Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

```
       NEIC 01 18:45:41.7±1.7,21°.70S×179°.55W,h600km,mb4.6/6,
               Error ellipse: s-maj=75.5km s-min=25.7km az=151.0
        IDC 01 18:45:46.3±2.6,21°.76S×179°.70W,h627km±37km,mb3.5/4,
               mb1 3.7/4,mb1mx3.2/14,Error ellipse: s-maj=83.2km
               s-min=20.6km az=159.0
        ISC 01 18:45:43.1±2.7,22°.3S±0°.2×179°.6W±0°.3,h613km±42km,
               n22,σ1ˢ.15/21,mb4.4/9,1C,South of Fiji Islands
Code   Station Name        Δ°    AZ°   Phase ID          Time      Res
                                      Op       ISC      h  m  s   ISC
HBZ    Hicks Bay          15.41 186  eP        P       18 48 53.1 -1.7
URZ    Urewera            16.21 189   P        P       18 49 01.5 -0.9
MRZ    Mangatainoka R     18.81 192  eP        P       18 49 26.7  0.0
DIW    D'Urville Isla     19.30 195  eP        P       18 49 27.3 -3.9
CAW    Cannon Point       19.34 192  eP        P       18 49 31.7 +0.1
OTW    Orongorongo Tu     19.52 192  eP        P       18 49 33.0 -0.2
MOW    Moikau             19.61 192  eP        P       18 49 35.5 +1.5
THZ    Tophouse           20.46 196  eP        P       18 49 42.0 +0.2
KHZ    Kahutara           20.93 194   P        P       18 49 46.2 +0.2
ARMA   Armidale           27.03 246  eP        P       18 50 42.4 +2.3
       4.9nm,0.5s,mb4.4
CTA    Charters Tower     31.93 267⇑iP         P       18 51 22.3 +0.4
       13nm,0.5s,mb4.8
STKA   Stephens Creek     35.75 246  eP        P       18 51 55.3 +1.8
       3.1nm,0.4s,mb4.2
ASAR   Alice Springs      42.74 259   P        P       18 52 50.1 +0.3
       9.8nm,0.5s,mb4.6,baz=92,slow=8.2,SNR=47
ASAR                                  S        S       18 58 31.3 -0.1
       1.0nm,0.8s,baz=95,slow=15,SNR=5.7
ASPA   Alice Springs      42.74 259  eP        P       18 52 50.1 +0.2
WRA    Warramunga Arr     42.96 264   P        P       18 52 51.0 -0.7
       1.8nm,0.3s,mb4.0,baz=96,slow=7.8,SNR=93
WRA                                   S        S       18 58 33.0 -1.5
       0.3nm,0.9s,baz=99,slow=14,SNR=3.0
KAKA   Kakadu             46.64 273  eP        P       18 53 18.2 -1.8
       14nm,0.4s,mb4.8
FITZ   Fitzroy Crossi     51.39 264  eP        P       18 53 54.3 -0.7
       12nm,0.3s,mb4.8
MBWA   Marble Bar         56.08 259  eP        P       18 54 27.1 -0.7
       11nm,0.6s,mb4.2
CMAR   Chiang Mai Arr     89.35 290   P        P       18 57 38.1 +1.0
       1.3nm,0.8s,mb3.8,baz=135,slow=3.1,SNR=8.1
ARCES  ARCESS Array B    130.36 349   PKP      PKP     19 03 43.7 -0.5
       0.7nm,0.6s,baz=282,slow=4.2,SNR=3.5
FINES  FINESS Array B    137.02 342   PKP      PKP     19 03 57.3 +0.5
       3.7nm,1.1s,baz=158,slow=3.2,SNR=3.4
MLR    Muntele Rosu      148.85 324   PKPbc    PKP     19 04 22.7 +5.2
       0.2nm,0.7s,baz=1.2,slow=23,SNR=2.3
```

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

IDC 01 00:00:55.7±1.6**, 32°.24N×40°.42W, h0^{km}, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.3**/56**, mbtmp3.5**/3**, Error ellipse: s-maj=57.4km s-min=34.2km az=18.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TORD	Torodi Ar. Bea	42.92	106	P	P	00 08 56.2	-0.1
	0.4nm,0.7s,baz=314,slow=6.6,SNR=4.2						
H10N2	ASCENSION HYDR	46.90	144	T	T	00 59 28.0	
	baz=329,slow=75,SNR=23						
H10N3	ASCENSION HYDR	46.91	144	T	T	00 59 19.6	
	baz=329,slow=75,SNR=25						
H10N1	ASCENSION HYDR	46.92	144	T	T	00 59 29.4	
	baz=329,slow=75,SNR=21						
H10S3	ASCENSION HYDR	47.78	145	T	T	01 00 23.8	
	baz=328,slow=74,SNR=50						
H10S2	ASCENSION HYDR	47.80	145	T	T	01 00 24.9	
	baz=252,slow=74,SNR=50						
PDAR	Pinedale Array	54.45	302	P	P	00 10 25.1	-0.1
	0.4nm,0.6s,baz=70,slow=7.8,SNR=3.9						
LPAZ	La Paz	55.07	213	P	P	00 10 30.1	-0.1
	0.6nm,0.6s,baz=45,slow=4.3,SNR=3.1						

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*NEIC **01** 00:07:39.0±1.7, 5°.42S±0°.06×30°.02E±0°.09, h13^{km}±5^{km}, mb4.4/4, Error ellipse: s-maj=13.9km s-min=7.3km az=70.0*

*IDC **01** 00:07:39.2±1.0, 5°.21S×30°.00E, h0^{km}, mb3.7/6, mb1 3.9/9, mb1mx3.5/63, mbtmp3.8/9, ML2.5/2, Error ellipse: s-maj=32.1km s-min=16.0km az=109.0*

ISC 01 00:07:38.8±0.6**, 5°.38S**±0°.04×**30°.13E**±0°.08**, h10^{km}, n28, σ2^{s}.73**/31**, mb3.8**/6**, 4C, Lake Tanganyika region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBAR	Mbarara	4.79	7	Pn	Pn	00 08 50.9	-0.3
	21nm,0.3s,baz=212,slow=3.3,SNR=45						
MBAR				Pg	Pb	00 09 04.7	+1.8
	66nm,0.3s,baz=198,slow=19,SNR=33						
MBAR				Sn	Sn	00 09 42.2	-4.7
	96nm,0.3s,baz=61,slow=24,SNR=5.8						
MBAR				Lg	Lg	00 09 55.7	
	214nm,0.3s,baz=90,slow=21,SNR=5.8						
MBAR	Mbarara	4.79	7	⇑eP	Pn	00 08 51.6	+0.4
MBAR				⇑eS	Sb	00 09 58.2	-2.5
MBAR	Mbarara	4.79	7	⇑eP	Pn	00 08 51.7	+0.4
MBAR				⇑eS	Sb	00 09 58.9	-1.9
MBAR	Mbarara	4.79	7		Pn	00 08 51.3	+0.1
KMBO	Kilima Mbogo	8.28	60	i P	Pn	00 09 47.1	+7.9
KMBO				i S	Sn	00 11 11.7	-1.2
KMBO	Kilima Mbogo	8.28	60	Pn	Pn	00 09 39.6	+0.4
	0.5nm,0.3s,baz=239,slow=16,SNR=10.0						
KMBO				Sn	Sn	00 11 09.4	-3.5
	3.9nm,0.3s,baz=203,slow=20,SNR=7.1						
KMBO				Lg	Lg	00 11 55.5	
	15nm,0.3s,baz=299,slow=20,SNR=12						
KMBO	Kilima Mbogo	8.28	60	i P	Pn	00 09 47.1	+7.9
KMBO				i S	Sn	00 11 11.7	-1.2
KMBO	Kilima Mbogo	8.28	60		Pn	00 09 40.3	+1.1
LSZ	Lusaka	10.02	191	i P	Pn	00 09 54.7	-8.3
LSZ				i S	Sn	00 11 24.3	-31
LSZ	Lusaka	10.02	191	Pn	Pn	00 10 06.7	+3.7
	1.9nm,0.3s,baz=4.2,slow=7.3,SNR=24						
LSZ				Sn	Sn	00 11 54.7	-0.9
	1.5nm,0.3s,baz=15,slow=13,SNR=4.0						
LSZ				Lg	Lg	00 12 55.6	
	3.9nm,0.3s,baz=104,slow=13,SNR=3.0						
LSZ	Lusaka	10.02	191	i P	Pn	00 09 54.7	-8.3
LSZ				i S	Sn	00 11 24.3	-31
LSZ	Lusaka	10.02	191		Pn	00 10 06.4	+3.4
ITZ	Itezhi-Tezhi	11.06	201	i P	Sn	00 12 19.0	-2.3
ITZ	Itezhi-Tezhi	11.06	201	Sn	Sn	00 13 30.6	+69
ITZ	Itezhi-Tezhi	11.06	201	i P	Sn	00 12 19.0	-2.3
ITZ	Itezhi-Tezhi	11.06	201	i S		00 13 28.9	
MATP	Matopo	15.04	186	Pn	Pn	00 11 10.3	-1.3
	0.5nm,0.3s,baz=5.8,slow=13,SNR=12						
MATP				Sn	Sn	00 13 50.3	-8.2
	0.4nm,0.3s,baz=118,slow=20,SNR=4.6						
MATP				Lg	Lg	00 15 31.8	
	0.4nm,0.3s,baz=257,slow=22,SNR=2.6						
TSUM	Tsumeb	18.39	221	P	P	00 11 57.3	+3.1
	0.3nm,0.3s,baz=32,slow=14,SNR=5.9						
TSUM				S	Sn	00 15 06.4	-13
	0.6nm,0.3s,baz=172,slow=20,SNR=6.4						
TSUM				Lg	Lg	00 17 24.3	
	0.1nm,0.3s,baz=86,slow=12,SNR=2.2						
TSUM	Tsumeb	18.39	221		Pn	00 11 53.6	-0.6
LBTB	Lobatse	20.00	192	P	Pn	00 12 15.4	+1.9
	2.6nm,0.8s,baz=22,slow=14,SNR=4.0						
LBTB				S	S	00 15 52.3	-4.6
	2.1nm,0.7s,baz=150,slow=18,SNR=2.2						
LBTB				Lg	Lg	00 18 11.1	
	6.3nm,1.0s,baz=107,slow=23,SNR=2.4						
LBTB	Lobatse	20.00	192	P	P	00 12 10.9	-0.9
LBTB				IAmb	IAmb	00 13 05.9	
	comp=Z,39nm,2.0s						
ATD	Arta Tunnel	21.04	37	P	P	00 12 24.4	+1.3
	comp=Z,5.7nm,0.8s,baz=232,slow=16,SNR=2.3						
BOSA	Boshof	23.56	191	P	P	00 12 53.2	+3.4
	comp=Z,2.2nm,0.9s,baz=11,slow=10,SNR=3.3						
BOSA	Boshof	23.56	191	P	P	00 12 48.6	-1.2
TOA0	Torodi Ar. Sit	33.71	303	P	P	00 14 19.7	-0.9
TOA0				IAmb	IAmb	00 14 51.9	
	comp=Z,5.6nm,1.2s						
TORD	Torodi Ar. Bea	33.71	303	P	P	00 14 19.9	-0.7
	comp=Z,1.0nm,0.6s,baz=115,slow=8.1,SNR=9.7						
BRTR	Keskin Array B	45.00	4	P	P	00 15 56.0	+1.3
	comp=Z,0.9nm,0.8s,baz=185,slow=7.5,SNR=6.7						
MKAR	Makanchi Array	69.39	35	P	P	00 18 48.3	+1.3
	comp=Z,0.2nm,0.5s,baz=243,slow=7.3,SNR=1.8						

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*IDC **01** 00:09:05.5±0.8, 56°.84S×25°.06W, h0^{km}, mb4.4/5, mb1 4.4/6, mb1mx4.0/31, mbtmp4.3/6, ML3.8/1, MS3.7/1, Ms1 3.7/1, ms1mx3.1/22, Error ellipse: s-maj=36.1km s-min=21.6km az=57.0*

*NEIC **01** 00:09:06.7±1.0, 56°.8S±0°.2×25°.0W±0°.2, h10^{km}±1^{km}, mb4.6/11, Error ellipse: s-maj=23.3km s-min=14.0km az=201.0*

ISC 01 00:09:08.2±0.7**, 56°.8S**±0°.1×**25°.0W**±0°.1**, h22^{km}, n34, σ0^{s}.71**/26**, mb4.7**/9**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	7.02	287	Pn	Pn	00 10 50.4	+0.8
VNA1	Neumayer--Stat	15.61	159	P	Pn	00 12 46.5	+0.1
VNA3	Neumayer Olymp	15.84	162	P	Pn	00 12 49.1	-0.4
VNA2	Neumayer--Watz	16.00	159	P	Pn	00 12 50.9	-0.6
	baz=333,slow=15						
SNAA	Sanae	17.52	157	P	P	00 13 11.3	-0.5
SNAA	Sanae	17.52	157	P	Pn	00 13 10.7	0.0
	0.3nm,0.3s,baz=354,slow=7.2,SNR=13						
SNAA	Sanae	17.52	157	IAmb	IAmb	00 13 19.7	
	comp=Z,3.9nm,0.9s						
EFI	East Falkland	19.89	271	P	P	00 13 37.5	-0.3
EFI				IAmb	IAmb	00 13 46.6	
	comp=Z,37nm,1.1s						
PLCA	Paso Flores	33.35	279	LR	LR	00 30 49.1	
	comp=Z,111nm,18.1s,baz=202,slow=39						
QSPA	South Pole Qui	33.41	180	P	P	00 15 45.5	+0.6
	comp=Z,1.9nm,0.5s,baz=200,slow=2.4,SNR=22						
QSPA	South Pole Qui	33.41	180	P	P	00 15 46.3	+1.4
QSPA				IAmb	IAmb	00 15 55.7	
	comp=Z,3.8nm,0.7s						
CPUP	Villa Florida	38.27	309	P	P	00 16 26.6	0.0
	comp=Z,2.2nm,0.6s,baz=150,slow=7.7,SNR=6.6						
CPUP	Villa Florida	38.27	309	IAmb	IAmb	00 16 30.2	
	comp=Z,2.8nm,0.9s						
ROC1	El Roble	39.36	287	P	P	00 16 35.0	-1.1
LVC	Limon Verde	46.77	298	P	P	00 17 35.5	-0.7
	comp=Z,4.0nm,0.4s,baz=122,slow=7.4,SNR=12						
LVC	Limon Verde	46.77	298	P	P	00 17 37.0	+0.8
LVC				IAmb	IAmb	00 17 38.9	
	comp=Z,5.4nm,0.8s						
PB01	IPOC Station P	48.38	299	P	P	00 17 48.5	+0.1
PB01				IAmb	IAmb	00 17 52.3	
	comp=Z,3.7nm,0.5s						
H10S2	ASCENSION HYDR	48.44	14	T	T	01 10 47.9	
	baz=189						
H10S3	ASCENSION HYDR	48.44	14	T	T	01 10 57.8	
	baz=31,SNR=3.1						
TSUM	Tsumeb	49.02	58	P	P	00 17 53.5	+0.1
PB11	IPOC Station P	49.56	299	P	P	00 17 58.1	+0.6
PB11				IAmb	IAmb	00 18 05.6	
	comp=Z,7.3nm,0.9s						
H10N1	ASCENSION HYDR	49.56	14	T	T	01 12 13.3	
	baz=188						
H10N3	ASCENSION HYDR	49.56	14	T	T	01 12 19.7	
	baz=188						
H10N2	ASCENSION HYDR	49.58	14	T	T	01 12 26.0	
	baz=188						
MNMC	Minye Minye	50.07	300	P	P	00 18 01.5	-0.1
MNMC				IAmb	IAmb	00 18 10.9	
	comp=Z,5.7nm,0.7s						
LPAZ	La Paz	51.85	303	P	P	00 18 16.1	+0.8
	comp=Z,11nm,0.5s,baz=119,slow=3.7,SNR=70						
LPAZ	La Paz	51.85	303	P	P	00 18 15.2	-0.2
SAML	Samuel	56.24	313	P	P	00 18 46.8	+0.1
SAML				IAmb	IAmb	00 18 48.2	
	comp=Z,1.8nm,0.6s						
TORD	Torodi Ar. Bea	73.17	27	P	P	00 20 37.9	+0.9
	comp=Z,0.7nm,0.7s,baz=201,slow=7.0,SNR=6.7						
YKA	Yellowknife Ar	137.59	316	PKP	PKiKP	00 28 29.6	-1.1
	comp=Z,0.2nm,0.5s,baz=121,slow=2.2,SNR=3.6						
INK	Inuvik	147.21	319	PKPbc	PKPab	00 28 48.6	-1.2
	comp=Z,1.0nm,0.8s,baz=82,slow=4.0,SNR=3.5						
SONM	Songino Array	149.54	86	PKPbc	PKiKP	00 28 55.3	-0.6
	comp=Z,0.7nm,0.6s,baz=221,slow=3.4,SNR=6.1						
ILAR	Eielson Array	151.57	310	PKPbc	PKiKP	00 28 59.5	+0.1
	comp=Z,1.3nm,0.9s,baz=132,slow=1.6,SNR=9.1						
KDAK	Kodiak Island	152.28	294	PKPbc	PKiKP	00 29 01.5	+0.5
	comp=Z,7.9nm,1.2s,baz=130,slow=7.9,SNR=3.3						

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*ISK **01** 00:09:24.9, 34°.13N×26°.16E, h104^{km}±2^{km}, ML3.4/19*

*NIC **01** 00:09:26.2±0.0, 34°.15N×26°.52E, h1^{km}±4^{km}, Ml3.6/4*

*THE **01** 00:09:26.1, 34°.22N×26°.18E, h0^{km}±2^{km}, ML2.8/5, Error ellipse: s-maj=4.3km s-min=1.5km az=162.0*

*IDC **01** 00:09:26.9±5.1, 34°.23N×26°.27E, h29^{km}±38^{km}, mb3.6/11, mb1 3.6/16, mb1mx3.4/55, mbtmp3.6/16, ML3.5/5, Error ellipse: s-maj=23.7km s-min=14.5km az=13.0*

*ATH **01** 00:09:26.9, 34°.31N×26°.18E, h28^{km}±2^{km}, ML2.8/9, Error ellipse: s-maj=5.4km s-min=2.2km az=1.0*

*HLW **01** 00:09:27.3, 34°.07N×26°.28E, h27^{km}±12^{km}, Md4.1, Ml3.6*

*DDA **01** 00:09:27.6, 34°.57N×26°.41E, h8^{km}±3^{km}, ML2.8*

*GII **01** 00:09:30.0±0.0, 34°.04N×26°.82E, h7^{km}±2^{km}, MD2.7/1, Mm3.4/2*

ISC 01 00:09:25.6±1.4**, 34°.13N**±0°.04×**26°.27E**±0°.03**, h27^{km}**±10^{km}**, n158, σ1^{s}.69**/197**, mb3.7**/11**, 8C, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	Zakros	0.98	358	P	Pn	00 09 42.8	-0.9
ZKR	Zakros	0.98	358	P	Pn	00 09 42.7	-0.9
ZKR				AML	AML	00 09 58.4	
	comp=N,631μm,0.3s						
ZKR				AML	AML	00 10 04.2	
	comp=E,1509μm,0.4s						
ZKR	Zakros	0.98	358	PG	Pn	00 09 42.8	-0.9
ZKR	Zakros	0.98	358	⇑P	Pn	00 09 42.9	-0.7
ZKR				S	Sn	00 10 00.8	+4.1
ZKR				AML	AML	00 10 03.8	
	comp=E,1.5nm,0.4s						
ZKR				AML	AML	00 10 03.8	
	comp=E,1.5nm,0.4s						
ZKR	Zakros	0.98	358	⇑P	Pn	00 09 42.9	-0.7
ZKR				S	Sn	00 10 00.8	+4.1
ZKR				AML	AML	00 10 03.8	
	comp=E,1.5nm,0.4s						
ZKR				AML	AML	00 10 03.8	
	comp=E,1.5nm,0.4s						
FRMA	Ierapetra Chan	0.98	334	P	Pn	00 09 42.6	-1.1
FRMA				S	Sn	00 09 56.5	-0.2
	comp=E,298nm,0.7s						
STIA	Sitia Lasithi	1.08	352	P	Pn	00 09 44.9	0.0
STIA				S	Sn	00 09 58.8	-0.2
LAST	Lasithi	1.21	328	P	Pn	00 09 46.5	-0.4
LAST				S	Sb	00 10 04.1	+0.8
	comp=E,552nm,1.0s						
LAST	Lasithi	1.21	328	P	Pn	00 09 46.5	-0.4
LAST				S	Sn	00 10 01.8	-0.8
LAST				AML	AML	00 10 09.9	
	comp=E,1180μm,0.7s						
LAST				AML	AML	00 10 15.5	
	comp=N,1031μm,1.3s						
NPS	Neapolis	1.25	335	P	Pn	00 09 47.1	-0.2
NPS				S	Sb	00 10 03.7	-0.5
	comp=N,445nm,0.8s						
NPS	Neapolis	1.25	335	P	Pn	00 09 47.0	-0.4
NPS				AML	AML	00 10 15.3	
	comp=E,1071μm,0.6s						
NPS				AML	AML	00 10 17.7	
	comp=N,725μm,0.7s						
SIVA	Sivas	1.49	307	P	Pn	00 09 51.8	+1.2
SIVA	Sivas	1.49	307	P	Pn	00 09 52.0	+1.4
SIVA				AML	AML	00 10 27.7	
	comp=E,1522μm,0.6s						
SIVA				AML	AML	00 10 29.1	
	comp=N,1151μm,0.7s						
HRKL	Herakleio	1.52	321	PN	Pn	00 09 51.9	+0.9
KSTL	Kastelli Herak	1.53	320	P	Pn	00 09 49.0	-2.1
KSTL				S	Sn	00 10 05.9	-4.2
KARP	Karpathos	1.59	27	P	Pb	00 09 54.2	-0.2
KARP				S	Sb	00 10 15.2	+1.1
	comp=N,322nm,0.8s						
KARP	Karpathos	1.59	27	P	Pb	00 09 54.8	+0.4
KARP				AML	AML	00 10 33.2	
	comp=E,614μm,0.9s						
KARP				AML	AML	00 10 34.3	
	comp=N,646μm,0.8s						
KARP	Karpathos	1.59	27	PN	Pb	00 09 54.5	+0.1
KARP				SN	Sb	00 10 15.4	+1.3
KARP	Karpathos	1.59	27	⇑P	Pb	00 09 54.7	+0.3
KARP				S	Sb	00 10 15.6	+1.5
KARP				AML	AML	00 10 32.8	
	comp=N,0.6nm,0.9s						
KARP				AML	AML	00 10 32.8	
	comp=N,0.6nm,0.9s						
KARP				AML	AML	00 10 34.0	
	comp=N,0.7nm,0.8s						
KARP				AML	AML	00 10 34.0	
	comp=N,0.7nm,0.8s						
KARP	Karpathos	1.59	27	⇑P	Pb	00 09 54.7	+0.3
KARP				S	Sb	00 10 15.6	+1.5
KARP				AML	AML	00 10 32.8	
	comp=N,0.6nm,0.9s						
KARP				AML	AML	00 10 32.8	
	comp=N,0.6nm,0.9s						
KARP				AML	AML	00 10 34.0	
	comp=N,0.7nm,0.8s						
KARP				AML	AML	00 10 34.0	
	comp=N,0.7nm,0.8s						
IDI	Anoyia	1.62	316	P	Pn	00 09 53.2	+0.8
IDI	Anoyia	1.62	316	Pn	Pn	00 09 53.9	+1.5
	comp=N,3.3nm,0.3s,baz=160,slow=9.0,SNR=58						
IDI				Sn	Sn	00 10 12.4	0.0
	comp=N,7.7nm,0.3s,baz=326,slow=22,SNR=9.6						
IDI	Anoyia	1.62	316	P	Pn	00 09 53.7	+1.3
IDI				S	Sn	00 10 12.8	+0.3
IDI				AML	AML	00 10 21.6	
	comp=N,251μm,0.5s						
IDI				AML	AML	00 10 34.7	
	comp=E,315μm,0.8s						
IDI	Anoyia	1.62	316	PN	Pn	00 09 53.1	+0.7
IDI				SN	Sn	00 10 12.9	+0.5
GVD	Gavdhos	1.93	292	P	Pn	00 09 57.3	+0.6
GVD				S	Sn	00 10 20.7	+0.6
	comp=E,172nm,0.6s						
GVD	Gavdhos	1.93	292	P	Pn	00 09 57.7	+1.0
GVD				AML	AML	00 10 23.2	
	comp=N,328μm,0.5s						
GVD				AML	AML	00 10 41.8	
	comp=E,548μm,0.5s						
GVD	Gavdhos	1.93	292	PN	Pn	00 09 56.6	-0.1
VAM	Vamos	2.12	307	P	Pn	00 10 01.1	+1.8
VAM				AML	AML	00 10 50.0	
	comp=N,305μm,0.5s						
VAM				AML	AML	00 10 52.3	
	comp=E,302μm,0.6s						
IMMV	Iera Moni Meta	2.30	306	P	Pn	00 10 03.7	+1.9
IMMV				AML	AML	00 10 36.1	
	comp=N,324μm,0.5s						
IMMV				AML	AML	00 10 36.9	
	comp=E,326μm,0.4s						
IMMV	Iera Moni Meta	2.30	306	PN	Pn	00 10 02.1	+0.3
SANT	Santorini	2.33	344	P	Pn	00 10 02.3	+0.1
SANT	Santorini	2.33	344	PN	Pn	00 10 02.4	+0.2
SANT	Santorini	2.33	344	i P	Pn	00 10 01.9	-0.4
STAX	Taxiarchis Har	2.37	343	P	Pn	00 10 02.6	-0.1
THR3	Thira Island,	2.38	343	P	Pn	00 10 03.7	+0.9
THR3	Thira Island,	2.38	343	P	Pn	00 10 03.3	+0.4
KNDR	Palaiochora Ch	2.39	298	PN	Pn	00 10 03.8	+0.8
THT2	Imerovigli	2.40	344	PN	Pn	00 10 03.5	+0.4
THR5	Thira Island,	2.40	342	P	Pn	00 10 03.5	+0.4
RODP	Rodopos	2.51	305	PN	Pn	00 10 04.7	+0.1
NISR	Nisiros	2.57	16	P	Pn	00 10 06.8	+1.3
ARG	Arkhangelos	2.58	36	P	Pb	00 10 08.5	-2.6
ARG	Arkhangelos	2.58	36	PN	Pn	00 10 06.9	+1.3
ARG	Arkhangelos	2.58	36	⇑P	Pn	00 10 08.3	+2.7
ARG				S	Sb	00 10 39.8	-2.6
ARG	Arkhangelos	2.58	36	⇑P	Pn	00 10 08.3	+2.7
ARG				S	Sb	00 10 39.8	-2.6
AMGA	Amorgos Island	2.71	354	P	Pn	00 10 07.7	+0.3
SLUM	Salum	2.78	199	P	Pn	00 10 10.1	+1.7
	baz=200						
SLUM				S	Sn	00 10 40.6	-0.5
	baz=200						
DAT	Datca	2.80	22	PN	Pn	00 10 09.6	+0.8
DAT	Datca	2.80	22	i P	Pn	00 10 09.5	+0.7
MHLO	Agia Marina, M	2.97	330	P	Pn	00 10 11.4	+0.4
ANKY	Antikythira Is	2.99	306	P	Pn	00 10 13.2	+2.0
APE	Apeiranthos	2.99	349	P	Pn	00 10 11.5	+0.2
APE	Apeiranthos	2.99	349	PN	Pn	00 10 11.2	-0.1
APE	Apeiranthos	2.99	349	i P	Pn	00 10 11.8	+0.5
MHLA	Plaka, Milos I	3.01	331	P	Pn	00 10 12.5	+1.0
BODT	Bodrum	3.04	16	PN	Pn	00 10 12.8	+0.8
DALY	Dalyan (Mula)	3.31	35	PN	Pn	00 10 16.7	+1.0
DALY	Dalyan (Mula)	3.31	35	i P	Pn	00 10 18.1	+2.5
TURN	Turunc	3.33	34	PN	Pn	00 10 13.7	-2.3
TURN	Turunc	3.33	34	i P	Pn	00 10 12.8	-3.2
TURN				i S	Sn	00 10 50.2	-4.5
KTHA	Kythira Island	3.37	310	P	Pn	00 10 17.0	+0.5
KTHA	Kythira Island	3.37	310	PN	Pn	00 10 16.3	-0.2
FETY	Fethiye	3.40	42	PN	Pn	00 10 17.9	+1.0
FETY	Fethiye	3.40	42	i P	Pn	00 10 17.9	+1.0
FETY				i S	Sn	00 10 56.3	0.0
YER	Yerkesik	3.42	28	PN	Pn	00 10 18.1	+0.9
AKAS	Kas	3.45	52	PN	Pn	00 10 18.6	+0.9
AKAS	Kas	3.45	52	i P	Pn	00 10 19.7	+2.1
AKAS				i S	Sn	00 10 58.9	+1.2
AKAS				IAML		00 11 03.0	
	comp=N,36nm,0.3s						
AKAS				IAML		00 11 04.0	
	comp=E,25nm,0.5s						
VLI	Veliai	3.75	314	P	Pn	00 10 21.6	0.0
AYDN	Tasoluk	3.76	20	i P	Pn	00 10 23.0	+1.1
ELL	Elmali	3.96	48	PN	Pn	00 10 25.6	+0.9
ELL	Elmali	3.96	48	P	Pn	00 10 27.1	+2.4
ELL				S	Sn	00 11 13.4	+3.1
ELL	Elmali	3.96	48	P	Pn	00 10 27.1	+2.4
ELL				S	Sn	00 11 13.4	+3.1
TAVA	DENIZLI_Tavas	3.96	32	i P	Pn	00 10 26.3	+1.6
AKUM	Antalya-Kumluc	3.99	56	i P	Pn	00 10 26.9	+1.9
AKUM				IAML		00 11 18.0	
	comp=N,17nm,0.5s						
AYDB	Zeytinkoy-Aydi	4.03	19	PN	Pn	00 10 26.1	+0.5
GOLH	Golhisar	4.10	40	i P	Pn	00 10 28.9	+2.3
GOLH				i S	Sn	00 11 11.1	-2.7
GOLH				IAML		00 11 22.0	
	comp=N,18nm,1.3s						
KRND	KRANIDI	4.12	323	P	Pn	00 10 27.2	+0.5
KORT	Korkueli	4.39	48	PN	Pn	00 10 31.5	+0.9
KORT	Korkueli	4.39	48	i P	Pn	00 10 34.9	+4.2
KORT				IAML		00 11 30.0	
	comp=N,16nm,0.4s						
KORT				IAML		00 11 41.0	
	comp=E,23nm,0.5s						
ITM	Ithomi	4.66	312	PN	Pn	00 10 33.6	-0.6
BRDR	BURDUR-Merkez	4.70	40	i P	Pn	00 10 37.8	+2.9
KULA	Kula-Manisa	4.78	23	PN	Pn	00 10 36.4	+0.4
SWA2		4.92	188	P	Pn	00 10 39.6	+1.7
	baz=189						
KHAL	Karahalli	4.97	31	i P	Pn	00 10 39.8	+1.3
USAK	Uak-Merkez	5.08	25	i P	Pn	00 10 41.1	+1.0
USAK				IAML		00 11 35.0	
	comp=N,11nm,1.4s						
AKMS	Akamas	5.08	78	P	Pn	00 10 40.9	+0.8
AKMS				AML	AML	00 11 39.9	
	comp=N,0.2nm,0.3s						
AKMS				AML	AML	00 11 41.4	
	comp=N,0.2nm,0.3s						
AKMS	Akamas	5.08	78	P	Pn	00 10 40.9	+0.8
AKMS				AML	AML	00 11 39.9	
	comp=N,0.2nm,0.3s						
AKMS				AML	AML	00 11 41.4	
	comp=N,0.2nm,0.3s						
OSC2	CSNet OBS 4	5.12	100	P	Pn	00 10 43.0	+2.6
OSC2				S	Sn	00 11 41.7	+3.0
OSC2	CSNet OBS 4	5.12	100	P	Pn	00 10 43.0	+2.6
OSC2				S	Sn	00 11 41.7	+3.0
KEPZ	Antalya-Kepez	5.16	56	i P	Pn	00 10 43.2	+2.1
KEPZ				i S	Sn	00 11 31.4	-8.3
KEPZ				IAML		00 11 44.0	
	comp=E,10.0nm,0.6s						
NATA	Nata	5.25	81	P	Pn	00 10 43.2	+0.9
NATA	Nata	5.25	81	P	Pn	00 10 43.2	+0.9
ALFC	Alefka	5.32	77	P	Pn	00 10 43.9	+0.5
ALFC				AML	AML	00 11 45.5	
	comp=E,0.2nm,0.3s						
ALFC				AML	AML	00 11 46.5	
	comp=E,0.2nm,0.8s						
ALFC	Alefka	5.32	77	P	Pn	00 10 43.9	+0.5
ALFC				AML	AML	00 11 45.5	
	comp=E,0.2nm,0.3s						
ALFC				AML	AML	00 11 46.5	
	comp=E,0.2nm,0.8s						
GAZI	Gazipasa	5.38	65	PN	Pn	00 10 44.7	+0.6
SZAC	Souni	5.50	82	⇑P	Pn	00 10 46.8	+0.9
SZAC	Souni	5.50	82	⇑P	Pn	00 10 46.8	+0.9
LEF	Lefka	5.55	78	PN	Pn	00 10 46.6	+0.2
SEYD	Seydisehir-KON	5.58	53	PN	Pn	00 10 47.8	+0.8
SHUT	Suhut-Afyon	5.61	37	PN	Pn	00 10 47.6	+0.3
HDMB	Hadim	5.80	59	PN	Pn	00 10 50.6	+0.5
CSS	Mathiatis	5.89	80	PN	Pn	00 10 51.8	+0.7
CSS	Mathiatis	5.89	80	Pn	Pn	00 10 52.3	+1.2
TEKE	Tekeli-Mersin	5.96	68	PN	Pn	00 10 52.6	+0.5
BERE	Bereket-Mersin	6.11	67	PN	Pn	00 10 54.9	+0.7
MVOU	Mavrovouni	6.14	80	P	Pn	00 10 56.4	+1.8
MVOU	Mavrovouni	6.14	80	P	Pn	00 10 56.4	+1.8
AKKU	Akkuyu-Mersin	6.30	69	PN	Pn	00 10 56.9	+0.1
TEVE	Tevekalti-Mers	6.30	67	PN	Pn	00 10 56.9	0.0
HSAF	As Saff	6.36	134	P	Pn	00 10 59.6	+2.0
	baz=133						
IKL	Isikli	6.43	69	PN	Pn	00 10 59.2	+0.7
KRMN	Karaman	6.45	60	PN	Pn	00 10 58.9	-0.1
GLL	Jalalah	6.49	133	P	Pn	00 11 01.2	+1.9
	baz=132						
KEBE	Keben-Mersin	6.51	67	PN	Pn	00 10 59.9	+0.2
EREN	Erenkoy	6.65	76	PN	Pn	00 11 02.0	+0.5
KIZK	Mersin	6.85	68	PN	Pn	00 11 04.6	+0.3
NBNS	Bani Suef	6.97	141	P	Pn	00 11 08.0	+1.9
	baz=140						
NBNS				AMP		00 12 00.0	
	baz=140						
NBNS				S	Sn	00 12 22.1	-2.5
	baz=140						
HFRF	Wahat Farafira	7.18	165	P	Pn	00 11 10.3	+1.5
	baz=165						
HFRF				S	Sn	00 12 25.0	-4.6
	baz=165						
MERS	Mersin	7.27	66	PN	Pn	00 11 10.2	+0.1
OFRI	\`Ofer	7.45	99	Pn	Pn	00 11 12.4	-0.2
HNTI	Hanita	7.51	96	Pn	Pn	00 11 13.7	+0.4
KZIT	Kziot	7.58	113	PN	Pn	00 11 14.3	-0.1
KZIT	Kziot	7.58	113	Pn	Pn	00 11 14.4	0.0
KZIT				Sn	Sn	00 12 35.6	-3.9
SLTI	Sal'it	7.59	102	Pn	Pn	00 11 14.3	-0.2
SLTI				Sn	Sn	00 12 35.5	-4.2
MMA0B	Mount Meron ar	7.71	96	Pn	Pn	00 11 16.0	-0.2
MMAI	Mount Meron Ar	7.71	96	Pn	Pn	00 11 16.0	-0.1
	comp=E,1.9nm,0.3s,baz=284,slow=10,SNR=29						
MMAI				Sn	Sn	00 12 41.8	-0.8
	comp=E,1.6nm,0.3s,baz=274,slow=27,SNR=5.8						
AMAZ	Amatzia	7.73	107	Pn	Pn	00 11 17.0	+0.6
AMAZ				Sn	Sn	00 12 40.7	-2.3
MMLI	Mount Malkishu	7.85	100	PN	Pn	00 11 17.8	-0.3
MMLI	Mount Malkishu	7.85	100	Pn	Pn	00 11 19.1	+1.0
KSDI	Kefar Szold	7.89	94	Pn	Pn	00 11 18.4	-0.1
NATI	Neve Ativ	7.94	94	Pn	Pn	00 11 20.0	+0.7
YTIR	Yattir	7.95	108	Pn	Pn	00 11 19.8	+0.3

YTIR				Sn	Sn	00 12 45.6	-3.0
HMDT	Nahal Hemdat	7.99	101	Pn	Pn	00 11 20.2	+0.3
QRNJ	Al-Qirein	8.00	100	Pn	Pn	00 11 20.3	+0.2
DSI	Dead Sea	8.08	106	Pn	Pn	00 11 22.4	+1.2
DSI				Sn	Sn	00 12 49.6	-2.2
BRTR	Keskin Array B	8.12	44	Pn	Pn	00 11 23.7	+1.8
	comp=E,0.1nm,0.3s,baz=213,slow=14,SNR=4.5						
PRNI	Paran	8.31	115	Pn	Pn	00 11 25.3	+1.0
GHAJ	Ghor Haditha	8.33	107	Pn	Pn	00 11 25.5	+0.9
ZFRI	Zfri	8.34	113	Pn	Pn	00 11 24.6	-0.2
HRFI	Mount Harif	8.49	116	PN	Pn	00 11 26.5	-0.3
HRFI	Mount Harif	8.49	116	Pn	Pn	00 11 27.9	+1.1
MBRI	Mt Berech	8.53	118	Pn	Pn	00 11 28.4	+1.0
MBRI				Sn	Sn	00 12 59.5	-3.2
EIL	Elat	8.62	119	Pn	Pn	00 11 30.0	+1.4
	comp=E,1.3nm,0.3s,baz=297,slow=5.1,SNR=15						
EIL				Sn	Sn	00 13 01.7	-3.3
	comp=E,1.4nm,0.3s,baz=158,slow=4.5,SNR=6.7						
EIL	Elat	8.62	119	Pn	Pn	00 11 29.6	+1.0
ASF	Jabal al Asfar	9.13	99	Pn	Pn	00 11 36.3	+0.7
	comp=E,0.2nm,0.3s,baz=243,slow=5.2,SNR=3.2						
ASF				Sn	Sn	00 13 15.9	-1.6
	comp=E,0.2nm,0.3s,baz=54,slow=22,SNR=2.0						
AKRG	Al Kharijah	9.35	156	P	Pn	00 11 41.2	+2.5
	baz=155						
AKASG	Malin Array Be	16.70	7	Pn	Pn	00 13 15.8	-1.8
	comp=E,0.6nm,0.3s,baz=196,slow=11,SNR=2.4						
ESDC	Sonseca Array	24.73	292	P	P	00 14 45.3	+0.5
	comp=E,0.6nm,0.6s,baz=82,slow=9.3,SNR=2.7						
GEYT	Alibeck	25.97	72	P	P	00 14 56.8	+0.8
	comp=E,1.0nm,0.5s,baz=291,slow=12,SNR=3.7						
FINES	FINESS Array B	27.33	360	P	P	00 15 06.8	-1.1
	comp=E,0.3nm,0.3s,baz=162,slow=8.0,SNR=4.0						
AKTO	Aktyubinsk	28.30	45	P	P	00 15 16.1	-0.7
	comp=E,1.2nm,0.7s,baz=302,slow=7.1,SNR=4.3						
TORD	Torodi Ar. Bea	30.56	233	P	P	00 15 38.3	+1.2
	comp=E,0.6nm,0.9s,baz=32,slow=8.9,SNR=2.9						
ARCES	ARCESS Array B	35.46	360	P	P	00 16 18.2	-1.1
	comp=E,1.3nm,0.8s,baz=170,slow=7.4,SNR=3.5						
MKAR	Makanchi Array	43.59	56	P	P	00 17 29.1	+1.8
	comp=E,0.9nm,0.6s,baz=276,slow=6.7,SNR=16						
ZALV	Zalesovo Beam	45.06	45	P	P	00 17 39.9	+0.9
	comp=E,1.0nm,0.4s,baz=258,slow=7.5,SNR=4.8						
SONM	Songino Array	59.43	50	P	P	00 19 26.9	+0.9
	comp=E,0.1nm,0.4s,baz=270,slow=5.8,SNR=2.6						
SCHQ	Schefferville	64.56	320	P	P	00 20 00.1	0.0
	comp=E,0.9nm,0.6s,baz=49,slow=9.3,SNR=3.5						
YKA	Yellowknife Ar	78.70	343	P	P	00 21 25.3	+0.2
	comp=E,0.2nm,0.5s,baz=38,slow=5.5,SNR=4.4						

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*NORS **01** 00:09:45.7±0.0, 42°.43N×45°.59E, h14^{km}, MPVA3.8*
*DRS **01** 00:09:46.3±0.0, 42°.43N×45°.62E, h11^{km}*
*TIF **01** 00:09:46.3, 42°.48N×45°.59E, h15^{km}±2^{km}*
*DDA **01** 00:09:47.6, 42°.54N×45°.25E, h8^{km}±2^{km}, ML2.5*
*ISK **01** 00:09:47.8, 42°.48N×45°.38E, h3^{km}, ML2.6/6*
ISC 01 00:09:46.9±1.1, **42°.46N**±0°.02×**45°.56E**±0°.01, **h7**^{km}±9^{km}, **n55**, σ**1^{s}.68**/98, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTLR	Botlikh	0.53	67	*i* Pg	Pb	00 09 57.3	-1.3
BTLR				*e*Sg	Sb	00 10 05.2	-1.3
GROC	Groznyy	0.76	13	*i* Pg	Pn	00 10 03.1	-1.0
GROC				*e*Sg	Sn	00 10 14.9	-1.0
KMGR	Komgaron	0.79	320	*e*Pg	Pn	00 10 03.0	-1.5
KMGR				*e*Sg	Sn	00 10 15.9	-0.7
GUDG	Gudauri	0.80	271	P	Pg	00 10 00.9	-1.5
GUDG				S	Sg	00 10 10.9	-1.9
LGD	Lagodekhi	0.80	141	P	Pb	00 10 02.2	-1.1
LGD				S	Sg	00 10 12.3	-0.5
XNZR	Khunzakh	0.85	84	*e*Pg	Pb	00 10 03.4	-0.7
XNZR				*e*Sg	Sb	00 10 14.9	-0.9
VLKR	Vladikavkaz	0.88	312	*e*Pg	Pn	00 10 05.3	-0.5
VLKR				*e*Sg	Sn	00 10 18.0	-0.8
UNCR	Uncukul	0.94	74	*i* Pg	Pn	00 10 05.0	-1.7
	68nm,0.3s						
UNCR				*e*Sg	Sb	00 10 17.0	-1.4
	315nm,0.5s						
TBLG	Delisi	0.95	220	P	Pn	00 10 05.8	-1.0
TBLG				S	Sn	00 10 19.4	-1.2
TBLG	Delisi	0.95	220	PG	Pb	00 10 05.6	-0.2
TBLG				SG	Sb	00 10 18.8	+0.2
TBLG	Delisi	0.95	220	*i* P	Pn	00 10 05.7	-1.0
TBLG				*i* S	Sb	00 10 19.0	+0.4
BTNK	Botanikuri	0.96	216	P	Pn	00 10 05.8	-1.1
BTNK				S	Sn	00 10 20.0	-0.9
BTNK	Botanikuri	0.96	216	*i* P	Pn	00 10 05.8	-1.1
BTNK				*i* S	Sb	00 10 19.2	+0.3
BTNK				IAML		00 10 20.0	
	comp=E,113nm,0.4s						
BTNK				IAML		00 10 21.0	
	comp=N,142nm,0.1s						
DLMR	Dylym	0.99	52	*i* Pg	Pn	00 10 06.0	-1.3
	comp=N,43nm,0.2s						
DLMR				*i* Sg	Sn	00 10 20.0	-1.7
	comp=N,162nm,0.6s						
LACR	Lac	1.00	292	*e*Pg	Pg	00 10 04.7	-1.5
GNBR	Gunib	1.04	93	*i* Pg	Pn	00 10 06.5	-1.6
GNBR				*e*Sg	Sn	00 10 21.9	-1.0
KRNR	Karanay	1.06	69	*i* Pg	Pn	00 10 07.0	-1.3
	comp=N,99nm,0.1s						
KRNR				*e*Sg	Sn	00 10 21.5	-1.9
	comp=N,83nm,0.1s						
ARKR	Arakani	1.07	82	*e*Pg	Pn	00 10 07.0	-1.4
	comp=N,50nm,0.2s						
ARKR				*i* Sg	Sn	00 10 23.0	-0.5
	comp=N,162nm,0.3s						
DBC	Dubki	1.09	59	*i* Pg	Pn	00 10 07.7	-1.0
	comp=N,45nm,0.1s						
DBC				*e*Sg	Sn	00 10 23.4	-0.7
	comp=N,57nm,0.1s						
DDFL	Dedoflistskaro	1.10	158	P	Pn	00 10 10.5	+1.7
DDFL				S	Sn	00 10 30.4	+6.2
DDFL	Dedoflistskaro	1.10	158	*i* P	Pn	00 10 10.3	+1.6
DDFL				*i* S	Sn	00 10 30.0	+5.8
BTKR	Batakoyurt	1.18	321	*e*Pg	Pg	00 10 11.0	+1.5
BTKR				*e*Sg	Sn	00 10 29.8	+3.6
ARNR	Ardon	1.18	308	*e*Pg	Pg	00 10 10.8	+1.2
ARNR				*e*Sg	Sn	00 10 27.8	+1.5
BUJR	Buynaksk	1.20	72	*e*Sg	Sn	00 10 30.7	+4.0
KORR	Kora	1.27	300	*i* Pg	Pg	00 10 11.9	+0.7
KORR				*e*Sg	Sg	00 10 30.0	+2.4
KZRT	Kazreti	1.38	219	P	Pb	00 10 12.5	-0.6
KZRT				S	Sg	00 10 31.2	-0.1
KZRT	Kazreti	1.38	219	*i* P	Pb	00 10 12.3	-0.7
KZRT				*i* S	Sg	00 10 31.1	-0.2
TRKR	Terskaya	1.40	335	*e*Pg	Pg	00 10 14.7	+0.9
TRKR				*e*Sg	Sg	00 10 34.9	+3.0
STDR	Stavd-Durt	1.43	310	*e*Pg	Pg	00 10 14.7	+0.5
STDR				*e*Sg	Sg	00 10 35.2	+2.5
LSNR	Lesken	1.52	303	*e*Pg	Pg	00 10 16.4	+0.5
LSNR				*e*Sg	Sg	00 10 38.0	+2.3
DIGR	Digorskoe uzhe	1.52	287	*e*Pg	Pb	00 10 14.7	-1.0
DIGR				*e*Sg	Sb	00 10 34.8	-0.5
URKR	Urkarakh	1.56	100	*e*Pg	Pg	00 10 16.1	-0.8
URKR				*e*Sg	Sg	00 10 36.9	-0.3
ONI	Oni	1.56	275	P	Pg	00 10 16.1	-0.8
ONI				S	Sb	00 10 36.4	+0.1
ONI	Oni	1.56	275	PN	Pb	00 10 15.7	-0.5
ONI				SN	Sb	00 10 35.7	-0.6
PRTR	Priterechnaya	1.59	324	*e*Pg	Pg	00 10 17.0	-0.5
PRTR				*e*Sg	Sg	00 10 40.3	+2.1
KANR	Karaman	1.60	62	*e*Pg	Pg	00 10 19.2	+1.6
KANR				*e*Sg	Sg	00 10 42.1	+3.8
BKRG	Bakuriani	1.67	246	P	Pb	00 10 17.8	-0.4
BKRG				S	Sg	00 10 40.1	-0.5
NCK	Nalchik	1.77	306	*e*Pg	Pb	00 10 18.5	-1.3
NCK				*e*Sg	Sg	00 10 43.8	-0.2
AKH	Akhalkalaki	1.87	236	P	Pb	00 10 20.8	-0.7
AKH				S	Sb	00 10 45.4	+0.3
AKH	Akhalkalaki	1.87	236	PN	Pb	00 10 19.9	-1.6
AKH				SN	Sb	00 10 44.1	-1.0
AKT	Akhty	1.89	120	*e*Pg	Pb	00 10 21.2	-0.6
AKT				*e*Sg	Sg	00 10 46.8	-0.8
BGD	Bogdanovka	1.89	231	P	Pb	00 10 21.3	-0.6
BGD				S	Sb	00 10 46.4	+0.6
DRN	Derbent	2.10	101	*e*Pg	Pg	00 10 27.8	+0.6
	comp=N,23nm,0.7s						
DRN				*e*Sg	Sg	00 10 57.0	+2.6
	comp=N,44nm,0.4s						
EAK	Akyaka	2.30	220	*i* P	Pb	00 10 28.3	-0.6
EAK				*i* S	Sb	00 10 56.6	-0.9
EAK				IAML		00 11 06.0	
	comp=N,46nm,0.6s						
EPOS	Posof	2.32	247	*i* P	Pb	00 10 27.4	-1.7
GNI	Garni	2.39	195	PN	Pb	00 10 29.0	-1.4
SHA1	Shidzhatmaz	2.48	302	*e*Pn	Pn	00 10 29.0	+1.0
SHA1				*e*Sn	Sb	00 11 01.7	-1.1
KIV	Kislovodsk	2.58	306	PN	Pn	00 10 30.0	+0.8
TASB	TASBURUN-IGDIR	2.67	202	PN	Pb	00 10 32.7	-2.4
IGDI	IGDIR	2.82	204	*i* P	Pb	00 10 36.1	-1.6
BATM	Batumi	3.01	255	PN	Pn	00 10 36.0	+1.0
DAGI	Agillar	3.06	244	*i* P	Pb	00 10 40.9	-0.8
SENK	Senkaya-Erzuru	3.07	233	PN	Pn	00 10 37.4	+1.4
BCA	Borcka	3.11	252	PN	Pn	00 10 37.5	+1.1
DBAD	Bademkaya	3.23	245	*i* P	Pb	00 10 40.9	-3.8

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*SJA **01** 00:28:30.8±0.8, 32°.92S×72°.58W, h4^{km}±7^{km}, ML3.7, MW3.7*
*IDC **01** 00:28:32.8±1.4, 33°.07S×71°.89W, h0^{km}, mb3.8/2, mb1 3.9/4, mb1mx3.7/16, mbtmp3.6/4, ML3.5/2, Error ellipse: s-maj=58.3km s-min=24.1km az=82.0*
ISC 01 00:28:35.8±1.1, **32°.95S**±0°.07×**72°.6W**±0°.1, **h14**^{km}, **n16**, σ**1^{s}.44**/18, **Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTLS	Leoncito	2.99	68	*i* P	Pn	00 29 22.6	-0.5
RTLS				*e*S	Sn	00 30 00.5	+1.6
RTLS				IAML		00 30 03.9	
	comp=Z,95nm,1.1s						
RTCV	Cerro Valdivia	3.57	73	*i* P	Pn	00 29 30.6	-0.2
RTCV				*e*S	Sn	00 30 14.3	+1.5
RTCV				IAML		00 30 18.0	
	comp=Z,185nm,2.9s						
ZON	Zonda	3.57	68	*i* P	Pn	00 29 30.2	-0.7
ZON				IAML		00 30 27.1	
	comp=Z,99nm,1.5s						
CCHI	Chillan	3.66	174	*i* P	Pn	00 29 31.7	-0.3
CCHI				*e*S	Sn	00 30 16.9	+1.9
ACCO	Cerro Coronel	3.79	52	*i* P	Pn	00 29 34.3	+0.1
ACCO				*e*S	Sn	00 30 21.1	+2.3
ACCO				IAML		00 30 42.4	
	comp=Z,168nm,0.6s						
RTLL	Cerro Villicun	3.82	66	*i* P	Pn	00 29 33.7	-0.6
RTLL				IAML		00 30 35.8	
	comp=Z,98nm,0.6s						
AROD	Rodeo	3.83	44	*i* P	Pn	00 29 34.1	-0.5
AROD				IAML		00 30 35.4	
	comp=Z,58nm,0.6s						
CFA	Coronel Fontan	3.90	71	*i* P	Pn	00 29 35.2	-0.2
CFA				IAML		00 30 46.3	
	comp=Z,607nm,0.8s						
AMOG	MOGNA	4.00	61	*i* P	Pn	00 29 35.5	-1.2
AMOG				IAML		00 30 46.8	
	comp=Z,104nm,0.2s						
ACAN	Cantantal	4.58	83	*i* P	Pn	00 29 42.5	-2.2
ACAN				IAML		00 30 59.4	
	comp=Z,32nm,0.9s						
PLCA	Paso Flores	7.93	169	Pn	Pn	00 30 26.7	-4.0
	comp=Z,0.2nm,0.3s,baz=359,slow=12,SNR=7.5						
PLCA				Lg	Lg	00 32 39.0	
	comp=Z,0.1nm,0.3s,baz=31,slow=12,SNR=3.1						
LPAZ	La Paz	17.07	15	P	Pn	00 32 34.1	-0.6
	comp=Z,0.1nm,0.3s,baz=174,slow=9.2,SNR=3.4						
TXAR	Lajitas Array	68.61	331	P	P	00 39 40.1	+1.6
	comp=Z,0.3nm,0.8s,baz=126,slow=9.2,SNR=4.2						
TORD	Torodi Ar. Bea	84.26	70	P	P	00 41 04.1	-3.4
	comp=Z,1.4nm,0.8s,baz=235,slow=5.1,SNR=8.2						
ZALV	Zalesovo Beam	153.56	31	PKPbc	PKPbc	00 48 32.0	-1.5
	comp=Z,0.4nm,0.5s,baz=306,slow=3.4,SNR=3.1						
MKAR	Makanchi Array	156.38	47	PKPab	PKPab	00 48 56.3	-2.1
	comp=Z,0.3nm,0.6s,baz=289,slow=5.3,SNR=2.5						

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*IDC **01** 00:29:01.6±5.4, 50°.31N×114°.33W, h0^{km}, mb1 4.0/1, mb1mx3.1/33, mbtmp3.7/1, ML3.6/1, Error ellipse: s-maj=83.0km s-min=41.3km az=75.0*
*PGC **01** 00:29:01.3±0.6, 50°.20N×114°.83W, h0^{km}, ML3.0/9, 102km northeast of Cranbrook, Bc Alberta, Canada Mining explosion.*
ISC 01 00:28:60.0±0.9, **50°.14N**±0°.04×**114°.80W**±0°.04, **h0**^{km}, **n42**, σ**1^{s}.25**/57, **Alberta**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WALA	Waterton Lakes	1.23	151	P	Pg	00 29 23.5	0.0
WALA				Sg	Sn	00 29 45.1	+3.2
BSMT	Bassoo Peak	2.29	180	Pn	Pn	00 29 39.4	+0.2
BSMT				Sg	Sg	00 30 13.0	-0.6
YBMT	Yellow Bay	2.34	167	Pn	Pn	00 29 40.2	+0.5
YBMT				Sg	Sg	00 30 16.1	+1.1
SLEB	Sale Mountain	2.36	297	Pn	Pn	00 29 40.0	-0.1
SLEB				Sg	Sb	00 30 13.9	+0.8
I56US	NEWPORT INFRAS	2.42	220	*i*		00 47 00.0	
	baz=38,slow=320,SNR=4.5						
JTMT	Jette	2.42	172	Pn	Pn	00 29 41.1	+0.2
JTMT				Sg	Sg	00 30 17.5	-0.1
SWMT	Swartz Lake	2.69	168	Pn	Pn	00 29 44.9	+0.3
SWMT				Sg	Sg	00 30 26.6	+0.4
FBMT	Ferry Basin	2.75	175	Pn	Pn	00 29 45.4	0.0
FBMT				Sg	Sg	00 30 27.5	-0.7
SLMT	Seeley Lake	3.03	163	Pn	Pn	00 29 50.0	+0.7
MNB	Mounoet Dainar	3.05	314	Pn	Pn	00 29 50.2	+0.4
MNB				Sg	Sb	00 30 34.2	+1.0
EDM	Edmonton	3.22	16	Pn	Pn	00 29 49.4	-2.3
EDM				Sg	Sb	00 30 39.7	+2.0
PNT	Penticton	3.23	257	Pn	Pn	00 29 51.5	-0.4
PNT				Sn	Sn	00 30 30.4	-0.7
PNT				Sg	Sg	00 30 42.1	-1.6
C09A	Chrisman Ranch	3.27	226	Pn	Pn	00 29 52.1	-0.4
OVMT	Ovando	3.30	158	Pn	Pn	00 29 53.6	+0.6
OVMT				Sg	Sg	00 30 44.2	-1.9
BLBC	Blue River	3.38	306	Pn	Pn	00 29 54.0	-0.3
BLBC				Sg	Sb	00 30 45.3	+2.5
B08A	Colville Reser	3.46	241	Pn	Pn	00 29 54.5	-0.7
B08A				Pg	Pb	00 30 01.8	-0.3
B08A				Sn	Sn	00 30 35.9	-1.0
B08A				Sg	Sb	00 30 46.2	+1.5
BPMT	Black Pine Rid	3.81	166	Pn	Pn	00 30 01.0	+0.8
BPMT				Pg	Pg	00 30 10.7	-2.3
BPMT				Sg	Sg	00 31 01.3	-1.1
LLLB	Lillooet	4.55	279	Pn	Pn	00 30 10.0	-0.1
LLLB				Sg	Sb	00 31 20.1	+3.9
HBMT	Mount Humbug	4.59	160	Pn	Pn	00 30 11.2	+0.3
HBMT				Sg	Sg	00 31 26.7	-0.8
LRM	Limekiln Ridge	4.60	159	Pn	Pn	00 30 09.6	-1.3
LRM				Sg	Sg	00 31 25.9	-1.7
GPW	Glacier Peak	4.62	246	Pn	Pn	00 30 11.1	-0.2
LTY	Liberty	4.84	236	Pn	Pn	00 30 12.8	-1.3
LTY				Sn	Sn	00 31 10.0	-0.9
VDB	Vedder Mountai	4.88	260	Pn	Pn	00 30 14.8	+0.3
JCW	Jim Creek	5.07	250	Pn	Pn	00 30 17.6	+0.4
WSLR	Whistler	5.22	273	Pn	Pn	00 30 20.1	+0.7
GNW	Green Mountain	5.89	247	Pn	Pn	00 30 28.4	0.0
SHB	Sechelt	5.89	268	Pn	Pn	00 30 29.1	+0.6
HDW	Hoodsport	5.99	249	Pn	Pn	00 30 30.3	+0.5
LZB	Mount Lazard	6.09	259	Pn	Pn	00 30 31.9	+0.7
B926	Mesachie Lake	6.22	261	Pn	Pn	00 30 33.8	+0.8
YOUB	Youbou, Lake C	6.28	262	Pn	Pn	00 30 34.1	+0.2
UBRB	Upper Baezaeko	6.41	299	Pn	Pn	00 30 36.5	+0.7
MGB	Mount Grey	6.53	264	Pn	Pn	00 30 38.2	+0.8
BTB	Buttle Lake	6.97	269	Pn	Pn	00 30 44.8	+1.4
HILA	High Level	8.53	352	Sg	Sn	00 32 33.9	-7.6
NBC5	NorthernBC 5	8.73	331	Pn	Pn	00 31 05.6	-1.9
NBC5				Sg	Sn	00 32 38.8	-7.9
NBC6	NorthernBC 6	9.28	338	Pn	Pn	00 31 11.1	-3.8
FNBB	Fort Nelson	9.97	335	Pn	Pn	00 31 25.9	+1.5
I10CA	LAC DU BONNET	12.04	82	*i*		01 39 10.0	
	baz=270,slow=341,SNR=3.1						
YKA	Yellowknife Ar	12.38	0	Pn	Pn	00 31 52.6	-4.7
	0.4nm,0.3s,baz=181,slow=13,SNR=16						
YKA				Sn	Sn	00 34 04.7	-11
	0.1nm,0.3s,baz=174,slow=23,SNR=3.6						
YKA				Lg	Lg	00 35 15.3	
	0.1nm,0.3s,baz=153,slow=27,SNR=4.0						
YKW3	Yellowknife Ar	12.45	0	P	Pn	00 31 53.5	-4.7
EPLO	Experimental L	13.59	84	P	Pn	00 32 08.8	-5.0

GUC 01 00:29:40.9±0.8, **32°.99S**×**71°.88W**, **h29**^{km}±3^{km}, **ML3.4**, **1C-2D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA01	Torpederas	0.20	99	⇓*i*P	Pb	00 29 47.3	+0.3
VA01				*e*S	Sb	00 29 52.1	+1.0
ROCH	El Roble	0.73	89	*e*P	Pn	00 29 56.0	+0.5
ROCH				*e*S	Sn	00 30 07.0	+1.2
ROCH				IAML		00 30 09.8	
	comp=N,2µm,0.3s						
PEL	Peldehue	1.02	99	⇓*i*P	Pb	00 30 00.6	+0.6
PEL				*i* S	Sb	00 30 15.0	+2.0
PEL				IAML		00 30 19.6	
	comp=E,1µm,0.2s						
STL	Santa Lucia	1.13	113	*e*P	Pb	00 30 02.4	+0.5
STL				*e*S	Sb	00 30 17.5	+1.3
STL				IAML		00 30 26.1	
	comp=E,1µm,0.2s						
ANTU	Antumapu	1.20	119	*e*P	Pb	00 30 03.0	0.0
ANTU				*e*S	Sb	00 30 19.6	+1.6
ANTU				IAML		00 30 29.7	
	comp=N,1µm,0.6s						
CO04	Los Peladeros	1.22	39	*e*P	Pb	00 30 03.7	+0.3
CO04				*e*S	Sb	00 30 22.0	+3.1
CO04				IAML		00 30 27.8	
	comp=N,2µm,0.3s						
MT03	Universidad Ad	1.25	114	*e*P	Pb	00 30 03.8	-0.2
MT03				*e*S	Sb	00 30 22.1	+2.3
FCH	Farellones	1.38	105	*e*P	Pb	00 30 06.1	-0.1
FCH				*e*S	Sb	00 30 25.9	+2.4
FCH				IAML		00 30 30.8	
	comp=N,1µm,0.4s						
LMEL	Las Melosas	1.65	122	⇑*i*P	Pb	00 30 10.1	-0.5
LMEL				*i* S	Sb	00 30 32.8	+1.7
LMEL				IAML		00 30 36.3	
	comp=N,1µm,0.2s						

IDC 01 00:40:29.3±3.1, **7°.48S**×**128°.92E**, **h127**^{km}±42^{km}, **mb3.4**/1, **mb1 3.2**/5, **mb1mx3.0**/30, **mbtmp3.5**/5, **Error ellipse: s-maj=67.4km s-min=17.9km az=95.0**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	6.97	20	P	Pn	00 42 10.0	+1.0
	1.2nm,0.3s,baz=221,slow=19,SNR=1.3						
SIJI				S	Sn	00 43 27.0	+0.1
	0.9nm,0.3s,baz=279,slow=23,SNR=1.3						
FITZ	Fitzroy Crossi	11.03	197	P	Pn	00 43 02.3	-1.2
	0.1nm,0.3s,baz=12,slow=13,SNR=2.3						
FITZ				S	Sn	00 44 57.4	-7.7
	0.7nm,0.3s,baz=112,slow=9.2,SNR=2.6						
WRA	Warramunga Arr	13.46	158	P	Pn	00 43 34.4	-0.9
	0.2nm,0.3s,baz=343,slow=13,SNR=2.6						
WRA				S	Sn	00 45 58.8	-5.1
	0.5nm,0.3s,baz=333,slow=22,SNR=4.0						
ASAR	Alice Springs	16.79	164	P	P	00 44 18.8	+1.7
	0.1nm,0.3s,baz=335,slow=11,SNR=2.8						
ASAR				S	Sn	00 47 20.3	-3.9
	0.1nm,0.3s,baz=318,slow=20,SNR=1.4						
MKAR	Makanchi Array	68.04	327	P	P	00 51 15.1	-0.1
	0.4nm,0.4s,baz=119,slow=7.7,SNR=7.6						

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*IDC **01** 00:41:24.9±3.0, 6°.28S×128°.07E, h370^{km}±46^{km}, mb2.9/3, mb1 3.0/7, mb1mx2.9/30, mbtmp3.7/7, Error ellipse: s-maj=80.6km s-min=19.0km az=86.0*
ISC 01 00:41:23.4±0.9, **6°.32S**±0°.07×**128°.2E**±0°.2, **h353**^{km}, **n7**, σ**1^{s}.49**/10, **mb3.4**/3, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	6.23	30	P	Pn	00 42 59.1	+2.0
	2.1nm,0.3s,baz=180,slow=20,SNR=2.6						
SIJI				S	S	00 44 11.6	-1.5
	3.2nm,0.3s,baz=127,slow=20,SNR=4.4						
FITZ	Fitzroy Crossi	11.97	192	P	Pn	00 44 05.3	+0.5
	0.4nm,0.3s,baz=25,slow=14,SNR=2.0						
WRA	Warramunga Arr	14.81	157	P	Pn	00 44 38.2	0.0
	1.0nm,0.3s,baz=333,slow=12,SNR=20						
WRA				S	S	00 47 14.3	-1.3
	0.2nm,0.3s,baz=334,slow=20,SNR=3.3						
ASAR	Alice Springs	18.11	163	P	P	00 45 12.5	+1.0
	0.2nm,0.3s,baz=345,slow=9.4,SNR=3.4						
ASAR				S	S	00 48 20.2	-0.4
	0.1nm,0.3s,baz=350,slow=21,SNR=6.0						
SONM	Songino Array	57.24	343	P	P	00 50 35.6	+0.5
	0.4nm,0.7s,baz=148,slow=8.4,SNR=3.0						
MKAR	Makanchi Array	66.67	328	P	P	00 51 36.8	-0.4
	0.3nm,0.4s,baz=116,slow=7.8,SNR=4.5						
ZALV	Zalesovo Beam	70.18	334	P	P	00 51 56.1	-2.4
	0.5nm,0.5s,baz=122,slow=5.4,SNR=2.5						

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*IDC **01** 00:41:56.2±7.1, 37°.58N×71°.14E, h83^{km}±88^{km}, mb1 3.1/3, mb1mx2.8/41, mbtmp3.4/3, ML3.0/3, Error ellipse: s-maj=127.5km s-min=30.2km az=163.0*
*NNC **01** 00:41:57.6±5.4, 37°.76N×71°.30E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=51.8km s-min=28.3km az=152.0*
ISC 01 00:41:53.6±1.0, **37°.18N**±0°.08×**71°.35E**±0°.07, **h106**^{km}, **n16**, σ**1^{s}.78**/20, **5C-2D**, **Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	5.95	354	⇓P	Pn	00 43 20.6	+1.3
	0.6nm,0.3s,baz=176,slow=12,SNR=8.8						
KK31				⇑S	Sn	00 44 23.0	-3.1
	2.7nm,0.4s,baz=172,slow=23,SNR=6.5						
AAK	Ala-Archa	5.96	23	⇑P	Pn	00 43 20.6	+1.1
	1.6nm,0.3s						
AAK				⇓S	Sn	00 44 23.0	-3.6
	1.5nm,0.4s						
CHMS	Chumysh	6.37	23	⇑P	Pn	00 43 25.6	+0.7
	1.7nm,0.3s						
CHMS				⇑S	Sn	00 44 36.5	+0.2
	1.4nm,0.6s						
GEYT	Alibeck	10.54	278	P	Pn	00 44 21.8	+0.2
	0.6nm,0.3s,baz=88,slow=14,SNR=6.5						
GEYT				S	Sn	00 46 15.4	-2.1
	1.2nm,0.3s,baz=90,slow=15,SNR=4.7						
MKAR	Makanchi Array	12.58	37	P	Pn	00 44 48.8	+0.1
	0.0nm,0.3s,baz=225,slow=14,SNR=5.0						
DANN	Dangsing	13.64	127	*e*P	Pn	00 45 02.6	-0.4
	5.6nm,0.4s						
AB31	Akbulak array	14.64	329	P	Pn	00 45 15.1	-0.2
	0.1nm,0.3s,baz=163,slow=9.8,SNR=12						
KKN	Kakani	15.01	125	*e*P	Pn	00 45 19.3	-1.1
PKIN	Phulchoki	15.23	125	*e*P	Pn	00 45 22.0	-1.2
PKI	Pulchoki	15.24	125	*e*P	Pn	00 45 22.7	-0.8
	6.0nm,0.5s						
GUN	Gumba	15.33	123	*e*P	Pn	00 45 24.9	+0.3
	18nm,0.9s						
JIRN	Jiri	15.70	123	*e*P	Pn	00 45 29.0	-0.2
	7.8nm,0.3s						
AKTO	Aktyubinsk	16.34	328	⇑P	P	00 45 41.1	+3.5
	2.8nm,0.6s						
TAPN	Taplejung	16.93	121	*e*P	Pn	00 45 43.8	-0.6
ODAN	Odare	17.03	123	*e*P	Pn	00 45 43.1	-2.4
ZALV	Zalesovo Beam	19.18	25	P	P	00 46 09.9	+1.2
	0.1nm,0.3s,baz=215,slow=12,SNR=2.7						

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*IDC **01** 00:56:43.8±0.6, 3°.39S×131°.00E, h0^{km}, mb4.3/19, mb1 4.3/20, mb1mx4.2/51, mbtmp4.3/20, ML3.7/1, MS3.8/14, Ms1 3.8/14, ms1mx3.6/35, Error ellipse: s-maj=30.7km s-min=14.8km az=69.0*
*NEIC **01** 00:56:46.5±2.3, 3°.51S±0°.04×131°.08E±0°.07, h35^{km}±2^{km}, mb4.6/46, Error ellipse: s-maj=9.7km s-min=5.8km az=102.0*
*DJA **01** 00:56:48.9±0.2, 3°S±2°×13°1E±°, h72^{km}±4^{km}, M4.5/27, mb4.7/27, mB5.1/10, MLv4.5/11, Mw(mB)4.5/10*
ISC 01 00:56:46.1±0.3, **3°.51S**±0°.04×**131°.07E**±0°.03, **h30**^{km}, **n131**, σ**2^{s}.49**/127, **mb4.6**/34, **MS3.8**/14, **2C**, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	1.31	64	P	Pb	00 57 09.8	-0.4
FAKI				S	Sn	00 57 24.7	-0.3
FAKI	Fak Fak	1.31	64		Pn	00 57 09.3	+0.8
BNDI	Bandanaira	1.54	229	P	Pb	00 57 15.8	+1.8
MSAI	Masohi	2.14	274	P	Pb	00 57 22.8	-1.5
SIJI	Sorong	2.63	4	Pn	Pn	00 57 25.8	-0.8
	17nm,0.3s,baz=259,slow=23,SNR=41						
SIJI				Sn	Sn	00 57 54.2	-3.3
	42nm,0.3s,baz=283,slow=22,SNR=5.9						
KMPI	Kaimana, Papua	2.63	93	P	Pn	00 57 29.2	+2.6

KMPI				S	Sn	00 57 58.9	+1.3
AAI	Ambon	2.88	266	P	Pn	00 57 33.1	+3.2
RKPI	Ransiki, Papua	3.69	57	P	Pn	00 57 42.4	+1.3
RKPI				S	Sn	00 58 22.7	-0.9
NLAI	Namlea	3.97	274	P	Pn	00 57 48.4	+3.4
NLAI				S	Sn	00 58 34.9	+4.3
SAUI	Saumlaki	4.45	177	Pn	Pn	00 57 52.8	+1.1
LBMI	Labuha	4.57	309	P	Pn	00 57 54.1	+0.9
LBMI				S	Sn	00 58 45.8	+0.5
SANI	Sanana	5.28	286	P	Pn	00 58 02.8	-0.2
	0.5nm1μm92nm,1.0s						
SANI				S	Sn	00 58 59.5	-3.4
	0.5nm1μm92nm,1.0s						
BAKI	Biak	5.53	66	P	Pn	00 58 07.3	+0.8
	175nm,0.6s						
TNTI	Ternate	5.64	319	Pn	Pn	00 58 07.8	-0.1
LUWI	Luwuk	8.64	286	P	Pn	00 58 49.8	+0.5
	4μm89nm,0.9s						
LUWI	Luwuk	8.64	286		Pn	00 58 49.0	-0.3
BBSI	Bau Bau	8.70	257	P	Pn	00 58 54.9	+4.9
	309nm32nm,1.1s						
GENI	Genyem	9.13	85	P	Pn	00 58 57.3	+1.4
	40nm,0.6s						
SOEI	Soe	9.17	227	P	Pn	00 59 02.4	+5.8
	1μm123nm,1.1s						
SOEI	Soe	9.17	227		Pn	00 58 57.0	+0.4
MTN	Manton Dam	9.28	180		Pn	00 58 59.1	+1.2
MRSI	Marisa	9.95	293	P	Pn	00 59 08.0	+0.9
	45nm,0.9s						
MMRI	Maumere	10.15	239	Pn	Pn	00 59 10.4	+0.5
EDFI	Ende, Flores	10.68	240	P	Pn	00 59 22.9	+5.6
	19nm,1.3s						
BNSI	Bone	10.97	265	P	Pn	00 59 25.9	+4.7
	28nm,1.1s						
BKSI	Bulukumba	11.06	260	P	Pn	00 59 26.1	+3.7
	753nm28nm,1.2s						
TTSI	Tana Toraja	11.24	272	P	Pn	00 59 37.5	+13
SPSI	Sidrap Palu	11.29	267	P	Pn	00 59 29.2	+3.7
	29nm,1.0s						
KAPI	Kappang	11.38	262	Pn	Pn	00 59 30.9	+4.0
	0.7nm,0.3s,baz=244,slow=22,SNR=5.9						
MPSI	Mapaga	11.80	289	P	Pn	00 59 33.9	+1.4
	8.8nm,0.9s						
KNRA	Kununurra	12.30	190		Pn	00 59 39.2	-0.2
BASI	Baing, Sumba	12.36	237	P	Pn	00 59 45.6	+5.4
	66nm,1.3s						
PLAI	Plampang	14.23	248	P	Pn	01 00 08.1	+2.4
	602nm51nm,1.0s						
BKB	Balikpapan	14.34	279	Pn	Pn	01 00 07.6	+0.4
KBKI	Kotabaru	14.88	270	P	Pn	01 00 17.4	+2.9
	672nm12nm,1.0s						
FITZ	Fitzroy Crossi	15.44	200	Pn	Pn	01 00 20.2	-1.7
	0.9nm,0.3s,baz=16,slow=7.7,SNR=14						
FITZ				Sn	Sn	01 03 04.3	-7.9
	0.4nm,0.3s,baz=142,slow=16,SNR=1.7						
FITZ	Fitzroy Crossi	15.44	200		Pn	01 00 21.3	-0.7
COEN	Coen	15.83	132	P	Pn	01 00 28.1	+1.1
SRBI	Singaraja	16.41	253	P	Pn	01 00 35.7	+1.2
	52nm,1.0s						
WB0	Warramunga Arr	16.48	169		Pn	01 00 35.2	-0.1
WB0				IAmb	IAmb	01 00 48.5	
	comp=Z,31nm,1.1s						
WRAB	Tennant Creek	16.64	169	P	P	01 00 39.3	-0.2
WRAB				IAmb	IAmb	01 00 50.8	
	comp=Z,35nm,0.7s						
WRA	Warramunga Arr	16.64	169	Pn	Pn	01 00 36.0	-1.3
	comp=Z,0.8nm,0.3s,baz=346,slow=10,SNR=4.1						
WRA				Sn	Sn	01 03 32.1	-9.3
	comp=Z,1.6nm,0.3s,baz=343,slow=20,SNR=9.2						
WB2	Warramunga Arr	16.64	169	P	Pn	01 00 34.7	-2.7
WR0	Warramunga Arr	16.70	169		Pn	01 00 37.8	-0.3
WR0				IAmb	IAmb	01 00 50.9	
	comp=Z,28nm,0.9s						
PMG	Port Moresby	17.02	111	Pn	Pn	01 00 40.9	-1.3
JAGI	Jajag, Banyuwa	17.53	253	P	Pn	01 00 43.2	-5.3
JAGI	Jajag, Banyuwa	17.53	253		Pn	01 00 47.6	-0.9
KKM	Kota Kinabalu	17.61	303		Pn	01 00 49.7	+0.1
KKM				IAmb	IAmb	01 00 54.3	
	comp=Z,44nm,1.0s						
GRJI	Gresik	18.82	259	P	Pn	01 01 05.8	+1.6
	comp=Z,67nm,1.0s						
PWJI	Pagerwojo	19.68	256	P	P	01 01 11.4	-1.6
	comp=Z,25nm,0.9s						
SBUM	Sibu	19.75	287	P	P	01 01 13.4	-0.4
STKI	Sintang	19.90	280	P	Pn	01 01 19.1	+1.9
AS31	Alice Springs	20.23	172		Pn	01 01 20.3	-0.7
AS31				IAmb	IAmb	01 01 30.9	
	comp=Z,11nm,0.5s						
ASAR	Alice Springs	20.23	172	P	Pn	01 01 21.9	+0.9
	comp=Z,22nm,0.7s,baz=350,slow=11,SNR=98						
ASAR				S	S	01 04 57.1	-7.4
	comp=Z,1.2nm,0.7s,baz=346,slow=23,SNR=4.0						
SMRI	Semarang	20.84	259	P	P	01 01 25.6	-0.1
PSAD1	Pilbara Seismi	20.92	211	P	P	01 01 26.7	+0.3
PSAD1				IAmb	IAmb	01 01 28.3	
	comp=Z,48nm,1.1s						
KRVT	Keravat (AS076	20.92	93	LR	LR	01 10 29.6	
	comp=Z,194nm,19.0s,baz=270,slow=39						
PSAC2	Pilbara Seismi	20.97	210	P	P	01 01 27.6	+0.5
PSAB2	Pilbara Seismi	20.99	210	P	P	01 01 27.7	+0.5
PSAB2				IAmb	IAmb	01 01 30.1	
	comp=Z,36nm,1.0s						
PSAD2	Pilbara Seismi	20.99	210	P	P	01 01 26.8	-0.4
PSAD2				IAmb	IAmb	01 01 28.7	
	comp=Z,21nm,0.8s						
PSAC1	Pilbara Seismi	21.00	210	P	P	01 01 27.4	+0.1
PSAC1				IAmb	IAmb	01 01 29.1	
	comp=Z,19nm,0.7s						
PSAA2	Pilbara Seismi	21.00	210	P	P	01 01 27.2	-0.1
PSAA2				IAmb	IAmb	01 01 30.3	
	comp=Z,36nm,1.1s						
PSA00	Pilbara Seismi	21.01	210	P	P	01 01 27.4	0.0
PSA00				IAmb	IAmb	01 01 30.4	
	comp=Z,33nm,1.1s						
PSAA3	Pilbara Seismi	21.01	210	P	P	01 01 26.9	-0.6
PSAA3				IAmb	IAmb	01 01 29.3	
	comp=Z,23nm,0.6s						
PSAA1	Pilbara Seismi	21.02	210	P	P	01 01 27.2	-0.3
PSAA1				IAmb	IAmb	01 01 30.4	
	comp=Z,34nm,1.0s						
PSAB1	Pilbara Seismi	21.02	210	P	P	01 01 26.9	-0.6
PSAB1				IAmb	IAmb	01 01 30.9	
	comp=Z,20nm,0.9s						
PSAB3	Pilbara Seismi	21.02	210	P	P	01 01 27.8	+0.3
PSAB3				IAmb	IAmb	01 01 30.5	
	comp=Z,36nm,1.1s						
PSAC3	Pilbara Seismi	21.06	210	P	P	01 01 27.1	-0.8
PSAC3				IAmb	IAmb	01 01 30.9	
	comp=Z,29nm,1.0s						
PSAD3	Pilbara Seismi	21.10	210	P	P	01 01 28.0	-0.4
PSAD3				IAmb	IAmb	01 01 37.4	
	comp=Z,35nm,1.1s						
KSM	Kuching	21.33	283	P	P	01 01 32.6	+1.6
GUMO	Guam	21.82	39	LR	LR	01 10 02.5	
	comp=Z,143nm,21.0s,baz=160,slow=37						
CTA	Charters Tower	22.16	139	P	P	01 01 43.0	+3.3
	comp=Z,5.1nm,0.5s,baz=308,slow=13,SNR=3.2						
KPJI	Karang Pucung	22.36	259	P	P	01 01 40.6	-1.4
	comp=Z,24nm,0.9s						
CISI	Cisompet, Garu	23.49	259	P	P	01 01 52.4	-1.3
	comp=Z,9μmcomp=Z,52nm,0.9s						
CISI	Cisompet, Garu	23.49	259	P	P	01 01 51.8	-1.9
LEM	Lembang	23.59	261	LR	LR	01 12 52.6	
	comp=Z,474nm,19.9s,baz=72,slow=41						
CNJI	Cibinong	24.13	260	P	P	01 01 53.1	-6.6
XMIS	Christmas Isla	26.15	253	P	P	01 02 16.4	-1.6
KASI	Kota Agung	26.56	265	P	P	01 02 20.4	-1.4
	comp=Z,28nm,1.1s						
MDSI	Maura Dua	26.84	267	P	P	01 02 23.8	-0.5
FORT	Forrest	27.27	186	P	P	01 02 27.7	-0.3
MYKOM	Kota Tinggi	27.71	281	P	P	01 02 32.3	+0.2
TWG	Pinlang	27.93	340	P	P	01 02 32.6	-1.3
STKA	Stephens Creek	29.91	162	P	P	01 02 54.3	+2.9
	comp=Z,2.3nm,0.5s,baz=340,slow=12,SNR=4.6						
STKA				LR	LR	01 15 30.9	
	comp=Z,327nm,21.8s,baz=347,slow=38						
QIZ	Qiongzhong	30.63	318	P	P	01 02 56.4	-1.5
QIZ				S	S	01 07 56.6	-1.9
NWAO	Narrogin (SRO)	32.01	202	P	P	01 03 10.2	+0.3
	comp=Z,9.3nm,1.0s,baz=45,slow=4.3,SNR=4.1						
NWAO	Narrogin (SRO)	32.01	202	IAmb	IAmb	01 03 17.9	
	comp=Z,12nm,1.0s						
RPSI	Rantau Prapat	32.72	280	P	P	01 03 14.9	-1.5
CMAR	Chiang Mai Arr	38.44	306	P	P	01 04 06.9	+1.4
	comp=Z,1.6nm,0.5s,baz=132,slow=6.9,SNR=21						
CHTO	Chiang Mai	38.63	306	P	P	01 04 09.4	+2.3
CHTO				IAmb	IAmb	01 04 25.7	
	comp=Z,11nm,0.9s						
MJAR	Matsushiro Arr	40.40	9	LR	LR	01 20 27.8	
	comp=Z,112nm,19.9s,baz=200,slow=35						
KSRS	Korea Array	40.86	356	P	P	01 04 26.7	+1.4
	comp=Z,1.3nm,0.6s,baz=175,slow=9.1,SNR=4.7						
KSRS				LR	LR	01 21 51.5	
	comp=Z,82nm,19.6s,baz=173,slow=37						
XAN	Xi'an	42.79	333	P	P	01 04 48.1	+6.8
XAN				pP	sP	01 05 32.2	+39
XAN				S	S	01 11 01.2	-2.5
USRK	Ussuriysk Ar.	47.50	1	LR	LR	01 24 40.9	
	comp=Z,27nm,21.5s,baz=150,slow=35						
HHC	Hu-ho-hao-te	47.61	340	*e*P	P	01 05 20.5	+1.0
GTA	Gaotai	51.49	329	*e*P	P	01 05 50.9	+1.7
GTA				pP	pP	01 05 55.1	-3.0
GTA				sP	sP	01 05 58.2	-3.4
ULN	Ulaanbaatar	55.32	341	P	P	01 06 12.9	-4.3
ULN				IAmb	IAmb	01 06 29.3	
	comp=Z,3.4nm,0.9s						
SONM	Songino Array	55.52	340	P	P	01 06 19.8	+1.2
	comp=Z,0.4nm,0.6s,baz=165,slow=7.0,SNR=5.8						
PETK	Petropavlovsk-	60.70	18	LR	LR	01 29 32.2	
	comp=Z,45nm,21.4s,baz=240,slow=32						
WMQ	Urumqi	61.10	325	*e*P	P	01 06 57.0	-0.6
WMQ				pP	sP	01 07 08.9	-1.3
MK31	Makanchi Array	65.94	326	P	P	01 07 27.4	-2.0
MKAR	Makanchi Array	65.94	326	P	P	01 07 31.1	+1.7
	comp=Z,3.5nm,0.7s,baz=120,slow=7.7,SNR=36						
MKAR				LR	LR	01 37 47.4	
	comp=Z,108nm,18.0s,baz=106,slow=37						
MAKZ	Makanchi	66.12	325	P	P	01 07 27.7	-3.0
MAKZ				IAmb	IAmb	01 07 33.3	
	comp=Z,4.1nm,1.0s						
KSH	Kashi	66.22	316	P	P	01 07 31.3	-0.2
KSH				pP	sP	01 07 51.7	+7.3
KSH				sP	PcP	01 07 59.0	-2.6
KSH				PP	PP	01 10 04.6	+7.0
KSH				PcS		01 12 01.2	
KSH				S	S	01 16 11.5	-7.4
KSH	Kashi	66.22	316	SS	SS	01 20 29.8	-5.6
SEY	Seymchan	68.20	10	P	P	01 07 45.1	+1.7
	comp=Z,1.2nm,0.7s,baz=76,slow=15,SNR=2.9						
AAK	Ala-Archa	68.61	319	P	P	01 07 48.5	+1.8
	comp=Z,0.5nm,0.4s,baz=153,slow=16,SNR=2.7						
AAK				LR	LR	01 40 59.3	
	comp=Z,92nm,18.1s,baz=80,slow=39						
ZAA0	Zalesovo Array	68.96	333	P	P	01 07 47.7	-0.7
ZALV	Zalesovo Beam	68.96	333	P	P	01 07 49.3	+0.9
	comp=Z,2.1nm,0.8s,baz=147,slow=7.1,SNR=9.6						
ZALV				LR	LR	01 41 15.1	
	comp=Z,66nm,18.6s,baz=28,slow=39						
KURBB	Kurchatov Arra	70.13	327	P	P	01 07 57.3	+1.6
	comp=Z,4.4nm,0.8s,baz=125,slow=5.6,SNR=29						
KURK	Kurchatov	70.14	328	P	P	01 07 52.7	-3.0
KURK				IAmb	IAmb	01 07 59.1	
	comp=Z,7.4nm,0.8s						
TIXI	Tiksi	75.03	359	P	P	01 08 25.8	+1.4
	comp=Z,1.9nm,0.3s,baz=220,slow=1.1,SNR=4.0						
BVAR	Borovoye Array	75.71	327	P	P	01 08 30.3	+1.6
	comp=Z,6.1nm,0.9s,baz=126,slow=7.5,SNR=28						
BRVK	Borovoye	75.78	327	P	P	01 08 29.5	+0.4
BRVK				IAmb	IAmb	01 08 31.7	
	comp=Z,7.8nm,1.1s						
NRIK	Noril'sk	78.46	346	P	P	01 08 45.7	+1.9
	comp=Z,2.2nm,0.8s,baz=166,slow=17,SNR=3.1						
NRIK				LR	LR	01 44 33.2	
	comp=Z,91nm,21.4s,baz=102,slow=37						
GEYT	Alibeck	78.80	310	P	P	01 08 47.7	+1.3
	comp=Z,2.5nm,0.8s,baz=126,slow=2.0,SNR=7.8						
PPT	Papeete	78.81	107	LR	LR	01 43 36.0	
	comp=Z,81nm,18.9s,baz=124,slow=36						
PPT	Papeete	78.81	107	P	P	01 08 44.5	-2.3
ABKAR	Akbulak array	80.47	321	P	P	01 08 54.2	-1.0
CNBA	Chernabura Isl	81.13	33	P	P	01 08 56.1	-2.4
AKTO	Aktyubinsk	81.99	322	P	P	01 09 05.3	+2.0
	comp=Z,1.5nm,0.8s,baz=121,slow=5.9,SNR=3.8						
SYO	Syowa Base	87.28	201	⇑*e*P	P	01 09 25.2	-4.4
SYO	Syowa Base	87.28	201	⇑*e*P	P	01 09 30.0	+0.4
RAYN	Ar Rayn	87.32	294	P	P	01 09 31.2	+0.4
ILAR	Eielson Array	89.75	25	P	P	01 09 43.4	+2.1
	comp=Z,0.9nm,1.0s,baz=250,slow=5.4,SNR=3.7						
ILAR				LR	LR	01 46 47.5	
	comp=Z,30nm,19.4s,baz=267,slow=34						
KMBO	Kilima Mbogo	93.74	269	P	P	01 10 02.9	+1.6
	comp=Z,0.5nm,0.4s,baz=50,slow=7.9,SNR=2.6						
ARCES	ARCESS Array B	98.69	340	P	Pdif	01 10 22.8	+0.6
	comp=Z,1.4nm,0.8s,baz=107,slow=8.9,SNR=3.4						
TORD	Torodi Ar. Bea	129.09	284	PKP	PKiKP	01 15 53.9	+0.8
	comp=Z,0.5nm,0.6s,baz=110,slow=2.0,SNR=6.0						
TORD				SKPbc	SKPbc	01 19 13.9	+2.3
	comp=Z,1.0nm,1.0s,baz=62,slow=2.9,SNR=4.2						
CPUP	Villa Florida	149.24	165	PKPbc	PKPab	01 16 36.0	-1.0
	comp=Z,1.3nm,0.6s,baz=180,slow=1.0,SNR=3.5						
LPAZ	La Paz	152.66	137	PKPbc	PKiKP	01 16 44.9	+2.9
	comp=Z,1.4nm,0.4s,baz=201,slow=4.2,SNR=9.4						
LPAZ	La Paz	152.66	137		PKiKP	01 16 45.4	+3.4

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*IDC **01** 00:59:35.4±1.0, 56°.78N×154°.88W, h0^{km}, mb3.7/18, mb1 3.9/19, mb1mx3.7/62, mbtmp3.7/19, ML3.0/1, Error ellipse: s-maj=27.1km s-min=14.5km az=9.0*

*AEIC **01** 00:59:35.6±2.8, 56°.92N±0°.03×154°.53W±0°.06, h10^{km}±4^{km}, ML3.5/36, Error ellipse: s-maj=4.8km s-min=3.8km az=98.0*

ISC 01 00:59:36.6±1.3**, 56°.91N**±0°.03×**154°.55W**±0°.03**, h5**^{km}±8^{km}**, n68, σ1^{s}.50**/75**, mb3.9**/18**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SII	Sitkinak Islan	0.41	150		Pg	00 59 44.2	-0.3
SII				Sg	Sg	00 59 49.2	-0.7
OHAK	Old Harbor	0.76	65		Pg	00 59 49.9	-1.2
OHAK					Sg	01 00 00.4	-0.6
PLK3	Peulik 3	1.21	311		Pg	00 59 59.4	-0.5
PLK3					Sn	01 00 17.0	-0.2
CHIR	Chirikof Islan	1.25	209		Pg	00 59 59.5	-1.0
CHIR					Sb	01 00 17.1	+0.1
PLK2	Peulik 2	1.28	312		Pg	01 00 00.3	-0.9
KDAK	Kodiak Island	1.38	50	Pn	Pn	01 00 01.4	-1.1
	316nm,0.3s,baz=238,slow=9.7,SNR=832						
KDAK				Sn	Sb	01 00 20.8	0.0
	124nm,0.3s,baz=59,slow=16,SNR=20						
KDAK	Kodiak Island	1.38	50		Pn	01 00 01.1	-1.4
KDAK					Sb	01 00 21.4	+0.5
ANCK	Angle Creek	1.39	339		Pn	01 00 01.7	-1.0
PLK1	Peulik 1	1.43	310		Pn	01 00 03.1	-0.1
KAWH	Katmai	1.48	355		Pn	01 00 03.1	-1.0
KAHG	Katmai Hook Gl	1.59	0		Pn	01 00 05.5	0.0
KELA	Mount Kelaz	1.66	338		Pn	01 00 06.4	-0.1
KAHC	Katmai Hardscr	1.76	352		Pn	01 00 08.1	+0.2
CHGN	Chignik	2.22	256		Pn	01 00 14.4	+0.3
AUQ	Augustine Qik’	2.52	13		Pn	01 00 20.2	+1.9
AUW	Augustine West	2.53	13		Pn	01 00 20.3	+1.9
AU22	Augustine Moun	2.54	14		Pn	01 00 20.1	+1.5
VNNF	Veniaminof 3	2.71	259		Pn	01 00 22.5	+1.6
VNSS	Veniaminof 8	2.80	258		Pn	01 00 23.3	+1.1
VNFG	Fog Glacier, M	2.83	259		Pn	01 00 24.4	+1.8
HOM	Homer	3.15	28		Pb	01 00 35.4	+2.3
CNPM	China Poot	3.15	32		Pn	01 00 27.1	+0.2
ILW	Iliamna West	3.24	13		Pn	01 00 29.7	+1.4
BRLK	Bradley Lake	3.45	33		Pn	01 00 30.5	-0.6
BRSE	Bradley Lake S	3.48	34		Pn	01 00 30.9	-0.5
CNBA	Chernabura Isl	3.53	236		Pn	01 00 31.2	-0.9
RED	Redoubt Volcan	3.64	14		Pn	01 00 34.4	+0.7
SDPT	Sand Point	3.67	247		Pn	01 00 34.2	+0.2
RSO	Redoubt South	3.68	14		Pn	01 00 35.0	+0.6
RDWB	Redoubt West	3.70	13		Pn	01 00 35.4	+0.8
DFR	Drift River	3.82	14		Pn	01 00 37.4	+1.2
SEW	Seward	4.17	38		Pn	01 00 39.5	-1.3
SVW2	Sparrevohn	4.23	353		Pn	01 00 42.7	+0.9
SLKM	Skilak Lake	4.25	30		Pn	01 00 41.4	-0.8
CKL	Chakachamna La	4.45	14		Pn	01 00 45.6	+0.8
RC01	Rabbit Creek A	4.87	29		Pn	01 00 50.4	-0.2
SUA	Susitna One	4.97	22		Pn	01 00 51.4	-0.6
FALS	False Pass	5.40	251	Pn	Pn	01 00 57.1	-0.6
PMR	Palmer	5.46	28		Pn	01 00 57.1	-1.4
HIN	Hinchinbrook I	5.46	47		Pn	01 00 58.1	-0.6
KNK	Knik Glacier	5.49	32		Pn	01 01 00.8	+1.7
GLI	Glacier Island	5.54	41		Pn	01 01 00.4	+0.6
FID	Port Fidalgo	5.69	44		Pn	01 01 01.9	+0.1
VRDI	Verde Repeater	7.17	48		Pn	01 01 22.9	+0.7
ILAR	Eielson Array	8.72	22	Pn	Pn	01 01 42.8	-0.5
	0.4nm,0.3s,baz=202,slow=14,SNR=15						
ILAR				Sn	Sn	01 03 15.2	-6.7
	baz=208,slow=24,SNR=2.1						
ANM	Nome	9.31	330		Pn	01 01 53.6	+2.2
INK	Inuvik	14.86	31	Pn	P	01 03 10.6	-2.5
	0.1nm,0.3s,baz=232,slow=13,SNR=3.4						
INK	Inuvik	14.86	31		P	01 03 16.5	+3.5
YKA	Yellowknife Ar	20.64	58	P	P	01 04 17.7	+1.0
	0.7nm,0.7s,baz=270,slow=9.8,SNR=11						
PETK	Petropavlovsk-	27.20	282	P	P	01 05 18.9	-2.0
	1.4nm,0.5s,baz=76,slow=11,SNR=6.3						
NVAR	Mina Array Bea	30.12	112	P	P	01 05 48.1	+0.8
	0.5nm,0.6s,baz=308,slow=7.7,SNR=3.5						
PDAR	Pinedale Array	31.64	97	P	P	01 06 01.6	+0.8
	0.4nm,0.5s,baz=335,slow=4.4,SNR=6.5						
KLR	Kul'dur	42.91	292	P	P	01 07 33.9	-2.0
	0.5nm,0.4s,baz=34,slow=16,SNR=3.3						
TXAR	Lajitas Array	44.79	106	P	P	01 07 51.7	+0.4
	0.4nm,0.8s,baz=317,slow=5.3,SNR=4.8						
SCHQ	Schefferville	46.00	53	P	P	01 08 02.2	+1.6
	1.3nm,0.7s,baz=328,slow=7.8,SNR=4.8						
ARCES	ARCESS Array B	53.85	360	P	P	01 09 00.3	+0.3
	2.1nm,0.9s,baz=358,slow=6.3,SNR=3.9						
SONM	Songino Array	55.96	307	P	P	01 09 14.0	-1.6
	0.2nm,0.4s,baz=37,slow=6.3,SNR=3.1						
ZALV	Zalesovo Beam	59.38	324	P	P	01 09 38.7	-0.8
	1.1nm,0.7s,baz=37,slow=7.4,SNR=3.5						
NB2	NORSAR Subarra	61.86	8	P	P	01 09 59.6	+3.3
	comp=Z,0.7nm,0.7s,baz=349,slow=6.9						
NOA	NORSAR Array B	61.86	8	P	P	01 09 56.6	+0.3
	comp=Z,0.2nm,0.4s,baz=342,slow=7.0,SNR=3.4						
FINES	FINESS Array B	61.98	360	P	P	01 09 58.4	+1.4
	comp=Z,1.2nm,0.6s,baz=8.3,slow=8.0,SNR=14						
KURBB	Kurchatov Arra	64.23	326	P	P	01 10 11.2	-0.9
	comp=Z,0.5nm,0.6s,baz=28,slow=6.5,SNR=2.7						
BVAR	Borovoye Array	64.41	332	P	P	01 10 12.5	-0.9
	comp=Z,1.7nm,0.6s,baz=26,slow=2.7,SNR=8.0						
MKAR	Makanchi Array	66.33	321	P	P	01 10 26.2	+0.3
	comp=Z,0.5nm,0.7s,baz=52,slow=8.0,SNR=4.3						
AAK	Ala-Archa	72.60	324	P	P	01 11 06.5	+1.6
	comp=Z,0.6nm,0.5s,baz=259,slow=3.7,SNR=3.6						
AKASG	Malin Array Be	72.70	357	P	P	01 11 05.9	+0.8
	comp=Z,0.7nm,0.6s,baz=8.4,slow=5.9,SNR=5.2						
CMAR	Chiang Mai Arr	83.38	294	P	P	01 12 02.9	-2.1
	comp=Z,0.8nm,0.3s,baz=25,slow=7.9,SNR=4.1						
BRTR	Keskin Array B	83.48	354	P	P	01 12 06.9	+1.6
	comp=Z,0.5nm,0.8s,baz=64,slow=6.6,SNR=3.5						

IDC 01 01:37:14.3±2.1**, 8°.32S**×**124°.36E, h0**^{km}**, mb3.1**/1**, mb1 3.5**/3**, mb1mx3.2**/40**, mbtmp3.3**/3**, ML3.2**/2**, Error ellipse: s-maj=190.4km s-min=33.4km az=58.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.06	141	Pn	Pn	01 40 49.7	+1.1
	0.1nm,0.3s,baz=315,slow=12,SNR=2.3						
WRA				Sn	Sn	01 43 25.2	-11
	0.2nm,0.3s,baz=318,slow=28,SNR=3.0						
ASAR	Alice Springs	17.79	150	P	Pn	01 41 23.0	-0.6
	0.1nm,0.3s,baz=323,slow=11,SNR=5.8						
ASAR				S	Sn	01 44 26.9	-16
	0.1nm,0.3s,baz=322,slow=25,SNR=2.9						
MKAR	Makanchi Array	66.40	330	P	P	01 48 05.2	0.0
	0.2nm,0.7s,baz=136,slow=6.2,SNR=2.0						

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*NEIC **01** 01:55:06.7±1.3, 5°.45N±0°.09×123°.7E±0°.1, h567^{km}±6^{km}, mb4.4/47, Error ellipse: s-maj=15.8km s-min=12.9km az=71.0*

*DJA **01** 01:55:06.3±0.3, 5°N±4°×12°4E±°, h556^{km}±3^{km}, M4.5/30, mb4.3/30, mB5.1/10, MLv4.7/12, Mw(mB)4.4/10*

*IDC **01** 01:55:07.6±1.1, 5°.47N×123°.69E, h580^{km}±14^{km}, mb3.5/18, mb1 3.6/18, mb1mx3.3/42, mbtmp4.5/18, Error ellipse: s-maj=16.2km s-min=7.2km az=66.0*

ISC 01 01:55:05.5±0.4**, 5°.47N**±0°.05×**123°.69E**±0°.07**, h551**^{km}**, n114, σ1^{s}.35**/123**, mb4.3**/42**, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	2.07	42	⇑*e*P	P	01 56 18.6	+2.9
DAV	Davao City (W)	2.46	50	S	S	01 57 19.9	+3.8
	43nm,0.3s,baz=105,slow=20,SNR=4.2						
DAV	Davao City (W)	2.46	50	P	P	01 56 20.1	+2.6
KMSI	Cibinong	4.87	177	P	P	01 56 37.2	+2.8
MRSI	Marisa	5.26	199	P	P	01 56 39.4	+1.8
	0.2nm22nm,0.5s						
TNTI	Ternate	5.94	142	P	P	01 56 44.8	+1.1
TNTI	Ternate	5.94	142	P	P	01 56 44.6	+1.0
TNTI					S	01 58 04.8	+0.9
MPSI	Mapaga	6.35	217	P	P	01 56 48.6	+1.2
	0.1nm7.9nm,0.9s						
LUWI	Luwuk	6.53	188	P	P	01 56 49.7	+0.5
	0.6nm8μm62nm,0.9s						
LUWI	Luwuk	6.53	188	P	P	01 56 49.5	+0.3
APSI	Ampana	6.66	198	P	P	01 56 48.8	-1.5
	0.3nm4μm29nm,0.5s						
LBMI	Labuha	7.16	148	P	P	01 56 56.7	+1.6
	1.2nm4μm241nm,0.5s						
KKM	Kota Kinabalu	7.46	275	P	P	01 56 58.6	+0.5
SANI	Sanana	7.81	163	P	P	01 57 00.7	-0.8
	0.8nm4μm110nm,0.6s						
NLAI	Namlea	9.30	158	P	P	01 57 18.5	+2.2
	39nm,0.4s						
TTSI	Tana Toraja	9.30	205	P	P	01 57 19.3	+2.9
	2μm42nm,1.0s						
SPSI	Sidrap Palu	10.16	203	P	P	01 57 26.7	+1.6
	20nm,0.8s						
SBUM	Sibu	11.83	256	P	P	01 57 41.5	-0.8
FAKI	Fak Fak	11.94	134	P	P	01 57 44.2	+0.7
	22nm,1.1s						
KSM	Kuching	13.93	254	P	P	01 58 04.2	+0.1
EDFI	Ende, Flores	14.27	188	P	P	01 58 09.6	+2.0
	14nm,0.7s						
DLV	T Lat	16.34	294	P	P	01 58 29.3	+0.8
JAGI	Jajag, Banyuwa	16.80	215	P	P	01 58 33.5	+1.0
JAGI				IAmb	IAmb	01 58 34.5	
	comp=Z,13nm,0.8s						
TPUB	Ta-pu	17.97	351	P	P	01 58 43.9	+0.8
MTN	Manton Dam	19.64	158	P	P	01 58 58.1	-0.2
UBPT	Khong Chiam	20.38	300	P	P	01 59 05.7	+0.6
CBJI	Citeko	20.54	235	P	P	01 59 10.8	+4.2
KLSI		21.46	242	P	P	01 59 14.0	-0.8
	comp=Z,5.4nm,0.9s						
MDSI	Maura Dua	21.85	243	P	P	01 59 17.5	-0.9
	comp=Z,9.0nm,0.6s						
LWLI	Liwa	22.20	242	P	P	01 59 07.8	-14
GUMO	Guam	22.37	67	P	P	01 59 23.8	+0.8
	comp=Z,84nm,0.6s,baz=3.6,slow=16,SNR=2.6						
FITZ	Fitzroy Crossi	23.50	175	P	P	01 59 33.2	+0.2
	comp=Z,3.7nm,0.4s,baz=4.8,slow=8.8,SNR=32						
FITZ	Fitzroy Crossi	23.50	175	IAmb	IAmb	01 59 34.1	
	comp=Z,14nm,1.4s						
PSI	Prapat	24.84	265	P	P	01 59 45.5	+0.4
	comp=Z,7.8nm,0.7s,baz=63,slow=4.6,SNR=8.4						
PBKT	Sadao Pong	24.84	298	P	P	01 59 45.3	+0.4
PBKT				IAmb	IAmb	01 59 46.9	
	comp=Z,8.5nm,1.0s						
RPSI	Rantau Prapat	24.85	265	P	P	01 59 45.2	+0.1
RPSI				IAmb	IAmb	01 59 45.9	
	comp=Z,8.8nm,0.7s						
RPSI	Rantau Prapat	24.85	265	P	P	01 59 45.5	+0.5
KCSI	Kotacane, Aceh	25.91	267	P	P	01 59 53.7	-0.8
	comp=Z,23nm,1.0s						
WB0	Warramunga Arr	27.20	158	P	P	02 00 05.3	-0.3
COEN	Coen	27.32	135	P	P	02 00 06.2	-0.6
COEN				IAmb	IAmb	02 00 07.0	
	comp=Z,4.5nm,0.7s						
WRA	Warramunga Arr	27.34	158	P	P	02 00 06.8	-0.1
	comp=Z,15nm,0.5s,baz=338,slow=9.5,SNR=27						
WRA				S	S	02 04 03.4	-5.0
	comp=Z,0.4nm,0.6s,baz=330,slow=13,SNR=2.7						
WRA				ScP	ScP	02 05 54.4	-2.4
	comp=Z,0.8nm,0.5s,baz=343,slow=3.1,SNR=5.5						
WB2	Warramunga Arr	27.34	158	P	P	02 00 06.9	0.0
CM31	Chiang Mai Arr	27.38	300	P	P	02 00 07.6	+0.3
CM31				IAmb	IAmb	02 00 09.4	
	comp=Z,9.5nm,0.9s						
CMAR	Chiang Mai Arr	27.38	300	P	P	02 00 08.6	+1.2
	comp=Z,6.5nm,0.8s,baz=116,slow=7.1,SNR=30						
WR0	Warramunga Arr	27.43	157	IAmb	IAmb	02 00 08.5	
	comp=Z,14nm,1.1s						
CHTO	Chiang Mai	27.53	301	P	P	02 00 09.0	+0.4

CHTO				IAmb	IAmb	02 00 10.4	
	comp=Z,10nm,0.7s						
KMI	**Kunming**	**28.02**	**316**	P	**P**	**02 00 14.5**	**+1.4**
KMI				sP	sP	02 02 45.2	-1.7
ENH	**Enshi**	**28.07**	**333**	P	**P**	**02 00 13.7**	**+0.6**
ENH				IAmb	IAmb	02 00 15.0	
	comp=Z,9.4nm,0.7s						
AS31	**Alice Springs**	**30.63**	**161**	P	**P**	**02 00 36.0**	**+0.6**
AS31				IAmb	IAmb	02 00 37.3	
	comp=Z,5.3nm,0.5s						
ASAR	**Alice Springs**	**30.63**	**161**	P	**P**	**02 00 36.0**	**+0.6**
	comp=Z,9.7nm,0.4s,baz=339,slow=7.2,SNR=186						
ASAR				S	**S**	**02 04 57.2**	**-2.1**
	comp=Z,2.0nm,0.8s,baz=335,slow=12,SNR=12						
ASAR				ScP	**ScP**	**02 06 04.9**	**-2.4**
	comp=Z,0.8nm,0.5s,baz=342,slow=2.9,SNR=7.0						
XAN	**Xi'an**	**31.56**	**336**	P	**P**	**02 00 43.8**	**+0.6**
XAN	**Xi'an**	**31.56**	**336**	P	**P**	**02 00 43.3**	**0.0**
XAN				IAmb	IAmb	02 00 44.4	
	comp=Z,7.8nm,1.0s						
CTA	**Charters Tower**	**33.72**	**139**	P	**P**	**02 01 03.0**	**+1.2**
	comp=Z,4.3nm,0.6s,baz=333,slow=11,SNR=7.6						
MORW	**Morawa**	**35.12**	**192**	P	**P**	**02 01 13.3**	**+0.1**
MORW				IAmb	IAmb	02 01 13.6	
	comp=Z,13nm,1.1s						
FORT	**Forrest**	**36.29**	**174**	P	**P**	**02 01 23.4**	**+0.6**
HHC	**Hu-ho-hao-te**	**36.87**	**345**	*e*P	**P**	**02 01 29.8**	**+2.2**
NWAO	**Narrogin (SRO)**	**38.68**	**189**	P	**P**	**02 01 42.6**	**+0.3**
	comp=Z,5.6nm,0.4s,baz=26,slow=9.0,SNR=9.8						
NWAO	**Narrogin (SRO)**	**38.68**	**189**	P	**P**	**02 01 42.9**	**+0.5**
LSA	**Lhasa**	**39.03**	**312**	P	**P**	**02 01 46.5**	**+0.7**
BBOO	**Buckleboo**	**39.84**	**164**	P	**P**	**02 01 52.5**	**+0.7**
GTA	**Gaotai**	**40.08**	**331**	*e*P	**P**	**02 01 54.7**	**+0.9**
TAPN	**Taplejung**	**40.55**	**307**	*e*P	**P**	**02 01 58.5**	**+0.6**
	comp=Z,20nm,0.5s						
EIDS	**Eidsvold**	**40.60**	**140**	P	**P**	**02 01 58.2**	**+0.2**
EIDS				IAmb	IAmb	02 01 59.6	
	comp=Z,16nm,1.1s						
ODAN	**Odare**	**40.60**	**306**	*e*P	**P**	**02 01 59.0**	**+0.8**
	comp=Z,44nm,0.7s						
STKA	**Stephens Creek**	**40.87**	**156**	P	**P**	**02 02 00.8**	**+0.9**
	comp=Z,11nm,0.4s,baz=333,slow=8.2,SNR=20						
STKA	**Stephens Creek**	**40.87**	**156**	P	**P**	**02 02 01.0**	**+1.0**
RAMN	**Ramite**	**41.28**	**305**	*e*P	**P**	**02 02 04.5**	**+0.9**
	comp=Z,34nm,0.7s						
JIRN	**Jiri**	**41.90**	**306**	*e*P	**P**	**02 02 09.3**	**+0.6**
	comp=Z,35nm,0.5s						
GUN	**Gumba**	**42.26**	**306**	*e*P	**P**	**02 02 12.0**	**+0.5**
	comp=Z,54nm,0.5s						
PKI	**Pulchoki**	**42.50**	**306**	*e*P	**P**	**02 02 13.3**	**0.0**
PKIN	**Phulchoki**	**42.51**	**306**	*e*P	**P**	**02 02 13.4**	**+0.1**
	comp=Z,14nm,0.6s						
KKN	**Kakani**	**42.69**	**306**	*e*P	**P**	**02 02 14.9**	**+0.2**
DMN	**Daman**	**42.76**	**305**	*e*P	**P**	**02 02 15.8**	**+0.5**
	comp=Z,30nm,0.8s						
KLR	**Kul'dur**	**44.14**	**8**	P	**P**	**02 02 25.2**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=153,slow=4.4,SNR=4.5						
DANN	**Dangsing**	**44.15**	**306**	*e*P	**P**	**02 02 26.5**	**+0.4**
	comp=Z,102nm,0.6s						
ULN	**Ulaanbaatar**	**44.58**	**344**	P	**P**	**02 02 29.3**	**+0.4**
ULN				IAmb	IAmb	02 02 30.6	
	comp=Z,11nm,1.4s						
SONM	**Songino Array**	**44.73**	**343**	P	**P**	**02 02 30.4**	**+0.4**
	comp=Z,3.1nm,0.8s,baz=158,slow=8.7,SNR=22						
SONM				PcP	**PcP**	**02 03 59.7**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=172,slow=3.9,SNR=3.5						
SONM				ScP	**ScP**	**02 06 58.0**	**-2.5**
	comp=Z,0.4nm,0.6s,baz=134,slow=4.2,SNR=2.5						
CAN	**Canberra**	**47.05**	**151**	P	**P**	**02 02 49.7**	**+2.0**
CAN				IAmb	IAmb	02 02 50.7	
	comp=Z,13nm,0.8s						
WMQ	**Urumqi**	**49.58**	**326**	*e*P	**P**	**02 03 07.8**	**+1.3**
WMQ	**Urumqi**	**49.58**	**326**	P	**P**	**02 03 07.5**	**+0.9**
WMQ				IAmb	IAmb	02 03 08.4	
	comp=Z,8.3nm,0.8s						
MK31	**Makanchi Array**	**54.42**	**326**	P	**P**	**02 03 41.6**	**+0.4**
MK31				PcP	**PcP**	**02 04 35.5**	**-0.7**
MKAR	**Makanchi Array**	**54.42**	**326**	P	**P**	**02 03 41.4**	**+0.3**
	comp=Z,6.2nm,0.5s,baz=122,slow=7.8,SNR=177						
MKAR				PcP	**PcP**	**02 04 34.4**	**-1.8**
	comp=Z,1.7nm,0.6s,baz=118,slow=4.9,SNR=8.5						
MKAR				ScP	**ScP**	**02 07 39.5**	**-2.5**
	comp=Z,0.6nm,0.5s,baz=112,slow=5.3,SNR=5.7						
NIL	**Nilore**	**54.47**	**308**	P	**P**	**02 03 41.7**	**-0.1**
NIL				IAmb	IAmb	02 03 43.7	
	comp=Z,17nm,1.4s						
MAKZ	**Makanchi**	**54.60**	**326**	P	**P**	**02 03 42.8**	**+0.4**
KSH	**Kashi**	**54.68**	**315**	P	**P**	**02 03 45.1**	**+1.8**
KSH				PcP	**PcP**	**02 04 38.1**	**+0.5**
KSH				pP	pwP	02 05 30.8	-2.3
KSH				S	**S**	**02 10 40.7**	**-1.6**
KZA	**Kyzart**	**56.30**	**318**	P	**P**	**02 03 56.1**	**+1.4**
	SNR=6.5						
UCH	**Uchtor**	**56.85**	**318**	P	**P**	**02 03 59.9**	**+1.3**
	SNR=10.0						
AAK	**Ala-Archa**	**57.05**	**318**	P	**P**	**02 03 60.0**	**+0.4**
USP	**Ospenovka**	**57.32**	**319**	P	**P**	**02 04 01.9**	**+0.6**
	SNR=8.1						
AML	**Almayashu**	**57.36**	**317**	P	**P**	**02 04 03.1**	**+1.0**
	SNR=11						
EKS2	**Erkin-Say**	**57.53**	**318**	P	**P**	**02 04 03.8**	**+0.9**
	SNR=7.3						
ZAA0	**Zalesovo Array**	**57.69**	**334**	P	**P**	**02 04 02.9**	**-0.6**
ZALV	**Zalesovo Beam**	**57.69**	**334**	P	**P**	**02 04 02.8**	**-0.7**
	comp=Z,1.9nm,0.4s,baz=134,slow=5.3,SNR=9.6						
KBL	**Kabul**	**58.06**	**308**	P	**P**	**02 04 06.6**	**-0.1**
KURK	**Kurchatov**	**58.66**	**328**	P	**P**	**02 04 10.2**	**+0.1**
KK31	**Karatay Array**	**59.90**	**317**	P	**P**	**02 04 18.9**	**+0.2**
KKAR	**Karatay Array**	**59.90**	**317**	P	**P**	**02 04 18.9**	**+0.2**
BRVK	**Borovoye**	**64.30**	**327**	P	**P**	**02 04 46.7**	**-0.2**
BRVK				IAmb	IAmb	02 04 47.7	
	comp=Z,9.4nm,1.0s						
GEYT	**Alibeck**	**67.45**	**309**	P	**P**	**02 05 07.3**	**+0.4**
	comp=Z,3.5nm,0.7s,baz=130,slow=6.2,SNR=10						
GYA0B	**ALIBECK ARRAY**	**67.45**	**309**	P	**P**	**02 05 07.1**	**+0.1**
NRIK	**Noril'sk**	**68.04**	**347**	P	**P**	**02 05 09.2**	**-0.6**
	comp=Z,4.7nm,0.5s,baz=146,slow=7.3,SNR=7.5						
ABKAR	**Akbulak array**	**68.90**	**321**	P	**P**	**02 05 15.1**	**-0.3**
ABKAR				IAmb	IAmb	02 05 15.9	
	comp=Z,6.4nm,0.7s						
ARU	**Arti**	**71.86**	**328**	P	**P**	**02 05 31.6**	**-1.1**
ARU				IAmb	IAmb	02 05 32.6	
	comp=Z,8.4nm,0.6s						
RAYN	**Ar Rayn**	**77.02**	**293**	P	**P**	**02 06 01.8**	**-0.7**
RAYN				IAmb	IAmb	02 06 02.7	
	comp=Z,8.2nm,0.8s						
AKH	**Akhalkalaki**	**79.05**	**311**	P	**P**	**02 06 13.6**	**+0.3**
KLMR	**Klimovskoe**	**82.41**	**331**	*e*P	**P**	**02 06 26.4**	**-3.6**
KLMR				AMP		02 06 33.2	
	comp=Z,27nm,2.0s						
GAZ	**Gaziantep**	**83.93**	**307**	P	**P**	**02 06 38.2**	**0.0**
GAZ				IAmb	IAmb	02 06 39.0	
	comp=Z,4.3nm,0.6s						
ILAR	**Eielson Array**	**84.84**	**25**	P	**P**	**02 06 40.6**	**-1.4**
	comp=Z,0.5nm,1.0s,baz=250,slow=5.3,SNR=3.5						
KMBO	**Kilima Mbogo**	**86.56**	**269**	P	**P**	**02 06 51.1**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=63,slow=8.9,SNR=4.3						
KMBO	**Kilima Mbogo**	**86.56**	**269**	P	**P**	**02 06 51.2**	**-0.4**
KMBO				IAmb	IAmb	02 06 52.4	
	comp=Z,6.1nm,1.4s						
BR131	**Keskin Array S**	**86.58**	**309**	P	**P**	**02 06 49.8**	**-1.3**
BRTR	**Keskin Array B**	**86.58**	**309**	P	**P**	**02 06 49.4**	**-1.7**
	comp=Z,1.3nm,0.7s,baz=120,slow=4.9,SNR=13						
FINES	**FINESS Array B**	**88.87**	**332**	P	**P**	**02 06 59.4**	**-1.7**
	comp=Z,1.6nm,0.6s,baz=328,slow=4.9,SNR=10						
TORD	**Torodi Ar. Bea**	**119.50**	**288**	PKP	**PKPdf**	**02 12 52.0**	**-1.8**
	comp=Z,0.9nm,0.7s,baz=114,slow=1.4,SNR=9.1						

IDC ***01*** *02:08:19.2±1.2, 20°.57S×169°.97E, h0^{km}, mb4.0/7, mb1 4.2/9, mb1mx4.1/25, mbtmp4.1/9, ML3.6/2, MS3.5/8, Ms1 3.5/8, ms1mx3.3/27, Error ellipse: s-maj=35.5km s-min=22.2km az=153.0*

NEIC ***01*** *02:08:25±1.2, 20°.62S±0°.09×169°.96E±0°.08, h42^{km}±8^{km}, mb4.4/7, Error ellipse: s-maj=13.9km s-min=10.9km az=161.0*

ISC 01 02:08:24.4±0.7**, 20°.65S**±0°.10×**169°.97E**±0°.09**, h35**^{km}**, n22,** σ**0^{s}.97**/20**, mb4.2**/9**, MS3.6**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.58**	**246**	Pn	**Pn**	**02 09 17.6**	**0.0**
	3.7nm,0.3s,baz=73,slow=17,SNR=31						
DZM				Sn	**Sn**	**02 10 00.5**	**+1.8**
	10nm,0.3s,baz=136,slow=22,SNR=7.2						
DZM				LR	LR	02 10 13.3	
	comp=Z,379nm,19.7s,baz=25,slow=32						
DZM	**Mont Dzumac**	**3.58**	**246**		**Pn**	**02 09 17.1**	**-0.4**
NOUC	**Port Laguerre**	**3.71**	**246**	Pn	**Pn**	**02 09 19.4**	**+0.1**
SANVU	**Saraoutou**	**5.80**	**333**	Pn	**Pn**	**02 09 48.6**	**+0.5**
MSVF	**Nonsavu**	**8.16**	**71**		**Pn**	**02 10 20.7**	**+0.2**
HNR	**Honiara**	**14.76**	**318**	LR	LR	02 16 30.2	
	comp=Z,101nm,18.5s,baz=66,slow=33						
URZ	**Urewera**	**18.61**	**162**	P	**P**	**02 12 38.8**	**+0.1**
	0.2nm,0.3s,baz=311,slow=3.2,SNR=2.9						
URZ				LR	LR	02 18 21.7	
	comp=Z,192nm,20.7s,baz=301,slow=32						
AFI	**Afiamalu**	**18.66**	**72**	LR	LR	02 18 09.0	
	comp=Z,210nm,21.8s,baz=294,slow=32						
CTA	**Charters Tower**	**22.24**	**267**	P	**P**	**02 13 18.5**	**+0.2**
	4.5nm,0.8s,baz=102,slow=18,SNR=2.1						
STKA	**Stephens Creek**	**27.72**	**240**	P	**P**	**02 14 09.3**	**-0.3**
	1.9nm,0.7s,baz=67,slow=13,SNR=3.0						
STKA				LR	LR	02 25 05.1	
	comp=Z,196nm,18.1s,baz=31,slow=36						
RAR	**Rarotonga**	**28.25**	**97**	LR	LR	02 23 00.6	
	comp=Z,63nm,21.5s,baz=280,slow=31						
WRAB	**Tennant Creek**	**33.38**	**265**	P	**P**	**02 15 00.8**	**+1.1**
WRA	**Warramunga Arr**	**33.39**	**265**	P	**P**	**02 14 59.0**	**-0.8**
	0.5nm,0.8s,baz=99,slow=8.6,SNR=3.9						
WRA				LR	LR	02 26 52.9	
	comp=Z,98nm,20.4s,baz=195,slow=33						
AS31	**Alice Springs**	**33.49**	**258**	P	**P**	**02 15 00.8**	**+0.1**
AS31				IAmb	IAmb	02 15 08.7	
	comp=Z,3.0nm,0.8s						
ASAR	**Alice Springs**	**33.49**	**258**	P	**P**	**02 15 00.4**	**-0.3**
	comp=Z,3.2nm,0.7s,baz=85,slow=9.4,SNR=40						
ASAR				LR	LR	02 27 53.1	
	comp=Z,159nm,19.6s,baz=120,slow=35						
FITZ	**Fitzroy Crossi**	**41.81**	**266**	P	**P**	**02 16 11.1**	**+0.1**
FITZ				IAmb	IAmb	02 16 19.8	
	comp=Z,11nm,0.9s						
QSPA	**South Pole Qui**	**69.42**	**180**	P	**P**	**02 19 29.4**	**+0.7**
RPSI	**Rantau Prapat**	**73.30**	**279**	P	**P**	**02 19 50.0**	**-2.8**
CMAR	**Chiang Mai Arr**	**79.71**	**294**	P	**P**	**02 20 30.1**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=134,slow=3.9,SNR=4.0						
SONM	**Songino Array**	**88.75**	**323**	P	**P**	**02 21 13.8**	**-0.7**
	comp=Z,0.5nm,0.9s,baz=131,slow=4.4,SNR=3.1						
NVAR	**Mina Array Bea**	**89.21**	**48**	P	**P**	**02 21 17.5**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=230,slow=8.6,SNR=5.9						
GERES	**GERESS Array B**	**146.05**	**332**	PKPbc	**PKPdf**	**02 27 59.8**	**0.0**
	comp=Z,0.9nm,0.5s,baz=33,slow=2.8,SNR=6.8						

IDC 01 02:11:15.9±3.5**, 18°.41S**×**177°.35W, h0**^{km}**, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.6**/27**, mbtmp3.5**/3**, Error ellipse: s-maj=408.5km s-min=37.0km az=159.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.53**	**260**	P	P	02 19 37.5	-0.1
	0.4nm,0.5s,baz=97,slow=7.2,SNR=3.1						
ASAR	**Alice Springs**	**45.62**	**255**	P	P	02 19 38.3	-0.2
	0.9nm,0.8s,baz=87,slow=8.5,SNR=5.8						
TXAR	**Lajitas Array**	**85.42**	**57**	P	P	02 23 55.8	0.0
	0.1nm,0.6s,baz=215,slow=6.2,SNR=1.7						

NEIC ***01*** *02:14:11.6±2.2, 18°.98N±0°.07×69°.55W±0°.05, h108^{km}±12^{km}, Md4.1/26(RSPR), Error ellipse: s-maj=10.1km s-min=6.4km az=178.0*

RSPR ***01*** *02:14:14.0, 19°.46N×68°.75W, h221^{km}±3^{km}, MD4.1/12*

OSPL ***01*** *02:14:16.3±3.5, 18°.64N×69°.69W, h79^{km}±24^{km}, ML3.5*

ISC 01 02:14:12.6±0.9**, 18°.86N**±0°.06×**69°.65W**±0°.03**, h96**^{km}±9^{km}**, n76,** σ**2^{s}.31**/87**, 12C-1D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DR12	**Loma Pena Alta**	**0.27**	**106**		Pn	02 14 21.7	-5.0
SDD	**Santo Domingo**	**0.47**	**212**	*i* P	**Pn**	**02 14 26.7**	**-1.1**
SDD				*e*S	**Sn**	**02 14 36.9**	**-2.3**
SDD	**Santo Domingo**	**0.47**	**212**		**Pn**	**02 14 26.7**	**-1.1**
BANI	**BANI**	**0.82**	**235**		**Pn**	**02 14 30.6**	**-0.3**
SC01	**Santiago de lo**	**1.16**	**299**	*i* P	**Pn**	**02 14 35.3**	**+0.7**
SC01				*e*S	**Sn**	**02 14 53.4**	**+2.2**
SC01				IAML		02 15 00.8	
	comp=Z,598nm,0.4s						
SC01	**Santiago de lo**	**1.16**	**299**		**Pn**	**02 14 35.3**	**+0.7**
SC01					**Sn**	**02 14 53.0**	**+1.8**
PCDR	**Punta Cana, DR**	**1.25**	**106**	*i* P	**Pn**	**02 14 36.0**	**+0.4**
PCDR				IAML		02 14 57.4	
	comp=Z,1µm,0.3s						
PCDR	**Punta Cana, DR**	**1.25**	**106**		**Pn**	**02 14 35.8**	**+0.2**
SJM1	**San Juan de la**	**1.49**	**268**	*i* P	**Pn**	**02 14 40.0**	**+1.5**
SJM1				*e*S	**Sn**	**02 14 58.3**	**+0.1**
LOBA1	**Barahona**	**1.56**	**241**	*i* P	**Pn**	**02 14 38.1**	**-1.2**
LOBA1				*e*S	**Sn**	**02 14 57.9**	**-1.8**
LOBA1				IAML		02 14 59.7	
	comp=Z,682nm,0.4s						
SDDR	**Presa de Saban**	**1.56**	**275**	*i* P	**Pn**	**02 14 40.9**	**+1.5**
SDDR				*e*S	**Sn**	**02 15 02.5**	**+2.7**
SDDR				IAML		02 15 09.5	
	comp=Z,364nm,0.3s						
SDDR	**Presa de Saban**	**1.56**	**275**		**Pn**	**02 14 40.8**	**+1.5**
AGPR	**Aguadilla, PR**	**2.44**	**99**	*i* P	**Pn**	**02 14 52.7**	**+2.0**
AGPR				*e*S	**Sn**	**02 15 22.8**	**+2.7**
AGPR				IAML		02 15 35.0	
	comp=Z,223nm,0.3s						
AGPR	**Aguadilla, PR**	**2.44**	**99**	⇑*e*P	**Pn**	**02 14 53.5**	**+2.7**
AGPR	**Aguadilla, PR**	**2.44**	**99**	*e*S	**Sn**	**02 15 23.6**	**+3.5**
AGPR	**Aguadilla, PR**	**2.44**	**99**		**Sn**	**02 15 23.6**	**+3.5**
AGPR	**Aguadilla, PR**	**2.44**	**99**		**Pn**	**02 14 51.2**	**+0.5**
MPR	**Mayaguez**	**2.47**	**105**	*i* P	**Pn**	**02 14 53.1**	**+2.0**
MPR				*e*S	**Sn**	**02 15 20.7**	**0.0**
MPR				IAML		02 15 32.4	
	comp=Z,93nm,0.5s						
MPR	**Mayaguez**	**2.47**	**105**		Pn	02 14 54.9	+3.8
CRPR	**Cabo Rojo, PR**	**2.56**	**109**	⇑*e*P	**Pn**	**02 14 55.8**	**+3.5**
CRPR	**Cabo Rojo, PR**	**2.56**	**109**	*e*S	**Sn**	**02 15 28.7**	**+5.8**
CRPR	**Cabo Rojo, PR**	**2.56**	**109**		**Sn**	**02 15 28.7**	**+5.8**
CRPR	**Cabo Rojo, PR**	**2.56**	**109**		**Pn**	**02 14 53.7**	**+1.3**
MLPR	**Magueyes Islan**	**2.63**	**109**	⇑*e*P	**Pn**	**02 14 56.9**	**+3.6**
MLPR	**Magueyes Islan**	**2.63**	**109**	*e*S	**Sn**	**02 15 30.4**	**+5.8**
MLPR	**Magueyes Islan**	**2.63**	**109**		**Pn**	**02 14 54.7**	**+1.4**
MLPR	**Magueyes Islan**	**2.63**	**109**		**Sn**	**02 15 30.4**	**+5.8**
AOPR	**Arecibo Observ**	**2.79**	**100**	⇑*e*P	**Pn**	**02 14 56.8**	**+1.2**
AOPR				*e*S	**Sn**	**02 15 30.3**	**+1.8**
AOPR	**Arecibo Observ**	**2.79**	**100**		**Pn**	**02 14 56.4**	**+0.9**
AOPR	**Arecibo Observ**	**2.79**	**100**		**Sn**	**02 15 30.3**	**+1.8**
LGNH	**Logne**	**2.82**	**263**	Pn	**Pn**	**02 14 56.0**	**+0.1**
GRTK	**Grand Turk**	**2.98**	**332**		**Pn**	**02 14 56.6**	**-1.4**
EMPR	**Esperanza - Ma**	**2.98**	**97**	⇓*e*P	**Pn**	**02 14 58.0**	**0.0**
EMPR	**Esperanza - Ma**	**2.98**	**97**	*e*S	**Sn**	**02 15 32.4**	**-0.6**
EMPR	**Esperanza - Ma**	**2.98**	**97**		**Pn**	**02 14 58.0**	**0.0**
EMPR					**Sn**	**02 15 32.4**	**-0.6**
OBIP	**Obispado Ponce**	**3.00**	**105**	⇑*e*P	**Pn**	**02 14 59.6**	**+1.4**
OBIP	**Obispado Ponce**	**3.00**	**105**	*e*S	**Sn**	**02 15 35.5**	**+2.0**
OBIP	**Obispado Ponce**	**3.00**	**105**		**Sn**	**02 15 35.5**	**+2.0**
OBIP	**Obispado Ponce**	**3.00**	**105**		**Pn**	**02 14 59.0**	**+0.7**
SJG	**San Juan**	**3.41**	**102**	*e*P	**Pn**	**02 15 05.3**	**+1.6**
SJG				*e*S	**Sn**	**02 15 45.5**	**+2.3**
SJG	**San Juan**	**3.41**	**102**		**Pn**	**02 15 02.7**	**-1.0**
GCPR	**Guaynabo City**	**3.43**	**99**	⇑*e*P	**Pn**	**02 15 03.3**	**-0.7**
GCPR	**Guaynabo City**	**3.43**	**99**	*e*S	**Sn**	**02 15 41.3**	**-2.5**
GCPR	**Guaynabo City**	**3.43**	**99**		**Sn**	**02 15 41.3**	**-2.5**
GCPR	**Guaynabo City**	**3.43**	**99**		**Pn**	**02 15 03.6**	**-0.4**
IGPR	**InterUniversit**	**3.48**	**104**	⇑*e*P	**Pn**	**02 15 04.6**	**-0.1**
IGPR				*e*S	**Sn**	**02 15 44.4**	**-0.6**
PDPR	**Patillas Dam,**	**3.54**	**103**	*e*S	**Sn**	**02 15 45.8**	**-0.8**
PDPR	**Patillas Dam,**	**3.54**	**103**	⇑*e*P	**Pn**	**02 15 05.5**	**0.0**
PDPR	**Patillas Dam,**	**3.54**	**103**		**Pn**	**02 15 05.5**	**0.0**
PDPR					**Sn**	**02 15 45.8**	**-0.8**
HUMP	**Col San Antoni**	**3.68**	**101**	*e*S	**Sn**	**02 15 47.0**	**-2.8**
HUMP	**Col San Antoni**	**3.68**	**101**	⇑*e*P	**Pn**	**02 15 06.1**	**-1.2**
HUMP	**Col San Antoni**	**3.68**	**101**		**Pn**	**02 15 06.1**	**-1.2**
HUMP	**Col San Antoni**	**3.68**	**101**		**Sn**	**02 15 47.0**	**-2.8**
HUMP	**Col San Antoni**	**3.68**	**101**		**Pn**	**02 15 07.6**	**+0.3**
MTP	**Monte Pirata**	**3.96**	**100**	*e*S	**Sn**	**02 15 53.3**	**-3.4**
MTP	**Monte Pirata**	**3.96**	**100**	⇑*e*P	**Pn**	**02 15 09.8**	**-1.4**
MTP	**Monte Pirata**	**3.96**	**100**		**Sn**	**02 15 53.3**	**-3.4**
MTP	**Monte Pirata**	**3.96**	**100**		**Pn**	**02 15 09.8**	**-1.4**
MTP	**Monte Pirata**	**3.96**	**100**		**Pn**	**02 15 11.8**	**+0.6**
CUPR	**Culebra, Puert**	**4.18**	**97**	⇑*e*P	**Pn**	**02 15 11.8**	**-2.3**
CUPR	**Culebra, Puert**	**4.18**	**97**	*e*S	**Sn**	**02 15 56.3**	**-5.6**
CUPR	**Culebra, Puert**	**4.18**	**97**		**Sn**	**02 16 03.8**	**+1.8**
CUPR	**Culebra, Puert**	**4.18**	**97**		**Pn**	**02 15 11.8**	**-2.3**
STVI	**Saint Thomas**	**4.48**	**96**	⇑*e*P	**Pn**	**02 15 15.6**	**-2.7**
STVI	**Saint Thomas**	**4.48**	**96**	*e*S	**Sn**	**02 16 03.3**	**-6.0**
STVI	**Saint Thomas**	**4.48**	**96**		**Pn**	**02 15 15.6**	**-2.7**
STVI	**Saint Thomas**	**4.48**	**96**		**Pn**	**02 15 18.8**	**+0.6**
GTBY	**Guantanamo Bay**	**5.26**	**282**	Pn	**Pn**	**02 15 27.2**	**-1.6**
URIC	**Uribia, Colomb**	**7.47**	**198**	*e*P	**Pn**	**02 15 58.5**	**-0.5**
CODC	**Agustn Codazz**	**9.61**	**203**	*e*P	**Pn**	**02 16 26.6**	**-1.4**
SDV	**Santo Domingo**	**9.96**	**186**		**Sn**	**02 18 24.0**	**+0.8**
PAMC	**Pamplona, Colo**	**11.83**	**195**	*e*P	**Pn**	**02 16 59.0**	**+0.4**
RUSC	**La Rusia**	**13.32**	**195**	Pn	**Pn**	**02 17 18.2**	**-0.2**
NORC	**Norcasia**	**14.17**	**202**	*e*P	**Pn**	**02 17 30.8**	**+1.8**
CBOC	**Ciudad Bolivar**	**14.33**	**206**	*e*P	**P**	**02 17 33.7**	**-1.7**
GUY2C	**Guyana, Caldas**	**14.66**	**203**	*e*P	**P**	**02 17 40.2**	**+0.8**

BJI ***01*** *02:16:36.4±0.0, 32°.44N×41°.04W, h16^{km}, mB5.5/11, mb5.1/15, Ms5.3/10, Ms7 5.0/10*

MOS ***01*** *02:16:37.2±0.9, 32°.23N×40°.32W, h10^{km}, mb5.4/86, MS4.8/6, Error ellipse: s-maj=7.3km s-min=4.4km az=53.5*

IDC ***01*** *02:16:37.1±0.4, 32°.22N×40°.30W, h0^{km}, mb4.5/39, mb1 4.5/39, mb1mx4.5/49, mbtmp4.5/39, MS4.4/36, Ms1 4.4/36, ms1mx4.4/38, Error ellipse: s-maj=12.3km s-min=11.2km az=174.0*

NEIC ***01*** *02:16:38.9±1.2, 32°.18N±0°.09×40°.3W±0°.1, h10^{km}±1^{km}, mb5.2/387, Error ellipse: s-maj=15.1km s-min=14.7km az=168.0*

GCMT ***01*** *02:16:39.9±0.1, 32°.36N±0°.01×40°.29W±0°.01, h12^{km}, MW5.2/143, Moment Tensor Solution. s68,c89; s143,c249; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-6.94±.10; $M_{\theta\theta}$1.55±.11; $M_{\phi\phi}$5.38±.08; $M_{r\theta}$2.18±.31; $M_{\theta\phi}$2.44±.07; $M_{\phi r}$-1.83±.26; Best double couple: $M_0$7.25100×10^{16} NP1:ϕ_s223.00000°, δ45.00000°, λ-63.00000°. NP2:ϕ_s8.00000°, δ51.00000°, λ-114.00000°. Principal axes: T 6.6060, Plg3.0000°, Azm115.0000°; N 1.2800, Plg18.0000°, Azm23.0000°; P -7.8960, Plg71.0000°, Azm214.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 02:16:39.4±0.2**, 32°.19N**±0°.05×**40°.28W**±0°.04**, h14**^{km}**, n870,** σ**1^{s}.24**/805**, mb5.2**/300**, MS4.7**/53**, 16C-25D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MACI	**Morro de la Ar**	**20.90**	**95**	P	**P**	**02 21 19.9**	**-1.7**
MACI				IAmb	IAmb	02 22 00.6	
	comp=Z,119nm,1.0s						
GBN	**Guysborough**	**21.09**	**315**	P	**P**	**02 21 24.1**	**+0.8**
DRLN	**Deer Lake**	**21.39**	**328**	P	**P**	**02 21 26.2**	**-0.3**
HAL	**Halifax**	**22.01**	**311**	P	**P**	**02 21 31.9**	**-1.3**
HAL				IAmb	IAmb	02 21 39.6	
	comp=Z,135nm,1.3s						
HAL	**Halifax**	**22.01**	**311**	P	**P**	**02 21 31.9**	**-1.3**
HAL				pmax	pmax		
	comp=Z,135nm,1.3s						
SACV	**Santiago Islan**	**22.91**	**135**	P	**P**	**02 21 43.0**	**0.0**
SACV				IAmb	IAmb	02 21 56.8	
	comp=Z,152nm,1.1s						
LMN	**Caledonia Moun**	**23.32**	**313**	P	**P**	**02 21 47.6**	**+0.6**
LMN				IAmb	IAmb	02 21 52.2	
	comp=Z,79nm,1.2s						
ANWB	**Willy Bob**	**24.21**	**238**	P	**P**	**02 21 54.3**	**-1.4**
ANWB				IAmb	IAmb	02 22 18.6	
	comp=Z,57nm,0.8s						
EMMW	**East Machias**	**24.56**	**308**	P	**P**	**02 21 58.4**	**-0.3**
EMMW				IAmb	IAmb	02 22 07.1	
	comp=Z,180nm,1.9s						
BATG	**Bathurst New B**	**24.75**	**315**	P	**P**	**02 22 01.1**	**+0.7**
G65A	**Princeton**	**24.81**	**309**	P	**P**	**02 22 01.6**	**+0.7**
G65A	**Princeton**	**24.81**	**309**	P	**P**	**02 22 03.9**	**+2.9**
	baz=112						
E64A	**Bridgewater**	**25.46**	**312**	P	**P**	**02 22 07.5**	**+0.6**
	baz=114						
F64A	**Sherman**	**25.57**	**310**	P	**P**	**02 22 09.0**	**+1.1**
F64A				IAmb	IAmb	02 22 17.6	
	comp=Z,112nm,1.8s						
F64A	**Sherman**	**25.57**	**310**	P	**P**	**02 22 09.0**	**+1.1**
	baz=112						
G64A	**Maxfield**	**25.61**	**309**	P	**P**	**02 22 10.3**	**+2.1**
	baz=111						
PQI	**Presque Isle**	**25.68**	**312**	P	**P**	**02 22 09.6**	**+0.7**
PQI				IAmb	IAmb	02 23 07.7	
	comp=Z,157nm,2.0s						
E63A	**Oxbow**	**25.84**	**312**	P	**P**	**02 22 10.6**	**+0.3**
E63A				IAmb	IAmb	02 22 18.8	
	comp=Z,111nm,1.5s						
E63A	**Oxbow**	**25.84**	**312**	P	**P**	**02 22 11.0**	**+0.7**
	baz=114						
D63A	**Stockholm**	**25.89**	**313**	P	**P**	**02 22 11.4**	**+0.6**
	baz=115						
F63A	**Nahmakanta, Br**	**26.00**	**310**	P	**P**	**02 22 13.2**	**+1.3**
F63A				IAmb	IAmb	02 22 19.4	
	comp=Z,114nm,1.6s						
F63A	**Nahmakanta, Br**	**26.00**	**310**	P	**P**	**02 22 12.8**	**+1.0**
	baz=111						
CUPR	**Culebra, Puert**	**26.42**	**244**	P	**P**	**02 22 14.9**	**-0.8**
D62A	**Allapoint, All**	**26.50**	**313**	P	**P**	**02 22 17.8**	**+1.6**
	baz=114						
GCPR	**Guaynabo City**	**27.03**	**245**	P	**P**	**02 22 19.9**	**-1.4**
GCPR				IAmb	IAmb	02 22 47.4	
	comp=Z,74nm,1.7s						
PDPR	**Patillas Dam,**	**27.16**	**245**	P	**P**	**02 22 22.3**	**-0.2**
PDPR				IAmb	IAmb	02 22 35.4	
	comp=Z,46nm,1.2s						
SJG	**San Juan**	**27.20**	**245**	LR	LR	02 30 58.3	
	comp=Z,507nm,21.3s,baz=66,slow=32						
D61A	**St Aubert, Com**	**27.26**	**312**	P	**P**	**02 22 26.1**	**+3.0**
	baz=113						
PESTR	**Estremoz**	**27.33**	**67**	P	**P**	**02 22 23.0**	**-0.9**
F61A	**St Evariste**	**27.34**	**309**	P	**P**	**02 22 26.4**	**+2.6**
	baz=110						
OBIP	**Obispado Ponce**	**27.59**	**246**	P	**P**	**02 22 24.9**	**-1.4**
OBIP				IAmb	IAmb	02 22 35.7	
	comp=Z,102nm,1.8s						
F60A	**Warwick**	**27.97**	**309**	P	**P**	**02 22 30.2**	**+0.7**
	baz=108						
PAL	**Palisades**	**28.26**	**298**	P	**P**	**02 22 31.6**	**-0.5**
PAL				IAmb	IAmb	02 22 38.8	
	comp=Z,72nm,1.9s						
PAL	**Palisades**	**28.26**	**298**	P	**P**	**02 22 31.6**	**-0.5**
PAL				pmax	pmax		
	comp=Z,72nm,1.9s						
G59A	**Clarenceville**	**28.54**	**306**	P	**P**	**02 22 36.2**	**+1.6**
	baz=105						
BRNJ	**Basking Ridge**	**28.71**	**297**	P	**P**	**02 22 37.5**	**+1.3**
BRNJ				IAmb	IAmb	02 22 44.9	
	comp=Z,125nm,1.8s						
H59A	**Cadyville**	**28.78**	**305**	P	**P**	**02 22 37.3**	**+0.6**
	baz=104						
ODNJ	**Ogdensburg**	**28.79**	**298**	P	**P**	**02 22 37.3**	**+0.4**
ODNJ				IAmb	IAmb	02 22 44.0	
	comp=Z,86nm,1.7s						
M60A	**Port Jervis**	**28.84**	**298**	P	P	02 22 42.8	+5.5
	baz=97						
D58A	**Chemin du LacG**	**28.94**	**310**	P	**P**	**02 22 39.0**	**+0.9**
	baz=109						
E58A	**La Victoria**	**28.97**	**309**	P	**P**	**02 22 43.1**	**+4.7**
	baz=108						
H58A	**Gabriels**	**29.06**	**305**	P	**P**	**02 22 40.4**	**+1.1**
	baz=103						
J59A	**Piesco**	**29.09**	**303**	P	**P**	**02 22 38.9**	**-0.7**
N60A	**Cedar Hill Far**	**29.14**	**297**	P	**P**	**02 22 41.4**	**+1.5**
	baz=96						
G58A	**Ormstown**	**29.15**	**306**	P	**P**	**02 22 40.8**	**+0.8**
	baz=105						
R61A	**Willards**	**29.16**	**292**	P	**P**	**02 22 40.0**	**-0.1**
LUPA	**Lehigh Univers**	**29.32**	**297**	P	**P**	**02 22 42.0**	**+0.4**
O60A	**Telford**	**29.32**	**296**	P	**P**	**02 22 42.7**	**+1.2**
	baz=95						
MDP	**Montagnes des**	**29.32**	**206**	LR	LR	02 31 49.3	
	comp=Z,653nm,20.5s,baz=26,slow=31						
SCHQ	**Schefferville**	**29.40**	**328**	P	**P**	**02 22 42.3**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=134,slow=13,SNR=4.1						
SCHQ				PcP	**PcP**	**02 25 47.1**	**-0.7**
	comp=Z,4.2nm,0.9s,baz=158,slow=5.8,SNR=4.1						
SCHQ				LR	LR	02 33 28.4	
	comp=Z,3µm,20.7s,baz=140,slow=34						
SCHQ	**Schefferville**	**29.40**	**328**	P	**P**	**02 22 41.2**	**-0.9**
SCHQ				IAmb	IAmb	02 22 48.2	
	comp=Z,94nm,1.8s						
M59A	**Waymart**	**29.46**	**299**	P	**P**	**02 22 43.3**	**+0.4**
	baz=97						
E57A	**Chemin Saint G**	**29.55**	**309**	P	**P**	**02 22 44.0**	**+0.4**

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      baz=107
N59A  State Game Lan  29.65 297  P     P     02 22 45.5 +1.0
N59A                             IAmb  IAmb  02 22 51.2
      comp=Z,64nm,1.7s
N59A  State Game Lan  29.65 297  P     P     02 22 45.9 +1.4
      baz=96
TRQ   Mont Tremblant  29.77 308  P     P     02 22 45.3 -0.3
PAB   San Pablo       29.89  66  P     P     02 22 46.0 -0.7
PAB                              IAmb  IAmb  02 23 02.0
      comp=Z,105nm,1.9s
PAB   San Pablo       29.89  66  P     P     02 22 46.0 -0.7
PAB                              pmax  pmax
      comp=Z,105nm,2.0s
BINY  Binghamton      29.96 300  P     P     02 22 47.4 +0.2
BINY                             IAmb  IAmb  02 23 04.7
      comp=Z,57nm,1.8s
BINY  Binghamton      29.96 300  P     P     02 22 48.5 +1.2
      baz=98
MDT   Midelt          30.01  79  LR    LR    02 32 06.9
      comp=Z,2µm,20.6s,baz=302,slow=31
MVL   Millersville    30.02 295  P     P     02 22 47.6 -0.1
P59A  Jarrettsville   30.06 295  P     P     02 22 47.9 -0.2
      baz=93
D56A  ZEC Mazanza, M  30.14 310  P     P     02 22 48.5 -0.3
      baz=107
ESDC  Sonseca Array   30.19  65  P     P     02 22 48.6 -0.7
      comp=Z,1.2nm,0.8s,baz=256,slow=8.0,SNR=5.6
ESDC                             LR    LR    02 32 59.3
      comp=Z,449nm,18.4s,baz=250,slow=32
N58A  Sunbury         30.36 297  P     P     02 22 50.3 -0.4
SDMD  Soldier's Deli  30.36 294  P     P     02 22 51.2 +0.4
H56A  Elgin           30.55 304  P     P     02 22 53.5 +1.1
      baz=102
L57A  Andrews Acres   30.57 299  P     P     02 22 55.3 +2.6
      baz=97
M57A  Sunshine Farm,  30.71 298  P     P     02 22 54.8 +0.9
M57A  Sunshine Farm,  30.71 298  P     P     02 22 54.9 +1.1
      baz=95
T59A  Double "B" Far  30.93 289  P     P     02 22 56.5 +0.7
PECO  Prince Edward   30.95 303  P     P     02 22 56.2 +0.3
G55A  Calabogie       31.01 305  P     P     02 22 57.3 +0.9
      baz=102
O57A  Amberson        31.01 296  P     P     02 22 58.3 +1.8
      baz=93
R58B  Mineral         31.16 291  P     P     02 22 58.8 +0.9
      baz=89
SSPA  Standing Stone  31.23 296  P     P     02 22 58.0 -0.5
D54A  Lac Fusel, La   31.42 309  P     P     02 23 00.5 +0.4
      baz=105
J55A  Hilton          31.44 301  P     P     02 23 00.5 +0.2
I55A  Frankford       31.49 303  P     P     02 23 01.7 +1.1
      baz=100
M56A  Emporium        31.51 298  P     P     02 23 00.1 -0.9
M56A                             IAmb  IAmb  02 23 07.4
      comp=Z,77nm,1.8s
E54A  Lac Daplat, Po  31.59 308  P     P     02 23 02.2 +0.6
      baz=104
O56A  Blue Knob Stat  31.73 296  P     P     02 23 02.3 -0.6
O56A                             IAmb  IAmb  02 23 07.0
      comp=Z,89nm,2.0s
U58A  Oxford          31.75 288  P     P     02 23 04.5 +1.4
      baz=86
L55A  Hinsdale        31.77 299  P     P     02 23 04.7 +1.4
      baz=96
MEDO  Medina          31.89 301  P     P     02 23 03.2 -1.0
E53A  Dumoine, Ponti  31.90 307  P     P     02 23 04.5 +0.2
      baz=103
WVNY  West Valley, N  31.91 300  P     P     02 23 04.3 -0.2
G54A  Lake Saint Pet  31.98 305  P     P     02 23 05.7 +0.6
      baz=101
ALGO  Algonquin Park  32.07 306  P     P     02 23 06.9 +1.2
      baz=102
N55A  Marion Center   32.07 297  P     P     02 23 07.4 +1.5
      baz=93
D53A  Lac Vacive, Po  32.09 309        PcP   02 25 56.1 +1.0
D53A  Lac Vacive, Po  32.09 309  P     P     02 23 06.6 +0.6
      baz=104
LSQQ  Lebel-sur-Quev  32.17 312  P     P     02 23 07.4 +0.8
      baz=108
H53A  Bobcaygeon      32.18 304  P     P     02 23 07.5 +0.7
      baz=99
VLDQ  Val d'Or        32.20 311  P     P     02 23 09.0 +2.2
VLDQ                             IAmb  IAmb  02 23 15.2
      comp=Z,46nm,1.5s
G53A  Haliburton      32.30 305  P     P     02 23 08.8 +0.9
      baz=100
U57A  Blanch          32.39 288  P     P     02 23 09.6 +0.9
      baz=86
L54A  Sinclairville   32.42 299  P     P     02 23 10.6 +1.7
      baz=95
E52A  Mattawa         32.55 307  P     P     02 23 10.6 +0.6
      baz=102
SADO  Sadowa          32.61 304  IAmb  IAmb  02 23 16.2
      comp=Z,54nm,1.6s
M54A  Oil Creek Stat  32.62 298  IAmb  IAmb  02 23 19.5
      comp=Z,66nm,1.6s
M54A  Oil Creek Stat  32.62 298  P     P     02 23 12.0 +1.3
      baz=94
V57A  Coltrane Farms  32.78 287  P     P     02 23 13.6 +1.4
      baz=85
N54A  Moraine State   32.84 297  P     P     02 23 13.5 +0.9
N54A                             IAmb  IAmb  02 23 19.4
      comp=Z,69nm,1.7s
F52A  Sundridge       32.91 306  P     P     02 23 18.2 +5.1
      baz=101
R55A  Marlinton       32.92 292  P     P     02 23 14.1 +0.7
R55A                             IAmb  IAmb  02 24 00.7
      comp=Z,34nm,1.5s
W57A  Gilead          33.03 286  P     P     02 23 14.2 -0.1
W57A  Gilead          33.03 286  P     P     02 23 16.1 +1.8
      baz=84
L53A  Girard          33.10 299  P     P     02 23 16.1 +1.3
      baz=94
E51A  G1948 Merrick   33.17 307  P     P     02 23 15.1 -0.3
      baz=102
D51A  Lot 18 Range I  33.20 308  P     P     02 23 15.5 -0.2
      baz=102
F51A  Arnstein        33.34 306  P     P     02 23 17.4 +0.5
      baz=100
GTBY  Guantanamo Bay  33.44 257  P     P     02 23 18.5 +0.5
GTBY                             IAmb  IAmb  02 23 24.8
      comp=Z,62nm,1.3s
N53A  Lisbon          33.48 297  P     P     02 23 18.3 +0.1
N53A                             IAmb  IAmb  02 23 25.0
      comp=Z,24nm,1.1s
N53A  Lisbon          33.48 297  P     P     02 23 19.6 +1.4
      baz=92
BIRD  Birdtown, Kers  33.48 285  P     P     02 23 18.2  0.0
BIRD                             IAmb  IAmb  02 23 25.8
      comp=Z,57nm,1.6s
O53A  New Philadelph  33.75 296  P     P     02 23 22.4 +1.8
      baz=91
I51A  Listowel        33.82 302  P     P     02 23 21.9 +0.8
      baz=96
P53A  Whipple         33.88 294  P     P     02 23 22.0 +0.2
P53A                             IAmb  IAmb  02 23 28.2
      comp=Z,53nm,1.6s
M52A  Chesterland     33.90 298  P     P     02 23 21.9 +0.1
V55A  Taylorsville    33.95 288  P     P     02 23 21.6 -0.7
V55A                             IAmb  IAmb  02 23 25.5
      comp=Z,48nm,1.7s
O52A  Adamsville      34.23 295  P     P     02 23 25.4 +0.6
O52A  Adamsville      34.23 295  P     P     02 23 26.1 +1.4
      baz=90
U54A  Nelsons Funny   34.37 289  P     P     02 23 25.4 -0.7
P52A  Corning         34.46 294  P     P     02 23 28.4 +1.7
      baz=89
M51A  Elyria          34.51 297  P     P     02 23 29.0 +1.9
      baz=92
D49A  Beulah Townshi  34.56 308  P     P     02 23 28.7 +1.1
      baz=101
Q52A  Bidwell         34.58 293  P     P     02 23 29.4 +1.7
      baz=88
BORG  Borgarnes       34.63  14  P     P     02 23 28.0 +0.2
      comp=Z,25nm,1.0s,baz=106,slow=0.4,SNR=3.2
N51A  Ashland         34.64 297  P     P     02 23 28.7 +0.4
N51A                             IAmb  IAmb  02 23 31.9
      comp=Z,101nm,1.9s
F49A  Sandfield       34.78 305  P     P     02 23 30.1 +0.7
      baz=98
O51A  Pataskala       34.82 295  P     P     02 23 31.5 +1.6
      baz=90
D48A  Paudash Townsh  34.85 308  P     P     02 23 31.0 +1.0
      baz=100,SNR=8.3
E48A  Lockeyer        34.98 306  P     P     02 23 32.1 +1.0
      baz=99,SNR=6.6
L50A  Kingsville      35.00 299  P     P     02 23 32.9 +1.5
      baz=92
ACSO  Alum Creek Sta  35.10 295  P     P     02 23 32.8 +0.5
ACSO                             IAmb  IAmb  02 23 35.0
      comp=Z,104nm,1.9s
ACSO  Alum Creek Sta  35.10 295  P     P     02 23 33.8 +1.5
      baz=90
I49A  Point Hope      35.13 302  P     P     02 23 33.1 +0.6
I49A                             IAmb  IAmb  02 23 40.5
      comp=Z,31nm,1.2s
I49A  Point Hope      35.13 302  P     P     02 23 33.6 +1.1
      baz=95
M50A  Fremont         35.16 298  P     P     02 23 34.0 +1.3
      baz=91
P51A  Williamsport    35.18 294  IAmb  IAmb  02 23 35.4
      comp=Z,101nm,1.9s
P51A  Williamsport    35.18 294  P     P     02 23 34.3 +1.4
      baz=88
F48A  Evansville      35.19 305  P     P     02 23 34.0 +1.1
      baz=98,SNR=8.4
N50A  Nevada          35.23 296  P     P     02 23 34.9 +1.6
      baz=90
V53A  Saluda          35.26 288  P     P     02 23 34.6 +0.9
V53A                             IAmb  IAmb  02 23 36.5
      comp=Z,67nm,2.0s
V53A  Saluda          35.26 288  P     P     02 23 34.7 +0.9
      baz=83
J49A  Marlette        35.31 301  P     P     02 23 35.4 +1.4
      baz=94
Q51A  Peebles         35.41 293  P     P     02 23 36.4 +1.4
      baz=88
BG3   Lake Jocassee   35.45 286  P     P     02 23 35.8 +0.5
K49A  Clarkson        35.51 300  P     P     02 23 38.0 +2.2
      baz=93
H48A  Harrisville     35.56 303  P     P     02 23 37.2 +1.1
      baz=96
URIC  Uribia, Colomb  35.57 242  P     P     02 23 37.0 +0.5
O50A  Cable           35.59 295  P     P     02 23 38.1 +1.6
      baz=89
255A  Hazlehurst      35.59 281  P     P     02 23 36.6  0.0
255A                             IAmb  IAmb  02 24 19.9
      comp=Z,90nm,1.5s
R51A  Hillsboro       35.64 292  P     P     02 23 38.5 +1.6
      baz=86
AAM   Ann Arbor       35.64 299  P     P     02 23 37.1 +0.3
      baz=92
S51A  Beattyville     35.69 291  P     P     02 23 39.0 +1.6
      baz=86
D47A  Chapleau        35.70 307  P     P     02 23 38.1 +0.8
      baz=99,SNR=8.5
L49A  Milan           35.72 299  P     P     02 23 39.3 +1.8
      baz=92
E47A  Iron Bridge     35.73 306  P     P     02 23 38.6 +1.0
      baz=98,SNR=9.4
P50A  Jamestown       35.74 294  P     P     02 23 38.6 +0.8
      baz=88,SNR=6.0
TZTN  Tazewell        35.76 289  P     P     02 23 38.2 +0.2
TZTN                             IAmb  IAmb  02 23 45.6
      comp=Z,98nm,1.9s
TZTN  Tazewell        35.76 289  P     P     02 23 39.6 +1.6
      baz=84
J48A  Bridge Port     35.78 301  IAmb  IAmb  02 23 44.4
      comp=Z,23nm,0.8s
J48A  Bridge Port     35.78 301  P     P     02 23 39.0 +1.0
      baz=93
I48A  Sherman Twp     35.78 302  P     P     02 23 39.4 +1.4
      baz=94
M49A  Liberty Center  35.86 298  P     P     02 23 40.0 +1.2
      baz=91
V52A  Sevierville     35.87 288  P     P     02 23 39.1 +0.1
V52A  Sevierville     35.87 288  P     P     02 23 40.0 +1.0
      baz=83
Q50A  Georgetown      35.92 293  P     P     02 23 40.8 +1.5
      baz=87
061Z  Ochoppi         35.92 271  P     P     02 23 39.0 -0.4
G47A  Hillman         35.98 304  P     P     02 23 40.9 +1.1
      baz=96
K48A  Perry           36.00 300  P     P     02 23 40.7 +0.8
      baz=92
T51A  Gray            36.03 290  P     P     02 23 41.9 +1.6
      baz=84
TKL   Tuckaleechee C  36.04 288  P     P     02 23 40.8 +0.4
TKL                              IAmb  IAmb  02 23 47.8
      comp=Z,105nm,2.0s
TKL   Tuckaleechee C  36.04 288  P     P     02 23 40.8 +0.4
TKL                              pmax  pmax
      comp=Z,105nm,2.0s
GOGA  Godfrey         36.13 284  P     P     02 23 41.9 +0.7
GOGA                             IAmb  IAmb  02 24 09.3
      comp=Z,58nm,1.9s
GOGA  Godfrey         36.13 284  P     P     02 23 41.9 +0.7
GOGA                             pmax  pmax
      comp=Z,58nm,1.9s
GOGA  Godfrey         36.13 284  P     P     02 23 44.0 +2.8
      baz=80
O49A  Covington       36.14 295  P     P     02 23 41.4 +0.2
O49A  Covington       36.14 295  P     P     02 23 42.2 +1.0
      baz=89
H47A  Mio             36.17 303  P     P     02 23 42.9 +1.5
      baz=95
FRB   Frobisher Bay   36.20 339  P     P     02 23 40.2 -1.2
      comp=Z,12nm,1.0s,baz=145,slow=7.0,SNR=24
L48A  N Adams         36.21 298  P     P     02 23 43.2 +1.4
      baz=91
R50A  Paris           36.23 292  P     P     02 23 43.5 +1.6
      baz=86
MTDJ  Mount Denham    36.27 257  P     P     02 23 42.8 +0.3
D46A  Sault St. Mari  36.31 307  P     P     02 23 43.6 +1.0
      baz=98,SNR=7.5
S50A  Richmond        36.33 291  P     P     02 23 44.4 +1.6
      baz=85
I47A  Gladwin         36.35 302  P     P     02 23 42.9  0.0
I47A                             IAmb  IAmb  02 23 55.3
      comp=Z,51nm,1.4s
I47A  Gladwin         36.35 302  P     P     02 23 44.3 +1.4
      baz=94
M48A  Edgerton        36.42 298  P     P     02 23 43.9 +0.4
M48A                             IAmb  IAmb  02 23 54.5
      comp=Z,92nm,1.9s
M48A  Edgerton        36.42 298  P     P     02 23 44.6 +1.1
      baz=90
SDV   Santo Domingo   36.45 237  eP    P     02 23 43.0 -1.3
SDV   Santo Domingo   36.45 237  P     P     02 23 45.1 +0.8
SDV   Santo Domingo   36.45 237  eP    P     02 23 45.5 +1.3
P49A  Miami Univ. Ec  36.46 294  P     P     02 23 44.7 +0.8
      baz=88
V51A  Loudon          36.49 288  P     P     02 23 46.0 +1.8
      baz=83
J47A  Sunmer          36.53 301  IAmb  IAmb  02 23 50.9
      comp=Z,62nm,1.4s
J47A  Sunmer          36.53 301  P     P     02 23 45.9 +1.4
      baz=92
Q49A  Aurora          36.62 293  P     P     02 23 46.7 +1.4
      baz=87
K47A  Vermontville    36.64 300  P     P     02 23 46.7 +1.3
      baz=92
N48A  Decatur         36.66 297  P     P     02 23 46.5 +0.9
      baz=89
G46A  Petoskey        36.70 304  P     P     02 23 47.5 +1.6
      baz=95,SNR=5.7
T50A  Nancy           36.74 290  P     P     02 23 47.9 +1.5
      baz=84,SNR=6.1
O48A  Farmland        36.77 296  P     P     02 23 46.9 +0.4
      baz=88
L47A  Sherwood        36.78 298  P     P     02 23 47.5 +0.8
      baz=90
R49A  Shelbyville     36.89 292  P     P     02 23 47.2 -0.3
R49A                             IAmb  IAmb  02 23 55.0
      comp=Z,80nm,1.9s
R49A  Shelbyville     36.89 292  P     P     02 23 47.3 -0.3
      baz=86
ELOV  Elorza          36.97 234  eP    P     02 23 48.4 -0.1
I46A  Reed City       37.02 302  P     P     02 23 50.7 +2.1
      baz=93
S49A  Springfield     37.02 291  P     P     02 23 49.6 +0.9
      baz=85
SOCV  Socops          37.02 237  eP    P     02 23 49.1 +0.2
M47A  Cromwell        37.10 297  P     P     02 23 50.6 +1.2
      baz=89
N47A  Urbana          37.16 297  P     P     02 23 50.1 +0.2
N47A                             IAmb  IAmb  02 24 00.7
      comp=Z,85nm,1.9s
N47A  Urbana          37.16 297  P     P     02 23 50.3 +0.5
      baz=89
F45A  CMU Biological  37.19 305  P     P     02 23 51.0 +0.9
      baz=95
K46A  Dorr            37.22 300  P     P     02 23 51.3 +1.0
      baz=91
G45A  Suttons Bay     37.24 304  P     P     02 23 50.3 -0.2
G45A                             IAmb  IAmb  02 24 02.8
      comp=Z,87nm,1.7s
G45A  Suttons Bay     37.24 304  P     P     02 23 51.8 +1.4
      baz=94
T49A  Edmonton        37.28 290  P     P     02 23 53.2 +2.2
      baz=84
W50A  Signal Mountai  37.35 287  P     P     02 23 54.3 +2.7
      baz=81
U49A  Red Boiling Sp  37.55 289  IAmb  IAmb  02 23 56.0
      comp=Z,112nm,2.0s
E44A  Grand Marais A  37.56 306  IAmb  IAmb  02 23 59.8
      comp=Z,139nm,1.9s
E44A  Grand Marais A  37.56 306  P     P     02 23 54.2 +1.0
      baz=96
UCC   Uccle           37.58  47  P     P     02 23 52.5 -0.7
UCC   Uccle           37.58  47  P     P     02 23 52.5 -0.7
UCC                              pmax  pmax
      comp=Z,38nm,1.4s
DOU   Dourbes         37.58  48  pP    P     02 23 54.0 +0.7
      comp=Z,29nm,3.1s
L46A  Eue Claire      37.60 298  P     P     02 23 54.3 +0.8
      baz=90
WCI   Wyandotte Cave  37.77 292  P     P     02 23 55.6 +0.5
WCI                              IAmb  IAmb  02 24 01.6
      comp=Z,51nm,1.6s
WCI   Wyandotte Cave  37.77 292  P     P     02 23 55.6 +0.5
WCI                              pmax  pmax
      comp=Z,51nm,1.7s
WCI   Wyandotte Cave  37.77 292  P     P     02 23 56.6 +1.5
      baz=85
SWET  Sewanee         37.85 287  P     P     02 23 56.2 +0.4
RCBR  Riachuelo       38.03 173  P     P     02 23 57.3 -0.1
RCBR  Riachuelo       38.03 173  P     P     02 23 57.3 -0.1
RCBR                             pmax  pmax
      comp=Z,37nm,1.6s
RCBR  Riachuelo       38.03 173  eP    P     02 23 56.5 -0.9
CLTN  Cedars of Leba  38.04 289  P     P     02 23 58.4 +1.0
BCLA  Clavier         38.09  48  pP    P     02 23 58.0 +0.4
      comp=Z,38nm,2.8s
Z50A  Ashland         38.18 284  P     P     02 24 00.2 +1.6
      baz=79
SFIN  Lafayette       38.24 296  P     P     02 24 00.4 +1.3
      baz=87
P46A  Rosedale        38.37 295  P     P     02 24 01.1 +1.0
P46A                             IAmb  IAmb  02 24 12.5
      comp=Z,91nm,1.9s
Y49A  Blount Mountai  38.47 285  P     P     02 24 01.4 +0.3
V48A  Smith Brothers  38.49 288  P     P     02 24 00.8 -0.3
WLF   Walferdange     38.49  49  pP    P     02 24 01.9 +0.9
WLF   Walferdange     38.49  49  P     P     02 24 00.9  0.0
WLF                              IAmb  IAmb  02 24 13.5
      comp=Z,113nm,1.7s
WLF   Walferdange     38.49  49  P     P     02 24 01.0  0.0
WLF                              pmax  pmax
      comp=Z,113nm,1.7s
T47A  Sharon Grove    38.55 290  P     P     02 24 01.7 +0.1
H43A  Windswept, Lux  38.71 302  P     P     02 24 03.0 +0.1
250A  Grady           38.73 282  P     P     02 24 03.6 +0.4
L44A  Lake County Fo  38.80 299  IAmb  IAmb  02 24 06.1
      comp=Z,44nm,1.1s
L44A  Lake County Fo  38.80 299  P     P     02 24 05.2 +1.6
      baz=89
X48A  Hartselle       38.88 286  P     P     02 24 05.0 +0.6
ECH   Echery          38.95  52  P     P     02 24 04.4 -0.5
ECH   Echery          38.95  52  P     P     02 24 04.4 -0.5
ECH                              pmax  pmax
      comp=Z,47nm,1.7s
TAMC  Tame, Arauca    38.97 236  eP    P     02 24 07.2 +1.7
SMLC  San Martn de    39.01 241  eP    P     02 24 04.6 -1.1
LRAL  Lakeview Retre  39.11 284  P     P     02 24 07.9 +1.5
      baz=78
WVT   Waverly         39.24 289  P     P     02 24 07.5 +0.1
WVT   Waverly         39.24 289  P     P     02 24 07.5 +0.1
WVT                              pmax  pmax
      comp=Z,14nm,1.1s
WVT   Waverly         39.24 289  P     P     02 24 08.7 +1.3
      baz=82
WTSB  Winterswijk     39.31  46  eP    P     02 24 08.8 +1.0
      comp=Z,64nm,1.5s,baz=265,slow=7.8
D41A  Chassel         39.41 307  P     P     02 24 08.4 -0.3
I42A  Draeger Farm,   39.52 302  P     P     02 24 08.2 -1.5
SCO   Scoresbysund    39.67  10  P     P     02 24 11.3 +0.9
SCO                              IAmb  IAmb  02 24 19.6
      comp=Z,90nm,1.8s
SCO   Scoresbysund    39.67  10  P     P     02 24 11.4 +0.9
SCO                              pmax  pmax
      comp=Z,90nm,1.8s
COWI  Conover         39.74 305  P     P     02 24 12.8 +1.3
BFO   Black Forest    39.74  52  eP    P     02 24 12.4 +0.9
      comp=Z,10nm,1.1s,baz=265,slow=7.8
BFO   Black Forest    39.74  52  P     P     02 24 12.2 +0.7
BFO                              IAmb  IAmb  02 24 23.1
      comp=Z,101nm,1.9s
BFO   Black Forest    39.74  52  P     P     02 24 12.2 +0.7
BFO                              pmax  pmax
      comp=Z,101nm,1.9s
HDIL  Hopedale        39.91 296  P     P     02 24 14.7 +1.8
      baz=86
IBBN  Ibbenburen      39.96  45  eP    P     02 24 14.4 +1.2
      comp=Z,16nm,1.0s,baz=265,slow=7.8
TNS   Taunus Mts      40.04  49  eP    P     02 24 15.5 +1.4
      comp=Z,20nm,1.3s,baz=265,slow=7.8
S44A  Carbondale      40.16 292  P     P     02 24 15.9 +0.9
S44A                             IAmb  IAmb  02 24 22.5
      comp=Z,107nm,1.8s
RUSC  La Rusia        40.26 236  eP    P     02 24 16.7  0.0
RUSC  La Rusia        40.26 236  P     P     02 24 16.4 -0.3
TUE   Stuetta         40.30  55  P     P     02 24 16.5 +0.1
TUE                              IAmb  IAmb  02 24 41.9
      comp=Z,56nm,1.4s
STU   Stuttgart       40.36  51  P     P     02 24 17.1 +0.6
STU                              IAmb  IAmb  02 24 29.3
      comp=Z,69nm,1.8s
STU   Stuttgart       40.36  51  P     P     02 24 17.2 +0.6
STU                              pmax  pmax
      comp=Z,69nm,1.8s
G40A  Rib Lake        40.46 304  P     P     02 24 17.7 +0.2
SUMG  Summit          40.47   1  P     P     02 24 17.4 -0.2
SUMG                             IAmb  IAmb  02 24 27.3
      comp=Z,70nm,1.7s
SUMG  Summit          40.47   1  P     P     02 24 17.4 -0.2
SUMG                             pmax  pmax
      comp=Z,70nm,1.7s
JFWS  Jewell Farm     40.51 300  P     P     02 24 18.4 +0.5
JFWS  Jewell Farm     40.51 300  P     P     02 24 18.4 +0.5
JFWS                             pmax  pmax
      comp=Z,49nm,1.7s
JFWS  Jewell Farm     40.51 300  P     P     02 24 19.2 +1.3
      baz=88
DAVA  Damuels         40.70  53  epP   P     02 24 20.9 +1.2
      comp=Z,31nm,2.0s
UREC  San Jos de Ur   40.78 241  eP    P     02 24 20.6 +0.1
OXF   Oxford          40.78 287  P     P     02 24 20.8 +0.5
      baz=79
PTGC  Puerto Gaitan,  40.81 234  eP    P     02 24 17.9 -2.7
PEBM  Pemiscott Bayo  40.87 290  P     P     02 24 21.6 +0.6
KEST  Kesra           40.97  71  P     P     02 24 21.5 -0.4
      comp=Z,9.9nm,0.9s,baz=164,slow=0.7,SNR=5.1
KEST                             LR    LR    02 39 42.7
      comp=Z,252nm,19.9s,baz=224,slow=34
KEST  Kesra           40.97  71  P     P     02 24 22.0 +0.1
KEST                             IAmb  IAmb  02 24 35.0
      comp=Z,124nm,1.8s
GNAR  Gosnell         41.02 289  P     P     02 24 22.7 +0.5
N41A  Harden Midland  41.08 297  IAmb  IAmb  02 24 24.9
      comp=Z,102nm,1.6s
SALO  Salr            41.09  56  P     P     02 24 21.9 -0.9
SALO                             IAmb  IAmb  02 24 56.1
      comp=Z,108nm,1.6s
UBBA  Unterbreizbach  41.10  48  eP    P     02 24 24.1 +1.5
      comp=Z,15nm,1.3s,baz=265,slow=7.8
GTTG  Gottingen       41.18  47  eP    P     02 24 24.3 +0.9
      comp=Z,5.8nm,0.9s,baz=265,slow=7.8
PBMO  Poplar Bluff    41.21 291  IAmb  IAmb  02 24 31.9
      comp=Z,55nm,1.6s
L40A  Anamosa         41.26 299  IAmb  IAmb  02 24 31.2
      comp=Z,98nm,1.8s
FETA  Feichten        41.27  54  epP   P     02 24 24.6 +0.3
      comp=Z,36nm,1.8s
RETA  Reutte          41.31  53  epP   P     02 24 26.4 +1.8
      comp=Z,22nm,1.5s
NRDL  Niedersach Rie  41.41  45  eP    P     02 24 26.2 +1.1
      comp=Z,44nm,1.2s,baz=265,slow=7.8
ZCCA  Zocca           41.41  58  P     P     02 24 24.8 -0.6
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TAM    Tamanrasset       41.44  91  P      P      02 24 26.9 +0.9
TAM                                 IAmb   IAmb   02 24 40.2
       comp=Z,111nm,2.0s
TAM    Tamanrasset       41.44  91  P      P      02 24 26.9 +0.9
TAM                                 pmax   pmax
       comp=Z,111nm,2.0s
EYMN   Ely               41.45 308  P      P      02 24 26.3 +0.6
       baz=93,SNR=9.1
CLZ    Clausthal         41.47  46 eP      P      02 24 26.5 +0.7
       comp=Z,27nm,1.2s,baz=265,slow=7.8
TIC    Toumodi           41.52 120 eP      P      02 24 26.6 +0.1
MOTA   Moosalm           41.54  53 epP     P      02 24 27.6 +1.0
       comp=Z,46nm,1.7s,SNR=7.7
SQTA   Sankt Quirin      41.60  53 epP     P      02 24 28.3 +1.3
       comp=Z,47nm,1.9s,SNR=10
DBIC   Dimbokro          41.62 120  P      P      02 24 26.6 -0.8
       comp=Z,8.4nm,0.9s,baz=286,slow=8.8,SNR=11
DBIC                                LR     LR     02 39 39.3
       comp=Z,2µm,19.5s,baz=298,slow=33
DBIC   Dimbokro          41.62 120  P      P      02 24 27.1 -0.3
DBIC   Dimbokro          41.62 120  P      P      02 24 27.1 -0.3
DBIC                                pmax   pmax
       comp=Z,23nm,1.2s
OSSC   Osservatorio P    41.63  59  IAmb   IAmb   02 24 46.2
       comp=Z,130nm,1.7s
CCM    Cathedral Cave    41.67 293  P      P      02 24 27.3 -0.2
CCM                                 IAmb   IAmb   02 24 33.4
       comp=Z,74nm,1.9s
CCM    Cathedral Cave    41.67 293  P      P      02 24 27.3 -0.2
CCM                                 pmax   pmax
       comp=Z,75nm,1.9s
CCM    Cathedral Cave    41.67 293  P      P      02 24 28.4 +0.8
       baz=82
ASSE   Asse, Remlinge    41.70  46 eP      P      02 24 28.2 +0.7
       comp=Z,24nm,1.1s,baz=265,slow=7.8
GRA1   Grafenberg Arr    41.77  50  P      P      02 24 28.6 +0.4
GRA1                                IAmb   IAmb   02 24 35.6
       comp=Z,150nm,1.9s
GRF    Grafenberg Arr    41.77  50 eP      P      02 24 29.2 +1.0
       comp=Z,123nm,1.8s,baz=265,slow=7.8
GRF    Grafenberg Arr    41.77  50  P      P      02 24 28.6 +0.4
GRF                                 pmax   pmax
       comp=Z,150nm,1.9s
BSEG   Bad Segeberg      41.78  43 eP      P      02 24 28.4 +0.3
       comp=Z,56nm,1.0s,baz=265,slow=7.8
LIC    Lamto             41.80 121 eP      P      02 24 28.4 -0.4
       comp=Z,33nm,0.9s
LIC    Lamto             41.80 121  P      P      02 24 28.4 -0.4
WATA   Walderalm         41.86  53 epP     P      02 24 30.0 +0.9
       comp=Z,26nm,1.3s,SNR=7.8
ROSC   El Rosal          41.88 237  LR     LR     02 40 27.2
       comp=Z,930nm,21.3s,baz=37,slow=34
CTI    Castel Tesino     41.88  55  IAmb   IAmb   02 24 41.8
       comp=Z,54nm,1.5s
TEOL   Teolo             41.89  56  P      P      02 24 29.2 -0.1
TEOL                                IAmb   IAmb   02 24 40.0
       comp=Z,107nm,1.7s
WTTA   Wattenberg        41.90  53 epP     P      02 24 30.6 +1.1
       comp=Z,31nm,1.3s,SNR=7.1
KIC    Kosan Boka        41.92 120 eP      P      02 24 29.4 -0.4
       comp=Z,16nm,0.8s
X43A   Marvell           41.98 287  P      P      02 24 31.3 +1.3
       baz=78
MOX    Moxa              42.11  48 eP      P      02 24 31.1 +0.1
       comp=Z,9.1nm,1.2s,baz=265,slow=7.8
SPMN   Marine on St.     42.30 304  P      P      02 24 33.4 +0.8
       baz=89
GUY2C  Guyana, Caldas    42.35 238 eP      P      02 24 33.1 -0.7
MANZ   Manzenberg        42.36  49 eP      P      02 24 35.0 +1.9
       comp=Z,13nm,1.1s,baz=265,slow=7.8
CBOC   Ciudad Bolivar    42.39 240 eP      P      02 24 34.0 +0.2
ROTZ   Rotzenmuhle       42.41  50 eP      P      02 24 34.4 +1.0
       baz=265,slow=7.8
ABTA   Abfaltersbach     42.48  54 epP     P      02 24 34.9 +0.7
       comp=Z,31nm,1.7s
GUNZ   Gunzen            42.53  49 eP      P      02 24 35.6 +1.1
       comp=Z,9.7nm,1.2s,baz=265,slow=7.8
WERN   Wernitzgruen      42.56  49 eP      P      02 24 35.6 +1.0
       comp=Z,27nm,1.3s,baz=265,slow=7.8
NKC    Novy Kostel       42.60  49 eP      P      02 24 35.9 +0.9
NKC    Novy Kostel       42.60  49 eP      P      02 24 35.9 +0.9
TANN   Tannenbergstha    42.62  49 eP      P      02 24 36.3 +1.0
       comp=Z,9.4nm,1.0s,baz=265,slow=7.8
RJOB   Jochberg          42.70  53 eP      P      02 24 36.6 +0.8
       baz=265,slow=7.8
FCAR   Ozark Folk Cen    42.71 290  IAmb   IAmb   02 24 37.7
       comp=Z,85nm,2.0s
SCIA   State Center      42.76 299  P      P      02 24 37.7 +1.3
       baz=85
KONO   Kongsberg         42.77  35 i P     P      02 24 35.6 -0.5
KONO                                pmax   pmax
       comp=Z,15nm,1.1s
TOA0   Torodi Ar. Sit    42.79 106  P      P      02 24 36.7 -0.2
TOA0                                IAmb   IAmb   02 24 49.1
       comp=Z,101nm,1.9s
TOA0   Torodi Ar. Sit    42.79 106  P      P      02 24 36.2 -0.6
       SNR=11
TORD   Torodi Ar. Bea    42.79 106  P      P      02 24 35.9 -1.0
       comp=Z,9.3nm,0.9s,baz=302,slow=9.5,SNR=35
TORD                                LR     LR     02 40 07.9
       comp=Z,1µm,21.8s,baz=320,slow=33
143A   Socs Landing,     42.80 285  IAmb   IAmb   02 24 39.3
       comp=Z,115nm,1.8s
WET    Wettzell          42.81  51 eP      P      02 24 37.0 +0.3
       comp=Z,13nm,1.3s,baz=265,slow=7.8
W41B   Gary Mavity, V    42.95 289  P      P      02 24 38.7 +0.7
       baz=78,SNR=7.7
CLL    Collm             43.04  47⇑iP      P      02 24 40.1 +1.6
       comp=Z,32nm,1.4s
CLL                                i              02 24 44.8
CLL                                i              02 24 49.8
CLL                                ePP     PP     02 26 20.0 +1.7
CLL                                eS      S      02 31 05.0 +1.3
CLL                                e              02 32 06.0
CLL                                eSSS    SSS    02 34 48.0
CLL                                 Lmax          02 37 00.0
CLL    Collm             43.04  47 eP      P      02 24 39.4 +0.9
       comp=Z,25nm,1.3s,baz=265,slow=7.8
CLL    Collm             43.04  47⇑iP      P      02 24 40.1 +1.6
CLL                                i              02 24 44.8
CLL                                eS      S      02 31 05.0 +1.3
CLL                                 pmax   pmax
       comp=Z,32nm,1.4s
KBA    Koelnbreinsper    43.06  54 epP     P      02 24 40.6 +1.6
       comp=Z,15nm,1.2s
PRAC   Prado             43.06 236 eP      P      02 24 36.7 -2.4
UALR   University of     43.10 288  IAmb   IAmb   02 24 45.2
       comp=Z,37nm,1.1s
ORTC   Ortega, Tolima    43.18 237 eP      P      02 24 37.1 -3.0
U40A   Yellville         43.21 291  P      P      02 24 41.0 +0.9
       baz=80,SNR=7.4
FBE    Freiberg          43.23  48 eP      P      02 24 40.4 +0.4
       comp=Z,13nm,1.0s,baz=265,slow=7.8
MYKA   Terra Mystica     43.26  54 epP     P      02 24 40.3 -0.1
       comp=Z,19nm,1.5s
KHC    Kasperske Hory    43.27  51 eP      P      02 24 41.0 +0.6
KHC                                epP     sP     02 24 46.0 +0.6
KHC    Kasperske Hory    43.27  51 eP      P      02 24 41.0 +0.6
KHC                                e              02 24 46.0
AQU    L'Aquila          43.28  61  P      P      02 24 41.2 +0.6
AQU    L'Aquila          43.28  61  P      P      02 24 41.2 +0.6
AQU                                 pmax   pmax
       comp=Z,28nm,1.0s
GEC2   GERESS Array S    43.34  51 eP      P      02 24 40.7 -0.4
       comp=Z,9.7nm,1.1s,baz=265,slow=7.8
GEC2   GERESS Array S    43.34  51  IAmb   IAmb   02 24 52.5
       comp=Z,91nm,1.9s
GERES  GERESS Array B    43.34  51  P      P      02 24 40.9 -0.2
       comp=Z,2.4nm,0.9s,baz=268,slow=8.0,SNR=18
GERES                               LR     LR     02 40 08.9
       comp=Z,187nm,18.9s,baz=260,slow=33
MACC   Macarena, Meta    43.47 233 eP      P      02 24 42.1 -0.3
X40A   Basin Creek Fa    43.56 288  P      P      02 24 43.7 +0.8
       baz=78
BRG    Berggiesshubel    43.60  48 eP      P      02 24 43.0  0.0
       comp=Z,56nm,1.7s
BRG                                i              02 24 53.3
       comp=Z,109nm,1.9s
BRG                                ePP     PP     02 26 21.9 -2.4
       comp=Z,8.5nm,1.3s
BRG    Berggiesshubel    43.60  48 eP      P      02 24 42.3 -0.7
       comp=Z,7.0nm,1.0s,baz=265,slow=7.8
BRG    Berggiesshubel    43.60  48 eP      P      02 24 43.0  0.0
BRG                                e              02 26 21.9
BRG                                 pmax   pmax
       comp=Z,56nm,1.7s
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BRG                                 pmax   pmax
       comp=Z,109nm,1.9s
BRG                                 pmax   pmax
       comp=Z,9.0nm,1.3s
RUE    Ruedersdorf       43.63  46 eP      P      02 24 42.6 -0.6
       comp=Z,37nm,1.1s,baz=265,slow=7.8
MOA    Molln             43.69  53 epP     P      02 24 44.4 +0.6
       comp=Z,20nm,1.4s
NAO01  NORSAR Array S    43.73  33  P      P      02 24 44.4 +0.4
NAO01                               IAmb   IAmb   02 24 54.6
       comp=Z,110nm,1.7s
Z41A   Richland Creek    43.81 286  IAmb   IAmb   02 24 47.9
       comp=Z,76nm,1.5s
Z41A   Richland Creek    43.81 286  P      P      02 24 46.4 +1.5
       baz=76
PRA    Prague            43.86  49 eP      P      02 24 46.9 +1.7
PRA    Prague            43.86  49 eP      P      02 24 46.9 +1.7
OBKA   Obir              43.89  55 epP     P      02 24 45.8 +0.2
       comp=Z,28nm,1.2s
YOTC   Yotoco, Valle     43.91 238 eP      P      02 24 44.9 -1.3
PRU    Pruhonice         43.93  50 eP      P      02 24 46.7 +1.0
PRU                                epP     sP     02 24 51.6 +0.9
PRU                                eS      S      02 31 23.8 +7.1
PRU                                 AMS    AMS    02 40 50.0
       comp=Z,800nm,18.9s
PRU    Pruhonice         43.93  50 eP      P      02 24 46.7 +1.0
PRU                                e              02 24 51.6
PRU                                eS      S      02 31 23.8 +7.1
PRU                                 MLR    MLR
       comp=Z,800nm,18.9s
NB2    NORSAR Subarra    43.95  33  P      P      02 24 45.5 -0.2
       comp=Z,253nm,3.3s,baz=253,slow=8.6
NB2    NORSAR Subarra    43.95  33  P      P      02 24 45.5 -0.2
       comp=Z,253nm,3.3s,baz=253,slow=8.6
NOA    NORSAR Array B    43.95  33  P      P      02 24 44.9 -0.8
       comp=Z,3.8nm,0.8s,baz=254,slow=7.9,SNR=9.5
NOA                                 LR     LR     02 39 44.1
       comp=Z,302nm,21.6s,baz=250,slow=32
WLAR   White Oak Lake    43.96 287  IAmb   IAmb   02 24 57.2
       comp=Z,44nm,1.1s
PVCC   Panska Ves        43.97  49 eP      P      02 24 47.1 +1.1
PVCC                                AMS    AMS    02 40 20.0
       comp=Z,1µm,14.2s
PVCC   Panska Ves        43.97  49 eP      P      02 24 47.1 +1.1
PVCC                                MLR    MLR
       comp=Z,1µm,14.2s
HHAR   Hobbs             44.08 291  IAmb   IAmb   02 24 49.1
       comp=Z,68nm,1.9s
GOPC   GO Pecny, Ondr    44.09  50 eP      P      02 24 49.0 +2.0
GOPC   GO Pecny, Ondr    44.09  50 eP      P      02 24 49.0 +2.0
MIAR   Mount Ida         44.15 288  IAmb   IAmb   02 24 50.1
       comp=Z,114nm,2.0s
MIAR   Mount Ida         44.15 288  P      P      02 24 48.5 +0.8
       baz=77,SNR=6.9
W39A   Magazine          44.17 289  IAmb   IAmb   02 24 50.0
       comp=Z,112nm,2.0s
W39A   Magazine          44.17 289  P      P      02 24 48.9 +1.0
       baz=78,SNR=5.7
SOKA   Soboth            44.22  54 epP     P      02 24 48.8 +0.6
       comp=Z,15nm,1.5s
AZU    Azuero            44.35 246 eP      P      02 24 47.5 -2.0
TEIG   Tepich            44.35 267  P      P      02 24 50.1 +0.7
TEIG                                IAmb   IAmb   02 25 00.8
       comp=Z,45nm,1.4s
U38A   Gravette          44.41 291  IAmb   IAmb   02 24 57.5
       comp=Z,35nm,1.4s
ULM    Lac du Bonnet     44.44 311  P      P      02 24 48.5 -1.2
       comp=Z,3.1nm,0.7s,baz=92,slow=8.0,SNR=8.1
ULM                                 LR     LR     02 43 57.7
       comp=Z,868nm,18.3s,baz=94,slow=37
ULM    Lac du Bonnet     44.44 311  IAmb   IAmb   02 24 59.3
       comp=Z,56nm,1.8s
FCC    Fort Churchill    44.49 323  P      P      02 24 50.4 +0.4
FCC                                 IAmb   IAmb   02 25 00.9
       comp=Z,118nm,2.0s
FCC    Fort Churchill    44.49 323  P      P      02 24 50.4 +0.4
FCC                                 pmax   pmax
       comp=Z,118nm,2.0s
ARSA   Arzberg           44.54  53 eP      P      02 24 49.9 -0.8
       comp=Z,32nm,1.8s,SNR=9.1
CONA   Conrad Observa    44.76  52 epP     P      02 24 52.5  0.0
       comp=Z,23nm,1.7s
UPC    Upice             44.89  49 eP      P      02 24 54.0 +0.6
UPC                                epP     sP     02 24 59.3 +0.9
UPC                                 AMS    AMS    02 41 30.0
       comp=Z,1µm,16.7s
UPC    Upice             44.89  49 eP      P      02 24 54.0 +0.6
UPC                                e              02 24 59.3
UPC                                 MLR    MLR
       comp=Z,1µm,16.7s
CHVC   Chvalec           44.92  49 eP      P      02 24 53.5 -0.2
OSTC   Ostas             45.02  49 eP      P      02 24 54.6 +0.1
KSP    Ksiaz             45.08  48 eP      P      02 24 56.3 +1.4
KSP    Ksiaz             45.08  48 eP      P      02 24 56.3 +1.4
DPC    Dobruska-Polom    45.09  49 eP      P      02 24 55.3 +0.3
DPC    Dobruska-Polom    45.09  49 eP      P      02 24 55.3 +0.3
DPC                                e              02 24 59.2
ECSD   EROS Data Cent    45.10 302  IAmb   IAmb   02 25 00.7
       comp=Z,39nm,1.6s
ECSD   EROS Data Cent    45.10 302  P      P      02 24 55.8 +0.7
       baz=85,SNR=7.3
KRUC   Moravsky          45.12  51 eP      P      02 24 55.6 +0.4
CLDB   Colider           45.31 202 eP      P      02 24 55.9 -1.2
SOTA   Rioblanco         45.39 236 eP      P      02 24 58.6 +0.3
TUL1   Leonard           45.63 291  P      P      02 25 00.2 +0.8
       baz=78,SNR=8.2
KSU1   Kansas State U    45.67 295  P      P      02 25 00.1 +0.4
       baz=80
NATX   Nacogdoches       45.70 285  P      P      02 25 01.4 +1.3
       baz=74
GKP    Gorka Klasztor    45.79  45 eP      P      02 25 02.0 +1.6
GKP    Gorka Klasztor    45.79  45 eP      P      02 25 02.0 +1.6
BLY    Banja Luka        45.82  57 ⇓P      P      02 25 01.2 +0.3
MORC   Moravsky Berou    45.87  50  P      P      02 25 01.2  0.0
MORC                                IAmb   IAmb   02 25 03.4
       comp=Z,36nm,1.4s
MORC   Moravsky Berou    45.87  50  P      P      02 25 01.2  0.0
MORC                                pmax   pmax
       comp=Z,36nm,1.4s
MORC   Moravsky Berou    45.87  50 eP      P      02 25 02.1 +0.9
BBAC   Balboa, Cauca     45.92 237 eP      P      02 25 01.8 -0.4
T35A   Sooner Cattle     45.99 292  IAmb   IAmb   02 25 09.9
       comp=Z,21nm,1.0s
ESTN   Estel             46.18 257  P      P      02 25 04.8 +0.7
TULEG  Thule             46.38 351  P      P      02 25 05.0 +0.2
SAML   Samuel            46.39 212  P      P      02 25 05.5  0.0
SAML   Samuel            46.39 212  P      P      02 25 05.5  0.0
SAML                                pmax   pmax
       comp=Z,110nm,2.0s
SAML   Samuel            46.39 212 eP      P      02 25 05.4 -0.2
TGUH   Tegucigalpa,Un    46.43 258 eP      P      02 25 05.4 -0.7
TGUH   Tegucigalpa,Un    46.43 258  P      P      02 25 07.0 +0.9
TGUH                                IAmb   IAmb   02 25 10.1
       comp=Z,36nm,1.2s
BGNE   Belgrade          46.49 299  P      P      02 25 06.6 +0.4
       baz=82
H10N2  ASCENSION HYDR46.79 144      T      T      03 15 04.6
       baz=329,slow=75,SNR=214
H10N3  ASCENSION HYDR46.79 144      T      T      03 15 05.0
       baz=329,slow=75,SNR=289
H10N1  ASCENSION HYDR46.81 144      T      T      03 15 06.0
       baz=329,slow=75,SNR=228
MDND   Maddock           46.90 308  P      P      02 25 10.3 +0.9
       baz=87
JANB   Januaria          47.13 185 eP      P      02 25 11.5 +0.2
HKT    Hockley           47.19 283 i P     P      02 25 11.5 -0.2
HKT                                 pmax   pmax
       comp=Z,7.0nm,1.2s
OJC    Ojcow             47.32  49 eP      P      02 25 13.9 +1.4
OJC    Ojcow             47.32  49  P      P      02 25 13.5 +1.0
OJC    Ojcow             47.32  49  P      P      02 25 13.5 +1.0
OJC                                 pmax   pmax
       comp=Z,73nm,1.8s
X34A   Smith Ranch, M    47.55 289  IAmb   IAmb   02 25 24.7
       comp=Z,56nm,1.8s
PDG    Podgorica         47.58  60 ⇓P      P      02 25 14.4 -0.2
KLNR   Kaliningrad       47.61  43 i P     P      02 25 14.3 -0.4
KLNR                                pmax   pmax
       comp=Z,56nm,1.3s
NIE    Niedzica          47.67  50 eP      P      02 25 17.0 +1.7
NIE    Niedzica          47.67  50 eP      P      02 25 17.0 +1.7
H10S3  ASCENSION HYDR47.67 145      T      T      03 16 10.6
       baz=329,slow=74,SNR=1133
H10S2  ASCENSION HYDR47.68 145      T      T      03 16 11.7
       baz=251,slow=74,SNR=912
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BEL    Belsk             47.92  47 eP      P      02 25 18.4 +1.3
BEL    Belsk             47.92  47 eP      P      02 25 18.4 +1.3
WHTX   Lake Whitney,     47.93 286  P      P      02 25 19.3 +1.8
       baz=74,SNR=7.0
OTAV   Otavalo           48.02 236 eP      P      02 25 17.9 -1.0
OTAV   Otavalo           48.02 236  P      P      02 25 19.8 +0.9
OTAV   Otavalo           48.02 236  P      P      02 25 19.8 +0.9
OTAV                                pmax   pmax
       comp=Z,65nm,1.7s
OTAV   Otavalo           48.02 236 eP      P      02 25 20.9 +2.0
CBKS   Cedar Bluff       48.12 295  IAmb   IAmb   02 25 29.0
       comp=Z,34nm,1.1s
CBKS   Cedar Bluff       48.12 295  P      P      02 25 19.6 +0.6
       baz=79
BDFB   Brasilia          48.13 190  P      P      02 25 19.0 -0.2
       comp=Z,6.5nm,0.8s,baz=29,slow=7.9,SNR=8.5
BDFB                                LR     LR     02 42 42.4
       comp=Z,413nm,19.8s,baz=333,slow=32
BDFB   Brasilia          48.13 190  P      P      02 25 19.5 +0.3
BDFB                                IAmb   IAmb   02 25 30.2
       comp=Z,22nm,1.3s
BDFB   Brasilia          48.13 190  P      P      02 25 19.5 +0.3
BDFB                                pmax   pmax
       comp=Z,22nm,1.3s
WMOK   Wichita Mounta    48.27 290  P      P      02 25 20.0 -0.2
WMOK                                IAmb   IAmb   02 25 31.9
       comp=Z,21nm,1.3s
WMOK   Wichita Mounta    48.27 290  P      P      02 25 20.0 -0.2
WMOK                                pmax   pmax
       comp=Z,21nm,1.3s
WMOK   Wichita Mounta    48.27 290  P      P      02 25 20.9 +0.7
       baz=76,SNR=8.9
FFC    Flin Flon         48.32 317  P      P      02 25 20.3 +0.1
FFC    Flin Flon         48.32 317  P      P      02 25 20.3 +0.1
FFC                                 pmax   pmax
       comp=Z,87nm,2.0s
435B   Jarrell           48.38 284  P      P      02 25 22.3 +1.2
       baz=73
CRVS   Cervenica-Dubn    48.45  51 eP      P      02 25 23.4 +2.0
CRVS   Cervenica-Dubn    48.45  51 eP      P      02 25 23.3 +1.9
BZS    Buzias            48.86  55 ⇓P      P      02 25 24.9 +0.5
ARAG   Araguaiana, MT    48.88 195 eP      P      02 25 25.5 +0.6
OHR    Ohrid             48.92  61 i P     P      02 25 28.8 +3.6
KOLS   Kolonicke sedl    48.99  51 eP      P      02 25 27.0 +1.5
KOLS   Kolonicke sedl    48.99  51 eP      P      02 25 26.9 +1.5
UZH    Uzhgorod          49.02  51d iP     P      02 25 26.0 +0.3
UZH                                e              02 25 31.4
KWP    Kalwaria Pacla    49.22  50 eP      P      02 25 28.0 +0.8
KWP    Kalwaria Pacla    49.22  50 eP      P      02 25 28.0 +0.8
TRPA   Tarpa             49.23  52 ⇓P      P      02 25 27.2 -0.1
SKO    Skopje            49.25  60 i P     P      02 25 28.8 +1.3
SUW    Suwalki           49.34  44 eP      P      02 25 28.5 +0.5
SUW    Suwalki           49.34  44  P      P      02 25 27.9 -0.2
SUW    Suwalki           49.34  44 eP      P      02 25 28.5 +0.5
CCIG   Comitan           49.41 264  P      P      02 25 29.4 +0.2
CCIG                                IAmb   IAmb   02 25 36.0
       comp=Z,53nm,1.9s
OGNE   Ogallala          49.45 299  P      P      02 25 29.7 +0.4
       baz=79
ABTX   Abilene, Hawle    49.53 287  IAmb   IAmb   02 25 32.0
       comp=Z,51nm,1.6s
ABTX   Abilene, Hawle    49.53 287  P      P      02 25 30.8 +1.0
       baz=74,SNR=5.0
GZR    Gura Zlata        49.70  55 ⇓P      P      02 25 31.1 +0.1
SALV   Santo Antonio     50.04 199 eP      P      02 25 34.5 +0.8
LVV    L'vov             50.06  50 eP      P      02 25 32.9 -0.7
CJR    Cluj-Napoca       50.09  54 ⇓P      P      02 25 33.8 -0.2
RES    Resolute Bay      50.09 344  P      P      02 25 32.6 -0.8
       comp=Z,3.7nm,0.4s,baz=165,slow=1.3,SNR=25
RES    Resolute Bay      50.09 344  P      P      02 25 32.9 -0.6
RES    Resolute Bay      50.09 344  P      P      02 25 32.9 -0.6
RES                                 pmax   pmax
       comp=Z,12nm,0.7s
VAY    Valandovo         50.20  61 i P     P      02 25 35.6 +0.8
VAY    Valandovo         50.20  61 i P     P      02 25 34.5 -0.2
KSCO   Kaye Shedlock’    50.29 296  IAmb   IAmb   02 25 47.4
       comp=Z,53nm,1.6s
KSCO   Kaye Shedlock’    50.29 296  P      P      02 25 36.5 +0.8
       baz=78
JCT    Junction City     50.30 285  IAmb   IAmb   02 25 37.4
       comp=Z,75nm,1.9s
JCT    Junction City     50.30 285  P      P      02 25 36.5 +0.8
       baz=72,SNR=5.6
NOR    Nord              50.31   4 i P     P      02 25 34.0 -1.1
       comp=Z,52nm,1.4s
NOR    Nord              50.31   4 i P     P      02 25 34.0 -1.1
NOR                                 pmax   pmax
       comp=Z,52nm,1.4s
LOT    Lotru             50.38  55 ⇓P      P      02 25 37.4 +1.2
VTS    Vitosha           50.45  59 ⇑P      P      02 25 37.1 +0.1
VTS    Vitosha           50.45  59 i P     P      02 25 37.0 +0.1
VTS    Vitosha           50.45  59  P      P      02 25 37.0 +0.1
VTS    Vitosha           50.45  59  P      P      02 25 37.0 +0.1
VTS                                 pmax   pmax
       comp=Z,18nm,1.0s
IPMB   Ipameri, GO       50.46 190 eP      P      02 25 37.0 +0.1
KKB    Krupnik           50.48  60 i P     P      02 25 38.5 +1.6
AMTX   Amarillo          50.54 291  IAmb   IAmb   02 25 39.9
       comp=Z,68nm,1.7s
AMTX   Amarillo          50.54 291  P      P      02 25 37.7 +0.1
       baz=74
SJMB   Sao Joao De Ma    50.61 181 eP      P      02 25 37.4 -0.5
MPEP   Malo Peshtene     50.69  58 i P     P      02 25 39.0 +0.5
BSFB   Barra de Sao F    50.73 181 eP      P      02 25 40.6 +1.7
ARR    Arges             50.99  55 ⇓P      P      02 25 41.6 +0.8
MMB    Musomiste         51.00  60 i P     P      02 25 41.8 +0.9
VLAD   Vladila           51.05  57 ⇓P      P      02 25 41.8 +0.6
BUR08  Bucovina Ar. S    51.06  52  P      P      02 25 41.2 -0.1
FINES  FINESS Array B    51.08  34  P      P      02 25 40.8 -0.2
       comp=Z,10nm,0.9s,baz=250,slow=3.9,SNR=18
FINES                               LR     LR     02 43 45.4
       comp=Z,458nm,21.8s,baz=262,slow=32
BURAR  Bucovina Array    51.08  52 ⇓P      Pb     02 25 43.1 +1.4
FIA1   FINESS Array S    51.08  34  P      P      02 25 40.7 -0.4
PGB    Panagyurishte     51.14  59 i P     P      02 25 43.0 +1.1
VOIR                     51.27  55 ⇑P      P      02 25 42.5 -0.4
PLVB   Pleven            51.31  58 ⇓P      P      02 25 43.5 +0.4
MTUR   Matau             51.31  55 ⇓P      P      02 25 44.7 +1.4
VSU    Vasula            51.32  38ceP      P      02 25 40.5 -2.4
VSU                                 pmax   pmax
       comp=Z,249nm,2.5s
HUMR   Humele            51.37  56 ⇓P      P      02 25 43.2 -0.3
DOPR   Dopca             51.43  54 ⇓P      P      02 25 43.5 -0.5
PP1B   Ponte de Pedra    51.44 198 eP      P      02 25 44.9 +0.6
LAO    LASA Array        51.50 307  P      P      02 25 45.6 +1.0
       baz=82
PLD    Plovdiv           51.62  59 i P     P      02 25 46.4 +1.0
MSTX   Muleshoe          51.66 290  P      P      02 25 45.6 -0.4
MSTX                                IAmb   IAmb   02 25 47.9
       comp=Z,67nm,1.7s
MSTX   Muleshoe          51.66 290  P      P      02 25 46.8 +0.8
       baz=73,SNR=6.3
OZUR                     51.68  54 ⇓P      P      02 25 46.5 +0.6
ARCES  ARCESS Array B    51.79  24  P      P      02 25 45.6 -0.8
       comp=Z,5.0nm,0.8s,baz=262,slow=6.0,SNR=8.2
ARCES                               LR     LR     02 43 59.3
       comp=Z,164nm,20.0s,baz=298,slow=32
MLR    Muntele Rosu      51.89  55 ⇓P      P      02 25 48.0 +0.4
MICGM  Minsk             52.08  43 e       P      02 25 48.0 -0.7
MNK    Minsk             52.08  43 eP      P      02 25 48.0 -0.7
T25A   Trinidad          52.10 294  P      P      02 25 50.9 +1.5
       baz=75,SNR=5.1
DIM    Dimitrovgrad      52.23  59 i P     P      02 25 51.4 +1.4
ELND   Elena             52.30  58 ⇓P      P      02 25 50.2 -0.3
PLOR   Plostina          52.31  54 ⇓P      P      02 25 51.6 +1.0
VRI    Vrincioaia        52.36  54 ⇓P      P      02 25 51.8 +0.8
ISCO   Idaho Springs     52.37 298  IAmb   IAmb   02 25 59.0
       comp=Z,74nm,1.9s
ISCO   Idaho Springs     52.37 298  P      P      02 25 52.7 +1.3
       baz=77,SNR=8.0
N23A   Red Feather La    52.37 299  P      P      02 25 52.8 +1.4
       baz=77
BISRR  Bisoca            52.41  55 ⇓P      P      02 25 52.0 +0.6
K22A   Casper            52.42 302  IAmb   IAmb   02 25 56.6
       comp=Z,45nm,1.8s
K22A   Casper            52.42 302  P      P      02 25 49.5 -2.1
       baz=78
SDCO   Great Sand Dun    52.78 295  P      P      02 25 56.0 +1.4
       baz=75
BSCB   Bom Sucesso       53.06 185 eP      P      02 25 57.0 +0.7
AKASG  Malin Array Be    53.28  48  P      P      02 25 56.5 -1.2
       comp=Z,12nm,0.8s,baz=275,slow=6.7,SNR=53
AKASG                               LR     LR     02 45 45.4
       comp=Z,445nm,20.7s,baz=275,slow=33
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AKASG	**Malin Array Be**	**53.28**	**48**	*i* P	**P**	**02 25 56.7**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,12nm,0.9s						
AKBB	**Malin Array Si**	**53.28**	**48**	P	**P**	**02 25 56.4**	**-1.2**
AKBB	**Malin Array Si**	**53.28**	**48**	*e*P	**P**	**02 25 56.6**	**-1.0**
PRD	**Provadia**	**53.34**	**57**	*i* P	**P**	**02 25 58.4**	**+0.2**
CFR	**Carcaliu**	**53.46**	**55**	⇓P	**P**	**02 25 58.2**	**-0.8**
BB19B	**Bebedouro**	**53.53**	**190**	*e*P	**P**	**02 25 59.9**	**+0.1**
SMCO	**Snowmass**	**53.54**	**297**	P	**P**	**02 26 00.5**	**+0.3**
SMCO				IAmb	IAmb	02 26 11.5	
	comp=Z,27nm,1.3s						
EGMT	**Eagleton**	**53.67**	**309**	P	**P**	**02 26 00.3**	**-0.3**
	baz=80,SNR=7.9						
S22A	**4UR Ranch, Cre**	**53.80**	**296**	P	**P**	**02 26 03.8**	**+1.7**
	baz=74,SNR=7.7						
TXAR	**Lajitas Array**	**53.84**	**285**	P	**P**	**02 26 02.6**	**+0.4**
	comp=Z,2.0nm,0.8s,baz=97,slow=8.2,SNR=24						
TXAR				LR	LR	02 47 22.7	
	comp=Z,575nm,20.4s,baz=0.0,slow=34						
RLMT	**Red Lodge**	**53.87**	**305**	IAmb	IAmb	02 26 08.4	
	comp=Z,54nm,1.9s						
RLMT	**Red Lodge**	**53.87**	**305**	P	**P**	**02 26 02.4**	**+0.1**
	baz=78,SNR=6.3						
O20A	**White River Ci**	**54.25**	**299**	IAmb	IAmb	02 26 25.9	
	comp=Z,51nm,1.6s						
O20A	**White River Ci**	**54.25**	**299**	P	**P**	**02 26 06.5**	**+1.3**
	baz=76						
TLIG	**Tlapa**	**54.25**	**269**	P	**P**	**02 26 06.2**	**+0.8**
TLIG				IAmb	IAmb	02 26 08.9	
	comp=Z,71nm,1.9s						
ANMO	**Albuquerque**	**54.29**	**292**	P	**P**	**02 26 06.2**	**+0.6**
ANMO				IAmb	IAmb	02 26 11.1	
	comp=Z,35nm,1.9s						
ANMO	**Albuquerque**	**54.29**	**292**	*ce*P	**P**	**02 26 05.2**	**-0.4**
ANMO				pmax	pmax		
	comp=Z,25nm,2.5s						
ANMO	**Albuquerque**	**54.29**	**292**	P	**P**	**02 26 07.4**	**+1.8**
	baz=73						
MNTX	**Cornudas Mount**	**54.44**	**288**	P	**P**	**02 26 06.2**	**-0.3**
	baz=71						
APA	**Apatity**	**54.48**	**27**	⇓*i*P	**P**	**02 26 01.5**	**-4.7**
APA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,1µm,14.0s						
PCMB	**Pacaembu**	**54.51**	**193**	*e*P	**P**	**02 26 07.6**	**+0.7**
BW06	**Boulder Array**	**54.58**	**302**	IAmb	IAmb	02 26 09.1	
	comp=Z,70nm,1.8s						
BW06	**Boulder Array**	**54.58**	**302**	P	**P**	**02 26 08.0**	**+0.5**
	baz=77,SNR=13						
PD31	**Pinedale Array**	**54.58**	**302**	IAmb	IAmb	02 26 09.0	
	comp=Z,58nm,1.7s						
PDAR	**Pinedale Array**	**54.58**	**302**	P	**P**	**02 26 06.9**	**-0.7**
	comp=Z,6.0nm,0.8s,baz=81,slow=5.6,SNR=44						
PDAR				LR	LR	02 48 11.1	
	comp=Z,1µm,19.8s,baz=102,slow=35						
RCLB	**Rio Claro- Sao**	**54.74**	**188**	*e*P	**P**	**02 26 09.1**	**+0.5**
LKWY	**Lake**	**54.77**	**305**	IAmb	IAmb	02 26 22.0	
	comp=Z,29nm,1.4s						
YKA	**Yellowknife Ar**	**54.84**	**327**	P	**P**	**02 26 07.6**	**-1.2**
	comp=Z,2.5nm,0.9s,baz=87,slow=7.7,SNR=29						
YKA				PcP	**PcP**	**02 27 10.1**	**-0.8**
	comp=Z,1.7nm,0.9s,baz=89,slow=4.5,SNR=4.2						
YKA				LR	LR	02 49 09.3	
	comp=Z,1µm,18.7s,baz=0.0,slow=36						
H17A	**Grant Village**	**54.93**	**304**	IAmb	IAmb	02 26 25.8	
	comp=Z,43nm,1.9s						
H17A	**Grant Village**	**54.93**	**304**	P	**P**	**02 26 12.1**	**+1.9**
	baz=77						
LPAZ	**La Paz**	**55.09**	**213**	P	**P**	**02 26 11.7**	**-0.2**
	comp=Z,7.7nm,0.8s,baz=17,slow=7.0,SNR=25						
LPAZ				LR	LR	02 48 14.1	
	comp=Z,616nm,19.8s,baz=18,slow=34						
LPAZ	**La Paz**	**55.09**	**213**	P	**P**	**02 26 11.1**	**-0.8**
LPAZ				IAmb	IAmb	02 26 14.6	
	comp=Z,23nm,1.1s						
LPAZ	**La Paz**	**55.09**	**213**	*e*P	**P**	**02 26 11.9**	**+0.1**
KARP	**Karpathos**	**55.10**	**67**	P	**P**	**02 26 11.4**	**+0.2**
RDMU	**Red Mountain**	**55.12**	**300**	P	**P**	**02 26 11.6**	**0.0**
YMR	**Madison River**	**55.14**	**305**	P	**P**	**02 26 12.7**	**+1.1**
MVCO	**Mesa Verde**	**55.22**	**295**	P	**P**	**02 26 14.2**	**+1.9**
	baz=73,SNR=7.3						
VAO	**Valinhos**	**55.25**	**188**	*e*P	**P**	**02 26 13.4**	**+1.2**
SNOW	**Snow King Moun**	**55.27**	**303**	IAmb	IAmb	02 26 13.9	
	comp=Z,22nm,1.1s						
IMW	**Indian Meadow**	**55.30**	**304**	IAmb	IAmb	02 26 14.9	
	comp=Z,78nm,1.9s						
REDW	**Red Top Meadow**	**55.36**	**303**	IAmb	IAmb	02 26 26.3	
	comp=Z,46nm,1.6s						
ZAIG	**Zacatecas**	**55.39**	**277**	P	**P**	**02 26 15.2**	**+1.4**
TPAW	**Teton Pass**	**55.40**	**303**	IAmb	IAmb	02 26 23.4	
	comp=Z,48nm,1.6s						
PARB	**Paraibuna**	**55.45**	**186**	*e*P	**P**	**02 26 13.9**	**+0.2**
MOIG	**Morelia**	**55.53**	**273**	P	**P**	**02 26 15.7**	**+1.0**
AHID	**Auburn Hatcher**	**55.68**	**303**	IAmb	IAmb	02 26 26.2	
	comp=Z,52nm,1.5s						
FRTB	**Fartura**	**55.92**	**190**	*e*P	**P**	**02 26 18.1**	**+1.0**
TRCB	**Terra Rica**	**55.93**	**194**	*e*P	**P**	**02 26 17.7**	**+0.5**
121A	**Cookes Peak, D**	**56.10**	**290**	IAmb	IAmb	02 26 29.6	
	comp=Z,26nm,1.5s						
121A	**Cookes Peak, D**	**56.10**	**290**	P	**P**	**02 26 20.6**	**+2.0**
	baz=71						
HWUT	**Hardware Ranch**	**56.31**	**301**	IAmb	IAmb	02 26 21.0	
	comp=Z,24nm,1.4s						
HPIG		**56.35**	**283**	P	**P**	**02 26 21.1**	**+0.6**
HPIG				IAmb	IAmb	02 26 31.9	
	comp=Z,52nm,1.5s						
TMCR	**Tamitsa**	**56.51**	**31**	*e*P	**P**	**02 26 18.7**	**-2.1**
TMCR				pmax	pmax		
	comp=Z,34nm,1.5s						
MSO	**Missoula**	**56.69**	**308**	IAmb	IAmb	02 26 24.3	
	comp=Z,52nm,1.9s						
MSO	**Missoula**	**56.69**	**308**	P	**P**	**02 26 22.9**	**+0.4**
	baz=77						
OBN	**Obninsk**	**56.99**	**42**	LR	LR	02 49 51.0	
	comp=Z,156nm,18.3s,baz=300,slow=35						
OBN	**Obninsk**	**56.99**	**42**	P	**P**	**02 26 24.7**	**+0.4**
OBN	**Obninsk**	**56.99**	**42**	*e*P	**P**	**02 26 24.3**	**0.0**
OBN				*e*		02 26 28.9	
OBN				*e*		02 27 20.4	
OBN				*e*		02 28 31.6	
OBN				pmax	pmax		
	comp=Z,48nm,1.0s						
MOS	**Moscow**	**57.48**	**41**	*e*P	**P**	**02 26 26.7**	**-1.0**
MOS				pmax	pmax		
	comp=Z,78nm,1.8s						
DUG	**Dugway, Tooele**	**57.61**	**300**	IAmb	IAmb	02 26 31.4	
	comp=Z,71nm,1.9s						
DUG	**Dugway, Tooele**	**57.61**	**300**	P	**P**	**02 26 30.5**	**+1.4**
	baz=73,SNR=11						
KLMR	**Klimovskoe**	**57.61**	**35**	*e*P	**P**	**02 26 25.6**	**-3.0**
KLMR				pmax	pmax		
	comp=Z,81nm,1.5s						
KLMR	**Klimovskoe**	**57.61**	**35**	*e*P	**P**	**02 26 25.6**	**-3.0**
KLMR				AMP		02 26 29.6	
	comp=Z,81nm,1.5s						
SIM	**Simferopol'**	**57.64**	**54**	*ce*P	**P**	**02 26 30.2**	**+1.1**
SIM				pmax	pmax		
	comp=Z,13nm,1.6s						
PTGB	**Pitanga**	**57.69**	**193**	*e*P	**P**	**02 26 29.9**	**+0.2**
WUAZ	**Wupatki**	**57.95**	**294**	P	**P**	**02 26 32.5**	**+0.9**
	baz=71						
BR231	**Keskin MP Arra**	**58.09**	**60**	P	**P**	**02 26 33.6**	**+1.1**
BR231				IAmb	IAmb	02 26 44.3	
	comp=Z,38nm,1.2s						
ANTO	**Ankara**	**58.10**	**60**	P	**P**	**02 26 32.7**	**+0.2**
ANTO	**Ankara**	**58.10**	**60**	P	**P**	**02 26 32.7**	**+0.2**
ANTO				pmax	pmax		
	comp=Z,95nm,1.8s						
ILGA	**Ilgaz**	**58.43**	**59**	P	**P**	**02 26 35.5**	**+0.5**
ILGA				IAmb	IAmb	02 26 36.9	
	comp=Z,43nm,1.5s						
NEW	**Newport**	**58.44**	**310**	P	**P**	**02 26 35.3**	**+0.5**
	baz=76,SNR=5.3						
TUC	**Tucson**	**58.56**	**291**	P	**P**	**02 26 36.9**	**+1.1**
	baz=69						
BR131	**Keskin Array S**	**58.76**	**60**	P	**P**	**02 26 37.8**	**+0.5**
BR131	**Keskin Array S**	**58.76**	**60**	P	**P**	**02 26 38.2**	**+1.0**
	SNR=14						
BR131	**Keskin Array S**	**58.76**	**60**	P	**P**	**02 26 37.8**	**+0.5**
BR131				pmax	pmax		
	comp=Z,93nm,2.0s						
BRTR	**Keskin Array B**	**58.76**	**60**	P	**P**	**02 26 37.1**	**-0.1**
	comp=Z,3.7nm,0.9s,baz=272,slow=4.6,SNR=28						
BRTR				LR	LR	02 51 06.1	
	comp=Z,111nm,18.8s,baz=277,slow=35						
PB11	**IPOC Station P**	**58.82**	**213**	P	**P**	**02 26 37.1**	**-0.6**
LPSR	**Galich'ya Gora**	**58.88**	**44**	*e*P	**P**	**02 26 37.7**	**+0.1**
LPSR				pmax	pmax		
	comp=Z,80nm,0.9s						
VORR	**Voronezh**	**59.26**	**45**	*e*P	**P**	**02 26 39.0**	**-1.3**
VORR				pmax	pmax		
	comp=Z,250nm,1.6s						
VSR	**Storozhevoye**	**59.35**	**46**	*e*P	**P**	**02 26 40.3**	**-0.6**
VSR				pmax	pmax		
	comp=Z,70nm,1.8s						
E09A	**Wood Farm, Sta**	**59.57**	**308**	IAmb	IAmb	02 26 53.1	
	comp=Z,29nm,1.5s						
Y14A	**Wickenburg**	**59.74**	**293**	IAmb	IAmb	02 26 51.0	
	comp=Z,36nm,1.8s						
PB01	**IPOC Station P**	**59.86**	**212**	P	**P**	**02 26 44.6**	**-0.2**
PB01				IAmb	IAmb	02 26 48.1	
	comp=Z,16nm,1.0s						
HSIG		**59.89**	**287**	P	**P**	**02 26 45.5**	**+0.5**
HSIG				IAmb	IAmb	02 26 47.7	
	comp=Z,43nm,1.7s						
D08A	**Wollman Farm,**	**59.93**	**309**	IAmb	IAmb	02 26 50.5	
	comp=Z,58nm,1.9s						
ANN	**Anapa**	**59.95**	**53**	*e*P	P	02 26 40.4	-4.8
ANN				*e**PP	pP	02 26 45.3	-3.6
ANN				*e*S	**S**	**02 34 51.6**	**-5.3**
ANN				pmax	pmax		
	comp=Z,31nm,1.3s						
ITAB	**Concordia**	**60.16**	**192**	*e*P	**P**	**02 26 47.2**	**+0.6**
E08A	**Dider Farm, El**	**60.18**	**309**	IAmb	IAmb	02 26 48.0	
	comp=Z,46nm,1.7s						
R11A	**Troy Canyon, C**	**60.22**	**299**	IAmb	IAmb	02 26 57.6	
	comp=Z,43nm,1.9s						
R11A	**Troy Canyon, C**	**60.22**	**299**	P	**P**	**02 26 48.6**	**+1.2**
	baz=71,SNR=8.8						
PRGR	**Permogore**	**60.35**	**33**	*e*P	**P**	**02 26 43.6**	**-4.0**
PRGR				pmax	pmax		
	comp=Z,46nm,1.5s						
CPUP	**Villa Florida**	**60.42**	**198**	P	**P**	**02 26 47.7**	**-0.7**
	comp=Z,3.7nm,1.0s,baz=16,slow=9.1,SNR=5.6						
CPUP				LR	LR	02 53 27.1	
	comp=Z,155nm,18.3s,baz=24,slow=37						
CPUP	**Villa Florida**	**60.42**	**198**	P	**P**	**02 26 48.4**	**0.0**
CPUP				IAmb	IAmb	02 26 54.1	
	comp=Z,54nm,1.8s						
CPUP	**Villa Florida**	**60.42**	**198**	P	**P**	**02 26 48.4**	**0.0**
CPUP				pmax	pmax		
	comp=Z,53nm,1.8s						
CPUP	**Villa Florida**	**60.42**	**198**	*e*P	**P**	**02 26 48.1**	**-0.3**
G08A	**Pilot Rock**	**60.46**	**307**	IAmb	IAmb	02 26 50.4	
	comp=Z,30nm,1.8s						
PDMCI	**Parker Dam,Lak**	**60.49**	**294**	P	**P**	**02 26 51.0**	**+1.9**
	baz=69						
HAWA	**Hanford**	**60.52**	**309**	IAmb	IAmb	02 26 59.2	
	comp=Z,32nm,1.5s						
LLLB	**Lillooet**	**60.82**	**314**	IAmb	IAmb	02 26 51.3	
	comp=Z,32nm,1.6s						
VRH	**Novokhopyorsk**	**60.91**	**45**	*e*P	**P**	**02 26 51.2**	**-0.4**
VRH				pmax	pmax		
	comp=Z,50nm,1.1s						
C06D	**Leavenworth**	**60.97**	**311**	P	**P**	**02 26 52.0**	**-0.1**
	baz=73						
LVC	**Limon Verde**	**60.98**	**210**	P	**P**	**02 26 52.9**	**+0.1**
LVC				IAmb	IAmb	02 27 54.9	
	comp=Z,38nm,1.8s						
LVC	**Limon Verde**	**60.98**	**210**	P	**P**	**02 26 52.9**	**+0.1**
LVC				pmax	pmax		
	comp=Z,38nm,1.8s						
LVC	**Limon Verde**	**60.98**	**210**	*e*P	**P**	**02 26 53.6**	**+0.8**
Y12C	**Blythe**	**60.99**	**294**	P	**P**	**02 26 54.3**	**+1.9**
	baz=69						
WVOR	**Wild Horse Val**	**61.11**	**304**	P	**P**	**02 26 53.8**	**+0.5**
WVOR				IAmb	IAmb	02 27 05.5	
	comp=Z,26nm,1.4s						
WVOR	**Wild Horse Val**	**61.11**	**304**	P	**P**	**02 26 53.8**	**+0.5**
TPNV	**Topopah Spring**	**61.19**	**297**	P	**P**	**02 26 55.8**	**+1.8**
	baz=70						
GLA	**Glamis**	**61.48**	**293**	P	**P**	**02 26 57.8**	**+2.0**
	baz=68						
GMRC	**Granite Mounta**	**61.50**	**295**	P	**P**	**02 26 55.8**	**-0.3**
	baz=69						
SHOC	**Shoshone, Teco**	**61.57**	**296**	P	**P**	**02 26 56.4**	**0.0**
	baz=69						
SRIG	**Santa Rosalia**	**61.60**	**286**	P	**P**	**02 26 57.9**	**+1.3**
SRIG				IAmb	IAmb	02 27 08.6	
	comp=Z,33nm,1.3s						
INK	**Inuvik**	**61.69**	**335**	P	**P**	**02 26 56.6**	**0.0**
INK	**Inuvik**	**61.69**	**335**	P	**P**	**02 26 56.6**	**0.0**
INK				pmax	pmax		
	comp=Z,55nm,1.6s						
FURC	**Furnace Creek,**	**61.81**	**297**	P	**P**	**02 27 00.3**	**+2.3**
	baz=69						
SOC	**Sochi**	**61.89**	**54**	*c i*P	**P**	**02 26 59.1**	**+0.7**
SOC				*e*S	**S**	**02 35 25.8**	**+4.1**
SOC				*e*SSS	SSS	02 42 11.9	
SOC				pmax	pmax		
	comp=Z,32nm,1.3s						
F05D	**White Salmon**	**61.95**	**309**	P	**P**	**02 26 59.6**	**+0.8**
	baz=72						
NV11	**Mina Array Sit**	**62.09**	**300**	IAmb	IAmb	02 27 27.6	
	comp=Z,47nm,1.9s						
NVAR	**Mina Array Bea**	**62.20**	**300**	P	**P**	**02 27 00.7**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=67,slow=6.6,SNR=13						
RYN	**Ryan**	**62.30**	**300**	P	**P**	**02 27 01.6**	**+0.2**
RYN				IAmb	IAmb	02 27 03.1	
	comp=Z,51nm,2.0s						
I05D	**Terrebonne, OR**	**62.37**	**307**	P	**P**	**02 27 03.8**	**+2.1**
	baz=71,SNR=7.0						
MPMC	**Manual Prospec**	**62.43**	**297**	P	**P**	**02 27 04.5**	**+2.1**
	baz=69,SNR=10						
DAC	**Darwin (Calif)**	**62.43**	**297**	P	**P**	**02 27 04.3**	**+1.9**
DAC				IAmb	IAmb	02 27 08.0	
	comp=Z,16nm,1.0s						
DAC	**Darwin (Calif)**	**62.43**	**297**	P	**P**	**02 27 04.3**	**+1.9**
DAC				pmax	pmax		
	comp=Z,16nm,1.0s						
MOD	**Modoc Plateau**	**62.46**	**304**	P	**P**	**02 27 01.7**	**-0.7**
MOD				IAmb	IAmb	02 27 04.2	
	comp=Z,18nm,1.2s						
PAHR	**Pah Rah Range**	**62.55**	**301**	P	**P**	**02 27 03.5**	**+0.4**
TIN	**Tinemaha, Big**	**62.63**	**298**	P	**P**	**02 27 06.2**	**+2.6**
	baz=69						
J05D	**Fort Rock, OR**	**62.64**	**306**	P	**P**	**02 27 05.4**	**+1.8**
	baz=70,SNR=7.8						
CWC	**Cottonwood Cre**	**62.74**	**298**	P	**P**	**02 27 05.7**	**+1.3**
	baz=69						
VCNR	**Virginia City**	**62.89**	**301**	IAmb	IAmb	02 27 15.8	
	comp=Z,36nm,1.7s						
KIRV	**Kirov**	**63.01**	**36**	LR	LR	02 51 26.8	
	comp=Z,534nm,21.4s,baz=266,slow=33						
OMMB	**Old Mammoth Mi**	**63.01**	**299**	IAmb	IAmb	02 27 39.3	
	comp=Z,28nm,1.7s						
NLWA	**Neilton Lookou**	**63.05**	**311**	IAmb	IAmb	02 27 16.4	
	comp=Z,34nm,1.2s						
K04D	**Chiloquin, OR**	**63.23**	**305**	P	**P**	**02 27 08.5**	**+1.0**
	baz=70						
J04D	**Umpqua Nationa**	**63.26**	**306**	P	**P**	**02 27 08.8**	**+1.0**
	baz=70						
ISA	**Isabella, Lake**	**63.32**	**297**	P	**P**	**02 27 10.6**	**+2.4**
	baz=68						
G03D	**McMinnville, O**	**63.37**	**308**	P	**P**	**02 27 08.7**	**+0.5**
	baz=70						
EPYK	**Eagle Plains**	**63.46**	**333**	P	**P**	**02 27 09.6**	**+1.1**
	baz=70						
M04C	**Macdoel**	**63.58**	**304**	P	**P**	**02 27 10.8**	**+1.0**
	baz=69						
L04D	**Klamath Falls**	**63.75**	**305**	P	**P**	**02 27 11.7**	**+0.7**
	baz=69						
KIV	**Kislovodsk**	**63.79**	**53**	*i* P	**P**	**02 27 11.2**	**0.0**
	SNR=12						
KIV	**Kislovodsk**	**63.79**	**53**	P	**P**	**02 27 11.2**	**0.0**
KIV	**Kislovodsk**	**63.79**	**53**	*e*P	**P**	**02 27 10.3**	**-0.9**
KIV				pmax	pmax		
	comp=Z,45nm,1.1s						
KIV				MLR	MLR		
	comp=Z,295nm,17.0s						
SHA1	**Shidzhatmaz**	**63.85**	**53**	*d i*P	**P**	**02 27 10.3**	**-1.4**
CMB	**Columbia Colle**	**63.88**	**300**	P	**P**	**02 27 11.6**	**-0.2**
CMB				IAmb	IAmb	02 27 14.3	
	comp=Z,41nm,1.8s						
CMB	**Columbia Colle**	**63.88**	**300**	P	**P**	**02 27 11.6**	**-0.2**
CMB				pmax	pmax		
	comp=Z,41nm,1.8s						
KBZ	**Khabaz**	**64.01**	**53**	P	**P**	**02 27 13.2**	**+0.8**
	comp=Z,7.2nm,0.9s,baz=296,slow=7.7,SNR=19						
KBZ				LR	LR	02 53 45.7	
	comp=Z,117nm,18.1s,baz=306,slow=35						
KBZ	**Khabaz**	**64.01**	**53**	*i* P	**P**	**02 27 13.3**	**+0.8**
KBZ				pmax	pmax		
	comp=Z,12nm,1.0s						
NEY	**Neytrino**	**64.06**	**54**	*i* P	**P**	**02 27 12.6**	**-0.5**
NEY				pmax	pmax		
	comp=Z,5.0nm,1.3s						
O03E	**Paynes Creek**	**64.08**	**303**	P	**P**	**02 27 13.5**	**+0.4**
	baz=69						
NCK	**Nalchik**	**64.57**	**53**	*i* P	**P**	**02 27 16.6**	**+0.4**
NCK				pmax	pmax		
	comp=Z,15nm,1.3s						
PLTB	**Pedras Altas**	**64.84**	**193**	*e*P	**P**	**02 27 18.4**	**+0.5**
AKH	**Akhalkalaki**	**65.26**	**55**	⇓P	**P**	**02 27 23.7**	**+2.8**
AKH	**Akhalkalaki**	**65.26**	**55**	P	**P**	**02 27 21.0**	**+0.1**
AKH	**Akhalkalaki**	**65.26**	**55**	P	**P**	**02 27 21.0**	**+0.1**
AKH				pmax	pmax		
	comp=Z,71nm,1.6s						
DAWY	**Dawson**	**65.35**	**331**	P	**P**	**02 27 21.4**	**+0.5**
GROC	**Groznyy**	**66.17**	**53**	*e*P	**P**	**02 27 26.1**	**-0.4**
GROC				*e*		02 27 55.0	
GROC				pmax	pmax		
	comp=Z,41nm,1.5s						
GNI	**Garni**	**66.62**	**56**	LR	LR	02 57 00.2	
	comp=Z,107nm,18.4s,baz=290,slow=36						
GNI	**Garni**	**66.62**	**56**	*i* P	**P**	**02 27 30.1**	**+0.4**
	SNR=12						
GNI	**Garni**	**66.62**	**56**	P	**P**	**02 27 30.5**	**+0.8**
GNI	**Garni**	**66.62**	**56**	P	**P**	**02 27 29.8**	**+0.1**
GNI				P	**P**	**02 27 29.8**	**+0.1**
GNI	**Garni**	**66.62**	**56**	*ce*P	**P**	**02 27 29.8**	**+0.1**
GNI				pmax	pmax		
	comp=Z,272nm,1.7s						
TOLK	**Toolik Lake Re**	**67.01**	**338**	IAmb	IAmb	02 27 43.0	
	comp=Z,57nm,2.0s						
TOLK	**Toolik Lake Re**	**67.01**	**338**	P	**P**	**02 27 32.3**	**+0.8**
	baz=60						
PRP	**Porcupine Dome**	**67.11**	**334**	IAmb	IAmb	02 27 43.3	
	comp=Z,48nm,1.8s						
SCRK	**Sand Creek**	**67.22**	**332**	IAmb	IAmb	02 27 39.8	
	comp=Z,42nm,2.0s						
CTGM	**Chitina Glacie**	**67.45**	**329**	IAmb	IAmb	02 27 46.8	
	comp=Z,50nm,1.8s						
BARN	**Barnard Glacie**	**67.56**	**329**	IAmb	IAmb	02 27 46.6	
	comp=Z,48nm,1.8s						
BALM	**Baldy**	**67.86**	**329**	IAmb	IAmb	02 27 48.4	
	comp=Z,35nm,1.6s						
COLD	**Coldfoot**	**67.92**	**337**	P	**P**	**02 27 37.8**	**+0.5**
ILAR	**Eielson Array**	**67.97**	**334**	P	**P**	**02 27 38.5**	**+0.9**
	comp=Z,2.6nm,1.1s,baz=56,slow=5.9,SNR=16						
POKR	**Poker Plat Res**	**68.01**	**334**	P	**P**	**02 27 40.4**	**+2.5**
	baz=61						
AKT	**Akhty**	**68.17**	**54**	*e*P	**P**	**02 27 39.2**	**-0.2**
AKT				*e*		02 28 04.6	
AKT				pmax	pmax		
	comp=Z,54nm,1.7s						
HDA	**Harding Lake**	**68.17**	**333**	P	**P**	**02 27 40.5**	**+1.6**
	baz=61						
PAX	**Paxson**	**68.28**	**332**	IAmb	IAmb	02 27 42.2	
	comp=Z,36nm,1.9s						
GLB	**Gilahina Butte**	**68.31**	**330**	IAmb	IAmb	02 27 46.2	
	comp=Z,18nm,1.3s						
CCB	**Clear Creek Bu**	**68.38**	**334**	IAmb	IAmb	02 27 41.8	
	comp=Z,19nm,1.3s						
ARU	**Arti**	**68.39**	**36**	P	**P**	**02 27 39.9**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=286,slow=4.9,SNR=22						
ARU				LR	LR	02 54 32.4	
	comp=Z,374nm,21.0s,baz=277,slow=33						
ARU	**Arti**	**68.39**	**36**	P	**P**	**02 27 40.2**	**-0.1**
ARU	**Arti**	**68.39**	**36**	*c i*P	**P**	**02 27 40.9**	**+0.6**
ARU				S	**S**	**02 36 44.0**	**+2.9**
ARU				SS	**SS**	**02 41 04.4**	**+0.6**
ARU				pmax	pmax		
	comp=Z,55nm,1.6s						
NEA	**Nenana**	**68.89**	**334**	IAmb	IAmb	02 27 45.8	
	comp=Z,48nm,2.0s						
SVE	**Sverdlovsk**	**69.24**	**35**	*e*P	**P**	**02 27 45.0**	**-0.6**
SVE				pmax	pmax		
	comp=Z,58nm,1.8s						
MLY	**Manley**	**69.26**	**335**	P	**P**	**02 27 46.1**	**+0.4**
MLY				IAmb	IAmb	02 28 11.1	
	comp=Z,39nm,2.0s						
BPAW	**Bear Paw Mtn.**	**69.84**	**334**	IAmb	IAmb	02 27 55.3	
	comp=Z,39nm,1.8s						
TRF	**Thorofare Moun**	**69.93**	**333**	IAmb	IAmb	02 28 28.6	
	comp=Z,53nm,1.9s						
KTH	**Kantishna Hill**	**70.11**	**334**	IAmb	IAmb	02 28 01.9	
	comp=Z,22nm,1.3s						
PMR	**Palmer**	**70.45**	**331**	P	**P**	**02 27 53.5**	**+0.5**
PMR	**Palmer**	**70.45**	**331**	P	**P**	**02 27 53.5**	**+0.5**
PMR				pmax	pmax		
	comp=Z,91nm,1.8s						
AKTO	**Aktyubinsk**	**70.78**	**42**	P	**P**	**02 27 54.4**	**-0.8**
	comp=Z,12nm,0.9s,baz=302,slow=6.0,SNR=37						
AKTO				LR	LR	02 58 14.6	
	comp=Z,484nm,18.6s,baz=294,slow=35						
SUA	**Susitna One**	**71.18**	**332**	IAmb	IAmb	02 27 59.5	
	comp=Z,34nm,1.4s						
RDOG	**Red Dog Mine**	**71.38**	**340**	IAmb	IAmb	02 28 00.4	
	comp=Z,45nm,1.6s						
NRIK	**Noril'sk**	**71.88**	**17**	P	**P**	**02 28 01.1**	**-0.5**
	comp=Z,11nm,1.0s,baz=319,slow=3.6,SNR=22						
ABKAR	**Akbulak array**	**72.43**	**43**	IAmb	IAmb	02 28 17.0	
	comp=Z,41nm,1.6s						
CNPM	**China Poot**	**72.45**	**330**	P	**P**	**02 28 05.0**	**-0.2**
CNPM				IAmb	IAmb	02 28 12.4	
	comp=Z,31nm,1.2s						
SVW2	**Sparrevohn**	**73.30**	**333**	P	**P**	**02 28 09.4**	**-0.8**
SVW2				IAmb	IAmb	02 28 11.5	
	comp=Z,26nm,1.6s						
MBAR	**Mbarara**	**74.32**	**101**	P	**P**	**02 28 17.2**	**+0.1**
MBAR	**Mbarara**	**74.32**	**101**	P	**P**	**02 28 17.2**	**+0.1**
MBAR				pmax	pmax		
	comp=Z,11nm,1.2s						
ANM	**Nome**	**74.48**	**338**	P	**P**	**02 28 16.8**	**-0.2**
ANM	**Nome**	**74.48**	**338**	P	**P**	**02 28 16.8**	**-0.2**
ANM				pmax	pmax		
	comp=Z,19nm,1.6s						
RAYN	**Ar Rayn**	**74.48**	**72**	P	**P**	**02 28 17.5**	**-0.3**
RAYN	**Ar Rayn**	**74.48**	**72**	P	**P**	**02 28 17.5**	**-0.3**
RAYN				pmax	pmax		
	comp=Z,23nm,1.6s						
TSUM	**Tsumeb**	**75.35**	**124**	P	**P**	**02 28 23.9**	**+1.1**
BRVK	**Borovoye**	**75.94**	**36**	P	**P**	**02 28 26.2**	**+0.6**
BRVK	**Borovoye**	**75.94**	**36**	P	**P**	**02 28 26.3**	**+0.6**
BRVK				P	**P**	**02 28 26.3**	**+0.6**
BRVK	**Borovoye**	**75.94**	**36**	*ce*P	**P**	**02 28 24.9**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,47nm,2.5s						
BVAR	**Borovoye Array**	**76.02**	**36**	P	**P**	**02 28 26.4**	**+0.4**
	comp=Z,3.1nm,0.8s,baz=294,slow=4.7,SNR=20						
LODK	**Lodwar**	**76.04**	**95**	P	**P**	**02 28 28.0**	**+1.2**
	SNR=12						
TIXI	**Tiksi**	**76.17**	**4**	P	**P**	**02 28 26.9**	**+0.3**
TIXI				IAmb	IAmb	02 28 28.7	
	comp=Z,20nm,1.2s						
TIXI	**Tiksi**	**76.17**	**4**	*ce*P	**P**	**02 28 27.0**	**+0.4**
TIXI				pmax	pmax		
	comp=Z,48nm,2.5s						
GEYT	**Alibeck**	**76.91**	**53**	P	**P**	**02 28 31.6**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=282,slow=7.4,SNR=6.7						
GEYT				LR	LR	03 03 48.9	
	comp=Z,64nm,18.5s,baz=25,slow=37						
GYA0B	**ALIBECK ARRAY**	**76.91**	**53**	P	**P**	**02 28 30.5**	**-0.9**
GYA0B				IAmb	IAmb	02 28 43.4	
	comp=Z,38nm,1.9s						
PLCA	**Paso Flores**	**77.76**	**203**	P	**P**	**02 28 35.8**	**-0.1**
	comp=Z,2.8nm,1.0s,baz=61,slow=8.3,SNR=4.6						
PLCA				LR	LR	03 03 52.4	
	comp=Z,197nm,18.3s,baz=42,slow=36						
PLCA	**Paso Flores**	**77.76**	**203**	P	**P**	**02 28 36.4**	**+0.5**
PLCA				IAmb	IAmb	02 28 38.7	
	comp=Z,48nm,2.0s						
PLCA	**Paso Flores**	**77.76**	**203**	P	**P**	**02 28 36.4**	**+0.5**
PLCA				pmax	pmax		
	comp=Z,48nm,2.0s						
PLCA	**Paso Flores**	**77.76**	**203**	*e*P	**P**	**02 28 36.5**	**+0.5**
BILL	**Bilibino**	**78.12**	**350**	P	**P**	**02 28 37.6**	**0.0**
BILL				IAmb	IAmb	02 28 40.2	
	comp=Z,59nm,1.8s						
BILL	**Bilibino**	**78.12**	**350**	*e*P	**P**	**02 28 35.9**	**-1.7**
BILL				*e*		02 28 46.4	
BILL				*e*PPP	PPP	02 33 18.5	
BILL				pmax	pmax		
	comp=Z,47nm,2.5s						
BILL				MLR	MLR		
	comp=Z,226nm,21.0s						

KMBO	Kilima Mbogo	80.06	98	P	P	02 28 51.4	+2.0
	comp=Z,0.9nm,0.9s,baz=312,slow=5.1,SNR=11						
KMBO				LR	LR	03 05 00.8	
	comp=Z,488nm,18.5s,baz=280,slow=36						
KMBO	Kilima Mbogo	80.06	98	*i* P	P	02 28 51.5	+2.0
	SNR=6.2						
KMBO	Kilima Mbogo	80.06	98	P	P	02 28 50.6	+1.2
LSZ	Lusaka	80.70	115	P	P	02 28 53.6	+1.0
LSZ				IAmb	IAmb	02 28 56.0	
	comp=Z,69nm,1.9s						
LSZ	Lusaka	80.70	115	P	P	02 28 53.6	+1.0
LSZ				P	P	02 28 53.6	+1.0
LSZ	Lusaka	80.70	115	P	P	02 28 53.6	+1.0
LSZ				pmax	pmax		
	comp=Z,69nm,1.9s						
GO07	Milladeo Hill,	80.94	204	P	P	02 28 52.9	-0.2
KURK	Kurchatov	81.45	34	P	P	02 28 56.1	+0.1
KURK				IAmb	IAmb	02 28 58.3	
	comp=Z,62nm,1.7s						
KURK	Kurchatov	81.45	34	P	P	02 28 55.7	-0.2
KURK				P	P	02 28 55.7	-0.2
KURK	Kurchatov	81.45	34	*ce*P	P	02 28 54.0	-2.0
KURK				pmax	pmax		
	comp=Z,38nm,1.7s						
KURBB	Kurchatov Arra	81.47	34	P	P	02 28 55.9	-0.2
	comp=Z,6.3nm,0.9s,baz=313,slow=6.2,SNR=40						
SHME	Shamm	81.59	65	P	P	02 28 57.6	+0.4
HRA	Herat	81.61	55	P	P	02 28 56.8	-0.6
HRA				IAmb	IAmb	02 28 59.1	
	comp=Z,41nm,2.0s						
NAZ	Nazwa, Dubai	81.78	66	P	P	02 28 58.6	+0.4
BANOM	Banah	81.78	65	P	P	02 28 58.3	+0.1
KK31	Karatay Array	81.92	44	P	P	02 28 58.0	-0.6
KK31	Karatay Array	81.92	44	P	P	02 28 58.1	-0.6
KK31				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KKAR	Karatay Array	81.92	44	P	P	02 28 58.3	-0.4
KKAR	Karatay Array	81.92	44	P	P	02 28 58.3	-0.4
KKAR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
MSFE	Esma-Masafi	81.97	65	P	P	02 28 58.4	-0.9
ZAA0	Zalesovo Array	81.99	29	P	P	02 28 59.1	+0.4
ZAA0				IAmb	IAmb	02 29 01.1	
	comp=Z,44nm,1.5s						
ZALV	Zalesovo Beam	81.99	29	P	P	02 28 58.3	-0.4
	comp=Z,7.0nm,0.9s,baz=292,slow=7.8,SNR=26						
ZALV				LR	LR	03 03 19.6	
	comp=Z,101nm,19.5s,baz=306,slow=34						
MDH	Madha	82.11	65	*i* P	P	02 29 00.4	+0.5
	SNR=7.3						
UOSS	Minazif	82.22	66	*i* P	P	02 29 00.1	-0.4
	SNR=6.4						
UOSS	Minazif	82.22	66	P	P	02 29 00.4	-0.1
UOSS	Minazif	82.22	66	P	P	02 28 59.9	-0.6
UOSS				P	P	02 28 59.9	-0.6
HATD	Hatta, Dubai	82.23	66	*i* P	P	02 28 59.9	-0.7
	SNR=9.8						
HATD				P	P	02 29 00.1	-0.5
HATD	Hatta, Dubai	82.23	66	P	P	02 28 59.9	-0.7
	SNR=7.3						
HATD				P	P	02 28 59.9	-0.7
	SNR=7.3						
ASHO	Ashiyiah	82.24	66	*i* P	P	02 29 00.3	-0.4
	SNR=8.2						
ASHO	Ashiyiah	82.24	66	P	P	02 29 00.3	-0.4
	SNR=6.2						
TAS	Tashkent	82.26	46	P	P	02 29 01.1	+0.7
TAS	Tashkent	82.26	46	P	P	02 29 01.1	+0.7
TAS				pmax	pmax		
	comp=Z,84nm,0.3s						
ALNE	Al Ain	82.33	67	*i* P	P	02 29 01.6	+0.5
	SNR=8.0						
SOHO	SOHO	82.90	66	P	P	02 29 05.0	+0.9
	SNR=14						
ARQ	Araqi	83.31	67	P	P	02 29 06.3	0.0
	SNR=7.6						
ARQ				P	P	02 29 06.3	0.0
	SNR=7.6						
HOQ	Hoqain	83.79	66	P	P	02 29 08.5	-0.2
	SNR=8.7						
HOQ				P	P	02 29 08.5	-0.2
	SNR=8.7						
ABTO	Aybut	83.88	73	P	P	02 29 09.5	+0.2
	SNR=7.0						
ABTO				P	P	02 29 09.5	+0.2
	SNR=7.0						
WHFO	Wadi Hawf	83.97	73	P	P	02 29 09.2	-0.5
	SNR=6.2						
WHFO				P	P	02 29 09.2	-0.5
	SNR=6.2						
AAK	Ala-Archa	84.52	42	P	P	02 29 11.9	-0.4
	comp=Z,1.2nm,0.4s,baz=255,slow=3.0,SNR=9.2						
AAK	Ala-Archa	84.52	42	P	P	02 29 11.9	-0.4
AAK				IAmb	IAmb	02 32 19.5	
	comp=Z,10nm,0.4s						
AAK	Ala-Archa	84.52	42	*ce*P	P	02 29 12.1	-0.2
AAK				pmax	pmax		
	comp=Z,25nm,2.5s						
SEY	Seymchan	84.67	354	*i* P	P	02 29 12.8	+0.4
LBTB	Lobatse	84.75	124	P	P	02 29 13.5	0.0
LBTB				IAmb	IAmb	02 29 15.9	
	comp=Z,20nm,1.4s						
LBTB	Lobatse	84.75	124	P	P	02 29 13.5	0.0
LBTB				pmax	pmax		
	comp=Z,20nm,1.4s						
EFI	East Falkland	84.95	191	P	P	02 29 14.6	+0.9
EFI	East Falkland	84.95	191	P	P	02 29 14.6	+0.9
EFI				pmax	pmax		
	comp=Z,433nm,1.9s						
WSAR	Wadi Sarin	85.00	66	P	P	02 29 15.4	+0.6
	comp=Z,14nm,1.2s,baz=337,slow=3.6,SNR=12						
MAKZ	Makanchi	85.73	36	P	P	02 29 18.0	-0.1
MAKZ				IAmb	IAmb	02 29 19.3	
	comp=Z,16nm,1.3s						
MAKZ	Makanchi	85.73	36	P	P	02 29 18.0	-0.1
MAKZ				pmax	pmax		
	comp=Z,16nm,1.3s						
YAK	Yakutsk	85.77	5	P	P	02 29 17.9	+0.1
YAK				IAmb	IAmb	02 29 19.2	
	comp=Z,28nm,1.1s						
YAK	Yakutsk	85.77	5	P	P	02 29 17.9	+0.1
YAK				pmax	pmax		
	comp=Z,28nm,1.1s						
MK31	Makanchi Array	85.90	35	P	P	02 29 18.5	-0.4
MK31	Makanchi Array	85.90	35	P	P	02 29 18.5	-0.4
MK31				pmax	pmax		
	comp=Z,12nm,1.4s						
MKAR	Makanchi Array	85.90	35	P	P	02 29 18.6	-0.3
	comp=Z,3.2nm,0.9s,baz=320,slow=4.7,SNR=25						
MKAR				LR	LR	03 07 02.7	
	comp=Z,417nm,19.5s,baz=302,slow=35						
KBL	Kabul	86.13	51	P	P	02 29 20.0	-0.5
KBL	Kabul	86.13	51	P	P	02 29 20.0	-0.5
KBL				pmax	pmax		
	comp=Z,11nm,1.3s						
HOPE	Hope Point	86.18	178	P	P	02 29 19.1	-0.5
HOPE	Hope Point	86.18	178	P	P	02 29 19.2	-0.5
HOPE				pmax	pmax		
	comp=Z,233nm,1.7s						
BOSA	Boshof	86.78	127	P	P	02 29 24.6	+1.2
	comp=Z,3.5nm,1.0s,baz=119,slow=3.4,SNR=3.8						
BOSA				LR	LR	03 02 20.2	
	comp=Z,392nm,21.1s,baz=312,slow=32						
BOSA	Boshof	86.78	127	P	P	02 29 22.8	-0.7
BOSA				IAmb	IAmb	02 29 25.6	
	comp=Z,37nm,1.6s						
KSH	Kashi	87.37	44	P	P	02 29 27.3	+0.9
KSH				pP	pwP	02 29 38.1	+4.0
KSH				PP	PP	02 32 52.8	+2.6
KSH				SKS	SKSac	02 39 49.2	-4.8
KSH				S	SKKSac	02 40 01.1	-2.0
KSH				sS	ScS	02 40 18.2	+4.3
KSH				pmax	pmax		
	comp=Z,71nm,1.5s						
KSH				pmax	pmax		
	comp=Z,280nm,6.7s						
KSH				LR	LR		
	comp=Z,740nm,16.9s						
KSH				LR	LR		
	comp=Z,430nm,11.8s						
KSH				LR	LR		
	comp=Z,940nm,16.3s						
GO09	Cerro Castillo	87.76	199	P	P	02 29 27.7	+0.2
BOD	Bodaibo	87.77	13	*e*P	P	02 29 28.0	+0.3
BOD				pmax	pmax		
	comp=Z,39nm,1.8s						
MA2	Magadan	88.12	354	*ce*P	P	02 29 28.1	-1.3
MA2				pmax	pmax		
	comp=Z,27nm,1.7s						
NIL	Nilore	89.43	50	P	P	02 29 35.9	-0.2
NIL				IAmb	IAmb	02 29 37.6	
	comp=Z,17nm,1.3s						
NIL	Nilore	89.43	50	P	P	02 29 35.9	-0.2
NIL				pmax	pmax		
	comp=Z,17nm,1.3s						
IRK	Irkutsk	90.38	21	*e*P	P	02 29 32.9	-7.3
IRK				pmax	pmax		
	comp=Z,48nm,2.9s						
TLY	Talaya	90.68	22	P	P	02 29 41.7	+0.1
	comp=Z,0.8nm,0.4s,baz=330,slow=1.9,SNR=5.2						
TLY	Talaya	90.68	22	P	P	02 29 42.0	+0.4
TLY				IAmb	IAmb	02 29 43.5	
	comp=Z,20nm,1.6s						
TLY	Talaya	90.68	22	*e*P	P	02 29 42.0	+0.4
TLY				pmax	pmax		
	comp=Z,54nm,2.0s						
WMQ	Urumqi	90.68	35	*e*P	P	02 29 43.1	+1.3
WMQ				sP	pwP	02 29 49.1	-0.4
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,50nm,3.7s						
WMQ				LR	LR		
	comp=Z,410nm,20.3s						
WMQ				LR	LR		
	comp=Z,360nm,13.5s						
WMQ				LR	LR		
	comp=Z,400nm,25.3s						
WMQ	Urumqi	90.68	35	P	P	02 29 42.1	+0.3
WMQ	Urumqi	90.68	35	P	P	02 29 42.1	+0.3
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ZAK	Zakamensk	91.69	22	*e*P	P	02 29 47.3	+0.9
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
PETK	Petropavlovsk-	93.63	349	LR	LR	03 09 51.9	
	comp=Z,244nm,21.6s,baz=60,slow=34						
SONM	Songino Array	94.91	22	P	P	02 30 01.2	-0.2
	comp=Z,1.4nm,1.0s,baz=321,slow=5.7,SNR=11						
SONM				LR	LR	03 11 56.6	
	comp=Z,42nm,18.1s,baz=355,slow=35						
ULN	Ulaanbaatar	95.09	21	P	P	02 30 01.9	-0.3
ULN				IAmb	IAmb	02 30 04.8	
	comp=Z,32nm,2.0s						
ULN	Ulaanbaatar	95.09	21	P	P	02 30 01.9	-0.3
ULN				pmax	pmax		
	comp=Z,33nm,2.0s						
GTA	Gaotai	99.71	30	*e*P	Pdif	02 30 20.3	-2.9
GTA				pP	pP	02 30 24.6	-2.3
GTA				sP	sP	02 30 27.9	-0.3
GTA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,71nm,4.4s						
GTA				LR	LR		
	comp=Z,140nm,15.2s						
GTA				LR	LR		
	comp=Z,180nm,14.3s						
GTA				LR	LR		
	comp=Z,260nm,18.1s						
YSS	Yuzh-Sakhalins	101.18	358	*e*P	Pdif	02 30 15.9	-13
YSS				MLR	MLR		
	comp=Z,500nm,13.0s						
HHC	Hu-ho-hao-te	102.81	22	*e*P	Pdif	02 30 36.5	-0.4
HHC				LR	LR		
	comp=Z,670nm,16.7s						
HHC				LR	LR		
	comp=Z,730nm,17.2s						
HHC				LR	LR		
	comp=Z,880nm,17.2s						
TAOE	Nuku Hiva Isla	102.98	268	*e*LR	LR	03 04 30.9	
	comp=Z,326nm,30.8s						
CD2	Chengdu	108.60	32	Pdif	Pdif	02 31 01.0	-1.8
CD2				S	Sdif	02 43 10.6	-0.3
CD2				LR	LR		
	comp=Z,220nm,16.2s						
CD2				LR	LR		
	comp=Z,270nm,17.2s						
CD2				LR	LR		
	comp=Z,370nm,18.1s						
GYA	Guiyang	113.72	32	*e*PKP	PKiKP	02 35 16.0	-2.1
GYA				PP	PP	02 36 07.2	-2.3
GYA				AMB	AMB		
	comp=Z,120nm,7.8s						
PPT2	Papeete2	115.24	264	*e*LR	LR	03 10 11.1	
	comp=Z,499nm,31.0s						
SYO	Syowa Base	116.15	157	⇑*e*PKPdf	PKiKP	02 35 23.0	+1.8
CMAR	Chiang Mai Arr	116.28	44	PKP	PKiKP	02 35 23.1	+0.1
	comp=Z,0.8nm,0.3s,baz=339,slow=4.8,SNR=2.9						
CMAR				PP	PP	02 36 27.2	-0.6
	comp=Z,1.0nm,0.3s,baz=313,slow=8.0,SNR=5.7						
TBI	Tubuai	117.71	259	*e*LR	LR	03 11 20.0	
	comp=Z,225nm,23.5s						
QIZ	Qiongzhong	121.58	34	PKP	PKPdf	02 35 31.8	-1.5
QIZ				PP	PP	02 37 01.4	-2.8
QIZ				SS	SS	02 53 37.9	-1.0
QIZ				LR	LR		
	comp=Z,180nm,14.5s						
QIZ				LR	LR		
	comp=Z,140nm,16.9s						
FAKI	Fak Fak	150.05	15		PKPbc	02 36 30.3	0.0
DZM	Mont Dzumac	154.23	286	*e*SS	SS	03 00 21.4	+13
	comp=Z,168nm,26.5s						
DZM	Mont Dzumac	154.23	286	*e*LR	LR	03 28 18.5	
	comp=Z,343nm,22.4s						
WB0	Warramunga Arr	166.74	22		PKPdf	02 36 44.0	-1.1
WB0				PKPab	PKPab	02 37 47.9	+0.2
WRA	Warramunga Arr	166.89	23	PKPab	PKPab	02 37 47.8	-0.5
	comp=Z,1.1nm,1.0s,baz=346,slow=4.6,SNR=4.5						
ASAR	Alice Springs	170.08	33	PKP	PKPdf	02 36 47.1	-0.2
	comp=Z,2.6nm,0.9s,baz=58,slow=0.1,SNR=20						
ASAR				PKPab	PKPab	02 38 02.6	+0.1
	comp=Z,1.8nm,0.9s,baz=316,slow=3.7,SNR=8.9						

PRU 01 02:24:12.7±0.0,49°.84N×18°.39E,h0^{km},2D,Mining Induced Event Karvina, E=1.7e+05,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.16	269	*e*PG	Pg	02 24 16.8	+1.1
OKC				*e*SG	Sg	02 24 18.8	+1.1
	comp=Z,115nm,0.3s						
MORC	Moravsky Berou	0.55	264	⇓P	Pb	02 24 25.2	-0.1
MORC	Moravsky Berou	0.55	264	*e*PG	Pg	02 24 23.6	+0.3
MORC				*e*SG	Sg	02 24 31.3	+0.9
LANS	Liptovska Anna	0.98	134	*e*PG	Pg	02 24 31.1	-0.5
LANS				*e*SG	Sb	02 24 46.6	+0.4
LANS				*e*LG	Lg	02 24 49.1	
OJC	Ojcow	0.98	67	*e*Pg	Pg	02 24 29.7	-1.8
OJC				*e*Sg	Sg	02 24 42.2	-2.1
KRLC	Kraliky	1.06	283	*e*PG	Pg	02 24 32.4	-0.7
KRLC				*e*SG	Sg	02 24 47.2	+0.3
	comp=Z,24nm,0.4s						
JAVC	Velka Javorina	1.09	206	*e*PG	Pb	02 24 34.6	+0.2
VRAC	Vranov	1.28	246	⇓P	Pg	02 24 35.1	-2.2
VRAC	Vranov	1.28	246	*e*PG	Pg	02 24 37.4	+0.1
VRAC				*e*SG	Sg	02 24 54.3	+0.4
NIE	Niedzica	1.31	108	*e*Pg	Pg	02 24 36.8	-1.0
NIE				*e*Sg	Sb	02 24 55.3	-0.3
DPC	Dobruska-Polom	1.43	292	*e*PG	Pn	02 24 39.2	-0.7
SMOL	Smolenice	1.47	206	*e*PG	Pn	02 24 39.9	-0.5
SMOL				*e*SG	Sg	02 24 59.6	-0.3
SMOL				*e*LG	Lg	02 25 00.7	
KRUC	Moravsky	1.52	240	*e*PG	Pn	02 24 40.9	-0.2
KRUC				*e*SG	Sn	02 25 01.8	+0.3
OSTC	Ostas	1.57	298	*e*PG	Pn	02 24 42.0	+0.1
OSTC				*e*SG	Sg	02 25 03.4	+0.3
MODS	Modra-Piesok	1.64	207	*e*PG	Pn	02 24 41.7	-1.1
MODS				*e*SG	Sn	02 25 03.2	-1.4
CHVC	Chvalec	1.68	297	*e*PG	Pn	02 24 43.3	0.0
CHVC				*e*SG	Sb	02 25 06.2	+0.1
KSP	Ksiaz	1.68	308	*e*Pg	Pb	02 24 44.0	-0.4
KSP				*e*Sg	Sg	02 25 07.5	+1.0
ZST	Bratislava	1.85	208	*e*PG	Pn	02 24 44.6	-1.1
TREC	Trest	1.97	255	*e*SG	Sb	02 25 15.1	+0.7
	comp=Z,7.7nm,0.2s						
CRVS	Cervenica-Dubn	2.22	114	*e*PN	Pb	02 24 53.2	-0.4
GOPC	GO Pecny, Ondr	2.33	273	*e*SG	Sb	02 25 25.6	+0.7
PRU	Pruhonice	2.49	275	*e*SG	Sb	02 25 31.0	+1.5
KOLS	Kolonicke sedl	2.69	108	*e*PG	Pg	02 25 03.9	-0.4
BRG	Berggiesshubel	3.03	292	SG	Sg	02 25 49.6	-0.3
	3.4nm,0.5s						
KHC	Kasperske Hory	3.22	259	*e*PN	Pn	02 25 04.0	-0.5
KHC				*e*SG	Sg	02 25 53.4	-2.6
CLL	Collm	3.73	295	*e*Sg	Sg	02 26 13.0	+0.4

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*IDC **01** 02:33:39.8±1.5,35°.30S×179°.86E,h0^{km},mb4.1/4, mb1 4.3/5,mb1mx4.0/24,mbtmp4.1/5,ML4.0/1,Error ellipse: s-maj=41.2km s-min=29.9km az=64.0*

*WEL **01** 02:33:46.6±0.6,36°S±4°×18°0E±°,h33^{km},M4.1/34, mB4.3/1,ML4.4/34,MLv4.1/34,Mw(mB)3.5/1*

*NEIC **01** 02:33:47.5±1.3,35°.6S±0°.1×179°.6E±0°.2,h49^{km}±5^{km}, Error ellipse: s-maj=22.5km s-min=13.8km az=64.0*

ISC 01 02:33:45.4±1.1,35°.54S±0°.07×179°.8E±0°.1,h35^{km},n106, σ1^{s}.15/125,mb4.1/4,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.36	211	Pn	Pn	02 34 22.9	+1.3
MXZ	Matakaoa Point	2.36	211	P	Pn	02 34 20.2	-1.4
MXZ	Matakaoa Point	2.36	211	P	Pn	02 34 20.2	-1.4
WMGZ	Waiomatatini S	2.54	206	P	Pn	02 34 26.2	+2.0
WMGZ				S	Sn	02 34 55.5	+1.7
WMGZ	Waiomatatini S	2.54	206	P	Pn	02 34 26.2	+2.0
WMGZ				S	Sn	02 34 55.5	+1.7
PKGZ	Pakihiroa	2.73	210	P	Pn	02 34 28.2	+1.4
PKGZ				S	Sn	02 34 59.5	+0.9
PKGZ	Pakihiroa	2.73	210	P	Pn	02 34 28.2	+1.4
PKGZ				S	Sn	02 34 59.5	+0.9
HAZ	Te Kaha	2.75	216	P	Pn	02 34 28.1	+1.1
HAZ	Te Kaha	2.75	216	P	Pn	02 34 28.1	+1.1
PUZ	Puketiti	2.82	206	P	Pn	02 34 29.3	+1.3
PUZ				S	Sn	02 35 00.9	+0.1
PUZ	Puketiti	2.82	206	P	Pn	02 34 29.3	+1.3
PUZ				S	Sn	02 35 00.9	+0.1
RUGZ	Raukumara Rang	2.97	215	P	Pn	02 34 31.3	+1.1
RUGZ				S	Sn	02 35 06.0	+1.4
RUGZ	Raukumara Rang	2.97	215	P	Pn	02 34 31.3	+1.1
RUGZ				S	Sn	02 35 06.0	+1.4
TWGZ	Tauwhareparae	3.02	209	P	Pn	02 34 32.0	+1.2
TWGZ				S	Sn	02 35 05.4	-0.3
TWGZ	Tauwhareparae	3.02	209	P	Pn	02 34 32.0	+1.2
TWGZ				S	Sn	02 35 05.4	-0.3
CNGZ	Carnagh Statio	3.21	203	P	Pn	02 34 34.5	+1.2
CNGZ				S	Sn	02 35 10.8	+0.4
CNGZ	Carnagh Statio	3.21	203	P	Pn	02 34 34.5	+1.2
CNGZ				S	Sn	02 35 10.8	+0.4
TKGZ	Te Karaka	3.30	208	P	Pn	02 34 35.1	+0.6
TKGZ				S	Sn	02 35 11.3	-1.1
TKGZ	Te Karaka	3.30	208	P	Pn	02 34 35.1	+0.6
TKGZ				S	Sn	02 35 11.3	-1.1
MWZ	Matawai	3.34	213	P	Pn	02 34 35.8	+0.7
MWZ				S	Sn	02 35 13.2	-0.4
MWZ	Matawai	3.34	213	P	Pn	02 34 35.8	+0.7
MWZ				S	Sn	02 35 13.2	-0.4
URZ	Urewera	3.48	218	Pn	Pn	02 34 37.2	+0.3
	12nm,0.3s,baz=50,slow=16,SNR=39						
URZ				Sn	Sn	02 35 12.2	-4.7
	5.6nm,0.3s,baz=286,slow=16,SNR=3.9						
URZ	Urewera	3.48	218		Pn	02 34 37.7	+0.7
URZ	Urewera	3.48	218	P	Pn	02 34 37.2	+0.3
URZ				S	Sn	02 35 15.2	-1.7
URZ	Urewera	3.48	218	P	Pn	02 34 37.2	+0.3
URZ				S	Sn	02 35 15.2	-1.7
OPRZ	Ohinepanea	3.49	228	P	Pn	02 34 36.8	-0.3
OPRZ	Ohinepanea	3.49	228	P	Pn	02 34 36.8	-0.3
MARZ	Manawahe	3.51	225	P	Pn	02 34 37.4	-0.1
MARZ	Manawahe	3.51	225	P	Pn	02 34 37.4	-0.1
RAGZ	Rawiri	3.52	212	P	Pn	02 34 38.3	+0.6
RAGZ	Rawiri	3.52	212	P	Pn	02 34 38.3	+0.6
RIGZ	Rimuhau	3.56	207	P	Pn	02 34 38.8	+0.6
RIGZ	Rimuhau	3.56	207	P	Pn	02 34 38.8	+0.6
TGRZ	Tauranga	3.60	232	P	Pn	02 34 38.6	-0.1
TGRZ	Tauranga	3.60	232	P	Pn	02 34 38.6	-0.1
PRGZ	Paritu Road	3.71	204	P	Pn	02 34 40.9	+0.6
PRGZ	Paritu Road	3.71	204	P	Pn	02 34 40.9	+0.6
OMRZ	Omania	3.77	226	P	Pn	02 34 41.7	+0.6
OMRZ	Omania	3.77	226	P	Pn	02 34 41.7	+0.6
TARZ	Mount Tarawera	3.78	224	P	Pn	02 34 42.7	+1.5
TARZ	Mount Tarawera	3.78	224	P	Pn	02 34 42.7	+1.5
SNGZ	Shannon Statio	3.79	211	P	Pn	02 34 41.4	0.0
SNGZ	Shannon Statio	3.79	211	P	Pn	02 34 41.4	0.0
MUGZ	Murupara	3.81	219	P	Pn	02 34 41.6	0.0
MUGZ	Murupara	3.81	219	P	Pn	02 34 41.6	0.0
RTZ	Ruatahuna	3.82	216	P	Pn	02 34 41.9	+0.1
RTZ	Ruatahuna	3.82	216	P	Pn	02 34 41.9	+0.1
MHGZ	Mahia Peninsul	3.92	202	P	Pn	02 34 43.0	0.0
MHGZ	Mahia Peninsul	3.92	202	P	Pn	02 34 43.0	0.0
RAHZ	Arahi	4.01	212	P	Pn	02 34 45.5	+1.1
RAHZ	Arahi	4.01	212	P	Pn	02 34 45.5	+1.1
MKAZ	Moumakai	4.07	246	P	Pn	02 34 45.6	+0.4
MKAZ	Moumakai	4.07	246	P	Pn	02 34 45.6	+0.4
MTHZ	Maungataniwha	4.07	215	P	Pn	02 34 46.0	+0.7
MTHZ	Maungataniwha	4.07	215	P	Pn	02 34 46.0	+0.7
ALRZ	Allen Road	4.10	222	P	Pn	02 34 46.1	+0.5
ALRZ	Allen Road	4.10	222	P	Pn	02 34 46.1	+0.5
TOZ	Tahuroa Road	4.10	237	P	Pn	02 34 45.8	+0.2
TOZ	Tahuroa Road	4.10	237	P	Pn	02 34 45.8	+0.2
ETAZ	East Tamaki Re	4.20	249	P	Pn	02 34 49.0	+2.1
ETAZ	East Tamaki Re	4.20	249	P	Pn	02 34 49.0	+2.1
MRHZ	Matea Rd	4.26	219	P	Pn	02 34 48.0	+0.1
MRHZ	Matea Rd	4.26	219	P	Pn	02 34 48.0	+0.1
NMHZ	Naumai	4.29	213	P	Pn	02 34 48.0	-0.2
NMHZ	Naumai	4.29	213	P	Pn	02 34 48.0	-0.2
ARHZ	Aropaoanui	4.34	210	P	Pn	02 34 48.5	-0.4
ARHZ	Aropaoanui	4.34	210	P	Pn	02 34 48.5	-0.4
AWAZ	Awhitu Peninsu	4.45	249	P	Pn	02 34 51.2	+0.8
AWAZ	Awhitu Peninsu	4.45	249	P	Pn	02 34 51.2	+0.8
HATZ	Hinemaiaia	4.48	221	P	Pn	02 34 50.8	0.0
HATZ	Hinemaiaia	4.48	221	P	Pn	02 34 50.8	0.0
BKZ	Black Stump Fm	4.49	215		Pn	02 34 50.2	-0.8
BKZ	Black Stump Fm	4.49	215	P	Pn	02 34 50.5	-0.4
BKZ	Black Stump Fm	4.49	215	P	Pn	02 34 50.5	-0.4
MCHZ	McNeill Hill	4.62	212	P	Pn	02 34 53.2	+0.4
MCHZ	McNeill Hill	4.62	212	P	Pn	02 34 53.2	+0.4
KWHZ	Kaweka Forest	4.73	214	P	Pn	02 34 53.4	-0.9
KWHZ	Kaweka Forest	4.73	214	P	Pn	02 34 53.4	-0.9
KAHZ	Kahuranaki	4.85	208	P	Pn	02 34 54.4	-1.4
KAHZ	Kahuranaki	4.85	208	P	Pn	02 34 54.4	-1.4
KRHZ	Kereru	4.93	213	P	Pn	02 34 55.9	-1.1
KRHZ	Kereru	4.93	213	P	Pn	02 34 55.9	-1.1
BHHZ	Black Hill Sta	4.95	216	P	Pn	02 34 56.4	-0.9
BHHZ	Black Hill Sta	4.95	216	P	Pn	02 34 56.4	-0.9
NGZ	Ngauruhoe	4.95	222	P	Pn	02 34 58.8	+1.5
NGZ	Ngauruhoe	4.95	222	P	Pn	02 34 58.8	+1.5
HIZ	Hauiti	4.96	232	P	Pn	02 34 58.6	+1.3
HIZ	Hauiti	4.96	232	P	Pn	02 34 58.6	+1.3
MOVZ	Moawhango	5.04	219	P	Pn	02 34 57.5	-1.0
MOVZ	Moawhango	5.04	219	P	Pn	02 34 57.5	-1.0
OUZ	Omahuta	5.09	272		Pn	02 34 58.8	-0.5
PNHZ	Pukenui	5.22	212	P	Pn	02 34 59.5	-1.5
PNHZ	Pukenui	5.22	212	P	Pn	02 34 59.5	-1.5
WAZ	Wanganui	5.69	221	P	Pn	02 35 07.4	-0.1
WAZ	Wanganui	5.69	221	P	Pn	02 35 07.4	-0.1
BFZ	Birch Farm	5.86	208	P	Pn	02 35 07.5	-2.2
BFZ	Birch Farm	5.86	208	P	Pn	02 35 07.5	-2.2
MRZ	Mangatainoka R	6.11	212	P	Pn	02 35 10.3	-2.8
MRZ	Mangatainoka R	6.11	212	P	Pn	02 35 10.3	-2.8
ASAR	Alice Springs	41.30	274	P	P	02 41 27.3	-0.5
	1.0nm,0.5s,baz=116,slow=7.7,SNR=26						
WRA	Warramunga Arr	42.76	279	P	P	02 41 39.6	-0.1
	2.6nm,0.6s,baz=122,slow=7.7,SNR=11						
QSPA	South Pole Qui	54.58	180	P	P	02 43 12.5	+2.5
	1.9nm,0.9s,baz=111,slow=1.7,SNR=6.2						
KSRS	Korea Array	87.13	321	P	P	02 46 27.5	0.0
	1.5nm,0.8s,baz=146,slow=6.1,SNR=2.9						
FINES	FINESS Array B	149.20	335	PKPbc	PKPbc	02 53 28.4	-0.9
	2.2nm,0.8s,baz=46,slow=6.0,SNR=4.4						
BRTR	Keskin Array B	152.99	289	PKPbc	PKPbc	02 53 37.5	-1.6
	0.2nm,0.5s,baz=90,slow=4.9,SNR=2.7						
TORD	Torodi Ar. Bea	157.64	185	PKPab	PKPab	02 54 10.3	-0.3
	0.5nm,0.8s,baz=194,slow=5.3,SNR=2.5						

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*IDC **01** 03:22:00.5±1.0,25°.37N×96°.45E,h0^{km},mb3.7/7, mb1 3.9/8,mb1mx3.5/51,mbtmp3.7/8,ML3.5/1,MS3.6/4,* *Ms1 3.6/4, ms1mx3.1/60, Error ellipse: s-maj=53.7km s-min=15.2km az=67.0*

*NEIC **01** 03:22:06.9±0.7, 25°.4N±0°.1×96°.5E±0°.1, h50^{km}±6^{km}, mb4.1/4, Error ellipse: s-maj=22.5km s-min=9.5km az=55.0*

ISC 01 03:22:02.5±0.7**, 25°.41N**±0°.06×**96°.55E**±0°.09**, h10**^{km}**, n36, σ1^{s}.83**/41**, mb3.9**/9**, MS3.5**/4**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHL	Shillong	4.22	273	Pn	Pn	03 23 08.9	+1.9
LSA	Lhasa	6.42	313	Pn	Pn	03 23 41.0	+3.5
CHTO	Chiang Mai	6.93	161	Pn	Pn	03 23 45.2	+1.0
CMMT	Chiang Mai	6.93	161	P	Pg	03 24 16.0	+0.7
CMMT				S	Sg	03 25 47.3	+2.1
CMAR	Chiang Mai Arr	7.27	162	Pn	Pn	03 23 49.6	+0.8
	0.2nm,0.3s,baz=337,slow=16,SNR=1.4						
CMAR				Pg	Pb	03 24 11.4	+2.6
	0.9nm,0.3s,baz=340,slow=16,SNR=3.8						
CMAR				Lg	Lg	03 25 51.0	
	0.5nm,0.3s,baz=344,slow=28,SNR=2.6						
CM02	Chiang Mai Arr	7.29	162	P	Pg	03 24 18.4	-3.8
CM13	Chiang Mai Arr	7.29	162	P	Pg	03 24 19.9	-2.3
CM13				S	Sg	03 25 57.3	+0.6
CM01	Chiang Mai Arr	7.31	162	P	Pg	03 24 19.5	-2.9
MHMT	Maesarieng	7.32	170	P	Pg	03 24 19.2	-3.4
MHMT				S	Sg	03 25 59.9	+2.6
CM05	Chiang Mai Arr	7.32	162	P	Pg	03 24 20.4	-2.3
CM04	Chiang Mai Arr	7.33	162	P	Pg	03 24 19.4	-3.6
LAMP	Lampang	7.43	157	P	Pg	03 24 21.1	-3.7
LAMP				S	Sg	03 26 02.2	+1.2
PHRA	Phrae	7.68	153	P	Pg	03 24 22.8	-6.8
PHRA				S	Sg	03 26 06.9	-2.2
TAPN	Taplejung	8.16	286	*e*Pn	Pn	03 24 02.1	+0.8
TAPN				*e*Sn	Sn	03 25 33.2	-0.6
	105nm,0.9s						
ODAN	Odare	8.36	282	*e*Pn	Pn	03 24 05.3	+1.3
ODAN				*e*Sn	Sn	03 25 37.7	-0.9
	122nm,0.9s						
RAMN	Ramite	9.07	282	*e*Pn	Pn	03 24 14.5	+0.8
JIRN	Jiri	9.55	286	*e*Pn	Pn	03 24 21.2	+0.8
GUN	Gumba	9.87	287	*e*Pn	Pn	03 24 25.5	+0.8
PKI	Pulchoki	10.21	285	*e*Pn	Pn	03 24 29.7	+0.2
PKIN	Phulchoki	10.22	285	*e*Pn	Pn	03 24 29.4	-0.2
DMN	Daman	10.48	285	*e*Pn	Pn	03 24 33.1	0.0
GKN	Gorkha	10.96	286	*e*Pn	Pn	03 24 39.3	-0.3
DANN	Dangsing	11.79	287	*e*Pn	Pn	03 24 49.1	-1.9
SONM	Songino Array	23.69	17	P	P	03 27 14.7	+0.2
	0.9nm,0.7s,baz=206,slow=9.0,SNR=8.0						
SONM				LR	LR	03 37 40.4	
	comp=Z,135nm,18.5s,baz=24,slow=40						
MK31	Makanchi Array	24.17	336	P	P	03 27 19.1	+0.2
MK31				IAmb	IAmb	03 27 21.4	
	comp=Z,9.9nm,1.8s						
MKAR	Makanchi Array	24.17	336	P	P	03 27 19.3	+0.3
	comp=Z,1.3nm,0.6s,baz=143,slow=8.7,SNR=21						
MKAR				LR	LR	03 37 24.1	
	comp=Z,94nm,19.0s,baz=1.5,slow=38						
KBL	Kabul	25.44	297	P	P	03 27 31.5	+0.8
KBL				IAmb	IAmb	03 27 42.0	
	comp=Z,5.4nm,0.7s						
KURBB	Kurchatov Arra	28.74	336	P	P	03 28 00.2	+0.2
	comp=Z,0.2nm,0.5s,baz=149,slow=9.4,SNR=2.9						
KURK	Kurchatov	28.78	336	P	P	03 28 00.2	-0.2
ZALV	Zalesovo Beam	29.81	346	P	P	03 28 07.9	-1.5
	comp=Z,0.5nm,0.4s,baz=167,slow=7.4,SNR=2.3						
ABKAR	Akbulak array	37.05	320	P	P	03 29 12.4	-0.1
ATD	Arta Tunnel	52.45	265	LR	LR	03 54 43.5	
	comp=Z,40nm,18.9s,baz=341,slow=38						
WRA	Warramunga Arr	58.15	137	P	P	03 31 56.3	-0.4
	comp=Z,1.7nm,1.0s,baz=323,slow=7.5,SNR=3.8						
ASAR	Alice Springs	60.74	140	P	P	03 32 14.4	-0.2
	comp=Z,0.7nm,0.7s,baz=318,slow=6.5,SNR=4.9						
NWAO	Narrogin (SRO)	61.27	160	LR	LR	04 01 08.3	
	comp=Z,90nm,20.5s,baz=96,slow=38						
GERES	GERESS Array B	66.75	314	P	P	03 32 52.9	-1.1
	comp=Z,0.7nm,0.8s,baz=61,slow=7.1,SNR=4.2						

IDC 01 03:28:15.1±3.4**, 6°.17S**×**147°.72E, h0**^{km}**, mb3.1**/1**, mb1 4.0**/3**, mb1mx3.5**/41**, mbtmp3.8**/3**, ML1.9**/1**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx2.9**/16**, Error ellipse: s-maj=81.3km s-min=36.5km az=95.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.26	190	Pn	Pn	03 29 08.3	+0.7
	10nm,0.3s,baz=16,slow=11,SNR=12						
PMG				Sn	Sn	03 29 48.4	+1.3
	6.3nm,0.3s,baz=12,slow=16,SNR=4.8						
WRA	Warramunga Arr	18.88	222	P	Pn	03 32 38.6	+0.8
	2.4nm,0.3s,baz=50,slow=12,SNR=24						
ASAR	Alice Springs	21.89	216	P	P	03 33 09.6	-0.3
	0.5nm,0.5s,baz=50,slow=9.6,SNR=7.8						
TGY	Tagaytay City	33.35	307	LR	LR	03 48 20.3	
	comp=Z,143nm,20.4s,baz=196,slow=36						
TORD	Torodi Ar. Bea	145.83	284	PKPbc	PKPdf	03 47 55.7	-1.3
	0.6nm,1.0s,baz=90,slow=1.9,SNR=2.0						

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*CNRM **01** 03:30:18.2±1.1, 35°.85N×3°.07W, h4^{km}±5^{km}, Error ellipse: s-maj=8.1km s-min=4.4km az=65.0*

*SFS **01** 03:30:20.0, 35°.75N×3°.35W, ML2.5, ALBORAN SUR*

*MDD **01** 03:30:21.0±0.4, 35°.76N×3°.36W, h0^{km}, mbLg2.2/17, Error ellipse: s-maj=4.6km s-min=2.8km az=57.0, PRXIMO*

ISC 01 03:30:20.3±1.0**, 35°.78N**±0°.02×**3°.31W**±0°.03**, h11**^{km}±9^{km}**, n34, σ1^{s}.47**/67**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EALB	Alboran	0.27	53	P	Pb	03 30 27.4	+0.1
	64nm,0.1s,SNR=7.9						
EALB				S	Sg	03 30 31.6	+1.9
	168nm,0.1s,SNR=7.9						
EMEL	Melilla	0.55	149	P	Pg	03 30 31.5	+0.4
	270nm,0.2s,SNR=7.9						
EMEL				S	Sg	03 30 39.0	+0.6
	1μm,0.2s,SNR=7.9						
MELI	Melilla	0.57	148	P	Pg	03 30 31.6	+0.3
	120nm,0.1s,SNR=7.9						
MELI				S	Sg	03 30 38.7	-0.2
	321nm,0.1s,SNR=7.9						
MELI	Melilla	0.57	148	*i* P	Pg	03 30 31.6	+0.3
MELI				*e*S	Sg	03 30 38.3	-0.5
GOG	Mont Gurugu	0.61	155	P	Pg	03 30 30.6	-1.5
GOG				S	Sg	03 30 39.2	-0.9
PALE	Palemas	0.76	223	P	Pn	03 30 36.4	-0.6
PALE				S	Sn	03 30 49.3	+0.8
ELGU	Los Guajares,	1.12	347	P	Pg	03 30 41.3	-0.5
	3.5nm,0.2s,SNR=7.9						
ELGU				S	Sg	03 30 55.6	-0.8
	49nm,0.2s,SNR=7.9						
EBER	Berja	1.17	17	P	Pg	03 30 42.3	-0.5
	2.0nm,0.3s,SNR=10						
EBER				S	Sg	03 30 57.9	-0.1
	72nm,0.3s,SNR=10						
EMAL	Malaga-Limoner	1.34	318	P	Pn	03 30 45.5	+0.7
EMAL				S	Sg	03 31 02.5	-0.8
EMAL	Malaga-Limoner	1.34	318	*e*P	Pn	03 30 45.5	+0.7
EMAL				*e*S	Sg	03 31 02.5	-0.8
EMIJ	Mijas	1.42	304	P	Pn	03 30 45.5	-0.6
	2.7nm,0.3s,SNR=8.3						
EMIJ				S	Sg	03 31 03.6	-2.5
	12nm,0.2s,SNR=6.7						
EQUE	Quentar	1.43	356	P	Pn	03 30 46.7	+0.5
	0.7nm,0.1s,SNR=6.1						
EQUE				S	Sg	03 31 05.7	-0.6
	6.2nm,0.3s,SNR=7.5						
EGOR	Sierra Gorda,	1.48	334	P	Pn	03 30 47.9	+0.9
	1.0nm,0.0s,SNR=7.9						
EGOR				S	Sg	03 31 07.5	-0.4
	11nm,0.4s,SNR=7.9						
ENIJ	Nijar	1.49	36	P	Pn	03 30 47.1	+0.2
	3.3nm,0.4s,SNR=7.9						
ENIJ				S	Sn	03 31 02.1	-4.3
	7.6nm,0.2s,SNR=7.9						
JBK	JBK	1.56	157	P	Pn	03 30 46.4	-1.7
JBK				S	Sn	03 31 08.0	-0.5
GORA	Gorafe	1.71	7	P	Pb	03 30 52.0	+0.2
	2.1nm,0.2s,SNR=7.9						
GORA				S	Sn	03 31 13.2	+1.1
	25nm,0.4s,SNR=7.9						
EQES	Quesada	2.03	5	P	Pn	03 30 56.6	+2.0
	1.8nm,0.2s,SNR=21						
EQES				S	Sn	03 31 22.0	+2.0
	21nm,0.3s						
HORN	Hornachuelos	2.59	323	P	Pn	03 31 03.7	+1.5
HORN				S	Sn	03 31 33.8	+0.2
EADA	Adamuz	2.59	337	P	Pn	03 31 03.3	+1.1
	0.4nm,0.1s,SNR=7.9						
EADA				S	Sn	03 31 35.8	+2.1
	5.9nm,0.4s,SNR=7.9						
EMUR	La Murta	2.65	38	P	Pn	03 31 03.8	+0.9
	0.7nm,0.3s,SNR=7.9						
EMUR				S	Sn	03 31 31.8	-3.2
	2.5nm,0.3s,SNR=7.9						
ECAB	El Cabril	2.85	324	P	Pn	03 31 07.0	+1.3
	0.1nm,0.2s,SNR=7.9						
ECAB				S	Sn	03 31 41.3	+1.2
	3.5nm,0.4s,SNR=7.9						
TDRA	Tendrara	2.93	158	P	Pn	03 31 06.4	-0.5
TDRA				S	Sn	03 31 44.3	+2.1
MD31	MD31	3.14	203	P	Pn	03 31 10.8	+1.1
MD31				S	Sn	03 31 50.9	+3.6
MDT	Midelt	3.15	200	P	Pn	03 31 11.3	+1.4
MDT				S	Sb	03 31 53.1	-1.5
ETOB	Tobarra	3.19	26	P	Pn	03 31 12.4	+2.0
	0.8nm,0.2s,SNR=7.9						
ETOB				S	Sn	03 31 47.7	-0.7
	1.5nm,0.4s,SNR=7.9						
EMIN	Mina Concepcio	3.35	307	P	Pn	03 31 12.9	+0.3
	0.7nm,0.5s,SNR=7.9						
EMIN				S	Sn	03 31 51.3	-1.1
	1.3nm,0.4s,SNR=7.9						
EGRO	El Granado	3.79	299	P	Pn	03 31 19.2	+0.6
	0.7nm,0.2s,SNR=7.9						
EGRO				S	Sn	03 32 01.8	-1.4
	3.4nm,0.3s,SNR=7.9						
PAB	San Pablo	3.85	348	P	Pn	03 31 20.7	+1.1
	0.2nm,0.2s,SNR=7.9						
PAB				S	Sn	03 32 05.5	+0.7
	0.4nm,0.2s,SNR=4.0						
PVAQ	Vaqueiros	3.90	296	Pn	Pn	03 31 22.9	+2.7
PVAQ				Sn	Sn	03 32 05.4	-0.6
	2.7nm,0.8s						
PVAQ	Vaqueiros	3.90	296	*e*Pn	Pn	03 31 22.9	+2.7
PVAQ				*e*Sn	Sn	03 32 05.4	-0.6
PVAQ				A	A	03 32 11.5	
	2.7nm,0.8s						
EBAD	Badajoz	4.19	316	P	Pn	03 31 24.9	+0.8
	0.3nm,0.2s,SNR=7.9						
EBAD				S	Sn	03 32 11.0	-2.1
	2.1nm,0.2s,SNR=7.9						
PCVE	Castro Verde	4.23	297	Pn	Pn	03 31 26.3	+1.7
PCVE				Sn	Sn	03 32 14.1	+0.1
PCVE	Castro Verde	4.23	297	*e*Pn	Pn	03 31 26.3	+1.7
PCVE				*e*Sn	Sn	03 32 14.1	+0.1
EPLA	Plasencia	4.81	334	P	Pn	03 31 34.6	+2.0
	0.4nm,0.2s,SNR=7.9						

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*NEIC **01** 03:32:11.6±1.6, 31°.29S±0°.04×180°.0E±0°.1, h378^{km}±4^{km}, mb4.6/45, Error ellipse: s-maj=13.8km s-min=5.4km az=78.0*

*IDC **01** 03:32:12.5±1.1, 31°.15S×179°.93W, h382^{km}±9^{km}, mb4.0/19, mb1 4.2/22, mb1mx4.0/40, mbtmp4.7/22, Error ellipse: s-maj=13.1km s-min=12.4km az=171.0*

ISC 01 03:32:11.6±0.3**, 31°.34S**±0°.05×**179°.96W**±0°.06**, h377**^{km}**, n265, σ1^{s}.45**/301**, mb4.5**/36**, 11C-11D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.72	41	P	Pn	03 33 09.7	-1.0
GLKZ				S	S	03 33 56.3	-2.1
GLKZ	Green Lake	2.72	41	P	Pn	03 33 09.7	-1.0
GLKZ				S	S	03 33 56.3	-2.1
RIZ	Raoul Island	2.73	41	P	Pn	03 33 10.2	-0.6
RIZ				S	S	03 33 54.4	-4.2
RIZ	Raoul Island	2.73	41	P	Pn	03 33 10.2	-0.6
RIZ				S	S	03 33 54.4	-4.2
RAO	Raoul Island	2.73	41	P	Pn	03 33 10.2	-0.6
	284nm,0.3s,baz=122,slow=9.0,SNR=9.3						
RAO				S	S	03 33 46.9	-12
	318nm,0.3s,baz=83,slow=17,SNR=6.7						
MXZ	Matakaoa Point	6.37	192		Pn	03 33 47.6	+0.3
MXZ	Matakaoa Point	6.37	192	P	Pn	03 33 47.7	+0.3
MXZ				S	S	03 35 01.3	-4.1
MXZ	Matakaoa Point	6.37	192	P	Pn	03 33 47.7	+0.3
MXZ				S	S	03 35 01.3	-4.1
WMGZ	Waiomatatini S	6.60	191	P	Pn	03 33 50.4	+0.4
WMGZ				S	S	03 35 05.9	-4.2
WMGZ	Waiomatatini S	6.60	191	P	Pn	03 33 50.4	+0.4
WMGZ				S	S	03 35 05.9	-4.2
OUZ	Omahuta	6.64	233		Pn	03 33 50.1	-0.3
HAZ	Te Kaha	6.67	196	P	Pn	03 33 52.7	+2.0
HAZ				S	S	03 35 09.9	-1.6
HAZ	Te Kaha	6.67	196	P	Pn	03 33 52.7	+2.0
HAZ				S	S	03 35 09.9	-1.6
PUZ	Puketiti	6.87	192	P	Pn	03 33 55.4	+2.3
PUZ				S	S	03 35 12.9	-3.0
PUZ	Puketiti	6.87	192	P	Pn	03 33 55.4	+2.3
PUZ				S	S	03 35 12.9	-3.0
WHRZ	Whale Island	6.97	200	P	P	03 33 58.5	+3.3
WHRZ				S	S	03 35 21.7	+3.7
WHRZ	Whale Island	6.97	200	P	P	03 33 58.5	+3.3
WHRZ				S	S	03 35 21.7	+3.7
TWGZ	Tauwhareparae	7.03	193	P	Pn	03 33 57.0	+2.1
TWGZ				S	S	03 35 19.3	+0.2
TWGZ	Tauwhareparae	7.03	193	P	Pn	03 33 57.0	+2.1
TWGZ				S	S	03 35 19.3	+0.2
MWZ	Matawai	7.28	196	P	Pn	03 33 60.0	+2.2
MWZ				S	S	03 35 21.7	-2.7
MWZ	Matawai	7.28	196	P	Pn	03 33 60.0	+2.2
MWZ				S	S	03 35 21.7	-2.7
TKGZ	Te Karaka	7.31	194	P	Pn	03 33 59.4	+1.4
TKGZ				S	S	03 35 21.4	-3.5
TKGZ	Te Karaka	7.31	194	P	Pn	03 33 59.4	+1.4
TKGZ				S	S	03 35 21.4	-3.5
URZ	Urewera	7.31	198	P	Pn	03 33 57.9	-0.1
	38nm,0.3s,baz=271,slow=4.3,SNR=82						
URZ				S	S	03 35 22.0	-3.0
	101nm,0.3s,baz=223,slow=23,SNR=16						
RRRZ	Republican Roa	7.56	202	P	Pn	03 34 02.9	+2.0
RRRZ				S	S	03 35 28.2	-2.2
RRRZ	Republican Roa	7.56	202	P	Pn	03 34 02.9	+2.0
RRRZ				S	S	03 35 28.2	-2.2
RIGZ	Rimuhau	7.58	194	P	Pn	03 34 03.1	+1.8
RIGZ				S	S	03 35 23.7	-7.1
RIGZ	Rimuhau	7.58	194	P	Pn	03 34 03.1	+1.8
RIGZ				S	S	03 35 23.7	-7.1
MUGZ	Murupara	7.61	200	P	Pn	03 34 01.9	+0.4
MUGZ				S	S	03 35 28.9	-2.5
MUGZ	Murupara	7.61	200	P	Pn	03 34 01.9	+0.4
MUGZ				S	S	03 35 28.9	-2.5
RTZ	Ruatahuna	7.68	198	P	Pn	03 34 03.6	+1.2
RTZ				S	S	03 35 30.1	-2.9
RTZ	Ruatahuna	7.68	198	P	Pn	03 34 03.6	+1.2
RTZ				S	S	03 35 30.1	-2.9
SNGZ	Shannon Statio	7.75	196	P	Pn	03 34 04.6	+1.5
SNGZ				S	S	03 35 32.1	-2.3
SNGZ	Shannon Statio	7.75	196	P	Pn	03 34 04.6	+1.5
SNGZ				S	S	03 35 32.1	-2.3
PRGZ	Paritu Road	7.77	193	P	P	03 34 06.2	+1.9
PRGZ				S	S	03 35 29.0	-5.8
PRGZ	Paritu Road	7.77	193	P	P	03 34 06.2	+1.9
PRGZ				S	S	03 35 29.0	-5.8
KNZ	Kokohu	7.91	194	P	Pn	03 34 05.3	+0.4
KNZ				S	S	03 35 31.7	-5.9
KNZ	Kokohu	7.91	194	P	Pn	03 34 05.3	+0.4
KNZ				S	S	03 35 31.7	-5.9
RAHZ	Arahi	7.94	197	P	Pn	03 34 04.9	-0.5
RAHZ	Arahi	7.94	197	P	Pn	03 34 04.9	-0.5
MTHZ	Maungataniwha	7.94	198	P	Pn	03 34 04.7	-0.7
MTHZ	Maungataniwha	7.94	198	P	Pn	03 34 04.7	-0.7
MHGZ	Mahia Peninsul	7.99	192	P	Pn	03 34 06.3	+0.4
MHGZ				S	S	03 35 33.0	-6.5
MHGZ	Mahia Peninsul	7.99	192	P	Pn	03 34 06.3	+0.4
MHGZ				S	S	03 35 33.0	-6.5
MRHZ	Matea Rd	8.04	201	P	Pn	03 34 04.4	-2.2
MRHZ	Matea Rd	8.04	201	P	Pn	03 34 04.4	-2.2
WHHZ	Waihua	8.05	196	P	Pn	03 34 06.3	-0.4
WHHZ	Waihua	8.05	196	P	Pn	03 34 06.3	-0.4
BKZ	Black Stump Fm	8.33	199		Pn	03 34 08.7	-1.2
BKZ	Black Stump Fm	8.33	199	P	Pn	03 34 07.1	-2.8
BKZ	Black Stump Fm	8.33	199	P	Pn	03 34 07.1	-2.8
MCHZ	McNeill Hill	8.53	198	P	Pn	03 34 11.3	-1.0
MCHZ	McNeill Hill	8.53	198	P	Pn	03 34 11.3	-1.0
CKHZ	Cape Kidnapper	8.64	195	P	Pn	03 34 12.7	-0.8
CKHZ	Cape Kidnapper	8.64	195	P	Pn	03 34 12.7	-0.8
BHHZ	Black Hill Sta	8.75	201	P	Pn	03 34 11.4	-3.4
BHHZ	Black Hill Sta	8.75	201	P	Pn	03 34 11.4	-3.4
MOVZ	Moawhango	8.78	202	P	Pn	03 34 11.5	-3.6
MOVZ	Moawhango	8.78	202	P	Pn	03 34 11.5	-3.6
KAHZ	Kahuranaki	8.82	196	P	Pn	03 34 13.3	-2.3
KAHZ	Kahuranaki	8.82	196	P	Pn	03 34 13.3	-2.3
BFZ	Birch Farm	9.81	197		Pn	03 34 25.8	-1.4
MSWZ	Moikau Station	10.77	200		P	03 34 36.2	-2.1
SNZO	South Karori	10.84	202		P	03 34 36.7	-2.3
BHW	Baring Head	10.87	201		P	03 34 37.5	-1.9
PLWZ	Palliser	10.91	199		P	03 34 37.9	-1.9
TUWZ	Tuamarina	11.20	204	P	P	03 34 40.8	-2.2
NNZ	Nelson	11.22	207	P	P	03 34 41.9	-1.4
QRZ	Quartz Range	11.24	211	P	P	03 34 43.1	-0.5
CMWZ	Cape Campbell	11.39	203	P	P	03 34 43.6	-1.6
BSWZ	Blackbirch Sta	11.47	204	P	P	03 34 45.3	-0.8
MSVF	Nonsavu	13.67	352	P	P	03 35 09.9	-0.7
RPZ	Rata Peaks	14.25	207	P	P	03 35 15.2	-1.5
	3.9nm,0.3s,baz=124,slow=2.6,SNR=9.2						
RPZ				S	S	03 37 41.6	-8.3
	2.9nm,0.3s,baz=24,slow=7.0,SNR=3.6						
LBZ	Lake Benmore	15.15	208	P	P	03 35 25.7	-0.8
LBZ				IAmb	IAmb	03 35 38.4	
	comp=Z,25nm,1.2s						
DZM	Mont Dzumac	15.24	304	P	P	03 35 27.6	-0.2
	comp=Z,0.4nm,0.3s,baz=139,slow=20,SNR=3.6						
DZM	Mont Dzumac	15.24	304	P	P	03 35 28.0	+0.2
DZM				IAmb	IAmb	03 35 38.1	
	comp=Z,30nm,0.8s						
NOUC	Port Laguerre	15.32	304	P	P	03 35 29.9	+1.3
WKZ	Wanaka	16.00	210	P	P	03 35 34.3	-1.3
WKZ				IAmb	IAmb	03 35 42.8	
	comp=Z,32nm,1.1s						
MLZ	Mavora Lakes	16.81	210	P	P	03 35 43.5	-0.9
MLZ				IAmb	IAmb	03 36 02.0	
	comp=Z,28nm,1.2s						
AFI	Afiamalu	18.91	25	P	P	03 36 06.2	-0.8
	comp=Z,2.5nm,0.3s,baz=188,slow=14,SNR=4.7						
AFI	Afiamalu	18.91	25	P	P	03 36 07.1	+0.1
SANVU	Saraoutou	19.69	321	P	P	03 36 14.2	-0.7
EIDS	Eidsvold	26.12	276	P	P	03 37 13.8	+0.8
CTA	Charters Tower	32.31	282	P	P	03 38 08.4	+1.1
	comp=Z,14nm,0.6s,baz=106,slow=10,SNR=21						
STKA	Stephens Creek	32.63	259	P	P	03 38 11.8	+1.9
	comp=Z,19nm,0.6s,baz=91,slow=9.7,SNR=35						
STKA				PcP	PcP	03 40 44.9	-0.8
	comp=Z,2.8nm,0.8s,baz=137,slow=3.9,SNR=3.3						
STKA	Stephens Creek	32.63	259	P	P	03 38 11.7	+1.9
TARA	Tarawa	33.21	347	P	P	03 38 13.9	-1.0
BBOO	Buckleboo	37.09	256	P	P	03 38 47.3	-0.3
BBOO				IAmb	IAmb	03 38 49.7	
	comp=Z,17nm,0.8s						
COEN	Coen	37.94	289	P	P	03 38 55.4	+0.6
AS31	Alice Springs	41.39	269	P	P	03 39 23.1	+0.3
ASAR	Alice Springs	41.39	269	P	P	03 39 22.9	+0.1
	comp=Z,7.4nm,0.6s,baz=103,slow=7.3,SNR=91						
ASAR				PcP	PcP	03 41 12.4	-0.3
	comp=Z,2.8nm,0.6s,baz=127,slow=3.6,SNR=7.8						
ASAR				ScP	ScP	03 44 25.2	-0.9
	comp=Z,1.7nm,0.6s,baz=118,slow=3.7,SNR=8.5						
ASAR				S	S	03 45 07.5	-1.5
	comp=Z,1.7nm,0.9s,baz=117,slow=16,SNR=7.3						
ASAR				ScS	ScS	03 48 41.6	-2.4
	comp=Z,0.8nm,0.7s,baz=111,slow=6.3,SNR=6.3						
WB2	Warramunga Arr	42.45	274	P	P	03 39 31.0	-0.3
WRAB	Tennant Creek	42.46	274	P	P	03 39 31.3	-0.1
WRAB				IAmb	IAmb	03 39 43.8	
	comp=Z,33nm,1.0s						
WRA	Warramunga Arr	42.46	274	P	P	03 39 31.4	-0.1
	comp=Z,4.3nm,0.3s,baz=111,slow=8.1,SNR=66						
WRA				PcP	PcP	03 41 16.1	-0.3
	comp=Z,6.6nm,0.8s,baz=119,slow=3.1,SNR=12						
WRA				ScP	ScP	03 44 30.6	+0.2
	comp=Z,1.2nm,0.7s,baz=114,slow=3.9,SNR=6.4						
WRA				S	S	03 45 20.7	-4.1
	comp=Z,1.7nm,0.9s,baz=112,slow=14,SNR=3.2						
FORT	Forrest	44.18	257	P	P	03 39 44.3	-0.5
FORT				IAmb	IAmb	03 39 45.9	
	comp=Z,40nm,0.6s						
MTN	Manton Dam	48.48	281		P	03 40 18.2	+0.1
MTN				IAmb	IAmb	03 40 23.1	
	comp=Z,19nm,1.1s						
KNRA	Kununurra	49.11	276	P	P	03 40 22.6	-0.1
FITZ	Fitzroy Crossi	50.68	272	P	P	03 40 34.8	+0.4
KHLU	Kahalu`u	55.66	28	P	P	03 41 10.1	-0.2
HMH	Humu‘ula Sheep	55.84	28	P	P	03 41 12.1	+0.3
GIRL	Giralia	58.52	261	P	P	03 41 30.0	-0.1
GIRL				IAmb	IAmb	03 41 36.0	
	comp=Z,28nm,1.0s						
QSPA	South Pole Qui	58.77	180	P	P	03 41 33.6	+2.3
	comp=Z,48nm,0.7s,baz=350,slow=0.5,SNR=208						
QSPA	South Pole Qui	58.77	180	P	P	03 41 32.8	+1.5
JAGI	Jajag, Banyuwa	65.07	275	P	P	03 42 12.5	-0.9
JAGI				IAmb	IAmb	03 42 13.8	
	comp=Z,17nm,0.7s						
SYO	Syowa Base	75.81	194	⇓*i*P	P	03 43 15.2	-1.5
SYO	Syowa Base	75.81	194	⇓*i*X	P	03 43 20.0	+3.3
GO09	Cerro Castillo	76.12	142	P	P	03 43 19.6	+0.8
GO09				IAmb	IAmb	03 43 25.9	
	comp=Z,6.2nm,0.8s						
SNAA	Sanae	77.26	179	P	P	03 43 25.6	+0.8
SNAA	Sanae	77.26	179	P	P	03 43 25.7	+0.8
SNAA				IAmb	IAmb	03 43 26.6	
	comp=Z,15nm,0.9s						
VNA3	Neumayer Olymp	77.47	177	P	P	03 43 26.7	+0.8
VNA2	Neumayer--Watz	77.89	178	P	P	03 43 29.2	+1.1
	baz=186,slow=4.7						
MJAR	Matsushiro Arr	78.07	327	P	P	03 43 28.7	-0.9
	comp=Z,5.0nm,1.1s,baz=159,slow=5.5,SNR=11						
MAJO	Matsushiro	78.08	327	P	P	03 43 28.6	-1.0
MAJO				IAmb	IAmb	03 43 29.9	
	comp=Z,6.4nm,0.9s						
MAT	Matsushiro	78.08	327	P	P	03 43 29.1	-0.5
VNA1	Neumayer--Stat	78.13	177	P	P	03 43 30.4	+1.0
JNU	Nakatsue	79.16	320	P	P	03 43 34.4	-1.1
	comp=Z,11nm,0.9s,baz=19,slow=6.8,SNR=5.6						
JNU	Nakatsue	79.16	320	IAmb	IAmb	03 43 36.1	
	comp=Z,18nm,1.0s						
ASAJ	Asahikawa	82.51	334	P	P	03 43 53.3	+0.5
	comp=Z,6.5nm,0.7s,baz=298,slow=25,SNR=3.7						
PLCA	Paso Flores	83.09	134	P	P	03 43 57.6	+1.4
	comp=Z,3.5nm,0.8s,baz=250,slow=5.4,SNR=12						
PLCA	Paso Flores	83.09	134	P	P	03 43 56.3	+0.1
KSRS	Korea Array	83.99	321	P	P	03 44 01.1	+0.7
	comp=Z,4.7nm,0.7s,baz=141,slow=5.5,SNR=16						
NJ2	Nanjing	85.59	312	*e*P	P	03 44 11.4	+3.0
PEA0B	Petropavlovsk-	86.32	347	P	P	03 44 11.6	+0.1
PETK	Petropavlovsk-	86.32	347	P	P	03 44 11.7	+0.2
	comp=Z,7.6nm,0.7s,baz=130,slow=7.2,SNR=19						
USA0B	Ussuriysk Arra	87.03	328	P	P	03 44 14.5	-0.5
USA0B				IAmb	IAmb	03 44 16.3	
	comp=Z,9.7nm,1.0s						
USRK	Ussuriysk Ar.	87.03	328	P	P	03 44 15.8	+0.7
	comp=Z,5.6nm,0.8s,baz=145,slow=4.3,SNR=8.4						
ISA	Isabella, Lake	88.16	46	P	P	03 44 21.2	+0.6
ISA				IAmb	IAmb	03 44 22.9	
	comp=Z,7.7nm,0.8s						
GLA	Glamis	88.78	50	P	P	03 44 25.0	+1.3
ORV	Oroville	88.98	41	P	P	03 44 25.8	+1.4
PBKT	Sadao Pong	89.49	290	P	P	03 44 29.0	+1.8
PBKT				IAmb	IAmb	03 44 29.6	
	comp=Z,6.3nm,1.1s						
YBH	Yreka Blue Hor	89.82	39	IAmb	IAmb	03 44 36.8	
	comp=Z,5.0nm,1.1s						
CN2	Changchun	89.88	324	*e*P	P	03 44 28.5	+0.1
NVAR	Mina Array Bea	90.08	44	P	P	03 44 30.3	+0.5
	comp=Z,2.2nm,0.8s,baz=216,slow=6.9,SNR=13						
ENH	Enshi	90.75	305	P	P	03 44 32.9	0.0
KLR	Kul'dur	91.01	331	P	P	03 44 34.1	+0.6
	comp=Z,2.7nm,0.9s,baz=81,slow=2.6,SNR=6.6						
TUC	Tucson	91.02	52	P	P	03 44 35.4	+1.3
TUC				IAmb	IAmb	03 44 36.9	
	comp=Z,4.4nm,0.8s						
OHAK	Old Harbor	91.05	14	P	P	03 44 33.4	-0.1
OHAK				IAmb	IAmb	03 44 34.1	
	comp=Z,13nm,1.0s						
MOD	Modoc Plateau	91.25	40	IAmb	IAmb	03 44 36.4	
	comp=Z,5.2nm,0.8s						
CMAR	Chiang Mai Arr	92.13	290	P	P	03 44 39.6	+0.1
	comp=Z,1.0nm,0.3s,baz=126,slow=3.6,SNR=5.8						
PINE	Pine Mountain	92.18	38	P	P	03 44 40.3	+1.0
TXAR	Lajitas Array	94.32	58	P	P	03 44 49.8	+0.4

	comp=Z,0.5nm,0.8s,baz=206,slow=5.9,SNR=3.3						
HHC	Hu-ho-hao-te	95.68	315	*e*P	P	03 44 58.0	+2.7
GHO	Glory Hole Cre	96.13	14	P	P	03 44 56.8	+0.1
GHO				IAmb	IAmb	03 44 59.1	
	comp=Z,5.0nm,0.7s						
SEY	Seymchan	96.52	348	P	P	03 44 57.4	-0.9
	comp=Z,0.5nm,0.4s,baz=312,slow=23,SNR=4.7						
TRF	Thorofare Moun	97.37	13	IAmb	IAmb	03 45 03.2	
	comp=Z,4.3nm,0.8s						
PDAR	Pinedale Array	97.98	44	P	P	03 45 05.3	-0.4
	comp=Z,0.3nm,0.6s,baz=189,slow=5.1,SNR=2.7						
PDAR				PKKP	PKKPbc	04 01 37.8	-0.8
	comp=Z,0.6nm,0.7s,baz=91,slow=4.5,SNR=7.2						
ILAR	Eielson Array	99.23	14	P	Pdif	03 45 09.7	-0.8
	comp=Z,0.5nm,0.7s,baz=216,slow=5.6,SNR=6.2						
ILAR				PKiKP	PKiKP	03 49 37.3	-0.7
	comp=Z,0.3nm,0.5s,baz=207,slow=4.4,SNR=6.9						
ILAR				PKKPbc	PKKPbc	04 01 33.3	-2.4
	comp=Z,0.3nm,0.5s,baz=25,slow=2.8,SNR=6.9						
SONM	Songino Array	102.71	318	PKKPbc	PKKPbc	04 01 24.6	-0.4
	comp=Z,0.5nm,0.9s,baz=252,slow=2.3,SNR=3.7						
YKA	Yellowknife Ar	107.02	26	PKKPbc	PKKPbc	04 01 09.9	-2.4
	comp=Z,0.5nm,0.6s,baz=45,slow=3.3,SNR=8.9						
WMQ	Urumqi	112.48	308	*e*P	P	03 50 03.1	+41
BOSA	Boshof	115.72	205	PKP	PKPdf	03 50 10.4	+0.2
	comp=Z,2.4nm,0.7s,baz=222,slow=2.4,SNR=6.2						
MK31	Makanchi Array	117.08	310		PKPdf	03 50 10.8	-1.2
MKAR	Makanchi Array	117.08	310	PKP	PKPdf	03 50 10.9	-1.1
	comp=Z,1.8nm,0.5s,baz=182,slow=0.9,SNR=36						
MKAR				PKKPbc	PKKPbc	04 00 38.4	-0.2
	comp=Z,0.5nm,0.6s,baz=273,slow=3.7,SNR=6.0						
MAKZ	Makanchi	117.29	310		PKPdf	03 50 11.1	-1.3
ZALV	Zalesovo Beam	117.61	318	PKP	PKPdf	03 50 11.4	-1.3
	comp=Z,1.3nm,0.3s,baz=135,slow=3.6,SNR=6.6						
KSH	Kashi	119.26	301	PKP	PKPdf	03 50 17.1	+0.5
KSH				PP	pPKPdf	03 51 50.1	+1.4
KSH				sPKP		03 52 19.2	
KSH				PKS	PKSdf	03 53 53.2	-0.1
KSH				SKKS		03 58 05.5	
KSH	Kashi	119.26	301	SKS	SKSdf	03 56 59.3	+7.2
NRIK	Noril'sk	119.80	336	PKP	PKPdf	03 50 15.4	-1.1
	comp=Z,2.1nm,0.4s,baz=89,slow=1.7,SNR=3.6						
KURK	Kurchatov	120.48	314		PKPdf	03 50 17.4	-0.9
KURBB	Kurchatov Arra	120.51	314	PKP	PKPdf	03 50 17.4	-1.0
	comp=Z,7.6nm,0.6s,baz=114,slow=2.0,SNR=87						
AAK	Ala-Archa	121.23	304	PKP	PKPdf	03 50 19.9	-0.5
	comp=Z,3.5nm,0.6s,baz=175,slow=4.0,SNR=10.0						
AAK	Ala-Archa	121.23	304		PKPdf	03 50 20.2	-0.1
KBL	Kabul	123.04	293		PKPdf	03 50 24.3	+0.2
KK31	Karatay Array	124.18	303		PKPdf	03 50 25.4	-0.3
BRVK	Borovoye	125.96	315		PKPdf	03 50 28.2	-0.6
LSZ	Lusaka	126.34	214		PKPdf	03 50 30.9	0.0
SCHQ	Schefferville	128.07	43	PKP	PKPdf	03 50 31.6	-1.2
	comp=Z,3.1nm,0.8s,baz=350,slow=2.4,SNR=5.8						
KMBO	Kilima Mbogo	132.16	235	PKP	PKPdf	03 50 42.7	+0.5
	comp=Z,1.0nm,0.5s,baz=39,slow=6.1,SNR=5.5						
KMBO				SKPbc	SKPbc	03 53 31.5	-1.1
	comp=Z,1.6nm,0.7s,baz=54,slow=5.0,SNR=7.9						
ABKAR	Akbulak array	132.23	310		PKPdf	03 50 40.9	+0.1
ABKAR				SKPbc	SKPbc	03 53 30.9	-0.5
GEYT	Alibeck	132.42	295	PKP	PKPdf	03 50 40.9	-0.8
	comp=Z,3.2nm,0.7s,baz=174,slow=1.4,SNR=6.8						
GEYT				SKPbc	SKPbc	03 53 31.9	-0.6
	comp=Z,4.2nm,0.8s,baz=122,slow=1.9,SNR=6.2						
SPA0	Spitsbergen Ar	132.51	355	*e*PKPdf	PKPdf	03 50 41.3	+0.7
ARU	Arti	132.73	320	PKP	PKPdf	03 50 41.1	-0.4
	comp=Z,3.2nm,0.6s,baz=71,slow=0.6,SNR=15						
ARU				SKPbc	SKPab	03 53 34.6	-0.2
	comp=Z,0.6nm,0.4s,baz=165,slow=16,SNR=4.0						
HAMF	Hammerfest	138.53	348	*e*PKPdf	PKPdf	03 50 52.7	+0.8
ARCES	ARCESS Array B	139.13	347	PKhKP	PKPpre	03 50 44.9	
	comp=Z,1.9nm,0.7s,baz=323,slow=7.8,SNR=19						
ARCES				PKP	PKPdf	03 50 52.9	-0.2
	comp=Z,5.7nm,0.7s,baz=29,slow=1.5,SNR=9.3						
ARE0	ARCESS Array S	139.13	347	*e*PKPdf	PKiKP	03 50 54.9	-0.6
RAYN	Ar Rayn	139.13	271		PKPdf	03 50 54.2	-0.4
TRO	Tromso	140.19	350	*e*PKPdf	PKPdf	03 50 55.7	+0.8
STEI	Steigen	142.30	351	*e*PKPdf	PKPdf	03 50 58.5	-0.3
GNI	Garni	142.99	296	PKhKP	PKPpre	03 50 57.7	
	comp=Z,5.5nm,0.7s,baz=176,slow=6.7,SNR=6.2						
AKH	Akhalkalaki	143.92	299	⇓P	PKPbc	03 51 02.1	+0.6
AKH	Akhalkalaki	143.92	299		PKPbc	03 51 02.2	+0.6
KONS	Konsvik	143.93	351	*e*PKPbc	PKPab	03 50 60.0	-0.3
MOR8	Moi Rana	144.06	350	*e*PKPbc	PKPab	03 50 59.4	-1.4
KBZ	Khabaz	144.21	303	PKP	PKPab	03 51 02.1	+0.1
	comp=Z,28nm,1.0s,baz=104,slow=2.6,SNR=46						
KIV	Kislovodsk	144.34	303		PKPbc	03 51 02.2	-0.4
FINES	FINESS Array B	145.42	338	PKPbc	PKPdf	03 51 04.6	+0.2
	comp=Z,37nm,0.5s,baz=46,slow=3.8,SNR=361						
NSS	Namsos	145.96	351	*e*PKPdf	PKPdf	03 51 05.9	+0.6
MOL	Molde	148.38	353	*e*PKPbc	PKPbc	03 51 13.0	-0.3
DOMB	Dombas	148.73	352	*e*PKPbc	PKPbc	03 51 13.6	-0.7
AKN	Aaknes	148.82	354	*e*PKPbc	PKPbc	03 51 14.6	+0.1
GAZ	Gaziantep	148.87	291		PKPbc	03 51 15.9	+0.5
NC303	NORSAR Array S	149.19	349		PKPbc	03 51 14.2	-1.1
NC204	NORSAR Array S	149.24	350		PKPbc	03 51 15.7	+0.1
NC405	NORSAR Array S	149.24	349		PKPbc	03 51 14.2	-1.3
NB201	NORSAR Array S	149.37	349		PKPbc	03 51 15.2	-0.7
NB2	NORSAR Subarra	149.39	349	PKP	PKPbc	03 51 15.5	-0.4
	comp=Z,6.9nm,0.6s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.39	349	PKPbc	PKPbc	03 51 15.2	-0.7
	comp=Z,11nm,0.6s,baz=16,slow=4.2,SNR=56						
FOO	Floro	149.55	355	*e*PKPbc	PKPbc	03 51 16.0	-0.2
NC602	NORSAR Array S	149.63	349	*e*PKPbc	PKPbc	03 51 15.3	-1.1
NC602	NORSAR Array S	149.63	349		PKPbc	03 51 15.1	-1.3
HYA	Hoyanger	149.89	354	*e*PKPbc	PKPbc	03 51 17.1	+0.1
DIKM	Dikmen	150.06	300	⇓P	PKPbc	03 51 18.7	+0.6
SKAR	Skarslia	150.14	352	*e*PKPbc	PKPbc	03 51 17.7	-0.1
OSL	Oslo	150.52	349	*e*PKPbc	PKPbc	03 51 18.6	+0.1
ASK	Askoy	150.65	355	*e*PKPbc	PKPbc	03 51 18.7	-0.1
BER	Bergen	150.74	355	*e*PKPbc	PKPbc	03 51 19.0	0.0
BZK	Bozkurt	150.93	301	⇓P	PKPbc	03 51 20.5	+0.4
KONO	Kongsberg	150.97	350	*e*PKPbc	PKPbc	03 51 19.2	-0.4
KONO	Kongsberg	150.97	350		PKPbc	03 51 18.9	-0.7
AKASG	Malin Array Be	150.98	320	PKPbc	PKPbc	03 51 19.4	-0.5
	comp=Z,10.0nm,0.6s,baz=57,slow=2.7,SNR=31						
AKASG				PKPab	PKPab	03 51 28.2	-0.8
	comp=Z,5.8nm,0.7s,baz=51,slow=4.5,SNR=9.3						
ODD1	Odda	151.08	353	*e*PKPbc	PKPbc	03 51 20.0	+0.1
BR131	Keskin Array S	151.53	296		PKPbc	03 51 21.2	-0.6
BRTR	Keskin Array B	151.53	296	PKPbc	PKPbc	03 51 21.2	-0.6
	comp=Z,8.5nm,0.5s,baz=140,slow=4.0,SNR=72						
BRTR				PKPab	PKPab	03 51 31.7	-0.2
	comp=Z,1.5nm,0.6s,baz=116,slow=5.3,SNR=6.9						
BLS5	Blasjo	151.58	353	*e*PKPbc	PKPbc	03 51 21.1	+0.1
KMY	Karmoy	151.90	354	*e*PKPbc	PKPbc	03 51 21.2	-0.5
CSS	Mathiatis	151.97	286		PKPbc	03 51 22.5	-0.2
ANTO	Ankara	152.16	297	⇓P	PKPbc	03 51 23.2	+0.2
ANTO	Ankara	152.16	297		PKPbc	03 51 23.1	+0.1
LEF	Lefka	152.33	287	⇓P	PKPbc	03 51 23.4	-0.1
HOMB	Homborsund	152.45	350	*e*PKPbc	PKPbc	03 51 22.6	-0.3
SNART	Snartemo	152.56	352	*e*PKPbc	PKPbc	03 51 23.2	0.0
SORM	Soroca	152.73	316	⇓P	PKPbc	03 51 23.3	-0.6
MILM	Milestii Mici	152.99	313	⇑P	PKPbc	03 51 24.1	-0.5
MDUB	Mudurnu	153.28	299		PKPbc	03 51 25.4	-0.2
CFR	Carcaliu	154.12	310	⇑P	PKPbc	03 51 26.6	-0.3
TESR	Tescani	154.51	314	⇑P	PKPab	03 51 43.8	-0.3
VRI	Vrincioaia	154.74	313	⇑P	PKPab	03 51 45.6	+0.4
PLOR	Plostina	154.80	313	⇑P	PKPab	03 51 46.1	+0.6
BUR08	Bucovina Ar. S	154.82	317	PKPdf	PKPdf	03 51 20.7	+1.1
BUR08					PKPab	03 51 45.8	+0.2
BURAR	Bucovina Array	154.82	317	⇓P	PKPab	03 51 46.5	+0.8
DBIC	Dimbokro	155.03	168	PKPbc	PKPdf	03 51 29.3	+8.6
	comp=Z,1.6nm,0.5s,baz=174,slow=2.8,SNR=5.0						
DBIC				PKPab	PKPab	03 51 47.8	+0.7
	comp=Z,3.1nm,0.6s,baz=146,slow=5.8,SNR=4.6						
MLR	Muntele Rosu	155.40	312	⇑P	PKPab	03 51 48.4	+0.2
MLR	Muntele Rosu	155.40	312		PKPab	03 51 48.3	+0.2
DOPR	Dopca	155.53	314	⇓P	PKPab	03 51 49.4	+0.7
KOLS	Kolonicke sedl	155.69	323	*e*PKP	PKPab	03 51 49.9	+0.7
VOIR		155.99	313	⇑P	PKPab	03 51 50.9	+0.3
CRVS	Cervenica-Dubn	156.13	323	*e*PKP	PKPab	03 51 52.1	+1.0
ARR	Arges	156.28	313	⇑P	PKPab	03 51 53.0	+1.1
HUMR	Humele	156.44	311	⇓P	PKPab	03 51 52.3	-0.2
PLVB	Pleven	157.15	309	⇑P	PKPab	03 51 56.4	+0.8
OSTC	Ostas	157.33	333	*e*PKPAB	PKPab	03 51 56.7	+0.5
CHVC	Chvalec	157.37	333	*e*PKPAB	PKPab	03 51 56.2	-0.2
UPC	Upice	157.45	333	*e*PKPAB	PKPab	03 51 56.9	+0.2
DPC	Dobruska-Polom	157.45	332	*e*PKPAB	PKPab	03 51 57.0	+0.3
KRLC	Kraliky	157.48	331	*e*PKPAB	PKPab	03 51 56.6	-0.3
VYHS	Vyhne	157.71	326	*e*PKP	PKPab	03 51 58.0	+0.1
CLL	Collm	157.86	338	*e*PKPdf	PKPdf	03 51 24.0	+0.8
CLL				*i* PKPab	PKPab	03 51 58.7	+0.3
	comp=Z,8.0nm,0.9s						
CLL				*e*pPKPab	pPKPab	03 53 28.0	+2.0
CLL	Collm	157.86	338		PKPab	03 51 58.1	-0.2
BRG	Berggiesshubel	157.92	336	*e*PKP	PKPab	03 51 58.3	-0.3
	comp=Z,8.9nm,1.1s						
PVCC	Panska Ves	157.98	335	*e*PKPAB	PKPab	03 51 59.2	+0.2
BZS	Buzias	157.99	316	⇑P	PKPdf	03 51 24.3	+0.8
JAVC	Velka Javorina	158.00	328	*e*PKP	PKPab	03 52 00.1	+0.9
VRAC	Vranov	158.14	330	*e*PKP	PKPab	03 51 59.8	+0.1
VTS	Vitosha	158.39	308	⇑P	PKPab	03 52 02.1	+0.8
GOPC	GO Pecny, Ondr	158.40	333	*e*PKPAB	PKPab	03 52 00.5	-0.3
KRUC	Moravsky	158.41	330	*e*PKP	PKPab	03 52 00.6	-0.3
NKC	Novy Kostel	158.97	337	*e*PKPAB	PKPab	03 52 03.6	+0.3
KHC	Kasperske Hory	159.50	334	*e*PKPAB	PKPab	03 52 05.5	-0.2
KHC	Kasperske Hory	159.50	334		PKPab	03 52 05.6	0.0
CONA	Conrad Observa	159.50	328	*i* PKPab	PKPab	03 52 06.0	+0.2
	comp=Z,5.6nm,0.9s						
GERES	GERESS Array B	159.68	333	PKP	PKPdf	03 51 24.6	-1.0
	comp=Z,0.6nm,0.8s,baz=325,slow=1.2,SNR=4.1						
GERES				PKPab	PKPab	03 52 05.7	-0.9
	comp=Z,3.0nm,0.9s,baz=44,slow=4.1,SNR=13						
TOA0	Torodi Ar. Sit	161.83	185		PKPdf	03 51 28.8	0.0
TOA0					PKPab	03 52 16.0	-0.5
TORD	Torodi Ar. Bea	161.83	185	PKP	PKPdf	03 51 28.5	-0.3
	comp=Z,3.0nm,0.9s,baz=316,slow=0.8,SNR=14						
TORD				PKPab	PKPab	03 52 16.7	+0.2
	comp=Z,7.2nm,0.7s,baz=167,slow=4.2,SNR=22						
TORD				SKP		03 54 23.6	
	comp=Z,0.3nm,0.7s,baz=197,slow=4.5,SNR=2.0						
ESDC	Sonseca Array	171.07	20	PKP	PKPdf	03 51 36.1	+0.9
	comp=Z,0.1nm,0.3s,baz=351,slow=1.5,SNR=4.3						
MDT	Midelt	175.79	68	PKP	PKPdf	03 51 37.4	+0.2
	comp=Z,3.9nm,0.9s,baz=19,slow=3.0,SNR=4.9						

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*IDC **01** 03:33:47.2±0.6, 32°.35N×40°.35W, h0^{km}, mb4.0/24, mb1 4.1/24, mb1mx4.0/55, mbtmp4.0/24, MS4.0/18, Ms1 4.0/18, ms1mx3.7/45, Error ellipse: s-maj=18.1km s-min=13.1km az=158.0*

*NEIC **01** 03:33:49.1±1.6, 32°.3N±0°.1×40°.3W±0°.1, h10^{km}±1^{km}, mb4.7/49, Error ellipse: s-maj=20.1km s-min=17.1km az=146.0*

*GCMT **01** 03:33:52.1±0.3, 32°.41N±0°.03×40°.24W±0°.02, h12^{km}±1^{km}, MW4.8/70, Moment Tensor Solution. s20,c21; s70,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.66±.14; $M_{\theta\theta}$0.36±.10; $M_{\phi\phi}$1.29±.09; $M_{r\theta}$0.02±.29; $M_{\theta\phi}$0.99±.06; $M_{\phi r}$-0.01±.21; Best double couple: $M_0$1.79100×10^{16} NP1:ϕ_s32.00000°, δ45.00000°, λ-91.00000°. NP2: ϕ_s213.00000°, δ45.00000°, λ-89.00000°. Principal axes: T 1.9220, Plg0.0000°, Azm302.0000°; N -0.2710, Plg1.0000°, Azm32.0000°; P -1.6600, Plg89.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 03:33:49.0±0.5, **32°.3N**±0°.1×**40°.32W**±0°.08, **h10^{km}, n113, σ0^{s}.98**/98, **mb4.3**/40, **MS4.1**/18, **9C-1D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMN	Caledonia Moun	23.23	313	P	P	03 38 55.7	-0.6
LMN				IAmb	IAmb	03 39 06.0	
	comp=Z,15nm,1.1s						
BATG	Bathurst New B	24.66	315	P	P	03 39 10.2	+0.3
SJG	San Juan	27.21	245	LR	LR	03 47 58.1	
	comp=Z,67nm,21.7s,baz=64,slow=31						
SCHQ	Schefferville	29.30	328	P	P	03 39 50.4	-1.1
	comp=Z,1.3nm,0.9s,baz=99,slow=11,SNR=2.4						
SCHQ				LR	LR	03 50 39.2	
	comp=Z,783nm,21.3s,baz=144,slow=35						
SCHQ	Schefferville	29.30	328	IAmb	IAmb	03 39 59.8	
	comp=Z,24nm,1.8s						
BANI	BANI	30.35	250	P	P	03 40 00.4	-0.8
SDV	Santo Domingo	36.47	237	P	P	03 40 54.5	-0.2
	comp=Z,7.0nm,0.9s,baz=36,slow=7.1,SNR=6.2						
SDV	Santo Domingo	36.47	237	P	P	03 40 55.1	+0.5
SDV				IAmb	IAmb	03 41 02.4	
	comp=Z,14nm,1.1s						
I40A	Norwalk	40.68	301	P	P	03 41 30.9	+1.4
I40A				IAmb	IAmb	03 41 32.2	
	comp=Z,26nm,1.8s						
E38A	The Farm, Brul	41.35	306	P	P	03 41 37.0	+1.9
E38A				IAmb	IAmb	03 41 42.6	
	comp=Z,19nm,1.6s						
EYMN	Ely	41.37	308	P	P	03 41 35.6	+0.4
DBIC	Dimbokro	41.70	120	LR	LR	03 57 27.4	
	comp=Z,378nm,18.6s,baz=294,slow=34						
ROSC	El Rosal	41.90	237	LR	LR	03 57 49.8	
	comp=Z,116nm,20.2s,baz=36,slow=34						
TOA0	Torodi Ar. Sit	42.84	107	P	P	03 41 47.7	+0.1
TOA0				IAmb	IAmb	03 41 56.9	
	comp=Z,32nm,1.9s						
TORD	Torodi Ar. Bea	42.84	107	P	P	03 41 46.8	-0.7
	comp=Z,2.5nm,0.9s,baz=310,slow=6.8,SNR=13						
TORD				LR	LR	03 57 18.1	
	comp=Z,275nm,21.9s,baz=315,slow=33						
W41B	Gary Mavity, V	42.89	289	P	P	03 41 48.7	+1.0
CLL	Collm	43.00	48	*e*P	P	03 41 50.0	+1.6
CLL	Collm	43.00	48	P	P	03 41 50.1	+1.7
KHC	Kasperske Hory	43.23	51	*e*P	P	03 41 51.6	+1.2
AQU	L'Aquila	43.26	61	P	P	03 41 51.6	+0.9
GERES	GERESS Array B	43.30	51	P	P	03 41 49.1	-1.9
	comp=Z,0.7nm,0.6s,baz=265,slow=6.6,SNR=9.0						
BRG	Berggiesshubel	43.56	48	*e*P	P	03 41 54.0	+1.1
	comp=Z,8.6nm,1.6s						
NB2	NORSAR Subarra	43.88	33	P	P	03 41 56.0	+0.5
	comp=Z,1.0nm,0.7s,baz=252,slow=7.9						
NOA	NORSAR Array B	43.88	33	P	P	03 41 55.9	+0.5
	comp=Z,1.2nm,0.7s,baz=253,slow=8.0,SNR=8.4						
PRU	Pruhonice	43.89	50	*e*P	P	03 41 57.3	+1.7
PRU				*e*x	x	03 42 04.4	
ULM	Lac du Bonnet	44.35	311	P	P	03 41 58.0	-1.3
	comp=Z,0.7nm,0.5s,baz=78,slow=6.1,SNR=2.2						
ULM				LR	LR	04 00 59.2	
	comp=Z,199nm,19.2s,baz=93,slow=37						
UPC	Upice	44.85	49	*e*P	P	03 42 04.0	+0.7
CHVC	Chvalec	44.88	49	*e*P	P	03 42 04.2	+0.6
CHVC				*e*x	x	03 42 10.9	
OSTC	Ostas	44.98	49	*e*P	P	03 42 05.2	+0.8
DPC	Dobruska-Polom	45.05	49	*e*P	P	03 42 05.5	+0.6
KRLC	Kraliky	45.34	50	*e*P	P	03 42 07.6	+0.4
KRLC				*e*x	x	03 42 14.5	
TUL1	Leonard	45.56	290	P	P	03 42 09.5	+0.3
TUL1				IAmb	IAmb	03 42 16.3	
	comp=Z,8.5nm,0.9s						
SAML	Samuel	46.45	212	P	P	03 42 15.8	-0.4
VYHS	Vyhne	46.70	52	*e*P	P	03 42 18.2	+0.2
H10N2	ASCENSION HYDR	46.88	144	T	T	04 32 01.2	
	baz=329,slow=75,SNR=260						
H10N3	ASCENSION HYDR	46.89	144	T	T	04 32 04.0	
	baz=329,slow=75,SNR=244						
H10N1	ASCENSION HYDR	46.90	144	T	T	04 32 02.8	
	baz=329,slow=75,SNR=328						
H10S3	ASCENSION HYDR	47.77	145	T	T	04 33 06.4	
	baz=251,slow=74,SNR=732						
H10S2	ASCENSION HYDR	47.78	145	T	T	04 33 05.5	
	baz=329,slow=74,SNR=519						
OTAV	Otavalo	48.05	236	P	P	03 42 30.5	+1.1
OTAV				IAmb	IAmb	03 42 36.6	
	comp=Z,11nm,1.4s						
FFC	Flin Flon	48.22	317	P	P	03 42 30.8	+1.1
FFC				IAmb	IAmb	03 42 37.6	
	comp=Z,7.0nm,1.2s						
BZS	Buzias	48.83	55	⇑P	P	03 42 35.7	+1.2
GZR	Gura Zlata	49.67	56	⇑P	P	03 42 41.9	+0.9
RES	Resolute Bay	49.99	344	P	P	03 42 44.7	+1.8
JCT	Junction City	50.24	285	P	P	03 42 45.4	-0.1
JCT				IAmb	IAmb	03 42 54.6	
	comp=Z,14nm,1.3s						
VTS	Vitosha	50.43	59	P	P	03 42 47.5	+0.6
FINES	FINESS Array B	51.01	35	P	P	03 42 50.8	0.0
	comp=Z,3.2nm,0.6s,baz=247,slow=5.1,SNR=15						
FIA1	FINESS Array S	51.02	35	P	P	03 42 50.2	-0.7
BUR08	Bucovina Ar. S	51.03	52	P	P	03 42 52.0	+0.6
BUR08				IAmb	IAmb	03 42 54.3	
	comp=Z,14nm,1.4s						
BURAR	Bucovina Array	51.04	52	⇑P	P	03 42 53.4	+2.0
VOIR		51.24	55	⇑P	P	03 42 53.0	+0.1
DOPR	Dopca	51.40	54	⇑P	P	03 42 53.9	-0.1
ARCES	ARCESS Array B	51.72	24	P	P	03 42 55.1	-0.9
	comp=Z,2.2nm,0.7s,baz=251,slow=7.6,SNR=9.3						
MLR	Muntele Rosu	51.86	55	⇑P	P	03 42 58.5	+1.0
SIV	San Ignacio	51.95	206	P	P	03 42 59.5	+1.1
	comp=Z,1.2nm,0.7s,baz=307,slow=5.8,SNR=6.0						
ISCO	Idaho Springs	52.29	298	P	P	03 43 01.6	+0.5
ISCO				IAmb	IAmb	03 43 16.4	
	comp=Z,21nm,2.0s						
VRI	Vrincioaia	52.33	54	⇑P	P	03 43 01.2	+0.2
SORM	Soroca	53.05	51	⇑P	P	03 43 05.0	-1.3
AKASG	Malin Array Be	53.24	48	P	P	03 43 06.7	-0.8
	comp=Z,1.7nm,0.6s,baz=271,slow=7.1,SNR=17						
AKASG				LR	LR	04 03 02.8	
	comp=Z,88nm,19.6s,baz=295,slow=33						
AKBB	Malin Array Si	53.24	48	P	P	03 43 07.5	-0.1
CFR	Carcaliu	53.43	55	⇑P	P	03 43 07.9	-1.2
TXAR	Lajitas Array	53.78	285	P	P	03 43 11.5	-0.6
	comp=Z,0.4nm,0.6s,baz=97,slow=7.4,SNR=8.4						
TXAR				LR	LR	04 04 02.4	
	comp=Z,146nm,20.9s,baz=0.0,slow=34						
YNE	Yellowstone No	54.32	305	P	P	03 43 16.2	+0.2
BW06	Boulder Array	54.50	302	P	P	03 43 17.3	+0.1
PD31	Pinedale Array	54.50	302	P	P	03 43 16.8	-0.5
PDAR	Pinedale Array	54.50	302	P	P	03 43 17.1	-0.1
	comp=Z,1.7nm,0.8s,baz=87,slow=6.3,SNR=13						
PDAR				LR	LR	04 05 11.4	
	comp=Z,335nm,20.4s,baz=93,slow=35						
YKA	Yellowknife Ar	54.74	327	P	P	03 43 17.5	-0.8
	comp=Z,0.5nm,0.7s,baz=84,slow=7.5,SNR=7.3						
YKA				PcP	PcP	03 44 20.0	-0.9
	comp=Z,0.3nm,0.7s,baz=97,slow=4.6,SNR=3.0						
YKA				LR	LR	04 06 38.6	
	comp=Z,345nm,18.2s,baz=0.0,slow=36						
LPAZ	La Paz	55.16	213	P	P	03 43 22.1	-0.5
	comp=Z,0.8nm,0.5s,baz=44,slow=6.2,SNR=7.4						
LPAZ				LR	LR	04 05 28.4	
	comp=Z,70nm,20.2s,baz=58,slow=34						
LPAZ	La Paz	55.16	213	P	P	03 43 22.5	-0.1
LPAZ				IAmb	IAmb	03 43 39.1	
	comp=Z,7.9nm,1.4s						
IMW	Indian Meadow	55.22	304	P	P	03 43 22.0	-0.5
IMW				IAmb	IAmb	03 43 30.3	
	comp=Z,12nm,1.6s						
REDW	Red Top Meadow	55.28	303	P	P	03 43 23.2	+0.3
REDW				IAmb	IAmb	03 43 26.5	
	comp=Z,9.8nm,1.4s						
OBN	Obninsk	56.94	42	P	P	03 43 34.5	+0.2
KLMR	Klimovskoe	57.54	35	*e*P	P	03 43 35.1	-3.3
KLMR				AMP		03 43 46.3	
	comp=Z,30nm,1.6s						
ANTO	Ankara	58.08	60	P	P	03 43 43.4	+0.8
MNMC	Minye Minye	58.31	213	P	P	03 43 44.0	-0.6
GO01	Chusmiza	58.59	212	P	P	03 43 45.0	-1.8
BR131	Keskin Array S	58.74	60	P	P	03 43 47.6	+0.2
BRTR	Keskin Array B	58.74	60	P	P	03 43 47.2	-0.1
	comp=Z,1.2nm,0.9s,baz=282,slow=5.8,SNR=8.0						
PB11	IPOC Station P	58.88	213	P	P	03 43 47.1	-1.3
J08A	Circle Bar Ran	60.63	305	P	P	03 44 01.4	+1.1
INK	Inuvik	61.59	335	P	P	03 44 04.7	-1.5
	comp=Z,1.8nm,1.0s,baz=35,slow=10,SNR=5.4						
INK	Inuvik	61.59	335	P	P	03 44 07.1	+0.9
INK				IAmb	IAmb	03 44 14.1	
	comp=Z,3.8nm,0.9s						
NVAR	Mina Array Bea	62.13	300	P	P	03 44 09.5	-1.1
	comp=Z,0.7nm,0.7s,baz=65,slow=6.0,SNR=5.1						
BCA	Borcka	63.91	56	⇓P	PKiKP	03 51 05.9	+0.1
KBZ	Khabaz	63.98	53	P	P	03 44 22.5	0.0
	comp=Z,1.3nm,0.9s,baz=287,slow=11,SNR=2.3						
WDC	Whiskeytown Da	64.42	303	P	P	03 44 25.8	+0.3
GNI	Garni	66.59	56	P	P	03 44 40.0	+0.3
ILAR	Eielson Array	67.87	334	P	P	03 44 46.2	-1.1
	comp=Z,0.6nm,1.0s,baz=58,slow=8.6,SNR=4.1						
ARU	Arti	68.33	36	P	P	03 44 50.9	+0.7
NRIK	Noril'sk	71.80	17	P	P	03 45 11.4	+0.1
	comp=Z,1.3nm,0.3s,baz=314,slow=7.0,SNR=5.1						
ABKAR	Akbulak array	72.38	43	P	P	03 45 15.5	+0.3
ABKAR				IAmb	IAmb	03 45 17.2	
	comp=Z,10nm,1.8s						
TIXI	Tiksi	76.08	4	P	P	03 45 36.6	+0.3
	comp=Z,2.3nm,0.5s,baz=346,slow=4.2,SNR=5.4						
TIXI	Tiksi	76.08	4	P	P	03 45 37.3	+1.0
TIXI				IAmb	IAmb	03 45 39.7	
	comp=Z,6.5nm,1.1s						
BILL	Bilibino	78.02	350	P	P	03 45 47.6	+0.3
KMBO	Kilima Mbogo	80.10	98	LR	LR	04 20 29.9	
	comp=Z,129nm,20.2s,baz=276,slow=35						
KURK	Kurchatov	81.39	34	P	P	03 46 06.5	+0.6
KURK				IAmb	IAmb	03 46 14.2	
	comp=Z,7.3nm,1.2s						
KURBB	Kurchatov Arra	81.41	34	P	P	03 46 05.9	-0.1
	comp=Z,1.2nm,0.7s,baz=314,slow=5.1,SNR=14						
ZAA0	Zalesovo Array	81.92	29	P	P	03 46 08.5	-0.1
ZALV	Zalesovo Beam	81.92	29	P	P	03 46 07.4	-1.2
	comp=Z,1.7nm,0.7s,baz=302,slow=2.7,SNR=7.0						
LBTB	Lobatse	84.83	124	LR	LR	04 17 59.1	
	comp=Z,110nm,20.7s,baz=226,slow=31						
MAKZ	Makanchi	85.67	36	P	P	03 46 28.1	+0.1
MAKZ				IAmb	IAmb	03 46 30.0	
	comp=Z,10nm,1.8s						
MK31	Makanchi Array	85.84	35	P	P	03 46 28.6	-0.2
MKAR	Makanchi Array	85.84	35	P	P	03 46 29.2	+0.3
	comp=Z,0.6nm,0.7s,baz=330,slow=4.5,SNR=6.4						
SUR	Sutherland	86.40	132	LR	LR	04 16 22.7	
	comp=Z,76nm,22.0s,baz=10,slow=30						
BOSA	Boshof	86.86	127	LR	LR	04 21 43.7	
	comp=Z,87nm,18.3s,baz=168,slow=33						
KSH	Kashi	87.33	44	P	P	03 46 36.5	0.0
KSH				sP	pwP	03 46 43.0	+0.4
KSH	Kashi	87.33	44	S	S	03 57 14.1	-2.9
KSH	Kashi	87.33	44	sS	sS	03 57 23.7	+2.8
MA2	Magadan	88.02	354	LR	LR	04 23 17.8	
	comp=Z,35nm,18.7s,baz=114,slow=34						
WMQ	Urumqi	90.62	35	*e*P	P	03 46 53.3	+1.5
WMQ				pP	pwP	03 46 57.1	-0.9
WMQ				sP	sP	03 47 00.2	+5.1
PETK	Petropavlovsk-	93.53	349	LR	LR	04 26 51.6	
	comp=Z,66nm,19.8s,baz=62,slow=34						
KLR	Kul'dur	98.54	5	LR	LR	04 27 37.9	
	comp=Z,75nm,20.1s,baz=274,slow=33						
ASAR	Alice Springs	170.01	32	PKP	PKPdf	03 53 57.3	-0.3
	comp=Z,0.6nm,0.8s,baz=307,slow=0.5,SNR=5.2						
ASAR				PKPab	PKPab	03 55 12.1	-0.4
	comp=Z,0.3nm,0.8s,baz=330,slow=5.4,SNR=3.2						

IDC 01 03:36:18.8±2.0, **32°.46N×40°.21W, h0^{km}, mb3.7**/7, **mb1 3.9**/7, **mb1mx3.5**/56, **mbtmp3.7**/7, **Error ellipse: s-maj=52.2km s-min=31.3km az=10.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	42.81	107	P	P	03 44 18.2	-0.3
	0.9nm,0.9s,baz=307,slow=7.6,SNR=2.7						
NOA	NORSAR Array B	43.69	33	P	P	03 44 24.5	-0.7
	0.7nm,0.8s,baz=254,slow=7.9,SNR=2.8						
H10N2	ASCENSION HYDR	46.97	144	T	T	04 34 29.0	
	baz=330						
H10N3	ASCENSION HYDR	46.97	144	T	T	04 34 29.3	
	baz=330						
H10N1	ASCENSION HYDR	46.99	144	T	T	04 34 30.4	
	baz=330						
H10S3	ASCENSION HYDR	47.85	145	T	T	04 35 36.4	
	baz=250						
H10S2	ASCENSION HYDR	47.87	145	T	T	04 35 37.4	
	baz=330						
FINES	FINESS Array B	50.82	35	P	P	03 45 19.2	-1.5
	1.6nm,0.7s,baz=264,slow=6.8,SNR=3.4						
ARCES	ARCESS Array B	51.52	24	P	P	03 45 26.7	+0.8
	3.2nm,0.9s,baz=266,slow=8.0,SNR=4.1						
AKASG	Malin Array Be	53.06	48	P	P	03 45 37.7	+0.2
	1.4nm,0.7s,baz=276,slow=6.7,SNR=2.2						
PDAR	Pinedale Array	54.49	302	P	P	03 45 48.2	-0.3
	0.4nm,0.7s,baz=82,slow=7.4,SNR=3.9						
KURBB	Kurchatov Arra	81.21	34	P	P	03 48 37.5	+1.2
	0.4nm,0.9s,baz=311,slow=5.8,SNR=2.4						

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*GRAL **01** 03:52:52.7±0.3, 36°.18N×35°.59E, h0^{km}±838^{km}, MD3.7*

*ISK **01** 03:52:54.9, 35°.23N×37°.59E, h2^{km}, ML2.9/27*

*DDA **01** 03:53:00.1, 35°.49N×37°.49E, h12^{km}±2^{km}, ML2.8*

ISC 01 03:52:56.9±1.8, **35°.32N**±0°.05×**37°.57E**±0°.05, **h9^{km}**±13^{km}, **n42, σ1^{s}.56**/49, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YAYL	Yayladag	1.39	301	*i* P	Pg	03 53 24.0	+0.4
KUZU	Kuzuini	1.51	345	*i* P	Pg	03 53 25.4	-0.4
KUZU				*i* S	Sg	03 53 48.4	+3.0

KUZU				IAML		03 53 50.0	
	comp=E,249nm,0.4s						
KUZU				IAML		03 53 50.0	
	comp=N,258nm,0.4s						
TAHT	**Tahtakopru-Hat**	**1.54**	**314**	PN	**Pb**	**03 53 25.6**	**-0.1**
TAHT				SN	**Sg**	**03 53 48.3**	**+1.7**
HWQ	**Hawqa**	**1.69**	**233**	*e*P	Pn	03 53 25.4	-1.3
GAZ	**Gaziantep**	**1.87**	**351**	PN	**Pb**	**03 53 30.6**	**-0.7**
GAZ				SN	**Sg**	**03 53 55.9**	**-1.3**
KAMA	**Osmaniye**	**2.00**	**339**	*i* P	**Pn**	**03 53 31.9**	**+0.9**
KAMA				*i* S	**Sg**	**03 53 58.8**	**-2.5**
GZT	**Gaziantep**	**2.03**	**360**	*i* P	**Pb**	**03 53 33.9**	**-0.2**
GZT				*i* S	**Sg**	**03 54 00.7**	**-1.6**
GZT				IAML		03 54 19.0	
	comp=E,34nm,0.3s						
BHL	**Bhannes**	**2.12**	**229**	*e*P	Pn	03 53 30.2	-2.4
BHL				*e*S	**Sn**	**03 53 58.1**	**-1.0**
KRTS	**Karatas**	**2.18**	**306**	PN	**Pn**	**03 53 34.3**	**+1.0**
CEYT	**Ceyhan**	**2.24**	**319**	PN	**Pn**	**03 53 35.4**	**+1.2**
KMRS	**Kahramanmaras**	**2.25**	**346**	PN	**Pn**	**03 53 36.0**	**+1.7**
DQRL	**Deir Qamar**	**2.31**	**226**	*e*P	Pn	03 53 33.0	-2.2
DQRL				*e*S	**Sn**	**03 54 02.8**	**-0.9**
URFA	**Urfa**	**2.35**	**25**	PN	**Pn**	**03 53 36.8**	**+1.1**
QRWL	**Qaraoun**	**2.36**	**222**	*e*P	Pn	03 53 35.1	-0.8
QRWL				*e*S	**Sn**	**03 54 06.5**	**+1.5**
ANDN	**Andirin**	**2.46**	**337**	*i* P	**Pb**	**03 53 41.2**	**-0.3**
ANDN				*i* S	**Sb**	**03 54 10.6**	**-1.3**
EREN	**Erenkoy**	**2.79**	**275**	PN	**Pn**	**03 53 42.3**	**+0.6**
KARA	**Karaisali**	**2.81**	**314**	PN	**Pn**	**03 53 43.5**	**+1.5**
SAIM	**ADANA**	**2.91**	**336**	*i* P	**Pn**	**03 53 45.9**	**+2.4**
SAIM				*i* S	**Sb**	**03 54 23.5**	**-1.3**
MERS	**Mersin**	**2.91**	**303**	PN	**Pn**	**03 53 44.9**	**+1.4**
AKCD	**Akcadag**	**2.98**	**5**	*i* P	**Pn**	**03 53 47.6**	**+3.1**
AKCD				*i* S	**Sb**	**03 54 24.1**	**-2.8**
AKCD				IAML		03 54 44.0	
	comp=E,26nm,0.5s						
KIZK	**Mersin**	**3.02**	**294**	PN	**Pn**	**03 53 46.1**	**+1.3**
CMRD	**Camardi-Nigde**	**3.13**	**319**	PN	**Pn**	**03 53 48.2**	**+1.7**
MAZI	**Mazidag**	**3.15**	**47**	PN	**Pn**	**03 53 48.0**	**+1.1**
SARI	**SarD1z-Kayseri**	**3.22**	**344**	PN	**Pn**	**03 53 49.5**	**+1.7**
DARE	**Darende-Malaty**	**3.25**	**359**	PN	**Pn**	**03 53 49.9**	**+1.8**
IKL	**Isikli**	**3.29**	**287**	PN	**Pn**	**03 53 49.8**	**+1.2**
KEBE	**Keben-Mersin**	**3.33**	**291**	PN	**Pn**	**03 53 50.3**	**+1.1**
DYBB	**Diyarbakir**	**3.34**	**37**	PN	**Pn**	**03 53 50.5**	**+1.1**
SVRC	**Sivrice-ELAZID**	**3.36**	**24**	PN	**Pn**	**03 53 51.1**	**+1.4**
AKKU	**Akkuyu-Mersin**	**3.38**	**286**	PN	**Pn**	**03 53 50.5**	**+0.7**
MMLI	**Mount Malkishu**	**3.38**	**213**	PN	**Pn**	**03 53 50.1**	**+0.2**
CSS	**Mathiatis**	**3.49**	**265**	PN	**Pn**	**03 53 52.2**	**+0.8**
BERE	**Bereket-Mersin**	**3.68**	**287**	PN	**Pn**	**03 53 54.8**	**+0.7**
TEKE	**Tekeli-Mersin**	**3.72**	**284**	PN	**Pn**	**03 53 55.4**	**+0.9**
BNN	**Bunyan**	**3.79**	**339**	PN	**Pn**	**03 53 57.6**	**+2.0**
ARPR	**Arapgir-MALATY**	**3.82**	**9**	PN	**Pn**	**03 53 57.6**	**+1.6**
LEF	**Lefka**	**3.84**	**268**	PN	**Pn**	**03 53 57.9**	**+1.8**
SVAN	**Silvan-Diyarba**	**4.06**	**45**	PN	**Pn**	**03 54 00.9**	**+1.7**
HDMB	**Hadim**	**4.43**	**293**	PN	**Pn**	**03 54 06.2**	**+1.7**
SIRT	**Sirnak**	**4.49**	**60**	PN	**Pn**	**03 54 06.9**	**+1.7**
CUKT	**Cukurca**	**5.24**	**67**	PN	**Pn**	**03 54 17.8**	**+2.2**
HRFI	**Mount Harif**	**5.68**	**203**	PN	**Pn**	**03 54 22.5**	**+0.9**

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*IDC **01** 04:07:48.1±29.0, 25.°25N×141.°21E, h0^{km}, mb4.1/3, mb1 4.2/3, mb1mx3.4/45, mbtmp4.1/3, Error ellipse: s-maj=796.4km s-min=111.9km az=175.0*

*JMA **01** 04:08:56.8±0.3, 29.°02N×139.°38E, h406^{km}, M3.1*

ISC 01 04:08:56.3±1.5**, 28.°98N**±0.°10×**139.°2E**±0.°2**, h400**^{km}**, n9, σ1^{s}13**/11**, mb3.6**/3**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**3.21**	**125**	P	**Pn**	**04 10 01.7**	**+0.4**
CBIJ				*e*S	**S**	**04 10 53.2**	**-0.6**
JHH2	**Haha-jima-NKT2**	**3.50**	**131**	P	**Pn**	**04 10 04.4**	**+0.6**
BSO1	**Boso 1**	**5.85**	**14**	P	**Pn**	**04 10 28.1**	**+1.6**
BSO1				*e*S	**S**	**04 11 40.2**	**-0.1**
JRY	**Ryogami san**	**7.03**	**358**	P	**P**	**04 10 41.1**	**+0.4**
JAG	**Ashikaga**	**7.43**	**1**	P	**P**	**04 10 45.1**	**-0.1**
JAG				*e*S	**S**	**04 12 10.9**	**-2.4**
JHO	**Hitachi**	**7.70**	**8**	P	**P**	**04 10 48.8**	**+0.7**
MKAR	**Makanchi Array**	**47.27**	**308**	P	P	04 16 51.6	+0.3
	0.3nm,0.4s,baz=92,slow=9.5,SNR=7.1						
ARCES	**ARCESS Array B**	**70.91**	**340**	P	**P**	**04 19 30.9**	**+0.1**
	10nm,1.3s,baz=68,slow=7.4,SNR=5.7						
FINES	**FINESS Array B**	**75.10**	**333**	P	**P**	**04 19 54.8**	**-0.5**
	0.6nm,0.5s,baz=62,slow=5.1,SNR=6.8						

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*IPEC **01** 04:30:43.1±0.3, 51.°51N×16.°18E, h0^{km}, ML2.1/4, Error ellipse: s-maj=3.0km s-min=1.2km az=51.0*

*PRU **01** 04:30:43.8±0.0, 51.°52N×16.°07E, h0^{km}*

*VIE **01** 04:30:45.9±0.9, 51.°33N×15.°96E, h0^{km}, mb2.4/5, ml2.5/6, Error ellipse: s-maj=9.3km s-min=5.3km az=52.0 78 km WNW of Wroclaw Suspected Mining induced.*

ISC 01 04:30:41.7±0.9**, 51.°59N**±0.°04×**16.°10E**±0.°02**, h0**^{km}**, n37, σ0^{s}84**/76**, 14D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.76**	**170**	*e*Pg	**Pg**	**04 30 56.7**	**+0.5**
KSP				*e*Sg	**Sg**	**04 31 05.9**	**0.0**
CHVC	**Chvalec**	**1.00**	**182**	⇓*i*PG	**Pb**	**04 31 01.5**	**-0.4**
CHVC				*e*SG	**Sg**	**04 31 13.9**	**+0.1**
	comp=Z,39nm,0.5s						
OSTC	**Ostas**	**1.03**	**176**	⇓*i*PG	**Pg**	**04 31 02.1**	**+0.6**
OSTC				*e*SG	**Sg**	**04 31 14.5**	**-0.4**
	comp=Z,30nm,0.3s						
UPC	**Upice**	**1.08**	**183**	⇓*e*PG	**Pg**	**04 31 02.7**	**+0.3**
UPC				*e*SG	**Sg**	**04 31 16.2**	**-0.2**
	comp=Z,65nm,0.7s						
DPC	**Dobruska-Polom**	**1.25**	**173**	⇓*i*PG	**Pg**	**04 31 05.4**	**-0.2**
DPC				*e*SG	**Sg**	**04 31 20.7**	**-1.0**
	comp=Z,42nm,0.8s						
PVCC	**Panska Ves**	**1.43**	**223**	⇓*e*PG	**Pn**	**04 31 09.1**	**+0.1**
PVCC				*e*SG	**Sb**	**04 31 28.2**	**+0.1**
	comp=Z,70nm,0.3s						
BRG	**Berggiesshubel**	**1.53**	**243**	PN	**Pn**	**04 31 10.0**	**-0.3**
BRG				PG	**Pg**	**04 31 11.7**	**+0.7**
BRG				SG	**Sn**	**04 31 31.6**	**+0.7**
	128nm,0.6s						
KRLC	**Kraliky**	**1.57**	**164**	⇓*e*PG	**Pn**	**04 31 11.0**	**0.0**
KRLC				*e*SG	**Sg**	**04 31 31.1**	**-1.1**
	comp=Z,35nm,0.8s						
PRA	**Prague**	**1.85**	**215**	⇓*e*PN	**Pn**	**04 31 14.8**	**+0.1**
PRA				*e*SG	**Sb**	**04 31 40.3**	**+0.3**
	comp=Z,24nm,0.6s						
GOPC	**GO Pecny, Ondr**	**1.87**	**207**	⇓*e*PN	**Pn**	**04 31 14.9**	**-0.1**
GOPC				*e*PG	**Pb**	**04 31 16.8**	**+0.1**
PRU	**Pruhonice**	**1.88**	**212**	⇓*e*PN	**Pn**	**04 31 14.7**	**-0.4**
PRU				*e*PG	**Pb**	**04 31 16.7**	**-0.2**
PRU				*e*SG	**Sb**	**04 31 40.5**	**-0.4**
	comp=Z,19nm,0.6s						
CLL	**Collm**	**1.96**	**263**	*i* Pn	**Pn**	**04 31 17.0**	**+0.9**
CLL				*i* Pg	**Pg**	**04 31 20.1**	**+0.9**
CLL				*i*		04 31 24.0	
CLL				*i* Sg	**Sg**	**04 31 46.1**	**+1.6**
	comp=Z,27nm,0.6s						
MORC	**Moravsky Berou**	**2.03**	**153**	*e*Pn	**Pn**	**04 31 17.2**	**0.0**
	baz=334						
MORC				*e*Sg	**Sn**	**04 31 43.9**	**+0.6**
	comp=Z,11nm,0.5s,baz=334						
MORC	**Moravsky Berou**	**2.03**	**153**	*e*PN	**Pn**	**04 31 17.2**	**0.0**
MORC				*e*SG	**Sn**	**04 31 43.9**	**+0.6**
OKC	**Ostrava-Krasne**	**2.18**	**143**	⇓*e*SG	**Sg**	**04 31 50.8**	**-1.0**
	comp=Z,37nm,0.8s						
VRAC	**Vranov**	**2.30**	**172**	*e*Pn	**Pn**	**04 31 21.2**	**+0.3**
	baz=353						
VRAC				*e*Sg	**Sb**	**04 31 52.7**	**-0.4**
	comp=Z,8.0nm,0.3s,baz=353						
VRAC	**Vranov**	**2.30**	**172**	*e*PN	**Pn**	**04 31 21.2**	**+0.3**
VRAC				*e*SG	**Sb**	**04 31 52.8**	**-0.4**
PBCC	**Pribram**	**2.33**	**216**	⇓*e*SG	**Sg**	**04 31 55.4**	**-1.0**
	comp=Z,4.1nm,0.4s						
TREC	**Trest**	**2.33**	**190**	⇓*e*PN	**Pn**	**04 31 21.8**	**+0.5**
KRUC	**Moravsky**	**2.54**	**176**	*e*Pn	**Pn**	**04 31 24.6**	**+0.5**
	baz=357						
KRUC				*e*Sg	**Sb**	**04 32 00.1**	**+0.3**
	comp=Z,6.4nm,0.4s,baz=357						
KRUC	**Moravsky**	**2.54**	**176**	*e*PN	**Pn**	**04 31 24.6**	**+0.5**
KRUC				*e*SG	**Sb**	**04 32 00.1**	**+0.3**
NKC	**Novy Kostel**	**2.68**	**241**	⇓*e*PN	**Pn**	**04 31 26.6**	**+0.5**
NKC				*e*PG	**Pg**	**04 31 32.3**	**-0.7**
NKC				*e*SG	**Sg**	**04 32 08.3**	**+0.6**
OJC	**Ojcow**	**2.71**	**119**	*e*Pg	**Pg**	**04 31 34.3**	**+0.6**
OJC				*e*Sg	**Sg**	**04 32 09.2**	**+0.3**
JAVC	**Velka Javorina**	**2.91**	**159**	*e*Pn	**Pn**	**04 31 29.4**	**+0.1**
	baz=341						
JAVC				*e*Sg	**Sb**	**04 32 11.2**	**+0.6**
	comp=Z,11nm,0.6s,baz=341						
JAVC	**Velka Javorina**	**2.91**	**159**	*e*PN	**Pn**	**04 31 29.5**	**+0.1**
JAVC				*e*SG	**Sb**	**04 32 11.3**	**+0.6**
KHC	**Kasperske Hory**	**2.94**	**214**	⇓*e*PN	**Pn**	**04 31 29.6**	**-0.1**
KHC				*e*PG	**Pb**	**04 31 35.9**	**+0.9**
KHC				*e*SN	**Sn**	**04 32 04.8**	**-0.9**
KHC				*e*SG	**Sg**	**04 32 15.2**	**-0.9**
	comp=Z,9.9nm,0.5s						
SMOL	**Smolenice**	**3.19**	**164**	*e*PG	**Pg**	**04 31 43.9**	**+1.0**
SMOL				*e*SG	**Sg**	**04 32 25.4**	**+1.1**
LANS	**Liptovska Anna**	**3.26**	**137**	*e*PG	**Pg**	**04 31 44.0**	**-0.1**
LANS				*e*SG	**Sg**	**04 32 26.4**	**+0.1**
MODS	**Modra-Piesok**	**3.31**	**166**	*e*PG	**Pg**	**04 31 43.9**	**-1.1**
MODS				*e*SG	**Sg**	**04 32 27.4**	**-0.5**
NIE	**Niedzica**	**3.45**	**127**	*e*P	**Pg**	**04 31 47.6**	**-0.2**
NIE				*e*S	**Sg**	**04 32 32.3**	**-0.2**
ZST	**Bratislava**	**3.46**	**169**	*e*SG	**Sg**	**04 32 32.1**	**-0.6**
VYHS	**Vyhne**	**3.56**	**149**	*e*PG	**Pg**	**04 31 50.1**	**+0.1**
VYHS				*e*SG	**Sg**	**04 32 38.6**	**+2.5**
BSD	**Bornholm Skovb**	**3.60**	**349**	*i* P	**Pn**	**04 31 39.1**	**+0.3**
BSD				*e*S	**Sn**	**04 32 18.6**	**-3.4**
CONA	**Conrad Observa**	**3.67**	**182**	*e*Pn	**Pn**	**04 31 40.5**	**+0.7**
	comp=Z,0.5nm,0.2s						
CONA				Sg	**Sg**	**04 32 37.7**	**-1.7**
	comp=Z,2.1nm,0.0s						
MOA	**Molln**	**3.92**	**198**	*e*Pn	**Pn**	**04 31 43.9**	**+0.6**
	comp=Z,1.2nm,0.2s,SNR=7.1						
MOA				Sg	**Sg**	**04 32 46.1**	**-1.7**
	comp=Z,9.0nm,0.7s						
ARSA	**Arzberg**	**4.36**	**185**	*e*Pn	**Pn**	**04 31 49.7**	**+0.5**
	comp=Z,1.1nm,0.3s						
ARSA				Sg	**Sg**	**04 33 00.5**	**-1.1**
	comp=Z,13nm,0.6s						
KBA	**Koelnbreinsper**	**4.86**	**203**	*e*Pn	**Pn**	**04 31 57.1**	**+0.9**
	comp=Z,1.9nm,0.3s,SNR=5.4						
KBA				Sg	**Sg**	**04 33 16.1**	**-1.6**
	comp=Z,1.8nm,0.3s						

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*MAN **01** 05:22:27.4, 4.°04N×125.°83E, h124^{km}, mb5.2, ML4.1, MS4.3*

*BJI **01** 05:22:27.8±0.0, 3.°97N×125.°99E, h168^{km}, mB4.9/45, mb4.8/57*

*NEIC **01** 05:22:30.1±2.5, 4.°31N±0.°06×125.°96E±0.°09, h147^{km}±5^{km}, mb4.8/121, Error ellipse: s-maj=13.2km s-min=8.9km az=72.0*

*IDC **01** 05:22:30.8±0.9, 4.°25N×125.°82E, h152^{km}±7^{km}, mb4.5/30, mb1 4.6/33, mb1mx4.5/41, mbtmp5.0/33, Error ellipse: s-maj=12.1km s-min=6.4km az=78.0*

*DJA **01** 05:22:30.2±0.3, 4°N±2°×12°6E±°, h150^{km}±3^{km}, M4.8/44, mb4.9/44, mB5.3/22, MLv5.3/15, Mw(mB)4.7/22, Mwp5.4/1*

*KLM **01** 05:22:36.0, 4.°32N×126.°07E, h202^{km}, mb5.1*

ISC 01 05:22:31.0±0.6**, 4.°24N**±0.°03×**125.°90E**±0.°05**, h158**^{km}±5^{km}**, n270, σ1^{s}52**/267**, mb4.8**/97**, 6C-6D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**2.07**	**333**	*e*P	**Pn**	**05 23 04.6**	**-3.0**
SKMP	**Bagumbayan, Su**	**2.64**	**329**	*e*P	**Pn**	**05 23 12.3**	**-2.0**
SKMP				*e*S	**Sn**	**05 23 45.2**	**-2.6**
MATI	**Mati**	**2.71**	**7**	*e*P	**Pn**	**05 23 12.5**	**-2.7**
MATI				*e*S	**Sn**	**05 23 49.8**	**+0.4**
DAV	**Davao City (W)**	**2.83**	**353**	P	**Pn**	**05 23 16.1**	**-0.5**
	279nm,0.3s,baz=261,slow=8.1,SNR=19						
DAV				S	**Sn**	**05 23 51.2**	**-0.9**
	266nm,0.3s,baz=96,slow=19,SNR=4.6						
DAV	**Davao City (W)**	**2.83**	**353**	⇑*e*P	**Pn**	**05 23 15.6**	**-1.0**
DAV	**Davao City (W)**	**2.83**	**353**		**Pn**	**05 23 15.6**	**-1.0**
DMPH	**Davao City--Mi**	**2.85**	**352**	⇑*i*P	**Pn**	**05 23 16.1**	**-0.8**
DMPH				*i* S	**Sn**	**05 24 01.4**	**+8.9**
CTBH	**Cotabato--PC H**	**3.39**	**331**	⇑*i*P	**Pn**	**05 23 22.8**	**-0.9**
BUKP	**Musuan**	**3.71**	**347**	*e*P	**Pn**	**05 23 26.1**	**-1.8**
BUKP				*e*S	**Sn**	**05 24 12.1**	**0.0**
TNTI	**Ternate**	**3.74**	**157**	P	**Pn**	**05 23 27.4**	**-0.8**
TNTI				S	**Sn**	**05 24 09.0**	**-3.6**
TNTI	**Ternate**	**3.74**	**157**		**Pn**	**05 23 27.4**	**-0.8**
TNTI				Sn	**Sn**	**05 24 09.2**	**-3.4**
KMSI	**Cibinong**	**4.12**	**208**	P	**Pn**	**05 23 33.9**	**+0.9**
PAGZ	**Pagadian**	**4.38**	**325**	*e*P	**Pn**	**05 23 33.9**	**-2.5**
BUTP	**Butuan**	**4.71**	**357**	*e*P	**Pn**	**05 23 40.5**	**-0.3**
BUTP				*e*S	**Sn**	**05 24 36.3**	**+1.0**
LBMI	**Labuha**	**5.10**	**162**	P	**Pn**	**05 23 45.6**	**-0.3**
	6.9nm7µm471nm,0.7s						
MRSI	**Marisa**	**5.44**	**227**	P	**Pn**	**05 23 52.3**	**+1.8**
	1.2nm4µm277nm,0.5s						
TBP	**Tagbilaran**	**5.79**	**340**	*e*P	**Pn**	**05 23 53.4**	**-1.6**
MSLP	**Maasin**	**5.95**	**350**	*e*P	**Pn**	**05 23 55.5**	**-1.7**
LUWI	**Luwuk**	**6.11**	**211**	P	**Pn**	**05 24 00.9**	**+1.6**
	2.1nm8µm361nm,0.8s						
LUWI	**Luwuk**	**6.11**	**211**		**Pn**	**05 24 01.7**	**+2.4**
SANI	**Sanana**	**6.25**	**179**	P	**Pn**	**05 23 58.4**	**-2.7**
	4.8nm18µm807nm,0.4s						
APSI	**Ampana**	**6.65**	**220**	P	**Pn**	**05 24 08.7**	**+2.2**
	0.5nm1µm92nm,1.0s						
MPSI	**Mapaga**	**7.14**	**237**	P	**Pn**	**05 24 15.3**	**+2.3**
	0.2nm815nm20nm,0.5s						
SIJI	**Sorong**	**7.38**	**133**	P	**Pn**	**05 24 16.2**	**0.0**
	27nm,0.3s,baz=334,slow=15,SNR=30						
SIJI				S	**Sn**	**05 25 37.1**	**-1.8**
	7.0nm,0.3s,baz=62,slow=23,SNR=8.1						
NLAI	**Namlea**	**7.52**	**171**	P	**Pn**	**05 24 16.5**	**-1.6**
	9.9nm15µm750nm,0.9s						
RCP	**Roxas**	**7.92**	**337**	⇓*e*P	**Pn**	**05 24 24.5**	**+1.1**
MSAI	**Masohi**	**8.12**	**158**	P	**Pn**	**05 24 26.4**	**+0.4**
	0.4nm1µm84nm,0.6s						
AAI	**Ambon**	**8.20**	**164**	P	**Pn**	**05 24 26.3**	**-0.8**
	1.5nm5µm386nm,0.5s						
TTSI	**Tana Toraja**	**9.45**	**220**	P	**Pn**	**05 24 45.9**	**+2.2**
	1µm141nm,1.0s						
FAKI	**Fak Fak**	**9.53**	**138**	P	**Pn**	**05 24 45.4**	**+0.7**
	2µm196nm,0.8s						
FAKI	**Fak Fak**	**9.53**	**138**		**Pn**	**05 24 45.4**	**+0.7**
SPSI	**Sidrap Palu**	**10.20**	**217**	P	**Pn**	**05 24 53.8**	**+0.2**
	586nm66nm,0.8s						
BNSI	**Bone**	**10.35**	**214**	P	**Pn**	**05 24 56.6**	**+1.0**
	34nm,0.9s						
KAPI	**Kappang**	**11.05**	**214**	P	**Pn**	**05 25 05.8**	**+1.0**
	5.0nm,0.3s,baz=17,slow=9.3,SNR=29						
BKSI	**Bulukumba**	**11.11**	**211**	P	**Pn**	**05 25 02.9**	**-2.7**
	725nm23nm,0.8s						
BAKI	**Biak**	**11.53**	**118**	P	**P**	**05 25 15.8**	**-2.5**
EDFI	**Ende, Flores**	**13.57**	**198**	P	**Pn**	**05 25 37.6**	**+0.2**
	14nm,0.6s						
SBUM	**Sibu**	**13.78**	**263**		**P**	**05 25 42.8**	**-0.4**
SBUM				P	Pn	05 25 46.2	+6.3
SOEI	**Soe**	**14.00**	**187**	P	**Pn**	**05 25 43.3**	**+0.5**
	94nm,0.9s						
SOEI	**Soe**	**14.00**	**187**		**Pn**	**05 25 43.8**	**+1.0**
STKI	**Sintang**	**15.00**	**254**	P	**P**	**05 25 58.0**	**+1.2**
GENI	**Genyem**	**15.79**	**115**	P	**Pn**	**05 26 03.8**	**-1.1**
	3µm257nm,1.2s						
KSM	**Kuching**	**15.81**	**260**	P	**P**	**05 26 07.6**	**+1.7**
KSM				IAmb	IAmb	05 26 09.2	
	comp=Z,73nm,1.0s						
KSM	**Kuching**	**15.81**	**260**	P	**P**	**05 26 09.0**	**+3.1**
JAGI	**Jajag, Banyuwa**	**17.23**	**223**	P	**Pn**	**05 26 24.9**	**+2.6**
MTN	**Manton Dam**	**17.75**	**163**	P	**P**	**05 26 27.4**	**+0.3**
	baz=18,SNR=75						
MTN	**Manton Dam**	**17.75**	**163**	P	**P**	**05 26 27.5**	**+0.3**
KDU	**Kakadu**	**18.04**	**159**	P	**P**	**05 26 30.8**	**+0.6**
	baz=18,SNR=46						
TWG	**Pinlang**	**19.06**	**346**	P	**P**	**05 26 38.4**	**-2.9**
YULB	**Yu-li**	**19.56**	**347**	P	**P**	**05 26 43.3**	**-3.4**
YULB				IAmb	IAmb	05 26 44.3	
	comp=Z,19nm,0.6s						
TPUB	**Ta-pu**	**19.62**	**345**	P	**P**	**05 26 45.1**	**-2.3**
TPUB				IAmb	IAmb	05 26 46.5	
	comp=Z,50nm,0.9s						
KNRA	**Kununurra**	**19.99**	**172**	P	**P**	**05 26 52.3**	**+0.9**
	baz=20,SNR=47						
KNRA	**Kununurra**	**19.99**	**172**	P	**P**	**05 26 52.2**	**+0.9**
SSLB	**Suanglung**	**20.02**	**347**	P	**P**	**05 26 50.5**	**-1.2**
SSLB				IAmb	IAmb	05 26 51.5	
	comp=Z,25nm,0.7s						
KPJI	**Karang Pucung**	**20.47**	**236**	P	**P**	**05 26 56.9**	**+0.3**
	comp=Z,16nm,0.9s						
YHNB	**Yeheng**	**20.78**	**348**	P	**P**	**05 26 58.0**	**-1.9**
YHNB				IAmb	IAmb	05 27 00.2	
	comp=Z,68nm,1.5s						
KNMB	**Chin-men Tao**	**21.37**	**341**	P	**P**	**05 27 06.4**	**+0.2**
KNMB				IAmb	IAmb	05 27 23.5	
	comp=Z,32nm,0.9s						
FITZ	**Fitzroy Crossi**	**22.20**	**181**	P	**P**	**05 27 15.3**	**+0.6**
	baz=22,SNR=34						
FITZ	**Fitzroy Crossi**	**22.20**	**181**	P	**P**	**05 27 15.2**	**+0.6**
	comp=Z,48nm,0.6s,baz=3.0,slow=8.3,SNR=119						
FITZ	**Fitzroy Crossi**	**22.20**	**181**	P	**P**	**05 27 14.8**	**+0.2**
FITZ				IAmb	IAmb	05 27 17.4	
	comp=Z,48nm,0.9s						
JOW	**Kunigami**	**22.58**	**6**	P	**P**	**05 27 19.3**	**+1.0**
	comp=Z,4.9nm,0.6s,baz=174,slow=13,SNR=19						
JOW	**Kunigami**	**22.58**	**6**	P	**P**	**05 27 19.1**	**+0.9**
JOW				IAmb	IAmb	05 27 20.1	
	comp=Z,31nm,0.6s						
UBPT	**Khong Chiam**	**22.91**	**300**	P	**P**	**05 27 21.1**	**-0.3**
UBPT				IAmb	IAmb	05 27 22.5	
	comp=Z,48nm,0.7s						
KLSI		**22.94**	**247**	P	**P**	**05 27 23.6**	**+1.9**
	comp=Z,6.9nm,0.6s						
MDSI	**Maura Dua**	**23.37**	**248**	P	**P**	**05 27 28.1**	**+2.4**
	comp=Z,11nm,1.2s						
IPM	**Ipoh**	**24.81**	**272**	P	**P**	**05 27 39.7**	**+0.9**
COEN	**Coen**	**24.91**	**137**	P	**P**	**05 27 40.3**	**+0.7**
	baz=25,SNR=12						
COEN	**Coen**	**24.91**	**137**	P	**P**	**05 27 40.2**	**+0.7**
BKNI	**Bangkinang**	**25.14**	**262**	P	**P**	**05 27 43.6**	**+1.8**
BKNI				IAmb	IAmb	05 27 44.4	
	comp=Z,38nm,0.9s						
WRAB	**Tennant Creek**	**25.41**	**161**	P	**P**	**05 27 41.5**	**-2.7**
WRAB				IAmb	IAmb	05 27 48.8	
	comp=Z,41nm,0.8s						
WRA	**Warramunga Arr**	**25.42**	**161**	P	**P**	**05 27 44.5**	**+0.3**
	comp=Z,36nm,0.4s,baz=340,slow=10,SNR=47						
WB2	**Warramunga Arr**	**25.42**	**161**	P	**P**	**05 27 44.4**	**+0.2**
WR0	**Warramunga Arr**	**25.50**	**161**	P	**P**	**05 27 45.5**	**+0.6**
WR0				IAmb	IAmb	05 27 48.4	
	comp=Z,28nm,0.8s						
PDSI	**Padang**	**25.93**	**259**	P	**P**	**05 27 50.4**	**+1.4**
	comp=Z,3µmcomp=Z,1µmcomp=Z,22nm,0.9s						
PSI	**Prapat**	**26.97**	**268**	P	**P**	**05 27 58.9**	**+0.5**
	comp=Z,5.9nm,0.7s,baz=91,slow=6.3,SNR=6.2						
RPSI	**Rantau Prapat**	**26.97**	**268**	P	**P**	**05 27 58.5**	**+0.3**
RPSI	**Rantau Prapat**	**26.97**	**268**	P	**P**	**05 27 58.9**	**+0.6**
PBKT	**Sadao Pong**	**27.37**	**298**	IAmb	IAmb	05 28 03.9	
	comp=Z,21nm,1.0s						
JCJ	**Chichijima**	**27.54**	**33**	P	**P**	**05 28 02.6**	**-0.6**
	comp=Z,74nm,0.6s,baz=277,slow=10,SNR=7.4						
QIS	**Mount Isa**	**28.07**	**152**	P	**P**	**05 28 08.8**	**+0.8**
	baz=28,SNR=5.7						
KCSI	**Kotacane, Aceh**	**28.08**	**270**	P	**P**	**05 28 09.2**	**+1.1**
	comp=Z,8.6nm,0.8s						
NJ2	**Nanjing**	**28.45**	**347**	*e*P	**P**	**05 28 11.4**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
MTSU	**Mount Surprise**	**28.70**	**141**	P	**P**	**05 28 16.0**	**+2.4**
	baz=29,SNR=6.3						
GYA	**Guiyang**	**28.76**	**322**	P	**P**	**05 28 15.5**	**+1.3**
GYA				pP	pP	05 28 48.4	+2.4
GYA				sP	sP	05 29 07.8	+4.1
GYA				S	**S**	**05 32 51.8**	**-0.4**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
AS31	**Alice Springs**	**28.81**	**165**	P	**P**	**05 28 15.2**	**+0.7**
AS31				IAmb	IAmb	05 28 16.6	
	comp=Z,9.3nm,0.5s						
ASAR	**Alice Springs**	**28.81**	**165**	P	**P**	**05 28 15.3**	**+0.9**
	comp=Z,17nm,0.5s,baz=344,slow=7.5,SNR=416						
ASAR				S	**S**	**05 32 51.5**	**-1.3**
	comp=Z,1.7nm,0.8s,baz=336,slow=13,SNR=4.4						
ASAR				ScP	**ScP**	**05 34 48.6**	**+1.3**
	comp=Z,1.1nm,0.5s,baz=344,slow=3.1,SNR=6.9						
JNU	**Nakatsue**	**29.11**	**9**	P	**P**	**05 28 17.0**	**0.0**
	comp=Z,24nm,0.7s,baz=208,slow=2.7,SNR=14						
JNU	**Nakatsue**	**29.11**	**9**	IAmb	IAmb	05 28 18.0	
	comp=Z,30nm,0.9s						
WRKA	**Warakurna**	**29.19**	**176**	P	**P**	**05 28 18.9**	**+1.0**
	baz=29,SNR=41						
CMAR	**Chiang Mai Arr**	**29.91**	**300**	P	**P**	**05 28 24.2**	**0.0**
	comp=Z,8.2nm,0.7s,baz=110,slow=6.2,SNR=28						
CMAR				PcP	**PcP**	**05 31 25.1**	**+1.7**
	comp=Z,1.3nm,0.3s,baz=164,slow=1.2,SNR=6.2						
CMAR				ScP	**ScP**	**05 34 52.5**	**+1.6**
	comp=Z,0.9nm,0.3s,baz=142,slow=2.5,SNR=5.8						
CHTO	**Chiang Mai**	**30.06**	**301**	P	**P**	**05 28 25.7**	**+0.1**
CHTO				IAmb	IAmb	05 28 27.5	
	comp=Z,13nm,0.8s						
ENH	**Enshi**	**30.18**	**331**	P	**P**	**05 28 26.0**	**-0.5**
ENH				IAmb	IAmb	05 28 26.8	
	comp=Z,17nm,1.0s						
KMI	**Kunming**	**30.44**	**315**	P	**P**	**05 28 33.2**	**+4.1**
KMI				pP	pwP	05 29 06.0	-1.5
KMI				sP	sP	05 29 29.1	+11
KMI				PP	**PnPn**	**05 29 37.5**	**+2.3**
KMI				S	**S**	**05 33 17.9**	**-0.9**
KMI				sS	sS	05 34 17.8	+0.7
KMI				SS	**SnSn**	**05 35 09.9**	**-4.5**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,98nm,4.5s						
KMI				LR	LR		
	comp=Z,280nm,19.2s						
KMI				LR	LR		
	comp=Z,200nm,19.9s						
KMI				LR	LR		
	comp=Z,120nm,13.3s						
CTA	**Charters Tower**	**31.37**	**141**	P	**P**	**05 28 38.6**	**+1.5**
	comp=Z,5.5nm,0.7s,baz=322,slow=12,SNR=5.9						
MEEK	**Meekatharra**	**31.49**	**193**	P	**P**	**05 28 38.6**	**+0.5**
	baz=32,SNR=17						
INU	**Inuyama**	**32.62**	**17**	IAmb	IAmb	05 28 49.7	
	comp=Z,19nm,0.8s						
KSRS	**Korea Array**	**33.11**	**3**	P	**P**	**05 28 53.1**	**+1.1**
	comp=Z,13nm,0.6s,baz=181,slow=9.8,SNR=44						
KSRS				PcP	**PcP**	**05 31 33.0**	**+1.4**
	comp=Z,2.4nm,0.6s,baz=188,slow=3.5,SNR=4.2						
KS19	**Wonju Array Si**	**33.16**	**3**	IAmb	IAmb	05 28 55.0	
	comp=Z,24nm,0.8s						
XAN	**Xi'an**	**33.60**	**334**	P	**P**	**05 28 55.2**	**-1.2**
XAN				pP	pP	05 29 28.9	-0.5
XAN				pmax	pmax		
	comp=Z,20nm,0.8s						
XAN				pmax	pmax		
	comp=Z,150nm,8.9s						
XAN	**Xi'an**	**33.60**	**334**	P	**P**	**05 28 55.1**	**-1.3**
XAN				IAmb	IAmb	05 28 56.0	
	comp=Z,15nm,0.7s						
CD2	**Chengdu**	**33.75**	**324**	P	**P**	**05 28 58.0**	**+0.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MAJO	**Matsushiro**	**34.08**	**18**	P	**P**	**05 28 59.3**	**-1.2**
MJAR	**Matsushiro Arr**	**34.08**	**18**	P	**P**	**05 28 59.9**	**-0.6**
	comp=Z,7.7nm,0.8s,baz=198,slow=9.4,SNR=16						
MORW	**Morawa**	**34.44**	**195**	P	**P**	**05 29 04.3**	**+0.6**
	baz=35,SNR=3.2						
FORT	**Forrest**	**34.88**	**177**	P	**P**	**05 29 08.5**	**+1.1**
	baz=35,SNR=34						
KMBL	**Kambalda**	**35.61**	**186**	P	**P**	**05 29 14.6**	**+1.0**
	baz=36,SNR=8.3						
BJT	**Baijiatuau**	**36.69**	**347**	IAmb	IAmb	05 29 25.6	
	comp=Z,15nm,0.8s						
BJI	**Beijing**	**36.71**	**347**	P	**P**	**05 29 22.8**	**0.0**
BJI				pmax	pmax		
	comp=Z,14nm,1.4s						
MUN	**Mundaring**	**37.18**	**194**	P	**P**	**05 29 27.8**	**+0.9**
	baz=37,SNR=3.3						
LZH	**Lanzhou**	**37.65**	**330**	*e*P	**P**	**05 29 31.2**	**+0.1**
LZH				pP	pP	05 30 05.8	+1.5
LZH				sP	sP	05 30 25.9	+4.0
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,95nm,4.9s						
NWAO	**Narrogin (SRO)**	**37.87**	**192**	P	**P**	**05 29 33.3**	**+0.6**
	comp=Z,2.8nm,0.5s,baz=11,slow=7.7,SNR=8.1						
NWAO	**Narrogin (SRO)**	**37.87**	**192**	IAmb	IAmb	05 29 43.7	
	comp=Z,20nm,1.4s						
BRDH	**Bariadhala**	**37.87**	**302**	P	**P**	**05 29 33.5**	**+0.6**
	comp=Z,158nm,0.4s,baz=88,slow=6.2,SNR=6.5						
BBOO	**Buckleboo**	**38.08**	**166**	P	**P**	**05 29 35.9**	**+1.4**
	baz=38,SNR=109						
EIDS	**Eidsvold**	**38.26**	**142**	P	**P**	**05 29 36.8**	**+0.7**
	baz=38,SNR=8.5						
EIDS	**Eidsvold**	**38.26**	**142**	P	**P**	**05 29 36.4**	**+0.3**
EIDS				IAmb	IAmb	05 29 37.7	

	comp=Z,19nm,0.8s						
HHC	Hu-ho-hao-te	38.67	342	*e*P	P	05 29 39.8	+0.4
HHC				pmax	pmax		
	comp=Z,89nm,0.9s						
HHC				pmax	pmax		
	comp=Z,300nm,5.2s						
STKA	Stephens Creek	38.90	159	P	P	05 29 42.8	+1.5
	baz=39,SNR=30						
STKA	Stephens Creek	38.90	159	P	P	05 29 42.8	+1.5
	comp=Z,23nm,0.7s,baz=332,slow=8.5,SNR=44						
STKA				PP	PP	05 31 12.3	-1.6
	comp=Z,11nm,0.8s,baz=341,slow=11,SNR=3.7						
STKA	Stephens Creek	38.90	159	P	P	05 29 42.8	+1.5
SHL	Shillong	38.91	306	P	P	05 29 41.4	-0.5
CN2	Changchun	39.40	359	*e*P	P	05 29 45.1	-0.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HTT	Hallett	39.44	163	P	P	05 29 47.8	+2.0
	baz=40,SNR=16						
USRK	Ussuriysk Ar.	40.16	7	P	P	05 29 52.7	+1.1
	comp=Z,35nm,0.7s,baz=190,slow=6.8,SNR=68						
MDJ	Mudanjiang	40.35	4	P	P	05 29 54.0	+0.8
MDJ				pmax	pmax		
	comp=Z,53nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,140nm,4.9s						
MDJ	Mudanjiang	40.35	4	P	P	05 29 53.9	+0.8
LSA	Lhasa	41.49	312	P	P	05 30 03.5	+0.2
LSA				PcP	PcP	05 31 59.9	+1.8
GTA	Gaotai	42.24	330	*e*P	P	05 30 08.3	-0.6
GTA				PcP	PcP	05 32 01.1	+1.2
GTA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ARMA	Armidale	42.34	146	P	P	05 30 11.9	+2.1
	baz=43,SNR=6.5						
ASAJ	Asahikawa	42.36	18	P	P	05 30 10.4	+0.8
	comp=Z,17nm,0.7s,baz=215,slow=7.8,SNR=8.4						
TAPN	Taplejung	43.05	306	*e*P	P	05 30 15.6	-0.2
	comp=Z,28nm,0.4s						
ODAN	Odare	43.11	306	*e*P	P	05 30 15.9	-0.3
	comp=Z,30nm,0.4s						
RAMN	Ramite	43.79	305	*e*P	P	05 30 21.9	+0.3
	comp=Z,37nm,0.6s						
YNG	Young	43.81	153	P	P	05 30 23.8	+2.4
	baz=44,SNR=5.3						
JIRN	Jiri	44.41	306	*e*P	P	05 30 26.7	0.0
	comp=Z,57nm,0.5s						
GUN	Gumba	44.76	306	*e*P	P	05 30 29.1	-0.4
	comp=Z,68nm,0.4s						
PKI	Pulchoki	45.01	305	*e*P	P	05 30 30.6	-0.8
	comp=Z,26nm,0.6s						
PKIN	Phulchoki	45.02	305	*e*P	P	05 30 30.5	-0.9
	comp=Z,22nm,0.6s						
PALK	Pallekele	45.06	276	PcP	PcP	05 32 10.6	+0.7
	comp=Z,10.0nm,0.6s,baz=47,slow=1.0,SNR=7.7						
CNB	Canberra Magne	45.09	153	P	P	05 30 34.1	+2.5
	baz=45,SNR=5.1						
KLR	Kul'dur	45.11	5	P	P	05 30 32.0	+0.6
	comp=Z,14nm,0.5s,baz=194,slow=5.9,SNR=69						
HIA	Hailar	45.17	354	IAmb	IAmb	05 30 33.5	
	comp=Z,29nm,0.9s						
DMN	Daman	45.27	305	*e*P	P	05 30 33.1	-0.3
	comp=Z,30nm,0.7s						
TOO	Toolangi	45.41	158	P	P	05 30 36.6	+2.6
	baz=46,SNR=7.7						
GKN	Gorkha	45.80	306	*e*P	P	05 30 37.0	-0.5
	comp=Z,26nm,0.3s						
ULN	Ulaanbaatar	46.39	343	P	P	05 30 40.7	-0.9
ULN				PcP	PcP	05 32 15.3	+1.3
SONM	Songino Array	46.56	342	P	P	05 30 42.2	-0.8
	comp=Z,3.1nm,0.6s,baz=156,slow=8.3,SNR=25						
SONM				PcP	PcP	05 32 15.2	+0.6
	comp=Z,4.4nm,0.6s,baz=168,slow=2.9,SNR=13						
DANN	Dangsing	46.65	306	*e*P	P	05 30 43.6	-0.6
	comp=Z,211nm,0.5s						
TLY	Talaya	50.80	342	P	P	05 31 14.7	-0.4
WMQ	Urumqi	51.84	325	*e*P	P	05 31 23.2	+0.1
WMQ				pP	pP	05 32 00.1	+2.1
WMQ				PcP	PcP	05 32 34.6	+0.7
WMQ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,120nm,3.7s						
WMQ				LR	LR		
	comp=Z,450nm,29.3s						
WMQ				LR	LR		
	comp=Z,540nm,29.2s						
WMQ				LR	LR		
	comp=Z,95nm,21.7s						
PETK	Petropavlovsk-	55.28	23	P	P	05 31 49.5	+1.6
	comp=Z,17nm,0.6s,baz=190,slow=7.3,SNR=17						
MK31	Makanchi Array	56.67	325	IAmb	IAmb	05 32 00.1	
	comp=Z,9.0nm,1.1s						
MKAR	Makanchi Array	56.67	325	P	P	05 31 57.3	-0.6
	comp=Z,6.9nm,0.4s,baz=120,slow=7.6,SNR=234						
MKAR				PcP	PcP	05 32 52.3	0.0
	comp=Z,20nm,0.6s,baz=119,slow=3.5,SNR=30						
MKAR				ScP	ScP	05 36 37.2	+0.2
	comp=Z,1.1nm,0.6s,baz=114,slow=4.4,SNR=5.9						
MAKZ	Makanchi	56.86	325	P	P	05 31 58.2	-1.0
MAKZ				IAmb	IAmb	05 32 00.7	
	comp=Z,9.1nm,0.6s						
MAKZ				PcP	PcP	05 32 53.0	0.0
NIL	Nilore	56.97	308	P	P	05 31 59.9	-0.4
KSH	Kashi	57.10	315	P	P	05 32 02.4	+1.1
KSH				pP	pwP	05 32 39.5	-0.6
KSH				ScP	ScP	05 36 36.9	-2.3
KSH				S	S	05 39 42.0	-2.2
KSH				ScS	ScS	05 41 29.1	-6.1
KSH				pmax	pmax		
	comp=Z,68nm,1.2s						
KSH				pmax	pmax		
	comp=Z,280nm,5.6s						
KSH				LR	LR		
	comp=Z,310nm,12.1s						
KSH				LR	LR		
	comp=Z,330nm,11.6s						
KSH				LR	LR		
	comp=Z,340nm,14.3s						
YAK	Yakutsk	57.73	2	P	P	05 32 05.4	+0.4
ULHL	Ulahol	58.10	318	P	P	05 32 08.0	-0.2
	SNR=7.1						
MA2	Magadan	58.42	15	P	P	05 32 09.6	-0.2
MA2				IAmb	IAmb	05 32 12.2	
	comp=Z,27nm,1.3s						
KZA	Kyzart	58.69	318	P	P	05 32 12.9	+0.3
	SNR=17						
KBK	Karagaybulak	59.14	318	P	P	05 32 16.5	+1.1
	SNR=11						
UCH	Uchtor	59.24	318	P	P	05 32 17.1	+0.6
	SNR=42						
CHMS	Chumysh	59.41	318	P	P	05 32 17.6	+0.4
	SNR=6.4						
AAK	Ala-Archa	59.43	318	P	P	05 32 17.7	+0.3
	SNR=7.0						
AAK	Ala-Archa	59.43	318	P	P	05 32 16.8	-0.6
AAK				IAmb	IAmb	05 32 18.5	
	comp=Z,6.3nm,0.8s						
USP	Ospenovka	59.70	319	P	P	05 32 18.7	-0.4
	SNR=30						
AML	Almayashu	59.76	317	P	P	05 32 19.8	-0.1
	SNR=46						
ZAA0	Zalesovo Array	59.77	333	P	P	05 32 17.0	-2.2
ZALV	Zalesovo Beam	59.77	333	P	P	05 32 17.6	-1.6
	comp=Z,4.1nm,0.4s,baz=132,slow=6.3,SNR=16						
ZALV				PcP	PcP	05 33 03.3	-1.0
	comp=Z,6.6nm,0.7s,baz=157,slow=3.3,SNR=11						
EKS2	Erkin-Say	59.92	318	P	P	05 32 22.0	+1.3
	SNR=32						
KBL	Kabul	60.56	307	P	P	05 32 24.4	-1.0
KURK	Kurchatov	60.87	328	P	P	05 32 25.4	-1.4
TAS	Tashkent	62.51	315	P	P	05 32 38.5	+0.5
HRA	Herat	65.97	306	IAmb	IAmb	05 33 01.6	
	comp=Z,7.2nm,0.8s						
BRVK	Borovoye	66.52	327	P	P	05 33 02.5	-1.2
TIXI	Tiksi	67.35	1	P	P	05 33 07.8	-0.8
NRIK	Noril'sk	69.75	346	P	P	05 33 23.9	+0.4
	comp=Z,17nm,0.5s,baz=133,slow=6.6,SNR=12						
GEYT	Alibeck	69.94	309	P	P	05 33 24.4	-1.1
	comp=Z,6.1nm,0.7s,baz=158,slow=6.1,SNR=10						
ABKAR	Akbulak array	71.24	321	IAmb	IAmb	05 33 33.7	
	comp=Z,15nm,0.8s						
SOCY	Socotra	71.45	281	IAmb	IAmb	05 33 33.6	
	comp=Z,15nm,0.6s						
ARU	Arti	74.07	328	P	P	05 33 47.7	-1.8
ARU				IAmb	IAmb	05 33 50.5	
	comp=Z,46nm,1.2s						
RAYN	Ar Rayn	79.53	293	P	P	05 34 19.7	-1.2
AKH	Akhalkalaki	81.52	311	⇓P	P	05 34 31.9	+0.6
KBZ	Khabaz	82.03	313	P	P	05 34 33.5	-0.2
	comp=Z,2.7nm,0.9s,baz=141,slow=4.2,SNR=6.3						
RSO	Redoubt South	82.06	30	P	P	05 34 34.4	+0.6
CNPM	China Poot	82.74	31	IAmb	IAmb	05 34 38.8	
	comp=Z,17nm,0.8s						
SKT	Skwentna	82.78	28	IAmb	IAmb	05 34 38.6	
	comp=Z,14nm,0.7s						
BRLK	Bradley Lake	82.94	30	IAmb	IAmb	05 34 39.2	
	comp=Z,12nm,0.6s						
BPAW	Bear Paw Mtn.	83.19	26	IAmb	IAmb	05 34 41.7	
	comp=Z,37nm,1.4s						
MLY	Manley	83.37	25	IAmb	IAmb	05 34 42.8	
	comp=Z,18nm,0.7s						
TRF	Thorofare Moun	83.46	27	IAmb	IAmb	05 34 42.7	
	comp=Z,14nm,1.1s						
COLD	Coldfoot	83.75	23	P	P	05 34 44.3	+2.2
PMR	Palmer	83.90	29	P	P	05 34 43.5	+0.6
PMR				IAmb	IAmb	05 34 44.5	
	comp=Z,22nm,1.1s						
GHO	Glory Hole Cre	84.00	28	IAmb	IAmb	05 34 47.3	
	comp=Z,9.6nm,0.9s						
NEA	Nenana	84.05	26	IAmb	IAmb	05 34 46.6	
	comp=Z,13nm,0.8s						
MCK	McKinley	84.08	26	IAmb	IAmb	05 34 45.5	
	comp=Z,19nm,0.8s						
TOLK	Toolik Lake Re	84.08	22	IAmb	IAmb	05 34 46.8	
	comp=Z,25nm,1.0s						
RND	Reindeer	84.10	27	IAmb	IAmb	05 34 45.3	
	comp=Z,11nm,0.7s						
SML	Sawmill	84.28	28	IAmb	IAmb	05 34 46.9	
	comp=Z,20nm,0.7s						
WRH	Wood River Hil	84.48	26	IAmb	IAmb	05 34 47.4	
	comp=Z,17nm,1.4s						
KLMR	Klimovskoe	84.56	331	*e*P	P	05 34 42.5	-3.8
KLMR				AMP		05 34 46.7	
	comp=Z,56nm,1.4s						
DHY	Denali Highway	84.76	27	IAmb	IAmb	05 34 49.3	
	comp=Z,17nm,1.5s						
SCM	Sheep Creek Mo	84.76	28	IAmb	IAmb	05 34 49.7	
	comp=Z,21nm,1.2s						
ILAR	Eielson Array	85.00	25	P	P	05 34 47.8	-0.6
	comp=Z,0.9nm,0.5s,baz=248,slow=4.7,SNR=34						
HIN	Hinchinbrook I	85.15	30	IAmb	IAmb	05 34 51.7	
	comp=Z,24nm,0.9s						
FID	Port Fidalgo	85.16	30	IAmb	IAmb	05 34 51.5	
	comp=Z,17nm,1.0s						
FYU	Fort Yukon	85.69	24	IAmb	IAmb	05 34 55.8	
	comp=Z,20nm,1.4s						
BALM	Baldy	87.17	29	P	P	05 35 00.6	+1.3
CTGM	Chitina Glacie	87.67	29	IAmb	IAmb	05 35 04.1	
	comp=Z,9.6nm,0.8s						
DAWY	Dawson	88.28	26	IAmb	IAmb	05 35 06.4	
	comp=Z,9.3nm,1.3s						
KMBO	Kilima Mbogo	88.74	269	P	P	05 35 07.3	-0.6
	comp=Z,3.9nm,0.8s,baz=48,slow=10,SNR=8.1						
KMBO	Kilima Mbogo	88.74	269	P	P	05 35 07.9	0.0
BR131	Keskin Array S	89.06	310	P	P	05 35 07.0	-1.7
BR131				IAmb	IAmb	05 35 09.2	
	comp=Z,6.7nm,0.9s						
BRTR	Keskin Array B	89.06	310	P	P	05 35 07.1	-1.7
	comp=Z,5.4nm,0.8s,baz=117,slow=4.9,SNR=28						
EPYK	Eagle Plains	89.11	24	P	P	05 35 08.6	+0.3
EPYK				IAmb	IAmb	05 35 10.2	
	comp=Z,14nm,1.1s						
HYT	Haines Junctio	89.55	29	IAmb	IAmb	05 35 12.7	
	comp=Z,6.1nm,0.8s						
ARCES	ARCESS Array B	89.69	340	P	P	05 35 10.1	-0.7
	comp=Z,20nm,0.7s,baz=82,slow=6.5,SNR=49						
ARE0	ARCESS Array S	89.69	340	*e*P	P	05 35 10.0	-0.8
SPA0	Spitsbergen Ar	89.83	349	*e*P	P	05 35 10.0	-1.3
HAMF	Hammerfest	90.07	341	*e*P	P	05 35 11.9	-0.7
KTK1	Kautokeino	90.59	339	*e*P	P	05 35 14.1	-0.9
WHY	Whitehorse	90.85	29	IAmb	IAmb	05 35 18.9	
	comp=Z,8.1nm,0.7s						
AKASG	Malin Array Be	90.98	321	P	P	05 35 15.5	-1.7
	comp=Z,1.9nm,0.4s,baz=67,slow=4.9,SNR=12						
FINES	FINESS Array B	91.00	332	P	P	05 35 15.4	-1.6
	comp=Z,3.8nm,0.5s,baz=95,slow=3.9,SNR=25						
TRO	Tromso	91.90	340	*e*P	P	05 35 19.8	-1.2
C36M	Paulatuk	93.01	19	IAmb	IAmb	05 35 26.7	
	comp=Z,3.3nm,0.6s						
TESR	Tescani	93.31	317	⇑P	P	05 35 27.2	-0.9
VRI	Vrincioaia	93.36	316	⇓P	P	05 35 27.7	-0.7
PLOR	Plostina	93.42	316	⇑P	P	05 35 27.3	-1.4
STEI	Steigen	93.73	339	*e*P	P	05 35 28.4	-1.1
MLR	Muntele Rosu	93.97	316	⇓P	P	05 35 30.5	-0.8
MLR	Muntele Rosu	93.97	316	IAmb	IAmb	05 35 31.1	
	comp=Z,3.3nm,0.6s						
BURAR	Bucovina Array	94.08	318	⇑P	P	05 35 31.2	-0.5
BUR08	Bucovina Ar. S	94.08	318	IAmb	IAmb	05 35 32.0	
	comp=Z,3.6nm,0.7s						
DOPR	Dopca	94.26	317	⇓P	P	05 35 32.3	-0.2
MOR8	Moi Rana	94.66	338	*e*P	P	05 35 31.2	-2.6
TRPA	Tarpa	95.74	319	⇓P	P	05 35 38.2	-0.9
NSS	Namsos	96.25	337	*e*P	P	05 35 39.2	-1.8
CRVS	Cervenica-Dubn	96.26	320	*e*P	P	05 35 41.4	-0.1
LANS	Liptovska Anna	97.47	321	*e*PDIFF	Pdif	05 35 47.1	0.0
NC303	NORSAR Array S	97.83	334	*e*P	P	05 35 47.6	-0.7
NC303	NORSAR Array S	97.83	334	P	P	05 35 47.0	-1.3
NB2	NORSAR Subarra	97.97	333	P	P	05 35 47.4	-1.6
	comp=Z,3.3nm,0.6s,baz=66,slow=4.6						
NB2	NORSAR Subarra	97.97	333	P	P	05 35 47.4	-1.6
	baz=66,slow=4.6						
NOA	NORSAR Array B	97.97	333	P	P	05 35 47.7	-1.3
	comp=Z,6.0nm,0.7s,baz=66,slow=4.5,SNR=30						
NC204	NORSAR Array S	98.07	334	P	P	05 35 48.2	-1.3
AKN	Aaknes	99.29	335	*e*P	Pdif	05 35 54.1	-0.7
YKA	Yellowknife Ar	99.38	24	P	Pdif	05 35 55.4	+0.2
	comp=Z,1.6nm,0.8s,baz=301,slow=4.5,SNR=21						
GERES	GERESS Array B	101.18	321	P	Pdif	05 36 02.6	-1.0
	comp=Z,0.6nm,0.6s,baz=69,slow=7.3,SNR=4.0						
NVAR	Mina Array Bea	107.18	48	PKKP	PKKPdf	05 52 11.9	+2.5
	comp=Z,0.4nm,0.5s,baz=112,slow=5.4,SNR=4.0						
PDAR	Pinedale Array	111.51	41	PKiKP	PKiKP	05 40 48.3	+1.1
	comp=Z,0.3nm,0.6s,baz=138,slow=2.4,SNR=5.5						
PDAR				PKKPbc	PKKPab	05 51 49.6	-3.4
	comp=Z,0.7nm,0.7s,baz=132,slow=4.3,SNR=7.0						
ANMO	Albuquerque	117.29	47		PKiKP	05 41 00.1	+1.6
MNTX	Cornudas Mount	119.56	50		PKiKP	05 41 04.0	+1.2
SCHQ	Schefferville	120.19	8	PKP	PKiKP	05 41 04.1	+0.7
	comp=Z,2.6nm,0.5s,baz=289,slow=1.9,SNR=13						
TXAR	Lajitas Array	121.94	52	PKP	PKiKP	05 41 08.9	+1.3
	comp=Z,0.9nm,0.7s,baz=230,slow=0.8,SNR=16						
TXAR				PKKPbc	PKKPab	05 51 07.2	+0.3
	comp=Z,0.3nm,0.7s,baz=128,slow=5.8,SNR=5.5						
TOA0	Torodi Ar. Sit	121.98	288		PKPdf	05 41 07.2	-0.5
TORD	Torodi Ar. Bea	121.98	288	PKP	PKiKP	05 41 07.8	-0.1
	comp=Z,3.6nm,0.6s,baz=84,slow=1.9,SNR=42						
S39A	Bolivar	124.62	38		PKiKP	05 41 12.5	-0.1
U38A	Gravette	124.75	39		PKiKP	05 41 13.0	+0.1
U40A	Yellville	125.77	39		PKiKP	05 41 15.0	+0.1
MIAR	Mount Ida	126.44	41		PKiKP	05 41 17.5	+1.2
KIC	Kosan Boka	129.61	282	*e*PKIKP	PKiKP	05 41 23.1	-0.1
	comp=Z,9.5nm,0.7s						
DBIC	Dimbokro	129.67	282	PKP	PKiKP	05 41 23.7	+0.4
	comp=Z,2.1nm,0.5s,baz=104,slow=3.0,SNR=8.5						
DBIC				SKPbc	SKPbc	05 44 30.2	+0.1
	comp=Z,3.3nm,0.7s,baz=124,slow=2.6,SNR=5.2						
TIC	Toumodi	129.83	282	*e*PKIKP	PKiKP	05 41 23.3	-0.3
LIC	Lamto	129.92	282	*e*PKIKP	PKiKP	05 41 23.5	-0.3
	comp=Z,15nm,0.5s						
PLCA	Paso Flores	140.76	160	PKP	PKiKP	05 41 44.6	-0.6
	comp=Z,2.6nm,0.9s,baz=8.5,slow=2.5,SNR=5.7						
PLCA				SKPbc	SKPbc	05 45 05.4	+0.9
	comp=Z,1.1nm,0.6s,baz=254,slow=4.1,SNR=4.0						
LPAZ	La Paz	161.74	132	PKP	PKPdf	05 42 16.4	+1.3
	comp=Z,1.4nm,0.8s,baz=275,slow=3.0,SNR=6.9						
LPAZ	La Paz	161.74	132		PKPdf	05 42 15.9	+0.9
BDFB	Brasilia	167.19	207	PKP	PKPdf	05 42 19.5	+0.3
	comp=Z,2.2nm,0.8s,baz=267,slow=2.3,SNR=3.8						
BDFB	Brasilia	167.19	207		PKPdf	05 42 19.7	+0.5

JMA 01 05:37:57.4±0.2, 22°.85N×122°.82E, h55^{km}, M2.5
TAP 01 05:37:58.7, 22°.67N×122°.65E, h57^{km}±1^{km}, ML2.8, D
ISC 01 05:37:54.2±3.0, 22°.77N±0°.05×122°.84E±0°.03, h17^{km}±22^{km}, n50, σ1^{s}.10/81, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWH	Lutao	1.26	268	P	Pn	05 38 17.6	+0.6
	baz=280						
TWH				S	Sb	05 38 31.4	-2.0
	baz=280						
CHKT	Chengkung	1.40	284	P	Pn	05 38 19.5	+0.6
	baz=295						
CHKT				S	Sn	05 38 34.5	-2.5
	baz=295						
FULB	Fuli	1.49	287	P	Pb	05 38 21.1	-0.3
	baz=297						
FULB				*e*S	Sn	05 38 38.8	-0.5
	baz=297						
HGSD	Ruisui	1.49	299	*e*P	Pb	05 38 21.1	-0.3
	baz=307						
HGSD				*e*S	Sn	05 38 38.8	-0.5
	baz=307						
YULB	Yu-li	1.55	294	⇑*e*P	Pb	05 38 22.3	-0.2
	baz=307						
YULB				*e*S	Sb	05 38 41.9	+0.1
	baz=307						
HATJ	Hateruma jima	1.56	34	P	Pb	05 38 22.7	+0.1
HATJ				S	Sb	05 38 41.2	-0.8
EHY	Hungye	1.58	298	*e*P	Pb	05 38 23.0	0.0
	baz=310						
EHY				*e*S	Sn	05 38 40.6	-0.9
	baz=310						
TWGBT	Beinan	1.63	272	*e*P	Pb	05 38 24.1	+0.3
	baz=282						
TWGBT				*e*S	Sn	05 38 42.3	-0.3
	baz=282						
TWG	Pinlang	1.63	272	P	Pb	05 38 24.1	+0.3
	baz=282						
TWG				*e*S	Sn	05 38 42.7	-0.1
	baz=282						
ESL	Shilin	1.66	309	*e*P	Pb	05 38 23.7	-0.6
	baz=316						
ESL				*e*S	Sn	05 38 42.3	-1.2
	baz=316						
ELDTW	Lidau	1.73	284	*e*P	Pb	05 38 25.1	-0.6
	baz=290						
IRIF	Iriomote-Funau	1.76	27	P	Pb	05 38 25.7	-0.3
IRIF				*e*S	Sb	05 38 46.5	-1.3
NACB	Ninganchiao	1.81	321	*e*P	Pb	05 38 26.2	-0.6
	baz=335						
NACB				*e*S	Sn	05 38 46.9	-0.2
	baz=335						
JKRS	Kuro-shima	1.81	36	P	Pb	05 38 26.6	-0.3
JKRS				*e*S	Sn	05 38 47.4	+0.2
VWDT	VWDT	1.84	302	*e*P	Pb	05 38 27.3	-0.2
	baz=309						
VWDT				*e*S	Sb	05 38 49.3	-1.0
	baz=309						
YUS	Yu-Shan	1.88	293	*e*P	Pb	05 38 28.2	-0.2
	baz=306						
EAST	Anshuo	1.88	259	*e*P	Pn	05 38 27.5	+1.8
	baz=271						
EAST				*e*S	Sn	05 38 49.0	0.0
	baz=271						
EOS1	EOS1	1.89	340	*e*S	Sb	05 38 50.9	-0.6
	baz=338						
ETLH	Xiulin Townshi	1.90	319	*e*P	Pb	05 38 27.6	-0.8
	baz=332						
ETLH				*e*S	Sn	05 38 49.3	-0.2
	baz=332						
OWD	Renai	1.93	308	*e*P	Pb	05 38 28.5	-0.6
	baz=320						
OWD				*e*S	Sn	05 38 50.4	0.0
	baz=320						
JIJ	Ishigaki jima	1.98	37	P	Pb	05 38 28.5	-1.4
JIJ				S	Sn	05 38 50.9	-0.6
WHF	Hehuan Shan	1.99	314	*e*P	Pb	05 38 29.4	-0.9
	baz=320						
WHF				*e*S	Sn	05 38 52.4	+0.1
	baz=320						
CHGB	Renai	2.00	310	*e*P	Pb	05 38 29.7	-0.6
	baz=325						
CHGB				*e*S	Sn	05 38 52.8	+0.7
	baz=325						
SSLB	Suanglung	2.01	301	*e*P	Pb	05 38 29.9	-0.5
	baz=306						
SSLB				*e*S	Sn	05 38 53.0	+0.8
	baz=306						
ALS	Alishan	2.01	292	*e*P	Pb	05 38 30.5	-0.1
	baz=302						
SLGT	Liugui	2.04	277	*e*P	Pb	05 38 30.2	-0.5
	baz=282						
SLGT				*e*S	Sb	05 38 55.1	-0.7
	baz=282						
SSD	Sandimen	2.04	270	*e*P	Pb	05 38 30.2	-0.6
	baz=273						
TWC	Suao	2.04	334	*e*S	Sb	05 38 53.9	-2.2
	baz=340						
MASBT	Mashibuluo	2.05	266	*e*P	Pn	05 38 29.4	+1.5
	baz=274						
MASBT				*e*S	Sn	05 38 51.4	-1.6
	baz=274						
TWKBT	Hengchun	2.05	247	*e*S	Sn	05 38 50.5	-2.7
	baz=254						
SCZT	Fangliau	2.09	260	*e*S	Sn	05 38 55.5	+1.3
	baz=252						
SMLT	Sun Moon Lake	2.10	302	*e*P	Pb	05 38 31.7	-0.2
	baz=314						
TPUB	Ta-pu	2.10	285	*e*P	Pb	05 38 32.3	+0.3
	baz=289						
WTP	Ta-pu	2.11	283	*e*P	Pb	05 38 32.3	+0.3
	baz=288						
NNSB	Datong	2.12	321	*e*P	Pb	05 38 31.5	-0.8
	baz=333						
NNSB				*e*S	Sn	05 38 55.7	+0.5
	baz=333						
NNSH	Datong	2.12	321	*e*P	Pb	05 38 31.3	-1.0
	baz=333						
NNSH				*e*S	Sn	05 38 55.8	+0.6
	baz=333						
TYC	Yuchr	2.15	302	*e*P	Pb	05 38 32.6	0.0
	baz=314						
CHN1	Nanshi	2.17	281	*e*P	Pb	05 38 33.9	+0.8
	baz=285						
TWK	Hsinying	2.22	283	*e*P	Pb	05 38 34.6	+0.6
	baz=297						
JISG	Ishigakijimahi	2.25	36	P	Pn	05 38 31.9	+1.2
JISG				*e*S	Sn	05 38 57.7	-0.5
WHP	Taichung City	2.30	311	*e*P	Pb	05 38 36.1	+0.8
	baz=323						
YHNB	Yeheng	2.32	325	*e*P	Pb	05 38 34.5	-1.1
	baz=330						
YHNB				*e*S	Sn	05 39 00.7	+0.8
	baz=330						
NSK	Sanguang	2.33	325	*e*P	Pb	05 38 34.9	-1.0
	baz=330						
NSK				*e*S	Sb	05 39 01.9	-2.6
	baz=330						
NWLT	Wulai	2.34	329	*e*S	Sn	05 39 01.9	+1.5
	baz=334						
TIPB	Shuangxi	2.38	337	*e*S	Sb	05 39 03.2	-2.6
	baz=350						
WFSB	Wu-fen Shan	2.49	337	*e*S	Sb	05 39 07.5	-1.3
	baz=353						
LIOB	Emei	2.51	318	*e*P	Pb	05 38 38.9	+0.1
	baz=331						
LIOB				*e*S	Sn	05 39 06.3	+1.8
	baz=331						
JTJ	Tarama	2.52	42	P	Pn	05 38 35.8	+1.4
JTJ				*e*S	Sn	05 39 04.9	+0.1
JIRB	Irabujima	2.96	46	*e*S	Sn	05 39 16.1	+0.6
VWUC	VWUC	3.81	306	*e*P	Pn	05 38 55.5	+3.4
	baz=310						
VWUC				*e*S	Sn	05 39 37.6	+1.0
	baz=310						

ATH 01 05:38:42.9, 34°.83N×24°.09E, h24^{km}±1^{km}, ML2.5/4, Error ellipse: s-maj=3.1km s-min=1.7km az=207.0
THE 01 05:38:44.4, 34°.83N×24°.09E, h15^{km}±1^{km}, ML2.5/4, Error ellipse: s-maj=2.2km s-min=1.0km az=199.0, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.01	358	P	Pg	05 38 46.8	-0.2
GVD				S	Sg	05 38 49.5	+0.8
	5μm,0.3s						
GVD	Gavdhos	0.01	358	P	Pg	05 38 46.7	-0.3
GVD				S	Sg	05 38 51.5	+2.8
GVD	Gavdhos	0.01	358	P	Pg	05 38 46.7	-0.3
GVD				S	Sg	05 38 50.7	+2.0
GVD				AML	AML	05 38 52.9	
	comp=E,9426μm,0.4s						
GVD				AML	AML	05 38 52.9	
	comp=N,9546μm,0.2s						
KNDR	Palaiochora Ch	0.52	321	P	Pg	05 38 54.2	-0.5
KNDR				S	Sb	05 39 03.9	+1.3

	comp=N,208nm,0.3s						
VAM	**Vamos**	0.58	9	P	Pg	05 38 54.9	-0.9
VAM	**Vamos**	0.58	9	P	Pg	05 38 54.6	-1.3
VAM				S	Sn	05 39 06.2	-1.3
VAM				AML	AML	05 39 11.2	
	comp=N,416µm,0.2s						
VAM				AML	AML	05 39 12.0	
	comp=E,603µm,0.3s						
VAM	**Vamos**	0.58	9	P	Pg	05 38 54.5	-1.4
VAM				S	Sg	05 39 03.5	0.0
VAM				AML	AML	05 39 12.0	
	comp=E,603µm,0.3s						
VAM				AML	AML	05 39 16.9	
	comp=N,531µm,0.4s						
SIVA	**Sivas**	0.62	72	P	Pg	05 38 55.9	-0.7
SIVA				S	Sb	05 39 06.3	+0.7
	comp=N,510nm,0.5s						
SIVA	**Sivas**	0.62	72	P	Pg	05 38 55.6	-1.0
SIVA				S	Sn	05 39 08.0	-0.4
SIVA				AML	AML	05 39 14.4	
	comp=E,1223µm,0.4s						
SIVA				AML	AML	05 39 20.4	
	comp=N,960µm,0.5s						
SIVA	**Sivas**	0.62	72	P	Pg	05 38 55.8	-0.7
SIVA				S	Sg	05 39 04.3	-0.6
SIVA				AML	AML	05 39 14.4	
	comp=E,1223µm,0.4s						
SIVA				AML	AML	05 39 20.4	
	comp=N,960µm,0.5s						
IMMV	**Iera Moni Meta**	0.63	352	P	Pg	05 38 56.2	-0.6
IMMV				S	Sb	05 39 06.2	+0.3
	comp=N,475nm,0.3s						
IMMV	**Iera Moni Meta**	0.63	352	P	Pg	05 38 55.1	-1.8
IMMV				S	Sb	05 39 06.0	0.0
IMMV				AML	AML	05 39 09.6	
	comp=N,962µm,0.4s						
IMMV				AML	AML	05 39 10.1	
	comp=E,920µm,0.3s						
IMMV	**Iera Moni Meta**	0.63	352	P	Pg	05 38 55.2	-1.6
IMMV				S	Sb	05 39 06.1	+0.2
IMMV				AML	AML	05 39 09.6	
	comp=N,962µm,0.4s						
IMMV				AML	AML	05 39 10.1	
	comp=E,920µm,0.3s						
CHAN	**Chania**	0.69	357	P	Pg	05 38 57.9	+0.1
CHAN				S	Sb	05 39 07.2	-0.2
RODP	**Rodopos**	0.78	340	P	Pg	05 38 59.0	-0.5
RODP				S	Sb	05 39 10.9	+0.9
IDI	**Anoyia**	0.80	55	P	Pg	05 38 58.5	-1.5
IDI				S	Sn	05 39 12.6	-0.3
IDI	**Anoyia**	0.80	55	P	Pg	05 38 58.5	-1.5
IDI				S	Sg	05 39 09.0	-1.5
LAST	**Lasithi**	1.19	74	P	Pn	05 39 05.6	-1.1
LAST	**Lasithi**	1.19	74	P	Pn	05 39 05.7	-0.9
ANKY	**Antikythira Is**	1.22	328	P	Pn	05 39 05.8	-1.1
ANKY				S	Sn	05 39 23.0	-0.2
ANKY	**Antikythira Is**	1.22	328	P	Pn	05 39 06.7	-0.2
ANKY	**Antikythira Is**	1.22	328	P	Pn	05 39 06.7	-0.2
KTHA	**Kythira Island**	1.65	330	P	Pn	05 39 12.6	-0.3
KARP	**Karpathos**	2.62	73	P	Pn	05 39 25.9	-0.4

IDC 01 05:44:40.1±7.7**, 16°.26S×178°.26W, h0^{km}, mb3.5**/3**, mb1 3.9**/3**, mb1mx3.6**/19**, mbtmp3.5**/3**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.8**/18**, Error ellipse: s-maj=341.8km s-min=36.1km az=141.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	45.09	258	P	P	05 52 58.4	-0.1
	0.3nm,0.5s,baz=91,slow=7.1,SNR=1.5						
ASAR	**Alice Springs**	45.39	253	P	P	05 53 00.7	-0.2
	0.7nm,0.6s,baz=87,slow=8.5,SNR=12						
JCJ	**Chichijima**	57.71	318	LR	LR	06 18 40.4	
	comp=Z,28nm,18.2s,baz=192,slow=35						
ILAR	**Eielson Array**	84.26	13	P	P	05 57 13.3	0.0
	0.1nm,0.4s,baz=218,slow=5.3,SNR=6.0						

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*MDD **01** 06:02:44.5±1.1, 36°.62N×7°.37W, h42^{km}±27^{km}, mb3.9/1, Error ellipse: s-maj=10.9km s-min=6.3km az=178.0, PRXIMO*

*INMG **01** 06:02:45.1±1.4, 36°.63N×7°.37W, h31^{km}±11^{km}, ML1.6, Error ellipse: s-maj=4.3km s-min=4.2km az=1.0*

*IGIL **01** 06:02:45.6, 36°.68N×7°.44W, h23^{km}, ML1.4*

ISC 01 06:02:42.3±1.9**, 36°.59N**±0°.08×**7°.32W**±0°.03**, h33^{km}**±7^{km}**, n36, σ1^{s}08**/65**, 2D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	0.81	323	P	Pb	06 02 58.4	+0.3
PBDV				S	Sn	06 03 08.3	-0.2
	9.1nm,0.4s						
PBDV	**Barranco-do-Ve**	0.81	323	eP	Pb	06 02 58.4	+0.3
PBDV				eS	Sn	06 03 08.3	-0.2
PBDV				A	A	06 03 09.1	
	9.1nm,0.4s						
PVAQ	**Vaqueiros**	0.87	339	P	Pb	06 02 59.4	+0.4
PVAQ				S	Sb	06 03 09.3	-1.0
	12nm,0.3s						
PVAQ	**Vaqueiros**	0.87	339	⇓eP	Pb	06 02 59.4	+0.4
PVAQ				eS	Sb	06 03 09.3	-1.0
PVAQ				A	A	06 03 10.3	
	12nm,0.3s						
EGRO	**El Granado**	0.95	352	⇓P	Pb	06 03 00.6	+0.4
	1.9nm,0.0s,SNR=18						
EGRO				S	Sb	06 03 12.2	-0.3
	5.0nm,0.3s,SNR=12						
PCVE	**Castro Verde**	1.19	331	P	Pb	06 03 03.8	-0.5
PCVE				S	Sn	06 03 17.4	-0.2
	6.4nm,0.5s						
PCVE	**Castro Verde**	1.19	331	eP	Pb	06 03 03.8	-0.5
PCVE				eS	Sn	06 03 17.4	-0.2
PCVE				A	A	06 03 18.3	
	6.4nm,0.5s						
EMIN	**Mina Concepcio**	1.28	24	P	Pn	06 03 05.1	+1.2
	0.1nm,0.1s,SNR=7.7						
EMIN				S	Sn	06 03 20.1	+0.1
	1.8nm,0.3s,SNR=9.2						
MORF	**Marmelete**	1.28	304	eP	Pn	06 03 05.2	+1.2
MORF				eS	Sn	06 03 19.4	-0.6
MORF				AML	AML	06 03 19.8	
	comp=N,6.9nm,0.2s						
MORF	**Marmelete**	1.28	304	P	Pn	06 03 05.2	+1.2
MORF				S	Sn	06 03 19.4	-0.6
	comp=N,6.9nm,0.2s						
MORF				S	Sn	06 03 19.5	-0.6
	comp=N,5.8nm,0.1s						
MORF	**Marmelete**	1.28	304	eS	Sn	06 03 19.5	-0.6
MORF				A	A	06 03 19.6	
	comp=N,5.8nm,0.1s						
PFVI	**Vila Bisbo**	1.32	294	P	Pn	06 03 04.0	-0.5
	comp=N,0.7nm,0.1s,SNR=4.0						
PFVI				S	Sn	06 03 19.2	-1.9
	comp=N,5.7nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	1.32	294	eS	Sn	06 03 20.3	-0.7
MESJ	**Messejana**	1.44	330	eP	Pn	06 03 07.2	+1.1
MESJ				eS	Sn	06 03 23.2	-0.6
MESJ				AML	AML	06 03 26.0	
	comp=N,4.9nm,0.1s						
MESJ	**Messejana**	1.44	330	P	Pn	06 03 07.2	+1.1
MESJ				S	Sn	06 03 23.2	-0.6
	comp=N,4.9nm,0.1s						
PTEO	**Sao Teotonio**	1.47	311	S	Sn	06 03 24.4	-0.3
PTEO	**Sao Teotonio**	1.47	311	eS	Sn	06 03 24.4	-0.3
PBEJ	**Beja**	1.50	343	P	Pn	06 03 08.0	+1.1
PBEJ				S	Sn	06 03 25.0	-0.3
PBEJ	**Beja**	1.50	343	eP	Pn	06 03 08.0	+1.1
PBEJ				eS	Sn	06 03 25.0	-0.3
PNCL	**Nicolau / Gran**	1.80	328	Pn	Pn	06 03 12.0	+1.0
PNCL				Sn	Sn	06 03 32.0	-0.7
	comp=N,2.6nm,0.9s						
PNCL	**Nicolau / Gran**	1.80	328	ePn	Pn	06 03 12.0	+1.0
PNCL				eSn	Sn	06 03 32.0	-0.7
PNCL				A	A	06 03 38.2	
	comp=N,2.6nm,0.9s						
ECAB	**El Cabril**	2.12	45	P	Pn	06 03 16.7	+1.3
	comp=N,0.1nm,0.0s,SNR=6.0						
ECAB				S	Sn	06 03 39.8	-0.8
	comp=N,1.8nm,0.5s,SNR=7.9						
EBAD	**Badajoz**	2.17	6	P	Pn	06 03 16.5	+0.3
	comp=N,0.2nm,0.1s,SNR=7.9						
EBAD				S	Sn	06 03 40.6	-1.3
	comp=N,6.0nm,0.5s,SNR=7.9						
PESTR	**Estremoz**	2.28	355	eSn	Sn	06 03 44.4	-0.2
PMTG	**Montargil**	2.57	344	Pn	Pn	06 03 22.7	+1.0
PMTG				Sn	Sn	06 03 51.8	0.0
PMTG	**Montargil**	2.57	344	ePn	Pn	06 03 22.7	+1.0
PMTG				eSn	Sn	06 03 51.8	0.0
EADA	**Adamuz**	2.69	53	P	Pn	06 03 25.0	+1.7
	comp=N,0.1nm,0.0s,SNR=7.9						
EADA				S	Sn	06 03 54.6	-0.2
	comp=N,8.8nm,0.5s,SNR=4.0						
PMRV	**Marv??o**	2.83	359	Pn	Pn	06 03 26.5	+1.3
PMRV				Sn	Sn	06 03 57.4	-0.8
	comp=N,1.3nm,0.7s						
PMRV	**Marv??o**	2.83	359	ePn	Pn	06 03 26.5	+1.3
PMRV				eSn	Sn	06 03 57.4	-0.8
PMRV				A	A	06 03 58.7	
	comp=N,1.3nm,0.7s						
PCBR	**Castelo Branco**	3.24	358	Pn	Pn	06 03 32.2	+1.3
PCBR	**Castelo Branco**	3.24	358	ePn	Pn	06 03 32.2	+1.3
EPLA	**Plasencia**	3.60	15	P	Pn	06 03 37.1	+1.3
	comp=N,0.2nm,0.0s,SNR=7.9						
EPLA				S	Sn	06 04 15.1	-2.1
	comp=N,7.9nm,0.8s,SNR=7.9						
PAB	**San Pablo**	3.76	38	P	Pn	06 03 39.9	+1.8
	comp=N,0.2nm,0.1s,SNR=7.9						
PAB				S	Sn	06 04 18.7	-2.7
	comp=N,11nm,1.1s,SNR=7.9						
ESDC	**Sonseca Array**	4.05	40	S	Sn	06 04 27.0	-1.5
	comp=N,2.3nm,1.1s,baz=327,slow=27,SNR=3.5						
ETOB	**Tobarra**	5.02	64	P	Pn	06 03 56.5	+1.2
	comp=N,0.2nm,0.2s,SNR=7.9						
ETOB				S	Sn	06 04 50.9	-1.3
	comp=N,0.6nm,0.3s,SNR=7.9						
ETOR	**Torete**	5.89	43	P	Pn	06 04 08.7	+1.3
	comp=N,1.4nm,0.1s,SNR=7.9						
ETOR				S	Sn	06 05 11.2	-2.6
	comp=N,20nm,1.1s,SNR=7.9						

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*NIED **01** 06:03:00, 44°.70N×142°.00E, h270^{km}, Mw4.9 Best double couple: M$_0$2.56000×10^{16} NP1:φ$_s$304.00000°, δ67.00000°, λ-111.00000°. NP2:φ$_s$169.00000°, δ30.00000°, λ-50.00000°.*

*BJI **01** 06:03:38.7±0.0, 44°.69N×142°.15E, h247^{km}, mB4.8/44, mb4.7/65*

*JMA **01** 06:03:40.8±0.2, 44°.66N×142°.00E, h253^{km}±2^{km}, M4.7*

JMA Felt I J1.

*SKHL **01** 06:03:40.5±0.7, 44°.60N×141°.98E, h245^{km}±25^{km}, mb5.2/8, msh5.5/8*

*MOS **01** 06:03:40.4±0.8, 44°.64N×142°.01E, h252^{km}, mb4.4/39, Error ellipse: s-maj=6.1km s-min=4.7km az=94.5*

*NEIC **01** 06:03:41.3±1.7, 44°.68N±0°.06×142°.0E±0°.1, h245^{km}±4^{km}, mb4.6/235, Error ellipse: s-maj=10.8km s-min=8.8km az=101.0*

*IDC **01** 06:03:41.3±0.2, 44°.71N×142°.00E, h245^{km}±2^{km}, mb4.2/35, mb1 4.3/44, mb1mx4.3/49, mbtmp4.8/44, Error ellipse: s-maj=7.8km s-min=5.7km az=119.0*

ISC 01 06:03:41.3±0.3**, 44°.68N**±0°.03×**142°.04E**±0°.03**, h245^{km}**±2^{km}**, h245^{km}:pP-P, n607, σ1^{s}31**/639**, mb4.5**/194**, 32C-38D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSS	**Shosan**	0.31	205	⇓P	Pn	06 04 13.9	+0.6
JSS				S	S	06 04 39.3	+1.0
JSE	**Soyaes**	0.48	54	⇓P	Pn	06 04 14.2	+0.7
JSE				S	S	06 04 39.3	+0.4
JYG	**Yagishiri**	0.51	240	⇓P	Pn	06 04 14.2	+0.5
JYG				eS	S	06 04 39.8	+0.8
JWK2	**Keihoku**	0.64	351	⇓P	Pn	06 04 14.6	+0.5
JWK2				eS	S	06 04 41.0	+1.1
JRR	**Rishiri**	0.69	312	⇓P	Pn	06 04 15.0	+0.7
ASAJ	**Asahikawa**	0.69	144	⇓P	Pn	06 04 14.9	+0.5
ASAJ				S	S	06 04 40.7	+0.4
ASAJ	**Asahikawa**	0.69	144	P	Pn	06 04 15.0	+0.5
	464nm,0.3s,baz=288,slow=5.0,SNR=2251						
ASAJ				S	S	06 04 41.0	+0.6
	114nm,0.3s,baz=174,slow=33,SNR=24						
JKA	**Kamikawa-asahi**	0.69	144	eP	Pn	06 04 15.0	+0.6
JKA	**Kamikawa-asahi**	0.69	144		Pn	06 04 15.0	+0.6
JKA					S	06 04 41.0	+0.6
JKK2	**Kamakawa 2**	0.95	147	⇓P	Pn	06 04 16.4	+0.7
JKK2				eS	S	06 04 43.5	+0.9
JHR	**Hokuryu**	0.96	194	⇓P	Pn	06 04 16.4	+0.7
JHR				eS	S	06 04 43.8	+1.1
JRBN	**Rebuntou**	1.01	317	⇓P	Pn	06 04 15.8	0.0
JRBN				S	S	06 04 42.6	-0.4
JTKR	**Abashiri--Toko**	1.52	117	⇓P	Pn	06 04 20.1	+0.8
JTKR				S	S	06 04 50.2	+1.1
JFR	**Furan**	1.57	165	⇑P	Pn	06 04 19.7	-0.1
JSK	**Shakotan**	1.74	221	⇑P	Pn	06 04 21.3	+0.2
JSK				eS	S	06 04 52.5	+0.1
JAR	**Ashorobuto**	1.86	137	⇓P	Pn	06 04 22.8	+0.6
JAR				eS	S	06 04 54.8	+0.4
JEW	**Eniwo**	1.89	193	⇑P	Pn	06 04 23.0	+0.6
JEW				eS	S	06 04 55.2	+0.4
JCH	**Churui**	2.28	155	⇑P	Pn	06 04 24.7	-1.4
JCH				eS	S	06 04 57.9	-3.4
YSS	**Yuzh-Sakhalins**	2.33	12	i P	Pn	06 04 26.8	+0.4
YSS				AMB	AMB	06 04 27.5	
	2µm,0.7s						
YSS				i S	S	06 05 01.8	-0.3
YSS				A	A	06 05 04.2	
	6µm,3.0s						
YSS				A	A	06 05 04.9	
	3µm,0.9s						
YSS	**Yuzh-Sakhalins**	2.33	12		Pn	06 04 26.8	+0.4
YSS				S	S	06 05 01.1	-1.0
YSS	**Yuzh-Sakhalins**	2.33	12	⇓iPN	Pn	06 04 27.0	+0.6
YSS				i S	S	06 05 01.7	-0.3
YSS				pmax	pmax		
	comp=Z,2µm,0.7s						
YSS				smax	smax		
	comp=E,6µm,3.0s						
YSS				smax	smax		
	comp=E,3µm,0.9s						
JRA	**Rausu**	2.34	107	⇓P	Pn	06 04 27.6	+1.1
JNBK	**Urakawa-nobuka**	2.46	168	P	Pn	06 04 26.9	-0.9
JNBK				eS	S	06 05 03.0	-1.4
JAK	**Akkeshi**	2.56	130	P	Pn	06 04 27.2	-1.6
JAK				eS	S	06 05 03.4	-2.8
GLVR	**Golovnino**	2.67	109	i P	Pn	06 04 30.7	+0.7
GLVR				AMB	AMB	06 04 35.0	
	comp=E,800nm,2.0s						
GLVR				AMB	AMB	06 04 36.0	
	comp=E,200nm,0.4s						
GLVR				AMB	AMB	06 04 36.0	
	comp=E,140nm,0.4s						
GLVR				AMB	AMB	06 04 36.0	
	comp=E,310nm,0.4s						
GLVR				eS	S	06 05 08.8	+0.4
GLVR				A	A	06 05 12.0	
	comp=E,3µm,0.3s						
GLVR				A	A	06 05 12.0	
	comp=E,1µm,0.3s						
GLVR				A	A	06 05 15.0	
	comp=E,4µm,2.0s						
GLVR				A	A	06 05 15.0	
	comp=E,4µm,2.0s						
GLVR	**Golovnino**	2.67	109	d iPN	Pn	06 04 30.7	+0.7
GLVR				eS	S	06 05 08.5	+0.1
GLVR				pmax	pmax		
	comp=Z,813nm,1.2s						
GLVR				pmax	pmax		
	comp=Z,310nm,0.4s						
GLVR				pmax	pmax		
	comp=N,200nm,0.3s						
GLVR				pmax	pmax		
	comp=E,141nm,0.3s						
GLVR				smax	smax		
	comp=N,3µm,0.3s						
GLVR				smax	smax		
	comp=E,1µm,0.3s						
GLVR				smax	smax		
	comp=N,4µm,1.5s						
GLVR				smax	smax		
	comp=E,4µm,1.1s						
GRPR	**Tuman**	2.77	103	i P	Pn	06 04 31.8	+0.8
GRPR				AMB	AMB	06 04 32.0	
	comp=E,330nm,0.3s						
GRPR				AMB	AMB	06 04 35.0	
	comp=E,300nm,2.0s						
GRPR				eS	S	06 05 10.8	+0.7
GRPR				A	A	06 05 17.0	
	comp=E,900nm,2.0s						
GRPR				A	A	06 05 17.0	
	comp=E,2µm,2.0s						
GRPR				A	A	06 05 18.0	
	comp=E,440nm,0.4s						
GRPR				A	A	06 05 18.0	
	comp=E,980nm,0.4s						
GRPR	**Tuman**	2.77	103	d iPN	Pn	06 04 31.8	+0.8
GRPR				eS	S	06 05 10.8	+0.7
GRPR				pmax	pmax		
	comp=Z,331nm,0.3s						
GRPR				pmax	pmax		
	comp=N,38nm,0.1s						
GRPR				pmax	pmax		
	comp=E,46nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,338nm,1.3s						
GRPR				smax	smax		
	comp=E,2µm,1.5s						
GRPR				smax	smax		
	comp=N,850nm,1.2s						
GRPR				smax	smax		
	comp=N,440nm,0.4s						
GRPR				smax	smax		
	comp=E,980nm,0.4s						
ERM	**Erimo**	2.79	163		Pn	06 04 30.6	-0.7
ERM					S	06 05 09.8	-0.8
ERM	**Erimo**	2.79	163	PN	Pn	06 04 30.6	-0.7
ERM				S	S	06 05 09.8	-0.8
YUK	**Yuzh-Kuril'sk**	2.82	102	i P	Pn	06 04 31.9	+0.4
YUK				AMB	AMB	06 04 35.0	
	comp=E,310nm,0.5s						
YUK				AMB	AMB	06 04 46.0	
	comp=E,1µm,2.0s						
YUK				i S	S	06 05 11.7	+0.6
YUK				A	A	06 05 19.0	
	comp=E,820nm,0.7s						
YUK				A	A	06 05 19.0	
	comp=E,1µm,0.7s						
YUK				A	A	06 05 19.0	
	comp=E,3µm,2.0s						
YUK				A	A	06 05 19.0	
	comp=E,3µm,2.0s						
YUK	**Yuzh-Kuril'sk**	2.82	102	⇓iPN	Pn	06 04 32.3	+0.8
YUK				i S	S	06 05 11.6	+0.5
YUK				pmax	pmax		
	comp=Z,312nm,0.5s						
YUK				pmax	pmax		
	comp=N,182nm,0.3s						
YUK				pmax	pmax		
	comp=E,203nm,0.4s						
YUK				pmax	pmax		
	comp=Z,1µm,1.1s						
YUK				smax	smax		
	comp=N,817nm,0.6s						
YUK				smax	smax		
	comp=E,1µm,0.7s						
YUK				smax	smax		
	comp=E,3µm,1.3s						
YUK				smax	smax		
	comp=N,3µm,1.1s						
JKB	**Kayabe**	2.89	195	⇑P	Pn	06 04 31.3	-1.0
JKB				S	S	06 05 10.2	-2.3
NMR	**Nemuro--Hokkai**	2.97	115	i P	Pn	06 04 31.0	-2.1
NMR				i S	S	06 05 11.0	-3.0
NMR	**Nemuro--Hokkai**	2.97	115	⇓iPN	Pn	06 04 31.5	-1.6
NMR				i S	S	06 05 10.8	-3.2
NEM2	**Nemuro 2**	2.98	115	P	Pn	06 04 31.5	-1.7
NEM2				S	S	06 05 10.7	-3.5
JOSM	**Okushiri--Mats**	3.20	217	⇑P	Pn	06 04 35.0	-0.7
SHO	**Shikotan**	3.54	102	i P	Pn	06 04 38.4	-1.1
SHO				AMB	AMB	06 04 41.0	
	comp=N,200nm,2.0s						
SHO				AMB	AMB	06 04 41.0	
	comp=N,120nm,0.5s						
SHO				i S	S	06 05 22.8	-2.7
SHO				A	A	06 05 24.0	
	comp=N,2µm,0.2s						
SHO				A	A	06 05 24.0	
	comp=N,3µm,0.2s						
SHO	**Shikotan**	3.54	102	d iPN	Pn	06 04 38.2	-1.3
SHO				i S	S	06 05 22.5	-3.0
SHO				pmax	pmax		
	comp=Z,224nm,2.3s						
SHO				pmax	pmax		
	comp=E,91nm,0.5s						
SHO				pmax	pmax		
	comp=Z,124nm,0.5s						
SHO				pmax	pmax		
	comp=N,28nm,0.2s						
SHO				smax	smax		
	comp=N,2µm,0.2s						
SHO				smax	smax		
	comp=E,3µm,0.2s						
TEY	**Ternei**	3.88	277	i P	Pn	06 04 43.5	+0.1
TEY				AMB	AMB	06 04 44.1	
	comp=E,900nm,2.0s						
TEY				AMB	AMB	06 04 44.2	
	comp=E,340nm,1.0s						
TEY				eS	S	06 05 33.7	+1.1
TEY				A	A	06 05 34.0	
	comp=E,2µm,4.0s						
TEY				A	A	06 05 34.0	
	comp=E,3µm,4.0s						
TEY	**Ternei**	3.88	277	⇑iPN	Pn	06 04 43.5	+0.1
TEY				eS	S	06 05 31.1	-1.6
TEY				pmax	pmax		
	comp=N,700nm,2.0s						
TEY				pmax	pmax		
	comp=E,340nm,1.0s						
TEY				pmax	pmax		
	comp=Z,340nm,1.0s						
TEY				pmax	pmax		
	comp=N,50nm,0.8s						
TEY				pmax	pmax		
	comp=Z,900nm,2.0s						
TEY				smax	smax		
	comp=E,2µm,3.7s						
TEY				smax	smax		
	comp=N,3µm,5.7s						
KUR	**Kuril'sk**	4.17	80	i P	Pn	06 04 48.3	+1.4
KUR				AMB	AMB	06 04 49.1	
	comp=N,420nm,0.6s						
KUR				AMB	AMB	06 04 49.2	
	comp=N,2µm,2.0s						
KUR				i S	S	06 05 40.6	+1.6
KUR				A	A	06 05 42.3	
	comp=N,8µm,3.0s						
KUR				A	A	06 05 42.3	
	comp=N,3µm,3.0s						
KUR				A	A	06 05 43.2	
	comp=N,340nm,0.7s						
KUR				A	A	06 05 43.2	
	comp=N,420nm,0.7s						
KUR	**Kuril'sk**	4.17	80	c iPN	Pn	06 04 48.3	+1.4
KUR				i S	S	06 05 40.5	+1.6
KUR				pmax	pmax		
	comp=Z,424nm,0.6s						
KUR				pmax	pmax		
	comp=E,108nm,0.5s						
KUR				pmax	pmax		
	comp=Z,2µm,1.2s						
KUR				smax	smax		
	comp=N,8µm,2.6s						
KUR				smax	smax		
	comp=E,3µm,2.0s						
KUR				smax	smax		
	comp=E,417nm,0.7s						
KUR				smax	smax		
	comp=N,344nm,0.9s						
UGL	**Uglegorsk**	4.40	0	i P	Pn	06 04 50.4	+0.9
UGL				AMB	AMB	06 04 51.0	
	comp=N,32µm,0.9s						
UGL				eS	S	06 05 45.0	+1.3
UGL				A	A	06 05 48.0	
	comp=N,460nm,1.0s						
UGL				A	A	06 05 48.0	
	comp=N,680nm,1.0s						
UGL				A	A	06 05 48.5	
	comp=N,2µm,3.0s						
UGL				A	A	06 05 48.5	
	comp=N,3µm,3.0s						
UGL	**Uglegorsk**	4.40	0	⇓iPN	Pn	06 04 50.4	+0.9
UGL				eS	S	06 05 45.0	+1.3
UGL				pmax	pmax		

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      comp=Z,319nm,0.9s
UGL                                smax   smax
      comp=E,677nm,1.2s
UGL                                smax   smax
      comp=Z,255nm,1.1s
UGL                                smax   smax
      comp=N,458nm,1.2s
UGL                                smax   smax
      comp=N,2µm,3.9s
UGL                                smax   smax
      comp=E,3µm,2.1s
TYV   Tymovskoe          6.20   4  eP     Pn     06 05 12.8 +1.1
TYV                                AMB    AMB    06 05 13.0
      comp=E,90nm,1.0s
TYV                                AMB    AMB    06 05 13.2
      comp=E,500nm,2.0s
TYV                                eS     S      06 06 26.1 +2.1
TYV                                A      A      06 06 27.0
      comp=E,124nm,1.0s
TYV                                A      A      06 06 28.0
      comp=E,2µm,5.0s
TYV   Tymovskoe          6.20   4  ePN    Pn     06 05 12.8 +1.1
TYV                                eS     S      06 06 26.1 +2.1
TYV                                pmax   pmax
      comp=Z,500nm,2.1s
TYV                                pmax   pmax
      comp=Z,94nm,1.0s
TYV                                smax   smax
      comp=N,124nm,1.4s
TYV                                smax   smax
      comp=E,2µm,5.0s
GRNR  Gornyy             7.17 330  eP     Pn     06 05 25.3 +1.4
GRNR                               AMB    AMB    06 05 26.1
      comp=E,10.0nm,0.6s
GRNR                               eS     S      06 06 48.0 +1.7
GRNR                               A      A      06 06 49.2
      comp=E,70nm,0.8s
GRNR  Gornyy             7.17 330⇓iPN    Pn     06 05 25.3 +1.4
GRNR                               eS     S      06 06 48.0 +1.7
GRNR                               pmax   pmax
      comp=Z,10.0nm,0.6s
GRNR                               smax   smax
      comp=N,7.0nm,0.8s
GRNR                               MLR    MLR
      comp=Z,230nm,14.0s
USA0B Ussuriysk Arra     7.21 270         Pn     06 05 24.4 -0.1
USA0B                              S      S      06 06 46.2 -1.1
USA0B Ussuriysk Arra     7.21 270  PN     Pn     06 05 24.4 -0.1
USA0B                              S      S      06 06 46.2 -1.1
USRK  Ussuriysk Ar.      7.21 270  P      Pn     06 05 24.6 +0.1
      baz=84,slow=12,SNR=167
VLA   Vladivostok        7.50 262  eP     Pn     06 05 27.9 -0.2
VLA   Vladivostok        7.50 262c iPN    Pn     06 05 27.9 -0.2
MSHR  Mys Shultsa        8.17 259c iPN    Pn     06 05 36.3 -0.3
KLR   Kul'dur            8.38 307  P      Pn     06 05 39.3  0.0
      comp=Z,0.2nm,0.3s,baz=114,slow=14,SNR=25
KLR   Kul'dur            8.38 307  eP     Pn     06 05 40.9 +1.7
KLR   Kul'dur            8.38 307c iPN    Pn     06 05 40.9 +1.7
MJB9  Matsu-Tunnel       8.63 201         Pn     06 05 40.3 -2.4
MAJO  Matsushiro         8.63 201         Pn     06 05 39.7 -3.0
MAJO  Matsushiro         8.63 201c iPN    Pn     06 05 40.3 -2.4
MAT   Matsushiro         8.63 201  P      Pn     06 05 40.3 -2.4
MAT                                eS     S      06 07 14.8 -5.8
MJAR  Matsushiro Arr     8.63 201  P      Pn     06 05 40.7 -2.0
      comp=Z,2.3nm,0.3s,baz=9.9,slow=14,SNR=232
MDJ   Mudanjiang         8.88 274  P      Pn     06 05 45.8 +0.2
MDJ                                sP            06 06 35.8
MDJ                                S      S      06 07 24.4 -1.6
MDJ                                pmax   pmax
      comp=Z,67nm,1.0s
MDJ                                pmax   pmax
      comp=Z,140nm,3.5s
MDJ   Mudanjiang         8.88 274         Pn     06 05 45.4 -0.2
INU   Inuyama           10.08 204         Pn     06 05 58.1 -2.8
EKMR  Ekimchan          10.30 328  eP     Pn     06 06 03.0 -0.6
EKMR                               AMB    AMB    06 06 21.8
      comp=Z,10.0nm,0.4s
SKR   Severo-Kuril's    11.22  53  eP     Pn     06 06 16.0 +0.9
SKR                                AMB    AMB    06 06 17.0
      comp=Z,200nm,4.0s
SKR                                AMB    AMB    06 06 17.8
      comp=Z,750nm,0.9s
SKR                                eS     S      06 08 19.3 -0.9
SKR   Severo-Kuril's    11.22  53  ePN    Pn     06 06 16.7 +1.6
SKR                                eS     S      06 08 16.1 -4.1
SKR                                pmax   pmax
      comp=Z,200nm,3.9s
SKR                                pmax   pmax
      comp=Z,941nm,0.9s
JHJ   Hachijo jima 2    11.68 189  P      Pn     06 06 18.8 -2.2
      comp=Z,23nm,0.3s,baz=115,slow=23,SNR=20
JHJ                                S      S      06 08 20.1  -11
      comp=Z,29nm,0.3s,baz=27,slow=22,SNR=8.0
JHJ2  Mitsune           11.68 189         Pn     06 06 18.5 -2.5
CN2   Changchun         11.94 272  eP     Pn     06 06 24.0 -0.1
CN2                                esP    P      06 07 23.6  +56
CN2                                eS     S      06 08 33.8 -3.1
CN2                                pmax   pmax
      comp=Z,10.0nm,0.6s
CN2                                pmax   pmax
      comp=Z,200nm,3.0s
CN2                                LR     LR
      comp=Z,100nm,10.0s
CN2                                LR     LR
      comp=Z,110nm,10.0s
CN2                                LR     LR
      comp=Z,100nm,11.0s
PAU   Pauzhetka         11.98  50  eP     Pn     06 06 24.4 -0.1
PAU                                eS     S      06 08 36.3 -1.4
KSRS  Korea Array       12.86 241  P      Pn     06 06 34.9 -0.7
      comp=Z,0.3nm,0.3s,baz=55,slow=12,SNR=23
KSRS                               ScP    ScP    06 14 58.7  0.0
      comp=Z,0.3nm,0.3s,baz=137,slow=0.6,SNR=6.1
KS19  Wonju Array Si    12.86 241         Pn     06 06 34.9 -0.8
BMKR  Bomnak            13.16 324  eP     Pn     06 06 38.5 -0.6
ZEA   Zeya              13.23 318  eP     P      06 06 42.1 +0.6
ZEA                                AMB    AMB    06 06 43.0
      comp=Z,30nm,0.7s
ZEA   Zeya              13.23 318  ePN    P      06 06 42.1 +0.6
ZEA                                e             06 09 08.7
ZEA                                pmax   pmax
      comp=N,26nm,0.8s
ZEA                                pmax   pmax
      comp=Z,30nm,0.7s
PEA0B Petropavlovsk-    13.29  45  P      Pn     06 06 41.3 +0.6
PEA0B Petropavlovsk-    13.29  45dePN    Pn     06 06 41.4 +0.7
PETK  Petropavlovsk-    13.29  45  P      P      06 06 41.6 -0.7
      comp=Z,6.7nm,0.3s,baz=220,slow=5.7,SNR=79
PET   Petropavlovsk     13.73  47  eP     P      06 06 47.0 -0.2
PET                                AMB    AMB    06 06 48.4
      comp=Z,160nm,0.7s
PET                                eS     S      06 09 14.6 -3.5
PET                                A      A      06 09 20.4
      comp=Z,720nm,0.9s
PET                                A      A      06 09 20.4
      comp=Z,290nm,0.9s
PET   Petropavlovsk     13.73  47  P      Pn     06 06 46.6 +0.5
PET   Petropavlovsk     13.73  47  eP     Pn     06 06 46.6 +0.5
PET                                eS     S      06 09 13.5 -4.6
PET                                pmax   pmax
      comp=Z,226nm,1.1s
PET                                MLR    MLR
      comp=Z,300nm,14.0s
KROS  Kirovskiy         13.79 320  eP     Pn     06 06 46.8  0.0
KROS                               AMB    AMB    06 06 50.0
      comp=Z,60nm,1.0s
TJN   Taejon            13.89 238deP     P      06 06 49.0 -0.1
JNU   Nakatsue          14.43 221  P      Pn     06 06 53.2 -1.6
      comp=Z,1.0nm,0.3s,baz=43,slow=4.8,SNR=17
JNU   Nakatsue          14.43 221  P      Pn     06 06 52.6 -2.2
MA2   Magadan           15.83  16  P      P      06 07 10.1 -0.1
      comp=Z,4.6nm,0.3s,baz=200,slow=12,SNR=64
MA2   Magadan           15.83  16  eP     P      06 07 10.7 +0.5
MA2   Magadan           15.83  16  P      P      06 07 10.5 +0.3
MA2   Magadan           15.83  16c iP     P      06 07 10.7 +0.5
MA2                                pmax   pmax
      comp=Z,288nm,1.7s
HIA   Hailar            15.88 295  P      P      06 07 10.2 -0.7
HIA   Hailar            15.88 295  P      P      06 07 10.2 -0.7
HIA                                pmax   pmax
      comp=Z,11nm,0.8s
JCJ   Chichijima        17.55 180  P      P      06 07 29.1 -0.2
      comp=Z,6.0nm,0.3s,baz=88,slow=21,SNR=5.0
YAK   Yakutsk           18.82 342  P      P      06 07 40.8 -1.9
      comp=Z,0.3nm,0.3s,baz=339,slow=4.4,SNR=7.2
YAK   Yakutsk           18.82 342  eP     P      06 07 40.5 -2.2
YAK   Yakutsk           18.82 342  P      P      06 07 40.5 -2.2
YAK   Yakutsk           18.82 342  eP     P      06 07 40.5 -2.2
YAK                                eS     S      06 10 57.9 -5.2
YAK                                pmax   pmax
      comp=Z,41nm,0.9s
YAK                                pmax   pmax
      comp=N,18nm,1.0s
YAK                                pmax   pmax
      comp=E,9.0nm,1.0s
YAK                                smax   smax
      comp=N,536nm,2.2s
YAK                                smax   smax
      comp=E,302nm,2.0s
SEY   Seymchan          19.23  14  P      P      06 07 46.6 -0.5
      comp=E,3.5nm,0.3s,baz=200,slow=6.8,SNR=169
SEY   Seymchan          19.23  14  eP     P      06 07 46.7 -0.4
SEY   Seymchan          19.23  14ceP     P      06 07 46.7 -0.4
BJI   Beijing           19.63 265  P      P      06 07 50.6 -0.9
BJI                                pmax   pmax
      comp=E,11nm,0.6s
BJT   Baijiatuau        19.64 265  IAmb   IAmb   06 07 51.4
      comp=Z,10nm,0.8s
TIA   Tai'an            20.70 255  P      P      06 07 56.9 -6.2
JOW   Kunigami          20.97 216  P      P      06 08 06.9 +1.0
      comp=Z,3.5nm,0.7s,baz=115,slow=14,SNR=7.8
BOD   Bodaibo           21.73 317  eP     P      06 08 10.7 -2.1
BOD                                pmax   pmax
      comp=Z,15nm,1.9s
NJ2   Nanjing           22.03 243  eP     P      06 08 15.5 -0.4
NJ2                                pmax   pmax
      comp=Z,18nm,0.8s
BTO   Baotou            23.81 271  eP     P      06 08 33.5 +1.3
ULN   Ulaanbaatar       24.27 290  eP     P      06 08 36.5 +0.2
ULN   Ulaanbaatar       24.27 290  P      P      06 08 36.5 +0.2
ULN                                       PcP    06 12 09.0  0.0
ULN   Ulaanbaatar       24.27 290  eP     P      06 08 36.5 +0.2
SONM  Songino Array     24.71 290  P      P      06 08 40.8 +0.5
      comp=Z,35nm,0.8s,baz=86,slow=8.6,SNR=218
SONM                               PcP    PcP    06 12 09.7 -0.3
      comp=Z,1.8nm,0.6s,baz=143,slow=4.4,SNR=5.7
SONM                               ScP    ScP    06 15 24.4 -0.7
      comp=Z,1.4nm,0.8s,baz=119,slow=1.4,SNR=5.8
WHN   Wuhan             25.93 246  P      P      06 08 50.5 -0.7
TLY   Talaya            26.30 299  P      P      06 08 54.8 +0.5
      comp=Z,1.7nm,0.4s,baz=38,slow=6.5,SNR=3.3
TLY                                PcP    PcP    06 12 13.7 +0.4
      comp=Z,3.1nm,0.6s,baz=58,slow=2.7,SNR=4.1
TLY   Talaya            26.30 299  eP     P      06 08 54.3  0.0
TLY   Talaya            26.30 299  P      P      06 08 54.0 -0.4
TLY                                       PcP    06 12 14.2 +0.8
TLY   Talaya            26.30 299  eP     P      06 08 54.1 -0.2
TLY                                pmax   pmax
      comp=Z,6.0nm,0.9s
TLY                                MLR    MLR
      comp=Z,232nm,9.0s
ZAK   Zakamensk         26.56 296  eP     P      06 08 56.4 -0.3
ZAK   Zakamensk         26.56 296  eP     P      06 08 56.4 -0.3
ZAK                                e             06 09 47.0
ZAK                                pmax   pmax
      comp=Z,7.0nm,1.4s
ZAK                                pmax   pmax
      comp=Z,5.0nm,1.3s
BILL  Bilibino          26.62  20  eP     P      06 08 56.2 -0.7
BILL  Bilibino          26.62  20  P      P      06 08 54.7 -2.2
BILL                               IAmb   IAmb   06 09 10.0
      comp=Z,16nm,1.3s
BILL  Bilibino          26.62  20⇓eP     P      06 08 56.2 -0.7
BILL                               e*PP   pP     06 09 45.0  0.0
BILL                               pmax   pmax
      comp=Z,4.0nm,0.9s
XAN   Xi'an             27.55 259  P      P      06 09 05.1 -0.5
XAN                                pmax   pmax
      comp=Z,11nm,1.3s
XAN                                pmax   pmax
      comp=Z,51nm,3.1s
XAN   Xi'an             27.55 259  IAmb   IAmb   06 09 07.0
      comp=Z,13nm,1.1s
TWG   Pinlang           27.76 225  P      P      06 09 06.1 -1.5
TIXI  Tiksi             27.79 351  P      P      06 09 05.1 -2.1
      comp=Z,2.2nm,0.3s,baz=142,slow=7.1,SNR=3.4
TIXI  Tiksi             27.79 351  P      P      06 09 04.3 -2.9
TIXI  Tiksi             27.79 351⇑eP     P      06 09 05.4 -1.8
TIXI                               pmax   pmax
      comp=Z,8.0nm,1.7s
KNMB  Chin-men Tao      27.86 231  P      P      06 09 09.0 +0.6
LZH   Lanzhou           30.11 267  eP     P      06 09 29.2 +0.9
LZH                                pP     pP     06 10 22.2 +5.5
LZH                                sP     sP     06 10 49.6 +4.7
LZH                                sS     sS     06 15 31.3 -4.8
LZH                                pmax   pmax
      comp=Z,38nm,1.2s
LZH                                pmax   pmax
      comp=Z,180nm,4.9s
GTA   Gaotai            31.53 275  eP     P      06 09 41.2 +0.5
GTA                                pP     pP     06 10 28.9 -0.2
GTA                                sP     sP     06 10 58.6 +1.4
GTA                                PcP    PcP    06 12 28.2 +1.2
GTA                                ScP    ScP    06 15 47.4 +1.0
GTA                                ScS    ScS    06 19 44.7 -0.2
SZP   Santa             32.55 221  P      P      06 09 50.5 +0.9
ANM   Nome              34.99  37  P      P      06 10 09.5 -0.6
ANM                                PcP    PcP    06 12 37.9 +1.7
ANM   Nome              34.99  37  P      P      06 10 09.5 -0.6
ANM                                              06 12 37.9
ANM                                pmax   pmax
      comp=Z,8.0nm,0.8s
TGY   Tagaytay City     35.37 217  P      P      06 10 14.4 +0.5
      comp=Z,201nm,0.3s,baz=78,slow=4.5,SNR=4.2
RDOG  Red Dog Mine      36.59  31  P      P      06 10 21.3 -2.2
KMI   Kunming           37.22 252  P      P      06 10 30.2 +0.6
KMI                                pP     pP     06 11 19.7 +0.6
KMI                                pmax   pmax
      comp=Z,63nm,0.9s
KMI                                pmax   pmax
      comp=Z,200nm,3.6s
ZAA0  Zalesovo Array    37.48 305  P      P      06 10 30.3 -0.9
ZAA0                                      PcP    06 12 44.4 +0.5
ZALV  Zalesovo Beam     37.48 305  P      P      06 10 30.9 -0.2
      comp=Z,1.4nm,0.4s,baz=84,slow=9.0,SNR=9.1
ZALV                               PcP    PcP    06 12 43.8 -0.1
      comp=Z,8.5nm,0.7s,baz=94,slow=2.1,SNR=19
ZALV                               ScP    ScP    06 16 07.7 +0.4
      comp=Z,1.6nm,0.7s,baz=68,slow=4.1,SNR=4.7
ZALV  Zalesovo Beam     37.48 305 i P     P      06 10 31.0 -0.2
ZALV                               pmax   pmax
      comp=Z,1.0nm,0.4s
WMQ   Urumqi            38.32 288  P      P      06 10 39.4 +0.9
WMQ                                pP     pP     06 11 27.8 -0.5
WMQ                                sP     sP     06 11 56.1 -0.2
WMQ                                pmax   pmax
      comp=Z,14nm,1.3s
WMQ                                pmax   pmax
      comp=Z,110nm,5.7s
WMQ                                LR     LR
      comp=Z,130nm,6.9s
WMQ                                LR     LR
      comp=Z,160nm,8.5s
WMQ                                LR     LR
      comp=Z,190nm,7.3s
WMQ   Urumqi            38.32 288  IAmb   IAmb   06 10 41.4
      comp=Z,19nm,0.9s
SLVN  Son La            39.05 246  P      P      06 10 44.2 -0.5
SLVN                               IAmb   IAmb   06 10 46.4
      comp=Z,30nm,1.5s
TTA   Tatalina          39.05  40  P      P      06 10 43.9 -0.3
TTA                                IAmb   IAmb   06 10 46.5
      comp=Z,12nm,0.9s
TTA   Tatalina          39.05  40  P      P      06 10 43.9 -0.3
TTA                                pmax   pmax
      comp=Z,12nm,0.9s
SVW2  Sparrevohn        39.36  43  P      P      06 10 47.0 +0.2
SVW2                               IAmb   IAmb   06 10 50.0
      comp=Z,11nm,0.7s
CHIR  Chirikof Islan    40.06  51  P      P      06 10 53.5 +1.0
KCP   Kidapawan         40.33 207⇓iP     P      06 10 56.3 +1.1
SII   Sitkinak Islan    40.70  50  P      P      06 11 02.6 +4.8
PPLA  Purkeypile        40.80  40  P      P      06 10 58.9 +0.2
PPLA                               IAmb   IAmb   06 11 08.0
      comp=Z,17nm,0.8s
PPLA                                      PcP    06 12 55.4 +0.9
MK31  Makanchi Array    40.88 295  P      P      06 10 58.7 -0.7
MK31                               IAmb   IAmb   06 11 00.6
      comp=Z,19nm,0.8s
MK31                               PcP    PcP    06 12 54.7 -0.2
MK31  Makanchi Array    40.88 295  P      P      06 10 58.7 -0.7
MK31                                             06 12 54.7
MK31                               pmax   pmax
      comp=Z,19nm,0.9s
MKAR  Makanchi Array    40.88 295  P      P      06 10 59.6 +0.2
      comp=Z,14nm,0.8s,baz=80,slow=8.9,SNR=164
MKAR                               PcP    PcP    06 12 54.7 -0.2
      comp=Z,3.6nm,0.7s,baz=60,slow=3.1,SNR=7.8
MKAR                               ScP    ScP    06 16 21.1 +0.5
      comp=Z,0.7nm,0.7s,baz=67,slow=5.0,SNR=4.0
MKAR                               S      S      06 16 51.1 -0.7
      comp=Z,1.8nm,1.0s,baz=76,slow=20,SNR=7.4
MAKZ  Makanchi          41.08 295  P      P      06 11 01.0  0.0
MAKZ                               IAmb   IAmb   06 11 02.2
      comp=Z,23nm,0.9s
MAKZ  Makanchi          41.08 295  P      P      06 11 01.0  0.0
MAKZ                               pmax   pmax
      comp=Z,23nm,0.9s
SKT   Skwentna          41.20  41  P      P      06 11 01.8  0.0
BPAW  Bear Paw Mtn.     41.23  38  P      P      06 11 01.6 -0.4
BPAW                               PcP    PcP    06 12 56.5 +0.9
KTH   Kantishna Hill    41.31  39  P      P      06 11 03.5 +0.8
KDAK  Kodiak Island     41.33  48  P      P      06 11 02.9 +0.1
      comp=Z,39nm,0.7s,baz=287,slow=5.0,SNR=62
KDAK  Kodiak Island     41.33  48  P      P      06 11 02.8  0.0
KDAK  Kodiak Island     41.33  48  eP     P      06 11 03.8 +1.0
TOLK  Toolik Lake Re    41.56  31  P      P      06 11 03.6 -1.0
      baz=271,SNR=12
TRF   Thorofare Moun    41.60  39  IAmb   IAmb   06 11 13.1
      comp=Z,15nm,0.8s
SUA   Susitna One       41.64  42  IAmb   IAmb   06 11 08.0
      comp=Z,19nm,0.7s
CNPM  China Poot        41.70  45  IAmb   IAmb   06 11 07.4
      comp=Z,26nm,0.8s
BRLK  Bradley Lake      41.84  44  IAmb   IAmb   06 11 08.7
      comp=Z,20nm,0.6s
KURK  Kurchatov         41.94 302  eP     P      06 11 07.3 -0.5
KURK  Kurchatov         41.94 302  P      P      06 11 07.9 +0.1
KURK                               IAmb   IAmb   06 11 08.7
      comp=Z,12nm,0.8s
KURK                               PcP    PcP    06 12 58.2  0.0
KURK  Kurchatov         41.94 302d iP     P      06 11 07.3 -0.5
KURK                               pmax   pmax
      comp=Z,12nm,0.8s
NEA   Nenana            42.01  37  IAmb   IAmb   06 11 09.4
      comp=Z,24nm,0.8s
KURBB Kurchatov Arra    42.02 302  P      P      06 11 08.7 +0.2
      comp=Z,12nm,0.9s,baz=71,slow=9.1,SNR=41
KURBB                              PcP    PcP    06 12 58.5 +0.1
      comp=Z,4.6nm,0.7s,baz=76,slow=3.5,SNR=13
KURBB                              ScP    ScP    06 16 25.3 +0.2
      comp=Z,0.7nm,0.6s,baz=78,slow=3.6,SNR=5.1
MCK   McKinley          42.17  38  P      P      06 11 09.1 -0.5
MCK                                IAmb   IAmb   06 11 12.3
      comp=Z,23nm,0.8s
MCK                                       PcP    06 12 58.8  0.0
MCK   McKinley          42.17  38  P      P      06 11 09.1 -0.5
MCK                                              06 12 58.8
MCK                                pmax   pmax
      comp=Z,23nm,0.8s
RC01  Rabbit Creek A    42.18  42  IAmb   IAmb   06 11 12.5
      comp=Z,15nm,0.8s
RND   Reindeer          42.25  39  IAmb   IAmb   06 11 18.1
      comp=Z,12nm,0.8s
MDM   Murphy Dome       42.33  36  IAmb   IAmb   06 11 12.0
      comp=Z,13nm,0.7s
PMR   Palmer            42.38  41  P      P      06 11 11.3  0.0
PMR                                PcP    PcP    06 12 59.8 +0.3
PMR   Palmer            42.38  41  P      P      06 11 11.3  0.0
PMR                                              06 12 59.8
PMR                                pmax   pmax
      comp=Z,11nm,0.7s
WRH   Wood River Hil    42.45  37  IAmb   IAmb   06 11 14.6
      comp=Z,14nm,0.8s
SEW   Seward            42.49  44  P      P      06 11 12.3 +0.2
SEW                                IAmb   IAmb   06 11 12.9
      comp=Z,27nm,0.9s
TCOL  CIGO, UAF Yank    42.49  36  P      P      06 11 12.3 +0.2
      baz=277,SNR=18
COLA  College           42.50  36  P      P      06 11 11.3 -0.8
COLA  College           42.50  36  eP     P      06 11 11.3 -0.8
LSA   Lhasa             42.52 267  IAmb   IAmb   06 11 15.6
      comp=Z,34nm,1.5s
CCB   Clear Creek Bu    42.55  37  IAmb   IAmb   06 11 14.5
      comp=Z,11nm,0.6s
UBPT  Khong Chiam       42.57 238  P      P      06 11 13.6 +0.3
UBPT                                      PcP    06 13 01.4 +0.5
POKR  Poker Plat Res    42.65  36  P      P      06 11 13.4 +0.1
      baz=277,SNR=15
KNK   Knik Glacier      42.73  42  P      P      06 11 14.2  0.0
KNK                                IAmb   IAmb   06 11 17.2
      comp=Z,25nm,0.8s
IL31                    42.92  37  P      P      06 11 14.2 -1.3
IL31                               IAmb   IAmb   06 11 17.9
      comp=Z,18nm,0.7s
ILAR  Eielson Array     42.92  37  P      P      06 11 14.4 -1.1
      comp=Z,13nm,0.7s,baz=277,slow=6.8,SNR=134
ILAR                               pP     pP     06 12 06.8  0.0
      comp=Z,5.6nm,0.7s,baz=274,slow=8.4,SNR=3.7
HDA   Harding Lake      42.94  37  P      P      06 11 14.9 -0.9
      baz=278,SNR=16
DHY   Denali Highway    42.96  39  P      P      06 11 15.3 -0.7
DHY                                PcP    PcP    06 13 02.9 +1.3
SCM   Sheep Creek Mo    43.19  41  IAmb   IAmb   06 11 20.9
      comp=Z,19nm,0.7s
FYU   Fort Yukon        43.37  34  P      P      06 11 18.8 -0.3
FYU                                IAmb   IAmb   06 11 20.0
      comp=Z,23nm,0.7s
PRP   Porcupine Dome    43.39  35  IAmb   IAmb   06 11 21.1
      comp=Z,24nm,0.6s
DLV   T  Lat            43.45 232  P      P      06 11 21.1 +0.4
GLI   Glacier Island    43.48  42  IAmb   IAmb   06 11 22.9
      comp=Z,13nm,0.7s
PAX   Paxson            43.83  39  P      P      06 11 23.2 +0.3
PAX                                PcP    PcP    06 13 05.8 +1.2
PAX   Paxson            43.83  39  P      P      06 11 23.2 +0.3
PAX                                              06 13 05.8
PAX                                pmax   pmax
      comp=Z,7.0nm,0.8s
HIN   Hinchinbrook I    43.87  43  IAmb   IAmb   06 11 27.2
      comp=Z,22nm,1.0s
RIDG  Independent Ri    43.96  38  IAmb   IAmb   06 11 26.6
      comp=Z,15nm,0.8s
CHTO  Chiang Mai        44.10 248  P      P      06 11 24.9 -0.6
CHTO                               IAmb   IAmb   06 11 26.5
      comp=Z,15nm,0.8s
CHTO  Chiang Mai        44.10 248  P      P      06 11 24.9 -0.6
CHTO                               pmax   pmax
      comp=Z,15nm,0.9s
EYAK  Cordova Ski Ar    44.20  42  P      P      06 11 25.7 -0.1
EYAK                               IAmb   IAmb   06 11 26.9
      comp=Z,13nm,0.7s
CM31  Chiang Mai Arr    44.36 248  P      P      06 11 27.6  0.0
CMAR  Chiang Mai Arr    44.36 248  P      P      06 11 27.8 +0.2
      comp=Z,4.6nm,0.9s,baz=39,slow=7.0,SNR=24
CMAR                               PcP    PcP    06 13 07.6 +0.7
      comp=Z,5.7nm,0.8s,baz=4.5,slow=2.7,SNR=16
CMAR                               ScP    ScP    06 16 36.5 +1.4
      comp=Z,0.6nm,0.3s,baz=15,slow=4.2,SNR=5.0
PBKT  Sadao Pong        44.40 244  P      P      06 11 27.7 -0.2
PBKT                                      PcP    06 13 07.6 +0.5
VRDI  Verde Repeater    45.13  41  IAmb   IAmb   06 11 37.1
      comp=Z,16nm,0.9s
MCARA McCarthy VSAT     45.30  41  IAmb   IAmb   06 11 41.6
      comp=Z,23nm,0.8s
EGAK  Eagle             45.34  36  P      P      06 11 33.8 -0.8
EGAK                               IAmb   IAmb   06 11 34.9
      comp=Z,33nm,0.8s
CRQM  Cirque            45.40  42  P      P      06 11 36.2 +0.8
CRQM                               IAmb   IAmb   06 11 40.6
      comp=Z,21nm,0.7s
TGL   Tana Glacier      45.55  42  IAmb   IAmb   06 11 40.5
      comp=Z,18nm,0.9s
SPMM  Sapulut           45.69 217  P      P      06 11 39.0 +0.9
BALM  Baldy             45.70  41  IAmb   IAmb   06 11 41.5
      comp=Z,15nm,0.7s
BARN  Barnard Glacie    46.02  41  IAmb   IAmb   06 11 43.9
      comp=Z,21nm,0.7s
BRVK  Borovoye          46.09 307  eP     P      06 11 40.6 -0.1
BRVK  Borovoye          46.09 307  P      P      06 11 40.0 -0.7
BRVK                                      PcP    06 13 12.3 -0.1
BRVK  Borovoye          46.09 307⇑iP     P      06 11 40.6 -0.1
BRVK                               pmax   pmax
      comp=Z,8.0nm,1.3s
CTGM  Chitina Glacie    46.20  41  IAmb   IAmb   06 11 45.2
      comp=Z,31nm,0.7s
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TAPN   Taplejung         46.35 267  eP     P      06 11 43.5 +0.1
SMPI   Sarmi             46.56 185   P     P      06 11 45.4 +0.7
       comp=Z,112nm,1.1s
ULHL   Ulahol            46.64 291   P     P      06 11 45.9 +0.5
       SNR=13
KMSI   Cibinong          46.75 205   P     P      06 11 55.3 +9.1
EPYK   Eagle Plains      46.76  33   P     P      06 11 45.4 -0.3
EPYK   Eagle Plains      46.76  33   P     P      06 11 45.8  0.0
       baz=285,SNR=34
ODAN   Odare             46.87 267  eP     P      06 11 46.9 -0.5
LBMI   Labuha            46.94 200   P     P      06 11 46.6 -1.1
       comp=Z,50nm,0.7s
PCA    Pinnacle          46.96  42   IAmb  IAmb   06 11 50.9
       comp=Z,19nm,0.8s
JIRN   Jiri              47.25 268  eP     P      06 11 50.6 +0.2
KBK    Karagaybulak      47.31 292   P     P      06 11 51.3 +0.8
       SNR=29
GUN    Gumba             47.32 269  eP     P      06 11 50.9 -0.1
USP    Ospenovka         47.34 293   P     P      06 11 51.1 +0.6
       SNR=14
KZA    Kyzart            47.38 292   P     P      06 11 52.7 +1.4
       SNR=29
RAMN   Ramite            47.38 267  eP     P      06 11 51.0 -0.3
       comp=Z,62nm,0.8s
INK    Inuvik            47.45  30   P     P      06 11 50.4 -0.6
       comp=Z,15nm,0.5s,baz=301,slow=7.0,SNR=91
INK                                  pP    pP     06 12 43.7 +0.5
       comp=Z,4.6nm,0.7s,baz=297,slow=7.5,SNR=2.7
INK    Inuvik            47.45  30   IAmb  IAmb   06 11 52.4
       comp=Z,15nm,0.6s
MRSI   Marisa            47.49 208   P     P      06 11 51.7 -0.2
       comp=Z,1µmcomp=Z,115nm,1.1s
AAK    Ala-Archa         47.62 293   P     P      06 11 53.4 +0.5
       SNR=8.9
AAK    Ala-Archa         47.62 293  i P    P      06 11 53.2 +0.4
       SNR=12
AAK    Ala-Archa         47.62 293  eP     P      06 11 53.1 +0.2
AAK    Ala-Archa         47.62 293   P     P      06 11 52.9  0.0
AAK    Ala-Archa         47.62 293d iP     P      06 11 53.1 +0.2
AAK                                  pmax  pmax
       comp=Z,22nm,1.6s
UCH    Uchtor            47.80 292   P     P      06 11 55.1 +0.5
       SNR=6.7
KKN    Kakani            47.82 269  eP     P      06 11 54.5 -0.1
PKI    Pulchoki          47.86 269  eP     P      06 11 54.8 -0.3
       comp=Z,35nm,1.0s
PKIN   Phulchoki         47.86 269  eP     P      06 11 54.7 -0.3
DMN    Daman             48.05 269  eP     P      06 11 56.6 +0.1
       comp=Z,39nm,0.9s
EKS2   Erkin-Say         48.08 293   P     P      06 11 56.9 +0.5
       SNR=16
KSH    Kashi             48.09 288   P     P      06 12 01.0 +4.6
KSH                                  PP    PP     06 13 55.5 +4.7
KSH                                  PcS   PcS    06 17 17.3 +1.1
KSH                                  S     S      06 18 44.2 +8.4
KSH                                  ScS   ScS    06 21 27.7 +4.7
KSH                                  pmax  pmax
       comp=Z,25nm,1.0s
KSH                                  pmax  pmax
       comp=Z,120nm,4.6s
KSH                                  LR    LR
       comp=Z,420nm,13.7s
KSH                                  LR    LR
       comp=Z,190nm,10.6s
KSH                                  LR    LR
       comp=Z,220nm,11.6s
GKN    Gorkha            48.15 270  eP     P      06 11 57.0 -0.1
       comp=Z,42nm,0.7s
FAKI   Fak Fak           48.19 193   P     P      06 11 56.9 -0.4
       comp=Z,2µmcomp=Z,212nm,0.8s
FAKI   Fak Fak           48.19 193   P     P      06 11 56.8 -0.5
MPSI   Mapaga            48.33 210   P     P      06 11 58.7 +0.4
       comp=Z,20nm,1.4s
AML    Almayashu         48.38 292   P     P      06 11 59.7 +0.7
       SNR=16
DANN   Dangsing          48.57 271  eP     P      06 12 01.0 +0.5
       comp=Z,283nm,0.9s
LUWI   Luwuk             48.65 206   P     P      06 12 00.8 +0.1
       comp=Z,77nm,1.4s
SANI   Sanana            48.68 202   P     P      06 11 59.4 -1.6
       comp=Z,64nm,0.6s
APSI   Ampana            48.89 208   P     P      06 12 01.7 -0.8
       comp=Z,665nmcomp=Z,49nm,1.3s
WHY    Whitehorse        49.29  40   IAmb  IAmb   06 12 07.7
       comp=Z,28nm,1.1s
SKAG   Skagway           49.52  42   P     P      06 12 08.3 +1.6
SBUM   Sibu              49.60 221   P     P      06 12 09.0 +1.1
SVE    Sverdlovsk        49.91 315  eP     P      06 12 10.2 +0.4
KK31   Karatay Array     50.01 295   IAmb  IAmb   06 12 11.8
       comp=Z,17nm,0.8s
KK31   Karatay Array     50.01 295  i P    P      06 12 10.5 -0.3
KKAR   Karatay Array     50.01 295   IAmb  IAmb   06 12 11.8
       comp=Z,17nm,0.8s
C36M   Paulatuk          50.36  27   P     P      06 12 12.3 -0.6
C36M                                 IAmb  IAmb   06 12 14.5
       comp=Z,16nm,0.7s
C36M   Paulatuk          50.36  27   P     P      06 12 12.5 -0.4
       baz=292,SNR=26
SIT    Sitka             50.44  45   IAmb  IAmb   06 12 19.9
       comp=Z,17nm,0.8s
ARU    Arti              51.12 315  eP     P      06 12 18.5 -0.3
ARU    Arti              51.12 315   P     P      06 12 18.4 -0.3
ARU    Arti              51.12 315c iP     P      06 12 18.9 +0.1
ARU                                  *PP   pP     06 13 11.4 -0.3
ARU                                               06 13 29.9
ARU                                               06 14 13.4
ARU                                  S     S      06 19 17.7 +0.7
ARU                                               06 21 37.4
ARU                                  SS    SS     06 22 51.3 -3.6
ARU                                  pmax  pmax
       comp=Z,13nm,1.6s
KSM    Kuching           51.36 222   P     P      06 12 21.3 +0.3
KSM                                  IAmb  IAmb   06 12 22.5
       comp=Z,31nm,1.0s
KSM    Kuching           51.36 222   P     P      06 12 22.0 +0.9
GAR    Garm              52.15 290   P     P      06 12 26.6 -0.3
SPSI   Sidrap Palu       52.37 209   P     P      06 12 26.8 -1.7
       comp=Z,914nmcomp=Z,35nm,0.9s
DLBC   Dease Lake        52.45  42   P     P      06 12 30.3 +1.7
       comp=Z,23nm,0.9s,baz=282,slow=6.2,SNR=27
DLBC   Dease Lake        52.45  42   IAmb  IAmb   06 12 31.9
       comp=Z,30nm,0.9s
NIL    Nilore            53.00 283   P     P      06 12 33.1 +0.1
NIL                                  IAmb  IAmb   06 12 34.5
       comp=Z,23nm,1.1s
NIL    Nilore            53.00 283   P     P      06 12 33.1 +0.1
NIL                                  pmax  pmax
       comp=Z,23nm,1.1s
KBKI   Kotabaru          53.07 213   P     P      06 12 32.6 -1.0
       comp=Z,21nm,0.8s
KULM   Kulim             53.33 235   IAmb  IAmb   06 12 37.0
       comp=Z,24nm,0.8s
KULM   Kulim             53.33 235   P     P      06 12 36.0 +0.4
KAPI   Kappang           53.36 208   P     P      06 12 35.6 -0.1
       comp=Z,28nm,0.9s,baz=354,slow=2.5,SNR=10
BKSI   Bulukumba         53.52 208   P     P      06 12 35.7 -1.2
       comp=Z,30nm,0.9s
AB31   Akbulak array     53.58 306  i P    P      06 12 36.9  0.0
ABKAR  Akbulak array     53.58 306   IAmb  IAmb   06 12 38.1
       comp=Z,21nm,0.8s
AKTO   Aktyubinsk        54.11 308   P     P      06 12 40.0 -0.7
MYKOM  Kota Tinggi       54.40 229   P     P      06 12 44.0 +0.8
PRGR   Permogore         54.71 324  eP     P      06 12 42.3 -2.6
PRGR                                e                 06 13 38.9
PRGR                                 pmax  pmax
       comp=Z,8.0nm,0.8s
RES    Resolute Bay      55.10  16   P     P      06 12 46.6 -0.8
       comp=Z,10nm,0.6s,baz=301,slow=7.8,SNR=39
RES                                  pP    pP     06 13 41.2 -0.1
       comp=Z,10.0nm,0.9s,baz=312,slow=6.8,SNR=5.4
RES    Resolute Bay      55.10  16   IAmb  IAmb   06 12 48.7
       comp=Z,13nm,0.8s
KBL    Kabul             55.41 286   P     P      06 12 49.5 -1.1
KBL                                  IAmb  IAmb   06 12 50.3
       comp=Z,13nm,0.8s
KBL    Kabul             55.41 286   P     P      06 12 49.5 -1.1
KBL                                  pmax  pmax
       comp=Z,13nm,0.9s
PSI    Prapat            56.34 235   P     P      06 12 56.8 -0.5
       comp=Z,12nm,0.9s,baz=353,slow=7.1,SNR=9.7
PSI                                  pP    pP     06 13 50.5 -0.6
       comp=Z,5.0nm,0.8s,baz=6.3,slow=9.2,SNR=2.7
RPSI   Rantau Prapat     56.43 235   IAmb  IAmb   06 12 57.8
       comp=Z,10nm,0.8s
YKA    Yellowknife Ar    57.03  33   P     P      06 13 01.4 +0.2
       comp=Z,25nm,0.9s,baz=304,slow=6.8,SNR=205
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YKA                                  pP    pP     06 13 55.1 -0.4
       comp=Z,1.3nm,0.6s,baz=305,slow=6.4,SNR=1.8
YKA                                  ScP   ScP    06 17 30.0 +1.1
       comp=Z,1.2nm,0.9s,baz=306,slow=4.0,SNR=5.6
ARCES  ARCESS Array B    57.05 338   P     P      06 13 00.7 -0.6
       comp=Z,2.6nm,0.8s,baz=56,slow=7.5,SNR=4.6
MTN    Manton Dam        58.10 193   P     P      06 13 08.5 -0.7
COEN   Coen              58.37 179   P     P      06 13 11.2 +0.1
JAGI   Jajag, Banyuwa    58.59 213   IAmb  IAmb   06 13 11.3
       comp=Z,14nm,0.8s
LEM    Lembang           59.89 220   P     P      06 13 22.3 +0.6
       comp=Z,31nm,0.6s,baz=4.0,slow=7.4,SNR=3.8
HRA    Herat             60.10 290   IAmb  IAmb   06 13 23.8
       comp=Z,10nm,0.9s
LLLB   Lillooet          60.53  47   IAmb  IAmb   06 13 27.6
       comp=Z,11nm,0.8s
GEYT   Alibeck           60.74 296   P     P      06 13 27.3 +0.1
       comp=Z,11nm,0.7s,baz=40,slow=4.8,SNR=19
GYA0B  ALIBECK ARRAY     60.74 296   P     P      06 13 27.4 +0.2
GYA0B                                IAmb  IAmb   06 13 28.2
       comp=Z,11nm,0.8s
KNRA   Kununurra         61.27 195   P     P      06 13 31.0 +0.3
NLWA   Neilton Lookou    61.34  51   P     P      06 13 32.7 +1.7
D03D   Eldon             61.69  50   P     P      06 13 35.1 +1.9
       baz=306,SNR=5.8
B05A   Bryant            61.79  49   P     P      06 13 35.3 +1.4
       baz=306
FIA1   FINESS Array S    62.32 331   P     P      06 13 36.5 -0.7
FIA1                                 IAmb  IAmb   06 13 37.0
       comp=Z,7.8nm,0.8s
FINES  FINESS Array B    62.32 331   P     P      06 13 36.7 -0.5
       comp=Z,6.6nm,0.7s,baz=46,slow=8.2,SNR=22
FINES                                pP    pP     06 14 33.4 +1.0
       comp=Z,8.1nm,0.9s,baz=61,slow=9.0,SNR=6.2
VRH    Novokhopyorsk     62.33 316  eP     P      06 13 36.5 -0.9
VRH                                  pmax  pmax
       comp=Z,10.0nm,0.8s
OBN    Obninsk           62.34 321  eP     P      06 13 35.6 -1.8
OBN    Obninsk           62.34 321  eP     P      06 13 35.6 -1.8
OBN                                 e                 06 14 14.5
OBN                                 e*PP   pP     06 14 33.8 +1.4
OBN                                  pmax  pmax
       comp=Z,4.0nm,0.8s
E04D   Cinebar           62.56  51   P     P      06 13 41.2 +2.2
       baz=307,SNR=6.5
C06D   Leavenworth       62.64  49   P     P      06 13 41.3 +1.6
       baz=307
LPSR   Galich'ya Gora    62.83 318  eP     P      06 13 39.5 -1.2
LPSR                                 pmax  pmax
       comp=Z,10.0nm,0.8s
SUMG   Summit            63.05   0  i P    P      06 13 41.9 -0.4
       comp=Z,23nm,0.8s
SUMG   Summit            63.05   0   P     P      06 13 42.5 +0.2
SUMG                                 IAmb  IAmb   06 13 42.8
       comp=Z,12nm,0.9s
SUMG   Summit            63.05   0   P     P      06 13 42.5 +0.2
SUMG                                 pmax  pmax
       comp=Z,12nm,0.9s
LTY    Liberty           63.17  49   IAmb  IAmb   06 13 45.0
       comp=Z,9.1nm,1.1s
B08A   Colville Reser    63.21  48   IAmb  IAmb   06 13 45.2
       comp=Z,13nm,1.2s
VSR    Storozhevoye      63.59 317  eP     P      06 13 44.8 -0.9
VSR                                  pmax  pmax
       comp=Z,10.0nm,0.7s
J01E   Myrtle Point      63.84  54   P     P      06 13 49.6 +2.1
       baz=308
I03D   Drain, OR         63.85  54   P     P      06 13 49.8 +2.3
       baz=308
E07A   Sunnyside         64.04  49   IAmb  IAmb   06 13 51.1
       comp=Z,12nm,0.9s
G05D   Wamic, OR         64.05  51   P     P      06 13 50.9 +2.0
       baz=308
SANVU  Saraoutou         64.08 153   P     P      06 13 49.9 +0.7
C09A   Chrisman Ranch    64.11  48   IAmb  IAmb   06 13 51.0
       comp=Z,18nm,1.1s
VSU    Vasula            64.16 328⇓eP     P      06 13 48.6 -0.7
VSU                                  pmax  pmax
       comp=Z,21nm,0.9s
FITZ   Fitzroy Crossi    64.24 197   P     P      06 13 50.2  0.0
FITZ                                 PcP   PcP    06 14 23.1 +0.3
HAWA   Hanford           64.32  49   IAmb  IAmb   06 13 52.7
       comp=Z,12nm,1.0s
I04A   Tendick Farm,     64.32  53   P     P      06 13 52.4 +1.7
       baz=308,SNR=7.9
NEW    Newport           64.42  47   P     P      06 13 52.2 +0.9
NEW                                  IAmb  IAmb   06 13 53.1
       comp=Z,8.7nm,0.9s
NEW    Newport           64.42  47   P     P      06 13 52.2 +0.9
NEW                                  pmax  pmax
       comp=Z,9.0nm,0.9s
NEW    Newport           64.42  47   P     P      06 13 52.3 +1.1
       baz=309,SNR=5.5
I05D   Terrebonne, OR    64.59  52   P     P      06 13 54.1 +1.7
       baz=308
WRAB   Tennant Creek     64.68 188d iP     P      06 13 52.4 -0.7
WRAB                                 pmax  pmax
       comp=Z,39nm,1.8s
PALK   Pallekele         64.68 254   P     P      06 13 53.1 -0.3
       comp=Z,8.7nm,0.7s,baz=36,slow=2.2,SNR=4.7
PALK   Pallekele         64.68 254   P     P      06 13 53.0 -0.4
PALK   Pallekele         64.68 254   IAmb  IAmb   06 13 53.8
       comp=Z,12nm,0.8s
WB2    Warramunga Arr    64.69 188   IAmb  IAmb   06 13 53.1
       comp=Z,13nm,0.8s
WRA    Warramunga Arr    64.69 188   P     P      06 13 52.5 -0.6
       comp=Z,11nm,0.7s,baz=9.6,slow=6.7,SNR=52
J04D   Umpqua Nationa    64.84  53   P     P      06 13 56.1 +1.9
       baz=308
E09A   Wood Farm, Sta    64.99  49   IAmb  IAmb   06 13 57.1
       comp=Z,15nm,0.9s
AKT    Akhty             65.03 304  eP     P      06 13 55.7 +0.3
AKT                                 e                 06 14 25.2
AKT                                 e*PP   pP     06 14 51.3 +0.3
AKT                                  pmax  pmax
       comp=Z,23nm,0.8s
PINE   Pine Mountain     65.16  52   P     P      06 13 58.4 +2.2
J05D   Fort Rock, OR     65.31  53   P     P      06 13 59.2 +2.0
       baz=309,SNR=7.7
L04D   Klamath Falls     65.36  54   P     P      06 13 59.2 +1.7
       baz=309,SNR=5.9
YBH    Yreka Blue Hor    65.43  55   IAmb  IAmb   06 14 00.7
       comp=Z,20nm,1.4s
WALA   Waterton Lakes    65.55  45   IAmb  IAmb   06 14 00.4
       comp=Z,11nm,1.1s
M02C   Callahan          65.56  55   P     P      06 14 01.1 +2.4
       baz=309
F10A   Beach Ranch, E    65.82  49   IAmb  IAmb   06 14 02.5
       comp=Z,11nm,1.2s
M04C   Macdoel           65.90  55   P     P      06 14 02.2 +1.2
       baz=309,SNR=5.8
N02D   Trinity Center    65.91  56   P     P      06 14 03.2 +2.3
       baz=309
NCK    Nalchik           66.15 308⇑eP     P      06 14 03.2 +0.9
NCK                                  pmax  pmax
       comp=Z,29nm,0.6s
KIV    Kislovodsk        66.36 309  eP     P      06 14 04.9 +1.1
KIV    Kislovodsk        66.36 309  eP     P      06 14 04.9 +1.1
KIV                                  pmax  pmax
       comp=Z,115nm,1.0s
KBZ    Khabaz            66.39 309   P     P      06 14 03.8  0.0
       comp=Z,14nm,0.8s,baz=36,slow=5.4,SNR=40
KBZ    Khabaz            66.39 309  eP     P      06 14 04.2 +0.4
KBZ    Khabaz            66.39 309d iP     P      06 14 04.2 +0.4
NACGM  Naroch            66.65 325  e      P      06 14 10.0 +4.7
NEY    Neytrino          66.79 308⇓eP     P      06 14 07.5 +0.9
NEY                                  pmax  pmax
       comp=Z,2.0nm,0.8s
J08A   Circle Bar Ran    66.82  51   IAmb  IAmb   06 14 10.0
       comp=Z,11nm,1.2s
O03E   Paynes Creek      66.87  56   P     P      06 14 08.5 +1.5
       baz=310
MSO    Missoula          67.00  46   IAmb  IAmb   06 14 10.2
       comp=Z,21nm,1.4s
MSO    Missoula          67.00  46   P     P      06 14 09.0 +1.2
       baz=311
FFC    Flin Flon         67.08  34   P     P      06 14 08.5 +0.5
FFC                                  IAmb  IAmb   06 14 13.0
       comp=Z,12nm,0.8s
FFC    Flin Flon         67.08  34   P     P      06 14 08.5 +0.5
FFC                                  pmax  pmax
       comp=Z,12nm,0.8s
NC204  NORSAR Array S    67.28 337   P     P      06 14 08.9 -0.3
WVOR   Wild Horse Val    67.32  52   IAmb  IAmb   06 14 12.9
       comp=Z,8.1nm,1.1s
NB2    NORSAR Subarra    67.34 336   P     P      06 14 08.8 -0.8
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       comp=Z,4.1nm,0.8s,baz=36,slow=6.2
NOA    NORSAR Array B    67.34 336   P     P      06 14 09.0 -0.6
       comp=Z,3.6nm,0.7s,baz=36,slow=6.2,SNR=24
AKH    Akhalkalaki       67.54 306 ⇑P     P      06 14 12.9 +1.5
AKH    Akhalkalaki       67.54 306   IAmb  IAmb   06 14 13.6
       comp=Z,8.0nm,0.9s
GNI    Garni             67.63 305⇑eP     P      06 14 13.8 +1.9
GNI                                  pmax  pmax
       comp=Z,77nm,1.7s
EGMT   Eagleton          68.30  43   IAmb  IAmb   06 14 17.6
       comp=Z,18nm,1.1s
EGMT   Eagleton          68.30  43   P     P      06 14 16.7 +0.9
       baz=313,SNR=6.8
AS31   Alice Springs     68.42 188   P     P      06 14 17.1 +0.5
ASAR   Alice Springs     68.42 188   P     P      06 14 17.1 +0.4
       comp=Z,16nm,0.8s,baz=8.2,slow=5.6,SNR=132
BATM   Batumi            68.44 308 ⇓P     P      06 14 17.6 +0.9
BCA    Borcka            68.58 307 ⇓P     P      06 14 18.6 +1.0
AKASG  Malin Array Be    68.60 321   P     P      06 14 16.8 -0.6
       comp=Z,5.4nm,0.6s,baz=43,slow=6.6,SNR=30
AKBB   Malin Array Si    68.60 321   P     P      06 14 17.2 -0.2
AKBB                                 IAmb  IAmb   06 14 17.8
       comp=Z,10nm,0.8s
AKBB   Malin Array Si    68.60 321   P     P      06 14 17.3 -0.2
YERR   Yerington         69.22  55   P     P      06 14 22.6 +0.8
YERR                                 IAmb  IAmb   06 14 25.0
       comp=Z,7.4nm,1.0s
BANOM  Banah             69.36 286   P     P      06 14 22.7 +0.1
BANOM  Banah             69.36 286   P     P      06 14 22.0 -0.7
SHME   Shamm             69.39 287   P     P      06 14 22.5 -0.3
YHL    Hebgen Lake       69.75  47   P     P      06 14 25.9 +0.9
YHB    Horse Butte       69.82  47   P     P      06 14 26.2 +0.8
KVN    Kaiserville       69.85  55   P     P      06 14 26.9 +1.3
KVN                                  IAmb  IAmb   06 14 35.0
       comp=Z,6.2nm,0.8s
KVN    Kaiserville       69.85  55   P     P      06 14 26.9 +1.3
KVN                                  pmax  pmax
       comp=Z,6.0nm,0.8s
YHH    Holmes Hill       69.97  46   P     P      06 14 27.4 +1.0
UOSS   Minazif           70.06 286  i P    P      06 14 26.8 -0.1
       SNR=5.8
UOSS   Minazif           70.06 286   P     P      06 14 26.4 -0.5
UOSS   Minazif           70.06 286   P     P      06 14 27.0 +0.1
NVAR   Mina Array Bea    70.14  55   P     P      06 14 28.5 +1.1
       comp=Z,1.8nm,0.7s,baz=297,slow=6.0,SNR=12
HOQ    Hoqain            70.19 284   P     P      06 14 28.0 +0.4
       SNR=7.2
HATD   Hatta, Dubai      70.19 286  i P    P      06 14 27.9 +0.2
       SNR=7.3
HATD   Hatta, Dubai      70.19 286   P     P      06 14 27.8 +0.2
       SNR=7.3
ASHO   Ashiyiah          70.33 285   P     P      06 14 28.5 -0.1
ASHO   Ashiyiah          70.33 285   P     P      06 14 28.8 +0.2
       SNR=5.3
SOHO   SOHO              70.36 285   P     P      06 14 28.6 -0.1
       SNR=7.8
H17A   Grant Village     70.38  47   IAmb  IAmb   06 14 32.7
       comp=Z,16nm,1.4s
H17A   Grant Village     70.38  47   P     P      06 14 31.8 +3.0
       baz=314,SNR=6.0
JMDO   Jabal Madar       70.43 282   P     P      06 14 27.7 -1.5
RLMT   Red Lodge         70.55  45   IAmb  IAmb   06 14 34.0
       comp=Z,12nm,1.4s
RLMT   Red Lodge         70.55  45   P     P      06 14 31.2 +1.4
       baz=314,SNR=5.0
FXWY   Fox Creek         70.67  47   P     P      06 14 32.0 +1.4
FXWY                                       PcP    06 14 32.3  -18
TPAW   Teton Pass        70.81  47   IAmb  IAmb   06 14 33.9
       comp=Z,14nm,1.4s
BSY    Bisya             70.81 283   P     P      06 14 31.8 +0.3
       SNR=6.3
MHTO   MHTO              71.43 281   P     P      06 14 35.7 +0.6
       SNR=16
LVV    L'vov             71.52 323  eP     P      06 14 35.0 -0.3
R11A   Troy Canyon, C    71.78  54         PcP    06 14 46.0 -8.7
R11A   Troy Canyon, C    71.78  54   P     P      06 14 38.5 +1.3
       baz=313
HWUT   Hardware Ranch    71.79  49   IAmb  IAmb   06 14 40.4
       comp=Z,8.5nm,1.1s
BW06   Boulder Array     72.05  47   P     P      06 14 38.9 +0.1
BW06                                 IAmb  IAmb   06 14 41.2
       comp=Z,6.8nm,0.7s
BW06   Boulder Array     72.05  47   P     P      06 14 39.3 +0.5
       baz=315,SNR=7.9
PD31   Pinedale Array    72.05  47   P     P      06 14 39.1 +0.3
PD31                                 IAmb  IAmb   06 14 41.2
       comp=Z,6.2nm,0.8s
PDAR   Pinedale Array    72.05  47   P     P      06 14 39.4 +0.6
       comp=Z,6.2nm,0.6s,baz=286,slow=2.0,SNR=77
PDAR                                 pP    pP     06 15 36.7 +1.0
       comp=Z,5.1nm,0.8s,baz=323,slow=1.4,SNR=7.7
DUG    Dugway, Tooele    72.08  51   P     P      06 14 40.2 +1.3
DUG    Dugway, Tooele    72.08  51   P     P      06 14 40.2 +1.3
DUG                                  pmax  pmax
       comp=Z,7.0nm,1.0s
DUG    Dugway, Tooele    72.08  51   P     P      06 14 40.3 +1.3
       baz=314,SNR=6.3
KWP    Kalwaria Pacla    72.23 323  eP     P      06 14 40.1 +0.6
KWP    Kalwaria Pacla    72.23 323   P     P      06 14 40.4 +0.9
KWP                                  IAmb  IAmb   06 14 41.1
       comp=Z,14nm,0.9s
KWP    Kalwaria Pacla    72.23 323   P     P      06 14 40.4 +0.9
KWP                                  pmax  pmax
       comp=Z,14nm,0.9s
BUR08  Bucovina Ar. S    72.63 321   P     P      06 14 41.9 -0.1
BURAR  Bucovina Array    72.65 321 ⇑P     P      06 14 42.3 +0.2
NLU    North Lily Min    72.66  51   P     P      06 14 44.4 +2.0
TESR   Tescani           72.81 319 ⇓P     P      06 14 43.5 +0.6
ULM    Lac du Bonnet     72.90  35   P     P      06 14 43.2 -0.2
       comp=Z,11nm,0.6s,baz=320,slow=6.4,SNR=42
KOLS   Kolonicke sedl    72.95 323  eP     P      06 14 43.8 +0.1
KOLS                                 pmax  pmax
       comp=Z,5.0nm,1.2s
KOLS   Kolonicke sedl    72.95 323  eP     P      06 14 43.8 +0.1
OJC    Ojcow             72.99 325  eP     P      06 14 44.4 +0.5
OJC    Ojcow             72.99 325   IAmb  IAmb   06 14 45.2
       comp=Z,14nm,0.9s
OJC    Ojcow             72.99 325  eP     P      06 14 44.4 +0.5
VRI    Vrincioaia        73.25 319 ⇓P     P      06 14 45.8 +0.3
NIE    Niedzica          73.40 325  eP     P      06 14 47.4 +1.0
NIE    Niedzica          73.40 325  eP     P      06 14 47.4 +1.0
TRPA   Tarpa             73.44 323 ⇑P     P      06 14 47.4 +0.8
OZUR                     73.52 319 ⇑P     P      06 14 48.3 +1.2
DOPR   Dopca             73.80 320 ⇓P     P      06 14 50.1 +1.4
RSSD   Black Hills       73.87  43   P     P      06 14 49.8 +0.4
RSSD                                 IAmb  IAmb   06 14 57.0
       comp=Z,7.1nm,0.9s
RSSD   Black Hills       73.87  43   P     P      06 14 49.8 +0.4
RSSD                                 pmax  pmax
       comp=Z,7.0nm,1.0s
RSSD   Black Hills       73.87  43   P     P      06 14 49.9 +0.4
       baz=317
KSP    Ksiaz             73.88 328  eP     P      06 14 49.3 +0.3
KSP    Ksiaz             73.88 328  eP     P      06 14 49.3 +0.3
LANS   Liptovska Anna    73.95 325  eP     P      06 14 50.4 +0.8
LANS                                 pmax  pmax
       comp=Z,4.0nm,0.9s
LANS   Liptovska Anna    73.95 325  eP     P      06 14 50.4 +0.8
OSTC   Ostas             74.14 327  eP     P      06 14 50.9 +0.3
CHVC   Chvalec           74.17 328  eP     P      06 14 51.3 +0.5
BRTR   Keskin Array B    74.19 310   P     P      06 14 51.5 +0.3
       comp=Z,3.2nm,0.8s,baz=79,slow=3.1,SNR=21
MORC   Moravsky Berou    74.24 326 ⇑P     P      06 14 52.0 +0.8
MORC   Moravsky Berou    74.24 326   IAmb  IAmb   06 14 52.7
       comp=Z,9.1nm,0.8s
MORC   Moravsky Berou    74.24 326  eP     P      06 14 51.6 +0.4
UPC    Upice             74.25 328  eP     P      06 14 51.8 +0.6
UPC    Upice             74.25 328  eP     P      06 14 51.8 +0.6
DPC    Dobruska-Polom    74.26 327  eP     P      06 14 51.9 +0.6
DPC    Dobruska-Polom    74.26 327  eP     P      06 14 51.9 +0.6
KRLC   Kraliky           74.30 327  eP     P      06 14 52.2 +0.6
KRLC   Kraliky           74.30 327  eP     P      06 14 52.2 +0.6
VOIR                     74.35 319 ⇑P     P      06 14 52.8 +0.8
ARR    Arges             74.60 320 ⇑P     P      06 14 54.9 +1.5
O20A   White River Ci    74.61  48   P     P      06 14 54.3 +0.6
       baz=316
CLL    Collm             74.72 330⇓iP     P      06 14 54.6 +0.7
       comp=Z,15nm,0.8s
CLL                                 epP    pP     06 15 53.0 +1.9
CLL                                 esP    sP     06 16 18.0 +0.7
CLL    Collm             74.72 330   IAmb  IAmb   06 14 56.0
       comp=Z,12nm,0.7s
CLL    Collm             74.72 330⇓iP     P      06 14 54.6 +0.7
CLL                                 e*PP   pP     06 15 53.0 +1.9
CLL                                  pmax  pmax
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	comp=Z,15nm,0.8s						
VYHS	Vyhne	74.73	325	*e*P	P	06 14 54.6	+0.6
VYHS	Vyhne	74.73	325	*e*P	P	06 14 54.6	+0.6
BRG	Berggiesshubel	74.73	329	*e*P	P	06 14 54.1	+0.1
	comp=Z,9.7nm,1.3s						
BRG	Berggiesshubel	74.73	329	*e*P	P	06 14 54.1	+0.1
BRG				pmax	pmax		
	comp=Z,10.0nm,1.3s						
PVCC	Panska Ves	74.78	328	*e*P	P	06 14 55.1	+0.9
PVCC	Panska Ves	74.78	328	*e*P	P	06 14 55.1	+0.9
JAVC	Velka Javorina	74.92	326	*e*P	P	06 14 56.4	+1.3
VRAC	Vranov	74.99	326	⇑P	P	06 14 56.6	+1.1
VRAC	Vranov	74.99	326	*e*P	P	06 14 56.2	+0.7
SHAO	Shalim	75.05	281	P	P	06 14 56.5	+0.2
GOPC	GO Pecny, Ondr	75.20	328	*e*P	P	06 14 57.2	+0.5
GOPC	GO Pecny, Ondr	75.20	328	*e*P	P	06 14 57.2	+0.5
PRU	Pruhonice	75.23	328	*e*P	P	06 14 57.4	+0.6
PRU	Pruhonice	75.23	328	*e*P	P	06 14 57.4	+0.6
KRUC	Moravsky	75.26	326	*e*P	P	06 14 57.3	+0.3
N23A	Red Feather La	75.27	47	P	P	06 14 58.6	+1.0
	baz=317						
GZR	Gura Zlata	75.43	321	⇑P	P	06 14 58.5	+0.3
PLVB	Pleven	76.10	318	⇑P	P	06 15 02.2	+0.4
STKA	Stephens Creek	76.19	180	P	P	06 15 02.4	+0.1
	comp=Z,10nm,0.8s,baz=341,slow=7.7,SNR=16						
ISCO	Idaho Springs	76.24	47	P	P	06 15 04.9	+1.8
	baz=317						
KHC	Kasperske Hory	76.29	328	*e*P	P	06 15 03.1	+0.2
KHC	Kasperske Hory	76.29	328	⇓*e*P	P	06 15 03.4	+0.5
KHC				pmax	pmax		
	comp=Z,22nm,1.1s						
CONA	Conrad Observa	76.38	326	*e*P	P	06 15 04.7	+1.2
	comp=Z,7.4nm,1.1s						
GERES	GERESS Array B	76.48	328	P	P	06 15 04.0	0.0
	comp=Z,0.8nm,0.6s,baz=30,slow=6.2,SNR=8.4						
GERES	GERESS Array B	76.48	328	P	P	06 15 04.0	0.0
EYMN	Ely	76.49	34	P	P	06 15 03.5	-0.4
EYMN				IAmb	IAmb	06 15 08.6	
	comp=Z,14nm,1.4s						
EYMN	Ely	76.49	34	P	P	06 15 03.8	-0.1
	baz=324,SNR=6.0						
MVCO	Mesa Verde	76.57	51	P	P	06 15 05.8	+0.8
MVCO	Mesa Verde	76.57	51	P	P	06 15 06.4	+1.4
	baz=316						
ARSA	Arzberg	77.07	326	*e*P	P	06 15 07.4	+0.1
	comp=Z,9.8nm,1.8s						
MOA	Molln	77.08	327	*e*P	P	06 15 05.0	-2.3
	comp=Z,12nm,1.7s						
S22A	4UR Ranch, Cre	77.10	49	P	P	06 15 09.4	+1.5
	baz=317						
MORW	Morawa	77.14	203	P	P	06 15 07.7	+0.1
BBOO	Buckleboo	77.31	185	IAmb	IAmb	06 15 09.5	
	comp=Z,16nm,0.9s						
VTS	Vitosha	77.35	318	⇑P	P	06 15 09.9	+0.9
VTS	Vitosha	77.35	318	IAmb	IAmb	06 15 10.7	
	comp=Z,9.6nm,0.9s						
ECSD	EROS Data Cent	77.66	39	P	P	06 15 10.6	0.0
ECSD	EROS Data Cent	77.66	39	P	P	06 15 10.6	0.0
	baz=322,SNR=8.0						
SOKA	Soboth	77.73	326	*e*P	P	06 15 10.3	-0.7
	comp=Z,16nm,1.8s						
SDCO	Great Sand Dun	77.81	49	P	P	06 15 10.7	-1.2
SDCO	Great Sand Dun	77.81	49	P	P	06 15 12.8	+0.9
	baz=318,SNR=5.8						
SCHQ	Schefferville	77.87	17	P	P	06 15 11.1	-0.4
	comp=Z,3.4nm,0.6s,baz=349,slow=6.8,SNR=12						
KBA	Koelnbreinsper	78.07	327	*e*P	P	06 15 13.7	+0.7
	comp=Z,14nm,0.9s,SNR=5.4						
RAYN	Ar Rayn	78.25	291	*i* P	P	06 15 14.0	-0.2
	SNR=7.7						
RAYN	Ar Rayn	78.25	291	P	P	06 15 14.2	0.0
RAYN				IAmb	IAmb	06 15 14.6	
	comp=Z,9.4nm,0.8s						
RAYN	Ar Rayn	78.25	291	P	P	06 15 14.2	0.0
RAYN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MYKA	Terra Mystica	78.32	327	*e*P	P	06 15 11.9	-2.3
	comp=Z,11nm,1.1s						
D41A	Chassel	78.36	33	P	P	06 15 15.1	+0.8
D41A				IAmb	IAmb	06 15 25.6	
	comp=Z,16nm,1.5s						
WATA	Walderalm	78.53	328	*i* P	P	06 15 16.1	+0.6
	comp=Z,7.2nm,0.9s						
WTTA	Wattenberg	78.57	328	*e*P	P	06 15 16.4	+0.8
	comp=Z,7.7nm,0.7s						
ABTA	Abfaltersbach	78.66	327	*e*P	P	06 15 13.2	-2.9
	comp=Z,12nm,1.8s						
MOTA	Moosalm	78.70	328	*e*P	P	06 15 16.9	+0.6
	comp=Z,22nm,1.1s,SNR=7.1						
RETA	Reutte	78.71	329	*e*P	P	06 15 16.9	+0.5
	comp=Z,11nm,0.9s,SNR=4.6						
SQTA	Sankt Quirin	78.77	328	*e*P	P	06 15 17.4	+0.7
	comp=Z,9.3nm,0.8s,SNR=5.1						
FETA	Feichten	79.11	328	*e*P	P	06 15 19.2	+0.6
	comp=Z,7.5nm,1.1s						
DAVA	Damuels	79.20	329	*i* P	P	06 15 19.6	+0.5
	comp=Z,15nm,1.4s						
ANMO	Albuquerque	79.35	51	P	P	06 15 21.7	+1.5
ANMO	Albuquerque	79.35	51	⇑*e*P	P	06 15 21.1	+0.9
ANMO	Albuquerque	79.35	51	P	P	06 15 21.8	+1.5
	baz=318						
E43A	Lone Tree Farm	79.53	32	P	P	06 15 19.9	-0.7
E43A				IAmb	IAmb	06 15 37.0	
	comp=Z,10nm,1.3s						
MATQ	Matagami	79.79	25	P	P	06 15 21.8	-0.2
	baz=333						
D46A	Sault St. Mari	80.18	30	P	P	06 15 23.5	-0.7
	baz=329						
319A	Douglas	80.35	55	IAmb	IAmb	06 15 28.5	
	comp=Z,8.1nm,0.8s						
D47A	Chapleau	80.37	29	P	P	06 15 24.6	-0.6
	baz=329						
121A	Cookes Peak, D	80.38	54	P	P	06 15 26.9	+1.2
	baz=317						
NWAO	Narrogin (SRO)	80.47	201	P	P	06 15 25.9	+0.2
	comp=Z,23nm,0.8s,baz=30,slow=6.3,SNR=11						
NWAO	Narrogin (SRO)	80.47	201	P	P	06 15 25.6	0.0
NWAO	Narrogin (SRO)	80.47	201	P	P	06 15 25.6	0.0
NWAO				pmax	pmax		
	comp=Z,26nm,0.9s						
LSQQ	Lebel-sur-Quev	80.61	25	P	P	06 15 25.9	-0.5
	baz=333						
VLDQ	Val d'Or	81.31	26	IAmb	IAmb	06 15 34.5	
	comp=Z,10nm,0.8s						
D53A	Lac Vacive, Po	82.15	26	P	P	06 15 34.3	-0.1
	baz=333						
MNTX	Cornudas Mount	82.36	53	P	P	06 15 37.1	+1.2
	baz=318						
T35A	Sooner Cattle	83.06	44	IAmb	IAmb	06 15 42.7	
	comp=Z,13nm,0.9s						
D56A	ZEC Mazanza, M	83.07	24	P	P	06 15 39.1	-0.1
	baz=335						
E56A	St. Veronique	83.44	25	P	P	06 15 40.9	-0.2
	baz=334						
WMOK	Wichita Mounta	83.62	46	P	P	06 15 43.0	+0.7
	baz=321						
K48A	Perry	83.64	32	P	P	06 15 43.2	+1.0
	baz=329						
E57A	Chemin Saint G	83.83	24	P	P	06 15 43.2	+0.1
	baz=335						
L47A	Sherwood	83.93	33	P	P	06 15 44.3	+0.6
	baz=328						
S39A	Bolivar	83.98	41	IAmb	IAmb	06 15 44.9	
	comp=Z,9.2nm,1.2s						
TUL1	Leonard	84.21	44	IAmb	IAmb	06 15 50.0	
	comp=Z,5.9nm,0.8s						
TUL1	Leonard	84.21	44	P	P	06 15 46.0	+0.8
	baz=323						
L48A	N Adams	84.25	33	P	P	06 15 46.4	+1.1
	baz=329						
N48A	Decatur	84.95	34	P	P	06 15 49.6	+0.8
	baz=328						
TXAR	Lajitas Array	85.11	53	P	P	06 15 50.9	+0.9
	comp=Z,3.9nm,0.8s,baz=289,slow=3.8,SNR=40						
TXAR				pP	pP	06 16 49.9	+1.2
	comp=Z,3.2nm,1.0s,baz=289,slow=3.8,SNR=4.3						
TXAR				PKKPbc	PKKPbc	06 33 54.5	+2.0
	comp=Z,0.3nm,0.9s,baz=116,slow=4.2,SNR=3.4						
U40A	Yellville	85.27	42	IAmb	IAmb	06 15 51.3	
	comp=Z,6.9nm,0.6s						
U40A	Yellville	85.27	42	P	P	06 15 50.6	+0.1
	baz=324,SNR=6.4						
HPIG		85.75	56	IAmb	IAmb	06 15 55.2	
	comp=Z,5.8nm,0.9s						
FCAR	Ozark Folk Cen	86.00	41	IAmb	IAmb	06 15 54.7	
	comp=Z,6.2nm,0.9s						
PBMO	Poplar Bluff	86.05	40	IAmb	IAmb	06 15 56.7	
	comp=Z,20nm,1.5s						
MIAR	Mount Ida	86.39	43	P	P	06 15 56.5	+0.5
MIAR				IAmb	IAmb	06 15 57.4	
	comp=Z,4.4nm,0.8s						
MIAR	Mount Ida	86.39	43	P	P	06 15 56.5	+0.5
MIAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MIAR	Mount Ida	86.39	43	P	P	06 15 56.8	+0.9
	baz=324						
W41B	Gary Mavity, V	86.52	42	P	P	06 15 57.2	+0.7
	baz=325						
Q51A	Peebles	87.18	34	P	P	06 16 01.0	+1.2
	baz=330						
WVT	Waverly	87.76	38	P	P	06 16 03.2	+0.7
	baz=327						
P55A	Reedsville	88.11	31	P	P	06 16 05.1	+1.0
	baz=332						
Q54A	Coxs Mills	88.19	32	P	P	06 16 05.5	+1.0
	baz=331						
T50A	Nancy	88.29	36	P	P	06 16 05.7	+0.7
	baz=329						
Q55A	Buckhannon	88.46	32	P	P	06 16 06.9	+1.1
	baz=332						
P58A	Pank, Wackersv	89.03	29	P	P	06 16 09.0	+0.7
	baz=333						
U54A	Nelsons Funny	89.95	34	P	P	06 16 11.6	-1.2
	baz=330						
ESDC	Sonseca Array	90.62	334	P	P	06 16 15.5	-0.4
	comp=Z,1.8nm,0.7s,baz=12,slow=3.9,SNR=6.1						
Z50A	Ashland	91.02	38	P	P	06 16 18.2	+0.4
	baz=328						
OXZ	Oxford	91.62	159	P	P	06 16 21.1	+1.2
TORD	Torodi Ar. Bea	112.12	318	PKKPbc	PKKPbc	06 32 39.4	+1.7
	comp=Z,1.1nm,0.8s,baz=207,slow=2.0,SNR=5.6						
SDV	Santo Domingo	119.07	38	PKPdf	PKPdf	06 22 00.9	-0.6
DBIC	Dimbokro	120.85	321	PKP	PKPdf	06 22 03.4	-1.2
	comp=Z,1.6nm,0.7s,baz=354,slow=3.9,SNR=4.7						
DBIC	Dimbokro	120.85	321	PKPdf	PKPdf	06 22 03.9	-0.7
DBIC	Dimbokro	120.85	321	PKIKP	PKPdf	06 22 03.9	-0.7
LBTB	Lobatse	125.65	269	PKPdf	PKiKP	06 22 13.8	-0.2
LBTB	Lobatse	125.65	269	PKIKP	PKiKP	06 22 13.8	-0.2
BOSA	Boshof	128.06	265	PKP	PKPdf	06 22 16.9	-1.3
	comp=Z,1.4nm,0.7s,baz=19,slow=2.5,SNR=2.8						
SYO	Syowa Base	135.16	210	⇑*e*pP	Pdif	06 19 22.8	-11
LPAZ	La Paz	141.97	52	PKP	PKPdf	06 22 44.9	0.0
	comp=Z,2.2nm,0.8s,baz=8.7,slow=2.5,SNR=8.9						
LPAZ	La Paz	141.97	52		PKPdf	06 22 44.3	-0.6
LPAZ	La Paz	141.97	52	PKIKP	PKPdf	06 22 44.3	-0.6
MNMC	Minye Minye	143.38	56	PKPdf	PKPbc	06 22 45.2	+0.4
PB11	IPOC Station P	143.82	57		PKPbc	06 22 46.5	+0.6
GO01	Chusmiza	144.03	56	PKPdf	PKPab	06 22 46.0	-0.4
NVL	N'lazarevskaya	144.47	206	*e*PKIKP	PKPbc	06 22 46.2	+0.1
NVL				pmax	pmax		
	comp=Z,88nm,0.8s						
PB01	IPOC Station P	144.91	58		PKPdf	06 22 49.9	+0.6
PB10	IPOC Station P	146.07	62	PKPbc	PKPab	06 22 53.1	-0.4
LVC	Limon Verde	146.43	59		PKPab	06 22 55.1	-0.3
LVC	Limon Verde	146.43	59	PKP2	PKPab	06 22 55.1	-0.3
SNAA	Sanae	148.14	200	PKPdf	PKPbc	06 22 56.2	-0.6
SNAA	Sanae	148.14	200		PKPbc	06 22 56.4	-0.4
SNAA	Sanae	148.14	200	PKP2	PKPbc	06 22 56.4	-0.4
VNA2	Neumayer--Watz	149.74	199	PKPdf	PKPbc	06 23 00.6	-0.1
	baz=94,slow=1.4						
BDFB	Brasilia	149.83	20	PKPbc	PKPbc	06 23 01.9	-0.8
	comp=Z,8.4nm,0.8s,baz=236,slow=2.2,SNR=13						
BDFB				pPKPbc	pPKPbc	06 24 04.3	-0.5
	comp=Z,8.4nm,0.9s,baz=98,slow=0.6,SNR=5.7						
BDFB	Brasilia	149.83	20		PKPbc	06 23 02.8	+0.1
VNA3	Neumayer Olymp	150.03	198	PKPdf	PKPbc	06 23 00.9	-0.5
VNA1	Neumayer--Stat	150.14	199	PKPdf	PKPbc	06 23 01.6	0.0
GO04	Tololo Observa	150.40	72		PKPbc	06 23 03.4	-0.4
ROC1	El Roble	151.91	77		PKPbc	06 23 06.3	-0.9
PLCA	Paso Flores	155.82	92	PKPbc	PKPdf	06 23 14.4	+8.9
	comp=Z,1.3nm,0.9s,baz=224,slow=14,SNR=3.3						
PLCA				PKPab	PKPab	06 23 33.8	+0.1
	comp=Z,1.8nm,0.8s,baz=282,slow=5.7,SNR=6.1						
PLCA	Paso Flores	155.82	92		PKPdf	06 23 14.7	+9.1
PLCA					PKPab	06 23 34.7	+1.0
CPUP	Villa Florida	155.94	47	PKPab	PKPab	06 23 34.2	-0.2
	comp=Z,5.1nm,1.0s,baz=345,slow=5.4,SNR=6.7						

*IDC **01** 06:06:24.1±3.8, 10°.98N×91°.71E, h0^{km}, mb3.8/3, mb1 3.9/4, mb1mx3.5/43, mbtmp3.7/4, ML3.6/1, MS3.1/2, Ms1 3.1/2, ms1mx2.7/33, Error ellipse: s-maj=102.3km s-min=29.0km az=81.0*

*NEIC **01** 06:06:28.3±2.4, 11°.0N±0°.1×91°.9E±0°.2, h30^{km}±10^{km}, mb4.6/6, Error ellipse: s-maj=27.4km s-min=8.6km az=122.0*

ISC 01 06:06:29.7±1.6**, 11°.0N**±0°.1×**92°.2E**±0°.3**, h27**^{km}**, n17,** σ**1^{s}.43**/11**, mb4.1**/5**, 1C, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBA	Port Blair	0.85	42		Pn	06 06 46.7	+0.9
PBA					Sn	06 07 01.3	+3.9
CMAR	Chiang Mai Arr	9.88	41	Pn	Pn	06 08 51.5	+1.4
	0.1nm,0.3s,baz=236,slow=13,SNR=3.2						
PSI	Prapat	10.56	140	LR	LR	06 13 26.3	
	comp=Z,73nm,20.8s,baz=254,slow=39						
KMI	Kunming	17.24	34	P	Pn	06 10 29.6	+0.7
KMI				IAmb	IAmb	06 10 30.9	
	comp=Z,74nm,1.1s						
MNAI	Manna	18.67	144	P	P	06 10 46.1	+0.3
MNAI				IAmb	IAmb	06 10 46.6	
	comp=Z,54nm,1.1s						
LEM	Lembang	23.47	138	LR	LR	06 21 54.1	
	comp=Z,69nm,18.1s,baz=214,slow=39						
H08S3	Diego Garcia H	26.96	227	T	T	06 40 16.2	
	baz=47,slow=75,SNR=54						
H08S2	Diego Garcia H	26.96	227	T	T	06 40 14.1	
	baz=47,slow=75,SNR=18						
H08S1	Diego Carcia H	26.98	227	T	T	06 40 20.4	
	baz=47,slow=75,SNR=11						
YULB	Yu-li	30.35	62	P	P	06 12 37.1	-2.3
SONM	Songino Array	38.60	15	P	P	06 13 50.4	-0.2
	comp=Z,0.3nm,0.4s,baz=196,slow=10.0,SNR=3.8						
PSA00	Pilbara Seismi	42.28	140	P	P	06 14 20.0	-1.2
WB0	Warramunga Arr	51.62	126	P	P	06 15 35.6	+1.4
WB0				IAmb	IAmb	06 15 44.6	
	comp=Z,5.4nm,1.1s						
WRA	Warramunga Arr	51.67	126	P	P	06 15 35.1	+0.4
	comp=Z,0.7nm,0.3s,baz=300,slow=9.8,SNR=3.6						
WB2	Warramunga Arr	51.68	126	P	P	06 15 36.2	+1.5
WB2				IAmb	IAmb	06 15 36.9	
	comp=Z,4.3nm,0.8s						
ASAR	Alice Springs	53.42	131	P	P	06 15 49.1	+1.6
	comp=Z,0.7nm,0.6s,baz=304,slow=6.2,SNR=5.4						
SYO	Syowa Base	87.83	197	⇑*e*P	P	06 19 16.2	+0.2

*IDC **01** 06:16:15.4±4.4, 23°.40S×69°.05W, h0^{km}, mb3.8/1, mb1 3.8/2, mb1mx3.5/17, mbtmp3.7/2, ML3.7/1, Error ellipse: s-maj=143.3km s-min=58.0km az=78.0*

*SJA **01** 06:16:31.5±0.6, 22°.40S×69°.07W, h106^{km}±2^{km}, ML3.3, MW3.4*

*GUC **01** 06:16:32.0±0.8, 22°.39S×69°.02W, h109^{km}±3^{km}, ML3.5*

ISC 01 06:16:31.6±1.0**, 22°.39S**±0°.03×**69°.09W**±0°.05**, h111**^{km}±6^{km}**, n35,** σ**0^{s}.86**/58**, 15C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	0.28	144	⇑*i*P	Pn	06 16 47.3	-0.6
LVC				*e*S	Sn	06 16 58.9	-1.2
LVC	Limon Verde	0.28	144	*i* P	Pn	06 16 47.4	-0.6
LVC				*e*S	Sn	06 16 59.6	-0.5
LVC				IAML		06 17 00.9	
	comp=Z,500nm,0.1s						
PB06	IPOC Station P	0.55	234	⇓*i*P	Pn	06 16 49.4	+0.3
PB06				*e*S	Sn	06 17 02.6	+0.4
PB06				IAML		06 17 03.2	
	comp=N,4μm,0.4s						
PB06	IPOC Station P	0.55	234	*i* P	Pn	06 16 49.4	+0.3
PB06				IAML		06 17 03.8	
	comp=Z,1μm,0.1s						
PB09	IPOC Station P	0.60	346	⇑*i*P	Pn	06 16 49.8	+0.3
PB09				*e*S	Sn	06 17 03.1	+0.1
PB09	IPOC Station P	0.60	346	*i* P	Pn	06 16 49.9	+0.4
PB09				*e*S	Sn	06 17 03.4	+0.4
PB09				IAML		06 17 03.7	
	comp=Z,1μm,0.3s						
PB03	IPOC Station P	0.70	298	⇑*i*P	Pn	06 16 50.7	+0.4
PB03				*i* S	Sn	06 17 04.5	+0.1
PB03				IAML		06 17 04.8	
	comp=E,3μm,0.2s						
PB15	IPOC Station P	0.89	203	⇓*i*P	Pn	06 16 52.4	+0.3
PB15				*i* S	Sn	06 17 08.4	+0.9
PB15	IPOC Station P	0.89	203	*i* P	Pn	06 16 52.4	+0.3
PB15				*e*S	Sn	06 17 07.9	+0.4
PB04	IPOC Station P	0.98	273	⇑*i*P	Pn	06 16 53.5	+0.6
PB04				*i* S	Sn	06 17 10.1	+1.1
PB04				IAML		06 17 12.5	
	comp=N,1μm,0.1s						
PB04	IPOC Station P	0.98	273	*i* P	Pn	06 16 53.3	+0.4
PB07	IPOC Station P	0.99	311	⇑*i*P	Pn	06 16 53.5	+0.6
PB07				*e*S	Sn	06 17 09.4	+0.4
PB07				IAML		06 17 10.3	
	comp=N,2μm,0.2s						
PB05	IPOC Station P	1.13	245	⇑*i*P	Pn	06 16 54.9	+0.5
PB05				*i* S	Sn	06 17 12.0	+0.4
PB05				IAML		06 17 17.8	
	comp=E,436nm,0.5s						
PB05	IPOC Station P	1.13	245	*i* P	Pn	06 16 54.8	+0.5
PB05				IAML		06 17 13.1	
	comp=Z,287nm,0.7s						
PB02	IPOC Station P	1.30	325	⇑*i*P	Pn	06 16 56.7	+0.4
PB02				*i* S	Sn	06 17 15.6	+0.7
PB02				IAML		06 17 16.9	
	comp=E,1μm,0.2s						
PB01	IPOC Station P	1.39	344	⇑*i*P	Pn	06 16 57.4	+0.1
PB01				*i* S	Sn	06 17 17.2	+0.5
PB01				IAML		06 17 18.2	
	comp=N,702nm,0.2s						
PB10	IPOC Station P	1.76	230	*e*P	Pn	06 17 01.9	+0.3
PB10				*i* S	Sn	06 17 24.2	-0.3
PB10	IPOC Station P	1.76	230	*i* P	Pn	06 17 02.5	+0.8
PB10				*e*S	Sn	06 17 25.1	+0.6
PB10				IAML		06 17 27.1	
	comp=Z,196nm,0.3s						
PATCX	Punta Patache	1.84	327	⇑*i*P	Pn	06 17 02.7	-0.1
PATCX				*e*S	Sn	06 17 26.7	+0.1
PATCX				IAML		06 17 28.8	
	comp=N,324nm,0.4s						
TA01	Diego Aracena	2.08	330	⇑*i*P	Pn	06 17 05.2	-0.4
TA01				*e*S	Sn	06 17 31.9	+0.3
TA01				IAML		06 17 35.7	
	comp=E,152nm,0.1s						
PB08	IPOC Station P	2.23	358	⇓*i*P	Pn	06 17 08.4	+0.4
PB08				*e*S	Sn	06 17 36.2	+0.4
PB08				IAML		06 17 39.3	
	comp=E,174nm,0.5s						
PB14	IPOC Station P	2.54	208	*i* P	Pn	06 17 11.9	+0.1
PB14				IAML		06 17 43.8	
	comp=Z,146nm,0.2s						
PB11	IPOC Station P	2.66	348	⇑*i*P	Pn	06 17 12.7	-0.7
PB11				*i* S	Sn	06 17 44.5	-1.0
PB11				IAML		06 17 46.4	
	comp=E,229nm,0.3s						
GO01	Chusmiza	2.71	358	⇑*i*P	Pn	06 17 14.2	0.0
GO01				*i* S	Sn	06 17 46.2	-0.7
GO01				IAML		06 17 48.1	
	comp=N,369nm,0.1s						
GO02	Mina Guanaco	2.80	189	⇑*i*P	Pn	06 17 15.2	-0.1
GO02				*e*S	Sn	06 17 48.8	-0.2
PSGC	Pisagua	2.94	341	⇑*i*P	Pn	06 17 15.3	-1.6
PSGC				*i* S	Sn	06 17 50.0	-1.8
PSGC				IAML		06 18 15.5	
	comp=E,63nm,0.2s						
MNMC	Minye Minye	3.27	352	⇑*i*P	Pn	06 17 20.9	-0.6
MNMC				*e*S	Sn	06 17 59.0	-1.1
HJA	Humahuaca	3.49	104	*i* P	Pn	06 17 26.1	+1.5
GO03	Copiap	5.29	191	*i* P	Pn	06 17 46.9	-1.5
AHML	Horco Molle	5.55	143	*i* P	Pn	06 17 52.9	+0.9
LPAZ	La Paz	6.13	9	Pn	Pn	06 18 01.6	+1.3
	comp=E,0.7nm,0.3s,baz=189,slow=8.7,SNR=26						
VCA	Vinchina	6.37	173	*i* P	Pn	06 18 03.5	+0.3
VCA				IAML		06 20 01.2	
	comp=Z,9.1nm,3.1s						
GO04	Tololo Observa	7.91	191	*i* P	Pn	06 18 20.3	-3.7
TORD	Torodi Ar. Bea	77.81	70	P	P	06 28 17.0	-0.2
	comp=Z,0.4nm,0.4s,baz=242,slow=5.8,SNR=4.5						
MKAR	Makanchi Array	146.44	37	PKPbc	PKPbc	06 35 60.0	+0.2
	comp=Z,0.3nm,0.8s,baz=298,slow=3.1,SNR=2.6						

*RSNC **01** 06:28:25.4±1.4, 7°.99N×77°.26W, h15^{km}±14^{km}, ML2.4*

*UPA **01** 06:28:27.1±2.4, 8°.05N×77°.24W, h32^{km}±25^{km}, MD3.5, MW3.3*

ISC 01 06:28:22.1±1.6**, 8°.06N**±0°.04×**77°.23W**±0°.03**, h7**^{km}±13^{km}**, n18,** σ**1^{s}.10**/30**, 2C, Panama-Colombia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPC	Capurgana	0.58	348	*e*P	Pn	06 28 37.4	+0.6
CAPC				*e*S	Sn	06 28 46.0	-0.6
CAPC				*i*		06 28 46.9	
	comp=Z,198nm,0.2s						
UPD2	Meteti	0.92	302	⇑*i*P	Pn	06 28 42.3	+0.9
UPD2				*e*S	Sn	06 28 54.1	-0.8
UPD2				*i*		06 28 58.0	
	comp=Z,153nm,0.2s						
UPD2	Meteti	0.92	302	⇑*i*P	Pn	06 28 42.3	+0.9
	baz=125,slow=2.5						
UPD2				*i* S	Sn	06 28 54.7	-0.2
PTAC	Punta Ardita,	1.08	213	*e*P	Pn	06 28 43.2	-0.4
PTAC				*e*S	Sg	06 28 56.1	-0.7
PTAC				*i*		06 29 00.7	
	comp=Z,260nm,0.3s						
DBBC	Dabeiba	1.45	136	*e*P	Pg	06 28 50.5	+0.6
DBBC				*e*S	Sn	06 29 07.4	-0.6
DBBC				*i*		06 29 12.3	
	comp=Z,94nm,0.6s						
SOLC	Bahia Solano	1.83	186	*e*P	Pb	06 28 54.9	-1.0
SOLC				*i*		06 29 22.4	
	comp=Z,12nm,0.6s						
CHPO	Chepo, Panama	2.17	301	*i* P	Pb	06 29 01.7	0.0
CHPO				*i* S	Sb	06 29 27.5	-1.4
UPA	Univ. de Panam	2.46	292	*e*P	Pb	06 29 06.3	-0.4
UPA				*i* S	Sn	06 29 33.0	+0.1
CBOC	Ciudad Bolivar	2.49	151	*e*P	Pn	06 29 04.2	+0.9
CBOC				*e*S	Sn	06 29 34.5	+0.5
CBOC				*i*		06 29 42.9	
	comp=Z,9.1nm,0.5s						
HELC	Santa Helena	2.51	138	*e*S	Sn	06 29 35.2	+0.6
HELC				*i*		06 29 44.0	
	comp=Z,7.5nm,0.7s						
HELC	Santa Helena	2.51	138	*i* P	Pb	06 29 06.8	-0.8
HELC				*e*S	Sn	06 29 35.7	+1.1
CHOR3	La Chorrera	2.65	289	*e*P	Pb	06 29 09.3	-0.5
CHOR3				*e*S	Sb	06 29 41.2	-1.3
SJCC	San Jacinto, C	2.72	48	*e*P	Pb	06 29 10.1	-1.1
SJCC				*i* S	Sn	06 29 39.6	0.0
FRIJ	El Hiral	2.73	295	*i* P	Pn	06 29 08.6	+2.2
ZANG	Zanguenga, Cho	2.76	289	*e*P	Pn	06 29 08.3	+1.5
AZU	Azuero	3.03	265	*e*P	Pn	06 29 12.5	+2.0
AZU				*i* S	Sn	06 29 46.2	-0.9
PTBC	PUERTO BERRIO,	3.13	119	*e*S	Sn	06 29 49.6	0.0
TOSI3	Tonosi	3.25	259	*e*P	Pn	06 29 15.8	+2.3

*IDC **01** 06:31:53.0±6.2, 35°.82N×71°.57E, h0^{km}, mb3.3/3, mb1 3.5/4, mb1mx3.3/29, mbtmp3.3/4, ML2.9/1, MS3.2/1, Ms1 3.1/1, ms1mx2.6/24, Error ellipse: s-maj=134.4km s-min=43.9km az=156.0*

ISC 01 06:32:13.7±1.4**, 37°.15N**±0°.10×**71°.4E**±0°.1**, h106**^{km}**, n8,** σ**1^{s}.54**/9**, 2C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	5.96	22	⇑P	Pn	06 33 40.8	+1.2
	1.8nm,0.3s						
AAK				⇓S	Sn	06 34 45.4	-1.3
	4.4nm,0.6s						
KK31	Karatay Array	5.98	354	⇓P	Pn	06 33 39.8	0.0
	0.9nm,0.3s,baz=178,slow=13,SNR=17						
KK31				⇑S	Sn	06 34 44.2	-2.7
	2.5nm,0.4s,baz=183,slow=22,SNR=5.7						
DHRM	DHARAMSHALA	6.33	139	*e*x	Sn	06 34 54.1	-1.6
DHRM				IAmb	IAmb	06 35 02.6	
	comp=Z,29nm,0.6s						
MKAR	Makanchi Array	12.56	37	Pn	Pn	06 35 09.2	+0.6
	comp=Z,0.1nm,0.3s,baz=220,slow=11,SNR=4.4						
ZALV	Zalesovo Beam	19.18	25	P	P	06 36 29.5	+0.7
	comp=Z,0.9nm,0.5s,baz=220,slow=13,SNR=4.4						
KBZ	Khabaz	22.61	296	LR	LR	06 46 50.2	
	comp=Z,66nm,20.3s,baz=58,slow=38						
NOA	NORSAR Array B	44.06	323	P	P	06 40 11.5	+0.7

	comp=Z,0.6nm,0.8s,baz=106,slow=9.7,SNR=2.5						
YKA	Yellowknife Ar	80.58	3	P	P	06 44 14.0	0.0
	comp=Z,0.1nm,0.4s,baz=343,slow=5.4,SNR=3.4						

DJA 01 06:46:26.2±0.4, 1°N±4°×12°2E±°, h48^{km}±7^{km}, M4.2/8, mB4.6/2, mb4.6/2, MLv4.2/8, MLv4.1/5, Mw(mB)3.8/2

NEIC 01 06:46:26.2±1.9, 0°.7N±0°.1×121°.7E±0°.2, h101^{km}±8^{km}, mb4.5/10, Error ellipse: s-maj=30.0km s-min=9.8km az=53.0

IDC 01 06:46:30.1±10.0, 0°.84N×122°.24E, h134^{km}±104^{km}, mb3.5/5, mb1 3.7/5, mb1mx3.4/25, mbtmp3.9/5, Error ellipse: s-maj=159.7km s-min=18.1km az=66.0

ISC 01 06:46:26.6±0.6, 0°.71N±0°.07×121°.79E±0°.08, h100^{km}, n29, σ2^{s}.09/36, mb4.1/9, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	0.27	146	P	Pn	06 46 36.9	-4.2
MRSI				S	Sn	06 46 45.9	-6.0
APSI	Ampana	1.61	185	P	Pn	06 46 51.6	-2.7
MPSI	Mapaga	1.93	259	P	Pn	06 46 55.8	-2.5
LUWI	Luwuk	1.99	150	P	Pn	06 46 58.8	-0.4
LUWI	Luwuk	1.99	150		Pn	06 46 59.1	-0.1
LUWI				Sn	Sn	06 47 28.2	+4.2
KMSI	Cibinong	2.20	93	P	Pn	06 47 02.0	+0.2
TTSI	Tana Toraja	4.21	208	P	Pn	06 47 27.7	-1.0
SPSI	Sidrap Palu	5.06	204	P	Pn	06 47 39.3	-0.9
	0.2nm0.2nm793nm45nm,0.7s						
BNSI	Bone	5.34	198	P	Pn	06 47 43.8	-0.3
KKM	Kota Kinabalu	7.69	314	Pn	Pn	06 48 14.7	-1.3
SOEI	Soe	10.68	167	Pn	Pn	06 48 56.2	-0.6
MTN	Manton Dam	16.34	146	P	P	06 50 11.5	+0.1
MTN				IAmb	IAmb	06 50 24.1	
	comp=Z,32nm,1.4s						
KNRA	Kununurra	17.68	157	P	Pn	06 50 27.3	+0.7
KNRA				IAmb	IAmb	06 50 44.1	
	comp=Z,33nm,1.2s						
WB0	Warramunga Arr	23.81	149	P	P	06 51 29.4	-1.1
WB0				IAmb	IAmb	06 51 31.3	
	comp=Z,26nm,1.2s						
WRA	Warramunga Arr	23.93	150	P	P	06 51 31.1	-0.5
	comp=Z,5.6nm,0.7s,baz=324,slow=11,SNR=10						
WB2	Warramunga Arr	23.93	150	P	P	06 51 30.8	-0.8
WB2				IAmb	IAmb	06 51 32.6	
	comp=Z,7.9nm,0.7s						
WR0	Warramunga Arr	24.04	149	P	P	06 51 31.7	-0.9
WR0				IAmb	IAmb	06 51 33.1	
	comp=Z,16nm,0.7s						
GIRL	Giralia	24.35	197	P	P	06 51 35.2	-0.1
AS31	Alice Springs	26.93	155	P	P	06 51 58.8	-0.1
ASAR	Alice Springs	26.93	155	P	P	06 51 58.2	-0.6
	comp=Z,1.2nm,0.5s,baz=344,slow=13,SNR=46						
ASAR				PcP	PcP	06 55 17.5	-1.1
	comp=Z,0.2nm,0.3s,baz=351,slow=2.2,SNR=5.2						
BBOO	Buckleboo	35.95	159	P	P	06 53 17.0	-0.7
CAN	Canberra	43.93	147	P	P	06 54 24.8	+1.0
CAN				IAmb	IAmb	06 54 36.1	
	comp=Z,24nm,1.5s						
SONM	Songino Array	48.81	346	P	P	06 55 01.9	0.0
	comp=Z,0.5nm,0.4s,baz=160,slow=10,SNR=5.2						
KSH	Kashi	56.85	319	P	P	06 56 04.4	+3.2
KSH				pP	pP	06 56 22.8	-2.9
KSH				PP	PP	06 58 12.9	+4.3
KSH				PcS	PcS	07 00 56.9	+0.1
KSH				S	S	07 03 50.4	+3.2
KSH				ScS	ScS	07 05 42.2	+1.0
MK31	Makanchi Array	57.38	329	P	P	06 56 05.8	+1.1
MKAR	Makanchi Array	57.38	329	P	P	06 56 05.4	+0.7
	comp=Z,0.6nm,0.6s,baz=124,slow=8.5,SNR=9.1						
ZALV	Zalesovo Beam	61.18	336	P	P	06 56 30.2	-0.4
	comp=Z,0.6nm,0.5s,baz=150,slow=6.7,SNR=3.3						
GO04	Tololo Observa	148.34	159	PKPdf	PKPdf	07 05 56.4	-2.5
PB10	IPOC Station P	154.36	153	PKPbc	PKPbc	07 06 16.0	-0.2

NEIC 01 06:58:36±2.4, 11°.0S±0°.2×164°.4E±0°.1, h53^{km}±12^{km}, mb4.4/4, Error ellipse: s-maj=29.2km s-min=8.4km az=223.0

IDC 01 06:58:38.3±4.0, 11°.09S×164°.16E, h60^{km}±31^{km}, mb3.3/4, mb1 3.4/4, mb1mx3.3/32, mbtmp3.5/4, ML4.4/2, MS3.5/6, Ms1 3.5/6, ms1mx3.2/22, Error ellipse: s-maj=40.5km s-min=21.5km az=51.0

ISC 01 06:58:34.2±1.3, 10°.9S±0°.2×164°.4E±0°.1, h29^{km}, n18, σ1^{s}.35/14, mb3.7/6, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.61	288	P	Pn	06 59 42.9	+0.9
	38nm,0.3s,baz=165,slow=12,SNR=2.9						
HNR				S	Sn	07 00 35.0	+0.4
	3.4nm,0.3s,baz=232,slow=12,SNR=2.3						
HNR				LR	LR	07 01 46.2	
	comp=Z,256nm,18.9s,baz=344,slow=42						
HNR	Honiara	4.61	288		Pn	06 59 42.8	+0.8
SANVU	Saraoutou	5.31	149		Pn	06 59 51.5	-0.1
DZM	Mont Dzumac	11.31	170	P	Pn	07 01 15.0	+0.9
	1.5nm,0.3s,baz=309,slow=17,SNR=14						
DZM				LR	LR	07 04 49.6	
	comp=Z,144nm,21.5s,baz=20,slow=33						
DZM	Mont Dzumac	11.31	170		Pn	07 01 15.7	+1.6
NOUC	Port Laguerre	11.32	171	Pn	Pn	07 01 15.4	+1.3
KRVT	Keravat (AS076	13.89	297	LR	LR	07 07 13.9	
	comp=Z,119nm,19.0s,baz=138,slow=37						
PMG	Port Moresby	17.04	273	LR	LR	07 08 51.3	
	comp=Z,167nm,20.2s,baz=160,slow=36						
COEN	Coen	20.96	259	P	P	07 03 15.7	+0.6
URZ	Urewera	29.56	159	P	P	07 04 31.6	-4.9
URZ				IAmb	IAmb	07 04 35.1	
	comp=Z,26nm,1.2s						
WRA	Warramunga Arr	30.31	249	P	P	07 04 41.3	-2.1
	comp=Z,0.5nm,0.6s,baz=75,slow=9.3,SNR=1.8						
ASAR	Alice Springs	31.70	242	P	P	07 04 54.0	-1.6
	comp=Z,0.3nm,0.6s,baz=64,slow=10,SNR=6.2						
RPZ	Rata Peaks	33.23	171	LR	LR	07 16 37.4	
	comp=Z,176nm,21.6s,baz=194,slow=33						
KNRA	Kununurra	34.99	258	P	P	07 05 22.9	-1.4
FITZ	Fitzroy Crossi	38.16	255	LR	LR	07 21 57.8	
	comp=Z,138nm,18.7s,baz=152,slow=37						
FITZ	Fitzroy Crossi	38.16	255	P	P	07 05 49.9	-1.5
FITZ				IAmb	IAmb	07 05 58.8	
	comp=Z,2.1nm,0.9s						
SONM	Songino Array	77.75	324	P	P	07 10 29.8	+1.2
	comp=Z,0.2nm,0.6s,baz=130,slow=5.8,SNR=2.8						
MKAR	Makanchi Array	92.49	317	P	P	07 11 42.1	-0.6
	comp=Z,0.2nm,0.5s,baz=92,slow=6.7,SNR=4.0						

NCEDC 01 07:00:12.3±1.0, 37°.862N±0°.008×122°.248W±0°.008, h10^{km}±1^{km}, Md2.5/103, Error ellipse: s-maj=1.2km s-min=0.8km az=168.0

NEIC 01 07:00:12.3±0.8, 37°.859N±0°.004×122°.27W±0°.01, h17^{km}±1^{km}, Error ellipse: s-maj=1.3km s-min=0.3km az=61.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRK	Berkeley--Havi	0.01	15		Pg	07 00 15.5	+0.2
BL67	Building 67, L	0.02	30		Pg	07 00 14.3	-1.1
BL88	Building 88, L	0.02	27		Pg	07 00 14.2	-1.2
VAK	Adit at Lawren	0.02	36		Pg	07 00 15.8	+0.5
BKS	Berkeley--Byer	0.03	54		Pg	07 00 15.7	+0.3
RFSB	Richmond Field	0.08	316		Pg	07 00 16.8	+1.2
BRIB	Briones	0.11	56		Pb	07 00 17.4	+1.4
CPIM	Pinole Ridge	0.14	17		Pg	07 00 16.0	-0.3
CPMM	Point Molate	0.14	309		Pg	07 00 15.9	-0.4
HERB	Hercules	0.15	1		Pb	07 00 19.1	+2.3
JPRM	Presidio of Sa	0.18	249		Pg	07 00 16.9	+0.1
JPRM					Sg	07 00 20.1	+0.3
CLCB	Lake Chabot	0.20	127		Pg	07 00 16.9	-0.3
CLCB					Sg	07 00 20.2	-0.2
CRHM	Round Hill Res	0.22	90		Pg	07 00 17.6	+0.1
J061	Lakeshore Driv	0.22	235		Pg	07 00 17.6	+0.1
C055	Cottonwood Ave	0.24	148		Pg	07 00 17.4	-0.3
JCPM	Coyote Point	0.27	189		Pg	07 00 18.4	+0.1
NLHM	Lake Herman	0.28	20		Pg	07 00 18.5	+0.1
CRPB	Russellman Par	0.29	79		Pg	07 00 18.2	-0.4
SAC	San Andreas	0.30	203		Pg	07 00 19.0	+0.2
BDM	Black Diamond	0.33	73		Pg	07 00 19.3	0.0
BDM					Sb	07 00 24.8	-0.1
CNIC	Niles Canyon	0.35	136		Pg	07 00 19.6	0.0
SNT	Sears Point	0.35	335		Pb	07 00 20.1	-0.1
CMOB	Morgan Territo	0.37	97		Pg	07 00 20.3	+0.2
JHPM	Huddart Park	0.41	184		Pb	07 00 21.2	-0.1
NGVM		0.42	5		Pb	07 00 21.5	+0.1
NOLM	Olema	0.45	294		Pg	07 00 21.6	0.0
JRSC	Jasper Ridge	0.46	177		Pg	07 00 21.6	+0.1
JSFB	Stanford Teles	0.46	171		Pb	07 00 21.9	-0.1
WENL	Wente Vineyard	0.47	120		Pb	07 00 22.1	0.0
CBSNC	Byron Hot Spri	0.50	95		Pb	07 00 22.6	0.0
JFP	Foothills Park	0.50	173		Pg	07 00 22.5	+0.1
CVS	Carmenet Viney	0.51	343		Pg	07 00 22.3	-0.2
JJRM	Joaquin Road	0.52	174		Pb	07 00 22.9	-0.1
MCCM	Marconi Confer	0.56	301	Pg	Pg	07 00 23.1	-0.4
NAPC	Atlas Peak	0.58	1		Pg	07 00 23.8	-0.1
FARB	Farallon Islan	0.60	255		Pb	07 00 24.4	0.0
NPRM	Point Reyes	0.61	283		Pg	07 00 24.4	0.0
NTYM	Taylor	0.61	330		Pg	07 00 24.5	0.0
CMLM	Mount Lewis	0.62	128		Pg	07 00 24.7	+0.1
NADM	Allendale	0.64	21		Pb	07 00 25.7	+0.6
NSHM	Saint Helena R	0.71	338		Pg	07 00 25.9	-0.5
MHC	Mount Hamilton	0.71	136		Pg	07 00 26.2	-0.2
CMMM	Mount Mocho	0.73	123		Pg	07 00 26.3	-0.5
JBNB	Ben Lomond Mou	0.74	173		Pb	07 00 26.6	-0.2
JSTM	Santa Teresa H	0.75	150		Pb	07 00 26.8	-0.1
JUMM	Mount Umunhum	0.76	157		Pb	07 00 27.0	-0.1
CCOB	Coe Ranch Numb	0.76	142		Pg	07 00 27.4	+0.2
ARN	Arnold Ranch	0.77	131		Pb	07 00 27.0	-0.4
AMC	Almaden	0.78	154		Pb	07 00 27.2	-0.2
MAC	Mark West Spri	0.78	333		Pb	07 00 27.1	-0.4
NBPM	Berryessa Peak	0.81	4		Pg	07 00 28.5	+0.3
JLAB	Laurel Hill	0.82	149		Pb	07 00 28.1	-0.1
JHLM	Holstrom Ranch	0.82	155		Pb	07 00 27.8	-0.5
NHSM	Mount Saint He	0.84	341		Pb	07 00 28.2	-0.4
JRGM	Rodeo Gulch Ro	0.85	164		Pb	07 00 28.6	-0.1
CADM	Anderson Res.	0.86	144		Pb	07 00 28.9	+0.1
JTGM	Trout Gulch Ro	0.89	159		Pb	07 00 29.2	-0.1
NMCNC	Mill Creek, So	0.89	325		Pb	07 00 29.0	-0.4
GAXM	Alexander Vall	0.93	336		Pb	07 00 29.3	-0.9
NDHM	Dunnigan Hills	0.95	17		Pb	07 00 30.2	-0.1
NMTM	Middletown	0.96	352		Pb	07 00 29.8	-0.7
HLPM	Lions Peak	0.96	148		Pb	07 00 29.8	-0.8
FTR	Fort Ross	0.97	313		Pg	07 00 30.9	-0.2
GCRM	Castle Rock Sp	0.98	339		Pb	07 00 30.5	-0.4
JELB	Ellicott, Sant	0.99	159		Pb	07 00 30.5	-0.6
GSSM	Skaggs Springs	1.03	325		Pb	07 00 30.9	-0.8
GDXM	Geysers	1.03	336	Pg	Pb	07 00 31.1	-0.8
CDC	Canada Road	1.04	143		Pb	07 00 31.5	-0.4
CSR	Chase Ranch	1.05	149		Pb	07 00 30.9	-1.2
HCOM	Corn Cob Canyo	1.07	155		Pb	07 00 31.1	-1.3
AASM	Arroyo Seco	1.08	58		Pb	07 00 30.8	-1.8
HFEM	San Felipe	1.11	142		Pb	07 00 32.6	-0.5
GACM	Adobe Creek	1.11	335		Pn	07 00 33.6	+0.3
OCR	O'Connell Ranc	1.12	147		Pb	07 00 32.1	-1.1
HPCM	Pacheco Lake	1.12	135		Pb	07 00 32.6	-0.7
SLD	San Luis Dam	1.14	133		Pn	07 00 32.9	-0.7
HTUM	Tustin Road	1.14	154		Pn	07 00 32.0	-1.5
HERM	Elkhorn Road	1.15	157		Pn	07 00 32.7	-0.9
HBTM	San Juan Bauti	1.16	150		Pn	07 00 32.8	-1.0
MNHB	New Hogan Dam	1.18	76		Pn	07 00 32.9	-1.2
SAO	San Andreas Ge	1.27	149	Pn	Pn	07 00 33.5	-1.9
HMOM	Monterey	1.29	167		Pn	07 00 34.3	-1.2
MCUB	Copperopolis B	1.31	84		Pn	07 00 34.6	-1.2
BPCNC	Pine Canyon	1.38	158		Pn	07 00 36.1	-0.7
AFDM	Forest Hills D	1.49	43		Pn	07 00 37.1	-1.3
CMB	Columbia Colle	1.50	83		Pn	07 00 38.0	-0.5
CMB	Columbia Colle	1.50	83	Pn	Pn	07 00 37.4	-1.1
ORV	Oroville	1.80	19	Pn	Pn	07 00 40.5	-2.0
RUBR	Rubicon Trail	2.04	54		Pn	07 00 46.3	+0.1
RUBR					Sn	07 01 12.1	+0.7
PHSB	Hesperia Broad	2.25	154		Pn	07 00 48.1	-0.7
WAKR	Walker	2.32	73		Pn	07 00 51.8	+1.8
BEKR	Beckworth	2.50	36	Pn	Pn	07 00 52.5	+0.1
YERR	Yerington	2.63	64	Pn	Pn	07 00 56.4	+2.2
YERR					Sb	07 01 30.6	-0.6
WOFM	Oak Flat	3.68	128		Pn	07 01 08.6	0.0

IDC 01 07:17:19.9±3.8, 3°.15S×140°.36E, h0^{km}, mb3.1/3, mb1 3.5/4, mb1mx3.4/26, mbtmp3.3/4, ML3.6/1, Error ellipse: s-maj=120.7km s-min=28.2km az=93.0

DJA 01 07:17:28.5±1.0, 3°S±4°×14°0E±2°9, h31^{km}±39^{km}, M3.9/3, MLv3.9/3

ISC 01 07:17:27.8±1.2, 3°.21S±0°.07×140°.1E±0°.1, h54^{km}, n7, σ0^{s}.54/10, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	0.62	8	P	Pn	07 17 40.6	-0.2
GENI				S	Sn	07 17 50.3	+0.1
WAMI	Wamena	1.52	244	P	Pn	07 17 53.0	+0.3
WAMI				S	Sn	07 18 10.7	-0.7
SMPI	Sarmi	1.83	312	P	Pn	07 17 56.6	-0.3
SMPI				S	Sn	07 18 19.0	0.0
WRA	Warramunga Arr	17.55	198	P	Pn	07 21 28.3	-0.5
	0.2nm,0.3s,baz=20,slow=13,SNR=6.6						
FITZ	Fitzroy Crossi	20.47	223	P	P	07 22 02.0	+0.8
	0.4nm,0.3s,baz=32,slow=9.5,SNR=2.4						
ASAR	Alice Springs	21.19	196	P	P	07 22 08.5	-0.5
	0.6nm,0.5s,baz=25,slow=9.0,SNR=11						
MKAR	Makanchi Array	71.02	322	P	P	07 28 40.5	+0.4
	0.1nm,0.4s,baz=108,slow=9.5,SNR=2.8						

GCG 01 07:41:20.3±0.6, 15°.03N×89°.50W, h8^{km}, MD3.6

SNET 01 07:41:21.8±1.2, 14°.80N×89°.44W, h5^{km}±14^{km}, ML3.4

ISC 01 07:41:16.6±2.4, 15°.05N±0°.09×89°.33W±0°.08, h9^{km}±12^{km}, n14, σ0^{s}.74/20, 1C-2D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRL	Marmol	0.34	275	⇓iP	Pg	07 41 22.9	-0.6
MTO3	Montecristo	0.65	183	⇓eP	Pb	07 41 30.1	-0.1
MTO3				eS	Sg	07 41 38.6	+0.9
LLGN	La Laguna	0.96	157	eP	Pn	07 41 36.8	+0.5
LLGN				eS	Sn	07 41 49.8	-0.3
LLGN				IAML		07 41 54.8	
	comp=Z,2µm,0.2s						
UNIC	Universidad Ca	1.08	191	eP	Pg	07 41 37.5	+0.1
UNIC				eS	Sg	07 41 49.9	-1.6
NBG	Las Nubes	1.08	245	eP	Pb	07 41 37.9	+0.2
NBG				eS	Sb	07 41 52.5	+0.4
RTR	El Retiro	1.19	195	eP	Pn	07 41 39.8	+0.3
SNJE	San Jose	1.20	193	eP	Pg	07 41 40.0	+0.2
SBLS	San Blas	1.23	193	eP	Pg	07 41 40.7	+0.4
CEVE	Cerro Verde	1.25	193	eP	Pg	07 41 41.0	+0.5
CEVE				IAML		07 42 05.8	
	comp=Z,869nm,0.5s						
UEES	Universidad Ev	1.33	176	eP	Pg	07 41 42.6	+0.6
SNET	Serv Nac Est T	1.36	176	eP	Pg	07 41 43.0	+0.3
SNET				eS	Sb	07 41 57.9	-1.8
IXG	Ixpaco	1.38	231	⇑eP	Pg	07 41 43.3	+0.1
PCG	Pacaya	1.40	242	eP	Pg	07 41 43.7	+0.3
FUG	Fuego 3	1.58	248	eP	Pb	07 41 46.2	+0.2
FUG				eS	Sg	07 42 07.6	+0.2

IDC 01 07:59:53.8±23.0, 16°.44S×177°.32W, h0^{km}, mb4.2/4, mb1 4.4/4, mb1mx3.8/25, mbtmp4.2/4, Error ellipse: s-maj=434.8km s-min=47.6km az=58.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	22.28	192	P	P	08 04 52.7	0.0
	7.6nm,0.6s,baz=17,slow=14,SNR=8.1						
STKA	Stephens Creek	40.26	240	P	P	08 07 33.2	+0.6
	1.0nm,0.4s,baz=84,slow=11,SNR=5.4						
WRA	Warramunga Arr	45.94	258	P	P	08 08 18.3	-0.6
	0.5nm,0.4s,baz=97,slow=7.4,SNR=9.1						
ASAR	Alice Springs	46.20	253	P	P	08 08 20.7	-0.3
	4.6nm,0.4s,baz=89,slow=7.8,SNR=151						

JMA 01 08:31:42.4±0.2, 41°.94N×142°.34E, h67^{km}±3^{km}, M3.1

IDC 01 08:31:45.8±2.4, 42°.11N×142°.37E, h88^{km}±15^{km}, mb3.4/10, mb1 3.4/13, mb1mx3.2/40, mbtmp3.6/13, Error ellipse: s-maj=27.3km s-min=16.3km az=127.0

ISC 01 08:31:42.6±0.9, 41°.92N±0°.05×142°.33E±0°.05, h66^{km}±7^{km}, n35, σ0^{s}.60/42, mb3.6/10, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNBK	Urakawa-nobuka	0.48	41	P	Pn	08 31 54.0	-0.8
JSHD	Hidakashinhida	0.50	12	P	Pn	08 31 54.9	-0.2
JSHD				eS	Sn	08 32 04.1	0.0
JEM	Erimo	0.62	81	P	Pn	08 31 56.5	+0.1
JIAM	Iburiatsuma	0.76	337	P	Pn	08 31 58.6	+0.6
JIAM				eS	Sn	08 32 10.6	+1.3
JBT2	Biratori 2	0.85	2	P	Pn	08 31 58.6	-0.5
JBT2				eS	Sn	08 32 11.0	-0.3
JKB	Kayabe	0.97	268	P	Pn	08 32 00.3	-0.2
JKB				eS	Sn	08 32 13.6	-0.1
JCH	Churui	1.03	48	P	Pn	08 32 01.4	+0.1
JOT	Ohata	1.10	241	P	Pn	08 32 02.3	+0.1
JOT				eS	Sn	08 32 17.0	+0.2
JNB	Noboribetsu	1.10	300	P	Pn	08 32 01.5	-0.7
JNB				eS	Sn	08 32 15.9	-0.9
JEW	Eniwo	1.12	325	P	Pn	08 32 02.7	+0.2
JEW				eS	Sn	08 32 17.0	-0.3
JFR	Furan	1.25	9	P	Pn	08 32 03.8	-0.4
JYM2	Yakumo 2	1.47	278	P	Pn	08 32 07.0	-0.1
JOB	Onbets	1.48	48	P	Pn	08 32 08.2	+1.0
JSR	Shiriuchi	1.48	255	P	Pn	08 32 07.5	+0.3
JSR				eS	Sn	08 32 26.4	+0.7
JISS	Ishikarishitsu	1.51	334	P	Pn	08 32 07.5	-0.1
JISS				eS	Sn	08 32 26.4	0.0
JAB	Ashibetsu	1.58	357	P	Pn	08 32 09.2	+0.6
JAR	Ashorobuto	1.74	37	P	Pn	08 32 10.5	-0.1
JOMM	Oshimamatsumae	1.78	258	P	Pn	08 32 11.5	+0.3
JOMM				eS	Sn	08 32 32.6	-0.3
JHR	Hokuryu	1.87	346	P	Pn	08 32 13.2	+0.8
ASAJ	Asahikawa	2.20	5	P	Pn	08 32 16.9	0.0
	8.0nm,0.3s,baz=206,slow=11,SNR=49						
ASAJ				S	Sn	08 32 43.4	+0.4
	10.0nm,0.3s,baz=340,slow=29,SNR=11						
MJAR	Matsushiro Arr	6.25	212	P	Pn	08 33 18.1	+5.9
	0.1nm,0.3s,baz=25,slow=13,SNR=5.2						
KLR	Kul'dur	10.40	318	P	Pn	08 34 10.2	+1.3
	0.1nm,0.3s,baz=116,slow=15,SNR=5.6						
SONM	Songino Array	25.97	295	P	P	08 37 10.1	+1.0
	0.3nm,0.4s,baz=86,slow=9.1,SNR=3.2						
H11N2	WAKE ISLAND Hy	30.37	129	T	T	09 10 28.5	
	baz=322,slow=75,SNR=4.7						
H11N1	WAKE ISLAND Hy	30.39	129	T	T	09 10 28.4	
	baz=322,slow=75,SNR=3.9						
H11N3	WAKE ISLAND Hy	30.39	129	T	T	09 10 29.8	
	baz=322,slow=75,SNR=4.4						
ZALV	Zalesovo Beam	39.30	308	P	P	08 39 04.8	0.0
	0.4nm,0.3s,baz=57,slow=5.5,SNR=3.7						
MKAR	Makanchi Array	42.29	298	P	P	08 39 29.9	+0.3
	0.7nm,0.7s,baz=84,slow=9.3,SNR=8.0						
KURBB	Kurchatov Arra	43.70	304	P	P	08 39 41.0	+0.2
	0.8nm,0.4s,baz=77,slow=8.7,SNR=6.6						
ILAR	Eielson Array	45.03	35	P	P	08 39 51.3	0.0
	0.6nm,1.0s,baz=236,slow=7.2,SNR=4.3						
BVAR	Borovoye Array	47.91	309	P	P	08 40 14.5	+0.5
	0.8nm,0.3s,baz=78,slow=9.3,SNR=8.7						
YKA	Yellowknife Ar	59.26	32	P	P	08 41 36.5	-0.3
	0.3nm,0.7s,baz=303,slow=6.0,SNR=4.9						
FINES	FINESS Array B	64.84	332	P	P	08 42 14.2	0.0
	0.7nm,0.4s,baz=51,slow=6.8,SNR=16						
NOA	NORSAR Array B	69.96	337	P	P	08 42 45.3	-1.2
	0.3nm,0.6s,baz=27,slow=3.8,SNR=2.6						
AKASG	Malin Array Be	70.88	322	P	P	08 42 51.4	-0.9
	0.5nm,0.5s,baz=42,slow=6.7,SNR=3.8						

THE 01 08:36:09.8, 38°.30N×20°.38E, h9^{km}±2^{km}, ML2.3/7, Error ellipse: s-maj=2.2km s-min=0.7km az=89.0

ATH 01 08:36:10.1, 38°.32N×20°.42E, h10^{km}±2^{km}, ML2.6/7, Error ellipse: s-maj=2.5km s-min=0.8km az=251.0

ISC 01 08:36:09.0±0.9, 38°.32N±0°.02×20°.38E±0°.04, h16^{km}±5^{km}, n26, σ0^{s}.70/48, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.07	154	P	Pg	08 36 12.4	+0.3
KEF4				S	Sg	08 36 14.0	0.0
KEF1	Kardakata, Kep	0.08	124	P	Pg	08 36 12.1	0.0
KEF1				S	Sg	08 36 13.5	-0.7
KEF3	Kipouria, Keph	0.12	193	P	Pg	08 36 13.4	+0.8
KEF3				S	Sg	08 36 15.9	+1.0
LXRA	Lixouri, Kepha	0.13	161	P	Pb	08 36 13.5	+0.4
LXRA				S	Sb	08 36 15.3	-0.4
ARGA	Argostoli. Kep	0.16	153	P	Pb	08 36 13.7	0.0
ARGA				S	Sb	08 36 15.9	-0.8
KEF2	Argostoli. Kep	0.18	153	P	Pb	08 36 13.7	-0.1
KEF2				S	Sg	08 36 16.1	-0.1
KONA	Konidatara, Ke	0.18	55	P	Pb	08 36 13.9	-0.1
KONA				S	Sg	08 36 16.2	-0.1
KONA				AML	AML	08 36 17.1	
	comp=N,7185µm,0.1s						
KONA				AML	AML	08 36 19.8	
	comp=E,4248µm,0.2s						
FSK	Fiskardo	0.20	46	P	Pb	08 36 14.2	0.0
FSK				S	Sb	08 36 17.3	-0.4
	comp=E,3µm,0.1s						
FSK	Fiskardo	0.20	46	P	Pb	08 36 14.2	0.0
FSK				S	Sg	08 36 16.3	-0.4
FSK				AML	AML	08 36 17.6	
	comp=N,3517µm,0.2s						
FSK				AML	AML	08 36 17.6	
	comp=E,8043µm,0.2s						
VLS	Valsamata	0.22	132	P	Pb	08 36 14.2	-0.4
VLS				S	Sb	08 36 17.5	-0.9
	comp=E,4µm,0.1s						
VLS	Valsamata	0.22	132	P	Pb	08 36 14.3	-0.4
VLS				S	Sg	08 36 17.2	-0.1
VLS				AML	AML	08 36 17.6	
	comp=N,9422µm,0.2s						
VLS				AML	AML	08 36 18.6	
	comp=E,5351µm,0.1s						
KFL	Anninata	0.38	124	P	Pb	08 36 17.0	-0.4
KFL				S	Sb	08 36 22.4	-0.7
KFL				AML	AML	08 36 23.7	
	comp=N,4464µm,0.4s						
KFL				AML	AML	08 36 24.7	
	comp=E,4836µm,0.3s						
MGNA	Meganis	0.46	44	P	Pb	08 36 18.5	-0.2
MGNA				S	Sg	08 36 24.6	+0.1
VLMS	Volimes, Zakyn	0.50	154	P	Pb	08 36 19.3	-0.1
VLMS				S	Sb	08 36 26.7	+0.3
VLMS				AML	AML	08 36 28.6	
	comp=E,2093µm,0.2s						
VLMS				AML	AML	08 36 30.7	
	comp=N,1674µm,0.2s						
LKD2	Lefkada island	0.51	25	P	Pb	08 36 19.7	+0.1
LKD2				S	Sn	08 36 28.4	-1.8
	comp=N,195nm,0.2s						
LKD2	Lefkada island	0.51	25	P	Pb	08 36 19.6	-0.1
PDO	Prodromos	0.69	66	P	Pg	08 36 22.8	+0.4
PDO				S	Sb	08 36 32.5	+0.7
	comp=N,410nm,0.4s						
PDO	Prodromos	0.69	66	P	Pg	08 36 22.8	+0.4
PDO				S	Sn	08 36 33.0	-1.4
PDO				AML	AML	08 36 34.5	
	comp=E,462µm,0.4s						
PDO				AML	AML	08 36 37.9	
	comp=N,702µm,0.4s						
RLS	Riolos of Patr	0.89	107	P	Pn	08 36 26.2	-0.7
PVO	Paravola	0.94	72	P	Pn	08 36 27.9	+0.3
PVO				S	Sn	08 36 42.6	+1.9
	comp=N,205nm,0.2s						
PVO	Paravola	0.94	72	P	Pn	08 36 27.8	+0.3
PVO				S	Sb	08 36 39.2	0.0
PVO				AML	AML	08 36 43.8	
	comp=E,548µm,0.2s						
PVO				AML	AML	08 36 44.1	
	comp=N,255µm,0.3s						
DRO	Drossia	1.11	109	P	Pg	08 36 30.7	+0.3
DRO				S	Sg	08 36 47.0	+2.1
	comp=N,128nm,0.4s						
IGT	Igoumenitsa	1.21	358	P	Pg	08 36 32.7	+0.4
IGT				S	Sg	08 36 49.0	+0.9
	comp=N,80nm,0.2s						
KALE	Kalithea	1.38	87	P	Pb	08 36 34.7	+0.2
KALE				S	Sg	08 36 53.4	-0.2
KEK	Kerkira	1.46	342	P	Pb	08 36 35.3	-0.5
MAKR	Makrakomi, Fth	1.53	63	P	Pb	08 36 37.2	+0.2

TAP 01 08:37:31.7, 24°.60N×121°.84E, h63^{km}, ML3.3, B

JMA 01 08:37:31.4±0.2, 24°.56N×121°.89E, h59^{km}±3^{km}, M2.4

ISC 01 08:37:31.9±1.3, 24°.59N±0°.03×121°.89E±0°.03, h62^{km}±6^{km}, n76, σ0^{s}.55/136, 6C-2D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao baz=64	0.04	298	⇑*i*P	Pn	08 37 41.3	+0.2
TWC	baz=64			*i* S	Sn	08 37 48.2	+0.5
ENA	Nanau baz=205	0.21	221	*i* P	Pn	08 37 41.6	-0.1
ENA	baz=205			*i* S	Sn	08 37 49.5	+0.8
ILA	Ilan baz=335	0.22	324	*i* P	Pn	08 37 42.4	+0.6
ILA	baz=335			S	Sn	08 37 48.9	+0.1
EOS1	EOS1 baz=100	0.22	100	P	Pn	08 37 42.6	+0.9
TWE	Neicheng baz=310	0.24	303	⇑*i*P	Pn	08 37 42.1	+0.3
TWE	baz=310			*i* S	Sn	08 37 49.6	+0.6
NTC	Toucheng baz=358	0.27	348	*e*P	Pn	08 37 42.6	+0.5
NTC	baz=358			*e*S	Sn	08 37 49.8	+0.4
SLBB	Yuanshan baz=310	0.28	305	*i* P	Pn	08 37 41.4	-0.8
SLBB	baz=310			S	Sn	08 37 48.9	-0.8
ENTT	Nioudou baz=279	0.30	280	*i* P	Pn	08 37 42.3	0.0
ENTT	baz=279			*e*S	Sn	08 37 49.6	-0.2
NDT	Datong Townshi baz=270	0.34	272	*i* P	Pn	08 37 42.6	0.0
NDT	baz=270			S	Sn	08 37 50.6	+0.2
TIPB	Shuangxi baz=358	0.39	351	⇑*i*P	Pn	08 37 43.1	+0.1
TIPB	baz=358			*i* S	Sn	08 37 51.3	+0.2
NWLT	Wulai baz=300	0.40	298	P	Pn	08 37 43.0	-0.2
NWLT	baz=300			S	Sn	08 37 50.8	-0.5
TWB1	Santiao Chiao baz=19	0.43	12	*i* P	Pn	08 37 43.3	0.0
TWB1	baz=19			S	Sn	08 37 51.6	0.0
YHNB	Yeheng baz=279	0.48	280	P	Pn	08 37 43.6	-0.3
YHNB	baz=279			S	Sn	08 37 52.0	-0.6
TWA	Mucha baz=329	0.48	324	*i* P	Pn	08 37 43.8	-0.1
TWA	baz=329			*i* S	Sn	08 37 52.6	0.0
NNSB	Datong baz=247	0.49	251	⇑P	Pn	08 37 44.0	-0.1
NNSB	baz=247			S	Sn	08 37 52.8	-0.1
NNSH	Datong baz=247	0.49	251	P	Pn	08 37 44.0	-0.1
NNSH	baz=247			S	Sn	08 37 52.6	-0.3
NWF	Wu-fen Shan baz=353	0.49	348	*i* P	Pn	08 37 44.4	+0.3
NWF	baz=353			*i* S	Sn	08 37 53.1	+0.2
WFSB	Wu-fen Shan baz=353	0.49	348	P	Pn	08 37 44.2	+0.2
WFSB	baz=353			S	Sn	08 37 53.2	+0.5
NACB	Ninganchiao baz=207	0.49	213	P	Pn	08 37 43.2	-0.8
NACB	baz=207			S	Sn	08 37 52.2	-0.6
NSK	Sanguang baz=279	0.49	280	*i* P	Pn	08 37 43.6	-0.4
NSK	baz=279			*i* S	Sn	08 37 52.2	-0.7
NNS	Nan Shan baz=248	0.49	253	*i* P	Pn	08 37 44.0	-0.1
NNS	baz=248			S	Sn	08 37 52.6	-0.5
NHDH	Xindian Distri baz=321	0.50	318	*i* P	Pn	08 37 43.9	-0.2
NHDH	baz=321			*i* S	Sn	08 37 52.7	-0.2
TATO	Taipei baz=320	0.53	317	P	Pn	08 37 44.0	-0.3
TATO	baz=320			S	Sn	08 37 53.0	-0.4
ETLH	Xiulin Townshi baz=219	0.53	225	P	Pn	08 37 44.1	-0.4
ETLH	baz=219			S	Sn	08 37 53.4	-0.3
TAP	Taipei baz=326	0.57	322	*e*P	Pn	08 37 43.9	-0.9
TAP	baz=326			S	Sn	08 37 53.8	-0.4
TWD	Chiawan baz=202	0.57	208	P	Pn	08 37 44.2	-0.6
TWD	baz=202			S	Sn	08 37 53.5	-0.7
YM01	YM01 baz=335	0.63	332	*e*P	Pn	08 37 45.8	+0.3
YM01	baz=335			S	Sn	08 37 55.4	0.0
WLTB	Daxi baz=295	0.64	294	*e*S	Sn	08 37 55.7	+0.2
YM10	YM10 baz=335	0.64	332	*e*S	Sn	08 37 55.6	-0.1
YM11	YM11 baz=337	0.64	333	P	Pn	08 37 45.4	-0.3
YM11	baz=337			S	Sn	08 37 55.4	-0.5
YM04	YM04 baz=333	0.65	330	P	Pn	08 37 45.4	-0.3
YM04	baz=333			S	Sn	08 37 55.4	-0.4
YM08	YM08 baz=338	0.66	335	P	Pn	08 37 45.6	-0.2
YM08	baz=338			S	Sn	08 37 55.4	-0.6
TWS1	Kuangyinshan baz=323	0.67	320	⇓*i*P	Pn	08 37 45.8	-0.1
TWS1	baz=323			*i* S	Sn	08 37 56.6	+0.5
YM03	YM03 baz=334	0.67	332	*e*S	Sn	08 37 56.1	-0.2
NTST	Danshui baz=327	0.70	325	P	Pn	08 37 46.4	+0.1
NTST	baz=327			S	Sn	08 37 57.5	+0.7
WHF	Hehuan Shan baz=228	0.72	232	*i* P	Pn	08 37 46.8	-0.2
WHF	baz=228			*i* S	Sn	08 37 57.4	-0.6
ENLB	Shoufeng baz=197	0.73	201	P	Pn	08 37 45.9	-0.8
ENLB	baz=197			S	Sn	08 37 58.8	+1.3
TWY	Chenhua baz=342	0.73	339	P	Pn	08 37 47.3	+0.6
TWY	baz=342			*e*S	Sn	08 37 58.2	+0.7
NCU	National Centr baz=302	0.74	301	P	Pn	08 37 46.5	-0.3
NCU	baz=302			S	Sn	08 37 57.8	0.0
NCUH	Zhongli baz=301	0.74	301	*e*P	Pn	08 37 46.6	-0.3
NCUH	baz=301			*e*S	Sn	08 37 57.5	-0.3
TDCB	Techi baz=240	0.75	244	⇑P	Pn	08 37 47.3	+0.3
TDCB	baz=240			S	Sn	08 37 57.5	-0.6
LIOB	Emei baz=273	0.80	274	⇓*i*P	Pn	08 37 47.2	-0.3
LIOB	baz=273			S	Sn	08 37 58.8	-0.3
NSTT	Nanjuang baz=272	0.81	273	S	Sn	08 37 58.9	-0.3
CHGB	Renai baz=228	0.84	231	⇑P	Pn	08 37 48.2	0.0
CHGB	baz=228			S	Sn	08 38 00.2	0.0
SBCB	Hsinchu baz=283	0.85	284	*e*P	Pn	08 37 47.5	-0.6
SBCB	baz=283			S	Sn	08 37 59.9	-0.1
NHW	Xinwu Township baz=299	0.87	299	P	Pn	08 37 48.0	-0.4
NHW	baz=299			S	Sn	08 38 00.3	-0.3
ESL	Shilin baz=204	0.88	209	*i* P	Pn	08 37 46.8	-1.7
OWD	Renai baz=223	0.91	226	*e*P	Pn	08 37 48.9	-0.2
OWD	baz=223			*e*S	Sn	08 38 00.9	-0.7
WHP	Taichung City baz=248	0.92	250	P	Pn	08 37 49.5	+0.5
WHP	baz=248			*e*S	Sn	08 38 02.4	+0.7
JYNG	Yonagunijimaku	0.97	98	P	Pn	08 37 49.4	-0.2
JYNG				*e*S	Sn	08 38 02.8	0.0
NMLH	Miaoli baz=266	1.00	267	*e*S	Sn	08 38 03.3	-0.2
EGFH	Guangfu baz=202	1.01	205	P	Pn	08 37 50.6	+0.5
EGFH	baz=202			S	Sn	08 38 02.6	-1.1
YOJ	Yonaguni jima	1.03	97	P	Pn	08 37 50.2	-0.2
NSY	Sanyi baz=259	1.04	261	P	Pn	08 37 50.6	0.0
NSY	baz=259			S	Sn	08 38 04.5	-0.1
TWQ1	Liyutan baz=255	1.05	257	*e*P	Pn	08 37 50.3	-0.3
TWQ1	baz=255			S	Sn	08 38 04.6	+0.1
VWDT	VWDT baz=217	1.08	220	P	Pn	08 37 51.0	0.0
VWDT	baz=217			S	Sn	08 38 05.4	+0.2
SMLT	Sun Moon Lake baz=229	1.15	232	P	Pn	08 37 51.9	-0.1
SMLT	baz=229			*e*S	Sn	08 38 06.6	-0.5
TYC	Yuchr baz=232	1.16	234	P	Pn	08 37 53.1	+0.9
TYC	baz=232			S	Sn	08 38 08.1	+0.8
WDJ	Dajia District baz=257	1.17	258	*e*S	Sn	08 38 07.1	-0.2
SSLB	Suanglung baz=224	1.17	227	*e*P	Pn	08 37 53.0	+0.7
SSLB	baz=224			*e*S	Sn	08 38 08.9	+1.4
HGSD	Ruisui baz=198	1.17	201	*e*P	Pn	08 37 52.4	+0.1
HGSD	baz=198			*e*S	Sn	08 38 07.7	+0.2
EHY	Hungye baz=203	1.20	206	*e*P	Pn	08 37 51.5	-1.2
EHY	baz=203			S	Sn	08 38 07.9	-0.2
WHYT	Xinyi Township baz=225	1.30	227	*e*P	Pn	08 37 55.2	+1.2
WHYT	baz=225			*e*S	Sn	08 38 11.8	+1.2
YULB	Yu-li baz=202	1.31	205	*e*P	Pn	08 37 53.4	-0.7
YULB	baz=202			*e*S	Sn	08 38 10.8	+0.1
YUS	Yu-Shan baz=216	1.39	218	*e*P	Pn	08 37 55.7	0.0
ALS	Alishan baz=220	1.46	223	*e*P	Pn	08 37 56.5	+0.1
CHN5	Tsauling baz=226	1.48	229	*e*P	Pn	08 37 56.8	+0.3
CHN5	baz=226			*e*S	Sn	08 38 14.9	-0.1
FULB	Fuli baz=199	1.49	202	*e*P	Pn	08 37 57.1	+0.6
FULB	baz=199			*e*S	Sn	08 38 15.3	+0.3
ELDTW	Lidau baz=207	1.61	210	*e*P	Pn	08 37 57.8	-0.4
IRIF	Iriomote-Funau	1.69	98	P	Pn	08 37 59.0	-0.3
IRIF				*e*S	Sn	08 38 19.8	-0.2
CHN4	Tsaushan baz=222	1.71	224	*e*P	Pn	08 38 00.9	+1.4
TPUB	Ta-pu baz=220	1.73	222	*e*P	Pn	08 38 00.7	+1.0
TWK	Hsinying baz=222	1.84	225	*e*P	Pn	08 38 02.7	+1.4
JKRS	Kuro-shima	1.96	100	P	Pn	08 38 03.1	+0.2
JIJ	Ishigaki jima	2.06	96	P	Pn	08 38 03.9	-0.4
JIJ				*e*S	Sn	08 38 27.9	-1.0
JISG	Ishigakijimahi	2.20	90	P	Pn	08 38 05.6	-0.5
JISG				*e*S	Sn	08 38 32.8	+0.5

NNC 01 08:43:25.1±8.6, 37°.02N×70°.51E, h0^{km}, mb3.6, mpv3.2, 3C-3D, Error ellipse: s-maj=78.1km s-min=58.2km az=141.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array 0.9nm,0.3s,baz=181,slow=14,SNR=14	6.08	360	⇑P	Pn	08 44 59.4	+3.2
KK31	3.6nm,0.5s,baz=183,slow=18,SNR=17			⇑S	Sn	08 46 08.4	+1.8
AAK	Ala-Archa 0.9nm,0.5s	6.39	27	⇓P	Pn	08 45 01.2	+0.4
AAK	3.0nm,0.7s			⇓S	Sn	08 46 14.2	-0.3
AB31	Akbulak array 0.4nm,0.6s,baz=144,slow=12,SNR=7.1	14.44	331	⇑P	Pn	08 46 49.5	-1.2
AKTO	Aktyubinsk 1.0nm,0.6s	16.14	330	⇓P	Pn	08 47 07.7	-5.6

BJI ***01*** *08:54:56.9±0.0, 36°.70N×70°.50E, h234^{km}, mB4.6/18, mb4.4/20*

MOS ***01*** *08:54:57.6±0.8, 36°.63N×70°.50E, h242^{km}, mb4.0/10, Error ellipse: s-maj=10.8km s-min=5.6km az=82.2*

NEIC ***01*** *08:54:58.9±2.4, 36°.60N±0°.06×70°.49E±0°.07, h243^{km}±4^{km}, mb4.2/40, Error ellipse: s-maj=8.6km s-min=8.1km az=162.0*

IDC ***01*** *08:54:59.2±0.9, 36°.49N×70°.46E, h253^{km}±8^{km}, mb3.6/23, mb1 3.6/28, mb1mx3.4/64, mbtmp4.2/28, Error ellipse: s-maj=13.2km s-min=10.0km az=15.0*

NNC ***01*** *08:55:02.3±3.0, 36°.93N×70°.75E, h252^{km}±32^{km}, mb3.4, mpv4.7, Error ellipse: s-maj=29.1km s-min=19.9km az=12.0*

ISC 01 08:54:58.1±0.5, 36°.59N±0°.04×70°.59E±0°.05, h233^{km}±5^{km}, h233^{km}:pP-P, n166, σ1^{s}.30/187, mb4.1/41, 10C-6D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHGR	Chuyangaron	2.36	332		Pn	08 55 43.0	+0.2
CHGR				S	S	08 56 15.7	-2.2
KBL	Kabul	2.40	212		Pn	08 55 43.9	+0.4
KBL				S	S	08 56 17.7	-1.2
KBL	Kabul	2.40	212	PN	Pn	08 55 43.9	+0.4
KBL				S	S	08 56 17.7	-1.2
GAR	Garm	2.42	355		Pn	08 55 44.0	+0.6
GAR				S	S	08 56 17.2	-1.8
CEP	Cherat	2.96	158	P	Pn	08 55 50.7	+1.3
CEP				S	S	08 56 30.0	+0.4
CHCP	Chirah Chowk	3.65	142	P	Pn	08 55 58.5	+1.3
NIL	Nilore	3.65	143		Pn	08 55 58.6	+1.4
NIL	Nilore	3.65	143	PN	Pn	08 55 58.6	+1.4
THW	Thamme Wali	3.90	166	P	Pn	08 56 00.7	+0.6
TAS	Tashkent	4.84	348		Pn	08 56 11.6	+0.3
TAS				S	S	08 57 06.2	-3.2
TAS	Tashkent	4.84	348	PN	Pn	08 56 11.6	+0.3
TAS				S	S	08 57 06.2	-3.2
SARP	Sargodha	4.96	159	P	Pn	08 56 13.1	+0.1
THN	Thein Dam	5.92	133	*e*P	Pn	08 56 26.0	+1.0
THN				*e*S	S	08 57 32.5	-1.6
AML	Almayashu SNR=661	6.04	23	P	Pn	08 56 26.5	-0.2
UCH	Uchtor SNR=258	6.40	27	P	Pn	08 56 31.4	+0.1
DHRM	DHARAMSHALA	6.40	131	*e*P	Pn	08 56 31.7	+0.4
DHRM				*e*S	S	08 57 42.8	-2.7
DHRM	comp=N,616nm,0.3s			IAML		08 57 45.2	
KK31	Karatay Array comp=N,20nm,0.3s,baz=174,slow=12,SNR=599	6.51	359	⇑P	Pn	08 56 31.9	-0.4
KK31	comp=N,8.0nm,0.3s,baz=173,slow=23			⇑S	S	08 57 46.0	-1.4
KK31	Karatay Array	6.51	359		Pn	08 56 31.8	-0.4
KK31	Karatay Array	6.51	359	*i* PN	Pn	08 56 31.9	-0.4
KKAR	Karatay Array	6.51	359		Pn	08 56 32.2	-0.1
KKAR	Karatay Array	6.51	359	PN	Pn	08 56 32.2	-0.1
EKS2	Erkin-Say SNR=114	6.54	21	P	Pn	08 56 33.1	+0.2
KZA	Kyzart SNR=72	6.56	32	P	Pn	08 56 33.3	-0.1
AAK	Ala-Archa comp=N,43nm,0.3s,baz=168,slow=6.1,SNR=440	6.75	25	P	Pn	08 56 35.8	+0.2
AAK	comp=N,5.5nm,0.3s,baz=124,slow=22,SNR=8.5			S	S	08 57 50.6	-2.7
AAK	Ala-Archa SNR=139	6.75	25	P	Pn	08 56 35.8	+0.2
AAK	Ala-Archa comp=N,52nm,0.3s	6.75	25	⇑P	Pn	08 56 35.6	+0.1
AAK	comp=N,69nm,0.7s			⇓S	S	08 57 50.6	-2.7
AAK	Ala-Archa	6.75	25		Pn	08 56 36.0	+0.5
AAK	Ala-Archa	6.75	25	*d i*PN	Pn	08 56 35.7	+0.2
AAK	comp=Z,65nm,0.5s			pmax	pmax		
KBK	Karagaybulak SNR=54	6.93	28	P	Pn	08 56 38.4	+0.6
BHK	Bhakra	7.07	135	*e*x	S	08 57 50.6	-10
ULHL	Ulahol SNR=66	7.14	36	P	Pn	08 56 40.7	+0.1
HRA	Herat	7.15	255		Pn	08 56 40.2	-0.6
CHMS	Chumysh SNR=31	7.16	25	P	Pn	08 56 40.4	-0.2
CHMS	Chumysh comp=Z,25nm,0.4s	7.16	25	⇑P	Pn	08 56 40.2	-0.4
CHMS	comp=Z,43nm,0.8s			⇑S	S	08 57 58.3	-4.3
CHMS	Chumysh	7.16	25	*i* PN	Pn	08 56 40.1	-0.4
CHMS	comp=Z,25nm,0.4s			pmax	pmax		
USP	Ospenovka SNR=51	7.32	23	P	Pn	08 56 42.0	-0.6
SMLA	Simla	7.72	133	*e*P	Pn	08 56 48.0	+0.2
SMLA				*e*S	S	08 58 11.4	-4.3
SMLA	comp=E,258nm,0.4s			IAML		08 58 13.3	
SMLA	comp=N,161nm,0.4s			IAML		08 58 14.0	
MDOK	Medeo comp=N,22nm,0.8s	8.23	35	⇓P	Pn	08 56 54.6	+0.2
JOSI	Joshimath	9.60	126	*e*P	Pn	08 57 10.1	-1.9
JOSI				*e*S	S	08 58 48.6	-12
JOSI	comp=E,90nm,0.2s			IAML		08 58 58.2	
NDI	New Delhi	9.66	143	*e*P	Pn	08 57 12.0	-0.6
NDI				*e*S	S	08 58 55.0	-6.3
GEYT	Alibeck comp=E,1.4nm,0.3s,baz=104,slow=12,SNR=14	10.03	281	P	Pn	08 57 15.4	-2.0
GYA0B	ALIBECK ARRAY	10.03	281	Pn	Pn	08 57 16.2	-1.2
MAKZ	Makanchi comp=E,11nm,0.6s	13.28	36	⇑P	Pn	08 57 57.8	0.0
MAKZ	Makanchi	13.28	36		Pn	08 57 57.3	-0.5
MAKZ	Makanchi	13.28	36	P	Pn	08 57 57.8	0.0
MK31	Makanchi Array comp=E,4.8nm,0.5s,baz=217,slow=11,SNR=107	13.42	37	P	Pn	08 57 59.5	0.0
MK31	Makanchi Array	13.42	37		Pn	08 57 59.4	-0.1
MK31	Makanchi Array	13.42	37	*i* P	Pn	08 57 59.5	-0.1
MKAR	Makanchi Array comp=E,1.9nm,0.3s,baz=227,slow=17,SNR=61	13.42	37	P	Pn	08 57 59.8	+0.2
DANN	Dangsing comp=E,18nm,0.2s	13.81	123	*e*P	Pn	08 58 05.0	+0.1
BHPL	Bhopal	14.55	154	*e*P	P	08 58 16.1	+2.0
GKN	Gorkha comp=E,24nm,0.2s	14.63	122	*e*P	P	08 58 16.4	+1.3
AB31	Akbulak array comp=E,1.9nm,0.5s,baz=146,slow=12,SNR=85	14.85	332	P	Pn	08 58 15.1	-1.9
AB31	Akbulak array	14.85	332	*e*P	Pn	08 58 15.1	-1.9
ABKAR	Akbulak array	14.85	332	P	Pn	08 58 15.6	-1.4
WMQ	Urumqi	14.92	56	*e*P	P	08 58 18.8	+0.8
WMQ	comp=E,20nm,0.9s			pmax	pmax		
WMQ	comp=E,59nm,3.7s			pmax	pmax		
WMQ	comp=E,120nm,7.3s			LR	LR		
WMQ	comp=E,30nm,5.1s			LR	LR		
WMQ	comp=E,190nm,6.1s			LR	LR		
WMQ	Urumqi	14.92	56	P	P	08 58 18.5	+0.5
WMQ	Urumqi	14.92	56	P	P	08 58 18.5	+0.5
KURBB	Kurchatov Arra comp=E,0.2nm,0.3s,baz=211,slow=11,SNR=32	15.15	20	P	P	08 58 19.4	-1.0
DMN	Daman comp=E,15nm,0.3s	15.20	122	*e*P	Pn	08 58 22.3	+0.6
KKN	Kakani comp=E,30nm,0.5s	15.20	121	*e*P	Pn	08 58 22.1	+0.4
KURK	Kurchatov comp=E,6.6nm,0.9s	15.26	20	⇓P	P	08 58 20.4	-1.1
KURK	Kurchatov	15.26	20	P	P	08 58 20.7	-0.8
KURK	comp=Z,7.5nm,0.9s			IAmb	IAmb	08 58 22.0	
KURK	Kurchatov	15.26	20	P	P	08 58 20.7	-0.8
KURK	comp=Z,8.0nm,1.0s			pmax	pmax		
PKIN	Phulchoki comp=Z,20nm,0.4s	15.42	121	*e*P	Pn	08 58 26.1	+1.8
PKI	Pulchoki comp=Z,21nm,0.4s	15.43	121	*e*P	Pn	08 58 25.6	+1.1
GUN	Gumba comp=Z,24nm,0.3s	15.55	119	*e*P	Pn	08 58 26.9	+0.9
JIRN	Jiri comp=Z,104nm,0.5s	15.92	120	*e*P	Pn	08 58 31.3	+0.9
BVAR	Borovoye Array comp=Z,3.4nm,0.3s,baz=183,slow=5.9,SNR=38	16.44	360	P	Pn	08 58 35.4	-0.5
BVAR	baz=165,slow=22,SNR=3.8			S	S	09 01 34.5	+0.1
BRVK	Borovoye comp=Z,4.6nm,0.4s	16.47	359	⇑P	Pn	08 58 35.7	-0.6
BRVK	Borovoye	16.47	359	P	Pn	08 58 36.3	0.0
BRVK	Borovoye	16.47	359	P	Pn	08 58 36.3	0.0
BRVK	comp=Z,10.0nm,0.5s			pmax	pmax		
AKTO	Aktyubinsk comp=Z,1.7nm,0.3s,baz=135,slow=7.4,SNR=18	16.54	331	P	P	08 58 36.4	+0.6
AKTO	Aktyubinsk comp=Z,5.2nm,0.5s	16.54	331	⇓P	P	08 58 35.9	+0.2
RAMN	Ramite comp=Z,30nm,0.5s	16.64	121	*e*P	Pn	08 58 39.1	+0.2
WSAR	Wadi Sarin comp=Z,0.2nm,0.3s,baz=348,slow=5.8,SNR=3.5	16.84	221	P	P	08 58 38.2	-1.1
UOSS	Minazif	16.93	231		P	08 58 40.4	+0.1
UOSS	comp=Z,8.5nm,1.1s			IAmb	IAmb	08 58 42.0	
TAPN	Taplejung comp=Z,23nm,0.5s	17.18	118	*e*P	Pn	08 58 45.0	-0.2
ODAN	Odare comp=Z,21nm,0.4s	17.25	119	*e*P	Pn	08 58 46.8	+0.8
LSA	Lhasa	18.52	106	P	Pn	08 58 59.8	-1.3
LSA	comp=Z,9.1nm,0.8s			IAmb	IAmb	08 59 11.1	
LSA	Lhasa	18.52	106	P	Pn	08 58 59.8	-1.3
LSA	comp=Z,9.0nm,0.8s			pmax	pmax		
ZAA0	Zalesovo Array	19.97	25	P	P	08 59 12.0	-0.7
ZALV	Zalesovo Beam comp=Z,8.0nm,0.4s,baz=220,slow=11,SNR=47	19.97	25	P	P	08 59 12.6	-0.2
SHL	Shillong	21.24	115	P	P	08 59 25.8	-0.7
SHL	Shillong	21.24	115	P	P	08 59 25.8	-0.7
SHL	comp=Z,10.0nm,0.6s			pmax	pmax		
ARU	Arti comp=Z,2.2nm,0.5s,baz=176,slow=5.5,SNR=11	21.44	342	P	P	08 59 27.9	0.0
ARU	Arti	21.44	342	P	P	08 59 28.5	+0.5
ARU	comp=Z,7.2nm,0.8s			IAmb	IAmb	08 59 30.1	
ARU	Arti	21.44	342	*c i*P	P	08 59 29.1	+1.1
ARU				S	S	09 03 13.2	+3.5
ARU	comp=Z,8.0nm,0.8s			pmax	pmax		
GTA	Gaotai	23.16	74	*e*P	P	08 59 45.6	+1.5
GTA	comp=Z,3.0nm,0.8s			pmax	pmax		

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TLY    Talaya             27.82  47   P      P       09 00 27.5 +1.8
       comp=Z,2.0nm,0.4s,baz=256,slow=10,SNR=3.8
TLY    Talaya             27.82  47   P      P       09 00 27.1 +1.4
TLY                                   IAmb   IAmb    09 00 28.0
       comp=Z,2.6nm,0.5s
SONM   Songino Array      28.56  56   P      P       09 00 33.8 +1.4
       comp=Z,2.8nm,0.6s,baz=264,slow=9.1,SNR=27
ULN    Ulaanbaatar        29.00  56   P      P       09 00 37.7 +1.3
ULN                                   IAmb   IAmb    09 00 38.2
       comp=Z,3.4nm,0.8s
ULN    Ulaanbaatar        29.00  56  eP      P       09 00 37.7 +1.3
OBN    Obninsk            29.66 319  eP      P       09 00 42.3 +0.5
OBN                                  e*PP    pP      09 01 26.9 -1.7
OBN                                   pmax   pmax
       comp=Z,4.0nm,0.9s
CMAR   Chiang Mai Arr     30.79 118   P      P       09 00 52.7 +0.5
       comp=Z,0.7nm,0.3s,baz=301,slow=7.8,SNR=10
CMAR   Chiang Mai Arr     30.79 118ceP       P       09 00 53.7 +1.5
CMAR                                  pmax   pmax
       comp=Z,1.0nm,0.3s
HHC    Hu-ho-hao-te       32.04  70  eP      P       09 01 05.3 +2.2
HHC                                   pmax   pmax
       comp=Z,26nm,0.9s
HHC                                   pmax   pmax
       comp=Z,95nm,4.6s
AKASG  Malin Array Be     32.63 309   P      P       09 01 07.2 -0.7
       comp=Z,0.4nm,0.4s,baz=82,slow=7.2,SNR=4.1
AKASG                                 pP     pP      09 01 58.0 +3.0
       comp=Z,0.7nm,0.5s,baz=106,slow=9.0,SNR=2.9
AKASG  Malin Array Be     32.63 309 i P      P       09 01 09.3 +1.4
NRIK   Noril'sk           34.10  11   P      P       09 01 21.4 +1.1
       comp=Z,4.4nm,0.5s,baz=190,slow=5.7,SNR=4.8
FIA1   FINESS Array S     37.23 326   P      P       09 01 46.7 -0.3
FINES  FINESS Array B     37.23 326   P      P       09 01 46.8 -0.1
       comp=Z,2.0nm,0.5s,baz=119,slow=9.2,SNR=15
LVZ    Lovozero           37.26 338   P      P       09 01 47.8 +0.6
LVZ    Lovozero           37.26 338   P      P       09 01 47.8 +0.6
LVZ                                   pmax   pmax
       comp=Z,60nm,1.4s
ARCES  ARCESS Array B     40.94 338   P      P       09 02 17.7 +0.2
       comp=Z,2.6nm,0.6s,baz=99,slow=7.5,SNR=13
ARE0   ARCESS Array S     40.94 338   P      P       09 02 17.9 +0.3
NC405  NORSAR Array S     43.88 323   P      P       09 02 40.7 -0.6
NC303  NORSAR Array S     44.06 323   P      P       09 02 42.5 -0.2
NB201  NORSAR Array S     44.08 323   P      P       09 02 42.2 -0.6
NB201                                 IAmb   IAmb    09 03 01.1
       comp=Z,14nm,1.1s
YAK    Yakutsk            44.09  36   P      P       09 02 42.9  0.0
       comp=Z,7.8nm,0.4s,baz=196,slow=2.6,SNR=5.5
YAK    Yakutsk            44.09  36   P      P       09 02 43.2 +0.3
YAK    Yakutsk            44.09  36  eP      P       09 02 42.8 -0.1
YAK                                   pmax   pmax
       comp=Z,14nm,0.9s
YAK                                   pmax   pmax
       comp=N,2.0nm,0.9s
NB2    NORSAR Subarra     44.11 323   P      P       09 02 42.2 -1.0
       comp=Z,0.8nm,0.5s,baz=96,slow=7.9
NOA    NORSAR Array B     44.11 323   P      P       09 02 42.4 -0.8
       comp=Z,1.2nm,0.6s,baz=97,slow=7.7,SNR=8.5
NBO00  NORSAR Array S     44.32 323   P      P       09 02 43.9 -0.9
NBO00                                 IAmb   IAmb    09 02 57.6
       comp=Z,17nm,1.1s
NC204  NORSAR Array S     44.35 323   P      P       09 02 44.3 -0.8
TEOL   Teolo              44.45 300   P      P       09 02 45.6 -0.4
TEOL                                  IAmb   IAmb    09 02 46.2
       comp=Z,30nm,1.4s
KSRS   Korea Array        45.16  71   P      P       09 02 52.0 +0.3
       comp=Z,1.5nm,0.5s,baz=272,slow=7.1,SNR=6.7
KLR    Kul'dur            45.36  54   P      P       09 02 53.8 +0.6
       comp=Z,1.4nm,0.6s,baz=273,slow=7.5,SNR=4.7
KLR    Kul'dur            45.36  54⇓eP       P       09 02 53.7 +0.6
KLR                                   pmax   pmax
       comp=Z,7.0nm,1.5s
TIXI   Tiksi              45.82  22   P      P       09 02 56.3  0.0
       comp=Z,3.2nm,0.3s,baz=263,slow=3.6,SNR=7.6
TIXI   Tiksi              45.82  22   P      P       09 02 56.1 -0.2
JNU    Nakatsue           48.89  75   P      P       09 03 20.7 +0.1
       comp=Z,3.9nm,0.7s,baz=243,slow=2.3,SNR=3.1
JNU    Nakatsue           48.89  75   P      P       09 03 21.1 +0.5
JNU                                   IAmb   IAmb    09 03 26.3
       comp=Z,30nm,1.5s
SEY    Seymchan           54.53  34   P      P       09 04 01.8 +0.2
       comp=Z,1.9nm,0.7s,baz=273,slow=9.4,SNR=7.4
BILL   Bilibino           58.67  26⇑eP       P       09 04 31.1 +0.4
BILL                                 e               09 05 16.9
BILL                                 e*PP    pP      09 05 23.9 -0.3
BILL                                 e               09 06 40.6
BILL                                  pmax   pmax
       comp=Z,13nm,3.9s
TORD   Torodi Ar. Bea     65.39 268   P      P       09 05 14.6 -1.5
       comp=Z,1.3nm,0.4s,baz=56,slow=6.0,SNR=10
ILULI  Ilulissat          66.21 341   P      P       09 05 20.8 +0.4
ILULI  Ilulissat          66.21 341   P      P       09 05 20.8 +0.4
ILULI                                 pmax   pmax
       comp=Z,29nm,1.3s
ANM    Nome               70.08  22   P      P       09 05 45.7 +1.2
ANM                                   IAmb   IAmb    09 05 45.8
       comp=Z,2.5nm,0.9s
ANM    Nome               70.08  22   P      P       09 05 45.7 +1.2
ANM                                   pmax   pmax
       comp=Z,3.0nm,0.9s
TOLK   Toolik Lake Re     70.92  14   P      P       09 05 49.7 +0.1
TOLK                                  IAmb   IAmb    09 05 51.3
       comp=Z,2.3nm,0.8s
INK    Inuvik             73.87   9   P      P       09 06 07.2 +0.4
       comp=Z,1.0nm,0.6s,baz=344,slow=4.9,SNR=7.8
INK    Inuvik             73.87   9   P      P       09 06 07.3 +0.4
INK    Inuvik             73.87   9   P      P       09 06 07.3 +0.4
INK                                   pmax   pmax
       comp=Z,2.0nm,1.5s
BPAW   Bear Paw Mtn.      74.41  18   P      P       09 06 11.3 +1.2
LBTB   Lobatse            74.52 222   P      P       09 06 11.0 -0.4
LBTB                                  IAmb   IAmb    09 06 16.2
       comp=Z,1.5nm,0.7s
LBTB   Lobatse            74.52 222   P      P       09 06 11.0 -0.4
LBTB                                  pmax   pmax
       comp=Z,1.0nm,0.7s
TSUM   Tsumeb             74.71 231   P      P       09 06 13.4 +0.8
IL31                      74.78  16   P      P       09 06 13.5 +1.3
ILAR   Eielson Array      74.78  16   P      P       09 06 11.4 -0.9
       comp=Z,0.4nm,0.6s,baz=357,slow=6.1,SNR=5.0
ILAR                                  pP     pP      09 07 11.8 +3.8
       comp=Z,0.2nm,0.5s,baz=294,slow=6.1,SNR=2.8
KTH    Kantishna Hill     74.88  18   P      P       09 06 12.8 -0.1
KTH                                   IAmb   IAmb    09 06 23.0
       comp=Z,2.6nm,0.8s
PPLA   Purkeypile         75.11  19   P      P       09 06 14.3  0.0
PPLA                                  IAmb   IAmb    09 06 27.1
       comp=Z,6.2nm,1.1s
SCRK   Sand Creek         76.10  15   P      P       09 06 20.0 +0.1
SCRK                                  IAmb   IAmb    09 06 33.6
       comp=Z,4.6nm,1.4s
RIDG   Independent Ri     76.12  15   P      P       09 06 19.4 -0.5
RIDG                                  IAmb   IAmb    09 06 37.5
       comp=Z,8.3nm,1.5s
DHY    Denali Highway     76.14  17   P      P       09 06 19.9 -0.3
DAWY   Dawson             76.91  13   P      P       09 06 24.1 -0.3
SML    Sawmill            77.00  18   P      P       09 06 24.4 -0.5
SML                                   IAmb   IAmb    09 06 42.6
       comp=Z,4.2nm,1.1s
RAGM   Ragged Mountai     79.12  17   P      P       09 06 37.9 +1.4
KDAK   Kodiak Island      79.24  22   P      P       09 06 36.5 -0.6
       comp=Z,1.8nm,0.6s,baz=345,slow=2.0,SNR=4.1
KDAK   Kodiak Island      79.24  22   P      P       09 06 36.5 -0.6
KDAK                                  IAmb   IAmb    09 06 50.1
       comp=Z,7.2nm,1.1s
OHAK   Old Harbor         79.49  23   P      P       09 06 38.7 +0.2
HYT    Haines Junctio     80.24  14   P      P       09 06 43.5 +0.9
YKA    Yellowknife Ar     81.17   2   P      P       09 06 45.2 -2.2
       comp=Z,0.3nm,0.4s,baz=350,slow=5.5,SNR=9.8
YKA                                   pP     pP      09 07 45.5 +1.6
       comp=Z,0.5nm,0.8s,baz=354,slow=5.7,SNR=3.0
SCHQ   Schefferville      81.89 337   P      P       09 06 51.8 +0.6
WB0    Warramunga Arr     82.23 121   P      P       09 06 54.5 +1.0
WB0                                   IAmb   IAmb    09 07 06.1
       comp=Z,9.6nm,1.4s
WRA    Warramunga Arr     82.32 122   P      P       09 06 52.1 -1.9
       comp=Z,0.3nm,0.5s,baz=323,slow=4.7,SNR=4.5
WRA    Warramunga Arr     82.32 122 i P      P       09 06 55.0 +1.0
WRAB   Tennant Creek      82.32 122          P       09 06 56.7 +2.7
WRAB   Tennant Creek      82.32 122  eP      P       09 06 56.7 +2.7
WR0    Warramunga Arr     82.47 122          P       09 06 53.5 -1.2
ASAR   Alice Springs      84.58 125   P      P       09 07 03.5 -1.9
       comp=Z,0.5nm,0.6s,baz=310,slow=4.9,SNR=9.1
QSPA   South Pole Qui    126.38 180   PKPdf  PKPdf   09 13 31.2 -1.0
RAR    Rarotonga         133.83  85   PKPdf  PKPdf   09 13 46.4 -1.2
RAR    Rarotonga         133.83  85   PKIKP  PKPdf   09 13 46.4 -1.2
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KEA 01 09:00:15.9±0.0, 40.°73N×122.°36E, h0^{km}, ML3.0/1, Northeastern China

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Code   Station Name          Δ°  AZ°     Phase ID           Time      Res
                                      Op     ISC        h  m  s      ISC
SUJ    Sinuiju             1.74 110   Pg     Pb      09 00 49.0 +0.3
SUJ                                   Sg     Sb      09 01 11.5 +0.3
PYS    Pyongsong           3.06 118   Sg     Sb      09 01 51.0 +1.9
PYAG   Pyongyang           3.10 122   Sg     Sb      09 01 52.5 +2.2
KGE    Kanggye             3.23  85   Sg     Sb      09 01 53.8 -0.2
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*MOS **01** 09:00:35.5±1.8, 52.°60N×106.°50E, h8^{km}, mb3.9/1, Error ellipse: s-maj=12.0km s-min=7.3km az=67.0*
MOS Felt (III-IV) at Elantsy.
*IDC **01** 09:00:35.3±1.6, 52.°56N×106.°44E, h0^{km}, mb3.7/3, mb1 3.7/4, mb1mx3.3/59, mbtmp3.6/4, ML3.2/1, MS3.3/1, Ms1 3.3/1, ms1mx2.6/37, Error ellipse: s-maj=21.0km s-min=14.3km az=121.0*
*BYKL **01** 09:00:36.8±0.2, 52.°57N×106.°46E, FELT I=III-IV MSK at Tyrgan, Yelantsy*
ISC 01 09:00:36.4±1.0, 52.°56N±0.°02×106.°47E±0.°02, h8^{km}±7^{km}, n57, σ2.^{s}41/99, mb3.5/4, 6C-10D, Lake Baykal region

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Code   Station Name          Δ°  AZ°     Phase ID           Time      Res
                                      Op     ISC        h  m  s      ISC
TRG    Tyrgan              0.21 339⇓iPg      Pg      09 00 42.0 +1.3
TRG                                  eSg     Sg      09 00 45.4 +1.8
TRG                                  e               09 00 48.1
TRG                                   Pmax
       3µm,0.1s
TRG                                   max
       6µm,0.2s
TRG    Tyrgan              0.21 339⇓iPG      Pg      09 00 41.9 +1.3
TRG                                  e               09 00 45.6
TRG                                   pmax   pmax
       comp=Z,14µm,0.5s
TRG                                   smax   smax
       comp=N,6µm,0.5s
STDB   Stepnoy Dvoret      0.40 189⇑iPg      Pb      09 00 45.6 -0.1
STDB                                 e               09 00 50.8
STDB                                 eSg     Sg      09 00 50.9 +1.5
STDB                                 e               09 00 54.4
ZRHB   Zarechye            0.41  91⇑iPg      Pg      09 00 45.5 +1.1
ZRHB                                 eSg     Sb      09 00 52.0 -0.5
ZRHB                                 e               09 00 54.2
ZRHB                                 e               09 00 57.3
ZRHB                                  Pmax
       comp=N,705nm,0.3s
ZRHB                                  Smax
       comp=N,6µm,0.7s
KAB    Kabansk             0.53 168  ePg     Pg      09 00 47.0 +0.5
KAB                                  eSg     Sg      09 00 54.5 +1.1
KAB                                   Pmax
       comp=N,561nm,0.2s
KAB                                   Smax
       comp=N,2µm,0.5s
KAB    Kabansk             0.53 168  ePG     Pg      09 00 47.1 +0.5
KAB                                  e               09 00 54.6
KAB                                   pmax   pmax
       comp=Z,915nm,0.5s
KAB                                   smax   smax
       comp=N,2µm,0.5s
FFNB   Fofonovo            0.55 161⇓iPg      Pg      09 00 47.1 +0.2
FFNB                                 e               09 00 49.8
FFNB                                 eSg     Sg      09 00 54.4 +0.3
TRTB   Turuntaevo          0.78 115⇓iPg      Pg      09 00 51.6 +0.2
TRTB                                 ePb     Pb      09 00 53.0 +0.7
TRTB                                 eSg     Sg      09 01 02.3 +0.7
TRTB                                 eSb     Sb      09 01 04.9 +1.8
BGT    Bolshoye Golou      0.83 232  ePg     Pg      09 00 52.4  0.0
BGT                                  eSg     Sg      09 01 02.9 -0.3
BGT                                   Pmax
       comp=N,268nm,0.1s
BGT                                   Smax
       comp=N,662nm,0.1s
BGT    Bolshoye Golou      0.83 232  ePG     Pg      09 00 52.7 +0.3
BGT                                  e               09 01 02.6
BGT                                   pmax   pmax
       comp=Z,120nm,0.1s
BGT                                   smax   smax
       comp=E,587nm,0.1s
HRMR   Khuramsha           0.98 162⇓iPg      Pg      09 00 54.9 -0.3
HRMR                                 eSg     Sg      09 01 07.9  0.0
HRMR                                 eSb     Sb      09 01 10.0 +1.2
UUDB   Ulan-Yde            1.01 133⇑iPg      Pg      09 00 55.2 -0.6
UUDB                                 i Sg    Sg      09 01 08.4 -0.5
UUDB                                  Pmax
       comp=E,164nm,0.2s
UUDB                                  Smax
       comp=E,1µm,0.6s
LSTR   Listvyanka          1.23 236  ePg     Pg      09 00 58.9 -0.9
LSTR                                 ePb     Pn      09 01 00.2 +0.3
LSTR                                 eSg     Sg      09 01 14.8 -0.9
LSTR                                 eSb     Sn      09 01 16.8 +0.2
LSTR                                  max
       comp=E,142nm,0.2s
LSTR                                  Smax
       comp=E,694nm,0.3s
LSTR   Listvyanka          1.23 236  ePG     Pg      09 00 59.0 -0.9
LSTR                                 e               09 01 14.8
LSTR                                  pmax   pmax
       comp=Z,130nm,0.1s
LSTR                                  smax   smax
       comp=E,697nm,0.3s
OGRR   Ongureny            1.28  32⇓iPg      Pn      09 01 00.9 +0.3
OGRR                                 e               09 01 05.0
OGRR                                 eSg     Sg      09 01 17.6 +0.2
OGRR                                  Pmax
       comp=E,124nm,0.2s
OGRR                                  Smax
       comp=E,927nm,0.5s
OGRR   Ongureny            1.28  32  ePG     Pg      09 01 01.1 +0.2
OGRR                                 e               09 01 18.7
OGRR                                  pmax   pmax
       comp=Z,125nm,0.4s
OGRR                                  smax   smax
       comp=E,922nm,0.5s
IRK    Irkutsk             1.39 258  ePg     Pn      09 01 01.8 -0.3
IRK                                  eSg     Sb      09 01 20.2 -0.2
IRK                                   Pmax
       comp=E,833nm,0.2s
IRK                                   Smax
       comp=E,3µm,0.2s
IRK    Irkutsk             1.39 258  ePG     Pn      09 01 01.1 -1.0
IRK                                  e               09 01 18.9
IRK                                   pmax   pmax
       comp=Z,842nm,0.2s
IRK                                   smax   smax
       comp=N,4µm,0.3s
IVK    Ivanovka            1.48 240  ePg     Pn      09 01 03.5 +0.2
IVK                                  eSg     Sn      09 01 22.4 -0.5
IVK                                   Pmax
       comp=N,154nm,0.1s
IVK                                   Smax
       comp=N,1µm,0.2s
IVK    Ivanovka            1.48 240  ePG     Pn      09 01 03.7 +0.4
IVK                                  e               09 01 23.2
IVK                                   pmax   pmax
       comp=Z,208nm,0.5s
IVK                                   smax   smax
       comp=E,2µm,0.5s
MXMB   Maximikha           1.54  62⇓iPg      Pn      09 01 04.8 +0.5
MXMB                                 e               09 01 09.5
MXMB                                 eSg     Sb      09 01 25.6 +0.6
MXMB                                 e               09 01 29.8
TLY    Talaya              1.96 244⇑iPn      Pn      09 01 10.1 +0.2
TLY                                  ePg     Pb      09 01 11.8 -0.4
TLY                                  eSg     Sb      09 01 36.8  0.0
TLY                                   Pmax
       comp=E,75nm,0.2s
TLY                                   Smax
       comp=E,1µm,0.3s
TLY    Talaya              1.96 244   Pn     Pn      09 01 10.2 +0.2
       comp=E,0.3nm,0.3s,baz=56,slow=8.7,SNR=110
TLY                                   LR     LR      09 01 34.1
       comp=E,22nm,18.4s,baz=106,slow=30
TLY                                   Sn     Sn      09 01 34.8 +0.2
       comp=E,0.3nm,0.3s,baz=181,slow=16,SNR=5.6
TLY                                   Lg     Lg      09 01 36.6
       comp=E,1.9nm,0.3s,baz=208,slow=19,SNR=60
TLY    Talaya              1.96 244c iPN     Pn      09 01 10.1 +0.2
TLY                                  e               09 01 12.4
TLY                                  eS      Sn      09 01 34.5 -0.1
TLY                                  e               09 01 36.7
TLY                                   pmax   pmax
       comp=Z,107nm,0.2s
TLY                                   smax   smax
       comp=N,2µm,0.4s
SYVR   Suvo                2.39  61  ePn     Pn      09 01 15.6 -0.3
SYVR                                 ePg     Pb      09 01 20.4 +0.7
SYVR                                 e               09 01 24.5
SYVR                                 eSg     Sg      09 01 52.4 -0.8
SYVR                                  max
       comp=N,28nm,0.3s
SYVR                                  Smax
       comp=N,121nm,0.6s
ARS    Arshan              2.57 257  ePn     Pn      09 01 18.0 -0.4
ARS                                  ePg     Pb      09 01 22.0 -0.8
ARS                                  eSg     Sb      09 01 54.8 +0.2
ARS                                  eSgSg   Sg      09 01 57.8 -1.1
ARS                                   Pmax
       comp=N,122nm,0.3s
ARS                                   max
       comp=N,2µm,0.4s
ARS    Arshan              2.57 257  ePN     Pn      09 01 18.2 -0.2
ARS                                  e               09 01 22.2
ARS                                  e               09 01 54.9
ARS                                   pmax   pmax
       comp=Z,124nm,0.3s
ARS                                   smax   smax
       comp=E,2µm,0.3s
ZAK    Zakamensk           2.96 224  ePg     Pb      09 01 30.6 +1.2
ZAK                                  eSg     Sg      09 02 08.8 -2.5
ZAK                                   Pmax
       comp=E,24nm,0.2s
ZAK                                   Smax
       comp=E,197nm,0.5s
ZAK    Zakamensk           2.96 224  ePN     Pb      09 01 30.7 +1.3
ZAK                                  e               09 02 08.4
ZAK                                   pmax   pmax
       comp=Z,22nm,0.1s
ZAK                                   smax   smax
       comp=N,196nm,0.3s
MOY    Mondy               3.50 257  e       Pn      09 01 32.3 +1.2
MOY                                  e               09 01 39.0
MOY                                  e               09 01 41.8
MOY                                  e               09 02 15.0
MOY                                  eSg     Sb      09 02 23.1 +1.9
MOY                                   max
       comp=N,75nm,0.3s
MOY                                   Smax
       comp=N,352nm,1.0s
MOY    Mondy               3.50 257  ePN     Pn      09 01 33.2 +2.1
MOY                                  e               09 01 39.2
MOY                                  e               09 02 22.1
MOY                                   pmax   pmax
       comp=Z,106nm,0.4s
MOY                                   smax   smax
       comp=N,304nm,0.5s
YLYR   Ulyunkhan           3.62  48  ePn     Pn      09 01 32.2 -0.6
YLYR                                 ePg     Pb      09 01 40.6 -0.1
YLYR                                 e               09 02 26.3
YLYR                                 eSg     Sb      09 02 28.3 +3.5
YLYR                                  Pmax
       comp=N,9.0nm,0.4s
YLYR                                  Smax
       comp=N,84nm,1.0s
NIZ    Nizh Angarsk        3.69  28  ePn     Pn      09 01 34.0 +0.2
NIZ                                  e               09 01 38.8
NIZ                                   Pg     Pb      09 01 42.4 +0.6
NIZ                                  eSn     Sn      09 02 15.5 -1.9
NIZ                                  eSg     Sb      09 02 30.9 +4.2
NIZ                                   Pmax
       comp=N,20nm,0.2s
NIZ                                   Smax
       comp=N,143nm,0.5s
NIZ    Nizh Angarsk        3.69  28  ePN     Pn      09 01 33.9 +0.2
NIZ                                  e               09 01 42.0
NIZ                                  eS      Sn      09 02 16.7 -0.7
NIZ                                  e               09 02 30.1
NIZ                                   pmax   pmax
       comp=Z,20nm,0.3s
NIZ                                   smax   smax
       comp=N,148nm,1.1s
ORL    Orlik               4.07 272⇑iPn      Pn      09 01 40.1 +1.0
ORL                                  e               09 01 56.3
ORL                                  e               09 02 27.8
ORL                                  e               09 02 39.6
ORL                                  eSg     Sg      09 02 42.5 -4.4
ORL                                   max
       comp=N,22nm,0.2s
ORL                                   Smax
       comp=N,131nm,0.7s
ORL    Orlik               4.07 272  ePN     Pn      09 01 40.0 +1.0
ORL                                  e               09 01 51.2
ORL                                  e               09 02 41.7
ORL                                   pmax   pmax
       comp=Z,25nm,0.4s
ORL                                   smax   smax
       comp=N,134nm,0.5s
KMO    Kumora              4.33  38  e       Pn      09 01 37.4 -5.2
KMO                                  ePg     Pb      09 01 53.5 +0.7
KMO                                  eSg     Sg      09 02 50.9 -4.6
KMO                                   Pmax
       comp=N,17nm,0.4s
KMO                                   Smax
       comp=N,156nm,1.2s
CIT    Chita               4.38  94  e       Pb      09 01 50.0 -3.6
CIT                                  ePg     Pg      09 01 54.4 -5.8
CIT                                  eSg     Sg      09 02 53.1 -3.8
CIT                                   Pmax
       comp=N,86nm,0.1s
CIT                                   Smax
       comp=N,236nm,0.5s
KPC    Khapcheranga        4.69 125  ePn     Pn      09 01 46.0 -1.6
KPC                                  ePg     Pb      09 02 00.5 +1.6
KPC                                  eSg     Sg      09 03 03.8 -3.2
KPC                                   Pmax
       comp=N,10.0nm,0.3s
KPC                                   Smax
       comp=N,138nm,0.9s
YOA    Uoyan               4.71  39   Sg     Sg      09 03 02.5 -5.1
YOA                                  e               09 03 21.2
YOA                                   max
       comp=N,362nm,0.8s
ULN    Ulaanbaatar         4.72 175  e       Pb      09 02 01.1 +1.7
ULN                                  e               09 02 42.8
ULN                                  eSg     Sb      09 03 02.5 +6.1
SONM   Songino Array       4.73 181   Pn     Pn      09 01 48.1 -0.1
       comp=N,1.0nm,0.3s,baz=355,slow=14,SNR=31
SONM                                  Pg     Pb      09 02 02.0 +2.3
       comp=N,4.1nm,0.3s,baz=353,slow=18,SNR=29
SONM                                  Lg     Lg      09 03 03.0
       comp=N,6.7nm,0.3s,baz=357,slow=28,SNR=6.0
UKT    Uakit               5.14  52  e       Pn      09 01 39.3  -14
UKT                                  e               09 01 55.0
UKT                                  e               09 03 09.6
UKT                                   Sg     Sb      09 03 15.0 +6.7
UKT                                  e               09 03 20.4
UKT                                   max
       comp=N,7.0nm,0.5s
UKT                                   Smax
       comp=N,37nm,1.3s
SVKR   Severomuysk         5.46  47  eSg     Sb      09 03 24.9 +7.2
SVKR                                 e               09 03 27.4
SVKR                                  max
       comp=N,157nm,0.6s
TDJR   Todzha              6.34 273  e       Pn      09 02 18.5 +8.3
TDJR                                 e               09 02 22.1
TDJR                                 e               09 03 35.2
TDJR                                 eSg     Sg      09 03 53.2 -6.6
NLYR   Nelyaty             6.66  50  e       Pn      09 02 08.6 -5.9
NLYR                                 e               09 02 32.3
NLYR                                 e               09 03 18.4
NLYR                                 e               09 03 30.5
NLYR                                 eSg     Sg      09 04 01.9 -8.0
NLYR                                  max
       comp=N,2.0nm,0.6s
NLYR                                  Smax
       comp=N,21nm,1.0s
BOD    Bodaibo             6.80  36  eSg     Sg      09 04 07.8 -6.8
BOD                                  e               09 04 10.2
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Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOD				max			
	comp=N,44nm,1.5s						
CRS	Chara	8.09	53	ePn	Pg	09 03 04.9	-6.2
CRS				eSg	Sg	09 04 48.2	-7.6
CRS				Smax			
	comp=N,25nm,1.1s						
TUP	Tupik	8.26	72	ePn	Pn	09 02 35.5	-0.9
TUP				eSg	Sg	09 04 52.2	-8.9
TUP				Smax			
	comp=N,49nm,1.2s						
HIA	Hailar	9.01	106	deP	Pn	09 02 48.1	+1.4
YAK	Yakutsk	15.63	44	⇓eP	Pn	09 04 17.3	+0.5
YAK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KURK	Kurchatov	17.35	275	⇓eP	Pn	09 04 38.4	-0.2
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BVAR	Borovoye Array	21.69	286	P	P	09 05 26.2	-1.2
	comp=Z,1.1nm,0.7s,baz=71,slow=13,SNR=4.0						
MJAR	Matsushiro Arr	27.42	113	LR	LR	09 18 42.1	
	comp=Z,59nm,18.8s,baz=75,slow=40						
BILL	Bilibino	31.86	38	eP	P	09 07 01.4	0.0
BILL				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ARCES	ARCESS Array B	39.18	327	P	P	09 08 03.9	-0.4
	comp=Z,2.7nm,1.0s,baz=62,slow=9.6,SNR=2.3						
FINES	FINESS Array B	41.97	315	P	P	09 08 27.3	0.0
	comp=Z,0.3nm,0.4s,baz=82,slow=10,SNR=2.8						

IDC 01 09:01:17.0±2.4, 6°.09S×128°.80E, h0km, mb3.3/1, mb1 3.4/3, mb1mx3.2/47, mbtmp3.2/3, ML3.2/2, Error ellipse: s-maj=176.8km s-min=31.9km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.79	159	Pn	Pn	09 04 47.3	-0.3
	0.1nm,0.3s,baz=341,slow=13,SNR=3.1						
WRA				Sn	Sn	09 07 19.1	-13
	0.2nm,0.3s,baz=351,slow=30,SNR=5.4						
ASAR	Alice Springs	18.15	165	P	Pn	09 05 30.8	0.0
	0.1nm,0.3s,baz=349,slow=11,SNR=8.3						
MKAR	Makanchi Array	66.81	327	P	P	09 12 10.7	0.0
	0.1nm,0.3s,baz=110,slow=7.0,SNR=4.1						

IDC 01 09:04:49.8±1.9, 18°.13N×93°.43E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.3/54, mbtmp3.5/4, ML3.9/1, MS3.3/2, Ms1 3.3/2, ms1mx2.8/30, Error ellipse: s-maj=62.9km s-min=29.0km az=59.0

ISC 01 09:04:56.0±1.4, 18°.2N±0°.2×93°.7E±0°.1, h35km, n11, σ0s.76/10, mb3.6/3, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRDH	Bariadhala	4.82	337	LR	LR	09 08 21.5	
	comp=Z,44nm,19.1s,baz=152,slow=44						
CMAR	Chiang Mai Arr	5.00	87	Pn	Pn	09 06 09.8	+1.1
	1.0nm,0.3s,baz=268,slow=15,SNR=8.5						
CMAR				Sn	Sn	09 07 04.4	-0.8
	1.2nm,0.3s,baz=265,slow=17,SNR=5.5						
TAPN	Taplejung	10.62	330	eP	Pn	09 07 26.4	+0.4
	3.5nm,0.2s						
PKI	Pulchoki	12.02	322	eP	Pn	09 07 45.6	+0.4
	4.9nm,0.2s						
PKIN	Phulchoki	12.03	322	eP	Pn	09 07 45.3	0.0
	6.2nm,0.2s						
GKN	Gorkha	12.80	321	eP	Pn	09 07 56.1	+0.4
	15nm,0.2s						
DANN	Dangsing	13.58	320	eP	Pn	09 08 07.0	+0.5
	4.5nm,0.2s						
MKAR	Makanchi Array	30.00	344	P	P	09 11 00.4	-0.9
	0.3nm,0.6s,baz=149,slow=8.4,SNR=3.8						
WRA	Warramunga Arr	55.05	132	P	P	09 14 24.0	-0.6
	0.5nm,0.8s,baz=316,slow=7.4,SNR=3.6						
ASAR	Alice Springs	57.23	135	P	P	09 14 40.4	+0.2
	0.5nm,0.6s,baz=316,slow=7.0,SNR=6.9						
FINES	FINESS Array B	63.47	330	LR	LR	09 48 09.7	
	comp=Z,187nm,18.4s,baz=322,slow=41						

IDC 01 09:51:08.7±1.7, 10°.61S×124°.51E, h0km, mb3.3/1, mb1 3.9/4, mb1mx3.5/40, mbtmp3.7/4, ML3.7/3, Error ellipse: s-maj=102.4km s-min=26.7km az=63.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	7.53	172	Pn	Pn	09 52 59.5	-0.3
	0.4nm,0.3s,baz=356,slow=12,SNR=10						
FITZ				Sn	Sn	09 54 21.4	-4.6
	1.4nm,0.3s,baz=147,slow=19,SNR=7.4						
WRA	Warramunga Arr	13.27	136	Pn	Pn	09 54 19.0	+0.5
	0.8nm,0.3s,baz=318,slow=11,SNR=21						
WRA				Sn	Sn	09 56 41.8	-5.0
	1.6nm,0.3s,baz=137,slow=17,SNR=7.7						
ASAR	Alice Springs	15.78	147	Pn	Pn	09 54 52.4	-0.1
	0.2nm,0.3s,baz=320,slow=12,SNR=18						
ASAR				Sn	Sn	09 57 43.0	-5.1
	0.1nm,0.3s,baz=315,slow=21,SNR=5.4						
MKAR	Makanchi Array	68.44	330	P	P	10 02 12.6	0.0
	0.2nm,0.7s,baz=143,slow=5.0,SNR=3.9						

IDC 01 10:09:46.9±2.1, 7°.34S×128°.49E, h0km, mb3.4/1, mb1 3.3/3, mb1mx3.2/25, mbtmp3.2/3, ML2.9/1, Error ellipse: s-maj=145.3km s-min=32.3km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.76	156	Pn	Pn	10 13 05.2	+1.9
	baz=335,slow=12,SNR=1.9						
WRA				Sn	Sn	10 15 25.7	-11
	baz=349,slow=31,SNR=2.1						
ASAR	Alice Springs	17.05	163	P	Pn	10 13 45.1	-1.7
	0.0nm,0.3s,baz=340,slow=9.2,SNR=4.8						
MKAR	Makanchi Array	67.69	328	P	P	10 20 46.1	0.0
	0.1nm,0.6s,baz=117,slow=8.0,SNR=6.2						

NORS 01 10:10:58.6±0.0, 43°.06N×44°.16E, h11km, MPVA3.6

ISC 01 10:10:59.2±0.8, 43°.05N±0°.03×44°.13E±0°.02, h16km±5km, n17, σ1s.04/34, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KORR	Kora	0.05	307	ePg	Pg	10 11 02.0	-0.2
KORR				i Sg	Sg	10 11 04.4	+0.2
ARNR	Ardon	0.17	42	ePg	Pg	10 11 02.8	-0.7
ARNR				i Sg	Sb	10 11 06.0	-1.3
LACR	Lac	0.26	151	ePg	Pb	10 11 05.4	-0.2
LACR				eSg	Sb	10 11 10.1	+0.2
LSNR	Lesken	0.31	316	i Pg	Pn	10 11 07.1	-2.1
LSNR				eSg	Sn	10 11 13.1	-2.5
STDR	Stavd-Durt	0.32	352	i Pg	Pb	10 11 06.4	-0.2
STDR				i Sg	Sb	10 11 12.7	+1.2
VLKR	Vladikavkaz	0.40	91	ePg	Pb	10 11 08.5	+0.4
VLKR				eSg	Sb	10 11 14.3	+0.3
DIGR	Digorskoe uzhe	0.43	249	i Pg	Pb	10 11 08.8	+0.2
DIGR				eSg	Sb	10 11 16.2	+1.4
BTKR	Batakoyurt	0.44	44	ePg	Pb	10 11 08.4	-0.3
BTKR				eSg	Sb	10 11 15.9	+0.8
KMGR	Komgaron	0.54	89	ePg	Pn	10 11 11.4	-1.0
KMGR				eSg	Sb	10 11 19.3	+1.3
NCK	Nalchik	0.59	319	ePg	Pn	10 11 12.1	-0.9
NCK				eSg	Sn	10 11 22.5	+0.2
GUDG	Gudauri	0.64	156	P	Pg	10 11 11.3	-0.6
GUDG				S	Sb	10 11 21.0	0.0
ONI	Oni	0.68	227	P	Pn	10 11 13.8	-0.5
ONI				S	Sn	10 11 24.2	-0.3
ONI	Oni	0.68	227	ePg	Pn	10 11 13.8	-0.5
ONI				eSg	Sn	10 11 24.2	-0.3
PRTR	Priterechnaya	0.71	9	ePg	Pn	10 11 14.1	-0.5
PRTR				eSg	Sn	10 11 26.1	+0.9
GROC	Groznyy	1.23	82	ePg	Pg	10 11 23.3	+0.4
GROC				eSg	Sg	10 11 41.1	+2.1
SHA1	Shidzhatmaz	1.27	303	i Pg	Pg	10 11 24.0	+0.2
SHA1				i Sg	Sg	10 11 42.5	+2.2
BTLR	Botlikh	1.59	103	ePg	Pb	10 11 28.2	0.0
BTLR				eSg	Sg	10 11 50.7	+0.3

UCR 01 10:19:50.2±1.2, 9°.71N×84°.48W, h36km±4km, MD3.8, MW3.7, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRA1	San Ramn	0.37	360	eP	Pn	10 19 58.6	-0.4
SRA1				eS	Sn	10 20 05.7	0.0
HDC	Heredia	0.46	51	eP	Pn	10 20 00.3	0.0
HDC				eS	Sn	10 20 08.6	+1.1
LCR2	La Lucha 2	0.47	86	eP	Pn	10 20 00.1	-0.5
LCR2				eS	Sn	10 20 08.3	+0.5
SJS	Escuela Geolog	0.47	62	eS	Sn	10 20 09.1	+1.3
EDDO	Dominical	0.76	127	eP	Pn	10 20 04.2	-0.1
CVTR	Volcan Turrial	0.77	67	eP	Pn	10 20 06.0	+1.1
FORC	Fortuna	0.77	346	i P	Pn	10 20 04.4	-0.2
FORC				i S	Sn	10 20 16.0	+1.0
CEDE	Laguna Cedeo	0.80	344	eP	Pn	10 20 05.0	0.0
EDLM	Las Mercedes	0.98	116	eP	Pn	10 20 08.2	+0.7
ACAL	Aguas Claras	1.07	329	i P	Pn	10 20 08.5	-0.2
ACAL				i S	Sn	10 20 23.3	+1.0
PTEN	Parque Tenorio	1.11	333	i P	Pn	10 20 09.7	+0.4
CUI	Cuipilapa	1.16	324	eP	Pn	10 20 09.9	0.0
CUI				i S	Sn	10 20 25.1	+0.7
GUAI	GUAI	1.16	299	i P	Pn	10 20 09.7	-0.1
GUAI				i S	Sn	10 20 25.5	+1.0
COLC	Colonia	1.19	323	i P	Pn	10 20 10.4	+0.1
GUAB	Guayabo de Bag	1.23	323	i P	Pn	10 20 11.0	+0.1
MESS	Mesas	1.24	325	i P	Pn	10 20 11.0	0.0
EDPN	Palmar Norte	1.25	126	eP	Pn	10 20 11.5	+0.3
EDBA	Buenos Aires	1.31	115	eP	Pn	10 20 12.0	0.0
BUEV	Buena Vista	1.41	320	i P	Pn	10 20 13.6	+0.1
GB1A	Borinquen Arri	1.42	321	i P	Pn	10 20 13.8	+0.2
BUAI	Buenos Aires	1.43	324	i P	Pn	10 20 13.8	+0.1
BRU2	Volcan	1.99	117	eP	Pn	10 20 22.6	+1.2

SJA 01 10:21:38.1±0.8, 21°.68S×67°.21W, h197km±6km, ML2.8, MW3.0

GUC 01 10:21:40.0±0.6, 21°.66S×67°.68W, h214km±7km, ML3.4

ISC 01 10:21:37.9±1.9, 21°.69S±0°.04×67°.29W±0°.05, h205km±15km, n28, σ1s.07/48, 5C-3D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	Yavi	1.72	107	i P	Pn	10 22 14.7	+0.1
YJA				eS	S	10 22 41.2	-1.3
YJA				IAML		10 22 42.5	
	comp=Z,59nm,0.4s						
LVC	Limon Verde	1.76	238	i P	Pn	10 22 15.7	+0.8
LVC				eS	S	10 22 43.1	0.0
PB09	IPOC Station P	1.82	266	⇓iP	Pn	10 22 16.1	+0.9
PB09				eS	S	10 22 43.5	-0.2
PB09	IPOC Station P	1.82	266	i P	Pn	10 22 16.1	+0.9
PB09				eS	S	10 22 44.2	+0.5
PB01	IPOC Station P	2.15	287	eP	Pn	10 22 18.8	+0.3
PB01				i S	S	10 22 48.7	-0.8
PB01				IAML		10 22 50.4	
	comp=E,224nm,0.1s						
HJA	Humahuaca	2.30	131	i P	Pn	10 22 20.8	+0.4
HJA				IAML		10 22 55.6	
	comp=Z,34nm,0.4s						
PB03	IPOC Station P	2.31	261	eP	Pn	10 22 20.4	+0.1
PB03				i S	S	10 22 51.8	-0.9
PB03				IAML		10 22 52.3	
	comp=E,105nm,0.1s						
PB08	IPOC Station P	2.33	311	eP	Pn	10 22 22.1	+1.4
PB08				i S	S	10 22 53.7	+0.3
PB08				IAML		10 22 57.1	
	comp=E,94nm,0.2s						
PB06	IPOC Station P	2.34	244	i P	Pn	10 22 21.6	+1.0
PB06				eS	S	10 22 53.9	+0.5
PB07	IPOC Station P	2.42	269	⇑iP	Pn	10 22 22.0	+0.6
PB07				i S	S	10 22 53.5	-1.2
PB07				IAML		10 22 54.7	
	comp=E,118nm,0.2s						
PB02	IPOC Station P	2.46	278	⇓iP	Pn	10 22 22.2	+0.4
PB02				eS	S	10 22 53.9	-1.4
PB02				IAML		10 22 55.7	
	comp=N,240nm,0.1s						
PB15	IPOC Station P	2.52	233	eS	S	10 22 57.1	+0.2
PB15	IPOC Station P	2.52	233	i P	Pn	10 22 23.8	+1.2
GO01	Chusmiza	2.69	318	⇓iP	Pn	10 22 26.2	+1.4
GO01				i S	S	10 23 01.4	+0.6
PB04	IPOC Station P	2.73	256	eP	Pn	10 22 25.4	+0.5
PB04				eS	S	10 22 59.5	-1.5
PB04				IAML		10 23 03.6	
	comp=N,58nm,0.1s						
PB04	IPOC Station P	2.73	256	i P	Pn	10 22 25.7	+0.8
PATCX	Punta Patache	2.81	287	eP	Pn	10 22 26.4	+0.7
PATCX				i S	S	10 23 00.7	-1.7
PATCX				IAML		10 23 03.3	
	comp=E,255nm,0.3s						
TA01	Diego Aracena	2.92	292	eP	Pn	10 22 26.9	0.0
TA01				i S	S	10 23 02.8	-1.8
TA01				IAML		10 23 04.4	
	comp=E,126nm,0.5s						
PB11	IPOC Station P	2.93	311	⇑iP	Pn	10 22 27.6	+0.4
PB11				i S	S	10 23 03.9	-1.3
PB05	IPOC Station P	2.93	246	eP	Pn	10 22 27.9	+0.7
PB05				eS	S	10 23 03.6	-1.5
PB05				IAML		10 23 04.1	
	comp=N,27nm,0.5s						
PB05	IPOC Station P	2.93	246	i P	Pn	10 22 28.3	+1.1
AZAP	Zapla	3.25	141	i P	Pn	10 22 30.9	-0.1
MNMC	Minye Minye	3.34	319	⇑iP	Pn	10 22 33.2	+1.0
MNMC				i S	S	10 23 13.9	-0.2
PSGC	Pisagua	3.37	308	eP	Pn	10 22 31.9	-0.6
PSGC				i S	S	10 23 11.4	-3.1
PSGC				IAML		10 23 14.7	
	comp=E,77nm,0.2s						
SLA	San Lorenzo	3.43	152	i P	Pn	10 22 34.3	+1.2
SLA				IAML		10 23 22.9	
	comp=Z,12nm,3.1s						
PB16	IPOC Station P	3.94	328	⇑iP	Pn	10 22 41.3	+1.6
PB16				i S	S	10 23 27.8	+0.1
PB16				IAML		10 23 30.5	
	comp=E,36nm,0.5s						
GO02	Mina Guanaco	4.05	211	⇑iP	Pn	10 22 41.4	+0.6
GO02				eS	S	10 23 28.7	-1.1
PB14	IPOC Station P	4.09	224	i P	Pn	10 22 42.3	+1.0
PB14				IAML		10 23 33.5	
	comp=Z,13nm,0.2s						

IDC 01 10:30:01.9±2.6, 2°.80N×126°.74E, h0km, mb3.3/3, mb1 3.4/3, mb1mx3.3/24, mbtmp3.3/3, Error ellipse: s-maj=249.9km s-min=25.3km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.80	162	P	P	10 35 15.4	-1.2
	0.3nm,0.4s,baz=340,slow=11,SNR=2.3						
ASAR	Alice Springs	27.21	166	P	P	10 35 49.1	+1.4
	0.1nm,0.3s,baz=347,slow=13,SNR=4.6						
MKAR	Makanchi Array	58.32	326	P	P	10 39 58.6	-0.2
	0.2nm,0.3s,baz=121,slow=7.4,SNR=8.0						

IDC 01 10:52:33.4±1.7, 13°.56S×76°.42W, h61km±18km, mb3.6/2, mb1 3.8/7, mb1mx3.5/31, mbtmp3.9/7, Error ellipse: s-maj=32.0km s-min=10.6km az=59.0

NEIC 01 10:52:33±1.8, 13°.51S±0°.03×76°.2W±0°.1, h58km±9km, mb4.7/3, ML4.6(ARE), Error ellipse: s-maj=18.0km s-min=4.2km az=86.0

ISC 01 10:52:30.1±0.9, 13°.58S±0°.07×76°.5W±0°.1, h33km, n26, σ1s.51/27, mb4.0/5, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	1.61	349	P	Pb	10 52 59.1	-0.2
	209nm,0.3s,baz=171,slow=13,SNR=99						
NNA				S	Sb	10 53 19.8	+0.5
	84nm,0.3s,baz=340,slow=17,SNR=8.3						
NNA				LR	LR	10 53 39.5	
	comp=Z,77nm,18.1s,baz=358,slow=41						
NNA	Nana	1.61	349		Pb	10 52 59.0	-0.3
ATAH	Atahualpa	6.66	344	P	Pn	10 54 11.1	+5.0
	4.6nm,0.3s,baz=183,slow=4.4,SNR=26						
LPAZ	La Paz	8.55	109	P	Pn	10 54 34.5	+2.2
	0.9nm,0.3s,baz=303,slow=5.7,SNR=19						
LPAZ				S	Sn	10 56 09.9	+2.0
	baz=18,slow=20,SNR=3.1						
LPAZ	La Paz	8.55	109		Pn	10 54 32.5	+0.2
LPAZ	La Paz	8.55	109		Pn	10 54 33.9	+1.6
MNMC	Minye Minye	8.65	131		Pn	10 54 33.2	0.0
PB11	IPOC Station P	9.01	134		Pn	10 54 38.4	+0.3
GO01	Chusmiza	9.28	132		Pn	10 54 43.1	+1.0
PB01	IPOC Station P	10.02	139	Pn	Pn	10 54 52.7	+0.9
PB01					Sn	10 56 38.9	-4.3
PB04	IPOC Station P	10.61	146	Pn	Pn	10 55 00.5	+0.4
PB10	IPOC Station P	11.39	151	Pn	Pn	10 55 10.5	-0.1
LVC	Limon Verde	11.54	142	P	Pn	10 55 14.7	+1.8
	1.0nm,0.3s,baz=320,slow=11,SNR=9.4						
LVC				S	Sn	10 57 19.4	-1.5
	0.5nm,0.3s,baz=41,slow=20,SNR=4.8						
LVC	Limon Verde	11.54	142	Pn	Pn	10 55 14.5	+1.6
GO02	Mina Guanaco	13.25	151	Pn	Pn	10 55 38.0	+1.7
SAML	Samuel	13.87	72	Pn	Pn	10 55 42.2	-2.3
FLOC	Florencia	15.09	3	Pn	Pn	10 56 00.7	-0.3
SIV	San Ignacio	15.14	101	P	Pn	10 56 02.5	+0.8
	0.1nm,0.3s,baz=287,slow=14,SNR=2.2						
CFA	Coronel Fontan	19.49	158	P	P	10 56 55.6	+1.1
	0.3nm,0.3s,baz=329,slow=5.9,SNR=2.8						
PLCA	Paso Flores	27.55	170	P	P	10 58 14.9	+0.8
	1.1nm,0.9s,baz=354,slow=10,SNR=3.2						
PLCA	Paso Flores	27.55	170	P	P	10 58 15.3	+1.2
PLCA				IAmb	IAmb	10 58 55.9	
	comp=Z,18nm,2.0s						
TXAR	Lajitas Array	50.06	329	pP	pP	11 01 39.7	+7.8
	comp=Z,0.2nm,0.6s,baz=152,slow=7.9,SNR=3.5						
HDIL	Hopedale	55.14	348	P	P	11 01 59.1	-0.2
HDIL				IAmb	IAmb	11 03 56.0	
	comp=Z,49nm,1.9s						
YKA	Yellowknife Ar	81.44	343	pP	pP	11 05 00.5	+6.6
	comp=Z,0.1nm,0.4s,baz=138,slow=6.6,SNR=4.5						
TORD	Torodi Ar. Bea	81.92	74	P	P	11 04 45.5	-1.5
	comp=Z,1.1nm,0.7s,baz=259,slow=5.0,SNR=5.6						
SONM	Songino Array	145.76	356	PKPbc	PKPdf	11 12 05.8	+0.2
	comp=Z,0.3nm,0.7s,baz=357,slow=5.8,SNR=3.5						
SONM				pPKPbc	sPKPab	11 12 23.4	+2.7
	comp=Z,0.8nm,0.9s,baz=344,slow=1.0,SNR=4.4						

IDC 01 11:19:23.5±3.1, 11°.45S×164°.80E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.6/41, mbtmp3.8/4, ML3.5/1, Error ellipse: s-maj=64.1km s-min=43.9km az=79.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.68	172	Pn	Pn	11 21 57.8	-0.1
	0.4nm,0.3s,baz=306,slow=18,SNR=6.9						
WRA	Warramunga Arr	30.48	250	P	P	11 25 38.5	+0.1
	0.6nm,0.8s,baz=80,slow=9.2,SNR=2.8						
ASAR	Alice Springs	31.78	243	P	P	11 25 49.8	-0.1
	0.5nm,0.6s,baz=75,slow=9.5,SNR=5.0						
MKAR	Makanchi Array	93.19	317	P	P	11 32 39.8	-0.1
	0.3nm,0.7s,baz=90,slow=4.3,SNR=4.7						

IDC 01 11:21:52.2±9.0, 20°.41S×178°.38W, h560km±105km, mb3.0/6, mb1 3.3/6, mb1mx3.0/36, mbtmp3.8/6, Error ellipse: s-maj=82.4km s-min=36.1km az=160.0

ISC 01 11:21:54.2±1.8, 20°.5S±0°.6×178°.4W±0°.3, h587km, n8, σ1s.09/8, mb3.5/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	44.14	257	P	P	11 29 12.3	+0.2
	1.7nm,0.7s,baz=87,slow=8.2,SNR=15						
WRA	Warramunga Arr	44.21	262	P	P	11 29 12.5	-0.1
	0.6nm,0.3s,baz=97,slow=8.7,SNR=2.0						
SEY	Seymchan	86.25	347	P	P	11 33 34.7	+0.8
	0.7nm,0.5s,baz=160,slow=15,SNR=4.2						
TXAR	Lajitas Array	87.37	57	P	P	11 33 41.4	+1.3
	0.6nm,1.1s,baz=201,slow=4.8,SNR=3.0						
ILAR	Eielson Array	88.36	13	P	P	11 33 43.4	-0.5
	0.2nm,0.3s,baz=217,slow=5.0,SNR=5.5						
PDAR	Pinedale Array	89.21	43	P	P	11 33 47.4	-1.1
	0.3nm,0.6s,baz=207,slow=5.0,SNR=3.3						
AKASG	Malin Array Be	142.78	331	PKP	PKPdf	11 40 19.9	-1.4
	0.3nm,0.5s,baz=43,slow=4.3,SNR=10.0						
GERES	GERESS Array B	150.05	344	PKPbc	PKiKP	11 40 40.4	+0.5
	0.5nm,0.5s,baz=38,slow=3.7,SNR=3.3						

NNC 01 11:53:50.0±3.6, 40°.80N×70°.25E, h0km, mb3.3, mpv3.3, Error ellipse: s-maj=27.4km s-min=19.9km az=54.0

SOME 01 11:53:50.9, 40°.82N×70°.18E, h20km

KRNET 01 11:53:59.8±0.1, 40°.90N×70°.46E, h25km, mb2.5

ISC 01 11:53:53.6±1.6, 40°.98N±0°.05×69°.93E±0°.07, h6km±12km, n16, σ1s.97/28, 16C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	1.14	143	⇑iP	Pb	11 54 16.3	+0.6
	baz=62						
BTK				⇑iS	Sg	11 54 28.4	-1.8
	baz=62						
IUG	Iuzhnay	1.17	4	eP	Pg	11 54 16.7	+0.6
	2.7nm,0.1s						
IUG				eS	Sn	11 54 35.6	+2.6
	84nm,0.2s						
IUG	Iuzhnay	1.17	4	P	Pg	11 54 15.8	-0.3
	2.7nm,0.1s						
IUG				S	Sn	11 54 35.1	+2.1
	84nm,0.2s						
JBG	Jabagly	1.52	17	P	Pn	11 54 20.4	-1.0
	17nm,0.2s						
JBG				S	Sg	11 54 42.7	+0.3
	36nm,0.4s						
ARK	Arkit	1.73	61	⇑iP	Pg	11 54 26.3	-0.6
	baz=52						
ARK				⇑iS	Sn	11 54 45.6	-1.3
	baz=52						
BRLS	Borolday	2.06	358	eP	Pn	11 54 27.1	-1.6
	0.7nm,0.2s						
BRLS				eS	Sn	11 54 52.9	-1.8
	6.3nm,0.4s						
BRLS	Borolday	2.06	358	Pg	Pn	11 54 25.6	-3.1
	7.7nm,0.2s						
BRLS				Lg	Lg	11 54 51.5	
	6.4nm,0.4s						
KK31	Karatay Array	2.17	11	⇑Pg	Pn	11 54 30.5	+0.2
	1.4nm,0.4s,baz=198,slow=15,SNR=19						
KK31				⇑Lg	Lg	11 54 59.8	
	2.9nm,0.4s,baz=196,slow=25,SNR=7.2						
ARSB	Arslanbob	2.33	80	⇑iP	Pn	11 54 34.4	+1.8
	baz=77						
ARSB				⇑iS	Sn	11 54 59.7	-1.9
	baz=77						
MRKS	Merke	3.03	53	eP	Pn	11 54 44.8	+2.6
	2.9nm,0.2s						
MRKS				eS	Sb	11 55 23.3	-2.0
	4.0nm,0.3s						
MRKS	Merke	3.03	53	Pg	Pn	11 54 44.2	+2.0
	2.9nm,0.2s						
MRKS				Lg	Lg	11 55 21.5	
	4.0nm,0.3s						
AML	Almayashu	3.05	67	⇑iP	Pn	11 54 45.2	+2.5
	baz=62						
AML				⇑iS	Sn	11 55 18.6	-1.1
	baz=62						
EKS2	Erkin-Say	3.33	58	⇑iP	Pn	11 54 49.5	+3.2
	baz=53						
EKS2				⇑iS	Sn	11 55 25.9	-0.4
	baz=53						
ARLS	Aral	3.42	74	⇓iP	Pn	11 54 50.0	+2.4
	baz=70						
ARLS				⇓iS	Sn	11 55 26.7	-1.8
	baz=70						
UCH	Uchtor	3.66	68	⇑iP	Pn	11 54 53.5	+2.4
	baz=65						
UCH				⇑iS	Sn	11 55 32.9	-1.9
	baz=65						
KBK	Karagaybulak	4.11	64	⇑iP	Pn	11 55 00.0	+2.9
	baz=61						
KBK				⇑iS	Sn	11 55 43.8	-1.7
	baz=61						

NEIC 01 12:00:38.3±1.6, 25°.08S±0°.09×174°.8W±0°.1, h12km±4km, mb4.4/12, Error ellipse: s-maj=17.4km s-min=8.6km az=126.0

IDC 01 12:00:49.2±5.6, 25°.49S×175°.17W, h60km±54km, mb3.9/12, mb1 4.1/12, mb1mx3.9/38, mbtmp4.2/12, ML4.8/1, MS3.5/5, *Ms1 3.4/5, ms1mx3.0/45, Error ellipse: s-maj=45.4km s-min=22.1km az=166.0*

ISC 01 12:00:45.8±0.7, **25°.38S**±0°.08×**175°.1W**±0°.1, **h35^{km}**, **n45**, σ**1^{s}.59**/34, **mb4.3**/13, **MS3.5**/6, **South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island** 48nm,0.3s,baz=1.1,slow=23,SNR=2.0	**4.59**	**212**	P	**Pn**	**12 01 52.9**	**+0.2**
RAO	153nm,0.3s,baz=85,slow=21,SNR=7.0			S	**Sn**	**12 02 46.7**	**+1.9**
RAO	**Raoul Island**	**4.59**	**212**	Pn	**Pn**	**12 01 53.3**	**+0.5**
RAO				Sn	**Sn**	**12 02 47.5**	**+2.7**
NIUE	**Niue**	**7.90**	**38**	Pn	Pn	12 02 29.8	-8.5
NIUE				Sn	Sn	12 03 46.3	-20
AFI	**Afiamalu**	**11.84**	**16**	Pn	Pn	12 03 22.6	-10
AFI				Sn	Sn	12 05 26.0	-17
OUZ	**Omahuta**	**13.81**	**222**	Pn	**Pn**	**12 03 59.6**	**+0.4**
URZ	**Urewera** 0.1nm,0.3s,baz=119,slow=5.9,SNR=3.5	**14.43**	**205**	P	Pn	12 04 00.4	-7.1
URZ	0.9nm,0.3s,baz=190,slow=23,SNR=10.0			S	Sn	12 06 36.7	-9.4
URZ	**Urewera**	**14.43**	**205**	Pn	**Pn**	**12 04 07.8**	**+0.3**
RAR	**Rarotonga** 8.2nm,0.3s,baz=270,slow=8.5,SNR=32	**14.69**	**77**	P	Pn	12 04 02.9	-8.3
RAR	comp=Z,67nm,22.0s,baz=273,slow=33			LR	LR	12 08 57.1	
RAR	**Rarotonga**	**14.69**	**77**	Pn	Pn	12 04 02.6	-8.6
BFZ	**Birch Farm**	**16.87**	**203**	P	**P**	**12 04 40.8**	**-0.2**
DZM	**Mont Dzumac** comp=Z,312nm,29.9s	**17.20**	**277**	*e*LR	LR	12 08 47.6	
DZM	**Mont Dzumac** 0.4nm,0.3s,baz=95,slow=15,SNR=3.8	**17.20**	**277**	P	**P**	**12 04 48.2**	**+3.4**
DZM	**Mont Dzumac**	**17.20**	**277**		**Pn**	**12 04 41.0**	**-2.6**
DZM	comp=Z,18nm,1.1s			IAmb	IAmb	12 04 43.6	
NOUC	**Port Laguerre**	**17.32**	**277**		**Pn**	**12 04 43.6**	**-1.4**
NOUC	comp=Z,20nm,1.0s			IAmb	IAmb	12 04 52.8	
THZ	**Tophouse**	**19.11**	**208**	P	**P**	**12 05 05.1**	**-0.6**
THZ	comp=Z,23nm,1.1s			IAmb	IAmb	12 05 12.9	
TBI	**Tubuai** comp=Z,204nm,33.8s	**23.45**	**90**	*e*LR	LR	12 11 03.3	
PPT2	**Papeete2** comp=Z,287nm,27.8s	**24.97**	**77**	*e*LR	LR	12 11 59.2	
PPT	**Papeete** comp=Z,64nm,19.6s,baz=284,slow=31	**24.98**	**77**	LR	LR	12 13 48.5	
HNR	**Honiara** comp=Z,61nm,19.9s,baz=141,slow=32	**28.51**	**299**	LR	LR	12 16 10.8	
EIDS	**Eidsvold**	**30.50**	**263**	P	**P**	**12 06 53.9**	**-1.8**
XMAS	**Kiritimati**	**32.20**	**35**	P	P	12 07 02.1	-8.5
CTA	**Charters Tower** comp=Z,3.0nm,0.7s,baz=88,slow=8.7,SNR=4.2	**35.93**	**270**	P	**P**	**12 07 43.1**	**0.0**
STKA	**Stephens Creek** comp=Z,143nm,18.3s,baz=185,slow=34	**38.35**	**250**	LR	LR	12 22 29.1	
AS31	**Alice Springs**	**46.18**	**261**	P	**P**	**12 09 06.0**	**-1.5**
ASAR	**Alice Springs** comp=Z,3.2nm,0.9s,baz=106,slow=7.9,SNR=23	**46.18**	**261**	P	**P**	**12 09 07.6**	**+0.1**
ASAR	comp=Z,107nm,20.4s,baz=150,slow=33			LR	LR	12 25 52.7	
WRA	**Warramunga Arr** comp=Z,1.1nm,0.7s,baz=102,slow=7.5,SNR=8.0	**46.74**	**266**	P	**P**	**12 09 11.6**	**-0.3**
FITZ	**Fitzroy Crossi** comp=Z,1.0nm,0.5s,baz=199,slow=5.9,SNR=3.7	**55.14**	**265**	P	**P**	**12 10 15.9**	**+0.9**
FITZ	**Fitzroy Crossi**	**55.14**	**265**	P	**P**	**12 10 13.3**	**-1.7**
FITZ	comp=Z,6.1nm,1.1s			IAmb	IAmb	12 10 17.4	
NWAO	**Narrogin (SRO)**	**58.67**	**246**	P	**P**	**12 10 38.0**	**-2.0**
QSPA	**South Pole Qui**	**64.71**	**180**	P	**P**	**12 11 18.2**	**-2.0**
MJAR	**Matsushiro Arr** comp=Z,1.4nm,0.9s,baz=176,slow=6.3,SNR=3.7	**75.69**	**323**	P	**P**	**12 12 28.5**	**+0.8**
PETK	**Petropavlovsk-** comp=Z,8.9nm,1.0s,baz=145,slow=8.7,SNR=3.6	**81.66**	**344**	P	**P**	**12 13 01.1**	**+1.0**
NVAR	**Mina Array Bea** comp=Z,1.9nm,1.0s,baz=222,slow=10,SNR=8.8	**82.82**	**41**	P	**P**	**12 13 08.2**	**+1.5**
USRK	**Ussuriysk Ar.** comp=Z,4.2nm,0.9s,baz=80,slow=2.3,SNR=6.4	**84.47**	**325**	P	**P**	**12 13 17.1**	**+2.3**
TXAR	**Lajitas Array** comp=Z,0.8nm,0.8s,baz=209,slow=8.1,SNR=9.4	**87.51**	**56**	P	**P**	**12 13 31.4**	**+1.1**
ANMO	**Albuquerque**	**88.43**	**50**	P	P	12 13 28.6	-6.1
PDAR	**Pinedale Array** comp=Z,0.3nm,0.7s,baz=204,slow=2.0,SNR=2.8	**90.73**	**42**	P	**P**	**12 13 46.5**	**+1.2**
IL31		**92.50**	**12**	P	P	12 13 47.2	-5.4
IL31	comp=Z,3.2nm,1.3s			IAmb	IAmb	12 13 52.2	
ILAR	**Eielson Array** comp=Z,0.9nm,0.9s,baz=222,slow=5.2,SNR=6.3	**92.50**	**12**	P	**P**	**12 13 52.5**	**-0.2**
CMAR	**Chiang Mai Arr** comp=Z,0.6nm,0.3s,baz=128,slow=2.5,SNR=3.3	**94.21**	**288**	P	**P**	**12 14 02.9**	**+1.2**
MKAR	**Makanchi Array** comp=Z,0.4nm,0.9s,baz=88,slow=3.5,SNR=3.5	**116.44**	**312**	PKP	**PKiKP**	**12 19 24.9**	**-0.9**
NB2	**NORSAR Subarra** comp=Z,0.5nm,0.6s,baz=7.8,slow=3.3	**144.09**	**355**	PKP	**PKPdf**	**12 20 15.8**	**-1.5**
NOA	**NORSAR Array B** comp=Z,2.0nm,0.9s,baz=6.2,slow=2.3,SNR=5.2	**144.09**	**355**	PKP	**PKPdf**	**12 20 15.9**	**-1.4**
AKASG	**Malin Array Be** comp=Z,1.3nm,0.7s,baz=48,slow=3.9,SNR=8.2	**148.55**	**330**	PKPbc	**PKiKP**	**12 20 28.6**	**-1.6**
BRTR	**Keskin Array B** comp=Z,1.0nm,1.0s,baz=349,slow=2.9,SNR=3.8	**152.00**	**308**	PKPbc	**PKiKP**	**12 20 37.3**	**-0.6**
BRTR	comp=Z,0.7nm,0.9s,baz=90,slow=1.4,SNR=4.1			PKPab	**sPKPbc**	**12 20 47.1**	**-2.9**

IDC 01 12:07:25.7±6.4, **6°.18N**×**123°.40E**, **h621^{km}**±90^{km}, **mb2.8**/5, **mb1 3.0**/5, **mb1mx2.5**/46, **mbtmp3.9**/5, **Error ellipse: s-maj=120.8km s-min=16.0km az=55.0**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr** 0.5nm,0.3s,baz=91,slow=5.4,SNR=3.3	**26.79**	**299**	P	P	12 12 19.6	+0.8
WRA	**Warramunga Arr** 1.0nm,0.5s,baz=331,slow=10,SNR=6.0	**28.10**	**158**	P	P	12 12 29.2	-0.9
ASAR	**Alice Springs** 0.8nm,0.3s,baz=338,slow=7.4,SNR=21	**31.38**	**161**	P	P	12 12 58.5	+0.3
STKA	**Stephens Creek** 0.6nm,0.4s,baz=338,slow=11,SNR=3.4	**41.63**	**156**	P	P	12 14 22.3	+0.6
MKAR	**Makanchi Array** 0.7nm,0.4s,baz=121,slow=8.6,SNR=11	**53.68**	**326**	P	P	12 15 50.7	-0.3
MKAR	0.1nm,0.3s,baz=117,slow=5.0,SNR=2.8			PcP	PcP	12 16 47.0	-0.1

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*SOME **01** 12:18:41.3, 39°.55N×73°.10E, h0^{km}*
*KRNET **01** 12:18:48.5±0.1, 39°.50N×73°.33E, mb2.8*
*NNC **01** 12:18:48.1±7.2, 39°.55N×73°.22E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=52.0km s-min=27.9km az=0.0*

ISC 01 12:18:48.2±3.1, **39°.3N**±0°.2×**73°.34E**±0°.05, **h4^{km}**±26^{km}, **n23**, σ**0^{s}.90**/38, **22C-5D**, **Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARSB	**Arslanbob** baz=52	**2.02**	**352**	⇑*i*P	**Pn**	**12 19 22.7**	**-0.4**
ARSB	baz=52			⇑*i*S	**Sn**	**12 19 47.8**	**-1.0**
BTK	**Batken** baz=87	**2.08**	**291**	⇑*i*P	**Pb**	**12 19 25.7**	**-0.8**
BTK	baz=87			⇑*i*S	**Sb**	**12 19 52.8**	**+0.1**
ARLS	**Aral** baz=17	**2.64**	**16**	⇑*i*P	**Pn**	**12 19 32.2**	**+0.5**
ARLS	baz=17			⇑*i*S	**Sn**	**12 20 03.5**	**-0.8**
AML	**Almayashu** baz=6.0	**2.82**	**5**	⇓*i*P	**Pn**	**12 19 34.5**	**+0.2**
AML	baz=6.0			⇓*i*S	**Sn**	**12 20 08.1**	**-0.8**
NRN	**Naryn** baz=46	**2.93**	**43**	⇓*e*P	**Pn**	**12 19 36.5**	**+0.8**
NRN	baz=46			⇓*i*S	**Sn**	**12 20 11.3**	**-0.2**
UCH	**Uchtor** baz=18	**3.03**	**17**	⇑*i*P	**Pn**	**12 19 37.6**	**+0.3**
UCH	baz=18			⇑*i*S	**Sn**	**12 20 13.6**	**-0.7**
KZA	**Kyzart** baz=29	**3.11**	**27**	⇑*i*P	**Pn**	**12 19 38.8**	**+0.5**
KZA	baz=29			⇑*i*S	**Sn**	**12 20 15.8**	**-0.3**
EKS2	**Erkin-Say** baz=6.0	**3.35**	**6**	⇑*i*P	**Pn**	**12 19 41.7**	**+0.3**
EKS2	baz=6.0			⇑*i*S	**Sn**	**12 20 20.6**	**-1.1**
MRKS	**Merke** 1.7nm,0.5s	**3.42**	**359**	*e*P	**Pn**	**12 19 42.2**	**0.0**
MRKS	4.0nm,0.5s			*e*S	**Sn**	**12 20 25.4**	**+2.1**
MRKS	**Merke** 5.4nm,0.2s	**3.42**	**359**	Pg	**Pn**	**12 19 43.1**	**+0.8**
MRKS	4.0nm,0.6s			Lg	Lg	12 20 25.2	
AAK	**Ala-Archa** baz=15	**3.42**	**14**	⇑*i*P	**Pn**	**12 19 42.7**	**+0.2**
AAK	baz=15			⇑*i*S	**Sn**	**12 20 22.5**	**-1.0**
AAK	**Ala-Archa** 1.8nm,0.4s	**3.42**	**14**	Pn	**Pn**	**12 19 42.6**	**+0.2**
AAK	5.5nm,0.8s			⇑Lg	Lg	12 20 28.6	
KBK	**Karagaybulak** baz=21	**3.54**	**20**	⇑*i*P	**Pn**	**12 19 44.5**	**+0.4**
KBK	baz=21			⇑*i*S	**Sn**	**12 20 25.5**	**-1.0**
ULHL	**Ulahol** baz=38	**3.66**	**36**	⇑*i*P	**Pn**	**12 19 46.6**	**+0.9**
ULHL	baz=38			⇑*i*S	**Sn**	**12 20 28.9**	**-0.4**
IUG	**Iuzhnay** 1.0nm,0.4s	**3.78**	**319**	*e*P	**Pn**	**12 19 46.8**	**-0.4**
IUG	13nm,0.6s			*e*S	**Sn**	**12 20 32.9**	**+0.7**
IUG	**Iuzhnay** 0.9nm,0.2s	**3.78**	**319**	Pg	**Pn**	**12 19 46.8**	**-0.4**
IUG	13nm,0.4s			Lg	Lg	12 20 31.0	
USP	**Ospenovka** baz=13	**4.03**	**12**	⇑*i*P	**Pn**	**12 19 51.2**	**+0.5**
USP	baz=13			⇑*i*S	**Sn**	**12 20 37.0**	**-1.4**
KST	**Kastek** 2.1nm,0.6s	**4.21**	**27**	Pg	**Pb**	**12 20 02.1**	**-0.7**
KST	5.4nm,0.6s			Lg	Lg	12 20 57.8	
DGS	**Degeres** 2.1nm,0.4s	**4.32**	**24**	Pg	**Pb**	**12 20 04.3**	**-0.4**
DGS	3.2nm,0.5s			Lg	Lg	12 21 00.9	
KK31	**Karatay Array** 0.3nm,0.3s,baz=147,slow=14,SNR=6.1	**4.34**	**331**	⇓Pg	**Pb**	**12 20 05.1**	**+0.2**
KK31	0.9nm,0.4s			⇑Sn	**Sn**	**12 20 48.7**	**+2.9**
KK31				Lg	Lg	12 21 00.5	
TNSS	**Tian-Shan** 2.0nm,0.4s	**4.60**	**35**	Pg	**Pb**	**12 20 09.6**	**-0.1**
TNSS	3.1nm,0.7s			Lg	Lg	12 21 10.3	
KTBS	**Karatobe** 0.9nm,0.3s	**5.05**	**29**	Pg	**Pb**	**12 20 18.0**	**+0.9**
KTBS	5.7nm,0.4s			Lg	Lg	12 21 24.8	
KUU	**Kurty** 1.0nm,0.2s	**5.09**	**25**	Pg	**Pb**	**12 20 17.5**	**-0.2**
KUU	4.5nm,0.6s			Lg	Lg	12 21 23.7	

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*SOME **01** 12:46:31.1, 40°.23N×77°.08E, h5^{km}*
*NNC **01** 12:46:32.8±1.1, 40°.25N×77°.10E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=7.3km s-min=6.4km az=175.0*
*KRNET **01** 12:46:34.8±0.1, 40°.30N×77°.17E, mb3.1*

ISC 01 12:46:33.6±2.4, **40°.29N**±0°.09×**77°.06E**±0°.04, **h9^{km}**±15^{km}, **n61**, σ**1^{s}.41**/93, **27C-12D**, **Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRN	**Naryn** baz=21	**1.40**	**325**	⇑*i*P	**Pg**	**12 47 02.0**	**+1.5**
NRN	baz=21			⇑*i*S	**Sg**	**12 47 22.1**	**+3.4**
KDJ	**Kajisay** baz=1.0	**1.84**	**3**	⇑*i*P	**Pg**	**12 47 08.8**	**-0.2**
KDJ	baz=1.0			⇑*i*S	**Sg**	**12 47 34.2**	**+1.3**
ULHL	**Ulahol** baz=41	**2.05**	**343**	⇑*i*P	**Pg**	**12 47 12.6**	**-0.4**
ULHL	baz=41			⇑*i*S	**Sg**	**12 47 40.9**	**+1.3**
ULHL	**Ulahol** SNR=11	**2.05**	**343**	P	**Pg**	**12 47 13.7**	**+0.7**
KZA	**Kyzart** baz=21	**2.25**	**323**	⇑*i*P	**Pg**	**12 47 15.9**	**-0.9**
KZA	baz=21			⇑*i*S	**Sg**	**12 47 46.4**	**+0.4**
KZA	**Kyzart** SNR=24	**2.25**	**323**	P	**Pg**	**12 47 17.9**	**+1.1**
BOOM	**Boomskoye usch** baz=38	**2.36**	**339**	⇓*i*P	**Pb**	**12 47 16.9**	**+0.5**
BOOM	baz=38			⇓*i*S	**Sg**	**12 47 48.2**	**-1.2**
PRZ	**Przheval'sk** baz=23	**2.41**	**24**	⇑*i*P	**Pb**	**12 47 17.3**	**0.0**
PRZ	baz=23			⇑*i*S	**Sb**	**12 47 48.2**	**+0.9**
ANVS	**Anan'yevo** baz=8.0	**2.54**	**10**	⇑*i*P	**Pb**	**12 47 18.6**	**-0.8**
ANVS	baz=8.0			⇑*i*S	**Sb**	**12 47 51.4**	**+0.7**
ARLS	**Aral** baz=7.0	**2.60**	**308**	⇑*i*P	**Pb**	**12 47 20.7**	**+0.2**
ARLS	baz=7.0			⇑*i*S	**Sb**	**12 47 54.8**	**+2.2**
UCH	**Uchtor** baz=15	**2.73**	**316**	⇑*i*P	**Pb**	**12 47 22.7**	**-0.2**
UCH	baz=15			⇑*i*S	**Sb**	**12 47 58.1**	**+1.5**
UCH	**Uchtor** SNR=8.4	**2.73**	**316**	P	**Pb**	**12 47 24.4**	**+1.5**
TNSS	**Tian-Shan** 23nm,0.6s	**2.75**	**358**	*e*P	**Pb**	**12 47 24.2**	**+1.0**
TNSS	35nm,0.6s			*e*S	**Sg**	**12 48 02.3**	**+0.3**
TNSS	**Tian-Shan** 23nm,0.6s	**2.75**	**358**	Pg	**Pb**	**12 47 24.2**	**+1.0**
TNSS	35nm,0.6s			Lg	Lg	12 48 02.3	
IZV	**Izvestkoviy** 28nm,0.5s	**2.77**	**353**	*e*P	**Pb**	**12 47 24.2**	**+0.9**
IZV	44nm,0.3s			*e*S	**Sg**	**12 48 02.7**	**+0.2**
IZV	**Izvestkoviy** 28nm,0.5s	**2.77**	**353**	Pg	**Pb**	**12 47 24.2**	**+0.9**
IZV	44nm,0.3s			Lg	Lg	12 48 02.7	
KBK	**Karagaybulak** baz=25	**2.85**	**327**	⇑*i*P	**Pb**	**12 47 24.1**	**-0.7**
KBK	baz=25			⇑*i*S	**Sb**	**12 48 00.4**	**+0.6**
KBK	**Karagaybulak** SNR=10	**2.85**	**327**	P	**Pg**	**12 47 26.6**	**-1.6**
KST	**Kastek** 6.8nm,0.6s	**2.87**	**344**	*e*P	**Pb**	**12 47 25.7**	**+0.6**
KST	33nm,0.5s			*e*S	**Sg**	**12 48 05.1**	**-0.9**
KST	**Kastek** 6.8nm,0.6s	**2.87**	**344**	Pg	**Pb**	**12 47 25.7**	**+0.6**
KST	33nm,0.5s			Lg	Lg	12 48 05.1	
MDOK	**Medeo** 13nm,0.4s	**2.87**	**360**	*e*P	**Pb**	**12 47 25.4**	**+0.2**
MDOK	51nm,0.5s			*e*S	**Sg**	**12 48 04.1**	**-1.9**
MDOK	**Medeo** 10nm,0.5s	**2.87**	**360**	Pg	**Pg**	**12 47 28.4**	**-0.3**
MDOK	57nm,0.9s			Lg	Lg	12 48 06.6	
MDOK	**Medeo** 13nm,0.4s	**2.87**	**360**	Pg	**Pb**	**12 47 25.4**	**+0.2**
MDOK	51nm,0.5s			Lg	Lg	12 48 04.1	
MTBS	**Maitube** 13nm,0.2s	**2.88**	**351**	*e*P	**Pb**	**12 47 26.3**	**+1.1**
MTBS	15nm,0.2s			⇑*i*S	**Sg**	**12 48 05.7**	**-0.5**
MTBS	**Maitube** 13nm,0.2s	**2.88**	**351**	Pg	**Pb**	**12 47 26.3**	**+1.1**
MTBS	15nm,0.2s			Lg	Lg	12 48 05.7	
KNDC	**Almaty** 9.0nm,0.3s	**2.93**	**359**	⇑Pg	**Pb**	**12 47 27.2**	**+1.1**
KNDC	62nm,0.5s			⇑Lg	Lg	12 48 08.6	
KOTS	**Kotyrbulak** 35nm,0.5s	**2.94**	**1**	*e*P	**Pb**	**12 47 26.2**	**-0.1**
KOTS	174nm,0.4s			*e*S	**Sg**	**12 48 05.8**	**-2.4**
KOTS	**Kotyrbulak** 35nm,0.5s	**2.94**	**1**	Pg	**Pb**	**12 47 26.2**	**-0.1**
KOTS	174nm,0.4s			Lg	Lg	12 48 05.8	
AAK	**Ala-Archa** baz=20	**3.04**	**321**	⇓*i*P	**Pb**	**12 47 26.7**	**-1.3**
AAK	baz=20			⇓*i*S	**Sb**	**12 48 05.0**	**-0.2**
AAK	**Ala-Archa** 3.8nm,0.4s	**3.04**	**321**	⇓Pg	**Pb**	**12 47 29.1**	**+1.2**
AAK	28nm,0.9s			⇓Lg	Lg	12 48 13.1	
DGS	**Degeres** 6.6nm,0.6s	**3.11**	**342**	*e*P	**Pb**	**12 47 29.5**	**+0.4**
DGS	22nm,0.5s			*e*S	**Sg**	**12 48 12.0**	**-1.4**
DGS	**Degeres** 6.6nm,0.6s	**3.11**	**342**	Pg	**Pb**	**12 47 29.5**	**+0.4**
DGS	22nm,0.5s			Lg	Lg	12 48 12.0	
FRU1	**Bishkek** baz=24	**3.11**	**325**	⇑*i*P	**Pb**	**12 47 27.6**	**-1.6**
FRU1	baz=24			⇑*i*S	**Sb**	**12 48 06.4**	**-0.8**
AML	**Almayashu** baz=6.0	**3.14**	**307**	⇑*i*P	**Pb**	**12 47 28.5**	**-1.3**
AML	baz=6.0			⇑*i*S	**Sb**	**12 48 08.1**	**-0.2**
AML	**Almayashu** SNR=15	**3.14**	**307**	P	**Pb**	**12 47 30.6**	**+0.8**
UZB	**Uzynbulak** 8.1nm,0.4s	**3.21**	**27**	*e*P	**Pb**	**12 47 31.6**	**+0.7**
UZB	18nm,0.7s			*e*S	**Sg**	**12 48 15.1**	**-1.7**
UZB	**Uzynbulak** 8.1nm,0.4s	**3.21**	**27**	Pg	**Pb**	**12 47 31.6**	**+0.7**
UZB	18nm,0.7s			Lg	Lg	12 48 15.1	
CHMS	**Chumysh** baz=27	**3.21**	**328**	⇓*i*P	**Pb**	**12 47 28.9**	**-2.0**
CHMS	baz=27			⇓*i*S	**Sb**	**12 48 08.9**	**-1.3**
CHMS	**Chumysh** SNR=8.9	**3.21**	**328**	P	**Pb**	**12 47 31.4**	**+0.5**
CHMS	**Chumysh** 11nm,0.6s	**3.21**	**328**	⇓Pg	**Pb**	**12 47 30.8**	**-0.1**
CHMS	8.7nm,0.6s			⇓Lg	Lg	12 48 17.8	
ARSB	**Arslanbob** baz=89	**3.27**	**290**	⇓*i*P	**Pb**	**12 47 30.8**	**-1.0**
ARSB	baz=89			⇓*i*S	**Sb**	**12 48 11.6**	**-0.1**
KURS	**Kuram** 6.6nm,0.7s	**3.30**	**14**	*e*P	**Pb**	**12 47 33.4**	**+1.0**
KURS	21nm,0.6s			*e*S	**Sg**	**12 48 18.6**	**-1.1**
KURS	**Kuram** 6.6nm,0.7s	**3.30**	**14**	Pg	**Pb**	**12 47 33.4**	**+1.0**
KURS	21nm,0.6s			Lg	Lg	12 48 18.6	
KPKS	**Kokpek** 4.8nm,0.4s	**3.40**	**20**	*e*P	**Pb**	**12 47 35.0**	**+1.0**
KPKS	49nm,0.6s			*e*S	**Sg**	**12 48 20.9**	**-1.9**
EKS2	**Erkin-Say** SNR=5.2	**3.42**	**315**	P	**Pb**	**12 47 34.5**	**0.0**
KTBS	**Karatobe** 11nm,0.4s	**3.43**	**355**	*e*P	**Pb**	**12 47 36.2**	**+1.5**
KTBS	20nm,0.4s			*e*S	**Sg**	**12 48 23.1**	**-0.8**
KTBS	**Karatobe** 11nm,0.4s	**3.43**	**355**	Pg	**Pb**	**12 47 36.2**	**+1.5**
KTBS	20nm,0.4s			Lg	Lg	12 48 23.1	
PDGK	**Podgornoye** 2.4nm,0.4s	**3.54**	**30**	Pg	**Pb**	**12 47 37.3**	**+0.9**
PDGK	16nm,0.6s			Lg	Lg	12 48 25.1	
USP	**Ospenovka** baz=27	**3.54**	**328**	⇑*i*P	**Pb**	**12 47 33.5**	**-2.9**
USP	baz=27			⇑*i*S	**Sb**	**12 48 16.7**	**-2.8**
USP	**Ospenovka** SNR=9.9	**3.54**	**328**	P	**Sg**	**12 48 28.4**	**+1.1**
CHKK	**Chushkaly** 11nm,0.4s	**3.56**	**359**	*e*P	**Pb**	**12 47 39.0**	**+2.1**
CHKK	22nm,0.5s			*e*S	**Sg**	**12 48 27.4**	**-0.6**
CHKK	**Chushkaly** 11nm,0.4s	**3.56**	**359**	Pg	**Pb**	**12 47 39.0**	**+2.1**
CHKK	22nm,0.5s			Lg	Lg	12 48 27.5	
KUU	**Kurty** 4.1nm,0.5s	**3.64**	**352**	*e*P	**Pb**	**12 47 38.9**	**+0.7**
KUU	16nm,0.6s			*e*S	**Sg**	**12 48 27.8**	**-2.8**
KUU	**Kurty** 4.1nm,0.5s	**3.64**	**352**	Pg	**Pb**	**12 47 38.9**	**+0.7**
KUU	16nm,0.6s			Lg	Lg	12 48 27.8	
SGDS	**Sogindy** 11nm,0.3s	**3.65**	**331**	Pg	**Pb**	**12 47 40.5**	**+2.3**
SGDS	6.6nm,0.5s			Lg	Lg	12 48 30.3	
MNBS	**Baschi** 2.8nm,0.5s	**3.92**	**14**	*e*P	**Pb**	**12 47 45.4**	**+2.5**
MNBS	15nm,0.4s			*e*S	**Sg**	**12 48 38.2**	**-1.2**
MNBS	**Baschi** 2.8nm,0.5s	**3.92**	**14**	Pg	**Pb**	**12 47 45.4**	**+2.5**
MNBS	15nm,0.4s			Lg	Lg	12 48 38.2	
ARXS	**Arharly** 3.2nm,0.7s	**3.96**	**8**	*e*P	**Pb**	**12 47 45.4**	**+1.7**
ARXS	16nm,0.7s			*e*S	**Sg**	**12 48 38.2**	**-2.7**
ARXS	**Arharly** 3.2nm,0.7s	**3.96**	**8**	Pg	**Pb**	**12 47 45.4**	**+1.7**
ARXS	16nm,0.7s			Lg	Lg	12 48 38.2	
DJR	**Jarkent** 1.0nm,0.4s	**4.52**	**26**	*e*P	**Pb**	**12 47 55.5**	**+2.3**
DJR	6.7nm,0.5s			*e*S	**Sg**	**12 48 55.8**	**-3.0**
DJR	**Jarkent** 1.0nm,0.4s	**4.52**	**26**	Pg	**Pb**	**12 47 55.5**	**+2.3**
DJR	6.7nm,0.5s			Lg	Lg	12 48 55.8	

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*DJA **01** 12:55:27.2±1.4, 3°S±4°×12°9E±°, h15^{km}±12^{km}, M4.5/13, mB5.5/2, mb5.1/5, MLv4.2/13, Mw(mB)5.0/2*
*IDC **01** 12:55:29.8±2.2, 2°.84S×129°.59E, h40^{km}±20^{km}, mb3.9/10, mb1 4.1/14, mb1mx3.8/45, mbtmp4.2/14, ML4.0/4, MS3.2/6, Ms1 3.2/6, ms1mx3.0/34, Error ellipse: s-maj=17.1km s-min=9.6km az=85.0*
*NEIC **01** 12:55:29.5±1.5, 2°.83S±0°.06×129°.49E±0°.06, h39^{km}±6^{km}, mb4.3/30, Error ellipse: s-maj=9.1km s-min=7.9km az=58.0*

ISC 01 12:55:28.3±0.4, **2°.83S**±0°.04×**129°.48E**±0°.05, **h28^{km}**, **n84**, σ**1^{s}.50**/89, **mb4.3**/24, **MS3.3**/3, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.75**	**227**	P	**Pb**	**12 55 43.0**	**+0.1**
AAI	**Ambon**	**1.54**	**236**	P	**Pb**	**12 55 55.5**	**-0.7**
BNDI	**Bandanaira**	**1.73**	**166**	P	**Pb**	**12 56 00.2**	**+0.7**
NLAI	**Namlea**	**2.41**	**260**	P	**Pn**	**12 56 06.6**	**+0.7**
SIJI	**Sorong** 39nm,0.3s,baz=238,slow=12,SNR=158	**2.64**	**43**	P	**Pn**	**12 56 08.8**	**-0.3**
SIJI	56nm,0.3s,baz=183,slow=24,SNR=14			S	**Sn**	**12 56 39.4**	**-0.9**
SIJI	comp=Z,412nm,18.9s,baz=93,slow=44			LR	LR	12 57 24.0	
FAKI	**Fak Fak**	**2.77**	**92**	P	**Pn**	**12 56 11.4**	**+0.6**
FAKI	**Fak Fak**	**2.77**	**92**		**Pn**	**12 56 11.7**	**+0.9**
FAKI				Sn	**Sn**	**12 56 44.4**	**+1.1**
LBMI	**Labuha**	**2.94**	**318**	P	**Pn**	**12 56 11.6**	**-1.6**
SANI	**Sanana**	**3.57**	**282**	P	**Pn**	**12 56 19.7**	**-2.2**
TNTI	**Ternate**	**4.15**	**329**	Pn	**Pn**	**12 56 28.9**	**-1.0**
RKPI	**Ransiki, Papua**	**4.87**	**75**	P	**Pn**	**12 56 40.3**	**+0.5**
SAUI	**Saumlaki** 0.6nm110nm,0.6s	**5.43**	**161**	P	**Pn**	**12 56 50.5**	**+3.0**

SAUI	Saumlaki	5.43	161	Pn	Pn	12 56 47.8	+0.4
KMSI	Cibinong	6.45	302	P	Pn	12 56 55.1	-6.4
APSI	Ampana	8.05	284	P	Pn	12 57 22.5	-1.0
	1.7nm4µm604nm,0.9s						
MRSI	Marisa	8.22	293	P	Pn	12 57 24.2	-1.6
	29nm,0.6s						
SOEI	Soe	8.61	217	Pn	Pn	12 57 32.3	+1.1
EDFI	Ende, Flores	9.73	232	P	Pn	12 57 54.5	+7.9
KAPI	Kappang	9.95	257	P	Pn	12 57 52.6	+3.1
	0.6nm,0.3s,baz=108,slow=4.7,SNR=6.5						
KAPI				LR	LR	13 02 03.8	
	comp=Z,104nm,21.7s,baz=80,slow=39						
MTN	Manton Dam	10.08	171		Pn	12 57 52.9	+1.6
MTN				Sn	Sn	12 59 43.7	+0.1
KNRA	Kununurra	12.79	183	Pn	Pn	12 58 28.4	0.0
KNRA				Sn	Sn	13 00 49.9	+0.1
FITZ	Fitzroy Crossi	15.63	194	P	Pn	12 59 05.9	-0.9
	0.4nm,0.3s,baz=22,slow=12,SNR=5.8						
FITZ				LR	LR	13 05 54.1	
	comp=Z,53nm,21.0s,baz=134,slow=40						
FITZ	Fitzroy Crossi	15.63	194		Pn	12 59 07.9	+1.1
JAGI	Jajag, Banyuwa	16.24	249	Pn	Pn	12 59 15.9	+1.2
JAGI				IAmb	IAmb	12 59 24.6	
	comp=Z,20nm,1.0s						
COEN	Coen	17.47	130	Pn	Pn	12 59 29.7	-0.5
WRA	Warramunga Arr	17.66	165	P	Pn	12 59 30.7	-1.7
	comp=Z,1.0nm,0.3s,baz=333,slow=12,SNR=28						
WRA				S	Sn	13 02 38.3	-10
	comp=Z,0.1nm,0.3s,baz=349,slow=24,SNR=4.1						
WB2	Warramunga Arr	17.66	165		Pn	12 59 30.6	-1.9
WR0	Warramunga Arr	17.73	164	P	Pn	12 59 33.0	-0.2
SBUM	Sibu	18.03	287		P	12 59 37.7	+0.3
KSM	Kuching	19.64	282	P	P	12 59 55.8	+0.8
KSM				IAmb	IAmb	12 59 58.7	
	comp=Z,19nm,1.0s						
AS31	Alice Springs	21.15	169	P	P	13 00 11.4	0.0
AS31				IAmb	IAmb	13 00 19.9	
	comp=Z,6.6nm,0.7s						
ASAR	Alice Springs	21.15	169	P	P	13 00 11.6	+0.2
	comp=Z,15nm,0.7s,baz=349,slow=12,SNR=118						
ASAR				S	S	13 04 04.2	-1.2
	comp=Z,3.0nm,0.8s,baz=349,slow=21,SNR=12						
LEM	Lembang	22.14	259	LR	LR	13 10 01.4	
	comp=Z,111nm,20.3s,baz=160,slow=39						
CTA	Charters Tower	23.71	138	P	P	13 00 38.6	+0.4
	comp=Z,4.3nm,0.9s,baz=301,slow=10,SNR=3.9						
MDSI	Maura Dua	25.30	266	P	P	13 00 54.5	+1.7
BBOO	Buckleboo	30.46	169	P	P	13 01 37.8	-1.0
BBOO				IAmb	IAmb	13 01 47.2	
	comp=Z,17nm,1.3s						
RPSI	Rantau Prapat	31.03	280	P	P	13 01 43.0	-1.0
RPSI				IAmb	IAmb	13 01 45.6	
	comp=Z,13nm,1.1s						
STKA	Stephens Creek	31.06	160	P	P	13 01 45.0	+0.9
	comp=Z,1.4nm,0.3s,baz=340,slow=8.6,SNR=6.8						
STKA	Stephens Creek	31.06	160	P	P	13 01 43.5	-0.6
GSI	Gunungsitoli	32.16	277	P	P	13 01 52.8	-1.2
CMAR	Chiang Mai Arr	36.76	306	P	P	13 02 35.1	+1.4
	comp=Z,0.5nm,0.3s,baz=128,slow=6.9,SNR=3.9						
CMAR				PcP	PcP	13 04 56.5	+0.6
	comp=Z,0.5nm,0.3s,baz=147,slow=1.1,SNR=5.5						
CAN	Canberra	37.05	153	P	P	13 02 36.4	+0.3
KSRS	Korea Array	40.10	358	LR	LR	13 19 26.7	
	comp=Z,21nm,18.6s,baz=142,slow=36						
SHL	Shillong	46.07	310	P	P	13 03 49.7	-0.6
HHC	Hu-ho-hao-te	46.45	341	*e*P	P	13 03 54.4	+1.5
LSA	Lhasa	48.89	314	P	P	13 04 12.2	-0.3
LSA				IAmb	IAmb	13 04 14.6	
	comp=Z,2.7nm,0.9s						
RAMN	Ramite	50.86	308	*e*P	P	13 04 27.5	+0.2
	comp=Z,21nm,0.7s						
JIRN	Jiri	51.52	309	*e*P	P	13 04 32.6	+0.2
	comp=Z,12nm,0.7s						
GUN	Gumba	51.88	309	*e*P	P	13 04 35.1	+0.1
	comp=Z,16nm,0.8s						
PKI	Pulchoki	52.09	308	*e*P	P	13 04 36.1	-0.4
PKIN	Phulchoki	52.10	308	*e*P	P	13 04 36.4	-0.2
KKN	Kakani	52.29	309	*e*P	P	13 04 37.8	-0.1
DMN	Daman	52.34	308	*e*P	P	13 04 38.4	0.0
	comp=Z,9.8nm,0.8s						
GKN	Gorkha	52.89	309	*e*P	P	13 04 42.3	0.0
DANN	Dangsing	53.74	309	*e*P	P	13 04 48.5	-0.2
	comp=Z,27nm,0.8s						
SONM	Songino Array	54.35	341	P	P	13 04 53.3	+0.7
	comp=Z,0.4nm,0.8s,baz=169,slow=8.8,SNR=2.0						
SONM				PcP	PcP	13 05 56.2	-0.1
	comp=Z,0.3nm,0.3s,baz=157,slow=4.7,SNR=4.4						
LBZ	Lake Benmore	54.76	145	P	P	13 04 55.8	+0.3
TUWZ	Tuamarina	55.36	140	P	P	13 05 00.1	+0.2
TLY	Talaya	58.58	341	P	P	13 05 22.4	-0.1
TLY				IAmb	IAmb	13 05 23.8	
	comp=Z,3.3nm,1.2s						
WMQ	Urumqi	59.65	326	*e*P	P	13 05 30.9	+0.7
WMQ				sP	sP	13 05 48.1	+5.9
PETK	Petropavlovsk-	60.56	19	LR	LR	13 35 05.6	
	comp=Z,26nm,18.7s,baz=65,slow=39						
MK31	Makanchi Array	64.49	326	P	P	13 06 02.2	-0.3
MKAR	Makanchi Array	64.49	326	P	P	13 06 02.2	-0.3
	comp=Z,1.4nm,0.6s,baz=123,slow=8.0,SNR=23						
MKAR				PcP	PcP	13 06 36.3	-0.3
	comp=Z,0.6nm,0.6s,baz=126,slow=5.5,SNR=4.2						
KSH	Kashi	64.63	317	P	P	13 06 05.1	+1.4
KSH				sP	sP	13 06 23.8	+8.0
KSH				PP	PP	13 08 30.3	+4.1
KSH				S	S	13 14 41.5	-0.7
KSH	Kashi	64.63	317	SS	SS	13 18 55.3	+1.9
MAKZ	Makanchi	64.67	326	P	P	13 06 03.1	-0.6
MAKZ				IAmb	IAmb	13 06 03.8	
	comp=Z,1.3nm,0.7s						
AAK	Ala-Archa	67.06	319	P	P	13 06 18.3	-1.0
AAK				IAmb	IAmb	13 06 28.3	
	comp=Z,4.4nm,1.4s						
ZAA0	Zalesovo Array	67.64	333	P	P	13 06 21.8	-0.8
ZAA0				IAmb	IAmb	13 06 22.7	
	comp=Z,3.0nm,0.9s						
ZALV	Zalesovo Beam	67.64	333	P	P	13 06 22.1	-0.5
	comp=Z,2.2nm,0.7s,baz=106,slow=5.2,SNR=10						
SEY	Seymchan	67.83	11	P	P	13 06 23.8	+0.2
	comp=Z,1.0nm,0.6s,baz=223,slow=6.9,SNR=7.2						
GAR	Garm	68.39	314	P	P	13 06 26.8	-1.0
GAR				IAmb	IAmb	13 06 29.4	
	comp=Z,8.5nm,1.3s						
KURK	Kurchatov	68.72	328	P	P	13 06 29.1	-0.3
KK31	Karatay Array	69.90	318	P	P	13 06 36.7	-0.2
KK31				IAmb	IAmb	13 06 44.2	
	comp=Z,2.0nm,1.0s						
KKAR	Karatay Array	69.90	318	P	P	13 06 36.6	-0.3
KKAR				IAmb	IAmb	13 06 44.3	
	comp=Z,2.0nm,1.0s						
BVAR	Borovoye Array	74.29	327	P	P	13 07 03.0	+0.1
	comp=Z,2.5nm,0.9s,baz=127,slow=6.3,SNR=10						
BRVK	Borovoye	74.36	327	P	P	13 07 03.0	-0.4
BRVK				IAmb	IAmb	13 07 04.3	
	comp=Z,3.7nm,0.9s						
ABKAR	Akbulak array	78.94	321	P	P	13 07 29.0	-0.4
ABKAR				IAmb	IAmb	13 07 34.0	
	comp=Z,2.8nm,0.8s						
AKTO	Aktyubinsk	80.48	322	P	P	13 07 37.8	+0.1
	comp=Z,2.1nm,0.6s,baz=111,slow=6.0,SNR=10.0						
RAYN	Ar Rayn	85.60	294	P	P	13 08 04.5	-0.3
QSPA	South Pole Qui	87.12	180	P	P	13 08 10.8	-0.7
QSPA				IAmb	IAmb	13 08 24.2	
	comp=Z,4.6nm,1.5s						
PPLA	Purkeypile	87.19	27	P	P	13 08 12.6	+0.7
RND	Reindeer	88.78	26	P	P	13 08 19.8	+0.4
CPUP	Villa Florida	150.27	168	PKPbc	PKPbc	13 15 17.0	-0.6
	comp=Z,3.3nm,0.8s,baz=186,slow=3.3,SNR=7.0						
CPUP	Villa Florida	150.27	168		PKiKP	13 15 18.5	+0.1

KEA 01 13:07:59.6±0.0**,40°.48N×122°.18E,h0km,ML2.5**/4**,**
Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUJ	Sinuiju	1.81	101	Pg	Pb	13 08 33.7	+0.1
SUJ				Sg	Sb	13 08 56.9	+0.2
PYS	Pyongsong	3.08	112	Sg	Sg	13 09 36.1	-2.5
PYAG	Pyongyang	3.10	116	Sg	Sg	13 09 37.6	-1.7
KGE	Kanggye	3.40	81	Sg	Sg	13 09 47.0	-1.8
HJU	Haeju	3.67	130	Sg	Sg	13 09 55.8	-1.8
HHU	Hamhung	4.13	96	Sg	Sg	13 10 11.0	-1.3

*KRNET **01** 13:10:57.5±0.1,41°.33N×69°.88E,mb2.6*
*SOME **01** 13:10:57.6,40°.87N×70°.58E,h10km*
ISC 01 13:11:03.0±1.9**,41°.13N**±0°.05×**70°.22E**±0°.07**,h7km**±15km**,**
n11,σ**1s.67**/21**,10C-4D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	1.03	352	*e*P	Pg	13 11 23.9	+1.1
	1.8nm,0.2s						
IUG				*e*S	Sn	13 11 42.4	+3.7
	25nm,0.4s						
BTK	Batken	1.16	157	⇑*i*P	Pb	13 11 24.5	-1.0
	baz=50						
BTK				⇑*i*S	Sn	13 11 44.5	+2.6
	baz=50						
ARK	Arkit	1.47	62	⇑*i*P	Pn	13 11 28.2	-1.9
	baz=74						
ARK				⇑*i*S	Sb	13 11 49.7	0.0
	baz=74						
BRLS	Borolday	1.92	352	*e*P	Pn	13 11 33.7	-2.5
	0.5nm,0.2s						
BRLS				*e*S	Sn	13 11 59.0	-1.7
	4.9nm,0.2s						
KK31	Karatay Array	1.99	6	Pg	Pn	13 11 37.4	+0.3
	0.5nm,0.2s,baz=184,slow=17,SNR=26						
KK31				Lg	Lg	13 12 05.4	
	1.2nm,0.3s,baz=178,slow=26,SNR=7.5						
ARSB	Arslanbob	2.09	84	⇑*i*P	Pn	13 11 38.0	-0.6
	baz=89						
ARSB				⇑*i*S	Sb	13 12 07.9	+0.3
	baz=89						
MRKS	Merke	2.76	53	*e*P	Pn	13 11 48.2	+0.4
	5.5nm,0.4s						
MRKS				*e*S	Sn	13 12 23.1	+1.6
	3.8nm,0.4s						
AML	Almayashu	2.79	68	⇑*i*P	Pn	13 11 47.1	-1.4
	baz=73						
AML				⇑*i*S	Sn	13 12 23.4	+0.8
	baz=73						
EKS2	Erkin-Say	3.07	59	⇑*e*P	Pn	13 11 50.1	-1.9
	baz=64						
EKS2				⇑*i*S	Sn	13 12 28.9	-0.1
	baz=64						
UCH	Uchtor	3.40	70	⇓*i*P	Pn	13 11 55.8	-1.1
	baz=74						
UCH				⇓*i*S	Sn	13 12 38.2	+0.6
	baz=74						
KZA	Kyzart	3.89	74	⇓*i*P	Pn	13 12 02.9	-0.7
	baz=78						
KZA				⇓*i*S	Sn	13 12 50.8	+1.1
	baz=78						

*IDC **01** 13:15:35.0±2.2,30°.38S×177°.51W,h0km,mb3.8/3,*
mb1 4.0/4,mb1mx3.8/25,mbtmp3.9/4,ML3.9/1,Error
ellipse: s-maj=48.2km s-min=21.8km az=100.0
*NEIC **01** 13:15:36.0±2.6,30°.50S±0°.07×177°.48W±0°.06,h10km±2km,*
mb4.3/6,Error ellipse: s-maj=11.3km s-min=8.5km
az=170.0
ISC 01 13:15:37.7±2.1**,30°.51S**±0°.07×**177°.5W**±0°.3**,h33km,n16,**
σ**2s.17**/17**,mb4.1**/6**,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.31	342	Pn	Pn	13 15 59.3	-0.5
	435nm,0.3s,baz=91,slow=12,SNR=25						
RAO				Sn	Sn	13 16 15.8	-0.2
	345nm,0.3s,baz=108,slow=20,SNR=4.7						
RAO	Raoul Island	1.31	342	Pn	Pn	13 15 59.2	-0.5
RAO					Pb	13 15 59.5	-2.3
URZ	Urewera	8.94	209	Pn	Pn	13 17 40.4	-4.0
	0.2nm,0.3s,baz=277,slow=5.5,SNR=8.0						
URZ				Sn	Sn	13 19 22.8	-1.1
	1.0nm,0.3s,baz=171,slow=21,SNR=7.1						
URZ	Urewera	8.94	209		Pn	13 17 41.5	-3.0
RPZ	Rata Peaks	16.03	212	Pn	Pn	13 19 21.8	+1.2
	0.5nm,0.3s,baz=56,slow=7.3,SNR=3.5						
RPZ	Rata Peaks	16.03	212	IAmb	IAmb	13 19 37.1	
	comp=Z,65nm,1.4s						
STKA	Stephens Creek	34.91	257	P	P	13 22 29.8	+3.4
	comp=Z,1.1nm,0.4s,baz=115,slow=10.0,SNR=5.8						
STKA	Stephens Creek	34.91	257	IAmb	IAmb	13 22 36.3	
	comp=Z,0.9nm,1.1s						
PMG	Port Moresby	39.07	295	P	P	13 23 00.6	-1.2
ASAR	Alice Springs	43.56	267	P	P	13 23 40.5	+1.7
	comp=Z,0.3nm,0.5s,baz=104,slow=7.5,SNR=11						
WR0	Warramunga Arr	44.38	272	P	P	13 23 46.9	+1.5
WR0				IAmb	IAmb	13 23 51.8	
	comp=Z,5.3nm,1.4s						
WB2	Warramunga Arr	44.55	272	P	P	13 23 48.7	+2.0
WB2				IAmb	IAmb	13 23 54.1	
	comp=Z,6.5nm,1.4s						
WRA	Warramunga Arr	44.56	272	P	P	13 23 47.5	+0.7
	comp=Z,0.7nm,0.5s,baz=111,slow=8.1,SNR=18						
WB0	Warramunga Arr	44.59	272	P	P	13 23 48.9	+1.9
WB0				IAmb	IAmb	13 23 56.0	
	comp=Z,4.2nm,1.2s						
FINES	FINESS Array B	145.40	340	PKPbc	PKPab	13 35 12.3	+0.6
	comp=Z,0.7nm,0.5s,baz=39,slow=5.3,SNR=9.3						
AKASG	Malin Array Be	151.66	323	PKPbc	PKiKP	13 35 31.1	+2.4
	comp=Z,0.2nm,0.3s,baz=59,slow=2.5,SNR=3.0						

*IDC **01** 13:18:09.0±1.3,14°.09N×93°.01W,h0km,mb3.7/8,*
mb1 4.0/12,mb1mx3.8/39,mbtmp3.8/12,ML3.6/4,MS3.4/5,
Ms1 3.4/5,ms1mx3.0/36,Error ellipse: s-maj=29.5km
s-min=16.8km az=32.0
*NEIC **01** 13:18:09.6±1.9,14°.07N±0°.05×93°.10W±0°.04,h7km±6km,*
Error ellipse: s-maj=7.3km s-min=6.1km az=168.0
*MEX **01** 13:18:10.8±0.8,14°.02N×93°.13W,h0km±51km,MD4.1*
*GCG **01** 13:18:29.4±0.3,14°.58N×91°.78W,h48km±32km,MD4.2*
ISC 01 13:18:10.3±3.5**,14°.15N**±0°.07×**93°.05W**±0°.05**,h7km**±22km**,**
n34,σ**1s.12**/40**,mb3.8**/8**,MS3.2**/3**,Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.07	45		Pb	13 18 31.3	+0.2
THIG					Sn	13 18 46.8	+0.1
THIG		1.07	45	*e*P	Pb	13 18 31.3	+0.2
THIG				*e*S	Sn	13 18 46.8	+0.1
ERG	Entre ros, C	1.46	79	*e*P	Pn	13 18 37.9	+0.8
STG3	Santiaguito 3,	1.54	69	*e*P	Pn	13 18 38.5	+0.2
PCIG		1.55	354		Pn	13 18 37.8	-0.6
PCIG					Sb	13 18 59.2	0.0
PCIG		1.55	354	*e*P	Pn	13 18 37.8	-0.6
PCIG				*i* S	Sb	13 18 59.2	0.0
FUG	Fuego 3	2.16	82	*e*P	Pn	13 18 46.5	-0.3
CCIG	Comitan	2.29	22		Pn	13 18 48.8	+0.1
CCIG					Sn	13 19 18.2	+0.9
CCIG	Comitan	2.29	22	*e*P	Pn	13 18 48.8	+0.1
CCIG				*i* S	Sn	13 19 18.2	+0.9
IXG	Ixpaco	2.53	89	*e*P	Pn	13 18 52.7	+0.7
TGIG		2.61	358		Pn	13 18 53.3	+0.4
TGIG					Lg	13 19 27.1	
TGIG		2.61	358	*e*P	Pn	13 18 53.3	+0.4
TGIG				*i* S	Sb	13 19 27.1	-2.7
APG	El Apazote	2.64	71	Pn	Pn	13 18 54.2	+0.6
	5.5nm,0.3s,baz=291,slow=7.7,SNR=35						
APG				Sn	Sn	13 19 26.1	+0.2
	14nm,0.3s,baz=297,slow=15,SNR=6.1						
CMIG	Matias Romero	3.41	329	Pn	Pn	13 19 04.6	+0.6
	1.9nm,0.3s,baz=137,slow=9.5,SNR=22						
CMIG				Sn	Sn	13 19 48.2	+3.4
	9.7nm,0.3s,baz=281,slow=23,SNR=7.4						
CMIG	Matias Romero	3.41	329		Pn	13 19 03.9	-0.1
CMIG					Sn	13 19 44.6	-0.1
CMIG	Matias Romero	3.41	329	*e*P	Pn	13 19 03.9	-0.1
CMIG				*i* S	Sn	13 19 44.6	-0.1
TEIG	Tepich	7.57	36	Pn	Pn	13 20 00.7	-0.3
	6.6nm,0.3s,baz=232,slow=0.3,SNR=18						
TEIG				Sn	Sn	13 21 28.9	+1.8
	2.0nm,0.3s,baz=320,slow=22,SNR=8.4						
TEIG				LR	LR	13 23 20.6	
	comp=Z,254nm,20.0s,baz=314,slow=41						
TXAR	Lajitas Array	18.02	329	P	P	13 22 23.1	+1.2
	0.0nm,0.3s,baz=145,slow=12,SNR=13						
MNTX	Cornudas Mount	20.80	329	P	P	13 22 52.0	-0.3
MNTX				IAmb	IAmb	13 22 59.9	
	comp=Z,3.2nm,1.1s						
SDV	Santo Domingo	22.57	101	P	P	13 23 12.3	+0.7
	comp=Z,2.3nm,0.6s,baz=298,slow=7.2,SNR=4.3						
TKL	Tuckaleechee C	22.98	20	LR	LR	13 32 16.3	
	comp=Z,61nm,19.5s,baz=212,slow=37						
ANMO	Albuquerque	23.98	332	P	P	13 23 26.9	+1.2
	comp=Z,0.7nm,0.8s,baz=153,slow=11,SNR=2.9						
ANMO	Albuquerque	23.98	332	IAmb	IAmb	13 23 47.4	
	comp=Z,3.7nm,1.4s						
ATAH	Atahualpa	25.67	145	LR	LR	13 31 19.7	
	comp=Z,68nm,18.2s,baz=307,slow=31						
PFO	Pinyon Flats O	28.75	316	LR	LR	13 34 31.3	
	comp=Z,57nm,18.3s,baz=190,slow=34						
PDAR	Pinedale Array	31.87	337	P	P	13 24 37.7	+1.4
	comp=Z,0.3nm,0.6s,baz=147,slow=3.5,SNR=3.7						
NVAR	Mina Array Bea	32.92	322	P	P	13 24 47.7	+2.1
	comp=Z,0.9nm,0.7s,baz=130,slow=11,SNR=7.8						
ULM	Lac du Bonnet	36.07	357	P	P	13 25 10.8	-1.6
	comp=Z,1.2nm,0.6s,baz=174,slow=8.4,SNR=3.9						
ULM	Lac du Bonnet	36.07	357	IAmb	IAmb	13 26 24.0	
	comp=Z,24nm,1.9s						
SIV	San Ignacio	43.54	132	P	P	13 26 13.8	-1.3
	comp=Z,1.0nm,1.0s,baz=293,slow=13,SNR=2.2						
YKA	Yellowknife Ar	50.65	347	P	P	13 27 09.7	-0.1
	comp=Z,3.2nm,0.8s,baz=149,slow=7.6,SNR=28						
ILAR	Eielson Array	62.30	337	P	P	13 28 32.9	0.0
	comp=Z,0.6nm,0.9s,baz=158,slow=3.9,SNR=6.0						
AKASG	Malin Array Be	98.15	33	LR	LR	14 18 20.2	
	comp=Z,37nm,18.1s,baz=295,slow=37						
CMAR	Chiang Mai Arr	145.51	340	PKPbc	PKPbc	13 37 48.1	-2.0
	comp=Z,0.4nm,0.3s,baz=347,slow=3.7,SNR=7.1						

*KRNET **01** 13:20:53.1±0.1,41°.26N×70°.20E,mb2.5*
ISC 01 13:20:55.6±1.7**,41°.13N**±0°.06×**70°.1E**±0°.1**,h10km,n7,**
σ**1s.62**/14**,10C-4D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	1.19	154	⇓*i*P	Pn	13 21 17.4	-1.0
	baz=58						
BTK				⇓*i*S	Sn	13 21 35.8	+1.1
	baz=58						
ARK	Arkit	1.52	64	⇑*i*P	Pn	13 21 20.7	-2.3
	baz=68						
ARK				⇑*i*S	Sn	13 21 40.1	-2.8
	baz=68						
KK31	Karatay Array	1.99	8	⇑Pn	Pg	13 21 33.3	-0.4
	0.2nm,0.2s,baz=184,slow=15,SNR=15						
KK31				⇑Sn	Sg	13 22 02.2	+2.7
	0.9nm,0.2s,baz=181,slow=32,SNR=15						
ARSB	Arslanbob	2.15	84	⇑*i*P	Pn	13 21 31.7	0.0
	baz=87						
ARSB				⇑*i*S	Sn	13 22 00.6	+2.1
	baz=87						
AML	Almayashu	2.84	68	⇓*i*P	Pn	13 21 41.1	-0.3
	baz=70						
AML				⇓*i*S	Sn	13 22 16.7	+0.8
	baz=70						
EKS2	Erkin-Say	3.11	59	⇑*i*P	Pn	13 21 44.3	-0.6
	baz=61						
EKS2				⇑*i*S	Sn	13 22 22.2	0.0
	baz=61						
UCH	Uchtor	3.45	70	⇑*i*P	Pn	13 21 49.5	-0.4
	baz=72						
UCH				⇑*i*S	Sn	13 22 31.5	+0.5
	baz=72						

*ISK **01** 13:23:40.5,37°.01N×27°.42E,h14km±2km,ML1.8/2*
DDA 01 13:23:41.4,37°.03N×27°.47E,h7km,ML1.2,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.04	337	*i* P	Pg	13 23 43.0	0.0
BDRM				*i* S	Sg	13 23 44.2	+0.2
BODT	Bodrum	0.13	286	PG	Pg	13 23 43.9	-0.3
BODT				SG	Sg	13 23 46.2	+0.1
DAT	Datca	0.31	163	PG	Pg	13 23 47.1	-0.4
DAT				SG	Sg	13 23 52.3	+0.7
DAT	Datca	0.31	163	*i* P	Pg	13 23 47.3	-0.2
DAT				*i* S	Sg	13 23 52.9	+1.3
AYDN	Tasoluk	0.71	27	*i* P	Pg	13 23 55.2	0.0
AYDN				*i* S	Sg	13 24 05.1	+0.6
AYDN	Tasoluk	0.71	27	*i* P	Pg	13 23 55.1	0.0
AYDN				*i* S	Sg	13 24 05.1	+0.7
AYDN				IAML		13 24 06.0	
	comp=N,12nm,0.5s						
AYDN				IAML		13 24 08.0	
	comp=E,12nm,0.4s						
TURN	Turunc	0.92	99	PG	Pg	13 23 54.5	-4.6
TURN				SG	Sg	13 24 04.9	-6.2
TURN	Turunc	0.92	99	*i* P	Pg	13 23 54.6	-4.6
TURN				IAML		13 24 07.0	
	comp=N,15nm,0.5s						
TURN				IAML		13 24 12.0	
	comp=E,8.9nm,0.6s						

DDA 01 13:23:51.0,37°.87N×29°.57E,h10km±6km**,ML1.5,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRDR	BURDUR-Merkez	0.43	114	*i* P	Pg	13 23 59.8	+0.4
BRDR				IAML		13 24 07.0	
	comp=N,74nm,0.3s						
BRDR				IAML		13 24 10.0	
	comp=E,64nm,0.5s						
KHAL	Karahalli	0.50	353	*i* P	Pg	13 24 00.2	-0.6
KHAL				*i* S	Sg	13 24 07.6	0.0
KHAL				IAML		13 24 13.0	
	comp=E,29nm,0.3s						
KHAL				IAML		13 24 16.0	
	comp=N,30nm,0.4s						
KZIL	AFYON_Kizioren	0.59	49	*i* P	Pb	13 24 03.2	-0.4
KZIL				IAML		13 24 16.0	
	comp=N,43nm,0.3s						
KZIL				IAML		13 24 19.0	
	comp=E,33nm,0.6s						
GOLH	Golhisar	0.63	181	*i* P	Pg	13 24 02.7	-0.6
GOLH				IAML		13 24 19.0	
	comp=N,66nm,0.7s						
USAK	Uak-Merkez	0.95	333	*i* P	Pn	13 24 10.0	-0.4
USAK				IAML		13 24 26.0	
	comp=E,28nm,0.4s						
USAK				IAML		13 24 53.0	
	comp=N,26nm,1.4s						
BAGO	Egridir - ISPA	0.97	83	*i* P	Pg	13 24 09.7	0.0
BAGO				*i* S	Sn	13 24 26.4	+1.7
BAGO				IAML		13 24 29.0	
	comp=E,9.6nm,1.1s						
BAGO				IAML		13 24 33.0	
	comp=N,9.7nm,0.8s						
MANT	Manisa	1.01	308	*i* P	Pn	13 24 11.6	+0.2
MANT				*i* S	Sb	13 24 24.6	+0.4
MANT				IAML		13 24 29.0	
	comp=E,22nm,0.5s						
MANT				IAML		13 24 29.0	
	comp=N,17nm,0.3s						
GDZ	Gediz	1.22	357	*i* P	Pg	13 24 15.8	+1.4
GDZ				*i* S	Sn	13 24 31.9	+1.0
GDZ				IAML		13 24 35.0	
	comp=N,6.2nm,0.4s						
GDZ				IAML		13 24 35.0	
	comp=E,5.3nm,0.5s						

IDC 01 13:46:44.4±4.3**,20°.79N×122°.05E,h0km,mb3.4**/3**,**
mb1 3.6/3**,mb1mx3.2**/30**,mbtmp3.4**/3**,Error ellipse:**
s-maj=326.3km s-min=28.1km az=61.0,Philippine
Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	41.37	318	P	P	13 54 32.0	-0.2
	0.2nm,0.7s,baz=112,slow=9.6,SNR=3.9						
WRA	Warramunga Arr	42.23	163	P	P	13 54 38.8	-0.6
	0.3nm,0.6s,baz=343,slow=9.1,SNR=2.7						
ASAR	Alice Springs	45.67	165	P	P	13 55 07.4	+0.3
	0.4nm,0.5s,baz=347,slow=7.1,SNR=14						

*IDC **01** 13:50:09.1±1.6,32°.30N×40°.12W,h0km,mb3.5/10,*
mb1 3.7/10,mb1mx3.5/45,mbtmp3.5/10,MS3.5/14,
Ms1 3.5/14,ms1mx3.2/45,Error ellipse: s-maj=50.2km
s-min=21.3km az=9.0
ISC 01 13:50:11.3±1.4**,32°.4N**±0°.3×**40°.1W**±0°.2**,h13km,n24,**
σ**1s.30**/10**,mb3.6**/10**,MS3.5**/14**,Northern Mid-Atlantic**
Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJG	San Juan	27.43	245	LR	LR	14 03 58.4	
	comp=Z,43nm,20.7s,baz=82,slow=30						
SCHQ	Schefferville	29.35	328	LR	LR	14 06 53.2	

	comp=Z,124nm,19.3s,baz=16,slow=34						
TKL	Tuckaleechee C	36.16	288	LR	LR	14 08 55.3	
	comp=Z,73nm,18.6s,baz=102,slow=31						
DBIC	Dimbokro	41.56	120	LR	LR	14 13 43.5	
	comp=Z,74nm,18.1s,baz=232,slow=34						
TORD	Torodi Ar. Bea	42.67	107	P	P	13 58 07.3	-0.6
	1.2nm,1.0s,baz=294,slow=11,SNR=3.7						
TORD				LR	LR	14 14 16.0	
	comp=Z,64nm,18.9s,baz=40,slow=34						
GERES	GERESS Array B	43.09	51	LR	LR	14 12 19.8	
	comp=Z,69nm,19.8s,baz=354,slow=31						
H10N2	ASCENSION HYDR	46.82	144	T	T	14 48 24.7	
	baz=329,slow=75,SNR=12						
H10N3	ASCENSION HYDR	46.83	144	T	T	14 48 24.4	
	baz=329,slow=75,SNR=12						
H10N1	ASCENSION HYDR	46.84	144	T	T	14 48 27.6	
	baz=329,slow=75,SNR=11						
H10S3	ASCENSION HYDR	47.71	145	T	T	14 49 38.8	
	baz=329,slow=74,SNR=51						
H10S2	ASCENSION HYDR	47.72	145	T	T	14 49 39.9	
	baz=251,slow=74,SNR=47						
CMIG	Matias Romero	51.54	267	LR	LR	14 18 25.9	
	comp=Z,27nm,20.3s,baz=105,slow=33						
SIV	San Ignacio	52.11	206	LR	LR	14 21 02.5	
	comp=Z,51nm,19.0s,baz=193,slow=36						
AKASG	Malin Array Be	53.03	48	P	P	13 59 27.8	0.0
	0.4nm,0.4s,baz=278,slow=6.8,SNR=3.5						
TXAR	Lajitas Array	53.97	285	P	P	13 59 36.4	+1.3
	0.2nm,0.6s,baz=90,slow=5.4,SNR=3.6						
TXAR				LR	LR	14 20 03.6	
	comp=Z,32nm,21.6s,baz=0.0,slow=33						
PDAR	Pinedale Array	54.63	302	P	P	13 59 38.2	-1.8
	0.4nm,0.9s,baz=106,slow=3.2,SNR=2.4						
PDAR				LR	LR	14 22 50.3	
	comp=Z,55nm,18.3s,baz=92,slow=36						
YKA	Yellowknife Ar	54.79	327	P	P	13 59 39.1	-1.4
	0.1nm,0.6s,baz=87,slow=6.9,SNR=2.7						
YKA				LR	LR	14 22 15.1	
	comp=Z,48nm,18.1s,baz=0.0,slow=35						
LVC	Limon Verde	61.22	211	LR	LR	14 26 35.4	
	comp=Z,38nm,20.6s,baz=193,slow=36						
INK	Inuvik	61.61	335	P	P	14 00 27.8	-0.2
	1.1nm,1.0s,baz=42,slow=2.3,SNR=2.1						
INK				LR	LR	14 26 43.5	
	comp=Z,54nm,18.8s,baz=65,slow=36						
NVAR	Mina Array Bea	62.27	300	P	P	14 00 33.1	-0.2
	0.1nm,0.3s,baz=84,slow=10,SNR=3.0						
EIL	Elat	63.08	71	LR	LR	14 27 04.4	
	comp=Z,28nm,19.1s,baz=154,slow=35						
ILAR	Eielson Array	67.89	334	P	P	14 01 11.0	+1.9
	0.4nm,0.9s,baz=57,slow=3.3,SNR=2.9						
KURBB	Kurchatov Arra	81.23	34	P	P	14 02 27.4	+0.6
	0.3nm,0.6s,baz=324,slow=4.6,SNR=2.2						
ZALV	Zalesovo Beam	81.75	29	P	P	14 02 30.3	+0.8
	0.3nm,0.3s,baz=306,slow=12,SNR=3.1						

*BGS **01** 13:58:06.5±0.3, 56°.85N×7°.51E, h10^{km}, ML3.2*
*NAO **01** 13:58:06.6±1.4, 56°.91N×7°.71E, h6^{km}±9^{km}, ML2.4*
*BER **01** 13:58:08.8±1.9, 56°.91N×7°.86E, h15^{km}, ML2.2, ML2.7(DNK), Confirmed Earthquake*
*DNK **01** 13:58:08.6±1.3, 56°.85N×7°.81E, h63^{km}±9^{km}, ML2.7, Hypocentre not reviewed by the ISC*
*HEL **01** 13:58:08.3±0.3, 56°.89N×8°.12E, h10^{km}, ML3.3, ML2.7(DNK), ML2.3(UPP), Confirmed Earthquake*
*UPP **01** 13:58:10.1±2.2, 56°.85N×7°.89E, h42^{km}±76^{km}, ML2.3, Suspected explosion*
ISC 01 13:58:03.5±0.8**, 56°.82N**±0°.03×**7°.70E**±0°.03**, h10**^{km}**, n83, σ2^{s}.32**/132**, 3C-3D, North Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOET	G??ttrup	0.86	75	⇑*i*P	Pn	13 58 24.3	+2.6
GOET	G??ttrup	0.86	75	⇑*i*P	Pn	13 58 24.4	+2.6
GOET	G??ttrup	0.86	75	⇑*i*P		13 58 24.4	
MUD	Monsted U'grnd	0.89	114	*e*P	Pn	13 58 24.5	+2.5
MUD				IAML		13 58 39.3	
	comp=N,388nm,0.2s						
MUD				IAML		13 58 40.0	
	comp=Z,207nm,0.2s						
MUD	Monsted U'grnd	0.89	114	*e*P	Pn	13 58 24.5	+2.5
MUD				IAML		13 58 39.3	
	comp=N,388nm,0.2s						
MUD				IAML		13 58 40.0	
	comp=Z,207nm,0.2s						
MUD	Monsted U'grnd	0.89	114	⇓*i*P	Pn	13 58 24.5	+2.5
MUD	Monsted U'grnd	0.89	114	*e*P	Pn	13 58 23.7	+1.6
MUD				*e*P	Pn	13 58 24.5	+2.5
MUD				⇓*i*P	Pn	13 58 24.6	+2.5
MUD				*e*S	Sb	13 58 34.6	+1.7
MUD				IAML		13 58 39.3	
	comp=N,388nm,0.2s						
MUD				IAML		13 58 39.6	
	comp=Z,246nm,0.3s						
MUD				IAML		13 58 40.0	
	comp=Z,207nm,0.2s						
MUD	Monsted U'grnd	0.89	114	⇓*i*P		13 58 24.6	
MUD				IAML		13 58 39.6	
	comp=Z,246nm,0.3s						
HOMB	Homborsund	1.52	16	Pg	Pb	13 58 33.1	+1.4
HOMB				Lg	Lg	13 58 50.9	
HOMB	Homborsund	1.52	16	*e*P	Pb	13 58 33.2	+1.4
HOMB				*e*S	Sn	13 58 50.9	+0.4
HOMB				*e*		13 58 53.9	
HOMB				IAML		13 58 54.2	
	comp=Z,113nm,0.2s						
HOMB	Homborsund	1.52	16	*i* P		13 58 33.1	
HOMB				IAML		13 58 54.6	
	comp=Z,50nm,0.3s						
SNART	Snartemo	1.55	350	*e*P	Pb	13 58 33.3	+1.1
	comp=Z,50nm,0.2s						
SNART				*e*S	Sn	13 58 50.9	-0.3
SNART				IAML		13 58 56.5	
	comp=Z,50nm,0.2s						
SNART				IAML		13 59 01.5	
	comp=Z,30nm,0.3s						
SNART	Snartemo	1.55	350	*i* P		13 58 33.5	
SNART				IAML		13 59 01.5	
	comp=Z,30nm,0.3s						
ONAU	Onsala	2.37	74	P	Pn	13 58 44.1	+1.6
ONAU				S	Sn	13 59 10.0	-1.5
ONAU	Onsala	2.37	74	*i* P	Pn	13 58 44.2	+1.8
ONAU	Onsala	2.37	74	*e*P	Pn	13 58 44.1	+1.6
ONAU				*e*S	Sn	13 59 10.0	-1.5
STAV	Stavanger	2.38	334	Pn	Pn	13 58 44.7	+2.2
STAV				Pg	Pb	13 58 49.0	+2.6
STAV				Lg	Lg	13 59 21.3	
STAV	Stavanger	2.38	334	*e*P	Pn	13 58 45.6	+3.2
STAV				*e*S	Sn	13 59 11.9	+0.3
STAV				IAML		13 59 24.0	
	comp=Z,24nm,0.2s						
TJOU	Tjoern	2.44	59	P	Pn	13 58 45.6	+2.1
TJOU				S	Sn	13 59 12.5	-0.9
TJOU	Tjoern	2.44	59	*i* P	Pn	13 58 45.7	+2.2
TJOU	Tjoern	2.44	59	*e*P	Pn	13 58 45.6	+2.1
TJOU				*e*S	Sn	13 59 12.5	-0.9
BLS5	Blasjo	2.69	346	*e*P	Pn	13 58 49.4	+2.5
BLS5				*e*S	Sn	13 59 18.7	-0.9
BLS5				IAML		13 59 45.6	
	comp=Z,19nm,0.4s						
KMY	Karmoy	2.73	332	*e*P	Pn	13 58 50.0	+2.6
KMY				*e*S	Sn	13 59 19.4	-1.0
KMY				IAML		13 59 35.9	
	comp=Z,15nm,0.2s						
FABU	Falkenberg	2.76	84	P	Pn	13 58 50.0	+2.3
FABU				S	Sn	13 59 19.5	-1.5
FABU	Falkenberg	2.76	84	*e*P	Pn	13 58 50.0	+2.3
FABU				*i* S	Sn	13 59 19.7	-1.3
FABU	Falkenberg	2.76	84	*e*P	Pn	13 58 50.0	+2.3
FABU				*e*S	Sn	13 59 19.5	-1.5
BORU	Boraas	2.87	71	P	Pn	13 58 51.0	+1.6
BORU				S	Sn	13 59 22.3	-1.6
BORU	Boraas	2.87	71	*i* P	Pn	13 58 52.3	+3.0
BORU				*i* S	Sn	13 59 22.6	-1.4
BORU	Boraas	2.87	71	*e*P	Pn	13 58 51.0	+1.6
BORU				*e*S	Sn	13 59 22.3	-1.6
COP	Copenhagen	2.87	111	*i* P	Pn	13 58 52.7	+3.4
COP				*e*S	Sn	13 59 22.3	-1.5
COP	Copenhagen	2.87	111	*e*P	Pn	13 58 52.8	+3.4
COP				*e*S	Sn	13 59 22.4	-1.5
COP				IAML		13 59 28.7	
	comp=Z,6.8nm,0.4s						
COP	Copenhagen	2.87	111	*e*P		13 58 52.8	
COP				*e*S		13 59 22.4	
COP				IAML		13 59 28.7	
	comp=Z,6.8nm,0.4s						
VANU	Vaenersborg	2.88	53	P	Pn	13 58 51.4	+1.9
VANU				S	Sn	13 59 22.5	-1.7
VANU	Vaenersborg	2.88	53	*e*P	Pn	13 58 51.4	+1.9
VANU				*e*S	Sn	13 59 22.5	-1.7
VANU	Vaenersborg	2.88	53	P		13 58 51.4	
VANU				S		13 59 22.5	
STRU	Stroemstad	2.89	38	P	Pn	13 58 51.5	+1.9
STRU				S	Sn	13 59 22.4	-1.9
STRU	Stroemstad	2.89	38	*i* P	Pn	13 58 51.4	+1.8
STRU				*e*P	Pn	13 58 51.5	+1.9
STRU				*e*S	Sn	13 59 22.5	-1.9
STRU	Stroemstad	2.89	38	*e*P	Pn	13 58 51.5	+1.9
STRU				*e*S	Sn	13 59 22.4	-1.9
KONO	Kongsberg	3.01	19	*e*P	Pn	13 58 53.0	+1.8
KONO				*e*S	Sn	13 59 25.5	-1.8
KONO				IAML		13 59 47.3	
	comp=Z,14nm,0.6s						
BJUU	Bjuv	3.05	102	P	Pn	13 58 53.9	+2.2
BJUU				S	Sn	13 59 26.6	-1.6
BJUU	Bjuv	3.05	102	*e*P	Pn	13 58 53.9	+2.2
BJUU				*e*S	Sn	13 59 26.6	-1.6
ODD1	Odda	3.15	350	*e*P	Pn	13 58 55.8	+2.6
ODD1				*e*S	Sn	13 59 28.9	-2.1
ODD1				IAML		13 59 57.9	
	comp=Z,22nm,0.4s						
GNOU	Gnosjoe	3.34	79	P	Pn	13 58 57.8	+2.1
GNOU				S	Sn	13 59 34.0	-1.4
GNOU	Gnosjoe	3.34	79	*e*P	Pn	13 58 57.8	+2.1
GNOU				*e*S	Sn	13 59 34.0	-1.4
GNOU	Gnosjoe	3.34	79	P		13 58 57.8	
GNOU				S		13 59 34.0	
LUNU	Lund	3.42	108	P	Pn	13 58 58.5	+1.6
LUNU	Lund	3.42	108	*i* P	Pn	13 58 58.6	+1.8
LUNU				*i* S	Sn	13 59 35.3	-2.1
LUNU	Lund	3.42	108	*e*P	Pn	13 58 58.5	+1.6
DEL	Delary	3.42	93	*i* P	Pn	13 59 00.2	+3.3
DEL				*i*		13 59 02.7	
DEL				*i* S	Sn	13 59 36.6	-0.9
NASU	Vaermlandsnaes	3.61	52	P	Pn	13 59 01.5	+2.1
NASU	Vaermlandsnaes	3.61	52	*e*P	Pn	13 59 01.5	+2.1
NASU	Vaermlandsnaes	3.61	52	P		13 59 01.5	
FINU	Finntorp	3.62	42	P	Pn	13 59 01.7	+2.1
FINU	Finntorp	3.62	42	*e*P	Pn	13 59 01.7	+2.1
FINU	Finntorp	3.62	42	P		13 59 01.7	
SKAR	Skarslia	3.89	4	*e*P	Pn	13 59 05.7	+2.4
SKAR				*e*S	Sn	13 59 46.8	-2.2
SKAR				IAML		14 00 18.9	
	comp=Z,13nm,0.6s						
NAO01	NORSAR Array S	4.36	21	*e*P	Pn	13 59 10.9	+1.1
NAO01				*e*S	Sn	13 59 56.9	-3.7
NAO01				IAML		14 00 28.7	
	comp=Z,4.0nm,0.4s						
BSD	Bornholm Skovb	4.40	110	*i* P	Pn	13 59 11.5	+1.2
BSD				*i* S	Sn	13 59 58.0	-3.4
BSD	Bornholm Skovb	4.40	110	*i* P	Pn	13 59 11.5	+1.2
BSD				*i* S	Sn	13 59 58.1	-3.4
BSD				IAML		14 00 38.7	
	comp=Z,4.3nm,0.3s						
BSD	Bornholm Skovb	4.40	110	*i* P		13 59 11.5	
BSD				*i* S		13 59 58.1	
BSD				IAML		14 00 38.7	
	comp=Z,4.3nm,0.3s						
NRA0	NORESS Array S	4.41	25	Pn	Pn	13 59 11.6	+1.2
	baz=207,slow=12						
NRA0				Sn	Sn	13 59 57.2	-4.5
	baz=198,slow=18						
NRA0	NORESS Array S	4.41	25	Pn	Pn	13 59 11.6	+1.2
	baz=207,slow=12						
NRA0				Sn	Sn	13 59 57.2	-4.5
	baz=198,slow=18						
HFS	Hagfors	4.57	41	Pn	Pn	13 59 14.5	+1.8
	baz=228,slow=16						
HFS				Sn	Sn	14 00 02.2	-3.6
	baz=220,slow=22						
HFS	Hagfors	4.57	41	Pn	Pn	13 59 14.5	+1.8
	baz=228,slow=16						
HFS				Sn	Sn	14 00 02.2	-3.6
	baz=220,slow=22						
NB2	NORSAR Subarra	4.61	22	Pn	Pn	13 59 14.2	+1.1
	baz=204,slow=14						
NB2	NORSAR Subarra	4.61	22	Pn	Pn	13 59 14.2	+1.1
	baz=204,slow=14						
FOO	Floro	4.98	345	*e*P	Pn	13 59 19.8	+1.5
FOO				*e*S	Sn	14 00 11.9	-4.0
AKN	Aaknes	5.39	356	Pn	Pn	13 59 25.0	+1.1
AKN				Sn	Sn	14 00 28.1	+2.2
AKN				Lg	Lg	14 00 51.9	
DRUM	Mains of Drumt	5.59	275	*e*P	Pn	13 59 28.2	+1.5
DRUM	Mains of Drumt	5.59	275	*e*P	Pn	13 59 28.2	+1.5
WACR	West Acre	5.80	228	*e*S	Sn	14 00 33.5	-2.4
WACR				IAML		14 00 35.4	
	comp=N,16nm,0.2s						
WACR				IAML		14 00 36.1	
	comp=E,15nm,0.4s						
WACR	West Acre	5.80	228	*e*S	Sn	14 00 33.5	-2.4
WACR				IAML		14 00 35.4	
	comp=N,16nm,0.2s						
WACR				IAML		14 00 36.1	
	comp=E,15nm,0.4s						
EDMD	Edmundbyers	5.80	254	*e*P	Pn	13 59 31.1	+1.5
EDMD				IAML		14 00 34.8	
	comp=E,26nm,0.2s						
EDMD				IAML		14 00 35.5	
	comp=N,27nm,0.2s						
EDMD	Edmundbyers	5.80	254	*e*P	Pn	13 59 31.1	+1.5
EDMD				IAML		14 00 34.8	
	comp=E,26nm,0.2s						
EDMD				IAML		14 00 35.5	
	comp=N,27nm,0.2s						
ESY	Stoneypath	5.81	265	*e*P	Pn	13 59 30.8	+1.2
ESY	Stoneypath	5.81	265	*e*P	Pn	13 59 30.8	+1.2
EKA	Eskdalemuir Ar	6.26	261	Pn	Pn	13 59 37.1	+1.2
EKA				Sn	Sn	14 00 43.2	-4.2
ESK	Eskdalemuir	6.29	261	*e*P	Pn	13 59 37.4	+1.1
ESK				*e*S	Sn	14 00 43.6	-4.5
ESK				IAML		14 00 46.2	
	comp=E,3.4nm,0.3s						
ESK				IAML		14 00 47.0	
	comp=N,4.3nm,0.2s						
ESK	Eskdalemuir	6.29	261	*e*P	Pn	13 59 37.4	+1.1
ESK				*e*S	Sn	14 00 43.6	-4.5
ESK				IAML		14 00 46.2	
	comp=E,3.4nm,0.3s						
ESK				IAML		14 00 47.0	
	comp=N,4.3nm,0.2s						
LBWR	Ladybower, Pea	6.40	242	*e*P	Pn	13 59 39.1	+1.3
LBWR				IAML		14 00 50.3	
	comp=E,14nm,0.2s						
LBWR				IAML		14 00 50.9	
	comp=N,13nm,0.2s						
LBWR	Ladybower, Pea	6.40	242	*e*P	Pn	13 59 39.1	+1.3
LBWR				IAML		14 00 50.3	
	comp=E,14nm,0.2s						
LBWR				IAML		14 00 50.9	
	comp=N,13nm,0.2s						
CWF	Charnwood Fore	6.62	236	*e*P	Pn	13 59 42.2	+1.4
CWF	Charnwood Fore	6.62	236	*e*P	Pn	13 59 42.2	+1.4
AAL	Aland	7.26	57	*e*P	Pn	13 59 49.3	-0.2
AAL				*e*S	Sn	14 01 06.9	-5.1
MCH1	Michaelchurch	7.89	237	*e*P	Pn	14 00 00.5	+2.3
MCH1				*e*S	Sn	14 01 22.5	-5.0
MCH1				IAML		14 01 26.1	
	comp=N,6.1nm,0.2s						
MCH1				IAML		14 01 26.2	
	comp=E,6.3nm,0.3s						
MCH1	Michaelchurch	7.89	237	*e*P	Pn	14 00 00.5	+2.3
MCH1				*e*S	Sn	14 01 22.5	-5.0
MCH1				IAML		14 01 26.1	
	comp=N,6.1nm,0.2s						
MCH1				IAML		14 01 26.2	
	comp=E,6.3nm,0.3s						
SLIT	Slitere, Latvi	7.96	78	*e*S	Sn	14 01 22.8	-6.3
RAF	Rauma	8.40	54	*e*P	Pn	14 00 05.1	0.0
RAF				MPN		14 00 05.4	
	comp=Z,0.8nm,0.4s						
MTSE	Matsula	8.82	71	*e*P	Pn	14 00 12.5	+1.6
KEF	Keuruu	10.22	51	MPN		14 00 32.7	
	comp=Z,1.6nm,0.2s						
FIA0	FINESS Array S	10.50	56	Pn	Pn	14 00 34.9	+1.0
	baz=248,slow=12						
FIA0				Sn	Sn	14 02 22.8	-8.7
	baz=266,slow=22						
KAF	Kangasniemi	10.83	53	MPN		14 00 40.5	
	comp=Z,1.6nm,0.3s						
ARA0	ARCESS Array S	14.98	25	Pn	Pn	14 01 32.8	-2.2
	baz=214,slow=14						

IDC 01 13:58:37.3±1.9**, 21°.42N×93°.20E, h0**^{km}**, mb3.3**/3**, mb1 3.4**/4**, mb1mx3.1**/38**, mbtmp3.2**/4**, ML3.4**/1**, Error ellipse: s-maj=82.9km s-min=25.6km az=53.0, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	6.15	118	Pn	Pn	14 00 11.5	+2.0
	0.2nm,0.3s,baz=309,slow=13,SNR=6.0						
CMAR				Pg	Pb	14 00 30.1	+4.7
	0.2nm,0.3s,baz=302,slow=18,SNR=4.8						
MKAR	Makanchi Array	26.82	343	P	P	14 04 19.7	+0.4
	0.2nm,0.6s,baz=139,slow=12,SNR=4.4						
WRA	Warramunga Arr	57.52	133	P	P	14 08 27.7	-1.0
	0.1nm,0.4s,baz=320,slow=7.5,SNR=5.8						
ASAR	Alice Springs	59.82	136	P	P	14 08 44.8	0.0
	0.2nm,0.5s,baz=324,slow=7.0,SNR=7.4						

PRE 01 14:14:45.6±1.0**, 28°.59S×20°.33E, h5**^{km}**, ML1.6, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEIM	Keimoes	0.57	102	*e*P	Pg	14 14 56.5	-0.1
KEIM				*e*S	Sg	14 15 04.3	+0.3
KEIM				AML	AML	14 15 06.8	
	comp=Z,20nm,0.2s						
KOMG	Komaggas	2.77	244	*e*P	Pn	14 15 31.0	+0.3
KOMG				*e*S	Sn	14 16 04.7	+0.2
KOMG				AML	AML	14 16 13.1	
	comp=Z,4.6nm,0.3s						
BOSA	Boshof	4.33	92	*i* P	Pn	14 15 56.6	+4.4
BOSA	Boshof	4.33	92	*e*P	Pn	14 15 52.3	+0.1
BOSA				*e*S	Sn	14 16 42.8	-0.4
BOSA				AML	AML	14 16 59.5	
	comp=Z,2.0nm,0.8s						
BOSA	Boshof	4.33	92	*i* P	Pn	14 15 56.6	+4.4

AUST 01 14:14:56.0±0.5**, 17°.70S×122°.30E, h10**^{km}**, Error ellipse: s-maj=7.9km s-min=3.3km az=151.0, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	3.20	98	P	Pn	14 15 47.7	+1.3
	baz=3.2,SNR=15						
FITZ				S	Sn	14 16 25.2	+0.6
	baz=3.2						
KNRA	Kununurra	6.51	73	P	Pn	14 16 32.4	+0.6
	baz=6.5,SNR=4.6						
KNRA				S	Sn	14 17 42.5	-3.7
	baz=6.5						
MEEK	Meekatharra	9.53	200	P	Pn	14 17 14.0	+0.7
	baz=9.6,SNR=3.3						
MEEK				S	Sn	14 18 53.7	-6.8
	baz=9.6						
MTN	Manton Dam	9.79	62	P	Pn	14 17 16.9	0.0
	baz=9.8,SNR=13						
MTN				S	Sn	14 18 59.6	-7.5
	baz=9.8						
KDU	Kakadu	11.01	64	P	Pn	14 17 33.0	-0.6
	baz=11						
OOD	Oodnadatta	15.90	132	P	Pn	14 18 39.8	-0.1
	baz=16						

*IDC **01** 14:17:15.5±4.4, 36°.98N×71°.73E, h99^{km}±27^{km}, mb3.5/7, mb1 3.5/13, mb1mx3.2/61, mbtmp3.8/13, Error ellipse: s-maj=49.4km s-min=22.8km az=155.0*
*NEIC **01** 14:17:20.2±2.1, 37°.30N±0°.04×71°.5E±0°.1, h132^{km}±6^{km}, mb4.1/9, Error ellipse: s-maj=12.1km s-min=6.2km az=93.0*
*NNC **01** 14:17:23.7±3.3, 37°.60N×71°.55E, h132^{km}±60^{km}, mb3.1, mpv3.7, Error ellipse: s-maj=33.8km s-min=26.3km az=137.0*
ISC 01 14:17:19.2±0.6**, 37°.18N**±0°.05×**71°.86E**±0°.07**, h142**^{km}**, n60, σ2^{s}.19**/68**, mb3.8**/11**, 2C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAR	Garm	2.19	327		Pn	14 17 53.7	-2.5
GAR				Sn	Sn	14 18 19.5	-5.2
CHGR	Chuyangaron	2.59	306		Pn	14 17 57.9	-3.2
CHGR				Sn	Sn	14 18 27.1	-6.4
KBL	Kabul	3.48	222		Pn	14 18 13.2	+0.5
NIL	Nilore	3.70	162		Pn	14 18 18.3	+2.9
AML	Almayashu	5.15	15	P	Pn	14 18 34.5	-0.2
	SNR=67						
UCH	Uchtor	5.44	21	P	Pn	14 18 39.0	+0.3
	SNR=16						
KZA	Kyzart	5.55	27	P	Pn	14 18 40.4	+0.2
	SNR=8.1						
EKS2	Erkin-Say	5.67	14	P	Pn	14 18 41.7	+0.2
	SNR=27						
THN	Thein Dam	5.70	145	*e*P	Pn	14 18 44.5	+2.7
THN				*e*S	Sn	14 19 45.0	-1.3
AAK	Ala-Archa	5.82	20	P	Pn	14 18 43.8	+0.4
	3.0nm,0.3s,baz=171,slow=6.5,SNR=44						
AAK				S	Sn	14 19 47.0	-2.3
	1.9nm,0.3s,baz=107,slow=3.9,SNR=17						
AAK	Ala-Archa	5.82	20	P	Pn	14 18 44.0	+0.5
	SNR=11						
AAK	Ala-Archa	5.82	20	⇓P	Pn	14 18 43.7	+0.2
	3.2nm,0.3s						
AAK				S	Sn	14 19 47.8	-1.5
	17nm,0.7s						
KK31	Karatay Array	6.01	351	P	Pn	14 18 44.6	-1.2
	2.4nm,0.3s,baz=176,slow=13,SNR=177						
KK31				⇑S	Sn	14 19 47.1	-6.5
	6.5nm,0.3s,baz=175,slow=28,SNR=4.7						
KK31	Karatay Array	6.01	351		Pn	14 18 44.7	-1.2
KKAR	Karatay Array	6.01	351		Pn	14 18 44.7	-1.2
ULHL	Ulahol	6.09	32	P	Pn	14 18 47.2	+0.1
	SNR=6.0						
DHRM	DHARAMSHALA	6.13	142	*e*P	Pn	14 18 49.2	+1.5
DHRM				*e*S	Sn	14 19 54.5	-2.4
DHRM				IAML		14 19 57.7	
	comp=E,234nm,0.4s						
DHRM				IAML		14 19 58.7	
	comp=N,223nm,0.6s						
CHMS	Chumysh	6.22	20	P	Pn	14 18 49.0	+0.3
	SNR=8.5						
CHMS	Chumysh	6.22	20	⇓P	Pn	14 18 48.8	+0.1
	comp=N,3.8nm,0.4s						
CHMS				⇓S	Sn	14 19 55.6	-3.2
	comp=N,7.5nm,0.7s						
SMLA	Simla	7.47	142	*e*P	Pn	14 19 06.2	+0.8
SMLA				*e*S	Sn	14 20 23.5	-5.3
SMLA				IAML		14 20 29.2	
	comp=N,66nm,0.2s						
JOSI	Joshimath	9.20	134	*e*P	Pn	14 19 29.2	+0.4
JOSI				*e*S	Sn	14 21 05.3	-5.6
JOSI				IAML		14 21 08.0	
	comp=E,54nm,0.3s						
JOSI				IAML		14 21 16.8	
	comp=N,46nm,0.6s						
GEYT	Alibeck	10.93	278	P	Pn	14 19 47.2	-4.5
	comp=N,1.5nm,0.3s,baz=103,slow=11,SNR=15						
GEYT				S	Sn	14 21 40.8	-12
	comp=N,1.0nm,0.3s,baz=98,slow=20,SNR=5.9						
GYA0B	ALIBECK ARRAY	10.93	278	Pn	Pn	14 19 47.2	-4.5
MK31	Makanchi Array	12.34	36	Pn	Pn	14 20 10.8	+0.8
MKAR	Makanchi Array	12.34	36	P	Pn	14 20 10.6	+0.6
	comp=N,0.1nm,0.3s,baz=221,slow=14,SNR=3.7						
DANN	Dangsing	13.33	128	*e*P	Pn	14 20 21.7	-1.4
	comp=N,13nm,0.2s						
GKN	Gorkha	14.12	127	*e*P	Pn	14 20 32.0	-1.1
	comp=N,15nm,0.2s						
KURBB	Kurchatov Arra	14.27	17	P	Pn	14 20 32.4	-2.2
	comp=N,0.0nm,0.3s,baz=207,slow=9.2,SNR=2.2						
KURK	Kurchatov	14.37	18	P	P	14 20 39.9	+1.1
KKN	Kakani	14.68	126	*e*P	Pn	14 20 39.0	-1.2
DMN	Daman	14.69	127	*e*P	Pn	14 20 39.7	-0.7
	comp=N,6.3nm,0.3s						
AB31	Akbulak array	14.85	328	⇑P	Pn	14 20 39.4	-2.4
	comp=N,0.5nm,0.4s,baz=137,slow=13,SNR=28						
ABKAR	Akbulak array	14.85	328		Pn	14 20 39.5	-2.3
PKIN	Phulchoki	14.90	126	*e*P	Pn	14 20 42.3	-0.7
	comp=N,7.7nm,0.4s						

PKI	Pulchoki	14.91	126	eP	Pn	14 20 41.9	-1.4
	comp=N,5.0nm,0.2s						
GUN	Gumba	14.99	124	eP	Pn	14 20 42.9	-1.4
	comp=N,6.1nm,0.3s						
JIRN	Jiri	15.37	124	eP	Pn	14 20 47.6	-1.3
	comp=N,23nm,0.3s						
BVAR	Borovoye Array	15.88	357	P	Pn	14 20 53.8	-0.8
	comp=N,0.5nm,0.3s,baz=164,slow=11,SNR=14						
BRVK	Borovoye	15.92	357	P	P	14 20 56.9	+1.0
RAMN	Ramite	16.11	125	eP	Pn	14 20 57.3	-0.7
	comp=N,13nm,0.4s						
AKTO	Aktyubinsk	16.55	328	P	Pn	14 21 03.3	+0.4
	comp=N,0.5nm,0.3s,baz=139,slow=11,SNR=14						
AKTO	Aktyubinsk	16.55	328	⇓P	P	14 21 03.6	+0.6
	comp=N,2.3nm,0.6s						
TAPN	Taplejung	16.59	122	eP	Pn	14 21 03.6	-0.2
	comp=N,5.0nm,0.3s						
ODAN	Odare	16.69	124	eP	P	14 21 05.0	+0.1
	comp=N,4.8nm,0.3s						
ZAA0	Zalesovo Array	19.02	24	P	P	14 21 30.9	+1.1
ZAA0				IAmb	IAmb	14 21 32.1	
	comp=Z,4.1nm,1.3s						
ZALV	Zalesovo Beam	19.02	24	P	P	14 21 31.1	+1.3
	comp=Z,0.8nm,0.3s,baz=212,slow=9.9,SNR=7.7						
ARU	Arti	21.23	339	P	P	14 21 54.3	+0.8
	comp=Z,0.4nm,0.3s,baz=160,slow=17,SNR=3.8						
FIA1	FINESS Array S	37.31	325	P	P	14 24 18.8	+1.6
FIA1				IAmb	IAmb	14 24 29.9	
	comp=Z,20nm,1.4s						
FINES	FINESS Array B	37.31	325	P	P	14 24 18.8	+1.6
	comp=Z,1.1nm,0.3s,baz=118,slow=9.5,SNR=19						
ARCES	ARCESS Array B	40.78	337	P	P	14 24 47.9	+1.9
	comp=Z,1.2nm,0.4s,baz=64,slow=5.6,SNR=13						
NC303	NORSAR Array S	44.19	323	P	P	14 25 15.5	+1.9
NB201	NORSAR Array S	44.22	323	P	P	14 25 15.3	+1.5
NB2	NORSAR Subarra	44.26	323	P	P	14 25 15.4	+1.2
	comp=Z,0.6nm,0.5s,baz=94,slow=7.9						
NOA	NORSAR Array B	44.26	323	P	P	14 25 15.5	+1.4
	comp=Z,0.8nm,0.5s,baz=108,slow=7.2,SNR=7.7						
NBO00	NORSAR Array S	44.47	323	P	P	14 25 15.3	-0.5
NBO00				IAmb	IAmb	14 25 23.5	
	comp=Z,11nm,1.2s						
TORD	Torodi Ar. Bea	66.42	269	P	P	14 27 53.9	+0.5
	comp=Z,0.2nm,0.4s,baz=38,slow=7.9,SNR=2.7						
TOLK	Toolik Lake Re	70.09	15	P	P	14 28 17.9	+2.4
TOLK				IAmb	IAmb	14 28 27.0	
	comp=Z,2.3nm,1.5s						
INK	Inuvik	73.12	10	P	P	14 28 36.1	+2.6
	comp=Z,1.3nm,1.0s,baz=340,slow=6.3,SNR=5.4						
C36M	Paulatuk	73.14	6	P	P	14 28 35.6	+2.1
C36M				IAmb	IAmb	14 28 39.1	
	comp=Z,3.2nm,1.2s						
YKA	Yellowknife Ar	80.53	3	P	P	14 29 17.1	+2.0
	comp=Z,0.5nm,0.4s,baz=350,slow=5.4,SNR=9.4						

DJA 01 14:18:26.2±0.7,**11°S**±6°×**11°5E**±°,**h10**^{km},**M3.9**/10,
MLv3.9/10,**South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGBI	Denpasar	2.29	15	P	Pn	14 19 04.6	+0.5
IGBI				S	Sn	14 19 33.3	+0.9
JAGI	Jajag, Banyuwa	2.59	351	P	Pn	14 19 08.1	-0.2
JAGI				S	Sn	14 19 39.6	-0.3
GMJI	Gumukmas	2.97	338	P	Pn	14 19 11.8	-1.6
SRBI	Singaraja	3.02	13	P	Pn	14 19 15.1	+1.0
PLAI	Plampang	3.87	55	P	Pn	14 19 25.1	-0.7
PWJI	Pagerwojo	4.05	318	P	Pn	14 19 28.2	-0.1
PCJI	Pacitan	4.37	310	P	Pn	14 19 32.4	-0.3
WBSI	Waikabubak, Su	4.96	74	P	Pn	14 19 39.9	-1.0
PCI	Palu	11.36	28	P	Pn	14 21 12.0	+3.2

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*TEH **01** 14:30:33.4,26°.73N×57°.77E,h8^{km},ML3.1*
*OMAN **01** 14:30:35.8±99.0,26°.50N×57°.72E,h17^{km}±152^{km},ml2.7/6,
Error ellipse: s-maj=9999.0km s-min=760.6km az=239.0*
ISC 01 14:30:33.6±3.1,**26°.59N**±0°.04×**57°.79E**±0°.07,**h13**^{km}±20^{km},
n12,σ**1**^{s}**.24**/19,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIAN	Nian	1.28	319	ePg	Pn	14 30 56.7	-0.5
NIAN				e		14 31 17.7	
KHNJ	Kahnooj	1.35	357	ePg	Pn	14 30 55.8	-2.4
KHNJ				eSg	Sn	14 31 14.9	-1.1
IBND	Bandar-abas	1.40	308	ePg	Pn	14 30 58.4	-0.4
IBND				e		14 31 29.8	
BANOM	Banah	1.49	244	P	Pn	14 31 00.3	+0.1
	SNR=107						
BANOM				S	Sb	14 31 20.2	+0.2
GENO	Geno	1.65	300	eSg	Sg	14 31 26.4	-0.4
GENO				ePn	Pn	14 31 03.2	+0.8
GENO				e		14 31 32.2	
MDH	Madha	1.86	226	P	Pn	14 31 04.4	-0.7
MDH				S	Sn	14 31 27.7	-0.8
UOSS	Minazif	2.17	221	P	Pn	14 31 09.7	+0.2
UOSS				S	Sn	14 31 36.6	+0.3
HOQ	Hoqain	3.03	188	P	Pn	14 31 20.6	-0.7
	SNR=7.4						
HOQ				S	Sn	14 31 57.4	0.0
NGRK	Negar Kerman	3.18	343	ePn	Pn	14 31 24.7	+1.0
NGRK				e		14 31 33.2	
WSAR	Wadi Sarin	3.43	167	P	Pn	14 31 27.5	+0.8
WSAR				S	Sn	14 32 07.0	-0.2
TVBK	TV Kerman	3.50	345	ePn	Pn	14 31 30.9	+2.9
TVBK				e		14 31 39.8	
KHGB	Koh Gabri	3.94	343	ePn	Pn	14 31 35.8	+1.8
KHGB				e		14 31 48.9	

IDC 01 14:42:33.2±2.5,**6°.49S**×**130°.05E**,**h0**^{km},**mb3.3**/1,
mb1 3.3/3,**mb1mx3.1**/45,**mbtmp3.1**/3,**ML3.2**/2,**MS3.3**/1,
Ms1 3.3/1,**ms1mx2.7**/11,**Error ellipse: s-maj=161.6km
s-min=32.0km az=69.0**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.01	163	Pn	Pn	14 45 53.2	+0.1
	0.1nm,0.3s,baz=346,slow=13,SNR=8.8						
WRA				Sn	Sn	14 48 15.6	-14
	0.4nm,0.3s,baz=332,slow=22,SNR=6.6						
ASAR	Alice Springs	17.48	168	P	Pn	14 46 38.5	0.0
	0.1nm,0.3s,baz=340,slow=9.1,SNR=9.8						
ASAR				S	Sn	14 49 39.3	-15
	0.1nm,0.3s,baz=357,slow=28,SNR=4.7						
JHJ	Hachijo jima 2	40.46	13	LR	LR	15 06 01.6	
	comp=Z,41nm,18.7s,baz=86,slow=35						
MKAR	Makanchi Array	67.83	327	P	P	14 53 33.3	0.0
	0.1nm,0.4s,baz=124,slow=7.5,SNR=5.3						

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*IDC **01** 14:50:52.1±2.6,27°.41N×52°.64E,h0^{km},mb3.6/6,
mb1 3.6/8,mb1mx3.3/60,mbtmp3.6/8,ML3.2/2,Error
ellipse: s-maj=53.6km s-min=26.4km az=24.0*
*DSN **01** 14:50:55.8±1.1,27°.52N×52°.89E,h10^{km},ML3.6/5,Error
ellipse: s-maj=21.3km s-min=6.4km az=10.0*
*OMAN **01** 14:50:57.6±99.0,27°.37N×52°.69E,h34^{km}±999^{km},ml3.3/8,
Error ellipse: s-maj=4391.0km s-min=143.1km az=280.0*
*TEH **01** 14:51:00.0,27°.37N×53°.05E,h17^{km},ML3.3*
*THR **01** 14:51:03.6±1.1,28°.24N×52°.91E,h14^{km}±13^{km},ML3.1*
ISC 01 14:50:55.7±0.9,**27°.33N**±0°.05×**52°.76E**±0°.06,**h20**^{km},**n39**,
σ**1**^{s}**.98**/50,**mb3.5**/6,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMD1	Lamerd	0.36	89	e		14 51 17.3	
LMD1				ePg	Pb	14 51 03.4	-0.1
JHRM	Jahrom	1.37	32	ePg	Pb	14 51 22.7	+1.9
JHRM				e		14 51 45.5	
LAR1	LAR	1.48	77	ePg	Pb	14 51 24.0	+1.5
LAR1				e		14 51 52.5	
IKAZ	Kazeroun	2.57	342	ePn	Pb	14 51 44.2	+2.9
IKAZ				e		14 52 26.8	
SHME	Shamm	3.29	112	i P	Pn	14 51 46.8	+0.7
	SNR=5.3						
SHME				S	Sn	14 52 26.6	+1.9
BANOM	Banah	3.47	113	i P	Pn	14 51 49.5	+0.9
	SNR=13						
BANOM	Banah	3.47	113	P	Pn	14 51 50.1	+1.4
	SNR=13						
BANOM				S	Sn	14 52 31.8	+2.6
NAZ	Nazwa, Dubai	3.50	131	P	Pn	14 51 51.2	+2.1
NIAN	Nian	3.63	86	ePn	Pn	14 51 53.4	+2.6
MSFE	Esma-Masafi	3.63	122	i P	Pn	14 51 52.0	+1.2
	SNR=12						
MDH	Madha	3.77	122	P	Pn	14 51 54.1	+1.4
MDH				S	Sn	14 52 39.5	+3.0
UOSS	Minazif	3.91	127	i P	Pn	14 51 55.8	+1.1
	SNR=6.7						
UOSS	Minazif	3.91	127	P	Pn	14 51 55.8	+1.1
UOSS				S	Sn	14 52 40.8	+0.9
HATD	Hatta, Dubai	3.93	129	P	Pn	14 51 56.8	+1.8
HATD				S	Sn	14 52 43.5	+3.0
ASHO	Ashiyiah	3.97	131	i P	Pn	14 51 56.9	+1.3
	SNR=9.9						
ASHO	Ashiyiah	3.97	131	P	Pn	14 51 57.1	+1.5
	SNR=9.8						
ASHO				S	Sn	14 52 44.8	+3.1
NGRK	Negar Kerman	4.19	56	ePn	Pn	14 52 00.2	+1.4
IMEH	Mehriz	4.35	21	ePn	Pn	14 52 03.3	+2.3
KRBR	Kerman	4.40	52	ePn	Pn	14 52 04.2	+2.5
KRBR				eSg	Sb	14 53 01.1	-4.2
KRBR				IAML		14 53 06.9	
	comp=E,24nm,0.6s						
KRBR				IAML		14 53 07.6	
	comp=N,27nm,0.8s						
TVBK	TV Kerman	4.40	52	e		14 52 07.1	
TVBK				ePn	Pn	14 52 04.6	+2.9
ISAD	Sadrabad	4.63	10	ePn	Pn	14 52 07.0	+2.1
SOHO	SOHO	4.66	132	P	Pn	14 52 06.1	+1.1
SOHO				S	Sn	14 53 01.4	+2.8
IBAF	Bafgh	4.90	29	ePn	Pn	14 52 09.8	+1.4
CHMN	Cheshme madani	4.90	58	ePn	Pn	14 52 11.8	+3.2
CHMN				e		14 52 18.0	
ICHK	Chekchek	5.10	16	ePn	Pn	14 52 11.8	+0.6
ARQ	Araqi	5.24	139	P	Pn	14 52 14.8	+1.8
	SNR=6.2						
ARQ				S	Sn	14 53 14.3	+1.5
YZKH	Yazd	5.28	17	ePn	Pn	14 52 12.8	-0.8
HOQ	Hoqain	5.56	131	P	Pn	14 52 18.7	+1.3
	SNR=11						
BSY	Bisya	6.09	138	P	Pn	14 52 26.3	+1.6
SMDO	Samad	6.41	130	P	Pn	14 52 30.8	+1.6
SMDO				S	Sn	14 53 43.2	+1.3
WSAR	Wadi Sarin	6.70	126	Pn	Pn	14 52 33.8	+0.7
	comp=N,0.6nm,0.3s,baz=314,slow=9.0,SNR=4.6						
WSAR				Sn	Sn	14 53 45.8	-3.0
	comp=N,0.1nm,0.3s,baz=264,slow=10,SNR=2.7						
WSAR	Wadi Sarin	6.70	126	P	Pn	14 52 34.7	+1.6
	SNR=9.1						
BRTR	Keskin Array B	20.12	313	P	P	14 55 28.1	-0.4
	comp=N,0.1nm,0.3s,baz=123,slow=10,SNR=3.1						
BVAR	Borovoye Array	28.82	22	P	P	14 56 52.6	+0.1
	comp=N,0.4nm,0.5s,baz=223,slow=5.9,SNR=3.5						
AKASG	Malin Array Be	29.41	329	P	P	14 56 55.4	-2.2
	comp=N,0.3nm,0.4s,baz=127,slow=7.7,SNR=2.9						
MKAR	Makanchi Array	30.27	42	P	P	14 57 04.6	-0.8
	comp=N,0.1nm,0.3s,baz=206,slow=19,SNR=5.0						
ZALV	Zalesovo Beam	35.51	33	P	P	14 57 50.4	-0.6
	comp=N,0.3nm,0.4s,baz=234,slow=12,SNR=3.1						
FINES	FINESS Array B	38.51	340	P	P	14 58 14.5	-1.9
	comp=N,0.9nm,0.4s,baz=145,slow=9.1,SNR=12						
NOA	NORSAR Array B	43.69	332	P	P	14 58 57.2	-1.9
	comp=N,0.6nm,0.7s,baz=119,slow=7.6,SNR=3.4						

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*IDC **01** 14:52:18.8±2.2,35°.96S×105°.46W,h0^{km},mb3.9/5,
mb1 4.3/5,mb1mx3.9/28,mbtmp3.9/5,MS3.7/10,
Ms1 3.7/10,ms1mx3.6/23,Error ellipse: s-maj=91.6km
s-min=33.4km az=48.0*
ISC 01 14:52:21.2±2.2,**35°.8S**±0°.5×**105°.3W**±0°.5,**h10**^{km},**n19**,
σ**1**^{s}**.33**/7,**mb3.9**/5,**MS3.8**/12,**Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	9.28	337	LR	LR	14 57 13.4	
	comp=Z,103nm,18.8s,baz=52,slow=31						
PLCA	Paso Flores	27.64	111	P	P	14 58 09.2	+0.1
	1.5nm,0.9s,baz=276,slow=13,SNR=3.2						
PLCA				LR	LR	15 05 18.3	
	comp=Z,57nm,20.0s,baz=265,slow=28						
CFA	Coronel Fontan	31.02	93	LR	LR	15 07 50.7	
	comp=Z,232nm,20.5s,baz=260,slow=30						
LVC	Limon Verde	34.19	77	LR	LR	15 09 17.0	
	comp=Z,174nm,18.8s,baz=220,slow=30						
LPAZ	La Paz	38.35	69	LR	LR	15 11 59.6	
	comp=Z,61nm,18.4s,baz=224,slow=31						
TAOE	Nuku Hiva Isla	41.52	302	eLR	LR	15 11 50.5	
	comp=Z,161nm,25.0s						
CPUP	Villa Florida	41.83	91	LR	LR	15 14 38.6	
	comp=Z,122nm,18.1s,baz=224,slow=32						
PPT2	Papeete2	43.08	283	eLR	LR	15 12 28.1	
	comp=Z,260nm,25.5s						
PPT	Papeete	43.09	283	LR	LR	15 13 11.7	
	comp=Z,139nm,21.1s,baz=133,slow=29						
SIV	San Ignacio	43.99	75	LR	LR	15 15 39.7	
	comp=Z,82nm,19.5s,baz=264,slow=32						
ROSC	El Rosal	49.78	42	LR	LR	15 19 09.5	
	comp=Z,102nm,18.1s,baz=254,slow=32						
BDFB	Brasilia	54.62	84	LR	LR	15 22 30.6	
	comp=Z,103nm,19.7s,baz=201,slow=33						
TXAR	Lajitas Array	64.79	2	P	P	15 03 00.4	+0.3
	0.6nm,0.7s,baz=185,slow=8.7,SNR=8.7						
NVAR	Mina Array Bea	74.81	349	P	P	15 04 03.4	+1.7
	1.1nm,0.8s,baz=178,slow=8.6						
DZM	Mont Dzumac	76.07	253	eLR	LR	15 27 38.8	
	comp=Z,120nm,30.5s						
PDAR	Pinedale Array	78.27	357	P	P	15 04 20.9	-0.3
	0.9nm,0.8s,baz=158,slow=7.5,SNR=6.9						
ULM	Lac du Bonnet	86.06	6	P	P	15 05 00.1	-1.5
	1.4nm,0.8s,baz=214,slow=7.3,SNR=3.5						
BRTR	Keskin Array B	147.52	71	PKPbc	PKPdf	15 12 04.0	+1.0
	1.0nm,0.9s,baz=235,slow=5.1,SNR=5.6						
SONM	Songino Array	153.65	307	PKPbc	PKPbc	15 12 19.2	-0.9
	0.4nm,0.7s,baz=90,slow=2.9,SNR=3.7						

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*NIED **01** 14:57:00,39°.90N×142°.20E,h50^{km},Mw4.1 Best double
couple: $M_0$1.63000×10^{15} NP1:ϕ_s15.00000°,δ75.00000°,
λ98.00000°. NP2:ϕ_s169.00000°,δ17.00000°,λ64.00000°.*
*MOS **01** 14:57:58.7±1.1,39°.93N×142°.34E,h61^{km},mb4.4/19,Error
ellipse: s-maj=8.3km s-min=5.1km az=92.9*
*NEIC **01** 14:57:58.1±2.7,39°.77N±0°.06×142°.4E±0°.1,h51^{km}±7^{km},
mb4.2/12,Error ellipse: s-maj=15.1km s-min=7.5km
az=108.0*
*JMA **01** 14:57:59.4±0.1,39°.88N×142°.17E,h48^{km}±1^{km},M4.0
Broadband fault plane solution: P waves. NP1:
ϕ_s181.00000°,δ30.00000°,λ85.00000°. NP2:ϕ_s7.00000°,
δ60.00000°,λ93.00000°. Principal axes: T Plg75.0000°,
Azm286.0000°; N Plg3.0000°, Azm186.0000°; P
Plg15.0000°, Azm95.0000°;*
JMA Felt II J1.
*IDC **01** 14:58:00.5±1.8,39°.90N×142°.28E,h64^{km}±15^{km},mb3.7/24,
mb1 3.8/29,mb1mx3.7/54,mbtmp4.0/29,MS3.2/10,
Ms1 3.2/10,ms1mx2.9/43 Error ellipse: s-maj=18.2km
s-min=10.7km az=100.0*
ISC 01 14:57:58.6±0.9,**39°.85N**±0°.04×**142°.32E**±0°.06,**h47**^{km}±7^{km},
n130,σ**1**^{s}**.82**/133,**mb4.1**/40,**MS3.4**/4,**7C-14D**,**Near east
coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	0.36	285	⇓P	Pn	14 58 08.1	0.0
JTH				S	Sn	14 58 13.9	-0.9
MIYJ	Miyakonagasawa	0.47	235	⇓P	Pn	14 58 09.3	0.0
MIYJ				S	Sn	14 58 16.2	-0.7
JKEN	Kujiedanarisaw	0.59	308	⇓P	Pn	14 58 10.1	-0.7
JKEN				eS	Sn	14 58 17.7	-1.8
JKZ	Kuzumaki	0.77	281	⇓P	Pn	14 58 12.7	-0.5
JKZ				S	Sn	14 58 22.0	-1.8
JANG	Nango	0.81	311	⇓P	Pn	14 58 12.9	-0.8
JANG				S	Sn	14 58 22.6	-2.0
JOM	Ohasama	0.87	245	⇓P	Pn	14 58 14.2	-0.4
JOM				eS	Sn	14 58 24.8	-1.4
OFUJ	Ofunato	0.92	213	⇓P	Pn	14 58 15.5	+0.4
OFUJ				S	Sn	14 58 27.0	-0.2
JMK	Ichinoseki	1.23	224	⇓P	Pn	14 58 19.8	+0.4
JMK				S	Sn	14 58 34.7	-0.2
JAH	Hinai	1.33	285	⇓P	Pn	14 58 20.4	-0.4
JTM	Tenmabayashi	1.34	315	⇓P	Pn	14 58 20.3	-0.5
JRG	Rokugo	1.37	251	⇓P	Pn	14 58 20.9	-0.5
ERM	Erimo	2.26	16	Pn	Pn	14 58 36.0	+2.6
ERM				Sn	Sn	14 59 07.4	+7.3
ERM	Erimo	2.26	16	P	Pn	14 58 36.0	+2.6
ERM						14 59 07.4	
ASAJ	Asahikawa	4.27	3	P	Pn	14 59 02.5	+1.4
	3.7nm,0.3s,baz=215,slow=12,SNR=48						
ASAJ				S	Sn	14 59 50.1	+0.5
	4.3nm,0.3s,baz=167,slow=9.9,SNR=3.8						
JKA	Kamikawa-asahi	4.27	3		Pn	14 59 02.5	+1.4
JKA					Sn	14 59 50.1	+0.5
NMR	Nemuro--Hokkai	4.35	35	⇑iP	Pn	14 59 02.2	+0.1
NMR				i S	Sn	14 59 48.9	-2.6
GLVR	Golovnino	4.57	31	eP	Pn	14 59 06.2	+1.1
GLVR				eS	Sn	14 59 55.0	-1.8
GLVR				smax	smax		
	comp=N,395nm,0.2s						
GLVR				smax	smax		
	comp=E,530nm,0.3s						
MAJO	Matsushiro	4.62	226	Pn	Pn	14 59 08.4	+2.5
MAJO	Matsushiro	4.62	226	c iP	Pn	14 59 09.0	+3.1
MAT	Matsushiro	4.62	226	P	Pn	14 59 08.2	+2.3
MAT				eS	Sn	15 00 04.4	+6.1
MJAR	Matsushiro Arr	4.62	226	P	Pn	14 59 09.1	+3.2
	comp=E,0.6nm,0.3s,baz=32,slow=15,SNR=51						
MJAR				LR	LR	15 01 11.1	
	comp=E,133nm,20.9s,baz=45,slow=41						
MJB9	Matsu-Tunnel	4.62	226		Pn	14 59 08.4	+2.5
GRPR	Tuman	4.88	31	eP	Pn	14 59 09.1	-0.3
GRPR				eS	Sn	15 00 01.7	-2.8
GRPR				pmax	pmax		
	comp=Z,69nm,0.3s						
GRPR				smax	smax		
	comp=N,356nm,0.5s						
GRPR				smax	smax		
	comp=E,674nm,0.4s						
YUK	Yuzh-Kuril'sk	4.95	31	eP	Pn	14 59 11.5	+1.2
YUK				eS	Sn	15 00 03.7	-2.5
YUK				pmax	pmax		
	comp=E,25nm,0.2s						
YUK				pmax	pmax		
	comp=Z,95nm,0.2s						
YUK				smax	smax		
	comp=N,386nm,0.4s						
YUK				smax	smax		
	comp=E,600nm,0.6s						
SHO	Shikotan	5.25	39	eP	Pn	14 59 14.0	-0.4
SHO				i S	Sn	15 00 09.6	-3.9
SHO				pmax	pmax		
	comp=Z,11nm,0.1s						
SHO				smax	smax		
	comp=E,219μm,0.2s						
SHO				smax	smax		
	comp=N,115nm,0.4s						
INU	Inuyama	6.15	225		Pn	14 59 29.7	+2.8
TEY	Ternei	6.69	323	⇑eP	Pn	14 59 36.7	+2.5
TEY				pmax	pmax		
	comp=Z,20nm,1.3s						
TEY				pmax	pmax		
	comp=Z,60nm,0.9s						
TEY				pmax	pmax		
	comp=N,50nm,0.9s						
TEY				pmax	pmax		
	comp=E,50nm,0.9s						
KUR	Kuril'sk	6.76	35	eP	Pn	14 59 36.1	+0.9
KUR				eS	Sn	15 00 48.9	-2.0
KUR				pmax	pmax		
	comp=Z,28nm,0.5s						
KUR				pmax	pmax		
	comp=N,14nm,0.6s						
KUR				pmax	pmax		
	comp=E,10.0nm,0.2s						
KUR				smax	smax		
	comp=N,54nm,0.4s						
KUR				smax	smax		
	comp=E,74nm,0.4s						
JHJ	Hachijo jima 2	7.02	198	P	Pn	14 59 40.0	+1.2
	comp=E,6.7nm,0.3s,baz=316,slow=23,SNR=8.5						
JHJ				S	Sn	15 00 53.2	-4.1
	comp=E,5.6nm,0.3s,baz=72,slow=20,SNR=3.7						
YSS	Yuzh-Sakhalins	7.11	2	eP	Pn	14 59 43.2	+3.2
USA0B	Ussuriysk Arra	8.83	303	Pn	Pn	15 00 06.3	+2.9
USA0B	Ussuriysk Arra	8.83	303	P	Pn	15 00 06.4	+2.9
USRK	Ussuriysk Ar.	8.83	303	P	Pn	15 00 06.3	+2.8
	baz=109,slow=14,SNR=15						
USRK				LR	LR	15 03 11.1	
	comp=E,117nm,20.1s,baz=106,slow=35						
JNU	Nakatsue	11.39	237	LR	LR	15 05 26.1	
	comp=E,33nm,18.7s,baz=10.0,slow=39						
KSRS	Korea Array	11.51	263	P	Pn	15 00 45.4	+5.2
	comp=E,0.3nm,0.3s,baz=68,slow=13,SNR=7.3						
KSRS				LR	LR	15 04 41.3	
	comp=E,66nm,21.7s,baz=102,slow=35						
KS19	Wonju Array Si	11.54	263	Pn	Pn	15 00 45.5	+4.9
KLR	Kul'dur	12.02	325	P	Pn	15 00 50.0	+2.9
	comp=E,0.1nm,0.3s,baz=137,slow=16,SNR=4.0						
KLR				LR	LR	15 05 26.5	
	comp=E,93nm,19.8s,baz=180,slow=37						
PETK	Petropavlovsk-	16.92	33	LR	LR	15 09 35.9	
	comp=E,67nm,18.3s,baz=235,slow=41						
ZEA	Zeya	17.25	329	eP	Pn	15 01 56.1	+0.2
JOW	Kunigami	17.47	226	P	Pn	15 01 52.7	-6.0
JOW				IAmb	IAmb	15 01 55.2	
	comp=Z,20nm,0.6s						
TIA	Tai'an	20.15	268	P	Pn	15 02 30.4	-0.6
MA2	Magadan	20.46	12	P	P	15 02 31.0	-0.9
	comp=Z,3.6nm,0.7s,baz=171,slow=11,SNR=4.6						
MA2	Magadan	20.46	12	IAmb	IAmb	15 02 49.5	
	comp=Z,10nm,1.2s						
MA2	Magadan	20.46	12	P	P	15 02 31.0	-0.9
HHC	Hu-ho-hao-te	23.40	282	eP	P	15 03 02.5	-0.9
YAK	Yakutsk	23.51	345	P	P	15 03 02.5	-1.5
	comp=Z,4.6nm,0.5s,baz=160,slow=18,SNR=8.9						
YAK	Yakutsk	23.51	345	eP	P	15 03 02.0	-2.0
YAK				e		15 03 18.7	
YAK				e		15 06 54.1	
YAK				eS	S	15 07 11.5	-2.6
YAK				e		15 14 12.8	
YAK				pmax	pmax		
	comp=Z,17nm,1.0s						
YAK				pmax	pmax		
	comp=N,11nm,1.2s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,133nm,3.8s						
YAK				pmax	pmax		
	comp=E,104nm,4.7s						
YAK				pmax	pmax		
	comp=N,93nm,5.3s						
YAK				smax	smax		
	comp=N,132nm,3.2s						
YAK				smax	smax		
	comp=E,63nm,3.4s						
SEY	Seymchan	23.90	11	P	P	15 03 08.1	+0.5
	comp=E,5.6nm,1.1s,baz=222,slow=5.6,SNR=6.4						
SEY	Seymchan	23.90	11	⇓eP	P	15 03 08.7	+1.1
WHN	Wuhan	24.58	257	P	P	15 03 23.8	+10
BOD	Bodaibo	25.60	324	eP	P	15 03 22.1	-1.0
BOD				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GUMO	Guam	26.25	174	P	P	15 03 20.6	-8.8
GUMO	Guam	26.25	174	P	P	15 03 20.6	-8.8
GUMO				pmax	pmax		
	comp=Z,298nm,1.2s						
ULN	Ulaanbaatar	26.48	299	P	P	15 03 30.4	-1.0
ULN	Ulaanbaatar	26.48	299	P	P	15 03 30.4	-1.0
ULN				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SONM	Songino Array	26.92	299	P	P	15 03 34.3	-1.0
	comp=Z,1.0nm,0.6s,baz=81,slow=8.4,SNR=7.6						
SONM				LR	LR	15 14 24.2	
	comp=Z,80nm,18.1s,baz=354,slow=37						
SONM	Songino Array	26.92	299	eP	P	15 03 34.7	-0.6
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
H11N2	WAKE ISLAND Hy	29.11	126	T	T	15 34 40.2	
	baz=318,slow=75,SNR=161						
TLY	Talaya	29.11	307	LR	LR	15 15 09.1	
	comp=Z,48nm,19.4s,baz=64,slow=35						
TLY	Talaya	29.11	307	eP	P	15 03 54.6	-0.1
TLY				pmax	pmax		
	comp=Z,5.0nm,0.9s						
H11N1	WAKE ISLAND Hy	29.12	126	T	T	15 34 40.8	
	baz=318,slow=75,SNR=149						
H11N3	WAKE ISLAND Hy	29.13	126	T	T	15 34 40.7	
	baz=318,slow=75,SNR=132						
ZAK	Zakamensk	29.18	304	eP	P	15 03 54.8	-0.6
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
H11S1	WAKE ISLAND Hy	29.92	128	T	T	15 35 42.6	

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             baz=321,slow=76,SNR=47
H11S3 WAKE ISLAND Hy 29.92 128   T       T       15 35 42.6
             baz=321,slow=76,SNR=34
H11S2 WAKE ISLAND Hy 29.94 128   T       T       15 35 42.0
             baz=321,slow=76,SNR=33
BILL  Bilibino       31.13  17  eP       P       15 04 12.3  0.0
BILL                            e                15 04 32.1
BILL                            e                15 05 17.5
BILL                            e                15 07 07.9
BILL                             pmax    pmax
             comp=Z,1.0nm,1.0s
TIXI  Tiksi          32.59 352   P       P       15 04 25.2 +0.1
             comp=Z,1.5nm,0.3s,baz=96,slow=4.8,SNR=5.1
TIXI  Tiksi          32.59 352   IAmb    IAmb    15 04 31.0
             comp=Z,1.8nm,0.8s
TIXI  Tiksi          32.59 352⇓eP       P       15 04 26.9 +1.8
WMQ   Urumqi         40.27 294  eP       P       15 05 31.2 +0.2
WMQ                              pP      sP      15 05 52.8 +3.7
WMQ                              sP      pP      15 06 05.2  +22
ZAA0  Zalesovo Array 40.60 310   P       P       15 05 32.6 -0.8
ZAA0                             IAmb    IAmb    15 05 34.8
             comp=Z,2.4nm,0.7s
ZALV  Zalesovo Beam  40.60 310   P       P       15 05 33.1 -0.3
             comp=Z,2.6nm,0.6s,baz=88,slow=7.8,SNR=12
ZALV                             LR      LR      15 22 59.6
             comp=Z,55nm,18.9s,baz=28,slow=37
ZALV  Zalesovo Beam  40.60 310  eP       P       15 05 33.2 -0.2
ZALV                             pmax    pmax
             comp=Z,3.0nm,0.6s
CMAR  Chiang Mai Arr 42.94 253   P       P       15 05 53.5 +0.4
             comp=Z,0.5nm,0.6s,baz=41,slow=5.4,SNR=5.3
CMAR  Chiang Mai Arr 42.94 253  eP       P       15 05 55.0 +2.0
CMAR                             pmax    pmax
             comp=Z,1.0nm,0.6s
MK31  Makanchi Array 43.28 300   P       P       15 05 54.2 -1.3
MK31  Makanchi Array 43.28 300   P       P       15 05 54.2 -1.3
MK31                             pmax    pmax
             comp=Z,3.0nm,0.9s
MKAR  Makanchi Array 43.28 300   P       P       15 05 55.1 -0.4
             comp=Z,3.0nm,0.8s,baz=84,slow=9.5,SNR=36
MAKZ  Makanchi       43.49 300   P       P       15 05 55.7 -1.4
MAKZ                             IAmb    IAmb    15 05 59.3
             comp=Z,4.0nm,0.8s
MAKZ  Makanchi       43.49 300   P       P       15 05 55.7 -1.4
MAKZ                             pmax    pmax
             comp=Z,4.0nm,0.8s
KURK  Kurchatov      44.80 306   P       P       15 06 06.7 -0.9
KURK  Kurchatov      44.80 306           PcP     15 07 48.4 -0.4
KURK  Kurchatov      44.80 306c iP       P       15 06 06.8 -0.7
KURK                             pmax    pmax
             comp=Z,6.0nm,0.8s
KURBB Kurchatov Arra 44.88 306   P       P       15 06 07.5 -0.6
             comp=Z,4.5nm,0.6s,baz=81,slow=8.5,SNR=27
KURBB                            PcP     PcP     15 07 48.4 -0.7
             comp=Z,0.9nm,0.8s,baz=80,slow=4.0,SNR=4.0
TAPN  Taplejung      46.51 272  eP       P       15 06 24.9 +3.2
ODAN  Odare          47.00 271  eP       P       15 06 27.2 +1.7
JIRN  Jiri           47.52 273  eP       P       15 06 31.3 +1.6
             comp=Z,8.7nm,0.5s
RAMN  Ramite         47.56 272  eP       P       15 06 29.5 -0.3
             comp=Z,15nm,0.8s
GUN   Gumba          47.63 274  eP       P       15 06 30.9 +0.4
             comp=Z,28nm,0.7s
KKN   Kakani         48.16 274  eP       P       15 06 34.4  0.0
             comp=Z,13nm,0.7s
DANN  Dangsing       49.04 275  eP       P       15 06 41.4 +0.1
             comp=Z,32nm,0.7s
BVAR  Borovoye Array 49.24 311   P       P       15 06 41.0 -1.1
             comp=Z,0.8nm,0.6s,baz=64,slow=8.7,SNR=4.4
AAK   Ala-Archa      49.82 297   P       P       15 06 46.7 -0.2
             comp=Z,1.1nm,0.7s,baz=102,slow=4.4,SNR=6.0
AAK   Ala-Archa      49.82 297⇓eP       P       15 06 47.0 +0.1
AAK                              pmax    pmax
             comp=Z,1.0nm,0.7s
KSH   Kashi          49.95 292  eP       P       15 06 50.8 +2.9
KK31  Karatay Array  52.37 299   P       P       15 07 04.9 -0.9
KK31                             IAmb    IAmb    15 07 06.1
             comp=Z,2.5nm,0.8s
KK31  Karatay Array  52.37 299   P       P       15 07 04.9 -0.9
KK31                             pmax    pmax
             comp=Z,3.0nm,0.8s
KKAR  Karatay Array  52.37 299   P       P       15 07 05.0 -0.8
KKAR                             IAmb    IAmb    15 07 06.2
             comp=Z,2.5nm,0.8s
KKAR  Karatay Array  52.37 299   P       P       15 07 05.0 -0.8
KKAR                             pmax    pmax
             comp=Z,3.0nm,0.8s
SVE   Sverdlovsk     53.53 317  eP       P       15 07 15.0 +0.8
SVE                              pmax    pmax
             comp=Z,10.0nm,0.7s
ARU   Arti           54.75 317   P       P       15 07 23.1 +0.1
             comp=Z,2.2nm,0.6s,baz=356,slow=2.1,SNR=11
ARU   Arti           54.75 317c iP       P       15 07 23.0  0.0
ARU                                              15 08 21.4
ARU                              S       S       15 14 59.3 -0.6
ARU                              pmax    pmax
             comp=Z,7.0nm,0.7s
ABKAR Akbulak array  56.69 309   P       P       15 07 36.1 -1.0
WRAB  Tennant Creek  59.93 189⇑eP       P       15 08 10.6  +11
WRAB                             pmax    pmax
             comp=Z,4.0nm,1.2s
WRA   Warramunga Arr 59.94 189   P       P       15 07 59.9 -0.1
             comp=Z,1.1nm,0.7s,baz=5.5,slow=7.2,SNR=9.1
YKA   Yellowknife Ar 61.03  31   P       P       15 08 08.0 +1.1
             comp=Z,0.2nm,0.6s,baz=305,slow=6.6,SNR=4.4
ARCES ARCESS Array B 61.62 339   P       P       15 08 10.7 -0.1
             comp=Z,3.3nm,0.9s,baz=59,slow=13,SNR=2.9
GEYT  Alibeck        63.11 298   P       P       15 08 21.1 -0.3
             comp=Z,1.6nm,0.6s,baz=7.4,slow=4.5,SNR=4.8
ASAR  Alice Springs  63.67 189   P       P       15 08 25.6 +0.6
             comp=Z,0.6nm,0.6s,baz=1.0,slow=6.4,SNR=14
OBN   Obninsk        66.28 323  eP       P       15 08 40.7 -0.9
OBN                             e                15 09 14.5
OBN                             e                15 11 08.0
OBN                              pmax    pmax
             comp=Z,3.0nm,0.9s
FINES FINESS Array B 66.66 332   P       P       15 08 43.8 -0.1
             comp=Z,2.8nm,0.7s,baz=38,slow=9.6,SNR=10
FINES FINESS Array B 66.66 332  eP       P       15 08 48.2 +4.2
FINES                            pmax    pmax
             comp=Z,1.0nm,0.7s
KIV   Kislovodsk     69.61 311  eP       P       15 09 03.9 +1.0
KIV                              pmax    pmax
             comp=Z,39nm,1.1s
KBZ   Khabaz         69.62 310   P       P       15 09 03.1 +0.3
             comp=Z,4.0nm,0.8s,baz=33,slow=3.4,SNR=12
KBZ   Khabaz         69.62 310  eP       P       15 09 03.6 +0.8
KBZ                              pmax    pmax
             comp=Z,4.0nm,0.9s
NEY   Neytrino       70.00 310⇑eP       P       15 09 07.2 +1.8
NEY                              pmax    pmax
             comp=Z,1.0nm,0.9s
NB2   NORSAR Subarra 71.87 337   P       P       15 09 16.6 +0.4
             comp=Z,1.0nm,0.7s,baz=40,slow=6.2
NOA   NORSAR Array B 71.87 337   P       P       15 09 16.1 -0.2
             comp=Z,1.4nm,0.7s,baz=39,slow=6.0,SNR=9.1
NOA   NORSAR Array B 71.87 337  eP       P       15 09 16.6 +0.4
NOA                              pmax    pmax
             comp=Z,1.0nm,0.7s
AKASG Malin Array Be 72.51 322   P       P       15 09 19.7 -0.5
             comp=Z,1.9nm,0.6s,baz=45,slow=6.4,SNR=17
LVV   L'vov          75.53 324  eP       P       15 09 39.4 +1.6
ULM   Lac du Bonnet  76.77  34   LR      LR      15 45 14.1
             comp=Z,37nm,19.8s,baz=72,slow=37
UZH   Uzhgorod       77.17 324  eP       P       15 09 46.2 -1.0
UZH                             e                15 09 59.8
UZH                             i                15 10 05.7
BRTR  Keskin Array B 77.52 312   P       P       15 09 49.0 -0.5
             comp=Z,0.5nm,0.6s,baz=49,slow=6.6,SNR=3.2
BRTR  Keskin Array B 77.52 312   P       P       15 09 49.0 -0.5
CLL   Collm          79.01 330  i P      P       15 09 58.8 +1.5
CLL   Collm          79.01 330  i P      P       15 09 58.8 +1.5
GERES GERESS Array B 80.69 328   P       P       15 10 07.1 +0.5
             comp=Z,0.6nm,0.7s,baz=52,slow=6.9,SNR=4.4
TXAR  Lajitas Array  87.85  53   P       P       15 10 42.2 -1.0
             comp=Z,0.3nm,0.8s,baz=252,slow=1.8,SNR=3.5
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*VIE **01** 14:59:36.5±0.1, 47°.47N×12°.05E, h8^{km}±2^{km}, mb1.8/12, ml2.5/17, Error ellipse: s-maj=1.4km s-min=0.8km az=166.0   2 km SW of Wrgl felt 3 ems98 at Woergl / Tyrol*

*ROM **01** 14:59:37.3±0.6, 47°.43N±0°.03×12°.02E±0°.02, h5^{km}, ML2.2/8, Error ellipse: s-maj=3.0km s-min=1.4km az=5.0*

*PRU **01** 14:59:37.8±0.0, 47°.51N×12°.07E, h0^{km}, Woergl*

*BGR **01** 14:59:37.6±0.2, 47°.48N×12°.04E, h10^{km}, ML2.4/25, Error ellipse: s-maj=3.3km s-min=2.2km az=169.0*

BGR Felt by some people.

*LDG **01** 14:59:39.9±0.6, 47°.53N×11°.96E, h5^{km}, Ml2.6/4, Error ellipse: s-maj=21.3km s-min=10.3km az=5.0*

ISC 01 14:59:36.7±1.0**, 47°.50N**±0°.02×**12°.05E**±0°.01**, h7**^{km}±9^{km}**, n72, σ0^{s}.93**/128**, 1C-1D, Austria**

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Code  Station Name      Δ°  AZ°    Phase ID          Time     Res
                                   Op      ISC      h  m  s   ISC
WATA  Walderalm      0.36 243  ePg     Pg      14 59 43.3 -0.5
             29nm,0.1s,SNR=66
WATA                           i Sg    Sg      14 59 48.8 +0.2
             296nm,0.2s
WTTA  Wattenberg     0.37 230  ePg     Pg      14 59 43.9  0.0
WTTA                           eSg     Sg      14 59 49.3 +0.5
WTTA  Wattenberg     0.37 230  ⇓P      Pg      14 59 43.7 -0.3
WTTA                            S      Sg      14 59 49.3 +0.5
WTTA                            AML    AML
             comp=N,168μm,1.0s
WTTA                            AML    AML
             comp=E,210μm,0.7s
WTTA                            AML    AML
             comp=N,168μm,1.0s
WTTA  Wattenberg     0.37 230  ePg     Pg      14 59 43.6 -0.3
             comp=N,21nm,0.1s,SNR=52
WTTA                           eSg     Sg      14 59 49.0 +0.2
             comp=N,81nm,0.3s
RISI  Rein           0.55 178   P      Pg      14 59 47.5 +0.1
RISI                            S      Sg      14 59 55.0 +0.4
RISI                            AML    AML
             comp=E,702μm,1.5s
RISI                            AML    AML
             comp=N,588μm,1.6s
RJOB  Jochberg       0.56  65  ePg     Pb      14 59 48.8  0.0
RJOB                           eSg     Sb      14 59 56.9 -0.1
PART  Garmisch-Parte 0.64 270  ePg     Pg      14 59 49.2 +0.3
PART                           eSg     Sb      14 59 58.6 -0.6
SQTA  Sankt Quirin   0.64 244  ePg     Pg      14 59 48.7 -0.3
             comp=N,16nm,0.1s,SNR=24
SQTA                           eSg     Sg      14 59 57.4 +0.2
             comp=N,103nm,0.3s
MOTA  Moosalm        0.66 257  ePg     Pg      14 59 48.7 -0.8
             comp=N,5.9nm,0.1s,SNR=22
MOTA                           eSg     Sb      14 59 59.0 -1.0
             comp=N,33nm,0.1s
ROSI  Rosskopf       0.72 217  ⇑P      Pg      14 59 50.4 -0.2
ROSI                            S      Sg      15 00 00.2 +0.3
ROSI                            AML    AML
             comp=E,185μm,0.9s
ROSI                            AML    AML
             comp=N,162μm,0.3s
ABTA  Abfaltersbach  0.82 157  ePg     Pg      14 59 52.3 -0.1
             comp=N,2.5nm,0.1s,SNR=14
ABTA                           eSg     Sg      15 00 02.9 -0.2
             comp=N,17nm,0.2s,SNR=8.3
FUR   Furstenfeldbru 0.84 322  ePg     Pb      14 59 53.8 +0.1
FUR                            eSg     Sb      15 00 06.1 +0.8
RETA  Reutte         0.87 270  ePg     Pg      14 59 53.6 +0.2
             comp=N,0.7nm,0.1s,SNR=16
RETA                           eSg     Sb      15 00 06.0 -0.1
             comp=N,40nm,0.4s
ABSI  Aberstueckl    0.92 213   P      Pg      14 59 53.6 -0.8
ABSI                            S      Sb      15 00 06.9 -0.6
ABSI                            AML    AML
             comp=E,87μm,0.3s
ABSI                            AML    AML
             comp=N,97μm,0.4s
KBA   Koelnbreinsper 0.98 115  ePg     Pg      14 59 55.1 -0.4
KBA                            eSg     Sg      15 00 08.4 +0.3
KBA   Koelnbreinsper 0.98 115  ePg     Pg      14 59 55.1 -0.4
             comp=N,1.8nm,0.1s
KBA                            eSg     Sg      15 00 08.6 +0.4
             comp=N,4.8nm,0.1s,SNR=5.6
FETA  Feichten       1.02 242  ePg     Pg      14 59 55.7 -0.6
             comp=N,2.7nm,0.2s,SNR=6.9
FETA                           eSg     Sb      15 00 10.0 -0.3
             comp=N,13nm,0.4s,SNR=13
FVI   Forni Avoltri  1.03 151   P      Pg      14 59 56.3 -0.3
FVI                             S      Sb      15 00 10.1 -0.6
FVI                             AML    AML
             comp=E,91μm,0.2s
FVI                             AML    AML
             comp=N,63μm,0.2s
KOSI  Kohlern        1.14 204   P      Pg      14 59 56.3 -2.2
KOSI                            S      Sb      15 00 13.3 -0.4
KOSI                            AML    AML
             comp=E,88μm,1.0s
KOSI                            AML    AML
             comp=N,153μm,1.1s
OBER  Oberstdorf     1.20 266  ePg     Pn      14 59 60.0 +0.1
OBER                           eSg     Sb      15 00 15.6 +0.2
UBR   Ueberruh       1.33 279  ePg     Pb      15 00 02.4 +0.5
UBR                            eSg     Sn      15 00 20.6 +1.1
MOSI  Grossmontoni   1.35 230   P      Pg      15 00 02.3 -0.4
MYKA  Terra Mystica  1.39 128  ePg     Pn      15 00 02.7 +0.1
             comp=N,2.0nm,0.2s
MYKA                            Sg     Sn      15 00 21.9 +0.6
             comp=N,4.3nm,0.2s
CTI   Castel Tesino  1.48 191   P      Pg      15 00 04.7 -0.3
DAVA  Damuels        1.49 263  ePg     Pg      15 00 05.5 +0.2
DAVA                           eSg     Sg      15 00 25.9 +1.4
DAVA  Damuels        1.49 263  ePg     Pg      15 00 05.5 +0.2
             comp=N,3.5nm,0.1s
DAVA                           eSg     Sg      15 00 26.0 +1.4
             comp=N,27nm,0.2s,SNR=6.3
POLC  Polcenigo      1.51 168   P      Pg      15 00 05.3 -0.2
POLC                            AML    AML
             comp=N,212μm,0.5s
POLC                            AML    AML
             comp=E,235μm,0.4s
MOA   Molln          1.54  76  ePg     Pg      15 00 06.1  0.0
MOA                            eSg     Sg      15 00 27.3 +1.2
MOA   Molln          1.54  76  ePg     Pg      15 00 06.0 -0.2
             comp=E,8.6nm,0.2s,SNR=24
MOA                            eSg     Sg      15 00 26.9 +0.8
             comp=E,18nm,0.2s,SNR=7.2
NORI  Noerdlinger Ri 1.55 322  ePn     Pn      15 00 04.6 -0.1
NORI                           ePg     Pg      15 00 06.4  0.0
NORI                           eSg     Sg      15 00 27.4 +0.9
DAVOX Davos/Dischmat 1.65 245   P      Pb      15 00 07.4  0.0
DAVOX                           AML    AML
             comp=E,48μm,1.6s
DAVOX                           AML    AML
             comp=N,67μm,0.4s
WET   Wettzell       1.73  18  ePn     Pn      15 00 07.3  0.0
WET                            eSn     Sn      15 00 29.5 -0.1
WET                            eSg     Sg      15 00 32.7 +0.3
GEC2  GERESS Array S 1.74  39  ePn     Pn      15 00 07.5 +0.1
PLONS Plons/SG       1.87 257  ePg     Pg      15 00 11.9 -0.7
PLONS                          eSg     Sg      15 00 37.1 +0.3
KHC   Kasperske Hory 1.92  31  ePN     Pn      15 00 10.6 +0.7
KHC                            ePG     Pb      15 00 13.1 +1.0
KHC                            eSG     Sg      15 00 38.4 -0.1
             comp=N,14nm,0.3s
OBKA  Obir           1.98 119  ePg     Pb      15 00 13.5 +0.4
OBKA                           eSg     Sg      15 00 40.5 +0.3
OBKA  Obir           1.98 119  ePn     Pn      15 00 09.2 -1.5
             comp=N,0.4nm,0.1s
OBKA                            Pg     Pb      15 00 13.4 +0.4
             comp=N,4.4nm,0.3s
OBKA                            Sn     Sn      15 00 36.6 +0.9
             comp=N,7.7nm,0.3s
WALHA Wallhausen, DE 2.00 278  ePg     Pg      15 00 15.0 +0.1
WALHA                          eSg     Sg      15 00 40.7 -0.1
WILA  Wila           2.13 269  eSg     Sg      15 00 45.0 -0.2
EMING Emmingen-Lipti 2.20 281  ePn     Pn      15 00 14.8 +1.2
EMING                          eSg     Sg      15 00 46.4 -1.0
GRF   Grafenberg Arr 2.26 346  eSg     Sg      15 00 48.8 -0.6
ROTZ  Rotzenmuhle    2.27   3  eSn     Sn      15 00 41.1 -1.7
ROTZ                           eSg     Sb      15 00 48.1 +1.8
ARSA  Arzberg        2.37  95  eSg     Sg      15 00 51.7 -1.2
ARSA  Arzberg        2.37  95   Sg     Sg      15 00 51.7 -1.2
             comp=N,2.0nm,0.3s
SLE   Schleitheim    2.42 278  ePn     Pn      15 00 16.6  0.0
SLE                            ePg     Pg      15 00 22.8 -0.3
SLE                            eSg     Sg      15 00 52.7 -1.7
MANZ  Manzenberg     2.49   1  eSg     Sg      15 00 56.4 -0.2
METMA Mettma DE      2.58 276  eSg     Sb      15 00 57.2 +2.1
CONA  Conrad Observa 2.61  79   Pn     Pn      15 00 20.9 +1.6
             comp=N,0.7nm,0.2s
CONA                           eSn     Sn      15 00 52.0 +0.7
             comp=N,1.4nm,0.2s
BFO   Black Forest   2.64 290  ePn     Pn      15 00 20.6 +0.9
BFO                            eSg     Sg      15 01 00.9 -0.4
BERGE Lenzkirch (DE) 2.64 280  ePn     Pn      15 00 21.1 +1.4
BERGE                          eSg     Sg      15 00 59.4 -2.1
NKC   Novy Kostel    2.75   5  eSG     Sg      15 01 04.9  0.0
             comp=N,9.1nm,0.4s
BALST Balsthal       2.96 268  eSg     Sg      15 01 09.8 -2.0
PRU   Pruhonice      2.99  33  ePG     Pb      15 00 31.1 +0.9
PRU                            eSG     Sg      15 01 11.4 -1.2
             comp=N,4.5nm,0.5s
GOPC  GO Pecny, Ondr 3.02  36  eSG     Sg      15 01 12.8 -0.8
             comp=N,4.8nm,0.2s
MOX   Moxa           3.16 355  eSn     Sn      15 01 02.7 -2.0
MOX                            eSg     Sg      15 01 17.5 -0.7
KRUC  Moravsky       3.30  60  ePN     Pn      15 00 26.2 -2.5
KRUC                           ePG     Pg      15 00 38.1 -1.7
KRUC                           eSN     Sn      15 01 08.9 +0.8
KRUC                           eSG     Sg      15 01 21.9 -0.6
CDF   Champ du Feu   3.33 288  ePn     Pn      15 00 29.7 +0.4
CDF   Champ du Feu   3.33 288  ePg     Pg      15 00 41.4 +0.8
CDF                            eSg     Sg      15 01 22.1 -1.7
             comp=N,3.0nm,0.2s
ECH   Echery         3.37 284  ePn     Pn      15 00 30.5 +0.8
ECH                            eSg     Sg      15 01 23.4 -1.5
VRAC  Vranov         3.53  57  ePN     Pn      15 00 30.6 -1.2
VRAC                           ePG     Pg      15 00 42.9 -1.3
VRAC                           eSN     Sn      15 01 15.7 +1.9
VRAC                           eSG     Sg      15 01 29.8 -0.1
HINF  Hinteralfeld   3.53 277  ePn     Pn      15 00 32.6 +0.7
HINF                           eSg     Sg      15 01 28.5 -1.4
             comp=N,3.2nm,0.3s
TNS   Taunus Mts     3.62 320  eSn     Sn      15 01 15.5 -0.5
ABH   Alteburg       3.82 310  ePn     Pn      15 00 36.9 +1.0
CLL   Collm          3.86   9  eSg     Sg      15 01 40.0 -0.6
HAU   Haudompre      3.88 280  ePn     Pn      15 00 37.1 +0.4
HAU                            eSg     Sg      15 01 40.2 -1.0
             comp=N,5.9nm,0.3s
DPC   Dobruska-Polom 4.01  43  eSG     Sg      15 01 43.8 -1.6
CABF  La Chapelle    4.17 260  eSg     Sg      15 01 48.4 -2.2
             comp=N,4.3nm,0.5s
MORC  Moravsky Berou 4.29  56  eSG     Sg      15 01 54.3 -0.3
PAGF  Fort de Pagny  4.37 286  ePn     Pn      15 00 43.4 -0.1
             baz=111
PAGF  Fort de Pagny  4.37 286  ePg     Pg      15 00 59.0 -1.4
SFTF  Sexfontaines   4.77 281  ePn     Pn      15 00 49.6 +0.6
AVF   Avril sur Loir 5.98 266  ePn     Pn      15 01 06.5 +1.0
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IDC 01 15:16:17.1±2.5**, 6°.14S**×**130°.53E, h157**^{km}±33^{km}**, mb2.9**/1**, mb1 2.9**/5**, mb1mx2.8**/27**, mbtmp3.3**/5**, Error ellipse: s-maj=61.4km s-min=19.9km az=87.0, Banda Sea**

```
Code  Station Name       Δ°  AZ°    Phase ID          Time     Res
                                    Op      ISC      h  m  s   ISC
SIJI  Sorong          5.29   8  P       Pn      15 17 34.9 +0.4
             0.3nm,0.3s,baz=112,slow=15,SNR=8.5
SIJI                            S       Sn      15 18 31.2 -3.7
             1.3nm,0.3s,baz=264,slow=23,SNR=14
FITZ  Fitzroy Crossi 12.81 201  P       Pn      15 19 11.9 -1.8
             0.0nm,0.3s,baz=22,slow=11,SNR=2.4
FITZ                            S       Sn      15 21 24.0  -12
             0.1nm,0.3s,baz=74,slow=20,SNR=3.1
WRA   Warramunga Arr 14.21 165  P       Pn      15 19 31.1 -0.3
             0.1nm,0.3s,baz=347,slow=11,SNR=12
WRA                             S       Sn      15 21 59.9 -9.4
             0.1nm,0.3s,baz=349,slow=22,SNR=4.6
ASAR  Alice Springs  17.73 170  P       Pn      15 20 14.6 +0.2
             0.1nm,0.3s,baz=349,slow=11,SNR=15
MKAR  Makanchi Array 67.80 326  P       P       15 26 58.0 -0.1
             0.1nm,0.4s,baz=108,slow=9.9,SNR=6.2
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*IDC **01** 15:40:20.0±0.7, 55°.96S×27°.73W, h123^{km}±5^{km}, mb4.2/11, mb1 4.4/12, mb1mx4.1/25, mbtmp4.7/12, MS3.1/2, Ms1 3.1/2, ms1mx2.9/18, Error ellipse: s-maj=18.5km s-min=10.3km az=65.0*

*NEIC **01** 15:40:22.3±1.3, 56°.0S±0°.1×28°.1W±0°.2, h144^{km}±3^{km}, mb4.7/15, Error ellipse: s-maj=20.8km s-min=12.4km az=211.0*

ISC 01 15:40:19.6±0.4**, 56°.01S**±0°.08×**27°.87W**±0°.08**, h121**^{km}**, n84, σ1^{s}.39**/87**, mb4.7**/17**, 1C-1D, South Sandwich Islands region**

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Code  Station Name       Δ°  AZ°    Phase ID          Time     Res
                                    Op      ISC      h  m  s   ISC
HOPE  Hope Point      5.24 286  Pn      Pn      15 41 36.7 +1.1
HOPE                                    Sn      15 42 31.3 -3.5
VNA1  Neumayer--Stat 16.98 157  P       Pn      15 44 11.0 +1.7
VNA3  Neumayer Olymp 17.16 160  P       Pn      15 44 12.2 +0.7
VNA2  Neumayer--Watz 17.38 157  P       Pn      15 44 15.1 +1.0
             baz=316,slow=13
SNAA  Sanae          18.94 156  P       P       15 44 31.9 +1.1
SNAA  Sanae          18.94 156  P       P       15 44 31.8 +1.1
             38nm,0.3s,baz=314,slow=9.3,SNR=1700
SNAA                            S       S       15 47 57.6 -1.6
             0.1nm,0.3s,baz=342,slow=20,SNR=2.3
SNAA  Sanae          18.94 156  P       Pn      15 44 32.0 -0.7
PLTB  Pedras Altas   30.19 313 eP       P       15 46 19.2 +1.0
CPSB  Cacapava Do Su 31.31 314 eP       P       15 46 29.4 +1.3
PLCA  Paso Flores    31.62 281  LR      LR      15 58 20.6
             comp=Z,30nm,19.8s,baz=194,slow=34
SYO   Syowa Base     31.86 141⇑eP       P       15 46 29.3 -3.2
SYO   Syowa Base     31.86 141⇓ipP      pP      15 47 00.0 +1.6
ITAB  Concordia      33.64 319 eP       P       15 46 49.6 +1.1
QSPA  South Pole Qui 34.24 180  P       P       15 46 55.3 +1.8
             12nm,0.6s,baz=182,slow=2.2,SNR=144
QSPA                            ScP     ScP     15 52 57.6 -2.9
             0.9nm,0.5s,baz=182,slow=1.0,SNR=7.9
QSPA  South Pole Qui 34.24 180  P       P       15 46 55.5 +2.0
QSPA                            IAmb    IAmb    15 46 55.8
             comp=Z,12nm,0.7s
SPB   Sao Paulo      35.43 328 eP       P       15 47 04.2 +0.3
VAO   Valinhos       35.85 329 eP       P       15 47 09.6 +2.0
PTGB  Pitanga        35.91 321 eP       P       15 47 09.0 +0.9
FRTB  Fartura        36.33 325 eP       P       15 47 12.6 +1.0
CPUP  Villa Florida  36.50 312  P       P       15 47 13.2 +0.3
             comp=Z,8.9nm,0.8s,baz=147,slow=7.2,SNR=16
CPUP                            ScP     ScP     15 53 06.4 -2.7
             comp=Z,1.4nm,0.9s,baz=105,slow=7.6,SNR=2.9
CPUP                            LR      LR      16 01 46.3
             comp=Z,28nm,19.0s,baz=204,slow=35
CPUP  Villa Florida  36.50 312  P       P       15 47 13.1 +0.1
CPUP                            IAmb    IAmb    15 47 14.0
             comp=Z,12nm,1.0s
CPUP  Villa Florida  36.50 312 eP       P       15 47 13.3 +0.3
RCLB  Rio Claro- Sao 36.57 328 eP       P       15 47 15.3 +1.7
BSCB  Bom Sucesso    37.17 333 eP       P       15 47 18.7 -0.1
CFA   Coronel Fontan 37.19 294  P       P       15 47 18.1 -0.7
             comp=Z,2.4nm,0.5s,baz=151,slow=8.2,SNR=5.1
TRCB  Terra Rica     37.87 321 eP       P       15 47 25.6 +0.9
BB19B Bebedouro      38.14 328 eP       P       15 47 27.7 +0.8
BB19B Bebedouro      38.14 328 eP       P       15 47 24.9 -2.0
BSFB  Barra de Sao F 38.39 340 eP       P       15 47 27.2 -1.8
PCMB  Pacaembu       38.50 324 eP       P       15 47 30.2 +0.3
SJMB  Sao Joao De Ma 38.58 340 eP       P       15 47 31.4 +0.9
MAW   Mawson         40.41 144  P       P       15 47 46.1 +1.0
             comp=Z,11nm,0.6s,baz=227,slow=8.1,SNR=9.2
MAW   Mawson         40.41 144  P       P       15 47 45.9 +0.8
IPMB  Ipameri, GO    40.97 330 eP       P       15 47 51.4 +1.0
C2SB  Chapadao do Su 41.67 323 eP       P       15 47 57.6 +1.6
JANB  Januaria       42.77 336 eP       P       15 48 06.2 +1.1
GO02  Mina Guanaco   43.13 298  P       P       15 48 08.4 +0.2
GO02                            IAmb    IAmb    15 48 10.4
             comp=Z,14nm,0.8s
BDFB  Brasilia       43.14 331  P       P       15 48 08.3 +0.2
             comp=Z,1.8nm,0.6s,baz=154,slow=10,SNR=3.2
PP1B  Ponte de Pedra 43.45 321 eP       P       15 48 10.5  0.0
ARAG  Araguaiana, MT 44.19 326 eP       P       15 48 16.9 +0.5
LVC   Limon Verde    44.95 301  P       P       15 48 23.7 +0.9
LVC                             IAmb    IAmb    15 48 26.1
             comp=Z,13nm,0.8s
LVC   Limon Verde    44.95 301 eP       P       15 48 24.0 +1.2
SALV  Santo Antonio  45.31 321 eP       P       15 48 26.2 +1.0
PB01  IPOC Station P 46.56 301  P       P       15 48 35.7 +0.6
PB01                            IAmb    IAmb    15 48 36.9
             comp=Z,13nm,0.7s
VNDA  Vanda          46.60 183  P       P       15 48 36.7 +2.1
             comp=Z,4.1nm,0.6s,baz=181,slow=7.0,SNR=7.7
GO01  Chusmiza       47.60 303  P       P       15 48 44.7 +1.1
PB11  IPOC Station P 47.74 302  P       P       15 48 44.7 +0.4
PB11                            IAmb    IAmb    15 48 46.6
             comp=Z,12nm,0.8s
H10S2 ASCENSION HYDR48.07  18   T       T       16 41 06.5
             baz=190,slow=74,SNR=7.6
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H10S3 ASCENSION HYDR48.08  18   T       T       16 41 11.6
      baz=30,slow=74,SNR=5.9
MNMC  Minye Minye     48.25 302  P       P       15 48 49.6 +1.2
H10N1 ASCENSION HYDR49.19  18   T       T       16 42 29.8
      baz=189
H10N3 ASCENSION HYDR49.19  18   T       T       16 42 27.4
      baz=189,slow=74,SNR=3.4
H10N2 ASCENSION HYDR49.21  18   T       T       16 42 27.8
      baz=189,slow=74,SNR=2.8
NBMA  Muriti-CE       49.28 346  eP      P       15 48 57.6 +1.6
LBTB  Lobatse         49.36  74  P       P       15 48 55.9 -0.8
      comp=Z,1.3nm,0.4s,baz=163,slow=6.9,SNR=3.6
LBTB  Lobatse         49.36  74  P       P       15 48 57.7 +1.0
CLDB  Colider         50.02 323  eP      P       15 49 00.8 -0.7
LPAZ  La Paz          50.04 306  P       P       15 49 03.5 +1.1
      comp=Z,9.3nm,0.6s,baz=148,slow=5.1,SNR=25
LPAZ  La Paz          50.04 306  P       P       15 49 03.5 +1.1
LPAZ                             IAmb    IAmb    15 49 04.4
      comp=Z,10nm,0.7s
LPAZ  La Paz          50.04 306  eP      P       15 49 03.7 +1.2
SAML  Samuel          54.50 315  P       P       15 49 34.6 -0.1
SAML                             IAmb    IAmb    15 49 35.8
      comp=Z,9.2nm,0.9s
SAML  Samuel          54.50 315  eP      P       15 49 35.0 +0.3
PTGA  Pitinga         60.91 323  eP      P       15 50 19.5  0.0
LIC   Lamto           64.82  25  eP      P       15 50 45.6 +0.3
      comp=Z,13nm,0.6s
KIC   Kosan Boka      65.02  26  eP      P       15 50 46.7 +0.1
      comp=Z,9.1nm,0.7s
TIC   Toumodi         65.22  25  eP      P       15 50 48.2 +0.2
DBIC  Dimbokro        65.29  25  P       P       15 50 48.8 +0.5
      comp=Z,2.7nm,0.6s,baz=174,slow=8.7,SNR=6.2
DBIC  Dimbokro        65.29  25  P       P       15 50 48.7 +0.4
DBIC                             IAmb    IAmb    15 51 03.3
      comp=Z,6.5nm,1.1s
OTAV  Otavalo         69.31 304  eP      P       15 51 16.2 +1.9
TOA0  Torodi Ar. Sit  73.21  30  P       P       15 51 38.0 +1.0
TORD  Torodi Ar. Bea  73.21  30  P       P       15 51 38.0 +0.9
      comp=Z,6.1nm,0.7s,baz=199,slow=6.6,SNR=26
TORD                             pP      pP      15 52 06.7 +0.1
      comp=Z,0.5nm,0.5s,baz=192,slow=6.3,SNR=1.6
SDV   Santo Domingo   73.71 316  eP      P       15 51 39.7 -0.6
ASAR  Alice Springs   99.14 163  P       Pdif    15 53 46.7 -0.4
      comp=Z,0.7nm,0.6s,baz=186,slow=4.4,SNR=19
ASAR                             PP      PP      15 57 46.0 -4.0
      comp=Z,1.2nm,0.8s,baz=192,slow=6.7,SNR=9.7
WRA   Warramunga Arr 102.86 163  P       Pdif    15 54 02.5 -1.2
      comp=Z,0.4nm,0.7s,baz=197,slow=4.1,SNR=5.0
FINES FINESS Array B 124.53  28  PKP     PKPdf   15 59 02.6 -0.3
      comp=Z,0.8nm,0.7s,baz=291,slow=1.6,SNR=4.6
CMAR  Chiang Mai Arr 125.44 111  PKP     PKiKP   15 59 06.5  0.0
      comp=Z,0.8nm,0.7s,baz=242,slow=3.8,SNR=6.0
ARCES ARCESS Array B 131.05  22  PKP     PKPdf   15 59 15.2  0.0
      comp=Z,2.2nm,0.8s,baz=180,slow=0.6,SNR=2.8
ARCES                            SKPbc   SKPbc   16 02 24.8 -3.5
      comp=Z,2.3nm,0.8s,baz=172,slow=2.5,SNR=5.0
YKA   Yellowknife Ar 135.88 318  PKhKP   PKPpre  15 59 22.4
      comp=Z,0.2nm,0.4s,baz=135,slow=2.0,SNR=5.5
YKA                              SKPbc   SKPbc   16 02 41.5 -3.1
      comp=Z,1.3nm,0.9s,baz=124,slow=2.2,SNR=10
MKAR  Makanchi Array 137.24  72  PKP     PKiKP   15 59 29.1 -0.3
      comp=Z,0.2nm,0.6s,baz=240,slow=2.1,SNR=2.7
MKAR                             SKPbc   SKPbc   16 02 46.3 -3.0
      comp=Z,0.7nm,0.6s,baz=237,slow=3.3,SNR=8.4
DAWY  Dawson         146.48 312          PKPbc   15 59 45.3 +0.2
PRP   Porcupine Dome 149.40 314          PKiKP   15 59 53.5 -0.5
ILAR  Eielson Array  149.80 312  PKPbc   PKPbc   15 59 53.9 +0.1
      comp=Z,3.8nm,0.7s,baz=133,slow=3.0,SNR=70
ILAR                             pPKPbc  pPKPbc  16 00 25.4 -0.5
      comp=Z,1.0nm,0.8s,baz=126,slow=1.7,SNR=3.1
SONM  Songino Array  151.11  87  PKPbc   PKPbc   15 59 57.7 +0.2
      comp=Z,3.6nm,0.4s,baz=221,slow=3.7,SNR=57
SONM                             pPKPbc  pPKPbc  16 00 28.9 -0.6
      comp=Z,0.8nm,0.5s,baz=214,slow=4.0,SNR=2.9
MJAR  Matsushiro Arr 158.36 148  PKPab   PKPab   16 00 36.6 -0.2
      comp=Z,0.4nm,0.4s,baz=194,slow=7.5,SNR=4.5
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     VAO 01 15:42:38.2±0.7,14°.37S×69°.72W,h10km,mb3.7,
        Peru-Bolivia border region
Code  Station Name        Δ°  AZ°   Phase ID          Time    Res
                                 Op      ISC       h  m  s   ISC
LPAZ  La Paz             2.44 141  eP      Pn      15 43 18.5 -0.3
LPAZ                               eS      Sn      15 43 49.0 -0.1
SAML  Samuel             8.37  51  eP      Pn      15 44 39.7  0.0
SAML                               eS      Sn      15 46 15.7 +1.5
SALV  Santo Antonio     13.63  98  eP      Pn      15 45 51.6 -0.1
CLDB  Colider           14.02  77  eP      Pn      15 45 56.3 -0.8
TRQA  Tornquist         24.57 165  eP      P       15 47 58.4 +0.1
PLCA  Paso Flores       26.27 181  eP      P       15 48 13.7 -0.2
SJMB  Sao Joao De Ma    27.67 103  eP      P       15 48 26.5 -0.2
BSFB  Barra de Sao F    28.00 103  eP      P       15 48 29.7 +0.1
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     IDC 01 15:43:19.8±7.3,12°.64S×167°.17E,h291km±78km,mb3.0/6,
        mb1 3.3/7,mb1mx3.1/31,mbtmp3.7/7,Error ellipse:
        s-maj=62.1km s-min=26.4km az=166.0
     ISC 01 15:43:12.4±0.9,12°.4S±0°.1×167°.2E±0°.2,h220km,n9,
        σ1ˢ68/10,mb3.3/6,Santa Cruz Islands
Code  Station Name        Δ°  AZ°   Phase ID          Time    Res
                                 Op      ISC       h  m  s   ISC
DZM   Mont Dzumac        9.62 184  P       P       15 45 31.5 -2.7
      0.2nm,0.3s,baz=24,slow=20,SNR=3.0
DZM                                S       S       15 47 17.7 +3.0
      0.1nm,0.3s,baz=41,slow=19,SNR=2.0
WRA   Warramunga Arr    32.41 252  P       P       15 49 21.2 -0.7
      0.2nm,0.7s,baz=84,slow=8.5,SNR=2.7
ASAR  Alice Springs     33.51 246  P       P       15 49 31.1 -0.3
      0.3nm,0.8s,baz=69,slow=9.8,SNR=5.7
CMAR  Chiang Mai Arr    73.99 293  P       P       15 54 25.8 +1.4
      0.3nm,0.4s,baz=126,slow=4.4,SNR=4.2
ILAR  Eielson Array     84.36  18  P       P       15 55 19.4  0.0
      0.9nm,0.6s,baz=247,slow=5.0,SNR=23
NVAR  Mina Array Bea    85.81  49  P       P       15 55 28.3 +0.7
      0.2nm,0.5s,baz=253,slow=9.3,SNR=2.3
MKAR  Makanchi Array    95.51 317  P       P       15 56 12.6 +0.2
      0.5nm,0.7s,baz=90,slow=6.0,SNR=6.2
ARCES ARCESS Array B   118.02 346  PKP     PKPdf   16 01 31.7 -0.7
      3.8nm,0.8s,baz=66,slow=2.5,SNR=6.5
FINES FINESS Array B   123.58 339  PKP     PKPdf   16 01 42.9 -0.4
      0.9nm,0.9s,baz=57,slow=5.1,SNR=4.3
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     MAN 01 15:45:33.2,13°.05N×120°.56E,h35km,mb4.6,ML3.4,
        MS3.3,1C-1D,Mindoro
Code  Station Name        Δ°  AZ°   Phase ID          Time    Res
                                 Op      ISC       h  m  s   ISC
PGP   Puerto Galera      0.59  40⇑eP      Pn      15 45 42.2 -3.0
PGP                               eS      Sn      15 45 47.3 -6.2
LUBP  Lubang             0.75 336  eP      Pn      15 45 48.0 +0.7
LUBP                               eS      Sn      15 45 58.6 +1.2
SJMP  San Jose           0.80 137  eP      Pn      15 45 48.2 +0.3
SJMP                               eS      Sn      15 46 00.0 +1.4
BOAC  Boac               1.31  72  eP      Pn      15 45 55.5 +0.5
BOAC                               eS      Sn      15 46 12.0 +0.7
LQP   Lukban             1.42  42  eP      Pn      15 45 56.8 +0.1
OTRP  Odiongan           1.58 116  eP      Pn      15 45 59.4 +0.7
OTRP                               eS      Sn      15 46 15.7 -2.2
GQP   Guinayangan        2.02  65⇓iP      Pn      15 46 18.0  +13
GQP                                i S     Sn      15 46 22.9 -5.8
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     IDC 01 15:57:51.1±2.2,1°.04N×126°.17E,h0km,mb3.1/3,
        mb1 3.4/3,mb1mx3.1/30,mbtmp3.1/3,MS3.3/1,Ms1 3.3/1,
        ms1mx2.5/20,Error ellipse: s-maj=222.3km
        s-min=25.2km az=65.0,Northern Molucca Sea
Code  Station Name        Δ°  AZ°   Phase ID          Time    Res
                                 Op      ISC       h  m  s   ISC
WRA   Warramunga Arr    22.34 159  P       P       16 02 49.8 -0.9
      0.7nm,0.8s,baz=338,slow=11,SNR=6.5
ASAR  Alice Springs     25.68 163  P       P       16 03 23.7 +0.7
      0.2nm,0.5s,baz=345,slow=12,SNR=6.2
ASAR                               LR      LR      16 14 00.1
      comp=Z,62nm,19.2s,baz=152,slow=38
MKAR  Makanchi Array    59.45 326  P       P       16 07 55.7 -0.1
      0.1nm,0.4s,baz=120,slow=6.8,SNR=2.2
```

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  KRNET 01 15:59:14.2±0.1,39°.48N×73°.46E,mb3.1
     NNC 01 15:59:20.3±3.1,39°.91N×73°.50E,h0km,mb3.5,mpv3.1,
        Error ellipse: s-maj=25.9km s-min=12.9km az=162.0
    SOME 01 15:59:20.4,39°.90N×73°.40E,h15km
     ISC 01 15:59:17.5±1.8,39°.51N±0°.09×73°.41E±0°.04,h10km,n46,
        σ1ˢ30/73,17C-19D,Tajikistan-Xinjiang border region
Code  Station Name        Δ°  AZ°   Phase ID          Time    Res
                                 Op      ISC       h  m  s   ISC
ARSB  Arslanbob          1.84 350⇓iP      Pn      15 59 49.5 +0.2
      baz=49
ARSB                              ⇓iS      Sb      16 00 14.9 +0.4
      baz=49
BTK   Batken             2.07 286⇑iP      Pn      15 59 53.1 +0.7
      baz=87
BTK                               ⇑iS      Sb      16 00 21.1 +0.1
      baz=87
ARLS  Aral               2.45  16⇓iP      Pn      15 59 58.3 +0.6
      baz=15
ARLS                              ⇓iS      Sb      16 00 29.8 -2.3
      baz=15
ARK   Arkit              2.54 335⇑iP      Pn      15 59 59.3 +0.5
      baz=34
ARK                               ⇑iS      Sn      16 00 31.8 +2.0
      baz=34
AML   Almayashu          2.63   5⇓iP      Pn      16 00 00.6 +0.2
      baz=4.0
AML                               ⇓iS      Sn      16 00 34.7 +2.2
      baz=4.0
AML   Almayashu          2.63   5  P       Pn      16 00 00.8 +0.4
      SNR=13
NRN   Naryn              2.76  45⇑iP      Pn      16 00 01.5 -0.6
      baz=44
NRN                               ⇑iS      Sn      16 00 36.2 +0.6
      baz=44
UCH   Uchtor             2.84  17⇓iP      Pn      16 00 03.4 +0.1
      baz=16
UCH                               ⇓iS      Sn      16 00 39.4 +1.5
      baz=16
UCH   Uchtor             2.84  17  P       Pn      16 00 04.9 +1.5
      SNR=16
KZA   Kyzart             2.92  28⇑iP      Pn      16 00 04.4  0.0
      baz=27
KZA                               ⇑iS      Sn      16 00 41.1 +1.3
      baz=27
KZA   Kyzart             2.92  28  P       Pn      16 00 06.8 +2.4
      SNR=7.0
EKS2  Erkin-Say          3.16   5⇑iP      Pn      16 00 07.7 +0.3
      baz=4.0
EKS2                              ⇑iS      Sn      16 00 46.9 +1.6
      baz=4.0
AAK   Ala-Archa          3.23  14⇓iP      Pn      16 00 08.6 +0.1
      baz=14
AAK                               ⇓iS      Sn      16 00 48.6 +1.5
      baz=14
AAK   Ala-Archa          3.23  14  P       Pn      16 00 08.5 +0.1
      SNR=7.9
AAK   Ala-Archa          3.23  14  Pg      Pn      16 00 08.9 +0.5
      3.8nm,0.5s
AAK                               ⇓Lg      Lg      16 00 51.4
      15nm,0.6s
KBK   Karagaybulak       3.35  20⇓iP      Pn      16 00 10.2 +0.1
      baz=19
KBK                               ⇓iS      Sn      16 00 51.6 +1.5
      baz=19
KBK   Karagaybulak       3.35  20  P       Pn      16 00 12.3 +2.2
      SNR=8.9
FRU1  Bishkek            3.42  15⇑iP      Pn      16 00 11.2 +0.2
      baz=14
FRU1                              ⇑iS      Sn      16 00 53.0 +1.3
      baz=14
ULHL  Ulahol             3.48  37⇓iP      Pn      16 00 12.1 +0.2
      baz=36
ULHL                              ⇓iS      Sn      16 00 54.1 +0.9
      baz=36
ULHL  Ulahol             3.48  37  P       Sn      16 00 58.9 +5.7
      SNR=5.5
BOOM  Boomskoye usch     3.54  32⇓iP      Pn      16 00 12.7  0.0
      baz=31
BOOM                              ⇓iS      Sn      16 00 55.4 +0.7
      baz=31
CHMS  Chumysh            3.63  16⇑iP      Pn      16 00 14.0 +0.2
      baz=15
CHMS                              ⇑iS      Sn      16 00 57.5 +0.8
      baz=15
CHMS  Chumysh            3.63  16  Pg      Pn      16 00 13.0 -0.8
      2.1nm,0.4s
CHMS                               Lg      Lg      16 01 05.9
      14nm,0.7s
IUG   Iuzhnay            3.67 317  eP      Pb      16 00 22.2 -0.4
      0.3nm,0.2s
IUG                                eS      Sb      16 01 07.0 -0.2
      23nm,0.4s
IUG   Iuzhnay            3.67 317  Pg      Pb      16 00 22.2 -0.4
      0.7nm,0.2s
IUG                                Lg      Lg      16 01 07.0
      22nm,0.4s
USP   Ospenovka          3.84  12⇓iP      Pn      16 00 17.0 +0.3
      baz=11
USP                               ⇓iS      Sn      16 01 03.2 +1.2
      baz=11
KDJ   Kajisay            3.88  46⇑iP      Pn      16 00 17.4  0.0
      baz=46
KDJ                               ⇑iS      Sn      16 01 03.7 +0.6
      baz=46
KST   Kastek             4.02  28  eP      Pb      16 00 27.6 -0.9
      3.8nm,0.5s
KST                                eS      Sb      16 01 16.1 -1.1
      14nm,0.8s
KST   Kastek             4.02  28  Pg      Pb      16 00 27.6 -0.9
      3.8nm,0.5s
KST                                Lg      Lg      16 01 16.2
      14nm,0.8s
SGDS  Sogindy            4.04  13  Pg      Pb      16 00 27.0 -1.9
      3.3nm,0.4s
SGDS                               Lg      Lg      16 01 15.6
      6.5nm,0.6s
DGS   Degeres            4.13  25  eP      Pb      16 00 30.1 -0.3
      3.2nm,0.7s
DGS                                eS      Sb      16 01 20.2 -0.2
      9.5nm,0.8s
DGS   Degeres            4.13  25  Pg      Pb      16 00 30.1 -0.3
      3.2nm,0.7s
DGS                                Lg      Lg      16 01 20.8
      9.5nm,0.8s
KK31  Karatay Array      4.20 330  Pn      Pn      16 00 23.4 +1.8
      0.6nm,0.3s,baz=131,slow=20,SNR=26
KK31                               Pg      Pg      16 00 35.3 -2.6
      0.5nm,0.3s,baz=135,slow=18,SNR=5.0
KK31                              ⇑Lg      Lg      16 01 28.9
      2.1nm,0.3s,baz=145,slow=30,SNR=4.1
TNSS  Tian-Shan          4.42  36  eP      Pb      16 00 34.2 -1.2
      4.6nm,0.4s
TNSS                               eS      Sb      16 01 27.0 -2.0
      7.2nm,0.6s
TNSS  Tian-Shan          4.42  36  Pg      Pb      16 00 34.2 -1.2
      4.6nm,0.4s
TNSS                               Lg      Lg      16 01 28.5
      7.2nm,0.6s
MDOK  Medeo              4.56  36  eP      Pb      16 00 38.2 +0.4
      2.2nm,0.3s
MDOK                               eS      Sb      16 01 34.2 +1.3
      6.7nm,0.5s
MDOK  Medeo              4.56  36  Pg      Pb      16 00 38.2 +0.4
      2.2nm,0.3s
MDOK                               Lg      Lg      16 01 34.2
      5.6nm,0.5s
KOTS  Kotyrbulak         4.65  36  eP      Pb      16 00 38.1 -1.1
      9.0nm,0.5s
KOTS                               eS      Sb      16 01 34.2 -1.1
      24nm,0.6s
KOTS  Kotyrbulak         4.65  36  Pg      Pb      16 00 38.1 -1.1
      9.0nm,0.5s
KOTS                               Lg      Lg      16 01 34.2
      24nm,0.6s
KTBS  Karatobe           4.86  29  eP      Pb      16 00 42.6 -0.2
      1.9nm,0.5s
KTBS                               eS      Sb      16 01 41.5 +0.1
      12nm,0.6s
KTBS  Karatobe           4.86  29  Pg      Pb      16 00 42.6 -0.2
      1.9nm,0.5s
KTBS                               Lg      Lg      16 01 41.5
      12nm,0.6s
KUU   Kurty              4.90  26  eP      Pb      16 00 43.5 +0.2
      2.3nm,0.7s
KUU                                eS      Sb      16 01 43.3 +1.0
      9.8nm,0.7s
KUU   Kurty              4.90  26  Pg      Pb      16 00 43.6 +0.2
      1.8nm,0.6s
KUU                                Lg      Lg      16 01 43.3
      8.7nm,0.7s
CHKK  Chushkaly          5.10  31  eP      Pb      16 00 47.5 +0.7
      0.9nm,0.1s
CHKK                               eS      Sb      16 01 50.0 +1.8
      4.4nm,0.5s
CHKK  Chushkaly          5.10  31  Pg      Pb      16 00 47.5 +0.7
      2.1nm,0.5s
CHKK                               Lg      Lg      16 01 50.0
      7.3nm,0.3s
ARXS  Arharly            5.74  34  Pg      Pb      16 00 59.8 +2.0
      1.0nm,0.5s
ARXS                               Lg      Lg      16 02 10.4
      7.3nm,0.9s
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     IDC 01 16:08:35.8±3.2,5°.33S×133°.80E,h0km,mb3.3/1,
        mb1 3.5/5,mb1mx3.3/31,mbtmp3.4/5,ML2.9/4,Error
        ellipse: s-maj=122.4km s-min=26.1km az=80.0,Aru
        Islands region
Code  Station Name        Δ°  AZ°   Phase ID          Time    Res
                                 Op      ISC       h  m  s   ISC
SIJI  Sorong             5.10 330  Pn      Pn      16 09 53.0 -0.5
      1.0nm,0.3s,baz=108,slow=20,SNR=15
SIJI                               Sn      Sn      16 10 44.3 -8.8
      1.7nm,0.3s,baz=187,slow=23,SNR=4.2
WRA   Warramunga Arr    14.54 178  Pn      Pn      16 12 01.7 -1.3
      0.0nm,0.3s,baz=357,slow=12,SNR=3.3
WRA                                Sn      Sn      16 14 41.4 -3.6
      0.0nm,0.3s,baz=357,slow=22,SNR=3.1
FITZ  Fitzroy Crossi    14.99 211  Pn      Pn      16 12 09.1 -0.1
      0.0nm,0.3s,baz=29,slow=10,SNR=3.0
FITZ                               Sn      Sn      16 14 45.6  -10
      0.1nm,0.3s,baz=72,slow=20,SNR=3.1
ASAR  Alice Springs     18.24 180  P       P       16 12 50.8 +0.1
      0.0nm,0.3s,baz=4.0,slow=11,SNR=4.7
MKAR  Makanchi Array    68.97 325  P       P       16 19 43.2 +0.3
      0.2nm,0.5s,baz=106,slow=8.0,SNR=4.1
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    NEIC 01 16:50:40.3±2.6,6°.27N±0°.07×95°.60E±0°.05,h219km±9km,
        mb4.2/13,Error ellipse: s-maj=10.6km s-min=6.5km
        az=162.0
     DJA 01 16:50:41.0±0.8,6°N±7°×9°6E±°,h221km±7km,M4.0/8,
        mB4.3/2,mb4.2/4,MLv4.0/8,Mw(mB)3.5/2
     IDC 01 16:50:43.0±1.8,6°.38N×96°.13E,h215km±18km,mb3.2/5,
        mb1 3.4/8,mb1mx3.0/49,mbtmp3.9/8,Error ellipse:
        s-maj=38.6km s-min=14.2km az=55.0
     ISC 01 16:50:39.1±0.7,6°.20N±0°.06×95°.49E±0°.07,h200km,n41,
        σ1ˢ73/41,mb4.0/12,Nicobar Islands region
Code  Station Name        Δ°  AZ°   Phase ID          Time    Res
                                 Op      ISC       h  m  s   ISC
LHMI  Lhok Sumawe        1.74 123  P       Pn      16 51 17.8 +2.8
LHMI  Lhok Sumawe        1.74 123          Pn      16 51 19.1 +4.1
MLSI  Meulaboh, Aceh     2.12 154  P       Pn      16 51 20.9 +2.0
MLSI                               S       Sn      16 51 53.2 +3.2
TPTI                     3.37 150  P       Pn      16 51 33.7 +0.5
TPTI                               S       Sn      16 52 16.0 +0.5
KCSI  Kotacane, Aceh     3.50 139  P       Pn      16 51 36.2 +1.5
KCSI                               S       Sn      16 52 19.6 +1.2
SNSI  Sinabang, Aceh     3.85 167  P       Pn      16 51 39.4 +0.3
PSI   Prapat             4.81 134  P       Pn      16 51 53.3 +2.1
      3.8nm,0.3s,baz=316,slow=22,SNR=11
PSI                                S       Sn      16 52 47.7 -0.3
      baz=217,slow=15,SNR=3.1
RPSI  Rantau Prapat      4.88 135          Pn      16 51 53.1 +1.0
RPSI  Rantau Prapat      4.88 135          Pn      16 51 53.3 +1.3
RPSI                                       Sn      16 52 47.7 -1.8
KULM  Kulim              5.21 100  Pn      Pn      16 51 58.2 +1.9
IPM   Ipoh               5.77 107          Pn      16 52 04.7 +1.2
PBA   Port Blair         6.07 334  Pn      Pn      16 52 04.6 -2.7
PBSI  Pulau Batu         6.80 156  P       Pn      16 52 18.1 +1.2
      0.4nm69nm,1.0s
PDSI  Padang             8.63 145  P       Pn      16 52 40.6 -0.1
PBKT  Sadao Pong        11.62  27          Pn      16 53 19.4 +0.1
CM31  Chiang Mai Arr    12.65  15  P       P       16 53 35.9  0.0
CMAR  Chiang Mai Arr    12.65  15  P       Pn      16 53 33.2 +1.0
      0.5nm,0.3s,baz=207,slow=11,SNR=39
MNAI  Manna             12.87 144  Pn      Pn      16 53 35.2 +0.2
CHTO  Chiang Mai        12.99  15          Pn      16 53 36.7 +0.2
UBPT  Khong Chiam       13.32  47  P       Pn      16 53 41.6 +0.8
PALK  Pallekele         14.72 275  P       P       16 54 09.3  +10
      0.3nm,0.3s,baz=88,slow=17,SNR=4.7
PALK                               S       S       16 56 42.2 +0.3
      1.0nm,0.3s,baz=88,slow=5.2,SNR=5.6
QIZ   Qiongzhong        18.93  46  P       P       16 54 41.5 -3.5
H08S3 Diego Garcia H    26.74 239  T       T       17 21 31.4
      baz=61,slow=74,SNR=33
H08S2 Diego Garcia H    26.74 239  T       T       17 21 31.9
      baz=61,slow=74,SNR=27
H08S1 Diego Carcia H    26.76 239  T       T       17 21 32.8
      baz=61,SNR=12
SOEI  Soe               32.76 119  P       P       16 56 51.8 -1.8
FITZ  Fitzroy Crossi    38.32 130  P       P       16 57 39.5 -1.2
FITZ                               IAmb    IAmb    16 57 48.3
      comp=Z,8.8nm,1.4s
KNRA  Kununurra         39.47 124  P       P       16 57 46.9 -3.5
GAR   Garm              39.80 329  P       P       16 57 51.3 -1.6
GAR                                IAmb    IAmb    16 58 06.0
      comp=Z,13nm,1.5s
MTN   Manton Dam        40.15 118  P       P       16 57 54.6 -1.4
MTN                                IAmb    IAmb    16 58 08.8
      comp=Z,19nm,1.2s
MKAR  Makanchi Array    42.02 346  P       P       16 58 13.5 +2.7
      comp=Z,0.2nm,0.7s,baz=164,slow=5.8,SNR=2.7
NWAO  Narrogin (SRO)    44.05 153  P       P       16 58 28.6 +1.3
NWAO                               IAmb    IAmb    16 58 30.2
      comp=Z,24nm,1.5s
WB0   Warramunga Arr    46.16 125  P       P       16 58 43.3 -0.8
WB0                                IAmb    IAmb    16 58 43.9
      comp=Z,3.9nm,0.5s
WRA   Warramunga Arr    46.20 125  P       P       16 58 43.8 -0.6
      comp=Z,1.0nm,0.5s,baz=306,slow=8.4,SNR=57
WRAB  Tennant Creek     46.21 125  P       P       16 58 42.1 -2.3
WRAB                               IAmb    IAmb    16 58 58.4
      comp=Z,11nm,1.1s
WB2   Warramunga Arr    46.22 125  P       P       16 58 43.6 -0.9
WB2                                IAmb    IAmb    16 58 44.2
      comp=Z,3.0nm,0.6s
WR0   Warramunga Arr    46.38 125  P       P       16 58 45.1 -0.6
ASAR  Alice Springs     47.82 130  P       P       16 58 56.4 -0.5
      comp=Z,1.4nm,0.6s,baz=303,slow=7.9,SNR=42
ZALV  Zalesovo Beam     48.39 352  P       P       16 59 00.6 -0.1
      comp=Z,0.4nm,0.5s,baz=169,slow=8.8,SNR=2.6
STKA  Stephens Creek    57.99 134  P       P       17 00 11.2 +0.1
      comp=Z,1.0nm,0.6s,baz=315,slow=13,SNR=3.1
STKA  Stephens Creek    57.99 134  IAmb    IAmb    17 00 19.1
      comp=Z,0.8nm,1.1s
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     LDG 01 16:51:38.3±0.1,43°.05N×0°.16W,h8km,Md3.4/4,Ml3.7/64,
        Error ellipse: s-maj=0.9km s-min=0.8km az=89.0
     MDD 01 16:51:38.5±0.2,43°.09N×0°.17W,h4km±2km,mbLg3.4/26,
        Error ellipse: s-maj=2.2km s-min=1.6km az=180.0,
        PRXIMO
     MRB 01 16:51:38.3±0.3,43°.04N×0°.20W,h6km±3km,ML3.4/20,
        Error ellipse: s-maj=1.2km s-min=0.8km az=354.0
     STR 01 16:51:38.9±0.2,43°N±2°×°±°,h0km,MLv3.5/7
     SFS 01 16:51:39.0,42°.97N×0°.22W,ML3.3,LARUNS (FRANCIA)
    INMG 01 16:51:39.7±1.8,42°.98N×0°.22W,h0km±3km,ML3.0,Error
        ellipse: s-maj=2.7km s-min=2.3km az=29.0
     ISC 01 16:51:38.1±0.8,43°.07N±0°.02×0°.19W±0°.01,h17km±4km,
        n230,σ2ˢ48/381,3C,Pyrenees
Code  Station Name        Δ°  AZ°   Phase ID          Time    Res
                                 Op      ISC       h  m  s   ISC
PYLO  Lourdes            0.10  75  Pg      Pg      16 51 41.1 -0.6
PYLO                               Sg      Sg      16 51 43.1 -1.0
PYLO  Lourdes            0.10  75  P       Pg      16 51 41.1 -0.6
PYLO                               S       Sg      16 51 43.2 -1.0
      8μm,0.3s
ETSF  Etsaut             0.32 238  ePg     Pg      16 51 44.3 -0.7
ETSF                               eSg     Sg      16 51 47.6 -2.1
      3μm,0.2s
ETSF  Etsaut             0.32 238  Pg      Pg      16 51 44.3 -0.7
ETSF                               Lg      Lg      16 51 47.6
      1μm,0.2s
ETSF  Etsaut             0.32 238  Pg      Pg      16 51 44.3 -0.7
ATE   Arette             0.38 273  Pg      Pg      16 51 45.3 -0.5
ATE                                Sg      Sg      16 51 50.8 -0.4
ATE   Arette             0.38 273 ⇑Pg      Pg      16 51 45.4 -0.5
      256nm,0.1s,SNR=18
ATE                                Lg      Lg      16 51 50.6
      998nm,0.1s,SNR=7.9
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ATE	Arette	0.38	273	P	Pg	16 51 45.4	-0.5	
ATE				S	Sg	16 51 50.6	-0.5	1µm,0.2s
EPF	Esparros	0.39	96	*e*Pg	Pg	16 51 45.7	-0.4	
EPF				*e*Sg	Sg	16 51 50.8	-0.7	2µm,0.3s
EPF	Esparros	0.39	96	Pg	Pg	16 51 45.7	-0.4	
EPF				Lg	Lg	16 51 50.8		1µm,0.3s
EPF	Esparros	0.39	96	Pg	Pg	16 51 45.7	-0.4	
FMON	Montouss	0.44	91	P	Pg	16 51 46.7	-0.3	
FMON				S	Sg	16 51 53.4	+0.3	739nm,0.3s
URDF	Urds	0.47	321	Pg	Pg	16 51 48.9	+1.3	
URDF				Sg	Sg	16 51 55.5	+1.5	
ECHI	Chisagues Biel	0.49	145	Pg	Pg	16 51 47.4	-0.7	
ECHI	Chisagues Biel	0.49	145	⇑Pg	Pg	16 51 47.0	-1.0	62nm,0.1s,SNR=18
ECHI				Lg	Lg	16 51 53.2		515nm,0.1s,SNR=7.9
ECHI	Chisagues Biel	0.49	145	P	Pg	16 51 47.1	-0.9	
SJPF	Ste Jean	0.76	274	*e*Pg	Pg	16 51 52.5	-0.5	
SJPF				*e*Sg	Sg	16 52 03.0	-0.1	536nm,0.3s
SJPF	Ste Jean	0.76	274	Pg	Pg	16 51 52.5	-0.5	
SJPF				Lg	Lg	16 52 03.0		268nm,0.3s
SJPF	Ste Jean	0.76	274	Pg	Pg	16 51 52.5	-0.5	
SJPF				Sg	Sg	16 52 03.0	-0.1	
CARA	Val d’Aran	0.82	116	P	Pg	16 51 53.7	-0.4	
CARA				S	Sg	16 52 05.2	+0.2	1µm,0.4s
EORO	Oroz-Betelu	0.84	258	⇑Pg	Pb	16 51 53.8	-0.4	77nm,0.3s,SNR=18
EORO				Lg	Lg	16 52 05.5		429nm,0.3s,SNR=27
EORO	Oroz-Betelu	0.84	258	Pg	Pb	16 51 53.8	-0.4	
TERF	Tercis-les-Bai	0.91	312	Pg	Pb	16 51 56.6	+1.3	
TERF				Sg	Sg	16 52 09.8	+2.1	
MLS	Moulis	0.95	96	Pn	Pb	16 51 55.2	-0.7	
MLS				Pg	Pg	16 51 56.6	+0.2	
MLS				Sg	Sb	16 52 10.0	+1.8	
MLS	Moulis	0.95	96	Pg	Pb	16 51 55.3	-0.7	
MLS				Lg	Lg	16 52 09.2		
MLS	Moulis	0.95	96	S	Sb	16 52 09.2	+1.0	
EALK	Alkurruntz	0.98	279	Pn	Pb	16 51 56.3	-0.2	
EALK				Pg	Pg	16 51 57.2	+0.1	
EALK				Sg	Sb	16 52 09.8	+0.6	
EALK	Alkurruntz	0.98	279	Pg	Pb	16 51 56.3	-0.2	80nm,0.4s,SNR=52
EALK				Lg	Lg	16 52 09.7		331nm,0.2s,SNR=18
EALK	Alkurruntz	0.98	279	Pg	Pb	16 51 56.3	-0.2	
EALK				Lg	Lg	16 52 09.7		
CTRE	Tremp	1.03	136	Pg	Pb	16 51 57.1	-0.3	
CTRE				Lg	Lg	16 52 11.6		358nm,0.4s
CTRE	Tremp	1.03	136	P	Pb	16 51 57.2	-0.3	
CTRE				S	Sb	16 52 11.1	+0.4	358nm,0.4s
EARA	Aranguren	1.07	254	Pg	Pb	16 51 58.8	+0.8	
EARA				Sg	Sb	16 52 13.1	+1.4	
EARA	Aranguren	1.07	254	Pg	Pb	16 51 58.8	+0.8	47nm,0.3s,SNR=20
EARA				Lg	Lg	16 52 13.4		356nm,0.2s,SNR=9.6
CEST	Esterri de Car	1.16	113	Pg	Pn	16 51 59.4	-0.2	
CEST				Lg	Lg	16 52 15.1		297nm,0.4s
CEST	Esterri de Car	1.16	113	P	Pn	16 51 59.5	-0.2	
CEST				S	Sb	16 52 15.2	+0.7	297nm,0.4s
CSOR	Sort	1.20	125	Pg	Pn	16 52 00.2	+0.2	72nm,0.5s,SNR=43
CSOR				Lg	Lg	16 52 17.6		495nm,0.3s,SNR=15
CSOR	Sort	1.20	125	P	Pn	16 52 00.1	+0.1	
CSOR				S	Sb	16 52 16.3	+0.8	444nm,0.3s
ESAC	San Caprasio	1.36	189	Pg	Pn	16 52 03.8	+1.5	588nm,0.3s,SNR=313
ESAC				Lg	Lg	16 52 22.6		1µm,0.2s
CAVN	Les Avellanes	1.38	149	Pn	Pn	16 52 03.1	+0.7	
CAVN				Sn	Sn	16 52 21.7	+1.4	355nm,0.3s
CAVN	Les Avellanes	1.38	149	P	Pn	16 52 03.1	+0.7	
CAVN				S	Sn	16 52 21.2	+1.0	710nm,0.3s
CORG	Organya	1.39	127	Pn	Pn	16 52 03.2	+0.5	
CORG				Sn	Sn	16 52 22.3	+1.7	
CORG	Organya	1.39	127	P	Pn	16 52 03.2	+0.5	
CORG				S	Sn	16 52 22.4	+1.7	
MONQ	Montcuq	1.64	37	P	Pn	16 52 06.0	0.0	
MONQ				Pn	Pb	16 52 08.3	+0.5	
MONQ				Pg	Pg	16 52 10.0	+0.4	
MONQ				Sg	Sg	16 52 32.3	+1.4	
FNEB	Nbias	1.69	95	Pg	Pb	16 52 10.4	+1.7	
FNEB				Sg	Sg	16 52 33.6	+1.0	
FNEB	Nbias	1.69	95	Pn	Pn	16 52 08.3	+1.5	
FNEB				Sn	Sn	16 52 30.2	+2.2	288nm,0.4s
FNEB	Nbias	1.69	95	P	Pn	16 52 08.4	+1.5	
FNEB				S	Sn	16 52 30.3	+2.2	288nm,0.4s
CLLI	Llivia	1.70	110	Pn	Pn	16 52 09.7	+2.8	7.0nm,0.3s,SNR=7.9
CLLI				Pg	Pg	16 52 12.2	+1.5	212nm,0.4s,SNR=56
CLLI				Lg	Lg	16 52 33.3		375nm,0.6s,SNR=23
CLLI	Llivia	1.70	110	S	Sn	16 52 30.3	+1.9	296nm,0.6s
EMIR	Miracle	1.71	132	Pg	Pb	16 52 09.9	+0.8	41nm,0.3s,SNR=55
EMIR				Lg	Lg	16 52 33.1		370nm,0.4s,SNR=11
EMIR	Miracle	1.71	132	Pg	Pb	16 52 09.9	+0.8	
MTLF	Montolieu	1.78	80	*e*P	Pn	16 52 09.1	+1.1	
MTLF	Montolieu	1.78	80	*e*Pg	Pb	16 52 11.4	+1.2	
MTLF				*e*Sg	Sb	16 52 33.6	+1.4	228nm,0.3s
MTLF	Montolieu	1.78	80	Pn	Pn	16 52 10.9	+2.9	
MTLF	Montolieu	1.78	80	Pg	Pb	16 52 11.4	+1.2	
MTLF				Lg	Lg	16 52 33.6		114nm,0.3s
MTLF	Montolieu	1.78	80	P	Pn	16 52 09.1	+1.1	
MTLF				Pg	Pb	16 52 11.4	+1.2	
LRVF	chteau la Riv	1.88	357	P	Pn	16 52 11.1	+1.8	
LRVF				Pn	Pb	16 52 11.6	-0.2	
CBRU	Bruguera	1.91	113	Sn	Sn	16 52 35.3	+1.7	185nm,0.5s
CBRU	Bruguera	1.91	113	S	Sn	16 52 35.4	+1.7	370nm,0.5s
EPOB	Poblet	1.96	151	Pn	Pn	16 52 12.0	+1.5	38nm,0.6s,SNR=116
EPOB				Pg	Pb	16 52 14.2	+0.9	23nm,0.3s,SNR=13
EPOB				Sn	Sn	16 52 35.5	+0.9	19nm,0.3s
EPOB				Lg	Lg	16 52 38.7		131nm,0.3s,SNR=20
EPOB	Poblet	1.96	151	P	Pn	16 52 11.8	+1.3	
EPOB				S	Sn	16 52 36.3	+1.6	142nm,0.4s
CORI	Orista	1.98	123	Pn	Pn	16 52 11.5	+0.7	
CORI				Sn	Sn	16 52 37.1	+1.9	389nm,0.4s
CORI	Orista	1.98	123	P	Pn	16 52 11.8	+1.0	
CORI				S	Sn	16 52 37.1	+1.9	389nm,0.4s
LFF	La Frestale	1.98	19	*e*Pn	Pn	16 52 10.9	+0.1	
LFF	La Frestale	1.98	19	*e*P	Pn	16 52 13.2	+2.4	
LFF	La Frestale	1.98	19	*e*Pg	Pb	16 52 16.0	+2.3	
LFF				*e*Sn	Sn	16 52 34.4	-0.8	
LFF				*e*Sg	Sb	16 52 41.9	+3.8	603nm,0.3s
LFF	La Frestale	1.98	19	Pn	Pn	16 52 10.9	+0.1	
LFF				Pg	Pb	16 52 16.0	+2.3	
LFF				Sn	Sn	16 52 34.4	-0.8	
LFF				Lg	Lg	16 52 41.9		302nm,0.3s
ERTA	Horta de San J	2.15	169	Pn	Pn	16 52 14.6	+1.5	0.3nm,0.1s,SNR=7.9
ERTA				Pg	Pb	16 52 17.4	+0.9	27nm,0.5s,SNR=50
ERTA				Lg	Lg	16 52 44.7		94nm,0.2s
ERTA	Horta de San J	2.15	169	P	Pn	16 52 13.7	+0.6	
ERTA				S	Sn	16 52 40.8	+1.5	135nm,0.4s
CBEU	Beuda	2.26	110	Pn	Pn	16 52 16.1	+1.4	
CBEU				Sn	Sn	16 52 43.2	+1.0	579nm,0.4s
CBEU	Beuda	2.26	110	P	Pn	16 52 16.1	+1.4	
CBEU				S	Sn	16 52 44.4	+2.2	579nm,0.4s
SJAF	Saint Jean de	2.33	103	Pn	Pn	16 52 18.6	+2.9	
SJAF				Sg	Sb	16 52 52.4	+4.2	
SJAF	Saint Jean de	2.33	103	Pn	Pb	16 52 19.6	0.0	0.5nm,0.2s,SNR=7.9
SJAF				Pg	Pg	16 52 21.9	-0.9	3.1nm,0.1s,SNR=7.9
SJAF				Lg	Lg	16 52 52.8		164nm,0.4s,SNR=7.9
SJAF	Saint Jean de	2.33	103	P	Pn	16 52 16.7	+1.1	
SJAF				S	Sn	16 52 45.6	+1.7	145nm,0.4s
CFON	Fontmartina	2.34	123	Pn	Pn	16 52 18.6	+2.8	21nm,0.3s,SNR=32
CFON				Pg	Pb	16 52 21.5	+1.7	50nm,0.4s,SNR=11
CFON				Lg	Lg	16 52 51.6		529nm,0.3s,SNR=7.7
CFON	Fontmartina	2.34	123	P	Pn	16 52 16.6	+0.8	
CFON				S	Sn	16 52 46.1	+1.9	423nm,0.3s
EJON	La Jonquera	2.35	104	Pn	Pn	16 52 19.7	+3.8	22nm,0.3s,SNR=27
EJON				Pg	Pb	16 52 22.1	+2.2	8.8nm,0.2s,SNR=7.9
EJON				Lg	Lg	16 52 52.8		181nm,0.4s,SNR=11
CMAS	Mas de Barbera	2.37	171	Pn	Pn	16 52 16.9	+0.8	
CMAS				Sn	Sn	16 52 45.7	+0.9	254nm,0.4s
CMAS	Mas de Barbera	2.37	171	P	Pn	16 52 17.0	+0.8	
CMAS				S	Sn	16 52 45.8	+0.9	254nm,0.4s
ELAN	Lanestosa	2.38	275	Pn	Pn	16 52 19.9	+3.5	8.2nm,0.3s,SNR=10.0
ELAN				Pg	Pb	16 52 22.7	+2.2	13nm,0.3s,SNR=8.7
ELAN				Lg	Lg	16 52 50.5		40nm,0.2s,SNR=5.8
CAF	Calviac	2.46	40	*e*Pn	Pn	16 52 17.1	-0.4	
CAF	Calviac	2.46	40	*e*Pg	Pb	16 52 24.6	+2.7	
CAF				*e*Sn	Sn	16 52 45.9	-1.3	48nm,0.2s
CAF				*e*Sg	Sb	16 52 55.9	+3.9	107nm,0.2s
CAF	Calviac	2.46	40	Pn	Pn	16 52 17.1	-0.4	
CAF				Pg	Pb	16 52 24.6	+2.7	
CAF				Sn	Sn	16 52 45.9	-1.3	24nm,0.2s
CAF				Lg	Lg	16 52 55.9		54nm,0.2s
RJF	Les Rejaudoux	2.55	28	*e*Pn	Pn	16 52 18.4	-0.2	
RJF	Les Rejaudoux	2.55	28	*e*P	Pn	16 52 21.1	+2.5	
RJF	Les Rejaudoux	2.55	28	*e*Pg	Pb	16 52 26.2	+2.9	
RJF				*e*Sn	Sn	16 52 47.9	-1.3	48nm,0.2s
RJF				*e*Sg	Sb	16 52 58.9	+4.6	180nm,0.3s
RJF	Les Rejaudoux	2.55	28	Pn	Pn	16 52 18.4	-0.2	
RJF				Pg	Pb	16 52 26.2	+2.9	
RJF				Sn	Sn	16 52 47.9	-1.3	24nm,0.2s
RJF				Lg	Lg	16 52 58.9		90nm,0.3s
CCAS	Cassa de la Se	2.58	116	Pn	Pn	16 52 19.8	+0.9	
CCAS				Sn	Sn	16 52 50.9	+1.1	168nm,0.6s
CCAS	Cassa de la Se	2.58	116	P	Pn	16 52 19.8	+0.9	
CCAS				S	Sn	16 52 51.7	+1.9	168nm,0.6s
ETOR	Torete	2.65	212	Pn	Pn	16 52 21.8	+1.8	35nm,0.2s,SNR=102
ETOR				Pg	Pb	16 52 26.8	+1.8	121nm,0.4s,SNR=16
ETOR				Sn	Sn	16 52 53.0	+1.3	115nm,0.5s,SNR=6.1
ETOR				Lg	Lg	16 53 01.0		237nm,0.5s
EMOS	Mosqueruela	2.71	185	Pn	Pn	16 52 23.1	+2.1	34nm,0.4s,SNR=13
EMOS				Pg	Pb	16 52 27.6	+1.4	28nm,0.4s,SNR=30
EMOS				Sn	Sn	16 52 55.8	+2.3	12nm,0.2s,SNR=5.7
EMOS				Lg	Lg	16 53 02.3		390nm,0.7s,SNR=11
CHIF	Chize	3.07	357	P	Pn	16 52 26.0	+0.3	
LASF	Ste Croix	3.11	70	*e*Pn	Pn	16 52 26.3	+0.1	
LASF	Ste Croix	3.11	70	*e*Pg	Pb	16 52 35.3	+2.5	
LASF				*e*Sg	Sb	16 53 14.8	+4.4	49nm,0.2s
LASF	Ste Croix	3.11	70	Pn	Pn	16 52 26.3	+0.1	
LASF				Pg	Pb	16 52 35.3	+2.5	
LASF				Lg	Lg	16 53 14.8		24nm,0.2s
MFF	Saint Martin d	3.53	0	*e*Pn	Pn	16 52 32.2	+0.1	
MFF	Saint Martin d	3.53	0	*e*Pg	Pb	16 52 44.7	+4.7	
MFF				*e*Sn	Sn	16 53 11.9	-1.5	17nm,0.2s
MFF				*e*Sg	Sg	16 53 30.0	-1.4	90nm,0.2s
MFF	Saint Martin d	3.53	0	Pn	Pn	16 52 32.2	+0.1	
MFF				Pg	Pb	16 52 44.7	+4.7	
MFF				Sn	Sn	16 53 11.9	-1.5	8.4nm,0.2s
MFF				Lg	Lg	16 53 30.0		45nm,0.2s
UCM	Universidad Co	3.59	221	Pn	Pn	16 52 33.8	+0.9	
UCM				Sn	Sn	16 53 09.8	-5.0	
UCM	Universidad Co	3.59	221	*e*P	Pn	16 52 33.8	+0.9	
UCM				*e*S	Sn	16 53 09.8	-5.0	
TCF	Toulx Ste Croi	3.64	27	*e*Pn	Pn	16 52 33.3	-0.3	
TCF	Toulx Ste Croi	3.64	27	*e*Pg	Pb	16 52 46.3	+4.3	
TCF				*e*Sn	Sn	16 53 13.5	-2.7	27nm,0.3s
TCF				*e*Sg	Sg	16 53 33.6	-1.4	89nm,0.2s
TCF	Toulx Ste Croi	3.64	27	Pn	Pn	16 52 33.3	-0.3	
TCF				Pg	Pb	16 52 46.3	+4.3	
TCF				Sn	Sn	16 53 13.5	-2.7	13nm,0.3s
TCF				Lg	Lg	16 53 33.6		45nm,0.2s
EARI	Arriondas	3.68	275	Pn	Pn	16 52 37.5	+3.3	2.4nm,0.2s,SNR=9.8
EARI				Sn	Sn	16 53 19.8	+2.7	15nm,0.4s
AGO	Saint Agoulin	3.81	37	P	Pn	16 52 35.9	-0.1	
GUD	Guadarrama	3.83	232	Pn	Pn	16 52 38.0	+1.7	3.7nm,0.2s,SNR=4.0
GUD				Sn	Sn	16 53 21.7	+0.7	18nm,0.3s,SNR=6.7
VIVF	Saint-Julien-l	3.94	61	*e*Pn	Pn	16 52 37.0	-0.7	
VIVF	Saint-Julien-l	3.94	61	*e*P	Pn	16 52 40.7	+3.0	
VIVF	Saint-Julien-l	3.94	61	*e*Pg	Pb	16 52 50.6	+3.6	
VIVF				*e*Sg	Sb	16 53 40.6	+6.3	86nm,0.6s
VIVF	Saint-Julien-l	3.94	61	Pn	Pn	16 52 37.0	-0.7	
VIVF				Pg	Pb	16 52 50.6	+3.6	
VIVF				Lg	Lg	16 53 40.6		43nm,0.6s
ETOS	Mallorca	4.00	145	Pn	Pn	16 52 40.0	+1.5	1.3nm,0.1s,SNR=9.1
ETOS				Sn	Sn	16 53 25.2	+0.3	5.0nm,0.3s
BGF	Bois d'Agland	4.10	31	*e*Pn	Pn	16 52 39.4	-0.5	
BGF	Bois d'Agland	4.10	31	*e*P	Pn	16 52 43.0	+3.1	
BGF	Bois d'Agland	4.10	31	*e*Pg	Pb	16 52 54.3	+4.6	
BGF				*e*Sg	Sg	16 53 47.3	-2.4	202nm,0.4s
BGF	Bois d'Agland	4.10	31	Pn	Pn	16 52 39.4	-0.5	
BGF				Pg	Pb	16 52 54.3	+4.6	
BGF				Lg	Lg	16 53 47.3		101nm,0.4s
EIBI	Ibiza	4.20	164	Pn	Pn	16 52 42.6	+1.4	1.1nm,0.1s,SNR=7.9
EIBI				Sn	Sn	16 53 27.8	-2.1	7.0nm,0.2s,SNR=7.9
SMRF	Simiane la Rot	4.29	76	*e*P	Pn	16 52 45.8	+3.3	
SMRF				*e*Sn	Sn	16 53 28.5	-3.6	8.4nm,0.3s
SMRF				*e*Sg	Sb	16 53 52.1	+7.7	30nm,0.4s
SMRF	Simiane la Rot	4.29	76	Pn	Pn	16 52 45.8	+3.3	
SMRF				Sn	Sn	16 53 28.5	-3.6	8.4nm,0.3s
SMRF				Lg	Lg	16 53 52.1		30nm,0.4s
EBEN2	Beniarda presa	4.39	180	Pn	Pn	16 52 45.6	+1.7	4.6nm,0.1s,SNR=4.0
EBEN2				Sn	Sn	16 53 34.1	-0.5	5.4nm,0.3s,SNR=7.9
EBEN2				Lg	Lg	16 53 48.4		20nm,0.4s,SNR=7.9
ESDC	Sonseca Array	4.42	221	Pn	Pn	16 52 45.1	+0.7	3.6nm,0.3s,baz=41,slow=13,SNR=19
ESDC				Sn	Sn	16 53 33.6	-1.9	2.2nm,0.3s,baz=44,slow=14,SNR=8.6
AVF	Avril sur Loir	4.49	33	*e*Pn	Pn	16 52 44.5	-0.7	
AVF	Avril sur Loir	4.49	33	*e*Pg	Pb	16 53 01.4	+5.1	
AVF				*e*Sn	Sn	16 53 35.0	-2.0	6.2nm,0.3s
AVF				*e*Sg	Sg	16 53 59.1	-3.0	61nm,0.4s
AVF	Avril sur Loir	4.49	33	Pn	Pn	16 52 44.5	-0.7	
AVF				Pg	Pb	16 53 01.4	+5.1	
AVF				Sn	Sn	16 53 35.0	-2.0	3.1nm,0.3s
AVF				Lg	Lg	16 53 59.1		31nm,0.4s
ETOB	Tobarra	4.54	194	Pn	Pn	16 52 47.8	+1.8	1.2nm,0.1s,SNR=7.9
ETOB				Sn	Sn	16 53 36.7	-1.7	3.0nm,0.3s,SNR=7.9
ETOB				Lg	Lg	16 53 56.4		6.9nm,0.4s,SNR=7.9
SMF	Signal de Mont	4.58	37	*e*Pn	Pn	16 52 46.0	-0.5	
SMF	Signal de Mont	4.58	37	*e*Pg	Pb	16 53 03.0	+5.1	
SMF				*e*Sn	Sn	16 53 36.2	-3.1	11nm,0.3s
SMF				*e*Sg	Sg	16 54 01.6	-3.4	51nm,0.4s
SMF	Signal de Mont	4.58	37	Pn	Pn	16 52 46.0	-0.5	
SMF				Pg	Pb	16 53 03.0	+5.1	
SMF				Sn	Sn	16 53 36.2	-3.1	5.6nm,0.3s
SMF				Lg	Lg	16 54 01.6		25nm,0.4s
HYF	Humbligny	4.65	24	*e*Pn	Pn	16 52 47.1	-0.3	
HYF	Humbligny	4.65	24	*e*P	Pn	16 52 50.5	+3.1	
HYF	Humbligny	4.65	24	*e*Pg	Pb	16 53 04.5	+5.4	
HYF				*e*Sg	Sg	16 54 04.6	-2.6	
HYF	Humbligny	4.65	24	Pn	Pn	16 52 47.1	-0.3	
HYF				Pg	Pb	16 53 04.5	+5.4	
HYF				Lg	Lg	16 54 04.6		
PAB	San Pablo	4.71	223	Pn	Pn	16 52 49.2	+0.8	2.6nm,0.1s,SNR=7.9
PAB				Sn	Sn	16 53 40.8	-1.9	12nm,0.3s,SNR=7.9
PAB				Lg	Lg	16 54 04.3		12nm,0.5s,SNR=7.9
ORIF	Oris-en-Rattie	4.75	65	*e*P	Pn	16 52 51.8	+2.9	
ORIF	Oris-en-Rattie	4.75	65	*e*Pg	Pb	16 53 05.5	+4.6	
ORIF				*e*Sn	Sn	16 53 41.1	-2.5	6.8nm,0.3s
ORIF				*e*Sg	Sb	16 54 06.4	+8.6	18nm,0.6s
ORIF	Oris-en-Rattie	4.75	65	Pg	Pb	16 53 05.5	+4.6	
ORIF				Sn	Sn	16 53 41.1	-2.5	3.4nm,0.3s
ORIF				Lg	Lg	16 54 06.4		9.2nm,0.6s
SSF	Saint Saulge	4.77	32	*e*Pn	Pn	16 52 48.8	-0.3	
SSF	Saint Saulge	4.77	32	*e*Pg	Pb	16 53 06.7	+5.5	
SSF				*e*Sn	Sn	16 53 40.3	-3.7	
SSF				*e*Sg	Sg	16 54 07.4	-3.7	111nm,0.6s
SSF	Saint Saulge	4.77	32	Pn	Pn	16 52 48.8	-0.3	
SSF				Pg	Pb	16 53 06.7	+5.5	
SSF				Sn	Sn	16 53 40.3	-3.7	
SSF				Lg	Lg	16 54 07.4		56nm,0.6s
LMR	La Mourre	4.90	85	*e*P	Pn	16 52 54.3	+3.4	
LMR				*e*Sn	Sn	16 53 43.0	-4.2	3.2nm,0.4s
LMR				*e*Sg	Sb	16 54 10.7	+8.7	7.5nm,0.4s
LMR	La Mourre	4.90	85	Sn	Sn	16 53 43.0	-4.2	1.6nm,0.4s
LMR				Lg	Lg	16 54 10.7		3.8nm,0.4s
ECAL	Calabor	4.97	259	Pn	Pn	16 52 54.0	+2.0	4.7nm,0.1s,SNR=6.3
ECAL				Sn	Sn	16 53 49.5	+0.4	26nm,0.3s,SNR=7.9
ECAL				Lg	Lg	16 54 08.7		23nm,0.3s,SNR=7.9
FRF	La Foret Royal	5.01	82	*e*P	Pn	16 52 55.9	+3.5	
FRF				*e*Sn	Sn	16 53 46.2	-3.7	4.0nm,0.3s
PBRG	Braganca	5.01	258	Pn	Pn	16 52 55.2	+2.7	
PBRG				Sn	Sn	16 53 50.7	+0.7	
PBRG				Lg	Lg	16 54 11.1		5.2nm,0.4s
PBRG	Braganca	5.01	258	*e*Pn	Pn	16 52 55.2	+2.7	
PBRG				*e*Sn	Sn	16 53 50.7	+0.7	
PBRG				*e*Sg	Sb	16 54 11.1	+5.8	
PBRG				A	A	16 54 18.3		10nm,0.4s
LOR	Lormes	5.08	33	*e*Pn	Pn	16 52 52.8	-0.6	baz=219
LOR	Lormes	5.08	33	*e*Pg	Pb	16 53 12.1	+5.7	baz=229
LOR				*e*Sg	Sg	16 54 17.6	-3.4	53nm,0.4s,baz=209
LOR	Lormes	5.08	33	Pn	Pn	16 52 52.8	-0.6	
LOR				Pg	Pb	16 53 12.1	+5.7	
LOR				Lg	Lg	16 54 17.6		26nm,0.4s
EPON	Pontenova	5.10	275	Pn	Pn	16 52 56.0	+2.4	2.0nm,0.2s,SNR=6.4
EPON				Sn	Sn	16 53 55.8	+3.8	18nm,0.3s,SNR=7.9
QUIF	Quistinic	5.28	338	*e*Pn	Pn	16 52 55.8	-0.3	
QUIF	Quistinic	5.28	338	*e*Pg	Pg	16 53 16.7	-2.4	
QUIF				*e*Sn	Sn	16 53 53.0	-3.4	9.9nm,0.2s
QUIF				*e*Sg	Sg	16 54 25.5	-1.9	22nm,0.2s
QUIF	Quistinic	5.28	338	Pn	Pn	16 52 55.8	-0.3	
QUIF				Pg	Pg	16 53 16.7	-2.4	
QUIF				Sn	Sn	16 53 53.0	-3.4	4.9nm,0.2s
QUIF				Lg	Lg	16 54 25.5		11nm,0.2s
EMUR	La Murta	5.28	189	Pn	Pn	16 52 57.6	+1.4	1.0nm,0.2s,SNR=6.1
EMUR				Sn	Sn	16 53 55.3	-1.4	4.0nm,0.5s,SNR=4.0
EMUR				Lg	Lg	16 54 21.8		30nm,0.8s,SNR=7.9
MBDF	Montbardon	5.29	69	*e*P	Pn	16 52 59.9	+3.5	
MBDF				*e*Sn	Sn	16 53 53.8	-3.3	1.1nm,0.3s
MBDF				*e*Sg	Sg	16 54 23.9	-4.0	11nm,0.5s
MBDF	Montbardon	5.29	69	Sn	Sn	16 53 53.8	-3.3	0.6nm,0.3s
MBDF				Lg	Lg	16 54 23.9		5.5nm,0.5s
GRR	Gorron	5.34	355	*e*Pn	Pn	16 52 56.5	-0.4	
GRR	Gorron	5.34	355	*e*Pg	Pb	16 53 17.7	+6.9	
GRR				*e*Sn	Sn	16 53 54.5	-3.4	22nm,0.3s
GRR				*e*Sg	Sg	16 54 27.0	-2.3	26nm,0.2s
GRR	Gorron	5.34	355	Pn	Pn	16 52 56.5	-0.4	
GRR				Pg	Pb	16 53 17.7	+6.9	
GRR				Sn	Sn	16 53 54.5	-3.4	11nm,0.3s

GRR				Lg	Lg	16 54 27.0	
	13nm,0.2s						
EPLA	**Plasencia**	**5.34**	**238**	Pn	**Pn**	**16 52 58.4**	**+1.4**
	1.2nm,0.1s,SNR=7.9						
EPLA				Sn	**Sn**	**16 53 56.8**	**-1.4**
	2.6nm,0.2s,SNR=7.9						
EPLA				Lg	Lg	16 54 24.5	
	7.3nm,0.4s,SNR=7.9						
MVO	**Moncorvo**	**5.43**	**252**	Pn	**Pn**	**16 53 00.0**	**+1.7**
	2.9nm,0.1s,SNR=8.8						
MVO				Sn	**Sn**	**16 53 59.3**	**-1.1**
	21nm,0.2s,SNR=7.9						
MVO				Lg	Lg	16 54 24.5	
	17nm,0.3s,SNR=7.9						
MVO	**Moncorvo**	**5.43**	**252**	*e*Pn	**Pn**	**16 53 00.2**	**+1.9**
MVO				*e*Sn	**Sn**	**16 53 59.6**	**-0.8**
MVO				*e*Sg	**Sb**	**16 54 25.6**	**+8.2**
MVO				A	A	16 54 30.4	
	21nm,0.4s						
SGMF	**Saint Gilles**	**5.44**	**343**	*e*Pn	**Pn**	**16 52 57.4**	**-0.9**
SGMF	**Saint Gilles**	**5.44**	**343**	*e*Pg	**Pg**	**16 53 19.8**	**-2.4**
SGMF				*e*Sn	**Sn**	**16 53 57.7**	**-2.8**
	11nm,0.3s						
SGMF				*e*Sg	**Sg**	**16 54 30.1**	**-2.6**
	37nm,0.4s						
SGMF	**Saint Gilles**	**5.44**	**343**	Pn	**Pn**	**16 52 57.4**	**-0.9**
SGMF				Pg	**Pg**	**16 53 19.8**	**-2.4**
SGMF				Sn	**Sn**	**16 53 57.7**	**-2.8**
	5.4nm,0.3s						
SGMF				Lg	Lg	16 54 30.1	
	18nm,0.4s						
LDF	**La Druitiere**	**5.52**	**0**	*e*Pn	**Pn**	**16 52 58.6**	**-0.8**
LDF	**La Druitiere**	**5.52**	**0**	*e*Pg	Pb	16 53 21.1	+7.1
LDF				*e*Sn	**Sn**	**16 53 58.8**	**-3.7**
	8.8nm,0.3s						
LDF				*e*Sg	**Sg**	**16 54 32.7**	**-2.6**
	43nm,0.5s						
LPL	**La Plagne**	**5.54**	**61**	*e*P	**Pn**	**16 53 03.3**	**+3.5**
LPL	**La Plagne**	**5.54**	**61**	*e*Pg	Pb	16 53 20.6	+6.3
LPL				*e*Sn	**Sn**	**16 53 59.2**	**-3.9**
	2.9nm,0.3s						
LPL				*e*Sg	**Sg**	**16 54 31.8**	**-3.9**
	15nm,0.6s						
LPL	**La Plagne**	**5.54**	**61**	Pg	Pb	16 53 20.6	+6.3
LPL				Sn	**Sn**	**16 53 59.2**	**-3.9**
	1.4nm,0.3s						
LPL				Lg	Lg	16 54 31.8	
	7.3nm,0.6s						
LPG	**La Plagne**	**5.54**	**62**	*e*P	**Pn**	**16 53 03.8**	**+3.9**
LPG				*e*Sn	**Sn**	**16 53 59.1**	**-4.2**
	3.6nm,0.5s						
LPG				*e*Sg	**Sg**	**16 54 32.2**	**-3.6**
	40nm,0.8s						
LPG	**La Plagne**	**5.54**	**62**	Sn	**Sn**	**16 53 59.1**	**-4.2**
	1.8nm,0.5s						
LPG				Lg	Lg	16 54 32.2	
	20nm,0.8s						
SBF	**Sospel**	**5.60**	**79**	*e*P	**Pn**	**16 53 04.4**	**+3.8**
SBF				*e*Sg	**Sg**	**16 54 32.9**	**-4.9**
	8.6nm,0.4s						
SBF	**Sospel**	**5.60**	**79**	Lg	Lg	16 54 32.9	
	4.3nm,0.4s						
ROSF	**Rostrenen**	**5.69**	**339**	*e*Pn	**Pn**	**16 53 01.5**	**-0.2**
ROSF	**Rostrenen**	**5.69**	**339**	*e*Pg	**Pg**	**16 53 24.4**	**-2.6**
ROSF				*e*Sn	**Sn**	**16 54 03.5**	**-3.1**
	10nm,0.3s						
ROSF				*e*Sg	**Sg**	**16 54 38.3**	**-2.3**
	27nm,0.4s						
ROSF	**Rostrenen**	**5.69**	**339**	Pn	**Pn**	**16 53 01.5**	**-0.2**
ROSF				Pg	**Pg**	**16 53 24.4**	**-2.6**
ROSF				Sn	**Sn**	**16 54 03.5**	**-3.1**
	5.1nm,0.3s						
ROSF				Lg	Lg	16 54 38.3	
	13nm,0.4s						
CABF	**La Chapelle**	**5.69**	**49**	*e*P	**Pn**	**16 53 05.2**	**+3.3**
CABF	**La Chapelle**	**5.69**	**49**	*e*Pg	Pb	16 53 22.8	+5.9
CABF				*e*Sg	**Sg**	**16 54 36.8**	**-3.9**
	47nm,0.6s						
CABF	**La Chapelle**	**5.69**	**49**	Pg	Pb	16 53 22.8	+5.9
CABF				Lg	Lg	16 54 36.8	
	23nm,0.6s						
FLN	**La Foliniere**	**5.70**	**358**	*e*Pn	**Pn**	**16 53 01.5**	**-0.3**
	baz=176						
FLN	**La Foliniere**	**5.70**	**358**	*e*Pg	Pb	16 53 24.0	+7.1
	baz=170						
FLN				*e*Sn	**Sn**	**16 54 02.9**	**-3.8**
	11nm,0.2s						
FLN				*e*Sg	**Sg**	**16 54 37.7**	**-3.1**
	26nm,0.3s,baz=175						
FLN	**La Foliniere**	**5.70**	**358**	Pn	**Pn**	**16 53 01.5**	**-0.3**
FLN				Pg	Pb	16 53 24.0	+7.1
FLN				Sn	**Sn**	**16 54 02.9**	**-3.8**
	5.3nm,0.2s						
FLN				Lg	Lg	16 54 37.7	
	13nm,0.3s						
EQES	**Quesada**	**5.70**	**204**	Pn	**Pn**	**16 53 03.4**	**+1.4**
	0.5nm,0.2s,SNR=4.0						
EQES				Pg	Pb	16 53 22.4	+5.3
	0.3nm,0.3s,SNR=7.9						
EQES				Lg	Lg	16 54 38.5	
	10nm,0.4s,SNR=7.9						
EAGO	**Agolada(Pontev**	**5.81**	**270**	Pn	**Pn**	**16 53 05.3**	**+1.9**
	2.8nm,0.1s,SNR=7.9						
EAGO				Sn	**Sn**	**16 54 09.1**	**-0.4**
	4.6nm,0.2s,SNR=7.9						
PVRL	**Vila Real**	**5.88**	**255**	Sn	**Sn**	**16 54 10.3**	**-1.0**
PVRL				Lg	Lg	16 54 37.8	
	7.9nm,0.6s						
PVRL	**Vila Real**	**5.88**	**255**	*e*Sn	**Sn**	**16 54 10.3**	**-1.0**
PVRL				*e*Sg	**Sb**	**16 54 37.8**	**+7.7**
PVRL				A	A	16 54 49.4	
	16nm,0.6s						
EADA	**Adamuz**	**5.93**	**216**	Pn	**Pn**	**16 53 06.1**	**+1.1**
	0.1nm,0.3s,SNR=7.9						
EADA				Sn	**Sn**	**16 54 09.0**	**-3.6**
	3.1nm,0.2s,SNR=7.9						
EADA				Lg	Lg	16 54 43.1	
	11nm,0.7s,SNR=7.9						
ELOB	**Lobios**	**5.95**	**261**	Pn	**Pn**	**16 53 06.8**	**+1.5**
	0.2nm,0.2s,SNR=4.8						
ELOB				Sn	**Sn**	**16 54 12.4**	**-0.7**
	9.3nm,0.4s,SNR=7.9						
ELOB				Lg	Lg	16 54 39.8	
	5.5nm,0.3s,SNR=7.9						
MTE	**Manteigas**	**6.12**	**247**	Sn	**Sn**	**16 54 15.8**	**-1.4**
MTE				Lg	Lg	16 54 50.1	
	10nm,0.7s						
MTE	**Manteigas**	**6.12**	**247**	*e*Sn	**Sn**	**16 54 15.8**	**-1.4**
MTE				*e*Sg	**Sg**	**16 54 50.1**	**-4.2**
MTE				A	A	16 54 57.0	
	20nm,0.7s						
PVIS	**Viseu**	**6.21**	**250**	Sn	**Sn**	**16 54 18.0**	**-1.6**
PVIS				Lg	Lg	16 54 50.9	
	5.2nm,0.7s						
PVIS	**Viseu**	**6.21**	**250**	*e*Sn	**Sn**	**16 54 18.0**	**-1.6**
PVIS				*e*Sg	**Sg**	**16 54 50.9**	**-6.5**
PVIS				A	A	16 55 25.2	
	10nm,0.7s						
SFTF	**Sexfontaines**	**6.31**	**34**	*e*P	**Pn**	**16 53 13.7**	**+3.5**
SFTF	**Sexfontaines**	**6.31**	**34**	*e*Pg	Pb	16 53 35.0	+7.7
SFTF				*e*Sn	**Sn**	**16 54 17.6**	**-4.2**
	1.2nm,0.2s						
SFTF				*e*Sg	**Sg**	**16 54 54.8**	**-5.5**
	42nm,0.6s						
SFTF	**Sexfontaines**	**6.31**	**34**	Pg	Pb	16 53 35.0	+7.7
SFTF				Sn	**Sn**	**16 54 17.6**	**-4.2**
	1.2nm,0.2s						
SFTF				Lg	Lg	16 54 54.8	
	42nm,0.6s						
EZAM	**Zamans**	**6.35**	**265**	Pn	**Pn**	**16 53 13.4**	**+2.6**
	4.4nm,0.4s,SNR=4.0						
EZAM				Sn	**Sn**	**16 54 21.9**	**-0.9**
	6.5nm,0.4s,SNR=7.9						
PCBR	**Castelo Branco**	**6.36**	**242**	Pn	**Pn**	**16 53 12.9**	**+2.0**
PCBR				Sn	**Sn**	**16 54 21.3**	**-1.7**
	4.2nm,0.6s						
PCBR	**Castelo Branco**	**6.36**	**242**	*e*Pn	**Pn**	**16 53 12.9**	**+2.0**
PCBR				*e*Sn	**Sn**	**16 54 21.3**	**-1.7**
PCBR				A	A	16 55 13.4	
	8.4nm,0.6s						
ECAB	**El Cabril**	**6.38**	**220**	Pn	**Pn**	**16 53 12.2**	**+0.9**
	1.1nm,0.2s,SNR=11						
ECAB				Sn	**Sn**	**16 54 20.3**	**-3.5**
	4.3nm,0.3s,SNR=5.7						
ECAB				Lg	Lg	16 54 57.0	
	9.1nm,0.4s,SNR=7.9						
EMAZ	**Mazaricos**	**6.45**	**272**	Pn	**Pn**	**16 53 14.4**	**+2.3**
	3.9nm,0.2s,SNR=4.0						
EMAZ				Sn	**Sn**	**16 54 24.1**	**-1.1**
	8.0nm,0.3s,SNR=7.9						
PMRV	**Marv??o**	**6.54**	**239**	Pn	**Pn**	**16 53 14.8**	**+1.4**
PMRV				Sn	**Sn**	**16 54 25.5**	**-2.0**
	11nm,0.6s						
PMRV	**Marv??o**	**6.54**	**239**	*e*Pn	**Pn**	**16 53 14.8**	**+1.4**
PMRV				*e*Sn	**Sn**	**16 54 25.5**	**-2.0**
PMRV				A	A	16 55 22.9	
	11nm,0.6s						
MEZF	**Maizieres J'vi**	**6.55**	**32**	*e*Pg	Pb	16 53 39.1	+7.7
	baz=216						
MEZF				*e*Sn	**Sn**	**16 54 22.9**	**-4.8**
	5.1nm,0.3s						
MEZF				*e*Sg	**Sg**	**16 55 02.3**	**-5.8**
	75nm,0.7s,baz=213						
MEZF	**Maizieres J'vi**	**6.55**	**32**	Pg	Pb	16 53 39.1	+7.7
MEZF				Sn	**Sn**	**16 54 22.9**	**-4.8**
	5.1nm,0.3s						
MEZF				Lg	Lg	16 55 02.3	
	75nm,0.7s						
EBAD	**Badajoz**	**6.73**	**232**	Pn	**Pn**	**16 53 16.6**	**+0.6**
	2.6nm,0.4s,SNR=5.3						
EBAD				Sn	**Sn**	**16 54 30.0**	**-2.3**
	3.4nm,0.2s,SNR=7.9						
HAU	**Haudompre**	**6.74**	**41**	*e*Pg	Pb	16 53 42.3	+7.7
HAU				*e*Sg	**Sg**	**16 55 09.1**	**-5.0**
	11nm,0.3s						
HAU	**Haudompre**	**6.74**	**41**	Pg	Pb	16 53 42.3	+7.7
HAU				Lg	Lg	16 55 09.1	
	5.6nm,0.3s						
PGF	**Pioggiola**	**6.78**	**91**	*e*P	**Pn**	**16 53 20.3**	**+3.6**
PGF				*e*Sn	**Sn**	**16 54 28.2**	**-5.3**
	3.8nm,0.3s						
HINF	**Hinteralfeld**	**6.86**	**44**	*e*Pn	**Pn**	**16 53 16.4**	**-1.4**
HINF	**Hinteralfeld**	**6.86**	**44**	*e*Pg	Pb	16 53 44.9	+8.2
HINF				*e*Sg	Sg	16 55 11.3	-6.7
	7.9nm,0.3s						
HINF	**Hinteralfeld**	**6.86**	**44**	Pn	**Pn**	**16 53 16.4**	**-1.4**
HINF				Pg	Pb	16 53 44.9	+8.2
HINF				Lg	Lg	16 55 11.3	
	4.0nm,0.3s						
PAGF	**Fort de Pagny**	**6.87**	**35**	*e*Pg	Pb	16 53 45.1	+8.3
PAGF				*e*Sn	**Sn**	**16 54 30.3**	**-5.2**
	3.7nm,0.3s						
PAGF				*e*Sg	**Sg**	**16 55 12.0**	**-6.2**
	71nm,0.8s						
PCAS	**Casmilo, Conde**	**6.92**	**247**	Sn	**Sn**	**16 54 35.4**	**-1.6**
	12nm,0.6s						
PCAS	**Casmilo, Conde**	**6.92**	**247**	*e*Sn	**Sn**	**16 54 35.4**	**-1.6**
PCAS				A	A	16 55 22.6	
	12nm,0.6s						
PESTR	**Estremoz**	**7.00**	**236**	*e*Pn	**Pn**	**16 53 21.5**	**+1.8**
PESTR				*e*Sn	**Sn**	**16 54 35.5**	**-3.4**
PESTR				A	A	16 55 46.4	
	6.4nm,0.6s						
EMIN	**Mina Concepcio**	**7.25**	**225**	Pn	**Pn**	**16 53 25.1**	**+2.0**
	1.0nm,0.4s,SNR=7.9						
EMIN				Sn	**Sn**	**16 54 39.6**	**-5.4**
	3.5nm,0.5s,SNR=7.9						
EMIN				Lg	Lg	16 55 26.4	
	0.7nm,0.3s,SNR=7.9						
PMTG	**Montargil**	**7.27**	**239**	Pn	**Pn**	**16 53 26.0**	**+2.6**
PMTG				Sn	**Sn**	**16 54 43.2**	**-2.3**
	5.4nm,0.7s						
PMTG	**Montargil**	**7.27**	**239**	*e*Pn	**Pn**	**16 53 26.0**	**+2.6**
PMTG				*e*Sn	**Sn**	**16 54 43.2**	**-2.3**
PMTG				A	A	16 55 43.4	
	5.4nm,0.7s						
EMIJ	**Mijas**	**7.39**	**210**	Pn	**Pn**	**16 53 27.2**	**+2.0**
	1.4nm,0.3s,SNR=7.9						
CDF	**Champ du Feu**	**7.47**	**42**	*e*Pg	Pb	16 53 55.8	+8.7
CDF				*e*Sn	**Sn**	**16 54 45.3**	**-5.2**
	2.3nm,0.4s						
CDF				*e*Sg	**Sg**	**16 55 31.8**	**-5.7**
	9.3nm,0.5s						
CDF	**Champ du Feu**	**7.47**	**42**	Pg	Pb	16 53 55.8	+8.7
CDF				Sn	**Sn**	**16 54 45.3**	**-5.2**
	1.2nm,0.4s						
CDF				Lg	Lg	16 55 31.8	
	4.7nm,0.5s						
BAIF	**Baives**	**7.62**	**22**	*e*Pn	**Pn**	**16 53 27.5**	**-0.6**
BAIF	**Baives**	**7.62**	**22**	*e*P	Pn	16 53 32.6	+4.5
BAIF	**Baives**	**7.62**	**22**	*e*Pg	Pb	16 53 59.0	+9.4
BAIF				*e*Sn	**Sn**	**16 54 49.0**	**-5.0**
	3.6nm,0.3s						
BAIF				*e*Sg	Sb	16 55 36.9	+17
	10nm,0.5s						
BAIF	**Baives**	**7.62**	**22**	Pn	**Pn**	**16 53 27.5**	**-0.6**
BAIF				Pg	Pb	16 53 59.0	+9.4
BAIF				Sn	**Sn**	**16 54 49.0**	**-5.0**
	1.8nm,0.3s						
BAIF				Lg	Lg	16 55 36.9	
	5.1nm,0.5s						
GIVF	**Givet**	**7.83**	**24**	*e*Pn	**Pn**	**16 53 30.7**	**-0.4**
GIVF	**Givet**	**7.83**	**24**	*e*Pg	Pb	16 54 03.1	+10
GIVF				*e*Sg	Sb	16 55 41.8	+16
	20nm,0.4s						
GIVF	**Givet**	**7.83**	**24**	Pn	**Pn**	**16 53 30.7**	**-0.4**
GIVF				Pg	Pb	16 54 03.1	+10
GIVF				Lg	Lg	16 55 41.8	
	9.8nm,0.4s						
PNCL	**Nicolau / Gran**	**8.05**	**235**	Pn	**Pn**	**16 53 36.1**	**+2.0**
PNCL				Sn	**Sn**	**16 55 02.5**	**-2.2**
PNCL	**Nicolau / Gran**	**8.05**	**235**	*e*Pn	**Pn**	**16 53 36.1**	**+2.0**
PNCL				*e*Sn	**Sn**	**16 55 02.5**	**-2.2**
PVAQ	**Vaqueiros**	**8.07**	**228**	Sn	**Sn**	**16 55 00.6**	**-4.7**
PVAQ	**Vaqueiros**	**8.07**	**228**	*e*Sn	**Sn**	**16 55 00.6**	**-4.7**

IDC 01 16:52:16.0±4.4**,19°.54S**×**174°.13W,h0**^{km}**,mb3.8**/3**,**
mb1 3.9/3**,mb1mx3.5**/36**,mbtmp3.8**/3**,Error ellipse:**
s-maj=216.1km s-min=53.8km az=144.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.48**	**244**	P	P	17 00 04.8	-0.1
	1.2nm,0.8s,baz=90,slow=12,SNR=2.3						
ASAR	**Alice Springs**	**48.28**	**255**	P	P	17 00 59.3	-0.1
	0.8nm,0.5s,baz=94,slow=8.1,SNR=12						
WRA	**Warramunga Arr**	**48.34**	**260**	P	P	17 00 59.7	-0.1
	0.4nm,0.5s,baz=100,slow=8.6,SNR=5.3						
AKASG	**Malin Array Be**	**143.82**	**335**	PKP	PKPdf	17 11 54.1	+1.0
	0.6nm,0.3s,baz=44,slow=4.2,SNR=6.6						
BRTR	**Keskin Array B**	**148.79**	**316**	PKPbc	PKPbc	17 12 04.6	-1.4
	0.4nm,0.6s,baz=143,slow=4.1,SNR=3.4						

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*IDC **01** 17:05:11.9±5.2,23°.30S×179°.81W,h502^{km}±62^{km},mb3.0/2,*
mb1 3.3/3,mb1mx2.9/25,mbtmp4.0/3,Error ellipse:
s-maj=85.3km s-min=35.6km az=3.0
*NEIC **01** 17:05:14.2±0.9,23°.3S±0°.1×179°.9W±0°.3,h527^{km}±6^{km},*
mb4.4/11,Error ellipse: s-maj=35.1km s-min=19.9km
az=75.0
ISC 01 17:05:14.6±1.1**,23°.61S**±0°.10×**179°.9W**±0°.2**,h532**^{km}**,n18,**
σ**1^{s}.61**/19**,mb4.1**/9**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.90**	**163**	P	**P**	**17 06 49.8**	**-1.5**
	253nm,0.3s,baz=336,slow=19,SNR=8.7						
MSVF	**Nonsavu**	**6.15**	**342**	P	**P**	**17 06 53.9**	**-0.1**
URZ	**Urewera**	**14.82**	**189**	P	**P**	**17 08 23.4**	**+1.0**
	1.2nm,0.3s,baz=310,slow=7.9,SNR=10						
URZ				S	**S**	**17 10 53.5**	**-3.7**
	0.2nm,0.3s,baz=354,slow=9.2,SNR=2.8						
URZ	**Urewera**	**14.82**	**189**	P	**P**	**17 08 23.1**	**+0.7**
QRZ	**Quartz Range**	**18.30**	**199**	P	**P**	**17 08 58.4**	**+2.4**
WHZ	**Wether Hill Ro**	**24.31**	**201**	P	**P**	**17 09 52.9**	**+2.9**
WHZ				IAmb	IAmb	17 10 06.4	
	comp=Z,24nm,1.3s						
AS31	**Alice Springs**	**42.16**	**260**	P	**P**	**17 12 21.2**	**+0.4**
ASAR	**Alice Springs**	**42.16**	**260**	P	**P**	**17 12 21.3**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=96,slow=7.1,SNR=27						
WR0	**Warramunga Arr**	**42.32**	**266**	P	**P**	**17 12 21.6**	**-0.5**
WR0				IAmb	IAmb	17 12 35.6	
	comp=Z,7.4nm,1.4s						
WB2	**Warramunga Arr**	**42.50**	**266**	P	**P**	**17 12 23.4**	**0.0**
WB2				IAmb	IAmb	17 12 29.1	
	comp=Z,5.3nm,1.2s						
WB0	**Warramunga Arr**	**42.50**	**266**	P	**P**	**17 12 23.3**	**-0.2**
WB0				IAmb	IAmb	17 12 24.7	
	comp=Z,10nm,1.6s						
WRA	**Warramunga Arr**	**42.51**	**266**	P	**P**	**17 12 23.5**	**0.0**
	comp=Z,1.1nm,0.4s,baz=103,slow=8.4,SNR=67						
MTN	**Manton Dam**	**47.51**	**274**	P	**P**	**17 13 01.5**	**-0.5**
MTN				IAmb	IAmb	17 13 10.5	
	comp=Z,21nm,1.4s						
KNRA	**Kununurra**	**48.77**	**269**	P	**P**	**17 13 11.7**	**+0.3**
KNRA				IAmb	IAmb	17 13 25.1	
	comp=Z,35nm,1.6s						
QSPA	**South Pole Qui**	**66.47**	**180**	P	**P**	**17 15 13.7**	**+2.5**
JOW	**Kunigami**	**70.86**	**312**	P	**P**	**17 15 37.0**	**-1.1**
JOW				IAmb	IAmb	17 15 43.6	
	comp=Z,42nm,1.3s						
AKASG	**Malin Array Be**	**144.77**	**328**	PKP	**PKPdf**	**17 23 49.7**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=42,slow=3.7,SNR=3.2						
BRTR	**Keskin Array B**	**147.47**	**308**	PKPbc	**PKPbc**	**17 23 58.7**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=84,slow=5.0,SNR=2.3						

MAN 01 17:17:03.5,9°.82N×**124°.11E,h5**^{km}**,mb5.0,ML3.9,MS4.0,**
3C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.28**	**243**	*i* P	Pb	17 17 10.3	-0.6
TBP				*i* S	Sb	17 17 15.5	-0.5
LLP	**Lapu-Lapu**	**0.52**	**344**⇑	*e*P	Pg	17 17 13.9	+0.5
LLP				*i* S	Sb	17 17 22.0	-0.9
MSLP	**Maasin**	**0.80**	**67**	*e*P	Pg	17 17 18.5	-0.3
MSLP				*e*S	Sb	17 17 30.1	-0.8
SNPH	**Sibulan**	**0.99**	**241**⇑	*i*P	Pb	17 17 23.0	-0.1
SNPH				*i* S	Sn	17 17 38.1	-0.4
OCLP	**Ormoc**	**1.32**	**22**	*e*P	Pn	17 17 26.7	-1.9
OCLP				*e*S	Sn	17 17 46.6	+0.1
GUIM	**Jordan**	**1.70**	**298**	*e*P	Pn	17 17 33.1	-0.7
GUIM				*e*S	Sb	17 17 57.1	+0.1
BUTP	**Butuan**	**1.71**	**119**	*e*P	Pn	17 17 24.2	-10
BUTP				*e*S	Sg	17 17 58.5	+0.1
PAGZ	**Pagadian**	**2.09**	**200**	*e*P	Pn	17 17 37.9	-1.2
PAGZ				*e*S	Sn	17 18 05.2	-0.3
BUKP	**Musuan**	**2.14**	**154**	*e*P	Pn	17 17 39.5	-0.4
BUKP				*e*S	Sb	17 18 09.7	-0.1
RCP	**Roxas**	**2.19**	**322**⇓	*e*P	Pn	17 17 41.6	+1.0
RCP				*e*S	Sg	17 18 12.6	-1.4
CTBH	**Cotabato--PC H**	**2.58**	**177**⇑	*i*P	Pn	17 17 47.0	+1.0
OTRP	**Odiongan**	**3.26**	**321**	*e*P	Pn	17 17 57.2	+2.0
SKMP	**Bagumbayan, Su**	**3.31**	**173**	*e*P	Pn	17 17 57.6	+1.7
SKMP				*e*S	Sb	17 18 39.7	-3.5

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*EAF **01** 17:21:00.6±0.8,23°.65S×24°.00E,h10^{km},MD3.9*
*PRE **01** 17:21:46.7±0.9,26°.19S×28°.40E,h2^{km},ML1.7*
ISC 01 17:20:58.1±2.9**,23°.72S**±0°.09×**23°.8E**±0°.2**,h10**^{km}**,n9,**
σ**2^{s}.06**/12**,Botswana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	**Lobatse**	**2.06**	**129**	*i* P	**Pn**	**17 21 33.6**	**+0.6**
LBTB	**Lobatse**	**2.06**	**129**	*i* P	**Pn**	**17 21 33.6**	**+0.6**
SWZ	**Schweizer**	**3.71**	**159**	*e*P	**Sn**	**17 22 35.2**	**-4.2**
SWZ				*e*S	Sg	17 23 10.0	+13
SWZ				AML	AML	17 23 10.4	
	comp=Z,2.2nm,0.3s						
BOSA	**Boshof**	**5.04**	**166**	*i* P	**Pn**	**17 22 15.8**	**+1.9**
BOSA				*i* S	**Sn**	**17 23 11.8**	**-0.4**
BOSA	**Boshof**	**5.04**	**166**	*e*P	Pg	17 22 46.1	+11
BOSA				*e*S	**Sb**	**17 23 27.9**	**+0.8**
BOSA				AML	AML	17 23 41.0	
	comp=Z,2.1nm,0.8s						
BOSA	**Boshof**	**5.04**	**166**	*i* P	**Pn**	**17 22 15.8**	**+1.9**
BOSA				*i* S	**Sn**	**17 23 11.8**	**-0.4**
MATP	**Matopo**	**5.43**	**54**	*i* P	**Pn**	**17 22 19.1**	**-0.2**
MATP	**Matopo**	**5.43**	**54**	*i* P	**Pn**	**17 22 19.1**	**-0.2**
MSNA	**Messina**	**5.87**	**78**	*e*P	**Pg**	**17 22 49.4**	**-1.2**
MSNA				*e*S	**Sn**	**17 23 35.9**	**+3.2**
MSNA				AML	AML	17 23 43.8	
	comp=Z,13nm,0.8s						

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*IPEC **01** 17:37:01.7±0.2,49°.87N×18°.57E,h1^{km}±3^{km},ML2.2/4,*
Error ellipse: s-maj=1.4km s-min=1.1km az=160.0
*VIE **01** 17:37:01.4±0.9,49°.72N×18°.57E,h0^{km},mb2.0/2,ml2.5/3,*
Error ellipse: s-maj=6.5km s-min=6.2km az=74.0   26 km
ESE of Ostrava Suspected Mining induced.
*PRU **01** 17:37:02.0±0.0,49°.82N×18°.49E,h0^{km},Mining Induced*
Event Csm, E=3.3e+05
ISC 01 17:37:00.9±0.8**,49°.82N**±0°.03×**18°.55E**±0°.02**,h0**^{km}**,n29,**
σ**0^{s}.77**/56**,5D,Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.26**	**275**⇓	*i*PG	**Pb**	**17 37 07.4**	**-1.1**
OKC				*e*SG	**Sg**	**17 37 10.6**	**+1.4**
	comp=Z,122nm,0.5s						
MORC	**Moravsky Berou**	**0.65**	**267**	*e*Pg	**Pb**	**17 37 14.5**	**-0.7**
	baz=82						
MORC				*e*Sg	**Sg**	**17 37 22.7**	**+0.9**
	51nm,0.3s,baz=82						
MORC	**Moravsky Berou**	**0.65**	**267**	*e*PG	**Pb**	**17 37 14.5**	**-0.7**
MORC				*e*SG	**Sg**	**17 37 22.8**	**+0.9**
LANS	**Liptovska Anna**	**0.90**	**138**	*e*PG	**Pb**	**17 37 19.0**	**-0.4**
LANS				*e*SG	**Sb**	**17 37 31.7**	**-0.2**
LANS				*e*LG	Lg	17 37 36.2	
OJC	**Ojcow**	**0.90**	**63**	*e*Pg	**Pg**	**17 37 18.2**	**0.0**
OJC				*e*Sg	**Sb**	**17 37 31.5**	**-0.5**
JAVC	**Velka Javorina**	**1.12**	**211**	*e*Pg	**Pn**	**17 37 24.2**	**+0.3**
	baz=30						
JAVC				*e*Sg	**Sb**	**17 37 38.3**	**+0.1**
	17nm,0.4s,baz=30						
JAVC	**Velka Javorina**	**1.12**	**211**	*e*PG	**Pn**	**17 37 24.2**	**+0.3**
JAVC				*e*SG	**Sb**	**17 37 38.4**	**+0.2**
KRLC	**Kraliky**	**1.17**	**283**	*e*PG	**Pg**	**17 37 22.9**	**-0.4**
KRLC				*e*SG	**Sg**	**17 37 38.6**	**+0.2**
	comp=Z,50nm,0.3s						
NIE	**Niedzica**	**1.21**	**109**	*e*Pg	**Pb**	**17 37 24.5**	**-0.1**
NIE				*e*Sg	**Sn**	**17 37 42.7**	**+0.5**
VYHS	**Vyhne**	**1.34**	**172**	*e*PG	**Pb**	**17 37 26.9**	**0.0**
VYHS				*e*SG	**Sn**	**17 37 45.0**	**-0.3**
VRAC	**Vranov**	**1.37**	**249**	*e*Pg	**Pn**	**17 37 27.5**	**+0.2**
	baz=66						
VRAC				*e*Sg	**Sb**	**17 37 45.6**	**+0.1**
	31nm,0.3s,baz=66						
VRAC	**Vranov**	**1.37**	**249**	*e*PG	**Pn**	**17 37 27.5**	**+0.2**
VRAC				*e*SG	**Sb**	**17 37 45.6**	**+0.1**
SMOL	**Smolenice**	**1.50**	**210**	*e*PG	**Pn**	**17 37 29.1**	**+0.1**
SMOL				*e*SG	**Sg**	**17 37 48.4**	**-0.5**
SMOL				*e*LG	Lg	17 37 52.4	
DPC	**Dobruska-Polom**	**1.53**	**291**	*e*PG	**Pn**	**17 37 29.6**	**+0.1**
DPC				*e*SG	**Sg**	**17 37 50.1**	**+0.1**
	comp=Z,21nm,0.3s						
KRUC	**Moravsky**	**1.59**	**243**	*e*Pg	**Pb**	**17 37 31.0**	**-0.2**
	baz=60						
KRUC				*e*Sg	**Sg**	**17 37 52.5**	**+0.4**
	22nm,0.2s,baz=60						
KRUC	**Moravsky**	**1.59**	**243**	*e*PG	**Pb**	**17 37 31.0**	**-0.2**
KRUC				*e*SG	**Sg**	**17 37 52.6**	**+0.4**
MODS	**Modra-Piesok**	**1.67**	**210**	*e*SG	**Sn**	**17 37 52.9**	**-0.6**
OSTC	**Ostas**	**1.67**	**297**⇓	*e*PG	**Pb**	**17 37 32.3**	**-0.3**
OSTC				*e*SG	**Sg**	**17 37 54.7**	**+0.1**
	comp=Z,21nm,0.6s						
UPC	**Upice**	**1.77**	**294**⇓	*e*PG	**Pb**	**17 37 34.0**	**-0.2**
UPC				*e*SG	**Sb**	**17 37 57.3**	**+0.3**
	comp=Z,16nm,0.4s						
KSP	**Ksiaz**	**1.77**	**306**	*e*Pb	**Pn**	**17 37 32.8**	**0.0**
KSP				*e*Pg	**Pg**	**17 37 34.8**	**-0.1**
KSP				*e*Sg	**Sb**	**17 37 57.4**	**+0.3**
CHVC	**Chvalec**	**1.78**	**297**	*e*PG	**Pb**	**17 37 34.1**	**-0.3**
CHVC				*e*SG	**Sb**	**17 37 57.7**	**+0.5**
	comp=Z,16nm,0.4s						
KECS	**Kecovo**	**1.84**	**136**	*e*PG	**Pg**	**17 37 36.9**	**+0.7**
KECS				*e*LG	Lg	17 38 02.5	
ZST	**Bratislava**	**1.88**	**211**	*e*SN	**Sn**	**17 37 57.6**	**-1.1**
TREC	**Trest**	**2.06**	**256**⇓	*e*SG	**Sb**	**17 38 05.5**	**+0.2**
CONA	**Conrad Observa**	**2.59**	**224**	*e*Pn	**Pn**	**17 37 44.0**	**-0.1**
	0.3nm,0.1s						
CONA				Sn	**Sn**	**17 38 14.4**	**-1.9**
	2.8nm,0.3s						
PRU	**Pruhonice**	**2.59**	**275**⇓	*e*PG	**Pb**	**17 37 48.9**	**+0.6**
PRU				*e*SG	**Sb**	**17 38 22.1**	**+1.4**
	comp=Z,8.0nm,0.4s						
BRG	**Berggiesshubel**	**3.13**	**291**	PG	**Pb**	**17 37 58.7**	**+1.2**
BRG				SG	**Sg**	**17 38 40.1**	**-1.4**
	6.2nm,0.5s						
KHC	**Kasperske Hory**	**3.31**	**260**	*e*PN	**Pn**	**17 37 54.2**	**+0.2**
KHC				*e*PG	**Pb**	**17 38 02.5**	**+2.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KHC				*e*SG	Sg	17 38 44.9	-2.4
	comp=Z,8.4nm,0.4s						
CLL	Collm	3.84	295	*e*Pg	Pg	17 38 15.0	+0.6
CLL				*e*Sg	Sg	17 39 03.0	-1.1
	comp=Z,7.0nm,0.6s						

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*TAP **01** 17:51:31.8, 25°.15N×122°.29E, h11^{km}±1^{km}, ML3.9, D*
*JMA **01** 17:51:32.0±0.1, 25°.16N×122°.34E, h41^{km}±4^{km}, M2.9*
ISC 01 17:51:30.2±1.3, **25°.19N**±0°.04×**122°.36E**±0°.03, **h12**^{km}±9^{km}, **n85, σ0^{s}89**/134, **2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.38	242	⇓*i*P	Pb	17 51 38.9	0.0
	baz=242						
TWB1				*i* S	Sb	17 51 43.8	-1.0
	baz=242						
TIPB	Shuangxi	0.53	246	P	Pb	17 51 41.7	+0.2
	baz=247						
TIPB				S	Sb	17 51 48.5	-0.7
	baz=247						
NWF	Wu-fen Shan	0.54	257	⇓*i*P	Pb	17 51 41.7	+0.1
	baz=260						
NWF				S	Sb	17 51 50.4	+1.0
	baz=260						
WFSB	Wu-fen Shan	0.54	257	P	Pb	17 51 41.7	+0.1
	baz=260						
WFSB				S	Sb	17 51 50.2	+0.9
	baz=260						
NTC	Toucheng	0.58	235	P	Pb	17 51 42.8	+0.4
	baz=235						
NTC				S	Sb	17 51 50.7	+0.1
	baz=235						
EOS1	EOS1	0.67	198	P	Pb	17 51 45.0	+1.2
	baz=193						
EOS1				*e*S	Sn	17 51 55.0	-0.9
	baz=193						
TWY	Chenhua	0.69	277	*i* P	Pb	17 51 44.6	+0.4
	baz=281						
TWY				S	Sb	17 51 54.5	+0.8
	baz=281						
ILA	Ilan	0.70	233	*e*P	Pb	17 51 45.5	+1.2
	baz=231						
ILA				*e*S	Sb	17 51 54.2	+0.3
	baz=231						
YM08	YM08	0.70	270	P	Pg	17 51 44.3	+0.6
	baz=273						
YM08				S	Sb	17 51 53.5	-0.4
	baz=273						
YM11	YM11	0.71	268	P	Pg	17 51 44.6	+0.6
	baz=271						
YM11				*e*S	Sb	17 51 54.4	0.0
	baz=271						
YM01	YM01	0.72	267	P	Pb	17 51 45.0	+0.3
	baz=269						
YM01				S	Sb	17 51 54.9	+0.4
	baz=269						
YM10	YM10	0.72	267	P	Pb	17 51 45.1	+0.3
	baz=270						
YM10				*e*S	Sb	17 51 54.8	0.0
	baz=270						
TWA	Mucha	0.73	254	*i* P	Pb	17 51 45.5	+0.5
	baz=254						
TWA				S	Sb	17 51 55.5	+0.5
	baz=254						
TWC	Suao	0.74	219	P	Pb	17 51 45.5	+0.5
	baz=216						
TWC				S	Sb	17 51 54.9	-0.2
	baz=216						
YM03	YM03	0.74	269	*e*P	Pg	17 51 45.2	+0.6
	baz=272						
YM03				*e*S	Sb	17 51 55.1	-0.1
	baz=272						
YM04	YM04	0.75	267	*e*P	Pg	17 51 45.3	+0.6
	baz=270						
YM04				*e*S	Sb	17 51 55.1	-0.3
	baz=270						
ANP	Anpu	0.76	270	P	Pg	17 51 45.5	+0.6
	baz=272						
ANP				S	Sb	17 51 55.6	-0.2
	baz=272						
TWE	Neicheng	0.78	233	P	Pb	17 51 46.1	+0.3
	baz=232						
TWE				S	Sb	17 51 56.1	-0.3
	baz=232						
SLBB	Yuanshan	0.79	237	P	Pg	17 51 45.3	-0.1
	baz=236						
SLBB				S	Sg	17 51 55.0	-0.8
	baz=236						
TAP	Taipei	0.79	259	P	Pb	17 51 46.6	+0.7
	baz=261						
TAP				S	Sn	17 51 58.1	-0.8
	baz=261						
NHDH	Xindian Distri	0.79	253	P	Pb	17 51 46.8	+0.9
	baz=255						
NHDH				*e*S	Sn	17 51 58.1	-0.8
	baz=255						
TATO	Taipei	0.82	255	*e*P	Pb	17 51 47.1	+0.7
	baz=256						
TATO				*e*S	Sb	17 51 58.1	+0.7
	baz=256						
NTST	Danshui	0.82	268	P	Pb	17 51 47.6	+1.1
	baz=271						
NTST				*e*S	Sn	17 51 59.3	-0.5
	baz=271						
TWS1	Kuangyinshan	0.86	264	*i* P	Pb	17 51 47.9	+0.9
	baz=266						
TWS1				*i* S	Sn	17 52 00.0	-0.6
	baz=266						
NWLT	Wulai	0.88	242	*e*P	Pb	17 51 47.7	+0.2
	baz=242						
NWLT				*e*S	Sb	17 51 58.6	-0.6
	baz=242						
ENTT	Nioudou	0.91	233	*i* P	Pb	17 51 48.2	+0.4
	baz=232						
ENTT				*e*S	Sb	17 52 00.1	+0.1
	baz=232						
JYNG	Yonagunijimaku	0.91	144	P	Pg	17 51 48.3	+0.6
YOJ	Yonaguni jima	0.94	141	P	Pg	17 51 48.8	+0.5
ENA	Nanau	0.94	217	P	Pb	17 51 49.0	+0.5
	baz=214						
ENA				S	Sb	17 52 00.5	-0.5
	baz=214						
NDT	Datong Townshi	0.97	233	P	Pg	17 51 49.0	+0.2
	baz=232						
NDT				*e*S	Sb	17 52 01.1	-0.6
	baz=232						
YHNB	Yeheng	1.03	240	P	Pg	17 51 50.2	+0.1
	baz=240						
YHNB				*e*S	Sb	17 52 03.6	0.0
	baz=240						
NSK	Sanguang	1.04	241	*i* P	Pg	17 51 50.3	0.0
	baz=240						
NSK				*e*S	Sg	17 52 02.4	-1.5
	baz=240						
WLTB	Daxi	1.06	252	*e*P	Pb	17 51 51.0	+0.5
	baz=252						
NCU	National Centr	1.08	259	P	Pb	17 51 51.6	+0.7
	baz=259						
NCU				S	Sn	17 52 06.4	+0.2
	baz=259						
NCUH	Zhongli	1.09	258	*e*P	Pg	17 51 51.4	+0.3
	baz=259						
NCUH				*e*S	Sn	17 52 06.8	+0.5
	baz=259						
NNS	Nan Shan	1.17	230	P	Pb	17 51 52.7	+0.3
	baz=229						
NNS				*e*S	Sn	17 52 08.0	-0.5
	baz=229						
NNSB	Datong	1.17	230	*e*P	Pg	17 51 52.8	+0.2
	baz=229						
NNSB				*e*S	Sg	17 52 06.8	-1.1
	baz=229						
NNSH	Datong	1.17	230	*e*P	Pn	17 51 53.1	+0.6
	baz=229						
NHW	Xinwu Township	1.20	262	*e*P	Pb	17 51 53.0	+0.1
	baz=262						
NHW				*e*S	Sg	17 52 08.8	-0.2
	baz=262						
NACB	Ninganchiao	1.23	215	*e*P	Pb	17 51 53.8	+0.4
	baz=213						
NACB				*e*S	Sb	17 52 08.8	-0.4
	baz=213						
ETLH	Xiulin Townshi	1.26	219	*e*P	Pb	17 51 54.4	+0.4
	baz=218						
ETLH				*e*S	Sb	17 52 09.9	-0.4
	baz=218						
TWD	Chiawan	1.30	212	*e*P	Pg	17 51 55.6	+0.3
	baz=210						
TWD				*e*S	Sg	17 52 11.6	-0.7
	baz=210						
SBCB	Hsinchu	1.31	253	*e*P	Pn	17 51 54.3	0.0
	baz=253						
SBCB				*e*S	Sn	17 52 14.0	+2.3
	baz=253						
HSN	Hsinchu	1.32	253	*e*P	Pn	17 51 54.1	-0.3
	baz=254						
HSN				*e*S	Sb	17 52 11.6	-0.2
	baz=254						
LIOB	Emei	1.33	246	*e*P	Pn	17 51 54.6	-0.1
	baz=246						
NSTT	Nanjuang	1.35	246	P	Pn	17 51 55.1	+0.2
	baz=246						
TWT	Tachien	1.42	229	*e*P	Pb	17 51 57.5	+0.6
	baz=228						
TDCB	Techi	1.44	230	*e*P	Pb	17 51 57.5	+0.5
	baz=229						
TDCB				*e*S	Sb	17 52 14.4	-0.9
	baz=229						
WHF	Hehuan Shan	1.44	224	*e*P	Pb	17 51 57.6	+0.4
	baz=222						
WHF				*e*S	Sb	17 52 14.6	-1.1
	baz=222						
IRIF	Iriomote-Funau	1.51	124	P	Pn	17 51 57.0	-0.1
IRIF				S	Sn	17 52 15.1	-1.6
CHGB	Renai	1.56	224	P	Pg	17 52 00.2	0.0
	baz=223						
CHGB				*e*S	Sg	17 52 19.1	-1.3
	baz=223						
NMLH	Miaoli	1.57	246	*e*P	Pn	17 51 58.2	+0.3
	baz=245						
WHP	Taichung City	1.57	235	*e*P	Pb	17 51 59.7	+0.4
	baz=234						
ESL	Shilin	1.61	212	*e*P	Pg	17 52 01.2	+0.2
	baz=210						
ESL				*e*S	Sg	17 52 21.6	-0.3
	baz=210						
OWD	Renai	1.64	221	*e*P	Pg	17 52 01.6	+0.1
	baz=220						
OWD				*e*S	Sb	17 52 21.4	+0.3
	baz=220						
NSY	Sanyi	1.64	242	*e*P	Pn	17 51 59.9	+0.9
	baz=242						
EGFH	Guangfu	1.74	209	*e*P	Pb	17 52 02.1	+0.1
	baz=208						
DPDB	Guoxing	1.74	229	*e*P	Pn	17 52 01.7	+1.4
	baz=228						
JKRS	Kuro-shima	1.78	122	P	Pn	17 52 01.3	+0.5
VWDT	VWDT	1.81	218	*e*P	Pb	17 52 03.3	0.0
	baz=217						
VWDT				*e*S	Sb	17 52 25.6	-0.4
	baz=217						
JIJ	Ishigaki jima	1.82	117	P	Pn	17 52 02.0	+0.6
TCU	Taichung	1.85	236	P	Pn	17 52 02.9	+1.1
	baz=235						
TYC	Yuchr	1.87	227	P	Pb	17 52 03.9	-0.5
	baz=226						
HGSD	Ruisui	1.89	207	*e*P	Pb	17 52 05.5	+0.8
	baz=205						
SSLB	Suanglung	1.89	223	*e*P	Pn	17 52 03.8	+1.3
	baz=221						
EHY	Hungye	1.93	210	*e*P	Pb	17 52 04.9	-0.4
	baz=208						
WNT	Mingjian	2.01	230	*e*P	Pb	17 52 06.0	-0.7
	baz=228						
WHYT	Xinyi Township	2.02	223	*e*P	Pb	17 52 07.2	+0.2
	baz=222						
YULB	Yu-li	2.04	209	*e*P	Pn	17 52 06.3	+2.0
	baz=207						
TWF1	Yuli	2.07	208	*e*P	Pb	17 52 07.7	-0.1
	baz=206						
CHN5	Tsauling	2.21	224	*e*P	Pb	17 52 09.7	-0.4
	baz=223						
FULB	Fuli	2.21	206	*e*P	Pb	17 52 09.7	-0.4
	baz=205						
RLNB	Erlin	2.23	235	*e*P	Pn	17 52 07.0	0.0
	baz=234						
MATB	Ma-tsu	2.38	294	*e*P	Pn	17 52 09.7	+0.6
	baz=294						
CHN4	Tsaushan	2.44	222	*e*P	Pn	17 52 12.2	+2.3
	baz=220						
TPUB	Ta-pu	2.46	220	*e*P	Pn	17 52 12.7	+2.5
	baz=219						
WTP	Ta-pu	2.51	220	*e*P	Pb	17 52 14.3	-0.9
	baz=218						
WLGB	Puzi	2.54	228	*e*P	Pn	17 52 12.9	+1.7
	baz=227						
TWK	Hsinying	2.57	222	*e*P	Pb	17 52 14.8	-1.4
	baz=221						
CHN1	Nanshi	2.60	220	*e*P	Pb	17 52 15.7	-1.2
	baz=219						
SGST	Jiashian	2.65	218	*e*P	Pn	17 52 14.8	+1.9
	baz=217						
CHN8	Yiju	2.69	227	*e*P	Pn	17 52 15.1	+1.8
	baz=226						
CHN8				*e*S	Sn	17 52 46.4	+0.6
	baz=226						
SSD	Sandimen	2.90	213	*e*P	Pn	17 52 18.9	+2.6
	baz=212						
EAST	Anshuo	3.12	207	*e*P	Pn	17 52 21.0	+1.8
	baz=205						
QZH	Quanzhou	3.42	267	Pn	Pn	17 52 22.9	-0.5
QZH				Sn	Sn	17 53 00.2	-3.8

IDC 01 17:54:15.1±1.7, **0°.79S**×**67°.09E, h0**^{km}, **mb3.5**/6, **mb1 3.7**/6, **mb1mx3.4**/49, **mbtmp3.5**/6, **MS3.3**/1, **Ms1 3.3**/1, **ms1mx2.8**/25, **Error ellipse: s-maj=57.7km s-min=25.3km az=55.0, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PALK	Pallekele	15.77	59	LR	LR	18 02 37.8	
	comp=Z,99nm,18.6s,baz=220,slow=32						
MKAR	Makanchi Array	49.23	14	P	P	18 03 05.8	+0.4
	0.2nm,0.7s,baz=191,slow=7.0,SNR=2.5						
BRTR	Keskin Array B	50.60	327	P	P	18 03 15.9	-0.2
	0.4nm,0.7s,baz=148,slow=8.5,SNR=3.5						
ZALV	Zalesovo Beam	56.51	12	P	P	18 03 57.7	-1.2
	0.5nm,0.5s,baz=196,slow=9.0,SNR=3.8						
SONM	Songino Array	59.26	30	P	P	18 04 19.3	+0.6
	0.7nm,0.7s,baz=227,slow=6.9,SNR=6.5						
WRA	Warramunga Arr	68.38	111	P	P	18 05 19.3	0.0
	0.6nm,0.7s,baz=289,slow=5.7,SNR=5.3						
ASAR	Alice Springs	68.51	115	P	P	18 05 19.8	-0.2
	0.4nm,0.6s,baz=279,slow=6.0,SNR=7.4						
TXAR	Lajitas Array	150.28	344	PKPbc	PKPbc	18 14 09.4	+0.2
	0.5nm,0.9s,baz=90,slow=2.5,SNR=3.9						

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*MAN **01** 17:57:32.2, 5°.83N×126°.20E, h118^{km}, mb4.7, ML3.6, MS3.4*
*IDC **01** 17:57:33.3±4.3, 5°.69N×125°.39E, h121^{km}±57^{km}, mb3.0/3, mb1 3.2/3, mb1mx2.9/44, mbtmp3.4/3, Error ellipse: s-maj=163.9km s-min=19.4km az=68.0*
ISC 01 17:57:33.2±1.2, **5°.91N**±0°.09×**126°.2E**±0°.1, **h128**^{km}±9^{km}, **n11, σ0^{s}84**/17, **mb3.4**/3, **2D, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.51	293	*e*P	Pn	17 57 52.0	0.0
DDMP				*e*S	Sn	17 58 06.4	+0.1
MATI	Mati	1.04	4	*e*P	Pn	17 57 55.3	-1.0
MATI				*e*S	Sn	17 58 13.5	-0.3
GSPH	General Santos	1.24	278	*e*P	Pn	17 57 58.0	-0.4
DAV	Davao City (W)	1.30	333	P	Pn	17 57 59.9	+0.9
	93nm,0.3s,baz=282,slow=3.5,SNR=7.7						
DAV				S	Sn	17 58 19.3	+0.7
	142nm,0.3s,baz=270,slow=20,SNR=4.1						
DMPH	Davao City--Mi	1.35	330	⇓*i*P	Pn	17 58 00.7	+1.2
DMPH				*i* S	Sn	17 58 19.2	-0.2
SKMP	Bagumbayan, Su	1.74	291	*e*P	Pn	17 58 03.0	-0.9
SKMP				*e*S	Sn	17 58 27.3	0.0
BUKP	Musuan	2.25	331	*e*P	Pn	17 58 10.1	-0.2
BUKP				*e*S	Sn	17 58 39.3	+0.6
CTBH	Cotabato--PC H	2.32	304	⇓*i*P	Pn	17 58 11.7	+0.6
WRA	Warramunga Arr	26.91	163	P	P	18 03 02.7	+0.1
	0.2nm,0.3s,baz=339,slow=10,SNR=11						
ASAR	Alice Springs	30.34	166	P	P	18 03 34.5	+1.4
	0.3nm,0.4s,baz=342,slow=7.1,SNR=13						
MKAR	Makanchi Array	55.47	325	P	P	18 06 53.5	-1.3
	0.2nm,0.3s,baz=117,slow=7.3,SNR=8.1						

IDC 01 18:24:50.4±8.0, **20°.09S**×**177°.60W, h532**^{km}±94^{km}, **mb2.8**/5, **mb1 3.1**/6, **mb1mx2.9**/24, **mbtmp3.7**/6, **Error ellipse: s-maj=45.4km s-min=28.8km az=10.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	18.68	193	P	P	18 28 34.2	-0.9
	0.9nm,0.3s,baz=356,slow=19,SNR=8.0						
ASAR	Alice Springs	44.98	256	P	P	18 32 18.9	+0.5
	0.6nm,0.6s,baz=95,slow=7.6,SNR=11						
WRA	Warramunga Arr	45.03	262	P	P	18 32 18.8	-0.1
	0.3nm,0.4s,baz=98,slow=7.9,SNR=10						
MJAR	Matsushiro Arr	70.11	323	P	P	18 35 08.8	-0.4
	0.7nm,0.6s,baz=136,slow=5.2,SNR=5.6						
TXAR	Lajitas Array	86.52	57	P	P	18 36 38.6	+1.2
	0.1nm,0.6s,baz=216,slow=8.9,SNR=2.7						
ILAR	Eielson Array	87.84	13	P	P	18 36 41.6	-1.0
	0.2nm,0.4s,baz=208,slow=5.1,SNR=2.2						
BRTR	Keskin Array B	146.84	313	PKPbc	PKPbc	18 43 32.1	-1.2
	0.4nm,0.8s,baz=108,slow=0.5,SNR=2.7						
GERES	GERESS Array B	149.91	345	PKPbc	PKPbc	18 43 40.4	-0.2
	0.4nm,0.8s,baz=60,slow=3.2,SNR=3.8						

IDC 01 18:52:39.6±2.2, **2°.51N**×**127°.82E, h0**^{km}, **mb3.2**/3, **mb1 3.4**/3, **mb1mx3.2**/24, **mbtmp3.2**/3, **Error ellipse: s-maj=157.4km s-min=26.3km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.21	164	P	P	18 57 48.6	+0.1
	0.2nm,0.3s,baz=344,slow=10,SNR=10						
ASAR	Alice Springs	26.69	168	P	P	18 58 20.2	-0.4
	0.3nm,0.5s,baz=353,slow=7.8,SNR=15						
MKAR	Makanchi Array	59.17	325	P	P	19 02 42.7	+0.3
	0.1nm,0.4s,baz=106,slow=8.3,SNR=4.3						

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*IDC **01** 19:35:55.2±2.1, 5°.29S×152°.93E, h0^{km}, mb3.3/5, mb1 3.5/6, mb1mx3.4/39, mbtmp3.4/6, ML1.3/1, Error ellipse: s-maj=47.8km s-min=22.0km az=104.0*
ISC 01 19:36:01.9±1.6, **5°.20S**±0°.08×**152°.8E**±0°.2, **h43**^{km}, **n8, σ1^{s}07**/10, **mb3.1**/5, **New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.16	320	Pn	Pn	19 36 21.1	-0.6
	252nm,0.3s,baz=194,slow=2.4,SNR=176						
KRVT				Sn	Sn	19 36 36.3	0.0
	387nm,0.3s,baz=163,slow=23,SNR=17						
PMG	Port Moresby	6.96	233	Pn	Pn	19 37 40.4	-1.0
	0.4nm,0.3s,baz=353,slow=10,SNR=2.0						
PMG				Sn	Sn	19 39 00.9	+1.6
	0.9nm,0.3s,baz=114,slow=5.3,SNR=3.7						
WRA	Warramunga Arr	23.16	229	P	P	19 41 05.4	+0.5
	0.7nm,0.9s,baz=51,slow=9.5,SNR=5.0						
ASAR	Alice Springs	25.84	223	P	P	19 41 28.8	-0.7
	0.3nm,0.9s,baz=61,slow=8.5,SNR=2.9						
FITZ	Fitzroy Crossi	29.45	242	P	P	19 42 00.7	-1.1
	0.7nm,0.4s,baz=70,slow=12,SNR=3.1						
SONM	Songino Array	66.65	328	P	P	19 46 49.3	+1.0
	0.3nm,0.9s,baz=161,slow=10,SNR=2.9						
MKAR	Makanchi Array	80.61	319	P	P	19 48 11.0	+0.9
	0.2nm,1.0s,baz=99,slow=8.3,SNR=2.7						
TORD	Torodi Ar. Bea	150.41	287	PKPbc	PKPbc	19 55 49.2	-0.5
	0.2nm,0.3s,baz=71,slow=2.8,SNR=5.6						

MAN 01 19:49:32.5, 6°.40N×**125°.63E, h154**^{km}, **mb3.6, ML2.3, MS1.8, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.30	164	*e*P	Pn	19 49 54.1	+0.5
DDMP				*e*S	Sn	19 50 11.7	+2.1
MATI	Mati	0.83	49	*e*P	Pn	19 49 58.0	+1.6
MATI				*e*S	Sn	19 50 15.3	+0.7
SKMP	Bagumbayan, Su	1.09	277	*e*P	Pn	19 49 58.2	-0.2
SKMP				*e*S	Sn	19 50 19.2	+1.0

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*UCR **01** 19:52:13.6±1.1, 15°.70N×88°.46W, h8^{km}±3^{km}, ML3.7*
*SNET **01** 19:52:13.6±1.1, 15°.70N×88°.47W, h9^{km}±3^{km}, ML3.8*
ISC 01 19:52:11.6±4.1, **15°.7N**±0°.1×**88°.44W**±0°.06, **h0**^{km}±18^{km}, **n23, σ0^{s}69**/39, **Honduras**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MTO3	Montecristo	1.60	214	*e*P	Pn	19 52 40.8	-0.5
MTO3				*e*S	Sg	19 53 03.2	+0.2
MTO3	Montecristo	1.60	214	*e*P	Pn	19 52 40.8	-0.5
MTO3				*e*S	Sg	19 53 03.2	+0.2
LLGN	La Laguna	1.64	198	*e*P	Pn	19 52 41.9	+0.1
LLGN				*e*S	Sb	19 53 03.9	0.0
LLGN	La Laguna	1.64	198	*e*P	Pn	19 52 41.9	+0.1
LLGN				*e*S	Sb	19 53 03.9	0.0
TGUH	Tegucigalpa,Un	2.01	146	*e*P	Pn	19 52 46.5	-0.4
TGUH				*e*S	Sn	19 53 13.3	+0.5
TGUH	Tegucigalpa,Un	2.01	146	*e*P	Pn	19 52 46.5	-0.4
TGUH				*e*S	Sn	19 53 13.3	+0.5
FAGO	Alcalda de S	2.05	171	*e*P	Pn	19 52 47.3	-0.1
FAGO				*e*S	Sn	19 53 13.7	0.0
FAGO	Alcalda de S	2.05	171	*e*P	Pn	19 52 47.3	-0.1
FAGO				*e*S	Sn	19 53 13.7	0.0
PAVA	Las Pavas	2.06	194	*e*P	Pn	19 52 48.4	+0.7
PAVA				*e*S	Sb	19 53 15.0	-1.3
PAVA	Las Pavas	2.06	194	*e*P	Pn	19 52 48.4	+0.7
PAVA				*e*S	Sb	19 53 15.0	-1.3
LBRS	Las Brisas	2.07	197	*e*P	Pn	19 52 48.5	+0.8
COEG	Centro de Oper	2.14	192	*e*P	Pn	19 52 49.4	+0.7
COEG				*e*S	Sn	19 53 16.3	+0.3
COEG				IAML		19 53 26.2	
	comp=Z,497nm,0.4s						
COEG	Centro de Oper	2.14	192	*e*P	Pn	19 52 49.4	+0.7
COEG				*e*S	Sn	19 53 16.3	+0.3
COEG				IAML		19 53 26.2	
	comp=Z,497nm,0.4s						
SNJE	San Jose	2.17	212	*e*P	Pn	19 52 50.1	+0.8
SNJE				*e*S	Sn	19 53 17.4	+0.5
SNJE	San Jose	2.17	212	*e*P	Pn	19 52 50.1	+0.8
SNJE				*e*S	Sn	19 53 17.4	+0.5
CEVE	Cerro Verde	2.21	211	*e*P	Pn	19 52 50.1	+0.2
CEVE				*e*S	Sb	19 53 19.6	-1.2
CEVE				IAML		19 53 25.8	
	comp=Z,977nm,0.5s						
CEVE	Cerro Verde	2.21	211	*e*P	Pn	19 52 50.1	+0.2
CEVE				*e*S	Sb	19 53 19.6	-1.2
CEVE				IAML		19 53 25.8	
	comp=Z,977nm,0.5s						
COEB	Comit de Eme	2.22	182	*e*P	Pn	19 52 50.8	+0.9
COEB	Comit de Eme	2.22	182	*e*P	Pn	19 52 50.8	+0.9
PACA	Pacayal	2.25	177	*e*P	Pn	19 52 50.9	+0.7
PACA	Pacayal	2.25	177	*e*P	Pn	19 52 50.9	+0.7
CNCH	Conchagua	2.51	166	*e*P	Pn	19 52 54.5	+0.7
CNCH	Conchagua	2.51	166	*e*P	Pn	19 52 54.5	+0.7

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*NEIC **01** 20:16:31.4±1.2, 18°.30S±0°.05×69°.7W±0°.2, h136^{km}±7^{km}, Error ellipse: s-maj=23.9km s-min=4.9km az=103.0*
*IDC **01** 20:16:32.8±1.1, 18°.33S×69°.16W, h146^{km}±8^{km}, mb3.5/5, mb1 3.6/9, mb1mx3.4/36, mbtmp4.0/9, Error ellipse: s-maj=21.6km s-min=9.3km az=99.0*
*GUC **01** 20:16:32.1±0.7, 18°.33S×69°.70W, h137^{km}±4^{km}, ML3.9*
ISC 01 20:16:31.0±0.7, **18°.31S**±0°.04×**69°.52W**±0°.07, **h135**^{km}±7^{km}, **n34, σ1^{s}69**/51, **mb3.8**/5, **2C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AP01	Chacalluta	0.78	265	⇑*i*P	Pn	20 16 52.2	-0.2
AP01				*i* S	Sn	20 17 07.5	-1.2
AP01				IAML		20 17 10.1	
	comp=E,6μm,0.8s						
MNMC	Minye Minye	0.82	185	⇓*i*P	Pn	20 16 53.9	+0.8
MNMC				*i* S	Sn	20 17 10.6	+0.7
MNMC				IAML		20 17 11.7	
	comp=E,5μm,0.7s						
MNMC	Minye Minye	0.82	185	Pn	Pn	20 16 54.0	+0.9
MNMC				Sn	Sn	20 17 10.6	+0.7
GO01	Chusmiza	1.39	167	⇓*i*P	Pn	20 17 00.2	+1.4
GO01				*i* S	Sn	20 17 22.0	+2.1
GO01				IAML		20 17 22.6	

	comp=N,2μm,0.5s						
GO01	Chusmiza	1.39	167		Pn	20 17 00.1	+1.4
GO01				Sn	Sn	20 17 21.5	+1.6
PSGC	Pisagua	1.41	204	⇑ *i*P	Pn	20 16 58.7	+0.2
PSGC				*i* S	Sn	20 17 18.9	-0.5
PSGC				IAML		20 17 20.1	
	comp=N,1μm,0.4s						
PB11	IPOC Station P	1.45	185	⇓ *i*P	Pn	20 16 59.9	+0.8
PB11				*i* S	Sn	20 17 21.2	+0.7
PB11				IAML		20 17 22.8	
	comp=E,2μm,0.6s						
PB11	IPOC Station P	1.45	185		Pn	20 17 00.0	+0.9
PB11				Sn	Sn	20 17 21.1	+0.7
PB08	IPOC Station P	1.86	169	*e*P	Pn	20 17 04.8	+0.9
PB08				*e*S	Sn	20 17 30.8	+1.7
PB08				IAML		20 17 32.4	
	comp=E,831nm,0.3s						
TA01	Diego Aracena	2.33	195	*e*P	Pn	20 17 08.9	-0.3
TA01				*e*S	Sn	20 17 36.5	-2.3
TA01				IAML		20 17 45.3	
	comp=N,268nm,0.4s						
LPAZ	La Paz	2.41	34	P	Pn	20 17 12.2	+1.5
	comp=N,6.4nm,0.3s,baz=214,slow=7.7,SNR=372						
LPAZ				S	Sn	20 17 41.6	+0.4
	comp=N,4.8nm,0.3s,baz=72,slow=21,SNR=14						
LPAZ	La Paz	2.41	34		Pn	20 17 12.3	+1.5
LPAZ				Sn	Sn	20 17 42.5	+1.2
PATCX	Punta Patache	2.57	193	*i* S	Sn	20 17 42.2	-2.0
PB01	IPOC Station P	2.73	179	*e*S	Sn	20 17 47.2	-0.5
PB01	IPOC Station P	2.73	179	Pn	Pn	20 17 15.0	+0.7
PB01				Sn	Sn	20 17 47.3	-0.4
PB04	IPOC Station P	4.05	188	Pn	Pn	20 17 31.9	+0.3
LVC	Limon Verde	4.32	172	P	Pn	20 17 37.9	+2.5
	baz=356,slow=19,SNR=0.8						
LVC				S	Sn	20 18 26.3	+0.8
	comp=N,11nm,0.3s,baz=264,slow=22,SNR=9.6						
LVC	Limon Verde	4.32	172		Pn	20 17 36.8	+1.4
LVC				Sn	Sn	20 18 24.9	-0.6
PB15	IPOC Station P	4.88	179	*i* S	Sn	20 18 37.3	-1.3
PB10	IPOC Station P	5.27	190	Pn	Pn	20 17 47.1	-0.7
PB10				Sn	Sn	20 18 45.4	-2.2
SIV	San Ignacio	8.40	75	P	Pn	20 18 27.6	-2.2
	comp=N,1.9nm,0.3s,baz=274,slow=9.8,SNR=34						
SIV				S	Sn	20 19 57.1	-6.0
	comp=N,0.1nm,0.3s,baz=217,slow=20,SNR=3.2						
SAML	Samuel	11.15	34	Pn	Pn	20 19 09.0	+2.4
GO04	Tololo Observa	11.87	185	Pn	Pn	20 19 15.7	-0.6
ROC1	El Roble	14.67	185	Pn	Pn	20 19 51.7	-0.5
PTGA	Pitinga	19.82	29	P	P	20 20 49.5	-1.8
	comp=N,1.2nm,0.3s,baz=210,slow=14,SNR=13						
PTGA	Pitinga	19.82	29	P	Pn	20 20 53.0	-1.2
PTGA				IAmb	IAmb	20 20 55.1	
	comp=Z,10nm,1.5s						
BDFB	Brasilia	20.74	86	P	P	20 20 56.9	-4.3
	comp=Z,1.0nm,0.3s,baz=304,slow=7.3,SNR=2.0						
BDFB	Brasilia	20.74	86	P	P	20 21 03.5	+2.2
DBIC	Dimbokro	68.42	75	P	P	20 27 18.4	-0.3
	comp=Z,1.2nm,0.5s,baz=227,slow=6.9,SNR=4.2						
DBIC	Dimbokro	68.42	75	P	P	20 27 19.2	+0.4
NVAR	Mina Array Bea	72.64	322	P	P	20 27 45.6	+1.4
	comp=Z,0.2nm,0.4s,baz=137,slow=9.4,SNR=2.7						
TOA0	Torodi Ar. Sit	76.85	71	P	P	20 28 09.5	+0.9
TOA0				IAmb	IAmb	20 28 11.5	
	comp=Z,1.9nm,0.9s						
TORD	Torodi Ar. Bea	76.85	71	P	P	20 28 07.9	-0.8
	comp=Z,0.9nm,0.5s,baz=250,slow=5.4,SNR=12						
YKA	Yellowknife Ar	88.00	341	P	P	20 29 06.3	+0.9
	comp=Z,0.6nm,0.6s,baz=132,slow=5.1,SNR=11						

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*NEIC **01** 20:22:20.8±1.9, 55°.7N±0°.1×161°.80W±0°.10, h166km±9km, Error ellipse: s-maj=15.6km s-min=7.2km az=164.0*

*AEIC **01** 20:22:20.8±2.0, 55°.61N±0°.10×161°.79W±0°.10, h163km±4km, ML3.2/23, Error ellipse: s-maj=15.0km s-min=7.1km az=163.0*

*IDC **01** 20:22:22.0±4.8, 56°.12N×161°.76W, h147km±39km, mb3.0/5, mb1 3.2/7, mb1mx3.0/64, mbtmp3.4/7, Error ellipse: s-maj=46.6km s-min=21.0km az=22.0*

ISC 01 20:22:21.4±0.7, **55°.82N**±0°.08×**161°.84W**±0°.05, **h159**km±7km, **n51**, σ1s.**59**/58, **mb3.5**/5, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLHA	Black Hill	0.17	229		Pn	20 22 43.0	+0.3
BLHA					Sn	20 22 58.9	-0.1
HAG	Hague Volcano	0.50	185		Pn	20 22 44.2	+0.4
DT1	Dutton Round H	0.76	200		Pn	20 22 45.3	+0.1
SDPT	Sand Point	0.90	121		Pn	20 22 46.1	-0.1
SDPT					Sn	20 23 04.8	-0.4
VNWF	Veniaminof 8	1.32	74		Pn	20 22 51.2	+1.3
FALS	False Pass	1.32	224		Sn	20 23 10.2	-1.4
FALS	False Pass	1.32	224		Pn	20 22 49.3	-0.5
VNFG	Fog Glacier, M	1.36	69		Pn	20 22 51.9	+1.5
VNSS	Veniaminof 8	1.40	72		Pn	20 22 52.2	+1.4
VNNF	Veniaminof 3	1.49	71		Pn	20 22 52.9	+1.3
CNBA	Chernabura Isl	1.63	127		Pn	20 22 52.0	-0.9
CNBA					Sn	20 23 14.7	-2.5
SSBA	Shishaldin	1.68	232		Pn	20 22 52.9	-0.7
SSBA					Sn	20 23 17.0	-1.3
CHGN	Chignik	1.98	74		Pn	20 22 57.4	+0.7
AKUT	Akutan	2.83	235	Pn	Pn	20 23 06.4	-0.5
AKLV	Akutan Long Va	2.90	237		Pn	20 23 07.3	-0.6
UNV	Unalaska Valle	3.35	236		Pn	20 23 12.2	-1.3
MSW	Makushin Switc	3.44	238		Pn	20 23 13.6	-1.0
MREP	Makushin Rep't	3.48	237		Pn	20 23 14.5	-0.7
CHIR	Chirikof Islan	3.50	87	Pn	Pn	20 23 15.0	-0.4
PLK3	Peulik 3	3.59	56		Pn	20 23 18.3	+1.8
SII	Sitkinak Islan	4.34	77	Pn	Pn	20 23 26.5	+0.3
KAHC	Katmai Hardscr	4.67	50		Pn	20 23 32.0	+1.4
SPIA	Saint Paul Isl	4.86	290	Pn	Pn	20 23 33.4	+0.5
OHAK	Old Harbor	4.94	70		Pn	20 23 33.1	-0.9
KDAK	Kodiak Island	5.45	65	P	Pn	20 23 39.8	-0.9
	4.3nm,0.3s,baz=247,slow=7.2,SNR=93						
KDAK				S	Sn	20 24 38.7	-4.2
	2.0nm,0.3s,baz=270,slow=20,SNR=9.4						
KDAK	Kodiak Island	5.45	65		Pn	20 23 40.1	-0.6
SVW2	Sparrevohn	6.23	29	Pn	Pn	20 23 51.8	+0.8
HOM	Homer	6.67	51	Pn	Pn	20 23 57.6	+0.6
RSO	Redoubt South	6.69	42		Pn	20 23 59.3	+1.9
SKT	Skwentna	8.15	37	Pn	Pn	20 24 18.7	+2.0
PPLA	Purkeypile	8.63	31	Pn	Pn	20 24 25.6	+2.6
GAMB	Gambell	9.39	332	Pn	Pn	20 24 33.3	+0.3
ADK	Adak	9.62	252	Pn	Pn	20 24 33.7	-2.3
SCM	Sheep Creek Mo	9.62	45		Pn	20 24 35.2	-0.9
RND	Reindeer	10.04	35	Pn	Pn	20 24 41.4	-0.2
GLB	Gilahina Butte	10.93	52		Pn	20 24 52.7	-0.6
PAX	Paxson	10.97	43		Pn	20 24 52.8	-1.1
CRQM	Cirque	10.99	56		Pn	20 24 53.6	-0.7
MCARA	McCarthy VSAT	11.26	53		Pn	20 24 57.3	-0.3
BALM	Baldy	11.45	55		Pn	20 24 60.0	-0.2
ILAR	Eielson Array	11.61	33	P	Pn	20 25 00.8	-1.2
	0.1nm,0.3s,baz=216,slow=13,SNR=5.0						
ILAR				S	Sn	20 27 04.2	-6.2
	0.1nm,0.3s,baz=219,slow=27,SNR=4.5						
BARN	Barnard Glacie	11.78	55		Pn	20 25 04.1	-0.4
CTGM	Chitina Glacie	11.90	56		Pn	20 25 05.9	-0.1
SCRK	Sand Creek	12.09	40	Pn	Pn	20 25 06.4	-2.0
YKA	Yellowknife Ar	24.62	55	P	P	20 27 26.6	0.0
	0.4nm,0.7s,baz=273,slow=9.4,SNR=7.4						
YKA				pP	pP	20 28 02.4	+3.6
	1.4nm,0.8s,baz=278,slow=10.0,SNR=13						
PD31	Pinedale Array	35.63	89	P	P	20 29 05.0	+1.1
PDAR	Pinedale Array	35.63	89	P	P	20 29 05.3	+1.3
	0.5nm,0.5s,baz=324,slow=3.4,SNR=6.3						
TX31	Lajitas Ar. Si	48.52	98	P	P	20 30 49.5	+1.3
TXAR	Lajitas Array	48.53	98	P	P	20 30 49.9	+1.6
	0.6nm,0.6s,baz=292,slow=6.0,SNR=8.3						
SONM	Songino Array	53.25	303	P	P	20 31 23.6	+0.2
	0.2nm,0.5s,baz=68,slow=3.9,SNR=2.0						
MKAR	Makanchi Array	64.50	317	P	P	20 32 41.5	+0.7
	0.3nm,0.9s,baz=15,slow=6.1,SNR=2.4						

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*IASPEI **01** 20:24:06.8±0.8, 41°.20N±0°.03×25°.54E±0°.02, h13km±5km, Error ellipse: s-maj=3.9km s-min=2.9km az=20.2, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ATH **01** 20:24:06.3, 41°.18N×25°.54E, h22km±1km, ML2.4/8, Error ellipse: s-maj=2.9km s-min=1.4km az=203.0*

*ISK **01** 20:24:06.2, 41°.22N×25°.55E, h12km, ML2.7/22*

*DDA **01** 20:24:07.5, 41°.14N×25°.63E, h36km±1km, ML2.2*

*THE **01** 20:24:07.0, 41°.21N×25°.55E, h8km±1km, ML2.4/5, Error ellipse: s-maj=1.5km s-min=0.7km az=151.0*

*BEO **01** 20:24:21.7±1.2, 41°.51N×25°.06E, h0km, ML2.1/3*

ISC 01 20:24:07.0±0.8, **41°.20N**±0°.02×**25°.55E**±0°.02, **h12**km±5km, **n70**, σ0s.**69**/97, **Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDO	Rodhopi	0.06	193	P	Pg	20 24 09.3	0.0
RDO				S	Sg	20 24 10.8	-0.2
RDO	Rodhopi	0.06	193	P	Pg	20 24 09.4	0.0
RDO				AML	AML	20 24 10.8	
	comp=E,17860μm,0.2s						
RDO				AML	AML	20 24 10.8	
	comp=N,24996μm,0.2s						
RDO	Rodhopi	0.06	193	PG	Pg	20 24 09.3	0.0
RDO				SG	Sg	20 24 10.7	-0.2
KDZ	Kurdzhali	0.46	347	PG	Pg	20 24 15.5	-0.6
KDZ				SG	Sg	20 24 21.9	-0.4
ALN	Alexandroupoli	0.48	129	P	Pg	20 24 16.7	+0.3
ALN				S	Sg	20 24 23.2	+0.4
	comp=N,390nm,0.1s						
ALN	Alexandroupoli	0.48	129	P	Pg	20 24 16.7	+0.3
ALN				S	Sg	20 24 22.9	+0.2
ALN				AML	AML	20 24 23.3	
	comp=N,960μm,0.2s						
ALN				AML	AML	20 24 23.3	
	comp=E,763μm,0.2s						
ALN	Alexandroupoli	0.48	129	PG	Pg	20 24 16.2	-0.2
ALN				SG	Sg	20 24 23.1	+0.3
ENEZ	Enez	0.65	135	P	Pg	20 24 20.0	+0.4
ENEZ				S	Sb	20 24 29.0	-0.2
ENEZ	Enez	0.65	135	PG	Pg	20 24 19.9	+0.4
SMTH	Samothraki Isl	0.73	181	P	Pg	20 24 21.1	0.0
SMTH				S	Sg	20 24 30.7	+0.1
SMTH	Samothraki Isl	0.73	181	P	Pg	20 24 20.8	-0.3
SMTH				S	Sg	20 24 30.1	-0.5
SMTH				AML	AML	20 24 31.0	
	comp=E,437μm,0.2s						
SMTH				AML	AML	20 24 35.2	
	comp=N,330μm,0.2s						
ENZZ	Sultanice-Enez	0.74	143	PG	Pb	20 24 21.7	-0.1
KAVA	Kavala	0.81	256	P	Pg	20 24 22.2	-0.5
KAVA				S	Sg	20 24 33.5	+0.2
	comp=N,278nm,0.2s						
KAVA	Kavala	0.81	256	P	Pg	20 24 22.2	-0.5
KAVA				S	Sg	20 24 33.1	-0.2
KAVA				AML	AML	20 24 34.4	
	comp=E,654μm,0.3s						
KAVA				AML	AML	20 24 36.3	
	comp=N,561μm,0.1s						
UKOP	Uzunkopru-Edir	0.82	95	PG	Pb	20 24 23.1	0.0
THAS	Thassos island	0.87	227	P	Pg	20 24 22.8	-1.0
THAS	Thassos island	0.87	227	P	Pg	20 24 22.7	-1.0
THAS				S	Sg	20 24 34.3	-0.8
THAS				AML	AML	20 24 36.9	
	comp=N,405μm,0.2s						
THAS				AML	AML	20 24 37.4	
	comp=E,743μm,0.3s						
ERIK	Erikli-Kesan	0.90	126	PG	Pg	20 24 23.8	-0.5
KVLA	Kavala	0.92	254	P	Pg	20 24 24.4	-0.4
KESN	Edirne-Kesan	0.93	113	*i* P	Pg	20 24 24.8	-0.2
KESN				*i* S	Sg	20 24 36.9	-0.3
KESN				IAML		20 24 41.0	
	comp=E,168nm,0.2s						
GOKC	Gokceada-Canak	1.04	164	PG	Pb	20 24 26.9	0.0
GELI	Tayfur-Gelibol	1.06	139	PG	Pb	20 24 27.4	+0.1
EDRB	Edirne	1.10	54	P	Pb	20 24 27.5	-0.5
EDRB				S	Sn	20 24 43.1	-0.3
	comp=E,195nm,0.4s						
EDRB	Edirne	1.10	54	PN	Pb	20 24 27.5	-0.5
PLD	Plovdiv	1.11	325	PN	Pb	20 24 27.9	-0.2
LPK	Lapseki	1.23	132	PN	Pn	20 24 29.8	-0.3
NVR	Nevrokopi	1.28	277	P	Pn	20 24 30.1	-0.7
NVR				S	Sg	20 24 48.4	0.0
	comp=E,80nm,0.5s						
NVR	Nevrokopi	1.28	277	P	Pn	20 24 30.2	-0.6
NVR				S	Sn	20 24 48.0	0.0
NVR				AML	AML	20 24 51.9	
	comp=E,152μm,0.4s						
NVR				AML	AML	20 24 53.3	
	comp=N,140μm,0.3s						
KIRK	Kırklareli	1.30	63	*i* P	Pb	20 24 31.1	-0.2
KIRK				*i* S	Sb	20 24 47.9	-0.1
KIRK				IAML		20 24 51.0	
	comp=N,69nm,0.4s						
LIA	Limnos Island	1.33	192	P	Pn	20 24 30.6	-0.8
RKY	Sarkoy-Tekirda	1.33	112	PN	Pn	20 24 31.2	-0.3
BOZC	Bozcaada	1.41	164	PN	Pn	20 24 32.1	-0.4
BOZC	Bozcaada	1.41	164	*i* P	Pn	20 24 32.2	-0.2
BOZC				*i* S	Sn	20 24 50.2	-0.8
BOZC				IAML		20 24 52.0	
	comp=N,46nm,0.3s						
BOZC				IAML		20 24 53.0	
	comp=E,54nm,0.5s						
OUR	Ouranopolis	1.47	235	P	Pn	20 24 32.3	-1.1
OUR				S	Sg	20 24 54.4	0.0
	comp=E,188nm,0.4s						
OUR	Ouranopolis	1.47	235	P	Pn	20 24 32.3	-1.1
OUR				AML	AML	20 24 56.0	
	comp=E,274μm,0.2s						
OUR				AML	AML	20 24 56.7	
	comp=N,341μm,0.3s						
OUR	Ouranopolis	1.47	235	PN	Pn	20 24 32.5	-0.9
SRS	Serrai	1.48	267	P	Pn	20 24 33.2	-0.3
SRS				S	Sb	20 24 53.8	+0.5
SRS	Serrai	1.48	267	P	Pn	20 24 33.3	-0.3
SRS				S	Sg	20 24 54.8	+0.1
SRS				AML	AML	20 24 57.2	
	comp=E,414μm,0.5s						
SRS				AML	AML	20 24 57.2	
	comp=N,306μm,0.3s						
EZN	Ezine	1.49	157	PN	Pn	20 24 33.2	-0.4
TKR	Tekirdag	1.51	97	PN	Pn	20 24 33.5	-0.4
PHSR	Pinarhisar	1.54	73	PN	Pn	20 24 34.1	-0.2
KRBG	Karabiga-Canak	1.55	121	PN	Pn	20 24 34.1	-0.3
BAYC	CANAKKALE_Bayr	1.64	152	*i* P	Pn	20 24 36.2	+0.5
BAYC				*i* S	Sn	20 24 56.4	-0.3
BAYC				IAML		20 24 59.0	
	comp=N,46nm,0.6s						
BAYC				IAML		20 25 00.0	
	comp=E,22nm,0.4s						
CRLT	Corlu	1.65	92	PN	Pn	20 24 35.8	0.0
MRMT	Marmara Adasi	1.66	110	PN	Pn	20 24 35.7	-0.3
PAIG	Paliouri	1.91	229	P	Pn	20 24 38.4	-0.9
EDC	Edincik	1.95	115	PN	Pn	20 24 39.9	0.0
GONE	Gonen-Balikesi	1.99	125	PN	Pn	20 24 40.5	0.0
SIGR	SIGRI	2.00	173	P	Pn	20 24 40.7	+0.1
SIGR	SIGRI	2.00	173	PN	Pn	20 24 40.5	-0.1
SLVT	Silivri	2.00	88	PN	Pn	20 24 40.6	-0.1
KNT	Kendrikon	2.00	270	P	Pn	20 24 40.9	+0.2
KNT	Kendrikon	2.00	270	P	Pn	20 24 40.8	+0.2
PRK	Paraskevi	2.03	164	P	Pn	20 24 42.2	+1.3
CTYL	Yalikoy Yolu	2.08	81	PN	Pn	20 24 40.9	-0.8
ELBA	Catalca	2.17	90	*i* P	Pn	20 24 42.5	-0.5
ELBA				IAML		20 25 18.0	
	comp=E,7.4nm,0.3s						
ELBA				IAML		20 25 22.0	
	comp=N,9.3nm,0.2s						
CTKS	Kestanelik-??a	2.23	88	PN	Pn	20 24 42.7	-1.0
VTS	Vitosha	2.24	310	P	Pn	20 24 43.6	-0.4
VTS	Vitosha	2.24	310	*e*Pn	Pg	20 24 52.8	+2.9
VTS				*e*Sn	Sb	20 25 16.4	+1.2
VAY	Valandovo	2.25	274	*i* Pn	Pg	20 24 50.0	-0.2
VAY				*i* Sn	Sg	20 25 20.8	+1.4
BALB	Balikesir	2.36	131	PN	Pn	20 24 45.7	+0.1
DKL	Dikili	2.37	154	PN	Pn	20 24 45.8	+0.2
STEP	BALIKESIR_Sava	2.46	137	*i* P	Pn	20 24 47.9	+0.9
STEP				*i* S	Sn	20 25 18.1	+1.1
STEP				IAML		20 25 30.0	
	comp=E,19nm,0.5s						
STEP				IAML		20 25 32.0	
	comp=N,17nm,0.5s						
ARMT	Armutlu	2.59	103	PN	Pn	20 24 48.9	+0.2
KLYT	Kilyos	2.63	88	PN	Pn	20 24 48.9	-0.4
ISK	Istanbul-Kandi	2.65	92	PN	Pn	20 24 49.7	+0.1
DURS	Dursunbey	2.74	125	*i* P	Pb	20 24 56.3	+0.3
DURS				IAML		20 25 35.0	
	comp=E,7.8nm,0.4s						
DURS				IAML		20 25 41.0	
	comp=N,8.0nm,0.4s						
CHOS	Chios island	2.84	172	P	Pn	20 24 52.1	-0.1
ZAPS	Zavoj	3.00	315	*e*Pn	Pg	20 25 03.5	-1.0
ZAPS				*e*Sg	Sg	20 25 42.2	-1.1
ZAGS	Zajecar	3.58	318	*e*Pn	Pb	20 25 12.6	+2.3
ZAGS				*e*Sg	Sg	20 25 59.8	-2.3

IDC 01 20:40:42.5±1.9, **50°.22N**×**115°.16W**, **h0**km, **mb1 3.7**/2, **mb1mx3.1**/67, **mbtmp3.3**/2, **ML3.3**/2, **Error ellipse: s-maj=40.7km s-min=8.3km az=111.0**, **British Columbia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEW	Newport	2.34	214	Pn	Pb	20 41 24.6	-1.0
	1.5nm,0.3s,baz=35,slow=15,SNR=18						
NEW				Lg	Lg	20 41 54.6	
	4.9nm,0.3s,baz=264,slow=23,SNR=4.7						
I56US	NEWPORT INFRAS	2.34	214	*i*		20 55 40.0	
	baz=34,slow=338,SNR=5.6						
I10CA	LAC DU BONNET	12.26	83	*i*		21 52 20.0	
	baz=269,slow=344,SNR=1.8						
YKA	Yellowknife Ar	12.31	1	Pn	Pn	20 43 35.2	-3.6
	0.3nm,0.3s,baz=181,slow=13,SNR=8.4						
YKA				Sn	Sn	20 45 46.1	-10
	0.1nm,0.3s,baz=182,slow=23,SNR=4.8						
YKA				Lg	Lg	20 46 59.0	
	baz=180,slow=27,SNR=2.6						
ULM	Lac du Bonnet	12.35	82	Lg	Lg	20 46 59.8	
	0.1nm,0.3s,baz=274,slow=5.8,SNR=3.9						

IDC 01 20:50:19.2±2.9, **18°.25S**×**177°.73W**, **h0**km, **mb3.6**/4, **mb1 3.9**/4, **mb1mx3.6**/39, **mbtmp3.6**/4, **MS3.8**/1, **Ms1 3.8**/1, **ms1mx2.8**/36, **Error ellipse: s-maj=266.2km s-min=29.4km az=157.0**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.21	260	P	P	20 58 38.8	+0.3
	0.2nm,0.3s,baz=96,slow=7.7,SNR=7.5						
ASAR	Alice Springs	45.32	255	P	P	20 58 38.8	-0.6
	0.5nm,0.8s,baz=89,slow=8.7,SNR=4.3						
FITZ	Fitzroy Crossi	53.61	261	LR	LR	21 23 12.9	
	comp=Z,84nm,18.1s,baz=160,slow=37						
TXAR	Lajitas Array	85.63	57	P	P	21 03 00.9	+0.7
	0.2nm,0.6s,baz=208,slow=5.1,SNR=3.6						
PDAR	Pinedale Array	87.15	43	P	P	21 03 06.8	-0.8
	0.3nm,0.6s,baz=298,slow=1.9,SNR=3.5						

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*VIE **01** 20:55:08.5±0.8, 46°.39N×14°.05E, h8km±23km, ml0.8/2, Error ellipse: s-maj=5.6km s-min=1.7km az=2.0   5 km SSW of Jesenice*

LJU 01 20:54:54.5, **45°.78N**×**15°.29E**, **h7**km, **ML0.3**, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRES	Cresnjev	0.13	67	*i* Pg	Pg	20 54 57.0	-0.2
CRES				*i* Sg	Sg	20 54 59.0	-0.1
	comp=Z,8.0nm,0.2s						
LEGS	Legarje	0.17	7	*i* Pg	Pg	20 54 57.8	-0.2
LEGS				*i* Sg	Sg	20 55 00.8	+0.4
CESS	Cesta pri Krsk	0.23	32	*i* Sg	Sg	20 55 02.6	+0.4
	comp=Z,2.0nm,0.1s						
GCIS	Gornji Cirnik	0.25	69	*i* Sg	Sg	20 55 04.0	+1.1
	comp=Z,1.0nm,0.1s						
BOJS	Bojanci	0.27	185	*i* Pg	Pg	20 54 59.6	-0.3
BOJS				*i* Sg	Sg	20 55 04.5	+1.0
	comp=Z,7.0nm,0.3s						
VISS	Visnje	0.32	275	*i* Pg	Pg	20 55 00.6	-0.1
VISS				*i* Sg	Sg	20 55 05.4	+0.5
	comp=Z,1.0nm,0.1s						
PDKS	Podkum	0.35	325	*i* Pg	Pg	20 55 01.8	+0.4
PDKS				*i* Sg	Sg	20 55 06.8	+0.8
OBKA	Obir	0.90	325	*e*Pg	Pn	20 55 15.9	+2.2
	comp=Z,0.4nm,0.1s						
OBKA				*e*Sg	Sg	20 55 21.0	-2.3
	comp=Z,1.5nm,0.2s						
MYKA	Terra Mystica	1.43	307	*e*Pg	Pn	20 55 15.5	-5.4
	comp=Z,0.2nm,0.1s						
MYKA				*e*Sg	Pg	20 55 21.4	-0.4
	comp=Z,2.9nm,0.2s						

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*IDC **01** 20:59:11.1±1.9, 0°.93N×99°.49E, h137km±12km, mb3.3/9, mb1 3.4/9, mb1mx3.2/56, mbtmp3.8/9, Error ellipse: s-maj=49.3km s-min=13.8km az=54.0*

ISC 01 20:59:12.7±1.2, **1°.1N**±0°.2×**99°.6E**±0°.3, **h150**km, **n10**, σ1s.**10**/14, **mb3.5**/9, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	1.79	339	P	Pn	20 59 44.5	-1.2
	2.9nm,0.3s,baz=149,slow=9.4,SNR=16						
PSI				S	Sn	21 00 08.9	-2.0
	0.7nm,0.3s,baz=233,slow=20,SNR=9.4						
WRA	Warramunga Arr	39.99	123	P	P	21 06 32.2	-0.9
	0.3nm,0.5s,baz=320,slow=10,SNR=7.5						
WRA				PcP	PcP	21 08 35.4	0.0
	0.2nm,0.8s,baz=310,slow=2.5,SNR=4.0						
ASAR	Alice Springs	41.47	129	P	P	21 06 43.6	-1.6
	0.2nm,0.7s,baz=307,slow=7.7,SNR=3.0						
ASAR				PcP	PcP	21 08 40.7	+0.5
	0.3nm,0.7s,baz=325,slow=2.6,SNR=3.7						
SONM	Songino Array	46.90	6	P	P	21 07 29.6	+1.5
	1.0nm,0.5s,baz=190,slow=9.3,SNR=13						
SONM				PcP	PcP	21 08 59.1	+0.7
	0.2nm,0.3s,baz=199,slow=4.3,SNR=4.0						
MKAR	Makanchi Array	47.93	344	P	P	21 07 36.6	+0.6
	0.3nm,0.3s,baz=157,slow=8.2,SNR=23						
KURBB	Kurchatov Arra	52.45	343	P	P	21 08 10.6	+0.7
	0.4nm,0.6s,baz=159,slow=6.7,SNR=4.3						
ZALV	Zalesovo Beam	54.04	349	P	P	21 08 22.0	+0.6
	1.2nm,0.4s,baz=167,slow=7.4,SNR=8.8						
BRTR	Keskin Array B	70.93	312	P	P	21 10 14.2	+0.1
	0.4nm,0.5s,baz=137,slow=6.5,SNR=2.7						
FINES	FINESS Array B	81.17	332	P	P	21 11 11.7	+0.3
	1.5nm,0.9s,baz=108,slow=4.8,SNR=6.1						
ARCES	ARCESS Array B	83.41	340	P	P	21 11 23.6	+0.7
	2.8nm,0.9s,baz=97,slow=4.7,SNR=2.8						

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*NEIC **01** 21:04:08.3±2.1, 27°.98S±0°.07×66°.5W±0°.1, h141km±7km, mb4.3/6, Error ellipse: s-maj=15.6km s-min=10.0km az=96.0*

*SJA **01** 21:04:09.7±0.6, 27°.93S×66°.70W, h186km±3km, ML3.6, MW3.8*

*IDC **01** 21:04:10.1±3.5, 27°.76S×66°.49W, h145km±30km, mb3.6/5, mb1 3.6/7, mb1mx3.5/23, mbtmp4.0/7, Error ellipse: s-maj=25.9km s-min=24.2km az=51.0*

ISC 01 21:04:10.9±0.6, **27°.86S**±0°.05×**66°.80W**±0°.05, **h164**km, **n62**, σ1s.**27**/67, **mb3.9**/6, **Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CYA	Choya	1.05	123	*i* P	Pn	21 04 38.5	+1.1
CYA				*e*S	Sn	21 04 58.5	+0.7
CYA				IAML		21 04 58.8	
	comp=Z,195nm,0.3s						
VCA	Vinchina	1.52	235	*i* P	Pn	21 04 43.3	+1.5
VCA				*e*S	Sn	21 05 08.6	+2.9
VCA				IAML		21 05 10.9	
	comp=Z,645nm,0.3s						
AHML	Horco Molle	1.69	51	*i* P	Pn	21 04 44.4	+0.9
AHML				IAML		21 04 45.0	
	comp=Z,65nm,0.2s						
AHML				*e*S	Sn	21 05 09.7	+1.0
GO03	Copiap	3.06	274		Pn	21 05 00.5	+0.9
GO03				Sn	Sn	21 05 37.1	-0.3
ACDV	Cuesta del Vie	3.07	221	*i* P	Pn	21 05 00.7	+0.9
AROD	Rodeo	3.28	225	*i* P	Pn	21 05 03.8	+1.2
AROD				*e*S	Sn	21 05 43.8	+1.0
SLA	San Lorenzo	3.34	21	*i* P	Pn	21 05 04.2	+1.0
SLA				*e*S	Sn	21 05 44.5	+0.6
ACCO	Cerro Coronel	3.36	216	*i* P	Pn	21 05 04.2	+0.6
AMOG	MOGNA	3.40	205	*i* P	Pn	21 05 03.9	0.0
GO02	Mina Guanaco	3.67	316		Pn	21 05 09.7	+2.0
RTLL	Cerro Villicun	3.75	203	*i* P	Pn	21 05 08.2	-0.1
RTLL				IAML		21 05 54.6	
	comp=Z,202nm,0.6s						
CFA	Coronel Fontan	3.93	198	*i* P	Pn	21 05 10.4	-0.2
ZON	Zonda	4.02	204	*i* P	Pn	21 05 11.6	-0.1
ZON				IAML		21 06 00.9	

	comp=Z,74nm,0.2s						
GO04	Tololo Observa	4.19	236		Pn	21 05 14.0	-0.2
RTCV	Cerro Valdivia	4.26	200	*i* P	Pn	21 05 14.8	-0.1
RTLS	Leoncito	4.48	208	*i* P	Pn	21 05 18.8	+0.8
RTLS				IAML		21 06 12.7	
	comp=Z,81nm,0.4s						
PB14	IPOC Station P	4.57	314	*i* P	Pn	21 05 20.4	+1.2
MRA	San Martin	4.63	169	*i* P	Pn	21 05 19.0	-0.8
MRA				IAML		21 06 43.7	
	comp=Z,57nm,0.6s						
ASAL	Salagasta	5.03	200	*i* P	Pn	21 05 24.9	0.0
PB15	IPOC Station P	5.23	332	*i* P	Pn	21 05 29.4	+1.6
AAGR	Agrelo	5.49	198	*i* P	Pn	21 05 31.0	-0.1
PB10	IPOC Station P	5.50	321		Pn	21 05 31.6	+0.5
PB10	IPOC Station P	5.50	321	*i* P	Pn	21 05 32.2	+1.0
LVC	Limon Verde	5.57	339		Pn	21 05 33.1	+0.7
PB06	IPOC Station P	5.72	333	*i* P	Pn	21 05 35.4	+1.2
PEL	Peldehue	6.24	212	Pn	Pn	21 05 39.8	-1.1
PEL					Sn	21 06 49.0	-2.6
PEL	Peldehue	6.24	212	*i* P	Pn	21 05 40.2	-0.7
ROC1	El Roble	6.26	215		Pn	21 05 39.5	-1.9
ROC1	El Roble	6.26	215	*i* P	Pn	21 05 39.4	-2.0
PB04	IPOC Station P	6.29	330		Pn	21 05 41.6	-0.2
PB04	IPOC Station P	6.29	330	*i* P	Pn	21 05 41.7	0.0
PB09	IPOC Station P	6.44	339	*i* P	Pn	21 05 44.6	+0.9
PB01	IPOC Station P	7.22	340		Pn	21 05 53.6	-0.5
LAMA	Las Malvinas	7.34	196	*i* P	Pn	21 05 54.7	-0.8
GO05	Huala	8.36	210	Pn	Pn	21 06 06.9	-2.1
GO01	Chusmiza	8.45	344		Pn	21 06 09.9	-0.8
GO01					Sn	21 07 43.1	-2.1
PB11	IPOC Station P	8.48	341		Pn	21 06 08.7	-2.1
MNMC	Minye Minye	9.06	343	Pn	Pn	21 06 17.0	-1.7
LPAZ	La Paz	11.59	354	P	Pn	21 06 51.5	-0.5
	comp=Z,1.4nm,0.3s,baz=150,slow=6.2,SNR=24						
LPAZ	La Paz	11.59	354		Pn	21 06 52.0	-0.1
PLCA	Paso Flores	13.20	193	P	Pn	21 07 15.4	+3.3
	comp=Z,0.1nm,0.3s,baz=17,slow=8.5,SNR=4.6						
PLCA	Paso Flores	13.20	193	P	Pn	21 07 12.4	+0.3
SAML	Samuel	19.12	11	P	P	21 08 21.5	+0.1
BDFB	Brasilia	21.23	59	P	P	21 08 41.0	-3.2
	comp=Z,1.6nm,0.5s,baz=215,slow=16,SNR=3.0						
BDFB	Brasilia	21.23	59	IAmb	IAmb	21 08 58.5	
	comp=Z,9.9nm,1.4s						
PTGA	Pitinga	27.76	15	P	P	21 09 44.5	+0.1
PTGA				IAmb	IAmb	21 09 45.5	
	comp=Z,5.5nm,1.1s						
ROSC	El Rosal	33.31	346	P	P	21 10 34.1	+0.5
	comp=Z,3.4nm,0.3s,baz=143,slow=20,SNR=2.0						
ROSC	El Rosal	33.31	346	IAmb	IAmb	21 10 48.8	
	comp=Z,6.5nm,0.5s						
RUSC	La Rusia	34.10	349	P	P	21 10 40.2	-0.4
DBIC	Dimbokro	68.90	70	P	P	21 14 57.2	-1.1
	comp=Z,0.8nm,0.4s,baz=230,slow=3.1,SNR=4.8						
DBIC	Dimbokro	68.90	70	IAmb	IAmb	21 14 59.6	
	comp=Z,20nm,1.5s						
TORD	Torodi Ar. Bea	77.81	68	P	P	21 15 49.9	-0.5
	comp=Z,1.6nm,0.6s,baz=258,slow=5.1,SNR=11						
TMUT	Trail Mountain	78.61	326		PcP	21 16 01.6	-1.5
PDAR	Pinedale Array	80.55	330	P	P	21 16 06.3	+1.3
	comp=Z,0.2nm,0.5s,baz=140,slow=5.8,SNR=3.1						
ASAR	Alice Springs	125.01	203	PKP	PKPdf	21 22 52.2	0.0
	comp=Z,0.2nm,0.5s,baz=133,slow=1.8,SNR=4.1						
TIXI	Tiksi	135.32	353	PKP	PKPdf	21 23 12.0	+1.9
	comp=Z,1.1nm,0.3s,baz=34,slow=3.6,SNR=5.3						
KURBB	Kurchatov Arra	145.31	40	PKPbc	PKPdf	21 23 29.8	+1.1
	comp=Z,1.7nm,0.8s,baz=298,slow=3.5,SNR=11						
KURK	Kurchatov	145.31	39		PKPdf	21 23 29.8	+1.1
AAK	Ala-Archa	145.44	54	PKPbc	PKPdf	21 23 30.6	+1.2
	comp=Z,3.5nm,0.7s,baz=226,slow=1.5,SNR=17						
AAK	Ala-Archa	145.44	54		PKPdf	21 23 31.0	+1.6
ZALV	Zalesovo Beam	146.66	31	PKPbc	PKPdf	21 23 32.5	+1.5
	comp=Z,1.8nm,0.3s,baz=298,slow=3.6,SNR=11						
MKAR	Makanchi Array	149.28	44	PKPbc	PKPbc	21 23 40.7	+0.7
	comp=Z,0.9nm,0.5s,baz=313,slow=2.2,SNR=21						
MKAR				PKPab	PKPab	21 23 46.2	+1.1
	comp=Z,0.9nm,0.6s,baz=308,slow=3.6,SNR=14						

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*IDC **01** 21:07:46.1±0.6, 5°.01S×151°.49E, h132km±7km, mb3.5/6, mb1 3.7/7, mb1mx3.2/51, mbtmp3.9/7, Error ellipse: s-maj=29.3km s-min=12.6km az=128.0*

*NEIC **01** 21:07:47.1±1.4, 5°.0S±0°.1×151°.5E±0°.1, h144km±10km, mb4.0/8, Error ellipse: s-maj=20.6km s-min=15.9km az=148.0*

ISC 01 21:07:46.1±0.9**, 5°.0S**±0°.1×**151°.6E**±0°.2**, h129km, n17, σ0ˢ.96**/20**, mb3.9**/10**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	0.84	35	P	Pn	21 08 07.8	+0.3
	215nm,0.3s,baz=206,slow=1.0,SNR=35						
KRVT				S	Sn	21 08 25.5	+1.8
	99nm,0.3s,baz=180,slow=20,SNR=12						
PMG	Port Moresby	6.17	225	P	Pn	21 09 15.8	+0.8
	7.2nm,0.3s,baz=77,slow=4.6,SNR=17						
PMG				S	Sn	21 10 24.2	-0.2
	14nm,0.3s,baz=6.3,slow=9.2,SNR=8.5						
PMG	Port Moresby	6.17	225		Pn	21 09 16.3	+1.3
PMG				Sn	Sn	21 10 25.2	+0.8
WB0	Warramunga Arr	22.24	227	P	P	21 12 31.8	-0.8
WB0				IAmb	IAmb	21 12 33.5	
	comp=Z,6.2nm,1.1s						
WR0	Warramunga Arr	22.25	227	P	P	21 12 32.0	-0.7
WR0				IAmb	IAmb	21 12 33.5	
	comp=Z,2.1nm,0.6s						
DZM	Mont Dzumac	22.27	141	P	P	21 12 33.0	0.0
	comp=Z,6.2nm,0.8s,baz=302,slow=13,SNR=4.5						
DZM	Mont Dzumac	22.27	141	IAmb	IAmb	21 12 36.5	
	comp=Z,32nm,1.4s						
WRAB	Tennant Creek	22.37	227	P	P	21 12 33.1	-0.8
WRAB				IAmb	IAmb	21 12 34.8	
	comp=Z,4.2nm,0.8s						
WB2	Warramunga Arr	22.38	227	P	P	21 12 32.8	-1.1
WB2					P	21 12 33.1	-0.8
WB2				IAmb	IAmb	21 12 33.7	
	comp=Z,4.1nm,0.6s						
WRA	Warramunga Arr	22.39	227	P	P	21 12 32.7	-1.3
	comp=Z,1.5nm,0.3s,baz=49,slow=10,SNR=46						
KNRA	Kununurra	24.77	243	P	P	21 12 55.5	-0.5
AS31	Alice Springs	25.17	221	P	P	21 13 00.3	+0.6
ASAR	Alice Springs	25.17	221	P	P	21 12 59.2	-0.5
	comp=Z,2.6nm,0.6s,baz=59,slow=8.7,SNR=54						
FITZ	Fitzroy Crossi	28.47	241	P	P	21 13 28.3	-1.0
	comp=Z,1.2nm,0.9s,baz=61,slow=10,SNR=3.4						
SONM	Songino Array	65.83	328	P	P	21 18 18.3	+0.5
	comp=Z,0.3nm,0.5s,baz=137,slow=7.7,SNR=2.5						
ILAR	Eielson Array	82.81	22	P	P	21 19 54.5	-1.2
	comp=Z,0.4nm,0.8s,baz=228,slow=5.4,SNR=3.6						
TORD	Torodi Ar. Bea	149.18	287	PKPbc	PKPbc	21 27 20.0	-0.5
	comp=Z,0.4nm,0.7s,baz=98,slow=2.6,SNR=2.7						

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*IDC **01** 21:08:29.1±0.9, 35°.73N×98°.13E, h0km, mb3.6/10, mb1 3.7/13, mb1mx3.6/60, mbtmp3.6/13, ML3.7/3, MS3.2/3, Ms1 3.3/3, ms1mx2.7/41, Error ellipse: s-maj=28.9km s-min=16.7km az=52.0*

*BJI **01** 21:08:30.4±0.0, 35°.78N×98°.08E, h8km, mb3.9/1, ML3.8/14, Ms3.6/11, Ms7 3.4/9*

ISC 01 21:08:34.1±0.8**, 36°.09N**±0°.09×**97°.96E**±0°.06**, h10km, n22, σ2ˢ.69**/20**, mb3.7**/9**, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTA	Gaotai	3.62	23	*e*Pn	Pn	21 09 34.8	+4.4
GTA				smax	smax		
	comp=N,510nm,1.8s						
GTA				smax	smax		
	comp=E,1μm,1.6s						
GTA				LR	LR		
	comp=N,250nm,4.4s						
GTA				LR	LR		
	comp=E,370nm,5.4s						
GTA				LR	LR		
	comp=Z,130nm,6.0s						
LZH	Lanzhou	4.76	88	*e*Pn	Pn	21 09 42.4	-3.7
LZH				Pg	Pb	21 09 54.5	-3.3
LZH				Sn	Sn	21 10 37.4	-4.1
LZH				Sg	Sb	21 10 52.8	-2.5
LZH				smax	smax		
	comp=N,250nm,1.0s						
LZH				smax	smax		
	comp=E,270nm,1.0s						
LZH				LR	LR		
	comp=E,480nm,7.6s						
LZH				LR	LR		
	comp=Z,540nm,7.8s						
XAN	Xi'an	9.22	100	P	Pn	21 10 49.6	+2.5
XAN				pP		21 10 53.0	
XAN				S	Sn	21 12 34.1	+3.2
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN				LR	LR		
	comp=N,250nm,8.4s						
XAN				LR	LR		
	comp=E,150nm,7.2s						
XAN				LR	LR		
	comp=Z,170nm,10.3s						
WMQ	Urumqi	11.02	318	*e*P	Pn	21 11 12.9	+1.1
WMQ				sP		21 11 20.0	
WMQ				S	Sn	21 13 15.6	+0.4
WMQ				LR	LR		
	comp=N,150nm,9.1s						
WMQ				LR	LR		
	comp=Z,82nm,9.9s						
KMI	Kunming	11.68	158	P	Pn	21 11 21.2	+0.1
KMI				pP		21 11 23.1	
KMI				sP		21 11 24.9	
KMI				LR	LR		
	comp=E,120nm,5.3s						
KMI				LR	LR		
	comp=Z,100nm,5.8s						
SONM	Songino Array	13.29	25	Pn	Pn	21 11 43.4	+0.5
	0.4nm,0.3s,baz=205,slow=14,SNR=21						
SONM				Lg	Lg	21 15 30.7	
	0.0nm,0.3s,baz=204,slow=28,SNR=3.8						
WHN	Wuhan	14.77	107	P	Pn	21 12 03.0	-0.1
MKAR	Makanchi Array	15.86	317	Pn	Pn	21 12 15.6	-1.8
	0.1nm,0.3s,baz=124,slow=14,SNR=6.8						
MKAR				Sn	Sn	21 15 06.8	-6.3
	0.1nm,0.3s,baz=131,slow=26,SNR=5.2						
CMAR	Chiang Mai Arr	17.59	177	P	Pn	21 12 30.6	-8.8
	0.1nm,0.3s,baz=342,slow=9.7,SNR=7.1						
CMAR				LR	LR	21 19 34.4	
	comp=Z,32nm,20.2s,baz=5.0,slow=39						
AAK	Ala-Archa	19.25	297	LR	LR	21 22 00.0	
	comp=Z,112nm,20.1s,baz=90,slow=42						
ZALV	Zalesovo Beam	20.07	337	P	P	21 13 06.7	-0.7
	3.0nm,0.6s,baz=150,slow=11,SNR=12						
KURBB	Kurchatov Arra	20.17	322	P	P	21 13 07.5	-1.0
	2.0nm,0.7s,baz=128,slow=11,SNR=14						
KSRS	Korea Array	24.00	78	P	P	21 13 44.8	-4.0
	1.5nm,0.7s,baz=278,slow=8.7,SNR=5.2						
BVAR	Borovoye Array	25.70	320	P	P	21 14 04.3	0.0
	1.2nm,0.6s,baz=113,slow=12,SNR=12						
GEYT	Alibeck	31.70	285	P	P	21 14 59.5	+1.5
	1.1nm,0.8s,baz=76,slow=6.3,SNR=3.7						
TIXI	Tiksi	39.06	15	P	P	21 16 00.3	-0.4
	1.1nm,0.3s,baz=317,slow=1.6,SNR=6.5						
GUMO	Guam	47.55	106	LR	LR	21 37 03.0	
	comp=Z,43nm,19.3s,baz=108,slow=36						
BRTR	Keskin Array B	49.91	295	P	P	21 17 27.5	-0.5
	0.4nm,0.6s,baz=97,slow=6.0,SNR=3.2						
FINES	FINESS Array B	50.55	324	P	P	21 17 32.2	-0.1
	1.0nm,0.7s,baz=81,slow=12,SNR=5.7						
WRA	Warramunga Arr	65.51	142	P	P	21 19 13.2	-4.5
	0.4nm,0.9s,baz=342,slow=6.7,SNR=3.6						
ASAR	Alice Springs	68.46	145	P	P	21 19 29.2	-7.2
	0.2nm,0.7s,baz=327,slow=6.6,SNR=3.5						
YKA	Yellowknife Ar	78.31	15	P	P	21 20 31.5	-2.5
	0.2nm,0.5s,baz=338,slow=4.6,SNR=2.8						

JMA 01 21:20:28.4±0.1**, 37°.97N**×**143°.81E, h50km, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	1.88	281	P	Pn	21 20 58.9	+0.8
JIKH				S	Sn	21 21 20.9	+0.3
JIO	Ouri	2.00	285	P	Pn	21 21 00.7	+1.0
JIO				S	Sn	21 21 24.2	+0.7
OFUJ	Ofunato	2.01	304	P	Pn	21 21 00.9	+1.0
OFUJ				S	Sn	21 21 25.3	+1.4
JKMT	Kesennumamotoy	2.02	295	P	Pn	21 21 00.9	+0.9
JKMT				S	Sn	21 21 24.9	+0.9
JMK	Ichinoseki	2.26	297	P	Pn	21 21 04.5	+1.3
JMK				S	Sn	21 21 31.3	+1.4
JOM	Ohasama	2.48	308	P	Pn	21 21 07.7	+1.5
JOM				S	Sn	21 21 37.1	+1.8
JFT	Otama	2.79	262	P	Pn	21 21 12.1	+1.5
JFT				S	Sn	21 21 44.2	+1.2
JYK	Kaneyama	2.87	290	P	Pn	21 21 13.4	+1.8
JYK				S	Sn	21 21 47.0	+2.0
JANG	Nango	2.99	324	P	Pn	21 21 14.1	+0.8
JAG	Ashikaga	3.81	247	P	Pn	21 21 25.5	+1.0
JOT	Ohata	4.02	329	P	Pn	21 21 28.9	+1.5
JRY	Ryogami san	4.39	245	P	Pn	21 21 33.3	+0.8
JKB	Kayabe	4.46	332	P	Pn	21 21 35.2	+1.8
JKB				*e*S	Sn	21 22 24.3	+0.4
JCH	Churui	4.65	356	P	Pn	21 21 35.8	-0.3
JCH				*e*S	Sn	21 22 26.4	-2.3
NEM2	Nemuro 2	5.59	15	P	Pn	21 21 47.7	-1.2

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*IDC **01** 21:23:51.4±2.3, 10°.92N×127°.21E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/46, mbtmp3.6/5, Error ellipse: s-maj=161.7km s-min=20.3km az=70.0*

*MAN **01** 21:23:57.1, 10°.87N×126°.67E, h47km, mb4.6, ML3.4, MS3.3*

ISC 01 21:23:57.1±1.2**, 10°.85N**±0°.07×**126°.8E**±0°.1**, h35km, n12, σ0ˢ.97**/15**, mb3.6**/5**, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	Maasin	2.03	250	*e*P	Pn	21 24 28.8	0.0
MSLP				*e*S	Sn	21 24 52.0	-1.0
BUTP	Butuan	2.20	212	*e*P	Pn	21 24 30.7	-0.5
BUTP				*e*S	Sn	21 24 57.4	+0.2
CNP	Catarman	2.66	308	*e*P	Pn	21 24 37.7	+0.2
CNP				*e*S	Sn	21 25 06.9	-1.6
LLP	Lapu-Lapu	2.83	259	*e*P	Pn	21 24 40.0	+0.2
TBP	Tagbilaran	3.11	248	*e*P	Pn	21 24 45.3	+1.6
RCP	Roxas	4.04	280	⇓*e*P	Pn	21 24 57.0	+0.6
GUIM	Jordan	4.14	267	*e*P	Pn	21 24 57.4	-0.4
GUIM				*e*S	Sn	21 25 32.5	-13
FITZ	Fitzroy Crossi	28.79	182	P	P	21 29 52.0	+0.1
	1.3nm,0.6s,baz=11,slow=11,SNR=2.3						
WRA	Warramunga Arr	31.49	166	P	P	21 30 14.5	-1.3
	0.4nm,0.8s,baz=346,slow=9.2,SNR=5.3						
ASAR	Alice Springs	35.01	169	P	P	21 30 45.9	-0.5
	0.3nm,0.5s,baz=350,slow=7.0,SNR=11						
MKAR	Makanchi Array	51.88	322	P	P	21 33 03.6	+1.5
	0.5nm,0.7s,baz=120,slow=7.5,SNR=6.4						
ZALV	Zalesovo Beam	54.37	331	P	P	21 33 20.4	+0.1
	0.3nm,0.5s,baz=120,slow=14,SNR=2.9						

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*IDC **01** 21:25:17.4±1.9, 21°.99S×170°.06E, h0km, mb3.9/5, mb1 4.1/6, mb1mx3.9/31, mbtmp3.9/6, ML3.7/1, MS3.9/16, Ms1 3.8/16, ms1mx3.7/27, Error ellipse: s-maj=71.0km s-min=31.1km az=156.0*

ISC 01 21:25:21.4±1.2**, 22°.1S**±0°.4×**170°.0E**±0°.1**, h25km, n33, σ0ˢ.70**/23**, mb3.9**/5**, MS3.9**/13**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.34	270	*e*Pn	Pn	21 26 11.9	-0.2
	32nm,0.2s						
DZM				*e*Sn	Sn	21 26 50.6	-0.4
	50nm,0.2s						
DZM				*e*LR	LR	21 27 00.5	
	comp=Z,1μm,23.5s						
DZM	Mont Dzumac	3.34	270	Pn	Pn	21 26 11.6	-0.4
	7.1nm,0.3s,baz=111,slow=12,SNR=493						
DZM				Sn	Sn	21 26 51.9	+0.9
	14nm,0.3s,baz=104,slow=19,SNR=9.0						
RAO	Raoul Island	12.98	126	LR	LR	21 32 22.4	
	comp=Z,591nm,19.6s,baz=154,slow=33						
HNR	Honiara	15.90	321	LR	LR	21 34 18.6	
	comp=Z,228nm,21.9s,baz=138,slow=34						
URZ	Urewera	17.21	161	LR	LR	21 34 35.5	
	comp=Z,596nm,19.1s,baz=346,slow=32						
AFI	Afiamalu	19.10	68	LR	LR	21 36 18.4	
	comp=Z,81nm,21.9s,baz=289,slow=35						
RPZ	Rata Peaks	21.57	178	LR	LR	21 37 49.1	
	comp=Z,330nm,18.6s,baz=24,slow=35						
PMG	Port Moresby	25.34	296	LR	LR	21 39 55.1	
	comp=Z,345nm,18.9s,baz=142,slow=35						
STKA	Stephens Creek	27.08	243	P	P	21 31 03.0	+0.8
	4.6nm,0.9s,baz=36,slow=5.0,SNR=7.4						
STKA				LR	LR	21 40 26.7	
	comp=Z,419nm,21.6s,baz=51,slow=34						
ASAR	Alice Springs	33.27	260	P	P	21 31 57.2	+0.1
	1.7nm,0.8s,baz=83,slow=9.7,SNR=7.4						
ASAR				PcP	PcP	21 34 39.2	0.0
	0.4nm,0.9s,baz=126,slow=1.3,SNR=3.2						
ASAR				LR	LR	21 44 44.0	
	comp=Z,345nm,20.1s,baz=90,slow=35						
WRA	Warramunga Arr	33.35	267	P	P	21 31 56.1	-1.6
	1.0nm,0.6s,baz=99,slow=8.2,SNR=6.3						
TBI	Tubuai	37.29	100	*e*LR	LR	21 42 31.8	
	comp=Z,156nm,30.8s						
MJAR	Matsushiro Arr	65.62	332	LR	LR	22 02 07.8	
	comp=Z,30nm,21.1s,baz=185,slow=34						
KSRS	Korea Array	71.28	326	LR	LR	22 05 01.4	
	comp=Z,46nm,20.9s,baz=130,slow=34						
RPN	Rapa Nui	72.28	113	LR	LR	22 00 50.5	
	comp=Z,84nm,20.7s,baz=222,slow=30						
PETK	Petropavlovsk-	75.66	352	LR	LR	22 03 55.0	
	comp=Z,73nm,19.8s,baz=239,slow=31						
MAW	Mawson	76.08	202	LR	LR	22 07 28.2	
	comp=Z,205nm,18.8s,baz=64,slow=33						
CMAR	Chiang Mai Arr	80.36	294	P	P	21 37 31.5	+0.5
	0.5nm,0.7s,baz=121,slow=3.5,SNR=3.5						
KMI	Kunming	80.42	302	P	P	21 37 39.5	+8.0
KMI				pP	pwP	21 37 51.4	+7.6
KMI				sP	sP	21 37 54.0	+13
XAN	Xi'an	80.59	313	P	P	21 37 43.6	+12
XAN				pP	pwP	21 37 55.8	+11
SONM	Songino Array	89.95	323	P	P	21 38 19.6	+1.1
	0.8nm,1.1s,baz=141,slow=3.5,SNR=3.5						
SONM				LR	LR	22 16 50.0	
	comp=Z,39nm,20.6s,baz=185,slow=34						
PLCA	Paso Flores	95.91	138	LR	LR	22 11 53.0	
	comp=Z,35nm,20.1s,baz=219,slow=29						
TXAR	Lajitas Array	97.47	61	LR	LR	22 13 41.8	
	comp=Z,59nm,21.8s,baz=0.0,slow=30						
CHVC	Chvalec	145.03	331	*e*PKP	PKPdf	21 44 56.5	+0.1
VYHS	Vyhne	145.08	326	*e*PKP	PKPbc	21 44 55.3	-0.7
DPC	Dobruska-Polom	145.08	330	*e*PKP	PKPdf	21 44 56.7	+0.2
UPC	Upice	145.11	331	*e*PKP	PKPdf	21 44 56.5	0.0
BRG	Berggiesshubel	145.75	333	*e*PKP	PKPab	21 44 58.1	-0.3
	4.2nm,0.8s						
BRG				*e*		21 45 01.5	
	9.7nm,1.2s						
CLL	Collm	145.81	334	*e*PKPbc	PKPab	21 44 59.0	+0.4
	comp=Z,5.0nm,0.8s						
CLL				*i* pPKPbc	PKiKP	21 45 01.6	-0.2
CLL				*e*PKiKP	pPKPdf	21 45 03.0	-1.4
KRUC	Moravsky	145.93	329	*e*PKP	PKPab	21 44 58.8	-0.3
MODS	Modra-Piesok	145.95	327	*e*PKP	PKPbc	21 44 58.5	-0.3
KHC	Kasperske Hory	147.20	331	*e*PKP	PKPdf	21 44 59.4	-0.7
KHC				*e*pPKP	PKPbc	21 45 03.0	+0.6
GERES	GERESS Array B	147.35	331	PKPbc	PKPdf	21 45 00.7	+0.2
	comp=Z,1.0nm,0.7s,baz=18,slow=4.5,SNR=8.5						

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*IDC **01** 21:51:37.6±8.9, 22°.28S×178°.16W, h357km±84km, mb3.2/8, mb1 3.5/8, mb1mx3.4/24, mbtmp3.9/8, Error ellipse: s-maj=36.8km s-min=28.1km az=136.0*

ISC 01 21:51:37.0±1.0**, 22°.3S**±0°.3×**178°.2W**±0°.2**, h352km, n13, σ0ˢ.83**/14**, mb3.4**/8**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	36.91	246	P	P	21 58 13.7	+0.1
	1.0nm,0.4s,baz=92,slow=9.5,SNR=3.6						
ASAR	Alice Springs	43.99	259	P	P	21 59 11.3	+0.2
	1.7nm,0.7s,baz=96,slow=7.6,SNR=25						
ASAR				PcP	PcP	22 00 49.8	-0.1
	0.2nm,0.5s,baz=112,slow=3.9,SNR=3.4						
WRA	Warramunga Arr	44.23	264	P	P	21 59 12.5	-0.6
	1.6nm,0.7s,baz=95,slow=8.3,SNR=14						
MJAR	Matsushiro Arr	71.54	324	P	P	22 02 21.0	+0.4
	1.7nm,1.0s,baz=110,slow=14,SNR=4.2						
NVAR	Mina Array Bea	82.41	43	P	P	22 03 21.3	+0.4
	0.1nm,0.4s,baz=233,slow=9.0,SNR=3.6						
TXAR	Lajitas Array	88.13	57	P	P	22 03 49.8	+0.9
	0.5nm,1.0s,baz=176,slow=3.6,SNR=3.4						
ILAR	Eielson Array	90.06	13	P	P	22 03 56.0	-1.0
	0.3nm,0.5s,baz=220,slow=6.3,SNR=4.3						
CMAR	Chiang Mai Arr	90.56	290	P	P	22 04 02.0	+1.6
	1.0nm,0.9s,baz=132,slow=3.7,SNR=6.7						
ARCES	ARCESS Array B	130.62	349	PKP	PKPdf	22 10 05.1	-0.6
	2.8nm,1.0s,baz=29,slow=2.1,SNR=3.5						
AKASG	Malin Array Be	144.47	330	PKP	PKPab	22 10 29.9	-1.2
	0.4nm,0.3s,baz=42,slow=4.3,SNR=6.3						
BRTR	Keskin Array B	147.88	310	PKPbc	PKPbc	22 10 40.5	-0.9
	0.3nm,0.6s,baz=138,slow=3.9,SNR=3.6						
GERES	GERESS Array B	151.84	343	PKPbc	PKPbc	22 10 50.4	-0.1
	0.2nm,0.5s,baz=53,slow=3.8,SNR=3.3						
TORD	Torodi Ar. Bea	170.93	179	PKPab	PKPab	22 12 24.5	-0.4
	0.7nm,0.9s,baz=199,slow=3.1,SNR=3.0						

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*JMA **01** 22:05:24.9±0.2, 23°.76N×121°.95E, h22km±4km, M2.9*

*TAP **01** 22:05:26.2, 23°.79N×121°.95E, h30km, ML3.4, C*

ISC 01 22:05:25.4±1.0**, 23°.77N**±0°.02×**121°.97E**±0°.02**, h26km**±10km**, n120, σ0ˢ.73**/222**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENLB	Shoufeng	0.36	292	P	Pb	22 05 33.6	+0.1
	baz=293						
ENLB				*e*S	Sn	22 05 40.0	-1.4
	baz=293						
HWA	Hwalien	0.39	303	*e*P	Pb	22 05 34.4	+0.5
	baz=297						
HWA				*e*S	Sn	22 05 40.5	-1.6
	baz=297						
TWD	Chiawan	0.46	313	P	Pb	22 05 35.1	0.0
	baz=312						
TWD				S	Sb	22 05 41.6	0.0
	baz=312						
ESL	Shilin	0.49	276	*i* P	Pb	22 05 35.6	0.0
	baz=267						
ESL				S	Sb	22 05 42.4	-0.1
	baz=267						
EGFH	Guangfu	0.50	259	*i* P	Pn	22 05 36.3	-0.7
	baz=248						
EGFH				S	Sn	22 05 44.2	-0.7
	baz=248						
NACB	Ninganchiao	0.53	320	P	Pb	22 05 35.8	-0.5
	baz=314						
NACB				S	Sb	22 05 43.0	-0.5
	baz=314						
HGSD	Ruisui	0.57	242	P	Pb	22 05 37.1	+0.3
	baz=238						
HGSD				*e*S	Sn	22 05 45.9	-0.6
	baz=238						
ETLH	Xiulin Townshi	0.62	315	*e*P	Pb	22 05 37.4	-0.5
	baz=314						
ETLH				S	Sb	22 05 46.6	+0.3
	baz=314						
EHY	Hungye	0.65	247	*i* P	Pb	22 05 38.2	+0.1
	baz=258						
EHY				S	Sb	22 05 47.2	+0.4
	baz=258						
ENA	Nanau	0.69	343	P	Pb	22 05 38.6	-0.3
	baz=334						
ENA				S	Sb	22 05 48.1	+0.1
	baz=334						
YULB	Yu-li	0.72	239	*e*P	Pb	22 05 39.4	+0.1
	baz=252						
YULB				*e*S	Sb	22 05 49.2	+0.3
	baz=252						
TWF1	Yuli	0.74	236	P	Pb	22 05 39.9	+0.2
	baz=248						
TWF1				*e*S	Sn	22 05 50.2	-0.5
	baz=248						
WHF	Hehuan Shan	0.75	301	P	Pb	22 05 39.5	-0.6
	baz=292						
WHF				*e*S	Sb	22 05 50.3	+0.2
	baz=292						
OWD	Renai	0.75	285	*i* P	Pb	22 05 39.6	-0.3
	baz=291						
OWD				*e*S	Sb	22 05 49.3	-0.6
	baz=291						
VWDT	VWDT	0.76	269	P	Pn	22 05 40.1	-0.3
	baz=267						
VWDT				S	Sn	22 05 50.2	-0.9
	baz=267						
CHGB	Renai	0.78	292	*i* P	Pb	22 05 40.3	-0.3
	baz=291						
CHGB				*e*S	Sb	22 05 50.3	-0.6

	baz=291						
EOS1	EOS1	0.80	11	P	Pn	22 05 41.0	0.0
	baz=21						
EOS1				S	Sn	22 05 51.9	-0.1
	baz=21						
FULB	Fuli	0.84	228	*e*P	Pn	22 05 41.6	0.0
	baz=213						
FULB				*e*S	Sn	22 05 53.6	+0.5
	baz=213						
TWC	Suao	0.85	353	P	Pb	22 05 41.5	-0.1
	baz=354						
TWC				S	Sn	22 05 53.1	-0.2
	baz=354						
NNSB	Datong	0.85	321	*i* P	Pb	22 05 41.3	-0.3
	baz=321						
NNSB				S	Sb	22 05 52.3	-0.5
	baz=321						
NNSH	Datong	0.85	321	P	Pb	22 05 41.3	-0.4
	baz=312						
NNSH				S	Sb	22 05 52.0	-0.7
	baz=312						
CHKT	Chengkung	0.86	220	*e*P	Pb	22 05 41.0	-0.8
	baz=208						
CHKT				S	Sb	22 05 51.3	-1.6
	baz=208						
NNS	Nan Shan	0.86	321	P	Pb	22 05 41.3	-0.6
	baz=321						
NNS				S	Sb	22 05 52.9	-0.3
	baz=321						
TWT	Tachien	0.87	304	P	Pn	22 05 42.0	-0.2
	baz=302						
TWT				*e*S	Sb	22 05 53.3	-0.2
	baz=302						
TDCB	Techi	0.89	303	*i* P	Pb	22 05 42.1	-0.2
	baz=302						
TDCB				*e*S	Sb	22 05 53.1	-0.6
	baz=302						
SSLB	Suanglung	0.93	272	*i* P	Pn	22 05 42.7	-0.2
	baz=270						
SSLB				*e*S	Sb	22 05 54.2	-0.7
	baz=270						
NDT	Datong Townshi	0.93	334	*e*P	Pn	22 05 42.8	-0.2
	baz=334						
NDT				S	Sb	22 05 54.8	-0.1
	baz=334						
ENTT	Nioudou	0.94	337	*i* P	Pb	22 05 43.1	-0.1
	baz=338						
ENTT				S	Sn	22 05 55.6	-0.2
	baz=338						
SMLT	Sun Moon Lake	0.98	277	P	Pn	22 05 43.6	-0.1
	baz=275						
SMLT				S	Sn	22 05 56.6	-0.3
	baz=275						
DPDB	Guoxing	0.99	286	*e*P	Pb	22 05 43.8	-0.2
	baz=284						
DPDB				*e*S	Sn	22 05 56.9	-0.1
	baz=284						
TWE	Neicheng	0.99	344	*e*P	Pn	22 05 43.5	-0.2
	baz=345						
TWE				S	Sn	22 05 56.8	-0.1
	baz=345						
ILA	Ilan	1.02	349	*e*P	Pn	22 05 43.9	-0.1
	baz=349						
ILA				S	Sn	22 05 57.5	0.0
	baz=349						
WHYT	Xinyi Township	1.02	266	P	Pb	22 05 44.5	-0.1
	baz=253						
WHYT				*e*S	Sn	22 05 58.0	+0.2
	baz=253						
TYC	Yuchr	1.03	278	P	Pb	22 05 44.2	-0.4
	baz=284						
TYC				S	Sn	22 05 57.3	-0.4
	baz=284						
SLBB	Yuanshan	1.03	343	P	Pn	22 05 43.7	-0.7
	baz=343						
SLBB				*e*S	Sb	22 05 56.9	-0.9
	baz=343						
ELDTW	Lidau	1.04	237	*e*P	Pn	22 05 43.8	-0.7
	baz=223						
ELDTW				*e*S	Sb	22 05 56.6	-1.6
	baz=223						
YHNB	Yeheng	1.05	329	*i* P	Pn	22 05 44.5	-0.2
	baz=329						
YHNB				S	Sb	22 05 57.4	-1.0
	baz=329						
NSK	Sanguang	1.06	329	P	Pn	22 05 44.6	-0.2
	baz=329						
NSK				S	Sn	22 05 57.8	-1.0
	baz=329						
WHP	Taichung City	1.06	299	P	Pb	22 05 45.4	+0.1
	baz=306						
WHP				S	Sb	22 05 58.4	-0.4
	baz=306						
NTC	Toucheng	1.09	353	*e*P	Pb	22 05 46.4	+0.7
	baz=354						
NTC				*e*S	Sb	22 06 00.4	+0.9
	baz=354						
NWLT	Wulai	1.09	337	*e*P	Pn	22 05 45.1	-0.1
	baz=324						
NWLT				S	Sn	22 05 59.0	-0.5
	baz=324						
ALS	Alishan	1.10	257	*e*P	Pb	22 05 45.9	0.0
	baz=255						
ALS				*e*S	Sb	22 05 59.7	-0.2
	baz=255						
JYNG	Yonagunijimaku	1.12	52	P	Pb	22 05 46.2	0.0
JYNG				*e*S	Sn	22 06 00.4	+0.2
WJS	Zhushan	1.14	273	*e*P	Pb	22 05 46.8	+0.4
	baz=271						
WJS				*e*S	Sb	22 06 02.9	+2.1
	baz=271						
TWH	Lutao	1.14	203	*e*P	Pn	22 05 45.7	-0.1
	baz=201						
TWH				*e*S	Sn	22 05 59.1	-1.5
	baz=201						
YOJ	Yonaguni jima	1.18	54	*e*S	Sb	22 06 02.6	+0.6
	baz=55						
YOJ	Yonaguni jima	1.18	54	P	Pn	22 05 46.7	+0.4
YOJ				S	Sn	22 06 00.9	-0.6
WNT	Mingjian	1.18	276	P	Pb	22 05 47.4	+0.2
	baz=274						
WNT				S	Sb	22 06 03.3	+1.3
	baz=274						
CHN5	Tsauling	1.19	262	P	Pb	22 05 47.4	0.0
	baz=261						
CHN5				S	Sb	22 06 02.6	+0.1
	baz=261						
TIPB	Shuangxi	1.21	354	*e*P	Pn	22 05 46.7	-0.1
	baz=354						
TIPB				*e*S	Sb	22 06 02.5	-0.5
	baz=354						
NSTT	Nanjuang	1.23	315	*e*P	Pn	22 05 47.1	0.0
	baz=314						
NSTT				*e*S	Sb	22 06 03.1	-0.5
	baz=314						
LIOB	Emei	1.23	315	*e*P	Pb	22 05 48.1	0.0
	baz=315						
LIOB				S	Sb	22 06 03.5	-0.2
	baz=315						
TWQ1	Liyutan	1.24	298	*e*P	Pb	22 05 47.7	-0.5
	baz=297						
TWQ1				*e*S	Sb	22 06 03.8	0.0
	baz=297						
TWB1	Santiao Chiao	1.24	1	*e*S	Sn	22 06 02.9	-0.1
	baz=2.0						
TCU	Taichung	1.24	288	*e*P	Pb	22 05 48.9	+0.7
	baz=287						
TCU				S	Sb	22 06 05.8	+2.0
	baz=287						
TWGBT	Beinan	1.25	221	*e*P	Pn	22 05 46.7	-0.5
	baz=230						
TWGBT				*e*S	Sn	22 06 02.4	-0.9
	baz=230						
TWG	Pinlang	1.25	221	*e*P	Pn	22 05 46.7	-0.6
	baz=230						
TWG				*e*S	Sn	22 06 02.5	-0.8
	baz=230						
NHDH	Xindian Distri	1.26	341	P	Pb	22 05 48.0	-0.6
	baz=330						
NHDH				S	Sb	22 06 03.8	-0.6
	baz=330						
TWA	Mucha	1.26	344	*e*P	Pn	22 05 47.4	0.0
	baz=344						
TWA				*e*S	Sb	22 06 03.6	-0.7
	baz=344						
STYT	Tauyuan	1.26	242	*e*P	Pn	22 05 47.8	+0.3
	baz=232						
STYT				*e*S	Sb	22 06 04.2	-0.3
	baz=232						
WLTB	Daxi	1.26	329	*e*P	Pb	22 05 48.1	-0.5
	baz=329						
WLTB				*e*S	Sb	22 06 04.9	+0.4
	baz=329						
NSY	Sanyi	1.28	301	P	Pb	22 05 49.1	+0.2
	baz=300						
NSY				*e*S	Sb	22 06 05.4	+0.5
	baz=300						
TATO	Taipei	1.28	340	*e*P	Pb	22 05 48.4	-0.6
	baz=330						
TATO				*e*S	Sb	22 06 04.7	-0.3
	baz=330						
WGK	Gukeng	1.29	267	*e*P	Pb	22 05 48.9	-0.1
	baz=265						
WGK				*e*S	Sb	22 06 06.5	+1.3
	baz=265						
NWF	Wu-fen Shan	1.31	353	*e*P	Pn	22 05 48.4	+0.2
	baz=353						
NWF				S	Sb	22 06 05.8	-0.1
	baz=353						
TPUB	Ta-pu	1.31	250	P	Pb	22 05 49.5	0.0
	baz=238						
TPUB				*e*S	Sb	22 06 07.2	+1.4
	baz=238						
WDLH	Douliu	1.31	267	*e*P	Pb	22 05 49.8	+0.3
	baz=265						
WDLH				*e*S	Sb	22 06 07.1	+1.3
	baz=265						
WFSB	Wu-fen Shan	1.31	353	*e*P	Pb	22 05 48.8	-0.6
	baz=353						
WFSB				*e*S	Sb	22 06 06.0	+0.2
	baz=353						
NMLH	Miaoli	1.32	306	P	Pb	22 05 49.5	-0.1
	baz=305						
NMLH				S	Sb	22 06 06.7	+0.6
	baz=305						
CHN4	Tsaushan	1.33	252	P	Pb	22 05 49.7	0.0
	baz=251						
CHN4				*e*S	Sb	22 06 07.5	+1.2
	baz=251						
WCHH	Zhanghua	1.33	284	*e*P	Pb	22 05 49.9	+0.2
	baz=282						
WCHH				*e*S	Sb	22 06 08.2	+2.0
	baz=282						
PTSB	Yuanli	1.34	301	*e*S	Sb	22 06 06.0	-0.6
	baz=300						
WDJ	Dajia District	1.34	296	*e*P	Pb	22 05 49.8	-0.2
	baz=295						
WDJ				S	Sb	22 06 07.9	+1.1
	baz=295						
WTP	Ta-pu	1.35	248	P	Pb	22 05 49.7	-0.3
	baz=246						
WTP				S	Sb	22 06 07.8	+0.9
	baz=246						
SBCB	Hsinchu	1.36	319	*e*S	Sb	22 06 07.8	+0.6
	baz=318						
CHN2	Minshiung	1.39	261	*e*P	Pb	22 05 51.0	+0.3
	baz=259						
CHN2				*e*S	Sb	22 06 09.8	+1.7
	baz=259						
NCUH	Zhongli	1.39	329	*e*S	Sb	22 06 08.5	+0.3
	baz=329						
NCU	National Centr	1.40	329	S	Sb	22 06 08.1	-0.2
	baz=329						
TWS1	Kuangyinshan	1.42	339	*e*P	Pn	22 05 50.0	+0.4
	baz=339						
TWS1				S	Sn	22 06 07.8	+0.3
	baz=339						
YM01	YM01	1.42	345	*e*P	Pn	22 05 50.2	+0.5
	baz=329						
YM01				*e*S	Sn	22 06 07.5	-0.1
	baz=329						
YM10	YM10	1.43	345	*e*P	Pn	22 05 50.3	+0.5
	baz=329						
YM10				S	Sb	22 06 08.6	-0.8
	baz=329						
SLGT	Liugui	1.44	238	P	Pb	22 05 51.0	-0.5
	baz=227						
SLGT				*e*S	Sb	22 06 10.2	+0.7
	baz=227						
YM04	YM04	1.44	344	*e*P	Pn	22 05 49.8	-0.1
	baz=328						
YM04				*e*S	Sn	22 06 07.9	0.0
	baz=328						
CHY	Chiayi	1.44	260	*e*P	Pb	22 05 51.0	-0.6
	baz=258						
CHY				*e*S	Sb	22 06 09.5	0.0
	baz=258						
YM11	YM11	1.44	346	*e*P	Pn	22 05 49.5	-0.5
	baz=329						
YM11				S	Sn	22 06 08.4	+0.2
	baz=329						
CHN1	Nanshi	1.44	247	P	Pb	22 05 51.7	+0.1
	baz=245						
CHN1				*e*S	Sb	22 06 11.2	+1.5
	baz=245						
SGST	Jiashian	1.44	242	P	Pb	22 05 51.0	-0.6
	baz=229						
SGST				S	Sb	22 06 10.5	+0.9
	baz=229						
SNST	Tainan City	1.46	248	*e*P	Pb	22 05 52.6	+0.7
	baz=247						
SNST				S	Sb	22 06 11.2	+1.2
	baz=247						
YM08	YM08	1.46	346	P	Pn	22 05 50.2	0.0
	baz=330						
YM08				*e*S	Sn	22 06 08.4	-0.1
	baz=330						
YM03	YM03	1.46	345	*e*P	Pn	22 05 50.8	+0.5
	baz=329						
YM03				*e*S	Sn	22 06 08.4	-0.3
	baz=329						
RLNB	Erlin	1.48	275	*e*P	Pb	22 05 52.2	0.0
	baz=264						
RLNB				S	Sb	22 06 11.2	+0.6
	baz=264						
ECL	Taimali	1.49	219	P	Pn	22 05 50.8	+0.2
	baz=217						
ECL				*e*S	Sn	22 06 07.7	-1.6
	baz=217						
WTCT	Ta-ch'eng	1.55	274	P	Pb	22 05 53.0	-0.4
	baz=272						
WTCT				S	Sb	22 06 13.7	+1.1
	baz=272						
SSD	Sandimen	1.59	231	*e*P	Pn	22 05 52.7	+0.7
	baz=224						
SSD				*e*S	Sn	22 06 12.3	+0.5
	baz=224						
WSF	Szhu	1.60	266	S	Sb	22 06 14.8	+0.5
	baz=264						
CHN3	Shinhua	1.62	245	*e*S	Sb	22 06 16.8	+1.9
	baz=244						
CHN8	Yiju	1.67	256	S	Sb	22 06 16.5	+0.5
	baz=254						
MASBT	Mashibuluo	1.68	227	P	Pn	22 05 53.8	+0.6
	baz=221						
MASBT				*e*S	Sb	22 06 15.2	-1.2
	baz=221						
TWM1	Shoushan	1.70	237	*e*S	Sb	22 06 19.0	+1.9
	baz=235						
HATJ	Hateruma jima	1.71	80	P	Pn	22 05 54.0	+0.5
HATJ				*e*S	Sn	22 06 14.6	+0.1
IRIF	Iriomote-Funau	1.71	70	P	Pn	22 05 54.1	+0.5
IRIF				S	Sn	22 06 15.3	+0.7
TAW	Tawu	1.71	215	*e*P	Pn	22 05 53.8	+0.2
	baz=214						
TAW				*e*S	Sn	22 06 13.2	-1.5
	baz=214						
EAST	Anshuo	1.72	217	*e*P	Pn	22 05 53.4	-0.4
	baz=216						
LAY	Lan-yu	1.76	193	*e*P	Pn	22 05 54.9	+0.6
	baz=192						
LAY				*e*S	Sn	22 06 13.9	-2.0
	baz=192						
JKRS	Kuro-shima	1.93	75	P	Pn	22 05 57.3	+0.7
JKRS				S	Sn	22 06 20.7	+0.7
JIJ	Ishigaki jima	2.08	73	P	Pn	22 05 58.8	+0.2
JIJ				S	Sn	22 06 22.7	-1.0
PHUB	P'eng-hu	2.21	264	*e*P	Pn	22 06 00.8	+0.3
	baz=249						
PHUB				*e*S	Sn	22 06 27.1	+0.1
	baz=249						
JISG	Ishigakijimahi	2.29	69	P	Pn	22 06 01.7	+0.1
JISG				S	Sn	22 06 27.5	-1.5
VWUC	VWUC	2.60	299	*e*P	Pn	22 06 07.2	+1.4
	baz=298						
PTTC	Pingtan	2.64	311	*e*P	Pn	22 06 07.5	+1.1
	baz=311						
JTJ	Tarama	2.65	70	P	Pn	22 06 06.8	+0.3
JTJ				S	Sn	22 06 37.3	-0.4
PTMZ	Houxiangcun	2.89	297	*e*P	Pn	22 06 09.5	-0.3
	baz=295						
MATB	Ma-tsu	3.00	323	*e*P	Pn	22 06 12.6	+1.2
	baz=334						
JIRB	Irabujima	3.11	69	P	Pn	22 06 13.1	+0.2
JIRB				S	Sn	22 06 47.5	-1.7
JIKM	Ikemajima	3.21	68	P	Pn	22 06 15.4	+1.2
JIKM				S	Sn	22 06 50.2	-1.4
JMJ2	Miyako jima3	3.22	72	P	Pn	22 06 15.5	+1.2
JMJ2				S	Sn	22 06 51.7	-0.1
JOGS	Gusukube	3.29	72	P	Pn	22 06 17.1	+1.7
JOGS				*e*S	Sn	22 06 52.5	-1.2
KNMB	Chin-men Tao	3.34	283	*e*P	Pn	22 06 16.3	+0.3
	baz=281						
MHZQ	Yeshan	3.54	312	*e*P	Pn	22 06 20.4	+1.6
	baz=311						
XPSS	Dashiqiu	3.54	333	*e*P	Pn	22 06 18.3	-0.5
	baz=334						

MEX ***01*** *22:07:44.5±1.0, 13°.66N×92°.12W, h19^{km}±33^{km}, MD3.9*
UCR ***01*** *22:07:47.3±1.5, 14°.12N×91°.88W, h63^{km}±47^{km}, ML5.1*
SNET ***01*** *22:07:47.3±1.3, 14°.07N×91°.87W, h58^{km}±50^{km}, ML5.4*
GCG ***01*** *22:07:50.2±0.3, 14°.31N×91°.74W, h71^{km}±47^{km}, MD3.9*
IDC ***01*** *22:07:54.2±2.6, 14°.44N×92°.04W, h68^{km}±23^{km}, mb3.4/6, mb1 3.8/9, mb1mx3.5/39, mbtmp3.7/9, MS2.7/2, Ms1 2.7/2, ms1mx2.5/29, Error ellipse: s-maj=22.7km s-min=16.3km az=36.0*

ISC 01 22:07:42.7±2.4**, 13°.77N**±0°.07×**92°.06W**±0°.04**, h14**^{km}±14^{km}**, n33, σ1^{s}.57**/43**, mb3.8**/6**, 1D, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERG	Entre ros, C	0.82	36	*e*P	Pn	22 08 01.0	+1.2
STG3	Santiaguito 3,	1.05	27	⇓*e*P	Pb	22 08 03.2	+0.5
THIG		1.15	350	*e*P	Pb	22 08 04.1	-0.2
THIG				*e*S	Sg	22 08 19.2	-0.6
FUG	Fuego 3	1.36	60	*e*P	Pn	22 08 08.0	+0.5
PCG	Pacaya	1.54	66	*e*P	Pb	22 08 11.0	-0.2
IXG	Ixpaco	1.62	76	*e*P	Pn	22 08 10.9	-0.2
NBG	Las Nubes	1.85	64	*e*P	Pb	22 08 16.2	-0.3
PCIG		2.22	330	*e*P	Pn	22 08 19.0	-0.1
PCIG				*e*S	Sn	22 08 44.4	-2.0
CEVE	Cerro Verde	2.37	88	*e*P	Pn	22 08 22.5	+1.1
CEVE				*e*S	Sn	22 08 49.5	-1.0
CEVE				IAML		22 08 54.6	
	comp=Z,21μm,0.3s						
CEVE	Cerro Verde	2.37	88	*e*P	Pn	22 08 22.5	+1.1
CEVE				*e*S	Sn	22 08 49.5	-1.0
CEVE				IAML		22 08 54.6	
	comp=Z,21μm,0.3s						
SBLS	San Blas	2.37	88	*e*P	Pn	22 08 22.3	+0.9
SBLS	San Blas	2.37	88	*e*P	Pn	22 08 22.3	+0.9
SNJE	San Jose	2.39	87	*e*P	Pn	22 08 21.9	+0.2
SNJE	San Jose	2.39	87	*e*P	Pn	22 08 21.9	+0.2
CCIG	Comitan	2.50	358	*e*P	Pn	22 08 23.6	+0.5
CCIG				*i* S	Sn	22 08 53.4	0.0
MTO3	Montecristo	2.70	76	*e*P	Pn	22 08 26.1	+0.2
MTO3	Montecristo	2.70	76	*e*P	Pn	22 08 26.1	+0.2
BOQS	Boqueron	2.71	90	*e*P	Pn	22 08 26.8	+0.8
BOQS				*e*S	Sn	22 08 59.1	+0.5
LFRS	El Faro	2.92	93	*e*P	Pn	22 08 30.0	+1.1
LFRS				*e*S	Sn	22 09 03.3	-0.6
TGIG		3.16	341	*i* P	Pn	22 08 31.6	-0.4
TGIG				*i* S	Sn	22 09 10.0	+0.4
CMIG	Matias Romero	4.28	321	P	Pn	22 08 48.5	+1.1
	comp=Z,1.4nm,0.3s,baz=137,slow=7.6,SNR=18						
CMIG				S	Sn	22 09 34.6	-2.5
	comp=Z,3.7nm,0.3s,baz=119,slow=18,SNR=4.5						
CMIG	Matias Romero	4.28	321	*e*P	Pn	22 08 47.0	-0.4
CMIG				*e*S	Sn	22 09 36.5	-0.6
HUIG	Huatulco	4.39	297	*i* P	Pn	22 08 48.4	-0.6
HUIG				*i* S	Sn	22 09 37.7	-2.1
TEIG	Tepich	7.37	29	P	Pn	22 09 31.9	+2.0
	comp=Z,6.1nm,0.3s,baz=207,slow=0.9,SNR=19						
TEIG				S	Sn	22 10 47.8	-5.6
	baz=313,slow=23,SNR=2.9						
TEIG				LR	LR	22 12 52.2	
	comp=Z,54nm,20.0s,baz=318,slow=44						
JTS	Las Juntas de	7.77	116	P	Pb	22 09 54.0	-3.2
	comp=Z,1.5nm,0.3s,baz=221,slow=22,SNR=3.9						
JTS				S	Sb	22 11 25.2	-4.5
	comp=Z,1.4nm,0.3s,baz=308,slow=17,SNR=2.5						
JTS				LR	LR	22 12 30.7	
	comp=Z,62nm,18.2s,baz=24,slow=34						
TXAR	Lajitas Array	18.85	327	P	Pn	22 12 05.0	+1.9
	comp=Z,0.0nm,0.3s,baz=148,slow=12,SNR=12						
ANMO	Albuquerque	24.77	331	P	P	22 13 03.7	-0.6
	comp=Z,1.2nm,0.7s,baz=162,slow=13,SNR=2.9						
NVAR	Mina Array Bea	33.81	321	P	P	22 14 27.6	+2.9
	comp=Z,0.6nm,0.6s,baz=140,slow=7.7,SNR=4.5						
YKA	Yellowknife Ar	51.23	347	P	P	22 16 45.4	-0.2
	comp=Z,0.4nm,0.5s,baz=148,slow=7.6,SNR=8.8						
CPUP	Villa Florida	52.25	140	P	P	22 17 02.1	+8.4
	comp=Z,2.0nm,0.9s,baz=248,slow=20,SNR=2.9						
PLCA	Paso Flores	57.78	161	P	P	22 17 43.1	+10
	comp=Z,0.8nm,0.8s,baz=340,slow=15,SNR=1.8						
ILAR	Eielson Array	63.02	337	P	P	22 18 09.1	+0.1
	comp=Z,1.1nm,1.1s,baz=118,slow=4.5,SNR=5.0						
CMAR	Chiang Mai Arr	146.19	341	PKPbc	PKPab	22 27 24.8	+0.6
	comp=Z,1.3nm,0.7s,baz=331,slow=3.6,SNR=11						

IDC ***01*** *22:15:15.3±0.8, 32°.08N×40°.22W, h0^{km}, mb4.0/13, mb1 4.1/13, mb1mx3.8/50, mbtmp4.0/13, MS3.6/11, Ms1 3.6/11, ms1mx3.3/41, Error ellipse: s-maj=25.6km s-min=17.3km az=158.0*

ISC 01 22:15:16.8±0.7**, 32°.1N**±0°.2×**40°.2W**±0°.1**, h10**^{km}**, n41, σ1^{s}.22**/27**, mb4.1**/14**, MS3.7**/11**, 6C-2D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCHQ	Schefferville	29.51	328	LR	LR	22 33 03.1	
	comp=Z,115nm,18.8s,baz=67,slow=36						
SDV	Santo Domingo	36.44	237	P	P	22 22 23.0	+0.9
	2.3nm,0.7s,baz=53,slow=9.9,SNR=3.3						
DBIC	Dimbokro	41.53	120	LR	LR	22 37 45.9	
	comp=Z,107nm,19.9s,baz=240,slow=32						
TORD	Torodi Ar. Bea	42.71	106	P	P	22 23 14.4	+0.2
	4.0nm,0.9s,baz=298,slow=6.9,SNR=14						
TORD				LR	LR	22 38 23.4	
	comp=Z,79nm,20.9s,baz=20,slow=32						
CLL	Collm	43.07	47	*e*P	P	22 23 18.0	+1.3
	comp=Z,9.0nm,1.3s						
GERES	GERESS Array B	43.35	51	P	P	22 23 17.4	-1.8
	comp=Z,0.4nm,0.7s,baz=280,slow=8.9,SNR=6.0						
NOA	NORSAR Array B	44.00	33	P	P	22 23 24.4	+0.3
	comp=Z,1.7nm,1.1s,baz=254,slow=8.4,SNR=3.0						
ULM	Lac du Bonnet	44.54	311	LR	LR	22 42 53.7	
	comp=Z,53nm,18.0s,baz=150,slow=37						
H10N2	ASCENSION HYDR	46.68	144	T	T	23 13 35.3	
	baz=329,slow=75,SNR=16						
H10N3	ASCENSION HYDR	46.68	144	T	T	23 13 35.0	
	baz=329,slow=75,SNR=15						
H10N1	ASCENSION HYDR	46.70	144	T	T	23 13 36.5	
	baz=329,slow=75,SNR=16						
VYHS	Vyhne	46.76	52	*e*P	P	22 23 46.8	+0.6
H10S3	ASCENSION HYDR	47.56	145	T	T	23 14 39.9	
	baz=329,slow=74,SNR=52						
H10S2	ASCENSION HYDR	47.57	145	T	T	23 14 41.0	
	baz=251,slow=74,SNR=47						
BZS	Buzias	48.87	55	⇑P	P	22 24 03.9	+1.4
GZR	Gura Zlata	49.71	55	⇑P	P	22 24 10.0	+0.9
ARR	Arges	51.01	55	⇑P	P	22 24 20.6	+1.7
BURAR	Bucovina Array	51.09	52	⇑P	P	22 24 17.7	-1.9
FINES	FINESS Array B	51.13	34	P	P	22 24 19.3	-0.1
	comp=Z,2.1nm,0.8s,baz=253,slow=3.2,SNR=6.1						
VOIR		51.28	55	⇑P	P	22 24 21.6	+0.6
MLR	Muntele Rosu	51.90	55	⇓P	P	22 24 26.0	+0.3
SORM	Soroca	53.11	51	⇑P	P	22 24 33.1	-1.3
AKASG	Malin Array Be	53.31	48	P	P	22 24 35.5	-0.3
	comp=Z,2.4nm,0.8s,baz=277,slow=6.3,SNR=14						
HARR	Harsova	53.43	56	⇓P	P	22 24 37.2	+0.4
TXAR	Lajitas Array	53.91	285	P	P	22 24 41.4	+0.7
	comp=Z,1.0nm,1.1s,baz=98,slow=6.4,SNR=4.1						
ANMO	Albuquerque	54.38	292	LR	LR	22 46 37.5	
	comp=Z,58nm,18.8s,baz=54,slow=35						
PDAR	Pinedale Array	54.67	302	P	P	22 24 45.2	-1.0
	comp=Z,1.9nm,1.0s,baz=65,slow=8.5,SNR=6.2						
PDAR				LR	LR	22 46 55.4	

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              comp=Z,66nm,18.7s,baz=104,slow=35
YKA    Yellowknife Ar    54.95 327  LR      LR        22 46 58.0
              comp=Z,59nm,19.3s,baz=0.0,slow=35
NEW    Newport           58.54 310  LR      LR        22 48 16.1
              comp=Z,64nm,21.4s,baz=57,slow=34
BRTR   Keskin Array B    58.77  60  P       P         22 25 15.4 +0.2
              comp=Z,0.9nm,0.8s,baz=292,slow=5.2,SNR=5.7
ELK    Elko              59.31 301  LR      LR        22 49 52.5
              comp=Z,67nm,18.6s,baz=86,slow=35
CPUP   Villa Florida     60.34 198  P       P         22 25 24.8 -1.1
              comp=Z,1.7nm,0.8s,baz=196,slow=2.0,SNR=3.1
LPIG   La Paz            61.39 282  LR      LR        22 51 03.8
              comp=Z,34nm,18.4s,baz=354,slow=35
INK    Inuvik            61.80 335  P       P         22 25 35.6 +0.3
              comp=Z,2.7nm,1.2s,baz=289,slow=19,SNR=2.7
KBZ    Khabaz            64.03  53  P       P         22 25 52.4 +1.8
              comp=Z,2.1nm,0.9s,baz=280,slow=1.9,SNR=5.5
YBH    Yreka Blue Hor    64.30 305  LR      LR        22 53 39.9
              comp=Z,53nm,19.2s,baz=354,slow=36
ZALV   Zalesovo Beam     82.05  29  P       P         22 27 37.6 +0.5
              comp=Z,0.6nm,0.6s,baz=292,slow=7.8,SNR=6.5
KSH    Kashi             87.41  44  P       P         22 28 03.9 -0.7
KSH                                 sP      pwP       22 28 10.4 +0.5
KSH    Kashi             87.41  44  S       S         22 38 42.4 -3.1
KSH    Kashi             87.41  44  sS      sS        22 38 50.2 +0.1
ASAR   Alice Springs    170.13  33  PKP     PKPdf     22 35 24.3 -1.0
              comp=Z,0.7nm,1.1s,baz=321,slow=1.2,SNR=4.5
ASAR                                PKPab   PKPab     22 36 41.3 +0.6
              comp=Z,1.0nm,1.1s,baz=239,slow=3.0,SNR=3.5
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*RSNC **01** 22:50:03.4±0.8, 3°.89N×71°.61W, h0^{km}±4^{km}, ML3.5*
*IDC **01** 22:50:05.3±2.5, 4°.04N×71°.43W, h35^{km}±19^{km}, mb3.6/6, mb1 3.9/9, mb1mx3.5/46, mbtmp3.9/9, ML2.6/2, MS3.0/3, Ms1 3.1/3, ms1mx2.7/33, Error ellipse: s-maj=17.0km s-min=16.0km az=119.0*
ISC 01 22:50:02.7±1.1**, 4°.06N**±0°.03×**71°.47W**±0°.04**, h11**^{km}±7^{km}**, n40, σ1^{s}89**/65**, mb3.7**/5**, 1C, Colombia**

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Code   Station Name        Δ°   AZ°   Phase ID            Time     Res
                                      Op      ISC       h  m  s    ISC
PTGC   Puerto Gaitan,     0.67 282⇑ iP      Pg        22 50 14.3 -1.5
PTGC                                eS      Sg        22 50 23.8 -0.8
PTGC                                i                 22 50 35.7
              comp=Z,1µm,0.3s
GUVC   San Jose del G     1.90 217  eP      Pn        22 50 32.5 -2.6
GUVC                                eS      Sn        22 50 55.7 -3.3
GUVC                                i                 22 51 01.8
              comp=Z,973nm,0.2s
GUVC                                i                 22 51 01.8
              comp=Z,973nm,0.2s
GUVC                                i                 22 51 02.0
              comp=Z,996nm,0.2s
CHIC   Chingaza           2.32 284  eP      Pn        22 50 41.6 +0.4
CHIC                                eS      Sn        22 51 10.8 +0.8
CHIC                                i                 22 51 14.9
              comp=Z,396nm,0.3s
TAMC   Tame, Arauca       2.38 352  eP      Pb        22 50 44.9 -0.7
TAMC                                eS      Sb        22 51 16.9 +1.9
TAMC                                i                 22 51 38.5
              comp=Z,317nm,0.6s
RUSC   La Rusia           2.42 319  eP      Pn        22 50 44.5 +1.8
RUSC                                eS      Sb        22 51 16.0 -0.7
RUSC                                i                 22 51 29.1
              comp=Z,154nm,0.5s
ROSC   El Rosal           2.94 285  Pn      Pn        22 50 51.4 +1.6
              comp=Z,11nm,0.3s,baz=127,slow=14,SNR=8.5
ROSC                                Pg      Pg        22 51 01.1 +1.9
              comp=Z,26nm,0.3s,baz=126,slow=10,SNR=27
ROSC                                Sn      Sn        22 51 28.1 +2.8
              comp=Z,19nm,0.3s,baz=41,slow=17,SNR=4.2
ROSC                                Lg      Lg        22 51 43.6
              comp=Z,30nm,0.3s,baz=247,slow=24,SNR=5.6
ROSC   El Rosal           2.94 285  eP      Pn        22 50 49.6 -0.2
ROSC                                i                 22 51 40.7
              comp=Z,88nm,0.3s
ROSC                                i                 22 51 47.5
              comp=Z,93nm,0.5s
SPBC   San Pablo de B     3.03 301  eP      Pn        22 50 51.1 +0.4
SPBC                                i                 22 51 41.1
              comp=Z,158nm,0.2s
BARC   Barichara          3.03 326  eP      Pn        22 50 52.5 +1.6
BARC                                i                 22 51 46.7
              comp=Z,543nm,1.1s
MACC   Macarena, Meta     3.04 231  eP      Pn        22 50 51.0 +0.2
MACC                                eS      Sn        22 51 28.4 +1.2
MACC                                i                 22 51 40.1
              comp=Z,349nm,0.7s
PRAC   Prado              3.42 264  eP      Pn        22 50 55.4 -0.7
PRAC                                eS      Sn        22 51 34.8 -1.9
PRAC                                i                 22 51 57.3
              comp=Z,108nm,0.9s
PAMC   Pamplona, Colo     3.48 340  eP      Pn        22 51 00.5 +3.3
PAMC                                eS      Sn        22 51 42.2 +3.6
PAMC                                i                 22 51 59.9
              comp=Z,96nm,0.3s
PAMC                                i                 22 52 05.7
              comp=Z,102nm,0.6s
NORC   Norcasia           3.70 294  eP      Pn        22 51 00.2 +0.3
NORC                                eS      Sn        22 51 44.2 +0.7
NORC                                i                 22 52 08.2
              comp=Z,75nm,0.5s
BRRC   Barranca, Sant     3.76 324  eP      Pn        22 51 01.3 +0.7
BRRC                                i                 22 52 12.8
              comp=Z,56nm,1.3s
ORTC   Ortega, Tolima     3.77 268  eP      Pn        22 51 00.4 -0.4
ORTC                                eS      Sn        22 51 49.4 +4.2
ORTC                                i                 22 52 10.3
              comp=Z,148nm,0.4s
PTBC   PUERTO BERRIO,     3.86 310  eP      Pn        22 51 01.6 -0.4
PTBC                                i                 22 52 11.5
              comp=Z,56nm,0.4s
GUY2C  Guyana, Caldas     4.05 287  eP      Pn        22 51 05.9 +0.9
GUY2C                               eS      Sn        22 51 51.3 -1.4
GUY2C                               i                 22 52 08.5
              comp=Z,45nm,0.5s
OCAC   Ocana              4.54 336  eP      Pn        22 51 13.1 +1.7
OCAC                                i                 22 52 32.9
              comp=Z,47nm,0.7s
HELC   Santa Helena       4.56 298  eP      Pn        22 51 12.2 +0.2
HELC                                eS      Sn        22 52 06.4 +1.2
HELC                                i                 22 52 31.2
              comp=Z,18nm,0.6s
ZARC   Zaragoza, Cauc     4.79 315  eP      Pn        22 51 14.9  0.0
ZARC                                eS      Sn        22 52 08.8 -1.5
ZARC                                i                 22 52 34.2
              comp=Z,28nm,0.4s
YOTC   Yotoco, Valle      4.86 269  eP      Pn        22 51 15.0 -0.9
YOTC                                eS      Sn        22 52 07.7 -4.6
YOTC                                i                 22 52 32.5
              comp=Z,17nm,1.6s
SDV    Santo Domingo      4.86  10  Pn      Pn        22 51 16.9 +0.9
              comp=Z,3.9nm,0.3s,baz=150,slow=5.5,SNR=27
SDV                                 Pg      Pg        22 51 35.5 -0.4
              comp=Z,9.0nm,0.3s,baz=151,slow=7.0,SNR=9.6
SDV                                 Sn      Sn        22 52 14.3 +1.8
              comp=Z,21nm,0.3s,baz=332,slow=18,SNR=11
SDV                                 Lg      Lg        22 52 39.6
              comp=Z,9.8nm,0.3s,baz=298,slow=19,SNR=4.6
SDV                                 LR      LR        22 53 38.4
              comp=Z,99nm,22.0s,baz=260,slow=44
SDV    Santo Domingo      4.86  10  eP      Pn        22 51 16.6 +0.6
SDV                                 eS      Sn        22 52 11.6 -0.9
SDV                                 i                 22 52 19.2
              comp=Z,51nm,0.5s
PTLC   Puerto Leguiza     5.10 221  eP      Pb        22 51 33.6 +1.6
PTLC                                eS      Sb        22 52 40.0 +6.8
PTLC                                i                 22 53 00.3
              comp=Z,138nm,1.0s
PCON   Cinco Dias         5.21 251  eP      Pn        22 51 24.1 +3.0
PCON                                eS      Sb        22 52 37.6 +0.5
PCON                                i                 22 52 50.2
              comp=Z,90nm,0.9s
SMLC   San Martn de       5.37 331  eP      Pn        22 51 22.2 -0.6
SMLC                                eS      Sn        22 52 22.3 -2.3
SMLC                                i                 22 52 48.5
              comp=Z,15nm,0.4s
POPC   Popayan, Colom     5.41 254  eP      Pn        22 51 21.9 -1.7
POPC                                eS      Sb        22 52 41.3 -1.2
POPC                                i                 22 53 04.4
              comp=Z,16nm,0.9s
UREC   San Jos de Ur      5.45 312  eP      Pn        22 51 23.1 -0.9
UREC                                i                 22 52 35.2
              comp=Z,16nm,0.2s
SOTA   Rioblanco          5.47 250  eP      Pn        22 51 24.5 -0.2
SOTA                                eS      Sb        22 52 45.4 +0.8
SOTA                                i                 22 53 00.3
              comp=Z,39nm,0.9s
CODC   Agustn Codazz      6.15 342  eP      Pn        22 51 34.8 +1.2
CODC                                eS      Sn        22 52 42.2 -1.7
CODC                                i                 22 52 51.0
              comp=Z,7.3nm,0.9s
PCRV   Puerto La Cruz     9.10  48  Pn      Pn        22 52 15.2 +1.0
              comp=Z,1.7nm,0.3s,baz=242,slow=2.3,SNR=6.3
NNA    Nana              16.82 198  LR      LR        23 00 55.0
              comp=Z,56nm,18.1s,baz=308,slow=39
LPAZ   La Paz            20.49 171  P       P         22 54 41.6 +0.1
              comp=Z,1.7nm,0.8s,baz=18,slow=11,SNR=5.5
LPAZ                                LR      LR        23 03 09.1
              comp=Z,70nm,18.8s,baz=31,slow=38
APG    El Apazote        21.63 301  P       P         22 54 51.8 -1.6
              comp=Z,6.2nm,0.4s,baz=174,slow=14,SNR=7.2
SIV    San Ignacio       22.43 153  P       P         22 55 02.5 +0.8
              comp=Z,0.4nm,0.4s,baz=349,slow=10,SNR=4.9
TXAR   Lajitas Array     39.52 313  P       P         22 57 33.6 -0.2
              comp=Z,0.6nm,0.7s,baz=128,slow=8.6,SNR=9.1
SCHQ   Schefferville     50.75   3  P       P         22 59 03.0 +0.4
              comp=Z,3.5nm,0.9s,baz=200,slow=2.9,SNR=5.2
YKA    Yellowknife Ar    66.40 340  P       P         23 00 49.7 -1.9
              comp=Z,0.2nm,0.4s,baz=134,slow=6.5,SNR=6.1
ASAR   Alice Springs    148.70 229  PKPbc   PKPdf     23 09 47.9 +0.6
              comp=Z,0.7nm,0.9s,baz=115,slow=3.7,SNR=5.3
WRA    Warramunga Arr   150.30 236  PKPbc   PKPbc     23 09 52.9 -2.2
              comp=Z,0.2nm,0.4s,baz=107,slow=2.8,SNR=2.4
WRA                                 PKPab   pPKPbc    23 09 58.8 -0.2
              comp=Z,0.5nm,0.9s,baz=108,slow=5.2,SNR=2.6
```

IDC 01 23:17:52.5±7.5**, 3°.34S×127°.74E, h136**^{km}±85^{km}**, mb2.8**/2**, mb1 3.0**/4**, mb1mx2.8**/37**, mbtmp3.4**/4**, Error ellipse: s-maj=81.2km s-min=20.3km az=85.0, Seram**

```
Code   Station Name        Δ°   AZ°   Phase ID            Time     Res
                                      Op      ISC       h  m  s    ISC
SIJI   Sorong             4.29  55  P       Pn        23 18 54.9 -1.4
              3.9nm,0.3s,baz=250,slow=18,SNR=11
SIJI                                S       Sn        23 19 47.1 +1.2
              4.2nm,0.3s,baz=336,slow=23,SNR=11
WRA    Warramunga Arr    17.72 159  P       P         23 21 48.8 -1.0
              0.2nm,0.3s,baz=341,slow=11,SNR=9.0
ASAR   Alice Springs     21.07 164  P       P         23 22 26.6 +0.6
              0.7nm,0.6s,baz=342,slow=12,SNR=8.6
MKAR   Makanchi Array    63.95 327  P       P         23 28 11.1  0.0
              0.2nm,0.7s,baz=141,slow=7.7,SNR=3.5
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*IDC **01** 23:33:17.1±2.7, 13°.78N×92°.34W, h0^{km}, mb3.6/2, mb1 3.9/6, mb1mx3.6/40, mbtmp3.7/6, ML3.6/4, Error ellipse: s-maj=45.1km s-min=24.4km az=175.0*
*MEX **01** 23:33:21.8±0.4, 14°.06N×92°.20W, h91^{km}±9^{km}, MD4.1*
*SNET **01** 23:33:25.6±1.2, 14°.06N×91°.99W, h26^{km}±10^{km}, ML2.8*
*GCG **01** 23:33:28.1±0.3, 14°.46N×91°.87W, h66^{km}±65^{km}, MD3.9*
ISC 01 23:33:21.5±2.2**, 13°.97N**±0°.09×**92°.34W**±0°.05**, h24**^{km}±14^{km}**, n20, σ2^{s}07**/30**, 3D, Off coast of Chiapas**

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Code   Station Name        Δ°   AZ°   Phase ID            Time     Res
                                      Op      ISC       h  m  s    ISC
ERG    Entre ros, C       0.89  58⇓ eP      Pb        23 33 38.8 +0.6
THIG                      0.94   5  eP      Pb        23 33 38.6 -0.6
THIG                                eS      Sb        23 33 51.5 +0.3
STG3   Santiaguito 3,     1.05  45⇓ eP      Pn        23 33 40.2 -0.8
FUG    Fuego 3            1.53  72⇓ eP      Pn        23 33 47.0 -0.6
PCG    Pacaya             1.74  76  eP      Pn        23 33 50.3 -0.2
PCG                                 eS      Sn        23 34 09.1 -2.9
IXG    Ixpaco             1.86  83  eP      Pn        23 33 50.9 -1.1
PCIG                      1.93 334  eP      Pn        23 33 51.5 -1.3
PCIG                                i S     Sn        23 34 15.2 -1.1
APG    El Apazote         2.09  60  Pn      Pn        23 33 56.0 +0.6
              23nm,0.3s,baz=240,slow=8.1,SNR=119
APG                                 Sn      Sn        23 34 23.6 +2.8
              28nm,0.3s,baz=70,slow=4.7,SNR=11
CCIG   Comitan            2.31   5  eP      Pn        23 33 55.8 -2.5
CCIG                                i S     Sn        23 34 23.6 -2.5
RTR    El Retiro          2.62  91  eP      Pn        23 34 02.4 -0.1
SBLS   San Blas           2.64  92  eP      Pn        23 34 02.1 -0.8
SBLS                                eS      Sn        23 34 32.0 -2.4
TGIG                      2.90 345  eP      Pn        23 34 03.9 -2.3
TGIG                                i S     Sn        23 34 38.1 -2.3
MTO3   Montecristo        2.92  81  eP      Pn        23 34 06.1 -0.7
CMIG   Matias Romero      3.96 322  Pn      Pn        23 34 21.4 +0.6
              2.4nm,0.3s,baz=146,slow=12,SNR=14
CMIG                                Sn      Sn        23 35 13.2 +6.7
              9.1nm,0.3s,baz=96,slow=10,SNR=6.5
CMIG   Matias Romero      3.96 322  eP      Pn        23 34 19.5 -1.3
CMIG                                i S     Sn        23 35 05.2 -1.3
TEIG   Tepich             7.34  31  Pn      Pn        23 35 08.7 +1.4
              3.5nm,0.3s,baz=286,slow=0.1,SNR=16
TEIG                                Sn      Sn        23 36 32.3 +2.4
              baz=318,slow=21,SNR=2.4
TXAR   Lajitas Array     18.54 327  P       Pn        23 37 38.2 +1.2
              0.0nm,0.3s,baz=137,slow=11,SNR=5.6
ANMO   Albuquerque       24.47 331  P       P         23 38 39.9 +0.9
              0.4nm,0.3s,baz=148,slow=9.5,SNR=3.1
YKA    Yellowknife Ar    50.98 347  P       P         23 42 20.4 -0.7
              0.9nm,0.8s,baz=152,slow=7.5,SNR=12
CMAR   Chiang Mai Arr   145.92 341  PKPbc   PKPdf     23 52 59.6 +0.2
              0.8nm,0.4s,baz=343,slow=3.6,SNR=5.8
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*IDC **01** 23:52:54.8±0.9, 21°.20N×122°.20E, h0^{km}, mb3.8/8, mb1 4.0/8, mb1mx3.6/44, mbtmp3.8/8, MS3.6/2, Ms1 3.6/2, ms1mx2.7/50, Error ellipse: s-maj=43.2km s-min=18.7km az=67.0*
*JMA **01** 23:53:03.4±0.4, 21°.29N×121°.66E, h0^{km}, M3.9*
*TAP **01** 23:53:05.6, 21°.17N×121°.46E, h96^{km}, ML4.2, D*
ISC 01 23:53:05.6±1.0**, 21°.09N**±0°.06×**121°.50E**±0°.04**, h92**^{km}±7^{km}**, n126, σ1^{s}31**/228**, mb3.7**/8**, Taiwan region**

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Code   Station Name        Δ°   AZ°   Phase ID            Time     Res
                                      Op      ISC       h  m  s    ISC
LAY    Lan-yu             0.94   3  P       Pn        23 53 24.5 -0.4
       baz=6.0
LAY                                 S       Sn        23 53 39.2 -0.2
       baz=6.0
TSEB   Hengchuen, Pin     0.98 325  i P     Pn        23 53 25.4 +0.1
       baz=317
TSEB                                i S     Sn        23 53 40.2 +0.2
       baz=317
TWKBT  Hengchun           1.06 323  i P     Pn        23 53 26.1 -0.1
       baz=318
TWKBT                               S       Sn        23 53 41.0 -0.6
       baz=318
TWK1   Hengchun           1.06 323  eP      Pn        23 53 26.1 -0.1
       baz=318
TWK1                                S       Sn        23 53 41.0 -0.8
       baz=318
HEN    Hengchun           1.15 322  P       Pn        23 53 27.4 +0.1
       baz=314
HEN                                 eS      Sn        23 53 43.3 -0.3
       baz=314
TAW    Tawu               1.38 336  i P     Pn        23 53 29.6 -0.4
       baz=344
TAW                                 S       Sn        23 53 46.7 -1.7
       baz=344
EAST   Anshuo             1.42 335  P       Pn        23 53 29.8 -0.8
       baz=343
EAST                                S       Sn        23 53 47.4 -2.0
       baz=343
SCZT   Fangliau           1.51 327  P       Pn        23 53 31.3 -0.4
       baz=321
SCZT                                eS      Sn        23 53 50.1 -1.3
       baz=321
ECL    Taimali            1.58 341  P       Pn        23 53 31.3 -1.2
       baz=342
ECL                                 S       Sn        23 53 50.3 -2.7
       baz=342
TWH    Lutao              1.61 359  P       Pn        23 53 31.0 -1.9
       baz=1.0
TWH                                 eS      Sn        23 53 50.7 -2.9
       baz=1.0
WLCH   Liuqiu             1.63 320  P       Pn        23 53 34.0 +0.8
       baz=320
WLCH                                S       Sn        23 53 55.3 +1.3
       baz=320
SSPT   Xinbi              1.63 328  P       Pn        23 53 33.6 +0.4
       baz=334
SSPT                                S       Sn        23 53 53.1 -0.9
       baz=334
TWP    Hsiaoliuchiu       1.64 320  eP      Pn        23 53 34.2 +1.0
       baz=319
TWP                                 eS      Sn        23 53 55.3 +1.1
       baz=319
TTN    Taitung            1.69 349  P       Pn        23 53 33.8 -0.1
       baz=342
TTN                                 S       Sn        23 53 54.9 -0.4
       baz=342
MASBT  Mashibuluo         1.71 332  P       Pn        23 53 33.8 -0.4
       baz=338
MASBT                               S       Sn        23 53 54.8 -1.1
       baz=338
TWGBT  Beinan             1.76 347  P       Pn        23 53 33.5 -1.3
       baz=342
TWGBT                               eS      Sn        23 53 55.1 -1.9
       baz=342
TWG    Pinlang            1.77 347  eP      Pn        23 53 33.6 -1.3
       baz=342
TWG                                 eS      Sn        23 53 54.7 -2.4
       baz=342
SSD    Sandimen           1.83 334  P       Pn        23 53 35.4 -0.4
       baz=340
SSD                                 eS      Sn        23 53 57.5 -1.2
       baz=340
KAU    Kaohsiung          1.84 323  P       Pn        23 53 36.5 +0.7
       baz=314
KAU                                 eS      Sn        23 53 58.2 -0.6
       baz=314
SGLT   Jiouru             1.88 330  eP      Pn        23 53 37.5 +1.1
       baz=338
SGLT                                S       Sn        23 54 00.9 +1.2
       baz=338
WSSB   Gushan             1.92 324  P       Pn        23 53 37.5 +0.5
       baz=323
WSSB                                S       Sn        23 54 00.7 -0.1
       baz=323
SNJT   Kaohsiung City     1.98 327  P       Pn        23 53 37.9 +0.3
       baz=327
SNJT                                S       Sn        23 54 02.6 +0.7
       baz=327
TWM1   Shoushan           1.99 330  eP      Pn        23 53 38.7 +0.8
       baz=319
TWM1                                eS      Sn        23 54 02.8 +0.4
       baz=319
CHKT   Chengkung          2.00 356  P       Pn        23 53 37.3 -0.7
       baz=350
CHKT                                S       Sn        23 54 01.9 -0.7
       baz=350
SLGT   Liugui             2.05 337  eP      Pn        23 53 38.8 +0.2
       baz=338
SLGT                                eS      Sn        23 54 03.2 -0.6
       baz=338
FULB   Fuli               2.10 355  eP      Pn        23 53 39.1 -0.2
       baz=347
FULB                                eS      Sn        23 54 04.0 -1.1
       baz=347
ELDTW  Lidau              2.13 348  eP      Pn        23 53 39.0 -0.8
       baz=352
ELDTW                               eS      Sn        23 54 03.8 -2.1
       baz=352
SGST   Jiashian           2.15 337  P       Pn        23 53 39.0 -1.0
       baz=337
SGST                                S       Sn        23 54 05.3 -0.9
       baz=337
STYT   Tauyuan            2.17 342  P       Pn        23 53 40.1 -0.2
       baz=342
STYT                                S       Sn        23 54 06.3 -0.4
       baz=342
CHN3   Shinhua            2.24 332  P       Pn        23 53 43.1 +2.0
       baz=322
CHN3                                eS      Sn        23 54 09.0 +0.9
       baz=322
TWF1   Yuli               2.26 355  P       Pn        23 53 40.6 -0.8
       baz=348
TWF1                                S       Sn        23 54 06.7 -1.9
       baz=348
CHN1   Nanshi             2.27 337  P       Pn        23 53 41.4 -0.1
       baz=346
CHN1                                eS      Sn        23 54 07.9 -1.1
       baz=346
TAI1   Yung-k'ang         2.27 329  eP      Pn        23 53 40.6 -0.9
       baz=329
TAI1                                S       Sn        23 54 08.1 -0.8
       baz=329
WTP    Ta-pu              2.29 339  P       Pn        23 53 41.9  0.0
       baz=340
WTP                                 eS      Sn        23 54 08.2 -1.4
       baz=340
YULB   Yu-li              2.30 355  eP      Pn        23 53 41.0 -0.9
       baz=348
YULB                                eS      Sn        23 54 07.5 -2.1
       baz=348
SNST   Tainan City        2.31 336  P       Pn        23 53 41.9 -0.2
       baz=345
SNST                                S       Sn        23 54 07.7 -2.2
       baz=345
TPUB   Ta-pu              2.34 340  i P     Pn        23 53 42.1 -0.4
       baz=340
TPUB                                S       Sn        23 54 08.8 -1.8
       baz=340
TWK    Hsinying           2.36 337  P       Pn        23 53 42.5 -0.2
       baz=346
TWK                                 eS      Sn        23 54 09.6 -1.5
       baz=346
HGSD   Ruisui             2.39 358  eP      Pn        23 53 42.9 -0.2
       baz=6.0
HGSD                                eS      Sn        23 54 11.2 -0.6
       baz=6.0
CHN4   Tsaushan           2.40 340  P       Pn        23 53 43.2  0.0
       baz=340
CHN4                                eS      Sn        23 54 12.1 +0.1
       baz=340
SCLT   Jiali              2.40 330  P       Pn        23 53 43.1 -0.1
       baz=321
SCLT                                S       Sn        23 54 10.8 -1.2
       baz=321
EHY    Hungye             2.41 356  P       Pn        23 53 41.7 -1.6
       baz=350
EHY                                 S       Sn        23 54 10.0 -2.2
       baz=350
YUS    Yu-Shan            2.44 348  P       Pn        23 53 44.6 +0.4
       baz=349
YUS                                 eS      Sn        23 54 14.2 +0.6
       baz=349
ALS    Alishan            2.49 345  P       Pn        23 53 44.7  0.0
       baz=346
ALS                                 S       Sn        23 54 13.7 -0.9
       baz=346
CHN8   Yiju               2.54 332  eP      Pn        23 53 45.4 +0.3
       baz=323
CHN8                                eS      Sn        23 54 15.0 -0.3
       baz=323
EGFH   Guangfu            2.56 359  P       Pn        23 53 45.5 +0.1
       baz=351
EGFH                                eS      Sn        23 54 14.2 -1.7
       baz=351
CHY    Chiayi             2.59 338  eP      Pn        23 53 46.4 +0.7
       baz=338
CHY                                 eS      Sn        23 54 15.6 -1.0
       baz=338
CHN5   Tsauling           2.61 343  P       Pn        23 53 45.8 -0.3
       baz=343
CHN5                                S       Sn        23 54 16.2 -0.9
       baz=343
WLGB   Puzi               2.62 335  eP      Pn        23 53 46.0 -0.1
       baz=343
WLGB                                eS      Sn        23 54 15.6 -1.6
       baz=343
WHYT   Xinyi Township     2.66 347  P       Pn        23 53 46.9 +0.1
       baz=339
WHYT                                S       Sn        23 54 17.2 -1.1
       baz=339
VWDT   VWDT               2.67 353  eP      Pn        23 53 46.8  0.0
       baz=343
VWDT                                eS      Sn        23 54 17.9 -0.5
       baz=343
ESL    Shilin             2.71 359  P       Pn        23 53 47.6 +0.3
       baz=353
ESL                                 eS      Sn        23 54 17.4 -2.0
       baz=353
WGK    Gukeng             2.72 342  eP      Pn        23 53 47.5  0.0
       baz=351
WGK                                 eS      Sn        23 54 19.9 +0.2
       baz=351
SSLB   Suanglung          2.73 349  P       Pn        23 53 47.7 +0.1
       baz=350
SSLB                                eS      Sn        23 54 18.3 -1.6
       baz=350
WDLH   Douliu             2.73 341  eP      Pn        23 53 46.8 -0.9
       baz=341
```

WDLH				eS	Sn	23 54 18.3	-1.6
	baz=341						
WDGT	Dungji	2.75	322	P	Pn	23 53 46.8	-1.1
	baz=329						
WDGT				S	Sn	23 54 16.6	-3.8
	baz=329						
WSF	Szhu	2.80	335	S	Sn	23 54 19.7	-1.8
	baz=335						
ENLB	Shoufeng	2.80	2	eS	Sn	23 54 20.1	-1.5
	baz=9.0						
WJS	Zhushan	2.81	345	eP	Pn	23 53 48.7	0.0
	baz=346						
WJS				eS	Sn	23 54 20.8	-0.9
	baz=346						
SMLT	Sun Moon Lake	2.83	349	P	Pn	23 53 49.1	0.0
	baz=349						
SMLT				S	Sn	23 54 22.4	-0.1
	baz=349						
VCHM	Qimei	2.85	318	eP	Pn	23 53 48.2	-1.0
	baz=317						
VCHM				eS	Sn	23 54 19.1	-3.6
	baz=317						
TYC	Yuchr	2.86	348	P	Pn	23 53 49.4	0.0
	baz=349						
TYC				eS	Sn	23 54 22.4	-0.6
	baz=349						
OWD	Renai	2.86	354	P	Pn	23 53 50.2	+0.6
	baz=344						
OWD				S	Sn	23 54 21.8	-1.5
	baz=344						
WNT	Mingjian	2.87	345	eP	Pn	23 53 49.1	-0.4
	baz=345						
WNT				eS	Sn	23 54 21.2	-2.1
	baz=345						
CHGB	Renai	2.97	354	P	Pn	23 53 52.0	+1.0
	baz=345						
CHGB				S	Sn	23 54 25.5	-0.4
	baz=345						
DPDB	Guoxing	2.98	350	eP	Pn	23 53 49.7	-1.3
	baz=350						
DPDB				eS	Sn	23 54 25.7	-0.2
	baz=350						
TWD	Chiawan	2.98	2	P	Pn	23 53 50.7	-0.2
	baz=354						
TWD				S	Sn	23 54 24.7	-1.0
	baz=354						
RLNB	Erlin	2.98	339	eP	Pn	23 53 50.6	-0.3
	baz=346						
RLNB				S	Sn	23 54 24.5	-1.3
	baz=346						
WTCT	Ta-ch'eng	2.98	338	eS	Sn	23 54 24.5	-1.3
	baz=338						
PHUB	P'eng-hu	3.00	324	eP	Pn	23 53 50.0	-1.2
	baz=329						
PHUB				eS	Sn	23 54 23.4	-2.9
	baz=329						
WHF	Hehuan Shan	3.05	356	eP	Pn	23 53 52.1	-0.1
	baz=348						
WHF				eS	Sn	23 54 27.4	-0.7
	baz=348						
PNG	Penghu	3.05	324	P	Pn	23 53 50.8	-1.1
	baz=330						
PNG				S	Sn	23 54 25.1	-2.5
	baz=330						
NACB	Ninganchiao	3.07	2	P	Pn	23 53 51.9	-0.2
	baz=355						
NACB				eS	Sn	23 54 27.0	-1.0
	baz=355						
WCHH	Zhanghua	3.10	344	eP	Pn	23 53 51.8	-0.7
	baz=344						
WCHH				eS	Sn	23 54 26.4	-2.2
	baz=344						
ETLH	Xiulin Townshi	3.10	360	eP	Pn	23 53 52.0	-0.7
ETLH				eS	Sn	23 54 27.6	-1.3
TWT	Tachien	3.16	355	P	Pn	23 53 54.1	+0.6
	baz=346						
TWT				S	Sn	23 54 30.5	0.0
	baz=346						
TDCB	Techi	3.16	354	P	Pn	23 53 54.3	+0.8
	baz=346						
TDCB				eS	Sn	23 54 28.0	-2.5
	baz=346						
WHP	Taichung City	3.21	351	P	Pn	23 53 54.4	+0.3
	baz=344						
WHP				S	Sn	23 54 29.7	-1.8
	baz=344						
TWQ1	Liyutan	3.31	348	P	Pn	23 53 55.7	+0.3
	baz=349						
TWQ1				eS	Sn	23 54 32.2	-1.6
	baz=349						
NNSB	Datong	3.32	358	eP	Pn	23 53 55.9	+0.2
	baz=5.0						
NNSB				eS	Sn	23 54 32.8	-1.5
	baz=5.0						
NNSH	Datong	3.32	358	P	Pn	23 53 56.6	+0.9
	baz=3.0						
NNSH				eS	Sn	23 54 33.8	-0.5
	baz=3.0						
ENA	Nanau	3.33	4	eP	Pn	23 53 55.5	-0.2
	baz=5.0						
ENA				eS	Sn	23 54 34.2	0.0
	baz=5.0						
NNS	Nan Shan	3.33	358	P	Pn	23 53 56.2	+0.4
	baz=5.0						
NNS				S	Sn	23 54 33.6	-1.0
	baz=5.0						
WDJ	Dajia District	3.34	346	eP	Pn	23 53 54.7	-1.0
	baz=347						
WDJ				eS	Sn	23 54 34.4	0.0
	baz=347						
NSY	Sanyi	3.38	348	P	Pn	23 53 56.6	+0.3
	baz=349						
NSY				eS	Sn	23 54 34.2	-1.3
	baz=349						
PTSB	Yuanli	3.42	348	eS	Sn	23 54 34.8	-1.7
	baz=348						
EOS1	EOS1	3.49	9	eP	Pn	23 53 57.6	-0.2
	baz=18						
EOS1				S	Sn	23 54 37.3	-0.8
	baz=18						
NDT	Datong Townshi	3.49	0	eP	Pn	23 53 58.0	+0.1
	baz=1.0						
TWC	Suao	3.52	5	eP	Pn	23 53 59.0	+0.8
	baz=16						
TWC				eS	Sn	23 54 38.2	-0.5
	baz=16						
ENTT	Nioudou	3.53	1	eP	Pn	23 53 58.7	+0.3
	baz=2.0						
ENTT				eS	Sn	23 54 38.1	-1.1
	baz=2.0						
YHNB	Yeheng	3.56	358	eP	Pn	23 53 59.8	+0.9
	baz=350						
YHNB				eS	Sn	23 54 39.2	-0.8
	baz=350						
LIOB	Emei	3.56	353	eP	Pn	23 53 59.1	+0.3
	baz=353						
LIOB				eS	Sn	23 54 38.1	-1.9
	baz=353						
TWE	Neicheng	3.62	2	eP	Pn	23 53 59.8	+0.3
	baz=353						
HATJ	Hateruma jima	3.64	35	P	Pn	23 53 59.5	-0.3
HATJ				eS	Sn	23 54 39.8	-1.9
SLBB	Yuanshan	3.65	2	eP	Pn	23 54 00.1	+0.1
	baz=359						
SLBB				eS	Sn	23 54 41.7	-0.3
	baz=359						
NWLT	Wulai	3.67	0	eP	Pn	23 54 01.3	+1.0
	baz=1.0						
NWLT				eS	Sn	23 54 41.0	-1.5
	baz=1.0						
WLTB	Daxi	3.75	357	eS	Sn	23 54 42.7	-1.7
	baz=347						
NTC	Toucheng	3.76	5	eP	Pn	23 54 03.6	+2.2
	baz=353						
NTC				eS	Sn	23 54 44.6	0.0
	baz=353						
IRIF	Iriomote-Funau	3.83	32	P	Pn	23 54 02.5	+0.1
JKRS	Kuro-shima	3.90	36	P	Pn	23 54 03.0	-0.3
JKRS				S	Sn	23 54 46.3	-1.6
WFSB	Wu-fen Shan	3.97	4	eP	Pn	23 54 04.7	+0.4
	baz=353						
WFSB				eS	Sn	23 54 47.9	-1.8
	baz=353						
YM01	YM01	4.04	1	eP	Pn	23 54 05.7	+0.5
	baz=1.0						
YM04	YM04	4.04	0	eP	Pn	23 54 05.3	0.0
	baz=1.0						
YM10	YM10	4.04	1	eP	Pn	23 54 05.7	+0.3
	baz=1.0						
YM10				eS	Sn	23 54 49.7	-2.0
	baz=1.0						
YM11	YM11	4.05	1	eP	Pn	23 54 05.5	0.0
	baz=1.0						
JIJ	Ishigaki jima	4.07	36	P	Pn	23 54 05.4	-0.2
JIJ				S	Sn	23 54 49.7	-2.5
VWUC	VWUC	4.32	334	eP	Pn	23 54 07.7	-1.3
	baz=334						
VWUC				eS	Sn	23 54 55.3	-2.9
	baz=334						
JISG	Ishigakijimahi	4.34	36	P	Pn	23 54 08.7	-0.6
JISG				S	Sn	23 54 57.0	-1.7
KNM	Kinmen	4.35	320	eP	Pn	23 54 10.0	+0.5
	baz=318						
KNM				eS	Sn	23 54 58.4	-0.7
	baz=318						
KNMB	Chin-men Tao	4.42	320	eP	Pn	23 54 10.0	-0.4
	baz=319						
KNMB				eS	Sn	23 54 57.6	-3.0
	baz=319						
ZPLA	Ao Xicun	4.47	310	eP	Pn	23 54 10.8	-0.3
	baz=309						
ZPLA				eS	Sn	23 54 58.4	-3.6
	baz=309						
VDOS	Pratas Island	4.48	266	eP	Pn	23 54 10.6	-0.6
	baz=264						
VDOS				eS	Sn	23 54 59.2	-2.9
	baz=264						
PTMZ	Houxiangcun	4.50	331	eP	Pn	23 54 10.2	-1.3
	baz=331						
PTMZ				eS	Sn	23 54 59.5	-3.1
	baz=331						
JTJ	Tarama	4.60	39	eS	Sn	23 55 03.2	-2.0
PTTC	Pingtan	4.67	340	eP	Pn	23 54 13.1	-0.7
	baz=340						
PTTC				eS	Sn	23 55 03.0	-3.7
	baz=340						
ZZJH	Jiuhuzhen	4.90	314	eP	Pn	23 54 16.2	-0.8
	baz=313						
ZZJH				eS	Sn	23 55 09.2	-3.3
	baz=313						
USRK	Ussuriysk Ar.	24.64	18	LR	LR	00 08 09.1	
	comp=Z,59nm,18.6s,baz=101,slow=38						
MKAR	Makanchi Array	40.79	318	P	P	00 00 41.5	+3.6
	1.1nm,0.5s,baz=109,slow=9.4,SNR=36						
WRA	Warramunga Arr	42.67	162	P	P	00 00 52.4	-1.0
	0.3nm,0.4s,baz=342,slow=8.6,SNR=3.7						
ZALV	Zalesovo Beam	43.01	329	P	P	00 00 57.6	+1.8
	1.7nm,0.4s,baz=119,slow=8.0,SNR=11						
KURBB	Kurchatov Arra	44.68	322	P	P	00 01 11.9	+2.7
	0.6nm,0.7s,baz=115,slow=7.4,SNR=4.6						
ASAR	Alice Springs	46.10	164	P	P	00 01 20.6	-0.2
	0.2nm,0.3s,baz=342,slow=6.6,SNR=8.7						
ILAR	Eielson Array	71.82	27	P	P	00 04 16.6	-1.4
	0.2nm,0.6s,baz=280,slow=5.0,SNR=3.7						
FINES	FINESS Array B	74.25	330	P	P	00 04 33.7	+1.3
	1.6nm,0.9s,baz=99,slow=7.2,SNR=4.7						
GERES	GERESS Array B	85.41	321	LR	LR	00 44 13.6	
	comp=Z,59nm,18.1s,baz=355,slow=36						
YKA	Yellowknife Ar	85.69	23	P	P	00 05 34.2	+0.2
	1.1nm,0.6s,baz=311,slow=4.4,SNR=26						

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*NNC **02** 00:01:22.8±7.0, 36.°66N×70.°63E, h76^{km}±162^{km}, mb3.5, mpv3.7, Error ellipse: s-maj=53.8km s-min=46.3km az=151.0*

*IDC **02** 00:01:23.3±6.9, 36.°65N×70.°64E, h116^{km}±59^{km}, mb1 2.9/5, mb1mx2.7/45, mbtmp3.4/5, Error ellipse: s-maj=86.4km s-min=20.7km az=154.0*

ISC 02 00:01:25.1±1.8**, 36.°7N**±0.°1×**70.°76E**±0.°08**, h188^{km}, n10, σ2.^{s}33**/16**, 5C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.36	358	⇓P	Pn	00 02 56.4	-0.5
	1.4nm,0.3s,baz=176,slow=12,SNR=19						
KK31				⇑S	Sn	00 04 09.6	+0.2
	1.3nm,0.5s,baz=186,slow=23,SNR=9.7						
AAK	Ala-Archa	6.56	25	P	Pn	00 02 58.6	-1.0
	2.4nm,0.3s,baz=170,slow=5.5,SNR=43						
AAK				S	Sn	00 04 13.1	-1.2
	0.2nm,0.3s,baz=170,slow=23,SNR=1.7						
AAK	Ala-Archa	6.56	25	⇓P	Pn	00 02 58.0	-1.6
	1.5nm,0.3s						
AAK				⇑S	Sn	00 04 12.7	-1.7
	1.0nm,0.5s						
CHMS	Chumysh	6.97	25	⇑P	Pn	00 03 02.4	-2.4
	2.7nm,0.4s						
CHMS				⇑S	Sn	00 04 22.0	-1.8
	1.6nm,0.7s						
GEYT	Alibeck	10.14	281	P	Pn	00 03 45.0	-1.2
	0.2nm,0.3s,baz=110,slow=35,SNR=2.0						
GEYT				S	Sn	00 05 35.9	-3.4
	0.2nm,0.3s,baz=29,slow=40,SNR=1.5						
MKAR	Makanchi Array	13.22	37	P	P	00 04 29.9	+1.0
	0.1nm,0.3s,baz=227,slow=10,SNR=6.2						
AB31	Akbulak array	14.78	331	⇓P	P	00 04 48.1	+1.9
	0.4nm,0.3s,baz=162,slow=11,SNR=22						
AB31				⇓S	Sn	00 07 28.0	-1.9
	0.2nm,0.4s						
KURBB	Kurchatov Arra	14.96	19	P	P	00 04 51.8	+3.6
	0.0nm,0.3s,baz=210,slow=10,SNR=4.2						
AKTO	Aktyubinsk	16.48	330	⇓P	Pn	00 05 11.0	+5.4
	1.4nm,0.7s						
AKTO				⇑S	Sn	00 08 12.0	+1.6
	1.0nm,1.2s						
ZALV	Zalesovo Beam	19.78	25	P	Pn	00 05 44.5	-0.1
	0.2nm,0.3s,baz=219,slow=12,SNR=5.8						

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*IDC **02** 00:18:38.7±1.2, 18.°17N×121.°13E, h0^{km}, mb3.5/8, mb1 3.7/8, mb1mx3.5/42, mbtmp3.5/8, MS3.1/4, Ms1 3.1/4, ms1mx2.7/43, Error ellipse: s-maj=46.2km s-min=16.8km az=74.0*

*MAN **02** 00:18:48.3, 18.°14N×120.°49E, h26^{km}, mb4.3, ML3.1, MS2.8*

ISC 02 00:18:45.9±1.9**, 18.°27N**±0.°06×**120.°42E**±0.°06**, h24**^{km}±15^{km}**, n20, σ1.^{s}66**/21**, mb3.6**/7**, 1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	0.35	174	⇓iP	Pn	00 18 56.4	+0.9
SIPP				eS	Sn	00 19 05.3	+3.6
ABRA	Dolores	0.68	156	eP	Pb	00 18 59.5	+0.3
ABRA				eS	Sb	00 19 06.4	-1.8
APYP	Conner	0.89	117	eP	Pb	00 19 02.5	-0.1
APYP				eS	Sn	00 19 15.2	+0.2
SGCP	Mt. Cagua	1.55	91	eP	Pn	00 19 12.8	+0.8
SGCP				eS	Sb	00 19 33.4	+0.3
CAUP	Cauayan	1.88	134	eP	Pn	00 19 18.2	+1.6
CAUP				eS	Sn	00 19 39.7	+0.1
BOLP	Bolinao	1.94	194	eP	Pn	00 19 18.5	+1.0
BOLP				eS	Sn	00 19 40.9	-0.2
SMPP	San Manuel, Pa	2.12	173	eP	Pn	00 19 18.2	-1.8
SMPP				eS	Sn	00 19 43.9	-1.8
TGY	Tagaytay City	4.18	173	Pg	Pb	00 19 58.8	0.0
	35nm,0.3s,baz=259,slow=5.7,SNR=4.1						
TGY				Lg	Lg	00 20 47.4	
	14nm,0.3s,baz=196,slow=17,SNR=1.1						
DAV	Davao City (W)	12.22	155	LR	LR	00 25 55.2	
	comp=Z,51nm,19.4s,baz=332,slow=37						
CMAR	Chiang Mai Arr	20.38	274	P	P	00 23 24.0	+2.9
	0.5nm,0.3s,baz=74,slow=8.9,SNR=4.6						
JHJ	Hachijo jima 2	22.81	46	LR	LR	00 30 55.2	
	comp=Z,15nm,20.2s,baz=229,slow=33						
GUMO	Guam	23.96	98	LR	LR	00 30 41.3	
	comp=Z,96nm,20.8s,baz=143,slow=31						
SONM	Songino Array	31.64	342	P	P	00 25 05.5	-1.7
	0.4nm,1.0s,baz=153,slow=4.8,SNR=2.8						
WRA	Warramunga Arr	40.36	160	P	P	00 26 15.7	-6.3
	0.2nm,0.5s,baz=340,slow=8.9,SNR=1.7						
MKAR	Makanchi Array	42.27	321	P	P	00 26 39.1	+1.6
	1.5nm,0.7s,baz=114,slow=9.6,SNR=23						
ASAR	Alice Springs	43.71	162	P	P	00 26 43.4	-6.0
	0.3nm,0.8s,baz=342,slow=7.3,SNR=2.5						
ZALV	Zalesovo Beam	44.92	331	P	P	00 26 58.7	0.0
	0.7nm,0.6s,baz=105,slow=11,SNR=5.8						
FINES	FINESS Array B	76.19	330	P	P	00 30 31.0	-1.0
	0.5nm,0.6s,baz=62,slow=9.6,SNR=1.4						
MMAI	Mount Meron Ar	76.21	300	LR	LR	01 09 47.5	
	comp=Z,30nm,20.0s,baz=350,slow=40						
NOA	NORSAR Array B	83.10	332	P	P	00 31 07.4	-2.2
	0.3nm,0.7s,baz=67,slow=4.9,SNR=1.8						

IDC 02 00:50:54.7±1.7**, 2.°13N**×**128.°27E, h0^{km}, mb3.6**/4**, mb1 3.9**/5**, mb1mx3.4**/54**, mbtmp3.7**/5**, ML4.3**/1**, Error ellipse: s-maj=84.7km s-min=24.1km az=62.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.22	135	Pn	Pn	00 52 00.6	+0.2
	16nm,0.3s,baz=196,slow=22,SNR=96						
SIJI				Sn	Sn	00 52 39.7	-11
	0.9nm,0.3s,baz=266,slow=23,SNR=1.2						
WRA	Warramunga Arr	22.73	165	P	P	00 55 58.3	-0.2
	1.7nm,0.6s,baz=344,slow=11,SNR=11						
ASAR	Alice Springs	26.22	168	P	P	00 56 32.2	+0.8
	0.6nm,0.7s,baz=356,slow=9.2,SNR=12						
STKA	Stephens Creek	36.10	161	P	P	00 57 57.4	-1.1
	1.2nm,0.4s,baz=326,slow=11,SNR=5.0						
H11N1	WAKE ISLAND Hy	41.59	62	T	T	01 42 37.8	
	baz=250,slow=75,SNR=9.9						
H11N2	WAKE ISLAND Hy	41.60	62	T	T	01 42 39.7	
	baz=250,slow=75,SNR=7.4						
H11N3	WAKE ISLAND Hy	41.61	62	T	T	01 42 39.6	
	baz=250,slow=75,SNR=7.2						
MKAR	Makanchi Array	59.74	325	P	P	01 01 01.6	+0.1
	0.1nm,0.3s,baz=114,slow=8.7,SNR=4.3						

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*IDC **02** 00:57:44.4±2.1, 34.°16N×52.°65E, h0^{km}, mb3.5/5, mb1 3.5/9, mb1mx3.3/46, mbtmp3.6/9, ML3.1/4, MS3.2/4, Ms1 3.2/4, ms1mx2.6/53, Error ellipse: s-maj=50.5km s-min=21.2km az=152.0*

*TEH **02** 00:57:47.1, 34.°83N×52.°55E, h8^{km}, ML4.0*

ISC 02 00:57:47.8±0.7**, 34.°85N**±0.°03×**52.°53E**±0.°03**, h5^{km}, n74, σ1.^{s}69**/71**, mb3.5**/5**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILAS	Lasjerd	0.64	33	ePg	Pg	00 58 00.8	+0.7
IVRN	Varamin	0.68	283	ePg	Pg	00 58 01.0	+0.2
IVRN				eSg	Sg	00 58 10.7	+1.1
IFIR	Firoozkooh	0.81	13	e		00 58 16.1	
IFIR				ePg	Pg	00 58 03.2	-0.2
IDMV	Damavand	0.83	331	ePg	Pg	00 58 04.1	+0.3
KRSH	Karshahi	0.94	200	e		00 58 19.6	
KRSH				ePg	Pg	00 58 05.9	+0.1
GHVR	GHOM	1.08	250	ePg	Pg	00 58 08.0	-0.6
ISHM	Shahmirzad	1.14	33	e		00 58 33.3	
ISHM				ePg	Pg	00 58 08.7	-1.0
IHSB	Hasanabad	1.18	300	ePg	Pg	00 58 09.7	-0.8
IQOM	Qom	1.20	270	ePg	Pg	00 58 10.1	-0.7
IANJ	Anjilo	1.29	61	ePg	Pg	00 58 11.1	-1.5
IANJ				e		00 58 37.2	
IPRN	Peran	1.40	354	ePn	Pn	00 58 14.1	0.0
IPRN				e		00 58 42.9	
QAM	Ghamsar	1.41	220	ePg	Pn	00 58 14.0	-0.4
CHTH	Charan	1.56	313	ePg	Pn	00 58 16.2	-0.2
IKLH	Kolahrood	1.72	208	ePn	Pn	00 58 19.4	+0.8
IKLH				e		00 58 45.3	
IMHD	Mahdasht	1.74	299	ePn	Pn	00 58 18.6	-0.2
IMHD				e		00 58 46.4	
ANAR	Anarak	1.93	149	ePn	Pn	00 58 22.6	+1.1
IZEF	Zefreh	1.96	185	ePn	Pn	00 58 22.9	+1.0
IZEF				e		00 58 51.2	
IGLO	Ghaloghah	1.96	32	ePn	Pb	00 58 23.4	-0.7
ASAO	Ashtian	2.08	262	ePg	Pn	00 58 25.2	+1.5
QALM	Alamut, Qazvin	2.20	316	ePn	Pn	00 58 27.1	+1.8
QALM				e		00 58 58.4	
IRAZ	Razeghan	2.20	285	ePn	Pn	00 58 25.7	+0.4
KHMZ	Khomeyn	2.40	243	ePn	Pn	00 58 28.5	+0.5
IGZV	Ghazvin	2.43	310	ePn	Pn	00 58 29.9	+1.5
IGZV				e		00 59 14.0	
IGAR	Gharneh	2.47	190	ePn	Pn	00 58 31.2	+2.2
IPIR	Pirpir	2.56	213	ePn	Pn	00 58 33.1	+2.9
QABG	Abgarm-Qazvin	2.56	290	ePn	Pn	00 58 30.6	+0.4
QABG				e		00 59 09.0	
HAGD	Aghdareh	2.79	270	ePn	Pn	00 58 34.9	+1.6
YZKH	Yazd	3.00	144	ePn	Pn	00 58 36.6	+0.5
ICHK	Chekchek	3.04	148	ePn	Pn	00 58 37.6	+0.9
IRAM	Ramesheh	3.04	182	ePn	Pn	00 58 38.3	+1.6
JHBN	Jahan bin	3.04	211	ePn	Pn	00 58 39.8	+2.9
ISAD	Sadrabad	3.08	161	ePn	Pn	00 58 38.8	+1.4
IBRJ	Brojen	3.12	200	ePn	Pb	00 58 42.1	-1.8
BDRS	Dareh Seyedi	3.15	255	ePn	Pn	00 58 41.0	+2.7
HSAM	Samen	3.30	260	ePn	Pn	00 58 43.4	+3.0
IMND	Minoodasht	3.35	43	ePn	Pn	00 58 41.4	+0.6
TNSJ	Nastanj	3.49	104	ePn	Pn	00 58 44.4	+1.6
HSRG	Sareghieh	3.51	278	ePn	Pn	00 58 44.8	+1.5
IALM	Almabolaq	3.59	271	ePn	Pn	00 58 46.6	+2.2
IKMR	Kamar-syah	3.69	250	ePn	Pn	00 58 47.1	+1.7
IDOB	Doab	3.75	255	ePn	Pn	00 58 48.8	+2.2
IBZA	Bozab	3.87	266	ePn	Pn	00 58 50.8	+2.6
IMEH	Mehriz	3.87	153	ePn	Pn	00 58 49.7	+1.5
TPRV	Parvadeh(Tabas	3.90	117	ePn	Pn	00 58 49.7	+1.2
TKDS	Koohdasht(Taba	4.00	107	ePn	Pn	00 58 51.0	+1.1
IKFM	Kafar-mosalman	4.10	253	ePn	Pn	00 58 53.1	+2.0
IBAF	Bafgh	4.13	141	ePn	Pn	00 58 53.2	+1.5
IKOM	Komasi	4.20	262	ePn	Pn	00 58 54.6	+1.9
KCHF	Cheshme Sefid,	4.57	264	ePn	Pn	00 58 59.3	+1.6
ILIN	Lien	4.58	272	ePn	Pn	00 58 59.8	+1.9
ISRB	Sarab	4.92	309	ePn	Pn	00 59 04.0	+1.4
ISFR	Sfrayin	4.95	62	ePn	Pn	00 59 04.1	+1.0
IDHR	Dehrash	5.06	270	ePn	Pn	00 59 05.2	+0.7
IKRD	Kardeh	5.23	67	ePn	Pb	00 59 19.1	-0.8
GEYT	Alibeck	5.46	54	Pn	Pn	00 59 11.2	+1.3
	0.6nm,0.3s,baz=224,slow=12,SNR=8.2						
GEYT				Lg	Lg	01 00 40.3	
	baz=229,slow=26,SNR=2.2						
ITEG	Tejag	5.53	109	ePn	Pn	00 59 12.4	+1.4
KHGB	Koh Gabri	5.57	142	ePn	Pn	00 59 13.2	+1.7
IMOG	Moghan	5.70	75	ePn	Pn	00 59 15.3	+1.9
IKOO	Kooshah	5.92	112	ePn	Pn	00 59 17.9	+1.5
IMON	Monand	6.15	104	ePn	Pn	00 59 21.3	+1.7
IMYA	Miami	6.35	74	ePn	Pn	00 59 24.0	+1.8
WSAR	Wadi Sarin	12.74	154	LR	LR	01 06 08.4	
	comp=Z,45nm,18.1s,baz=146,slow=42						
MMAI	Mount Meron Ar	14.34	268	Pn	Pn	01 01 08.8	-2.7
	0.2nm,0.3s,baz=96,slow=15,SNR=1.6						
BRTR	Keskin Array B	15.80	293	Pn	Pn	01 01 33.8	+2.7
	0.0nm,0.3s,baz=109,slow=14,SNR=9.5						
AKTO	Aktyubinsk	16.08	13	Pn	P	01 01 38.9	+0.9
	0.1nm,0.3s,baz=172,slow=11,SNR=4.9						
ARU	Arti	21.97	9	P	P	01 02 46.3	+3.9
	1.1nm,0.6s,baz=196,slow=7.6,SNR=6.1						
BVAR	Borovoye Array	22.15	29	P	P	01 02 46.0	+1.7
	0.9nm,0.7s,baz=223,slow=8.1,SNR=5.2						
IDI	Anoyia	22.60	279	LR	LR	01 12 48.7	
	comp=Z,53nm,19.9s,baz=144,slow=40						
ATD	Arta Tunnel	24.83	203	LR	LR	01 14 19.7	
	comp=Z,25nm,20.0s,baz=13,slow=41						
MKAR	Makanchi Array	25.33	53	P	P	01 03 15.6	+0.1
	0.7nm,0.7s,baz=249,slow=8.5,SNR=8.6						
ZALV	Zalesovo Beam	29.57	40	P	P	01 03 56.6	+3.3
	0.5nm,0.5s,baz=254,slow=10,SNR=2.4						
XAN	Xi'an	45.98	74	P	P	01 06 09.5	-2.5
XAN				pP	sP	01 06 17.0	+2.4
TORD	Torodi Ar. Bea	50.61	258	P	P	01 06 45.5	-2.5
	0.9nm,0.9s,baz=59,slow=6.7,SNR=4.2						
DAV	Davao City (W)	72.09	94	LR	LR	01 44 41.2	
	comp=Z,73nm,19.3s,baz=121,slow=39						

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*IDC **02** 00:58:32.9±1.3, 22.°41S×65.°98W, h259^{km}±20^{km}, mb3.4/1, mb1 3.2/6, mb1mx3.0/36, mbtmp3.8/6, Error ellipse: s-maj=30.5km s-min=15.9km az=116.0*

*SJA **02** 00:58:33.2±0.6, 22.°47S×66.°02W, h274^{km}±5^{km}, ML3.4, MW3.5*

ISC 02 00:58:33.3±0.9**, 22.°39S**±0.°07×**66.°00W**±0.°07**, h251^{km}, n17, σ1.^{s}61**/21**, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	Yavi	0.50	65	i P	Pn	00 59 10.3	+3.4
YJA				eS	S	00 59 37.2	+4.1
AZAP	Zapla	2.02	155	i P	Pn	00 59 17.9	+1.7
AZAP				eS	S	00 59 51.2	+1.0
LVC	Limon Verde	2.70	265	P	Pn	00 59 24.6	+1.6
	7.4nm,0.3s,baz=79,slow=6.4,SNR=184						
LVC				S	S	01 00 03.3	+0.9
	2.5nm,0.3s,baz=298,slow=21,SNR=7.2						
LVC	Limon Verde	2.70	265	i P	Pn	00 59 24.7	+1.7
LVC				eS	S	01 00 02.8	+0.4

PB09	**IPOC Station P**	**3.06**	**280**	*i* P	**Pn**	**00 59 28.5**	**+1.8**
PB09				IAML		01 00 11.6	
	comp=Z,33nm,1.0s						
PB15	**IPOC Station P**	**3.31**	**255**	*i* P	**Pn**	**00 59 31.2**	**+1.8**
PB06	**IPOC Station P**	**3.32**	**264**	*i* P	**Pn**	**00 59 30.8**	**+1.3**
PB06				IAML		01 00 17.4	
	comp=Z,43nm,0.1s						
PB04	**IPOC Station P**	**3.84**	**270**	*i* P	**Pn**	**00 59 36.5**	**+1.0**
PB05	**IPOC Station P**	**3.91**	**262**	*i* P	**Pn**	**00 59 37.1**	**+0.9**
PB05				IAML		01 00 27.6	
	comp=Z,20nm,0.2s						
PB10	**IPOC Station P**	**4.34**	**254**	*i* P	**Pn**	**00 59 41.8**	**+0.6**
PB10				IAML		01 00 35.8	
	comp=Z,27nm,0.2s						
PB14	**IPOC Station P**	**4.62**	**240**	*i* P	**Pn**	**00 59 45.2**	**+0.4**
PB14				IAML		01 00 41.1	
	comp=Z,68nm,0.3s						
LPAZ	**La Paz**	**6.39**	**341**	P	**Pn**	**01 00 07.9**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=174,slow=7.1,SNR=17						
LPAZ				S	**S**	**01 01 21.5**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=295,slow=17,SNR=7.9						
SIV	**San Ignacio**	**7.88**	**37**	P	**Pn**	**01 00 26.0**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=234,slow=11,SNR=11						
BDFB	**Brasilia**	**18.27**	**72**	P	**P**	**01 02 27.4**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=219,slow=5.7,SNR=4.1						
PLCA	**Paso Flores**	**18.69**	**191**	P	**P**	**01 02 31.4**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=26,slow=7.1,SNR=3.3						
TORD	**Torodi Ar. Bea**	**75.13**	**69**	P	**P**	**01 09 47.0**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=259,slow=5.9,SNR=13						
MKAR	**Makanchi Array**	**144.70**	**39**	PKP	**PKPdf**	**01 17 40.0**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=326,slow=2.7,SNR=4.1						

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*IDC **02** 01:13:31.4±1.8, 11°.21N×126°.22E, h0^{km}, mb3.7/5, mb1 3.9/5, mb1mx3.4/50, mbtmp3.7/5, Error ellipse: s-maj=184.2km s-min=23.1km az=69.0*

*MAN **02** 01:13:43.5, 10°.88N×125°.52E, h25^{km}, mb4.2, ML3.1, MS2.8*

ISC 02 01:13:44.4±1.1**, 10°.91N**±0°.05×**125°.3E**±0°.1**, h95**^{km}±10^{km}**, n11, σ2^{s}.17**/17**, mb3.6**/5**, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.72**	**281**	*e*P	**Pn**	**01 14 00.5**	**-0.9**
OCLP				*e*S	**Sn**	**01 14 15.2**	**+0.9**
MSLP	**Maasin**	**0.90**	**211**	*e*P	**Pn**	**01 14 02.2**	**-1.1**
MSLP				*e*S	**Sn**	**01 14 16.2**	**-1.3**
LLP	**Lapu-Lapu**	**1.46**	**246**	*e*P	**Pn**	**01 14 09.6**	**-0.3**
LLP				*e*S	**Sn**	**01 14 30.9**	**+1.7**
CNP	**Catarman**	**1.72**	**338**	*e*P	**Pn**	**01 14 12.8**	**-0.3**
CNP				*e*S	**Sn**	**01 14 37.6**	**+2.7**
BUTP	**Butuan**	**1.95**	**171**	*e*P	**Pn**	**01 14 14.9**	**-1.3**
BUTP				*e*S	**Sn**	**01 14 43.6**	**+3.2**
BUKP	**Musuan**	**3.03**	**185**	*e*P	**Pn**	**01 14 30.0**	**-0.4**
BUKP				*e*S	**Sn**	**01 15 11.2**	**+5.3**
WRA	**Warramunga Arr**	**31.92**	**164**	P	**P**	**01 19 59.2**	**-2.0**
	0.3nm,0.7s,baz=348,slow=9.3,SNR=1.5						
ASAR	**Alice Springs**	**35.38**	**166**	P	**P**	**01 20 29.9**	**-1.3**
	0.4nm,0.5s,baz=346,slow=7.5,SNR=6.7						
MKAR	**Makanchi Array**	**50.96**	**323**	P	**P**	**01 22 37.0**	**+0.7**
	0.2nm,0.3s,baz=116,slow=6.9,SNR=12						
ARCES	**ARCESS Array B**	**83.27**	**340**	P	**P**	**01 26 00.2**	**0.0**
	4.1nm,1.0s,baz=71,slow=5.8,SNR=2.2						
FINES	**FINESS Array B**	**84.89**	**332**	P	**P**	**01 26 08.3**	**-0.2**
	0.6nm,0.8s,baz=75,slow=5.9,SNR=4.0						

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*IDC **02** 01:18:57.0±0.7, 53°.31N×35°.11W, h0^{km}, mb3.7/17, mb1 4.0/19, mb1mx3.8/51, mbtmp3.8/19, ML3.2/2, MS3.4/19, Ms1 3.4/19, ms1mx3.3/43, Error ellipse: s-maj=22.9km s-min=12.1km az=3.0*

*NEIC **02** 01:18:59.0±1.9, 53°.33N±0°.07×35°.1W±0°.2, h10^{km}±2^{km}, mb4.4/16, Error ellipse: s-maj=14.4km s-min=10.6km az=81.0*

ISC 02 01:18:59.0±0.6**, 53°.3N**±0°.1×**35°.15W**±0°.07**, h12**^{km}**, n47, σ0^{s}.93**/37**, mb3.9**/19**, MS3.4**/17**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**13.49**	**26**	LR	LR	01 25 13.5	
	comp=Z,54nm,18.6s,baz=324,slow=28						
SCHQ	**Schefferville**	**18.59**	**288**	P	**P**	**01 23 14.0**	**-1.8**
	0.1nm,0.3s,baz=97,slow=10,SNR=5.1						
SCHQ				LR	LR	01 29 50.6	
	comp=Z,65nm,18.8s,baz=94,slow=35						
SCHQ	**Schefferville**	**18.59**	**288**	IAmb	IAmb	01 23 42.1	
	comp=Z,60nm,1.9s						
EKA	**Eskdalemuir Ar**	**18.70**	**71**	P	**Pn**	**01 23 17.0**	**-0.3**
	baz=270,slow=11,SNR=6.9						
FRB	**Frobisher Bay**	**20.10**	**315**	P	Pn	01 23 32.5	-1.5
	comp=Z,1.7nm,0.6s,baz=61,slow=10,SNR=5.9						
FRB				LR	LR	01 29 14.3	
	comp=Z,91nm,18.4s,baz=251,slow=31						
JMIC	**Jan Mayen**	**21.36**	**24**	LR	LR	01 29 54.5	
	comp=Z,144nm,19.6s,baz=322,slow=31						
NOA	**NORSAR Array B**	**25.82**	**54**	P	**P**	**01 24 30.0**	**+0.2**
	comp=Z,1.6nm,0.9s,baz=275,slow=9.9,SNR=3.7						
NOA				LR	LR	01 32 51.9	
	comp=Z,56nm,19.6s,baz=270,slow=32						
HFS	**Hagfors**	**27.12**	**56**	LR	LR	01 34 23.9	
	comp=Z,110nm,18.1s,baz=283,slow=34						
CLL	**Collm**	**29.08**	**74**	*e*P	**P**	**01 25 00.0**	**+1.0**
	comp=Z,4.0nm,1.1s						
DAVOX	**Davos/Dischmat**	**29.24**	**84**	LR	LR	01 36 03.8	
	comp=Z,94nm,19.2s,baz=309,slow=35						
SADO	**Sadowa**	**29.66**	**271**	LR	LR	01 35 53.8	
	comp=Z,111nm,21.1s,baz=123,slow=34						
GERES	**GERESS Array B**	**30.53**	**78**	P	**P**	**01 25 12.2**	**+0.1**
	comp=Z,0.9nm,0.9s,baz=297,slow=8.7,SNR=5.5						
GERES				LR	LR	01 36 06.9	
	comp=Z,61nm,19.3s,baz=302,slow=34						
ARCES	**ARCESS Array B**	**31.57**	**36**	LR	LR	01 34 25.9	
	comp=Z,104nm,18.3s,baz=358,slow=30						
FINES	**FINESS Array B**	**32.85**	**51**	P	**P**	**01 25 31.1**	**-1.0**
	comp=Z,2.9nm,0.9s,baz=250,slow=9.5,SNR=6.1						
FINES				LR	LR	01 36 36.2	
	comp=Z,102nm,21.6s,baz=312,slow=32						
KEST	**Kesra**	**35.56**	**101**	P	**P**	**01 25 56.3**	**+0.2**
	comp=Z,5.9nm,0.9s,baz=18,slow=5.4,SNR=4.1						
KEST	**Kesra**	**35.56**	**101**	IAmb	IAmb	01 26 02.8	
	comp=Z,27nm,1.4s						
ULM	**Lac du Bonnet**	**36.72**	**291**	P	**P**	**01 26 05.0**	**-0.7**
	comp=Z,1.5nm,0.7s,baz=91,slow=8.3,SNR=3.5						
ULM				LR	LR	01 38 48.4	
	comp=Z,75nm,21.2s,baz=8.0,slow=32						
AKASG	**Malin Array Be**	**38.53**	**67**	P	**P**	**01 26 20.8**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=298,slow=8.3,SNR=2.0						
AKASG				LR	LR	01 41 56.0	
	comp=Z,60nm,18.5s,baz=310,slow=36						
KLMR	**Klimovskoe**	**39.20**	**48**	*e*	**P**	**01 26 25.7**	**-0.8**
KLMR				AMP		01 26 37.6	
	comp=Z,19nm,1.6s						
YKA	**Yellowknife Ar**	**40.61**	**315**	P	**P**	**01 26 37.6**	**-0.6**
	comp=Z,0.8nm,0.9s,baz=62,slow=8.8,SNR=7.4						
YKA				PcP	**PcP**	**01 28 39.0**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=66,slow=3.8,SNR=15						
LAO	**LASA Array**	**44.44**	**292**	P	**P**	**01 27 10.9**	**+1.4**
INK	**Inuvik**	**44.79**	**329**	P	**P**	**01 27 11.7**	**-0.4**
	comp=Z,1.5nm,1.1s,baz=19,slow=6.0,SNR=5.2						
INK	**Inuvik**	**44.79**	**329**	IAmb	IAmb	01 28 51.0	
	comp=Z,9.4nm,1.6s						
TUL1	**Leonard**	**45.10**	**273**	P	**P**	**01 27 15.7**	**+0.9**
EGMT	**Eagleton**	**45.61**	**295**	P	**P**	**01 27 19.4**	**+0.5**
BR131	**Keskin Array S**	**47.42**	**78**	P	**P**	**01 27 34.0**	**+0.7**
BR131				IAmb	IAmb	01 27 37.5	
	comp=Z,2.8nm,0.9s						
BRTR	**Keskin Array B**	**47.42**	**78**	P	**P**	**01 27 32.2**	**-1.1**
	comp=Z,2.2nm,0.9s,baz=320,slow=5.6,SNR=11						
BRTR				LR	LR	01 48 52.9	
	comp=Z,30nm,18.1s,baz=324,slow=38						
YNE	**Yellowstone No**	**47.56**	**292**	P	**P**	**01 27 35.0**	**+0.5**
PDAR	**Pinedale Array**	**48.72**	**289**	P	**P**	**01 27 42.3**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=64,slow=8.0,SNR=10						
PDAR				LR	LR	01 46 43.6	
	comp=Z,39nm,18.4s,baz=352,slow=34						
TORD	**Torodi Ar. Bea**	**49.53**	**130**	P	**P**	**01 27 47.7**	**-1.9**
	comp=Z,1.7nm,0.9s,baz=330,slow=7.2,SNR=7.1						
HWUT	**Hardware Ranch**	**50.61**	**289**	P	**P**	**01 27 58.1**	**+0.4**
NRIK	**Noril'sk**	**50.78**	**23**	LR	LR	01 48 31.5	
	comp=Z,30nm,19.5s,baz=348,slow=35						
E09A	**Wood Farm, Sta**	**51.04**	**298**	P	**P**	**01 28 00.8**	**+0.1**
ILAR	**Eielson Array**	**51.17**	**329**	P	**P**	**01 28 00.6**	**-0.9**
	comp=Z,0.6nm,0.9s,baz=42,slow=5.4,SNR=7.7						
TXAR	**Lajitas Array**	**54.43**	**273**	P	**P**	**01 28 26.8**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=55,slow=8.2,SNR=5.2						
TXAR				PcP	**PcP**	**01 29 28.9**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=86,slow=4.6,SNR=5.4						
TXAR				LR	LR	01 51 06.4	
	comp=Z,34nm,18.5s,baz=0.0,slow=35						
TIXI	**Tiksi**	**54.87**	**6**	P	**P**	**01 28 29.4**	**+0.8**
ABKAR	**Akbulak array**	**55.31**	**53**	P	**P**	**01 28 33.1**	**+1.0**
NVAR	**Mina Array Bea**	**56.56**	**291**	P	**P**	**01 28 41.7**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=30,slow=6.3,SNR=2.4						
ROSC	**El Rosal**	**57.93**	**228**	P	**P**	**01 28 53.3**	**+1.8**
	comp=Z,9.0nm,0.6s,baz=126,slow=16,SNR=6.9						
ROSC	**El Rosal**	**57.93**	**228**	P	**P**	**01 28 52.5**	**+1.0**
ZALV	**Zalesovo Beam**	**62.12**	**35**	LR	LR	01 54 52.9	
	comp=Z,41nm,18.0s,baz=45,slow=35						
MK31	**Makanchi Array**	**67.00**	**41**	P	**P**	**01 29 52.0**	**+0.6**
MK31				IAmb	IAmb	01 30 46.5	
	comp=Z,4.2nm,1.8s						
MKAR	**Makanchi Array**	**67.00**	**41**	P	**P**	**01 29 51.1**	**-0.3**
	comp=Z,1.3nm,1.0s,baz=331,slow=7.0,SNR=9.1						
MKAR				LR	LR	01 57 53.9	
	comp=Z,58nm,18.5s,baz=356,slow=35						
GAR	**Garm**	**67.89**	**54**	P	**P**	**01 29 58.5**	**+1.2**
SONM	**Songino Array**	**74.10**	**26**	P	**P**	**01 30 35.4**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=322,slow=6.4,SNR=3.8						
WRA	**Warramunga Arr**	**145.76**	**18**	PKPbc	**PKPdf**	**01 38 36.2**	**-1.2**
	comp=Z,4.4nm,0.2s,baz=337,slow=2.6,SNR=8.2						
ASAR	**Alice Springs**	**149.30**	**20**	PKPbc	**PKPbc**	**01 38 46.9**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=354,slow=2.4,SNR=19						

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*DJA **02** 01:23:26.6±0.5, 7°S±6°×10°7E±°, h99^{km}±6^{km}, M3.8/10, MLv3.8/10*

*IDC **02** 01:23:28.6±1.1, 6°.41S×107°.25E, h142^{km}±6^{km}, mb3.6/5, mb1 3.7/5, mb1mx3.2/45, mbtmp4.0/5, Error ellipse: s-maj=106.9km s-min=16.9km az=48.0*

ISC 02 01:23:25.7±1.0**, 7°.3S**±0°.1×**106°.70E**±0°.08**, h122**^{km}±7^{km}**, n17, σ1^{s}.26**/23**, mb3.7**/5**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.30**	**331**	P	**Pn**	**01 23 43.2**	**+0.2**
CNJI	**Cibinong**	**0.43**	**95**	P	**Pn**	**01 23 43.6**	**+0.1**
CNJI				S	**Sn**	**01 23 55.7**	**-1.2**
DBJI	**Dramaga**	**0.71**	**4**	P	**Pn**	**01 23 45.7**	**+0.2**
DBJI				S	**Sn**	**01 24 00.8**	**+0.4**
LEM	**Lembang**	**1.01**	**64**	P	**Pn**	**01 23 49.4**	**+1.2**
	114nm,0.3s,baz=19,slow=15,SNR=34						
LEM				S	**Sn**	**01 24 06.7**	**+1.4**
	70nm,0.3s,baz=287,slow=19,SNR=18						
LEM	**Lembang**	**1.01**	**64**	P	**Pn**	**01 23 48.5**	**+0.3**
LEM				S	**Sn**	**01 24 05.8**	**+0.5**
TNG	**Tangerang**	**1.09**	**357**	P	**Pn**	**01 23 49.3**	**+0.4**
TNG				S	**Sn**	**01 24 06.1**	**-0.4**
CISI	**Cisompet, Garu**	**1.14**	**104**	P	**Pn**	**01 23 49.2**	**-0.2**
CISI				S	**Sn**	**01 24 06.4**	**-1.0**
KPJI	**Karang Pucung**	**2.21**	**92**	P	**Pn**	**01 24 02.3**	**+0.4**
KASI	**Kota Agung**	**2.79**	**308**	P	**Pn**	**01 24 10.7**	**+1.3**
KLSI		**3.23**	**322**	P	**Pn**	**01 24 15.8**	**+0.7**
MDSI	**Maura Dua**	**3.73**	**318**	P	**Pn**	**01 24 23.1**	**+1.3**
PCJI	**Pacitan**	**4.53**	**102**	P	**Pn**	**01 24 32.6**	**+0.2**
WRA	**Warramunga Arr**	**29.61**	**118**	P	**P**	**01 29 20.3**	**+0.7**
	1.1nm,0.7s,baz=299,slow=9.1,SNR=3.6						
ASAR	**Alice Springs**	**30.77**	**125**	P	**P**	**01 29 31.1**	**+1.3**
	0.8nm,0.8s,baz=300,slow=8.0,SNR=8.8						
STKA	**Stephens Creek**	**40.68**	**132**	P	**P**	**01 30 56.4**	**+2.1**
	4.7nm,0.4s,baz=314,slow=7.0,SNR=15						
MKAR	**Makanchi Array**	**58.04**	**340**	P	**P**	**01 33 02.5**	**-3.4**
	0.4nm,0.4s,baz=149,slow=8.2,SNR=9.9						
GEYT	**Alibeck**	**63.77**	**319**	P	**P**	**01 33 43.9**	**-1.0**
	0.6nm,0.4s,baz=116,slow=5.0,SNR=3.0						

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*IASPEI **02** 01:38:43.8±0.8, 46°.35N±0°.02×13°.08E±0°.02, h11^{km}±4^{km}, Error ellipse: s-maj=3.1km s-min=2.3km az=26.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ROM **02** 01:38:44.3±0.2, 46°.361N±0°.010×13°.09E±0°.01, h4^{km}±1^{km}, ML2.3/17, Error ellipse: s-maj=0.9km s-min=0.9km az=48.0*

*VIE **02** 01:38:44.5±0.1, 46°.35N×13°.06E, h7^{km}±1^{km}, mb1.9/14, ml2.5/19, Error ellipse: s-maj=1.2km s-min=0.6km az=7.0 7 km SSE of Tolmezzo*

*LDG **02** 01:38:45.6±0.1, 46°.31N×13°.01E, h4^{km}, Ml2.2/11, Error ellipse: s-maj=4.1km s-min=2.2km az=2.0*

*PRU **02** 01:38:47.3±0.0, 46°.44N×13°.07E, h0^{km}*

ISC 02 01:38:43.5±0.7**, 46°.34N**±0°.02×**13°.05E**±0°.01**, h12**^{km}±3^{km}**, n89, σ1^{s}.43**/144**, 5C-7D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOO	**Bordano**	**0.04**	**119**	⇓*e*Pg	**Pg**	**01 38 45.6**	**-0.1**
BOO				*e*Sg	**Sg**	**01 38 46.3**	**-1.1**
FUSE	**Fusea**	**0.09**	**334**	⇓*e*Pg	**Pg**	**01 38 46.8**	**+0.5**
FUSE				*e*Sg	**Sg**	**01 38 48.4**	**+0.1**
GEPF	**Gemona**	**0.09**	**137**	⇓*i*P	**Pg**	**01 38 46.6**	**+0.4**
GEPF				S	**Sg**	**01 38 48.2**	**+0.1**
GEPF				AML	AML		
	comp=E,2450μm,0.8s						
GEPF				AML	AML		
	comp=N,4650μm,1.6s						
MPRI	**Monte Prat**	**0.11**	**206**	⇓*e*Pg	**Pb**	**01 38 47.3**	**-0.2**
MPRI				*e*Sg	**Sg**	**01 38 49.4**	**+0.7**
BUA	**Buia**	**0.13**	**158**	⇓*e*Pg	**Pb**	**01 38 47.6**	**-0.3**
BUA				*e*Sg	**Sb**	**01 38 50.1**	**+1.0**
BAD	**Bernadia**	**0.17**	**127**	*e*Pg	**Pb**	**01 38 48.1**	**-0.4**
BAD				*e*Sg	**Sb**	**01 38 50.9**	**+0.9**
CLUD	**Cludinico**	**0.17**	**315**	⇓*e*Pg	**Pg**	**01 38 48.3**	**+0.9**
CLUD				*e*Sg	**Sg**	**01 38 51.2**	**+1.1**
VINO	**Villanova**	**0.18**	**117**	⇓*e*Pg	**Pb**	**01 38 48.1**	**-0.6**
VINO				*e*Sg	**Sg**	**01 38 51.1**	**+0.7**
PTCC	**Patocco-Chiusa**	**0.22**	**72**	⇑P	**Pg**	**01 38 48.7**	**+0.5**
PTCC				S	**Sg**	**01 38 52.1**	**+0.6**
PTCC				AML	AML		
	comp=E,865μm,0.6s						
PTCC				AML	AML		
	comp=N,687μm,0.2s						
PLRO	**Paularo**	**0.22**	**17**	⇑*e*Pg	**Pg**	**01 38 49.1**	**+0.7**
PLRO				*e*Sg	**Sb**	**01 38 53.1**	**+1.4**
FVI	**Forni Avoltri**	**0.32**	**324**	P	**Pb**	**01 38 51.0**	**-0.3**
FVI				S	**Sb**	**01 38 55.9**	**-0.5**
FVI				AML	AML		
	comp=E,1100μm,0.1s						
FVI				AML	AML		
	comp=N,748μm,0.2s						
ROBS	**Robic**	**0.33**	**106**	*i* Pg	**Pb**	**01 38 50.6**	**-0.7**
ROBS				*i* Sg	**Sb**	**01 38 55.7**	**-0.8**
LSR	**Lussari**	**0.36**	**67**	⇑*e*Pg	**Pb**	**01 38 51.7**	**-0.1**
LSR				*e*Sg	**Sb**	**01 38 57.0**	**-0.5**
MLNI	**Malnisio**	**0.36**	**239**	⇑*e*Pg	**Pb**	**01 38 52.1**	**+0.3**
PRED	**Cave del Predi**	**0.37**	**73**	⇑*e*Pg	**Pb**	**01 38 51.7**	**-0.3**
PRED				*e*Sg	**Sb**	**01 38 57.3**	**-0.5**
TLI	**Talmassons**	**0.42**	**175**	*e*Pg	**Pb**	**01 38 53.0**	**+0.3**
DRE	**Drenchia**	**0.44**	**112**	*e*Pg	**Pb**	**01 38 52.8**	**-0.4**
CADS	**Cadrg**	**0.49**	**103**	*i* Pg	**Pb**	**01 38 53.5**	**-0.5**
CADS				*i* Sg	**Sb**	**01 39 01.6**	**+0.6**
POLC	**Polcenigo**	**0.49**	**231**	P	**Pb**	**01 38 54.8**	**+0.7**
POLC				S	**Sn**	**01 39 03.8**	**+4.0**
POLC				AML	AML		
	comp=N,435μm,0.2s						
POLC				AML	AML		
	comp=E,390μm,1.3s						
MYKA	**Terra Mystica**	**0.50**	**54**	*e*Pg	**Pb**	**01 38 54.2**	**0.0**
	comp=E,4.4nm,0.2s,SNR=17						
MYKA				*i* Sg	**Sb**	**01 39 01.0**	**-0.5**
	comp=E,11nm,0.2s						
CSO	**Casso**	**0.51**	**263**	*e*Pg	**Pb**	**01 38 54.4**	**0.0**
SABO	**M.te Sabotino**	**0.52**	**133**	P	**Pb**	**01 38 54.6**	**+0.1**
SABO				S	**Sn**	**01 39 04.0**	**-1.6**
SABO				AML	AML		
	comp=N,678μm,0.3s						
SABO				AML	AML		
	comp=E,640μm,0.2s						
SABO	**M.te Sabotino**	**0.52**	**133**	*e*Pg	**Pb**	**01 38 54.7**	**+0.1**
CAE	**Caneva**	**0.54**	**233**	*e*Pg	**Pb**	**01 38 55.3**	**+0.4**
ABTA	**Abfaltersbach**	**0.56**	**318**	*e*Pg	**Pb**	**01 38 55.3**	**+0.1**
	comp=E,1.7nm,0.1s,SNR=17						
ABTA				*e*Sg	**Sb**	**01 39 03.1**	**-0.1**
	comp=E,19nm,0.1s,SNR=12						
AFL	**Alpe Faloria**	**0.64**	**288**	*e*Pg	**Pn**	**01 38 57.8**	**-0.7**
GORS	**Gorjuse**	**0.65**	**91**	*i* Pg	**Pb**	**01 38 56.5**	**-0.3**
GORS				*i* Sg	**Sn**	**01 39 06.9**	**-2.0**
VOJS	**Vojsko**	**0.65**	**118**	*i* Pg	**Pb**	**01 38 56.5**	**-0.3**
VOJS				*i* Sg	**Sn**	**01 39 07.3**	**-1.5**
VARN	**Col Varnada, M**	**0.74**	**243**	*e*Pg	**Pb**	**01 38 58.9**	**+0.5**
KBA	**Koelnbreinsper**	**0.77**	**15**	*e*Pg	**Pb**	**01 38 59.4**	**+0.5**
	comp=E,0.4nm,0.1s,SNR=13						
KBA				*i* Sg	**Sb**	**01 39 09.8**	**+0.4**
	comp=E,5.1nm,0.1s						
TRI	**Trieste**	**0.80**	**142**	P	**Pg**	**01 38 58.8**	**-0.1**
TRI				S	**Sn**	**01 39 11.5**	**-0.8**
TRI				AML	AML		
	comp=N,71μm,1.3s						
TRI				AML	AML		
	comp=E,138μm,0.9s						
JAVS	**Javornik**	**0.83**	**122**	*i* Pg	**Pg**	**01 38 59.6**	**0.0**
JAVS				*i* Sg	**Sn**	**01 39 13.1**	**-0.2**
RISI	**Rein**	**0.91**	**313**	P	**Pn**	**01 39 02.0**	**-0.2**
RISI				S	**Sn**	**01 39 14.8**	**-0.5**
RISI				AML	AML		
	comp=N,372μm,0.4s						
RISI				AML	AML		
	comp=E,382μm,0.4s						
ASOL	**Asolo**	**0.96**	**237**	P	**Pn**	**01 39 05.1**	**+2.3**
CGRP	**Cima Grappa**	**0.98**	**243**	P	**Pn**	**01 39 05.0**	**+1.7**
CGRP				AML	AML		
	comp=N,94μm,1.2s						
CGRP				AML	AML		
	comp=E,192μm,1.6s						
CTI	**Castel Tesino**	**1.02**	**254**	P	**Pn**	**01 39 05.0**	**+1.3**
CTI				AML	AML		
	comp=E,304μm,1.4s						
CTI				AML	AML		
	comp=N,252μm,0.2s						
OBKA	**Obir**	**1.05**	**80**	*i* Pg	**Pg**	**01 39 04.5**	**+0.8**
	comp=N,0.5nm,0.1s						
OBKA				*i* Sg	**Sn**	**01 39 19.0**	**+0.3**
	comp=N,8.0nm,0.3s						
LJU	**Ljubljana**	**1.06**	**105**	P	**Pg**	**01 39 05.2**	**+1.3**
LJU				AML	AML		
	comp=E,227μm,0.2s						
LJU				AML	AML		
	comp=N,350μm,1.1s						
KOSI	**Kohlern**	**1.17**	**277**	P	**Pg**	**01 39 07.3**	**+1.4**
KOSI				AML	AML		
	comp=E,71μm,1.0s						
KOSI				AML	AML		
	comp=N,70μm,1.4s						
APPI	**Appiano**	**1.27**	**277**	P	**Pg**	**01 39 09.3**	**+1.4**
APPI				AML	AML		
	comp=N,105μm,0.4s						
APPI				AML	AML		
	comp=E,74μm,0.5s						
ROSI	**Rosskopf**	**1.28**	**298**	P	**Pg**	**01 39 09.3**	**+1.2**
ROSI				AML	AML		
	comp=E,91μm,0.9s						
ROSI				AML	AML		
	comp=N,85μm,0.4s						
WTTA	**Wattenberg**	**1.34**	**314**	P	**Pg**	**01 39 10.3**	**+1.0**
WTTA				AML	AML		
	comp=E,63μm,1.6s						
WTTA				AML	AML		
	comp=N,69μm,1.0s						
WTTA	**Wattenberg**	**1.34**	**314**	*e*Pg	**Pg**	**01 39 10.4**	**+1.0**
	comp=N,0.9nm,0.1s,SNR=20						
WTTA				*i* Sn	**Sg**	**01 39 28.4**	**+1.6**
	comp=N,21nm,0.5s						
TEOL	**Teolo**	**1.38**	**225**	P	**Pg**	**01 39 10.9**	**+1.0**
TEOL				AML	AML		
	comp=E,419μm,0.9s						
TEOL				AML	AML		
	comp=N,342μm,0.6s						
SOKA	**Soboth**	**1.41**	**75**	*i* Pg	**Pg**	**01 39 11.8**	**+1.3**
	comp=N,1.7nm,0.2s						
SOKA				*i* Sg	**Sg**	**01 39 30.6**	**+1.8**
	comp=N,1.1nm,0.2s						
RIY	**Rijeka**	**1.42**	**135**	*e*Pg	**Pg**	**01 39 13.2**	**+2.4**
RIY				Sg	**Sg**	**01 39 31.4**	**+2.1**
WATA	**Walderalm**	**1.42**	**315**	*e*Pg	**Pg**	**01 39 12.4**	**+1.6**
	comp=N,1.5nm,0.2s,SNR=6.4						
WATA				*i* Sn	**Sg**	**01 39 30.8**	**+1.4**
	comp=N,8.8nm,0.3s						
ROVR	**Rover Verones**	**1.54**	**244**	P	**Pg**	**01 39 13.6**	**+0.4**
ROVR				AML	AML		
	comp=N,89μm,1.4s						
ROVR				AML	AML		
	comp=E,56μm,0.2s						
SQTA	**Sankt Quirin**	**1.55**	**306**	*e*Pg	**Pg**	**01 39 14.3**	**+1.2**
	comp=E,2.0nm,0.2s,SNR=16						
SQTA				*i* Sn	**Sg**	**01 39 34.3**	**+1.1**
	comp=E,12nm,0.3s						
MOTA	**Moosalm**	**1.68**	**308**	*i* Pg	**Pg**	**01 39 16.9**	**+1.2**
	comp=E,1.8nm,0.3s						
MOTA				*i* Sg	**Sg**	**01 39 39.6**	**+2.2**
	comp=E,6.3nm,0.4s						
MOA	**Molln**	**1.73**	**28**	*i* Pg	**Pg**	**01 39 17.5**	**+0.9**
	comp=E,1.1nm,0.2s						
MOA				*i* Sg	**Sg**	**01 39 41.0**	**+2.1**
	comp=E,4.0nm,0.2s						
FETA	**Feichten**	**1.74**	**294**	*i* Pg	**Pg**	**01 39 17.8**	**+0.9**
	comp=E,2.1nm,0.2s						
FETA				*i* Sn	**Sb**	**01 39 38.5**	**+1.2**
	comp=E,2.7nm,0.3s						
BOJS	**Bojanci**	**1.75**	**118**	P	**Pg**	**01 39 16.8**	**-0.2**
BOJS				AML	AML		
	comp=N,104μm,0.5s						
BOJS				AML	AML		
	comp=E,77μm,0.5s						
OZLJ	**Ozalj**	**1.83**	**112**	*e*Pn	**Pg**	**01 39 18.5**	**-0.1**
OZLJ				Sn	**Sg**	**01 39 41.4**	**-0.9**
ARSA	**Arzberg**	**1.93**	**61**	*i* Pn	**Pb**	**01 39 17.2**	**-1.4**
	comp=E,2.0nm,0.3s						
ARSA				*i* Sn	**Sb**	**01 39 43.3**	**+0.7**
	comp=E,2.9nm,0.3s						
RETA	**Reutte**	**1.95**	**307**	*i* Pg	**Pg**	**01 39 21.7**	**+0.9**
	comp=E,1.5nm,0.2s						
RETA				*i* Sg	**Sg**	**01 39 49.4**	**+3.3**
	comp=E,7.6nm,0.2s						
PTJ	**Puntijarka**	**2.07**	**101**	*e*Pn	**Pg**	**01 39 23.7**	**+0.5**
PTJ				Sn	**Sg**	**01 39 48.2**	**-1.8**
NVLJ	**Novalja**	**2.19**	**144**	*i* Pn	**Pb**	**01 39 23.2**	**+0.3**
NVLJ				Sn	**Sb**	**01 39 50.1**	**+0.1**
DAVA	**Damuels**	**2.38**	**295**	*i* Pn	**Pn**	**01 39 22.0**	**-0.4**
	comp=E,0.6nm,0.2s						
DAVA				*i* Sg	**Sg**	**01 40 02.7**	**+2.8**
	comp=E,6.2nm,0.3s						
CONA	**Conrad Observa**	**2.49**	**49**	*i* Pn	**Pb**	**01 39 26.2**	**-2.0**
	comp=E,0.5nm,0.3s						
CONA				*i* Sn	**Sb**	**01 39 57.1**	**-1.7**
	comp=E,0.3nm,0.2s						
UDBI	**Udbina**	**2.63**	**133**	*e*Pn	**Pb**	**01 39 29.5**	**-1.1**
UDBI				Sn	**Sb**	**01 40 00.3**	**-2.5**
KHC	**Kasperske Hory**	**2.82**	**7**	*e*PN	**Pb**	**01 39 31.4**	**-2.3**
KHC				*e*SN	**Sb**	**01 40 05.5**	**-2.7**
KHC				*e*SG	**Sg**	**01 40 13.5**	**-0.5**
MORI	**Morici**	**3.10**	**142**	Sn	**Sn**	**01 40 11.1**	**+1.9**
GOPC	**GO Pecny, Ondr**	**3.76**	**17**	*e*PN	**Pn**	**01 39 43.4**	**+2.1**
GOPC				*e*SG	**Sg**	**01 40 44.0**	**-0.3**
	comp=E,10.0nm,0.9s						
PRU	**Pruhonice**	**3.79**	**15**	*e*PN	**Pn**	**01 39 44.2**	**+2.6**
PRA	**Prague**	**3.85**	**13**	*e*SG	**Sg**	**01 40 47.1**	**+0.1**
	comp=E,14nm,0.9s						
RICI	**Ricice**	**4.06**	**133**	Sn	**Sn**	**01 40 37.5**	**+4.7**
CDF	**Champ du Feu**	**4.44**	**300**	*e*Pn	**Pn**	**01 39 51.2**	**+0.5**
CDF	**Champ du Feu**	**4.44**	**300**	*e*Pg	**Pg**	**01 40 07.7**	**-0.8**
CDF				*e*Sn	**Sn**	**01 40 39.9**	**-2.4**
	comp=E,1.5nm,0.4s						
LPG	**La Plagne**	**4.48**	**261**	*e*Pn	**Pn**	**01 39 51.5**	**+0.1**
LPG	**La Plagne**	**4.48**	**261**	*e*Pg	**Pg**	**01 40 08.7**	**-0.6**
LPG				*e*Sn	**Sn**	**01 40 41.3**	**-2.2**
	comp=E,0.4nm,0.3s						
LPG				*e*Sg	**Sg**	**01 41 05.0**	**-2.3**
	comp=E,0.6nm,0.5s						
LPL	**La Plagne**	**4.49**	**262**	*e*Pn	**Pn**	**01 39 51.2**	**-0.3**
LPL	**La Plagne**	**4.49**	**262**	*e*Pg	**Pg**	**01 40 08.9**	**-0.5**
LPL				*e*Sn	**Sn**	**01 40 42.1**	**-1.6**
	comp=E,0.3nm,0.2s						
LPL				*e*Sg	**Sg**	**01 41 04.7**	**-2.8**
	comp=E,0.5nm,0.3s						
HINF	**Hinteralfeld**	**4.49**	**291**	*e*Pn	**Pn**	**01 39 52.0**	**+0.7**
HINF				*e*Sn	**Sn**	**01 40 42.1**	**-1.3**
	comp=E,2.0nm,0.3s						
HINF				*e*Sg	**Sg**	**01 41 05.9**	**-1.6**
KRLC	**Kraliky**	**4.49**	**32**	*e*SG	**Sg**	**01 41 08.2**	**+0.5**
DPC	**Dobruska-Polom**	**4.57**	**27**	*e*SG	**Sg**	**01 41 09.4**	**-0.7**
	comp=E,2.2nm,0.4s						

BRG	Berggiesshubel	4.58	7	*e*	Sn	01 40 48.6	+3.0
BRG	Berggiesshubel	4.58	7	SG	Sg	01 41 13.1	+2.7
	comp=E,4.2nm,0.8s						
UPC	Upice	4.61	24	*e*SG	Sg	01 41 11.5	0.0
SBF	Sospel	4.68	240	*e*P	Pn	01 39 58.0	+4.0
SBF				*e*Sn	Sn	01 40 46.6	-1.7
	comp=E,3.5nm,0.4s						
CHVC	Chvalec	4.70	24	*e*SG	Sg	01 41 13.2	-1.1
MBDF	Montbardon	4.70	252	*e*Pn	Pn	01 39 54.8	+0.5
MBDF				*e*Sn	Sn	01 40 46.7	-2.1
	comp=E,0.4nm,0.2s						
OSTC	Ostas	4.72	25	*e*SG	Sg	01 41 13.6	-1.2
HAU	Haudompre	4.87	292	*e*Pn	Pn	01 39 57.0	+0.5
HAU	Haudompre	4.87	292	*e*Pg	Pg	01 40 15.1	-1.6
HAU				*e*Sn	Sn	01 40 50.9	-1.9
	comp=E,1.8nm,0.3s						
CLL	Collm	4.97	360	*i* Pn	Pn	01 40 02.7	+4.8
CLL				*e*Sg	Sg	01 41 23.0	-0.1
PAGF	Fort de Pagny	5.44	297	*e*P	Pn	01 40 09.4	+5.0
	baz=113						
SFTF	Sexfontaines	5.77	292	*e*Pn	Pn	01 40 09.8	+1.0
	baz=114						
SFTF				*e*Sn	Sn	01 41 12.6	-2.3
	comp=E,0.6nm,0.3s						
MEZF	Maizieres J'vi	5.85	295	*e*P	Pn	01 40 14.9	+5.0
MEZF				*e*Sn	Sn	01 41 14.3	-2.5
	comp=E,0.6nm,0.3s						

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*IDC **02** 01:44:08.1±5.8, 7°.54S×127°.44E, h95^{km}±52^{km}, mb3.6/4, mb1 3.8/6, mb1mx3.5/32, mbtmp4.1/6, Error ellipse: s-maj=98.1km s-min=19.5km az=64.0*

*NEIC **02** 01:44:12.2±2.0, 7°.58S±0°.08×127°.74E±0°.09, h135^{km}±8^{km}, mb4.1/3, Error ellipse: s-maj=14.6km s-min=8.9km az=54.0*

ISC 02 01:44:12.6±0.7**, 7°.84S**±0°.06×**127°.80E**±0°.09**, h150**^{km}**, n20, σ2^{s}.45**/24**, mb3.8**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	Soe	3.98	241		Pn	01 45 13.5	+0.8
MTN	Manton Dam	5.96	147		Pn	01 45 40.8	+2.1
FAKI	Fak Fak	6.59	42	Pn	Pn	01 45 45.5	-1.7
KNRA	Kununurra	7.85	173		Pn	01 46 05.1	+1.1
KNRA					Sn	01 47 31.7	+0.2
FITZ	Fitzroy Crossi	10.41	191	P	Pn	01 46 37.5	-0.6
	1.6nm,0.3s,baz=23,slow=13,SNR=44						
FITZ				S	Sn	01 48 29.6	-3.7
	2.5nm,0.3s,baz=174,slow=22,SNR=6.7						
FITZ	Fitzroy Crossi	10.41	191		Pn	01 46 37.6	-0.4
WB0	Warramunga Arr	13.47	152		Pn	01 47 18.1	+0.2
WRA	Warramunga Arr	13.60	153	P	Pn	01 47 18.4	-1.1
	1.4nm,0.3s,baz=330,slow=12,SNR=7.3						
WRA				S	Sn	01 49 44.2	-5.9
	2.3nm,0.3s,baz=323,slow=25,SNR=7.0						
WB2	Warramunga Arr	13.60	153		Pn	01 47 19.4	-0.2
WR0	Warramunga Arr	13.71	152		Pn	01 47 20.7	-0.2
AS31	Alice Springs	16.79	160	P	P	01 47 58.8	+0.1
AS31				IAmb	IAmb	01 48 04.4	
	comp=Z,3.8nm,0.3s						
ASAR	Alice Springs	16.79	160	P	Pn	01 48 02.4	+3.4
	comp=Z,1.5nm,0.3s,baz=337,slow=11,SNR=102						
ASAR				S	S	01 51 03.6	-2.2
	comp=Z,0.6nm,0.3s,baz=313,slow=19,SNR=5.4						
STKA	Stephens Creek	27.15	154	P	P	01 49 46.4	+4.5
	comp=Z,1.2nm,0.4s,baz=326,slow=9.8,SNR=5.2						
STKA	Stephens Creek	27.15	154	IAmb	IAmb	01 50 33.9	
	comp=Z,4.6nm,1.9s						
RPSI	Rantau Prapat	30.65	289	P	P	01 50 11.4	-1.7
RPSI				IAmb	IAmb	01 50 13.4	
	comp=Z,4.4nm,0.8s						
SONM	Songino Array	58.58	343	P	P	01 53 52.1	-1.6
	comp=Z,0.3nm,0.5s,baz=152,slow=6.5,SNR=4.6						
MKAR	Makanchi Array	67.75	328	P	P	01 54 53.6	-0.4
	comp=Z,0.6nm,0.5s,baz=127,slow=7.8,SNR=12						
ZALV	Zalesovo Beam	71.39	335	P	P	01 55 14.8	-1.3
	comp=Z,0.7nm,0.4s,baz=123,slow=7.3,SNR=5.2						
TORD	Torodi Ar. Bea	126.82	281	PKP	PKPdf	02 03 00.2	+0.7
	comp=Z,0.5nm,0.8s,baz=38,slow=2.6,SNR=3.9						
LPAZ	La Paz	151.31	147	PKPbc	PKiKP	02 03 52.8	+2.2
	comp=Z,0.5nm,0.5s,baz=21,slow=4.2,SNR=5.6						
LPAZ				PKPab	PKPab	02 04 02.7	+4.1
	comp=Z,1.9nm,0.6s,baz=214,slow=5.4,SNR=9.0						

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*NCEDC **02** 03:01:25.4±2.9, 40°.31N±0°.04×124°.49W±0°.05, h7^{km}±6^{km}, ML3.0/16, Error ellipse: s-maj=6.4km s-min=4.9km az=151.0*

*ANF **02** 03:01:26.1±1.7, 40°.37N×124°.36W, h8^{km}, ML2.8/6, Error ellipse: s-maj=18.8km s-min=6.7km az=71.0*

NEIC 02 03:01:24.4±1.7**, 40°.25N**±0°.04×**124°.60W**±0°.06**, h18**^{km}±8^{km}**, Error ellipse: s-maj=6.9km s-min=5.4km az=81.0, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCTM	Capetown	0.30	42		Pg	03 01 30.6	-0.3
KCTM					Sg	03 01 35.1	-0.3
KSMM	Slide Mountain	0.33	102		Pb	03 01 31.8	0.0
KMPM	Mount Pierce	0.40	66		Pg	03 01 32.4	-0.3
KMPM					Sg	03 01 37.8	-0.6
KCRM	Chalk Rock	0.62	74		Pg	03 01 37.0	+0.3
KMRM	Mail Ridge	0.68	92		Pg	03 01 38.2	+0.4
KMRM					Sn	03 01 48.9	-0.4
JCC	Jacoby Creek,	0.71	37	Pg	Pb	03 01 37.9	-0.3
JCC	Jacoby Creek,	0.71	37		Sg	03 01 47.9	+0.1
KBSM	Bell Springs	0.84	113		Pn	03 01 41.1	-0.2
KCSM	Cold Springs	0.88	71		Pg	03 01 41.3	-0.2
KHMM	Horse Mountain	0.91	47		Pb	03 01 41.5	-0.1
KHMM					Sg	03 01 54.1	0.0
KPPM	Pickett Peak	0.95	84		Pg	03 01 42.6	-0.2
KCPM	Cahto Peak	0.96	126		Pg	03 01 43.2	+0.1
KIPM	Iron Peak	0.97	117		Pg	03 01 43.2	0.0
KRPM	Rodgers	1.00	26		Pb	03 01 42.6	-0.6
KFPM	Farley Peak	1.09	124		Pb	03 01 44.6	-0.1
KHBM	Hayfork Bally	1.13	68		Pn	03 01 44.6	-0.8
KBNM	Bluenose Ridge	1.14	108		Pn	03 01 45.4	0.0
GTC	Three Chop Rid	1.17	136		Pb	03 01 45.9	-0.1
GNAM	Navarro Ridge	1.29	144		Pn	03 01 47.8	+0.3
LBPM	Beegum Peak	1.31	87		Pn	03 01 47.8	-0.1
KOMM	Orleans Mounta	1.34	40		Pn	03 01 47.5	-0.8
KRMB	Red Mountain	1.37	22		Pn	03 01 47.8	-0.9
O02D	Mt. Diablo Mer	1.39	93		Pn	03 01 49.0	+0.2
O02D	Mt. Diablo Mer	1.39	93	P	Pn	03 01 49.2	+0.4
	baz=276,SNR=32						
GHOM	Hamilton Openi	1.46	146		Pn	03 01 50.0	+0.2
GHMM	Hull Mountain	1.49	120		Pn	03 01 50.3	-0.1
LGPM	Granite Peak	1.50	63		Pn	03 01 50.0	-0.5
GASB	Alder Springs	1.57	112		Pn	03 01 51.7	+0.3
WDC	Whiskeytown Da	1.60	78		Pn	03 01 51.6	-0.2
WDC	Whiskeytown Da	1.60	78	Pn	Pn	03 01 51.2	-0.6
N02D	Trinity Center	1.61	63		Pn	03 01 51.2	-0.7
N02D	Trinity Center	1.61	63	P	Pn	03 01 51.8	-0.1
	baz=244,SNR=20						
GGUM	Gualala	1.64	148		Pn	03 01 52.6	+0.4
KSXB	Camp Six Broad	1.67	19		Pn	03 01 52.0	-0.7
LBKM	Bonanza King	1.69	60		Pn	03 01 52.9	-0.1
GSNM	Snow Mountain	1.70	140		Pn	03 01 53.6	+0.4
GHLM	Highland Sprin	1.72	134		Pn	03 01 53.6	+0.2
HOPS	Hopland Field	1.73	136		Pn	03 01 53.7	+0.3
HOPS	Hopland Field	1.73	136		Pn	03 01 53.9	+0.5
M02C	Callahan	1.75	49		Pn	03 01 53.5	-0.3
M02C	Callahan	1.75	49	P	Pn	03 01 53.5	-0.3
	baz=229,SNR=41						
M02C				S	Sn	03 02 14.6	-1.0
	baz=229						
GTSM	Trough Springs	1.80	121		Pn	03 01 54.9	+0.3
KTRM	Thompson Ridge	1.89	29		Pn	03 01 55.3	-0.6
LTCM	Tuscan Springs	1.90	91		Pn	03 01 56.8	+1.0
LAMM	Antelope Mount	2.02	47		Pn	03 01 57.5	-0.1
LSHM	Sage Hen Hill	2.02	74		Pn	03 01 58.1	+0.5
L02E	Cave Junction	2.04	21	P	Pn	03 01 57.8	0.0
	baz=200,SNR=10						
L02E				S	Sn	03 02 22.5	-0.4
	baz=200						
YBH	Yreka Blue Hor	2.06	43		Pn	03 01 57.9	-0.2
YBH	Yreka Blue Hor	2.06	43	Pn	Pn	03 01 57.6	-0.4
M03C	McCloud	2.14	61		Pn	03 02 00.6	+1.4
O03E	Paynes Creek	2.14	88		Pn	03 01 59.0	-0.2
O03E	Paynes Creek	2.14	88	P	Pn	03 01 59.3	0.0
	baz=271,SNR=16						
LDBM	Digger Butte	2.16	84		Pn	03 01 59.3	-0.2
LMPM	Military Pass	2.22	55		Pn	03 02 01.6	+1.2
LHEM	Herd Peak	2.27	52		Pn	03 02 01.7	+0.7
B040	Montague	2.28	46		Pn	03 02 01.5	+0.4
LBFM	Black Fox Moun	2.33	61		Pn	03 02 02.9	+1.0
HATC	Hat Creek Radi	2.46	76		Pn	03 02 04.5	+0.9
ORV	Oroville	2.48	105	Pn	Pn	03 02 04.5	+0.6
LGMM	Garner Mountai	2.49	56		Pn	03 02 04.5	+0.4
LTIM	Timbered Crate	2.54	68		Pn	03 02 05.1	+0.4
LBCM	Butte Creek Ri	2.54	76		Pn	03 02 05.9	+1.0
M04C	Macdoel	2.59	53		Pn	03 02 06.0	+0.6
M04C	Macdoel	2.59	53	P	Pn	03 02 06.1	+0.7
	baz=234						
L04D	Klamath Falls	2.62	41		Pn	03 02 07.3	+1.5
L04D	Klamath Falls	2.62	41	P	Pn	03 02 07.4	+1.5
	baz=222,SNR=20						
HUMO	Hull Mountain	2.66	27	Pn	Pn	03 02 07.3	+1.0
AFDM	Forest Hills D	3.09	114	Pn	Pn	03 02 14.2	+2.0
BEKR	Beckworth	3.28	95		Pn	03 02 16.6	+1.7
RUBR	Rubicon Trail	3.63	108	Pn	Pn	03 02 20.8	+0.9
MOD	Modoc Plateau	3.64	62	Pn	Pn	03 02 19.2	-0.7
J05D	Fort Rock, OR	3.94	39	P	Pn	03 02 25.4	+1.5
	baz=220						
J05D				S	Sn	03 03 10.3	+0.5
	baz=220						
PNTR	Pine Nut	4.03	105	Pn	Pn	03 02 26.2	+0.8
YERR	Yerington	4.33	105	Pn	Pn	03 02 30.7	+1.3
BJOM	Mount Johnson	4.45	143		Pb	03 02 39.9	-1.9
PINE	Pine Mountain	4.46	36		Pn	03 02 31.9	+0.6

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*IDC **02** 03:34:25.9±0.6, 44°.35N×34°.39E, h0^{km}, mb3.4/8, mb1 3.5/15, mb1mx3.4/48, mbtmp3.4/15, ML3.3/7, MS2.7/1, Ms1 2.7/1, ms1mx2.0/47, Error ellipse: s-maj=10.7km s-min=7.0km az=18.0*

*MOS **02** 03:34:25.8±1.1, 44°.31N×34°.25E, h11^{km}, mb3.8/1, Error ellipse: s-maj=6.0km s-min=5.1km az=113.4*

*NEIC **02** 03:34:27.4±1.9, 44°.31N±0°.05×34°.39E±0°.08, h10^{km}±1^{km}, ML4.1(ISK), Error ellipse: s-maj=8.7km s-min=6.7km az=82.0*

*SIGU **02** 03:34:28.3, 44°.30N×34°.33E, h28^{km}, mb3.5*

ISC 02 03:34:28.6±0.9**, 44°.28N**±0°.04×**34°.31E**±0°.03**, h26**^{km}±6^{km}**, n138, σ1^{s}.76**/174**, mb3.4**/8**, 58C-31D, Crimea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YAL	Yalta	0.23	331	⇑*i*Pg	Pb	03 34 34.6	-0.2
	baz=327						
YAL				⇓*i*Pg	Pn	03 34 34.8	-1.6
	baz=327						
YAL				*e*Sg	Sb	03 34 39.4	+0.3
	baz=327						
YAL	Yalta	0.23	331	⇑*i*P	Pb	03 34 34.6	-0.2
YAL				*e*		03 34 39.4	
ALU	Alushta	0.41	9	⇑*i*Pg	Pb	03 34 37.3	0.0
	baz=8.0						
ALU				Pgm		03 34 37.6	
	baz=8.0						
ALU				*e*Sg	Sb	03 34 43.4	+0.1
	baz=8.0						
ALU	Alushta	0.41	9	⇑*i*P	Pb	03 34 37.3	0.0
ALU				*e*		03 34 43.4	
SEVA	Sevastopol	0.52	299	⇓P	Pb	03 34 37.4	-1.7
SEVA				⇑S	Sb	03 34 45.7	-0.6
SEV	Sevastopol'	0.53	300	⇓*i*Pg	Pb	03 34 39.1	-0.3
	baz=299						
SEV				Pgm		03 34 39.4	
	baz=299						
SEV				*e*Sg	Sb	03 34 47.3	+0.6
	baz=299						
SEV	Sevastopol'	0.53	300	⇓*i*P	Pb	03 34 39.1	-0.3
SEV				*e*		03 34 47.3	
SIM	Simferopol'	0.68	348	⇓*i*Pg	Pb	03 34 41.5	-0.4
	baz=347						
SIM				Pgm		03 34 42.4	
	baz=347						
SIM				*e*Sg	Sb	03 34 51.6	+0.6
	baz=347						
SIM				Sgm		03 34 52.2	
	baz=347						
SIM				Sgm		03 34 52.2	
	baz=347						
SIM	Simferopol'	0.68	348		Pn	03 34 42.8	+0.2
SIM	Simferopol'	0.68	348	*e*P	Pn	03 34 42.9	+0.3
SIM				*e*		03 34 52.4	
SIM				pmax	pmax		
	comp=Z,751nm,0.2s						
SIM				smax	smax		
	comp=E,3µm,0.3s						
SIM				smax	smax		
	comp=N,2µm,0.1s						
SUDU	Sudak	0.78	39	⇑*i*Pg	Pb	03 34 43.1	-0.5
	baz=39						
SUDU				Pgm		03 34 43.3	
	baz=39						
SUDU				*e*Sg	Sb	03 34 54.3	+0.5
	baz=39						
SUDU	Sudak	0.78	39	⇑*i*P	Pb	03 34 43.1	-0.5
SUDU				*e*		03 34 54.3	
FEO	Feodosiya	1.06	46	⇓*i*Pg	Pb	03 34 48.8	+0.4
	baz=47						
FEO				Pgm		03 34 49.0	
	baz=47						
FEO				*e*Sg	Sb	03 35 03.8	+1.9
	baz=47						
FEO				Sgm		03 35 05.2	
	baz=47						
FEO				Sgm		03 35 05.2	
	baz=47						
FEO	Feodosiya	1.06	46	⇓*i*P	Pb	03 34 48.8	+0.4
FEO				*e*		03 35 03.8	
TARU	Tarkhankut	1.68	311	*e*Pn	Pb	03 34 58.5	-0.2
	baz=311						
TARU				*e*Sn	Sb	03 35 20.6	+1.2
	baz=311						
ANN	Anapa	2.29	76	*e*Pn	Pn	03 35 04.8	+0.2
	baz=74						
ANN				Pnm		03 35 05.4	
	baz=74						
ANN				*e*Sn	Sn	03 35 30.8	-1.1
	baz=74						
ANN				Snm		03 35 31.5	
	baz=74						
ANN				Snm		03 35 32.6	
	baz=74						
ANN	Anapa	2.29	76		Pn	03 35 05.1	+0.5
ANN	Anapa	2.29	76	*e*P	Pn	03 35 04.8	+0.2
ANN				*i*		03 35 32.3	
ANN				pmax	pmax		
	comp=N,6.0nm,0.3s						
ANN				pmax	pmax		
	comp=E,8.0nm,0.3s						
ANN				pmax	pmax		
	comp=Z,37nm,0.3s						
BZK	Bozkurt	2.33	186	*e*Pn	Pn	03 35 06.3	+1.1
	baz=186						
BZK	Bozkurt	2.33	186	⇑P	Pn	03 35 06.2	+1.0
BZK				⇓S	Sn	03 35 32.3	-0.6
BZK	Bozkurt	2.33	186	Pn	Pn	03 35 06.0	+0.8
DIKM	Dikmen	2.72	165	*e*Pn	Pn	03 35 12.7	+2.1
	baz=166						
DIKM	Dikmen	2.72	165	⇑P	Pn	03 35 11.4	+0.8
DIKM				⇓S	Sn	03 35 41.7	-0.9
ILGA	Ilgaz	3.26	188	Pn	Pn	03 35 17.5	-0.6
KDZE	Karadeniz Ereo	3.64	216	⇓P	Pn	03 35 24.6	+1.4
KDZE				⇓S	Sn	03 36 05.1	-0.3
JURR	Jurilovca	3.92	279	⇑P	Pn	03 35 28.7	+1.7
SOC	Sochi	3.96	98	*e*Pn	Pn	03 35 29.0	+1.3
	baz=99						
SOC	Sochi	3.96	98	*e*P	Pn	03 35 29.0	+1.3
SOC				*e*		03 36 12.6	
SOC				pmax	pmax		
	comp=Z,13nm,0.7s						
SOC				smax	smax		
	comp=N,70nm,0.4s						
SOC				smax	smax		
	comp=E,60nm,0.3s						
SOC				MLR	MLR		
	comp=Z,117nm,7.0s						
TLCR		4.02	285	⇑P	Pn	03 35 30.6	+2.2
TLCR				⇓S	Sn	03 36 15.3	+0.7
EFOR	EFORIE	4.09	269	⇑P	Pn	03 35 30.7	+1.3
EFOR				⇓S	Sn	03 36 16.1	-0.3
MANR	Mangalia	4.15	266	⇓P	Pn	03 35 31.2	+1.0
MANR				⇑S	Sn	03 36 16.7	-1.2
MFTR	Murfatlar	4.24	271	⇑P	Pn	03 35 32.9	+1.5
MFTR				⇓S	Sn	03 36 19.5	-0.4
TOPG	Topolog	4.28	280	⇑P	Pn	03 35 34.1	+2.1
TOPG				⇓S	Sn	03 36 22.1	+1.0
MDUB	Mudurnu	4.45	212		Pn	03 35 36.3	+1.8
CFR	Carcaliu	4.49	284	⇓P	Pn	03 35 36.6	+1.8
CFR				⇓S	Sn	03 36 24.4	-1.8
GIUM	Giurgiulesti	4.50	288	⇑P	Pn	03 35 37.0	+2.0
CVDA	Cernavoda	4.50	273	⇓P	Pn	03 35 40.2	+5.1
CVDA				⇓S	Sn	03 36 28.1	+1.6
BR131	Keskin Array S	4.58	187		Pn	03 35 38.2	+1.9
BR131	Keskin Array S	4.58	187	*ce*P	Pn	03 35 38.4	+2.1
BRTR	Keskin Array B	4.58	187	Pn	Pn	03 35 38.3	+2.0
	comp=Z,0.7nm,0.3s,baz=332,slow=28,SNR=40						
BRTR				Sn	Sn	03 36 27.8	-0.9
	comp=Z,1.7nm,0.3s,baz=24,slow=14,SNR=5.8						
HARR	Harsova	4.58	277	⇑P	Pn	03 35 37.1	+0.9
ERBR	Yeremizino-Bor	4.61	70	⇑*e*P	Pn	03 35 39.0	+2.5
MILM	Milestii Mici	4.67	306	⇓P	Pn	03 35 39.4	+2.0
KIS	Kishinev	4.71	307	⇑P	Pn	03 35 39.9	+2.0
LEOM	Leova	4.80	299	⇑P	Pn	03 35 41.6	+2.5
LEOM				⇓S	Sn	03 36 34.3	+0.4
ARXR	Arkhyz	5.08	96	⇑*e*P	Pn	03 35 45.5	+2.4
BIR	Birlad	5.12	295	⇑P	Pn	03 35 46.2	+2.7
PETR	Petresti	5.22	288	⇑P	Pn	03 35 46.6	+1.7
GRER		5.33	284	⇓P	Pn	03 35 49.3	+2.8
ODBI	Odobesti	5.35	289	⇑P	Pn	03 35 49.3	+2.5
BISRR	Bisoca	5.55	286	⇑P	Pn	03 35 51.2	+1.7
IAS	Iasi	5.55	304	⇑P	Pn	03 35 51.2	+1.8
IAS				⇑S	Sn	03 36 52.7	+0.4
VRI	Vrincioaia	5.60	289	⇑P	Pn	03 35 52.8	+2.7
ISR	Istrita	5.60	281	⇑P	Pn	03 35 47.4	-2.8
PLOR	Plostina	5.65	289	⇑P	Pn	03 35 53.7	+2.8
SORM	Soroca	5.65	315	⇑P	Pn	03 35 52.2	+1.3
SORM				⇑S	Sn	03 36 53.1	-1.7
TESR	Tescani	5.84	295	⇑P	Pn	03 35 55.5	+2.0
TESR				⇑S	Sn	03 37 01.8	+2.3
SGRR	Singureni	5.99	272	⇑P	Pn	03 35 57.4	+1.9
KIV	Kislovodsk	6.04	90	⇑P	Pn	03 35 57.9	+1.7
KIV	Kislovodsk	6.04	90	Pn	Pn	03 35 56.1	-0.1
KIV					Sn	03 37 04.0	-0.5
KIV	Kislovodsk	6.04	90	*e*P	Pn	03 35 57.2	+1.0
KIV				*e*S	Sn	03 37 06.6	+2.1
KIV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KVAR	Kislovodsk Arr	6.04	90	Pn	Pn	03 35 57.6	+1.3
	baz=259,slow=23,SNR=1.3						
KVAR				Sn	Sn	03 37 03.0	-1.7
	baz=274,slow=16,SNR=7.6						
SHA1	Shidzhatmaz	6.04	92	⇑*e*P	Pn	03 35 57.2	+0.8
MLR	Muntele Rosu	6.07	284	Pn	Pn	03 35 58.7	+2.0
	comp=Z,2.2nm,0.3s,baz=20,slow=3.5,SNR=34						
MLR				Sn	Sn	03 37 07.5	+2.3
	comp=Z,1.2nm,0.3s,baz=148,slow=17,SNR=2.6						
MLR				LR	LR	03 38 53.9	
	comp=Z,75nm,21.6s,baz=97,slow=44						
MLR	Muntele Rosu	6.07	284	⇑P	Pn	03 35 59.5	+2.8
MLR				⇑S	Sn	03 37 07.9	+2.6
MLR	Muntele Rosu	6.07	284		Pn	03 35 59.5	+2.8
BCA	Borcka	6.07	115	⇑P	Pn	03 35 56.3	-0.4
BCA				⇓S	Sn	03 37 00.2	-5.1
GIRR	Girov	6.10	299	⇑P	Pn	03 35 59.6	+2.6
NEY	Neytrino	6.18	97	⇓*e*P	Pn	03 36 00.8	+2.6
NEY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KBZ	Khabaz	6.22	92	Pn	Pn	03 35 59.6	+1.0
	comp=Z,0.2nm,0.3s,baz=270,slow=8.5,SNR=8.7						
KBZ				Sn	Sn	03 37 09.7	+1.0
	comp=Z,1.7nm,0.3s,baz=79,slow=19,SNR=7.5						
ELND	Elena	6.27	260	⇑P	Pn	03 35 59.6	+0.2
ELND				⇑S	Sn	03 37 05.5	-4.7
GOF	Gofitskoye	6.27	80	⇑*e*P	Pn	03 35 59.9	+0.5
GOF				*e*S	Sn	03 37 09.8	-0.4
GOF				smax	smax		
	comp=E,82nm,0.8s						
GOF				smax	smax		
	comp=N,56nm,0.6s						
PRAR	RASCA	6.43	301	⇑P	Pn	03 36 05.2	+3.6
DOPR	Dopca	6.54	288	⇑P	Pn	03 36 05.1	+2.1
TKB	Tkibuli	6.62	104	P	Pn	03 36 05.6	+1.4
JOSR	Joseni	6.64	294	⇑P	Pn	03 36 07.0	+2.5
VOIR		6.69	283	⇓P	Pn	03 36 06.8	+1.7
ONI	Oni	6.87	101	P	Pn	03 36 09.2	+1.6
LSNR	Lesken	6.96	95	⇑*e*P	Pn	03 36 12.7	+3.9
ALN	Alexandroupoli	6.97	244	Pn	Pn	03 36 09.5	+0.5
ALN	Alexandroupoli	6.97	244	P	Pn	03 36 09.5	+0.5
BURAR	Bucovina Array	7.16	301	⇑P	Pn	03 36 13.0	+1.3
BURAR				⇑S	Sn	03 37 33.4	+1.2
BUR08	Bucovina Ar. S	7.18	301		Pn	03 36 13.8	+1.8
BKRG	Bakuriani	7.20	107	P	Pn	03 36 13.8	+1.5
AKASG	Malin Array Be	7.29	334	Pn	Pn	03 36 12.4	-0.8
	comp=N,3.8nm,0.3s,baz=58,slow=18,SNR=18						
AKASG				Sn	Sn	03 37 31.8	-3.2
	comp=N,9.7nm,0.3s,baz=146,slow=24,SNR=7.4						
AKASG	Malin Array Be	7.29	334	*i* P	Pn	03 36 12.5	-0.8
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.2s						
AKH	Akhalkalaki	7.33	110	⇓P	Pn	03 36 16.1	+2.0
AKH	Akhalkalaki	7.33	110		Pn	03 36 14.7	+0.6
AKH	Akhalkalaki	7.33	110	P	Pn	03 36 14.7	+0.6
LACR	Lac	7.40	98	*ce*P	Pn	03 36 17.7	+2.8
BTKR	Batakoyurt	7.45	93	⇑*e*P	Pn	03 36 16.3	+0.7
ARCR	ARCALIA	7.52	295	⇓P	Pn	03 36 18.9	+2.5
VSR	Storozhevoye	7.67	24	*e*P	Pn	03 36 17.7	-0.8
VSR				*e*S	Sn	03 37 42.5	-1.9
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSR				smax	smax		
	comp=N,30nm,0.8s						
TBLG	Delisi	8.05	105		Pn	03 36 25.0	+1.2
TBLG	Delisi	8.05	105	P	Pn	03 36 25.0	+1.2
VTS	Vitosha	8.23	262	⇑P	Pn	03 36 27.0	+0.6
VTS	Vitosha	8.23	262	Pn	Pn	03 36 28.4	+2.0
VTS	Vitosha	8.23	262	P	Pn	03 36 28.4	+2.0
BMR	Baia Mare	8.26	298	⇓P	Pn	03 36 29.0	+2.4
GZR	Gura Zlata	8.28	282	⇑P	Pn	03 36 28.7	+1.8
BLKB	Belogradchik	8.42	270	⇑S	Sn	03 37 58.8	-4.3
VRH	Novokhopyorsk	8.53	33	*e*P	Pn	03 36 30.1	-0.2
VRH				*e*S	Sn	03 37 59.8	-5.8
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VRH				smax	smax		
	comp=E,30nm,0.6s						
GNI	Garni	8.77	114	Pn	Pn	03 36 39.3	+5.5
	comp=E,0.3nm,0.3s,baz=319,slow=22,SNR=4.0						
GNI	Garni	8.77	114	⇑*e*P	Pn	03 36 38.4	+4.6
LPSR	Galich'ya Gora	8.87	19	*e*P	Pn	03 36 35.3	+0.4
LPSR				*e*S	Sn	03 38 15.8	+1.9
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LPSR				smax	smax		
	comp=N,20nm,0.6s						
TRPA	Tarpa	9.03	299	⇓P	Pn	03 36 39.5	+2.4
BZS	Buzias	9.10	283	⇑P	Pn	03 36 39.5	+1.3
UZH	Uzhgorod	9.37	302	*e*P	Pn	03 36 47.2	+5.5
KOLS	Kolonicke sedl	9.50	304	*e*P	Pn	03 36 44.9	+1.3
KOLS				*e*		03 38 27.6	
KOLS	Kolonicke sedl	9.50	304	*e*PN	Pn	03 36 44.9	+1.3
KOLS				*e*SN	Sn	03 38 27.6	-1.9
KWP	Kalwaria Pacla	9.57	308		Pn	03 36 45.4	+0.9
KWP	Kalwaria Pacla	9.57	308	P	Pn	03 36 45.4	+0.9
CRVS	Cervenica-Dubn	9.98	302	*e*P	Pn	03 36 50.6	+0.4
CRVS	Cervenica-Dubn	9.98	302	*e*PN	Pn	03 36 50.6	+0.4
VYHS	Vyhne	11.49	297	*e*P	Pn	03 37 13.0	+2.2
VYHS	Vyhne	11.49	297	*e*PN	Pn	03 37 13.0	+2.2
OJC	Ojcow	11.51	306		Pn	03 37 11.5	+0.4
OJC	Ojcow	11.51	306	P	Pn	03 37 11.5	+0.4
NACGM	Naroch	11.69	338	*e*	Pn	03 37 14.0	+0.5
SUW	Suwalki	12.15	327		Pn	03 37 18.8	-1.0
SUW	Suwalki	12.15	327	P	Pn	03 37 18.8	-1.0
KHC	Kasperske Hory	15.01	296	⇓*e*P	Pn	03 37 56.8	-2.1
KHC				pmax	pmax		
	comp=Z,10.0nm,1.7s						
AKTO	Aktyubinsk	17.16	61	Pn	Pn	03 38 22.2	-4.1
	comp=Z,0.3nm,0.3s,baz=269,slow=12,SNR=3.5						
FINES	FINESS Array B	17.87	347	Pn	Pn	03 38 31.4	-3.6
	comp=Z,0.3nm,0.3s,baz=156,slow=16,SNR=14						
FINES				Sn	Sn	03 41 34.1	-19
	comp=Z,0.3nm,0.3s,baz=160,slow=21,SNR=2.9						
FINES	FINESS Array B	17.87	347	*i* P	Pn	03 38 35.2	+0.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						

ABKAR	Akbulak array	18.21	65		Pn	03 38 39.0	-0.3
ARU	Arti	19.55	43	P	P	03 38 52.4	-1.6
	comp=Z,0.0nm,0.3s,baz=247,slow=10.0,SNR=3.2						
HFS	Hagfors	20.14	329	P	P	03 39 00.2	-0.3
	comp=Z,1.6nm,0.6s,baz=143,slow=13,SNR=10.0						
NOA	NORSAR Array B	21.66	329	P	P	03 39 16.9	0.0
	comp=Z,0.5nm,0.9s,baz=134,slow=11,SNR=1.2						
BVAR	Borovoye Array	25.15	57	P	P	03 39 52.1	+0.7
	comp=Z,0.5nm,0.6s,baz=251,slow=9.0,SNR=3.9						
ARCES	ARCESS Array B	25.71	353	P	P	03 39 57.0	+0.7
	comp=Z,1.6nm,0.9s,baz=172,slow=11,SNR=4.9						
ARCES	ARCESS Array B	25.71	353	P	P	03 39 57.0	+0.7
KURBB	Kurchatov Arra	30.20	62	P	P	03 40 36.9	+0.3
	comp=Z,0.1nm,0.3s,baz=271,slow=9.8,SNR=2.7						
KURK	Kurchatov	30.25	62	P	P	03 40 36.9	-0.1
MKAR	Makanchi Array	33.29	68	P	P	03 41 05.2	+1.4
	comp=Z,0.5nm,0.5s,baz=279,slow=8.1,SNR=12						
SPITS	Spitsbergen Ar	34.74	354	P	P	03 41 17.5	+1.4
	comp=Z,19nm,1.1s,baz=160,slow=13,SNR=2.0						
TORD	Torodi Ar. Bea	41.71	232	P	P	03 42 16.0	+0.7
	comp=Z,0.2nm,0.4s,baz=30,slow=9.0,SNR=5.7						
YKA	Yellowknife Ar	70.69	345	P	P	03 45 43.1	+1.6
	comp=Z,0.2nm,0.5s,baz=22,slow=6.6,SNR=3.7						

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*IDC **02** 03:37:57.2±0.7, 2°.80S×129°.37E, h0^{km}, mb4.5/12, mb1 4.5/14, mb1mx4.2/39, mbtmp4.4/14, ML4.2/2, MS3.4/6, Ms1 3.5/6, ms1mx3.1/37, Error ellipse: s-maj=26.3km s-min=14.3km az=69.0*

*DJA **02** 03:38:02.4±0.8, 3°S±3°×12°9E±°, h35^{km}±15^{km}, M4.5/14, mB5.6/1, mb4.7/5, MLv4.4/14, Mw(mB)5.1/1*

*NEIC **02** 03:38:03.0±0.9, 2°.82S±0°.06×129°.53E±0°.07, h45^{km}±4^{km}, mb4.4/28, Error ellipse: s-maj=10.4km s-min=9.1km az=84.0*

ISC 02 03:38:01.1±0.4**, 2°.80S**±0°.04×**129°.45E**±0°.04**, h28**^{km}**, n77, σ1^s.47**/83**, mb4.5**/22**, MS3.4**/4**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	Masohi	0.75	224	P	Pn	03 38 16.5	+0.7
MSAI				S	Sn	03 38 29.7	+3.4
AAI	Ambon	1.53	235	P	Pb	03 38 29.2	+0.4
BNDI	Bandanaira	1.77	165	P	Pb	03 38 33.3	+0.4
NLAI	Namlea	2.38	259	P	Pn	03 38 39.8	+1.4
SIJI	Sorong	2.65	43	Pn	Pn	03 38 42.6	+0.6
	83nm,0.3s,baz=51,slow=9.1,SNR=886						
SIJI				Sn	Sn	03 39 13.3	+0.1
	69nm,0.3s,baz=231,slow=22,SNR=10						
SIJI				LR	LR	03 39 57.4	
	comp=Z,580nm,19.2s,baz=235,slow=44						
FAKI	Fak Fak	2.80	92	P	Pn	03 38 44.7	+0.6
FAKI				S	Sn	03 39 16.6	-0.4
FAKI	Fak Fak	2.80	92		Pn	03 38 44.7	+0.6
LBMI	Labuha	2.90	318	P	Pn	03 38 44.9	-0.6
LBMI				S	Sn	03 39 18.5	-1.0
SANI	Sanana	3.54	282	P	Pn	03 38 52.3	-1.9
SANI				S	Sn	03 39 32.4	-2.8
TNTI	Ternate	4.12	330	P	Pn	03 39 01.2	-1.0
TNTI	Ternate	4.12	330	Pn	Pn	03 39 04.3	+2.1
RKPI	Ransiki, Papua	4.90	75	P	Pn	03 39 15.6	+2.6
KMSI	Cibinong	6.41	301	P	Pn	03 39 32.6	-1.2
	0.9nm107nm,0.6s						
KMSI				S	Sn	03 40 44.0	-2.1
	0.9nm107nm,0.6s						
LUWI	Luwuk	6.90	285	P	Pn	03 39 39.3	-1.2
	0.4nm4μm79nm,0.5s						
LUWI				S	Sn	03 40 56.8	-1.3
	0.4nm4μm79nm,0.5s						
BBSI	Bau Bau	7.36	249	P	Pn	03 39 47.1	+0.3
	0.0nm15nm,1.0s						
SOEI	Soe	8.61	216	Pn	Pn	03 40 06.6	+2.4
KAPI	Kappang	9.92	257	Pn	Pn	03 40 26.0	+4.1
	1.0nm,0.3s,baz=86,slow=6.3,SNR=10						
MTN	Manton Dam	10.11	171		Pn	03 40 26.3	+1.7
DAV	Davao City (W)	10.54	339	LR	LR	03 45 25.4	
	comp=Z,226nm,19.7s,baz=64,slow=43						
KNRA	Kununurra	12.81	183		Pn	03 41 01.5	0.0
FITZ	Fitzroy Crossi	15.65	194	Pn	Pn	03 41 38.5	-1.4
	0.5nm,0.3s,baz=32,slow=10,SNR=14						
FITZ	Fitzroy Crossi	15.65	194		Pn	03 41 40.6	+0.7
FITZ				IAmb	IAmb	03 41 53.2	
	comp=Z,40nm,1.6s						
JAGI	Jajag, Banyuwa	16.22	249	Pn	Pn	03 41 48.4	+1.1
JAGI				IAmb	IAmb	03 41 59.1	
	comp=Z,36nm,1.2s						
COEN	Coen	17.51	130		Pn	03 42 02.7	-0.8
WB0	Warramunga Arr	17.54	164		Pn	03 42 03.5	-0.3
WRA	Warramunga Arr	17.69	165	P	Pn	03 42 02.6	-3.1
	comp=Z,1.6nm,0.3s,baz=334,slow=12,SNR=21						
WRA				S	Sn	03 45 14.5	-7.7
	comp=Z,0.5nm,0.3s,baz=352,slow=40,SNR=3.2						
WB2	Warramunga Arr	17.70	165		Pn	03 42 06.3	+0.6
WR0	Warramunga Arr	17.76	164		Pn	03 42 06.4	-0.1
SBUM	Sibu	18.00	287	P	P	03 42 10.9	+1.2
KSM	Kuching	19.60	282	P	Pn	03 42 28.1	-0.7
MBWA	Marble Bar	20.55	207		pP	03 42 52.5	+7.2
PSA00	Pilbara Seismi	20.86	206	P	P	03 42 41.4	+0.3
PSA00				IAmb	IAmb	03 42 52.9	
	comp=Z,25nm,1.2s						
AS31	Alice Springs	21.18	169	P	P	03 42 44.6	0.0
AS31				IAmb	IAmb	03 42 45.9	
	comp=Z,9.0nm,0.6s						
ASAR	Alice Springs	21.18	169	P	P	03 42 44.3	-0.2
	comp=Z,27nm,0.6s,baz=346,slow=9.0,SNR=305						
ASAR				S	S	03 46 35.2	-3.7
	comp=Z,2.1nm,0.8s,baz=349,slow=19,SNR=5.2						
CTA	Charters Tower	23.75	138	P	P	03 43 12.0	+0.7
	comp=Z,8.4nm,1.1s,baz=326,slow=14,SNR=5.1						
IPM	Ipoh	29.31	284	P	P	03 44 03.0	+1.4
IPM				IAmb	IAmb	03 44 04.6	
	comp=Z,8.4nm,0.8s						
RPSI	Rantau Prapat	31.00	280	P	P	03 44 17.1	+0.5
RPSI	Rantau Prapat	31.00	280	P	P	03 44 17.1	+0.5
PSI	Prapat	31.02	280	P	P	03 44 17.1	+0.2
	comp=Z,8.4nm,0.6s,baz=115,slow=6.8,SNR=14						
STKA	Stephens Creek	31.10	160	P	P	03 44 17.4	+0.1
	comp=Z,1.1nm,0.4s,baz=333,slow=12,SNR=5.8						
STKA				LR	LR	03 58 21.2	
	comp=Z,188nm,18.1s,baz=2.7,slow=39						
NWAO	Narrogin (SRO)	32.08	200	P	P	03 44 25.2	-0.6
	comp=Z,12nm,1.1s,baz=40,slow=3.3,SNR=3.9						
NWAO	Narrogin (SRO)	32.08	200	IAmb	IAmb	03 44 25.5	
	comp=Z,41nm,1.4s						
CMAR	Chiang Mai Arr	36.72	306	P	P	03 45 06.3	+0.1
	comp=Z,0.6nm,0.3s,baz=140,slow=7.7,SNR=5.7						
CMAR				LR	LR	04 01 17.1	
	comp=Z,32nm,21.0s,baz=154,slow=38						
CHTO	Chiang Mai	36.91	307	P	P	03 45 08.4	+0.6
KSRS	Korea Array	40.08	358	LR	LR	04 03 49.7	
	comp=Z,30nm,18.2s,baz=172,slow=39						
SHL	Shillong	46.03	310	P	P	03 46 23.1	+0.3
LSA	Lhasa	48.85	314	P	P	03 46 45.5	+0.5
LSA				IAmb	IAmb	03 46 47.1	
	comp=Z,4.1nm,0.7s						
TAPN	Taplejung	50.15	310	*e*P	P	03 46 55.3	+0.5
ODAN	Odare	50.16	309	*e*P	P	03 46 55.2	+0.4
	comp=Z,18nm,0.7s						
RAMN	Ramite	50.82	308	*e*P	P	03 47 00.5	+0.7
	comp=Z,28nm,0.6s						
JIRN	Jiri	51.48	309	*e*P	P	03 47 05.3	+0.4
	comp=Z,18nm,0.7s						
GUN	Gumba	51.84	309	*e*P	P	03 47 07.9	+0.3
	comp=Z,20nm,0.6s						
PKI	Pulchoki	52.05	309	*e*P	P	03 47 09.1	0.0
	comp=Z,3.5nm,0.4s						
DMN	Daman	52.30	308	*e*P	P	03 47 11.1	+0.2
GKN	Gorkha	52.85	309	*e*P	P	03 47 15.2	+0.4
DANN	Dangsing	53.70	309	*e*P	P	03 47 21.3	+0.1
	comp=Z,36nm,0.7s						
SONM	Songino Array	54.32	341	P	P	03 47 25.4	+0.2
	comp=Z,0.2nm,0.4s,baz=141,slow=7.4,SNR=3.1						
SONM				PcP	PcP	03 48 30.1	+1.1
	comp=Z,0.4nm,0.8s,baz=156,slow=1.2,SNR=3.5						
MK31	Makanchi Array	64.45	326	P	P	03 48 34.9	-0.2
MKAR	Makanchi Array	64.45	326	P	P	03 48 35.2	+0.1
	comp=Z,2.1nm,0.6s,baz=122,slow=8.2,SNR=35						
MKAR				PcP	PcP	03 49 08.9	-0.3
	comp=Z,1.4nm,0.8s,baz=121,slow=5.7,SNR=5.4						
MAKZ	Makanchi	64.63	326	P	P	03 48 36.0	-0.3
MAKZ				IAmb	IAmb	03 48 37.1	
	comp=Z,2.1nm,0.6s						
ZAA0	Zalesovo Array	67.61	333	P	P	03 48 55.0	-0.2
ZAA0				IAmb	IAmb	03 48 55.6	
	comp=Z,4.0nm,0.8s						
ZALV	Zalesovo Beam	67.61	333	P	P	03 48 54.2	-1.0
	comp=Z,3.0nm,0.7s,baz=97,slow=5.4,SNR=13						
KURBB	Kurchatov Arra	68.68	328	P	P	03 49 02.4	+0.5
	comp=Z,5.1nm,0.7s,baz=128,slow=5.7,SNR=45						
KURK	Kurchatov	68.68	328	P	P	03 49 02.1	+0.1
KK31	Karatay Array	69.86	318	P	P	03 49 09.5	0.0
KK31				IAmb	IAmb	03 49 38.4	
	comp=Z,7.4nm,1.8s						
KKAR	Karatay Array	69.86	318	P	P	03 49 09.6	+0.1
KKAR				IAmb	IAmb	03 49 38.4	
	comp=Z,7.4nm,1.8s						
BVAR	Borovoye Array	74.25	327	P	P	03 49 35.7	+0.1
	comp=Z,2.7nm,0.8s,baz=134,slow=8.5,SNR=15						
BRVK	Borovoye	74.32	327	P	P	03 49 36.0	+0.1
BRVK				IAmb	IAmb	03 49 37.2	
	comp=Z,4.1nm,0.8s						
TIXI	Tiksi	74.32	360	P	P	03 49 35.4	-0.2
ABKAR	Akbulak array	78.91	321	P	P	03 50 02.1	+0.1
ABKAR				IAmb	IAmb	03 50 07.0	
	comp=Z,2.9nm,0.6s						
RAYN	Ar Rayn	85.56	294	P	P	03 50 37.9	+0.4
BRLK	Bradley Lake	87.20	30	P	P	03 50 44.0	-0.7
BRTR	Keskin Array B	96.25	309	P	P	03 51 27.1	-0.3
	comp=Z,0.7nm,0.9s,baz=46,slow=5.3,SNR=3.9						
ARCES	ARCESS Array B	97.48	340	P	P	03 51 32.1	0.0
	comp=Z,1.9nm,0.8s,baz=77,slow=6.4,SNR=4.1						
AKASG	Malin Array Be	98.64	321	LR	LR	04 39 02.2	
	comp=Z,26nm,21.9s,baz=0.0,slow=37						
CPUP	Villa Florida	150.31	168	PKPbc	PKiKP	03 57 51.9	+0.5
	comp=Z,3.4nm,0.6s,baz=190,slow=1.5,SNR=16						
CPUP	Villa Florida	150.31	168		PKiKP	03 57 52.1	+0.8

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*JMA **02** 04:05:32.6±0.1, 25°.03N×123°.59E, h20^{km}, M3.0*

*IDC **02** 04:05:34.5±1.4, 25°.46N×123°.52E, h0^{km}, mb3.4/5, mb1 3.5/5, mb1mx3.3/53, mbtmp3.4/5, MS2.3/1, Ms1 2.3/1, ms1mx2.1/40, Error ellipse: s-maj=63.8km s-min=27.3km az=62.0*

ISC 02 04:05:31.7±3.0**, 25°.0N**±0°.1×**123°.60E**±0°.05**, h1**^{km}±25^{km}**, n14, σ0^s.55**/17**, mb3.3**/5**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.71	170	P	Pg	04 05 46.0	+0.6
IRIF				S	Sg	04 05 55.1	+0.4
YOJ	Yonaguni jima	0.79	223	P	Pg	04 05 47.0	+0.2
YOJ				*e*S	Sg	04 05 56.7	-0.3
JISG	Ishigakijimahi	0.79	125	P	Pg	04 05 47.2	+0.3
JIJ	Ishigaki jima	0.84	144	P	Pg	04 05 48.1	+0.3
JIJ				*e*S	Sg	04 05 58.5	-0.1
JYNG	Yonagunijimaku	0.84	225	P	Pg	04 05 48.1	+0.3
JKRS	Kuro-shima	0.88	155	P	Pg	04 05 48.8	+0.1
JKRS				*e*S	Sg	04 06 00.4	+0.3
HATJ	Hateruma jima	1.00	169	P	Pg	04 05 50.9	0.0
HATJ				S	Sg	04 06 03.7	-0.1
JTJ	Tarama	1.08	112	P	Pb	04 05 52.3	-0.9
KSRS	Korea Array	12.91	16	LR	LR	04 13 17.4	
	comp=Z,12nm,19.6s,baz=5.0,slow=37						
SONM	Songino Array	26.51	333	P	P	04 11 11.6	+0.8
	0.2nm,0.6s,baz=150,slow=12,SNR=2.2						
MKAR	Makanchi Array	39.28	314	P	P	04 13 01.1	-1.0
	0.5nm,0.6s,baz=103,slow=9.6,SNR=7.2						
KURBB	Kurchatov Arra	42.90	319	P	P	04 13 31.8	+0.1
	0.4nm,0.4s,baz=109,slow=8.6,SNR=5.3						
ASAR	Alice Springs	49.44	168	P	P	04 14 29.9	+6.3
	0.2nm,0.4s,baz=348,slow=8.0,SNR=4.4						
YKA	Yellowknife Ar	81.32	24	P	P	04 17 50.1	+0.5
	0.1nm,0.3s,baz=302,slow=4.1,SNR=3.7						

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*IDC **02** 04:11:47.9±1.1, 28°.20N×57°.30E, h0^{km}, mb3.7/9, mb1 3.7/11, mb1mx3.5/48, mbtmp3.7/11, ML3.3/2, MS2.8/4, Ms1 2.8/4, ms1mx2.6/54, Error ellipse: s-maj=23.7km s-min=22.0km az=98.0*

*TEH **02** 04:11:51.0, 28°.26N×57°.37E, h11^{km}, ML3.5*

*OMAN **02** 04:11:52.9±0.4, 28°.06N×57°.73E, h25^{km}, ml3.4/10, Error ellipse: s-maj=9.4km s-min=1.9km az=91.0*

*THR **02** 04:11:56.8±0.6, 28°.33N×57°.17E, h14^{km}±9^{km}, ML3.5*

ISC 02 04:11:51.9±0.7**, 28°.12N**±0°.03×**57°.45E**±0°.04**, h10**^{km}**, n55, σ1^s.97**/57**, mb3.6**/9**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNJ	Kahnooj	0.29	127	*e*Pg	Pg	04 11 59.0	+1.3
NIAN	Nian	0.78	224	*e*Sg	Sg	04 12 20.5	+3.5
NIAN				*e*Pg	Pg	04 12 08.1	+1.2
GENO	Geno	1.34	238	*e*Pn	Pn	04 12 16.8	0.0
GENO				*e*Sg	Sb	04 12 36.0	+1.6
GENO				*e*		04 12 37.3	
NGRK	Negar Kerman	1.64	338	*e*Pn	Pn	04 12 18.5	-2.6
NGRK				*e*		04 12 45.9	
CHMN	Cheshme madani	1.73	3	*e*Pn	Pn	04 12 20.6	-1.8
CHMN				*e*		04 12 43.7	
KRBR	Kerman	1.95	342	*e*Pg	Pn	04 12 27.5	+2.2
KRBR				*e*Sg	Sn	04 12 50.7	+0.7
KRBR				IAML		04 13 03.7	
	comp=E,483nm,0.3s						
KRBR	Kerman	1.95	342	*e*Pg	Pn	04 12 27.5	+2.2
TVBK	TV Kerman	1.95	342	*e*Pn	Pn	04 12 24.4	-1.0
TVBK				*e*		04 12 30.9	
SHME	Shamm	2.37	210	*e*Pn	Pn	04 12 30.5	-0.3
KHGB	Koh Gabri	2.40	340	*e*Pn	Pn	04 12 30.7	-0.7
KHGB				*e*		04 13 09.2	
BANOM	Banah	2.42	205	P	Pn	04 12 31.8	+0.3
	SNR=13						
BANOM				S	Sn	04 13 03.5	+2.3
BANOM	Banah	2.42	205	*e*Pn	Pn	04 12 31.5	0.0
MSFE	Esma-Masafi	2.98	203	*e*Pn	Pn	04 12 40.6	+1.3
MDH	Madha	2.99	200	P	Pn	04 12 39.6	+0.2
MDH	Madha	2.99	200	*e*Pn	Pn	04 12 38.8	-0.6
UMQ	Umm Al-Quwin	3.04	212	P	Pn	04 12 41.9	+2.0
ZHSF	Zahedan	3.28	62	*e*Pn	Pb	04 12 52.1	+1.9
ZHSF				*e*Sg	Sg	04 13 42.8	+5.7
SZD1	Zahaedan-tmp	3.29	65	*e*Pn	Pn	04 12 45.4	+1.7
UOSS	Minazif	3.35	200	P	Pn	04 12 44.9	+0.6
UOSS				S	Sn	04 13 24.1	-0.2
UOSS	Minazif	3.35	200	*e*Pn	Pn	04 12 44.6	+0.2
HATD	Hatta, Dubai	3.49	200	P	Pn	04 12 46.1	-0.1
HATD				S	Sn	04 13 29.1	+1.5
HATD	Hatta, Dubai	3.49	200	*e*Pn	Pn	04 12 47.3	+1.1
ASHO	Ashiyiah	3.64	200	P	Pn	04 12 50.3	+2.0
	SNR=16						
ASHO	Ashiyiah	3.64	200	*e*Pn	Pn	04 12 48.7	+0.3
IBAF	Bafgh	3.82	335	*e*Pn	Pn	04 12 52.3	+1.4
NHDN	Nehbandan	3.97	34	*e*Pn	Pn	04 12 52.9	0.0
SOHO	SOHO	4.05	192	P	Pn	04 12 52.9	-1.2
	SNR=9.3						
SOHO	SOHO	4.05	192	*e*Pn	Pn	04 12 52.8	-1.2
IKOO	Kooshah	4.50	17	*e*Pn	Pn	04 13 02.0	+1.7
HOQ	Hoqain	4.52	182	P	Pn	04 12 60.0	-0.5
BIDO	Bidbid	4.62	172	*e*Pn	Pn	04 13 00.9	-0.9
YZKH	Yazd	4.92	331	*e*Pn	Pn	04 13 08.6	+2.7
YZKH	Yazd	4.92	331	*e*Pn	Pn	04 13 08.6	+2.7
TPRV	Parvadeh(Tabas	4.93	353	*e*Pn	Pn	04 13 06.2	0.0
WSAR	Wadi Sarin	4.98	167	Pn	Pn	04 13 06.4	-0.3
	comp=E,2.5nm,0.3s,baz=7.3,slow=11,SNR=16						
WSAR				Sn	Sn	04 14 01.1	-3.3
	comp=E,2.3nm,0.3s,baz=78,slow=21,SNR=10.0						
WSAR				LR	LR	04 15 54.4	
	comp=E,28nm,18.6s,baz=346,slow=48						
WSAR	Wadi Sarin	4.98	167	P	Pn	04 13 06.8	+0.1
WSAR				S	Sn	04 14 01.8	-2.6
ISAD	Sadrabad	4.99	320	*e*Pn	Pn	04 13 05.6	-1.5
IMON	Monand	5.40	20	*e*Pn	Pn	04 13 14.5	+1.8
TKDS	Koohdasht(Taba	5.48	357	*e*Pn	Pn	04 13 13.8	+0.1
TABS	Tabas	5.52	357	*e*Pn	Pn	04 13 17.6	+3.5
TABS	Tabas	5.52	357	*e*Pn	Pn	04 13 17.7	+3.5
KLNJ	Kolanjah	5.85	301	*e*Pn	Pn	04 13 19.4	+0.4
GEYT	Alibeck	9.80	3	LR	LR	04 18 26.2	
	comp=E,47nm,21.2s,baz=35,slow=41						
GNI	Garni	15.93	322	LR	LR	04 22 20.3	
	comp=E,35nm,21.3s,baz=89,slow=40						
KBZ	Khabaz	19.48	327	P	P	04 16 13.9	-4.9
	comp=E,0.1nm,0.3s,baz=164,slow=18,SNR=2.4						
AKTO	Aktyubinsk	22.29	1	P	P	04 16 47.9	-1.3
	comp=E,2.9nm,0.6s,baz=173,slow=10,SNR=12						
BRTR	Keskin Array B	22.82	307	P	P	04 16 52.1	-3.0
	comp=E,1.5nm,0.9s,baz=134,slow=11,SNR=7.8						
BVAR	Borovoye Array	26.66	18	P	P	04 17 27.4	-3.3
	comp=E,0.8nm,0.6s,baz=201,slow=7.6,SNR=6.6						
MKAR	Makanchi Array	26.95	40	P	P	04 17 29.3	-4.2
	comp=E,0.3nm,0.7s,baz=224,slow=8.5,SNR=4.0						
KURBB	Kurchatov Arra	27.57	30	P	P	04 17 36.6	-2.4
	comp=E,0.7nm,0.7s,baz=227,slow=8.9,SNR=6.3						
ZALV	Zalesovo Beam	32.66	30	P	P	04 18 22.1	-1.9
	comp=E,1.2nm,0.3s,baz=250,slow=10,SNR=6.3						
FINES	FINESS Array B	39.32	337	P	P	04 19 17.7	-3.2
	comp=E,0.6nm,0.8s,baz=114,slow=12,SNR=1.4						
DAVOX	Davos/Dischmat	41.39	310	LR	LR	04 38 29.2	
	comp=E,35nm,18.6s,baz=109,slow=39						
TORD	Torodi Ar. Bea	53.83	266	P	P	04 21 10.8	-4.4
	comp=E,0.4nm,0.6s,baz=70,slow=7.0,SNR=5.7						
WRA	Warramunga Arr	88.31	114	P	P	04 24 43.0	-1.1
	comp=E,0.4nm,0.8s,baz=316,slow=3.9,SNR=2.1						

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*ANF **02** 04:21:45.4±0.3, 35°.66N×97°.07W, h0^{km}, ML4.1/11, Error ellipse: s-maj=4.7km s-min=1.8km az=158.0*

*NEIC **02** 04:21:45.5±2.9, 35°.63N±0°.02×97°.08W±0°.02, h1^{km}±3^{km}, Error ellipse: s-maj=3.0km s-min=1.9km az=148.0*

*TUL **02** 04:21:46.1±2.2, 35°.64N±0°.02×97°.04W±0°.02, h4^{km}±3^{km}, ML3.5, Error ellipse: s-maj=3.1km s-min=2.3km az=168.0*

ISC 02 04:21:44.7±0.6**, 35°.74N**±0°.03×**97°.03W**±0°.02**, h10**^{km}**, n81, σ2^s.47**/112**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK001	Jones High Sch	0.28	231	Pg	Pg	04 21 50.4	0.0
ADOK	Arcadia Dam	0.29	253		Pg	04 21 51.4	+0.7
OK009	Oakdale Elemen	0.36	244	Pg	Pg	04 21 51.2	-0.7
OKCSW	OKLAHOMA CITY	0.47	226		Pg	04 21 53.6	-0.4
OKCFA	Oklahoma City	0.47	227		Pg	04 21 53.7	-0.3
FNO	Franklin	0.57	213	Pg	Pg	04 21 55.7	-0.1
W35A	Tecumseh	0.60	168		Pg	04 21 56.0	-0.3
TUL1	Leonard	1.02	80	Pg	Pn	04 22 05.7	+0.6
TUL1				Sg	Sn	04 22 20.6	+1.1
TUL1	Leonard	1.02	80	P	Pn	04 22 05.6	+0.5
	baz=255						
TUL1				S	Sn	04 22 20.1	+0.7
	baz=255						
T35A	Sooner Cattle	1.25	19	Pn	Pg	04 22 10.4	+1.7
X34A	Smith Ranch, M	1.31	210	Pg	Pn	04 22 09.1	-0.1
U32A	Winter Ranch,	1.73	292		Pg	04 22 17.3	-0.6
U32A				Sn	Sg	04 22 39.2	-1.1
WMOK	Wichita Mounta	1.75	236		Pn	04 22 16.1	+0.9
WMOK				Sn	Sn	04 22 36.9	-0.6
WMOK	Wichita Mounta	1.75	236	P	Pn	04 22 16.0	+0.8
	baz=57						
WMOK				S	Sb	04 22 38.8	-0.2
	baz=57						
U38A	Gravette	2.25	71		Pb	04 22 25.5	0.0
Z35A	Perchaven, San	2.41	185		Pn	04 22 24.5	+0.3
W39A	Magazine	2.70	101		Pn	04 22 30.1	+1.9
W39A	Magazine	2.70	101	P	Pn	04 22 30.7	+2.5
	baz=280						
W39A				S	Sb	04 23 05.0	-1.4
	baz=280						
Z38A	Mt. Pleasant	2.99	145	Pn	Pn	04 22 33.2	+1.0
MIAR	Mount Ida	3.07	112		Pn	04 22 35.6	+2.4
MIAR	Mount Ida	3.07	112	P	Pn	04 22 35.6	+2.4
	baz=292						
KSU1	Kansas State U	3.37	6	P	Pn	04 22 40.8	+3.3
	baz=186						
U40A	Yellville	3.44	78		Pn	04 22 40.9	+2.6
S39A	Bolivar	3.56	56		Pn	04 22 42.7	+2.7
S39A				Sg	Sg	04 23 38.8	-0.1
X40A	Basin Creek Fa	3.66	109		Pn	04 22 43.1	+1.8
X40A				Sg	Sg	04 23 39.6	-2.5
WHTX	Lake Whitney,	3.75	186	Pn	Pn	04 22 43.0	+0.3
WHTX				Pg	Pb	04 22 50.4	-0.7
WHTX	Lake Whitney,	3.75	186	P	Pn	04 22 43.6	+0.8
	baz=5.3						
CBKS	Cedar Bluff	3.76	326	Pn	Pn	04 22 45.1	+2.3
CBKS				Pg	Pg	04 22 55.9	-0.8
CBKS					LR	04 23 46.5	
CBKS	Cedar Bluff	3.76	326	P	Pn	04 22 46.5	+3.7
	baz=145						
ABTX	Abilene, Hawle	3.79	216	Pn	Pn	04 22 43.5	+0.3
ABTX				Pg	Pb	04 22 53.9	+2.1
ABTX	Abilene, Hawle	3.79	216	S	Sn	04 23 28.4	+0.6
	baz=35						
WLAR	White Oak Lake	3.82	121	Pn	Pn	04 22 45.4	+1.8
237A	Washetta, Mont	3.86	164	Pn	Pn	04 22 44.2	0.0
AMTX	Amarillo	3.90	259		Pn	04 22 47.1	+2.3
AMTX				Pg	Pg	04 22 57.8	-1.7
AMTX				Sg	Sg	04 23 46.4	-3.6
AMTX	Amarillo	3.90	259	P	Pn	04 22 47.4	+2.5
	baz=77						
W41B	Gary Mavity, V	3.94	97		Pn	04 22 47.4	+2.1
W41B				Sg	Sg	04 23 48.8	-2.4
W41B	Gary Mavity, V	3.94	97	P	Pn	04 22 48.0	+2.7
	baz=278						
W41B				S	Sn	04 23 34.8	+3.3
	baz=278						
UALR	University of	3.95	103	Pn	Pn	04 22 47.5	+2.1
UALR				Pg	Pb	04 22 56.9	+2.4
UALR				Sg	Sg	04 23 49.1	-2.5
FCAR	Ozark Folk Cen	3.98	86	Pn	Pn	04 22 47.9	+2.0
FCAR					LR	04 23 52.0	
MGMO	Mountain Grove	4.09	68		Pn	04 22 50.8	+3.5
MGMO				Sg	Sg	04 23 55.1	-0.9
Z41A	Richland Creek	4.28	124	Pn	Pn	04 22 50.7	+0.8
NATX	Nacogdoches	4.43	153	Pn	Pn	04 22 51.8	-0.2
NATX					LR	04 24 05.2	
CCAR	Cane Creek	4.69	111	Pn	Pn	04 22 57.6	+2.1
LCAR	Lake Charles	4.78	84	Pn	Pn	04 22 58.7	+1.9
LCAR				Sg	Sg	04 24 13.0	-5.1
435B	Jarrell	4.96	186	Pn	Pn	04 22 59.2	-0.2
435B				Pg	Pb	04 23 15.3	+3.6
435B				Sg	Sb	04 24 15.5	+4.0
MSTX	Muleshoe	5.04	251	Pn	Pn	04 23 02.0	+1.5
MSTX				Pg	Pg	04 23 17.4	-4.0
MSTX				Sg	Sb	04 24 20.1	+6.2
MSTX	Muleshoe	5.04	251	S	Sn	04 23 58.9	0.0
	baz=69						
BGNE	Belgrade	5.73	351	S	Sn	04 24 16.8	+1.1
	baz=171						
HICK	Hickman	6.36	80	Sg	Sg	04 25 03.7	-5.1
OXF	Oxford	6.36	99		Pn	04 23 20.0	+1.5
OXF					LR	04 25 05.6	
OGNE	Ogallala	6.52	324	Pn	Pn	04 23 22.6	+1.8
OGNE				Sg	Sg	04 25 10.6	-3.4
S44A	Carbondale	6.54	70	Pn	Pn	04 23 22.8	+1.8
S44A				Sg	Sg	04 25 10.5	-4.1
UTMT	University of	6.64	82	Pn	Pn	04 23 24.0	+1.7
UTMT				Sg	Sg	04 25 11.9	-5.9
SCIA	State Center	6.84	25	Pn	Pn	04 23 29.0	+3.9
SCIA				Sg	Sg	04 25 22.4	-1.8
N41A	Harden Midland	6.94	43	Pn	Pn	04 23 29.7	+3.2
N41A				Sg	Sg	04 25 24.2	-3.3
SDCO	Great Sand Dun	7.09	289		Pn	04 23 31.8	+2.9
SDCO				Sg	Sg	04 25 26.1	-6.4
P43A	Skaggs, Pawnee	7.11	55	Sg	Sg	04 25 28.5	-4.4
Q24A	Divide	7.23	299	Pn	Pn	04 23 30.8	+0.1
Q24A				Sg	Sg	04 25 30.6	-6.1
PLAL	Pickwick Lake	7.35	93	Pn	Pn	04 23 32.9	+0.8
PLAL					LR	04 25 36.8	
WVT	Waverly	7.47	84	Pn	Pn	04 23 34.8	+1.0
WVT				Sg	Sg	04 25 38.9	-5.5
833A	Chaparral WMA,	7.66	196	Pn	Pn	04 23 36.4	0.0
HDIL	Hopedale	7.76	49	Pn	Pn	04 23 39.5	+1.7
HDIL					LR	04 25 52.5	
L40A	Anamosa	7.77	34		Pn	04 23 39.8	+2.0
ISCO	Idaho Springs	7.92	303		Pn	04 23 40.9	+0.7
ECSD	EROS Data Cent	7.99	2		Pn	04 23 42.4	+1.4
MNTX	Cornudas Mount	8.04	242	Pn	Pn	04 23 42.4	+0.8
O44A	Mansfield	8.07	54	Sg	Sg	04 26 00.5	-3.2
T47A	Sharon Grove	8.10	78	Pn	Pn	04 23 43.5	+1.1
L42A	Oliver, Polo	8.49	40	Pn	Pn	04 23 50.3	+2.6
TX31	Lajitas Ar. Si	8.50	223		Pn	04 23 49.1	+1.1
TX32	Lajitas Array	8.50	223		Pn	04 23 48.3	+0.3
PHWY	Pilot Hill	8.63	313	Pn	Pn	04 23 52.7	+2.8
N23A	Red Feather La	8.70	309		Pn	04 23 54.1	+3.3
LRAL	Lakeview Retre	8.71	105	Pn	Pn	04 23 53.2	+2.4
JFWS	Jewell Farm	8.88	34	Pn	Pn	04 23 55.2	+2.1
Z50A	Ashland	9.49	102	Pn	Pn	04 24 02.0	+0.5
I40A	Norwalk	9.52	29	Pn	Pn	04 24 03.1	+1.3
K43A	Burlington	9.68	41	Pn	Pn	04 24 06.3	+2.2
SPMN	Marine on St.	10.01	17		Pn	04 24 11.2	+2.7
I42A	Draeger Farm,	10.25	35	Pn	Pn	04 24 13.5	+1.6
E43A	Lone Tree Farm	13.03	32		Pn	04 24 50.6	+0.7

*THE **02** 04:24:46.6, 38.°24N×20.°37E, h12km, ML2.1/6, Error ellipse: s-maj=1.4km s-min=0.5km az=76.0*

*ATH **02** 04:24:47.1, 38.°27N×20.°39E, h7km±2km, ML2.5/1, Error ellipse: s-maj=2.4km s-min=0.8km az=229.0*

ISC 02 04:24:47.1±1.1, **38.°26N**±0.°02×**20.°41E**±0.°04, **h8**km±5km, **n25**, σ**0.s59**/46, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF4	Livadi, Kephal	0.02	107	P	Pg	04 24 48.4	-0.2
KEF4				S	Sg	04 24 49.5	-0.1
KEF1	Kardakata, Kep	0.05	74	P	Pg	04 24 48.9	0.0
KEF1				S	Sg	04 24 50.0	-0.2
LXRA	Lixouri, Kepha	0.07	158	P	Pg	04 24 49.3	+0.2
LXRA				S	Sg	04 24 50.7	+0.4
KEF3	Kipouria, Keph	0.07	217	P	Pg	04 24 49.2	0.0
KEF3				S	Sg	04 24 50.7	+0.1
ARGA	Argostoli. Kep	0.10	146	P	Pg	04 24 50.2	+0.6
ARGA				S	Sg	04 24 51.6	+0.4
KEF2	Argostoli. Kep	0.12	146	P	Pg	04 24 50.0	+0.2
KEF2				S	Sg	04 24 51.9	+0.4
VLS	Valsamata	0.17	120	P	Pg	04 24 50.8	+0.1
VLS				S	Sg	04 24 53.5	+0.4
	2µm,0.1s						
VLS	Valsamata	0.17	120	P	Pg	04 24 50.2	-0.4
VLS				S	Sg	04 24 53.4	+0.4
VLS				AML	AML	04 24 53.7	
	comp=N,4063µm,0.1s						
VLS				AML	AML	04 24 54.1	
	comp=E,4882µm,0.1s						
KONA	Konidatara, Ke	0.21	39	P	Pg	04 24 51.4	+0.1
KONA				S	Sg	04 24 54.7	+0.4
FSK	Fiskardo	0.23	32	P	Pg	04 24 51.7	-0.1
FSK				S	Sg	04 24 56.1	+1.1
	comp=E,400nm,0.3s						
FSK	Fiskardo	0.23	32	P	Pg	04 24 51.9	+0.1
FSK				S	Sg	04 24 55.6	+0.6
KFL	Anninata	0.34	117	P	Pg	04 24 53.8	0.0
KFL				S	Sg	04 24 59.3	+1.0
	comp=E,740nm,0.3s						
KFL	Anninata	0.34	117	P	Pg	04 24 53.9	0.0
KFL				S	Sb	04 24 59.7	-1.3
EVGI	Lefkada island	0.41	29	P	Pg	04 24 55.1	-0.1
EVGI				S	Sb	04 25 02.0	-1.0
EVGI	Lefkada island	0.41	29	P	Pg	04 24 55.0	-0.1
EVGI				S	Sg	04 25 00.9	+0.4
VLMS	Volimes, Zakyn	0.44	152	P	Pg	04 24 55.6	-0.1
VLMS				S	Sb	04 25 03.0	-0.8
MGNA	Meganis	0.50	38	P	Pg	04 24 56.2	-0.6
LKD2	Lefkada island	0.56	21	P	Pg	04 24 57.8	-0.2
LKD2				S	Sb	04 25 06.8	-0.7
PDO	Prodromos	0.70	61	P	Pg	04 25 00.2	-0.4
PDO				S	Sb	04 25 11.3	0.0
	comp=E,150nm,0.5s						
PDO	Prodromos	0.70	61	P	Pg	04 25 00.5	-0.1
PVO	Paravola	0.95	68	P	Pg	04 25 05.5	+0.2
PVO	Paravola	0.95	68	P	Pg	04 25 05.6	+0.2
DRO	Drossia	1.08	106	P	Pg	04 25 07.2	-0.6
DRO				S	Sg	04 25 21.7	-0.1
	comp=E,78nm,0.3s						
IGT	Igoumenitsa	1.27	357	P	Pg	04 25 11.8	+0.3
IGT				S	Sn	04 25 29.0	+0.5
	comp=E,32nm,2.1s						
TRIZ	Trizonia	1.32	85	P	Pn	04 25 11.2	-0.6
TRIZ				S	Sn	04 25 31.6	+2.1

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*ISK **02** 04:25:57.8, 36.°76N×35.°18E, h8km, ML4.1/38*

*MED_RC **02** 04:25:57.0±0.6, 36.°79N×35.°18E, h10km, MW4.2/8, Moment Tensor Solution.Mantle waves: s8,c9; Duration: 1.s0 Moment tensor: Scale 10^{15}Nm; M_{rr}2.29±.14; $M_{\theta\theta}$-2.10±.17; $M_{\phi\phi}$-0.18±.18; $M_{r\theta}$-0.29±.48; $M_{\theta\phi}$-0.14±.14; $M_{\phi r}$0.92±.46; Best double couple: $M_0$2.37000×10^{15} NP1:ϕ_s69.00000°, δ45.00000°, λ63.00000°. NP2: ϕ_s284.00000°, δ51.00000°, λ114.00000°. Principal axes: T 2.6100, Plg71.0000°, Azm258.0000°; N -0.4800, Plg18.0000°, Azm88.0000°; P -2.1200, Plg3.0000°, Azm357.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*IDC **02** 04:25:57.9±0.6, 36.°77N×35.°12E, h0km, mb4.0/17, mb1 4.0/26, mb1mx3.9/53, mbtmp3.9/26, ML3.7/9, MS3.4/16, Ms1 3.4/16, ms1mx3.2/50 Error ellipse: s-maj=13.2km s-min=9.9km az=85.0*

*MOS **02** 04:25:57.6±1.2, 36.°68N×35.°12E, h11km, mb4.3/15, Error ellipse: s-maj=8.7km s-min=5.5km az=89.1*

*NEIC **02** 04:25:58.0±3.3, 36.°62N±0.°04×35.°28E±0.°04, h10km±1km, Error ellipse: s-maj=8.0km s-min=4.1km az=329.0*

*DDA **02** 04:25:58.3, 36.°74N×35.°19E, h25km±1km, MW4.2*

*GII **02** 04:25:59.3±0.0, 36.°66N×34.°84E, h8km, mb4.1/1, MD3.9/1, Mm3.7/12*

*NIC **02** 04:26:02.3±0.0, 36.°58N×35.°33E, h16km±2km, Ml4.5/4*

ISC 02 04:25:58.9±0.9, **36.°73N**±0.°02×**35.°16E**±0.°01, **h6**km±6km, **n265**, σ**1.s83**/313, **mb4.0**/28, **MS3.4**/9, **18C-26D**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRTS	Karatas	0.23	132	PG	Pg	04 26 04.3	+0.9
KRTS				SG	Sg	04 26 07.5	+1.0
KRTS	Karatas	0.23	132	Pg	Pg	04 26 04.2	+0.7
KRTD	Karatas-Adana	0.25	123	PG	Pg	04 26 04.7	+1.0
KRTD	Karatas-Adana	0.25	123	Pg	Pg	04 26 04.6	+1.0
MERS	Mersin	0.53	285	PG	Pg	04 26 08.8	-0.3
MERS				SG	Sg	04 26 16.8	+0.8
MERS	Mersin	0.53	285	Pg	Pg	04 26 08.4	-0.6
KARA	Karaisali	0.54	351	PG	Pg	04 26 08.1	-1.1
KARA				SG	Sg	04 26 15.6	-0.6
KARA	Karaisali	0.54	351	Pg	Pg	04 26 07.7	-1.5
CEYT	Ceyhan	0.55	59	PG	Pg	04 26 08.9	-0.6
CEYT				SG	Sg	04 26 16.3	-0.3
CEYT	Ceyhan	0.55	59	Pg	Pg	04 26 08.6	-0.9
KIZK	Mersin	0.85	253	PG	Pg	04 26 14.9	-0.3
KIZK	Mersin	0.85	253	⇓iP	Pg	04 26 14.8	-0.5
KIZK				iS	Sn	04 26 29.8	-0.5
KIZK				IAML		04 26 32.0	
	comp=N,2µm,0.7s						
KIZK				IAML		04 26 40.0	
	comp=E,2µm,0.8s						
TAHT	Tahtakopru-Hat	0.90	113	PG	Pg	04 26 15.4	-0.7
TAHT	Tahtakopru-Hat	0.90	113	Pg	Pg	04 26 14.9	-1.2
KOZT	Kozan	0.92	35	PG	Pg	04 26 15.3	-1.2
KOZT	Kozan	0.92	35	Pg	Pg	04 26 14.9	-1.6
CMRD	Camardi-Nigde	0.94	352	PG	Pg	04 26 15.1	-1.8
YAYL	Yayladag	1.03	132	iP	Pg	04 26 18.6	-0.1
YAYL				iS	Sn	04 26 33.5	-1.4
SILI	Silifke-Mersin	1.06	250	PN	Pg	04 26 18.6	-0.5
SILI	Silifke-Mersin	1.06	250	Pg	Pb	04 26 19.2	-0.3
KERG	Konya-Eregli	1.07	310	iP	Pg	04 26 18.6	-0.9
KERG				iS	Sg	04 26 33.0	-0.4
KERG				IAML		04 26 43.0	
	comp=N,1µm,0.8s						
KERG				IAML		04 26 44.0	
	comp=E,2µm,0.7s						
KEBE	Keben-Mersin	1.20	257	PN	Pg	04 26 20.9	-0.9
ANDN	Andirin	1.27	48	iP	Pn	04 26 22.1	-1.2
ANDN				iS	Sn	04 26 40.1	-0.7
ANDN				IAML		04 26 59.0	
	comp=E,3µm,0.8s						
ANDN				IAML		04 26 59.0	
	comp=N,3µm,1.2s						
KARG	Kargicak-Mersi	1.28	246	PN	Pn	04 26 22.8	-0.5
IKL	Isikli	1.28	248	PN	Pn	04 26 22.8	-0.6
TISA	Tisan-Mersin	1.32	245	PN	Pb	04 26 23.7	-0.4
YAHY	KAYSERI_Yahyal	1.37	7	⇓iP	Pn	04 26 24.0	-0.7
YAHY				iS	Sg	04 26 43.6	+0.6
YAHY				IAML		04 26 48.0	
	comp=E,3µm,0.7s						
YAHY				IAML		04 26 55.0	
	comp=N,2µm,0.7s						
TEPK	Tepekoy-MERSIN	1.40	249	PN	Pn	04 26 24.8	-0.1
GULN	MERSIN_Gulnar	1.41	248	⇓iP	Pn	04 26 24.9	-0.2
GULN				iS	Sg	04 26 44.9	+0.7
GULN				IAML		04 27 00.0	
	comp=N,1µm,0.7s						
GULN				IAML		04 27 02.0	
	comp=E,1µm,1.1s						
TEVE	Tevekalti-Mers	1.41	259	PN	Pb	04 26 25.4	-0.3
AKKU	Akkuyu-Mersin	1.42	247	PN	Pn	04 26 25.1	-0.1
AKK2	Akkuyu-Mersin	1.43	246	PN	Pn	04 26 25.1	-0.2
AKK1	Akkuyu-Mersin	1.43	246	PN	Pb	04 26 25.5	-0.4
EREN	Erenkoy	1.44	214	PN	Pn	04 26 25.3	-0.2
EREN	Erenkoy	1.44	214	iP	Pn	04 26 24.8	-0.7
EREN				iS	Sg	04 26 56.9	+12
NIG	Nigde	1.45	343	PN	Pn	04 26 24.6	-1.3
SAIM	ADANA	1.45	30	⇓iP	Pn	04 26 24.4	-1.4
SAIM				iS	Sn	04 26 42.2	-2.9
SAIM				IAML		04 26 48.0	
	comp=E,2µm,0.4s						
SAIM				IAML		04 26 51.0	
	comp=N,2µm,0.4s						
OREN	Orenkoy-Mersin	1.47	250	PN	Pn	04 26 25.9	0.0
YORU	Yoruktepe-Mers	1.53	248	PN	Pn	04 26 26.4	-0.3
KUZU	Kuzuini	1.54	88	⇑iP	Pn	04 26 25.8	-1.2
KUZU				iS	Sn	04 26 45.8	-1.6
KUZU				IAML		04 26 48.0	
	comp=N,2µm,0.4s						
KUZU				IAML		04 26 54.0	
	comp=E,2µm,0.3s						
YESY	Yesilyurt	1.54	313	PN	Pn	04 26 26.3	-0.8
KRMN	Karaman	1.58	287	PN	Pn	04 26 27.4	-0.2
KMRS	Kahramanmaras	1.59	60	PN	Pn	04 26 26.1	-1.6
BERE	Bereket-Mersin	1.60	257	PN	Pn	04 26 28.0	+0.1
GAZ	Gaziantep	1.70	74	PN	Pn	04 26 27.8	-1.4
GAZ	Gaziantep	1.70	74		Pn	04 26 27.4	-1.8
GAZ	Gaziantep	1.70	74	P	Pn	04 26 28.0	-1.2
GAZ				S	Sb	04 26 51.9	-0.5
TEKE	Tekeli-Mersin	1.75	251	PN	Pn	04 26 29.9	+0.1
GULA	Gulagac	1.77	336	PN	Pn	04 26 29.6	-0.6
ERMK	Ermenek	1.81	268	⇓iP	Pb	04 26 32.5	0.0
ERMK				iS	Sg	04 27 00.7	+3.8
ERMK				IAML		04 27 11.0	
	comp=N,1µm,0.8s						
ERMK				IAML		04 27 30.0	
	comp=E,2µm,0.9s						
SARI	SarD1z-Kayseri	1.95	30	PN	Pn	04 26 31.8	-0.9
PARAL	Paralimni	1.96	208	P	Pb	04 26 34.2	-0.7
PARAL				S	Sb	04 26 58.9	-0.7
PARAL				AML	AML	04 27 12.0	
	comp=E,9.1nm,0.8s						
PARAL				AML	AML	04 27 12.0	
	comp=E,9.1nm,0.8s						
PARAL				AML	AML	04 27 18.4	
	comp=E,12nm,1.0s						
PARAL				AML	AML	04 27 18.4	
	comp=E,12nm,1.0s						
GZT	Gaziantep	2.02	71	⇑iP	Pn	04 26 32.3	-1.4
GZT				iS	Sg	04 27 07.5	+3.6
GZT				IAML		04 27 12.0	
	comp=N,1µm,0.6s						
GZT				IAML		04 27 32.0	
	comp=E,656nm,0.7s						
AVNS	Nevsehir-Avano	2.09	353	⇓iP	Pn	04 26 34.8	+0.2
AVNS				iS	Sb	04 27 03.4	-0.1
AVNS				IAML		04 27 12.0	
	comp=N,3µm,0.8s						
AVNS				IAML		04 27 14.0	
	comp=E,2µm,0.7s						
MVOU	Mavrovouni	2.11	216	S	Sb	04 27 03.2	-0.8
HDMB	Hadim	2.16	277	PN	Pn	04 26 35.0	-0.6
BNN	Bunyan	2.19	14	PN	Pn	04 26 35.5	-0.5
AKIN	Akıncılar- Kıb	2.19	219	PN	Pn	04 26 35.3	-0.6
GUNE	Kayseri	2.20	10	⇑iP	Pb	04 26 38.4	-0.8
GUNE				iS	Sg	04 27 22.1	+13
GUNE				IAML		04 27 44.0	
	comp=E,2µm,1.6s						
GUNE				IAML		04 27 47.0	
	comp=N,2µm,1.1s						
AKSY	AKSARAY - Alti	2.21	330	⇓iP	Pn	04 26 36.9	+0.6
AKSY				iS	Sg	04 27 11.0	+0.9
ELBS	KAHRAMANMARAS	2.24	44	iP	Pn	04 26 35.8	-0.8
ELBS				iS	Sb	04 27 07.8	+0.1
ELBS				IAML		04 27 16.0	
	comp=N,960nm,0.5s						
ELBS				IAML		04 27 19.0	
	comp=E,1µm,1.3s						
AKDN	Akdeniz- Kıbrı	2.28	232	PN	Pn	04 26 36.8	-0.3
CSS	Mathiatis	2.31	221	PN	Pn	04 26 36.8	-0.6
CSS	Mathiatis	2.31	221		Pn	04 26 34.6	-2.8
CSS	Mathiatis	2.31	221	Pn	Pn	04 26 34.0	-3.4
GAZI	Gazipasa	2.34	259	PN	Pn	04 26 38.4	+0.4
GAZI	Gazipasa	2.34	259	iP	Pb	04 26 39.5	-2.0
GAZI				iS	Sg	04 27 13.6	-0.5
LEF	Lefka	2.44	230	⇑P	Pn	04 26 36.9	-2.4
LEF	Lefka	2.44	230	PN	Pn	04 26 39.9	+0.6
LEF	Lefka	2.44	230	iP	Pn	04 26 37.0	-2.4
LEF				iS	Sn	04 27 05.3	-4.2
YAYX	Yaylak	2.45	335	PN	Pn	04 26 38.8	-0.7
KMER	Konya-Meram	2.46	296	⇓iP	Pb	04 26 41.8	-1.7
KMER				iS	Sb	04 27 13.6	-0.5
ASGA	Asgata	2.48	219	P	Pn	04 26 41.1	+1.2
ASGA				S	Sb	04 27 12.8	-2.0
ASGA				AML	AML	04 27 35.9	
	comp=E,5.3nm,1.0s						
ASGA				AML	AML	04 27 35.9	
	comp=E,5.3nm,1.0s						
ASGA				AML	AML	04 27 37.1	
	comp=E,3.8nm,0.7s						
ASGA				AML	AML	04 27 37.1	
	comp=E,3.8nm,0.7s						
ALAN	Alanya-ANTALYA	2.52	267	PN	Pn	04 26 40.6	+0.2
KONT	Konya--Tatoy	2.54	299	PN	Pn	04 26 40.9	+0.2
KONT	Konya--Tatoy	2.54	299	⇓iP	Pb	04 26 42.6	-2.3
KONT				iS	Sg	04 27 22.4	+2.0
SERE	Sereflikochisa	2.55	331	PN	Pn	04 26 40.7	-0.2
CHBY	Cihanbeyli	2.58	316	PN	Pn	04 26 40.9	-0.4
KIRS	Kırehir-Merke	2.59	338	⇓iP	Pn	04 26 42.0	+0.6
KIRS				iS	Sg	04 27 22.4	+0.2
CUGUR	Gurin_SVAS	2.60	39	iP	Pn	04 26 41.6	-0.1
CUGUR				iS	Sg	04 27 21.7	-0.8
SIRC	Yozgat	2.60	360	iP	Pn	04 26 41.9	+0.3
SIRC				iS	Sg	04 27 23.1	+0.6
DARE	Darende-Malaty	2.60	44	PN	Pn	04 26 41.3	-0.4
ATAB	Bozova	2.61	73	iP	Pn	04 26 40.7	-1.1
ATAB				iS	Sg	04 27 21.1	-1.8
ATAB				IAML		04 27 26.0	
	comp=E,465nm,0.5s						
LADK	Ladik-KONYA	2.66	304	PN	Pn	04 26 42.6	+0.1
AKCD	Akcadag	2.70	54	iP	Pn	04 26 42.9	-0.1
AKCD				iS	Sb	04 27 21.9	+0.8
SZAC	Souni	2.70	224	⇑P	Pb	04 26 45.1	-2.6
SZAC				S	Sb	04 27 18.7	-2.4
SZAC				AML	AML	04 27 29.5	
	comp=E,6.7nm,0.8s						
SZAC				AML	AML	04 27 29.5	
	comp=E,6.7nm,0.8s						
SZAC				AML	AML	04 27 43.8	
	comp=E,5.8nm,0.9s						
SZAC				AML	AML	04 27 43.8	
	comp=E,5.8nm,0.9s						
SEYD	Seydisehir-KON	2.74	285	PN	Pn	04 26 43.4	-0.1
CUSAR	Sarkisla-SIVAS	2.82	17	iP	Pn	04 26 45.1	+0.4
CUSAR				iS	Sg	04 27 28.9	-0.5
CUALT	Altinyayla-SIV	2.83	26	iP	Pn	04 26 44.5	-0.4
CUALT				iS	Sg	04 27 33.7	+3.7
BHL	Bhannes	2.85	172	eP	Pn	04 26 45.0	0.0
KEPZ	Antalya-Kepez	2.86	275	iP	Pb	04 26 48.4	-1.9
KEPZ				iS	Sg	04 27 30.5	-0.2
AKMS	Akamas	2.86	234	P	Pb	04 26 47.6	-2.7
NATA	Nata	2.87	228	P	Pn	04 26 47.5	+2.3
NATA				S	Sn	04 27 22.4	+2.4
YOZ	Yozgat	2.91	2	PN	Pn	04 26 45.1	-0.8
CDAG	Cicekdag	2.96	348	⇓iP	Pn	04 26 47.5	+1.0
CDAG				iS	Sb	04 27 27.8	-0.7
KDHN	Kadinhani	3.00	307	iP	Pn	04 26 49.4	+2.2
KDHN				iS	Sg	04 27 34.1	-1.3
KKUL	Konya-Kulu	3.01	325	⇓iP	Pn	04 26 49.0	+1.8
KKUL				iS	Sg	04 27 42.1	+6.5
URFA	Urfa	3.01	75	PN	Pn	04 26 45.8	-1.5
DQRL	Deir Qamar	3.04	174	eP	Pn	04 26 47.2	-0.3
DOGA	KONYA_Doganhis	3.10	297	⇑iP	Pn	04 26 51.2	+2.7
DOGA				iS	Sg	04 27 40.6	+2.1
DOGA				IAML		04 27 50.0	
	comp=E,182nm,1.0s						
DOGA				IAML		04 27 51.0	
	comp=N,214nm,0.9s						
AFSR	Afar-Bala (An	3.17	329	PN	Pn	04 26 49.3	-0.2
QRWL	Qaraoun	3.20	172	eP	Pn	04 26 49.8	0.0
BRTR	Keskin Array B	3.22	339	Pn	Pn	04 26 51.4	+1.2
	comp=N,1.5nm,0.3s,baz=166,slow=16,SNR=63						
BRTR				Pg	Pb	04 26 57.6	+1.1
	comp=N,6.3nm,0.3s,baz=159,slow=17,SNR=50						
BRTR				Lg	Lg	04 27 40.3	
	comp=N,4.5nm,0.3s,baz=304,slow=26,SNR=2.0						
BRTR	Keskin Array B	3.22	339	PN	Pn	04 26 50.1	-0.1
BRTR	Keskin Array B	3.22	339	iP	Pn	04 26 51.4	+1.2
BRTR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BR131	Keskin Array S	3.22	339		Pn	04 26 51.3	+1.2
BR131	Keskin Array S	3.22	339	deP	Pn	04 26 51.0	+0.8
BBAL	Bala	3.23	331	iP	Pn	04 26 52.7	+2.3
BBAL				iS	Sg	04 27 41.7	-1.1
RCY	Rachaya	3.27	170	eP	Pn	04 26 51.0	+0.2
DELI	KIRIKKALE	3.41	344	iP	Pn	04 26 54.2	+1.6
DELI				iS	Sg	04 27 45.4	-2.8
ARPR	Arapgir-MALATY	3.45	46	PN	Pn	04 26 53.2	-0.1
NATI	Neve Ativ	3.49	172	Pn	Pn	04 26 54.2	+0.5
NATI				Sn	Sn	04 27 34.9	-0.5
SVSK	Karacayir	3.50	24	PN	Pn	04 26 53.6	-0.2
KSDI	Kefar Szold	3.55	173	Pn	Pn	04 26 54.9	+0.3
KSDI				Sn	Sn	04 27 35.7	-1.2
KSDI	Kefar Szold	3.55	173	⇑P	Pn	04 26 54.9	+0.3
KSDI				S	Sn	04 27 35.3	-1.6
BR231	Keskin MP Arra	3.63	330		Pn	04 26 57.6	+1.8
HNTI	Hanita	3.64	180	Pn	Pn	04 26 55.3	-0.5
HNTI				Sn	Sn	04 27 37.3	-1.7
ANTO	Ankara	3.65	330	⇑P	Pb	04 27 03.7	-0.1
ANTO	Ankara	3.65	330		Pn	04 26 57.6	+1.7
ANTO	Ankara	3.65	330	P	Pn	04 26 57.6	+1.7
BAGO	Egridir - ISPA	3.70	291	iP	Pb	04 27 00.7	-4.0
BAGO				iS	Sg	04 28 00.1	+2.4
MMA0B	Mount Meron ar	3.71	177	Pn	Pn	04 26 56.7	-0.1
MMA0B				Sn	Sn	04 27 39.3	-1.6
MMAI	Mount Meron Ar	3.71	177	Pn	Pn	04 26 57.1	+0.2
	comp=Z,33nm,0.3s,baz=347,slow=13,SNR=106						
MMAI				Sn	Sn	04 27 39.5	-1.4
	comp=Z,52nm,0.3s,baz=348,slow=24,SNR=14						
MMAI				LR	LR	04 28 54.2	
	comp=Z,301nm,20.6s,baz=330,slow=47						
ISP	Isparta	3.85	288		Pn	04 26 58.0	-0.9
ISP	Isparta	3.85	288	P	Pn	04 26 58.0	-0.9
ISP	Isparta	3.85	288	Pn	Pn	04 26 55.9	-2.9
KORT	Korkueli	3.87	275	iP	Pn	04 27 00.8	+1.8
KORT				iS	Sg	04 27 59.8	-3.2
BOLV	Bolvadin	3.88	302	iP	Pn	04 27 02.4	+3.1
AKUM	Antalya-Kumluc	3.90	265	iP	Pn	04 27 02.7	+3.3
AKUM				iS	Sb	04 27 58.9	+3.4
BLGI	Bet Lehem HaGe	3.99	180	Pn	Pn	04 26 59.7	-0.8
BLGI				Sn	Sn	04 27 46.3	-1.3
SHMJ	Saham	4.02	173	Pn	Pn	04 27 02.0	+0.9
SHMJ				Sn	Sn	04 27 48.6	0.0
OFRI	\`Ofer	4.10	182	Pn	Pn	04 26 57.2	-5.0
OFRI				Sn	Sn	04 27 48.5	-2.0
BRDR	BURDUR-Merkez	4.18	285	iP	Pb	04 27 09.3	-3.6
ELL	Elmali	4.22	272		Pn	04 27 03.7	-0.1
ELL	Elmali	4.22	272	P	Pn	04 27 03.7	-0.1
ELL	Elmali	4.22	272	P	Pn	04 27 08.1	+4.3
MMLI	Mount Malkishu	4.29	177	Pn	Pn	04 27 04.5	-0.2
MMLI				Sn	Sn	04 27 53.9	-1.2
MMLI	Mount Malkishu	4.29	177	⇑P	Pn	04 27 05.6	+0.8
MMLI				S	Sn	04 27 54.0	-1.1
OSC2	CSNet OBS 4	4.35	214	P	Pn	04 27 08.0	+2.5
OSC2				S	Sn	04 27 59.5	+2.9
ILGA	Ilgaz	4.46	346		Pn	04 27 07.8	+0.5
HMDT	Nahal Hemdat	4.48	176	Pn	Pn	04 27 07.4	+0.1
HMDT				Sn	Sn	04 27 59.2	-0.5
SLTI	Sal'it	4.48	181	Pn	Pn	04 27 06.1	-1.2
SLTI				Sn	Sn	04 27 58.9	-0.9
ASF	Jabal al Asfar	4.77	162	Pn	Pn	04 27 12.5	+1.1
	comp=Z,0.7nm,0.3s,baz=307,slow=14,SNR=16						
ASF				Sn	Sn	04 28 11.5	+4.5
	comp=Z,1.8nm,0.3s,baz=209,slow=2.6,SNR=2.9						
ASF				LR	LR	04 29 28.6	
	comp=Z,874nm,19.3s,baz=286,slow=44						
MDUB	Mudurnu	4.86	322		Pn	04 27 10.8	-1.8
DIKM	Dikmen	4.91	1	⇑P	Pb	04 27 25.4	0.0
DIKM				⇑S	Sb	04 28 27.7	+3.0
DSI	Dead Sea	5.15	178	Pn	Pn	04 27 16.3	-0.2
DSI				Sn	Sn	04 28 15.5	-0.8
AMAZ	Amatzia	5.19	182	Pn	Pn	04 27 16.7	-0.4
AMAZ				Sn	Sn	04 28 16.0	-1.3
AMAZ	Amatzia	5.19	182	⇑P	Pn	04 27 17.5	+0.4
BZK	Bozkurt	5.30	351	⇓P	Pb	04 27 25.3	-6.6
YTIR	Yattir	5.35	180	Pn	Pn	04 27 19.4	0.0
YTIR				Sn	Sn	04 28 21.2	-0.3
KDZE	Karadeniz Ereo	5.41	329	⇑P	Pn	04 27 26.4	+6.2
GHAJ	Ghor Haditha	5.42	176	Pn	Pn	04 27 19.6	-0.7
MANT	Manisa	5.53	291	Pn	Pn	04 27 24.9	+3.0
DAMI2	DAM2	5.55	177	Pn	Pn	04 27 21.1	-0.9
KZIT	Kziot	5.84	186	Pn	Pn	04 27 24.8	-1.3
KZIT				Sn	Sn	04 28 31.8	-1.6
PRNI	Paran	6.36	181	Pn	Pn	04 27 33.4	+0.2
PRNI				Sn	Sn	04 28 45.4	-0.8
HRFI	Mount Harif	6.68	181	Pn	Pn	04 27 37.6	+0.1
HRFI				Sn	Sn	04 28 52.6	-1.4
BCA	Borcka	6.89	45	⇓P	Pb	04 27 59.4	+0.5
EIL	Elat	7.04	181	Pn	Pn	04 27 43.3	+0.8
	comp=Z,0.9nm,0.3s,baz=345,slow=12,SNR=5.1						
EIL				Sn	Sn	04 29 04.5	+1.5
	comp=Z,1.7nm,0.3s,baz=49,slow=16,SNR=2.3						
EIL				LR	LR	04 31 01.2	
	comp=Z,227nm,19.1s,baz=350,slow=43						
EIL	Elat	7.04	181	Pn	Pn	04 27 42.1	-0.5
SOC	Sochi	7.68	26	eP	Pn	04 27 53.0	+1.7
SOC				e		04 29 23.4	
SOC				pmax	pmax		
	comp=Z,3.0nm,0.3s						
SOC				MLR	MLR		
	comp=Z,270nm,12.0s						
ALN	Alexandroupoli	8.24	303	Pn	Pn	04 27 58.8	-0.1
ALN	Alexandroupoli	8.24	303	P	Pn	04 27 58.8	-0.1
IDI	Anoyia	8.44	263	Pn	Pn	04 28 02.8	+1.0
	comp=Z,0.8nm,0.3s,baz=107,slow=14,SNR=2.5						
KIV	Kislovodsk	9.22	36	eP	Pn	04 28 14.3	+1.8
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,202nm,11.0s						
KVAR	Kislovodsk Arr	9.23	36	Pn	Pn	04 28 15.7	+3.1
	baz=134,slow=1.5,SNR=2.8						
ELND	Elena	9.45	314	⇑P	Pn	04 28 17.0	+1.5
TLCR		9.71	332	⇓P	Pn	04 28 25.7	+6.6
CFR	Carcaliu	9.97	330	⇓P	Pn	04 28 28.2	+5.6
VTS	Vitosha	10.90	306	⇓P	Pn	04 28 36.7	+1.1
VRI	Vrincioaia	11.11	328	⇓P	Pn	04 28 43.6	+5.4
MLR	Muntele Rosu	11.17	324	LR	LR	04 33 53.6	
	comp=Z,261nm,18.9s,baz=220,slow=43						
MLR	Muntele Rosu	11.17	324	⇓P	Pn	04 28 44.0	+4.8
MAK	Makhachkala	11.34	53	eP	Pn	04 28 42.4	+1.0
MAK				eS	Sn	04 30 54.2	+5.7
MAK				pmax	pmax		
	comp=Z,30nm,0.4s						
MAK				MLR	MLR		
	comp=Z,107nm,10.0s						
VOIR		11.56	322	⇓P	Pn	04 28 48.8	+4.3
BURAR	Bucovina Array	13.13	329	⇓P	P	04 29 12.4	-3.8
AKASG	Malin Array Be	14.60	345	Pn	Pn	04 29 24.8	-1.1
	comp=Z,0.4nm,0.3s,baz=157,slow=13,SNR=7.5						
TIP	Timpagrande	14.72	285	Pn	Pn	04 29 25.8	-2.0
VSR	Storozhevoye	14.76	10	eP	Pn	04 29 29.2	+1.1
VSR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VRH	Novokhopyorsk	15.21	16	eP	P	04 29 38.9	-0.3
VRH				pmax	pmax		
	comp=Z,20nm,1.0s						
KOLS	Kolonicke sedl	15.40	326	eP	P	04 29 41.0	-0.4
KOLS	Kolonicke sedl	15.40	326	eP	P	04 29 41.0	-0.4
CRVS	Cervenica-Dubn	15.75	325	eP	P	04 29 46.4	+1.1
CRVS	Cervenica-Dubn	15.75	325	eP	P	04 29 46.4	+1.1
LPSR	Galich'ya Gora	16.09	8	eP	P	04 29 49.3	+0.3
LPSR				pmax	pmax		
	comp=Z,50nm,1.2s						
VYHS	Vyhne	16.77	320	eP	P	04 29 57.9	+1.3
VYHS	Vyhne	16.77	320	eP	P	04 29 57.9	+1.3
LANS	Liptovska Anna	16.87	322	eP	P	04 30 00.8	+3.1
LANS	Liptovska Anna	16.87	322	eP	P	04 30 00.8	+3.1
GEYT	Alibeck	18.29	79	Pn	P	04 30 13.1	-0.4
	comp=Z,0.2nm,0.3s,baz=266,slow=13,SNR=5.1						
OBN	Obninsk	18.41	3	LR	LR	04 39 05.6	
	comp=Z,16nm,21.2s,baz=180,slow=43						
OBN	Obninsk	18.41	3	⇑eP	Pn	04 30 17.6	+3.0
OBN				eS	S	04 33 47.7	+2.6
OBN				pmax	pmax		
	comp=Z,17nm,1.3s						
OBN				MLR	MLR		
	comp=Z,72nm,14.0s						

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VRAC  Vranov            18.44 319    LR      LR      04 38 23.5
            comp=Z,90nm,18.8s,baz=129,slow=40
MOA   Molln             18.97 312  i P       Pn      04 30 24.7 +3.2
            comp=Z,6.4nm,1.1s
MOS   Moscow            19.09   4  eP        Pn      04 30 29.7 +6.9
MOS                                e                 04 33 51.7
ABTA  Abfaltersbach     19.58 308  i Pn      Pn      04 30 28.1  -0.8
            comp=Z,8.8nm,1.5s
GEC2  GERESS Array S    19.79 314    P       Pn      04 30 32.2 +0.8
GEC2                                 IAmb    IAmb    04 30 34.1
            comp=Z,4.8nm,0.8s
GERES GERESS Array B    19.79 314    P       P       04 30 30.2 +0.3
            comp=Z,0.2nm,0.3s,baz=115,slow=11,SNR=24
GERES                                LR      LR      04 38 21.9
            comp=Z,64nm,20.8s,baz=108,slow=38
PRU   Pruhonice         19.92 318  eP        Pn      04 30 33.1 +0.2
PRU                                ex        x       04 30 47.7
PRU   Pruhonice         19.92 318  eP        Pn      04 30 33.1 +0.2
KHC   Kasperske Hory    20.00 315  eP        P       04 30 31.7  -0.4
KHC                                ex        x       04 30 51.6
KHC   Kasperske Hory    20.00 315    P       Pn      04 30 33.9   0.0
KHC   Kasperske Hory    20.00 315⇑eP        Pn      04 30 33.3  -0.5
KHC                                  pmax    pmax
            comp=Z,14nm,1.0s
WTTA  Wattenberg        20.33 309  i pP      P       04 30 35.8  -0.1
            comp=Z,10nm,1.1s
WATA  Walderalm         20.40 309  i P       Pn      04 30 39.4 +0.8
            comp=Z,5.8nm,0.8s
SQTA  Sankt Quirin      20.58 308  i pP      Pn      04 30 41.7 +0.9
            comp=Z,14nm,1.9s
MOTA  Moosalm           20.70 308  i Pn      Pn      04 30 40.7  -1.5
            comp=Z,4.7nm,0.8s
BRG   Berggiesshubel    20.74 320  e(P)      Pn      04 30 41.2  -1.2
            comp=Z,5.9nm,1.1s
BRG   Berggiesshubel    20.74 320  eP        Pn      04 30 41.2  -1.2
BRG                                  pmax    pmax
            comp=Z,6.0nm,1.1s
FETA  Feichten          20.82 307  i pP      Pn      04 30 43.8 +0.2
            comp=Z,6.6nm,1.1s
KEST  Kesra             20.83 275    P       Pn      04 30 43.5  -0.2
            comp=Z,6.0nm,1.0s,baz=308,slow=5.0,SNR=6.7
RETA  Reutte            20.96 308  i Pn      Pn      04 30 44.2  -1.1
AKTO  Aktyubinsk        21.38  43    P       P       04 30 46.7  -0.3
            comp=Z,3.9nm,0.7s,baz=250,slow=11,SNR=11
DAVA  Damuels           21.45 307  i Pn      P       04 30 50.0 +2.0
            comp=Z,9.8nm,0.9s
ABKAR Akbulak array     21.92  47    P       P       04 30 50.5  -2.3
HRA   Herat             22.14  88    P       P       04 30 53.5  -2.0
HRA                                  IAmb    IAmb    04 31 02.7
            comp=Z,7.7nm,1.1s
VSU   Vasula            22.44 348⇓eP        P       04 31 02.1 +3.8
VSU                                  pmax    pmax
            comp=Z,80nm,1.3s
ECH   Echery            23.49 308    P       P       04 31 07.8  -1.6
ECH                                  IAmb    IAmb    04 31 12.5
            comp=Z,14nm,1.2s
ECH   Echery            23.49 308    P       P       04 31 07.8  -1.6
ECH                                  pmax    pmax
            comp=Z,14nm,1.2s
KIRV  Kirov             23.78  19    LR      LR      04 42 34.7
            comp=Z,80nm,18.7s,baz=153,slow=42
KLMR  Klimovskoe        24.30   5  eP        P       04 31 17.0 +0.1
KLMR                                 pmax    pmax
            comp=Z,32nm,2.2s
KLMR  Klimovskoe        24.30   5  e         P       04 31 17.0 +0.1
KLMR                                 AMP             04 31 22.0
            comp=Z,32nm,2.2s
ARU   Arti              25.21  31    P       P       04 31 25.6 +0.4
            comp=Z,1.4nm,0.6s,baz=221,slow=9.1,SNR=6.6
ARU                                  LR      LR      04 43 42.1
            comp=Z,53nm,21.9s,baz=218,slow=42
ARU   Arti              25.21  31    P       P       04 31 23.8  -1.4
ARU   Arti              25.21  31d iP        P       04 31 27.0 +1.8
ARU                                                  04 32 01.9
ARU                                  S       S       04 35 56.7 +5.9
ARU                                  SS      SnSn    04 36 52.6  +12
ARU                                  pmax    pmax
            comp=Z,9.0nm,1.1s
FINES FINESS Array B    25.39 350    P       P       04 31 25.1  -1.6
            comp=Z,1.2nm,0.5s,baz=152,slow=10,SNR=16
FINES FINESS Array B    25.39 350  i P       P       04 31 25.8  -0.9
FINES                                pmax    pmax
            comp=Z,1.0nm,0.5s
PRGR  Permogore         25.79  12  eP        P       04 31 30.1  -0.2
ATD   Arta Tunnel       26.03 163    LR      LR      04 40 55.2
            comp=Z,98nm,21.5s,baz=24,slow=34
SVE   Sverdlovsk        26.35  32  eP        P       04 31 38.0 +2.5
HFS   Hagfors           27.16 336    P       P       04 31 41.0  -1.7
            comp=Z,3.1nm,1.0s,baz=184,slow=10,SNR=3.5
HFS                                  LR      LR      04 43 40.7
            comp=Z,112nm,20.7s,baz=106,slow=39
KK31  Karatay Array     27.71  66    P       P       04 31 47.0  -0.9
KK31                                 IAmb    IAmb    04 31 57.4
            comp=Z,4.0nm,1.2s
KK31  Karatay Array     27.71  66    P       P       04 31 47.0  -0.9
KK31                                 pmax    pmax
            comp=Z,4.0nm,1.3s
KKAR  Karatay Array     27.71  66    P       P       04 31 47.0  -0.9
KKAR                                 IAmb    IAmb    04 31 57.4
            comp=Z,4.0nm,1.2s
KKAR  Karatay Array     27.71  66    P       P       04 31 47.0  -0.9
KKAR                                 pmax    pmax
            comp=Z,4.0nm,1.3s
NOA   NORSAR Array B    28.65 336    LR      LR      04 44 45.5
            comp=Z,86nm,18.3s,baz=295,slow=39
BRVK  Borovoye          29.38  45  i P       P       04 32 03.6 +0.9
BVAR  Borovoye Array    29.43  45    P       P       04 32 04.3 +1.2
            comp=Z,0.6nm,0.6s,baz=276,slow=4.2,SNR=5.6
KSH   Kashi             32.04  72    P       P       04 32 24.0  -2.4
KSH                                  pP      sP      04 32 29.1 +0.2
KSH                                  PP      PnPn    04 33 29.7  -1.8
KSH                                  S       S       04 37 31.3  -7.5
KSH                                  SS      SnSn    04 39 21.0  -6.6
ARCES ARCESS Array B    33.28 354    P       P       04 32 35.0  -1.8
            comp=Z,1.9nm,0.9s,baz=165,slow=9.8,SNR=5.1
ARCES                                LR      LR      04 47 13.3
            comp=Z,103nm,19.9s,baz=318,slow=38
KURBB Kurchatov Arra    33.80  52    P       P       04 32 41.5   0.0
            comp=Z,2.8nm,1.0s,baz=267,slow=8.9,SNR=8.1
KURK  Kurchatov         33.87  52    P       P       04 32 42.2 +0.1
KURK  Kurchatov         33.87  52⇓iP        P       04 32 42.8 +0.7
KURK                                 pmax    pmax
            comp=Z,8.0nm,1.7s
MK31  Makanchi Array    36.08  59    P       P       04 32 59.4  -1.9
MK31  Makanchi Array    36.08  59    P       P       04 32 59.4  -1.9
MK31                                 pmax    pmax
            comp=Z,1.0nm,1.1s
MKAR  Makanchi Array    36.08  59    P       P       04 33 01.2  -0.1
            comp=Z,1.7nm,0.9s,baz=267,slow=6.1,SNR=13
MKAR  Makanchi Array    36.08  59ceP        P       04 33 01.9 +0.6
MKAR                                 pmax    pmax
            comp=Z,2.0nm,0.9s
KMBO  Kilima Mbogo      37.71 177    LR      LR      04 47 53.8
            comp=Z,44nm,18.4s,baz=90,slow=35
ZALV  Zalesovo Beam     38.03  47    P       P       04 33 17.5  -0.2
            comp=Z,0.6nm,0.5s,baz=262,slow=8.6,SNR=2.4
TOA0  Torodi Ar. Sit    38.05 241    P       P       04 33 17.8  -0.5
TOA0                                 IAmb    IAmb    04 33 21.9
            comp=Z,4.4nm,1.4s
TORD  Torodi Ar. Bea    38.05 241    P       P       04 33 18.6 +0.3
            comp=Z,0.5nm,0.8s,baz=33,slow=8.3,SNR=5.0
WMQ   Urumqi            40.13  63  eP        P       04 33 37.4 +1.8
SPITS Spitsbergen Ar    42.31 354    P       P       04 33 52.7  -0.3
            comp=Z,2.1nm,0.6s,baz=183,slow=16,SNR=4.2
NRIK  Noril'sk          43.06  24    LR      LR      04 56 04.4
            comp=Z,93nm,18.2s,baz=162,slow=42
DBIC  Dimbokro          47.16 241    P       P       04 34 31.2  -1.2
            comp=Z,4.5nm,1.0s,baz=31,slow=10.0,SNR=4.5
TLY   Talaya            49.50  50    P       P       04 34 49.5  -0.6
            comp=Z,1.4nm,0.4s,baz=258,slow=11,SNR=3.9
TLY   Talaya            49.50  50  eP        P       04 34 51.4 +1.3
TLY                                  pmax    pmax
            comp=Z,4.0nm,0.8s
SONM  Songino Array     52.11  54    P       P       04 35 10.0 +0.1
            comp=Z,1.0nm,0.7s,baz=286,slow=7.7,SNR=9.6
TIXI  Tiksi             56.75  22⇑eP        P       04 35 45.3 +2.2
TIXI                                 pmax    pmax
            comp=Z,9.0nm,4.7s
HHC   Hu-ho-hao-te      57.91  60  eP        P       04 35 52.1 +0.1
CMAR  Chiang Mai Arr    58.38  90    P       P       04 35 54.6  -0.8
            comp=Z,0.9nm,0.5s,baz=301,slow=8.2,SNR=7.0
BOSA  Boshof            65.66 190    P       P       04 36 44.6 +0.5
            comp=Z,6.4nm,0.7s,baz=9.1,slow=6.7,SNR=16
BOSA                                 LR      LR      05 07 12.7
            comp=Z,82nm,18.1s,baz=98,slow=38
BOSA  Boshof            65.66 190    P       P       04 36 43.4  -0.7
KLR   Kul'dur           67.09  45⇓eP        P       04 36 53.8 +0.7
KLR                                  pmax    pmax
            comp=Z,9.0nm,2.3s
YKA   Yellowknife Ar    78.16 346    P       P       04 37 57.6  -1.1
            comp=Z,2.5nm,1.0s,baz=28,slow=5.3,SNR=12
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ISK ***02*** *04:29:09.4, 36°.78N×35°.16E, h13^{km}, ML3.5/30*
DDA ***02*** *04:29:10.0, 36°.75N×35°.16E, h8^{km}±2^{km}, ML3.0*
NIC ***02*** *04:29:11.4±0.0, 36°.71N×35°.33E, h10^{km}±1^{km}, Ml3.8/3*
ISC 02 04:29:10.2±0.9, **36°.77N**±0°.02×**35°.16E**±0°.02, **h13**^{km}±7^{km}, **n84,** σ1^{s}.**16**/100, **Turkey**

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Code  Station Name       Δ°   AZ°    Phase ID            Time       Res
                                   Op      ISC        h  m  s     ISC
KRTS  Karatas            0.26 138    PG      Pg      04 29 15.8 +0.1
KRTS                                 SG      Sg      04 29 19.6 +0.2
KRTD  Karatas-Adana      0.27 130    PG      Pg      04 29 16.1 +0.2
KRTD                                 SG      Sg      04 29 19.8 +0.1
KARA  Karaisali          0.50 351    PG      Pg      04 29 19.4  -0.6
KARA                                 SG      Sg      04 29 26.9 +0.3
MERS  Mersin             0.52 281    PG      Pg      04 29 20.1  -0.3
CEYT  Ceyhan             0.53  63    PG      Pb      04 29 21.1  -0.2
KIZK  Mersin             0.86 251    PG      Pg      04 29 26.7  -0.1
KIZK  Mersin             0.86 251  i P       Pg      04 29 26.8  -0.1
KIZK                               i S       Sb      04 29 39.6 +1.2
KIZK                                 IAML            04 29 45.0
            comp=E,642nm,0.4s
KIZK                                 IAML            04 29 47.0
            comp=N,404nm,0.3s
KOZT  Kozan              0.89  37    PG      Pg      04 29 26.8  -0.6
CMRD  Camardi-Nigde      0.90 352    PG      Pg      04 29 26.7  -0.9
TAHT  Tahtakopru-Hat     0.92 115    PG      Pg      04 29 27.4  -0.5
KERG  Konya-Eregli       1.05 308  i P       Pg      04 29 30.0  -0.4
KERG                               i S       Sg      04 29 41.6  -2.5
KERG                                 IAML            04 29 47.0
            comp=N,434nm,0.3s
KERG                                 IAML            04 29 48.0
            comp=E,300nm,0.4s
YAYL  Yayladag           1.06 133  i P       Pb      04 29 30.3  -0.1
YAYL                               i S       Sb      04 29 44.5 +0.3
YAYL                                 IAML            04 29 49.0
            comp=E,359nm,0.5s
YAYL                                 IAML            04 29 51.0
            comp=N,298nm,0.6s
SILI  Silifke-Mersin     1.07 248    PG      Pb      04 29 30.0  -0.5
KEBE  Keben-Mersin       1.21 255    PN      Pn      04 29 32.8 +0.1
ANDN  Andirin            1.25  49  i P       Pg      04 29 35.4 +1.2
KARG  Kargicak-Mersi     1.30 245    PN      Pn      04 29 33.7  -0.2
IKL   Isikli             1.30 246    PN      Pn      04 29 34.2 +0.3
YAHY  KAYSERI_Yahyal     1.33   7  i P       Pg      04 29 35.9 +0.1
YAHY                               i S       Sg      04 29 53.4 +0.2
YAHY                                 IAML            04 30 00.0
            comp=E,320nm,0.6s
YAHY                                 IAML            04 30 01.0
            comp=N,227nm,0.6s
TISA  Tisan-Mersin       1.34 243    PN      Pn      04 29 34.6 +0.1
YESI  Yesilovacik-Me     1.35 245    PN      Pn      04 29 34.3  -0.3
NIG   Nigde              1.41 342    PN      Pn      04 29 35.3  -0.4
TEPK  Tepekoy-MERSIN     1.41 248    PN      Pn      04 29 35.5   0.0
SAIM  ADANA              1.41  31  i P       Pn      04 29 36.1 +0.5
SAIM                                 IAML            04 29 57.0
            comp=E,258nm,0.4s
SAIM                                 IAML            04 30 02.0
            comp=N,236nm,0.4s
TEVE  Tevekalti-Mers     1.42 257    PN      Pn      04 29 35.7   0.0
GULN  MERSIN_Gulnar      1.43 246  i P       Pb      04 29 36.8 +0.2
GULN                               i S       Sb      04 29 55.1 +0.5
GULN                                 IAML            04 29 58.0
            comp=E,368nm,0.5s
GULN                                 IAML            04 29 58.0
            comp=N,304nm,0.5s
AKKU  Akkuyu-Mersin      1.43 245    PN      Pn      04 29 35.8   0.0
AKK2  Akkuyu-Mersin      1.44 245    PN      Pn      04 29 35.8  -0.1
AKK1  Akkuyu-Mersin      1.45 245    PN      Pn      04 29 36.1 +0.2
EREN  Erenkoy            1.47 213    PN      Pn      04 29 36.3   0.0
EREN  Erenkoy            1.47 213  i P       Pn      04 29 35.6  -0.8
OREN  Orenkoy-Mersin     1.48 248    PN      Pn      04 29 36.4   0.0
YESY  Yesilyurt          1.51 312    PN      Pn      04 29 37.3 +0.2
KUZU  Kuzuini            1.54  89  i P       Pn      04 29 37.0  -0.3
KUZU                                 IAML            04 30 01.0
            comp=E,200nm,0.6s
KUZU                                 IAML            04 30 01.0
            comp=N,144nm,0.3s
YORU  Yoruktepe-Mers     1.54 247    PN      Pn      04 29 37.4 +0.1
KRMN  Karaman            1.57 285    PN      Pn      04 29 38.2 +0.4
KMRS  Kahramanmaras      1.57  62    PN      Pn      04 29 37.7  -0.1
BERE  Bereket-Mersin     1.61 255    PN      Pn      04 29 38.6 +0.2
GAZ   Gaziantep          1.69  76    PN      Pn      04 29 38.9  -0.6
GAZ   Gaziantep          1.69  76    P       Pn      04 29 39.2  -0.2
GAZ                                  S       Sn      04 30 00.9  -0.1
GULA  Gulagac            1.73 335    PN      Pn      04 29 40.1   0.0
TEKE  Tekeli-Mersin      1.76 250    PN      Pn      04 29 40.7 +0.4
ERMK  Ermenek            1.81 267  i P       Pb      04 29 44.1 +0.9
ERMK                               i S       Sg      04 30 09.4 +1.0
ERMK                                 IAML            04 30 24.0
            comp=N,313nm,0.9s
ERMK                                 IAML            04 30 26.0
            comp=E,396nm,0.6s
SARI  SarD1z-Kayseri     1.92  31    PN      Pn      04 29 42.7 +0.1
PARAL Paralimni          1.99 207    P       Pn      04 29 44.9 +1.4
PARAL                                S       Sb      04 30 11.7 +0.8
PARAL                                AML     AML     04 30 12.7
            comp=E,2.1nm,1.6s
PARAL                                AML     AML     04 30 12.7
            comp=E,2.1nm,1.6s
PARAL                                AML     AML     04 30 22.9
            comp=E,1.7nm,1.1s
PARAL                                AML     AML     04 30 22.9
            comp=E,1.7nm,1.1s
AVNS  Nevsehir-Avano     2.05 353  i P       Pn      04 29 45.0 +0.6
AVNS                               i S       Sb      04 30 14.2 +1.5
AVNS                                 IAML            04 30 26.0
            comp=E,294nm,0.6s
BNN   Bunyan             2.15  15    PN      Pn      04 29 46.2 +0.4
GUNE  Kayseri            2.16  10  i P       Pn      04 29 46.7 +0.8
AKSY  AKSARAY - Alti     2.18 330  i P       Pb      04 29 48.9  -0.6
ELBS  KAHRAMANMARAS2.21  45  i P       Pn      04 29 47.7 +1.1
ELBS                                 IAML            04 30 31.0
            comp=N,102nm,0.6s
ELBS                                 IAML            04 30 35.0
            comp=E,101nm,0.6s
CSS   Mathiatis          2.33 220    PN      Pn      04 29 48.8 +0.6
CSS   Mathiatis          2.33 220    P       Pn      04 29 49.5 +1.2
GAZI  Gazipasa           2.35 258    PN      Pn      04 29 48.6 +0.2
GAZI  Gazipasa           2.35 258  i P       Pb      04 29 51.8  -0.6
GAZI                               i S       Sb      04 30 22.2 +0.9
GAZI                                 IAML            04 30 25.0
            comp=N,160nm,0.4s
GAZI                                 IAML            04 30 30.0
            comp=E,62nm,0.3s
YAYX  Yaylak             2.41 334    PN      Pn      04 29 49.5 +0.1
KMER  Konya-Meram        2.44 295  i P       Pb      04 29 53.5  -0.4
KMER                                 IAML            04 30 40.0
            comp=N,60nm,0.9s
KMER                                 IAML            04 30 44.0
            comp=E,62nm,0.9s
LEF   Lefka              2.47 229    PN      Pn      04 29 50.7 +0.7
LEF   Lefka              2.47 229  i P       Sn      04 30 16.1  -4.0
SERE  Sereflikochisa     2.51 330    PN      Pn      04 29 50.7  -0.1
ASGA  Asgata             2.52 219    P       Pn      04 29 52.9 +2.2
ASGA                                 AML     AML     04 30 28.9
            comp=E,0.8nm,0.7s
ASGA                                 AML     AML     04 30 31.5
            comp=E,0.8nm,0.8s
KONT  Konya--Tatoy       2.52 299    PN      Pn      04 29 51.4 +0.6
KONT  Konya--Tatoy       2.52 299  i P       Pg      04 30 00.9 +2.5
KONT                                 IAML            04 30 45.0
            comp=E,66nm,0.7s
KONT                                 IAML            04 30 47.0
            comp=N,51nm,0.9s
CHBY  Cihanbeyli         2.55 316    PN      Pn      04 29 51.8 +0.5
KIRS  Kırehir-Merke      2.56 338  i P       Pn      04 29 53.7 +2.3
SIRC  Yozgat             2.56 360  i P       Pn      04 29 52.7 +1.2
SIRC                               i S       Sg      04 30 31.6  -0.9
SIRC                                 IAML            04 30 36.0
            comp=E,40nm,0.5s
CUGUR Gurin_SVAS         2.57  40  i P       Pn      04 29 52.1 +0.5
DARE  Darende-Malaty     2.58  45    PN      Pn      04 29 51.8 +0.2
ATAB  Bozova             2.60  73  i P       Pg      04 30 00.1   0.0
ATAB                                 IAML            04 30 47.0
            comp=E,67nm,0.5s
LADK  Ladik-KONYA        2.64 304    PN      Pn      04 29 52.9 +0.4
AKCD  Akcadag            2.67  54  i P       Pg      04 30 00.0  -1.4
AKCD                                 IAML            04 30 45.0
            comp=E,101nm,0.7s
AKCD                                 IAML            04 30 49.0
            comp=N,112nm,0.9s
SEYD  Seydisehir-KON     2.73 284    PN      Pn      04 29 53.8 +0.1
SZAC  Souni              2.73 223    P       Pn      04 29 56.2 +2.5
SZAC                                 AML     AML     04 30 34.4
            comp=N,1.2nm,0.9s
SZAC                                 AML     AML     04 30 35.4
            comp=N,1.4nm,0.5s
CUSAR Sarkisla-SIVAS     2.78  18  i P       Pg      04 30 02.8  -0.7
KEPZ  Antalya-Kepez      2.85 274  i P       Pb      04 29 60.0  -1.0
YOZ   Yozgat             2.87   3    PN      Pn      04 29 55.9 +0.2
AKMS  Akamas             2.88 233    P       Pb      04 29 58.9  -2.5
NATA  Nata               2.89 227    P       Pn      04 29 58.6 +2.7
CDAG  Cicekdag           2.92 348  i P       Pn      04 29 59.2 +2.9
KDHN  Kadinhani          2.98 307  i P       Pb      04 30 01.1  -2.0
HEKM  Malatya_Hekimh     3.06  46  i P       Pg      04 30 16.7 +7.9
DOGA  KONYA_Doganhis     3.08 297  i P       Pb      04 30 02.3  -2.6
BBAL  Bala               3.20 331  i P       Pn      04 30 03.2 +2.9
BBAL                               i S       Sg      04 30 53.5 +0.5
DELI  KIRIKKALE          3.37 344  i P       Pn      04 30 03.8 +1.3
DELI                               i S       Sb      04 30 54.0 +3.4
KSDI  Kefar Szold        3.59 173    P       Pn      04 30 06.5 +1.0
KSDI                                 S       Sn      04 30 47.3  -0.5
MMLI  Mount Malkishu     4.33 177    P       Pn      04 30 17.0 +1.4
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NIED ***02*** *04:30:00, 39°.20N×142°.50E, h26^{km}, Mw4.1 Best double couple: M$_0$1.49000×10^{15} NP1:φ$_s$267.00000°, δ50.00000°, λ-85.00000°. NP2:φ$_s$79.00000°, δ40.00000°, λ-96.00000°.*
JMA ***02*** *04:30:06.8±0.1, 39°.23N×142°.51E, h27^{km}±1^{km}, M3.9*
NEIC ***02*** *04:30:11.2±1.5, 39°.19N±0°.07×142°.58E±0°.04, h60^{km}±8^{km}, mb4.2/9, Error ellipse: s-maj=10.5km s-min=4.0km az=188.0*
IDC ***02*** *04:30:12.6±2.2, 39°.17N×142°.48E, h71^{km}±20^{km}, mb3.5/18, mb1 3.7/21, mb1mx3.5/54, mbtmp3.8/21, MS3.2/8, Ms1 3.2/8, ms1mx3.0/42, Error ellipse: s-maj=17.6km s-min=12.0km az=111.0*
ISC 02 04:30:08.0±1.8, **39°.26N**±0°.04×**142°.46E**±0°.07, **h25**^{km}±11^{km}, **n54,** σ1^{s}.**38**/53, **mb3.8**/20, **Near east coast of eastern Honshu**

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Code  Station Name       Δ°   AZ°    Phase ID            Time       Res
                                   Op      ISC        h  m  s     ISC
MIYJ  Miyakonagasawa     0.59 303    P       Pb      04 30 18.9  -0.8
MIYJ                                 S       Sb      04 30 27.6  -0.1
OFUJ  Ofunato            0.64 254    P       Pb      04 30 19.6  -1.0
OFUJ                                 S       Sb      04 30 28.7  -0.4
JTH   Tanohata           0.82 326    P       Pn      04 30 22.6  -1.4
JKMT  Kesennumamotoy     0.89 240    P       Pn      04 30 23.2  -1.7
JKMT                                 S       Sb      04 30 35.5  -0.7
JOM   Ohasama            0.93 284    P       Pn      04 30 24.4  -1.1
JOM                                  S       Sb      04 30 37.0  -0.4
JMK   Ichinoseki         1.01 253    P       Pn      04 30 25.4  -1.2
JMK                                  S       Sn      04 30 39.0  -1.0
JKZ   Kuzumaki           1.13 310    P       Pn      04 30 27.9  -0.4
JIO   Ouri               1.18 228    P       Pn      04 30 27.4  -1.5
JANG  Nango              1.33 327    P       Pn      04 30 30.4  -0.6
JANG                                 S       Sn      04 30 48.2 +0.3
JRG   Rokugo             1.42 276    P       Pb      04 30 32.8  -1.1
JRG                                eS        Sb      04 30 52.1 +0.5
ERM   Erimo              2.80  11            Pn      04 30 52.4 +1.2
MAJO  Matsushiro         4.32 232            Pn      04 31 14.6 +2.5
MAT   Matsushiro         4.32 232    P       Pn      04 31 15.2 +3.1
MAT                                  S       Sn      04 32 01.5  -0.2
MJAR  Matsushiro Arr     4.32 232    P       Pn      04 31 14.1 +2.0
            0.4nm,0.3s,baz=40,slow=12,SNR=54
MJAR                                 S       Sn      04 32 05.1 +3.4
            0.1nm,0.3s,baz=38,slow=6.3,SNR=4.2
MJAR                                 LR      LR      04 33 10.1
            comp=Z,244nm,18.6s,baz=45,slow=42
MJB9  Matsu-Tunnel       4.32 232            Pn      04 31 14.8 +2.7
JKA   Kamikawa-asahi     4.85   1            Pn      04 31 24.2 +4.8
ASAJ  Asahikawa          4.86   1    P       Pn      04 31 24.2 +4.8
            4.8nm,0.3s,baz=202,slow=4.9,SNR=12
ASAJ                                 S       Sn      04 32 16.7 +1.9
            1.9nm,0.3s,baz=45,slow=29,SNR=2.5
ASAJ                                 LR      LR      04 33 51.6
            comp=Z,452nm,19.9s,baz=291,slow=44
INU   Inuyama            5.83 230    Pn      Pn      04 31 35.5 +2.6
USRK  Ussuriysk Ar.      9.25 306    P       Pn      04 32 24.5 +4.8
            baz=112,slow=14,SNR=8.7
USRK                                 LR      LR      04 35 43.5
            comp=Z,175nm,18.8s,baz=98,slow=36
MDJ   Mudanjiang        10.97 303            Pn      04 32 46.5 +3.1
JNU   Nakatsue          11.18 240    LR      LR      04 37 06.4
            comp=Z,59nm,19.5s,baz=72,slow=37
KSRS  Korea Array       11.56 266    LR      LR      04 37 12.2
            comp=Z,47nm,21.9s,baz=94,slow=36
KLR   Kul'dur           12.57 326    P       P       04 33 17.9 +1.4
            0.2nm,0.3s,baz=118,slow=17,SNR=5.0
KLR                                  LR      LR      04 38 01.5
            comp=Z,96nm,19.4s,baz=212,slow=37
PETK  Petropavlovsk-    17.36  32    LR      LR      04 41 09.5
            comp=Z,53nm,19.1s,baz=239,slow=38
SEY   Seymchan          24.45  11    P       P       04 35 25.9 +1.4
            1.3nm,0.7s,baz=180,slow=20,SNR=3.6
SONM  Songino Array     27.30 300    P       P       04 35 51.7 +1.1
            0.5nm,0.8s,baz=94,slow=9.1,SNR=3.2
H11N2 WAKE ISLAND Hy    28.68 126    T       T       05 06 29.1
            baz=318,slow=75,SNR=143
H11N1 WAKE ISLAND Hy    28.68 126    T       T       05 06 30.1
            baz=318,slow=75,SNR=106
H11N3 WAKE ISLAND Hy    28.69 126    T       T       05 06 40.7
            baz=318,slow=75,SNR=82
H11S1 WAKE ISLAND Hy    29.47 128    T       T       05 07 41.3
            baz=320,slow=76,SNR=11
H11S3 WAKE ISLAND Hy    29.47 128    T       T       05 07 37.6
            baz=320,slow=76,SNR=8.6
H11S2 WAKE ISLAND Hy    29.48 128    T       T       05 07 41.2
            baz=320,slow=76,SNR=3.0
ZALV  Zalesovo Beam     41.06 311    P       P       04 37 49.1  -0.1
            1.1nm,0.5s,baz=96,slow=8.8,SNR=5.0
MK31  Makanchi Array    43.67 300    P       P       04 38 11.1 +0.5
MK31                                 IAmb    IAmb    04 38 29.9
            comp=Z,7.7nm,1.9s
MKAR  Makanchi Array    43.67 300    P       P       04 38 09.4  -1.2
            comp=Z,0.8nm,0.8s,baz=88,slow=9.0,SNR=7.0
KURK  Kurchatov         45.24 307    P       P       04 38 22.6  -0.4
ILAR  Eielson Array     47.18  33    P       P       04 38 38.0  -0.1
            comp=Z,0.6nm,0.6s,baz=264,slow=6.3,SNR=14
BVAR  Borovoye Array    49.71 311    P       P       04 38 57.0  -0.7
            comp=Z,0.6nm,0.6s,baz=85,slow=9.1,SNR=6.0
BVAR                                 PcP     PcP     04 40 18.8 +0.2
            comp=Z,0.7nm,0.8s,baz=108,slow=3.3,SNR=3.9
INK   Inuvik            52.03  28    P       P       04 39 13.1  -1.9
            comp=Z,0.7nm,0.6s,baz=278,slow=8.7,SNR=3.7
KK31  Karatay Array     52.75 299    P       P       04 39 20.8 +0.1
KKAR  Karatay Array     52.75 299    P       P       04 39 20.6   0.0
KKAR                                 IAmb    IAmb    04 39 21.1
            comp=Z,3.1nm,1.3s
ARU   Arti              55.26 318    P       P       04 39 38.4  -0.3
            comp=Z,0.5nm,0.3s,baz=70,slow=18,SNR=3.0
CHGR  Chuyangaron       55.48 294    P       P       04 39 40.2  -0.6
ABKAR Akbulak array     57.15 309    P       P       04 39 52.4   0.0
WRA   Warramunga Arr    59.38 189    P       P       04 40 06.4  -1.8
            comp=Z,4.5nm,0.7s,baz=5.8,slow=6.9,SNR=23
ASAR  Alice Springs     63.11 189    P       P       04 40 32.1  -1.2
            comp=Z,1.6nm,0.8s,baz=11,slow=7.5,SNR=18
FINES FINESS Array B    67.23 332    P       P       04 41 00.1 +0.4
            comp=Z,1.2nm,0.7s,baz=57,slow=7.0,SNR=4.3
FINES                                LR      LR      05 12 08.4
            comp=Z,100nm,18.3s,baz=13,slow=37
HFS   Hagfors           72.40 336    P       P       04 41 31.1  -0.4
            comp=Z,1.0nm,0.8s,baz=62,slow=6.7,SNR=2.4
NOA   NORSAR Array B    72.45 337    P       P       04 41 31.4  -0.5
            comp=Z,0.7nm,0.8s,baz=43,slow=5.5,SNR=3.8
NVAR  Mina Array Bea    73.01  54    P       P       04 41 35.4  -0.5
            comp=Z,0.6nm,0.8s,baz=296,slow=6.3,SNR=4.9
AKASG Malin Array Be    73.04 322    P       P       04 41 35.0  -0.5
            comp=Z,0.3nm,0.3s,baz=47,slow=6.1,SNR=7.1
PDAR  Pinedale Array    75.53  46    P       P       04 41 50.4  -0.1
            comp=Z,0.2nm,0.6s,baz=56,slow=48,SNR=2.6
ULM   Lac du Bonnet     77.20  34    P       P       04 41 58.8  -0.7
            comp=Z,0.9nm,0.6s,baz=76,slow=4.2,SNR=2.8
TXAR  Lajitas Array     88.12  53    P       P       04 42 56.3  -0.5
            comp=Z,0.2nm,0.7s,baz=306,slow=3.1,SNR=2.8
```

IDC 02 04:35:46.2±9.9, **15°.94S**×**172°.90W, h0**^{km}, **mb3.7**/3, **mb1 4.0**/3, **mb1mx3.6**/34, **mbtmp3.7**/3, **Error ellipse:**

s-maj=436.9km s-min=39.1km az=139.0,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**50.19**	**257**	P	P	04 44 44.1	-0.1
	0.2nm,0.4s,baz=94,slow=6.9,SNR=6.4						
ASAR	**Alice Springs**	**50.40**	**252**	P	P	04 44 45.7	-0.1
	0.6nm,0.5s,baz=89,slow=7.7,SNR=12						
ILAR	**Eielson Array**	**82.88**	**11**	P	P	04 48 12.3	0.0
	0.9nm,1.1s,baz=214,slow=6.3,SNR=4.1						

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*INET **02** 04:36:31.2, 10°.11N×86°.91W, h13^{km}, ML3.7*

UCR 02 04:36:31.9±1.4**,11°.24N×85°.57W,h204**^{km}±5^{km}**,MD3.9, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUAI	**Buenos Aires**	**0.43**	**147**	*i* P	Pn	04 36 59.8	+0.6
BUAI				*i* S	S	04 37 20.9	+0.4
BUEV	**Buena Vista**	**0.46**	**160**	*i* P	Pn	04 36 59.6	+0.1
NY14	**Universidad de**	**0.59**	**177**	*i* P	Pn	04 37 00.2	+0.4
NY14				*i* S	S	04 37 22.2	+0.7
MESS	**Mesas**	**0.61**	**144**	*i* P	Pn	04 37 00.5	+0.4
COLC	**Colonia**	**0.67**	**148**	*i* P	Pn	04 37 00.6	+0.4
COLC				*i* S	S	04 37 23.4	+1.2
PTEN	**Parque Tenorio**	**0.77**	**132**	*i* P	Pn	04 37 01.4	+0.6
ACAL	**Aguas Claras**	**0.80**	**139**	*i* P	Pn	04 37 01.5	+0.6
ACAL				*i* S	S	04 37 23.7	+0.4
PLVR	**Palo Verde**	**0.91**	**167**	*e*P	Pn	04 37 02.3	+0.5
PLVR				*e*S	S	04 37 25.3	+0.5
GUAI	**GUAI**	**0.96**	**177**	*i* P	Pn	04 37 02.3	+0.5
GUAI				*i* S	S	04 37 25.5	+0.5
JTS	**Las Juntas de**	**1.12**	**147**	*e*P	Pn	04 37 03.0	0.0
CEDE	**Laguna Cedeo**	**1.13**	**131**	*i* P	Pn	04 37 03.5	+0.4
SRA1	**San Ramn**	**1.57**	**137**	*e*P	Pn	04 37 07.2	+0.5
CNGN	**Cerro Negro**	**1.67**	**319**	*e*P	Pn	04 37 07.5	0.0
MATN	**Matagalpa**	**1.72**	**348**	*e*P	Pn	04 37 08.2	+0.1
CRIN	**San Cristobal**	**2.05**	**315**	*e*P	Pn	04 37 11.5	+0.2
LCR2	**La Lucha 2**	**2.14**	**134**	*e*P	Pn	04 37 12.7	+0.3
EDDO	**Dominical**	**2.59**	**140**	*e*P	Pn	04 37 18.6	+1.6
CSGN	**Cosiguina Volc**	**2.60**	**312**	*e*P	Pn	04 37 18.9	+1.6
EDBA	**Buenos Aires**	**3.06**	**132**	*e*P	Pn	04 37 23.0	+0.5
BRU2	**Volcan**	**3.73**	**130**	*e*P	Pn	04 37 31.6	+0.9

MAN 02 04:37:34.5,13°.70N×120°.56E,h109^{km}**,mb4.1,ML2.9, MS2.5,Mindoro**

IDC 02 04:45:55.7±1.9**,2°.23S×141°.29E,h0**^{km}**,mb3.3**/3**, mb1 3.7**/4**,mb1mx3.4**/34**,mbtmp3.4**/4**,ML3.5**/1**,Error ellipse: s-maj=96.3km s-min=29.6km az=116.0,Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.87**	**201**	P	Pn	04 50 18.4	+0.2
	0.2nm,0.3s,baz=21,slow=12,SNR=6.3						
FITZ	**Fitzroy Crossi**	**22.01**	**223**	P	P	04 50 52.5	+0.7
	1.4nm,0.6s,baz=44,slow=12,SNR=6.4						
ASAR	**Alice Springs**	**22.48**	**198**	P	P	04 50 55.5	-1.3
	0.5nm,0.6s,baz=33,slow=9.4,SNR=7.9						
H11S3	**WAKE ISLAND Hy**	**32.39**	**49**	T	T	05 26 41.6	
	baz=232,slow=75,SNR=17						
H11S2	**WAKE ISLAND Hy**	**32.40**	**49**	T	T	05 26 47.2	
	baz=232,slow=75,SNR=9.7						
H11S1	**WAKE ISLAND Hy**	**32.40**	**49**	T	T	05 26 53.3	
	baz=232,slow=75,SNR=12						
ILAR	**Eielson Array**	**84.34**	**24**	P	P	04 58 29.7	+0.2
	0.2nm,0.9s,baz=251,slow=5.5,SNR=1.9						

IDC 02 04:58:46.5±2.2**,5°.86S×130°.62E,h0**^{km}**,mb3.7**/1**, mb1 3.6**/2**,mb1mx3.3**/24**,mbtmp3.6**/2**,ML5.0**/1**,Error ellipse: s-maj=122.0km s-min=30.7km az=71.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.46**	**166**	Pn	Pn	05 02 11.9	-0.7
	7.6nm,0.3s,baz=346,slow=10,SNR=117						
WRA				Sn	Sn	05 04 38.9	-15
	0.4nm,0.3s,baz=318,slow=9.7,SNR=3.8						
ASAR	**Alice Springs**	**17.99**	**170**	P	Pn	05 02 58.3	+0.2
	0.1nm,0.3s,baz=348,slow=10,SNR=12						
MKAR	**Makanchi Array**	**67.62**	**326**	P	P	05 09 45.2	+0.1
	0.5nm,0.6s,baz=124,slow=7.2,SNR=7.6						

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*NIED **02** 05:27:00, 26°.50N×124°.80E, h230^{km}, Mw4.4   Best double couple: M$_0$3.97000×10^{15} NP1:φ$_s$350.00000°, δ60.00000°, λ-108.00000°.   NP2:φ$_s$202.00000°, δ34.00000°, λ-62.00000°.*

*BJI **02** 05:27:10.9±0.0, 25°.94N×125°.15E, h204^{km}, mB4.7/25, mb4.4/33*

*MOS **02** 05:27:15.5±0.8, 26°.33N×124°.84E, h216^{km}, mb4.3/34, Error ellipse: s-maj=9.5km s-min=6.0km az=102.0*

*JMA **02** 05:27:15.9±0.2, 26°.48N×124°.79E, h184^{km}, M4.4*

*NEIC **02** 05:27:16.0±1.3, 26°.33N±0°.08×124°.83E±0°.08, h204^{km}±6^{km}, mb4.3/94, Error ellipse: s-maj=12.5km s-min=8.8km az=140.0*

*IDC **02** 05:27:16.8±0.8, 26°.37N×124°.87E, h215^{km}±7^{km}, mb3.7/23, mb1 3.9/27, mb1mx3.8/48, mbtmp4.3/27, Error ellipse: s-maj=12.7km s-min=9.1km az=64.0*

ISC 02 05:27:16.0±0.4**,26°.34N**±0°.04×**124°.92E**±0°.03**,h206**^{km}±3^{km}**, h206**^{km}**:pP-P,n258,**σ1^{s}**41**/312**,mb4.3**/98**,10C-4D, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKM	**Ikemajima**	**1.45**	**168**	P	**Pn**	**05 27 49.9**	**+0.1**
JIKM				S	**S**	**05 28 14.9**	**-0.8**
JIRB	**Irabujima**	**1.53**	**171**	P	**Pn**	**05 27 50.3**	**-0.2**
JIRB				S	**S**	**05 28 15.1**	**-1.8**
JOGS	**Gusukube**	**1.64**	**164**	P	**Pn**	**05 27 51.9**	**+0.4**
JOGS				*e*S	**S**	**05 28 17.9**	**-0.8**
JMJ2	**Miyako jima3**	**1.64**	**167**	P	**Pn**	**05 27 51.8**	**+0.3**
JMJ2				S	**S**	**05 28 17.6**	**-1.1**
JKE	**Kume jima 2**	**1.67**	**90**	P	**Pn**	**05 27 51.8**	**0.0**
JKE				S	**S**	**05 28 18.0**	**-1.1**
JTJ	**Tarama**	**1.71**	**187**	P	**Pn**	**05 27 51.9**	**-0.3**
JTJ				S	**S**	**05 28 17.7**	**-2.2**
JISG	**Ishigakijimahi**	**1.83**	**198**	P	**Pn**	**05 27 52.8**	**-0.6**
JISG				S	**S**	**05 28 19.6**	**-2.4**
JAGN	**Aguni-jima**	**2.09**	**83**	P	**Pn**	**05 27 55.7**	**-0.2**
JAGN				*e*S	**S**	**05 28 24.7**	**-1.7**
JIJ	**Ishigaki jima**	**2.10**	**200**	P	**Pn**	**05 27 54.8**	**-1.2**
JIJ				S	**S**	**05 28 23.0**	**-3.6**
JKRS	**Kuro-shima**	**2.25**	**202**	P	**Pn**	**05 27 56.7**	**-1.0**
JKRS				S	**S**	**05 28 26.6**	**-3.0**
IRIF	**Iriomote-Funau**	**2.27**	**209**	P	**Pn**	**05 27 56.7**	**-1.2**
IRIF				S	**S**	**05 28 27.3**	**-2.6**
HATJ	**Hateruma jima**	**2.49**	**204**	P	**Pn**	**05 27 59.4**	**-0.8**
HATJ				S	**S**	**05 28 30.8**	**-3.4**
YOJ	**Yonaguni jima**	**2.55**	**223**	P	**Pn**	**05 28 00.0**	**-0.8**
YOJ				*e*S	**S**	**05 28 34.1**	**-1.2**
YOJ	**Yonaguni jima**	**2.55**	**223**		**Pn**	**05 28 00.1**	**-0.8**
YOJ	**Yonaguni jima**	**2.55**	**223**	P	**Pn**	**05 28 00.1**	**-0.8**
JJT3	**Tamagusuku3**	**2.58**	**94**	P	**Pn**	**05 28 01.7**	**+0.6**
JJT3				*e*S	**S**	**05 28 34.8**	**-0.9**
JYNG	**Yonagunijimaku**	**2.60**	**224**	P	**Pn**	**05 28 00.5**	**-0.9**
JYNG				S	**S**	**05 28 35.6**	**-0.6**
JNTH	**Nagotoyohara**	**2.78**	**86**	P	**Pn**	**05 28 03.5**	**+0.1**
JNTH				S	**S**	**05 28 37.2**	**-2.7**
JIH	**Iheya**	**2.81**	**75**	P	**Pn**	**05 28 03.6**	**-0.1**
JIH				S	**S**	**05 28 37.9**	**-2.5**
JOW	**Kunigami**	**3.04**	**80**	P	**Pn**	**05 28 06.1**	**-0.3**
JOW				S	**S**	**05 28 42.4**	**-2.9**
JOW	**Kunigami**	**3.04**	**80**	P	**Pn**	**05 28 06.2**	**-0.3**
	14nm,0.3s,baz=157,slow=13,SNR=450						
JOW				S	**S**	**05 28 41.9**	**-3.4**
	75nm,0.3s,baz=219,slow=22,SNR=55						
JOW	**Kunigami**	**3.04**	**80**		**Pn**	**05 28 06.5**	**0.0**
JYRO	**Yoronjima**	**3.23**	**77**	P	**Pn**	**05 28 08.1**	**-0.5**
JYRO				S	**S**	**05 28 45.6**	**-3.6**
TATO	**Taipei**	**3.39**	**247**		**Pn**	**05 28 11.7**	**+1.2**
JOKE	**Okinoerabujima**	**3.41**	**72**	P	**Pn**	**05 28 10.1**	**-0.7**
JOKE				S	**S**	**05 28 50.6**	**-2.7**
YHNB	**Yeheng**	**3.61**	**243**		**Pn**	**05 28 14.3**	**+0.9**
NACB	**Ninganchiao**	**3.71**	**235**		**Pn**	**05 28 12.8**	**-1.7**
NACB				Sn	**S**	**05 28 57.5**	**-2.2**
JTK	**Tokunoshima**	**3.87**	**67**	P	**Pn**	**05 28 15.3**	**-1.1**
JTK				S	**S**	**05 28 58.8**	**-4.5**
JAMN	**Amaminishikomi**	**4.23**	**62**	P	**Pn**	**05 28 19.2**	**-1.6**
JAMN				S	**S**	**05 29 06.4**	**-5.0**
SSLB	**Suanglung**	**4.41**	**236**		**Pn**	**05 28 22.2**	**-1.0**
SSLB				Sn	**S**	**05 29 13.2**	**-2.3**
YULB	**Yu-li**	**4.41**	**229**		**Pn**	**05 28 20.8**	**-2.4**
JAM	**Amami Oshima**	**4.64**	**63**	P	**Pn**	**05 28 24.4**	**-1.6**
JAM				*e*S	**S**	**05 29 15.9**	**-4.9**
JTAJ	**Takarajima**	**4.71**	**53**	P	**Pn**	**05 28 26.2**	**-0.7**
JZK	**Kikaishima**	**4.90**	**65**	P	**Pn**	**05 28 28.7**	**-0.6**
JZK				S	**S**	**05 29 23.4**	**-3.3**
TPUB	**Ta-pu**	**4.94**	**233**		**Pn**	**05 28 29.0**	**-0.9**
TPUB				Sn	**S**	**05 29 26.2**	**-1.5**
TWG	**Pinlang**	**4.96**	**226**		**Pn**	**05 28 26.9**	**-3.2**
TWG				Sn	**S**	**05 29 23.8**	**-4.3**
JNN	**Nakanoshima**	**5.59**	**50**	P	**Pn**	**05 28 38.3**	**+0.2**
JMZ	**Minamidaito 2**	**5.69**	**94**	P	**Pn**	**05 28 38.9**	**-0.4**
JMZ				S	**S**	**05 29 39.7**	**-5.2**
JKDJ	**Kitadaitoujima**	**5.74**	**93**	P	**Pn**	**05 28 39.5**	**-0.5**
JKDJ				S	**S**	**05 29 41.4**	**-4.8**
KNMB	**Chin-men Tao**	**6.20**	**254**	Pn	**Pn**	**05 28 45.5**	**-0.4**
JNU	**Nakatsue**	**8.51**	**36**	P	**Pn**	**05 29 17.4**	**+1.5**
	4.6nm,0.3s,baz=227,slow=4.1,SNR=30						
JNU	**Nakatsue**	**8.51**	**36**		**Pn**	**05 29 16.8**	**+0.9**
WHN	**Wuhan**	**10.20**	**297**	P	**Pn**	**05 29 38.2**	**+0.4**
TJN	**Taejon**	**10.22**	**11**	*i* P	**Pn**	**05 29 38.7**	**+0.8**
KSRS	**Korea Array**	**11.37**	**12**	P	**Pn**	**05 29 54.3**	**+1.7**
	0.9nm,0.3s,baz=186,slow=13,SNR=27						
KS19	**Wonju Array Si**	**11.40**	**12**		**Pn**	**05 29 55.0**	**+2.0**
TGY	**Tagaytay City**	**12.74**	**198**	P	**P**	**05 30 15.2**	**+1.5**
	52nm,0.3s,baz=27,slow=2.6,SNR=6.1						
DL2	**Dalian**	**12.83**	**348**	P	**P**	**05 30 16.6**	**+2.2**
DL2				pmax	pmax		
	comp=Z,22nm,0.6s						
MAJO	**Matsushiro**	**15.21**	**45**	*i* P	**P**	**05 30 41.7**	**+0.8**
MAT	**Matsushiro**	**15.21**	**45**	P	**P**	**05 30 41.7**	**+0.8**
MJAR	**Matsushiro Arr**	**15.21**	**45**	P	**Pn**	**05 30 41.1**	**+0.5**
	0.1nm,0.3s,baz=239,slow=9.8,SNR=19						
JCJ	**Chichijima**	**15.45**	**83**	P	**Pn**	**05 30 47.9**	**+4.4**
	2.9nm,0.3s,baz=120,slow=21,SNR=5.2						
XAN	**Xi'an**	**15.81**	**303**	P	**Pn**	**05 30 48.3**	**+0.5**
XAN				pP	P	05 30 53.2	+5.7
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CN2	**Changchun**	**17.42**	**1**	⇑*i*P	**Pn**	**05 31 07.1**	**+0.3**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
HHC	**Hu-ho-hao-te**	**18.22**	**326**	*e*P	**P**	**05 31 14.5**	**+0.6**
HHC				pmax	pmax		
	comp=Z,45nm,0.7s						
HHC				pmax	pmax		
	comp=Z,67nm,3.7s						
USA0B	**Ussuriysk Arra**	**18.71**	**16**	*i* P	**P**	**05 31 19.7**	**+0.7**
KMI	**Kunming**	**20.02**	**271**	P	**Pn**	**05 31 35.9**	**-2.2**
KMI				pmax	pmax		
	comp=Z,17nm,0.5s						
KMI				pmax	pmax		
	comp=Z,150nm,4.5s						
KMI				LR	LR		
	comp=N,200nm,5.0s						
KMI				LR	LR		
	comp=E,160nm,5.4s						
KMI				LR	LR		
	comp=Z,100nm,6.7s						
LZH	**Lanzhou**	**20.44**	**303**	*e*P	**P**	**05 31 39.6**	**+1.7**
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
KLR	**Kul'dur**	**23.46**	**11**	P	**P**	**05 32 07.1**	**+0.3**
	0.9nm,0.5s,baz=200,slow=9.7,SNR=5.1						
KLR				PcP	**PcP**	**05 35 47.0**	**+0.4**
	0.8nm,0.6s,baz=176,slow=2.7,SNR=3.9						
KLR	**Kul'dur**	**23.46**	**11**	*i* P	**P**	**05 32 07.9**	**+1.1**
KLR				pmax	pmax		
	comp=Z,6.0nm,1.9s						
GTA	**Gaotai**	**24.69**	**308**	*e*P	**P**	**05 32 18.4**	**0.0**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**25.24**	**257**	P	**P**	**05 32 23.6**	**+0.3**
	comp=Z,1.1nm,0.5s,baz=59,slow=7.6,SNR=5.4						
CMAR				PcP	**PcP**	**05 35 51.2**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=33,slow=0.9,SNR=5.2						
CMAR	**Chiang Mai Arr**	**25.24**	**257**	*ce*P	**P**	**05 32 24.1**	**+0.8**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM	**Songino Array**	**25.92**	**331**	P	**P**	**05 32 28.6**	**-0.7**
	comp=Z,1.7nm,0.5s,baz=149,slow=10,SNR=9.9						
SONM				pP	**pP**	**05 33 12.3**	**+1.9**
	comp=Z,1.5nm,0.8s,baz=132,slow=10,SNR=4.3						
SONM				PcP	**PcP**	**05 35 52.3**	**0.0**
	comp=Z,0.9nm,0.5s,baz=156,slow=5.7,SNR=8.2						
SONM				ScP	**ScP**	**05 39 11.7**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=116,slow=3.4,SNR=3.7						
MPSI	**Mapaga**	**26.31**	**191**	P	**P**	**05 32 34.5**	**+1.6**
	comp=Z,22nm,1.1s						
SBUM	**Sibu**	**26.71**	**209**	P	**P**	**05 32 35.5**	**-1.0**
SBUM				IAmb	IAmb	05 32 37.5	
	comp=Z,7.2nm,1.2s						
FAKI	**Fak Fak**	**29.94**	**165**	P	**P**	**05 33 05.6**	**+0.5**
TLY	**Talaya**	**30.00**	**333**	PcP	**PcP**	**05 36 02.5**	**+0.3**
	comp=Z,1.4nm,0.5s,baz=313,slow=8.6,SNR=3.2						
IPM	**Ipoh**	**31.55**	**231**	P	**P**	**05 33 18.7**	**-0.7**
IPM				IAmb	IAmb	05 33 19.9	
	comp=Z,7.9nm,0.6s						
WMQ	**Urumqi**	**34.74**	**310**	*e*P	**P**	**05 33 48.1**	**+1.3**
YAK	**Yakutsk**	**35.82**	**4**	*i* P	**P**	**05 33 55.9**	**+0.4**
YAK				pmax	pmax		
	comp=Z,12nm,0.5s						
KLSI		**36.53**	**215**	P	**P**	**05 34 05.3**	**+3.2**
	comp=Z,5.9nm,0.9s						
MDSI	**Maura Dua**	**36.65**	**216**	P	**P**	**05 34 04.6**	**+1.5**
	comp=Z,398nmcomp=Z,12nm,1.0s						
UGM	**Wanagama**	**36.81**	**204**	P	**P**	**05 34 05.7**	**+1.2**
MK31	**Makanchi Array**	**39.26**	**313**	P	**P**	**05 34 24.4**	**-0.3**
MK31	**Makanchi Array**	**39.26**	**313**	P	**P**	**05 34 24.4**	**-0.3**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR	**Makanchi Array**	**39.26**	**313**	P	**P**	**05 34 24.0**	**-0.7**
	comp=Z,2.5nm,0.4s,baz=98,slow=10.0,SNR=81						
MKAR				PcP	**PcP**	**05 36 28.9**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=79,slow=4.4,SNR=6.8						
MKAR				ScP	**ScP**	**05 39 57.7**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=100,slow=5.4,SNR=6.8						
MKAR	**Makanchi Array**	**39.26**	**313**	*ce*P	**P**	**05 34 24.0**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
MTN	**Manton Dam**	**39.42**	**170**	P	**P**	**05 34 25.6**	**-0.5**
MAKZ	**Makanchi**	**39.47**	**313**	P	**P**	**05 34 26.4**	**+0.1**
MAKZ				IAmb	IAmb	05 34 27.8	
	comp=Z,7.1nm,1.1s						
MAKZ	**Makanchi**	**39.47**	**313**	P	**P**	**05 34 26.5**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ZAA0	**Zalesovo Array**	**40.38**	**324**	P	**P**	**05 34 32.9**	**-0.9**
ZALV	**Zalesovo Beam**	**40.38**	**324**	P	**P**	**05 34 32.5**	**-1.3**
	comp=Z,3.3nm,0.5s,baz=109,slow=7.0,SNR=16						
ZALV				pP	**pP**	**05 35 19.1**	**+1.9**
	comp=Z,1.4nm,0.6s,baz=118,slow=8.3,SNR=2.2						
ZALV				PcP	**PcP**	**05 36 31.7**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=119,slow=4.1,SNR=2.5						
ZALV				ScP	**ScP**	**05 40 00.1**	**-2.2**
	comp=Z,1.2nm,0.7s,baz=132,slow=3.7,SNR=5.9						
KNRA	**Kununurra**	**41.94**	**174**	P	**P**	**05 34 46.4**	**-0.3**
KSH	**Kashi**	**42.65**	**301**	P	**P**	**05 34 53.7**	**+1.2**
KSH				pP	pP	05 35 38.0	+1.7
KSH				PP	**PcP**	**05 36 38.7**	**-1.9**
KSH				S	**S**	**05 41 01.5**	**+1.5**
KSH				ScS	**ScS**	**05 44 29.2**	**-2.3**
KSH				pmax	pmax		
	comp=Z,11nm,0.5s						
KSH				pmax	pmax		
	comp=Z,340nm,7.8s						
KSH				LR	LR		
	comp=Z,260nm,13.8s						
KSH				LR	LR		
	comp=Z,160nm,10.8s						
KSH				LR	LR		
	comp=Z,110nm,12.2s						
KURK	**Kurchatov**	**42.71**	**317**	P	**P**	**05 34 52.1**	**-0.6**
KURK				IAmb	IAmb	05 34 53.6	
	comp=Z,8.2nm,1.2s						
KURK	**Kurchatov**	**42.71**	**317**	*ce*P	**P**	**05 34 52.1**	**-0.6**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
COEN	**Coen**	**43.82**	**154**	P	**P**	**05 35 02.6**	**+0.7**
COEN				IAmb	IAmb	05 35 02.9	
	comp=Z,7.5nm,0.5s						
AAK	**Ala-Archa**	**43.97**	**305**	P	**P**	**05 35 02.8**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=137,slow=6.2,SNR=4.7						
AAK				PcP	**PcP**	**05 36 44.9**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=145,slow=3.0,SNR=6.0						
AAK	**Ala-Archa**	**43.97**	**305**	IAmb	IAmb	05 35 04.1	
	comp=Z,1.2nm,0.8s						
AAK	**Ala-Archa**	**43.97**	**305**	*i* P	**P**	**05 35 02.8**	**-0.3**
AAK				pmax	pmax		
	comp=Z,5.0nm,2.0s						
FITZ	**Fitzroy Crossi**	**44.18**	**179**	P	**P**	**05 35 04.7**	**0.0**
FITZ				IAmb	IAmb	05 35 05.1	
	comp=Z,10nm,0.6s						
NIL	**Nilore**	**44.96**	**292**	P	**P**	**05 35 10.0**	**-0.9**
NIL	**Nilore**	**44.96**	**292**	P	**P**	**05 35 10.0**	**-0.9**
NIL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TIXI	**Tiksi**	**45.40**	**2**	P	**P**	**05 35 13.9**	**+0.3**
TIXI	**Tiksi**	**45.40**	**2**	*i* P	**P**	**05 35 13.9**	**+0.3**
TIXI				pmax	pmax		
	comp=Z,6.0nm,2.4s						
WB0	**Warramunga Arr**	**46.75**	**168**	P	**P**	**05 35 24.8**	**-0.1**
WRAB	**Tennant Creek**	**46.90**	**168**	P	**P**	**05 35 25.8**	**-0.2**
WRAB				IAmb	IAmb	05 35 26.5	
	comp=Z,11nm,0.8s						
WRAB	**Tennant Creek**	**46.90**	**168**	*ce*P	**P**	**05 35 25.8**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,11nm,0.8s						
WRA	**Warramunga Arr**	**46.91**	**168**	P	**P**	**05 35 25.9**	**-0.2**
	comp=Z,14nm,0.7s,baz=348,slow=8.3,SNR=29						
WRA	**Warramunga Arr**	**46.91**	**168**	*ce*P	**P**	**05 35 25.8**	**-0.3**
WRA				pmax	pmax		
	comp=Z,12nm,0.5s						
WB2	**Warramunga Arr**	**46.91**	**168**	P	**P**	**05 35 26.0**	**-0.1**
WB2				IAmb	IAmb	05 35 26.7	
	comp=Z,12nm,0.7s						
KK31	**Karatay Array**	**46.92**	**305**	P	**P**	**05 35 26.4**	**+0.3**
KK31	**Karatay Array**	**46.92**	**305**	P	**P**	**05 35 26.4**	**+0.3**
KK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KKAR	**Karatay Array**	**46.92**	**305**	P	**P**	**05 35 26.4**	**+0.3**
KKAR	**Karatay Array**	**46.92**	**305**	P	**P**	**05 35 26.4**	**+0.3**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WR0	**Warramunga Arr**	**46.97**	**168**	P	**P**	**05 35 26.6**	**+0.1**
WR0				IAmb	IAmb	05 35 27.0	
	comp=Z,14nm,0.9s						
PSA00	**Pilbara Seismi**	**47.89**	**186**	P	**P**	**05 35 33.2**	**-0.4**
PSA00				IAmb	IAmb	05 35 33.6	
	comp=Z,8.5nm,0.9s						
BRVK	**Borovoye**	**48.29**	**319**	P	**P**	**05 35 36.5**	**+0.2**
BRVK	**Borovoye**	**48.29**	**319**	*ce*P	**P**	**05 35 36.5**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KBL	**Kabul**	**48.35**	**294**	P	**P**	**05 35 37.7**	**+0.4**
KBL				IAmb	IAmb	05 35 38.9	
	comp=Z,9.9nm,0.7s						
KBL	**Kabul**	**48.35**	**294**	P	**P**	**05 35 37.7**	**+0.4**
KBL				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BILL	**Bilibino**	**48.52**	**19**	*i* P	**P**	**05 35 38.7**	**+0.8**
BILL				pmax	pmax		
	comp=Z,10.0nm,2.3s						
AS31	**Alice Springs**	**50.47**	**169**	P	**P**	**05 35 53.6**	**+0.4**
ASAR	**Alice Springs**	**50.47**	**169**	P	**P**	**05 35 53.2**	**+0.1**
	comp=Z,4.4nm,0.6s,baz=355,slow=13,SNR=88						
ASAR				PcP	**PcP**	**05 37 07.5**	**-0.7**
	comp=Z,1.5nm,0.5s,baz=348,slow=3.9,SNR=8.1						
SVE	**Sverdlovsk**	**54.36**	**322**	*e*P	**P**	**05 36 21.3**	**0.0**
SVE				pmax	pmax		
	comp=Z,14nm,0.7s						
ABKAR	**Akbulak array**	**54.40**	**313**	P	**P**	**05 36 21.2**	**-0.5**
ABKAR				IAmb	IAmb	05 36 22.4	
	comp=Z,4.5nm,0.7s						
ARU	**Arti**	**55.47**	**322**	P	**P**	**05 36 28.6**	**-0.6**
ARU				IAmb	IAmb	05 36 29.4	
	comp=Z,8.3nm,0.8s						
ARU	**Arti**	**55.47**	**322**	*d i*P	**P**	**05 36 28.3**	**-0.9**
ARU				*PP	**pP**	**05 37 15.4**	**+0.1**
ARU				S	**S**	**05 43 56.9**	**-0.9**
ARU				SS	**SS**	**05 47 43.4**	**-1.9**
ARU				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MORW	**Morawa**	**55.75**	**189**	P	**P**	**05 36 31.6**	**+0.1**
GEYT	**Alibeck**	**56.66**	**300**	P	**P**	**05 36 38.2**	**+0.2**
	comp=Z,4.2nm,0.7s,baz=58,slow=3.9,SNR=7.7						
FORT	**Forrest**	**56.88**	**177**	P	**P**	**05 36 39.9**	**+0.5**
ANM	**Nome**	**57.83**	**29**	P	**P**	**05 36 44.4**	**-1.3**
ANM	**Nome**	**57.83**	**29**	P	**P**	**05 36 44.4**	**-1.3**
ANM				pmax	pmax		
	comp=Z,4.0nm,1.1s						
NWAO	**Narrogin (SRO)**	**59.40**	**188**	P	**P**	**05 36 56.9**	**0.0**
NWAO	**Narrogin (SRO)**	**59.40**	**188**	P	**P**	**05 36 57.0**	**+0.2**
NWAO				IAmb	IAmb	05 37 04.6	
	comp=Z,26nm,1.4s						
NWAO	**Narrogin (SRO)**	**59.40**	**188**	P	**P**	**05 36 56.9**	**0.0**
NWAO				pmax	pmax		
	comp=Z,21nm,1.4s						
BBOO	**Buckleboo**	**59.77**	**169**	P	**P**	**05 36 59.3**	**-0.1**
BBOO				IAmb	IAmb	05 37 00.1	
	comp=Z,8.8nm,0.8s						
STKA	**Stephens Creek**	**60.04**	**164**	P	**P**	**05 37 00.9**	**-0.4**
	comp=Z,2.8nm,0.7s,baz=2.4,slow=5.1,SNR=6.7						
STKA	**Stephens Creek**	**60.04**	**164**	P	**P**	**05 37 01.7**	**+0.4**
STKA	**Stephens Creek**	**60.04**	**164**	P	**P**	**05 37 01.7**	**+0.4**
STKA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ARMA	**Armidale**	**61.96**	**154**	P	**P**	**05 37 16.2**	**+1.8**
PRGR	**Permogore**	**62.14**	**328**	*e*P	**P**	**05 37 12.8**	**-2.2**
PRGR				*e**PP	**pP**	**05 37 59.4**	**-2.7**
PRGR				pmax	pmax		
	comp=Z,11nm,0.6s						
SVW2	**Sparrevohn**	**62.27**	**33**	P	**P**	**05 37 17.1**	**+1.2**
SVW2				IAmb	IAmb	05 37 17.5	
	comp=Z,3.0nm,0.6s						
PPLA	**Purkeypile**	**63.69**	**30**	P	**P**	**05 37 26.6**	**+1.2**
PPLA				IAmb	IAmb	05 37 45.7	
	comp=Z,12nm,1.4s						
MLY	**Manley**	**64.07**	**28**	P	**P**	**05 37 28.6**	**+0.9**
BPAW	**Bear Paw Mtn.**	**64.08**	**29**	P	**P**	**05 37 28.6**	**+0.8**
BPAW				IAmb	IAmb	05 37 28.8	
	comp=Z,2.2nm,0.6s						
SKT	**Skwentna**	**64.11**	**31**	P	**P**	**05 37 28.3**	**+0.3**
SKT				IAmb	IAmb	05 37 28.5	
	comp=Z,3.2nm,0.8s						
KTH	**Kantishna Hill**	**64.18**	**30**	P	**P**	**05 37 29.3**	**+0.8**
KTH				IAmb	IAmb	05 37 43.1	
	comp=Z,7.8nm,1.4s						
KDAK	**Kodiak Island**	**64.18**	**36**	P	**P**	**05 37 29.2**	**+0.8**
KDAK	**Kodiak Island**	**64.18**	**36**	P	**P**	**05 37 29.3**	**+0.8**
KDAK				pmax	pmax		
	comp=Z,26nm,1.2s						
TRF	**Thorofare Moun**	**64.47**	**30**	P	**P**	**05 37 31.7**	**+1.1**
TRF				IAmb	IAmb	05 37 46.4	
	comp=Z,13nm,1.5s						
SUA	**Susitna One**	**64.55**	**32**	P	**P**	**05 37 31.3**	**+0.3**
CNPM	**China Poot**	**64.61**	**34**	P	**P**	**05 37 32.7**	**+1.4**
BWN	**Browne**	**64.73**	**29**	P	**P**	**05 37 33.4**	**+1.4**
BWN				IAmb	IAmb	05 37 52.4	
	comp=Z,6.8nm,1.0s						
NEA	**Nenana**	**64.84**	**28**	P	**P**	**05 37 33.2**	**+0.5**
NEA				IAmb	IAmb	05 37 33.5	
	comp=Z,3.2nm,0.7s						
MCK	**McKinley**	**65.03**	**29**	P	**P**	**05 37 34.3**	**+0.3**
MCK	**McKinley**	**65.03**	**29**	P	**P**	**05 37 34.3**	**+0.3**
MCK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
RND	**Reindeer**	**65.12**	**30**	P	**P**	**05 37 34.9**	**+0.3**
RND				IAmb	IAmb	05 37 35.0	
	comp=Z,7.2nm,0.7s						
RND	**Reindeer**	**65.12**	**30**	P	**P**	**05 37 34.9**	**+0.3**
RND				pmax	pmax		
	comp=Z,7.0nm,0.7s						
PMR	**Palmer**	**65.29**	**32**	P	**P**	**05 37 35.6**	**0.0**
PMR				IAmb	IAmb	05 37 47.3	
	comp=Z,4.7nm,1.1s						
PMR	**Palmer**	**65.29**	**32**	P	**P**	**05 37 35.6**	**0.0**
PMR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GHO	**Glory Hole Cre**	**65.36**	**31**	P	**P**	**05 37 36.0**	**-0.2**
GHO				IAmb	IAmb	05 37 48.0	
	comp=Z,9.1nm,1.4s						

CAN	Canberra	65.42	158	P	P	05 37 38.2	+1.4
CAN	Canberra	65.42	158	P	P	05 37 38.2	+1.4
CAN				pmax	pmax		
	comp=Z,15nm,1.2s						
SML	Sawmill	65.63	31	P	P	05 37 38.0	+0.1
SML				IAmb	IAmb	05 37 40.4	
	comp=Z,3.3nm,0.6s						
KNK	Knik Glacier	65.64	32	P	P	05 37 38.4	+0.5
KNK				IAmb	IAmb	05 37 41.6	
	comp=Z,4.1nm,0.9s						
ILAR	Eielson Array	65.74	28	P	P	05 37 39.4	+1.0
	comp=Z,0.4nm,0.6s,baz=294,slow=9.4,SNR=6.6						
DHY	Denali Highway	65.83	30	P	P	05 37 39.5	+0.2
SCM	Sheep Creek Mo	66.09	31	P	P	05 37 41.4	+0.5
SCM				IAmb	IAmb	05 37 41.8	
	comp=Z,5.7nm,0.6s						
SCM	Sheep Creek Mo	66.09	31	P	P	05 37 41.4	+0.5
SCM				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GNI	Garni	66.38	304	*i* P	P	05 37 42.5	-0.7
GNI				pmax	pmax		
	comp=Z,22nm,1.1s						
GLI	Glacier Island	66.39	32	P	P	05 37 43.1	+0.5
GLI				IAmb	IAmb	05 37 43.4	
	comp=Z,8.5nm,1.0s						
FID	Port Fidalgo	66.72	32	P	P	05 37 44.7	0.0
FID				IAmb	IAmb	05 37 45.4	
	comp=Z,5.1nm,0.6s						
KBZ	Khabaz	66.78	309	P	P	05 37 45.6	+0.2
	comp=Z,6.4nm,0.8s,baz=119,slow=4.3,SNR=22						
HIN	Hinchinbrook I	66.78	33	P	P	05 37 45.6	+0.4
RIDG	Independent Ri	66.81	29	P	P	05 37 45.3	-0.1
RIDG				IAmb	IAmb	05 37 46.9	
	comp=Z,7.6nm,1.2s						
KIV	Kislovodsk	66.87	309	*e*P	P	05 37 46.3	+0.2
KIV				pmax	pmax		
	comp=Z,45nm,1.1s						
EYAK	Cordova Ski Ar	67.11	32	P	P	05 37 48.0	+0.8
EYAK				IAmb	IAmb	05 38 03.9	
	comp=Z,11nm,1.5s						
SCRK	Sand Creek	67.13	29	P	P	05 37 47.1	-0.3
RAGM	Ragged Mountai	67.67	32	P	P	05 37 51.8	+1.1
SOCY	Socotra	67.72	273	P	P	05 37 50.5	-1.3
GLB	Gilahina Butte	67.82	31	P	P	05 37 52.2	+0.5
OBN	Obninsk	67.91	322	⇓*e*P	P	05 37 52.1	-0.1
OBN				*e**PP	pP	05 38 42.9	+2.7
OBN				*e*PPP	PPP	05 42 09.5	
OBN				*e*SS	SS	05 51 04.9	+5.6
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VRDI	Verde Repeater	68.04	31	P	P	05 37 53.7	+0.5
VRDI				IAmb	IAmb	05 37 53.8	
	comp=Z,6.1nm,1.2s						
EGAK	Eagle	68.13	27	P	P	05 37 53.9	+0.4
KEV	Kevo	68.24	338	P	P	05 37 53.6	-0.5
KEV	Kevo	68.24	338	P	P	05 37 53.6	-0.5
KEV				pmax	pmax		
	comp=Z,20nm,1.1s						
CRQM	Cirque	68.31	32	P	P	05 37 55.5	+0.6
CRQM				IAmb	IAmb	05 37 55.9	
	comp=Z,10nm,1.2s						
TGL	Tana Glacier	68.45	32	P	P	05 37 56.2	+0.5
ARCES	ARCESS Array B	68.81	338	P	P	05 37 56.6	-1.0
	comp=Z,1.9nm,0.7s,baz=66,slow=7.0,SNR=19						
ARE0	ARCESS Array S	68.81	338	*e*P	P	05 37 57.3	-0.4
BARN	Barnard Glacie	68.92	31	P	P	05 37 59.7	+1.0
SOC	Sochi	69.04	309	*e*P	P	05 37 57.6	-1.9
SOC				*e**SP	sP	05 39 08.4	-1.4
SOC				*e*		05 40 34.2	
SOC				*e*PPP	PPP	05 42 15.4	
SOC				*e*S	S	05 46 46.1	-1.6
SOC				*e*SS	SS	05 51 24.2	+6.9
SOC				pmax	pmax		
	comp=Z,4.0nm,0.5s						
DAWY	Dawson	69.06	28	P	P	05 38 00.0	+0.7
CTGM	Chitina Glacie	69.10	31	P	P	05 38 00.5	+0.8
CTGM				IAmb	IAmb	05 38 01.2	
	comp=Z,3.8nm,0.7s						
KTK1	Kautokeino	69.74	338	*e*P	P	05 38 02.6	-0.8
INK	Inuvik	69.94	23	P	P	05 38 04.5	0.0
INK	Inuvik	69.94	23	P	P	05 38 04.5	0.0
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TRO	Tromso	70.92	339	*e*P	P	05 38 09.4	-1.0
RAYN	Ar Rayn	70.95	287	P	P	05 38 11.1	-0.5
RAYN	Ar Rayn	70.95	287	P	P	05 38 11.1	-0.5
RAYN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FIA1	FINESS Array S	71.29	330	P	P	05 38 12.3	-0.5
FIA1				IAmb	IAmb	05 38 13.9	
	comp=Z,9.8nm,1.1s						
FINES	FINESS Array B	71.29	330	P	P	05 38 11.9	-0.8
	comp=Z,3.1nm,0.6s,baz=62,slow=5.8,SNR=42						
FINES				pP	pP	05 39 02.9	+1.7
	comp=Z,2.1nm,0.9s,baz=85,slow=6.1,SNR=3.0						
FINES	FINESS Array B	71.29	330	*ce*P	P	05 38 12.0	-0.8
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
VSU	Vasula	72.04	327	*i* P	P	05 38 17.1	-0.2
VSU				pmax	pmax		
	comp=Z,36nm,1.6s						
WHY	Whitehorse	72.19	31	P	P	05 38 19.4	+1.1
C36M	Paulatuk	72.63	20	P	P	05 38 20.0	-0.6
C36M				IAmb	IAmb	05 38 20.4	
	comp=Z,6.8nm,1.2s						
STEI	Steigen	72.88	338	*e*P	P	05 38 20.8	-1.2
LOF	Lofoten	73.34	339	*e*P	P	05 38 23.7	-1.1
AKASG	Malin Array Be	73.50	319	P	P	05 38 24.9	-1.1
	comp=Z,4.2nm,0.5s,baz=59,slow=6.7,SNR=21						
AKASG	Malin Array Be	73.50	319	*ce*P	P	05 38 25.0	-1.1
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AKBB	Malin Array Si	73.50	319	P	P	05 38 25.0	-1.1
AKBB				IAmb	IAmb	05 38 25.5	
	comp=Z,6.4nm,0.6s						
AKBB	Malin Array Si	73.50	319	P	P	05 38 25.0	-1.1
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MOR8	Moi Rana	73.99	337	*e*P	P	05 38 26.5	-2.2
BR131	Keskin Array S	74.61	307	P	P	05 38 32.7	-0.2
BR131				IAmb	IAmb	05 38 33.0	
	comp=Z,4.6nm,0.9s						
BR131	Keskin Array S	74.61	307	P	P	05 38 32.7	-0.2
BR131				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRTR	Keskin Array B	74.61	307	P	P	05 38 31.8	-1.1
	comp=Z,3.1nm,0.7s,baz=108,slow=4.6,SNR=14						
BRTR	Keskin Array B	74.61	307	*ce*P	P	05 38 32.4	-0.5
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ASF	Jabal al Asfar	74.92	299	P	P	05 38 33.1	-1.6
	comp=Z,3.1nm,0.6s,baz=28,slow=3.4,SNR=4.4						
SUW	Suwalki	75.61	323	P	P	05 38 37.6	-0.5
SUW	Suwalki	75.61	323	P	P	05 38 37.6	-0.5
SUW				pmax	pmax		
	comp=Z,16nm,0.9s						
NSS	Namsos	75.72	336	*e*P	P	05 38 37.5	-1.1
BUR08	Bucovina Ar. S	77.13	317	P	P	05 38 46.6	-0.3
NC405	NORSAR Array S	77.64	333	P	P	05 38 48.6	-0.8
KWP	Kalwaria Pacla	77.77	319	P	P	05 38 50.6	+0.3
KWP	Kalwaria Pacla	77.77	319	P	P	05 38 50.6	+0.3
KWP				pmax	pmax		
	comp=Z,12nm,0.5s						
NB2	NORSAR Subarra	77.88	333	P	P	05 38 49.1	-1.6
	comp=Z,1.3nm,0.6s,baz=54,slow=5.3						
NB2	NORSAR Subarra	77.88	333	P	P	05 38 49.1	-1.6
	baz=54,slow=5.3						
NOA	NORSAR Array B	77.88	333	P	P	05 38 49.1	-1.6
	comp=Z,1.7nm,0.7s,baz=55,slow=5.6,SNR=12						
NC204	NORSAR Array S	77.93	333	*e*P	P	05 38 49.9	-1.2
DOMB	Dombas	78.18	334	*e*P	P	05 38 51.3	-1.1
KOLS	Kolonicke sedl	78.33	319	*e*P	P	05 38 53.0	-0.5
KOLS	Kolonicke sedl	78.33	319	*e*P	P	05 38 53.0	-0.5
AKN	Aaknes	78.89	335	*e*P	P	05 38 55.5	-0.8
OJC	Ojcow	79.17	321	P	P	05 38 57.7	-0.3
OJC				IAmb	IAmb	05 38 58.6	
	comp=Z,13nm,1.2s						
OJC	Ojcow	79.17	321	P	P	05 38 57.7	-0.3
OJC				pmax	pmax		
	comp=Z,13nm,1.2s						
YKA	Yellowknife Ar	79.65	24	P	P	05 38 59.5	-0.8
	comp=Z,1.4nm,0.6s,baz=304,slow=5.1,SNR=26						
HYA	Hoyanger	79.81	334	*e*P	P	05 39 00.5	-0.7
LANS	Liptovska Anna	79.87	320	*e*P	P	05 39 02.0	+0.2
LANS				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LANS	Liptovska Anna	79.87	320	*e*P	P	05 39 02.0	+0.2
VYHS	Vyhne	80.55	320	*e*P	P	05 39 05.4	0.0
VYHS	Vyhne	80.55	320	*e*P	P	05 39 05.4	0.0
SUMG	Summit	80.69	355	P	P	05 39 06.0	-0.2
SUMG				IAmb	IAmb	05 39 06.6	
	comp=Z,4.7nm,0.7s						
SUMG	Summit	80.69	355	P	P	05 39 06.0	-0.2
SUMG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SMOL	Smolenice	81.36	320	*e*P	P	05 39 10.7	+1.0
SMOL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SMOL	Smolenice	81.36	320	*e*P	P	05 39 10.7	+1.0
BRG	Berggiesshubel	82.07	323	*e*P	P	05 39 14.7	+1.3
	comp=Z,1.6nm,0.8s						
CLL	Collm	82.34	324	⇓*i*P	P	05 39 14.9	+0.2
	comp=Z,5.0nm,0.7s						
CLL				*e*pP	pP	05 40 02.0	-2.5
CLL	Collm	82.34	324	P	P	05 39 15.5	+0.8
CLL				IAmb	IAmb	05 39 16.7	
	comp=Z,3.4nm,0.6s						
CLL	Collm	82.34	324	⇓*i*P	P	05 39 14.9	+0.2
CLL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GERES	GERESS Array B	83.29	322	P	P	05 39 19.0	-0.8
	comp=Z,0.2nm,0.4s,baz=35,slow=4.9,SNR=6.5						
ITM	Ithomi	84.01	309	P	P	05 39 22.0	-1.6
NEW	Newport	87.29	36	P	P	05 39 40.7	+1.2
NEW				IAmb	IAmb	05 39 41.8	
	comp=Z,4.5nm,1.0s						
NEW	Newport	87.29	36	P	P	05 39 40.7	+1.2
NEW				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KMBO	Kilima Mbogo	88.41	268	P	P	05 39 45.1	-0.5
	comp=Z,1.8nm,0.6s,baz=40,slow=9.3,SNR=9.0						
KMBO	Kilima Mbogo	88.41	268	IAmb	IAmb	05 39 46.8	
	comp=Z,2.8nm,0.9s						
WALA	Waterton Lakes	88.45	34	P	P	05 39 46.7	+1.6
WALA				IAmb	IAmb	05 39 47.4	
	comp=Z,4.5nm,0.8s						
MSO	Missoula	89.87	36	P	P	05 39 52.2	+0.5
MSO				IAmb	IAmb	05 39 53.4	
	comp=Z,4.1nm,0.8s						
MFID	Camas Ranch	90.99	39	P	P	05 39 57.3	+0.3
MFID				IAmb	IAmb	05 39 59.5	
	comp=Z,3.9nm,1.0s						
EGMT	Eagleton	91.21	33	P	P	05 39 57.5	-0.4
DLMT	Dillon	91.53	37	P	P	05 40 00.9	+1.4
NVAR	Mina Array Bea	92.54	45	P	P	05 40 04.9	+0.4
	comp=Z,0.4nm,0.6s,baz=298,slow=5.6,SNR=5.9						
YHL	Hebgen Lake	92.62	36	P	P	05 40 06.8	+2.0
PDAR	Pinedale Array	94.89	37	P	P	05 40 15.2	+0.1
	comp=Z,0.3nm,0.5s,baz=34,slow=1.8,SNR=6.4						
TXAR	Lajitas Array	107.65	43	PKiKP	PKiKP	05 45 17.9	-1.2
	comp=Z,0.1nm,0.5s,baz=316,slow=3.5,SNR=3.7						
TORD	Torodi Ar. Bea	112.29	298	PKiKP	PKiKP	05 45 27.1	-0.9
	comp=Z,0.5nm,0.4s,baz=129,slow=1.6,SNR=6.9						
DBIC	Dimbokro	121.29	297	PKP	PKPdf	05 45 44.8	-0.6
	comp=Z,2.7nm,0.4s,baz=25,slow=2.4,SNR=11						

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*IDC **02** 05:37:23.4±2.2, 35°.42N×66°.80E, h0^{km}, mb3.6/7,*
mb1 3.7/12, mb1mx3.5/45, mbtmp3.6/12, ML3.6/5, MS3.1/1,
Ms1 3.2/1, ms1mx2.3/50, Error ellipse: s-maj=40.0km
s-min=18.2km az=162.0
*NNC **02** 05:37:33.2±1.7, 36°.62N×66°.30E, h0^{km}, mb4.1, mpv3.9,*
Error ellipse: s-maj=18.5km s-min=6.3km az=162.0
ISC 02 05:37:34.1±1.6**, 36°.5N**±0°.1×**66°.32E**±0°.07**, h10**^{km}**, n24,**
σ**1^{s}.30**/30**, mb3.5**/5**, 5C-7D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GEYT	Alibeck	6.69	284	Pn	Pn	05 39 11.6	-0.9
	1.5nm,0.3s,baz=121,slow=11,SNR=14						
GEYT				Sn	Sn	05 40 28.1	-0.7
	2.8nm,0.3s,baz=71,slow=14,SNR=7.2						
GEYT				Lg	Lg	05 41 20.7	
	baz=149,slow=41,SNR=1.3						
GYA0B	ALIBECK ARRAY	6.69	284	⇓Pn	Pn	05 39 13.0	+0.5
GYA0B				⇓Sn	Sn	05 40 29.6	+0.9
KK31	Karatay Array	7.31	25	⇓Pn	Pn	05 39 21.4	+0.5
	2.2nm,0.3s,baz=210,slow=14,SNR=42						
KK31				⇓Sn	Sn	05 40 44.3	+0.3
	2.6nm,0.3s,baz=208,slow=23,SNR=4.2						
AML	Almayashu	7.99	43	P	Pn	05 39 30.0	-0.7
	SNR=11						
EKS2	Erkin-Say	8.40	41	P	Pn	05 39 37.6	+1.7
	SNR=5.7						
UCH	Uchtor	8.52	46	P	Pn	05 39 37.3	-0.6
	SNR=16						
AAK	Ala-Archa	8.77	44	Pn	Pn	05 39 40.8	-0.3
	1.5nm,0.3s,baz=190,slow=9.4,SNR=15						
AAK				Sn	Sn	05 41 20.9	+0.9
	0.3nm,0.3s,baz=233,slow=15,SNR=1.8						
AAK	Ala-Archa	8.77	44	P	Pn	05 39 41.3	+0.2
	SNR=6.1						
AAK	Ala-Archa	8.77	44	⇑Pn	Pn	05 39 40.0	-1.1
	3.6nm,0.5s						
AAK				⇓Sn	Sn	05 41 22.4	+2.3
	7.2nm,1.1s						
KBK	Karagaybulak	9.04	45	P	Pn	05 39 44.7	-0.1
	SNR=7.6						
CHMS	Chumysh	9.15	43	⇑Pn	Pn	05 39 44.3	-1.9
	3.1nm,0.7s						
CHMS				⇓Sn	Sn	05 41 29.7	+0.5
	5.1nm,0.7s						
AB31	Akbulak array	13.54	342	⇑Pn	Pn	05 40 44.7	-1.4
	0.9nm,0.6s,baz=337,slow=9.8,SNR=16						
AB31				⇑Sn	Sn	05 43 17.5	+1.0
	0.3nm,0.3s						
AKTO	Aktyubinsk	15.13	339	Pn	Pn	05 41 09.2	+1.4
	0.3nm,0.3s,baz=159,slow=21,SNR=2.5						
AKTO				Sn	Sn	05 43 53.1	-2.2
	0.2nm,0.3s,baz=304,slow=11,SNR=1.8						
AKTO	Aktyubinsk	15.13	339	⇑Pn	Pn	05 41 08.4	+0.7
	1.9nm,0.7s						
AKTO				⇓Sn	Sn	05 43 53.8	-1.5
	4.3nm,1.1s						
MKAR	Makanchi Array	15.70	44	Pn	Pn	05 41 12.3	-3.0
	0.1nm,0.3s,baz=237,slow=16,SNR=7.0						
MKAR				Sn	Sn	05 44 00.5	-8.8
	0.0nm,0.3s,baz=249,slow=21,SNR=2.2						
KURBB	Kurchatov Arra	16.59	28	P	Pn	05 41 27.7	+1.0
	0.1nm,0.3s,baz=222,slow=10,SNR=13						
BVAR	Borovoye Array	16.73	9	P	Pn	05 41 28.8	+0.3
	0.6nm,0.3s,baz=187,slow=10.0,SNR=8.3						
KBZ	Khabaz	19.26	299	P	P	05 42 00.9	+2.3
	1.6nm,0.8s,baz=220,slow=7.6,SNR=4.5						
ARU	Arti	20.58	348	P	Pn	05 42 17.6	+2.4
	0.5nm,0.3s,baz=192,slow=14,SNR=3.9						
ZALV	Zalesovo Beam	21.63	31	P	P	05 42 23.9	-0.4
	1.3nm,0.4s,baz=228,slow=11,SNR=10						
FINES	FINESS Array B	35.39	328	P	P	05 44 29.3	-0.4
	2.7nm,1.1s,baz=83,slow=11,SNR=1.9						
NOA	NORSAR Array B	42.09	323	P	P	05 45 25.5	-0.5
	0.5nm,0.9s,baz=100,slow=8.1,SNR=1.5						
NOA				LR	LR	06 06 43.4	
	comp=Z,20nm,18.2s,baz=10.0,slow=41						
TORD	Torodi Ar. Bea	61.95	266	P	P	05 47 48.5	-6.0
	0.2nm,0.6s,baz=46,slow=4.0,SNR=4.3						
YKA	Yellowknife Ar	81.31	0	P	P	05 49 45.2	-5.1
	0.2nm,0.6s,baz=351,slow=5.1,SNR=4.1						

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*IDC **02** 05:56:13.7±3.3, 14°.40N×93°.03W, h0^{km}, mb3.5/2,*
mb1 3.8/6, mb1mx3.5/40, mbtmp3.5/6, ML3.3/3, MS1.9/1,
Ms1 1.9/1, ms1mx1.9/28, Error ellipse: s-maj=56.2km
s-min=22.8km az=10.0
*MEX **02** 05:56:16.9±0.8, 14°.30N×93°.12W, h9^{km}±20^{km}, MD4.0*
ISC 02 05:56:15.3±3.3**, 14°.34N**±0°.08×**93°.09W**±0°.04**, h16**^{km}±22^{km}**,**
n23, σ**1^{s}.02**/37**, mb3.6**/3**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.98	54		Pb	05 56 33.5	-0.5
THIG					Sb	05 56 46.3	-0.3
THIG		0.98	54	*e*P	Pb	05 56 33.5	-0.5
THIG				*e*S	Sb	05 56 46.3	-0.3
PCIG		1.37	355		Pn	05 56 38.8	-1.0
PCIG					Sn	05 56 55.7	-1.9
PCIG		1.37	355	*e*P	Pn	05 56 38.8	-1.0
PCIG				*i* S	Sn	05 56 55.7	-1.9
CCIG	Comitan	2.14	25		Pb	05 56 53.8	0.0
CCIG	Comitan	2.14	25		Pn	05 56 50.8	+0.2
CCIG					Sn	05 57 16.1	-0.8
CCIG	Comitan	2.14	25	*e*P	Pn	05 56 50.8	+0.2
CCIG				*e*S	Sn	05 57 16.1	-0.8
TGIG		2.43	359		Pn	05 56 55.0	+0.5
TGIG					Sn	05 57 24.0	+0.1
TGIG		2.43	359	*e*P	Pn	05 56 55.0	+0.5
TGIG				*i* S	Sn	05 57 24.0	+0.1
APG	El Apazote	2.62	75	Pn	Pn	05 56 56.7	-0.6
	2.6nm,0.3s,baz=294,slow=19,SNR=38						
APG				Sn	Sn	05 57 28.3	-0.7
	3.8nm,0.3s,baz=298,slow=12,SNR=5.2						
APG				LR	LR	05 57 44.8	
	comp=Z,24nm,20.6s,baz=240,slow=36						
CMIG	Matias Romero	3.24	328	Pn	Pn	05 57 05.7	+0.1
	1.7nm,0.3s,baz=157,slow=10,SNR=15						
CMIG				Sn	Sn	05 57 44.8	+1.0
	2.7nm,0.3s,baz=289,slow=7.0,SNR=6.5						
CMIG	Matias Romero	3.24	328		Pn	05 57 05.5	-0.1
CMIG					Sn	05 57 43.9	0.0
CMIG	Matias Romero	3.24	328	*e*P	Pn	05 57 05.5	-0.1
CMIG				*i* S	Sn	05 57 43.9	0.0
HUIG	Huatulco	3.25	296		Pn	05 57 05.7	0.0
HUIG					Sn	05 57 41.8	-2.3
HUIG	Huatulco	3.25	296	*e*P	Pn	05 57 05.7	0.0
HUIG				*i* S	Sn	05 57 41.8	-2.3
TLIG	Tlapa	6.17	302	Pn	Pn	05 57 47.5	+1.6
TEIG	Tepich	7.44	37	Pn	Pn	05 58 03.9	+0.6
	2.7nm,0.3s,baz=47,slow=0.8,SNR=15						
TEIG				Sn	Sn	05 59 27.2	-0.3
	0.6nm,0.3s,baz=312,slow=4.1,SNR=1.1						
TEIG	Tepich	7.44	37		Pn	05 58 04.5	+1.1
TXAR	Lajitas Array	17.85	328	P	P	06 00 24.4	+0.5
	baz=147,slow=12,SNR=3.5						
GOGA	Godfrey	20.91	23	P	Pn	06 00 59.9	+0.2
GOGA				IAmb	IAmb	06 01 14.2	
	comp=Z,12nm,1.4s						
SDCO	Great Sand Dun	25.79	337	P	P	06 01 47.4	+1.3
SDCO				IAmb	IAmb	06 01 51.2	
	comp=Z,1.7nm,1.2s						
YKA	Yellowknife Ar	50.46	347	P	P	06 05 11.1	-1.1
	comp=Z,0.7nm,0.6s,baz=150,slow=7.5,SNR=13						
ILAR	Eielson Array	62.12	337	P	P	06 06 37.2	+1.8
	comp=Z,0.3nm,0.9s,baz=108,slow=2.9,SNR=2.6						

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*TAP **02** 06:12:41.7, 24°.69N×122°.74E, h100^{km}, ML3.6, D*
*JMA **02** 06:12:41.9±0.1, 24°.60N×122°.73E, h98^{km}±1^{km}, M2.3*
ISC 02 06:12:42.7±1.3**, 24°.63N**±0°.04×**122°.75E**±0°.02**, h92**^{km}±7^{km}**,**
n90, σ**0^{s}.85**/161**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.25	134	P	Pn	06 12 56.1	0.0
JYNG				S	Sn	06 13 06.7	+0.7
YOJ	Yonaguni jima	0.29	124	*e*P	Pn	06 12 56.6	+0.3
	baz=140						
YOJ				*e*S	Sn	06 13 07.6	+1.2
	baz=140						
YOJ	Yonaguni jima	0.29	124	P	Pn	06 12 56.4	+0.1
YOJ				S	Sn	06 13 06.9	+0.5
EOS1	EOS1	0.57	262	P	Pn	06 12 58.3	+0.2
	baz=249						
EOS1				S	Sn	06 13 10.6	+1.0
	baz=249						
TWB1	Santiao Chiao	0.79	299	P	Pn	06 12 59.8	-0.4
	baz=291						
TWC	Suao	0.82	269	*i* P	Pn	06 13 00.0	-0.5
	baz=262						
TWC				*i* S	Sn	06 13 13.3	-0.6
	baz=262						
NTC	Toucheng	0.86	285	P	Pn	06 13 00.6	-0.3
	baz=281						
NTC				S	Sn	06 13 14.0	-0.7
	baz=281						
TIPB	Shuangxi	0.90	293	P	Pn	06 13 01.4	-0.1
	baz=284						
TIPB				S	Sn	06 13 15.0	-0.6
	baz=284						
ENA	Nanau	0.94	258	P	Pn	06 13 01.3	-0.5
	baz=250						
ENA				S	Sn	06 13 16.4	+0.3
	baz=250						
IRIF	Iriomote-Funau	0.94	108	P	Pn	06 13 01.7	-0.2
IRIF				S	Sn	06 13 16.7	+0.5
NWF	Wu-fen Shan	0.98	297	P	Pn	06 13 02.2	-0.1
	baz=293						
NWF				S	Sn	06 13 17.2	+0.1
	baz=293						
WFSB	Wu-fen Shan	0.98	297	*e*P	Pn	06 13 02.6	+0.3
	baz=293						
WFSB				*e*S	Sn	06 13 17.7	+0.7
	baz=293						
TWE	Neicheng	0.98	276	P	Pn	06 13 01.9	-0.4
	baz=273						
TWE				S	Sn	06 13 16.6	-0.5
	baz=273						
SLBB	Yuanshan	1.02	277	P	Pn	06 13 01.9	-0.8
	baz=273						
SLBB				S	Sn	06 13 16.9	-0.9
	baz=273						
ENTT	Nioudou	1.07	271	*i* P	Pn	06 13 03.4	0.0
	baz=263						
ENTT				S	Sn	06 13 18.5	-0.4
	baz=263						
TWA	Mucha	1.11	289	*e*S	Sn	06 13 19.7	-0.1
	baz=278						
HATJ	Hateruma jima	1.12	120	P	Pn	06 13 04.2	+0.3
HATJ				S	Sn	06 13 20.7	+0.9
NDT	Datong Townshi	1.12	269	P	Pn	06 13 03.5	-0.4
	baz=263						
NDT				S	Sn	06 13 19.8	-0.1
	baz=263						
NWLT	Wulai	1.14	278	P	Pn	06 13 04.2	0.0
	baz=280						
NWLT				S	Sn	06 13 20.0	-0.3
	baz=280						
NACB	Ninganchiao	1.14	247	P	Pn	06 13 03.2	-0.9
	baz=237						
NACB				S	Sn	06 13 19.8	-0.5
	baz=237						
TWD	Chiawan	1.18	243	P	Pn	06 13 03.9	-0.7
	baz=233						
TWD				S	Sn	06 13 20.6	-0.5
	baz=233						
YM01	YM01	1.19	296	*e*P	Pn	06 13 05.2	+0.4
	baz=287						
YM01				*e*S	Sn	06 13 20.8	-0.5
	baz=287						
YM08	YM08	1.19	298	*e*P	Pn	06 13 04.7	-0.1
	baz=289						
YM11	YM11	1.19	297	*e*P	Pn	06 13 05.0	+0.2
	baz=288						
TATO	Taipei	1.19	287	*e*P	Pn	06 13 03.9	-0.9
	baz=275						
TATO				*e*S	Sn	06 13 20.6	-0.7
	baz=275						
JKRS	Kuro-shima	1.22	108	P	Pn	06 13 05.3	+0.3
JKRS				*e*S	Sn	06 13 22.5	+0.7
YM04	YM04	1.22	296	*e*P	Pn	06 13 04.5	-0.6
	baz=284						
ETLH	Xiulin Townshi	1.23	250	P	Pn	06 13 05.0	-0.2
	baz=247						
ETLH				S	Sn	06 13 21.9	-0.3
	baz=247						
YHNB	Yeheng	1.25	272	P	Pn	06 13 05.8	+0.3
	baz=275						
YHNB				S	Sn	06 13 22.4	-0.3
	baz=275						
NNSB	Datong	1.26	261	P	Pn	06 13 05.8	+0.2
	baz=251						
NNSB				S	Sn	06 13 22.1	-0.8
	baz=251						
NNSH	Datong	1.26	261	P	Pn	06 13 05.8	+0.2
	baz=252						
NNSH				S	Sn	06 13 22.7	-0.2
	baz=252						
NNS	Nan Shan	1.26	262	P	Pn	06 13 06.5	+0.7
	baz=251						
NNS				S	Sn	06 13 22.7	-0.4
	baz=251						
NSK	Sanguang	1.26	273	*i* P	Pn	06 13 06.0	+0.3
	baz=275						
NSK				*i* S	Sn	06 13 22.7	-0.3
	baz=275						
ENLB	Shoufeng	1.27	236	*e*S	Sn	06 13 22.7	-0.2
	baz=233						

JIJ	Ishigaki jima	1.30	101	P	Pn	06 13 05.8	-0.2
JIJ				S	Sn	06 13 23.2	-0.5
WLTB	Daxi	1.38	280	*e*S	Sn	06 13 24.7	-0.6
	baz=281						
JISG	Ishigakijimahi	1.43	91	P	Pn	06 13 07.2	-0.4
JISG				*e*S	Sn	06 13 25.5	-0.9
WHF	Hehuan Shan	1.43	251	S	Sn	06 13 26.3	-1.0
	baz=248						
ESL	Shilin	1.45	236	P	Pn	06 13 07.6	-0.3
	baz=233						
ESL				S	Sn	06 13 26.3	-0.6
	baz=233						
TDCB	Techi	1.49	256	*e*P	Pn	06 13 09.0	+0.4
	baz=248						
TDCB				*e*S	Sn	06 13 27.4	-0.8
	baz=248						
EGFH	Guangfu	1.54	232	*e*P	Pn	06 13 07.9	-1.1
	baz=229						
EGFH				*e*S	Sn	06 13 27.9	-1.0
	baz=229						
CHGB	Renai	1.54	249	P	Pn	06 13 09.2	-0.1
	baz=240						
CHGB				*e*S	Sn	06 13 28.9	-0.5
	baz=240						
LIOB	Emei	1.57	271	P	Pn	06 13 09.5	0.0
	baz=268						
LIOB				S	Sn	06 13 28.9	-0.9
	baz=268						
OWD	Renai	1.58	245	*e*P	Pn	06 13 09.2	-0.5
	baz=237						
OWD				*e*S	Sn	06 13 28.4	-1.8
	baz=237						
NSTT	Nanjuang	1.59	271	P	Pn	06 13 09.3	-0.3
	baz=268						
NSTT				S	Sn	06 13 30.2	+0.1
	baz=268						
HGSD	Ruisui	1.65	227	P	Pn	06 13 10.3	-0.2
	baz=223						
HGSD				S	Sn	06 13 31.0	-0.6
	baz=223						
WHP	Taichung City	1.68	258	P	Pn	06 13 12.0	+1.1
	baz=252						
WHP				*e*S	Sn	06 13 32.7	+0.5
	baz=252						
VWDT	VWDT	1.70	240	P	Pn	06 13 11.4	+0.3
	baz=232						
VWDT				S	Sn	06 13 32.3	-0.4
	baz=232						
EHY	Hungye	1.71	230	P	Pn	06 13 10.5	-0.8
	baz=227						
EHY				S	Sn	06 13 31.8	-1.2
	baz=227						
DPDB	Guoxing	1.76	251	*e*P	Pn	06 13 12.1	+0.2
	baz=246						
DPDB				*e*S	Sn	06 13 34.8	+0.7
	baz=246						
JTJ	Tarama	1.78	89	P	Pn	06 13 12.2	+0.1
JTJ				S	Sn	06 13 34.3	-0.2
NMLH	Miaoli	1.78	268	*e*S	Sn	06 13 34.4	-0.2
	baz=265						
YULB	Yu-li	1.81	227	P	Pn	06 13 11.7	-0.8
	baz=233						
YULB				S	Sn	06 13 33.5	-1.6
	baz=233						
TWQ1	Liyutan	1.82	262	S	Sn	06 13 35.3	-0.1
	baz=259						
NSY	Sanyi	1.82	264	P	Pn	06 13 13.2	+0.6
	baz=261						
NSY				S	Sn	06 13 35.8	+0.4
	baz=261						
TWF1	Yuli	1.83	227	P	Pn	06 13 12.9	+0.1
	baz=232						
TWF1				S	Sn	06 13 35.0	-0.8
	baz=232						
SSLB	Suanglung	1.84	243	*e*P	Pn	06 13 12.7	-0.1
	baz=237						
SSLB				*e*S	Sn	06 13 35.0	-0.8
	baz=237						
SMLT	Sun Moon Lake	1.84	247	*e*P	Pn	06 13 13.2	+0.2
	baz=238						
SMLT				*e*S	Sn	06 13 36.6	+0.6
	baz=238						
TYC	Yuchr	1.87	248	P	Pn	06 13 14.0	+0.8
	baz=239						
TYC				*e*S	Sn	06 13 37.2	+0.8
	baz=239						
WDJ	Dajia District	1.94	262	*e*S	Sn	06 13 38.1	-0.1
	baz=260						
FULB	Fuli	1.94	223	P	Pn	06 13 14.2	-0.1
	baz=215						
FULB				*e*S	Sn	06 13 38.4	0.0
	baz=215						
TCU	Taichung	1.95	256	*e*S	Sn	06 13 39.4	+1.0
	baz=254						
WHYT	Xinyi Township	1.96	242	*e*P	Pn	06 13 15.0	+0.5
	baz=238						
WHYT				*e*S	Sn	06 13 40.8	+2.1
	baz=238						
CHKT	Chengkung	1.98	220	S	Sn	06 13 36.9	-2.1
	baz=215						
YUS	Yu-Shan	1.99	236	P	Pn	06 13 15.5	+0.1
	baz=228						
YUS				S	Sn	06 13 39.8	-0.3
	baz=228						
WJS	Zhushan	2.01	247	P	Pn	06 13 15.8	+0.7
	baz=237						
WJS				S	Sn	06 13 41.9	+2.1
	baz=237						
WNT	Mingjian	2.02	249	*e*P	Pn	06 13 16.9	+1.7
	baz=246						
WNT				*e*S	Sn	06 13 42.2	+2.1
	baz=246						
WCHH	Zhanghua	2.07	255	*e*S	Sn	06 13 41.6	+0.5
	baz=253						
ALS	Alishan	2.09	238	*e*P	Pn	06 13 17.7	+1.3
	baz=230						
ALS				*e*S	Sn	06 13 42.6	+0.4
	baz=230						
ELDTW	Lidau	2.13	228	P	Pn	06 13 16.1	-0.7
	baz=226						
ELDTW				*e*S	Sn	06 13 42.1	-0.8
	baz=226						
CHN5	Tsauling	2.15	242	*e*P	Pn	06 13 17.2	+0.2
	baz=232						
CHN5				*e*S	Sn	06 13 44.4	+1.1
	baz=232						
JIRB	Irabujima	2.22	84	P	Pn	06 13 18.0	+0.2
JIRB				S	Sn	06 13 43.5	-1.2
WDLH	Douliu	2.22	246	*e*S	Sn	06 13 47.1	+2.3
	baz=254						
JIKM	Ikemajima	2.29	82	P	Pn	06 13 19.3	+0.5
JIKM				S	Sn	06 13 45.7	-0.8
RLNB	Erlin	2.30	252	*e*S	Sn	06 13 46.1	-0.4
	baz=259						
STYT	Tauyuan	2.33	232	*e*P	Pn	06 13 19.5	+0.1
	baz=229						
STYT				S	Sn	06 13 48.4	+0.9
	baz=229						
CHN4	Tsaushan	2.34	238	P	Pn	06 13 20.3	+0.8
	baz=235						
CHN4				S	Sn	06 13 49.7	+2.0
	baz=235						
TPUB	Ta-pu	2.34	236	P	Pn	06 13 20.3	+0.8
	baz=234						
TPUB				S	Sn	06 13 49.0	+1.3
	baz=234						
JMJ2	Miyako jima3	2.35	87	P	Pn	06 13 19.8	+0.2
JMJ2				S	Sn	06 13 47.5	-0.4
TWGBT	Beinan	2.36	221	*e*P	Pn	06 13 19.4	-0.4
	baz=218						
TWGBT				*e*S	Sn	06 13 46.8	-1.3
	baz=218						
TWG	Pinlang	2.36	221	P	Pn	06 13 19.5	-0.3
	baz=218						
TWG				S	Sn	06 13 46.8	-1.4
	baz=218						
WTCT	Ta-ch'eng	2.37	252	*e*S	Sn	06 13 48.2	-0.2
	baz=258						
WTP	Ta-pu	2.38	235	P	Pn	06 13 21.3	+1.2
	baz=232						
WTP				*e*S	Sn	06 13 50.2	+1.4
	baz=232						
TWK	Hsinying	2.47	237	*e*P	Pn	06 13 21.9	+0.7
	baz=234						
TWK				*e*S	Sn	06 13 51.8	+1.0
	baz=234						
CHN1	Nanshi	2.48	235	P	Pn	06 13 23.4	+2.0
	baz=233						
CHN1				S	Sn	06 13 53.1	+2.0
	baz=233						
ECL	Taimali	2.60	219	*e*P	Pn	06 13 22.1	-0.9
	baz=217						
ECL				*e*S	Sn	06 13 52.1	-1.8
	baz=217						
SSD	Sandimen	2.69	226	*e*P	Pn	06 13 26.0	+1.8
	baz=224						
MASBT	Mashibuluo	2.79	224	P	Pn	06 13 26.3	+0.9
	baz=233						
MASBT				*e*S	Sn	06 13 59.8	+1.5
	baz=233						
EAST	Anshuo	2.83	218	*e*P	Pn	06 13 25.6	-0.4
	baz=216						
EAST				*e*S	Sn	06 13 57.2	-2.2
	baz=216						
VWUC	VWUC	3.02	278	*e*P	Pn	06 13 27.4	-1.0
	baz=276						

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*IDC **02** 06:13:46.0±2.2, 17°.30S×174°.70W, h193^{km}±22^{km}, mb3.5/7, mb1 3.9/8, mb1mx3.5/45, mbtmp4.1/8, Error ellipse: s-maj=40.9km s-min=14.2km az=136.0*

*NEIC **02** 06:13:46.0±1.0, 17°.2S±0°.1×174°.8W±0°.1, h189^{km}±8^{km}, mb4.3/11, Error ellipse: s-maj=22.2km s-min=13.3km az=124.0*

ISC 02 06:13:46.5±0.7**, 17°.2S**±0°.2×**174°.7W**±0°.2**, h200**^{km}**, n23, σ1^{s}.10**/25**, mb4.1**/14**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.31	41	P	Pn	06 14 52.8	+0.6
	20nm,0.3s,baz=194,slow=2.8,SNR=18						
AFI				S	Sn	06 15 40.3	-3.6
	25nm,0.3s,baz=122,slow=21,SNR=8.4						
AFI	Afiamalu	4.31	41		Pn	06 14 53.1	+0.8
AFI					Sn	06 15 42.3	-1.6
URZ	Urewera	22.18	197	P	P	06 18 25.1	-1.2
	4.8nm,0.5s,baz=349,slow=4.9,SNR=6.6						
BKZ	Black Stump Fm	23.20	198	P	P	06 18 36.2	+0.6
BKZ				IAmb	IAmb	06 18 51.1	
	comp=Z,16nm,1.4s						
EIDS	Eidsvold	32.84	250	P	P	06 20 00.3	-1.1
ARMA	Armidale	33.37	241	P	P	06 20 06.2	+0.1
ARMA				IAmb	IAmb	06 20 12.0	
	comp=Z,13nm,1.2s						
CAN	Canberra	36.96	234	P	P	06 20 36.4	-0.2
CAN				IAmb	IAmb	06 20 54.2	
	comp=Z,19nm,1.5s						
TOO	Toolangi	40.38	232	P	P	06 21 05.6	+0.6
TOO				IAmb	IAmb	06 21 05.7	
	comp=Z,4.6nm,0.7s						
STKA	Stephens Creek	42.08	241	P	P	06 21 18.9	0.0
	comp=Z,4.5nm,0.8s,baz=104,slow=9.9,SNR=9.7						
STKA	Stephens Creek	42.08	241	P	P	06 21 19.1	+0.2
MCQ	Macquarie Isla	42.42	203	P	P	06 21 20.1	-1.1
BBOO	Buckleboo	46.85	241	P	P	06 21 56.6	0.0
BBOO				IAmb	IAmb	06 22 05.7	
	comp=Z,21nm,1.4s						
WB0	Warramunga Arr	48.21	259	P	P	06 22 06.8	-0.5
WB2	Warramunga Arr	48.23	258	P	P	06 22 07.4	-0.1
WB2				IAmb	IAmb	06 22 22.1	
	comp=Z,7.2nm,1.4s						
AS31	Alice Springs	48.39	253	P	P	06 22 08.7	0.0
AS31				IAmb	IAmb	06 22 09.2	
	comp=Z,2.4nm,0.7s						
ASAR	Alice Springs	48.39	253	P	P	06 22 08.4	-0.2
	comp=Z,7.9nm,0.6s,baz=88,slow=8.6,SNR=106						
NVAR	Mina Array Bea	76.49	42	P	P	06 25 15.6	+0.9
	comp=Z,0.6nm,0.7s,baz=221,slow=7.2,SNR=4.9						
TXAR	Lajitas Array	82.64	56	P	P	06 25 49.4	+1.6
	comp=Z,0.2nm,0.7s,baz=216,slow=7.6,SNR=2.9						
PDAR	Pinedale Array	84.42	42	P	P	06 25 57.3	+0.5
	comp=Z,0.5nm,0.6s,baz=202,slow=3.5,SNR=5.7						
ILAR	Eielson Array	84.44	12	P	P	06 25 56.2	+0.2
	comp=Z,1.2nm,0.8s,baz=230,slow=6.3,SNR=15						
CLL	Collm	145.41	351	*e*PKPbc	PKPab	06 33 02.0	+0.8
	comp=Z,3.0nm,0.8s						
BRTR	Keskin Array B	146.71	318	PKPbc	PKPbc	06 33 05.4	+0.3
	comp=Z,0.4nm,0.7s,baz=100,slow=30,SNR=3.0						
GERES	GERESS Array B	147.70	350	PKPbc	PKPbc	06 33 08.2	+0.7
	comp=Z,0.3nm,0.7s,baz=15,slow=5.8,SNR=3.7						

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*NIED **02** 06:14:00, 37°.10N×141°.20E, h20^{km}, Mw3.8 Best double couple: M$_0$4.87000×10^{14} NP1:φ$_s$215.00000°, δ75.00000°, λ-143.00000°. NP2:φ$_s$115.00000°, δ54.00000°, λ-18.00000°.*

*JMA **02** 06:14:21.4±0.1, 37°.12N×141°.18E, h28^{km}±1^{km}, M3.8 Broadband fault plane solution: P waves. NP1: φ$_s$224.00000°, δ54.00000°, λ-138.00000°. NP2: φ$_s$106.00000°, δ57.00000°, λ-45.00000°. Principal axes: T Plg2.0000°, Azm166.0000°; N Plg37.0000°, Azm258.0000°; P Plg53.0000°, Azm73.0000°;*

JMA Felt II J1.

*IDC **02** 06:14:24.7±2.5, 36°.89N×141°.34E, h66^{km}±26^{km}, mb3.4/8, mb1 3.6/12, mb1mx3.3/54, mbtmp3.8/12, MS2.8/3, Ms1 2.8/3, ms1mx2.5/40 Error ellipse: s-maj=22.8km s-min=14.6km az=61.0*

ISC 02 06:14:18.5±1.5**, 37°.08N**±0°.04×**141°.39E**±0°.06**, h12**^{km}±9^{km}**, n32, σ1^{s}.54**/36**, mb3.8**/8**, 6C-3D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.47	272	⇓P	Pg	06 14 28.7	+0.9
ONAJ				S	Sg	06 14 33.5	-0.6
JFK	Kawauchi	0.50	305	⇑P	Pg	06 14 29.1	+0.8
JFK				S	Sg	06 14 34.2	-0.7
JFFD	Fukushimafurud	0.66	271	⇓P	Pg	06 14 31.5	+0.2
JFFD				*e*S	Sg	06 14 38.4	-1.6
JMST	Minamisoumatoc	0.75	328	⇑P	Pg	06 14 33.4	+0.3
JMST				*e*S	Sg	06 14 42.2	-0.8
JHO	Hitachi	0.81	234	P	Pb	06 14 34.3	-0.2
JMM	Marumori	0.91	329	⇑P	Pb	06 14 36.0	-0.2
JFT	Otama	0.94	298	⇑P	Pb	06 14 36.6	-0.2
JFT				S	Sb	06 14 47.2	-2.0
JSB	Shiboa	1.18	265	⇓P	Pn	06 14 40.8	0.0
JSB				S	Sb	06 14 54.5	-1.5
JFY	Yanaizu	1.38	284	⇑P	Pn	06 14 43.5	-0.1
JFY				S	Sn	06 14 59.8	-2.0
JOU	Okura	1.40	336	⇑P	Pn	06 14 44.4	+0.5
JOU				S	Sn	06 15 01.5	-0.8
MJAR	Matsushiro Arr	2.61	259	P	Pn	06 15 01.8	+1.3
	0.5nm,0.3s,baz=84,slow=25,SNR=25						
MJAR				S	Sn	06 15 33.9	+1.8
	1.5nm,0.3s,baz=225,slow=44,SNR=2.7						
MJAR				LR	LR	06 16 02.1	
	comp=Z,50nm,19.2s,baz=105,slow=39						
MAT	Matsushiro	2.61	259	P	Pn	06 15 01.9	+1.4
MAT				S	Sn	06 15 33.7	+1.6
JHJ	Hachijo jima 2	4.17	199	P	Pn	06 15 23.9	+2.0
	13nm,0.3s,baz=333,slow=18,SNR=2.0						
JHJ				S	Sn	06 16 10.3	-0.2
	10nm,0.3s,baz=190,slow=14,SNR=1.7						
ASAJ	Asahikawa	7.08	7	P	Pn	06 16 02.4	+0.4
	1.3nm,0.3s,baz=214,slow=7.5,SNR=4.1						
ASAJ				S	Sn	06 17 20.0	-2.3
	0.1nm,0.3s,baz=3.2,slow=33,SNR=1.6						
JCJ	Chichijima	9.98	176	P	Pn	06 16 40.9	-0.9
	4.0nm,0.3s,baz=284,slow=22,SNR=5.5						
JCJ				S	Sn	06 18 24.1	-10
	2.3nm,0.3s,baz=292,slow=21,SNR=2.2						
JCJ				LR	LR	06 20 55.5	
	comp=Z,59nm,19.3s,baz=147,slow=40						
USRK	Ussuriysk Ar.	10.07	318	P	Pn	06 16 47.4	+4.6
	baz=140,slow=12,SNR=8.4						
KSRS	Korea Array	10.74	276	P	Pn	06 16 59.4	+7.4
	0.2nm,0.3s,baz=84,slow=13,SNR=2.0						
H11N2	WAKE ISLAND Hy	28.19	121	T	T	06 49 44.9	
	baz=314,slow=75,SNR=124						
H11N1	WAKE ISLAND Hy	28.20	121	T	T	06 50 00.8	
	baz=314,slow=75,SNR=84						
H11N3	WAKE ISLAND Hy	28.21	121	T	T	06 49 52.6	
	baz=314,slow=75,SNR=98						
H11S1	WAKE ISLAND Hy	28.91	123	T	T	06 50 41.7	
	baz=315,slow=75,SNR=39						
H11S3	WAKE ISLAND Hy	28.91	123	T	T	06 50 42.7	
	baz=315,slow=75,SNR=26						
H11S2	WAKE ISLAND Hy	28.92	123	T	T	06 50 38.1	
	baz=315,slow=75,SNR=16						
ZALV	Zalesovo Beam	41.86	312	P	P	06 22 08.6	+0.4
	0.6nm,0.3s,baz=238,slow=40,SNR=1.7						
MKAR	Makanchi Array	44.07	302	P	P	06 22 26.4	+0.1
	0.4nm,0.7s,baz=88,slow=11,SNR=4.1						
KURBB	Kurchatov Arra	45.95	308	P	P	06 22 40.7	-0.4
	1.3nm,0.8s,baz=83,slow=8.1,SNR=10						
ILAR	Eielson Array	49.46	32	P	P	06 23 09.1	+1.0
	0.6nm,0.8s,baz=266,slow=7.0,SNR=6.2						
INK	Inuvik	54.35	27	P	P	06 23 46.4	+1.9
	0.9nm,1.0s,baz=287,slow=11,SNR=2.7						
ARU	Arti	56.31	319	LR	LR	06 48 02.8	
	comp=Z,26nm,18.5s,baz=44,slow=36						
ASAR	Alice Springs	60.84	188	P	P	06 24 27.5	-3.1
	0.1nm,0.6s,baz=3.8,slow=5.6,SNR=1.7						
ARCES	ARCESS Array B	63.94	339	P	P	06 24 51.8	+0.9
	1.7nm,0.8s,baz=61,slow=7.5,SNR=1.2						
FINES	FINESS Array B	68.76	332	P	P	06 25 23.1	+1.2
	0.8nm,0.8s,baz=39,slow=9.1,SNR=1.6						

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*TEH **02** 06:30:09.6, 34°.30N×45°.68E, h12^{km}, ML2.9*

*ISN **02** 06:30:09.9±0.9, 34°.33N×45°.65E, h8^{km}±3^{km}, ML3.0*

ISC 02 06:30:09.8±1.3**, 34°.33N**±0°.03×**45°.72E**±0°.03**, h1**^{km}±12^{km}**, n19, σ0^{s}.86**/25**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDHR	Dehrash	0.67	56	*e*Pg	Pg	06 30 22.9	+0.2
IDHR				*e*Sg	Sb	06 30 33.5	-0.8
IDHR				*e*		06 30 37.1	
IGHG	Ghaleghazi	0.71	90	*e*Pg	Pg	06 30 24.2	+0.8
IGHG				*e*		06 30 24.9	
IVIS	Veis	0.96	78	*e*Pg	Pg	06 30 28.7	+0.5
IVIS				*e*		06 30 49.7	
KCHF	Cheshme Sefid,	1.10	92	*e*Pg	Pb	06 30 31.1	-0.7
KCHF				*e*		06 30 51.7	
ILIN	Lien	1.19	60	*e*Pg	Pb	06 30 33.1	-0.2
ILIN				*e*		06 30 56.0	
IBDR	Badra	1.23	172	*e*Pg	Pg	06 30 34.0	+0.6
IBDR				*e*Sg	Sn	06 30 51.0	-0.4
IBDR				AML	AML	06 31 05.8	
	comp=N,69nm,0.2s						
IBDR				AML	AML	06 31 06.2	
	comp=E,92nm,0.3s						
IKOM	Komasi	1.50	95	*e*Pn	Pb	06 30 38.4	-0.1
IKOM				*e*		06 30 40.0	
BHD	Baghdad	1.53	227	*e*Pg	Pb	06 30 38.0	-1.0
BHD				*e*Sg	Sg	06 30 59.5	+0.4
IKRK	Kirkuk	1.56	314	*e*Pg	Pg	06 30 39.0	-0.7
IKRK				*e*Sn	Sg	06 31 00.0	+0.2
IKRK				AML	AML	06 31 01.7	
	comp=N,289nm,0.5s						
IKRK				AML	AML	06 31 07.7	
	comp=E,221nm,0.4s						
IBZA	Bozab	1.78	85	*e*Pn	Pb	06 30 42.6	-0.8
IBZA				*e*		06 31 12.5	
IKFM	Kafar-mosalman	1.95	114	*e*Pn	Pb	06 30 44.6	-1.5
IKFM				*e*		06 31 22.4	
IALM	Almabolaq	2.09	75	*e*Pn	Pn	06 30 47.1	+0.8
IALM				*e*		06 31 23.5	
HSRG	Sareghieh	2.30	66	*e*Pn	Pn	06 30 50.2	+1.0
HSRG				*e*		06 31 28.8	
IKMR	Kamar-syah	2.36	109	*e*Pn	Pn	06 30 49.1	-0.6
IKMR				*e*		06 31 01.5	
HSAM	Samen	2.39	92	*e*Pn	Pb	06 30 52.1	-1.8
HSAM				*e*		06 31 33.1	
BDRS	Dareh Seyedi	2.65	97	*e*		06 29 53.2	
BDRS				*e*Pn	Pn	06 30 53.8	-0.2
BMDN	Meydan	2.67	103	*e*Pn	Pn	06 30 54.1	0.0
BMDN				*e*		06 31 30.3	
MSL	Mosul	2.97	315	*e*Pn	Pn	06 30 59.0	+0.9
MSL				*e*Sn	Sn	06 31 35.0	+0.7
NSR	Nassriya	3.33	174	*e*Pn	Pn	06 31 04.0	+1.0
NSR				*e*Sn	Sn	06 31 44.0	+0.8
NSR				AML	AML	06 31 55.8	
	comp=E,584nm,0.2s						

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*IDC **02** 06:38:54.4±0.7, 21°.84S×68°.14W, h108^{km}±9^{km}, mb3.7/6, mb1 3.7/8, mb1mx3.4/38, mbtmp4.0/8, MS3.9/1, Ms1 3.9/1, ms1mx2.5/27, Error ellipse: s-maj=32.3km s-min=14.1km az=126.0*

*NEIC **02** 06:38:54.2±1.6, 21°.76S±0°.05×68°.2W±0°.1, h113^{km}±9^{km}, Error ellipse: s-maj=14.3km s-min=6.4km az=100.0*

*SJA **02** 06:38:55.4±0.8, 21°.77S×68°.51W, h118^{km}±6^{km}, ML3.4, MW3.5*

*GUC **02** 06:38:56.1±0.6, 21°.79S×68°.50W, h120^{km}±3^{km}, ML4.0*

ISC 02 06:38:55.1±0.7**, 21°.75S**±0°.03×**68°.55W**±0°.05**, h129**^{km}±6^{km}**, n57, σ1^{s}.14**/80**, mb4.1**/7**, 2C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.65	266	*e*P	Pn	06 39 15.4	+0.2
PB09				*e*S	Sn	06 39 30.4	0.0
PB09	IPOC Station P	0.65	266	*i* P	Pn	06 39 15.3	+0.1
PB09				*e*S	Sn	06 39 29.9	-0.4
PB09				IAML		06 39 32.9	
	comp=Z,1μm,0.2s						
LVC	Limon Verde	0.92	202	P	Pn	06 39 17.2	-0.3
	comp=Z,50nm,0.3s,baz=342,slow=12,SNR=400						
LVC				S	Sn	06 39 32.9	-1.7
	comp=Z,102nm,0.3s,baz=245,slow=22,SNR=17						
LVC				LR	LR	06 39 47.8	
	comp=Z,50nm,20.8s,baz=348,slow=51						
LVC	Limon Verde	0.92	202	*e*P	Pn	06 39 17.2	-0.3
LVC				*e*S	Sn	06 39 33.9	-0.7
LVC	Limon Verde	0.92	202		Pn	06 39 17.1	-0.4
LVC					Sn	06 39 33.9	-0.7
LVC	Limon Verde	0.92	202	*i* P	Pn	06 39 17.2	-0.3
LVC				*e*S	Sn	06 39 33.9	-0.7
LVC				IAML		06 39 36.2	
	comp=Z,222nm,0.1s						
PB01	IPOC Station P	1.13	309	*e*P	Pn	06 39 19.3	+0.1
PB01				*i* S	Sn	06 39 37.8	+0.3
PB01				IAML		06 39 38.9	
	comp=E,2μm,0.3s						
PB01	IPOC Station P	1.13	309		Pn	06 39 19.4	+0.1
PB03	IPOC Station P	1.16	255	*e*P	Pn	06 39 19.8	+0.2
PB03				*i* S	Sn	06 39 38.0	-0.2
PB03				IAML		06 39 38.8	
	comp=E,5μm,0.2s						
PB07	IPOC Station P	1.25	271	*e*P	Pn	06 39 20.7	+0.1
PB07				*i* S	Sn	06 39 40.0	+0.1
PB02	IPOC Station P	1.33	289	*e*P	Pn	06 39 21.5	+0.2
PB02				*i* S	Sn	06 39 41.2	0.0
PB02				IAML		06 39 42.9	
	comp=E,4μm,0.2s						
PB06	IPOC Station P	1.34	225	*e*P	Pn	06 39 21.8	+0.2
PB06				*i* S	Sn	06 39 41.7	0.0
PB06				IAML		06 39 42.9	
	comp=E,2μm,0.3s						
PB06	IPOC Station P	1.34	225	*i* P	Pn	06 39 22.0	+0.5
PB06				*e*S	Sn	06 39 41.9	+0.2
PB06				IAML		06 39 43.3	
	comp=Z,1μm,1.1s						
PB04	IPOC Station P	1.60	248	*e*P	Pn	06 39 24.4	+0.1
PB04				*i* S	Sn	06 39 45.9	-0.8
PB04	IPOC Station P	1.60	248		Pn	06 39 24.3	-0.1
PB04	IPOC Station P	1.60	248	*i* P	Pn	06 39 25.5	+1.1
PB15	IPOC Station P	1.68	210	*i* S	Sn	06 39 49.2	+0.6
PB15	IPOC Station P	1.68	210	*i* P	Pn	06 39 26.2	+0.7
PB15				*e*S	Sn	06 39 48.9	+0.3
PB08	IPOC Station P	1.70	340	*e*P	Pn	06 39 26.9	+1.1
PB08				*i* S	Sn	06 39 50.4	+1.2
PATCX	Punta Patache	1.76	301	*e*P	Pn	06 39 26.9	+0.6
PATCX				*i* S	Sn	06 39 50.1	+0.1
PATCX				IAML		06 39 52.5	
	comp=E,3μm,0.1s						
PB05	IPOC Station P	1.89	234	*e*P	Pn	06 39 27.6	-0.1
PB05				*i* S	Sn	06 39 52.2	-0.4
PB05	IPOC Station P	1.89	234	*i* P	Pn	06 39 27.8	+0.1
PB05				IAML		06 39 58.3	
	comp=Z,291nm,0.3s						
TA01	Diego Aracena	1.93	307	⇑*i*P	Pn	06 39 28.1	-0.1
TA01				*i* S	Sn	06 39 53.4	0.0
GO01	Chusmiza	2.16	344	*e*P	Pn	06 39 32.1	+0.6
GO01				*e*S	Sn	06 40 00.4	+1.1
GO01	Chusmiza	2.16	344		Pn	06 39 32.0	+0.6
PB11	IPOC Station P	2.24	332	*e*P	Pn	06 39 32.2	0.0
PB11				*i* S	Sn	06 40 00.5	0.0
PB11	IPOC Station P	2.24	332		Pn	06 39 32.0	-0.1
PB11				Sn	Sn	06 39 59.6	-0.8
PB10	IPOC Station P	2.55	226	*e*P	Pn	06 39 36.0	+0.1
PB10				*i* S	Sn	06 40 04.4	-2.9

PB10				IAML		06 40 16.6	
	comp=E,146nm,0.4s						
PB10	IPOC Station P	2.55	226		Pn	06 39 35.9	+0.1
PB10	IPOC Station P	2.55	226	i P	Pn	06 39 37.4	+1.5
PB10				IAML		06 40 19.7	
	comp=Z,103nm,0.3s						
PSGC	Pisagua	2.60	325	⇑iP	Pn	06 39 35.7	-1.0
PSGC				i S	Sn	06 40 07.3	-1.3
PSGC				IAML		06 40 08.7	
	comp=N,340nm,0.2s						
MNMC	Minye Minye	2.79	339	eP	Pn	06 39 39.5	+0.2
MNMC				eS	Sn	06 40 13.8	+0.6
MNMC				IAML		06 40 19.2	
	comp=N,464nm,0.3s						
MNMC	Minye Minye	2.79	339		Pn	06 39 39.6	+0.4
YJA	Yavi	2.84	99	i P	Pn	06 39 40.9	+0.8
HJA	Humahuaca	3.24	117	i P	Pn	06 39 46.5	+1.3
GO02	Mina Guanaco	3.53	196		Pn	06 39 48.2	-0.7
AZAP	Zapla	4.04	128	i P	Pn	06 39 56.2	+0.6
SLA	San Lorenzo	4.07	137	i P	Pn	06 39 57.5	+1.6
LPAZ	La Paz	5.45	4	P	Pn	06 40 15.9	+1.1
	comp=N,0.6nm,0.3s,baz=131,slow=8.5,SNR=18						
LPAZ				S	Sn	06 41 12.0	-4.8
	comp=N,0.1nm,0.3s,baz=164,slow=8.6,SNR=2.5						
LPAZ	La Paz	5.45	4		Pn	06 40 16.6	+1.7
LPAZ	La Paz	5.45	4		Pn	06 40 16.3	+1.5
AHML	Horco Molle	5.80	150	i P	Pn	06 40 19.2	+0.2
GO03	Copiap	6.02	194	Pn	Pn	06 40 19.1	-2.7
SIV	San Ignacio	9.10	52	P	Pn	06 40 59.8	-3.7
	comp=N,2.8nm,0.3s,baz=241,slow=12,SNR=73						
SIV				S	Sn	06 42 34.7	-10
	comp=N,0.2nm,0.3s,baz=343,slow=23,SNR=2.6						
BDFB	Brasilia	20.37	76	P	P	06 43 20.5	-1.3
	comp=N,0.7nm,0.3s,baz=233,slow=7.3,SNR=3.4						
BDFB	Brasilia	20.37	76	P	P	06 43 22.7	+0.9
BDFB				IAmb	IAmb	06 43 39.4	
	comp=Z,7.4nm,1.5s						
PTGA	Pitinga	22.50	23	P	P	06 43 43.4	-0.8
PTGA				IAmb	IAmb	06 43 52.6	
	comp=Z,12nm,1.4s						
OTAV	Otavalo	23.90	335		P	06 43 47.7	-10
QSPA	South Pole Qui	68.44	180	P	P	06 49 44.5	+1.5
	comp=Z,0.6nm,0.6s,baz=286,slow=4.3,SNR=6.0						
DBIC	Dimbokro	68.48	73	P	P	06 49 43.9	0.0
	comp=Z,3.5nm,0.7s,baz=209,slow=5.7,SNR=5.9						
DBIC	Dimbokro	68.48	73	P	P	06 49 44.2	+0.3
TOA0	Torodi Ar. Sit	77.12	70	P	P	06 50 34.3	-0.6
TOA0				IAmb	IAmb	06 50 36.1	
	comp=Z,8.4nm,1.4s						
TORD	Torodi Ar. Bea	77.12	70	P	P	06 50 34.6	-0.2
	comp=Z,0.9nm,0.4s,baz=258,slow=5.3,SNR=14						
BOSA	Boshof	83.03	118	P	P	06 51 04.9	-1.8
	comp=Z,4.0nm,1.0s,baz=164,slow=8.0,SNR=4.6						
YKA	Yellowknife Ar	91.54	340	P	P	06 51 47.8	+1.2
	comp=Z,0.2nm,0.5s,baz=128,slow=4.9,SNR=4.7						
RPZ	Rata Peaks	95.01	219	LR	LR	07 24 02.8	
	comp=Z,53nm,19.5s,baz=249,slow=28						
MKAR	Makanchi Array	145.64	36	PKPbc	PKPdf	06 58 19.9	+1.7
	comp=Z,0.3nm,0.7s,baz=316,slow=6.2,SNR=3.5						

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*NEIC **02** 06:44:17.5±1.3, 25°.2S±0°.1×179°.8E±0°.1, h482^{km}±8^{km}, mb4.6/34, Error ellipse: s-maj=18.4km s-min=9.9km az=139.0*

*IDC **02** 06:44:20.0±1.9, 25°.24S×179°.75E, h509^{km}±21^{km}, mb3.6/7, mb1 3.9/8, mb1mx3.4/39, mbtmp4.4/8, Error ellipse: s-maj=37.3km s-min=15.0km az=159.0*

ISC 02 06:44:19.9±0.6, **25°.18S**±0°.08×**179°.74E**±0°.09, **h507**^{km}**, n61,** σ**1**^{s}**17**/64, **mb4.5**/24, **1C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.57	348	P	P	06 46 11.6	-0.7
OUZ	Omahuta	11.33	206	P	P	06 46 49.3	-1.9
MXZ	Matakaoa Point	12.41	185	P	P	06 47 00.6	-1.9
MXZ	Matakaoa Point	12.41	185	P	P	06 47 02.8	+0.3
HAZ	Te Kaha	12.65	187	P	P	06 47 06.7	+1.6
PKGZ	Pakihiroa	12.75	186	P	P	06 47 06.8	+0.5
RUGZ	Raukumara Rang	12.87	187	P	P	06 47 08.5	+0.9
PUZ	Puketiti	12.92	185	P	P	06 47 10.0	+2.0
KMRZ	Kaimai	13.04	193	P	P	06 47 13.1	+3.9
TWGZ	Tauwhareparae	13.05	186	P	P	06 47 11.1	+1.8
URZ	Urewera	13.23	189	P	P	06 47 10.6	-0.7
	2.3nm,0.3s,baz=82,slow=1.8,SNR=13						
URZ				S	S	06 49 29.7	-2.8
	0.8nm,0.3s,baz=19,slow=12,SNR=2.1						
URZ	Urewera	13.23	189	P	P	06 47 10.9	-0.3
MWZ	Matawai	13.25	188	P	P	06 47 13.1	+1.6
MUGZ	Murupara	13.50	190	P	P	06 47 15.4	+1.4
THZ	Tophouse	17.49	197	P	P	06 47 54.5	-0.6
HNR	Honiara	24.49	306	P	P	06 48 56.9	-1.7
ARMA	Armidale	25.38	252	P	P	06 49 08.9	+2.5
EIDS	Eidsvold	25.90	263	P	P	06 49 12.0	+1.0
EIDS				IAmb	IAmb	06 50 05.8	
	comp=Z,32nm,1.5s						
CAN	Canberra	28.32	242	P	P	06 49 34.1	+1.9
CAN				IAmb	IAmb	06 50 10.0	
	comp=Z,25nm,1.6s						
TOO	Toolangi	31.57	239	P	P	06 50 02.0	+1.6
TOO				IAmb	IAmb	06 50 02.0	
	comp=Z,39nm,1.9s						
MCQ	Macquarie Isla	33.10	202	P	P	06 50 12.3	-0.6
STKA	Stephens Creek	34.05	250	P	P	06 50 22.1	+0.8
	comp=Z,3.9nm,0.4s,baz=103,slow=12,SNR=9.9						
STKA	Stephens Creek	34.05	250	P	P	06 50 22.6	+1.2
COEN	Coen	36.11	281	P	P	06 50 40.0	+1.2
BBOO	Buckleboo	38.74	248	P	P	06 51 00.2	0.0
BBOO				IAmb	IAmb	06 51 22.1	
	comp=Z,58nm,1.9s						
AS31	Alice Springs	41.61	262	P	P	06 51 23.8	+0.5
ASAR	Alice Springs	41.61	262	P	P	06 51 23.5	+0.1
	comp=Z,4.0nm,0.3s,baz=93,slow=7.1,SNR=195						
ASAR				ScP	ScP	06 56 11.1	+0.7
	comp=Z,0.6nm,0.8s,baz=117,slow=5.0,SNR=4.6						
ASAR				S	S	06 57 01.2	-1.7
	comp=Z,0.2nm,0.4s,baz=172,slow=36,SNR=4.1						
WR0	Warramunga Arr	41.92	268	P	P	06 51 25.6	-0.2
WB2	Warramunga Arr	42.09	268	P	P	06 51 27.1	-0.1
WB0	Warramunga Arr	42.10	268	P	P	06 51 27.1	-0.2
WB0				IAmb	IAmb	06 51 27.6	
	comp=Z,14nm,0.6s						
WRA	Warramunga Arr	42.10	268	P	P	06 51 26.8	-0.5
	comp=Z,6.6nm,0.3s,baz=100,slow=7.1,SNR=38						
WRA				ScP	ScP	06 56 13.2	+0.8
	comp=Z,1.7nm,0.9s,baz=105,slow=3.7,SNR=5.8						
FORT	Forrest	45.66	251	P	P	06 51 54.5	-0.3
MTN	Manton Dam	47.33	276	P	P	06 52 07.3	-0.3
MTN				IAmb	IAmb	06 53 41.7	
	comp=Z,16nm,1.2s						
KNRA	Kununurra	48.46	271	P	P	06 52 16.3	+0.2
KNRA				IAmb	IAmb	06 52 16.9	
	comp=Z,34nm,1.1s						
FITZ	Fitzroy Crossi	50.51	267	P	P	06 52 31.8	+0.6
HUH	Hualalai	50.52	30	P	P	06 52 30.3	-1.1
PSA00	Pilbara Seismi	54.71	261	P	P	06 53 00.9	-0.4
MBWA	Marble Bar	54.93	261		pP	06 54 32.1	-8.6
MORW	Morawa	56.23	251	P	P	06 53 11.7	-0.1
MORW				IAmb	IAmb	06 54 09.9	
	comp=Z,68nm,1.9s						
JAGI	Jajag, Banyuwa	64.39	273	P	P	06 54 05.2	-0.9
JAGI				IAmb	IAmb	06 55 14.5	
	comp=Z,10nm,1.0s						
QSPA	South Pole Qui	64.91	180	P	P	06 54 09.4	+0.8
QSPA				IAmb	IAmb	06 54 34.8	
	comp=Z,28nm,1.9s						
SYO	Syowa Base	81.72	193	⇑eP	P	06 55 43.7	-0.9
PNTR	Pine Nut	85.42	43	P	P	06 56 04.0	+0.2
PNTR				IAmb	IAmb	06 59 21.9	
	comp=Z,9.5nm,1.3s						
NVAR	Mina Array Bea	85.83	44	P	P	06 56 04.9	-0.8
	comp=Z,0.8nm,0.7s,baz=222,slow=9.9,SNR=8.6						
TPNV	Topopah Spring	86.28	46	P	P	06 56 07.2	-0.6
TPNV				IAmb	IAmb	06 58 39.8	
	comp=Z,18nm,1.8s						
KVN	Kaiserville	86.33	44	P	P	06 56 07.5	-0.6
PINE	Pine Mountain	87.53	39	P	P	06 56 13.7	+0.1
PINE				IAmb	IAmb	06 59 24.8	
	comp=Z,19nm,1.7s						
I07A	Izee	88.52	39	P	P	06 56 17.9	-0.2
I07A				IAmb	IAmb	06 56 32.3	
	comp=Z,18nm,1.9s						
J08A	Circle Bar Ran	88.68	40	P	P	06 56 18.3	-0.5
MTPU	Mount Pierson	89.57	47	P	P	06 56 24.2	+0.8
CMAR	Chiang Mai Arr	89.75	290	P	P	06 56 25.6	+1.4
	comp=Z,0.7nm,0.3s,baz=136,slow=3.6,SNR=5.5						
TMUT	Trail Mountain	90.89	46	P	P	06 56 29.5	+0.1
TX31	Lajitas Ar. Si	91.30	58	P	P	06 56 30.9	-0.5
TX31				IAmb	IAmb	06 59 41.6	
	comp=Z,16nm,1.9s						
TX32	Lajitas Array	91.30	58	P	P	06 56 30.9	-0.5
TX32				IAmb	IAmb	06 59 41.6	
	comp=Z,13nm,1.8s						
TXAR	Lajitas Array	91.30	58	P	P	06 56 30.6	-0.7
	comp=Z,1.1nm,0.8s,baz=214,slow=6.3,SNR=13						
S22A	4UR Ranch, Cre	93.04	50	P	P	06 56 39.2	-0.2
S22A				IAmb	IAmb	06 56 40.1	
	comp=Z,7.9nm,1.6s						
ILAR	Eielson Array	93.32	14	P	P	06 56 41.0	+1.4
	comp=Z,0.8nm,1.1s,baz=231,slow=5.7,SNR=2.8						
YUF	Upper Falls	94.18	42	P	P	06 56 45.3	+1.0
ARCES	ARCESS Array B	133.08	348	SKPbc	SKPbc	07 05 16.6	-0.3
	comp=Z,4.2nm,1.0s,baz=20,slow=5.3,SNR=6.3						
FINES	FINESS Array B	139.57	341	SKPbc	SKPbc	07 05 36.4	-0.1
	comp=Z,2.0nm,0.8s,baz=90,slow=3.8,SNR=5.9						
AKASG	Malin Array Be	145.90	326	PKPbc	PKPdf	07 03 00.5	+0.2
	comp=Z,0.3nm,0.3s,baz=50,slow=4.0,SNR=2.3						

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*DNK **02** 06:53:07.9±1.9, 51°.33N×15°.21E, h15^{km}±98^{km}, ML2.1, Hypocentre not reviewed by the ISC*

ISC 02 06:53:08.5±1.5, **51°.55N**±0°.08×**16°.09E**±0°.04, **h0**^{km}**, n9,** σ**1**^{s}**56**/17, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.72	170	ePg	Pb	06 53 22.8	-1.2
KSP				eSg	Sb	06 53 32.2	-2.3
BRG	Berggiesshubel	1.51	244	PG	Pg	06 53 37.5	0.0
BRG				SG	Sn	06 53 57.7	+0.5
	24nm,0.3s						
CLL	Collm	1.95	264	ePn	Pn	06 53 43.0	+0.2
CLL				i Pg	Pg	06 53 46.0	+0.2
CLL				eSg	Sg	06 54 12.0	+1.0
	comp=Z,6.0nm,0.4s						
MORC	Moravsky Berou	2.01	152	ePN	Pn	06 53 43.3	-0.4
MORC				eSG	Sn	06 54 08.6	-0.9
VRAC	Vranov	2.27	172	ePN	Pn	06 53 48.3	+1.0
VRAC				eSG	Sb	06 54 18.5	-0.5
KRUC	Moravsky	2.50	175	ePN	Pn	06 53 51.4	+0.9
KRUC				eSG	Sg	06 54 27.3	-1.6
OJC	Ojcow	2.70	118	ePg	Pg	06 54 00.9	+0.6
OJC				eSg	Sg	06 54 35.4	+0.1
MODS	Modra-Piesok	3.27	166	eSG	Sg	06 54 58.1	+4.4
VYHS	Vyhne	3.54	149	ePG	Pg	06 54 17.1	+0.8
BSD	Bornholm Skovb	3.64	349	e		06 54 03.9	
	baz=184,slow=12						
BSD				i P		06 54 04.9	
BSD				eS		06 54 37.5	
BSD				IAML		06 54 49.7	
	comp=Z,1.8nm,0.5s						

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*IDC **02** 07:16:54.3±0.7, 0°.65N×126°.33E, h0^{km}, mb4.0/9, mb1 4.1/10, mb1mx3.8/51, mbtmp4.0/10, ML4.1/1, MS2.8/1, Ms1 2.8/1, ms1mx2.4/36, Error ellipse: s-maj=41.5km s-min=16.1km az=70.0*

*DJA **02** 07:16:58.7±0.9, 1°N±2°×12°6E±°, h20^{km}±8^{km}, M4.2/13, mb4.5/3, MLv4.0/13*

*NEIC **02** 07:17:01.0±1.9, 0°.45N±0°.09×126°.31E±0°.07, h50^{km}±6^{km}, mb4.1/11, Error ellipse: s-maj=13.7km s-min=8.3km az=155.0*

ISC 02 07:17:00.6±0.6, **0°.52N**±0°.05×**126°.22E**±0°.04, **h44**^{km}**, n40,** σ**1**^{s}**12**/46, **mb4.1**/14, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.18	78	P	Pn	07 17 20.5	-0.1
TNTI				S	Sn	07 17 36.6	+1.1
TNTI	Ternate	1.18	78		Pn	07 17 19.9	-0.7
LBMI	Labuha	1.73	132	P	Pn	07 17 27.9	-0.2
LBMI				S	Sn	07 17 51.9	+2.9
KMSI	Cibinong	2.24	271	P	Pn	07 17 34.2	-0.9
KMSI				S	Sn	07 18 02.8	+1.3
SANI	Sanana	2.57	185	P	Pn	07 17 38.7	-1.0
SANI				S	Sn	07 18 08.8	-0.9
LUWI	Luwuk	3.78	246	P	Pn	07 17 55.0	-1.3
LUWI	Luwuk	3.78	246	Pn	Pn	07 17 58.1	+1.8
NLAI	Namlea	3.84	167	P	Pn	07 17 56.8	-0.4
MSAI	Masohi	4.70	145	P	Pn	07 18 07.7	-1.4
APSI	Ampana	4.79	253	P	Pn	07 18 09.9	-0.3
MPSI	Mapaga	6.32	268	P	Pn	07 18 29.9	-1.4
DAV	Davao City (W)	6.53	354	LR	LR	07 20 38.6	
	comp=Z,80nm,18.4s,baz=166,slow=35						
FAKI	Fak Fak	6.93	120	Pn	Pn	07 18 36.8	-2.8
TTSI	Tana Toraja	7.31	241	P	Pn	07 18 44.9	0.0
	0.1nm18nm,0.5s						
BNSI	Bone	7.82	231	P	Pn	07 18 52.4	+0.5
	0.1nm15nm,0.8s						
SPSI	Sidrap Palu	7.83	235	P	Pn	07 18 51.1	-1.0
KAPI	Kappang	8.48	230	Pn	Pn	07 19 02.6	+1.6
	2.0nm,0.3s,baz=62,slow=5.8,SNR=8.1						
KAPI				Sn	Sn	07 20 35.4	0.0
	0.9nm,0.3s,baz=180,slow=21,SNR=1.5						
MTN	Manton Dam	14.15	160	Pn	Pn	07 20 18.2	-0.2
KNRA	Kununurra	16.29	171		Pn	07 20 46.8	+0.4
KNRA				IAmb	IAmb	07 20 49.7	
	comp=Z,20nm,1.1s						
FITZ	Fitzroy Crossi	18.51	182	P	P	07 21 12.9	-0.5
FITZ				IAmb	IAmb	07 21 25.3	
	comp=Z,11nm,1.5s						
WB0	Warramunga Arr	21.70	159	P	P	07 21 47.0	-1.0
WB0				IAmb	IAmb	07 21 51.8	
	comp=Z,10.0nm,0.8s						
WRA	Warramunga Arr	21.84	159	P	P	07 21 48.4	-1.1
	comp=Z,7.7nm,0.6s,baz=337,slow=11,SNR=5.8						
WB2	Warramunga Arr	21.85	159	P	P	07 21 48.6	-1.0
WB2					PcP	07 25 50.8	+2.5
WR0	Warramunga Arr	21.93	159	P	P	07 21 49.5	-1.0
WR0				IAmb	IAmb	07 21 58.5	
	comp=Z,6.3nm,1.0s						
COEN	Coen	22.12	131	P	P	07 21 51.6	-0.9
COEN				IAmb	IAmb	07 22 07.5	
	comp=Z,5.6nm,0.9s						
AS31	Alice Springs	25.18	163	P	P	07 22 21.8	-0.3
ASAR	Alice Springs	25.18	163	P	P	07 22 23.1	+1.0
	comp=Z,3.1nm,0.7s,baz=349,slow=14,SNR=34						
STKA	Stephens Creek	35.36	157	P	P	07 23 51.6	-0.4
	comp=Z,2.2nm,0.7s,baz=309,slow=13,SNR=4.3						
STKA	Stephens Creek	35.36	157	P	P	07 23 52.3	+0.3
SONM	Songino Array	50.17	343	P	P	07 25 52.4	+0.5
	comp=Z,0.5nm,0.8s,baz=154,slow=6.6,SNR=4.1						
MK31	Makanchi Array	59.91	327	P	P	07 27 02.0	-0.1
MK31				IAmb	IAmb	07 27 02.6	
	comp=Z,1.6nm,1.1s						
MKAR	Makanchi Array	59.91	327	P	P	07 27 00.5	-1.7
	comp=Z,0.8nm,0.5s,baz=121,slow=8.3,SNR=20						
MKAR				PcP	PcP	07 27 48.0	-0.1
	comp=Z,1.0nm,0.6s,baz=119,slow=3.8,SNR=7.1						
MAKZ	Makanchi	60.09	326	P	P	07 27 03.1	-0.2
KURBB	Kurchatov Arra	64.17	328	P	P	07 27 30.4	-0.2
	comp=Z,0.8nm,0.5s,baz=133,slow=6.4,SNR=16						
KURK	Kurchatov	64.17	329	P	P	07 27 30.5	-0.1
KURK				IAmb	IAmb	07 27 31.8	
	comp=Z,3.0nm,1.1s						
NRIK	Noril'sk	73.41	347	P	P	07 28 28.0	+0.3
	comp=Z,2.5nm,0.9s,baz=128,slow=6.2,SNR=5.4						
AKTO	Aktyubinsk	75.85	322	P	P	07 28 42.7	+0.4
	comp=Z,1.3nm,0.6s,baz=117,slow=7.5,SNR=7.7						
ILAR	Eielson Array	88.20	25	P	P	07 29 46.0	-0.7
	comp=Z,0.3nm,0.9s,baz=256,slow=3.6,SNR=4.1						
TORD	Torodi Ar. Bea	123.37	286	PKP	PKPdf	07 35 53.2	-0.7
	comp=Z,0.6nm,0.7s,baz=68,slow=1.6,SNR=3.8						
TXAR	Lajitas Array	123.93	54	PKP	PKiKP	07 35 56.0	+0.9
	comp=Z,0.1nm,0.7s,baz=50,slow=1.4,SNR=2.5						

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*JMA **02** 07:20:27.7±0.4, 42°.65N×137°.11E, h315^{km}, M3.1*

*IDC **02** 07:20:28.0±1.2, 42°.77N×136°.95E, h293^{km}±13^{km}, mb3.3/9, mb1 3.3/13, mb1mx3.0/53, mbtmp3.8/13, Error ellipse: s-maj=18.4km s-min=15.4km az=92.0*

ISC 02 07:20:28.2±0.7, **42°.68N**±0°.06×**137°.18E**±0°.07, **h303**^{km}**, n31,** σ**1**^{s}**51**/39, **mb3.6**/9, **Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOSM	Okushiri--Mats	1.80	109	P	Pn	07 21 14.9	+1.2
JSH	Shimam	2.11	90	P	Pn	07 21 17.1	+1.0
JSK	Shakotan	2.51	73	P	Pn	07 21 20.5	+1.1
JOT	Ohata	3.16	113	P	Pn	07 21 26.5	+0.7
JOT				eS	S	07 22 12.6	+0.9
JHR	Hokuryu	3.48	71	P	Pn	07 21 30.7	+1.7
JYG	Yagishiri	3.54	59	P	Pn	07 21 30.8	+1.2
JRBN	Rebuntou	3.92	44	P	Pn	07 21 34.5	+1.0
JANG	Nango	3.99	124	P	Pn	07 21 34.0	-0.5
JANG				eS	S	07 22 26.5	-1.1
JFR	Furan	4.00	81	P	Pn	07 21 35.3	+0.7
USRK	Ussuriysk Ar.	4.07	294	P	Pn	07 21 33.8	-1.5
	baz=170,slow=26,SNR=2.7						
JNBK	Urakawa-nobuka	4.14	94	P	Pn	07 21 36.7	+0.6
JNBK				eS	S	07 22 30.4	-0.1
ASAJ	Asahikawa	4.20	68	P	Pn	07 21 36.2	-0.5
	3.5nm,0.3s,baz=241,slow=10,SNR=25						
JKK2	Kamakawa 2	4.23	72	P	Pn	07 21 38.3	+1.2
JKK2				eS	S	07 22 32.5	+0.1
JWK2	Keihoku	4.30	51	P	Pn	07 21 40.0	+2.2
JOM	Ohasama	4.46	135	P	Pn	07 21 40.1	+0.3
JOM				eS	S	07 22 36.1	-1.1
JYK	Kaneyama	4.47	146	P	Pn	07 21 39.9	+0.1
JCH	Churui	4.56	89	P	Pn	07 21 40.4	-0.4
JCH				eS	S	07 22 37.0	-2.0
JMK	Ichinoseki	4.82	139	P	Pn	07 21 43.5	-0.4
JMK				eS	S	07 22 42.8	-1.8
JTKR	Abashiri--Toko	5.07	73	P	Pn	07 21 47.2	+0.6
MJAR	Matsushiro Arr	6.18	172	P	Pn	07 22 01.3	+1.4
	0.1nm,0.3s,baz=2.3,slow=11,SNR=11						
NEM2	Nemuro 2	6.31	81	P	Pn	07 22 00.0	-1.2
NEM2				eS	S	07 23 10.7	-5.6
KLR	Kul'dur	7.56	332	P	Pn	07 22 13.9	-2.3
	0.4nm,0.3s,baz=155,slow=13,SNR=11						
TIXI	Tiksi	29.33	355	P	P	07 26 01.8	-1.2
	1.0nm,0.4s,baz=163,slow=5.4,SNR=5.3						
NRIK	Noril'sk	36.77	333	P	P	07 27 06.8	-0.2
	3.0nm,0.4s,baz=139,slow=12,SNR=8.7						
CMAR	Chiang Mai Arr	40.33	245	P	P	07 27 36.9	-0.1
	1.1nm,0.3s,baz=41,slow=7.2,SNR=1.1						
ILAR	Eielson Array	46.60	35	P	P	07 28 27.4	+1.3
	0.4nm,0.5s,baz=279,slow=8.0,SNR=9.6						
INK	Inuvik	50.92	29	P	P	07 29 00.2	+1.6
	0.6nm,0.5s,baz=288,slow=8.9,SNR=2.3						
ARCES	ARCESS Array B	57.55	337	P	P	07 29 45.4	-0.7
	4.5nm,1.0s,baz=55,slow=7.8,SNR=1.6						
FINES	FINESS Array B	62.30	330	P	P	07 30 17.0	-1.3
	0.9nm,0.5s,baz=34,slow=10.0,SNR=5.4						
ASAR	Alice Springs	66.09	183	P	P	07 30 44.0	+0.8
	0.2nm,0.6s,baz=2.3,slow=5.4,SNR=4.1						
PDAR	Pinedale Array	75.96	44	P	P	07 31 44.0	+1.6
	0.3nm,0.7s,baz=240,slow=2.9,SNR=3.6						

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*ISK **02** 07:33:42.2, 36°.04N×31°.20E, h15^{km}, ML2.9/11*

*DDA **02** 07:33:43.9, 36°.14N×31°.27E, h36^{km}±3^{km}, ML2.4*

*NIC **02** 07:33:43.3±0.0, 36°.41N×31°.56E, h37^{km}±27^{km}, Ml3.1/2*

ISC 02 07:33:40.7±1.3, **36°.10N**±0°.03×**31°.25E**±0°.03, **h6**^{km}±11^{km}, **n32,** σ**1**^{s}**62**/51, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEMT	Kemer-ANTALYA	0.75	312	PG	Pn	07 33 57.7	-0.2
AKUM	Antalya-Kumluc	0.77	287	i P	Pn	07 33 58.6	+0.5
AKUM				i S	Sn	07 34 11.0	+1.0
AKUM				IAML		07 34 16.0	
	comp=N,202nm,0.4s						
AKUM				IAML		07 34 16.0	
	comp=E,218nm,0.3s						
ALAN	Alanya-ANTALYA	0.78	54	PG	Pn	07 33 58.9	+0.6
KEPZ	Antalya-Kepez	0.84	19	i P	Pn	07 33 59.3	+0.1
KEPZ				i S	Sn	07 34 09.6	-2.4
KEPZ				IAML		07 34 12.0	
	comp=N,60nm,0.2s						
GAZI	Gazipasa	0.87	81	PG	Pn	07 34 00.7	+1.1
GAZI	Gazipasa	0.87	81	i P	Pn	07 34 00.6	+1.0
GAZI				i S	Sb	07 34 09.8	-0.4
GAZI				IAML		07 34 12.0	
	comp=E,242nm,0.4s						
GAZI				IAML		07 34 13.0	
	comp=N,154nm,0.6s						
ANTB	Antalya	0.93	329	PG	Pn	07 34 00.2	-0.2
KORT	Korkueli	1.15	321	PN	Pn	07 34 04.9	+1.3
KORT				SN	Sn	07 34 21.1	+1.3
KORT	Korkueli	1.15	321	i P	Pn	07 34 06.7	+3.1
KORT				i S	Sn	07 34 20.8	+1.0
KORT				IAML		07 34 25.0	
	comp=E,77nm,0.6s						
KORT				IAML		07 34 27.0	
	comp=N,48nm,0.4s						
ELL	Elmali	1.26	301	PN	Pn	07 34 05.8	+0.7
ELL				SN	Sn	07 34 23.1	+0.7
ELL	Elmali	1.26	301	P	Pn	07 34 06.4	+1.4
ELL				S	Sn	07 34 23.5	+1.1
HDMB	Hadim	1.31	49	PN	Pn	07 34 07.7	+1.8
AKAS	Kas	1.34	276	PN	Pn	07 34 06.2	+0.1
AKAS				SN	Sg	07 34 23.7	-0.1
SEYD	Seydisehir-KON	1.38	20	PN	Pn	07 34 08.1	+1.4
AKMS	Akamas	1.40	141	P	Pg	07 34 08.2	+0.8
AKMS				S	Sn	07 34 27.8	+2.2
AKMS				AML	AML	07 34 37.3	
	comp=N,1.0nm,0.4s						
AKMS				AML	AML	07 34 37.3	
	comp=N,1.0nm,0.4s						
AKMS				AML	AML	07 34 39.0	
	comp=N,0.8nm,0.5s						
AKMS				AML	AML	07 34 39.0	
	comp=N,0.8nm,0.5s						
ERMK	Ermenek	1.44	68	i P	Pb	07 34 10.3	+2.1
ERMK				i S	Sn	07 34 32.4	+5.3
ERMK				IAML		07 34 38.0	
	comp=N,112nm,0.7s						
ERMK				IAML		07 34 40.0	
	comp=E,87nm,0.5s						
ALFC	Alefka	1.45	130	P	Pn	07 34 08.0	+0.4
ALFC				S	Sg	07 34 27.8	+0.5
ALFC				AML	AML	07 34 31.7	
	comp=E,0.7nm,0.3s						
ALFC				AML	AML	07 34 31.7	
	comp=E,0.7nm,0.3s						
ALFC				AML	AML	07 34 31.8	
	comp=E,0.6nm,0.3s						
ALFC				AML	AML	07 34 31.8	
	comp=E,0.6nm,0.3s						
LEF	Lefka	1.66	126	i P	Pn	07 34 10.3	0.0
LEF				i S	Sn	07 34 28.4	-3.5
GOLH	Golhisar	1.77	310	i P	Pg	07 34 14.8	+0.2
GOLH				i S	Sn	07 34 32.1	-2.8
ISP	Isparta	1.81	341	PN	Pg	07 34 14.3	-1.2
FETY	Fethiye	1.83	287	PN	Pn	07 34 13.6	+0.8
GULN	MERSIN_Gulnar	1.86	87	i P	Pg	07 34 16.1	-0.2
GULN				i S	Sb	07 34 37.8	-0.7
GULN				IAML		07 34 44.0	
	comp=E,24nm,0.4s						
KMER	Konya-Meram	1.89	28	i P	Pg	07 34 16.3	-0.6
KMER				i S	Sn	07 34 36.8	-1.1
KMER				IAML		07 34 39.0	
	comp=E,35nm,1.1s						
KMER				IAML		07 34 42.0	
	comp=N,42nm,0.6s						
DOGA	KONYA_Doganhis	2.03	9	i P	Pg	07 34 18.1	-1.5
DOGA				i S	Sb	07 34 41.1	-2.5
DOGA				IAML		07 34 44.0	
	comp=N,41nm,0.6s						
DOGA				IAML		07 34 47.0	
	comp=E,31nm,0.5s						
KONT	Konya--Tatoy	2.04	25	PN	Pg	07 34 18.2	-1.6
CSS	Mathiatis	2.04	123	P	Pn	07 34 15.3	-0.4
CSS				S	Sn	07 34 39.9	-1.6
ASGA	Asgata	2.09	128	P	Pb	07 34 18.3	-0.8
DALY	Dalyan (Mula)	2.21	290	PN	Pn	07 34 18.9	+0.9
MVOU	Mavrovouni	2.22	119	P	Pn	07 34 18.0	-0.2
MVOU				S	Sn	07 34 44.0	-1.9
TAVA	DENIZLI_Tavas	2.32	307	i P	Pn	07 34 21.0	+1.4
TAVA				i S	Sn	07 34 46.7	-1.8
TAVA				IAML		07 34 57.0	
	comp=E,12nm,0.5s						
TAVA				IAML		07 34 59.0	
	comp=N,12nm,0.5s						
YER	Yerkesik	2.60	294	PN	Pn	07 34 24.7	+1.3
KIZT	Kizilcal	2.82	10	PN	Pn	07 34 27.7	+1.3

IDC 02 07:55:07.4±1.4, **0°.18N**×**125°.97E, h0**^{km}**, mb3.7**/4, **mb1 3.9**/4, **mb1mx3.5**/35, **mbtmp3.7**/4, **Error ellipse:**

s-maj=148.9km s-min=21.6km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.62	158	P	P	07 59 58.8	-0.5
	2.2nm,0.5s,baz=336,slow=11,SNR=13						
ASAR	Alice Springs	24.93	163	P	P	08 00 32.8	+0.3
	1.6nm,0.7s,baz=345,slow=13,SNR=16						
SONM	Songino Array	50.42	343	P	P	08 04 06.3	-0.5
	0.3nm,0.5s,baz=154,slow=8.0,SNR=2.0						
MKAR	Makanchi Array	60.05	327	P	P	08 05 16.4	+0.2
	0.3nm,0.3s,baz=118,slow=8.1,SNR=7.7						

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*IDC **02** 07:55:54.4±1.1, 54°.72N×158°.00W, h0^{km}, mb3.7/12, mb1 3.9/15, mb1mx3.7/58, mbtmp3.7/15, ML3.8/3, Error ellipse: s-maj=27.4km s-min=17.4km az=6.0*

*NEIC **02** 07:56:03.4±0.9, 55°.18N±0°.06×157°.9W±0°.1, h44^{km}±30^{km}, Error ellipse: s-maj=10.4km s-min=6.2km az=135.0*

*AEIC **02** 07:56:03.7±1.2, 55°.18N±0°.06×157°.83W±0°.09, h35^{km}±9^{km}, ML3.5/42, mb3.6/1(NEIC), Error ellipse: s-maj=9.5km s-min=6.1km az=142.0*

ISC 02 07:56:01.3±0.7, **55°.09N**±0°.09×**157°.78W**±0°.06, **h35^{km}, n81,** σ**1$\overset{s}{.}$43**/71, **mb3.7**/12, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNBA	Chernabura Isl	1.08	256	Pn	Pn	07 56 21.4	+1.5
CNBA					Pn	07 56 21.9	+2.0
CNBA					Sn	07 56 35.2	+1.6
CHGN	Chignik	1.27	344	Pn	Pn	07 56 22.3	-0.1
CHGN					Pn	07 56 22.4	-0.1
CHGN					Sn	07 56 37.4	-0.8
CHIR	Chirikof Islan	1.43	58	Pn	Pn	07 56 27.1	+2.4
VNWF	Veniaminof 8	1.47	317		Pn	07 56 26.0	+0.7
VNNF	Veniaminof 3	1.48	325		Pn	07 56 26.5	+1.0
VNSS	Veniaminof 8	1.48	321		Pn	07 56 26.3	+0.7
VNFG	Fog Glacier, M	1.56	321		Pn	07 56 28.0	+1.4
SDPT	Sand Point	1.57	281	Pn	Pn	07 56 27.9	+1.3
PVV	Pavlof Volcano	2.32	279		Pn	07 56 37.9	+1.0
HAG	Hague Volcano	2.38	277		Pn	07 56 38.8	+1.1
SII	Sitkinak Islan	2.50	53		Pn	07 56 41.8	+2.3
BLHA	Black Hill	2.52	286		Pn	07 56 41.2	+1.5
DT1	Dutton Round H	2.59	272		Pn	07 56 41.9	+1.3
PLK3	Peulik 3	2.74	17		Pn	07 56 44.6	+2.0
BALA	Baldy Mountain	2.88	274		Pn	07 56 47.0	+2.5
FALS	False Pass	3.26	268		Pn	07 56 52.1	+2.3
OHAK	Old Harbor	3.30	48		Pn	07 56 52.1	+1.8
OHAK					Pn	07 56 52.2	+1.9
KELA	Mount Kelaz	3.54	18		Pn	07 56 55.1	+1.4
SSBA	Shishaldin	3.68	268		Pn	07 56 57.8	+2.1
KAHC	Katmai Hardscr	3.88	22		Pn	07 56 59.7	+1.3
KDAK	Kodiak Island	3.95	45	Pn	Pn	07 57 00.6	+1.3
	1.5nm,0.3s,baz=190,slow=4.4,SNR=84						
WESE	West Dahl East	3.99	264		Pn	07 57 01.6	+1.6
AKSA	Akutan Strait	4.70	261		Pn	07 57 12.1	+2.5
AKLV	Akutan Long Va	4.84	262		Pn	07 57 13.5	+1.9
UNV	Unalaska Valle	5.24	260		Pn	07 57 18.5	+1.5
MSW	Makushin Switc	5.38	261		Pn	07 57 20.2	+1.2
HOM	Homer	5.65	33	Pn	Pn	07 57 24.4	+1.8
CNPM	China Poot	5.68	36		Pn	07 57 24.7	+1.6
BRLK	Bradley Lake	5.98	36		Pn	07 57 27.9	+0.7
RSO	Redoubt South	6.02	24		Pn	07 57 30.1	+2.3
SVW2	Sparrevohn	6.13	10		Pn	07 57 30.5	+1.2
DFR	Drift River	6.15	24		Pn	07 57 30.8	+1.2
SLKM	Skilak Lake	6.76	34		Pn	07 57 38.1	+0.2
SPIA	Saint Paul Isl	7.28	292	Pn	Pn	07 57 46.9	+2.0
RC01	Rabbit Creek A	7.37	32		Pn	07 57 47.6	+1.4
SUA	Susitna One	7.38	27		Pn	07 57 48.0	+1.5
PWL	Port Wells	7.65	37		Pn	07 57 50.0	-0.1
TT01	Tatalina	7.89	6		Pn	07 57 54.0	+0.6
TTA	Tatalina	7.92	6		Pn	07 57 54.6	+0.8
KNK	Knik Glacier	8.01	34	Pn	Pn	07 57 57.4	+2.3
HIN	Hinchinbrook I	8.04	44		Pn	07 57 57.2	+1.9
GHO	Glory Hole Cre	8.14	31		Pn	07 57 58.0	+1.1
FID	Port Fidalgo	8.26	42		Pn	07 57 59.1	+0.7
EYAK	Cordova Ski Ar	8.43	45		Pn	07 58 02.5	+1.9
SCM	Sheep Creek Mo	8.69	35		Pn	07 58 06.0	+1.6
RAGM	Ragged Mountai	8.78	48	Pn	Pn	07 58 08.1	+2.4
TRF	Thorofare Moun	9.21	21	Pn	Pn	07 58 12.7	+1.1
CRQM	Cirque	9.62	48	Pn	Pn	07 58 19.1	+1.8
GLB	Gilahina Butte	9.71	43	Pn	Pn	07 58 20.4	+2.0
TGL	Tana Glacier	9.76	48	Pn	Pn	07 58 21.1	+2.1
MCK	McKinley	9.76	24	Pn	Pn	07 58 20.4	+1.5
BALM	Baldy	10.10	48		Pn	07 58 25.6	+1.9
ANM	Nome	10.23	341		Pn	07 58 26.4	+1.1
NEA	Nenana	10.46	21	Pn	Pn	07 58 27.6	-0.9
CTGM	Chitina Glacie	10.50	49	Pn	Pn	07 58 31.8	+2.6
WRH	Wood River Hil	10.58	23	Pn	Pn	07 58 29.3	-0.9
HDA	Harding Lake	10.80	26	Pn	Pn	07 58 33.2	-0.1
RIDG	Independent Ri	10.87	32	Pn	Pn	07 58 36.0	+1.8
MDM	Murphy Dome	10.97	22	Pn	Pn	07 58 34.9	-0.7
IL31		11.12	25		Pn	07 58 37.0	-0.5
ILAR	Eielson Array	11.12	25	Pn	Pn	07 58 35.5	-2.0
	0.4nm,0.3s,baz=215,slow=13,SNR=20						
ILAR				Sn	Sn	08 00 32.7	-7.7
	0.0nm,0.3s,baz=190,slow=28,SNR=1.2						
SCRK	Sand Creek	11.30	32	Pn	Pn	07 58 41.5	+1.3
PRP	Porcupine Dome	12.06	25	Pn	Pn	07 58 50.9	+0.4
EGAK	Eagle	12.74	34	Pn	Pn	07 59 01.5	+1.8
INK	Inuvik	17.36	31	P	Pn	08 00 01.8	+1.4
	0.7nm,0.3s,baz=200,slow=9.6,SNR=25						
INK	Inuvik	17.36	31		Pn	08 00 01.1	+0.8
INK				IAmb	IAmb	08 00 05.3	
	comp=Z,5.7nm,1.1s						
YKA	Yellowknife Ar	23.17	54	P	P	08 01 04.3	+0.1
	comp=Z,0.3nm,0.5s,baz=265,slow=8.0,SNR=7.3						
PETK	Petropavlovsk-	25.85	284	P	P	08 01 28.3	-0.9
	comp=Z,4.1nm,0.9s,baz=90,slow=12,SNR=7.0						
NVAR	Mina Array Bea	31.24	106	P	P	08 02 16.9	-0.7
	comp=Z,0.1nm,0.4s,baz=318,slow=6.1,SNR=1.4						
PDAR	Pinedale Array	33.32	91	P	P	08 02 33.7	-2.0
	comp=Z,0.2nm,0.7s,baz=298,slow=6.0,SNR=1.5						
ULM	Lac du Bonnet	36.76	71	P	P	08 03 05.3	+0.3
	comp=Z,0.4nm,0.3s,baz=0.0,slow=3.0,SNR=1.6						
H11N2	WAKE ISLAND Hy	44.24	231	T	T	08 51 06.5	
	baz=25						
H11N3	WAKE ISLAND Hy	44.25	231	T	T	08 51 08.0	
	baz=25						
H11N1	WAKE ISLAND Hy	44.26	231	T	T	08 51 07.6	
	baz=25						
TXAR	Lajitas Array	46.13	101	P	P	08 04 21.7	-0.4
	comp=Z,0.1nm,0.8s,baz=306,slow=5.4,SNR=1.3						
ARCES	ARCESS Array B	55.66	359	P	P	08 05 33.3	+0.1
	comp=Z,6.6nm,1.1s,baz=355,slow=9.4,SNR=1.6						
ZALV	Zalesovo Beam	59.76	323	P	P	08 06 01.3	-0.9
	comp=Z,0.6nm,0.5s,baz=64,slow=6.6,SNR=1.9						
FINES	FINESS Array B	63.77	358	P	P	08 06 29.7	+0.7
	comp=Z,1.6nm,0.8s,baz=12,slow=9.8,SNR=9.5						
MKAR	Makanchi Array	66.58	320	P	P	08 06 47.4	-0.1
	comp=Z,0.3nm,0.5s,baz=41,slow=5.9,SNR=2.5						
AKASG	Malin Array Be	74.42	355	P	P	08 07 35.7	+0.6
	comp=Z,0.2nm,0.3s,baz=7.4,slow=6.0,SNR=6.3						
CMAR	Chiang Mai Arr	82.41	291	P	P	08 08 17.8	-2.0
	comp=Z,1.1nm,0.3s,baz=3.3,slow=6.3,SNR=2.2						

IDC 02 07:58:15.6±1.6, **0°.56N×126°.76E, h0^{km}, mb3.6**/4, **mb1 3.8**/4, **mb1mx3.5**/39, **mbtmp3.6**/4, **Error ellipse: s-maj=164.4km s-min=23.1km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.69	160	P	P	08 03 07.4	-0.8
	1.9nm,0.3s,baz=338,slow=11,SNR=5.2						
ASAR	Alice Springs	25.07	164	P	P	08 03 42.5	+0.5
	0.8nm,0.5s,baz=345,slow=12,SNR=9.3						
MKAR	Makanchi Array	60.17	326	P	P	08 08 25.8	+0.5
	0.2nm,0.3s,baz=128,slow=8.1,SNR=4.2						
ZALV	Zalesovo Beam	63.41	334	P	P	08 08 46.2	-0.7
	0.2nm,0.4s,baz=123,slow=5.3,SNR=1.2						

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*IDC **02** 07:59:48.8±1.1, 9°.00N×126°.28E, h0^{km}, mb3.8/7, mb1 3.9/7, mb1mx3.6/42, mbtmp3.8/7, Error ellipse: s-maj=64.7km s-min=21.0km az=79.0*

*MAN **02** 07:59:55.5, 9°.00N×126°.47E, h28^{km}, mb4.6, ML3.4, MS3.3*

ISC 02 07:59:54.6±0.8, **8°.97N**±0°.05×**126°.52E**±0°.07, **h35^{km}, n18,** σ**1$\overset{s}{.}$78**/22, **mb3.9**/7, **2C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.79	191	⇑eP	Pn	08 00 10.7	+1.4
BIPH				eS	Sn	08 00 20.6	+0.7
BUTP	Butuan	0.88	270	eP	Pn	08 00 11.5	+1.0
BUTP				eS	Sn	08 00 21.1	-1.0
BUKP	Musuan	1.80	233	eS	Sn	08 00 47.3	+2.5
BUKP	Musuan	1.80	233	eP	Pn	08 00 25.2	+2.0
CGP	Cagayan de Oro	1.87	254	⇑eP	Pn	08 00 25.4	+1.3
CGP				eS	Sn	08 00 46.6	+0.1
MATI	Mati	2.02	187	eP	Pn	08 00 28.9	+2.7
KCP	Kidapawan	2.40	216	⇓eP	Pn	08 00 37.7	+6.2
TBP	Tagbilaran	2.71	286	eP	Pn	08 00 37.8	+2.1
TBP				iS	Sn	08 01 08.1	+0.7
CTBH	Cotabato--PC H	2.84	232	⇓iP	Pn	08 00 39.0	+1.6
PAGZ	Pagadian	3.29	250	eP	Pn	08 00 45.3	+1.6
PAGZ				eS	Sn	08 01 04.9	-17
CNP	Catarman	3.96	333	eP	Pn	08 00 55.8	+2.9
CNP				eS	Sn	08 01 40.9	+2.7
FITZ	Fitzroy Crossi	26.91	182	P	P	08 05 32.8	+0.3
	0.4nm,0.4s,baz=0.0,slow=10,SNR=0.9						
ASAR	Alice Springs	33.23	168	P	P	08 06 28.4	-0.2
	0.2nm,0.3s,baz=349,slow=7.0,SNR=8.0						
USRK	Ussuriysk Ar.	35.42	7	P	P	08 06 47.6	+0.3
	2.3nm,0.9s,baz=210,slow=6.6,SNR=4.6						
MKAR	Makanchi Array	53.21	323	P	P	08 09 08.3	-1.1
	1.0nm,0.8s,baz=133,slow=8.4,SNR=7.9						
ZALV	Zalesovo Beam	55.88	332	P	P	08 09 26.8	-1.9
	0.5nm,0.4s,baz=126,slow=7.3,SNR=2.1						
FINES	FINESS Array B	87.14	332	P	P	08 12 34.6	-2.2
	1.0nm,0.8s,baz=79,slow=4.1,SNR=5.1						
YKA	Yellowknife Ar	94.84	24	P	P	08 13 11.8	-0.8
	0.2nm,0.6s,baz=297,slow=5.6,SNR=3.7						

IDC 02 08:04:17.9±3.0, **5°.55S×152°.60E, h0^{km}, mb3.3**/2, **mb1 3.6**/2, **mb1mx3.2**/39, **mbtmp3.3**/2, **Error ellipse: s-maj=73.5km s-min=20.9km az=89.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.36	335	Pn	Pb	08 04 45.3	+0.9
	164nm,0.3s,baz=154,slow=1.6,SNR=37						
KRVT				Sn	Sg	08 05 02.0	+0.3
	186nm,0.3s,baz=105,slow=22,SNR=15						
WRA	Warramunga Arr	22.80	230	P	P	08 09 23.0	+0.5
	0.5nm,0.7s,baz=53,slow=9.9,SNR=2.1						
ASAR	Alice Springs	25.46	223	P	P	08 09 47.4	-0.6
	0.8nm,0.8s,baz=56,slow=9.1,SNR=8.1						
TORD	Torodi Ar. Bea	150.34	287	PKPbc	PKPbc	08 24 11.8	-0.5
	0.7nm,0.8s,baz=232,slow=1.6,SNR=2.8						

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*IDC **02** 08:09:58.7±1.7, 18°.28S×176°.50W, h265^{km}±17^{km}, mb3.3/8, mb1 3.5/9, mb1mx3.3/34, mbtmp3.9/9, Error ellipse: s-maj=21.0km s-min=10.8km az=132.0*

ISC 02 08:09:57.4±0.7, **18°.3S**±0°.2×**176°.6W**±0°.1, **h250^{km}, n13,** σ**1$\overset{s}{.}$02**/15, **mb3.5**/7, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	6.35	48	P	Pn	08 11 31.5	+1.5
	3.2nm,0.3s,baz=207,slow=16,SNR=3.2						
AFI				S	S	08 12 44.3	+0.2
	1.5nm,0.3s,baz=252,slow=19,SNR=2.4						
URZ	Urewera	20.67	194	P	P	08 14 18.4	-0.1
	3.2nm,0.5s,baz=8.1,slow=14,SNR=5.8						
URZ				S	S	08 17 54.2	+0.2
	3.6nm,0.8s,baz=356,slow=16,SNR=2.3						
CTA	Charters Tower	35.07	261	P	P	08 16 28.2	+1.0
	2.0nm,0.6s,baz=95,slow=12,SNR=3.5						
STKA	Stephens Creek	39.97	242	P	P	08 17 07.8	-0.2
	1.3nm,0.8s,baz=90,slow=10,SNR=3.1						
WRA	Warramunga Arr	46.25	260	P	P	08 17 59.1	+0.8
	0.2nm,0.3s,baz=102,slow=7.0,SNR=9.6						
ASAR	Alice Springs	46.34	254	P	P	08 18 00.2	+1.2
	1.5nm,0.5s,baz=90,slow=8.4,SNR=40						
NVAR	Mina Array Bea	78.50	43	P	P	08 21 31.3	0.0
	0.7nm,0.8s,baz=225,slow=8.8,SNR=7.0						
TXAR	Lajitas Array	84.75	57	P	P	08 22 04.2	+0.2
	1.0nm,1.0s,baz=208,slow=7.1,SNR=6.7						
ILAR	Eielson Array	85.85	12	P	P	08 22 07.1	-1.4
	0.5nm,0.6s,baz=228,slow=5.8,SNR=8.6						
BVAR	Borovoye Array	118.19	321	PKP	PKPdf	08 28 13.2	-1.4
	0.2nm,0.3s,baz=87,slow=4.9,SNR=2.5						
ARCES	ARCESS Array B	126.94	350	PKP	PKPdf	08 28 29.3	-1.6
	1.2nm,0.7s,baz=14,slow=4.1,SNR=2.6						
GERES	GERESS Array B	148.36	347	PKPbc	PKPbc	08 29 13.8	-0.6
	0.7nm,0.6s,baz=33,slow=3.2,SNR=6.9						
DAVOX	Davos/Dischmat	151.05	351	PKPbc	PKPbc	08 29 20.3	-0.7
	1.8nm,0.4s,baz=359,slow=6.1,SNR=5.2						

NCEDC 02 08:20:56.9±1.9, **36°.917N**±0°.010×**121°.66W**±0°.01, **h11^{km}**±2^{km}, **Md2.5**/126, **Error ellipse: s-maj=1.8km s-min=1.2km az=58.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HCOM	Corn Cob Canyo	0.05	230		Pg	08 20 59.2	+0.2
HTUM	Tustin Road	0.09	169		Pg	08 21 01.4	+2.0
HBTM	San Juan Bauti	0.11	126		Pg	08 20 59.7	0.0
HERM	Elkhorn Road	0.12	198		Pg	08 21 00.3	+0.4
OCR	O'Connell Ranc	0.12	90		Pg	08 21 00.3	+0.4
HLPM	Lions Peak	0.13	12		Pg	08 21 00.1	+0.2
JELB	Ellicott, Sant	0.13	274		Pg	08 21 00.4	+0.4
JELB					Sg	08 21 03.2	+1.0
HJGM	San Juan Grade	0.14	149		Pg	08 21 00.2	+0.1
CDC	Canada Road	0.18	53		Pg	08 21 01.2	+0.4
HCAM	Canada Road	0.18	53		Pg	08 21 01.2	+0.4
JTGM	Trout Gulch Ro	0.20	303		Pg	08 21 01.6	+0.4
FRP	Fremont Peak	0.21	139		Pg	08 21 01.3	-0.2
HFEM	San Felipe	0.22	73		Pg	08 21 01.9	+0.4
SAO	San Andreas Ge	0.23	131	Pg	Pg	08 21 01.6	-0.1
SAO					Sg	08 21 01.7	-3.2
JHLM	Holstrom Ranch	0.23	325		Pg	08 21 01.8	0.0
JLAB	Laurel Hill	0.24	347		Pg	08 21 02.2	+0.3
CADM	Anderson Res.	0.25	7		Pg	08 21 02.4	+0.3
GHS	Gilroy Hot Spr	0.25	44		Pg	08 21 02.5	+0.4
BVYM	Vineyard	0.26	130		Pg	08 21 02.2	-0.1
JRGM	Rodeo Gulch Ro	0.27	296		Pg	08 21 02.5	+0.1
BSRM	Salinas Radio	0.28	155		Pg	08 21 02.4	-0.2
AMC	Almaden	0.28	329		Pg	08 21 02.6	-0.1
HLTM	Lone Tree Road	0.29	96		Pg	08 21 03.2	+0.5
JUMM	Mount Umunhum	0.31	322		Pg	08 21 03.1	-0.1
JSTM	Santa Teresa H	0.31	340		Pg	08 21 03.3	+0.2
HJSM	John Smith Roa	0.31	109		Pg	08 21 03.7	+0.6
PACP	Pacheco Peak	0.32	73		Pg	08 21 03.7	+0.5
BCGM	Cienega Road	0.33	129		Pg	08 21 03.6	0.0
CCOB	Coe Ranch Numb	0.34	359		Pb	08 21 04.7	-0.3
HPCM	Pacheco Lake	0.34	65		Pg	08 21 04.2	+0.4
BPCNC	Pine Canyon	0.34	175		Pg	08 21 04.0	+0.2
BHRM	Hodges Ranch	0.37	120		Pb	08 21 05.0	-0.6
HMOM	Monterey	0.38	213		Pg	08 21 04.5	+0.1
SCZ	Santa Cruz	0.38	147		Pg	08 21 04.0	-0.4
SCZ					Sg	08 21 09.3	-0.2
SLD	San Luis Dam	0.39	66		Pg	08 21 05.0	+0.5
SLD					Sg	08 21 10.6	+0.9
BLRM	Lewis Ranch	0.40	128		Pg	08 21 04.9	0.0
BJOM	Mount Johnson	0.40	136		Pg	08 21 04.8	0.0
SCCB	Santa Clara Co	0.40	337		Pg	08 21 05.1	+0.2
SFJWR	San Luis Fatjo	0.41	71		Pg	08 21 05.5	+0.4
MHC	Mount Hamilton	0.42	2		Pg	08 21 05.9	+0.6
BJCM	Johnson Can.	0.43	149		Pg	08 21 05.0	-0.4
ARN	Arnold Ranch	0.44	14		Pb	08 21 06.3	-0.6
JBNB	Ben Lomond Mou	0.45	298		Pg	08 21 05.2	-0.4
MOBB	Monterey Bay O	0.46	241		Pb	08 21 06.5	-0.5
BEHM	Elkhorn Ranch	0.47	123		Pg	08 21 06.6	+0.5
BVL	Bear Valley	0.51	132		Pg	08 21 06.6	-0.3
BEMM	Emmet	0.52	119		Pg	08 21 07.4	+0.3
HAST	Hastings Reser	0.54	170		Pg	08 21 07.1	-0.2
CMMM	Mount Mocho	0.55	14		Pb	08 21 08.4	-0.3
CMLM	Mount Lewis	0.56	1		Pb	08 21 08.5	-0.3
BSMM	Soledad Missio	0.57	160		Pg	08 21 07.7	-0.2
BAVM	Antelope Valle	0.58	118		Pg	08 21 08.2	+0.1
BPIM	Pinnacles	0.58	137		Pg	08 21 07.6	-0.7
BSGM	Shirttail Gulc	0.60	147		Pg	08 21 07.9	-0.7
BBGB	Big Mountain B	0.60	124		Pg	08 21 09.0	+0.3
JJRM	Joaquin Road	0.60	315		Pg	08 21 08.3	-0.4
JFP	Foothills Park	0.61	317		Pg	08 21 08.5	-0.3
BBNM	San Benito	0.62	131		Pg	08 21 09.3	+0.3
JSFB	Stanford Teles	0.64	320		Pg	08 21 09.2	-0.1
JRSC	Jasper Ridge	0.67	317		Pg	08 21 09.4	-0.5
BRMM	Rolling Bench	0.68	97		Pb	08 21 10.9	+0.1
BPOM	Post Ranch	0.69	187		Pg	08 21 10.0	-0.3
WENL	Wente Vineyard	0.71	354		Pb	08 21 11.3	0.0
LRV	Little Rabbit	0.72	133		Pg	08 21 10.7	-0.1
CNIC	Niles Canyon	0.73	341		Pg	08 21 11.2	+0.2
JHPM	Huddart Park	0.73	316		Pg	08 21 10.7	-0.3
BAPM	Anderson Peak	0.74	179		Pg	08 21 10.9	-0.3
BMSM	Mercy Hot Spri	0.74	110		Pg	08 21 11.4	+0.1
CSU1	Sunol Dilatome	0.76	343		Pg	08 21 11.7	+0.1
JCPM	Coyote Point	0.85	322		Pg	08 21 12.8	-0.5
PHRM	Hernandez Vall	0.87	128		Pg	08 21 12.8	-0.8
CLCB	Lake Chabot	0.88	339		Pg	08 21 13.5	-0.4
CSLM	San Leandro Hi	0.88	336		Pg	08 21 13.5	-0.5
SAC	San Andreas	0.90	318		Pg	08 21 13.3	-0.9
CMOB	Morgan Territo	0.90	353		Pg	08 21 14.0	-0.2
CBSNC	Byron Hot Spri	0.90	1		Pn	08 21 15.1	-0.4
PCCM	Crazy Canyon	0.92	154		Pg	08 21 14.1	-0.5
BGC	Bolinger Road	0.95	341		Pg	08 21 14.8	-0.4
CMCM	Mills College	0.95	335		Pg	08 21 15.0	-0.3
CRHM	Round Hill Res	0.98	345		Pb	08 21 16.1	+0.3
PMPB	Monarch Peak	0.99	135		Pg	08 21 15.1	-0.8
SMCB	Saint Mary's C	0.99	339		Pg	08 21 15.1	-0.8
CRPB	Russellman Par	1.01	349		Pg	08 21 15.1	-1.3
PAPM	Alder Peak	1.03	166		Pg	08 21 15.9	-0.8
CYBM	Yerba Buena Is	1.05	328		Pg	08 21 15.2	-2.0
BKS	Berkeley--Byer	1.06	335		Pg	08 21 15.6	-1.7
CVPM	Vollmer Peak	1.06	335		Pg	08 21 16.0	-1.3
VAK	Adit at Lawren	1.07	334		Pb	08 21 15.7	-1.7
BRIB	Briones	1.07	339		Pb	08 21 16.4	-1.1
JPRM	Presidio of Sa	1.09	324		Pb	08 21 16.9	-0.9
PSAM	San Ardo	1.09	145		Pb	08 21 16.6	-1.2
MYLM	Yosemite Lake	1.10	65		Pb	08 21 17.6	-0.4
CPIM	Pinole Ridge	1.16	338		Pb	08 21 17.3	-1.6
CSPM	San Pablo Ridg	1.16	334		Pb	08 21 17.1	-1.9
PHSB	Hesperia Broad	1.20	156		Pb	08 21 18.6	-1.0
PANM	San Antonio Re	1.29	151		Pn	08 21 19.7	-1.3
PKD	Bear Valley Ra	1.33	137		Pn	08 21 19.8	-1.7
MCUB	Copperopolis B	1.34	38		Pn	08 21 20.2	-1.4
PPO	Portuguese Can	1.35	141		Pn	08 21 20.6	-1.1
PVCM	Vineyard Canyo	1.35	137		Pn	08 21 20.4	-1.4
PSTM	Stockdale Moun	1.36	136		Pn	08 21 20.1	-1.8
MNHB	New Hogan Dam	1.40	29		Pb	08 21 23.0	-0.1
MHDM	Hidden Dam	1.43	81		Pn	08 21 21.3	-1.5
CMB	Columbia Colle	1.51	42		Pn	08 21 23.5	-0.5
BLDC	Black Mountain	1.51	156		Pn	08 21 22.8	-1.1
BLDC	Black Mountain	1.51	156		Pn	08 21 22.7	-1.3
CVS	Carmenet Viney	1.56	336		Pn	08 21 22.9	-1.8
MCCM	Marconi Confer	1.56	322		Pn	08 21 22.4	-2.2
MCCM	Marconi Confer	1.56	322		Pn	08 21 23.2	-1.4
MMIM	Miami Mountain	1.61	71		Pn	08 21 24.8	-0.7
PAGB	Antelope Grade	1.65	136		Pn	08 21 25.3	-0.5
THIS	South End of C	1.66	135		Pn	08 21 24.3	-1.8
NTYM	Taylor	1.67	332		Pn	08 21 24.1	-2.1
TRAM	Private Proper	1.67	137		Pn	08 21 24.3	-2.0
TSCN	Private Proper	1.73	142		Pn	08 21 25.9	-1.2
NMCNC	Mill Creek, So	1.94	330		Pn	08 21 27.2	-2.6
AFDM	Forest Hills D	2.10	15		Pn	08 21 31.8	-0.3
HELL	Mitchell Peak,	2.13	96		Pn	08 21 30.9	-1.7
OMMB	Old Mammoth Mi	2.24	71		Pn	08 21 33.0	-1.2
MEMM	East Mammoth H	2.30	70		Pn	08 21 35.5	+0.5
MCMM	Convict Lake	2.33	72		Pn	08 21 35.8	+0.4
HOPS	Hopland Field	2.35	332	Pn	Pn	08 21 34.7	-0.8
RUBR	Rubicon Trail	2.44	29	Pn	Pn	08 21 36.7	-0.3
ORV	Oroville	2.64	3	Pn	Pn	08 21 39.5	0.0
ISA	Isabella, Lake	2.87	115	Pn	Pn	08 21 42.0	-0.6

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*MOS **02** 08:50:02.1±1.0, 0°.15N×126°.13E, h33^{km}, mb5.2/49, Error ellipse: s-maj=11.2km s-min=5.3km az=108.0*

*NEIC **02** 08:50:02.7±1.3, 0°.23N±0°.06×126°.27E±0°.05, h26^{km}±4^{km}, mb5.0/84, Error ellipse: s-maj=9.7km s-min=6.1km az=154.0*

*IDC **02** 08:50:03.5±2.3, 0°.20N×126°.16E, h30^{km}±15^{km}, mb4.6/36, mb1 4.6/40, mb1mx4.5/58, mbtmp4.7/40, ML4.2/4, MS3.9/11, Ms1 3.9/11, ms1mx3.6/48, Error ellipse: s-maj=13.9km s-min=7.8km az=77.0*

*GCMT **02** 08:50:04.7±0.2, 0°.35N±0°.01×126°.14E±0°.02, h24^{km}, MW5.1/79, Moment Tensor Solution. s39,c59; s79,c114; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.92±.16; $M_{\theta\theta}$-1.68±.11; $M_{\phi\phi}$-0.24±.13; $M_{r\theta}$-3.56±.30; $M_{\theta\phi}$-2.57±.08; $M_{\phi r}$0.94±.27; Best double couple: $M_0$4.82900×10^{16} NP1:ϕ_s20.00000°, δ37.00000°, λ24.00000°. NP2: ϕ_s270.00000°, δ76.00000°, λ124.00000°. Principal axes: T 5.0420, Plg48.0000°, Azm216.0000°; N -0.4270, Plg33.0000°, Azm80.0000°; P -4.6160, Plg23.0000°, Azm334.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **02** 08:50:04.5±0.0, 0°.30N×126°.30E, h40^{km}, mB5.1/44, mb4.8/61, Ms4.6/28, Ms7 4.3/29*

*DJA **02** 08:50:04.0±0.2, 0°N±2°×12°6E±°, h10^{km}, M4.8/17, mB5.3/10, mb5.0/13, MLv4.8/17, Mw(mB)4.7/10, Mwp5.0/1*

*KLM **02** 08:50:05.0, 0°.35N×126°.37E, h35^{km}, mb4.7*

ISC 02 08:50:04.6±0.3, **0°.22N**±0°.03×**126°.26E**±0°.03, **h35^{km}, n304,** σ**1$\overset{s}{.}$69**/325, **mb5.0**/112, **MS4.2**/22, **12C-4D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.23	63	P	Pn	08 50 24.2	-1.1
TNTI				S	Sn	08 50 46.7	+5.9
TNTI	Ternate	1.23	63		Pn	08 50 24.4	-1.0
TNTI				Sn	Sn	08 50 39.6	-1.1
LBMI	Labuha	1.50	124	P	Pn	08 50 29.4	+0.4
SANI	Sanana	2.27	187	P	Pn	08 50 43.7	+4.1
SANI				S	Sn	08 51 11.1	+4.7
KMSI	Cibinong	2.31	279	P	Pn	08 50 40.2	0.0
KMSI				S	Sn	08 51 10.5	+3.1
NLAI	Namlea	3.53	166	P	Pn	08 50 59.4	+2.4
NLAI				S	Sn	08 51 40.5	+2.9
LUWI	Luwuk	3.71	250	P	Pn	08 51 03.0	+3.6
LUWI				S	Sn	08 51 48.6	+6.7
LUWI	Luwuk	3.71	250	Pn	Pn	08 50 59.4	0.0
AAI	Ambon	4.33	154	P	Pn	08 51 12.9	+4.9
AAI				S	Sn	08 52 02.3	+5.0
MRSI	Marisa	4.33	273	P	Pn	08 51 08.7	+0.7
MSAI	Masohi	4.43	143	P	Pn	08 51 13.5	+4.2
APSI	Ampana	4.75	256	P	Pn	08 51 17.1	+3.4
SIJI	Sorong	5.12	102	Pn	Pn	08 51 21.1	+2.2
	3.1nm,0.3s,baz=299,slow=8.0,SNR=8.7						
SIJI				LR	LR	08 53 43.7	
	comp=Z,1µm,20.2s,baz=295,slow=42						
KDI	Kendari	5.52	221	P	Pn	08 51 32.8	+8.5
BNDI	Bandanaira	5.95	142	P	Pn	08 51 35.5	+5.3
	1.4nm22µm250nm,0.9s						
MPSI	Mapaga	6.37	271	P	Pn	08 51 41.2	+5.2
MATI	Mati	6.68	360	eP	Pn	08 51 42.0	+1.6
FAKI	Fak Fak	6.75	118	P	Pn	08 51 57.2	+16
FAKI	Fak Fak	6.75	118		Pn	08 51 39.8	-1.4
DAV	Davao City (W)	6.84	354	⇑eP	Pn	08 51 44.9	+2.4
KCP	Kidapawan	6.85	350	⇑eP	Pn	08 51 45.2	+2.6
TTSI	Tana Toraja	7.21	243	P	Pn	08 51 48.0	+0.4
	0.5nm3µm159nm,0.8s						
CTBH	Cotabato--PC H	7.24	344	⇑eP	Pn	08 51 49.9	+1.9
BNSI	Bone	7.67	233	P	Pn	08 51 55.0	+1.1
	0.4nm1µm102nm,0.7s						
BUKP	Musuan	7.71	351	eP	Pn	08 51 56.2	+1.8
SPSI	Sidrap Palu	7.71	237	P	Pn	08 51 55.7	+1.3
	0.4nm2µm134nm,0.7s						
PAGZ	Pagadian	8.11	339	eP	Pn	08 51 60.0	+0.1
BKSI	Bulukumba	8.24	228	P	Pn	08 52 02.9	+1.2
	1µm115nm,0.9s						
KAPI	Kappang	8.33	231	Pn	Pn	08 52 02.4	-0.5
	2.0nm,0.3s,baz=43,slow=9.4,SNR=21						
KAPI				Sn	Sn	08 53 34.7	-1.1
	0.7nm,0.3s,baz=165,slow=20,SNR=1.6						
MMRI	Maumere	9.67	204	Pn	Pn	08 52 20.1	-1.2
EDFI	Ende, Flores	10.01	207	P	Pn	08 52 29.0	+3.0
	366nm34nm,1.3s						
SOEI	Soe	10.10	191	P	Pn	08 52 35.2	+7.8
SOEI	Soe	10.10	191		Pn	08 52 26.3	-1.1
KKM	Kota Kinabalu	11.58	300		Pn	08 52 45.8	-1.8
CUYO	Cuyo Island	11.78	334	eP	Pn	08 52 54.3	+4.0
BATP	Bataraza	11.99	316	eP	Pn	08 53 01.4	+8.3
PLAI	Plampang	12.34	223	P	P	08 53 15.1	+5.5
OTRP	Odiongan	12.78	341	eP	P	08 53 11.1	-3.4
ENPP	El Nido	12.86	328	eP	Pn	08 53 07.5	+2.5

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SJMP  San Jose          13.19 337 eP    P      08 53 21.4 +2.3
SRBI  Singaraja         13.76 233  P    P      08 53 31.0 +5.6
MTN   Manton Dam        13.85 160       Pn     08 53 18.1 -0.4
PGP   Puerto Galera     14.21 338⇑eP    Pn     08 53 24.9 +1.4
SBUM  Sibu              14.21 279       Pn     08 53 22.5 -1.0
SBUM  Sibu              14.21 279  P    Pn     08 53 26.0 +2.5
LUBP  Lubang            14.69 336 eP    P      08 53 34.8 -1.0
TGY   Tagaytay City     14.77 339  Pn   Pn     08 53 32.1 +1.0
      25nm,0.3s,baz=177,slow=2.6,SNR=6.2
STKI  Sintang           14.79 269  P    P      08 53 47.6  +11
JAGI  Jajag, Banyuwa    14.84 234  P    P      08 53 38.9 +1.5
JAGI  Jajag, Banyuwa    14.84 234       Pn     08 53 32.0  0.0
GMJI  Gumukmas          15.31 236  P    P      08 53 46.2 +3.6
KNRA  Kununurra         15.98 171       Pn     08 53 46.0 -0.9
KSM   Kuching           16.00 275       Pn     08 53 46.0 -1.2
KSM                                IAmb IAmb   08 53 52.8
      comp=Z,80nm,0.9s
KSM   Kuching           16.00 275  P    P      08 53 50.0 -0.3
BALP  Baler            16.10 344 eP    Pn     08 53 49.4 +1.0
PWJI  Pagerwojo         16.58 240  P    P      08 53 57.2 +0.5
      comp=Z,1µmcomp=Z,92nm,1.1s
CAUP  Cauayan           17.19 345 eP    Pn     08 54 02.2 +0.1
PCJI  Pacitan           17.20 241  P    P      08 54 06.8 +3.2
      comp=Z,2µmcomp=Z,99nm,1.0s
WOJI  Wonogiri, Jawa    17.26 242  P    P      08 54 06.1 +1.8
      comp=Z,49nm,1.5s
UGM   Wanagama          17.65 242  Pn   Pn     08 54 04.7 -3.2
SZP   Santa             18.15 342  P    Pn     08 54 13.1 -0.9
SZP                                IAmb IAmb   08 54 20.1
      comp=Z,92nm,0.9s
FITZ  Fitzroy Crossi    18.21 182  P    P      08 54 14.6 -0.1
      comp=Z,0.5nm,0.3s,baz=20,slow=9.7,SNR=14
FITZ                               LR   LR     09 03 31.9
      comp=Z,339nm,19.0s,baz=6.5,slow=44
FITZ  Fitzroy Crossi    18.21 182  P    P      08 54 13.9 -0.9
APYP  Conner            18.22 345 eP    P      08 54 13.6 -1.1
KPJI  Karang Pucung     18.84 246  P    Pn     08 54 23.2 +0.7
      comp=Z,1µmcomp=Z,76nm,1.0s
LEM   Lembang           19.88 249  P    P      08 54 31.2 -2.0
      comp=Z,2.7nm,0.3s,baz=49,slow=9.3,SNR=2.1
CISI  Cisompet, Garu    19.95 247  P    Pn     08 54 36.5 +0.7
CISI  Cisompet, Garu    19.95 247  P    P      08 54 33.9 -0.1
DLV   T  Lat            21.14 304  P    P      08 54 45.4 -1.6
DLV                                IAmb IAmb   08 54 57.5
      comp=Z,63nm,1.1s
WB0   Warramunga Arr    21.40 159  P    P      08 54 48.8 -0.7
WB0                                IAmb IAmb   08 54 57.0
      comp=Z,56nm,0.8s
WRAB  Tennant Creek     21.54 159  P    P      08 54 50.5 -0.5
WRAB                               IAmb IAmb   08 54 58.2
      comp=Z,40nm,0.6s
WRAB  Tennant Creek     21.54 159  P    P      08 54 50.5 -0.5
WRAB                               pmax pmax
      comp=Z,41nm,0.6s
WRA   Warramunga Arr    21.54 159  P    P      08 54 50.3 -0.7
      comp=Z,32nm,0.6s,baz=335,slow=11,SNR=226
WRA                                S    S      08 58 47.3 -0.8
      comp=Z,3.6nm,1.1s,baz=340,slow=17,SNR=5.0
WB2   Warramunga Arr    21.55 159  P    P      08 54 50.3 -0.8
WB2                                IAmb IAmb   08 55 02.2
      comp=Z,45nm,0.6s
WR0   Warramunga Arr    21.63 158  P    P      08 54 51.4 -0.5
WR0                                IAmb IAmb   08 54 59.2
      comp=Z,39nm,0.7s
COEN  Coen              21.88 131  P    P      08 54 54.2 -0.4
COEN                               IAmb IAmb   08 55 10.2
      comp=Z,77nm,1.2s
PSA00 Pilbara Seismi    22.55 196  P    P      08 55 02.1 +0.4
PMG   Port Moresby      22.89 115  LR   LR     09 05 29.0
      comp=Z,430nm,20.1s,baz=304,slow=40
TPUB  Ta-pu             23.59 347  P    P      08 55 11.6 -0.7
SSLB  Suanglung         23.99 348  P    P      08 55 15.0 -1.1
SSLB                               IAmb IAmb   08 55 21.0
      comp=Z,56nm,1.0s
QIZ   Qiongzhong        24.68 320  P    P      08 55 20.9 -1.6
QIZ                                pP   pP     08 55 32.8 +1.1
QIZ                                S    S      08 59 40.5 -1.5
QIZ                                pmax pmax
      comp=Z,8.0nm,1.2s
QIZ                                pmax pmax
      comp=Z,200nm,3.5s
QIZ                                LR   LR
      comp=Z,300nm,22.9s
QIZ                                LR   LR
      comp=Z,320nm,25.7s
QIZ                                LR   LR
      comp=Z,330nm,22.0s
YHNB  Yeheng            24.77 349  P    P      08 55 22.5 -0.7
AS31  Alice Springs     24.87 163  P    P      08 55 25.1 +0.9
ASAR  Alice Springs     24.87 163  P    P      08 55 24.6 +0.4
      comp=Z,28nm,0.7s,baz=354,slow=17,SNR=205
ASAR                               PcP  PcP    08 59 00.2 +0.5
      comp=Z,0.9nm,0.7s,baz=343,slow=2.0,SNR=2.7
ASAR                               S    S      08 59 46.2 +1.0
      comp=Z,1.0nm,0.9s,baz=339,slow=20,SNR=2.5
ASAR                               ScP  ScP    09 02 37.8 +1.5
      comp=Z,0.7nm,0.9s,baz=351,slow=3.0,SNR=4.0
UBPT  Khong Chiam       25.42 307  P    P      08 55 28.2 -0.9
UBPT                               IAmb IAmb   08 55 33.4
      comp=Z,30nm,1.2s
GIRL  Giralia           25.57 207  P    P      08 55 28.7 -1.7
IPM   Ipoh              25.57 280  P    P      08 55 27.9 -2.7
KULM  Kulim             26.07 282  P    P      08 55 36.0 +0.9
KRVT  Keravat (AS076    26.13 100  LR   LR     09 05 19.6
      comp=Z,373nm,21.2s,baz=284,slow=35
JOW   Kunigami          26.53   4  P    P      08 55 39.8 +0.7
      comp=Z,6.2nm,0.9s,baz=184,slow=14,SNR=9.0
JOW   Kunigami          26.53   4  P    P      08 55 37.6 -1.5
RPSI  Rantau Prapat     27.44 275  P    P      08 55 46.0 -1.5
RPSI  Rantau Prapat     27.44 275  P    P      08 55 45.5 -2.0
PSI   Prapat            27.45 276  P    P      08 55 45.5 -2.2
      comp=Z,4.7nm,0.8s,baz=162,slow=0.8,SNR=4.2
PSI   Prapat            27.45 276  P    P      08 55 45.5 -2.2
PSI                                pmax pmax
      comp=Z,17nm,1.2s
CTA   Charters Tower    28.12 137  P    P      08 55 52.4 -1.1
      comp=Z,1.3nm,0.4s,baz=298,slow=17,SNR=3.2
PBKT  Sadao Pong        29.76 304  P    P      08 56 05.7 -2.4
SLVN  Son La            30.28 315  P    P      08 56 11.8 -0.9
MORW  Morawa            30.72 198  P    P      08 56 15.2 -1.2
JCJ   Chichijima        30.80  29  P    P      08 56 16.6 -0.5
      comp=Z,43nm,0.7s,baz=264,slow=11,SNR=3.9
JCJ                                LR   LR     09 07 15.1
      comp=Z,104nm,21.5s,baz=242,slow=33
FORT  Forrest           30.87 177  P    P      08 56 16.7 -1.1
GYA   Guiyang           32.20 326  P    P      08 56 31.7 +2.0
GYA                                pP   sP     08 56 42.8 -0.1
GYA                                PP   PnPn   08 57 39.4 +3.0
GYA                                S    S      09 01 41.7 +1.1
GYA                                SS   SnSn   09 03 38.0 +4.6
GYA                                pmax pmax
      comp=Z,20nm,0.8s
GYA                                pmax pmax
      comp=Z,120nm,4.9s
GYA                                LR   LR
      comp=Z,380nm,17.9s
GYA                                LR   LR
      comp=Z,470nm,17.5s
GYA                                LR   LR
      comp=Z,490nm,17.0s
WHN   Wuhan             32.22 340  P    P      08 56 26.7 -2.9
CM31  Chiang Mai Arr    32.38 306  P    P      08 56 31.0 -0.2
CMAR  Chiang Mai Arr    32.38 306  P    P      08 56 29.9 -1.3
      comp=Z,1.1nm,0.3s,baz=134,slow=8.3,SNR=13
CMAR                               PcP  PcP    08 59 18.8 +0.3
      comp=Z,1.5nm,0.4s,baz=137,slow=2.6,SNR=5.8
CMAR                               ScP  ScP    09 03 00.6 +0.7
      comp=Z,0.9nm,0.4s,baz=134,slow=2.6,SNR=5.3
CMAR  Chiang Mai Arr    32.38 306ceP    P      08 56 30.8 -0.4
CMAR                               pmax pmax
      comp=Z,1.0nm,0.3s
NJ2   Nanjing           32.43 348 eP    P      08 56 33.2 +1.8
NJ2                                pmax pmax
      comp=Z,14nm,0.6s
CHTO  Chiang Mai        32.57 306  P    P      08 56 31.9 -0.9
CHTO                               IAmb IAmb   08 56 37.0
      comp=Z,15nm,1.1s
CHTO  Chiang Mai        32.57 306  P    P      08 56 31.9 -0.9
CHTO                               pmax pmax
      comp=Z,15nm,1.2s
JNU   Nakatsue          33.02   7  P    P      08 56 35.9 -0.7
      comp=Z,25nm,1.0s,baz=135,slow=5.0,SNR=5.5
JNU   Nakatsue          33.02   7  IAmb IAmb   08 56 38.2
      comp=Z,38nm,1.1s
KMI   Kunming           33.62 319  P    P      08 56 43.9 +1.7
KMI                                pP   pP     08 56 51.5 -0.1
KMI                                sP   sP     08 56 57.9 +2.4
KMI                                pmax pmax
      comp=Z,28nm,0.5s
KMI                                pmax pmax
      comp=Z,150nm,4.0s
KMI                                LR   LR
      comp=Z,370nm,8.9s
KMI                                LR   LR
      comp=Z,190nm,5.9s
KMI                                LR   LR
      comp=Z,270nm,10.6s
ENH   Enshi             33.88 333  P    P      08 56 43.5 -0.7
BBOO  Buckleboo         34.13 165  P    P      08 56 46.2  0.0
HNR   Honiara           34.88 107  LR   LR     09 12 37.2
      comp=Z,250nm,21.5s,baz=286,slow=39
STKA  Stephens Creek    35.06 157  P    P      08 56 54.5 +0.1
      comp=Z,5.4nm,0.5s,baz=323,slow=9.1,SNR=16
STKA  Stephens Creek    35.06 157  P    P      08 56 52.9 -1.5
STKA  Stephens Creek    35.06 157  P    P      08 56 52.9 -1.5
STKA                               pmax pmax
      comp=Z,4.0nm,1.1s
INU   Inuyama           36.36  15  P    P      08 57 05.2 -0.2
KSRS  Korea Array       37.08   2  P    P      08 57 12.1 +0.5
      comp=Z,9.1nm,0.8s,baz=178,slow=10,SNR=22
KSRS                               LR   LR     09 13 18.3
      comp=Z,98nm,20.4s,baz=185,slow=38
CD2   Chengdu           37.26 327  P    P      08 57 13.3 +0.1
CD2                                pmax pmax
      comp=Z,20nm,0.4s
XAN   Xi'an             37.37 336  P    P      08 57 13.2 -0.9
XAN                                PP   PnPn   08 58 44.8 +4.1
XAN                                S    S      09 02 48.8  -11
XAN                                pmax pmax
      comp=Z,13nm,0.9s
XAN                                pmax pmax
      comp=Z,92nm,7.3s
XAN   Xi'an             37.37 336  P    P      08 57 13.4 -0.7
XAN   Xi'an             37.37 336  P    P      08 57 13.4 -0.7
XAN                                pmax pmax
      comp=Z,10.0nm,0.8s
MJAR  Matsushiro Arr    37.80  16  P    P      08 57 16.6 -1.1
      comp=Z,20nm,0.9s,baz=188,slow=9.9,SNR=40
MJAR                               LR   LR     09 13 11.2
      comp=Z,118nm,20.9s,baz=190,slow=37
MAJO  Matsushiro        37.80  16  P    P      08 57 17.7 +0.1
MAJO                               IAmb IAmb   08 57 18.4
      comp=Z,21nm,0.8s
MAJO  Matsushiro        37.80  16 i P   P      08 57 17.8 +0.1
MAJO                               pmax pmax
      comp=Z,22nm,0.9s
MAT   Matsushiro        37.80  16  P    P      08 57 17.2 -0.5
MAT                                S    S      09 03 13.4 +7.0
MJB9  Matsu-Tunnel      37.81  16  P    P      08 57 16.4 -1.4
MJB9                               IAmb IAmb   08 57 18.4
      comp=Z,20nm,0.8s
DL2   Dalian            38.74 354  P    P      08 57 26.7 +1.2
DL2                               eS    S      09 03 24.5 +4.2
DL2                                pmax pmax
      comp=Z,36nm,0.7s
DL2                                LR   LR
      comp=Z,290nm,18.1s
DL2                                LR   LR
      comp=Z,230nm,17.8s
DL2                                LR   LR
      comp=Z,330nm,18.8s
ARMA  Armidale          38.86 144  P    P      08 57 26.0 -0.9
BJT   Baijiatuau        40.67 348  P    P      08 57 42.3 +0.8
BJT                                IAmb IAmb   08 57 46.7
      comp=Z,15nm,0.8s
BJT   Baijiatuau        40.67 348  P    P      08 57 42.3 +0.8
BJT                                pmax pmax
      comp=Z,15nm,0.8s
BJI   Beijing           40.69 348  P    P      08 57 41.5 -0.1
BJI   Beijing           40.69 348  P    P      08 57 41.6 -0.1
BJI                                pmax pmax
      comp=Z,15nm,0.7s
CAN   Canberra          41.23 151  P    P      08 57 45.6 -0.8
CAN   Canberra          41.23 151  P    P      08 57 45.6 -0.8
CAN                                pmax pmax
      comp=Z,13nm,1.0s
LZH   Lanzhou           41.33 332 eP    P      08 57 47.7 +0.5
LZH                                pP   pwP    08 58 00.1  0.0
LZH                                sP   sP     08 58 05.3 +4.7
LZH                               ePP   PP     08 59 24.1 +1.0
LZH                                pmax pmax
      comp=Z,13nm,1.0s
LZH                                pmax pmax
      comp=Z,68nm,4.9s
LZH                                LR   LR
      comp=Z,290nm,16.3s
LZH                                LR   LR
      comp=Z,290nm,17.4s
LZH                                LR   LR
      comp=Z,340nm,17.3s
SHL   Shillong          41.67 310  P    P      08 57 49.0 -1.2
SHL   Shillong          41.67 310  P    P      08 57 49.0 -1.2
SHL                                pmax pmax
      comp=Z,9.0nm,0.6s
HHC   Hu-ho-hao-te      42.59 343 eP    P      08 57 58.9 +1.5
HHC                                pmax pmax
      comp=Z,140nm,0.9s
HHC                                pmax pmax
      comp=Z,210nm,5.0s
HHC                                LR   LR
      comp=Z,100nm,15.3s
HHC                                LR   LR
      comp=Z,90nm,14.5s
HHC                                LR   LR
      comp=Z,85nm,15.3s
CN2   Changchun         43.40 359 eP    P      08 58 06.1 +2.3
CN2                                pmax pmax
      comp=Z,10.0nm,0.6s
USA0B Ussuriysk Arra    44.09   6  P    P      08 58 08.2 -1.1
USA0B                              IAmb IAmb   08 58 11.5
      comp=Z,25nm,0.8s
USA0B Ussuriysk Arra    44.09   6 i P   P      08 58 09.7 +0.4
USRK  Ussuriysk Ar.     44.09   6  P    P      08 58 09.6 +0.3
      comp=Z,20nm,0.8s,baz=186,slow=6.0,SNR=29
MDJ   Mudanjiang        44.31   3  P    P      08 58 11.5 +0.4
MDJ                                pP   pwP    08 58 22.9 -1.1
MDJ                                sP   sP     08 58 28.0 +3.5
MDJ                                PcP  PP     08 59 53.4 -1.5
MDJ                                PP   PcP    08 59 56.4 +1.5
MDJ                                ScP  ScP    09 03 41.9 -2.6
MDJ                                PcS  PcS    09 03 46.6 -1.4
MDJ                                S    S      09 04 46.0 +3.3
MDJ                                sS   sS     09 05 05.4 +7.0
MDJ                                ScS  ScS    09 08 05.5 -1.2
MDJ                                pmax pmax
      comp=Z,36nm,0.9s
MDJ                                pmax pmax
      comp=Z,130nm,4.0s
MDJ                                LR   LR
      comp=Z,260nm,5.2s
MDJ                                LR   LR
      comp=Z,180nm,6.4s
MDJ                                LR   LR
      comp=Z,290nm,14.2s
MDJ   Mudanjiang        44.31   3  P    P      08 58 11.7 +0.6
MDJ                                IAmb IAmb   08 58 13.4
      comp=Z,27nm,0.9s
LSA   Lhasa             44.47 314  P    P      08 58 16.2 +2.9
LSA                                IAmb IAmb   08 58 16.7
      comp=Z,10nm,0.7s
LSA   Lhasa             44.47 314  P    P      08 58 16.2 +2.9
LSA                                pmax pmax
      comp=Z,10.0nm,0.7s
TEY   Ternei            45.56  10⇑iP    P      08 58 21.2 +0.2
TEY                                pmax pmax
      comp=N,20nm,1.0s
TEY                                pmax pmax
      comp=Z,40nm,0.9s
GTA   Gaotai            45.89 331 eP    P      08 58 22.5 -1.4
GTA                                pP   pP     08 58 34.0 +0.5
GTA                                sP   sP     08 58 39.3 +1.9
GTA                                pmax pmax
      comp=Z,4.0nm,0.9s
GTA                                pmax pmax
      comp=Z,57nm,5.4s
GTA                                LR   LR
      comp=Z,160nm,15.9s
GTA                                LR   LR
      comp=Z,350nm,16.8s
GTA                                LR   LR
      comp=Z,320nm,18.4s
ASAJ  Asahikawa         46.07  16  P    P      08 58 25.1 +0.1
      comp=Z,24nm,0.9s,baz=248,slow=26,SNR=10.0
JKA   Kamikawa-asahi    46.07  16  P    P      08 58 25.1 +0.1
YSS   Yuzh-Sakhalins    48.73  15 eP    P      08 58 42.5 -3.2
KLR   Kul'dur           49.05   5 eP    P      08 58 48.2 +0.1
KLR                                pmax pmax
      comp=Z,16nm,1.1s
HIA   Hailar            49.18 354  P    P      08 58 50.9 +1.7
HIA                                IAmb IAmb   08 59 02.4
      comp=Z,21nm,1.2s
HIA   Hailar            49.18 354  P    P      08 58 50.9 +1.7
HIA                                pmax pmax
      comp=Z,21nm,1.2s
HYB   Hyderabad         49.95 293 i P   P      08 58 55.0 -0.6
ULN   Ulaanbaatar       50.31 343  P    P      08 58 57.2 -0.8
ULN                                IAmb IAmb   08 59 03.2
      comp=Z,14nm,0.9s
ULN   Ulaanbaatar       50.31 343  P    P      08 58 57.2 -0.8
ULN                                pmax pmax
      comp=Z,14nm,1.0s
SONM  Songino Array     50.48 343  P    P      08 58 58.9 -0.3
      comp=Z,9.1nm,0.9s,baz=155,slow=8.7,SNR=49
SONM                               LR   LR     09 22 28.0
      comp=Z,232nm,21.3s,baz=182,slow=38
GRNR  Gornyy            51.10   8⇓iP    P      08 59 04.6 +0.9
GRNR                               pmax pmax
      comp=Z,20nm,0.8s
GRNR                               MLR  MLR
      comp=Z,70nm,19.0s
TYV   Tymovskoe         52.35  13 eP    P      08 59 13.8 +0.9
TYV                                pmax pmax
      comp=Z,6.0nm,0.8s
TYV                                pmax pmax
      comp=Z,300nm,5.0s
ZEA   Zeya              53.34   1 eP    P      08 59 20.1 -0.2
ZEA                                pmax pmax
      comp=Z,12nm,1.0s
ZAK   Zakamensk         53.68 342 eP    P      08 59 22.9 -0.1
ZAK                                pmax pmax
      comp=Z,5.0nm,1.2s
TLY   Talaya            54.71 343  P    P      08 59 30.4 +0.1
      comp=Z,2.1nm,0.5s,baz=233,slow=6.9,SNR=7.6
TLY   Talaya            54.71 343  P    P      08 59 30.1 -0.2
TLY                                IAmb IAmb   08 59 49.4
      comp=Z,26nm,1.5s
TLY   Talaya            54.71 343 eP    P      08 59 32.0 +1.6
TLY                                pmax pmax
      comp=Z,18nm,0.9s
TLY                                MLR  MLR
      comp=Z,251nm,10.0s
WMQ   Urumqi            55.35 327 eP    P      08 59 33.9 -1.3
WMQ                                pP   pP     08 59 44.7 -0.3
WMQ                                sP   sP     08 59 55.6 +6.8
WMQ                                pmax pmax
      comp=Z,9.0nm,1.3s
WMQ                                pmax pmax
      comp=Z,73nm,8.5s
WMQ                                LR   LR
      comp=Z,620nm,29.3s
WMQ                                LR   LR
      comp=Z,220nm,25.1s
WMQ   Urumqi            55.35 327  P    P      08 59 36.1 +0.9
WMQ   Urumqi            55.35 327  P    P      08 59 36.1 +0.9
WMQ                                pmax pmax
      comp=Z,31nm,1.2s
MOY   Mondy             55.52 341 eP    P      08 59 37.9 +1.6
MOY                                pmax pmax
      comp=Z,35nm,1.8s
BOD   Bodaibo           58.26 352 eP    P      08 59 55.1 -0.3
BOD                                pmax pmax
      comp=Z,21nm,1.2s
PEA0B Petropavlovsk-    58.84  22 i P   P      09 00 00.3 +0.7
PETK  Petropavlovsk-    58.84  22  P    P      09 00 00.2 +0.7
      comp=Z,16nm,0.8s,baz=195,slow=5.3,SNR=20
MK31  Makanchi Array    60.19 327  P    P      09 00 07.8 -1.3
MK31                               IAmb IAmb   09 00 12.5
      comp=Z,13nm,0.8s
MK31  Makanchi Array    60.19 327  P    P      09 00 07.8 -1.3
MK31                               pmax pmax
      comp=Z,13nm,0.8s
MKAR  Makanchi Array    60.19 327  P    P      09 00 08.0 -1.0
      comp=Z,15nm,0.7s,baz=133,slow=8.8,SNR=74
MKAR                               LR   LR     09 27 16.5
      comp=Z,197nm,20.4s,baz=110,slow=37
KSH   Kashi             60.23 317  P    P      09 00 11.0 +1.4
KSH                                sP   sP     09 00 29.1 +5.9
KSH                                S    S      09 08 20.6 -0.8
KSH                                SS   SS     09 12 20.5 +1.3
KSH                                pmax pmax
      comp=Z,15nm,0.5s
KSH                                pmax pmax
      comp=Z,160nm,5.0s
KSH                                LR   LR
      comp=Z,210nm,9.7s
KSH                                LR   LR
      comp=Z,240nm,10.3s
KSH                                LR   LR
      comp=Z,200nm,12.2s
URZ   Urewera           60.35 135  P    P      09 00 08.8 -1.5
      comp=Z,5.6nm,0.8s,baz=269,slow=5.2,SNR=6.0
URZ   Urewera           60.35 135  IAmb IAmb   09 00 14.0
      comp=Z,26nm,1.2s
MAKZ  Makanchi          60.37 327  P    P      09 00 08.9 -1.4
MAKZ                               IAmb IAmb   09 00 13.6
      comp=Z,13nm,0.8s
MAKZ  Makanchi          60.37 327  P    P      09 00 08.9 -1.4
MAKZ                               pmax pmax
      comp=Z,13nm,0.8s
YAK   Yakutsk           61.71   2  P    P      09 00 16.6 -2.4
      comp=Z,14nm,0.6s,baz=248,slow=0.2,SNR=8.2
YAK   Yakutsk           61.71   2  P    P      09 00 16.1 -2.9
YAK   Yakutsk           61.71   2 eP    P      09 00 19.2 +0.2
YAK                                pmax pmax
      comp=Z,23nm,0.9s
YAK                                pmax pmax
      comp=E,3.0nm,0.9s
YAK                                pmax pmax
      comp=N,11nm,1.1s
MA2   Magadan           62.20  14  P    P      09 00 23.0 +0.6
      comp=N,31nm,0.8s,baz=191,slow=7.7,SNR=18
MA2   Magadan           62.20  14  P    P      09 00 22.2 -0.2
MA2   Magadan           62.20  14ceP    P      09 00 23.8 +1.4
MA2                                pmax pmax
      comp=Z,39nm,1.0s
AAK   Ala-Archa         62.67 319  P    P      09 00 25.0 -1.1
AAK                                IAmb IAmb   09 00 31.9
      comp=Z,9.3nm,1.1s
AAK   Ala-Archa         62.67 319  P    P      09 00 26.5 +0.4
KBL   Kabul             63.32 309  P    P      09 00 29.1 -1.4
KBL                                IAmb IAmb   09 00 33.7
      comp=Z,9.9nm,0.8s
KBL   Kabul             63.32 309  P    P      09 00 29.2 -1.4
KBL                                pmax pmax
      comp=Z,10.0nm,0.9s
ZAA0  Zalesovo Array    63.51 334  P    P      09 00 29.9 -1.3
ZAA0                               IAmb IAmb   09 00 48.6
      comp=Z,17nm,1.0s
ZALV  Zalesovo Beam     63.51 334  P    P      09 00 29.6 -1.6
      comp=Z,4.7nm,0.6s,baz=118,slow=4.9,SNR=17
ZALV                               LR   LR     09 30 23.6
      comp=Z,106nm,21.3s,baz=142,slow=38
GAR   Garm              63.98 314  P    P      09 00 34.1 -0.7
KURBB Kurchatov Arra    64.45 329  P    P      09 00 36.2 -1.2
      comp=Z,8.9nm,0.7s,baz=127,slow=5.9,SNR=61
KURK  Kurchatov         64.46 329  P    P      09 00 36.9 -0.6
KURK  Kurchatov         64.46 329ceP    P      09 00 36.8 -0.6
KURK                               pmax pmax
      comp=Z,21nm,0.8s
CHGR  Chuyangaron       64.69 313  P    P      09 00 39.1 -0.3
KK31  Karatay Array     65.50 318  P    P      09 00 43.0 -1.4
KK31                               IAmb IAmb   09 00 47.7
      comp=Z,12nm,1.0s
KK31  Karatay Array     65.50 318 i P   P      09 00 43.3 -1.2
KKAR  Karatay Array     65.50 318  P    P      09 00 43.9 -0.6
KKAR                               IAmb IAmb   09 00 47.7
      comp=Z,12nm,1.0s
KKAR  Karatay Array     65.50 318  P    P      09 00 43.9 -0.6
KKAR                               pmax pmax
      comp=Z,12nm,1.0s
SEY   Seymchan          65.54  13  P    P      09 00 45.1 +0.8
      comp=Z,11nm,1.0s,baz=203,slow=6.0,SNR=18
SEY   Seymchan          65.54  13 i P   P      09 00 45.3 +1.0
BRVK  Borovoye          70.08 328  P    P      09 01 12.1 -1.0
BRVK  Borovoye          70.08 328ceP    P      09 01 12.8 -0.3
BRVK                               pmax pmax
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                comp=Z,20nm,0.8s
TIXI   Tiksi             71.34   1    P      P       09 01 19.5 -0.9
                comp=Z,3.0nm,0.5s,baz=164,slow=3.8,SNR=13
TIXI   Tiksi             71.34   1    P      P       09 01 19.7 -0.7
TIXI                                  IAmb   IAmb    09 01 29.5
                comp=Z,11nm,1.0s
TIXI   Tiksi             71.34   1 ceP       P       09 01 20.5 +0.1
TIXI                                  pmax   pmax
                comp=Z,5.0nm,0.8s
SOCY   Socotra           72.64 283    P      P       09 01 28.9 -0.5
SOCY                                  IAmb   IAmb    09 01 32.1
                comp=Z,16nm,0.7s
GEYT   Alibeck           72.74 310    P      P       09 01 28.7 -0.9
                comp=Z,3.8nm,0.9s,baz=108,slow=4.8,SNR=6.9
BILL   Bilibino          73.05  15 ceP       P       09 01 31.0 +0.3
BILL                                  pmax   pmax
                comp=Z,9.0nm,1.7s
NRIK   Noril'sk          73.71 347    P      P       09 01 34.4 -0.2
                comp=Z,14nm,0.7s,baz=134,slow=7.7,SNR=12
AB31   Akbulak array     74.58 322  i P      P       09 01 39.2 -0.8
ABKAR  Akbulak array     74.58 322    P      P       09 01 39.6 -0.4
ABKAR                                 IAmb   IAmb    09 01 44.0
                comp=Z,17nm,1.0s
AKTO   Aktyubinsk        76.12 322    P      P       09 01 48.7 -0.2
SVE    Sverdlovsk        76.70 329   eP      P       09 01 52.0  0.0
SVE                                   pmax   pmax
                comp=Z,37nm,1.0s
ARU    Arti              77.65 328    P      P       09 01 56.7 -0.6
ARU                                   IAmb   IAmb    09 02 02.1
                comp=Z,14nm,0.8s
ARU    Arti              77.65 328 d iP      P       09 01 56.5 -0.8
ARU                                                  09 04 46.8
ARU                                   S      S       09 11 47.8 +1.2
ARU                                   SS     SS      09 16 46.9 +0.1
ARU                                   pmax   pmax
                comp=Z,9.0nm,0.8s
GAMB   Gambell           77.78  24    P      P       09 01 59.6 +1.8
GAMB                                  IAmb   IAmb    09 02 13.0
                comp=Z,28nm,1.4s
ANM    Nome              80.64  24    P      P       09 02 15.0 +1.5
ANM    Nome              80.64  24    P      P       09 02 15.0 +1.5
ANM                                   pmax   pmax
                comp=Z,5.0nm,1.0s
AKT    Akhty             81.27 312   eP      P       09 02 18.0 +0.5
AKT                                  e               09 02 23.8
AKT                                   pmax   pmax
                comp=Z,17nm,1.0s
RAYN   Ar Rayn           81.44 294    P      P       09 02 18.2 -0.6
RAYN                                  IAmb   IAmb    09 02 26.6
                comp=Z,20nm,1.1s
RAYN   Ar Rayn           81.44 294    P      P       09 02 18.2 -0.6
RAYN                                  pmax   pmax
                comp=Z,20nm,1.2s
RDOG   Red Dog Mine      82.71  21    P      P       09 02 25.3 +0.9
RDOG                                  IAmb   IAmb    09 02 40.2
                comp=Z,20nm,1.2s
TBLG   Delisi            83.52 312    P      P       09 02 29.3 +0.1
TBLG   Delisi            83.52 312    P      P       09 02 29.3 +0.1
ZEI    Tsey              84.24 313   eP      P       09 02 32.7 -0.4
ZEI                                   pmax   pmax
                comp=Z,15nm,0.9s
KBZ    Khabaz            85.05 314    P      P       09 02 36.1 -0.7
                comp=Z,7.4nm,0.9s,baz=163,slow=3.1,SNR=11
KDAK   Kodiak Island     85.09  32    P      P       09 02 35.7 -1.0
                comp=Z,14nm,0.7s,baz=271,slow=6.8,SNR=6.9
KDAK   Kodiak Island     85.09  32    P      P       09 02 35.7 -1.0
KDAK                                  pmax   pmax
                comp=Z,50nm,1.1s
KIV    Kislovodsk        85.22 314   eP      P       09 02 37.9 +0.1
KIV                                   pmax   pmax
                comp=Z,20nm,1.0s
PRGR   Permogore         85.35 332   eP      P       09 02 37.1 -0.8
VRH    Novokhopyorsk     86.40 321   eP      P       09 02 41.6 -1.8
VRH                                   pmax   pmax
                comp=Z,30nm,1.0s
MLY    Manley            86.84  25    P      P       09 02 47.2 +1.9
RND    Reindeer          87.51  27    P      P       09 02 49.7 +1.1
RND                                   IAmb   IAmb    09 03 07.2
                comp=Z,5.5nm,1.0s
RND    Reindeer          87.51  27    P      P       09 02 49.7 +1.1
RND                                   pmax   pmax
                comp=Z,6.0nm,1.0s
TOLK   Toolik Lake Re    87.66  21    P      P       09 02 51.9 +2.7
                baz=265
WRH    Wood River Hil    87.92  26    P      P       09 02 52.0 +1.5
WRH                                   IAmb   IAmb    09 03 03.6
                comp=Z,6.0nm,1.1s
VSR    Storozhevoye      88.01 321   eP      P       09 02 49.2 -2.0
VSR                                   pmax   pmax
                comp=Z,10.0nm,0.9s
CCB    Clear Creek Bu    88.05  25    P      P       09 02 51.7 +0.6
CCB                                   IAmb   IAmb    09 03 04.6
                comp=Z,6.6nm,1.2s
LPSR   Galich'ya Gora    88.20 322   eP      P       09 02 53.6 +1.5
LPSR                                  pmax   pmax
                comp=Z,20nm,0.9s
KLMR   Klimovskoe        88.22 331   eP      P       09 02 47.4 -4.5
KLMR                                  pmax   pmax
                comp=Z,15nm,0.9s
KLMR   Klimovskoe        88.22 331   eP      P       09 02 47.5 -4.5
KLMR                                  AMP            09 02 57.6
                comp=Z,15nm,0.9s
HDA    Harding Lake      88.41  26    P      P       09 02 53.7 +0.9
HDA    Harding Lake      88.41  26    P      P       09 02 53.5 +0.7
                baz=267
ILAR   Eielson Array     88.45  25    P      P       09 02 51.1 -1.9
                comp=Z,1.0nm,0.8s,baz=243,slow=4.8,SNR=11
SYO    Syowa Base        89.00 201⇑eP      P       09 02 54.2 -1.3
KMBO   Kilima Mbogo      89.02 269    P      P       09 02 56.4 -0.6
                comp=Z,5.8nm,1.0s,baz=49,slow=6.3,SNR=7.4
KMBO   Kilima Mbogo      89.02 269    P      P       09 02 58.4 +1.3
KMBO                                  IAmb   IAmb    09 03 03.3
                comp=Z,6.0nm,1.0s
KMBO   Kilima Mbogo      89.02 269    P      P       09 02 58.4 +1.3
KMBO                                  pmax   pmax
                comp=Z,6.0nm,1.0s
TMCR   Tamitsa           89.03 334   eP      P       09 02 54.4 -1.3
TMCR                                  pmax   pmax
                comp=Z,19nm,1.0s
RIDG   Independent Ri    89.31  26    P      P       09 02 55.2 -2.0
RIDG                                  IAmb   IAmb    09 02 59.4
                comp=Z,12nm,1.1s
OBN    Obninsk           89.65 325⇓eP      P       09 02 57.6 -1.2
OBN                                  e               09 06 34.0
OBN                                  eS      SKSac   09 13 23.0 -3.5
OBN                                   pmax   pmax
                comp=Z,10.0nm,0.7s
MENT   Mentasta          89.82  27    P      P       09 03 01.8 +2.3
QSPA   South Pole Qui    90.15 180    P      P       09 03 01.4 +0.4
                comp=Z,6.7nm,0.9s,baz=209,slow=1.2,SNR=7.7
QSPA   South Pole Qui    90.15 180    P      P       09 03 04.4 +3.4
QSPA                                  IAmb   IAmb    09 03 06.5
                comp=Z,11nm,1.1s
APA    Apatity           90.90 337⇓iP      P       09 03 10.9 +6.5
APA                                   pmax   pmax
                comp=Z,6.0nm,0.9s
APA                                   MLR    MLR
                comp=Z,400nm,15.0s
CTGM   Chitina Glacie    90.98  29    P      P       09 03 08.0 +2.9
CTGM                                  IAmb   IAmb    09 03 19.5
                comp=Z,6.6nm,1.0s
DAWY   Dawson            91.72  26    P      P       09 03 10.7 +2.4
DAWY                                  IAmb   IAmb    09 03 22.8
                comp=Z,13nm,1.4s
BRTR   Keskin Array B    91.89 310    P      P       09 03 07.7 -2.1
                comp=Z,1.5nm,0.7s,baz=122,slow=4.5,SNR=6.7
BRTR   Keskin Array B    91.89 310  i P      P       09 03 10.6 +0.8
BRTR                                  pmax   pmax
                comp=Z,2.0nm,0.7s
EPYK   Eagle Plains      92.62  24    P      P       09 03 14.8 +2.4
EPYK   Eagle Plains      92.62  24    P      P       09 03 14.0 +1.5
                baz=276
ARCES  ARCESS Array B    93.56 340    P      P       09 03 14.6 -2.1
                comp=Z,2.7nm,0.7s,baz=65,slow=6.0,SNR=5.5
INK    Inuvik            93.58  22    P      P       09 03 15.7 -1.1
                comp=Z,2.3nm,1.0s,baz=290,slow=9.6,SNR=5.7
INK    Inuvik            93.58  22    P      P       09 03 18.3 +1.6
INK    Inuvik            93.58  22    P      P       09 03 18.3 +1.6
INK                                   pmax   pmax
                comp=Z,16nm,1.4s
AKASG  Malin Array Be    94.30 321    P      P       09 03 18.6 -1.8
                comp=Z,0.9nm,0.7s,baz=63,slow=5.1,SNR=3.6
FINES  FINESS Array B    94.69 332    P      P       09 03 20.4 -1.5
                comp=Z,1.6nm,0.9s,baz=74,slow=8.1,SNR=5.1
FINES  FINESS Array B    94.69 332  i P      P       09 03 22.7 +0.7
FINES                                 pmax   pmax
                comp=Z,2.0nm,0.9s
BUR08  Bucovina Ar. S    97.30 318    P      P       09 03 33.9 -0.4
BUR08                                 IAmb   IAmb    09 03 37.3
                comp=Z,7.0nm,1.1s
UZH    Uzhgorod          99.05 319   eP      Pdif    09 03 43.8 +1.8
UZH                                  e               09 03 51.4
CRVS   Cervenica-Dubn    99.54 320   eP      Pdif    09 03 46.8 +2.6
CRVS   Cervenica-Dubn    99.54 320   ePDIFF  Pdif    09 03 46.8 +2.6
YKA    Yellowknife Ar   102.87  25    Pdiff  Pdif    09 03 58.3 -0.4
                comp=Z,0.4nm,0.8s,baz=298,slow=4.3,SNR=3.4
YKA                                   PKKPbc PKKPbc  09 19 57.5 -1.5
                comp=Z,0.2nm,0.7s,baz=114,slow=3.2,SNR=3.9
ULM    Lac du Bonnet    118.24  29    PKP    PKPdf   09 08 46.8 -1.4
                comp=Z,1.8nm,0.7s,baz=296,slow=2.7,SNR=6.2
TORD   Torodi Ar. Bea   123.50 286    PKP    PKPdf   09 08 58.3 -1.0
                comp=Z,3.3nm,0.8s,baz=40,slow=1.9,SNR=14
TORD                                  PKKPbc PKKPab  09 18 49.0 +1.0
                comp=Z,1.6nm,0.9s,baz=277,slow=3.4,SNR=5.8
TXAR   Lajitas Array    124.07  54    PKP    PKPdf   09 09 00.3  0.0
                comp=Z,0.4nm,0.8s,baz=1.9,slow=2.7,SNR=2.6
SCHQ   Schefferville    124.09   9    PKP    PKPdf   09 08 58.2 -1.1
                comp=Z,1.5nm,0.6s,baz=308,slow=5.3,SNR=7.2
JFWS   Jewell Farm      126.01  33    P      PKiKP   09 09 05.1 +1.2
                baz=313
D46A   Sault St. Mari   126.11  25    P      PKiKP   09 09 04.1 +0.2
                baz=321
D47A   Chapleau         126.38  25    P      PKiKP   09 09 04.7 +0.2
                baz=323
E46A   Sault Ste Mari   126.41  26           PKiKP   09 09 04.9 +0.4
E47A   Iron Bridge      126.78  25    P      PKiKP   09 09 06.3 +1.0
                baz=322
G46A   Petoskey         126.96  27    P      PKiKP   09 09 06.6 +1.0
                baz=320
E48A   Lockeyer         127.23  24    P      PKiKP   09 09 06.3 +0.2
                baz=323
S39A   Bolivar          127.52  40           PKPdf   09 09 06.2 -0.2
D50A   G1974 Best Tow   127.59  22    P      PKiKP   09 09 07.2 +0.4
                baz=326
K47A   Vermontville     128.89  29    P      PKiKP   09 09 10.8 +1.2
                baz=318
L48A   N Adams          129.72  30    P      PKiKP   09 09 11.2 -0.1
                baz=318
342A   Flagon Creek P   131.81  46           PKPdf   09 09 13.1 -1.6
L54A   Sinclairville    131.86  26    P      PKiKP   09 09 16.0 +0.4
                baz=325
M53A   WI Miller and    131.90  27    P      PKiKP   09 09 15.5 -0.1
                baz=323
P52A   Corning          132.60  30    P      PKiKP   09 09 17.7 +0.6
                baz=320
P53A   Whipple          133.08  29    P      PKiKP   09 09 18.6 +0.4
                baz=321
PLCA   Paso Flores      136.88 161    PKP    PKPdf   09 09 24.6 +0.5
                comp=Z,0.7nm,0.7s,baz=306,slow=4.9,SNR=3.3
LVC    Limon Verde      153.29 147    PKPbc  PKiKP   09 10 00.8 +0.3
                comp=Z,3.2nm,0.9s,baz=259,slow=5.2,SNR=2.5
CPUP   Villa Florida    153.81 173    PKP    PKPdf   09 09 53.1 +0.1
                comp=Z,1.1nm,0.9s,baz=86,slow=13,SNR=2.4
CPUP                                  PKPbc  PKPbc   09 10 00.6 -0.3
                comp=Z,3.2nm,0.9s,baz=46,slow=2.0,SNR=4.7
LPAZ   La Paz           158.63 139    PKP    PKPdf   09 10 01.1 +0.7
                comp=Z,0.4nm,0.7s,baz=280,slow=6.1,SNR=1.7
SIV    San Ignacio      162.74 156    PKP    PKPdf   09 10 04.8 +0.7
                comp=Z,1.5nm,0.9s,baz=229,slow=5.8,SNR=7.1
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IDC ***02*** *08:52:10.9±0.6, 43°.09S×82°.89W, h0^{km}, mb4.6/21, mb1 4.6/23, mb1mx4.5/41, mbtmp4.5/23, ML4.2/2, MS4.7/15, Ms1 4.7/15, ms1mx4.5/32, Error ellipse: s-maj=18.3km s-min=14.3km az=118.0*

NEIC ***02*** *08:52:14.6±2.2, 42°.95S±0°.09×82°.9W±0°.1, h10^{km}±1^{km}, mb4.9/122, Error ellipse: s-maj=17.3km s-min=14.3km az=284.0*

GCMT ***02*** *08:52:14.6±0.2, 43°.04S±0°.01×83°.05W±0°.01, h13^{km}±1^{km}, MW5.3/117, Moment Tensor Solution. s91,c144; s117,c194; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.09±.02; $M_{\theta\theta}$0.34±.02; $M_{\phi\phi}$-0.24±.02; $M_{r\theta}$0.04±.04; $M_{\theta\phi}$-1.02±.02; $M_{\phi r}$-0.14±.04; Best double couple: $M_0$1.07000×10^{17} NP1:ϕ_s82.00000°, δ82.00000°, λ180.00000°. NP2:ϕ_s172.00000°, δ90.00000°, λ8.00000°. Principal axes: T 1.1170, Plg5.0000°, Azm37.0000°; N -0.0950, Plg82.0000°, Azm172.0000°; P -1.0220, Plg5.0000°, Azm307.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 08:52:14.1±0.4**, 42°.89S**±0°.06×**82°.80W**±0°.07**, h10^{km}, n292,** σ**1^s.48**/286**, mb4.9**/67**, MS4.7**/17**, 3C-2D, West Chile Rise**

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Code   Station Name        Δ°   AZ°    Phase ID             Time      Res
                                      Op     ISC          h  m  s    ISC
GO07   Milladeo Hill,     6.71  95  i P      Pn          08 53 51.5 -1.1
GO07   Milladeo Hill,     6.71  95    Pn     Pn          08 53 52.0 -0.7
LL01   San Ignacio de     7.68  90  i P      Pn          08 54 06.5 +0.5
GO08   Villa O'Higgin     9.08 131⇓iP      Pn          08 54 26.1 +0.9
PLCA   Paso Flores        9.40  81    Pn     Pn          08 54 29.9 +0.2
                1.4nm,0.3s,baz=282,slow=8.2,SNR=72
PLCA                                  Sn     Sn          08 56 15.5  0.0
                baz=139,slow=9.3,SNR=1.0
PLCA                                  LR     LR          08 57 37.0
                comp=Z,3μm,18.5s,baz=280,slow=34
PLCA   Paso Flores        9.40  81           Pn          08 54 30.0 +0.3
PLCA   Paso Flores        9.40  81   eP      Pn          08 54 31.4 +1.7
CCHI   Chillan           10.37  56   eP      Pn          08 54 40.7 -2.2
GO09   Cerro Castillo    11.00 143           Pn          08 54 50.5 -0.9
GO05   Huala             11.55  51  i P      Pn          08 54 55.1 -4.0
GO05   Huala             11.55  51           Pn          08 54 55.4 -3.7
GO10   Punta Arenas      12.92 147    Pn     Pn          08 55 19.8 +2.1
VA01   Torpederas        13.20  45   eP      Pn          08 55 18.5 -3.1
LMEL   Las Melosas       13.38  52   eP      Pn          08 55 22.2 -1.9
MT05   Renca             13.41  49   eP      Pn          08 55 21.6 -2.9
MT03   Universidad Ad    13.46  50   eP      Pn          08 55 22.5 -2.8
ROC1   El Roble          13.57  47           Pn          08 55 24.5 -2.4
ROCH   El Roble          13.58  47   eP      Pn          08 55 24.0 -3.0
PEL    Peldehue          13.62  48⇑iP      Pn          08 55 25.9 -1.6
PEL                                   IAmb   IAmb        08 55 33.6
                comp=Z,164nm,0.9s
PEL    Peldehue          13.62  48           Pn          08 55 25.4 -2.0
FCH    Farellones        13.71  50   eP      Pn          08 55 26.4 -2.4
FCH                                   IAmb   IAmb        08 55 39.0
                comp=Z,65nm,0.6s
USHA   Ushuaia           15.20 147    Pn     Pn          08 55 45.5 -3.1
                comp=Z,0.2nm,0.3s,baz=340,slow=18,SNR=1.8
USHA                                  LR     LR          09 00 59.4
                comp=Z,2μm,18.6s,baz=314,slow=35
GO04   Tololo Observa    15.92  41           Pn          08 55 55.5 -3.0
GO02   Mina Guanaco      20.75  36    P      P           08 56 55.3 -0.1
LPA    La Plata          20.88  76   eP      P           08 56 50.6 -5.8
LPA                                   PP     PnPn        08 57 17.8 +3.1
LPA                                   S      S           09 00 48.7 -0.4
LPA                                   SSS    SSS         09 01 28.5
LPA                                   PKIKP  PKiKP       09 08 50.2 -1.7
LPA                                   SKIKS              09 15 55.2
PB10   IPOC Station P    21.83  32    P      P           08 57 06.2 -0.4
PB04   IPOC Station P    23.05  31    P      P           08 57 21.2 +1.3
LVC    Limon Verde       23.30  34    P      P           08 57 23.5 +0.9
                comp=Z,35nm,0.9s,baz=198,slow=9.1,SNR=29
LVC                                   S      S           09 01 38.7 +3.4
                comp=Z,0.9nm,0.3s,baz=163,slow=15,SNR=1.4
LVC                                   LR     LR          09 04 20.9
                comp=Z,2μm,20.4s,baz=195,slow=31
LVC    Limon Verde       23.30  34    P      P           08 57 23.8 +1.2
LVC    Limon Verde       23.30  34   eP      P           08 57 23.8 +1.2
OGAUY  Aigu              23.47  78   eP      P           08 57 26.0 +2.2
PMSA   Palmer Station    24.36 160    LR     LR          09 03 59.0
                comp=Z,480nm,20.6s,baz=333,slow=29
PMSA   Palmer Station    24.36 160   eP      P           08 57 36.6 +4.6
PB01   IPOC Station P    24.48  31    P      P           08 57 34.6 +1.1
ITQB   Itaqui            24.77  66   eP      P           08 57 36.8 +0.8
PB11   IPOC Station P    25.59  30    P      P           08 57 44.4 +0.8
PLTB   Pedras Altas      25.62  74   eP      P           08 57 44.0 +0.4
GO01   Chusmiza          25.84  31    P      P           08 57 47.4 +1.1
MNMC   Minye Minye       26.19  29    P      P           08 57 50.4 +1.2
MNMC                                  IAmb   IAmb        08 58 02.2
                comp=Z,29nm,0.9s
CPSB   Cacapava Do Su    26.51  72   eP      P           08 57 51.5 -0.2
CPUP   Villa Florida     26.55  60    P      P           08 57 52.0 -0.1
                comp=Z,34nm,1.1s,baz=244,slow=8.5,SNR=26
CPUP                                  LR     LR          09 08 22.6
                comp=Z,4μm,18.8s,baz=235,slow=36
CPUP   Villa Florida     26.55  60   eP      P           08 57 52.5 +0.4
RPN    Rapa Nui          26.67 298    LR     LR          09 05 31.4
                comp=Z,3μm,21.5s,baz=116,slow=30
CNLB   Canela            28.96  73   eP      P           08 58 14.4 +0.6
LPAZ   La Paz            29.33  30    P      P           08 58 18.4 +0.6
                comp=Z,6.4nm,0.8s,baz=197,slow=8.2,SNR=32
LPAZ                                  LR     LR          09 09 02.7
                comp=Z,619nm,19.0s,baz=174,slow=34
LPAZ   La Paz            29.33  30    P      P           08 58 19.1 +1.3
LPAZ                                  IAmb   IAmb        08 58 33.4
                comp=Z,36nm,1.4s
LPAZ   La Paz            29.33  30   eP      P           08 58 18.8 +1.1
ITAB   Concordia         29.36  68   eP      P           08 58 17.6 +0.3
PTGB   Pitanga           31.08  64   eP      P           08 58 32.8 +0.2
NNA    Nana              31.22  11    P      P           08 58 35.1 +1.3
                comp=Z,8.7nm,0.7s,baz=198,slow=10
NNA                                   LR     LR          09 07 43.7
                comp=Z,2μm,20.0s,baz=198,slow=30
NNA    Nana              31.22  11    P      P           08 58 35.6 +1.7
NNA                                   IAmb   IAmb        08 58 43.2
                comp=Z,14nm,0.8s
AQDB   Aquidauana        31.88  54   eP      P           08 58 39.3 -0.2
TRCB   Terra Rica        32.05  61   eP      P           08 58 41.1  0.0
FRTB   Fartura           33.68  65   eP      P           08 58 56.1 +0.7
PCMB   Pacaembu          33.79  61   eP      P           08 58 55.5 -0.8
PP1B   Ponte de Pedra    34.60  52   eP      P           08 59 03.1 -0.2
C2SB   Chapadao do Su    34.90  56   eP      P           08 59 07.0 +1.1
SPB    Sao Paulo         34.95  68   eP      P           08 59 07.4 +1.1
SALV   Santo Antonio     35.50  49   eP      P           08 59 11.3 +0.2
VAO    Valinhos          35.66  68   eP      P           08 59 12.9 +0.3
ITRB   Iturama           35.75  60   eP      P           08 59 13.6 +0.4
ATAH   Atahualpa         35.83   7    P      P           08 59 13.1 -1.2
                comp=Z,13nm,1.1s,baz=252,slow=20,SNR=2.1
BB19B  Bebedouro         35.95  64   eP      P           08 59 15.1 +0.1
PARB   Paraibuna         36.36  70   eP      P           08 59 20.1 +1.6
ARAG   Araguaiana, MT    37.89  54   eP      P           08 59 31.6 +0.1
SAML   Samuel            37.93  33    P      P           08 59 32.0 +0.2
SAML   Samuel            37.93  33   eP      P           08 59 32.0 +0.2
IPMB   Ipameri, GO       38.38  60   eP      P           08 59 35.4 -0.3
BSCB   Bom Sucesso       38.51  68   eP      P           08 59 38.0 +1.2
CLDB   Colider           39.62  44   eP      P           08 59 44.5 -1.5
BDFB   Brasilia          40.26  58    P      P           08 59 51.0 -0.4
                comp=Z,18nm,0.9s,baz=225,slow=7.0,SNR=24
BDFB                                  LR     LR          09 17 14.9
                comp=Z,3μm,18.4s,baz=225,slow=37
BDFB   Brasilia          40.26  58    P      P           08 59 50.9 -0.5
SJMB   Sao Joao De Ma    42.53  69   eP      P           09 00 11.2 +1.2
BSFB   Barra de Sao F    42.68  69   eP      P           09 00 12.0 +0.9
JANB   Januaria          43.05  62   eP      P           09 00 15.1 +0.8
OTAV   Otavalo           43.12   6   eP      P           09 00 13.8 -1.4
OTAV   Otavalo           43.12   6    P      P           09 00 15.5 +0.3
OTAV                                  IAmb   IAmb        09 00 26.2
                comp=Z,30nm,1.4s
OTAV   Otavalo           43.12   6   eP      P           09 00 16.1 +0.9
VNA3   Neumayer Olymp    44.71 154    P      P           09 00 29.8 +2.8
FLOC   Florencia         44.74  10⇓eP      P           09 00 26.4 -1.4
FLOC   Florencia         44.74  10    P      P           09 00 27.9 +0.2
SOTA   Rioblanco         45.17   9   eP      P           09 00 34.6 +2.9
PCON   Cinco Dias        45.38   9⇑eP      P           09 00 36.2 +2.7
VNA2   Neumayer--Watz    45.47 153    P      P           09 00 32.6 -0.3
                baz=274,slow=8.6
MACC   Macarena, Meta    45.55  13   eP      P           09 00 33.5 -0.7
SMTB   Santa Maria do    45.80  53   eP      P           09 00 36.7 +0.5
NBIT   Itapeh - BA       46.37  67   eP      P           09 00 42.6 +1.9
PTGA   Pitinga           46.70  32    P      P           09 00 42.1 -1.1
                comp=Z,6.1nm,0.6s,baz=204,slow=8.7,SNR=15
PTGA   Pitinga           46.70  32    P      P           09 00 42.1 -1.1
PTGA                                  IAmb   IAmb        09 00 50.6
                comp=Z,15nm,1.1s
PTGA   Pitinga           46.70  32   eP      P           09 00 42.6 -0.7
SNAA   Sanae             46.85 155    P      P           09 00 42.8 -1.1
SNAA   Sanae             46.85 155    P      P           09 00 44.0  0.0
SNAA                                  IAmb   IAmb        09 00 56.5
                comp=Z,22nm,1.3s
YOTC   Yotoco, Valle     47.02   9   eP      P           09 00 43.9 -2.0
QSPA   South Pole Qui    47.35 180    P      P           09 00 44.1 -3.9
                comp=Z,1.3nm,0.8s,baz=139,slow=5.4,SNR=3.3
QSPA   South Pole Qui    47.35 180    P      P           09 00 45.3 -2.6
QSPA                                  IAmb   IAmb        09 00 56.4
                comp=Z,18nm,1.2s
CHIC   Chingaza          48.01  12   eP      P           09 00 54.8 +1.0
ROSC   El Rosal          48.13  11    P      P           09 00 54.3 -0.4
                comp=Z,2.8nm,0.4s,baz=139,slow=19,SNR=3.7
ROSC                                  LR     LR          09 19 32.9
                comp=Z,2μm,18.8s,baz=214,slow=34
ROSC   El Rosal          48.13  11    P      P           09 00 54.9 +0.1
NBPN   Ponto Novo - B    48.84  62   eP      P           09 00 59.6 -0.3
RUSC   La Rusia          49.35  13   eP      P           09 01 04.7 +0.4
RUSC   La Rusia          49.35  13    P      P           09 01 03.8 -0.5
PTBC   PUERTO BERRIO,    49.78  11   eP      P           09 01 04.7 -2.3
NBLA   Lagarto - SE      50.31  64   eP      P           09 01 11.3 +0.2
ZARC   Zaragoza, Cauc    50.66  10   eP      P           09 01 12.3 -1.3
UREC   San Jos de Ur     50.84   9   eP      P           09 01 13.4 -1.5
NBTA   Tacaratu-PE       51.52  63   eP      P           09 01 20.2  0.0
SMLC   San Martn de      52.06  11   eP      P           09 01 22.2 -1.9
NBAN   Anadia - AL       52.29  65   eP      P           09 01 28.1 +2.1
NBMA   Muriti-CE         52.38  61   eP      P           09 01 27.7 +1.0
SDV    Santo Domingo     52.71  15    P      P           09 01 29.0 -0.2
                comp=Z,7.7nm,0.9s,baz=238,slow=5.7,SNR=11
SDV    Santo Domingo     52.71  15   eP      P           09 01 27.7 -1.5
SDV    Santo Domingo     52.71  15    P      P           09 01 29.6 +0.4
SDV                                   IAmb   IAmb        09 01 42.2
                comp=Z,12nm,0.9s
SDV    Santo Domingo     52.71  15   eP      P           09 01 29.7 +0.5
JTS    Las Juntas de     52.96 357    P      P           09 01 32.1 +1.3
                comp=Z,9.4nm,1.1s,baz=207,slow=6.8,SNR=3.0
JTS    Las Juntas de     52.96 357    P      P           09 01 30.4 -0.5
JTS                                   IAmb   IAmb        09 01 41.4
                comp=Z,24nm,1.1s
NBPS   Pedro II - PI     53.01  56   eP      P           09 01 30.9 -0.5
ARGC   Ariguani, Magd    53.07  11   eP      P           09 01 31.5 -0.1
NBPB   Pedra_Branca-C    53.26  58   eP      P           09 01 32.9 -0.2
NBLI   Livramento-PB     53.56  62   eP      P           09 01 35.8 +0.4
VNDA   Vanda             53.59 194    LR     LR          09 20 13.4
                comp=Z,1μm,20.2s,baz=125,slow=32
NBPA   Parau_RN          54.67  61   eP      P           09 01 44.3 +0.8
NBMO   Morrinhos-CE      54.72  56   eP      P           09 01 46.1 +2.3
NBCL   Cascavel-CE       55.09  58   eP      P           09 01 47.3 +0.8
URIC   Uribia, Colomb    55.22  13   eP      P           09 01 46.8 -0.5
URIC   Uribia, Colomb    55.22  13    P      P           09 01 45.9 -1.4
NBPV   Pedro Velho       55.35  63   eP      P           09 01 49.5 +1.2
PCRV   Puerto La Cruz    55.36  22    P      P           09 01 46.8 -1.6
                comp=Z,13nm,1.1s,baz=256,slow=5.9,SNR=4.0
PLCV   Puerto La Cruz    55.36  22    P      P           09 01 46.8 -1.5
RCBR   Riachuelo         55.39  62   eP      P           09 01 50.7 +2.0
TGUH   Tegucigalpa,Un    56.82 355    P      P           09 02 03.3 +4.5
TGUH                                  IAmb   IAmb        09 02 06.8
                comp=Z,13nm,0.8s
TBI    Tubuai            57.66 267   eS      S           09 09 49.5  -14
                comp=Z,56nm,33.8s
TBI                                  eLQ     LQ          09 16 16.7
                comp=Z,1μm,34.5s
TBI                                  eLR     LR          09 18 42.0
                comp=Z,204nm,25.8s
MEH    Mehetia           60.02 273   eT      T           10 06 38.3
                comp=Z,8.5nm,0.2s
TAOE   Nuku Hiva Isla    60.29 287   eLR     LR          09 19 59.0
                comp=Z,648nm,25.0s
SYO    Syowa Base        60.61 160⇑eX      P           09 02 18.6  -5.9
PPT2   Papeete2          61.30 272   eS      S           09 10 37.5  -13
                comp=Z,161nm,29.2s
PPT2                                 eLQ     LQ          09 17 44.2
                comp=Z,1μm,33.5s
PPT2                                 eLR     LR          09 20 24.9
                comp=Z,255nm,24.0s
OBIP   Obispado Ponce    62.44  17    P      P           09 02 37.2 -0.2
SJG    San Juan          62.61  18    P      P           09 02 36.3 -2.1
                comp=Z,9.5nm,0.9s,baz=105,slow=2.9,SNR=3.4
SJG    San Juan          62.61  18    P      P           09 02 37.8 -0.7
MTP    Monte Pirata      62.73  19    P      P           09 02 39.8 +0.5
CBYP   Canovanas         62.83  18    P      P           09 02 39.6 -0.5
CUPR   Culebra, Puert    63.00  19    P      P           09 02 41.5 +0.4
RAR    Rarotonga         66.51 262    LR     LR          09 25 30.8
                comp=Z,189nm,18.3s,baz=250,slow=30
MAW    Mawson            66.81 166    LR     LR          09 30 47.4
                comp=Z,262nm,19.1s,baz=210,slow=35
RPZ    Rata Peaks        71.41 227    LR     LR          09 27 33.2
                comp=Z,705nm,19.3s,baz=176,slow=30
URZ    Urewera           71.53 235    LR     LR          09 26 53.9
                comp=Z,791nm,20.9s,baz=181,slow=29
HPIG                     72.60 339    P      P           09 03 42.5 +0.7
TX31   Lajitas Ar. Si    74.39 341    P      P           09 03 52.2  0.0
TX32   Lajitas Array     74.39 341    P      P           09 03 52.1  0.0
TXAR   Lajitas Array     74.39 341    P      P           09 03 50.8 -1.3
                comp=Z,1.1nm,0.9s,baz=160,slow=7.9,SNR=9.2
342A   Flagon Creek P    74.42 352    P      P           09 03 52.2 +0.1
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342A				IAmb	IAmb	09 04 01.7	
	comp=Z,11nm,0.8s						
250A	Grady	74.57	357	P	P	09 03 55.0	+2.0
JCT	Junction City	74.67	345	P	P	09 03 53.7	+0.1
NATX	Nacogdoches	75.08	350	P	P	09 03 56.1	+0.1
NATX				IAmb	IAmb	09 04 13.8	
	comp=Z,8.8nm,0.9s						
154A	Montrose	75.14	360	P	P	09 03 56.8	+0.6
237A	Washetta, Mont	75.48	349	P	P	09 03 59.4	+1.2
237A				IAmb	IAmb	09 04 00.5	
	comp=Z,21nm,1.4s						
143A	Socs Landing,	75.64	353	P	P	09 03 59.5	+0.5
LRAL	Lakeview Retre	75.66	356	P	P	09 04 00.8	+1.6
ABTX	Abilene, Hawle	76.72	345	P	P	09 04 06.5	+1.2
ABTX				IAmb	IAmb	09 04 07.4	
	comp=Z,12nm,1.4s						
X48A	Hartselle	77.07	356	P	P	09 04 08.9	+1.7
X48A				IAmb	IAmb	09 04 21.3	
	comp=Z,21nm,1.5s						
W50A	Signal Mountai	77.75	358	P	P	09 04 11.7	+0.7
W50A				IAmb	IAmb	09 04 20.3	
	comp=Z,14nm,1.1s						
SWET	Sewanee	77.79	357	P	P	09 04 11.5	+0.3
SWET				IAmb	IAmb	09 04 20.4	
	comp=Z,17nm,1.3s						
CNNC	Cliffs of the	77.89	4	P	P	09 04 11.5	-0.2
CPCT	Cooper Cave	77.98	359	P	P	09 04 11.4	-0.9
CPCT				IAmb	IAmb	09 04 16.3	
	comp=Z,12nm,1.2s						
W41B	Gary Mavity, V	78.17	352	P	P	09 04 14.0	+0.7
V48A	Smith Brothers	78.34	357	P	P	09 04 13.4	-0.8
V48A				IAmb	IAmb	09 04 28.1	
	comp=Z,13nm,1.2s						
MSTX	Muleshoe	78.65	343	P	P	09 04 17.4	+1.3
MSTX				IAmb	IAmb	09 04 18.1	
	comp=Z,14nm,1.4s						
CLTN	Cedars of Leba	78.67	357	P	P	09 04 17.8	+1.7
CLTN				IAmb	IAmb	09 04 27.7	
	comp=Z,12nm,1.1s						
FCAR	Ozark Folk Cen	78.87	352	P	P	09 04 18.7	+1.5
U49A	Red Boiling Sp	79.08	358	P	P	09 04 19.1	+0.8
TUL1	Leonard	79.32	349	P	P	09 04 20.5	+0.9
HENM	Henderson Moun	79.47	355	P	P	09 04 21.8	+1.4
PBMO	Poplar Bluff	79.60	354	P	P	09 04 22.2	+1.1
T47A	Sharon Grove	79.60	356	P	P	09 04 21.4	+0.3
T47A				IAmb	IAmb	09 04 24.9	
	comp=Z,13nm,1.0s						
MGMO	Mountain Grove	80.14	352	P	P	09 04 23.8	-0.3
S51A	Beattyville	80.16	359	P	P	09 04 26.2	+2.1
S51A				IAmb	IAmb	09 04 32.1	
	comp=Z,18nm,1.1s						
S44A	Carbondale	80.42	355	P	P	09 04 26.3	+0.8
S44A				IAmb	IAmb	09 04 45.0	
	comp=Z,11nm,0.7s						
ANMO	Albuquerque	80.43	340	P	P	09 04 27.4	+1.4
USIN	University of	80.60	356	P	P	09 04 28.5	+2.0
S39A	Bolivar	80.78	352	P	P	09 04 28.1	+0.6
CCM	Cathedral Cave	80.94	353	P	P	09 04 28.8	+0.5
CCM				IAmb	IAmb	09 04 39.7	
	comp=Z,16nm,0.9s						
P51A	Williamsport	81.99	360	P	P	09 04 34.4	+0.6
MVL	Millersville	82.72	5	P	P	09 04 39.1	+1.4
MVL				IAmb	IAmb	09 04 54.7	
	comp=Z,11nm,1.0s						
ACSO	Alum Creek Sta	82.74	360	P	P	09 04 39.8	+2.0
ACSO				IAmb	IAmb	09 04 41.2	
	comp=Z,12nm,1.1s						
CBKS	Cedar Bluff	82.77	347	P	P	09 04 40.0	+2.0
CBKS				IAmb	IAmb	09 04 41.3	
	comp=Z,9.9nm,0.8s						
O44A	Mansfield	82.82	356	P	P	09 04 39.3	+1.1
O44A				IAmb	IAmb	09 04 47.5	
	comp=Z,13nm,1.1s						
BOSA	Boshof	82.95	123	P	P	09 04 37.7	-1.9
	comp=Z,4.7nm,0.7s,baz=225,slow=4.8,SNR=8.8						
BOSA	Boshof	82.95	123	P	P	09 04 39.7	+0.1
MVCO	Mesa Verde	83.09	340	P	P	09 04 40.8	+0.8
S22A	4UR Ranch, Cre	83.18	341	P	P	09 04 42.8	+2.3
N53A	Lisbon	83.34	2	P	P	09 04 41.8	+0.9
N53A				IAmb	IAmb	09 04 44.5	
	comp=Z,10nm,1.0s						
U15A	North Rim	83.40	336	P	P	09 04 43.0	+1.3
N51A	Ashland	83.43	0	P	P	09 04 41.1	-0.2
N47A	Urbana	83.43	358	P	P	09 04 42.7	+1.4
N47A				IAmb	IAmb	09 04 54.6	
	comp=Z,8.8nm,0.8s						
KSCO	Kaye Shedlock'	83.48	345	P	P	09 04 41.7	-0.1
KSCO				IAmb	IAmb	09 04 54.7	
	comp=Z,8.0nm,0.9s						
SHPR	Sheep Range	84.35	334	P	P	09 04 47.4	+1.1
TSUM	Tsumeb	84.46	111	P	P	09 04 48.6	+1.1
TSUM				IAmb	IAmb	09 04 55.5	
	comp=Z,5.2nm,0.8s						
SMCO	Snowmass	84.58	341	P	P	09 04 48.5	+0.8
ISA	Isabella, Lake	84.69	332	P	P	09 04 48.1	+0.2
ISA				IAmb	IAmb	09 04 57.6	
	comp=Z,8.2nm,1.0s						
SZCU	Shurtz Canyon	84.72	336	P	P	09 04 50.0	+1.8
L42A	Oliver, Polo	84.74	355	P	P	09 04 49.0	+1.0
L42A				IAmb	IAmb	09 04 58.5	
	comp=Z,10nm,1.1s						
CCUT	Cedar City	84.76	336	P	P	09 04 50.1	+1.6
TPNV	Topopah Spring	85.10	334	P	P	09 04 51.8	+1.6
TPNV				IAmb	IAmb	09 05 03.9	
	comp=Z,6.4nm,0.8s						
MSU	Marysvale	85.30	337	P	P	09 04 52.5	+1.3
LIC	Lamto	85.32	77	*e*P	P	09 04 52.9	+1.3
	comp=Z,32nm,0.7s						
LIC	Lamto	85.32	77	P	P	09 04 52.9	+1.3
Q16A	Castle Valley	85.40	338	P	P	09 04 52.9	+1.2
SRU	San Rafael Swe	85.41	339	P	P	09 04 52.8	+1.1
TIC	Toumodi	85.61	77	*e*P	P	09 04 54.2	+1.1
TIC	Toumodi	85.61	77	P	P	09 04 54.2	+1.1
KIC	Kosan Boka	85.62	77	*e*P	P	09 04 54.4	+1.3
	comp=Z,20nm,1.0s						
KIC	Kosan Boka	85.62	77	P	P	09 04 54.4	+1.3
JFWS	Jewell Farm	85.69	355	P	P	09 04 53.4	+0.7
LBTB	Lobatse	85.72	120	P	P	09 04 53.5	-0.1
DBIC	Dimbokro	85.75	77	P	P	09 04 52.1	-1.6
	comp=Z,8.9nm,1.0s,baz=198,slow=6.1,SNR=8.9						
DBIC	Dimbokro	85.75	77	P	P	09 04 52.6	-1.1
DBIC				IAmb	IAmb	09 04 56.6	
	comp=Z,12nm,1.0s						
TMUT	Trail Mountain	85.77	338	P	P	09 04 55.0	+1.4
O20A	White River Ci	85.79	341	P	P	09 04 54.2	+0.6
O20A				IAmb	IAmb	09 05 03.6	
	comp=Z,12nm,1.4s						
P17A	Butcher Ranch,	85.81	339	P	P	09 04 54.5	+0.9
PSUT	Pine Spring	85.81	336	P	P	09 04 55.4	+1.7
N23A	Red Feather La	85.98	343	P	P	09 04 54.8	+0.3
N23A				IAmb	IAmb	09 05 03.7	
	comp=Z,18nm,1.4s						
R11A	Troy Canyon, C	86.17	335	P	P	09 04 57.2	+1.8
RDMU	Red Mountain	86.53	340	P	P	09 04 58.2	+0.9
MPU	Maple Canyon	86.55	338	P	P	09 04 58.9	+1.6
NLU	North Lily Min	86.62	338	P	P	09 04 57.3	-0.3
I40A	Norwalk	86.68	354	P	P	09 04 56.2	-1.4
I40A				IAmb	IAmb	09 05 02.1	
	comp=Z,6.0nm,0.9s						
DUG	Dugway, Tooele	87.05	337	P	P	09 05 01.3	+1.7
ECSD	EROS Data Cent	87.13	350	P	P	09 04 59.2	-0.5
NVAR	Mina Array Bea	87.13	333	P	P	09 05 01.2	+1.0
	comp=Z,1.6nm,0.9s,baz=159,slow=3.6,SNR=9.8						
TCUT	Toone Canyon	87.52	339	P	P	09 05 03.3	+1.2
G45A	Suttons Bay	87.59	358	P	P	09 05 02.8	+0.9
K22A	Casper	87.79	343	P	P	09 05 04.0	+0.9
SPUT	South Promonto	87.98	338	P	P	09 05 05.0	+0.8
HWUT	Hardware Ranch	88.02	339	P	P	09 05 04.7	+0.3
HWUT				IAmb	IAmb	09 05 11.5	
	comp=Z,10nm,1.1s						
G40A	Rib Lake	88.02	355	P	P	09 05 04.0	0.0
G40A				IAmb	IAmb	09 05 11.9	
	comp=Z,6.0nm,1.0s						
SPMN	Marine on St.	88.19	353	P	P	09 05 04.3	-0.5
SPMN				IAmb	IAmb	09 05 11.9	
	comp=Z,3.9nm,0.7s						
ELK	Elko	88.26	336	P	P	09 05 06.1	+0.5
ELK				IAmb	IAmb	09 05 15.8	
	comp=Z,6.6nm,1.2s						
F42A	Maple Grove Fa	88.39	356	P	P	09 05 05.9	+0.1
PD31	Pinedale Array	88.60	341	P	P	09 05 07.9	+0.8
PDAR	Pinedale Array	88.60	341	P	P	09 05 05.9	-1.2
	comp=Z,0.3nm,0.7s,baz=154,slow=5.0,SNR=3.9						
RSSD	Black Hills	88.69	345	P	P	09 05 07.9	+0.5
RSSD				IAmb	IAmb	09 05 09.1	
	comp=Z,6.1nm,1.1s						
E46A	Sault Ste Mari	88.89	359	P	P	09 05 09.2	+1.2
E43A	Lone Tree Farm	88.96	357	P	P	09 05 08.0	-0.4
E43A				IAmb	IAmb	09 05 16.6	
	comp=Z,7.4nm,0.8s						
TRQ	Mont Tremblant	89.03	6	P	P	09 05 09.4	+0.5
BEKR	Beckworth	89.12	332	P	P	09 05 10.9	+1.3
DZM	Mont Dzumac	89.32	240	*e*LR	LR	09 33 20.8	
	comp=Z,883nm,24.8s						
REDW	Red Top Meadow	89.48	340	P	P	09 05 12.9	+1.7
REDW				IAmb	IAmb	09 05 32.4	
	comp=Z,8.5nm,1.4s						
D53A	Lac Vacive, Po	89.70	3	P	P	09 05 12.9	+1.0
D53A				IAmb	IAmb	09 05 22.9	
	comp=Z,9.9nm,1.1s						
FXWY	Fox Creek	89.78	340	P	P	09 05 14.3	+1.7
IMW	Indian Meadow	90.00	340	P	P	09 05 15.0	+1.2
FLWY	Flagg Ranch	90.12	340	P	P	09 05 14.9	+0.7
FLWY				IAmb	IAmb	09 05 26.6	
	comp=Z,10nm,1.1s						
WDC	Whiskeytown Da	90.52	331	P	P	09 05 16.4	+0.5
WDC				IAmb	IAmb	09 05 23.3	
	comp=Z,8.7nm,1.1s						
YHH	Holmes Hill	90.82	340	P	P	09 05 18.8	+1.2
YBH	Yreka Blue Hor	91.59	331	P	P	09 05 19.3	-1.7
	comp=Z,1.0nm,0.8s,baz=176,slow=9.4,SNR=2.5						
YBH	Yreka Blue Hor	91.59	331	P	P	09 05 21.2	+0.3
J08A	Circle Bar Ran	91.63	335	P	P	09 05 22.6	+1.5
J08A				IAmb	IAmb	09 05 30.1	
	comp=Z,6.3nm,1.1s						
ULM	Lac du Bonnet	93.46	352	P	P	09 05 27.2	-2.0
	comp=Z,1.7nm,1.0s,baz=204,slow=1.8,SNR=3.4						
ULM	Lac du Bonnet	93.46	352	P	P	09 05 30.1	+0.9
ULM				IAmb	IAmb	09 05 34.2	
	comp=Z,8.1nm,1.4s						
TORD	Torodi Ar. Bea	94.86	77	P	P	09 05 34.9	-1.6
	comp=Z,2.4nm,1.1s,baz=226,slow=6.0,SNR=5.5						
H11S2	WAKE ISLAND Hy	117.25	270	T	T	11 18 51.1	
	baz=129,slow=76						
H11S1	WAKE ISLAND Hy	117.27	270	T	T	11 18 50.8	
	baz=129,slow=76						
H11S3	WAKE ISLAND Hy	117.27	270	T	T	11 18 51.5	
	baz=129,slow=76						
H11N3	WAKE ISLAND Hy	117.87	272	T	T	11 19 37.7	
	baz=131,slow=76						
H11N1	WAKE ISLAND Hy	117.88	272	T	T	11 19 37.6	
	baz=131,slow=76						
H11N2	WAKE ISLAND Hy	117.89	272	T	T	11 19 40.5	
	baz=131,slow=76						
GERES	GERESS Array B	124.34	53	PKP	PKPdf	09 11 10.8	-2.0
	comp=Z,1.2nm,0.8s,baz=164,slow=1.0,SNR=7.1						
MODS	Modra-Piesok	126.24	54	*e*PDIFF	Pdif	09 07 57.1	+1.5
VYHS	Vyhne	127.23	55	*e*PKP	PKiKP	09 11 20.2	+1.5
BRTR	Keskin Array B	133.16	71	PKP	PKPdf	09 11 28.9	-1.0
	comp=Z,0.8nm,0.7s,baz=196,slow=3.7,SNR=5.0						
AKASG	Malin Array Be	134.32	55	PKP	PKPdf	09 11 29.6	-1.8
	comp=Z,0.7nm,0.6s,baz=251,slow=2.7,SNR=5.0						
PETK	Petropavlovsk-	139.40	306	PKP	PKPdf	09 11 39.1	-1.7
	comp=Z,4.1nm,1.0s,baz=129,slow=3.9,SNR=2.4						
KBZ	Khabaz	141.08	70	PKP	PKPdf	09 11 40.8	-3.3
	comp=Z,1.7nm,0.8s,baz=310,slow=2.4,SNR=4.3						
SEY	Seymchan	142.65	322	PKP	PKPdf	09 11 44.4	-2.0
	comp=Z,1.1nm,0.7s,baz=162,slow=9.6,SNR=3.6						
TIXI	Tiksi	147.28	342	PKPbc	PKPdf	09 11 54.8	+0.7
	comp=Z,4.9nm,0.6s,baz=25,slow=3.6,SNR=6.4						
TIXI	Tiksi	147.28	342		PKPdf	09 11 55.0	+0.9
MJAR	Matsushiro Arr	148.06	273	PKPbc	PKPdf	09 11 58.7	+2.1
	comp=Z,5.7nm,0.9s,baz=146,slow=3.0,SNR=4.5						
GEYT	Alibeck	150.03	86	PKPbc	PKPbc	09 12 04.0	-0.7
	comp=Z,4.0nm,0.9s,baz=241,slow=4.9,SNR=7.8						
HYB	Hyderabad	150.06	142	*i* PKP	PKiKP	09 12 08.0	+1.8
UBPT	Khong Chiam	151.58	197		PKPab	09 12 16.5	-0.7
ARU	Arti	151.98	48	PKPdf	PKPdf	09 12 03.9	+1.9
ARU					PKiKP	09 12 10.0	+1.1
YAK	Yakutsk	152.91	326	PKPbc	PKPbc	09 12 08.6	-1.9
	comp=Z,4.1nm,0.3s,baz=159,slow=1.5,SNR=2.9						
ABKAR	Akbulak array	153.59	63	PKPdf	PKPdf	09 12 05.9	+1.3
ABKAR					PKiKP	09 12 13.9	+1.4
ABKAR				PKPab	PKPab	09 12 26.3	+1.3
KLR	Kul'dur	155.35	297	PKP	PKPdf	09 12 05.7	-1.4
	comp=Z,0.2nm,0.3s,baz=196,slow=20,SNR=1.8						
CMAR	Chiang Mai Arr	155.60	184	PKP	PKPdf	09 12 06.5	-1.9
	comp=Z,0.7nm,0.4s,baz=219,slow=2.3,SNR=2.8						
NJ2	Nanjing	159.74	245	*e*PKP	PKPdf	09 12 16.1	+3.0
KURK	Kurchatov	165.09	52		PKPdf	09 12 18.0	+0.2
KURK				PKPab	pPKPab	09 13 16.8	-0.2
ZALV	Zalesovo Beam	166.24	32	PKP	PKPdf	09 12 15.8	-2.9
	comp=Z,1.7nm,0.9s,baz=270,slow=1.4,SNR=4.0						
ZALV				PKPab	PKPab	09 13 20.6	+0.8
	comp=Z,0.4nm,0.3s,baz=305,slow=5.1,SNR=3.2						
CD2	Chengdu	166.94	206	PKP	PKPdf	09 12 20.4	+0.4
MK31	Makanchi Array	168.72	65	PKPdf	PKPdf	09 12 21.3	+0.6
MK31					PKPab	09 13 32.2	+1.0
MKAR	Makanchi Array	168.72	65	PKP	PKPdf	09 12 17.6	-3.2
	comp=Z,0.5nm,0.9s,baz=124,slow=2.1,SNR=3.0						
MKAR				PKPab	PKPab	09 13 29.7	-1.4
	comp=Z,2.4nm,0.8s,baz=289,slow=3.7,SNR=16						
MKAR				PP	PP	09 17 20.7	-0.2
	comp=Z,0.7nm,1.0s,baz=261,slow=2.8,SNR=3.7						
HHC	Hu-ho-hao-te	169.09	264	*e*PKP	PKPdf	09 12 22.6	+1.3
SONM	Songino Array	171.85	311	PKPab	PKPab	09 13 42.8	-2.3
	comp=Z,0.4nm,0.8s,baz=72,slow=4.8,SNR=3.8						
WMQ	Urumqi	173.01	79	*e*PKP	PKPdf	09 12 24.2	+1.0

IDC 02 09:11:49.5±1.9, 0°.12S×125°.74E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.3/39, mbtmp3.4/3, Error ellipse: s-maj=180.1km s-min=25.2km az=64.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.42	157	P	P	09 16 38.2	-1.1
	0.7nm,0.4s,baz=335,slow=11,SNR=7.8						
ASAR	Alice Springs	24.71	162	P	P	09 17 13.4	+0.8
	0.7nm,0.6s,baz=345,slow=12,SNR=11						
MKAR	Makanchi Array	60.18	327	P	P	09 21 59.2	-0.1
	0.2nm,0.5s,baz=124,slow=8.1,SNR=5.8						

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*IDC **02** 09:24:27.1±1.4, 53°.19N×163°.27W, h0^{km}, mb3.6/12, mb1 3.8/14, mb1mx3.6/58, mbtmp3.6/14, ML3.3/2, Error ellipse: s-maj=32.3km s-min=17.1km az=179.0*

*NEIC **02** 09:24:30.8±1.6, 53°.16N±0°.08×163°.23W±0°.07, h26^{km}±7^{km}, Error ellipse: s-maj=11.8km s-min=6.0km az=167.0*

*AEIC **02** 09:24:30.2±1.7, 53°.14N±0°.05×163°.28W±0°.07, h20^{km}±5^{km}, ML3.3/36, mb3.7/11(NEIC), Error ellipse: s-maj=8.4km s-min=5.4km az=146.0*

ISC 02 09:24:31.9±0.8, 53°.13N±0°.09×163°.18W±0°.04, h35^{km}, n93, σ1^{s}.59/95, mb3.7/14, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	West Dahl East	1.59	329		Pn	09 24 56.7	-0.8
WESP	Westdahl Peak	1.65	327		Pn	09 24 57.6	-0.8
FALS	False Pass	1.74	355		Pn	09 24 58.9	-0.7
WEBT	Westdahl Beart	1.74	328		Pn	09 24 58.9	-0.7
SSLW	Shishaldin Wes	1.74	342		Pn	09 24 59.1	-0.6
SSBA	Shishaldin	1.74	342		Pn	09 24 59.0	-0.7
SSBA					Sn	09 25 21.9	+1.2
AKSA	Akutan Strait	1.81	305		Pn	09 24 59.5	-1.1
AKSA					Sn	09 25 21.0	-1.3
AKUT	Akutan	1.85	304		Pn	09 25 00.1	-0.9
AKUT					Sn	09 25 22.1	-1.0
AKBBA	Akutan Broad B	1.91	302		Pn	09 25 01.2	-0.7
AKBBA					Sn	09 25 24.1	-0.6
AKMO	Akutan Morgan	1.95	301		Pn	09 25 01.8	-0.7
AKLV	Akutan Long Va	1.95	303		Pn	09 25 01.3	-1.3
AKLV					Sn	09 25 24.8	-1.1
AKGG	Akutan Green G	1.99	304		Pn	09 25 02.4	-0.7
AKGG					Sn	09 25 25.7	-1.1
DT1	Dutton Round H	2.05	15		Pn	09 25 02.8	-1.1
BALA	Baldy Mountain	2.08	6		Pn	09 25 04.7	+0.4
UNV	Unalaska Valle	2.12	291		Pn	09 25 03.4	-1.3
UNV	Unalaska Valle	2.12	291		Sn	09 25 28.1	-1.7
DOL	Dolgoi Island	2.17	20		Pn	09 25 04.3	-1.2
MNAT	Makushin Natee	2.23	291		Pn	09 25 05.4	-0.9
MREP	Makushin Rep't	2.24	289		Pn	09 25 05.5	-1.0
MSW	Makushin Switc	2.29	292		Pn	09 25 06.3	-0.9
MGOD	Makushin Gods	2.31	288		Pn	09 25 06.4	-1.1
MGOD					Sn	09 25 33.4	-1.3
HAG	Hague Volcano	2.32	18		Pn	09 25 07.4	-0.1
BLHA	Black Hill	2.66	14		Pn	09 25 12.3	+0.1
CNBA	Chernabura Isl	2.71	50	Pn	Pn	09 25 13.0	0.0
SDPT	Sand Point	2.73	34		Pn	09 25 12.6	-0.6
SDPT					Sn	09 25 44.1	-0.9
OKER	Okmok East Rim	2.94	278		Pn	09 25 15.3	-0.9
OKSP	Okmok Steeple	3.08	274		Pn	09 25 16.6	-1.4
NIKH	Nikolski High	3.43	270		Pn	09 25 21.0	-1.8
VNHG	Veniaminof 1	3.88	35		Pn	09 25 29.2	+0.2
CHGN	Chignik	4.21	39	Pn	Pn	09 25 32.1	-1.4
ATKA	Atka Island	6.77	267	Pn	Pn	09 26 08.0	-0.6
OHAK	Old Harbor	6.99	50	Pn	Pn	09 26 10.5	-1.2
KDAK	Kodiak Island	7.61	48	Pn	Pn	09 26 17.8	-2.4
	0.5nm,0.3s,baz=177,slow=4.2,SNR=18						
KDAK				Sn	Sn	09 27 38.6	-6.5
	0.3nm,0.3s,baz=319,slow=20,SNR=2.8						
KDAK	Kodiak Island	7.61	48	Pn	Pn	09 26 18.4	-1.7
ADK	Adak	8.34	267	Pn	Pn	09 26 29.0	-1.1
SVW2	Sparrevohn	8.99	24	Pn	Pn	09 26 39.7	+0.7
CNPM	China Poot	9.21	41	Pn	Pn	09 26 42.5	+0.3
BRLK	Bradley Lake	9.50	41	Pn	Pn	09 26 45.0	-1.1
TTA	Tatalina	10.53	18	Pn	Pn	09 26 59.5	-0.7
ANM	Nome	11.53	355	Pn	Pn	09 27 14.9	+1.1
HIN	Hinchinbrook I	11.67	45		Pn	09 27 13.9	-1.8
KTH	Kantishna Hill	12.25	27	Pn	Pn	09 27 25.3	+1.7
CRQM	Cirque	13.30	47	Pn	Pn	09 27 37.0	-1.0
GLB	Gilahina Butte	13.33	44	Pn	Pn	09 27 38.2	-0.3
VRDI	Verde Repeater	13.38	45	Pn	Pn	09 27 38.3	-0.9
TGL	Tana Glacier	13.43	47	Pn	Pn	09 27 38.6	-1.2
MLY	Manley	13.50	23		Pn	09 27 40.5	-0.3
PAX	Paxson	13.55	36		Pn	09 27 40.4	-1.1
MCARA	McCarthy VSAT	13.63	45	Pn	Pn	09 27 44.8	+2.3
WRH	Wood River Hil	13.75	28	Pn	Pn	09 27 39.5	-4.5
BALM	Baldy	13.77	47	Pn	Pn	09 27 44.5	0.0
CCB	Clear Creek Bu	13.96	28	Pn	Pn	09 27 42.5	-4.4
HDA	Harding Lake	14.04	30	Pn	Pn	09 27 43.1	-4.9
BARN	Barnard Glacie	14.08	47	Pn	Pn	09 27 48.7	-0.1
MENT	Mentasta	14.18	38	Pn	Pn	09 27 49.1	-0.8
CTGM	Chitina Glacie	14.19	48	Pn	Pn	09 27 50.8	+0.6
RIDG	Independent Ri	14.26	35		Pn	09 27 49.0	-2.1
IL31		14.32	29		Pn	09 27 47.6	-4.2
ILAR	Eielson Array	14.32	29	Pn	Pn	09 27 49.1	-2.8
	0.1nm,0.3s,baz=221,slow=14,SNR=7.7						
DOT	Dot Lake	14.47	36	Pn	Pn	09 27 50.6	-3.4
SCRK	Sand Creek	14.71	35		Pn	09 27 53.3	-3.9
COLD	Coldfoot	15.49	19	P	Pn	09 28 07.7	+0.3
FYU	Fort Yukon	16.11	26	P	Pn	09 28 16.0	+0.6
FYU				IAmb	IAmb	09 28 21.6	
	comp=Z,8.9nm,1.5s						
EGAK	Eagle	16.17	35	P	P	09 28 19.6	+0.6
EGAK				IAmb	IAmb	09 28 32.3	
	comp=Z,8.6nm,1.2s						
DAWY	Dawson	16.42	39	Pn	Pn	09 28 17.6	-1.8
TOLK	Toolik Lake Re	16.84	17	P	Pn	09 28 23.9	-0.7
TOLK				IAmb	IAmb	09 28 40.4	
	comp=Z,7.6nm,0.8s						
EPYK	Eagle Plains	18.59	34	P	Pn	09 28 46.0	-0.3
EPYK				IAmb	IAmb	09 29 00.8	
	comp=Z,4.7nm,0.8s						
INK	Inuvik	20.68	31	P	P	09 29 07.3	-1.2
	comp=Z,1.5nm,0.4s,baz=234,slow=14,SNR=13						
INK	Inuvik	20.68	31	P	P	09 29 07.5	-0.9
INK				IAmb	IAmb	09 29 27.0	
	comp=Z,2.8nm,0.7s						
PETK	Petropavlovsk-	23.29	286	P	P	09 29 34.4	-1.8
	comp=Z,1.7nm,0.9s,baz=86,slow=14,SNR=6.2						
SEY	Seymchan	24.98	311	P	P	09 29 52.1	+0.3
	comp=Z,0.5nm,0.3s,baz=120,slow=20,SNR=3.6						
YKA	Yellowknife Ar	26.88	50	P	P	09 30 10.9	+1.9
	comp=Z,0.5nm,0.7s,baz=268,slow=8.4,SNR=6.6						
RES	Resolute Bay	34.04	26	P	P	09 31 13.6	+1.6
RLMT	Red Lodge	35.42	81	P	P	09 31 26.1	+1.5
RLMT				IAmb	IAmb	09 31 42.9	
	comp=Z,1.3nm,1.2s						
REDW	Red Top Meadow	35.45	84	P	P	09 31 25.6	+0.8
PDAR	Pinedale Array	36.57	84	P	P	09 31 35.3	+0.8
	comp=Z,0.2nm,0.6s,baz=299,slow=8.0,SNR=2.9						
H11N2	WAKE ISLAND Hy	40.55	226	T	T	10 15 25.7	
	baz=27,slow=76						
H11N3	WAKE ISLAND Hy	40.56	226	T	T	10 15 23.8	
	baz=27,slow=76						
H11N1	WAKE ISLAND Hy	40.57	226	T	T	10 15 25.1	
	baz=27,slow=76						
H11S1	WAKE ISLAND Hy	41.72	226	T	T	10 16 49.5	
	baz=26						
H11S2	WAKE ISLAND Hy	41.73	226	T	T	10 16 51.8	
	baz=26						
H11S3	WAKE ISLAND Hy	41.74	226	T	T	10 16 49.8	
	baz=26						
SPITS	Spitsbergen Ar	48.96	0	P	P	09 33 14.7	+0.7
	comp=Z,14nm,0.9s,baz=5.7,slow=1.4,SNR=5.0						
TX31	Lajitas Ar. Si	49.01	95	P	P	09 33 16.9	+1.8
TX32	Lajitas Array	49.01	95	P	P	09 33 15.2	0.0
TXAR	Lajitas Array	49.01	95	P	P	09 33 15.5	+0.4
	comp=Z,0.4nm,0.6s,baz=302,slow=5.7,SNR=7.9						
SONM	Songino Array	54.08	304	P	P	09 33 53.6	+0.8
	comp=Z,0.4nm,0.7s,baz=41,slow=6.0,SNR=3.0						
ARCES	ARCESS Array B	57.48	356	P	P	09 34 16.5	-0.3
	comp=Z,3.0nm,0.9s,baz=13,slow=8.3,SNR=3.6						
FINES	FINESS Array B	65.54	355	P	P	09 35 10.8	-0.3
	comp=Z,0.6nm,0.6s,baz=18,slow=5.8,SNR=5.1						
MK31	Makanchi Array	65.93	317	P	P	09 35 14.8	+0.9
MK31				IAmb	IAmb	09 35 15.1	
	comp=Z,0.6nm,0.8s						
MKAR	Makanchi Array	65.93	317	P	P	09 35 14.0	0.0
	comp=Z,0.6nm,0.7s,baz=54,slow=6.2,SNR=8.2						
NOA	NORSAR Array B	66.09	3	P	P	09 35 15.5	+0.7
	comp=Z,1.0nm,1.0s,baz=4.2,slow=7.3,SNR=3.0						
AKASG	Malin Array Be	76.02	352	P	P	09 36 14.6	-0.4
	comp=Z,0.3nm,0.3s,baz=7.3,slow=5.8,SNR=6.4						

IDC 02 09:27:13.7±10.0, 19°.45S×178°.18W, h495^{km}±122^{km}, mb2.8/5, mb1 3.1/5, mb1mx2.9/38, mbtmp3.6/5, Error ellipse: s-maj=142.8km s-min=37.2km az=161.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.59	261	P	P	09 34 41.3	-0.1
	0.4nm,0.6s,baz=96,slow=8.0,SNR=5.2						
ASAR	Alice Springs	44.60	256	P	P	09 34 41.3	-0.2
	1.0nm,0.8s,baz=92,slow=7.6,SNR=8.7						
TXAR	Lajitas Array	86.64	57	P	P	09 39 04.5	-0.1
	0.2nm,0.7s,baz=237,slow=6.3,SNR=4.0						
ILAR	Eielson Array	87.33	13	P	P	09 39 06.8	-0.1
	0.6nm,0.9s,baz=218,slow=5.9,SNR=4.3						
PDAR	Pinedale Array	88.32	43	P	P	09 39 12.6	+0.2
	0.2nm,0.6s,baz=182,slow=4.3,SNR=2.8						
BRTR	Keskin Array B	146.01	313	PKPbc	PKPbc	09 45 57.6	-0.5
	0.4nm,0.5s,baz=136,slow=1.2,SNR=2.6						
GERES	GERESS Array B	149.15	345	PKPbc	PKPbc	09 46 04.8	-1.0
	0.1nm,0.3s,baz=56,slow=2.6,SNR=3.5						

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*BJI **02** 09:37:54.3±0.0, 12°.67N×87°.64W, h60^{km}, mB5.9/48, Ms6.4/63, Ms7 6.3/59*

*NEIC **02** 09:37:54.8±2.9, 12°.56N±0°.05×87°.69W±0°.06, h60^{km}±1^{km}, mb5.8/608, Mwb6.2/79, Mwc6.2/33, Mww6.2, Md6.1(SNET), Mwc6.3(GCMT), Error ellipse: s-maj=10.4km s-min=7.5km az=50.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.84; M$_{\theta\theta}$-0.62; M$_{\phi\phi}$-0.22; M$_{r\theta}$1.49; M$_{\theta\phi}$0.44; M$_{\phi r}$-1.60; Fault plane solution: M$_0$2.36000×10^{18} NP1: φ$_s$136.08000°, δ79.42000°, λ95.27000°. NP2: φ$_s$289.43000°, δ11.81000°, λ63.84000°. Principal axes: T 2.3464, Plg55.0000°, Azm53.0000°; N 0.0178, Plg5.0000°, Azm315.0000°; P -2.3642, Plg34.0000°, Azm222.0000°;*

*INET **02** 09:37:55.7, 12°.51N×87°.77W, h51^{km}, ML6.4*

*IDC **02** 09:37:55.3±0.4, 12°.81N×87°.43W, h71^{km}±2^{km}, mb4.9/37, mb1 5.0/41, mb1mx5.0/46, mbtmp5.2/41, MS5.7/38, Ms1 5.7/38, ms1mx5.6/44, Error ellipse: s-maj=9.9km s-min=5.6km az=47.0*

*MOS **02** 09:37:55.6±1.4, 12°.74N×87°.48W, h82^{km}, mb5.8/26, MS6.1/19, Error ellipse: s-maj=7.8km s-min=5.1km az=106.0*

*UCR **02** 09:37:55.6±2.0, 12°.53N×87°.78W, h45^{km}±29^{km}, MD4.5, ML5.9, mb6.2(NEIC)*

*SNET **02** 09:37:55.7±1.3, 12°.51N×87°.88W, h28^{km}±4^{km}, ML6.1, MW6.1*

*GCMT **02** 09:37:56.8±0.1, 12°.52N×87°.91W, h62^{km}, MW6.2/161, Moment Tensor Solution. s158,c389; s161,c570;*

Duration: $3^{s}2$ Moment tensor: Scale 10^{18}Nm; M_{rr}0.84±.01; $M_{\theta\theta}$-0.55±.01; $M_{\phi\phi}$-0.28±.01; $M_{r\theta}$1.91±.01; $M_{\theta\phi}$0.61±.01; $M_{\phi r}$-1.98±.01; Best double couple: $M_0$2.90900×10^{18} NP1:ϕ_s298.00000°,δ10.00000°, λ72.00000°. NP2:ϕ_s136.00000°,δ81.00000°,λ93.00000°. Principal axes: T 2.8120, Plg54.0000°, Azm49.0000°; N 0.1910, Plg3.0000°, Azm315.0000°; P -3.0050, Plg36.0000°, Azm223.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function

*NEIC **02** 09:38:58... *

*NEIC **02** 09:37:58, 12°.53N×87°.90W, h60^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.71; $M_{\theta\theta}$-0.47; $M_{\phi\phi}$-0.24; $M_{r\theta}$2.07; $M_{\theta\phi}$0.63; $M_{\phi r}$-2.05; Fault plane solution: $M_0$3.05000×10^{18} NP1:ϕ_s301.00000°, δ8.00000°,λ77.00000°. NP2:ϕ_s135.00000°,δ82.00000°, λ92.00000°. Principal axes: T 2.8982, Plg53.0000°, Azm47.0000°; N 0.2761, Plg2.0000°, Azm314.0000°; P -3.1742, Plg37.0000°, Azm223.0000°;*

*NEIC **02** 09:38:00, 12°.63N×87°.53W, h70^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.58; $M_{\theta\theta}$-0.22; $M_{\phi\phi}$-0.36; $M_{r\theta}$1.87; $M_{\theta\phi}$0.57; $M_{\phi r}$-1.89; Fault plane solution: $M_0$2.76000×10^{18} NP1:ϕ_s325.00000°, δ8.00000°,λ99.00000°. NP2:ϕ_s135.00000°,δ82.00000°, λ89.00000°. Principal axes: T 2.6109, Plg53.0000°, Azm44.0000°; N 0.2852, Plg1.0000°, Azm135.0000°; P -2.8962, Plg37.0000°, Azm226.0000°;*

*BGR **02** 09:38:00.7±0.0, 12°.70N×85°.34W, h74^{km}±4^{km}, mb4.8*

*UPA **02** 09:38:01.0±2.6, 12°.42N×87°.36W, h10^{km}±168^{km}, MW6.0*

*GCG **02** 09:38:05.9±0.9, 13°.13N×88°.51W, h2^{km}±999^{km}, MD4.9*

*NEIC **02** 09:38:10.8, 12°.56N×87°.38W, h63^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.83; $M_{\theta\theta}$-0.53; $M_{\phi\phi}$-0.30; $M_{r\theta}$1.42; $M_{\theta\phi}$0.74; $M_{\phi r}$-1.57; Fault plane solution: $M_0$2.34000×10^{18} NP1:ϕ_s297.90000°, δ13.23000°,λ70.71000°. NP2:ϕ_s137.68000°,δ77.53000°, λ94.44000°. Principal axes: T 2.1832, Plg57.0000°, Azm53.0000°; N 0.3154, Plg4.0000°, Azm317.0000°; P -2.4986, Plg32.0000°, Azm224.0000°;*

*OSPL **02** 09:38:16.5±1.3, 10°.54N×84°.81W, h65^{km}±431^{km}*

ISC 02 09:37:54.8±0.3**, 12°.59N**±0°.02×**87°.70W**±0°.02**, h70**^{km}±1^{km}**, h71**^{km}**:pP-P, n1658,** σ**$2^{s}18$**/2107**, mb5.8**/378**, 97C-73D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.41**	**20**	Pn	**Pn**	**09 38 07.8**	**+0.9**
CSGN	**Cosiguina Volc**	**0.41**	**20**	⇓*e*P	**Pn**	**09 38 08.0**	**+1.0**
CRIN	**San Cristobal**	**0.65**	**80**	⇓*e*P	**Pn**	**09 38 10.4**	**+1.2**
CNCH	**Conchagua**	**0.69**	**350**	*e*P	**Pn**	**09 38 10.2**	**+0.4**
CNCH				IAML		09 38 25.8	
	comp=Z,1148μm,0.2s						
CNCH	**Conchagua**	**0.69**	**350**	*e*P	**Pn**	**09 38 10.2**	**+0.4**
CNCH				IAML		09 38 25.8	
	comp=Z,1148μm,0.2s						
LCND	**La Caada**	**0.74**	**346**	*e*P	**Pn**	**09 38 10.9**	**+0.8**
LCND	**La Caada**	**0.74**	**346**	*e*P	**Pn**	**09 38 10.9**	**+0.8**
JUCU	**Jucuar¡n**	**0.85**	**321**	*e*P	**Pn**	**09 38 11.3**	**-0.2**
JUCU				*e*S	**Sn**	**09 38 23.1**	**-0.9**
JUCU	**Jucuar¡n**	**0.85**	**321**	*e*P	**Pn**	**09 38 11.3**	**-0.2**
JUCU				*e*S	**Sn**	**09 38 23.1**	**-0.9**
CNGN	**Cerro Negro**	**0.99**	**95**	⇓*e*P	**Pn**	**09 38 13.8**	**+0.6**
CNGN				*e*S	**Sn**	**09 38 27.5**	**+0.6**
BLLM	**Bellamira**	**0.99**	**329**	*e*P	**Pn**	**09 38 13.7**	**+0.4**
BLLM	**Bellamira**	**0.99**	**329**	*e*P	**Pn**	**09 38 13.7**	**+0.4**
VSM	**San Miguel**	**1.00**	**326**	*e*P	**Pn**	**09 38 13.8**	**+0.2**
VSM	**San Miguel**	**1.00**	**326**	*e*P	**Pn**	**09 38 13.8**	**+0.2**
LCY	**Lacayo**	**1.01**	**325**	⇓*i*P	**Pn**	**09 38 13.7**	**+0.2**
LCY	**Lacayo**	**1.01**	**325**	⇓*i*P	**Pn**	**09 38 13.7**	**+0.2**
RANC	**El Ranchito**	**1.01**	**326**	*e*P	**Pn**	**09 38 14.2**	**+0.6**
RANC				*e*S	**Sn**	**09 38 28.5**	**+0.9**
RANC	**El Ranchito**	**1.01**	**326**	*e*P	**Pn**	**09 38 14.2**	**+0.6**
RANC				*e*S	**Sn**	**09 38 28.5**	**+0.9**
PACA	**Pacayal**	**1.06**	**325**	*e*P	**Pn**	**09 38 14.8**	**+0.5**
PACA				IAML		09 38 32.7	
	comp=Z,930μm,0.3s						
PACA	**Pacayal**	**1.06**	**325**	*e*P	**Pn**	**09 38 14.8**	**+0.5**
PACA				IAML		09 38 32.7	
	comp=Z,930μm,0.3s						
ALJI	**Alcalda de J**	**1.12**	**311**	*e*P	**Pn**	**09 38 14.6**	**-0.2**
ALJI				*e*S	**Sn**	**09 38 29.0**	**-0.7**
ALJI				IAML		09 38 33.2	
	comp=Z,282μm,0.3s						
ALJI	**Alcalda de J**	**1.12**	**311**	*e*P	**Pn**	**09 38 14.6**	**-0.2**
ALJI				*e*S	**Sn**	**09 38 29.0**	**-0.7**
ALJI				IAML		09 38 33.2	
	comp=Z,282μm,0.3s						
FAGO	**Alcalda de S**	**1.17**	**340**	*e*P	**Pn**	**09 38 16.4**	**+0.9**
FAGO				*e*S	**Sn**	**09 38 32.2**	**+1.3**
FAGO	**Alcalda de S**	**1.17**	**340**	*e*P	**Pn**	**09 38 16.4**	**+0.9**
FAGO				*e*S	**Sn**	**09 38 32.2**	**+1.3**
TECA	**Tecapa**	**1.19**	**319**	⇓*i*P	**Pn**	**09 38 15.9**	**0.0**
TECA	**Tecapa**	**1.19**	**319**	⇓*i*P	**Pn**	**09 38 15.9**	**0.0**
COEB	**Comit de Eme**	**1.21**	**318**	*e*P	**Pn**	**09 38 16.3**	**+0.2**
COEB				*e*S	**Sn**	**09 38 32.6**	**+0.6**
COEB	**Comit de Eme**	**1.21**	**318**	*e*P	**Pn**	**09 38 16.3**	**+0.2**
COEB				*e*S	**Sn**	**09 38 32.6**	**+0.6**
ESTN	**Estel**	**1.40**	**68**		**Pn**	**09 38 20.2**	**+1.7**
ESTN				Sn	**Sn**	**09 38 38.5**	**+2.2**
ESTN	**Estel**	**1.40**	**68**	*e*P	**Pn**	**09 38 19.8**	**+1.3**
ESTN				*e*S	**Sn**	**09 38 38.5**	**+2.2**
TGUH	**Tegucigalpa,Un**	**1.52**	**16**	*i* P	**Pn**	**09 38 22.0**	**+1.8**
TGUH	**Tegucigalpa,Un**	**1.52**	**16**		**Pn**	**09 38 22.0**	**+1.8**
TGUH				Sn	**Sn**	**09 38 41.9**	**+2.6**
TGUH	**Tegucigalpa,Un**	**1.52**	**16**	*i* P	**Pn**	**09 38 22.0**	**+1.8**
COEG	**Centro de Oper**	**1.54**	**312**	*e*P	**Pn**	**09 38 20.6**	**+0.3**
COEG				*e*S	**Sn**	**09 38 40.1**	**+0.5**
COEG	**Centro de Oper**	**1.54**	**312**	*e*P	**Pn**	**09 38 20.6**	**+0.3**
COEG				*e*S	**Sn**	**09 38 40.1**	**+0.5**
MASN	**Masaya**	**1.63**	**111**	⇓*e*P	**Pn**	**09 38 21.7**	**+0.2**
PAVA	**Las Pavas**	**1.64**	**313**	*e*P	**Pn**	**09 38 22.1**	**+0.4**
PAVA				*e*S	**Sn**	**09 38 42.7**	**+0.6**
PAVA				IAML		09 38 48.6	
	comp=Z,129μm,0.5s						
PAVA	**Las Pavas**	**1.64**	**313**	*e*P	**Pn**	**09 38 22.1**	**+0.4**
PAVA				*e*S	**Sn**	**09 38 42.7**	**+0.6**
PAVA				IAML		09 38 48.6	
	comp=Z,129μm,0.5s						
LFRS	**El Faro**	**1.68**	**308**	⇑*i*P	**Pn**	**09 38 22.0**	**-0.2**
LBRS	**Las Brisas**	**1.73**	**311**	⇓*i*P	**Pn**	**09 38 23.2**	**+0.2**
AEIL	**Aeropuerto Ilo**	**1.76**	**309**	*e*P	**Pn**	**09 38 23.8**	**+0.5**
AEIL				*e*S	**Sn**	**09 38 44.2**	**-0.7**
AEIL				IAML		09 38 50.8	
	comp=Z,242μm,0.3s						
AEIL	**Aeropuerto Ilo**	**1.76**	**309**	*e*P	**Pn**	**09 38 23.8**	**+0.5**
AEIL				*e*S	**Sn**	**09 38 44.2**	**-0.7**
AEIL				IAML		09 38 50.8	
	comp=Z,242μm,0.3s						
MATN	**Matagalpa**	**1.77**	**79**	*e*P	**Pn**	**09 38 24.5**	**+1.1**
MATN				*e*S	**Sn**	**09 38 47.9**	**+2.8**
LFU	**La Fuente**	**1.79**	**310**	*e*P	**Pn**	**09 38 24.2**	**+0.4**
LFU	**La Fuente**	**1.79**	**310**	*e*P	**Pn**	**09 38 24.2**	**+0.4**
UDBS	**Universidad Do**	**1.80**	**309**	*e*P	**Pn**	**09 38 24.2**	**+0.3**
UDBS				*e*S	**Sn**	**09 38 46.3**	**+0.3**
UDBS				IAML		09 38 51.6	
	comp=Z,157μm,0.3s						
UDBS	**Universidad Do**	**1.80**	**309**	*e*P	**Pn**	**09 38 24.2**	**+0.3**
UDBS				*e*S	**Sn**	**09 38 46.3**	**+0.3**
UDBS				IAML		09 38 51.6	
	comp=Z,157μm,0.3s						
LALI	**Alcalda de L**	**1.81**	**300**	*e*P	**Pn**	**09 38 23.3**	**-0.6**
LALI				*e*S	**Sn**	**09 38 44.6**	**-1.4**
LALI	**Alcalda de L**	**1.81**	**300**	*e*P	**Pn**	**09 38 23.3**	**-0.6**
LALI				*e*S	**Sn**	**09 38 44.6**	**-1.4**
UTEC	**Universidad Te**	**1.83**	**307**	*e*P	**Pn**	**09 38 24.5**	**+0.3**
UTEC				*e*S	**Sn**	**09 38 47.1**	**+0.6**
UTEC				IAML		09 38 52.6	
	comp=Z,155μm,0.5s						
UTEC	**Universidad Te**	**1.83**	**307**	*e*P	**Pn**	**09 38 24.5**	**+0.3**
UTEC				*e*S	**Sn**	**09 38 47.1**	**+0.6**
UTEC				IAML		09 38 52.6	
	comp=Z,155μm,0.5s						
OPAM	**Oficina de Pla**	**1.83**	**308**	*e*P	**Pn**	**09 38 24.8**	**+0.5**
OPAM				*e*S	**Sn**	**09 38 48.1**	**+1.4**
OPAM				IAML		09 38 51.9	
	comp=Z,113μm,0.2s						
OPAM	**Oficina de Pla**	**1.83**	**308**	*e*P	**Pn**	**09 38 24.8**	**+0.5**
OPAM				*e*S	**Sn**	**09 38 48.1**	**+1.4**
OPAM				IAML		09 38 51.9	
	comp=Z,113μm,0.2s						
SNET	**Serv Nac Est T**	**1.84**	**306**	*e*P	**Pn**	**09 38 24.7**	**+0.3**
SNET				*e*S	**Sn**	**09 38 47.6**	**+0.6**
SNET				IAML		09 38 50.1	
	comp=Z,134μm,0.3s						
SNET	**Serv Nac Est T**	**1.84**	**306**		**Pn**	**09 38 24.6**	**+0.2**
SNET	**Serv Nac Est T**	**1.84**	**306**	*e*P	**Pn**	**09 38 24.7**	**+0.3**
SNET				*e*S	**Sn**	**09 38 47.6**	**+0.6**
SNET				IAML		09 38 50.1	
	comp=Z,134μm,0.3s						
BOQS	**Boqueron**	**1.91**	**307**	*e*P	**Pn**	**09 38 25.8**	**+0.3**
LLGN	**La Laguna**	**1.98**	**322**	*e*P	**Pn**	**09 38 26.8**	**+0.6**
LLGN	**La Laguna**	**1.98**	**322**	*e*P	**Pn**	**09 38 26.8**	**+0.6**
CEVE	**Cerro Verde**	**2.24**	**304**	*e*P	**Pn**	**09 38 30.4**	**+0.6**
CEVE	**Cerro Verde**	**2.24**	**304**	*e*P	**Pn**	**09 38 30.4**	**+0.6**
SBLS	**San Blas**	**2.24**	**304**	*e*P	**Pn**	**09 38 30.1**	**+0.2**
SBLS	**San Blas**	**2.24**	**304**	*e*P	**Pn**	**09 38 30.1**	**+0.2**
SNJE	**San Jose**	**2.25**	**305**	⇓*i*P	**Pn**	**09 38 30.4**	**+0.5**
SNJE	**San Jose**	**2.25**	**305**	⇓*i*P	**Pn**	**09 38 30.4**	**+0.5**
RTR	**El Retiro**	**2.29**	**305**	*e*P	**Pn**	**09 38 31.2**	**+0.6**
RTR	**El Retiro**	**2.29**	**305**	*e*P	**Pn**	**09 38 31.2**	**+0.6**
MTO3	**Montecristo**	**2.42**	**318**	*e*P	**Pn**	**09 38 33.1**	**+0.8**
MTO3				*e*S	**Sn**	**09 39 02.4**	**+1.5**
MTO3	**Montecristo**	**2.42**	**318**	*e*P	**Pn**	**09 38 33.1**	**+0.8**
MTO3				*e*S	**Sn**	**09 39 02.4**	**+1.5**
ACON	**Acoyapa**	**2.55**	**104**		**Pn**	**09 38 34.4**	**+0.5**
ACON	**Acoyapa**	**2.55**	**104**	⇓*e*P	**Pn**	**09 38 34.2**	**+0.4**
GBS3	**Finca Las Img**	**2.84**	**129**	*i* P	**Pn**	**09 38 39.7**	**+1.8**
GB1A	**Borinquen Arri**	**2.86**	**128**	*e*P	**Pn**	**09 38 39.8**	**+1.6**
LAPC	**Finca la Perla**	**2.87**	**129**	*i* P	**Pn**	**09 38 40.1**	**+1.9**
BUEV	**Buena Vista**	**2.87**	**128**	*i* P	**Pn**	**09 38 39.8**	**+1.5**
BUEV				*i* S	**Sn**	**09 39 12.8**	**+1.0**
NY14	**Universidad de**	**2.87**	**132**	*i* P	**Pn**	**09 38 40.4**	**+2.1**
NY14				*i* S	**Sn**	**09 39 12.3**	**+0.6**
BUAI	**Buenos Aires**	**2.88**	**126**	*i* P	**Pn**	**09 38 37.9**	**-0.5**
GPS1	**Guardaparques**	**2.93**	**128**	*i* P	**Pn**	**09 38 41.3**	**+2.2**
LIM1	**Limonal**	**3.05**	**128**	*i* P	**Pn**	**09 38 41.6**	**+0.8**
GUAB	**Guayabo de Bag**	**3.06**	**127**	*i* P	**Pn**	**09 38 42.7**	**+1.8**
MESS	**Mesas**	**3.07**	**127**	*i* P	**Pn**	**09 38 40.9**	**-0.1**
IXG	**Ixpaco**	**3.09**	**301**	⇑*e*P	**Pn**	**09 38 42.6**	**+1.1**
COLC	**Colonia**	**3.11**	**128**	*i* P	**Pn**	**09 38 42.4**	**+0.9**
MRL	**Marmol**	**3.14**	**322**	⇑*e*P	**Pn**	**09 38 44.7**	**+2.6**
GUAI	**GUAI**	**3.15**	**137**	*i* P	**Pn**	**09 38 43.8**	**+1.8**
PLVR	**Palo Verde**	**3.21**	**134**	⇓*e*P	**Pn**	**09 38 44.6**	**+1.7**
PLVR				*e*S	**Sn**	**09 39 20.1**	**-0.1**
NBG	**Las Nubes**	**3.25**	**308**	*e*P	**Pn**	**09 38 45.8**	**+2.2**
PTEN	**Parque Tenorio**	**3.25**	**125**	*i* P	**Pn**	**09 38 43.4**	**-0.1**
ACAL	**Aguas Claras**	**3.26**	**126**	*i* P	**Pn**	**09 38 44.1**	**+0.5**
ESPN	**Las Esperanzas**	**3.35**	**96**		**Pn**	**09 38 45.7**	**+1.0**
ESPN	**Las Esperanzas**	**3.35**	**96**	⇓*e*P	**Pn**	**09 38 46.0**	**+1.3**
JTS	**Las Juntas de**	**3.53**	**130**	P	**Pn**	**09 38 49.0**	**+1.7**
	comp=Z,196nm,0.3s,baz=360,slow=23,SNR=209						
JTS				S	**Sn**	**09 39 29.4**	**+1.4**
	comp=Z,3μm,0.3s,baz=235,slow=12,SNR=6.3						
JTS				LR	LR	09 40 06.5	
	comp=Z,262μm,21.2s,baz=46,slow=38						
JTS	**Las Juntas de**	**3.53**	**130**	*i* P	**Pn**	**09 38 49.5**	**+2.2**
JTS	**Las Juntas de**	**3.53**	**130**		**Pn**	**09 38 49.1**	**+1.7**
JTS	**Las Juntas de**	**3.53**	**130**	*e*P	**Pn**	**09 38 48.5**	**+1.2**
FUG	**Fuego 3**	**3.57**	**302**	*e*P	**Pn**	**09 38 49.9**	**+2.0**
APG	**El Apazote**	**3.60**	**312**	P	**Pn**	**09 38 49.6**	**+1.3**
	comp=Z,88nm,0.3s,baz=142,slow=13,SNR=188						
APG				ScS	ScS	09 53 16.3	+0.5
	comp=Z,0.5nm,0.3s,baz=114,slow=23,SNR=7.2						
CEDE	**Laguna Cedeo**	**3.61**	**125**	⇓*e*P	**Pn**	**09 38 48.9**	**+0.5**
SRA1	**San Ramn**	**4.02**	**128**	⇑*e*P	**Pn**	**09 38 56.0**	**+1.9**
ERG	**Entre ros, C**	**4.18**	**297**	*e*P	**Pn**	**09 38 58.3**	**+2.1**
STG3	**Santiaguito 3,**	**4.31**	**300**	*e*P	**Pn**	**09 38 59.7**	**+1.6**
HDC	**Heredia**	**4.36**	**126**	*e*P	**Pn**	**09 39 00.6**	**+1.9**
HDC	**Heredia**	**4.36**	**126**		**Pn**	**09 39 00.7**	**+2.0**
HDC	**Heredia**	**4.36**	**126**	⇑*e*P	**Pn**	**09 39 01.0**	**+2.3**
HDC				*e*S	**Sn**	**09 39 50.9**	**+2.5**
SJS	**Escuela Geolog**	**4.44**	**126**	⇑*e*P	**Pn**	**09 39 02.1**	**+2.3**
SJS				*e*S	**Sn**	**09 39 53.4**	**+3.0**
LCR2	**La Lucha 2**	**4.60**	**128**	*e*P	**Pn**	**09 39 03.1**	**+1.0**
EDDO	**Dominical**	**5.02**	**131**	⇓*e*P	**Pn**	**09 39 10.3**	**+2.7**
EDLM	**Las Mercedes**	**5.21**	**129**	⇑*e*P	**Pn**	**09 39 13.3**	**+3.0**
EDPN	**Palmar Norte**	**5.51**	**130**	⇑*e*P	**Pn**	**09 39 17.2**	**+2.9**
EDBA	**Buenos Aires**	**5.52**	**128**	⇑*i*P	**Pn**	**09 39 16.9**	**+2.4**
CCIG	**Comitan**	**5.65**	**311**		**Pn**	**09 39 19.5**	**+3.2**
RGM0	**Gandoca**	**5.82**	**120**	⇓*e*P	**Pn**	**09 39 23.0**	**+4.4**
RGM0	**Gandoca**	**5.82**	**120**	⇑*e*P	**Pn**	**09 39 21.0**	**+2.5**
PTJ1	**Puerto Jimnez**	**5.91**	**133**	*i* P	**Pn**	**09 39 23.5**	**+3.7**
PTJ1				*i* S	**Sn**	**09 40 25.9**	**-0.3**
PTJ1	**Puerto Jimnez**	**5.91**	**133**	⇓*e*P	**Pn**	**09 39 22.9**	**+3.1**
PTJ1				*e*S	**Sn**	**09 40 29.8**	**+3.6**
EDSV	**San Vito**	**5.97**	**128**	⇑*e*P	**Pn**	**09 39 23.7**	**+3.0**
PIRO	**Carate, Puerto**	**5.98**	**134**	⇑*e*P	**Pn**	**09 39 23.9**	**+3.2**
CNI2	**El Empalme, Bo**	**6.02**	**121**	⇓*e*P	**Pn**	**09 39 23.8**	**+2.5**
BRU2	**Volcan**	**6.20**	**127**	⇑*i*P	**Pn**	**09 39 26.9**	**+3.0**
	baz=333,slow=3.7						
BRU2	**Volcan**	**6.20**	**127**	⇓*e*P	**Pn**	**09 39 26.6**	**+2.6**
PRVC	**Isla de Provid**	**6.23**	**82**	⇓*i*P	**Pn**	**09 39 26.1**	**+1.9**
PRVC				*e*S	**Sn**	**09 40 37.3**	**+3.3**
SBAR3	**San Bartolo, C**	**6.36**	**131**	⇑*e*P	**Pn**	**09 39 29.7**	**+3.7**
BCO2	**Palmira**	**6.38**	**127**	*e*P	**Pn**	**09 39 29.2**	**+2.9**
PTAR3	**Potrerillos Ar**	**6.42**	**127**	*i* P	**Pn**	**09 39 29.7**	**+2.9**
PTAR3				*e*S	**Sn**	**09 40 33.0**	**-5.8**
BAGA3	**Bagala, Chiriq**	**6.53**	**128**	*i* P	**Pn**	**09 39 31.6**	**+3.3**
CHGR2	**Aguacate**	**6.56**	**123**	*e*P	**Pn**	**09 39 31.4**	**+2.7**
CHGR2				*i* S	**Sn**	**09 40 39.9**	**-2.1**
DVD	**David**	**6.61**	**128**	⇓*e*P	**Pn**	**09 39 32.6**	**+3.2**
LOCO3	**Loma Colorada,**	**6.65**	**128**	*i* P	**Pn**	**09 39 32.9**	**+2.9**
LOMA3	**Las Lomas, Chi**	**6.66**	**128**	⇓*i*P	**Pn**	**09 39 33.4**	**+3.4**
PEDE3	**Pedregal, Chir**	**6.67**	**128**	⇓*e*P	**Pn**	**09 39 33.2**	**+3.1**
PEDE3				*e*S	**Sn**	**09 40 40.7**	**-4.0**
CHIR3	**Chiriqui UPA,**	**6.73**	**128**	⇓*e*P	**Pn**	**09 39 34.4**	**+3.4**
NANC3	**Nancito, Chiri**	**7.29**	**126**	*i* P	**Pn**	**09 39 41.7**	**+3.0**
PVID3	**Puerto Vidal,**	**7.50**	**126**	*e*P	**Pn**	**09 39 44.5**	**+3.0**
TEIG	**Tepich**	**7.61**	**356**	P	**Pn**	**09 39 45.2**	**+2.2**
	comp=Z,29nm,0.3s,baz=119,slow=1.3,SNR=110						
TEIG				ScP	**ScP**	**09 49 46.5**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=182,slow=0.6,SNR=6.3						
TEIG				ScS	**ScS**	**09 53 19.4**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=53,slow=20,SNR=5.5						
TEIG	**Tepich**	**7.61**	**356**	*e*P	**Pn**	**09 39 46.1**	**+3.0**
TEIG	**Tepich**	**7.61**	**356**		**Pn**	**09 39 46.6**	**+3.5**
CNAZ3	**Canazas, Verag**	**7.65**	**123**	⇓*i*P	**Pn**	**09 39 47.4**	**+3.8**
MESA3	**La Mesa, Verag**	**7.78**	**124**	*e*P	**Pn**	**09 39 49.0**	**+3.6**
RSUS3	**Rio de Jesus,**	**7.90**	**125**	*i* P	Pn	09 39 51.8	+4.8
SFRA3	**San Francisco,**	**7.90**	**122**	⇓*e*P	**Pn**	**09 39 50.4**	**+3.4**
GMAL	**Guarumal, Vera**	**7.97**	**126**	⇑*i*P	**Pn**	**09 39 49.4**	**+1.4**
GMAL	**Guarumal, Vera**	**7.97**	**126**	⇑*e*P	**Pn**	**09 39 49.2**	**+1.2**
STIA3	**Santiago, Vera**	**7.99**	**123**	⇓*e*P	**Pn**	**09 39 51.5**	**+3.4**
PONU3	**Ponuga, Veragu**	**8.10**	**125**	⇓*e*P	**Pn**	**09 39 53.6**	**+3.8**
CRIS3	**El Cristo, Coc**	**8.19**	**121**	⇓*i*P	**Pn**	**09 39 54.4**	**+3.3**
PINA	**Piqa, Costa Ab**	**8.20**	**113**	*e*P	**Pn**	**09 39 53.0**	**+1.9**
OCU3	**Ocu, Herrera**	**8.23**	**123**	*e*P	**Pn**	**09 39 55.0**	**+3.5**
CMIG	**Matias Romero**	**8.26**	**304**	P	**Pn**	**09 39 52.7**	**+0.8**
	comp=Z,18nm,0.3s,baz=144,slow=9.0,SNR=259						
CMIG				S	**Sn**	**09 41 21.5**	**-2.2**
	comp=Z,42nm,0.3s,baz=165,slow=20,SNR=3.9						
CMIG				ScP	**ScP**	**09 49 47.3**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=2.0,slow=4.9,SNR=4.8						
CMIG				ScS	**ScS**	**09 53 21.3**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=224,slow=22,SNR=7.7						
CMIG	**Matias Romero**	**8.26**	**304**		**Pn**	**09 39 52.1**	**+0.2**
SPIL	**Cristobal, Col**	**8.32**	**113**	*e*P	**Pn**	**09 39 57.0**	**+4.3**
PESE3	**Pese, Herrera**	**8.39**	**123**	*e*P	Pn	09 39 58.9	+5.3
MLIR	**Monte Lirio**	**8.40**	**113**	*e*P	**Pn**	**09 39 56.1**	**+2.3**
BCIP	**Isla Barro Col**	**8.44**	**113**	⇑*i*P	**Pn**	**09 39 56.0**	**+1.6**
BCIP	**Isla Barro Col**	**8.44**	**113**	⇑*i*P	**Pn**	**09 39 56.2**	**+1.8**
BCIP	**Isla Barro Col**	**8.44**	**113**		**Pn**	**09 39 55.6**	**+1.2**
BCIP	**Isla Barro Col**	**8.44**	**113**	P	**Pn**	**09 39 55.6**	**+1.2**
BCIP	**Isla Barro Col**	**8.44**	**113**	⇑*e*P	**Pn**	**09 39 55.3**	**+0.9**
VTON	**El Valle, Cocl**	**8.44**	**117**	⇓*e*P	**Pn**	**09 39 58.3**	**+3.8**
ZANG	**Zanguenga, Cho**	**8.50**	**114**	*e*P	**Pn**	**09 39 57.4**	**+2.1**
ZANG	**Zanguenga, Cho**	**8.50**	**114**	*e*P	**Pn**	**09 39 56.1**	**+0.9**
CACAO	**El Cacao, Vera**	**8.52**	**127**	*e*P	**Pn**	**09 39 57.1**	**+1.7**
FRIJ	**El Hiral**	**8.52**	**112**	*e*P	**Pn**	**09 39 57.0**	**+1.5**
CHIT3	**Chitre**	**8.52**	**122**	*e*P	**Pn**	**09 39 58.5**	**+3.0**
CHOR3	**La Chorrera**	**8.62**	**114**	⇓*i*P	**Pn**	**09 40 00.4**	**+3.6**
MAD3	**Madden Dam**	**8.62**	**112**	*e*P	Pn	09 40 01.8	+4.9
AZU	**Azuero**	**8.73**	**122**	⇑*i*P	**Pn**	**09 40 00.5**	**+2.2**
AZU				*e*S	Sn	09 41 51.1	+16
AZU	**Azuero**	**8.73**	**122**	⇑*i*P	**Pn**	**09 40 00.2**	**+1.9**
	baz=339,slow=16						
UPA	**Univ. de Panam**	**8.79**	**113**	⇑*i*P	**Pn**	**09 40 01.0**	**+1.9**
UPA	**Univ. de Panam**	**8.79**	**113**	⇑*i*P	**Pn**	**09 40 01.1**	**+1.9**
UPA	**Univ. de Panam**	**8.79**	**113**	⇑*e*P	**Pn**	**09 40 00.2**	**+1.1**
TOSI3	**Tonosi**	**8.81**	**125**	*i* P	Pn	09 40 05.2	+5.7
FLAM	**Flamenco Islan**	**8.82**	**114**	*e*P	**Pn**	**09 40 03.8**	**+4.3**
PCRI3	**Pocri, Los San**	**8.93**	**123**	*e*P	**Pn**	**09 40 04.5**	**+3.4**
ACHO3	**Achotines, Los**	**9.02**	**124**	*i* P	**Pn**	**09 40 06.4**	**+4.1**
PEDA3	**Pedasi**	**9.08**	**123**	*e*P	**Pn**	**09 40 06.7**	**+3.5**
CHPO	**Chepo, Panama**	**9.09**	**111**	⇓*i*P	**Pn**	**09 40 07.1**	**+3.8**
FSCY	**Frank Sound, G**	**9.16**	**42**	⇑*i*P	Pn	09 40 09.1	+4.9
FSCY	**Frank Sound, G**	**9.16**	**42**		**Pn**	**09 40 08.8**	**+4.6**
UPD2	**Meteti**	**10.34**	**112**	⇑*i*P	**Pn**	**09 40 22.1**	**+1.8**
UPD2	**Meteti**	**10.34**	**112**	⇑*i*P	**Pn**	**09 40 22.5**	**+2.2**
CBCY	**The Bluff, Cay**	**10.43**	**46**	⇑*i*P	Pn	09 40 26.4	+4.9
MCJ	**Malvern**	**11.02**	**60**	⇑*i*P	**Pn**	**09 40 33.9**	**+4.2**
PTAC	**Punta Ardita,**	**11.15**	**118**	⇑*i*P	**Pn**	**09 40 30.6**	**-0.7**
MTDJ	**Mount Denham**	**11.29**	**59**	⇑*i*P	**Pn**	**09 40 37.3**	**+3.9**
MTDJ	**Mount Denham**	**11.29**	**59**	⇑*i*P	**Pn**	**09 40 37.7**	**+4.3**
MTDJ	**Mount Denham**	**11.29**	**59**		**Pn**	**09 40 37.2**	**+3.9**
MTDJ				ScP	**ScP**	**09 49 50.7**	**+0.9**
PCJ	**Portland Cotta**	**11.39**	**62**	⇑*i*P	**Pn**	**09 40 38.7**	**+4.0**
BBJ	**Bamboo Saint A**	**11.59**	**59**	⇓*i*P	Pn	09 40 42.7	+5.3
TLIG	**Tlapa**	**11.60**	**297**		**Pn**	**09 40 39.1**	**+1.5**
LCBC	**Los crdobas,**	**11.74**	**107**	⇑*i*P	**Pn**	**09 40 40.5**	**+1.1**
HOJ	**Hope**	**11.86**	**62**	⇓*i*P	Pn	09 40 45.9	+4.9
SOLC	**Bahia Solano**	**11.96**	**121**	*e*P	**Pn**	**09 40 41.9**	**-0.5**
SJCC	**San Jacinto, C**	**12.57**	**101**	⇑*i*P	**Pn**	**09 40 51.6**	**+0.8**
SJCC	**San Jacinto, C**	**12.57**	**101**	⇑*e*P	**Pn**	**09 40 51.3**	**+0.4**
DBBC	**Dabeiba**	**12.60**	**115**	⇑*i*P	**Pn**	**09 40 52.5**	**+1.2**
PIZC	**Pizarro, Choco**	**12.72**	**126**	⇑*i*P	**Pn**	**09 40 55.5**	**+2.7**
UREC	**San Jos de Ur**	**12.91**	**111**	⇑*i*P	**Pn**	**09 40 53.8**	**-1.6**
SMRC	**Santa Marta, M**	**13.27**	**95**	⇑*i*P	**Pn**	**09 40 59.5**	**-0.7**
CBOC	**Ciudad Bolivar**	**13.33**	**119**	⇓*i*P	**Pn**	**09 41 01.9**	**+0.6**
CBOC				⇑*i*P	P	09 41 02.2	-6.2
GR1C	**Gorgona, Isla**	**13.41**	**134**	⇑*i*P	**Pn**	**09 41 04.3**	**+2.2**
PAYG	**Puerto Ayora**	**13.42**	**191**	⇓*i*P	**Pn**	**09 41 05.2**	**+2.9**
PAYG	**Puerto Ayora**	**13.42**	**191**		**Pn**	**09 41 05.4**	**+3.1**
ARGC	**Ariguani, Magd**	**13.48**	**100**	⇑*i*P	**Pn**	**09 41 03.8**	**+0.8**
HELC	**Santa Helena**	**13.59**	**117**	⇑*i*P	**Pn**	**09 41 06.1**	**+1.3**
HELC	**Santa Helena**	**13.59**	**117**	⇑*e*P	**Pn**	**09 41 05.7**	**+0.9**
PLMC	**San Jos del P**	**13.62**	**123**	⇑*i*P	**Pn**	**09 41 05.2**	**+0.2**
ZARC	**Zaragoza, Cauc**	**13.62**	**111**	⇑*i*P	**Pn**	**09 41 03.5**	**-1.4**
TUMC	**Tumaco**	**13.91**	**140**	*e*P	**P**	**09 41 12.4**	**-2.2**
TUMC	**Tumaco**	**13.91**	**140**	P	**P**	**09 41 12.7**	**-2.0**
SMLC	**San Martn de**	**13.91**	**104**	⇑*i*P	**Pn**	**09 41 08.1**	**-0.6**
YOTC	**Yotoco, Valle**	**14.12**	**126**	⇑*i*P	**Pn**	**09 41 12.5**	**+1.0**
GTBY	**Guantanamo Bay**	**14.12**	**57**	⇑*i*P	**P**	**09 41 14.9**	**-2.0**
GTBY	**Guantanamo Bay**	**14.12**	**57**	*i* P	**P**	**09 41 14.7**	**-2.2**
GTBY	**Guantanamo Bay**	**14.12**	**57**		**Pn**	**09 41 13.9**	**+2.5**
GUY2C	**Guyana, Caldas**	**14.21**	**120**	⇑*i*P	**Pn**	**09 41 15.0**	**+1.9**
CODC	**Agustn Codazz**	**14.23**	**99**	⇑*i*P	**Pn**	**09 41 13.4**	**+0.5**
CODC				⇑*i*P	**P**	**09 41 13.6**	**-4.7**
PTBC	**PUERTO BERRIO,**	**14.38**	**113**	⇑*i*P	**Pn**	**09 41 15.2**	**+0.3**
NORC	**Norcasia**	**14.46**	**118**	⇑*i*P	**Pn**	**09 41 17.4**	**+1.4**
061Z	**Ochoppi**	**14.68**	**25**	P	**P**	**09 41 22.5**	**-0.6**
MOIG	**Morelia**	**14.74**	**300**	P	**P**	**09 41 22.8**	**-1.3**
BBAC	**Balboa, Cauca**	**14.75**	**135**	⇑*i*P	**Pn**	**09 41 22.0**	**+2.1**
OCAC	**Ocana**	**14.79**	**106**	⇑*i*P	**Pn**	**09 41 20.3**	**-0.1**
ORTC	**Ortega, Tolima**	**15.04**	**124**	⇑*i*P	**Pn**	**09 41 24.9**	**+1.4**
SPBC	**San Pablo de B**	**15.12**	**116**	⇑*i*P	**Pn**	**09 41 25.6**	**+1.1**
SOTA	**Rioblanco**	**15.12**	**133**	⇑*i*P	**P**	**09 41 27.7**	**-0.9**
PCON	**Cinco Dias**	**15.14**	**131**	⇑*i*P	**P**	**09 41 27.8**	**-1.1**
CMBC	**Cumbal**	**15.16**	**139**	*e*P	**P**	**09 41 30.9**	**+1.9**
CRUC	**La Cruz**	**15.28**	**135**	*e*P	**P**	**09 41 29.0**	**-1.2**
ROSC	**El Rosal**	**15.30**	**119**	P	**Pn**	**09 41 27.9**	**+0.7**
	comp=Z,4.6nm,0.3s,baz=327,slow=9.7,SNR=78						
ROSC				LR	LR	09 48 34.1	
	comp=Z,7μm,18.4s,baz=341,slow=42						
ROSC				ScP	**ScP**	**09 49 58.8**	**+2.1**
	comp=Z,0.8nm,0.3s,baz=58,slow=3.7,SNR=9.4						
ROSC				ScS	**ScS**	**09 53 36.3**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=259,slow=18,SNR=9.8						
ROSC	**El Rosal**	**15.30**	**119**	⇑*i*P	**P**	**09 41 30.1**	**-0.4**
ROSC	**El Rosal**	**15.30**	**119**	P	**P**	**09 41 30.2**	**-0.3**
ROSC				IAmb	IAmb	09 41 58.3	
	comp=Z,862nm,1.2s						
ROSC				PcP	**PcP**	**09 46 30.9**	**+2.3**
OTAV	**Otavalo**	**15.32**	**143**	⇓*i*P	**P**	**09 41 30.4**	**-0.5**
OTAV	**Otavalo**	**15.32**	**143**	P	**P**	**09 41 29.9**	**-0.9**
OTAV	**Otavalo**	**15.32**	**143**	P	**P**	**09 41 29.9**	**-0.9**
OTAV				pmax	pmax		
	comp=Z,505nm,1.3s						
OTAV	**Otavalo**	**15.32**	**143**	*e*P	**P**	**09 41 29.7**	**-1.2**
URIC	**Uribia, Colomb**	**15.39**	**92**	⇑*i*P	**Pn**	**09 41 28.6**	**+0.7**
BARC	**Barichara**	**15.50**	**111**	*e*P	**Pn**	**09 41 30.0**	**+0.4**
PAMC	**Pamplona, Colo**	**15.67**	**108**	⇑*i*P	**Pn**	**09 41 32.6**	**+0.7**
RUSC	**La Rusia**	**15.88**	**113**	⇑*i*P	**Pn**	**09 41 34.7**	**0.0**
RUSC	**La Rusia**	**15.88**	**113**		**Pn**	**09 41 34.9**	**+0.2**
RUSC				ScP	**ScP**	**09 50 00.2**	**+2.2**
GARC	**Garzon, Huila**	**15.91**	**130**	⇑*i*P	**P**	**09 41 36.6**	**-0.5**
CHIC	**Chingaza**	**15.91**	**119**	⇑*i*P	**P**	**09 41 37.3**	**0.0**
FLOC	**Florencia**	**16.19**	**132**	⇑*i*P	**P**	**09 41 40.6**	**+0.6**
FLOC				⇓*i*P	**P**	**09 41 40.7**	**+0.6**
FLOC	**Florencia**	**16.19**	**132**	P	**P**	**09 41 40.5**	**+0.4**
DWPF	**Disney Wildern**	**16.52**	**20**	P	**P**	**09 41 45.7**	**+2.2**
DWPF	**Disney Wildern**	**16.52**	**20**	P	**P**	**09 41 45.9**	**+2.4**
	baz=202						
TAMC	**Tame, Arauca**	**16.84**	**110**	⇑*i*P	**Pn**	**09 41 45.9**	**-0.2**
SDDR	**Presa de Saban**	**17.02**	**66**	*i* P	**P**	**09 41 51.2**	**+2.0**
SDDR	**Presa de Saban**	**17.02**	**66**	P	**P**	**09 41 51.9**	**+2.7**
SDDR				IAmb	IAmb	09 42 12.6	
	comp=Z,651nm,1.1s						
SDV	**Santo Domingo**	**17.17**	**101**	P	**P**	**09 41 51.0**	**0.0**
	comp=Z,12nm,0.3s,baz=287,slow=8.5,SNR=125						
SDV				S	**Sn**	**09 44 58.9**	**-2.0**
	baz=240,slow=12,SNR=1.6						
SDV				ScP	**ScP**	**09 50 02.3**	**+2.2**
	comp=Z,0.6nm,0.3s,baz=258,slow=1.7,SNR=8.7						
SDV				LR	LR	09 50 07.5	
	comp=Z,21μm,19.0s,baz=274,slow=43						
SDV				ScS	**ScS**	**09 53 40.8**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=26,slow=21,SNR=17						
SDV	**Santo Domingo**	**17.17**	**101**	⇑*i*P	**P**	**09 41 50.7**	**-0.3**
SDV	**Santo Domingo**	**17.17**	**101**	P	**P**	**09 41 50.7**	**-0.3**
SDV				IAmb	IAmb	09 42 23.5	
	comp=Z,1μm,1.4s						
SDV				ScP	**ScP**	**09 50 02.4**	**+2.4**
SDV	**Santo Domingo**	**17.17**	**101**	*e*P	**P**	**09 41 51.5**	**+0.4**
MACC	**Macarena, Meta**	**17.20**	**126**	⇑*i*P	**P**	**09 41 51.5**	**+0.2**
ZAIG	**Zacatecas**	**17.39**	**308**	P	**P**	**09 41 55.6**	**+2.1**
PTGC	**Puerto Gaitan,**	**17.50**	**117**	⇑*i*P	**P**	**09 41 54.8**	**+0.3**
545A	**Edgard**	**17.56**	**352**	P	**P**	**09 41 59.0**	**+4.0**
545A				IAmb	IAmb	09 42 16.0	
	comp=Z,635nm,0.8s						
SC01	**Santiago de lo**	**17.67**	**65**	*i* P	**P**	**09 42 00.5**	**+4.2**
SC01	**Santiago de lo**	**17.67**	**65**	IAmb	IAmb	09 42 23.1	
	comp=Z,940nm,0.9s						
KVTX	**Kingsville**	**17.68**	**329**	P	**P**	**09 41 59.8**	**+3.6**
KVTX				IAmb	IAmb	09 42 29.9	
	comp=Z,525nm,0.9s						
553A	**Crawfordville**	**17.77**	**9**		**Pn**	**09 42 01.3**	**+3.9**
553A				ScP	**ScP**	**09 50 01.6**	**+0.8**
PTLC	**Puerto Leguiza**	**17.78**	**133**	⇑*i*P	**Pn**	**09 42 02.0**	**+4.3**
GUVC	**San Jose del G**	**17.95**	**123**	⇑*i*P	**Pn**	**09 41 59.7**	**-0.1**
451A	**Vernon**	**18.03**	**5**	P	**Pn**	**09 42 04.7**	**+4.1**
451A				PcP	**PcP**	**09 46 33.5**	**+1.5**
SDD	**Santo Domingo**	**18.10**	**69**	IAmb	IAmb	09 42 30.0	
	comp=Z,952nm,0.8s						
BRAL	**Brewton**	**18.50**	**2**	IAmb	IAmb	09 42 11.2	
	comp=Z,664nm,0.9s						
BRAL	**Brewton**	**18.50**	**2**	P	**Pn**	**09 42 09.3**	**+3.0**
	baz=182,SNR=69						
ELOV	**Elorza**	**18.79**	**105**	⇑*i*P	**Pn**	**09 42 09.6**	**-0.3**
456A	**Hilliard**	**18.80**	**15**	IAmb	IAmb	09 42 14.4	
	comp=Z,2μm,1.6s						
HKT	**Hockley**	**18.85**	**338**	P	**Pn**	**09 42 11.7**	**+1.3**
HKT				IAmb	IAmb	09 43 01.8	
	comp=Z,832nm,1.7s						
HKT	**Hockley**	**18.85**	**338**	P	**Pn**	**09 42 11.7**	**+1.3**
HKT				pmax	pmax		
	comp=Z,832nm,1.7s						
833A	**Chaparral WMA,**	**19.08**	**327**	IAmb	IAmb	09 42 15.4	
	comp=Z,925nm,1.1s						
833A	**Chaparral WMA,**	**19.08**	**327**	P	**Pn**	**09 42 13.7**	**+0.5**
	baz=143,SNR=108						
TIGA	**Tifton**	**19.14**	**11**	P	**Pn**	**09 42 16.4**	**+2.5**
	baz=192,SNR=318						
250A	**Grady**	**19.34**	**4**	P	**Pn**	**09 42 17.9**	**+1.7**
PCDR	**Punta Cana, DR**	**19.52**	**70**	*i* P	**Pn**	**09 42 19.4**	**+1.0**
BAUV	**El Baul**	**19.65**	**99**	*e*P	**P**	**09 42 17.9**	**-0.2**
VBMS	**Vicksburg**	**19.71**	**353**	P	**Pn**	**09 42 21.8**	**+1.3**
VBMS	**Vicksburg**	**19.71**	**353**	P	**Pn**	**09 42 22.2**	**+1.7**
	baz=172,SNR=128						
NATX	**Nacogdoches**	**20.13**	**343**	IAmb	IAmb	09 42 31.6	
	comp=Z,908nm,1.1s						
NATX	**Nacogdoches**	**20.13**	**343**	P	Pn	09 42 26.0	+0.6

	baz=160,SNR=130						
NATX				S	**S**	**09 46 05.6**	**+0.3**
	baz=160						
152A	**Waverly Hall**	**20.17**	**7**	P	Pn	09 42 27.1	+1.1
152A				PcP	**PcP**	**09 46 37.1**	**+1.4**
152A					**ScP**	**09 50 06.0**	**-0.2**
435B	**Jarrell**	**20.28**	**335**	P	Pn	09 42 26.2	-1.1
435B	**Jarrell**	**20.28**	**335**	P	Pn	09 42 26.5	-0.8
	baz=151,SNR=64						
435B				S	**S**	**09 46 08.8**	**+0.5**
	baz=151						
143A	**Socs Landing,**	**20.31**	**351**	IAmb	IAmb	09 42 29.8	
	comp=Z,915nm,1.1s						
LRAL	**Lakeview Retre**	**20.36**	**2**	P	Pn	09 42 28.9	+0.6
LRAL				IAmb	IAmb	09 42 33.5	
	comp=Z,495nm,0.9s						
LRAL				ScP	**ScP**	**09 50 06.9**	**+0.4**
LRAL	**Lakeview Retre**	**20.36**	**2**	S	Sn	09 46 14.0	-3.3
	baz=182						
CRPR	**Cabo Rojo, PR**	**20.57**	**72**	IAmb	IAmb	09 42 37.1	
	comp=Z,713nm,1.0s						
MPR	**Mayaguez**	**20.59**	**72**	*i* P	Pn	09 42 31.0	-0.1
MPR	**Mayaguez**	**20.59**	**72**	IAmb	IAmb	09 43 03.6	
	comp=Z,1µm,1.7s						
MLPR	**Magueyes Islan**	**20.63**	**72**	IAmb	IAmb	09 42 37.7	
	comp=Z,629nm,0.9s						
Z50A	**Ashland**	**20.64**	**4**	P	Pn	09 42 31.2	-0.2
Z50A				IAmb	IAmb	09 42 37.6	
	comp=Z,411nm,0.8s						
Z50A				ScP	**ScP**	**09 50 07.2**	**0.0**
Z50A	**Ashland**	**20.64**	**4**	P	Pn	09 42 31.4	-0.1
	baz=185,SNR=236						
Z50A				S	Sn	09 46 20.2	-3.6
	baz=185						
AGPR	**Aguadilla, PR**	**20.68**	**71**	*i* P	Pn	09 42 30.7	-1.4
237A	**Washetta, Mont**	**20.71**	**340**	P	Pn	09 42 31.3	-1.0
237A				ScP	**ScP**	**09 50 09.8**	**+2.4**
157A	**Early Branch**	**20.92**	**16**	P	Pn	09 42 35.4	+0.6
	baz=198,SNR=59						
AOPR	**Arecibo Observ**	**20.98**	**72**	P	**P**	**09 42 33.1**	**+0.7**
AOPR				IAmb	IAmb	09 42 36.9	
	comp=Z,430nm,0.9s						
JCT	**Junction City**	**21.03**	**330**	IAmb	IAmb	09 43 15.7	
	comp=Z,331nm,0.9s						
JCT	**Junction City**	**21.03**	**330**	P	**P**	**09 42 33.8**	**+0.9**
	baz=145,SNR=104						
JCT				S	**S**	**09 46 20.4**	**-2.8**
	baz=145						
OBIP	**Obispado Ponce**	**21.05**	**72**	IAmb	IAmb	09 43 00.4	
	comp=Z,491nm,1.1s						
GOGA	**Godfrey**	**21.09**	**10**	P	**P**	**09 42 36.1**	**+2.7**
GOGA	**Godfrey**	**21.09**	**10**	P	**P**	**09 42 36.1**	**+2.7**
GOGA				pmax	pmax		
	comp=Z,970nm,0.7s						
GOGA	**Godfrey**	**21.09**	**10**	P	**P**	**09 42 36.8**	**+3.4**
	baz=192,SNR=476						
GOGA				S	Sn	09 46 29.5	-5.1
	baz=192						
Z41A	**Richland Creek**	**21.10**	**348**	P	**P**	**09 42 35.9**	**+2.4**
	baz=166,SNR=180						
Z41A				S	**S**	**09 46 28.6**	**+4.2**
	baz=166						
158A	**Hollywood**	**21.20**	**18**	P	**P**	**09 42 37.9**	**+3.3**
	baz=200,SNR=31						
158A				S	Sn	09 46 35.3	-2.0
	baz=200						
Y49A	**Blount Mountai**	**21.20**	**3**	P	**P**	**09 42 36.9**	**+2.2**
Y49A				IAmb	IAmb	09 42 40.5	
	comp=Z,480nm,0.8s						
Y49A				ScP	**ScP**	**09 50 08.5**	**-0.1**
WHTX	**Lake Whitney,**	**21.29**	**337**	P	**P**	**09 42 36.7**	**+1.1**
WHTX				ScP	**ScP**	**09 50 10.3**	**+1.4**
WHTX	**Lake Whitney,**	**21.29**	**337**	P	**P**	**09 42 37.1**	**+1.4**
	baz=153,SNR=24						
WHTX				S	**S**	**09 46 29.2**	**+0.9**
	baz=153						
Y52A	**Lilburn**	**21.44**	**8**	P	**P**	**09 42 40.1**	**+2.9**
	baz=190,SNR=323						
Y52A				S	**S**	**09 46 36.2**	**+4.9**
	baz=190						
Z56A	**Williston**	**21.44**	**15**	P	**P**	**09 42 40.2**	**+3.1**
	baz=197,SNR=92						
Z56A				S	Sn	09 46 37.8	-5.3
	baz=197						
SJG	**San Juan**	**21.49**	**73**	P	**P**	**09 42 37.7**	**-0.2**
	comp=Z,247nm,0.9s,baz=262,slow=7.3,SNR=91						
SJG				ScP	**ScP**	**09 50 09.4**	**-0.1**
	comp=Z,36nm,1.1s,baz=302,slow=4.4,SNR=5.1						
SJG				ScS	**ScS**	**09 53 53.2**	**-0.8**
	comp=Z,26nm,1.1s,baz=54,slow=23,SNR=25						
SJG	**San Juan**	**21.49**	**73**	⇑*i*P	**P**	**09 42 38.6**	**+0.7**
SJG	**San Juan**	**21.49**	**73**	P	**P**	**09 42 38.3**	**+0.5**
SJG				IAmb	IAmb	09 43 04.4	
	comp=Z,392nm,1.0s						
SJG	**San Juan**	**21.49**	**73**	P	**P**	**09 42 38.3**	**+0.5**
SJG				pmax	pmax		
	comp=Z,392nm,1.0s						
CCAR	**Cane Creek**	**21.55**	**351**	IAmb	IAmb	09 43 32.1	
	comp=Z,751nm,1.1s						
NHSC	**New Hope**	**21.55**	**17**	P	**P**	**09 42 41.7**	**+3.3**
	baz=200,SNR=44						
NHSC				S	Sn	09 46 41.2	-4.6
	baz=200						
WLAR	**White Oak Lake**	**21.57**	**348**	IAmb	IAmb	09 43 07.1	
	comp=Z,643nm,0.9s						
Z57A	**Bowman**	**21.58**	**16**	P	**P**	**09 42 41.7**	**+3.0**
	baz=199,SNR=63						
Z57A				S	Sn	09 46 41.8	-4.6
	baz=199						
PDPR	**Patillas Dam,**	**21.59**	**73**	IAmb	IAmb	09 43 00.6	
	comp=Z,476nm,1.1s						
Z38A	**Mt. Pleasant**	**21.63**	**343**	P	**P**	**09 42 40.7**	**+1.6**
Z38A					**ScP**	**09 50 11.4**	**+1.7**
ATAH	**Atahualpa**	**21.67**	**154**	P	**P**	**09 42 42.4**	**+2.2**
	comp=Z,136nm,1.0s,baz=342,slow=9.0,SNR=134						
ATAH				ScP	**ScP**	**09 50 14.1**	**+3.5**
	comp=Z,38nm,1.1s,baz=343,slow=5.0,SNR=6.8						
ATAH				LR	LR	09 50 34.9	
	comp=Z,22µm,21.8s,baz=334,slow=35						
X48A	**Hartselle**	**21.77**	**1**	IAmb	IAmb	09 42 50.9	
	comp=Z,265nm,0.8s						
HUMP	**Col San Antoni**	**21.78**	**73**	IAmb	IAmb	09 42 45.5	
	comp=Z,294nm,0.8s						
Z58A	**St. Stephen**	**21.87**	**18**	P	**P**	**09 42 44.7**	**+2.9**
	baz=201,SNR=59						
Z58A				S	**S**	**09 46 45.1**	**+5.4**
	baz=201						
OXF	**Oxford**	**21.88**	**356**	IAmb	IAmb	09 43 02.0	
	comp=Z,740nm,1.1s						
OXF	**Oxford**	**21.88**	**356**	P	**P**	**09 42 43.5**	**+1.7**
	baz=176						
Y56A	**Pelion**	**21.90**	**14**	P	**P**	**09 42 44.9**	**+2.8**
	baz=197,SNR=50						
Y56A				S	**S**	**09 46 44.5**	**+4.4**
	baz=197						
Y55A	**Saluda**	**21.91**	**13**	P	**P**	**09 42 44.8**	**+2.6**
	baz=195,SNR=155						
Y55A				S	**S**	**09 46 44.8**	**+4.5**
	baz=195						
FPAL	**Fort Paine**	**21.94**	**5**	P	**P**	**09 42 44.5**	**+2.0**
FPAL				IAmb	IAmb	09 43 06.2	
	comp=Z,975nm,1.7s						
FPAL				ScP	**ScP**	**09 50 09.8**	**-0.7**
Z59A	**Georgetown, SC**	**21.95**	**19**	P	**P**	**09 42 45.7**	**+3.1**
	baz=202,SNR=30						
Z59A				S	**S**	**09 46 47.7**	**+6.6**
	baz=202						
X43A	**Marvell**	**22.02**	**353**	IAmb	IAmb	09 43 10.8	
	comp=Z,412nm,0.9s						
X43A	**Marvell**	**22.02**	**353**	P	**P**	**09 42 45.6**	**+2.2**
	baz=172,SNR=23						
X51A	**Calhoun**	**22.03**	**6**	P	**P**	**09 42 45.9**	**+2.4**
	baz=187,SNR=66						
X51A				S	**S**	**09 46 44.9**	**+2.4**
	baz=187						
MTP	**Monte Pirata**	**22.04**	**73**	IAmb	IAmb	09 42 47.7	
	comp=Z,564nm,0.8s						
HPIG		**22.08**	**313**	P	**P**	**09 42 46.0**	**+1.6**
HODGE	**Hodges**	**22.11**	**12**	IAmb	IAmb	09 43 08.2	
	comp=Z,522nm,1.0s						
X53A	**Estanollee**	**22.18**	**10**	P	**P**	**09 42 47.8**	**+2.7**
	baz=191,SNR=448						
X53A				S	**S**	**09 46 49.5**	**+4.3**
	baz=191						
X40A	**Basin Creek Fa**	**22.29**	**349**	IAmb	IAmb	09 43 12.3	
	comp=Z,391nm,1.2s						
X40A	**Basin Creek Fa**	**22.29**	**349**	P	**P**	**09 42 48.1**	**+1.8**
	baz=167,SNR=101						
X40A				S	**S**	**09 46 47.4**	**+0.3**
	baz=167						
PLAL	**Pickwick Lake**	**22.30**	**359**	P	**P**	**09 42 47.3**	**+1.0**
PLAL				IAmb	IAmb	09 43 09.6	
	comp=Z,394nm,1.4s						
PLAL				ScP	**ScP**	**09 50 10.6**	**-0.7**
TX31	**Lajitas Ar. Si**	**22.31**	**321**	P	**P**	**09 42 48.0**	**+1.3**
TX31				IAmb	IAmb	09 42 50.9	
	comp=Z,429nm,0.9s						
TX31				ScP	**ScP**	**09 50 13.3**	**+1.7**
TX32	**Lajitas Array**	**22.31**	**321**	IAmb	IAmb	09 42 50.9	
	comp=Z,405nm,0.9s						
TXAR	**Lajitas Array**	**22.31**	**321**	P	**P**	**09 42 48.3**	**+1.6**
	comp=Z,381nm,0.9s,baz=140,slow=9.5,SNR=635						
TXAR				S	**S**	**09 46 49.1**	**+1.3**
	comp=Z,16nm,0.9s,baz=101,slow=9.3,SNR=3.3						
TXAR				ScP	**ScP**	**09 50 11.3**	**-0.3**
	comp=Z,37nm,1.0s,baz=144,slow=4.5,SNR=20						
TXAR				ScS	**ScS**	**09 53 58.0**	**+1.1**
	comp=Z,0.8nm,0.9s,baz=97,slow=4.6,SNR=2.2						
CUPR	**Culebra, Puert**	**22.34**	**72**	P	**P**	**09 42 47.6**	**+0.7**
CUPR				IAmb	IAmb	09 42 51.2	
	comp=Z,295nm,0.8s						
Y57A	**Sumter**	**22.35**	**16**	IAmb	IAmb	09 42 51.7	
	comp=Z,767nm,1.4s						
Y57A	**Sumter**	**22.35**	**16**	P	**P**	**09 42 49.4**	**+2.5**
	baz=199,SNR=51						
Y57A				S	**S**	**09 46 52.1**	**+4.0**
	baz=199						
JSC	**Jenkinsville**	**22.38**	**14**	IAmb	IAmb	09 42 52.3	
	comp=Z,542nm,1.4s						
X54A	**Belton**	**22.39**	**12**	P	**P**	**09 42 50.1**	**+2.7**
	baz=194,SNR=203						
X54A				S	**S**	**09 46 52.6**	**+3.8**
	baz=194						
Y58A	**Scranton**	**22.45**	**18**	P	**P**	**09 42 50.2**	**+2.2**
	baz=201,SNR=37						
Y58A				S	**S**	**09 46 54.5**	**+4.7**
	baz=201						
X55A	**Gracelyn & Ava**	**22.47**	**13**	P	**P**	**09 42 51.0**	**+2.7**
	baz=196,SNR=143						
X55A				S	**S**	**09 46 54.8**	**+4.7**
	baz=196						
MIAR	**Mount Ida**	**22.50**	**347**	P	**P**	**09 42 49.9**	**+1.3**
MIAR				IAmb	IAmb	09 43 10.5	
	comp=Z,437nm,0.9s						
MIAR	**Mount Ida**	**22.50**	**347**	P	**P**	**09 42 49.9**	**+1.3**
MIAR				pmax	pmax		
	comp=Z,437nm,0.9s						
MIAR	**Mount Ida**	**22.50**	**347**	P	**P**	**09 42 49.9**	**+1.3**
	baz=165,SNR=360						
MIAR				S	**S**	**09 46 53.4**	**+2.7**
	baz=165						
MET	**Memphis--Engin**	**22.52**	**355**	IAmb	IAmb	09 42 52.4	
	comp=Z,1µm,1.7s						
SWET	**Sewanee**	**22.59**	**4**	P	**P**	**09 42 50.4**	**+0.9**
SWET				IAmb	IAmb	09 42 52.1	
	comp=Z,1µm,1.7s						
SWET				ScP	**ScP**	**09 50 11.3**	**-0.8**
W50A	**Signal Mountai**	**22.62**	**5**	IAmb	IAmb	09 42 52.6	
	comp=Z,1µm,1.9s						
W50A	**Signal Mountai**	**22.62**	**5**	P	**P**	**09 42 51.2**	**+1.4**
	baz=186,SNR=114						
W50A				S	**S**	**09 46 53.7**	**+1.1**
	baz=186						
X56A	**White Oak**	**22.63**	**14**	P	**P**	**09 42 52.5**	**+2.5**
	baz=197,SNR=150						
X56A				S	**S**	**09 46 56.9**	**+4.1**
	baz=197						
W52A	**Murphy**	**22.66**	**8**	IAmb	IAmb	09 42 53.9	
	comp=Z,1µm,1.6s						
W52A	**Murphy**	**22.66**	**8**	P	**P**	**09 42 52.8**	**+2.4**
	baz=190,SNR=111						
W52A				S	**S**	**09 46 57.0**	**+3.6**
	baz=190						
BG3	**Lake Jocassee**	**22.72**	**10**	P	**P**	**09 42 53.1**	**+2.2**
BG3				IAmb	IAmb	09 42 56.7	
	comp=Z,419nm,0.6s						
BG3				ScP	**ScP**	**09 50 12.1**	**-0.4**
PCRV	**Puerto La Cruz**	**22.74**	**94**	P	**P**	**09 42 51.1**	**-0.2**
	comp=Z,296nm,0.7s,baz=228,slow=4.8,SNR=78						
PCRV				S	**S**	**09 46 52.6**	**-2.4**
	comp=Z,12nm,0.6s,baz=354,slow=9.2,SNR=2.7						
PCRV				ScP	**ScP**	**09 50 11.6**	**-1.3**
	comp=Z,26nm,1.0s,baz=0.0,slow=8.1,SNR=4.0						
PCRV				LR	LR	09 53 36.8	
	comp=Z,17µm,20.9s,slow=42						
PCRV				ScS	**ScS**	**09 53 56.2**	**-2.7**
	comp=Z,9.9nm,0.7s,baz=325,slow=22,SNR=8.8						
ABTX	**Abilene, Hawle**	**22.75**	**333**	P	**P**	**09 42 51.7**	**+0.5**
	baz=149,SNR=91						
ABTX				S	**S**	**09 46 53.1**	**-1.7**
	baz=149						
Y59A	**Loris**	**22.77**	**19**	P	**P**	**09 42 53.6**	**+2.2**
	baz=203,SNR=26						
Y59A				S	**S**	**09 47 00.6**	**+5.5**
	baz=203						
PLCV	**Puerto La Cruz**	**22.79**	**94**		**S**	**09 46 52.6**	**-3.1**
PLCV					**ScP**	**09 50 11.6**	**-1.4**
X57A	**Johnson Farm,**	**22.85**	**16**	P	**P**	**09 42 54.4**	**+2.1**
	baz=199						
X57A				S	**S**	**09 47 01.1**	**+4.8**
	baz=199						
W53A	**Cullowhee**	**22.86**	**10**	P	**P**	**09 42 54.4**	**+2.0**
	baz=191,SNR=226						
W53A				S	**S**	**09 46 59.9**	**+3.3**
	baz=191						
W41B	**Gary Mavity, V**	**22.86**	**350**	P	**P**	**09 42 53.2**	**+0.9**
W41B				IAmb	IAmb	09 43 16.4	
	comp=Z,332nm,1.1s						
W41B				ScP	**ScP**	**09 50 12.9**	**+0.1**
W41B	**Gary Mavity, V**	**22.86**	**350**	P	**P**	**09 42 53.1**	**+0.9**
	baz=169,SNR=132						
W41B				S	**S**	**09 46 55.2**	**-1.2**
	baz=169						
W54A	**Cherokee Point**	**22.95**	**12**	P	**P**	**09 42 55.8**	**+2.5**
	baz=194,SNR=444						
W54A				S	**S**	**09 47 02.0**	**+4.0**
	baz=194						
Y60A	**Bolivia**	**23.00**	**21**	P	**P**	**09 42 55.6**	**+1.8**
	baz=204,SNR=33						
Y60A				S	**S**	**09 47 05.0**	**+6.1**
	baz=204						
X58A	**Rowland**	**23.15**	**18**	P	**P**	**09 42 57.3**	**+2.1**
	baz=201,SNR=63						
X58A				S	**S**	**09 47 04.1**	**+3.0**
	baz=201						
W39A	**Magazine**	**23.17**	**347**	P	**P**	**09 42 57.1**	**+1.7**
	baz=165,SNR=142						
KMSC	**Kings Mountain**	**23.18**	**13**	IAmb	IAmb	09 43 00.8	
	comp=Z,393nm,0.6s						
KMSC	**Kings Mountain**	**23.18**	**13**	P	**P**	**09 42 57.8**	**+2.3**
	baz=196,SNR=224						
KMSC				S	**S**	**09 47 05.2**	**+3.5**
	baz=196						
TKL	**Tuckaleechee C**	**23.24**	**8**	P	**P**	**09 42 57.5**	**+1.5**
	comp=Z,458nm,0.8s,baz=183,slow=9.9,SNR=152						
TKL				S	**S**	**09 47 00.8**	**-1.9**
	comp=Z,59nm,1.1s,baz=352,slow=19,SNR=2.2						
TKL				ScP	**ScP**	**09 50 12.6**	**-1.1**
	comp=Z,28nm,1.0s,baz=148,slow=7.9,SNR=3.6						
TKL				LR	LR	09 53 23.3	
	comp=Z,16µm,18.9s,baz=181,slow=40						
HALT	**Halls**	**23.27**	**357**	IAmb	IAmb	09 43 26.3	
	comp=Z,913nm,1.4s						
V51A	**Loudon**	**23.31**	**7**	P	**P**	**09 42 58.0**	**+1.3**
V51A				IAmb	IAmb	09 43 45.1	
	comp=Z,1µm,1.6s						
V51A				ScP	**ScP**	**09 50 13.6**	**-0.3**
V51A	**Loudon**	**23.31**	**7**	P	**P**	**09 42 58.6**	**+1.9**
	baz=188,SNR=87						
V51A				S	**S**	**09 47 06.2**	**+2.4**
	baz=188						
W56A	**Indian Trail**	**23.36**	**15**	P	**P**	**09 42 59.2**	**+2.0**
	baz=198,SNR=93						
W56A				S	**S**	**09 47 09.1**	**+4.5**
	baz=198						
X59A	**McDuffie Farm,**	**23.39**	**19**	P	**P**	**09 42 59.4**	**+1.9**
	baz=203,SNR=74						
V53A	**Saluda**	**23.40**	**10**	P	**P**	**09 42 59.4**	**+1.8**
V53A	**Saluda**	**23.40**	**10**	P	**P**	**09 42 59.9**	**+2.3**
	baz=192,SNR=264						
V53A				S	**S**	**09 47 06.7**	**+1.3**
	baz=192						
WVT	**Waverly**	**23.44**	**360**	P	**P**	**09 42 57.9**	**+0.1**
WVT				IAmb	IAmb	09 43 38.1	
	comp=Z,421nm,1.6s						
WVT	**Waverly**	**23.44**	**360**	P	**P**	**09 42 57.9**	**+0.1**
WVT				pmax	pmax		
	comp=Z,421nm,1.6s						
WVT	**Waverly**	**23.44**	**360**	P	**P**	**09 42 58.0**	**+0.1**
	baz=180						
WVT				S	**S**	**09 47 05.1**	**-0.7**
	baz=180						
V52A	**Sevierville**	**23.45**	**8**	P	**P**	**09 43 00.1**	**+2.1**
	baz=190,SNR=97						
V52A				S	**S**	**09 47 09.4**	**+3.3**
	baz=190						
LNXT	**Lenox**	**23.47**	**356**	IAmb	IAmb	09 43 23.3	
	comp=Z,516nm,0.9s						
PEBM	**Pemiscott Bayo**	**23.50**	**356**	IAmb	IAmb	09 43 17.0	
	comp=Z,540nm,1.0s						
W57A	**Gilead**	**23.53**	**16**	IAmb	IAmb	09 43 03.1	
	comp=Z,294nm,0.6s						
W57A	**Gilead**	**23.53**	**16**	P	**P**	**09 43 00.5**	**+1.9**
	baz=199,SNR=120						
W57A				S	**S**	**09 47 12.1**	**+4.8**
	baz=199						
FCAR	**Ozark Folk Cen**	**23.54**	**351**	IAmb	IAmb	09 43 02.3	
	comp=Z,256nm,0.7s						
LCAR	**Lake Charles**	**23.59**	**353**	IAmb	IAmb	09 43 02.3	
	comp=Z,236nm,0.7s						
X60A	**Albert Glenn T**	**23.61**	**20**	P	**P**	**09 43 01.4**	**+2.0**
	baz=204,SNR=86						
X60A				S	**S**	**09 47 12.6**	**+4.1**
	baz=204						
W58A	**Raeford**	**23.62**	**18**	P	**P**	**09 43 01.5**	**+2.0**
	baz=201,SNR=96						
W58A				S	**S**	**09 47 13.1**	**+4.3**
	baz=201						
GLAT	**Glass**	**23.62**	**357**	IAmb	IAmb	09 43 25.9	
	comp=Z,350nm,0.8s						
V54A	**Nebo**	**23.67**	**12**	P	**P**	**09 43 02.3**	**+2.3**
	baz=194,SNR=334						
V54A				S	**S**	**09 47 13.7**	**+4.1**
	baz=194						
PVMO	**Portageville**	**23.79**	**356**	P	**P**	**09 43 01.9**	**+0.9**
PVMO				IAmb	IAmb	09 43 46.3	
	comp=Z,327nm,1.0s						
PENMO	**Penman**	**23.82**	**356**	IAmb	IAmb	09 43 53.8	
	comp=Z,679nm,1.3s						
HICK	**Hickman**	**23.89**	**357**	IAmb	IAmb	09 43 44.6	
	comp=Z,660nm,1.1s						
V55A	**Taylorsville**	**23.89**	**13**	P	**P**	**09 43 04.3**	**+2.3**
	baz=196,SNR=98						
V55A				S	**S**	**09 47 17.3**	**+4.1**
	baz=196						
W35A	**Tecumseh**	**23.95**	**341**	P	**P**	**09 43 02.6**	**+0.1**
W35A				ScP	**ScP**	**09 50 16.2**	**+0.5**
W59A	**Clinton**	**23.99**	**19**	P	**P**	**09 43 04.9**	**+2.1**
	baz=203,SNR=17						
W59A				S	**S**	**09 47 18.3**	**+3.5**
	baz=203						
V56A	**Mocksville**	**24.02**	**15**	P	**P**	**09 43 05.0**	**+1.9**
	baz=197,SNR=199						
V56A				S	**S**	**09 47 19.5**	**+4.2**
	baz=197						
ORIV	**Oritupano**	**24.11**	**96**	*e*P	**P**	**09 43 04.3**	**+0.1**
ORIV	**Oritupano**	**24.11**	**96**	*e*	**S**	**09 47 24.9**	**+7.7**
U40A	**Yellville**	**24.12**	**350**	IAmb	IAmb	09 43 10.0	
	comp=Z,216nm,0.7s						
U40A	**Yellville**	**24.12**	**350**	P	**P**	**09 43 04.6**	**+0.6**
	baz=168,SNR=242						
U40A				S	**S**	**09 47 15.2**	**-1.6**
	baz=168						
U53A	**Fall Branch**	**24.12**	**10**	P	**P**	**09 43 06.2**	**+2.1**
	baz=192,SNR=268						
U53A				S	**S**	**09 47 20.2**	**+3.2**
	baz=192						
W60A	**Pink Hill**	**24.13**	**20**	P	**P**	**09 43 06.3**	**+2.2**
	baz=204,SNR=91						
W60A				S	**S**	**09 47 21.2**	**+4.2**
	baz=204						
SABA	**Saba**	**24.13**	**75**	*e*P	**P**	**09 43 04.0**	**-0.4**
SABA	**Saba**	**24.13**	**75**	*e*P	**P**	**09 43 05.2**	**+0.9**
SABA	**Saba**	**24.13**	**75**	*e*	**S**	**09 47 23.6**	**+6.1**
SABA	**Saba**	**24.13**	**75**	P	**P**	**09 43 04.0**	**-0.4**
TZTN	**Tazewell**	**24.14**	**8**	P	**P**	**09 43 05.8**	**+1.6**
TZTN				IAmb	IAmb	09 43 59.1	
	comp=Z,517nm,1.2s						
TZTN				ScP	**ScP**	**09 50 15.9**	**-0.3**
TZTN	**Tazewell**	**24.14**	**8**	P	**P**	**09 43 06.0**	**+1.8**
	baz=190,SNR=88						
TZTN				S	**S**	**09 47 20.2**	**+3.0**
	baz=190						
PBMO	**Poplar Bluff**	**24.21**	**355**	IAmb	IAmb	09 43 07.9	
	comp=Z,287nm,0.8s						
WMOK	**Wichita Mounta**	**24.23**	**337**	P	**P**	**09 43 05.9**	**+0.8**
	baz=153,SNR=176						
WMOK				S	**S**	**09 47 19.6**	**+0.8**
	baz=153						
CNNC	**Cliffs of the**	**24.24**	**20**	P	**P**	**09 43 07.2**	**+2.1**
	baz=204,SNR=60						
CNNC				S	**S**	**09 47 23.1**	**+4.3**
	baz=204						
HHAR	**Hobbs**	**24.25**	**348**	IAmb	IAmb	09 43 12.0	
	comp=Z,224nm,0.7s						
V57A	**Coltrane Farms**	**24.28**	**16**	P	**P**	**09 43 07.1**	**+1.6**
	baz=199,SNR=188						
V57A				S	**S**	**09 47 23.2**	**+3.8**
	baz=199						
LPIG	**La Paz**	**24.28**	**301**	P	**P**	**09 43 07.0**	**+1.4**
	comp=Z,178nm,0.9s,baz=47,slow=1.9,SNR=10						
T47A	**Sharon Grove**	**24.30**	**1**	P	**P**	**09 43 05.9**	**+0.2**
T47A				ScP	**ScP**	**09 50 15.8**	**-0.8**
TUL1	**Leonard**	**24.34**	**344**	P	**P**	**09 43 06.8**	**+0.8**
	baz=161,SNR=209						
TUL1				S	**S**	**09 47 20.5**	**+0.1**
	baz=161						
SMRT	**St. Maarten**	**24.36**	**74**	*e*P	**P**	**09 43 05.6**	**-0.8**
SMRT	**St. Maarten**	**24.36**	**74**	*e*	pP	09 43 23.0	0.0
SMRT	**St. Maarten**	**24.36**	**74**	*e*	**S**	**09 47 28.9**	**+7.9**
SEUS	**St. Eustatius**	**24.36**	**75**	*e*P	**P**	**09 43 05.9**	**-0.5**
SEUS	**St. Eustatius**	**24.36**	**75**	P	**P**	**09 43 05.9**	**-0.5**
SEUS	**St. Eustatius**	**24.36**	**75**	IAmb	IAmb	09 43 08.1	
	comp=Z,716nm,0.9s						
V58A	**Windy Hill, Pi**	**24.37**	**17**	P	**P**	**09 43 08.4**	**+2.1**
	baz=201,SNR=257						
V58A				S	**S**	**09 47 23.9**	**+3.0**
	baz=201						
U54A	**Nelsons Funny**	**24.41**	**12**	P	**P**	**09 43 08.4**	**+1.7**
U54A	**Nelsons Funny**	**24.41**	**12**	P	**P**	**09 43 08.4**	**+1.7**
	baz=194,SNR=302						
U54A				S	**S**	**09 47 24.9**	**+3.2**
	baz=194						
T50A	**Nancy**	**24.46**	**6**	P	**P**	**09 43 08.4**	**+1.3**
	baz=187,SNR=109						
T50A				S	**S**	**09 47 24.4**	**+2.0**
	baz=187						
T49A	**Edmonton**	**24.49**	**4**	IAmb	IAmb	09 43 28.8	
	comp=Z,217nm,0.8s						
T49A	**Edmonton**	**24.49**	**4**	P	**P**	**09 43 08.6**	**+1.2**
	baz=185,SNR=98						
T49A				S	**S**	**09 47 22.8**	**0.0**
	baz=185						
W61A	**Ground Anchor**	**24.49**	**22**	P	**P**	**09 43 10.0**	**+2.6**
	baz=206,SNR=26						
U38A	**Gravette**	**24.50**	**347**	P	**P**	**09 43 08.1**	**+0.6**
U38A				IAmb	IAmb	09 43 29.7	
	comp=Z,234nm,0.8s						
U38A				ScP	**ScP**	**09 50 17.0**	**-0.2**
T51A	**Gray**	**24.51**	**7**	P	**P**	**09 43 09.5**	**+2.0**
	baz=189,SNR=106						
T51A				S	**S**	**09 47 24.8**	**+1.7**
	baz=189						
U55A	**TA2, Sparta**	**24.55**	**13**	P	**P**	**09 43 10.2**	**+2.2**
	baz=196,SNR=105						
U55A				S	**S**	**09 47 27.5**	**+3.6**
	baz=196						
U56A	**King**	**24.56**	**14**	IAmb	IAmb	09 43 32.2	
	comp=Z,276nm,0.9s						
U56A	**King**	**24.56**	**14**	P	**P**	**09 43 10.4**	**+2.4**
	baz=197,SNR=87						
U56A				S	**S**	**09 47 27.6**	**+3.6**
	baz=197						
SKI	**Saint Kitts**	**24.57**	**76**	*e*P	**P**	**09 43 07.7**	**-0.6**
SKI	**Saint Kitts**	**24.57**	**76**	P	**P**	**09 43 07.7**	**-0.6**
SKI	**Saint Kitts**	**24.57**	**76**	IAmb	IAmb	09 43 10.0	
	comp=Z,897nm,0.9s						
SKI	**Saint Kitts**	**24.57**	**76**	P	**P**	**09 43 07.7**	**-0.6**
SKI				pmax	pmax		
	comp=Z,897nm,0.9s						
SKOC	**St. Kitts, UWI**	**24.57**	**76**	*e*P	**P**	**09 43 10.1**	**+1.8**

V59A	Middlesex	24.61	19	P	P	09 43 10.3	+1.9
	baz=202,SNR=91						
V59A				S	S	09 47 27.7	+3.0
	baz=202						
T53A	Wise	24.73	10	P	P	09 43 11.5	+1.8
	baz=192,SNR=119						
T53A				S	S	09 47 29.2	+2.4
	baz=192						
T52A	Hallie	24.78	9	P	P	09 43 11.5	+1.4
T52A				IAmb	IAmb	09 43 33.9	
	comp=Z,575nm,1.3s						
T52A				ScP	ScP	09 50 17.8	-0.2
T52A	Hallie	24.78	9	P	P	09 43 11.8	+1.8
	baz=191,SNR=50						
T52A				S	S	09 47 30.8	+3.4
	baz=191						
MGMO	Mountain Grove	24.80	351	IAmb	IAmb	09 44 03.4	
	comp=Z,370nm,1.2s						
U57A	Blanch	24.91	16	P	P	09 43 13.0	+1.8
	baz=200,SNR=164						
U57A				S	S	09 47 31.5	+2.0
	baz=200						
V60A	Jim Taylor Roa	24.93	20	P	P	09 43 13.1	+1.8
	baz=205,SNR=149						
V60A				S	S	09 47 34.6	+4.8
	baz=205						
T54A	Tazewell	24.98	12	P	P	09 43 13.9	+2.0
	baz=194,SNR=92						
T54A				S	S	09 47 32.5	+1.7
	baz=194						
MLYT	Lee's Yard	25.01	77	*e*P	P	09 43 10.9	-1.5
MNTX	Cornudas Mount	25.03	322	IAmb	IAmb	09 43 56.6	
	comp=Z,1µm,2.0s						
MNTX	Cornudas Mount	25.03	322	P	P	09 43 13.6	+1.2
	baz=136,SNR=209						
MNTX				S	S	09 47 32.3	+0.7
	baz=136						
GUIV	Guiria	25.03	92	*e*P	P	09 43 05.2	-7.4
S44A	Carbondale	25.04	357	P	P	09 43 13.0	+0.6
S44A				IAmb	IAmb	09 43 15.3	
	comp=Z,244nm,0.8s						
S44A				ScP	ScP	09 50 18.2	-0.4
U58A	Oxford	25.09	18	P	P	09 43 14.7	+1.8
	baz=201,SNR=90						
U58A				S	S	09 47 36.2	+3.7
	baz=201						
S50A	Richmond	25.16	6	P	P	09 43 14.9	+1.4
	baz=188,SNR=40						
S50A				S	S	09 47 34.2	+0.7
	baz=188						
S49A	Springfield	25.18	5	P	P	09 43 14.6	+0.9
	baz=186,SNR=58						
S49A				S	S	09 47 34.1	+0.2
	baz=186						
V61A	Roper	25.19	22	P	P	09 43 16.2	+2.4
	baz=206,SNR=28						
V61A				S	S	09 47 38.9	+5.0
	baz=206						
T55A	Pulaski	25.20	13	P	P	09 43 16.2	+2.3
	baz=196,SNR=112						
T55A				S	S	09 47 37.3	+3.1
	baz=196						
S51A	Beattyville	25.22	8	IAmb	IAmb	09 43 35.3	
	comp=Z,204nm,0.8s						
S51A	Beattyville	25.22	8	P	P	09 43 15.5	+1.5
	baz=189,SNR=116						
S51A				S	S	09 47 36.8	+2.4
	baz=189						
V62A	Hyde County Ai	25.22	23	P	P	09 43 16.6	+2.6
	baz=208,SNR=10.0						
V62A				S	S	09 47 40.5	+6.1
	baz=208						
USIN	University of	25.27	0	IAmb	IAmb	09 43 18.7	
	comp=Z,213nm,0.6s						
U59A	Littleton	25.29	19	IAmb	IAmb	09 43 20.8	
	comp=Z,357nm,1.0s						
U59A	Littleton	25.29	19	P	P	09 43 16.4	+1.8
	baz=203,SNR=113						
U59A				S	S	09 47 39.4	+3.9
	baz=203						
T56A	Rocky Mt	25.29	14	P	P	09 43 16.9	+2.2
	baz=198,SNR=51						
T56A				S	S	09 47 38.8	+3.1
	baz=198						
MSTX	Muleshoe	25.32	330	P	P	09 43 16.2	+1.0
	baz=144,SNR=591						
MSTX				S	S	09 47 42.5	+6.1
	baz=144						
S52A	Salyersville	25.33	9	P	P	09 43 16.7	+1.7
	baz=190,SNR=51						
S52A				S	S	09 47 38.2	+2.1
	baz=190						
BLA	Blacksburg	25.37	14	IAmb	IAmb	09 43 21.3	
	comp=Z,217nm,0.8s						
BLA	Blacksburg	25.37	14	P	P	09 43 17.4	+1.9
	baz=197,SNR=77						
BLA				S	S	09 47 40.1	+3.1
	baz=197						
GRGR	Grenville	25.45	88	P	P	09 43 16.3	0.0
T57A	Hurt	25.46	16	IAmb	IAmb	09 43 21.9	
	comp=Z,200nm,0.7s						
T57A	Hurt	25.46	16	P	P	09 43 18.3	+2.1
	baz=199,SNR=82						
T57A				S	S	09 47 41.5	+3.2
	baz=199						
TDBA	Terre de Bas,	25.47	80	*e*P	P	09 43 16.4	-0.1
S53A	Williamson	25.48	10	P	P	09 43 18.1	+1.7
	baz=193,SNR=134						
S53A				S	S	09 47 41.6	+2.9
	baz=193						
T35A	Sooner Cattle	25.48	343	P	P	09 43 16.4	0.0
T35A				IAmb	IAmb	09 44 08.5	
	comp=Z,279nm,1.0s						
T35A				ScP	ScP	09 50 20.8	+0.8
S39A	Bolivar	25.50	350	IAmb	IAmb	09 43 19.6	
	comp=Z,276nm,0.8s						
ANWB	Willy Bob	25.51	75	*e*P	P	09 43 14.1	-2.8
ANWB	Willy Bob	25.51	75	P	P	09 43 14.1	-2.8
ANWB	Willy Bob	25.51	75	IAmb	IAmb	09 43 19.7	
	comp=Z,413nm,0.8s						
CBE	Ff, Capester	25.51	79	*e*P	P	09 43 17.5	+0.5
CCM	Cathedral Cave	25.56	354	P	P	09 43 17.6	+0.5
CCM				IAmb	IAmb	09 43 19.6	
	comp=Z,228nm,0.8s						
CCM	Cathedral Cave	25.56	354	P	P	09 43 17.6	+0.5
CCM				pmax	pmax		
	comp=Z,228nm,0.8s						
CCM	Cathedral Cave	25.56	354	P	P	09 43 17.6	+0.5
	baz=172						
AMTX	Amarillo	25.56	333	IAmb	IAmb	09 43 55.4	
	comp=Z,334nm,0.9s						
AMTX	Amarillo	25.56	333	P	P	09 43 18.6	+1.3
	baz=147						
WCI	Wyandotte Cave	25.57	3	P	P	09 43 17.7	+0.6
WCI				IAmb	IAmb	09 43 21.8	
	comp=Z,403nm,0.8s						
WCI				ScP	ScP	09 50 19.1	-1.1
WCI	Wyandotte Cave	25.57	3	P	P	09 43 17.7	+0.6
WCI				pmax	pmax		
	comp=Z,403nm,0.8s						
WCI	Wyandotte Cave	25.57	3	P	P	09 43 18.0	+0.8
	baz=183						
WCI				S	S	09 47 38.9	-1.0
	baz=183						
U60A	Pendleton	25.60	20	P	P	09 43 19.6	+2.1
	baz=204,SNR=76						
U60A				S	S	09 47 43.9	+3.4
	baz=204						
T58A	Grand View Acr	25.61	17	P	P	09 43 19.4	+1.8
	baz=201,SNR=72						
T58A				S	S	09 47 43.7	+3.1
	baz=201						
MDPO	Dominica; Chan	25.63	80	*e*P	P	09 43 19.4	+1.5
ABD	La Joyeuse, An	25.66	78	*e*P	P	09 43 17.3	-0.9
R49A	Shelbyville	25.70	5	IAmb	IAmb	09 43 40.5	
	comp=Z,347nm,1.6s						
R49A	Shelbyville	25.70	5	P	P	09 43 19.2	+0.8
	baz=186,SNR=91						
R49A				S	S	09 47 41.8	-0.2
	baz=186						
U61A	Possum Corner	25.72	21	P	P	09 43 20.8	+2.3
	baz=206,SNR=13						
S54A	Dingess, Beckl	25.75	12	IAmb	IAmb	09 43 47.7	
	comp=Z,725nm,1.6s						
S54A	Dingess, Beckl	25.75	12	P	P	09 43 20.6	+1.7
	baz=194,SNR=60						
S54A				S	S	09 47 46.1	+3.2
	baz=194						
DWS	Wesley	25.76	80	*e*P	P	09 43 18.1	-1.1
DWS	Wesley	25.76	80	*e*P	P	09 43 19.1	0.0
R50A	Paris	25.76	6	P	P	09 43 20.3	+1.4
	baz=188,SNR=35						
R50A				S	S	09 47 43.3	+0.2
	baz=188						
SVB	Belmont	25.79	86	*e*P	P	09 43 18.9	-0.5
SVB	Belmont	25.79	86	*e*P	P	09 43 20.2	+0.8
SVB	Belmont	25.79	86	*e*	S	09 47 44.6	+0.7
SVB	Belmont	25.79	86	P	P	09 43 19.6	+0.2
SVB				IAmb	IAmb	09 43 38.6	
	comp=Z,628nm,1.1s						
FCV	Fort Charlotte	25.80	86	*e*P	P	09 43 18.7	-0.8
SVV	Soufriere Volc	25.82	85	*e*P	P	09 43 21.4	+1.7
TPP	Pointe-a-Pierr	25.82	92	*e*P	P	09 43 21.0	+1.2
PCM	Pelee Case Pet	25.83	82	*e*P	P	09 43 19.8	0.0
PML	Morne Lenard	25.85	82	*e*P	P	09 43 20.3	+0.3
R51A	Hillsboro	25.87	7	P	P	09 43 21.5	+1.6
	baz=189,SNR=43						
R51A				S	S	09 47 45.9	+1.2
	baz=189						
CXM	Morne La Croix	25.87	82	*e*P	P	09 43 20.6	+0.3
SVN	Savane Anatole	25.87	82	*e*P	P	09 43 20.0	-0.2
GBMF	Grand Be	25.87	82	*e*P	P	09 43 20.0	-0.3
FDF	Fort de France	25.89	82	*e*P	P	09 43 12.2	-8.1
FDF	Fort de France	25.89	82	*e*P	P	09 43 19.0	-1.3
FDF	Fort de France	25.89	82	*e*P	P	09 43 20.3	0.0
FDF	Fort de France	25.89	82	P	P	09 43 20.4	0.0
FDF				IAmb	IAmb	09 43 40.8	
	comp=Z,839nm,1.5s						
FDF	Fort de France	25.89	82	P	P	09 43 20.4	+0.1
FDF				pmax	pmax		
	comp=Z,839nm,1.5s						
BAMF	Morne Balai	25.89	82	*e*P	P	09 43 20.8	+0.4
SVCV	St. Vincent, C	25.89	86	*e*P	P	09 43 22.6	+2.3
SVCV	St. Vincent, C	25.89	86	*e*	S	09 47 41.8	-3.8
S55A	Lewisburg	25.89	13	P	P	09 43 22.3	+2.1
	baz=196,SNR=74						
S55A				S	S	09 47 48.7	+3.6
	baz=196						
T59A	Double "B" Far	25.93	19	IAmb	IAmb	09 43 42.3	
	comp=Z,470nm,1.3s						
T59A	Double "B" Far	25.93	19	P	P	09 43 22.6	+2.1
	baz=203,SNR=48						
T59A				S	S	09 47 49.6	+3.9
	baz=203						
BIM	Bigot	25.96	83	*e*P	P	09 43 21.0	0.0
TRMF	Trois Ilets	25.98	83	*e*P	P	09 43 20.5	-0.6
TRMF	Trois Ilets	25.98	83	*e*P	P	09 43 21.2	+0.1
SLB	Belfond	25.98	84	*e*P	P	09 43 22.1	+0.8
SLB	Belfond	25.98	84	*e*	S	09 47 35.3	-12
SLB	Belfond	25.98	84	*e*	S	09 47 49.8	+2.7
ZAM	Aeronautique	26.00	83	*e*P	P	09 43 21.0	-0.3
S56A	Natural Bridge	26.02	15	P	P	09 43 23.5	+2.2
	baz=198,SNR=60						
S56A				S	S	09 47 51.4	+4.2
	baz=198						
R52A	Catlettsburg	26.04	9	P	P	09 43 23.0	+1.6
	baz=191,SNR=37						
R52A				S	S	09 47 48.7	+1.4
	baz=191						
OLIL	Olney	26.04	359	P	P	09 43 22.2	+0.8
OLIL				IAmb	IAmb	09 43 24.7	
	comp=Z,194nm,0.7s						
OLIL				ScP	ScP	09 50 20.9	-0.7
SLBI	Saint Lucia, B	26.05	84	*e*P	P	09 43 22.9	+1.1
SLBI	Saint Lucia, B	26.05	84	*e*	S	09 47 49.8	+1.9
DEG	La Desirade	26.06	79	*e*	P	09 43 22.6	+0.7
LPMF	Morne Lapointe	26.06	83	*e*P	P	09 43 21.9	+0.1
MCLT	Moule a Chique	26.08	85	*e*P	P	09 43 20.5	-1.6
MCLT	Moule a Chique	26.08	85	*e*P	P	09 43 22.1	+0.1
SLAC	Saint Lucia, A	26.12	84	*e*P	P	09 43 22.0	-0.4
SLAC	Saint Lucia, A	26.12	84	*e*	pP	09 43 40.1	+1.0
SLAC	Saint Lucia, A	26.12	84	*e*	S	09 47 47.7	-1.5
R53A	Hurricane	26.14	10	IAmb	IAmb	09 43 26.8	
	comp=Z,196nm,0.6s						
R53A	Hurricane	26.14	10	P	P	09 43 24.0	+1.6
	baz=193,SNR=48						
R53A				S	S	09 47 52.1	+3.0
	baz=193						
MPOM	Morne Pois Mar	26.16	83	*e*P	P	09 43 22.3	-0.4
R54A	Victor	26.18	12	P	P	09 43 24.5	+1.8
	baz=195,SNR=67						
R54A				S	S	09 47 52.8	+3.1
	baz=195						
S57A	Dark Hollow, R	26.26	16	P	P	09 43 25.2	+1.8
	baz=200,SNR=36						
S57A				S	S	09 47 54.9	+4.0
	baz=200						
Q48A	North Vernon	26.29	3	P	P	09 43 24.2	+0.5
	baz=184,SNR=68						
T60A	Surry	26.35	20	IAmb	IAmb	09 43 46.3	
	comp=Z,442nm,1.1s						
T60A	Surry	26.35	20	P	P	09 43 26.4	+2.2
	baz=205,SNR=17						
Q50A	Georgetown	26.36	7	P	P	09 43 25.4	+1.2
	baz=188,SNR=9.3						
Q50A				S	S	09 47 52.7	+0.3
	baz=188						
S58A	Poland Farm, P	26.37	17	IAmb	IAmb	09 43 46.2	
	comp=Z,476nm,1.6s						
S58A	Poland Farm, P	26.37	17	P	P	09 43 26.3	+1.9
	baz=202,SNR=37						
S58A				S	S	09 47 55.3	+2.6
	baz=202						
Q49A	Aurora	26.43	5	P	P	09 43 25.8	+0.9
	baz=186,SNR=64						
Q49A				S	S	09 47 52.4	-1.1
	baz=186						
R55A	Marlinton	26.47	13	IAmb	IAmb	09 43 30.5	
	comp=Z,210nm,0.6s						
R55A	Marlinton	26.47	13	P	P	09 43 27.1	+1.8
	baz=197,SNR=89						
R55A				S	S	09 47 57.5	+3.2
	baz=197						
BLO	Bloomington	26.50	2	IAmb	IAmb	09 44 13.1	
	comp=Z,341nm,1.4s						
TOSP	Speyside	26.61	90	*e*P	P	09 43 27.8	+1.0
Q51A	Peebles	26.61	8	IAmb	IAmb	09 43 48.0	
	comp=Z,434nm,0.8s						
Q51A	Peebles	26.61	8	P	P	09 43 28.2	+1.6
	baz=190,SNR=121						
Q51A				S	S	09 47 57.7	+1.2
	baz=190						
NNA	Nana	26.69	156	P	P	09 43 29.6	+2.1
	comp=Z,25nm,0.8s,baz=323,slow=9.8,SNR=25						
NNA				S	S	09 47 59.9	+1.8
	comp=Z,2.3nm,0.3s,baz=45,slow=7.1,SNR=1.4						
NNA				ScP	ScP	09 50 24.4	+0.6
	comp=Z,4.9nm,0.5s,baz=228,slow=14,SNR=2.8						
NNA				LR	LR	09 52 20.4	
	comp=Z,13µm,21.2s,baz=318,slow=32						
NNA				ScS	ScS	09 54 16.2	+1.4
	comp=Z,1.8nm,0.3s,baz=221,slow=19,SNR=2.4						
NNA	Nana	26.69	156	P	P	09 43 29.3	+1.7
NNA				IAmb	IAmb	09 44 00.8	
	comp=Z,242nm,1.1s						
NNA	Nana	26.69	156	P	P	09 43 29.3	+1.7
NNA				S	S	09 47 59.9	+1.8
NNA						09 54 16.2	
NNA				pmax	pmax		
	comp=Z,242nm,1.2s						
Q52A	Bidwell	26.71	9	P	P	09 43 29.1	+1.7
	baz=192,SNR=131						
Q53A	Leroy	26.73	11	P	P	09 43 29.4	+1.7
	baz=193,SNR=70						
S59A	Mechanicsville	26.74	19	P	P	09 43 29.8	+2.1
	baz=203,SNR=38						
S59A				S	S	09 48 04.9	+6.5
	baz=203						
R58B	Mineral	26.75	17	P	P	09 43 29.0	+1.2
R58B					ScP	09 50 22.4	-1.2
R58B	Mineral	26.75	17	P	P	09 43 29.7	+1.9
	baz=202,SNR=43						
R58B				S	S	09 48 03.5	+4.9
	baz=202						
R56A	Bull Pasture M	26.75	15	P	P	09 43 30.3	+2.3
	baz=198,SNR=66						
R56A				S	S	09 48 03.7	+4.9
	baz=198						
P48A	Milroy	26.84	4	P	P	09 43 29.0	+0.4
	baz=185,SNR=64						
P48A				S	S	09 47 59.9	-0.1
	baz=185						
R57A	Stanardsville	26.88	16	P	P	09 43 30.9	+1.9
	baz=200,SNR=123						
R57A				S	S	09 48 05.5	+4.9
	baz=200						
S60A	Water View	26.89	20	P	P	09 43 31.3	+2.2
	baz=204,SNR=30						
P49A	Miami Univ. Ec	26.97	5	P	P	09 43 30.2	+0.4
	baz=186,SNR=41						
P49A				S	S	09 48 02.0	-0.1
	baz=186						
Q54A	Coxs Mills	26.99	12	P	P	09 43 31.8	+1.9
	baz=195,SNR=191						
Q54A				S	S	09 48 04.6	+2.3
	baz=195						
P43A	Skaggs, Pawnee	26.99	357	P	P	09 43 30.2	+0.2
P43A				IAmb	IAmb	09 44 29.0	
	comp=Z,590nm,1.9s						
P43A				ScP	ScP	09 50 24.1	-0.2
R58A	Rapidan	27.02	17	P	P	09 43 32.3	+2.0
	baz=201,SNR=92						
R58A				S	S	09 48 07.6	+4.7
	baz=201						
121A	Cookes Peak, D	27.07	320	IAmb	IAmb	09 43 38.1	
	comp=Z,387nm,1.2s						
121A	Cookes Peak, D	27.07	320	P	P	09 43 33.6	+2.6
	baz=133,SNR=141						
P51A	Williamsport	27.10	8	IAmb	IAmb	09 43 51.9	
	comp=Z,176nm,0.9s						
P51A	Williamsport	27.10	8	P	P	09 43 32.1	+1.2
	baz=190,SNR=119						
P51A				S	S	09 48 05.1	+1.0
	baz=190						
HSIG		27.11	311	P	P	09 43 35.8	+4.6
CBN	Corbin Frederi	27.12	18	IAmb	IAmb	09 43 53.3	
	comp=Z,350nm,0.9s						
CBN	Corbin Frederi	27.12	18	P	P	09 43 33.6	+2.5
	baz=202,SNR=30						
CBN				S	S	09 48 09.2	+4.8
	baz=202						
P50A	Jamestown	27.13	7	P	P	09 43 32.2	+0.9
	baz=188,SNR=40						
P50A				S	S	09 48 04.8	+0.1
	baz=188						
Q55A	Buckhannon	27.16	13	P	P	09 43 33.7	+2.1
	baz=196,SNR=104						
R59A	King George, V	27.20	18	P	P	09 43 34.3	+2.5
	baz=203,SNR=42						
S61A	Accomac	27.20	21	P	P	09 43 34.7	+2.9
	baz=206						
S61A				S	S	09 48 11.8	+6.1
	baz=206						
319A	Douglas	27.29	317	IAmb	IAmb	09 43 40.5	
	comp=Z,375nm,1.6s						
P53A	Whipple	27.37	11	IAmb	IAmb	09 43 38.9	
	comp=Z,402nm,0.9s						
P53A	Whipple	27.37	11	P	P	09 43 35.3	+2.0
	baz=193,SNR=162						
P53A				S	S	09 48 10.0	+1.7
	baz=193						
BCHC	Barbados, Cave	27.37	86	*e*	P	09 43 36.2	+2.6
P52A	Corning	27.39	9	P	P	09 43 34.9	+1.4
	baz=192,SNR=79						
P52A				S	S	09 48 08.8	+0.2
	baz=192						
Q56A	Snyder Ridge,	27.41	15	IAmb	IAmb	09 43 40.4	
	comp=Z,180nm,0.7s						
Q56A	Snyder Ridge,	27.41	15	P	P	09 43 36.4	+2.7
	baz=198,SNR=78						
Q56A				S	S	09 48 15.9	+6.9
	baz=198						
R60A	Leonardtown, M	27.43	19	P	P	09 43 36.5	+2.6
	baz=204,SNR=49						
BBGH	Gun Hill	27.44	86	*e*P	pP	09 43 49.8	-1.2
O44A	Mansfield	27.46	359	P	P	09 43 34.2	0.0
O44A				IAmb	IAmb	09 43 37.0	
	comp=Z,168nm,0.6s						
O44A					ScP	09 50 25.1	-0.6
KSU1	Kansas State U	27.56	345	P	P	09 43 35.7	+0.6
	baz=161						
KSU1				S	S	09 48 11.9	+0.5
	baz=161						
Q57A	Strasburg	27.60	16	P	P	09 43 37.6	+2.1
	baz=200,SNR=69						
Q57A				S	S	09 48 16.2	+4.2
	baz=200						
Y22D	IRIS PASSCAL I	27.63	324	IAmb	IAmb	09 43 44.0	
	comp=Z,418nm,1.1s						
Y22D	IRIS PASSCAL I	27.63	324	P	P	09 43 38.6	+2.6
	baz=136						
O49A	Covington	27.65	6	IAmb	IAmb	09 43 39.0	
	comp=Z,149nm,0.8s						
O49A	Covington	27.65	6	P	P	09 43 36.8	+0.9
	baz=187,SNR=78						
O49A				S	S	09 48 11.7	-1.1
	baz=187						
O48A	Farmland	27.65	4	P	P	09 43 36.2	+0.3
	baz=185,SNR=28						
O48A				S	S	09 48 12.6	-0.2
	baz=185						
P54A	Burton	27.65	12	P	P	09 43 37.6	+1.6
	baz=195,SNR=65						
O50A	Cable	27.68	7	P	P	09 43 37.2	+1.0
	baz=188,SNR=277						
O50A				S	S	09 48 13.0	-0.3
	baz=188						
SFIN	Lafayette	27.69	1	IAmb	IAmb	09 44 28.6	
	comp=Z,444nm,1.5s						
SFIN	Lafayette	27.69	1	P	P	09 43 36.4	+0.2
	baz=181,SNR=101						
P55A	Reedsville	27.70	13	P	P	09 43 38.4	+2.0
	baz=197,SNR=42						
Q58A	Fox Den Farm,	27.71	17	P	P	09 43 38.6	+2.1
	baz=201,SNR=56						
Q58A				S	S	09 48 17.4	+3.6
	baz=201						
O51A	Pataskala	27.82	8	P	P	09 43 38.5	+1.2
	baz=191,SNR=137						
O51A				S	S	09 48 15.2	-0.2
	baz=191						
ACSO	Alum Creek Sta	27.85	8	IAmb	IAmb	09 43 58.7	
	comp=Z,304nm,0.9s						
ACSO	Alum Creek Sta	27.85	8	P	P	09 43 38.9	+1.3
	baz=190,SNR=79						
ACSO				S	S	09 48 16.0	+0.1
	baz=190						
HDIL	Hopedale	27.89	357	IAmb	IAmb	09 43 40.0	
	comp=Z,294nm,1.3s						
HDIL	Hopedale	27.89	357	P	P	09 43 38.4	+0.4
	baz=177,SNR=20						
HDIL				S	S	09 48 13.7	-2.8
	baz=177						
R61A	Willards	27.90	21	IAmb	IAmb	09 43 44.5	
	comp=Z,319nm,0.8s						
R61A	Willards	27.90	21	P	P	09 43 40.4	+2.3
	baz=206,SNR=14						
O52A	Adamsville	27.90	10	IAmb	IAmb	09 43 59.3	
	comp=Z,419nm,1.1s						
O52A	Adamsville	27.90	10	P	P	09 43 39.6	+1.4
	baz=192,SNR=102						
O52A				S	S	09 48 17.8	+1.0
	baz=192						
P56A	Dayton Farm, R	27.93	15	P	P	09 43 40.6	+2.2
	baz=199,SNR=79						
P56A				S	S	09 48 24.6	+7.4
	baz=199						
Q59A	Harwood	27.95	19	P	P	09 43 40.8	+2.3
	baz=203,SNR=15						
Q59A				S	S	09 48 22.3	+4.9
	baz=203						
ANMO	Albuquerque	28.00	326	P	P	09 43 40.6	+1.3
	comp=Z,40nm,1.0s,baz=143,slow=10,SNR=106						
ANMO				ScP	ScP	09 50 28.6	+0.8
	comp=Z,13nm,1.0s,baz=89,slow=3.8,SNR=4.4						
ANMO				LR	LR	09 56 35.5	
	comp=Z,6µm,19.3s,baz=138,slow=40						
ANMO	Albuquerque	28.00	326	P	P	09 43 41.1	+1.7
ANMO	Albuquerque	28.00	326	*c i*P	P	09 43 40.2	+0.8
ANMO				pmax	pmax		
	comp=Z,42nm,1.1s						
ANMO	Albuquerque	28.00	326	P	P	09 43 41.5	+2.1
	baz=138						
ANMO				S	S	09 48 25.3	+6.4
	baz=138						
P57A	Homestead Farm	28.13	16	IAmb	IAmb	09 44 02.5	
	comp=Z,316nm,1.0s						
P57A	Homestead Farm	28.13	16	P	P	09 43 42.7	+2.6
	baz=200,SNR=124						
P57A				S	S	09 48 24.5	+4.3
	baz=200						

O53A	**New Philadelph**	**28.14**	**11**	P	**P**	**09 43 41.9**	**+1.6**
	baz=193,SNR=162						
O53A				S	**S**	**09 48 21.4**	**+0.9**
	baz=193						
N41A	**Harden Midland**	**28.15**	**355**	IAmb	IAmb	09 43 43.5	
	comp=Z,179nm,0.7s						
CBKS	**Cedar Bluff**	**28.22**	**340**	IAmb	IAmb	09 43 45.0	
	comp=Z,251nm,0.7s						
CBKS	**Cedar Bluff**	**28.22**	**340**	P	**P**	**09 43 42.1**	**+1.0**
	baz=155,SNR=54						
O54A	**Avella**	**28.23**	**12**	IAmb	IAmb	09 43 46.0	
	comp=Z,224nm,0.7s						
O54A	**Avella**	**28.23**	**12**	P	**P**	**09 43 42.5**	**+1.4**
	baz=195,SNR=115						
O54A				S	**S**	**09 48 23.4**	**+1.5**
	baz=195						
N47A	**Urbana**	**28.24**	**3**	IAmb	IAmb	09 43 44.3	
	comp=Z,117nm,0.7s						
N47A	**Urbana**	**28.24**	**3**	P	**P**	**09 43 40.9**	**-0.2**
	baz=184,SNR=51						
N47A				S	**S**	**09 48 18.6**	**-3.4**
	baz=184						
N48A	**Decatur**	**28.26**	**4**	P	**P**	**09 43 41.6**	**+0.3**
	baz=186,SNR=35						
P58A	**Pank, Wackersv**	**28.33**	**17**	P	**P**	**09 43 44.2**	**+2.2**
	baz=202,SNR=64						
P58A				S	**S**	**09 48 26.2**	**+2.7**
	baz=202						
Q60A	**Greensboro**	**28.33**	**20**	IAmb	IAmb	09 44 04.2	
	comp=Z,411nm,1.2s						
Q60A	**Greensboro**	**28.33**	**20**	P	**P**	**09 43 44.4**	**+2.4**
	baz=205,SNR=24						
N50A	**Nevada**	**28.36**	**7**	P	**P**	**09 43 43.3**	**+1.1**
	baz=189,SNR=47						
N50A				S	**S**	**09 48 24.1**	**+0.2**
	baz=189						
N49A	**Columbus Grove**	**28.39**	**6**	P	**P**	**09 43 42.9**	**+0.4**
N49A				IAmb	IAmb	09 43 45.7	
	comp=Z,179nm,0.7s						
N49A					SS	09 50 26.9	-0.2
N49A	**Columbus Grove**	**28.39**	**6**	P	**P**	**09 43 43.2**	**+0.7**
	baz=187,SNR=92						
Q61A	**Milford**	**28.40**	**21**	P	**P**	**09 43 45.0**	**+2.5**
	baz=206						
O55A	**Ligonier**	**28.49**	**14**	P	**P**	**09 43 44.8**	**+1.4**
	baz=197,SNR=21						
O55A				S	**S**	**09 48 27.9**	**+1.9**
	baz=197						
N51A	**Ashland**	**28.61**	**8**	IAmb	IAmb	09 44 05.7	
	comp=Z,166nm,0.8s						
N51A	**Ashland**	**28.61**	**8**	P	**P**	**09 43 45.2**	**+0.8**
	baz=191,SNR=51						
N51A				S	**S**	**09 48 28.1**	**+0.3**
	baz=191						
N52A	**McGinn's Farm,**	**28.61**	**10**	P	**P**	**09 43 45.6**	**+1.2**
	baz=192,SNR=101						
N52A				S	**S**	**09 48 26.9**	**-0.9**
	baz=192						
T25A	**Trinidad**	**28.67**	**331**	IAmb	IAmb	09 43 49.4	
	comp=Z,520nm,1.7s						
T25A	**Trinidad**	**28.67**	**331**	P	**P**	**09 43 47.6**	**+2.4**
	baz=144,SNR=64						
T25A				S	**S**	**09 48 30.6**	**+1.3**
	baz=144						
M44A	**Midewin, Midew**	**28.69**	**359**	IAmb	IAmb	09 44 41.9	
	comp=Z,534nm,1.5s						
P59A	**Jarrettsville**	**28.70**	**18**	P	**P**	**09 43 47.4**	**+2.2**
	baz=203,SNR=49						
P59A				S	**S**	**09 48 33.4**	**+4.1**
	baz=203						
M47A	**Cromwell**	**28.72**	**3**	P	**P**	**09 43 45.4**	**0.0**
	baz=184,SNR=19						
M47A				S	**S**	**09 48 27.1**	**-2.5**
	baz=184						
O56A	**Blue Knob Stat**	**28.72**	**15**	IAmb	IAmb	09 44 36.7	
	comp=Z,414nm,1.7s						
O56A	**Blue Knob Stat**	**28.72**	**15**	P	**P**	**09 43 47.5**	**+2.0**
	baz=199,SNR=20						
O56A				S	**S**	**09 48 32.6**	**+2.8**
	baz=199						
N53A	**Lisbon**	**28.75**	**11**	P	**P**	**09 43 46.4**	**+0.8**
N53A				IAmb	IAmb	09 43 49.8	
	comp=Z,154nm,0.6s						
N53A				ScP	**ScP**	**09 50 28.8**	**-0.9**
N53A	**Lisbon**	**28.75**	**11**	P	**P**	**09 43 46.8**	**+1.2**
	baz=194,SNR=81						
N53A				S	**S**	**09 48 30.0**	**-0.1**
	baz=194						
BBSR	**BB Station**	**28.86**	**43**	P	**P**	**09 43 48.6**	**+1.9**
BBSR				IAmb	IAmb	09 43 53.4	
	comp=Z,200nm,0.9s						
TUC	**Tucson**	**28.87**	**317**	P	**P**	**09 43 48.8**	**+1.8**
TUC	**Tucson**	**28.87**	**317**	P	**P**	**09 43 48.8**	**+1.8**
TUC				pmax	pmax		
	comp=Z,142nm,1.2s						
TUC	**Tucson**	**28.87**	**317**	P	**P**	**09 43 49.6**	**+2.7**
	baz=128						
M48A	**Edgerton**	**28.91**	**5**	P	**P**	**09 43 47.2**	**+0.2**
	baz=186,SNR=7.1						
O57A	**Amberson**	**28.91**	**16**	P	**P**	**09 43 49.2**	**+2.1**
	baz=201,SNR=79						
M49A	**Liberty Center**	**28.96**	**6**	P	**P**	**09 43 48.2**	**+0.7**
	baz=188,SNR=53						
M49A				S	**S**	**09 48 31.9**	**-1.4**
	baz=188						
M50A	**Fremont**	**28.99**	**7**	IAmb	IAmb	09 44 09.0	
	comp=Z,215nm,0.8s						
M50A	**Fremont**	**28.99**	**7**	P	**P**	**09 43 48.7**	**+0.9**
	baz=189,SNR=39						
M50A				S	**S**	**09 48 34.3**	**+0.4**
	baz=189						
O58A	**Lewisberry**	**29.03**	**17**	P	**P**	**09 43 50.5**	**+2.3**
	baz=202,SNR=30						
O58A				S	**S**	**09 48 38.5**	**+4.1**
	baz=202						
M51A	**Elyria**	**29.04**	**9**	P	**P**	**09 43 49.0**	**+0.8**
	baz=191,SNR=30						
N54A	**Moraine State**	**29.06**	**12**	IAmb	IAmb	09 43 52.7	
	comp=Z,215nm,0.6s						
N54A	**Moraine State**	**29.06**	**12**	P	**P**	**09 43 49.8**	**+1.3**
	baz=196,SNR=115						
N54A				S	**S**	**09 48 36.7**	**+1.7**
	baz=196						
MVL	**Millersville**	**29.08**	**18**	IAmb	IAmb	09 44 10.8	
	comp=Z,336nm,1.3s						
N55A	**Marion Center**	**29.11**	**14**	P	**P**	**09 43 50.4**	**+1.5**
	baz=198,SNR=42						
N55A				S	**S**	**09 48 37.0**	**+1.3**
	baz=198						
P60A	**Greenville**	**29.14**	**19**	IAmb	IAmb	09 44 10.8	
	comp=Z,293nm,1.2s						
P60A	**Greenville**	**29.14**	**19**	P	**P**	**09 43 50.8**	**+1.7**
	baz=205,SNR=32						
P60A				S	**S**	**09 48 40.0**	**+4.0**
	baz=205						
PAGS	**Pennsylvania G**	**29.18**	**17**	IAmb	IAmb	09 43 55.1	
	comp=Z,232nm,0.9s						
SSPA	**Standing Stone**	**29.24**	**15**	P	**P**	**09 43 51.1**	**+1.0**
SSPA				IAmb	IAmb	09 43 54.9	
	comp=Z,126nm,0.6s						
SSPA	**Standing Stone**	**29.24**	**15**	P	**P**	**09 43 51.7**	**+1.7**
	baz=200						
SSPA				S	**S**	**09 48 40.9**	**+3.1**
	baz=200						
P61A	**Hammonton**	**29.29**	**21**	IAmb	IAmb	09 44 12.7	
	comp=Z,479nm,1.3s						
P61A	**Hammonton**	**29.29**	**21**	P	**P**	**09 43 52.7**	**+2.2**
	baz=206,SNR=9.5						
PSUB	**Penn St. - Bra**	**29.30**	**19**	P	**P**	**09 43 52.5**	**+2.0**
L46A	**Eue Claire**	**29.34**	**2**	IAmb	IAmb	09 43 53.6	
	comp=Z,246nm,0.6s						
L46A	**Eue Claire**	**29.34**	**2**	P	**P**	**09 43 50.3**	**-0.6**
	baz=183,SNR=49						
L46A				S	**S**	**09 48 35.3**	**-4.0**
	baz=183						
L42A	**Oliver, Polo**	**29.36**	**357**	IAmb	IAmb	09 43 52.7	
	comp=Z,189nm,1.1s						
L47A	**Sherwood**	**29.36**	**4**	P	**P**	**09 43 51.0**	**-0.1**
	baz=185,SNR=68						
L47A				S	**S**	**09 48 35.6**	**-4.0**
	baz=185						
M52A	**Chesterland**	**29.37**	**10**	P	**P**	**09 43 51.6**	**+0.4**
M52A				pP	**pP**	**09 44 08.9**	**+0.9**
M52A	**Chesterland**	**29.37**	**10**	P	**P**	**09 43 52.0**	**+0.9**
	baz=193,SNR=27						
M52A				S	**S**	**09 48 39.7**	**-0.1**
	baz=193						
L48A	**N Adams**	**29.38**	**5**	P	**P**	**09 43 51.3**	**0.0**
	baz=186,SNR=116						
L48A				S	**S**	**09 48 36.9**	**-3.1**
	baz=186						
M53A	**WI Miller and**	**29.39**	**11**	P	**P**	**09 43 52.6**	**+1.3**
	baz=194,SNR=61						
N56A	**West Decatur**	**29.40**	**15**	P	**P**	**09 43 53.1**	**+1.6**
	baz=199,SNR=112						
O59A	**Robesonia**	**29.42**	**18**	P	**P**	**09 43 53.9**	**+2.3**
	baz=203,SNR=145						
O59A				S	**S**	**09 48 43.5**	**+2.9**
	baz=203						
KSCO	**Kaye Shedlock'**	**29.46**	**336**	IAmb	IAmb	09 43 56.8	
	comp=Z,126nm,0.7s						
KSCO	**Kaye Shedlock'**	**29.46**	**336**	P	**P**	**09 43 53.7**	**+1.5**
	baz=149,SNR=79						
L44A	**Lake County Fo**	**29.48**	**360**	IAmb	IAmb	09 43 54.3	
	comp=Z,221nm,0.7s						
L44A	**Lake County Fo**	**29.48**	**360**	P	**P**	**09 43 51.9**	**-0.2**
	baz=180,SNR=29						
L40A	**Anamosa**	**29.52**	**355**	IAmb	IAmb	09 43 55.0	
	comp=Z,174nm,0.8s						
SCIA	**State Center**	**29.60**	**352**	IAmb	IAmb	09 43 56.9	
	comp=Z,647nm,1.8s						
SCIA	**State Center**	**29.60**	**352**	P	**P**	**09 43 53.7**	**+0.5**
	baz=169,SNR=7.6						
SCIA				S	**S**	**09 48 41.2**	**-2.2**
	baz=169						
L49A	**Milan**	**29.61**	**6**	P	**P**	**09 43 54.1**	**+0.9**
	baz=188,SNR=42						
L49A				S	**S**	**09 48 42.0**	**-1.5**
	baz=188						
L50A	**Kingsville**	**29.65**	**7**	P	**P**	**09 43 54.2**	**+0.6**
	baz=190,SNR=34						
L50A				S	**S**	**09 48 43.9**	**-0.3**
	baz=190						
M54A	**Oil Creek Stat**	**29.66**	**12**	P	**P**	**09 43 54.6**	**+0.9**
M54A				ScP	**ScP**	**09 50 31.8**	**-0.8**
M54A	**Oil Creek Stat**	**29.66**	**12**	P	**P**	**09 43 55.1**	**+1.4**
	baz=196,SNR=197						
M54A				S	**S**	**09 48 47.0**	**+2.7**
	baz=196						
O60A	**Telford**	**29.67**	**19**	P	**P**	**09 43 55.8**	**+2.1**
	baz=205,SNR=31						
O60A				S	**S**	**09 48 47.8**	**+3.3**
	baz=205						
SDCO	**Great Sand Dun**	**29.67**	**331**	IAmb	IAmb	09 43 58.2	
	comp=Z,218nm,1.2s						
SDCO	**Great Sand Dun**	**29.67**	**331**	P	**P**	**09 43 56.2**	**+2.0**
	baz=143,SNR=232						
ALLY	**Alegheny Colle**	**29.70**	**11**	P	**P**	**09 43 54.9**	**+0.8**
ALLY				IAmb	IAmb	09 43 58.8	
	comp=Z,141nm,0.7s						
ALLY				pP	**pP**	**09 44 12.8**	**+2.0**
N58A	**Sunbury**	**29.75**	**17**	IAmb	IAmb	09 44 15.6	
	comp=Z,138nm,0.9s						
N58A	**Sunbury**	**29.75**	**17**	P	**P**	**09 43 56.3**	**+1.8**
	baz=202,SNR=55						
N58A				S	**S**	**09 48 48.5**	**+2.8**
	baz=202						
O61A	**Allentown**	**29.75**	**21**	P	**P**	**09 43 56.5**	**+1.9**
	baz=206,SNR=7.2						
O61A				S	**S**	**09 48 48.9**	**+3.2**
	baz=206						
AAM	**Ann Arbor**	**29.81**	**6**	IAmb	IAmb	09 44 00.6	
	comp=Z,222nm,0.6s						
AAM	**Ann Arbor**	**29.81**	**6**	P	**P**	**09 43 55.8**	**+0.8**
	baz=188,SNR=35						
AAM				S	**S**	**09 48 45.3**	**-1.4**
	baz=188						
M55A	**Ridgway**	**29.81**	**14**	P	**P**	**09 43 56.5**	**+1.4**
	baz=198,SNR=30						
M55A				S	**S**	**09 48 48.4**	**+1.6**
	baz=198						
M56A	**Emporium**	**29.97**	**14**	P	**P**	**09 43 57.5**	**+1.0**
M56A				IAmb	IAmb	09 44 17.7	
	comp=Z,225nm,1.2s						
M56A					**ScP**	**09 50 32.2**	**-1.4**
M56A	**Emporium**	**29.97**	**14**	P	**P**	**09 43 57.8**	**+1.4**
	baz=199,SNR=32						
M56A				S	**S**	**09 48 50.6**	**+1.4**
	baz=199						
L53A	**Girard**	**29.97**	**11**	P	**P**	**09 43 57.7**	**+1.3**
	baz=195,SNR=85						
L53A				S	**S**	**09 48 49.2**	**0.0**
	baz=195						
K43A	**Burlington**	**30.01**	**359**	IAmb	IAmb	09 44 00.4	
	comp=Z,95nm,0.7s						
W18A	**Petrified Fore**	**30.01**	**322**	IAmb	IAmb	09 44 01.3	
	comp=Z,189nm,1.2s						
W18A	**Petrified Fore**	**30.01**	**322**	P	**P**	**09 43 59.9**	**+2.7**
	baz=133,SNR=42						
K46A	**Dorr**	**30.03**	**3**	P	**P**	**09 43 56.3**	**-0.7**
	baz=184,SNR=76						
K46A				S	**S**	**09 48 45.2**	**-5.0**
	baz=184						
214A	**Organ Pipe Nat**	**30.06**	**314**	P	**P**	**09 43 60.0**	**+2.5**
	baz=124						
214A				S	**S**	**09 48 52.9**	**+2.0**
	baz=124						
K47A	**Vermontville**	**30.06**	**4**	P	**P**	**09 43 57.0**	**-0.3**
	baz=185,SNR=172						
K47A				S	**S**	**09 48 46.5**	**-4.1**
	baz=185						
M57A	**Sunshine Farm,**	**30.10**	**16**	P	**P**	**09 43 58.8**	**+1.2**
M57A				IAmb	IAmb	09 44 03.0	
	comp=Z,168nm,0.8s						
M57A				pP	**pP**	**09 44 16.6**	**+2.2**
M57A	**Sunshine Farm,**	**30.10**	**16**	P	**P**	**09 43 59.5**	**+1.9**
	baz=201,SNR=82						
M57A				S	**S**	**09 48 53.6**	**+2.4**
	baz=201						
N59A	**State Game Lan**	**30.10**	**18**	IAmb	IAmb	09 44 03.4	
	comp=Z,172nm,0.7s						
N59A	**State Game Lan**	**30.10**	**18**	P	**P**	**09 43 59.9**	**+2.3**
	baz=204,SNR=119						
N59A				S	**S**	**09 48 53.7**	**+2.4**
	baz=204						
BGNE	**Belgrade**	**30.13**	**344**	P	**P**	**09 43 58.9**	**+1.0**
	baz=159,SNR=38						
ERPA	**Erie**	**30.18**	**11**	P	**P**	**09 43 59.4**	**+1.1**
ERPA				pP	**pP**	**09 44 16.9**	**+1.8**
ERPA	**Erie**	**30.18**	**11**	P	**P**	**09 43 59.6**	**+1.3**
	baz=195,SNR=71						
ERPA				S	**S**	**09 48 52.7**	**+0.2**
	baz=195						
K48A	**Perry**	**30.26**	**5**	P	**P**	**09 43 59.0**	**0.0**
	baz=187,SNR=118						
K48A				S	**S**	**09 48 51.4**	**-2.4**
	baz=187						
N60A	**Cedar Hill Far**	**30.27**	**19**	P	**P**	**09 44 01.2**	**+2.2**
	baz=205,SNR=33						
N60A				S	**S**	**09 48 57.3**	**+3.4**
	baz=205						
BRNJ	**Basking Ridge**	**30.27**	**20**	IAmb	IAmb	09 44 21.2	
	comp=Z,383nm,1.2s						
JFWS	**Jewell Farm**	**30.30**	**356**	IAmb	IAmb	09 44 49.6	
	comp=Z,308nm,1.6s						
JFWS	**Jewell Farm**	**30.30**	**356**	P	**P**	**09 43 59.4**	**+0.1**
	baz=175,SNR=84						
JFWS				S	**S**	**09 48 51.9**	**-2.4**
	baz=175						
K49A	**Clarkson**	**30.31**	**6**	P	**P**	**09 44 00.0**	**+0.6**
	baz=188,SNR=94						
K49A				S	**S**	**09 48 53.0**	**-1.5**
	baz=188						
M58A	**Price's Panora**	**30.32**	**17**	P	**P**	**09 44 01.5**	**+2.0**
	baz=202,SNR=58						
M58A				S	**S**	**09 48 57.1**	**+2.5**
	baz=202						
S22A	**4UR Ranch, Cre**	**30.32**	**329**	IAmb	IAmb	09 44 03.9	
	comp=Z,196nm,1.2s						
S22A	**4UR Ranch, Cre**	**30.32**	**329**	P	**P**	**09 44 02.3**	**+2.3**
	baz=141,SNR=177						
K50A	**Casco**	**30.40**	**7**	IAmb	IAmb	09 44 20.4	
	comp=Z,265nm,1.4s						
K50A	**Casco**	**30.40**	**7**	P	**P**	**09 44 00.7**	**+0.5**
	baz=190,SNR=22						
K50A				S	**S**	**09 48 55.1**	**-0.7**
	baz=190						
L54A	**Sinclairville**	**30.43**	**12**	P	**P**	**09 44 01.7**	**+1.2**
	baz=196,SNR=89						
L54A				S	**S**	**09 48 57.0**	**+0.6**
	baz=196						
N61A	**South Mountain**	**30.43**	**20**	P	**P**	**09 44 02.6**	**+2.2**
	baz=206,SNR=21						
N61A				S	**S**	**09 49 01.4**	**+5.0**
	baz=206						
Q24A	**Divide**	**30.49**	**333**	P	**P**	**09 44 03.2**	**+1.7**
	baz=145,SNR=18						
Q24A				S	**S**	**09 49 01.3**	**+3.2**
	baz=145						
K51A	**Iona Station**	**30.50**	**9**	P	**P**	**09 44 01.6**	**+0.4**
	baz=192,SNR=7.5						
K51A				S	**S**	**09 48 56.0**	**-1.5**
	baz=192						
PTGA	**Pitinga**	**30.54**	**114**	P	**P**	**09 44 01.2**	**-0.6**
	comp=Z,22nm,0.8s,baz=304,slow=8.1,SNR=28						
PTGA				ScS	ScS	09 54 32.6	0.0
	comp=Z,1.2nm,0.5s,baz=253,slow=19,SNR=4.6						
PTGA				LR	LR	09 57 33.7	
	comp=Z,8µm,20.6s,baz=297,slow=39						
PTGA	**Pitinga**	**30.54**	**114**	*e*P	**P**	**09 43 58.9**	**-2.9**
L55A	**Hinsdale**	**30.57**	**14**	P	**P**	**09 44 03.1**	**+1.3**
	baz=198,SNR=74						
L55A				S	**S**	**09 48 59.7**	**+1.1**
	baz=198						
ODNJ	**Ogdensburg**	**30.62**	**20**	P	**P**	**09 44 03.9**	**+1.7**
ODNJ				pP	**pP**	**09 44 21.0**	**+2.0**
ODNJ				IAmb	IAmb	09 44 23.9	
	comp=Z,276nm,1.2s						
J47A	**Sunmer**	**30.64**	**4**	IAmb	IAmb	09 44 04.8	
	comp=Z,159nm,0.6s						
J47A	**Sunmer**	**30.64**	**4**	P	**P**	**09 44 02.0**	**-0.3**
	baz=186,SNR=75						
K52A	**Tillsonburg**	**30.69**	**10**	P	**P**	**09 44 03.6**	**+0.9**
	baz=193,SNR=26						
K52A				S	**S**	**09 49 00.6**	**+0.3**
	baz=193						
J46A	**Howard City**	**30.70**	**3**	P	**P**	**09 44 02.3**	**-0.5**
	baz=184,SNR=29						
L56A	**Greenwood**	**30.73**	**15**	P	**P**	**09 44 04.2**	**+1.0**
L56A				IAmb	IAmb	09 44 23.9	
	comp=Z,165nm,1.1s						
L56A				ScP	**ScP**	**09 50 35.0**	**-1.1**
L56A	**Greenwood**	**30.73**	**15**	P	**P**	**09 44 04.6**	**+1.3**
	baz=200,SNR=35						
L56A				S	**S**	**09 49 01.3**	**0.0**
	baz=200						
WVNY	**West Valley, N**	**30.74**	**13**	IAmb	IAmb	09 44 07.7	
	comp=Z,150nm,0.6s						
J45A	**Montague**	**30.76**	**2**	P	**P**	**09 44 02.6**	**-0.7**
	baz=182,SNR=8.6						
M59A	**Waymart**	**30.77**	**18**	P	**P**	**09 44 05.5**	**+1.9**
	baz=204,SNR=100						
M59A				S	**S**	**09 49 03.9**	**+2.0**
	baz=204						
PAL	**Palisades**	**30.79**	**21**	IAmb	IAmb	09 44 24.7	
	comp=Z,336nm,1.4s						
PAL	**Palisades**	**30.79**	**21**	P	**P**	**09 44 05.5**	**+1.8**
	baz=207,SNR=28						
PAL				S	**S**	**09 49 04.2**	**+2.3**
	baz=207						
J48A	**Bridge Port**	**30.79**	**6**	P	**P**	**09 44 03.8**	**+0.1**
	baz=187,SNR=48						
J48A				S	**S**	**09 48 59.3**	**-2.6**
	baz=187						
MVCO	**Mesa Verde**	**30.79**	**326**	P	**P**	**09 44 06.3**	**+2.2**
	baz=138,SNR=82						
L57A	**Andrews Acres**	**30.79**	**16**	P	**P**	**09 44 05.2**	**+1.4**
	baz=201,SNR=36						
L57A				S	**S**	**09 49 03.9**	**+1.8**
	baz=201						
M60A	**Port Jervis**	**30.83**	**19**	P	**P**	**09 44 06.0**	**+1.9**
	baz=205,SNR=78						
M60A				S	**S**	**09 49 05.0**	**+2.2**
	baz=205						
N62A	**Caumsett State**	**30.87**	**21**	P	**P**	**09 44 06.3**	**+1.9**
	baz=208,SNR=6.7						
N62A				S	**S**	**09 49 05.7**	**+2.4**
	baz=208						
J49A	**Marlette**	**30.91**	**6**	P	**P**	**09 44 04.8**	**+0.1**
	baz=189,SNR=94						
J49A				S	**S**	**09 49 01.6**	**-2.3**
	baz=189						
K54A	**Basiliko Farm,**	**30.92**	**13**	P	**P**	**09 44 06.1**	**+1.3**
	baz=197,SNR=42						
K54A				S	**S**	**09 49 05.1**	**+1.0**
	baz=197						
M61A	**Granite Spring**	**31.10**	**21**	P	**P**	**09 44 08.4**	**+2.0**
	baz=207,SNR=46						
M61A				S	**S**	**09 49 09.4**	**+2.5**
	baz=207						
L58A	**Harry Jones Me**	**31.11**	**17**	P	**P**	**09 44 08.4**	**+1.9**
	baz=203,SNR=97						
L58A				S	**S**	**09 49 09.6**	**+2.5**
	baz=203						
K55A	**Perry**	**31.17**	**14**	P	**P**	**09 44 08.3**	**+1.2**
	baz=198,SNR=23						
K55A				S	**S**	**09 49 07.6**	**-0.5**
	baz=198						
J52A	**Paris**	**31.18**	**10**	P	**P**	**09 44 07.9**	**+0.8**
	baz=194,SNR=41						
J52A				S	**S**	**09 49 07.0**	**-1.0**
	baz=194						
I42A	**Draeger Farm,**	**31.21**	**358**	IAmb	IAmb	09 44 09.2	
	comp=Z,248nm,1.1s						
BINY	**Binghamton**	**31.21**	**17**	IAmb	IAmb	09 44 29.0	
	comp=Z,271nm,1.1s						
BINY	**Binghamton**	**31.21**	**17**	P	**P**	**09 44 09.3**	**+1.8**
	baz=202,SNR=65						
BINY				S	**S**	**09 49 10.8**	**+2.0**
	baz=202						
N63A	**Mattituck**	**31.27**	**22**	P	**P**	**09 44 09.6**	**+1.8**
	baz=209						
WUAZ	**Wupatki**	**31.28**	**321**	P	**P**	**09 44 10.5**	**+2.2**
WUAZ				ScP	**ScP**	**09 50 39.8**	**+1.6**
WUAZ	**Wupatki**	**31.28**	**321**	P	**P**	**09 44 10.8**	**+2.5**
	baz=131,SNR=59						
I40A	**Norwalk**	**31.29**	**356**	IAmb	IAmb	09 44 11.3	
	comp=Z,104nm,0.7s						
I46A	**Reed City**	**31.30**	**3**	P	**P**	**09 44 07.5**	**-0.7**
	baz=184,SNR=100						
I46A				S	**S**	**09 49 05.1**	**-4.9**
	baz=184						
K56A	**Middlesex**	**31.32**	**15**	P	**P**	**09 44 09.7**	**+1.3**
	baz=200,SNR=38						
K56A				S	**S**	**09 49 11.6**	**+1.2**
	baz=200						
I45A	**Fountain**	**31.36**	**2**	P	**P**	**09 44 08.4**	**-0.3**
	baz=183,SNR=41						
I45A				S	**S**	**09 49 05.9**	**-5.0**
	baz=183						
ISCO	**Idaho Springs**	**31.38**	**333**	P	**P**	**09 44 11.1**	**+1.8**
	baz=145,SNR=59						
ISCO				S	**S**	**09 49 15.4**	**+3.5**
	baz=145						
I47A	**Gladwin**	**31.44**	**4**	IAmb	IAmb	09 44 11.8	
	comp=Z,152nm,0.6s						
I47A	**Gladwin**	**31.44**	**4**	P	**P**	**09 44 09.1**	**-0.2**
	baz=186,SNR=41						
I47A				S	**S**	**09 49 08.2**	**-3.9**
	baz=186						
L59A	**Walton**	**31.48**	**18**	P	**P**	**09 44 11.7**	**+1.8**
	baz=204,SNR=54						
L59A				S	**S**	**09 49 10.4**	**-2.6**
	baz=204						
MEDO	**Medina**	**31.50**	**13**	P	**P**	**09 44 11.0**	**+1.1**
MEDO				pP	**pP**	**09 44 28.4**	**+1.7**
MEDO				IAmb	IAmb	09 44 30.7	
	comp=Z,300nm,1.4s						
SMCO	**Snowmass**	**31.51**	**331**	IAmb	IAmb	09 44 14.3	
	comp=Z,156nm,1.1s						
I49A	**Point Hope**	**31.52**	**7**	IAmb	IAmb	09 44 14.2	
	comp=Z,148nm,0.7s						
I49A	**Point Hope**	**31.52**	**7**	P	**P**	**09 44 10.2**	**+0.1**
	baz=189,SNR=46						
I49A				S	**S**	**09 49 11.5**	**-1.9**
	baz=189						
M62A	**Hamden**	**31.53**	**22**	P	**P**	**09 44 11.9**	**+1.7**
	baz=208,SNR=6.9						
M62A				S	**S**	**09 49 15.1**	**+1.6**
	baz=208						
L60A	**Shokan**	**31.56**	**19**	P	**P**	**09 44 12.5**	**+2.0**
	baz=206,SNR=60						
L60A				S	**S**	**09 49 16.5**	**+2.4**
	baz=206						
J54A	**Appleton**	**31.56**	**13**	P	**P**	**09 44 11.6**	**+1.2**
	baz=197,SNR=24						
J54A				S	**S**	**09 49 13.7**	**-0.3**
	baz=197						
K57A	**Scipio Center**	**31.56**	**16**	P	**P**	**09 44 11.6**	**+1.1**
	baz=201,SNR=49						
K57A				S	**S**	**09 49 15.5**	**+1.4**
	baz=201						
KSCT	**Kent School, K**	**31.57**	**21**	IAmb	IAmb	09 44 32.4	
	comp=Z,273nm,1.2s						

I51A	**Listowel** baz=192,SNR=51	**31.63**	**9**	P	**P**	**09 44 11.7**	**+0.5**
I51A	baz=192			S	**S**	**09 49 12.6**	**-2.6**
I48A	**Sherman Twp** baz=187,SNR=45	**31.68**	**5**	P	**P**	**09 44 11.5**	**+0.1**
I48A	baz=187			S	**S**	**09 49 13.1**	**-2.7**
J55A	**Hilton**	**31.74**	**14**	P	**P**	**09 44 12.6**	**+0.6**
J55A	comp=Z,197nm,1.4s			IAmb	IAmb	09 44 16.7	
J55A				pP	**pP**	**09 44 30.1**	**+1.3**
J55A	**Hilton** baz=198,SNR=6.0	**31.74**	**14**	P	**P**	**09 44 12.9**	**+0.9**
J55A	baz=198			S	**S**	**09 49 17.4**	**+0.6**
H43A	**Windswept, Lux** comp=Z,152nm,1.1s	**31.77**	**360**	IAmb	IAmb	09 44 13.8	
M63A	**Gales Ferry** baz=210,SNR=14	**31.80**	**23**	P	**P**	**09 44 15.0**	**+2.4**
M63A	baz=210			S	**S**	**09 49 18.1**	**+0.2**
K58A	**Earlville** baz=203,SNR=62	**31.83**	**17**	P	**P**	**09 44 14.2**	**+1.3**
K58A	baz=203			S	**S**	**09 49 18.7**	**+0.4**
I53A	**Kortright Cn E** baz=195,SNR=9.8	**31.90**	**11**	P	**P**	**09 44 14.2**	**+0.8**
I53A	baz=195			S	**S**	**09 49 19.7**	**+0.4**
H46A	**Fife Lake** baz=185	**31.91**	**3**	S	**S**	**09 49 18.1**	**-1.4**
H45A	**Beulah** baz=183,SNR=36	**31.95**	**2**	P	**P**	**09 44 13.3**	**-0.6**
H45A	baz=183			S	**S**	**09 49 16.8**	**-3.4**
L61A	**Hillsdale 1, H** baz=207,SNR=25	**31.96**	**20**	P	**P**	**09 44 15.9**	**+1.9**
L61A	baz=207			S	**S**	**09 49 22.5**	**+2.2**
ECSD	**EROS Data Cent** baz=163,SNR=294	**31.97**	**348**	P	**P**	**09 44 14.1**	**0.0**
ECSD	baz=163			S	**S**	**09 49 16.9**	**-3.6**
J56A	**Wolcott**	**31.98**	**15**	P	**P**	**09 44 15.1**	**+1.0**
J56A					**ScP**	**09 50 38.7**	**-1.5**
J56A	**Wolcott** baz=200,SNR=73	**31.98**	**15**	P	**P**	**09 44 15.4**	**+1.3**
J56A	baz=200			S	**S**	**09 49 21.1**	**+0.6**
I52A	**Shelburne** baz=194,SNR=60	**32.03**	**10**	P	**P**	**09 44 15.6**	**+1.0**
I52A	baz=194			S	**S**	**09 49 18.9**	**-2.5**
H47A	**Mio** baz=186,SNR=39	**32.04**	**5**	P	**P**	**09 44 14.6**	**-0.1**
K59A	**Cooperstown** baz=204,SNR=30	**32.08**	**18**	P	**P**	**09 44 16.6**	**+1.6**
K59A	baz=204			S	**S**	**09 49 24.0**	**+1.8**
GLA	**Glamis** baz=123,SNR=9.9	**32.08**	**314**	P	**P**	**09 44 17.6**	**+2.4**
L62A	**Suffield** baz=208,SNR=23	**32.13**	**21**	P	**P**	**09 44 17.5**	**+2.0**
L62A	baz=208			S	**S**	**09 49 26.7**	**+3.8**
H48A	**Harrisville** baz=188,SNR=204	**32.22**	**6**	P	**P**	**09 44 16.5**	**+0.2**
H48A	baz=188			S	**S**	**09 49 22.4**	**-1.9**
K60A	**Five Rivers En** baz=206,SNR=26	**32.23**	**19**	P	**P**	**09 44 18.2**	**+1.9**
GLMI	**Grayling** baz=186	**32.23**	**4**	P	**P**	**09 44 16.2**	**-0.1**
M64A	**Tiverton** baz=211	**32.25**	**24**	P	**P**	**09 44 18.6**	**+2.0**
M64A	baz=211			S	**S**	**09 49 27.9**	**+3.0**
Y12C	**Blythe**	**32.26**	**315**	P	**P**	**09 44 18.2**	**+1.5**
Y12C					**ScP**	**09 50 43.7**	**+2.3**
Y12C	**Blythe** baz=124,SNR=12	**32.26**	**315**	P	**P**	**09 44 19.0**	**+2.3**
PDMCI	**Parker Dam,Lak** baz=126,SNR=39	**32.31**	**316**	P	**P**	**09 44 19.5**	**+2.3**
J57A	**Williamstown**	**32.33**	**16**	P	**P**	**09 44 17.6**	**+0.4**
J57A				pP	**pP**	**09 44 35.3**	**+1.2**
J57A	comp=Z,193nm,0.9s			IAmb	IAmb	09 44 38.0	
J57A	**Williamstown** baz=202,SNR=42	**32.33**	**16**	P	**P**	**09 44 18.3**	**+1.1**
J57A	baz=202			S	**S**	**09 49 25.8**	**-0.2**
L63A	**North Scituate** baz=210,SNR=16	**32.37**	**23**	P	**P**	**09 44 19.4**	**+1.8**
L63A	baz=210			S	**S**	**09 49 29.6**	**+3.0**
G45A	**Suttons Bay** baz=184,SNR=175	**32.39**	**3**	P	**P**	**09 44 17.6**	**-0.1**
G45A	baz=184			S	**S**	**09 49 23.7**	**-3.2**
N23A	**Red Feather La** baz=145,SNR=36	**32.42**	**334**	P	**P**	**09 44 20.3**	**+1.9**
SAML	**Samuel**	**32.43**	**130**	P	**P**	**09 44 16.9**	**-1.5**
SAML	comp=Z,133nm,0.8s			IAmb	IAmb	09 44 22.2	
SAML	**Samuel**	**32.43**	**130**	P	**P**	**09 44 16.9**	**-1.5**
SAML	comp=Z,133nm,0.8s			pmax	pmax		
SAML	**Samuel**	**32.43**	**130**	*e*P	**P**	**09 44 17.2**	**-1.1**
BRYW	**Bryant College** comp=Z,185nm,1.1s	**32.44**	**23**	IAmb	IAmb	09 44 39.9	
QUA2	**Belchertown** comp=Z,332nm,1.3s	**32.45**	**21**	IAmb	IAmb	09 44 40.1	
K61A	**Williamstown** baz=207,SNR=38	**32.48**	**20**	P	**P**	**09 44 20.5**	**+2.0**
K61A	baz=207			S	**S**	**09 49 33.0**	**+4.5**
J58A	**Remsen**	**32.48**	**17**	P	**P**	**09 44 19.8**	**+1.2**
J58A	comp=Z,388nm,1.6s			IAmb	IAmb	09 44 20.7	
J58A					**pP**	**09 44 36.6**	**+1.1**
J58A	**Remsen** baz=203,SNR=41	**32.48**	**17**	P	**P**	**09 44 20.0**	**+1.4**
J58A	baz=203			S	**S**	**09 49 29.8**	**+1.3**
M65A	**Busby, Falmout** baz=212	**32.48**	**24**	P	**P**	**09 44 20.4**	**+1.8**
M65A	baz=212			S	**S**	**09 49 31.2**	**+2.8**
L61B	**Northampton** baz=208,SNR=29	**32.49**	**21**	P	**P**	**09 44 20.3**	**+1.6**
L61B	baz=208			S	**S**	**09 49 30.4**	**+1.9**
PHWY	**Pilot Hill**	**32.55**	**335**	P	**P**	**09 44 20.0**	**+0.4**
PHWY	comp=Z,333nm,1.8s			IAmb	IAmb	09 44 23.0	
W13A	**Hualapai Mount**	**32.61**	**318**	P	**P**	**09 44 22.2**	**+2.1**
W13A					**ScP**	**09 50 44.5**	**+1.6**
H52A	**Wyevale** baz=194,SNR=25	**32.64**	**10**	P	**P**	**09 44 20.6**	**+0.8**
H52A	baz=194			S	**S**	**09 49 28.5**	**-2.3**
G40A	**Rib Lake** comp=Z,203nm,1.2s	**32.64**	**357**	IAmb	IAmb	09 44 21.5	
G47A	**Hillman** baz=187,SNR=54	**32.64**	**5**	P	**P**	**09 44 19.7**	**-0.2**
I55A	**Frankford** baz=198,SNR=26	**32.67**	**13**	P	**P**	**09 44 21.0**	**+0.8**
I55A	baz=198			S	**S**	**09 49 30.9**	**-0.4**
G46A	**Petoskey** baz=185,SNR=48	**32.71**	**4**	P	**P**	**09 44 20.1**	**-0.4**
SWSC	**Sam W. Stewart** baz=122,SNR=7.1	**32.71**	**313**	P	**P**	**09 44 23.3**	**+2.6**
L64A	**Middleborough** baz=211,SNR=7.4	**32.73**	**24**	P	**P**	**09 44 22.7**	**+2.0**
IKP	**In-Ko-Pah, Jac** baz=121,SNR=8.1	**32.78**	**312**	P	**P**	**09 44 24.2**	**+2.7**
J59A	**Piesco** comp=Z,179nm,1.2s	**32.81**	**18**	IAmb	IAmb	09 44 42.5	
J59A	**Piesco** baz=204,SNR=32	**32.81**	**18**	P	**P**	**09 44 22.7**	**+1.3**
J59A	baz=204			S	**S**	**09 49 35.0**	**+1.4**
SPMN	**Marine on St.** baz=171,SNR=122	**32.81**	**353**	P	**P**	**09 44 21.2**	**-0.2**
SPMN	baz=171			S	**S**	**09 49 28.9**	**-4.7**
H53A	**Bobcaygeon** baz=196,SNR=86	**32.82**	**12**	P	**P**	**09 44 22.5**	**+1.1**
H53A	baz=196			S	**S**	**09 49 33.7**	**+0.1**
K62A	**Royalston** comp=Z,305nm,1.3s	**32.84**	**21**	IAmb	IAmb	09 44 43.5	
K62A	**Royalston** baz=209,SNR=14	**32.84**	**21**	P	**P**	**09 44 23.4**	**+1.7**
K62A	baz=209			S	**S**	**09 49 35.9**	**+2.0**
BC3	**Big Chuckawall** baz=123,SNR=28	**32.85**	**314**	P	**P**	**09 44 24.5**	**+2.5**
O20A	**White River Ci** baz=141,SNR=324	**32.87**	**330**	P	**P**	**09 44 24.5**	**+2.3**
O20A	baz=141			S	**S**	**09 49 39.2**	**+4.3**
I58A	**Old Forge** baz=203,SNR=66	**32.88**	**17**	P	**P**	**09 44 23.3**	**+1.3**
I58A	baz=203			S	**S**	**09 49 36.6**	**+2.0**
SADO	**Sadowa** comp=Z,197nm,0.6s,baz=245,slow=5.6,SNR=160	**32.90**	**11**	P	**P**	**09 44 22.1**	**0.0**
SADO	comp=Z,20nm,1.1s,baz=288,slow=13,SNR=6.0			S	**S**	**09 49 32.6**	**-2.1**
SADO	comp=Z,22nm,0.7s,baz=252,slow=3.3,SNR=11			ScP	**ScP**	**09 50 41.4**	**-2.0**
NEE2	**Needles Airpor** baz=126,SNR=5.5	**32.90**	**317**	P	**P**	**09 44 24.7**	**+2.4**
IRM	**Iron Mountain** baz=124,SNR=18	**32.91**	**315**	P	**P**	**09 44 24.9**	**+2.4**
I57A	**Carthage** baz=202,SNR=26	**32.91**	**16**	P	**P**	**09 44 23.3**	**+1.0**
I57A	baz=202			S	**S**	**09 49 36.1**	**+0.9**
WES	**Weston**	**32.92**	**23**	P	**P**	**09 44 22.9**	**+0.5**
WES					**pP**	**09 44 39.6**	**+0.3**
WES	comp=Z,244nm,1.2s			IAmb	IAmb	09 44 43.4	
WES	**Weston**	**32.92**	**23**	P	**P**	**09 44 22.9**	**+0.5**
WES				*PP	**pP**	**09 44 39.6**	**+0.3**
WES	comp=Z,244nm,1.2s			pmax	pmax		
HRV	**Adam Dziewonsk**	**32.94**	**22**	P	**P**	**09 44 23.8**	**+1.2**
HRV					**pP**	**09 44 40.3**	**+0.8**
HRV	comp=Z,183nm,1.2s			IAmb	IAmb	09 44 45.5	
HRV	**Adam Dziewonsk**	**32.94**	**22**	P	**P**	**09 44 23.8**	**+1.2**
HRV				*PP	**pP**	**09 44 40.3**	**+0.8**
HRV	comp=Z,183nm,1.3s			pmax	pmax		
HRV	**Adam Dziewonsk** baz=210	**32.94**	**22**	P	**P**	**09 44 24.5**	**+1.9**
HRV	baz=210			S	**S**	**09 49 37.9**	**+2.4**
J60A	**Lant Hill Farm** baz=206,SNR=16	**32.95**	**19**	P	**P**	**09 44 24.6**	**+1.9**
J60A	baz=206			S	**S**	**09 49 39.8**	**+4.1**
DELO	**Deloro Mine**	**32.97**	**13**	P	**P**	**09 44 23.2**	**+0.4**
DELO	comp=Z,341nm,1.7s			IAmb	IAmb	09 44 25.3	
DELO				ScP	**ScP**	**09 50 42.2**	**-1.4**
ACCN	**Adirondack Com** comp=Z,336nm,1.8s	**32.99**	**19**	IAmb	IAmb	09 44 25.4	
F45A	**CMU Biological** baz=184,SNR=69	**33.04**	**3**	P	**P**	**09 44 23.2**	**-0.1**
F45A	baz=184			S	**S**	**09 49 34.3**	**-2.7**
H55A	**Tweed** baz=199,SNR=25	**33.10**	**14**	P	**P**	**09 44 24.8**	**+0.8**
H55A	baz=199			S	**S**	**09 49 37.7**	**-0.3**
K63A	**Dunstable** baz=210,SNR=10.0	**33.11**	**22**	P	**P**	**09 44 26.2**	**+2.2**
K63A	baz=210			S	**S**	**09 49 40.6**	**+2.5**
MONP2	**Monument Peak** baz=121	**33.13**	**312**	P	**P**	**09 44 27.2**	**+2.6**
SUSD	**Miller** baz=160,SNR=78	**33.18**	**345**	P	**P**	**09 44 24.9**	**+0.3**
I59A	**Olmsteadville** baz=205,SNR=29	**33.30**	**18**	P	**P**	**09 44 26.8**	**+1.1**
I59A	baz=205			S	**S**	**09 49 42.0**	**+0.9**
J61A	**Chester** baz=208,SNR=21	**33.33**	**20**	P	**P**	**09 44 27.9**	**+2.0**
J61A	baz=208			S	**S**	**09 49 44.7**	**+3.2**
G53A	**Haliburton** baz=196,SNR=56	**33.34**	**12**	P	**P**	**09 44 26.5**	**+0.5**
G53A	baz=196			S	**S**	**09 49 39.7**	**-2.0**
NCB	**Newcomb**	**33.35**	**18**	P	**P**	**09 44 26.8**	**+0.6**
NCB					**pP**	**09 44 44.8**	**+1.7**
NCB	comp=Z,189nm,1.4s			IAmb	IAmb	09 44 47.2	
H56A	**Elgin** baz=200,SNR=34	**33.37**	**15**	P	**P**	**09 44 27.2**	**+1.0**
H56A	baz=200			S	**S**	**09 49 40.9**	**-1.2**
F48A	**Evansville** baz=189,SNR=115	**33.41**	**6**	P	**P**	**09 44 26.5**	**-0.1**
F49A	**Sandfield** baz=190,SNR=33	**33.41**	**7**	P	**P**	**09 44 26.3**	**-0.3**
F49A	baz=190			S	**S**	**09 49 42.0**	**-0.8**
BELC	**Belle Mtn. Jos** baz=123,SNR=16	**33.42**	**314**	P	**P**	**09 44 29.3**	**+2.3**
COWI	**Conover** comp=Z,84nm,0.7s	**33.42**	**358**	IAmb	IAmb	09 44 28.8	
H57A	**Richville** baz=202,SNR=30	**33.47**	**16**	P	**P**	**09 44 28.3**	**+1.1**
H57A	baz=202			S	**S**	**09 49 42.9**	**-0.8**
J62A	**Henniker** baz=209,SNR=29	**33.48**	**21**	P	**P**	**09 44 29.5**	**+2.3**
J62A	baz=209			S	**S**	**09 49 46.2**	**+2.4**
I60A	**Shoreham** baz=206,SNR=22	**33.53**	**19**	P	**P**	**09 44 29.1**	**+1.5**
I60A	baz=206			S	**S**	**09 49 48.0**	**+3.5**
XPFO	**Pion Flat**	**33.53**	**313**	P	**P**	**09 44 30.6**	**+2.5**
PFO	**Pinyon Flats O** comp=Z,26nm,1.1s,baz=120,slow=7.1,SNR=12	**33.53**	**313**	P	**P**	**09 44 30.0**	**+2.0**
PFO	comp=Z,22nm,0.9s,baz=114,slow=4.2,SNR=6.9			PcP	**PcP**	**09 47 08.7**	**+1.2**
PFO	comp=Z,15µm,21.6s,baz=134,slow=39			LR	LR	09 59 59.1	
PFO	**Pinyon Flats O**	**33.53**	**313**	P	**P**	**09 44 30.0**	**+2.0**
PFO					**PcP**	**09 47 08.8**	**+1.4**
PFO	**Pinyon Flats O** baz=122,SNR=9.2	**33.53**	**313**	P	**P**	**09 44 30.6**	**+2.6**
GMRC	**Granite Mounta** baz=124,SNR=20	**33.62**	**316**	P	**P**	**09 44 31.1**	**+2.4**
109C	**Camp Elliot, M**	**33.63**	**312**	P	**P**	**09 44 30.9**	**+2.2**
109C	comp=Z,219nm,1.9s			IAmb	IAmb	09 45 41.6	
109C					**PcP**	**09 47 09.6**	**+2.0**
109C	**Camp Elliot, M** baz=120	**33.63**	**312**	P	**P**	**09 44 31.4**	**+2.7**
E43A	**Lone Tree Farm** comp=Z,107nm,0.7s	**33.68**	**1**	IAmb	IAmb	09 44 31.6	
G54A	**Lake Saint Pet** baz=197,SNR=54	**33.71**	**12**	P	**P**	**09 44 30.0**	**+0.7**
G54A	baz=197			S	**S**	**09 49 45.9**	**-1.6**
HNH	**Hanover** comp=Z,156nm,1.4s	**33.73**	**20**	IAmb	IAmb	09 45 18.3	
H58A	**Gabriels** baz=204,SNR=50	**33.77**	**18**	P	**P**	**09 44 30.9**	**+1.1**
H58A	baz=204			S	**S**	**09 49 48.2**	**-0.3**
J63A	**Strafford** baz=210,SNR=13	**33.79**	**22**	P	**P**	**09 44 32.0**	**+2.1**
J63A	baz=210			S	**S**	**09 49 51.9**	**+3.2**
LONY	**Lake Ozonia** baz=203	**33.84**	**17**	P	**P**	**09 44 31.5**	**+1.1**
LONY	baz=203			S	**S**	**09 49 51.8**	**+2.3**
F52A	**Sundridge** baz=195,SNR=78	**33.85**	**11**	P	**P**	**09 44 31.0**	**+0.5**
F52A	baz=195			S	**S**	**09 49 49.5**	**-0.1**
G55A	**Calabogie** baz=199,SNR=41	**33.88**	**14**	P	**P**	**09 44 31.6**	**+0.9**
G55A	baz=199			S	**S**	**09 49 49.0**	**-0.9**
F51A	**Arnstein** baz=194,SNR=38	**33.88**	**10**	P	**P**	**09 44 30.8**	**+0.2**
F51A	baz=194			S	**S**	**09 49 49.4**	**-0.6**
E44A	**Grand Marais A** baz=183,SNR=58	**33.95**	**2**	P	**P**	**09 44 32.0**	**+0.7**
E44A	baz=183			S	**S**	**09 49 48.6**	**-2.6**
I61A	**Oroboro, Fairl** baz=208,SNR=15	**33.96**	**20**	P	**P**	**09 44 33.2**	**+1.8**
I61A	baz=208			S	**S**	**09 49 52.9**	**+1.6**
E47A	**Iron Bridge** baz=188,SNR=134	**33.96**	**5**	P	**P**	**09 44 31.7**	**+0.3**
E47A	baz=188			S	**S**	**09 49 50.4**	**-0.9**
MURC	**Murrieta** baz=121,SNR=14	**34.05**	**313**	P	**P**	**09 44 34.9**	**+2.5**
E38A	**The Farm, Brul** comp=Z,135nm,0.7s	**34.06**	**355**	IAmb	IAmb	09 44 34.4	
HEC	**Hector,Ludlow** baz=124,SNR=22	**34.10**	**315**	P	**P**	**09 44 35.4**	**+2.5**
E48A	**Lockeyer** baz=190,SNR=65	**34.10**	**7**	P	**P**	**09 44 33.0**	**+0.3**
E48A	baz=190			S	**S**	**09 49 51.8**	**-1.7**
K22A	**Casper** comp=Z,225nm,1.2s	**34.11**	**335**	IAmb	IAmb	09 44 36.4	
K22A	**Casper** baz=146,SNR=92	**34.11**	**335**	P	**P**	**09 44 34.6**	**+1.6**
H59A	**Cadyville** baz=205,SNR=21	**34.13**	**18**	P	**P**	**09 44 33.9**	**+1.0**
H59A	baz=205			S	**S**	**09 49 55.8**	**+2.0**
VT1	**Waterbury** comp=Z,270nm,1.8s	**34.13**	**19**	IAmb	IAmb	09 44 54.1	
TUQ	**Turquoise Moun** baz=125,SNR=16	**34.16**	**317**	P	**P**	**09 44 35.5**	**+2.1**
G57A	**Newington** baz=202,SNR=17	**34.17**	**16**	P	**P**	**09 44 34.0**	**+0.8**
G57A	baz=202			S	**S**	**09 49 55.8**	**+1.3**
BBRC	**Big Bear Solar** baz=122	**34.20**	**314**	P	**P**	**09 44 37.0**	**+3.1**
I62A	**Tamworth**	**34.21**	**21**	P	**P**	**09 44 35.3**	**+1.7**
I62A					**pP**	**09 44 51.9**	**+1.3**
I62A	**Tamworth** baz=209,SNR=30	**34.21**	**21**	P	**P**	**09 44 35.6**	**+2.0**
I62A	baz=209			S	**S**	**09 49 59.3**	**+4.1**
ALGO	**Algonquin Park** baz=197,SNR=100	**34.25**	**12**	P	**P**	**09 44 34.4**	**+0.5**
ALGO	baz=197			S	**S**	**09 49 53.8**	**-1.9**
LBNH	**Lisbon** comp=Z,206nm,1.3s	**34.33**	**20**	IAmb	IAmb	09 44 55.7	
LBNH	**Lisbon** baz=208,SNR=18	**34.33**	**20**	P	**P**	**09 44 36.2**	**+1.6**
FRNY	**Flat Rock** comp=Z,183nm,1.2s	**34.33**	**18**	IAmb	IAmb	09 44 55.7	
D46A	**Sault St. Mari** baz=186,SNR=36	**34.33**	**4**	P	**P**	**09 44 34.5**	**-0.1**
D46A	baz=186			S	**S**	**09 49 54.8**	**-2.1**
H60A	**Morristown** baz=206,SNR=9.4	**34.36**	**19**	P	**P**	**09 44 35.8**	**+0.9**
H60A	baz=206			S	**S**	**09 50 00.2**	**+2.8**
D41A	**Chassel** comp=Z,203nm,1.2s	**34.37**	**359**	IAmb	IAmb	09 44 36.4	
RSSD	**Black Hills**	**34.41**	**339**	P	**P**	**09 44 37.1**	**+1.6**
RSSD	comp=Z,126nm,0.6s			IAmb	IAmb	09 44 40.6	
RSSD	**Black Hills**	**34.41**	**339**	P	**P**	**09 44 37.2**	**+1.6**
RSSD	comp=Z,126nm,0.6s			pmax	pmax		
RSSD	**Black Hills** baz=151	**34.41**	**339**	P	**P**	**09 44 37.6**	**+1.9**
RSSD	baz=151			S	**S**	**09 50 02.0**	**+3.2**
E52A	**Mattawa** baz=196,SNR=34	**34.45**	**11**	P	**P**	**09 44 36.0**	**+0.4**
E52A	baz=196			S	**S**	**09 49 59.8**	**+1.1**
G58A	**Ormstown** baz=204,SNR=19	**34.48**	**17**	P	**P**	**09 44 36.8**	**+1.0**
G58A	baz=204			S	**S**	**09 49 59.9**	**+0.7**
F55A	**Otter Lake** baz=200,SNR=16	**34.51**	**14**	P	**P**	**09 44 37.0**	**+0.9**
F55A	baz=200			S	**S**	**09 49 59.9**	**+0.2**
E51A	**G1948 Merrick** baz=194,SNR=193	**34.54**	**10**	P	**P**	**09 44 36.9**	**+0.5**
E51A	baz=194			S	**S**	**09 49 59.7**	**-0.5**
D47A	**Chapleau** baz=188,SNR=70	**34.57**	**6**	P	**P**	**09 44 36.5**	**-0.2**
D47A	baz=188			S	**S**	**09 49 57.8**	**-3.0**
RRX	**Edison Barstow** baz=123	**34.58**	**315**	P	**P**	**09 44 39.7**	**+2.7**
H61A	**Lyndonville** baz=208,SNR=15	**34.59**	**20**	P	**P**	**09 44 38.5**	**+1.6**
H61A	baz=208			S	**S**	**09 50 05.7**	**+4.7**
LPAZ	**La Paz** comp=Z,18nm,0.5s,baz=331,slow=7.5,SNR=130	**34.61**	**145**	P	**P**	**09 44 40.0**	**+2.0**
LPAZ	comp=Z,18nm,0.7s,baz=356,slow=2.7,SNR=6.3			PcP	**PcP**	**09 47 12.4**	**+1.1**
LPAZ	comp=Z,9.5nm,1.0s,baz=251,slow=5.1,SNR=4.8			ScP	**ScP**	**09 50 52.9**	**+2.3**
LPAZ	**La Paz**	**34.61**	**145**	⇑*i*P	**P**	**09 44 39.1**	**+1.1**
LPAZ	**La Paz**	**34.61**	**145**	P	**P**	**09 44 39.1**	**+1.1**
I63A	**Otisfield** baz=210,SNR=19	**34.63**	**22**	P	**P**	**09 44 39.3**	**+2.1**
I63A	baz=210			S	**S**	**09 50 06.9**	**+5.2**
SHOC	**Shoshone, Teco** baz=125,SNR=8.0	**34.66**	**317**	P	**P**	**09 44 39.9**	**+2.3**
G59A	**Clarenceville** baz=205,SNR=22	**34.67**	**18**	P	**P**	**09 44 38.7**	**+1.2**
G59A	baz=205			S	**S**	**09 50 04.5**	**+2.3**
GSC	**Goldstone, Bar** baz=124,SNR=10	**34.68**	**316**	P	**P**	**09 44 40.7**	**+2.7**
BFSC	**Mount Baldy Ra** baz=121,SNR=6.7	**34.71**	**313**	P	**P**	**09 44 40.5**	**+2.2**
E53A	**Dumoine, Ponti** baz=197	**34.73**	**12**	P	**P**	**09 44 38.6**	**+0.5**
E53A	baz=197			S	**S**	**09 50 03.1**	**-0.1**
D48A	**Paudash Townsh** baz=190,SNR=106	**34.83**	**7**	P	**P**	**09 44 38.9**	**0.0**
D48A	baz=190			S	**S**	**09 50 02.4**	**-2.3**
I64A	**Boothbay** baz=212	**34.88**	**23**	P	**P**	**09 44 41.5**	**+2.2**
I64A	baz=212			S	**S**	**09 50 09.5**	**+4.1**
H62A	**Milan**	**34.88**	**21**	P	**P**	**09 44 40.7**	**+1.3**
H62A					**pP**	**09 44 56.9**	**+0.4**
H62A	comp=Z,122nm,1.2s			IAmb	IAmb	09 45 00.4	
H62A	**Milan** baz=209,SNR=8.9	**34.88**	**21**	P	**P**	**09 44 41.0**	**+1.6**
H62A	baz=209			S	**S**	**09 50 08.9**	**+3.3**
E54A	**Lac Daplat, Po** baz=198	**34.89**	**13**	P	**P**	**09 44 40.0**	**+0.6**
E54A	baz=198			S	**S**	**09 50 06.1**	**+0.6**
G60A	**Masonville** baz=207,SNR=9.1	**34.95**	**19**	P	**P**	**09 44 41.1**	**+1.1**
G60A	baz=207			S	**S**	**09 50 09.5**	**+2.9**
D49A	**Beulah Townshi** baz=191,SNR=101	**34.98**	**8**	P	**P**	**09 44 40.3**	**+0.1**
D49A	baz=191			S	**S**	**09 50 04.9**	**-2.1**
PASC	**Pasadena Art C**	**35.05**	**313**	P	**P**	**09 44 43.2**	**+2.2**
PASC					**PcP**	**09 47 13.7**	**+2.1**
D50A	**G1974 Best Tow** baz=193,SNR=92	**35.10**	**9**	P	**P**	**09 44 41.6**	**+0.4**
D50A	baz=193			S	**S**	**09 50 06.0**	**-2.7**

D51A	Lot 18 Range I	35.10	10	P	P	09 44 41.5	+0.3
	baz=194,SNR=54						
D51A				S	S	09 50 06.9	-1.8
	baz=194						
E55A	Montcerf-Lytto	35.16	14	P	P	09 44 42.3	+0.6
	baz=200,SNR=25						
E55A				S	S	09 50 10.5	+0.8
	baz=200						
DECC	Green Verdugo	35.20	313	P	P	09 44 44.7	+2.4
	baz=120,SNR=9.3						
F58A	St-Lin Laurent	35.20	17	P	P	09 44 42.8	+0.7
	baz=204						
F58A				S	S	09 50 11.5	+1.2
	baz=204						
TPNV	Topopah Spring	35.25	318	P	P	09 44 45.8	+3.0
	baz=126,SNR=52						
DUG	Dugway, Tooele	35.28	326	IAmb	IAmb	09 44 46.9	
	comp=Z,152nm,1.1s						
DUG	Dugway, Tooele	35.28	326	P	P	09 44 45.3	+2.3
	baz=134,SNR=136						
EDW2	Edwards Air Fo	35.28	314	P	P	09 44 45.0	+2.0
	baz=122,SNR=17						
H63A	New Sharon	35.36	22	P	P	09 44 45.6	+2.2
	baz=211,SNR=30						
H63A				S	S	09 50 15.0	+2.2
	baz=211						
FURC	Furnace Creek,	35.37	317	P	P	09 44 46.2	+2.5
	baz=125,SNR=17						
LRMC	Laurel Mtn Rad	35.38	315	P	P	09 44 46.2	+2.2
	baz=123,SNR=7.7						
G61A	St-Isidore-de-	35.38	20	P	P	09 44 45.3	+1.6
	baz=208,SNR=14						
G61A				S	S	09 50 15.6	+2.4
	baz=208						
EYMN	Ely	35.39	356	IAmb	IAmb	09 44 45.3	
	comp=Z,76nm,0.7s						
EYMN	Ely	35.39	356	P	P	09 44 43.1	-0.6
	baz=174,SNR=134						
EYMN				S	S	09 50 06.0	-7.2
	baz=174						
D53A	Lac Vacive, Po	35.40	12	P	P	09 44 44.8	+1.0
	baz=197						
D53A				S	S	09 50 13.4	+0.1
	baz=197						
MDP	Montagnes des	35.40	99	P	P	09 44 43.6	-0.7
	comp=Z,10nm,0.9s,baz=296,slow=7.5,SNR=8.0						
MDP				pP	pP	09 45 01.5	+0.2
	comp=Z,27nm,0.8s,baz=310,slow=12,SNR=4.3						
MDP				ScP	ScP	09 50 51.7	-1.2
	comp=Z,34nm,1.0s,baz=308,slow=2.6,SNR=4.2						
F59A	Saint Guilaume	35.49	18	P	P	09 44 45.6	+1.0
	baz=206,SNR=17						
F59A				S	S	09 50 17.2	+2.5
	baz=206						
E56A	St. Veronique	35.50	15	P	P	09 44 45.5	+0.9
	baz=202,SNR=32						
E56A				S	S	09 50 14.6	-0.3
	baz=202						
PDAR	Pinedale Array	35.53	332	P	P	09 44 46.5	+1.2
	comp=Z,42nm,0.6s,baz=134,slow=8.5,SNR=198						
PDAR				PcP	PcP	09 47 13.2	0.0
	comp=Z,4.8nm,0.5s,baz=142,slow=3.4,SNR=8.8						
PDAR				S	S	09 50 13.8	-2.2
	comp=Z,2.0nm,0.8s,baz=94,slow=7.2,SNR=2.6						
PDAR				ScP	ScP	09 50 52.8	-0.3
	comp=Z,15nm,1.1s,baz=123,slow=6.0,SNR=7.7						
PDAR				PKiKP	PKiKP	09 54 33.5	-0.6
	comp=Z,0.4nm,0.5s,baz=108,slow=2.9,SNR=4.8						
PDAR				LR	LR	10 02 01.9	
	comp=Z,9µm,20.9s,baz=138,slow=41						
PB16	IPOC Station P	35.59	149	⇑*i*P	P	09 44 48.1	+1.7
E57A	Chemin Saint G	35.61	16	P	P	09 44 46.3	+0.7
	baz=203,SNR=21						
E57A				S	S	09 50 17.6	+0.9
	baz=203						
H64A	Troy	35.65	23	P	P	09 44 48.1	+2.2
	baz=212,SNR=14						
H64A				S	S	09 50 21.2	+4.0
	baz=212						
OSI	Osito Audit: C	35.66	313	P	P	09 44 48.9	+2.7
	baz=120						
G62A	West of Eustis	35.66	21	P	P	09 44 48.0	+1.9
	baz=210,SNR=67						
G62A				S	S	09 50 19.2	+1.7
	baz=210						
R11A	Troy Canyon, C	35.68	321	P	P	09 44 49.0	+2.5
	baz=129,SNR=67						
D54A	Lac Fusel, La	35.68	13	P	P	09 44 46.9	+0.7
	baz=199,SNR=91						
D54A				S	S	09 50 17.4	-0.4
	baz=199						
DAC	Darwin (Calif)	35.76	316	P	P	09 44 52.0	+4.7
DAC					ScP	09 50 58.8	+4.8
DAC	Darwin (Calif)	35.76	316	P	P	09 44 52.0	+4.7
DAC				pmax	pmax		
	comp=Z,26nm,1.1s						
E58A	La Victoria	35.82	17	P	P	09 44 48.2	+0.8
	baz=204,SNR=42						
E58A				S	S	09 50 21.1	+1.3
	baz=204						
D55A	Sainte-Anne-du	35.83	14	P	P	09 44 48.1	+0.6
	baz=201						
D55A				S	S	09 50 20.2	+0.2
	baz=201						
F60A	Warwick	35.85	19	P	P	09 44 48.4	+0.8
	baz=207,SNR=15						
F60A				S	S	09 50 21.5	+1.2
	baz=207						
G63A	Kingsbury	35.90	22	P	P	09 44 49.9	+1.8
	baz=211,SNR=15						
G63A				S	S	09 50 23.3	+2.1
	baz=211						
ARVC	Arvin	35.99	314	P	P	09 44 51.6	+2.5
	baz=121,SNR=13						
ISA	Isabella, Lake	36.02	315	P	P	09 44 51.7	+2.3
	baz=122,SNR=13						
D56A	ZEC Mazanza, M	36.04	15	P	P	09 44 49.6	+0.3
	baz=202						
D56A				S	S	09 50 23.3	+0.2
	baz=202						
H65A	Eastbrook	36.07	24	P	P	09 44 51.6	+2.1
	baz=213,SNR=10						
H65A				S	S	09 50 26.0	+2.4
	baz=213						
E59A	St. Maurice	36.14	18	P	P	09 44 51.2	+1.1
	baz=206						
E59A				S	S	09 50 24.5	-0.2
	baz=206						
PKME	Peaks-Kenny Pk	36.15	22	P	P	09 44 51.7	+1.5
PKME					pP	09 45 08.4	+1.1
PKME	Peaks-Kenny Pk	36.15	22	P	P	09 44 52.0	+1.8
	baz=211,SNR=20						
PKME				S	S	09 50 26.4	+1.5
	baz=211						
F61A	St Evariste	36.17	20	P	P	09 44 51.3	+0.9
	baz=208,SNR=7.8						
CWC	Cottonwood Cre	36.17	316	P	P	09 44 52.7	+1.9
	baz=123						
MNMCX	Minye Minye	36.22	150	⇓*i*P	P	09 44 54.0	+2.6
D57A	Chemin Vers le	36.24	16	P	P	09 44 51.8	+0.8
	baz=203,SNR=38						
D57A				S	S	09 50 25.0	-1.2
	baz=203						
G64A	Maxfield	36.34	23	P	P	09 44 53.5	+1.6
	baz=212,SNR=16						
G64A				S	S	09 50 31.1	+3.3
	baz=212						
E60A	Ste Agathe de	36.37	19	P	P	09 44 52.7	+0.7
	baz=207,SNR=13						
E60A				S	S	09 50 29.4	+1.2
	baz=207						
PSGCX	Pisagua	36.37	151	⇓*i*P	P	09 44 54.5	+2.0
EMMW	East Machias	36.40	25	P	P	09 44 53.9	+1.6
EMMW					pP	09 45 10.9	+1.5
VLDQ	Val d'Or	36.43	12	IAmb	IAmb	09 44 54.9	
	comp=Z,214nm,1.5s						
H66A	Whiting	36.52	25	P	P	09 44 54.6	+1.2
	baz=215,SNR=8.5						
H66A				S	S	09 50 33.3	+2.8
	baz=215						
MDND	Maddock	36.53	347	P	P	09 44 54.1	+0.6
	baz=160,SNR=180						
MDND				S	S	09 50 28.5	-2.2
	baz=160						
VES	Vestal, Richgr	36.54	315	P	P	09 44 56.4	+2.7
	baz=122,SNR=19						
PKM	Mcpherson Peak	36.57	313	P	P	09 44 57.1	+2.9
	baz=120,SNR=5.5						
D58A	Chemin du LacG	36.59	17	P	P	09 44 54.8	+0.8
	baz=205,SNR=76						
D58A				S	S	09 50 33.5	+1.9
	baz=205						
F63A	Nahmakanta, Br	36.59	22	IAmb	IAmb	09 44 56.2	
	comp=Z,246nm,1.4s						
F63A	Nahmakanta, Br	36.59	22	P	P	09 44 55.2	+1.2
	baz=211,SNR=15						
F63A				S	S	09 50 34.0	+2.3
	baz=211						
TIN	Tinemaha, Big	36.61	317	P	P	09 44 57.2	+2.7
	baz=124,SNR=8.2						
PB11	IPOC Station P	36.73	151	*e*P	P	09 44 57.3	+1.7
PB11	IPOC Station P	36.73	151	P	P	09 44 57.7	+2.1
E61A	Lac Etchemin	36.74	20	P	P	09 44 56.3	+1.0
	baz=209,SNR=11						
E61A				S	S	09 50 36.6	+2.7
	baz=209						
G65A	Princeton	36.76	24	P	P	09 44 57.6	+2.2
	baz=214,SNR=21						
G65A				S	S	09 50 37.9	+3.8
	baz=214						
D59A	Saint-Raymond	36.82	18	P	P	09 44 56.9	+1.1
	baz=206,SNR=11						
D59A				S	S	09 50 36.3	+1.3
	baz=206						
GO01	Chusmiza	36.87	150	⇓*i*P	P	09 45 00.1	+2.8
GO01	Chusmiza	36.87	150	IAmb	IAmb	09 45 07.1	
	comp=Z,136nm,0.7s						
LATQ	La Tuque	36.88	17	IAmb	IAmb	09 44 59.2	
	comp=Z,214nm,1.6s						
LATQ	La Tuque	36.88	17	P	P	09 44 57.4	+1.0
	baz=205,SNR=54						
LATQ				S	S	09 50 34.8	-1.2
	baz=205						
FXWY	Fox Creek	36.89	331	IAmb	IAmb	09 45 00.1	
	comp=Z,120nm,1.2s						
SMMC	Simmler	36.91	313	P	P	09 44 59.5	+2.6
	baz=120,SNR=6.4						
F64A	Sherman	37.01	23	P	P	09 44 59.3	+1.8
	baz=212,SNR=24						
F64A				S	S	09 50 41.5	+3.5
	baz=212						
ELK	Elko	37.01	324	P	P	09 44 59.9	+2.0
ELK				IAmb	IAmb	09 45 01.6	
	comp=Z,153nm,1.1s						
ELK					ScP	09 50 59.8	+1.2
D60A	Saint Jean D’O	37.02	19	P	P	09 44 58.7	+1.2
	baz=208,SNR=28						
D60A				S	S	09 50 39.0	+1.0
	baz=208						
H17A	Grant Village	37.27	333	IAmb	IAmb	09 45 05.9	
	comp=Z,198nm,1.3s						
H17A	Grant Village	37.27	333	P	P	09 45 02.4	+2.3
	baz=141,SNR=88						
H17A				S	S	09 50 46.4	+3.9
	baz=141						
RLMT	Red Lodge	37.27	335	IAmb	IAmb	09 45 03.0	
	comp=Z,170nm,1.1s						
RLMT	Red Lodge	37.27	335	P	P	09 45 01.6	+1.5
	baz=144,SNR=135						
RLMT				S	S	09 50 43.4	+0.9
	baz=144						
PB08	IPOC Station P	37.30	150	*e*P	P	09 45 03.3	+2.6
PAGB	Antelope Grade	37.30	314	IAmb	IAmb	09 45 08.1	
	comp=Z,174nm,1.4s						
LKWY	Lake	37.32	333	IAmb	IAmb	09 45 04.8	
	comp=Z,138nm,1.1s						
MLAC	Mammoth, Mammo	37.33	317	P	P	09 45 03.4	+2.6
	baz=124,SNR=9.8						
NV11	Mina Array Sit	37.34	319	P	P	09 45 02.4	+1.7
NV11				IAmb	IAmb	09 45 04.8	
	comp=Z,114nm,1.2s						
NV11					ScP	09 51 00.9	+1.1
LSQQ	Lebel-sur-Quev	37.43	12	P	P	09 45 01.5	+0.4
	baz=197						
OMMB	Old Mammoth Mi	37.43	317	P	P	09 45 03.8	+2.1
OMMB					ScP	09 51 02.3	+2.0
NVAR	Mina Array Bea	37.44	319	P	P	09 45 03.9	+2.3
	comp=Z,22nm,0.6s,baz=134,slow=7.5,SNR=209						
NVAR				PcP	PcP	09 47 20.1	+1.2
	comp=Z,18nm,0.7s,baz=128,slow=2.7,SNR=7.4						
NVAR				ScP	ScP	09 51 00.1	-0.1
	comp=Z,22nm,0.9s,baz=137,slow=4.7,SNR=13						
NVAR				LR	LR	10 02 27.3	
	comp=Z,14µm,21.3s,baz=142,slow=39						
E63A	Oxbow	37.45	22	P	P	09 45 02.8	+1.5
E63A				IAmb	IAmb	09 45 03.7	
	comp=Z,287nm,1.4s						
E63A				pP	pP	09 45 20.0	+1.6
E63A	Oxbow	37.45	22	P	P	09 45 02.9	+1.6
	baz=212,SNR=19						
E63A				S	S	09 50 46.3	+1.5
	baz=212						
D61A	St Aubert, Com	37.51	20	P	P	09 45 03.2	+1.4
	baz=209,SNR=23						
D61A				S	S	09 50 46.8	+1.2
	baz=209						
KVN	Kaiserville	37.67	320	P	P	09 45 05.3	+1.8
KVN				PcP	PcP	09 47 21.6	+2.0
KVN	Kaiserville	37.67	320	P	P	09 45 05.3	+1.8
KVN						09 47 21.6	
KVN				pmax	pmax		
	comp=Z,111nm,1.3s						
E64A	Bridgewater	37.67	23	P	P	09 45 04.8	+1.6
	baz=213,SNR=15						
E64A				S	S	09 50 51.0	+3.0
	baz=213						
D62A	Allapoint, All	37.79	21	P	P	09 45 05.6	+1.4
	baz=210,SNR=54						
D62A				S	S	09 50 50.7	+0.9
	baz=210						
PQI	Presque Isle	37.81	22	IAmb	IAmb	09 45 26.0	
	comp=Z,227nm,1.2s						
YHL	Hebgen Lake	37.89	333	P	P	09 45 07.9	+2.4
YHL				PcP	PcP	09 47 22.5	+2.2
PB01	IPOC Station P	37.91	152	⇓*i*P	P	09 45 07.9	+2.3
PB01	IPOC Station P	37.91	152	IAmb	IAmb	09 45 09.6	
	comp=Z,129nm,1.0s						
PMPB	Monarch Peak	37.93	314	IAmb	IAmb	09 45 08.8	
	comp=Z,137nm,1.3s						
PB02	IPOC Station P	37.97	152	⇓*i*P	P	09 45 08.2	+2.2
MATQ	Matagami	37.98	11	P	P	09 45 06.0	+0.3
	baz=196,SNR=235						
MATQ				S	S	09 50 49.8	-2.8
	baz=196						
HAL	Halifax	38.02	28	IAmb	IAmb	09 45 27.4	
	comp=Z,108nm,1.0s						
D63A	Stockholm	38.09	22	P	P	09 45 08.2	+1.6
	baz=212,SNR=24						
D63A				S	S	09 50 56.8	+2.5
	baz=212						
ULM	Lac du Bonnet	38.15	352	P	P	09 45 05.9	-1.2
	comp=Z,111nm,0.6s,baz=167,slow=8.9,SNR=158						
ULM				S	S	09 50 48.1	-7.0
	comp=Z,18nm,1.1s,baz=73,slow=20,SNR=4.0						
ULM				ScP	ScP	09 51 01.0	-1.3
	comp=Z,42nm,1.0s,baz=146,slow=9.3,SNR=6.7						
ULM				LR	LR	10 03 13.4	
	comp=Z,10µm,21.2s,baz=163,slow=40						
ULM	Lac du Bonnet	38.15	352	IAmb	IAmb	09 45 08.0	
	comp=Z,185nm,0.9s						
ULM	Lac du Bonnet	38.15	352	*c* *i*P	P	09 45 06.3	-0.8
PB07	IPOC Station P	38.33	153	⇓*i*P	P	09 45 11.3	+2.2
YERR	Yerington	38.35	319	IAmb	IAmb	09 45 13.2	
	comp=Z,182nm,1.4s						
LMN	Caledonia Moun	38.42	26	P	P	09 45 10.8	+1.3
LMN				pP	pP	09 45 28.3	+1.6
CMB	Columbia Colle	38.58	317	P	P	09 45 12.6	+1.6
CMB				PcP	PcP	09 47 23.9	+1.6
PB03	IPOC Station P	38.67	153	⇓*i*P	P	09 45 14.2	+2.2
PB09	IPOC Station P	38.68	152	⇓*i*P	P	09 45 14.8	+2.8
PB09				⇓*i*P	P	09 45 14.8	+2.8
SIV	San Ignacio	38.73	136	P	P	09 45 12.1	-0.4
	comp=Z,143nm,0.8s,baz=322,slow=8.8,SNR=434						
SIV				PcP	PcP	09 47 24.1	+1.1
	comp=Z,64nm,0.8s,baz=290,slow=4.3,SNR=5.8						
SIV				S	S	09 51 02.6	-2.2
	comp=Z,7.6nm,1.1s,baz=68,slow=19,SNR=2.1						
PB04	IPOC Station P	38.74	153	⇓*i*P	P	09 45 14.8	+2.3
DLMT	Dillon	38.93	332	P	P	09 45 15.4	+1.5
DLMT				ScP	S	09 51 06.6	-0.8
BATG	Bathurst New B	39.06	23	P	P	09 45 16.2	+1.5
BATG				IAmb	IAmb	09 45 17.2	
	comp=Z,185nm,1.0s						
BATG				pP	pP	09 45 33.1	+1.0
PB05	IPOC Station P	39.17	154	⇑*i*P	P	09 45 17.3	+1.2
PB06	IPOC Station P	39.32	153	⇓*i*P	P	09 45 19.6	+2.3
CLDB	Colider	39.33	125	*e*P	P	09 45 13.9	-3.6
AFDM	Forest Hills D	39.46	318	P	P	09 45 19.9	+1.7
AFDM				PcP	PcP	09 47 26.7	+1.7
LVC	Limon Verde	39.53	152	S	S	09 51 19.0	+1.7
	comp=Z,6.0nm,0.9s,baz=343,slow=10,SNR=3.6						
LVC				LR	LR	10 01 10.6	
	comp=Z,9µm,21.7s,baz=320,slow=35						
LVC	Limon Verde	39.53	152	⇓*i*P	P	09 45 22.3	+2.9
LVC	Limon Verde	39.53	152	P	P	09 45 22.1	+2.7
LVC				IAmb	IAmb	09 45 24.7	
	comp=Z,192nm,1.2s						
LVC	Limon Verde	39.53	152	P	P	09 45 22.1	+2.7
LVC				S	S	09 51 19.0	+1.7
LVC				pmax	pmax		
	comp=Z,191nm,1.2s						
LVC	Limon Verde	39.53	152	*e*P	P	09 45 20.6	+1.1
GBN	Guysborough	39.57	29	P	P	09 45 20.7	+1.7
GBN				pP	pP	09 45 37.9	+1.6
GBN				IAmb	IAmb	09 45 43.0	
	comp=Z,227nm,1.3s						
PB10	IPOC Station P	39.61	155	⇓*i*P	P	09 45 22.0	+2.4
PB15	IPOC Station P	39.80	153	⇓*i*P	P	09 45 23.9	+2.4
EGMT	Eagleton	39.83	337	P	P	09 45 22.9	+1.6
	baz=145,SNR=102						
EGMT				S	S	09 51 22.6	+1.9
	baz=145						
WVOR	Wild Horse Val	40.05	324	IAmb	IAmb	09 45 27.8	
	comp=Z,112nm,0.8s						
ORV	Oroville	40.13	318	P	P	09 45 25.6	+1.8
ORV	Oroville	40.13	318	P	P	09 45 25.6	+1.8
ORV				pmax	pmax		
	comp=Z,115nm,1.3s						
MCCM	Marconi Confer	40.33	315	IAmb	IAmb	09 45 28.9	
	comp=Z,194nm,1.1s						
J08A	Circle Bar Ran	40.54	325	P	P	09 45 28.0	+0.8
J08A				IAmb	IAmb	09 45 30.2	
	comp=Z,168nm,1.3s						
J08A					ScP	09 51 13.3	+1.4
MSO	Missoula	40.65	332	P	P	09 45 29.3	+1.2
	baz=139,SNR=184						
MSO				S	S	09 51 33.2	+0.2
	baz=139						
PB14	IPOC Station P	40.66	155	⇓*i*P	P	09 45 31.0	+2.4
O03E	Paynes Creek	40.73	319	P	P	09 45 29.7	+0.8
	baz=123,SNR=36						
O02D	Mt. Diablo Mer	41.30	318	P	P	09 45 33.7	+0.2
	baz=122,SNR=29						
WDC	Whiskeytown Da	41.35	319	P	P	09 45 33.0	-0.9
WDC				PcP	PcP	09 47 32.3	+1.3
WDC					ScP	09 51 15.8	+0.8
WDC	Whiskeytown Da	41.35	319	P	P	09 45 33.0	-0.9
WDC						09 47 32.3	
WDC				pmax	pmax		
	comp=Z,18nm,0.7s						
GO02	Mina Guanaco	41.47	155	⇓*i*P	P	09 45 37.9	+2.5
GO02	Mina Guanaco	41.47	155	P	P	09 45 37.5	+2.2
KCPM	Cahto Peak	41.57	317	IAmb	IAmb	09 45 39.7	
	comp=Z,146nm,1.2s						
M04C	Macdoel	41.57	321	P	P	09 45 37.1	+1.2
	baz=124,SNR=60						
I07A	Izee	41.57	325	P	P	09 45 36.4	+0.6
I07A				PcP	PcP	09 47 33.5	+1.6
I07A				ScP	ScP	09 51 17.4	+1.4
F10A	Beach Ranch, E	41.61	329	IAmb	IAmb	09 45 39.6	
	comp=Z,149nm,0.8s						
N02D	Trinity Center	41.67	319	P	P	09 45 37.5	+1.0
	baz=123						
KMRM	Mail Ridge	41.93	318	P	P	09 45 40.6	+2.0
KMRM				IAmb	IAmb	09 45 42.6	
	comp=Z,145nm,1.1s						
AC01	Pan de Azucar	41.95	157	⇓*i*P	P	09 45 40.6	+1.8
AC01				⇓*i*P	P	09 45 40.6	+1.8
M02C	Callahan	41.99	320	P	P	09 45 39.3	+0.1
	baz=123						
K04D	Chiloquin, OR	42.00	322	P	P	09 45 40.1	+0.8
	baz=125						
J05D	Fort Rock, OR	42.08	323	P	P	09 45 40.6	+0.7
	baz=126,SNR=30						
YBH	Yreka Blue Hor	42.09	320	P	P	09 45 39.6	-0.3
	comp=Z,16nm,0.8s,baz=147,slow=2.3,SNR=41						
L04D	Klamath Falls	42.10	321	P	P	09 45 41.0	+0.8
	baz=124,SNR=65						
KHMM	Horse Mountain	42.28	318	IAmb	IAmb	09 45 46.1	
	comp=Z,100nm,0.7s						
WALA	Waterton Lakes	42.33	334	IAmb	IAmb	09 46 03.3	
	comp=Z,170nm,1.1s						
JCC	Jacoby Creek,	42.44	318	IAmb	IAmb	09 45 46.0	
	comp=Z,252nm,1.2s						
E09A	Wood Farm, Sta	42.45	329	IAmb	IAmb	09 45 45.9	
	comp=Z,130nm,0.9s						
SALV	Santo Antonio	42.47	131	*e*P	P	09 45 42.8	-0.5
J04D	Umpqua Nationa	42.57	322	P	P	09 45 45.0	+1.0
	baz=126,SNR=40						
I05D	Terrebonne, OR	42.77	324	P	P	09 45 46.3	+0.8
	baz=127,SNR=42						
L02E	Cave Junction	42.88	320	P	P	09 45 46.9	+0.6
	baz=123						
E08A	Dider Farm, El	42.90	328	P	P	09 45 46.7	+0.3
I04A	Tendick Farm,	43.07	323	P	P	09 45 48.4	+0.5
	baz=126,SNR=50						
AC02	Maricunga	43.14	155	⇓*i*P	P	09 45 52.1	+3.0
NEW	Newport	43.17	331	P	P	09 45 49.0	+0.4
	comp=Z,70nm,0.7s,baz=132,slow=8.8,SNR=84						
NEW	Newport	43.17	331	P	P	09 45 48.7	+0.1
NEW	Newport	43.17	331	P	P	09 45 49.2	+0.6
	baz=136,SNR=95						
NEW				S	S	09 52 10.3	+0.2
	baz=136						
K02D	Willamette Mer	43.21	321	P	P	09 45 49.3	+0.3
	baz=123,SNR=17						
KBO	Bosley Butte	43.30	320	IAmb	IAmb	09 45 52.9	
	comp=Z,316nm,1.1s						
G05D	Wamic, OR	43.31	325	P	P	09 45 51.5	+1.8
	baz=128,SNR=45						
E07A	Sunnyside	43.36	328	IAmb	IAmb	09 45 53.9	
	comp=Z,230nm,0.7s						
C09A	Chrisman Ranch	43.39	330	P	P	09 45 50.9	+0.6
C09A				IAmb	IAmb	09 45 54.7	
	comp=Z,158nm,0.6s						
C09A					ScP	09 51 24.0	+0.9
FFC	Flin Flon	43.51	348	P	P	09 45 51.5	+0.4
FFC				IAmb	IAmb	09 45 55.3	
	comp=Z,174nm,0.7s						
FFC	Flin Flon	43.51	348	P	P	09 45 51.5	+0.4
FFC				pmax	pmax		
	comp=Z,174nm,0.7s						
I03D	Drain, OR	43.57	322	P	P	09 45 52.5	+0.7
	baz=124,SNR=27						
J01E	Myrtle Point	43.63	321	P	P	09 45 53.8	+1.5
	baz=123,SNR=42						
H04D	Lebanon	43.69	324	P	P	09 45 52.8	+0.1
	baz=126,SNR=25						
F05D	White Salmon	43.78	326	P	P	09 45 55.3	+1.8
	baz=128,SNR=52						
F05D				S	S	09 52 21.9	+2.8
	baz=128						
COR	Corvallis	44.05	323	P	P	09 45 57.0	+1.4
COR				IAmb	IAmb	09 46 18.0	
	comp=Z,265nm,1.4s						
COR	Corvallis	44.05	323	P	P	09 45 57.0	+1.4
COR				pmax	pmax		
	comp=Z,265nm,1.5s						
I02D	Swisshome	44.10	322	P	P	09 45 57.5	+1.5
	baz=124,SNR=16						
LTY	Liberty	44.24	328	IAmb	IAmb	09 45 59.7	
	comp=Z,182nm,1.2s						
DRLN	Deer Lake	44.24	28	P	P	09 45 57.1	0.0
DRLN				pP	pP	09 46 14.3	-0.4
DRLN				IAmb	IAmb	09 46 17.1	
	comp=Z,182nm,1.1s						
B08A	Colville Reser	44.29	330	IAmb	IAmb	09 45 59.7	
	comp=Z,180nm,1.2s						
G03D	McMinnville, O	44.39	324	P	P	09 45 59.4	+1.1
	baz=126,SNR=31						
AC05	El Transito	44.50	158	⇓*i*P	P	09 46 01.7	+2.2
RPN	Rapa Nui	44.72	208	P	P	09 46 02.8	+1.7
	comp=Z,114nm,0.9s,baz=321,slow=3.9,SNR=17						
RPN				LR	LR	10 00 19.6	
	comp=Z,13µm,20.3s,baz=32,slow=30						
RPN	Rapa Nui	44.72	208	P	P	09 46 03.3	+2.2
RPN	Rapa Nui	44.72	208	P	P	09 46 03.3	+2.2
RPN				pmax	pmax		
	comp=Z,2µm,1.9s						
F04D	Rainier, OR	44.76	325	P	P	09 46 02.8	+1.5

	baz=127,SNR=28						
C06D	Leavenworth	44.78	328	P	P	09 46 02.8	+1.3
	baz=131,SNR=68						
C06D				S	S	09 52 34.5	+1.0
	baz=131						
E04D	Cinebar	44.80	326	P	P	09 46 02.4	+0.8
	baz=128,SNR=16						
D05A	Enumclaw	44.88	327	IAmb	IAmb	09 46 06.7	
	comp=Z,123nm,0.8s						
F03A	Seaside	44.98	325	IAmb	IAmb	09 46 17.4	
	comp=Z,144nm,0.8s						
SCHQ	Schefferville	45.22	17	P	P	09 46 04.3	-0.5
	comp=Z,176nm,0.6s,baz=218,slow=6.3,SNR=609						
SCHQ				S	S	09 52 37.0	-2.5
	comp=Z,26nm,1.2s,baz=29,slow=18,SNR=9.1						
SCHQ				LR	LR	10 05 32.1	
	comp=Z,26µm,21.8s,baz=208,slow=37						
SCHQ	Schefferville	45.22	17	P	P	09 46 03.8	-1.0
ARAG	Araguaiana, MT	45.29	127	*e*P	P	09 46 04.0	-1.9
E03A	Lebam	45.35	325	IAmb	IAmb	09 46 09.4	
	comp=Z,159nm,0.7s						
GO04	Tololo Observa	45.52	159	⇓*i*P	P	09 46 09.4	+1.7
GO04	Tololo Observa	45.52	159	P	P	09 46 09.4	+1.7
B05A	Bryant	45.62	328	P	P	09 46 08.2	+0.2
	baz=130,SNR=38						
D03D	Eldon	45.69	327	P	P	09 46 09.2	+0.6
	baz=128,SNR=58						
NLWA	Neilton Lookou	46.02	326	IAmb	IAmb	09 46 14.1	
	comp=Z,252nm,1.2s						
A04D	Lummi Island	46.22	328	P	P	09 46 13.6	+0.8
	baz=129,SNR=13						
A04D				S	S	09 52 55.2	+1.1
	baz=129						
FCC	Fort Churchill	46.33	355	IAmb	IAmb	09 46 16.3	
	comp=Z,142nm,0.7s						
CO02	Combarbal	46.40	160	⇓*i*P	P	09 46 16.3	+1.8
CO02				⇓*i*P	P	09 46 16.5	+2.0
LLLB	Lillooet	47.04	331	IAmb	IAmb	09 46 21.9	
	comp=Z,269nm,1.2s						
CO04	Los Peladeros	47.18	161	⇓*i*P	P	09 46 22.1	+1.3
VA01	Torpederas	47.88	162	⇑*i*P	P	09 46 26.1	+0.3
ROCH	El Roble	48.03	161	⇓*i*P	P	09 46 28.8	+1.5
ROCH				⇓*i*P	P	09 46 28.8	+1.5
ROC1	El Roble	48.03	161	P	P	09 46 28.3	+1.0
BDFB	Brasilia	48.26	124	P	P	09 46 27.2	-2.0
	comp=Z,37nm,0.8s,baz=298,slow=4.9,SNR=21						
BDFB				PcP	PcP	09 47 54.9	-0.5
	comp=Z,14nm,0.5s,baz=218,slow=2.8,SNR=3.3						
BDFB				LR	LR	10 08 47.9	
	comp=Z,7µm,21.4s,baz=304,slow=38						
BDFB	Brasilia	48.26	124	P	P	09 46 26.5	-2.7
PEL	Peldehue	48.29	161	⇓*i*P	P	09 46 30.7	+1.6
PEL	Peldehue	48.29	161	P	P	09 46 30.4	+1.3
PEL	Peldehue	48.29	161	P	P	09 46 30.4	+1.3
PEL				pmax	pmax		
	comp=Z,517nm,1.7s						
MT05	Renca	48.50	161	⇓*i*P	P	09 46 32.5	+1.8
FCH	Farellones	48.59	160	⇓*i*P	P	09 46 34.1	+2.4
MT03	Universidad Ad	48.67	161	⇓*i*P	P	09 46 33.8	+1.8
MT03				⇓*i*P	P	09 46 34.0	+2.0
CPUP	Villa Florida	48.67	143	P	P	09 46 31.6	-0.4
	comp=Z,85nm,0.9s,baz=332,slow=8.2,SNR=156						
CPUP				PcP	PcP	09 47 56.6	+0.1
	comp=Z,31nm,0.8s,baz=325,slow=6.0,SNR=2.5						
CPUP				LR	LR	10 08 01.7	
	comp=Z,6µm,21.5s,baz=319,slow=37						
TRCB	Terra Rica	49.16	136	*e*P	P	09 46 35.8	-0.2
PCMB	Pacaembu	49.34	133	*e*P	P	09 46 37.0	-0.2
IPMB	Ipameri, GO	49.41	127	*e*P	P	09 46 34.5	-3.5
GO05	Huala	49.65	163	P	P	09 46 40.6	+1.3
PTGB	Pitanga	50.84	137	*e*P	P	09 46 48.3	-0.4
JANB	Januaria	50.99	121	*e*P	P	09 46 46.1	-3.9
FRTB	Fartura	51.66	134	*e*P	P	09 46 54.3	-0.4
ITAB	Concordia	52.52	139	*e*P	P	09 47 01.2	+0.1
VAO	Valinhos	53.31	131	*e*P	P	09 47 06.4	-0.7
SPB	Sao Paulo	53.33	132	*e*P	P	09 47 06.3	-0.8
YKA	Yellowknife Ar	53.41	345	P	P	09 47 06.4	-0.7
	comp=Z,104nm,1.1s,baz=138,slow=7.9,SNR=247						
YKA				PcP	PcP	09 48 11.9	-1.5
	comp=Z,14nm,0.7s,baz=143,slow=4.1,SNR=5.2						
YKA				ScP	ScP	09 52 04.6	-0.5
	comp=Z,4.8nm,0.5s,baz=144,slow=4.7,SNR=15						
YKA				LR	LR	10 12 23.8	
	comp=Z,7µm,21.1s,baz=0.0,slow=39						
YKA				PKPPKP	P'P'df	10 17 28.7	-1.3
	comp=Z,1.6nm,0.8s,baz=354,slow=2.7,SNR=5.6						
DIB	Dawson Inlet,	53.85	328	IAmb	IAmb	09 47 12.9	
	comp=Z,98nm,1.3s						
CPSB	Cacapava Do Su	53.98	143	*e*P	P	09 47 12.3	+0.5
PARB	Paraibuna	54.50	131	*e*P	P	09 47 14.5	-1.2
RCBR	Riachuelo	54.63	107	P	P	09 47 15.0	-1.8
	comp=Z,20nm,0.8s,baz=276,slow=8.5,SNR=14						
RCBR	Riachuelo	54.63	107	P	P	09 47 14.2	-2.6
RCBR				IAmb	IAmb	09 47 40.3	
	comp=Z,214nm,1.9s						
RCBR	Riachuelo	54.63	107	*e*P	P	09 47 15.1	-1.8
PLTB	Pedras Altas	54.89	144	*e*P	P	09 47 19.2	+0.9
LPA	La Plata	55.03	150	*e*P	P	09 47 10.7	-8.5
LPA				PCP	PcP	09 48 21.4	+1.3
LPA				PP	PP	09 49 06.4	-17
LPA				PPP	PPP	09 50 37.2	
LPA				S	S	09 54 52.0	-4.4
LPA				sS	sS	09 55 26.6	0.0
LPA				SCS	ScS	09 57 03.4	+1.3
LPA				SS	SS	09 58 51.7	+10
LPA				SSS	SSS	10 00 55.5	
LPA				SKIKS		10 01 58.1	
PLCA	Paso Flores	55.38	164	P	P	09 47 23.2	+1.5
	comp=Z,100nm,0.8s,baz=0.7,slow=8.2,SNR=181						
PLCA				LR	LR	10 05 29.8	
	comp=Z,4µm,21.8s,baz=348,slow=30						
PLCA	Paso Flores	55.38	164	*e*P	P	09 47 23.6	+1.8
SJMB	Sao Joao De Ma	55.41	123	*e*P	P	09 47 21.3	-0.9
TAOE	Nuku Hiva Isla	56.29	250	*e*LQ	LQ	10 01 32.4	
	comp=Z,7µm,28.6s						
TAOE				*e*LR	LR	10 03 58.2	
	comp=Z,43µm,26.7s						
TAOE	Nuku Hiva Isla	56.29	250	*e*T	T	10 46 54.7	
	comp=Z,59nm,0.2s						
GO07	Milladeo Hill,	56.90	168	P	P	09 47 33.7	+1.3
SKAG	Skagway	58.52	334	P	P	09 47 44.1	+0.5
SKAG					pP	09 48 00.3	-1.5
SRBC	Serra Branca	58.68	52	*e*P	P	09 47 47.6	+2.5
	comp=Z,389nm,0.9s						
PGRA	Graciosa	58.72	52	*e*P	P	09 47 50.0	+4.6
	comp=Z,257nm,1.4s						
SFJD	Kangerlussuaq	59.65	16	*i* P	P	09 47 50.8	-0.5
SFJD	Kangerlussuaq	59.65	16	P	P	09 47 50.1	-1.2
SFJD				pP	pP	09 48 09.9	+0.3
SFJD				IAmb	IAmb	09 48 10.9	
	comp=Z,69nm,1.1s						
SFJD	Kangerlussuaq	59.65	16	*i* P	P	09 47 50.8	-0.5
PSET	Sete Cidades	60.30	54	*e*P	P	09 47 51.6	-4.8
	comp=Z,147nm,0.3s						
GRON	Grota Negra	60.45	54	*e*P	P	09 47 53.8	-3.6
	comp=Z,216nm,1.4s						
CMLA	Cha da Macela	60.45	54	*e*P	P	09 47 49.8	-7.6
	comp=Z,139nm,1.4s						
PSMA	Santa Maria	60.67	55	*e*P	P	09 47 52.2	-6.7
	comp=Z,158nm,1.1s						
PSMN	Pico do Norte,	60.73	55	*e*P	P	09 47 55.0	-4.2
	comp=Z,101nm,1.9s						
BART	Pico Bartolome	60.73	54	*e*P	P	09 48 02.4	+3.0
	comp=Z,138nm,1.3s						
PCA	Pinnacle	61.00	333	P	P	09 48 00.8	0.0
PCA				PcP	PcP	09 48 45.4	+2.0
ILULI	Ilulissat	61.18	14	*i* P	P	09 48 00.7	-1.0
	comp=Z,22nm,0.7s						
ILULI	Ilulissat	61.18	14	IAmb	IAmb	09 48 21.5	
	comp=Z,130nm,1.5s						
ILULI	Ilulissat	61.18	14	*i* P	P	09 48 00.7	-1.0
ILULI				pmax	pmax		
	comp=Z,22nm,0.7s						
ILULI				MLR	MLR		
	comp=Z,27µm,23.0s						
C36M	Paulatuk	61.23	346	P	P	09 48 01.1	-0.9
	baz=139,SNR=6.3						
C36M				S	S	09 56 13.1	-3.1
	baz=139						
RES	Resolute Bay	62.21	358	IAmb	IAmb	09 48 10.3	
	comp=Z,145nm,1.6s						
BALM	Baldy	62.34	333	P	P	09 48 10.2	+0.4
BALM				pP	pP	09 48 29.1	+0.9
TGL	Tana Glacier	62.44	333	IAmb	IAmb	09 48 39.7	
	comp=Z,70nm,1.0s						
CRQM	Cirque	62.57	333	IAmb	IAmb	09 48 40.5	
	comp=Z,69nm,1.0s						
MCARA	McCarthy VSAT	62.79	334	IAmb	IAmb	09 48 43.9	
	comp=Z,66nm,0.9s						
ANGG	Ammassalik, Gr	62.80	21	P	P	09 48 11.4	-1.2
ANGG				IAmb	IAmb	09 48 15.7	
	comp=Z,74nm,0.6s						
ANGG				pP	pP	09 48 30.7	-0.3
EPYK	Eagle Plains	62.85	340	IAmb	IAmb	09 48 14.8	
	comp=Z,99nm,1.2s						
EPYK	Eagle Plains	62.85	340	P	P	09 48 13.3	+0.2
	baz=124,SNR=51						
EPYK				S	S	09 56 36.9	-0.1
	baz=124						
INK	Inuvik	63.00	343	P	P	09 48 13.8	0.0
INK				pP	pP	09 48 32.3	0.0
INK				IAmb	IAmb	09 48 41.3	
	comp=Z,87nm,1.1s						
RAGM	Ragged Mountai	63.11	332	IAmb	IAmb	09 48 44.4	
	comp=Z,104nm,1.2s						
EYAK	Cordova Ski Ar	63.67	332	IAmb	IAmb	09 48 20.9	
	comp=Z,98nm,1.1s						
HIN	Hinchinbrook I	63.95	332	P	P	09 48 20.9	+0.5
HIN				IAmb	IAmb	09 48 22.4	
	comp=Z,156nm,1.2s						
HIN				pP	pP	09 48 39.5	+0.7
KULLO	Kullorsuaq	64.29	9	⇑*i*P	P	09 48 21.6	-0.7
	comp=Z,20nm,0.7s						
KULLO	Kullorsuaq	64.29	9	⇑*i*P	P	09 48 21.6	-0.7
KULLO				pmax	pmax		
	comp=Z,20nm,0.7s						
KULLO				MLR	MLR		
	comp=Z,14µm,22.0s						
SCRK	Sand Creek	64.32	336	P	P	09 48 22.8	0.0
PAX	Paxson	64.50	335	P	P	09 48 23.6	-0.4
PAX				pP	pP	09 48 43.2	+0.7
TULEG	Thule	64.72	5	P	P	09 48 25.7	+0.6
TULEG				IAmb	IAmb	09 48 26.8	
	comp=Z,175nm,1.4s						
GO09	Cerro Castillo	64.98	169	P	P	09 48 29.9	+2.8
GO09				IAmb	IAmb	09 48 31.6	
	comp=Z,184nm,1.2s						
HMH	Humu‘ula Sheep	65.15	286	P	P	09 48 30.2	+1.0
HMH				IAmb	IAmb	09 48 55.0	
	comp=Z,162nm,1.1s						
POHA	Pohakuloa	65.18	286	P	P	09 48 30.9	+1.5
POHA				IAmb	IAmb	09 48 38.1	
	comp=Z,141nm,0.9s						
MLOA	Mauna Loa Obse	65.24	286	IAmb	IAmb	09 48 55.6	
	comp=Z,154nm,0.9s						
MWH	Moku‘aweowe	65.27	286	P	P	09 48 32.6	+2.3
MWH				IAmb	IAmb	09 48 52.0	
	comp=Z,108nm,0.9s						
SML	Sawmill	65.29	333	IAmb	IAmb	09 48 58.5	
	comp=Z,127nm,1.4s						
GHO	Glory Hole Cre	65.54	333	IAmb	IAmb	09 48 50.7	
	comp=Z,94nm,1.0s						
HDA	Harding Lake	65.68	336	IAmb	IAmb	09 48 32.8	
	comp=Z,102nm,1.2s						
HDA	Harding Lake	65.68	336	P	P	09 48 31.3	-0.1
	baz=113,SNR=50						
HDA				S	S	09 57 10.9	-0.9
	baz=113						
HDA				S	S	09 57 10.9	-0.9
	baz=113						
RC01	Rabbit Creek A	65.69	332	IAmb	IAmb	09 48 55.2	
	comp=Z,76nm,0.8s						
IL31		65.79	336	IAmb	IAmb	09 48 33.6	
	comp=Z,97nm,1.2s						
ILAR	Eielson Array	65.79	336	P	P	09 48 31.7	-0.5
	comp=Z,27nm,0.9s,baz=120,slow=4.1,SNR=160						
ILAR				pP	pP	09 48 51.0	+0.3
	comp=Z,18nm,0.7s,baz=162,slow=4.7,SNR=5.9						
ILAR				PP	PP	09 50 58.9	+1.3
	comp=Z,4.9nm,0.7s,baz=113,slow=6.9,SNR=4.4						
ILAR				PKPPKP	P'P'df	10 17 05.8	-5.1
	comp=Z,1.5nm,0.9s,baz=307,slow=4.3,SNR=5.5						
ILAR				LR	LR	10 20 09.8	
	comp=Z,7µm,21.9s,baz=114,slow=39						
BRLK	Bradley Lake	65.81	330	IAmb	IAmb	09 48 34.1	
	comp=Z,94nm,1.2s						
KHLH	Kahului Airpor	65.92	287	P	P	09 48 36.6	+2.8
KHLH				IAmb	IAmb	09 48 38.7	
	comp=Z,177nm,1.2s						
KHLH					pP	09 48 53.7	+1.3
RND	Reindeer	66.08	334	IAmb	IAmb	09 48 54.6	
	comp=Z,127nm,1.0s						
KDAK	Kodiak Island	66.12	328	LR	LR	10 20 14.7	
	comp=Z,8µm,20.6s,baz=95,slow=38						
POKR	Poker Plat Res	66.14	336	P	P	09 48 34.5	0.0
	baz=113,SNR=23						
POKR				S	S	09 57 13.8	-3.7
	baz=113						
COLA	College	66.21	336	P	P	09 48 34.0	-0.9
COLA	College	66.21	336	P	P	09 48 34.0	-0.9
COLA				pmax	pmax		
	comp=Z,28nm,0.8s						
TCOL	CIGO, UAF Yank	66.22	336	P	P	09 48 34.6	-0.3
	baz=112,SNR=15						
MCK	McKinley	66.23	335	IAmb	IAmb	09 48 36.6	
	comp=Z,97nm,1.2s						
SUMG	Summit	66.52	14	⇑*i*P	P	09 48 36.7	-0.5
SUMG				*i*		09 48 53.7	
SUMG	Summit	66.52	14	P	P	09 48 36.4	-0.8
SUMG				pP	pP	09 48 55.9	0.0
SUMG				IAmb	IAmb	09 48 57.8	
	comp=Z,207nm,1.1s						
SUMG	Summit	66.52	14	⇑*i*P	P	09 48 36.7	-0.5
SUMG				*i*		09 48 53.7	
TRF	Thorofare Moun	66.70	334	IAmb	IAmb	09 48 58.2	
	comp=Z,76nm,1.0s						
MEH	Mehetia	66.81	244	*e*P	P	09 48 40.2	+0.7
	comp=Z,76nm,1.2s						
PMOZ	Porto Moniz, M	66.97	60	*e*pP	pP	09 48 58.6	-0.5
PMOZ				A	A	09 49 05.2	
	comp=Z,158nm,1.9s						
PMOZ				*e*S	S	09 57 36.4	+7.5
PMOZ	Porto Moniz, M	66.97	60	*e*LR	LR	10 09 09.1	
	comp=Z,4µm,20.0s						
GO10	Punta Arenas	67.02	169	P	P	09 48 43.5	+3.3
GO10				IAmb	IAmb	09 48 44.1	
	comp=Z,164nm,1.1s						
PPLA	Purkeypile	67.35	333	P	P	09 48 41.8	-0.6
PPLA				pP	pP	09 49 00.3	-0.7
TIAR	Tiarei	67.83	245	*e*P	P	09 48 46.6	+0.7
	comp=Z,58nm,1.1s						
TVO	Taravao	67.83	245	*e*P	P	09 48 46.7	+0.7
	comp=Z,33nm,1.2s						
PPTF	Pamatai, Papee	68.03	245	P	P	09 48 49.9	+2.6
PPTF				IAmb	IAmb	09 48 50.7	
	comp=Z,261nm,1.5s						
PPT	Papeete	68.03	245	P	P	09 48 49.1	+1.9
	comp=Z,36nm,1.0s,baz=93,slow=7.9,SNR=8.9						
PPT				LR	LR	10 10 24.7	
	comp=Z,8µm,21.0s,baz=54,slow=28						
PPT	Papeete	68.03	245	P	P	09 48 49.5	+2.3
PPT	Papeete	68.03	245	P	P	09 48 49.5	+2.3
PPT2	Papeete2	68.04	245	*e*P	P	09 48 48.1	+0.7
	comp=Z,85nm,1.4s						
PPT2				*e*S	S	09 57 40.8	-1.1
	comp=Z,5µm,24.5s						
PPT2	Papeete2	68.04	245	*e*LR	LR	10 09 16.1	
	comp=Z,57µm,28.2s						
PAE	Paea	68.07	245	*e*P	P	09 48 48.1	+0.7
	comp=Z,24nm,1.0s						
TOLK	Toolik Lake Re	68.28	340	P	P	09 48 48.3	+0.3
	baz=112,SNR=34						
TOLK				S	S	09 57 43.8	+0.7
	baz=112						
EFI	East Falkland	68.97	161	P	P	09 48 52.6	+0.3
EFI				IAmb	IAmb	09 48 57.2	
	comp=Z,156nm,1.2s						
EFI	East Falkland	68.97	161	*i* P	P	09 48 53.8	+1.5
EFI				pmax	pmax		
	comp=Z,161nm,1.2s						
USHA	Ushuaia	69.11	168	P	P	09 48 55.0	+1.9
	comp=Z,32nm,0.9s,baz=234,slow=2.3,SNR=9.0						
USHA				LR	LR	10 13 17.9	
	comp=Z,8µm,21.3s,baz=340,slow=31						
TBI	Tubuai	70.17	239	*e*P	P	09 49 00.6	+0.3
	comp=Z,150nm,1.0s						
TBI				*e*S	S	09 58 05.7	-0.9
	comp=Z,6µm,30.2s						
TBI	Tubuai	70.17	239	*e*LR	LR	10 10 19.0	
	comp=Z,36µm,28.8s						
TBI	Tubuai	70.17	239	*e*T	T	11 04 42.0	
	comp=Z,38nm,0.2s						
SCO	Scoresbysund	70.20	19	*i* P	P	09 48 58.0	-1.7
SCO	Scoresbysund	70.20	19	*i* P	P	09 48 58.0	-1.7
SCO				MLR	MLR		
	comp=Z,39µm,25.0s						
FALS	False Pass	71.58	324	IAmb	IAmb	09 49 47.5	
	comp=Z,197nm,1.2s						
PMAFR	Mafra	73.24	53	*e*S	SKiKP	09 58 46.3	+2.3
UNV	Unalaska Valle	73.33	323	IAmb	IAmb	09 49 20.5	
	comp=Z,137nm,1.3s						
LIS	Lisbon	73.36	53	*e*P	P	09 49 19.3	0.0
LIS				AMS	AMS	10 15 01.9	
	comp=Z,9µm,24.7s						
LIS	Lisbon	73.36	53	*e*P	P	09 49 19.2	0.0
PFVI	Vila Bisbo	73.70	55	*e*pP	pP	09 49 39.6	-0.6
PFVI				*e*S	S	09 58 47.9	+1.0
PTEO	Sao Teotonio	73.75	54	*e*pP	pP	09 49 39.8	-0.7
PTEO				A	A	09 49 44.4	
	comp=Z,178nm,1.5s						
PCAS	Casmilo, Conde	73.79	52	*e*P	P	09 49 20.8	-1.0
	comp=Z,216nm,1.3s						
PCAS				*e*pP	pP	09 49 40.4	-0.3
PCAS				*e*S	S	09 58 56.0	+8.2
MORF	Marmelete	73.83	55	*e*P	P	09 49 22.2	0.0
MORF				*e*S	S	09 58 48.3	-0.1
MORF				AMS	AMS	10 15 26.6	
	comp=Z,10µm,28.6s						
MORF	Marmelete	73.83	55	*e*P	P	09 49 22.2	0.0
MORF				*e*S	S	09 58 48.3	-0.1
MORF	Marmelete	73.83	55	*e*pP	pP	09 49 40.5	-0.6
MORF				A	A	09 49 48.0	
	comp=Z,152nm,1.5s						
MORF				*e*S	S	09 58 53.6	+5.1
COI	Coimbra	73.85	52	*e*pP	pP	09 49 40.3	-0.8
COI				A	A	09 49 47.8	
	comp=Z,231nm,1.3s						
COI				*e*S	S	09 58 52.6	+4.2
PNCL	Nicolau / Gran	73.88	54	*e*pP	pP	09 49 38.0	-3.2
PNCL				*e*S	S	09 58 52.6	+3.8
PTOM	Tomar	73.88	52	*e*P	P	09 49 22.3	-0.1
	comp=Z,117nm,1.5s						
PTOM				*e*pP	pP	09 49 41.4	+0.2
PMTG	Montargil	74.06	53	*e*P	P	09 49 25.8	+2.4
	comp=Z,108nm,1.7s						
PMTG				*e*pP	pP	09 49 41.6	-0.7
PMTG				*e*S	S	09 58 54.9	+4.1
MESJ	Messejana	74.14	54	*e*P	P	09 49 23.8	-0.1
MESJ				*e*S	S	09 58 51.6	-0.1
MESJ				AMS	AMS	10 17 45.0	
	comp=Z,7µm,19.9s						
MESJ	Messejana	74.14	54	*e*P	P	09 49 23.8	-0.1
MESJ				*e*S	S	09 58 51.6	-0.1
PVIS	Viseu	74.22	51	*e*P	P	09 49 23.1	-1.3
	comp=Z,128nm,1.4s						
PVIS				*e*pP	pP	09 49 43.5	+0.2
PCVE	Castro Verde	74.29	54	*e*pP	pP	09 49 43.9	+0.2
PCVE				A	A	09 49 50.6	
	comp=Z,76nm,1.7s						
PVRL	Vila Real	74.32	50	*e*pP	pP	09 49 43.4	-0.5
PVRL				A	A	09 49 54.5	
	comp=Z,103nm,1.8s						
PBEJ	Beja	74.40	54	*e*P	P	09 49 28.4	+3.0
	comp=Z,54nm,2.0s						
PBEJ				*e*pP	pP	09 49 44.8	+0.5
PBDV	Barranco-do-Ve	74.41	55	*e*P	P	09 49 26.3	+0.8
	comp=Z,110nm,1.7s						
PBDV				*e*pP	pP	09 49 44.3	-0.1
PBDV				*e*S	S	09 59 01.6	+6.7
MTE	Manteigas	74.50	51	*e*P	P	09 49 27.5	+1.4
	comp=Z,124nm,1.8s						
MTE				*e*pP	pP	09 49 44.2	-0.8
MTE				*e*S	S	09 59 00.8	+4.9
MTE	Manteigas	74.50	51	*e*LQ	LQ	10 09 28.2	
MTE				*e*LR	LR	10 12 35.5	
	comp=Z,9µm,22.0s						
PESTR	Estremoz	74.56	53	*e*S	S	09 59 02.0	+5.4
PVAQ	Vaqueiros	74.56	54	*e*pP	pP	09 49 44.8	-0.5
PVAQ				A	A	09 49 52.2	
	comp=Z,90nm,1.6s						
PVAQ				*e*S	S	09 58 59.4	+2.8
PVAQ	Vaqueiros	74.56	54	*e*LR	LR	10 12 22.2	
	comp=Z,10µm,22.0s						
PCBR	Castelo Branco	74.59	52	*e*P	P	09 49 24.9	-1.6
	comp=Z,122nm,1.6s						
PCBR				*e*pP	pP	09 49 44.4	-1.0
PMRV	Marv??o	74.68	52	*e*pP	pP	09 49 44.4	-1.6
PMRV				A	A	09 49 52.4	
	comp=Z,88nm,1.8s						
PMRV				*e*S	S	09 59 01.7	+3.9
PMRV	Marv??o	74.68	52	*e*LR	LR	10 12 43.3	
	comp=Z,10µm,24.0s						
MVO	Moncorvo	74.84	51	*e*P	P	09 49 26.9	-1.1
	comp=Z,94nm,1.6s						
MVO				*e*pP	pP	09 49 46.3	-0.7
MVO				*e*S	S	09 59 01.2	+1.5
MVO	Moncorvo	74.84	51	*e*LQ	LQ	10 10 08.4	
MVO				*e*LR	LR	10 12 43.4	
	comp=Z,6µm,20.0s						
NOR	Nord	74.88	8	⇑*i*P	P	09 49 26.4	-1.0
	comp=Z,57nm,1.5s						
NOR	Nord	74.88	8	⇑*i*P	P	09 49 26.4	-1.0
NOR				pmax	pmax		
	comp=Z,57nm,1.5s						
NOR				MLR	MLR		
	comp=Z,26µm,22.0s						
PBRG	Braganca	75.02	50	*e*P	P	09 49 27.9	-1.1
	comp=Z,107nm,1.5s						
PBRG				*e*pP	pP	09 49 47.4	-0.5
PBRG				*e*S	S	09 59 02.0	+0.4
AVE	Averroes	75.15	59	*e*P	P	09 49 25.7	-4.2
AVE				*e*S	S	09 58 59.8	-3.5
CEU	Ceuta	76.57	56	*e*P	P	09 49 33.6	-4.3
CEU				*e*S	SKSac	09 59 48.6	+4.9
EMAL	Malaga-Limoner	77.24	55	*e*P	P	09 49 38.8	-2.8
EMAL				*e*S	S	09 59 24.5	-1.5
ESBB	Sonseca Array	77.30	52	P	P	09 49 40.4	-1.6
ESBB				pP	pP	09 50 00.4	-0.6
ESDC	Sonseca Array	77.30	52	P	P	09 49 40.4	-1.6
	comp=Z,7.0nm,0.5s,baz=279,slow=5.1,SNR=15						
ESDC				pP	pP	09 50 00.7	-0.3
	comp=Z,25nm,0.9s,baz=284,slow=5.7,SNR=8.6						
ESDC				LR	LR	10 19 17.8	
	comp=Z,5µm,21.3s,baz=275,slow=32						
PVLZ	Peæn de	77.52	56	*e*P	P	09 49 37.0	-6.2
PVLZ				*e*S	S	09 59 36.8	+7.7
MDT	Midelt	77.55	59	P	P	09 49 42.1	-1.4
	comp=Z,7.2nm,0.8s,baz=280,slow=10,SNR=3.1						
MDT				pP	pP	09 50 01.3	-1.3
	comp=Z,15nm,1.2s,baz=308,slow=7.1,SNR=3.2						
UCM	Universidad Co	77.78	51	*e*P	P	09 49 39.6	-5.1
UCM				*e*S	S	09 59 33.3	+1.4
RAR	Rarotonga	78.31	245	P	P	09 49 49.9	+2.1
	comp=Z,43nm,1.1s,baz=155,slow=24,SNR=9.4						
RAR				LR	LR	10 15 07.0	
	comp=Z,6µm,19.6s,baz=71,slow=28						
RAR	Rarotonga	78.31	245	P	P	09 49 49.9	+2.1
RAR				IAmb	IAmb	09 49 51.4	
	comp=Z,299nm,1.6s						
MELI	Melilla	78.62	56	*e*P	P	09 49 47.2	-2.0
MELI				*e*S	S	09 59 37.0	-3.9
PMSA	Palmer Station	79.19	170	LR	LR	10 18 56.2	
	comp=Z,2µm,19.5s,baz=334,slow=31						
KBS	Kingsbay	79.58	11	*ce*P	P	09 49 54.3	+0.6
KBS				pmax	pmax		
	comp=Z,185nm,1.3s						
ADK	Adak	79.59	321	P	P	09 49 55.2	+1.0
ADK				IAmb	IAmb	09 50 36.2	
	comp=Z,172nm,1.3s						
ADK	Adak	79.59	321	P	P	09 49 55.2	+1.0
ADK				pmax	pmax		
	comp=Z,172nm,1.3s						
CART	Cartagena	79.86	54	*e*P	P	09 49 49.4	-6.5
CART				*e*S	S	09 59 49.3	-4.6
TIC	Toumodi	81.47	85	*e*P	P	09 50 02.2	-2.9
LIC	Lamto	81.54	85	*e*P	P	09 50 02.8	-2.7
	comp=Z,53nm,1.1s						
DBIC	Dimbokro	81.62	85	P	P	09 50 03.2	-2.6
	comp=Z,7.9nm,0.8s,baz=260,slow=5.0,SNR=13						
DBIC				LR	LR	10 22 39.0	
	comp=Z,9µm,21.7s,baz=266,slow=33						
DBIC	Dimbokro	81.62	85	P	P	09 50 03.3	-2.6
DBIC				pP	pP	09 50 24.1	-1.0
KIC	Kosan Boka	81.80	85	*e*P	P	09 50 04.0	-2.8
	comp=Z,28nm,0.9s						

BGES	**Gesves**	**82.19**	**40**	P	**PP**	**09 53 24.6**	**+7.6**
	comp=Z,39nm,3.6s						
BCLA	**Clavier**	**82.32**	**40**	P	**PP**	**09 53 25.7**	**+7.6**
BSTI	**Sart Tilman**	**82.45**	**40**	P	**PP**	**09 53 26.9**	**+7.8**
BHOU	**Houvegnez**	**82.77**	**40**	P	PP	09 53 29.9	+8.1
	comp=Z,47nm,3.1s						
WLF	**Walferdange**	**83.00**	**41**	P	**P**	**09 50 14.5**	**+2.1**
WLF					**pP**	**09 50 33.0**	**+1.4**
WLF				IAmb	IAmb	09 50 36.0	
	comp=Z,131nm,1.5s						
BUG	**Bochum--Univer**	**83.34**	**39**	*e*P	**P**	**09 50 12.0**	**-2.0**
	comp=Z,6.8nm,0.9s,baz=283,slow=5.1						
NB2	**NORSAR Subarra**	**83.37**	**29**	P	**P**	**09 50 12.6**	**-1.5**
	comp=Z,112nm,1.4s,baz=284,slow=5.1						
NOA	**NORSAR Array B**	**83.37**	**29**	P	**P**	**09 50 12.7**	**-1.4**
	comp=Z,2.9nm,0.6s,baz=286,slow=5.0,SNR=18						
NOA				pP	**pP**	**09 50 31.4**	**-1.9**
	comp=Z,10nm,0.9s,baz=285,slow=5.0,SNR=9.4						
NOA				LR	LR	10 25 30.5	
	comp=Z,3µm,21.4s,baz=285,slow=34						
MUD	**Monsted U'grnd**	**83.38**	**34**	*i* P	**P**	**09 50 11.8**	**-2.4**
MUD	**Monsted U'grnd**	**83.38**	**34**	*e*P	**P**	**09 50 11.8**	**-2.4**
NB201	**NORSAR Array S**	**83.40**	**29**	P	**P**	**09 50 12.8**	**-1.5**
NB201					**pP**	**09 50 32.4**	**-1.1**
NB201				IAmb	IAmb	09 50 38.6	
	comp=Z,125nm,1.4s						
AHRW	**Bad Neuenahr-A**	**83.41**	**40**	*e*P	**P**	**09 50 13.1**	**-1.3**
	comp=Z,6.4nm,0.9s,baz=283,slow=5.1						
AHRW				*e*pP	**pP**	**09 50 33.1**	**-0.6**
MAHO	**Mahon**	**83.54**	**51**	*e*P	P	09 50 08.4	-6.9
MAHO				*e*S	**S**	**10 00 33.3**	**+1.4**
NC405	**NORSAR Array S**	**83.58**	**29**	P	**P**	**09 50 14.3**	**-0.9**
NC405					**pP**	**09 50 34.3**	**-0.1**
NC602	**NORSAR Array S**	**83.59**	**29**	P	**P**	**09 50 14.3**	**-0.9**
BILL	**Bilibino**	**84.30**	**339**	P	**P**	**09 50 18.0**	**-0.7**
BILL				IAmb	IAmb	09 50 20.1	
	comp=Z,105nm,1.2s						
BILL	**Bilibino**	**84.30**	**339**	*ce*P	**P**	**09 50 18.2**	**-0.5**
BILL				pmax	pmax		
	comp=Z,110nm,1.3s						
TNS	**Taunus Mts**	**84.33**	**40**	*e*P	**P**	**09 50 17.6**	**-1.7**
	comp=Z,5.3nm,0.7s,baz=283,slow=5.1						
TNS				*e*pP	**pP**	**09 50 36.4**	**-2.1**
SENIN	**Lac Senin/Sane**	**84.42**	**44**	IAmb	IAmb	09 50 43.9	
	comp=Z,159nm,1.6s						
BSEG	**Bad Segeberg**	**84.60**	**36**	*e*P	**P**	**09 50 19.2**	**-1.2**
	comp=Z,4.7nm,0.8s,baz=283,slow=5.1						
BFO	**Black Forest**	**84.67**	**42**	*e*P	**P**	**09 50 18.6**	**-2.4**
	comp=Z,4.5nm,1.0s,baz=283,slow=5.1						
STU	**Stuttgart**	**85.13**	**41**	*e*P	**P**	**09 50 20.8**	**-2.4**
	comp=Z,5.8nm,0.8s,baz=283,slow=5.1						
STU				*e*pP	**pP**	**09 50 41.6**	**-1.0**
CLZ	**Clausthal**	**85.14**	**38**	*e*P	**P**	**09 50 21.9**	**-1.4**
	comp=Z,6.1nm,0.8s,baz=283,slow=5.1						
DAVA	**Damuels**	**85.93**	**43**	*i* P	**P**	**09 50 25.6**	**-1.9**
	comp=Z,19nm,1.0s						
DAVA				*i* pP	**pP**	**09 50 45.5**	**-1.3**
	comp=Z,91nm,1.5s						
UBR	**Ueberruh**	**85.99**	**42**	*e*P	**P**	**09 50 25.8**	**-1.8**
	comp=Z,9.9nm,1.0s,baz=283,slow=5.1						
UBR				*e*pP	**pP**	**09 50 45.8**	**-1.1**
DAVOX	**Davos/Dischmat**	**86.06**	**43**	P	**P**	**09 50 26.2**	**-1.9**
	comp=Z,5.2nm,0.6s,baz=319,slow=8.8,SNR=8.2						
DAVOX				pP	**pP**	**09 50 46.6**	**-0.9**
	comp=Z,18nm,1.0s,baz=321,slow=11,SNR=6.9						
ARCES	**ARCESS Array B**	**86.14**	**19**	P	**P**	**09 50 25.1**	**-2.7**
	comp=Z,2.3nm,0.4s,baz=317,slow=5.0,SNR=40						
ARCES				pP	**pP**	**09 50 47.0**	**-0.1**
	comp=Z,10nm,0.9s,baz=288,slow=4.7,SNR=3.4						
ARCES				PKKPbc	**PKKPbc**	**10 08 29.5**	**+0.5**
	comp=Z,2.4nm,0.8s,baz=117,slow=1.4,SNR=7.2						
ARCES				LR	LR	10 28 17.9	
	comp=Z,3µm,21.0s,baz=305,slow=35						
NEUB	**Neuenburg**	**86.15**	**38**	*e*P	**P**	**09 50 26.8**	**-1.4**
	comp=Z,5.5nm,0.6s,baz=283,slow=5.1						
MOX	**Moxa**	**86.20**	**39**	*e*P	**P**	**09 50 27.0**	**-1.5**
	comp=Z,4.1nm,0.9s,baz=283,slow=5.1						
MOX				*e*pP	**pP**	**09 50 47.0**	**-0.9**
GRF	**Grafenberg Arr**	**86.20**	**40**	*e*P	**P**	**09 50 27.1**	**-1.4**
	comp=Z,7.6nm,1.0s,baz=283,slow=5.1						
RETA	**Reutte**	**86.47**	**42**	*i* P	**P**	**09 50 28.3**	**-1.7**
	comp=Z,6.6nm,0.7s,SNR=5.7						
RETA				*i* pP	**pP**	**09 50 47.9**	**-1.4**
	comp=Z,85nm,1.5s						
FETA	**Feichten**	**86.56**	**43**	*i* P	**P**	**09 50 28.7**	**-1.9**
	comp=Z,6.9nm,0.9s						
FETA				*i* pP	**pP**	**09 50 48.6**	**-1.3**
	comp=Z,48nm,1.4s						
TOA0	**Torodi Ar. Sit**	**86.62**	**77**	P	**P**	**09 50 28.1**	**-3.2**
TOA0					**pP**	**09 50 48.6**	**-2.0**
TORD	**Torodi Ar. Bea**	**86.62**	**77**	P	**P**	**09 50 28.4**	**-2.9**
	comp=Z,2.5nm,0.8s,baz=294,slow=4.3,SNR=9.3						
TORD				pP	**pP**	**09 50 48.7**	**-1.9**
	comp=Z,2.7nm,0.5s,baz=289,slow=6.3,SNR=5.6						
TORD				PKKPbc	**PKKPbc**	**10 08 28.9**	**+2.8**
	comp=Z,1.2nm,0.6s,baz=101,slow=1.6,SNR=9.2						
TORD				PKPPKP	**P'P'df**	**10 16 33.9**	**-1.6**
	comp=Z,1.5nm,1.0s,baz=63,slow=1.6,SNR=4.7						
TORD				LR	LR	10 24 34.4	
	comp=Z,12µm,21.9s,baz=300,slow=32						
MANZ	**Manzenberg**	**86.67**	**40**	*e*P	**P**	**09 50 29.5**	**-1.4**
	comp=Z,6.1nm,1.0s,baz=283,slow=5.1						
GUNZ	**Gunzen**	**86.71**	**39**	*e*P	**P**	**09 50 29.7**	**-1.4**
	comp=Z,6.3nm,0.8s,baz=283,slow=5.1						
MOTA	**Moosalm**	**86.72**	**42**	*i* P	**P**	**09 50 29.5**	**-1.9**
	comp=Z,14nm,1.2s						
MOTA				*i* pP	**pP**	**09 50 48.3**	**-2.4**
	comp=Z,56nm,1.8s						
WERN	**Wernitzgruen**	**86.76**	**39**	*e*P	**P**	**09 50 30.1**	**-1.2**
	comp=Z,10nm,1.0s,baz=283,slow=5.1						
WERN				*e*pP	**pP**	**09 50 50.2**	**-0.4**
TANN	**Tannenbergstha**	**86.78**	**39**	*e*P	**P**	**09 50 30.0**	**-1.4**
	comp=Z,14nm,0.8s,baz=283,slow=5.1						
ROTZ	**Rotzenmuhle**	**86.80**	**40**	*e*P	**P**	**09 50 30.2**	**-1.3**
	comp=Z,6.1nm,1.1s,baz=283,slow=5.1						
ROTZ				*e*pP	**pP**	**09 50 50.2**	**-0.7**
NKC	**Novy Kostel**	**86.82**	**39**	*e*P	**P**	**09 50 29.8**	**-1.8**
NKC				*e*x	x	09 50 50.3	
NKC				*e*SKS	**SKSac**	**10 00 52.6**	**+0.1**
NKC				AMS	AMS	10 23 10.0	
	comp=Z,11µm,23.4s						
NKC	**Novy Kostel**	**86.82**	**39**	*e*P	**P**	**09 50 29.8**	**-1.8**
NKC				*e*		09 50 50.3	
NKC				*e*		10 00 52.6	
NKC				MLR	MLR		
	comp=Z,11µm,23.4s						
SQTA	**Sankt Quirin**	**86.83**	**42**	*i* P	**P**	**09 50 29.9**	**-1.9**
	comp=Z,3.7nm,0.5s						
SQTA				*i* pP	**pP**	**09 50 49.7**	**-1.5**
	comp=Z,11nm,0.8s						
CLL	**Collm**	**86.86**	**38**	*i* P	**P**	**09 50 30.3**	**-1.4**
CLL				*i* pP	**pP**	**09 50 49.6**	**-1.5**
CLL				*i* sP	**sP**	**09 50 55.5**	**-3.2**
CLL				*e*PP	**PP**	**09 53 52.0**	**-2.9**
CLL				*e*sPP		09 54 19.0	
CLL				*e*(SKSac)		10 00 42.0	
CLL				*e*S	**S**	**10 00 58.0**	**-6.2**
CLL				*i* sS	**sS**	**10 01 36.6**	**-0.5**
CLL				*e*SP	**SP**	**10 02 04.0**	**-0.6**
CLL				*e*PPS	PPS	10 02 36.0	
CLL				*e*SS	**SS**	**10 06 44.0**	**-3.1**
CLL				*e*sSS		10 07 31.0	
CLL				*e*SSS	SSS	10 10 36.0	
CLL				*e*SSSS		10 13 18.0	
CLL	**Collm**	**86.86**	**38**	*e*P	**P**	**09 50 31.1**	**-0.6**
	comp=Z,4.5nm,0.8s,baz=283,slow=5.1						
CLL	**Collm**	**86.86**	**38**	*i* P	**P**	**09 50 30.3**	**-1.4**
CLL				*i* *SP	**sP**	**09 50 55.5**	**-3.2**
CLL				*e*S	**S**	**10 00 58.0**	**-6.2**
WATA	**Walderalm**	**87.04**	**42**	*i* pP	pP	09 50 50.9	-1.3
	comp=Z,27nm,1.4s						
WTTA	**Wattenberg**	**87.10**	**42**	*i* P	**P**	**09 50 31.0**	**-2.2**
	comp=Z,0.1nm,0.3s						
WTTA				*i* pP	**pP**	**09 50 50.8**	**-1.7**
	comp=Z,27nm,1.7s						
FBE	**Freiberg**	**87.18**	**38**	*e*P	**P**	**09 50 32.4**	**-0.9**
	comp=Z,7.2nm,1.0s,baz=283,slow=5.1						
FBE				*e*pP	**pP**	**09 50 52.3**	**-0.4**
WET	**Wettzell**	**87.39**	**40**	*e*P	**P**	**09 50 33.1**	**-1.2**
	comp=Z,6.9nm,0.9s,baz=283,slow=5.1						
WET				*e*pP	**pP**	**09 50 53.2**	**-0.5**
BRG	**Berggiesshubel**	**87.55**	**38**	*e*P	**P**	**09 50 32.9**	**-2.2**
	comp=Z,99nm,2.3s						
BRG				*i* pP	**pP**	**09 50 53.2**	**-1.2**
	comp=Z,129nm,1.9s						
BRG				sP	**sP**	**09 51 02.0**	**-0.1**
BRG				*e*PP	**PP**	**09 53 54.5**	**-6.0**
	comp=Z,73nm,2.0s						
BRG				SKS	**SKSac**	**10 00 54.0**	**-2.9**
BRG				SS	SS	10 06 46.0	-11
BRG	**Berggiesshubel**	**87.55**	**38**	*e*P	**P**	**09 50 33.5**	**-1.5**
	comp=Z,3.0nm,0.9s,baz=283,slow=5.1						
BRG				*e*pP	**pP**	**09 50 53.7**	**-0.8**
BRG	**Berggiesshubel**	**87.55**	**38**	*e*P	**P**	**09 50 32.9**	**-2.2**
BRG				*i* *PP	**pP**	**09 50 53.2**	**-1.2**
BRG				*SP	**sP**	**09 51 02.0**	**-0.1**
BRG				*e*		09 53 54.5	
BRG						10 00 54.0	
BRG				pmax	pmax		
	comp=Z,99nm,2.3s						
BRG				pmax	pmax		
	comp=Z,129nm,1.9s						
BRG				pmax	pmax		
	comp=Z,73nm,2.0s						
BRG				MLR	MLR		
	comp=N,3µm,24.1s						
BRG				MLR	MLR		
	comp=E,4µm,21.3s						
BRG				MLR	MLR		
	comp=Z,5µm,21.6s						
TEOL	**Teolo**	**87.62**	**44**	IAmb	IAmb	09 50 59.0	
	comp=Z,91nm,1.2s						
RJOB	**Jochberg**	**87.72**	**42**	*e*P	**P**	**09 50 34.2**	**-1.8**
	comp=Z,4.6nm,0.9s,baz=283,slow=5.1						
RJOB				*e*pP	**pP**	**09 50 54.3**	**-1.2**
ABTA	**Abfaltersbach**	**87.81**	**43**	*i* P	**P**	**09 50 34.5**	**-2.1**
	comp=Z,10nm,1.1s						
ABTA				*i* pP	**pP**	**09 50 54.7**	**-1.2**
	comp=Z,50nm,1.6s						
KHC	**Kasperske Hory**	**87.83**	**40**	*e*P	**P**	**09 50 34.8**	**-1.7**
KHC				*e*PCP	**PcP**	**09 50 38.3**	**0.0**
KHC				*e*pP	**pP**	**09 50 54.4**	**-1.5**
KHC				*e*sP	**sP**	**09 50 59.1**	**-4.4**
KHC				*e*SKS	**SKSac**	**10 00 49.4**	**-9.3**
KHC				AMS	AMS	10 24 10.0	
	comp=Z,13µm,22.0s						
KHC	**Kasperske Hory**	**87.83**	**40**	P	**P**	**09 50 34.1**	**-2.4**
KHC				pP	**pP**	**09 50 54.3**	**-1.6**
KHC	**Kasperske Hory**	**87.83**	**40**	*e*P	**P**	**09 50 34.8**	**-1.7**
KHC				*e*		09 50 59.1	
KHC				*e*		10 00 49.4	
KHC				MLR	MLR		
	comp=Z,13µm,22.0s						
PBCC	**Pribram**	**87.93**	**40**	*e*P	P	09 50 55.7	+19
PBCC				*e*x	x	09 50 59.8	
PBCC				*e*SKS	**SKSac**	**10 00 57.9**	**-1.3**
GEC2	**GERESS Array S**	**87.99**	**40**	*e*P	**P**	**09 50 34.9**	**-2.4**
	comp=Z,4.8nm,1.1s,baz=283,slow=5.1						
GERES	**GERESS Array B**	**87.99**	**40**	P	**P**	**09 50 35.3**	**-2.1**
	comp=Z,1.5nm,0.6s,baz=295,slow=3.9,SNR=12						
GERES				pP	**pP**	**09 50 55.2**	**-1.5**
	comp=Z,5.3nm,0.8s,baz=284,slow=3.5,SNR=9.6						
GERES				LR	LR	10 25 02.4	
	comp=Z,9µm,21.9s,baz=285,slow=32						
PVCC	**Panska Ves**	**88.04**	**39**	*e*P	**P**	**09 50 32.7**	**-4.7**
PVCC				*e*SKS	**SKSac**	**10 00 55.5**	**-4.3**
PVCC				AMS	AMS	10 19 50.0	
	comp=Z,10µm,38.2s						
PVCC	**Panska Ves**	**88.04**	**39**	*e*P	**P**	**09 50 32.7**	**-4.7**
PVCC				*e*		10 00 55.5	
PVCC				MLR	MLR		
	comp=Z,10µm,38.2s						
PRA	**Prague**	**88.09**	**39**	*e*P	**P**	**09 50 34.5**	**-3.1**
PRA				*e*SKS	**SKSac**	**10 00 58.8**	**-1.3**
PRA				AMS	AMS	10 23 50.0	
	comp=Z,11µm,24.3s						
PRA	**Prague**	**88.09**	**39**	*e*P	**P**	**09 50 34.5**	**-3.1**
PRA				*e*		10 00 58.8	
PRA				MLR	MLR		
	comp=Z,11µm,24.3s						
PRU	**Pruhonice**	**88.18**	**39**	*e*P	P	09 50 44.0	+5.9
PRU				*e*pP	pP	09 50 56.7	-0.8
PRU				*e*SKS	**SKSac**	**10 00 57.3**	**-3.4**
PRU				AMS	AMS	10 23 50.0	
	comp=Z,12µm,23.4s						
PRU	**Pruhonice**	**88.18**	**39**	*e*P	P	09 50 44.0	+5.9
PRU				*e*		10 00 57.3	
PRU				MLR	MLR		
	comp=Z,12µm,23.4s						
KBA	**Koelnbreinsper**	**88.27**	**42**	*i* PcP	**PcP**	**09 50 39.9**	**-0.5**
	comp=Z,7.3nm,1.4s,SNR=4.7						
KBA				*i* pP	**pP**	**09 50 59.1**	**+0.9**
	comp=Z,37nm,1.4s						
GOPC	**GO Pecny, Ondr**	**88.35**	**39**	*e*P	P	09 50 31.0	-7.9
GOPC				*e*SKS	**SKSac**	**10 00 54.7**	**-7.1**
GOPC				AMS	AMS	10 24 00.0	
	comp=Z,12µm,22.9s						
GOPC	**GO Pecny, Ondr**	**88.35**	**39**	*e*P	P	09 50 31.0	-7.9
GOPC				*e*		10 00 54.7	
GOPC				MLR	MLR		
	comp=Z,12µm,22.9s						
KEST	**Kesra**	**88.37**	**54**	P	**P**	**09 50 37.8**	**-1.6**
	comp=Z,4.0nm,0.8s,baz=194,slow=4.2,SNR=2.6						
KEST				LR	LR	10 25 33.6	
	comp=Z,3µm,21.7s,baz=238,slow=32						
MYKA	**Terra Mystica**	**88.59**	**43**	*i* P	**P**	**09 50 39.0**	**-1.2**
	comp=Z,12nm,1.1s						
MYKA				*i* pP	**pP**	**09 50 58.4**	**-1.2**
	comp=Z,22nm,1.2s						
MOA	**Molln**	**88.64**	**41**	*i* P	**P**	**09 50 39.7**	**-0.6**
	comp=Z,5.3nm,1.2s						
MOA				*i* pP	**pP**	**09 50 58.3**	**-1.5**
	comp=Z,14nm,1.6s						
UPC	**Upice**	**88.92**	**38**	*e*P	P	09 50 36.3	-5.3
UPC				*e*sP	sP	09 51 04.9	-3.7
UPC				*e*SKS	**SKSac**	**10 01 02.1**	**-3.0**
UPC				AMS	AMS	10 23 20.0	
	comp=Z,6µm,24.6s						
UPC	**Upice**	**88.92**	**38**	*e*P	P	09 50 36.3	-5.3
UPC				*e*		09 51 04.9	
UPC				*e*		10 01 02.1	
UPC				MLR	MLR		
	comp=Z,6µm,24.6s						
CHVC	**Chvalec**	**88.92**	**38**	*e*P	**P**	**09 50 41.4**	**-0.2**
CHVC				*e*x	x	09 51 00.0	
CHVC				AMS	AMS	10 26 00.0	
	comp=Z,4µm,21.7s						
TREC	**Trest**	**88.98**	**40**	*e*P	**P**	**09 50 42.4**	**+0.5**
TREC				*e*x	x	09 50 49.1	
TREC				AMS	AMS	10 24 10.0	
	comp=Z,13µm,23.6s						
TREC	**Trest**	**88.98**	**40**	*e*P	**P**	**09 50 42.4**	**+0.5**
TREC				MLR	MLR		
	comp=Z,13µm,23.6s						
OSTC	**Ostas**	**89.03**	**38**	*e*P	**P**	**09 50 40.1**	**-2.0**
OSTC				*e*x	x	09 51 00.8	
OSTC				*e*SKS	**SKSac**	**10 00 59.4**	**-6.4**
OSTC				AMS	AMS	10 26 10.0	
	comp=Z,4µm,23.6s						
DPC	**Dobruska-Polom**	**89.16**	**38**	*e*P	**P**	**09 50 43.9**	**+1.2**
DPC				*e*SKS	**SKSac**	**10 01 01.9**	**-4.7**
DPC				AMS	AMS	10 23 20.0	
	comp=Z,6µm,23.0s						
DPC	**Dobruska-Polom**	**89.16**	**38**	*e*P	**P**	**09 50 43.9**	**+1.2**
DPC				*e*		10 01 01.9	
DPC				MLR	MLR		
	comp=Z,6µm,23.0s						
OBKA	**Obir**	**89.23**	**42**	*i* P	**P**	**09 50 41.9**	**-1.3**
	comp=Z,14nm,1.3s						
OBKA				*i* pP	**pP**	**09 51 03.2**	**+0.5**
	comp=Z,31nm,1.5s						
SOKA	**Soboth**	**89.49**	**42**	*i* P	**P**	**09 50 42.6**	**-1.8**
	comp=Z,14nm,2.0s						
SOKA				*i* pP	**pP**	**09 51 03.8**	**0.0**
	comp=Z,14nm,1.0s						
KRLC	**Kraliky**	**89.53**	**39**	*e*P	**P**	**09 50 39.8**	**-4.7**
KRLC				AMS	AMS	10 25 10.0	
	comp=Z,7µm,23.8s						
KRLC	**Kraliky**	**89.53**	**39**	*e*P	**P**	**09 50 39.8**	**-4.7**
KRLC				MLR	MLR		
	comp=Z,7µm,23.8s						
KRUC	**Moravsky**	**89.62**	**40**	*e*P	**P**	**09 50 42.7**	**-2.1**
KRUC				*e*pP	**pP**	**09 51 02.9**	**-1.4**
KRUC	**Moravsky**	**89.62**	**40**	*e*S	**SKSac**	**10 01 08.2**	**-1.0**
ARSA	**Arzberg**	**89.64**	**42**	*i* P	**P**	**09 50 43.2**	**-1.8**
	comp=Z,8.5nm,1.3s						
ARSA				*i* pP	**pP**	**09 51 04.8**	**+0.3**
	comp=Z,9.9nm,0.9s						
CONA	**Conrad Observa**	**89.64**	**41**	*i* P	**P**	**09 50 43.2**	**-1.9**
	comp=Z,11nm,1.5s						
CONA				*i* pP	**pP**	**09 51 03.6**	**-1.0**
	comp=Z,34nm,1.7s						
VRAC	**Vranov**	**89.66**	**39**	*e*P	**P**	**09 50 43.2**	**-1.9**
VRAC				*e*pP	**pP**	**09 51 04.4**	**-0.1**
VRAC	**Vranov**	**89.66**	**39**	*e*S	**SKSac**	**10 01 09.2**	**-0.3**
FINES	**FINESS Array B**	**89.96**	**26**	P	**P**	**09 50 44.0**	**-2.1**
	comp=Z,1.4nm,0.6s,baz=286,slow=2.8,SNR=12						
FINES				PKKPbc	**PKKPbc**	**10 08 18.4**	**-1.0**
	comp=Z,1.1nm,0.5s,baz=71,slow=3.7,SNR=13						
FINES				LR	LR	10 31 09.5	
	comp=Z,3µm,19.5s,baz=298,slow=36						
MORC	**Moravsky Berou**	**90.09**	**39**	*e*P	**P**	**09 50 43.7**	**-3.4**
MORC	**Moravsky Berou**	**90.09**	**39**	*e*S	**SKSac**	**10 01 10.1**	**-2.0**
MODS	**Modra-Piesok**	**90.39**	**40**	*e*P	**P**	**09 50 50.0**	**+1.5**
MODS				*e*		09 51 09.1	
MODS	**Modra-Piesok**	**90.39**	**40**	*e*P	**P**	**09 50 50.0**	**+1.5**
MODS				*e*		09 51 09.1	
OKC	**Ostrava-Krasne**	**90.44**	**39**	*e*P	P	09 50 41.6	-7.0
OKC				*e*SKS	**SKSac**	**10 01 11.2**	**-2.7**
OKC				AMS	AMS	10 25 40.0	
	comp=Z,7µm,23.9s						
OKC	**Ostrava-Krasne**	**90.44**	**39**	*e*P	P	09 50 41.6	-7.0
OKC				*e*		10 01 11.2	
OKC				MLR	MLR		
	comp=Z,7µm,23.9s						
JAVC	**Velka Javorina**	**90.48**	**40**	*e*P	**P**	**09 50 46.0**	**-3.0**
JAVC	**Velka Javorina**	**90.48**	**40**	*e*S	**SKSac**	**10 01 14.9**	**+0.5**
VYHS	**Vyhne**	**91.33**	**40**	*e*P	**P**	**09 50 51.6**	**-1.3**
VYHS				*e*		09 51 11.8	
VYHS	**Vyhne**	**91.33**	**40**	*e*P	**P**	**09 50 51.6**	**-1.3**
VYHS				*e*		09 51 11.8	
SEY	**Seymchan**	**91.73**	**337**	PKKPbc	PKKPbc	10 08 14.8	-0.3
	comp=Z,2.7nm,0.8s,baz=250,slow=23,SNR=4.6						
SEY	**Seymchan**	**91.73**	**337**	*i* P	**P**	**09 50 54.8**	**+0.5**
PSZ	**Piszkesteto**	**92.19**	**40**	P	**P**	**09 50 55.6**	**-1.3**
PSZ					**pP**	**09 51 17.3**	**+0.9**
PSZ				IAmb	IAmb	09 51 21.6	
	comp=Z,69nm,1.5s						
PSZ	**Piszkesteto**	**92.19**	**40**	P	**P**	**09 50 55.6**	**-1.3**
PSZ				*PP	**pP**	**09 51 17.3**	**+0.9**
PSZ				pmax	pmax		
	comp=Z,69nm,1.5s						
TIXI	**Tiksi**	**92.46**	**349**	P	**P**	**09 50 56.4**	**-1.2**
TIXI	**Tiksi**	**92.46**	**349**	*e*P	**P**	**09 50 55.7**	**-1.9**
TIXI				pmax	pmax		
	comp=Z,25nm,1.4s						
CRVS	**Cervenica-Dubn**	**92.80**	**39**	*e*	P	09 51 18.5	+19
NACGM	**Naroch**	**93.26**	**32**	*e*P	**P**	**09 50 57.0**	**-4.6**
NACGM				*e*PP	**PP**	**09 54 38.0**	**-7.6**
NACGM				*e*PPP	PPP	09 56 12.0	
NACGM				*e*SKS	**SKSac**	**10 01 20.0**	**-10**
NACGM				*e*PS	**PS**	**10 03 32.0**	**+7.3**
NACGM				*e*SS	**SS**	**10 08 14.0**	**-5.3**
NACGM				*e*SSS	SSS	10 12 02.0	
NACGM				*e*LQ	LQ	10 21 00.0	
UZH	**Uzhgorod**	**93.41**	**39**	*e*P	**P**	**09 51 01.2**	**-1.2**
UZH				*i*		09 51 26.0	
UZH				*e*		09 54 50.4	
UZH				*e*PPP	PPP	09 56 55.0	
UZH				*e*S	**S**	**10 02 00.2**	**-4.5**
UZH				*e*PS	**PS**	**10 03 19.0**	**-7.5**
UZH				*e*SS	**SS**	**10 08 25.6**	**+3.8**
PET	**Petropavlovsk**	**93.66**	**326**	*e*P	**P**	**09 51 06.3**	**+2.8**
PET				*e*		10 01 29.7	
PET				*e*S	**S**	**10 02 06.0**	**-0.7**
PET				*e*SS	**SS**	**10 08 26.8**	**+1.7**
PET				pmax	pmax		
	comp=Z,300nm,13.2s						
PET				MLR	MLR		
	comp=Z,7µm,22.0s						
PET				MLR	MLR		
	comp=Z,4µm,22.0s						
MICGM	**Minsk**	**94.02**	**32**	*e*P	**P**	**09 51 06.0**	**+0.9**
MICGM				*e*pP	**pP**	**09 51 26.0**	**+1.5**
MICGM				*e*PP	PP	09 54 40.0	-11
MICGM				*e*PPP	PPP	09 56 42.0	
MICGM				*e*SKS	**SKSac**	**10 01 30.0**	**-3.7**
MICGM				*e*S	**S**	**10 02 08.0**	**-1.7**
MICGM				*e*SS	SS	10 09 16.0	+46
MICGM				*e*SSS	SSS	10 11 46.0	
MICGM				*e*LR	LR	10 20 14.0	
MICGM				LRM	MLR	10 25 30.0	
	comp=N,10nm,26.0s						
MICGM				LRM	MLR	10 25 34.0	
	comp=E,5.3nm,28.0s						
MICGM				LRM	MLR	10 25 38.0	
	comp=Z,14nm,28.0s						
MNK	**Minsk**	**94.02**	**32**	*e*P	**P**	**09 51 06.0**	**+0.9**
MNK				*e**PP	**pP**	**09 51 26.0**	**+1.5**
MNK				*e*		09 54 46.0	
MNK				*e*		10 01 30.0	
MNK				*e*S	**S**	**10 02 08.0**	**-1.7**
PETK	**Petropavlovsk-**	**94.14**	**327**	P	**P**	**09 51 05.3**	**-0.4**
	comp=Z,2.6nm,0.6s,baz=78,slow=7.5,SNR=5.9						
PETK				LR	LR	10 34 36.8	
	comp=Z,3µm,21.6s,baz=48,slow=36						
MA2	**Magadan**	**94.21**	**334**	*i* P	**P**	**09 51 07.0**	**+1.1**
MA2				pmax	pmax		
	comp=Z,14nm,0.8s						
KLMR	**Klimovskoe**	**95.75**	**23**	*e*P	**P**	**09 51 08.7**	**-4.2**
KLMR				S	**SKSac**	**10 01 38.4**	**-4.4**
KLMR				pmax	pmax		
	comp=Z,22nm,1.5s						
KLMR	**Klimovskoe**	**95.75**	**23**	*e*P	**P**	**09 51 08.7**	**-4.2**
KLMR				*e*P	**P**	**09 51 08.7**	**-4.2**
KLMR				*e*P	**P**	**09 51 08.7**	**-4.2**
KLMR				AMP		09 51 12.1	
	comp=Z,22nm,1.5s						
KLMR				*e*PP	**PP**	**09 54 57.4**	**-7.3**
KLMR				S	**SKSac**	**10 01 38.4**	**-4.4**
KLMR				S	**SKSac**	**10 01 38.4**	**-4.4**
KLMR				LR	LR	10 22 01.2	
RAO	**Raoul Island**	**96.23**	**242**	LR	LR	10 24 17.9	
	comp=Z,4µm,21.5s,baz=100,slow=29						
AKASG	**Malin Array Be**	**96.55**	**35**	P	**P**	**09 51 15.7**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=293,slow=3.4,SNR=4.4						
AKASG				PP	**PP**	**09 55 07.6**	**-3.6**
	comp=Z,0.6nm,0.5s,baz=297,slow=6.3,SNR=4.8						
AKASG				PKKPbc	**PKKPdf**	**10 08 02.5**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=95,slow=3.3,SNR=4.0						
AKASG				LR	LR	10 33 27.0	
	comp=Z,4µm,19.7s,baz=290,slow=35						
PRGR	**Permogore**	**97.45**	**21**	*e*P	**P**	**09 51 17.5**	**-3.0**
PRGR				*e**PP	**pP**	**09 51 37.1**	**-2.9**
PRGR				*e*		09 55 14.9	
PRGR				pmax	pmax		
	comp=Z,11nm,0.9s						
OBN	**Obninsk**	**97.97**	**29**⇑	*e*P	Pdif	09 51 23.1	+0.1
OBN				*e*		09 55 18.5	
OBN				*e*SS	SS	10 09 24.7	-1.0
OBN				pmax	pmax		
	comp=Z,40nm,2.7s						
OBN				MLR	MLR		
	comp=Z,2µm,18.0s						
VNA3	**Neumayer Olymp**	**98.02**	**161**	P	Pdif	09 51 24.9	+2.1
KIS	**Kishinev**	**98.08**	**38**	*e*P	Pdif	09 51 28.0	+4.3
KIS	**Kishinev**	**98.08**	**38**	*i* PS	PS	10 04 14.0	-3.6
KIS	**Kishinev**	**98.08**	**38**	LRM	MLR	10 29 44.0	
	comp=Z,8µm,25.0s						
KIS	**Kishinev**	**98.08**	**38**	*e*P	Pdif	09 51 28.0	+4.3
KIS				*i*		10 01 49.0	
KIS				*i* PS	**PS**	**10 04 14.0**	**-3.6**
KIS				pmax	pmax		
	comp=Z,2µm,12.0s						
KIS	**Kishinev**	**98.08**	**38**	*e*PPS	PPS	10 05 22.0	
KIS	**Kishinev**	**98.08**	**38**	*e*SSS	SSS	10 12 45.0	
KIS	**Kishinev**	**98.08**	**38**	*e*L	L	10 22 58.0	
NRIK	**Noril'sk**	**98.21**	**2**	PP	**PP**	**09 55 21.4**	**-1.9**
	comp=Z,4.7nm,0.9s,baz=352,slow=9.6,SNR=5.7						
NRIK				LR	LR	10 38 26.4	
	comp=Z,4µm,20.8s,baz=356,slow=37						
NRIK	**Noril'sk**	**98.21**	**2**	*i* P	Pdif	09 51 24.9	+1.1
VNA2	**Neumayer--Watz**	**98.66**	**161**	P	Pdif	09 51 27.9	+2.3
	baz=310,slow=4.7						
YAK	**Yakutsk**	**100.06**	**343**	*i* P	**Pdif**	**09 51 32.2**	**0.0**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SNAA	**Sanae**	**100.24**	**161**	P	**Pdif**	**09 51 35.3**	**+2.5**
LPSR	**Galich'ya Gora**	**100.58**	**30**	*e*P	**Pdif**	**09 51 36.8**	**+2.1**
LPSR				*e*		09 55 38.5	
LPSR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
VSR	**Storozhevoye**	**101.54**	**31**	*e*P	**Pdif**	**09 51 37.3**	**-1.7**
VSR				pmax	pmax		

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                 comp=Z,10.0nm,1.7s
SIM      Simferopol'       102.30  38 eP        Pdif      09 51 25.6  -17
SIM                                   e                   10 02 14.0
SIM                                   ePS       PS        10 05 04.0 +1.2
SIM                                     pmax    pmax
                 comp=Z,700nm,11.6s
VRH      Novokhopyorsk     102.81  30 eP        Pdif      09 51 45.5 +0.8
VRH                                     pmax    pmax
                 comp=Z,8.0nm,0.9s
ANN      Anapa             104.36  37 eP        Pdif      09 51 49.9 -1.8
ANN                                   i                   09 56 03.7
ANN                                   e                   10 02 22.3
ANN                                   eS        Sdif      10 03 34.0 -3.7
ANN                                   eSP       SP        10 05 21.6 +6.4
ANN                                     pmax    pmax
                 comp=Z,45nm,1.4s
ANN                                     MLR     MLR
                 comp=N,7µm,24.0s
ANN                                     MLR     MLR
                 comp=Z,4µm,24.0s
ANN                                     MLR     MLR
                 comp=E,4µm,24.0s
BRTR     Keskin Array B    104.70  43   PKiKP   PKiKP     09 56 08.1 -0.9
                 comp=E,1.2nm,0.8s,baz=297,slow=3.6,SNR=4.5
BRTR                                    PKKPbc  PKKPbc    10 07 39.4 +0.8
                 comp=E,1.1nm,0.7s,baz=138,slow=3.9,SNR=6.0
YSS      Yuzh-Sakhalins    105.55 327 eP        Pdif      09 51 56.2 -0.7
YSS                                   e                   09 56 22.2
YSS                                   e                   10 02 22.9
YSS                                   eS        Sdif      10 03 42.9 -4.6
YSS                                   ePS       PS        10 05 37.6 +1.1
YSS                                   ePPS      PPS       10 06 37.7
KIV      Kislovodsk        107.88  35 eP        Pdif      09 52 06.3 -1.3
KIV                                   e                   09 56 34.3
KIV                                   e                   10 02 39.5
KIV                                   eSS       SS        10 11 42.7 -0.3
KIV                                     pmax    pmax
                 comp=Z,16nm,1.1s
KBZ      Khabaz            108.14  35   PP      PP        09 56 36.8 -1.3
                 comp=Z,2.5nm,0.9s,baz=294,slow=9.0,SNR=4.1
KBZ                                     PKKP    PKKPdf    10 07 41.6 +0.4
                 comp=Z,2.7nm,0.8s,baz=134,slow=5.8,SNR=6.5
DZM      Mont Dzumac       109.16 251 ePP       PP        09 56 43.6 -3.5
                 comp=Z,1µm,31.9s
DZM                                   eSKSac    SKSac     10 02 45.4 -2.4
                 comp=Z,3µm,28.1s
DZM      Mont Dzumac       109.16 251 ePS       PS        10 06 08.4 -6.9
                 comp=Z,4µm,30.9s
DZM                                   eSS       SS        10 12 02.4 -0.4
                 comp=Z,9µm,29.4s
DZM      Mont Dzumac       109.16 251 eLR       LR        10 28 26.6
                 comp=Z,13µm,28.6s
MAK      Makhachkala       111.20  34 eP        Pdif      09 52 26.7 +4.5
MAK                                   e                   09 57 02.5
MAK                                   ePPP      PPP       09 59 26.6
MAK                                   ePS       PS        10 06 24.4 -8.4
MAK                                   eSS       SS        10 12 30.7 +3.6
MAK                                     pmax    pmax
                 comp=Z,80nm,0.8s
ZALV     Zalesovo Beam     113.42   5   PKiKP   PKiKP     09 56 23.4 -1.2
                 comp=Z,3.6nm,0.5s,baz=272,slow=2.3,SNR=18
ZALV                                    PP      PP        09 57 08.2 -7.2
                 comp=Z,3.5nm,0.6s,baz=348,slow=5.3,SNR=5.3
ZALV                                    PKKPbc  PKKPbc    10 07 10.6 -0.6
                 comp=Z,0.4nm,0.3s,baz=219,slow=1.8,SNR=2.3
SYO      Syowa Base        114.53 162⇑eP        PKPdf     09 56 30.4 +4.2
SYO      Syowa Base        114.53 162⇓eX        PKPdf     09 56 41.0  +15
MJAR     Matsushiro Arr    114.75 320   PKP     PKPdf     09 56 27.8 +0.1
                 comp=Z,2.4nm,0.4s,baz=125,slow=0.9,SNR=12
MJAR                                    PKKPbc  PKKPbc    10 07 05.6 -0.5
                 comp=Z,3.1nm,0.8s,baz=207,slow=3.2,SNR=9.2
MAT      Matsushiro        114.75 320   PKP     PKiKP     09 56 27.7  0.0
TLY      Talaya            115.24 352   PP      PP        09 57 25.5 -2.8
                 comp=Z,1.5nm,0.3s,baz=354,slow=10,SNR=1.9
TLY      Talaya            115.24 352 i PKIKP   PKPdf     09 56 33.6 +5.3
TLY                                   e                   09 57 28.1
TLY                                   ePS       PKKPbc    10 07 02.1 -2.9
TLY                                   ePPS      PPS       10 08 20.2
TLY                                   eSS       SS        10 13 18.7 -0.9
TLY                                     pmax    pmax
                 comp=Z,3.0nm,0.5s
KURK     Kurchatov         115.84  10           PKiKP     09 56 28.3 -1.1
KURK     Kurchatov         115.84  10c iPKIKP   PKPdf     09 56 29.5 +0.1
KURK                                    pmax    pmax
                 comp=Z,2.0nm,0.8s
BOSA     Boshof            115.98 116 i P       PKiKP     09 56 30.9 +0.5
BOSA     Boshof            115.98 116   PKP     PKiKP     09 56 30.4  0.0
                 comp=Z,6.6nm,0.4s,baz=274,slow=2.4,SNR=27
BOSA                                    SKP               10 00 00.5
                 comp=Z,13nm,1.0s,baz=250,slow=2.2,SNR=7.0
BOSA                                    PKKPab  PKKPab    10 07 04.4 -1.5
                 comp=Z,3.1nm,0.7s,baz=75,slow=1.7,SNR=9.3
BOSA     Boshof            115.98 116 i P       PKiKP     09 56 30.9 +0.5
LBTB     Lobatse           116.20 112 i P       PKiKP     09 56 31.1 +0.2
LBTB     Lobatse           116.20 112 i P       PKiKP     09 56 31.1 +0.2
CN2      Changchun         116.26 334   Pdif    Pdif      09 52 45.1 +0.4
CN2                                     PP      PP        09 57 36.2 +0.4
CN2                                     LR      LR
                 comp=Z,2µm,24.0s
CN2                                     LR      LR
                 comp=Z,2µm,24.0s
CN2                                     LR      LR
                 comp=Z,2µm,24.0s
ZAK      Zakamensk         116.56 352 ePKIKP    PKPdf     09 56 22.9 -8.1
ZAK                                     pmax    pmax
                 comp=Z,6.0nm,1.4s
LSZ      Lusaka            117.91 101           PKiKP     09 56 35.0 +0.5
LSZ      Lusaka            117.91 101   PKIKP   PKiKP     09 56 35.0 +0.5
SONM     Songino Array     118.55 349   PKP     PKPdf     09 56 34.3 -0.6
                 comp=Z,1.3nm,0.5s,baz=296,slow=0.9,SNR=20
SONM                                    PP      PP        09 57 49.8 -1.8
                 comp=Z,1.5nm,0.7s,baz=15,slow=6.3,SNR=3.1
SONM                                    SKP               10 00 04.6
                 comp=Z,1.9nm,0.8s,baz=265,slow=0.7,SNR=4.0
SONM                                    PKKPbc  PKKPbc    10 06 52.4 -0.9
                 comp=Z,2.9nm,0.7s,baz=192,slow=3.7,SNR=11
MATP     Matopo            118.65 106 i P       PKPdf     09 56 32.6 -3.1
MATP     Matopo            118.65 106 i P       PKPdf     09 56 32.6 -3.1
SNY      Shenyang          118.66 334 ⇑Pdif     Pdif      09 53 03.4 +8.0
SNY                                     PP      PP        09 57 55.4 +2.9
SNY      Shenyang          118.66 334   SS      SS        10 14 15.6  +11
KS19     Wonju Array Si    120.02 328           PKiKP     09 56 38.4 +0.5
KSRS     Korea Array       120.02 328   PKP     PKPdf     09 56 37.8  0.0
                 comp=Z,11nm,0.6s,baz=10,slow=1.8,SNR=37
KSRS                                    SKP               10 00 07.7
                 comp=Z,4.0nm,0.9s,baz=72,slow=0.4,SNR=4.5
KSRS                                    PKKPbc  PKKPbc    10 06 47.6 +0.2
                 comp=Z,3.0nm,0.9s,baz=221,slow=3.8,SNR=6.2
MKAR     Makanchi Array    120.21   8   PKP     PKPdf     09 56 36.8 -1.2
                 comp=Z,1.3nm,0.6s,baz=58,slow=2.7,SNR=12
MKAR                                    PP      PP        09 57 59.6 -3.3
                 comp=Z,1.0nm,0.6s,baz=347,slow=5.8,SNR=4.0
MKAR                                    PKKPbc  PKKPbc    10 06 45.8 -1.3
                 comp=Z,1.1nm,0.8s,baz=162,slow=5.8,SNR=6.4
GEYT     Alibeck           120.41  31   PKP     PKPdf     09 56 37.7 -0.9
                 comp=Z,2.2nm,0.4s,baz=280,slow=4.4,SNR=6.8
GEYT                                    SKP               10 00 08.0
                 comp=Z,2.7nm,0.5s,baz=279,slow=3.9,SNR=4.3
GEYT                                    PKKPbc  PKKPab    10 06 47.6 -0.6
                 comp=Z,1.7nm,0.6s,baz=207,slow=5.0,SNR=5.1
MAW      Mawson            121.73 167   PKP     PKiKP     09 56 40.4 +0.1
                 comp=Z,5.1nm,0.5s,baz=178,slow=2.8,SNR=12
DL2      Dalian            121.91 333 ePKP      PKPdf     09 56 37.6 -3.8
DL2                                   esPKP               09 57 08.1
DL2                                     PP      PP        09 58 16.6 +1.8
DL2                                     SS      SS        10 14 50.8 +4.3
DL2                                     AMB     AMB
                 comp=Z,520nm,5.9s
DL2                                     LR      LR
                 comp=Z,2µm,22.7s
DL2                                     LR      LR
                 comp=Z,4µm,24.6s
DL2                                     LR      LR
                 comp=Z,5µm,26.1s
AAK      Ala-Archa         122.67  16c iPKIKP   PKPdf     09 56 42.9 -0.1
AAK                                     pmax    pmax
                 comp=Z,4.0nm,1.3s
BJI      Beijing           123.13 338   PKP     PKiKP     09 56 44.0 +0.1
BJI                                     PP      PP        09 58 23.3 +0.4
BJI                                     SKKS              10 05 13.5
BJI                                     AMB     AMB
                 comp=Z,370nm,10.6s
BJI                                     LR      LR
                 comp=Z,6µm,27.9s
BJI                                     LR      LR
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                 comp=Z,5µm,25.5s
BJI                                     LR      LR
                 comp=Z,12µm,28.4s
WMQ      Urumqi            123.71   4 ePKP      PKiKP     09 56 47.1 +2.0
WMQ                                     PP      PP        09 58 29.4 +2.8
WMQ                                     SKS     SKSdf     10 03 45.7 -5.2
WMQ                                     AMB     AMB
                 comp=Z,590nm,9.3s
WMQ                                     LR      LR
                 comp=Z,5µm,24.1s
WMQ                                     LR      LR
                 comp=Z,3µm,25.3s
WMQ                                     LR      LR
                 comp=Z,10µm,29.5s
HHC      Hu-ho-hao-te      123.92 342 ePKP      PKPdf     09 56 45.1 -0.3
HHC                                     SKS     SKSdf     10 03 48.6 -2.9
HHC                                     SS      SS        10 15 12.3 +0.5
HHC                                     AMB     AMB
                 comp=Z,6µm,9.2s
HHC                                     LR      LR
                 comp=Z,8µm,21.3s
HHC                                     LR      LR
                 comp=Z,5µm,20.1s
HHC                                     LR      LR
                 comp=Z,7µm,20.4s
KMBO     Kilima Mbogo      124.30  83   PKP     PKiKP     09 56 48.2 +0.9
                 comp=Z,0.9nm,0.5s,baz=315,slow=0.4,SNR=7.9
KSH      Kashi             125.98  16   PKP     PKPdf     09 56 47.0 -2.4
KSH                                     PP      PP        09 58 46.3 +4.3
KSH                                     AMB     AMB
                 comp=Z,2µm,6.1s
KSH                                     LR      LR
                 comp=Z,1µm,12.5s
KSH                                     LR      LR
                 comp=Z,1µm,16.3s
KSH                                     LR      LR
                 comp=Z,11µm,15.4s
TIA      Tai'an            126.10 335   PKP     PKiKP     09 56 50.0  0.0
TIY      Taiyuan           126.51 340 ePKP      PKiKP     09 56 51.8 +0.9
TIY                                     AMB     AMB
                 comp=Z,190nm,3.5s
TIY                                     LR      LR
                 comp=Z,5µm,25.4s
TIY                                     LR      LR
                 comp=Z,2µm,18.9s
TIY                                     LR      LR
                 comp=Z,6µm,20.8s
GTA      Gaotai            127.80 353 ePKP      PKPdf     09 56 52.6 -0.3
GTA                                     SS      SS        10 16 02.6 +2.5
GTA                                     AMB     AMB
                 comp=Z,200nm,6.3s
GTA                                     LR      LR
                 comp=Z,5µm,24.0s
GTA                                     LR      LR
                 comp=Z,3µm,23.2s
GTA                                     LR      LR
                 comp=Z,9µm,24.2s
CTA      Charters Tower    127.87 254   PKP     PKiKP     09 56 54.9 +1.0
                 comp=Z,13nm,1.0s,baz=21,slow=3.5,SNR=8.8
SSE      Sheshan           128.46 328   PKP     PKiKP     09 56 56.3 +1.5
SSE                                     PP      PP        09 58 58.8 +0.1
SSE                                     SS      SS        10 16 15.4 +6.4
SSE                                     AMB     AMB
                 comp=Z,280nm,4.0s
SSE                                     LR      LR
                 comp=Z,2µm,23.4s
SSE                                     LR      LR
                 comp=Z,1µm,24.7s
NJ2      Nanjing           128.84 331 ePKP      PKiKP     09 56 55.4 -0.1
NJ2                                     PP      PP        09 59 01.5 +0.4
NJ2                                     SS      SS        10 16 19.6 +6.0
NJ2                                     AMB     AMB
                 comp=Z,430nm,4.5s
NJ2                                     LR      LR
                 comp=Z,3µm,24.6s
NJ2                                     LR      LR
                 comp=Z,2µm,23.1s
NJ2                                     LR      LR
                 comp=Z,5µm,23.2s
LZH      Lanzhou           130.37 348 ePKP      PKiKP     09 56 58.8  0.0
LZH                                     PP      PP        09 59 15.6 +4.8
LZH                                     SKKS              10 05 58.9
LZH                                     AMB     AMB
                 comp=Z,660nm,9.8s
LZH                                     LR      LR
                 comp=Z,3µm,19.6s
LZH                                     LR      LR
                 comp=Z,3µm,19.5s
LZH                                     LR      LR
                 comp=Z,4µm,20.2s
BSY      Bisya             130.85  45   P       SKPbc     10 00 15.7 -1.4
                 SNR=8.5
STKA     Stephens Creek    130.95 239   PKP     PKiKP     09 57 01.0 +1.3
                 comp=Z,10nm,0.5s,baz=98,slow=4.1,SNR=21
STKA                                    pPKP    pPKPdf    09 57 18.1 -1.0
                 comp=Z,19nm,0.9s,baz=76,slow=1.7,SNR=6.7
STKA                                    SKPbc   SKPab     10 00 18.2 +0.7
                 comp=Z,10nm,1.1s,baz=101,slow=6.4,SNR=4.3
STKA     Stephens Creek    130.95 239           PKiKP     09 57 00.6 +0.8
BIDO     Bidbid            130.96  43   P       SKPbc     10 00 16.3 -1.2
                 SNR=20
XAN      Xi'an             131.00 342   PKP     PKiKP     09 56 59.5 -0.4
XAN                                     PP      PP        09 59 15.3 +0.4
XAN                                     SKS     SKSdf     10 04 00.0 -4.7
XAN                                     AMB     AMB
                 comp=Z,380nm,12.2s
XAN                                     LR      LR
                 comp=Z,2µm,29.8s
XAN                                     LR      LR
                 comp=Z,5µm,27.9s
XAN                                     LR      LR
                 comp=Z,7µm,26.5s
XAN      Xi'an             131.00 342   PKPpre  SKPbc     10 00 16.7 -0.7
SMDO     Samad             131.22  44   P       SKPbc     10 00 17.4 -1.2
                 SNR=19
ABTO     Aybut             131.33  53   P       SKPbc     10 00 18.3 -0.8
                 SNR=14
ABTO     Aybut             131.33  53   P       SKPbc     10 00 18.3 -0.8
                 SNR=14
WHFO     Wadi Hawf         131.37  52   P       SKPbc     10 00 17.9 -1.3
                 SNR=9.7
WSAR     Wadi Sarin        131.49  43   SKPbc   SKPbc     10 00 18.3 -1.2
                 comp=Z,40nm,0.8s,baz=320,slow=3.5,SNR=39
WSAR     Wadi Sarin        131.49  43   P       SKPbc     10 00 18.9 -0.6
                 SNR=23
GENI     Genyem            131.60 278   PKP     PKiKP     09 57 02.4 +0.8
JMDO     Jabal Madar       131.72  44   P       SKPbc     10 00 18.7 -1.7
                 SNR=9.4
RBK      Rabkut            131.95  52   P       SKPbc     10 00 20.0 -1.3
                 SNR=6.3
WBK      Wadi Bani Khal    132.14  43   P       SKPbc     10 00 21.2 -0.7
                 SNR=12
WHN      Wuhan             132.15 334 ⇓P        SKPbc     10 00 21.4 -0.2
WHN      Wuhan             132.15 334   PKP     PKPdf     09 57 00.8 -0.4
WHN                                     SKKS              10 06 09.3
WHN                                     SS      SS        10 16 58.5 +4.5
WHN                                     LR      LR
                 comp=Z,19µm,27.2s
WHN                                     LR      LR
                 comp=Z,9µm,36.0s
WHN                                     LR      LR
                 comp=Z,21µm,28.1s
DMTO     DMTO              132.40  52   P       SKPbc     10 00 21.5 -1.3
MHTO     MHTO              132.55  46   P       SKPbc     10 00 22.3 -1.0
                 SNR=12
SHAO     Shalim            132.73  51   P       SKPbc     10 00 22.1 -1.8
SMPI     Sarmi             132.85 279   PKP     PKiKP     09 57 04.8 +0.7
DHRM     DHARAMSHALA       132.86  19 ex        PKPdf     09 56 58.8 -4.0
DQM      DQM               132.94  47   P       SKPbc     10 00 23.2 -1.4
BHK      Bhakra            133.67  19 ex        SKPbc     10 00 21.0 -5.8
QZH      Quanzhou          134.73 326 i PKP     PKPdf     09 57 06.7 +0.5
QZH                                   ePP       PP        09 59 48.4 +9.2
QZH                                     SS      SS        10 17 32.0 +6.3
QZH                                     LR      LR
                 comp=Z,2µm,24.6s
QZH                                     LR      LR
                 comp=Z,3µm,24.6s
QZH                                     LR      LR
                 comp=Z,4µm,27.5s
CD2      Chengdu           135.37 346   PKP     PKiKP     09 57 08.8 -0.1
CD2                                     sPKP              09 57 34.8
CD2                                     SKS     SKSdf     10 04 13.9 +1.3
CD2                                     SKKS    SKKSac    10 06 33.2  0.0
CD2                                     SS      SS        10 17 40.7 +8.3
CD2                                     AMB     AMB
                 comp=Z,900nm,11.4s
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CD2                                     LR      LR
                 comp=Z,7µm,21.4s
CD2                                     LR      LR
                 comp=Z,4µm,24.2s
CD2                                     LR      LR
                 comp=Z,12µm,24.2s
OPO      Ambohidratompo136.23 104   PKP     PKiKP     09 57 10.6 -0.4
                 comp=Z,9.5nm,0.8s,baz=258,slow=4.7,SNR=9.5
OPO                                     SKP     SKPbc     10 00 37.7 +2.2
                 comp=Z,17nm,1.0s,baz=245,slow=2.6,SNR=10
ABPO     Ambohimpanom      136.26 104           PKPdf     09 57 10.1 +0.8
ABPO     Ambohimpanom      136.26 104   PKIKP   PKPdf     09 57 10.1 +0.8
LSA      Lhasa             137.94   1   PKP     PKPdf     09 57 12.2 -0.5
LSA                                     LR      LR
                 comp=Z,14µm,34.2s
LSA                                     LR      LR
                 comp=Z,13µm,29.9s
LSA                                     LR      LR
                 comp=Z,24µm,34.5s
DANN     Dangsing          138.47  11 eP        PKPdf     09 57 04.1 -9.4
                 comp=Z,70nm,0.7s
GYA      Guiyang           138.75 340⇓iPKP      PKPdf     09 57 12.1 -1.7
GYA                                     AMB     AMB
                 comp=Z,180nm,6.7s
GYA                                     LR      LR
                 comp=Z,2µm,24.2s
GYA                                     LR      LR
                 comp=Z,2µm,24.8s
GYA                                     LR      LR
                 comp=Z,6µm,24.5s
GZH      Guangzhou         138.99 330   PKP     PKPdf     09 57 12.0 -2.1
GZH                                     PP      PP        10 00 02.6 -3.1
GZH                                     SS      SS        10 18 08.1 -8.0
GZH                                     LR      LR
                 comp=Z,3µm,24.3s
GZH                                     LR      LR
                 comp=Z,3µm,27.6s
WB0      Warramunga Arr    139.03 254           PKPpre    09 57 07.0
WB0                                     PKPdf   PKiKP     09 57 16.3 -0.2
WB2      Warramunga Arr    139.06 254           PKPpre    09 57 07.9
WB2                                     PKPdf   PKiKP     09 57 16.1 -0.4
WRA      Warramunga Arr    139.07 254   PKhKP   PKPpre    09 57 08.1
                 comp=Z,4.5nm,0.5s,baz=92,slow=3.2,SNR=32
WRA                                     PKP     PKiKP     09 57 16.0 -0.6
                 comp=Z,14nm,0.5s,baz=88,slow=2.5,SNR=37
WRA                                     pPKP    pPKPdf    09 57 34.1 -0.4
                 comp=Z,50nm,1.0s,baz=86,slow=1.1,SNR=9.3
WRA                                     PP      PP        10 00 07.7 -0.2
                 comp=Z,2.3nm,0.8s,baz=100,slow=6.1,SNR=6.4
WRA                                     SKPbc   SKPbc     10 00 44.0 +0.6
                 comp=Z,18nm,1.0s,baz=86,slow=2.1,SNR=8.3
ASAR     Alice Springs     139.09 248   PKhKP   PKPpre    09 57 06.0
                 comp=Z,3.3nm,0.6s,baz=110,slow=3.7,SNR=22
ASAR                                    PKP     PKiKP     09 57 16.1 -0.4
                 comp=Z,18nm,0.7s,baz=99,slow=2.6,SNR=30
ASAR                                    PP      PP        10 00 08.7 +0.7
                 comp=Z,3.1nm,1.0s,baz=93,slow=3.9,SNR=2.9
ASAR                                    SKPbc   SKPbc     10 00 44.5 +1.0
                 comp=Z,19nm,0.9s,baz=107,slow=3.0,SNR=12
GUN      Gumba             139.26   9 eP        PKPpre    09 57 07.3
FAKI     Fak Fak           139.32 280   PKP     PKiKP     09 57 16.9 -0.4
FAKI     Fak Fak           139.32 280           PKPdf     09 57 14.0 -1.0
DMN      Daman             139.44  10 eP        PKPpre    09 57 08.3
PKI      Pulchoki          139.52   9 eP        PKPpre    09 57 08.9
JIRN     Jiri              139.56   8 eP        PKPpre    09 57 08.7
                 comp=Z,27nm,0.6s
TAPN     Taplejung         140.05   6 eP        PKPpre    09 57 10.6
ZIRO     ZIRO              140.09 358 ex        PKPpre    09 57 10.3
LKP      Lekhapani         140.17 355 eP        PKPdf     09 57 14.4 -1.8
GTK      Tadong            140.17   5 eP        PKPdf     09 57 16.4  0.0
GTK                                   i x       SKPdf     10 00 46.7 +1.5
RAMN     Ramite            140.31   8 eP        PKPpre    09 57 12.9
                 comp=Z,34nm,0.5s
JORH     JORHAT            140.86 357 eP        PKPdf     09 57 17.3 -0.1
KMI      Kunming           141.16 345   PKP     PKPpre    09 57 12.2
KMI                                     SS      SS        10 18 41.3 +0.1
KMI                                     AMB     AMB
                 comp=Z,320nm,4.6s
KMI                                     LR      LR
                 comp=Z,6µm,26.7s
KMI                                     LR      LR
                 comp=Z,3µm,25.1s
KMI                                     LR      LR
                 comp=Z,10µm,28.2s
BHPL     Bhopal            141.53  22 i x       PP        10 00 19.0 -2.0
BNDI     Bandanaira        142.00 279   PKP     PKPdf     09 57 20.5 +0.7
SHL      Shillong          142.07   1           PKPdf     09 57 19.7 -0.2
SHL      Shillong          142.07   1   PKIKP   PKPdf     09 57 19.7 -0.2
LBMI     Labuha            143.13 286   PKP     PKiKP     09 57 23.9 -1.2
BOK      Bokaro            143.30  10 i x       PP        10 00 28.9 -2.6
AAI      Ambon             143.42 281   PKP     PKiKP     09 57 24.4 -1.3
NGP      Nagpur            144.03  21 eP        PKPab     09 57 20.6 -0.1
NGP                                   ex        SKSdf     10 04 32.1 +5.1
QIZ      Qiongzhong        144.14 331   PKP     PKPdf     09 57 23.4  0.0
QIZ                                     pPKP    pPKPdf    09 57 42.8 -0.8
QIZ                                     sPKP              09 57 49.4
QIZ                                     PP      PP        10 00 38.6 +1.6
QIZ                                     SS      SS        10 19 20.6 +4.6
QIZ                                     AMB     AMB
                 comp=Z,440nm,5.4s
QIZ                                     LR      LR
                 comp=Z,3µm,22.6s
QIZ                                     LR      LR
                 comp=Z,2µm,25.3s
QIZ                                     LR      LR
                 comp=Z,4µm,25.1s
NLAI     Namlea            144.34 282   PKP     PKPdf     09 57 24.9 +1.0
BRDH     Bariadhala        144.95   1   PKP     PKPbc     09 57 24.1 +0.1
                 comp=Z,59nm,0.3s,baz=256,slow=2.3,SNR=4.8
SANI     Sanana            145.03 285   PKP     PKPdf     09 57 25.6 +0.5
KAD      Karad             145.32  31 i P       PKPbc     09 57 23.1 -2.3
SRSP     Sriramsagar       145.79  24 ePKPdf    PKPdf     09 57 24.7 -1.7
KLRI     Killari           145.82  27 ePKPdf    PKPdf     09 57 24.6 -1.8
KMSI     Cibinong          145.95 290   PKP     PKPab     09 57 28.9 +0.8
RPR      Rampur            146.22  23 ePKPdf    PKPdf     09 57 26.0 -1.0
GOA      Goa               146.64  34⇑iP        PKPdf     09 57 23.5 -4.2
BWNR     Bhubaneshwar      146.70  11⇑iP        PKPdf     09 57 27.0 -0.8
HYBB     Hyderabad (bro    147.24  25 ePKPdf    PKPdf     09 57 29.1 +0.3
HYB      Hyderabad         147.24  25 i PKP     PKPdf     09 57 29.0 +0.2
FITZ     Fitzroy Crossi    147.41 256   PKPbc   PKPbc     09 57 31.4 -0.2
                 comp=Z,38nm,0.8s,baz=158,slow=2.2,SNR=34
FITZ                                    pPKPbc  pPKPab    09 57 53.0 -0.3
                 comp=Z,116nm,1.0s,baz=53,slow=0.9,SNR=10
FITZ     Fitzroy Crossi    147.41 256           PKPbc     09 57 31.1 -0.5
GGR      Gangavaram        147.51  22 ePKPdf    PKPdf     09 57 28.4 -0.9
LUWI     Luwuk             147.69 288   PKP     PKPbc     09 57 31.8 -0.7
MRSI     Marisa            147.85 292   PKP     PKPbc     09 57 32.1 -0.8
CHLP     Challavanipeta    148.05  15 ePKPdf    PKPdf     09 57 30.5 +0.4
CHTO     Chiang Mai        148.12 348           PKPdf     09 57 29.9 -0.3
CHTO     Chiang Mai        148.12 348   PKIKP   PKPdf     09 57 29.9 -0.3
NJS      Nagarjunasagar    148.32  24 ePKPdf    PKPdf     09 57 30.7 +0.1
CMAR     Chiang Mai Arr    148.46 348   PKPbc   PKPdf     09 57 31.6 +0.8
                 comp=Z,14nm,0.7s,baz=344,slow=3.4,SNR=28
SOEI     Soe               148.52 272   PKP     PKPbc     09 57 33.2 -1.6
SOEI     Soe               148.52 272           PKPbc     09 57 34.2 -0.6
PVM      Polavaram         148.53  20 ePKPdf    PKPdf     09 57 30.0 -0.9
SRLM     Srisailam         148.56  25 ePKPdf    PKPdf     09 57 30.9 -0.1
MYLAV    Mylavaram         148.65  22 ePKPdf    PKPdf     09 57 30.7 -0.4
APSI     Ampana            148.68 289   PKP     PKPbc     09 57 33.5 -1.5
URV      Uravakonda        148.85  29 ePKPdf    PKPdf     09 57 32.2 +0.7
ADKI     Addanki           149.23  24 ePKPdf    PKPdf     09 57 31.3 -0.7
NWAO     Narrogin (SRO)    149.50 224           PKPbc     09 57 35.4 -1.2
MPSI     Mapaga            149.75 293   PKP     PKPdf     09 57 35.3 +2.3
MMRI     Maumere           150.32 275   PKP     PKPdf     09 57 36.2 +2.4
MMRI     Maumere           150.32 275           PKPdf     09 57 33.5 -0.3
MMRI                                    PKPbc   PKiKP     09 57 41.0 +1.2
EDFI     Ende, Flores      150.87 275   PKP     PKPdf     09 57 35.3 +0.5
SKHT     Srikalahasti      151.02  26 ePKPdf    PKPdf     09 57 34.7 -0.2
TTSI     Tana Toraja       151.16 287   PKP     PKPdf     09 57 37.5 +2.3
BNSI     Bone              151.34 284   PKP     PKPdf     09 57 37.8 +2.4
SPSI     Sidrap Palu       151.52 285   PKP     PKPdf     09 57 38.1 +2.4
BKSI     Bulukumba         151.60 282   PKP     PKPdf     09 57 38.2 +2.4
MDRS     Chennai           151.85  26 eP        PKPdf     09 57 34.0 -2.2
KAPI     Kappang           151.87 283   PKPbc   PKiKP     09 57 44.2 +1.2
                 comp=Z,35nm,0.4s,baz=156,slow=0.5,SNR=18
BASI     Baing, Sumba      152.18 272   PKP     PKPdf     09 57 39.1 +2.5
BKB      Balikpapan        153.15 293   PKP     PKPdf     09 57 40.5 +2.4
WBSI     Waikabubak, Su    153.26 274   PKP     PKPdf     09 57 40.1 +1.8
TRD      Trivandrum        154.09  37 eP        PKPdf     09 57 39.6 +0.1
DGPR     DIGLIPUR          154.39 359 eP        PKPdf     09 57 39.7 -0.2
KBKI     Kotabaru          154.65 289   PKP     PKPdf     09 57 41.9 +1.7
PLAI     Plampang          154.69 276   PKP     PKPdf     09 57 41.2 +0.9
SBUM     Sibu              155.21 306           PKPdf     09 57 41.9 +0.9
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SRBI	Singaraja	157.02	279	PKP	PKPdf	09 57 43.8	+0.4
STKI	Sintang	157.19	302	PKP	PKPdf	09 57 45.1	+1.5
GMJI	Gumukmas	158.77	280	PKP	PKPdf	09 57 45.2	-0.3
GRJI	Gresik	159.33	284	PKP	PKPdf	09 57 47.5	+1.3
PWJI	Pagerwojo	160.28	281	PKP	PKPdf	09 57 48.0	+0.8
PCJI	Pacitan	160.93	281	PKP	PKPdf	09 57 48.8	+0.9
WOJI	Wonogiri, Jawa	161.07	283	PKP	PKPdf	09 57 48.9	+0.8
SMRI	Semarang	161.30	285	PKP	PKPdf	09 57 49.2	+0.8
UGM	Wanagama	161.47	283	PKP	PKPdf	09 57 49.0	+0.4
LHMI	Lhok Sumawe	161.71	345	PKP	PKPdf	09 57 49.1	+0.3
KPJI	Karang Pucung	162.81	286	PKP	PKPdf	09 57 50.4	+0.5
KCSI	Kotacane, Aceh	163.09	341	PKP	PKPdf	09 57 49.1	-1.1
TPTI		163.52	343	PKP	PKPdf	09 57 50.8	+0.2
LEM	Lembang	163.85	289	PKP	PKPdf	09 57 51.2	+0.1
CISI	Cisompet, Garu	163.93	287	PKP	PKPdf	09 57 51.3	+0.3
CNJI	Cibinong	164.48	288	PKP	PKPdf	09 57 50.0	-1.4
SNSI	Sinabang, Aceh	164.57	345	PKP	PKPdf	09 57 51.8	+0.2
SDSI	Sungai Dareh	165.30	321	PKP	PKPdf	09 57 51.2	-1.0
KLSI		165.42	301	PKP	PKPdf	09 57 51.3	-1.0
MDSI	Maura Dua	165.76	303	PKP	PKPdf	09 57 51.6	-0.9
KASI	Kota Agung	166.06	299	PKP	PKPdf	09 57 51.9	-0.9
KRJI	Kerinci	166.17	318	PKP	PKPdf	09 57 52.0	-1.0
SISI	Saibi	166.94	328	PKP	PKPdf	09 57 53.8	+0.3
PPSI	Pulau Pagai	167.61	321	PKP	PKPdf	09 57 54.3	+0.3

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*NEIC **02** 09:41:23.6±2.7, 12°.42N±0°.08×87°.82W±0°.04, h72^{km}±6^{km}, mb5.0/75, Md4.8(SNET), Error ellipse: s-maj=11.4km s-min=5.7km az=185.0*

*IDC **02** 09:41:23.9±2.0, 12°.49N×87°.77W, h80^{km}±26^{km}, mb4.4/10, mb1 4.6/13, mb1mx4.2/48, mbtmp4.8/13, Error ellipse: s-maj=38.1km s-min=13.8km az=32.0*

*SNET **02** 09:41:23.7±1.2, 12°.46N×87°.99W, h14^{km}±19^{km}, ML4.8*

*INET **02** 09:41:24.1, 12°.52N×87°.82W, h61^{km}, ML5.5*

*UCR **02** 09:41:25.6±0.8, 12°.58N×87°.89W, h34^{km}±6^{km}, ML4.7, mb5.0(NEIC)*

ISC 02 09:41:21.3±0.5**, 12°.42N**±0°.06×**87°.89W**±0°.04**, h50**^{km}**, n163,** σ**1^{s}.66**/163**, mb5.0**/42**, 1D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	Cosiguina Volc	0.64	30		Pn	09 41 37.4	+3.0
CNCH	Conchagua	0.85	3	eP	Pn	09 41 39.2	+1.9
CNCH	Conchagua	0.85	3	eP	Pn	09 41 39.2	+1.9
JUCU	Jucuar¡n	0.90	337	eP	Pn	09 41 39.9	+2.0
JUCU	Jucuar¡n	0.90	337	eP	Pn	09 41 39.9	+2.0
ALJI	Alcalda de J	1.12	324	eS	Sn	09 41 56.6	+1.5
ALJI	Alcalda de J	1.12	324	eS	Sn	09 41 56.6	+1.5
COEB	Comit de Eme	1.24	330	eP	Pn	09 41 44.9	+2.4
COEB				IAML		09 42 03.6	
	comp=Z,19µm,0.4s						
COEB	Comit de Eme	1.24	330	eP	Pn	09 41 44.9	+2.4
COEB				IAML		09 42 03.6	
	comp=Z,19µm,0.4s						
FAGO	Alcalda de S	1.29	350	eP	Pn	09 41 44.9	+1.9
FAGO				IAML		09 42 03.0	
	comp=Z,10µm,0.5s						
FAGO	Alcalda de S	1.29	350	eP	Pn	09 41 44.9	+1.9
FAGO				IAML		09 42 03.0	
	comp=Z,10µm,0.5s						
COEG	Centro de Oper	1.54	321	eP	Pn	09 41 49.0	+2.5
COEG				IAML		09 42 12.1	
	comp=Z,18µm,0.4s						
COEG	Centro de Oper	1.54	321	eP	Pn	09 41 49.0	+2.5
COEG				IAML		09 42 12.1	
	comp=Z,18µm,0.4s						
ESTN	Estel	1.63	65	Pn	Pn	09 41 48.4	+0.7
ESTN				Sn	Sn	09 42 08.1	+0.5
TGUH	Tegucigalpa,Un	1.74	20	Pn	Pn	09 41 50.8	+1.6
TGUH				Sn	Sn	09 42 10.7	+0.4
AEIL	Aeropuerto Ilo	1.75	317	eP	Pn	09 41 52.8	+3.5
AEIL				IAML		09 42 21.1	
	comp=Z,14µm,0.4s						
AEIL	Aeropuerto Ilo	1.75	317	eP	Pn	09 41 52.8	+3.5
AEIL				IAML		09 42 21.1	
	comp=Z,14µm,0.4s						
UDBS	Universidad Do	1.79	316	eP	Pn	09 41 52.1	+2.3
UDBS	Universidad Do	1.79	316	eP	Pn	09 41 52.1	+2.3
SNET	Serv Nac Est T	1.82	314	Pn	Pn	09 41 53.4	+3.1
SNET				Sn	Sn	09 42 15.2	+2.9
ACON	Acoyapa	2.69	99	Pn	Pn	09 42 04.6	+2.4
JTS	Las Juntas de	3.57	126	P	Pn	09 42 18.0	+3.7
	comp=Z,25nm,0.3s,baz=12,slow=20,SNR=7.8						
JTS				S	Sn	09 42 56.8	+1.5
	comp=Z,26nm,0.3s,baz=351,slow=19,SNR=1.7						
CMIG	Matias Romero	8.21	305	P	Pn	09 43 21.5	+3.7
	baz=308,slow=19,SNR=2.8						
CMIG				S	Sn	09 44 47.7	-1.6
	baz=323,slow=20,SNR=2.1						
MTDJ	Mount Denham	11.53	59	Pn	Pn	09 44 05.9	+2.4
GTBY	Guantanamo Bay	14.36	57		P	09 44 45.6	-2.0
061Z	Ochoppi	14.91	25	P	P	09 44 56.8	+3.1
SDV	Santo Domingo	17.32	100	P	Pn	09 45 19.8	0.0
	comp=Z,0.4nm,0.3s,baz=356,slow=16,SNR=3.0						
451A	Vernon	18.22	6	P	Pn	09 45 32.0	+1.4
DR12	Loma Pena Alta	18.91	68	P	Pn	09 45 40.1	+1.0
346A	Big Creek Wild	18.93	356	P	Pn	09 45 41.1	+1.8
346A				IAmb	IAmb	09 45 44.3	
	comp=Z,83nm,1.1s						
344A	Westbrook Farm	19.12	353	P	Pn	09 45 43.0	+1.4
TIGA	Tifton	19.34	11	P	Pn	09 45 44.7	+0.6
TIGA	Tifton	19.34	11	P	Pn	09 45 45.3	+1.2
	baz=192						
BAUV	El Baul	19.80	98	e	Pn	09 45 54.2	+4.5
255A	Hazlehurst	20.05	14	P	Pn	09 45 52.5	+0.1
152A	Waverly Hall	20.36	8	P	Pn	09 45 56.0	-0.2
152A				IAmb	IAmb	09 45 57.5	
	comp=Z,129nm,1.4s						
154A	Montrose	20.57	12	P	P	09 45 57.0	+1.0
CRPR	Cabo Rojo, PR	20.80	72	P	P	09 45 57.6	-0.9
MLPR	Magueyes Islan	20.85	72	P	P	09 46 00.6	+1.4
MLPR				IAmb	IAmb	09 46 03.8	
	comp=Z,87nm,1.2s						
OBIP	Obispado Ponce	21.27	72	P	P	09 46 03.2	-0.5
GOGA	Godfrey	21.28	10	P	P	09 46 04.5	+0.9
GOGA				IAmb	IAmb	09 46 06.8	
	comp=Z,66nm,0.7s						
GOGA	Godfrey	21.28	10	P	P	09 46 05.7	+2.0
	baz=192						
Y49A	Blount Mountai	21.39	3	P	P	09 46 06.0	+1.2
Y49A				IAmb	IAmb	09 46 13.1	
	comp=Z,51nm,0.9s						
Y52A	Lilburn	21.63	9	P	P	09 46 09.4	+2.0
Y52A				IAmb	IAmb	09 46 10.1	
	comp=Z,45nm,0.7s						
Y52A	Lilburn	21.63	9	P	P	09 46 09.2	+1.8
	baz=190						
SJG	San Juan	21.71	72	P	P	09 46 07.5	-0.8
	comp=Z,24nm,0.9s,baz=225,slow=13,SNR=3.0						
SJG	San Juan	21.71	72	P	P	09 46 09.9	+1.6
SJG				IAmb	IAmb	09 46 26.2	
	comp=Z,74nm,1.3s						
NHSC	New Hope	21.77	18	P	P	09 46 11.3	+2.5
HUMP	Col San Antoni	22.00	72	P	P	09 46 12.1	+0.6
HODGE	Hodges	22.31	12	P	P	09 46 16.3	+1.6
HODGE				IAmb	IAmb	09 46 17.5	
	comp=Z,118nm,1.4s						
TXAR	Lajitas Array	22.33	321	P	P	09 46 14.1	-1.0
	comp=Z,10nm,0.6s,baz=83,slow=7.4,SNR=6.8						
X53A	Estanollee	22.38	10	P	P	09 46 16.9	+1.5
	baz=192						
JSC	Jenkinsville	22.59	14	P	P	09 46 19.1	+1.4
X54A	Belton	22.59	12	P	P	09 46 19.4	+1.7
	baz=194						
MIAR	Mount Ida	22.63	348	P	P	09 46 18.3	+0.2
MIAR				IAmb	IAmb	09 46 36.7	
	comp=Z,63nm,1.1s						
W50A	Signal Mountai	22.80	5	P	P	09 46 20.6	+0.7
W50A				IAmb	IAmb	09 46 21.1	
	comp=Z,43nm,0.8s						
W52A	Murphy	22.86	8	P	P	09 46 21.4	+0.9
W52A				IAmb	IAmb	09 46 39.5	
	comp=Z,70nm,1.1s						
PCRV	Puerto La Cruz	22.91	93	P	P	09 46 21.1	-0.2
	comp=Z,17nm,0.6s,baz=252,slow=5.2,SNR=5.2						
BG3	Lake Jocassee	22.92	10	P	P	09 46 21.9	+0.8
PLCV	Puerto La Cruz	22.95	93	P	P	09 46 21.1	-0.6
PAULI	Pauline	22.98	13	P	P	09 46 22.4	+0.7
Y59A	Loris	22.99	19	P	P	09 46 22.9	+1.0
Y59A				IAmb	IAmb	09 46 27.3	
	comp=Z,129nm,1.3s						
X57A	Johnson Farm,	23.06	17	P	P	09 46 23.6	+1.0
	baz=200						
W54A	Cherokee Point	23.15	12	P	P	09 46 24.6	+1.2
	baz=194						
Y60A	Bolivia	23.23	21	P	P	09 46 24.1	-0.1
Y60A				IAmb	IAmb	09 46 30.2	
	comp=Z,67nm,1.0s						
KMSC	Kings Mountain	23.39	14	P	P	09 46 26.0	+0.3
KMSC	Kings Mountain	23.39	14	P	P	09 46 26.3	+0.6
	baz=196						
TKL	Tuckaleechee C	23.44	8	P	P	09 46 26.2	0.0
	comp=Z,25nm,0.9s,baz=195,slow=14,SNR=3.6						
TKL	Tuckaleechee C	23.44	8	IAmb	IAmb	09 46 27.9	
	comp=Z,33nm,0.9s						
W56A	Indian Trail	23.57	15	P	P	09 46 27.3	-0.1
	baz=198						
CLTN	Cedars of Leba	23.61	3	P	P	09 46 27.9	+0.1
CLTN				IAmb	IAmb	09 46 32.1	
	comp=Z,63nm,1.3s						
W57A	Gilead	23.74	16	P	P	09 46 28.7	-0.3
W57A	Gilead	23.74	16	P	P	09 46 28.5	-0.5
	baz=199						
X60A	Albert Glenn T	23.83	21	P	P	09 46 29.5	-0.3
	baz=204						
V54A	Nebo	23.87	12	P	P	09 46 30.3	+0.1
	baz=194						
V55A	Taylorsville	24.10	13	P	P	09 46 32.5	+0.2
V57A	Coltrane Farms	24.49	16	P	P	09 46 35.7	-0.1
	baz=199						
SMRT	St. Maarten	24.57	74	P	P	09 46 34.2	-2.7
V58A	Windy Hill, Pi	24.59	17	P	P	09 46 36.9	+0.1
V58A				IAmb	IAmb	09 46 38.7	
	comp=Z,130nm,1.3s						
V58A	Windy Hill, Pi	24.59	17	P	P	09 46 36.9	+0.1
	baz=201						
SKI	Saint Kitts	24.78	76	e		09 47 46.8	
U57A	Blanch	25.12	16	P	P	09 46 41.8	+0.2
	baz=200						
V60A	Jim Taylor Roa	25.15	21	P	P	09 46 44.0	+2.1
V60A				IAmb	IAmb	09 46 45.9	
	comp=Z,50nm,0.6s						
U58A	Oxford	25.31	18	P	P	09 46 42.8	-0.5
	baz=202						
MSTX	Muleshoe	25.38	330	P	P	09 46 44.6	+0.5
MSTX				IAmb	IAmb	09 46 48.0	
	comp=Z,73nm,1.0s						
S39A	Bolivar	25.63	350	P	P	09 46 45.4	-0.9
FDF	Fort de France	26.09	82	P	P	09 46 48.2	-2.5
Q54A	Coxs Mills	27.19	12	P	P	09 46 60.0	-0.3
Q54A	Coxs Mills	27.19	12	P	P	09 47 00.3	0.0
	baz=195						
P53A	Whipple	27.57	11	P	P	09 47 03.4	-0.3
P53A				IAmb	IAmb	09 47 18.2	
	comp=Z,54nm,0.9s						
MCWV	Mont Chateau	28.05	13	P	P	09 47 07.3	-0.6
R61A	Willards	28.12	21	P	P	09 47 09.7	+1.1
P57A	Homestead Farm	28.34	16	P	P	09 47 10.7	+0.2
P57A				IAmb	IAmb	09 47 15.5	
	comp=Z,80nm,1.4s						
N54A	Moraine State	29.27	12	P	P	09 47 17.6	-1.2
N54A	Moraine State	29.27	12	P	P	09 47 17.9	-0.9
	baz=196						
O59A	Robesonia	29.64	18	P	P	09 47 22.0	0.0
	baz=203						
M54A	Oil Creek Stat	29.86	12	P	P	09 47 23.2	-0.8
M54A				IAmb	IAmb	09 47 24.1	
	comp=Z,32nm,0.9s						
M54A	Oil Creek Stat	29.86	12	P	P	09 47 23.0	-1.1
	baz=196						
LUPA	Lehigh Univers	30.15	19	P	P	09 47 27.0	+0.4
N59A	State Game Lan	30.32	18	P	P	09 47 28.0	-0.1
N59A	State Game Lan	30.32	18	P	P	09 47 28.0	-0.1
	baz=204						
ODNJ	Ogdensburg	30.84	20	P	P	09 47 32.2	-0.4
ODNJ				IAmb	IAmb	09 47 32.8	
	comp=Z,49nm,1.5s						
WVNY	West Valley, N	30.95	13	P	P	09 47 33.0	-0.7
WVNY				IAmb	IAmb	09 47 51.3	
	comp=Z,50nm,1.2s						
M59A	Waymart	30.99	18	P	P	09 47 34.0	-0.1
	baz=204						
M60A	Port Jervis	31.05	20	P	P	09 47 34.1	-0.4
	baz=206						
L58A	Harry Jones Me	31.33	17	P	P	09 47 36.9	-0.1
	baz=203						
I42A	Draeger Farm,	31.37	359	P	P	09 47 35.6	-1.8
I42A				IAmb	IAmb	09 47 41.9	
	comp=Z,28nm,1.1s						
L59A	Walton	31.70	18	P	P	09 47 39.9	-0.4
L59A				IAmb	IAmb	09 47 40.2	
	comp=Z,21nm,0.8s						
J54A	Appleton	31.77	13	P	P	09 47 39.8	-0.9
L60A	Shokan	31.78	20	P	P	09 47 41.1	+0.1
	baz=206						
J56A	Wolcott	32.19	15	P	P	09 47 44.1	-0.4
J56A	Wolcott	32.19	15	P	P	09 47 43.9	-0.7
	baz=200						
I52A	Shelburne	32.23	10	P	P	09 47 44.3	-0.6
	baz=194						
H48A	Harrisville	32.41	6	P	P	09 47 45.3	-1.1
L63A	North Scituate	32.59	23	P	P	09 47 47.4	-0.7
	baz=210						
TRY	Troy	32.63	20	P	P	09 47 49.1	+0.7
TRY				IAmb	IAmb	09 47 58.5	
	comp=Z,55nm,1.4s						
BRYW	Bryant College	32.67	23	P	P	09 47 48.5	-0.3
I58A	Old Forge	33.09	17	P	P	09 47 52.0	-0.4
	baz=203						
SADO	Sadowa	33.10	11	P	P	09 47 51.1	-1.4
	comp=Z,15nm,0.5s,baz=251,slow=9.5,SNR=4.5						
SADO	Sadowa	33.10	11	P	P	09 47 50.9	-1.6
SADO				IAmb	IAmb	09 47 52.1	
	comp=Z,22nm,0.7s						
BCX	Boston College	33.16	23	P	P	09 47 53.0	0.0
BCX				IAmb	IAmb	09 47 53.2	
	comp=Z,19nm,0.9s						
DELO	Deloro Mine	33.18	13	P	P	09 47 53.2	+0.1
DELO				IAmb	IAmb	09 47 59.6	
	comp=Z,28nm,1.1s						
SRU	San Rafael Swe	33.31	327	P	P	09 47 53.5	-1.1
H58A	Gabriels	33.99	18	P	P	09 47 59.3	-0.9
	baz=204						
D32A	Dogwood Acres,	35.45	349	P	P	09 48 11.4	-1.4
PDAR	Pinedale Array	35.60	332	P	P	09 48 15.0	+0.6
	comp=Z,2.4nm,0.5s,baz=126,slow=9.1,SNR=4.7						
HWUT	Hardware Ranch	35.68	329	P	P	09 48 16.1	+1.0
HWUT				IAmb	IAmb	09 48 33.3	
	comp=Z,19nm,1.1s						
G62A	West of Eustis	35.89	21	P	P	09 48 16.5	-0.1
G62A	West of Eustis	35.89	21	P	P	09 48 15.8	-0.7
	baz=210						
D54A	Lac Fusel, La	35.89	13	P	P	09 48 15.3	-1.2
	baz=199						
AHID	Auburn Hatcher	36.32	331	P	P	09 48 22.7	+2.1
AHID				IAmb	IAmb	09 48 22.8	
	comp=Z,19nm,0.8s						
SNOW	Snow King Moun	36.69	332	P	P	09 48 25.4	+1.6
FLWY	Flagg Ranch	37.15	332	P	P	09 48 28.9	+1.3
LMN	Caledonia Moun	38.65	26	P	P	09 48 38.7	-1.3
LMN				IAmb	IAmb	09 48 41.4	
	comp=Z,27nm,0.9s						
DLMT	Dillon	38.99	332	P	P	09 48 44.5	+1.4
DLMT				IAmb	IAmb	09 48 46.1	
	comp=Z,31nm,1.4s						
NEW	Newport	43.23	332	P	P	09 49 17.2	-0.5
	comp=Z,6.2nm,0.8s,baz=114,slow=8.7,SNR=2.3						
E07A	Sunnyside	43.40	328	P	P	09 49 20.2	+1.1
E07A				IAmb	IAmb	09 49 23.2	
	comp=Z,17nm,0.9s						
LTY	Liberty	44.28	328	P	P	09 49 26.5	+0.3
G03D	McMinnville, O	44.42	324	P	P	09 49 27.6	+0.4
	baz=126						
C06D	Leavenworth	44.84	329	P	P	09 49 31.3	+0.7
	baz=131						
SCHQ	Schefferville	45.43	17	P	P	09 49 32.8	-2.3
	comp=Z,22nm,0.6s,baz=235,slow=8.9,SNR=5.0						
SCHQ	Schefferville	45.43	17	IAmb	IAmb	09 49 33.6	
	comp=Z,24nm,0.7s						
NLWA	Neilton Lookou	46.06	326	P	P	09 49 41.2	+0.9
NLWA				IAmb	IAmb	09 49 49.2	
	comp=Z,27nm,1.2s						
LLLB	Lillooet	47.10	331	P	P	09 49 48.8	+0.4
LLLB				IAmb	IAmb	09 50 08.0	
	comp=Z,12nm,0.8s						
YKA	Yellowknife Ar	53.53	345	P	P	09 50 35.1	-1.6
	comp=Z,3.0nm,0.6s,baz=102,slow=23,SNR=4.5						
PLCA	Paso Flores	55.27	164	P	P	09 50 51.5	+1.8
PLCA				IAmb	IAmb	09 50 52.7	
	comp=Z,16nm,0.9s						
ANGG	Ammassalik, Gr	63.02	21	P	P	09 51 40.3	-2.5
ILAR	Eielson Array	65.88	336	P	P	09 51 59.9	-1.7
	comp=Z,1.8nm,0.6s,baz=144,slow=5.1,SNR=5.4						
MLY	Manley	67.50	336	P	P	09 52 10.6	-1.4
MLY				IAmb	IAmb	09 52 14.0	
	comp=Z,21nm,1.4s						
BGES	Gesves	82.43	40	pP	P	09 53 40.3	+1.9
BCLA	Clavier	82.56	40	pP	P	09 53 42.0	+3.0
BSTI	Sart Tilman	82.70	40	pP	P	09 53 42.3	+2.5
MEM	Membach	82.97	40	pP	P	09 53 44.5	+3.4
BHOU	Houvegnez	83.02	40	pP	P	09 53 45.6	+4.2
SYO	Syowa Base	114.42	162	⇓*i*X	PKiKP	09 59 50.0	-5.1
COEN	Coen	130.34	262		PKPdf	10 00 22.3	-4.9
BBOO	Buckleboo	135.04	236	PKPdf	PKiKP	10 00 36.7	-0.4
ABPO	Ambohimpanom	136.39	105		PKPdf	10 00 37.7	-1.0
LSA	Lhasa	138.12	1		PKPdf	10 00 39.8	-2.3
SZP	Santa	139.13	316		PKiKP	10 00 45.1	-0.8
SHL	Shillong	142.25	0		PKPdf	10 00 50.0	+0.8
HYB	Hyderabad	147.47	25	*i* PKP	PKPab	10 01 02.5	-0.3
CMAR	Chiang Mai Arr	148.59	347	PKPbc	PKPbc	10 01 02.7	-1.1
	comp=Z,3.2nm,0.8s,baz=332,slow=2.1,SNR=3.6						

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*INET **02** 09:51:11.5, 12°.54N×87°.75W, h53^{km}, ML4.0*

SNET 02 09:51:12.6±0.9**, 12°.57N**×**87°.90W, h31**^{km}±3^{km}**, ML3.0, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	0.70	5	eP	Pb	09 51 26.6	0.0
LCND	La Caada	0.73	1	eP	Pn	09 51 26.0	-0.9
LCND				eS	Sn	09 51 38.0	+1.1
LCND				eS	Sb	09 51 38.7	+2.0
JUCU	Jucuar¡n	0.76	333	eP	Pn	09 51 27.1	-0.2
JUCU				eS	Sn	09 51 38.0	+0.3
BLLM	Bellamira	0.93	339	eP	Pn	09 51 29.5	-0.1
LCY	Lacayo	0.93	336	eP	Pn	09 51 29.8	+0.1
ALJI	Alcalda de J	1.00	319	eP	Pn	09 51 30.5	0.0
ALJI				eS	Sb	09 51 44.8	+0.6
TECA	Tecapa	1.09	327	eP	Pn	09 51 32.4	+0.5
COEB	Comit de Eme	1.11	326	eP	Pn	09 51 32.2	+0.1
COEB				eS	Sb	09 51 47.5	+0.1
COEB				IAML		09 51 50.4	
	comp=Z,535nm,0.3s						
FAGO	Alcalda de S	1.14	350	eP	Pn	09 51 32.1	-0.3
FAGO				eS	Sn	09 51 47.2	+0.2
FAGO				IAML		09 51 51.0	
	comp=Z,190nm,0.5s						
COEG	Centro de Oper	1.42	318	eP	Pn	09 51 36.6	+0.3
COEG				eS	Sn	09 51 54.9	+1.0
OPAM	Oficina de Pla	1.70	312	eS	Sn	09 52 01.7	+0.7

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*THE **02** 09:52:54.5, 38°.15N×20°.39E, h13^{km}, ML3.1/12, Error ellipse: s-maj=0.9km s-min=0.5km az=247.0*

*ATH **02** 09:52:54.5, 38°.16N×20°.43E, h14^{km}±1^{km}, ML3.5/6, Error ellipse: s-maj=2.0km s-min=1.0km az=250.0*

ISC 02 09:52:54.4±0.9**, 38°.16N**±0°.03×**20°.42E**±0°.04**, h15**^{km}±4^{km}**, n52,** σ**0^{s}.58**/81**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LXRA	Lixouri, Kepha	0.05	21	P	Pg	09 52 57.2	+0.1
LXRA				S	Sg	09 52 58.9	0.0
LXR1	Lixouri, Cepha	0.05	22	P	Pg	09 52 57.3	+0.1
LXR1				S	Sg	09 52 59.5	+0.5
ARGA	Argostoli. Kep	0.05	68	P	Pg	09 52 57.2	0.0
ARGA				S	Sg	09 52 58.4	-0.6
KEF2	Argostoli. Kep	0.06	81	P	Pg	09 52 57.1	-0.1
KEF2				S	Sg	09 52 58.7	-0.4
KEF3	Kipouria, Keph	0.07	311	P	Pg	09 52 57.4	+0.1
KEF3				S	Sg	09 52 59.2	-0.1
AGT1	Agia Thekli	0.10	345	P	Pg	09 52 57.8	+0.2
KEF4	Livadi, Kephal	0.10	4	P	Pg	09 52 57.6	0.0
KEF4				S	Sb	09 53 00.3	-0.3
KEF1	Kardakata, Kep	0.13	20	P	Pg	09 52 58.1	+0.1
KEF1				S	Sg	09 53 00.5	+0.1
VLS	Valsamata	0.14	81	P	Pg	09 52 58.1	-0.1
VLS				S	Sg	09 53 00.8	+0.2
VLS	Valsamata	0.14	81	P	Pg	09 52 58.0	-0.2
VLS				S	Sg	09 53 00.1	-0.5
VLS				AML	AML	09 53 00.8	
	comp=N,80989µm,0.2s						
VLS				AML	AML	09 53 01.0	
KONA	Konidatara, Ke	0.29	24	P	Pg	09 53 00.8	+0.2
KONA				S	Sg	09 53 04.9	0.0
KONA				AML	AML	09 53 05.9	
	comp=E,19177µm,0.3s						
KONA				AML	AML	09 53 06.1	
	comp=N,44421µm,0.4s						
KFL	Anninata	0.30	99	P	Pg	09 53 00.7	+0.1
KFL				S	Sb	09 53 05.7	-0.4
	comp=N,12µm,0.3s						
KFL	Anninata	0.30	99	P	Pg	09 53 00.7	+0.1
KFL				S	Sg	09 53 04.9	0.0
KFL				AML	AML	09 53 06.1	
	comp=E,29166µm,0.3s						
KFL				AML	AML	09 53 06.6	
	comp=N,19525µm,0.3s						
FSK	Fiskardo	0.32	21	P	Pg	09 53 01.2	+0.1
FSK				S	Sb	09 53 06.3	-0.6
	comp=N,11µm,0.4s						
FSK	Fiskardo	0.32	21	P	Pg	09 53 01.2	+0.1
FSK				S	Sg	09 53 05.5	-0.2
FSK				AML	AML	09 53 06.9	
	comp=N,17623µm,0.4s						
FSK				AML	AML	09 53 07.1	
	comp=E,26110µm,0.3s						
VLMS	Volimes, Zakyn	0.34	145	P	Pg	09 53 01.3	-0.1
VLMS				S	Sg	09 53 06.2	0.0
VLMS				AML	AML	09 53 07.4	
	comp=E,46374µm,0.2s						
VLMS				AML	AML	09 53 08.9	
	comp=N,22669µm,0.2s						
EVGI	Lefkada island	0.50	22	P	Pg	09 53 04.2	-0.1
EVGI				S	Sb	09 53 12.2	+0.2
	comp=N,2µm,0.7s						
EVGI	Lefkada island	0.50	22	P	Pg	09 53 04.2	-0.1
EVGI				S	Sb	09 53 11.6	-0.5
MGNA	Meganis	0.58	30	P	Pg	09 53 05.4	-0.4
MGNA				S	Sg	09 53 13.5	0.0
KRI1	kERI	0.59	147	P	Pg	09 53 05.3	-0.6
LKD2	Lefkada island	0.66	17	P	Pg	09 53 07.0	-0.3
LKD2	Lefkada island	0.66	17	P	Pg	09 53 07.0	-0.3
LKD2				S	Sg	09 53 15.7	-0.3
LKD2				AML	AML	09 53 23.6	
	comp=N,2407µm,0.2s						
LKD2				AML	AML	09 53 24.5	
	comp=E,2904µm,0.2s						
TSLK	Tsoukalades, L	0.69	16	P	Pg	09 53 07.8	-0.2
TSLK				S	Sb	09 53 17.4	-0.2
	comp=E,2µm,0.5s						
TSLK	Tsoukalades, L	0.69	16	P	Pg	09 53 07.7	-0.2
TSLK				S	Sb	09 53 18.3	+0.8
PDO	Prodromos	0.75	54	P	Pg	09 53 08.7	-0.2
PDO				S	Sb	09 53 20.0	+0.9
	comp=E,3µm,0.4s						
PDO	Prodromos	0.75	54	P	Pg	09 53 08.8	-0.2
RLS	Riolos of Patr	0.83	96	P	Pg	09 53 10.0	-0.6
RLS				S	Sn	09 53 23.2	-0.4
	comp=E,505nm,0.4s						
RLS	Riolos of Patr	0.83	96	P	Pg	09 53 10.0	-0.6
PVO	Paravola	0.99	62	P	Pg	09 53 13.2	-0.2
PVO				S	Sn	09 53 29.2	+1.8
	comp=E,2µm,0.4s						
PVO	Paravola	0.99	62	P	Pg	09 53 13.2	-0.2
DRO	Drossia	1.04	101	P	Pb	09 53 14.0	-0.1
DRO				S	Sn	09 53 29.9	+1.1
	comp=E,1µm,0.5s						
DRO	Drossia	1.04	101	P	Pb	09 53 14.0	-0.1
AMT	Artemida-Makis	1.20	121	P	Pb	09 53 16.9	+0.1
AMT				S	Sg	09 53 34.9	+1.8
	comp=E,695nm,0.7s						
TRIZ	Trizonia	1.32	80	P	Pn	09 53 18.1	-0.2
TRIZ				S	Sg	09 53 37.5	+0.5
	comp=E,508nm,0.5s						
TRIZ	Trizonia	1.32	80	P	Pn	09 53 18.3	0.0
EVR	Evrytania	1.33	55	P	Pg	09 53 19.5	-0.5
ALIK	Aliki, Aigiali	1.34	85	P	Pn	09 53 18.6	+0.1
ALIK				S	Sg	09 53 37.8	+0.2
KLV	Kalavryta, Ach	1.37	94	P	Pb	09 53 19.4	-0.4

KLV	comp=E,190nm,0.7s			S	Sg	09 53 38.3	-0.4
IGT	Igoumenitsa	1.38	357	P	Pb	09 53 19.4	-0.4
IGT	comp=E,352nm,0.4s			S	Sn	09 53 36.9	-0.1
KALE	Kalithea	1.38	80	P	Pn	09 53 19.2	+0.1
AGG	Agios Georgios	1.73	59	P	Pn	09 53 23.3	-0.7
DRME	Dracevica, Mon	4.13	347	*e*Pn	Pn	09 53 57.5	+0.5
PDG	Podgorica	4.36	349	*e*Pn	Pn	09 53 52.6	-7.5
TREB	Trebinje	4.82	342	*e*Pn	Pn	09 54 05.6	-0.8
BRY	Bratogost	4.95	344	*e*Pn	Pn	09 54 07.3	-1.0
UPM	Unac-Piva	5.17	348	*e*Pn	Pn	09 54 11.5	+0.1
RUDO	Rudo	5.51	352	*e*Pn	Pn	09 54 16.9	+1.0
BBLS	Lazići	5.75	353	*e*Pn	Pn	09 54 20.1	+0.8
DIVS	Divibare	5.95	357	*e*Pn	Pn	09 54 21.0	-0.9
HAPS	Han Pijesak,Bl	6.03	350	*e*Pn	Pn	09 54 25.3	+2.2
CRES	Cresnjev	8.50	336	*e*Pn	Pn	09 54 55.8	-1.2
CEY	Cerknica	8.79	331	*e*Pn	Pn	09 55 01.1	+0.2

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*NNC **02** 09:54:41.4±2.7, 42°.86N×77°.00E, h1^{km}±15^{km}, mpv2.4,*
Error ellipse: s-maj=26.3km s-min=8.5km az=147.0
SOME 02 09:54:41.7, 42°.92N×77°.00E, h15^{km}, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNSS	Tian-Shan 4.8nm,0.1s	0.13	342	*e*P	Pb	09 54 45.9	-0.2
TNSS	25nm,0.1s			*e*S	Sb	09 54 49.0	0.0
TNSS	Tian-Shan 4.8nm,0.1s	0.13	342	P	Pg	09 54 45.9	+0.2
TNSS	25nm,0.1s			S	Sb	09 54 48.7	-0.3
MDOK	Medeo 1.2nm,0.1s	0.25	8	*e*P	Pg	09 54 47.3	+0.1
MDOK	16nm,0.2s			*e*S	Sg	09 54 51.4	+0.4
MDOK	Medeo 1.2nm,0.1s	0.25	8	Pg	Pg	09 54 47.5	+0.2
MDOK	16nm,0.2s			Lg	Lg	09 54 51.4	
IZV	Izvestkoviy 2.0nm,0.1s	0.31	293	*e*P	Pg	09 54 48.1	-0.2
IZV	27nm,0.1s			*e*S	Sg	09 54 52.8	0.0
IZV	Izvestkoviy 2.0nm,0.1s	0.31	293	P	Pg	09 54 48.0	-0.2
IZV	27nm,0.1s			S	Sg	09 54 52.5	-0.2
KOTS	Kotyrbulak 2.3nm,0.1s	0.33	14	*e*P	Pg	09 54 48.8	+0.2
KOTS	24nm,0.3s			*e*S	Sb	09 54 53.9	-0.6
KOTS	Kotyrbulak 3.0nm,0.2s	0.33	14	P	Pg	09 54 48.9	+0.3
KOTS	24nm,0.3s			S	Sg	09 54 53.9	+0.6

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*NNC **02** 09:54:50.2±1.6, 42°.88N×77°.10E, h0^{km}, mb2.8, mpv2.9,*
Error ellipse: s-maj=9.4km s-min=8.4km az=134.0
*KRNET **02** 09:54:54.6±0.1, 42°.95N×77°.12E, h13^{km}, mb2.0*
*SOME **02** 09:54:55.0, 43°.03N×77°.08E, h15^{km}*
ISC 02 09:54:53.2±0.8**, 42°.99N**±0°.02×**77°.11E**±0°.01**, h12**^{km}±5^{km}**,**
n54, σ1^{s}.03/102**, 23C-10D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNSS	Tian-Shan 39nm,0.1s	0.13	293	*e*P	Pg	09 54 57.4	+0.6
TNSS	181nm,0.2s			*e*S	Sg	09 54 59.3	0.0
TNSS	Tian-Shan 39nm,0.1s	0.13	293	P	Pg	09 54 57.4	+0.6
TNSS	181nm,0.2s			S	Sg	09 54 59.3	0.0
MDOK	Medeo 33nm,0.1s	0.18	346	*e*P	Pg	09 54 57.9	+0.5
MDOK	123nm,0.3s			*e*S	Sg	09 55 00.1	-0.2
MDOK	Medeo 1.5nm,0.4s	0.18	346	⇑P	Pg	09 54 53.2	-4.2
MDOK	70nm,0.4s			⇑S	Sg	09 55 00.4	+0.1
MDOK	Medeo 33nm,0.1s	0.18	346	Pg	Pg	09 54 57.9	+0.5
MDOK	123nm,0.3s			Lg	Lg	09 55 00.1	
KOTS	Kotyrbulak 23nm,0.1s	0.25	1	*e*P	Pg	09 54 59.1	+0.6
KOTS	302nm,0.2s			*e*S	Sg	09 55 02.3	+0.2
KOTS	Kotyrbulak 23nm,0.1s	0.25	1	P	Pg	09 54 59.1	+0.6
KOTS	302nm,0.2s			S	Sg	09 55 02.3	+0.2
KNDC	Almaty 9.2nm,0.6s	0.25	336	⇑P	Pg	09 54 55.5	-3.0
KNDC	26nm,0.5s			⇑S	Sg	09 55 03.2	+1.1
IZV	Izvestkoviy 4.6nm,0.1s	0.36	278	*e*P	Pb	09 55 01.9	+0.1
IZV	66nm,0.2s			*e*S	Sb	09 55 07.3	-0.3
IZV	Izvestkoviy 4.6nm,0.1s	0.36	278	P	Pb	09 55 01.9	+0.1
IZV	66nm,0.2s			S	Sb	09 55 07.3	-0.3
ANVS	Anan'yevo baz=12	0.46	116	⇑*i*P	Pb	09 55 03.3	-0.1
ANVS	baz=12			⇑*i*S	Sb	09 55 09.0	-1.3
MTBS	Maitube 4.3nm,0.1s	0.52	286	*e*P	Pb	09 55 04.6	+0.3
MTBS	39nm,0.2s			*e*S	Sb	09 55 11.7	-0.2
MTBS	Maitube 4.3nm,0.1s	0.52	286	P	Pb	09 55 04.6	+0.3
MTBS	39nm,0.2s			S	Sb	09 55 11.7	-0.2
KTBS	Karatobe 2.6nm,0.2s	0.79	337	*e*P	Pb	09 55 09.3	+0.3
KTBS	16nm,0.3s			*e*S	Sb	09 55 19.8	+0.2
KTBS	Karatobe 2.6nm,0.2s	0.79	337	P	Pb	09 55 09.3	+0.3
KTBS	16nm,0.3s			S	Sb	09 55 19.8	+0.2
KST	Kastek 5.0nm,0.1s	0.84	274	*e*P	Pn	09 55 10.6	-0.5
KST	11nm,0.4s			*e*S	Sb	09 55 21.9	+0.6
KST	Kastek 5.0nm,0.1s	0.84	274	P	Pn	09 55 10.6	-0.5
KST	11nm,0.4s			S	Sb	09 55 21.9	+0.6
KDJ	Kajisay baz=76	0.86	176	⇑*i*P	Pb	09 55 10.2	0.0
KDJ	baz=76			⇑*i*S	Sb	09 55 21.8	0.0
CHKK	Chushkaly 2.3nm,0.1s	0.87	354	*e*P	Pb	09 55 10.5	+0.1
CHKK	16nm,0.2s			*e*S	Sg	09 55 22.1	+0.6
CHKK	Chushkaly 2.3nm,0.1s	0.87	354	P	Pb	09 55 10.5	+0.1
CHKK	16nm,0.2s			S	Sg	09 55 22.1	+0.6
KURS	Kuram 1.2nm,0.1s	0.93	57	*e*P	Pn	09 55 12.3	+0.2
KURS	3.8nm,0.3s			*e*S	Sn	09 55 24.8	-0.7
KURS	Kuram 1.2nm,0.1s	0.93	57	P	Pn	09 55 12.3	+0.2
KURS	3.8nm,0.3s			S	Sn	09 55 24.8	-0.7
ULHL	Ulahol baz=23	0.98	221	⇑*i*P	Pn	09 55 13.0	0.0
ULHL	baz=23			⇑*i*S	Sn	09 55 25.9	-1.1
ZHN	Zhinishke 4.5nm,0.1s	0.99	79	*e*P	Pn	09 55 12.9	-0.2
ZHN	4.5nm,0.2s			*e*S	Sb	09 55 25.7	+0.2
ZHN	Zhinishke 4.5nm,0.1s	0.99	79	P	Pn	09 55 12.9	-0.2
ZHN	4.5nm,0.2s			S	Sb	09 55 25.7	+0.2
BOOM	Boomskoye usch baz=42	0.99	240	⇑*i*P	Pn	09 55 13.1	-0.1
BOOM	baz=42			⇑*i*S	Sn	09 55 27.0	-0.3
DGS	Degeres 2.2nm,0.1s	1.01	285	*e*P	Pn	09 55 13.5	+0.1
DGS	9.8nm,0.2s			*e*S	Sb	09 55 26.9	+0.8
DGS	Degeres 2.2nm,0.1s	1.01	285	P	Pn	09 55 13.5	+0.1
DGS	9.8nm,0.2s			S	Sb	09 55 26.9	+0.8
KUU	Kurty 2.5nm,0.1s	1.06	329	*e*P	Pn	09 55 15.0	+0.9
KUU	5.0nm,0.1s			*e*S	Sn	09 55 29.6	+0.8
KUU	Kurty 2.5nm,0.1s	1.06	329	P	Pn	09 55 15.0	+0.9
KUU	5.0nm,0.1s			S	Sn	09 55 29.6	+0.8
PRZ	Przheval'sk baz=16	1.08	117	⇑*i*P	Pn	09 55 15.1	+0.7
PRZ	baz=16			⇑*i*S	Sn	09 55 29.6	+0.2
KPKS	Kokpek 29nm,0.1s	1.25	67	*e*P	Pg	09 55 17.4	+0.1
KPKS	8.3nm,0.2s			*e*S	Sn	09 55 33.8	+0.3
ARXS	Arharly 1.3nm,0.2s	1.33	23	*e*P	Pg	09 55 18.8	-0.1
ARXS	33nm,0.2s			*e*S	Sb	09 55 36.0	+0.6
ARXS	Arharly 1.3nm,0.2s	1.33	23	P	Pg	09 55 18.8	-0.1
ARXS	33nm,0.2s			S	Sb	09 55 36.0	+0.6
UZB	Uzynbulak 3.5nm,0.2s	1.41	83	*e*P	Pg	09 55 20.8	+0.4
UZB	7.1nm,0.2s			*e*S	Sg	09 55 38.7	-0.1
UZB	Uzynbulak 3.5nm,0.2s	1.41	83	P	Pg	09 55 20.7	+0.4
UZB	7.1nm,0.2s			S	Sg	09 55 38.7	-0.1
MNBS	Baschi 4.8nm,0.1s	1.44	40	*e*P	Pg	09 55 21.2	+0.3
MNBS	24nm,0.2s			*e*S	Sg	09 55 40.4	+0.7
MNBS	Baschi 4.8nm,0.1s	1.44	40	P	Pg	09 55 21.1	+0.2
MNBS	24nm,0.2s			S	Sg	09 55 40.3	+0.7
KBK	Karagaybulak baz=60	1.62	259	⇓*i*P	Pg	09 55 24.9	+0.5
KBK	baz=60			⇓*i*S	Sg	09 55 47.2	+1.8
KZA	Kyzart baz=38	1.65	237	⇑*i*P	Pg	09 55 25.0	+0.2
KZA	baz=38			⇑*i*S	Sg	09 55 47.7	+1.5
CHMS	Chumysh baz=72	1.73	271	⇑*i*P	Pg	09 55 26.4	0.0
CHMS	baz=72			⇑*i*S	Sg	09 55 50.5	+1.7
CHMS	Chumysh 0.6nm,0.3s	1.73	271	⇑Pn	Pn	09 55 19.8	-3.4
CHMS	3.5nm,0.4s			⇓Sn	Sn	09 55 40.4	-4.9
AAK	Ala-Archa baz=62	1.95	261	⇓*i*P	Pg	09 55 30.5	-0.2
AAK	baz=62			⇓*i*S	Sg	09 55 56.9	+0.9
AAK	Ala-Archa 0.9nm,0.3s	1.95	261	⇓Pn	Pn	09 55 24.4	-2.1
AAK	2.9nm,0.7s			⇑Sn	Sn	09 55 52.2	+1.2
UCH	Uchtor baz=50	2.06	249	⇑*e*P	Pg	09 55 32.2	-0.5
UCH	baz=50			⇑*i*S	Sg	09 55 59.7	+0.2
ARLS	Aral baz=43	2.35	242	⇓*i*P	Pb	09 55 36.2	+0.6
ARLS	baz=43			⇓*i*S	Sb	09 56 06.0	+1.4
DJR	Jarkent 0.9nm,0.1s	2.37	54	*e*P	Pg	09 55 38.1	-0.5
DJR	4.9nm,0.3s			*e*S	Sg	09 56 08.0	-1.3
DJR	Jarkent 0.9nm,0.1s	2.37	54	Pg	Pg	09 55 38.1	-0.5
DJR	4.9nm,0.3s			Lg	Lg	09 56 08.0	
KTMS	Ketmen 1.2nm,0.1s	2.42	78	*e*P	Pg	09 55 39.6	+0.1
KTMS	4.3nm,0.1s			*e*S	Sg	09 56 10.8	-0.1
KTMS	Ketmen 1.2nm,0.1s	2.42	78	Pg	Pg	09 55 39.6	+0.1
KTMS	4.3nm,0.1s			Lg	Lg	09 56 10.8	
EKS2	Erkin-Say baz=64	2.47	264	⇓*i*P	Pb	09 55 38.1	+0.4
EKS2	baz=64			⇓*i*S	Sb	09 56 09.8	+1.7
MRKS	Merke 1.4nm,0.2s	2.86	266	*e*P	Pg	09 55 47.2	-0.9
MRKS	3.2nm,0.2s			*e*S	Sg	09 56 24.6	-0.5
MRKS	Merke 1.4nm,0.2s	2.86	266	Pg	Pg	09 55 47.2	-0.9
MRKS				Lg	Lg	09 56 24.6	
KK31	Karatay Array 0.7nm,0.5s,baz=112,slow=27,SNR=4.1	4.83	274	⇑Lg	Lg	09 57 25.2	

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*NNC **02** 09:56:43.4±0.4, 44°.52N×79°.49E, h0^{km}, mb3.5, mpv3.3,*
Error ellipse: s-maj=3.1km s-min=2.6km az=50.0
*SOME **02** 09:56:44.0, 44°.52N×79°.53E, h15^{km}*
ISC 02 09:56:43.8±1.0**, 44°.51N**±0°.03×**79°.53E**±0°.03**, h11**^{km}±12^{km}**,**
n39, σ0^{s}.83/69**, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	Jarkent 9.0nm,0.0s	0.26	134	*e*P	Pg	09 56 49.5	+0.3
DJR	564nm,0.1s			*e*S	Sg	09 56 53.1	+0.2
DJR	Jarkent 18nm,0.1s	0.26	134	P	Pg	09 56 49.5	+0.3
DJR	564nm,0.1s			S	Sg	09 56 53.1	+0.2
KAPS	Kapalarasan 6.9nm,0.1s	0.78	351	*e*P	Pg	09 56 58.5	-0.4
KAPS	22nm,0.2s			*e*S	Sg	09 57 08.9	-0.2
KAPS	Kapalarasan 6.9nm,0.1s	0.78	351	P	Pg	09 56 58.5	-0.4
KAPS	22nm,0.2s			S	Sg	09 57 08.9	-0.2
MNBS	Baschi 14nm,0.1s	0.92	242	*e*P	Pg	09 57 01.0	-0.5
MNBS	43nm,0.1s			*e*S	Sg	09 57 12.9	-0.5
MNBS	Baschi 14nm,0.1s	0.92	242	P	Pg	09 57 01.0	-0.5
MNBS	43nm,0.1s			S	Sg	09 57 13.0	-0.5
TDK	Taldyqorghan 34nm,0.4s	0.94	302	*e*P	Pg	09 57 01.3	-0.6
TDK	42nm,0.2s			*e*S	Sg	09 57 13.6	-0.5
TDK	Taldyqorghan 34nm,0.4s	0.94	302	P	Pg	09 57 01.3	-0.6
TDK	42nm,0.2s			S	Sg	09 57 13.6	-0.5
KPKS	Kokpek 14nm,0.1s	1.21	210	*e*P	Pg	09 57 06.7	-0.4
KPKS	132nm,0.2s			*e*S	Sg	09 57 22.6	-0.2
KTMS	Ketmen 13nm,0.1s	1.22	151	*e*P	Pg	09 57 06.2	-1.1
KTMS	22nm,0.1s			*e*S	Sg	09 57 21.9	-1.2
KTMS	Ketmen 13nm,0.1s	1.22	151	P	Pg	09 57 05.9	-1.4
KTMS	22nm,0.1s			S	Sg	09 57 21.7	-1.4
ARXS	Arharly 4.3nm,0.1s	1.26	257	*e*P	Pb	09 57 07.4	-0.1
ARXS	23nm,0.2s			*e*S	Sb	09 57 23.9	+0.2
ARXS	Arharly 4.3nm,0.1s	1.26	257	P	Pb	09 57 07.4	-0.1
ARXS	23nm,0.2s			S	Sb	09 57 23.9	+0.2
UZB	Uzynbulak 5.2nm,0.2s	1.41	195	*e*P	Pb	09 57 10.2	0.0
UZB	54nm,0.2s			*e*S	Sb	09 57 28.6	+0.3
UZB	Uzynbulak 5.2nm,0.2s	1.41	195	P	Pb	09 57 10.2	0.0
UZB	54nm,0.2s			S	Sb	09 57 28.6	+0.3
KURS	Kuram 7.5nm,0.2s	1.42	224	*e*P	Pg	09 57 10.9	-0.1
KURS	23nm,0.3s			*e*S	Sg	09 57 30.1	+0.7
KURS	Kuram 7.5nm,0.2s	1.42	224	P	Pg	09 57 10.9	-0.1
KURS	23nm,0.3s			S	Sg	09 57 30.1	+0.7
ZHN	Zhinishke 6.7nm,0.2s	1.56	211	*e*P	Pb	09 57 12.8	0.0
ZHN	26nm,0.2s			*e*S	Sb	09 57 33.2	+0.8
ZHN	Zhinishke 6.7nm,0.2s	1.56	211	P	Pb	09 57 12.7	0.0
ZHN	26nm,0.2s			S	Sb	09 57 32.9	+0.4
CHKK	Chushkaly 4.3nm,0.1s	1.94	251	*e*P	Pb	09 57 19.2	0.0
CHKK	33nm,0.2s			*e*S	Sb	09 57 44.3	+0.9
CHKK	Chushkaly 7.0nm,0.2s	1.94	251	P	Pb	09 57 18.8	-0.4
CHKK	33nm,0.2s			S	Sb	09 57 43.7	+0.4
KOTS	Kotyrbulak 9.7nm,0.2s	2.17	235	*e*P	Pb	09 57 23.8	+0.8
KOTS	37nm,0.4s			*e*S	Sg	09 57 52.1	-1.3
KOTS	Kotyrbulak 9.7nm,0.2s	2.17	235	Pg	Pb	09 57 23.8	+0.8
KOTS	37nm,0.4s			Lg	Lg	09 57 52.1	
KTBS	Karatobe 1.9nm,0.2s	2.20	250	*e*P	Pb	09 57 24.3	+0.7
KTBS	26nm,0.4s			*e*S	Sg	09 57 53.0	-1.4
KTBS	Karatobe 3.7nm,0.2s	2.20	250	Pg	Pb	09 57 22.9	-0.6
KTBS	26nm,0.4s			Lg	Lg	09 57 50.2	
MDOK	Medeo 2.8nm,0.3s	2.25	234	*e*P	Pb	09 57 24.8	+0.4
MDOK	14nm,0.3s			*e*S	Sb	09 57 54.0	+1.7
MDOK	Medeo 2.8nm,0.3s	2.25	234	Pg	Pb	09 57 25.1	+0.7
MDOK	14nm,0.3s			Lg	Lg	09 57 54.4	
KUU	Kurty 1.8nm,0.2s	2.38	256	*e*P	Pb	09 57 26.6	+0.1
KUU	15nm,0.2s			*e*S	Sb	09 57 57.0	+1.2
KUU	Kurty 1.8nm,0.2s	2.38	256	Pg	Pb	09 57 26.6	+0.1
KUU	15nm,0.2s			Lg	Lg	09 57 57.0	
TNSS	Tian-Shan 3.2nm,0.2s	2.38	233	*e*P	Pb	09 57 27.6	+0.7
TNSS	11nm,0.3s			*e*S	Sg	09 57 58.7	-1.6
TNSS	Tian-Shan 3.2nm,0.2s	2.38	233	Pg	Pb	09 57 27.6	+0.7
TNSS	11nm,0.3s			Lg	Lg	09 57 58.4	
IZV	Izvestkoviy 2.0nm,0.3s	2.58	236	*e*P	Pb	09 57 31.0	+0.9
IZV	5.9nm,0.3s			*e*S	Sg	09 58 04.3	-2.2
IZV	Izvestkoviy 2.0nm,0.3s	2.58	236	Pg	Pb	09 57 31.0	+0.9
IZV	5.9nm,0.3s			Lg	Lg	09 58 04.3	
MTBS	Maitube 2.3nm,0.1s	2.63	239	*e*P	Pb	09 57 31.4	+0.4
MTBS	18nm,0.2s			*e*S	Sb	09 58 05.2	+1.8
MTBS	Maitube 2.3nm,0.1s	2.63	239	Pg	Pb	09 57 31.4	+0.4
MTBS	18nm,0.2s			Lg	Lg	09 58 05.0	
KST	Kastek 5.7nm,0.3s	2.97	242	*e*P	Pb	09 57 37.1	+0.4
KST	5.1nm,0.4s			*e*S	Sb	09 58 15.1	+2.0
KST	Kastek 4.3nm,0.3s	2.97	242	Pg	Pb	09 57 37.0	+0.3
KST	2.9nm,0.3s			Lg	Lg	09 58 15.2	
DGS	Degeres 2.3nm,0.4s	3.00	246	*e*P	Pb	09 57 37.4	+0.2
DGS	9.5nm,0.4s			*e*S	Sb	09 58 15.5	+1.6
DGS	Degeres 2.3nm,0.4s	3.00	246	Pg	Pb	09 57 38.0	+0.7
DGS	9.5nm,0.4s			Lg	Lg	09 58 15.5	

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*INET **02** 10:00:21.0, 12°.52N×87°.78W, h45^{km}, ML4.0*
SNET 02 10:00:21.1±1.1**, 12°.53N**×**87°.94W, h29**^{km}±4^{km}**, ML3.1,**
Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	0.75	8	*e*P	Pb	10 00 35.1	-0.7
CNCH				*e*S	Sn	10 00 46.8	+0.4
CNCH				*e*S	Sb	10 00 47.6	+1.8
LCND	La Caada	0.78	4	*e*P	Pb	10 00 35.5	-0.7
LCND				*e*S	Sn	10 00 47.5	+0.5
JUCU	Jucuar¡n	0.78	338	*e*P	Pb	10 00 35.8	-0.5
JUCU				*e*S	Sn	10 00 47.0	-0.1
BLLM	Bellamira	0.96	342	*e*P	Pn	10 00 38.8	+0.1
LCY	Lacayo	0.96	339	*e*P	Pn	10 00 38.8	+0.1
ALJI	Alcalda de J	1.00	323	*e*P	Pn	10 00 39.2	-0.1
ALJI				*e*S	Sb	10 00 53.5	+0.7
ALJI	comp=Z,761nm,0.3s			IAML		10 00 56.3	
PACA	Pacayal	1.01	338	*e*P	Pn	10 00 39.5	0.0
PACA				*e*S	Sb	10 00 53.9	+0.9
TECA	Tecapa	1.11	331	*e*P	Pn	10 00 41.1	+0.2
COEB	Comit de Eme	1.12	329	*e*P	Pn	10 00 40.9	-0.1
COEB				*e*S	Sb	10 00 56.1	-0.2
COEB	comp=Z,393nm,0.3s			IAML		10 00 59.2	
FAGO	Alcalda de S	1.17	352	*e*P	Pn	10 00 40.9	-0.8
FAGO				*e*S	Sb	10 00 57.5	-0.2
FAGO	comp=Z,247nm,0.4s			IAML		10 00 59.6	
COEG	Centro de Oper	1.42	320	*e*P	Pn	10 00 45.1	0.0
COEG				*e*S	Sn	10 01 03.4	+0.5
PAVA	Las Pavas	1.53	321	*e*P	Pn	10 00 46.6	+0.1
PAVA				*e*S	Sb	10 01 07.1	-0.8
LFU	La Fuente	1.67	317	*e*P	Pn	10 00 49.4	+0.9
OPAM	Oficina de Pla	1.70	314	*e*S	Sn	10 01 11.0	+1.3
OPAM				*e*S	Sb	10 01 11.1	-1.6

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*IDC **02** 10:07:46.4±0.8, 45°.98S×76°.37W, h0^{km}, mb3.9/8,*
mb1 4.1/9, mb1mx3.9/32, mbtmp3.9/9, ML3.6/1, Error ellipse: s-maj=36.3km s-min=19.3km az=104.0
*NEIC **02** 10:07:48.4±2.8, 45°.7S±0°.1×76°.7W±0°.1, h10^{km}±1^{km},*
mb4.6/15, Error ellipse: s-maj=21.7km s-min=9.3km az=150.0
ISC 02 10:07:50.3±0.6**, 45°.8S**±0°.1×**76°.7W**±0°.1**, h23**^{km}**, n45,**
σ1^{s}.41/43**, mb4.5**/16**, Off coast of southern Chile**

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

GO07	Milladeo Hill,	3.43	40		Pn	10 08 40.0	-2.3
PLCA	Paso Flores	6.74	44	Pn	Pn	10 09 28.1	+0.2
	0.3nm,0.3s,baz=250,slow=13,SNR=17						
PLCA	Paso Flores	6.74	44		Pn	10 09 27.7	-0.2
GO05	Huala	11.34	20	Pn	Pn	10 10 29.1	-1.8
ROC1	El Roble	13.51	21	Pn	Pn	10 10 59.7	-1.0
GO04	Tololo Observa	16.24	19		Pn	10 11 38.3	+1.1
GO02	Mina Guanaco	21.34	18	P	P	10 12 36.3	+0.2
GO02				IAmb	IAmb	10 12 46.7	
	comp=Z,29nm,1.4s						
LVC	Limon Verde	23.96	18	P	P	10 13 04.1	+0.8
	comp=Z,4.2nm,0.8s,baz=166,slow=12,SNR=3.0						
LVC	Limon Verde	23.96	18	P	P	10 13 03.4	+0.1
LVC				IAmb	IAmb	10 13 17.9	
	comp=Z,22nm,1.4s						
CPUP	Villa Florida	24.81	45	P	P	10 13 09.5	-1.1
	comp=Z,3.9nm,0.8s,baz=208,slow=9.3,SNR=6.6						
CPUP	Villa Florida	24.81	45	P	P	10 13 11.4	+0.8
CPUP				IAmb	IAmb	10 13 19.8	
	comp=Z,18nm,1.1s						
PB01	IPOC Station P	25.36	16	P	P	10 13 16.0	+0.2
PB01				IAmb	IAmb	10 13 31.2	
	comp=Z,16nm,1.4s						
MNMC	Minye Minye	27.21	15	P	P	10 13 34.6	+1.9
LPAZ	La Paz	30.26	16	P	P	10 14 01.4	+1.2
	comp=Z,0.7nm,0.6s,baz=196,slow=6.6,SNR=3.5						
LPAZ	La Paz	30.26	16	P	P	10 14 00.4	+0.3
SIV	San Ignacio	32.45	29	P	P	10 14 18.7	-0.1
	comp=Z,1.3nm,0.7s,baz=233,slow=9.2,SNR=6.1						
QSPA	South Pole Qui	44.47	180	P	P	10 15 59.1	-0.3
	comp=Z,1.8nm,1.0s,baz=90,slow=1.0,SNR=3.2						
QSPA	South Pole Qui	44.47	180	P	P	10 15 59.9	+0.5
OBIP	Obispado Ponce	64.17	11	P	P	10 18 21.3	-1.6
RAR	Rarotonga	70.39	260	P	P	10 19 01.8	-0.8
RAR				IAmb	IAmb	10 19 13.1	
	comp=Z,2.6nm,0.5s						
ODZ	Otahua Downs	71.79	224	P	P	10 19 11.2	+0.5
TXAR	Lajitas Array	78.67	336	P	P	10 19 51.3	+0.9
	comp=Z,0.3nm,0.8s,baz=144,slow=7.8,SNR=2.9						
JCT	Junction City	78.74	340	P	P	10 19 51.6	+1.0
JCT				IAmb	IAmb	10 19 52.8	
	comp=Z,8.5nm,1.2s						
LIC	Lamto	81.84	72	*e*P	P	10 20 11.3	+3.6
	comp=Z,124nm,2.0s						
LIC	Lamto	81.84	72	P	P	10 20 11.3	+3.6
KIC	Kosan Boka	82.13	73	*e*P	P	10 20 08.0	-1.3
	comp=Z,152nm,1.7s						
KIC	Kosan Boka	82.13	73	P	P	10 20 08.0	-1.3
TIC	Toumodi	82.15	72	*e*P	P	10 20 10.9	+1.5
TIC	Toumodi	82.15	72	P	P	10 20 10.9	+1.5
DBIC	Dimbokro	82.28	72	P	P	10 20 07.9	-2.1
	comp=Z,4.0nm,1.1s,baz=191,slow=5.2,SNR=7.3						
DBIC	Dimbokro	82.28	72	P	P	10 20 07.5	-2.5
DBIC				IAmb	IAmb	10 20 21.9	
	comp=Z,6.0nm,1.1s						
U40A	Yellville	83.04	347	P	P	10 20 13.3	-0.2
U40A				IAmb	IAmb	10 20 19.9	
	comp=Z,6.3nm,1.1s						
S39A	Bolivar	84.42	347	P	P	10 20 19.5	-1.0
S39A				IAmb	IAmb	10 20 27.3	
	comp=Z,5.5nm,0.9s						
CCM	Cathedral Cave	84.47	349	P	P	10 20 20.8	+0.2
NVAR	Mina Array Bea	91.78	329	P	P	10 20 58.1	+2.0
	comp=Z,0.4nm,0.7s,baz=216,slow=5.6,SNR=3.1						
H11S2	WAKE ISLAND Hy	121.51	264	T	T	12 39 44.8	
	baz=193,slow=74,SNR=6.3						
H11S1	WAKE ISLAND Hy	121.52	264	T	T	12 39 47.0	
	baz=137,slow=74,SNR=4.3						
H11S3	WAKE ISLAND Hy	121.52	264	T	T	12 39 45.6	
GEYT	Alibeck	145.81	87	PKPbc	PKPdf	10 27 26.7	+0.1
	comp=Z,2.6nm,0.7s,baz=218,slow=9.4,SNR=5.0						
AKTO	Aktyubinsk	149.76	65	PKPbc	PKPbc	10 27 37.5	0.0
	comp=Z,3.0nm,1.1s,baz=262,slow=3.0,SNR=5.9						
ARU	Arti	150.46	52	PKPbc	PKPbc	10 27 39.0	+0.1
	comp=Z,2.3nm,0.8s,baz=284,slow=5.3,SNR=8.3						
ARU	Arti	150.46	52		PKPbc	10 27 39.1	+0.2
CMAR	Chiang Mai Arr	152.52	171	PKPbc	PKPbc	10 27 42.5	-2.4
	comp=Z,0.6nm,0.4s,baz=220,slow=3.8,SNR=5.5						
CMAR				PKPab	pPKPbc	10 27 51.1	-0.3
	comp=Z,0.5nm,0.3s,baz=214,slow=3.9,SNR=6.6						
MKAR	Makanchi Array	165.43	78	PKPab	PKPab	10 28 50.3	-0.3
	comp=Z,0.4nm,0.7s,baz=258,slow=3.6,SNR=4.3						
ZALV	Zalesovo Beam	165.57	49	PKP	PKPdf	10 27 51.2	-0.8
	comp=Z,0.2nm,0.4s,baz=315,slow=3.1,SNR=3.2						

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*IDC **02** 10:09:13.2±0.8, 6.°98N×73.°22W, h148^{km}±12^{km}, mb3.1/3, mb1 3.5/6, mb1mx3.2/41, mbtmp3.8/6, Error ellipse: s-maj=29.8km s-min=8.0km az=132.0*

*RSNC **02** 10:09:14.6±1.0, 6.°81N×73.°17W, h148^{km}±4^{km}, ML3.5, Mw3.7*

ISC 02 10:09:13.1±0.8**, 6.°84N**±0.°03×**73.°12W**±0.°04**, h155**^{km}±6^{km}**, n43, σ0^{s}.99**/66**, mb3.5**/3**, 5C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.25	193	⇑*i*P	Pn	10 09 34.7	+0.2
BARC				*e*S	Sn	10 09 50.0	-0.8
PAMC	Pamplona, Colo	0.65	40	⇑*i*P	Pn	10 09 37.5	+1.0
PAMC				*e*S	Sn	10 09 54.8	+0.5
PAMC				*i*		10 09 57.8	
	comp=Z,536nm,0.4s						
RUSC	La Rusia	0.94	178	⇓*i*P	Pn	10 09 38.6	+0.1
RUSC				*e*S	Sn	10 09 57.0	-0.9
RUSC				*i*		10 09 58.6	
	comp=Z,610nm,0.3s						
PTBC	PUERTO BERRIO,	1.36	257	*e*P	Pn	10 09 41.2	-0.4
PTBC				*e*S	Sn	10 10 02.3	-1.1
PTBC				*i*		10 10 05.1	
	comp=Z,456nm,0.2s						
TAMC	Tame, Arauca	1.38	107	⇑*i*P	Pn	10 09 43.1	+1.1
TAMC				*e*S	Sn	10 10 04.9	+0.9
OCAC	Ocana	1.41	352	*e*P	Pn	10 09 42.8	+0.4
OCAC				*e*S	Sn	10 10 05.1	+0.3
OCAC				*i*		10 10 08.3	
	comp=Z,453nm,0.2s						
SPBC	San Pablo de B	1.51	219	*e*P	Pn	10 09 43.4	+0.1
SPBC				*e*S	Sn	10 10 05.6	-0.8
SPBC				*i*		10 10 07.5	
	comp=Z,556nm,0.3s						
ZARC	Zaragoza, Cauc	1.84	291	*e*P	Pn	10 09 47.0	+0.3
ZARC				*e*S	Sn	10 10 12.6	-0.1
ZARC				*i*		10 10 18.5	
	comp=Z,491nm,0.3s						
NORC	Norcasia	2.15	234	*e*P	Pn	10 09 50.9	+0.5
NORC				*e*S	Sn	10 10 18.3	-0.7
NORC				*i*		10 10 24.4	
	comp=Z,299nm,0.2s						
SMLC	San Martn de	2.17	334	*e*P	Pn	10 09 50.7	+0.1
SMLC				*e*S	Sn	10 10 19.1	-0.2
CHIC	Chingaza	2.27	195	*e*P	Pn	10 09 52.6	+0.4
CHIC				*e*S	Sn	10 10 22.4	0.0
CHIC				*i*		10 10 32.0	
	comp=Z,203nm,0.4s						
ROSC	El Rosal	2.31	211	P	Pn	10 09 54.5	+1.7
	comp=Z,92nm,0.3s,baz=212,slow=16,SNR=318						
ROSC				S	Sn	10 10 24.5	+1.3
	comp=Z,75nm,0.3s,baz=70,slow=21,SNR=6.7						
ROSC	El Rosal	2.31	211	*e*P	Pn	10 09 54.4	+1.7
ROSC				*e*S	Sn	10 10 25.0	+1.9
HELC	Santa Helena	2.47	255	*e*P	Pn	10 09 54.6	0.0
HELC				*e*S	Sn	10 10 25.6	-0.9
HELC				*i*		10 10 34.6	
	comp=E,212nm,0.3s						
HELC				*i*		10 10 34.8	
	comp=Z,219nm,0.4s						
CVER	Cruz Verde, Cu	2.49	202	*e*P	Pn	10 09 56.1	+1.2
UREC	San Jos de Ur	2.56	291	*e*P	Pn	10 09 54.5	-0.7
GUY2C	Guyana, Caldas	2.75	234	*e*P	Pn	10 09 58.7	+0.7
GUY2C				*e*S	Sn	10 10 32.1	-0.5
GUY2C				*i*		10 10 40.8	
	comp=Z,273nm,0.4s						
PTGC	Puerto Gaitan,	2.80	159	⇓*i*P	Pn	10 09 57.8	-0.5
PTGC				*e*S	Sn	10 10 31.2	-2.0
PTGC				*i*		10 10 36.0	
	comp=Z,178nm,0.3s						
CBOC	Ciudad Bolivar	3.03	252	*e*P	Pn	10 10 02.2	+0.9
CBOC				*e*S	Sn	10 10 39.1	+0.6
CBOC				*i*		10 10 49.6	
	comp=Z,66nm,0.5s						
DBBC	Dabeiba	3.07	274	*e*P	Pn	10 10 02.1	+0.4
CODC	Agustn Codazz	3.09	354	*e*P	Pn	10 10 02.5	+0.6
CODC				*e*S	Sn	10 10 39.4	-0.3
CODC				*i*		10 10 47.7	
	comp=N,153nm,0.6s						
SDV	Santo Domingo	3.20	50	P	Pn	10 10 04.1	+0.7
	comp=N,51nm,0.3s,baz=207,slow=7.0,SNR=439						
SDV				S	Sn	10 10 41.6	-0.8
	comp=N,17nm,0.3s,baz=55,slow=22,SNR=17						
SDV	Santo Domingo	3.20	50	⇑*i*P	Pn	10 10 04.0	+0.5
SDV				*e*S	Sn	10 10 41.1	-1.3
SDV				*i*		10 10 45.5	
	comp=Z,53nm,0.8s						
ARGC	Ariguani, Magd	3.20	340	*e*P	Pn	10 10 04.7	+1.5
ARGC				*e*S	Sn	10 10 43.5	+1.3
ARGC				*i*		10 10 52.7	
	comp=Z,77nm,0.4s						
ORTC	Ortega, Tolima	3.59	216	⇑*e*P	Pn	10 10 09.0	+0.6
ORTC				*e*S	Sn	10 10 51.9	+0.6
ORTC				*i*		10 10 58.4	
	comp=Z,144nm,0.4s						
SJCC	San Jacinto, C	3.66	326	*e*P	Pn	10 10 08.9	-0.3
PLMC	San Jos del P	3.68	239	*e*P	Pn	10 10 10.4	+0.8
PLMC				*e*S	Sn	10 10 51.7	-1.6
PLMC				*i*		10 10 60.0	
	comp=Z,87nm,0.1s						
YOTC	Yotoco, Valle	4.28	229	*e*P	Pn	10 10 17.2	-0.1
YOTC				*i*		10 11 18.9	
	comp=N,22nm,0.5s						
GUVC	San Jose del G	4.29	173	*e*P	Pn	10 10 16.2	-1.2
SMRC	Santa Marta, M	4.43	346	*e*P	Pn	10 10 19.5	+0.2
MACC	Macarena, Meta	4.72	189	*e*P	Pn	10 10 21.8	-1.2
URIC	Uribia, Colomb	4.96	13	*e*P	Pn	10 10 25.2	-1.0
GARC	Garzon, Huila	5.19	207	*e*P	Pn	10 10 28.9	-0.6
PCON	Cinco Dias	5.54	216	*e*P	Pn	10 10 34.8	+0.4
FLOC	Florencia	5.80	206	*e*P	Pn	10 10 37.1	-0.2
SOTA	Rioblanco	5.82	217	*e*P	Pn	10 10 39.7	+1.7
PCRV	Puerto La Cruz	9.03	68	P	Pn	10 11 21.6	+1.3
	comp=N,0.9nm,0.3s,baz=288,slow=2.7,SNR=4.5						
TXAR	Lajitas Array	36.45	312	P	P	10 16 02.9	-0.4
	comp=N,0.3nm,0.9s,baz=132,slow=7.5,SNR=3.4						
ULM	Lac du Bonnet	47.27	340	P	P	10 17 29.0	-1.7
	comp=N,0.7nm,0.3s,baz=134,slow=2.8,SNR=4.7						
YKA	Yellowknife Ar	63.25	340	P	P	10 19 25.1	+0.3
	comp=N,0.3nm,0.4s,baz=130,slow=6.9,SNR=6.5						
MKAR	Makanchi Array	122.31	20	PKP	PKiKP	10 27 52.9	+2.7
	comp=N,0.1nm,0.3s,baz=333,slow=1.8,SNR=6.2						
ASAR	Alice Springs	149.12	234	PKPbc	PKPbc	10 28 43.5	-0.6
	comp=N,0.3nm,0.6s,baz=116,slow=3.9,SNR=5.7						
WRA	Warramunga Arr	150.34	241	PKPbc	PKPbc	10 28 46.3	-0.8
	comp=N,0.2nm,0.5s,baz=107,slow=2.8,SNR=5.3						

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*IDC **02** 10:12:20.9±0.5, 45.°74S×76.°56W, h0^{km}, mb4.3/22, mb1 4.3/24, mb1mx4.3/39, mbtmp4.2/24, ML3.7/2, MS4.8/5, Ms1 4.8/5, ms1mx4.3/29, Error ellipse: s-maj=20.2km s-min=11.8km az=86.0*

*BJI **02** 10:12:20.6±0.0, 45.°70S×76.°50W, h10^{km}, mB5.3/3, Ms5.3/2, Ms7 5.1/2*

*NEIC **02** 10:12:21.9±1.8, 45.°69S±0.°07×76.°6W±0.°2, h10^{km}±1^{km}, mb5.2/78, Error ellipse: s-maj=22.7km s-min=11.1km az=273.0*

*MOS **02** 10:12:21.0±1.1, 45.°69S×76.°58W, h12^{km}, mb5.3/22, Error ellipse: s-maj=24.0km s-min=9.3km az=85.9*

*GCMT **02** 10:12:24.0±0.5, 45.°56S±0.°04×76.°95W±0.°04, h18^{km}±1^{km}, MW5.3/76, Moment Tensor Solution. s13,c16; s76,c104; Duration: 1^{s}.1 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.00±.10; $M_{\theta\theta}$0.22±.06; $M_{\phi\phi}$0.77±.06; $M_{r\theta}$0.95±.18; $M_{\theta\phi}$-0.32±.03; $M_{\phi r}$-0.10±.12; Best double couple: $M_0$1.30500×10^{17} NP1:ϕ_s170.00000°, δ33.00000°, λ-47.00000°. NP2:ϕ_s302.00000°, δ67.00000°, λ-114.00000°. Principal axes: T 1.0880, Plg18.0000°, Azm50.0000°; N 0.4340, Plg22.0000°, Azm312.0000°; P -1.5220, Plg61.0000°, Azm177.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 10:12:23.2±0.3**, 45.°74S**±0.°05×**76.°73W**±0.°09**, h17**^{km}**, n200, σ1^{s}.58**/202**, mb5.2**/57**, MS4.9**/6**, 1C-1D, Off coast of southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO07	Milladeo Hill,	3.42	41		Pn	10 13 11.5	-4.2
GO09	Cerro Castillo	6.25	154		Pn	10 13 54.3	-0.3
PLCA	Paso Flores	6.74	44	Pn	Pn	10 14 00.0	-1.4
	0.4nm,0.3s,baz=251,slow=11,SNR=14						
PLCA				Sn	Sn	10 15 24.0	+6.3
	baz=241,slow=17,SNR=1.7						
PLCA				LR	LR	10 16 35.4	
	comp=Z,8µm,21.1s,baz=292,slow=38						
PLCA	Paso Flores	6.74	44		Pn	10 13 59.5	-1.9
PLCA	Paso Flores	6.74	44	P	Pn	10 13 59.5	-1.9
GO10	Punta Arenas	8.29	156		Pn	10 14 21.4	-1.1
USHA	Ushuaia	10.53	153	Pn	Pn	10 14 53.2	+0.1
	0.3nm,0.3s,baz=320,slow=16,SNR=3.1						
GO05	Huala	11.32	20		Pn	10 15 00.7	-3.5
ROC1	El Roble	13.49	21	Pn	Pn	10 15 30.0	-4.0
GO04	Tololo Observa	16.22	19	P	P	10 16 13.4	-0.1
GO02	Mina Guanaco	21.32	18	P	P	10 17 09.6	0.0
LVC	Limon Verde	23.94	18	P	P	10 17 35.9	-0.9
	12nm,1.3s,baz=178,slow=10,SNR=6.2						
LVC	Limon Verde	23.94	18	P	P	10 17 36.9	+0.1
LVC				IAmb	IAmb	10 17 45.0	
	comp=Z,127nm,1.9s						
LVC	Limon Verde	23.94	18	P	P	10 17 36.9	+0.1
LVC				pmax	pmax		
	comp=Z,127nm,1.9s						
CPUP	Villa Florida	24.81	45	P	P	10 17 45.0	+0.7
	comp=Z,5.0nm,0.8s,baz=220,slow=7.3,SNR=10						
CPUP	Villa Florida	24.81	45	P	P	10 17 43.8	-0.5
CPUP				IAmb	IAmb	10 18 03.2	
	comp=Z,77nm,1.4s						
CPUP	Villa Florida	24.81	45	P	P	10 17 43.8	-0.5
CPUP				pmax	pmax		
	comp=Z,77nm,1.4s						
PB01	IPOC Station P	25.34	16	P	P	10 17 48.4	-0.9
LPAZ	La Paz	30.23	17	P	P	10 18 32.4	-1.4
	comp=Z,0.7nm,0.7s,baz=218,slow=8.0,SNR=3.6						
LPAZ	La Paz	30.23	17	P	P	10 18 34.1	+0.5
LPAZ	La Paz	30.23	17	P	P	10 18 34.2	+0.5
LPAZ				pmax	pmax		
	comp=Z,25nm,1.6s						
SIV	San Ignacio	32.44	29	P	P	10 18 51.3	-1.2
	comp=Z,1.5nm,0.7s,baz=238,slow=11,SNR=5.9						
NNA	Nana	33.64	360	*i* P	P	10 19 03.6	+0.6
NNA				pmax	pmax		
	comp=Z,12nm,1.3s						
BDFB	Brasilia	38.46	48	P	P	10 19 43.3	-1.1
	comp=Z,0.8nm,0.4s,baz=91,slow=25,SNR=1.7						
BDFB				LR	LR	10 37 07.3	
	comp=Z,2µm,19.4s,baz=242,slow=39						
BDFB	Brasilia	38.46	48	P	P	10 19 43.1	-1.3
BDFB	Brasilia	38.46	48	P	P	10 19 43.1	-1.3
BDFB				pmax	pmax		
	comp=Z,25nm,1.4s						
SAML	Samuel	38.47	22	P	P	10 19 44.0	-0.3
SAML	Samuel	38.47	22	P	P	10 19 44.0	-0.3
SAML				pmax	pmax		
	comp=Z,69nm,2.0s						
ATAH	Atahualpa	38.49	357	P	P	10 19 44.9	0.0
	comp=Z,1.7nm,0.5s,baz=175,slow=6.6,SNR=3.3						
VNA3	Neumayer Olymp	40.20	153	P	P	10 19 58.6	+0.4
VNA2	Neumayer--Watz	40.94	152	P	P	10 20 05.1	+0.8
	baz=288,slow=9.9						
SNAA	Sanae	42.38	153	P	P	10 20 16.6	+0.5
SNAA	Sanae	42.38	153	P	P	10 20 15.6	-0.5
	comp=Z,9.8nm,1.1s,baz=277,slow=6.5,SNR=10						
SNAA	Sanae	42.38	153	P	P	10 20 15.5	-0.7
SNAA				IAmb	IAmb	10 20 22.8	
	comp=Z,55nm,1.4s						
SNAA	Sanae	42.38	153	P	P	10 20 15.5	-0.7
SNAA				pmax	pmax		
	comp=Z,55nm,1.4s						
QSPA	South Pole Qui	44.51	180	P	P	10 20 32.8	-0.7
	comp=Z,9.5nm,1.1s,baz=139,slow=2.3,SNR=14						
QSPA	South Pole Qui	44.51	180	P	P	10 20 33.8	+0.3
OTAV	Otavalo	45.81	358	P	P	10 20 45.9	+1.2
OTAV				IAmb	IAmb	10 20 53.0	
	comp=Z,38nm,1.7s						
OTAV	Otavalo	45.81	358	P	P	10 20 45.9	+1.2
OTAV				pmax	pmax		
	comp=Z,38nm,1.7s						
PTGA	Pitinga	47.19	23	P	P	10 20 54.3	-0.7
	comp=Z,2.0nm,0.7s,baz=172,slow=16,SNR=3.9						
PTGA				LR	LR	10 40 21.9	
	comp=Z,668nm,19.3s,baz=356,slow=36						
PTGA	Pitinga	47.19	23	P	P	10 20 54.6	-0.4
PTGA				IAmb	IAmb	10 21 02.3	
	comp=Z,33nm,1.6s						
NVL	N'lazarevskaya	47.21	153	*e*P	P	10 20 55.6	+1.1
NVL				*e*S	S	10 27 50.7	+4.5
NVL				*e*SS	SS	10 31 07.8	-5.0
NVL				pmax	pmax		
	comp=Z,45nm,1.3s						
NVL				MLR	MLR		
	comp=Z,902nm,16.0s						
ROSC	El Rosal	50.40	3	P	P	10 21 20.3	+0.3
	comp=Z,5.3nm,0.4s,baz=285,slow=21,SNR=3.1						
ROSC				LR	LR	10 40 13.8	
	comp=Z,1µm,20.2s,baz=73,slow=33						
ROSC	El Rosal	50.40	3	P	P	10 21 19.8	-0.2
ROSC				IAmb	IAmb	10 21 52.9	
	comp=Z,35nm,1.4s						
JTS	Las Juntas de	56.26	350	*i* P	P	10 22 01.2	-1.5
JTS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
APG	El Apazote	61.72	345	P	P	10 22 41.9	+1.1
	comp=Z,3.5nm,0.9s,baz=273,slow=22,SNR=3.1						
MAW	Mawson	62.93	164	P	P	10 22 46.9	-1.1
	comp=Z,6.7nm,0.9s,baz=158,slow=11,SNR=3.1						
MAW	Mawson	62.93	164	P	P	10 22 48.2	+0.1
MAW	Mawson	62.93	164	P	P	10 22 48.2	+0.1
MAW				pmax	pmax		
	comp=Z,10.0nm,1.4s						
CMIG	Matias Romero	64.67	341	P	P	10 22 59.8	-0.2
	comp=Z,1.1nm,0.8s,baz=167,slow=6.1,SNR=3.6						
RAR	Rarotonga	70.37	260	LR	LR	10 47 00.2	
	comp=Z,943nm,20.1s,baz=115,slow=30						
HPIG		76.97	334	P	P	10 24 15.9	+1.0
HPIG				IAmb	IAmb	10 24 23.7	
	comp=Z,47nm,1.9s						
HKT	Hockley	77.31	343	*i* P	P	10 24 12.6	-3.8
HKT				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BOSA	Boshof	77.74	118	P	P	10 24 20.1	+0.6
	comp=Z,2.0nm,0.8s,baz=140,slow=2.1,SNR=2.2						
342A	Flagon Creek P	78.05	346	P	P	10 24 22.2	+1.6
435B	Jarrell	78.48	342	P	P	10 24 23.1	0.0
435B				IAmb	IAmb	10 24 30.3	
	comp=Z,47nm,1.7s						
TXAR	Lajitas Array	78.63	336	P	P	10 24 23.7	-0.3
	comp=Z,0.9nm,1.0s,baz=152,slow=11,SNR=8.6						
TX31	Lajitas Ar. Si	78.63	336	P	P	10 24 23.9	-0.1
TX32	Lajitas Array	78.63	336	P	P	10 24 23.7	-0.2
JCT	Junction City	78.70	340	P	P	10 24 23.9	-0.3
JCT				IAmb	IAmb	10 24 31.4	
	comp=Z,48nm,1.6s						
JCT	Junction City	78.70	340	P	P	10 24 24.0	-0.3
JCT				pmax	pmax		
	comp=Z,48nm,1.6s						
JCT	Junction City	78.70	340	P	P	10 24 25.1	+0.8
	baz=164						
LRAL	Lakeview Retre	78.96	351	P	P	10 24 30.9	+5.3
LRAL				IAmb	IAmb	10 24 32.6	
	comp=Z,47nm,1.9s						
GOGA	Godfrey	79.02	354	P	P	10 24 25.9	0.0
GOGA				IAmb	IAmb	10 24 32.7	
	comp=Z,53nm,1.6s						
GOGA	Godfrey	79.02	354	P	P	10 24 25.9	0.0
GOGA				pmax	pmax		
	comp=Z,53nm,1.6s						
Z51A	Franklin	79.06	353	P	P	10 24 31.0	+4.8
Z51A				IAmb	IAmb	10 24 33.3	
	comp=Z,47nm,1.6s						
Z50A	Ashland	79.07	352	P	P	10 24 26.5	+0.3
Z50A				IAmb	IAmb	10 24 33.0	
	comp=Z,40nm,1.7s						
143A	Socs Landing,	79.20	347	P	P	10 24 27.0	+0.1
HODGE	Hodges	79.76	355	P	P	10 24 29.0	-0.9
HODGE				IAmb	IAmb	10 24 36.6	
	comp=Z,48nm,1.8s						
FPAL	Fort Paine	80.31	353	P	P	10 24 35.6	+2.6
FPAL				IAmb	IAmb	10 24 39.5	
	comp=Z,55nm,1.8s						
X48A	Hartselle	80.37	351	P	P	10 24 32.0	-1.2
LBTB	Lobatse	80.53	116	P	P	10 24 33.7	-1.0
	comp=Z,4.4nm,1.0s,baz=168,slow=8.2,SNR=4.4						
LBTB	Lobatse	80.53	116	P	P	10 24 33.1	-1.6
LBTB				IAmb	IAmb	10 24 40.9	
	comp=Z,60nm,1.6s						
LBTB	Lobatse	80.53	116	P	P	10 24 33.1	-1.6
LBTB				pmax	pmax		
	comp=Z,60nm,1.6s						
BG3	Lake Jocassee	80.56	355	P	P	10 24 38.0	+3.8
Z35A	Perchaven, San	80.87	343	P	P	10 24 35.8	-0.1
Z35A				IAmb	IAmb	10 24 42.5	
	comp=Z,60nm,1.7s						
SWET	Sewanee	81.01	352	P	P	10 24 36.0	-0.6
MNTX	Cornudas Mount	81.34	336	P	P	10 24 37.9	-0.7
MNTX	Cornudas Mount	81.34	336	P	P	10 24 37.8	-0.7
	baz=160						
V48A	Smith Brothers	81.62	352	P	P	10 24 39.2	-0.7
V48A				IAmb	IAmb	10 24 46.2	
	comp=Z,32nm,1.5s						
W41B	Gary Mavity, V	81.75	347	P	P	10 24 40.6	+0.1
	baz=169						
W39A	Magazine	82.03	346	P	P	10 24 41.5	-0.5
W39A				IAmb	IAmb	10 24 49.2	
	comp=Z,47nm,1.6s						
W39A	Magazine	82.03	346	P	P	10 24 42.9	+1.0
	baz=168						
WVT	Waverly	82.11	351	P	P	10 24 41.5	-0.9
WVT				IAmb	IAmb	10 24 48.7	
	comp=Z,35nm,1.6s						
WVT	Waverly	82.11	351	P	P	10 24 41.5	-0.9
WVT				pmax	pmax		
	comp=Z,35nm,1.6s						
U49A	Red Boiling Sp	82.28	353	P	P	10 24 42.6	-0.7
U49A				IAmb	IAmb	10 24 49.5	
	comp=Z,48nm,1.6s						
FCAR	Ozark Folk Cen	82.44	347	P	P	10 24 43.3	-0.9
LCAR	Lake Charles	82.47	348	P	P	10 24 44.0	-0.3
LCAR				IAmb	IAmb	10 24 50.5	
	comp=Z,37nm,1.8s						
WMOK	Wichita Mounta	82.55	342	P	P	10 24 44.1	-0.7
WMOK				IAmb	IAmb	10 27 34.6	
	comp=Z,15nm,0.8s						
WMOK	Wichita Mounta	82.55	342	P	P	10 24 44.1	-0.7
WMOK				pmax	pmax		
	comp=Z,15nm,0.9s						
WMOK	Wichita Mounta	82.55	342	P	P	10 24 44.8	0.0
	baz=165						
MSTX	Muleshoe	82.77	338	P	P	10 24 46.0	-0.1
MSTX				IAmb	IAmb	10 24 53.1	
	comp=Z,44nm,1.8s						
MSTX	Muleshoe	82.77	338	P	P	10 24 46.5	+0.4
	baz=162						
T49A	Edmonton	82.85	353	P	P	10 24 42.7	-3.6
T49A				IAmb	IAmb	10 24 52.2	
	comp=Z,36nm,1.7s						
T47A	Sharon Grove	82.88	352	P	P	10 24 44.5	-1.9
T47A				IAmb	IAmb	10 24 52.4	
	comp=Z,40nm,1.8s						
U40A	Yellville	83.01	347	P	P	10 24 46.0	-1.1
U40A	Yellville	83.01	347	P	P	10 24 47.0	-0.1
	baz=169						
TUL1	Leonard	83.08	345	P	P	10 24 46.5	-0.9
TUL1	Leonard	83.08	345	P	P	10 24 46.8	-0.7
	baz=167						
HHAR	Hobbs	83.11	346	P	P	10 24 47.4	-0.3
HHAR				IAmb	IAmb	10 24 54.1	
	comp=Z,37nm,1.8s						
AMTX	Amarillo	83.36	340	P	P	10 24 49.1	0.0
AMTX				IAmb	IAmb	10 24 57.5	
	comp=Z,36nm,1.6s						
MGMO	Mountain Grove	83.70	348	P	P	10 24 50.3	-0.4
S44A	Carbondale	83.82	350	P	P	10 24 51.3	+0.1
R50A	Paris	83.92	354	P	P	10 24 51.2	-0.6
R50A				IAmb	IAmb	10 24 57.8	
	comp=Z,21nm,1.6s						
T35A	Sooner Cattle	84.19	344	P	P	10 24 53.1	-0.1
S39A	Bolivar	84.39	347	P	P	10 24 53.1	-1.0
CCM	Cathedral Cave	84.44	349	P	P	10 24 53.9	-0.5
CCM	Cathedral Cave	84.44	349	P	P	10 24 53.9	-0.5
CCM				pmax	pmax		
	comp=Z,89nm,1.8s						
CCM	Cathedral Cave	84.44	349	P	P	10 24 54.7	+0.4
	baz=170						
ANMO	Albuquerque	84.69	336	P	P	10 24 56.4	+0.4
ANMO				IAmb	IAmb	10 25 03.9	
	comp=Z,30nm,1.9s						

ANMO	Albuquerque	84.69	336	*i* P	P	10 24 55.0	-1.0
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BLO	Bloomington	84.99	352	P	P	10 24 56.0	-1.1
BLO	Bloomington	84.99	352	P	P	10 24 56.0	-1.1
BLO				pmax	pmax		
	comp=Z,38nm,1.5s						
X18A	Snowflake	85.36	333	P	P	10 25 00.7	+1.4
X18A				IAmb	IAmb	10 25 08.7	
	comp=Z,37nm,1.7s						
MATP	Matopo	85.69	115	P	P	10 25 03.4	+1.9
	comp=Z,2.9nm,1.0s,baz=249,slow=6.2,SNR=4.2						
T25A	Trinidad	86.19	338	P	P	10 25 03.8	+0.3
T25A	Trinidad	86.19	338	P	P	10 25 04.3	+0.8
	baz=161						
WUAZ	Wupatki	86.73	332	P	P	10 25 07.4	+1.4
WUAZ				IAmb	IAmb	10 25 15.4	
	comp=Z,21nm,1.4s						
SDCO	Great Sand Dun	87.05	338	P	P	10 25 08.3	+0.5
SDCO	Great Sand Dun	87.05	338	P	P	10 25 08.9	+1.2
	baz=160						
S22A	4UR Ranch, Cre	87.42	337	P	P	10 25 10.2	+0.7
S22A	4UR Ranch, Cre	87.42	337	P	P	10 25 10.4	+0.9
	baz=159						
KSCO	Kaye Shedlock’	87.52	340	P	P	10 25 10.8	+1.1
	baz=162						
U15A	North Rim	87.86	332	P	P	10 25 13.3	+1.7
U15A				IAmb	IAmb	10 25 20.9	
	comp=Z,26nm,1.6s						
TUQ	Turquoise Moun	88.22	329	P	P	10 25 15.0	+1.8
	baz=154						
L40A	Anamosa	88.37	349	P	P	10 25 12.7	-0.9
KNB	Kanab	88.57	332	P	P	10 25 16.3	+1.4
KNB	Kanab	88.57	332	P	P	10 25 16.3	+1.4
KNB				pmax	pmax		
	comp=Z,59nm,1.8s						
SMCO	Snowmass	88.79	337	P	P	10 25 16.7	+0.6
SHPR	Sheep Range	88.90	330	P	P	10 25 18.0	+1.6
ISCO	Idaho Springs	89.01	338	P	P	10 25 17.3	+0.3
ISCO				IAmb	IAmb	10 25 24.7	
	comp=Z,25nm,1.8s						
ISCO	Idaho Springs	89.01	338	P	P	10 25 17.3	+0.3
ISCO				pmax	pmax		
	comp=Z,25nm,1.8s						
JFWS	Jewell Farm	89.09	350	P	P	10 25 16.3	-0.6
JFWS	Jewell Farm	89.09	350	P	P	10 25 16.3	-0.6
JFWS				pmax	pmax		
	comp=Z,53nm,1.5s						
JFWS	Jewell Farm	89.09	350	P	P	10 25 16.5	-0.4
	baz=170						
SZCU	Shurtz Canyon	89.18	332	P	P	10 25 19.0	+1.2
CCUT	Cedar City	89.23	332	P	P	10 25 18.8	+0.8
LSZ	Lusaka	89.26	111	P	P	10 25 19.3	+0.7
	comp=Z,0.4nm,0.3s,baz=190,slow=5.3,SNR=4.1						
LSZ	Lusaka	89.26	111	IAmb	IAmb	10 25 26.6	
	comp=Z,18nm,1.7s						
LSZ	Lusaka	89.26	111	P	P	10 25 19.4	+0.7
LSZ				pmax	pmax		
	comp=Z,18nm,1.7s						
MTPU	Mount Pierson	89.29	333	P	P	10 25 20.4	+2.0
TCRU	Three Creeks R	89.90	333	P	P	10 25 22.4	+1.3
ECSD	EROS Data Cent	90.83	346	P	P	10 25 24.2	-0.8
ECSD	EROS Data Cent	90.83	346	P	P	10 25 24.8	-0.2
	baz=166						
TORD	Torodi Ar. Bea	91.40	73	P	P	10 25 29.6	+1.2
	comp=Z,3.0nm,1.4s,baz=197,slow=4.5,SNR=4.4						
NVAR	Mina Array Bea	91.74	329	P	P	10 25 32.2	+2.5
	comp=Z,0.9nm,1.0s,baz=145,slow=3.3,SNR=2.1						
K22A	Casper	91.92	338	P	P	10 25 30.3	-0.1
STKA	Stephens Creek	95.29	212	P	P	10 25 46.9	+0.6
	comp=Z,0.9nm,0.6s,baz=311,slow=4.1,SNR=2.9						
STKA	Stephens Creek	95.29	212	P	P	10 25 46.3	0.0
STKA	Stephens Creek	95.29	212	P	P	10 25 46.3	0.0
STKA				pmax	pmax		
	comp=Z,7.0nm,2.0s						
ULM	Lac du Bonnet	97.04	348	P	P	10 25 53.0	-0.4
	comp=Z,1.3nm,0.7s,baz=198,slow=3.9,SNR=3.2						
ULM	Lac du Bonnet	97.04	348	*i* P	P	10 25 53.6	+0.2
H11S2	WAKE ISLAND Hy	121.49	264	T	T	12 44 14.2	
	baz=134,slow=75,SNR=20						
H11S1	WAKE ISLAND Hy	121.50	264	T	T	12 44 10.7	
	baz=134,slow=75,SNR=14						
H11S3	WAKE ISLAND Hy	121.50	264	T	T	12 44 25.7	
	baz=134,slow=75,SNR=13						
GERES	GERESS Array B	122.64	52	PKP	PKiKP	10 31 19.5	+2.0
	comp=Z,0.5nm,0.7s,baz=318,slow=1.8,SNR=4.1						
ILAR	Eielson Array	122.90	331	PKP	PKiKP	10 31 19.7	+2.4
	comp=Z,0.8nm,0.9s,baz=170,slow=2.6,SNR=6.1						
VYHS	Vyhne	125.32	54	*e*PKIKP	PKiKP	10 31 27.7	+5.1
VYHS	Vyhne	125.32	54	*e*PKP	PKiKP	10 31 27.7	+5.1
NOA	NORSAR Array B	127.69	38	PKP	PKPdf	10 31 26.4	-0.1
	comp=Z,1.7nm,1.1s,baz=230,slow=1.2,SNR=2.8						
MLR	Muntele Rosu	127.98	61		PKPdf	10 31 26.6	-1.0
MLR	Muntele Rosu	127.98	61	PKIKP	PKPdf	10 31 26.7	-1.0
BRTR	Keskin Array B	129.97	71	PKP	PKPdf	10 31 31.6	0.0
	comp=Z,0.6nm,0.8s,baz=316,slow=10,SNR=4.1						
AKASG	Malin Array Be	132.32	56	PKP	PKPdf	10 31 35.9	+0.4
	comp=Z,0.2nm,0.4s,baz=215,slow=1.1,SNR=4.4						
KIV	Kislovodsk	137.91	70	*e*PKIKP	PKPdf	10 31 43.1	-3.2
KIV				pmax	pmax		
	comp=Z,16nm,1.0s						
OBN	Obninsk	138.02	52 ⇑	*e*PKIKP	PKPdf	10 31 45.2	-0.7
OBN				*e*		10 34 34.9	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,326nm,19.0s						
KLMR	Klimovskoe	140.72	44	*e*PKHKP	PKPpre	10 31 37.3	
KLMR				pmax	pmax		
	comp=Z,32nm,2.0s						
KLMR	Klimovskoe	140.72	44	*e*PKPdf	PKPpre	10 31 37.4	
KLMR				AMP		10 31 46.9	
	comp=Z,32nm,2.0s						
BILL	Bilibino	141.35	328	*i* PKIKP	PKPdf	10 31 50.5	-1.2
BILL				pmax	pmax		
	comp=Z,3.0nm,1.3s						
POO	Poona	143.53	128 ⇓	*i* P	PKPdf	10 31 57.6	+0.4
	comp=Z,250nm,0.8s						
PETK	Petropavlovsk-	144.60	302	PKP	PKPdf	10 31 57.8	-0.1
	comp=Z,3.6nm,0.8s,baz=58,slow=3.7,SNR=4.8						
HYB	Hyderabad	145.05	136	*i* PKP	PKPbc	10 31 58.0	-1.2
HYB				*e*		10 32 04.5	
HYB				*e*		10 32 09.0	
GEYT	Alibeck	145.84	87	PKPbc	PKPdf	10 32 00.8	+0.3
	comp=Z,2.6nm,0.7s,baz=274,slow=8.8,SNR=8.5						
GYA0B	ALIBECK ARRAY	145.84	87		PKPdf	10 31 59.8	-0.8
HRA	Herat	146.95	95		PKPdf	10 32 02.9	+0.1
SEY	Seymchan	147.62	320	*i* PKIKP	PKPdf	10 32 03.1	+0.4
UBPT	Khong Chiam	149.58	184		PKPbc	10 32 11.5	-0.3
ARU	Arti	150.46	52		PKPbc	10 32 12.2	-0.6
ARU	Arti	150.46	52	*i* PKIKP	PKPbc	10 32 12.8	0.0
ARU						10 35 49.2	
ABKAR	Akbulak array	150.81	67		PKPbc	10 32 12.7	-1.2
PBKT	Sadao Pong	150.85	175		PKPbc	10 32 14.1	-0.8
TIXI	Tiksi	151.30	343		PKPbc	10 32 12.4	-1.9
TIXI	Tiksi	151.30	343	*e*PKIKP	PKPdf	10 32 10.4	+2.1
TIXI				pmax	pmax		
	comp=Z,21nm,1.7s						
SVE	Sverdlovsk	151.59	51	*e*PKIKP	PKiKP	10 32 16.4	+0.6
MJAR	Matsushiro Arr	152.32	263	PKPbc	PKiKP	10 32 20.3	+2.3
	comp=Z,2.1nm,0.9s,baz=204,slow=2.7,SNR=6.7						
MJAR				PKPab	PKPab	10 32 30.2	+2.3
	comp=Z,6.6nm,1.1s,baz=148,slow=3.8,SNR=6.9						
MAT	Matsushiro	152.32	263	PKP	PKPab	10 32 33.5	+5.6
CMAR	Chiang Mai Arr	152.56	171	PKPbc	PKPbc	10 32 17.8	-1.1
	comp=Z,1.3nm,0.8s,baz=228,slow=3.6,SNR=11						
CMAR				PKPab	PKPab	10 32 28.8	-0.4
	comp=Z,2.2nm,0.9s,baz=207,slow=4.8,SNR=7.1						
GAR	Garm	154.86	94		PKPdf	10 32 14.3	-0.4
KSH	Kashi	159.03	98	PKP	PKPdf	10 32 20.9	+0.9
KSH				PP	PP	10 36 38.3	+0.2
KSH				SKS	SKSdf	10 39 24.6	-0.1
KSH				SKKS	SKKSac	10 43 25.0	-0.8
KSH				AMB	AMB		
	comp=Z,410nm,8.8s						
KMI	Kunming	159.42	179	PKP	PKPdf	10 32 20.4	-0.6
NJ2	Nanjing	161.77	227	*e*PKP	PKPdf	10 32 22.9	-0.2
ZEA	Zeya	162.62	306	*e*PKP2	PKPab	10 33 12.1	+0.3
ZEA				pmax	pmax		
	comp=Z,42nm,2.0s						
CN2	Changchun	164.14	271	*e*PKP	PKPdf	10 32 20.5	-4.5
CD2	Chengdu	165.19	182	PKP	PKPdf	10 32 24.9	-1.5
MKAR	Makanchi Array	165.45	78	PKP	PKPdf	10 32 25.4	-0.7
	comp=Z,0.3nm,0.9s,baz=318,slow=1.9,SNR=3.1						
MKAR				PKPab	PKPab	10 33 25.2	+0.7
	comp=Z,0.5nm,0.8s,baz=270,slow=3.9,SNR=2.8						
MKAR				PP	PP	10 37 15.9	+3.8
	comp=Z,0.5nm,1.0s,baz=333,slow=1.4,SNR=3.7						
ZAA0	Zalesovo Array	165.57	49		PKPdf	10 32 23.8	-2.1
ZALV	Zalesovo Beam	165.57	49	PKP	PKPdf	10 32 24.4	-1.5
	comp=Z,0.4nm,0.4s,baz=276,slow=5.8,SNR=4.5						
WMQ	Urumqi	168.76	94	*e*PKP	PKPdf	10 32 28.7	0.0
HHC	Hu-ho-hao-te	172.23	234	*e*PKP	PKPdf	10 32 26.3	-4.4
HHC				LR	LR		
	comp=Z,500nm,21.3s						
HHC				LR	LR		
	comp=Z,610nm,20.4s						
SONM	Songino Array	177.00	315	PKP	PKPdf	10 32 30.5	-1.5
	comp=Z,0.4nm,0.8s,baz=90,slow=1.5,SNR=4.9						
SONM				PKPab	PKPab	10 34 16.7	+0.9
	comp=Z,0.9nm,1.2s,baz=52,slow=2.6,SNR=4.2						
SONM				PP	PP	10 38 11.6	+2.5
	comp=Z,0.4nm,1.1s,baz=60,slow=3.6,SNR=4.1						

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*JMA **02** 10:12:20.6±0.2, 30°.66N×142°.37E, h44km, M4.1*
*IDC **02** 10:12:21.5±0.9, 30°.51N×141°.76E, h0km, mb3.6/8, mb1 3.8/10, mb1mx3.5/53, mbtmp3.6/10, ML3.3/2, MS3.5/1, Ms1 3.5/1, ms1mx3.0/39, Error ellipse: s-maj=34.4km s-min=15.2km az=80.0*
*NEIC **02** 10:12:24.1±0.9, 30°.53N±0°.07×141°.9E±0°.2, h19km±5km, mb4.1/10, Error ellipse: s-maj=21.8km s-min=8.4km az=77.0*
ISC 02 10:12:24.3±0.6**, 30°.62N**±0°.05×**142°.1E**±0°.1**, h23**km**, n34,** σ1s**96**/41**, mb3.9**/12**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.51	178	S	Sn	10 13 55.7	-2.7
JCJ	Chichijima	3.51	178	Pn	Pn	10 13 17.1	-0.5
	5.2nm,0.3s,baz=306,slow=23,SNR=9.9						
JCJ				Sn	Sn	10 13 56.9	-1.5
	19nm,0.3s,baz=288,slow=22,SNR=9.3						
BSO1	Boso 1	4.12	348	P	Pn	10 13 23.4	-2.0
BSO1				*e*S	Sn	10 14 10.6	-2.0
BSO3	Boso 3	4.37	343	*e*S	Sn	10 14 17.4	-1.7
BSO4	Boso 4	4.59	342	*e*S	Sn	10 14 23.2	-1.6
JOD2	Odawara 2	5.26	332	P	Pn	10 13 42.0	+0.5
JHU	Hanno	5.71	337	P	Pn	10 13 47.1	-0.6
JRY	Ryogami san	5.99	335	P	Pn	10 13 51.0	-0.6
JRY				S	Sn	10 14 59.0	-0.6
JHO	Hitachi	6.10	349	P	Pn	10 13 50.7	-2.4
JAG	Ashikaga	6.18	340	P	Pn	10 13 52.6	-1.6
JAG				S	Sn	10 15 00.7	-3.5
MJAR	Matsushiro Arr	6.72	333	Pn	Pn	10 14 01.3	-0.3
	0.3nm,0.3s,baz=158,slow=11,SNR=21						
MJAR				Sn	Sn	10 15 17.8	+0.3
	0.1nm,0.3s,baz=159,slow=19,SNR=4.1						
MJAR				LR	LR	10 15 59.2	
	comp=Z,349nm,19.3s,baz=40,slow=33						
MAJO	Matsushiro	6.72	333	Pn	Pn	10 14 02.0	+0.4
MAT	Matsushiro	6.72	333	P	Pn	10 14 01.6	0.0
MAT				S	Sn	10 15 16.0	-1.5
MJB9	Matsu-Tunnel	6.73	332	Pn	Pn	10 14 02.0	+0.3
JMK	Ichinoseki	8.34	356	P	Pn	10 14 21.3	-2.5
JMK				*e*S	Sn	10 15 49.5	-7.7
YULB	Yu-li	19.83	254	P	Pn	10 16 53.4	-1.8
YULB				IAmb	IAmb	10 17 09.6	
	comp=Z,21nm,1.2s						
KLR	Kul'dur	20.16	340	P	P	10 16 56.8	-0.1
	comp=Z,0.7nm,0.4s,baz=182,slow=9.8,SNR=3.8						
SONM	Songino Array	32.18	312	P	P	10 18 51.8	+1.4
	comp=Z,0.5nm,0.7s,baz=97,slow=8.3,SNR=3.6						
SEY	Seymchan	33.00	9	P	P	10 18 59.0	+1.7
	comp=Z,1.5nm,0.9s,baz=106,slow=1.3,SNR=3.2						
MK31	Makanchi Array	48.20	307	P	P	10 21 02.8	-0.2
MKAR	Makanchi Array	48.20	307	P	P	10 21 02.7	-0.3
	comp=Z,0.5nm,0.6s,baz=100,slow=9.2,SNR=5.8						
MAKZ	Makanchi	48.42	307	P	P	10 21 04.3	-0.4
WB0	Warramunga Arr	50.63	189	P	P	10 21 21.1	-0.6
WB0				IAmb	IAmb	10 21 40.0	
	comp=Z,3.6nm,1.1s						
WR0	Warramunga Arr	50.80	189	P	P	10 21 22.2	-0.8
WR0				IAmb	IAmb	10 21 35.4	
	comp=Z,2.6nm,0.9s						
WRA	Warramunga Arr	50.82	189	P	P	10 21 22.2	-0.8
	comp=Z,1.0nm,0.7s,baz=6.3,slow=8.6,SNR=8.7						
ASAR	Alice Springs	54.54	189	P	P	10 21 50.2	-0.4
	comp=Z,0.2nm,0.4s,baz=360,slow=4.7,SNR=6.5						
KK31	Karatay Array	56.98	304	P	P	10 22 07.9	-0.1
KK31				IAmb	IAmb	10 22 08.5	
	comp=Z,1.4nm,0.8s						
KKAR	Karatay Array	56.98	304	P	P	10 22 07.9	-0.2
KKAR				IAmb	IAmb	10 22 08.4	
	comp=Z,1.4nm,0.8s						
INK	Inuvik	59.89	25	P	P	10 22 28.1	+0.2
ABKAR	Akbulak array	62.59	313	P	P	10 22 46.3	-0.2
ABKAR				IAmb	IAmb	10 22 52.7	
	comp=Z,0.9nm,0.9s						
RES	Resolute Bay	68.67	14	P	P	10 23 28.9	+3.6
FINES	FINESS Array B	74.75	333	P	P	10 24 02.1	0.0
	comp=Z,1.8nm,1.0s,baz=103,slow=3.0,SNR=6.5						
NVAR	Mina Array Bea	78.44	52	P	P	10 24 26.8	+3.0
	comp=Z,0.3nm,0.7s,baz=264,slow=6.3,SNR=3.0						
GO03	Copiap	151.68	92	PKPbc	PKPbc	10 32 17.2	-0.1

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*INET **02** 10:16:44.0, 12°.55N×87°.74W, h68km, ML4.0*
SNET 02 10:16:43.9±1.0**, 12°.52N×87°.87W, h32**km±5km**, ML3.1, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.75	3	*e*P	Pn	10 16 58.4	0.0
CNCH				*e*S	Sn	10 17 09.6	+0.8
CNCH				IAML		10 17 16.6	
	comp=Z,2μm,0.2s						
LCND	La Caada	0.78	359	*e*P	Pn	10 16 58.7	0.0
LCND				*e*S	Sb	10 17 10.8	+1.4
LCND				IAML		10 17 12.4	
	comp=Z,837nm,0.3s						
JUCU	Jucuar¡n	0.81	333	*e*P	Pn	10 16 59.1	-0.1
JUCU				*e*S	Sb	10 17 11.0	+0.6
PACA	Pacayal	1.04	335	*e*P	Pn	10 17 02.8	+0.4
PACA				*e*S	Sb	10 17 17.4	+0.7
ALJI	Alcalda de J	1.05	320	*e*P	Pn	10 17 02.7	+0.3
ALJI				*e*S	Sb	10 17 17.2	+0.2
ALJI				IAML		10 17 18.6	
	comp=Z,366nm,0.2s						
TECA	Tecapa	1.14	328	*e*P	Pn	10 17 04.2	+0.3
COEB	Comit de Eme	1.16	327	*e*P	Pn	10 17 03.6	-0.5
COEB				*e*S	Sb	10 17 20.0	-0.3
COEB				IAML		10 17 23.5	
	comp=Z,161nm,0.2s						
FAGO	Alcalda de S	1.19	349	*e*P	Pn	10 17 04.2	-0.2
FAGO				*e*S	Sn	10 17 20.0	+0.5
COEG	Centro de Oper	1.47	318	*e*P	Pn	10 17 08.7	+0.5
COEG				*e*S	Sn	10 17 26.9	+0.5
TGUH	Tegucigalpa,Un	1.63	21	*e*P	Pn	10 17 10.3	-0.3

INET 02 10:24:32.2, 12°.53N×87°.71W, h62km**, ML3.8, Near coast of Nicaragua**

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*INET **02** 10:29:16.1, 12°.49N×87°.79W, h51km, ML5.3*
*IDC **02** 10:29:16.3±0.6, 12°.70N×87°.57W, h70km±4km, mb3.7/15, mb1 3.9/20, mb1mx3.7/47, mbtmp4.0/20, Error ellipse: s-maj=19.2km s-min=7.4km az=47.0*
*NEIC **02** 10:29:16.6±1.7, 12°.54N±0°.04×87°.72W±0°.06, h71km±6km, mb4.3/129, Md4.2(SNET), Error ellipse: s-maj=9.2km s-min=2.7km az=57.0*
*UCR **02** 10:29:16.3±1.2, 12°.50N×87°.84W, h35km±9km, ML4.1, MW4.4, mb4.3(NEIC)*
*SNET **02** 10:29:16.1±0.7, 12°.50N×87°.86W, h30km±2km, ML4.2*
*UPA **02** 10:29:23.6±3.6, 11°.90N×87°.78W, h64km±60km, MD4.9*
ISC 02 10:29:16.0±0.5**, 12°.54N**±0°.05×**87°.76W**±0°.04**, h68**km±4km**, h68**km**:pP-P, n245,** σ1s**26**/273**, mb4.2**/62**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	0.48	24	Pn	Pn	10 29 28.6	+0.1
CNCH	Conchagua	0.74	354	*e*P	Pn	10 29 30.9	-0.5
CNCH				*e*S	Sn	10 29 42.6	-0.1
CNCH	Conchagua	0.74	354	*e*P	Pn	10 29 30.9	-0.5
CNCH				*e*S	Sn	10 29 42.6	-0.1
LCND	La Caada	0.78	350	*e*P	Pn	10 29 31.3	-0.4
LCND				*e*S	Sn	10 29 43.3	-0.1
LCND	La Caada	0.78	350	*e*P	Pn	10 29 31.3	-0.4
LCND				*e*S	Sn	10 29 43.3	-0.1
JUCU	Jucuar¡n	0.86	326	*e*P	Pn	10 29 31.8	-1.0
JUCU				*e*S	Sn	10 29 43.9	-1.2
JUCU	Jucuar¡n	0.86	326	*e*P	Pn	10 29 31.8	-1.0
JUCU				*e*S	Sn	10 29 43.9	-1.2
BLLM	Bellamira	1.02	333	*e*P	Pn	10 29 34.3	-0.4
BLLM	Bellamira	1.02	333	*e*P	Pn	10 29 34.3	-0.4
VSM	San Miguel	1.02	330	*e*P	Pn	10 29 34.6	-0.4
VSM	San Miguel	1.02	330	*e*P	Pn	10 29 34.6	-0.4
LCY	Lacayo	1.03	329	*e*P	Pn	10 29 34.7	-0.2
LCY	Lacayo	1.03	329	*e*P	Pn	10 29 34.7	-0.2
PACA	Pacayal	1.08	329	*e*P	Pn	10 29 35.4	-0.2
PACA				*e*S	Sn	10 29 50.1	0.0
PACA	Pacayal	1.08	329	*e*P	Pn	10 29 35.4	-0.2
PACA				*e*S	Sn	10 29 50.1	0.0
ALJI	Alcalda de J	1.12	315	*e*P	Pn	10 29 35.1	-0.8
ALJI				*e*S	Sn	10 29 50.1	-0.7
ALJI				IAML		10 29 52.2	
	comp=Z,7μm,0.5s						
ALJI	Alcalda de J	1.12	315	*e*P	Pn	10 29 35.1	-0.8
ALJI				*e*S	Sn	10 29 50.1	-0.7
ALJI				IAML		10 29 52.2	
	comp=Z,7μm,0.5s						
TECA	Tecapa	1.20	323	*e*P	Pn	10 29 36.7	-0.5
TECA	Tecapa	1.20	323	*e*P	Pn	10 29 36.7	-0.5
FAGO	Alcalda de S	1.20	344	*e*P	Pn	10 29 36.7	-0.3
FAGO				*e*S	Sn	10 29 52.9	+0.1
FAGO				IAML		10 30 00.1	
	comp=Z,3μm,0.6s						
FAGO	Alcalda de S	1.20	344	*e*P	Pn	10 29 36.7	-0.3
FAGO				*e*S	Sn	10 29 52.9	+0.1
FAGO				IAML		10 30 00.1	
	comp=Z,3μm,0.6s						
COEB	Comit de Eme	1.22	322	*e*S	Sn	10 29 53.6	+0.3
COEB	Comit de Eme	1.22	322	*e*S	Sn	10 29 53.6	+0.3
ESTN	Estel	1.47	67	Pn	Pn	10 29 40.6	0.0
ESTN				Sn	Sn	10 29 59.3	+0.3
COEG	Centro de Oper	1.54	315	*e*P	Pn	10 29 41.0	-0.5
COEG				*e*S	Sn	10 30 00.3	-0.4
COEG	Centro de Oper	1.54	315	*e*P	Pn	10 29 41.0	-0.5
COEG				*e*S	Sn	10 30 00.3	-0.4
TGUH	Tegucigalpa,Un	1.58	17	*e*P	Pn	10 29 42.7	+0.5
TGUH	Tegucigalpa,Un	1.58	17		Pn	10 29 42.7	+0.5
TGUH				Sn	Sn	10 30 01.9	0.0
LFRS	El Faro	1.67	311	*e*P	Pn	10 29 42.8	-0.5
LBRS	Las Brisas	1.73	314	*e*P	Pn	10 29 44.3	+0.2
SNET	Serv Nac Est T	1.84	309	*e*S	Sn	10 30 07.7	-0.2
SNET	Serv Nac Est T	1.84	309		Pn	10 29 45.0	-0.5
SNET	Serv Nac Est T	1.84	309	*e*S	Sn	10 30 07.7	-0.2
UEES	Universidad Ev	1.86	309	*e*S	Sn	10 30 08.2	-0.3
UEES				IAML		10 30 12.2	
	comp=Z,2μm,0.5s						
UEES	Universidad Ev	1.86	309	*e*S	Sn	10 30 08.2	-0.3
UEES				IAML		10 30 12.2	
	comp=Z,2μm,0.5s						
BOQS	Boqueron	1.91	309	*e*P	Pn	10 29 46.3	-0.3
SBLS	San Blas	2.23	306	*e*P	Pn	10 29 50.9	-0.1
SBLS	San Blas	2.23	306	*e*P	Pn	10 29 50.9	-0.1
RTR	El Retiro	2.29	307	*e*P	Pn	10 29 51.8	+0.1
RTR	El Retiro	2.29	307	*e*P	Pn	10 29 51.8	+0.1
ACON	Acoyapa	2.59	102		Pn	10 29 54.9	-0.7
ACON				Sn	Sn	10 30 25.6	-0.4
ACON	Acoyapa	2.59	102	*e*P	Pn	10 29 54.5	-1.1
GB1A	Borinquen Arri	2.87	126	*e*P	Pn	10 30 01.1	+1.5
BUEV	Buena Vista	2.88	127	*e*P	Pn	10 29 59.7	+0.1
PLVR	Palo Verde	3.21	132	*e*P	Pn	10 30 05.0	+0.8
ESPN	Las Esperanzas	3.39	95		Pn	10 30 06.5	-0.1
ESPN	Las Esperanzas	3.39	95	*e*P	Pn	10 30 06.9	+0.3
JTS	Las Juntas de	3.54	129	P	Pn	10 30 09.1	+0.5
	comp=Z,18nm,0.3s,baz=176,slow=22,SNR=80						
JTS				S	Sn	10 30 50.6	+1.2
	comp=Z,52nm,0.3s,baz=4.5,slow=23,SNR=3.4						
JTS	Las Juntas de	3.54	129	*e*P	Pn	10 30 09.8	+1.1
JTS				*e*S	Sn	10 30 48.0	-1.3
JTS	Las Juntas de	3.54	129		Pn	10 30 09.6	+0.9
JTS	Las Juntas de	3.54	129	*e*P	Pn	10 30 09.5	+0.9
APG	El Apazote	3.60	313	P	Pn	10 30 10.7	+1.1
	comp=Z,3.0nm,0.3s,baz=110,slow=9.4,SNR=25						
APG				S	Sn	10 30 54.5	+3.5
	comp=Z,11nm,0.3s,baz=82,slow=16,SNR=3.1						
CEDE	Laguna Cedeo	3.62	124	*e*P	Pn	10 30 11.6	+1.8
HDC	Heredia	4.37	125	*e*P	Pn	10 30 29.1	+9.0
HDC	Heredia	4.37	125		Pn	10 30 20.6	+0.5
HDC	Heredia	4.37	125	*e*P	Pn	10 30 21.3	+1.2
LCR2	La Lucha 2	4.61	127	*e*P	Pn	10 30 25.2	+1.7
EDDO	Dominical	5.02	130	*e*P	Pn	10 30 30.4	+1.5
EDLM	Las Mercedes	5.22	128	*e*P	Pn	10 30 33.8	+2.1
EDPN	Palmar Norte	5.52	130	*e*P	Pn	10 30 38.1	+2.4
EDBA	Buenos Aires	5.53	127	*e*P	Pn	10 30 37.1	+1.2
CCIG	Comitan	5.65	312		Pn	10 30 39.8	+2.2
PTJ1	Puerto Jimnez	5.91	132	*i* P	Pn	10 30 43.3	+2.3
PTJ1				*e*S	Sn	10 31 40.4	-7.1
EDSV	San Vito	5.98	128	*e*P	Pn	10 30 44.1	+2.0
CNI2	El Empalme, Bo	6.04	120	*e*P	Pn	10 30 44.3	+1.4
BRU2	Volcan	6.21	126	*i* P	Pn	10 30 46.8	+1.5
BRU2				*i* S	Sn	10 31 53.1	-2.0
BRU2	Volcan	6.21	126	*e*P	Pn	10 30 46.5	+1.2
SBAR3	San Bartolo, C	6.37	131	*e*P	Pn	10 30 51.1	+3.8
BCO2	Palmira	6.39	126	*e*P	Pn	10 30 49.0	+1.3
BCO2				*i* S	Sn	10 31 56.8	-2.6
PTAR3	Potrerillos Ar	6.43	126	*e*P	Pn	10 30 52.2	+4.0
DVD	David	6.62	127	*e*P	Pn	10 30 51.9	+1.1
PEDE3	Pedregal, Chir	6.67	128	*e*P	Pn	10 30 53.8	+2.3
CHIR3	Chiriqui UPA,	6.74	127	*e*P	Pn	10 31 01.2	+8.8
TEIG	Tepich	7.66	356	P	Pn	10 31 07.1	+2.1
	comp=Z,0.7nm,0.3s,baz=49,slow=22,SNR=4.5						
TEIG	Tepich	7.66	356		Pn	10 31 08.8	+3.8
GMAL	Guarumal, Vera	7.98	126	*e*P	Pn	10 31 10.9	+1.5
CMIG	Matias Romero	8.25	304	P	Pn	10 31 14.3	+1.3
	comp=Z,1.2nm,0.3s,baz=149,slow=9.8,SNR=22						
CMIG				S	Sn	10 32 43.3	-1.4
	comp=Z,1.6nm,0.3s,baz=286,slow=12,SNR=3.1						
BCIP	Isla Barro Col	8.47	113		Pn	10 31 18.4	+2.4
MTDJ	Mount Denham	11.36	59		Pn	10 31 58.2	+2.5
TLIG	Tlapa	11.57	297		Pn	10 32 01.3	+2.7
DBBC	Dabeiba	12.63	115	*e*P	Pn	10 32 15.9	+2.9
CBOC	Ciudad Bolivar	13.35	119	*e*P	Pn	10 32 26.0	+3.2
SMLC	San Martn de	13.95	104	*e*P	Pn	10 32 31.9	+1.2
YOTC	Yotoco, Valle	14.12	126	*e*P	Pn	10 32 32.2	-0.8
GTBY	Guantanamo Bay	14.19	57	P	P	10 32 38.3	-0.8
GUY2C	Guyana, Caldas	14.23	120	*e*P	Pn	10 32 37.1	+2.4
PTBC	PUERTO BERRIO,	14.40	113	*e*P	Pn	10 32 38.5	+2.0
ORTC	Ortega, Tolima	15.05	124	*e*P	P	10 32 50.8	+1.9
SOTA	Rioblanco	15.12	132	*e*P	P	10 32 49.8	-0.3
PCON	Cinco Dias	15.14	131	*e*P	P	10 32 49.0	-1.4
OTAV	Otavalo	15.31	142	*e*P	P	10 32 54.5	+2.4
OTAV	Otavalo	15.31	142	P	P	10 32 53.7	+1.5
ROSC	El Rosal	15.32	119	P	Pn	10 32 49.5	+0.7
	comp=Z,1.0nm,0.3s,baz=117,slow=10,SNR=2.9						
ROSC	El Rosal	15.32	119	P	P	10 32 51.5	-0.7
ROSC				IAmb	IAmb	10 32 55.6	
	comp=Z,15nm,1.1s						
URIC	Uribia, Colomb	15.44	91	P	P	10 32 52.5	-0.6
RUSC	La Rusia	15.91	113	*e*P	P	10 33 00.6	+1.7
CHIC	Chingaza	15.93	118	*e*P	P	10 32 59.0	0.0
FLOC	Florencia	16.19	131	*e*P	P	10 33 01.6	+0.1
FLOC	Florencia	16.19	131	P	P	10 33 00.9	-0.6
SDV	Santo Domingo	17.21	100	P	Pn	10 33 11.7	-0.6
	comp=Z,0.4nm,0.3s,baz=322,slow=11,SNR=5.0						
SDV	Santo Domingo	17.21	100	*e*P	Pn	10 33 10.8	-1.5
SDV	Santo Domingo	17.21	100	P	Pn	10 33 12.0	-0.3
ZAIG	Zacatecas	17.39	308	P	P	10 33 16.4	+1.5
352A	Blakely	19.03	7	P	Pn	10 33 35.6	+1.5
352A				IAmb	IAmb	10 33 38.9	
	comp=Z,24nm,0.9s						
833A	Chaparral WMA,	19.10	327	P	Pn	10 33 34.7	-0.2
833A				IAmb	IAmb	10 33 36.0	
	comp=Z,13nm,0.8s						
TIGA	Tifton	19.20	11	P	Pn	10 33 36.7	+0.7
152A	Waverly Hall	20.23	7	P	Pn	10 33 47.9	-0.3
152A				IAmb	IAmb	10 33 49.9	
	comp=Z,23nm,1.2s						
143A	Socs Landing,	20.35	351	P	Pn	10 33 49.3	-0.3
143A				IAmb	IAmb	10 33 54.3	
	comp=Z,15nm,0.9s						
LRAL	Lakeview Retre	20.42	2	P	Pn	10 33 51.3	+1.0
LRAL				IAmb	IAmb	10 33 54.5	

	comp=Z,15nm,1.2s						
154A	**Montrose**	**20.43**	**11**	P	Pn	10 33 49.3	-1.3
Z50A	**Ashland**	**20.69**	**4**	P	**P**	**10 33 50.9**	**+0.2**
JCT	**Junction City**	**21.05**	**330**	P	**P**	**10 33 56.8**	**+2.2**
OBIP	**Obispado Ponce**	**21.11**	**72**	P	**P**	**10 33 56.8**	**+1.4**
OBIP				IAmb	IAmb	10 33 57.0	
	comp=Z,8.9nm,0.7s						
GOGA	**Godfrey**	**21.15**	**10**	P	**P**	**10 33 56.9**	**+1.4**
GOGA				IAmb	IAmb	10 33 58.7	
	comp=Z,15nm,0.7s						
ICMP	**Isla Caja de M**	**21.16**	**73**	P	**P**	**10 33 57.6**	**+1.8**
Y49A	**Blount Mountai**	**21.26**	**3**	P	**P**	**10 33 57.9**	**+1.1**
Y49A				IAmb	IAmb	10 34 04.5	
	comp=Z,9.5nm,0.8s						
Y52A	**Lilburn**	**21.50**	**8**	P	**P**	**10 34 00.2**	**+0.9**
Y52A				IAmb	IAmb	10 34 04.1	
	comp=Z,7.6nm,0.6s						
SJG	**San Juan**	**21.55**	**72**	P	**P**	**10 33 59.4**	**-0.6**
	comp=Z,4.6nm,0.7s,baz=283,slow=11,SNR=4.5						
SJG	**San Juan**	**21.55**	**72**	P	**P**	**10 34 00.5**	**+0.5**
NHSC	**New Hope**	**21.62**	**17**	P	**P**	**10 34 03.5**	**+2.9**
FPAL	**Fort Paine**	**21.99**	**5**	P	**P**	**10 34 05.2**	**+0.6**
MTP	**Monte Pirata**	**22.11**	**73**	P	**P**	**10 34 06.3**	**+0.3**
MTP				IAmb	IAmb	10 34 14.6	
	comp=Z,13nm,0.9s						
HODGE	**Hodges**	**22.17**	**12**	P	**P**	**10 34 08.2**	**+1.7**
HODGE				IAmb	IAmb	10 34 09.9	
	comp=Z,24nm,1.4s						
TXAR	**Lajitas Array**	**22.32**	**321**	P	**P**	**10 34 08.3**	**0.0**
	comp=Z,9.7nm,0.9s,baz=142,slow=8.4,SNR=75						
TXAR				ScP	**ScP**	**10 41 33.6**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=154,slow=5.7,SNR=11						
TX31	**Lajitas Ar. Si**	**22.32**	**321**	P	**P**	**10 34 08.5**	**+0.2**
TX31				IAmb	IAmb	10 34 10.5	
	comp=Z,9.1nm,0.8s						
TX32	**Lajitas Array**	**22.32**	**321**	P	**P**	**10 34 08.5**	**+0.2**
TX32				IAmb	IAmb	10 34 10.5	
	comp=Z,8.9nm,0.8s						
JSC	**Jenkinsville**	**22.44**	**14**	P	**P**	**10 34 11.3**	**+1.9**
MIAR	**Mount Ida**	**22.54**	**347**	P	**P**	**10 34 10.5**	**0.0**
MIAR				IAmb	IAmb	10 34 29.5	
	comp=Z,7.0nm,0.8s						
W50A	**Signal Mountai**	**22.67**	**5**	P	**P**	**10 34 11.7**	**-0.3**
STVI	**Saint Thomas**	**22.71**	**72**	P	**P**	**10 34 10.9**	**-1.6**
W52A	**Murphy**	**22.73**	**8**	P	**P**	**10 34 13.7**	**+1.3**
ABTX	**Abilene, Hawle**	**22.77**	**333**	P	**P**	**10 34 13.5**	**+0.5**
BG3	**Lake Jocassee**	**22.78**	**10**	P	**P**	**10 34 14.2**	**+1.2**
BG3				IAmb	IAmb	10 34 15.5	
	comp=Z,6.1nm,0.6s						
PCRV	**Puerto La Cruz**	**22.79**	**94**	P	**P**	**10 34 12.1**	**-1.2**
	comp=Z,11nm,0.9s,baz=212,slow=5.4,SNR=4.2						
PAULI	**Pauline**	**22.83**	**13**	P	**P**	**10 34 14.3**	**+0.7**
PAULI				IAmb	IAmb	10 34 15.8	
	comp=Z,18nm,1.5s						
PLCV	**Puerto La Cruz**	**22.83**	**94**	P	**P**	**10 34 12.1**	**-1.7**
CPCT	**Cooper Cave**	**23.00**	**7**	P	**P**	**10 34 15.3**	**0.0**
CPCT				IAmb	IAmb	10 34 32.9	
	comp=Z,9.7nm,1.1s						
Y60A	**Bolivia**	**23.07**	**21**	P	**P**	**10 34 16.0**	**0.0**
KMSC	**Kings Mountain**	**23.25**	**13**	P	**P**	**10 34 18.2**	**+0.6**
KMSC				IAmb	IAmb	10 34 19.6	
	comp=Z,9.7nm,0.7s						
TKL	**Tuckaleechee C**	**23.30**	**8**	P	**P**	**10 34 18.1**	**-0.1**
	comp=Z,2.9nm,0.6s,baz=180,slow=12,SNR=8.5						
TKL	**Tuckaleechee C**	**23.30**	**8**	P	**P**	**10 34 18.4**	**+0.2**
TKL				IAmb	IAmb	10 34 36.9	
	comp=Z,11nm,1.0s						
V53A	**Saluda**	**23.46**	**10**	P	**P**	**10 34 19.9**	**+0.3**
V53A				IAmb	IAmb	10 34 23.8	
	comp=Z,7.0nm,0.8s						
CLTN	**Cedars of Leba**	**23.49**	**3**	P	**P**	**10 34 19.9**	**+0.1**
WVT	**Waverly**	**23.49**	**360**	P	**P**	**10 34 19.6**	**-0.3**
W57A	**Gilead**	**23.59**	**16**	P	**P**	**10 34 20.7**	**-0.1**
W57A				IAmb	IAmb	10 34 36.1	
	comp=Z,13nm,1.1s						
LCAR	**Lake Charles**	**23.63**	**353**	P	**P**	**10 34 19.8**	**-1.4**
X34A	**Smith Ranch, M**	**23.80**	**339**	P	**P**	**10 34 23.0**	**+0.3**
X34A				IAmb	IAmb	10 34 42.1	
	comp=Z,12nm,0.6s						
V55A	**Taylorsville**	**23.95**	**13**	P	**P**	**10 34 24.9**	**+0.8**
V55A				IAmb	IAmb	10 34 43.0	
	comp=Z,14nm,1.2s						
TZTN	**Tazewell**	**24.20**	**8**	P	**P**	**10 34 26.4**	**0.0**
HHAR	**Hobbs**	**24.29**	**348**	P	**P**	**10 34 29.4**	**+2.3**
HHAR				IAmb	IAmb	10 34 46.9	
	comp=Z,8.6nm,1.1s						
T47A	**Sharon Grove**	**24.36**	**1**	P	**P**	**10 34 27.6**	**-0.1**
T47A				IAmb	IAmb	10 34 46.5	
	comp=Z,9.2nm,0.8s						
TUL1	**Leonard**	**24.38**	**344**	P	**P**	**10 34 29.1**	**+1.1**
V58A	**Windy Hill, Pi**	**24.44**	**17**	P	**P**	**10 34 28.8**	**+0.4**
V58A				IAmb	IAmb	10 34 30.1	
	comp=Z,12nm,0.7s						
U54A	**Nelsons Funny**	**24.47**	**12**	P	**P**	**10 34 29.3**	**+0.5**
T49A	**Edmonton**	**24.55**	**4**	P	**P**	**10 34 29.8**	**+0.4**
T52A	**Hallie**	**24.84**	**9**	P	**P**	**10 34 32.2**	**+0.1**
MNTX	**Cornudas Mount**	**25.04**	**322**	P	**P**	**10 34 34.3**	**+0.3**
S51A	**Beattyville**	**25.27**	**8**	P	**P**	**10 34 35.8**	**-0.3**
V62A	**Hyde County Ai**	**25.29**	**23**	P	**P**	**10 34 37.6**	**+1.5**
MSTX	**Muleshoe**	**25.35**	**330**	P	**P**	**10 34 36.1**	**-0.8**
MSTX				IAmb	IAmb	10 34 37.9	
	comp=Z,11nm,0.8s						
T57A	**Hurt**	**25.53**	**16**	P	**P**	**10 34 39.6**	**+1.3**
S39A	**Bolivar**	**25.54**	**350**	P	**P**	**10 34 37.8**	**-0.7**
S39A				IAmb	IAmb	10 34 43.9	
	comp=Z,9.2nm,1.2s						
S54A	**Dingess, Beckl**	**25.81**	**12**	P	**P**	**10 34 41.5**	**+0.6**
S54A				IAmb	IAmb	10 35 00.7	
	comp=Z,8.4nm,1.1s						
U32A	**Winter Ranch,**	**25.81**	**339**	P	**P**	**10 34 41.7**	**+0.7**
U32A				IAmb	IAmb	10 34 59.6	
	comp=Z,15nm,1.0s						
R55A	**Marlinton**	**26.53**	**14**	P	**P**	**10 34 48.0**	**+0.5**
Q51A	**Peebles**	**26.67**	**8**	P	**P**	**10 34 48.6**	**-0.1**
Q54A	**Coxs Mills**	**27.05**	**12**	P	**P**	**10 34 52.4**	**+0.4**
Q54A				IAmb	IAmb	10 34 53.4	
	comp=Z,6.7nm,0.6s						
P53A	**Whipple**	**27.43**	**11**	P	**P**	**10 34 55.7**	**+0.2**
Q56A	**Snyder Ridge,**	**27.47**	**15**	P	**P**	**10 34 56.5**	**+0.6**
Q56A				IAmb	IAmb	10 34 58.0	
	comp=Z,6.8nm,0.7s						
ANMO	**Albuquerque**	**28.02**	**326**	P	**P**	**10 35 01.3**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=146,slow=5.6,SNR=5.0						
ANMO	**Albuquerque**	**28.02**	**326**	P	**P**	**10 35 01.6**	**+0.6**
P57A	**Homestead Farm**	**28.19**	**16**	P	**P**	**10 35 02.7**	**+0.5**
P57A				IAmb	IAmb	10 35 19.1	
	comp=Z,9.9nm,1.1s						
SDMD	**Soldier's Deli**	**28.46**	**18**	P	**P**	**10 35 05.2**	**+0.6**
SSPA	**Standing Stone**	**29.31**	**15**	P	**P**	**10 35 12.5**	**+0.3**
SSPA				IAmb	IAmb	10 35 13.8	
	comp=Z,16nm,1.5s						
SDCO	**Great Sand Dun**	**29.69**	**331**	P	**P**	**10 35 16.8**	**+0.9**
M54A	**Oil Creek Stat**	**29.72**	**12**	P	**P**	**10 35 15.5**	**-0.3**
M54A				IAmb	IAmb	10 35 17.3	
	comp=Z,5.7nm,0.8s						
S22A	**4UR Ranch, Cre**	**30.34**	**329**	P	**P**	**10 35 22.6**	**+0.9**
S22A				IAmb	IAmb	10 35 22.9	
	comp=Z,2.5nm,0.6s						
X16A	**Lo Mia Camp, P**	**30.62**	**319**	P	**P**	**10 35 25.1**	**+1.0**
ODNJ	**Ogdensburg**	**30.69**	**20**	P	**P**	**10 35 24.2**	**-0.2**
MVCO	**Mesa Verde**	**30.80**	**326**	P	**P**	**10 35 26.2**	**+0.5**
MVCO				IAmb	IAmb	10 35 27.9	
	comp=Z,4.6nm,1.1s						
WVNY	**West Valley, N**	**30.81**	**13**	P	**P**	**10 35 24.9**	**-0.5**
SMCO	**Snowmass**	**31.53**	**331**	P	**P**	**10 35 33.9**	**+1.6**
SMCO				IAmb	IAmb	10 35 34.2	
	comp=Z,5.4nm,1.4s						
L59A	**Walton**	**31.55**	**18**	P	**P**	**10 35 31.9**	**-0.1**
ECSD	**EROS Data Cent**	**32.01**	**348**	P	**P**	**10 35 34.5**	**-1.5**
ECSD				IAmb	IAmb	10 35 53.2	
	comp=Z,7.1nm,1.1s						
H48A	**Harrisville**	**32.28**	**6**	P	**P**	**10 35 37.2**	**-1.0**
J58A	**Remsen**	**32.55**	**17**	P	**P**	**10 35 40.7**	**0.0**
O20A	**White River Ci**	**32.89**	**330**	P	**P**	**10 35 45.0**	**+1.1**
O20A				IAmb	IAmb	10 35 45.5	
	comp=Z,5.0nm,0.7s						
SADO	**Sadowa**	**32.96**	**11**	P	**P**	**10 35 44.4**	**+0.1**
SADO				IAmb	IAmb	10 36 02.9	
	comp=Z,6.4nm,1.0s						
SRU	**San Rafael Swe**	**33.28**	**327**	P	**P**	**10 35 48.1**	**+0.7**
MTPU	**Mount Pierson**	**33.46**	**324**	P	**P**	**10 35 49.4**	**+0.3**
Q16A	**Castle Valley**	**33.49**	**326**	P	**P**	**10 35 49.9**	**+0.6**
P17A	**Butcher Ranch,**	**33.66**	**327**	P	**P**	**10 35 51.0**	**+0.4**
LONY	**Lake Ozonia**	**33.91**	**17**	P	**P**	**10 35 52.6**	**+0.1**
RSSD	**Black Hills**	**34.45**	**339**	P	**P**	**10 35 58.2**	**+0.8**
RSSD				IAmb	IAmb	10 35 58.5	
	comp=Z,2.2nm,0.6s						
MPU	**Maple Canyon**	**34.53**	**327**	P	**P**	**10 35 58.6**	**+0.4**
LPAZ	**La Paz**	**34.59**	**145**	P	**P**	**10 36 00.1**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=339,slow=4.7,SNR=7.9						
LPAZ	**La Paz**	**34.59**	**145**	P	**P**	**10 36 00.2**	**+0.7**
NLU	**North Lily Min**	**34.72**	**326**	P	**P**	**10 36 01.2**	**+1.3**
EYMN	**Ely**	**35.44**	**356**	P	**P**	**10 36 03.2**	**-2.5**
EYMN				IAmb	IAmb	10 36 04.8	
	comp=Z,5.6nm,1.5s						
PD31	**Pinedale Array**	**35.56**	**332**	P	**P**	**10 36 06.5**	**-0.6**
PDAR	**Pinedale Array**	**35.56**	**332**	P	**P**	**10 36 06.3**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=133,slow=11,SNR=20						
PDAR				pP	**pP**	**10 36 23.8**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=138,slow=9.8,SNR=3.6						
HWUT	**Hardware Ranch**	**35.65**	**329**	P	**P**	**10 36 07.7**	**-0.1**
G62A	**West of Eustis**	**35.73**	**21**	P	**P**	**10 36 08.4**	**+0.2**
SPUT	**South Promonto**	**35.89**	**328**	P	**P**	**10 36 10.4**	**+0.6**
BGU	**Big Grassy Mou**	**35.92**	**327**	P	**P**	**10 36 10.4**	**+0.3**
MNMC	**Minye Minye**	**36.20**	**150**	P	**P**	**10 36 14.4**	**+1.6**
AHID	**Auburn Hatcher**	**36.28**	**330**	P	**P**	**10 36 13.1**	**-0.1**
REDW	**Red Top Meadow**	**36.62**	**331**	P	**P**	**10 36 16.7**	**+0.6**
FXWY	**Fox Creek**	**36.91**	**331**	P	**P**	**10 36 19.2**	**+0.6**
IMW	**Indian Meadow**	**37.07**	**332**	P	**P**	**10 36 20.6**	**+0.5**
IMW				IAmb	IAmb	10 36 23.3	
	comp=Z,2.4nm,0.5s						
FLWY	**Flagg Ranch**	**37.10**	**332**	P	**P**	**10 36 20.5**	**+0.3**
FLWY				IAmb	IAmb	10 36 39.7	
	comp=Z,2.8nm,0.8s						
RLMT	**Red Lodge**	**37.30**	**335**	P	**P**	**10 36 22.2**	**+0.4**
RLMT				IAmb	IAmb	10 36 24.3	
	comp=Z,4.1nm,1.4s						
NV11	**Mina Array Sit**	**37.35**	**319**	P	**P**	**10 36 23.6**	**+1.3**
NV11				IAmb	IAmb	10 36 24.1	
	comp=Z,3.0nm,1.1s						
NVAR	**Mina Array Bea**	**37.44**	**319**	P	**P**	**10 36 23.9**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=132,slow=7.6,SNR=9.9						
NVAR				pP	**pP**	**10 36 41.1**	**+1.4**
	comp=Z,1.0nm,0.8s,baz=133,slow=6.8,SNR=4.3						
NVAR				ScP	**ScP**	**10 42 22.2**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=126,slow=4.6,SNR=6.3						
YNE	**Yellowstone No**	**37.52**	**334**	P	**P**	**10 36 24.0**	**+0.2**
KVN	**Kaiserville**	**37.68**	**320**	P	**P**	**10 36 25.8**	**+0.7**
KVN				IAmb	IAmb	10 36 25.9	
	comp=Z,2.6nm,0.9s						
D62A	**Allapoint, All**	**37.86**	**21**	P	**P**	**10 36 25.9**	**-0.4**
PB01	**IPOC Station P**	**37.89**	**152**	P	**P**	**10 36 28.0**	**+1.0**
YHL	**Hebgen Lake**	**37.92**	**333**	P	**P**	**10 36 28.3**	**+1.1**
ULM	**Lac du Bonnet**	**38.19**	**352**	P	**P**	**10 36 26.5**	**-2.5**
	comp=Z,1.3nm,0.4s,baz=161,slow=8.4,SNR=7.1						
ULM				pP	**pP**	**10 36 45.9**	**+0.2**
	comp=Z,2.4nm,0.6s,baz=153,slow=9.1,SNR=4.8						
ULM	**Lac du Bonnet**	**38.19**	**352**	P	**P**	**10 36 26.3**	**-2.7**
ULM				IAmb	IAmb	10 36 35.4	
	comp=Z,3.6nm,1.2s						
ULM					**pP**	**10 36 45.6**	**0.0**
DGMT	**Dagmar**	**38.35**	**342**	P	**P**	**10 36 29.9**	**-0.5**
MCMT	**McKenzie Canyo**	**38.67**	**331**	P	**P**	**10 36 34.5**	**+1.1**
SIV	**San Ignacio**	**38.73**	**136**	P	**P**	**10 36 33.4**	**-0.6**
	comp=Z,1.7nm,0.8s,baz=317,slow=9.3,SNR=9.7						
F10A	**Beach Ranch, E**	**41.63**	**329**	P	**P**	**10 36 57.0**	**-0.8**
PINE	**Pine Mountain**	**42.22**	**324**	P	**P**	**10 37 02.2**	**-0.6**
PINE				IAmb	IAmb	10 37 02.6	
	comp=Z,4.0nm,0.8s						
E07A	**Sunnyside**	**43.37**	**328**	P	**P**	**10 37 11.5**	**-0.3**
E07A				IAmb	IAmb	10 37 12.1	
	comp=Z,5.9nm,0.8s						
C09A	**Chrisman Ranch**	**43.41**	**330**	P	**P**	**10 37 12.5**	**+0.4**
FFC	**Flin Flon**	**43.55**	**348**	P	**P**	**10 37 12.4**	**-0.7**
FFC				IAmb	IAmb	10 37 14.0	
	comp=Z,2.4nm,0.7s						
LTY	**Liberty**	**44.25**	**328**	P	**P**	**10 37 18.5**	**-0.4**
LTY				IAmb	IAmb	10 37 19.1	
	comp=Z,7.5nm,1.3s						
SCHQ	**Schefferville**	**45.28**	**17**	P	**P**	**10 37 24.8**	**-2.1**
	comp=Z,3.5nm,0.7s,baz=215,slow=6.4,SNR=17						
SCHQ				pP	**pP**	**10 37 42.7**	**-1.2**
	comp=Z,5.2nm,0.8s,baz=186,slow=5.4,SNR=6.1						
SCHQ	**Schefferville**	**45.28**	**17**	P	**P**	**10 37 24.9**	**-1.9**
SCHQ				IAmb	IAmb	10 37 44.3	
	comp=Z,4.6nm,0.9s						
YKA	**Yellowknife Ar**	**53.45**	**345**	P	**P**	**10 38 26.9**	**-2.1**
	comp=Z,0.3nm,0.5s,baz=144,slow=6.9,SNR=9.8						
YKA				pP	**pP**	**10 38 44.2**	**-2.1**
	comp=Z,1.0nm,0.6s,baz=137,slow=8.0,SNR=7.8						
PLCA	**Paso Flores**	**55.34**	**164**	P	**P**	**10 38 43.1**	**0.0**
	comp=Z,4.4nm,0.8s,baz=357,slow=8.1,SNR=12						
PLCA	**Paso Flores**	**55.34**	**164**	IAmb	IAmb	10 38 44.0	
	comp=Z,6.0nm,0.9s						
INK	**Inuvik**	**63.04**	**343**	P	**P**	**10 39 34.6**	**-1.1**
	comp=Z,0.8nm,0.7s,baz=164,slow=2.6,SNR=2.9						
INK				pP	**pP**	**10 39 52.9**	**-0.6**
	comp=Z,1.2nm,0.9s,baz=90,slow=3.9,SNR=2.8						
INK	**Inuvik**	**63.04**	**343**	IAmb	IAmb	10 39 44.9	
	comp=Z,6.7nm,1.4s						
ILAR	**Eielson Array**	**65.82**	**336**	P	**P**	**10 39 52.6**	**-1.4**
	comp=Z,0.3nm,0.8s,baz=158,slow=5.0,SNR=5.7						
ILAR				pP	**pP**	**10 40 11.9**	**0.0**
	comp=Z,0.6nm,0.6s,baz=161,slow=5.0,SNR=6.1						
RND	**Reindeer**	**66.11**	**334**	P	**P**	**10 39 55.1**	**-0.9**
RND				IAmb	IAmb	10 39 57.4	
	comp=Z,3.3nm,1.1s						
SUA	**Susitna One**	**66.29**	**332**	P	**P**	**10 40 00.1**	**+2.9**
MLY	**Manley**	**67.45**	**336**	P	**P**	**10 40 02.4**	**-2.1**
WRA	**Warramunga Arr**	**139.01**	**254**	PKP	**PKPdf**	**10 48 36.0**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=89,slow=2.3,SNR=4.3						
WRA				pPKP	**pPKPdf**	**10 48 55.6**	**+0.3**
	comp=Z,1.6nm,0.9s,baz=95,slow=1.6,SNR=4.9						
ASAR	**Alice Springs**	**139.02**	**248**	PKP	**PKPdf**	**10 48 35.5**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=106,slow=2.5,SNR=9.7						
ASAR				pPKP	**pPKPdf**	**10 48 54.5**	**-0.8**
	comp=Z,1.6nm,1.0s,baz=128,slow=2.4,SNR=5.0						
FITZ	**Fitzroy Crossi**	**147.35**	**256**	PKPbc	**PKPbc**	**10 48 53.1**	**+0.1**
	comp=Z,3.0nm,0.9s,baz=4.4,slow=1.7,SNR=4.8						
CMAR	**Chiang Mai Arr**	**148.50**	**348**	PKPbc	**PKPbc**	**10 48 55.2**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=330,slow=3.6,SNR=4.6						

INET ***02*** *10:32:53.8, 12°.49N×87°.70W, h53km, ML4.1*

SNET 02 10:32:53.2±0.8**, 12°.48N×87°.93W, h26**km±3km**, ML3.4,**
Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.80**	**7**	*e*P	Pb	10 33 08.1	-0.5
CNCH				*e*S	Sn	10 33 20.7	+0.6
LCND	**La Caada**	**0.83**	**3**	*e*P	Pb	10 33 08.5	-0.4
LCND				*e*S	Sb	10 33 20.1	+0.4
LCND				IAML		10 33 22.7	
	comp=Z,2µm,0.3s						
JUCU	**Jucuar¡n**	**0.83**	**338**	*e*P	Pb	10 33 08.8	-0.2
JUCU				*e*S	Sn	10 33 20.8	0.0
BLLM	**Bellamira**	**1.00**	**343**	*e*P	Pn	10 33 11.6	-0.2
ALJI	**Alcalda de J**	**1.05**	**324**	*e*P	Pn	10 33 12.4	+0.1
ALJI				*e*S	Sn	10 33 26.1	0.0
ALJI				IAML		10 33 27.3	
	comp=Z,651nm,0.2s						
PACA	**Pacayal**	**1.05**	**339**	*e*P	Pn	10 33 12.5	0.0
PACA				*e*S	Sn	10 33 27.5	+1.1
TECA	**Tecapa**	**1.15**	**331**	*e*P	Pn	10 33 13.8	-0.1
COEB	**Comit de Eme**	**1.17**	**330**	*e*S	Sb	10 33 30.6	+1.0
FAGO	**Alcalda de S**	**1.22**	**352**	*e*P	Pn	10 33 14.0	-0.6
FAGO				*e*S	Sb	10 33 31.1	+0.1
SNET	**Serv Nac Est T**	**1.75**	**314**	*e*S	Sb	10 33 44.9	-1.3
UEES	**Universidad Ev**	**1.77**	**314**	IAML		10 33 48.3	
	comp=Z,421nm,0.3s						

IDC ***02*** *10:42:22.7±0.7, 19°.42S×174°.86W, h0km, mb4.4/18,*
mb1 4.5/19, mb1mx4.4/41, mbtmp4.4/19, ML3.7/1, MS4.3/6,
Ms1 4.3/6, ms1mx3.9/49, Error ellipse: s-maj=25.5km
s-min=15.0km az=150.0

BJI ***02*** *10:42:23.5±0.0, 19°.30S×174°.70W, h10km, mb4.9/21,*
Ms5.3/3, Ms7 5.2/4

NEIC ***02*** *10:42:24.8±2.8, 19°.45S±0°.07×174°.73W±0°.07, h10km±3km,*
mb4.9/54, Error ellipse: s-maj=10.8km s-min=10.1km
az=172.0

ISC 02 10:42:24.5±0.4**, 19°.57S**±0°.07×**174°.73W**±0°.06**, h10**km**,**
n133,σ1§**71**/125**, mb4.8**/48**, MS4.5**/7**, 3C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.57**	**85**	Pn	**Pn**	**10 43 30.3**	**-3.3**
AFI	**Afiamalu**	**6.30**	**27**	Pn	Pn	10 43 50.0	-7.6
	3.5nm,0.3s,baz=289,slow=23,SNR=4.1						
AFI				Sn	**Sn**	**10 45 13.2**	**+3.4**
	2.6nm,0.3s,baz=98,slow=22,SNR=2.3						
AFI				LR	LR	10 46 02.5	
	comp=Z,2µm,18.3s,baz=214,slow=35						
AFI	**Afiamalu**	**6.30**	**27**	Pn	Pn	10 43 51.7	-6.0
MSVF	**Nonsavu**	**7.08**	**284**		**Pn**	**10 44 05.4**	**-3.0**
RAO	**Raoul Island**	**10.06**	**196**	Pn	**Pn**	**10 44 48.5**	**-0.6**
	80nm,0.3s,baz=168,slow=22,SNR=2.5						
RAO	**Raoul Island**	**10.06**	**196**		**Pn**	**10 44 48.8**	**-0.3**
RAR	**Rarotonga**	**14.12**	**99**	Pn	**Pn**	**10 45 41.9**	**-2.8**
	0.7nm,0.3s,baz=203,slow=8.9,SNR=4.5						
RAR	**Rarotonga**	**14.12**	**99**		**Pn**	**10 45 45.1**	**+0.4**
SANVU	**Saraoutou**	**17.71**	**281**	P	**Pn**	**10 46 29.1**	**-2.3**
SANVU				IAmb	IAmb	10 46 33.2	
	comp=Z,70nm,1.2s						
DZM	**Mont Dzumac**	**17.77**	**259**	*e*LR	LR	10 50 35.2	
	comp=Z,3µm,26.4s						
DZM	**Mont Dzumac**	**17.77**	**259**	P	**Pn**	**10 46 30.8**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=92,slow=7.9,SNR=4.0						
DZM				LR	LR	10 51 41.8	
	comp=Z,2µm,21.2s,baz=97,slow=32						
DZM	**Mont Dzumac**	**17.77**	**259**	P	**P**	**10 46 33.9**	**+0.8**
DZM				IAmb	IAmb	10 46 52.1	
	comp=Z,73nm,1.1s						
URZ	**Urewera**	**19.93**	**199**	P	**Pn**	**10 46 57.8**	**-0.3**
	comp=Z,17nm,0.9s,baz=259,slow=5.2,SNR=4.5						
URZ	**Urewera**	**19.93**	**199**	P	**P**	**10 46 57.0**	**+0.6**
BKZ	**Black Stump Fm**	**20.95**	**199**	P	Pn	10 47 10.5	+0.3
TBI	**Tubuai**	**23.81**	**104**	*e*LQ	LQ	10 52 22.8	
	comp=Z,2µm,29.5s						
TBI	**Tubuai**	**23.81**	**104**	*e*T	T	11 11 39.0	
	comp=Z,12nm,0.4s						
PAE	**Paea**	**23.91**	**90**	*e*P	**P**	**10 47 38.6**	**-0.1**
	comp=Z,8.3nm,1.2s						
PAE	**Paea**	**23.91**	**90**	*e*T	T	11 11 38.1	
	comp=Z,4.7nm,0.3s						
PPT2	**Papeete2**	**23.92**	**89**	*e*P	**P**	**10 47 39.3**	**+0.3**
	comp=Z,54nm,1.1s						
PPT2				*e*LQ	LQ	10 52 23.4	
	comp=Z,2µm,25.2s						
PPT2				*e*LR	LR	10 53 26.6	
	comp=Z,1µm,26.5s						
PPT2	**Papeete2**	**23.92**	**89**	*e*T	T	11 11 42.2	
	comp=Z,6.5nm,0.4s						
PPT	**Papeete**	**23.93**	**89**	P	**P**	**10 47 39.5**	**+0.6**
	comp=Z,60nm,1.0s,baz=330,slow=4.7,SNR=5.7						
PPT				LR	LR	10 54 38.0	
	comp=Z,193nm,18.9s,baz=308,slow=31						
PPTF	**Pamatai, Papee**	**23.93**	**89**	P	**P**	**10 47 39.5**	**+0.4**
TIAR	**Tiarei**	**24.14**	**89**	*e*P	**P**	**10 47 41.0**	**0.0**
	comp=Z,12nm,1.1s						
TVO	**Taravao**	**24.20**	**90**	*e*P	**P**	**10 47 41.7**	**+0.2**
	comp=Z,16nm,1.3s						
TVO	**Taravao**	**24.20**	**90**	*e*T	T	11 11 45.0	
	comp=Z,1.6nm,0.4s						
LTZ	**Lake Taylor**	**25.61**	**203**	P	**P**	**10 47 56.0**	**+1.9**
LTZ				IAmb	IAmb	10 48 03.4	
	comp=Z,18nm,1.1s						
RPZ	**Rata Peaks**	**26.86**	**203**	LR	LR	10 57 57.7	
	comp=Z,753nm,18.0s,baz=54,slow=35						
RPZ	**Rata Peaks**	**26.86**	**203**	P	**P**	**10 48 11.1**	**+5.8**
FOZ	**Fox Glacier**	**27.18**	**205**	P	**P**	**10 48 13.2**	**+5.0**
WKZ	**Wanaka**	**28.58**	**205**	P	**P**	**10 48 24.8**	**+4.0**
TAOE	**Nuku Hiva Isla**	**35.11**	**77**	*e*LR	LR	10 58 25.3	
	comp=Z,2µm,28.3s						
TAOE	**Nuku Hiva Isla**	**35.11**	**77**	*e*T	T	11 25 28.0	
	comp=Z,20nm,0.3s						
CAN	**Canberra**	**35.57**	**236**	P	**P**	**10 49 25.5**	**+3.2**
CAN				IAmb	IAmb	10 49 39.2	
	comp=Z,15nm,1.4s						
CTA	**Charters Tower**	**36.65**	**262**	LR	LR	11 02 50.3	
	comp=Z,1µm,20.9s,baz=44,slow=34						
PATS	**Pohnpei**	**37.32**	**312**	P	**P**	**10 49 37.6**	**+0.4**
STKA	**Stephens Creek**	**40.95**	**244**	P	**P**	**10 50 07.5**	**0.0**
	comp=Z,2.4nm,0.8s,baz=333,slow=20,SNR=3.6						
STKA	**Stephens Creek**	**40.95**	**244**	P	**P**	**10 50 08.0**	**+0.4**
WR0	**Warramunga Arr**	**47.59**	**261**	P	**P**	**10 50 56.9**	**-4.0**
WR0				IAmb	IAmb	10 51 00.6	
	comp=Z,8.5nm,1.2s						
AS31	**Alice Springs**	**47.72**	**255**	P	P	10 50 57.1	-4.8
ASAR	**Alice Springs**	**47.72**	**255**	P	**P**	**10 50 59.5**	**-2.5**
	comp=Z,6.5nm,0.8s,baz=93,slow=7.9,SNR=28						
ASAR				PcP	**PcP**	**10 52 32.4**	**+1.1**
	comp=Z,2.3nm,0.7s,baz=104,slow=4.0,SNR=7.8						
WB0	**Warramunga Arr**	**47.75**	**261**	P	P	10 50 56.6	-5.6
WB0				IAmb	IAmb	10 51 02.5	
	comp=Z,25nm,1.4s						
WRAB	**Tennant Creek**	**47.77**	**261**	P	**P**	**10 50 59.1**	**-3.2**
WRAB				IAmb	IAmb	10 51 02.7	
	comp=Z,19nm,1.3s						
WRA	**Warramunga Arr**	**47.78**	**260**	P	**P**	**10 50 59.7**	**-2.7**
	comp=Z,5.6nm,1.0s,baz=97,slow=4.9,SNR=25						
SIJI	**Sorong**	**56.00**	**283**	P	**P**	**10 52 03.1**	**-0.6**
	comp=Z,14nm,0.8s,baz=67,slow=4.6,SNR=5.7						
FITZ	**Fitzroy Crossi**	**56.20**	**261**	P	**P**	**10 52 05.6**	**+0.5**
	comp=Z,3.7nm,0.9s,baz=107,slow=9.3,SNR=3.7						
FITZ	**Fitzroy Crossi**	**56.20**	**261**	P	**P**	**10 52 05.4**	**+0.3**
FITZ				IAmb	IAmb	10 52 07.6	
	comp=Z,15nm,1.5s						
SOEI	**Soe**	**59.56**	**270**	P	**P**	**10 52 29.7**	**+0.7**
QSPA	**South Pole Qui**	**70.49**	**180**	P	**P**	**10 53 39.3**	**0.0**
MJAR	**Matsushiro Arr**	**71.34**	**322**	P	**P**	**10 53 43.2**	**-1.5**
	comp=Z,2.5nm,1.0s,baz=136,slow=7.7,SNR=3.2						
HOPS	**Hopland Field**	**75.69**	**39**	P	**P**	**10 54 10.3**	**+0.1**
HOPS				IAmb	IAmb	10 54 20.4	
	comp=Z,15nm,1.1s						
LEM	**Lembang**	**76.14**	**268**	P	**P**	**10 54 12.1**	**-1.4**
	comp=Z,9.7nm,0.3s,baz=158,slow=11,SNR=5.3						
PETK	**Petropavlovsk-**	**76.22**	**343**	P	**P**	**10 54 13.1**	**+0.2**
	comp=Z,4.0nm,0.9s,baz=119,slow=1.9,SNR=3.6						
NVAR	**Mina Array Bea**	**78.27**	**42**	P	**P**	**10 54 22.8**	**-2.2**
	comp=Z,0.5nm,0.7s,baz=223,slow=9.6,SNR=4.5						
KSRS	**Korea Array**	**78.27**	**317**	P	**P**	**10 54 23.7**	**-1.0**
	comp=Z,4.5nm,1.1s,baz=134,slow=7.0,SNR=6.4						
NV11	**Mina Array Sit**	**78.36**	**42**	P	**P**	**10 54 27.1**	**+1.7**
PINE	**Pine Mountain**	**80.00**	**36**	P	**P**	**10 54 34.8**	**+0.5**
PINE				IAmb	IAmb	10 54 38.2	
	comp=Z,16nm,1.4s						
X16A	**Lo Mia Camp, P**	**80.62**	**48**	P	**P**	**10 54 37.7**	**-0.2**
NJ2	**Nanjing**	**81.69**	**308**	*e*P	**P**	**10 54 44.4**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
G08A	**Pilot Rock**	**82.04**	**36**	P	**P**	**10 54 45.3**	**+0.2**
MSU	**Marysvale**	**82.28**	**45**	P	**P**	**10 54 46.4**	**-0.2**
BMO	**Blue Mountains**	**82.70**	**37**	P	**P**	**10 54 50.6**	**+2.0**
BMO				IAmb	IAmb	10 54 52.1	
	comp=Z,8.5nm,1.4s						
E08A	**Dider Farm, El**	**82.73**	**35**	P	**P**	**10 54 48.8**	**+0.3**
TMUT	**Trail Mountain**	**83.33**	**44**	P	**P**	**10 54 52.1**	**-0.1**
CN2	**Changchun**	**83.48**	**321**	*e*P	**P**	**10 54 51.9**	**-0.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SRU	**San Rafael Swe**	**83.69**	**45**	P	**P**	**10 54 53.4**	**-0.5**
MNTX	**Cornudas Mount**	**83.72**	**53**	P	**P**	**10 54 55.2**	**+1.2**
P17A	**Butcher Ranch,**	**83.73**	**44**	P	**P**	**10 54 57.7**	**+3.6**
TX31	**Lajitas Ar. Si**	**83.98**	**56**	P	**P**	**10 54 55.5**	**0.0**
TX31				IAmb	IAmb	10 55 07.9	
	comp=Z,12nm,1.4s						
TX32	**Lajitas Array**	**83.98**	**56**	P	**P**	**10 54 55.9**	**+0.4**
TX32				IAmb	IAmb	10 55 07.9	
	comp=Z,13nm,1.5s						
TXAR	**Lajitas Array**	**83.98**	**56**	P	**P**	**10 54 56.7**	**+1.2**
	comp=Z,0.7nm,0.9s,baz=215,slow=9.3,SNR=7.1						
TCUT	**Toone Canyon**	**84.16**	**43**	P	**P**	**10 54 55.1**	**-1.3**
VRDI	**Verde Repeater**	**84.35**	**15**	P	**P**	**10 54 57.7**	**+0.9**
VRDI				IAmb	IAmb	10 54 58.9	
	comp=Z,8.2nm,1.2s						
ANMO	**Albuquerque**	**84.44**	**50**	P	**P**	**10 54 57.0**	**-0.9**
ANMO				IAmb	IAmb	10 55 03.0	
	comp=Z,9.1nm,1.3s						
RND	**Reindeer**	**85.16**	**11**	P	**P**	**10 54 57.2**	**-3.4**
MCK	**McKinley**	**85.44**	**11**	P	**P**	**10 55 02.5**	**+0.5**
MCK				IAmb	IAmb	10 55 03.6	
	comp=Z,16nm,1.2s						
S22A	**4UR Ranch, Cre**	**85.52**	**47**	P	**P**	**10 55 02.2**	**-1.1**
HYT	**Haines Junctio**	**85.55**	**17**	P	**P**	**10 55 03.5**	**+0.8**
HYT				IAmb	IAmb	10 55 06.3	
	comp=Z,8.2nm,1.2s						
FXWY	**Fox Creek**	**85.74**	**41**	P	**P**	**10 55 05.1**	**+0.9**
PDAR	**Pinedale Array**	**86.20**	**42**	P	**P**	**10 55 06.7**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=208,slow=2.7,SNR=6.0						
SEY	**Seymchan**	**86.21**	**346**	P	**P**	**10 55 03.7**	**-2.0**
	comp=Z,2.1nm,0.9s,baz=146,slow=7.3,SNR=3.2						
RIDG	**Independent Ri**	**86.25**	**13**	P	**P**	**10 55 07.0**	**+1.0**

RIDG				IAmb	IAmb	10 55 08.2	
	comp=Z,13nm,1.3s						
WRH	Wood River Hil	86.27	11	P	P	10 55 06.5	+0.5
YHL	Hebgen Lake	86.29	40	P	P	10 55 06.5	-0.4
DOT	Dot Lake	86.33	13	P	P	10 55 07.3	+0.9
DOT				IAmb	IAmb	10 55 08.5	
	comp=Z,11nm,1.3s						
HDA	Harding Lake	86.42	12	P	P	10 55 06.7	-0.1
HDA				IAmb	IAmb	10 55 07.8	
	comp=Z,11nm,1.2s						
CCB	Clear Creek Bu	86.48	11	P	P	10 55 06.5	-0.5
CCB				IAmb	IAmb	10 55 08.7	
	comp=Z,15nm,1.4s						
SCRK	Sand Creek	86.64	13	P	P	10 55 06.8	-1.2
COLA	College	86.68	11	P	P	10 55 06.3	-1.7
COLA				IAmb	IAmb	10 55 09.5	
	comp=Z,11nm,1.1s						
MSTX	Muleshoe	86.71	52	P	P	10 55 07.7	-1.4
IL31		86.76	12	P	P	10 55 06.1	-2.2
IL31				IAmb	IAmb	10 55 13.2	
	comp=Z,6.0nm,1.2s						
ILAR	Eielson Array	86.76	12	P	P	10 55 06.0	-2.4
	comp=Z,3.3nm,1.1s,baz=225,slow=4.6,SNR=8.5						
BJI	Beijing	87.42	314	P	P	10 55 12.6	+0.4
BJI				pP	sP	10 55 17.7	+1.4
BJI				pmax	pmax		
	comp=Z,10.0nm,1.6s						
RPSI	Rantau Prapat	87.45	274	P	P	10 55 12.2	-0.7
PSI	Prapat	87.48	274	P	P	10 55 12.2	-1.1
	comp=Z,1.5nm,0.5s,baz=156,slow=9.5,SNR=4.2						
DAWY	Dawson	87.76	15	P	P	10 55 11.1	-2.2
DAWY				IAmb	IAmb	10 55 15.9	
	comp=Z,12nm,1.4s						
EGAK	Eagle	87.95	14	P	P	10 55 12.4	-1.7
EGAK				IAmb	IAmb	10 55 27.8	
	comp=Z,7.0nm,1.2s						
ABTX	Abilene, Hawle	88.51	55	P	P	10 55 19.7	+2.1
XAN	Xi'an	90.04	306	P	P	10 55 25.1	+0.3
XAN				pmax	pmax		
	comp=Z,17nm,1.5s						
XAN	Xi'an	90.04	306	P	P	10 55 25.2	+0.3
HHC	Hu-ho-hao-te	90.93	313	*e*P	P	10 55 29.3	+0.4
CMAR	Chiang Mai Arr	92.72	289	P	P	10 55 37.5	0.0
	comp=Z,1.5nm,1.0s,baz=114,slow=3.5,SNR=8.8						
CD2	Chengdu	92.90	302	P	P	10 55 38.1	0.0
YKA	Yellowknife Ar	94.41	24	P	P	10 55 44.5	+0.2
	comp=Z,0.7nm,0.9s,baz=242,slow=3.9,SNR=3.6						
ULM	Lac du Bonnet	97.95	39	LR	LR	11 34 53.4	
	comp=Z,150nm,20.8s,baz=0.0,slow=32						
WMQ	Urumqi	108.64	311	*e*P	Pdif	10 56 49.2	+0.7
KSH	Kashi	116.87	305	PKP	PKiKP	11 01 12.4	+2.6
KSH				PP	PP	11 02 25.6	+6.8
KSH				PKS	PKSdf	11 04 48.6	+2.0
KSH				SKKS		11 09 19.4	
KSH				LR	LR		
	comp=Z,550nm,12.7s						
BVAR	Borovoye Array	120.33	321	PKP	PKiKP	11 01 16.6	+0.6
	comp=Z,1.0nm,0.7s,baz=113,slow=3.9,SNR=7.0						
KOLS	Kolonicke sedl	147.67	339	*e*PKP	PKiKP	11 02 11.0	-0.4
CLL	Collm	147.75	351	*e*PKPdf	PKPdf	11 02 07.0	+0.4
CLL				*e*PKPbc	PKPbc	11 02 08.0	-1.4
CLL				*e*PKPab	sPKPdf	11 02 11.0	+0.3
	comp=Z,13nm,1.2s						
CLL				*e*		11 02 17.0	
	comp=Z,10.0nm,1.0s						
CLL	Collm	147.75	351		PKPdf	11 02 06.8	+0.3
OSTC	Ostas	147.88	347⇑	*e*PKP	PKPbc	11 02 09.1	-0.7
CHVC	Chvalec	147.89	347⇑	*e*PKP	PKPdf	11 02 08.4	+1.5
BRG	Berggiesshubel	148.02	350	*e*PKP	PKPbc	11 02 10.9	+0.7
	comp=Z,9.7nm,1.6s						
MORC	Moravsky Berou	148.31	345		PKPbc	11 02 10.8	-0.2
BR131	Keskin Array S	148.41	316	PKPdf	PKPdf	11 02 07.1	-1.1
BR131					pPKPdf	11 02 11.8	+0.4
BRTR	Keskin Array B	148.41	316	PKPbc	PKPbc	11 02 12.7	+0.9
	comp=Z,3.9nm,0.8s,baz=107,slow=1.3,SNR=14						
VYHS	Vyhne	149.13	342	*e*PKP	PKiKP	11 02 14.9	+0.5
MODS	Modra-Piesok	149.67	344	*e*PKP	PKiKP	11 02 15.6	+0.1
KHC	Kasperske Hory	149.76	349⇑	*e*PKP	PKiKP	11 02 16.3	+0.6
KHC	Kasperske Hory	149.76	349		PKiKP	11 02 15.7	0.0
GERES	GERESS Array B	150.01	349	PKPbc	PKPdf	11 02 12.4	+2.0
	comp=Z,0.7nm,0.6s,baz=48,slow=2.0,SNR=5.6						
CONA	Conrad Observa	150.43	345	*i* PKPdf	PKPdf	11 02 10.6	-0.6
	comp=Z,15nm,1.6s						
MOA	Molln	150.86	348	*i* pPKPbc	PKiKP	11 02 18.7	+0.7
	comp=Z,6.1nm,1.2s						
RETA	Reutte	151.80	352	*i* PKPab	PKPab	11 02 27.7	-0.7
	comp=Z,10.0nm,1.5s						
SOKA	Soboth	151.80	346	*i* pPKPbc	PKiKP	11 02 20.7	+0.7
	comp=Z,2.9nm,0.7s						
WATA	Walderalm	151.83	351	*i* PKiKP	PKPbc	11 02 20.0	+0.3
	comp=Z,5.4nm,0.9s						
MOTA	Moosalm	151.89	352	*i* PKiKP	PKPbc	11 02 19.7	-0.2
	comp=Z,0.1nm,0.2s						
WTTA	Wattenberg	151.89	351	*i* sPKPdf	PKPbc	11 02 17.4	-2.6
	comp=Z,0.5nm,0.4s						
SQTA	Sankt Quirin	152.00	351	*i* pPKPbc	PKiKP	11 02 21.1	+0.7
	comp=Z,6.3nm,1.0s						
DAVA	Damuels	152.10	353	*i* pPKPbc	PKiKP	11 02 21.0	+0.3
ABTA	Abfaltersbach	152.25	349	*i* PKPab	PKPab	11 02 29.0	-1.4
	comp=Z,10nm,1.4s						
FETA	Feichten	152.26	352	*i* pPKPbc	PKiKP	11 02 21.4	+0.4
	comp=Z,10nm,1.4s						

INET 02 10:44:43.5, 12°.45N×87°.76W, h64^{km}, ML3.5, Near coast of Nicaragua

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IDC ***02*** *10:46:44.5±0.6, 1°.47N×121°.10E, h0^{km}, mb4.0/11, mb1 4.1/13, mb1mx3.8/50, mbtmp4.0/13, ML3.8/2, Error ellipse: s-maj=30.4km s-min=13.0km az=71.0*

BJI ***02*** *10:46:45.0±0.0, 1°.30N×120°.70E, h10^{km}, mB4.7/1, mb4.5/10*

NEIC ***02*** *10:46:52.5±2.7, 1°.40N±0°.06×120°.77E±0°.07, h55^{km}±7^{km}, mb4.4/18, Error ellipse: s-maj=10.7km s-min=8.9km az=64.0*

DJA ***02*** *10:46:55.4±0.7, 1°N±3°×12°1E±°, h14^{km}±5^{km}, M4.4/16, mB4.8/3, mb4.5/8, MLv4.5/16, Mw(mB)4.0/3, Mwp5.5/2*

ISC 02 10:46:50.7±0.5, **1°.38N**±0°.06×**120°.80E**±0°.06, **h37**^{km}, **n52**, σ**1^{s}78**/56, **mb4.2**/19, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPSI	Mapaga	1.38	221	P	Pn	10 47 08.2	-5.2
MRSI	Marisa	1.45	128	P	Pn	10 47 13.1	-1.3
MRSI				S	Sn	10 47 30.1	-2.1
APSI	Ampana	2.43	160	P	Pn	10 47 26.5	-1.4
APSI				S	Sn	10 47 51.6	-4.8
LUWI	Luwuk	3.11	141	P	Pn	10 47 39.5	+2.2
LUWI				S	Sn	10 48 11.5	-1.7
LUWI	Luwuk	3.11	141		Pn	10 47 38.8	+1.5
LUWI				Sn	Sn	10 48 22.5	+9.2
KMSI	Cibinong	3.28	104	P	Pn	10 47 42.6	+3.0
KMSI				S	Sn	10 48 20.1	+2.8
SMKI	Samarinda	4.03	243	P	Pn	10 47 56.7	+6.8
TTSI	Tana Toraja	4.51	193	P	Pn	10 47 57.9	+1.4
SPSI	Sidrap Palu	5.41	191	P	Pn	10 48 10.9	+2.0
	0.3nm18µm920nm60nm,0.8s						
BNSI	Bone	5.79	187	P	Pn	10 48 13.5	-0.6
	0.3nm967nm76nm,1.3s						
SANI	Sanana	6.21	123	P	Pn	10 48 19.4	-0.5
	0.2nm23nm,0.9s						
KAPI	Kappang	6.44	189	Pn	Pn	10 48 24.1	+1.0
	0.4nm,0.3s,baz=345,slow=3.8,SNR=6.6						
KAPI				Sn	Sn	10 49 39.5	+4.1
	0.4nm,0.3s,baz=229,slow=12,SNR=2.2						
KKM	Kota Kinabalu	6.51	315	Pn	Pn	10 48 23.4	-0.7
KBKI	Kotabaru	6.57	225	P	Pn	10 48 28.2	+3.4
	0.1nm445nm17nm,0.7s						
TNTI	Ternate	6.59	95	P	Pn	10 48 28.4	+3.3
	0.2nm32nm,0.8s						
BKSI	Bulukumba	6.70	186	P	Pn	10 48 26.9	+0.3
	0.1nm23µm25nm,0.8s						
LBMI	Labuha	6.99	107	P	Pn	10 48 33.1	+2.4
	0.3nm45nm,0.8s						
BBSI	Bau Bau	7.05	166	P	Pn	10 48 31.1	-0.4
	0.1nm18nm,1.1s						
NLAI	Namlea	7.79	126	P	Pn	10 48 43.5	+1.9
FAKI	Fak Fak	12.22	110	Pn	Pn	10 49 45.2	+2.9
MTN	Manton Dam	17.46	144	Pn	Pn	10 50 49.9	-1.6
MTN				IAmb	IAmb	10 50 54.7	
	comp=Z,38nm,1.4s						
KNRA	Kununurra	18.69	155	P	Pn	10 51 07.7	+1.1
KNRA				IAmb	IAmb	10 51 09.1	
	comp=Z,48nm,1.5s						
FITZ	Fitzroy Crossi	19.94	166	P	P	10 51 19.1	-0.5
	comp=Z,0.6nm,0.3s,baz=349,slow=8.7,SNR=13						
FITZ	Fitzroy Crossi	19.94	166	P	P	10 51 19.9	+0.3
RPSI	Rantau Prapat	21.90	274	P	P	10 51 42.0	+1.1
PSI	Prapat	21.91	274	P	P	10 51 42.0	+0.9
	comp=Z,1.8nm,0.4s,baz=58,slow=6.2,SNR=3.6						
WB0	Warramunga Arr	24.89	148	P	P	10 52 09.8	-0.5
WB0				IAmb	IAmb	10 52 26.8	
	comp=Z,12nm,1.1s						
WRA	Warramunga Arr	25.01	149	P	P	10 52 07.9	-3.5
	comp=Z,3.2nm,0.6s,baz=330,slow=10.0,SNR=10						
WR0	Warramunga Arr	25.13	148	P	P	10 52 11.4	-1.0
WR0				IAmb	IAmb	10 52 13.3	
	comp=Z,11nm,0.8s						
COEN	Coen	26.91	125	P	P	10 52 29.7	+1.1
CHTO	Chiang Mai	27.55	310	P	P	10 52 34.6	+0.3
CHTO				IAmb	IAmb	10 52 35.9	
	comp=Z,8.1nm,1.5s						
AS31	Alice Springs	27.97	154	P	P	10 52 39.5	+1.4
ASAR	Alice Springs	27.97	154	P	P	10 52 37.0	-1.1
	comp=Z,0.8nm,0.5s,baz=343,slow=14,SNR=16						
ASAR				PcP	PcP	10 55 54.5	+1.6
	comp=Z,0.2nm,0.5s,baz=342,slow=2.1,SNR=4.4						
FORT	Forrest	32.72	168	P	P	10 53 20.1	+0.2
SHL	Shillong	36.81	313	P	P	10 53 55.1	-0.4
SHL				IAmb	IAmb	10 53 56.5	
	comp=Z,8.3nm,1.1s						
STKA	Stephens Creek	38.51	151	P	P	10 54 07.7	-2.0
	comp=Z,1.0nm,0.4s,baz=309,slow=10,SNR=5.2						
STKA	Stephens Creek	38.51	151	P	P	10 54 10.7	+1.1
LSA	Lhasa	39.85	318	P	P	10 54 22.4	+1.0
TOO	Toolangi	45.00	152	P	P	10 55 02.3	-0.4
CAN	Canberra	45.03	147	P	P	10 55 02.0	-1.0
SONM	Songino Array	47.92	347	P	P	10 55 26.3	+0.7
	comp=Z,0.6nm,0.8s,baz=126,slow=7.3,SNR=4.6						
MK31	Makanchi Array	56.30	329	P	P	10 56 28.3	+0.5
MK31				IAmb	IAmb	10 56 29.4	
	comp=Z,3.4nm,1.2s						
MKAR	Makanchi Array	56.30	329	P	P	10 56 27.5	-0.3
	comp=Z,1.3nm,0.9s,baz=133,slow=8.5,SNR=9.6						
ZAA0	Zalesovo Array	60.16	336	P	P	10 56 54.5	-0.1
ZAA0				IAmb	IAmb	10 56 55.2	
	comp=Z,3.5nm,0.9s						
ZALV	Zalesovo Beam	60.16	336	P	P	10 56 54.6	+0.1
	comp=Z,1.9nm,0.8s,baz=107,slow=5.0,SNR=9.0						
KURBB	Kurchatov Arra	60.68	331	P	P	10 56 57.9	-0.2
	comp=Z,1.0nm,0.8s,baz=127,slow=6.6,SNR=6.6						
KURK	Kurchatov	60.69	331	P	P	10 56 58.7	+0.4
KURK				IAmb	IAmb	10 56 59.6	
	comp=Z,4.4nm,0.9s						
SEY	Seymchan	65.74	15	P	P	10 57 28.9	-2.6
	comp=Z,10nm,0.3s,baz=127,slow=0.4,SNR=55						
BVAR	Borovoye Array	66.17	329	P	P	10 57 33.9	-0.6
	comp=Z,0.3nm,0.4s,baz=134,slow=6.4,SNR=3.6						
TIXI	Tiksi	70.35	3	P	P	10 57 59.6	-0.7
	comp=Z,3.5nm,1.0s,baz=164,slow=3.0,SNR=9.4						
TIXI	Tiksi	70.35	3	P	P	10 57 59.4	-0.8
TIXI				IAmb	IAmb	10 58 01.2	
	comp=Z,6.1nm,1.3s						
BRTR	Keskin Array B	86.94	310	P	P	10 59 31.3	-1.1
	comp=Z,1.3nm,0.8s,baz=116,slow=8.4,SNR=6.3						

INET ***02*** *10:50:48.7, 12°.48N×87°.75W, h60^{km}, ML4.0*

SNET 02 10:50:48.9±0.9, **12°.49N×87°.87W, h48**^{km}±26^{km}, **ML3.4, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	0.79	3	*e*P	Pn	10 51 03.3	-0.5
CNCH				*e*S	Sn	10 51 16.0	+1.3
CNCH				IAML		10 51 19.1	
	comp=Z,3µm,0.4s						
LCND	La Caada	0.82	359	*e*P	Pn	10 51 03.9	-0.2
LCND				*e*S	Sn	10 51 15.9	+0.7
LCND				IAML		10 51 20.8	
	comp=Z,1µm,0.3s						
JUCU	Jucuar¡n	0.85	334	*e*P	Pn	10 51 04.5	-0.1
JUCU				*e*S	Sn	10 51 17.1	+1.1
JUCU				IAML		10 51 23.4	
	comp=Z,708nm,0.3s						
BLLM	Bellamira	1.02	339	*e*P	Pn	10 51 07.2	+0.3
BLLM				*e*S	Sn	10 51 21.6	+1.5
LCY	Lacayo	1.02	336	*e*P	Pn	10 51 07.8	+0.8
PACA	Pacayal	1.07	336	*e*P	Pn	10 51 07.9	+0.2
PACA				*e*S	Sn	10 51 23.1	+1.5
TECA	Tecapa	1.18	329	*e*P	Pn	10 51 09.6	+0.4
TECA				*e*S	Sn	10 51 25.0	+0.8
COEB	Comit de Eme	1.20	327	*e*P	Pn	10 51 09.6	+0.2
COEB				*e*S	Sn	10 51 25.4	+0.9
FAGO	Alcalda de S	1.23	349	*e*P	Pn	10 51 09.4	-0.2
FAGO				*e*S	Sn	10 51 26.1	+1.0
COEG	Centro de Oper	1.50	319	*e*P	Pn	10 51 13.9	+0.5
COEG				*e*S	Sn	10 51 32.8	+1.0
COEG				IAML		10 51 36.7	
	comp=Z,386nm,0.4s						
TGUH	Tegucigalpa,Un	1.67	20	*e*P	Pn	10 51 15.4	-0.4

IDC ***02*** *10:55:09.3±1.2, 0°.75N×127°.07E, h0^{km}, mb3.8/6, mb1 3.9/6, mb1mx3.6/44, mbtmp3.8/6, Error ellipse: s-maj=136.6km s-min=18.8km az=69.0*

DJA ***02*** *10:55:10.1±0.4, 1°N±2°×12°7E±°, h10^{km}, M3.9/7, mB5.3/2, mb4.3/5, MLv3.6/7, Mw(mB)4.7/2*

NEIC ***02*** *10:55:11.8±0.9, 0°.8N±0°.2×127°.17E±0°.07, h16^{km}±7^{km}, mb4.1/5, Error ellipse: s-maj=24.5km s-min=7.4km az=196.0*

ISC 02 10:55:11.0±1.4, **0°.95N**±0°.08×**127°.3E**±0°.1, **h12**^{km}±8^{km}, **n22**, σ**1^{s}28**/26, **mb4.0**/9, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.18	167	P	Pg	10 55 14.9	-0.2
TNTI				S	Sb	10 55 17.9	0.0
TNTI	Ternate	0.18	167		Pb	10 55 15.6	-0.7
TNTI				Sg	Sb	10 55 19.8	+1.9
LBMI	Labuha	1.59	174	P	Pn	10 55 38.2	-0.8
LBMI				S	Sg	10 56 01.4	-0.8
SANI	Sanana	3.27	204	P	Pn	10 56 02.6	+0.5
SANI				S	Sn	10 56 43.4	+2.4
KMSI	Cibinong	3.37	264	P	Pn	10 56 04.7	+1.2
MRSI	Marisa	5.41	265	P	Pn	10 56 32.0	+0.4
	0.1nm2µm18nm,0.7s						
FAKI	Fak Fak	6.25	128	Pn	Pn	10 56 44.2	+1.1
TTSI	Tana Toraja	8.49	242	P	Pn	10 57 14.4	+0.5
	2µm10nm,0.6s						
SPSI	Sidrap Palu	8.99	237	P	Pn	10 57 21.3	+0.4
	11nm,0.5s						
SMKI	Samarinda	10.21	262	P	Pn	10 57 33.8	-3.8
MTN	Manton Dam	14.21	165	P	P	10 58 38.6	-1.2
WB0	Warramunga Arr	21.73	162	P	P	11 00 02.1	-0.3
WB0				IAmb	IAmb	11 00 06.5	
	comp=Z,8.3nm,1.2s						
WRA	Warramunga Arr	21.87	162	P	P	11 00 02.9	-1.1
	comp=Z,3.1nm,0.7s,baz=340,slow=11,SNR=22						
WB2	Warramunga Arr	21.88	162	P	P	11 00 03.5	-0.5
WB2				IAmb	IAmb	11 00 05.9	
	comp=Z,5.3nm,0.8s						
WR0	Warramunga Arr	21.95	162	P	P	11 00 04.0	-0.8
ASAR	Alice Springs	25.29	166	P	P	11 00 36.5	-1.1
	comp=Z,3.1nm,0.8s,baz=346,slow=11,SNR=23						
SONM	Songino Array	50.11	342	P	P	11 04 06.6	+0.4
	comp=Z,0.4nm,0.7s,baz=145,slow=8.5,SNR=4.2						
MK31	Makanchi Array	60.17	326	P	P	11 05 19.0	+0.2
MKAR	Makanchi Array	60.17	326	P	P	11 05 19.3	+0.4
	comp=Z,0.8nm,0.9s,baz=136,slow=8.0,SNR=6.3						
ZALV	Zalesovo Beam	63.32	333	P	P	11 05 40.6	+0.7
	comp=Z,0.2nm,0.3s,baz=129,slow=5.7,SNR=2.3						
KURBB	Kurchatov Arra	64.39	328	P	P	11 05 47.3	+0.3
	comp=Z,1.9nm,1.1s,baz=127,slow=6.0,SNR=4.3						
KURK	Kurchatov	64.39	328	P	P	11 05 47.8	+0.8
KURK				IAmb	IAmb	11 05 49.5	
	comp=Z,2.5nm,0.9s						

INET ***02*** *10:56:27.7, 12°.47N×87°.70W, h65^{km}, ML3.4*

UCR ***02*** *10:56:28.4±1.0, 12°.56N×87°.82W, h62^{km}±16^{km}, ML3.8*

SNET ***02*** *10:56:28.4±1.0, 12°.55N×87°.85W, h56^{km}±18^{km}, ML3.8*

ISC 02 10:56:27.2±4.3, **12°.5N**±0°.3×**87°.79W**±0°.09, **h57**^{km}±37^{km}, **n13**, σ**0^{s}27**/26, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	0.82	357	*e*P	Pn	10 56 42.8	-0.1
CNCH				*e*S	Sn	10 56 54.3	-0.1
CNCH	Conchagua	0.82	357	*e*P	Pn	10 56 42.8	-0.1
CNCH				*e*S	Sn	10 56 54.3	-0.1
BLLM	Bellamira	1.07	336	*e*P	Pn	10 56 46.6	+0.4
BLLM				*e*S	Sn	10 57 00.3	+0.1
BLLM	Bellamira	1.07	336	*e*P	Pn	10 56 46.6	+0.4
BLLM				*e*S	Sn	10 57 00.3	+0.1
LCY	Lacayo	1.08	333	*e*P	Pn	10 56 46.5	+0.2
LCY				*e*S	Sn	10 57 00.7	+0.2
LCY	Lacayo	1.08	333	*e*P	Pn	10 56 46.5	+0.2
LCY				*e*S	Sn	10 57 00.7	+0.2
PACA	Pacayal	1.13	333	*e*P	Pn	10 56 47.2	+0.1
PACA				*e*S	Sn	10 57 02.0	+0.2
PACA				IAML		10 57 06.2	
	comp=Z,2µm,0.2s						
PACA	Pacayal	1.13	333	*e*P	Pn	10 56 47.2	+0.1
PACA				*e*S	Sn	10 57 02.0	+0.2
PACA				IAML		10 57 06.2	
	comp=Z,2µm,0.2s						
TECA	Tecapa	1.24	326	*e*P	Pn	10 56 48.5	-0.1
TECA				*e*S	Sn	10 57 03.9	-0.6
TECA	Tecapa	1.24	326	*e*P	Pn	10 56 48.5	-0.1
TECA				*e*S	Sn	10 57 03.9	-0.6
TGUH	Tegucigalpa,Un	1.67	17	*e*P	Pn	10 56 54.4	+0.1
TGUH				*e*S	Sn	10 57 14.5	-0.2
TGUH	Tegucigalpa,Un	1.67	17	*e*P	Pn	10 56 54.4	+0.1
TGUH				*e*S	Sn	10 57 14.5	-0.2
LFRS	El Faro	1.70	313	*e*P	Pn	10 56 54.8	+0.2
LFRS				*e*S	Sn	10 57 15.1	-0.3

IDC ***02*** *11:14:38.3±0.4, 45°.81S×76°.58W, h0^{km}, mb4.7/18, mb1 4.7/19, mb1mx4.6/29, mbtmp4.6/19, ML3.4/2, MS4.8/4, Ms1 4.8/4, ms1mx4.2/17, Error ellipse: s-maj=16.8km s-min=12.2km az=95.0*

VAO ***02*** *11:14:39.4±0.4, 45°.87S×76°.79W, h10^{km}, mb5.0*

MOS ***02*** *11:14:39.0±1.0, 45°.70S×76°.55W, h12^{km}, mb5.5/35, Error ellipse: s-maj=17.1km s-min=7.9km az=89.1*

GCMT ***02*** *11:14:39.7±0.3, 46°.15S±0°.04×76°.89W±0°.03, h15^{km}±1^{km}, MW5.2/70, Moment Tensor Solution. s10,c15; s70,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-5.80±.61; M$_{\theta\theta}$0.04±.34; M$_{\phi\phi}$5.76±.38; M$_{r\theta}$-4.17±1.66; M$_{\theta\phi}$-2.27±.21; M$_{\phi r}$-0.84±.91; Best double couple: M$_0$7.39500×10^{16} NP1:φ$_s$6.00000°, δ49.00000°, λ-50.00000°. NP2: φ$_s$134.00000°, δ55.00000°, λ-127.00000°. Principal axes: T 6.5860, Plg3.0000°, Azm249.0000°; N 1.6210, Plg29.0000°, Azm157.0000°; P -8.2040, Plg60.0000°, Azm345.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***02*** *11:14:39.7±1.5, 45°.77S±0°.06×76°.6W±0°.1, h10^{km}±1^{km}, mb5.3/223 Error ellipse: s-maj=17.0km s-min=10.5km az=275.0*

ISC 02 11:14:42.0±0.3, **45°.79S**±0°.05×**76°.64W**±0°.07, **h23**^{km}, **n617**, σ**0^{s}98**/629, **mb5.3**/130, **MS4.8**/6, **2C-1D, Off coast of southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO07	Milladeo Hill,	3.42	40		Pn	11 15 31.7	-2.1
GO09	Cerro Castillo	6.18	154		Pn	11 16 11.1	-0.7
PLCA	Paso Flores	6.73	43	Pn	Pn	11 16 17.6	-1.8
	0.2nm,0.3s,baz=248,slow=13,SNR=10						
PLCA				Sn	Sn	11 17 39.2	+3.9
	baz=231,slow=22,SNR=1.1						
PLCA				LR	LR	11 18 54.2	
	comp=Z,6µm,20.6s,baz=250,slow=38						
PLCA	Paso Flores	6.73	43		Pn	11 16 18.4	-1.0
PLCA	Paso Flores	6.73	43	P	Pn	11 16 18.4	-1.0
PLCA	Paso Flores	6.73	43	*e*P	Pn	11 16 17.8	-1.6
GO10	Punta Arenas	8.22	156		Pn	11 16 38.8	-1.0
USHA	Ushuaia	10.46	153	Pn	Pn	11 17 10.3	0.0
	0.4nm,0.3s,baz=315,slow=9.0,SNR=4.8						
GO05	Huala	11.35	20		Pn	11 17 20.4	-2.2
PEL	Peldehue	13.43	22		Pn	11 17 48.3	-2.9
PEL	Peldehue	13.43	22	P	Pn	11 17 48.3	-2.9
ROC1	El Roble	13.51	21		Pn	11 17 49.5	-2.9
EFI	East Falkland	13.59	122	*i* P	Pn	11 17 54.5	+1.4
GO04	Tololo Observa	16.25	18	P	P	11 18 31.2	-0.6
GO03	Copiap	18.86	18	P	P	11 19 00.0	-0.5
OGAUY	Aigu	20.24	63	*e*P	P	11 19 15.9	+0.4
PMSA	Palmer Station	20.26	164	P	P	11 19 15.8	+0.4
	31nm,0.9s,baz=127,slow=17,SNR=2.8						
PMSA	Palmer Station	20.26	164	P	P	11 19 15.9	+0.4
GO02	Mina Guanaco	21.35	18	P	P	11 19 27.3	-0.5
ITQB	Itaqui	22.47	51	*e*P	P	11 19 39.9	+0.3
PLTB	Pedras Altas	22.67	60	*e*P	P	11 19 41.6	-0.1
PB10	IPOC Station P	22.76	15	P	P	11 19 42.4	-0.3
PB10				IAmb	IAmb	11 19 49.7	
	comp=Z,184nm,1.3s						
CPSB	Cacapava Do Su	23.73	58	*e*P	P	11 19 53.0	+0.6
LVC	Limon Verde	23.96	18	P	P	11 19 55.0	0.0
	comp=Z,22nm,1.1s,baz=180,slow=11,SNR=24						
LVC	Limon Verde	23.96	18	P	P	11 19 55.0	0.0
LVC	Limon Verde	23.96	18	P	P	11 19 55.0	0.0
LVC				pmax	pmax		
	comp=Z,274nm,1.9s						
LVC	Limon Verde	23.96	18	*e*P	P	11 19 55.4	+0.4
PB04	IPOC Station P	23.99	15	P	P	11 19 54.9	-0.2
PB04				IAmb	IAmb	11 20 13.9	
	comp=Z,81nm,1.1s						
CPUP	Villa Florida	24.80	45	P	P	11 20 02.4	+0.2
	comp=Z,44nm,1.3s,baz=224,slow=8.6,SNR=21						
CPUP				LR	LR	11 30 34.4	
	comp=Z,2µm,18.1s,baz=227,slow=39						
CPUP	Villa Florida	24.80	45	P	P	11 20 03.0	+0.8
CPUP	Villa Florida	24.80	45	P	P	11 20 03.0	+0.8
CPUP				pmax	pmax		
	comp=Z,262nm,1.4s						
CPUP	Villa Florida	24.80	45	*e*P	P	11 20 02.4	+0.2
PB01	IPOC Station P	25.37	16	P	P	11 20 07.3	-0.2
PB01				IAmb	IAmb	11 20 16.0	
	comp=Z,99nm,1.4s						
CNLB	Canela	26.07	60	*e*P	P	11 20 15.2	+1.4
PB11	IPOC Station P	26.59	15	P	P	11 20 18.5	-0.1
PB11				IAmb	IAmb	11 20 34.6	
	comp=Z,142nm,1.6s						
GO01	Chusmiza	26.76	16	P	P	11 20 21.1	+0.6
GO01				IAmb	IAmb	11 20 30.6	
	comp=Z,84nm,1.6s						
ITAB	Concordia	26.86	55	*e*P	P	11 20 21.8	+0.9
MNMC	Minye Minye	27.21	15	P	P	11 20 24.4	0.0
PTGB	Pitanga	28.86	52	*e*P	P	11 20 41.3	+2.4
TRCB	Terra Rica	30.11	48	*e*P	P	11 20 50.4	+0.5
LPAZ	La Paz	30.26	16	P	P	11 20 51.2	-0.7
	comp=Z,13nm,1.4s,baz=186,slow=8.1,SNR=15						
LPAZ	La Paz	30.26	16	P	P	11 20 52.6	+0.7
LPAZ				IAmb	IAmb	11 20 59.5	
	comp=Z,75nm,1.9s						
LPAZ	La Paz	30.26	16	P	P	11 20 52.6	+0.7
LPAZ				pmax	pmax		
	comp=Z,75nm,1.9s						
LPAZ	La Paz	30.26	16	*e*P	P	11 20 52.2	+0.3
AQDB	Aquidauana	30.55	41	*e*P	P	11 20 53.8	0.0
FRTB	Fartura	31.34	54	*e*P	P	11 21 01.3	+0.6
PCMB	Pacaembu	31.80	49	*e*P	P	11 21 04.9	+0.1
SPB	Sao Paulo	32.37	57	*e*P	P	11 21 10.0	+0.3
VAO	Valinhos	33.09	57	*e*P	P	11 21 16.7	+0.5
C2SB	Chapadao do Su	33.38	44	*e*P	P	11 21 18.9	+0.3
PP1B	Ponte de Pedra	33.43	40	*e*P	P	11 21 19.5	+0.4
PARB	Paraibuna	33.63	59	*e*P	P	11 21 20.9	0.0
NNA	Nana	33.69	360	*i* P	P	11 21 20.0	-1.3
NNA				pmax	pmax		
	comp=Z,14nm,1.5s						
BB19B	Bebedouro	33.72	52	*e*P	P	11 21 21.8	+0.1
ITRB	Iturama	33.84	49	*e*P	P	11 21 23.4	+0.7
SALV	Santo Antonio	34.58	37	*e*P	P	11 21 28.8	-0.3
ESAR	Angra dos Reis	34.58	60	*e*P	P	11 21 29.6	+0.6
BSCB	Bom Sucesso	35.92	57	*e*P	P	11 21 41.0	+0.3
IPMB	Ipameri, GO	36.40	50	*e*P	P	11 21 45.0	+0.3
ARAG	Araguaiana, MT	36.50	43	*e*P	P	11 21 45.0	-0.5
BDFB	Brasilia	38.45	48	P	P	11 22 02.1	0.0
	comp=Z,12nm,1.1s,baz=227,slow=7.8,SNR=9.2						
BDFB				LR	LR	11 38 51.1	
	comp=Z,2µm,20.5s,baz=206,slow=38						
BDFB	Brasilia	38.45	48	P	P	11 22 02.2	0.0
BDFB	Brasilia	38.45	48	P	P	11 22 02.2	0.0

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BDFB                                 pmax  pmax
       comp=Z,48nm,1.2s
SAML  Samuel          38.49  22   P     P       11 22 01.9 -0.5
SAML  Samuel          38.49  22   P     P       11 22 01.9 -0.5
SAML                                 pmax  pmax
       comp=Z,40nm,1.2s
SAML  Samuel          38.49  22  eP     P       11 22 02.2 -0.2
ATAH  Atahualpa       38.54 357   P     P       11 22 04.0 +0.7
       comp=Z,5.2nm,1.0s,baz=181,slow=6.4,SNR=7.3
CLDB  Colider         39.08  34  eP     P       11 22 05.8 -1.6
SJMB  Sao Joao De Ma  39.83  59  eP     P       11 22 12.2 -1.4
VNA3  Neumayer Olymp  40.13 152   P     P       11 22 15.8 +0.3
VNA1  Neumayer--Stat  40.58 152   P     P       11 22 19.2  0.0
VNA2  Neumayer--Watz  40.87 152   P     P       11 22 22.2 +0.5
       baz=274,slow=8.9
JANB  Januaria        40.91  52  eP     P       11 22 24.0 +1.3
PEXB  Peixe           41.30  45  eP     P       11 22 25.8  0.0
SNAA  Sanae           42.31 153   P     P       11 22 33.5  0.0
SNAA  Sanae           42.31 153   P     P       11 22 32.8 -0.7
       comp=Z,21nm,1.1s,baz=257,slow=7.2,SNR=15
SNAA  Sanae           42.31 153   P     P       11 22 33.3 -0.2
SNAA  Sanae           42.31 153   P     P       11 22 33.3 -0.2
SNAA                                 pmax  pmax
       comp=Z,49nm,1.3s
NBIT  Itapeh - BA     43.81  58  eP     P       11 22 46.8 +0.7
SMTB  Santa Maria do  44.45  43  eP     P       11 22 51.5 +0.2
QSPA  South Pole Qui  44.46 180   P     P       11 22 51.3 +0.3
       comp=Z,19nm,1.0s,baz=140,slow=5.6,SNR=25
QSPA                                 PcP   PcP  11 24 34.2 +0.1
       comp=Z,8.1nm,1.1s,baz=242,slow=0.6,SNR=3.5
QSPA  South Pole Qui  44.46 180   P     P       11 22 51.0 -0.1
OTAV  Otavalo         45.86 357   P     P       11 23 03.5 +0.6
OTAV                                 IAmb  IAmb 11 23 16.2
       comp=Z,54nm,1.6s
OTAV  Otavalo         45.86 357   P     P       11 23 03.5 +0.6
OTAV                                 pmax  pmax
       comp=Z,53nm,1.6s
OTAV  Otavalo         45.86 357  eP     P       11 23 03.7 +0.8
PAYG  Puerto Ayora    46.51 341   P     P       11 23 08.0 +0.4
NBPN  Ponto Novo - B  46.64  53  eP     P       11 23 09.3 +0.6
NVL   N'lazarevskaya  47.14 153  eP     P       11 23 10.9 -1.0
NVL                                  pmax  pmax
       comp=Z,72nm,1.4s
FLOC  Florencia       47.17   1   P     P       11 23 12.8  0.0
PTGA  Pitinga         47.21  23   P     P       11 23 12.7 -0.4
PTGA                                 IAmb  IAmb 11 23 18.8
       comp=Z,39nm,1.2s
PTGA  Pitinga         47.21  23  eP     P       11 23 12.8 -0.2
TUMC  Tumaco          47.44 357   P     P       11 23 16.9 +2.1
NBLA  Lagarto - SE    47.90  56  eP     P       11 23 18.7 +0.2
NBTA  Tacaratu-PE     49.25  54  eP     P       11 23 29.8 +0.9
NBAN  Anadia - AL     49.84  57  eP     P       11 23 33.8 +0.4
NBMA  Muriti-CE       50.30  52  eP     P       11 23 37.1 +0.2
ROSC  El Rosal        50.45   3   P     P       11 23 39.3 +1.0
       comp=Z,3.3nm,0.3s,baz=163,slow=7.0,SNR=5.6
ROSC                                 LR    LR   11 43 29.5
       comp=Z,561nm,18.8s,baz=152,slow=34
ROSC  El Rosal        50.45   3   P     P       11 23 41.2 +2.9
NBRF  Rio Formoso -   51.31  57  eP     P       11 23 45.8 +1.4
NBLI  Livramento-PB   51.31  54  eP     P       11 23 45.7 +1.1
NBPS  Pedro II - PI   51.35  47  eP     P       11 23 46.1 +1.3
NBPB  Pedra_Branca-C  51.36  50  eP     P       11 23 45.5 +0.7
RUSC  La Rusia        51.55   5   P     P       11 23 46.2 -0.5
NBPA  Parau_RN        52.54  53  eP     P       11 23 54.4 +0.8
NBCL  Cascavel-CE     53.16  51  eP     P       11 23 57.7 -0.5
SDV   Santo Domingo   54.69   7   P     P       11 24 08.8 -0.7
SDV   Santo Domingo   54.69   7  eP     P       11 24 09.6 +0.1
HDC   Heredia         55.94 351   P     P       11 24 19.2 +0.8
SYO   Syowa Base      56.29 157⇓eP     P       11 24 16.0 -4.2
SYO   Syowa Base      56.29 157⇑epP    P       11 24 20.0 -0.2
JTS   Las Juntas de   56.32 350   P     P       11 24 21.4 +0.4
JTS                                  IAmb  IAmb 11 24 28.7
       comp=Z,40nm,1.2s
JTS   Las Juntas de   56.32 350  iP     P       11 24 20.5 -0.5
JTS                                  pmax  pmax
       comp=Z,18nm,1.3s
ESPN  Las Esperanzas  58.12 351   P     P       11 24 33.5 -0.2
ESPN                                 IAmb  IAmb 11 24 34.8
       comp=Z,45nm,1.3s
TGUH  Tegucigalpa,Un  60.33 348   P     P       11 24 49.2 +0.1
TBI   Tubuai          61.87 265  eLR    LR      11 43 18.4
       comp=Z,1µm,27.0s,baz=135
MAW   Mawson          62.87 164   P     P       11 25 05.9 +0.3
       comp=Z,12nm,0.9s,baz=285,slow=17,SNR=3.6
MAW   Mawson          62.87 164   P     P       11 25 05.8 +0.3
MAW   Mawson          62.87 164   P     P       11 25 05.8 +0.3
MAW                                  pmax  pmax
       comp=Z,7.0nm,1.2s
CCIG  Comitan         63.35 343   P     P       11 25 09.2 -0.2
OBIP  Obispado Ponce  64.17  11   P     P       11 25 12.9 -1.8
OBIP                                 IAmb  IAmb 11 25 19.1
       comp=Z,29nm,1.1s
HUMP  Col San Antoni  64.37  11   P     P       11 25 14.5 -1.5
HUMP                                 IAmb  IAmb 11 25 14.8
       comp=Z,23nm,1.4s
GCPR  Guaynabo City   64.50  11   P     P       11 25 14.2 -2.6
GCPR                                 IAmb  IAmb 11 25 26.7
       comp=Z,37nm,1.6s
ANWB  Willy Bob       64.58  16   P     P       11 25 16.5 -0.8
TIAR  Tiarei          65.63 270  eP     P       11 25 25.3 +0.9
       comp=Z,14nm,1.1s
PPT2  Papeete2        65.77 269  eLR    LR      11 45 03.0
       comp=Z,712nm,24.2s,baz=131
PPT   Papeete         65.78 269   P     P       11 25 26.9 +1.6
       comp=Z,8.6nm,0.6s,baz=83,slow=19,SNR=1.8
TLIG  Tlapa           66.11 337   P     P       11 25 28.3 +0.9
ZAIG  Zacatecas       72.19 335   P     P       11 26 04.7 -0.5
833A  Chaparral WMA,  76.60 339   P     P       11 26 30.9 +0.4
833A                                 IAmb  IAmb 11 26 32.0
       comp=Z,44nm,1.4s
833A  Chaparral WMA,  76.60 339   P     P       11 26 31.8 +1.4
       baz=164
HPIG                  77.04 334   P     P       11 26 33.8 +0.7
BRAL  Brewton         77.17 351   P     P       11 26 34.2 +0.6
BRAL  Brewton         77.17 351   P     P       11 26 34.8 +1.2
       baz=173
352A  Blakely         77.27 353   P     P       11 26 33.6 -0.5
352A                                 IAmb  IAmb 11 26 40.5
       comp=Z,44nm,1.3s
HKT   Hockley         77.37 343  iP     P       11 26 35.5 +0.9
HKT                                  pmax  pmax
       comp=Z,4.0nm,1.2s
BOSA  Boshof          77.67 118   P     P       11 26 36.5 -0.4
       comp=Z,13nm,1.1s,baz=236,slow=5.2,SNR=9.2
BOSA  Boshof          77.67 118   P     P       11 26 36.5 -0.4
BOSA                                 IAmb  IAmb 11 26 37.6
       comp=Z,50nm,1.4s
BOSA  Boshof          77.67 118   P     P       11 26 36.5 -0.4
BOSA                                 pmax  pmax
       comp=Z,50nm,1.4s
250A  Grady           77.89 352   P     P       11 26 37.1 -0.4
344A  Westbrook Farm  77.93 348   P     P       11 26 38.9 +1.1
342A  Flagon Creek P  78.11 346   P     P       11 26 39.1 +0.4
152A  Waverly Hall    78.43 353   P     P       11 26 40.0 -0.6
152A                                 IAmb  IAmb 11 26 41.4
       comp=Z,38nm,1.6s
435B  Jarrell         78.55 342   P     P       11 26 41.1 -0.1
435B                                 IAmb  IAmb 11 26 48.3
       comp=Z,31nm,1.1s
435B  Jarrell         78.55 342   P     P       11 26 42.2 +1.0
       baz=165
NHSC  New Hope        78.59 357   P     P       11 26 41.8 +0.5
       baz=178
VBMS  Vicksburg       78.65 348   P     P       11 26 41.6 -0.1
VBMS                                 IAmb  IAmb 11 26 48.3
       comp=Z,32nm,1.2s
TX31  Lajitas Ar. Si  78.69 336   P     P       11 26 42.4 +0.2
TX32  Lajitas Array   78.69 336   P     P       11 26 42.4 +0.2
TXAR  Lajitas Array   78.69 336   P     P       11 26 42.6 +0.4
       comp=Z,4.4nm,1.1s,baz=157,slow=6.8,SNR=26
JCT   Junction City   78.77 340   P     P       11 26 42.8 +0.3
JCT   Junction City   78.77 340   P     P       11 26 42.8 +0.3
JCT                                  pmax  pmax
       comp=Z,56nm,1.3s
JCT   Junction City   78.77 340   P     P       11 26 43.1 +0.6
       baz=164,SNR=18
Z58A  St. Stephen     78.81 357   P     P       11 26 42.5  0.0
       baz=178
NATX  Nacogdoches     78.90 344   P     P       11 26 43.1  0.0
LRAL  Lakeview Retre  79.01 351   P     P       11 26 43.2 -0.6
GOGA  Godfrey         79.07 354   P     P       11 26 44.0  0.0
GOGA                                 IAmb  IAmb 11 26 50.6
       comp=Z,25nm,1.0s
GOGA  Godfrey         79.07 354   P     P       11 26 44.0  0.0
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GOGA                                 pmax  pmax
       comp=Z,25nm,1.0s
GOGA  Godfrey         79.07 354   P     P       11 26 43.7 -0.3
       baz=175
Z51A  Franklin        79.11 353   P     P       11 26 44.4 +0.1
Z51A                                 IAmb  IAmb 11 26 51.1
       comp=Z,26nm,1.1s
Z50A  Ashland         79.12 352   P     P       11 26 43.9 -0.5
Z50A                                 IAmb  IAmb 11 26 50.2
       comp=Z,44nm,1.6s
Z50A  Ashland         79.12 352   P     P       11 26 44.7 +0.4
       baz=173
143A  Socs Landing,   79.26 347   P     P       11 26 45.1  0.0
TSUM  Tsumeb          79.34 106   P     P       11 26 46.4 +0.2
237A  Washetta, Mont  79.35 344   P     P       11 26 45.9 +0.3
Y55A  Saluda          79.50 356   P     P       11 26 46.5 +0.2
       baz=176
Y52A  Lilburn         79.56 354   P     P       11 26 46.0 -0.7
Y52A                                 IAmb  IAmb 11 26 53.5
       comp=Z,39nm,1.2s
Y52A  Lilburn         79.56 354   P     P       11 26 47.3 +0.6
       baz=175
WHTX  Lake Whitney,   79.68 342   P     P       11 26 47.5 +0.1
WHTX                                 IAmb  IAmb 11 26 48.8
       comp=Z,31nm,1.1s
HODGE Hodges          79.81 355   P     P       11 26 47.8 -0.2
X56A  White Oak       80.01 356   P     P       11 26 49.1  0.0
       baz=177
X55A  Gracelyn & Ava  80.01 356   P     P       11 26 49.3 +0.1
       baz=176
Z41A  Richland Creek  80.03 346   P     P       11 26 49.4 +0.2
Z41A                                 IAmb  IAmb 11 26 56.2
       comp=Z,29nm,1.1s
Z41A  Richland Creek  80.03 346   P     P       11 26 49.9 +0.7
       baz=169
X54A  Belton          80.13 355   P     P       11 26 50.0 +0.2
       baz=176
X53A  Estanollee      80.14 354   P     P       11 26 49.9 +0.1
       baz=175
X51A  Calhoun         80.33 353   P     P       11 26 50.9  0.0
X51A                                 IAmb  IAmb 11 27 03.9
       comp=Z,50nm,1.4s
X51A  Calhoun         80.33 353   P     P       11 26 51.4 +0.6
       baz=174
FPAL  Fort Paine      80.37 352   P     P       11 26 50.8 -0.3
PAULI Pauline         80.37 356   P     P       11 26 50.5 -0.5
PAULI                                IAmb  IAmb 11 26 51.8
       comp=Z,43nm,1.5s
X48A  Hartselle       80.42 351   P     P       11 26 51.0 -0.4
LBTB  Lobatse         80.45 116   P     P       11 26 51.8 -0.4
LBTB                                 IAmb  IAmb 11 26 58.7
       comp=Z,39nm,1.1s
LBTB  Lobatse         80.45 116   P     P       11 26 51.8 -0.4
LBTB                                 pmax  pmax
       comp=Z,39nm,1.2s
WLAR  White Oak Lake  80.50 346   P     P       11 26 51.8  0.0
WLAR                                 IAmb  IAmb 11 26 58.6
       comp=Z,33nm,1.1s
CCAR  Cane Creek      80.51 347   P     P       11 26 51.8  0.0
CCAR                                 IAmb  IAmb 11 26 58.6
       comp=Z,31nm,0.9s
BG3   Lake Jocassee   80.61 355   P     P       11 26 51.8 -0.5
W57A  Gilead          80.62 357   P     P       11 26 51.2 -1.2
W57A  Gilead          80.62 357   P     P       11 26 52.3 -0.1
       baz=178
W54A  Cherokee Point  80.66 355   P     P       11 26 52.7 +0.2
       baz=176
KMSC  Kings Mountain  80.67 356   P     P       11 26 51.8 -0.9
KMSC  Kings Mountain  80.67 356   P     P       11 26 51.9 -0.7
       baz=177
OXF   Oxford          80.76 349   P     P       11 26 53.1  0.0
       baz=171
ABTX  Abilene, Hawle  80.78 340   P     P       11 26 52.6 -0.8
ABTX  Abilene, Hawle  80.78 340   P     P       11 26 53.7 +0.3
       baz=164,SNR=5.4
W53A  Cullowhee       80.80 355   P     P       11 26 52.8 -0.8
       baz=175
Z35A  Perchaven, San  80.93 343   P     P       11 26 54.0 -0.1
Z35A                                 IAmb  IAmb 11 26 55.5
       comp=Z,60nm,1.5s
W50A  Signal Mountai  80.99 353   P     P       11 26 54.1 -0.3
W50A  Signal Mountai  80.99 353   P     P       11 26 54.6 +0.2
       baz=174
PLAL  Pickwick Lake   81.06 351   P     P       11 26 53.8 -1.0
SWET  Sewanee         81.07 352   P     P       11 26 54.5 -0.3
SWET                                 IAmb  IAmb 11 26 56.1
       comp=Z,60nm,1.5s
CPCT  Cooper Cave     81.18 353   P     P       11 26 55.5 +0.1
CPCT                                 IAmb  IAmb 11 27 06.8
       comp=Z,60nm,1.9s
V59A  Middlesex       81.19 359   P     P       11 26 55.7 +0.3
       baz=179
V53A  Saluda          81.27 355   P     P       11 26 54.8 -1.1
V53A                                 IAmb  IAmb 11 27 02.0
       comp=Z,46nm,1.9s
V53A  Saluda          81.27 355   P     P       11 26 54.2 -1.7
       baz=176
V56A  Mocksville      81.30 357   P     P       11 26 56.1 +0.1
       baz=177
V57A  Coltrane Farms  81.35 357   P     P       11 26 55.2 -1.1
       baz=178
V55A  Taylorsville    81.37 356   P     P       11 26 55.6 -0.8
V55A  Taylorsville    81.37 356   P     P       11 26 56.3 -0.1
       baz=177
MNTX  Cornudas Mount  81.41 336   P     P       11 26 55.0 -1.7
MNTX  Cornudas Mount  81.41 336   P     P       11 26 55.5 -1.2
       baz=160,SNR=7.3
MIAR  Mount Ida       81.42 346   P     P       11 26 56.6 -0.1
       baz=168
V48A  Smith Brothers  81.67 352   P     P       11 26 56.7 -1.3
V48A                                 IAmb  IAmb 11 27 04.1
       comp=Z,26nm,1.2s
U59A  Littleton       81.77 359   P     P       11 26 59.6 +1.1
U59A                                 IAmb  IAmb 11 27 05.1
       comp=Z,53nm,1.8s
LIC   Lamto           81.81  72  eP     P       11 26 59.5 +0.2
       comp=Z,66nm,1.1s
W41B  Gary Mavity, V  81.81 347   P     P       11 26 58.1 -0.6
W41B                                 IAmb  IAmb 11 27 11.7
       comp=Z,45nm,1.7s
W41B  Gary Mavity, V  81.81 347   P     P       11 26 58.0 -0.7
       baz=169,SNR=6.4
U56A  King            81.83 357   P     P       11 26 58.5 -0.3
U56A                                 IAmb  IAmb 11 27 00.2
       comp=Z,38nm,1.5s
U56A  King            81.83 357   P     P       11 26 58.9 +0.1
       baz=177
U57A  Blanch          81.88 358   P     P       11 26 59.0 -0.1
       baz=178
CLTN  Cedars of Leba  81.97 352   P     P       11 26 58.8 -0.7
U55A  TA2, Sparta     82.01 356   P     P       11 26 59.7 -0.1
       baz=177
U54A  Nelsons Funny   82.06 356   P     P       11 26 59.5 -0.7
U54A                                 IAmb  IAmb 11 27 01.2
       comp=Z,43nm,1.5s
U54A  Nelsons Funny   82.06 356   P     P       11 27 00.5 +0.4
       baz=176
W39A  Magazine        82.09 346   P     P       11 27 00.1  0.0
W39A  Magazine        82.09 346   P     P       11 27 00.9 +0.8
       baz=168,SNR=9.9
KIC   Kosan Boka      82.10  73  eP     P       11 27 01.1 +0.3
       comp=Z,20nm,1.1s
TIC   Toumodi         82.12  72  eP     P       11 27 01.1 +0.2
WVT   Waverly         82.17 351   P     P       11 26 59.6 -1.0
WVT                                  IAmb  IAmb 11 27 00.8
       comp=Z,36nm,1.4s
WVT   Waverly         82.17 351   P     P       11 26 59.6 -1.0
WVT                                  pmax  pmax
       comp=Z,36nm,1.4s
WVT   Waverly         82.17 351   P     P       11 27 00.2 -0.3
       baz=172
TZTN  Tazewell        82.19 354   P     P       11 26 59.8 -0.9
TZTN                                 IAmb  IAmb 11 27 01.1
       comp=Z,30nm,1.4s
TZTN  Tazewell        82.19 354   P     P       11 27 00.5 -0.2
       baz=175
DBIC  Dimbokro        82.25  72   P     P       11 27 01.9 +0.4
       comp=Z,5.4nm,0.9s,baz=199,slow=4.2,SNR=5.8
DBIC  Dimbokro        82.25  72   P     P       11 27 01.7 +0.1
DBIC  Dimbokro        82.25  72   P     P       11 27 01.7 +0.1
DBIC                                 pmax  pmax
       comp=Z,13nm,0.9s
GNAR  Gosnell         82.27 349   P     P       11 27 01.1  0.0
X34A  Smith Ranch, M  82.28 342   P     P       11 27 01.3 +0.1
X34A                                 IAmb  IAmb 11 27 07.8
       comp=Z,38nm,1.3s
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319A  Douglas         82.31 332   P     P       11 27 02.9 +1.3
319A                                 IAmb  IAmb 11 27 09.6
       comp=Z,25nm,1.1s
U49A  Red Boiling Sp  82.34 353   P     P       11 27 00.6 -0.8
U49A                                 IAmb  IAmb 11 27 02.4
       comp=Z,42nm,1.4s
T58A  Grand View Acr  82.37 358   P     P       11 27 01.2 -0.4
       baz=179
T59A  Double "B" Far  82.39 359   P     P       11 27 00.7 -1.0
T59A                                 IAmb  IAmb 11 27 02.5
       comp=Z,32nm,1.4s
T59A  Double "B" Far  82.39 359   P     P       11 27 01.8 +0.2
       baz=179
T57A  Hurt            82.44 358   P     P       11 27 00.9 -1.0
       baz=178
GLAT  Glass           82.47 350   P     P       11 27 02.2 +0.1
T56A  Rocky Mt        82.50 357   P     P       11 27 02.6 +0.3
       baz=178
LCAR  Lake Charles    82.53 348   P     P       11 27 01.8 -0.6
LCAR                                 IAmb  IAmb 11 27 08.4
       comp=Z,22nm,1.2s
T60A  Surry           82.55 360   P     P       11 27 02.7 +0.2
T54A  Tazewell        82.59 356   P     P       11 27 02.4 -0.5
       baz=176
T55A  Pulaski         82.61 357   P     P       11 27 02.9 -0.1
       baz=177
WMOK  Wichita Mounta  82.62 342   P     P       11 27 02.2 -0.8
WMOK                                 IAmb  IAmb 11 27 04.3
       comp=Z,33nm,1.3s
WMOK  Wichita Mounta  82.62 342   P     P       11 27 02.2 -0.8
WMOK                                 pmax  pmax
       comp=Z,33nm,1.3s
WMOK  Wichita Mounta  82.62 342   P     P       11 27 02.9 -0.1
       baz=165,SNR=16
T51A  Gray            82.64 354   P     P       11 27 02.7 -0.3
       baz=175
BLA   Blacksburg      82.69 357   P     P       11 27 02.6 -0.7
BLA                                  IAmb  IAmb 11 27 04.6
       comp=Z,46nm,1.5s
BLA   Blacksburg      82.69 357   P     P       11 27 02.7 -0.7
BLA                                  pmax  pmax
       comp=Z,46nm,1.5s
BLA   Blacksburg      82.69 357   P     P       11 27 03.3 -0.1
       baz=177
T52A  Hallie          82.72 355   P     P       11 27 02.8 -0.6
T52A                                 IAmb  IAmb 11 27 15.7
       comp=Z,38nm,1.6s
HICK  Hickman         82.73 350   P     P       11 27 03.7 +0.2
T50A  Nancy           82.76 353   P     P       11 27 03.1 -0.5
       baz=174
FNO   Franklin        82.82 343   P     P       11 27 03.7 -0.4
MSTX  Muleshoe        82.83 338   P     P       11 27 04.0 -0.3
MSTX                                 IAmb  IAmb 11 27 10.9
       comp=Z,24nm,1.2s
MSTX  Muleshoe        82.83 338   P     P       11 27 04.6 +0.4
       baz=162
T49A  Edmonton        82.90 353   P     P       11 27 02.9 -1.5
T49A  Edmonton        82.90 353   P     P       11 27 03.7 -0.7
       baz=174,SNR=6.6
T47A  Sharon Grove    82.94 352   P     P       11 27 03.3 -1.2
T47A                                 IAmb  IAmb 11 27 10.2
       comp=Z,19nm,1.0s
HENM  Henderson Moun  82.94 350   P     P       11 27 03.8 -0.8
OKCFA Oklahoma City   82.99 343   P     P       11 27 06.5 +1.6
OKCFA                                IAmb  IAmb 11 27 25.5
       comp=Z,30nm,1.3s
S58A  Poland Farm, P  83.03 359   P     P       11 27 05.7 +0.7
S58A  Poland Farm, P  83.03 359   P     P       11 27 05.0 -0.1
       baz=179
U40A  Yellville       83.07 347   P     P       11 27 04.4 -0.8
U40A                                 IAmb  IAmb 11 27 11.5
       comp=Z,25nm,1.1s
U40A  Yellville       83.07 347   P     P       11 27 04.6 -0.6
       baz=169,SNR=12
PBMO  Poplar Bluff    83.12 349   P     P       11 27 04.3 -1.2
PBMO                                 IAmb  IAmb 11 27 11.6
       comp=Z,19nm,1.1s
S56A  Natural Bridge  83.13 358   P     P       11 27 05.3 -0.2
       baz=178
TUL1  Leonard         83.14 344   P     P       11 27 05.4 -0.3
TUL1  Leonard         83.14 344   P     P       11 27 05.6  0.0
       baz=167,SNR=10
HHAR  Hobbs           83.17 346   P     P       11 27 05.3 -0.6
HHAR                                 IAmb  IAmb 11 27 06.3
       comp=Z,27nm,1.6s
S57A  Dark Hollow, R  83.19 358   P     P       11 27 05.9  0.0
S57A  Dark Hollow, R  83.19 358   P     P       11 27 06.1 +0.2
       baz=178
S53A  Williamson      83.24 356   P     P       11 27 05.7 -0.4
       baz=176,SNR=5.4
S55A  Lewisburg       83.25 357   P     P       11 27 06.2  0.0
       baz=177,SNR=7.3
S51A  Beattyville     83.28 354   P     P       11 27 05.4 -1.0
S51A                                 IAmb  IAmb 11 27 12.5
       comp=Z,26nm,1.1s
S51A  Beattyville     83.28 354   P     P       11 27 06.3  0.0
       baz=175,SNR=8.3
S52A  Salyersville    83.29 355   P     P       11 27 06.2 -0.2
       baz=176
S54A  Dingess, Beckl  83.31 356   P     P       11 27 06.0 -0.6
S54A                                 IAmb  IAmb 11 27 07.4
       comp=Z,46nm,1.6s
R58B  Mineral         83.38 359   P     P       11 27 06.3 -0.5
R58B                                 IAmb  IAmb 11 27 07.9
       comp=Z,33nm,1.4s
R58B  Mineral         83.38 359   P     P       11 27 07.2 +0.5
       baz=179
S50A  Richmond        83.38 354   P     P       11 27 06.7 -0.1
       baz=174,SNR=10
U38A  Gravette        83.40 346   P     P       11 27 06.2 -0.8
AMTX  Amarillo        83.43 339   P     P       11 27 07.2 -0.1
AMTX                                 IAmb  IAmb 11 27 09.3
       comp=Z,35nm,1.4s
AMTX  Amarillo        83.43 339   P     P       11 27 08.1 +0.8
       baz=163
S49A  Springfield     83.56 353   P     P       11 27 07.1 -0.7
       baz=174
TUC   Tucson          83.66 331   P     P       11 27 10.1 +1.6
       baz=157
R54A  Victor          83.68 357   P     P       11 27 07.8 -0.6
       baz=177
R55A  Marlinton       83.75 357   P     P       11 27 09.1 +0.4
R55A  Marlinton       83.75 357   P     P       11 27 09.2 +0.4
       baz=178,SNR=5.4
MGMO  Mountain Grove  83.76 347   P     P       11 27 08.0 -0.8
MGMO                                 IAmb  IAmb 11 27 15.1
       comp=Z,28nm,1.1s
R56A  Bull Pasture M  83.85 358   P     P       11 27 09.9 +0.5
       baz=178
R53A  Hurricane       83.88 356   P     P       11 27 09.0 -0.4
R53A  Hurricane       83.88 356   P     P       11 27 09.5 +0.1
       baz=176
S44A  Carbondale      83.88 350   P     P       11 27 08.3 -1.0
S44A                                 IAmb  IAmb 11 27 15.4
       comp=Z,23nm,0.9s
R52A  Catlettsburg    83.92 355   P     P       11 27 09.9 +0.3
       baz=176
R51A  Hillsboro       83.94 355   P     P       11 27 10.2 +0.5
       baz=175
USIN  University of   83.96 351   P     P       11 27 08.5 -1.3
USIN                                 IAmb  IAmb 11 27 15.2
       comp=Z,24nm,0.9s
R50A  Paris           83.97 354   P     P       11 27 08.5 -1.3
R50A                                 IAmb  IAmb 11 27 15.6
       comp=Z,18nm,1.2s
R50A  Paris           83.97 354   P     P       11 27 09.5 -0.4
       baz=175
R49A  Shelbyville     84.05 353   P     P       11 27 09.1 -1.2
R49A                                 IAmb  IAmb 11 27 15.9
       comp=Z,30nm,1.2s
R49A  Shelbyville     84.05 353   P     P       11 27 09.7 -0.5
       baz=174
WCI   Wyandotte Cave  84.09 352   P     P       11 27 09.0 -1.4
WCI   Wyandotte Cave  84.09 352   P     P       11 27 09.0 -1.4
WCI                                  pmax  pmax
       comp=Z,16nm,1.3s
WCI   Wyandotte Cave  84.09 352   P     P       11 27 09.4 -1.0
       baz=173
U32A  Winter Ranch,   84.24 342   P     P       11 27 11.3  0.0
T35A  Sooner Cattle   84.25 344   P     P       11 27 10.9 -0.4
FVM   French Village  84.31 349   IAmb  IAmb    11 27 12.1
       comp=Z,27nm,1.2s
S39A  Bolivar         84.45 347   P     P       11 27 11.5 -0.8
Q57A  Strasburg       84.46 359   P     P       11 27 12.8 +0.5
       baz=179
CCM   Cathedral Cave  84.49 348   P     P       11 27 11.5 -1.0
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CCM	Cathedral Cave	84.49	348	P	P	11 27 11.5	-1.0
CCM				pmax	pmax		
	comp=Z,42nm,1.0s						
CCM	Cathedral Cave	84.49	348	P	P	11 27 12.8	+0.3
	baz=170						
Q52A	Bidwell	84.52	356	P	P	11 27 12.3	-0.3
	baz=176						
Q51A	Peebles	84.65	355	P	P	11 27 12.9	-0.4
Q51A				IAmb	IAmb	11 27 19.2	
	comp=Z,16nm,1.0s						
Q51A	Peebles	84.65	355	P	P	11 27 13.2	-0.1
	baz=175						
Q48A	North Vernon	84.73	353	P	P	11 27 12.4	-1.3
	baz=174						
Q49A	Aurora	84.74	354	P	P	11 27 13.2	-0.5
	baz=174						
ANMO	Albuquerque	84.76	336	P	P	11 27 14.4	+0.2
ANMO	Albuquerque	84.76	336	i P	P	11 27 13.7	-0.5
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ANMO	Albuquerque	84.76	336	P	P	11 27 15.4	+1.2
	baz=160						
OLIL	Olney	84.77	351	P	P	11 27 13.5	-0.3
SDMD	Soldier's Deli	84.82	360	P	P	11 27 14.6	+0.5
P58A	Pank, Wackersv	84.90	359	P	P	11 27 15.1	+0.6
	baz=180						
SLM	Saint Louis	84.93	349	P	P	11 27 13.9	-0.8
SLM				IAmb	IAmb	11 27 20.8	
	comp=Z,23nm,0.9s						
SLM	Saint Louis	84.93	349	P	P	11 27 13.9	-0.8
SLM				pmax	pmax		
	comp=Z,23nm,0.9s						
P53A	Whipple	85.00	356	P	P	11 27 14.7	-0.4
P53A				IAmb	IAmb	11 27 21.2	
	comp=Z,29nm,1.1s						
P53A	Whipple	85.00	356	P	P	11 27 14.8	-0.2
	baz=177						
P59A	Jarrettsville	85.02	0	P	P	11 27 15.7	+0.6
	baz=180						
BLO	Bloomington	85.04	352	P	P	11 27 13.5	-1.7
BLO	Bloomington	85.04	352	P	P	11 27 13.5	-1.7
BLO				pmax	pmax		
	comp=Z,43nm,1.2s						
P51A	Williamsport	85.08	355	P	P	11 27 14.4	-1.0
P51A				IAmb	IAmb	11 27 15.5	
	comp=Z,27nm,1.3s						
P51A	Williamsport	85.08	355	P	P	11 27 15.1	-0.3
	baz=176						
P52A	Corning	85.18	356	P	P	11 27 15.7	-0.3
	baz=176,SNR=7.6						
P48A	Milroy	85.23	353	P	P	11 27 14.9	-1.3
P48A				IAmb	IAmb	11 27 21.4	
	comp=Z,20nm,1.1s						
P48A	Milroy	85.23	353	P	P	11 27 15.2	-1.0
	baz=174						
P49A	Miami Univ. Ec	85.25	354	P	P	11 27 15.5	-0.7
	baz=174						
P50A	Jamestown	85.26	354	P	P	11 27 15.7	-0.6
	baz=175						
PSUB	Penn St. - Bra	85.34	1	P	P	11 27 16.8	+0.1
PSUB				IAmb	IAmb	11 27 17.9	
	comp=Z,30nm,1.4s						
MVL	Millersville	85.41	0	P	P	11 27 16.7	-0.3
MVL				IAmb	IAmb	11 27 19.0	
	comp=Z,32nm,1.4s						
X18A	Snowflake	85.43	333	P	P	11 27 18.3	+0.7
X18A				IAmb	IAmb	11 27 20.8	
	comp=Z,33nm,1.6s						
O58A	Lewisberry	85.53	360	P	P	11 27 18.1	+0.4
	baz=180						
O59A	Robesonia	85.72	0	P	P	11 27 18.9	+0.3
	baz=180						
O53A	New Philadelph	85.75	356	P	P	11 27 18.6	-0.1
	baz=177,SNR=7.1						
X16A	Lo Mia Camp, P	85.81	332	P	P	11 27 20.6	+1.2
ACSO	Alum Creek Sta	85.83	355	P	P	11 27 18.3	-0.8
ACSO				IAmb	IAmb	11 27 19.1	
	comp=Z,28nm,1.4s						
ACSO	Alum Creek Sta	85.83	355	P	P	11 27 18.7	-0.4
	baz=176						
W18A	Petrified Fore	85.90	333	P	P	11 27 20.3	+0.4
W18A				IAmb	IAmb	11 27 27.6	
	comp=Z,32nm,1.5s						
W18A	Petrified Fore	85.90	333	P	P	11 27 20.6	+0.7
	baz=158						
O48A	Farmland	86.00	353	P	P	11 27 19.1	-0.9
	baz=174						
N55A	Marion Center	86.21	358	P	P	11 27 21.2	+0.1
	baz=178						
O44A	Mansfield	86.21	351	P	P	11 27 19.5	-1.5
O44A				IAmb	IAmb	11 27 26.8	
	comp=Z,20nm,0.9s						
N58A	Sunbury	86.24	360	P	P	11 27 21.4	+0.3
	baz=180						
T25A	Trinidad	86.26	338	P	P	11 27 21.5	-0.2
T25A				IAmb	IAmb	11 27 29.3	
	comp=Z,35nm,1.2s						
T25A	Trinidad	86.26	338	P	P	11 27 22.9	+1.3
	baz=161,SNR=13						
Y12C	Blythe	86.27	329	P	P	11 27 22.7	+1.3
	baz=155						
N60A	Cedar Hill Far	86.29	1	P	P	11 27 21.8	+0.4
	baz=181						
N53A	Lisbon	86.29	357	P	P	11 27 20.6	-0.8
N53A				IAmb	IAmb	11 27 21.9	
	comp=Z,38nm,1.6s						
N53A	Lisbon	86.29	357	P	P	11 27 21.8	+0.4
	baz=177						
N59A	State Game Lan	86.33	1	P	P	11 27 21.8	+0.2
N59A				IAmb	IAmb	11 27 28.8	
	comp=Z,27nm,1.4s						
N59A	State Game Lan	86.33	1	P	P	11 27 22.5	+0.9
	baz=181,SNR=5.9						
N50A	Nevada	86.37	355	P	P	11 27 21.5	-0.3
	baz=175						
KSU1	Kansas State U	86.39	345	P	P	11 27 22.0	0.0
	baz=166						
N54A	Moraine State	86.42	357	P	P	11 27 21.8	-0.2
	baz=178						
N51A	Ashland	86.47	356	P	P	11 27 21.5	-0.8
N51A				IAmb	IAmb	11 27 22.2	
	comp=Z,26nm,1.1s						
ODNJ	Ogdensburg	86.51	2	P	P	11 27 23.0	+0.6
ODNJ				IAmb	IAmb	11 27 24.3	
	comp=Z,45nm,1.6s						
N49A	Columbus Grove	86.59	354	P	P	11 27 21.0	-1.9
N49A				IAmb	IAmb	11 27 22.6	
	comp=Z,25nm,1.5s						
N49A	Columbus Grove	86.59	354	P	P	11 27 21.4	-1.4
	baz=175						
CBKS	Cedar Bluff	86.74	342	P	P	11 27 24.0	+0.3
CBKS	Cedar Bluff	86.74	342	P	P	11 27 24.0	+0.3
CBKS				pmax	pmax		
	comp=Z,46nm,1.3s						
CBKS	Cedar Bluff	86.74	342	P	P	11 27 24.5	+0.8
	baz=164						
M57A	Sunshine Farm,	86.74	360	P	P	11 27 24.1	+0.5
	baz=180						
M60A	Port Jervis	86.75	2	P	P	11 27 24.1	+0.5
	baz=181						
M58A	Price's Panora	86.78	0	P	P	11 27 24.0	+0.2
	baz=180						
WUAZ	Wupatki	86.80	332	P	P	11 27 25.2	+1.0
WUAZ				IAmb	IAmb	11 27 32.4	
	comp=Z,22nm,1.2s						
WUAZ	Wupatki	86.80	332	P	P	11 27 26.0	+1.8
	baz=156						
XPFO	Pion Flat	86.85	328	P	P	11 27 26.4	+1.9
XPFO				IAmb	IAmb	11 27 27.2	
	comp=Z,20nm,1.4s						
PFO	Pinyon Flats O	86.86	328	P	P	11 27 26.2	+1.7
PFO	Pinyon Flats O	86.86	328	i P	P	11 27 25.6	+1.1
PFO				pmax	pmax		
	comp=Z,17nm,1.2s						
PFO	Pinyon Flats O	86.86	328	P	P	11 27 26.5	+2.0
	baz=153						
IRM	Iron Mountain	86.86	329	P	P	11 27 26.4	+2.0
	baz=154						
M56A	Emporium	86.90	359	P	P	11 27 24.3	-0.1
M56A	Emporium	86.90	359	P	P	11 27 24.5	+0.1
	baz=179						
M62A	Hamden	86.91	3	P	P	11 27 25.8	+1.4
	baz=183						
M53A	WI Miller and	86.92	357	P	P	11 27 24.3	-0.1
	baz=177						
M59A	Waymart	86.95	1	P	P	11 27 25.3	+0.6
	baz=181						
BELC	Belle Mtn. Jos	87.03	328	P	P	11 27 27.4	+2.0
	baz=154						
N41A	Harden Midland	87.05	349	P	P	11 27 24.2	-0.9
SDCO	Great Sand Dun	87.12	337	P	P	11 27 26.1	+0.2
SDCO	Great Sand Dun	87.12	337	P	P	11 27 26.7	+0.8
	baz=160,SNR=8.3						
W13A	Hualapai Mount	87.26	330	P	P	11 27 27.7	+1.1
W13A				IAmb	IAmb	11 27 34.7	
	comp=Z,22nm,1.4s						
L57A	Andrews Acres	87.40	360	P	P	11 27 27.2	+0.3
	baz=180,SNR=5.7						
L60A	Shokan	87.42	2	P	P	11 27 27.6	+0.7
	baz=182						
L58A	Harry Jones Me	87.45	1	P	P	11 27 27.4	+0.4
	baz=180						
MVCO	Mesa Verde	87.46	335	P	P	11 27 28.1	+0.5
MVCO	Mesa Verde	87.46	335	P	P	11 27 30.5	+2.9
	baz=158						
S22A	4UR Ranch, Cre	87.48	336	P	P	11 27 28.0	+0.3
S22A				IAmb	IAmb	11 27 35.3	
	comp=Z,16nm,1.1s						
S22A	4UR Ranch, Cre	87.48	336	P	P	11 27 29.0	+1.3
	baz=159,SNR=15						
L56A	Greenwood	87.54	359	P	P	11 27 27.7	+0.2
L56A	Greenwood	87.54	359	P	P	11 27 28.0	+0.5
	baz=179						
KSCO	Kaye Shedlock'	87.58	340	P	P	11 27 28.0	0.0
KSCO				IAmb	IAmb	11 27 29.3	
	comp=Z,30nm,1.3s						
KSCO	Kaye Shedlock'	87.58	340	P	P	11 27 28.9	+0.9
	baz=162,SNR=6.8						
L55A	Hinsdale	87.60	359	P	P	11 27 28.2	+0.4
	baz=179						
BINY	Binghamton	87.61	0	P	P	11 27 27.3	-0.5
BINY	Binghamton	87.61	0	P	P	11 27 28.3	+0.5
	baz=180						
L59A	Walton	87.61	1	P	P	11 27 28.5	+0.7
	baz=181						
GMRC	Granite Mounta	87.61	329	P	P	11 27 30.1	+1.9
	baz=154						
L54A	Sinclairville	87.67	358	P	P	11 27 28.3	+0.2
	baz=178						
MSVF	Nonsavu	87.70	247	i P	P	11 27 31.1	+2.0
MSVF				pmax	pmax		
	comp=Z,17nm,1.2s						
WVNY	West Valley, N	87.83	359	P	P	11 27 29.1	+0.2
BFSC	Mount Baldy Ra	87.86	327	P	P	11 27 30.5	+1.1
	baz=153						
HEC	Hector,Ludlow	87.89	328	P	P	11 27 31.0	+1.5
	baz=154						
U15A	North Rim	87.93	332	P	P	11 27 30.8	+0.9
K54A	Basiliko Farm,	88.03	358	P	P	11 27 29.5	-0.3
	baz=178						
K56A	Middlesex	88.10	359	P	P	11 27 30.5	+0.3
	baz=180						
K55A	Perry	88.14	359	P	P	11 27 31.2	+0.9
	baz=179						
Q24A	Divide	88.17	338	P	P	11 27 32.0	+1.0
	baz=160						
K58A	Earlville	88.17	1	P	P	11 27 30.4	-0.1
K58A	Earlville	88.17	1	P	P	11 27 30.9	+0.5
	baz=181,SNR=7.7						
L42A	Oliver, Polo	88.18	350	P	P	11 27 29.2	-1.3
K59A	Cooperstown	88.19	1	P	P	11 27 30.5	-0.1
	baz=181						
TUQ	Turquoise Moun	88.29	329	P	P	11 27 33.4	+2.0
	baz=154						
L40A	Anamosa	88.43	349	P	P	11 27 30.4	-1.3
K48A	Perry	88.46	354	P	P	11 27 31.5	-0.3
	baz=175						
GSC	Goldstone, Bar	88.49	328	P	P	11 27 34.4	+2.1
	baz=153						
EDW2	Edwards Air Fo	88.56	327	P	P	11 27 34.0	+1.4
	baz=152						
KNB	Kanab	88.64	332	P	P	11 27 34.1	+1.0
KNB	Kanab	88.64	332	P	P	11 27 34.1	+1.0
KNB				pmax	pmax		
	comp=Z,28nm,1.2s						
J52A	Paris	88.71	357	P	P	11 27 32.9	-0.1
	baz=177,SNR=6.6						
K43A	Burlington	88.72	351	P	P	11 27 32.5	-0.6
TOO	Toolangi	88.77	212	P	P	11 27 34.1	+0.2
TOO				IAmb	IAmb	11 27 35.5	
	comp=Z,21nm,1.1s						
TOO	Toolangi	88.77	212	P	P	11 27 34.1	+0.2
TOO				pmax	pmax		
	comp=Z,21nm,1.2s						
LCMT	Little Creek M	88.77	331	P	P	11 27 34.0	+0.4
J57A	Williamstown	88.81	0	P	P	11 27 33.5	0.0
J57A	Williamstown	88.81	0	P	P	11 27 33.3	-0.2
	baz=180,SNR=7.8						
SMCO	Snowmass	88.86	337	P	P	11 27 34.8	+0.5
J48A	Bridge Port	88.93	355	P	P	11 27 32.8	-1.2
J48A	Bridge Port	88.93	355	P	P	11 27 33.0	-0.9
	baz=175						
J49A	Marlette	88.95	355	P	P	11 27 33.7	-0.4
	baz=175						
SHPR	Sheep Range	88.97	330	P	P	11 27 36.2	+1.6
SHPR				IAmb	IAmb	11 27 42.9	
	comp=Z,21nm,1.2s						
ISCO	Idaho Springs	89.08	338	P	P	11 27 36.2	+1.0
	baz=160,SNR=5.5						
I58A	Old Forge	89.11	1	P	P	11 27 35.2	+0.3
	baz=181						
JFWS	Jewell Farm	89.14	350	P	P	11 27 34.3	-0.7
JFWS	Jewell Farm	89.14	350	P	P	11 27 34.3	-0.7
JFWS				pmax	pmax		
	comp=Z,72nm,1.4s						
JFWS	Jewell Farm	89.14	350	P	P	11 27 35.2	+0.1
	baz=170						
LSZ	Lusaka	89.18	111	P	P	11 27 37.0	+0.8
LSZ				IAmb	IAmb	11 27 56.2	
	comp=Z,30nm,1.8s						
LSZ	Lusaka	89.18	111	P	P	11 27 37.0	+0.8
LSZ				pmax	pmax		
	comp=Z,30nm,1.8s						
SZCU	Shurtz Canyon	89.25	332	P	P	11 27 37.0	+1.0
I51A	Listowel	89.29	357	P	P	11 27 35.7	0.0
	baz=177,SNR=6.7						
I60A	Shoreham	89.30	2	P	P	11 27 36.1	+0.4
	baz=182						
CCUT	Cedar City	89.30	332	P	P	11 27 36.2	0.0
I57A	Carthage	89.34	1	P	P	11 27 36.2	+0.3
	baz=181,SNR=7.0						
MTPU	Mount Pierson	89.36	333	P	P	11 27 38.2	+1.5
ISA	Isabella, Lake	89.44	327	P	P	11 27 38.9	+2.2
	baz=152						
I49A	Point Hope	89.51	356	P	P	11 27 35.8	-0.9
I49A	Point Hope	89.51	356	P	P	11 27 36.4	-0.3
	baz=176						
FURC	Furnace Creek,	89.55	329	P	P	11 27 38.8	+1.7
	baz=153						
I47A	Gladwin	89.69	354	P	P	11 27 36.9	-0.7
I47A				IAmb	IAmb	11 27 43.5	
	comp=Z,19nm,1.0s						
I47A	Gladwin	89.69	354	P	P	11 27 37.4	-0.2
	baz=174						
TPNV	Topopah Spring	89.76	329	P	P	11 27 40.0	+1.7
TPNV				IAmb	IAmb	11 27 46.6	
	comp=Z,21nm,1.4s						
TPNV	Topopah Spring	89.76	329	P	P	11 27 40.0	+1.7
TPNV				pmax	pmax		
	comp=Z,21nm,1.5s						
TPNV	Topopah Spring	89.76	329	P	P	11 27 40.9	+2.6
	baz=154						
MSU	Marysvale	89.79	333	P	P	11 27 40.0	+1.5
MSU	Marysvale	89.79	333	P	P	11 27 40.0	+1.5
Q16A	Castle Valley	89.84	334	P	P	11 27 39.7	+1.0
H58A	Gabriels	89.85	2	P	P	11 27 38.6	+0.3
	baz=182						
H57A	Richville	89.87	1	P	P	11 27 38.6	+0.2
	baz=181						
I42A	Draeger Farm,	89.96	351	P	P	11 27 38.4	-0.4
TCRU	Three Creeks R	89.97	333	P	P	11 27 40.6	+1.3
H53A	Bobcaygeon	89.99	359	P	P	11 27 38.8	-0.2
	baz=179,SNR=5.4						
H56A	Elgin	90.00	0	P	P	11 27 39.2	+0.3
	baz=180,SNR=5.2						
H60A	Morristown	90.03	3	P	P	11 27 39.1	0.0
	baz=183						
I40A	Norwalk	90.15	350	P	P	11 27 38.9	-0.8
I40A				IAmb	IAmb	11 27 40.2	
	comp=Z,26nm,1.4s						
N23A	Red Feather La	90.19	338	P	P	11 27 40.9	+0.6
N23A				IAmb	IAmb	11 27 47.8	
	comp=Z,17nm,1.2s						
N23A	Red Feather La	90.19	338	P	P	11 27 41.5	+1.2
	baz=160,SNR=6.4						
TMUT	Trail Mountain	90.20	334	P	P	11 27 41.0	+0.5
P17A	Butcher Ranch,	90.22	334	P	P	11 27 40.1	-0.3
H48A	Harrisville	90.30	355	P	P	11 27 39.6	-0.8
H48A				IAmb	IAmb	11 27 46.5	
	comp=Z,18nm,0.9s						
H48A	Harrisville	90.30	355	P	P	11 27 40.4	+0.1
	baz=175,SNR=5.3						
PSUT	Pine Spring	90.36	332	P	P	11 27 41.5	+0.3
PHWY	Pilot Hill	90.45	339	P	P	11 27 41.2	-0.4
G53A	Haliburton	90.54	359	P	P	11 27 41.8	+0.3
	baz=179,SNR=5.8						
R11A	Troy Canyon, C	90.78	330	P	P	11 27 45.0	+2.0
	baz=154						
G45A	Suttons Bay	90.79	354	P	P	11 27 42.0	-0.6
G45A	Suttons Bay	90.79	354	P	P	11 27 42.8	+0.1
	baz=174,SNR=6.7						
G47A	Hillman	90.80	355	P	P	11 27 42.7	0.0
	baz=175						
G54A	Lake Saint Pet	90.81	359	P	P	11 27 42.6	-0.2
	baz=179						
ECSD	EROS Data Cent	90.89	346	P	P	11 27 41.7	-1.5
ECSD				IAmb	IAmb	11 27 49.0	
	comp=Z,16nm,0.9s						
ECSD	EROS Data Cent	90.89	346	P	P	11 27 42.2	-0.9
	baz=166,SNR=12						
MPU	Maple Canyon	90.99	334	P	P	11 27 43.7	-0.3
F52A	Sundridge	91.23	358	P	P	11 27 44.4	-0.3
	baz=178,SNR=5.6						
F49A	Sandfield	91.29	356	P	P	11 27 44.6	-0.4
	baz=176						
TORD	Torodi Ar. Bea	91.35	73	P	P	11 27 45.8	-0.2
	comp=Z,1.9nm,1.1s,baz=204,slow=3.3,SNR=5.3						
ALGO	Algonquin Park	91.36	359	P	P	11 27 45.0	-0.3
	baz=179						
F51A	Arnstein	91.38	358	P	P	11 27 45.0	-0.4
	baz=178,SNR=6.1						
F48A	Evansville	91.38	356	P	P	11 27 45.0	-0.3
	baz=176,SNR=5.4						
F45A	CMU Biological	91.42	354	P	P	11 27 46.3	+0.7
	baz=174						
G40A	Rib Lake	91.46	350	P	P	11 27 44.7	-1.1
G40A				IAmb	IAmb	11 27 55.2	
	comp=Z,20nm,1.7s						
DUG	Dugway, Tooele	91.53	333	P	P	11 27 47.4	+1.0
	baz=156						
SPMN	Marine on St.	91.75	349	P	P	11 27 45.8	-1.3
E53A	Dumoine, Ponti	91.78	359	P	P	11 27 47.4	+0.1
	baz=179						
NVAR	Mina Array Bea	91.81	329	P	P	11 27 48.9	+1.0
	comp=Z,1.1nm,1.0s,baz=154,slow=4.0,SNR=4.7						
NVAR				PP	PP	11 31 32.5	+4.9
	comp=Z,0.7nm,1.0s,baz=134,slow=8.6,SNR=4.2						
E54A	Lac Daplat, Po	91.84	360	P	P	11 27 47.7	+0.2
	baz=180						
E51A	G1948 Merrick	91.97	358	P	P	11 27 47.1	-1.0
	baz=178						
K22A	Casper	91.99	338	P	P	11 27 47.9	-0.6
K22A				IAmb	IAmb	11 27 55.4	
	comp=Z,19nm,1.1s						
K22A	Casper	91.99	338	P	P	11 27 49.2	+0.6
	baz=160						
E48A	Lockeyer	92.01	356	P	P	11 27 48.3	0.0
	baz=176						
E46A	Sault Ste Mari	92.02	355	P	P	11 27 46.3	-2.0
E47A	Iron Bridge	92.04	355	P	P	11 27 48.1	-0.3
	baz=175						
D53A	Lac Vacive, Po	92.49	359	P	P	11 27 50.3	-0.2
	baz=179						
D50A	G1974 Best Tow	92.61	358	P	P	11 27 50.2	-0.9
	baz=178						
D47A	Chapleau	92.63	356	P	P	11 27 50.1	-1.1
	baz=176						
D48A	Paudash Townsh	92.69	356	P	P	11 27 50.6	-0.9
	baz=176						
PDAR	Pinedale Array	92.91	336	P	P	11 27 52.5	-0.4
	comp=Z,2.2nm,1.1s,baz=180,slow=4.4,SNR=6.5						
ORV	Oroville	94.00	327	P	P	11 27 58.0	+0.4
ORV	Oroville	94.00	327	P	P	11 27 58.0	+0.4
ORV				pmax	pmax		
	comp=Z,12nm,1.5s						
IMW	Indian Meadow	94.34	336	P	P	11 27 59.2	-0.3
FLWY	Flagg Ranch	94.45	336	P	P	11 27 59.7	-0.2
LSQQ	Lebel-sur-Quev	94.46	360	P	P	11 27 58.9	-0.6
	baz=180						
AGMN	Agassiz Nation	95.20	347	IAmb	IAmb	11 28 12.9	
	comp=Z,20nm,1.7s						
AGMN	Agassiz Nation	95.20	347	P	P	11 28 02.4	-0.5
	baz=167						
LRM	Limekiln Ridge	96.54	336	P	P	11 28 09.0	-0.4
ULM	Lac du Bonnet	97.10	348	P	P	11 28 10.2	-1.4
	comp=Z,1.9nm,0.8s,baz=187,slow=6.0,SNR=3.6						
ULM	Lac du Bonnet	97.10	348	IAmb	IAmb	11 28 11.2	
	comp=Z,17nm,1.7s						
DOU	Dourbes	118.54	46	PKPdf	PKPdf	11 33 26.6	-0.3
MEM	Membach	119.57	47	PKPdf	PKPdf	11 33 28.4	-0.5
H11S2	WAKE ISLAND Hy	121.54	264	T	T	13 46 37.2	
	baz=134,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	121.56	264	T	T	13 46 29.9	
	baz=134,slow=75,SNR=7.0						
H11S3	WAKE ISLAND Hy	121.56	264	T	T	13 46 30.3	
	baz=134,slow=75,SNR=8.2						
GERES	GERESS Array B	122.62	52	PKP	PKPdf	11 33 34.1	-0.9
	comp=Z,1.3nm,1.0s,baz=222,slow=3.4,SNR=7.8						
ILAR	Eielson Array	122.97	331	PKP	PKPdf	11 33 33.9	-1.2
	comp=Z,1.0nm,1.0s,baz=182,slow=2.0,SNR=6.0						
CLL	Collm	123.60	49	i PKiKP	PKiKP	11 33 37.5	+0.6
	comp=Z,11nm,1.5s						
CLL				LmV		12 24 00.0	
	comp=Z,300nm,19.4s						
CLL	Collm	123.60	49	eP	Pdif	11 30 07.0	-2.4
CLL				i		11 33 37.5	
CLL				pmax	pmax		
	comp=Z,11nm,1.5s						
BRG	Berggiesshubel	123.86	50	ePKP	PKiKP	11 33 38.5	+1.0
	comp=Z,16nm,1.8s						
VYHS	Vyhne	125.30	54	ePKIKP	PKPdf	11 33 39.9	-0.2
VYHS				e		11 33 45.7	
VYHS	Vyhne	125.30	54	ePKP	PKPdf	11 33 39.9	-0.2
VYHS				e		11 33 45.7	
TOLK	Toolik Lake Re	126.12	334		PKPdf	11 33 40.7	-0.4
TOLK	Toolik Lake Re	126.12	334	P	PKiKP	11 33 41.6	+0.1
	baz=124						
NOA	NORSAR Array B	127.69	38	PKP	PKiKP	11 33 44.7	-0.1
	comp=Z,2.4nm,0.9s,baz=236,slow=2.0,SNR=2.6						
NOA	NORSAR Array B	127.69	38	ePKIKP	PKiKP	11 33 49.5	+4.7
NOA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MLR	Muntele Rosu	127.95	61		PKPdf	11 33 44.8	-0.6
MLR	Muntele Rosu	127.95	61	PKIKP	PKPdf	11 33 44.8	-0.6
BUR08	Bucovina Ar. S	128.56	58		PKiKP	11 33 47.4	+0.3
BRTR	Keskin Array B	129.93	71	PKP	PKPdf	11 33 49.0	-0.4
	comp=Z,1.4nm,0.9s,baz=188,slow=3.7,SNR=7.4						
GAMB	Gambell	131.87	324		PKPdf	11 33 51.7	-0.3
AKASG	Malin Array Be	132.30	56	PKP	PKPdf	11 33 52.5	-0.8
	comp=Z,0.2nm,0.4s,baz=264,slow=1.8,SNR=5.6						
KIV	Kislovodsk	137.87	70	ePKIKP	PKPdf	11 34 03.5	-0.6
KIV				pmax	pmax		
	comp=Z,31nm,1.1s						
KBZ	Khabaz	137.91	70	PKP	PKPdf	11 34 02.9	-1.0
	comp=Z,1.2nm,0.9s,baz=252,slow=3.2,SNR=3.5						
OBN	Obninsk	138.00	52⇑	ePKIKP	PKiKP	11 34 05.3	-0.4
OBN				e		11 36 56.4	
OBN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KLMR	Klimovskoe	140.71	44	ePKHKP	PKPpre	11 33 58.3	
KLMR				pmax	pmax		
	comp=Z,45nm,1.6s						
KLMR	Klimovskoe	140.71	44	ePKPdf	PKPpre	11 33 58.4	
KLMR				AMP		11 34 11.6	
	comp=Z,45nm,1.6s						
BILL	Bilibino	141.43	328		PKPdf	11 34 09.7	+0.1
BILL	Bilibino	141.43	328	ePKIKP	PKPdf	11 34 09.5	-0.1
BILL				pmax	pmax		
	comp=Z,6.0nm,1.2s						
PRGR	Permogore	143.71	43	ePKHKP	PKPpre	11 34 07.2	
PRGR				pmax	pmax		
	comp=Z,68nm,0.9s						
PETK	Petropavlovsk-	144.68	302	PKP	PKPab	11 34 14.7	+0.1
	comp=Z,7.2nm,1.1s,baz=75,slow=11,SNR=3.8						
HYB	Hyderabad	144.98	136	i PKP	PKPab	11 34 16.0	-0.8
HYB				e		11 34 21.5	
TGY	Tagaytay City	145.10	211	PKPbc	PKPbc	11 34 16.2	-1.0
	comp=Z,76nm,0.4s,baz=110,slow=6.6,SNR=3.5						
GEYT	Alibeck	145.78	87	PKPbc	PKPdf	11 34 18.4	+0.1

	comp=Z,10nm,1.0s,baz=264,slow=2.7,SNR=29						
GYA0B	ALIBECK ARRAY	145.78	87		PKPbc	11 34 18.8	-0.1
DLV	T Lat	145.99	189		PKPdf	11 34 19.5	0.0
HRA	Herat	146.89	95		PKPdf	11 34 20.2	-0.3
SEY	Seymchan	147.69	320	PKPbc	PKPbc	11 34 22.9	-0.5
	comp=Z,22nm,1.1s,baz=81,slow=4.6,SNR=20						
SEY	Seymchan	147.69	320	*i* PKP2	PKPbc	11 34 22.3	-1.2
MA2	Magadan	148.87	314	PKPbc	PKiKP	11 34 28.3	+0.4
	comp=Z,9.3nm,0.8s,baz=52,slow=5.0,SNR=6.9						
UBPT	Khong Chiam	149.54	184		PKPbc	11 34 29.0	-0.6
AKTO	Aktyubinsk	149.74	65	PKP2	PKPbc	11 34 27.8	-1.3
ARU	Arti	150.44	53	PKPbc	PKPbc	11 34 30.3	-0.3
	comp=Z,11nm,1.1s,baz=250,slow=2.8,SNR=32						
ARU	Arti	150.44	53		PKPbc	11 34 30.1	-0.5
ARU	Arti	150.44	53	*i* PKIKP	PKPbc	11 34 30.5	-0.1
ARU						11 38 02.8	
AB31	Akbulak array	150.78	67	*i* PKIKP	PKPbc	11 34 30.6	-1.0
ABKAR	Akbulak array	150.78	67		PKPdf	11 34 25.2	-0.8
ABKAR				PKPbc	PKPbc	11 34 31.1	-0.5
PBKT	Sadao Pong	150.80	175		PKPbc	11 34 32.0	-0.6
TIXI	Tiksi	151.36	343	PKPbc	PKPbc	11 34 30.4	-1.9
	comp=Z,12nm,1.2s,baz=44,slow=3.2,SNR=15						
TIXI	Tiksi	151.36	343		PKPbc	11 34 30.8	-1.5
TIXI	Tiksi	151.36	343	PKIKP	PKPbc	11 34 30.8	-1.5
SVE	Sverdlovsk	151.56	52	*e*PKIKP	PKPbc	11 34 32.9	-0.3
SVE				pmax	pmax		
	comp=Z,26nm,1.8s						
MJAR	Matsushiro Arr	152.37	263	PKPbc	PKPbc	11 34 34.1	-1.6
	comp=Z,6.1nm,1.2s,baz=163,slow=1.3,SNR=6.9						
MJAR				PKPab	PKPab	11 34 45.7	-0.3
	comp=Z,9.2nm,1.1s,baz=154,slow=3.9,SNR=6.9						
MAT	Matsushiro	152.38	263	PKP	PKPbc	11 34 35.4	-0.3
CM31	Chiang Mai Arr	152.50	171	PKPdf	PKPdf	11 34 29.3	-0.3
CM31					pPKPdf	11 34 36.3	-0.1
CMAR	Chiang Mai Arr	152.50	171	PKP	PKPdf	11 34 29.1	-0.5
	comp=Z,0.4nm,0.4s,baz=242,slow=2.5,SNR=8.1						
CMAR				PKPbc	pPKPdf	11 34 35.5	-1.0
	comp=Z,5.6nm,1.0s,baz=220,slow=3.5,SNR=19						
CHTO	Chiang Mai	152.85	171		PKPdf	11 34 29.2	-1.0
CHTO					PKPbc	11 34 36.8	-0.5
CHTO	Chiang Mai	152.85	171	PKIKP	PKPbc	11 34 36.8	-0.5
CHGR	Chuyangaron	153.83	94	PKPdf	PKPdf	11 34 30.5	-0.6
NIL	Nilore	154.02	107	PKPdf	PKPdf	11 34 30.9	-0.5
NIL					pPKPdf	11 34 37.1	-1.1
NIL	Nilore	154.02	107	PKIKP	PKPdf	11 34 30.9	-0.5
NIL						11 34 37.1	
GAR	Garm	154.80	94		PKPdf	11 34 31.7	-0.7
GAR				PKPab	PKPab	11 34 56.7	+0.4
SLVN	Son La	155.60	181		PKPab	11 34 59.2	-0.7
BRVK	Borovoye	157.44	59		PKPdf	11 34 35.0	-0.3
BRVK	Borovoye	157.44	59	PKIKP	PKPdf	11 34 35.0	-0.3
BVAR	Borovoye Array	157.51	59	PKP	PKPdf	11 34 35.4	+0.1
	comp=Z,1.7nm,1.0s,baz=316,slow=4.1,SNR=6.5						
KSH	Kashi	158.96	98	PKP	PKPdf	11 34 37.9	+0.1
KSH				PP	PP	11 38 57.8	+2.2
KSH				SKS	SKSdf	11 41 42.6	+0.8
KSH				SKKS	SKKSac	11 45 44.5	+1.9
KSH				AMB	AMB		
	comp=Z,380nm,5.1s						
KSH				LR	LR		
	comp=Z,190nm,13.0s						
KSH				LR	LR		
	comp=Z,300nm,12.6s						
KSH				LR	LR		
	comp=Z,320nm,21.9s						
AAK	Ala-Archa	159.12	88	PKP	PKPdf	11 34 38.3	+0.4
	comp=Z,1.6nm,0.8s,baz=149,slow=4.9,SNR=4.0						
AAK				PKPab	PKPab	11 35 15.2	+0.3
	comp=Z,2.7nm,0.8s,baz=239,slow=11,SNR=4.3						
KMI	Kunming	159.38	178	PKP	PKPdf	11 34 36.9	-1.9
KSRS	Korea Array	159.90	254	PKPab	PKPab	11 35 19.2	+1.1
	comp=Z,2.6nm,1.1s,baz=134,slow=7.2,SNR=4.4						
GYA	Guiyang	160.53	189	*e*PKPbc	PKPdf	11 34 45.7	+5.8
GYA				PKPab	sPKPab	11 35 47.9	+18
GYA				PP	PP	11 39 35.7	+33
KLR	Kul'dur	160.57	290	PKP	PKPdf	11 34 37.5	-1.6
	comp=Z,1.3nm,0.8s,baz=299,slow=3.5,SNR=2.4						
NJ2	Nanjing	161.79	227	*e*PKP	PKPdf	11 34 40.4	-0.5
KURBB	Kurchatov Arra	162.79	65	PKP	PKPdf	11 34 40.5	-0.8
	comp=Z,0.5nm,0.3s,baz=298,slow=1.4,SNR=13						
KURBB				PKPab	PKPab	11 35 30.2	-0.2
	comp=Z,3.6nm,1.0s,baz=282,slow=5.6,SNR=9.0						
KURBB				PP	PP	11 39 15.7	-0.1
	comp=Z,0.3nm,0.4s,baz=281,slow=6.0,SNR=5.6						
KURK	Kurchatov	162.84	64		PKPdf	11 34 40.8	-0.5
KURK					PKPab	11 35 30.3	-0.4
KURK	Kurchatov	162.84	64	PKIKP	PKPdf	11 34 40.8	-0.5
KURK						11 35 30.3	
CD2	Chengdu	165.14	181	PKP	PKPdf	11 34 42.9	-1.3
MKAR	Makanchi Array	165.40	78	PKP	PKPdf	11 34 43.0	-0.9
	comp=Z,1.3nm,0.8s,baz=226,slow=22,SNR=6.3						
MKAR				PKPab	PKPab	11 35 40.7	-1.4
	comp=Z,1.2nm,0.8s,baz=258,slow=5.8,SNR=5.8						
MKAR				PP	PP	11 39 30.7	+0.9
	comp=Z,2.3nm,1.1s,baz=272,slow=4.2,SNR=7.2						
ZALV	Zalesovo Beam	165.55	49	PKP	PKPdf	11 34 42.0	-1.7
	comp=Z,8.9nm,1.2s,baz=252,slow=3.0,SNR=17						
ZALV				PKPab	PKPab	11 35 41.4	-1.1
	comp=Z,2.3nm,1.1s,baz=296,slow=4.6,SNR=3.0						
XAN	Xi'an	167.52	202	P	PKPab	11 35 56.7	+5.1
XAN				pP	sPKPab	11 36 14.7	+14
WMQ	Urumqi	168.69	94	*e*PKP	PKPdf	11 34 46.8	+0.3
WMQ				AMB	AMB		
	comp=Z,220nm,8.5s						
HHC	Hu-ho-hao-te	172.25	233	*e*PKP	PKPdf	11 34 49.3	+0.7
HHC				LR	LR		
	comp=Z,1μm,21.3s						
HHC				LR	LR		
	comp=Z,1μm,20.1s						
HHC				LR	LR		
	comp=Z,1μm,20.4s						
GTA	Gaotai	173.11	156	*e*PKP	PKPdf	11 34 48.8	-0.2
GTA				pPKP	pPKPdf	11 34 54.4	-1.4
GTA				sPKP		11 34 57.5	
TLY	Talaya	174.10	358	PKP	PKPdf	11 34 48.1	-0.7
	comp=Z,0.5nm,0.4s,baz=180,slow=3.4,SNR=2.4						
TLY				PKPab	PKPab	11 36 21.3	+1.0
	comp=Z,1.1nm,0.6s,baz=350,slow=2.5,SNR=2.7						
TLY	Talaya	174.10	358		PKPdf	11 34 46.8	-2.0
TLY					PKPab	11 36 20.8	+0.5
TLY	Talaya	174.10	358	PKIKP	PKPdf	11 34 46.8	-2.0
ULN	Ulaanbaatar	176.72	311		PKPdf	11 34 48.0	-1.8
ULN	Ulaanbaatar	176.72	311	PKIKP	PKPdf	11 34 48.0	-1.8
SONM	Songino Array	177.08	316	PKP	PKPdf	11 34 48.1	-1.7
	comp=Z,1.4nm,1.1s,baz=252,slow=0.9,SNR=8.7						
SONM				PKPab	PKPab	11 36 33.2	-0.8
	comp=Z,0.9nm,1.0s,baz=124,slow=3.9,SNR=5.2						
SONM				PP	PP	11 40 27.5	+0.2
	comp=Z,0.5nm,1.0s,baz=292,slow=0.8,SNR=3.5						

IDC 02 11:19:46.7±1.8**, 0°.78N×126°.81E, h0km, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.3**/54**, mbtmp3.5**/4**, Error ellipse: s-maj=178.2km s-min=22.1km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.88	161	P	P	11 24 41.0	-0.3
	1.0nm,0.8s,baz=339,slow=11,SNR=6.2						
ASAR	Alice Springs	25.26	165	P	P	11 25 15.0	+0.2
	1.2nm,0.9s,baz=346,slow=10,SNR=11						
MKAR	Makanchi Array	60.02	326	P	P	11 29 56.6	+1.3
	0.3nm,0.7s,baz=119,slow=5.1,SNR=3.5						
KURBB	Kurchatov Arra	64.26	328	P	P	11 30 22.7	-1.0
	0.6nm,0.7s,baz=126,slow=6.2,SNR=7.0						

WEL 02 11:25:59.4, 37°S±8°**×17°9E**±°**, h33km, ML3.6**/13**, MLv3.4**/13**, Error ellipse: s-maj=0.0km s-min=0.0km az=59.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	0.69	234	P	Pn	11 26 11.8	-0.9
MXZ				S	Sn	11 26 20.4	-1.8
WMGZ	Waiomatatini S	0.81	215	P	Pb	11 26 15.1	+0.1
WMGZ				S	Sb	11 26 26.0	+0.3
PKGZ	Pakihiroa	1.04	225	P	Pn	11 26 18.2	+0.6
PKGZ				S	Sb	11 26 31.7	-0.4
PUZ	Puketiti	1.09	213	P	Pn	11 26 18.7	+0.4
PUZ				S	Sb	11 26 33.2	-0.4
HAZ	Te Kaha	1.14	238	P	Pn	11 26 18.8	-0.2
HAZ				S	Sb	11 26 34.7	-0.4
TWGZ	Tauwhareparae	1.30	218	P	Pn	11 26 22.1	+0.9
TWGZ				S	Sb	11 26 39.5	-0.2
RUGZ	Raukumara Rang	1.33	232	P	Pb	11 26 22.9	-0.9
RUGZ				S	Sb	11 26 39.7	-0.8
CNGZ	Carnagh Statio	1.47	205	P	Pn	11 26 24.4	+0.9
TKGZ	Te Karaka	1.57	215	P	Pn	11 26 25.1	+0.2
TKGZ				S	Sn	11 26 44.8	+0.7
MWZ	Matawai	1.66	225	P	Pn	11 26 26.8	+0.7
MWZ				S	Sn	11 26 46.2	-0.1
WHRZ	Whale Island	1.76	246	P	Pn	11 26 29.0	+1.6
WHRZ				S	Sb	11 26 50.9	-1.8
RIGZ	Rimuhau	1.83	212	P	Pn	11 26 28.7	+0.2
RAGZ	Rawiri	1.83	223	P	Pn	11 26 29.7	+1.1
RAGZ				S	Sn	11 26 51.5	+0.8
URZ	Urewera	1.86	233	P	Pn	11 26 29.9	+1.0
PRGZ	Paritu Road	1.97	206	P	Pn	11 26 30.4	-0.1
MARZ	Manawahe	2.03	245	P	Pn	11 26 32.3	+1.1
EDRZ	Edgecumbe	2.03	242	P	Pn	11 26 32.5	+1.2
OPRZ	Ohinepanea	2.06	250	P	Pn	11 26 32.3	+0.6
SNGZ	Shannon Statio	2.09	219	P	Pn	11 26 32.3	+0.2
RTZ	Ruatahuna	2.16	227	P	Pn	11 26 34.3	+1.2
MHGZ	Mahia Peninsul	2.17	203	P	Pn	11 26 33.0	-0.1
MUGZ	Murupara	2.21	233	P	Pn	11 26 34.2	+0.6
TARZ	Mount Tarawera	2.25	241	P	Pn	11 26 36.1	+1.7
TGRZ	Tauranga	2.26	255	P	Pn	11 26 35.2	+0.8
OMRZ	Omania	2.29	245	P	Pn	11 26 36.5	+1.6
KARZ	Kaharoa	2.35	248	P	Pn	11 26 36.7	+1.0
MTHZ	Maungataniwha	2.40	225	P	Pn	11 26 37.3	+0.9
PRRZ	Plateau Road	2.46	236	P	Pn	11 26 38.5	+1.3
HSRZ	Hossack Road	2.47	241	P	Pn	11 26 39.8	+2.5
ALRZ	Allen Road	2.53	236	P	Pn	11 26 39.5	+1.4
NMHZ	Naumai	2.60	221	P	Pn	11 26 39.9	+0.8
ARHZ	Aropaoanui	2.63	216	P	Pn	11 26 39.6	+0.2
MRHZ	Matea Rd	2.64	230	P	Pn	11 26 40.2	+0.5
KUZ	Kuaotunu	2.66	278	P	Pn	11 26 40.1	+0.2
BKZ	Black Stump Fm	2.82	224	P	Pn	11 26 42.1	0.0
TOZ	Tahuroa Road	2.85	257	P	Pn	11 26 43.1	+0.7
HATZ	Hinemaiaia	2.88	232	P	Pn	11 26 43.4	+0.5
GRZ	Great Barrier	2.99	287	P	Pn	11 26 46.5	+2.1
KWHZ	Kaweka Forest	3.04	221	P	Pn	11 26 44.8	-0.3
MKAZ	Moumakai	3.07	270	P	Pn	11 26 46.1	+0.6
KAHZ	Kahuranaki	3.12	212	P	Pn	11 26 44.9	-1.3
WIAZ	Waiheke Island	3.12	276	P	Pn	11 26 47.0	+0.8
KRHZ	Kereru	3.23	219	P	Pn	11 26 46.8	-1.0
ETAZ	East Tamaki Re	3.27	272	P	Pn	11 26 49.6	+1.4
BHHZ	Black Hill Sta	3.28	224	P	Pn	11 26 48.3	-0.1
KRVZ	Karewarewa	3.28	233	P	Pn	11 26 49.2	+0.7
MBAZ	Motutapu North	3.31	276	P	Pn	11 26 50.5	+1.7
WTVZ	West Tongariro	3.33	233	P	Pn	11 26 49.9	+0.8
NGZ	Ngauruhoe	3.35	232	P	Pn	11 26 50.0	+0.4
TUVZ	Tukino	3.38	230	P	Pn	11 26 50.4	+0.5
ABAZ	Army Bay	3.39	278	P	Pn	11 26 52.3	+2.4
TWVZ	Taurewa	3.40	235	P	Pn	11 26 51.4	+1.2
MOVZ	Moawhango	3.40	228	P	Pn	11 26 50.2	0.0
EPAZ	Eden Park BICE	3.42	273	P	Pn	11 26 52.9	+2.6
HBAZ	Herne Bay Bore	3.44	274	P	Pn	11 26 53.2	+2.7
AWAZ	Awhitu Peninsu	3.49	270	P	Pn	11 26 52.7	+1.5
HIZ	Hauiti	3.55	246	P	Pn	11 26 54.1	+1.9
MTVZ	Mangateitei	3.56	230	P	Pn	11 26 52.9	+0.6
VRZ	Vera Road	3.88	238	P	Pn	11 26 58.1	+1.5
WCZ	Waipu Caves	3.94	287	P	Pn	11 26 59.2	+1.7
WAZ	Wanganui	4.08	229	P	Pn	11 27 00.1	+0.6
KHEZ	Kahui Hut	4.47	240	P	Pn	11 27 07.6	+2.8
OUZ	Omahuta	4.78	292	P	Pn	11 27 11.2	+2.1
QRZ	Quartz Range	6.23	232	P	Pn	11 27 27.3	-1.7

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*NEIC **02** 11:33:04.4±2.4, 23°.36N±0°.05×122°.49E±0°.05, h25km±5km, mb4.4/35, ML4.8(TAP), Error ellipse: s-maj=8.0km s-min=4.4km az=141.0*

*TAP **02** 11:33:05.9, 23°.43N×122°.45E, h50km, ML4.6, D*

*JMA **02** 11:33:05.1±0.2, 23°.41N×122°.42E, h38km, M4.1*

*BJI **02** 11:33:06.4±0.0, 23°.48N×122°.51E, h32km, mB4.4/4, mb4.3/17, ML3.8/1, Ms3.8/1, Ms7 3.6/2*

*IDC **02** 11:33:35.5±4.6, 24°.60N×122°.13E, h253km±46km, mb3.4/20, mb1 3.5/20, mb1mx3.4/47, mbtmp4.0/20, Error ellipse: s-maj=20.0km s-min=9.8km az=68.0*

ISC 02 11:33:03.7±0.4**, 23°.40N**±0°.02×**122°.47E**±0°.02**, h21**km±3km**, n241,** σ1ˢ.09/360**, mb4.3**/42**, 3C-66D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENLB	Shoufeng	0.94	303	*e*P	Pb	11 33 21.1	-0.3
	baz=309						
ENLB				*e*S	Sb	11 33 32.9	-0.5
	baz=309						
HGSD	Ruisui	0.96	276	⇓P	Pn	11 33 22.0	-0.1
	baz=274						
HGSD				*e*S	Sb	11 33 33.6	-0.4
	baz=274						
HWA	Hwalien	0.98	306	P	Pn	11 33 22.5	+0.2
	baz=298						
HWA				*e*S	Sn	11 33 35.2	-0.4
	baz=298						
EGFH	Guangfu	0.99	286	⇓*e*P	Pn	11 33 22.8	+0.3
	baz=284						
EGFH				*e*S	Sb	11 33 35.0	+0.1
	baz=284						
ESL	Shilin	1.04	294	⇓*i*P	Pb	11 33 22.9	-0.1
	baz=285						
ESL				*e*S	Sb	11 33 35.4	-0.7
	baz=285						
TWD	Chiawan	1.05	311	⇓*i*P	Pn	11 33 23.4	+0.1
	baz=310						
TWD				S	Sb	11 33 35.7	-0.8
	baz=310						
CHKT	Chengkung	1.05	254	⇓*i*P	Pb	11 33 23.2	-0.1
	baz=246						
CHKT				*e*S	Sb	11 33 35.5	-1.2
	baz=246						
EHY	Hungye	1.06	276	⇓*i*P	Pn	11 33 23.7	+0.3
	baz=281						
EHY				*e*S	Sb	11 33 36.6	-0.2
	baz=281						
YULB	Yu-li	1.07	270	⇓P	Pn	11 33 23.8	+0.2
	baz=268						
YULB				S	Sb	11 33 37.2	0.0
	baz=268						
YULB	Yu-li	1.07	270		Pn	11 33 23.9	+0.2
YULB					Sn	11 33 37.6	-0.3
TWF1	Yuli	1.08	268	⇓*i*P	Pn	11 33 23.9	+0.3
	baz=266						
TWF1				*i* S	Sb	11 33 37.4	+0.1
	baz=266						
FULB	Fuli	1.10	260	⇓*i*P	Pn	11 33 23.8	-0.1
	baz=251						
FULB				*e*S	Sb	11 33 36.8	-1.1
	baz=251						
NACB	Ninganchiao	1.11	314	⇓P	Pn	11 33 24.1	0.0
	baz=306						
NACB				S	Sb	11 33 37.0	-1.4
	baz=306						
NACB	Ninganchiao	1.11	314		Pn	11 33 24.0	-0.1
NACB				Sn	Sb	11 33 37.3	-1.0
JYNG	Yonagunijimaku	1.14	23	P	Pb	11 33 25.6	+0.9
JYNG				S	Sn	11 33 39.8	+0.3
TWH	Lutao	1.14	233	⇓P	Pn	11 33 24.6	+0.2
	baz=235						
TWH				*e*S	Sb	11 33 37.5	-1.6
	baz=235						
YOJ	Yonaguni jima	1.17	25	P	Pb	11 33 26.1	+0.9
	baz=26						
YOJ				S	Sn	11 33 40.2	-0.1
	baz=26						
YOJ	Yonaguni jima	1.17	25	P	Pb	11 33 26.3	+1.0
YOJ				S	Sn	11 33 40.9	+0.6
YOJ	Yonaguni jima	1.17	25		Pb	11 33 26.2	+0.9
YOJ				Sn	Sn	11 33 40.9	+0.6
EOS1	EOS1	1.19	345	*e*P	Pb	11 33 26.1	+0.5
	baz=337						
EOS1				*e*S	Sn	11 33 41.0	+0.3
	baz=337						
ETLH	Xiulin Townshi	1.21	312	⇓*e*P	Pb	11 33 25.8	-0.3
	baz=302						
ETLH				*e*S	Sb	11 33 40.5	-0.7
	baz=302						
ENA	Nanau	1.22	327	*e*P	Pb	11 33 26.4	+0.2
	baz=319						
ENA				*e*S	Sb	11 33 41.4	-0.2
	baz=319						
VWDT	VWDT	1.27	287	⇓P	Pb	11 33 27.2	+0.3
	baz=285						
VWDT				S	Sn	11 33 42.1	-0.5
	baz=285						
OWD	Renai	1.31	295	⇓*i*P	Pb	11 33 27.6	-0.1
	baz=294						
OWD				*e*S	Sn	11 33 42.8	-1.0
	baz=294						
WHF	Hehuan Shan	1.33	304	⇓*i*P	Pn	11 33 27.8	+0.2
	baz=293						
WHF				S	Sn	11 33 43.3	-1.5
	baz=293						
TWC	Suao	1.33	335	⇓*e*P	Pb	11 33 28.0	0.0
	baz=343						
TWC				*e*S	Sn	11 33 43.1	-1.2
	baz=343						
ELDTW	Lidau	1.35	261	⇓*i*P	Pn	11 33 27.7	+0.2
	baz=252						
ELDTW				*e*S	Sn	11 33 42.9	-1.9
	baz=252						
CHGB	Renai	1.36	299	⇓P	Pb	11 33 28.4	-0.2
	baz=298						
CHGB				S	Sn	11 33 44.0	-1.2
	baz=298						
TTN	Taitung	1.37	243	*e*P	Pb	11 33 28.3	-0.4
	baz=241						
TTN				S	Sn	11 33 45.0	-0.3
	baz=241						
HATJ	Hateruma jima	1.39	62	P	Pb	11 33 29.1	+0.1
HATJ				S	Sb	11 33 46.1	-0.2
YUS	Yu-Shan	1.40	274	⇓*i*P	Pb	11 33 29.4	0.0
	baz=272						
YUS				S	Sn	11 33 45.7	-0.8
	baz=272						
TWGBT	Beinan	1.40	246	*e*P	Pn	11 33 28.3	+0.2
	baz=244						
TWGBT				S	Sn	11 33 45.3	-0.7
	baz=244						
TWG	Pinlang	1.41	246	*e*P	Pn	11 33 28.5	+0.4
	baz=244						
TWG				S	Sn	11 33 45.2	-0.9
	baz=244						
TWG	Pinlang	1.41	246		Pn	11 33 28.6	+0.4
TWG				Sn	Sn	11 33 45.2	-0.9
NNSB	Datong	1.43	316	⇓P	Pb	11 33 29.3	-0.5
	baz=307						
NNSB				*e*S	Sn	11 33 46.1	-0.8
	baz=307						
NNSH	Datong	1.43	316	⇓*e*P	Pb	11 33 29.4	-0.4
	baz=308						
NNSH				*e*S	Sn	11 33 45.9	-1.0
	baz=308						
SSLB	Suanglung	1.44	286	⇓P	Pb	11 33 29.4	-0.5
	baz=284						
SSLB	Suanglung	1.44	286		Pb	11 33 29.3	-0.6
SSLB				Sn	Sb	11 33 50.5	+2.6
NNS	Nan Shan	1.44	316	⇓P	Pb	11 33 29.4	-0.6
	baz=307						
NNS				S	Sn	11 33 46.6	-0.6
	baz=307						
TWT	Tachien	1.46	306	⇓P	Pb	11 33 30.2	-0.1
	baz=304						
TWT				*e*S	Sn	11 33 46.9	-0.7
	baz=304						
TDCB	Techi	1.47	306	⇓P	Pb	11 33 30.3	-0.2
	baz=304						
TDCB				S	Sn	11 33 47.3	-0.7
	baz=304						
NDT	Datong Townshi	1.48	324	⇓*e*P	Pb	11 33 30.4	-0.3
	baz=317						
NDT				*e*S	Sn	11 33 48.0	-0.1
	baz=317						
ENTT	Nioudou	1.49	327	⇓*i*P	Pb	11 33 30.2	-0.5
	baz=326						
IRIF	Iriomote-Funau	1.49	51	P	Pb	11 33 30.5	-0.2
IRIF				*e*S	Sb	11 33 48.7	-0.4
TWE	Neicheng	1.51	331	P	Pb	11 33 30.8	-0.2
	baz=331						
TWE				*e*S	Sb	11 33 49.2	-0.5
	baz=331						
WHYT	Xinyi Township	1.51	282	⇓P	Pb	11 33 31.1	0.0
	baz=275						
WHYT				*e*S	Sb	11 33 50.2	+0.3
	baz=275						
ILA	Ilan	1.51	334	*e*P	Pb	11 33 31.3	+0.2
	baz=334						
ILA				S	Sb	11 33 49.5	-0.4
	baz=334						
SMLT	Sun Moon Lake	1.52	289	⇓*i*P	Pb	11 33 30.9	-0.3
	baz=287						
SMLT				*e*S	Sn	11 33 49.3	+0.3
	baz=287						
ALS	Alishan	1.53	275	⇓P	Pb	11 33 31.6	0.0
	baz=279						
ALS				S	Sn	11 33 49.8	+0.2
	baz=279						
DPDB	Guoxing	1.55	294	⇓*i*P	Pb	11 33 31.6	-0.1
	baz=293						
DPDB				*e*S	Sn	11 33 50.0	+0.3
	baz=293						
SLBB	Yuanshan	1.55	331	*e*P	Pn	11 33 30.6	+0.4
	baz=322						
TYC	Yuchr	1.56	289	⇓P	Pb	11 33 31.5	-0.4
	baz=294						
TYC				*e*S	Sb	11 33 50.6	-0.6
	baz=294						
NTC	Toucheng	1.56	338	*e*P	Pb	11 33 31.9	-0.1
	baz=347						
NTC				*e*S	Sb	11 33 50.6	-0.7
	baz=347						
STYT	Tauyuan	1.59	262	⇓*i*P	Pb	11 33 31.8	-0.6
	baz=256						
STYT				S	Sn	11 33 50.0	-0.7
	baz=256						
LAY	Lan-yu	1.59	212	⇑P	Pn	11 33 30.5	-0.3
	baz=218						
ECL	Taimali	1.60	241	⇓*i*P	Pn	11 33 30.9	0.0
	baz=249						
ECL				*e*S	Sn	11 33 48.9	-2.1
	baz=249						
YHNB	Yeheng	1.61	322	⇓P	Pb	11 33 32.2	-0.7
	baz=311						
YHNB				S	Sn	11 33 50.6	-0.7
	baz=311						
YHNB	Yeheng	1.61	322		Pb	11 33 32.2	-0.7
YHNB				Sn	Sn	11 33 50.7	-0.6
NWLT	Wulai	1.63	328	*e*P	Pb	11 33 32.6	-0.6
	baz=316						
NWLT				*e*S	Sn	11 33 51.7	0.0
	baz=316						
JKRS	Kuro-shima	1.64	59	P	Pb	11 33 32.8	-0.5
JKRS				S	Sb	11 33 52.9	-0.7
WHP	Taichung City	1.65	303	⇓*e*P	Pb	11 33 33.1	-0.3
	baz=301						
WHP				*e*S	Sn	11 33 52.4	+0.2
	baz=301						
WJS	Zhushan	1.65	285	⇓*e*P	Pb	11 33 33.9	+0.4
	baz=283						
WJS				*e*S	Sb	11 33 54.6	+0.8
	baz=283						
CHN5	Tsauling	1.66	277	⇓P	Pb	11 33 33.8	+0.2
	baz=275						
CHN5				*e*S	Sb	11 33 54.8	+0.8
	baz=275						
TWB1	Santiao Chiao	1.66	345	P	Pb	11 33 32.7	-1.0
	baz=358						
TWB1				S	Sn	11 33 51.5	-0.9
	baz=358						
TIPB	Shuangxi	1.68	340	P	Pb	11 33 33.4	-0.5
	baz=347						
TIPB				S	Sn	11 33 52.4	-0.4
	baz=347						
TPUB	Ta-pu	1.69	267	⇓P	Pb	11 33 34.2	0.0
	baz=272						
TPUB				S	Sn	11 33 54.1	+0.9
	baz=272						
TPUB	Ta-pu	1.69	267		Pb	11 33 34.1	0.0
TPUB				Sn	Sb	11 33 54.2	-0.8
WNT	Mingjian	1.70	287	⇓P	Pb	11 33 34.8	+0.4
	baz=285						
WTP	Ta-pu	1.71	265	⇓*i*P	Pb	11 33 34.5	0.0
	baz=270						
WTP				S	Sb	11 33 55.5	-0.1
	baz=270						
CHN4	Tsaushan	1.72	269	⇓*i*P	Pb	11 33 34.9	+0.2
	baz=267						
CHN4				S	Sb	11 33 56.2	+0.3
	baz=267						
SLGT	Liugui	1.72	257	⇓P	Pb	11 33 34.2	-0.5
	baz=252						

SGST	Jiashian	1.76	260	⇓*i*P	Pn	11 33 34.2	+1.1
	baz=257						
SGST				S	Sn	11 33 55.7	+0.8
	baz=257						
TWA	Mucha	1.77	333	P	Pb	11 33 35.3	-0.2
	baz=333						
TWA				S	Sb	11 33 56.1	-1.2
	baz=333						
WGK	Gukeng	1.77	280	*e*P	Pb	11 33 35.6	+0.1
	baz=278						
WGK				*e*S	Sn	11 33 56.0	+0.9
	baz=278						
NHDH	Xindian Distri	1.78	331	*e*P	Pb	11 33 35.4	-0.3
	baz=331						
NHDH				*e*S	Sb	11 33 56.8	-0.8
	baz=331						
NWF	Wu-fen Shan	1.78	340	P	Pb	11 33 34.7	-1.0
	baz=352						
NWF				*e*S	Sn	11 33 55.3	-0.2
	baz=352						
WFSB	Wu-fen Shan	1.78	340	⇑P	Pb	11 33 34.9	-0.8
	baz=352						
WFSB				S	Sn	11 33 55.0	-0.4
	baz=352						
WDLH	Douliu	1.79	280	⇓*e*P	Pb	11 33 35.8	-0.1
	baz=278						
WDLH				*e*S	Sb	11 33 58.5	+0.6
	baz=278						
CHN1	Nanshi	1.79	264	⇓*i*P	Pb	11 33 36.0	+0.1
	baz=269						
CHN1				S	Sb	11 33 58.0	-0.1
	baz=269						
EAST	Anshuo	1.80	236	⇓P	Pn	11 33 34.0	+0.4
	baz=242						
EAST				*e*S	Sn	11 33 54.7	-1.2
	baz=242						
TCU	Taichung	1.80	295	*e*P	Pb	11 33 36.4	+0.3
	baz=293						
TCU				*e*S	Sb	11 33 58.4	+0.1
	baz=293						
TATO	Taipei	1.81	331	⇑P	Pb	11 33 35.6	-0.5
	baz=319						
TATO				S	Sn	11 33 56.4	+0.4
	baz=319						
TATO	Taipei	1.81	331		Pb	11 33 35.7	-0.4
TATO				Sn	Sn	11 33 56.7	+0.7
SSD	Sandimen	1.81	249	*e*P	Pn	11 33 34.6	+0.9
	baz=242						
JIJ	Ishigaki jima	1.81	58	P	Pn	11 33 34.5	+0.8
JIJ				*e*S	Sn	11 33 55.8	-0.3
LIOB	Emei	1.82	313	⇓P	Pb	11 33 36.4	0.0
	baz=312						
LIOB				S	Sn	11 33 57.2	+0.9
	baz=312						
NSTT	Nanjuang	1.82	313	⇓P	Pb	11 33 36.1	-0.2
	baz=312						
NSTT				S	Sn	11 33 56.7	+0.4
	baz=312						
SNST	Tainan City	1.82	265	⇓P	Pb	11 33 36.3	-0.1
	baz=272						
SNST				*e*S	Sb	11 33 58.9	+0.3
	baz=272						
TWK	Hsinying	1.82	266	⇓*i*P	Pb	11 33 36.2	-0.2
	baz=271						
TWK				S	Sb	11 33 59.4	+0.5
	baz=271						
WLTB	Daxi	1.83	323	*e*P	Pb	11 33 36.3	-0.2
	baz=314						
WLTB				*e*S	Sn	11 33 57.3	+0.9
	baz=314						
TAP1	Taipei	1.85	332	*e*P	Pn	11 33 35.3	+1.0
	baz=332						
TAP1				*e*S	Sn	11 33 57.6	+0.6
	baz=332						
TAP	Taipei	1.86	332	*e*P	Pb	11 33 36.2	-0.8
	baz=332						
TAP				*e*S	Sn	11 33 58.1	+0.9
	baz=332						
MASBT	Mashibuluo	1.86	246	⇓P	Pn	11 33 35.5	+1.1
	baz=240						
MASBT				*e*S	Sn	11 33 55.9	-1.4
	baz=240						
NSY	Sanyi	1.86	303	P	Pb	11 33 37.0	-0.1
	baz=302						
NSY				*e*S	Sb	11 33 58.9	-1.0
	baz=302						
WCHH	Zhanghua	1.88	292	*e*P	Pb	11 33 37.5	+0.2
	baz=299						
WCHH				*e*S	Sb	11 34 01.4	+1.0
	baz=299						
CHY	Chiayi	1.88	273	*e*P	Pb	11 33 37.0	-0.3
	baz=272						
CHY				*e*S	Sb	11 34 00.3	-0.1
	baz=272						
NMLH	Miaoli	1.91	307	*e*P	Pb	11 33 37.4	-0.4
	baz=295						
NMLH				*e*S	Sb	11 34 00.1	-1.2
	baz=295						
PTSB	Yuanli	1.92	303	*e*P	Pb	11 33 37.9	-0.2
	baz=302						
PTSB				*e*S	Sb	11 34 00.6	-1.0
	baz=302						
WDJ	Dajia District	1.92	300	⇓*i*P	Pb	11 33 37.8	-0.2
	baz=298						
WDJ				*e*S	Sb	11 34 00.8	-0.8
	baz=298						
YM01	YM01	1.93	335	*e*P	Pb	11 33 36.9	-1.3
	baz=335						
YM01				S	Sn	11 33 59.4	+0.4
	baz=335						
YM10	YM10	1.94	335	*e*P	Pb	11 33 37.1	-1.3
	baz=334						
YM10				S	Sn	11 33 59.5	+0.2
	baz=334						
SGLT	Jiouru	1.94	250	*e*P	Pb	11 33 38.1	-0.2
	baz=248						
SBCB	Hsinchu	1.94	316	*e*P	Pb	11 33 38.0	-0.5
	baz=315						
SBCB				*e*S	Sb	11 34 01.4	-0.8
	baz=315						
YM11	YM11	1.94	335	⇓P	Pb	11 33 37.1	-1.3
	baz=335						
YM11				*e*S	Sn	11 33 59.6	+0.1
	baz=335						
YM04	YM04	1.94	334	*e*P	Pb	11 33 37.2	-1.3
	baz=334						
YM04				S	Sn	11 33 59.7	+0.2
	baz=334						
TWS1	Kuangyinshan	1.95	331	*e*P	Pb	11 33 37.5	-1.0
	baz=340						
TWS1				S	Sn	11 34 00.8	+1.3
	baz=340						
NCUH	Zhongli	1.95	323	*e*P	Pb	11 33 37.7	-0.9
	baz=323						
NCUH				*e*S	Sb	11 34 01.4	-1.2
	baz=323						
NCU	National Centr	1.96	324	*e*P	Pb	11 33 37.6	-1.1
	baz=323						
NCU				*e*S	Sn	11 34 00.9	+1.3
	baz=323						
YM08	YM08	1.96	336	*e*P	Pn	11 33 37.1	+1.3
	baz=336						
YM08				*e*S	Sn	11 33 58.9	-0.8
	baz=336						
HSN	Hsinchu	1.96	316	*e*P	Pb	11 33 38.1	-0.6
	baz=316						
HSN				S	Sb	11 34 01.9	-0.8
	baz=316						
CHN3	Shinhua	1.96	261	*e*P	Pb	11 33 38.7	0.0
	baz=270						
CHN3				*e*S	Sb	11 34 04.7	+2.0
	baz=270						
TWM1	Shoushan	1.97	254	⇓*i*P	Pb	11 33 39.7	+0.8
	baz=252						
TWM1				*e*S	Sb	11 34 04.8	+1.8
	baz=252						
YM03	YM03	1.97	335	*e*P	Pn	11 33 37.3	+1.4
	baz=334						
YM03				*e*S	Sn	11 34 01.0	+1.0
	baz=334						
SSPT	Xinbi	1.97	243	*e*P	Pb	11 33 38.0	-1.0
	baz=241						
ANP	Anpu	1.98	334	*e*P	Pn	11 33 37.4	+1.2
	baz=334						
SCZT	Fangliau	1.98	239	*e*P	Pb	11 33 38.3	-0.8
	baz=241						
WLGB	Puzi	1.99	273	⇓P	Pb	11 33 38.7	-0.6
	baz=271						
WLGB				*e*S	Sb	11 34 02.8	-0.9
	baz=271						
RLNB	Erlin	2.00	285	*e*P	Pb	11 33 38.7	-0.6
	baz=275						
RLNB				*e*S	Sb	11 34 03.2	-0.5
	baz=275						
JISG	Ishigakijimahi	2.06	55	P	Pn	11 33 37.7	+0.5
JISG				*e*S	Sn	11 34 01.5	-0.8
SNJT	Kaohsiung City	2.06	252	*e*P	Pb	11 33 41.3	+0.8
	baz=251						
SNJT				*e*S	Sb	11 34 07.5	+1.8
	baz=251						
CHN8	Yiju	2.07	269	*e*P	Pb	11 33 39.8	-0.8
	baz=267						
CHN8				*e*S	Sb	11 34 05.1	-0.9
	baz=267						
WSF	Szhu	2.08	277	*e*P	Pb	11 33 39.1	-1.5
	baz=275						
WSF				*e*S	Sn	11 34 04.0	+1.4
	baz=275						
TSEB	Hengchuen, Pin	2.08	224	*e*P	Pn	11 33 38.8	+1.4
	baz=224						
TSEB				*e*S	Sn	11 34 03.9	+1.3
	baz=224						
TAI1	Yung-k'ang	2.09	261	*e*P	Pb	11 33 40.0	-0.9
	baz=271						
WMLT	Mailiao	2.10	282	*e*P	Pb	11 33 40.0	-1.1
	baz=280						
SCLT	Jiali	2.10	264	*e*P	Pb	11 33 40.2	-0.9
	baz=273						
SCLT				*e*S	Sn	11 34 05.0	+1.8
	baz=273						
TWKBT	Hengchun	2.11	227	*e*P	Pn	11 33 39.3	+1.5
	baz=217						
TWKBT				*e*S	Sn	11 34 03.6	+0.2
	baz=217						
TWK1	Hengchun	2.11	227	*e*P	Pn	11 33 39.6	+1.8
	baz=226						
HEN	Hengchun	2.11	229	*e*P	Pb	11 33 39.7	-1.6
	baz=228						
KAU	Kaohsiung	2.15	248	*e*P	Pb	11 33 41.4	-0.6
	baz=246						
WSSB	Gushan	2.17	250	*e*P	Pb	11 33 41.8	-0.4
	baz=261						
WSSB				*e*S	Sb	11 34 08.7	0.0
	baz=261						
WLCH	Liuqiu	2.19	242	*e*P	Pb	11 33 42.0	-0.7
	baz=238						
JTJ	Tarama	2.39	58	P	Pn	11 33 43.0	+1.3
JTJ				*e*S	Sn	11 34 11.0	+0.6
WDGT	Dungji	2.58	268	⇓P	Pn	11 33 46.0	+1.6
	baz=266						
WDGT				S	Sn	11 34 14.1	-1.0
	baz=266						
PHUB	P'eng-hu	2.66	273	⇓P	Pn	11 33 47.1	+1.6
	baz=261						
PHUB				S	Sn	11 34 17.1	0.0
	baz=261						
PNG	Penghu	2.68	274	⇓P	Pn	11 33 47.4	+1.7
	baz=272						
PNG				*e*S	Sn	11 34 18.1	+0.6
	baz=272						
VCHM	Qimei	2.80	267	*e*P	Pn	11 33 48.5	+1.2
	baz=265						
JMJ	Miyako jima 2	2.94	61	P	Pn	11 33 50.6	+1.3
	baz=62						
JMJ				S	Sn	11 34 23.6	-0.4
	baz=62						
VWUC	VWUC	3.18	301	⇓P	Pn	11 33 53.3	+0.7
	baz=298						
VWUC				*e*S	Sn	11 34 27.5	-2.4
	baz=298						
PTTC	Pingtan	3.23	311	⇓*e*P	Pn	11 33 53.7	+0.5
	baz=298						
PTTC				*e*S	Sn	11 34 28.9	-2.2
	baz=298						
PTMZ	Houxiangcun	3.47	299	⇓P	Pn	11 33 57.3	+0.8
	baz=296						
PTMZ				*e*S	Sn	11 34 34.2	-2.7
	baz=296						
MATB	Ma-tsu	3.58	321	*e*P	Pn	11 33 58.6	+0.6
	baz=319						
KNM	Kinmen	3.83	286	⇓*e*P	Pn	11 34 04.0	+2.5
	baz=283						
QZH	Quanzhou	3.86	294	⇓*i*Pn	Pn	11 34 02.7	+0.8
QZH				Sn	Sn	11 34 44.1	-2.6
KNMB	Chin-men Tao	3.88	287	⇓*e*P	Pn	11 34 03.1	+0.9
	baz=284						
KNMB	Chin-men Tao	3.88	287		Pn	11 34 02.9	+0.7
KNMB				Sn	Sn	11 34 46.1	-1.1
LYJJ	Jianjiangzhen	3.99	323	*e*P	Pn	11 34 04.5	+0.8
	baz=321						
XPSS	Dashiqiu	4.08	330	*e*P	Pn	11 34 05.0	+0.1
	baz=330						
MHZQ	Yeshan	4.12	311	*e*P	Pn	11 34 06.0	+0.5
	baz=299						
ZPLA	Ao Xicun	4.36	278	*e*P	Pn	11 34 09.7	+1.0
	baz=276						
ZZJH	Jiuhuzhen	4.55	285	⇓*e*P	Pn	11 34 12.3	+0.8
	baz=281						
JOW	Kunigami	6.28	56	Pn	Pn	11 34 34.1	-1.0
HKPS	Hong Kong Po S	7.76	263	Pn	Pn	11 34 58.0	+2.4
KSRS	Korea Array	14.78	17	P	Pn	11 36 33.5	+2.1
	0.3nm,0.3s,baz=198,slow=11,SNR=8.6						
KSRS	Korea Array	14.78	17		Pn	11 36 33.5	+2.1
KMI	Kunming	18.07	279	P	P	11 37 15.8	+1.6
KMI				pP	pwP	11 37 26.4	+1.5
KMI				pmax	pmax		
	comp=Z,17nm,1.1s						
HHC	Hu-ho-hao-te	19.67	335	*e*P	Pn	11 37 35.7	+2.7
LZH	Lanzhou	20.48	312	*e*P	P	11 37 41.5	+1.0
LZH				pP	sP	11 37 48.6	+1.1
LZH				sP	pwP	11 37 52.7	+1.8
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
CN2	Changchun	20.50	6	*e*P	Pn	11 37 41.9	-0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CMAR	Chiang Mai Arr	22.50	262	P	P	11 38 07.3	+5.1
	0.3nm,0.4s,baz=81,slow=8.7,SNR=4.3						
CMAR	Chiang Mai Arr	22.50	262	P	P	11 38 07.3	+5.1
ASAJ	Asahikawa	26.46	34	P	P	11 38 37.2	-2.1
	3.5nm,0.7s,baz=231,slow=6.5,SNR=5.4						
JKA	Kamikawa-asahi	26.46	34	P	P	11 38 37.2	-2.1
KLR	Kul'dur	26.80	14	P	P	11 38 41.8	-0.6
	0.8nm,0.6s,baz=213,slow=11,SNR=5.3						
KLR	Kul'dur	26.80	14	P	P	11 38 41.8	-0.6
ULN	Ulaanbaatar	27.34	337	P	P	11 38 47.5	+0.1
SONM	Songino Array	27.55	336	P	P	11 38 48.9	-0.4
	4.1nm,0.7s,baz=151,slow=10,SNR=34						
SONM	Songino Array	27.55	336	P	P	11 38 48.9	-0.4
TLY	Talaya	31.74	338	P	P	11 39 25.2	-1.1
	1.3nm,0.7s,baz=213,slow=4.1,SNR=3.3						
TLY	Talaya	31.74	338	P	P	11 39 25.5	-0.8
WMQ	Urumqi	35.05	314	*e*P	P	11 39 56.8	+1.6
MTN	Manton Dam	37.00	166	P	P	11 40 10.9	-1.2
MK31	Makanchi Array	39.72	316	P	P	11 40 34.9	+0.1
MKAR	Makanchi Array	39.72	316	P	P	11 40 33.9	-0.8
	0.9nm,0.5s,baz=100,slow=7.8,SNR=18						
MKAR				PcP	PcP	11 42 39.8	-1.3
	0.5nm,0.8s,baz=98,slow=4.6,SNR=3.5						
MKAR	Makanchi Array	39.72	316	P	P	11 40 33.9	-0.8
MAKZ	Makanchi	39.92	316	P	P	11 40 36.3	-0.1
H11N1	WAKE ISLAND Hy	41.36	86	T	T	12 26 20.1	
	baz=282,slow=75,SNR=4.2						
H11N2	WAKE ISLAND Hy	41.36	86	T	T	12 26 35.2	
	baz=282,slow=75,SNR=6.9						
H11N3	WAKE ISLAND Hy	41.38	86	T	T	12 26 35.7	
	baz=282,slow=75,SNR=5.4						
H11S3	WAKE ISLAND Hy	41.47	88	T	T	12 26 31.2	
	baz=284,slow=75,SNR=6.3						
H11S1	WAKE ISLAND Hy	41.48	88	T	T	12 26 30.7	
	baz=284,slow=75,SNR=6.6						
H11S2	WAKE ISLAND Hy	41.48	88	T	T	12 26 29.6	
	baz=284,slow=75,SNR=6.5						
ZAA0	Zalesovo Array	41.54	327	P	P	11 40 48.2	-1.4
ZALV	Zalesovo Beam	41.54	327	P	P	11 40 48.5	-1.1
	3.3nm,0.5s,baz=112,slow=7.9,SNR=16						
ZALV	Zalesovo Beam	41.54	327	P	P	11 40 48.5	-1.1
KSH	Kashi	42.31	304	P	P	11 41 00.3	+4.0
KSH				pP	pwP	11 41 10.1	+3.0
KSH				PP	PcP	11 42 43.1	-6.7
KSH				S	S	11 47 18.4	+2.1
KSH				ScS	ScS	11 50 58.0	+0.5
KSH				pmax	pmax		
	comp=Z,24nm,1.3s						
KURK	Kurchatov	43.45	320	P	P	11 41 05.0	-0.2
KURBB	Kurchatov Arra	43.47	320	P	P	11 41 04.6	-0.7
	1.0nm,0.8s,baz=110,slow=8.2,SNR=5.8						
WRAB	Tennant Creek	44.60	164	P	P	11 41 15.1	+0.5
WRAB				IAmb	IAmb	11 41 33.8	
	comp=Z,5.8nm,1.4s						
WRA	Warramunga Arr	44.60	164	P	P	11 41 31.3	+17
	comp=Z,1.5nm,0.8s,baz=344,slow=8.7,SNR=11						
WR0	Warramunga Arr	44.67	164	P	P	11 41 14.9	-0.3
WR0				IAmb	IAmb	11 41 34.2	
	comp=Z,4.1nm,1.1s						
GAR	Garm	46.63	302	P	P	11 41 31.8	+1.0
GAR				IAmb	IAmb	11 41 32.0	
	comp=Z,3.3nm,0.6s						
ASAR	Alice Springs	48.08	166	P	P	11 41 59.4	+17
	comp=Z,0.6nm,0.5s,baz=355,slow=15,SNR=11						
TIXI	Tiksi	48.42	3	P	P	11 41 42.4	-1.6
	comp=Z,2.1nm,0.9s,baz=158,slow=5.1,SNR=7.7						
TIXI	Tiksi	48.42	3	P	P	11 41 43.1	-0.9
BVAR	Borovoye Array	49.02	321	P	P	11 41 49.1	+0.1
	comp=Z,0.5nm,0.5s,baz=99,slow=8.5,SNR=5.4						
BVAR	Borovoye Array	49.02	321	P	P	11 41 49.1	+0.1
ABKAR	Akbulak array	54.83	315	P	P	11 42 32.5	+0.1
ABKAR				IAmb	IAmb	11 42 33.0	
	comp=Z,2.9nm,0.8s						
GEYT	Alibeck	56.21	301	P	P	11 42 43.6	+1.1
	comp=Z,1.1nm,0.7s,baz=260,slow=7.2,SNR=3.4						
GEYT	Alibeck	56.21	301	P	P	11 42 43.6	+1.1
STKA	Stephens Creek	57.93	161	P	P	11 43 11.6	+17
	comp=Z,2.8nm,0.6s,baz=335,slow=7.6,SNR=8.4						
PPLA	Purkeypile	67.35	30	P	P	11 43 58.3	+1.1
TOLK	Toolik Lake Re	67.70	23	P	P	11 44 00.2	+0.9
MLY	Manley	67.71	27	P	P	11 44 00.3	+0.9
MLY				IAmb	IAmb	11 44 16.9	
	comp=Z,3.9nm,1.3s						
BPAW	Bear Paw Mtn.	67.73	28	P	P	11 44 00.2	+0.7
TRF	Thorofare Moun	68.12	29	P	P	11 44 04.6	+2.4
MCK	McKinley	68.68	29	P	P	11 44 05.7	+0.3
MCK				IAmb	IAmb	11 44 07.8	
	comp=Z,2.1nm,0.6s						
RND	Reindeer	68.77	29	P	P	11 44 06.2	+0.1
RND				IAmb	IAmb	11 44 08.0	
	comp=Z,5.5nm,0.9s						
PMR	Palmer	68.96	31	P	P	11 44 07.1	0.0
PMR				IAmb	IAmb	11 44 19.6	
	comp=Z,8.3nm,1.5s						
ILAR	Eielson Array	69.37	27	P	P	11 44 10.4	+0.7
	comp=Z,0.7nm,0.6s,baz=295,slow=7.7,SNR=12						
ILAR	Eielson Array	69.37	27	P	P	11 44 10.4	+0.7
SCM	Sheep Creek Mo	69.76	30	P	P	11 44 13.6	+1.3
RIDG	Independent Ri	70.46	28	P	P	11 44 17.1	+0.6
ARCES	ARCESS Array B	70.70	338	P	P	11 44 17.8	0.0
	comp=Z,5.1nm,1.0s,baz=57,slow=3.3,SNR=3.1						
ARCES	ARCESS Array B	70.70	338	P	P	11 44 17.8	0.0
SCRK	Sand Creek	70.78	28	P	P	11 44 18.8	+0.3
SCRK				IAmb	IAmb	11 44 36.3	
	comp=Z,3.2nm,1.3s						
EYAK	Cordova Ski Ar	70.78	32	P	P	11 44 20.2	+1.8
DOT	Dot Lake	70.82	28	P	P	11 44 19.1	+0.4
DOT				IAmb	IAmb	11 44 30.8	
	comp=Z,2.3nm,1.0s						
GLB	Gilahina Butte	71.48	30	P	P	11 44 23.8	+1.0
GLB				IAmb	IAmb	11 44 27.5	
	comp=Z,3.9nm,1.1s						
VRDI	Verde Repeater	71.70	31	P	P	11 44 25.6	+1.3
VRDI				IAmb	IAmb	11 44 43.1	
	comp=Z,7.8nm,1.4s						
EGAK	Eagle	71.76	27	P	P	11 44 24.6	+0.3
EGAK				IAmb	IAmb	11 44 26.6	
	comp=Z,2.0nm,0.8s						
MCARA	McCarthy VSAT	71.86	30	P	P	11 44 27.2	+2.2
MCARA				IAmb	IAmb	11 44 28.7	
	comp=Z,3.5nm,0.8s						
CRQM	Cirque	71.98	31	P	P	11 44 27.5	+1.6
BARN	Barnard Glacie	72.59	30	P	P	11 44 31.3	+1.8
BARN				IAmb	IAmb	11 44 31.8	
	comp=Z,3.1nm,0.7s						
DAWY	Dawson	72.70	27	P	P	11 44 30.2	+0.3
DAWY				IAmb	IAmb	11 44 32.4	
	comp=Z,2.0nm,0.7s						
FINES	FINESS Array B	72.71	330	P	P	11 44 29.3	-0.7
	comp=Z,1.8nm,0.7s,baz=57,slow=7.0,SNR=4.8						
FINES	FINESS Array B	72.71	330	P	P	11 44 29.3	-0.7
CTGM	Chitina Glacie	72.77	31	P	P	11 44 32.5	+2.0
CTGM				IAmb	IAmb	11 44 33.3	
	comp=Z,4.6nm,0.6s						
INK	Inuvik	73.51	22	P	P	11 44 35.1	+0.5
INK				IAmb	IAmb	11 44 36.5	
	comp=Z,3.5nm,0.9s						
AKASG	Malin Array Be	74.24	319	P	P	11 44 37.7	-1.4
	comp=Z,0.1nm,0.2s,baz=63,slow=7.9,SNR=2.7						
AKASG	Malin Array Be	74.24	319	P	P	11 44 37.7	-1.4
BRTR	Keskin Array B	74.58	307	P	P	11 44 41.0	-0.6
	comp=Z,1.2nm,0.7s,baz=52,slow=8.0,SNR=5.4						
BRTR	Keskin Array B	74.58	307	P	P	11 44 41.0	-0.6
C36M	Paulatuk	76.15	20	P	P	11 44 49.6	-0.2
C36M				IAmb	IAmb	11 44 50.9	
	comp=Z,5.8nm,1.2s						
NC405	NORSAR Array S	79.22	332	P	P	11 45 06.6	-0.6
NOA	NORSAR Array B	79.47	333	P	P	11 45 07.2	-1.4
	comp=Z,0.9nm,0.7s,baz=60,slow=5.4,SNR=3.5						
VYHS	Vyhne	81.33	319	*e*P	P	11 45 16.0	-2.8
YKA	Yellowknife Ar	83.23	23	P	P	11 45 27.6	-0.9
	comp=Z,1.7nm,0.7s,baz=312,slow=4.6,SNR=25						
GERES	GERESS Array B	84.19	321	P	P	11 45 32.6	-1.2
	comp=Z,0.4nm,0.6s,baz=36,slow=5.0,SNR=3.6						
WLF	Walferdange	87.97	324	PcP	P	11 45 52.6	+0.4
SDV	Santo Domingo	145.45	23		PKPbc	11 52 40.4	-0.9

TAP 02 11:33:15.8, 23°.74N × 121°.39E, h13^{km}, ML0.8, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGFH	Guangfu	0.08	151	P	Pg	11 33 19.1	+0.5
	baz=150						
EGFH				*e*S	Sg	11 33 21.4	+0.9
	baz=150						
ESL	Shilin	0.09	29	P	Pg	11 33 19.2	+0.4
	baz=33						
ESL				S	Sg	11 33 21.7	+1.0
	baz=33						
VWDT	VWDT	0.23	274	P	Pb	11 33 21.5	-0.2
	baz=274						
VWDT				*e*S	Sb	11 33 25.6	0.0
	baz=274						
OWD	Renai	0.29	318	*e*P	Pb	11 33 22.7	-0.2
	baz=318						
CHGB	Renai	0.38	329	*e*P	Pg	11 33 23.9	+0.4
	baz=328						

IDC 02 11:42:05.3±2.3, 7°.62S × 132°.20E, h0^{km}, mb3.4/1, mb1 3.6/5, mb1mx3.3/41, mbtmp3.4/5, ML3.5/4, Error ellipse: s-maj=91.7km s-min=24.7km az=85.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.77	352	Pn	Pn	11 43 45.2	-0.8
	1.6nm,0.3s,baz=180,slow=20,SNR=22						
SIJI				Sn	Sn	11 44 53.5	-10
	4.2nm,0.3s,baz=155,slow=22,SNR=13						
FITZ	Fitzroy Crossi	12.22	211	Pn	Pn	11 45 00.3	-0.5
	0.3nm,0.3s,baz=26,slow=13,SNR=13						
FITZ				Sn	Sn	11 47 09.5	-8.4
	1.3nm,0.3s,baz=224,slow=19,SNR=7.4						
WRA	Warramunga Arr	12.43	171	Pn	Pn	11 45 03.1	-0.5
	0.2nm,0.3s,baz=352,slow=13,SNR=14						
WRA				Sn	Sn	11 47 13.4	-10
	0.7nm,0.3s,baz=90,slow=14,SNR=6.7						
ASAR	Alice Springs	16.04	174	Pn	Pn	11 45 53.1	+0.6
	0.1nm,0.3s,baz=348,slow=8.8,SNR=12						
ASAR				Sn	Sn	11 48 46.1	-5.1
	0.2nm,0.3s,baz=354,slow=24,SNR=6.2						
MKAR	Makanchi Array	69.94	326	P	P	11 53 18.8	+0.3
	0.2nm,0.4s,baz=116,slow=6.6,SNR=4.4						

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*UCR **02** 11:44:22.0±1.0, 12°.56N×87°.81W, h53^{km}±15^{km}, ML3.5*
*INET **02** 11:44:22.0, 12°.52N×87°.70W, h56^{km}, ML3.4*
*SNET **02** 11:44:22.0±0.8, 12°.56N×87°.82W, h51^{km}±14^{km}, ML3.5*
ISC 02 11:44:21.0±4.2, **12°.5N**±0°.3×**87°.77W**±0°.08, **h44**^{km}±55^{km}, **n21,** σ**0^{s}.34**/40, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.80**	**356**	*e*P	**Pn**	**11 44 35.9**	**-0.1**
CNCH				*e*S	**Sn**	**11 44 47.9**	**+0.9**
CNCH				IAML		11 44 51.4	
	comp=Z,4μm,0.3s						
CNCH	**Conchagua**	**0.80**	**356**	*e*P	**Pn**	**11 44 35.9**	**-0.1**
CNCH				*e*S	**Sn**	**11 44 47.9**	**+0.9**
CNCH				IAML		11 44 51.4	
	comp=Z,4μm,0.3s						
LCND	**La Caada**	**0.84**	**352**	*e*P	**Pn**	**11 44 36.4**	**-0.1**
LCND				*e*S	**Sn**	**11 44 47.7**	**-0.1**
LCND				IAML		11 44 49.8	
	comp=Z,1μm,0.3s						
LCND	**La Caada**	**0.84**	**352**	*e*P	**Pn**	**11 44 36.4**	**-0.1**
LCND				*e*S	**Sn**	**11 44 47.7**	**-0.1**
LCND				IAML		11 44 49.8	
	comp=Z,1μm,0.3s						
JUCU	**Jucuar¡n**	**0.91**	**329**	*e*P	**Pn**	**11 44 37.0**	**-0.4**
JUCU				*e*S	**Sn**	**11 44 49.0**	**-0.4**
JUCU	**Jucuar¡n**	**0.91**	**329**	*e*P	**Pn**	**11 44 37.0**	**-0.4**
JUCU				*e*S	**Sn**	**11 44 49.0**	**-0.4**
BLLM	**Bellamira**	**1.07**	**335**	*e*P	**Pn**	**11 44 39.6**	**0.0**
BLLM				*e*S	**Sn**	**11 44 52.9**	**-0.5**
BLLM	**Bellamira**	**1.07**	**335**	*e*P	**Pn**	**11 44 39.6**	**0.0**
BLLM				*e*S	**Sn**	**11 44 52.9**	**-0.5**
LCY	**Lacayo**	**1.08**	**332**	*e*P	**Pn**	**11 44 40.0**	**+0.3**
LCY				*e*S	**Sn**	**11 44 53.9**	**+0.3**
LCY	**Lacayo**	**1.08**	**332**	*e*P	**Pn**	**11 44 40.0**	**+0.3**
LCY				*e*S	**Sn**	**11 44 53.9**	**+0.3**
PACA	**Pacayal**	**1.13**	**332**	*e*P	**Pn**	**11 44 40.5**	**0.0**
PACA				*e*S	**Sn**	**11 44 55.0**	**+0.1**
PACA	**Pacayal**	**1.13**	**332**	*e*P	**Pn**	**11 44 40.5**	**0.0**
PACA				*e*S	**Sn**	**11 44 55.0**	**+0.1**
TECA	**Tecapa**	**1.24**	**325**	*e*P	**Pn**	**11 44 42.3**	**+0.2**
TECA				*e*S	**Sn**	**11 44 57.5**	**-0.3**
TECA	**Tecapa**	**1.24**	**325**	*e*P	**Pn**	**11 44 42.3**	**+0.2**
TECA				*e*S	**Sn**	**11 44 57.5**	**-0.3**
FAGO	**Alcalda de S**	**1.26**	**345**	*e*P	**Pn**	**11 44 42.3**	**+0.1**
FAGO	**Alcalda de S**	**1.26**	**345**	*e*P	**Pn**	**11 44 42.3**	**+0.1**
COEG	**Centro de Oper**	**1.57**	**317**	*e*P	**Pn**	**11 44 46.7**	**+0.2**
COEG				*e*S	**Sn**	**11 45 06.1**	**+0.3**
COEG				IAML		11 45 09.4	
	comp=Z,374nm,0.3s						
COEG	**Centro de Oper**	**1.57**	**317**	*e*P	**Pn**	**11 44 46.7**	**+0.2**
COEG				*e*S	**Sn**	**11 45 06.1**	**+0.3**
COEG				IAML		11 45 09.4	
	comp=Z,374nm,0.3s						
TGUH	**Tegucigalpa,Un**	**1.65**	**17**	*e*P	**Pn**	**11 44 47.8**	**+0.2**
TGUH				*e*S	**Sn**	**11 45 07.2**	**-0.5**
TGUH	**Tegucigalpa,Un**	**1.65**	**17**	*e*P	**Pn**	**11 44 47.8**	**+0.2**
TGUH				*e*S	**Sn**	**11 45 07.2**	**-0.5**
LFRS	**El Faro**	**1.70**	**313**	*e*P	**Pn**	**11 44 48.2**	**-0.2**
LFRS				*e*S	**Sn**	**11 45 09.0**	**+0.1**

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*IDC **02** 11:52:58.2±0.9, 41°.38N×78°.14E, h0^{km}, mb3.6/7, mb1 3.7/13, mb1mx3.6/41, mbtmp3.6/13, ML3.4/6, Error ellipse: s-maj=14.0km s-min=13.1km az=109.0*
*KRNET **02** 11:53:00.1±0.1, 41°.63N×77°.98E, h22^{km}, mb4.0*
*SOME **02** 11:53:00.1, 41°.68N×77°.93E, h5^{km}, MS2.9*
*BJI **02** 11:53:02.0±0.0, 41°.67N×78°.07E, h8^{km}, mb4.0/2, ML3.7/9*
*NNC **02** 11:53:02.3±1.0, 41°.71N×78°.01E, h0^{km}, mb4.5, mpv4.6, Error ellipse: s-maj=6.6km s-min=4.3km az=170.0*
ISC 02 11:53:01.5±1.2**, 41°.73N**±0°.03×**77°.99E**±0°.02**, h9**^{km}±8^{km}**, n95, σ1^{s}84**/151**, mb3.6**/6**, 38C-17D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**0.72**	**304**	⇑*i*P	**Pg**	**11 53 15.1**	**-0.4**
	baz=11						
KDJ				⇑*i*S	**Sg**	**11 53 25.7**	**+0.8**
	baz=11						
PRZ	**Przheval'sk**	**0.82**	**22**	⇑*i*P	**Pg**	**11 53 17.1**	**-0.1**
	baz=21						
PRZ				⇑*i*S	**Sb**	**11 53 29.6**	**+0.4**
	baz=21						
ANVS	**Anan'yevo**	**1.08**	**348**	⇑*i*P	**Pb**	**11 53 22.3**	**-0.2**
	baz=49						
ANVS				⇑*i*S	**Sb**	**11 53 38.0**	**+1.2**
	baz=49						
ULHL	**Ulahol**	**1.40**	**292**	⇑*i*P	**Pn**	**11 53 26.7**	**-0.7**
	baz=96						
ULHL				⇑*i*S	**Sb**	**11 53 45.6**	**-0.3**
	baz=96						
ULHL	**Ulahol**	**1.40**	**292**	P	**Pn**	**11 53 26.9**	**-0.5**
	SNR=50						
ZHN	**Zhinishke**	**1.48**	**13**	*e*P	**Pg**	**11 53 29.5**	**-0.4**
	658nm,0.1s						
ZHN				*e*S	**Sg**	**11 53 50.7**	**+1.7**
	1μm,0.2s						
ZHN	**Zhinishke**	**1.48**	**13**	P	**Pg**	**11 53 29.5**	**-0.4**
	658nm,0.1s						
ZHN				S	**Sg**	**11 53 50.7**	**+1.7**
	1μm,0.2s						
NRN	**Naryn**	**1.52**	**260**	⇑*e*P	**Pn**	**11 53 27.7**	**-1.4**
	baz=63						
NRN				⇑*i*S	**Sn**	**11 53 47.5**	**-1.6**
	baz=63						
TNSS	**Tian-Shan**	**1.52**	**330**	*e*P	**Pg**	**11 53 30.3**	**-0.4**
	224nm,0.1s						
TNSS				*e*S	**Sg**	**11 53 52.3**	**+1.9**
	655nm,0.2s						
TNSS	**Tian-Shan**	**1.52**	**330**	P	**Pg**	**11 53 30.3**	**-0.4**
	224nm,0.1s						
TNSS				S	**Sg**	**11 53 52.3**	**+1.9**
	655nm,0.2s						
MDOK	**Medeo**	**1.59**	**335**	*e*P	**Pg**	**11 53 31.8**	**-0.2**
	266nm,0.1s						
MDOK				*e*S	**Sg**	**11 53 54.6**	**+1.9**
	756nm,0.3s						
MDOK	**Medeo**	**1.59**	**335**	⇑P	**Pg**	**11 53 31.6**	**-0.4**
	174nm,0.4s						
MDOK				⇑S	**Sn**	**11 53 50.4**	**-0.4**
	335nm,0.4s						
MDOK	**Medeo**	**1.59**	**335**	Pg	**Pg**	**11 53 31.8**	**-0.2**
	266nm,0.1s						
MDOK				Lg	Lg	11 53 54.6	
	756nm,0.3s						
UZB	**Uzynbulak**	**1.61**	**28**	*e*P	**Pb**	**11 53 31.0**	**-0.5**
	114nm,0.1s						
UZB				*e*S	**Sg**	**11 53 53.4**	**0.0**
	1μm,0.4s						
UZB	**Uzynbulak**	**1.61**	**28**	P	**Pb**	**11 53 31.0**	**-0.5**
	114nm,0.1s						
UZB				S	**Sg**	**11 53 53.4**	**0.0**
	1μm,0.4s						
KOTS	**Kotyrbulak**	**1.64**	**337**	*e*P	**Pg**	**11 53 32.9**	**0.0**
	745nm,0.1s						
KOTS				*e*S	**Sg**	**11 53 56.5**	**+2.3**
	1μm,0.2s						
KOTS	**Kotyrbulak**	**1.64**	**337**	P	**Pg**	**11 53 32.9**	**0.0**
	745nm,0.1s						
KOTS				S	**Sg**	**11 53 56.5**	**+2.3**
	1μm,0.2s						
IZV	**Izvestkoviy**	**1.66**	**323**	*e*P	**Pg**	**11 53 32.8**	**-0.5**
	148nm,0.2s						
IZV				*e*S	**Sg**	**11 53 56.5**	**+1.8**
	2μm,0.4s						
IZV	**Izvestkoviy**	**1.66**	**323**	P	**Pg**	**11 53 32.8**	**-0.5**
	148nm,0.2s						
IZV				S	**Sg**	**11 53 56.5**	**+1.8**
	2μm,0.4s						
KNDC	**Almaty**	**1.67**	**334**	⇓P	**Pg**	**11 53 33.2**	**-0.3**
	59nm,0.3s						
KNDC				⇑S	**Sg**	**11 53 56.4**	**+1.2**
	526nm,0.4s						
AAA	**Alma-Ata**	**1.68**	**332**	*e*P	**Pg**	**11 53 33.7**	**0.0**
	1μm,0.1s						
AAA				*e*S	**Sg**	**11 53 57.7**	**+2.2**
	1μm,0.2s						
AAA	**Alma-Ata**	**1.68**	**332**	P	**Pg**	**11 53 33.7**	**0.0**
	1μm,0.1s						
AAA				S	**Sg**	**11 53 57.7**	**+2.2**
	1μm,0.2s						
BOOM	**Boomskoye usch**	**1.70**	**297**	⇓*i*P	**Pb**	**11 53 32.2**	**-0.8**
	baz=0.0						
BOOM				⇓*i*S	**Sb**	**11 53 55.1**	**+0.5**
	baz=0.0						
KURS	**Kuram**	**1.77**	**4**	*e*P	**Pg**	**11 53 34.6**	**-0.7**
	153nm,0.2s						
KURS				*e*S	**Sg**	**11 53 59.1**	**+0.9**
	812nm,0.2s						
KPKS	**Kokpek**	**1.81**	**16**	*e*P	**Pg**	**11 53 35.6**	**-0.7**
	16μm,0.1s						
KPKS				*e*S	**Sg**	**11 54 00.9**	**+1.1**
	83μm,0.2s						
MTBS	**Maitube**	**1.81**	**321**	*e*P	**Pb**	**11 53 35.3**	**+0.4**
	98nm,0.2s						
MTBS				*e*S	**Sg**	**11 54 00.9**	**+1.1**
	930nm,0.3s						
MTBS	**Maitube**	**1.81**	**321**	P	**Pb**	**11 53 35.3**	**+0.4**
	98nm,0.2s						
MTBS				S	**Sg**	**11 54 00.9**	**+1.1**
	930nm,0.3s						
KST	**Kastek**	**1.99**	**312**	*e*P	**Pb**	**11 53 38.5**	**+0.5**
	117nm,0.2s						
KST				*e*S	**Sg**	**11 54 06.2**	**+0.6**
	758nm,0.3s						
KST	**Kastek**	**1.99**	**312**	Pg	**Pb**	**11 53 38.5**	**+0.5**
	117nm,0.2s						
KST				Lg	Lg	11 54 06.1	
	758nm,0.3s						
KZA	**Kyzart**	**2.07**	**281**	⇑*e*P	**Pn**	**11 53 37.0**	**+0.2**
	baz=83						
KZA				⇑*e*S	**Sn**	**11 54 03.5**	**+0.6**
	baz=83						
KZA	**Kyzart**	**2.07**	**281**	P	**Pb**	**11 53 38.7**	**-0.8**
	SNR=90						
KTBS	**Karatobe**	**2.21**	**335**	*e*P	**Pg**	**11 53 42.5**	**-1.3**
	262nm,0.3s						
KTBS				*e*S	**Sg**	**11 54 12.9**	**+0.6**
	3μm,0.2s						
KTBS	**Karatobe**	**2.21**	**335**	Pg	**Pg**	**11 53 42.5**	**-1.3**
	262nm,0.3s						
KTBS				Lg	Lg	11 54 12.9	
	3μm,0.2s						
DGS	**Degeres**	**2.23**	**314**	*e*P	**Pb**	**11 53 42.8**	**+0.7**
	42nm,0.1s						
DGS				*e*S	**Sg**	**11 54 13.2**	**+0.1**
	858nm,0.2s						
DGS	**Degeres**	**2.23**	**314**	Pg	**Pb**	**11 53 42.8**	**+0.7**
	42nm,0.1s						
DGS				Lg	Lg	11 54 13.2	
	858nm,0.2s						
CHKK	**Chushkaly**	**2.25**	**341**	*e*P	**Pg**	**11 53 43.6**	**-1.0**
	76nm,0.1s						
CHKK				*e*S	**Sg**	**11 54 14.6**	**+0.9**
	6μm,0.2s						
CHKK	**Chushkaly**	**2.25**	**341**	Pg	**Pg**	**11 53 43.6**	**-1.0**
	76nm,0.1s						
CHKK				Lg	Lg	11 54 14.6	
	6μm,0.2s						
MNBS	**Baschi**	**2.37**	**7**	*e*P	**Pg**	**11 53 45.6**	**-1.3**
	224nm,0.1s						
MNBS				*e*S	**Sg**	**11 54 18.4**	**+0.8**
	3μm,0.3s						
MNBS	**Baschi**	**2.37**	**7**	Pg	**Pg**	**11 53 45.6**	**-1.3**
	224nm,0.1s						
MNBS				Lg	Lg	11 54 18.4	
	3μm,0.3s						
KBK	**Karagaybulak**	**2.44**	**293**	⇑*e*P	**Pn**	**11 53 42.1**	**+0.4**
	baz=96						
KBK				⇑*e*S	**Sn**	**11 54 12.5**	**+0.8**
	baz=96						
KBK	**Karagaybulak**	**2.44**	**293**	P	**Pb**	**11 53 45.7**	**+0.1**
	SNR=186						
KUU	**Kurty**	**2.48**	**331**	*e*P	**Pb**	**11 53 47.1**	**+0.9**
	32nm,0.2s						
KUU				*e*S	**Sg**	**11 54 21.2**	**0.0**
	943nm,0.2s						
KUU	**Kurty**	**2.48**	**331**	Pg	**Pb**	**11 53 47.1**	**+0.9**
	32nm,0.2s						
KUU				Lg	Lg	11 54 21.2	
	943nm,0.2s						
ARXS	**Arharly**	**2.49**	**357**	*e*P	**Pb**	**11 53 47.4**	**+1.0**
	153nm,0.1s						
ARXS				*e*S	**Sg**	**11 54 21.2**	**-0.2**
	3μm,0.3s						
ARXS	**Arharly**	**2.49**	**357**	Pg	**Pb**	**11 53 47.4**	**+1.0**
	153nm,0.1s						
ARXS				Lg	Lg	11 54 21.2	
	3μm,0.3s						
UCH	**Uchtor**	**2.64**	**282**	⇑*i*P	**Pn**	**11 53 44.8**	**+0.2**
	baz=84						
UCH				⇑*i*S	**Sn**	**11 54 17.0**	**+0.1**
	baz=84						
UCH	**Uchtor**	**2.64**	**282**	P	**Pb**	**11 53 47.8**	**-1.4**
	SNR=147						
KSH	**Kashi**	**2.69**	**215**	Pn	**Pg**	**11 53 55.5**	**+2.6**
KSH				Sn	**Sg**	**11 54 34.2**	**+6.5**
KSH				smax	smax		
	comp=N,250nm,0.6s						
KSH				smax	smax		
	comp=E,620nm,0.8s						
CHMS	**Chumysh**	**2.71**	**299**	⇑*i*P	**Pn**	**11 53 45.9**	**+0.6**
	baz=1.0						
CHMS				⇑*i*S	**Sn**	**11 54 19.1**	**+0.9**
	baz=1.0						
CHMS	**Chumysh**	**2.71**	**299**	P	**Pb**	**11 53 49.0**	**-1.1**
	SNR=27						
CHMS	**Chumysh**	**2.71**	**299**	⇓Pn	**Pb**	**11 53 49.1**	**-1.1**
	28nm,0.5s						
CHMS				⇑Lg	Lg	11 54 26.9	
	262nm,0.5s						
FRU1	**Bishkek**	**2.71**	**295**	⇑*i*P	**Pn**	**11 53 45.9**	**+0.6**
	baz=97						
FRU1				⇑*i*S	**Sn**	**11 54 18.9**	**+0.6**
	baz=97						
ARLS	**Aral**	**2.74**	**274**	⇑*i*P	**Pn**	**11 53 45.6**	**-0.2**
	baz=76						
ARLS				⇑*i*S	**Sn**	**11 54 18.3**	**-0.8**
	baz=76						
AAK	**Ala-Archa**	**2.75**	**291**	Pn	**Pb**	**11 53 49.8**	**-1.0**
	20nm,0.3s,baz=119,slow=7.6,SNR=135						
AAK				Sn	**Sg**	**11 54 28.9**	**-0.9**
	31nm,0.3s,baz=254,slow=22,SNR=17						
AAK	**Ala-Archa**	**2.75**	**291**	⇓*i*P	**Pn**	**11 53 46.0**	**+0.1**
	baz=92						
AAK				⇓*i*S	**Sn**	**11 54 19.3**	**0.0**
	baz=92						
AAK	**Ala-Archa**	**2.75**	**291**	P	**Pb**	**11 53 50.0**	**-0.9**
	SNR=79						
AAK	**Ala-Archa**	**2.75**	**291**	⇓Pn	**Pb**	**11 53 50.1**	**-0.8**
	34nm,0.3s						
AAK				⇓Lg	Lg	11 54 29.8	
	181nm,0.6s						
DJR	**Jarkent**	**2.92**	**26**	*e*P	**Pb**	**11 53 54.4**	**+0.6**
	20nm,0.1s						
DJR				*e*S	**Sg**	**11 54 33.2**	**-2.1**
	799nm,0.2s						
DJR	**Jarkent**	**2.92**	**26**	Pg	**Pb**	**11 53 54.4**	**+0.6**
	20nm,0.1s						
DJR				Lg	Lg	11 54 33.2	
	799nm,0.2s						
USP	**Ospenovka**	**3.00**	**302**	⇑*i*P	**Pn**	**11 53 49.8**	**+0.5**
	baz=4.0						
USP				⇑*i*S	**Sn**	**11 54 26.0**	**+0.6**
	baz=4.0						
USP	**Ospenovka**	**3.00**	**302**	P	**Pb**	**11 53 52.5**	**-2.6**
	SNR=19						
SGDS	**Sogindy**	**3.02**	**306**	Pg	**Pb**	**11 53 56.2**	**+0.8**
	25nm,0.2s						
SGDS				Lg	Lg	11 54 36.7	
	145nm,0.3s						
AML	**Almayashu**	**3.23**	**279**	⇑*e*P	**Pn**	**11 53 53.0**	**+0.3**
	baz=80						
AML				⇑*i*S	**Sn**	**11 54 30.9**	**-0.5**
	baz=80						
AML	**Almayashu**	**3.23**	**279**	P	**Pb**	**11 54 00.4**	**+1.3**
	SNR=75						
EKS2	**Erkin-Say**	**3.26**	**288**	⇓*e*P	**Pn**	**11 53 53.4**	**+0.5**
	baz=90						
EKS2				⇓*i*S	**Sn**	**11 54 31.7**	**-0.2**
	baz=90						
EKS2	**Erkin-Say**	**3.26**	**288**	P	**Pb**	**11 53 56.6**	**-3.0**
	SNR=16						
TDK	**Taldyqorghan**	**3.29**	**5**	*e*P	**Pb**	**11 54 01.0**	**+1.0**
	99nm,0.2s						
TDK				*e*S	**Sg**	**11 54 44.9**	**-2.2**
	1μm,0.3s						
TDK	**Taldyqorghan**	**3.29**	**5**	Pg	**Pb**	**11 54 01.0**	**+1.0**
	99nm,0.2s						
TDK				Lg	Lg	11 54 44.8	
	1μm,0.3s						
MRKS	**Merke**	**3.68**	**288**	*e*P	**Pb**	**11 54 08.6**	**+2.0**
	20nm,0.2s						
MRKS				*e*S	**Sg**	**11 54 58.1**	**-1.4**
	98nm,0.2s						
MRKS	**Merke**	**3.68**	**288**	Pg	**Pb**	**11 54 08.6**	**+2.0**
	20nm,0.2s						
MRKS				Lg	Lg	11 54 58.1	
	98nm,0.2s						
KAPS	**Kapalarasan**	**3.69**	**15**	*e*P	**Pb**	**11 54 08.2**	**+1.3**
	21nm,0.2s						
KAPS				*e*S	**Sg**	**11 54 57.0**	**-3.1**
	98nm,0.2s						
KAPS	**Kapalarasan**	**3.69**	**15**	Pg	**Pb**	**11 54 08.2**	**+1.3**
	21nm,0.2s						
KAPS				Lg	Lg	11 54 57.0	
	98nm,0.2s						
ARSB	**Arslanbob**	**3.78**	**266**	⇑*e*P	**Pn**	**11 53 59.8**	**-0.2**
	baz=67						
ARSB				⇑*e*S	**Sn**	**11 54 43.2**	**-1.4**
	baz=67						
BTLS	**Baital**	**4.38**	**320**	*e*P	**Pb**	**11 54 20.8**	**+2.2**
	7.8nm,0.3s						
BTLS				*e*S	**Sg**	**11 55 18.5**	**-3.7**
	53nm,0.3s						
BTLS	**Baital**	**4.38**	**320**	Pg	**Pb**	**11 54 20.8**	**+2.2**
	7.8nm,0.3s						
BTLS				Lg	Lg	11 55 18.5	
	53nm,0.3s						
KK31	**Karatay Array**	**5.70**	**286**	⇓Pg	**Pg**	**11 54 46.0**	**-4.6**
	2.9nm,0.6s,baz=102,slow=15,SNR=72						
KK31				⇓Lg	Lg	11 56 06.1	
	13nm,0.6s,baz=97,slow=30,SNR=9.2						
MAKZ	**Makanchi**	**5.83**	**28**	⇑Pn	**Pn**	**11 54 31.2**	**+3.1**
	2.2nm,0.4s						
MAKZ				⇓Pg	**Pg**	**11 54 48.3**	**-4.8**
	4.9nm,0.4s						
MAKZ				⇓Lg	Lg	11 56 04.7	
	7.5nm,0.6s						
MK31	**Makanchi Array**	**5.93**	**30**	⇑Pn	**Pn**	**11 54 31.9**	**+2.4**
	1.4nm,0.3s,baz=208,slow=12,SNR=233						
MK31				⇑Pg	**Pg**	**11 54 51.3**	**-3.7**
	5.9nm,0.3s,baz=200,slow=17,SNR=5.0						
MK31				⇑Sn	**Sn**	**11 55 41.0**	**+3.4**
	12nm,0.6s						
MK31				⇓Lg	Lg	11 56 07.2	
	5.0nm,0.3s						
MKAR	**Makanchi Array**	**5.93**	**30**	Pn	**Pn**	**11 54 31.9**	**+2.4**
	1.9nm,0.3s,baz=207,slow=14,SNR=89						
MKAR				Sn	**Sn**	**11 55 41.5**	**+3.8**
	2.5nm,0.3s,baz=202,slow=22,SNR=3.7						
MKAR				Lg	Lg	11 56 09.3	
	5.3nm,0.3s,baz=210,slow=26,SNR=4.5						
WMQ	**Urumqi**	**7.45**	**70**	Pn	**Pn**	**11 54 51.1**	**+0.8**
WMQ				Sn	**Sn**	**11 56 14.2**	**-0.7**
WMQ				smax	smax		
	comp=N,160nm,0.8s						
WMQ				smax	smax		
	comp=E,140nm,0.8s						
SEM	**Semipalatinsk**	**8.82**	**9**	Lg	Lg	11 57 39.8	
	13nm,0.0s						
KURBB	**Kurchatov Arra**	**8.91**	**2**	Pn	**Pn**	**11 55 12.0**	**+1.8**
	0.1nm,0.3s,baz=202,slow=8.5,SNR=10						
KURBB				Sn	**Sn**	**11 56 56.5**	**+5.9**
	0.2nm,0.3s,baz=271,slow=4.7,SNR=4.3						
KURBB				Lg	Lg	11 57 43.4	
	0.5nm,0.3s,baz=186,slow=29,SNR=6.6						
KURBB	**Kurchatov Arra**	**8.91**	**2**	⇓Pn	**Pn**	**11 55 13.0**	**+2.8**
	4.5nm,0.7s						
KURBB				⇓Lg	Lg	11 57 42.2	
	66nm,0.7s						
KURK	**Kurchatov**	**9.00**	**3**	⇑Pn	**Pn**	**11 55 12.5**	**+1.0**
	2.0nm,0.5s						
KURK				⇑Lg	Lg	11 57 47.0	
	86nm,1.3s						
BRZS	**Berezniki**	**9.05**	**338**	Lg	Lg	11 57 45.1	
	23nm,0.5s						
BVAR	**Borovoye Array**	**12.41**	**338**	Pn	**Pn**	**11 55 59.0**	**+0.8**
	0.5nm,0.3s,baz=148,slow=14,SNR=16						
BVAR				Sn	**Sn**	**11 58 21.9**	**+5.3**
	0.2nm,0.3s,baz=140,slow=19,SNR=3.2						
BVAR				Lg	Lg	11 59 35.3	
	0.5nm,0.3s,baz=171,slow=28,SNR=9.1						
ZALV	**Zalesovo Beam**	**13.05**	**18**	Pn	**Pn**	**11 56 07.9**	**+1.0**
	0.2nm,0.3s,baz=338,slow=31,SNR=4.4						
ZALV				Sn	**Sn**	**11 58 40.8**	**+8.7**
	0.4nm,0.3s,baz=130,slow=7.5,SNR=2.8						
ZALV				Lg	Lg	11 59 55.3	
	0.4nm,0.3s,baz=247,slow=22,SNR=2.9						
AKTO	**Aktyubinsk**	**16.32**	**309**	Pn	**Pn**	**11 56 50.5**	**-0.3**
	0.1nm,0.3s,baz=104,slow=15,SNR=3.6						
SONM	**Songino Array**	**21.00**	**63**	P	**P**	**11 57 45.0**	**-0.2**
	2.0nm,0.8s,baz=264,slow=12,SNR=19						
FINES	**FINESS Array B**	**36.54**	**321**	P	**P**	**12 00 07.4**	**+0.4**
	1.1nm,0.8s,baz=116,slow=8.9,SNR=4.3						
NOA	**NORSAR Array B**	**43.70**	**320**	P	**P**	**12 01 06.3**	**-0.2**
	0.8nm,0.8s,baz=79,slow=2.9,SNR=3.2						
TORD	**Torodi Ar. Bea**	**71.17**	**271**	P	**P**	**12 04 18.5**	**-2.3**
	0.6nm,0.7s,baz=25,slow=6.6,SNR=4.2						
YKA	**Yellowknife Ar**	**75.64**	**6**	P	**P**	**12 04 45.6**	**-0.8**
	0.2nm,0.6s,baz=345,slow=5.1,SNR=3.9						
WRA	**Warramunga Arr**	**80.48**	**127**	P	**P**	**12 05 11.1**	**-2.7**
	0.2nm,0.7s,baz=334,slow=5.9,SNR=3.6						
ASAR	**Alice Springs**	**83.11**	**130**	P	**P**	**12 05 25.2**	**-2.5**
	0.3nm,0.8s,baz=322,slow=5.4,SNR=4.8						

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*INET **02** 12:01:24.8, 12°.49N×87°.80W, h66^{km}, ML3.8*
*SNET **02** 12:01:25.7±0.8, 12°.53N×87°.87W, h48^{km}±15^{km}, ML3.5*
*UCR **02** 12:01:25.6±1.0, 12°.53N×87°.86W, h52^{km}±16^{km}, ML3.6*
ISC 02 12:01:24.8±4.0**, 12°.5N**±0°.2×**87°.83W**±0°.08**, h47**^{km}±43^{km}**, n25, σ0^{s}33**/44**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.81**	**359**	*e*P	**Pn**	**12 01 40.0**	**-0.1**
CNCH				*e*S	**Sn**	**12 01 51.6**	**+0.4**
CNCH				IAML		12 01 54.1	
	comp=Z,3μm,0.2s						
CNCH	**Conchagua**	**0.81**	**359**	*e*P	**Pn**	**12 01 40.0**	**-0.1**
CNCH				*e*S	**Sn**	**12 01 51.6**	**+0.4**
CNCH				IAML		12 01 54.1	
	comp=Z,3μm,0.2s						
LCND	**La Caada**	**0.85**	**356**	*e*P	**Pn**	**12 01 40.4**	**0.0**
LCND				*e*S	**Sn**	**12 01 52.3**	**+0.5**
LCND				IAML		12 01 56.0	
	comp=Z,997nm,0.3s						
LCND	**La Caada**	**0.85**	**356**	*e*P	**Pn**	**12 01 40.4**	**0.0**
LCND				*e*S	**Sn**	**12 01 52.3**	**+0.5**
LCND				IAML		12 01 56.0	
	comp=Z,997nm,0.3s						
JUCU	**Jucuar¡n**	**0.89**	**332**	*e*P	**Pn**	**12 01 40.8**	**-0.3**
JUCU				*e*S	**Sn**	**12 01 52.4**	**-0.6**
JUCU				IAML		12 01 54.5	
	comp=Z,680nm,0.2s						
JUCU	**Jucuar¡n**	**0.89**	**332**	*e*P	**Pn**	**12 01 40.8**	**-0.3**
JUCU				*e*S	**Sn**	**12 01 52.4**	**-0.6**
JUCU				IAML		12 01 54.5	
	comp=Z,680nm,0.2s						
BLLM	**Bellamira**	**1.06**	**338**	*e*P	**Pn**	**12 01 43.5**	**+0.2**
BLLM	**Bellamira**	**1.06**	**338**	*e*P	**Pn**	**12 01 43.5**	**+0.2**
LCY	**Lacayo**	**1.06**	**335**	*e*P	**Pn**	**12 01 43.2**	**-0.2**
LCY				*e*S	**Sn**	**12 01 57.2**	**0.0**
LCY	**Lacayo**	**1.06**	**335**	*e*P	**Pn**	**12 01 43.2**	**-0.2**
LCY				*e*S	**Sn**	**12 01 57.2**	**0.0**
PACA	**Pacayal**	**1.11**	**334**	*e*P	**Pn**	**12 01 44.3**	**+0.1**
PACA				*e*S	**Sn**	**12 01 58.6**	**+0.1**
PACA				IAML		12 02 01.6	
	comp=Z,3μm,0.1s						
PACA	**Pacayal**	**1.11**	**334**	*e*P	**Pn**	**12 01 44.3**	**+0.1**
PACA				*e*S	**Sn**	**12 01 58.6**	**+0.1**
PACA				IAML		12 02 01.6	
	comp=Z,3μm,0.1s						
TECA	**Tecapa**	**1.22**	**327**	*e*P	**Pn**	**12 01 45.9**	**+0.1**
TECA				*e*S	**Sn**	**12 02 01.5**	**+0.3**
TECA	**Tecapa**	**1.22**	**327**	*e*P	**Pn**	**12 01 45.9**	**+0.1**
TECA				*e*S	**Sn**	**12 02 01.5**	**+0.3**
COEB	**Comit de Eme**	**1.24**	**326**	*e*P	**Pn**	**12 01 45.7**	**-0.2**
COEB	**Comit de Eme**	**1.24**	**326**	*e*P	**Pn**	**12 01 45.7**	**-0.2**
FAGO	**Alcalda de S**	**1.26**	**347**	*e*P	**Pn**	**12 01 46.0**	**-0.1**
FAGO				*e*S	**Sn**	**12 02 01.8**	**-0.1**
FAGO	**Alcalda de S**	**1.26**	**347**	*e*P	**Pn**	**12 01 46.0**	**-0.1**
FAGO				*e*S	**Sn**	**12 02 01.8**	**-0.1**
COEG	**Centro de Oper**	**1.55**	**318**	*e*P	**Pn**	**12 01 49.3**	**-0.7**
COEG				*e*S	**Sn**	**12 02 08.9**	**-0.1**
COEG	**Centro de Oper**	**1.55**	**318**	*e*P	**Pn**	**12 01 49.3**	**-0.7**
COEG				*e*S	**Sn**	**12 02 08.9**	**-0.1**
LFRS	**El Faro**	**1.67**	**314**	*e*P	**Pn**	**12 01 52.0**	**+0.2**
LFRS				*e*S	**Sn**	**12 02 12.3**	**+0.2**
TGUH	**Tegucigalpa,Un**	**1.68**	**19**	*e*P	**Pn**	**12 01 51.9**	**0.0**
TGUH				*e*S	**Sn**	**12 02 12.0**	**-0.3**
TGUH	**Tegucigalpa,Un**	**1.68**	**19**	*e*P	**Pn**	**12 01 51.9**	**0.0**
TGUH				*e*S	**Sn**	**12 02 12.0**	**-0.3**
LFU	**La Fuente**	**1.79**	**316**	*e*P	**Pn**	**12 01 54.1**	**+0.6**

LFU	**La Fuente**	**1.79**	**316**	*e*P	**Pn**	**12 01 54.1**	**+0.6**

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*ATH **02** 12:05:25.9, 38°.39N×20°.47E, h9^{km}±2^{km}, ML2.6/7, Error ellipse: s-maj=2.7km s-min=0.6km az=259.0*
*THE **02** 12:05:26.1, 38°.39N×20°.44E, h6^{km}±2^{km}, ML2.6/7, Error ellipse: s-maj=2.3km s-min=0.3km az=91.0*
ISC 02 12:05:26.1±1.0**, 38°.39N**±0°.02×**20°.48E**±0°.03**, h7**^{km}±6^{km}**, n33, σ0^{s}60**/55**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KONA	**Konidatara, Ke**	**0.08**	**65**	P	**Pg**	**12 05 28.0**	**-0.1**
KONA				S	**Sg**	**12 05 29.4**	**-0.1**
KONA				AML	AML	12 05 30.6	
	comp=E,11846μm,0.2s						
KONA				AML	AML	12 05 30.6	
	comp=N,15437μm,0.2s						
FSK	**Fiskardo**	**0.10**	**44**	P	**Pg**	**12 05 28.2**	**-0.1**
FSK				S	**Sg**	**12 05 30.3**	**+0.4**
	comp=N,5μm,0.1s						
FSK	**Fiskardo**	**0.10**	**44**	P	**Pg**	**12 05 28.2**	**-0.1**
FSK				S	**Sg**	**12 05 29.7**	**-0.2**
FSK				AML	AML	12 05 31.2	
	comp=E,12388μm,0.2s						
FSK				AML	AML	12 05 32.8	
	comp=N,5468μm,0.2s						
KEF1	**Kardakata, Kep**	**0.11**	**183**	P	**Pg**	**12 05 28.6**	**0.0**
KEF1				S	**Sg**	**12 05 30.3**	**0.0**
KEF4	**Livadi, Kephal**	**0.14**	**198**	P	**Pg**	**12 05 29.0**	**-0.1**
KEF4				S	**Sg**	**12 05 31.7**	**+0.7**
AGT1	**Agia Thekli**	**0.16**	**208**	P	**Pg**	**12 05 29.2**	**-0.2**
LXRA	**Lixouri, Kepha**	**0.19**	**190**	P	**Pg**	**12 05 29.8**	**-0.1**
LXRA				S	**Sg**	**12 05 33.5**	**+0.9**
ARGA	**Argostoli. Kep**	**0.21**	**180**	P	**Pg**	**12 05 30.3**	**-0.1**
ARGA				S	**Sg**	**12 05 33.0**	**-0.2**
KEF3	**Kipouria, Keph**	**0.21**	**209**	P	**Pg**	**12 05 30.2**	**-0.2**
KEF3				S	**Sg**	**12 05 34.2**	**+0.9**
KEF2	**Argostoli. Kep**	**0.23**	**178**	P	**Pg**	**12 05 30.6**	**0.0**
KEF2				S	**Sg**	**12 05 33.9**	**+0.3**
VLS	**Valsamata**	**0.23**	**158**	P	**Pg**	**12 05 30.6**	**-0.1**
VLS				S	**Sg**	**12 05 34.7**	**+0.9**
	comp=N,2μm,0.3s						
VLS	**Valsamata**	**0.23**	**158**	P	**Pg**	**12 05 30.4**	**-0.3**
VLS				S	**Sg**	**12 05 34.2**	**+0.4**
VLS				AML	AML	12 05 34.8	
	comp=E,4916μm,0.3s						
VLS				AML	AML	12 05 35.7	
	comp=N,3646μm,0.1s						
EVGI	**Lefkada island**	**0.27**	**31**	P	**Pg**	**12 05 31.6**	**+0.1**
EVGI				S	**Sg**	**12 05 36.1**	**+1.1**
EVGI	**Lefkada island**	**0.27**	**31**	P	**Pg**	**12 05 31.5**	**+0.1**
MGNA	**Meganis**	**0.36**	**43**	P	**Pg**	**12 05 33.1**	**-0.1**
MGNA				S	**Sg**	**12 05 38.5**	**+0.5**
KFL	**Anninata**	**0.37**	**139**	P	**Pg**	**12 05 33.3**	**-0.1**
KFL				S	**Sg**	**12 05 39.8**	**+1.6**
	comp=N,2μm,0.2s						
KFL	**Anninata**	**0.37**	**139**	P	**Pg**	**12 05 33.1**	**-0.2**
KFL				S	**Sg**	**12 05 39.6**	**+1.3**
KFL				AML	AML	12 05 41.3	
	comp=E,4962μm,0.3s						
KFL				AML	AML	12 05 41.3	
	comp=N,4098μm,0.4s						
LKD2	**Lefkada island**	**0.42**	**19**	P	**Pg**	**12 05 34.0**	**-0.3**
LKD2				S	**Sg**	**12 05 40.8**	**+0.9**
	comp=N,592nm,0.3s						
LKD2	**Lefkada island**	**0.42**	**19**	P	**Pg**	**12 05 34.1**	**-0.3**
LKD2				S	**Sg**	**12 05 41.0**	**+1.1**
LKD2				AML	AML	12 05 44.0	
	comp=E,966μm,0.3s						
LKD2				AML	AML	12 05 45.8	
	comp=N,1397μm,0.3s						
TSLK	**Tsoukalades, L**	**0.46**	**18**	P	**Pg**	**12 05 34.8**	**-0.2**
TSLK				S	**Sg**	**12 05 41.9**	**+1.0**
	comp=N,652nm,0.7s						
TSLK	**Tsoukalades, L**	**0.46**	**18**	P	**Pg**	**12 05 34.7**	**-0.2**
TSLK				S	**Sg**	**12 05 41.5**	**+0.5**
TSLK				AML	AML	12 05 46.1	
	comp=E,1248μm,0.4s						
TSLK				AML	AML	12 05 49.9	
	comp=N,1177μm,0.7s						
VLMS	**Volimes, Zakyn**	**0.53**	**164**	P	**Pg**	**12 05 36.0**	**-0.4**
VLMS				S	**Sg**	**12 05 43.8**	**+0.4**
VLMS				AML	AML	12 05 46.2	
	comp=E,3379μm,0.2s						
VLMS				AML	AML	12 05 47.5	
	comp=N,4967μm,0.2s						
PDO	**Prodromos**	**0.59**	**69**	P	**Pg**	**12 05 37.5**	**0.0**
PDO				S	**Sg**	**12 05 46.4**	**+1.2**
	comp=N,1μm,0.4s						
PDO	**Prodromos**	**0.59**	**69**	P	**Pg**	**12 05 37.3**	**-0.3**
RLS	**Riolos of Patr**	**0.85**	**113**	P	**Pg**	**12 05 41.7**	**-0.6**
PVO	**Paravola**	**0.85**	**74**	P	**Pg**	**12 05 42.5**	**0.0**
PVO	**Paravola**	**0.85**	**74**	P	**Pg**	**12 05 42.4**	**-0.1**
DRO	**Drossia**	**1.06**	**114**	P	**Pg**	**12 05 46.2**	**-0.4**
DRO				S	**Sn**	**12 06 03.2**	**+0.7**
	comp=N,480nm,0.5s						
DRO	**Drossia**	**1.06**	**114**	P	**Pg**	**12 05 45.6**	**-0.9**
IGT	**Igoumenitsa**	**1.15**	**354**	P	**Pg**	**12 05 47.6**	**-0.5**
EVR	**Evrytania**	**1.17**	**63**	P	**Pg**	**12 05 47.4**	**-1.1**
KLV	**Kalavryta, Ach**	**1.36**	**104**	P	**Pn**	**12 05 50.8**	**-0.8**
KEK	**Kerkira**	**1.42**	**338**	P	**Pn**	**12 05 51.9**	**-0.5**

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*INET **02** 12:07:12.4, 12°.56N×87°.80W, h70^{km}, ML4.0*
SNET 02 12:07:11.7±3.3**, 12°.53N×87°.93W, h53**^{km}±51^{km}**, ML3.4, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**0.75**	**7**	*e*P	Pn	12 07 26.6	+0.3
CNCH				*e*S	Sn	12 07 38.2	+1.3
CNCH				IAML		12 07 42.2	
	comp=Z,3μm,0.3s						
LCND	**La Caada**	**0.77**	**3**	*e*P	Pn	12 07 26.9	+0.4
LCND				*e*S	Sn	12 07 37.9	+0.6
LCND				IAML		12 07 42.5	
	comp=Z,963nm,0.2s						
JUCU	**Jucuar¡n**	**0.78**	**337**	*e*P	Pn	12 07 27.0	+0.3
JUCU				*e*S	Sn	12 07 38.2	+0.5
JUCU				IAML		12 07 41.4	
	comp=Z,802nm,0.2s						
BLLM	**Bellamira**	**0.95**	**342**	*e*P	Pn	12 07 29.9	+1.0
BLLM				*e*S	Sn	12 07 43.4	+1.8
LCY	**Lacayo**	**0.95**	**338**	*e*P	Pn	12 07 29.1	0.0
LCY				*e*S	Sn	12 07 43.2	+1.5
ALJI	**Alcalda de J**	**1.01**	**322**	*e*P	Pn	12 07 30.4	+0.7
ALJI				*e*S	Sn	12 07 43.4	+0.6
PACA	**Pacayal**	**1.01**	**338**	*e*P	Pn	12 07 30.5	+0.8
PACA				*e*S	Sn	12 07 44.0	+1.0
PACA				IAML		12 07 47.1	
	comp=Z,3μm,0.1s						
TECA	**Tecapa**	**1.11**	**330**	*e*P	Pn	12 07 32.1	+0.9
TECA				*e*S	Sn	12 07 45.5	0.0
COEB	**Comit de Eme**	**1.12**	**329**	*e*P	Pn	12 07 26.2	-5.1
COEB				*e*S	Sn	12 07 47.4	+1.5
COEB				IAML		12 07 50.4	
	comp=Z,246nm,0.3s						
FAGO	**Alcalda de S**	**1.17**	**352**	*e*P	Pn	12 07 32.2	+0.4
FAGO				*e*S	Sn	12 07 48.6	+1.9
COEG	**Centro de Oper**	**1.42**	**319**	*e*P	Pn	12 07 36.1	+0.8
COEG				*e*S	Sn	12 07 54.3	+1.3
COEG				IAML		12 07 58.5	
	comp=Z,190nm,0.3s						
TGUH	**Tegucigalpa,Un**	**1.65**	**23**	*e*P	Pn	12 07 38.6	+0.3
TGUH				*e*S	Sn	12 07 58.1	-0.4

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*SNET **02** 12:13:46.3±1.1, 12°.62N×87°.88W, h66^{km}±15^{km}, ML3.9*
*UCR **02** 12:13:46.3±1.3, 12°.64N×87°.86W, h71^{km}±15^{km}, ML3.9*
*INET **02** 12:13:46.6, 12°.55N×87°.72W, h55^{km}, ML3.7*
ISC 02 12:13:44.6±4.3**, 12°.5N**±0°.3×**87°.82W**±0°.09**, h65**^{km}±29^{km}**, n15, σ0^{s}52**/28**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**0.79**	**359**	*e*P	**Pn**	**12 14 00.2**	**-0.1**
CNCH				*e*S	**Sn**	**12 14 11.7**	**-0.2**
CNCH				IAML		12 14 13.6	
	comp=Z,3μm,0.1s						
CNCH	**Conchagua**	**0.79**	**359**	*e*P	**Pn**	**12 14 00.2**	**-0.1**
CNCH				*e*S	**Sn**	**12 14 11.7**	**-0.2**
CNCH				IAML		12 14 13.6	
	comp=Z,3μm,0.1s						
BLLM	**Bellamira**	**1.04**	**337**	*e*P	**Pn**	**12 14 03.8**	**+0.4**
BLLM				*e*S	**Sn**	**12 14 16.8**	**-0.5**
BLLM	**Bellamira**	**1.04**	**337**	*e*P	**Pn**	**12 14 03.8**	**+0.4**
BLLM				*e*S	**Sn**	**12 14 16.8**	**-0.5**
VSM	**San Miguel**	**1.04**	**335**	*e*P	**Pn**	**12 14 04.6**	**+1.0**
VSM	**San Miguel**	**1.04**	**335**	*e*P	**Pn**	**12 14 04.6**	**+1.0**
LCY	**Lacayo**	**1.04**	**333**	*e*P	**Pn**	**12 14 04.0**	**+0.5**
LCY				*e*S	**Sn**	**12 14 17.5**	**-0.1**
LCY	**Lacayo**	**1.04**	**333**	*e*P	**Pn**	**12 14 04.0**	**+0.5**
LCY				*e*S	**Sn**	**12 14 17.5**	**-0.1**
PACA	**Pacayal**	**1.10**	**333**	*e*P	**Pn**	**12 14 04.6**	**+0.4**
PACA				*e*S	**Sn**	**12 14 18.7**	**-0.1**
PACA				IAML		12 14 20.6	
	comp=Z,4μm,0.2s						
PACA	**Pacayal**	**1.10**	**333**	*e*P	**Pn**	**12 14 04.6**	**+0.4**
PACA				*e*S	**Sn**	**12 14 18.7**	**-0.1**
PACA				IAML		12 14 20.6	
	comp=Z,4μm,0.2s						
TECA	**Tecapa**	**1.21**	**326**	*e*P	**Pn**	**12 14 06.2**	**+0.5**
TECA				*e*S	**Sn**	**12 14 21.6**	**+0.2**
TECA	**Tecapa**	**1.21**	**326**	*e*P	**Pn**	**12 14 06.2**	**+0.5**
TECA				*e*S	**Sn**	**12 14 21.6**	**+0.2**
TGUH	**Tegucigalpa,Un**	**1.65**	**19**	*e*P	**Pn**	**12 14 12.0**	**+0.5**
TGUH				*e*S	**Sn**	**12 14 31.3**	**-0.6**
TGUH	**Tegucigalpa,Un**	**1.65**	**19**	*e*P	**Pn**	**12 14 12.0**	**+0.5**
TGUH				*e*S	**Sn**	**12 14 31.3**	**-0.6**
LFRS	**El Faro**	**1.66**	**313**	*e*P	**Pn**	**12 14 11.0**	**-0.7**
LFRS				*e*S	**Sn**	**12 14 31.5**	**-0.6**

MAN 02 12:21:19.6, 9°.77N×124°.19E, h4^{km}**, mb3.7, ML2.4, MS1.9, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBP	**Tagbilaran**	**0.33**	**257**	*i* P	Pg	12 21 27.0	+0.9
TBP				*i* S	Sb	12 21 32.1	-1.7
LLP	**Lapu-Lapu**	**0.59**	**338**	*e*P	Pg	12 21 30.6	-0.4
LLP				*i* S	Sg	12 21 38.6	0.0
MSLP	**Maasin**	**0.75**	**61**	*e*P	Pb	12 21 35.5	+0.2
MSLP				*e*S	Sn	12 21 47.6	-1.3
OCLP	**Ormoc**	**1.34**	**18**	*e*P	Pn	12 21 44.6	-0.5
OCLP				*e*S	Sn	12 22 03.8	+0.3
GUIM	**Jordan**	**1.79**	**299**	*e*P	Pn	12 21 52.0	+0.7
GUIM				*e*S	Sn	12 22 11.4	-3.2
PAGZ	**Pagadian**	**2.06**	**203**	*e*P	Pn	12 21 55.0	-0.1
PAGZ				*e*S	Sn	12 22 08.7	-13

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*IDC **02** 12:30:45.0±1.3, 24°.73S×65°.54W, h0^{km}, mb3.6/1, mb1 3.8/6, mb1mx3.6/26, mbtmp3.6/6, ML3.5/5, Error ellipse: s-maj=31.8km s-min=22.9km az=27.0*
ISC 02 12:30:49.7±1.0**, 24°.69S**±0°.10×**65°.6W**±0°.1**, h35**^{km}**, n9, σ2^{s}08**/10**, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**3.69**	**303**	Pn	**Pn**	**12 31 46.1**	**+1.4**
	0.9nm,0.3s,baz=128,slow=11,SNR=5.9						
CPUP	**Villa Florida**	**7.62**	**104**	Pn	**Pn**	**12 32 38.2**	**-0.2**
	0.4nm,0.3s,baz=288,slow=11,SNR=9.7						
CPUP				Lg	Lg	12 34 46.6	
	0.6nm,0.3s,baz=224,slow=17,SNR=3.1						
LPAZ	**La Paz**	**8.69**	**343**	Pn	**Pn**	**12 32 52.9**	**-0.7**
	0.2nm,0.3s,baz=146,slow=5.6,SNR=5.2						
SIV	**San Ignacio**	**9.62**	**27**	Pn	**Pn**	**12 33 04.6**	**-1.3**
	2.9nm,0.3s,baz=237,slow=12,SNR=42						
SIV				Sn	**Sn**	**12 34 50.6**	**-2.2**
	1.0nm,0.3s,baz=105,slow=22,SNR=4.4						
SIV				Lg	Lg	12 35 44.5	
	baz=242,slow=15,SNR=1.9						
PLCA	**Paso Flores**	**16.54**	**193**	Pn	**Pn**	**12 34 36.5**	**-2.5**
	0.0nm,0.3s,baz=277,slow=9.6,SNR=3.1						
BDFB	**Brasilia**	**18.76**	**65**	P	**Pn**	**12 35 10.3**	**+3.7**
	0.2nm,0.3s,baz=198,slow=17,SNR=3.4						
TORD	**Torodi Ar. Bea**	**75.60**	**68**	P	**P**	**12 42 32.4**	**+0.9**
	0.4nm,0.7s,baz=243,slow=6.3,SNR=2.7						
ASAR	**Alice Springs**	**128.36**	**203**	PKP	**PKiKP**	**12 49 54.2**	**+0.2**
	0.4nm,0.8s,baz=171,slow=1.8,SNR=3.4						
MKAR	**Makanchi Array**	**146.20**	**41**	PKPbc	**PKPbc**	**12 50 25.6**	**-0.7**
	0.6nm,0.9s,baz=288,slow=3.7,SNR=3.8						

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*INET **02** 12:32:13.9, 12°.51N×87°.75W, h59^{km}, ML3.3*
*UCR **02** 12:32:14.0±1.5, 12°.60N×87°.85W, h63^{km}±17^{km}, ML3.7*
*SNET **02** 12:32:14.0±1.2, 12°.59N×87°.86W, h60^{km}±15^{km}, ML3.7*
ISC 02 12:32:13.1±4.0**, 12°.5N**±0°.2×**87°.82W**±0°.08**, h60**^{km}±25^{km}**, n15, σ0^{s}58**/28**, 8C, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**0.77**	**359**	⇑*e*P	**Pn**	**12 32 28.1**	**-0.1**
CNCH				⇑*e*S	**Sn**	**12 32 40.4**	**+1.0**
CNCH				IAML		12 32 41.8	
	comp=Z,2μm,0.1s						
CNCH	**Conchagua**	**0.77**	**359**	⇑*e*P	**Pn**	**12 32 28.1**	**-0.1**
CNCH				⇑*e*S	**Sn**	**12 32 40.4**	**+1.0**
CNCH				IAML		12 32 41.8	
	comp=Z,2μm,0.1s						
JUCU	**Jucuar¡n**	**0.85**	**331**	*e*P	**Pn**	**12 32 28.9**	**-0.4**
JUCU				*e*S	**Sn**	**12 32 40.2**	**-1.0**
JUCU	**Jucuar¡n**	**0.85**	**331**	*e*P	**Pn**	**12 32 28.9**	**-0.4**
JUCU				*e*S	**Sn**	**12 32 40.2**	**-1.0**
PACA	**Pacayal**	**1.08**	**333**	*e*P	**Pn**	**12 32 32.4**	**+0.1**
PACA				*e*S	**Sn**	**12 32 46.9**	**+0.5**
PACA				IAML		12 32 48.2	
	comp=Z,2μm,0.1s						
PACA	**Pacayal**	**1.08**	**333**	*e*P	**Pn**	**12 32 32.4**	**+0.1**
PACA				*e*S	**Sn**	**12 32 46.9**	**+0.5**
PACA				IAML		12 32 48.2	
	comp=Z,2μm,0.1s						
TECA	**Tecapa**	**1.19**	**326**	*e*P	**Pn**	**12 32 33.8**	**+0.1**
TECA	**Tecapa**	**1.19**	**326**	*e*P	**Pn**	**12 32 33.8**	**+0.1**
FAGO	**Alcalda de S**	**1.22**	**347**	⇑*i*P	**Pn**	**12 32 34.0**	**0.0**
FAGO				*e*S	**Sn**	**12 32 49.7**	**+0.1**
FAGO	**Alcalda de S**	**1.22**	**347**	⇑*i*P	**Pn**	**12 32 34.0**	**0.0**
FAGO				*e*S	**Sn**	**12 32 49.7**	**+0.1**
COEG	**Centro de Oper**	**1.52**	**317**	*e*P	**Pn**	**12 32 38.0**	**0.0**
COEG				*e*S	**Sn**	**12 32 56.8**	**0.0**
COEG	**Centro de Oper**	**1.52**	**317**	*e*P	**Pn**	**12 32 38.0**	**0.0**
COEG				*e*S	**Sn**	**12 32 56.8**	**0.0**
TGUH	**Tegucigalpa,Un**	**1.63**	**19**	⇑*i*P	**Pn**	**12 32 40.1**	**+0.5**
TGUH				*e*S	**Sn**	**12 32 58.6**	**-1.1**
TGUH	**Tegucigalpa,Un**	**1.63**	**19**	⇑*i*P	**Pn**	**12 32 40.1**	**+0.5**
TGUH				*e*S	**Sn**	**12 32 58.6**	**-1.1**
LFRS	**El Faro**	**1.64**	**313**	*e*P	**Pn**	**12 32 40.2**	**+0.4**
LFRS				*e*S	**Sn**	**12 33 00.0**	**0.0**

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*IDC **02** 12:35:45.4±0.7, 4°.69N×95°.02E, h0^{km}, mb4.4/17, mb1 4.5/18, mb1mx4.3/35, mbtmp4.4/18, ML4.0/1, MS3.3/5, Ms1 3.4/5, ms1mx3.1/49, Error ellipse: s-maj=24.9km s-min=13.6km az=42.0*
*BJI **02** 12:35:48.6±0.0, 4°.32N×95°.02E, h61^{km}, mB5.1/28, mb4.7/43, Ms4.5/10, Ms7 4.2/11*
*NEIC **02** 12:35:53.1±1.6, 4°.67N±0°.08×95°.10E±0°.09, h60^{km}±2^{km}, mb4.6/49, Error ellipse: s-maj=13.3km s-min=11.0km az=50.0*
*DJA **02** 12:35:57.4±1.0, 4°N±5°×9°6E±°, h29^{km}±11^{km}, M4.2/8, mB4.6/2, mb4.5/4, MLv4.1/8, Mw(mB)3.8/2*
ISC 02 12:35:52.7±0.7**, 4°.54N**±0°.04×**95°.10E**±0°.05**, h61**^{km}±6^{km}**, n156, σ1^{s}53**/170**, mb4.6**/57**, 11C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLSI	**Meulaboh, Aceh**	**1.33**	**102**	P	**Pn**	**12 36 14.8**	**-0.4**
MLSI				S	**Sn**	**12 36 26.3**	**-5.8**
LHMI	**Lhok Sumawe**	**1.97**	**70**	P	**Pn**	**12 36 24.5**	**+0.7**
LHMI	**Lhok Sumawe**	**1.97**	**70**		**Pn**	**12 36 24.5**	**+0.7**
LHMI				Sn	**Sn**	**12 36 42.2**	**-5.2**
TPTI		**2.44**	**121**	P	**Pn**	**12 36 29.3**	**-0.9**
TPTI				S	**Sn**	**12 36 54.0**	**-4.9**
SNSI	**Sinabang, Aceh**	**2.45**	**150**	P	**Pn**	**12 36 30.3**	**0.0**
SNSI				S	**Sn**	**12 36 57.3**	**-1.9**
CMBY	**CAMPBELL BAY**	**2.72**	**335**	*e*P	**Pn**	**12 36 33.5**	**-0.5**
CMBY				*e*S	**Sn**	**12 37 07.6**	**+1.9**
PSI	**Prapat**	**4.19**	**114**	Pn	**Pn**	**12 36 55.2**	**+0.9**
	8.0nm,0.3s,baz=270,slow=9.6,SNR=20						
PSI				Sn	**Sn**	**12 37 47.3**	**+5.1**
	5.6nm,0.3s,baz=62,slow=15,SNR=5.1						
PSI				LR	LR	12 38 57.6	
	comp=Z,293nm,20.1s,baz=294,slow=44						
RPSI	**Rantau Prapat**	**4.24**	**115**		**Pn**	**12 36 56.4**	**+1.6**
RPSI				Sn	**Sn**	**12 37 47.5**	**+4.5**
RPSI	**Rantau Prapat**	**4.24**	**115**		**Pn**	**12 36 55.2**	**+0.4**
RPSI					**Sn**	**12 37 47.3**	**+4.2**
PBSI	**Pulau Batu**	**5.56**	**145**	P	**Pn**	**12 37 13.2**	**+0.2**
	0.2nm37nm,0.9s						
KULM	**Kulim**	**5.58**	**82**		**Pn**	**12 37 13.3**	**0.0**
KULM				Sn	**Sn**	**12 38 15.7**	**-0.4**
IPM	**Ipoh**	**5.91**	**90**		**Pn**	**12 37 17.8**	**0.0**
SISI	**Saibi**	**7.06**	**146**	P	**Pn**	**12 37 33.6**	**+0.1**
PDSI	**Padang**	**7.62**	**135**	P	**Pn**	**12 37 40.8**	**-0.4**
RGRI	**Rengat**	**8.71**	**124**	P	Pn	12 38 15.1	+19
MDSI	**Maura Dua**	**12.76**	**135**	P	**P**	**12 38 57.7**	**-2.7**
PBKT	**Sadao Pong**	**13.27**	**25**		**Pn**	**12 39 01.3**	**+2.9**
CM31	**Chiang Mai Arr**	**14.34**	**15**	P	**P**	**12 39 16.3**	**-1.7**
CMAR	**Chiang Mai Arr**	**14.34**	**15**	Pn	**P**	**12 39 16.0**	**-2.0**
	1.4nm,0.3s,baz=208,slow=11,SNR=99						
CMAR				LR	LR	12 44 50.1	
	comp=Z,158nm,19.3s,baz=184,slow=38						
PALK	**Pallekele**	**14.57**	**281**	LR	LR	12 43 23.7	
	comp=Z,58nm,21.3s,baz=108,slow=32						
CHTO	**Chiang Mai**	**14.68**	**15**	P	**P**	**12 39 20.9**	**-0.9**
UBPT	**Khong Chiam**	**14.77**	**43**	P	**P**	**12 39 21.9**	**-0.9**
DLV	**T Lat**	**15.15**	**60**	P	**P**	**12 39 28.2**	**+1.0**
KSM	**Kuching**	**15.49**	**101**	P	**P**	**12 39 33.8**	**+2.9**
SBUM	**Sibu**	**17.22**	**96**	P	**P**	**12 39 50.4**	**+0.4**
SLVN	**Son La**	**18.76**	**26**	P	**Pn**	**12 40 08.0**	**0.0**
QIZ	**Qiongzhong**	**20.36**	**44**	P	**P**	**12 40 24.0**	**-0.4**
QIZ				S	**S**	**12 44 09.3**	**-0.1**
QIZ				LR	LR		
	comp=N,220nm,9.2s						
QIZ				LR	LR		
	comp=Z,200nm,11.3s						
SHL	**Shillong**	**21.13**	**352**	P	**P**	**12 40 28.9**	**-4.0**
SHL				IAmb	IAmb	12 40 44.1	
	comp=Z,13nm,0.3s						
KMI	**Kunming**	**21.74**	**19**	P	**P**	**12 40 42.6**	**+3.2**
KMI				pP	sP	12 40 57.8	-2.8
KMI				sP	pP	12 41 01.8	+8.9
KMI				PP	**PnPn**	**12 41 08.4**	**+5.4**
KMI				S	**S**	**12 44 36.9**	**-0.1**
KMI				sS	sS	12 44 54.0	-4.1
KMI				pmax	pmax		
	comp=Z,15nm,0.6s						
KMI				pmax	pmax		
	comp=Z,170nm,5.2s						
KMI				LR	LR		
	comp=Z,180nm,6.3s						
KMI				LR	LR		
	comp=Z,190nm,5.1s						
KMI				LR	LR		
	comp=Z,180nm,11.4s						
JAGI	**Jajag, Banyuwa**	**22.98**	**124**	P	**P**	**12 40 52.0**	**-0.5**
RAMN	**Ramite**	**23.72**	**341**	*e*P	**P**	**12 41 00.5**	**+0.9**
	comp=Z,14nm,0.6s						
TAPN	**Taplejung**	**23.75**	**344**	*e*P	**P**	**12 40 59.5**	**-0.4**
	comp=Z,6.9nm,0.3s						
JIRN	**Jiri**	**24.51**	**341**	*e*P	**P**	**12 41 06.3**	**-0.6**
	comp=Z,22nm,0.5s						
PKI	**Pulchoki**	**24.70**	**339**	*e*P	**P**	**12 41 09.0**	**+0.4**
	comp=Z,6.7nm,0.5s						
DMN	**Daman**	**24.84**	**339**	*e*P	**P**	**12 41 10.6**	**+0.8**
	comp=Z,7.5nm,0.6s						
GUN	**Gumba**	**24.84**	**340**	*e*P	**P**	**12 41 09.5**	**-0.4**
	comp=Z,24nm,0.6s						
LSA	**Lhasa**	**25.30**	**352**	P	**P**	**12 41 14.2**	**0.0**
LSA				IAmb	IAmb	12 41 16.3	
	comp=Z,8.2nm,0.6s						
H08S2	**Diego Garcia H**	**25.59**	**242**	T	T	13 08 23.8	
	baz=62,slow=76,SNR=12						
H08S3	**Diego Garcia H**	**25.59**	**242**	T	T	13 08 17.7	
	baz=62,slow=76,SNR=14						
H08S1	**Diego Carcia H**	**25.61**	**242**	T	T	13 08 19.0	
	baz=62,slow=76,SNR=12						
DANN	**Dangsing**	**26.02**	**337**	*e*P	**P**	**12 41 20.2**	**-0.3**
	comp=Z,44nm,0.7s						
CD2	**Chengdu**	**27.47**	**16**	P	**P**	**12 41 31.9**	**-1.4**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
DAV	**Davao City (W)**	**30.43**	**84**	LR	LR	12 53 49.5	
	comp=Z,49nm,21.6s,baz=14,slow=36						
YULB	**Yu-li**	**31.48**	**51**	P	**P**	**12 42 11.2**	**+2.3**
YULB				IAmb	IAmb	12 42 17.0	
	comp=Z,9.0nm,0.9s						
XAN	**Xi'an**	**32.04**	**22**	P	**P**	**12 42 12.4**	**-1.3**
XAN				pmax	pmax		
	comp=Z,34nm,0.7s						
XAN				pmax	pmax		
	comp=Z,200nm,5.1s						
XAN	**Xi'an**	**32.04**	**22**	P	**P**	**12 42 12.4**	**-1.3**
LZH	**Lanzhou**	**32.41**	**13**	*e*P	**P**	**12 42 18.8**	**+1.7**
LZH				pP	pP	12 42 31.2	-1.0
LZH				sP	sP	12 42 38.5	-0.9
LZH				pmax	pmax		
	comp=Z,12nm,0.9s						
GTA	**Gaotai**	**34.98**	**6**	*e*P	**P**	**12 42 37.8**	**-1.5**
GTA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NJ2	**Nanjing**	**35.28**	**36**	*e*P	**P**	**12 42 43.0**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NIL	**Nilore**	**35.39**	**328**	P	**P**	**12 42 42.2**	**-0.6**
NIL				IAmb	IAmb	12 42 42.6	
	comp=Z,7.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**37.60**	**128**	P	**P**	**12 43 02.4**	**+0.7**
FAKI	**Fak Fak**	**37.86**	**101**	P	**P**	**12 43 04.2**	**+0.2**
FAKI				IAmb	IAmb	12 43 16.8	
	comp=Z,8.1nm,0.8s						
KSH	**Kashi**	**38.88**	**336**	P	**P**	**12 43 11.7**	**-0.8**
KSH				sP	sP	12 43 34.6	+0.3
KSH				S	**S**	**12 49 03.6**	**-2.8**
KSH				ScS	**ScS**	**12 53 15.6**	**-1.1**
KSH				pmax	pmax		
	comp=Z,350nm,6.0s						
KSH				LR	LR		
	comp=Z,270nm,10.9s						
KSH				LR	LR		
	comp=Z,120nm,10.5s						
KSH				LR	LR		
	comp=Z,200nm,12.0s						
KNRA	**Kununurra**	**38.91**	**122**	P	**P**	**12 43 12.6**	**-0.2**
KNRA				IAmb	IAmb	12 43 13.6	
	comp=Z,7.7nm,0.8s						
HHC	**Hu-ho-hao-te**	**39.06**	**20**	*e*P	**P**	**12 43 14.6**	**+0.7**
HHC				pmax	pmax		
	comp=Z,57nm,0.9s						
HHC				pmax	pmax		
	comp=Z,240nm,4.9s						
WMQ	**Urumqi**	**39.66**	**352**	*e*P	**P**	**12 43 19.7**	**+0.9**
MTN	**Manton Dam**	**39.75**	**116**	P	**P**	**12 43 19.7**	**-0.2**
MTN				IAmb	IAmb	12 43 26.3	
	comp=Z,16nm,1.2s						
BJT	**Baijiatuau**	**40.12**	**25**	P	**P**	**12 43 23.0**	**+0.5**
BJI	**Beijing**	**40.14**	**25**	P	**P**	**12 43 23.6**	**+0.9**
BJI	**Beijing**	**40.14**	**25**	P	**P**	**12 43 23.2**	**+0.5**
BJI				pmax	pmax		
	comp=Z,21nm,0.8s						
GAR	**Garm**	**41.01**	**330**	P	**P**	**12 43 29.6**	**-0.5**
ULHL	**Ulahol**	**41.13**	**339**	P	**P**	**12 43 31.7**	**+0.6**
	SNR=7.1						
CHGR	**Chuyangaron**	**41.34**	**329**	P	**P**	**12 43 31.8**	**-1.0**
KZA	**Kyzart**	**41.36**	**338**	P	**P**	**12 43 34.1**	**+0.9**
	SNR=9.4						
UCH	**Uchtor**	**41.77**	**337**	P	**P**	**12 43 37.6**	**+0.9**
	SNR=23						
KBK	**Karagaybulak**	**41.97**	**338**	P	**P**	**12 43 39.4**	**+1.4**
	SNR=29						
AML	**Almayashu**	**42.02**	**336**	P	**P**	**12 43 39.6**	**+1.0**
	SNR=35						
AAK	**Ala-Archa**	**42.13**	**337**	P	**P**	**12 43 41.3**	**+2.1**
	SNR=10						
AAK	**Ala-Archa**	**42.13**	**337**	P	**P**	**12 43 41.6**	**+2.4**
AAK				IAmb	IAmb	12 43 42.0	
	comp=Z,12nm,0.8s						
CHMS	**Chumysh**	**42.34**	**338**	P	**P**	**12 43 41.5**	**+0.7**
	SNR=6.1						
EKS2	**Erkin-Say**	**42.43**	**337**	P	**P**	**12 43 42.7**	**+1.0**
	SNR=14						
USP	**Ospenovka**	**42.66**	**338**	P	**P**	**12 43 44.2**	**+0.7**
	SNR=17						
MK31	**Makanchi Array**	**43.53**	**347**	P	**P**	**12 43 49.8**	**-0.6**
MK31				IAmb	IAmb	12 43 51.0	
	comp=Z,11nm,1.4s						
MKAR	**Makanchi Array**	**43.53**	**347**	P	**P**	**12 43 49.6**	**-0.7**

	comp=Z,4.4nm,0.6s,baz=174,slow=7.6,SNR=72						
MKAR				PcP	**PcP**	**12 45 38.4**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=173,slow=3.5,SNR=3.6						
MAKZ	**Makanchi**	**43.61**	**347**	P	**P**	**12 43 50.0**	**-1.0**
KK31	**Karatay Array**	**44.15**	**334**	P	**P**	**12 43 55.7**	**+0.3**
KK31				IAmb	IAmb	12 43 57.5	
	comp=Z,6.2nm,0.9s						
KKAR	**Karatay Array**	**44.15**	**334**	P	**P**	**12 43 55.4**	**0.0**
KKAR				IAmb	IAmb	12 43 57.5	
	comp=Z,6.2nm,0.9s						
SONM	**Songino Array**	**44.21**	**11**	P	**P**	**12 43 54.5**	**-1.4**
	comp=Z,1.0nm,0.8s,baz=192,slow=9.6,SNR=5.6						
SONM				PcP	**PP**	**12 45 40.6**	**+0.5**
	comp=Z,1.5nm,0.5s,baz=193,slow=3.9,SNR=8.9						
KSRS	**Korea Array**	**44.42**	**38**	P	**P**	**12 43 57.6**	**+0.1**
	comp=Z,2.7nm,0.7s,baz=224,slow=8.6,SNR=9.7						
WB0	**Warramunga Arr**	**45.56**	**123**	P	**P**	**12 44 07.5**	**+0.6**
WRA	**Warramunga Arr**	**45.60**	**124**	P	**P**	**12 44 08.5**	**+1.3**
	comp=Z,13nm,0.6s,baz=302,slow=9.2,SNR=106						
WRAB	**Tennant Creek**	**45.60**	**124**	P	**P**	**12 44 08.6**	**+1.4**
WB2	**Warramunga Arr**	**45.61**	**124**	P	**P**	**12 44 08.5**	**+1.1**
WR0	**Warramunga Arr**	**45.77**	**123**	P	**P**	**12 44 09.8**	**+1.2**
AS31	**Alice Springs**	**47.09**	**128**	P	**P**	**12 44 19.7**	**+0.8**
ASAR	**Alice Springs**	**47.09**	**128**	P	**P**	**12 44 20.2**	**+1.3**
	comp=Z,3.1nm,0.7s,baz=298,slow=7.8,SNR=73						
ASAR				PcP	**PcP**	**12 45 51.5**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=305,slow=3.6,SNR=4.9						
GEYT	**Alibeck**	**47.32**	**320**	P	**P**	**12 44 21.3**	**+0.8**
	comp=Z,4.3nm,0.6s,baz=160,slow=10,SNR=13						
GYA0B	**ALIBECK ARRAY**	**47.32**	**320**	P	**P**	**12 44 20.4**	**-0.1**
GYA0B				IAmb	IAmb	12 44 22.6	
	comp=Z,5.8nm,0.6s						
CN2	**Changchun**	**47.38**	**30**	*e*P	**P**	**12 44 20.3**	**-0.5**
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
KURBB	**Kurchatov Arra**	**47.99**	**346**	P	**P**	**12 44 25.4**	**0.0**
	comp=Z,4.2nm,0.6s,baz=169,slow=7.2,SNR=11						
KURBB				PcP	**PcP**	**12 45 53.4**	**+0.7**
	comp=Z,2.0nm,0.7s,baz=153,slow=2.9,SNR=8.3						
KURK	**Kurchatov**	**48.05**	**346**	P	**P**	**12 44 25.5**	**-0.4**
KURK				IAmb	IAmb	12 44 26.7	
	comp=Z,5.2nm,0.8s						
HIA	**Hailar**	**49.24**	**21**	P	**P**	**12 44 34.5**	**-0.5**
HIA				IAmb	IAmb	12 44 35.4	
	comp=Z,6.9nm,0.8s						
ZAA0	**Zalesovo Array**	**49.97**	**352**	P	**P**	**12 44 39.1**	**-1.3**
ZAA0				IAmb	IAmb	12 44 40.6	
	comp=Z,5.0nm,0.7s						
ZALV	**Zalesovo Beam**	**49.97**	**352**	P	**P**	**12 44 39.7**	**-0.7**
	comp=Z,5.7nm,0.5s,baz=187,slow=7.7,SNR=25						
ZALV				PcP	**PcP**	**12 45 59.2**	**-0.6**
	comp=Z,1.4nm,0.4s,baz=151,slow=4.4,SNR=3.6						
MJAR	**Matsushiro Arr**	**50.75**	**45**	P	**P**	**12 44 47.7**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=230,slow=48,SNR=5.1						
USRK	**Ussuriysk Ar.**	**51.09**	**34**	P	**P**	**12 44 48.5**	**-0.6**
	comp=Z,5.3nm,0.6s,baz=243,slow=7.5,SNR=9.1						
COEN	**Coen**	**51.11**	**112**	P	**P**	**12 44 50.4**	**+0.6**
COEN				IAmb	IAmb	12 44 53.1	
	comp=Z,3.4nm,0.8s						
BRVK	**Borovoye**	**52.49**	**341**	P	**P**	**12 44 59.0**	**-0.5**
ABKAR	**Akbulak array**	**53.60**	**332**	P	**P**	**12 45 08.0**	**+0.4**
ABKAR				IAmb	IAmb	12 45 22.6	
	comp=Z,4.7nm,0.8s						
TBLG	**Delisi**	**58.12**	**317**	P	**P**	**12 45 40.4**	**+0.2**
ARU	**Arti**	**59.31**	**337**	P	**P**	**12 45 47.6**	**-0.5**
ARU				IAmb	IAmb	12 45 48.5	
	comp=Z,7.1nm,1.0s						
KBZ	**Khabaz**	**60.19**	**319**	P	**P**	**12 45 54.1**	**-0.3**
	comp=Z,2.5nm,0.8s,baz=163,slow=6.7,SNR=6.3						
YAK	**Yakutsk**	**62.85**	**18**	P	**P**	**12 46 10.6**	**-1.4**
NRIK	**Noril'sk**	**64.90**	**357**	P	**P**	**12 46 24.8**	**-0.5**
	comp=Z,2.9nm,0.5s,baz=157,slow=7.3,SNR=4.8						
BR131	**Keskin Array S**	**65.33**	**312**	P	**P**	**12 46 28.5**	**-0.3**
BRTR	**Keskin Array B**	**65.33**	**312**	P	**P**	**12 46 28.6**	**-0.3**
	comp=Z,2.5nm,0.6s,baz=140,slow=7.3,SNR=15						
KLMR	**Klimovskoe**	**69.85**	**335**	*e*P	**P**	**12 46 52.9**	**-3.8**
KLMR				AMP		12 46 57.2	
	comp=Z,21nm,1.8s						
TIXI	**Tiksi**	**70.30**	**11**	P	**P**	**12 46 57.6**	**-1.7**
TIXI				IAmb	IAmb	12 46 58.5	
	comp=Z,6.7nm,0.6s						
AKASG	**Malin Array Be**	**71.35**	**322**	P	**P**	**12 47 05.2**	**-0.8**
	comp=Z,3.3nm,0.5s,baz=88,slow=5.3,SNR=21						
AKBB	**Malin Array Si**	**71.35**	**322**	P	**P**	**12 47 05.4**	**-0.6**
AKBB				IAmb	IAmb	12 47 05.6	
	comp=Z,3.9nm,0.6s						
VRI	**Vrincioaia**	**71.76**	**317**	⇑P	**P**	**12 47 09.7**	**+1.0**
PLOR	**Plostina**	**71.81**	**317**	⇑P	**P**	**12 47 10.1**	**+1.1**
TESR	**Tescani**	**71.95**	**318**	⇑P	**P**	**12 47 10.2**	**+0.4**
MLR	**Muntele Rosu**	**72.21**	**316**	⇑P	**P**	**12 47 11.8**	**+0.2**
MLR	**Muntele Rosu**	**72.21**	**316**	P	**P**	**12 47 12.7**	**+1.1**
MLR				IAmb	IAmb	12 47 13.3	
	comp=Z,5.1nm,0.8s						
PRAR	**RASCA**	**72.42**	**318**	⇑P	**P**	**12 47 12.6**	**0.0**
VOIR		**72.82**	**316**	⇑P	**P**	**12 47 14.2**	**-0.9**
ARR	**Arges**	**73.09**	**316**	⇑P	**P**	**12 47 16.8**	**+0.1**
BURAR	**Bucovina Array**	**73.15**	**318**	⇑P	**P**	**12 47 18.0**	**+1.0**
BUR08	**Bucovina Ar. S**	**73.16**	**318**	P	**P**	**12 47 18.1**	**+1.0**
BUR08				IAmb	IAmb	12 47 18.4	
	comp=Z,2.9nm,0.6s						
LIT	**Litokhoron**	**73.80**	**310**	P	**P**	**12 47 20.2**	**-0.7**
LIT				IAmb	IAmb	12 47 36.8	
	comp=Z,12nm,1.0s						
DRGR		**74.67**	**317**	⇑P	**P**	**12 47 26.8**	**+0.9**
LVZ	**Lovozero**	**75.00**	**340**	P	**P**	**12 47 27.0**	**-0.3**
TRPA	**Tarpa**	**75.01**	**319**	⇑P	**P**	**12 47 28.3**	**+0.5**
SIRR	**Siria**	**75.30**	**317**	⇑P	**P**	**12 47 29.8**	**+0.4**
CRVS	**Cervenica-Dubn**	**75.85**	**319**	*e*P	**P**	**12 47 33.5**	**+0.9**
FIA1	**FINESS Array S**	**76.08**	**332**	P	**P**	**12 47 33.4**	**-0.1**
FIA1				IAmb	IAmb	12 47 40.8	
	comp=Z,4.5nm,0.9s						
FINES	**FINESS Array B**	**76.08**	**332**	P	**P**	**12 47 33.5**	**-0.1**
	comp=Z,3.1nm,0.4s,baz=108,slow=5.4,SNR=47						
OJC	**Ojcow**	**77.13**	**320**	P	**P**	**12 47 40.2**	**+0.4**
OJC				IAmb	IAmb	12 47 41.7	
	comp=Z,8.4nm,1.0s						
LANS	**Liptovska Anna**	**77.19**	**319**	*e*P	**P**	**12 47 41.2**	**+1.0**
VYHS	**Vyhne**	**77.51**	**319**	*e*P	**P**	**12 47 42.6**	**+0.6**
MORC	**Moravsky Berou**	**78.51**	**320**	P	**P**	**12 47 48.6**	**+1.1**
ARCES	**ARCESS Array B**	**78.70**	**340**	P	**P**	**12 47 48.4**	**+0.3**
	comp=Z,4.6nm,0.6s,baz=92,slow=5.7,SNR=35						
ARE0	**ARCESS Array S**	**78.70**	**340**	P	**P**	**12 47 48.7**	**+0.6**
KRLC	**Kraliky**	**79.03**	**320**	*e*P	**P**	**12 47 51.1**	**+0.7**
KRLC				*e*pP	**pP**	**12 48 05.8**	**-0.9**
GEC2	**GERESS Array S**	**80.93**	**319**	P	**P**	**12 48 01.2**	**+0.5**
GERES	**GERESS Array B**	**80.93**	**319**	P	**P**	**12 48 01.6**	**+0.9**
	comp=Z,2.3nm,0.7s,baz=115,slow=4.8,SNR=14						
KHC	**Kasperske Hory**	**81.03**	**319**	*e*P	**P**	**12 48 05.5**	**+4.3**
KHC				*e*pP	**pwP**	**12 48 20.9**	**+0.5**
KBA	**Koelnbreinsper**	**81.07**	**317**	*i* P	**P**	**12 48 01.5**	**-0.1**
	comp=Z,3.4nm,0.7s						
WTTA	**Wattenberg**	**82.25**	**317**	*i* P	**P**	**12 48 07.4**	**-0.4**
	comp=Z,3.7nm,0.5s						
WATA	**Walderalm**	**82.29**	**317**	*i* P	**P**	**12 48 07.1**	**-0.9**
	comp=Z,1.5nm,0.6s						
SQTA	**Sankt Quirin**	**82.54**	**317**	*i* P	**P**	**12 48 08.6**	**-0.7**
	comp=Z,3.2nm,0.5s						
MOTA	**Moosalm**	**82.61**	**317**	*i* P	**P**	**12 48 09.2**	**-0.4**
	comp=Z,5.2nm,0.8s						
RETA	**Reutte**	**82.84**	**317**	*i* P	**P**	**12 48 10.8**	**+0.1**
	comp=Z,4.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**92.28**	**283**	LR	LR	13 29 03.8	
	comp=Z,36nm,18.2s,baz=340,slow=35						
SCHQ	**Schefferville**	**118.96**	**348**	PKPdf	**PKiKP**	**12 54 35.2**	**+0.7**
NVAR	**Mina Array Bea**	**127.23**	**33**	PKP	**PKiKP**	**12 54 53.2**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=357,slow=3.0,SNR=3.8						
PDAR	**Pinedale Array**	**127.88**	**23**	PKP	**PKiKP**	**12 54 52.6**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=113,slow=3.7,SNR=4.2						
PLCA	**Paso Flores**	**141.72**	**198**	PKP	**PKPdf**	**12 55 18.3**	**+0.5**
	comp=Z,1.1nm,0.9s,baz=119,slow=16,SNR=3.1						
TXAR	**Lajitas Array**	**141.80**	**27**	PKhKP	PKPpre	12 55 12.5	
	comp=Z,0.2nm,0.6s,baz=242,slow=1.9,SNR=3.2						
TXAR				PKP	**PKPdf**	**12 55 17.9**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=12,slow=1.1,SNR=4.3						
CPUP	**Villa Florida**	**145.86**	**228**	PKPbc	**PKPab**	**12 55 27.6**	**+1.2**
	comp=Z,0.8nm,0.7s,baz=118,slow=5.1,SNR=3.3						
CUPR	**Culebra, Puert**	**150.17**	**320**	PKPbc	**PKiKP**	**12 55 39.0**	**+0.4**
MTP	**Monte Pirata**	**150.50**	**320**	PKPbc	**PKiKP**	**12 55 39.6**	**+0.4**
HUMP	**Col San Antoni**	**150.66**	**321**	PKPbc	**PKiKP**	**12 55 39.9**	**+0.3**
ICMP	**Isla Caja de M**	**151.27**	**321**	PKPbc	**PKiKP**	**12 55 41.3**	**+0.4**
MLPR	**Magueyes Islan**	**151.53**	**322**	PKPbc	**PKiKP**	**12 55 41.7**	**+0.3**

IDC 02 12:48:47.1±1.0**,20°.14N**×**120°.36E,h0**^{km}**,mb3.3**/5**,**
mb1 3.6/5**,mb1mx3.3**/49**,mbtmp3.3**/5**,Error ellipse:**
s-maj=73.5km s-min=20.3km az=69.0,Philippine
Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**18.46**	**19**	P	Pn	12 53 09.7	+5.2
	0.1nm,0.3s,baz=196,slow=10,SNR=4.4						
SONM	**Songino Array**	**29.86**	**341**	P	P	12 54 55.3	-1.0
	0.3nm,0.7s,baz=140,slow=7.0,SNR=3.4						
MKAR	**Makanchi Array**	**40.80**	**320**	P	P	12 56 30.7	+0.3
	0.2nm,0.7s,baz=111,slow=7.9,SNR=2.8						
WRA	**Warramunga Arr**	**42.12**	**160**	P	P	12 56 41.1	-0.2
	0.3nm,0.5s,baz=341,slow=9.1,SNR=5.7						
ASAR	**Alice Springs**	**45.50**	**162**	P	P	12 57 08.3	-0.2
	0.4nm,0.5s,baz=345,slow=7.3,SNR=22						
YKA	**Yellowknife Ar**	**86.97**	**22**	P	P	13 01 34.5	+0.5
	0.1nm,0.5s,baz=304,slow=4.4,SNR=3.0						

SJA ***02*** *12:51:33.6±0.6, 23°.49S×69°.80W, h70^{km}±4^{km}, ML3.3,*
MW3.1
GUC ***02*** *12:51:34.3±0.6, 23°.46S×69°.79W, h68^{km}±2^{km}, ML2.7*
ISC 02 12:51:35.4±1.4**,23°.48S**±0°.03×**69°.80W**±0°.04**,h64**^{km}±10^{km}**,**
n21,σ**0^{s}.78**/38**,8C-4D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB15	**IPOC Station P**	**0.40**	**48**	⇓*i*P	**Pn**	**12 51 46.5**	**-0.5**
PB15				*i* S	**Sn**	**12 51 55.5**	**0.0**
PB15	**IPOC Station P**	**0.40**	**48**	*i* P	**Pn**	**12 51 46.6**	**-0.4**
PB15				*e*S	**Sn**	**12 51 56.2**	**+0.8**
PB15				IAML		12 51 57.2	
	comp=Z,7µm,0.2s						
PB10	**IPOC Station P**	**0.69**	**267**	⇑*i*P	**Pn**	**12 51 49.2**	**-0.6**
PB10				*i* S	**Sn**	**12 52 00.5**	**0.0**
PB10				IAML		12 52 03.3	
	comp=E,408nm,0.4s						
PB10	**IPOC Station P**	**0.69**	**267**	*i* P	**Pn**	**12 51 49.3**	**-0.6**
PB10				*e*S	**Sn**	**12 52 01.0**	**+0.5**
PB05	**IPOC Station P**	**0.72**	**329**	⇑*i*P	**Pn**	**12 51 50.0**	**-0.3**
PB05				*i* S	**Sn**	**12 52 01.6**	**+0.3**
PB05				IAML		12 52 04.2	
	comp=N,347nm,0.5s						
PB05	**IPOC Station P**	**0.72**	**329**	*i* P	**Pn**	**12 51 50.2**	**-0.1**
PB05				*e*S	**Sn**	**12 52 02.5**	**+1.3**
PB06	**IPOC Station P**	**0.80**	**15**	⇑*i*P	**Pn**	**12 51 50.7**	**-0.5**
PB06				*i* S	**Sn**	**12 52 02.4**	**-0.4**
PB06				IAML		12 52 04.0	
	comp=N,728nm,0.3s						
PB04	**IPOC Station P**	**1.18**	**344**	⇓*i*P	**Pn**	**12 51 55.5**	**-0.7**
PB04				⇓*i*S	**Sn**	**12 52 11.4**	**-0.2**
PB04				IAML		12 52 14.6	
	comp=E,223nm,0.1s						
PB04	**IPOC Station P**	**1.18**	**344**	*i* P	**Pn**	**12 51 55.6**	**-0.5**
PB04				*e*S	**Sn**	**12 52 12.7**	**+1.1**
LVC	**Limon Verde**	**1.19**	**44**	*e*P	**Pn**	**12 51 56.9**	**+0.5**
LVC				*e*S	**Sn**	**12 52 13.1**	**+1.1**
LVC	**Limon Verde**	**1.19**	**44**	*i* P	**Pn**	**12 51 56.5**	**+0.1**
LVC				IAML		12 51 57.0	
	comp=Z,83nm,0.2s						
PB14	**IPOC Station P**	**1.27**	**206**	*e*P	**Pn**	**12 51 57.4**	**0.0**
PB14				*e*S	**Sn**	**12 52 14.3**	**+0.4**
PB14				IAML		12 52 15.1	
	comp=E,180nm,0.3s						
PB14	**IPOC Station P**	**1.27**	**206**	*i* P	**Pn**	**12 51 57.2**	**-0.2**
PB03	**IPOC Station P**	**1.42**	**2**	⇑*i*P	**Pn**	**12 51 58.9**	**-0.4**
PB03				*i* S	**Sn**	**12 52 17.0**	**-0.3**
PB03				IAML		12 52 18.9	
	comp=E,220nm,0.2s						
GO02	**Mina Guanaco**	**1.69**	**174**	⇑*i*P	**Pn**	**12 52 03.3**	**+0.3**
GO02				*i* S	**Sn**	**12 52 25.2**	**+1.4**
PB07	**IPOC Station P**	**1.75**	**357**	⇑*i*P	**Pn**	**12 52 03.1**	**-0.5**
PB07				*i* S	**Sn**	**12 52 25.1**	**+0.1**
PB07				IAML		12 52 30.6	
	comp=N,96nm,0.2s						
PB09	**IPOC Station P**	**1.75**	**17**	⇑*i*P	**Pn**	**12 52 04.7**	**+0.9**
PB09				*e*S	**Sn**	**12 52 26.7**	**+1.5**
PB09				IAML		12 52 31.3	
	comp=N,94nm,0.3s						
PB09	**IPOC Station P**	**1.75**	**17**	*i* P	**Pn**	**12 52 05.0**	**+1.2**
PB02	**IPOC Station P**	**2.15**	**358**	⇑*i*P	**Pn**	**12 52 08.5**	**-0.6**
PB02				*e*S	**Sn**	**12 52 34.7**	**0.0**
PB01	**IPOC Station P**	**2.44**	**7**	⇓*i*P	**Pn**	**12 52 12.8**	**-0.2**
PB01				*e*S	**Sn**	**12 52 42.1**	**+0.4**
PB01				IAML		12 52 48.1	
	comp=E,112nm,0.2s						
AZAP	**Zapla**	**4.39**	**101**	*i* P	**Pn**	**12 52 37.5**	**-2.3**

INET ***02*** *12:56:15.5, 12°.45N×87°.86W, h70^{km}, ML3.8*
SNET ***02*** *12:56:17.8±1.0, 12°.58N×87°.89W, h50^{km}±20^{km}, ML3.5*
UCR ***02*** *12:56:17.7±1.0, 12°.59N×87°.86W, h58^{km}±17^{km}, ML3.5*
ISC 02 12:56:16.7±4.4**,12°.5N**±0°.3×**87°.83W**±0°.08**,h52**^{km}±39^{km}**,**
n11,σ**0^{s}.39**/22**,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**0.78**	**360**	*e*P	**Pn**	**12 56 31.3**	**-0.4**
CNCH				*e*S	**Sn**	**12 56 43.0**	**+0.5**
CNCH				IAML		12 56 47.3	
	comp=Z,2µm,0.1s						
CNCH	**Conchagua**	**0.78**	**360**	*e*P	**Pn**	**12 56 31.3**	**-0.4**
CNCH				*e*S	**Sn**	**12 56 43.0**	**+0.5**
CNCH				IAML		12 56 47.3	
	comp=Z,2µm,0.1s						
LCY	**Lacayo**	**1.03**	**334**	*e*P	**Pn**	**12 56 35.4**	**+0.5**
LCY				*e*S	**Sn**	**12 56 48.2**	**-0.3**
LCY	**Lacayo**	**1.03**	**334**	*e*P	**Pn**	**12 56 35.4**	**+0.5**
LCY				*e*S	**Sn**	**12 56 48.2**	**-0.3**
PACA	**Pacayal**	**1.08**	**334**	*e*P	**Pn**	**12 56 35.6**	**-0.1**
PACA				*e*S	**Sn**	**12 56 49.9**	**+0.1**
PACA	**Pacayal**	**1.08**	**334**	*e*P	**Pn**	**12 56 35.6**	**-0.1**
PACA				*e*S	**Sn**	**12 56 49.9**	**+0.1**
TECA	**Tecapa**	**1.19**	**327**	*e*P	**Pn**	**12 56 37.7**	**+0.5**
TECA				*e*S	**Sn**	**12 56 51.8**	**-0.7**
TECA	**Tecapa**	**1.19**	**327**	*e*P	**Pn**	**12 56 37.7**	**+0.5**
TECA				*e*S	**Sn**	**12 56 51.8**	**-0.7**
LFRS	**El Faro**	**1.65**	**313**	*e*P	**Pn**	**12 56 43.1**	**-0.2**
LFRS				*e*S	**Sn**	**12 57 03.6**	**+0.2**
TGUH	**Tegucigalpa,Un**	**1.65**	**19**	*e*P	**Pn**	**12 56 43.3**	**-0.1**
TGUH				*e*S	**Sn**	**12 57 03.5**	**+0.1**
TGUH	**Tegucigalpa,Un**	**1.65**	**19**	*e*P	**Pn**	**12 56 43.3**	**-0.1**
TGUH				*e*S	**Sn**	**12 57 03.5**	**+0.1**

IDC ***02*** *13:12:23.6±1.4, 32°.17N×40°.24W, h0^{km}, mb3.7/14,*
mb1 3.8/14, mb1mx3.7/37, mbtmp3.6/14, MS3.6/8,
Ms1 3.6/8, ms1mx3.2/37, Error ellipse: s-maj=42.5km
s-min=18.0km az=0.0
ISC 02 13:12:25.2±1.3**,32°.2N**±0°.3×**40°.2W**±0°.1**,h10**^{km}**,n24,**
σ**1^{s}.11**/14**,mb3.6**/14**,MS3.6**/8**,Northern Mid-Atlantic**
Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJG	**San Juan**	**27.25**	**245**	LR	LR	13 27 38.5	
	comp=Z,23nm,19.2s,baz=107,slow=34						
SCHQ	**Schefferville**	**29.44**	**328**	LR	LR	13 29 03.6	
	comp=Z,145nm,20.4s,baz=102,slow=34						
DBIC	**Dimbokro**	**41.57**	**120**	LR	LR	13 35 06.2	
	comp=Z,88nm,19.7s,baz=302,slow=33						
TORD	**Torodi Ar. Bea**	**42.73**	**106**	P	**P**	**13 20 22.3**	**-0.5**
	1.1nm,0.8s,baz=310,slow=6.3,SNR=5.5						
GERES	**GERESS Array B**	**43.30**	**51**	P	**P**	**13 20 27.2**	**+0.1**
	0.4nm,0.6s,baz=263,slow=7.8,SNR=3.3						
NOA	**NORSAR Array B**	**43.92**	**33**	P	**P**	**13 20 31.7**	**-0.2**
	0.4nm,0.6s,baz=252,slow=8.0,SNR=2.5						
H10N2	**ASCENSION HYDR**	**46.75**	**144**	T	T	14 10 33.9	
	baz=329,slow=76,SNR=57						
H10N3	**ASCENSION HYDR**	**46.75**	**144**	T	T	14 10 34.3	
	baz=329,slow=76,SNR=54						
H10N1	**ASCENSION HYDR**	**46.77**	**144**	T	T	14 10 35.5	
	baz=329,slow=76,SNR=68						
H10S3	**ASCENSION HYDR**	**47.63**	**145**	T	T	14 11 48.6	
	baz=251,slow=74,SNR=149						
H10S2	**ASCENSION HYDR**	**47.64**	**145**	T	T	14 11 44.2	
	baz=329,slow=74,SNR=132						
FINES	**FINESS Array B**	**51.05**	**34**	P	**P**	**13 21 26.7**	**-0.6**
	1.7nm,0.7s,baz=242,slow=4.1,SNR=5.4						
SIV	**San Ignacio**	**51.90**	**206**	LR	LR	13 41 13.3	
	comp=Z,43nm,20.4s,baz=96,slow=33						
AKASG	**Malin Array Be**	**53.24**	**48**	P	**P**	**13 21 42.9**	**-0.9**
	1.2nm,0.6s,baz=276,slow=6.4,SNR=9.4						
AKASG				LR	LR	13 43 21.2	
	comp=Z,59nm,18.0s,baz=25,slow=35						
TXAR	**Lajitas Array**	**53.90**	**285**	P	**P**	**13 21 49.9**	**+0.9**
	0.3nm,0.7s,baz=91,slow=7.4,SNR=3.2						
PDAR	**Pinedale Array**	**54.63**	**302**	P	**P**	**13 21 52.9**	**-1.5**
	0.3nm,0.6s,baz=91,slow=8.9,SNR=5.2						
PDAR				LR	LR	13 43 37.4	
	comp=Z,56nm,20.8s,baz=46,slow=34						
YKA	**Yellowknife Ar**	**54.88**	**327**	P	**P**	**13 21 54.3**	**-1.2**
	0.4nm,0.8s,baz=86,slow=7.5,SNR=4.2						
YKA				LR	LR	13 45 31.5	
	comp=Z,96nm,19.3s,baz=0.0,slow=36						
NVAR	**Mina Array Bea**	**62.26**	**300**	P	**P**	**13 22 46.5**	**-1.2**
	0.3nm,0.6s,baz=82,slow=6.5,SNR=3.3						
NVAR				LR	LR	13 48 14.8	
	comp=Z,83nm,19.6s,baz=6.5,slow=35						
ILAR	**Eielson Array**	**68.00**	**334**	P	**P**	**13 23 25.9**	**+1.7**
	0.2nm,0.6s,baz=57,slow=6.8,SNR=3.0						
AKTO	**Aktyubinsk**	**70.74**	**42**	P	**P**	**13 23 41.5**	**+0.1**
	1.1nm,0.5s,baz=300,slow=7.6,SNR=3.9						
H09W1	**TRISTAN DA CUN**	**73.68**	**157**	T	T	14 44 23.3	
	SNR=11						
ZALV	**Zalesovo Beam**	**81.97**	**29**	P	**P**	**13 24 45.3**	**+0.3**
	0.7nm,0.7s,baz=298,slow=3.1,SNR=3.2						
MKAR	**Makanchi Array**	**85.87**	**36**	P	**P**	**13 25 06.9**	**+1.7**
	0.7nm,1.0s,baz=8.5,slow=2.9,SNR=3.4						
SONM	**Songino Array**	**94.90**	**22**	P	**P**	**13 25 48.5**	**+0.7**
	0.2nm,0.3s,baz=16,slow=7.5,SNR=3.0						

IDC 02 13:15:43.0±2.1**,0°.81N**×**126°.98E,h0**^{km}**,mb3.1**/3**,**
mb1 3.4/3**,mb1mx3.2**/31**,mbtmp3.2**/3**,Error ellipse:**
s-maj=173.0km s-min=25.3km az=66.0,Northern
Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.85**	**161**	P	P	13 20 36.3	-1.1
	0.2nm,0.4s,baz=340,slow=11,SNR=7.5						
ASAR	**Alice Springs**	**25.24**	**165**	P	P	13 21 11.8	+0.9
	0.4nm,0.8s,baz=344,slow=8.5,SNR=6.6						
MKAR	**Makanchi Array**	**60.09**	**326**	P	P	13 25 52.1	-0.1
	0.4nm,0.9s,baz=123,slow=7.1,SNR=3.0						

JMA 02 13:23:09.0,35°.73N×**136°.34E,h12**^{km}**,M2.8,Western**
Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYTA	**Yamagatataniai**	**0.35**	**113**	P	Pg	13 23 16.0	0.0
JYTA				S	Sg	13 23 21.0	+0.3
JFM	**Mihama**	**0.35**	**235**	P	Pg	13 23 16.3	+0.2
JFM				S	Sg	13 23 21.2	+0.4
JKG	**Kaga**	**0.55**	**359**	P	Pg	13 23 19.7	0.0
JKG				S	Sg	13 23 27.2	+0.3
JICN	**Ichinomiyachia**	**0.59**	**136**	P	Pg	13 23 20.7	+0.2
JWT	**Wachi**	**0.89**	**240**	P	Pg	13 23 25.7	-0.4
JKY	**Yasaka**	**1.01**	**265**	P	Pb	13 23 27.8	-0.7
JKY				S	Sg	13 23 41.5	-0.2
TSUJ	**Tsu 2**	**1.02**	**176**	P	Pb	13 23 28.3	-0.3
TSUJ				S	Sb	13 23 41.7	-0.2
MAT	**Matsushiro**	**1.71**	**61**	P	Pb	13 23 40.6	+0.1
MAT				S	Sg	13 24 04.0	-0.2

IDC 02 13:28:30.9±1.9**,0°.96S**×**127°.51E,h0**^{km}**,mb2.8**/3**,**
mb1 3.2/4**,mb1mx3.1**/34**,mbtmp3.0**/4**,ML3.2**/1**,Error**
ellipse: s-maj=119.9km s-min=24.2km az=70.0,
Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**17.13**	**186**	P	P	13 32 33.3	-0.4
	0.1nm,0.3s,baz=0.0,slow=10,SNR=2.7						
WRA	**Warramunga Arr**	**20.02**	**161**	P	P	13 33 04.6	-0.9
	0.1nm,0.4s,baz=338,slow=11,SNR=5.6						
ASAR	**Alice Springs**	**23.41**	**165**	P	P	13 33 42.0	+0.3
	0.2nm,0.9s,baz=346,slow=12,SNR=3.1						
MKAR	**Makanchi Array**	**61.85**	**326**	P	P	13 38 52.0	-0.1
	0.2nm,0.8s,baz=109,slow=8.3,SNR=2.1						

DJA ***02*** *13:30:02.2±0.9, 3°S±2°×12°8E±°, h31^{km}±13^{km}, M4.6/15,*
mB5.4/6, mb4.9/9, MLv4.4/15, Mw(mB)4.8/6
NEIC ***02*** *13:30:02.1±2.4, 2°.87S±0°.04×128°.21E±0°.06, h39^{km}±7^{km},*
mb4.5/23, Error ellipse: s-maj=9.2km s-min=4.9km
az=120.0
IDC ***02*** *13:30:05.8±1.5, 2°.87S×128°.38E, h68^{km}±16^{km}, mb3.7/9,*
mb1 4.1/13, mb1mx3.8/35, mbtmp4.2/13, MS3.5/4,
Ms1 3.5/4, ms1mx3.0/36, Error ellipse: s-maj=12.5km
s-min=8.7km az=89.0
ISC 02 13:30:02.7±0.9**,2°.84S**±0°.04×**128°.16E**±0°.04**,h42**^{km}±9^{km}**,**
n66,σ**1^{s}.45**/76**,mb4.5**/15**,Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**0.84**	**178**	P	**Pn**	**13 30 17.2**	**-1.0**
AAI				S	**Sn**	**13 30 31.1**	**+1.7**
MSAI	**Masohi**	**0.92**	**123**	P	**Pn**	**13 30 19.8**	**+0.7**
MSAI				S	**Sn**	**13 30 33.7**	**+2.5**
NLAI	**Namlea**	**1.13**	**249**	P	**Pn**	**13 30 22.2**	**+0.1**
NLAI				S	**Sn**	**13 30 37.1**	**+0.6**
LBMI	**Labuha**	**2.28**	**343**	P	**Pn**	**13 30 37.7**	**-0.2**
LBMI				S	**Sn**	**13 31 04.9**	**0.0**
SANI	**Sanana**	**2.31**	**290**	P	**Pn**	**13 30 35.9**	**-2.4**
SANI				S	**Sn**	**13 31 02.7**	**-2.8**
BNDI	**Bandanaira**	**2.41**	**134**	P	**Pn**	**13 30 41.9**	**+2.2**
SIJI	**Sorong**	**3.67**	**58**	P	**Pn**	**13 30 56.8**	**-0.2**
	84nm,0.3s,baz=234,slow=9.1,SNR=215						
SIJI				S	**Sn**	**13 31 38.5**	**-0.5**
	27nm,0.3s,baz=55,slow=21,SNR=8.0						
SIJI				LR	LR	13 33 00.6	
	comp=Z,512nm,19.1s,baz=289,slow=50						
TNTI	**Ternate**	**3.67**	**347**	P	**Pn**	**13 30 57.4**	**+0.4**
TNTI				S	**Sn**	**13 31 38.5**	**-0.6**
TNTI	**Ternate**	**3.67**	**347**		**Pn**	**13 30 57.0**	**0.0**
FAKI	**Fak Fak**	**4.08**	**91**	P	**Pn**	**13 31 02.5**	**-0.1**
FAKI				S	**Sn**	**13 31 49.4**	**+0.2**
FAKI	**Fak Fak**	**4.08**	**91**		**Pn**	**13 31 02.3**	**-0.4**
KMSI	**Cibinong**	**5.38**	**309**	P	**Pn**	**13 31 19.0**	**-1.5**
	2.0nm116nm,0.5s						
LUWI	**Luwuk**	**5.68**	**288**	P	**Pn**	**13 31 24.1**	**-0.5**
	0.8nm1µm105nm,0.7s						
LUWI	**Luwuk**	**5.68**	**288**		**Pn**	**13 31 24.0**	**-0.5**
SAUI	**Saumlaki**	**5.99**	**149**	P	**Pn**	**13 31 31.2**	**+2.3**
	0.6nm6µm185nm,0.9s						
SAUI	**Saumlaki**	**5.99**	**149**	Pn	**Pn**	**13 31 27.2**	**-1.6**
RKPI	**Ransiki, Papua**	**6.15**	**78**	P	**Pn**	**13 31 31.4**	**+0.3**
	1.4nm2µm96nm,0.7s						
BBSI	**Bau Bau**	**6.17**	**245**	P	**Pn**	**13 31 31.9**	**+0.6**
	0.1nm18nm,1.0s						
APSI	**Ampana**	**6.79**	**286**	P	**Pn**	**13 31 40.4**	**+0.6**
	1.4nm4µm362nm,0.5s						
MRSI	**Marisa**	**7.04**	**298**	P	**Pn**	**13 31 42.5**	**-0.8**
	0.5nm809nm44nm,0.5s						
SOEI	**Soe**	**7.89**	**209**	Pn	**Pn**	**13 31 53.6**	**-1.4**
KAPI	**Kappang**	**8.66**	**255**	P	**Pn**	**13 32 09.4**	**+3.8**
	2.0nm,0.3s,baz=75,slow=11,SNR=9.0						
KAPI				S	Sn	13 33 52.5	+10
	1.2nm,0.3s,baz=277,slow=22,SNR=2.2						
KAPI				LR	LR	13 35 55.2	
	comp=Z,266nm,18.6s,baz=62,slow=39						
EDFI	**Ende, Flores**	**8.71**	**227**	P	**Pn**	**13 32 09.4**	**+3.0**
	11nm,0.7s						
DAV	**Davao City (W)**	**10.18**	**345**	Pn	**Pn**	**13 32 26.4**	**+0.1**
MTN	**Manton Dam**	**10.37**	**164**		**Pn**	**13 32 30.8**	**+1.9**
KNRA	**Kununurra**	**12.77**	**177**		**Pn**	**13 33 03.0**	**+1.2**
KKM	**Kota Kinabalu**	**14.84**	**306**	P	**P**	**13 33 34.2**	**-0.9**
JAGI	**Jajag, Banyuwa**	**15.02**	**248**	P	**P**	**13 33 35.9**	**-1.1**
JAGI				IAmb	IAmb	13 33 44.5	
	comp=Z,57nm,1.4s						
FITZ	**Fitzroy Crossi**	**15.37**	**189**	P	**P**	**13 33 39.0**	**-1.9**
	comp=Z,1.2nm,0.3s,baz=24,slow=9.5,SNR=28						
FITZ	**Fitzroy Crossi**	**15.37**	**189**	P	**P**	**13 33 40.0**	**-0.8**
FITZ				IAmb	IAmb	13 33 49.1	
	comp=Z,8.9nm,0.8s						
SBUM	**Sibu**	**16.78**	**288**	P	**Pn**	**13 33 55.9**	**+1.1**
WB0	**Warramunga Arr**	**17.89**	**161**	P	**Pn**	**13 34 07.0**	**-1.6**
WRAB	**Tennant Creek**	**18.03**	**161**	P	**Pn**	**13 34 08.6**	**-1.7**
WRAB				IAmb	IAmb	13 34 10.0	
	comp=Z,9.7nm,0.7s						
WRA	**Warramunga Arr**	**18.04**	**161**	P	**Pn**	**13 34 08.7**	**-1.7**
	comp=Z,2.3nm,0.3s,baz=338,slow=12,SNR=107						
WRA				S	**S**	**13 37 34.3**	**-1.0**

	comp=Z,0.3nm,0.3s,baz=329,slow=21,SNR=4.9						
WRA				LR	LR	13 42 16.6	
	comp=Z,114nm,18.8s,baz=90,slow=41						
WB2	Warramunga Arr	18.04	161	P	Pn	13 34 08.7	-1.8
WB2				IAmb	IAmb	13 34 11.4	
	comp=Z,12nm,0.6s						
WR0	Warramunga Arr	18.12	160	P	Pn	13 34 09.6	-1.8
KSM	Kuching	18.36	283	P	P	13 34 13.2	-0.8
KSM				IAmb	IAmb	13 34 17.4	
	comp=Z,13nm,0.9s						
COEN	Coen	18.49	128	P	Pn	13 34 15.4	-0.5
PSA00	Pilbara Seismi	20.30	203	P	P	13 34 33.5	-1.7
PSA00				IAmb	IAmb	13 34 35.0	
	comp=Z,14nm,0.7s						
LEM	Lembang	20.85	258	P	Pn	13 34 43.1	-1.0
	comp=Z,8.5nm,0.3s,baz=87,slow=9.7,SNR=4.0						
LEM				LR	LR	13 44 04.0	
	comp=Z,181nm,18.5s,baz=93,slow=40						
AS31	Alice Springs	21.44	165	P	P	13 34 46.8	-0.7
AS31				IAmb	IAmb	13 34 50.3	
	comp=Z,14nm,0.3s						
ASAR	Alice Springs	21.44	165	P	P	13 34 46.9	-0.6
	comp=Z,22nm,0.6s,baz=345,slow=10,SNR=287						
ASAR				S	S	13 38 41.0	-2.2
	comp=Z,3.3nm,0.6s,baz=349,slow=20,SNR=13						
GIRL	Giralia	23.88	213	P	P	13 35 12.2	-0.3
YOJ	Yonaguni jima	27.59	350	P	P	13 35 44.1	-2.0
FORT	Forrest	27.79	180	P	P	13 35 47.0	-0.8
FORT				IAmb	IAmb	13 36 19.0	
	comp=Z,16nm,0.9s						
MORW	Morawa	28.52	203	P	P	13 35 53.1	-1.3
MORW				IAmb	IAmb	13 35 53.5	
	comp=Z,74nm,2.0s						
BBOO	Buckleboo	30.72	167	P	P	13 36 12.8	-1.1
BBOO				IAmb	IAmb	13 36 56.6	
	comp=Z,56nm,1.9s						
STKA	Stephens Creek	31.53	158	P	P	13 36 19.2	-1.8
	comp=Z,1.8nm,0.5s,baz=328,slow=12,SNR=5.1						
STKA	Stephens Creek	31.53	158	P	P	13 36 20.3	-0.8
CMAR	Chiang Mai Arr	35.72	307	P	P	13 37 00.4	+2.8
	comp=Z,0.2nm,0.5s,baz=137,slow=6.8,SNR=4.1						
KSRS	Korea Array	40.09	360	P	P	13 37 35.4	+1.3
	comp=Z,1.2nm,0.9s,baz=172,slow=9.7,SNR=3.9						
HHC	Hu-ho-hao-te	46.05	342	eP	P	13 38 23.4	+0.9
SONM	Songino Array	53.94	342	P	P	13 39 22.7	+0.4
	comp=Z,0.5nm,0.7s,baz=142,slow=7.5,SNR=4.2						
TUWZ	Tuamarina	56.20	140	P	P	13 39 37.7	-0.9
KHZ	Kahutara	56.45	141	P	P	13 39 39.6	-0.8
BKZ	Black Stump Fm	56.83	136	P	P	13 39 43.0	-0.2
URZ	Urewera	56.86	135	P	P	13 39 43.1	-0.2
WMQ	Urumqi	58.93	327	eP	P	13 40 00.7	+2.8
WMQ				sP	sP	13 40 16.1	+2.2
PETK	Petropavlovsk-	61.01	20	P	P	13 40 13.4	+1.6
	comp=Z,2.8nm,0.8s,baz=209,slow=4.7,SNR=4.2						
KSH	Kashi	63.74	317	P	P	13 40 33.2	+2.7
KSH				sP	sP	13 40 51.2	+4.5
KSH				S	S	13 49 04.0	+1.5
KSH				sS	sS	13 49 25.9	+5.0
MKAR	Makanchi Array	63.77	327	P	P	13 40 31.1	+0.6
	comp=Z,0.5nm,0.6s,baz=122,slow=8.1,SNR=6.9						
KURK	Kurchatov	68.03	329	P	P	13 40 57.8	+0.1
KURK				IAmb	IAmb	13 41 09.1	
	comp=Z,4.4nm,1.1s						
TIXI	Tiksi	74.36	0	P	P	13 41 35.6	0.0
TIXI				IAmb	IAmb	13 41 37.2	
	comp=Z,2.6nm,0.7s						
ABKAR	Akbulak array	78.13	322	P	P	13 41 57.6	+0.1
ABKAR				IAmb	IAmb	13 44 02.0	
	comp=Z,8.9nm,1.8s						
ILAR	Eielson Array	90.39	25	P	P	13 42 58.2	-1.2
	comp=Z,0.4nm,0.8s,baz=234,slow=5.4,SNR=6.6						
TORD	Torodi Ar. Bea	126.12	284	PKP	PKiKP	13 49 03.1	+1.1
	comp=Z,0.4nm,0.6s,baz=40,slow=2.9,SNR=2.3						

DJA ***02*** *13:46:27.2±0.3, 7°S±3°×12°8E±°, h413^{km}±5^{km}, M4.2/16, mB4.5/6, mb4.2/13, MLv4.4/16, Mw(mB)3.7/6*

IDC ***02*** *13:46:27.6±1.3, 6°.64S×127°.63E, h405^{km}±16^{km}, mb3.2/6, mb1 3.4/12, mb1mx3.2/34, mbtmp4.2/12, Error ellipse: s-maj=18.2km s-min=9.2km az=70.0*

NEIC ***02*** *13:46:27.0±0.7, 6°.56S±0°.09×127°.54E±0°.08, h395^{km}±9^{km}, mb4.2/15, Error ellipse: s-maj=12.9km s-min=12.0km az=188.0*

ISC 02 13:46:28.1±0.5**, 6°.59S**±0°.05×**127°.64E**±0°.07**, h408^{km}, n59, σ1^{s}.58**/67**, mb4.0**/12**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAI	Ambon	2.94	11	P	P	13 47 31.4	0.0
AAI				S	S	13 48 23.7	+1.0
BNDI	Bandanaira	3.05	48	P	P	13 47 32.1	-0.1
NLAI	Namlea	3.37	351	P	P	13 47 35.4	+0.5
NLAI				S	S	13 48 29.0	-0.2
MSAI	Masohi	3.47	22	S	S	13 48 31.8	+1.0
SAUI	Saumlaki	3.88	111	P	P	13 47 39.6	+0.1
SAUI	Saumlaki	3.88	111		P	13 47 39.6	+0.1
SAUI				S	S	13 48 35.4	-2.2
SOEI	Soe	4.59	226	P	P	13 47 45.0	-1.3
SOEI	Soe	4.59	226		P	13 47 44.8	-1.4
SANI	Sanana	4.80	340	P	P	13 47 46.6	-1.7
BBSI	Bau Bau	5.16	282	P	P	13 47 52.3	+0.4
	0.1nm457nm30nm,0.7s						
MMRI	Maumere	5.73	249	P	P	13 47 57.1	-0.7
MMRI	Maumere	5.73	249		P	13 47 55.9	-1.9
FAKI	Fak Fak	5.86	52	P	P	13 47 58.8	-0.5
	0.6nm3μm114nm,0.6s						
FAKI	Fak Fak	5.86	52		P	13 47 58.3	-1.0
LBMI	Labuha	5.91	359	P	P	13 48 00.1	+0.2
	0.1nm1μm38nm,1.1s						
EDFI	Ende, Flores	6.28	250	P	P	13 48 01.2	-2.6
	0.1nm288nm10nm,0.5s						
SIJI	Sorong	6.74	33	P	P	13 48 08.8	-0.7
	3.8nm,0.3s,baz=220,slow=11,SNR=20						
SIJI				S	S	13 49 28.4	-3.1
	1.3nm,0.3s,baz=98,slow=20,SNR=4.2						
MTN	Manton Dam	7.10	151		P	13 48 13.4	-0.2
BKSI	Bulukumba	7.58	279	P	P	13 48 17.5	-1.4
	0.2nm713nm71nm,0.6s						
BNSI	Bone	7.81	286	P	P	13 48 19.6	-1.8
	0.3nm67nm,0.7s						
BASI	Baing, Sumba	7.86	242	P	P	13 48 20.0	-1.9
	0.5nm42nm,0.8s						
KAPI	Kappang	8.00	281	P	P	13 48 23.3	-0.1
	4.3nm,0.3s,baz=121,slow=5.2,SNR=34						
SPSI	Sidrap Palu	8.26	288	P	P	13 48 24.7	-1.6
	35nm,0.8s						
WBSI	Waikabubak, Su	8.71	249	P	P	13 48 29.1	-2.2
	648nm50nm,0.9s						
KNRA	Kununurra	9.10	173	P	P	13 48 35.5	0.0
PLAI	Plampang	10.02	257	P	P	13 48 41.7	-4.1
	28nm,0.6s						
FITZ	Fitzroy Crossi	11.60	189	P	P	13 49 02.9	-0.3
	1.7nm,0.3s,baz=12,slow=6.7,SNR=36						
FITZ				S	S	13 51 17.6	+6.2
	0.2nm,0.3s,baz=161,slow=17,SNR=1.9						
FITZ	Fitzroy Crossi	11.60	189	P	P	13 49 02.8	-0.5
WB0	Warramunga Arr	14.65	154	P	P	13 49 36.6	0.0
WRAB	Tennant Creek	14.78	154	P	P	13 49 38.0	+0.1
WRA	Warramunga Arr	14.78	155	P	P	13 49 38.4	+0.4
	1.5nm,0.3s,baz=339,slow=11,SNR=120						
WRA				S	S	13 52 12.1	-3.0
	1.0nm,0.3s,baz=329,slow=20,SNR=20						
WB2	Warramunga Arr	14.79	154	P	P	13 49 38.2	+0.2
WR0	Warramunga Arr	14.88	154	P	P	13 49 39.2	+0.1
PSA00	Pilbara Seismi	16.69	206	P	P	13 49 57.4	-1.1
PSA00				IAmb	IAmb	13 49 58.4	
	comp=Z,19nm,1.1s						
COEN	Coen	16.94	117	P	P	13 50 01.3	+0.1
COEN				IAmb	IAmb	13 50 02.4	
	comp=Z,18nm,0.9s						
AS31	Alice Springs	18.02	161	P	P	13 50 12.7	+0.2
ASAR	Alice Springs	18.02	161	P	P	13 50 12.8	+0.3
	comp=Z,1.0nm,0.3s,baz=336,slow=12,SNR=62						
ASAR				S	S	13 53 15.0	-3.0
	comp=Z,0.6nm,0.3s,baz=349,slow=20,SNR=17						
KSM	Kuching	19.06	294	P	P	13 50 22.4	-1.0
KSM				IAmb	IAmb	13 50 27.6	
	comp=Z,11nm,1.2s						
PMG	Port Moresby	19.53	100	P	P	13 50 28.7	+0.9
	comp=Z,1.1nm,0.3s,baz=200,slow=23,SNR=6.1						
PMG	Port Moresby	19.53	100	P	P	13 50 28.5	+0.7
FORT	Forrest	24.07	179	P	P	13 51 09.0	+0.2
FORT				IAmb	IAmb	13 51 09.5	
	comp=Z,14nm,0.8s						
NWAO	Narrogin (SRO)	27.94	199	P	P	13 51 42.8	-0.3
STKA	Stephens Creek	28.34	154	P	P	13 51 47.4	+0.7
	comp=Z,0.7nm,0.3s,baz=333,slow=11,SNR=5.0						
STKA	Stephens Creek	28.34	154	P	P	13 51 47.1	+0.4
CAN	Canberra	34.69	148	P	P	13 52 43.7	+2.1
CAN				IAmb	IAmb	13 52 44.5	
	comp=Z,31nm,1.7s						
CMAR	Chiang Mai Arr	37.69	312	P	P	13 53 06.0	-0.8
	comp=Z,0.5nm,0.7s,baz=139,slow=6.5,SNR=4.5						
SANVU	Saraoutou	39.76	106	P	P	13 53 25.1	+1.3
ENH	Enshi	40.58	336	P	P	13 53 29.7	-0.5
ENH				IAmb	IAmb	13 53 30.8	
	comp=Z,13nm,1.2s						
HHC	Hu-ho-hao-te	49.47	344	eP	P	13 54 43.0	+3.9
SONM	Songino Array	57.34	343	P	P	13 55 36.1	+0.6
	comp=Z,0.6nm,0.7s,baz=170,slow=8.0,SNR=5.9						
WMQ	Urumqi	61.79	328	eP	P	13 56 06.5	+1.0
PETK	Petropavlovsk-	64.69	20	P	P	13 56 25.5	+1.5
	comp=Z,3.8nm,1.0s,baz=205,slow=8.5,SNR=4.3						
MK31	Makanchi Array	66.62	328	P	P	13 56 36.0	-0.3
MKAR	Makanchi Array	66.62	328	P	P	13 56 36.3	0.0
	comp=Z,1.3nm,0.4s,baz=119,slow=8.4,SNR=38						
MKAR				PcP	PcP	13 57 01.6	-0.4
	comp=Z,0.7nm,0.7s,baz=142,slow=4.5,SNR=4.2						
MAKZ	Makanchi	66.79	328	P	P	13 56 37.0	-0.4
MAKZ				IAmb	IAmb	13 58 29.0	
	comp=Z,9.1nm,1.9s						
ZAA0	Zalesovo Array	70.20	335	P	P	13 56 57.3	-0.7
ZAA0				IAmb	IAmb	13 56 57.7	
	comp=Z,1.9nm,0.6s						
ZALV	Zalesovo Beam	70.20	335	P	P	13 56 57.4	-0.6
	comp=Z,1.5nm,0.4s,baz=126,slow=4.3,SNR=7.8						
KURK	Kurchatov	70.96	329	P	P	13 57 02.4	-0.2
KURK				IAmb	IAmb	13 57 03.3	
	comp=Z,3.8nm,0.9s						
TORD	Torodi Ar. Bea	126.43	281	PKP	PKiKP	14 04 44.6	-0.3
	comp=Z,0.3nm,0.5s,baz=132,slow=2.1,SNR=2.4						

IDC 02 13:55:56.1±26.0**, 20°.02S**×**172°.80W, h0^{km}, mb3.8**/4**, mb1 3.9**/4**, mb1mx3.6**/35**, mbtmp3.8**/4**, Error ellipse: s-maj=495.2km s-min=153.7km az=75.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	38.40	263	P	P	14 03 20.2	+0.6
	5.8nm,1.1s,baz=98,slow=7.1,SNR=3.1						
STKA	Stephens Creek	42.40	244	P	P	14 03 51.9	-0.7
	0.8nm,0.5s,baz=73,slow=11,SNR=3.2						
ASAR	Alice Springs	49.38	256	P	P	14 04 47.5	-0.3
	0.3nm,0.5s,baz=81,slow=7.9,SNR=12						
WRA	Warramunga Arr	49.50	260	P	P	14 04 48.9	0.0
	0.2nm,0.3s,baz=97,slow=8.2,SNR=25						

SNET ***02*** *14:10:50.6±1.1, 12°.58N×87°.88W, h56^{km}±13^{km}, ML3.9*

INET ***02*** *14:10:50.0, 12°.51N×87°.78W, h56^{km}, ML4.1*

UCR ***02*** *14:10:50.6±1.3, 12°.57N×87°.87W, h58^{km}±14^{km}, ML3.9*

ISC 02 14:10:50.5±3.5**, 12°.5N**±0°.2×**87°.84W**±0°.07**, h52^{km}**±24^{km}**, n37, σ0^{s}.49**/68**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	0.73	0	eP	Pn	14 11 04.6	-0.4
CNCH				eS	Sn	14 11 16.0	+0.6
CNCH				IAML		14 11 20.8	
	comp=Z,11μm,0.3s						
CNCH	Conchagua	0.73	0	eP	Pn	14 11 04.6	-0.4
CNCH				eS	Sn	14 11 16.0	+0.6
CNCH				IAML		14 11 20.8	
	comp=Z,11μm,0.3s						
LCND	La Caada	0.77	356	eP	Pn	14 11 05.0	-0.3
LCND				eS	Sn	14 11 17.0	+1.0
LCND				IAML		14 11 22.1	
	comp=Z,4μm,0.3s						
LCND	La Caada	0.77	356	eP	Pn	14 11 05.0	-0.3
LCND				eS	Sn	14 11 17.0	+1.0
LCND				IAML		14 11 22.1	
	comp=Z,4μm,0.3s						
JUCU	Jucuar¡n	0.82	330	eP	Pn	14 11 05.4	-0.6
JUCU				eS	Sn	14 11 17.1	-0.1
JUCU	Jucuar¡n	0.82	330	eP	Pn	14 11 05.4	-0.6
JUCU				eS	Sn	14 11 17.1	-0.1
BLLM	Bellamira	0.98	336	eP	Pn	14 11 08.2	+0.1
BLLM				eS	Sn	14 11 21.1	+0.1
BLLM	Bellamira	0.98	336	eP	Pn	14 11 08.2	+0.1
BLLM				eS	Sn	14 11 21.1	+0.1
LCY	Lacayo	0.99	333	eP	Pn	14 11 08.2	-0.1
LCY				eS	Sn	14 11 22.2	+0.9
LCY	Lacayo	0.99	333	eP	Pn	14 11 08.2	-0.1
LCY				eS	Sn	14 11 22.2	+0.9
PACA	Pacayal	1.04	333	eP	Pn	14 11 08.7	-0.3
PACA				eS	Sn	14 11 22.6	0.0
PACA	Pacayal	1.04	333	eP	Pn	14 11 08.7	-0.3
PACA				eS	Sn	14 11 22.6	0.0
ALJI	Alcalda de J	1.06	318	eP	Pn	14 11 08.4	-0.7
ALJI				eS	Sn	14 11 22.4	-0.5
ALJI	Alcalda de J	1.06	318	eP	Pn	14 11 08.4	-0.7
ALJI				eS	Sn	14 11 22.4	-0.5
TECA	Tecapa	1.15	326	eP	Pn	14 11 10.4	-0.2
TECA				eS	Sn	14 11 25.7	+0.4
TECA	Tecapa	1.15	326	eP	Pn	14 11 10.4	-0.2
TECA				eS	Sn	14 11 25.7	+0.4
COEB	Comit de Eme	1.17	325	eP	Pn	14 11 10.3	-0.4
COEB				eS	Sn	14 11 25.1	-0.6
COEB				IAML		14 11 30.2	
	comp=Z,1μm,0.3s						
COEB	Comit de Eme	1.17	325	eP	Pn	14 11 10.3	-0.4
COEB				eS	Sn	14 11 25.1	-0.6
COEB				IAML		14 11 30.2	
	comp=Z,1μm,0.3s						
FAGO	Alcalda de S	1.18	347	eP	Pn	14 11 09.7	-1.1
FAGO				eS	Sn	14 11 26.4	+0.6
FAGO	Alcalda de S	1.18	347	eP	Pn	14 11 09.7	-1.1
FAGO				eS	Sn	14 11 26.4	+0.6
COEG	Centro de Oper	1.48	317	eP	Pn	14 11 14.5	-0.4
COEG				eS	Sn	14 11 32.9	-0.3
COEG				IAML		14 11 37.3	
	comp=Z,2μm,0.3s						
COEG	Centro de Oper	1.48	317	eP	Pn	14 11 14.5	-0.4
COEG				eS	Sn	14 11 32.9	-0.3
COEG				IAML		14 11 37.3	
	comp=Z,2μm,0.3s						
TGUH	Tegucigalpa,Un	1.61	20	eP	Pn	14 11 16.5	-0.2
TGUH				eS	Sn	14 11 36.2	-0.1
TGUH	Tegucigalpa,Un	1.61	20	eP	Pn	14 11 16.5	-0.2
TGUH				eS	Sn	14 11 36.2	-0.1
LFRS	El Faro	1.61	312	eP	Pn	14 11 16.5	-0.2
LFRS				eS	Sn	14 11 37.0	+0.6
LBRS	Las Brisas	1.68	316	eP	Pn	14 11 16.9	-0.7
LBRS				eS	Sn	14 11 37.6	-0.3
LFU	La Fuente	1.73	314	eP	Pn	14 11 18.8	+0.5
LFU				eS	Sn	14 11 39.9	+0.6
LFU	La Fuente	1.73	314	eP	Pn	14 11 18.8	+0.5
LFU				eS	Sn	14 11 39.9	+0.6
UEES	Universidad Ev	1.80	311	eP	Pn	14 11 19.7	+0.4
UEES	Universidad Ev	1.80	311	eP	Pn	14 11 19.7	+0.4
BOQS	Boqueron	1.84	310	eP	Pn	14 11 19.7	-0.3
BOQS				eS	Sn	14 11 42.8	+0.5
CEVE	Cerro Verde	2.16	307	eP	Pn	14 11 24.6	+0.2
CEVE	Cerro Verde	2.16	307	eP	Pn	14 11 24.6	+0.2
SBLS	San Blas	2.17	307	eP	Pn	14 11 24.8	+0.3
SBLS				eS	Sn	14 11 50.4	+0.1
SBLS	San Blas	2.17	307	eP	Pn	14 11 24.8	+0.3
SBLS				eS	Sn	14 11 50.4	+0.1
MTO3	Montecristo	2.37	321	eP	Pn	14 11 27.1	-0.1
MTO3	Montecristo	2.37	321	eP	Pn	14 11 27.1	-0.1

MAN 02 14:16:29.0, 15°.89N×121°.67E, h22^{km}, mb4.5, ML3.3, MS3.1, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BALP	Baler	0.17	210	eP	Pb	14 16 34.5	+0.1
BALP				eS	Sb	14 16 39.5	+1.2
PCPH	Palayan	0.64	239⇑	eP	Pn	14 16 43.0	+0.2
SMPP	San Manuel, Pa	0.98	285	eP	Pb	14 16 46.8	-0.6
SMPP				eS	Sn	14 17 03.3	+2.5
CAUP	Cauayan	1.06	8	eP	Pn	14 16 46.9	-1.7
CAUP				eS	Sb	14 17 01.8	-0.3
POLP	Polilio Island	1.19	167	eP	Pn	14 16 49.6	-0.7
POLP				eS	Sn	14 17 06.1	+0.3
LQP	Lukban	1.77	184	eP	Pb	14 16 60.0	-1.0
BOAC	Boac	2.43	176	eP	Pn	14 17 08.5	+1.1
BOAC				eS	Sn	14 17 37.1	+0.7

IDC ***02*** *14:44:12.5±0.5, 32°.16N×40°.36W, h0^{km}, mb4.1/29, mb1 4.3/29, mb1mx4.1/60, mbtmp4.1/29, MS3.9/29, Ms1 3.9/29, ms1mx3.7/40, Error ellipse: s-maj=13.7km s-min=11.6km az=146.0*

NEIC ***02*** *14:44:14.6±1.2, 32°.1N±0°.1×40°.3W±0°.1, h15^{km}±4^{km}, mb4.7/137, Error ellipse: s-maj=15.5km s-min=14.2km az=126.0*

GCMT ***02*** *14:44:15.6±0.4, 32°.61N±0°.04×40°.22W±0°.03, h12^{km}±1^{km}, MW4.9/87, Moment Tensor Solution. s15,c15; s87,c104; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.20±.19; M$_{\theta\theta}$1.04±.14; M$_{\phi\phi}$1.17±.11; M$_{r\theta}$1.80±.49; M$_{\theta\phi}$0.86±.08; M$_{\phi r}$-1.10±.33; Best double couple: M$_0$2.73100×10^{16} NP1:ϕ$_s$27.00000°,δ40.00000°,λ-134.00000°. NP2: ϕ$_s$259.00000°,δ62.00000°,λ-59.00000°. Principal axes: T 2.0570, Plg12.0000°, Azm327.0000°; N 1.3570, Plg27.0000°, Azm63.0000°; P -3.4040, Plg60.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 14:44:14.7±0.3**, 32°.16N**±0°.07×**40°.33W**±0°.07**, h14^{km}, n243, σ0^{s}.90**/221**, mb4.6**/91**, MS3.8**/29**, 7C-1D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRLN	Deer Lake	21.39	328	P	P	14 49 02.2	+0.4
DRLN				IAmb	IAmb	14 49 04.3	
	comp=Z,53nm,1.1s						
BATG	Bathurst New B	24.74	315	P	P	14 49 37.0	+1.3
BATG				IAmb	IAmb	14 49 43.2	
	comp=Z,32nm,1.4s						
F64A	Sherman	25.56	310	P	P	14 49 44.5	+1.4
PQI	Presque Isle	25.67	312	P	P	14 49 45.6	+1.6
E63A	Oxbow	25.82	312	P	P	14 49 46.2	+0.7
D62A	Allapoint, All	26.49	313	P	P	14 49 52.4	+0.9
D62A				IAmb	IAmb	14 50 10.0	
	comp=Z,28nm,1.5s						
SJG	San Juan	27.16	245	LR	LR	14 58 31.6	
	comp=Z,77nm,19.8s,baz=65,slow=32						
MDP	Montagnes des	29.29	206	LR	LR	14 59 22.3	
	comp=Z,134nm,18.0s,baz=359,slow=31						
SCHQ	Schefferville	29.40	328	P	P	14 50 18.4	+0.9
	comp=Z,1.2nm,0.6s,baz=288,slow=6.3,SNR=5.5						
SCHQ				LR	LR	15 01 03.6	
	comp=Z,564nm,20.1s,baz=138,slow=34						
SCHQ	Schefferville	29.40	328	IAmb	IAmb	14 51 15.3	
	comp=Z,24nm,1.6s						
ESDC	Sonseca Array	30.23	65	LR	LR	15 00 53.9	
	comp=Z,62nm,18.8s,baz=235,slow=33						
SSPA	Standing Stone	31.20	296	P	P	14 50 34.2	+0.6
SSPA				IAmb	IAmb	14 50 34.6	
	comp=Z,17nm,1.4s						
D53A	Lac Vacive, Po	32.07	309	P	P	14 50 42.4	+1.3
D53A				IAmb	IAmb	14 51 09.1	
	comp=Z,26nm,1.8s						
Q56A	Snyder Ridge,	32.15	293	P	P	14 50 43.3	+1.4
SADO	Sadowa	32.59	304	P	P	14 50 46.4	+0.7
	comp=Z,3.0nm,0.6s,baz=90,slow=7.0,SNR=3.9						
SADO				LR	LR	15 02 08.2	
	comp=Z,181nm,20.1s,baz=124,slow=33						
SADO	Sadowa	32.59	304	IAmb	IAmb	14 51 45.5	
	comp=Z,21nm,1.6s						
TKL	Tuckaleechee C	36.01	288	LR	LR	15 03 38.7	
	comp=Z,391nm,19.6s,baz=90,slow=32						
R50A	Paris	36.20	292	P	P	14 51 18.5	+1.5
SDV	Santo Domingo	36.40	237	P	P	14 51 20.1	+0.9
	comp=Z,9.9nm,0.8s,baz=60,slow=5.7,SNR=14						
SDV	Santo Domingo	36.40	237	P	P	14 51 20.4	+1.2
SDV				IAmb	IAmb	14 51 21.6	
	comp=Z,16nm,1.0s						
SDV	Santo Domingo	36.40	237	eP	P	14 51 20.3	+1.1
V51A	Loudon	36.46	288	P	P	14 51 19.0	-0.3
GLMI	Grayling	36.47	303	P	P	14 51 19.4	+0.1
J47A	Sunmer	36.51	301	P	P	14 51 18.7	-0.9
J47A				IAmb	IAmb	14 51 19.6	
	comp=Z,25nm,1.4s						
U49A	Red Boiling Sp	37.52	289	P	P	14 51 28.7	+0.4
U49A				IAmb	IAmb	14 51 29.9	
	comp=Z,21nm,1.4s						
PTGA	Pitinga	37.62	213	P	P	14 51 28.5	-0.8
	comp=Z,4.7nm,0.6s,baz=40,slow=9.3,SNR=6.4						
PTGA	Pitinga	37.62	213	IAmb	IAmb	14 51 31.0	
	comp=Z,23nm,1.4s						
PTGA	Pitinga	37.62	213	eP	P	14 51 29.7	+0.4
SFIN	Lafayette	38.22	296	P	P	14 51 33.9	-0.3
SFIN				IAmb	IAmb	14 51 42.3	
	comp=Z,31nm,1.6s						
E43A	Lone Tree Farm	38.26	306	P	P	14 51 34.2	-0.2
E43A				IAmb	IAmb	14 51 41.4	
	comp=Z,23nm,1.8s						
T47A	Sharon Grove	38.52	290	P	P	14 51 37.1	+0.4
D41A	Chassel	39.39	307	P	P	14 51 44.3	+0.4
D41A				IAmb	IAmb	14 51 50.6	
	comp=Z,12nm,0.8s						
PLAL	Pickwick Lake	39.59	287	P	P	14 51 46.5	+0.9
S44A	Carbondale	40.13	292	P	P	14 51 51.6	+1.4
RUSC	La Rusia	40.22	236	P	P	14 51 51.3	-0.4
JFWS	Jewell Farm	40.48	300	P	P	14 51 52.5	-0.5
DAVOX	Davos/Dischmat	40.72	54	P	P	14 51 56.1	+1.0
	comp=Z,2.7nm,0.8s,baz=281,slow=10,SNR=3.6						
DAVA	Damuels	40.75	53	i P	P	14 51 55.3	0.0
	comp=Z,5.3nm,1.0s						
KEST	Kesra	41.01	71	LR	LR	15 05 52.3	
	comp=Z,94nm,20.7s,baz=3.0,slow=32						
N41A	Harden Midland	41.06	297	P	P	14 51 57.4	-0.4
N41A				IAmb	IAmb	14 52 04.4	
	comp=Z,12nm,1.0s						
FETA	Feichten	41.31	54	i P	P	14 51 59.5	-0.5
	comp=Z,8.1nm,2.0s						
RETA	Reutte	41.36	53	i pP	P	14 52 01.7	+1.5
	comp=Z,7.1nm,1.3s						
E38A	The Farm, Brul	41.42	306	P	P	14 52 01.3	+0.6
E38A				IAmb	IAmb	14 52 07.3	
	comp=Z,20nm,1.2s						
EYMN	Ely	41.44	308	P	P	14 52 00.3	-0.5
MOTA	Moosalm	41.58	53	i P	P	14 52 01.8	-0.4
	comp=Z,9.2nm,1.6s						
CCM	Cathedral Cave	41.64	293	P	P	14 52 03.6	+1.0
DBIC	Dimbokro	41.65	120	P	P	14 52 02.9	0.0
	comp=Z,3.3nm,0.8s,baz=287,slow=9.6,SNR=4.2						
DBIC				LR	LR	15 07 05.5	
	comp=Z,290nm,19.5s,baz=306,slow=33						
DBIC	Dimbokro	41.65	120	P	P	14 52 02.9	0.0
SQTA	Sankt Quirin	41.65	53	i P	P	14 52 00.7	-2.0
	comp=Z,7.1nm,1.5s						
ROSC	El Rosal	41.83	237	LR	LR	15 08 01.4	
	comp=Z,147nm,21.4s,baz=74,slow=34						
LCAR	Lake Charles	41.88	290	P	P	14 52 04.3	-0.3
LCAR				IAmb	IAmb	14 52 11.3	
	comp=Z,31nm,1.7s						
WATA	Walderalm	41.90	53	i P	P	14 52 05.1	+0.3
CTI	Castel Tesino	41.92	55	P	P	14 52 04.5	-0.5
CTI				IAmb	IAmb	14 52 15.3	
	comp=Z,32nm,1.9s						
WTTA	Wattenberg	41.94	53	i pP	P	14 52 05.8	+0.6
	comp=Z,7.1nm,1.0s						
ABTA	Abfaltersbach	42.53	54	i pP	pP	14 52 11.8	-1.5
	comp=Z,7.0nm,1.4s						
MGMO	Mountain Grove	42.58	292	P	P	14 52 09.8	-0.6
MGMO				IAmb	IAmb	14 52 17.3	
	comp=Z,31nm,1.9s						
FCAR	Ozark Folk Cen	42.68	290	P	P	14 52 10.2	-1.0
FCAR				IAmb	IAmb	14 52 17.6	
	comp=Z,28nm,1.8s						
TOA0	Torodi Ar. Sit	42.82	106	P	P	14 52 12.6	+0.1
TORD	Torodi Ar. Bea	42.82	106	P	P	14 52 12.3	-0.1
	comp=Z,4.9nm,1.0s,baz=303,slow=6.9,SNR=12						
TORD				LR	LR	15 07 54.4	
	comp=Z,146nm,21.2s,baz=300,slow=33						
W41B	Gary Mavity, V	42.92	289	P	P	14 52 12.7	-0.4
W41B				IAmb	IAmb	14 52 17.8	
	comp=Z,33nm,1.8s						
UALR	University of	43.08	288	P	P	14 52 14.3	0.0
CLL	Collm	43.08	47	eP	P	14 52 13.0	-1.2
CLL				epP	pP	14 52 17.0	-0.6
	comp=Z,9.0nm,1.3s						
CLL				eS	S	14 58 40.0	+0.4

CLL				*e*SSS	SSS	15 02 24.0	
CLL	**Collm**	**43.08**	**47**	P	**P**	**14 52 13.5**	**-0.7**
KBA	**Koelnbreinsper**	**43.10**	**54**	*i* pP	pP	14 52 16.6	-1.5
	comp=Z,6.7nm,1.3s						
S39A	**Bolivar**	**43.32**	**293**	P	**P**	**14 52 15.5**	**-0.8**
GERES	**GERESS Array B**	**43.38**	**51**	P	**P**	**14 52 17.2**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=263,slow=7.9,SNR=8.1						
GERES				LR	LR	15 06 56.6	
	comp=Z,74nm,21.1s,baz=264,slow=31						
MOA	**Molln**	**43.73**	**53**	*i* pP	pP	14 52 21.4	-1.5
	comp=Z,5.7nm,1.6s						
OBKA	**Obir**	**43.93**	**55**	*i* P	**P**	**14 52 20.5**	**-0.7**
	comp=Z,8.8nm,1.2s						
WLAR	**White Oak Lake**	**43.93**	**287**	P	**P**	**14 52 21.7**	**+0.4**
WLAR				IAmb	IAmb	14 52 24.5	
	comp=Z,16nm,1.0s						
NB2	**NORSAR Subarra**	**43.98**	**33**	P	**P**	**14 52 21.2**	**-0.2**
	comp=Z,11nm,1.7s,baz=252,slow=8.6						
NOA	**NORSAR Array B**	**43.98**	**33**	P	**P**	**14 52 21.4**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=254,slow=8.1,SNR=3.9						
NOA				LR	LR	15 08 29.7	
	comp=Z,46nm,19.4s,baz=250,slow=33						
TEIG	**Tepich**	**44.31**	**267**	LR	LR	15 07 51.0	
	comp=Z,216nm,21.0s,baz=324,slow=32						
ULM	**Lac du Bonnet**	**44.42**	**311**	P	**P**	**14 52 23.9**	**-1.1**
	comp=Z,2.5nm,0.8s,baz=90,slow=13,SNR=4.8						
ULM				LR	LR	15 11 23.4	
	comp=Z,133nm,18.7s,baz=97,slow=37						
ULM	**Lac du Bonnet**	**44.42**	**311**	IAmb	IAmb	14 52 30.6	
	comp=Z,5.4nm,1.0s						
FCC	**Fort Churchill**	**44.49**	**323**	P	**P**	**14 52 25.9**	**+0.6**
FCC				IAmb	IAmb	14 52 32.3	
	comp=Z,15nm,1.4s						
NBCP	**Cabaceiras do**	**44.52**	**178**	*e*P	**P**	**14 52 26.1**	**+0.2**
ARSA	**Arzberg**	**44.59**	**53**	*i* P	**P**	**14 52 22.4**	**-3.9**
	comp=Z,5.1nm,1.1s						
CLDB	**Colider**	**45.28**	**202**	*e*P	**P**	**14 52 30.9**	**-1.2**
Z38A	**Mt. Pleasant**	**45.55**	**287**	P	**P**	**14 52 33.7**	**-0.5**
TUL1	**Leonard**	**45.60**	**291**	P	**P**	**14 52 33.4**	**-1.1**
TUL1				IAmb	IAmb	14 52 41.1	
	comp=Z,15nm,1.1s						
MORC	**Moravsky Berou**	**45.91**	**50**	P	**P**	**14 52 36.9**	**+0.1**
MORC				IAmb	IAmb	14 52 47.7	
	comp=Z,12nm,1.8s						
T35A	**Sooner Cattle**	**45.97**	**292**	P	**P**	**14 52 36.8**	**-0.6**
T35A				IAmb	IAmb	14 52 37.8	
	comp=Z,11nm,1.1s						
SAML	**Samuel**	**46.35**	**212**	P	**P**	**14 52 40.3**	**-0.2**
SAML				IAmb	IAmb	14 52 41.5	
	comp=Z,11nm,1.1s						
SAML	**Samuel**	**46.35**	**212**	*e*P	**P**	**14 52 40.4**	**-0.2**
JTS	**Las Juntas de**	**46.52**	**252**	LR	LR	15 11 29.7	
	comp=Z,95nm,18.8s,baz=112,slow=35						
VYHS	**Vyhne**	**46.78**	**52**	*e*P	**P**	**14 52 45.1**	**+1.4**
H10N2	**ASCENSION HYDR**	**46.79**	**144**	T	T	15 42 41.5	
	baz=329,slow=75,SNR=218						
H10N3	**ASCENSION HYDR**	**46.80**	**144**	T	T	15 42 42.4	
	baz=329,slow=75,SNR=187						
H10N1	**ASCENSION HYDR**	**46.81**	**144**	T	T	15 42 43.6	
	baz=329,slow=75,SNR=222						
JANB	**Januaria**	**47.11**	**185**	*e*P	**P**	**14 52 46.8**	**+0.3**
PSZ	**Piszkesteto**	**47.52**	**52**	P	**P**	**14 52 49.3**	**-0.2**
H10S3	**ASCENSION HYDR**	**47.67**	**145**	T	T	15 43 47.8	
	baz=251,slow=74,SNR=564						
H10S2	**ASCENSION HYDR**	**47.69**	**145**	T	T	15 43 45.8	
	baz=329,slow=74,SNR=441						
OTAV	**Otavalo**	**47.98**	**236**	P	**P**	**14 52 53.3**	**-0.6**
OTAV	**Otavalo**	**47.98**	**236**	*e*P	**P**	**14 52 55.0**	**+1.1**
BDFB	**Brasilia**	**48.10**	**190**	P	**P**	**14 52 54.0**	**-0.3**
	comp=Z,3.0nm,0.8s,baz=333,slow=6.3,SNR=4.2						
BDFB				LR	LR	15 10 16.1	
	comp=Z,76nm,19.8s,baz=68,slow=32						
FFC	**Flin Flon**	**48.31**	**317**	P	**P**	**14 52 54.9**	**-0.5**
APG	**El Apazote**	**48.58**	**262**	LR	LR	15 10 47.7	
	comp=Z,81nm,18.6s,baz=94,slow=33						
ARAG	**Araguaiana, MT**	**48.85**	**195**	*e*P	**P**	**14 53 00.6**	**+0.7**
SIRR	**Siria**	**48.86**	**54**	⇑P	**P**	**14 53 00.1**	**+0.3**
BZS	**Buzias**	**48.90**	**55**	⇑P	**P**	**14 53 03.0**	**+2.9**
DRGR		**49.52**	**54**	⇑P	**P**	**14 53 05.1**	**+0.1**
GZR	**Gura Zlata**	**49.74**	**55**	⇑P	**P**	**14 53 07.4**	**+0.8**
SALV	**Santo Antonio**	**50.01**	**199**	*e*P	**P**	**14 53 09.3**	**+0.5**
RES	**Resolute Bay**	**50.11**	**344**	P	**P**	**14 53 09.6**	**+0.8**
KSCO	**Kaye Shedlock’**	**50.26**	**296**	P	**P**	**14 53 10.3**	**-0.5**
KSCO				IAmb	IAmb	14 53 17.7	
	comp=Z,16nm,1.2s						
JCT	**Junction City**	**50.27**	**285**	P	**P**	**14 53 10.5**	**-0.3**
JCT				IAmb	IAmb	14 53 17.5	
	comp=Z,8.0nm,1.0s						
IPMB	**Ipameri, GO**	**50.43**	**190**	*e*P	**P**	**14 53 12.4**	**+0.4**
VTS	**Vitosha**	**50.49**	**59**	P	**P**	**14 53 12.6**	**0.0**
AMTX	**Amarillo**	**50.52**	**291**	P	**P**	**14 53 12.6**	**-0.1**
SJMB	**Sao Joao De Ma**	**50.58**	**181**	*e*P	**P**	**14 53 15.1**	**+2.0**
BSFB	**Barra de Sao F**	**50.71**	**181**	*e*P	**P**	**14 53 15.0**	**+1.0**
ARR	**Arges**	**51.04**	**55**	⇓P	**P**	**14 53 17.4**	**+0.9**
BUR08	**Bucovina Ar. S**	**51.10**	**52**	P	**P**	**14 53 17.1**	**+0.1**
BUR08				IAmb	IAmb	14 53 24.1	
	comp=Z,20nm,1.8s						
FINES	**FINESS Array B**	**51.12**	**34**	P	**P**	**14 53 16.6**	**0.0**
	comp=Z,2.1nm,0.6s,baz=250,slow=5.7,SNR=9.8						
FINES				LR	LR	15 12 47.4	
	comp=Z,52nm,18.7s,baz=245,slow=34						
FIA1	**FINESS Array S**	**51.12**	**34**	P	**P**	**14 53 16.4**	**-0.2**
BURAR	**Bucovina Array**	**51.12**	**52**	⇑P	**P**	**14 53 18.4**	**+1.3**
PP1B	**Ponte de Pedra**	**51.41**	**198**	*e*P	**P**	**14 53 20.0**	**+0.7**
ARCES	**ARCESS Array B**	**51.83**	**24**	P	**P**	**14 53 21.3**	**-0.6**
	comp=Z,2.9nm,0.8s,baz=251,slow=7.6,SNR=8.2						
MLR	**Muntele Rosu**	**51.93**	**55**	⇑P	**P**	**14 53 25.1**	**+1.9**
MLR	**Muntele Rosu**	**51.93**	**55**	P	**P**	**14 53 23.9**	**+0.7**
MLR				IAmb	IAmb	14 53 31.2	
	comp=Z,14nm,1.1s						
ISCO	**Idaho Springs**	**52.34**	**298**	P	**P**	**14 53 26.6**	**0.0**
N23A	**Red Feather La**	**52.34**	**299**	P	**P**	**14 53 25.4**	**-1.1**
N23A				IAmb	IAmb	14 53 33.8	
	comp=Z,22nm,1.8s						
SDCO	**Great Sand Dun**	**52.76**	**295**	P	**P**	**14 53 29.5**	**-0.2**
BSCB	**Bom Sucesso**	**53.03**	**185**	*e*P	**P**	**14 53 31.8**	**+0.4**
SORM	**Soroca**	**53.13**	**51**	⇑P	**P**	**14 53 36.1**	**+4.2**
AKASG	**Malin Array Be**	**53.32**	**48**	P	**P**	**14 53 32.5**	**-0.8**
	comp=Z,2.6nm,0.6s,baz=277,slow=6.5,SNR=21						
AKASG				LR	LR	15 13 01.2	
	comp=Z,78nm,21.6s,baz=255,slow=32						
AKBB	**Malin Array Si**	**53.32**	**48**	P	**P**	**14 53 32.0**	**-1.2**
BB19B	**Bebedouro**	**53.51**	**190**	*e*P	**P**	**14 53 35.9**	**+1.0**
S22A	**4UR Ranch, Cre**	**53.77**	**296**	P	**P**	**14 53 37.4**	**+0.2**
TX32	**Lajitas Array**	**53.81**	**285**	P	**P**	**14 53 36.8**	**-0.5**
TX32				IAmb	IAmb	14 54 10.1	
	comp=Z,13nm,1.8s						
TXAR	**Lajitas Array**	**53.81**	**285**	P	**P**	**14 53 37.2**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=91,slow=6.9,SNR=10						
TXAR				LR	LR	15 14 57.1	
	comp=Z,93nm,20.4s,baz=0.0,slow=34						
TX31	**Lajitas Ar. Si**	**53.81**	**285**	P	**P**	**14 53 36.8**	**-0.5**
TX31				IAmb	IAmb	14 54 10.1	
	comp=Z,11nm,1.7s						
GCMT	**Greycliff**	**54.00**	**306**	P	**P**	**14 53 38.2**	**-0.3**
O20A	**White River Ci**	**54.23**	**299**	P	**P**	**14 53 39.5**	**-0.8**
AQDB	**Aquidauana**	**54.37**	**198**	*e*P	**P**	**14 53 42.4**	**+1.3**
YNE	**Yellowstone No**	**54.39**	**305**	P	**P**	**14 53 41.2**	**-0.3**
PCMB	**Pacaembu**	**54.48**	**193**	*e*P	**P**	**14 53 42.5**	**+0.5**
YMP	**Mirror Lake Pl**	**54.55**	**305**	P	**P**	**14 53 42.2**	**-0.5**
PD31	**Pinedale Array**	**54.56**	**302**	P	**P**	**14 53 42.0**	**-0.8**
PD31				IAmb	IAmb	14 53 44.8	
	comp=Z,5.3nm,0.8s						
PDAR	**Pinedale Array**	**54.56**	**302**	P	**P**	**14 53 42.0**	**-0.8**
	comp=Z,3.0nm,0.7s,baz=82,slow=6.6,SNR=23						
PDAR				LR	LR	15 15 35.9	
	comp=Z,255nm,20.4s,baz=98,slow=34						
YKA	**Yellowknife Ar**	**54.84**	**327**	P	**P**	**14 53 43.5**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=86,slow=7.7,SNR=19						
YKA				LR	LR	15 16 44.8	
	comp=Z,219nm,18.8s,baz=0.0,slow=36						
YHH	**Holmes Hill**	**55.02**	**305**	P	**P**	**14 53 46.1**	**0.0**
LPAZ	**La Paz**	**55.05**	**213**	P	**P**	**14 53 47.1**	**+0.2**
	comp=Z,2.4nm,0.7s,baz=1.0,slow=8.3,SNR=16						
LPAZ				LR	LR	15 15 47.7	
	comp=Z,102nm,19.7s,baz=15,slow=34						
LPAZ	**La Paz**	**55.05**	**213**	P	**P**	**14 53 46.6**	**-0.3**
LPAZ	**La Paz**	**55.05**	**213**	*e*P	**P**	**14 53 47.4**	**+0.5**
FLWY	**Flagg Ranch**	**55.07**	**304**	P	**P**	**14 53 46.2**	**-0.2**
RDMU	**Red Mountain**	**55.10**	**300**	P	**P**	**14 53 46.3**	**-0.4**
YMR	**Madison River**	**55.12**	**305**	P	**P**	**14 53 46.2**	**-0.6**
MVCO	**Mesa Verde**	**55.20**	**295**	P	**P**	**14 53 47.7**	**+0.3**
VAO	**Valinhos**	**55.22**	**187**	*e*P	**P**	**14 53 47.9**	**+0.5**
YHL	**Hebgen Lake**	**55.24**	**305**	P	**P**	**14 53 47.9**	**+0.2**
YHB	**Horse Butte**	**55.27**	**305**	P	**P**	**14 53 48.0**	**+0.2**
IMW	**Indian Meadow**	**55.28**	**304**	P	**P**	**14 53 47.6**	**-0.4**
IMW				IAmb	IAmb	14 53 54.5	
	comp=Z,5.5nm,0.9s						
REDW	**Red Top Meadow**	**55.34**	**303**	P	**P**	**14 53 47.8**	**-0.6**
REDW				IAmb	IAmb	14 53 55.2	
	comp=Z,9.4nm,1.1s						
FXWY	**Fox Creek**	**55.40**	**304**	P	**P**	**14 53 48.2**	**-0.6**
QLMT	**Earthquake Lak**	**55.41**	**305**	P	**P**	**14 53 48.5**	**-0.4**
PARB	**Paraibuna**	**55.42**	**186**	*e*P	**P**	**14 53 49.0**	**+0.2**
AHID	**Auburn Hatcher**	**55.66**	**303**	P	**P**	**14 53 49.7**	**-0.9**
SPB	**Sao Paulo**	**55.86**	**188**	*e*P	**P**	**14 53 52.9**	**+1.1**
FRTB	**Fartura**	**55.90**	**190**	*e*P	**P**	**14 53 53.4**	**+1.2**
TRCB	**Terra Rica**	**55.90**	**194**	*e*P	**P**	**14 53 52.7**	**+0.5**
NNA	**Nana**	**56.11**	**225**	P	**P**	**14 53 52.9**	**-1.0**
WALA	**Waterton Lakes**	**56.17**	**311**	P	**P**	**14 53 53.1**	**-1.1**
WALA				IAmb	IAmb	14 53 55.5	
	comp=Z,10nm,1.4s						
SRU	**San Rafael Swe**	**56.20**	**298**	P	**P**	**14 53 54.5**	**-0.1**
HWUT	**Hardware Ranch**	**56.29**	**301**	P	**P**	**14 53 54.3**	**-0.9**
HWUT				IAmb	IAmb	14 54 01.8	
	comp=Z,5.8nm,0.9s						
TCUT	**Toone Canyon**	**56.30**	**301**	P	**P**	**14 53 55.0**	**-0.3**
HPIG		**56.32**	**283**	P	**P**	**14 53 54.9**	**-0.7**
HPIG				IAmb	IAmb	14 53 57.1	
	comp=Z,12nm,1.2s						
JLU	**Jordanelle**	**56.47**	**300**	P	**P**	**14 53 55.5**	**-1.1**
Q16A	**Castle Valley**	**56.73**	**298**	P	**P**	**14 53 59.1**	**+0.7**
SPUT	**South Promonto**	**57.01**	**301**	P	**P**	**14 53 59.9**	**-0.3**
NLU	**North Lily Min**	**57.11**	**300**	P	**P**	**14 54 01.1**	**0.0**
BGU	**Big Grassy Mou**	**57.54**	**301**	P	**P**	**14 54 03.5**	**-0.5**
DUG	**Dugway, Tooele**	**57.59**	**300**	P	**P**	**14 54 04.4**	**+0.1**
DUG				IAmb	IAmb	14 54 11.6	
	comp=Z,8.9nm,1.1s						
MSU	**Marysvale**	**57.60**	**298**	P	**P**	**14 54 05.1**	**+0.5**
KLMR	**Klimovskoe**	**57.65**	**35**	*e*P	**P**	**14 54 02.1**	**-2.1**
KLMR				AMP		14 54 07.8	
	comp=Z,7.0nm,1.3s						
PTGB	**Pitanga**	**57.66**	**193**	*e*P	**P**	**14 54 05.7**	**+1.0**
MTPU	**Mount Pierson**	**57.75**	**297**	P	**P**	**14 54 05.6**	**-0.2**
MNMC	**Minye Minye**	**58.20**	**213**	P	**P**	**14 54 07.9**	**-1.0**
U15A	**North Rim**	**58.33**	**296**	P	**P**	**14 54 10.4**	**+0.6**
U15A				IAmb	IAmb	14 54 17.8	
	comp=Z,11nm,1.4s						
NEW	**Newport**	**58.43**	**310**	P	**P**	**14 54 09.3**	**-0.7**
	comp=Z,3.3nm,0.9s,baz=50,slow=6.1,SNR=5.5						
NEW	**Newport**	**58.43**	**310**	P	**P**	**14 54 09.3**	**-0.7**
NEW				IAmb	IAmb	14 54 16.3	
	comp=Z,6.6nm,1.0s						
GO01	**Chusmiza**	**58.49**	**212**	P	**P**	**14 54 10.3**	**-0.8**
GO01				IAmb	IAmb	14 54 11.5	
	comp=Z,9.7nm,1.1s						
SZCU	**Shurtz Canyon**	**58.57**	**297**	P	**P**	**14 54 11.5**	**+0.1**
PB11	**IPOC Station P**	**58.78**	**213**	P	**P**	**14 54 11.4**	**-1.3**
CCUT	**Cedar City**	**58.79**	**297**	P	**P**	**14 54 13.1**	**+0.2**
BR131	**Keskin Array S**	**58.81**	**60**	P	**P**	**14 54 12.3**	**-0.6**
BR131				IAmb	IAmb	14 54 21.4	
	comp=Z,14nm,1.6s						
BRTR	**Keskin Array B**	**58.81**	**60**	P	**P**	**14 54 13.9**	**+1.0**
	comp=Z,2.1nm,1.1s,baz=256,slow=3.7,SNR=5.8						
MFID	**Camas Ranch**	**58.83**	**304**	P	**P**	**14 54 13.1**	**+0.2**
MFID				IAmb	IAmb	14 54 20.2	
	comp=Z,7.5nm,1.0s						
PSUT	**Pine Spring**	**58.85**	**299**	P	**P**	**14 54 13.9**	**+0.6**
LCMT	**Little Creek M**	**58.87**	**297**	P	**P**	**14 54 13.0**	**-0.3**
W13A	**Hualapai Mount**	**60.00**	**295**	P	**P**	**14 54 22.4**	**+1.1**
ITAB	**Concordia**	**60.13**	**192**	*e*P	**P**	**14 54 23.2**	**+1.5**
R11A	**Troy Canyon, C**	**60.20**	**299**	P	**P**	**14 54 22.3**	**-0.2**
CPUP	**Villa Florida**	**60.38**	**198**	P	**P**	**14 54 22.9**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=331,slow=19,SNR=3.4						
CPUP				LR	LR	15 18 07.6	
	comp=Z,38nm,19.6s,baz=30,slow=34						
CPUP	**Villa Florida**	**60.38**	**198**	P	**P**	**14 54 23.6**	**+0.1**
CPUP	**Villa Florida**	**60.38**	**198**	*e*P	**P**	**14 54 22.6**	**-0.9**
G08A	**Pilot Rock**	**60.45**	**307**	P	**P**	**14 54 24.3**	**+0.2**
SHPR	**Sheep Range**	**60.49**	**297**	P	**P**	**14 54 25.1**	**+0.5**
SHPR				IAmb	IAmb	14 56 13.0	
	comp=Z,16nm,2.0s						
HAWA	**Hanford**	**60.51**	**309**	P	**P**	**14 54 24.5**	**+0.2**
HAWA				IAmb	IAmb	14 54 31.3	
	comp=Z,6.5nm,1.1s						
J08A	**Circle Bar Ran**	**60.70**	**305**	P	**P**	**14 54 26.2**	**+0.5**
J08A				IAmb	IAmb	14 54 28.5	
	comp=Z,6.0nm,0.8s						
LVC	**Limon Verde**	**60.94**	**210**	*e*P	**P**	**14 54 27.9**	**+0.1**
TPNV	**Topopah Spring**	**61.16**	**297**	P	**P**	**14 54 29.2**	**+0.1**
TPNV				IAmb	IAmb	14 54 37.3	
	comp=Z,9.6nm,1.1s						
INK	**Inuvik**	**61.69**	**335**	P	**P**	**14 54 31.8**	**-0.2**
	comp=Z,2.5nm,0.9s,baz=55,slow=7.1,SNR=8.0						
INK	**Inuvik**	**61.69**	**335**	P	**P**	**14 54 31.7**	**-0.2**
KVN	**Kaiserville**	**61.82**	**300**	P	**P**	**14 54 33.0**	**-0.6**
KVN				IAmb	IAmb	14 54 40.8	
	comp=Z,6.9nm,1.2s						
CNLB	**Canela**	**61.95**	**190**	*e*P	**P**	**14 54 35.1**	**+1.0**
NVAR	**Mina Array Bea**	**62.18**	**300**	P	**P**	**14 54 35.0**	**-1.1**
	comp=Z,1.0nm,0.7s,baz=70,slow=5.8,SNR=7.5						
NVAR				LR	LR	15 20 23.3	
	comp=Z,311nm,19.7s,baz=82,slow=35						
MOD	**Modoc Plateau**	**62.44**	**304**	P	**P**	**14 54 37.4**	**-0.3**
MOD				IAmb	IAmb	14 54 45.1	
	comp=Z,6.4nm,1.1s						
KBZ	**Khabaz**	**64.06**	**53**	P	**P**	**14 54 49.6**	**+1.5**
	comp=Z,2.0nm,0.9s,baz=261,slow=13,SNR=3.6						
DAWY	**Dawson**	**65.35**	**331**	P	**P**	**14 54 56.2**	**-0.1**
EGAK	**Eagle**	**65.77**	**333**	P	**P**	**14 54 59.2**	**+0.2**
EGAK				IAmb	IAmb	14 55 06.2	
	comp=Z,12nm,1.5s						
BARN	**Barnard Glacie**	**67.56**	**329**	P	**P**	**14 55 09.8**	**-0.8**
BALM	**Baldy**	**67.86**	**329**	P	**P**	**14 55 12.6**	**+0.1**
ILAR	**Eielson Array**	**67.97**	**334**	P	**P**	**14 55 13.3**	**+0.4**
	comp=Z,0.8nm,0.9s,baz=83,slow=3.5,SNR=7.8						
ILAR				LR	LR	15 25 23.5	
	comp=Z,86nm,18.0s,baz=99,slow=36						
DHY	**Denali Highway**	**68.99**	**332**	P	**P**	**14 55 19.9**	**+0.4**
KNK	**Knik Glacier**	**70.28**	**331**	P	**P**	**14 55 25.6**	**-1.7**
PMR	**Palmer**	**70.46**	**331**	P	**P**	**14 55 28.7**	**+0.4**
PMR				IAmb	IAmb	14 55 31.4	
	comp=Z,4.3nm,0.8s						
ROC1	**El Roble**	**70.97**	**207**	P	**P**	**14 55 31.9**	**-0.2**
RC01	**Rabbit Creek A**	**70.97**	**331**	P	**P**	**14 55 31.4**	**-0.1**
RC01				IAmb	IAmb	14 55 33.1	
	comp=Z,12nm,1.3s						
SUA	**Susitna One**	**71.18**	**332**	P	**P**	**14 55 33.4**	**+0.5**
NRIK	**Noril'sk**	**71.91**	**17**	P	**P**	**14 55 38.0**	**+0.9**
	comp=Z,1.4nm,0.4s,baz=322,slow=19,SNR=3.2						
ABKAR	**Akbulak array**	**72.47**	**43**	P	**P**	**14 55 40.6**	**-0.2**
H09W1	**TRISTAN DA CUN**	**73.70**	**157**	T	T	16 16 27.7	
	SNR=13						
TIXI	**Tiksi**	**76.20**	**4**	P	**P**	**14 56 02.4**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=12,slow=4.5,SNR=6.4						
TIXI	**Tiksi**	**76.20**	**4**	P	**P**	**14 56 02.2**	**+0.2**
TIXI				IAmb	IAmb	14 56 09.7	
	comp=Z,9.3nm,1.6s						
PLCA	**Paso Flores**	**77.73**	**203**	*e*P	**P**	**14 56 11.9**	**+0.9**
BILL	**Bilibino**	**78.14**	**350**	P	**P**	**14 56 12.7**	**-0.4**
BILL				IAmb	IAmb	14 57 19.4	
	comp=Z,14nm,1.9s						
KMBO	**Kilima Mbogo**	**80.09**	**98**	LR	LR	15 30 44.9	
	comp=Z,100nm,21.6s,baz=262,slow=35						
KURK	**Kurchatov**	**81.49**	**34**	P	**P**	**14 56 30.5**	**-1.0**
KURK				IAmb	IAmb	14 56 38.8	
	comp=Z,9.2nm,1.5s						
ZAA0	**Zalesovo Array**	**82.03**	**29**	P	**P**	**14 56 34.1**	**-0.1**
ZALV	**Zalesovo Beam**	**82.03**	**29**	P	**P**	**14 56 33.7**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=273,slow=7.3,SNR=8.6						
CHGR	**Chuyangaron**	**83.80**	**48**	P	**P**	**14 56 43.8**	**-0.1**
GAR	**Garm**	**84.31**	**47**	P	**P**	**14 56 46.3**	**-0.3**
MAKZ	**Makanchi**	**85.77**	**36**	P	**P**	**14 56 53.2**	**-0.4**
MKAR	**Makanchi Array**	**85.94**	**35**	P	**P**	**14 56 53.0**	**-1.5**
	comp=Z,0.7nm,0.8s,baz=328,slow=4.3,SNR=7.6						
MKAR				LR	LR	15 34 29.9	
	comp=Z,69nm,18.8s,baz=316,slow=35						
BOSA	**Boshof**	**86.80**	**127**	LR	LR	15 30 25.4	
	comp=Z,56nm,18.5s,baz=336,slow=32						
KSH	**Kashi**	**87.42**	**44**	P	**P**	**14 57 01.0**	**-0.9**
KSH				pP	sP	14 57 06.3	-0.6
KSH				PP	**PP**	**15 00 27.2**	**+1.4**
KSH	**Kashi**	**87.42**	**44**	S	**S**	**15 07 39.0**	**-3.5**
KSH	**Kashi**	**87.42**	**44**	sS	sS	15 07 46.6	-2.0
WMQ	**Urumqi**	**90.72**	**35**	*e*P	**P**	**14 57 18.2**	**+0.9**
WRA	**Warramunga Arr**	**166.92**	**23**	PKP	**PKPdf**	**15 04 19.4**	**-1.1**
	comp=Z,0.4nm,0.9s,baz=2.9,slow=2.1,SNR=3.1						
ASAR	**Alice Springs**	**170.12**	**32**	PKP	**PKPdf**	**15 04 22.1**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=315,slow=0.6,SNR=14						

BJI ***02*** *14:47:54.2±0.0, 41°.30N×102°.19E, h9^{km}, ML3.6/7, Ms3.3/2, Ms7 3.2/2*
IDC ***02*** *14:47:59.9±8.2, 41°.61N×102°.46E, h0^{km}, mb1 3.4/3, mb1mx3.1/49, mbtmp3.4/3, ML3.1/3, Error ellipse: s-maj=101.4km s-min=35.0km az=145.0*
ISC 02 14:47:53.5±0.9**, 40°.99N**±0°.07×**102°.46E**±0°.05**, h10^{km}, n7,** σ**1^{s}.30**/11**, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTA	**Gaotai**	**2.56**	**233**	Pn	**Pb**	**14 48 38.7**	**-0.9**
GTA				Pg	**Pg**	**14 48 41.6**	**-1.0**
GTA				Sn	**Sb**	**14 49 11.6**	**+0.4**
GTA				Sg	**Sg**	**14 49 16.4**	**+0.6**
GTA				smax	smax		
	comp=N,60nm,0.8s						
GTA				smax	smax		
	comp=E,99nm,1.0s						
LZH	**Lanzhou**	**5.01**	**167**	*e*Pg	**Pg**	**14 49 29.0**	**-0.4**
LZH				Sg	Sg	14 50 43.4	+9.1
LZH				smax	smax		
	comp=N,110nm,1.2s						
LZH				smax	smax		
	comp=E,92nm,1.4s						
LZH				LR	LR		
	comp=N,180nm,6.0s						
LZH				LR	LR		
	comp=E,230nm,6.5s						
LZH				LR	LR		
	comp=Z,240nm,7.6s						
BTO	**Baotou**	**5.75**	**91**	*e*Pg	**Pg**	**14 49 42.4**	**-1.3**
BTO				Sn	**Sn**	**14 50 27.3**	**+2.2**
SONM	**Songino Array**	**7.41**	**21**	Pn	**Pn**	**14 49 40.9**	**-0.8**
	0.5nm,0.3s,baz=201,slow=16,SNR=34						
SONM				Lg	Lg	14 51 37.4	
	1.6nm,0.3s,baz=211,slow=30,SNR=7.3						
WMQ	**Urumqi**	**11.28**	**289**	*e*P	**Pn**	**14 50 35.0**	**+0.3**
MKAR	**Makanchi Array**	**15.64**	**299**	Pn	**Pn**	**14 51 35.8**	**+2.0**
	0.2nm,0.3s,baz=99,slow=13,SNR=15						
ZALV	**Zalesovo Beam**	**17.55**	**324**	P	**P**	**14 51 59.6**	**+0.5**
	0.1nm,0.3s,baz=132,slow=12,SNR=2.8						

TUL ***02*** *14:55:46.9±2.0, 36°.54N±0°.05×97°.05W±0°.01, h3^{km}±2^{km}, ML3.0, Error ellipse: s-maj=7.8km s-min=3.0km az=358.0*
ANF ***02*** *14:55:47.9±0.2, 36°.45N×97°.07W, h0^{km}, ML4.0/13, Error ellipse: s-maj=2.3km s-min=1.9km az=14.0*
NEIC ***02*** *14:55:47.8±1.6, 36°.47N±0°.04×97°.07W±0°.05, h5^{km}±7^{km}, Error ellipse: s-maj=6.1km s-min=4.9km az=137.0*
IDC ***02*** *14:55:49.5±2.1, 36°.73N×97°.43W, h0^{km}, mb1 3.4/3, mb1mx3.2/40, mbtmp3.1/3, ML3.1/3, Error ellipse: s-maj=31.2km s-min=13.9km az=109.0*
ISC 02 14:55:48.3±0.7**, 36°.50N**±0°.03×**97°.03W**±0°.03**, h10^{km}, n59,** σ**1^{s}.73**/64**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	**0.58**	**45**	Pg	**Pg**	**14 55 58.3**	**-1.4**
ADOK	**Arcadia Dam**	**0.90**	**198**	Pg	**Pg**	**14 56 04.4**	**-1.1**
OKCFA	**Oklahoma City**	**1.14**	**198**		**Pb**	**14 56 08.7**	**-1.4**
OKCSW	**OKLAHOMA CITY**	**1.15**	**197**		**Pb**	**14 56 08.8**	**-1.5**
TUL1	**Leonard**	**1.16**	**120**	Pg	**Pn**	**14 56 09.5**	**-1.1**
TUL1	**Leonard**	**1.16**	**120**	P	**Pn**	**14 56 09.5**	**-1.1**
	baz=302						
TUL1				S	**Sb**	**14 56 26.2**	**+0.5**
	baz=302						
FNO	**Franklin**	**1.28**	**194**		**Pn**	**14 56 11.5**	**-0.8**
W35A	**Tecumseh**	**1.35**	**175**		**Pn**	**14 56 12.6**	**-0.7**
U32A	**Winter Ranch,**	**1.60**	**266**	Pn	**Pn**	**14 56 15.9**	**-0.7**
X34A	**Smith Ranch, M**	**2.01**	**199**		**Pn**	**14 56 22.6**	**+0.3**
U38A	**Gravette**	**2.13**	**91**	Pn	**Pn**	**14 56 25.2**	**+1.2**
WMOK	**Wichita Mounta**	**2.27**	**220**		**Pn**	**14 56 25.7**	**-0.2**
WMOK	**Wichita Mounta**	**2.27**	**220**	P	**Pn**	**14 56 26.0**	**+0.1**
	baz=37						
WMOK				Sb	**Sb**	**14 56 58.2**	**+0.7**
	baz=37						
HHAR	**Hobbs**	**2.50**	**94**	Pn	**Pn**	**14 56 31.2**	**+2.1**
KSU1	**Kansas State U**	**2.61**	**7**	P	**Pn**	**14 56 32.2**	**+1.6**
	baz=188						
KSU1				S	**Sb**	**14 57 06.7**	**-0.7**
	baz=188						
W39A	**Magazine**	**2.94**	**115**	Pn	**Pn**	**14 56 36.3**	**+1.2**
W39A	**Magazine**	**2.94**	**115**	Sb	**Sb**	**14 57 17.9**	**+1.1**
	baz=298						
CBKS	**Cedar Bluff**	**3.15**	**318**	Pn	**Pn**	**14 56 38.2**	**+0.2**
CBKS	**Cedar Bluff**	**3.15**	**318**	Pb	**Pb**	**14 56 44.7**	**+0.3**
	baz=136						
CBKS				S	**Sn**	**14 57 17.9**	**+2.1**
	baz=136						
Z35A	**Perchaven, San**	**3.17**	**183**	Pn	**Pn**	**14 56 37.9**	**-0.4**
S39A	**Bolivar**	**3.19**	**67**		**Pn**	**14 56 39.5**	**+0.9**
U40A	**Yellville**	**3.37**	**91**		**Pn**	**14 56 41.4**	**+0.4**
U40A	**Yellville**	**3.37**	**91**	P	**Pn**	**14 56 42.5**	**+1.5**
	baz=274						
U40A				S	**Sn**	**14 57 23.8**	**+2.8**
	baz=274						
MIAR	**Mount Ida**	**3.43**	**124**	Pn	**Pn**	**14 56 41.7**	**-0.1**
MIAR	**Mount Ida**	**3.43**	**124**	S	**Sn**	**14 57 25.2**	**+2.7**
	baz=306						
Z38A	**Mt. Pleasant**	**3.65**	**152**	Pn	**Pn**	**14 56 45.5**	**+0.7**
MGMO	**Mountain Grove**	**3.87**	**79**	Pn	**Pn**	**14 56 49.6**	**+1.6**
X40A	**Basin Creek Fa**	**3.97**	**119**		**Pn**	**14 56 50.0**	**+0.8**
X40A	**Basin Creek Fa**	**3.97**	**119**	P	**Pn**	**14 56 50.6**	**+1.4**
	baz=302						
X40A				S	**Sn**	**14 57 38.7**	**+2.8**
	baz=302						
FCAR	**Ozark Folk Cen**	**4.01**	**97**	Pn	**Pn**	**14 56 51.1**	**+1.2**
W41B	**Gary Mavity, V**	**4.10**	**107**		**Pn**	**14 56 51.9**	**+0.8**
W41B	**Gary Mavity, V**	**4.10**	**107**	Sb	**Sb**	**14 57 55.9**	**+5.6**
	baz=291						
AMTX	**Amarillo**	**4.12**	**248**	Pn	**Pn**	**14 56 51.3**	**0.0**
AMTX	**Amarillo**	**4.12**	**248**	Sb	**Sb**	**14 57 54.8**	**+3.9**
	baz=65						
WLAR	**White Oak Lake**	**4.27**	**130**	Pn	**Pn**	**14 56 54.0**	**+0.7**
ABTX	**Abilene, Hawle**	**4.43**	**210**	Pn	**Pn**	**14 56 54.3**	**-1.4**
ABTX	**Abilene, Hawle**	**4.43**	**210**	Pb	**Pb**	**14 57 05.7**	**-0.5**
	baz=28						
WHTX	**Lake Whitney,**	**4.52**	**185**	Sb	**Sb**	**14 58 05.3**	**+3.1**
	baz=4.1						
Z41A	**Richland Creek**	**4.75**	**132**	Pn	**Pn**	**14 57 00.6**	**+0.7**
Z41A	**Richland Creek**	**4.75**	**132**	S	**Sn**	**14 57 56.6**	**+1.5**
	baz=314						
LCAR	**Lake Charles**	**4.76**	**93**	Pn	**Pn**	**14 57 02.0**	**+1.8**
CCM	**Cathedral Cave**	**4.87**	**70**	Pn	**Pn**	**14 57 03.0**	**+1.4**
CCAR	**Cane Creek**	**5.02**	**119**	Pn	**Pn**	**14 57 04.6**	**+1.0**
KSCO	**Kaye Shedlock’**	**5.09**	**301**	Pn	**Pn**	**14 57 04.7**	**-0.2**
MSTX	**Muleshoe**	**5.34**	**243**	Pn	**Pn**	**14 57 07.5**	**-0.6**
FVM	**French Village**	**5.47**	**72**	Pn	**Pn**	**14 57 11.0**	**+1.1**
P43A	**Skaggs, Pawnee**	**6.70**	**60**		**Pn**	**14 57 26.5**	**-0.2**
SDCO	**Great Sand Dun**	**6.88**	**283**	Pn	**Pn**	**14 57 29.6**	**+0.1**
Q24A	**Divide**	**6.89**	**293**	Pn	**Pn**	**14 57 28.9**	**-0.7**
L40A	**Anamosa**	**7.15**	**37**	Pn	**Pn**	**14 57 33.3**	**+0.4**
ECSD	**EROS Data Cent**	**7.23**	**2**	Pn	**Pn**	**14 57 33.2**	**-0.8**
HDIL	**Hopedale**	**7.29**	**54**	Pn	**Pn**	**14 57 34.6**	**-0.2**
ISCO	**Idaho Springs**	**7.52**	**299**		**Pn**	**14 57 37.5**	**-0.9**
ANMO	**Albuquerque**	**7.83**	**261**	Pg	**Pb**	**14 58 08.5**	**+4.3**
	0.2nm,0.3s,baz=79,slow=16,SNR=3.1						
ANMO				Lg	Lg	14 59 51.5	
	1.2nm,0.3s,baz=26,slow=8.5,SNR=8.2						
I40A	**Norwalk**	**8.86**	**32**		**Pn**	**14 57 55.4**	**-1.0**
TXAR	**Lajitas Array**	**9.07**	**220**	Pn	**Pn**	**14 57 58.8**	**-0.6**
	0.1nm,0.3s,baz=47,slow=11,SNR=7.0						
TXAR				Pg		14 58 29.2	
	0.2nm,0.3s,baz=34,slow=14,SNR=5.9						
TXAR				Lg	Lg	15 00 32.8	
	0.6nm,0.3s,baz=37,slow=27,SNR=11						
TKL	**Tuckaleechee C**	**10.76**	**91**	Lg	Lg	15 01 20.2	
	0.7nm,0.3s,baz=4.2,slow=18,SNR=6.9						
PDAR	**Pinedale Array**	**11.50**	**307**	Pn	**Pn**	**14 58 30.3**	**-2.5**
	0.1nm,0.3s,baz=114,slow=13,SNR=3.6						
PDAR				Pg		14 59 17.7	
	0.2nm,0.3s,baz=111,slow=16,SNR=5.5						
PDAR				Lg	Lg	15 01 44.9	
	0.1nm,0.3s,baz=105,slow=35,SNR=4.1						
ULM	**Lac du Bonnet**	**13.77**	**3**	Pn	**Pn**	**14 58 58.9**	**-4.6**
	0.2nm,0.3s,baz=186,slow=10,SNR=2.9						
ULM				Lg	Lg	15 02 55.0	
	0.1nm,0.3s,baz=74,slow=19,SNR=1.8						

SJA ***02*** *14:56:56.7±0.7, 24°.25S×67°.20W, h202^{km}±6^{km}, ML3.3, MW3.3*

*GUC **02** 14:56:59.6±0.6, 24°.21S×67°.50W, h211^{km}±8^{km}, ML3.8*

ISC 02 14:56:56.0±2.1**, 24°.25S**±0°.05×**67°.23W**±0°.05**, h210**^{km}±18^{km}**, n26, σ1^{s}40**/44**, 6C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.64	107	*i*P	Pn	14 57 32.3	+0.2
SLA				*e*S	S	14 57 59.2	-0.6
AZAP	Zapla	1.98	90	*i*P	Pn	14 57 35.1	-0.2
AZAP				*e*S	S	14 58 05.2	-0.4
LVC	Limon Verde	2.25	316	*e*P	Pn	14 57 39.9	+1.6
LVC				*e*S	S	14 58 09.7	-1.1
LVC	Limon Verde	2.25	316	*i*P	Pn	14 57 39.2	+0.9
LVC				*e*S	S	14 58 10.6	-0.1
PB15	IPOC Station P	2.30	296	⇓*i*P	Pn	14 57 40.1	+1.4
PB15				*i*S	S	14 58 10.7	-0.7
PB15	IPOC Station P	2.30	296	*i*P	Pn	14 57 39.7	+1.0
PB15				*e*S	S	14 58 11.1	-0.3
GO02	Mina Guanaco	2.33	247	⇑*i*P	Pn	14 57 40.3	+1.3
GO02				*e*S	S	14 58 12.0	-0.1
GO02				IAML		14 58 14.3	
	comp=N,396nm,0.5s						
YJA	Yavi	2.60	38	*i*P	Pn	14 57 43.5	+1.3
PB06	IPOC Station P	2.64	305	⇑*i*P	Pn	14 57 43.7	+1.4
PB06				*e*S	S	14 58 17.1	-1.0
PB06				IAML		14 58 19.6	
	comp=N,294nm,0.4s						
PB06	IPOC Station P	2.64	305	*i*P	Pn	14 57 43.5	+1.2
PB06				IAML		14 58 20.1	
	comp=Z,129nm,0.3s						
AHML	Horco Molle	3.05	146	*i*P	Pn	14 57 47.5	+0.7
PB05	IPOC Station P	3.06	296	⇑*i*P	Pn	14 57 48.3	+1.3
PB05				*e*S	S	14 58 24.5	-2.0
PB05				IAML		14 58 26.4	
	comp=N,109nm,0.2s						
PB05	IPOC Station P	3.06	296	*i*P	Pn	14 57 48.1	+1.1
PB05				IAML		14 58 36.1	
	comp=Z,41nm,0.3s						
PB09	IPOC Station P	3.07	322	⇑*i*P	Pn	14 57 49.1	+1.9
PB09				*e*S	S	14 58 26.6	-0.2
PB09	IPOC Station P	3.07	322	*i*P	Pn	14 57 48.7	+1.5
PB09				IAML		14 58 29.2	
	comp=Z,45nm,0.2s						
PB10	IPOC Station P	3.13	283	*e*P	Pn	14 57 49.5	+1.7
PB10				*e*S	S	14 58 25.8	-2.0
PB10				IAML		14 58 30.8	
	comp=N,101nm,0.3s						
PB10	IPOC Station P	3.13	283	*i*P	Pn	14 57 49.2	+1.5
PB10				IAML		14 58 33.4	
	comp=Z,56nm,0.3s						
PB03	IPOC Station P	3.19	313	*e*P	Pn	14 57 49.8	+1.1
PB03				*i*S	S	14 58 28.6	-0.9
PB03				IAML		14 58 30.1	
	comp=N,135nm,0.2s						
PB04	IPOC Station P	3.29	305	*e*P	Pn	14 57 51.2	+1.4
PB04				*e*S	S	14 58 29.6	-1.9
PB04	IPOC Station P	3.29	305	*i*P	Pn	14 57 51.0	+1.1
PB07	IPOC Station P	3.51	315	⇑*i*P	Pn	14 57 53.6	+1.2
PB07				*e*S	S	14 58 34.2	-2.0
AC01	Pan de Azucar	3.59	238	⇑*i*P	Pn	14 57 53.6	+0.4
AC01				*e*S	S	14 58 35.6	-2.1
PB01	IPOC Station P	3.81	326	*e*P	Pn	14 57 56.8	+0.8
PB01				*i*S	S	14 58 41.2	-1.6
PB02	IPOC Station P	3.82	319	*e*P	Pn	14 57 57.6	+1.6
PB02				*i*S	S	14 58 40.9	-2.0
PATCX	Punta Patache	4.35	321	*e*P	Pn	14 58 03.4	+0.7
PATCX				*e*S	S	14 58 52.3	-2.5
ACCO	Cerro Coronel	6.52	194	*i*P	Pn	14 58 32.5	+2.2

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*INET **02** 15:07:40.8, 12°.53N×87°.71W, h62^{km}, ML3.5*

SNET 02 15:07:40.5±1.2**, 12°.60N×87°.82W, h62**^{km}±14^{km}**, ML3.2, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.67	359	*e*P	Pn	15 07 54.6	-0.1
CNCH				*e*S	Sn	15 08 05.8	+0.8
CNCH				IAML		15 08 10.7	
	comp=Z,1μm,0.3s						
LCND	La Caada	0.71	355	*e*P	Pn	15 07 55.0	+0.1
LCND				*e*S	Sn	15 08 07.1	+1.5
LCND				IAML		15 08 13.3	
	comp=Z,420nm,0.3s						
JUCU	Jucuar¡n	0.77	328	*e*P	Pn	15 07 55.5	-0.3
JUCU				*e*S	Sn	15 08 08.5	+1.5
PACA	Pacayal	0.99	331	*e*P	Pn	15 07 58.8	+0.2
PACA				*e*S	Sn	15 08 12.8	+0.8
TECA	Tecapa	1.11	323	*e*P	Pn	15 08 00.3	+0.1
TECA				*e*S	Sn	15 08 16.2	+1.4
FAGO	Alcalda de S	1.12	346	*e*P	Pn	15 08 00.7	+0.4
FAGO				*e*S	Sn	15 08 16.2	+1.3
TGUH	Tegucigalpa,Un	1.54	20	*e*P	Pn	15 08 06.4	+0.4
TGUH				*e*S	Sn	15 08 25.1	0.0

IDC 02 15:09:05.1±3.4**, 6°.84S×150°.03E, h0**^{km}**, mb2.9**/2**, mb1 3.4**/3**, mb1mx3.2**/35**, mbtmp3.2**/3**, ML1.6**/1**, Error ellipse: s-maj=127.5km s-min=41.9km az=121.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.82	228	Pn	Pn	15 10 07.0	+1.8
	3.3nm,0.3s,baz=42,slow=6.0,SNR=15						
PMG				Sn	Sn	15 10 46.2	-4.6
	3.4nm,0.3s,baz=159,slow=18,SNR=7.8						
WRA	Warramunga Arr	20.04	228	P	P	15 13 38.0	-2.0
	0.5nm,0.7s,baz=53,slow=11,SNR=6.4						
ASAR	Alice Springs	22.80	221	P	P	15 14 09.5	-0.2
	0.2nm,0.4s,baz=58,slow=9.3,SNR=11						
TORD	Torodi Ar. Bea	148.21	284	PKPbc	PKPbc	15 28 54.1	-0.2
	0.1nm,0.4s,baz=90,slow=1.9,SNR=2.5						

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*INET **02** 15:32:26.6, 12°.48N×87°.79W, h68^{km}, ML3.7*

SNET 02 15:32:27.2±0.7**, 12°.50N×87°.95W, h27**^{km}±6^{km}**, ML3.2, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.78	8	*e*P	Pb	15 32 41.8	-0.5
CNCH				*e*S	Sn	15 32 53.8	+0.4
CNCH				IAML		15 32 56.4	
	comp=Z,2μm,0.3s						
JUCU	Jucuar¡n	0.80	339	*e*P	Pb	15 32 42.3	-0.4
JUCU				*e*S	Sn	15 32 54.2	+0.2
JUCU				IAML		15 32 58.4	
	comp=Z,501nm,0.4s						
LCND	La Caada	0.81	4	*i*P	Pb	15 32 42.2	-0.4
LCND				*e*S	Sn	15 32 54.1	+0.1
LCND				IAML		15 32 59.3	
	comp=Z,694nm,0.3s						
COEG	Centro de Oper	1.44	321	*e*S	Sb	15 33 10.5	-0.8

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*IDC **02** 15:36:47.6±1.1, 9°.87N×85°.94W, h0^{km}, mb4.1/9, mb1 4.3/11, mb1mx4.0/42, mbtmp4.0/11, ML3.1/2, MS3.8/10, Ms1 3.8/10, ms1mx3.4/45, Error ellipse: s-maj=24.9km s-min=10.8km az=178.0*

*UCR **02** 15:36:48.7±2.6, 9°.78N×85°.85W, h2^{km}±16^{km}, MD4.1, MW4.6, mb4.5(NEIC)*

*NEIC **02** 15:36:56.2±1.6, 10°.12N±0°.07×85°.46W±0°.06, h50^{km}±5^{km}, mb4.5/134, Error ellipse: s-maj=11.2km s-min=7.4km az=206.0*

ISC 02 15:36:52.8±0.5**, 9°.94N**±0°.05×**85°.69W**±0°.05**, h24**^{km}**, n285, σ1^{s}40**/281**, mb4.6**/71**, MS3.6**/6**, 1C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUAI	GUAI	0.37	29	*i*P	Pb	15 37 01.5	+0.6
GUAI				*i*S	Sn	15 37 10.7	+1.5
PLVR	Palo Verde	0.53	40	*e*P	Pb	15 37 04.0	+0.4
PLVR				*e*S	Sb	15 37 14.4	+3.5
NY14	Universidad de	0.72	13	*i*P	Pb	15 37 07.5	+0.8
JTS	Las Juntas de	0.81	65	Pg	Pb	15 37 07.6	-0.6
	233nm,0.3s,baz=314,slow=6.7,SNR=307						
JTS				Lg	Lg	15 37 24.0	
	245nm,0.3s,baz=114,slow=20,SNR=10						
JTS				LR	LR	15 37 35.3	
	comp=Z,5μm,18.5s,baz=204,slow=45						
JTS	Las Juntas de	0.81	65	*e*P	Pb	15 37 07.7	-0.6
COLC	Colonia	0.86	34	*i*P	Pn	15 37 09.3	-0.2
GBS3	Finca Las Img	0.86	16	⇑*i*P	Pb	15 37 09.3	+0.1
GUAB	Guayabo de Bag	0.89	31	*i*P	Pn	15 37 09.5	-0.3
GPS1	Guardaparques	0.89	22	*i*P	Pn	15 37 09.8	-0.2
BUEV	Buena Vista	0.90	18	*i*P	Pn	15 37 09.6	-0.4
GB1A	Borinquen Arri	0.92	18	*i*P	Pn	15 37 10.1	-0.2
GB1A				*e*S	Sn	15 37 25.4	+2.6
ACAL	Aguas Claras	0.94	43	*i*P	Pn	15 37 10.2	-0.4
CEDE	Laguna Cedeo	1.11	61	*e*P	Pn	15 37 13.2	+0.2
SRA1	San Ramn	1.20	83	*e*P	Pn	15 37 13.7	-0.6
SRA1				*e*S	Sb	15 37 35.5	+5.3
HDC	Heredia	1.56	88		Pn	15 37 18.3	-0.9
HDC	Heredia	1.56	88	*e*P	Pn	15 37 18.8	-0.4
SJS	Escuela Geolog	1.62	90	*e*P	Pn	15 37 20.0	+0.1
ACON	Acoyapa	2.08	14		Pn	15 37 26.1	0.0
ACON	Acoyapa	2.08	14	*e*P	Pn	15 37 26.6	+0.5
EDBA	Buenos Aires	2.51	108	*e*P	Pn	15 37 31.7	-0.5
ESPN	Las Esperanzas	2.62	31	Pn	Pn	15 37 32.2	-1.5
BRU2	Volcan	3.18	111	*e*P	Pn	15 37 41.3	-0.1
ESTN	Estel	3.21	348		Pn	15 37 42.9	+1.1
TGUH	Tegucigalpa,Un	4.37	339	Pn	Pn	15 37 56.5	-1.3
BCIP	Isla Barro Col	5.83	97		Pn	15 38 17.1	-0.7
APG	El Apazote	6.86	318	Pn	Pn	15 38 29.8	-2.3
	0.4nm,0.3s,baz=129,slow=14,SNR=4.0						
CCIG	Comitan	8.89	316		Pn	15 39 02.5	+2.5
TEIG	Tepich	10.52	347	LR	LR	15 43 43.1	
	comp=Z,373nm,20.4s,baz=317,slow=39						
CMIG	Matias Romero	11.41	309	Pn	Pn	15 39 31.2	-3.2
	0.1nm,0.3s,baz=138,slow=11,SNR=3.9						
PAYG	Puerto Ayora	11.50	204	Pn	Pn	15 39 44.2	+8.6
OTAV	Otavalo	12.04	143		Pn	15 39 47.5	+4.1
ROSC	El Rosal	12.36	113	LR	LR	15 44 57.9	
	comp=Z,639nm,18.8s,baz=332,slow=39						
TLIG	Tlapa	14.61	303	P	P	15 40 27.8	+3.4
SDV	Santo Domingo	14.90	93	LR	LR	15 47 51.3	
	comp=Z,523nm,18.7s,baz=252,slow=44						
ATAH	Atahualpa	18.46	157	LR	LR	15 47 03.8	
	comp=Z,677nm,20.9s,baz=331,slow=33						
SJG	San Juan	20.61	65	LR	LR	15 47 56.4	
	comp=Z,131nm,20.5s,baz=250,slow=32						
PCRV	Puerto La Cruz	20.74	88	P	P	15 41 33.5	+1.6
	7.7nm,0.9s,baz=225,slow=13,SNR=2.2						
PLCV	Puerto La Cruz	20.78	88		P	15 41 33.5	+1.1
CUPR	Culebra, Puert	21.45	65	P	P	15 41 36.6	-3.0
344A	Westbrook Farm	21.91	348	P	P	15 41 43.2	-1.1
344A				IAmb	IAmb	15 41 47.0	
	comp=Z,17nm,0.9s						
152A	Waverly Hall	22.63	2	P	P	15 41 51.4	-0.7
152A				IAmb	IAmb	15 41 54.0	
	comp=Z,25nm,0.9s						
LRAL	Lakeview Retre	23.01	357	P	P	15 41 55.9	-0.2
Z50A	Ashland	23.20	360	P	P	15 41 57.6	-0.4
Z50A				IAmb	IAmb	15 41 59.7	
	comp=Z,17nm,0.8s						
Z50A	Ashland	23.20	360	P	P	15 41 58.3	+0.3
	baz=179,SNR=13						
Z51A	Franklin	23.27	1	P	P	15 41 58.8	+0.2
Z51A				IAmb	IAmb	15 41 59.8	
	comp=Z,16nm,0.7s						
GOGA	Godfrey	23.45	5	P	P	15 42 00.1	-0.3
GOGA				IAmb	IAmb	15 42 01.2	
	comp=Z,12nm,0.9s						
GOGA	Godfrey	23.45	5	P	P	15 42 00.6	+0.2
	baz=185,SNR=7.3						
Y49A	Blount Mountai	23.81	359	P	P	15 42 03.0	-0.9
Y49A				IAmb	IAmb	15 42 04.6	
	comp=Z,10nm,0.8s						
Y52A	Lilburn	23.86	3	P	P	15 42 03.6	-0.7
Y52A				IAmb	IAmb	15 42 11.9	
	comp=Z,13nm,0.9s						
Y52A	Lilburn	23.86	3	P	P	15 42 04.2	-0.1
	baz=183,SNR=5.3						
Z58A	St. Stephen	23.90	12	P	P	15 42 05.1	+0.4
	baz=194						
Y55A	Saluda	24.14	8	P	P	15 42 06.8	-0.2
	baz=189,SNR=5.8						
JCT	Junction City	24.30	329	P	P	15 42 08.8	+0.2
HODGE	Hodges	24.38	7	P	P	15 42 08.5	-0.7
HODGE				IAmb	IAmb	15 42 09.8	
	comp=Z,16nm,0.8s						
X48A	Hartselle	24.43	357	P	P	15 42 08.8	-0.8
FPAL	Fort Paine	24.48	0	P	P	15 42 08.8	-1.4
X51A	Calhoun	24.52	2	P	P	15 42 09.3	-1.1
X51A				IAmb	IAmb	15 42 11.1	
	comp=Z,14nm,0.8s						
X51A	Calhoun	24.52	2	P	P	15 42 10.2	-0.3
	baz=181,SNR=5.5						
JSC	Jenkinsville	24.56	9	P	P	15 42 10.0	-0.9
X54A	Belton	24.68	7	P	P	15 42 11.8	-0.1
	baz=187						
X55A	Gracelyn & Ava	24.69	8	P	P	15 42 12.1	+0.1
	baz=189						
PAULI	Pauline	25.02	8	P	P	15 42 14.2	-0.8
PAULI				IAmb	IAmb	15 42 15.7	
	comp=Z,14nm,0.9s						
PLAL	Pickwick Lake	25.02	355	P	P	15 42 15.6	+0.6
BG3	Lake Jocassee	25.06	5	P	P	15 42 15.1	-0.3
BG3				IAmb	IAmb	15 42 18.4	
	comp=Z,11nm,0.9s						
W52A	Murphy	25.09	3	P	P	15 42 15.1	-0.5
W52A				IAmb	IAmb	15 42 17.4	
	comp=Z,10nm,0.9s						
W52A	Murphy	25.09	3	P	P	15 42 15.8	+0.1
	baz=184						
W50A	Signal Mountai	25.14	1	P	P	15 42 15.5	-0.6
W50A				IAmb	IAmb	15 42 23.3	
	comp=Z,17nm,1.0s						
W50A	Signal Mountai	25.14	1	P	P	15 42 15.9	-0.2
	baz=180						
SWET	Sewanee	25.16	360	P	P	15 42 14.8	-1.5
SWET				IAmb	IAmb	15 42 16.9	
	comp=Z,10nm,0.8s						
X58A	Rowland	25.18	12	P	P	15 42 14.1	-2.3
X58A				IAmb	IAmb	15 42 32.1	
	comp=Z,41nm,1.6s						
W54A	Cherokee Point	25.23	7	P	P	15 42 17.4	+0.4
	baz=188,SNR=5.4						
KMSC	Kings Mountain	25.40	8	P	P	15 42 17.6	-0.8
KMSC				IAmb	IAmb	15 42 19.1	
	comp=Z,11nm,0.9s						
KMSC	Kings Mountain	25.40	8	P	P	15 42 18.5	+0.1
	baz=190						
CPCT	Cooper Cave	25.41	2	P	P	15 42 17.8	-0.8
CPCT				IAmb	IAmb	15 42 21.6	
	comp=Z,13nm,1.0s						
MIAR	Mount Ida	25.53	345	P	P	15 42 19.8	+0.2
MIAR	Mount Ida	25.53	345	P	P	15 42 20.2	+0.6
	baz=161,SNR=6.2						
TXAR	Lajitas Array	25.59	321	P	P	15 42 19.2	-1.2
	comp=Z,1.2nm,0.7s,baz=140,slow=11,SNR=16						
TX31	Lajitas Ar. Si	25.59	321	P	P	15 42 21.3	+0.9
TX32	Lajitas Array	25.59	321	P	P	15 42 21.3	+0.9
TKL	Tuckaleechee C	25.66	4	P	P	15 42 20.1	-0.6
	comp=Z,8.8nm,0.8s,baz=172,slow=11,SNR=9.7						
TKL	Tuckaleechee C	25.66	4	P	P	15 42 20.0	-0.8
TKL				IAmb	IAmb	15 42 23.9	
	comp=Z,12nm,0.9s						
V48A	Smith Brothers	25.70	358	P	P	15 42 20.4	-0.7
V53A	Saluda	25.74	5	P	P	15 42 20.5	-1.1
V53A				IAmb	IAmb	15 42 25.4	
	comp=Z,12nm,0.8s						
V53A	Saluda	25.74	5	P	P	15 42 24.4	+2.8
	baz=186,SNR=6.0						
V51A	Loudon	25.77	3	P	P	15 42 20.8	-1.0
V51A				IAmb	IAmb	15 42 25.4	
	comp=Z,11nm,0.9s						
V51A	Loudon	25.77	3	P	P	15 42 21.5	-0.4
	baz=182						
ABTX	Abilene, Hawle	25.99	332	P	P	15 42 24.6	+0.8
U53A	Fall Branch	26.45	6	P	P	15 42 27.7	-0.4
	baz=186						
U55A	TA2, Sparta	26.77	8	P	P	15 42 30.5	-0.4
	baz=190						
T51A	Gray	26.95	3	P	P	15 42 34.9	+2.5
	baz=183						
T50A	Nancy	26.97	2	P	P	15 42 31.5	-1.1
	baz=181						
U57A	Blanch	26.99	11	P	P	15 42 32.4	-0.4
	baz=193						
T49A	Edmonton	27.04	0	P	P	15 42 32.5	-0.8
T49A				IAmb	IAmb	15 42 33.0	
	comp=Z,10nm,1.2s						
T49A	Edmonton	27.04	0	P	P	15 42 32.6	-0.7
	baz=180						
T54A	Tazewell	27.25	7	P	P	15 42 34.4	-0.8
	baz=188						
S51A	Beattyville	27.64	4	P	P	15 42 37.2	-1.4
S51A				IAmb	IAmb	15 43 15.2	
	comp=Z,33nm,1.8s						
S51A	Beattyville	27.64	4	P	P	15 42 37.9	-0.7
	baz=184						
PTGA	Pitinga	27.72	111	P	P	15 42 39.0	-0.6
	comp=Z,1.1nm,0.4s,baz=300,slow=20,SNR=3.6						
PTGA				LR	LR	15 54 21.5	
	comp=Z,251nm,20.3s,baz=210,slow=38						
PTGA	Pitinga	27.72	111	IAmb	IAmb	15 43 35.0	
	comp=Z,18nm,1.6s						
S49A	Springfield	27.72	1	P	P	15 42 38.4	-1.0
	baz=180						
S55A	Lewisburg	28.10	9	P	P	15 42 42.7	-0.1
	baz=190						
WCI	Wyandotte Cave	28.17	359	P	P	15 42 41.9	-1.5
WCI				IAmb	IAmb	15 42 43.6	
	comp=Z,7.1nm,0.8s						
WCI	Wyandotte Cave	28.17	359	P	P	15 42 42.3	-1.1
	baz=178						
R51A	Hillsboro	28.30	4	P	P	15 42 43.9	-0.6
	baz=184						
R54A	Victor	28.43	8	P	P	15 42 45.2	-0.5
	baz=189						
S39A	Bolivar	28.47	347	P	P	15 42 44.2	-1.9
R55A	Marlinton	28.66	9	P	P	15 42 47.1	-0.7
R55A				IAmb	IAmb	15 42 58.3	
	comp=Z,13nm,1.1s						
R55A	Marlinton	28.66	9	P	P	15 42 47.8	0.0
	baz=191						
Q51A	Peebles	29.04	4	P	P	15 42 49.3	-1.8
Q51A				IAmb	IAmb	15 42 51.0	
	comp=Z,12nm,0.8s						
Q51A	Peebles	29.04	4	P	P	15 42 50.3	-0.7
	baz=184,SNR=6.0						
Q52A	Bidwell	29.06	6	P	P	15 42 50.8	-0.4
	baz=186						
Q54A	Coxs Mills	29.24	8	P	P	15 42 52.3	-0.6
Q54A				IAmb	IAmb	15 42 52.8	
	comp=Z,9.6nm,1.0s						
Q54A	Coxs Mills	29.24	8	P	P	15 42 52.8	-0.1
	baz=189						
Q55A	Buckhannon	29.36	9	P	P	15 42 54.0	0.0
	baz=191						
P48A	Milroy	29.39	0	P	P	15 42 52.5	-1.7
P48A				IAmb	IAmb	15 42 54.4	
	comp=Z,7.2nm,0.9s						
P48A	Milroy	29.39	0	P	P	15 42 52.7	-1.5
	baz=180						
Q56A	Snyder Ridge,	29.55	10	P	P	15 42 55.5	-0.2
Q56A				IAmb	IAmb	15 43 53.8	
	comp=Z,32nm,1.6s						
P53A	Whipple	29.67	7	P	P	15 42 55.4	-1.3
P53A				IAmb	IAmb	15 42 56.9	
	comp=Z,12nm,0.9s						
P53A	Whipple	29.67	7	P	P	15 42 56.3	-0.4
	baz=188						
P52A	Corning	29.74	6	P	P	15 42 56.5	-0.7
	baz=187						
MCWV	Mont Chateau	30.05	9	P	P	15 42 59.0	-1.0
O49A	Covington	30.14	2	P	P	15 42 59.6	-1.3
O49A				IAmb	IAmb	15 43 00.5	
	comp=Z,20nm,1.6s						
O51A	Pataskala	30.20	5	P	P	15 43 00.5	-0.9
	baz=186						
P57A	Homestead Farm	30.20	12	P	P	15 43 01.6	+0.2
	baz=195						
O52A	Adamsville	30.24	6	P	P	15 42 59.9	-1.9
O52A				IAmb	IAmb	15 43 01.0	
	comp=Z,9.5nm,0.8s						
O53A	New Philadelph	30.44	7	P	P	15 43 02.7	-0.8
	baz=188						
N49A	Columbus Grove	30.88	2	P	P	15 43 05.7	-1.6
N49A				IAmb	IAmb	15 43 07.9	
	comp=Z,6.7nm,1.0s						
N55A	Marion Center	31.28	10	P	P	15 43 09.5	-1.5
	baz=192						
LPAZ	La Paz	31.33	146	P	P	15 43 13.6	+1.3
SSPA	Standing Stone	31.34	11	P	P	15 43 10.7	-0.7
SSPA				IAmb	IAmb	15 43 11.7	
	comp=Z,8.9nm,0.8s						
SSPA	Standing Stone	31.34	11	P	P	15 43 11.0	-0.4
	baz=194						
O59A	Robesonia	31.40	14	P	P	15 43 11.9	0.0
	baz=198						
N56A	West Decatur	31.54	11	P	P	15 43 12.5	-0.7
	baz=194,SNR=5.2						
M53A	WI Miller and	31.68	7	P	P	15 43 13.5	-1.0
	baz=189						
N58A	Sunbury	31.78	13	P	P	15 43 14.2	-1.1
N58A				IAmb	IAmb	15 43 15.7	
	comp=Z,9.7nm,0.8s						
N58A	Sunbury	31.78	13	P	P	15 43 14.9	-0.4
	baz=197						
M55A	Ridgway	31.99	10	P	P	15 43 15.7	-1.5
M55A				IAmb	IAmb	15 43 17.1	
	comp=Z,11nm,0.8s						
M55A	Ridgway	31.99	10	P	P	15 43 16.3	-0.9
	baz=192						
N59A	State Game Lan	32.07	14	P	P	15 43 17.5	-0.4
N59A				IAmb	IAmb	15 43 18.8	
	comp=Z,8.2nm,0.8s						
N59A	State Game Lan	32.07	14	P	P	15 43 17.9	0.0
	baz=198						
M56A	Emporium	32.11	11	P	P	15 43 16.8	-1.4
M56A				IAmb	IAmb	15 43 18.1	
	comp=Z,13nm,0.8s						
M56A	Emporium	32.11	11	P	P	15 43 17.4	-0.7
	baz=194						
M57A	Sunshine Farm,	32.17	12	P	P	15 43 17.7	-1.0
M57A				IAmb	IAmb	15 43 19.4	
	comp=Z,9.6nm,0.8s						
M57A	Sunshine Farm,	32.17	12	P	P	15 43 18.5	-0.2
	baz=196,SNR=5.2						
L53A	Girard	32.24	8	P	P	15 43 18.3	-1.1
	baz=190,SNR=5.4						
ERPA	Erie	32.44	8	P	P	15 43 19.3	-1.8
ERPA				IAmb	IAmb	15 43 20.5	
	comp=Z,10.0nm,0.7s						
L55A	Hinsdale	32.74	10	P	P	15 43 22.6	-1.1
	baz=193						
M59A	Waymart	32.75	14	P	P	15 43 23.3	-0.5
	baz=198						
L57A	Andrews Acres	32.86	12	P	P	15 43 24.1	-0.8
	baz=196						
SDCO	Great Sand Dun	32.93	330	P	P	15 43 25.6	-0.1
SDCO	Great Sand Dun	32.93	330	P	P	15 43 25.9	+0.1
	baz=142						
WVNY	West Valley, N	32.93	10	P	P	15 43 24.1	-1.2
WVNY				IAmb	IAmb	15 44 16.9	
	comp=Z,23nm,1.4s						
L58A	Harry Jones Me	33.12	13	P	P	15 43 26.7	-0.4
	baz=198						
BINY	Binghamton	33.24	13	P	P	15 43 27.3	-0.9
BINY				IAmb	IAmb	15 43 29.1	
	comp=Z,11nm,0.8s						
BINY	Binghamton	33.24	13	P	P	15 43 27.6	-0.5
	baz=197						
K55A	Perry	33.33	10	P	P	15 43 28.1	-0.9
	baz=193						
L59A	Walton	33.45	14	P	P	15 43 29.2	-0.8
L59A	Walton	33.45	14	P	P	15 43 29.5	-0.5
	baz=199						
J52A	Paris	33.48	7	P	P	15 43 28.8	-1.4
	baz=189						
K58A	Earlville	33.85	13	P	P	15 43 32.0	-1.5
K58A	Earlville	33.85	13	P	P	15 43 32.6	-0.8
	baz=198						
X16A	Lo Mia Camp, P	33.89	320	P	P	15 43 35.5	+1.5
I51A	Listowel	33.98	6	P	P	15 43 32.7	-1.8
	baz=188						
K59A	Cooperstown	34.05	14	P	P	15 43 34.4	-0.8
	baz=199						
J56A	Wolcott	34.09	12	P	P	15 43 34.0	-1.4
J56A	Wolcott	34.09	12	P	P	15 43 34.0	-1.4
	baz=195						
J57A	Williamstown	34.39	13	P	P	15 43 36.0	-2.1
J57A				IAmb	IAmb	15 43 55.2	
	comp=Z,9.6nm,0.9s						
J57A	Williamstown	34.39	13	P	P	15 43 36.6	-1.5
	baz=197						
J58A	Remsen	34.51	13	P	P	15 43 37.5	-1.6
J58A	Remsen	34.51	13	P	P	15 43 38.2	-0.9
	baz=198,SNR=5.7						
J59A	Piesco	34.79	14	P	P	15 43 40.3	-1.3

I58A	**Old Forge**	**34.89**	**14**	P	**P**	**15 43 41.6**	**-0.8**
	baz=198						
ACCN	**Adirondack Com**	**34.92**	**15**	P	**P**	**15 43 41.3**	**-1.4**
H53A	**Bobcaygeon**	**35.05**	**9**	P	**P**	**15 43 42.1**	**-1.6**
	baz=192						
SADO	**Sadowa**	**35.16**	**8**	P	**P**	**15 43 42.0**	**-2.7**
SADO				IAmb	IAmb	15 43 43.8	
	comp=Z,8.1nm,0.7s						
I59A	**Olmsteadville**	**35.26**	**15**	P	**P**	**15 43 44.2**	**-1.4**
	baz=200						
H56A	**Elgin**	**35.47**	**12**	P	**P**	**15 43 46.0**	**-1.3**
	baz=196						
G53A	**Haliburton**	**35.58**	**9**	P	**P**	**15 43 46.0**	**-2.3**
	baz=192						
H58A	**Gabriels**	**35.76**	**14**	P	**P**	**15 43 48.0**	**-2.0**
	baz=199						
LONY	**Lake Ozonia**	**35.86**	**14**	P	**P**	**15 43 49.2**	**-1.5**
LONY				IAmb	IAmb	15 43 50.5	
	comp=Z,9.0nm,0.7s						
LONY	**Lake Ozonia**	**35.86**	**14**	P	**P**	**15 43 49.5**	**-1.2**
	baz=198						
W13A	**Hualapai Mount**	**35.89**	**319**	P	**P**	**15 43 53.2**	**+1.8**
G54A	**Lake Saint Pet**	**35.93**	**9**	P	**P**	**15 43 49.4**	**-1.9**
	baz=192						
F52A	**Sundridge**	**36.14**	**8**	P	**P**	**15 43 50.9**	**-2.2**
	baz=190						
E43A	**Lone Tree Farm**	**36.32**	**358**	P	**P**	**15 43 51.5**	**-3.2**
E43A				IAmb	IAmb	15 43 52.6	
	comp=Z,4.1nm,0.9s						
PB10	**IPOC Station P**	**36.40**	**156**	P	**P**	**15 43 58.4**	**+2.8**
KNB	**Kanab**	**36.42**	**322**	P	**P**	**15 43 57.4**	**+1.5**
E47A	**Iron Bridge**	**36.44**	**3**	P	**P**	**15 43 53.4**	**-2.2**
	baz=184						
ALGO	**Algonquin Park**	**36.48**	**9**	P	**P**	**15 43 53.9**	**-2.0**
	baz=192						
E48A	**Lockeyer**	**36.53**	**4**	P	**P**	**15 43 53.9**	**-2.6**
	baz=186						
SRU	**San Rafael Swe**	**36.54**	**327**	P	**P**	**15 43 57.3**	**+0.4**
E52A	**Mattawa**	**36.71**	**8**	P	**P**	**15 43 56.1**	**-1.9**
	baz=191						
E51A	**G1948 Merrick**	**36.84**	**7**	P	**P**	**15 43 57.1**	**-2.0**
	baz=190						
109C	**Camp Elliot, M**	**36.85**	**313**	P	**P**	**15 44 01.1**	**+1.7**
P17A	**Butcher Ranch,**	**36.92**	**327**	P	**P**	**15 44 00.5**	**+0.5**
E53A	**Dumoine, Ponti**	**36.95**	**9**	P	**P**	**15 43 58.0**	**-2.0**
	baz=193						
SZCU	**Shurtz Canyon**	**36.96**	**323**	P	**P**	**15 44 01.6**	**+1.1**
E54A	**Lac Daplat, Po**	**37.08**	**10**	P	**P**	**15 43 59.0**	**-2.2**
	baz=194						
RDMU	**Red Mountain**	**37.12**	**329**	P	**P**	**15 44 01.2**	**-0.6**
TRQ	**Mont Tremblant**	**37.38**	**13**	P	**P**	**15 44 02.0**	**-1.7**
D50A	**G1974 Best Tow**	**37.43**	**7**	P	**P**	**15 44 02.3**	**-1.8**
	baz=189						
G62A	**West of Eustis**	**37.49**	**18**	P	**P**	**15 44 03.6**	**-1.0**
D53A	**Lac Vacive, Po**	**37.63**	**9**	P	**P**	**15 44 03.6**	**-2.1**
D53A				IAmb	IAmb	15 44 04.7	
	comp=Z,5.0nm,0.8s						
D53A	**Lac Vacive, Po**	**37.63**	**9**	P	**P**	**15 44 04.1**	**-1.7**
	baz=193						
E57A	**Chemin Saint G**	**37.65**	**13**	P	**P**	**15 44 04.7**	**-1.3**
	baz=198						
F60A	**Warwick**	**37.78**	**16**	P	**P**	**15 44 05.6**	**-1.4**
	baz=202						
E58A	**La Victoria**	**37.82**	**14**	P	**P**	**15 44 05.9**	**-1.5**
	baz=200						
D54A	**Lac Fusel, La**	**37.87**	**10**	P	**P**	**15 44 05.8**	**-2.0**
	baz=194						
D55A	**Sainte-Anne-du**	**37.96**	**11**	P	**P**	**15 44 06.8**	**-1.8**
	baz=196,SNR=6.7						
PSUT	**Pine Spring**	**38.04**	**323**	P	**P**	**15 44 10.4**	**+0.8**
D57A	**Chemin Vers le**	**38.28**	**13**	P	**P**	**15 44 09.5**	**-1.8**
	baz=199						
TPNV	**Topopah Spring**	**38.53**	**319**	P	**P**	**15 44 15.4**	**+1.7**
TPNV				IAmb	IAmb	15 44 23.4	
	comp=Z,6.3nm,1.1s						
TPNV	**Topopah Spring**	**38.53**	**319**	P	**P**	**15 44 15.7**	**+2.0**
	baz=126						
DUG	**Dugway, Tooele**	**38.56**	**326**	P	**P**	**15 44 14.4**	**+0.5**
D58A	**Chemin du LacG**	**38.59**	**14**	P	**P**	**15 44 12.1**	**-1.8**
	baz=200						
PDAR	**Pinedale Array**	**38.78**	**332**	P	**P**	**15 44 12.8**	**-3.0**
	comp=Z,0.4nm,0.6s,baz=128,slow=11,SNR=5.6						
LATQ	**La Tuque**	**38.88**	**14**	P	**P**	**15 44 14.2**	**-2.1**
LATQ				IAmb	IAmb	15 44 15.5	
	comp=Z,5.5nm,0.8s						
LATQ	**La Tuque**	**38.88**	**14**	P	**P**	**15 44 14.9**	**-1.4**
	baz=200,SNR=5.4						
HWUT	**Hardware Ranch**	**38.90**	**329**	P	**P**	**15 44 15.9**	**-0.8**
R11A	**Troy Canyon, C**	**38.96**	**321**	P	**P**	**15 44 18.4**	**+1.1**
D61A	**St Aubert, Com**	**39.39**	**17**	P	**P**	**15 44 19.7**	**-0.9**
	baz=204						
D62A	**Allapoint, All**	**39.62**	**18**	P	**P**	**15 44 20.0**	**-2.5**
LSQQ	**Lebel-sur-Quev**	**39.66**	**9**	P	**P**	**15 44 20.4**	**-2.4**
	baz=193						
REDW	**Red Top Meadow**	**39.85**	**331**	P	**P**	**15 44 23.6**	**-1.1**
REDW				IAmb	IAmb	15 44 29.9	
	comp=Z,12nm,1.6s						
LMN	**Caledonia Moun**	**40.00**	**23**	P	**P**	**15 44 22.8**	**-2.9**
MATQ	**Matagami**	**40.25**	**8**	P	**P**	**15 44 25.2**	**-2.5**
	baz=192						
ELK	**Elko**	**40.29**	**325**	P	**P**	**15 44 29.0**	**+0.6**
NV11	**Mina Array Sit**	**40.62**	**320**	P	**P**	**15 44 32.3**	**+1.2**
NVAR	**Mina Array Bea**	**40.71**	**320**	P	**P**	**15 44 30.9**	**-1.1**
	comp=Z,3.6nm,0.8s,baz=132,slow=7.1,SNR=24						
NVAR				LR	LR	16 02 42.8	
	comp=Z,153nm,18.9s,baz=330,slow=38						
KVN	**Kaiserville**	**40.95**	**320**	P	**P**	**15 44 34.9**	**+1.0**
RYN	**Ryan**	**40.97**	**320**	P	**P**	**15 44 34.5**	**+0.5**
YERR	**Yerington**	**41.63**	**320**	P	**P**	**15 44 40.6**	**+1.2**
PNTR	**Pine Nut**	**41.92**	**319**	P	**P**	**15 44 42.9**	**+1.0**
BEKR	**Beckworth**	**42.85**	**320**	P	**P**	**15 44 50.0**	**+0.6**
ORV	**Oroville**	**43.41**	**319**	P	**P**	**15 44 55.3**	**+1.6**
PINE	**Pine Mountain**	**45.50**	**324**	P	**P**	**15 45 10.5**	**0.0**
PINE				IAmb	IAmb	15 45 12.1	
	comp=Z,7.6nm,0.9s						
E07A	**Sunnyside**	**46.63**	**328**	P	**P**	**15 45 19.0**	**-0.2**
H04A	**Detroit Lake**	**46.75**	**324**	P	**P**	**15 45 19.9**	**-0.3**
SCHQ	**Schefferville**	**47.21**	**15**	P	**P**	**15 45 21.0**	**-2.6**
	comp=Z,5.4nm,0.8s,baz=224,slow=6.7,SNR=8.1						
SCHQ				LR	LR	16 04 58.1	
	comp=Z,67nm,18.5s,baz=202,slow=36						
SCHQ	**Schefferville**	**47.21**	**15**	P	**P**	**15 45 20.9**	**-2.6**
YKA	**Yellowknife Ar**	**56.47**	**344**	P	**P**	**15 46 29.7**	**-2.8**
	comp=Z,0.2nm,0.3s,baz=134,slow=7.9,SNR=5.0						
CMLA	**Cha da Macela**	**60.46**	**52**	P	**P**	**15 46 58.1**	**-2.8**
HYT	**Haines Junctio**	**63.38**	**334**	P	**P**	**15 47 19.1**	**-1.1**
HYT				IAmb	IAmb	15 47 50.0	
	comp=Z,5.5nm,0.9s						
YKU2	**Yakutat**	**63.70**	**333**	P	**P**	**15 47 22.7**	**+0.6**
C36M	**Paulatuk**	**64.25**	**346**	P	**P**	**15 47 28.0**	**+2.4**
	baz=137,SNR=6.1						
MCARA	**McCarthy VSAT**	**66.02**	**334**	P	**P**	**15 47 35.3**	**-2.0**
INK	**Inuvik**	**66.10**	**342**	P	**P**	**15 47 36.1**	**-1.5**
INK				IAmb	IAmb	15 47 37.2	
	comp=Z,3.4nm,0.9s						
GLB	**Gilahina Butte**	**66.39**	**334**	P	**P**	**15 47 39.7**	**0.0**
GLB				IAmb	IAmb	15 47 42.6	
	comp=Z,8.5nm,0.9s						
EYAK	**Cordova Ski Ar**	**66.91**	**332**	P	**P**	**15 47 42.9**	**0.0**
DOT	**Dot Lake**	**67.41**	**336**	P	**P**	**15 47 45.6**	**-0.6**
DOT				IAmb	IAmb	15 47 46.5	
	comp=Z,3.5nm,0.8s						
SCRK	**Sand Creek**	**67.52**	**336**	P	**P**	**15 47 46.2**	**-0.7**
HLP	**Hilina Pali**	**67.64**	**287**	P	**P**	**15 47 50.2**	**+1.8**
PAX	**Paxson**	**67.72**	**335**	P	**P**	**15 47 47.5**	**-0.6**
PAX				IAmb	IAmb	15 48 07.1	
	comp=Z,9.1nm,1.6s						
RIDG	**Independent Ri**	**67.77**	**336**	P	**P**	**15 47 48.2**	**-0.2**
GHO	**Glory Hole Cre**	**68.78**	**333**	P	**P**	**15 47 54.2**	**-0.6**
GHO				IAmb	IAmb	15 48 02.3	
	comp=Z,7.5nm,1.1s						
HDA	**Harding Lake**	**68.88**	**336**	P	**P**	**15 47 54.3**	**-1.0**
HDA				IAmb	IAmb	15 47 55.5	
	comp=Z,4.7nm,0.8s						
HDA	**Harding Lake**	**68.88**	**336**	P	**P**	**15 47 54.4**	**-0.9**
	baz=112						
RC01	**Rabbit Creek A**	**68.93**	**332**	P	**P**	**15 47 54.8**	**-0.9**
IL31		**68.99**	**336**	P	**P**	**15 47 54.2**	**-1.8**
ILAR	**Eielson Array**	**68.99**	**336**	P	**P**	**15 47 53.2**	**-2.7**
	comp=Z,1.6nm,0.8s,baz=112,slow=4.6,SNR=19						
RND	**Reindeer**	**69.30**	**335**	P	**P**	**15 47 57.3**	**-0.7**
RND				IAmb	IAmb	15 47 58.9	
	comp=Z,9.3nm,0.8s						
KDAK	**Kodiak Island**	**69.39**	**328**	P	**P**	**15 47 58.8**	**+0.3**
HOM	**Homer**	**69.41**	**330**	P	**P**	**15 47 58.4**	**-0.2**
COLA	**College**	**69.42**	**336**	P	**P**	**15 47 57.8**	**-0.7**
MCK	**McKinley**	**69.45**	**335**	P	**P**	**15 47 57.9**	**-1.0**
MCK				IAmb	IAmb	15 48 04.3	
	comp=Z,7.6nm,1.1s						
SUA	**Susitna One**	**69.51**	**332**	P	**P**	**15 47 58.8**	**-0.7**
SUA				IAmb	IAmb	15 48 56.4	
	comp=Z,24nm,1.9s						
NEA	**Nenana**	**69.80**	**336**	P	**P**	**15 47 60.0**	**-1.0**
BWN	**Browne**	**69.82**	**335**	P	**P**	**15 48 00.5**	**-0.6**
TRF	**Thorofare Moun**	**69.93**	**334**	P	**P**	**15 48 01.2**	**-0.8**
SKT	**Skwentna**	**70.02**	**333**	P	**P**	**15 48 01.5**	**-0.9**
SKT				IAmb	IAmb	15 48 53.5	
	comp=Z,24nm,2.0s						
KTH	**Kantishna Hill**	**70.23**	**334**	P	**P**	**15 48 02.8**	**-1.0**
BPAW	**Bear Paw Mtn.**	**70.43**	**335**	P	**P**	**15 48 03.7**	**-1.2**
BPAW				IAmb	IAmb	15 49 30.7	
	comp=Z,25nm,2.0s						
PPLA	**Purkeypile**	**70.58**	**334**	P	**P**	**15 48 04.6**	**-1.3**
MLY	**Manley**	**70.62**	**336**	P	**P**	**15 48 04.8**	**-1.3**
MLY				IAmb	IAmb	15 48 06.3	
	comp=Z,4.2nm,0.8s						
ANM	**Nome**	**76.65**	**334**	P	**P**	**15 48 41.7**	**+0.3**
ANM				IAmb	IAmb	15 48 50.4	
	comp=Z,5.7nm,1.2s						
ESDC	**Sonseca Array**	**77.38**	**52**	LR	LR	16 21 26.1	
	comp=Z,30nm,18.1s,baz=280,slow=34						
RAR	**Rarotonga**	**79.02**	**246**	P	**P**	**15 48 56.7**	**+1.3**
NOA	**NORSAR Array B**	**84.71**	**29**	LR	LR	16 26 21.2	
	comp=Z,14nm,19.9s,baz=20,slow=35						
VYHS	**Vyhne**	**92.08**	**40**	*e*P	**P**	**15 49 56.2**	**-4.0**
MKAR	**Makanchi Array**	**122.51**	**10**	PKP	**PKPdf**	**15 55 45.3**	**-1.2**
	comp=Z,0.3nm,0.8s,baz=357,slow=2.9,SNR=3.6						
KSRS	**Korea Array**	**123.30**	**328**	PKP	**PKiKP**	**15 55 48.4**	**0.0**
	comp=Z,1.0nm,0.7s,baz=9.7,slow=2.0,SNR=3.5						
KSH	**Kashi**	**127.93**	**18**	PKP	**PKiKP**	**15 55 59.1**	**+1.3**
KSH				sPKP		15 56 13.3	
KSH				PP	**PP**	**15 58 00.0**	**+1.6**
KSH				PKS	**PKSdf**	**15 59 34.1**	**+0.2**
KSH	**Kashi**	**127.93**	**18**	SS	SS	16 15 11.1	+1.6
WRA	**Warramunga Arr**	**140.16**	**251**	PKP	**PKPdf**	**15 56 18.6**	**-1.8**
	comp=Z,0.5nm,0.9s,baz=105,slow=3.4,SNR=2.8						
CMAR	**Chiang Mai Arr**	**151.41**	**351**	PKPbc	**PKPbc**	**15 56 44.9**	**-0.8**
	comp=Z,1.9nm,0.7s,baz=350,slow=2.6,SNR=8.0						

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*BGR **02** 15:42:00.2±0.0, 22°.73S×173°.59W, h10^{km}*

*BJI **02** 15:42:01.8±0.0, 21°.22S×174°.02W, h14^{km}, mB5.6/28, mb5.1/39, Ms5.3/19, Ms7 5.0/18*

*IDC **02** 15:42:01.4±0.5, 21°.50S×174°.54W, h0^{km}, mb4.6/17, mb1 4.8/18, mb1mx4.7/26, mbtmp4.6/18, ML4.6/1, MS4.4/21, Ms1 4.4/21, ms1mx4.3/39, Error ellipse: s-maj=19.2km s-min=15.6km az=128.0*

*NEIC **02** 15:42:01.9±2.9, 21°.26S±0°.07×174°.08W±0°.08, h10^{km}±1^{km}, mb5.3/101, Error ellipse: s-maj=12.8km s-min=10.8km az=311.0*

*MOS **02** 15:42:02.0±1.2, 21°.39S×174°.27W, h16^{km}, mb5.3/26, MS4.8/4, Error ellipse: s-maj=10.9km s-min=10.1km az=111.1*

*GCMT **02** 15:42:05.9±0.2, 21°.66S±0°.02×173°.78W±0°.01, h18^{km}, MW5.2/131, Moment Tensor Solution. s68,c99; s131,c201; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.89±.18; $M_{\theta\theta}$-0.91±.11; $M_{\phi\phi}$-4.98±.12; $M_{r\theta}$2.31±.29; $M_{\theta\phi}$-1.82±.07; $M_{\phi r}$3.32±.24; Best double couple: $M_0$7.05400×10^{16} NP1:ϕ_s194.00000°, δ28.00000°, λ77.00000°. NP2:ϕ_s29.00000°, δ63.00000°, λ97.00000°. Principal axes: T 7.2130, Plg72.0000°, Azm314.0000°; N -0.3180, Plg6.0000°, Azm205.0000°; P -6.8940, Plg17.0000°, Azm113.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 15:42:03.9±0.3**, 21°.42S**±0°.05×**174°.03W**±0°.05**, h25**^{km}**, n336,** σ1^{s}**96**/346**, mb5.2**/93**, MS4.5**/31**, 36C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.51**	**60**	P	**Pn**	**15 43 06.4**	**-4.2**
	baz=4.3,SNR=14						
NIUE	**Niue**	**4.51**	**60**	Pn	**Pn**	**15 43 06.2**	**-4.4**
AFI	**Afiamalu**	**7.78**	**16**	Pn	**Pn**	**15 43 52.3**	**-3.3**
	9.3nm,0.3s,baz=210,slow=8.0,SNR=7.4						
AFI				Sn	**Sn**	**15 45 15.1**	**-7.8**
	9.5nm,0.3s,baz=144,slow=19,SNR=3.9						
AFI	**Afiamalu**	**7.78**	**16**		**Pn**	**15 43 51.4**	**-4.2**
MSVF	**Nonsavu**	**8.32**	**295**		**Pn**	**15 44 01.5**	**-1.6**
MSVF	**Nonsavu**	**8.32**	**295**	P	**Pn**	**15 44 01.5**	**-1.6**
RAO	**Raoul Island**	**8.55**	**203**	Sn	**Sn**	**15 45 35.0**	**-6.7**
	67nm,0.3s,baz=256,slow=19,SNR=4.3						
RAO				LR	LR	15 47 09.5	
	comp=Z,691nm,18.7s,baz=48,slow=37						
RAO	**Raoul Island**	**8.55**	**203**	Pn	**Pn**	**15 44 08.8**	**+2.7**
RAO	**Raoul Island**	**8.55**	**203**	P	**Pn**	**15 44 08.8**	**+2.7**
RAO						15 45 35.1	
RAR	**Rarotonga**	**13.29**	**92**	Pn	Pn	15 45 05.9	-5.2
	16nm,0.3s,baz=264,slow=10,SNR=34						
RAR				Sn	Sn	15 47 25.2	-13
	3.3nm,0.3s,baz=225,slow=19,SNR=5.6						
RAR				LR	LR	15 51 15.7	
	comp=Z,2μm,18.1s,baz=234,slow=40						
RAR	**Rarotonga**	**13.29**	**92**	Pn	**Pn**	**15 45 06.4**	**-4.7**
RAR	**Rarotonga**	**13.29**	**92**	P	**Pn**	**15 45 06.4**	**-4.7**
OUZ	**Omahuta**	**17.51**	**216**		**P**	**15 46 07.6**	**+0.3**
DZM	**Mont Dzumac**	**18.15**	**264**	*e*P	**P**	**15 46 15.6**	**+1.0**
	103nm,1.3s						
DZM				*e*S	**Sn**	**15 49 34.9**	**-1.5**
	524nm,24.8s						
DZM				*e*LR	LR	15 50 30.2	
	comp=Z,1μm,27.9s						
DZM	**Mont Dzumac**	**18.15**	**264**	P	**Pn**	**15 46 13.6**	**-0.9**
	0.2nm,0.3s,baz=78,slow=9.1,SNR=5.6						
DZM				LR	LR	15 51 12.3	
	comp=Z,685nm,20.1s,baz=98,slow=31						
DZM	**Mont Dzumac**	**18.15**	**264**	P	**P**	**15 46 15.5**	**+1.0**
NOUC	**Port Laguerre**	**18.28**	**264**	P	**P**	**15 46 17.6**	**+1.7**
URZ	**Urewera**	**18.43**	**203**	P	**P**	**15 46 16.5**	**-1.0**
	1.9nm,0.3s,baz=41,slow=6.7,SNR=14						
URZ	**Urewera**	**18.43**	**203**	P	**Pn**	**15 46 17.7**	**0.0**
SANVU	**Saraoutou**	**18.76**	**285**	P	**P**	**15 46 21.0**	**-0.3**
SANVU				IAmb	IAmb	15 46 44.5	
	comp=Z,487nm,1.9s						
BKZ	**Black Stump Fm**	**19.46**	**203**	P	**P**	**15 46 29.4**	**+0.6**
BFZ	**Birch Farm**	**20.90**	**201**	P	**P**	**15 46 41.1**	**-3.2**
MSWZ	**Moikau Station**	**21.89**	**202**	P	**P**	**15 46 53.6**	**-1.5**
SNZO	**South Karori**	**22.00**	**203**	P	**P**	**15 46 54.4**	**-1.7**
PLWZ	**Palliser**	**22.03**	**202**	P	**P**	**15 46 56.5**	**-0.1**
TUWZ	**Tuamarina**	**22.39**	**204**	P	**P**	**15 46 58.5**	**-1.9**
QRZ	**Quartz Range**	**22.45**	**208**	P	**P**	**15 47 04.1**	**+3.0**
QRZ				IAmb	IAmb	15 47 17.2	
	comp=Z,138nm,1.4s						
TBI	**Tubuai**	**22.80**	**99**	*e*P	**P**	**15 47 04.2**	**-0.7**
	comp=Z,191nm,1.2s						
TBI				*e*S	**S**	**15 51 06.8**	**-5.8**
	comp=Z,524nm,32.0s						
TBI				*e*LR	LR	15 52 14.3	
	comp=Z,2μm,32.0s,baz=260						
PAE	**Paea**	**23.34**	**85**	*e*P	**P**	**15 47 10.2**	**-0.2**
	comp=Z,7.3nm,1.2s						
PAE	**Paea**	**23.34**	**85**	*e*T	T	16 11 08.8	
	comp=Z,3.2nm,0.4s						
PPT2	**Papeete2**	**23.36**	**85**	*e*P	**P**	**15 47 11.0**	**+0.3**
	comp=Z,74nm,1.2s						
PPT2				*e*S	**S**	**15 51 20.2**	**-2.1**
	comp=Z,1μm,25.8s						
PPT2				*e*LR	LR	15 52 25.3	
	comp=Z,2μm,29.2s,baz=252						
PPT2	**Papeete2**	**23.36**	**85**	*e*T	T	16 11 11.4	
	comp=Z,3.6nm,0.4s						
PPT	**Papeete**	**23.36**	**85**	P	**P**	**15 47 13.8**	**+3.0**
	comp=Z,28nm,0.9s,baz=352,slow=9.7,SNR=4.3						
PPT				LR	LR	15 55 02.3	
	comp=Z,1μm,18.2s,baz=260,slow=33						
PPTF	**Pamatai, Papee**	**23.37**	**85**	P	**P**	**15 47 11.6**	**+0.8**
PPTF				IAmb	IAmb	15 47 30.5	
	comp=Z,97nm,1.2s						
KHZ	**Kahutara**	**23.39**	**204**	P	**P**	**15 47 10.7**	**0.0**
KHZ				IAmb	IAmb	15 47 31.5	
	comp=Z,166nm,1.8s						
TIAR	**Tiarei**	**23.58**	**85**	*e*P	**P**	**15 47 12.8**	**-0.1**
	comp=Z,19nm,0.9s						
TVO	**Taravao**	**23.62**	**86**	*e*P	**P**	**15 47 13.2**	**-0.1**
	comp=Z,27nm,1.3s						
TVO	**Taravao**	**23.62**	**86**	*e*T	T	16 11 30.0	
	comp=Z,0.7nm,0.3s						
LTZ	**Lake Taylor**	**24.19**	**205**	P	**P**	**15 47 17.7**	**-0.7**
LTZ				IAmb	IAmb	15 47 39.5	
	comp=Z,128nm,1.4s						
OXZ	**Oxford**	**24.74**	**205**	P	**P**	**15 47 21.5**	**-1.9**
OXZ				IAmb	IAmb	15 47 41.5	
	comp=Z,58nm,1.0s						
RPZ	**Rata Peaks**	**25.45**	**206**	P	**P**	**15 47 28.0**	**-1.8**
	comp=Z,19nm,0.8s,baz=150,slow=1.1,SNR=3.9						
RPZ				LR	LR	15 56 19.7	
	comp=Z,1μm,18.4s,baz=22,slow=34						
RPZ	**Rata Peaks**	**25.45**	**206**	IAmb	IAmb	15 47 54.6	
	comp=Z,84nm,1.2s						
FOZ	**Fox Glacier**	**25.82**	**208**	P	**P**	**15 47 35.2**	**+2.0**
HNR	**Honiara**	**27.72**	**291**	LR	LR	15 57 06.8	
	comp=Z,435nm,18.5s,baz=134,slow=33						
MLZ	**Mavora Lakes**	**28.02**	**207**	P	**P**	**15 47 53.3**	**+0.3**
ARMA	**Armidale**	**32.05**	**247**	P	**P**	**15 48 28.5**	**-0.5**
	baz=32,SNR=5.9						
ARMA	**Armidale**	**32.05**	**247**	P	**P**	**15 48 28.1**	**-0.8**
RMQ	**Roma**	**34.30**	**254**	P	**P**	**15 48 48.2**	**-0.3**
	baz=34,SNR=5.2						
CMSA	**Cobar Meteorol**	**37.25**	**246**	P	**P**	**15 49 12.1**	**-1.7**
	baz=37,SNR=21						
PMG	**Port Moresby**	**39.16**	**282**	P	**P**	**15 49 25.8**	**-4.2**
	comp=Z,30nm,1.1s,baz=61,slow=10,SNR=3.3						
PMG	**Port Moresby**	**39.16**	**282**	P	**P**	**15 49 28.4**	**-1.6**
PMG				IAmb	IAmb	15 50 18.2	
	comp=Z,91nm,1.6s						
PMG	**Port Moresby**	**39.16**	**282**	*ce*P	**P**	**15 49 29.0**	**-1.0**
PMG				pmax	pmax		
	comp=Z,318nm,2.5s						
STKA	**Stephens Creek**	**40.76**	**246**	P	**P**	**15 49 41.9**	**-1.3**
	baz=41,SNR=6.1						
STKA	**Stephens Creek**	**40.76**	**246**	P	**P**	**15 49 39.9**	**-3.3**
	comp=Z,14nm,1.1s,baz=92,slow=8.7,SNR=13						
STKA				LR	LR	16 06 04.4	
	comp=Z,576nm,18.1s,baz=78,slow=36						
STKA	**Stephens Creek**	**40.76**	**246**	P	**P**	**15 49 42.1**	**-1.0**
COEN	**Coen**	**41.34**	**273**	P	**P**	**15 49 48.0**	**-0.1**
	baz=42,SNR=5.8						
COEN	**Coen**	**41.34**	**273**	P	**P**	**15 49 46.9**	**-1.2**
HTT	**Hallett**	**43.11**	**244**	P	**P**	**15 50 00.8**	**-1.6**
	baz=43,SNR=9.3						
BBOO	**Buckleboo**	**45.48**	**245**	P	**P**	**15 50 19.4**	**-1.9**
	baz=46,SNR=4.8						
BBOO	**Buckleboo**	**45.48**	**245**	P	**P**	**15 50 18.9**	**-2.4**
AS05	**Alice Springs**	**47.88**	**257**	P	**P**	**15 50 38.3**	**-2.0**
	baz=48						
AS31	**Alice Springs**	**47.92**	**257**	P	**P**	**15 50 37.1**	**-3.5**
ASAR	**Alice Springs**	**47.92**	**257**	P	**P**	**15 50 36.6**	**-3.9**
	comp=Z,1.9nm,0.8s,baz=346,slow=15,SNR=35						
ASAR				S	**S**	**15 57 31.9**	**-5.0**
	comp=Z,1.8nm,1.2s,baz=86,slow=17,SNR=5.9						
ASAR				LR	LR	16 09 01.4	
	comp=Z,379nm,18.2s,baz=94,slow=34						
ASAR	**Alice Springs**	**47.92**	**257**		**S**	**15 57 31.9**	**-5.0**
ASAR	**Alice Springs**	**47.92**	**257**	S	**S**	**15 57 31.9**	**-5.0**
WR0	**Warramunga Arr**	**47.95**	**262**	P	**P**	**15 50 37.6**	**-3.2**
WB0	**Warramunga Arr**	**48.13**	**262**	P	**P**	**15 50 40.1**	**-2.1**
WB0				IAmb	IAmb	15 50 40.7	
	comp=Z,41nm,1.3s						
WB2	**Warramunga Arr**	**48.13**	**262**	P	**P**	**15 50 40.2**	**-2.1**
WB2				IAmb	IAmb	15 50 40.8	
	comp=Z,33nm,1.2s						
WRAB	**Tennant Creek**	**48.14**	**262**	P	**P**	**15 50 39.8**	**-2.4**
WRAB				IAmb	IAmb	15 50 41.4	
	comp=Z,30nm,1.1s						
WRAB	**Tennant Creek**	**48.14**	**262**	*ce*P	**P**	**15 50 40.0**	**-2.3**
WRAB				pmax	pmax		
	comp=Z,27nm,1.0s						
WRA	**Warramunga Arr**	**48.14**	**262**	P	**P**	**15 50 39.4**	**-3.0**
	comp=Z,15nm,1.1s,baz=90,slow=5.7,SNR=53						
WRA				PcP	**PcP**	**15 52 10.6**	**+0.9**
	comp=Z,2.5nm,0.8s,baz=93,slow=3.6,SNR=2.6						
FORT	**Forrest**	**52.34**	**247**	P	**P**	**15 51 12.2**	**-1.8**
FORT				IAmb	IAmb	15 51 34.8	
	comp=Z,27nm,0.8s						
WRKA	**Warakurna**	**52.78**	**254**	P	**P**	**15 51 15.6**	**-1.8**
	baz=53,SNR=24						
MTN	**Manton Dam**	**52.87**	**270**	P	**P**	**15 51 15.8**	**-2.3**
SAUI	**Saumlaki**	**54.28**	**276**	P	**P**	**15 51 26.1**	**-2.4**
KNRA	**Kununurra**	**54.29**	**266**	P	**P**	**15 51 27.8**	**-0.7**
	baz=54,SNR=4.1						
KNRA	**Kununurra**	**54.29**	**266**	P	**P**	**15 51 27.1**	**-1.4**
FAKI	**Fak Fak**	**55.32**	**282**	P	**P**	**15 51 34.6**	**-1.4**
	comp=Z,25nm,1.8s						
FAKI	**Fak Fak**	**55.32**	**282**	P	**P**	**15 51 33.7**	**-2.3**
FAKI				IAmb	IAmb	15 51 35.4	
	comp=Z,24nm,1.1s						
FITZ	**Fitzroy Crossi**	**56.58**	**262**	P	**P**	**15 51 43.4**	**-1.5**
	baz=57,SNR=4.4						
FITZ	**Fitzroy Crossi**	**56.58**	**262**	P	**P**	**15 51 42.3**	**-2.6**
VNDA	**Vanda**	**57.35**	**186**	LR	LR	16 16 02.8	
	comp=Z,167nm,18.0s,baz=17,slow=36						
RPN	**Rapa Nui**	**58.70**	**109**	P	**P**	**15 52 01.2**	**+1.5**
RPN	**Rapa Nui**	**58.70**	**109**	P	**P**	**15 52 01.2**	**+1.5**
RPN				pmax	pmax		
	comp=Z,52nm,1.1s						
SOEI	**Soe**	**60.23**	**271**	P	**P**	**15 52 09.9**	**-0.7**
	comp=Z,42nm,0.9s						
SOEI	**Soe**	**60.23**	**271**	P	**P**	**15 52 09.7**	**-0.9**
SOEI				IAmb	IAmb	15 52 19.9	
	comp=Z,28nm,0.8s						
PSA00	**Pilbara Seismi**	**61.06**	**257**	P	**P**	**15 52 14.1**	**-2.0**
PSA00				IAmb	IAmb	15 52 15.6	
	comp=Z,24nm,1.2s						
TNTI	**Ternate**	**61.28**	**283**	P	**P**	**15 52 16.0**	**-1.6**
BLDU	**Ballidu**	**62.06**	**246**	P	**P**	**15 52 22.0**	**-0.8**
	baz=62,SNR=5.1						
MORW	**Morawa**	**62.90**	**247**	P	**P**	**15 52 28.0**	**-0.4**
	baz=63,SNR=4.4						
MORW	**Morawa**	**62.90**	**247**	P	**P**	**15 52 28.8**	**+0.4**
MORW				IAmb	IAmb	15 52 49.2	
	comp=Z,33nm,1.4s						
QSPA	**South Pole Qui**	**68.65**	**180**	P	**P**	**15 53 06.6**	**+1.7**
	comp=Z,4.3nm,0.8s,baz=31,slow=2.0,SNR=17						
QSPA	**South Pole Qui**	**68.65**	**180**	P	**P**	**15 53 07.0**	**+2.0**
QSPA				IAmb	IAmb	15 53 19.7	
	comp=Z,16nm,1.1s						
MJAR	**Matsushiro Arr**	**73.19**	**321**	P	**P**	**15 53 32.9**	**+0.2**
	comp=Z,11nm,1.1s,baz=155,slow=5.9,SNR=10						
MJAR				LR	LR	16 25 35.6	
	comp=Z,135nm,18.5s,baz=135,slow=36						
MAJO	**Matsushiro**	**73.19**	**321**	P	**P**	**15 53 32.6**	**-0.1**
MAJO	**Matsushiro**	**73.19**	**321**	*i* P	**P**	**15 53 32.3**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,14nm,1.1s						
MAT	**Matsushiro**	**73.19**	**321**	P	**P**	**15 53 32.8**	**+0.1**
MJB9	**Matsu-Tunnel**	**73.20**	**321**	P	**P**	**15 53 32.6**	**-0.1**
ASAJ	**Asahikawa**	**76.35**	**329**	LR	LR	16 26 42.2	
	comp=Z,226nm,18.1s,baz=155,slow=35						
SKR	**Severo-Kuril's**	**76.47**	**341**	*e*P	P	15 54 05.7	+14
SKR				pmax	pmax		
	comp=Z,56nm,1.1s						
SKR				pmax	pmax		
	comp=Z,400nm,4.8s						
SKR				MLR	MLR		
	comp=Z,200nm,17.0s						
YULB	**Yu-li**	**77.12**	**302**	P	**P**	**15 53 53.6**	**-2.0**
KMRM	**Mail Ridge**	**77.18**	**37**	P	**P**	**15 53 56.8**	**+1.1**
KSM	**Kuching**	**77.21**	**277**	P	**P**	**15 53 56.3**	**-0.1**
NACB	**Ninganchiao**	**77.28**	**302**	P	**P**	**15 53 55.7**	**-0.8**
NACB				IAmb	IAmb	15 55 12.9	
	comp=Z,42nm,1.2s						
JCC	**Jacoby Creek,**	**77.41**	**37**	P	**P**	**15 53 56.9**	**+0.1**
SSLB	**Suanglung**	**77.59**	**302**	P	**P**	**15 53 57.4**	**-0.9**
TPUB	**Ta-pu**	**77.61**	**301**	P	**P**	**15 53 57.4**	**-1.0**
O02D	**Mt. Diablo Mer**	**77.67**	**38**	P	**P**	**15 54 03.1**	**+4.7**
	baz=228						
CMB	**Columbia Colle**	**77.68**	**41**	P	**P**	**15 54 00.1**	**+1.6**
CMB				IAmb	IAmb	15 54 08.2	
	comp=Z,36nm,1.8s						
CMB	**Columbia Colle**	**77.68**	**41**	P	**P**	**15 54 00.1**	**+1.6**
CMB				pmax	pmax		
	comp=Z,36nm,1.8s						
AFDM	**Forest Hills D**	**77.92**	**40**	P	**P**	**15 53 59.4**	**-0.4**
ORV	**Oroville**	**78.00**	**39**	P	**P**	**15 54 01.0**	**+0.8**
ORV	**Oroville**	**78.00**	**39**	P	**P**	**15 54 01.0**	**+0.8**
ORV				pmax	pmax		
	comp=Z,13nm,1.3s						
WDC	**Whiskeytown Da**	**78.08**	**38**	P	**P**	**15 54 00.5**	**-0.1**
WDC				IAmb	IAmb	15 54 09.0	
	comp=Z,30nm,1.4s						
WDC	**Whiskeytown Da**	**78.08**	**38**	P	**P**	**15 54 00.5**	**-0.1**
WDC				pmax	pmax		
	comp=Z,30nm,1.5s						

PETK	**Petropavlovsk-**	**78.17**	**343**	P	**P**	**15 54 01.8**	**+1.0**
	comp=Z,7.8nm,0.8s,baz=116,slow=10,SNR=6.9						
PETK				LR	LR	16 24 05.5	
	comp=Z,214nm,20.0s,baz=197,slow=32						
GLA	**Glamis**	**78.26**	**47**	P	**P**	**15 54 01.0**	**-0.8**
GLA	**Glamis**	**78.26**	**47**	P	**P**	**15 54 01.0**	**-0.8**
GLA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HEC	**Hector,Ludlow**	**78.28**	**45**	P	**P**	**15 54 05.9**	**+4.0**
	baz=234						
O03E	**Paynes Creek**	**78.31**	**38**	P	**P**	**15 54 05.5**	**+3.5**
	baz=229						
YSS	**Yuzh-Sakhalins**	**78.43**	**331**	*e*P	**P**	**15 54 03.7**	**+1.4**
YSS				*e*		15 54 18.9	
YSS				*e*S	**S**	**16 03 57.2**	**+0.6**
YSS				*e*PS	**PnS**	**16 04 32.6**	**-7.7**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				MLR	MLR		
	comp=Z,400nm,17.0s						
PNTR	**Pine Nut**	**78.83**	**40**	P	**P**	**15 54 02.5**	**-2.5**
PNTR				IAmb	IAmb	15 54 15.8	
	comp=Z,23nm,1.1s						
BEKR	**Beckworth**	**78.88**	**39**	P	**P**	**15 54 04.3**	**-0.9**
YERR	**Yerington**	**78.98**	**40**	P	**P**	**15 54 04.2**	**-1.6**
YERR				IAmb	IAmb	15 54 14.1	
	comp=Z,48nm,1.9s						
NVAR	**Mina Array Bea**	**79.21**	**41**	P	**P**	**15 54 10.2**	**+3.1**
	comp=Z,4.4nm,1.0s,baz=221,slow=8.3,SNR=13						
NVAR				LR	LR	16 28 59.2	
	comp=Z,440nm,18.1s,baz=258,slow=35						
TPNV	**Topopah Spring**	**79.60**	**44**	P	**P**	**15 54 09.6**	**+0.3**
TPNV	**Topopah Spring**	**79.60**	**44**	P	**P**	**15 54 09.6**	**+0.3**
TPNV				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KSRS	**Korea Array**	**80.06**	**317**	P	**P**	**15 54 12.5**	**+1.0**
	comp=Z,11nm,1.2s,baz=141,slow=5.9,SNR=16						
KSRS				LR	LR	16 25 46.8	
	comp=Z,120nm,19.9s,baz=138,slow=33						
I04A	**Tendick Farm,**	**80.30**	**35**	P	**P**	**15 54 15.7**	**+3.0**
	baz=228						
J05D	**Fort Rock, OR**	**80.60**	**36**	P	**P**	**15 54 17.6**	**+3.1**
	baz=229						
TYV	**Tymovskoe**	**81.45**	**334**	*e*P	**P**	**15 54 19.4**	**+0.8**
TYV				*e*S	**S**	**16 04 32.0**	**+3.7**
TYV				pmax	pmax		
	comp=Z,6.0nm,1.7s						
TYV				pmax	pmax		
	comp=Z,400nm,4.7s						
TYV				smax	smax		
	comp=E,900nm,7.7s						
USRK	**Ussuriysk Ar.**	**81.85**	**324**	P	**P**	**15 54 21.8**	**+0.9**
	comp=E,2.1nm,0.7s,baz=104,slow=8.0,SNR=6.8						
USRK				LR	LR	16 27 40.6	
	comp=E,352nm,19.1s,baz=128,slow=34						
ELK	**Elko**	**82.49**	**41**	P	**P**	**15 54 23.4**	**-1.3**
ELK	**Elko**	**82.49**	**41**	P	**P**	**15 54 23.4**	**-1.3**
ELK				pmax	pmax		
	comp=Z,18nm,1.8s						
DLV	**T Lat**	**82.94**	**286**	P	**P**	**15 54 26.9**	**-0.6**
DLV				IAmb	IAmb	15 54 30.1	
	comp=Z,29nm,1.5s						
MYKOM	**Kota Tinggi**	**83.31**	**275**	P	**P**	**15 54 30.1**	**+0.8**
NJ2	**Nanjing**	**83.34**	**308**	*e*P	**P**	**15 54 29.2**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MDJ	**Mudanjiang**	**83.44**	**323**	P	**P**	**15 54 30.6**	**+1.4**
MDJ				sP	pP	15 54 35.3	-0.2
MDJ				PP	**PP**	**15 57 41.2**	**-0.5**
MDJ				S	**S**	**16 04 52.0**	**+3.0**
MDJ				sS	pS	16 04 57.4	+0.1
MDJ				SS	**SS**	**16 10 17.9**	**+2.4**
MDJ				pmax	pmax		
	comp=Z,22nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,190nm,5.6s						
MDJ				LR	LR		
	comp=Z,250nm,19.9s						
MDJ				LR	LR		
	comp=Z,300nm,19.9s						
MDJ				LR	LR		
	comp=Z,580nm,19.9s						
MDJ	**Mudanjiang**	**83.44**	**323**	P	**P**	**15 54 29.9**	**+0.8**
MDJ				IAmb	IAmb	15 54 32.9	
	comp=Z,38nm,1.4s						
B05A	**Bryant**	**83.47**	**32**	P	**P**	**15 54 33.4**	**+4.1**
	baz=228						
E07A	**Sunnyside**	**83.48**	**34**	P	**P**	**15 54 28.8**	**-0.6**
E07A				IAmb	IAmb	15 54 37.6	
	comp=Z,45nm,1.6s						
HAWA	**Hanford**	**83.55**	**35**	P	**P**	**15 54 29.2**	**-0.5**
HAWA				IAmb	IAmb	15 54 38.0	
	comp=Z,37nm,1.5s						
GRNR	**Gornyy**	**84.07**	**331**	⇑*i*P	**P**	**15 54 33.5**	**+1.2**
GRNR				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TMUT	**Trail Mountain**	**84.20**	**44**	P	**P**	**15 54 33.3**	**-0.3**
TX31	**Lajitas Ar. Si**	**84.47**	**56**	P	**P**	**15 54 34.0**	**-0.9**
TXAR	**Lajitas Array**	**84.47**	**56**	P	**P**	**15 54 37.4**	**+2.4**
	comp=Z,1.2nm,1.0s,baz=205,slow=5.5,SNR=8.2						
TXAR				LR	LR	16 28 05.2	
	comp=Z,120nm,18.0s,baz=0.0,slow=33						
F10A	**Beach Ranch, E**	**84.52**	**36**	P	**P**	**15 54 34.7**	**-0.1**
F10A				IAmb	IAmb	15 54 44.6	
	comp=Z,17nm,1.1s						
RC01	**Rabbit Creek A**	**84.53**	**12**	P	**P**	**15 54 34.3**	**-0.1**
QIZ	**Qiongzhong**	**84.62**	**293**	P	**P**	**15 54 35.4**	**-0.4**
QIZ				S	**S**	**16 05 02.9**	**+1.0**
QIZ				LR	LR		
	comp=Z,190nm,34.9s						
GLI	**Glacier Island**	**84.86**	**13**	P	**P**	**15 54 36.9**	**+0.9**
GLI				IAmb	IAmb	15 54 42.6	
	comp=Z,29nm,1.1s						
B08A	**Colville Reser**	**84.92**	**33**	P	**P**	**15 54 37.7**	**+1.0**
GAMB	**Gambell**	**84.94**	**1**	P	**P**	**15 54 37.0**	**+0.7**
GAMB				IAmb	IAmb	15 54 47.0	
	comp=Z,19nm,1.0s						
SKT	**Skwentna**	**85.04**	**10**	P	**P**	**15 54 36.9**	**0.0**
SKT				IAmb	IAmb	15 54 42.5	
	comp=Z,26nm,1.4s						
PMR	**Palmer**	**85.11**	**12**	P	**P**	**15 54 37.3**	**+0.1**
PMR				IAmb	IAmb	15 54 44.0	
	comp=Z,23nm,1.2s						
PMR	**Palmer**	**85.11**	**12**	P	**P**	**15 54 37.3**	**+0.1**
PMR				pmax	pmax		
	comp=Z,23nm,1.2s						
ANMO	**Albuquerque**	**85.13**	**50**	P	**P**	**15 54 40.2**	**+1.9**
ANMO				IAmb	IAmb	15 54 48.2	
	comp=Z,28nm,1.9s						
ANMO	**Albuquerque**	**85.13**	**50**	*ce*P	**P**	**15 54 40.2**	**+1.9**
ANMO				pmax	pmax		
	comp=Z,12nm,1.7s						
ANMO	**Albuquerque**	**85.13**	**50**	P	**P**	**15 54 41.3**	**+3.0**
	baz=240						
KLR	**Kul'dur**	**85.24**	**328**	*i* P	**P**	**15 54 38.0**	**-0.2**
KLR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
CN2	**Changchun**	**85.32**	**321**	*e*P	**P**	**15 54 40.0**	**+1.3**
CN2				*e*S	**S**	**16 05 08.1**	**+0.3**
CN2				pmax	pmax		
	comp=Z,20nm,1.4s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
TGL	**Tana Glacier**	**85.70**	**15**	P	**P**	**15 54 39.0**	**-1.4**
TGL				IAmb	IAmb	15 54 47.5	
	comp=Z,35nm,1.2s						
MA2	**Magadan**	**85.70**	**343**	LR	LR	16 28 41.2	
	comp=Z,286nm,19.4s,baz=128,slow=33						
PLCA	**Paso Flores**	**85.93**	**132**	P	**P**	**15 54 45.5**	**+3.3**
	comp=Z,4.1nm,1.1s,baz=298,slow=10,SNR=4.3						
PLCA	**Paso Flores**	**85.93**	**132**	P	**P**	**15 54 43.3**	**+1.1**
PLCA	**Paso Flores**	**85.93**	**132**	P	**P**	**15 54 43.3**	**+1.1**
PLCA				pmax	pmax		
	comp=Z,25nm,1.7s						
VRDI	**Verde Repeater**	**85.97**	**14**	P	**P**	**15 54 41.2**	**-0.6**
VRDI				IAmb	IAmb	15 54 48.9	
	comp=Z,26nm,1.2s						
MCARA	**McCarthy VSAT**	**86.21**	**14**	P	**P**	**15 54 41.8**	**-0.9**
BARN	**Barnard Glacie**	**86.25**	**15**	P	**P**	**15 54 42.3**	**-0.9**
BARN				IAmb	IAmb	15 54 50.5	
	comp=Z,37nm,1.2s						
SYO	**Syowa Base**	**86.61**	**192**	⇑*e*P	**P**	**15 54 44.6**	**-0.2**
TRF	**Thorofare Moun**	**86.63**	**10**	P	**P**	**15 54 45.7**	**+0.8**
TRF				IAmb	IAmb	15 55 00.8	
	comp=Z,22nm,1.0s						
RND	**Reindeer**	**86.83**	**11**	P	**P**	**15 54 46.5**	**+0.7**
RND	**Reindeer**	**86.83**	**11**	P	**P**	**15 54 46.5**	**+0.7**
RND				pmax	pmax		
	comp=Z,48nm,1.2s						
IPM	**Ipoh**	**86.92**	**276**	P	**P**	**15 54 47.8**	**+0.4**
UBPT	**Khong Chiam**	**86.94**	**288**	P	**P**	**15 54 46.5**	**-0.9**
UBPT				IAmb	IAmb	15 54 49.9	
	comp=Z,19nm,1.3s						
VNA3	**Neumayer Olymp**	**86.94**	**175**	P	**P**	**15 54 46.0**	**-0.4**
SNAA	**Sanae**	**86.95**	**177**	P	**P**	**15 54 48.5**	**+1.9**
SNAA	**Sanae**	**86.95**	**177**	*i* P	**P**	**15 54 47.9**	**+1.3**
MCK	**McKinley**	**87.12**	**11**	P	**P**	**15 54 48.0**	**+0.8**
MCK	**McKinley**	**87.12**	**11**	P	**P**	**15 54 48.0**	**+0.8**
MCK				pmax	pmax		
	comp=Z,58nm,1.4s						
PDAR	**Pinedale Array**	**87.14**	**42**	P	**P**	**15 54 50.4**	**+2.4**
	comp=Z,0.7nm,0.9s,baz=194,slow=3.1,SNR=4.7						
PDAR				LR	LR	16 32 46.6	
	comp=Z,280nm,18.2s,baz=244,slow=35						
MENT	**Mentasta**	**87.42**	**13**	P	**P**	**15 54 49.2**	**+0.6**
MENT				IAmb	IAmb	15 54 56.1	
	comp=Z,20nm,1.3s						
VNA2	**Neumayer--Watz**	**87.43**	**176**	P	**P**	**15 54 52.1**	**+3.3**
KULM	**Kulim**	**87.56**	**277**	P	**P**	**15 54 50.5**	**0.0**
KULM				IAmb	IAmb	15 54 53.0	
	comp=Z,23nm,1.3s						
WRH	**Wood River Hil**	**87.95**	**11**	P	**P**	**15 54 52.0**	**+0.9**
DOT	**Dot Lake**	**87.98**	**13**	P	**P**	**15 54 52.4**	**+1.1**
DOT				IAmb	IAmb	15 55 01.4	
	comp=Z,24nm,1.2s						
SEY	**Seymchan**	**88.16**	**345**	*i* P	**P**	**15 54 52.6**	**+0.5**
CCB	**Clear Creek Bu**	**88.16**	**11**	P	**P**	**15 54 53.0**	**+0.9**
CCB				IAmb	IAmb	15 54 59.4	
	comp=Z,24nm,1.2s						
RPSI	**Rantau Prapat**	**88.22**	**274**	P	**P**	**15 54 53.5**	**-0.1**
PSI	**Prapat**	**88.26**	**274**	P	**P**	**15 54 53.5**	**-0.4**
PSI				pmax	pmax		
	comp=Z,28nm,1.2s						
SCRK	**Sand Creek**	**88.29**	**13**	P	**P**	**15 54 53.2**	**+0.4**
SCRK				IAmb	IAmb	15 55 12.4	
	comp=Z,40nm,1.9s						
TCOL	**CIGO, UAF Yank**	**88.36**	**11**	P	**P**	**15 54 55.2**	**+2.2**
	baz=204						
COLA	**College**	**88.36**	**11**	P	**P**	**15 54 53.3**	**+0.3**
COLA	**College**	**88.36**	**11**	P	**P**	**15 54 53.3**	**+0.3**
COLA				pmax	pmax		
	comp=Z,32nm,1.2s						
MDM	**Murphy Dome**	**88.37**	**11**	P	**P**	**15 54 53.5**	**+0.3**
IL31		**88.44**	**11**	P	**P**	**15 54 53.6**	**+0.3**
IL31				IAmb	IAmb	15 55 03.1	
	comp=Z,34nm,1.6s						
ILAR	**Eielson Array**	**88.44**	**11**	P	**P**	**15 54 55.2**	**+1.8**
	comp=Z,8.6nm,1.2s,baz=218,slow=5.2,SNR=16						
POKR	**Poker Plat Res**	**88.66**	**11**	P	**P**	**15 54 56.8**	**+2.4**
	baz=205						
BJI	**Beijing**	**89.17**	**314**	PKP	**P**	**15 54 59.7**	**+2.3**
DAWY	**Dawson**	**89.37**	**14**	P	**P**	**15 54 58.7**	**+0.8**
DAWY				IAmb	IAmb	15 55 06.2	
	comp=Z,38nm,1.6s						
EGAK	**Eagle**	**89.59**	**13**	P	**P**	**15 54 59.7**	**+0.9**
EGAK				IAmb	IAmb	15 55 06.9	
	comp=Z,47nm,1.9s						
ENH	**Enshi**	**89.64**	**303**	P	**P**	**15 55 00.0**	**+0.1**
ZEA	**Zeya**	**90.27**	**329**	*e*P	**P**	**15 55 03.8**	**+1.6**
ZEA				pmax	pmax		
	comp=Z,30nm,1.6s						
ZEA				MLR	MLR		
	comp=Z,400nm,13.0s						
ZEA				MLR	MLR		
	comp=E,300nm,12.0s						
GYA	**Guiyang**	**90.34**	**298**	*e*P	**P**	**15 55 05.4**	**+2.0**
GYA				pmax	pmax		
	comp=E,10.0nm,1.0s						
BILL	**Bilibino**	**90.37**	**353**	*ce*P	**P**	**15 55 04.7**	**+2.3**
BILL				pmax	pmax		
	comp=Z,8.0nm,1.7s						
SLVN	**Son La**	**90.65**	**293**	P	**P**	**15 55 04.6**	**-0.3**
SLVN				IAmb	IAmb	15 55 08.4	
	comp=Z,29nm,1.6s						
TOLK	**Toolik Lake Re**	**91.56**	**9**	P	**P**	**15 55 07.8**	**-0.1**
TOLK				IAmb	IAmb	15 55 15.2	
	comp=Z,16nm,1.6s						
TOLK	**Toolik Lake Re**	**91.56**	**9**	P	**P**	**15 55 08.0**	**0.0**
	baz=203						
XAN	**Xi'an**	**91.66**	**306**	P	**P**	**15 55 11.2**	**+1.9**
XAN				pmax	pmax		
	comp=Z,22nm,1.6s						
XAN				pmax	pmax		
	comp=Z,230nm,4.5s						
XAN	**Xi'an**	**91.66**	**306**	P	**P**	**15 55 08.7**	**-0.5**
XAN	**Xi'an**	**91.66**	**306**	P	**P**	**15 55 08.7**	**-0.5**
XAN				pmax	pmax		
	comp=Z,36nm,1.3s						
HHC	**Hu-ho-hao-te**	**92.67**	**313**	*e*P	**P**	**15 55 13.8**	**-0.1**
HHC				pmax	pmax		
	comp=Z,73nm,1.3s						
HHC				pmax	pmax		
	comp=Z,220nm,7.5s						
HHC				LR	LR		
	comp=Z,720nm,16.9s						
HHC				LR	LR		
	comp=Z,690nm,17.3s						
HHC				LR	LR		
	comp=Z,830nm,17.0s						
KMI	**Kunming**	**93.08**	**296**	P	**P**	**15 55 16.5**	**+0.2**
KMI				pmax	pmax		
	comp=Z,17nm,0.9s						
KMI				pmax	pmax		
	comp=Z,130nm,3.7s						
KMI				LR	LR		
	comp=Z,200nm,10.7s						
KMI				LR	LR		
	comp=Z,250nm,11.6s						
KMI				LR	LR		
	comp=Z,280nm,17.8s						
CM31	**Chiang Mai Arr**	**93.92**	**288**	P	**P**	**15 55 19.1**	**-0.9**
CM31				IAmb	IAmb	15 55 23.4	
	comp=Z,21nm,1.4s						
CMAR	**Chiang Mai Arr**	**93.92**	**288**	P	**P**	**15 55 21.1**	**+1.2**
	comp=Z,4.9nm,1.0s,baz=117,slow=2.9,SNR=32						
CMAR				LR	LR	16 39 17.5	
	comp=Z,53nm,18.0s,baz=138,slow=37						
CHTO	**Chiang Mai**	**94.05**	**289**	P	**P**	**15 55 20.6**	**0.0**
CHTO				IAmb	IAmb	15 55 23.6	
	comp=Z,21nm,1.4s						
CHTO	**Chiang Mai**	**94.05**	**289**	P	**P**	**15 55 20.6**	**0.0**
CHTO				pmax	pmax		
	comp=Z,21nm,1.5s						
INK	**Inuvik**	**94.23**	**14**	P	**P**	**15 55 21.0**	**+0.8**
INK				IAmb	IAmb	15 55 34.9	
	comp=Z,23nm,1.8s						
INK	**Inuvik**	**94.23**	**14**	P	**P**	**15 55 21.0**	**+0.8**
INK				pmax	pmax		
	comp=Z,23nm,1.8s						
YAK	**Yakutsk**	**94.38**	**337**	*i* P	**P**	**15 55 23.6**	**+2.6**
YAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
YKA	**Yellowknife Ar**	**95.83**	**24**	P	**P**	**15 55 30.2**	**+2.5**
	comp=Z,0.8nm,0.9s,baz=231,slow=4.2,SNR=7.9						
LZH	**Lanzhou**	**96.29**	**306**	*e*P	**P**	**15 55 33.0**	**+2.4**
LZH				pP	sP	15 55 39.4	0.0
LZH				sP	pwP	15 55 42.5	-1.6
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,130nm,4.6s						
C36M	**Paulatuk**	**97.29**	**16**	P	Pdif	15 55 38.7	+4.5
	baz=226						
SONM	**Songino Array**	**98.90**	**318**	LR	LR	16 39 46.4	
	comp=Z,79nm,18.1s,baz=76,slow=35						
ULM	**Lac du Bonnet**	**98.96**	**40**	LR	LR	16 36 29.1	
	comp=Z,427nm,19.1s,baz=260,slow=33						
TIXI	**Tiksi**	**100.61**	**344**	*i* P	**Pdif**	**15 55 51.7**	**+2.8**
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.0s						
TLY	**Talaya**	**101.93**	**321**	*i* P	**Pdif**	**15 55 54.7**	**-0.6**
TLY				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WMQ	**Urumqi**	**110.34**	**310**	*e*PKP	**PKiKP**	**16 00 34.0**	**0.0**
WMQ				AMB	AMB		
	comp=Z,130nm,5.5s						
WMQ				LR	LR		
	comp=Z,280nm,27.9s						
WMQ				LR	LR		
	comp=Z,480nm,24.1s						
MKAR	**Makanchi Array**	**114.53**	**313**	PKP	PKPdf	16 00 41.3	-0.5
	comp=Z,1.0nm,1.1s,baz=95,slow=1.8,SNR=3.5						
KSH	**Kashi**	**118.46**	**304**	PKP	**PKiKP**	**16 00 52.6**	**+2.8**
KSH				PP	**PP**	**16 02 14.0**	**+7.1**
KSH				PKS	**PKSdf**	**16 04 26.5**	**0.0**
KSH				SKKS		16 09 07.6	
KSH				AMB	AMB		
	comp=Z,320nm,5.6s						
KSH				LR	LR		
	comp=Z,210nm,13.7s						
KSH				LR	LR		
	comp=Z,200nm,10.1s						
KSH				LR	LR		
	comp=Z,310nm,12.6s						
BRVK	**Borovoye**	**122.23**	**320**	*c i*PKIKP	**PKPdf**	**16 00 55.8**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
BOSA	**Boshof**	**126.88**	**201**	PKP	**PKiKP**	**16 01 07.0**	**+0.2**
	comp=Z,2.6nm,0.9s,baz=139,slow=6.4,SNR=3.8						
ARU	**Arti**	**128.05**	**326**	PKP	**PKPdf**	**16 01 07.5**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=359,slow=0.3,SNR=3.9						
ARU	**Arti**	**128.05**	**326**	*i* PKIKP	**PKiKP**	**16 01 08.5**	**+0.5**
ARU						16 03 12.6	
ARU				SS	SS	16 20 25.7	+2.9
ARCES	**ARCESS Array B**	**130.45**	**351**	PKP	**PKiKP**	**16 01 14.7**	**+2.2**
	comp=Z,2.2nm,0.8s,baz=73,slow=4.2,SNR=7.6						
FINES	**FINESS Array B**	**137.64**	**346**	PKP	**PKiKP**	**16 01 28.7**	**+1.4**
	comp=Z,1.0nm,0.8s,baz=358,slow=4.2,SNR=3.7						
OBN	**Obninsk**	**139.29**	**333**	⇑*e*PKIKP	**PKPdf**	**16 01 28.9**	**+0.4**
OBN				*e*		16 04 28.5	
OBN				*i* PPP	PPP	16 07 25.5	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NOA	**NORSAR Array B**	**140.25**	**356**	PKP	**PKiKP**	**16 01 33.7**	**+1.0**
	comp=Z,0.8nm,0.9s,baz=83,slow=0.4,SNR=3.4						
KBZ	**Khabaz**	**142.19**	**315**	*i* PKIKP	**PKPdf**	**16 01 33.3**	**-0.8**
KIV	**Kislovodsk**	**142.24**	**315**	*i* PKIKP	**PKPdf**	**16 01 34.5**	**+0.2**
KIV				pmax	pmax		
	comp=Z,13nm,1.1s						
KIV				MLR	MLR		
	comp=Z,401nm,24.0s						
SUW	**Suwalki**	**144.93**	**342**		**PKPdf**	**16 01 39.0**	**+0.4**
SUW	**Suwalki**	**144.93**	**342**	PKIKP	**PKPdf**	**16 01 39.0**	**+0.4**
MUD	**Monsted U'grnd**	**144.94**	**357**	*i* P	**PKiKP**	**16 01 44.2**	**+1.9**
MUD	**Monsted U'grnd**	**144.94**	**357**	*e*PKIKP	**PKiKP**	**16 01 44.2**	**+1.9**
EKA	**Eskdalemuir Ar**	**145.45**	**9**	PKPbc	**PKPab**	**16 01 40.8**	**+1.1**
	comp=Z,1.4nm,0.7s,baz=1.7,slow=2.4,SNR=3.4						
AKASG	**Malin Array Be**	**145.55**	**334**	PKPbc	**PKPab**	**16 01 40.4**	**+0.2**
	comp=Z,6.6nm,0.7s,baz=38,slow=4.1,SNR=36						
AKBB	**Malin Array Si**	**145.55**	**334**		**PKPbc**	**16 01 39.9**	**0.0**
AKBB	**Malin Array Si**	**145.55**	**334**	PKIKP	**PKPbc**	**16 01 39.9**	**0.0**
BSD	**Bornholm Skovb**	**145.69**	**351**	*i* P	**PKiKP**	**16 01 45.8**	**+1.9**
	comp=Z,32nm,0.9s						
BSD	**Bornholm Skovb**	**145.69**	**351**	*e*PKIKP	**PKiKP**	**16 01 45.8**	**+1.9**
BSD				pmax	pmax		
	comp=Z,33nm,0.9s						
BSEG	**Bad Segeberg**	**147.37**	**355**	*e*PKPbc	**PKiKP**	**16 01 47.2**	**-0.2**
	baz=6.9,slow=2.3						
SORM	**Soroca**	**147.86**	**331**	⇑P	**PKPbc**	**16 01 47.6**	**+0.9**
LVV	**L'vov**	**148.26**	**338**	*e*PKP2	**PKPbc**	**16 01 48.0**	**+0.3**
CLZ	**Clausthal**	**149.45**	**355**	*e*PKPbc	**PKiKP**	**16 01 52.9**	**+1.1**
	baz=6.9,slow=2.3						
BUR08	**Bucovina Ar. S**	**149.59**	**334**	PKPdf	**PKPdf**	**16 01 46.6**	**-0.1**
BURAR	**Bucovina Array**	**149.60**	**334**	⇑P	**PKiKP**	**16 01 54.1**	**+1.7**
CLL	**Collm**	**149.67**	**351**	*e*PKPbc	**PKiKP**	**16 01 53.0**	**+0.8**
CLL				*i*		16 01 57.4	
	comp=Z,24nm,1.2s						
CLL	**Collm**	**149.67**	**351**	*e*PKPbc	**PKiKP**	**16 01 53.7**	**+1.4**
	baz=6.9,slow=2.3						
CLL	**Collm**	**149.67**	**351**	PKPdf	**PKPdf**	**16 01 46.2**	**-0.4**
CLL	**Collm**	**149.67**	**351**	*e*PKP2	**PKiKP**	**16 01 53.0**	**+0.8**
CLL				pmax	pmax		
	comp=Z,24nm,1.2s						
OSTC	**Ostas**	**149.83**	**347**	⇑*e*PKP	**PKiKP**	**16 01 53.4**	**+0.8**
OSTC				*e*PKPAB	**PKPab**	**16 01 57.3**	**+0.2**
CHVC	**Chvalec**	**149.83**	**347**	⇑*e*PKP	**PKiKP**	**16 01 53.2**	**+0.5**
CHVC				*e*x	x	16 01 57.0	
UZH	**Uzhgorod**	**149.87**	**338**	*e*PKP2	**PKPbc**	**16 01 52.1**	**+0.3**
UPC	**Upice**	**149.91**	**347**	⇑*e*PKP	**PKiKP**	**16 01 53.8**	**+1.0**
UPC				*e*PKPAB	**PKPab**	**16 01 57.4**	**0.0**
UPC	**Upice**	**149.91**	**347**	*e*PKP2	**PKiKP**	**16 01 53.8**	**+1.0**
BRG	**Berggiesshubel**	**149.95**	**350**	*e*PKP	**PKiKP**	**16 01 53.3**	**+0.5**
	comp=Z,14nm,1.3s						
BRG				*e*		16 02 00.4	
	comp=Z,20nm,1.3s						
BRG				*e*		16 02 06.4	
	comp=Z,15nm,1.1s						
BRG	**Berggiesshubel**	**149.95**	**350**	*e*PKPbc	**PKiKP**	**16 01 53.9**	**+1.0**
	baz=6.9,slow=2.3						
BRG	**Berggiesshubel**	**149.95**	**350**	*e*PKP2	**PKiKP**	**16 01 53.3**	**+0.5**
BRG				pmax	pmax		
	comp=Z,14nm,1.3s						
BRG				pmax	pmax		
	comp=Z,20nm,1.3s						
BRG				pmax	pmax		
	comp=Z,15nm,1.1s						
FBE	**Freiberg**	**150.00**	**351**	*e*PKPbc	**PKiKP**	**16 01 54.0**	**+1.1**
	baz=6.9,slow=2.3						
DPC	**Dobruska-Polom**	**150.00**	**347**	⇑*e*PKP	**PKiKP**	**16 01 54.2**	**+1.2**
DPC				*e*PKPAB	**PKPab**	**16 01 58.1**	**+0.3**
DPC	**Dobruska-Polom**	**150.00**	**347**	*e*PKP2	**PKiKP**	**16 01 54.2**	**+1.2**
CFR	**Carcaliu**	**150.11**	**328**	⇑P	**PKiKP**	**16 01 53.9**	**+0.6**
KRLC	**Kraliky**	**150.16**	**346**	⇑*e*PKP	**PKPbc**	**16 01 52.6**	**+0.1**
KRLC	**Kraliky**	**150.16**	**346**	*e*PKIKP	**PKPbc**	**16 01 52.6**	**+0.1**
PVCC	**Panska Ves**	**150.17**	**349**	⇑*e*PKP	**PKiKP**	**16 01 54.0**	**+0.7**
PVCC				*e*PKPAB	**PKPab**	**16 01 58.5**	**0.0**
PVCC	**Panska Ves**	**150.17**	**349**	*e*PKIKP	**PKiKP**	**16 01 54.0**	**+0.7**
PVCC				*e*		16 01 58.5	
BR131	**Keskin Array S**	**150.18**	**314**	PKPdf	**PKPdf**	**16 01 48.2**	**+0.2**
BR131	**Keskin Array S**	**150.18**	**314**	PKHKP	PKPpre	16 01 48.2	
BRTR	**Keskin Array B**	**150.18**	**314**	PKPbc	**PKiKP**	**16 01 54.2**	**+0.4**
	comp=Z,4.4nm,1.0s,baz=158,slow=3.9,SNR=13						
TRPA	**Tarpa**	**150.21**	**337**	⇑P	**PKiKP**	**16 01 54.3**	**+0.9**
MORC	**Moravsky Berou**	**150.25**	**345**	⇑P	**PKiKP**	**16 01 54.0**	**+0.4**
MORC	**Moravsky Berou**	**150.25**	**345**	*e*PKP	**PKiKP**	**16 01 54.3**	**+0.7**
VRI	**Vrincioaia**	**150.29**	**330**	⇑P	**PKPab**	**16 01 57.0**	**-2.1**
ASF	**Jabal al Asfar**	**150.49**	**298**	PKPbc	**PKiKP**	**16 01 55.3**	**+0.6**
	comp=Z,1.7nm,0.6s,baz=82,slow=4.8,SNR=4.3						
MOX	**Moxa**	**150.50**	**353**	*e*PKPbc	**PKiKP**	**16 01 55.3**	**+1.2**
	baz=6.9,slow=2.3						
TANN	**Tannenbergstha**	**150.62**	**352**	*e*PKPbc	**PKiKP**	**16 01 55.7**	**+1.3**
	baz=6.9,slow=2.3						
ANTO	**Ankara**	**150.66**	**315**	⇑P	**PKiKP**	**16 01 55.3**	**+0.5**
ANTO	**Ankara**	**150.66**	**315**	PKPdf	**PKPdf**	**16 01 47.9**	**-0.7**
ANTO				PKPab	**PKPab**	**16 01 59.5**	**-1.6**
ANTO	**Ankara**	**150.66**	**315**	PKIKP	**PKPdf**	**16 01 47.9**	**-0.7**
ANTO						16 01 59.5	
GUNZ	**Gunzen**	**150.69**	**352**	*e*PKPbc	**PKiKP**	**16 01 56.0**	**+1.6**
	baz=6.9,slow=2.3						
PRU	**Pruhonice**	**150.70**	**349**	⇑*e*PKP	**PKiKP**	**16 01 55.7**	**+1.3**
PRU				*e*PKPAB	**pPKPbc**	**16 01 59.9**	**-0.5**
PRU	**Pruhonice**	**150.70**	**349**	*e*PKIKP	**PKiKP**	**16 01 55.7**	**+1.3**
PRU				*e*		16 01 59.9	
GOPC	**GO Pecny, Ondr**	**150.72**	**348**	⇑*e*PKP	**PKiKP**	**16 01 55.2**	**+0.7**
GOPC	**GO Pecny, Ondr**	**150.72**	**348**	*e*PKIKP	**PKiKP**	**16 01 55.2**	**+0.7**
WERN	**Wernitzgruen**	**150.75**	**352**	*e*PKPbc	**PKiKP**	**16 01 56.3**	**+1.7**
	baz=6.9,slow=2.3						
NKC	**Novy Kostel**	**150.80**	**351**	*e*PKPAB	**PKPab**	**16 02 03.1**	**+2.0**
VRAC	**Vranov**	**150.92**	**346**	⇑P	**PKiKP**	**16 01 57.1**	**+2.2**
VRAC	**Vranov**	**150.92**	**346**	*e*PKP	**PKiKP**	**16 01 55.6**	**+0.7**
MLR	**Muntele Rosu**	**150.94**	**330**	⇑P	**PKiKP**	**16 01 56.6**	**+1.3**
JAVC	**Velka Javorina**	**151.07**	**344**	*e*PKP	**PKiKP**	**16 01 57.5**	**+2.2**
MANZ	**Manzenberg**	**151.09**	**352**	*e*PKPbc	**PKiKP**	**16 01 55.8**	**+0.5**
	baz=6.9,slow=2.3						
PBCC	**Pribram**	**151.09**	**349**	⇑*e*PKP	**PKiKP**	**16 01 55.9**	**+0.6**
BMRD	**Maredsous**	**151.16**	**2**	x	x	16 01 56.1	
BMRD				sPKPab	**PKPab**	**16 02 04.3**	**+1.8**
TREC	**Trest**	**151.17**	**347**	⇑*e*PKP	**PKiKP**	**16 01 56.6**	**+1.1**
TREC				*e*PKPAB	**PKPab**	**16 02 03.0**	**+0.3**
TREC	**Trest**	**151.17**	**347**	*e*PKIKP	**PKiKP**	**16 01 56.6**	**+1.1**
TREC				*e*		16 02 03.0	
KRUC	**Moravsky**	**151.19**	**346**	*e*PKP	**PKiKP**	**16 01 56.6**	**+1.1**
DRGR		**151.27**	**336**	⇑P	**PKiKP**	**16 01 56.6**	**+0.8**
PSZ	**Piszkesteto**	**151.28**	**340**	⇑P	**PKPab**	**16 02 05.2**	**+1.9**
ROTZ	**Rotzenmuhle**	**151.29**	**352**	*e*PKPbc	**PKiKP**	**16 01 57.2**	**+1.5**
	baz=6.9,slow=2.3						
DOU	**Dourbes**	**151.37**	**2**	x	x	16 01 56.4	
DOU				sPKPab	**PKPab**	**16 02 04.9**	**+1.5**

MDUB	**Mudurnu**	**151.38**	**317**	PKPdf	**PKPdf**	**16 01 49.4**	**-0.3**
VOIR		**151.38**	**331**	⇑P	**PKiKP**	**16 01 58.2**	**+2.1**
MMAI	**Mount Meron Ar**	**151.49**	**300**	PKPbc	**PKiKP**	**16 01 57.1**	**+0.4**
	comp=Z,5.7nm,0.9s,baz=64,slow=5.7,SNR=4.9						
ARR	**Arges**	**151.62**	**332**	⇑P	**PKiKP**	**16 01 58.9**	**+2.3**
KHC	**Kasperske Hory**	**151.69**	**349**	⇑ePKP	**PKiKP**	**16 01 57.9**	**+1.3**
KHC				ePKPAB	**PKPab**	**16 02 09.2**	**+4.3**
KHC	**Kasperske Hory**	**151.69**	**349**	ePKIKP	**PKiKP**	**16 01 57.9**	**+1.3**
GEC2	**GERESS Array S**	**151.95**	**349**	ePKPbc	**PKiKP**	**16 01 58.7**	**+1.5**
	baz=6.9,slow=2.3						
GERES	**GERESS Array B**	**151.95**	**349**	PKPbc	**PKiKP**	**16 01 58.5**	**+1.3**
	comp=Z,2.3nm,1.0s,baz=64,slow=3.1,SNR=11						
SIRR	**Siria**	**152.11**	**336**	⇑P	**PKiKP**	**16 01 58.5**	**+1.1**
CONA	**Conrad Observa**	**152.38**	**346**	i pPKPdf	**PKPdf**	**16 01 52.9**	**+1.9**
	comp=Z,10nm,1.1s						
GZR	**Gura Zlata**	**152.39**	**334**	⇑P	**PKiKP**	**16 01 58.2**	**+0.1**
BZS	**Buzias**	**152.67**	**336**	⇑P	**PKiKP**	**16 01 59.7**	**+1.1**
MOA	**Molln**	**152.80**	**348**	i pPKPbc	**PKiKP**	**16 01 59.6**	**+0.7**
	comp=Z,8.6nm,1.4s						
FUR	**Furstenfeldbru**	**152.98**	**352**	ePKPbc	**PKiKP**	**16 02 00.3**	**+1.1**
	baz=6.9,slow=2.3						
ARSA	**Arzberg**	**153.10**	**346**	i sPKPdf	**PKPbc**	**16 01 56.4**	**-3.0**
	comp=Z,0.3nm,0.3s						
RJOB	**Jochberg**	**153.18**	**350**	ePKPbc	**PKiKP**	**16 02 01.1**	**+1.4**
	baz=6.9,slow=2.3						
UBR	**Ueberruh**	**153.59**	**354**	ePKPbc	**PKiKP**	**16 02 02.5**	**+1.9**
	baz=6.9,slow=2.3						
KBA	**Koelnbreinsper**	**153.72**	**349**	i sPKPdf	**PKPbc**	**16 01 57.1**	**-3.8**
	comp=Z,7.4nm,1.2s						
SOKA	**Soboth**	**153.75**	**346**	i sPKiKP	**PKiKP**	**16 02 05.9**	**+4.9**
	comp=Z,10nm,1.6s						
WATA	**Walderalm**	**153.75**	**351**	i pPKPbc	**PKiKP**	**16 02 02.0**	**+1.0**
	comp=Z,7.9nm,1.5s						
MOTA	**Moosalm**	**153.81**	**352**	i sPKiKP	**PKiKP**	**16 02 07.0**	**+5.8**
	comp=Z,12nm,1.5s						
WTTA	**Wattenberg**	**153.81**	**351**	i pPKPbc	**PKiKP**	**16 02 03.2**	**+2.0**
	comp=Z,14nm,1.7s						
DAVA	**Damuels**	**154.00**	**354**	i pPKPdf	**PKPdf**	**16 01 54.6**	**+1.2**
	comp=Z,14nm,1.4s						
FETA	**Feichten**	**154.17**	**353**	i PKPbc	**PKPbc**	**16 01 59.2**	**-2.7**
	comp=Z,7.3nm,1.2s						
ABTA	**Abfaltersbach**	**154.18**	**350**	i sPKiKP	**PKiKP**	**16 02 06.1**	**+4.2**
	comp=Z,7.6nm,1.0s						
VTS	**Vitosha**	**154.39**	**330**	⇑P	**PKiKP**	**16 02 08.6**	**+6.1**
TORD	**Torodi Ar. Bea**	**170.81**	**153**	PKP	**PKPdf**	**16 02 11.0**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=297,slow=2.3,SNR=3.6						
TORD				PKPab	**PKPab**	**16 03 29.9**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=318,slow=1.7,SNR=2.9						

*IDC **02** 15:44:58.5±1.6, 0°.86S×120°.72E, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.5/45, mbtmp3.7/3, Error ellipse: s-maj=403.2km s-min=25.5km az=59.0*
*DJA **02** 15:45:00.8±1.1, 1°S±2°×12°0E±°, h16^{km}±9^{km}, M4.0/10, mb4.2/2, MLv3.9/10*
*NEIC **02** 15:45:05.4±0.3, 1°.2S±0°.2×120°.4E±0°.2, h55^{km}±13^{km}, mb4.6/4, Error ellipse: s-maj=32.9km s-min=20.5km az=213.0*
ISC 02 15:45:01.3±0.9**, 0°.96S**±0°.05×**120°.16E**±0°.05**, h28**^{km}**, n19, σ1.^{s}65**/23**, mb3.7**/3**, 1D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPSI	**Mapaga**	**1.31**	**348**	P	**Pn**	**15 45 23.9**	**+0.1**
MPSI				S	**Sb**	**15 45 43.7**	**+1.9**
APSI	**Ampana**	**1.48**	**88**	P	**Pb**	**15 45 27.2**	**-1.1**
APSI				S	**Sb**	**15 45 49.4**	**+2.7**
TTSI	**Tana Toraja**	**2.10**	**189**	P	**Pn**	**15 45 34.3**	**-0.4**
TTSI				S	**Sn**	**15 46 01.3**	**+1.4**
MRSI	**Marisa**	**2.28**	**51**	P	**Pn**	**15 45 35.1**	**-2.0**
LUWI	**Luwuk**	**2.61**	**92**	P	**Pn**	**15 45 42.7**	**+1.0**
LUWI				S	**Sn**	**15 46 14.2**	**+1.8**
LUWI	**Luwuk**	**2.61**	**92**	Pn	**Pn**	**15 45 42.6**	**+1.0**
SPSI	**Sidrap Palu**	**3.01**	**188**	P	**Pn**	**15 45 47.9**	**+0.7**
BNSI	**Bone**	**3.42**	**181**	P	**Pn**	**15 45 54.0**	**+1.2**
BKSI	**Bulukumba**	**4.33**	**181**	P	**Pn**	**15 46 05.3**	**-0.1**
SANI	**Sanana**	**5.92**	**101**	P	**Pn**	**15 46 26.2**	**-1.0**
	0.1nm9.6nm,0.4s						
LBMI	**Labuha**	**7.34**	**88**	P	**Pn**	**15 46 46.8**	**0.0**
WB0	**Warramunga Arr**	**23.31**	**144**	P	**P**	**15 50 05.7**	**-1.5**
WRAB	**Tennant Creek**	**23.42**	**145**	P	**P**	**15 50 07.1**	**-1.2**
WRA	**Warramunga Arr**	**23.42**	**145**	P	**P**	**15 50 07.0**	**-1.4**
	1.6nm,0.7s,baz=324,slow=11,SNR=22						
WB2	**Warramunga Arr**	**23.43**	**145**	P	**P**	**15 50 07.2**	**-1.2**
WR0	**Warramunga Arr**	**23.55**	**144**	P	**P**	**15 50 07.9**	**-1.7**
ASAR	**Alice Springs**	**26.21**	**150**	P	**P**	**15 50 33.6**	**-0.4**
	2.2nm,1.1s,baz=325,slow=8.2,SNR=22						
MKAR	**Makanchi Array**	**57.98**	**330**	P	**P**	**15 54 54.3**	**+2.8**
	0.7nm,0.9s,baz=144,slow=5.4,SNR=5.5						
SYO	**Syowa Base**	**85.73**	**201**	⇓eP	**P**	**15 57 34.2**	**-3.2**

*RSNC **02** 15:48:03.5±1.0, 4°.12N×75°.93W, h172^{km}±4^{km}, ML3.3, Mw3.7*
*IDC **02** 15:48:04.4±1.6, 4°.18N×75°.76W, h196^{km}±14^{km}, mb3.0/5, mb1 3.3/6, mb1mx3.1/36, mbtmp3.6/6, Error ellipse: s-maj=32.0km s-min=18.1km az=81.0*
ISC 02 15:48:02.3±0.8**, 4°.12N**±0°.03×**75°.92W**±0°.04**, h180**^{km}±6^{km}**, n43, σ1.^{s}03**/65**, mb3.3**/5**, 2C-7D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOTC	**Yotoco, Valle**	**0.45**	**253**	⇑iP	**Pn**	**15 48 26.7**	**-0.3**
YOTC				eS	**Sn**	**15 48 44.4**	**-1.6**
YOTC				i		15 48 49.6	
	comp=Z,506nm,0.3s						
ORTC	**Ortega, Tolima**	**0.70**	**107**	⇓iP	**Pn**	**15 48 28.1**	**0.0**
ORTC				eS	**Sn**	**15 48 46.9**	**-1.1**
PLMC	**San Jos del P**	**0.86**	**335**	eP	**Pn**	**15 48 30.0**	**+0.8**
PLMC				eS	**Sn**	**15 48 50.4**	**+0.4**
GUY2C	**Guyana, Caldas**	**1.23**	**27**	eP	**Pn**	**15 48 32.8**	**+0.4**
GUY2C				eS	**Sn**	**15 48 55.9**	**+0.2**
GUY2C				i		15 48 59.4	
	comp=Z,226nm,0.5s						
PIZC	**Pizarro, Choco**	**1.67**	**300**	eP	**Pn**	**15 48 37.6**	**+1.7**
PIZC				eS	**Sn**	**15 49 03.1**	**+1.2**
PIZC				i		15 49 10.2	
	comp=Z,296nm,0.3s						
CBOC	**Ciudad Bolivar**	**1.74**	**357**	⇓iP	**Pn**	**15 48 37.3**	**+0.5**
CBOC				eS	**Sn**	**15 49 02.3**	**-1.3**
CBOC				i		15 49 11.5	
	comp=Z,128nm,0.5s						
POPC	**Popayan, Colom**	**1.74**	**206**	⇑iP	**Pn**	**15 48 36.8**	**-0.2**
POPC				eS	**Sn**	**15 49 01.4**	**-2.4**
POPC				i		15 49 04.7	
	comp=Z,177nm,0.5s						
ROSC	**El Rosal**	**1.75**	**66**	P	**Pn**	**15 48 38.5**	**+1.3**
	comp=Z,19nm,0.3s,baz=156,slow=6.7,SNR=20						
ROSC				S	**Sn**	**15 49 05.8**	**+1.8**
	comp=Z,6.2nm,0.3s,baz=238,slow=23,SNR=10						
ROSC	**El Rosal**	**1.75**	**66**	⇓eP	**Pn**	**15 48 38.4**	**+1.3**
NORC	**Norcasia**	**1.77**	**36**	⇓iP	**Pn**	**15 48 37.5**	**+0.4**
NORC				i		15 48 38.1	
	comp=Z,193nm,0.4s						
PCON	**Cinco Dias**	**1.84**	**195**	eP	**Pn**	**15 48 39.6**	**+1.3**
PCON				eS	**Sn**	**15 49 07.1**	**+0.8**
PCON				i		15 49 14.1	
	comp=Z,130nm,0.6s						
CVER	**Cruz Verde, Cu**	**1.88**	**78**	eP	**Pn**	**15 48 39.6**	**+1.0**
GARC	**Garzon, Huila**	**1.96**	**168**	eP	**Pn**	**15 48 39.3**	**0.0**
SOTA	**Rioblanco**	**2.09**	**199**	eP	**Pn**	**15 48 41.4**	**+0.5**
SOTA				eS	**Sn**	**15 49 10.6**	**-0.3**
SOTA				i		15 49 15.4	
	comp=Z,252nm,0.5s						
HELC	**Santa Helena**	**2.09**	**11**	eP	**Pn**	**15 48 41.1**	**+0.3**
HELC				eS	**Sn**	**15 49 10.0**	**-0.7**
HELC				i		15 49 14.7	
	comp=Z,72nm,0.4s						
CHIC	**Chingaza**	**2.24**	**77**	eP	**Pn**	**15 48 42.9**	**+0.5**
SPBC	**San Pablo de B**	**2.39**	**50**	⇓eP	**Pn**	**15 48 44.3**	**+0.5**
BBAC	**Balboa, Cauca**	**2.47**	**213**	eP	**Pn**	**15 48 45.1**	**+0.1**
BBAC				eS	**Sn**	**15 49 16.1**	**-2.0**
BBAC				i		15 49 19.5	
	comp=Z,280nm,0.3s						
GR1C	**Gorgona, Isla**	**2.50**	**244**	eP	**Pn**	**15 48 44.5**	**-0.5**
GR1C				eS	**Sn**	**15 49 16.0**	**-2.4**
FLOC	**Florencia**	**2.53**	**174**	eP	**Pn**	**15 48 45.8**	**+0.3**
FLOC				eS	**Sn**	**15 49 19.0**	**-0.1**
SOLC	**Bahia Solano**	**2.57**	**325**	⇓iP	**Pn**	**15 48 47.0**	**+1.2**
SOLC				eS	**Sn**	**15 49 19.4**	**-0.3**
SOLC				i		15 49 21.7	
	comp=Z,73nm,0.3s						
CRUC	**La Cruz**	**2.74**	**202**	eP	**Pn**	**15 48 49.1**	**+0.9**
CRUC				eS	**Sn**	**15 49 24.1**	**+0.2**
CRUC				i		15 49 30.7	
	comp=Z,114nm,0.5s						
PTBC	**PUERTO BERRIO,**	**2.81**	**31**	eP	**Pn**	**15 48 48.5**	**-0.2**
PTBC				eS	**Sn**	**15 49 23.1**	**-1.8**
PTBC				i		15 49 25.0	
	comp=Z,57nm,0.3s						
DBBC	**Dabeiba**	**2.89**	**354**	eP	**Pn**	**15 48 50.6**	**+0.9**
DBBC				eS	**Sn**	**15 49 25.7**	**-1.2**
DBBC				i		15 49 37.8	
	comp=Z,50nm,0.6s						
RUSC	**La Rusia**	**3.33**	**58**	eP	**Pn**	**15 48 56.4**	**+0.9**
RUSC				eS	**Sn**	**15 49 36.5**	**-0.3**
ZARC	**Zaragoza, Cauc**	**3.51**	**17**	⇓eP	**Pn**	**15 48 57.7**	**+0.4**
ZARC				eS	**Sn**	**15 49 39.0**	**-1.3**
UREC	**San Jos de Ur**	**3.63**	**6**	eP	**Pn**	**15 48 59.2**	**+0.5**
BARC	**Barichara**	**3.67**	**48**	eP	**Pn**	**15 49 00.2**	**+0.8**
BARC				eS	**Sn**	**15 49 41.8**	**-2.4**
BARC				i		15 49 47.1	
	comp=Z,121nm,0.5s						
BRRC	**Barranca, Sant**	**3.69**	**36**	eP	**Pn**	**15 48 59.2**	**-0.4**
BRRC				eS	**Sn**	**15 49 42.5**	**-1.8**
BRRC				i		15 49 48.7	
	comp=Z,39nm,0.5s						
PAMC	**Pamplona, Colo**	**4.53**	**45**	eP	**Pn**	**15 49 10.9**	**+0.3**
OTAV	**Otavalo**	**4.61**	**213**	eP	**Pn**	**15 49 11.8**	**+0.1**
OCAC	**Ocana**	**4.84**	**32**	eP	**Pn**	**15 49 14.5**	**+0.1**
SMLC	**San Martn de**	**5.00**	**21**	eP	**Pn**	**15 49 16.0**	**-0.3**
SJCC	**San Jacinto, C**	**5.79**	**7**	eP	**Pn**	**15 49 27.5**	**+0.9**
CODC	**Agustn Codazz**	**6.28**	**23**	eP	**Pn**	**15 49 33.3**	**+0.3**
SDV	**Santo Domingo**	**7.07**	**48**	P	**Pn**	**15 49 44.0**	**+0.4**
	comp=Z,2.5nm,0.3s,baz=219,slow=3.2,SNR=18						
LPAZ	**La Paz**	**21.69**	**159**	P	**P**	**15 52 40.8**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=340,slow=4.0,SNR=4.6						
PLCA	**Paso Flores**	**44.90**	**174**	P	**P**	**15 55 59.8**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=343,slow=9.2,SNR=3.5						
YKA	**Yellowknife Ar**	**64.87**	**341**	P	**P**	**15 58 22.0**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=134,slow=6.1,SNR=3.8						
TORD	**Torodi Ar. Bea**	**77.02**	**78**	P	**P**	**15 59 35.3**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=264,slow=5.6,SNR=2.9						
ILAR	**Eielson Array**	**78.24**	**336**	P	**P**	**15 59 42.3**	**+0.5**
	comp=Z,0.2nm,0.9s,baz=98,slow=6.5,SNR=3.4						
ASAR	**Alice Springs**	**145.28**	**233**	PKPbc	**PKPab**	**16 07 19.2**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=118,slow=3.7,SNR=14						
WRA	**Warramunga Arr**	**146.59**	**239**	PKPbc	**PKPab**	**16 07 23.9**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=110,slow=3.3,SNR=5.9						

*UCR **02** 15:55:29.9±1.0, 12°.57N×87°.85W, h63^{km}±9^{km}, ML3.6*
*INET **02** 15:55:29.3, 12°.49N×87°.80W, h63^{km}, ML3.8*
*SNET **02** 15:55:30.0±0.9, 12°.57N×87°.86W, h61^{km}±9^{km}, ML3.6*
ISC 02 15:55:29.9±3.2**, 12°.5N**±0°.2×**87°.83W**±0°.06**, h60**^{km}±17^{km}**, n33, σ0.^{s}44**/61**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**0.51**	**31**	eP	**Pn**	**15 55 42.2**	**+0.1**
CNCH	**Conchagua**	**0.74**	**359**	eP	**Pn**	**15 55 44.3**	**-0.5**
CNCH				eS	**Sn**	**15 55 56.7**	**+1.1**
CNCH	**Conchagua**	**0.74**	**359**	eP	**Pn**	**15 55 44.3**	**-0.5**
CNCH				eS	**Sn**	**15 55 56.7**	**+1.1**
LCND	**La Caada**	**0.77**	**355**	eP	**Pn**	**15 55 44.5**	**-0.5**
LCND				eS	**Sn**	**15 55 56.4**	**+0.3**
LCND				IAML		15 55 59.5	
	comp=Z,2µm,0.2s						
LCND	**La Caada**	**0.77**	**355**	eP	**Pn**	**15 55 44.5**	**-0.5**
LCND				eS	**Sn**	**15 55 56.4**	**+0.3**
LCND				IAML		15 55 59.5	
	comp=Z,2µm,0.2s						
JUCU	**Jucuar¡n**	**0.82**	**330**	eP	**Pn**	**15 55 44.9**	**-0.8**
JUCU				eS	**Sn**	**15 55 57.4**	**0.0**
JUCU				IAML		15 55 59.9	
	comp=Z,3µm,0.4s						
JUCU	**Jucuar¡n**	**0.82**	**330**	eP	**Pn**	**15 55 44.9**	**-0.8**
JUCU				eS	**Sn**	**15 55 57.4**	**0.0**
JUCU				IAML		15 55 59.9	
	comp=Z,3µm,0.4s						
BLLM	**Bellamira**	**0.99**	**336**	eP	**Pn**	**15 55 47.8**	**-0.1**
BLLM				eS	**Sn**	**15 56 01.5**	**+0.4**
BLLM	**Bellamira**	**0.99**	**336**	eP	**Pn**	**15 55 47.8**	**-0.1**
BLLM				eS	**Sn**	**15 56 01.5**	**+0.4**
LCY	**Lacayo**	**0.99**	**333**	eP	**Pn**	**15 55 48.0**	**0.0**
LCY				eS	**Sn**	**15 56 01.5**	**+0.2**
LCY	**Lacayo**	**0.99**	**333**	eP	**Pn**	**15 55 48.0**	**0.0**
LCY				eS	**Sn**	**15 56 01.5**	**+0.2**
PACA	**Pacayal**	**1.05**	**333**	eP	**Pn**	**15 55 48.4**	**-0.2**
PACA				eS	**Sn**	**15 56 02.7**	**+0.1**
PACA	**Pacayal**	**1.05**	**333**	eP	**Pn**	**15 55 48.4**	**-0.2**
PACA				eS	**Sn**	**15 56 02.7**	**+0.1**
ALJI	**Alcalda de J**	**1.07**	**317**	eP	**Pn**	**15 55 48.5**	**-0.3**
ALJI				eS	**Sn**	**15 56 02.0**	**-0.9**
ALJI	**Alcalda de J**	**1.07**	**317**	eP	**Pn**	**15 55 48.5**	**-0.3**
ALJI				eS	**Sn**	**15 56 02.0**	**-0.9**
TECA	**Tecapa**	**1.16**	**325**	eP	**Pn**	**15 55 49.9**	**-0.3**
TECA				eS	**Sn**	**15 56 05.2**	**-0.1**
TECA	**Tecapa**	**1.16**	**325**	eP	**Pn**	**15 55 49.9**	**-0.3**
TECA				eS	**Sn**	**15 56 05.2**	**-0.1**
COEB	**Comit de Eme**	**1.18**	**324**	eP	**Pn**	**15 55 50.3**	**-0.1**
COEB				eS	**Sn**	**15 56 06.3**	**+0.7**
COEB				IAML		15 56 08.5	
	comp=Z,1µm,0.2s						
COEB	**Comit de Eme**	**1.18**	**324**	eP	**Pn**	**15 55 50.3**	**-0.1**
COEB				eS	**Sn**	**15 56 06.3**	**+0.7**
COEB				IAML		15 56 08.5	
	comp=Z,1µm,0.2s						
FAGO	**Alcalda de S**	**1.19**	**347**	eP	**Pn**	**15 55 49.8**	**-0.6**
FAGO				eS	**Sn**	**15 56 06.1**	**+0.5**
FAGO				IAML		15 56 08.2	
	comp=Z,442nm,0.3s						
FAGO	**Alcalda de S**	**1.19**	**347**	eP	**Pn**	**15 55 49.8**	**-0.6**
FAGO				eS	**Sn**	**15 56 06.1**	**+0.5**
FAGO				IAML		15 56 08.2	
	comp=Z,442nm,0.3s						
COEG	**Centro de Oper**	**1.49**	**317**	eP	**Pn**	**15 55 54.4**	**-0.1**
COEG				eS	**Sn**	**15 56 12.9**	**-0.1**
COEG				IAML		15 56 17.1	
	comp=Z,1µm,0.3s						
COEG	**Centro de Oper**	**1.49**	**317**	eP	**Pn**	**15 55 54.4**	**-0.1**
COEG				eS	**Sn**	**15 56 12.9**	**-0.1**
COEG				IAML		15 56 17.1	
	comp=Z,1µm,0.3s						
PAVA	**Las Pavas**	**1.59**	**317**	eP	**Pn**	**15 55 55.8**	**-0.2**
PAVA	**Las Pavas**	**1.59**	**317**	eP	**Pn**	**15 55 55.8**	**-0.2**
TGUH	**Tegucigalpa,Un**	**1.61**	**20**	eP	**Pn**	**15 55 56.0**	**-0.1**
TGUH				eS	**Sn**	**15 56 15.6**	**-0.4**
TGUH	**Tegucigalpa,Un**	**1.61**	**20**	eP	**Pn**	**15 55 56.0**	**-0.1**
TGUH				eS	**Sn**	**15 56 15.6**	**-0.4**
LFRS	**El Faro**	**1.62**	**312**	eP	**Pn**	**15 55 56.1**	**-0.1**
LFRS				eS	**Sn**	**15 56 16.4**	**+0.2**
LFU	**La Fuente**	**1.74**	**314**	eP	**Pn**	**15 55 58.3**	**+0.4**
LFU				eS	**Sn**	**15 56 19.6**	**+0.5**
LFU	**La Fuente**	**1.74**	**314**	eP	**Pn**	**15 55 58.3**	**+0.4**
LFU				eS	**Sn**	**15 56 19.6**	**+0.5**
BOQS	**Boqueron**	**1.85**	**310**	eP	**Pn**	**15 55 59.5**	**0.0**
BOQS				eS	**Sn**	**15 56 22.6**	**+0.5**
MTO3	**Montecristo**	**2.38**	**321**	eP	**Pn**	**15 56 06.8**	**+0.1**
MTO3	**Montecristo**	**2.38**	**321**	eP	**Pn**	**15 56 06.8**	**+0.1**

*NEIC **02** 15:58:19.6±1.3, 50°.99N±0°.04×176°.04W±0°.06, h31^{km}±7^{km}, Error ellipse: s-maj=6.2km s-min=4.4km az=49.0*
*AEIC **02** 15:58:20.0±1.4, 51°.04N±0°.08×176°.05W±0°.05, h43^{km}±8^{km}, ML3.1/19, Error ellipse: s-maj=11.4km s-min=4.9km az=177.0*
*IDC **02** 15:58:25.8±8.4, 51°.67N×176°.22W, h65^{km}±71^{km}, mb2.8/3, mb1 3.4/5, mb1mx3.0/40, mbtmp3.5/5, ML3.5/2, Error ellipse: s-maj=90.0km s-min=25.9km az=180.0*
ISC 02 15:58:18.0±1.2**, 50°.94N**±0°.10×**176°.03W**±0°.04**, h28**^{km}**, n35, σ1.^{s}00**/39**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**1.03**	**337**		**Pb**	**15 58 36.7**	**-0.5**
ADAG	**Mount Adagdak**	**1.10**	**341**		**Pb**	**15 58 38.4**	**0.0**
GSMY	**Great Sitkin M**	**1.11**	**359**		**Pb**	**15 58 38.4**	**-0.1**
KIMD	**Kanaga Island**	**1.12**	**318**		**Pb**	**15 58 38.0**	**-0.7**
KIMD					**Sb**	**15 58 53.3**	**+0.5**
GSTD	**Great Sitkin T**	**1.12**	**356**		**Pb**	**15 58 38.6**	**-0.2**
GSTD					**Sb**	**15 58 53.2**	**+0.2**
GSTR	**Great Sitkin T**	**1.16**	**359**		**Pb**	**15 58 39.4**	**0.0**
KIKV	**Kanaga Island**	**1.18**	**323**		**Pb**	**15 58 39.3**	**-0.4**
KICM	**Kanaga Island**	**1.22**	**324**		**Pb**	**15 58 40.0**	**-0.5**
TAPA	**Tanaga Point A**	**1.42**	**309**		**Pb**	**15 58 42.6**	**-1.2**
TASE	**Tanaga Southea**	**1.55**	**306**		**Pb**	**15 58 45.1**	**-0.9**
TAFP	**Tanaga Falls P**	**1.56**	**309**		**Pb**	**15 58 44.8**	**-1.3**
TAFP					**Sb**	**15 59 04.1**	**-1.3**
ATKA	**Atka Island**	**1.71**	**41**		**Pb**	**15 58 46.9**	**-1.8**
ATKA					**Sb**	**15 59 07.3**	**-2.3**
KOFP	**Korovin Flat P**	**1.80**	**41**		**Pb**	**15 58 48.9**	**-1.4**
GALAA	**Gareloi Lava P**	**1.91**	**297**		**Pb**	**15 58 50.6**	**-1.4**
KDAK	**Kodiak Island**	**15.23**	**54**	P	**Pn**	**16 01 51.1**	**+0.2**
	0.5nm,0.3s,baz=294,slow=5.4,SNR=11						
PETK	**Petropavlovsk-**	**16.29**	**288**	P	**P**	**16 02 06.9**	**-0.4**
	0.4nm,0.3s,baz=99,slow=16,SNR=6.7						
CNPM	**China Poot**	**16.46**	**49**	Pn	**Pn**	**16 02 06.3**	**-0.3**
BRLK	**Bradley Lake**	**16.71**	**48**	Pn	**Pn**	**16 02 09.2**	**-0.7**
GHO	**Glory Hole Cre**	**18.37**	**43**	P	**Pn**	**16 02 31.0**	**+0.6**
KNK	**Knik Glacier**	**18.43**	**45**	P	**Pn**	**16 02 31.8**	**+0.7**
GLI	**Glacier Island**	**18.86**	**47**	P	**P**	**16 02 35.2**	**-0.4**
HIN	**Hinchinbrook I**	**19.00**	**49**	P	**Pn**	**16 02 37.9**	**-0.1**
SCM	**Sheep Creek Mo**	**19.09**	**44**	P	**Pn**	**16 02 39.4**	**+0.3**
FID	**Port Fidalgo**	**19.11**	**48**	P	**P**	**16 02 37.7**	**-0.6**
RND	**Reindeer**	**19.12**	**39**	P	**Pn**	**16 02 39.3**	**-0.1**
MCK	**McKinley**	**19.24**	**38**	P	**Pn**	**16 02 40.4**	**-0.5**
MLY	**Manley**	**19.27**	**33**	P	**Pn**	**16 02 40.3**	**-0.9**
DHY	**Denali Highway**	**19.57**	**41**	P	**P**	**16 02 43.8**	**+0.4**
WRH	**Wood River Hil**	**19.93**	**37**	P	**P**	**16 02 47.2**	**0.0**
CCB	**Clear Creek Bu**	**20.12**	**36**	P	**P**	**16 02 49.4**	**+0.1**
IL31		**20.53**	**37**	P	**P**	**16 02 54.4**	**+0.7**
ILAR	**Eielson Array**	**20.53**	**37**	P	**P**	**16 02 53.3**	**-0.4**
	0.2nm,0.5s,baz=236,slow=9.3,SNR=8.9						
SCRK	**Sand Creek**	**21.32**	**40**	P	**P**	**16 03 03.8**	**+1.4**
PDAR	**Pinedale Array**	**44.77**	**73**	P	**P**	**16 06 32.3**	**+3.2**
	0.2nm,0.6s,baz=308,slow=4.4,SNR=2.5						
MKAR	**Makanchi Array**	**61.66**	**310**	P	**P**	**16 08 32.5**	**-0.6**
	0.3nm,0.6s,baz=36,slow=5.5,SNR=4.9						

*UCR **02** 16:01:35.5±0.9, 12°.51N×87°.82W, h50^{km}±21^{km}, ML4.2*
*SNET **02** 16:01:35.5±1.1, 12°.51N×87°.85W, h32^{km}±5^{km}, ML4.1*
*INET **02** 16:01:35.8, 12°.50N×87°.76W, h62^{km}, ML4.2*
ISC 02 16:01:35.4±3.5**, 12°.5N**±0°.2×**87°.81W**±0°.07**, h29**^{km}±13^{km}**, n16, σ0.^{s}46**/32**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**0.77**	**358**	eP	**Pb**	**16 01 50.5**	**+0.1**
CNCH				eS	**Sn**	**16 02 01.5**	**+0.5**
CNCH				IAML		16 02 06.4	
	comp=Z,8µm,0.2s						
CNCH	**Conchagua**	**0.77**	**358**	eP	**Pb**	**16 01 50.5**	**+0.1**
CNCH				eS	**Sn**	**16 02 01.5**	**+0.5**
CNCH				IAML		16 02 06.4	
	comp=Z,8µm,0.2s						
BLLM	**Bellamira**	**1.02**	**336**	eP	**Pn**	**16 01 52.7**	**-1.1**
BLLM				eS	**Sb**	**16 02 08.2**	**+0.5**
BLLM	**Bellamira**	**1.02**	**336**	eP	**Pn**	**16 01 52.7**	**-1.1**
BLLM				eS	**Sb**	**16 02 08.2**	**+0.5**
LCY	**Lacayo**	**1.03**	**333**	eP	**Pn**	**16 01 53.5**	**-0.4**
LCY				eS	**Sb**	**16 02 07.8**	**-0.1**
LCY	**Lacayo**	**1.03**	**333**	eP	**Pn**	**16 01 53.5**	**-0.4**
LCY				eS	**Sb**	**16 02 07.8**	**-0.1**
PACA	**Pacayal**	**1.08**	**333**	eP	**Pn**	**16 01 54.5**	**-0.2**
PACA				eS	**Sb**	**16 02 09.6**	**+0.1**
PACA				IAML		16 02 11.5	
	comp=Z,5µm,0.3s						
PACA	**Pacayal**	**1.08**	**333**	eP	**Pn**	**16 01 54.5**	**-0.2**
PACA				eS	**Sb**	**16 02 09.6**	**+0.1**
PACA				IAML		16 02 11.5	
	comp=Z,5µm,0.3s						
TECA	**Tecapa**	**1.19**	**326**	eP	**Pn**	**16 01 56.1**	**-0.2**
TECA				eS	**Sb**	**16 02 11.9**	**-0.7**
TECA	**Tecapa**	**1.19**	**326**	eP	**Pn**	**16 01 56.1**	**-0.2**
TECA				eS	**Sb**	**16 02 11.9**	**-0.7**
TGUH	**Tegucigalpa,Un**	**1.63**	**19**	eP	**Pn**	**16 02 02.2**	**0.0**
TGUH				eS	**Sn**	**16 02 22.3**	**-0.1**
TGUH	**Tegucigalpa,Un**	**1.63**	**19**	eP	**Pn**	**16 02 02.2**	**0.0**
TGUH				eS	**Sn**	**16 02 22.3**	**-0.1**
LFRS	**El Faro**	**1.65**	**313**	eP	**Pn**	**16 02 02.3**	**-0.2**
LFRS				eS	**Sn**	**16 02 22.8**	**0.0**
LFU	**La Fuente**	**1.77**	**314**	eP	**Pn**	**16 02 04.4**	**+0.3**
LFU				eS	**Sn**	**16 02 26.2**	**+0.4**
LFU	**La Fuente**	**1.77**	**314**	eP	**Pn**	**16 02 04.4**	**+0.3**
LFU				eS	**Sn**	**16 02 26.2**	**+0.4**
BOQS	**Boqueron**	**1.88**	**311**	eP	**Pn**	**16 02 05.5**	**-0.2**
BOQS				eS	**Sn**	**16 02 28.8**	**+0.1**

*NEIC **02** 16:10:24.1±1.7, 50°.95N±0°.08×176°.06W±0°.06, h14^{km}±7^{km}, Error ellipse: s-maj=12.5km s-min=5.4km az=191.0*
*AEIC **02** 16:10:26.9±1.3, 51°.03N±0°.06×176°.04W±0°.07, h41^{km}±5^{km}, mb4.0/23(NEIC), Error ellipse: s-maj=9.6km s-min=5.6km az=157.0*
*IDC **02** 16:10:35.9±6.3, 52°.23N×176°.44W, h51^{km}±55^{km}, mb3.1/7, mb1 3.5/10, mb1mx3.3/44, mbtmp3.5/10, ML3.4/3, Error ellipse: s-maj=52.3km s-min=18.6km az=180.0*
ISC 02 16:10:25.6±1.1**, 51°.0N**±0°.1×**176°.03W**±0°.05**, h28**^{km}**, n54, σ0.^{s}96**/49**, mb3.4**/9**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**1.01**	**336**		**Pb**	**16 10 43.8**	**-0.7**
ADAG	**Mount Adagdak**	**1.08**	**341**		**Pb**	**16 10 45.4**	**-0.3**
GSMY	**Great Sitkin M**	**1.08**	**359**		**Pb**	**16 10 45.4**	**-0.3**
GSTD	**Great Sitkin T**	**1.10**	**356**		**Pb**	**16 10 45.7**	**-0.3**
GSTD					**Sb**	**16 11 00.3**	**+0.4**
KIMD	**Kanaga Island**	**1.10**	**317**		**Pb**	**16 10 45.1**	**-0.9**
GSTR	**Great Sitkin T**	**1.14**	**359**		**Pb**	**16 10 46.3**	**-0.3**
KIWB	**Kanaga Island**	**1.14**	**322**	Pn	**Pn**	**16 10 45.1**	**-0.5**
KIKV	**Kanaga Island**	**1.16**	**323**		**Pb**	**16 10 46.3**	**-0.8**
KICM	**Kanaga Island**	**1.21**	**323**		**Pb**	**16 10 47.0**	**-0.8**
TAPA	**Tanaga Point A**	**1.41**	**308**		**Pb**	**16 10 49.8**	**-1.4**
TASE	**Tanaga Southea**	**1.53**	**306**		**Pb**	**16 10 51.9**	**-1.4**
TAFP	**Tanaga Falls P**	**1.54**	**308**		**Pb**	**16 10 51.8**	**-1.8**
TAFP					**Sb**	**16 11 11.4**	**-1.2**
ATKA	**Atka Island**	**1.69**	**42**		**Pn**	**16 10 53.9**	**+0.7**
ATKA					**Sb**	**16 11 14.6**	**-2.1**
KOFP	**Korovin Flat P**	**1.78**	**42**		**Pb**	**16 10 55.8**	**-1.8**
CHIR	**Chirikof Islan**	**13.10**	**60**		**Pn**	**16 13 29.0**	**-0.5**
OHAK	**Old Harbor**	**14.70**	**56**	Pn	**Pn**	**16 13 49.8**	**-1.5**
KDAK	**Kodiak Island**	**15.22**	**54**	P	**Pn**	**16 14 00.3**	**+2.0**
	0.3nm,0.3s,baz=226,slow=1.8,SNR=6.4						
KDAK	**Kodiak Island**	**15.22**	**54**	Pn	**Pn**	**16 13 58.0**	**-0.3**
PETK	**Petropavlovsk-**	**16.28**	**288**	P	**P**	**16 14 13.8**	**-1.0**
	0.6nm,0.3s,baz=101,slow=15,SNR=14						
CNPM	**China Poot**	**16.45**	**49**	Pn	**Pn**	**16 14 13.6**	**-0.5**
BRLK	**Bradley Lake**	**16.70**	**48**	Pn	**Pn**	**16 14 16.6**	**-0.7**
SEW	**Seward**	**17.49**	**48**		**Pn**	**16 14 26.7**	**-0.4**
SEW				IAmb	IAmb	16 14 55.4	
	comp=Z,33nm,1.8s						
RC01	**Rabbit Creek A**	**17.72**	**45**		**P**	**16 14 30.2**	**-0.5**
RC01				IAmb	IAmb	16 14 51.6	
	comp=Z,18nm,1.8s						
PMR	**Palmer**	**18.19**	**44**	P	**P**	**16 14 35.9**	**+0.1**
GHO	**Glory Hole Cre**	**18.35**	**43**	P	**Pn**	**16 14 38.2**	**+0.4**
GHO				IAmb	IAmb	16 14 41.0	
	comp=Z,25nm,1.9s						
KTH	**Kantishna Hill**	**18.37**	**37**	P	**Pn**	**16 14 37.8**	**-0.1**
GLI	**Glacier Island**	**18.85**	**47**	P	**Pn**	**16 14 43.3**	**-0.5**
HIN	**Hinchinbrook I**	**18.98**	**49**	P	**Pn**	**16 14 45.9**	**+0.5**
SCM	**Sheep Creek Mo**	**19.07**	**44**	P	**Pn**	**16 14 46.1**	**-0.4**
FID	**Port Fidalgo**	**19.10**	**48**	P	**P**	**16 14 45.9**	**+0.1**
RND	**Reindeer**	**19.10**	**39**	P	**Pn**	**16 14 46.0**	**-0.8**
RND				IAmb	IAmb	16 15 07.6	
	comp=Z,28nm,1.9s						
MCK	**McKinley**	**19.22**	**38**	Pn	**Pn**	**16 14 48.2**	**0.0**
MCK				IAmb	IAmb	16 14 50.9	
	comp=Z,20nm,1.8s						
MLY	**Manley**	**19.25**	**33**	Pn	**Pn**	**16 14 48.9**	**+0.3**
DHY	**Denali Highway**	**19.55**	**41**	Pn	**Pn**	**16 14 51.6**	**-0.7**
DHY				IAmb	IAmb	16 15 13.1	
	comp=Z,20nm,1.8s						
CCB	**Clear Creek Bu**	**20.10**	**36**	P	**P**	**16 14 56.6**	**-0.1**
CCB				IAmb	IAmb	16 15 03.6	
	comp=Z,17nm,2.0s						
HDA	**Harding Lake**	**20.31**	**37**	Pn	Pn	16 15 01.1	-0.1
HDA				IAmb	IAmb	16 15 15.9	
	comp=Z,16nm,1.8s						
IL31		**20.51**	**37**	P	**P**	**16 15 00.6**	**-0.5**
IL31				IAmb	IAmb	16 15 51.6	
	comp=Z,12nm,1.9s						
ILAR	**Eielson Array**	**20.51**	**37**	P	**P**	**16 15 00.7**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=225,slow=11,SNR=5.4						

SEY	Seymchan	20.73	317	P	P	16 15 03.6	+0.1
	comp=Z,0.1nm,0.3s,baz=163,slow=19,SNR=5.0						
RIDG	Independent Ri	20.86	40	P	P	16 15 04.9	-0.1
RIDG				IAmb	IAmb	16 15 36.8	
	comp=Z,15nm,1.6s						
DOT	Dot Lake	21.15	41	P	P	16 15 08.0	-0.1
DOT				IAmb	IAmb	16 15 19.8	
	comp=Z,13nm,1.8s						
SCRK	Sand Creek	21.30	40	P	P	16 15 10.1	+0.2
SCRK				IAmb	IAmb	16 15 11.8	
	comp=Z,3.9nm,0.6s						
INK	Inuvik	26.82	34	P	P	16 16 02.4	-0.6
	comp=Z,0.5nm,0.6s,baz=236,slow=4.9,SNR=3.6						
H11N2	WAKE ISLAND Hy	33.96	210	T	T	16 53 58.1	
	baz=18,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	33.97	210	T	T	16 53 44.8	
	baz=18,slow=76,SNR=8.9						
H11N1	WAKE ISLAND Hy	33.98	210	T	T	16 53 49.9	
	baz=18,slow=76,SNR=8.7						
YKA	Yellowknife Ar	34.26	46	P	P	16 17 11.5	+2.8
	comp=Z,0.2nm,0.6s,baz=285,slow=8.0,SNR=2.9						
H11S1	WAKE ISLAND Hy	35.17	209	T	T	16 55 22.9	
	baz=315,slow=74,SNR=6.0						
H11S2	WAKE ISLAND Hy	35.18	209	T	T	16 55 23.1	
	baz=14,slow=74,SNR=3.5						
PDAR	Pinedale Array	44.77	73	P	P	16 18 41.9	+5.3
	comp=Z,0.3nm,0.6s,baz=292,slow=4.8,SNR=2.6						
SONM	Songino Array	48.39	298	P	P	16 19 06.4	+1.6
	comp=Z,0.2nm,0.6s,baz=52,slow=9.3,SNR=2.6						
TXAR	Lajitas Array	56.98	83	P	P	16 20 18.4	+10
	comp=Z,0.4nm,0.9s,baz=90,slow=0.1,SNR=3.5						
MKAR	Makanchi Array	61.65	310	P	P	16 20 40.8	+0.3
	comp=Z,0.4nm,0.5s,baz=46,slow=6.1,SNR=8.7						
NOA	NORSAR Array B	68.20	356	P	P	16 21 22.4	-0.5
	comp=Z,0.6nm,0.8s,baz=3.2,slow=8.7,SNR=2.5						

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*ANF **02** 16:11:53.5±0.2, 35°.32N×118°.47W, h11^{km}±2^{km}, ML2.9/27, Error ellipse: s-maj=1.4km s-min=1.3km az=43.0*

*SCEDC **02** 16:11:54.5, 35°.31N×118°.49W, h7^{km}*

*PAS **02** 16:11:54.4±1.1, 35°.306N±0°.010×118°.49W±0°.01, h8^{km}±4^{km}, ML2.9/169, Error ellipse: s-maj=1.6km s-min=1.3km az=59.0*

NEIC 02 16:11:54.0±1.0, 35°.31N±0°.01×118°.48W±0°.01, h6^{km}±5^{km}, Error ellipse: s-maj=1.6km s-min=1.4km az=161.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEJ	El Tejon	0.19	246		Pg	16 11 57.9	+0.2
WOFM	Oak Flat	0.30	320		Pg	16 11 60.0	+0.1
ARVC	Arvin	0.34	238		Pg	16 12 00.9	+0.4
ARVC					Sg	16 12 05.8	+0.8
ARVC	Arvin	0.34	238	P	Pg	16 12 00.9	+0.4
	baz=57,SNR=65						
ARVC				S	Sg	16 12 05.7	+0.7
	baz=57						
TJR	Tejon Ranch	0.35	218		Pg	16 12 00.9	+0.1
ISA	Isabella, Lake	0.35	1		Pg	16 12 01.0	+0.1
ISA				Sg	Sg	16 12 06.0	+0.4
ISA	Isabella, Lake	0.35	1	P	Pg	16 12 01.0	+0.1
	baz=182,SNR=189						
ISA				S	Sg	16 12 06.0	+0.4
	baz=182						
WHFM	Hanning Flat	0.40	15		Pg	16 12 02.0	+0.2
THC	Tehachapi Micr	0.42	201		Pg	16 12 02.2	0.0
WORM	Onyx Ranch	0.43	27		Pg	16 12 02.5	+0.2
WASM	Alta Sierra Ca	0.43	352		Pg	16 12 02.6	+0.1
BAKC	Calstate	0.51	274		Pg	16 12 04.5	+0.7
EDW2	Edwards Air Fo	0.58	137		Pg	16 12 05.1	-0.1
EDW2					Sg	16 12 13.2	+0.4
EDW2	Edwards Air Fo	0.58	137	P	Pg	16 12 05.1	-0.1
	baz=317,SNR=15						
EDW2				S	Sg	16 12 13.1	+0.3
	baz=317						
BTPC	Burnt Peak	0.63	187		Pg	16 12 06.1	+0.1
ALPC	Antelope	0.64	166		Pg	16 12 06.2	+0.1
WCHM	Chimney Peak	0.66	30		Pg	16 12 06.7	0.0
LRMC	Laurel Mtn Rad	0.68	75		Sg	16 12 15.9	+0.2
LRMC	Laurel Mtn Rad	0.68	75	P	Pg	16 12 07.0	0.0
	baz=256,SNR=18						
LRMC				S	Sg	16 12 16.0	+0.3
	baz=256						
LEOC	Leona Valley	0.69	168		Pg	16 12 07.1	-0.1
OSI	Osito Audit: C	0.72	196		Pg	16 12 07.7	-0.1
OSI	Osito Audit: C	0.72	196	P	Pg	16 12 07.7	-0.1
	baz=15						
VES	Vestal, Richgr	0.72	317		Pg	16 12 07.6	-0.3
VES					Sg	16 12 16.9	-0.4
VES	Vestal, Richgr	0.72	317	P	Pg	16 12 07.6	-0.3
	baz=138,SNR=26						
VES				S	Sg	16 12 17.6	+0.3
	baz=138						
MPI	Mount Pinos, F	0.74	228		Pg	16 12 08.0	-0.1
MPI					Sg	16 12 17.8	+0.1
PYR	Pyramid	0.77	196		Pg	16 12 08.6	-0.2
TOW	Tower One	0.77	49		Pg	16 12 09.1	+0.3
SBB	Saddle Back Bu	0.82	139		Pg	16 12 09.5	-0.2
SBB					Sg	16 12 19.9	-0.4
VPEM	Volcano Peak E	0.84	40		Pg	16 12 10.0	-0.1
BCW	Bitter Crk WRg	0.85	245		Sg	16 12 22.0	+0.7
JRC2	Joshua Ridge	0.87	39		Pg	16 12 10.5	-0.1
JRC2					Sg	16 12 22.2	+0.3
CLC	China Lake	0.88	55		Pg	16 12 10.5	-0.4
IR2C	Iron Canyon	0.92	176		Pg	16 12 11.2	-0.4
WCSM	Coso Springs S	0.92	39		Pg	16 12 11.6	-0.1
MFS	McCloud Flat S	0.95	32		Pg	16 12 12.2	-0.2
OAT	Oat Mountain	0.97	187		Pb	16 12 13.0	-0.2
CHFC	Chilao Flat St	1.04	159		Pg	16 12 13.4	-0.6
CHFC					Sg	16 12 27.2	-0.3
DECC	Green Verdugo	1.06	173	P	Pg	16 12 13.9	-0.4
	baz=353,SNR=9.9						
DECC				S	Sb	16 12 29.3	+0.5
	baz=353						
CARC	Carrizo Plain	1.12	270		Pg	16 12 14.6	-0.8
CARC					Sg	16 12 30.1	+0.2
MWC	Mount Wilson	1.14	162		Pg	16 12 14.9	-0.8
PASC	Pasadena Art C	1.16	168		Pg	16 12 15.2	-1.0
CWC	Cottonwood Cre	1.18	16		Pg	16 12 15.9	-0.7
CWC	Cottonwood Cre	1.18	16	P	Pg	16 12 15.8	-0.8
	baz=196						
CWC				S	Sg	16 12 31.0	-0.8
	baz=196						
DJJ	Donna J Jenkin	1.20	179		Pg	16 12 16.7	-0.2
DAC	Darwin (Calif)	1.21	36	Pn	Pn	16 12 19.4	+1.8
SMMC	Simmler	1.24	271	P	Pg	16 12 16.4	-1.3
	baz=90						
SMMC				S	Sg	16 12 33.3	-0.5
	baz=90						
VOG	Valley Oaks Go	1.25	324		Pg	16 12 17.0	-0.9
VOG	Valley Oaks Go	1.25	324	P	Pg	16 12 16.5	-1.5
	baz=144						
VOG				S	Sg	16 12 33.1	-1.0
	baz=144						
BFSC	Mount Baldy Ra	1.26	147		Sg	16 12 34.5	-0.1
BFSC	Mount Baldy Ra	1.26	147	P	Pg	16 12 17.4	-0.7
	baz=328,SNR=8.7						
BFSC				S	Sg	16 12 34.3	-0.2
	baz=328						
SSK	Sunset Peak	1.27	149		Pg	16 12 18.1	-0.3
BLG	Laguna Peak, P	1.29	202	Pg	Pn	16 12 18.3	-0.2
	baz=21						
BLG				Sg	Sn	16 12 37.1	+0.9
	baz=21						
RRX	Edison Barstow	1.29	109	Pg	Pg	16 12 19.1	+0.4
	baz=290						
RRX				Sg	Sn	16 12 37.0	+0.8
	baz=290						
SBC	Santa Barbara	1.33	230	Sg	Sn	16 12 37.9	+0.8
	baz=49						
GSC	Goldstone, Bar	1.37	90		Pn	16 12 19.6	-0.1
GSC	Goldstone, Bar	1.37	90	Pg	Pb	16 12 20.1	0.0
	baz=271,SNR=34						
GSC				Sg	Sn	16 12 38.7	+0.4
	baz=271						
QSM	Queen of Sheba	1.47	63		Pg	16 12 22.3	+0.2
PAGB	Antelope Grade	1.50	287		Pn	16 12 20.4	-1.1
FMP	Fort Macarthur	1.60	174		Sn	16 12 43.5	-0.2
BBRC	Big Bear Solar	1.65	129	Sg	Sg	16 12 47.2	+0.1
	baz=310						
SME	Santa Rosa Min	1.75	148		Pn	16 12 24.6	-0.2
HEC	Hector,Ludlow	1.82	105	Pb	Pn	16 12 26.4	+0.5
	baz=286,SNR=13						
HEC				Sg	Sg	16 12 52.4	-0.2
	baz=286						
SHOC	Shoshone, Teco	1.89	71	Sb	Sb	16 12 53.8	+0.9
	baz=252						
MURC	Murrieta	2.01	148	P	Pn	16 12 28.4	-0.1
	baz=328						
MURC				Sb	Sb	16 12 56.8	+0.6
	baz=328						
POB	Polly Butte	2.07	141		Pn	16 12 29.2	-0.1
TUQ	Turquoise Moun	2.09	86	Pn	Pn	16 12 28.9	-0.8
	baz=267						
TUQ				Pb	Pb	16 12 30.6	-1.8
	baz=267						
TUQ				Pg	Pg	16 12 33.1	-1.0
	baz=267,SNR=12						
TUQ				Sg	Sg	16 13 01.6	+0.3
	baz=267						
PMPB	Monarch Peak	2.09	296	Pn	Pn	16 12 29.2	-0.5
MLAC	Mammoth, Mammo	2.34	353	Pg	Pb	16 12 37.1	+0.4
	baz=173,SNR=16						
MLAC				Sb	Sb	16 13 07.3	+1.4
	baz=173						
GMRC	Granite Mounta	2.37	102	Pn	Pn	16 12 33.8	+0.2
	baz=284						
GMRC				Pg	Pg	16 12 38.7	-0.7
	baz=284,SNR=8.8						
PFO	Pinyon Flats O	2.38	135	Pn	Pn	16 12 33.0	-0.6
PFO	Pinyon Flats O	2.38	135	P	Pn	16 12 33.1	-0.5
	baz=316						
XPFO	Pion Flat	2.38	135	Pn	Pn	16 12 33.0	-0.7
BELC	Belle Mtn. Jos	2.43	122	P	Pn	16 12 34.2	-0.1
	baz=303						
BELC				Sb	Sb	16 13 10.0	+1.7
	baz=303						
TPNV	Topopah Spring	2.44	47		Pn	16 12 34.7	+0.2
TPNV	Topopah Spring	2.44	47	P	Pn	16 12 34.8	+0.4
	baz=228,SNR=11						
109C	Camp Elliot, M	2.67	154	Sb	Sb	16 13 16.6	+1.5
	baz=335						
SAO	San Andreas Ge	2.81	302	Pn	Pn	16 12 39.9	+0.4
SHPR	Sheep Range	2.95	65	Pn	Pn	16 12 42.0	+0.5
MONP2	Monument Peak	2.95	144	P	Pn	16 12 41.8	+0.2
	baz=325						
MONP2				Sb	Sb	16 13 24.5	+0.9
	baz=325						
IRM	Iron Mountain	2.98	112	Pg	Pg	16 12 50.4	-0.6
	baz=294						
BC3	Big Chuckawall	2.99	123	Pg	Pg	16 12 49.8	-1.6
	baz=304						
BAR	Barrett	3.02	150	Pn	Pn	16 12 42.6	+0.2
TJX	Tijuana	3.03	157		Pn	16 12 41.9	-0.6
CMB	Columbia Colle	3.12	331		Pn	16 12 44.1	+0.3
NV11	Mina Array Sit	3.13	5		Pb	16 12 51.4	+1.3
TKX	Tecate	3.14	150		Pn	16 12 44.8	+0.8
RYN	Ryan	3.31	359	Pn	Pn	16 12 46.3	-0.2
Y12C	Blythe	3.62	114	Pn	Pn	16 12 51.0	+0.5
YERR	Yerington	3.72	351		Pb	16 13 02.0	+1.8
KVN	Kaiserville	3.75	5		Pb	16 13 02.2	+1.5
W13A	Hualapai Mount	3.77	92		Pg	16 13 04.0	-2.2
PAHR	Pah Rah Range	4.45	351	Pn	Pn	16 13 01.4	-0.7

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*IDC **02** 16:18:27.7±0.6, 45°.89S×76°.58W, h0^{km}, mb4.3/14, mb1 4.3/15, mb1mx4.2/32, mbtmp4.3/15, ML3.7/1, MS4.2/15, Ms1 4.2/15, ms1mx4.0/31, Error ellipse: s-maj=25.6km s-min=15.1km az=96.0*

*NEIC **02** 16:18:28.3±1.8, 45°.83S±0°.07×76°.7W±0°.2, h10^{km}±1^{km}, mb5.1/55, Error ellipse: s-maj=22.9km s-min=11.3km az=272.0*

*MOS **02** 16:18:28.0±1.3, 45°.67S×76°.69W, h10^{km}, mb4.8/5, Error ellipse: s-maj=23.5km s-min=8.9km az=82.8*

*BJI **02** 16:18:30.0±0.0, 45°.90S×76°.80W, h10^{km}, mB5.4/9, Ms5.5/8, Ms7 5.3/8*

*VAO **02** 16:18:31.5±1.6, 45°.71S×76°.38W, h10^{km}, mb4.5*

*GCMT **02** 16:18:32.3±0.3, 45°.78S±0°.03×76°.93W±0°.03, h21^{km}±1^{km}, MW5.0/85, Moment Tensor Solution. s36,c37; s85,c112; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.78±.25; M$_{\theta\theta}$0.45±.14; M$_{\phi\phi}$3.33±.16; M$_{r\theta}$0.80±.26; M$_{\theta\phi}$-1.38±.09; M$_{\phi r}$-1.55±.25; Best double couple: M$_0$4.21100×10^{16} NP1:φ$_s$160.00000°, δ33.00000°, λ-86.00000°. NP2: φ$_s$336.00000°, δ57.00000°, λ-93.00000°. Principal axes: T 4.2610, Plg12.0000°, Azm68.0000°; N -0.0950, Plg2.0000°, Azm337.0000°; P -4.1620, Plg78.0000°, Azm237.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 16:18:30.8±0.4, 45°.86S±0°.06×76°.59W±0°.09, h23^{km}, n201, σ1^{s}30/188, mb5.0/43, MS4.3/19, 1C-1D, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO07	Milladeo Hill,	3.45	38		Pn	16 19 20.9	-2.3
GO09	Cerro Castillo	6.10	154	Pn	Pn	16 19 59.6	0.0
PLCA	Paso Flores	6.76	43	Pn	Pn	16 20 08.8	+0.1
	0.4nm,0.3s,baz=250,slow=12,SNR=20						
PLCA	Paso Flores	6.76	43		Pn	16 20 08.4	-0.2
PLCA	Paso Flores	6.76	43	P	Pn	16 20 08.4	-0.2
PLCA	Paso Flores	6.76	43	*e*P	Pn	16 20 08.3	-0.4
GO10	Punta Arenas	8.14	156	Pn	Pn	16 20 26.7	-0.8
GO05	Huala	11.40	20		Pn	16 21 10.2	-2.1
PEL	Peldehue	13.49	22		Pn	16 21 41.6	+0.8
PEL	Peldehue	13.49	22	P	Pn	16 21 41.6	+0.8
EFI	East Falkland	13.52	122	*i* P	Pn	16 21 38.7	-2.3
ROC1	El Roble	13.56	20	Pn	Pn	16 21 39.0	-3.0
GO04	Tololo Observa	16.31	18	Pn	Pn	16 22 17.4	-1.0
PMSA	Palmer Station	20.18	164	LR	LR	16 29 01.1	
	comp=Z,430nm,19.9s,baz=317,slow=31						
GO02	Mina Guanaco	21.41	18	P	P	16 23 17.6	+0.3
GO02				IAmb	IAmb	16 23 27.6	
	comp=Z,115nm,1.8s						
PLTB	Pedras Altas	22.68	60	*e*P	P	16 23 30.0	-0.6
PB10	IPOC Station P	22.83	14	P	P	16 23 31.8	-0.4
PB10				IAmb	IAmb	16 23 38.5	
	comp=Z,72nm,1.2s						
LVC	Limon Verde	24.02	18	P	P	16 23 45.4	+1.0
	comp=Z,5.0nm,0.9s,baz=187,slow=8.5,SNR=11						
LVC	Limon Verde	24.02	18	P	P	16 23 42.7	-1.7
LVC				IAmb	IAmb	16 23 51.6	
	comp=Z,82nm,1.6s						
LVC	Limon Verde	24.02	18	P	P	16 23 42.7	-1.7
LVC				pmax	pmax		
	comp=Z,82nm,1.6s						
LVC	Limon Verde	24.02	18	*e*P	P	16 23 44.9	+0.5
PB04	IPOC Station P	24.05	15	P	P	16 23 43.2	-1.2
PB04				IAmb	IAmb	16 23 52.5	
	comp=Z,78nm,1.5s						
CPUP	Villa Florida	24.83	45	P	P	16 23 52.0	+0.8
	comp=Z,17nm,1.1s,baz=224,slow=9.4,SNR=16						
CPUP				LR	LR	16 34 23.9	
	comp=Z,984nm,18.2s,baz=216,slow=38						
PB01	IPOC Station P	25.43	16	P	P	16 23 57.0	+0.2
PB01				IAmb	IAmb	16 24 11.9	
	comp=Z,38nm,1.3s						
PB11	IPOC Station P	26.65	15	P	P	16 24 08.2	+0.2
PB11				IAmb	IAmb	16 24 24.1	
	comp=Z,49nm,1.4s						
GO01	Chusmiza	26.83	16	P	P	16 24 10.6	+0.6
MNMC	Minye Minye	27.28	15	P	P	16 24 14.4	+0.6
TRCB	Terra Rica	30.13	48	*e*P	P	16 24 39.3	+0.4
LPAZ	La Paz	30.32	16	P	P	16 24 42.0	+0.8
	comp=Z,1.5nm,0.9s,baz=198,slow=7.8,SNR=7.4						
LPAZ	La Paz	30.32	16	P	P	16 24 41.3	0.0
LPAZ	La Paz	30.32	16	P	P	16 24 41.3	0.0
LPAZ				pmax	pmax		
	comp=Z,28nm,1.7s						
LPAZ	La Paz	30.32	16	*e*P	P	16 24 42.1	+0.8
PCMB	Pacaembu	31.83	49	*e*P	P	16 24 54.7	+0.9
RPN	Rapa Nui	31.98	294	LR	LR	16 33 57.9	
	comp=Z,345nm,21.6s,baz=132,slow=29						
SIV	San Ignacio	32.49	29	P	P	16 24 59.6	-0.1
	comp=Z,5.0nm,1.1s,baz=238,slow=11,SNR=9.8						
SIV				LR	LR	16 39 34.8	
	comp=Z,268nm,19.7s,baz=280,slow=39						
VAO	Valinhos	33.11	57	*e*P	P	16 25 06.5	+1.4
NNA	Nana	33.76	360	*i* P	P	16 25 09.0	-1.8
NNA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SALV	Santo Antonio	34.62	37	*e*P	P	16 25 18.8	+0.6
BDFB	Brasilia	38.47	48	P	P	16 25 51.2	0.0
	comp=Z,4.3nm,0.9s,baz=180,slow=6.6,SNR=4.7						
BDFB				LR	LR	16 43 06.1	
	comp=Z,1μm,18.1s,baz=244,slow=38						
BDFB	Brasilia	38.47	48	P	P	16 25 50.5	-0.7
BDFB	Brasilia	38.47	48	P	P	16 25 50.5	-0.7
BDFB				pmax	pmax		
	comp=Z,16nm,1.3s						
SAML	Samuel	38.54	22	P	P	16 25 51.1	-0.5
SAML	Samuel	38.54	22	P	P	16 25 51.1	-0.5
SAML				pmax	pmax		
	comp=Z,14nm,1.2s						
SAML	Samuel	38.54	22	*e*P	P	16 25 51.3	-0.3
ATAH	Atahualpa	38.61	357	P	P	16 25 53.9	+1.2
	comp=Z,3.5nm,0.7s,baz=149,slow=5.9,SNR=4.2						
CLDB	Colider	39.13	34	*e*P	P	16 25 56.5	-0.1
VNA3	Neumayer Olymp	40.05	152	P	P	16 26 05.3	+1.6
VNA1	Neumayer--Stat	40.50	152	P	P	16 26 06.1	-1.2
VNA2	Neumayer--Watz	40.79	152	P	P	16 26 11.2	+1.4
	baz=277,slow=9.6						
JANB	Januaria	40.94	52	*e*P	P	16 26 13.4	+1.7
SNAA	Sanae	42.23	153	P	P	16 26 23.0	+1.3
SNAA	Sanae	42.23	153	P	P	16 26 21.8	+0.2
	comp=Z,14nm,1.2s,baz=250,slow=8.1,SNR=8.5						
SNAA	Sanae	42.23	153	P	P	16 26 22.6	+0.9
SNAA	Sanae	42.23	153	P	P	16 26 22.6	+0.9
SNAA				pmax	pmax		
	comp=Z,26nm,1.3s						
QSPA	South Pole Qui	44.38	180	P	P	16 26 40.7	+1.5
	comp=Z,7.2nm,1.0s,baz=149,slow=8.4,SNR=11						
QSPA				LR	LR	16 42 22.0	
	comp=Z,76nm,18.2s,baz=100,slow=32						
QSPA	South Pole Qui	44.38	180	P	P	16 26 37.8	-1.4
QSPA				IAmb	IAmb	16 26 41.7	
	comp=Z,34nm,1.6s						
OTAV	Otavalo	45.93	357	P	P	16 26 50.3	-2.1
OTAV	Otavalo	45.93	357	P	P	16 26 50.3	-2.1
OTAV				pmax	pmax		
	comp=Z,25nm,1.7s						
OTAV	Otavalo	45.93	357	*e*P	P	16 26 54.2	+1.9
NVL	N'lazarevskaya	47.06	153	*e*P	P	16 27 02.9	+2.9
NVL				*e*S	S	16 33 46.0	-4.2
NVL				pmax	pmax		
	comp=Z,27nm,1.2s						
PTGA	Pitinga	47.27	23	*e*P	P	16 27 02.0	-0.3
ROSC	El Rosal	50.52	3	P	P	16 27 29.4	+1.8
	comp=Z,3.4nm,0.3s,baz=105,slow=20,SNR=2.1						
ROSC				LR	LR	16 46 00.6	
	comp=Z,187nm,20.3s,baz=245,slow=33						
ROSC	El Rosal	50.52	3	IAmb	IAmb	16 27 36.6	
	comp=Z,49nm,1.8s						
RUSC	La Rusia	51.62	4	P	P	16 27 34.9	-1.2
VNDA	Vanda	51.78	194	LR	LR	16 47 23.3	
	comp=Z,107nm,18.3s,baz=102,slow=34						
RCBR	Riachuelo	53.18	54	LR	LR	16 51 02.1	
	comp=Z,370nm,18.2s,baz=195,slow=37						
BCIP	Isla Barro Col	54.85	356	P	P	16 27 56.8	-2.4
BCIP	Isla Barro Col	54.85	356	P	P	16 27 56.8	-2.4
BCIP				pmax	pmax		
	comp=Z,187nm,1.7s						
SYO	Syowa Base	56.21	157⇓	*e*pP	P	16 28 07.6	-0.8
JTS	Las Juntas de	56.40	350	P	P	16 28 08.5	-1.8
JTS				IAmb	IAmb	16 28 18.0	
	comp=Z,31nm,1.4s						
JTS	Las Juntas de	56.40	350	P	P	16 28 08.5	-1.8
JTS				pmax	pmax		
	comp=Z,31nm,1.4s						
ACON	Acoyapa	58.08	350	P	P	16 28 20.4	-1.8
ACON				IAmb	IAmb	16 29 15.6	
	comp=Z,36nm,1.4s						
TGUH	Tegucigalpa,Un	60.41	348	P	P	16 28 37.1	-1.4
TBI	Tubuai	61.90	265	*e*LR	LR	16 47 07.7	
	comp=Z,627nm,27.5s,baz=138						
MAW	Mawson	62.79	164	LR	LR	16 55 15.3	
	comp=Z,174nm,18.1s,baz=222,slow=35						
CCIG	Comitan	63.43	343	P	P	16 28 58.4	-0.4
SABA	Saba	64.33	14	P	P	16 29 02.4	-2.1
HUMP	Col San Antoni	64.44	11	P	P	16 29 03.3	-1.8
HUMP				IAmb	IAmb	16 29 43.7	
	comp=Z,13nm,1.1s						
PPT2	Papeete2	65.80	269	*e*S	S	16 37 57.4	-2.4
	comp=Z,77nm,23.8s						
PPT2	Papeete2	65.80	269	*e*LR	LR	16 48 50.4	
	comp=Z,347nm,25.2s,baz=123						
PPT	Papeete	65.82	269	LR	LR	16 49 11.0	
	comp=Z,191nm,20.2s,baz=169,slow=28						
RPZ	Rata Peaks	72.55	225	LR	LR	16 53 40.1	
	comp=Z,385nm,20.8s,baz=138,slow=29						
URZ	Urewera	73.34	232	LR	LR	16 54 25.6	
	comp=Z,183nm,18.6s,baz=172,slow=29						
HKT	Hockley	77.45	343	*i* P	P	16 30 26.4	+2.6
HKT				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BOSA	Boshof	77.61	118	P	P	16 30 25.1	-0.2
	comp=Z,4.7nm,1.0s,baz=201,slow=8.0,SNR=4.1						
BOSA	Boshof	77.61	118	IAmb	IAmb	16 30 27.1	
	comp=Z,43nm,1.7s						
BOSA	Boshof	77.61	118	P	P	16 30 25.2	-0.2
BOSA				pmax	pmax		
	comp=Z,43nm,1.7s						
TXAR	Lajitas Array	78.77	336	P	P	16 30 31.9	+0.5
	comp=Z,1.0nm,1.0s,baz=148,slow=7.3,SNR=8.4						
TXAR	Lajitas Array	78.77	336	P	P	16 30 32.0	+0.5
TX31	Lajitas Ar. Si	78.78	336	P	P	16 30 31.5	+0.1
TX32	Lajitas Array	78.78	336	P	P	16 30 31.7	+0.3
JCT	Junction City	78.85	340	P	P	16 30 32.5	+0.8
	baz=164						
GOGA	Godfrey	79.15	354	P	P	16 30 32.9	-0.4
GOGA				IAmb	IAmb	16 30 40.1	
	comp=Z,27nm,1.4s						
GOGA	Godfrey	79.15	354	P	P	16 30 32.9	-0.4
GOGA				pmax	pmax		
	comp=Z,27nm,1.4s						
GOGA	Godfrey	79.15	354	P	P	16 30 33.7	+0.5
	baz=175						
LBTB	Lobatse	80.39	116	P	P	16 30 40.7	+0.1
LBTB				IAmb	IAmb	16 30 54.0	
	comp=Z,60nm,1.9s						
LBTB	Lobatse	80.39	116	P	P	16 30 40.7	+0.1
LBTB				pmax	pmax		
	comp=Z,60nm,1.9s						
V59A	Middlesex	81.27	359	P	P	16 30 45.7	+1.1
	baz=179						
W41B	Gary Mavity, V	81.89	347	P	P	16 30 47.5	-0.4
	baz=169						
W39A	Magazine	82.17	346	P	P	16 30 50.2	+0.8
W39A				IAmb	IAmb	16 30 57.3	
	comp=Z,22nm,1.3s						
W39A	Magazine	82.17	346	P	P	16 30 48.9	-0.5
	baz=168						
DBIC	Dimbokro	82.24	72	P	P	16 30 52.6	+2.3
	comp=Z,3.1nm,0.9s,baz=236,slow=6.7,SNR=4.1						
DBIC	Dimbokro	82.24	72	IAmb	IAmb	16 31 10.0	
	comp=Z,18nm,1.4s						
DBIC	Dimbokro	82.24	72	P	P	16 30 52.6	+2.3
DBIC				pmax	pmax		
	comp=Z,18nm,1.5s						
WVT	Waverly	82.24	351	P	P	16 30 49.2	-0.5
WVT				IAmb	IAmb	16 33 04.3	
	comp=Z,8.6nm,0.7s						
WVT	Waverly	82.24	351	P	P	16 30 49.2	-0.5
WVT				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WVT	Waverly	82.24	351	P	P	16 30 49.2	-0.5
	baz=172						
U49A	Red Boiling Sp	82.42	353	P	P	16 30 49.9	-0.8
LCAR	Lake Charles	82.61	348	P	P	16 30 50.4	-1.2
WMOK	Wichita Mounta	82.70	342	P	P	16 30 51.9	-0.3
	baz=165						
U40A	Yellville	83.15	347	P	P	16 30 53.8	-0.7
U40A	Yellville	83.15	347	P	P	16 30 54.5	0.0
	baz=169						
PBMO	Poplar Bluff	83.20	349	P	P	16 30 54.0	-0.8
PBMO				IAmb	IAmb	16 30 55.2	
	comp=Z,30nm,1.8s						
TUL1	Leonard	83.22	344	P	P	16 30 54.9	0.0
TUL1				IAmb	IAmb	16 30 56.3	
	comp=Z,15nm,1.1s						
S53A	Williamson	83.31	356	P	P	16 30 55.9	+0.6
	baz=176						
S50A	Richmond	83.46	354	P	P	16 30 55.4	-0.6
	baz=175						
AFI	Afiamalu	83.71	257	LR	LR	16 58 41.9	
	comp=Z,163nm,20.2s,baz=352,slow=29						
R55A	Marlinton	83.82	357	P	P	16 30 58.6	+0.6
	baz=178						
MGMO	Mountain Grove	83.84	347	P	P	16 30 57.4	-0.6
MGMO				IAmb	IAmb	16 31 04.6	
	comp=Z,25nm,1.6s						

FVM	French Village	84.39	349	P	P	16 30 59.9	-0.9
FVM				IAmb	IAmb	16 31 07.3	
	comp=Z,15nm,1.4s						
FVM	French Village	84.39	349	P	P	16 30 59.9	-0.9
FVM				pmax	pmax		
	comp=Z,15nm,1.4s						
S39A	Bolivar	84.53	347	P	P	16 31 00.8	-0.7
S39A				IAmb	IAmb	16 31 07.8	
	comp=Z,11nm,1.1s						
CCM	Cathedral Cave	84.57	348	P	P	16 31 01.1	-0.6
CCM	Cathedral Cave	84.57	348	P	P	16 31 01.1	-0.6
CCM				pmax	pmax		
	comp=Z,26nm,1.3s						
CCM	Cathedral Cave	84.57	348	P	P	16 31 01.7	0.0
	baz=170						
ANMO	Albuquerque	84.84	336	P	P	16 31 02.3	-1.1
ANMO	Albuquerque	84.84	336	P	P	16 31 02.3	-1.1
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ANMO	Albuquerque	84.84	336	P	P	16 31 04.6	+1.2
	baz=160						
P53A	Whipple	85.08	356	P	P	16 31 03.2	-1.0
	baz=177						
P52A	Corning	85.26	356	P	P	16 31 04.8	-0.3
	baz=176						
N55A	Marion Center	86.29	358	P	P	16 31 13.1	+2.9
	baz=178						
T25A	Trinidad	86.34	338	P	P	16 31 09.7	-1.2
T25A				IAmb	IAmb	16 31 18.7	
	comp=Z,27nm,1.5s						
T25A	Trinidad	86.34	338	P	P	16 31 12.2	+1.4
	baz=161						
WUAZ	Wupatki	86.88	332	P	P	16 31 13.2	-0.2
WUAZ				IAmb	IAmb	16 31 21.8	
	comp=Z,36nm,1.9s						
M59A	Waymart	87.03	1	P	P	16 31 13.7	-0.1
	baz=181						
S22A	4UR Ranch, Cre	87.56	336	P	P	16 31 18.3	+1.5
	baz=160						
WVNY	West Valley, N	87.90	359	P	P	16 31 18.0	0.0
L40A	Anamosa	88.51	349	P	P	16 31 20.3	-0.5
L40A				IAmb	IAmb	16 31 26.5	
	comp=Z,14nm,1.2s						
KNB	Kanab	88.72	332	P	P	16 31 22.1	-0.1
KNB	Kanab	88.72	332	P	P	16 31 22.1	-0.1
KNB				pmax	pmax		
	comp=Z,17nm,1.4s						
SHPR	Sheep Range	89.05	330	P	P	16 31 21.4	-2.4
SHPR				IAmb	IAmb	16 31 27.5	
	comp=Z,22nm,1.6s						
JFWS	Jewell Farm	89.22	350	P	P	16 31 23.6	-0.6
JFWS	Jewell Farm	89.22	350	P	P	16 31 23.6	-0.6
JFWS				pmax	pmax		
	comp=Z,35nm,1.4s						
JFWS	Jewell Farm	89.22	350	P	P	16 31 24.0	-0.2
	baz=171						
SZCU	Shurtz Canyon	89.33	332	P	P	16 31 24.2	-1.0
G45A	Suttons Bay	90.87	354	P	P	16 31 32.5	+0.7
	baz=174						
G47A	Hillman	90.88	355	P	P	16 31 32.7	+0.8
	baz=175						
ECSD	EROS Data Cent	90.97	346	P	P	16 31 30.9	-1.4
ECSD	EROS Data Cent	90.97	346	P	P	16 31 31.2	-1.2
	baz=166						
TORD	Torodi Ar. Bea	91.34	73	P	P	16 31 34.2	-0.6
	comp=Z,1.0nm,0.9s,baz=249,slow=4.2,SNR=3.5						
DZM	Mont Dzumac	91.53	236	*e*LR	LR	17 00 52.0	
	comp=Z,239nm,30.4s						
DZM	Mont Dzumac	91.53	236	LR	LR	17 04 37.6	
	comp=Z,73nm,19.1s,baz=219,slow=30						
PDAR	Pinedale Array	92.99	336	P	P	16 31 42.3	+0.2
	comp=Z,0.7nm,1.1s,baz=151,slow=2.1,SNR=2.3						
H11S2	WAKE ISLAND Hy	121.57	264	T	T	18 50 33.2	
	baz=134,slow=75,SNR=15						
H11S1	WAKE ISLAND Hy	121.58	264	T	T	18 50 31.0	
	baz=134,slow=75,SNR=7.9						
H11S3	WAKE ISLAND Hy	121.58	264	T	T	18 50 31.2	
	baz=134,slow=75,SNR=8.1						
GERES	GERESS Array B	122.64	52	PKP	PKPdf	16 37 23.1	-0.8
	comp=Z,0.6nm,0.8s,baz=194,slow=1.1,SNR=4.6						
KHC	Kasperske Hory	122.73	51	*i* PKIKP	PKPdf	16 37 23.6	-0.4
ILAR	Eielson Array	123.05	331	PKP	PKPdf	16 37 23.1	-0.9
	comp=Z,0.2nm,0.7s,baz=180,slow=1.5,SNR=4.2						
KIV	Kislovodsk	137.87	70	*e*PKIKP	PKPdf	16 37 52.9	+0.1
KIV				pmax	pmax		
	comp=Z,15nm,1.0s						
OBN	Obninsk	138.02	52	⇑*e*PKIKP	PKPdf	16 37 53.3	+0.7
OBN				*e*		16 40 41.4	
OBN				*e*PPP	PPP	16 43 45.2	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,94nm,14.0s						
BILL	Bilibino	141.51	327	*e*PKIKP	PKPdf	16 37 59.6	+1.0
BILL				pmax	pmax		
	comp=Z,2.0nm,1.3s						
PRGR	Permogore	143.75	43	*e*PKIKP	PKPab	16 37 59.4	-0.2
PRGR				pmax	pmax		
	comp=Z,24nm,0.7s						
HYB	Hyderabad	144.90	136	*i* PKP	PKPbc	16 38 05.0	-0.3
HYB				*e*		16 38 10.5	
GEYT	Alibeck	145.75	87	PKPbc	PKPdf	16 38 07.8	+0.8
	comp=Z,3.7nm,0.7s,baz=259,slow=1.5,SNR=16						
GYA0B	ALIBECK ARRAY	145.75	87		PKPdf	16 38 07.2	+0.2
DLV	T Lat	145.92	189	PKPbc	PKPdf	16 38 08.8	+0.6
SEY	Seymchan	147.77	320	PKPbc	PKPdf	16 38 11.4	+1.9
	comp=Z,5.1nm,1.0s,baz=57,slow=4.3,SNR=6.3						
SEY	Seymchan	147.77	320	*i* PKIKP	PKPdf	16 38 10.5	+1.0
UBPT	Khong Chiam	149.46	184		PKPdf	16 38 17.7	+4.0
ARU	Arti	150.46	53		PKPbc	16 38 19.0	-0.4
ARU	Arti	150.46	53	*i* PKIKP	PKPbc	16 38 19.8	+0.4
ARU						16 41 51.4	
PBKT	Sadao Pong	150.72	175		PKPbc	16 38 20.7	-0.5
ABKAR	Akbulak array	150.77	67		PKPbc	16 38 20.3	-0.1
TIXI	Tiksi	151.44	343		PKPbc	16 38 20.9	-0.3
TIXI	Tiksi	151.44	343	PKIKP	PKPbc	16 38 21.0	-0.3
MJAR	Matsushiro Arr	152.40	263	PKPbc	PKPbc	16 38 26.4	+1.8
	comp=Z,1.8nm,0.8s,baz=171,slow=4.7,SNR=4.1						
CM31	Chiang Mai Arr	152.42	171		PKPbc	16 38 24.3	-0.8
CMAR	Chiang Mai Arr	152.42	171	PKP	PKPdf	16 38 18.6	+0.4
	comp=Z,0.3nm,0.5s,baz=197,slow=4.5,SNR=6.4						
CMAR				PKPbc	pPKPdf	16 38 25.1	+0.2
	comp=Z,1.9nm,0.8s,baz=212,slow=4.5,SNR=12						
CHTO	Chiang Mai	152.78	171		PKPbc	16 38 24.8	-1.1
CHTO	Chiang Mai	152.78	171	PKIKP	PKPbc	16 38 24.8	-1.1
SHL	Shillong	157.74	152		PKPdf	16 38 24.8	-0.8
SHL	Shillong	157.74	152	PKIKP	PKPdf	16 38 24.8	-0.8
KSH	Kashi	158.92	98	PKP	PKPdf	16 38 27.6	+1.1
KSH				PP	PP	16 42 41.9	-2.3
KSH				SKS	SKSdf	16 45 28.8	-1.7
KSH				SKKS	SKKSac	16 49 28.1	-3.1
KSH				AMB	AMB		
	comp=Z,220nm,9.1s						
KSH				LR	LR		
	comp=Z,240nm,11.3s						
KSH				LR	LR		
	comp=Z,250nm,11.1s						
KSH				LR	LR		
	comp=Z,340nm,13.8s						
LSA	Lhasa	161.22	145		PKPab	16 39 12.7	-0.7
LSA	Lhasa	161.22	145	PKP2	PKPab	16 39 12.7	-0.7
NJ2	Nanjing	161.76	226	*e*PKP	PKPdf	16 38 30.5	+0.8
CN2	Changchun	164.23	270	*e*PKP	PKPdf	16 38 37.5	+5.8
CN2				PP	PP	16 43 20.9	+8.4
CN2				LR	LR		
	comp=Z,200nm,25.0s						
CN2				LR	LR		
	comp=Z,300nm,25.0s						
CN2				LR	LR		
	comp=Z,300nm,25.0s						
CD2	Chengdu	165.07	181	PKP	PKPdf	16 38 31.8	-1.1
MAKZ	Makanchi	165.17	79		PKPdf	16 38 31.8	-0.7
MAKZ					PKPab	16 39 29.5	-0.4
MAKZ	Makanchi	165.17	79	PKIKP	PKPdf	16 38 31.8	-0.7
MAKZ						16 39 29.5	
MK31	Makanchi Array	165.38	79		PKPab	16 39 30.0	-0.8
MK31	Makanchi Array	165.38	79	PKP2	PKPab	16 39 30.0	-0.8
MKAR	Makanchi Array	165.38	79	PKP	PKPdf	16 38 34.1	+1.5
	comp=Z,0.5nm,1.0s,baz=289,slow=3.7,SNR=3.7						
MKAR				PKPab	PKPab	16 39 30.6	-0.2
	comp=Z,0.7nm,0.7s,baz=265,slow=4.0,SNR=6.5						
MKAR				PP	PP	16 43 20.9	+2.5
	comp=Z,1.6nm,1.2s,baz=264,slow=3.7,SNR=4.3						
MKAR	Makanchi Array	165.38	79	PKP2	PKPab	16 39 30.7	-0.2
MKAR						16 43 20.9	
MKAR						17 38 34.2	
ZAA0	Zalesovo Array	165.58	49		PKPdf	16 38 30.6	-1.9
ZALV	Zalesovo Beam	165.58	49	PKP	PKPdf	16 38 31.5	-1.0
	comp=Z,1.3nm,0.8s,baz=256,slow=3.1,SNR=8.1						
WMQ	Urumqi	168.66	95	PKP	PKPdf	16 38 34.1	-1.1
WMQ				AMB	AMB		
	comp=Z,93nm,4.5s						
WMQ				LR	LR		
	comp=Z,360nm,26.5s						
WMQ				LR	LR		
	comp=Z,360nm,19.1s						
HHC	Hu-ho-hao-te	172.23	233	*e*PKP	PKPdf	16 38 36.1	-1.3
HHC				LR	LR		
	comp=Z,420nm,20.9s						
HHC				LR	LR		
	comp=Z,390nm,21.3s						
HHC				LR	LR		
	comp=Z,430nm,21.0s						
GTA	Gaotai	173.03	156	*e*PKP	PKPdf	16 38 38.4	+0.6
GTA				pPKP	pPKPdf	16 38 43.1	-1.3
GTA				sPKP		16 38 46.0	
SONM	Songino Array	177.15	315	PKP	PKPdf	16 38 40.6	+2.0
	comp=Z,0.6nm,1.0s,baz=0.0,slow=1.5,SNR=4.4						

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*AEIC **02** 16:26:21.3±0.9, 51°.01N±0°.09×176°.04W±0°.08, h20^{km}±5^{km}, mb4.0/26(NEIC), Error ellipse: s-maj=12.7km s-min=6.9km az=176.0*

*NEIC **02** 16:26:22.0±1.3, 51°.05N±0°.10×176°.11W±0°.08, h27^{km}±2^{km}, Error ellipse: s-maj=14.1km s-min=6.8km az=166.0*

*IDC **02** 16:26:27.5±8.3, 51°.55N×176°.08W, h64^{km}±70^{km}, mb3.0/5, mb1 3.5/7, mb1mx3.1/50, mbtmp3.6/7, ML3.3/2, Error ellipse: s-maj=78.8km s-min=21.7km az=177.0*

ISC 02 16:26:21.8±1.0**, 51°.02N**±0°.09×**176°.09W**±0°.05**, h28**^{km}**, n50,** σ**0**^{s}**83**/49**, mb3.8**/7**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADK	Adak	0.94	337		Pn	16 26 38.6	-0.5
ADAG	Mount Adagdak	1.01	342		Pb	16 26 40.4	-0.2
GSMY	Great Sitkin M	1.02	1		Pn	16 26 40.4	+0.2
KIMD	Kanaga Island	1.03	316		Pn	16 26 40.2	-0.2
GSTD	Great Sitkin T	1.04	358		Pb	16 26 40.7	-0.4
GSTD					Sb	16 26 55.4	+1.0
KIWB	Kanaga Island	1.07	322	Pn	Pn	16 26 40.6	-0.3
GSTR	Great Sitkin T	1.07	1		Pb	16 26 41.4	-0.3
KIKV	Kanaga Island	1.09	322		Pn	16 26 41.2	0.0
KICM	Kanaga Island	1.14	323		Pn	16 26 41.9	+0.1
TAPA	Tanaga Point A	1.34	307		Pn	16 26 44.8	+0.1
TASE	Tanaga Southea	1.47	304		Pn	16 26 46.8	+0.4
TAFP	Tanaga Falls P	1.48	307		Pn	16 26 46.8	+0.3
ATKA	Atka Island	1.67	44		Pn	16 26 48.8	-0.3
ATKA					Sn	16 27 09.6	+0.1
KOWE	Korovin West	1.77	40		Pn	16 26 51.2	+0.8
UNV	Unalaska Valle	6.50	61	Pn	Pn	16 27 56.6	+1.1
KDAK	Kodiak Island	15.21	54	P	Pn	16 29 52.5	-1.9
	0.2nm,0.3s,baz=234,slow=5.3,SNR=6.1						
PETK	Petropavlovsk-	16.23	288	P	P	16 30 10.2	-0.2
	0.4nm,0.3s,baz=104,slow=15,SNR=12						
CNPM	China Poot	16.43	49	Pn	Pn	16 30 08.6	-1.5
BRLK	Bradley Lake	16.68	49	Pn	Pn	16 30 12.1	-1.2
BRLK				IAmb	IAmb	16 30 54.0	
	comp=Z,14nm,1.2s						
SEW	Seward	17.48	48	Pn	Pn	16 30 21.6	-1.5
SEW				IAmb	IAmb	16 31 08.0	
	comp=Z,10nm,1.2s						
PPLA	Purkeypile	17.50	38	Pn	Pn	16 30 23.3	-0.4
PPLA				IAmb	IAmb	16 30 33.2	
	comp=Z,31nm,1.7s						
RC01	Rabbit Creek A	17.70	45		P	16 30 26.4	-0.3
RC01				IAmb	IAmb	16 30 52.1	
	comp=Z,15nm,1.7s						
GHO	Glory Hole Cre	18.33	44		Pn	16 30 34.0	+0.2
GHO				IAmb	IAmb	16 30 47.0	
	comp=Z,34nm,2.0s						
KTH	Kantishna Hill	18.34	37		Pn	16 30 34.8	+1.0
KTH				IAmb	IAmb	16 30 45.7	
	comp=Z,9.2nm,1.0s						
KNK	Knik Glacier	18.40	45	P	P	16 30 31.6	-2.8
GLI	Glacier Island	18.83	47	P	P	16 30 38.8	-0.3
HIN	Hinchinbrook I	18.97	49	P	P	16 30 40.8	+0.2
SCM	Sheep Creek Mo	19.06	44	P	P	16 30 41.7	+0.1
RND	Reindeer	19.07	39	P	P	16 30 41.7	-0.1
RND				IAmb	IAmb	16 31 22.1	
	comp=Z,12nm,1.5s						
FID	Port Fidalgo	19.08	48	P	P	16 30 40.8	-1.0
FID				IAmb	IAmb	16 31 31.7	
	comp=Z,25nm,1.8s						
BILL	Bilibino	19.13	340	P	Pn	16 30 43.0	-0.3
BILL				IAmb	IAmb	16 30 51.8	
	comp=Z,14nm,1.9s						
MCK	McKinley	19.20	38	P	P	16 30 43.4	+0.3
MCK				IAmb	IAmb	16 31 34.2	
	comp=Z,19nm,1.9s						
DHY	Denali Highway	19.53	41	P	P	16 30 47.5	+0.7
DHY				IAmb	IAmb	16 30 52.9	
	comp=Z,19nm,1.9s						
CCB	Clear Creek Bu	20.08	36	P	P	16 30 52.5	-0.1
HDA	Harding Lake	20.29	38	P	P	16 30 55.1	+0.2
IL31		20.48	37	P	P	16 30 57.5	+0.5
ILAR	Eielson Array	20.48	37	P	P	16 30 55.2	-1.8
	comp=Z,0.4nm,0.6s,baz=238,slow=9.3,SNR=7.8						
RIDG	Independent Ri	20.84	40	P	P	16 31 00.8	-0.1
DOT	Dot Lake	21.13	41	P	P	16 31 04.4	+0.4
SCRK	Sand Creek	21.28	40	P	P	16 31 05.8	0.0
SCRK				IAmb	IAmb	16 31 33.2	
	comp=Z,3.1nm,0.8s						
TOLK	Toolik Lake Re	21.80	26	P	P	16 31 11.7	+0.4
TOLK				IAmb	IAmb	16 31 57.7	
	comp=Z,19nm,2.0s						
PCA	Pinnacle	21.95	52	P	P	16 31 12.3	-0.6
EGAK	Eagle	22.72	39	P	P	16 31 21.1	+0.1
EGAK				IAmb	IAmb	16 31 24.0	
	comp=Z,9.4nm,1.6s						
H11N2	WAKE ISLAND Hy	33.99	210	T	T	17 09 44.3	
	baz=18,slow=76,SNR=5.6						
H11N3	WAKE ISLAND Hy	34.00	210	T	T	17 09 50.7	
	baz=18,slow=76,SNR=4.0						
H11N1	WAKE ISLAND Hy	34.01	210	T	T	17 09 50.4	
	baz=18,slow=76,SNR=4.5						
PDAR	Pinedale Array	44.78	74	P	P	16 34 34.1	+1.1
	comp=Z,0.4nm,0.7s,baz=310,slow=3.4,SNR=2.5						
SONM	Songino Array	48.33	298	P	P	16 35 01.3	+0.8
	comp=Z,0.2nm,0.5s,baz=48,slow=8.7,SNR=2.3						
MKAR	Makanchi Array	61.58	310	P	P	16 36 35.1	-1.2
	comp=Z,0.4nm,0.6s,baz=56,slow=6.5,SNR=4.5						
CMAR	Chiang Mai Arr	72.75	278	P	P	16 37 48.0	+0.6
	comp=Z,0.3nm,0.6s,baz=36,slow=6.7,SNR=3.4						

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*SOME **02** 16:27:23.0, 39°.10N×72°.23E, h10^{km}*

*KRNET **02** 16:27:31.4±0.1, 39°.33N×71°.81E, mb3.0*

*ISU **02** 16:27:33.0, 39°.50N×71°.80E, h5^{km}*

*NNC **02** 16:27:36.9±3.5, 39°.57N×71°.72E, h0^{km}, mb3.6, mpv3.4, Error ellipse: s-maj=26.7km s-min=15.9km az=12.0*

ISC 02 16:27:21.4±2.4**, 39°.00N**±0°.10×**72°.22E**±0°.04**, h4**^{km}±10^{km}**, n30,** σ**2**^{s}**31**/51**, 24C-11D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	1.51	315	⇑*i*P	Pg	16 27 51.5	+1.1
	baz=14						
BTK				⇑*i*S	Sn	16 28 06.5	-3.1
	baz=14						
BTK	Batken	1.51	315	*i* P	Pg	16 27 52.2	+1.8
BTK				*i* S	Sn	16 28 06.6	-3.1
ANR	Andizhan	1.75	3	*e*P	Pg	16 28 00.0	+4.9
ANR				S	Sg	16 28 19.7	+1.9
ARSB	Arslanbob	2.39	14	⇑*i*P	Pg	16 28 11.5	+4.1
	baz=24						
ARSB				⇑*i*S	Sg	16 28 40.9	+2.6
	baz=24						
ARSB	Arslanbob	2.39	14	*e*P	Pg	16 28 11.4	+4.1
ARSB				*e*S	Sg	16 28 40.0	+1.7
ARK	Arkit	2.80	356	⇑*i*P	Pg	16 28 14.9	-0.2
	baz=3.0						
ARK				⇑*i*S	Sb	16 28 47.3	+0.5
	baz=3.0						
ARLS	Aral	3.28	29	⇓*i*P	Pg	16 28 25.3	+1.1
	baz=36						
ARLS				⇓*i*S	Sg	16 29 04.8	-1.9
	baz=36						
AML	Almayashu	3.32	19	⇑*i*P	Pg	16 28 24.7	-0.4
	baz=26						
AML				⇑*i*S	Sg	16 29 03.4	-4.8
	baz=26						
AML	Almayashu	3.32	19	P	Pg	16 28 25.2	0.0
	SNR=17						
IUG	Iuzhnay	3.56	333	*e*P	Pb	16 28 26.4	+1.4
	2.6nm,0.2s						
IUG				*e*S	Sg	16 29 12.3	-3.4
	58nm,0.3s						
IUG	Iuzhnay	3.56	333	Pg	Pb	16 28 26.4	+1.4
	2.6nm,0.2s						
IUG				Lg	Lg	16 29 04.0	
	35nm,0.5s						
JBG	Jabagly	3.65	340	Pg	Pb	16 28 28.3	+1.7
	8.1nm,0.2s						
JBG				Lg	Lg	16 29 07.3	
	20nm,0.4s						
UCH	Uchtor	3.67	28	⇓*i*P	Pg	16 28 30.3	-1.4
	baz=34						
UCH				⇓*i*S	Sb	16 29 13.1	+1.1
	baz=34						
UCH	Uchtor	3.67	28	P	Pg	16 28 31.1	-0.6
	SNR=9.2						
MRKS	Merke	3.82	11	*e*P	Pb	16 28 31.2	+1.7
	2.2nm,0.1s						
MRKS				*e*S	Sg	16 29 20.3	-3.7
	14nm,0.2s						
MRKS	Merke	3.82	11	Pg	Pb	16 28 31.2	+1.7
	2.2nm,0.1s						
MRKS				Lg	Lg	16 29 12.4	
	14nm,0.2s						
EKS2	Erkin-Say	3.84	17	⇑*i*P	Pb	16 28 31.8	+1.9
	baz=23						
EKS2				⇑*i*S	Sb	16 29 15.2	-1.6
	baz=23						
EKS2	Erkin-Say	3.84	17	P	Pg	16 28 33.3	-1.8
	SNR=7.2						
KZA	Kyzart	3.84	36	⇑*i*P	Pg	16 28 33.6	-1.5
	baz=42						
KZA				⇑*i*S	Sb	16 29 19.2	+2.1
	baz=42						
AAK	Ala-Archa	4.02	25	⇑*i*P	Pb	16 28 34.9	+1.9
	baz=31						
AAK				⇑*i*S	Sb	16 29 20.7	-1.3
	baz=31						
AAK	Ala-Archa	4.02	25	⇑Pn	Pg	16 28 35.8	-2.7
	1.3nm,0.4s						
AAK				⇑Pg	Pb	16 28 45.5	+13
	4.6nm,0.6s						
AAK				Lg	Lg	16 29 30.8	
	8.7nm,0.6s						
KK31	Karatay Array	4.30	343	⇓Pn	Pb	16 28 34.6	-2.9
	3.4nm,0.4s,baz=141,slow=11,SNR=99						
KK31				⇑Pg	Pg	16 28 44.8	+1.0
	1.5nm,0.3s,baz=161,slow=17,SNR=8.0						
KK31				⇑Sn	Sn	16 29 22.0	+3.8
	1.7nm,0.3s,baz=165,slow=16,SNR=3.8						
KK31				⇑Lg	Lg	16 29 34.4	
	8.2nm,0.5s,baz=159,slow=29,SNR=6.9						
BRLS	Borolday	4.41	337	*e*P	Pb	16 28 38.9	-0.6
	0.2nm,0.1s						
BRLS				*e*S	Sb	16 29 33.4	+0.4
	13nm,0.2s						
CHMS	Chumysh	4.43	25	⇑*i*P	Pb	16 28 40.5	+0.7
	baz=30						
CHMS				⇑*i*S	Sb	16 29 30.5	-3.1
	baz=30						
CHMS	Chumysh	4.43	25	P	Pb	16 28 41.2	+1.4
	SNR=8.3						
CHMS	Chumysh	4.43	25	⇓Pn	Pb	16 28 40.6	+0.8
	6.3nm,0.6s						
CHMS				⇓Sn	Sb	16 29 31.0	-2.5
	7.5nm,0.7s						
CHMS				⇓Lg	Lg	16 29 46.7	
	7.9nm,0.6s						
ULHL	Ulahol	4.46	42	⇑*i*P	Pb	16 28 42.7	+2.3
	baz=48						
ULHL				⇑*i*S	Sb	16 29 34.7	+0.1
	baz=48						
USP	Ospenovka	4.60	21	P	Pb	16 28 43.0	+0.4
	SNR=5.5						
AB31	Akbulak array	13.50	323	⇓Pn	P	16 30 40.0	-3.1
	0.3nm,0.5s,baz=131,slow=13,SNR=12						
AB31				⇓Sn	Sn	16 33 05.5	+1.4
	0.3nm,0.4s						
AKTO	Aktyubinsk	15.22	323	⇑Pn	P	16 31 05.6	+3.5
	2.3nm,0.9s						
AKTO				⇓Sn	Sn	16 33 49.0	+3.0
	0.9nm,0.7s						

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*SCB **02** 16:28:17.2±2.1, 18°.99S×67°.17W, h301^{km}±16^{km}, ML4.5/8, Error ellipse: s-maj=10.0km s-min=6.6km az=1.0*

*NEIC **02** 16:28:18.8±2.0, 18°.97S±0°.06×66°.92W±0°.08, h239^{km}±5^{km}, mb4.5/128, ML4.4(GUC), Error ellipse: s-maj=11.6km s-min=9.3km az=87.0*

*IDC **02** 16:28:19.3±0.7, 18°.95S×66°.93W, h240^{km}±6^{km}, mb3.9/12, mb1 4.0/18, mb1mx3.9/34, mbtmp4.4/18, Error ellipse: s-maj=11.1km s-min=8.1km az=84.0*

*VAO **02** 16:28:20.6±0.4, 18°.99S×66°.98W, h255^{km}±4^{km}, mb4.4*

*GUC **02** 16:28:21.0±0.7, 18°.99S×67°.43W, h283^{km}±9^{km}, ML4.2*

ISC 02 16:28:19.6±0.6**, 19°.00S**±0°.04×**67°.05W**±0°.05**, h247**^{km}±5^{km}**, n252,** σ**1**^{s}**27**/281**, mb4.5**/59**, 12C-1D, Central Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO01	Chusmiza	2.13	251	⇑*i*P	Pn	16 29 04.6	+1.0
GO01				*e*S	S	16 29 40.8	+2.5
GO01	Chusmiza	2.13	251		Pn	16 29 04.3	+0.7
PB08	IPOC Station P	2.29	240	⇑*i*P	Pn	16 29 06.1	+1.1
PB08				*e*S	S	16 29 41.8	+1.1
PB08				IAML		16 29 46.5	
	comp=N,682nm,0.8s						
PB08	IPOC Station P	2.29	240	P	Pn	16 29 04.1	-0.9
PB08				S	S	16 29 41.9	+1.2
PB08				AML	AML	16 29 42.7	
	comp=N,141nm,0.6s						
BBOE	La Paz, Chanca	2.35	338	P	Pn	16 29 08.0	+2.1
MNMC	Minye Minye	2.42	266	⇑*i*P	Pn	16 29 07.0	+0.8
MNMC				*e*S	S	16 29 42.3	-0.4
MNMC	Minye Minye	2.42	266	P	Pn	16 29 04.9	-1.2
MNMC	Minye Minye	2.42	266		Pn	16 29 06.8	+0.6
PB16	IPOC Station P	2.42	285	⇑*i*P	Pn	16 29 08.0	+1.5
PB16				*e*S	S	16 29 43.6	+0.1
PB16				IAML		16 29 51.1	
	comp=N,99nm,0.2s						
PB11	IPOC Station P	2.58	252	⇑*i*P	Pn	16 29 07.9	+0.2
PB11				*i* S	S	16 29 44.3	-1.2
PB11				IAML		16 29 46.7	
	comp=N,1µm,0.3s						
PB11	IPOC Station P	2.58	252	P	Pn	16 29 07.9	+0.2
PB11				S	S	16 29 45.2	-0.3
PB11				AML	AML	16 29 47.9	
	comp=N,659nm,0.4s						
PB11	IPOC Station P	2.58	252		Pn	16 29 07.8	+0.1
MOCB	Mochara	2.60	150	P	Pn	16 29 09.8	+1.6
BBOD	La Paz, Gloria	2.77	328	P	Pn	16 29 10.1	-0.1
LPAZ	La Paz	2.89	339	P	Pn	16 29 12.6	+1.2
	comp=N,5.2nm,0.3s,baz=170,slow=7.4,SNR=168						
LPAZ				S	S	16 29 51.2	-1.0
	comp=N,2.3nm,0.3s,baz=40,slow=22,SNR=9.7						
LPAZ	La Paz	2.89	339	P	Pn	16 29 12.2	+0.7
LPAZ				S	S	16 29 52.2	-0.1
LPAZ				AML	AML	16 29 58.8	
	comp=N,504nm,1.4s						
LPAZ	La Paz	2.89	339		Pn	16 29 12.4	+1.0
LPAZ	La Paz	2.89	339	*e*P	Pn	16 29 12.7	+1.2
PSGC	Pisagua	2.97	258	⇑*i*P	Pn	16 29 11.2	-0.5
PSGC				*i* S	S	16 29 50.4	-2.4
PSGC	Pisagua	2.97	258	P	Pn	16 29 10.1	-1.6
PSGC				S	S	16 29 50.9	-1.9
PSGC				AML	AML	16 29 52.8	
	comp=N,727nm,0.4s						
PB01	IPOC Station P	3.07	228	P	Pn	16 29 13.0	+0.2
PB01				S	S	16 29 52.7	-2.1
PB01				AML	AML	16 29 56.2	
	comp=N,601nm,0.4s						
PB01	IPOC Station P	3.07	228	Pn	Pn	16 29 13.6	+0.9
BS09	Huarina	3.17	332	P	Pn	16 29 14.7	+0.3
TA01	Diego Aracena	3.34	242	⇑*e*P	Pn	16 29 15.6	-0.1
TA01				*i* S	S	16 29 57.6	-2.5
PATCX	Punta Patache	3.44	238	*e*P	Pn	16 29 16.8	-0.1
PATCX				*e*S	S	16 29 59.8	-2.4
PB09	IPOC Station P	3.46	216	*e*P	Pn	16 29 19.0	+1.7
PB09				*e*S	S	16 30 03.1	+0.2

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YJA   Yavi                3.47 156  P     Pn     16 29 18.9 +1.3
PB02  IPOC Station P      3.54 229 eP     Pn     16 29 19.0 +1.0
PB02                               eS     S      16 30 02.4 -1.9
PB02  IPOC Station P      3.54 229  P     Pn     16 29 19.1 +1.0
PB02                                S     S      16 30 01.6 -2.7
PB02                                AML   AML    16 30 03.4
      comp=N,814nm,0.4s
PB07  IPOC Station P      3.80 224⇓iP     Pn     16 29 22.1 +0.9
PB07                               eS     S      16 30 07.6 -2.4
PB03  IPOC Station P      3.96 219 eP     Pn     16 29 24.1 +1.1
PB03                               eS     S      16 30 10.7 -2.5
LVC   Limon Verde         3.99 206  P     Pn     16 29 24.5 +0.9
      comp=N,11nm,0.3s,baz=19,slow=8.0,SNR=50
LVC                                 S     S      16 30 14.1 -0.3
      comp=N,21nm,0.3s,baz=220,slow=19,SNR=30
LVC   Limon Verde         3.99 206        Pn     16 29 24.2 +0.6
LVC   Limon Verde         3.99 206 eP     Pn     16 29 24.7 +1.1
PB06  IPOC Station P      4.38 212⇑iP     Pn     16 29 28.6 +0.6
PB06                               i S    S      16 30 19.8 -2.5
PB06  IPOC Station P      4.38 212  P     Pn     16 29 28.6 +0.6
PB06                                S     S      16 30 18.1 -4.2
PB06                                AML   AML    16 30 22.6
      comp=N,610nm,0.6s
PB04  IPOC Station P      4.41 221⇑iP     Pn     16 29 28.8 +0.5
PB04                               eS     S      16 30 20.3 -2.7
PB04  IPOC Station P      4.41 221  P     Pn     16 29 28.6 +0.2
PB04                                S     S      16 30 20.1 -2.9
PB04                                AML   AML    16 30 20.9
      comp=N,763nm,0.5s
PB04  IPOC Station P      4.41 221        Pn     16 29 28.2 -0.1
PB05  IPOC Station P      4.84 217⇑iP     Pn     16 29 33.5  0.0
PB05                               i S    S      16 30 28.0 -4.3
PB10  IPOC Station P      5.56 215 ⇑P     Pn     16 29 41.7 -0.5
PB10  IPOC Station P      5.56 215        Pn     16 29 41.3 -0.9
SLA   San Lorenzo         5.87 166  P     Pn     16 29 47.3 +1.0
PB14  IPOC Station P      6.41 209⇑iS     S      16 31 02.9 -5.0
SIV   San Ignacio         6.44  63  P     Pn     16 29 51.9 -1.4
      comp=N,5.1nm,0.3s,baz=259,slow=10,SNR=69
SIV                                 S     S      16 31 01.9 -6.3
      comp=N,0.6nm,0.3s,baz=318,slow=15,SNR=6.5
SIV   San Ignacio         6.44  63  P     Pn     16 29 53.9 +0.6
GO02  Mina Guanaco        6.57 201        Pn     16 29 54.7 -0.5
GO03  Copiap              9.04 198        Pn     16 30 25.1 -1.1
SAML  Samuel             10.67  21 eP     Pn     16 30 48.8 +2.0
AQDB  Aquidauana         10.79 100 eP     Pn     16 30 48.4 +0.2
SALV  Santo Antonio      11.26  76 eP     Pn     16 30 53.4 -0.8
CPUP  Villa Florida      11.56 131  P     Pn     16 30 57.8 -0.1
      comp=N,0.1nm,0.3s,baz=301,slow=12,SNR=7.3
CPUP  Villa Florida      11.56 131        Pn     16 30 56.9 -0.9
CPUP  Villa Florida      11.56 131 eP     Pn     16 30 57.4 -0.4
GO04  Tololo Observa     11.64 196  Pn    Pn     16 30 58.8 -0.2
PP1B  Ponte de Pedra     11.64  85 eP     Pn     16 30 58.5 -0.4
NNA   Nana               11.73 305  P     Pn     16 31 01.4 +1.2
      comp=N,2.4nm,0.3s,baz=139,slow=10,SNR=16
NNA   Nana               11.73 305  P     Pn     16 31 01.1 +1.0
NNA   Nana               11.73 305        Pn     16 31 01.1 +1.0
C2SB  Chapadao do Su     13.45  91 eP     Pn     16 31 21.7 +0.4
CLDB  Colider            13.54  55 eP     Pn     16 31 21.9 -0.4
TRCB  Terra Rica         13.99 108 eP     P      16 31 28.6 +0.1
ITQB  Itaqui             14.24 140 eP     Pn     16 31 30.7  0.0
ARAG  Araguaiana, MT     14.91  80 eP     P      16 31 38.4 -0.4
PTGB  Pitanga            15.02 115 eP     Pn     16 31 41.0 +0.6
PCMB  Pacaembu           15.03 103 eP     Pn     16 31 40.6 +0.2
ITRB  Iturama            15.77  95 eP     P      16 31 48.3 +0.2
ITAB  Concordia          15.97 124 eP     Pn     16 31 51.1 -0.5
GO05  Huala              16.53 194  Pn    Pn     16 31 58.6 +0.6
GO05                                IAmb  IAmb   16 32 55.7
      comp=Z,37nm,1.6s
CPSB  Cacapava Do Su     16.77 135 eP     P      16 31 59.4 +0.4
FRTB  Fartura            16.87 108 eP     P      16 32 00.5 +0.2
BB19B Bebedouro          17.52 100 eP     P      16 32 07.5 +0.1
PLTB  Pedras Altas       17.56 139 eP     P      16 32 07.0 -0.6
IPMB  Ipameri, GO        17.89  90 eP     P      16 32 11.8 +0.3
CNLB  Canela             17.98 128 eP     P      16 32 11.3 -0.9
BDFB  Brasilia           18.47  83  P     P      16 32 17.9 +0.1
      comp=Z,2.6nm,0.3s,baz=250,slow=12,SNR=19
BDFB  Brasilia           18.47  83  P     P      16 32 17.8  0.0
BDFB                                IAmb  IAmb   16 32 23.4
      comp=Z,14nm,0.7s
OGAUY Aigu               18.81 147 eP     P      16 32 21.9 +0.8
SPB   Sao Paulo          18.84 107  P     P      16 32 20.2 -1.3
SPB                                 IAmb  IAmb   16 32 21.6
      comp=Z,21nm,0.9s
SPB   Sao Paulo          18.84 107 eP     P      16 32 20.7 -0.8
VAO   Valinhos           19.16 105 eP     P      16 32 24.2 -0.9
PTGA  Pitinga            19.44  22  S     S      16 35 49.2 -5.2
      comp=Z,0.1nm,0.3s,baz=305,slow=21,SNR=5.6
PTGA  Pitinga            19.44  22 eP     P      16 32 27.8 -0.2
PARB  Paraibuna          20.44 106 eP     P      16 32 37.5 -1.2
BSCB  Bom Sucesso        21.02  99 eP     P      16 32 44.0 -0.9
SMTB  Santa Maria do     21.38  65 eP     P      16 32 48.3  0.0
ESAR  Angra dos Reis     21.47 105 eP     P      16 32 49.1  0.0
PLCA  Paso Flores        21.87 187  P     P      16 32 53.5 +0.7
      comp=Z,10nm,0.7s,baz=22,slow=11,SNR=43
PLCA  Paso Flores        21.87 187  P     P      16 32 53.3 +0.6
PLCA                                IAmb  IAmb   16 32 55.2
      comp=Z,10nm,0.8s
PLCA  Paso Flores        21.87 187 eP     P      16 32 53.4 +0.7
JANB  Januaria           22.08  83 eP     P      16 32 54.6 -0.3
SJMB  Sao Joao De Ma     24.47  94 eP     P      16 33 15.4 -1.1
GO07  Milladeo Hill,     24.68 192  P     P      16 33 18.2 +0.1
ROSC  El Rosal           24.75 342  P     P      16 33 19.5 +0.1
ROSC                                IAmb  IAmb   16 33 39.8
      comp=Z,8.9nm,0.5s
BSFB  Barra de Sao F     24.78  94 eP     P      16 33 18.7 -0.6
NBIT  Itapeh - BA        26.70  86 eP     P      16 33 36.7 +0.1
NBPN  Ponto Novo - B     27.15  76 eP     P      16 33 40.1 -0.4
NBPS  Pedro II - PI      28.90  63 eP     P      16 33 55.9 -0.2
NBLA  Lagarto - SE       29.33  78 eP     P      16 33 58.8 -1.0
NBTA  Tacaratu-PE        29.73  75 eP     P      16 34 03.3 -0.1
NBMA  Muriti-CE          29.81  71 eP     P      16 34 03.8 -0.3
NBPB  Pedra_Branca-C     29.92  67 eP     P      16 34 04.9 -0.2
NBMO  Morrinhos-CE       30.66  63 eP     P      16 34 11.3 -0.2
NBAN  Anadia - AL        31.18  77 eP     P      16 34 15.3 -0.7
NBLI  Livramento-PB      31.44  72 eP     P      16 34 18.1 -0.4
NBCL  Cascavel-CE        31.68  66 eP     P      16 34 20.3 -0.1
NBPA  Parau_RN           31.99  70 eP     P      16 34 23.1 -0.1
RCBR  Riachuelo          33.04  71  P     P      16 34 32.2 -0.1
      comp=Z,22nm,0.9s,baz=236,slow=11,SNR=11
RCBR  Riachuelo          33.04  71  P     P      16 34 31.8 -0.5
RCBR  Riachuelo          33.04  71 eP     P      16 34 32.2 -0.1
NBPV  Pedro Velho        33.33  72 eP     P      16 34 34.6 -0.2
DR12  Loma Pena Alta     37.62 356  P     P      16 35 12.4 +1.2
TEIG  Tepich             44.19 331  P     P      16 36 04.6 +0.1
TLIG  Tlapa              47.75 318  P     P      16 36 34.3 +1.9
344A  Westbrook Farm     55.08 335  pP    pP     16 38 18.4 -3.4
V55A  Taylorsville       56.18 346  P     P      16 37 34.0 +0.1
V55A                                IAmb  IAmb   16 37 34.9
      comp=Z,8.8nm,0.9s
T59A  Double "B" Far     56.54 350  P     P      16 37 35.7 -0.8
T59A                                IAmb  IAmb   16 37 48.1
      comp=Z,28nm,1.6s
SWET  Sewanee            56.82 342  P     P      16 37 37.6 -0.9
SWET                                IAmb  IAmb   16 38 05.7
      comp=Z,16nm,1.6s
U54A  Nelsons Funny      56.96 346  P     P      16 37 39.4 -0.1
U54A                                IAmb  IAmb   16 37 44.9
      comp=Z,18nm,1.3s
OXF   Oxford             57.31 338  P     P      16 37 42.7 +0.8
Z41A  Richland Creek     57.49 334  P     P      16 37 42.9 -0.3
Z41A                                IAmb  IAmb   16 39 25.5
      comp=Z,19nm,1.2s
V48A  Smith Brothers     57.58 341  P     P      16 37 42.8 -0.9
V48A                                IAmb  IAmb   16 38 55.6
      comp=Z,18nm,1.8s
S54A  Dingess, Beckl     58.07 347  P     P      16 37 47.1 -0.1
WVT   Waverly            58.25 340  P     P      16 37 47.0 -1.4
JCT   Junction City      58.42 327  P     P      16 37 49.8  0.0
T47A  Sharon Grove       58.81 341  P     P      16 37 51.3 -1.0
LCAR  Lake Charles       59.33 337  P     P      16 37 54.8 -1.0
TXAR  Lajitas Array      59.64 323  P     P      16 37 58.6 +0.4
      comp=Z,0.8nm,0.6s,baz=149,slow=8.5,SNR=13
TX31  Lajitas Ar. Si     59.64 323  P     P      16 37 58.2  0.0
TX32  Lajitas Array      59.64 323  P     P      16 37 58.2  0.0
P53A  Whipple            59.70 347  P     P      16 37 58.1 -0.2
P53A                                IAmb  IAmb   16 37 59.1
      comp=Z,8.2nm,0.7s
WCI   Wyandotte Cave     59.73 343  P     P      16 37 57.3 -1.2
WCI                                 IAmb  IAmb   16 37 58.6
      comp=Z,25nm,1.9s
ABTX  Abilene, Hawle     60.06 328  P     P      16 38 00.3 -0.6
ABTX                                IAmb  IAmb   16 38 02.2
      comp=Z,16nm,1.3s
U40A  Yellville          60.22 336  P     P      16 38 01.0 -0.9
MGMO  Mountain Grove     60.70 337  P     P      16 38 04.5 -0.6
BRYW  Bryant College     60.75 356  P     P      16 38 05.1 -0.2
ACSO  Alum Creek Sta     60.77 346  P     P      16 38 04.7 -0.8
FVM   French Village     60.79 339  P     P      16 38 05.0 -0.6
FVM                                 IAmb  IAmb   16 38 05.9
      comp=Z,14nm,1.1s
X34A  Smith Ranch, M     60.82 331  P     P      16 38 05.0 -0.9
X34A                                IAmb  IAmb   16 38 07.5
      comp=Z,12nm,0.8s
TUL1  Leonard            61.02 333  P     P      16 38 06.0 -1.3
TUL1                                IAmb  IAmb   16 38 08.2
      comp=Z,5.3nm,0.7s
O49A  Covington          61.05 345  P     P      16 38 06.0 -1.4
O49A                                IAmb  IAmb   16 38 29.3
      comp=Z,26nm,1.8s
M56A  Emporium           61.05 350  P     P      16 38 06.1 -1.3
CCM   Cathedral Cave     61.14 338  P     P      16 38 07.1 -0.9
CCM                                 IAmb  IAmb   16 38 08.2
      comp=Z,11nm,0.7s
FNO   Franklin           61.17 332  P     P      16 38 08.7 +0.4
L59A  Walton             61.33 353  P     P      16 38 09.2  0.0
BINY  Binghamton         61.45 352  P     P      16 38 10.2 +0.2
S39A  Bolivar            61.57 336  P     P      16 38 10.1 -0.8
N49A  Columbus Grove     61.70 345  P     P      16 38 09.9 -1.8
N49A                                IAmb  IAmb   16 38 11.7
      comp=Z,10.0nm,0.7s
SFIN  Lafayette          61.95 343  P     P      16 38 11.8 -1.6
SFIN                                IAmb  IAmb   16 38 12.5
      comp=Z,5.4nm,0.6s
K58A  Earlville          61.96 353  P     P      16 38 13.3 -0.1
ERPA  Erie               61.97 349  P     P      16 38 12.9 -0.5
ERPA                                IAmb  IAmb   16 38 14.0
      comp=Z,9.4nm,0.8s
P43A  Skaggs, Pawnee     62.00 340  P     P      16 38 11.5 -2.2
P43A                                IAmb  IAmb   16 38 13.2
      comp=Z,8.7nm,0.7s
WVNY  West Valley, N     62.02 350  P     P      16 38 12.4 -1.4
N47A  Urbana             62.04 344  P     P      16 38 12.6 -1.4
N47A                                IAmb  IAmb   16 38 13.5
      comp=Z,7.3nm,0.7s
T35A  Sooner Cattle      62.18 334  P     P      16 38 14.8 -0.2
T35A                                IAmb  IAmb   16 38 16.3
      comp=Z,13nm,1.1s
MNTX  Cornudas Mount     62.39 323  P     P      16 38 16.4 -0.1
J59A  Piesco             62.53 354  P     P      16 38 16.8 -0.4
J56A  Wolcott            62.62 352  P     P      16 38 16.9 -0.7
J57A  Williamstown       62.64 353  P     P      16 38 17.6 -0.2
J57A                                IAmb  IAmb   16 40 32.7
      comp=Z,21nm,1.4s
MSTX  Muleshoe           62.72 327  P     P      16 38 18.6 -0.1
MSTX                                IAmb  IAmb   16 38 19.8
      comp=Z,7.7nm,0.9s
MEDO  Medina             62.74 351  P     P      16 38 19.2 +0.7
J48A  Bridge Port        63.87 346  P     P      16 38 24.1 -1.8
SNAA  Sanae              64.07 162  P     P      16 38 27.4 +0.4
SNAA                                IAmb  IAmb   16 39 27.8
      comp=Z,22nm,1.9s
K43A  Burlington         64.45 343  P     P      16 38 28.7 -1.0
K43A                                IAmb  IAmb   16 38 29.9
      comp=Z,13nm,1.1s
CBKS  Cedar Bluff        65.16 332  P     P      16 38 34.1 -0.3
JFWS  Jewell Farm        65.20 341  P     P      16 38 33.4 -1.2
JFWS                                IAmb  IAmb   16 38 34.6
      comp=Z,7.0nm,0.8s
TRQ   Mont Tremblant     65.27 354  P     P      16 38 34.3 -0.7
ANMO  Albuquerque        65.42 325  P     P      16 38 36.2 -0.1
H43A  Windswept, Lux     65.94 344  P     P      16 38 36.5 -2.7
H43A                                IAmb  IAmb   16 38 38.7
      comp=Z,5.6nm,0.7s
BATG  Bathurst New B     65.97   1  P     P      16 38 39.1 -0.2
T25A  Trinidad           66.02 328  P     P      16 38 40.4 +0.3
DBIC  Dimbokro           66.35  74  P     P      16 38 41.0 -1.4
      comp=Z,5.0nm,0.7s,baz=210,slow=2.1,SNR=7.9
DBIC  Dimbokro           66.35  74  P     P      16 38 40.9 -1.5
DBIC                                IAmb  IAmb   16 38 42.6
      comp=Z,7.7nm,1.0s
D53A  Lac Vacive, Po     66.47 352  P     P      16 38 40.8 -1.7
D53A                                IAmb  IAmb   16 40 32.9
      comp=Z,21nm,1.7s
BGNE  Belgrade           66.66 335  P     P      16 38 43.0 -0.9
E46A  Sault Ste Mari     66.91 347  P     P      16 38 44.1 -1.1
E46A                                IAmb  IAmb   16 40 47.4
      comp=Z,32nm,1.9s
SDCO  Great Sand Dun     67.04 328  P     P      16 38 47.8 +1.1
SDCO                                IAmb  IAmb   16 38 49.0
      comp=Z,5.9nm,0.8s
X18A  Snowflake          67.07 322  P     P      16 38 48.0 +1.2
X16A  Lo Mia Camp, P     67.86 321  P     P      16 38 50.0 -1.7
ECSD  EROS Data Cent     68.06 337  P     P      16 38 52.1 -0.5
ECSD                                IAmb  IAmb   16 39 20.2
      comp=Z,15nm,1.9s
SPMN  Marine on St.      68.08 341  P     P      16 38 52.0 -0.7
MVCO  Mesa Verde         68.20 325  P     P      16 38 53.4 -0.5
MVCO                                IAmb  IAmb   16 38 56.8
      comp=Z,12nm,1.2s
Y14A  Wickenburg         68.47 320  P     P      16 38 55.0 -0.4
Y14A                                IAmb  IAmb   16 38 58.4
      comp=Z,12nm,1.5s
O20A  White River Ci     70.24 328  P     P      16 39 06.3  0.0
O20A                                IAmb  IAmb   16 39 16.1
      comp=Z,27nm,2.0s
LCMT  Little Creek M     70.71 322  P     P      16 39 09.6 +0.5
MTPU  Mount Pierson      70.83 324  P     P      16 39 10.8 +0.8
Q16A  Castle Valley      70.89 325  P     P      16 39 11.2 +1.0
P17A  Butcher Ranch,     71.06 326  P     P      16 39 12.5 +1.4
CCUT  Cedar City         71.15 323  P     P      16 39 13.6 +1.7
MSU   Marysvale          71.15 324  P     P      16 39 13.1 +1.3
QSPA  South Pole Qui     71.18 180  P     P      16 39 13.3 +1.8
      comp=Z,4.6nm,0.7s,baz=185,slow=0.5,SNR=15
QSPA  South Pole Qui     71.18 180  P     P      16 39 13.0 +1.5
QSPA                                IAmb  IAmb   16 39 14.2
      comp=Z,8.3nm,1.0s
RDMU  Red Mountain       71.24 327  P     P      16 39 12.1 -0.2
RSSD  Black Hills        71.35 333  P     P      16 39 12.8 -0.1
SHPR  Sheep Range        71.50 321  P     P      16 39 15.4 +1.5
AGMN  Agassiz Nation     71.78 340  P     P      16 39 14.3 -0.7
AGMN                                IAmb  IAmb   16 39 15.3
      comp=Z,5.1nm,0.7s
PSUT  Pine Spring        72.11 323  P     P      16 39 19.3 +1.8
TPNV  Topopah Spring     72.45 320  P     P      16 39 21.4 +1.9
TPNV                                IAmb  IAmb   16 39 22.8
      comp=Z,8.0nm,1.1s
MDND  Maddock            72.66 338  P     P      16 39 20.5 +0.2
PD31  Pinedale Array     72.86 329  P     P      16 39 22.3 +0.4
PDAR  Pinedale Array     72.86 329  P     P      16 39 22.4 +0.6
      comp=Z,0.8nm,0.5s,baz=127,slow=7.9,SNR=13
HWUT  Hardware Ranch     73.03 327  P     P      16 39 23.6 +0.8
SPUT  South Promonto     73.28 326  P     P      16 39 24.9 +0.7
BGU   Big Grassy Mou     73.32 325  P     P      16 39 24.5  0.0
ULM   Lac du Bonnet      73.50 341  P     P      16 39 24.7 -0.3
      comp=Z,4.4nm,0.7s,baz=153,slow=7.3,SNR=11
ULM   Lac du Bonnet      73.50 341  P     P      16 39 24.5 -0.6
ULM                                 IAmb  IAmb   16 39 25.2
      comp=Z,5.1nm,0.7s
SCHQ  Schefferville      73.53   0  P     P      16 39 25.3 +0.1
      comp=Z,3.6nm,1.0s,baz=240,slow=5.4,SNR=5.1
SCHQ  Schefferville      73.53   0  P     P      16 39 24.4 -0.7
IMW   Indian Meadow      74.37 329  P     P      16 39 30.9 +0.2
IMW                                 IAmb  IAmb   16 39 33.1
      comp=Z,6.8nm,0.9s
FLWY  Flagg Ranch        74.39 329  P     P      16 39 32.1 +1.4
FLWY                                IAmb  IAmb   16 39 33.5
      comp=Z,6.8nm,0.6s
ELK   Elko               74.40 324  P     P      16 39 31.7 +0.8
RLMT  Red Lodge          74.48 330  P     P      16 39 32.3 +1.1
NVAR  Mina Array Bea     74.65 321  P     P      16 39 33.5 +1.2
      comp=Z,2.3nm,0.9s,baz=148,slow=6.3,SNR=12
YNE   Yellowstone No     74.74 330  P     P      16 39 33.5 +0.8
TOA0  Torodi Ar. Sit     74.87  70  P     P      16 39 32.1 -1.6
TOA0                                IAmb  IAmb   16 39 34.1
      comp=Z,6.6nm,0.6s
TORD  Torodi Ar. Bea     74.87  70  P     P      16 39 32.2 -1.6
      comp=Z,5.3nm,0.5s,baz=254,slow=5.2,SNR=42
KVN   Kaiserville        74.92 321  P     P      16 39 34.8 +1.0
YHH   Holmes Hill        74.98 329  P     P      16 39 36.3 +2.1
YHB   Horse Butte        75.12 329  P     P      16 39 33.8 -1.1
GCMT  Greycliff          75.17 331  P     P      16 39 35.8 +0.8
YHL   Hebgen Lake        75.19 329  P     P      16 39 36.2 +0.8
YERR  Yerington          75.56 321  P     P      16 39 37.9 +0.4
YERR                                IAmb  IAmb   16 39 40.6
      comp=Z,9.8nm,1.3s
MCMT  McKenzie Canyo     75.99 328  P     P      16 39 40.5 +0.7
PAHR  Pah Rah Range      76.11 321  P     P      16 39 41.9 +1.4
PAHR                                IAmb  IAmb   16 39 43.6
      comp=Z,10nm,0.8s
MFID  Camas Ranch        76.54 326  P     P      16 39 44.5 +1.7
MFID                                IAmb  IAmb   16 39 45.9
      comp=Z,15nm,1.4s
BEKR  Beckworth          76.79 321  P     P      16 39 45.7 +1.3
EGMT  Eagleton           76.89 332  P     P      16 39 43.8 -0.7
ORV   Oroville           77.29 320  P     P      16 39 46.9  0.0
MOD   Modoc Plateau      78.04 322  P     P      16 39 52.0 +0.8
MOD                                 IAmb  IAmb   16 39 53.9
      comp=Z,20nm,1.6s
BMO   Blue Mountains     78.30 326  P     P      16 39 54.0 +1.6
BMO                                 IAmb  IAmb   16 39 55.1
      comp=Z,7.5nm,0.8s
WDC   Whiskeytown Da     78.55 320  P     P      16 39 53.7 -0.1
WDC                                 IAmb  IAmb   16 40 49.5
      comp=Z,33nm,1.9s
SBA   Scott Base         78.59 190  P     P      16 39 53.6 +0.1
JTMT  Jette              78.77 330  P     P      16 39 55.6 +0.7
JTMT                                IAmb  IAmb   16 39 57.2
      comp=Z,12nm,1.2s
I07A  Izee               78.98 324  P     P      16 39 57.8 +1.6
F10A  Beach Ranch, E     79.01 327  P     P      16 39 57.8 +1.6
C09A  Chrisman Ranch     80.77 328  P     P      16 40 06.9 +1.4
C09A                                IAmb  IAmb   16 40 07.8
      comp=Z,9.8nm,0.8s
BOSA  Boshof             83.06 118  P     P      16 40 18.5 +0.3
      comp=Z,1.0nm,0.6s,baz=243,slow=2.6,SNR=4.0
BOSA  Boshof             83.06 118  IAmb  IAmb   16 40 54.4
      comp=Z,24nm,1.5s
YKA   Yellowknife Ar     89.43 340  P     P      16 40 48.6 +0.6
      comp=Z,4.3nm,0.8s,baz=128,slow=4.8,SNR=51
ASAR  Alice Springs     132.93 207  PKP   PKiKP  16 47 07.0 -0.5
      comp=Z,0.7nm,0.5s,baz=137,slow=1.7,SNR=23
ASAR                                SKPbc SKPbc  16 50 11.1 +0.6
      comp=Z,0.4nm,0.7s,baz=143,slow=3.8,SNR=6.9
WRA   Warramunga Arr    135.98 210  PKhKP PKPpre 16 46 58.7
      comp=Z,0.4nm,0.8s,baz=148,slow=3.4,SNR=5.0
WRA                                 PKP   PKPdf  16 47 12.9 +0.8
      comp=Z,1.2nm,0.5s,baz=156,slow=1.7,SNR=16
WRA                                 SKPbc SKPbc  16 50 21.1 +0.7
      comp=Z,0.4nm,0.6s,baz=156,slow=2.6,SNR=5.2
ZALV  Zalesovo Beam     138.96  25  PKP   PKPdf  16 47 17.4 +1.0
      comp=Z,1.5nm,0.8s,baz=304,slow=3.7,SNR=6.6
KSH   Kashi             142.16  49  PKP   PKPdf  16 47 22.5 -0.3
KSH                                 pPKP  pPKPdf 16 48 20.2 -7.1
KSH                                 PP    PP     16 50 36.7 +5.0
KSH                                 PKS   PKSdf  16 50 56.0 -2.7
KSH                                 SKKS         16 56 59.5
MKAR  Makanchi Array    142.59  35  PKP   PKPdf  16 47 23.7 +0.5
      comp=Z,0.3nm,0.6s,baz=328,slow=1.6,SNR=4.7
JKA   Kamikawa-asahi    144.76 322        PKPdf  16 47 27.6 +0.6
ASAJ  Asahikawa         144.76 322  PKP   PKPdf  16 47 27.6 +0.6
      comp=Z,14nm,0.9s,baz=1.8,slow=3.6,SNR=6.2
KLR   Kul'dur           146.26 338  PKPbc PKPbc  16 47 31.1 +0.1
      comp=Z,1.3nm,0.5s,baz=40,slow=2.6,SNR=5.6
USRK  Ussuriysk Ar.     150.25 332  PKPbc PKiKP  16 47 42.0 -0.1
      comp=Z,5.7nm,0.7s,baz=263,slow=2.0,SNR=7.2
SONM  Songino Array     150.74   9  PKP   PKPdf  16 47 37.1 +0.1
      comp=Z,0.4nm,0.6s,baz=303,slow=1.5,SNR=4.6
SONM                                PKPbc PKiKP  16 47 43.3  0.0
      comp=Z,2.3nm,0.6s,baz=267,slow=2.5,SNR=8.4
MJAR  Matsushiro Arr    151.76 313  PKPbc PKiKP  16 47 45.9 +0.3
      comp=Z,1.5nm,0.6s,baz=92,slow=1.9,SNR=6.5
HHC   Hu-ho-hao-te      158.19   3 eP     PKPdf  16 47 46.4 -1.0
NJ2   Nanjing           165.96 339 eP     PKPdf  16 47 54.4 -0.9
```

IDC 02 16:35:52.9±5.3**, 6°.34S**×**132°.82E, h0**km**, mb3.3**/1**, mb1 3.2**/3**, mb1mx3.1**/30**, mbtmp3.0**/3**, ML3.0**/2**, MS2.6**/1**, Ms1 2.6**/1**, ms1mx2.4**/18**, Error ellipse: s-maj=333.3km s-min=32.3km az=76.0, Tanimbar Islands region**

```
Code  Station Name         Δ°  AZ°   Phase ID        Time      Res
                                    Op    ISC      h  m  s    ISC
SIJI  Sorong              5.65 344  LR    LR     16 40 01.4
      comp=Z,64nm,20.4s,baz=282,slow=44
WRA   Warramunga Arr     13.61 174  Pn    Pn     16 39 07.0 -0.4
      0.1nm,0.3s,baz=356,slow=13,SNR=9.5
WRA                                 Sn    Sn     16 41 27.4  -12
      0.3nm,0.3s,baz=343,slow=30,SNR=8.5
ASAR  Alice Springs      17.26 177  P     Pn     16 39 56.0 +0.3
      0.0nm,0.3s,baz=344,slow=8.9,SNR=5.0
ASAR                                S     Sn     16 42 52.7  -16
      0.1nm,0.3s,baz=360,slow=26,SNR=5.1
MKAR  Makanchi Array     69.24 325  P     P      16 47 01.8  0.0
      0.1nm,0.3s,baz=118,slow=7.7,SNR=3.8
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*JMA **02** 16:42:25.7±0.3, 43°.99N×148°.12E, h0km, M3.7*

*SKHL **02** 16:42:26.0±0.4, 44°.41N×148°.41E, h50km±4km, mb4.3/4*

ISC 02 16:42:23.2±3.4**, 44°.34N**±0°.10×**148°.6E**±0°.2**, h55**km**, n16,** σ**1s.63**/26**, Kuril Islands**

```
Code  Station Name         Δ°  AZ°   Phase ID        Time      Res
                                    Op    ISC      h  m  s    ISC
KUR   Kuril'sk            1.04 329 i P    Pn     16 42 41.6 +0.1
KUR                                 AMB   AMB    16 42 42.0
      180nm,0.4s
KUR                                eS     Sn     16 42 53.7 -1.4
KUR                                 A     A      16 42 54.0
      990nm,0.3s
KUR                                 A     A      16 42 54.0
      600nm,0.3s
YUK   Yuzh-Kuril'sk       2.00 262 i P    Pn     16 42 55.2 +0.6
YUK                                 AMB   AMB    16 43 02.0
      60nm,0.2s
YUK                                i S    Sn     16 43 16.9 -1.6
YUK                                 A     A      16 43 20.0
      250nm,0.2s
YUK                                 A     A      16 43 20.0
      150nm,0.2s
GRPR  Tuman               2.07 261 eP     Pn     16 42 56.0 +0.5
GRPR                                AMB   AMB    16 42 57.0
      60nm,0.2s
GRPR                               eS     Sn     16 43 19.0 -1.2
GRPR                                A     A      16 43 21.0
      180nm,0.2s
GRPR                                A     A      16 43 21.0
      160nm,0.2s
NEM2  Nemuro 2            2.29 246  P     Pn     16 42 58.9 +0.4
NEM2                               eS     Sn     16 43 22.8 -2.8
NMR   Nemuro--Hokkai      2.30 246 i P    Pn     16 42 59.0 +0.3
NMR                                i S    Sn     16 43 23.7 -2.1
GLVR  Golovnino           2.31 256 eP     Pn     16 42 59.9 +1.1
GLVR                                AMB   AMB    16 43 01.0
      50nm,0.3s
GLVR                               i S    Sn     16 43 25.0 -1.0
GLVR                                A     A      16 43 31.0
      210nm,0.3s
GLVR                                A     A      16 43 31.0
      150nm,0.3s
JRA   Rausu               2.54 262  P     Pn     16 43 03.7 +1.7
JNSB  Nemuroshibetsu      2.66 259  P     Pn     16 43 05.1 +1.5
JKHN  Kushirohamanak      2.80 245  P     Pn     16 43 06.4 +0.9
JNK   Nakash              2.91 256  P     Pn     16 43 08.4 +1.4
JNK                                eS     Sn     16 43 39.7 -1.1
JAK   Akkeshi             3.14 246  P     Pn     16 43 11.1 +0.9
JAK                                eS     Sn     16 43 44.0 -2.4
JTKR  Abashiri--Toko      3.41 265  P     Pn     16 43 16.8 +3.0
JAR   Ashorobuto          3.66 255  P     Pn     16 43 19.7 +2.5
JAR                                eS     Sn     16 43 59.6 +0.5
JCH   Churui              4.19 248  P     Pn     16 43 25.9 +1.3
JNBK  Urakawa-nobuka      4.75 246  P     Pn     16 43 32.8 +0.7
JKB   Kayabe              6.07 249  P     Pn     16 43 52.2 +2.0
JKB                                eS     Sn     16 44 56.8 -1.4
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*INET **02** 16:44:30.1, 12°.42N×87°.74W, h71km, ML4.1*

SNET 02 16:44:36.6±1.3**, 12°.90N**×**88°.00W, h43**km±14km**, ML2.8, Off coast of central America**

```
Code  Station Name         Δ°  AZ°   Phase ID        Time      Res
                                    Op    ISC      h  m  s    ISC
CNCH  Conchagua           0.41  24 eP     Pn     16 44 46.0 -0.4
CNCH                               eS     Sn     16 44 54.3 +0.9
CNCH                                IAML         16 45 01.9
      comp=Z,2µm,0.2s
LCND  La Caada            0.42  15 eP     Pn     16 44 46.7 +0.2
JUCU  Jucuar¡n            0.42 326 eP     Pn     16 44 46.1 -0.4
JUCU                               eS     Sn     16 44 55.3 +1.7
BLLM  Bellamira           0.58 337 eP     Pn     16 44 49.2 +0.5
LCY   Lacayo              0.59 331 eP     Pn     16 44 49.1 +0.3
PACA  Pacayal             0.64 331 eP     Pn     16 44 50.2 +0.7
```

PACA				*e*S	Sn	16 44 59.5	+0.8
TECA	**Tecapa**	**0.76**	**321**	*e*P	Pn	16 44 51.5	+0.4
TECA				*e*S	Sn	16 45 02.4	+0.7
FAGO	**Alcalda de S**	**0.80**	**353**	*e*P	Pn	16 44 51.3	-0.1
FAGO				*e*S	Sn	16 45 03.3	+1.2
FAGO				IAML		16 45 04.2	
	comp=Z,92nm,0.2s						

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*ATH **02** 16:50:41.4, 38°.64N×20°.51E, h16^{km}±3^{km}, ML3.1/10, Error ellipse: s-maj=3.0km s-min=0.8km az=313.0*

*THE **02** 16:50:41.8, 38°.63N×20°.48E, h9^{km}±1^{km}, ML3.1/16, Error ellipse: s-maj=1.9km s-min=0.5km az=284.0*

ISC 02 16:50:41.7±0.8, **38°.63N**±0°.02×**20°.50E**±0°.03, **h12**^{km}±5^{km}, **n47**, σ**0^{s}.69**/80, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVGI	**Lefkada island**	**0.12**	**96**	P	**Pg**	**16 50 44.5**	**-0.4**
FSK	**Fiskardo**	**0.18**	**165**	P	**Pg**	**16 50 45.8**	**+0.1**
FSK				S	**Sg**	**16 50 49.1**	**+0.6**
	6μm,0.3s						
FSK	**Fiskardo**	**0.18**	**165**	P	**Pg**	**16 50 45.8**	**+0.1**
FSK				S	**Sg**	**16 50 48.8**	**+0.3**
FSK				AML	AML	16 50 49.3	
	comp=N,11222μm,0.5s						
FSK				AML	AML	16 50 50.2	
	comp=E,14796μm,0.3s						
LKD2	**Lefkada island**	**0.20**	**38**	P	**Pg**	**16 50 45.8**	**-0.3**
LKD2				S	**Sg**	**16 50 49.3**	**+0.2**
	comp=E,13μm,0.2s						
LKD2	**Lefkada island**	**0.20**	**38**	P	**Pg**	**16 50 46.0**	**-0.1**
LKD2				S	**Sg**	**16 50 48.4**	**-0.8**
LKD2				AML	AML	16 50 49.6	
	comp=N,22263μm,0.2s						
LKD2				AML	AML	16 50 49.8	
	comp=E,22692μm,0.3s						
KONA	**Konidatara, Ke**	**0.21**	**165**	P	**Pg**	**16 50 46.4**	**0.0**
KONA				S	**Sg**	**16 50 49.6**	**+0.1**
KONA				AML	AML	16 50 53.2	
	comp=N,9832μm,0.3s						
KONA				AML	AML	16 50 54.0	
	comp=E,7704μm,0.6s						
TSLK	**Tsoukalades, L**	**0.23**	**32**	P	**Pg**	**16 50 46.5**	**0.0**
TSLK				S	**Sg**	**16 50 50.6**	**+0.7**
	comp=E,12μm,0.6s						
TSLK	**Tsoukalades, L**	**0.23**	**32**	P	**Pg**	**16 50 46.6**	**0.0**
TSLK				S	**Sg**	**16 50 50.4**	**+0.6**
TSLK				AML	AML	16 50 50.8	
	comp=E,24255μm,0.4s						
TSLK				AML	AML	16 50 51.1	
	comp=N,23889μm,0.7s						
MGNA	**Meganis**	**0.23**	**84**	P	**Pg**	**16 50 46.3**	**-0.3**
MGNA				S	**Sg**	**16 50 49.7**	**-0.1**
KEF1	**Kardakata, Kep**	**0.36**	**184**	P	**Pg**	**16 50 48.7**	**-0.1**
KEF1				S	**Sg**	**16 50 54.4**	**+0.8**
KEF4	**Livadi, Kephal**	**0.38**	**189**	P	**Pg**	**16 50 49.6**	**+0.3**
KEF4				S	**Sb**	**16 50 55.4**	**-0.8**
KEF3	**Kipouria, Keph**	**0.45**	**196**	P	**Pg**	**16 50 50.5**	**0.0**
KEF3				S	**Sb**	**16 50 57.8**	**-0.3**
ARGA	**Argostoli. Kep**	**0.46**	**182**	P	**Pg**	**16 50 50.1**	**-0.6**
VLS	**Valsamata**	**0.46**	**171**	P	**Pg**	**16 50 50.2**	**-0.6**
VLS				S	**Sb**	**16 50 58.2**	**-0.3**
	comp=N,2μm,0.4s						
VLS	**Valsamata**	**0.46**	**171**	P	**Pg**	**16 50 50.2**	**-0.6**
VLS				S	**Sb**	**16 50 57.7**	**-0.8**
VLS				AML	AML	16 50 58.4	
	comp=E,5125μm,0.4s						
VLS				AML	AML	16 50 59.7	
	comp=N,3329μm,0.2s						
KEF2	**Argostoli. Kep**	**0.47**	**181**	P	**Pg**	**16 50 50.5**	**-0.4**
KEF2				S	**Sb**	**16 50 58.5**	**-0.2**
AST1	**Astakos**	**0.47**	**101**	P	**Pg**	**16 50 50.9**	**-0.1**
AST1				S	**Sb**	**16 50 58.4**	**-0.4**
	comp=N,5μm,0.5s						
PDO	**Prodromos**	**0.54**	**93**	P	**Pg**	**16 50 51.7**	**-0.5**
PDO				S	**Sb**	**16 51 01.7**	**+1.0**
	comp=N,3μm,0.6s						
PDO	**Prodromos**	**0.54**	**93**	P	**Pg**	**16 50 51.9**	**-0.3**
PDO				S	**Sg**	**16 50 58.9**	**-0.4**
PDO				AML	AML	16 51 06.3	
	comp=N,4509μm,0.5s						
PDO				AML	AML	16 51 08.9	
	comp=E,3218μm,0.7s						
KFL	**Anninata**	**0.57**	**157**	P	**Pg**	**16 50 52.5**	**-0.3**
KFL				S	**Sg**	**16 51 00.3**	**-0.1**
	comp=E,3μm,0.5s						
KFL	**Anninata**	**0.57**	**157**	P	**Pg**	**16 50 52.5**	**-0.3**
KFL				S	**Sg**	**16 51 00.6**	**+0.2**
KFL				AML	AML	16 51 12.4	
	comp=E,6472μm,0.5s						
KFL				AML	AML	16 51 12.4	
	comp=N,5357μm,0.5s						
VLMS	**Volimes, Zakyn**	**0.77**	**170**	P	**Pg**	**16 50 55.8**	**-0.8**
VLMS				S	**Sb**	**16 51 07.7**	**+0.3**
PVO	**Paravola**	**0.80**	**91**	P	**Pg**	**16 50 57.1**	**-0.1**
PVO				S	**Sb**	**16 51 08.9**	**+0.5**
	comp=N,1μm,0.5s						
PVO	**Paravola**	**0.80**	**91**	P	**Pg**	**16 50 57.0**	**-0.3**
PVO				S	**Sb**	**16 51 08.8**	**+0.5**
PVO				AML	AML	16 51 11.1	
	comp=N,2797μm,0.4s						
PVO				AML	AML	16 51 12.9	
	comp=E,1442μm,0.5s						
IGT	**Igoumenitsa**	**0.91**	**352**	P	**Pg**	**16 50 58.5**	**-0.8**
IGT				S	**Sn**	**16 51 13.1**	**-0.2**
	comp=E,828nm,0.5s						
RLS	**Riolos of Patr**	**0.95**	**127**	P	**Pg**	**16 50 59.8**	**-0.3**
RLS				S	**Sn**	**16 51 13.8**	**-0.6**
	comp=E,570nm,0.6s						
RLS	**Riolos of Patr**	**0.95**	**127**	P	**Pg**	**16 50 59.3**	**-0.7**
RLS				S	**Sb**	**16 51 12.6**	**0.0**
RLS				AML	AML	16 51 23.2	
	comp=E,1124μm,0.7s						
RLS				AML	AML	16 51 24.4	
	comp=N,1316μm,0.6s						
JAN	**Janina**	**1.06**	**15**	P	**Pn**	**16 51 02.5**	**+0.1**
EVR	**Evrytania**	**1.06**	**74**	P	**Pb**	**16 51 01.3**	**-0.8**
EVR				S	**Sn**	**16 51 19.3**	**+2.1**
	comp=N,312nm,0.8s						
EVR	**Evrytania**	**1.06**	**74**	P	**Pb**	**16 51 01.2**	**-0.9**
DRO	**Drossia**	**1.17**	**125**	P	**Pb**	**16 51 03.4**	**-0.5**
DRO				S	**Sn**	**16 51 20.9**	**+1.1**
	comp=N,1μm,0.6s						
DRO	**Drossia**	**1.17**	**125**	P	**Pb**	**16 51 03.5**	**-0.4**
DRO				S	**Sb**	**16 51 18.6**	**-0.3**
DRO				AML	AML	16 51 26.9	
	comp=E,1590μm,0.4s						
DRO				AML	AML	16 51 29.3	
	comp=N,2142μm,0.5s						
KEK	**Kerkira**	**1.21**	**333**	P	**Pn**	**16 51 03.8**	**-0.6**
TRIZ	**Trizonia**	**1.26**	**102**	P	**Pn**	**16 51 04.8**	**-0.3**
TRIZ				S	**Sg**	**16 51 22.6**	**+0.2**
	comp=N,902nm,0.5s						
MEV	**Metsovon**	**1.28**	**26**	P	**Pn**	**16 51 05.0**	**-0.6**
KALE	**Kalithea**	**1.31**	**100**	P	**Pb**	**16 51 06.0**	**-0.3**
KALE				S	**Sg**	**16 51 25.0**	**+1.1**
	comp=N,472nm,0.5s						
ALIK	**Aliki, Aigiali**	**1.32**	**106**	P	**Pn**	**16 51 06.0**	**+0.1**
ALIK				S	**Sg**	**16 51 24.9**	**+0.7**
MAKR	**Makrakomi, Fth**	**1.33**	**73**	P	**Pg**	**16 51 07.0**	**-0.3**
KLV	**Kalavryta, Ach**	**1.42**	**114**	P	**Pn**	**16 51 07.3**	**-0.1**
AMT	**Artemida-Makis**	**1.46**	**139**	P	**Pb**	**16 51 08.6**	**-0.1**
AGG	**Agios Georgios**	**1.48**	**74**	P	**Pb**	**16 51 08.9**	**-0.3**
AGG				S	**Sg**	**16 51 29.9**	**+0.5**
	comp=N,370nm,0.8s						
KPRO	**Kipourio**	**1.48**	**27**	S	**Sb**	**16 51 28.6**	**+0.6**
THL	**Klokotos Trika**	**1.50**	**51**	P	**Pn**	**16 51 08.8**	**+0.4**
THL				S	**Sg**	**16 51 30.2**	**+0.2**
	comp=N,375nm,0.7s						
OHR	**Ohrid**	**2.49**	**5**	*i* Pn	**Pb**	**16 51 27.5**	**+1.1**
VAY	**Valandovo**	**3.12**	**30**	*i* Pn	**Pb**	**16 51 36.3**	**-0.8**
SKO	**Skopje**	**3.41**	**12**	*i* Pn	**Pb**	**16 51 39.2**	**-2.9**
SG1	**Sgolgore (BA)**	**3.68**	**308**	*e*Pn	**Pn**	**16 51 40.6**	**+2.2**

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*IDC **02** 16:51:18.6±2.0, 21°.65N×143°.12E, h294^{km}±19^{km}, mb2.8/6, mb1 3.0/7, mb1mx2.7/44, mbtmp3.6/7, Error ellipse: s-maj=39.8km s-min=14.9km az=91.0*

ISC 02 16:51:20.2±1.2, **21°.7N**±0°.1×**143°.1E**±0°.4, **h311**^{km}, **n7**, σ**1^{s}.05**/8, **mb2.9**/6, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.41**	**352**	P	**Pn**	**16 52 42.8**	**+0.1**
	5.9nm,0.3s,baz=115,slow=19,SNR=8.5						
JCJ				S	**S**	**16 53 47.6**	**-1.6**
	3.2nm,0.3s,baz=270,slow=20,SNR=3.6						
WRA	**Warramunga Arr**	**42.28**	**192**	P	**P**	**16 58 43.2**	**-0.9**
	0.1nm,0.3s,baz=15,slow=9.4,SNR=7.0						
ASAR	**Alice Springs**	**45.99**	**192**	P	**P**	**16 59 12.6**	**-0.7**
	0.1nm,0.3s,baz=11,slow=6.6,SNR=3.2						
MKAR	**Makanchi Array**	**54.59**	**313**	P	**P**	**17 00 18.0**	**+1.0**
	0.4nm,1.1s,baz=82,slow=9.0,SNR=2.7						
YKA	**Yellowknife Ar**	**76.49**	**28**	P	**P**	**17 02 36.4**	**+0.5**
	0.2nm,0.5s,baz=294,slow=5.3,SNR=2.6						
ARCES	**ARCESS Array B**	**78.86**	**341**	P	**P**	**17 02 49.4**	**+0.6**
	2.3nm,0.9s,baz=68,slow=8.0,SNR=3.3						
FINES	**FINESS Array B**	**83.10**	**334**	P	**P**	**17 03 11.2**	**0.0**
	1.0nm,0.8s,baz=72,slow=6.2,SNR=5.4						

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*SJA **02** 17:03:32.9±7.9, 45°.82S×76°.53W, h10^{km}±999^{km}*

*IDC **02** 17:03:40.2±0.5, 45°.82S×76°.70W, h0^{km}, mb4.5/16, mb1 4.6/18, mb1mx4.5/25, mbtmp4.5/18, ML3.8/2, MS4.8/17, Ms1 4.8/17, ms1mx4.6/26, Error ellipse: s-maj=22.7km s-min=13.8km az=91.0*

*NEIC **02** 17:03:41.7±1.8, 45°.72S±0°.05×76°.6W±0°.2, h10^{km}±1^{km}, mb5.5/33, Mwc5.4(GCMT), Error ellipse: s-maj=19.6km s-min=7.3km az=97.0*

*GCMT **02** 17:03:42.7±0.1, 45°.81S±0°.01×76°.96W±0°.01, h12^{km}, MW5.4/149, Moment Tensor Solution. s101,c162; s149,c270; Duration: 1^{s}.2 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.18±.01; $M_{\theta\theta}$0.10±.01; $M_{\phi\phi}$1.09±.01; $M_{r\theta}$0.56±.04; $M_{\theta\phi}$-0.33±.01; $M_{\phi r}$-0.50±.04; Best double couple: $M_0$1.40300×10^{17} NP1:ϕ_s177.00000°, δ32.00000°, λ-64.00000°. NP2:ϕ_s328.00000°, δ61.00000°, λ-105.00000°. Principal axes: T 1.3620, Plg15.0000°, Azm69.0000°; N 0.0910, Plg13.0000°, Azm335.0000°; P -1.4450, Plg70.0000°, Azm205.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **02** 17:03:42.0±0.0, 45°.80S×76°.70W, h7^{km}, mB5.5/17, Ms5.6/11, Ms7 5.3/12*

*MOS **02** 17:03:42.3±1.7, 45°.63S×76°.47W, h17^{km}, mb5.4/11, Error ellipse: s-maj=26.7km s-min=10.0km az=78.6*

*NEIC **02** 17:03:43, 45°.94S×77°.00W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.27; $M_{\theta\theta}$0.16; $M_{\phi\phi}$1.11; $M_{r\theta}$0.11; $M_{\theta\phi}$-0.31; $M_{\phi r}$-0.35; Fault plane solution: $M_0$1.29000×10^{17} NP1:ϕ_s164.00000°, δ37.00000°, λ-90.00000°. NP2:ϕ_s343.00000°, δ53.00000°, λ-90.00000°. Principal axes: T 1.2533, Plg8.0000°, Azm73.0000°; N 0.0689, Plg0.0000°, Azm343.0000°; P -1.3222, Plg82.0000°, Azm253.0000°;*

*VAO **02** 17:03:44.8±1.6, 45°.75S×76°.54W, h10^{km}, mb5.0*

ISC 02 17:03:43.1±0.3, **45°.75S**±0°.06×**76°.18W**±0°.08, **h10**^{km}, **n423**, σ**1^{s}.49**/400, **mb5.2**/36, **MS5.0**/23, **4C-1D**, **Off coast of southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO07	**Milladeo Hill,**	**3.19**	**35**		**Pn**	**17 04 32.9**	**-0.4**
GO09	**Cerro Castillo**	**6.09**	**157**		**Pn**	**17 05 13.8**	**+0.8**
PLCA	**Paso Flores**	**6.49**	**41**	Pn	**Pn**	**17 05 19.7**	**+1.1**
	0.5nm,0.3s,baz=241,slow=14,SNR=25						
PLCA				LR	LR	17 07 56.6	
	comp=Z,18μm,21.0s,baz=252,slow=38						
USHA	**Ushuaia**	**10.35**	**154**	Pn	**Pn**	**17 06 11.7**	**+0.3**
	0.4nm,0.3s,baz=302,slow=8.3,SNR=4.3						
GO05	**Huala**	**11.21**	**18**		**Pn**	**17 06 22.2**	**-1.1**
PEL	**Peldehue**	**13.28**	**20**		**Pn**	**17 06 50.9**	**-0.8**
PEL	**Peldehue**	**13.28**	**20**	P	**Pn**	**17 06 50.9**	**-0.8**
ROC1	**El Roble**	**13.36**	**19**		**Pn**	**17 06 52.4**	**-0.6**
ROC1	**El Roble**	**13.36**	**19**	*e*P	**Pn**	**17 06 52.2**	**-0.8**
ASAL	**Salagasta**	**14.31**	**26**	*e*P	**P**	**17 07 13.7**	**+0.7**
RTLS	**Leoncito**	**14.92**	**23**	*e*P	**P**	**17 07 21.6**	**+1.6**
ACAN	**Cantantal**	**15.15**	**30**	*e*P	**Pn**	**17 07 14.1**	**-3.0**
AMOG	**MOGNA**	**15.96**	**25**	*e*P	**P**	**17 07 32.4**	**+1.1**
GO04	**Tololo Observa**	**16.11**	**17**		**Pn**	**17 07 28.8**	**-1.0**
ACCO	**Cerro Coronel**	**16.13**	**23**	*e*P	**Pn**	**17 07 32.4**	**+2.2**
AROD	**Rodeo**	**16.42**	**21**	*e*P	**P**	**17 07 38.6**	**+1.9**
ACDV	**Cuesta del Vie**	**16.51**	**22**	*e*P	**Pn**	**17 07 35.3**	**+0.4**
APLL	**PUNTA DE LOS L**	**17.09**	**30**	*e*P	**Pn**	**17 07 42.7**	**+0.6**
LPA	**La Plata**	**17.59**	**58**	*e*P	**Pn**	**17 07 43.3**	**-4.9**
LPA				S	**Sn**	**17 10 58.1**	**-6.0**
LPA				SSS	SSS	17 11 28.9	
LPA				PCP	**PcP**	**17 12 24.2**	**-3.2**
ACLC	**CERRO LA CRUZ**	**17.84**	**27**	*e*P	**Pn**	**17 07 53.1**	**+1.5**
VCA	**Vinchina**	**18.11**	**23**	*e*P	**Pn**	**17 07 55.5**	**+0.7**
PMSA	**Palmer Station**	**20.21**	**165**	LR	LR	17 15 18.7	
	comp=Z,642nm,18.4s,baz=330,slow=34						
GO02	**Mina Guanaco**	**21.22**	**17**	P	**P**	**17 08 29.6**	**+0.3**
PB10	**IPOC Station P**	**22.65**	**14**	P	**P**	**17 08 41.5**	**-2.8**
PB10				IAmb	IAmb	17 08 51.4	
	comp=Z,154nm,1.3s						
LVC	**Limon Verde**	**23.83**	**17**	P	**P**	**17 08 57.4**	**+0.7**
	comp=Z,8.2nm,0.9s,baz=179,slow=9.5,SNR=18						
LVC				LR	LR	17 19 04.4	
	comp=Z,1μm,18.9s,baz=193,slow=38						
LVC	**Limon Verde**	**23.83**	**17**	P	**P**	**17 08 55.2**	**-1.5**
LVC	**Limon Verde**	**23.83**	**17**	P	**P**	**17 08 55.2**	**-1.5**
LVC				pmax	pmax		
	comp=Z,110nm,1.4s						
LVC	**Limon Verde**	**23.83**	**17**	*e*P	**P**	**17 08 57.2**	**+0.5**
PB04	**IPOC Station P**	**23.87**	**14**	P	**P**	**17 08 57.8**	**+0.9**
PB04				IAmb	IAmb	17 09 17.1	
	comp=Z,146nm,1.3s						
CPUP	**Villa Florida**	**24.55**	**44**	P	**P**	**17 09 04.7**	**+1.8**
	comp=Z,49nm,1.0s,baz=219,slow=9.2,SNR=38						
CPUP				LR	LR	17 19 36.8	
	comp=Z,7μm,18.6s,baz=216,slow=38						
CPUP	**Villa Florida**	**24.55**	**44**	P	**P**	**17 09 05.0**	**+2.1**
CPUP				IAmb	IAmb	17 09 12.9	
	comp=Z,64nm,0.8s						
CPUP	**Villa Florida**	**24.55**	**44**	P	**P**	**17 09 05.0**	**+2.1**
CPUP				pmax	pmax		
	comp=Z,64nm,0.9s						
CNLB	**Canela**	**25.78**	**59**	*e*P	**P**	**17 09 17.6**	**+3.5**
PB11	**IPOC Station P**	**26.47**	**14**	P	**P**	**17 09 20.1**	**-0.4**
PB11				IAmb	IAmb	17 09 38.5	
	comp=Z,107nm,1.4s						
GO01	**Chusmiza**	**26.64**	**15**	P	**P**	**17 09 21.7**	**-0.8**
MNMC	**Minye Minye**	**27.10**	**14**	P	**P**	**17 09 27.0**	**+0.7**
TRCB	**Terra Rica**	**29.85**	**48**	*e*P	**P**	**17 09 54.0**	**+3.5**
LPAZ	**La Paz**	**30.14**	**16**	P	**P**	**17 09 55.0**	**+1.2**
	comp=Z,5.6nm,1.0s,baz=176,slow=7.1,SNR=11						
LPAZ	**La Paz**	**30.14**	**16**	*e*P	**P**	**17 09 56.1**	**+2.3**
FRTB	**Fartura**	**31.06**	**53**	*e*P	**P**	**17 10 05.1**	**+3.9**
PCMB	**Pacaembu**	**31.54**	**49**	*e*P	**P**	**17 10 07.9**	**+2.4**
SPB	**Sao Paulo**	**32.08**	**56**	P	**P**	**17 10 07.7**	**-2.5**
SPB	**Sao Paulo**	**32.08**	**56**	*e*P	**P**	**17 10 14.0**	**+3.8**
SIV	**San Ignacio**	**32.26**	**28**	P	**P**	**17 10 12.7**	**+0.9**
	comp=Z,10nm,1.0s,baz=228,slow=9.4,SNR=21						
VAO	**Valinhos**	**32.81**	**56**	*e*P	**P**	**17 10 20.1**	**+3.4**
SALV	**Santo Antonio**	**34.36**	**37**	*e*P	**P**	**17 10 32.8**	**+2.7**
ARAG	**Araguaiana, MT**	**36.26**	**42**	*e*P	**P**	**17 10 49.6**	**+3.2**
BDFB	**Brasilia**	**38.19**	**47**	P	**P**	**17 11 03.1**	**+0.1**
	comp=Z,7.9nm,0.8s,baz=188,slow=6.9,SNR=9.5						
BDFB				LR	LR	17 27 53.5	
	comp=Z,5μm,21.7s,baz=213,slow=38						
BDFB	**Brasilia**	**38.19**	**47**	P	**P**	**17 11 03.3**	**+0.3**
BDFB	**Brasilia**	**38.19**	**47**	P	**P**	**17 11 03.3**	**+0.3**
BDFB				pmax	pmax		
	comp=Z,66nm,1.5s						
SAML	**Samuel**	**38.34**	**21**	P	**P**	**17 11 04.3**	**+0.2**
SAML	**Samuel**	**38.34**	**21**	P	**P**	**17 11 04.3**	**+0.2**
SAML				pmax	pmax		
	comp=Z,34nm,1.1s						
ATAH	**Atahualpa**	**38.52**	**356**	P	**P**	**17 11 06.5**	**+0.5**
	comp=Z,2.8nm,0.7s,baz=179,slow=8.9,SNR=8.1						
VNA3	**Neumayer Olymp**	**40.02**	**153**	P	**P**	**17 11 18.5**	**+0.9**
VNA1	**Neumayer--Stat**	**40.46**	**152**	P	**P**	**17 11 23.1**	**+1.9**
JANB	**Januaria**	**40.64**	**52**	*e*P	**P**	**17 11 26.8**	**+3.4**
VNA2	**Neumayer--Watz**	**40.75**	**152**	P	**P**	**17 11 24.4**	**+0.8**
	baz=276,slow=9.6						
SNAA	**Sanae**	**42.20**	**153**	P	**P**	**17 11 36.6**	**+0.9**
SNAA	**Sanae**	**42.20**	**153**	P	**P**	**17 11 35.6**	**0.0**
	comp=Z,19nm,1.0s,baz=249,slow=7.5,SNR=23						
SNAA	**Sanae**	**42.20**	**153**	P	**P**	**17 11 35.1**	**-0.5**
SNAA				IAmb	IAmb	17 11 38.6	
	comp=Z,93nm,1.4s						
SNAA	**Sanae**	**42.20**	**153**	*c i*P	**P**	**17 11 36.2**	**+0.5**
QSPA	**South Pole Qui**	**44.50**	**180**	P	**P**	**17 11 53.1**	**-1.2**
	comp=Z,15nm,1.1s,baz=140,slow=3.4,SNR=18						
QSPA	**South Pole Qui**	**44.50**	**180**	P	**P**	**17 11 53.2**	**-1.2**
QSPA				IAmb	IAmb	17 11 55.3	
	comp=Z,71nm,1.6s						
OTAV	**Otavalo**	**45.84**	**357**	*e*P	**P**	**17 12 04.8**	**-1.0**
OTAV	**Otavalo**	**45.84**	**357**	P	**P**	**17 12 03.6**	**-2.2**
OTAV				IAmb	IAmb	17 12 13.7	
	comp=Z,123nm,1.9s						
OTAV	**Otavalo**	**45.84**	**357**	P	**P**	**17 12 03.6**	**-2.2**
OTAV				pmax	pmax		
	comp=Z,123nm,2.0s						
OTAV	**Otavalo**	**45.84**	**357**	*e*P	**P**	**17 12 06.5**	**+0.6**
NVL	**N'lazarevskaya**	**47.03**	**153**	*e*P	**P**	**17 12 13.7**	**-0.3**
NVL				*e*S	**S**	**17 19 07.3**	**+2.0**
NVL				pmax	pmax		
	comp=Z,86nm,1.3s						
PTGA	**Pitinga**	**47.05**	**22**	*e*P	**P**	**17 12 17.5**	**+2.7**
CRUC	**La Cruz**	**47.12**	**359**	*e*P	**P**	**17 12 17.6**	**+1.9**
FLOC	**Florencia**	**47.13**	**1**	*e*P	**P**	**17 12 12.8**	**-2.7**
BBAC	**Balboa, Cauca**	**47.58**	**359**	*e*P	**P**	**17 12 18.8**	**-0.3**
SOTA	**Rioblanco**	**47.68**	**359**	*e*P	**P**	**17 12 19.8**	**-0.5**
MACC	**Macarena, Meta**	**47.73**	**3**	*e*P	P	17 12 12.5	-7.7
GARC	**Garzon, Huila**	**47.73**	**1**	*e*P	**P**	**17 12 20.4**	**0.0**
PCON	**Cinco Dias**	**47.87**	**360**	*e*P	**P**	**17 12 21.8**	**-0.1**
POPC	**Popayan, Colom**	**48.08**	**359**	*e*P	P	17 12 19.1	-4.0
GR1C	**Gorgona, Isla**	**48.57**	**357**	*e*P	**P**	**17 12 26.9**	**+0.3**
ORTC	**Ortega, Tolima**	**49.45**	**1**	*e*P	**P**	**17 12 32.5**	**-0.8**
YOTC	**Yotoco, Valle**	**49.52**	**360**	*e*P	**P**	**17 12 33.9**	**-0.1**
PTGC	**Puerto Gaitan,**	**49.86**	**5**	*e*P	**P**	**17 12 36.0**	**-0.4**
ROSC	**El Rosal**	**50.39**	**2**	P	**P**	**17 12 40.9**	**-0.1**
	comp=Z,3.8nm,0.4s,baz=184,slow=5.1,SNR=7.0						
ROSC				LR	LR	17 32 22.3	
	comp=Z,1μm,18.4s,baz=214,slow=34						
ROSC	**El Rosal**	**50.39**	**2**	*e*P	**P**	**17 12 42.3**	**+1.3**
ROSC	**El Rosal**	**50.39**	**2**	IAmb	IAmb	17 12 49.9	
	comp=Z,152nm,1.9s						
GUY2C	**Guyana, Caldas**	**50.75**	**1**	*e*P	**P**	**17 12 42.2**	**-1.6**
CBOC	**Ciudad Bolivar**	**51.38**	**0**	*e*P	**P**	**17 12 48.6**	**+0.4**
RUSC	**La Rusia**	**51.49**	**4**	*e*P	P	17 12 42.1	-7.2
VNDA	**Vanda**	**51.96**	**194**	LR	LR	17 32 38.4	
	comp=Z,313nm,18.5s,baz=133,slow=34						
PTBC	**PUERTO BERRIO,**	**52.08**	**2**	*e*P	P	17 12 44.9	-8.2
DBBC	**Dabeiba**	**52.53**	**360**	*e*P	**P**	**17 12 57.1**	**+0.5**
ZARC	**Zaragoza, Cauc**	**53.01**	**2**	*e*P	**P**	**17 12 57.7**	**-2.4**
UREC	**San Jos de Ur**	**53.26**	**1**	*e*P	P	17 12 52.1	-10
SDV	**Santo Domingo**	**54.61**	**7**	*e*P	**P**	**17 13 14.4**	**+2.4**
SYO	**Syowa Base**	**56.20**	**157**	⇑*i*P	P	17 13 14.4	-8.2
SYO	**Syowa Base**	**56.20**	**157**	⇑*e*X	PP	17 15 20.0	-7.3
JTS	**Las Juntas de**	**56.34**	**350**	LR	LR	17 31 18.5	
	comp=Z,323nm,20.7s,baz=183,slow=29						
JTS	**Las Juntas de**	**56.34**	**350**	*i* P	**P**	**17 13 22.3**	**-1.9**
JTS				pmax	pmax		
	comp=Z,18nm,1.3s						
TBI	**Tubuai**	**62.19**	**264**	*e*S	**S**	**17 22 28.6**	**-1.7**
	comp=Z,1μm,27.5s						
TBI				*e*LR	LR	17 32 21.0	
	comp=Z,4μm,27.5s,baz=138						
MAW	**Mawson**	**62.82**	**164**	LR	LR	17 40 26.2	
	comp=Z,914nm,21.9s,baz=222,slow=35						
TIAR	**Tiarei**	**65.95**	**269**	*e*P	**P**	**17 14 32.3**	**+2.8**
	comp=Z,14nm,1.2s						
PPT2	**Papeete2**	**66.09**	**269**	*e*S	**S**	**17 23 16.9**	**-2.0**
	comp=Z,1μm,27.2s						
PPT2	**Papeete2**	**66.09**	**269**	*e*LR	LR	17 34 04.5	
	comp=Z,2μm,25.8s,baz=133						
PPT	**Papeete**	**66.10**	**269**	LR	LR	17 34 58.3	
	comp=Z,899nm,20.4s,baz=176,slow=29						
RAR	**Rarotonga**	**70.75**	**259**	LR	LR	17 37 31.6	
	comp=Z,2μm,19.0s,baz=123,slow=29						
833A	**Chaparral WMA,**	**76.68**	**339**	P	**P**	**17 15 33.8**	**-0.2**
	baz=164						
TIGA	**Tifton**	**77.12**	**354**	P	**P**	**17 15 36.3**	**0.0**
	baz=175						
BOSA	**Boshof**	**77.41**	**118**	P	**P**	**17 15 38.4**	**-0.2**
	comp=Z,11nm,1.2s,baz=239,slow=5.7,SNR=5.9						
BOSA				LR	LR	17 46 41.2	
	comp=Z,574nm,18.8s,baz=227,slow=33						
HKT	**Hockley**	**77.43**	**343**	*i* P	**P**	**17 15 40.6**	**+2.5**
HKT				pmax	pmax		
	comp=Z,10.0nm,1.7s						
435B	**Jarrell**	**78.61**	**341**	P	**P**	**17 15 44.7**	**0.0**
	baz=165						
VBMS	**Vicksburg**	**78.69**	**348**	P	**P**	**17 15 45.2**	**+0.1**
	baz=170						
TXAR	**Lajitas Array**	**78.79**	**336**	P	**P**	**17 15 44.2**	**-1.6**
	comp=Z,1.6nm,1.0s,baz=148,slow=7.4,SNR=11						
TXAR				PP	**PP**	**17 18 46.5**	**+1.8**
	comp=Z,1.7nm,1.2s,baz=142,slow=6.3,SNR=3.9						
JCT	**Junction City**	**78.84**	**339**	P	**P**	**17 15 45.6**	**-0.4**
	baz=164,SNR=6.9						
NATX	**Nacogdoches**	**78.95**	**344**	P	**P**	**17 15 47.1**	**+0.5**
	baz=167						
GOGA	**Godfrey**	**79.07**	**354**	P	**P**	**17 15 45.3**	**-1.8**
GOGA				IAmb	IAmb	17 15 53.5	
	comp=Z,78nm,1.4s						
GOGA	**Godfrey**	**79.07**	**354**	P	**P**	**17 15 45.3**	**-1.8**
GOGA				pmax	pmax		
	comp=Z,78nm,1.4s						
GOGA	**Godfrey**	**79.07**	**354**	P	**P**	**17 15 46.5**	**-0.6**
	baz=175						
Z50A	**Ashland**	**79.13**	**352**	P	**P**	**17 15 47.2**	**-0.4**
	baz=173						
Y55A	**Saluda**	**79.48**	**355**	P	**P**	**17 15 49.5**	**+0.1**
	baz=176						
Y52A	**Lilburn**	**79.56**	**353**	P	**P**	**17 15 50.6**	**+0.7**
	baz=175						
WHTX	**Lake Whitney,**	**79.75**	**342**	P	**P**	**17 15 50.7**	**-0.2**
	baz=165						
X57A	**Johnson Farm,**	**79.92**	**357**	P	**P**	**17 15 52.1**	**+0.3**
	baz=178						
X56A	**White Oak**	**79.99**	**356**	P	**P**	**17 15 52.6**	**+0.5**
	baz=177						
X55A	**Gracelyn & Ava**	**80.00**	**355**	P	**P**	**17 15 52.6**	**+0.4**
	baz=176						
Z41A	**Richland Creek**	**80.07**	**346**	P	**P**	**17 15 53.3**	**+0.7**
	baz=169						
X54A	**Belton**	**80.12**	**355**	P	**P**	**17 15 51.9**	**-0.9**
	baz=176						
X53A	**Estanollee**	**80.14**	**354**	P	**P**	**17 15 52.2**	**-0.7**
	baz=175						
X51A	**Calhoun**	**80.33**	**353**	P	**P**	**17 15 53.7**	**-0.2**
	baz=174						
W59A	**Clinton**	**80.57**	**358**	P	**P**	**17 15 56.1**	**+0.9**
	baz=179						
W57A	**Gilead**	**80.60**	**357**	P	**P**	**17 15 55.1**	**-0.3**
	baz=178						
W54A	**Cherokee Point**	**80.65**	**355**	P	**P**	**17 15 56.1**	**+0.4**
	baz=176						
KMSC	**Kings Mountain**	**80.65**	**356**	P	**P**	**17 15 54.6**	**-1.2**
	baz=177						
W52A	**Murphy**	**80.78**	**354**	P	**P**	**17 15 56.4**	**0.0**
	baz=175						
OXF	**Oxford**	**80.78**	**349**	P	**P**	**17 15 56.2**	**-0.2**
	baz=171						
ABTX	**Abilene, Hawle**	**80.85**	**340**	P	**P**	**17 15 57.0**	**+0.1**
	baz=164						
W50A	**Signal Mountai**	**81.00**	**352**	P	**P**	**17 15 57.6**	**0.0**
	baz=174						
V59A	**Middlesex**	**81.16**	**358**	P	**P**	**17 15 59.3**	**+0.9**
	baz=179						
V53A	**Saluda**	**81.27**	**355**	P	**P**	**17 15 58.4**	**-0.7**
	baz=176						
V56A	**Mocksville**	**81.28**	**356**	P	**P**	**17 15 59.3**	**+0.3**
	baz=177						
V54A	**Nebo**	**81.32**	**355**	P	**P**	**17 15 59.3**	**+0.1**
	baz=176						
V57A	**Coltrane Farms**	**81.33**	**357**	P	**P**	**17 15 59.4**	**+0.1**
	baz=178						
V55A	**Taylorsville**	**81.36**	**356**	P	**P**	**17 15 59.6**	**+0.2**
	baz=177,SNR=5.6						
MIAR	**Mount Ida**	**81.46**	**346**	P	**P**	**17 15 59.0**	**-1.0**
	baz=168						
LIC	**Lamto**	**81.49**	**72**	*e*P	**P**	**17 16 02.6**	**+1.9**
	comp=Z,27nm,0.7s						
LIC	**Lamto**	**81.49**	**72**	P	**P**	**17 16 02.6**	**+1.9**
V52A	**Sevierville**	**81.49**	**354**	P	**P**	**17 15 59.8**	**-0.4**
	baz=175						
MNTX	**Cornudas Mount**	**81.51**	**335**	P	**P**	**17 15 59.2**	**-1.2**
	baz=160						
KIC	**Kosan Boka**	**81.78**	**72**	*e*P	**P**	**17 16 04.1**	**+1.8**
	comp=Z,63nm,1.7s						
KIC	**Kosan Boka**	**81.78**	**72**	P	**P**	**17 16 04.1**	**+1.8**
U58A	**Oxford**	**81.80**	**358**	P	**P**	**17 16 01.5**	**-0.2**
	baz=179						
TIC	**Toumodi**	**81.81**	**72**	*e*P	**P**	**17 16 04.3**	**+1.9**
TIC	**Toumodi**	**81.81**	**72**	P	**P**	**17 16 04.3**	**+1.9**
TIC	**Toumodi**	**81.81**	**72**	P	**P**	**17 16 04.3**	**+1.9**

U56A	King	81.81	357	P	P	17 16 01.3	-0.5
	baz=177						
W41B	Gary Mavity, V	81.85	347	P	P	17 15 59.7	-2.3
W41B				IAmb	IAmb	17 16 08.2	
	comp=Z,92nm,1.6s						
W41B	Gary Mavity, V	81.85	347	P	P	17 16 01.2	-0.8
	baz=169,SNR=5.2						
U57A	Blanch	81.86	357	P	P	17 16 01.4	-0.7
	baz=178						
DBIC	Dimbokro	81.94	72	P	P	17 16 03.4	+0.3
	comp=Z,4.3nm,0.8s,baz=216,slow=9.6,SNR=4.8						
DBIC				LR	LR	17 47 33.2	
	comp=Z,369nm,21.6s,baz=200,slow=32						
U53A	Fall Branch	81.94	355	P	P	17 16 02.1	-0.5
	baz=176						
U55A	TA2, Sparta	81.99	356	P	P	17 16 02.1	-0.8
	baz=177,SNR=5.7						
U54A	Nelsons Funny	82.05	355	P	P	17 16 03.1	-0.1
	baz=176						
W39A	Magazine	82.13	346	P	P	17 16 02.2	-1.3
	baz=168,SNR=7.1						
WVT	Waverly	82.18	351	P	P	17 16 01.4	-2.4
WVT	Waverly	82.18	351	P	P	17 16 01.4	-2.4
WVT				pmax	pmax		
	comp=Z,127nm,1.7s						
WVT	Waverly	82.18	351	P	P	17 16 02.4	-1.4
	baz=172						
TZTN	Tazewell	82.19	354	P	P	17 16 02.7	-1.1
	baz=175						
T58A	Grand View Acr	82.35	358	P	P	17 16 03.8	-0.8
	baz=179						
T59A	Double "B" Far	82.35	359	P	P	17 16 05.1	+0.4
	baz=179						
T57A	Hurt	82.42	358	P	P	17 16 05.0	0.0
	baz=178						
T56A	Rocky Mt	82.47	357	P	P	17 16 04.1	-1.2
	baz=178						
LCAR	Lake Charles	82.56	348	IAmb	IAmb	17 16 11.5	
	comp=Z,40nm,1.4s						
T54A	Tazewell	82.58	356	P	P	17 16 05.9	0.0
	baz=176						
T55A	Pulaski	82.59	356	P	P	17 16 06.2	+0.2
	baz=177						
T51A	Gray	82.64	354	P	P	17 16 06.2	0.0
	baz=175						
BLA	Blacksburg	82.67	357	P	P	17 16 06.7	+0.3
	baz=177						
WMOK	Wichita Mounta	82.68	341	P	P	17 16 06.3	-0.2
	baz=165						
T52A	Hallie	82.71	355	P	P	17 16 05.4	-1.1
	baz=176						
T50A	Nancy	82.76	353	P	P	17 16 06.1	-0.7
	baz=174						
T49A	Edmonton	82.91	352	P	P	17 16 07.1	-0.4
	baz=174,SNR=5.6						
MSTX	Muleshoe	82.92	338	P	P	17 16 07.2	-0.7
	baz=162						
S58A	Poland Farm, P	83.00	359	P	P	17 16 08.6	+0.6
	baz=179						
121A	Cookes Peak, D	83.01	334	IAmb	IAmb	17 16 15.7	
	comp=Z,60nm,2.0s						
U40A	Yellville	83.10	347	P	P	17 16 07.8	-0.8
	baz=169,SNR=11						
S56A	Natural Bridge	83.11	357	P	P	17 16 08.9	+0.3
	baz=178						
S57A	Dark Hollow, R	83.17	358	P	P	17 16 09.4	+0.5
	baz=178						
TUL1	Leonard	83.19	344	P	P	17 16 09.3	+0.2
	baz=167						
S53A	Williamson	83.23	355	P	P	17 16 09.3	+0.1
	baz=176						
S55A	Lewisburg	83.23	357	P	P	17 16 09.8	+0.5
	baz=177,SNR=6.4						
S51A	Beattyville	83.28	354	P	P	17 16 09.7	+0.2
	baz=175						
S52A	Salyersville	83.28	354	P	P	17 16 09.8	+0.3
	baz=175,SNR=6.0						
R58B	Mineral	83.35	359	P	P	17 16 10.7	+1.0
	baz=179,SNR=5.3						
S50A	Richmond	83.38	353	P	P	17 16 08.9	-1.0
	baz=174,SNR=5.5						
AMTX	Amarillo	83.51	339	P	P	17 16 10.5	-0.3
	baz=163						
S49A	Springfield	83.56	353	P	P	17 16 10.3	-0.6
	baz=174						
R58A	Rapidan	83.69	359	P	P	17 16 12.2	+0.7
	baz=179						
R57A	Stanardsville	83.69	358	P	P	17 16 12.1	+0.5
	baz=179						
R55A	Marlinton	83.73	357	P	P	17 16 10.2	-1.6
	baz=178,SNR=6.4						
TUC	Tucson	83.78	331	P	P	17 16 12.3	0.0
	baz=157						
MGMO	Mountain Grove	83.79	347	P	P	17 16 09.0	-3.2
R56A	Bull Pasture M	83.83	357	P	P	17 16 12.1	-0.2
	baz=178						
R53A	Hurricane	83.86	355	P	P	17 16 12.6	+0.2
	baz=176						
R52A	Catlettsburg	83.91	355	P	P	17 16 11.5	-1.2
	baz=176						
R51A	Hillsboro	83.94	354	P	P	17 16 10.8	-2.0
	baz=175						
R50A	Paris	83.97	354	P	P	17 16 13.0	0.0
	baz=175						
AFI	Afiamalu	84.01	256	LR	LR	17 48 21.9	
	comp=Z,500nm,18.5s,baz=179,slow=32						
R49A	Shelbyville	84.05	353	P	P	17 16 12.7	-0.7
	baz=174,SNR=5.4						
WCI	Wyandotte Cave	84.09	352	P	P	17 16 12.7	-0.9
	baz=173						
Q53A	Leroy	84.37	356	P	P	17 16 14.6	-0.4
	baz=176						
Q55A	Buckhannon	84.44	357	P	P	17 16 13.7	-1.7
	baz=178						
Q56A	Snyder Ridge,	84.45	358	P	P	17 16 15.4	0.0
	baz=178						
S39A	Bolivar	84.48	346	IAmb	IAmb	17 16 21.4	
	comp=Z,35nm,1.1s						
Q52A	Bidwell	84.51	355	P	P	17 16 14.4	-1.3
	baz=176						
CCM	Cathedral Cave	84.52	348	P	P	17 16 14.2	-1.5
CCM	Cathedral Cave	84.52	348	P	P	17 16 14.2	-1.5
CCM				pmax	pmax		
	comp=Z,83nm,1.3s						
CCM	Cathedral Cave	84.52	348	P	P	17 16 14.3	-1.5
	baz=170						
Q51A	Peebles	84.64	354	P	P	17 16 16.4	0.0
	baz=175						
Q48A	North Vernon	84.73	353	P	P	17 16 15.4	-1.4
	baz=174						
Q49A	Aurora	84.74	353	P	P	17 16 15.5	-1.4
	baz=174						
ANMO	Albuquerque	84.86	335	P	P	17 16 17.9	+0.1
	baz=160						
P58A	Pank, Wackersv	84.86	359	P	P	17 16 18.1	+0.7
	baz=180						
P57A	Homestead Farm	84.87	359	P	P	17 16 18.0	+0.5
	baz=179						
P59A	Jarrettsville	84.98	360	P	P	17 16 19.0	+1.0
	baz=180						
P53A	Whipple	84.98	356	P	P	17 16 18.1	0.0
	baz=177						
P51A	Williamsport	85.08	355	P	P	17 16 18.0	-0.5
	baz=176						
P52A	Corning	85.17	355	P	P	17 16 18.8	-0.2
	baz=176						
P60A	Greenville	85.18	0	P	P	17 16 20.2	+1.1
	baz=181						
P48A	Milroy	85.23	353	P	P	17 16 17.4	-2.0
	baz=174						
P49A	Miami Univ. Ec	85.25	353	P	P	17 16 17.5	-2.0
	baz=174						
P50A	Jamestown	85.25	354	P	P	17 16 18.4	-1.1
	baz=175						
O59A	Robesonia	85.68	360	P	P	17 16 21.3	-0.2
	baz=180						
O53A	New Philadelph	85.74	356	P	P	17 16 21.8	0.0
	baz=177						
O50A	Cable	85.78	354	P	P	17 16 19.4	-2.7
	baz=175						
ACSO	Alum Creek Sta	85.82	355	P	P	17 16 20.9	-1.3
	baz=176						
O49A	Covington	85.87	354	P	P	17 16 21.9	-0.6
	baz=175						
GLA	Glamis	85.89	328	P	P	17 16 23.7	+0.9
	baz=154						
O48A	Farmland	86.00	353	P	P	17 16 21.4	-1.8
	baz=174						
W18A	Petrified Fore	86.02	333	P	P	17 16 24.8	+1.2
	baz=158						
N61A	South Mountain	86.14	1	P	P	17 16 24.2	+0.5
	baz=182						
N55A	Marion Center	86.19	358	P	P	17 16 23.3	-0.8
	baz=178						
T25A	Trinidad	86.34	338	P	P	17 16 25.5	+0.3
	baz=161						
N50A	Nevada	86.36	355	P	P	17 16 24.9	0.0
	baz=175						
N54A	Moraine State	86.40	357	P	P	17 16 23.7	-1.4
	baz=178						
Y12C	Blythe	86.40	329	P	P	17 16 25.6	+0.3
	baz=154						
KSU1	Kansas State U	86.44	344	P	P	17 16 24.2	-1.2
	baz=166						
N48A	Decatur	86.59	353	P	P	17 16 25.3	-0.7
	baz=174						
BC3	Big Chuckawall	86.66	328	P	P	17 16 26.9	+0.2
	baz=154						
N47A	Urbana	86.67	353	P	P	17 16 25.3	-1.1
	baz=174						
M57A	Sunshine Farm,	86.71	359	P	P	17 16 25.0	-1.6
	baz=180						
HDIL	Hopedale	86.72	350	P	P	17 16 26.6	-0.1
	baz=171						
M58A	Price's Panora	86.74	360	P	P	17 16 27.6	+0.8
	baz=180						
PDMCI	Parker Dam,Lak	86.76	329	P	P	17 16 26.9	-0.1
	baz=155						
CBKS	Cedar Bluff	86.80	342	P	P	17 16 27.1	-0.1
	baz=164						
M51A	Elyria	86.86	355	P	P	17 16 26.7	-0.6
	baz=176						
M55A	Ridgway	86.87	358	P	P	17 16 28.1	+0.7
	baz=178						
M56A	Emporium	86.87	358	P	P	17 16 27.8	+0.3
	baz=179						
WUAZ	Wupatki	86.91	332	P	P	17 16 28.5	+0.5
	baz=156						
IRM	Iron Mountain	86.99	329	P	P	17 16 28.5	+0.2
	baz=154						
PFO	Pinyon Flats O	87.00	327	P	P	17 16 29.8	+1.5
	baz=153						
BELC	Belle Mtn. Jos	87.17	328	P	P	17 16 30.0	+0.8
	baz=154						
SDCO	Great Sand Dun	87.21	337	P	P	17 16 28.3	-1.2
	baz=160						
MURC	Murrieta	87.27	327	P	P	17 16 29.8	+0.2
	baz=153						
L63A	North Scituate	87.33	3	P	P	17 16 30.6	+1.0
	baz=184						
NEE2	Needles Airpor	87.35	329	P	P	17 16 29.4	-0.5
	baz=154						
L57A	Andrews Acres	87.37	360	P	P	17 16 30.1	+0.3
	baz=180						
L53A	Girard	87.40	357	P	P	17 16 28.6	-1.3
	baz=177						
L56A	Greenwood	87.51	359	P	P	17 16 30.0	-0.5
	baz=179						
ERPA	Erie	87.55	357	P	P	17 16 30.9	+0.3
	baz=178						
MVCO	Mesa Verde	87.56	335	P	P	17 16 31.2	0.0
	baz=158						
BINY	Binghamton	87.57	0	P	P	17 16 30.1	-0.7
	baz=180						
L55A	Hinsdale	87.57	358	P	P	17 16 31.1	+0.3
	baz=179						
S22A	4UR Ranch, Cre	87.58	336	IAmb	IAmb	17 16 38.4	
	comp=Z,60nm,1.6s						
S22A	4UR Ranch, Cre	87.58	336	P	P	17 16 31.3	0.0
	baz=159						
L50A	Kingsville	87.61	355	P	P	17 16 30.2	-0.8
	baz=176						
L54A	Sinclairville	87.65	358	P	P	17 16 31.8	+0.6
	baz=178						
KSCO	Kaye Shedlock'	87.66	340	P	P	17 16 31.9	+0.5
	baz=162						
L49A	Milan	87.74	354	P	P	17 16 30.9	-0.7
	baz=175						
GMRC	Granite Mounta	87.74	328	P	P	17 16 32.8	+0.9
	baz=154						
AAM	Ann Arbor	87.92	354	P	P	17 16 32.1	-0.3
	baz=175						
K54A	Basiliko Farm,	88.00	358	P	P	17 16 33.4	+0.6
	baz=178						
K60A	Five Rivers En	88.01	2	P	P	17 16 34.0	+1.2
	baz=182						
HEC	Hector,Ludlow	88.03	328	P	P	17 16 34.9	+1.6
	baz=154						
K56A	Middlesex	88.07	359	P	P	17 16 33.8	+0.6
	baz=180						
K55A	Perry	88.11	359	P	P	17 16 33.9	+0.5
	baz=179						
K58A	Earlville	88.13	0	P	P	17 16 34.4	+1.0
	baz=181						
K51A	Iona Station	88.22	356	P	P	17 16 33.6	-0.2
	baz=177						
K52A	Tillsonburg	88.24	357	P	P	17 16 34.0	+0.1
	baz=177						
Q24A	Divide	88.25	338	P	P	17 16 34.5	0.0
	baz=160						
K50A	Casco	88.33	355	P	P	17 16 33.6	-0.7
	baz=176						
K47A	Vermontville	88.39	354	P	P	17 16 33.9	-0.8
	baz=174						
K49A	Clarkson	88.39	355	P	P	17 16 35.5	+0.9
	baz=175						
TUQ	Turquoise Moun	88.42	329	P	P	17 16 35.9	+0.7
	baz=154						
K48A	Perry	88.45	354	P	P	17 16 34.7	-0.2
	baz=175						
K46A	Dorr	88.47	353	P	P	17 16 38.2	+3.2
	baz=174						
SCIA	State Center	88.59	347	P	P	17 16 35.1	-0.5
	baz=168						
GSC	Goldstone, Bar	88.63	328	IAmb	IAmb	17 16 43.5	
	comp=Z,55nm,1.6s						
GSC	Goldstone, Bar	88.63	328	P	P	17 16 36.7	+0.6
	baz=153						
J52A	Paris	88.69	357	P	P	17 16 35.3	-0.7
	baz=177						
J57A	Williamstown	88.78	0	P	P	17 16 37.4	+0.9
	baz=180						
J48A	Bridge Port	88.92	354	P	P	17 16 37.2	0.0
	baz=175						
J47A	Sunmer	88.94	354	P	P	17 16 36.8	-0.4
	baz=174						
J49A	Marlette	88.94	355	P	P	17 16 35.8	-1.4
	baz=175						
LRMC	Laurel Mtn Rad	89.11	327	P	P	17 16 38.9	+0.4
	baz=153						
ISCO	Idaho Springs	89.16	338	P	P	17 16 38.6	-0.2
	baz=160						
JFWS	Jewell Farm	89.16	350	P	P	17 16 37.5	-0.8
	baz=170						
I51A	Listowel	89.27	356	P	P	17 16 38.8	0.0
	baz=177						
I57A	Carthage	89.31	0	P	P	17 16 40.0	+1.1
	baz=181						
I52A	Shelburne	89.50	357	P	P	17 16 40.3	+0.5
	baz=178						
I55A	Frankford	89.59	359	P	P	17 16 40.2	0.0
	baz=179						
FURC	Furnace Creek,	89.68	328	P	P	17 16 42.5	+1.6
	baz=153						
I46A	Reed City	89.69	353	P	P	17 16 40.5	-0.2
	baz=174						
I48A	Sherman Twp	89.80	355	P	P	17 16 40.2	-1.1
	baz=175						
TPNV	Topopah Spring	89.89	329	P	P	17 16 42.3	+0.2
	baz=154						
H55A	Tweed	89.92	359	P	P	17 16 42.0	+0.3
	baz=180						
H53A	Bobcaygeon	89.97	358	P	P	17 16 42.6	+0.6
	baz=179						
LONY	Lake Ozonia	90.00	1	P	P	17 16 42.9	+0.7
	baz=181						
O20A	White River Ci	90.20	336	P	P	17 16 43.0	-0.5
	baz=158						
N23A	Red Feather La	90.28	338	P	P	17 16 43.9	0.0
	baz=160						
H48A	Harrisville	90.29	355	P	P	17 16 43.2	-0.3
	baz=175						
H45A	Beulah	90.41	353	P	P	17 16 44.1	0.0
	baz=173						
GLMI	Grayling	90.50	354	P	P	17 16 44.7	+0.2
	baz=174						
G53A	Haliburton	90.51	358	P	P	17 16 45.1	+0.5
	baz=179						
G54A	Lake Saint Pet	90.78	359	P	P	17 16 46.3	+0.5
	baz=179						
G47A	Hillman	90.79	355	P	P	17 16 46.2	+0.4
	baz=175						
G45A	Suttons Bay	90.79	353	P	P	17 16 46.0	+0.1
	baz=174						
R11A	Troy Canyon, C	90.90	330	P	P	17 16 47.3	+0.6
	baz=154						
ECSD	EROS Data Cent	90.93	345	P	P	17 16 43.8	-2.8
ECSD				IAmb	IAmb	17 16 52.0	
	comp=Z,31nm,1.1s						
ECSD	EROS Data Cent	90.93	345	P	P	17 16 45.1	-1.4
	baz=166						
TORD	Torodi Ar. Bea	91.04	72	P	P	17 16 48.2	+0.5
	comp=Z,1.3nm,0.8s,baz=232,slow=2.3,SNR=8.1						
TORD				LR	LR	17 51 38.8	
	comp=Z,336nm,21.9s,baz=265,slow=32						
F52A	Sundridge	91.20	358	P	P	17 16 48.0	+0.3
	baz=178						
F51A	Arnstein	91.35	357	P	P	17 16 48.5	+0.1
	baz=178						
F48A	Evansville	91.37	356	P	P	17 16 48.5	0.0
	baz=176						
DUG	Dugway, Tooele	91.64	333	P	P	17 16 51.0	+0.9
	baz=156						
E53A	Dumoine, Ponti	91.75	359	P	P	17 16 50.8	+0.5
	baz=179						
SPMN	Marine on St.	91.78	348	P	P	17 16 48.3	-2.1
	baz=169						
DZM	Mont Dzumac	91.83	236	*e*PS	PS	17 29 08.4	+5.5
	comp=Z,217nm,27.1s						
DZM	Mont Dzumac	91.83	236	*e*LR	LR	17 46 10.0	
	comp=Z,2µm,29.6s						
NVAR	Mina Array Bea	91.95	328	P	P	17 16 51.2	-0.5
	comp=Z,1.2nm,1.0s,baz=166,slow=7.2,SNR=3.8						
E48A	Lockeyer	92.00	356	P	P	17 16 51.5	+0.1
	baz=176						
SUSD	Miller	92.05	344	P	P	17 16 48.4	-3.4
K22A	Casper	92.07	338	P	P	17 16 51.6	-0.5
	baz=160						
D47A	Chapleau	92.62	355	P	P	17 16 54.1	-0.2
	baz=175						
PDAR	Pinedale Array	93.01	336	P	P	17 16 54.6	-1.8
	comp=Z,0.4nm,0.7s,baz=123,slow=3.3,SNR=3.0						
PDAR				LR	LR	17 52 46.6	
	comp=Z,201nm,19.4s,baz=152,slow=32						
AGMN	Agassiz Nation	95.23	347	P	P	17 17 05.3	-1.0
	baz=167						
STKA	Stephens Creek	95.49	212	LR	LR	17 51 19.8	
	comp=Z,466nm,21.6s,baz=167,slow=30						
ULM	Lac du Bonnet	97.13	347	P	P	17 17 11.9	-2.9
	comp=Z,1.4nm,0.7s,baz=183,slow=5.2,SNR=5.5						
ULM	Lac du Bonnet	97.13	347	IAmb	IAmb	17 17 19.4	
	comp=Z,26nm,1.6s						
ULM	Lac du Bonnet	97.13	347	*i* P	P	17 17 12.5	-2.3
FETA	Feichten	119.66	52	*i* PKPdf	PKPdf	17 22 30.7	-2.0
	comp=Z,5.8nm,1.7s						
WATA	Walderalm	120.32	52	*i* PKiKP	PKPdf	17 22 34.3	+0.3
	comp=Z,9.3nm,1.5s						
KBA	Koelnbreinsper	121.15	53	*i* PKPdf	PKPdf	17 22 34.7	-0.8
	comp=Z,8.8nm,1.9s						
H11S2	WAKE ISLAND Hy	121.86	264	T	T	19 35 32.6	
	baz=134,slow=75,SNR=17						
H11S1	WAKE ISLAND Hy	121.88	264	T	T	19 35 51.7	
	baz=134,slow=75,SNR=13						
H11S3	WAKE ISLAND Hy	121.88	264	T	T	19 35 45.7	
	baz=134,slow=75,SNR=14						
GERES	GERESS Array B	122.35	51	PKP	PKPdf	17 22 35.6	-2.1
	comp=Z,1.0nm,0.8s,baz=174,slow=2.5,SNR=7.1						
KHC	Kasperske Hory	122.44	51	*i* PKIKP	PKPdf	17 22 38.4	+0.6
ARSA	Arzberg	122.47	54	*i* sPKiKP	PKiKP	17 22 44.5	+6.4
	comp=Z,8.9nm,1.6s						
ILAR	Eielson Array	123.09	331	PKP	PKPdf	17 22 36.0	-2.5
	comp=Z,0.7nm,0.8s,baz=152,slow=2.8,SNR=7.1						
ILAR	Eielson Array	123.09	331	PKIKP	PKPdf	17 22 36.0	-2.5
CLL	Collm	123.34	49	*e*Pdif	Pdif	17 19 12.0	+0.6
CLL				*e*PKiKP	PKPdf	17 22 40.0	+0.6
	comp=Z,17nm,1.7s						
CLL				*e*SS	SS	17 41 36.0	+29
CLL				*e*SSS	SSS	17 45 42.0	
CLL				*e*		17 57 12.0	
CLL				LmH		18 13 00.0	
	comp=N,300nm,21.4s						
CLL				LmH		18 13 00.0	
	comp=E,500nm,20.9s						
CLL	Collm	123.34	49	*e*PKIKP	PKPdf	17 22 40.0	+0.6
CLL				pmax	pmax		
	comp=Z,17nm,1.7s						
BRG	Berggiesshubel	123.60	50	*e*PKIKP	PKPdf	17 22 35.3	-4.6
BRG				pmax	pmax		
	comp=Z,9.0nm,1.5s						
BRG				MLR	MLR		
	comp=N,424nm,14.0s						
BRG				MLR	MLR		
	comp=E,488nm,17.1s						
BRG				MLR	MLR		
	comp=Z,911nm,27.1s						
VYHS	Vyhne	125.02	54	*e*PKIKP	PKPdf	17 22 43.6	+0.8
VYHS	Vyhne	125.02	54	*e*PKP	PKPdf	17 22 43.5	+0.8
TOLK	Toolik Lake Re	126.23	334	P	PKPdf	17 22 44.9	+0.4
	baz=124						
NOA	NORSAR Array B	127.46	38	PKP	PKPdf	17 22 47.2	+0.1
	comp=Z,1.6nm,0.9s,baz=245,slow=2.0,SNR=4.6						
BR131	Keskin Array S	129.61	70	*i* PKIKP	PKPdf	17 22 51.3	-0.7
BRTR	Keskin Array B	129.61	70	PKP	PKPdf	17 22 51.5	-0.5
	comp=Z,1.5nm,0.9s,baz=168,slow=6.3,SNR=7.0						
AKASG	Malin Array Be	132.01	56	PKP	PKPdf	17 22 54.5	-1.4
	comp=Z,0.6nm,0.6s,baz=241,slow=1.9,SNR=5.9						
VSU	Vasula	133.60	45	*i* PKIKP	PKPdf	17 22 58.2	-0.5
KIV	Kislovodsk	137.56	70	*i* PKIKP	PKPdf	17 23 04.8	-1.9
KIV				pmax	pmax		
	comp=Z,21nm,1.1s						
KBZ	Khabaz	137.60	70	*i* PKIKP	PKPdf	17 23 02.9	-3.7
OBN	Obninsk	137.73	52⇑	*e*PKIKP	PKPdf	17 23 07.1	+0.7
OBN				*e*		17 25 50.1	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
APA	Apatity	138.54	33⇓	*i*PKHKP	PKPpre	17 22 40.9	
APA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
APA				MLR	MLR		
	comp=Z,1µm,33.0s						
AKT	Akhty	139.88	75	*e*PKIKP	PKiKP	17 23 18.0	+4.5
AKT				*e*		17 26 09.5	
AKT				pmax	pmax		
	comp=Z,27nm,1.4s						
KLMR	Klimovskoe	140.46	44	*e*PKIKP	PKPdf	17 23 08.2	-3.1
KLMR				pmax	pmax		
	comp=Z,41nm,1.7s						
KLMR	Klimovskoe	140.46	44	*e*PKPdf	PKPdf	17 23 08.2	-3.1
KLMR				AMP		17 23 14.6	
	comp=Z,41nm,1.7s						
BILL	Bilibino	141.57	328	*i* PKIKP	PKPdf	17 23 13.7	+0.6
BILL				pmax	pmax		
	comp=Z,9.0nm,1.4s						
URV	Uravakonda	142.03	135	*e*pPKPdf	PKPdf	17 23 15.8	+0.2
SKHT	Srikalahasti	142.15	140	*e*PKPdf	PKPdf	17 23 11.3	-4.5
PRGR	Permogore	143.47	43	*e*PKIKP	PKPab	17 23 13.3	+0.4
PRGR				pmax	pmax		
	comp=Z,62nm,0.9s						
SRLM	Srisailam	143.82	137	*e*PKPdf	PKPab	17 23 16.0	+0.3
ADKI	Addanki	144.11	138	*e*PKPdf	PKPab	17 23 17.2	+0.5
KLRI	Killari	144.33	132	*e*PKPdf	PKPab	17 23 17.6	0.0
NJS	Nagarjunasagar	144.41	137	*e*PKPdf	PKPab	17 23 17.8	0.0
HYB	Hyderabad	144.78	135	*i* PKP	PKPab	17 23 18.0	-1.2
HYB				*e*		17 23 24.5	
HYB				*e*		17 23 29.5	
HYBB	Hyderabad (bro	144.78	135	*e*PKPab	PKPab	17 23 17.8	-1.4
PETK	Petropavlovsk-	144.93	302	PKP	PKPab	17 23 16.0	-2.8
	comp=Z,2.8nm,0.8s,baz=117,slow=5.0,SNR=3.5						
PETK	Petropavlovsk-	144.93	302	PKIKP	PKPab	17 23 16.0	-2.8
MYLAV	Mylavaram	145.20	139	*e*PKPab	PKPbc	17 23 19.5	-1.2
GEYT	Alibeck	145.46	87	PKPbc	PKPdf	17 23 20.8	-0.2
	comp=Z,8.0nm,0.8s,baz=238,slow=2.8,SNR=21						
GGR	Gangavaram	145.93	137	*e*PKPbc	PKPdf	17 23 21.3	-1.1
SRSP	Sriramsagar	145.95	133	*e*PKPab	PKPdf	17 23 22.3	0.0
PVM	Polavaram	146.09	140	*e*PKPab	PKPdf	17 23 22.8	+0.2
RPR	Rampur	146.37	135	*e*PKPbc	PKPdf	17 23 22.7	-0.3
SEY	Seymchan	147.87	320	*i* PKP2	PKPdf	17 23 24.8	+0.7
NGP	Nagpur	148.17	132	*e*x	PKPbc	17 23 28.9	-0.3
CHLP	Challavanipeta	148.27	142	*e*PKPdf	PKPdf	17 23 25.9	-0.3
UBPT	Khong Chiam	149.59	183		PKPdf	17 23 31.2	+2.8
ARU	Arti	150.17	52		PKPbc	17 23 33.7	+0.5
ARU	Arti	150.17	52	*i* PKIKP	PKPbc	17 23 32.9	-0.2

ARU				SS	SS	17 46 21.1	-5.3
SVE	**Sverdlovsk**	**151.29**	**52**	*e*PKIKP	**PKPbc**	**17 23 36.4**	**+0.6**
SVE				pmax	pmax		
	comp=Z,52nm,1.8s						
TIXI	**Tiksi**	**151.42**	**344**	PKPbc	**PKPdf**	**17 23 32.6**	**+3.0**
	comp=Z,3.8nm,0.9s,baz=46,slow=3.8,SNR=11						
CMAR	**Chiang Mai Arr**	**152.49**	**170**	PKP	**PKPdf**	**17 23 32.4**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=242,slow=1.9,SNR=6.0						
CMAR				PKPbc	**PKPbc**	**17 23 38.0**	**-1.7**
	comp=Z,4.2nm,1.0s,baz=216,slow=3.4,SNR=7.2						
CMAR	**Chiang Mai Arr**	**152.49**	**170**	PKIKP	**PKPbc**	**17 23 38.0**	**-1.7**
MJAR	**Matsushiro Arr**	**152.69**	**263**	PKPbc	**PKPdf**	**17 23 37.0**	**+4.5**
	comp=Z,6.4nm,1.1s,baz=126,slow=2.2,SNR=4.2						
QIZ	**Qiongzhong**	**152.89**	**193**	PKPbc	**PKPdf**	**17 23 31.4**	**-2.0**
QIZ				PP	**PP**	**17 27 22.8**	**-0.8**
QIZ				SS	SS	17 46 55.4	+0.4
QIZ				LR	LR		
	comp=Z,220nm,7.6s						
QIZ				LR	LR		
	comp=Z,150nm,13.3s						
YSS	**Yuzh-Sakhalins**	**153.28**	**287**	*e*PKIKP	**PKPbc**	**17 23 41.7**	**+1.1**
YSS				pmax	pmax		
	comp=Z,20nm,1.4s						
KSH	**Kashi**	**158.65**	**97**	PKP	**PKPdf**	**17 23 35.9**	**-4.7**
KSH				PKS	PKSdf	17 27 06.9	-7.4
KSH				PP	**PP**	**17 27 55.4**	**-1.7**
KSH				AMB	AMB		
	comp=Z,310nm,4.8s						
KSH				LR	LR		
	comp=Z,190nm,10.1s						
KSH				LR	LR		
	comp=Z,260nm,10.6s						
KSH				LR	LR		
	comp=Z,400nm,16.6s						
KMI	**Kunming**	**159.40**	**177**	PKP	**PKPdf**	**17 23 37.2**	**-4.9**
KMI				AMB	AMB		
	comp=Z,190nm,4.9s						
KMI				LR	LR		
	comp=Z,200nm,6.7s						
KMI				LR	LR		
	comp=Z,120nm,6.8s						
KMI				LR	LR		
	comp=Z,210nm,7.6s						
NJ2	**Nanjing**	**162.04**	**226**	*e*PKP	**PKPdf**	**17 23 43.2**	**-1.2**
KURBB	**Kurchatov Arra**	**162.49**	**65**	PKP	**PKPdf**	**17 23 43.3**	**-0.9**
	comp=Z,1.4nm,0.8s,baz=256,slow=1.4,SNR=12						
KURBB				PKPab	**PKPab**	**17 24 33.9**	**+1.6**
	comp=Z,3.3nm,0.9s,baz=281,slow=5.4,SNR=6.9						
KURK	**Kurchatov**	**162.53**	**64**		**PKPab**	**17 24 33.9**	**+1.4**
KURK	**Kurchatov**	**162.53**	**64**	PKP2	**PKPab**	**17 24 33.9**	**+1.4**
WHN	**Wuhan**	**162.73**	**212**	PKP	PKPdf	17 23 55.5	+10
ZEA	**Zeya**	**162.93**	**306**	*e*PKP2	**PKPab**	**17 24 32.9**	**-1.2**
ZEA				pmax	pmax		
	comp=Z,48nm,1.8s						
MKAR	**Makanchi Array**	**165.08**	**78**	PKP	**PKPdf**	**17 23 46.2**	**-0.6**
	comp=Z,0.6nm,1.0s,baz=54,slow=3.1,SNR=3.7						
MKAR				PKPab	**PKPab**	**17 24 43.5**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=267,slow=3.8,SNR=7.1						
MKAR				PP	**PP**	**17 28 32.9**	**+1.6**
	comp=Z,0.1nm,0.4s,baz=275,slow=6.0,SNR=3.8						
CD2	**Chengdu**	**165.18**	**180**	PKP	**PKPdf**	**17 23 44.7**	**-2.8**
ZALV	**Zalesovo Beam**	**165.29**	**49**	PKP	**PKPdf**	**17 23 45.2**	**-1.5**
	comp=Z,2.9nm,0.8s,baz=273,slow=2.5,SNR=12						
XAN	**Xi'an**	**167.67**	**200**	PKP	**PKPdf**	**17 23 53.1**	**+3.8**
WMQ	**Urumqi**	**168.38**	**94**	*e*PKP	**PKPdf**	**17 23 47.3**	**-2.2**
WMQ				LR	LR		
	comp=Z,310nm,19.5s						
WMQ				LR	LR		
	comp=Z,440nm,21.7s						
HHC	**Hu-ho-hao-te**	**172.52**	**232**	*e*PKP	**PKPdf**	**17 23 51.4**	**-0.5**
GTA	**Gaotai**	**173.01**	**154**	*e*PKP	**PKPdf**	**17 23 51.4**	**-0.8**
GTA				PKPab	**PKPab**	**17 25 19.1**	**0.0**
SONM	**Songino Array**	**177.26**	**321**	PKP	**PKPdf**	**17 23 52.3**	**-0.8**
	comp=Z,2.1nm,1.3s,baz=262,slow=1.0,SNR=6.8						
SONM				PKPab	PKPab	17 25 36.2	-1.7
	comp=Z,0.1nm,0.4s,baz=153,slow=4.6,SNR=4.2						
SONM	**Songino Array**	**177.26**	**321**	PKP2	PKPab	17 25 36.2	-1.7
SONM						18 23 52.3	

IDC 02 17:04:30.9±3.3**, 2°.54S**×**100°.44E, h0^{km}, mb3.7**/5**, mb1 3.8**/5**, mb1mx3.4**/45**, mbtmp3.7**/5**, Error ellipse: s-maj=147.4km s-min=20.2km az=55.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**28.28**	**259**	T	T	17 39 42.2	
	baz=82,slow=74,SNR=3.4						
H08S3	**Diego Garcia H**	**28.29**	**259**	T	T	17 39 40.3	
	baz=82,slow=74,SNR=4.6						
H08S1	**Diego Carcia H**	**28.30**	**259**	T	T	17 39 43.9	
	baz=82						
WRA	**Warramunga Arr**	**37.35**	**120**	P	P	17 11 45.0	-0.5
	0.2nm,0.4s,baz=311,slow=9.9,SNR=14						
ASAR	**Alice Springs**	**38.59**	**126**	P	P	17 11 56.4	+0.5
	0.6nm,0.6s,baz=302,slow=7.8,SNR=24						
SONM	**Songino Array**	**50.43**	**5**	P	P	17 13 30.3	-0.1
	0.2nm,0.5s,baz=165,slow=6.0,SNR=2.8						
MKAR	**Makanchi Array**	**51.66**	**344**	P	P	17 13 39.8	+0.3
	0.9nm,0.4s,baz=159,slow=8.9,SNR=21						
ZALV	**Zalesovo Beam**	**57.77**	**349**	P	P	17 14 23.4	-0.3
	0.6nm,0.3s,baz=169,slow=7.0,SNR=5.9						
TXAR	**Lajitas Array**	**144.85**	**38**	PKP	PKPab	17 24 09.2	-0.6
	0.3nm,0.7s,baz=318,slow=1.7,SNR=5.4						

NIED ***02*** *17:11:00, 20°.40N×120°.40E, h68^{km}, Mw4.9 Best double couple: $M_0$2.67000×10^{16} NP1:ϕ_s206.00000°, δ54.00000°, λ55.00000°. NP2:ϕ_s76.00000°, δ49.00000°, λ128.00000°.*

IDC ***02*** *17:11:22.9±0.4, 20°.15N×120°.39E, h0^{km}, mb4.4/29, mb1 4.6/31, mb1mx4.5/48, mbtmp4.5/31, ML4.1/2, MS3.8/16, Ms1 3.8/16, ms1mx3.6/50, Error ellipse: s-maj=15.6km s-min=9.8km az=83.0*

JMA ***02*** *17:11:23.5±0.4, 20°.44N×120°.39E, h0^{km}, M4.9*

BJI ***02*** *17:11:23.0±0.0, 20°.34N×120°.30E, h4^{km}, mB5.0/51, mb4.5/55, Ms4.5/53, Ms7 4.2/53*

NEIC ***02*** *17:11:24.2±2.3, 20°.23N±0°.04×120°.33E±0°.06, h10^{km}±2^{km}, mb4.9/69, Error ellipse: s-maj=9.9km s-min=3.2km az=58.0*

MAN ***02*** *17:11:25.1, 20°.22N×120°.31E, h43^{km}, mb5.5, ML4.5, MS4.8*

GCMT ***02*** *17:11:27.2±0.4, 20°.28N±0°.03×120°.21E±0°.03, h18^{km}±1^{km}, MW4.8/70, Moment Tensor Solution. s15,c15; s70,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.12±.19; $M_{\theta\theta}$0.46±.10; $M_{\phi\phi}$1.66±.12; $M_{r\theta}$0.57±.25; $M_{\theta\phi}$-0.91±.05; $M_{\phi r}$0.03±.21; Best double couple: $M_0$2.21000×10^{16} NP1:ϕ_s164.00000°, δ43.00000°, λ-71.00000°. NP2: ϕ_s319.00000°, δ50.00000°, λ-107.00000°. Principal axes: T 2.1650, Plg3.0000°, Azm61.0000°; N 0.0870, Plg13.0000°, Azm330.0000°; P -2.2560, Plg76.0000°, Azm165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 17:11:26.7±0.9**, 20°.22N**±0°.03×**120°.32E**±0°.04**, h28^{km}**±6^{km}**, n196, σ1ˢ72**/220**, mb4.8**/79**, MS3.9**/19**, 4C-3D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	**Basco**	**1.56**	**81**	⇓*e*P	**Pn**	**17 11 51.6**	**-0.9**
BBP				*i* S	**Sn**	**17 12 10.9**	**-1.0**
SIPP	**Brgy, Tapao**	**2.29**	**177**	⇑*i*P	**Pn**	**17 12 01.3**	**-1.3**
SIPP				*e*S	**Sb**	**17 12 39.5**	**+4.3**
APYP	**Conner**	**2.50**	**159**	*e*P	**Pn**	**17 12 04.7**	**-0.9**
APYP				*e*S	**Sn**	**17 12 34.3**	**-0.9**
SGCP	**Mt. Cagua**	**2.55**	**140**	*e*P	**Pn**	**17 12 04.8**	**-1.5**
SGCP				*e*S	**Sn**	**17 12 35.8**	**-0.6**
ABRA	**Dolores**	**2.58**	**172**	*e*P	**Pn**	**17 12 05.1**	**-1.6**
ABRA				*e*S	**Sn**	**17 12 33.0**	**-4.2**
SZP	**Santa**	**2.66**	**177**		**Pn**	**17 12 06.2**	**-1.5**
TWG	**Pinlang**	**2.68**	**15**		**Pn**	**17 12 06.5**	**-1.6**
TPUB	**Ta-pu**	**3.08**	**5**		**Pn**	**17 12 11.3**	**-2.3**
YULB	**Yu-li**	**3.29**	**16**		**Pn**	**17 12 14.9**	**-1.5**
CAUP	**Cauayan**	**3.55**	**156**	*e*P	**Pn**	**17 12 20.6**	**+0.6**
CAUP				*e*S	**Sn**	**17 13 02.6**	**+1.4**
SSLB	**Suanglung**	**3.60**	**9**		**Pn**	**17 12 19.0**	**-1.8**
BOLP	**Bolinao**	**3.83**	**186**	*e*P	**Pn**	**17 12 22.6**	**-1.3**
BOLP				*e*S	**Sn**	**17 13 05.7**	**-2.5**
SMPP	**San Manuel, Pa**	**4.06**	**175**	*e*P	**Pn**	**17 12 24.9**	**-2.2**
SMPP				*e*S	**Sn**	**17 13 10.5**	**-3.2**
NACB	**Ninganchiao**	**4.11**	**16**		**Pn**	**17 12 26.7**	**-1.0**
YHNB	**Yeheng**	**4.54**	**12**		**Pn**	**17 12 33.2**	**-0.5**
KNMB	**Chin-men Tao**	**4.59**	**337**	Pn	**Pn**	**17 12 31.5**	**-2.8**
KNMB					**Sn**	**17 13 21.0**	**-5.7**
BALP	**Baler**	**4.61**	**165**	*e*P	**Pn**	**17 12 35.2**	**+0.6**
BALP				*e*S	**Sn**	**17 13 21.8**	**-5.5**
PCPH	**Palayan**	**4.69**	**171**	⇑*e*P	**Pn**	**17 12 36.1**	**+0.4**
YOJ	**Yonaguni jima**	**4.90**	**30**	P	**Pn**	**17 12 38.1**	**-0.5**
QZH	**Quanzhou**	**4.97**	**342**	Pn	**Pn**	**17 12 38.2**	**-1.3**
QZH				Sn	**Sn**	**17 13 29.3**	**-6.8**
HATJ	**Hateruma jima**	**5.00**	**40**	P	**Pn**	**17 12 38.9**	**-1.1**
HATJ				*e*S	**Sn**	**17 13 34.9**	**-2.0**
IRIF	**Iriomote-Funau**	**5.17**	**37**	P	**Pn**	**17 12 41.8**	**-0.5**
IRIF				*e*S	**Sn**	**17 13 39.8**	**-1.3**
JKRS	**Kuro-shima**	**5.26**	**40**	P	**Pn**	**17 12 42.9**	**-0.6**
JIJ	**Ishigaki jima**	**5.43**	**40**	P	**Pn**	**17 12 45.0**	**-0.9**
JIJ				*e*S	**Sn**	**17 13 44.6**	**-3.0**
POLP	**Polilio Island**	**5.67**	**164**	*e*P	**Pn**	**17 12 49.0**	**-0.2**
POLP				*e*S	**Sn**	**17 13 53.1**	**-0.4**
JISG	**Ishigakijimahi**	**5.70**	**40**	P	**Pn**	**17 12 48.5**	**-1.1**
JISG				S	**Sn**	**17 13 50.7**	**-3.5**
JTJ	**Tarama**	**5.98**	**42**	P	**Pn**	**17 12 53.2**	**-0.2**
JTJ				S	**Sn**	**17 13 58.8**	**-2.3**
TGY	**Tagaytay City**	**6.11**	**174**	Pn	**Pn**	**17 12 57.2**	**+1.9**
	61nm,0.3s,baz=35,slow=12,SNR=4.1						
TGY				LR	LR	17 15 38.0	
	comp=Z,974nm,18.2s,baz=326,slow=42						
HKPS	**Hong Kong Po S**	**6.12**	**291**		**Pn**	**17 12 53.4**	**-1.9**
GQP	**Guinayangan**	**6.60**	**162**	⇑*e*P	**Pn**	**17 13 02.4**	**+0.4**
PGP	**Puerto Galera**	**6.71**	**175**	⇓*e*P	**Pn**	**17 13 01.6**	**-1.8**
QIZ	**Qiongzhong**	**9.95**	**265**	P	**Pn**	**17 13 45.1**	**-2.8**
QIZ				S	**Sn**	**17 15 35.9**	**-2.8**
QIZ				LR	LR		
	comp=N,2µm,11.8s						
QIZ				LR	LR		
	comp=E,2µm,11.8s						
QIZ				LR	LR		
	comp=Z,1µm,10.2s						
WHN	**Wuhan**	**11.61**	**334**	P	Pn	17 13 57.8	-13
WHN				S	**Sn**	**17 16 17.1**	**-2.2**
NJ2	**Nanjing**	**11.86**	**354**	*e*P	**Pn**	**17 14 13.4**	**-0.6**
NJ2				S	**Sn**	**17 16 29.3**	**+3.9**
NJ2				pmax	pmax		
	comp=Z,18nm,1.0s						
NJ2				LR	LR		
	comp=N,1µm,10.9s						
NJ2				LR	LR		
	comp=E,1µm,11.4s						
NJ2				LR	LR		
	comp=Z,1µm,12.3s						
DAV	**Davao City (W)**	**14.03**	**158**	LR	LR	17 20 37.4	
	comp=Z,431nm,20.0s,baz=353,slow=40						
SLVN	**Son La**	**15.40**	**277**		**Pn**	**17 15 02.4**	**+0.1**
JNU	**Nakatsue**	**15.93**	**34**	Pn	**Pn**	**17 15 10.3**	**+1.3**
	0.8nm,0.3s,baz=189,slow=4.2,SNR=14						
JNU				LR	LR	17 21 23.7	
	comp=Z,251nm,21.0s,baz=212,slow=38						
JNU	**Nakatsue**	**15.93**	**34**	P	**P**	**17 15 10.7**	**-1.7**
JNU				IAmb	IAmb	17 15 14.0	
	comp=Z,82nm,1.0s						
TIA	**Tai'an**	**16.18**	**351**	P	**P**	**17 15 16.9**	**+1.8**
KMI	**Kunming**	**16.94**	**290**	P	**Pn**	**17 15 20.8**	**-1.3**
KMI				pP	P	17 15 24.0	+0.1
KMI				sP	pP	17 15 26.7	-3.6
KMI				PP	**pwP**	**17 15 35.8**	**+0.7**
KMI				S	**Sn**	**17 18 29.8**	**0.0**
KMI				sS	S	17 18 37.1	-2.4
KMI				SS	**SnSn**	**17 18 47.5**	**+4.4**
KMI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,120nm,4.5s						
KMI				LR	LR		
	comp=Z,900nm,11.8s						
KMI				LR	LR		
	comp=Z,900nm,13.0s						
KMI				LR	LR		
	comp=Z,580nm,11.5s						
KSRS	**Korea Array**	**18.41**	**19**	P	**P**	**17 15 39.3**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=195,slow=12,SNR=46						
KSRS				LR	LR	17 23 32.1	
	comp=Z,185nm,21.0s,baz=198,slow=40						
DL2	**Dalian**	**18.66**	**3**	⇑*i*P	**Pn**	**17 15 43.2**	**+0.3**
DL2				pmax	pmax		
	comp=Z,64nm,0.9s						
DL2				pmax	pmax		
	comp=Z,450nm,3.9s						
DL2				LR	LR		
	comp=Z,480nm,12.5s						
DL2				LR	LR		
	comp=Z,830nm,13.5s						
DL2				LR	LR		
	comp=Z,620nm,13.4s						
SBUM	**Sibu**	**19.35**	**205**	P	**P**	**17 15 49.2**	**-1.0**
SBUM	**Sibu**	**19.35**	**205**	P	**Pn**	**17 15 51.0**	**-0.4**
MRSI	**Marisa**	**19.68**	**175**	P	**Pn**	**17 15 55.5**	**+0.1**
	comp=Z,799nmcomp=Z,46nm,1.4s						
MPSI	**Mapaga**	**19.76**	**181**	P	**Pn**	**17 15 55.6**	**-0.7**
	comp=Z,423nmcomp=Z,26nm,1.1s						
KMSI	**Cibinong**	**19.85**	**169**	P	**P**	**17 15 56.3**	**+0.7**
	comp=Z,132nm,1.0s						
BJT	**Baijiatuau**	**20.06**	**351**	P	**P**	**17 15 56.6**	**-1.2**
BJT				IAmb	IAmb	17 16 09.3	
	comp=Z,69nm,1.1s						
BJI	**Beijing**	**20.08**	**351**	P	Pn	17 15 59.5	-0.4
BJI				S	**S**	**17 19 43.0**	**+0.9**
BJI				LR	LR		
	comp=Z,470nm,17.1s						
BJI				LR	LR		
	comp=Z,370nm,14.3s						
BJI				LR	LR		
	comp=Z,490nm,17.2s						
CMAR	**Chiang Mai Arr**	**20.25**	**269**	P	Pn	17 16 01.4	-0.7
	comp=Z,2.3nm,0.8s,baz=74,slow=9.2,SNR=20						
CMAR				PcP	**PcP**	**17 20 14.9**	**+1.4**
	comp=Z,1.4nm,0.8s,baz=84,slow=1.0,SNR=10						
CMAR				LR	LR	17 23 51.9	
	comp=Z,433nm,18.1s,baz=90,slow=37						
TNTI	**Ternate**	**20.52**	**160**	P	**P**	**17 16 00.7**	**-2.2**
SMKI	**Samarinda**	**20.76**	**189**	P	Pn	17 16 07.1	-1.0
	comp=Z,6µmcomp=Z,178nm,0.5s						
APSI	**Ampana**	**21.04**	**176**	P	**P**	**17 16 09.8**	**+1.3**
	comp=Z,608nmcomp=Z,41nm,1.5s						
KSM	**Kuching**	**21.04**	**209**	P	**P**	**17 16 08.4**	**-0.2**
INU	**Inuyama**	**21.06**	**41**	P	**P**	**17 16 07.2**	**-1.5**
JCJ	**Chichijima**	**21.15**	**67**	LR	LR	17 22 39.8	
	comp=Z,212nm,20.1s,baz=206,slow=32						
LUWI	**Luwuk**	**21.26**	**173**	P	**P**	**17 16 11.4**	**+0.4**
	comp=Z,2µmcomp=Z,143nm,1.3s						
LZH	**Lanzhou**	**21.42**	**321**	⇓P	**P**	**17 16 15.0**	**+2.3**
LZH				pP	pP	17 16 19.6	+0.4
LZH				sP	pwP	17 16 23.2	-1.1
LZH				S	**S**	**17 20 12.2**	**+3.0**
LZH				pmax	pmax		
	comp=Z,28nm,1.4s						
LZH				pmax	pmax		
	comp=Z,140nm,7.6s						
LZH				LR	LR		
	comp=Z,570nm,11.9s						
LZH				LR	LR		
	comp=Z,660nm,14.6s						
LZH				LR	LR		
	comp=Z,810nm,15.3s						
BKB	**Balikpapan**	**21.61**	**189**	P	**P**	**17 16 15.8**	**+1.1**
	comp=Z,3µmcomp=Z,333nm,1.0s						
HHC	**Hu-ho-hao-te**	**21.88**	**342**	*e*P	**P**	**17 16 18.8**	**+1.2**
HHC				pP	pP	17 16 23.2	-0.8
HHC				sP	pwP	17 16 29.9	+0.8
HHC				S	**S**	**17 20 10.8**	**-7.2**
HHC				pmax	pmax		
	comp=Z,98nm,0.6s						
HHC				pmax	pmax		
	comp=Z,400nm,3.9s						
HHC				LR	LR		
	comp=Z,1µm,10.1s						
HHC				LR	LR		
	comp=Z,980nm,11.1s						
HHC				LR	LR		
	comp=Z,1µm,9.1s						
LBMI	**Labuha**	**21.89**	**160**	P	**P**	**17 16 15.9**	**-1.8**
	comp=Z,80nm,1.2s						
BTO	**Baotou**	**22.15**	**339**	*e*P	**P**	**17 16 26.2**	**+5.8**
MAJO	**Matsushiro**	**22.57**	**40**	P	**P**	**17 16 22.0**	**-2.9**
MAJO				IAmb	IAmb	17 16 33.0	
	comp=Z,71nm,1.1s						
MAT	**Matsushiro**	**22.57**	**40**	P	**P**	**17 16 24.0**	**-0.9**
MAT				S	**S**	**17 20 27.1**	**-3.6**
MJAR	**Matsushiro Arr**	**22.57**	**40**	P	**P**	**17 16 24.5**	**-0.4**
	comp=Z,18nm,0.9s,baz=242,slow=6.8,SNR=26						
MJB9	**Matsu-Tunnel**	**22.57**	**40**	P	**P**	**17 16 24.8**	**-0.1**
MJB9				IAmb	IAmb	17 16 32.9	
	comp=Z,69nm,1.1s						
SANI	**Sanana**	**22.82**	**165**	P	**P**	**17 16 24.4**	**-3.2**
	comp=Z,865nmcomp=Z,92nm,1.0s						
SIJI	**Sorong**	**23.54**	**152**	P	**P**	**17 16 34.3**	**-0.7**
	comp=Z,57nm,0.8s,baz=357,slow=7.5,SNR=38						
CN2	**Changchun**	**23.90**	**9**	*e*P	**P**	**17 16 37.6**	**-0.5**
CN2				*e*S	**S**	**17 20 51.1**	**-1.7**
CN2				pmax	pmax		
	comp=Z,20nm,1.3s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,800nm,13.0s						
CN2				LR	LR		
	comp=Z,500nm,13.0s						
CN2				LR	LR		
	comp=Z,700nm,15.0s						
SPSI	**Sidrap Palu**	**24.04**	**181**	P	**P**	**17 16 39.6**	**0.0**
	comp=Z,31nm,1.3s						
KULM	**Kulim**	**24.21**	**235**	P	**P**	**17 16 41.2**	**0.0**
KULM				IAmb	IAmb	17 16 51.9	
	comp=Z,25nm,0.9s						
KULM	**Kulim**	**24.21**	**235**	P	**P**	**17 16 43.0**	**+1.8**
NLAI	**Namlea**	**24.24**	**163**	P	**P**	**17 16 44.6**	**+3.1**
	comp=Z,1µmcomp=Z,82nm,1.2s						
IPM	**Ipoh**	**24.45**	**233**	P	**P**	**17 16 43.4**	**-0.1**
IPM				IAmb	IAmb	17 16 44.0	
	comp=Z,27nm,0.9s						
IPM	**Ipoh**	**24.45**	**233**	P	**P**	**17 16 44.0**	**+0.6**
KAPI	**Kappang**	**25.08**	**181**	P	**P**	**17 16 48.9**	**-0.2**
	comp=Z,24nm,1.0s,baz=1.5,slow=10,SNR=9.9						
KAPI				LR	LR	17 27 20.9	
	comp=Z,157nm,19.2s,baz=352,slow=38						
MDJ	**Mudanjiang**	**25.52**	**15**	P	**P**	**17 16 52.7**	**-0.2**
MDJ				pmax	pmax		
	comp=Z,35nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,240nm,7.4s						
MDJ	**Mudanjiang**	**25.52**	**15**	P	**P**	**17 16 52.8**	**-0.1**
MDJ				IAmb	IAmb	17 16 55.9	
	comp=Z,30nm,1.0s						
USRK	**Ussuriysk Ar.**	**25.82**	**20**	P	**P**	**17 16 56.9**	**+1.3**
	comp=Z,5.7nm,0.9s,baz=245,slow=5.5,SNR=7.8						
USRK				LR	LR	17 27 47.3	
	comp=Z,92nm,20.4s,baz=188,slow=38						
GTA	**Gaotai**	**26.02**	**322**	*e*P	**P**	**17 16 58.6**	**+1.0**
GTA				pP	pP	17 17 02.8	-1.7
GTA				sP	sP	17 17 05.9	-1.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,84nm,5.7s						
GTA				LR	LR		
	comp=Z,250nm,14.6s						
GTA				LR	LR		
	comp=Z,280nm,14.6s						
GTA				LR	LR		
	comp=Z,350nm,11.1s						
SHL	**Shillong**	**26.71**	**287**	P	**P**	**17 17 05.0**	**+0.9**
BRDH	**Bariadhala**	**26.79**	**280**	LR	LR	17 27 34.1	
	comp=Z,295nm,18.9s,baz=140,slow=36						
PSI	**Prapat**	**27.12**	**233**	P	**P**	**17 17 08.2**	**+0.4**
	comp=Z,17nm,0.9s,baz=27,slow=5.5,SNR=20						
PSI				LR	LR	17 27 06.1	
	comp=Z,262nm,19.7s,baz=78,slow=35						
RPSI	**Rantau Prapat**	**27.19**	**233**	P	**P**	**17 17 07.1**	**-1.1**
RPSI				IAmb	IAmb	17 17 17.9	
	comp=Z,26nm,1.0s						
EDFI	**Ende, Flores**	**28.82**	**177**	P	**P**	**17 17 23.0**	**+0.2**
ULN	**Ulaanbaatar**	**29.60**	**342**	P	**P**	**17 17 28.9**	**-0.8**
ULN				IAmb	IAmb	17 17 40.2	
	comp=Z,30nm,1.4s						
ULN				PcP	**PcP**	**17 20 31.0**	**-2.9**
LEM	**Lembang**	**29.64**	**206**	LR	LR	17 30 20.9	
	comp=Z,136nm,18.4s,baz=40,slow=38						
SONM	**Songino Array**	**29.77**	**341**	P	**P**	**17 17 32.1**	**+1.0**
	comp=Z,3.1nm,0.9s,baz=162,slow=10,SNR=13						
SONM				LR	LR	17 31 52.7	
	comp=Z,206nm,18.7s,baz=182,slow=41						
KLR	**Kul'dur**	**30.36**	**15**	P	**P**	**17 17 37.9**	**+1.8**
	comp=Z,4.3nm,0.9s,baz=213,slow=8.6,SNR=7.9						
TAPN	**Taplejung**	**30.61**	**290**	*e*P	**P**	**17 17 39.5**	**+0.5**
	comp=Z,24nm,1.1s						
ODAN	**Odare**	**30.85**	**289**	*e*P	**P**	**17 17 41.8**	**+0.8**
	comp=Z,13nm,0.7s						
RAMN	**Ramite**	**31.56**	**289**	*e*P	**P**	**17 17 48.6**	**+1.3**
	comp=Z,43nm,1.2s						
JIRN	**Jiri**	**31.99**	**290**	*e*P	**P**	**17 17 52.1**	**+0.9**
	comp=Z,62nm,1.2s						
GUN	**Gumba**	**32.29**	**290**	*e*P	**P**	**17 17 54.7**	**+0.9**
	comp=Z,37nm,0.9s						
PKI	**Pulchoki**	**32.67**	**290**	*e*P	**P**	**17 17 57.0**	**-0.1**
	comp=Z,32nm,1.3s						
PKIN	**Phulchoki**	**32.68**	**290**	*e*P	**P**	**17 17 57.2**	**+0.1**
	comp=Z,11nm,1.1s						
KKN	**Kakani**	**32.80**	**290**	*e*P	**P**	**17 17 58.5**	**+0.3**
	comp=Z,26nm,1.1s						
DMN	**Daman**	**32.94**	**290**	*e*P	**P**	**17 17 59.6**	**+0.2**
	comp=Z,36nm,1.2s						
GKN	**Gorkha**	**33.39**	**290**	*e*P	**P**	**17 18 03.3**	**+0.1**
	comp=Z,33nm,1.1s						
DANN	**Dangsing**	**34.19**	**291**	*e*P	**P**	**17 18 10.2**	**-0.2**
	comp=Z,25nm,1.0s						
WMQ	**Urumqi**	**35.95**	**318**	*e*P	**P**	**17 18 23.9**	**-1.1**
WMQ				sP	pwP	17 18 36.0	-1.1
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,60nm,5.3s						
WMQ				LR	LR		
	comp=Z,230nm,13.5s						
WMQ				LR	LR		
	comp=Z,170nm,16.3s						
FITZ	**Fitzroy Crossi**	**38.43**	**172**	P	**P**	**17 18 45.4**	**-0.8**
	comp=Z,10nm,1.1s,baz=6.1,slow=4.2,SNR=10.0						
FITZ	**Fitzroy Crossi**	**38.43**	**172**	P	**P**	**17 18 44.8**	**-1.3**
FITZ				PcP	**PcP**	**17 20 59.9**	**+0.6**
HYB	**Hyderabad**	**39.56**	**273**	*i* P	**P**	**17 18 57.0**	**+1.2**
COEN	**Coen**	**40.72**	**145**	P	**P**	**17 19 05.0**	**-0.4**
MK31	**Makanchi Array**	**40.73**	**320**	P	**P**	**17 19 05.0**	**-0.1**
MK31				PcP	**PcP**	**17 21 07.0**	**+0.8**
MKAR	**Makanchi Array**	**40.73**	**320**	P	**P**	**17 19 06.6**	**+1.5**
	comp=Z,1.9nm,0.6s,baz=115,slow=9.8,SNR=22						
MKAR				PcP	**PcP**	**17 21 06.9**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=108,slow=5.6,SNR=4.0						
MAKZ	**Makanchi**	**40.92**	**319**	P	**P**	**17 19 07.4**	**+0.7**
MAKZ				PcP	**PcP**	**17 21 07.6**	**+0.7**
PSA00	**Pilbara Seismi**	**41.54**	**181**	P	**P**	**17 19 10.2**	**-1.7**
PSA00				IAmb	IAmb	17 19 11.9	
	comp=Z,15nm,1.0s						
WB0	**Warramunga Arr**	**42.06**	**160**	P	**P**	**17 19 15.3**	**-0.9**
WB0				IAmb	IAmb	17 19 16.5	
	comp=Z,28nm,1.3s						
WB0				PcP	**PcP**	**17 21 11.7**	**+0.8**
WRAB	**Tennant Creek**	**42.20**	**160**	P	**P**	**17 19 16.9**	**-0.5**
WRAB				IAmb	IAmb	17 19 17.9	
	comp=Z,31nm,1.2s						
WRA	**Warramunga Arr**	**42.21**	**160**	P	**P**	**17 19 16.6**	**-0.9**
	comp=Z,9.8nm,0.9s,baz=338,slow=9.3,SNR=62						
WRA				PcP	**PcP**	**17 21 11.7**	**+0.3**
	comp=Z,3.9nm,0.9s,baz=341,slow=3.6,SNR=5.2						
WB2	**Warramunga Arr**	**42.21**	**160**	IAmb	IAmb	17 19 17.9	
	comp=Z,36nm,1.2s						
WR0	**Warramunga Arr**	**42.29**	**160**	P	**P**	**17 19 17.6**	**-0.5**
WR0				PcP	**PcP**	**17 21 12.1**	**+0.5**
KSH	**Kashi**	**42.51**	**307**	P	**P**	**17 19 20.4**	**+0.5**
KSH				pP	pP	17 19 25.1	-1.9
KSH				ScP	**ScP**	**17 25 02.0**	**+0.6**
KSH				S	**S**	**17 25 42.3**	**+1.7**
KSH				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,180nm,4.8s						
KSH				LR	LR		
	comp=Z,620nm,12.1s						
KSH				LR	LR		
	comp=Z,490nm,12.9s						
KSH				LR	LR		
	comp=Z,510nm,13.0s						
ZAA0	**Zalesovo Array**	**43.20**	**330**	P	**P**	**17 19 23.1**	**-2.0**

ZAA0				IAmb	IAmb	17 19 37.0	
	comp=Z,19nm,1.1s						
ZALV	Zalesovo Beam	43.20	330	P	P	17 19 25.9	+0.8
	comp=Z,5.2nm,0.9s,baz=115,slow=7.2,SNR=16						
PETK	Petropavlovsk-	43.61	32	LR	LR	17 37 54.0	
	comp=Z,132nm,21.7s,baz=240,slow=36						
H11S3	WAKE ISLAND Hy	43.67	84	T	T	18 06 18.4	
	baz=281,slow=75,SNR=6.8						
H11S1	WAKE ISLAND Hy	43.68	84	T	T	18 06 23.6	
	baz=281,slow=75,SNR=5.6						
H11S2	WAKE ISLAND Hy	43.69	84	T	T	18 06 19.2	
	baz=281,slow=75,SNR=5.3						
NIL	Nilore	43.70	298	P	P	17 19 30.3	+0.8
NIL				IAmb	IAmb	17 19 31.7	
	comp=Z,19nm,0.9s						
KURBB	Kurchatov Arra	44.70	323	P	P	17 19 38.6	+1.4
	comp=Z,6.4nm,0.8s,baz=123,slow=7.5,SNR=24						
AS31	Alice Springs	45.58	162	P	P	17 19 44.7	+0.1
ASAR	Alice Springs	45.58	162	P	P	17 19 44.3	-0.3
	comp=Z,9.2nm,0.8s,baz=345,slow=7.2,SNR=168						
GAR	Garm	46.71	305	P	P	17 19 53.8	+0.2
KK31	Karatay Array	47.33	310	P	P	17 19 55.8	-2.3
KKAR	Karatay Array	47.33	310	P	P	17 19 55.7	-2.4
CHGR	Chuyangaron	47.56	304	P	P	17 19 59.8	-0.3
CHGR				IAmb	IAmb	17 20 01.9	
	comp=Z,10nm,0.8s						
SEY	Seymchan	47.97	19	P	P	17 20 03.6	+0.9
	comp=Z,2.8nm,0.9s,baz=244,slow=19,SNR=6.3						
BRVK	Borovoye	50.36	323	P	P	17 20 21.1	-0.1
BRVK				IAmb	IAmb	17 20 32.2	
	comp=Z,10nm,0.9s						
TIXI	Tiksi	51.68	3	P	P	17 20 30.6	-0.3
	comp=Z,3.8nm,0.9s,baz=155,slow=4.4,SNR=13						
TIXI	Tiksi	51.68	3	P	P	17 20 32.0	+1.2
NRIK	Noril'sk	53.03	346	P	P	17 20 41.9	+1.0
	comp=Z,4.7nm,0.6s,baz=135,slow=7.7,SNR=3.5						
NRIK				LR	LR	17 45 06.4	
	comp=Z,210nm,18.4s,baz=155,slow=38						
BBOO	Buckleboo	54.83	164	P	P	17 20 54.2	-0.2
STKA	Stephens Creek	55.67	158	P	P	17 21 00.4	-0.1
	comp=Z,10nm,1.0s,baz=349,slow=7.1,SNR=12						
STKA	Stephens Creek	55.67	158	P	P	17 20 59.5	-1.0
BILL	Bilibino	55.67	19	P	P	17 21 01.6	+1.5
BILL				IAmb	IAmb	17 21 01.8	
	comp=Z,12nm,0.8s						
ABKAR	Akbulak array	55.69	316	P	P	17 21 01.1	+0.6
GEYT	Alibeck	56.18	303	P	P	17 21 05.4	+1.1
	comp=Z,2.9nm,0.8s,baz=95,slow=7.4,SNR=11						
ARU	Arti	57.83	325	P	P	17 21 15.8	+0.2
ARU				IAmb	IAmb	17 21 25.9	
	comp=Z,11nm,0.9s						
TOO	Toolangi	62.17	158	P	P	17 21 47.2	+1.6
KIRV	Kirov	63.03	326	LR	LR	17 49 21.1	
	comp=Z,101nm,19.7s,baz=189,slow=36						
ANM	Nome	65.19	27	P	P	17 22 07.0	+1.8
ANM				IAmb	IAmb	17 22 16.8	
	comp=Z,11nm,1.1s						
KBZ	Khabaz	67.36	310	P	P	17 22 20.4	+0.9
	comp=Z,3.5nm,0.9s,baz=73,slow=5.5,SNR=8.8						
KLMR	Klimovskoe	68.10	329	*e*P	P	17 22 22.1	-1.7
KLMR				AMP		17 22 33.1	
	comp=Z,21nm,1.2s						
RAYN	Ar Rayn	68.77	288	P	P	17 22 28.2	-0.6
PPLA	Purkeypile	71.08	29	P	P	17 22 41.2	-1.2
COLD	Coldfoot	71.35	24	P	P	17 22 43.1	-0.6
COLD				IAmb	IAmb	17 23 01.2	
	comp=Z,12nm,1.4s						
TOLK	Toolik Lake Re	71.40	23	P	P	17 22 42.2	-1.9
TOLK				IAmb	IAmb	17 22 45.4	
	comp=Z,11nm,1.1s						
KDAK	Kodiak Island	71.60	34	P	P	17 22 47.4	+2.0
	comp=Z,6.1nm,0.8s,baz=274,slow=9.8,SNR=4.3						
KDAK	Kodiak Island	71.60	34	IAmb	IAmb	17 22 50.8	
	comp=Z,47nm,1.4s						
SUA	Susitna One	71.96	30	P	P	17 22 48.2	+0.6
BRLK	Bradley Lake	72.16	32	P	P	17 22 48.3	-0.5
MCK	McKinley	72.41	28	P	P	17 22 49.0	-1.1
MDM	Murphy Dome	72.50	26	P	P	17 22 49.9	-0.8
MDM				PcP	PcP	17 23 06.6	-1.8
WRH	Wood River Hil	72.64	27	P	P	17 22 53.4	+1.9
WRH				IAmb	IAmb	17 23 03.6	
	comp=Z,12nm,1.2s						
PMR	Palmer	72.70	30	P	P	17 22 52.4	+0.5
PMR				IAmb	IAmb	17 22 53.1	
	comp=Z,10nm,1.0s						
ARCES	ARCESS Array B	72.91	338	P	P	17 22 54.1	+1.1
	comp=Z,2.5nm,0.8s,baz=81,slow=5.9,SNR=3.1						
KNK	Knik Glacier	73.05	30	P	P	17 22 54.0	0.0
KNK				IAmb	IAmb	17 22 55.7	
	comp=Z,16nm,1.1s						
IL31		73.09	27	P	P	17 22 52.9	-1.3
ILAR	Eielson Array	73.09	27	P	P	17 22 54.1	-0.1
	comp=Z,2.1nm,0.7s,baz=268,slow=5.4,SNR=20						
SPITS	Spitsbergen Ar	73.17	348	LR	LR	17 57 58.4	
	comp=Z,56nm,18.4s,baz=145,slow=38						
DHY	Denali Highway	73.22	28	P	P	17 22 56.1	+1.0
SCM	Sheep Creek Mo	73.49	30	P	P	17 22 57.6	+0.8
GLI	Glacier Island	73.80	31	P	P	17 22 58.6	+0.1
GLI				IAmb	IAmb	17 23 08.6	
	comp=Z,18nm,1.1s						
RIDG	Independent Ri	74.19	27	P	P	17 23 00.9	+0.1
FINES	FINESS Array B	74.46	330	P	P	17 23 02.9	+0.6
	comp=Z,2.1nm,0.7s,baz=104,slow=6.5,SNR=7.7						
SCRK	Sand Creek	74.50	27	P	P	17 23 02.1	-0.5
SCRK				IAmb	IAmb	17 23 13.9	
	comp=Z,14nm,1.0s						
DOT	Dot Lake	74.55	27	P	P	17 23 03.3	+0.5
DOT				IAmb	IAmb	17 23 04.3	
	comp=Z,8.1nm,1.0s						
GLB	Gilahina Butte	75.22	30	P	P	17 23 08.0	+1.3
GLB				IAmb	IAmb	17 23 17.5	
	comp=Z,18nm,1.2s						
EGAK	Eagle	75.48	26	P	P	17 23 08.1	0.0
EGAK				IAmb	IAmb	17 23 18.4	
	comp=Z,6.4nm,0.9s						
BARN	Barnard Glacie	76.32	30	P	P	17 23 14.8	+1.6
BARN				IAmb	IAmb	17 23 15.7	
	comp=Z,11nm,1.2s						
DAWY	Dawson	76.42	26	P	P	17 23 14.5	+0.9
DAWY				IAmb	IAmb	17 23 24.3	
	comp=Z,10nm,0.9s						
CTGM	Chitina Glacie	76.50	30	P	P	17 23 15.4	+1.2
INK	Inuvik	77.19	21	P	P	17 23 18.8	+1.1
	comp=Z,2.5nm,0.7s,baz=256,slow=7.1,SNR=6.7						
INK	Inuvik	77.19	21	P	P	17 23 18.3	+0.7
INK				IAmb	IAmb	17 23 28.1	
	comp=Z,13nm,1.3s						
HYT	Haines Junctio	78.32	29	P	P	17 23 24.5	+0.1
WHY	Whitehorse	79.58	29	P	P	17 23 30.9	-0.4
WHY				IAmb	IAmb	17 23 41.9	
	comp=Z,17nm,1.4s						
C36M	Paulatuk	79.79	19	P	P	17 23 31.8	-0.3
C36M				IAmb	IAmb	17 23 42.1	
	comp=Z,20nm,1.4s						
NB2	NORSAR Subarra	81.34	332	P	P	17 23 40.7	+0.1
	comp=Z,15nm,1.4s,baz=64,slow=5.3						
NOA	NORSAR Array B	81.34	332	P	P	17 23 40.9	+0.3
	comp=Z,2.2nm,0.9s,baz=65,slow=5.2,SNR=5.5						
VYHS	Vyhne	82.41	319	*e*P	P	17 23 47.7	+1.3
RES	Resolute Bay	82.69	9	P	P	17 23 47.9	+0.5
KMBO	Kilima Mbogo	83.88	267	P	P	17 23 56.6	+1.6
	comp=Z,1.9nm,0.8s,baz=53,slow=10.0,SNR=7.2						
CLL	Collm	84.72	323	*i* P	P	17 23 59.7	+1.5
	comp=Z,21nm,1.8s						
CLL				*e*sP	pP	17 24 04.0	-1.8
CLL				*e*		17 24 08.0	
CLL				LmV		17 28 00.0	
	comp=Z,200nm,18.2s						
ARSA	Arzberg	84.95	319	*i* P	P	17 23 59.7	+0.2
	comp=Z,5.4nm,1.1s						
GERES	GERESS Array B	85.39	321	P	P	17 24 02.6	+0.9
	comp=Z,1.9nm,0.9s,baz=50,slow=4.2,SNR=9.8						
MOA	Molln	85.47	320	*i* PcP	P	17 24 03.0	+0.9
	comp=Z,12nm,1.6s						
SOKA	Soboth	85.49	318	*i* P	P	17 24 00.9	-1.4
	comp=Z,7.8nm,1.6s						
OBKA	Obir	85.86	318	*i* P	P	17 23 59.7	-4.5
	comp=Z,7.8nm,1.6s						
MYKA	Terra Mystica	86.38	319	*i* P	P	17 24 04.5	-2.2
	comp=Z,3.9nm,1.0s						
YKA	Yellowknife Ar	86.92	22	P	P	17 24 09.6	+0.7
	comp=Z,3.2nm,0.9s,baz=313,slow=4.5,SNR=31						
BEKR	Beckworth	97.73	43	P	P	17 24 59.5	-0.2
TXAR	Lajitas Array	115.00	42	PKP	PKPdf	17 30 07.0	+1.1
	comp=Z,0.4nm,0.7s,baz=321,slow=1.6,SNR=5.1						
LPAZ	La Paz	171.07	65	PKP	PKPdf	17 31 35.3	+1.2
	comp=Z,3.3nm,1.1s,baz=26,slow=3.7,SNR=8.5						

*IDC **02** 17:30:11.1±3.4,25°.16N×99°.55W,h0^{km},mb3.0/3, mb1 3.6/6,mb1mx3.4/45,mbtmp3.2/6,ML4.3/2,MS3.3/5, Ms1 3.3/5,ms1mx3.1/16,Error ellipse: s-maj=95.0km s-min=28.3km az=40.0*

*CERI **02** 17:30:16.0,25°.60N×99°.35W,h8^{km}*

*NEIC **02** 17:30:16.1±1.5,25°.6N±0°.1×99°.4W±0°.1,h8^{km}±10^{km}, mb3.8/2,Mwr4.0/13(SLM),Error ellipse: s-maj=15.7km s-min=12.6km az=154.0,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.13; $M_{\theta\theta}$0.21; $M_{\phi\phi}$0.92; $M_{r\theta}$0.19; $M_{\theta\phi}$-0.69; $M_{\phi r}$0.70; Fault plane solution: $M_0$1.45000×10^{15} NP1:ϕ_s307.00000°,δ38.00000°, λ-126.00000°. NP2:ϕ_s170.00000°,δ60.00000°, λ-65.00000°. Principal axes: T 1.4439, Plg12.0000°, Azm242.0000°; N -0.0009, Plg22.0000°, Azm337.0000°; P -1.4430, Plg65.0000°, Azm126.0000°;*

*MEX **02** 17:30:17.2±0.4,25°.48N×99°.58W,h5^{km},MD3.6*

ISC 02 17:30:15.6±0.8,**25°.58N**±0°.03×**99°.45W**±0°.05,**h10**^{km}**,n33, σ1^{s}75**/35**,Northern Mexico**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LNIG	Linares	0.68	182	*e*P	Pg	17 30 27.9	-0.8
LNIG				*i* PG	Pg	17 30 27.9	-0.8
	baz=350,slow=16						
LNIG				*e*S	Sg	17 30 36.8	-0.7
MNIG	Monterrey	0.76	273	*e*P	Pg	17 30 29.5	-0.8
MNIG				*i* S	Sg	17 30 37.7	-2.6
KVTX	Kingsville	2.40	35		Pn	17 30 55.0	+0.1
833A	Chaparral WMA,	2.73	1		Pg	17 31 08.3	+0.3
833A	Chaparral WMA,	2.73	1	P	Pn	17 31 01.4	+1.8
	baz=179						
833A				Sb	Sg	17 31 44.2	+0.7
	baz=179						
ZAIG	Zacatecas	3.99	226		Pb	17 31 28.6	+2.4
JCT	Junction City	4.89	356		Pn	17 31 31.1	+1.8
JCT	Junction City	4.89	356	P	Pn	17 31 31.3	+2.1
	baz=175						
JCT				S	Sn	17 32 27.3	+1.3
	baz=175						
TXAR	Lajitas Array	5.30	316	Pn	Pn	17 31 36.1	+1.2
	1.4nm,0.3s,baz=141,slow=14,SNR=52						
TXAR				Lg	Lg	17 33 04.0	
	16nm,0.3s,baz=156,slow=31,SNR=9.8						
TXAR				LR	LR	17 34 02.5	
	comp=Z,187nm,19.9s,baz=0.0,slow=42						
TX31	Lajitas Ar. Si	5.30	316		Pn	17 31 36.2	+1.3
TX32	Lajitas Array	5.30	316		Pn	17 31 36.1	+1.2
435B	Jarrell	5.44	17		Pn	17 31 36.9	+0.2
HPIG		5.75	285		Pn	17 31 42.0	+0.8
WHTX	Lake Whitney,	6.62	15	S	Sn	17 33 06.5	-2.1
	baz=195						
ABTX	Abilene, Hawle	7.02	359		Pn	17 31 59.5	+1.0
ABTX	Abilene, Hawle	7.02	359	P	Pn	17 31 59.6	+1.1
	baz=178						
ABTX				S	Sn	17 33 16.4	-2.0
	baz=178						
MNTX	Cornudas Mount	8.02	321		Pn	17 32 14.4	+2.2
MSTX	Muleshoe	8.85	342		Pn	17 32 24.4	+0.8
MSTX	Muleshoe	8.85	342	P	Pn	17 32 24.5	+0.9
	baz=160						
WMOK	Wichita Mounta	9.15	3		Pn	17 32 27.5	-0.2
WMOK	Wichita Mounta	9.15	3	P	Pn	17 32 28.8	+1.1
	baz=183						
WMOK				S	Sn	17 34 04.5	-6.3
	baz=183						
AMTX	Amarillo	9.47	349		Pn	17 32 32.2	0.0
X37A	Clayton	9.65	20		Pn	17 32 33.5	-1.0
ANMO	Albuquerque	11.13	329	Pn	Pn	17 32 55.7	+0.8
	0.1nm,0.3s,baz=146,slow=8.3,SNR=3.3						
ANMO				Lg	Lg	17 36 04.6	
	0.6nm,0.3s,baz=42,slow=22,SNR=6.5						
ANMO				LR	LR	17 37 22.7	
	comp=Z,204nm,18.6s,baz=128,slow=38						
PFO	Pinyon Flats O	16.81	302	LR	LR	17 41 27.1	
	comp=Z,173nm,20.3s,baz=79,slow=40						
SHPR	Sheep Range	17.30	313	IAmb	IAmb	17 34 23.7	
	comp=Z,5.1nm,1.1s						
PDAR	Pinedale Array	19.05	337	P	P	17 34 38.0	-0.2
	comp=Z,0.2nm,0.3s,baz=132,slow=15,SNR=5.6						
ELK	Elko	20.04	323	LR	LR	17 42 41.8	
	comp=Z,87nm,21.0s,baz=144,slow=37						
NVAR	Mina Array Bea	20.44	313	P	P	17 34 51.4	-2.0
	comp=Z,0.2nm,0.5s,baz=125,slow=11,SNR=2.4						
KVN	Kaiserville	20.66	315	IAmb	IAmb	17 35 05.2	
	comp=Z,13nm,1.5s						
YBH	Yreka Blue Hor	25.07	316	LR	LR	17 46 49.1	
	comp=Z,74nm,20.9s,baz=177,slow=39						
YKA	Yellowknife Ar	38.28	349	P	P	17 37 35.7	-0.1
	comp=Z,0.5nm,0.8s,baz=153,slow=8.7,SNR=5.7						
ILAR	Eielson Array	49.48	335	P	P	17 39 07.2	+1.4
	comp=Z,0.2nm,0.6s,baz=122,slow=6.3,SNR=4.3						

IDC 02 17:45:45.5±9.7**,14°.25N**×**124°.05E,h0**^{km}**,mb3.4**/3**, mb1 3.7**/3**,mb1mx3.2**/45**,mbtmp3.4**/3**,Error ellipse: s-maj=308.8km s-min=29.1km az=42.0,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	24.45	283	P	P	17 51 06.3	+0.1
	0.2nm,0.2s,baz=80,slow=10,SNR=3.3						
WRA	Warramunga Arr	35.45	163	P	P	17 52 44.2	+0.5
	0.4nm,0.6s,baz=342,slow=9.0,SNR=6.5						
ASAR	Alice Springs	38.89	166	P	P	17 53 12.3	-0.6
	0.4nm,0.6s,baz=347,slow=7.2,SNR=16						

*HLW **02** 17:56:10.4,36°.25N×27°.05E,h10^{km}±16^{km},Md4.2,Ml3.8*

*DDA **02** 17:56:17.1,35°.95N×27°.46E,h8^{km}±1^{km},ML2.3*

ISC 02 17:56:12.0±1.6**,36°.16N**±0°.08×**27°.0E**±0°.1**,h10**^{km}**,n10, σ2^{s}76**/18**,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAT	Datca	0.76	41	*i* P	Pn	17 56 32.2	+3.3
TURN	Turunc	1.51	61	*i* P	Pn	17 56 37.1	-2.0
TURN				*i* S	Sn	17 56 51.6	-7.2
TURN				IAML		17 57 11.0	
	comp=N,48nm,3.1s						
DALY	Dalyan (Mula)	1.52	64	*i* P	Pb	17 56 41.4	+1.2
DALY				*i* S	Sg	17 57 03.1	+2.2
FETY	Fethiye	1.78	74	*i* P	Pn	17 56 44.9	+2.0
FETY				*i* S	Sn	17 57 06.9	+1.3
TAVA	DENIZLI_Tavas	2.04	50	*i* P	Pn	17 56 45.8	-0.8
TAVA				*i* S	Sn	17 57 10.6	-1.6
AKAS	Kas	2.14	87	*i* P	Pn	17 56 50.3	+2.3
AKAS				*i* S	Sn	17 57 15.0	+0.3
AKAS				IAML		17 57 23.0	
	comp=E,44nm,2.0s						
GOLH	Golhisar	2.35	62	*i* P	Pn	17 56 51.2	+0.4
SLUM	Salum	4.88	198	P	Pn	17 57 26.9	+1.5
	baz=199						
SLUM				AMP		17 58 00.0	
	baz=199						
SLUM				S	Sn	17 58 20.4	-1.5
	baz=199						
SWA2		7.01	191	P	Pn	17 57 55.3	+0.6
	baz=192						
SWA2				S	Sn	17 59 12.5	-2.0
	baz=192						
HFRF	Wahat Farafira	9.06	172	P	Pn	17 58 23.8	+1.0
	baz=172						
HFRF				S	Sn	18 00 00.6	-4.3
	baz=172						

TRN 02 18:27:34.8,14°.52N×59°.42W,h3^{km},MD3.5,Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPOM	Morne Pois Mar	1.40	267	*e*P	Pg	18 28 02.6	+1.0
LPMF	Morne Lapointe	1.50	272	*e*P	Pg	18 28 03.7	+0.1
ZAM	Aeronautique	1.56	272	*e*P	Pg	18 28 04.7	0.0
TRMF	Trois Ilets	1.58	271	*e*P	Pg	18 28 05.3	+0.2
BIM	Bigot	1.60	270	*e*P	Pg	18 28 06.2	+0.7
FDF	Fort de France	1.69	277	*e*P	Pg	18 28 07.0	-0.2
FDF				*e*S	Sg	18 28 31.7	+2.5
BAMF	Morne Balai	1.70	280	*e*P	Pg	18 28 07.1	-0.3
GBMF	Grand Be	1.71	279	*e*P	Pb	18 28 07.3	+0.3
CXM	Morne La Croix	1.72	280	*e*P	Pb	18 28 07.4	+0.3
SVN	Savane Anatole	1.72	281	*e*P	Pg	18 28 08.4	+0.5
PML	Morne Lenard	1.73	279	*e*P	Pb	18 28 07.5	+0.3
PCM	Pelee Case Pet	1.76	280	*e*P	Pb	18 28 07.8	+0.1
SVCV	St. Vincent, C	2.09	234	*e*P	Pb	18 28 13.7	+0.4
SVCV				*e*S	Sb	18 28 40.2	+0.5
SVB	Belmont	2.17	235	*e*P	Pb	18 28 14.7	-0.1
SVB				*e*S	Sb	18 28 42.0	-0.1

IDC 02 18:58:25.5±4.6**,23°.09N**×**94°.37E,h105**^{km}±37^{km}**,mb3.4**/3**, mb1 3.4**/4**,mb1mx2.9**/61**,mbtmp3.5**/4**,Error ellipse: s-maj=140.1km s-min=16.2km az=59.0,Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	6.29	136	P	Pn	18 59 55.8	0.0
	baz=314,slow=14,SNR=2.5						
MKAR	Makanchi Array	25.57	341	P	P	19 03 45.1	+0.5
	1.0nm,0.7s,baz=154,slow=10.0,SNR=12						
KURBB	Kurchatov Arra	30.13	340	P	P	19 04 24.6	-0.5
	baz=156,slow=7.1						
WRA	Warramunga Arr	57.88	134	P	P	19 08 06.5	-0.2
	0.5nm,0.5s,baz=318,slow=7.7,SNR=22						
ASAR	Alice Springs	60.30	138	P	P	19 08 23.5	+0.1
	0.5nm,0.6s,baz=320,slow=7.0,SNR=17						

*NEIC **02** 18:58:46.4±2.2,10°.3S±0°.1×161°.3E±0°.1,h74^{km}±6^{km}, mb4.1/11,Error ellipse: s-maj=20.7km s-min=8.5km az=46.0*

*IDC **02** 18:58:48.5±2.4,10°.24S×161°.18E,h91^{km}±17^{km},mb3.5/8, mb1 3.7/9,mb1mx3.5/37,mbtmp3.8/9,Error ellipse: s-maj=27.2km s-min=19.7km az=90.0*

ISC 02 18:58:45.5±0.6**,10°.34S**±0°.08×**161°.24E**±0°.09**,h61**^{km}**,n30, σ1^{s}76**/27**,mb4.0**/15**,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.56	305	P	Pn	18 59 13.4	+2.4
	180nm,0.3s,baz=179,slow=8.5,SNR=125						
HNR				S	Sn	18 59 32.9	+2.7
	443nm,0.3s,baz=195,slow=20,SNR=15						
HNR	Honiara	1.56	305	*e*P	Pn	18 59 13.0	+2.0
SANVU	Saraoutou	7.72	132		Pn	19 00 38.4	+3.1
NOUC	Port Laguerre	12.67	158	Pn	P	19 01 47.8	-4.4
DZM	Mont Dzumac	12.69	157	P	Pn	19 01 47.8	+4.4
	0.8nm,0.3s,baz=27,slow=10,SNR=37						
DZM				S	Sn	19 04 03.9	+0.7
	0.5nm,0.3s,baz=156,slow=20,SNR=4.3						
MSVF	Nonsavu	17.88	116	P	P	19 02 48.3	-1.9
COEN	Coen	18.02	257	P	P	19 02 49.3	-2.4
LHI	Lord Howe Isla	21.18	185	P	P	19 03 24.5	-1.4
WR0	Warramunga Arr	27.45	246	P	P	19 04 24.9	-1.2
WR0				IAmb	IAmb	19 04 34.5	
	comp=Z,5.5nm,1.4s						
WB0	Warramunga Arr	27.53	247	P	P	19 04 26.8	0.0
WB0				IAmb	IAmb	19 04 29.6	
	comp=Z,5.9nm,1.3s						
WRAB	Tennant Creek	27.61	247	P	P	19 04 28.5	+1.0
WRAB				IAmb	IAmb	19 04 31.9	
	comp=Z,4.9nm,1.2s						
WB2	Warramunga Arr	27.62	247	P	P	19 04 27.4	-0.2
WB2				IAmb	IAmb	19 04 44.7	
	comp=Z,5.2nm,1.2s						
WRA	Warramunga Arr	27.63	247	P	P	19 04 27.4	-0.2
	comp=Z,1.0nm,0.6s,baz=74,slow=9.3,SNR=14						
WRA				pP	sP	19 04 49.3	+1.1
	comp=Z,1.2nm,0.5s,baz=77,slow=9.3,SNR=6.8						
H11S2	WAKE ISLAND Hy	29.15	11	T	T	19 33 33.0	
	baz=194,slow=76,SNR=6.3						
H11S3	WAKE ISLAND Hy	29.15	11	T	T	19 33 52.0	
	baz=194,slow=76,SNR=5.0						
H11S1	WAKE ISLAND Hy	29.16	11	T	T	19 33 36.1	
	baz=194,slow=76,SNR=4.5						
ASAR	Alice Springs	29.24	240	P	P	19 04 42.1	+0.2
	comp=Z,0.2nm,0.4s,baz=62,slow=9.9,SNR=8.6						
ASAR				pP	sP	19 05 03.0	+0.9
	comp=Z,0.7nm,0.8s,baz=63,slow=9.8,SNR=5.0						
H11N1	WAKE ISLAND Hy	30.37	11	T	T	19 35 28.5	
	baz=193,slow=76,SNR=6.0						
H11N3	WAKE ISLAND Hy	30.38	11	T	T	19 35 07.5	
	baz=193,slow=76,SNR=7.9						
H11N2	WAKE ISLAND Hy	30.39	11	T	T	19 35 17.5	
	baz=193,slow=76,SNR=7.8						
KNRA	Kununurra	32.06	257	P	P	19 05 06.5	-0.4
BBOO	Buckleboo	32.22	222	P	P	19 05 07.9	-0.2
BBOO				IAmb	IAmb	19 05 13.5	
	comp=Z,14nm,1.3s						
MJAR	Matsushiro Arr	51.42	336	P	P	19 07 43.1	-1.4
	comp=Z,0.6nm,0.5s,baz=129,slow=8.5,SNR=5.0						
KLR	Kul'dur	64.73	339	P	P	19 09 16.2	-1.1
	comp=Z,0.8nm,0.4s,baz=150,slow=7.1,SNR=3.7						
SONM	Songino Array	75.52	325	P	P	19 10 23.3	-0.3
	comp=Z,1.1nm,0.6s,baz=138,slow=5.0,SNR=9.7						
BARN	Barnard Glacie	84.02	24	P	P	19 11 09.2	-0.1
BARN				IAmb	IAmb	19 11 18.6	
	comp=Z,8.9nm,1.4s						
IL31		84.30	20	P	P	19 11 08.3	-2.1
IL31				IAmb	IAmb	19 11 19.2	
	comp=Z,2.2nm,1.2s						
ILAR	Eielson Array	84.30	20	P	P	19 11 09.4	-1.0
	comp=Z,0.6nm,0.8s,baz=242,slow=5.2,SNR=4.3						
MKAR	Makanchi Array	90.00	318	P	P	19 11 37.2	-1.3
	comp=Z,0.2nm,0.4s,baz=93,slow=6.7,SNR=7.5						
YKA	Yellowknife Ar	96.39	28	P	P	19 12 06.2	-1.3
	comp=Z,0.2nm,0.6s,baz=254,slow=4.6,SNR=3.6						

*SOME **02** 19:05:25.8,42°.12N×78°.90E,h10^{km}*

*KRNET **02** 19:05:26.7±0.1,42°.14N×78°.87E,h20^{km},mb2.0*

*NNC **02** 19:05:26.6±1.1,42°.16N×78°.93E,h0^{km},mb2.5,mpv2.6, Error ellipse: s-maj=7.9km s-min=3.8km az=154.0*

ISC 02 19:05:25.8±2.2**,42°.13N**±0°.08×**78°.90E**±0°.05**,h0**^{km}±13^{km}**, n23,σ0^{s}76**/42**,10C-2D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	Przheval'sk	0.51	314	⇓*i*P	Pg	19 05 36.1	+0.4
	baz=16						
PRZ				⇓*i*S	Sg	19 05 42.6	+0.3
	baz=16						
UZB	Uzynbulak	1.02	5	*e*P	Pg	19 05 45.1	-0.3
	baz=7.0						
UZB				*e*S	Sb	19 05 59.5	-1.0
	baz=7.0						
UZB	Uzynbulak	1.02	5	*e*P	Pg	19 05 45.1	-0.3
	0.5nm,0.1s						
UZB				*e*S	Sb	19 05 59.5	-1.0
	2.2nm,0.1s						
UZB	Uzynbulak	1.02	5	P	Pg	19 05 45.1	-0.3
	0.5nm,0.1s						
UZB				S	Sb	19 05 59.5	-1.0
	2.2nm,0.1s						
ANVS	Anan'yevo	1.12	306	⇑*i*P	Pg	19 05 47.4	+0.1
	baz=6.0						
ANVS				⇑*i*S	Sg	19 06 01.8	-0.1
	baz=6.0						
KDJ	Kajisay	1.28	271	⇑*i*P	Pn	19 05 49.7	-1.4
	baz=70						
KDJ				⇑*i*S	Sb	19 06 06.3	-1.6
	baz=70						
TNSS	Tian-Shan	1.70	303	*e*P	Pb	19 05 57.7	-0.5
	0.2nm,0.1s						
TNSS				*e*S	Sg	19 06 21.1	+0.5
	1.8nm,0.2s						
TNSS	Tian-Shan	1.70	303	P	Pb	19 05 57.7	-0.5
	0.2nm,0.1s						
TNSS				S	Sg	19 06 21.1	+0.5
	1.8nm,0.2s						
MDOK	Medeo	1.71	308	*e*P	Pn	19 05 57.3	+0.3
	baz=8.0						
MDOK				*e*S	Sb	19 06 20.3	-0.1
	baz=8.0						
MDOK	Medeo	1.71	308	*e*P	Pn	19 05 57.3	+0.3
	0.6nm,0.2s						
MDOK				*e*S	Sb	19 06 20.3	-0.1
	1.5nm,0.2s						
MDOK	Medeo	1.71	308	Pg	Pn	19 05 57.3	+0.3
	0.6nm,0.2s						
MDOK				Lg	Lg	19 06 20.3	
	1.5nm,0.2s						
KOTS	Kotyrbulak	1.72	311	*e*P	Pb	19 05 58.0	-0.4
	1.3nm,0.1s						

KOTS				eS	Sg	19 06 21.5	+0.4
	6.2nm,0.1s						
KOTS	Kotyrbulak	1.72	311	P	Pb	19 05 58.0	-0.4
	1.3nm,0.1s						
KOTS				S	Sg	19 06 21.5	+0.4
	6.2nm,0.1s						
IZV	Izvestkoviy	1.92	299	eP	Pb	19 06 02.1	+0.4
	0.8nm,0.1s						
IZV				eS	Sg	19 06 28.5	+1.1
	4.8nm,0.1s						
ULHL	Ulahol	1.98	274	⇑iP	Pb	19 06 01.8	-1.0
	baz=74						
ULHL				⇑iS	Sb	19 06 26.9	-1.2
	baz=74						
BOOM	Boomskoye usch	2.23	280	⇑iP	Pn	19 06 05.1	+1.0
	baz=80						
BOOM				⇑iS	Sn	19 06 32.8	+0.4
	baz=80						
KTBS	Karatobe	2.27	315	eP	Pb	19 06 07.9	+0.2
	1.3nm,0.1s						
KTBS				eS	Sg	19 06 38.5	-0.3
	5.1nm,0.5s						
KTBS	Karatobe	2.27	315	Pg	Pb	19 06 07.9	+0.2
	1.3nm,0.1s						
KTBS				Lg	Lg	19 06 38.5	
	11nm,0.3s						
NRN	Naryn	2.28	253	⇑eP	Pn	19 06 06.3	+1.3
	baz=53						
NRN				⇑iS	Sn	19 06 34.6	+0.7
	baz=53						
DJR	Jarkent	2.30	16	eP	Pb	19 06 08.7	+0.6
	0.3nm,0.1s						
DJR				eS	Sg	19 06 40.1	+0.5
	3.5nm,0.4s						
DJR	Jarkent	2.30	16	Pg	Pb	19 06 08.7	+0.6
	0.3nm,0.1s						
DJR				Lg	Lg	19 06 40.1	
	3.5nm,0.4s						
KAPS	Kapalarasan	3.17	6	eP	Pb	19 06 23.6	+0.5
	0.3nm,0.1s						
KAPS				eS	Sg	19 07 06.0	-1.7
	1.0nm,0.2s						
KAPS	Kapalarasan	3.17	6	Pg	Pb	19 06 23.6	+0.5
	0.3nm,0.1s						
KAPS				Lg	Lg	19 07 06.0	
	1.0nm,0.2s						

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*PRU **02** 19:17:47.9±0.0, 42°.12N×21°.76E, h0^{km}*
*SKO **02** 19:17:48.5, 42°.40N×21°.71E, h15^{km}*
*SOF **02** 19:17:49.3, 42°.40N×21°.64E, h3^{km}, MD3.7*
*BEO **02** 19:17:51.9±0.2, 42°.41N×21°.71E, h16^{km}±3^{km}, ML3.4/19*
*PDG **02** 19:17:51.7±0.4, 42°.40N×21°.75E, h12^{km}, ML3.2/13, Error ellipse: s-maj=0.4km s-min=0.4km az=90.0*
*IDC **02** 19:17:51.9±1.1, 42°.41N×21°.67E, h0^{km}, mb3.5/4, mb1 3.6/10, mb1mx3.4/36, mbtmp3.4/10, ML3.0/6, MS4.4/1, Ms1 4.4/1, ms1mx2.4/52, Error ellipse: s-maj=19.1km s-min=13.5km az=28.0*
*THE **02** 19:17:53.1, 42°.33N×21°.81E, h0^{km}±5^{km}, ML3.3/8, Error ellipse: s-maj=8.8km s-min=1.3km az=339.0*
ISC 02 19:17:51.8±1.1, **42°.41N**±0°.02×**21°.72E**±0°.02, **h1**^{km}±8^{km}, **n159, σ1^{s}.09**/211, **mb3.7**/3, **30C-20D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARS	Barje	0.41	10	ePg	Pg	19 18 00.2	+0.5
BARS				eSg	Sb	19 18 07.2	-1.5
SKO	Skopje	0.48	206	ePg	Pg	19 18 01.3	+0.2
SKO				eSg	Sg	19 18 08.5	+1.2
SKO	Skopje	0.48	206	⇑iPg	Pg	19 18 01.3	+0.2
SKO				i Sg	Sg	19 18 08.0	+0.6
SKO				eLg	Lg	19 18 08.7	
	comp=E,226nm,0.3s						
SELS	Selova	0.92	331	ePg	Pg	19 18 09.0	-0.5
SELS				eSg	Sg	19 18 21.2	-0.3
ZAPS	Zavoj	1.09	37	ePg	Pg	19 18 13.1	+0.3
ZAPS				eSg	Sg	19 18 26.6	-0.3
VTS	Vitosha	1.14	79	ePg	Pg	19 18 13.5	-0.2
VTS				eSg	Sg	19 18 28.2	-0.2
VTS	Vitosha	1.14	79	⇓P	Pg	19 18 13.5	-0.2
VTS				⇑S	Sg	19 18 28.5	+0.2
VTS	Vitosha	1.14	79	i P	Pg	19 18 13.4	-0.2
KKB	Krupnik	1.15	118	i P	Pg	19 18 14.1	+0.3
BOVS	Bovan	1.23	359	ePg	Pg	19 18 14.7	-0.6
BOVS				eSg	Sg	19 18 31.2	0.0
VAY	Valandovo	1.26	149	ePg	Pg	19 18 14.4	-1.5
VAY				eSg	Sg	19 18 31.4	-0.8
VAY	Valandovo	1.26	149	⇑iPg	Pg	19 18 14.6	-1.3
VAY				i Sg	Sb	19 18 32.7	-0.3
VAY				eLg	Lg	19 18 33.4	
	comp=E,333nm,0.4s						
VAY				eLg	Lg	19 18 36.0	
	comp=N,538nm,0.5s						
BLKB	Belogradchik	1.40	30	⇑S	Sb	19 18 37.0	-0.1
ZAGS	Zajecar	1.45	15	ePg	Pn	19 18 18.5	-0.7
ZAGS				eSg	Sg	19 18 37.5	-0.9
OHR	Ohrid	1.47	208	⇓iPg	Pn	19 18 19.5	+0.1
OHR				i Sg	Sb	19 18 39.0	-0.1
OHR				eLg	Lg	19 18 39.2	
	comp=E,940nm,0.5s						
OHR				eLg	Lg	19 18 41.4	
	comp=N,753nm,0.5s						
KNT	Kendrikon	1.52	144	P	Pn	19 18 18.9	-1.3
KNT				S	Sn	19 18 39.5	-1.1
	comp=N,535nm,0.4s						
GRG	Griva	1.54	160	P	Pn	19 18 19.7	-0.7
GRG				S	Sn	19 18 40.0	-1.0
	comp=N,715nm,0.7s						
SJES	Sjenica	1.54	304	ePg	Pn	19 18 20.0	-0.5
SJES				eSg	Sn	19 18 40.6	-0.6
IVAS	Ivanjica	1.64	316	ePg	Pn	19 18 20.7	-1.1
IVAS				eSg	Sn	19 18 43.0	-0.6
GRUS	Gruza	1.65	334	ePg	Pn	19 18 21.3	-0.6
GRUS				eSg	Sg	19 18 44.8	-0.1
MMB	Musomiste	1.71	118	i P	Pn	19 18 22.6	-0.1
TIR	Tirane	1.75	233	⇑S	Sg	19 18 48.0	+0.2
PGB	Panagyurishte	1.81	85	i P	Pn	19 18 24.4	+0.2
PDG	Podgorica	1.83	271	ePg	Pb	19 18 25.5	-0.5
PDG				eSg	Sg	19 18 50.9	+0.4
PDG	Podgorica	1.83	271	⇓P	Pn	19 18 24.4	+0.1
PDG				⇑S	Sn	19 18 48.5	+0.5
PDG	Podgorica	1.83	271	ePn	Pn	19 18 24.2	-0.1
SVIS	Svilajnac	1.89	349	ePg	Pb	19 18 26.6	-0.5
SVIS				eSg	Sg	19 18 52.3	-0.3
DRME	Dracevica, Mon	1.90	264	ePn	Pb	19 18 27.4	+0.2
SRS	Serrai	1.90	132	P	Pn	19 18 24.4	-1.0
SRS				S	Sn	19 18 50.1	+0.1
	comp=N,772nm,0.6s						
NVR	Nevrokopi	1.92	123	P	Pn	19 18 25.1	-0.5
NVR				S	Sn	19 18 50.7	+0.4
	comp=N,700nm,0.6s						
BAIL	Bailesti	2.00	36	⇑P	Pn	19 18 26.0	-0.7
BAIL				⇑S	Sn	19 18 51.8	-0.5
KUBS	Kucevo	2.00	359	ePn	Pn	19 18 25.8	-1.0
KUBS				eSg	Sb	19 18 55.2	+0.8
SOH	Sokhos	2.00	142	P	Pn	19 18 25.8	-1.0
SOH				S	Sn	19 18 51.8	-0.7
	comp=N,732nm,0.5s						
KTI	Kastanea	2.04	171	P	Pn	19 18 27.0	-0.3
TRUS	Trudelj	2.05	333	ePg	Pb	19 18 29.4	-0.4
TRUS				eSg	Sb	19 18 55.6	-0.3
NEST	Nestorio	2.06	194	P	Pn	19 18 27.6	0.0
NEST				S	Sn	19 18 53.4	-0.5
	comp=N,542nm,1.1s						
PUNG	Punghina	2.07	25	⇑P	Pn	19 18 27.0	-0.6
PUNG				⇑S	Sn	19 18 54.0	+0.1
HORT	Hortiatis	2.08	150	P	Pn	19 18 27.1	-0.8
KZN	Kozani	2.10	179	P	Pn	19 18 27.8	-0.3
RUDO	Rudo	2.11	306	ePn	Pn	19 18 27.0	-1.2
DIVS	Divibare	2.11	324	ePg	Pb	19 18 30.2	-0.7
DIVS				eSg	Sg	19 18 59.5	-0.1
DIVS	Divibare	2.11	324	ePn	Pn	19 18 27.2	-1.1
UPM	Unac-Piva	2.22	292	ePn	Pn	19 18 29.8	-0.1
PLD	Plovdiv	2.23	97	eP	Pn	19 18 30.5	+0.6
PLD				eS	Sb	19 19 01.9	+0.9
BBLS	Lazići	2.23	311	ePg	Pn	19 18 30.8	+0.8
BBLS				eSg	Sg	19 19 02.6	-1.0
BBLS	Lazići	2.23	311	ePn	Pn	19 18 29.3	-0.7
PENT	Pentalofos	2.25	191	P	Pn	19 18 30.7	+0.4
PENT				S	Sn	19 18 59.9	+1.1
	comp=N,315nm,1.2s						
PLVB	Pleven	2.34	64	⇑P	Pn	19 18 32.2	+0.8
PLVB				⇑S	Sn	19 19 01.1	+0.3
RZN	Rozhen	2.34	107	i P	Pg	19 18 36.7	0.0
MDVR	Moldovita	2.37	360	⇑P	Pn	19 18 31.0	-0.8
MDVR				⇑S	Sn	19 19 03.2	+1.5
LIT	Litokhoron	2.38	166	P	Pn	19 18 31.3	-0.6
HCY	Herceg Novi	2.39	272	ePn	Pn	19 18 33.1	+1.0
BRY	Bratogost	2.40	283	ePn	Pn	19 18 32.7	+0.4
KPRO	Kipourio	2.47	186	P	Pn	19 18 33.6	+0.4
SRE	Strehaia	2.50	25	⇓P	Pn	19 18 33.2	-0.3
SRE				⇑S	Sn	19 19 04.7	+0.1
TREB	Trebinje	2.51	278	ePg	Pb	19 18 35.7	-1.9
TREB				eSg	Sg	19 19 12.2	-0.2
TREB	Trebinje	2.51	278	ePn	Pn	19 18 35.0	+1.3
KAVA	Kavala	2.52	123	P	Pn	19 18 33.5	-0.4
KAVA				S	Sn	19 19 03.7	-1.5
	comp=N,672nm,0.8s						
VLAD	Vladila	2.52	50	⇑P	Pn	19 18 34.9	+1.0
VLAD				⇑S	Sn	19 19 04.9	-0.4
HAPS	Han Pijesak,Bl	2.63	311	ePn	Pn	19 18 37.1	+1.6
TEKS	Tekeris	2.67	324	ePn	Pn	19 18 34.9	-1.0
TEKS	Tekeris	2.67	324	ePn	Pn	19 18 35.0	-1.0
OUR	Ouranopolis	2.68	140	P	Pn	19 18 35.5	-0.5
OUR	Ouranopolis	2.68	140	eP	Pn	19 18 35.5	-0.5
PVL	Pavlikeni	2.78	72	i P	Pn	19 18 35.0	-2.4
THL	Klokotos Trika	2.85	175	P	Pn	19 18 38.1	-0.3
KDZ	Kurdzhali	2.85	104	i P	Pg	19 18 45.8	-0.7
PAIG	Paliouri	2.89	149	P	Pn	19 18 38.1	-0.8
ZIMR		2.95	64	⇓S	Sn	19 19 16.9	+1.2
BANR	Banloc	3.00	352	⇑P	Pn	19 18 39.3	-1.1
BANR				⇑S	Sn	19 19 17.2	+0.2
STON	Ston	3.00	280	ePn	Pn	19 18 41.1	+0.6
FRGS	Fruska Gora	3.08	334	ePn	Pn	19 18 36.6	-4.9
FRGS	Fruska Gora	3.08	334	ePn	Pn	19 18 36.0	-5.5
GZR	Gura Zlata	3.08	14	⇓P	Pn	19 18 41.1	-0.5
GZR				⇑S	Sn	19 19 18.3	-0.8
COPA	Copaceanca	3.08	55	⇑P	Pn	19 18 41.8	+0.2
ELND	Elena	3.11	79	⇓P	Pn	19 18 42.0	+0.1
ELND				⇑S	Sn	19 19 19.8	+0.2
RDO	Rodhopi	3.12	113	eP	Pn	19 18 42.9	+0.8
HUMR	Humele	3.18	47	⇓P	Pn	19 18 42.8	-0.1
BZS	Buzias	3.21	359	⇓P	Pn	19 18 41.8	-1.5
BZS				⇓S	Sn	19 19 23.8	+1.7
SZH	Strazhica	3.21	73	i P	Pn	19 18 44.1	+0.7
XOR	Xorichti	3.24	159	P	Pn	19 18 42.8	-0.9
NEO	Neokhori	3.30	159	P	Pn	19 18 43.8	-0.8
LOT	Lotru	3.38	25	⇓P	Pn	19 18 44.8	-0.9
LOT				⇓S	Sn	19 19 28.1	+1.5
GOLR		3.38	43	⇑P	Pn	19 18 46.6	+0.9
AGG	Agios Georgios	3.42	172	eP	Pn	19 18 44.8	-1.4
ALN	Alexandroupoli	3.57	114	eP	Pn	19 18 48.4	+0.1
DEV	Deva	3.58	13	⇑P	Pn	19 18 47.8	-0.6
AOS	Alonnisos	3.63	152	eP	Pn	19 18 48.2	-0.8
ARR	Arges	3.63	34	⇑P	Pn	19 18 49.3	+0.1
MTUR	Matau	3.71	40	⇓P	Pn	19 18 51.1	+0.8
ENEZ	Enez	3.72	115	eP	Pn	19 18 50.6	+0.3
EDRB	Edirne	3.78	97	eP	Pn	19 18 51.2	+0.1
SIRR	Siria	3.86	359	⇑P	Pn	19 18 51.4	-0.9
VOIR		3.87	37	⇓P	Pn	19 18 52.1	-0.3
UKOP	Uzunkopru-Edir	3.89	108	eP	Pn	19 18 54.8	+2.2
MGRS	Mrkonjic Grad	3.93	302	ePn	Pn	19 18 53.7	+0.4
ERIK	Erikli-Kesan	3.99	114	eP	Pn	19 18 53.7	-0.4
BLY	Banja Luka	4.04	307	ePn	Pn	19 18 54.6	-0.2
GELI	Tayfur-Gelibol	4.10	118	eP	Pn	19 18 55.2	-0.3
MLR	Muntele Rosu	4.33	43	Pn	Pn	19 19 00.4	+1.5
	comp=N,1.2nm,0.3s,baz=170,slow=6.1,SNR=9.4						
MLR				Lg	Lg	19 20 14.2	
	comp=N,2.0nm,0.3s,baz=263,slow=19,SNR=3.4						
MLR	Muntele Rosu	4.33	43	⇑P	Pn	19 18 59.6	+0.7
DOPR	Dopca	4.43	35	⇓P	Pn	19 19 00.6	+0.5
DRGR		4.44	9	⇓P	Pn	19 18 59.9	-0.4
RKY	Sarkoy-Tekirda	4.44	111	eP	Pn	19 19 01.5	+1.2
KRBG	Karabiga-Canak	4.65	114	eP	Pn	19 19 06.1	+3.0
CRLT	Corlu	4.68	104	eP	Pn	19 19 05.2	+1.7
PLOR	Plostina	4.94	44	⇓P	Pn	19 19 08.2	+1.1
SLVT	Silivri	4.99	101	eP	Pn	19 19 07.5	-0.3
VRI	Vrincioaia	4.99	44	⇑P	Pn	19 19 07.9	0.0
HARR	Harsova	5.06	61	⇓P	Pn	19 19 08.5	-0.1
CTKS	Kestanelik-??a	5.20	101	eP	Pn	19 19 10.2	-0.5
BEHE	Becsehely	5.39	321	ePn	Pn	19 19 13.2	0.0
CFR	Carcaliu	5.41	57	⇑P	Pn	19 19 13.2	-0.2
BALB	Balikesir	5.42	119	eP	Pn	19 19 15.1	+1.5
URLA	Izmir	5.50	136	eP	Pn	19 19 14.2	-0.6
GCIS	Gornji Cirnik	5.58	310	ePn	Pn	19 19 16.0	0.0
KLYT	Kilyos	5.59	99	eP	Pn	19 19 16.9	+0.9
KOGS	Kog	5.63	318	i Pn	Pn	19 19 16.3	-0.2
KOGS				eSn	Sn	19 20 20.6	-1.1
CRES	Cresnjev	5.66	309	i Pn	Pn	19 19 17.2	+0.3
CRES	Cresnjev	5.66	309	ePn	Pn	19 19 16.9	-0.1
PSZ	Piszkesteto	5.66	347	⇑P	Pn	19 19 16.6	-0.5
ARMT	Armutlu	5.67	107	eP	Pn	19 19 14.9	-2.2
BURAR	Bucovina Array	5.76	24	⇓P	Pn	19 19 19.5	+0.9
LEGS	Legarje	5.81	310	ePn	Pn	19 19 19.4	+0.4
TLCR		5.83	59	⇓P	Pn	19 19 19.0	-0.4
SRO	Srobarova	5.92	337	ePN	Pn	19 19 21.3	+0.8
GROS	Grobnik	6.02	314	ePn	Pn	19 19 21.2	-0.8
HRT	Hereke	6.16	102	eP	Pn	19 19 19.4	-4.5
CEY	Cerknica	6.22	305	ePn	Pn	19 19 25.3	+0.6
SOKA	Soboth	6.41	314	i Pn	Pn	19 19 26.9	-0.4
	comp=N,2.1nm,0.4s,SNR=6.4						
SOKA				i Sn	Sn	19 20 39.8	-1.3
	comp=N,2.2nm,0.4s						
VYHS	Vyhne	6.41	343	ePN	Pn	19 19 27.3	-0.1
VYHS				eSN	Sn	19 20 42.6	+1.4
KOLS	Kolonicke sedl	6.54	3	ePN	Pn	19 19 29.4	+0.4
KOLS				eSG	Sg	19 21 25.6	+4.0
ARSA	Arzberg	6.54	320	i Pn	Pn	19 19 28.6	-0.6
	comp=N,4.7nm,0.3s,SNR=11						
ARSA				i Sn	Sn	19 20 45.6	+1.2
	comp=N,7.5nm,0.4s						
OBKA	Obir	6.57	311	i Pn	Pn	19 19 29.6	0.0
	comp=N,2.3nm,0.3s						
OBKA				i Sn	Sn	19 20 46.7	+1.6
ZST	Bratislava	6.64	332	ePN	Pn	19 19 27.7	-2.7
ZST				eSN	Sn	19 20 44.4	-2.3
MODS	Modra-Piesok	6.73	334	ePN	Pn	19 19 31.3	-0.5
MODS				eSN	Sn	19 20 44.6	-4.5
CONA	Conrad Observa	6.90	325	i Pn	Pn	19 19 34.0	0.0
	comp=N,0.6nm,0.3s						
CONA				i Sn	Sn	19 20 52.3	-0.9
	comp=N,3.2nm,0.7s						
LANS	Liptovska Anna	6.92	348	ePN	Pn	19 19 37.1	+2.7
MYKA	Terra Mystica	7.15	309	i Pn	Pn	19 19 38.7	+1.2
	comp=N,3.9nm,0.5s,SNR=4.9						
IDI	Anoyia	7.53	160	Pn	Pn	19 19 42.7	0.0
	comp=N,0.3nm,0.3s,baz=332,slow=12,SNR=2.5						
KBA	Koelnbreinsper	7.57	311	i Pn	Pn	19 19 44.0	+0.6
	comp=N,2.3nm,0.5s,SNR=7.2						
KBA				i Sn	Sn	19 21 10.0	+0.1
	comp=N,1.5nm,0.5s						
MOA	Molln	7.57	318	i Pn	Pn	19 19 44.6	+1.3
	comp=N,0.8nm,0.4s						
MOA				i Sn	Sn	19 21 11.2	+1.5
	comp=N,3.0nm,0.5s						
ABTA	Abfaltersbach	7.88	307	i Pn	Pn	19 19 48.1	+0.6
	comp=N,2.0nm,0.5s						
KRLC	Kraliky	8.39	338	eSN	Sn	19 21 28.5	-1.4
GERES	GERESS Array B	8.54	322	Pn	Pn	19 19 57.3	+0.7
	comp=N,0.3nm,0.3s,baz=151,slow=13,SNR=11						
WTTA	Wattenberg	8.65	308	i Pn	Pn	19 19 59.4	+1.2
	comp=N,4.1nm,0.4s,SNR=5.8						
KHC	Kasperske Hory	8.80	323	ePN	Pn	19 20 00.6	+0.4
KHC				eSN	Sn	19 21 38.2	-1.8
SQTA	Sankt Quirin	8.88	306	i Pn	Pn	19 20 03.7	+2.4
	comp=N,4.9nm,0.5s						
MOTA	Moosalm	9.01	307	i Pn	Pn	19 20 04.0	+0.9
	comp=N,3.3nm,0.4s						
FETA	Feichten	9.08	304	i Pn	Pn	19 20 03.3	-0.7
	comp=N,0.6nm,0.3s						
BRTR	Keskin Array B	9.39	103	Pn	Pn	19 20 11.2	+2.9
	comp=N,0.1nm,0.3s,baz=176,slow=16,SNR=4.4						
DAVOX	Davos/Dischmat	9.51	301	Pn	Pn	19 20 13.8	+3.9
	comp=N,0.4nm,0.3s,baz=153,slow=18,SNR=5.3						
FINES	FINESS Array B	19.24	6	P	Pn	19 22 17.8	-0.3
	comp=N,0.1nm,0.3s,baz=186,slow=13,SNR=2.6						
NOA	NORSAR Array B	19.71	345	P	Pn	19 22 24.3	+0.5
	comp=N,0.0nm,0.3s,baz=153,slow=9.1,SNR=2.9						
EKA	Eskdalemuir Ar	20.72	317	P	P	19 22 34.0	+0.7
	comp=N,1.3nm,0.7s,baz=109,slow=11,SNR=2.8						
TORD	Torodi Ar. Bea	33.93	217	P	P	19 24 36.2	-0.3
	comp=N,0.8nm,0.8s,baz=25,slow=8.9,SNR=4.0						
ZALV	Zalesovo Beam	42.26	52	P	P	19 25 45.8	-0.6
	comp=N,0.7nm,0.4s,baz=273,slow=9.3,SNR=5.1						
MKAR	Makanchi Array	42.42	63	P	P	19 25 47.4	-0.4
	comp=N,0.2nm,0.5s,baz=282,slow=7.7,SNR=3.8						
TLY	Talaya	53.80	50	LR	LR	19 50 46.8	
	comp=N,317nm,19.4s,baz=14,slow=37						

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*INET **02** 19:20:22.7, 12°.44N×87°.73W, h68^{km}, ML3.6*
*UCR **02** 19:20:23.6±0.9, 12°.58N×87°.84W, h63^{km}±13^{km}, ML3.9*
*SNET **02** 19:20:23.6±0.9, 12°.57N×87°.86W, h57^{km}±16^{km}, ML4.0*
ISC 02 19:20:22.8±4.3, **12°.5N**±0°.3×**87°.81W**±0°.09, **h60**^{km}±31^{km}, **n15, σ0^{s}.31**/28, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.78	359	eP	Pn	19 20 37.7	-0.3
CNCH				eS	Sn	19 20 49.6	+0.4
CNCH	Conchagua	0.78	359	eP	Pn	19 20 37.7	-0.3
CNCH				eS	Sn	19 20 49.6	+0.4
BLLM	Bellamira	1.03	336	eP	Pn	19 20 41.3	+0.1
BLLM				eS	Sn	19 20 54.9	0.0
BLLM	Bellamira	1.03	336	eP	Pn	19 20 41.3	+0.1
BLLM				eS	Sn	19 20 54.9	0.0
VSM	San Miguel	1.03	334	eP	Pn	19 20 42.0	+0.6
VSM	San Miguel	1.03	334	eP	Pn	19 20 42.0	+0.6
LCY	Lacayo	1.03	333	eP	Pn	19 20 41.4	0.0
LCY				eS	Sn	19 20 55.1	0.0
LCY	Lacayo	1.03	333	eP	Pn	19 20 41.4	0.0
LCY				eS	Sn	19 20 55.1	0.0
PACA	Pacayal	1.09	333	eP	Pn	19 20 42.0	-0.1
PACA				eS	Sn	19 20 56.5	+0.1
PACA				IAML		19 20 59.5	
	comp=Z,3µm,0.1s						
PACA	Pacayal	1.09	333	eP	Pn	19 20 42.0	-0.1
PACA				eS	Sn	19 20 56.5	+0.1
PACA				IAML		19 20 59.5	
	comp=Z,3µm,0.1s						
TECA	Tecapa	1.20	326	eP	Pn	19 20 43.1	-0.4
TECA				eS	Sn	19 20 58.6	-0.5
TECA	Tecapa	1.20	326	eP	Pn	19 20 43.1	-0.4
TECA				eS	Sn	19 20 58.6	-0.5
TGUH	Tegucigalpa,Un	1.64	19	eP	Pn	19 20 49.5	+0.1
TGUH				eS	Sn	19 21 09.5	-0.1
TGUH	Tegucigalpa,Un	1.64	19	eP	Pn	19 20 49.5	+0.1
TGUH				eS	Sn	19 21 09.5	-0.1
LFRS	El Faro	1.65	313	eP	Pn	19 20 49.8	+0.2
LFRS				eS	Sn	19 21 10.4	+0.5

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*ARE **02** 19:22:23±7.6, 14°.48S±0°.09×76°.0W±0°.1, h56^{km}±8^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=157.0*
NEIC 02 19:22:23.6±1.8, **14°.62S**±0°.05×**76°.3W**±0°.2, **h92**^{km}±13^{km}, **mb4.5**/8, **ML4.3**(ARE), **Error ellipse: s-maj=22.4km s-min=6.7km az=95.0, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	2.68	348		Pn	19 23 04.9	-0.1
NNA				Sn	Sn	19 23 38.8	+2.1
MNMC	Minye Minye	7.81	126		Pn	19 24 15.0	+0.2
LPAZ	La Paz	8.02	103		Pn	19 24 17.7	-0.3
PB11	IPOC Station P	8.13	130		Pn	19 24 20.1	+1.1
GO01	Chusmiza	8.42	128		Pn	19 24 25.0	+1.6
SAML	Samuel	14.00	68	Pn	Pn	19 25 33.6	-4.3
GO04	Tololo Observa	16.28	163	Pn	Pn	19 26 06.5	-0.5
GO04				IAmb	IAmb	19 26 08.5	
	comp=Z,17nm,1.2s						
ROC1	El Roble	18.89	166	P	P	19 26 36.6	-0.5
ROSC	El Rosal	19.43	6	P	P	19 26 42.3	-1.0
ROSC				IAmb	IAmb	19 27 00.3	
	comp=Z,5.9nm,0.6s						
PTGA	Pitinga	21.22	51	P	P	19 27 03.9	+1.6
PLCA	Paso Flores	26.49	170	P	P	19 27 53.1	+0.7
GRGR	Grenville	30.27	29	P	P	19 28 26.6	+0.4
SDD	Santo Domingo	33.46	11	P	P	19 28 54.1	+0.1
CRPR	Cabo Rojo, PR	33.66	16	P	P	19 28 55.7	-0.1
CRPR				IAmb	IAmb	19 29 01.5	
	comp=Z,22nm,1.1s						
RCBR	Riachuelo	40.62	82	P	P	19 29 52.7	-2.2
RCBR				IAmb	IAmb	19 29 56.5	
	comp=Z,22nm,1.3s						

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*INET **02** 19:29:26.4, 12°.52N×87°.78W, h61^{km}, ML4.3*
*SNET **02** 19:29:26.7±0.9, 12°.53N×87°.94W, h30^{km}±3^{km}, ML3.9*
*UCR **02** 19:29:26.6±1.0, 12°.52N×87°.94W, h28^{km}±3^{km}, ML3.9*
ISC 02 19:29:25.5±3.1, **12°.5N**±0°.1×**87°.89W**±0°.09, **h27**^{km}±13^{km}, **n37, σ0^{s}.38**/63, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.81	4	eP	Pb	19 29 40.9	-0.2
CNCH				eS	Sb	19 29 52.2	+0.4
CNCH				IAML		19 29 56.7	
	comp=Z,11µm,0.2s						
CNCH	Conchagua	0.81	4	eP	Pb	19 29 40.9	-0.2
CNCH				eS	Sb	19 29 52.2	+0.4
CNCH				IAML		19 29 56.7	
	comp=Z,11µm,0.2s						
LCND	La Caada	0.84	360	eP	Pb	19 29 41.3	-0.3
LCND				eS	Sb	19 29 53.0	+0.5
LCND				IAML		19 29 55.3	
	comp=Z,3µm,0.2s						
LCND	La Caada	0.84	360	eP	Pb	19 29 41.3	-0.3
LCND				eS	Sb	19 29 53.0	+0.5
LCND				IAML		19 29 55.3	
	comp=Z,3µm,0.2s						
JUCU	Jucuar¡n	0.86	336	eP	Pb	19 29 41.5	-0.4
JUCU				eS	Sb	19 29 53.4	+0.2
JUCU				IAML		19 29 57.0	
	comp=Z,3µm,0.3s						
JUCU	Jucuar¡n	0.86	336	eP	Pb	19 29 41.5	-0.4
JUCU				eS	Sb	19 29 53.4	+0.2
JUCU				IAML		19 29 57.0	
	comp=Z,3µm,0.3s						
BLLM	Bellamira	1.03	341	eP	Pn	19 29 44.3	0.0
BLLM				eS	Sb	19 29 58.2	+0.1
BLLM	Bellamira	1.03	341	eP	Pn	19 29 44.3	0.0
BLLM				eS	Sb	19 29 58.2	+0.1
LCY	Lacayo	1.04	337	eP	Pn	19 29 44.5	+0.1
LCY				eS	Sb	19 29 58.1	0.0
LCY				IAML		19 30 00.9	
	comp=Z,1µm,0.1s						
LCY	Lacayo	1.04	337	eP	Pn	19 29 44.5	+0.1
LCY				eS	Sb	19 29 58.1	0.0
LCY				IAML		19 30 00.9	
	comp=Z,1µm,0.1s						
PACA	Pacayal	1.09	337	eP	Pn	19 29 45.1	0.0
PACA				eS	Sn	19 29 59.7	+0.3
PACA				IAML		19 30 03.0	
	comp=Z,9µm,0.1s						
PACA	Pacayal	1.09	337	eP	Pn	19 29 45.1	0.0
PACA				eS	Sn	19 29 59.7	+0.3
PACA				IAML		19 30 03.0	
	comp=Z,9µm,0.1s						
ALJI	Alcalda de J	1.09	322	eP	Pn	19 29 45.0	+0.1
ALJI				eS	Sn	19 29 58.3	-0.9
ALJI	Alcalda de J	1.09	322	eP	Pn	19 29 45.0	+0.1
ALJI				eS	Sn	19 29 58.3	-0.9
TECA	Tecapa	1.19	330	eP	Pn	19 29 46.5	-0.1
TECA				eS	Sn	19 30 02.7	+0.8
TECA	Tecapa	1.19	330	eP	Pn	19 29 46.5	-0.1
TECA				eS	Sn	19 30 02.7	+0.8
COEB	Comit de Eme	1.21	329	eP	Pn	19 29 46.6	-0.1
COEB				eS	Sn	19 30 01.7	-0.6
COEB	Comit de Eme	1.21	329	eP	Pn	19 29 46.6	-0.1
COEB				eS	Sn	19 30 01.7	-0.6
FAGO	Alcalda de S	1.25	350	eP	Pn	19 29 46.7	-0.5
FAGO				eS	Sn	19 30 03.2	+0.1
FAGO	Alcalda de S	1.25	350	eP	Pn	19 29 46.7	-0.5
FAGO				eS	Sn	19 30 03.2	+0.1
COEG	Centro de Oper	1.51	320	eP	Pn	19 29 50.7	-0.1
COEG				eS	Sn	19 30 09.8	+0.2
COEG				IAML		19 30 27.2	
	comp=Z,1µm,0.4s						
COEG	Centro de Oper	1.51	320	eP	Pn	19 29 50.7	-0.1
COEG				eS	Sn	19 30 09.8	+0.2
COEG				IAML		19 30 27.2	
	comp=Z,1µm,0.4s						
PAVA	Las Pavas	1.61	321	eP	Pn	19 29 52.1	-0.2
PAVA	Las Pavas	1.61	321	eP	Pn	19 29 52.1	-0.2
LFRS	El Faro	1.63	315	eP	Pn	19 29 52.7	+0.2

LFRS				eS	Sn	19 30 12.1	-0.6
LBRS	Las Brisas	1.70	319	eP	Pn	19 29 53.8	+0.3
LALI	Alcalda de L	1.73	306	eP	Pn	19 29 53.9	0.0
LALI				eS	Sn	19 30 14.9	-0.2
LALI	Alcalda de L	1.73	306	eP	Pn	19 29 53.9	0.0
LALI				eS	Sn	19 30 14.9	-0.2
LFU	La Fuente	1.75	317	eP	Pn	19 29 54.5	+0.4
LFU	La Fuente	1.75	317	eP	Pn	19 29 54.5	+0.4
BOQS	Boqueron	1.86	313	eP	Pn	19 29 56.7	+1.0
BOQS				eS	Sn	19 30 19.0	+0.5
CEVE	Cerro Verde	2.17	309	eP	Pn	19 30 00.6	+0.5
CEVE				IAML		19 30 40.4	
	comp=Z,954nm,0.2s						
CEVE	Cerro Verde	2.17	309	eP	Pn	19 30 00.6	+0.5
CEVE				IAML		19 30 40.4	
	comp=Z,954nm,0.2s						
SBLS	San Blas	2.18	309	eP	Pn	19 30 00.5	+0.3
SBLS	San Blas	2.18	309	eP	Pn	19 30 00.5	+0.3
MTO3	Montecristo	2.40	324	eP	Pn	19 30 03.4	+0.1
MTO3	Montecristo	2.40	324	eP	Pn	19 30 03.4	+0.1

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*KRNET **02** 19:32:13.5±0.1, 39°.27N×72°.09E, mb3.0*
*SOME **02** 19:32:15.3, 39°.63N×72°.13E, h5^{km}*
*NNC **02** 19:32:21.6±5.9, 39°.76N×72°.32E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=47.0km s-min=30.2km az=17.0*
ISC 02 19:32:15.3±3.0**, 39°.2N**±0°.2×**72°.02E**±0°.05**, h10^{km}, n18, σ1^{s}76**/31**, 15C-4D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	1.24	312	⇑iP	Pb	19 32 37.5	-1.4
	baz=9.0						
BTK				⇑iS	Sg	19 32 55.0	-0.3
	baz=9.0						
ARSB	Arslanbob	2.22	19	⇑iP	Pn	19 32 52.8	+0.5
	baz=18						
ARSB				⇑iS	Sn	19 33 21.7	+1.8
	baz=18						
ARK	Arkit	2.57	359	⇑iP	Pn	19 32 57.8	+0.7
	baz=58						
ARK				⇑iS	Sn	19 33 30.3	+1.8
	baz=58						
ARLS	Aral	3.16	33	⇑iP	Pn	19 33 06.0	+0.7
	baz=33						
ARLS				⇑iS	Sn	19 33 44.1	+0.9
	baz=33						
AML	Almayashu	3.17	23	⇓eP	Pn	19 33 06.6	+1.0
	baz=23						
AML				⇓iS	Sn	19 33 44.9	+1.2
	baz=23						
IUG	Iuzhnay	3.28	333	eP	Pb	19 33 10.8	-2.9
	3.6nm,0.2s						
IUG				eS	Sb	19 33 50.8	-3.0
	10nm,0.2s						
IUG	Iuzhnay	3.28	333	Pg	Pb	19 33 10.8	-2.9
	3.6nm,0.2s						
IUG				Lg	Lg	19 33 51.5	
	10nm,0.2s						
JBG	Jabagly	3.38	341	Pg	Pn	19 33 10.8	+2.5
	3.8nm,0.1s						
JBG				Lg	Lg	19 33 51.2	
	9.1nm,0.3s						
UCH	Uchtor	3.55	32	⇑iP	Pn	19 33 11.4	+0.5
	baz=31						
UCH				⇑iS	Sn	19 33 54.1	+1.0
	baz=31						
MRKS	Merke	3.63	14	eP	Pn	19 33 13.7	+2.0
	6.0nm,0.2s						
MRKS				eS	Sn	19 33 55.8	+1.1
	6.7nm,0.3s						
MRKS	Merke	3.63	14	Pg	Pn	19 33 13.7	+2.0
	6.0nm,0.2s						
MRKS				Lg	Lg	19 33 56.7	
	6.7nm,0.3s						
EKS2	Erkin-Say	3.68	21	⇑iP	Pn	19 33 13.3	+0.9
	baz=20						
EKS2				⇑iS	Sn	19 33 56.8	+0.9
	baz=20						
AAK	Ala-Archa	3.89	28	Pn	Pn	19 33 16.3	+1.0
	2.5nm,0.6s						
AAK				Lg	Lg	19 34 04.0	
	7.2nm,0.6s						
KK31	Karatay Array	4.04	344	⇓Pn	Pn	19 33 18.7	+1.6
	1.2nm,0.4s,baz=156,slow=12,SNR=29						
KK31				⇑Sn	Sn	19 34 06.3	+1.8
	1.2nm,0.3s						
KK31				⇑Lg	Lg	19 34 18.4	
	2.1nm,0.5s,baz=156,slow=28,SNR=4.0						
BRLS	Borolday	4.14	337	eP	Pn	19 33 21.7	+3.1
	0.3nm,0.1s						
BRLS				eS	Sn	19 34 09.6	+2.5
	1.4nm,0.3s						
CHMS	Chumysh	4.30	28	⇑Pn	Pn	19 33 21.5	+0.8
	4.0nm,0.5s						
CHMS				⇓Lg	Lg	19 34 19.2	
	3.9nm,0.7s						
KST	Kastek	4.84	37	eP	Pb	19 33 38.2	-2.0
	1.0nm,0.1s						
KST				eS	Sb	19 34 38.0	-0.5
	4.6nm,0.3s						
DGS	Degeres	4.91	34	eP	Pb	19 33 40.1	-1.4
	1.2nm,0.4s						
DGS				eS	Sb	19 34 41.2	+0.6
	3.9nm,0.6s						

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*BJI **02** 19:38:54.1±0.0, 6°.25S×155°.44E, h67^{km}, mB5.6/65, mb5.5/77, Ms5.2/65, Ms7 5.0/62*

*NEIC **02** 19:38:56.4±2.2, 6°.29S±0°.06×154°.84E±0°.05, h45^{km}±1^{km}, mb5.8/340, Ms_20 5.8/682, Mwb5.8/71, Mww5.8, Mwc5.8(GCMT), Error ellipse: s-maj=10.9km s-min=8.4km az=191.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}6.97; $M_{\theta\theta}$-3.32; $M_{\phi\phi}$-3.66; $M_{r\theta}$-0.55; $M_{\theta\phi}$3.93; $M_{\phi r}$0.65; Fault plane solution: $M_0$7.26000×10^{17} NP1:ϕ_s135.79000°, δ41.64000°, λ89.32000°. NP2: ϕ_s316.69000°, δ48.36000°, λ90.60000°. Principal axes: T 7.0248, Plg87.0000°, Azm234.0000°; N 0.4432, Plg0.0000°, Azm136.0000°; P -7.4679, Plg3.0000°, Azm46.0000°;*

*MOS **02** 19:38:58.3±1.0, 6°.21S×154°.80E, h73^{km}, mb5.8/24, MS5.7/15 Error ellipse: s-maj=7.2km s-min=5.4km az=110.5*

*NEIC **02** 19:38:59, 6°.43S×154°.83E, h58^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}5.69; $M_{\theta\theta}$-2.91; $M_{\phi\phi}$-2.78; $M_{r\theta}$-0.15; $M_{\theta\phi}$3.45; $M_{\phi r}$0.16; Fault plane solution: $M_0$6.02000×10^{17} NP1:ϕ_s134.00000°, δ44.00000°, λ90.00000°. NP2:ϕ_s315.00000°, δ46.00000°, λ90.00000°. Principal axes: T 5.6942, Plg89.0000°, Azm230.0000°; N 0.6056, Plg0.0000°, Azm134.0000°; P -6.2998, Plg1.0000°, Azm44.0000°;*

*NEIC **02** 19:38:59, 6°.19S×154°.64E, h60^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}5.17; $M_{\theta\theta}$-2.80; $M_{\phi\phi}$-2.37; $M_{r\theta}$0.61; $M_{\theta\phi}$2.78; $M_{\phi r}$0.85; Fault plane solution: $M_0$5.38000×10^{17} NP1:ϕ_s122.00000°, δ45.00000°, λ74.00000°. NP2:ϕ_s324.00000°, δ47.00000°, λ106.00000°. Principal axes: T 5.3827, Plg79.0000°, Azm309.0000°; N -0.0023, Plg11.0000°, Azm133.0000°; P -5.3804, Plg1.0000°, Azm43.0000°;*

*IDC **02** 19:38:59.9±0.8, 6°.30S×154°.81E, h74^{km}±6^{km}, mb5.4/51, mb1 5.4/56, mb1mx5.4/58, mbtmp5.7/56, MS5.1/17, Ms1 5.1/17, ms1mx4.8/48 Error ellipse: s-maj=6.7km s-min=5.6km az=44.0*

*GCMT **02** 19:38:59.4±0.1, 6°.47S±0°.01×154°.72E±0°.01, h56^{km}, MW5.8/153, Moment Tensor Solution. s153,c296; s117,c262; Duration: 1^{s}9 Moment tensor: Scale 10^{17} Nm; M_{rr}5.66±.06; $M_{\theta\theta}$-2.90±.05; $M_{\phi\phi}$-2.76±.06; $M_{r\theta}$-0.15±.06; $M_{\theta\phi}$3.33±.05; $M_{\phi r}$0.22±.06; Best double couple: $M_0$5.91600×10^{17} NP1:ϕ_s134.00000°, δ44.00000°, λ89.00000°. NP2:ϕ_s315.00000°, δ46.00000°, λ91.00000°. Principal axes: T 5.6660, Plg89.0000°, Azm247.0000°; N 0.5000, Plg1.0000°, Azm134.0000°; P -6.1670, Plg1.0000°, Azm44.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*DJA **02** 19:39:01.3±0.4, 6°S±3°×15°5E±°, h90^{km}±4^{km}, M5.6/55, mB6.0/49, mb5.7/55, MLv6.3/2, Mw(mB)5.6/49, Mwp5.6/32*

ISC 02 19:38:58.9±0.3**, 6°.32S**±0°.03×**154°.87E**±0°.03**, h70^{km}**±2^{km}**, h70^{km}:pP-P, n1495, σ1^{s}63**/1257**, mb5.7**/285**, 44C-18D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.43	308		Pn	19 39 50.9	+1.0
KRVT	Keravat (AS076	3.47	305	P	Pn	19 39 51.5	+1.1
	82nm,0.3s,baz=108,slow=4.5,SNR=21						
KRVT				S	Sn	19 40 30.4	0.0
	804nm,0.3s,baz=259,slow=22,SNR=6.0						
HNR	Honiara	5.90	122	P	Pn	19 40 26.4	+2.6
	125nm,0.3s,baz=209,slow=5.2,SNR=30						
HNR				S	Sn	19 41 33.6	+3.5
	236nm,0.3s,baz=109,slow=19,SNR=9.0						
HNR				LR	LR	19 42 43.4	
	comp=Z,25µm,20.4s,baz=297,slow=38						
HNR	Honiara	5.90	122	eP	Pn	19 40 26.0	+2.2
HNR	Honiara	5.90	122		Pn	19 40 25.4	+1.6
PMG	Port Moresby	8.23	248	P	Pn	19 40 57.1	+1.6
	70nm,0.3s,baz=58,slow=5.7,SNR=68						
PMG				S	Sn	19 42 28.5	+1.5
	55nm,0.3s,baz=249,slow=21,SNR=15						
PMG				LR	LR	19 44 01.4	
	comp=Z,24µm,21.4s,baz=55,slow=37						
PMG	Port Moresby	8.23	248		Pn	19 40 56.2	+0.6
MANU	Manus Island	8.61	299	Pn	Pn	19 41 01.5	+0.7
PATS	Pohnpei	13.52	15	P	Pn	19 42 07.0	-0.7
	baz=14,SNR=6.0						
PATS	Pohnpei	13.52	15		Pn	19 42 06.2	-1.5
COEN	Coen	13.78	236	P	Pn	19 42 11.0	-0.1
	baz=14,SNR=22						
COEN	Coen	13.78	236		Pn	19 42 10.4	-0.8
MMPI	Merauke	14.52	261	P	P	19 42 36.4	+11
GENI	Genyem	15.12	284	P	P	19 42 31.4	-0.8
	9µm4µm160nm,0.8s						
SANVU	Saraoutou	15.12	128	P	P	19 42 31.2	-1.0
MTSU	Mount Surprise	15.61	220	P	P	19 42 36.9	-0.8
	baz=16,SNR=31						
CTA	Charters Tower	16.04	211	P	P	19 42 41.9	-0.5
	2.1nm,0.3s,baz=28,slow=15,SNR=25						
CTA				S	S	19 45 43.5	-3.6
	baz=13,slow=13,SNR=2.0						
CTA				LR	LR	19 48 27.9	
	comp=Z,10µm,19.2s,baz=30,slow=35						
SMPI	Sarmi	16.68	284	P	P	19 42 50.1	+0.6
	5µm342nm,1.3s						
NOUC	Port Laguerre	19.18	146	P	P	19 43 18.0	+0.9
NOUC				IAmb	IAmb	19 43 22.5	
	comp=Z,359nm,1.0s						
DZM	Mont Dzumac	19.24	146	eP	P	19 43 16.8	-1.0
	comp=Z,690nm,1.1s						
DZM				eS	S	19 46 41.9	-10
	comp=Z,6µm,25.5s						
DZM				eLQ	LQ	19 46 57.5	
	comp=Z,9µm,31.2s						
DZM				eLR	LR	19 47 44.7	
	comp=Z,19µm,26.5s						
DZM	Mont Dzumac	19.24	146	P	Pn	19 43 19.2	-0.2
	comp=Z,11nm,0.3s,baz=316,slow=10,SNR=82						
DZM				S	Sn	19 46 54.7	-0.1
	comp=Z,0.3nm,0.3s,baz=12,slow=14,SNR=1.8						
DZM				LR	LR	19 49 53.4	
	comp=Z,7µm,21.3s,baz=326,slow=34						
DZM	Mont Dzumac	19.24	146	P	P	19 43 18.5	+0.7
DZM				IAmb	IAmb	19 43 25.0	
	comp=Z,566nm,1.3s						
EIDS	Eidsvold	19.28	190	P	Pn	19 43 20.1	+0.3
	baz=19,SNR=17						
EIDS	Eidsvold	19.28	190	P	Pn	19 43 19.4	-0.4
TARA	Tarawa	19.57	68	Pn	Pn	19 43 23.3	0.0
KWAJ	Kwajalein Atol	19.68	40		Pn	19 43 24.5	+0.1
KWAJ	Kwajalein Atol	19.68	40	P	Pn	19 43 24.5	+0.1
KWAJ				pmax	pmax		
	comp=Z,5µm,1.5s						
QIS	Mount Isa	20.48	225	P	P	19 43 31.8	+0.7
	baz=21,SNR=70						
RMQ	Roma	20.88	196	P	Pn	19 43 37.7	-0.9
	baz=21,SNR=25						
RKPI	Ransiki, Papua	21.18	282	P	P	19 43 40.1	+1.3
	comp=Z,4µmcomp=Z,317nm,0.9s						
KMPI	Kaimana, Papua	21.25	276	P	P	19 43 40.0	+0.5
	comp=Z,329nm,1.1s						
GUMO	Guam	22.14	333	P	P	19 43 49.6	+0.7
	comp=Z,178nm,0.8s,baz=211,slow=10,SNR=4.7						
GUMO				LR	LR	19 51 44.9	
	comp=Z,2µm,21.4s,baz=153,slow=35						
GUMO	Guam	22.14	333	P	P	19 43 49.2	+0.3
GUMO				IAmb	IAmb	19 44 06.2	
	comp=Z,330nm,1.1s						
QLP	Quilpie	22.55	206	P	P	19 43 54.9	+1.6
	baz=23,SNR=27						
FAKI	Fak Fak	22.80	278	P	P	19 43 55.8	-0.2
	comp=Z,9µmcomp=Z,7µmcomp=Z,390nm,0.8s						
FAKI	Fak Fak	22.80	278	P	P	19 43 55.4	-0.7
FAKI				IAmb	IAmb	19 43 59.4	
	comp=Z,326nm,0.9s						
KDU	Kakadu	22.96	252	P	P	19 43 57.8	0.0
	baz=23,SNR=36						
SAUI	Saumlaki	23.44	265	P	P	19 44 03.8	+1.5
	comp=Z,16µmcomp=Z,17µmcomp=Z,1µm,1.7s						
SAUI	Saumlaki	23.44	265	P	P	19 44 02.6	+0.3
WR0	Warramunga Arr	23.95	234	P	P	19 44 07.9	+1.0
WR0				IAmb	IAmb	19 44 22.3	
	comp=Z,324nm,1.0s						
WB0	Warramunga Arr	23.97	234	P	P	19 44 08.0	+1.0
WB0				IAmb	IAmb	19 44 10.8	
	comp=Z,383nm,1.1s						
WRAB	Tennant Creek	24.09	234	P	P	19 44 09.0	+0.9
WRAB				IAmb	IAmb	19 44 11.3	
	comp=Z,238nm,0.9s						
WRAB	Tennant Creek	24.09	234	ceP	P	19 44 09.2	+1.1
WRAB				pmax	pmax		
	comp=Z,722nm,2.0s						
WB2	Warramunga Arr	24.09	234	P	P	19 44 09.3	+1.1
WRA	Warramunga Arr	24.10	234	P	P	19 44 09.3	+1.1
	comp=Z,190nm,0.8s,baz=58,slow=9.2,SNR=202						
WRA				PcP	PcP	19 47 48.6	+0.5
	comp=Z,19nm,0.8s,baz=35,slow=1.8,SNR=4.9						
WRA				S	S	19 48 20.8	-0.4
	comp=Z,5.5nm,1.0s,baz=59,slow=14,SNR=4.4						
WRA				ScP	ScP	19 51 21.5	+0.8
	comp=Z,4.1nm,0.9s,baz=57,slow=3.3,SNR=4.0						
WRA				LR	LR	19 53 24.7	
	comp=Z,8µm,20.1s,baz=65,slow=36						
WRA				PKiKP	PKiKP	19 55 30.2	-0.8
	comp=Z,0.8nm,0.5s,baz=336,slow=0.8,SNR=4.8						
SIJI	Sorong	24.16	282	P	P	19 44 09.0	+0.2
	comp=Z,147nm,0.8s,baz=74,slow=8.3,SNR=54						
SIJI				S	S	19 48 22.6	+0.3
	comp=Z,16nm,1.0s,baz=262,slow=12,SNR=3.8						
SIJI				LR	LR	19 55 30.5	
	comp=Z,2µm,18.6s,baz=118,slow=41						
ARMA	Armidale	24.16	187	P	P	19 44 10.2	+1.5
	baz=24,SNR=34						
ARMA	Armidale	24.16	187	P	P	19 44 09.9	+1.2
ARMA				IAmb	IAmb	19 44 12.2	
	comp=Z,288nm,1.3s						
BNDI	Bandanaira	24.91	273	P	P	19 44 17.2	+1.5
	comp=Z,8µmcomp=Z,7µmcomp=Z,350nm,1.5s						
MSVF	Nonsavu	25.31	119	P	P	19 44 19.0	-0.3
MSVF				IAmb	IAmb	19 44 35.7	
	comp=Z,227nm,1.2s						
MSVF	Nonsavu	25.31	119	P	P	19 44 19.0	-0.3
MSVF				pmax	pmax		
	comp=Z,227nm,1.2s						
MSVF				MLR	MLR		
	comp=Z,9µm,20.0s						
LHI	Lord Howe Isla	25.37	172	P	P	19 44 20.6	+1.0
	baz=26,SNR=7.1						
LHI	Lord Howe Isla	25.37	172	P	P	19 44 19.9	+0.3
LHI				IAmb	IAmb	19 44 22.0	
	comp=Z,166nm,0.9s						
MSAI	Masohi	26.01	275	P	P	19 44 25.0	-0.6
	comp=Z,523nmcomp=Z,46nm,1.1s						
CMSA	Cobar Meteorol	26.52	198	P	P	19 44 30.5	+0.5
	baz=27,SNR=89						
AS31	Alice Springs	26.53	227	P	P	19 44 30.4	+0.2
ASAR	Alice Springs	26.53	227	P	P	19 44 30.8	+0.6
	comp=Z,47nm,0.8s,baz=58,slow=8.7,SNR=318						
ASAR				PcP	PcP	19 47 53.6	0.0
	comp=Z,34nm,1.0s,baz=52,slow=2.1,SNR=9.1						
ASAR				S	S	19 49 00.9	+1.2
	comp=Z,2.9nm,0.9s,baz=50,slow=17,SNR=2.4						
ASAR				ScP	ScP	19 51 29.4	+1.8
	comp=Z,4.2nm,0.7s,baz=47,slow=3.6,SNR=5.4						
ASAR				LR	LR	19 54 37.4	
	comp=Z,7µm,20.6s,baz=110,slow=35						
AAI	Ambon	26.70	274	P	P	19 44 31.5	-0.3
	comp=Z,6µmcomp=Z,2µmcomp=Z,145nm,0.8s						
KNRA	Kununurra	27.23	248	P	P	19 44 37.3	+0.7
	baz=27,SNR=28						
KNRA	Kununurra	27.23	248	IAmb	IAmb	19 45 00.4	
	comp=Z,142nm,0.9s						
RIV	Riverview	27.59	187	P	P	19 44 41.3	+1.8
	baz=28,SNR=6.2						
NLAI	Namlea	27.84	275	P	P	19 44 43.5	+1.5
	comp=Z,2µmcomp=Z,170nm,1.6s						
LBMI	Labuha	27.88	281	P	P	19 44 43.4	+1.0
	comp=Z,5µmcomp=Z,449nm,0.9s						
WAKE	Wake Island	27.97	24	PcP	PcP	19 47 59.3	+2.4
STKA	Stephens Creek	28.29	204	P	P	19 44 46.0	+0.1
	baz=28,SNR=40						
STKA	Stephens Creek	28.29	204	P	P	19 44 46.0	+0.1
	comp=Z,20nm,0.7s,baz=13,slow=8.7,SNR=54						
STKA				PcP	PcP	19 47 58.0	+0.4
	comp=Z,23nm,0.9s,baz=316,slow=3.4,SNR=3.8						
STKA				S	S	19 49 26.8	-0.4
	comp=Z,4.3nm,0.7s,baz=175,slow=16,SNR=1.7						
STKA				ScP	ScP	19 51 34.1	+1.4
	comp=Z,12nm,0.9s,baz=58,slow=2.9,SNR=5.8						
STKA				LR	LR	19 56 05.1	
	comp=Z,8µm,19.9s,baz=17,slow=36						
STKA	Stephens Creek	28.29	204	P	P	19 44 45.8	0.0
TNTI	Ternate	28.34	283	P	P	19 44 46.3	-0.2
	comp=Z,2µmcomp=Z,1µmcomp=Z,65nm,1.8s						
TNTI	Ternate	28.34	283	P	P	19 44 46.6	0.0
YNG	Young	28.48	191	P	P	19 44 48.9	+1.4
	baz=29,SNR=7.6						
SANI	Sanana	29.11	277	P	P	19 44 53.2	-0.1
	comp=Z,3µmcomp=Z,3µmcomp=Z,268nm,1.1s						
CNB	Canberra Magne	29.30	189	P	P	19 44 56.5	+1.7
	baz=30,SNR=19						
CAN	Canberra	29.36	190	P	P	19 44 56.4	+1.1
CAN	Canberra	29.36	190	P	P	19 44 56.4	+1.1
CAN				pmax	pmax		
	comp=Z,76nm,1.3s						
CAN				MLR	MLR		
	comp=Z,8µm,21.0s						
SOEI	Soe	30.48	262	P	P	19 45 05.3	-0.3
	comp=Z,6µmcomp=Z,3µmcomp=Z,160nm,0.8s						
SOEI	Soe	30.48	262	IAmb	IAmb	19 45 59.5	
	comp=Z,365nm,1.4s						
HTT	Hallett	30.77	207	P	P	19 45 08.7	+0.8
	baz=31,SNR=17						
FITZ	Fitzroy Crossi	30.81	245	P	P	19 45 08.4	0.0
	baz=31,SNR=102						
FITZ	Fitzroy Crossi	30.81	245	P	P	19 45 08.4	0.0
	comp=Z,83nm,0.9s,baz=76,slow=8.7,SNR=125						
FITZ				S	S	19 50 06.8	-0.3
	comp=Z,7.5nm,0.8s,baz=246,slow=13,SNR=2.4						
FITZ				LR	LR	19 58 08.7	
	comp=Z,7µm,20.0s,baz=80,slow=37						
FITZ	Fitzroy Crossi	30.81	245	P	P	19 45 08.1	-0.2
MILA	Mila	31.03	189	P	P	19 45 11.7	+1.6
	baz=31,SNR=7.7						
MATI	Mati	31.44	294	eP	P	19 45 11.9	-2.1
WRKA	Warakurna	31.52	231	P	P	19 45 14.5	-0.1
	baz=32,SNR=226						
KMSI	Cibinong	31.58	281	P	P	19 45 15.7	+0.5
	comp=Z,7µmcomp=Z,797nm,0.7s						
DDMP	Don Marcelino,	31.61	292	eP	P	19 45 13.7	-1.8
BBOO	Buckleboo	31.64	211	P	P	19 45 15.6	+0.1
	baz=32,SNR=17						
BBOO	Buckleboo	31.64	211	P	P	19 45 15.3	-0.2
BBOO				IAmb	IAmb	19 45 26.5	
	comp=Z,57nm,0.6s						
BBOO				PcP	PcP	19 48 06.8	+0.6
DAV	Davao City (W)	32.11	294	S	S	19 50 28.4	+1.0
	comp=Z,76nm,0.5s,baz=225,slow=19,SNR=2.8						
DAV				LR	LR	19 56 29.6	
	comp=Z,2µm,21.6s,baz=104,slow=33						
BBSI	Bau Bau	32.13	270	P	P	19 45 21.5	+1.5
	comp=Z,743nmcomp=Z,60nm,1.1s						
TOO	Toolangi	32.26	194	P	P	19 45 22.0	+1.2
	baz=32,SNR=11						
TOO	Toolangi	32.26	194	P	P	19 45 21.6	+0.7
TOO				PcP	PcP	19 48 09.6	+1.7
TOO	Toolangi	32.26	194	P	P	19 45 21.6	+0.7
TOO						19 48 09.6	
TOO				pmax	pmax		
	comp=Z,40nm,1.1s						
TOO				MLR	MLR		
	comp=Z,8µm,20.0s						
GSPH	General Santos	32.31	292	eP	P	19 45 21.0	-0.7
MMRI	Maumere	32.43	264	P	P	19 45 22.1	-0.6
	comp=Z,4µmcomp=Z,6µmcomp=Z,538nm,0.8s						
MMRI	Maumere	32.43	264	P	P	19 45 22.0	-0.6
LUWI	Luwuk	32.45	278	P	P	19 45 23.4	+0.7
	comp=Z,8µmcomp=Z,904nm,1.2s						
LUWI	Luwuk	32.45	278	P	P	19 45 23.4	+0.7
SKMP	Bagumbayan, Su	32.84	292	eP	P	19 45 26.2	0.0
BUTP	Butuan	32.87	297	eP	P	19 45 26.4	-0.1
BUKP	Musuan	32.91	295	eP	P	19 45 27.4	+0.6
EDFI	Ende, Flores	32.97	264	P	P	19 45 27.0	-0.5
	comp=Z,2µmcomp=Z,3µmcomp=Z,279nm,1.1s						
CTBH	Cotabato--PC H	33.38	293	⇑iP	P	19 45 31.2	+0.3
CGP	Cagayan de Oro	33.48	296	⇓eP	P	19 45 32.9	+1.2
KNTN	Kanton	33.49	85	P	P	19 45 32.9	+1.0
KNTN				IAmb	IAmb	19 45 34.2	
	comp=Z,122nm,0.8s						
OUZ	Omahuta	33.53	152	IAmb	IAmb	19 45 35.9	
	comp=Z,220nm,1.8s						
MRSI	Marisa	33.55	280	P	P	19 45 32.2	-0.2
	comp=Z,3µmcomp=Z,2µmcomp=Z,234nm,1.1s						
APSI	Ampana	33.57	278	P	P	19 45 33.1	+0.5
	comp=Z,2µmcomp=Z,5µmcomp=Z,509nm,1.1s						
AFI	Afiamalu	33.66	106	P	P	19 45 33.2	-0.2
	comp=Z,84nm,0.9s,baz=75,slow=18,SNR=7.4						
AFI	Afiamalu	33.66	106	P	P	19 45 33.2	-0.2
AFI				IAmb	IAmb	19 45 34.7	
	comp=Z,80nm,0.9s						
BASI	Baing, Sumba	34.14	261	P	P	19 45 38.9	+1.4
	comp=Z,3µmcomp=Z,5µmcomp=Z,507nm,1.2s						
PAGZ	Pagadian	34.41	294	eP	P	19 45 40.9	+1.0
BKSI	Bulukumba	34.58	270	P	P	19 45 40.2	-1.1
	comp=Z,4µmcomp=Z,1µmcomp=Z,108nm,1.0s						
BNSI	Bone	34.66	271	P	P	19 45 43.2	+1.2
	comp=Z,2µmcomp=Z,128nm,1.1s						
OCLP	Ormoc	34.71	300	eP	P	19 45 42.3	-0.2
KAPI	Kappang	34.97	270	P	P	19 45 45.2	+0.6
	comp=Z,41nm,0.7s,baz=100,slow=5.8,SNR=27						
KAPI				LR	LR	20 03 32.9	
	comp=Z,481nm,19.6s,baz=93,slow=42						
FORT	Forrest	34.99	223	P	P	19 45 45.2	+0.6
	baz=35,SNR=18						
SPSI	Sidrap Palu	35.03	272	P	P	19 45 45.7	+0.5
	comp=Z,3µmcomp=Z,1µmcomp=Z,70nm,1.2s						
WBSI	Waikabubak, Su	35.28	262	P	P	19 45 46.8	-0.6
	comp=Z,7µmcomp=Z,408nm,0.8s						
MPSI	Mapaga	35.52	279	P	P	19 45 49.2	-0.3
	comp=Z,3µmcomp=Z,4µmcomp=Z,461nm,0.9s						
KUZ	Kuaotunu	35.78	151	P	P	19 45 52.7	+1.4
MKAZ	Moumakai	35.80	152	P	P	19 45 54.4	+3.0
GUIM	Jordan	36.28	297	eP	P	19 45 56.5	+0.6
PVCP	Virac	36.35	303	eP	P	19 45 51.6	-4.9
NIUE	Niue	36.52	114	P	P	19 45 58.3	+0.5
	baz=36,SNR=3.3						
RCP	Roxas	36.56	299	⇓eP	P	19 45 59.2	+0.9
MOO	Moorlands	36.61	190	P	P	19 46 00.7	+2.3
	baz=37,SNR=11						
HIZ	Hauiti	36.81	153	P	P	19 46 02.9	+2.8
PLAI	Plampang	36.84	264	P	P	19 45 59.1	-1.6
	comp=Z,4µmcomp=Z,6µmcomp=Z,534nm,0.9s						
TAU	Tasmania Unive	37.04	189	P	P	19 46 03.6	+1.6
TAU				IAmb	IAmb	19 46 06.4	
	comp=Z,171nm,1.1s						
TAU	Tasmania Unive	37.04	189	P	P	19 46 03.6	+1.6
TAU				pmax	pmax		
	comp=Z,171nm,1.1s						
PSA00	Pilbara Seismi	37.09	242	IAmb	IAmb	19 46 05.5	
	comp=Z,202nm,1.2s						
PSA00				PcP	PcP	19 48 22.9	+0.7
HLRZ	Highlands Stat	37.28	152	P	P	19 46 08.9	+4.8
TWVZ	Taurewa	37.52	153	P	P	19 46 08.7	+2.5
OTRP	Odiongan	37.56	300	eP	P	19 46 06.4	-0.4
URZ	Urewera	37.65	151	P	P	19 46 08.5	+1.3
	comp=Z,101nm,0.6s,baz=321,slow=4.5,SNR=46						
URZ				S	S	19 51 53.8	+1.7
	comp=Z,16nm,0.9s,baz=79,slow=22,SNR=8.3						
URZ	Urewera	37.65	151	PcP	PcP	19 48 24.1	+0.7
URZ					ScP	19 51 59.1	-5.8
URZ	Urewera	37.65	151	P	P	19 46 08.6	+1.4
NGZ	Ngauruhoe	37.68	153	P	P	19 46 10.0	+2.3

RUGZ	**Raukumara Rang**	**37.70**	**150**	P	**P**	**19 46 09.2**	**+1.4**
MXZ	**Matakaoa Point**	**37.71**	**149**	P	**P**	**19 46 08.6**	**+0.9**
CUYO	**Cuyo Island**	**37.77**	**297**	*e*P	**P**	**19 46 09.7**	**+1.1**
MRHZ	**Matea Rd**	**37.78**	**152**	P	**P**	**19 46 11.8**	**+3.4**
QRZ	**Quartz Range**	**37.81**	**158**	P	**P**	**19 46 08.9**	**+0.3**
QRZ				IAmb	IAmb	19 46 17.4	
	comp=Z,89nm,0.8s						
PKGZ	**Pakihiroa**	**37.84**	**149**	P	**P**	**19 46 10.5**	**+1.6**
WMGZ	**Waiomatatini S**	**37.96**	**149**	P	**P**	**19 46 11.5**	**+1.7**
MTHZ	**Maungataniwha**	**37.99**	**152**	P	**P**	**19 46 12.7**	**+2.6**
TWGZ	**Tauwhareparae**	**38.02**	**150**	P	**P**	**19 46 12.2**	**+1.9**
BKZ	**Black Stump Fm**	**38.08**	**152**	P	**P**	**19 46 11.7**	**+0.8**
BKZ				PcP	**PcP**	**19 48 23.8**	**-1.0**
TKGZ	**Te Karaka**	**38.15**	**150**	P	**P**	**19 46 13.1**	**+1.6**
NMHZ	**Naumai**	**38.17**	**152**	P	**P**	**19 46 14.7**	**+3.0**
SNGZ	**Shannon Statio**	**38.17**	**151**	P	**P**	**19 46 13.3**	**+1.7**
BOAC	**Boac**	**38.23**	**301**	*e*P	**P**	**19 46 13.1**	**+0.7**
SJMP	**San Jose**	**38.39**	**299**	*e*P	**P**	**19 46 14.9**	**+1.2**
THZ	**Tophouse**	**38.77**	**158**	IAmb	IAmb	19 46 22.0	
	comp=Z,157nm,0.9s						
POLP	**Polilio Island**	**38.78**	**303**	*e*P	**P**	**19 46 17.2**	**+0.3**
LQP	**Lukban**	**38.81**	**302**	*e*P	**P**	**19 46 17.1**	**-0.4**
TUWZ	**Tuamarina**	**38.87**	**157**	PcP	**PcP**	**19 48 26.8**	**-0.4**
BUSP	**Coron**	**38.99**	**298**	*e*P	**P**	**19 46 19.3**	**+0.5**
SNZO	**South Karori**	**39.07**	**156**	P	**P**	**19 46 20.4**	**+1.3**
SNZO				IAmb	IAmb	19 46 39.5	
	comp=Z,106nm,0.8s						
BFZ	**Birch Farm**	**39.20**	**154**	IAmb	IAmb	19 46 26.3	
	comp=Z,108nm,0.6s						
TGY	**Tagaytay City**	**39.31**	**301**	P	**P**	**19 46 22.2**	**+0.7**
	comp=Z,122nm,0.4s,baz=226,slow=6.9,SNR=7.2						
ENPP	**El Nido**	**39.34**	**296**	*e*P	**P**	**19 46 22.3**	**+0.6**
SRBI	**Singaraja**	**39.37**	**265**	P	**P**	**19 46 21.5**	**-0.5**
	comp=Z,2µmcomp=Z,144nm,1.1s						
LTZ	**Lake Taylor**	**39.44**	**160**	IAmb	IAmb	19 46 29.4	
	comp=Z,75nm,0.5s						
IGBI	**Denpasar**	**39.44**	**264**	P	**P**	**19 46 22.7**	**+0.1**
	comp=Z,3µmcomp=Z,211nm,0.9s						
PLWZ	**Palliser**	**39.52**	**156**	P	**P**	**19 46 22.5**	**-0.3**
KHZ	**Kahutara**	**39.57**	**158**	P	**P**	**19 46 23.1**	**-0.1**
KHZ				IAmb	IAmb	19 46 27.9	
	comp=Z,134nm,0.8s						
BALP	**Baler**	**39.59**	**304**	*e*P	**P**	**19 46 24.3**	**+0.6**
KMBL	**Kambalda**	**39.66**	**227**	P	**P**	**19 46 24.8**	**+0.6**
	baz=40,SNR=14						
OXZ	**Oxford**	**39.84**	**160**	P	**P**	**19 46 25.3**	**-0.2**
OXZ				IAmb	IAmb	19 46 30.7	
	comp=Z,136nm,0.9s						
RPZ	**Rata Peaks**	**39.87**	**162**	P	**P**	**19 46 26.9**	**+1.2**
	comp=Z,122nm,0.8s,baz=11,slow=5.1,SNR=19						
RPZ	**Rata Peaks**	**39.87**	**162**	IAmb	IAmb	19 46 32.4	
	comp=Z,154nm,0.9s						
SPMM	**Sapulut**	**39.88**	**285**	P	**P**	**19 46 27.0**	**+0.8**
BATP	**Bataraza**	**39.89**	**292**	*e*P	**P**	**19 46 26.5**	**+0.2**
MEEK	**Meekatharra**	**39.98**	**235**	P	**P**	**19 46 27.4**	**+0.4**
	baz=40,SNR=140						
CAUP	**Cauayan**	**40.02**	**306**	*e*P	**P**	**19 46 28.4**	**+1.1**
LBZ	**Lake Benmore**	**40.21**	**163**	P	**P**	**19 46 28.6**	**0.0**
WKZ	**Wanaka**	**40.29**	**164**	P	**P**	**19 46 29.2**	**0.0**
WKZ				IAmb	IAmb	19 46 34.9	
	comp=Z,156nm,1.3s						
MQZ	**McQueen's Vall**	**40.38**	**160**	P	**P**	**19 46 30.2**	**+0.3**
MQZ				IAmb	IAmb	19 46 36.6	
	comp=Z,397nm,1.6s						
JAGI	**Jajag, Banyuwa**	**40.42**	**264**	P	**P**	**19 46 29.9**	**-0.8**
	comp=Z,4µmcomp=Z,4µmcomp=Z,435nm,1.2s						
JAGI	**Jajag, Banyuwa**	**40.42**	**264**	P	**P**	**19 46 28.8**	**-2.0**
KKM	**Kota Kinabalu**	**40.49**	**287**	IAmb	IAmb	19 46 33.2	
	comp=Z,154nm,0.9s						
SGCP	**Mt. Cagua**	**40.55**	**308**	*e*P	**P**	**19 46 31.8**	**+0.1**
APYP	**Conner**	**40.98**	**306**	*e*P	**P**	**19 46 35.2**	**-0.1**
WHZ	**Wether Hill Ro**	**41.02**	**166**	P	**P**	**19 46 35.4**	**+0.3**
WHZ				PcP	**PcP**	**19 48 32.5**	**-1.4**
ABRA	**Dolores**	**41.29**	**306**	*e*P	**P**	**19 46 38.8**	**+1.1**
JOW	**Kunigami**	**41.83**	**323**	P	**P**	**19 46 42.8**	**+0.7**
	comp=Z,8.5nm,0.8s,baz=180,slow=15,SNR=5.7						
GIRL	**Giralia**	**42.38**	**243**	P	**P**	**19 46 48.1**	**+1.5**
	baz=42,SNR=8.6						
GIRL	**Giralia**	**42.38**	**243**	P	**P**	**19 46 47.1**	**+0.5**
KLBR	**Kellerberrin**	**42.82**	**229**	P	**P**	**19 46 50.1**	**0.0**
	baz=43,SNR=36						
MORW	**Morawa**	**43.05**	**234**	P	**P**	**19 46 52.1**	**+0.1**
	baz=43,SNR=30						
MORW	**Morawa**	**43.05**	**234**	P	**P**	**19 46 51.9**	**-0.1**
MORW				IAmb	IAmb	19 46 54.1	
	comp=Z,141nm,0.9s						
BLDU	**Ballidu**	**43.18**	**231**	P	**P**	**19 46 53.2**	**+0.2**
	baz=43,SNR=34						
MIDW	**Midway**	**43.55**	**37**	P	**P**	**19 46 56.8**	**+0.9**
YOJ	**Yonaguni jima**	**43.59**	**316**		PP	19 48 45.7	+6.7
NWAO	**Narrogin (SRO)**	**43.84**	**228**	P	**P**	**19 46 58.6**	**+0.3**
	baz=44,SNR=7.5						
NWAO	**Narrogin (SRO)**	**43.84**	**228**	P	**P**	**19 46 58.9**	**+0.5**
	comp=Z,50nm,0.8s,baz=61,slow=7.0,SNR=21						
NWAO	**Narrogin (SRO)**	**43.84**	**228**	P	**P**	**19 46 58.4**	**+0.1**
NWAO				PcP	**PcP**	**19 48 45.0**	**+1.3**
NWAO	**Narrogin (SRO)**	**43.84**	**228**	IAmb	IAmb	19 47 00.3	
	comp=Z,60nm,0.9s						
NWAO				PcP	**PcP**	**19 48 44.5**	**+0.8**
TWG	**Pinlang**	**43.95**	**312**	IAmb	IAmb	19 47 36.1	
	comp=Z,295nm,1.4s						
SMRI	**Semarang**	**44.12**	**266**	P	**P**	**19 47 01.7**	**+0.9**
MUN	**Mundaring**	**44.17**	**230**	P	**P**	**19 47 01.2**	**+0.2**
	baz=44,SNR=33						
NACB	**Ninganchiao**	**44.40**	**314**	IAmb	IAmb	19 47 08.1	
	comp=Z,94nm,0.7s						
TPUB	**Ta-pu**	**44.56**	**313**	P	**P**	**19 47 04.1**	**-0.1**
SSLB	**Suanglung**	**44.62**	**313**	P	**P**	**19 47 05.1**	**+0.4**
RKGY	**Rocky Gully**	**44.86**	**226**	P	**P**	**19 47 07.6**	**+1.3**
	baz=45,SNR=27						
YHNB	**Yeheng**	**44.87**	**315**	IAmb	IAmb	19 47 28.1	
	comp=Z,135nm,1.1s						
KSM	**Kuching**	**45.15**	**278**	IAmb	IAmb	19 47 10.5	
	comp=Z,170nm,1.3s						
KSM	**Kuching**	**45.15**	**278**	P	**P**	**19 47 10.0**	**+1.0**
JNU	**Nakatsue**	**45.37**	**331**	P	**P**	**19 47 10.4**	**0.0**
	comp=Z,115nm,0.9s,baz=99,slow=2.4,SNR=29						
JNU	**Nakatsue**	**45.37**	**331**	IAmb	IAmb	19 47 13.4	
	comp=Z,104nm,0.8s						
MJAR	**Matsushiro Arr**	**45.41**	**341**	P	**P**	**19 47 09.9**	**-0.8**
	comp=Z,4.4nm,0.4s,baz=165,slow=7.1,SNR=23						
MJAR				PcP	**PcP**	**19 48 48.8**	**-0.1**
	comp=Z,10nm,0.7s,baz=170,slow=3.1,SNR=5.4						
MAJO	**Matsushiro**	**45.41**	**341**	P	**P**	**19 47 09.9**	**-0.8**
MAJO	**Matsushiro**	**45.41**	**341**	P	**P**	**19 47 09.9**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,21nm,0.9s						
MAJO				MLR	MLR		
	comp=Z,1µm,20.0s						
MAT	**Matsushiro**	**45.41**	**341**	P	**P**	**19 47 09.8**	**-0.9**
MAT				*e*S	**S**	**19 53 46.6**	**-0.3**
MJB9	**Matsu-Tunnel**	**45.41**	**341**	P	**P**	**19 47 09.9**	**-0.8**
RAR	**Rarotonga**	**46.29**	**113**	P	**P**	**19 47 17.7**	**-0.2**
	comp=Z,55nm,1.0s,baz=239,slow=6.1,SNR=16						
RAR				LR	LR	20 03 45.5	
	comp=Z,1µm,19.2s,baz=310,slow=32						
RAR	**Rarotonga**	**46.29**	**113**	P	**P**	**19 47 17.2**	**-0.7**
RAR				IAmb	IAmb	19 47 22.9	
	comp=Z,88nm,1.2s						
CISI	**Cisompet, Garu**	**46.71**	**266**	PP	PP	19 49 10.4	-1.7
LEM	**Lembang**	**46.93**	**267**	P	**P**	**19 47 23.9**	**+0.7**
	comp=Z,245nm,0.7s,baz=62,slow=4.6,SNR=74						
LEM				S	**S**	**19 54 08.7**	**-1.0**
	comp=Z,10nm,0.3s,baz=287,slow=19,SNR=3.0						
QZH	**Quanzhou**	**47.03**	**313**	⇑*i*P	**P**	**19 47 24.4**	**+0.8**
QZH				S	**S**	**19 54 10.5**	**0.0**
QZH				pmax	pmax		
	comp=Z,69nm,0.8s						
QZH				LR	LR		
	comp=Z,1µm,20.8s						
QZH				LR	LR		
	comp=Z,830nm,21.8s						
QZH				LR	LR		
	comp=Z,1µm,22.3s						
MCQ	**Macquarie Isla**	**48.15**	**177**	P	**P**	**19 47 33.7**	**+2.0**
	baz=48,SNR=4.8						
MCQ	**Macquarie Isla**	**48.15**	**177**	PP	PP	19 49 21.3	-3.3
XMAS	**Kiritimati**	**48.33**	**82**	P	**P**	**19 47 34.4**	**+0.6**
HKPS	**Hong Kong Po S**	**48.97**	**307**	IAmb	IAmb	19 47 42.3	
	comp=Z,93nm,0.9s						
SSE	**Sheshan**	**49.21**	**321**	P	**P**	**19 47 41.6**	**+1.3**
SSE				S	**S**	**19 54 41.8**	**+0.8**
SSE				pmax	pmax		
	comp=Z,21nm,0.7s						
SSE				pmax	pmax		
	comp=Z,260nm,4.5s						
SSE				LR	LR		
	comp=Z,450nm,24.7s						
SSE				LR	LR		
	comp=Z,440nm,24.9s						
DLV	**T Lat**	**49.57**	**291**	P	**P**	**19 47 44.0**	**+0.5**
DLV				IAmb	IAmb	19 48 02.7	
	comp=Z,169nm,1.3s						
TJN	**Taejon**	**49.69**	**331**	*ce*P	**P**	**19 47 43.9**	**+0.1**
KSRS	**Korea Array**	**50.29**	**332**	P	**P**	**19 47 48.3**	**-0.1**
	comp=Z,31nm,0.9s,baz=149,slow=8.1,SNR=52						
YUK	**Yuzh-Kuril'sk**	**50.78**	**352**	*e*P	**P**	**19 47 50.6**	**-1.3**
YUK				*i* S	**S**	**19 55 00.0**	**-2.4**
YUK				SSS	SSS	20 00 16.8	
YUK				pmax	pmax		
	comp=Z,120nm,1.2s						
YUK				pmax	pmax		
	comp=E,37nm,0.4s						
YUK				pmax	pmax		
	comp=N,51nm,0.3s						
YUK				pmax	pmax		
	comp=Z,115nm,1.4s						
INCN	**Inchon**	**50.92**	**331**	P	**P**	**19 47 53.1**	**-0.1**
INCN				IAmb	IAmb	19 47 56.7	
	comp=Z,98nm,0.7s						
INCN	**Inchon**	**50.92**	**331**	P	**P**	**19 47 53.1**	**-0.1**
INCN				pmax	pmax		
	comp=Z,98nm,0.7s						
INCN				MLR	MLR		
	comp=Z,800nm,19.0s						
QIZ	**Qiongzhong**	**51.01**	**301**	P	**P**	**19 47 55.8**	**+1.7**
QIZ				pP	**pP**	**19 48 10.9**	**-0.8**
QIZ				sP	**sP**	**19 48 20.7**	**+1.2**
QIZ				S	**S**	**19 55 06.1**	**-0.4**
QIZ				sS	**sS**	**19 55 37.8**	**+1.1**
QIZ				pmax	pmax		
	comp=Z,62nm,0.7s						
QIZ				pmax	pmax		
	comp=Z,660nm,8.3s						
QIZ				LR	LR		
	comp=Z,820nm,23.3s						
QIZ				LR	LR		
	comp=Z,2µm,31.4s						
QIZ	**Qiongzhong**	**51.01**	**301**	IAmb	IAmb	19 47 56.3	
	comp=Z,49nm,0.8s						
NJ2	**Nanjing**	**51.32**	**320**	*e*P	**P**	**19 47 57.0**	**+0.8**
NJ2				sP	**sP**	**19 48 23.6**	**+1.7**
NJ2				PP	**PP**	**19 49 53.7**	**-0.3**
NJ2				S	**S**	**19 55 12.8**	**+2.5**
NJ2				sS	**sS**	**19 55 38.1**	**-2.4**
NJ2				pmax	pmax		
	comp=Z,27nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,400nm,4.7s						
NJ2				LR	LR		
	comp=Z,1µm,18.4s						
NJ2				LR	LR		
	comp=Z,1µm,16.5s						
NJ2				LR	LR		
	comp=Z,1µm,22.7s						
ASAJ	**Asahikawa**	**51.41**	**349**	P	**P**	**19 47 57.6**	**+0.9**
	comp=Z,31nm,0.6s,baz=199,slow=5.8,SNR=29						
MYKOM	**Kota Tinggi**	**51.57**	**277**	IAmb	IAmb	19 47 59.7	
	comp=Z,66nm,0.8s						
MYKOM	**Kota Tinggi**	**51.57**	**277**	P	**P**	**19 47 59.0**	**+0.6**
KUR	**Kuril'sk**	**51.70**	**354**	P	**P**	**19 47 55.6**	**-3.2**
KUR				*e*		19 50 00.2	
KUR				*e*S	**S**	**19 55 17.1**	**+2.0**
KUR				pmax	pmax		
	comp=Z,149nm,1.1s						
KUR				pmax	pmax		
	comp=Z,680nm,5.7s						
KUR				MLR	MLR		
	comp=Z,1µm,15.0s						
KUR				MLR	MLR		
	comp=N,710nm,21.0s						
KUR				MLR	MLR		
	comp=E,1µm,19.0s						
MSHR	**Mys Shultsa**	**53.24**	**338**	*i* P	**P**	**19 48 09.1**	**-1.2**
WHN	**Wuhan**	**53.37**	**316**	⇑P	**P**	**19 48 12.2**	**+0.7**
WHN				S	**S**	**19 55 40.8**	**+2.3**
WHN				pmax	pmax		
	comp=E,94nm,0.9s						
WHN				LR	LR		
	comp=E,7µm,28.7s						
TEY	**Ternei**	**53.69**	**344**	⇑*e*P	**P**	**19 48 15.0**	**+1.5**
TEY				pmax	pmax		
	comp=Z,30nm,1.0s						
KIP	**Kipapa**	**53.81**	**58**	P	**P**	**19 48 15.0**	**+0.2**
KIP	**Kipapa**	**53.81**	**58**	P	**P**	**19 48 15.0**	**+0.2**
KIP				pmax	pmax		
	comp=Z,406nm,1.7s						
YSS	**Yuzh-Sakhalins**	**54.12**	**350**	P	**P**	**19 48 16.4**	**-0.2**
YSS				IAmb	IAmb	19 48 21.8	
	comp=Z,41nm,0.6s						
YSS	**Yuzh-Sakhalins**	**54.12**	**350**	*e*P	**P**	**19 48 17.4**	**+0.8**
YSS				*e*S	**S**	**19 55 46.8**	**-1.2**
YSS						20 01 25.0	
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				MLR	MLR		
	comp=N,900nm,18.0s						
YSS				MLR	MLR		
	comp=Z,1µm,18.0s						
USA0B	**Ussuriysk Arra**	**54.36**	**340**	IAMs_20	IAMs_20	20 15 23.3	
	comp=Z,7µm,19.0s						
USA0B	**Ussuriysk Arra**	**54.36**	**340**	*c i*P	**P**	**19 48 18.5**	**+0.1**
USRK	**Ussuriysk Ar.**	**54.36**	**340**	P	**P**	**19 48 18.9**	**+0.5**
	comp=Z,25nm,1.0s,baz=154,slow=8.0,SNR=28						
DL2	**Dalian**	**54.53**	**328**	P	**P**	**19 48 19.6**	**-0.2**
DL2				pP	**pP**	**19 48 36.2**	**-1.5**
DL2				PP	**PP**	**19 50 19.5**	**-3.3**
DL2				S	**S**	**19 55 54.8**	**+1.0**
DL2				sS	**sS**	**19 56 24.2**	**+1.9**
DL2				pmax	pmax		
	comp=Z,79nm,0.8s						
DL2				pmax	pmax		
	comp=Z,400nm,6.4s						
DL2				LR	LR		
	comp=Z,830nm,23.9s						
DL2				LR	LR		
	comp=Z,920nm,22.4s						
DL2				LR	LR		
	comp=Z,2µm,25.5s						
IPM	**Ipoh**	**54.82**	**280**	IAmb	IAmb	19 48 24.3	
	comp=Z,71nm,0.8s						
IPM	**Ipoh**	**54.82**	**280**	P	**P**	**19 48 22.0**	**-0.3**
TIA	**Tai'an**	**55.16**	**323**	P	**P**	**19 48 23.9**	**-0.5**
TIA				S	**S**	**19 56 01.1**	**-1.3**
TIA				pmax	pmax		
	comp=Z,28nm,0.7s						
TIA				pmax	pmax		
	comp=Z,450nm,3.7s						
TIA				LR	LR		
	comp=Z,560nm,16.9s						
TIA				LR	LR		
	comp=Z,830nm,21.2s						
TIA				LR	LR		
	comp=Z,1µm,25.5s						
HMH	**Humu'ula Sheep**	**55.23**	**61**	P	**P**	**19 48 26.6**	**+1.1**
POHA	**Pohakuloa**	**55.25**	**61**	P	**P**	**19 48 26.3**	**+0.7**
HLP	**Hilina Pali**	**55.27**	**61**	P	**P**	**19 48 25.7**	**+0.2**
PPT	**Papeete**	**55.31**	**107**	P	**P**	**19 48 26.6**	**+0.8**
	comp=Z,35nm,1.0s,baz=9.3,slow=6.1,SNR=4.1						
PPT				LR	LR	20 07 08.4	
	comp=Z,642nm,21.5s,baz=290,slow=30						
PPT2	**Papeete2**	**55.31**	**107**	*e*P	**P**	**19 48 26.3**	**+0.4**
	comp=Z,47nm,1.2s						
PPT2				*e*S	**S**	**19 56 02.8**	**-2.4**
	comp=Z,1µm,26.8s						
PPT2				*e*LQ	LQ	20 02 11.3	
	comp=Z,2µm,28.2s						
PPT2				*e*LR	LR	20 04 29.7	
	comp=Z,3µm,27.5s,baz=284						
PAE	**Paea**	**55.31**	**107**	*e*P	**P**	**19 48 25.9**	**+0.1**
	comp=Z,5.4nm,0.9s						
SDHHI	**Sand Hill**	**55.31**	**61**	IAmb	IAmb	19 48 29.3	
	comp=Z,95nm,0.9s						
WRMHI	**West Rim**	**55.32**	**61**	IAmb	IAmb	19 48 36.6	
	comp=Z,122nm,0.9s						
UWE	**Uwekahuna**	**55.33**	**61**	IAmb	IAmb	19 48 36.9	
	comp=Z,103nm,0.9s						
NPH	**North Pit**	**55.33**	**61**	IAmb	IAmb	19 48 59.7	
	comp=Z,169nm,1.3s						
OBL	**Observatory Le**	**55.33**	**61**	IAmb	IAmb	19 48 45.9	
	comp=Z,124nm,0.9s						
KULM	**Kulim**	**55.34**	**281**	IAmb	IAmb	19 48 32.4	
	comp=Z,47nm,0.6s						
KULM	**Kulim**	**55.34**	**281**	P	**P**	**19 48 26.0**	**-0.1**
TIAR	**Tiarei**	**55.53**	**107**	*e*P	**P**	**19 48 27.7**	**+0.3**
	comp=Z,16nm,0.8s						
MDJ	**Mudanjiang**	**55.57**	**338**	P	**P**	**19 48 27.1**	**-0.1**
MDJ				pP	pP	19 48 45.0	-0.1
MDJ				sP	sP	19 48 53.2	+0.2
MDJ				PcP	**PcP**	**19 49 25.6**	**-0.6**
MDJ				PP	**PP**	**19 50 32.8**	**+0.7**
MDJ				ScP	**ScP**	**19 53 17.9**	**-1.2**
MDJ				PcS	**PcS**	**19 53 24.9**	**-1.4**
MDJ				S	**S**	**19 56 08.6**	**+1.0**
MDJ				sS	sS	19 56 41.2	+4.2
MDJ				ScS	**ScS**	**19 58 09.1**	**-0.8**
MDJ				pmax	pmax		
	comp=Z,42nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,450nm,6.7s						
MDJ				LR	LR		
	comp=Z,860nm,19.9s						
MDJ				LR	LR		
	comp=Z,880nm,19.9s						
MDJ				LR	LR		
	comp=Z,1µm,19.9s						
MDJ	**Mudanjiang**	**55.57**	**338**	IAMs_20	IAMs_20	20 15 32.4	
	comp=Z,9µm,20.0s						
TVO	**Taravao**	**55.63**	**107**	*e*P	**P**	**19 48 28.4**	**+0.2**
	comp=Z,8.6nm,0.8s						
SNY	**Shenyang**	**55.80**	**332**	⇑P	**P**	**19 48 28.2**	**-0.6**
SNY				PP	**PP**	**19 50 32.1**	**-2.0**
SNY				S	**S**	**19 56 10.8**	**+0.2**
SNY				pmax	pmax		
	comp=Z,17nm,0.5s						
SNY				pmax	pmax		
	comp=Z,430nm,5.8s						
SNY				LR	LR		
	comp=Z,860nm,23.9s						
SNY				LR	LR		
	comp=Z,870nm,19.6s						
SNY				LR	LR		
	comp=Z,2µm,31.6s						
TBI	**Tubuai**	**56.06**	**114**	*e*S	**S**	**19 56 12.9**	**-1.9**
	comp=Z,1µm,30.0s						
TBI				*e*LQ	LQ	20 02 29.0	
	comp=Z,2µm,44.8s						
TBI				*e*LR	LR	20 04 51.0	
	comp=Z,8µm,29.5s,baz=282						
CN2	**Changchun**	**56.53**	**335**	*e*P	**P**	**19 48 33.8**	**-0.2**
CN2				*e*pP	pP	19 48 53.6	+1.5
CN2				*e*S	**S**	**19 56 18.5**	**-1.9**
CN2				pmax	pmax		
	comp=Z,30nm,1.2s						
CN2				pmax	pmax		
	comp=Z,500nm,6.0s						
CN2				LR	LR		
	comp=Z,800nm,22.0s						
CN2				LR	LR		
	comp=Z,700nm,22.0s						
CN2				LR	LR		
	comp=Z,1µm,27.0s						
PSI	**Prapat**	**56.59**	**278**	P	**P**	**19 48 34.1**	**-1.0**
	comp=Z,17nm,0.5s,baz=95,slow=4.2,SNR=35						
ENH	**Enshi**	**56.69**	**313**	IAmb	IAmb	19 48 39.6	
	comp=Z,60nm,0.8s						
SKR	**Severo-Kuril's**	**56.78**	**1**	*e*P	**P**	**19 48 38.1**	**+2.5**
SKR				*e*S	**S**	**19 56 28.2**	**+4.8**
SKR				pmax	pmax		
	comp=Z,900nm,5.2s						
SKR				pmax	pmax		
	comp=Z,400nm,5.3s						
SKR				pmax	pmax		
	comp=Z,151nm,0.9s						
SKR				MLR	MLR		
	comp=Z,1µm,15.0s						
SKR				MLR	MLR		
	comp=Z,600nm,13.0s						
GYA	**Guiyang**	**56.95**	**307**	⇑*i*P	**P**	**19 48 38.7**	**+1.2**
GYA				pP	pP	19 48 54.7	-0.8
GYA				sP	sP	19 49 07.9	+4.6
GYA				S	**S**	**19 56 28.9**	**+2.2**
GYA				pmax	pmax		
	comp=Z,40nm,1.0s						
GYA				pmax	pmax		
	comp=Z,580nm,6.9s						
GYA				LR	LR		
	comp=Z,580nm,18.8s						
GYA				LR	LR		
	comp=Z,1µm,20.7s						
GYA				LR	LR		
	comp=Z,2µm,21.9s						
SLVN	**Son La**	**57.04**	**300**	IAmb	IAmb	19 48 40.9	
	comp=Z,128nm,1.3s						
TYV	**Tymovskoe**	**57.92**	**351**	*e*P	**P**	**19 48 44.5**	**+0.8**
TYV				*e*S	**S**	**19 56 41.3**	**+3.0**
TYV				pmax	pmax		
	comp=Z,600nm,5.0s						
TYV				pmax	pmax		
	comp=Z,48nm,0.9s						
TYV				smax	smax		
	comp=N,800nm,7.0s						
PBKT	**Sadao Pong**	**57.95**	**294**	IAmb	IAmb	19 48 46.8	
	comp=Z,93nm,1.0s						
BJI	**Beijing**	**58.30**	**326**	P	**P**	**19 48 46.0**	**-0.5**
BJI				sS	**sS**	**19 57 19.2**	**+6.3**
BJI				pmax	pmax		
	comp=Z,19nm,1.2s						
BJI				LR	LR		
	comp=Z,470nm,32.0s						
BJI				LR	LR		
	comp=Z,640nm,25.1s						
BJI				LR	LR		
	comp=Z,1µm,39.2s						
KLR	**Kul'dur**	**58.89**	**343**	P	**P**	**19 48 50.9**	**+0.4**
	comp=Z,51nm,0.8s,baz=151,slow=5.5,SNR=56						
KLR	**Kul'dur**	**58.89**	**343**	*c i*P	**P**	**19 48 50.6**	**+0.1**
KLR				pmax	pmax		
	comp=Z,81nm,0.9s						
TIY	**Taiyuan**	**58.99**	**321**	*e*P	**P**	**19 48 51.8**	**+0.3**
GRNR	**Gornyy**	**59.05**	**346**	⇑*i*P	**P**	**19 48 51.7**	**+0.1**
GRNR				*e*S	**S**	**19 56 55.2**	**+2.1**
GRNR				pmax	pmax		
	comp=Z,20nm,0.9s						
GRNR				smax	smax		
	comp=N,2.0nm,1.1s						
XAN	**Xi'an**	**59.14**	**316**	P	**P**	**19 48 52.4**	**-0.2**
XAN				PcP	**PcP**	**19 49 41.8**	**+1.3**
XAN				PP	**PP**	**19 51 06.7**	**+2.7**
XAN				S	**S**	**19 56 49.9**	**-5.0**
XAN				ScS	**ScS**	**19 58 30.4**	**-6.2**
XAN				SS	**SS**	**20 00 49.0**	**-1.4**
XAN				pmax	pmax		
	comp=N,62nm,1.0s						
XAN				pmax	pmax		
	comp=N,520nm,8.0s						
XAN				LR	LR		
	comp=N,230nm,18.0s						
XAN				LR	LR		
	comp=N,880nm,21.4s						
XAN				LR	LR		
	comp=N,1µm,21.0s						
XAN	**Xi'an**	**59.14**	**316**	IAmb	IAmb	19 48 53.0	
	comp=Z,44nm,0.7s						
PET	**Petropavlovsk**	**59.21**	**3**	P	**P**	**19 48 52.3**	**-0.2**
PET	**Petropavlovsk**	**59.21**	**3**	*e*P	**P**	**19 48 53.5**	**+1.0**
PET				*e**PP	**pP**	**19 49 11.7**	**+1.0**
PET				*e**SP	**sP**	**19 49 19.7**	**+1.1**
PET				*e*		19 49 42.4	
PET				*e*S	**S**	**19 56 55.8**	**+0.9**
PET				pmax	pmax		
	comp=Z,473nm,0.7s						
PET				pmax	pmax		
	comp=Z,300nm,13.3s						
PEA0B	**Petropavlovsk-**	**59.25**	**2**	P	**P**	**19 48 53.8**	**+0.9**
PEA0B	**Petropavlovsk-**	**59.25**	**2**	*c i*P	**P**	**19 48 53.9**	**+1.0**
PETK	**Petropavlovsk-**	**59.25**	**2**	P	**P**	**19 48 54.1**	**+1.2**
	comp=Z,342nm,0.7s,baz=181,slow=8.6,SNR=167						
KMI	**Kunming**	**59.54**	**304**	P	**P**	**19 48 57.0**	**+1.3**
KMI				pP	pP	19 49 13.3	-0.6
KMI				sP	sP	19 49 23.2	+1.5
KMI				S	**S**	**19 57 00.7**	**0.0**
KMI				sS	sS	19 57 30.8	-0.3
KMI				SS	**SS**	**20 00 56.7**	**-0.6**
KMI				pmax	pmax		
	comp=Z,120nm,1.2s						

KMI				pmax	pmax		
	comp=Z,640nm,4.0s						
KMI				LR	LR		
	comp=Z,460nm,20.4s						
KMI				LR	LR		
	comp=Z,1µm,23.5s						
KMI				LR	LR		
	comp=Z,2µm,27.1s						
KMI	**Kunming**	**59.54**	**304**	IAmb	IAmb	19 48 58.5	
	comp=Z,120nm,1.0s						
CMAR	**Chiang Mai Arr**	**60.38**	**295**	P	**P**	**19 49 02.9**	**+1.6**
	comp=Z,147nm,0.8s,baz=121,slow=5.4,SNR=883						
CMAR				S	**S**	**19 57 11.1**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=94,slow=13,SNR=3.0						
CMAR	**Chiang Mai Arr**	**60.38**	**295**	*i* P	**P**	**19 49 02.9**	**+1.6**
CMAR				pmax	pmax		
	comp=Z,161nm,0.7s						
CHTO	**Chiang Mai**	**60.50**	**296**	P	**P**	**19 49 03.1**	**+1.0**
CHTO	**Chiang Mai**	**60.50**	**296**	IAMs_20	IAMs_20	20 18 26.1	
	comp=Z,7µm,20.0s						
CHTO	**Chiang Mai**	**60.50**	**296**	P	**P**	**19 49 03.1**	**+1.0**
CHTO				pmax	pmax		
	comp=Z,448nm,1.5s						
CHTO				MLR	MLR		
	comp=Z,7µm,20.0s						
CD2	**Chengdu**	**61.29**	**310**	P	**P**	**19 49 07.8**	**+0.5**
CD2				pP	pP	19 49 23.9	-1.6
CD2				S	**S**	**19 57 22.5**	**0.0**
CD2				sS	sS	19 57 58.2	+5.0
CD2				SS	**SS**	**20 01 28.6**	**+4.4**
CD2				pmax	pmax		
	comp=Z,880nm,6.3s						
CD2				LR	LR		
	comp=Z,1µm,19.2s						
CD2				LR	LR		
	comp=Z,1µm,24.2s						
CD2				LR	LR		
	comp=Z,2µm,24.9s						
HHC	**Hu-ho-hao-te**	**61.48**	**324**	*e*P	**P**	**19 49 08.8**	**+0.3**
HHC				pP	pP	19 49 27.6	+0.8
HHC				sP	sP	19 49 39.5	+4.9
HHC				PP	**PP**	**19 51 29.3**	**+4.6**
HHC				S	**S**	**19 57 24.7**	**-0.1**
HHC				sS	sS	19 57 59.6	+4.6
HHC				SS	**SS**	**20 01 27.3**	**+0.3**
HHC				LR	LR		
	comp=Z,4µm,17.0s						
HHC				LR	LR		
	comp=Z,5µm,17.0s						
HHC				LR	LR		
	comp=Z,5µm,16.6s						
BTO	**Baotou**	**62.25**	**323**	*e*P	**P**	**19 49 14.5**	**+0.8**
ADK	**Adak**	**62.88**	**19**	P	**P**	**19 49 18.8**	**+1.3**
ADK	**Adak**	**62.88**	**19**	P	**P**	**19 49 18.8**	**+1.3**
ADK				pmax	pmax		
	comp=Z,341nm,0.7s						
ADK				MLR	MLR		
	comp=Z,4µm,20.0s						
HIA	**Hailar**	**63.26**	**335**	IAmb	IAmb	19 49 23.9	
	comp=Z,54nm,0.8s						
LZH	**Lanzhou**	**63.75**	**315**	*e*P	**P**	**19 49 24.4**	**+0.6**
LZH				sP	sP	19 49 52.9	+3.1
LZH				S	**S**	**19 57 51.9**	**-1.7**
LZH				sS	sS	19 58 30.2	+5.8
LZH				SS	**SS**	**20 01 59.7**	**-3.1**
LZH				pmax	pmax		
	comp=Z,79nm,1.3s						
LZH				pmax	pmax		
	comp=Z,740nm,8.1s						
LZH				LR	LR		
	comp=Z,710nm,13.6s						
LZH				LR	LR		
	comp=Z,910nm,13.6s						
LZH				LR	LR		
	comp=Z,1µm,14.6s						
ZEA	**Zeya**	**64.20**	**342**	*e*P	**P**	**19 49 26.1**	**0.0**
ZEA				*e*S	**S**	**19 57 58.0**	**-0.1**
ZEA				pmax	pmax		
	comp=N,62nm,0.8s						
ZEA				pmax	pmax		
	comp=E,30nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,120nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,400nm,5.0s						
ZEA				smax	smax		
	comp=N,300nm,13.0s						
TAOE	**Nuku Hiva Isla**	**64.40**	**97**	*e*LR	LR	20 08 46.0	
	comp=N,2µm,23.8s						
TAOE	**Nuku Hiva Isla**	**64.40**	**97**	*e*T	T	20 58 27.5	
	comp=N,49nm,0.2s						
MA2	**Magadan**	**65.77**	**358**	P	**P**	**19 49 36.7**	**+0.5**
	comp=N,272nm,0.7s,baz=165,slow=7.1,SNR=121						
MA2	**Magadan**	**65.77**	**358**	P	**P**	**19 49 36.0**	**-0.2**
MA2	**Magadan**	**65.77**	**358**	*ce*P	**P**	**19 49 36.2**	**0.0**
MA2				pmax	pmax		
	comp=Z,316nm,0.8s						
SIMRM	**Sittwe**	**66.34**	**295**	IAmb	IAmb	19 49 43.9	
	comp=Z,143nm,1.4s						
UNV	**Unalaska Valle**	**68.16**	**23**	IAmb	IAmb	19 49 57.5	
	comp=Z,93nm,0.9s						
GTA	**Gaotai**	**68.17**	**317**	⇑P	**P**	**19 49 52.8**	**+0.8**
GTA				pP	pP	19 50 10.5	-0.1
GTA				sP	sP	19 50 20.5	+2.2
GTA				S	**S**	**19 58 43.1**	**-4.0**
GTA				SS	**SS**	**20 03 14.8**	**+3.5**
GTA				pmax	pmax		
	comp=Z,47nm,1.4s						
GTA				pmax	pmax		
	comp=Z,490nm,9.2s						
GTA				LR	LR		
	comp=Z,440nm,20.3s						
GTA				LR	LR		
	comp=Z,750nm,24.0s						
GTA				LR	LR		
	comp=Z,1µm,24.0s						
BRDH	**Bariadhala**	**68.18**	**297**	P	**P**	**19 49 53.5**	**+1.2**
	comp=Z,117nm,0.3s,baz=87,slow=9.0,SNR=8.4						
ULN	**Ulaanbaatar**	**68.37**	**328**	P	**P**	**19 49 53.5**	**+0.3**
ULN	**Ulaanbaatar**	**68.37**	**328**	P	**P**	**19 49 53.5**	**+0.3**
ULN				pmax	pmax		
	comp=Z,71nm,1.3s						
ULN				MLR	MLR		
	comp=Z,17µm,19.0s						
AKUT	**Akutan**	**68.67**	**24**	P	**P**	**19 49 55.1**	**+0.5**
SONM	**Songino Array**	**68.71**	**327**	P	**P**	**19 49 55.8**	**+0.6**
	comp=Z,20nm,0.6s,baz=145,slow=5.0,SNR=135						
SEY	**Seymchan**	**69.08**	**359**	P	**P**	**19 49 57.7**	**+0.7**
	comp=Z,98nm,0.8s,baz=168,slow=5.3,SNR=102						
SEY	**Seymchan**	**69.08**	**359**	*i* P	**P**	**19 49 54.9**	**-2.2**
YAK	**Yakutsk**	**70.88**	**348**	P	**P**	**19 50 08.8**	**+0.8**
	comp=Z,68nm,0.6s,baz=301,slow=0.9,SNR=35						
YAK	**Yakutsk**	**70.88**	**348**	P	**P**	**19 50 07.9**	**-0.2**
YAK	**Yakutsk**	**70.88**	**348**	*c i*P	**P**	**19 50 08.4**	**+0.4**
YAK				*e*		19 50 24.2	
YAK				*e**PP	**sP**	**19 50 38.4**	**+4.0**
YAK				*e*		19 52 49.8	
YAK				*e*S	**S**	**19 59 17.9**	**+0.2**
YAK				*e**SS	**SKiKP**	**19 59 43.3**	**-0.6**
YAK				*e*SS	**SS**	**20 03 57.0**	**+5.2**
YAK				pmax	pmax		
	comp=Z,114nm,0.8s						
YAK				pmax	pmax		
	comp=E,12nm,0.8s						
YAK				pmax	pmax		
	comp=N,38nm,1.2s						
YAK				pmax	pmax		
	comp=Z,6.0nm,0.5s						
YAK				smax	smax		
	comp=E,56nm,3.1s						
YAK				smax	smax		
	comp=N,172nm,3.8s						
VNDA	**Vanda**	**71.25**	**178**	P	**P**	**19 50 11.2**	**+1.0**
	comp=N,17nm,1.0s,baz=322,slow=7.7,SNR=8.7						
VNDA				LR	LR	20 16 49.7	
	comp=N,513nm,19.2s,baz=360,slow=32						
CNBA	**Chernabura Isl**	**71.72**	**26**	IAmb	IAmb	19 50 15.2	
	comp=Z,152nm,1.2s						
ZAK	**Zakamensk**	**71.86**	**328**	*e*P	**P**	**19 50 14.2**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,65nm,1.1s						
BOD	**Bodaibo**	**71.95**	**338**	*e*P	**P**	**19 50 13.2**	**-1.4**
BOD				pmax	pmax		
	comp=Z,34nm,1.2s						
TLY	**Talaya**	**72.42**	**329**	P	**P**	**19 50 17.9**	**+0.3**
	comp=Z,12nm,0.6s,baz=161,slow=3.0,SNR=21						
TLY	**Talaya**	**72.42**	**329**	P	**P**	**19 50 17.5**	**-0.2**
TLY	**Talaya**	**72.42**	**329**	*c i*P	**P**	**19 50 17.8**	**+0.2**
TLY				*e*S	**S**	**19 59 41.2**	**+5.2**
TLY				*e*		19 59 57.7	
TLY				*e*SS	**SS**	**20 04 12.0**	**-4.0**
TLY				pmax	pmax		
	comp=Z,71nm,1.0s						
IRK	**Irkutsk**	**72.44**	**330**	*e*P	**P**	**19 50 17.1**	**-0.6**
IRK				pmax	pmax		
	comp=Z,75nm,1.0s						
TAPN	**Taplejung**	**72.95**	**301**	*e*P	**P**	**19 50 22.0**	**+0.4**
	comp=Z,342nm,1.1s						
ODAN	**Odare**	**73.08**	**300**	*e*P	**P**	**19 50 22.8**	**+0.4**
	comp=Z,574nm,0.9s						
CHGN	**Chignik**	**73.20**	**25**	IAmb	IAmb	19 50 44.6	
	comp=Z,145nm,0.8s						
MOY	**Mondy**	**73.78**	**328**	*e*P	**P**	**19 50 26.2**	**+0.5**
MOY				pmax	pmax		
	comp=Z,78nm,1.3s						
RAMN	**Ramite**	**73.79**	**300**	*e*P	**P**	**19 50 26.6**	**+0.1**
	comp=Z,92nm,0.6s						
CHLP	**Challavanipeta**	**74.01**	**291**	*e*P	**P**	**19 50 28.8**	**+1.2**
CHLP				IAmb	IAmb	19 50 29.9	
	comp=Z,173nm,1.2s						
CHLP				*e*PcP	**PcP**	**19 50 42.4**	**-0.2**
CHLP				*e*sP	**pP**	**19 50 44.7**	**-1.5**
GAMB	**Gambell**	**74.30**	**15**	IAmb	IAmb	19 50 32.7	
	comp=Z,110nm,0.9s						
JIRN	**Jiri**	**74.33**	**301**	*e*P	**P**	**19 50 30.2**	**+0.4**
	comp=Z,324nm,0.9s						
BILL	**Bilibino**	**74.62**	**4**	P	**P**	**19 50 30.9**	**+0.8**
BILL	**Bilibino**	**74.62**	**4**	*ce*P	**P**	**19 50 31.0**	**+0.8**
BILL				pmax	pmax		
	comp=Z,228nm,0.7s						
GUN	**Gumba**	**74.67**	**301**	*e*P	**P**	**19 50 32.0**	**+0.3**
	comp=Z,349nm,0.7s						
PKI	**Pulchoki**	**74.98**	**301**	*e*P	**P**	**19 50 33.4**	**-0.1**
	comp=Z,343nm,1.1s						
PKIN	**Phulchoki**	**74.99**	**301**	*e*P	**P**	**19 50 33.3**	**-0.2**
	comp=Z,82nm,0.6s						
KKN	**Kakani**	**75.14**	**301**	*e*P	**P**	**19 50 34.5**	**+0.2**
	comp=Z,126nm,0.5s						
SII	**Sitkinak Islan**	**75.19**	**26**	P	**P**	**19 50 33.9**	**+0.2**
PALK	**Pallekele**	**75.21**	**279**	P	**P**	**19 50 35.3**	**+0.6**
	comp=Z,62nm,0.8s,baz=72,slow=3.9,SNR=42						
PALK	**Pallekele**	**75.21**	**279**	*c i*P	**P**	**19 50 35.2**	**+0.5**
PALK				pmax	pmax		
	comp=Z,94nm,1.0s						
DMN	**Daman**	**75.25**	**301**	*e*P	**P**	**19 50 35.2**	**+0.2**
	comp=Z,304nm,0.7s						
GKN	**Gorkha**	**75.75**	**301**	*e*P	**P**	**19 50 37.8**	**+0.1**
	comp=Z,492nm,1.0s						
OHAK	**Old Harbor**	**75.98**	**26**	IAmb	IAmb	19 50 41.4	
	comp=Z,121nm,0.8s						
PVM	**Polavaram**	**76.02**	**289**	*e*P	**P**	**19 50 39.6**	**+0.4**
PVM				IAmb	IAmb	19 50 40.0	
	comp=Z,49nm,1.0s						
PVM				*e*pP	**PcP**	**19 50 53.1**	**+1.8**
DANN	**Dangsing**	**76.59**	**301**	*e*P	**P**	**19 50 42.3**	**-0.3**
	comp=Z,268nm,0.6s						
KDAK	**Kodiak Island**	**76.62**	**26**	P	**P**	**19 50 42.7**	**+1.0**
	comp=Z,107nm,0.9s,baz=239,slow=3.0,SNR=45						
KDAK	**Kodiak Island**	**76.62**	**26**	P	**P**	**19 50 42.8**	**+1.0**
KDAK				IAmb	IAmb	19 50 45.1	
	comp=Z,107nm,0.8s						
KDAK	**Kodiak Island**	**76.62**	**26**	IAMs_20	IAMs_20	20 30 30.4	
	comp=Z,6µm,21.0s						
KDAK	**Kodiak Island**	**76.62**	**26**	P	**P**	**19 50 42.8**	**+1.0**
KDAK				pmax	pmax		
	comp=Z,107nm,0.9s						
KDAK				MLR	MLR		
	comp=Z,6µm,21.0s						
ANM	**Nome**	**76.62**	**16**	IAmb	IAmb	19 50 45.8	
	comp=Z,90nm,0.9s						
MYLAV	**Mylavaram**	**76.86**	**289**	*e*P	**P**	**19 50 44.4**	**+0.5**
MYLAV				IAmb	IAmb	19 50 45.0	
	comp=Z,50nm,1.0s						
MYLAV				*e*pP	**PcP**	**19 50 57.9**	**+3.0**
SKHT	**Srikalahasti**	**77.20**	**286**	*e*P	**P**	**19 50 46.4**	**+0.5**
SKHT				IAmb	IAmb	19 50 46.9	
	comp=Z,36nm,0.8s						
SKHT				*e*pP	**PcP**	**19 51 00.0**	**+3.6**
ADKI	**Addanki**	**77.32**	**288**	*e*P	**P**	**19 50 47.0**	**+0.4**
ADKI				IAmb	IAmb	19 50 47.5	
	comp=Z,40nm,0.9s						
ADKI				*e*pP	**PcP**	**19 51 00.8**	**+3.9**
SVW2	**Sparrevohn**	**77.43**	**22**	P	**P**	**19 50 47.8**	**+1.6**
SVW2				IAmb	IAmb	19 50 51.5	
	comp=Z,61nm,0.8s						
SVW2				IAMs_20	IAMs_20	20 19 06.4	
	comp=Z,4µm,22.0s						
GGR	**Gangavaram**	**77.46**	**290**	*e*P	**P**	**19 50 47.3**	**-0.1**
GGR				IAmb	IAmb	19 50 47.9	
	comp=Z,48nm,1.0s						
GGR				*e*pP	**PcP**	**19 51 01.5**	**+3.9**
NJS	**Nagarjunasagar**	**78.07**	**288**	*e*P	**P**	**19 50 50.7**	**-0.1**
NJS				IAmb	IAmb	19 50 51.8	
	comp=Z,68nm,1.2s						
NJS				*e*pP	**PcP**	**19 51 04.3**	**+4.1**
HOM	**Homer**	**78.11**	**25**	IAMs_20	IAMs_20	20 30 25.7	
	comp=Z,5µm,20.0s						
CNPM	**China Poot**	**78.20**	**25**	IAMs_20	IAMs_20	20 30 30.3	
	comp=Z,5µm,22.0s						
WMQ	**Urumqi**	**78.25**	**317**	P	**P**	**19 50 51.3**	**0.0**
WMQ				pP	pP	19 51 11.3	+1.1
WMQ				sP	sP	19 51 17.2	-0.7
WMQ				S	**S**	**20 00 42.8**	**+1.8**
WMQ				ScS	**SKKSac**	**20 01 02.9**	**+2.0**
WMQ				pmax	pmax		
	comp=Z,28nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,83nm,8.5s						
SRLM	**Srisailam**	**78.38**	**288**	*e*P	**P**	**19 50 52.5**	**-0.1**
SRLM				IAmb	IAmb	19 50 53.0	
	comp=Z,58nm,0.9s						
SRLM				*e*pP	**PcP**	**19 51 05.5**	**+3.9**
BRLK	**Bradley Lake**	**78.49**	**25**	IAmb	IAmb	19 50 55.3	
	comp=Z,104nm,0.8s						
BRLK				IAMs_20	IAMs_20	20 21 31.3	
	comp=Z,5µm,20.0s						
RPR	**Rampur**	**78.50**	**291**	*e*P	**P**	**19 50 53.1**	**0.0**
RPR				IAmb	IAmb	19 50 53.5	
	comp=Z,37nm,1.0s						
RPR				*e*pP	**PcP**	**19 51 06.9**	**+4.9**
HYB	**Hyderabad**	**78.93**	**289**	*i* P	**P**	**19 50 54.0**	**-1.6**
HYB				*e*		19 51 08.5	
HYBB	**Hyderabad (bro**	**78.93**	**289**	*e*P	**P**	**19 50 55.1**	**-0.4**
HYBB				IAmb	IAmb	19 50 56.2	
	comp=Z,80nm,1.4s						
HYBB				*e*pP	**PcP**	**19 51 08.7**	**+4.7**
SEW	**Seward**	**79.28**	**25**	IAmb	IAmb	19 50 59.7	
	comp=Z,79nm,0.7s						
SEW				IAMs_20	IAMs_20	20 30 06.6	
	comp=Z,5µm,20.0s						
SRSP	**Sriramsagar**	**79.40**	**291**	*e*P	**P**	**19 50 57.7**	**-0.4**
SRSP				IAmb	IAmb	19 50 58.2	
	comp=Z,47nm,1.0s						
SRSP				*e*pP	**PcP**	**19 51 11.1**	**+5.1**
SKT	**Skwentna**	**79.51**	**23**	IAMs_20	IAMs_20	20 21 27.6	
	comp=Z,5µm,20.0s						
SUA	**Susitna One**	**79.51**	**23**	IAmb	IAmb	19 51 00.8	
	comp=Z,80nm,0.8s						
SUA				IAMs_20	IAMs_20	20 29 56.8	
	comp=Z,5µm,22.0s						
TIXI	**Tiksi**	**79.68**	**352**	P	**P**	**19 50 58.6**	**+0.2**
	comp=Z,25nm,0.5s,baz=137,slow=3.5,SNR=62						
TIXI	**Tiksi**	**79.68**	**352**	P	**P**	**19 50 57.0**	**-1.4**
TIXI				IAMs_20	IAMs_20	20 30 05.1	
	comp=Z,6µm,22.0s						
TIXI	**Tiksi**	**79.68**	**352**	*ce*P	**P**	**19 50 57.7**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,23nm,0.6s						
RC01	**Rabbit Creek A**	**79.71**	**24**	IAmb	IAmb	19 51 01.5	
	comp=Z,139nm,1.0s						
URV	**Uravakonda**	**79.74**	**286**	*e*P	**P**	**19 51 00.2**	**+0.3**
URV				IAmb	IAmb	19 51 00.7	
	comp=Z,103nm,1.0s						
URV				*e*pP	**pP**	**19 51 13.6**	**-4.7**
PPLA	**Purkeypile**	**79.80**	**22**	P	**P**	**19 50 59.2**	**-0.2**
PPLA				IAMs_20	IAMs_20	20 22 42.3	
	comp=Z,5µm,18.0s						
RDOG	**Red Dog Mine**	**79.90**	**15**	IAmb	IAmb	19 51 04.2	
	comp=Z,110nm,0.8s						
RDOG				IAMs_20	IAMs_20	20 21 55.8	
	comp=Z,4µm,18.0s						
PMR	**Palmer**	**80.23**	**24**	IAmb	IAmb	19 51 04.5	
	comp=Z,69nm,0.8s						
KNK	**Knik Glacier**	**80.40**	**24**	IAmb	IAmb	19 51 12.2	
	comp=Z,75nm,1.0s						
KNK				IAMs_20	IAMs_20	20 30 11.3	
	comp=Z,5µm,20.0s						
GHO	**Glory Hole Cre**	**80.41**	**24**	IAmb	IAmb	19 51 05.8	
	comp=Z,77nm,0.9s						
GHO				IAMs_20	IAMs_20	20 30 07.5	
	comp=Z,4µm,19.0s						
GLI	**Glacier Island**	**80.68**	**25**	IAmb	IAmb	19 51 07.2	
	comp=Z,125nm,0.7s						
GLI				IAMs_20	IAMs_20	20 31 33.7	
	comp=Z,4µm,20.0s						
HIN	**Hinchinbrook I**	**80.68**	**25**	IAmb	IAmb	19 51 07.4	
	comp=Z,121nm,0.8s						
HIN				IAMs_20	IAMs_20	20 31 11.7	
	comp=Z,5µm,20.0s						
FID	**Port Fidalgo**	**80.87**	**25**	IAmb	IAmb	19 51 08.6	
	comp=Z,108nm,0.9s						
FID				IAMs_20	IAMs_20	20 31 11.1	
	comp=Z,5µm,20.0s						
KLRI	**Killari**	**80.88**	**289**	*e*P	**P**	**19 51 05.3**	**-0.7**
KLRI				IAmb	IAmb	19 51 05.9	
	comp=Z,23nm,1.0s						
KLRI				*e*pP	**pP**	**19 51 19.6**	**-5.4**
SCM	**Sheep Creek Mo**	**81.08**	**24**	IAmb	IAmb	19 51 10.3	
	comp=Z,143nm,1.1s						
SCM				IAMs_20	IAMs_20	20 31 03.3	
	comp=Z,5µm,20.0s						
ZSN	**Zaisan**	**81.35**	**320**	*e*P	**P**	**19 51 07.4**	**-0.5**
	comp=Z,24nm,1.2s						
ZSN	**Zaisan**	**81.35**	**320**	*e*P	**P**	**19 51 07.4**	**-0.5**
ZSN				pmax	pmax		
	comp=Z,24nm,1.2s						
RAGM	**Ragged Mountai**	**81.46**	**26**	IAmb	IAmb	19 51 11.0	
	comp=Z,136nm,1.3s						
MCK	**McKinley**	**81.48**	**22**	IAmb	IAmb	19 51 12.0	
	comp=Z,196nm,1.2s						
BWN	**Browne**	**81.53**	**21**	IAmb	IAmb	19 51 10.3	
	comp=Z,154nm,1.2s						
MLY	**Manley**	**81.57**	**20**	IAMs_20	IAMs_20	20 24 38.0	
	comp=Z,5µm,20.0s						
DHY	**Denali Highway**	**81.72**	**23**	IAmb	IAmb	19 51 11.9	
	comp=Z,85nm,1.3s						
DHY				IAMs_20	IAMs_20	20 30 14.1	
	comp=Z,4µm,21.0s						
NEA	**Nenana**	**81.90**	**21**	IAmb	IAmb	19 52 35.5	
	comp=Z,52nm,0.8s						
KAAM	**Kaadhehdhoo**	**81.98**	**271**	P	**P**	**19 51 11.1**	**-0.8**
KAAM				IAMs_20	IAMs_20	20 34 55.0	
	comp=Z,4µm,19.0s						
WRH	**Wood River Hil**	**82.20**	**22**	IAmb	IAmb	19 51 13.2	
	comp=Z,87nm,1.3s						
WRH				IAMs_20	IAMs_20	20 22 51.7	
	comp=Z,5µm,20.0s						
CRQM	**Cirque**	**82.31**	**26**	IAmb	IAmb	19 51 16.4	
	comp=Z,121nm,0.9s						
GLB	**Gilahina Butte**	**82.34**	**25**	IAmb	IAmb	19 51 16.5	
	comp=Z,108nm,0.9s						
VRDI	**Verde Repeater**	**82.39**	**25**	IAmb	IAmb	19 51 18.5	
	comp=Z,80nm,0.8s						
CCB	**Clear Creek Bu**	**82.40**	**21**	IAMs_20	IAMs_20	20 30 09.0	
	comp=Z,6µm,20.0s						
PAX	**Paxson**	**82.41**	**23**	IAMs_20	IAMs_20	20 22 37.4	
	comp=Z,4µm,20.0s						
TGL	**Tana Glacier**	**82.44**	**26**	IAmb	IAmb	19 51 19.1	
	comp=Z,93nm,1.0s						
TGL				IAMs_20	IAMs_20	20 31 33.3	
	comp=Z,4µm,21.0s						
TCOL	**CIGO, UAF Yank**	**82.50**	**21**	P	**P**	**19 51 13.3**	**-0.2**
	baz=238						
COLA	**College**	**82.50**	**21**	P	**P**	**19 51 12.8**	**-0.7**
COLA	**College**	**82.50**	**21**	P	**P**	**19 51 12.8**	**-0.7**
COLA				pmax	pmax		
	comp=Z,126nm,0.3s						
COLA				MLR	MLR		
	comp=Z,7µm,20.0s						
HDA	**Harding Lake**	**82.58**	**22**	P	**P**	**19 51 13.8**	**-0.2**
	baz=238						
MCARA	**McCarthy VSAT**	**82.65**	**25**	IAmb	IAmb	19 51 18.6	
	comp=Z,137nm,1.0s						
MCARA				IAMs_20	IAMs_20	20 30 44.8	
	comp=Z,4µm,20.0s						
BALM	**Baldy**	**82.78**	**26**	IAmb	IAmb	19 51 19.1	
	comp=Z,56nm,0.7s						
POKR	**Poker Plat Res**	**82.78**	**21**	P	**P**	**19 51 14.6**	**-0.5**
	baz=238						
IL31		**82.80**	**22**	P	**P**	**19 51 14.0**	**-1.0**
ILAR	**Eielson Array**	**82.80**	**22**	P	**P**	**19 51 14.8**	**-0.4**
	comp=Z,31nm,1.0s,baz=238,slow=5.2,SNR=127						
ILAR				PKiKP	**PKiKP**	**19 56 34.8**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=277,slow=2.8,SNR=4.5						
ILAR				PKKPbc	**PKKPbc**	**20 09 39.0**	**-2.9**
	comp=Z,0.5nm,0.6s,baz=5.3,slow=1.2,SNR=7.5						
MK31	**Makanchi Array**	**82.82**	**319**	IAmb	IAmb	19 51 20.4	
	comp=Z,74nm,0.8s						
MKAR	**Makanchi Array**	**82.82**	**319**	P	**P**	**19 51 15.4**	**-0.2**
	comp=Z,105nm,0.6s,baz=98,slow=5.8,SNR=227						
MKAR				PKKPbc	**PKKPbc**	**20 09 38.9**	**-2.2**
	comp=Z,1.1nm,0.9s,baz=263,slow=2.8,SNR=5.8						
COLD	**Coldfoot**	**83.02**	**19**	IAMs_20	IAMs_20	20 30 38.2	
	comp=Z,3µm,19.0s						
MAKZ	**Makanchi**	**83.03**	**319**	P	**P**	**19 51 16.3**	**-0.5**
MAKZ	**Makanchi**	**83.03**	**319**	P	**P**	**19 51 16.3**	**-0.5**
MAKZ				MLR	MLR		
	comp=Z,10µm,21.0s						
RIDG	**Independent Ri**	**83.04**	**23**	IAmb	IAmb	19 51 34.7	
	comp=Z,156nm,1.3s						
RIDG				IAMs_20	IAMs_20	20 22 36.0	
	comp=Z,6µm,22.0s						
BARN	**Barnard Glacie**	**83.09**	**26**	IAmb	IAmb	19 51 20.7	
	comp=Z,112nm,0.9s						
MENT	**Mentasta**	**83.09**	**24**	IAMs_20	IAMs_20	20 31 25.5	
	comp=Z,6µm,21.0s						
CTGM	**Chitina Glacie**	**83.19**	**26**	IAMs_20	IAMs_20	20 30 54.0	
	comp=Z,3µm,19.0s						
PCA	**Pinnacle**	**83.29**	**27**	IAMs_20	IAMs_20	20 31 51.0	
	comp=Z,4µm,20.0s						
DOT	**Dot Lake**	**83.30**	**23**	IAMs_20	IAMs_20	20 22 31.8	
	comp=Z,5µm,21.0s						
YKU2	**Yakutat**	**83.32**	**28**	IAMs_20	IAMs_20	20 31 07.6	
	comp=Z,4µm,18.0s						
SCRK	**Sand Creek**	**83.49**	**23**	IAmb	IAmb	19 51 36.5	
	comp=Z,85nm,1.4s						
SCRK				IAMs_20	IAMs_20	20 31 16.8	
	comp=Z,5µm,19.0s						
ZALV	**Zalesovo Beam**	**83.56**	**326**	P	**P**	**19 51 18.3**	**-0.9**
	comp=Z,84nm,0.5s,baz=116,slow=4.9,SNR=153						
ZALV				PKKP	**PKKPbc**	**20 09 37.2**	**-2.4**
	comp=Z,0.6nm,0.4s,baz=318,slow=2.0,SNR=4.9						
QSPA	**South Pole Qui**	**83.65**	**180**	P	**P**	**19 51 20.3**	**+0.6**
	comp=Z,68nm,0.5s,baz=313,slow=0.5,SNR=298						
QSPA	**South Pole Qui**	**83.65**	**180**	P	**P**	**19 51 20.4**	**+0.7**
DHAK	**Deception Hill**	**83.83**	**29**	IAMs_20	IAMs_20	20 31 31.2	
	comp=Z,4µm,18.0s						
TOLK	**Toolik Lake Re**	**84.02**	**18**	IAmb	IAmb	19 51 23.7	
	comp=Z,63nm,1.1s						
TOLK	**Toolik Lake Re**	**84.02**	**18**	P	**P**	**19 51 22.6**	**+1.2**
	baz=236						
UZB	**Uzynbulak**	**84.07**	**314**	⇑*i*P	**P**	**19 51 21.9**	**-0.5**
	comp=Z,44nm,1.5s						
UZB				*e*S	**S**	**20 01 33.1**	**-8.5**
UZB	**Uzynbulak**	**84.07**	**314**	*c i*P	**P**	**19 51 21.8**	**-0.5**
UZB				*e*S	**S**	**20 01 33.0**	**-8.5**
UZB				pmax	pmax		
	comp=Z,44nm,1.5s						
KPKS	**Kokpek**	**84.39**	**315**	*e*P	**P**	**19 51 23.0**	**-0.9**
	comp=Z,57nm,1.5s						
KPKS				*e*S	**S**	**20 01 36.5**	**-8.2**
KPKS	**Kokpek**	**84.39**	**315**	*e*P	**P**	**19 51 22.9**	**-0.9**
KPKS				*e*S	**S**	**20 01 36.4**	**-8.2**
KPKS				pmax	pmax		
	comp=Z,57nm,1.5s						
ZHN	**Zhinishke**	**84.49**	**314**	*e*P	**P**	**19 51 22.0**	**-2.5**
ZHN	**Zhinishke**	**84.49**	**314**	*e*P	**P**	**19 51 21.9**	**-2.5**
SIT	**Sitka**	**84.50**	**31**	IAmb	IAmb	19 51 28.1	
	comp=Z,58nm,0.8s						
SIT				IAMs_20	IAMs_20	20 32 21.1	
	comp=Z,4µm,22.0s						
DIB	**Dawson Inlet,**	**84.79**	**35**	IAmb	IAmb	19 51 28.7	
	comp=Z,71nm,0.9s						
DIB				IAMs_20	IAMs_20	20 33 24.9	
	comp=Z,3µm,19.0s						
HYT	**Haines Junctio**	**84.84**	**27**	P	**P**	**19 51 26.8**	**+1.0**
EGAK	**Eagle**	**84.95**	**23**	P	**P**	**19 51 26.8**	**+0.7**
EGAK				IAmb	IAmb	19 51 34.0	
	comp=Z,43nm,0.8s						

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EGAK                                 IAMs_20  IAMs_20  20 23 21.5
      comp=Z,6µm,22.0s
MAW   Mawson             84.97 203   P        P        19 51 27.2 +1.1
      baz=85,SNR=33
MAW   Mawson             84.97 203   P        P        19 51 26.5 +0.4
      comp=Z,48nm,0.6s,baz=94,slow=5.6,SNR=37
MAW   Mawson             84.97 203   P        P        19 51 26.8 +0.7
MAW   Mawson             84.97 203   P        P        19 51 26.8 +0.7
MAW                                  pmax     pmax
      comp=Z,27nm,1.2s
MOBC  Moresby Island     85.06  35   IAmb     IAmb     19 51 31.1
      comp=Z,98nm,0.9s
BESE  Bessie Mountai     85.27  30   IAmb     IAmb     19 51 31.4
      comp=Z,57nm,0.9s
DAWY  Dawson             85.33  24   IAmb     IAmb     19 51 46.6
      comp=Z,111nm,1.5s
DAWY                                 IAMs_20  IAMs_20  20 31 44.7
      comp=Z,4µm,19.0s
SKAG  Skagway            85.34  29   IAmb     IAmb     19 51 31.1
      comp=Z,82nm,1.3s
MDOK  Medeo              85.48 314  eP        P        19 51 29.0 -0.5
MDOK                                eS        S        20 01 52.0 -3.6
MDOK  Medeo              85.48 314  eP        P        19 51 28.9 -0.5
MDOK                                eS        S        20 01 51.9 -3.6
KSH   Kashi              85.48 310   P        P        19 51 31.2 +1.7
KSH                                  sP       sP       19 51 59.3 +3.2
KSH                                  S        S        20 01 55.6 -0.1
KSH                                  SS       SS       20 07 38.5 +5.8
KSH                                  pmax     pmax
      comp=Z,260nm,1.7s
KSH                                  pmax     pmax
      comp=Z,1µm,5.5s
KSH                                  LR       LR
      comp=Z,2µm,11.3s
TNSS  Tian-Shan          85.52 314⇑iP       P        19 51 29.7 -0.2
TNSS  Tian-Shan          85.52 314⇑iP       P        19 51 29.7 -0.2
AAA   Alma-Ata           85.58 314  eP        P        19 51 28.6 -1.2
      comp=Z,29nm,1.3s
AAA   Alma-Ata           85.58 314  eP        P        19 51 28.7 -1.2
AAA                                  pmax     pmax
      comp=Z,300nm,4.2s
AAA                                  MLR      MLR
      comp=Z,2µm,19.0s
CHKK  Chushkaly          85.67 315⇑eP       P        19 51 29.2 -1.0
CHKK  Chushkaly          85.67 315⇑eP       P        19 51 29.2 -1.0
ULHL  Ulahol             85.86 313   P        P        19 51 31.6 +0.2
      SNR=17
KUU   Kurty              86.14 315⇑iP       P        19 51 31.7 -0.9
      comp=Z,58nm,0.8s
KUU   Kurty              86.14 315c iP      P        19 51 31.6 -0.9
KUU                                  pmax     pmax
      comp=Z,58nm,0.8s
KURK  Kurchatov          86.23 322   P        P        19 51 31.5 -1.2
KURK  Kurchatov          86.23 322   P        P        19 51 32.2 -0.5
KURBB Kurchatov Arra     86.26 322   P        P        19 51 32.2 -0.7
      comp=Z,32nm,0.5s,baz=101,slow=4.6,SNR=76
NIL   Nilore             86.53 304   P        P        19 51 34.0 -0.6
NIL                                  IAmb     IAmb     19 51 50.2
      comp=Z,45nm,0.8s
NIL   Nilore             86.53 304   P        P        19 51 34.0 -0.6
NIL                                  pmax     pmax
      comp=Z,45nm,0.8s
NIL                                  MLR      MLR
      comp=Z,10µm,20.0s
KZA   Kyzart             86.54 313   P        P        19 51 35.4 +0.4
      SNR=40
KBK   Karagaybulak       86.88 313   P        P        19 51 36.6 +0.2
      SNR=42
CHMS  Chumysh            87.09 314   P        P        19 51 36.7 -0.5
      SNR=59
UCH   Uchtor             87.11 313   P        P        19 51 38.7 +0.8
      SNR=31
AAK   Ala-Archa          87.20 313   P        P        19 51 38.3 +0.4
      comp=Z,48nm,0.6s,baz=105,slow=4.7,SNR=50
AAK   Ala-Archa          87.20 313   P        P        19 51 37.8 -0.1
      SNR=54
AAK   Ala-Archa          87.20 313   P        P        19 51 37.2 -0.7
AAK                                  IAmb     IAmb     19 51 42.7
      comp=Z,46nm,0.7s
SGDS  Sogindy            87.26 314⇑iP       P        19 51 37.1 -1.0
      comp=Z,14nm,0.7s
SGDS                                eS        S        20 02 09.7 -3.1
EPYK  Eagle Plains       87.29  22   P        P        19 51 38.5 +0.9
EPYK                                 IAMs_20  IAMs_20  20 25 51.3
      comp=Z,4µm,21.0s
EPYK  Eagle Plains       87.29  22   P        P        19 51 38.8 +1.2
      baz=248
USP   Ospenovka          87.32 314   P        P        19 51 37.8 -0.5
      SNR=52
KCPM  Cahto Peak         87.53  50   IAmb     IAmb     19 51 44.3
      comp=Z,68nm,0.9s
KMRM  Mail Ridge         87.53  49   IAmb     IAmb     19 51 45.8
      comp=Z,40nm,1.0s
KRMB  Red Mountain       87.61  48   IAMs_20  IAMs_20  20 35 59.7
      comp=Z,4µm,22.0s
KHMM  Horse Mountain     87.63  49   IAMs_20  IAMs_20  20 36 06.1
      comp=Z,5µm,21.0s
AML   Almayashu          87.69 313   P        P        19 51 40.7 +0.1
      SNR=80
EKS2  Erkin-Say          87.73 313   P        P        19 51 40.2 -0.1
      SNR=60
HOPS  Hopland Field      87.80  51   IAmb     IAmb     19 51 44.3
      comp=Z,53nm,1.0s
HOPS                                 IAMs_20  IAMs_20  20 36 43.7
      comp=Z,4µm,20.0s
J01E  Myrtle Point       87.90  46   P        P        19 51 42.2 +1.2
      baz=259
L02E  Cave Junction      87.95  47   P        P        19 51 43.4 +2.1
      baz=260
GDXM  Geysers            87.98  51   IAmb     IAmb     19 51 46.5
      comp=Z,58nm,0.9s
BTLS  Baital             87.98 316⇑iP       P        19 51 40.3 -1.0
      comp=Z,9.2nm,0.6s
BTLS  Baital             87.98 316c iP      P        19 51 40.3 -1.0
BTLS                                 pmax     pmax
      comp=Z,9.0nm,0.6s
K02D  Willamette Mer     88.00  47   P        P        19 51 43.6 +2.0
      baz=260,SNR=13
NRIK  Noril'sk           88.06 341   P        P        19 51 40.2 -1.0
      comp=Z,73nm,0.9s,baz=113,slow=5.1,SNR=55
O02D  Mt. Diablo Mer     88.21  49   P        P        19 51 44.8 +2.1
      baz=260,SNR=24
M02C  Callahan           88.37  48   P        P        19 51 45.3 +1.9
      baz=260,SNR=12
I03D  Drain, OR          88.41  46   P        P        19 51 45.1 +1.7
      baz=260
N02D  Trinity Center     88.41  49   P        P        19 51 45.5 +1.9
      baz=260
HUMO  Hull Mountain      88.50  47   IAmb     IAmb     19 51 48.6
      comp=Z,40nm,0.9s
YBH   Yreka Blue Hor     88.53  48   IAMs_20  IAMs_20  20 35 18.1
      comp=Z,5µm,21.0s
COR   Corvallis          88.60  45   IAMs_20  IAMs_20  20 24 14.6
      comp=Z,5µm,20.0s
F03A  Seaside            88.66  44   IAMs_20  IAMs_20  20 35 50.1
      comp=Z,4µm,19.0s
NLWA  Neilton Lookou     88.72  42   IAmb     IAmb     19 51 47.3
      comp=Z,57nm,1.2s
NLWA                                 IAMs_20  IAMs_20  20 34 25.5
      comp=Z,4µm,22.0s
G03D  McMinnville, O     88.74  44   P        P        19 51 46.5 +1.6
      baz=260
E03A  Lebam              88.77  43   IAMs_20  IAMs_20  20 34 34.0
      comp=Z,3µm,19.0s
L04D  Klamath Falls      88.91  47   P        P        19 51 47.5 +1.5
      baz=260
O03E  Paynes Creek       88.98  49   P        P        19 51 47.4 +1.2
      baz=261,SNR=21
H04D  Lebanon            88.99  45   P        P        19 51 48.5 +2.4
      baz=260,SNR=6.5
ORV   Oroville           89.09  50   IAmb     IAmb     19 51 51.9
      comp=Z,34nm,0.8s
ORV                                  IAMs_20  IAMs_20  20 36 27.0
      comp=Z,4µm,22.0s
I04A  Tendick Farm,      89.10  46   P        P        19 51 47.5 +0.8
      baz=260
INK   Inuvik             89.14  21   P        P        19 51 46.6 +0.3
      comp=Z,29nm,1.1s,baz=242,slow=4.9,SNR=26
INK                                  PKKPbc   PKKPbc   20 09 24.3 -2.3
      comp=Z,3.5nm,1.0s,baz=26,slow=2.9,SNR=6.0
INK                                  LR       LR       20 28 54.8
      comp=Z,3µm,20.7s,baz=272,slow=34
INK   Inuvik             89.14  21   IAmb     IAmb     19 52 03.5
      comp=Z,88nm,1.6s
INK                                  IAMs_20  IAMs_20  20 28 24.1
      comp=Z,4µm,20.0s
PMPB  Monarch Peak       89.14  54   IAmb     IAmb     19 52 10.6
      comp=Z,82nm,1.3s
PMPB                                 IAMs_20  IAMs_20  20 36 23.5
      comp=Z,5µm,22.0s
M04C  Macdoel            89.19  48   P        P        19 51 48.5 +1.2
      baz=261
J04D  Umpqua Nationa     89.22  47   P        P        19 51 49.4 +1.9
      baz=261,SNR=7.7
PGC   Sidney             89.23  41   IAmb     IAmb     19 51 51.1
      comp=Z,28nm,0.8s
D03D  Eldon              89.27  42   P        P        19 51 48.7 +1.4
      baz=260,SNR=5.4
K04D  Chiloquin, OR      89.38  47   P        P        19 51 49.2 +1.0
      baz=261
AFDM  Forest Hills D     89.41  51   IAmb     IAmb     19 51 53.0
      comp=Z,58nm,0.9s
F04A  Amboy              89.45  44   IAmb     IAmb     19 51 50.8
      comp=Z,39nm,1.0s
F04A                                 IAMs_20  IAMs_20  20 34 44.9
      comp=Z,4µm,18.0s
E04D  Cinebar            89.45  43   P        P        19 51 49.5 +1.3
      baz=260,SNR=5.9
PAGB  Antelope Grade     89.51  54   IAmb     IAmb     19 51 54.0
      comp=Z,46nm,0.8s
SMMC  Simmler            89.66  55   P        P        19 51 52.4 +2.9
      baz=262
PKM   Mcpherson Peak     89.75  55   P        P        19 51 53.3 +3.1
      baz=262,SNR=14
J05D  Fort Rock, OR      89.86  47   P        P        19 51 51.9 +1.5
      baz=261,SNR=23
D05A  Enumclaw           89.95  43   IAmb     IAmb     19 52 09.5
      comp=Z,38nm,1.0s
D05A                                 IAMs_20  IAMs_20  20 23 49.0
      comp=Z,4µm,22.0s
I05D  Terrebonne, OR     89.95  46   P        P        19 51 52.1 +1.5
      baz=261
BEKR  Beckworth          90.01  50   IAmb     IAmb     19 51 59.0
      comp=Z,23nm,0.7s
JBG   Jabagly            90.04 313c iP      P        19 51 50.5 -0.8
B05A  Bryant             90.05  42   P        P        19 51 52.1 +1.1
      baz=261,SNR=9.4
RUBR  Rubicon Trail      90.05  51   IAMs_20  IAMs_20  20 36 10.4
      comp=Z,4µm,22.0s
F05D  White Salmon       90.10  44   P        P        19 51 52.2 +0.9
      baz=261,SNR=7.0
G05D  Wamic, OR          90.10  45   P        P        19 51 52.4 +1.0
      baz=261,SNR=6.7
KBL   Kabul              90.12 305   P        P        19 51 50.7 -1.2
KBL   Kabul              90.12 305   P        P        19 51 50.7 -1.2
KBL                                  pmax     pmax
      comp=Z,14nm,0.6s
KBL                                  MLR      MLR
      comp=Z,7µm,20.0s
PINE  Pine Mountain      90.15  46   IAmb     IAmb     19 51 55.3
      comp=Z,28nm,0.8s
KK31  Karatay Array      90.17 313   P        P        19 51 51.1 -0.6
KK31  Karatay Array      90.17 313   P        P        19 51 51.1 -0.6
KK31                                 pmax     pmax
      comp=Z,12nm,0.7s
KKAR  Karatay Array      90.17 313   P        P        19 51 50.9 -0.8
KKAR  Karatay Array      90.17 313   P        P        19 51 50.9 -0.8
KKAR                                 pmax     pmax
      comp=Z,12nm,0.7s
MOD   Modoc Plateau      90.34  48   IAmb     IAmb     19 51 58.4
      comp=Z,34nm,1.0s
VES   Vestal, Richgr     90.46  54   P        P        19 51 54.0 +0.8
      baz=263,SNR=12
VCNR  Virginia City      90.47  51   IAmb     IAmb     19 51 57.3
      comp=Z,54nm,1.0s
PNTR  Pine Nut           90.48  51   IAMs_20  IAMs_20  20 36 37.9
      comp=Z,4µm,20.0s
B06A  Marblemount        90.49  41   IAMs_20  IAMs_20  20 24 28.3
      comp=Z,4µm,19.0s
LLLB  Lillooet           90.57  39   IAmb     IAmb     19 51 56.2
      comp=Z,30nm,1.0s
LLLB                                 IAMs_20  IAMs_20  20 24 09.1
      comp=Z,4µm,20.0s
ARVC  Arvin              90.58  55   P        P        19 51 56.1 +2.4
      baz=263,SNR=13
PAHR  Pah Rah Range      90.73  50   IAmb     IAmb     19 51 58.3
      comp=Z,52nm,0.9s
PAHR                                 IAMs_20  IAMs_20  20 36 36.4
      comp=Z,4µm,20.0s
YERR  Yerington          90.75  51   IAmb     IAmb     19 51 58.4
      comp=Z,32nm,0.8s
YERR                                 IAMs_20  IAMs_20  20 36 15.9
      comp=Z,4µm,21.0s
LTY   Liberty            90.84  43   IAmb     IAmb     19 52 11.5
      comp=Z,36nm,1.1s
DECC  Green Verdugo      90.88  56   P        P        19 51 57.3 +2.1
      baz=263,SNR=11
MLAC  Mammoth, Mammo90.89    52   P        P        19 51 57.8 +2.3
      baz=263
ISA   Isabella, Lake     90.93  54   IAmb     IAmb     19 51 58.3
      comp=Z,38nm,1.1s
ISA   Isabella, Lake     90.93  54   P        P        19 51 56.9 +1.4
      baz=263,SNR=27
MWC   Mount Wilson       91.10  56   IAMs_20  IAMs_20  20 37 28.6
      comp=Z,4µm,22.0s
F07A  Phinny Hill Vi     91.16  44   IAmb     IAmb     19 51 58.4
      comp=Z,33nm,1.0s
I07A  Izee               91.22  46   IAMs_20  IAMs_20  20 34 24.9
      comp=Z,4µm,21.0s
EDW2  Edwards Air Fo     91.23  55   P        P        19 51 58.9 +2.0
      baz=263,SNR=35
RYN   Ryan               91.26  51   IAMs_20  IAMs_20  20 35 00.5
      comp=Z,4µm,19.0s
TIN   Tinemaha, Big      91.30  53   P        P        19 51 58.9 +1.6
      baz=263,SNR=7.0
E07A  Sunnyside          91.30  43   IAmb     IAmb     19 51 59.0
      comp=Z,48nm,1.0s
E07A                                 IAMs_20  IAMs_20  20 23 55.9
      comp=Z,4µm,21.0s
CWC   Cottonwood Cre     91.34  54   P        P        19 51 59.1 +1.6
      baz=263
NVAR  Mina Array Bea     91.41  52   P        P        19 51 59.4 +1.6
      comp=Z,105nm,0.9s,baz=250,slow=6.2,SNR=230
NVAR                                 PP       PP       19 55 36.1 -0.3
      comp=Z,1.4nm,0.8s,baz=255,slow=9.2,SNR=3.8
NVAR                                 PKiKP    PKiKP    19 56 50.9 +1.3
      comp=Z,0.5nm,0.5s,baz=229,slow=1.0,SNR=2.3
NVAR                                 PKKPbc   PKKPbc   20 09 19.8 -0.3
      comp=Z,1.2nm,0.9s,baz=104,slow=3.2,SNR=5.7
NVAR                                 PKPPKP   P'P'df   20 17 31.9 +2.8
      comp=Z,0.4nm,0.7s,baz=113,slow=3.9,SNR=4.2
BFSC  Mount Baldy Ra     91.43  56   P        P        19 51 59.3 +1.4
      baz=263,SNR=28
HAWA  Hanford            91.50  44   IAmb     IAmb     19 51 59.9
      comp=Z,46nm,1.1s
HAWA                                 IAMs_20  IAMs_20  20 37 35.2
      comp=Z,4µm,18.0s
NV11  Mina Array Sit     91.52  52   IAMs_20  IAMs_20  20 35 11.4
      comp=Z,4µm,22.0s
LRMC  Laurel Mtn Rad     91.55  55   P        P        19 52 00.4 +1.9
      baz=263,SNR=9.5
WVOR  Wild Horse Val     91.64  48   IAMs_20  IAMs_20  20 34 48.1
      comp=Z,4µm,22.0s
KVN   Kaiserville        91.64  51   IAMs_20  IAMs_20  20 36 01.4
      comp=Z,4µm,18.0s
BVAR  Borovoye Array     91.69 323   P        P        19 51 57.4 -1.1
      comp=Z,25nm,0.5s,baz=106,slow=4.8,SNR=143
109C  Camp Elliot, M     91.74  57   P        P        19 52 00.9 +1.7
      baz=264,SNR=7.7
MURC  Murrieta           91.74  57   P        P        19 52 00.7 +1.5
      baz=264,SNR=9.6
BRVK  Borovoye           91.75 323   P        P        19 51 56.3 -2.5
BRVK                                 IAmb     IAmb     19 51 59.0
      comp=Z,40nm,0.9s
BRVK  Borovoye           91.75 323ceP       P        19 51 57.0 -1.8
BRVK                                 pmax     pmax
      comp=Z,43nm,0.9s
G08A  Pilot Rock         91.76  45   IAmb     IAmb     19 52 01.1
      comp=Z,36nm,1.2s
G08A                                 IAMs_20  IAMs_20  20 34 20.1
      comp=Z,4µm,21.0s
MPMC  Manual Prospec     91.78  54   P        P        19 52 01.2 +1.7
      baz=264,SNR=78
E08A  Dider Farm, El     91.84  44   IAmb     IAmb     19 52 01.5
      comp=Z,52nm,1.2s
E08A                                 IAMs_20  IAMs_20  20 34 12.1
      comp=Z,5µm,21.0s
J08A  Circle Bar Ran     91.87  47   IAmb     IAmb     19 52 02.7
      comp=Z,24nm,0.8s
J08A                                 IAMs_20  IAMs_20  20 34 35.1
      comp=Z,5µm,22.0s
B08A  Colville Reser     91.89  42   IAmb     IAmb     19 52 01.1
      comp=Z,50nm,1.2s
B08A                                 IAMs_20  IAMs_20  20 26 39.3
      comp=Z,4µm,20.0s
GRAC  Grapevine Rang     91.98  53   P        P        19 52 02.3 +2.0
      baz=264
BBRC  Big Bear Solar     92.04  56   P        P        19 52 02.2 +1.3
      baz=264
RRX   Edison Barstow     92.04  55   P        P        19 52 02.4 +1.8
      baz=264
BAR   Barrett            92.08  58   IAmb     IAmb     19 52 03.3
      comp=Z,38nm,1.1s
GSC   Goldstone, Bar     92.25  55   IAmb     IAmb     19 52 05.5
      comp=Z,44nm,1.0s
GSC   Goldstone, Bar     92.25  55   P        P        19 52 03.3 +1.7
      baz=264,SNR=27
RPN   Rapa Nui           92.28 117   P        P        19 52 03.2 +1.3
      comp=Z,64nm,0.9s,baz=213,slow=1.3,SNR=3.8
RPN   Rapa Nui           92.28 117   IAmb     IAmb     19 52 05.4
      comp=Z,120nm,1.1s
MONP2 Monument Peak      92.31  57   P        P        19 52 04.3 +2.1
      baz=264,SNR=14
FURC  Furnace Creek,     92.32  54   P        P        19 52 03.6 +1.8
      baz=264,SNR=72
PFO   Pinyon Flats O     92.35  57   P        P        19 52 03.1 +0.9
PFO                                  IAmb     IAmb     19 52 05.8
      comp=Z,43nm,0.9s
PFO   Pinyon Flats O     92.35  57   P        P        19 52 03.1 +0.9
PFO                                  pmax     pmax
      comp=Z,43nm,0.9s
PFO                                  MLR      MLR
      comp=Z,7µm,18.0s
PFO   Pinyon Flats O     92.35  57   P        P        19 52 04.0 +1.8
      baz=264,SNR=28
TPFO  Pinon Flats        92.36  57   P        P        19 52 04.0 +1.8
      baz=264,SNR=25
XPFO  Pion Flat          92.36  57   P        P        19 52 03.2 +1.0
XPFO                                 IAmb     IAmb     19 52 05.8
      comp=Z,44nm,0.9s
XPFO  Pion Flat          92.36  57   IAMs_20  IAMs_20  20 36 50.9
      comp=Z,5µm,19.0s
E09A  Wood Farm, Sta     92.47  44   P        P        19 52 02.6 +0.4
E09A                                 IAmb     IAmb     19 52 04.2
      comp=Z,56nm,1.1s
C09A  Chrisman Ranch     92.53  42   IAmb     IAmb     19 52 05.2
      comp=Z,22nm,0.8s
C09A                                 IAMs_20  IAMs_20  20 26 05.2
      comp=Z,4µm,21.0s
IKP   In-Ko-Pah, Jac     92.55  58   P        P        19 52 05.4 +2.4
      baz=264
HEC   Hector,Ludlow      92.58  55   P        P        19 52 04.7 +1.6
      baz=264,SNR=19
C36M  Paulatuk           92.72  21   IAmb     IAmb     19 52 04.3
      comp=Z,42nm,1.2s
C36M  Paulatuk           92.72  21   P        P        19 52 03.1 +0.2
      baz=259
SHOC  Shoshone, Teco     92.74  54   P        P        19 52 05.5 +1.7
      baz=264,SNR=13
BELC  Belle Mtn. Jos     92.77  56   P        P        19 52 05.9 +1.8
      baz=264,SNR=84
SWSC  Sam W. Stewart     92.83  57   P        P        19 52 06.3 +2.0
      baz=264,SNR=9.2
TPNV  Topopah Spring     92.86  53   IAMs_20  IAMs_20  20 36 31.1
      comp=Z,5µm,21.0s
TPNV  Topopah Spring     92.86  53   P        P        19 52 06.2 +1.7
      baz=264,SNR=64
BMO   Blue Mountains     92.87  45   IAmb     IAmb     19 52 08.3
      comp=Z,20nm,0.8s
SYO   Syowa Base         92.92 199⇓iP       P        19 52 02.6 -1.2
SYO   Syowa Base         92.92 199⇓iPcP     P        19 52 04.0 +0.1
SYO   Syowa Base         92.92 199⇓ipP      pP       19 52 17.4 -5.3
TUQ   Turquoise Moun     92.98  55   P        P        19 52 06.8 +1.7
      baz=264,SNR=37
F10A  Beach Ranch, E     93.04  44   IAmb     IAmb     19 52 06.6
      comp=Z,36nm,1.1s
F10A                                 IAMs_20  IAMs_20  20 38 27.0
      comp=Z,3µm,19.0s
GMRC  Granite Mounta     93.13  56   P        P        19 52 07.5 +1.7
      baz=264,SNR=64
BC3   Big Chuckawall     93.19  57   P        P        19 52 08.2 +2.2
      baz=265,SNR=39
NEW   Newport            93.34  42   P        P        19 52 06.7 +0.4
      comp=Z,54nm,1.1s,baz=256,slow=4.2
NEW   Newport            93.34  42   IAmb     IAmb     19 52 08.9
      comp=Z,31nm,0.8s
NEW   Newport            93.34  42   P        P        19 52 06.6 +0.3
      baz=264
IRM   Iron Mountain      93.49  56   P        P        19 52 09.4 +2.1
      baz=265,SNR=108
R11A  Troy Canyon, C     93.52  52   IAmb     IAmb     19 52 11.0
      comp=Z,46nm,1.0s
R11A                                 IAMs_20  IAMs_20  20 35 24.4
      comp=Z,3µm,18.0s
R11A  Troy Canyon, C     93.52  52   P        P        19 52 09.1 +1.6
      baz=265,SNR=92
GLA   Glamis             93.66  57   IAmb     IAmb     19 52 13.8
      comp=Z,29nm,0.8s
GLA   Glamis             93.66  57   P        P        19 52 10.6 +2.5
      baz=265,SNR=7.1
Y12C  Blythe             93.97  57   IAmb     IAmb     19 52 12.8
      comp=Z,42nm,1.1s
Y12C                                 IAMs_20  IAMs_20  20 37 26.7
      comp=Z,4µm,21.0s
Y12C  Blythe             93.97  57   P        P        19 52 11.6 +2.1
      baz=265,SNR=19
NEE2  Needles Airpor     93.98  56   P        P        19 52 11.6 +2.0
      baz=265,SNR=12
ELK   Elko               94.00  50   IAmb     IAmb     19 52 12.3
      comp=Z,30nm,1.1s
PDMCI Parker Dam,Lak     94.33  56   P        P        19 52 13.3 +2.2
      baz=265,SNR=21
W13A  Hualapai Mount     94.61  55   IAmb     IAmb     19 52 16.8
      comp=Z,60nm,1.0s
W13A                                 IAMs_20  IAMs_20  20 37 25.5
      comp=Z,4µm,22.0s
JTMT  Jette              95.20  43   IAMs_20  IAMs_20  20 27 03.0
      comp=Z,4µm,22.0s
Y14A  Wickenburg         95.25  57   IAMs_20  IAMs_20  20 37 24.5
      comp=Z,4µm,22.0s
214A  Organ Pipe Nat     95.27  59   P        P        19 52 17.2 +1.7
      baz=266
MSO   Missoula           95.38  44   P        P        19 52 16.1 +0.3
      baz=266
SRIG  Santa Rosalia      95.42  63   IAMs_20  IAMs_20  20 27 21.7
      comp=Z,3µm,20.0s
WALA  Waterton Lakes     95.53  41   IAmb     IAmb     19 52 19.2
      comp=Z,54nm,1.1s
WALA                                 IAMs_20  IAMs_20  20 28 00.5
      comp=Z,4µm,22.0s
DUG   Dugway, Tooele     95.80  50   P        P        19 52 18.7 +0.8
      baz=267,SNR=11
YKA   Yellowknife Ar     95.80  28   P        P        19 52 17.9 +0.7
      comp=Z,38nm,0.7s,baz=267,slow=4.4,SNR=166
YKA                                  PP       PP       19 56 05.8 -3.9
      comp=Z,1.8nm,0.9s,baz=272,slow=8.1,SNR=4.5
YKA                                  PKiKP    PKiKP    19 56 57.0 +0.8
      comp=Z,1.0nm,0.5s,baz=263,slow=1.1,SNR=7.1
YKA                                  PKKPbc   PKKPbc   20 09 05.9 -3.2
      comp=Z,1.1nm,0.5s,baz=83,slow=3.1,SNR=16
U15A  North Rim          95.99  54   IAmb     IAmb     19 52 23.4
      comp=Z,41nm,1.0s
U15A                                 IAMs_20  IAMs_20  20 37 03.0
      comp=Z,4µm,18.0s
RER   Riviere de l'E     96.19 248   IAMs_20  IAMs_20  20 36 12.6
      comp=Z,4µm,20.0s
HSIG                     96.68  62   IAMs_20  IAMs_20  20 39 09.0
      comp=Z,3µm,22.0s
WUAZ  Wupatki            96.69  55   IAmb     IAmb     19 52 26.5
      comp=Z,32nm,1.1s
WUAZ  Wupatki            96.69  55   P        P        19 52 24.5 +2.5
      baz=267
HWUT  Hardware Ranch     96.82  49   IAMs_20  IAMs_20  20 41 31.4
      comp=Z,3µm,21.0s
TUC   Tucson             97.01  58   IAMs_20  IAMs_20  20 38 04.2
      comp=Z,3µm,20.0s
TUC   Tucson             97.01  58   P        Pdif     19 52 26.9 +3.4
      baz=267
AHID  Auburn Hatcher     97.21  48   IAMs_20  IAMs_20  20 36 23.6
      comp=Z,4µm,22.0s
FXWY  Fox Creek          97.29  47   IAMs_20  IAMs_20  20 36 27.7
      comp=Z,5µm,21.0s
IMW   Indian Meadow      97.36  47   IAMs_20  IAMs_20  20 36 25.5
      comp=Z,4µm,22.0s
FLWY  Flagg Ranch        97.54  46   IAMs_20  IAMs_20  20 29 25.2
      comp=Z,4µm,21.0s
SVE   Sverdlovsk         97.57 326  eP        P        19 52 23.4 -1.9
SVE                                  pmax     pmax
      comp=Z,14nm,1.1s
H17A  Grant Village      97.64  46   P        Pdif     19 52 28.5 +2.1
      baz=269
X18A  Snowflake          97.81  56   IAmb     IAmb     19 52 33.0
      comp=Z,21nm,1.1s
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X18A                                 IAMs_20  IAMs_20  20 37 42.2
       comp=Z,4µm,21.0s
319A   Douglas            98.24  59  IAMs_20  IAMs_20  20 38 53.0
       comp=Z,4µm,18.0s
EGMT   Eagleton           98.26  42  IAmb     IAmb     19 52 31.2
       comp=Z,15nm,0.7s
EGMT                                 IAMs_20  IAMs_20  20 29 11.8
       comp=Z,3µm,21.0s
EGMT   Eagleton           98.26  42  Pdiff    Pdif     19 52 29.3 +0.5
       baz=270
PDAR   Pinedale Array     98.34  48  P        P        19 52 29.4  0.0
       comp=Z,15nm,0.9s,baz=228,slow=1.6,SNR=60
PDAR                                 PP       PP       19 56 26.3 -3.9
       comp=Z,3.0nm,1.0s,baz=256,slow=6.0,SNR=5.6
PDAR                                 PKiKP    PKiKP    19 57 02.1 +0.5
       comp=Z,0.6nm,0.5s,baz=124,slow=4.1,SNR=4.4
PDAR                                 PKKPbc   PKKPbc   20 09 00.3 -1.4
       comp=Z,0.6nm,0.5s,baz=117,slow=6.1,SNR=5.2
PDAR                                 LR       LR       20 32 39.7
       comp=Z,1µm,19.5s,baz=322,slow=33
RLMT   Red Lodge          98.58  45  IAMs_20  IAMs_20  20 36 16.6
       comp=Z,3µm,21.0s
RLMT   Red Lodge          98.58  45  Pdiff    Pdif     19 52 31.6 +1.2
       baz=270
ARU    Arti               98.72 326  P        P        19 52 28.6 -1.8
       comp=Z,5.8nm,0.5s,baz=93,slow=5.0,SNR=25
ARU    Arti               98.72 326  P        P        19 52 27.7 -2.8
ARU                                  IAmb     IAmb     19 52 32.4
       comp=Z,17nm,0.6s
ARU    Arti               98.72 326c iP       P        19 52 28.0 -2.5
ARU                                  *PP      pP       19 52 43.9 -6.0
ARU                                                    19 56 28.5
ARU                                  S        SKSac    20 02 59.2 -3.1
ARU                                  pmax     pmax
       comp=Z,11nm,0.5s
MSEY   Mahe Island        98.79 264  IAMs_20  IAMs_20  20 23 45.6
       comp=Z,4µm,21.0s
MVCO   Mesa Verde         99.06  53  Pdiff    Pdif     19 52 34.7 +1.9
       baz=269
GEYT   Alibeck            99.17 307  P        Pdif     19 52 33.1 +0.1
       comp=Z,2.3nm,0.8s,baz=54,slow=2.6,SNR=7.5
GEYT                                 PP       PP       19 56 39.3 +2.9
       comp=Z,2.6nm,0.9s,baz=70,slow=4.9,SNR=5.2
AKTO   Aktyubinsk         99.20 320  P        Pdif     19 52 31.1 -1.6
       comp=Z,4.1nm,0.6s,baz=93,slow=5.3,SNR=11
NVL    N'lazarevskaya     99.21 192 eP        Pdif     19 52 48.0 +16
NVL                                  pmax     pmax
       comp=Z,10.0nm,1.0s
O20A   White River Ci     99.30  50  Pdiff    Pdif     19 52 35.2 +1.4
       baz=270
121A   Cookes Peak, D     99.55  58  IAMs_20  IAMs_20  20 38 09.9
       comp=Z,4µm,20.0s
121A   Cookes Peak, D     99.55  58  Pdiff    Pdif     19 52 37.6 +2.6
       baz=269
SMCO   Snowmass          100.28  51  IAMs_20  IAMs_20  20 44 17.2
       comp=Z,3µm,19.0s
S22A   4UR Ranch, Cre    100.40  53  Pdiff    Pdif     19 52 41.1 +2.3
       baz=270
K22A   Casper            100.58  48  IAMs_20  IAMs_20  20 43 55.8
       comp=Z,3µm,20.0s
K22A   Casper            100.58  48  Pdiff    Pdif     19 52 40.2 +0.8
       baz=271
EPT    El Paso           100.62  59  IAMs_20  IAMs_20  20 39 08.9
       comp=Z,3µm,22.0s
LAO    LASA Array        100.68  44  IAMs_20  IAMs_20  20 35 13.1
       comp=Z,3µm,19.0s
ANMO   Albuquerque       100.69  56  IAMs_20  IAMs_20  20 38 02.6
       comp=Z,3µm,19.0s
ANMO   Albuquerque       100.69  56 i P       Pdif     19 52 39.0 -1.1
ANMO   Albuquerque       100.69  56  Pdiff    Pdif     19 52 42.4 +2.3
       baz=270
SNAA   Sanae             100.79 187  P        Pdif     19 52 40.1 +0.5
SNAA   Sanae             100.79 187  P        Pdif     19 52 39.9 +0.3
       comp=Z,3.6nm,0.8s,baz=176,slow=13
SNAA                                 PP       PP       19 56 51.0 +3.7
       comp=Z,4.6nm,1.0s,baz=186,slow=13,SNR=3.1
SNAA                                 PKiKP    PKiKP    19 57 05.7 +0.7
       comp=Z,2.2nm,0.8s,baz=207,slow=6.8,SNR=6.2
N23A   Red Feather La    101.05  50  Pdiff    Pdif     19 52 43.3 +1.7
       baz=271
HPIG                     101.26  64  IAMs_20  IAMs_20  20 41 19.3
       comp=Z,3µm,20.0s
ISCO   Idaho Springs     101.33  51  IAMs_20  IAMs_20  20 37 33.8
       comp=Z,3µm,21.0s
ISCO   Idaho Springs     101.33  51  Pdiff    Pdif     19 52 44.4 +1.5
       baz=271
RES    Resolute Bay      101.35  15  P        Pdif     19 52 41.7 -0.1
       comp=Z,3.0nm,0.8s,baz=305,slow=8.1,SNR=8.6
RES                                  PP       PP       19 56 52.3 +0.6
       comp=Z,2.2nm,0.9s,baz=260,slow=5.8,SNR=3.9
RES                                  PKiKP    PKiKP    19 57 06.2 +0.5
       comp=Z,1.4nm,0.5s,baz=209,slow=4.4,SNR=5.5
PHWY   Pilot Hill        101.41  49  IAMs_20  IAMs_20  20 37 34.9
       comp=Z,3µm,22.0s
SDCO   Great Sand Dun    101.45  53  Pdiff    Pdif     19 52 45.2 +1.7
       baz=271
Q24A   Divide            101.70  52  IAMs_20  IAMs_20  20 37 40.9
       comp=Z,3µm,20.0s
Q24A   Divide            101.70  52  Pdiff    Pdif     19 52 46.6 +2.0
       baz=271
VNA3   Neumayer Olymp    101.91 185  P        Pdif     19 52 43.6 -0.9
DGMT   Dagmar            101.95  42  Pdiff    Pdif     19 52 46.2 +1.1
       baz=274
VNA2   Neumayer--Watz    102.00 186  P        Pdif     19 52 50.1 +5.2
       baz=176,slow=4.5
T25A   Trinidad          102.33  53  IAMs_20  IAMs_20  20 37 58.7
       comp=Z,3µm,21.0s
T25A   Trinidad          102.33  53  Pdiff    Pdif     19 52 49.5 +2.2
       baz=271
RSSD   Black Hills       102.34  46  Pdiff    Pdif     19 52 47.9 +0.7
       baz=273
TXAR   Lajitas Array     103.05  61  Pdiff    Pdif     19 52 52.3 +1.8
       comp=Z,1.3nm,0.7s,baz=266,slow=3.8,SNR=10
TXAR                                 PP       PP       19 57 04.2 -1.8
       comp=Z,3.1nm,1.0s,baz=308,slow=6.2,SNR=3.6
TXAR                                 PKKPbc   PKKPbc   20 08 47.5 -0.1
       comp=Z,1.7nm,0.6s,baz=107,slow=3.8,SNR=15
KIRV   Kirov             103.41 329  Pdiff    Pdif     19 52 53.0 +1.8
       comp=Z,9.4nm,0.5s,baz=72,slow=2.2,SNR=4.8
KSCO   Kaye Shedlock’    103.67  52  IAMs_20  IAMs_20  20 37 53.9
       comp=Z,3µm,21.0s
KSCO   Kaye Shedlock’    103.67  52  Pdiff    Pdif     19 52 55.6 +2.5
       baz=273
MSTX   Muleshoe          103.75  57  Pdiff    Pdif     19 52 56.0 +2.5
       baz=272
OGNE   Ogallala          104.01  50  IAMs_20  IAMs_20  20 37 38.7
       comp=Z,3µm,22.0s
AMTX   Amarillo          104.62  56  IAMs_20  IAMs_20  20 38 28.7
       comp=Z,3µm,20.0s
PRGR   Permogore         104.63 332 eP        Pdif     19 52 53.2 -3.4
PRGR                                 pmax     pmax
       comp=Z,17nm,0.9s
MDND   Maddock           105.08  42  IAMs_20  IAMs_20  20 36 56.2
       comp=Z,4µm,21.0s
KBS    Kingsbay          105.11 353  IAMs_20  IAMs_20  20 40 07.6
       comp=Z,4µm,19.0s
SUSD   Miller            105.94  46  IAMs_20  IAMs_20  20 38 12.6
       comp=Z,3µm,18.0s
JCT    Junction City     106.38  60  IAMs_20  IAMs_20  20 39 11.7
       comp=Z,3µm,19.0s
ABTX   Abilene, Hawle    106.42  58  IAMs_20  IAMs_20  20 39 44.5
       comp=Z,3µm,18.0s
U32A   Winter Ranch,     106.71  54  IAMs_20  IAMs_20  20 38 31.6
       comp=Z,3µm,19.0s
BGNE   Belgrade          106.89  49  PKiKP    PKiKP    19 57 17.8 +0.9
       baz=277
D32A   Dogwood Acres,    106.91  43  IAMs_20  IAMs_20  20 38 42.9
       comp=Z,3µm,20.0s
WMOK   Wichita Mounta    107.01  56  PKiKP    PKiKP    19 57 17.8 +0.5
       baz=274
ULM    Lac du Bonnet     107.12  39  Pdiff    Pdif     19 53 08.0  0.0
       comp=Z,5.8nm,1.0s,baz=296,slow=6.1,SNR=9.3
ULM                                  PKiKP    PKiKP    19 57 17.2 +0.3
       comp=Z,4.1nm,0.6s,baz=214,slow=1.2,SNR=9.4
ULM                                  PKKPbc   PKKPbc   20 08 33.9 -1.9
       comp=Z,1.6nm,0.5s,baz=91,slow=5.4,SNR=5.4
ULM    Lac du Bonnet     107.12  39           Pdif     19 53 08.2 +0.2
ULM    Lac du Bonnet     107.12  39  P        Pdif     19 53 08.2 +0.2
ULM                                  MLR      MLR
       comp=Z,5µm,21.0s
TMCR   Tamitsa           107.15 336 eP        Pdif     19 53 05.1 -2.7
TMCR                                 pmax     pmax
       comp=Z,14nm,1.1s
AGMN   Agassiz Nation    107.49  41  IAMs_20  IAMs_20  20 38 38.9
       comp=Z,3µm,20.0s
KLMR   Klimovskoe        107.68 332 eP        Pdif     19 53 05.5 -4.7
KLMR                                 pmax     pmax
       comp=Z,20nm,1.1s
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KLMR   Klimovskoe        107.68 332 eP        Pdif     19 53 05.6 -4.7
KLMR                                 AMP               19 53 09.1
       comp=Z,20nm,1.1s
ECSD   EROS Data Cent    107.71  46  IAMs_20  IAMs_20  20 38 59.3
       comp=Z,3µm,22.0s
ECSD   EROS Data Cent    107.71  46  PKiKP    PKiKP    19 57 18.1 -0.3
       baz=278
X34A   Smith Ranch, M    107.80  56  IAMs_20  IAMs_20  20 38 48.7
       comp=Z,3µm,21.0s
435B   Jarrell           108.28  60  IAMs_20  IAMs_20  20 40 16.8
       comp=Z,3µm,21.0s
WHTX   Lake Whitney,     108.31  59  IAMs_20  IAMs_20  20 39 14.5
       comp=Z,3µm,20.0s
KSU1   Kansas State U    108.33  51  IAMs_20  IAMs_20  20 38 21.2
       comp=Z,3µm,19.0s
KSU1   Kansas State U    108.33  51  PKiKP    PKiKP    19 57 20.1 +0.5
       baz=277
KEV    Kevo              108.36 343  IAMs_20  IAMs_20  20 46 41.5
       comp=Z,2µm,19.0s
Z35A   Perchaven, San    108.38  57  IAMs_20  IAMs_20  20 39 06.2
       comp=Z,3µm,22.0s
ARCES  ARCESS Array B    108.91 343  Pdiff    Pdif     19 53 17.2 +1.6
       comp=Z,1.6nm,0.6s,baz=45,slow=4.4,SNR=7.3
ARCES                                PKiKP    PKiKP    19 57 19.8 -0.1
       comp=Z,2.1nm,0.6s,baz=62,slow=2.1,SNR=15
ARCES                                PKKPbc   PKKPbc   20 08 27.9 -2.9
       comp=Z,2.8nm,0.9s,baz=247,slow=0.9,SNR=5.3
ARCES                                PKKPab   PKKPab   20 08 41.5 +0.6
       comp=Z,3.0nm,0.9s,baz=236,slow=1.3,SNR=5.6
TUL1   Leonard           109.34  54  PKiKP    PKiKP    19 57 22.1 +0.5
       baz=276
GNI    Garni             109.42 310  IAMs_20  IAMs_20  20 43 39.5
       comp=Z,3µm,20.0s
HKT    Hockley           109.84  61  IAMs_20  IAMs_20  20 45 42.2
       comp=Z,3µm,18.0s
SPMN   Marine on St.     110.14  44  IAMs_20  IAMs_20  20 38 28.3
       comp=Z,2µm,18.0s
SPMN   Marine on St.     110.14  44  PKiKP    PKiKP    19 57 23.1 +0.3
       baz=282
KIV    Kislovodsk        110.29 315 i PKIKP   PKiKP    19 57 21.5 -1.8
KIV                                 e                  19 57 56.5
KIV                                 ePS       PS       20 07 27.7 -1.7
KIV                                 eSS       SS       20 13 19.1 -1.6
KIV                                  pmax     pmax
       comp=Z,10.0nm,1.1s
MOS    Moscow            110.34 328 eP        Pdif     19 53 33.2 +11
EYMN   Ely               110.42  41  PKiKP    PKiKP    19 57 23.6 +0.3
       baz=284
SCIA   State Center      110.47  48  IAMs_20  IAMs_20  20 39 35.6
       comp=Z,3µm,21.0s
E38A   The Farm, Brul    110.69  42  IAMs_20  IAMs_20  20 38 25.9
       comp=Z,3µm,19.0s
NATX   Nacogdoches       110.70  59  IAMs_20  IAMs_20  20 39 30.8
       comp=Z,3µm,19.0s
W39A   Magazine          111.05  55  IAMs_20  IAMs_20  20 39 07.6
       comp=Z,3µm,22.0s
W39A   Magazine          111.05  55  PKiKP    PKiKP    19 57 25.0 +0.2
       baz=277
S39A   Bolivar           111.07  52  IAMs_20  IAMs_20  20 38 45.0
       comp=Z,3µm,21.0s
OBN    Obninsk           111.12 327⇑iPKIKP    PKiKP    19 57 23.8 -0.5
OBN                                 e                  19 58 12.1
OBN                                  pmax     pmax
       comp=Z,6.0nm,1.1s
MIAR   Mount Ida         111.30  55  IAMs_20  IAMs_20  20 40 04.3
       comp=Z,3µm,20.0s
DAMY   Dhamar            111.35 283  IAMs_20  IAMs_20  20 52 59.0
       comp=Z,3µm,21.0s
U40A   Yellville         111.64  53  IAMs_20  IAMs_20  20 40 37.1
       comp=Z,2µm,21.0s
U40A   Yellville         111.64  53  PKiKP    PKiKP    19 57 25.7 -0.3
       baz=278
L40A   Anamosa           111.90  47  IAMs_20  IAMs_20  20 39 41.4
       comp=Z,3µm,21.0s
X40A   Basin Creek Fa    111.91  55  IAMs_20  IAMs_20  20 41 06.6
       comp=Z,3µm,21.0s
G40A   Rib Lake          111.92  44  IAMs_20  IAMs_20  20 37 55.5
       comp=Z,3µm,22.0s
I40A   Norwalk           111.95  45  IAMs_20  IAMs_20  20 38 54.4
       comp=Z,3µm,21.0s
MGMO   Mountain Grove    111.98  53  IAMs_20  IAMs_20  20 42 14.2
       comp=Z,2µm,18.0s
UALR   University of     112.27  55  IAMs_20  IAMs_20  20 39 22.2
       comp=Z,3µm,22.0s
FCAR   Ozark Folk Cen    112.29  54  IAMs_20  IAMs_20  20 51 56.5
       comp=Z,2µm,18.0s
W41B   Gary Mavity, V    112.30  55  IAMs_20  IAMs_20  20 40 19.7
       comp=Z,2µm,22.0s
W41B   Gary Mavity, V    112.30  55  PKiKP    PKiKP    19 57 27.2  0.0
       baz=278
JFWS   Jewell Farm       112.43  46  PKiKP    PKiKP    19 57 26.7 -0.5
       baz=283
COWI   Conover           112.44  43  IAMs_20  IAMs_20  20 38 39.1
       comp=Z,3µm,22.0s
SOC    Sochi             112.47 315 i PKIKP   PKiKP    19 57 26.0 -1.3
SOC                                 e                  19 57 44.0
SOC                                 e                  19 58 10.7
SOC                                 ePPP      PPP      20 00 33.8
SOC                                 ePS       PS       20 07 44.0 -5.3
SOC                                 eSS       SS       20 13 48.2 -1.3
CCM    Cathedral Cave    112.64  51  IAMs_20  IAMs_20  20 45 16.3
       comp=Z,3µm,21.0s
CCM    Cathedral Cave    112.64  51  PKiKP    PKiKP    19 57 27.4 -0.4
       baz=280
LCAR   Lake Charles      113.04  54  IAMs_20  IAMs_20  20 45 01.3
       comp=Z,2µm,18.0s
L42A   Oliver, Polo      113.05  47  IAMs_20  IAMs_20  20 38 25.6
       comp=Z,3µm,20.0s
FINES  FINESS Array B    113.28 336  Pdiff    Pdif     19 53 33.8 -1.3
       comp=Z,1.4nm,0.6s,baz=46,slow=4.4,SNR=11
FINES                                PKiKP    PKiKP    19 57 28.4 +0.1
       comp=Z,4.0nm,0.9s,baz=79,slow=3.0,SNR=9.7
FINES                                PKKPbc   PKKPbc   20 08 13.2 -3.0
       comp=Z,1.0nm,0.5s,baz=223,slow=2.3,SNR=9.8
FINES                                PKKPab   PKKPab   20 08 21.9 +0.3
       comp=Z,3.3nm,0.8s,baz=298,slow=4.1,SNR=7.2
FINES                                PKKP     PKKPdf   20 08 37.4 +0.5
       comp=Z,3.6nm,0.8s,baz=180,slow=3.8,SNR=5.6
FVM    French Village    113.29  51  IAMs_20  IAMs_20  20 41 43.5
       comp=Z,3µm,19.0s
SUMG   Summit            113.31   4 i P       PP       19 58 14.3 -5.2
SUMG   Summit            113.31   4 i P       PKKPbc   20 08 14.0 -2.8
143A   Socs Landing,     113.33  57  IAMs_20  IAMs_20  20 45 45.4
       comp=Z,2µm,20.0s
PBMO   Poplar Bluff      113.50  53  IAMs_20  IAMs_20  20 40 42.3
       comp=Z,3µm,21.0s
X43A   Marvell           113.50  55  IAMs_20  IAMs_20  20 41 33.7
       comp=Z,2µm,20.0s
HDIL   Hopedale          113.64  48  IAMs_20  IAMs_20  20 38 40.4
       comp=Z,3µm,20.0s
HDIL   Hopedale          113.64  48  PKiKP    PKiKP    19 57 29.6  0.0
       baz=282
CCIG   Comitan           113.79  75  IAMs_20  IAMs_20  20 41 45.2
       comp=Z,3µm,22.0s
H43A   Windswept, Lux    113.79  44  IAMs_20  IAMs_20  20 54 06.1
       comp=Z,2µm,20.0s
GNAR   Gosnell           113.97  54  IAMs_20  IAMs_20  20 45 19.8
       comp=Z,3µm,21.0s
GO07   Milladeo Hill,    114.05 143  IAMs_20  IAMs_20  20 49 14.4
       comp=Z,3µm,19.0s
VBMS   Vicksburg         114.14  58  IAMs_20  IAMs_20  20 39 45.8
       comp=Z,2µm,21.0s
MET    Memphis--Engin    114.18  54  IAMs_20  IAMs_20  20 45 19.5
       comp=Z,2µm,19.0s
S44A   Carbondale        114.25  52  IAMs_20  IAMs_20  20 40 41.1
       comp=Z,4µm,22.0s
L44A   Lake County Fo    114.28  46  IAMs_20  IAMs_20  20 44 06.1
       comp=Z,2µm,20.0s
O44A   Mansfield         114.34  49  IAMs_20  IAMs_20  20 38 48.1
       comp=Z,3µm,21.0s
E44A   Grand Marais A    114.43  41  IAMs_20  IAMs_20  20 39 50.7
       comp=Z,3µm,20.0s
PAYG   Puerto Ayora      114.60  94  IAMs_20  IAMs_20  20 51 41.5
       comp=Z,2µm,22.0s
OXF    Oxford            114.70  55  P        PKPdf    19 57 31.8 -0.1
       baz=280
OLIL   Olney             114.93  50  IAMs_20  IAMs_20  20 39 52.9
       comp=Z,3µm,21.0s
I45A   Fountain          114.97  44  IAMs_20  IAMs_20  20 39 03.3
       comp=Z,3µm,21.0s
F45A   CMU Biological    114.98  42  P        PKiKP    19 57 31.7 -0.3
       baz=288,SNR=7.9
J45A   Montague          115.03  45  IAMs_20  IAMs_20  20 39 08.0
       comp=Z,3µm,22.0s
G45A   Suttons Bay       115.08  43  P        PKiKP    19 57 32.2 -0.1
       baz=287,SNR=6.7
346A   Big Creek Wild    115.14  58  IAMs_20  IAMs_20  20 41 56.5
       comp=Z,2µm,18.0s
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SFIN   Lafayette         115.31  48  IAMs_20  IAMs_20  20 38 51.7
       comp=Z,3µm,22.0s
SFIN   Lafayette         115.31  48  P        PKPdf    19 57 32.9 +0.1
       baz=284
APG    El Apazote        115.41  76  PKP      PKPdf    19 57 34.0  0.0
       comp=Z,4.8nm,0.6s,baz=359,slow=4.3,SNR=7.5
P46A   Rosedale          115.41  49  IAMs_20  IAMs_20  20 41 09.4
       comp=Z,2µm,18.0s
L46A   Eue Claire        115.48  46  IAMs_20  IAMs_20  20 44 51.0
       comp=Z,2µm,20.0s
L46A   Eue Claire        115.48  46  P        PKPdf    19 57 33.6 +0.5
       baz=285
D46A   Sault St. Mari    115.58  41  P        PKPdf    19 57 33.6 +0.5
       baz=289
J46A   Howard City       115.58  45  P        PKPdf    19 57 33.7 +0.5
       baz=286
K46A   Dorr              115.67  45  P        PKPdf    19 57 33.8 +0.3
       baz=286
WVT    Waverly           115.68  53           PKPdf    19 57 32.7 -0.9
WVT    Waverly           115.68  53  IAMs_20  IAMs_20  20 40 28.0
       comp=Z,2µm,21.0s
WVT    Waverly           115.68  53  PKIKP    PKPdf    19 57 32.7 -0.9
WVT                                  MLR      MLR
       comp=Z,2µm,21.0s
WVT    Waverly           115.68  53  P        PKPdf    19 57 32.9 -0.7
       baz=282
PLAL   Pickwick Lake     115.70  54  IAMs_20  IAMs_20  20 40 43.8
       comp=Z,3µm,22.0s
GLMI   Grayling          115.85  43  IAMs_20  IAMs_20  20 39 03.4
       comp=Z,3µm,22.0s
GLMI   Grayling          115.85  43  P        PKPdf    19 57 34.1 +0.4
       baz=288
T47A   Sharon Grove      116.07  52  IAMs_20  IAMs_20  20 39 21.3
       comp=Z,3µm,20.0s
D47A   Chapleau          116.12  40  P        PKPdf    19 57 34.2  0.0
       baz=290,SNR=18
I47A   Gladwin           116.17  44  IAMs_20  IAMs_20  20 39 29.9
       comp=Z,2µm,19.0s
J47A   Sunmer            116.19  45  IAMs_20  IAMs_20  20 39 15.5
       comp=Z,3µm,22.0s
E47A   Iron Bridge       116.21  41  P        PKPdf    19 57 34.2 -0.2
       baz=290,SNR=12
N47A   Urbana            116.22  47  IAMs_20  IAMs_20  20 38 45.6
       comp=Z,3µm,20.0s
N47A   Urbana            116.22  47  P        PKPdf    19 57 34.3 -0.3
       baz=285,SNR=6.9
K47A   Vermontville      116.22  45  P        PKPdf    19 57 34.4 -0.2
       baz=287,SNR=6.6
G47A   Hillman           116.25  42  P        PKPdf    19 57 34.5  0.0
       baz=289,SNR=8.3
L47A   Sherwood          116.28  46  P        PKPdf    19 57 34.6  0.0
       baz=286,SNR=6.9
WCI    Wyandotte Cave    116.42  50           PKPdf    19 57 34.9 -0.1
WCI    Wyandotte Cave    116.42  50  IAMs_20  IAMs_20  20 40 17.4
       comp=Z,3µm,20.0s
WCI    Wyandotte Cave    116.42  50  PKIKP    PKPdf    19 57 34.9 -0.1
WCI                                  MLR      MLR
       comp=Z,3µm,20.0s
WCI    Wyandotte Cave    116.42  50  P        PKPdf    19 57 34.9 -0.1
       baz=284
I48A   Sherman Twp       116.67  43  P        PKiKP    19 57 35.4 +0.1
       baz=288
Q48A   North Vernon      116.68  50  P        PKPdf    19 57 35.5  0.0
       baz=284,SNR=7.4
N48A   Decatur           116.71  47  P        PKPdf    19 57 35.6 +0.1
       baz=286,SNR=12
M48A   Edgerton          116.76  47  IAMs_20  IAMs_20  20 47 20.9
       comp=Z,2µm,20.0s
M48A   Edgerton          116.76  47  P        PKPdf    19 57 35.6  0.0
       baz=286
FURI   Furi              116.76 277  IAMs_20  IAMs_20  20 47 38.8
       comp=Z,4µm,22.0s
H48A   Harrisville       116.76  43  IAMs_20  IAMs_20  20 39 16.5
       comp=Z,3µm,20.0s
H48A   Harrisville       116.76  43  P        PKPdf    19 57 35.2 -0.3
       baz=289
O48A   Farmland          116.78  48  P        PKPdf    19 57 35.5 -0.1
       baz=285,SNR=12
P48A   Milroy            116.78  49  IAMs_20  IAMs_20  20 41 12.7
       comp=Z,2µm,21.0s
P48A   Milroy            116.78  49  P        PKPdf    19 57 35.6 -0.1
       baz=285,SNR=7.7
K48A   Perry             116.81  45  P        PKPdf    19 57 35.6  0.0
       baz=287,SNR=14
L48A   N Adams           116.83  46  P        PKiKP    19 57 35.9 +0.1
       baz=287,SNR=21
F48A   Evansville        116.86  41  P        PKPdf    19 57 35.3 -0.3
       baz=290,SNR=9.4
CLTN   Cedars of Leba    116.87  53  IAMs_20  IAMs_20  20 41 44.6
       comp=Z,2µm,21.0s
J48A   Bridge Port       116.89  44  IAMs_20  IAMs_20  20 39 27.1
       comp=Z,2µm,18.0s
J48A   Bridge Port       116.89  44  P        PKPdf    19 57 35.6 -0.2
       baz=288,SNR=7.4
D48A   Paudash Townsh    116.91  40  P        PKPdf    19 57 35.4 -0.3
       baz=291,SNR=12
AKASG  Malin Array Be    116.92 325  Pdiff    Pdif     19 53 50.5 -1.0
       comp=Z,0.1nm,0.3s,baz=60,slow=4.2,SNR=4.6
AKASG                                PKP      PKPdf    19 57 34.9 -0.7
       comp=Z,3.3nm,0.5s,baz=59,slow=2.3,SNR=18
AKASG                                PP       PP       19 58 45.3 +0.1
       comp=Z,1.5nm,0.8s,baz=58,slow=7.4,SNR=5.1
AKASG                                PKKPbc   PKKPbc   20 08 01.3 -2.0
       comp=Z,5.7nm,1.1s,baz=257,slow=3.9,SNR=11
E48A   Lockeyer          116.93  41  P        PKPdf    19 57 35.7 -0.1
       baz=291,SNR=16
LRAL   Lakeview Retre    116.94  56  IAMs_20  IAMs_20  20 41 45.8
       comp=Z,3µm,22.0s
U49A   Red Boiling Sp    117.22  52  IAMs_20  IAMs_20  20 39 30.0
       comp=Z,3µm,21.0s
BRAL   Brewton           117.22  58  IAMs_20  IAMs_20  20 41 12.5
       comp=Z,2µm,19.0s
F49A   Sandfield         117.26  41  P        PKPdf    19 57 36.2 -0.2
       baz=291,SNR=12
L49A   Milan             117.26  46  P        PKiKP    19 57 36.7 +0.1
       baz=287,SNR=7.7
R49A   Shelbyville       117.27  50  IAMs_20  IAMs_20  20 41 06.7
       comp=Z,3µm,22.0s
R49A   Shelbyville       117.27  50  P        PKiKP    19 57 37.0 +0.3
       baz=284
Y49A   Blount Mountai    117.27  55  IAMs_20  IAMs_20  20 41 38.3
       comp=Z,3µm,20.0s
T49A   Edmonton          117.27  51  IAMs_20  IAMs_20  20 44 25.0
       comp=Z,3µm,20.0s
T49A   Edmonton          117.27  51  P        PKPdf    19 57 36.3 -0.4
       baz=284,SNR=16
AAM    Ann Arbor         117.28  45  IAMs_20  IAMs_20  20 39 37.6
       comp=Z,2µm,20.0s
AAM    Ann Arbor         117.28  45  P        PKiKP    19 57 37.0 +0.4
       baz=288
P49A   Miami Univ. Ec    117.29  49  P        PKPdf    19 57 36.6 -0.1
       baz=285
KMBO   Kilima Mbogo      117.29 265  PKP      PKiKP    19 57 37.9 +0.2
       comp=Z,4.1nm,1.0s,baz=24,slow=3.5,SNR=10
KMBO                                 PKKPbc   PKKPbc   20 08 02.0 +0.9
       comp=Z,2.1nm,0.9s,baz=292,slow=4.1,SNR=6.3
Q49A   Aurora            117.30  49  P        PKPdf    19 57 36.4 -0.3
       baz=285
M49A   Liberty Center    117.30  46  P        PKPdf    19 57 36.6  0.0
       baz=287,SNR=11
S49A   Springfield       117.30  51  P        PKPdf    19 57 36.5 -0.3
       baz=284,SNR=13
N49A   Columbus Grove    117.31  47  IAMs_20  IAMs_20  20 39 47.4
       comp=Z,3µm,21.0s
N49A   Columbus Grove    117.31  47  P        PKiKP    19 57 36.9 +0.2
       baz=286,SNR=20
J49A   Marlette          117.32  44  P        PKPdf    19 57 35.3 -1.3
       baz=288
PLCA   Paso Flores       117.33 142  PKKPbc   PKKPbc   20 08 03.5 +1.8
       comp=Z,4.3nm,0.8s,baz=89,slow=9.8,SNR=3.3
TEIG   Tepich            117.34  71  IAMs_20  IAMs_20  20 41 29.9
       comp=Z,2µm,21.0s
I49A   Point Hope        117.35  43  IAMs_20  IAMs_20  20 39 37.1
       comp=Z,2µm,20.0s
I49A   Point Hope        117.35  43  P        PKPdf    19 57 36.4 -0.3
       baz=289,SNR=12
SWET   Sewanee           117.38  54  IAMs_20  IAMs_20  20 39 39.1
       comp=Z,2µm,21.0s
O49A   Covington         117.40  48  IAMs_20  IAMs_20  20 39 51.9
       comp=Z,2µm,20.0s
O49A   Covington         117.40  48  P        PKPdf    19 57 36.5 -0.3
       baz=286,SNR=8.4
ILGA   Ilgaz             117.42 313  IAMs_20  IAMs_20  20 56 25.9
       comp=Z,3µm,21.0s
250A   Grady             117.74  57  IAMs_20  IAMs_20  20 42 08.1
       comp=Z,3µm,19.0s
FPAL   Fort Paine        117.78  54  IAMs_20  IAMs_20  20 39 46.8
       comp=Z,3µm,19.0s
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Z50A	Ashland comp=Z,2µm,19.0s	117.78	56	IAMs_20	IAMs_20	20 40 17.1	
Z50A	Ashland baz=281,SNR=9.9	117.78	56	P	PKPdf	19 57 37.3	-0.5
T50A	Nancy baz=284,SNR=18	117.83	51	P	PKPdf	19 57 37.3	-0.5
BRTR	Keskin Array B comp=Z,3.1nm,0.6s,baz=136,slow=3.1,SNR=13	117.85	312	PKP	PKPdf	19 57 37.4	-0.6
BRTR	comp=Z,1.1nm,0.7s,baz=230,slow=3.2,SNR=5.9			PKKPbc	PKKPbc	20 07 59.8	0.0
W50A	Signal Mountai comp=Z,2µm,19.0s	117.88	53	IAMs_20	IAMs_20	20 39 43.3	
W50A	Signal Mountai baz=283,SNR=16	117.88	53	P	PKPdf	19 57 37.6	-0.4
R50A	Paris baz=285,SNR=6.6	117.91	50	P	PKPdf	19 57 37.5	-0.4
O50A	Cable baz=286,SNR=7.9	117.94	48	P	PKPdf	19 57 37.6	-0.4
P50A	Jamestown baz=286,SNR=7.4	117.95	48	P	PKPdf	19 57 37.5	-0.5
L50A	Kingsville baz=288,SNR=9.0	117.96	45	P	PKPdf	19 57 37.6	-0.2
M50A	Fremont comp=Z,2µm,19.0s	117.99	46	IAMs_20	IAMs_20	20 41 04.4	
M50A	Fremont baz=288	117.99	46	P	PKPdf	19 57 37.9	0.0
S50A	Richmond baz=285,SNR=17	118.01	51	P	PKPdf	19 57 37.9	-0.2
Q50A	Georgetown baz=286	118.03	49	P	PKPdf	19 57 37.4	-0.7
N50A	Nevada baz=287,SNR=7.9	118.10	47	P	PKiKP	19 57 38.3	+0.1
D50A	G1974 Best Tow baz=293,SNR=9.6	118.15	39	P	PKPdf	19 57 37.7	-0.4
ACSO	Alum Creek Sta comp=Z,2µm,18.0s	118.38	47	IAMs_20	IAMs_20	20 41 15.9	
ACSO	Alum Creek Sta baz=287,SNR=10	118.38	47	P	PKPdf	19 57 38.6	-0.1
X51A	Calhoun comp=Z,2µm,19.0s	118.38	54	IAMs_20	IAMs_20	20 41 39.7	
X51A	Calhoun baz=283	118.38	54	P	PKPdf	19 57 38.6	-0.3
Z51A	Franklin	118.39	56		PKPdf	19 57 39.0	0.0
Z51A	comp=Z,3µm,21.0s			IAMs_20	IAMs_20	20 41 49.0	
MATQ	Matagami baz=296,SNR=6.0	118.40	36	P	PKPdf	19 57 37.6	-0.9
451A	Vernon comp=Z,3µm,21.0s	118.42	59	IAMs_20	IAMs_20	20 40 35.2	
ANTO	Ankara	118.43	312	⇓P	PKiKP	19 57 39.1	+0.1
ANTO	Ankara comp=Z,3µm,20.0s	118.43	312	IAMs_20	IAMs_20	20 58 35.9	
CPCT	Cooper Cave comp=Z,2µm,19.0s	118.45	53	IAMs_20	IAMs_20	20 42 33.4	
Q51A	Peebles baz=286,SNR=10	118.45	49	P	PKPdf	19 57 38.6	-0.3
R51A	Hillsboro baz=286	118.47	50	P	PKPdf	19 57 38.1	-0.9
D51A	Lot 18 Range I baz=294,SNR=5.8	118.47	39	P	PKPdf	19 57 38.2	-0.5
V51A	Loudon comp=Z,2µm,19.0s	118.50	53	IAMs_20	IAMs_20	20 43 26.8	
V51A	Loudon baz=284,SNR=7.2	118.50	53	P	PKPdf	19 57 38.8	-0.4
SORM	Soroca	118.52	322	⇑P	PKPdf	19 57 36.4	-2.4
P51A	Williamsport comp=Z,3µm,21.0s	118.54	48	IAMs_20	IAMs_20	20 39 06.2	
P51A	Williamsport baz=287	118.54	48	P	PKPdf	19 57 38.3	-0.8
T51A	Gray baz=285,SNR=11	118.54	51	P	PKPdf	19 57 38.9	-0.3
F51A	Arnstein baz=292,SNR=9.7	118.58	40	P	PKPdf	19 57 38.7	-0.3
N51A	Ashland comp=Z,2µm,21.0s	118.62	47	IAMs_20	IAMs_20	20 40 21.0	
N51A	Ashland baz=288,SNR=14	118.62	47	P	PKPdf	19 57 39.1	-0.1
E51A	G1948 Merrick baz=293,SNR=6.9	118.62	40	P	PKPdf	19 57 38.7	-0.3
I51A	Listowel baz=290,SNR=10	118.62	43	P	PKPdf	19 57 39.0	-0.2
M51A	Elyria baz=288,SNR=6.8	118.63	46	P	PKPdf	19 57 39.0	-0.1
S51A	Beattyville baz=285,SNR=18	118.64	50	P	PKPdf	19 57 39.2	-0.2
K51A	Iona Station baz=290	118.66	44	P	PKPdf	19 57 39.0	-0.2
O51A	Pataskala baz=287,SNR=8.7	118.68	47	P	PKPdf	19 57 38.9	-0.5
MILM	Milestii Mici	118.73	321	⇑P	PKPdf	19 57 39.2	0.0
HFS	Hagfors comp=Z,2.1nm,0.7s,baz=241,slow=5.9,SNR=6.5	118.83	339	PKKPbc	PKKPbc	20 07 54.3	-2.4
152A	Waverly Hall comp=Z,2µm,21.0s	118.89	56	IAMs_20	IAMs_20	20 43 49.5	
TZTN	Tazewell comp=Z,2µm,21.0s	118.95	52	IAMs_20	IAMs_20	20 44 46.5	
TZTN	Tazewell baz=285,SNR=6.8	118.95	52	P	PKiKP	19 57 40.1	+0.1
TKL	Tuckaleechee C comp=Z,3µm,20.0s	118.99	53	IAMs_20	IAMs_20	20 43 08.8	
W52A	Murphy comp=Z,3µm,22.0s	119.01	53	IAMs_20	IAMs_20	20 39 49.2	
W52A	Murphy baz=284,SNR=11	119.01	53	P	PKPdf	19 57 40.2	0.0
F52A	Sundridge baz=293,SNR=7.7	119.02	40	P	PKPdf	19 57 39.6	-0.2
S52A	Salyersville baz=286,SNR=8.9	119.02	50	P	PKPdf	19 57 40.0	-0.1
NB2	NORSAR Subarra comp=Z,12nm,1.4s,baz=39,slow=1.7	119.03	341	PKPdf	PKPdf	19 57 38.6	-0.8
NB2	NORSAR Subarra baz=39,slow=1.7	119.03	341	PKPdf	PKPdf	19 57 38.6	-0.8
NOA	NORSAR Array B comp=Z,0.2nm,0.5s,baz=46,slow=1.9,SNR=8.9	119.03	341	PKP	PKPdf	19 57 39.1	-0.4
NOA	comp=Z,1.8nm,0.9s,baz=34,slow=7.9,SNR=3.4			PP	PP	19 58 50.7	-8.6
NOA	comp=Z,1.8nm,0.9s,baz=224,slow=4.3,SNR=3.7			PKKPbc	PKKPab	20 07 56.4	+0.2
H52A	Wyevale baz=292,SNR=5.3	119.08	42	P	PKPdf	19 57 39.8	-0.1
V52A	Sevierville comp=Z,3µm,21.0s	119.09	52	IAMs_20	IAMs_20	20 42 00.3	
V52A	Sevierville baz=284,SNR=17	119.09	52	P	PKiKP	19 57 40.4	+0.1
LSQQ	Lebel-sur-Quev baz=297	119.10	36	P	PKPdf	19 57 39.3	-0.6
I52A	Shelburne baz=291,SNR=7.0	119.10	43	P	PKPdf	19 57 40.0	-0.1
N52A	McGinn’s Farm, baz=288,SNR=11	119.14	46	P	PKPdf	19 57 40.2	0.0
M52A	Chesterland comp=Z,2µm,21.0s	119.15	46	IAMs_20	IAMs_20	20 47 51.0	
M52A	Chesterland baz=289,SNR=7.2	119.15	46	P	PKPdf	19 57 40.1	-0.2
R52A	Catlettsburg baz=286	119.17	49	P	PKPdf	19 57 40.2	-0.1
Y52A	Lilburn baz=283,SNR=17	119.18	55	P	PKPdf	19 57 40.5	0.0
P52A	Corning baz=287,SNR=13	119.18	48	P	PKPdf	19 57 39.9	-0.4
J52A	Paris baz=291,SNR=6.0	119.19	44	P	PKiKP	19 57 40.5	+0.2
VLDQ	Val d'Or comp=Z,3µm,19.0s	119.23	37	IAMs_20	IAMs_20	20 53 04.5	
T52A	Hallie baz=285,SNR=9.0	119.25	51	P	PKiKP	19 57 40.7	+0.1
E52A	Mattawa baz=294,SNR=7.3	119.25	40	P	PKPdf	19 57 39.9	-0.3
O52A	Adamsville comp=Z,3µm,21.0s	119.25	47	IAMs_20	IAMs_20	20 41 22.0	
O52A	Adamsville baz=288,SNR=5.7	119.25	47	P	PKPdf	19 57 40.4	0.0
Q52A	Bidwell baz=287,SNR=6.5	119.28	49	P	PKPdf	19 57 40.1	-0.4
CSS	Mathiatis comp=Z,3µm,21.0s	119.30	307	IAMs_20	IAMs_20	20 47 51.3	
D53A	Lac Vacive, Po comp=Z,2µm,22.0s	119.52	39	IAMs_20	IAMs_20	21 00 22.0	
D53A	Lac Vacive, Po baz=295,SNR=8.1	119.52	39	P	PKPdf	19 57 40.3	-0.4
T53A	Wise baz=286,SNR=9.3	119.62	51	P	PKiKP	19 57 41.7	+0.3
X53A	Estanollee baz=284,SNR=11	119.65	54	P	PKiKP	19 57 41.7	+0.2
O53A	New Philadelph baz=288,SNR=13	119.67	47	P	PKPdf	19 57 41.3	0.0
M53A	WI Miller and baz=290,SNR=14	119.67	46	P	PKPdf	19 57 41.0	-0.2
R53A	Hurricane comp=Z,3µm,19.0s	119.70	49	IAMs_20	IAMs_20	20 45 36.9	
R53A	Hurricane baz=287	119.70	49	P	PKPdf	19 57 41.2	-0.1
G53A	Haliburton baz=293,SNR=9.8	119.73	41	P	PKPdf	19 57 41.1	-0.1
GO05	Huala comp=Z,3µm,21.0s	119.74	136	IAMs_20	IAMs_20	20 36 17.7	
S53A	Williamson baz=286	119.75	50	P	PKiKP	19 57 41.9	+0.3
V53A	Saluda comp=Z,3µm,21.0s	119.75	52	IAMs_20	IAMs_20	20 44 34.8	
V53A	Saluda baz=285,SNR=14	119.75	52	P	PKiKP	19 57 41.8	+0.1
U53A	Fall Branch baz=285,SNR=20	119.76	52	P	PKiKP	19 57 41.7	+0.1
N53A	Lisbon comp=Z,2µm,21.0s	119.76	46	IAMs_20	IAMs_20	20 59 10.2	
N53A	Lisbon baz=289,SNR=22	119.76	46	P	PKiKP	19 57 41.7	+0.2
GOGA	Godfrey baz=283,SNR=9.4	119.76	55	P	PKPdf	19 57 41.5	-0.1
ALGO	Algonquin Park baz=294,SNR=14	119.77	40	P	PKPdf	19 57 40.8	-0.4
P53A	Whipple baz=288,SNR=17	119.77	48	P	PKPdf	19 57 41.5	0.0
L53A	Girard baz=290	119.79	45	P	PKPdf	19 57 41.5	0.0
E53A	Dumoine, Ponti baz=295,SNR=12	119.84	39	P	PKPdf	19 57 41.2	-0.2
CFR	Carcaliu	119.86	319	⇓P	PKiKP	19 57 42.2	+0.7
Q53A	Leroy baz=287,SNR=8.9	119.86	49	P	PKPdf	19 57 41.5	-0.2
ERPA	Erie comp=Z,2µm,22.0s	119.92	45	IAMs_20	IAMs_20	20 43 49.3	
ERPA	Erie baz=290,SNR=5.7	119.92	45	P	PKiKP	19 57 41.8	+0.1
G54A	Lake Saint Pet baz=294,SNR=11	119.97	40	P	PKPdf	19 57 41.4	-0.3
H53A	Bobcaygeon baz=293,SNR=9.3	119.97	42	P	PKPdf	19 57 41.5	-0.2
TIGA	Tifton baz=282	120.08	57	P	PKiKP	19 57 43.0	+0.6
E54A	Lac Daplat, Po baz=295,SNR=9.1	120.11	39	P	PKPdf	19 57 41.3	-0.6
D54A	Lac Fusel, La baz=296,SNR=12	120.14	38	P	PKPdf	19 57 40.9	-1.0
154A	Montrose comp=Z,3µm,21.0s	120.23	56	IAMs_20	IAMs_20	20 47 11.0	
O54A	Avella baz=289,SNR=21	120.29	47	P	PKiKP	19 57 42.9	+0.3
U54A	Nelsons Funny comp=Z,2µm,19.0s	120.30	51	IAMs_20	IAMs_20	20 42 02.2	
U54A	Nelsons Funny baz=286,SNR=5.7	120.30	51	P	PKiKP	19 57 42.8	+0.1
N54A	Moraine State comp=Z,2µm,18.0s	120.31	46	IAMs_20	IAMs_20	20 47 23.9	
N54A	Moraine State baz=290,SNR=10	120.31	46	P	PKPdf	19 57 42.4	-0.1
S54A	Dingess, Beckl comp=Z,2µm,19.0s	120.33	50	IAMs_20	IAMs_20	20 44 49.8	
S54A	Dingess, Beckl baz=287,SNR=12	120.33	50	P	PKPdf	19 57 42.4	-0.3
Q54A	Coxs Mills baz=288,SNR=20	120.34	48	P	PKPdf	19 57 42.4	-0.1
BOSA	Boshof	120.34	232	*i* P	PKPdf	19 57 43.1	+0.1
BOSA	Boshof comp=Z,9.6nm,0.6s,baz=150,slow=1.7,SNR=35	120.34	232	PKP	PKiKP	19 57 43.3	+0.2
BOSA	comp=Z,6.2nm,0.9s,baz=292,slow=4.3,SNR=6.4			PKKPbc	PKKPbc	20 07 50.3	-0.1
BOSA	Boshof	120.34	232	*i* P	PKPdf	19 57 43.1	+0.1
T54A	Tazewell baz=286,SNR=14	120.34	51	P	PKPdf	19 57 42.5	-0.3
L54A	Sinclairville baz=291,SNR=14	120.35	44	P	PKPdf	19 57 42.1	-0.4
M54A	Oil Creek Stat comp=Z,2µm,21.0s	120.36	45	IAMs_20	IAMs_20	20 45 16.9	
M54A	Oil Creek Stat baz=290,SNR=22	120.36	45	P	PKPdf	19 57 42.4	-0.2
X54A	Belton baz=284,SNR=19	120.38	54	P	PKiKP	19 57 43.0	+0.1
W54A	Cherokee Point baz=285,SNR=9.4	120.39	53	P	PKiKP	19 57 43.0	+0.1
V54A	Nebo baz=285,SNR=14	120.40	52	P	PKiKP	19 57 43.0	+0.1
P54A	Burton baz=289,SNR=14	120.41	47	P	PKPdf	19 57 42.5	-0.2
J54A	Appleton comp=Z,2µm,21.0s	120.43	43	IAMs_20	IAMs_20	20 44 38.6	
J54A	Appleton baz=292	120.43	43	P	PKPdf	19 57 42.4	-0.2
R54A	Victor baz=287,SNR=8.8	120.46	49	P	PKPdf	19 57 42.4	-0.5
VRI	Vrincioaia	120.48	320	⇑P	PKiKP	19 57 43.5	+0.7
HODGE	Hodges comp=Z,2µm,20.0s	120.55	54	IAMs_20	IAMs_20	20 42 55.1	
MEDO	Medina comp=Z,3µm,21.0s	120.60	43	IAMs_20	IAMs_20	20 46 05.0	
K54A	Basiliko Farm, baz=292	120.64	44	P	PKPdf	19 57 42.5	-0.6
BURAR	Bucovina Array	120.64	323	⇓P	PKiKP	19 57 45.2	+2.1
I55A	Frankford baz=294	120.71	42	P	PKPdf	19 57 42.3	-0.7
ISP	Isparta comp=Z,2µm,20.0s	120.72	310	IAMs_20	IAMs_20	20 45 06.9	
JTS	Las Juntas de	120.74	82		PKPdf	19 57 44.1	+0.1
JTS	Las Juntas de comp=Z,2µm,21.0s	120.74	82	IAMs_20	IAMs_20	20 51 27.8	
JTS	Las Juntas de	120.74	82	PKIKP	PKPdf	19 57 44.1	+0.1
JTS	comp=Z,2µm,21.0s			MLR	MLR		
PAULI	Pauline comp=Z,3µm,20.0s	120.75	53	IAMs_20	IAMs_20	20 43 54.5	
WVNY	West Valley, N comp=Z,2µm,19.0s	120.78	44	IAMs_20	IAMs_20	21 00 46.8	
E55A	Montcerf-Lytto baz=296,SNR=12	120.81	39	P	PKPdf	19 57 42.8	-0.4
Q55A	Buckhannon baz=289,SNR=12	120.89	48	P	PKPdf	19 57 43.6	-0.1
F55A	Otter Lake baz=296	120.90	39	P	PKPdf	19 57 43.3	-0.1
H55A	Tweed baz=294,SNR=7.9	120.90	41	P	PKPdf	19 57 43.2	-0.3
U55A	TA2, Sparta baz=286,SNR=15	120.91	51	P	PKPdf	19 57 43.8	0.0
G55A	Calabogie baz=295,SNR=12	120.91	40	P	PKPdf	19 57 43.1	-0.4
P55A	Reedsville baz=289,SNR=10	120.91	47	P	PKPdf	19 57 43.4	-0.3
D55A	Sainte-Anne-du baz=297,SNR=9.9	120.92	38	P	PKPdf	19 57 42.9	-0.5
T55A	Pulaski baz=287,SNR=6.2	120.93	50	P	PKPdf	19 57 43.7	-0.1
Y55A	Saluda baz=284,SNR=12	120.94	54	P	PKiKP	19 57 44.2	+0.3
S55A	Lewisburg baz=288	120.95	49	P	PKPdf	19 57 43.9	0.0
V55A	Taylorsville comp=Z,3µm,22.0s	120.96	52	IAMs_20	IAMs_20	20 42 17.6	
V55A	Taylorsville baz=286,SNR=14	120.96	52	P	PKiKP	19 57 44.2	+0.3
L55A	Hinsdale baz=292,SNR=14	120.97	44	P	PKPdf	19 57 43.5	-0.3
J55A	Hilton comp=Z,3µm,21.0s	120.99	43	IAMs_20	IAMs_20	20 46 24.5	
J55A	Hilton baz=293	120.99	43	P	PKiKP	19 57 43.9	+0.1
MATP	Matopo	120.99	242	*i* P	PKPdf	19 57 40.8	-3.7
MATP	Matopo	120.99	242	*i* P	PKPdf	19 57 40.8	-3.7
X55A	Gracelyn & Ava baz=285,SNR=22	120.99	53	P	PKiKP	19 57 44.3	+0.2
M55A	Ridgway comp=Z,2µm,21.0s	121.00	45	IAMs_20	IAMs_20	20 44 54.0	
M55A	Ridgway baz=291,SNR=12	121.00	45	P	PKPdf	19 57 43.5	-0.3
K55A	Perry baz=292,SNR=9.0	121.02	43	P	PKPdf	19 57 43.1	-0.7
KMSC	Kings Mountain comp=Z,3µm,21.0s	121.05	53	IAMs_20	IAMs_20	20 45 03.3	
KMSC	Kings Mountain baz=286,SNR=19	121.05	53	P	PKiKP	19 57 44.2	0.0
O55A	Ligonier baz=290,SNR=12	121.06	46	P	PKPdf	19 57 44.1	+0.1
R55A	Marlinton comp=Z,2µm,20.0s	121.08	49	IAMs_20	IAMs_20	20 40 39.7	
R55A	Marlinton baz=288,SNR=17	121.08	49	P	PKPdf	19 57 43.9	-0.2
N55A	Marion Center baz=290,SNR=8.2	121.09	46	P	PKPdf	19 57 43.5	-0.5
MLR	Muntele Rosu comp=Z,5.0nm,0.9s,baz=225,slow=7.1,SNR=4.5	121.14	320	PKKPbc	PKKPbc	20 07 46.9	-1.0
MLR	Muntele Rosu	121.14	320	⇑P	PKPdf	19 57 44.2	+0.1
BLA	Blacksburg comp=Z,2µm,22.0s	121.18	50	IAMs_20	IAMs_20	20 42 30.4	
BLA	Blacksburg baz=287,SNR=14	121.18	50	P	PKPdf	19 57 44.1	-0.2
SCHQ	Schefferville comp=Z,7.1nm,0.5s,baz=251,slow=3.6,SNR=33	121.24	27	PKP	PKiKP	19 57 44.4	+0.4
SCHQ	comp=Z,3.6nm,0.8s,baz=316,slow=11,SNR=2.2			PP	PP	19 59 07.5	-7.1
SCHQ	comp=Z,6.4nm,0.7s,baz=172,slow=3.3,SNR=15			PKKPbc	PKKPab	20 07 45.0	-1.7
SCHQ	Schefferville comp=Z,2µm,22.0s	121.24	27	IAMs_20	IAMs_20	21 00 36.1	
DOPR	Dopca	121.28	321	⇓P	PKiKP	19 57 44.4	+0.1
D56A	ZEC Mazanza, M baz=298,SNR=22	121.34	38	P	PKPdf	19 57 43.8	-0.4
E56A	St. Veronique baz=297	121.40	38	P	PKPdf	19 57 43.9	-0.5
M56A	Emporium comp=Z,3µm,22.0s	121.41	45	IAMs_20	IAMs_20	20 58 20.7	
M56A	Emporium baz=292,SNR=9.8	121.41	45	P	PKPdf	19 57 44.4	-0.1
U56A	King comp=Z,2µm,21.0s	121.46	51	IAMs_20	IAMs_20	20 56 47.9	
U56A	King baz=287	121.46	51	P	PKiKP	19 57 45.2	+0.3
X56A	White Oak baz=285,SNR=18	121.46	53	P	PKiKP	19 57 45.2	+0.3
H56A	Elgin baz=295,SNR=9.6	121.48	41	P	PKPdf	19 57 44.4	-0.2
Z56A	Williston baz=284	121.49	55	P	PKiKP	19 57 46.1	+1.0
V56A	Mocksville baz=286,SNR=10	121.53	52	P	PKiKP	19 57 45.1	+0.1
N56A	West Decatur baz=291,SNR=20	121.53	45	P	PKPdf	19 57 44.8	0.0
T56A	Rocky Mt baz=288,SNR=12	121.53	50	P	PKPdf	19 57 44.8	-0.1
Q56A	Snyder Ridge, comp=Z,2µm,21.0s	121.53	48	IAMs_20	IAMs_20	20 49 35.4	
Q56A	Snyder Ridge, baz=289,SNR=7.7	121.53	48	P	PKPdf	19 57 44.9	0.0
K56A	Middlesex baz=293	121.54	43	P	PKPdf	19 57 44.2	-0.6
O56A	Blue Knob Stat comp=Z,2µm,21.0s	121.57	46	IAMs_20	IAMs_20	20 40 58.1	
O56A	Blue Knob Stat baz=290,SNR=14	121.57	46	P	PKPdf	19 57 44.9	-0.1
R56A	Bull Pasture M baz=289,SNR=7.6	121.58	48	P	PKPdf	19 57 44.7	-0.4
L56A	Greenwood baz=292,SNR=10	121.60	44	P	PKPdf	19 57 44.5	-0.4
J56A	Wolcott comp=Z,3µm,20.0s	121.63	42	IAMs_20	IAMs_20	20 44 41.2	
J56A	Wolcott baz=294,SNR=7.0	121.63	42	P	PKPdf	19 57 44.8	-0.1
P56A	Dayton Farm, R baz=290,SNR=15	121.64	47	P	PKPdf	19 57 44.7	-0.3
W56A	Indian Trail baz=286,SNR=9.3	121.65	52	P	PKiKP	19 57 45.4	+0.1
LBTB	Lobatse	121.66	236	*i* P	PKPdf	19 57 44.2	-1.4
LBTB	Lobatse	121.66	236	*i* P	PKPdf	19 57 44.2	-1.4
S56A	Natural Bridge baz=288,SNR=5.6	121.69	49	P	PKPdf	19 57 44.8	-0.4
VOIR		121.73	321	⇑P	PKiKP	19 57 46.2	+0.9
KOLS	Kolonicke sedl	121.73	325	*e*PKIKP	PKiKP	19 57 45.4	+0.3
KOLS	Kolonicke sedl	121.73	325	*e*PKP	PKiKP	19 57 45.4	+0.3
D57A	Chemin Vers le baz=298,SNR=8.9	121.88	37	P	PKPdf	19 57 44.9	-0.4
SSPA	Standing Stone	121.92	46		PKPdf	19 57 45.3	-0.3
SSPA	Standing Stone comp=Z,2µm,20.0s	121.92	46	IAMs_20	IAMs_20	20 50 39.4	
SSPA	Standing Stone baz=291	121.92	46	P	PKPdf	19 57 45.5	-0.1
157A	Early Branch baz=284	121.95	55	P	PKiKP	19 57 46.9	+0.9
TRPA	Tarpa	121.98	324	⇑P	PKPdf	19 57 44.6	-0.8
E57A	Chemin Saint G baz=298,SNR=14	122.01	38	P	PKPdf	19 57 45.3	-0.3
Z57A	Bowman baz=285,SNR=5.8	122.03	55	P	PKPdf	19 57 46.1	+0.1
V57A	Coltrane Farms baz=287,SNR=13	122.07	51	P	PKPdf	19 57 46.1	+0.1
K57A	Scipio Center baz=294,SNR=7.6	122.08	43	P	PKPdf	19 57 45.6	-0.2
G57A	Newington baz=296,SNR=8.6	122.08	40	P	PKPdf	19 57 45.4	-0.3
H57A	Richville baz=296,SNR=8.7	122.10	41	P	PKPdf	19 57 45.2	-0.6
Y57A	Sumter comp=Z,2µm,19.0s	122.10	54	IAMs_20	IAMs_20	21 02 36.1	
Y57A	Sumter baz=286	122.10	54	P	PKiKP	19 57 46.5	+0.3
Q57A	Strasburg baz=290,SNR=9.5	122.11	47	P	PKPdf	19 57 45.9	0.0
W57A	Gilead comp=Z,3µm,20.0s	122.11	52	IAMs_20	IAMs_20	20 46 15.1	
W57A	Gilead baz=286,SNR=18	122.11	52	P	PKiKP	19 57 46.4	+0.2
S57A	Dark Hollow, R baz=289	122.12	49	P	PKPdf	19 57 45.7	-0.4
T57A	Hurt comp=Z,2µm,20.0s	122.14	50	IAMs_20	IAMs_20	20 48 33.6	
T57A	Hurt baz=288,SNR=9.3	122.14	50	P	PKPdf	19 57 46.0	0.0
L57A	Andrews Acres baz=293,SNR=11	122.14	44	P	PKPdf	19 57 45.9	-0.1
J57A	Williamstown baz=294,SNR=8.2	122.15	42	P	PKPdf	19 57 45.7	-0.2
I57A	Carthage baz=295,SNR=14	122.15	41	P	PKPdf	19 57 45.5	-0.4
HUMR	Humele	122.17	320	⇓P	PKPdf	19 57 45.6	-0.3
M57A	Sunshine Farm, comp=Z,2µm,21.0s	122.20	45	IAMs_20	IAMs_20	20 46 10.6	
M57A	Sunshine Farm, baz=292,SNR=22	122.20	45	P	PKPdf	19 57 46.2	+0.1
CRVS	Cervenica-Dubn	122.20	325	*e*PKIKP	PKiKP	19 57 46.6	+0.6
CRVS	Cervenica-Dubn	122.20	325	*e*PKP	PKiKP	19 57 46.6	+0.6
X57A	Johnson Farm, baz=286	122.22	53	P	PKiKP	19 57 46.8	+0.3
P57A	Homestead Farm baz=290,SNR=11	122.24	47	P	PKPdf	19 57 46.1	-0.1
U57A	Blanch baz=288,SNR=9.8	122.25	51	P	PKPdf	19 57 46.3	0.0
ELND	Elena	122.25	318	⇓P	PKiKP	19 57 46.3	0.0
O57A	Amberson baz=291,SNR=19	122.26	46	P	PKPdf	19 57 46.2	0.0
R57A	Stanardsville baz=289,SNR=6.5	122.27	48	P	PKPdf	19 57 46.3	0.0
LATQ	La Tuque baz=300	122.36	36	P	PKPdf	19 57 46.1	-0.1
D58A	Chemin du LacG baz=299,SNR=15	122.44	37	P	PKPdf	19 57 45.9	-0.5
NHSC	New Hope baz=285	122.51	55	P	PKiKP	19 57 47.8	+0.8
DRGR		122.54	323	⇓P	PKPdf	19 57 46.0	-0.7
LONY	Lake Ozonia comp=Z,2µm,20.0s	122.55	40	IAMs_20	IAMs_20	20 45 16.3	
LONY	Lake Ozonia baz=296	122.55	40	P	PKPdf	19 57 46.6	0.0
E58A	La Victoria baz=299,SNR=8.1	122.56	38	P	PKPdf	19 57 46.4	-0.2
DWPF	Disney Wildern baz=281	122.58	61	P	PKiKP	19 57 47.5	+0.2
V58A	Windy Hill, Pi comp=Z,2µm,22.0s	122.61	51	IAMs_20	IAMs_20	20 53 01.3	
V58A	Windy Hill, Pi baz=288,SNR=10	122.61	51	P	PKPdf	19 57 47.1	+0.1
J58A	Remsen baz=295,SNR=12	122.64	42	P	PKPdf	19 57 46.8	0.0
BINY	Binghamton comp=Z,2µm,20.0s	122.65	43	IAMs_20	IAMs_20	20 41 13.3	
BINY	Binghamton baz=294,SNR=7.8	122.65	43	P	PKPdf	19 57 46.9	0.0
G58A	Ormstown baz=297,SNR=6.8	122.65	39	P	PKPdf	19 57 46.4	-0.4
K58A	Earlville comp=Z,3µm,22.0s	122.65	42	IAMs_20	IAMs_20	20 44 42.2	
K58A	Earlville baz=294,SNR=7.4	122.65	42	P	PKiKP	19 57 47.2	0.0
M58A	Price’s Panora baz=293,SNR=9.9	122.65	44	P	PKPdf	19 57 47.1	+0.1
R58A	Rapidan baz=290,SNR=6.2	122.66	48	P	PKPdf	19 57 46.9	-0.1
Q58A	Fox Den Farm,	122.67	47	P	PKPdf	19 57 47.0	0.0

	baz=290,SNR=13						
N58A	Sunbury	122.67	45	IAMs_20	IAMs_20	20 44 39.2	
	comp=Z,3µm,21.0s						
N58A	Sunbury	122.67	45	P	PKPdf	19 57 47.0	0.0
	baz=292,SNR=19						
T58A	Grand View Acr	122.70	50	P	PKPdf	19 57 47.1	0.0
	baz=289,SNR=12						
I58A	Old Forge	122.70	41	P	PKPdf	19 57 46.9	-0.1
	baz=296,SNR=6.2						
Y58A	Scranton	122.71	54	IAMs_20	IAMs_20	20 48 19.3	
	comp=Z,2µm,20.0s						
Y58A	Scranton	122.71	54	P	PKiKP	19 57 47.6	+0.1
	baz=286,SNR=9.0						
W58A	Raeford	122.74	52	P	PKPdf	19 57 47.4	+0.1
	baz=287,SNR=12						
Z58A	St. Stephen	122.75	54	P	PKiKP	19 57 47.8	+0.2
	baz=285,SNR=12						
P58A	Pank, Wackersv	122.76	47	P	PKPdf	19 57 47.0	-0.2
	baz=291,SNR=9.0						
X58A	Rowland	122.79	53	P	PKiKP	19 57 47.9	+0.3
	baz=286,SNR=6.1						
O58A	Lewisberry	122.80	46	P	PKPdf	19 57 47.3	0.0
	baz=292,SNR=20						
L58A	Harry Jones Me	122.80	43	P	PKPdf	19 57 47.3	0.0
	baz=294,SNR=9.9						
S58A	Poland Farm, P	122.85	49	IAMs_20	IAMs_20	20 50 16.4	
	comp=Z,2µm,19.0s						
S58A	Poland Farm, P	122.85	49	P	PKPdf	19 57 47.4	0.0
	baz=289,SNR=11						
R58B	Mineral	122.86	49	IAMs_20	IAMs_20	20 53 05.6	
	comp=Z,2µm,22.0s						
R58B	Mineral	122.86	49	P	PKPdf	19 57 47.2	-0.2
	baz=290,SNR=8.9						
U58A	Oxford	122.86	50	P	PKPdf	19 57 47.6	+0.1
	baz=288,SNR=11						
PLVB	Pleven	122.89	318	⇓P	PKiKP	19 57 47.5	0.0
H58A	Gabriels	122.90	40	P	PKPdf	19 57 47.2	-0.1
	baz=297,SNR=15						
PAGS	Pennsylvania G	122.90	46	IAMs_20	IAMs_20	20 44 04.3	
	comp=Z,2µm,21.0s						
LSZ	Lusaka	122.98	247		PKiKP	19 57 48.7	0.0
LSZ	Lusaka	122.98	247	IAMs_20	IAMs_20	20 45 14.3	
	comp=Z,3µm,22.0s						
LSZ	Lusaka	122.98	247	PKIKP	PKiKP	19 57 48.7	0.0
LSZ				MLR	MLR		
	comp=Z,3µm,22.0s						
NCB	Newcomb	123.07	41	IAMs_20	IAMs_20	20 45 32.1	
	comp=Z,3µm,22.0s						
FRNY	Flat Rock	123.09	39	IAMs_20	IAMs_20	20 54 55.8	
	comp=Z,2µm,22.0s						
H59A	Cadyville	123.11	40	P	PKiKP	19 57 48.0	+0.1
	baz=297						
F59A	Saint Guilaume	123.11	38	P	PKPdf	19 57 47.7	+0.1
	baz=299						
J59A	Piesco	123.11	41	P	PKPdf	19 57 47.7	-0.1
	baz=296,SNR=13						
CBN	Corbin Frederi	123.15	48	IAMs_20	IAMs_20	20 51 22.3	
	comp=Z,2µm,21.0s						
CBN	Corbin Frederi	123.15	48	P	PKiKP	19 57 48.3	+0.1
	baz=290,SNR=5.7						
GZR	Gura Zlata	123.17	321	⇓P	PKPdf	19 57 47.6	-0.3
K59A	Cooperstown	123.17	42	P	PKiKP	19 57 48.1	0.0
	baz=295						
LANS	Liptovska Anna	123.18	327	*e*PKIKP	PKiKP	19 57 48.7	+0.7
LANS	Liptovska Anna	123.18	327	*e*PKP	PKiKP	19 57 48.7	+0.7
O59A	Robesonia	123.25	45	P	PKPdf	19 57 48.3	+0.2
	baz=292,SNR=12						
MVL	Millersville	123.25	46	IAMs_20	IAMs_20	21 02 38.6	
	comp=Z,2µm,21.0s						
L59A	Walton	123.29	43	P	PKPdf	19 57 48.3	+0.1
	baz=295,SNR=5.8						
M59A	Waymart	123.29	44	P	PKiKP	19 57 48.4	0.0
	baz=294,SNR=20						
V59A	Middlesex	123.30	51	P	PKPdf	19 57 48.5	+0.2
	baz=288,SNR=12						
N59A	State Game Lan	123.31	45	IAMs_20	IAMs_20	20 58 29.9	
	comp=Z,2µm,20.0s						
N59A	State Game Lan	123.31	45	P	PKPdf	19 57 48.4	+0.2
	baz=293,SNR=15						
W59A	Clinton	123.32	52	P	PKiKP	19 57 49.0	+0.4
	baz=288,SNR=5.0						
Y59A	Loris	123.32	53	IAMs_20	IAMs_20	20 45 20.4	
	comp=Z,3µm,22.0s						
Y59A	Loris	123.32	53	P	PKiKP	19 57 49.2	+0.6
	baz=286,SNR=5.2						
P59A	Jarrettsville	123.34	46	P	PKPdf	19 57 48.3	+0.1
	baz=292,SNR=8.8						
R59A	King George, V	123.34	48	P	PKiKP	19 57 48.7	+0.1
	baz=290						
I59A	Olmsteadville	123.37	41	P	PKPdf	19 57 48.4	+0.1
	baz=297,SNR=9.8						
SIRR	Siria	123.43	323	⇓P	PKPdf	19 57 48.3	0.0
T59A	Double "B" Far	123.43	50	IAMs_20	IAMs_20	20 39 51.9	
	comp=Z,2µm,18.0s						
T59A	Double "B" Far	123.43	50	P	PKPdf	19 57 48.7	+0.2
	baz=289,SNR=16						
U59A	Littleton	123.45	50	IAMs_20	IAMs_20	20 51 45.5	
	comp=Z,3µm,22.0s						
U59A	Littleton	123.45	50	P	PKiKP	19 57 49.0	+0.1
	baz=289						
OKC	Ostrava-Krasne	123.50	328	*e*PKPDF	PKiKP	19 57 49.0	+0.5
OKC				*e*pPKP	pPKPdf	19 58 03.9	-4.3
OKC	Ostrava-Krasne	123.50	328	*e*PKIKP	PKiKP	19 57 49.0	+0.5
F60A	Warwick	123.56	38	P	PKPdf	19 57 48.5	0.0
	baz=300,SNR=10						
E60A	Ste Agathe de	123.66	37	P	PKPdf	19 57 48.6	0.0
	baz=300,SNR=6.8						
D60A	Saint Jean D'O	123.69	36	P	PKPdf	19 57 48.4	-0.3
	baz=301,SNR=12						
CNNC	Cliffs of the	123.73	52	IAMs_20	IAMs_20	20 52 24.0	
	comp=Z,3µm,20.0s						
I60A	Shoreham	123.73	40	P	PKPdf	19 57 49.0	+0.1
	baz=297,SNR=15						
G60A	Masonville	123.75	39	P	PKPdf	19 57 49.0	0.0
	baz=299						
H60A	Morristown	123.78	39	P	PKPdf	19 57 49.2	+0.2
	baz=298						
BZS	Buzias	123.78	322	⇑P	PKPdf	19 57 48.5	-0.5
N60A	Cedar Hill Far	123.79	44	P	PKPdf	19 57 49.0	-0.1
	baz=294,SNR=14						
O60A	Telford	123.80	45	P	PKiKP	19 57 49.4	0.0
	baz=293,SNR=19						
P60A	Greenville	123.83	46	IAMs_20	IAMs_20	20 46 00.9	
	comp=Z,2µm,20.0s						
P60A	Greenville	123.83	46	P	PKiKP	19 57 49.5	0.0
	baz=293,SNR=12						
Y60A	Bolivia	123.84	53	P	PKiKP	19 57 49.9	+0.2
	baz=287						
VT1	Waterbury	123.85	40	IAMs_20	IAMs_20	20 51 04.8	
	comp=Z,3µm,20.0s						
MORC	Moravsky Berou	123.85	328	⇑P	PKiKP	19 57 49.3	-0.1
MORC	Moravsky Berou	123.85	328	*e*PKP	PKPdf	19 57 49.1	+0.1
MORC				*e*		19 58 04.7	
S60A	Water View	123.86	48	P	PKiKP	19 57 49.9	+0.3
	baz=290,SNR=5.1						
X60A	Albert Glenn T	123.86	52	P	PKiKP	19 57 49.7	0.0
	baz=288,SNR=10						
K60A	Five Rivers En	123.88	42	P	PKiKP	19 57 49.6	+0.1
	baz=296						
VYHS	Vyhne	123.89	326	*e*P	Pdif	19 54 23.1	+0.4
VYHS				*e*		19 57 49.0	
VYHS	Vyhne	123.89	326	*e*PKP	PKPdf	19 57 49.0	-0.1
VYHS	Vyhne	123.89	326	*e*PDIFF	Pdif	19 54 23.1	+0.4
U60A	Pendleton	123.90	50	P	PKPdf	19 57 49.3	-0.1
	baz=289						
J60A	Lant Hill Farm	123.92	41	P	PKPdf	19 57 49.4	+0.2
	baz=297,SNR=7.1						
PSUB	Penn St. - Bra	123.92	45	IAMs_20	IAMs_20	20 41 21.2	
	comp=Z,3µm,22.0s						
W60A	Pink Hill	123.92	52	P	PKPdf	19 57 49.7	+0.2
	baz=288						
L60A	Shokan	123.93	43	P	PKPdf	19 57 49.5	+0.1
	baz=295						
M60A	Port Jervis	123.93	44	P	PKiKP	19 57 49.9	+0.3
	baz=294,SNR=5.7						
D61A	St Aubert, Com	123.97	36	P	PKPdf	19 57 48.9	-0.4
	baz=302						
Q60A	Greensboro	123.99	47	IAMs_20	IAMs_20	21 03 08.2	
	comp=Z,2µm,19.0s						
Q60A	Greensboro	123.99	47	P	PKiKP	19 57 50.2	+0.4
	baz=292						
T60A	Surry	124.00	49	IAMs_20	IAMs_20	20 50 14.7	
	comp=Z,2µm,19.0s						
T60A	Surry	124.00	49	P	PKiKP	19 57 50.3	+0.4
	baz=290						
ODNJ	Ogdensburg	124.05	44	IAMs_20	IAMs_20	20 56 51.4	
	comp=Z,2µm,20.0s						
V60A	Jim Taylor Roa	124.05	51	IAMs_20	IAMs_20	20 48 24.3	
	comp=Z,2µm,20.0s						
V60A	Jim Taylor Roa	124.05	51	P	PKPdf	19 57 49.9	+0.1
	baz=289						
OSTC	Ostas	124.07	329	*e*PKPDF	PKPdf	19 57 49.1	-0.3
OSTC				*e*pPKP	pPKPdf	19 58 00.4	-8.9
OSTC				*e*PKKP	PKKPbc	20 07 36.0	-0.6
OSTC				*e*x	x	20 07 51.5	
OSTC				*e*x	x	20 08 11.2	
KRLC	Kraliky	124.07	329	*e*PKPDF	PKPdf	19 57 49.1	-0.4
KRLC				*e*pPKP	pPKPdf	19 58 00.0	-9.3
KRLC				*e*PKKP	PKKPbc	20 07 35.8	-0.8
KRLC				*e*x	x	20 07 51.3	
KRLC				*e*x	x	20 08 14.9	
KRLC	Kraliky	124.07	329	*e*PKIKP	PKPdf	19 57 49.1	-0.4
MDVR	Moldovita	124.12	321	⇑P	PKPdf	19 57 49.0	-0.8
CHVC	Chvalec	124.13	330	*e*PKPDF	PKiKP	19 57 50.3	+0.5
CHVC				*e*PKKP	PKKPbc	20 07 35.9	-0.4
CHVC				*e*x	x	20 07 50.8	
CHVC				*e*x	x	20 08 11.4	
F61A	St Evariste	124.14	37	P	PKiKP	19 57 50.1	+0.1
	baz=301,SNR=5.7						
VTS	Vitosha	124.14	318	⇓P	PKiKP	19 57 58.1	+7.8
VTS	Vitosha	124.14	318	IAMs_20	IAMs_20	21 01 35.3	
	comp=Z,3µm,21.0s						
DPC	Dobruska-Polom	124.14	329	*e*PKPDF	PKPdf	19 57 49.5	-0.1
DPC				*e*PKKP	PKKPbc	20 07 35.9	-0.4
DPC				*e*x	x	20 08 12.4	
DPC	Dobruska-Polom	124.14	329	*e*PKIKP	PKPdf	19 57 49.5	-0.1
G61A	St-Isidore-de-	124.16	38	P	PKiKP	19 57 50.6	+0.6
	baz=300						
BANR	Banloc	124.19	322	⇓P	PKiKP	19 57 51.4	+1.4
E61A	Lac Etchemin	124.20	37	P	PKiKP	19 57 50.2	+0.1
	baz=301,SNR=22						
UPC	Upice	124.20	329	*e*PKPDF	PKiKP	19 57 50.1	+0.2
UPC				*e*PKKP	PKKPbc	20 07 35.7	-0.3
UPC				*e*x	x	20 07 50.8	
UPC				*e*x	x	20 08 11.0	
UPC	Upice	124.20	329	*e*PKIKP	PKiKP	19 57 50.1	+0.2
BRNJ	Basking Ridge	124.24	44	IAMs_20	IAMs_20	21 00 37.5	
	comp=Z,2µm,22.0s						
K61A	Williamstown	124.27	42	P	PKiKP	19 57 50.5	+0.2
	baz=296,SNR=9.8						
H61A	Lyndonville	124.27	39	P	PKiKP	19 57 50.4	+0.2
	baz=299						
L61A	Hillsdale 1, H	124.29	42	P	PKiKP	19 57 50.7	+0.3
	baz=296						
JAVC	Velka Javorina	124.32	327	*e*PKP	PKiKP	19 57 50.8	+0.5
JAVC				*e*		19 58 06.0	
I61A	Oroboro, Fairl	124.38	40	P	PKiKP	19 57 51.0	+0.5
	baz=298,SNR=5.3						
N61A	South Mountain	124.40	44	P	PKiKP	19 57 51.2	+0.6
	baz=294,SNR=6.1						
LBNH	Lisbon	124.42	39	IAMs_20	IAMs_20	20 48 56.6	
	comp=Z,2µm,20.0s						
LBNH	Lisbon	124.42	39	P	PKiKP	19 57 50.7	+0.2
	baz=299						
J61A	Chester	124.43	41	P	PKiKP	19 57 50.7	+0.1
	baz=298,SNR=5.6						
HNH	Hanover	124.44	40	IAMs_20	IAMs_20	20 44 57.3	
	comp=Z,3µm,21.0s						
W61A	Ground Anchor	124.45	51	P	PKiKP	19 57 51.3	+0.4
	baz=289						
P61A	Hammonton	124.48	46	IAMs_20	IAMs_20	20 58 58.2	
	comp=Z,2µm,19.0s						
U61A	Possum Corner	124.49	50	IAMs_20	IAMs_20	20 54 56.8	
	comp=Z,2µm,20.0s						
M61A	Granite Spring	124.53	43	P	PKiKP	19 57 50.8	0.0
	baz=295,SNR=12						
KSCT	Kent School, K	124.54	43	IAMs_20	IAMs_20	20 45 40.3	
	comp=Z,2µm,19.0s						
SRO	Srobarova	124.56	326	*e*PKIKP	PKPdf	19 57 50.3	-0.1
SRO	Srobarova	124.56	326	*e*PKP	PKPdf	19 57 50.3	-0.1
PAL	Palisades	124.56	44	IAMs_20	IAMs_20	20 47 03.9	
	comp=Z,2µm,19.0s						
PAL	Palisades	124.56	44	P	PKiKP	19 57 50.9	+0.1
	baz=295,SNR=8.8						
V61A	Roper	124.57	51	IAMs_20	IAMs_20	20 51 15.0	
	comp=Z,2µm,21.0s						
S61A	Accomac	124.60	48	IAMs_20	IAMs_20	20 41 35.5	
	comp=Z,3µm,20.0s						
R61A	Willards	124.60	47	IAMs_20	IAMs_20	20 41 30.6	
	comp=Z,2µm,21.0s						
VRAC	Vranov	124.63	328	⇑P	PKPdf	19 57 50.3	-0.2
VRAC	Vranov	124.63	328	*e*PKP	PKPdf	19 57 50.2	-0.3
VRAC				*e*		19 58 06.0	
D62A	Allapoint, All	124.69	35	P	PKPdf	19 57 50.5	-0.2
	baz=303						
H62A	Milan	124.73	39	IAMs_20	IAMs_20	20 49 34.0	
	comp=Z,2µm,19.0s						
H62A	Milan	124.73	39	P	PKiKP	19 57 51.3	+0.2
	baz=300						
L61B	Northampton	124.76	42	P	PKiKP	19 57 51.2	-0.1
	baz=297,SNR=6.9						
G62A	West of Eustis	124.80	38	IAMs_20	IAMs_20	20 51 58.5	
	comp=Z,2µm,21.0s						
G62A	West of Eustis	124.80	38	P	PKPdf	19 57 51.1	+0.1
	baz=301						
MODS	Modra-Piesok	124.81	327	*e*PKIKP	PKPdf	19 57 50.1	-0.8
MODS	Modra-Piesok	124.81	327	*e*PKP	PKPdf	19 57 50.1	-0.8
KRUC	Moravsky	124.88	328	*e*PKP	PKPdf	19 57 50.8	-0.2
KRUC				*e*		19 58 06.4	
PVCC	Panska Ves	124.91	330	*e*PKPDF	PKiKP	19 57 51.4	+0.1
PVCC				*e*pPKP	pPKPdf	19 58 06.6	-4.2
PVCC	Panska Ves	124.91	330	*e*PKIKP	PKiKP	19 57 51.4	+0.1
PVCC				*e*		19 58 06.6	
K62A	Royalston	124.95	41	P	PKiKP	19 57 51.7	0.0
	baz=297						
I62A	Tamworth	124.96	40	IAMs_20	IAMs_20	20 51 56.1	
	comp=Z,2µm,19.0s						
I62A	Tamworth	124.96	40	P	PKiKP	19 57 52.1	+0.5
	baz=299						
J62A	Henniker	124.97	40	P	PKiKP	19 57 51.9	+0.2
	baz=298						
BRG	Berggiesshubel	125.00	331	*e*PKP	PKPdf	19 57 51.2	+0.1
	comp=Z,16nm,1.1s						
BRG				*e*pPKP	pPKPdf	19 58 05.0	-6.0
	comp=Z,11nm,1.2s						
BRG				SS	SS	20 16 34.0	+3.8
BRG	Berggiesshubel	125.00	331	*e*PKIKP	PKPdf	19 57 51.2	+0.1
BRG				SS	SS	20 16 34.0	+3.8
BRG				pmax	pmax		
	comp=Z,17nm,1.1s						
BRG				pmax	pmax		
	comp=Z,11nm,1.2s						
SANT	Santorini	125.02	310	IAMs_20	IAMs_20	20 47 53.6	
	comp=Z,3µm,22.0s						
M62A	Hamden	125.06	43	P	PKPdf	19 57 51.2	-0.3
	baz=296						
V62A	Hyde County Ai	125.12	51	IAMs_20	IAMs_20	20 51 41.7	
	comp=Z,2µm,21.0s						
V62A	Hyde County Ai	125.12	51	P	PKiKP	19 57 52.7	+0.5
	baz=290						
CLL	Collm	125.17	332	*i* PKPdf	PKiKP	19 57 52.3	+0.5
	comp=Z,13nm,1.0s						
CLL				*i* pPKPdf	pPKPdf	19 58 08.1	-3.2
CLL				*e*		19 58 52.0	
CLL				*e*PP	PP	19 59 42.0	+0.9
CLL				*e*(sPP)		20 01 00.0	
CLL				*e*(SKPdf)		20 01 17.0	
CLL				*e*sPPP		20 02 42.0	
CLL				*e*PS	PS	20 09 40.0	-2.9
CLL				*e*PPS	PPS	20 11 06.0	
CLL				*e*SKKSacr		20 15 00.0	
CLL				*e*SS	SS	20 16 42.0	+10
CLL	Collm	125.17	332	*i* PKIKP	PKiKP	19 57 52.3	+0.5
CLL				*i*		19 58 08.1	
CLL				pmax	pmax		
	comp=Z,13nm,1.0s						
GOPC	GO Pecny, Ondr	125.19	329	*e*PKPDF	PKiKP	19 57 52.4	+0.5
GOPC	GO Pecny, Ondr	125.19	329	*e*PKIKP	PKiKP	19 57 52.4	+0.5
ATAH	Atahualpa	125.20	103	PKP	PKiKP	19 57 54.6	+1.1
	comp=Z,26nm,1.0s,baz=173,slow=2.1,SNR=16						
TREC	Trest	125.22	329	*e*PKPDF	PKPdf	19 57 51.5	-0.1
TREC				*e*pPKP	pPKPdf	19 58 06.3	-5.2
TREC	Trest	125.22	329	*e*PKIKP	PKPdf	19 57 51.5	-0.1
D63A	Stockholm	125.26	35	P	PKPdf	19 57 51.4	-0.4
	baz=304						
PRU	Pruhonice	125.27	330	*e*PKPDF	PKPdf	19 57 50.3	-1.4
PRU				*e*pPKP	pPKPdf	19 58 02.4	-9.1
PRU				*e*PKKP	PKKPbc	20 07 31.7	-0.1
PRU				*e*x	x	20 07 47.8	
PRU				*e*x	x	20 08 03.5	
PRU	Pruhonice	125.27	330	*e*PKIKP	PKPdf	19 57 50.3	-1.4
F63A	Nahmakanta, Br	125.41	37	IAMs_20	IAMs_20	21 01 33.4	
	comp=Z,3µm,21.0s						
F63A	Nahmakanta, Br	125.41	37	P	PKPdf	19 57 52.3	+0.2
	baz=302						
G63A	Kingsbury	125.41	37	P	PKPdf	19 57 52.3	+0.2
	baz=301						
K63A	Dunstable	125.41	41	P	PKiKP	19 57 53.0	+0.5
	baz=298						
J63A	Strafford	125.42	40	P	PKPdf	19 57 52.2	+0.1
	baz=299						
E63A	Oxbow	125.42	36	IAMs_20	IAMs_20	20 52 48.6	
	comp=Z,2µm,21.0s						
E63A	Oxbow	125.42	36	P	PKPdf	19 57 52.2	+0.2
	baz=303						
NNA	Nana	125.46	109	PKP	PKPdf	19 57 53.4	+0.3
	comp=Z,8.5nm,0.6s,baz=290,slow=4.1,SNR=8.5						
NNA	Nana	125.46	109	IAMs_20	IAMs_20	20 45 06.5	
	comp=Z,2µm,20.0s						
HRV	Adam Dziewonsk	125.47	41	P	PKiKP	19 57 53.1	+0.4
	baz=298						
PQI	Presque Isle	125.51	35	IAMs_20	IAMs_20	20 47 06.0	
	comp=Z,2µm,21.0s						
PKME	Peaks-Kenny Pk	125.52	37	IAMs_20	IAMs_20	20 53 07.6	
	comp=Z,3µm,22.0s						
PKME	Peaks-Kenny Pk	125.52	37	P	PKiKP	19 57 52.7	0.0
	baz=302						
M63A	Gales Ferry	125.65	43	P	PKiKP	19 57 53.1	+0.1
	baz=297						
WVL	Waterville	125.67	38	IAMs_20	IAMs_20	20 52 05.4	
	comp=Z,3µm,21.0s						
L63A	North Scituate	125.73	42	P	PKPdf	19 57 53.0	+0.2
	baz=298						
E64A	Bridgewater	125.76	35	P	PKPdf	19 57 52.8	+0.1
	baz=304						
F64A	Sherman	125.76	36	IAMs_20	IAMs_20	21 01 28.8	
	comp=Z,2µm,21.0s						
F64A	Sherman	125.76	36	P	PKPdf	19 57 52.7	-0.1
	baz=303						
CONA	Conrad Observa	125.84	327	*i* PKiKP	PKPdf	19 57 53.0	0.0
	comp=Z,8.0nm,0.8s						
G64A	Maxfield	125.85	37	P	PKiKP	19 57 53.3	0.0
	baz=302						
H64A	Troy	125.89	38	P	PKPdf	19 57 53.2	+0.2
	baz=302						
I64A	Boothbay	126.01	39	P	PKPdf	19 57 53.4	+0.1
	baz=301						
NKC	Novy Kostel	126.14	331	*e*PKPDF	PKiKP	19 57 53.9	+0.1
NKC				*e*pPKP	pPKPdf	19 58 06.5	-6.7
NKC	Novy Kostel	126.14	331	*e*PKIKP	PKiKP	19 57 53.9	+0.1
M64A	Tiverton	126.14	42	P	PKPdf	19 57 53.9	+0.3
	baz=298						
L64A	Middleborough	126.21	41	P	PKiKP	19 57 54.0	-0.1
	baz=298						
KHC	Kasperske Hory	126.30	329	*e*PKPDF	PKPdf	19 57 53.4	-0.3
KHC				*e*pPKP	pPKPdf	19 58 08.5	-5.1
KHC				*e*x	x	19 58 20.0	
KHC				*e*x	x	20 07 58.2	
KHC	Kasperske Hory	126.30	329	*e*PKIKP	PKPdf	19 57 53.4	-0.3
KHC				*e*		19 58 20.0	
GERES	GERESS Array B	126.42	329	PKP	PKPdf	19 57 54.1	+0.1
	comp=Z,11nm,1.0s,baz=67,slow=1.7,SNR=42						
ARSA	Arzberg	126.43	327	*i* PKiKP	PKPdf	19 57 53.9	-0.1
	comp=Z,3.0nm,0.9s						
H65A	Eastbrook	126.45	37	P	PKPdf	19 57 54.3	+0.2
	baz=302						
OTAV	Otavalo	126.46	94	*e*P	PKiKP	19 57 56.2	+0.1
G65A	Princeton	126.59	36	IAMs_20	IAMs_20	20 40 54.7	
	comp=Z,3µm,21.0s						
G65A	Princeton	126.59	36	P	PKPdf	19 57 54.3	0.0
	baz=304						
GO02	Mina Guanaco	126.63	128	IAMs_20	IAMs_20	20 58 27.1	
	comp=Z,2µm,19.0s						
PB10	IPOC Station P	126.66	125	IAMs_20	IAMs_20	20 46 45.0	
	comp=Z,2µm,20.0s						
MOA	Molln	126.74	328	*i* PKiKP	PKPdf	19 57 54.3	-0.3
	comp=Z,7.2nm,1.2s						
BLY	Banja Luka	126.91	323	⇓P	PKiKP	19 57 55.6	+0.1
EMMW	East Machias	126.92	37	IAMs_20	IAMs_20	20 52 50.6	
	comp=Z,2µm,18.0s						
SOKA	Soboth	127.04	326	*i* PKPdf	PKPdf	19 57 54.9	-0.4
	comp=Z,16nm,1.2s,SNR=5.7						
GR1C	Gorgona, Isla	127.06	91	*e*P	PKPdf	19 57 55.8	-0.3
CRES	Cresnjev	127.30	325	*i* PKPdf	PKPdf	19 57 55.9	+0.2
PB04	IPOC Station P	127.53	124	IAMs_20	IAMs_20	20 49 40.4	
	comp=Z,3µm,22.0s						
KBA	Koelnbreinsper	127.71	327	*i* PKPdf	PKPdf	19 57 55.3	-1.4
	comp=Z,8.9nm,1.3s						
LMN	Caledonia Moun	127.80	34	IAMs_20	IAMs_20	20 58 09.6	
	comp=Z,3µm,22.0s						
MYKA	Terra Mystica	127.83	327	*i* PKPdf	PKPdf	19 57 56.1	-0.7
	comp=Z,8.5nm,1.7s						
BBAC	Balboa, Cauca	127.87	92	*e*P	PKPdf	19 57 57.9	-0.1
PIZC	Pizarro, Choco	128.02	89	*e*P	PKiKP	19 57 58.9	+0.3
ABTA	Abfaltersbach	128.37	328	*i* PKPdf	PKPdf	19 57 56.9	-0.9
	comp=Z,23nm,1.3s,SNR=7.6						
LVC	Limon Verde	128.41	125	IAMs_20	IAMs_20	20 46 21.6	
	comp=Z,2µm,20.0s						
LVC	Limon Verde	128.41	125	*e*P	PKPdf	19 57 58.6	-0.4
WATA	Walderalm	128.48	329	*i* PKPdf	PKPdf	19 57 57.5	-0.6
	comp=Z,20nm,1.1s,SNR=6.4						
POPC	Popayan, Colom	128.49	92	*e*P	PKPdf	19 57 59.0	-0.2
WTTA	Wattenberg	128.49	329	*i* PKiKP	PKPdf	19 57 58.2	0.0
	comp=Z,32nm,1.2s,SNR=9.1						
SOTA	Rioblanco	128.51	92	*e*P	PKPdf	19 57 60.0	+0.4
MOTA	Moosalm	128.71	329	*i* PKiKP	PKPdf	19 57 58.4	-0.1
	comp=Z,22nm,1.0s,SNR=5.8						
SQTA	Sankt Quirin	128.74	329	*i* PKiKP	PKPdf	19 57 58.4	-0.2
	comp=Z,24nm,1.3s						
PCON	Cinco Dias	128.75	92	*e*P	PKiKP	19 58 00.9	+0.2
MEM	Membach	128.78	335	PKPdf	PKPdf	19 57 58.2	-0.1
MEM				PKiKP	PKiKP	19 57 59.0	0.0
RETA	Reutte	128.79	329	*i* PKiKP	PKPdf	19 57 58.9	+0.3
	comp=Z,11nm,1.2s						
YOTC	Yotoco, Valle	128.96	90	*e*P	PKPdf	19 57 59.6	-0.3
PB11	IPOC Station P	129.10	122	IAMs_20	IAMs_20	20 46 09.2	
	comp=Z,3µm,21.0s						
FETA	Feichten	129.12	329	*i* PKPdf	PKPdf	19 57 58.0	-1.4
	comp=Z,20nm,1.1s						
HAL	Halifax	129.22	35	IAMs_20	IAMs_20	20 41 14.1	
	comp=Z,2µm,20.0s						
BCLA	Clavier	129.22	335	PKiKP	PKPdf	19 57 59.5	+0.3
DBBC	Dabeiba	129.28	86	*e*P	PKiKP	19 58 01.8	+0.6
BGES	Gesves	129.34	335	PKiKP	PKPdf	19 57 59.7	+0.3
DAVA	Damuels	129.37	330	*i* PKiKP	PKiKP	19 58 00.3	-0.3
	comp=Z,16nm,1.2s						
FLOC	Florencia	129.40	93	*e*P	PKPdf	19 58 01.0	+0.3
CBOC	Ciudad Bolivar	129.42	88	*e*P	PKPdf	19 58 01.2	+0.3
MNMC	Minye Minye	129.43	121	IAMs_20	IAMs_20	20 49 31.8	
	comp=Z,3µm,19.0s						
BMRD	Maredsous	129.53	336	PKiKP	PKiKP	19 58 00.3	-0.3
GARC	Garzon, Huila	129.63	92	*e*P	PKiKP	19 58 01.9	-0.2
GARC				*e*P	PKPdf	19 58 02.4	+1.0
GBN	Guysborough	129.90	33	IAMs_20	IAMs_20	20 54 55.8	
	comp=Z,2µm,21.0s						
HELC	Santa Helena	129.92	87	*e*P	PKPdf	19 58 01.9	-0.2
UREC	San Jos de Ur	129.98	85	*e*P	PKPdf	19 58 01.6	-0.1
GUY2C	Guyana, Caldas	130.02	88	*e*P	PKPdf	19 58 02.6	+0.2
ORTC	Ortega, Tolima	130.04	90	*e*P	PKPdf	19 58 01.8	-0.1
PTLC	Puerto Leguiza	130.07	95	*e*P	PKPdf	19 58 02.1	+0.2
SJCC	San Jacinto, C	130.36	82	*e*P	PKiKP	19 58 03.2	-0.1
NORC	Norcasia	130.54	88	*e*P	PKPdf	19 58 02.6	-0.3
TSUM	Tsumeb	130.88	238	*i* P	PKPdf	19 57 57.2	-6.2
TSUM	Tsumeb	130.88	238	*i* P	PKPdf	19 57 57.2	-6.2
TSUM	Tsumeb	130.88	238		PKPdf	19 58 02.7	-0.7
TSUM	Tsumeb	130.88	238	IAMs_20	IAMs_20	20 52 45.7	
	comp=Z,2µm,20.0s						
PTBC	PUERTO BERRIO,	131.00	87	*e*P	PKPdf	19 58 02.9	-0.8
ROSC	El Rosal	131.04	89	PKP	PKiKP	19 58 05.0	-0.1
	comp=Z,69nm,0.5s,baz=151,slow=3.6,SNR=30						
ROSC				SKPbc	SKPbc	20 01 22.7	-0.1
	comp=Z,5.9nm,0.5s,baz=53,slow=20,SNR=3.2						
ROSC	El Rosal	131.04	89	*e*P	PKiKP	19 58 05.0	-0.1
MACC	Macarena, Meta	131.26	93	*e*P	PKiKP	19 58 04.9	-0.3
SMRC	Santa Marta, M	131.28	81	*e*P	PKPdf	19 58 04.6	+0.4
SPBC	San Pablo de B	131.34	88	*e*P	PKPdf	19 58 04.3	-0.1
SMLC	San Martn de	131.45	84	*e*P	PKPdf	19 58 04.4	0.0
CHIC	Chingaza	131.60	89	*e*P	PKPdf	19 58 05.3	0.0
BRRC	Barranca, Sant	131.76	86	*e*P	PKPdf	19 58 01.0	-4.1
LPAZ	La Paz	131.89	118	PKhKP	PKPpre	19 57 53.9	
	comp=Z,1.2nm,0.4s,baz=310,slow=3.6,SNR=7.4						
LPAZ				PKP	PKiKP	19 58 06.8	-0.3
	comp=Z,17nm,1.0s,baz=306,slow=0.9,SNR=12						
LPAZ				SKPbc	SKPbc	20 01 25.6	-0.5
	comp=Z,2.7nm,0.7s,baz=242,slow=4.6,SNR=3.6						
LPAZ	La Paz	131.89	118	*e*P	PKiKP	19 58 07.4	+0.4
OCAC	Ocana	132.18	85	*e*P	PKiKP	19 58 06.8	-0.4

BARC	Barichara	132.27	87	eP	PKPdf	19 58 05.4	-1.0
RUSC	La Rusia	132.33	88	eP	PKPdf	19 58 06.7	-0.1
PAMC	Pamplona, Colo	132.78	86	eP	PKiKP	19 58 08.7	-0.1
ITQB	Itaqui	133.14	141	eP	PKiKP	19 58 08.5	+0.1
URIC	Uribia, Colomb	133.45	80	eP	PKPdf	19 58 08.9	+0.7
SDV	Santo Domingo	134.85	84	PKP	PKPdf	19 58 11.3	+0.2
	comp=Z,112nm,0.7s,baz=258,slow=1.0,SNR=67						
SDV				SKPbc	SKPbc	20 01 35.6	0.0
	comp=Z,5.0nm,0.8s,baz=99,slow=4.6,SNR=3.2						
SDV	Santo Domingo	134.85	84	eP	PKPdf	19 58 11.4	+0.2
CPUP	Villa Florida	134.96	137	PKP	PKPdf	19 58 10.6	-0.2
	comp=Z,9.3nm,1.0s,baz=256,slow=2.3,SNR=11						
CPUP				SKPbc	SKPbc	20 01 35.0	-0.4
	comp=Z,1.5nm,0.6s,baz=288,slow=5.7,SNR=3.2						
CPUP	Villa Florida	134.96	137	eP	PKiKP	19 58 11.8	-0.4
BBSR	BB Station	134.97	50	IAMs_20	IAMs_20	20 43 27.3	
	comp=Z,2µm,20.0s						
KEST	Kesra	136.91	318	PKP	PKPdf	19 58 13.9	-0.4
	comp=Z,6.3nm,0.8s,baz=164,slow=1.7,SNR=3.6						
SJG	San Juan	138.34	70	PKhKP	PKPpre	19 58 08.5	
	comp=Z,6.6nm,0.4s,baz=85,slow=1.9,SNR=6.0						
SJG				PKP	PKPdf	19 58 17.2	0.0
	comp=Z,98nm,1.0s,baz=316,slow=2.2,SNR=21						
SJG	San Juan	138.34	70	eP	PKPdf	19 58 17.4	+0.2
SJG	San Juan	138.34	70	IAMs_20	IAMs_20	20 52 08.1	
	comp=Z,2µm,21.0s						
SAML	Samuel	139.15	111	eP	PKPdf	19 58 19.6	+0.8
PTGB	Pitanga	139.50	141	eP	PKiKP	19 58 20.7	-1.0
AQDB	Aquidauana	139.85	132	eP	PKPdf	19 58 20.5	+0.6
TRCB	Terra Rica	140.49	138	eP	PKPdf	19 58 22.3	+1.1
PBRG	Braganca	141.06	338	ePKPdf	PKPdf	19 58 21.1	-0.5
SMRT	St. Maarten	141.21	69	IAMs_20	IAMs_20	20 57 01.2	
	comp=Z,1µm,20.0s						
SKI	Saint Kitts	141.68	70	IAMs_20	IAMs_20	20 51 56.7	
	comp=Z,2µm,21.0s						
ESDC	Sonseca Array	141.72	333	PKP	PKPdf	19 58 21.9	-0.9
	comp=Z,1.4nm,0.7s,baz=20,slow=4.1,SNR=4.1						
MVO	Moncorvo	141.73	338	ePKPdf	PKPdf	19 58 22.7	-0.2
FRTB	Fartura	142.06	142	eP	PKPdf	19 58 24.8	+0.8
PVIS	Viseu	142.44	338	ePKPdf	PKPdf	19 58 23.8	-0.3
ANWB	Willy Bob	142.49	69	IAMs_20	IAMs_20	20 54 18.2	
	comp=Z,1µm,19.0s						
SALV	Santo Antonio	142.54	126	eP	PKPdf	19 58 26.5	+1.6
MTE	Manteigas	142.58	338	ePKPdf	PKPdf	19 58 25.1	+0.7
PCBR	Castelo Branco	143.04	337	ePKPdf	PKPdf	19 58 25.9	+0.8
PCAS	Casmilo, Conde	143.24	338	ePKPdf	PKPdf	19 58 25.0	-0.5
PMRV	Marv??o	143.37	337	ePKPdf	PKPbc	19 58 22.9	-0.1
DLPL	La Plaine	143.47	73	IAMs_20	IAMs_20	21 15 31.3	
	comp=Z,2µm,19.0s						
PTOM	Tomar	143.59	338	ePKPdf	PKPbc	19 58 23.6	0.0
FDF	Fort de France	143.66	74	IAMs_20	IAMs_20	21 00 07.7	
	comp=Z,2µm,21.0s						
PMTG	Montargil	144.00	337	ePKPdf	PKPdf	19 58 27.4	+0.6
BB19B	Bebedouro	144.38	140	eP	PKPbc	19 58 27.1	+0.6
PMAFR	Mafra	144.49	338	ePKPdf	PKPdf	19 58 29.6	+1.9
PTGA	Pitinga	144.53	100	PKP	PKPab	19 58 27.0	0.0
	comp=Z,81nm,0.5s,baz=249,slow=4.4,SNR=139						
PTGA	Pitinga	144.53	100		PKPab	19 58 27.1	0.0
PTGA	Pitinga	144.53	100	eP	PKPab	19 58 27.0	0.0
PBEJ	Beja	144.76	336	ePKPdf	PKPab	19 58 27.2	+0.1
PNCL	Nicolau / Gran	144.95	337	ePKPdf	PKPdf	19 58 28.5	0.0
CLDB	Colider	145.02	119	eP	PKPbc	19 58 27.6	-1.1
MESJ	Messejana	145.06	336	ePKP	PKPbc	19 58 28.0	-0.2
PCVE	Castro Verde	145.17	336	ePKPdf	PKPdf	19 58 29.0	+0.1
PVAQ	Vaqueiros	145.23	335	ePKPdf	PKPdf	19 58 29.2	+0.2
ESAR	Angra dos Reis	145.26	148	eP	PKPdf	19 58 30.0	+0.5
PBDV	Barranco-do-Ve	145.46	335	ePKPdf	PKPab	19 58 30.3	+0.5
PTEO	Sao Teotonio	145.52	337	ePKPdf	PKPab	19 58 30.2	+0.3
ARAG	Araguaiana, MT	145.69	130	eP	PKPbc	19 58 30.8	0.0
MORF	Marmelete	145.69	336	ePKP	PKPdf	19 58 29.0	-0.9
MORF	Marmelete	145.69	336	ePKPdf	PKPab	19 58 31.1	+0.4
PFVI	Vila Bisbo	145.91	336	ePKPdf	PKiKP	19 58 35.4	+1.1
TAM	Tamanrasset	146.23	302	IAMs_20	IAMs_20	21 18 10.2	
	comp=Z,2µm,21.0s						
H07S1	FLORES T-PHASE	146.64	9	ePKP	PKiKP	19 58 36.6	+0.8
IPMB	Ipameri, GO	146.80	137	eP	PKPdf	19 58 33.1	+0.8
PGRA	Graciosa	147.34	4	ePKP	PKiKP	19 58 38.7	+1.5
MDT	Midelt	147.45	327	P	PKPbc	19 58 36.5	+0.9
	SNR=8.2						
ROSA	Rosais	147.63	5	ePKP	PKPab	19 58 41.3	+3.3
ADH	Angra Heroismo	147.76	3	ePKP	PKPab	19 58 40.4	+1.9
PICO	Pico	147.83	5	ePKP	PKPab	19 58 41.1	+2.2
PCAN	Candelaria	147.86	5	ePKP	PKPab	19 58 41.0	+2.0
BDFB	Brasilia	148.54	134	PKP	PKPdf	19 58 35.3	0.0
	comp=Z,29nm,0.9s,baz=67,slow=1.5,SNR=20						
BDFB				PKPbc	PKPbc	19 58 39.1	+0.2
	comp=Z,29nm,0.9s,baz=258,slow=0.4,SNR=20						
GRON	Grota Negra	148.70	1	ePKP	PKiKP	19 58 41.0	+0.9
CMLA	Cha da Macela	148.70	1	ePKP	PKPab	19 58 41.5	-0.9
PDA	Ponta Delgada	148.72	1	ePKP	PKPab	19 58 44.1	+1.7
PSMN	Pico do Norte,	149.46	360	ePKP	PKiKP	19 58 41.5	-0.2
PSMA	Santa Maria	149.47	360	ePKP	PKiKP	19 58 43.0	+1.3
TZRR	Tazzarine	149.52	325	P	PKiKP	19 58 42.0	-0.1
	SNR=5.9						
ZGR	Zagora	150.04	325	P	PKiKP	19 58 43.0	-0.3
	SNR=11						
OUZM	OUZ	150.08	327	P	PKiKP	19 58 43.0	-0.3
	SNR=8.3						
SJMB	Sao Joao De Ma	150.52	148	eP	PKPdf	19 58 38.3	+0.1
TTIG	Tnine Tigouga,	151.25	329	P	PKiKP	19 58 46.0	+0.2
	SNR=6.0						
MDP	Montagnes des	152.60	91	PKP	PKPdf	19 58 42.0	+0.5
	comp=Z,61nm,1.0s,baz=259,slow=2.8,SNR=6.6						
MDP				PKPbc	PKiKP	19 58 49.1	+0.3
	comp=Z,66nm,0.5s,baz=277,slow=3.3,SNR=62						
PMAR	Madeira	152.64	345	ePKPbc	PKiKP	19 58 50.1	+1.5
TOC2	Torodi Ar. Sit	152.70	286	IAMs_20	IAMs_20	21 16 54.5	
	comp=Z,2µm,22.0s						
TOC3	Torodi Ar. Sit	152.70	286	IAMs_20	IAMs_20	21 16 54.6	
	comp=Z,2µm,22.0s						
TOB2	Torodi Ar. Sit	152.71	286	IAMs_20	IAMs_20	21 16 55.8	
	comp=Z,2µm,22.0s						
TOB3	Torodi Ar. Sit	152.72	286	IAMs_20	IAMs_20	21 20 03.0	
	comp=Z,2µm,21.0s						
TOA2	Torodi Ar. Sit	152.72	286	IAMs_20	IAMs_20	21 16 44.0	
	comp=Z,2µm,22.0s						
TOA0	Torodi Ar. Sit	152.72	286	IAMs_20	IAMs_20	21 16 44.2	
	comp=Z,2µm,22.0s						
TOC4	Torodi Ar. Sit	152.72	286	IAMs_20	IAMs_20	21 16 56.2	
	comp=Z,2µm,22.0s						
TORD	Torodi Ar. Bea	152.72	286	PKP	PKPdf	19 58 40.8	-0.8
	comp=Z,10.0nm,1.0s,baz=41,slow=1.6,SNR=30						
TORD				PKPbc	PKiKP	19 58 49.2	+0.3
	comp=Z,27nm,0.7s,baz=40,slow=3.0,SNR=45						
TORD				PKPab	PKPab	19 59 00.0	+0.3
	comp=Z,42nm,0.8s,baz=82,slow=3.8,SNR=7.6						
TORD				PP	PP	20 02 32.0	-1.0
	comp=Z,2.5nm,0.9s,baz=65,slow=5.4,SNR=3.5						
TOA3	Torodi Ar. Sit	152.72	286	IAMs_20	IAMs_20	21 16 43.2	
	comp=Z,2µm,22.0s						
TOB4	Torodi Ar. Sit	152.74	286	IAMs_20	IAMs_20	21 16 43.5	
	comp=Z,2µm,22.0s						
TOC7	Torodi Ar. Sit	152.74	286	IAMs_20	IAMs_20	21 16 43.5	
	comp=Z,2µm,22.0s						
SMTB	Santa Maria do	153.01	124	eP	PKPdf	19 58 43.7	+1.5
NBPN	Ponto Novo - B	157.29	139	eP	PKPdf	19 58 48.1	+0.1
NBLA	Lagarto - SE	158.68	144	eP	PKPdf	19 58 50.1	+0.5
KIC	Kosan Boka	159.73	271	ePKP2	PKPdf	19 58 49.5	-1.4
	comp=Z,42nm,1.4s						
DBIC	Dimbokro	159.85	272	PKP	PKPdf	19 58 50.3	-0.7
	comp=Z,7.7nm,1.1s,baz=79,slow=5.2,SNR=4.6						
DBIC				PKPab	PKPab	19 59 30.6	+0.1
	comp=Z,42nm,1.0s,baz=74,slow=5.5,SNR=14						
DBIC	Dimbokro	159.85	272		PKPab	19 59 30.8	+0.4
DBIC	Dimbokro	159.85	272	PKP2	PKPab	19 59 30.8	+0.4
NBTA	Tacaratu-PE	159.96	140	eP	PKPdf	19 58 52.5	+1.3
TIC	Toumodi	160.01	272	ePKP2	PKPdf	19 58 50.7	-0.5
LIC	Lamto	160.02	271	ePKP2	PKPdf	19 58 50.5	-0.7
	comp=Z,32nm,1.0s						
NBAN	Anadia - AL	160.62	145	eP	PKPdf	19 58 53.6	+1.7
NBMA	Muriti-CE	160.77	135	eP	PKPdf	19 58 52.8	+0.7
NBPB	Pedra_Branca-C	161.37	129	eP	PKPdf	19 58 54.2	+1.5
NBLI	Livramento-PB	162.00	139	eP	PKPdf	19 58 54.2	+0.8
NBMO	Morrinhos-CE	162.30	122	eP	PKPdf	19 58 53.8	+0.1
NBPA	Parau_RN	163.06	135	eP	PKPdf	19 58 54.9	+0.5
NBCL	Cascavel-CE	163.19	128	eP	PKPdf	19 58 54.9	+0.4
RCBR	Riachuelo	163.84	138	PKP	PKPdf	19 58 55.2	0.0
	comp=Z,12nm,1.0s,baz=244,slow=3.1,SNR=6.1						
RCBR	Riachuelo	163.84	138	eP	PKPdf	19 58 56.5	+1.4

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*INET **02** 19:41:36.6, 12°.48N×87°.66W, h60^{km}, ML3.8*
*SNET **02** 19:41:36.7±0.8, 12°.56N×87°.86W, h55^{km}±23^{km}, ML3.8*
*UCR **02** 19:41:36.7±0.9, 12°.57N×87°.84W, h61^{km}±21^{km}, ML3.9*

ISC 02 19:41:36.0±4.3**, 12°.5N**±0°.3×**87°.80W**±0°.09**, h56**^{km}±44^{km}**,**
n15, σ0^{s}**.29**/26**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.77	358	eP	Pn	19 41 50.8	-0.4
CNCH				eS	Sn	19 42 02.6	+0.5
CNCH				IAML		19 42 06.3	
	comp=Z,4µm,0.3s						
CNCH	Conchagua	0.77	358	eP	Pn	19 41 50.8	-0.4
CNCH				eS	Sn	19 42 02.6	+0.5
CNCH				IAML		19 42 06.3	
	comp=Z,4µm,0.3s						
BLLM	Bellamira	1.03	336	eP	Pn	19 41 54.3	0.0
BLLM				eS	Sn	19 42 07.8	-0.1
BLLM	Bellamira	1.03	336	eP	Pn	19 41 54.3	0.0
BLLM				eS	Sn	19 42 07.8	-0.1
LCY	Lacayo	1.04	332	eP	Pn	19 41 54.6	+0.1
LCY				eS	Sn	19 42 08.4	+0.3
LCY	Lacayo	1.04	332	eP	Pn	19 41 54.6	+0.1
LCY				eS	Sn	19 42 08.4	+0.3
PACA	Pacayal	1.09	332	eP	Pn	19 41 55.0	-0.3
PACA				eS	Sn	19 42 09.4	0.0
PACA				IAML		19 42 17.8	
	comp=Z,2µm,0.3s						
PACA	Pacayal	1.09	332	eP	Pn	19 41 55.0	-0.3
PACA				eS	Sn	19 42 09.4	0.0
PACA				IAML		19 42 17.8	
	comp=Z,2µm,0.3s						
TECA	Tecapa	1.20	325	eP	Pn	19 41 56.5	-0.3
TECA				eS	Sn	19 42 12.1	-0.2
TECA	Tecapa	1.20	325	eP	Pn	19 41 56.5	-0.3
TECA				eS	Sn	19 42 12.1	-0.2
TGUH	Tegucigalpa,Un	1.63	18	eP	Pn	19 42 02.5	-0.1
TGUH	Tegucigalpa,Un	1.63	18	eP	Pn	19 42 02.5	-0.1
LFRS	El Faro	1.66	312	eP	Pn	19 42 02.8	-0.1
LFRS				eS	Sn	19 42 23.0	-0.2
LFU	La Fuente	1.78	314	eP	Pn	19 42 04.9	+0.4
LFU	La Fuente	1.78	314	eP	Pn	19 42 04.9	+0.4

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*SJA **02** 19:48:07.2±1.1, 21°.21S×67°.50W, h195^{km}±8^{km}, ML3.5, MW3.4*
*NEIC **02** 19:48:07.3±2.2, 21°.17S±0°.06×67°.26W±0°.10, h175^{km}±8^{km}, mb4.4/4, Error ellipse: s-maj=13.3km s-min=8.5km az=93.0*
*IDC **02** 19:48:07.5±1.1, 21°.18S×67°.31W, h171^{km}±10^{km}, mb3.8/4, mb1 3.8/8, mb1mx3.5/33, mbtmp4.1/8, Error ellipse: s-maj=25.2km s-min=11.6km az=106.0*
*SCB **02** 19:48:08.8±2.1, 21°.23S×67°.47W, h200^{km}±12^{km}, ML3.6/9, Error ellipse: s-maj=5.8km s-min=5.0km az=0.0*
*GUC **02** 19:48:09.3±0.6, 21°.18S×67°.73W, h208^{km}±6^{km}, ML4.1*
ISC 02 19:48:07.5±0.7**, 21°.20S**±0°.03×**67°.47W**±0°.03**, h186**^{km}±6^{km}**,**
n80, σ**1^{s}.43**/128**, mb4.2**/5**, 11C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCB	Mochara	1.71	92	P	Pn	19 48 43.5	+1.0
MOCB				S	Sn	19 49 08.6	-1.0
	150nm,0.4s						
PB09	IPOC Station P	1.75	250	⇑eP	Pn	19 48 43.8	+1.2
PB09				iS	Sn	19 49 10.2	+0.4
PB09	IPOC Station P	1.75	250	iP	Pn	19 48 44.0	+1.3
PB09				IAML		19 49 11.9	
	comp=Z,145nm,0.6s						
PB01	IPOC Station P	1.89	274	eP	Pn	19 48 44.6	+0.6
PB01				iS	Sn	19 49 11.2	-0.9
PB01				IAML		19 49 14.5	
	comp=E,460nm,0.3s						
PB01	IPOC Station P	1.89	274	P	Pn	19 48 44.3	+0.4
PB01				S	Sn	19 49 11.0	-1.1
PB01				AML	AML	19 49 13.3	
	comp=E,132nm,0.4s						
PB01	IPOC Station P	1.89	274		Pn	19 48 44.5	+0.6
PB01	IPOC Station P	1.89	274	eP	Pn	19 48 44.6	+0.6
PB01				eS	Sn	19 49 12.8	+0.7
PB08	IPOC Station P	1.89	303	⇑iP	Pn	19 48 45.4	+1.1
PB08				iS	Sn	19 49 13.2	+0.5
PB08				IAML		19 49 16.5	
	comp=E,463nm,0.6s						
PB08	IPOC Station P	1.89	303	P	Pn	19 48 44.9	+0.6
PB08				S	Sn	19 49 12.7	0.0
PB08				AML	AML	19 49 13.9	
	comp=E,219nm,0.5s						
PB08	IPOC Station P	1.89	303	iP	Pn	19 48 45.6	+1.3
PB08				iS	Sn	19 49 13.7	+1.0
LVC	Limon Verde	1.94	223	P	Pn	19 48 45.7	+1.0
	comp=E,5.5nm,0.3s,baz=33,slow=7.4,SNR=133						
LVC				S	Sn	19 49 14.0	+0.3
	comp=E,5.9nm,0.3s,baz=57,slow=10.0,SNR=5.4						
LVC	Limon Verde	1.94	223		Pn	19 48 45.8	+1.1
LVC	Limon Verde	1.94	223	eP	Pn	19 48 45.8	+1.1
LVC				iS	Sn	19 49 14.9	+1.2
YJA	Yavi	2.07	119	P	Pn	19 48 46.6	+0.4
YJA	Yavi	2.07	119	iP	Pn	19 48 47.3	+1.2
YJA				IAML		19 48 47.7	
	comp=Z,171nm,0.1s						
YJA				iS	Sn	19 49 15.3	-0.9
GO01	Chusmiza	2.22	313	⇑iP	Pn	19 48 48.6	+0.7
GO01				iS	Sn	19 49 19.6	+0.4
GO01				IAML		19 49 25.2	
	comp=N,794nm,0.1s						
GO01	Chusmiza	2.22	313		Pn	19 48 48.6	+0.7
PB02	IPOC Station P	2.26	266	⇑iP	Pn	19 48 48.4	+0.4
PB02				iS	Sn	19 49 18.2	-1.1
PB02				IAML		19 49 20.6	
	comp=E,904nm,0.6s						
PB02	IPOC Station P	2.26	266	P	Pn	19 48 48.4	+0.4
PB02				S	Sn	19 49 18.3	-1.1
PB02				AML	AML	19 49 19.6	
	comp=E,228nm,0.5s						
PB02	IPOC Station P	2.26	266	eP	Pn	19 48 48.8	+0.8
PB02				iS	Sn	19 49 18.7	-0.7
PB03	IPOC Station P	2.28	248	⇑iP	Pn	19 48 48.9	+0.6
PB03				iS	Sn	19 49 18.8	-1.1
PB03				IAML		19 49 20.0	
	comp=E,652nm,0.3s						
PB03	IPOC Station P	2.28	248	eP	Pn	19 48 48.9	+0.6
PB03				iS	Sn	19 49 19.2	-0.8
PB07	IPOC Station P	2.31	256	⇓eP	Pn	19 48 49.0	+0.4
PB07				iS	Sn	19 49 19.3	-1.2
PB07				IAML		19 49 20.0	
	comp=E,583nm,0.3s						
PB07	IPOC Station P	2.31	256	eP	Pn	19 48 49.1	+0.5
PB07				iS	Sn	19 49 19.6	-0.9
PB06	IPOC Station P	2.46	232	eP	Pn	19 48 51.0	+0.8
PB06				iS	Sn	19 49 23.5	-0.1
PB06				IAML		19 49 25.2	
	comp=E,535nm,0.2s						
PB06	IPOC Station P	2.46	232	P	Pn	19 48 50.7	+0.4
PB06				S	Sn	19 49 22.7	-0.9
PB06				AML	AML	19 49 24.8	
	comp=E,202nm,0.4s						
PB06	IPOC Station P	2.46	232	eP	Pn	19 48 51.0	+0.8
PB06				eS	Sn	19 49 23.7	+0.1
PB06				IAML		19 49 26.3	
	comp=Z,246nm,0.2s						
PB11	IPOC Station P	2.49	305	⇑iP	Pn	19 48 51.0	+0.3
PB11				iS	Sn	19 49 22.7	-1.5
PB11				IAML		19 49 25.2	
	comp=N,1µm,0.2s						
PB11	IPOC Station P	2.49	305	P	Pn	19 48 50.6	-0.1
PB11				S	Sn	19 49 22.5	-1.7
PB11				AML	AML	19 49 25.9	
	comp=N,178nm,0.6s						
PB11	IPOC Station P	2.49	305		Pn	19 48 50.8	+0.1
PB11	IPOC Station P	2.49	305	iP	Pn	19 48 51.1	+0.4
PB11				iS	Sn	19 49 23.7	-0.6
PATCX	Punta Patache	2.53	278	⇑iP	Pn	19 48 51.4	+0.4
PATCX				iS	Sn	19 49 23.5	-1.3
PATCX				IAML		19 49 24.8	
	comp=N,835nm,0.2s						
PATCX	Punta Patache	2.53	278	eP	Pn	19 48 51.5	+0.4
PATCX				iS	Sn	19 49 23.9	-0.9
TA01	Diego Aracena	2.61	283	⇑iP	Pn	19 48 51.7	-0.1
TA01				iS	Sn	19 49 24.3	-2.0
TA01				IAML		19 49 25.2	
	comp=E,732nm,0.2s						
PB15	IPOC Station P	2.73	222	eP	Pn	19 48 54.4	+0.9
PB15				iS	Sn	19 49 29.4	+0.2
PB15	IPOC Station P	2.73	222	eP	Pn	19 48 54.5	+1.1
PB15				iS	Sn	19 49 30.5	+1.2
PB04	IPOC Station P	2.73	245	eP	Pn	19 48 53.3	-0.1
PB04				iS	Sn	19 49 27.3	-1.9
PB04				IAML		19 49 31.8	
	comp=N,429nm,0.2s						
PB04	IPOC Station P	2.73	245	iP	Pn	19 48 54.3	+0.8
PB04				iS	Sn	19 49 28.1	-1.1
PB04				IAML		19 49 31.5	
	comp=Z,295nm,0.1s						
HJA	Humahuaca	2.77	137	iP	Pn	19 48 55.8	+1.7
HJA				eS	Sn	19 49 31.2	+0.8
MNMC	Minye Minye	2.86	315	⇑iP	Pn	19 48 56.0	+0.9
MNMC				iS	Sn	19 49 32.0	-0.2
MNMC				IAML		19 49 34.5	
	comp=N,919nm,0.2s						
MNMC	Minye Minye	2.86	315	P	Pn	19 48 56.0	+0.9
MNMC				S	Sn	19 49 31.3	-0.9
MNMC				AML	AML	19 49 33.6	
	comp=N,140nm,0.6s						
MNMC	Minye Minye	2.86	315		Pn	19 48 56.0	+0.9
MNMCX	Minye Minye	2.86	315	eP	Pn	19 48 56.1	+1.0
MNMCX				iS	Sn	19 49 32.8	+0.6
PSGC	Pisagua	2.95	302	⇑iP	Pn	19 48 55.8	-0.2
PSGC				iS	Sn	19 49 31.4	-2.3
PSGC				IAML		19 49 34.5	
	comp=N,303nm,0.2s						
PSGC	Pisagua	2.95	302	P	Pn	19 48 55.4	-0.6
PSGC				S	Sn	19 49 30.9	-2.8
PSGC				AML	AML	19 49 34.6	
	comp=N,195nm,0.7s						
PSGCX	Pisagua	2.95	302	eP	Pn	19 48 55.9	-0.1
PSGCX				iS	Sn	19 49 32.0	-1.7
PB05	IPOC Station P	3.02	236	iP	Pn	19 48 57.6	+0.7
PB05				iS	Sn	19 49 33.2	-2.1
PB10	IPOC Station P	3.67	230	P	Pn	19 49 04.5	-0.1
PB10				S	Sn	19 49 45.4	-4.0
PB10				AML	AML	19 49 48.3	
	comp=N,214nm,0.3s						
PB10	IPOC Station P	3.67	230	Pn	Pn	19 49 04.8	+0.2
PB10	IPOC Station P	3.67	230	eP	Pn	19 49 04.9	+0.3
PB10				iS	Sn	19 49 46.0	-3.4
AZAP	Zapla	3.75	144	iP	Pn	19 49 06.2	+0.4
AZAP				iS	Sn	19 49 50.1	-1.5
AZAP				IAML		19 49 53.4	
	comp=Z,84nm,0.4s						
ASTB	Santa Barbara	3.91	135	eP	Pn	19 49 08.4	+0.6
ASTB				iS	Sn	19 49 51.9	-3.2
SLA	San Lorenzo	3.95	153	P	Pn	19 49 09.5	+1.1
SLA	San Lorenzo	3.95	153	iP	Pn	19 49 10.0	+1.7
SLA				IAML		19 49 11.2	
	comp=Z,24nm,0.3s						
SLA				iS	Sn	19 49 56.5	+0.4
PB14	IPOC Station P	4.35	218	iP	Pn	19 49 13.9	+0.3
BBOE	La Paz, Chanca	4.38	354	P	Pn	19 49 16.6	+2.3
GO02	Mina Guanaco	4.40	206	⇑iP	Pn	19 49 14.6	+0.3
GO02				eS	Sn	19 50 04.6	-2.0
GO02	Mina Guanaco	4.40	206		Pn	19 49 14.5	+0.3
BBOD	La Paz, Gloria	4.66	347	P	Pn	19 49 19.7	+1.9
LPAZ	La Paz	4.92	353	P	Pn	19 49 22.6	+1.3
	comp=Z,5.7nm,0.3s,baz=146,slow=5.3,SNR=129						
LPAZ				S	Sn	19 50 18.3	-0.8
	baz=14,slow=18,SNR=1.4						
LPAZ	La Paz	4.92	353	P	Pn	19 49 22.5	+1.3
AHML	Horco Molle	5.90	161	P	Pn	19 49 33.5	+0.2
AHML	Horco Molle	5.90	161	iP	Pn	19 49 35.2	+1.9
GO03	Copiap	6.85	201	Pn	Pn	19 49 43.9	-1.9
SIV	San Ignacio	7.98	51	P	Pn	19 49 58.3	-2.3
	comp=Z,2.7nm,0.3s,baz=266,slow=9.6,SNR=43						
SIV				S	Sn	19 51 22.6	-7.7
	comp=Z,0.5nm,0.3s,baz=308,slow=19,SNR=5.1						
SIV	San Ignacio	7.98	51	P	Pn	19 49 59.8	-0.8
GO04	Tololo Observa	9.43	198	Pn	Pn	19 50 16.7	-3.0
SAML	Samuel	12.86	19	Pn	Pn	19 51 02.5	-1.3
PLCA	Paso Flores	19.65	187	P	Pn	19 52 24.0	-1.8
	comp=Z,0.2nm,0.3s,baz=25,slow=11,SNR=8.7						
PLCA	Paso Flores	19.65	187	P	Pn	19 52 24.1	-1.7
GO09	Cerro Castillo	30.26	186	P	P	19 54 00.7	-0.1
JTS	Las Juntas de	35.69	330	P	P	19 54 47.6	-0.7
JTS				IAmb	IAmb	19 54 51.0	
	comp=Z,19nm,1.4s						
PDAR	Pinedale Array	74.53	329	P	P	19 59 27.9	+2.0
	comp=Z,0.4nm,0.4s,baz=125,slow=9.3,SNR=5.5						
ULM	Lac du Bonnet	75.44	342	P	P	19 59 31.8	+1.1
	comp=Z,2.2nm,0.5s,baz=166,slow=5.9,SNR=5.0						
ULM	Lac du Bonnet	75.44	342	P	P	19 59 31.2	+0.5
ULM				IAmb	IAmb	19 59 32.6	
	comp=Z,5.7nm,1.1s						
TORD	Torodi Ar. Bea	75.99	70	P	P	19 59 35.0	+0.4
	comp=Z,6.4nm,0.9s,baz=251,slow=5.6,SNR=5.2						
YKA	Yellowknife Ar	91.35	340	P	P	20 00 53.5	+1.9
	comp=Z,0.9nm,0.5s,baz=132,slow=4.7,SNR=14						
ZALV	Zalesovo Beam	141.10	26	PKP	PKiKP	20 07 16.8	-1.3
	comp=Z,0.9nm,0.5s,baz=294,slow=6.6,SNR=3.8						
MKAR	Makanchi Array	144.60	37	PKP	PKPdf	20 07 22.9	+1.0
	comp=Z,1.3nm,0.4s,baz=327,slow=2.9,SNR=33						
SONM	Songino Array	152.97	9	PKPbc	PKiKP	20 07 44.8	+1.8
	comp=Z,0.4nm,0.6s,baz=212,slow=1.2,SNR=3.1						

IDC 02 19:52:49.2±4.0**, 3°.68S**×**148°.92E, h0**^{km}**, mb3.7**/3**,**
mb1 4.0/3**, mb1mx3.5**/31**, mbtmp3.7**/3**, Error ellipse:**
s-maj=130.3km s-min=50.1km az=112.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.53	220	P	P	19 57 39.2	-1.0
	2.1nm,0.9s,baz=44,slow=11,SNR=6.1						
ASAR	Alice Springs	24.60	215	P	P	19 58 11.5	+0.1
	0.9nm,1.0s,baz=51,slow=8.6,SNR=3.1						
FITZ	Fitzroy Crossi	26.92	236	P	P	19 58 33.1	+0.7
	2.7nm,1.0s,baz=60,slow=8.0,SNR=5.9						
TORD	Torodi Ar. Bea	146.28	288	PKPbc	PKPdf	20 12 31.9	0.0
	0.2nm,0.2s,baz=71,slow=0.2,SNR=6.0						

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*IDC **02** 19:59:54.0±0.9, 32°.23N×40°.27W, h0^{km}, mb4.1/21, mb1 4.3/21, mb1mx4.0/58, mbtmp4.1/21, MS5.2/2, Ms1 5.2/2, ms1mx3.8/62, Error ellipse: s-maj=27.1km s-min=16.8km az=179.0*
ISC 02 19:59:56.2±0.9**, 32°.3N**±0°.2×**40°.3W**±0°.1**, h14**^{km}**, n29,**
σ**0^{s}.87**/22**, mb4.1**/21**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	42.80	107	P	P	20 07 53.4	-0.4
	4.7nm,1.0s,baz=303,slow=7.3,SNR=8.0						
GERES	GERESS Array B	43.29	51	P	P	20 07 57.5	0.0
	0.5nm,0.8s,baz=254,slow=8.1,SNR=4.8						
NOA	NORSAR Array B	43.89	33	P	P	20 08 01.9	-0.2
	1.9nm,0.9s,baz=254,slow=8.1,SNR=3.9						
ULM	Lac du Bonnet	44.40	311	P	P	20 08 04.8	-1.5
	0.9nm,0.4s,baz=81,slow=6.0,SNR=3.1						
VRAC	Vranov	45.20	51	LR	LR	20 23 46.3	
	comp=Z,2µm,20.4s,baz=304,slow=32						
H10N2	ASCENSION HYDR	46.84	144	T	T	20 58 16.5	
	baz=329,slow=75,SNR=12						
H10N3	ASCENSION HYDR	46.84	144	T	T	20 58 27.9	
	baz=329,slow=75,SNR=12						
H10N1	ASCENSION HYDR	46.85	144	T	T	20 58 22.3	
	baz=329,slow=75,SNR=13						
H10S3	ASCENSION HYDR	47.72	145	T	T	20 59 21.0	
	baz=251,slow=74,SNR=13						
H10S2	ASCENSION HYDR	47.73	145	T	T	20 59 24.3	
	baz=329,slow=74,SNR=13						
FINES	FINESS Array B	51.02	34	P	P	20 08 58.2	+0.7
	7.4nm,1.0s,baz=243,slow=9.2,SNR=5.7						
MLR	Muntele Rosu	51.84	55	P	P	20 09 03.5	-0.6
	15nm,1.2s,baz=176,slow=1.4,SNR=5.1						
AKASG	Malin Array Be	53.23	48	P	P	20 09 13.8	-0.3
	3.5nm,0.7s,baz=277,slow=6.3,SNR=16						
PDAR	Pinedale Array	54.55	302	P	P	20 09 24.3	+0.1
	3.2nm,0.9s,baz=74,slow=6.7,SNR=8.6						
BRTR	Keskin Array B	58.72	60	P	P	20 09 54.0	+0.2
	1.1nm,0.9s,baz=255,slow=4.8,SNR=4.2						
INK	Inuvik	61.63	335	P	P	20 10 12.9	-0.2
	3.1nm,1.0s,baz=78,slow=5.9,SNR=3.1						
NVAR	Mina Array Bea	62.18	300	P	P	20 10 18.0	+0.5
	1.4nm,1.0s,baz=81,slow=5.6,SNR=2.5						
KBZ	Khabaz	63.97	53	P	P	20 10 27.3	-1.7
	2.7nm,1.0s,baz=297,slow=6.8,SNR=4.0						
ILAR	Eielson Array	67.92	334	P	P	20 10 54.6	+0.5
	0.9nm,1.0s,baz=32,slow=5.3,SNR=4.9						
AKTO	Aktyubinsk	70.72	42	P	P	20 11 12.5	+0.8
	1.7nm,0.6s,baz=282,slow=9.3						
NRIK	Noril'sk	71.82	17	P	P	20 11 20.0	+2.0

	4.9nm,0.6s,baz=289,slow=5.9,SNR=4.6						
BVAR	Borovoye Array	75.96	36	P	P	20 11 43.3	+0.8
	0.8nm,0.8s,baz=308,slow=3.6,SNR=4.4						
PLCA	Paso Flores	77.83	203	P	P	20 11 53.5	+0.4
	3.5nm,1.1s,baz=63,slow=9.0,SNR=4.3						
KURBB	Kurchatov Arra	81.41	34	P	P	20 12 12.2	-0.4
	1.4nm,0.9s,baz=315,slow=5.5,SNR=5.7						
ZALV	Zalesovo Beam	81.93	29	P	P	20 12 16.4	+1.1
	1.5nm,0.8s,baz=274,slow=7.3,SNR=7.1						
MKAR	Makanchi Array	85.84	35	P	P	20 12 35.7	+0.3
	0.9nm,1.1s,baz=332,slow=4.1,SNR=4.5						
SUR	Sutherland	86.35	132	LR	LR	20 44 09.5	
	comp=Z,2μm,21.4s,baz=172,slow=31						
SONM	Songino Array	94.85	22	P	P	20 13 17.2	-0.7
	0.6nm,0.9s,baz=318,slow=2.0,SNR=4.9						
ASAR	Alice Springs	170.02	32	PKP	PKPdf	20 20 04.0	0.0
	1.1nm,1.0s,baz=64,slow=2.2,SNR=4.2						

IDC 02 20:01:28.7±4.5,3°.07S×148°.57E,h0^{km},mb3.4/3, mb1 3.7/3,mb1mx3.2/43,mbtmp3.4/3,Error ellipse: s-maj=163.4km s-min=48.1km az=111.0,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.77	219	P	P	20 06 21.5	-0.8
	1.2nm,0.9s,baz=44,slow=9.9,SNR=3.8						
ASAR	Alice Springs	24.91	213	P	P	20 06 54.3	+0.7
	0.4nm,0.9s,baz=52,slow=8.3,SNR=4.0						
FITZ	Fitzroy Crossi	26.98	235	P	P	20 07 12.3	0.0
	1.2nm,0.8s,baz=41,slow=11,SNR=2.8						
TORD	Torodi Ar. Bea	145.76	289	PKPbc	PKPdf	20 21 09.8	-0.6
	0.6nm,1.0s,baz=60,slow=3.5,SNR=2.8						

*NIED **02** 20:11:00,27°.40N×127°.40E,h110^{km},Mw6.5 Best double couple: $M_0$5.81000×10^{18} NP1:ϕ_s14.00000°, δ80.00000°,λ-33.00000°. NP2:ϕ_s111.00000°,δ58.00000°, λ-168.00000°.*

*TAP **02** 20:11:18.4,26°.73N×128°.00E,h197^{km}±1^{km},ML7.7,C*

*BGR **02** 20:11:19.6±0.0,27°.14N×127°.66E,h110^{km},mb7.0,Ms6.0*

*MOS **02** 20:11:20.5±1.1,27°.51N×127°.35E,h110^{km},mb6.2/56, MS6.0/33,Error ellipse: s-maj=5.4km s-min=3.4km az=106.4*

*BJI **02** 20:11:20.6±0.0,27°.41N×127°.34E,h110^{km},mB6.7/72, mb6.2/78*

*KEA **02** 20:11:21.4±0.0,27°.20N×126°.60E,h96^{km},mB6.3/1*

*JMA **02** 20:11:22.9±0.2,27°.38N×127°.40E,h116^{km}±3^{km},M6.4*

JMA Felt IV J1.

*IDC **02** 20:11:22.1±0.3,27°.51N×127°.33E,h109^{km}±2^{km},mb5.6/66, mb1 5.6/69,mb1mx5.6/70,mbtmp5.9/69,MS5.6/37, Ms1 5.6/37,ms1mx5.4/60,Error ellipse: s-maj=6.2km s-min=4.7km az=64.0*

*NEIC **02** 20:11:23.4±2.0,27°.43N±0°.06×127°.37E±0°.07, h119^{km}±1^{km},mb6.3/345,Mwb6.4/65,Mwc6.5/74,Mww6.5, Mwc6.5(GCMT),Error ellipse: s-maj=10.8km s-min=9.8km az=95.0,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-2.58; $M_{\theta\theta}$0.10; $M_{\phi\phi}$2.48; $M_{r\theta}$-2.38; $M_{\theta\phi}$-1.55; $M_{\phi r}$-3.24; Fault plane solution: $M_0$5.00000×10^{18} NP1: ϕ_s14.11000°,δ73.71000°,λ-61.89000°. NP2:ϕ_s131.81000°, δ32.16000°,λ-148.20000°. Principal axes: T 4.1026, Plg24.0000°, Azm83.0000°; N 1.4636, Plg27.0000°, Azm186.0000°; P -5.5663, Plg53.0000°, Azm318.0000°;*

*GCMT **02** 20:11:25.4±0.0,27°.34N×127°.46E,h125^{km},MW6.5/173, Moment Tensor Solution. s171,c458; s173,c740; Duration: 4s.3 Moment tensor: Scale 10^{18}Nm; M_{rr}-2.69±.02; $M_{\theta\theta}$-1.47±.03; $M_{\phi\phi}$4.16±.03; $M_{r\theta}$-2.40±.02; $M_{\theta\phi}$-3.86±.03; $M_{\phi r}$-3.28±.02; Best double couple: $M_0$6.68700×10^{18} NP1:ϕ_s117.00000°,δ50.00000°, λ-155.00000°. NP2:ϕ_s10.00000°,δ71.00000°, λ-43.00000°. Principal axes: T 6.5480, Plg13.0000°, Azm68.0000°; N 0.2770, Plg44.0000°, Azm171.0000°; P -6.8250, Plg43.0000°, Azm325.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **02** 20:11:25,27°.35N×127°.46E,h128^{km},Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-2.79; $M_{\theta\theta}$-1.46; $M_{\phi\phi}$4.25; $M_{r\theta}$-2.44; $M_{\theta\phi}$-3.97; $M_{\phi r}$-3.40; Fault plane solution: $M_0$6.87000×10^{18} NP1:ϕ_s117.00000°, δ50.00000°,λ-155.00000°. NP2:ϕ_s10.00000°,δ71.00000°, λ-43.00000°. Principal axes: T 6.7328, Plg13.0000°, Azm68.0000°; N 0.2757, Plg44.0000°, Azm171.0000°; P -7.0086, Plg43.0000°, Azm325.0000°;*

*NEIC **02** 20:11:26,27°.22N×127°.48E,h130^{km},Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-2.76; $M_{\theta\theta}$-0.83; $M_{\phi\phi}$3.58; $M_{r\theta}$-1.91; $M_{\theta\phi}$-3.94; $M_{\phi r}$-2.55; Fault plane solution: $M_0$6.02000×10^{18} NP1:ϕ_s113.00000°, δ53.00000°,λ-151.00000°. NP2:ϕ_s6.00000°,δ68.00000°, λ-40.00000°. Principal axes: T 6.0842, Plg9.0000°, Azm62.0000°; N -0.1327, Plg45.0000°, Azm161.0000°; P -5.9515, Plg44.0000°, Azm324.0000°;*

*NEIC **02** 20:11:35.5,27°.44N×127°.91E,h107^{km},Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-3.18; $M_{\theta\theta}$-1.02; $M_{\phi\phi}$4.20; $M_{r\theta}$-2.20; $M_{\theta\phi}$-4.11; $M_{\phi r}$-3.41; Fault plane solution: $M_0$6.91000×10^{18} NP1:ϕ_s115.84000°, δ49.11000°,λ-152.17000°. NP2:ϕ_s6.77000°,δ69.33000°, λ-44.40000°. Principal axes: T 6.8798, Plg12.0000°, Azm66.0000°; N 0.0583, Plg42.0000°, Azm167.0000°; P -6.9381, Plg45.0000°, Azm323.0000°;*

ISC 02 20:11:22.7±0.2,27°.42N±0°.02×127°.33E±0°.02,h119^{km}±1^{km}, h120^{km}:pP-P,n2235,σ1s.74/2856,mb6.2/434,135C-221D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIH	Iheya	0.69	124	⇓P	Pn	20 11 41.4	-0.4
JIH				S	Sn	20 11 55.6	-0.7
JAGN	Aguni-jima	0.83	185	⇓P	Pn	20 11 42.7	-0.4
JAGN				eS	Sn	20 11 58.1	-0.4
JOW	Kunigami	1.03	125	⇓eP	Pn	20 11 44.4	-0.6
	baz=65						
JOW	Kunigami	1.03	125	⇓P	Pn	20 11 44.2	-0.7
JOW				S	Sn	20 12 00.1	-1.6
JOW	Kunigami	1.03	125	P	Pn	20 11 44.4	-0.6
	3μm,0.3s,baz=155,slow=12						
JOW				S	Sn	20 12 00.3	-1.4
	14μm,0.3s,baz=67,slow=27,SNR=44						
JYRO	Yoronjima	1.08	111	⇓P	Pn	20 11 44.7	-0.7
JYRO				eS	Sn	20 12 00.0	-2.5
JNTH	Nagotoyohara	1.09	145	⇓P	Pn	20 11 45.1	-0.5
JNTH				S	Sn	20 12 01.9	-1.0
JOKE	Okinoerabujima	1.11	93	⇓P	Pn	20 11 45.2	-0.5
JOKE				S	Sn	20 12 01.7	-1.4
JKE	Kume jima 2	1.20	204	P	Pn	20 11 46.4	-0.3
JKE				S	Sn	20 12 04.4	-0.4
JJT3	Tamagusuku3	1.34	162	⇓P	Pn	20 11 48.4	+0.1
JJT3				eS	Sn	20 12 06.7	-0.9
JTK	Tokunoshima	1.48	76	⇑P	Pn	20 11 49.5	-0.4
JTK				eS	Sn	20 12 09.6	-0.9
JAMN	Amaminishikomi	1.83	63	⇑P	Pn	20 11 53.6	-0.4
JAMN				eS	Sn	20 12 16.9	-0.9
JAM	Amami Oshima	2.24	63	⇑P	Pn	20 11 58.8	-0.3
JAM				S	Sn	20 12 26.1	-1.0
JTAJ	Takarajima	2.39	43	⇑P	Pn	20 12 01.6	+0.6
JTAJ				eS	Sn	20 12 32.4	+2.0
JZK	Kikaishima	2.50	69	⇑P	Pn	20 12 02.6	+0.1
JZK				eS	Sn	20 12 33.3	+0.3
JMJ	Miyako jima 2	3.18	216	eP	Pn	20 12 10.6	-0.8
	baz=232						
JMJ				S	Sn	20 12 47.6	-1.2
	baz=232						
YOJ	Yonaguni jima	4.88	234	⇑P	Pn	20 12 33.6	-0.4
	baz=243						
YOJ				eS	Sn	20 13 28.4	-1.1
	baz=243						
YOJ	Yonaguni jima	4.88	234		Pn	20 12 33.6	-0.4
YOJ	Yonaguni jima	4.88	234	P	Pn	20 12 33.6	-0.4
TWB1	Santiao Chiao	5.37	245	⇑iP	Pn	20 12 41.5	+1.0
	baz=252						
EOS1	EOS1	5.49	240	eP	Pn	20 12 42.9	+0.7
	baz=247						
NWF	Wu-fen Shan	5.50	246	⇑iP	Pn	20 12 44.0	+1.5
	baz=253						
WFSB	Wu-fen Shan	5.50	246	⇑P	Pn	20 12 44.1	+1.6
	baz=253						
TIPB	Shuangxi	5.51	245	⇑iP	Pn	20 12 43.9	+1.3
	baz=252						
NTC	Toucheng	5.56	244	⇑P	Pn	20 12 44.5	+1.3
	baz=251						
TWY	Chenhua	5.57	249	⇑P	Pn	20 12 45.3	+2.0
	baz=255						
YM08	YM08	5.61	248	⇑P	Pn	20 12 45.6	+1.7
	baz=255						
YM11	YM11	5.63	248	⇑P	Pn	20 12 45.9	+1.6
	baz=254						
YM10	YM10	5.65	248	⇑iP	Pn	20 12 46.2	+1.7
	baz=254						
YM03	YM03	5.66	248	⇑P	Pn	20 12 46.2	+1.6
	baz=255						
ANP	Anpu	5.67	248	⇑iP	Pn	20 12 46.5	+1.7
	baz=255						
TWC	Suao	5.67	242	P	Pn	20 12 45.5	+0.8
	baz=249						
ILA	Ilan	5.67	243	⇑iP	Pn	20 12 46.1	+1.4
	baz=250						
TWA	Mucha	5.71	246	⇑iP	Pn	20 12 46.9	+1.7
	baz=253						
TAP1	Taipei	5.73	247	⇑iP	Pn	20 12 47.3	+1.8
	baz=253						
TAP	Taipei	5.74	247	⇑iP	Pn	20 12 47.7	+2.0
	baz=253						
TWE	Neicheng	5.76	243	⇑P	Pn	20 12 47.2	+1.3
	baz=250						
NHDH	Xindian Distri	5.76	246	⇑iP	Pn	20 12 47.8	+1.9
	baz=253						
SLBB	Yuanshan	5.77	244	⇑P	Pn	20 12 46.5	+0.4
	baz=251						
TATO	Taipei	5.79	246	⇑P	Pn	20 12 48.0	+1.8
	baz=253						
TATO	Taipei	5.79	246		Pn	20 12 48.0	+1.8
TWS1	Kuangyinshan	5.79	248	P	Pn	20 12 48.2	+1.9
	baz=254						
ENA	Nanau	5.85	241	⇑P	Pn	20 12 46.9	-0.2
	baz=247						
NWLT	Wulai	5.86	245	⇑iP	Pn	20 12 48.9	+1.5
	baz=251						
ENTT	Nioudou	5.88	243	⇑iP	Pn	20 12 48.8	+1.2
	baz=250						
NDT	Datong Townshi	5.94	243	⇑iP	Pn	20 12 49.6	+1.3
	baz=250						
YHNB	Yeheng	6.01	244	⇑P	Pn	20 12 50.8	+1.4
	baz=251						
YHNB	Yeheng	6.01	244		Pn	20 12 50.9	+1.5
NSK	Sanguang	6.03	244	⇑iP	Pn	20 12 50.9	+1.4
	baz=251						
WLTB	Daxi	6.03	246	⇑iP	Pn	20 12 51.5	+2.0
	baz=252						
NCU	National Centr	6.03	247	P	Pn	20 12 51.4	+1.8
	baz=254						
NCUH	Zhongli	6.04	247	⇑iP	Pn	20 12 51.4	+1.8
	baz=254						
JUR	Ureshino	6.09	21	⇑P	Pn	20 12 53.6	+3.3
NACB	Ninganchiao	6.10	239	⇑eP	Pn	20 12 48.9	-1.5
	baz=246						
NACB	Ninganchiao	6.10	239		Pn	20 12 49.0	-1.5
NNSB	Datong	6.13	242	⇑P	Pn	20 12 51.3	+0.3
	baz=249						
NNSH	Datong	6.13	242	⇑eP	Pn	20 12 51.2	+0.2
	baz=249						
NNS	Nan Shan	6.13	242	⇑iP	Pn	20 12 51.3	+0.3
	baz=249						
TWD	Chiawan	6.15	238	⇑eP	Pn	20 12 49.2	-1.9
	baz=245						
ETLH	Xiulin Townshi	6.17	240	eP	Pn	20 12 50.3	-1.2
	baz=246						
HWA	Hwalien	6.20	238	eP	Pn	20 12 50.0	-1.9
	baz=244						
ENLB	Shoufeng	6.24	237	⇑eP	Pn	20 12 49.3	-3.1
	baz=244						
SBCB	Hsinchu	6.28	247	⇑P	Pn	20 12 54.8	+1.9
	baz=253						
HSN	Hsinchu	6.28	247	⇑P	Pn	20 12 54.1	+1.2
	baz=253						
LIOB	Emei	6.32	245	⇑iP	Pn	20 12 55.0	+1.5
	baz=251						
NSTT	Nanjuang	6.33	245	⇑P	Pn	20 12 54.9	+1.2
	baz=251						
WHF	Hehuan Shan	6.37	240	eP	Pn	20 12 53.5	-1.0
	baz=247						
XPSS	Dashiqiu	6.38	267	⇑eP	Pn	20 12 55.7	+1.5
	baz=271						
TWT	Tachien	6.38	242	eP	Pn	20 12 54.8	+0.4
	baz=248						
TDCB	Techi	6.39	242	⇑P	Pn	20 12 54.6	0.0
	baz=248						
ESL	Shilin	6.42	237	⇑eP	Pn	20 12 51.9	-2.9
	baz=243						
JNU	Nakatsue	6.46	28	P	Pn	20 12 57.2	+1.9
	284nm,0.3s,baz=197,slow=9.9,SNR=986						
JNU				S	Sn	20 14 07.7	+0.1
	baz=238,slow=19,SNR=1.4						
JNU	Nakatsue	6.46	28		Pn	20 12 56.1	+0.9
CHGB	Renai	6.48	240	⇑P	Pn	20 12 54.8	-1.1
	baz=246						
SSE	Sheshan	6.49	306	P	Pn	20 12 58.5	+2.8
SSE				S	Sn	20 14 09.2	+0.8
SSE				pmax	pmax		
	comp=Z,280nm,0.8s						
SSE				LR	LR		
	comp=N,5μm,5.9s						
SSE				LR	LR		
	comp=E,2μm,7.5s						
SSE	Sheshan	6.49	306		Pn	20 12 58.5	+2.8
EGFH	Guangfu	6.51	236	⇑eP	Pn	20 12 53.1	-3.0
	baz=242						
OWD	Renai	6.54	239	eP	Pn	20 12 54.9	-1.7
	baz=245						
NMLH	Miaoli	6.55	245	⇑P	Pn	20 12 57.5	+0.9
	baz=251						
WHP	Taichung City	6.55	243	⇑P	Pn	20 12 57.2	+0.5
	baz=249						
HGSD	Ruisui	6.62	235	⇑eP	Pn	20 12 54.0	-3.5
	baz=241						
NSY	Sanyi	6.63	245	⇑iP	Pn	20 12 58.5	+0.9
	baz=250						
TWQ1	Liyutan	6.65	244	eP	Pn	20 12 58.1	+0.2
	baz=250						
PTSB	Yuanli	6.66	245	eP	Pn	20 12 59.2	+1.1
	baz=250						
VWDT	VWDT	6.67	238	⇑P	Pn	20 12 56.7	-1.5
	baz=244						
EHY	Hungye	6.68	236	⇑eP	Pn	20 12 54.8	-3.6
	baz=242						
DPDB	Guoxing	6.69	241	⇑P	Pn	20 12 58.1	-0.4
	baz=247						
MATB	Ma-tsu	6.72	261	⇑eP	Pn	20 13 00.5	+1.7
	baz=265						
WDJ	Dajia District	6.76	245	⇑P	Pn	20 12 59.9	+0.5
	baz=250						
YULB	Yu-li	6.77	235	⇑eP	Pn	20 12 56.1	-3.4
	baz=241						
YULB	Yu-li	6.77	235		Pn	20 12 56.2	-3.4
SMLT	Sun Moon Lake	6.79	240	⇑P	Pn	20 12 58.8	-1.1
	baz=246						
TWF1	Yuli	6.79	235	⇑eP	Pn	20 12 56.6	-3.4
	baz=241						
SSLB	Suanglung	6.80	239	⇑P	Pn	20 12 58.3	-1.7
	baz=245						
SSLB	Suanglung	6.80	239		Pn	20 12 58.4	-1.6
LYJJ	Jianjiangzhen	6.81	264	⇑eP	Pn	20 13 01.7	+1.6
	baz=268						
TYC	Yuchr	6.81	240	⇑P	Pn	20 12 59.1	-0.9
	baz=246						
TCU	Taichung	6.83	243	⇑eP	Pn	20 13 00.1	-0.2
	baz=248						
FULB	Fuli	6.89	234	⇑eP	Pn	20 12 56.9	-4.4
	baz=239						
CHKT	Chengkung	6.90	233	eP	Pn	20 12 56.8	-4.6
	baz=238						
WHYT	Xinyi Township	6.92	239	⇑P	Pn	20 13 00.7	-1.0
	baz=244						
WHYT				eS	Sn	20 14 15.9	-3.2
	baz=244						
WCHH	Zhanghua	6.95	243	eP	Pn	20 13 01.6	-0.5
	baz=248						
WJS	Zhushan	6.95	240	⇑eP	Pn	20 13 01.9	-0.2
	baz=246						
WJS				eS	Sn	20 14 16.9	-2.8
	baz=246						
WNT	Mingjian	6.96	241	eP	Pn	20 13 01.4	-0.7
	baz=246						
WNT				eS	Sn	20 14 18.4	-1.3
	baz=246						
YUS	Yu-Shan	6.97	237	eP	Pn	20 13 00.5	-2.2
	baz=243						
YUS				eS	Sn	20 14 16.9	-3.8
	baz=243						
PTTC	Pingtan	7.04	256	⇑P	Pn	20 13 04.9	+1.8
	baz=260						
ALS	Alishan	7.07	238	⇑eP	Pn	20 13 02.2	-1.6
	baz=243						
ALS				eS	Sn	20 14 18.7	-4.2
	baz=243						
TWH	Lutao	7.08	230	⇑eP	Pn	20 12 59.2	-4.6
	baz=235						
ELDTW	Lidau	7.10	235	⇑eP	Pn	20 13 00.3	-3.9
	baz=240						
CHN5	Tsauling	7.11	239	⇑P	Pn	20 13 03.1	-1.2
	baz=244						
JTSM	Tsushimamitsus	7.12	14	P	Pn	20 13 07.9	+3.8
WGK	Gukeng	7.15	240	eP	Pn	20 13 03.9	-0.8
	baz=245						
WGK				eS	Sn	20 14 22.5	-2.1
	baz=245						
WDLH	Douliu	7.17	240	⇑eP	Pn	20 13 04.3	-0.7
	baz=245						
RLNB	Erlin	7.20	242	⇑P	Pn	20 13 04.5	-1.0
	baz=247						
TTN	Taitung	7.28	232	eP	Pn	20 13 02.8	-3.6
	baz=237						
TTN				eS	Sn	20 14 20.8	-6.8
	baz=237						
WTCT	Ta-ch'eng	7.28	242	eP	Pn	20 13 05.2	-1.2
	baz=247						
TWGBT	Beinan	7.29	232	⇑eP	Pn	20 13 02.4	-4.2
	baz=238						
TWG	Pinlang	7.29	232	eP	Pn	20 13 02.7	-3.9
	baz=238						
TWG	Pinlang	7.29	232		Pn	20 13 02.3	-4.3
CHN2	Minshiung	7.30	239	eP	Pn	20 13 05.7	-1.0
	baz=244						
CHN2				eS	Sn	20 14 26.5	-1.7
	baz=244						
STYT	Tauyuan	7.30	236	eP	Pn	20 13 04.7	-2.2
	baz=241						
STYT				S	Sn	20 14 23.1	-5.2
	baz=241						
CHN4	Tsaushan	7.32	238	⇑eP	Pn	20 13 05.3	-1.7
	baz=243						
CHN4				eS	Sn	20 14 25.4	-3.1
	baz=243						
TPUB	Ta-pu	7.32	237	⇑P	Pn	20 13 05.3	-1.7
	baz=242						
TPUB				eS	Sn	20 14 23.1	-5.5
	baz=242						
TPUB	Ta-pu	7.32	237		Pn	20 13 05.2	-1.8
WMLT	Mailiao	7.36	242	eP	Pn	20 13 06.8	-0.7
	baz=247						
WTP	Ta-pu	7.36	237	⇑P	Pn	20 13 05.5	-2.1
	baz=242						
WTP				eS	Sn	20 14 25.3	-4.4
	baz=242						
CHY	Chiayi	7.36	239	eP	Pn	20 13 06.4	-1.2
	baz=244						
TWK	Hsinying	7.44	238	⇑eP	Pn	20 13 06.8	-2.0
	baz=243						
TWK				eS	Sn	20 14 28.2	-3.5
	baz=243						
WSF	Szhu	7.44	241	eP	Pn	20 13 07.2	-1.4
	baz=246						
WSF				eS	Sn	20 14 28.0	-3.6
	baz=246						
CHN1	Nanshi	7.46	237	⇑eP	Pn	20 13 07.0	-2.0
	baz=242						
CHN1				eS	Sn	20 14 26.7	-5.4
	baz=242						
SNST	Tainan City	7.46	237	eP	Pn	20 13 07.4	-1.5
	baz=242						
SNST				eS	Sn	20 14 29.6	-2.5
	baz=242						
WLGB	Puzi	7.47	240	eP	Pn	20 13 07.5	-1.5
	baz=245						
VWUC	VWUC	7.48	253	⇑P	Pn	20 13 10.3	+1.1
	baz=257						
VWUC				eS	Sn	20 14 31.2	-1.2
	baz=257						
SGST	Jiashian	7.48	236	⇑eP	Pn	20 13 06.6	-2.6
	baz=241						
SGST				eS	Sn	20 14 28.7	-3.8
	baz=241						
SLGT	Liugui	7.49	235	eP	Pn	20 13 07.3	-2.0
	baz=240						
LAY	Lan-yu	7.50	226	eP	Pn	20 13 04.3	-5.2
	baz=231						
LAY				eS	Sn	20 14 21.5	-12
	baz=231						
ECL	Taimali	7.52	232	⇑eP	Pn	20 13 04.8	-4.8
	baz=237						
ECL				eS	Sn	20 14 24.6	-8.8
	baz=237						
MHZQ	Yeshan	7.53	262	⇑eP	Pn	20 13 11.2	+1.4
	baz=265						
CHN8	Yiju	7.61	239	eP	Pn	20 13 08.7	-2.2
	baz=244						
CHN3	Shinhua	7.65	237	eP	Pn	20 13 09.7	-1.7
	baz=242						
SSD	Sandimen	7.65	234	eP	Pn	20 13 08.5	-2.9
	baz=239						
SCLT	Jiali	7.72	238	eP	Pn	20 13 10.5	-1.9
	baz=243						
EAST	Anshuo	7.73	231	⇑eP	Pn	20 13 08.3	-4.3
	baz=236						
MASBT	Mashibuluo	7.73	233	⇑P	Pn	20 13 09.5	-3.1
	baz=238						
PTMZ	Houxiangcun	7.74	254	⇑P	Pn	20 13 13.8	+1.1
	baz=258						
TWM1	Shoushan	7.75	235	eP	Pn	20 13 11.0	-1.9
	baz=240						
SGLT	Jiouru	7.76	234	⇑P	Pn	20 13 11.5	-1.5
	baz=239						
TAI1	Yung-k'ang	7.77	237	eP	Pn	20 13 11.3	-1.7
	baz=242						
SNJT	Kaohsiung City	7.86	235	eP	Pn	20 13 12.6	-1.7
	baz=240						
SSPT	Xinbi	7.86	233	⇑P	Pn	20 13 11.9	-2.4
	baz=237						
SSPT				eS	Sn	20 14 35.5	-6.2
	baz=237						
SCZT	Fangliau	7.90	232	⇑P	Pn	20 13 11.7	-3.2
	baz=237						
SCZT				eS	Sn	20 14 34.9	-7.6
	baz=237						
KAU	Kaohsiung	7.99	234	eP	Pn	20 13 13.6	-2.5
	baz=239						
PNG	Penghu	8.00	243	eP	Pn	20 13 13.9	-2.3
	baz=247						
PHUB	P'eng-hu	8.02	243	⇑eP	Pn	20 13 13.8	-2.6
	baz=247						
TSEB	Hengchuen, Pin	8.03	228	eP	Pn	20 13 13.1	-3.4
	baz=233						
TSEB				S	Sn	20 14 37.6	-8.1
	baz=233						
TWKBT	Hengchun	8.05	229	⇑P	Pn	20 13 13.3	-3.7
	baz=233						
TWK1	Hengchun	8.06	229	⇑P	Pn	20 13 13.2	-3.8
	baz=233						
HEN	Hengchun	8.06	229	eP	Pn	20 13 13.6	-3.4
	baz=234						
HEN				eS	Sn	20 14 37.4	-9.1
	baz=234						
WDGT	Dungji	8.08	241	eP	Pn	20 13 14.7	-2.6
	baz=245						
WLCH	Liuqiu	8.08	233	⇑eP	Pn	20 13 15.3	-2.0
	baz=237						
TWP	Hsiaoliuchiu	8.10	233	P	Pn	20 13 15.5	-2.0
	baz=237						
QZH	Quanzhou	8.23	254	⇑iP	Pn	20 13 20.3	+1.1
QZH				S	Sn	20 14 50.5	0.0
QZH				LR	LR		
	comp=N,29μm,7.8s						
QZH				LR	LR		
	comp=E,55μm,8.8s						
QZH				LR	LR		
	comp=Z,51μm,9.7s						
VCHM	Qimei	8.29	241	eP	Pn	20 13 16.6	-3.4
	baz=245						
BBP	Basco	8.51	216	eP	Pn	20 13 17.1	-6.0
KNMB	Chin-men Tao	8.57	252	⇑eP	Pn	20 13 23.9	+0.1
	baz=255						
KNMB	Chin-men Tao	8.57	252		Pn	20 13 24.0	+0.1
NJ2	Nanjing	8.69	304	⇓iP	Pn	20 13 28.2	+2.7
NJ2				sP		20 13 57.3	

NJ2				S	**Sn**	**20 15 03.0**	**+1.3**
NJ2				ScS	**ScS**	**20 26 35.7**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,2µm,1.3s						
NJ2				pmax	pmax		
	comp=Z,6µm,4.3s						
NJ2				LR	LR		
	comp=N,189µm,8.3s						
NJ2				LR	LR		
	comp=E,149µm,7.7s						
NJ2				LR	LR		
	comp=Z,81µm,10.4s						
TJN	**Taejon**	**8.93**	**0**	c *e*P	**Pn**	**20 13 30.1**	**+1.5**
KSRS	**Korea Array**	**10.01**	**3**	P	**Pn**	**20 13 46.1**	**+2.9**
	8.8nm,0.3s,baz=182,slow=13,SNR=407						
KSRS				ScP	**ScP**	**20 23 04.7**	**+0.1**
	0.1nm,0.3s,baz=198,slow=1.4,SNR=17						
KSRS				PKiKP	**PKiKP**	**20 27 42.8**	**+0.1**
	0.1nm,0.3s,baz=163,slow=0.7,SNR=9.4						
INCN	**Inchon**	**10.05**	**357**	Pn	**Pn**	**20 13 46.9**	**+3.1**
INCN	**Inchon**	**10.05**	**357**	P	**Pn**	**20 13 46.9**	**+3.1**
KS19	**Wonju Array Si**	**10.06**	**2**		**Pn**	**20 13 46.1**	**+2.2**
SGCP	**Mt. Cagua**	**10.35**	**209**	*e*P	**Pn**	**20 13 44.3**	**-3.7**
TSUJ	**Tsu 2**	**10.65**	**45**	P	**Pn**	**20 13 49.2**	**-2.7**
HJU	**Haeju**	**10.68**	**353**	P	**Pn**	**20 13 55.0**	**+2.8**
APYP	**Conner**	**11.05**	**212**	*e*P	**Pn**	**20 13 54.0**	**-3.3**
INU	**Inuyama**	**11.44**	**44**		**Pn**	**20 14 00.2**	**-2.3**
ABRA	**Dolores**	**11.49**	**213**	*e*P	**Pn**	**20 13 59.2**	**-3.9**
JAO	**Obara**	**11.53**	**45**	⇑P	**Pn**	**20 14 01.3**	**-2.5**
HMMJ	**Hamamatsu 2**	**11.58**	**48**	P	**Pn**	**20 14 01.6**	**-2.7**
CAUP	**Cauayan**	**11.61**	**207**	*e*P	**Pn**	**20 14 03.9**	**-0.9**
JYZW	**Yoshizawa**	**11.67**	**47**	P	**Pn**	**20 14 02.9**	**-2.6**
PYAG	**Pyongyang**	**11.67**	**354**	P	**Pn**	**20 14 09.0**	**+3.5**
PYAG				pP	P	20 14 20.0	+6.1
PYAG				sP		20 14 36.0	
PYAG				S	**Sn**	**20 16 20.0**	**+6.2**
JKKS	**Kakegawashinom**	**11.69**	**49**	P	**Pn**	**20 14 04.1**	**-1.7**
SZP	**Santa**	**11.70**	**214**		**Pn**	**20 14 04.3**	**-1.6**
WOSN	**Wonsan**	**11.71**	**0**	P	**Pn**	**20 14 09.0**	**+3.0**
JSG	**Sagara**	**11.78**	**50**	P	**Pn**	**20 14 05.4**	**-1.6**
WHN	**Wuhan**	**11.78**	**288**	⇓P	**Pn**	**20 14 08.9**	**+1.9**
WHN				pP	**P**	**20 14 18.9**	**+3.7**
WHN				S	**Sn**	**20 16 14.6**	**-2.0**
WHN				pmax	pmax		
	comp=Z,2µm,1.2s						
WHN				LR	LR		
	comp=N,258µm,7.6s						
WHN				LR	LR		
	comp=E,141µm,6.6s						
WHN				LR	LR		
	comp=Z,82µm,11.0s						
SHZ3	**Shizuoka 3**	**12.02**	**48**	P	**Pn**	**20 14 07.7**	**-2.5**
JHJ	**Hachijo jima 2**	**12.17**	**59**	P	**Pn**	**20 14 11.2**	**-0.9**
	649nm,0.3s,baz=127,slow=14,SNR=39						
JHJ2	**Mitsune**	**12.19**	**59**		**Pn**	**20 14 15.4**	**+3.1**
JSKK	**Shikinejimakit**	**12.31**	**53**	P	**Pn**	**20 14 15.5**	**+1.6**
TIA	**Tai'an**	**12.32**	**318**	P	**Pn**	**20 14 16.7**	**+2.6**
TIA				pmax	pmax		
	comp=Z,650nm,2.1s						
TIA				pmax	pmax		
	comp=Z,36µm,7.9s						
TIA				LR	LR		
	comp=N,36µm,11.6s						
TIA				LR	LR		
	comp=E,34µm,10.7s						
TIA				LR	LR		
	comp=Z,41µm,6.7s						
JJH	**Hakui**	**12.40**	**38**	⇑P	**Pn**	**20 14 13.1**	**-1.9**
DL2	**Dalian**	**12.40**	**339**	⇑P	**Pn**	**20 14 17.9**	**+2.8**
DL2				sP	P	20 14 49.7	+28
DL2				S	**Sn**	**20 16 37.6**	**+6.0**
DL2				ScP	**ScP**	**20 23 07.8**	**0.0**
DL2				ScS	**ScS**	**20 26 40.8**	**-3.0**
DL2				pmax	pmax		
	comp=Z,4µm,1.4s						
JTHY	**Toshimahigashi**	**12.46**	**52**	P	**Pn**	**20 14 18.0**	**+2.1**
HHU	**Hamhung**	**12.47**	**1**	P	**Pn**	**20 14 19.0**	**+3.0**
JYN	**Shimob**	**12.50**	**47**	P	**Pn**	**20 14 14.5**	**-2.0**
BALP	**Baler**	**12.79**	**206**	*e*P	**Pn**	**20 14 18.7**	**-1.7**
SUJ	**Sinuiju**	**12.86**	**350**	P	**Pn**	**20 14 23.9**	**+2.8**
MAJO	**Matsushiro**	**12.95**	**43**		**Pn**	**20 14 21.5**	**-0.7**
MAJO	**Matsushiro**	**12.95**	**43**	c *i*P	**Pn**	**20 14 19.9**	**-2.4**
MAJO				pmax	pmax		
	comp=Z,291nm,1.2s						
MAT	**Matsushiro**	**12.95**	**43**	P	**Pn**	**20 14 20.3**	**-2.0**
MAT	**Matsushiro**	**12.95**	**43**	P	**Pn**	**20 14 20.3**	**-2.0**
MAT				S	**Sn**	**20 16 40.2**	**-4.7**
MJAR	**Matsushiro Arr**	**12.95**	**43**	P	**Pn**	**20 14 20.8**	**-1.5**
	comp=Z,1.8nm,0.3s,baz=236,slow=14,SNR=219						
MJAR				S	**Sn**	**20 16 39.8**	**-5.1**
	comp=Z,0.7nm,0.3s,baz=226,slow=7.3,SNR=5.0						
MJAR				LR	LR	20 19 30.7	
	comp=Z,25µm,21.4s,baz=225,slow=38						
MJAR				ScP	**ScP**	**20 23 09.4**	**+0.7**
	baz=224,slow=1.6,SNR=7.4						
MJAR				P3KPbc		20 50 29.4	
	comp=Z,0.0nm,0.3s,baz=21,slow=2.4,SNR=15						
MJB9	**Matsu-Tunnel**	**12.95**	**43**		**Pn**	**20 14 21.6**	**-0.7**
HKC	**Hong Kong Obse**	**12.98**	**250**	⇑P	**Pn**	**20 14 21.0**	**-1.8**
HKPS	**Hong Kong Po S**	**13.02**	**250**		**Pn**	**20 14 25.0**	**+1.8**
PCPH	**Palayan**	**13.15**	**207**	⇑*e*P	**Pn**	**20 14 24.9**	**-0.1**
JCJ	**Chichijima**	**13.22**	**88**	P	**Pn**	**20 14 27.3**	**+1.4**
	comp=Z,168nm,0.3s,baz=268,slow=4.1,SNR=150						
JCJ				S	**Sn**	**20 16 49.8**	**-1.8**
	comp=Z,73nm,0.3s,baz=275,slow=22,SNR=5.6						
JCJ				LR	LR	20 18 48.1	
	comp=Z,71µm,21.5s,baz=293,slow=34						
JJN	**Nakama**	**13.30**	**41**	P	**Pn**	**20 14 26.2**	**-0.6**
GZH	**Guangzhou**	**13.37**	**254**	P	Pn	20 14 21.0	-6.8
GZH				sP	P	20 14 49.3	+16
GZH				S	Sn	20 16 44.7	-10
GZH				pmax	pmax		
	comp=Z,18µm,6.4s						
GZH				LR	LR		
	comp=Z,66µm,10.2s						
GZH				LR	LR		
	comp=Z,29µm,11.1s						
SCZP	**Santa Cruz**	**13.48**	**212**	*e*P	**Pn**	**20 14 27.9**	**-1.4**
POLP	**Polilio Island**	**13.59**	**203**	*e*P	**Pn**	**20 14 30.2**	**-0.6**
PVCP	**Virac**	**14.07**	**193**	*e*P	**Pn**	**20 14 35.2**	**-1.7**
GQP	**Guinayangan**	**14.20**	**200**	⇑*e*P	**Pn**	**20 14 39.4**	**+0.9**
CHJN	**Chongjin**	**14.49**	**7**	P	**Pn**	**20 14 42.7**	**+0.7**
TGY	**Tagaytay City**	**14.53**	**205**	P	**Pn**	**20 14 44.0**	**+1.1**
	comp=Z,107nm,0.3s,baz=359,slow=2.5,SNR=295						
TGY				S	**Sn**	**20 17 21.3**	**-2.2**
	comp=Z,89nm,0.3s,baz=340,slow=18,SNR=4.8						
TGY				LR	LR	20 19 47.8	
	comp=Z,22µm,21.5s,baz=32,slow=35						
TGY	**Tagaytay City**	**14.53**	**205**	P	**Pn**	**20 14 44.0**	**+1.1**
TGY	**Tagaytay City**	**14.53**	**205**	⇑*e*P	**P**	**20 14 46.4**	**+0.4**
SNY	**Shenyang**	**14.70**	**349**	⇓P	**P**	**20 14 47.7**	**+0.1**
SNY				PP	Pn	20 14 59.9	+15
SNY				S	**Sn**	**20 17 33.2**	**+6.3**
SNY				pmax	pmax		
	comp=Z,1µm,2.1s						
SNY				pmax	pmax		
	comp=Z,50µm,7.8s						
SNY				LR	LR		
	comp=Z,38µm,9.0s						
SNY				LR	LR		
	comp=Z,41µm,4.7s						
SNY				LR	LR		
	comp=Z,42µm,11.1s						
JFFD	**Fukushimafurud**	**14.76**	**46**	P	**Pn**	**20 14 44.3**	**-1.2**
BOAC	**Boac**	**14.81**	**201**	*e*P	**Pn**	**20 14 47.4**	**+1.2**
ONAJ	**Iwakimizuishiy**	**14.92**	**46**	S	**Sn**	**20 17 36.3**	**+3.8**
CNP	**Catarman**	**15.05**	**190**	*e*P	**P**	**20 14 51.9**	**+0.3**
PGP	**Puerto Galera**	**15.08**	**205**	⇑*e*P	**Pn**	**20 14 47.8**	**-1.9**
PGP				*i* S	**Sn**	**20 17 37.1**	**+0.5**
LUBP	**Lubang**	**15.14**	**207**	*e*P	**Pn**	**20 14 49.2**	**-1.2**
JMST	**Minamisoumatoc**	**15.35**	**45**	P	**Pn**	**20 14 51.4**	**-1.5**
MSHR	**Mys Shultsa**	**15.44**	**11**	d *i*P	**P**	**20 14 55.7**	**-0.1**
BJT	**Baijiatuau**	**15.60**	**326**	P	**P**	**20 15 00.3**	**+2.6**
BJT				IAmb	IAmb	20 15 05.1	
	comp=Z,1µm,0.9s						
BJT	**Baijiatuau**	**15.60**	**326**	P	**P**	**20 15 00.3**	**+2.6**
BJT				pmax	pmax		
	comp=Z,1µm,0.9s						
BJI	**Beijing**	**15.62**	**327**	P	**P**	**20 14 58.9**	**+1.1**
BJI				ScS	ScS	20 26 51.4	-0.2
BJI				pmax	pmax		
	comp=Z,1µm,1.9s						
BJI				LR	LR		
	comp=Z,25µm,16.7s						
BJI				LR	LR		
	comp=Z,22µm,15.2s						
BJI				LR	LR		
	comp=Z,35µm,39.2s						
OTRP	**Odiongan**	**15.79**	**199**	*e*P	**P**	**20 15 00.1**	**+0.2**
JYK	**Kaneyama**	**15.80**	**40**	P	**Pn**	**20 14 57.4**	**-1.1**
ENH	**Enshi**	**15.89**	**285**	P	**P**	**20 15 02.8**	**+1.8**
ENH				IAmb	IAmb	20 15 30.4	
	comp=Z,6µm,1.9s						
SJMP	**San Jose**	**15.98**	**203**	*e*P	**P**	**20 15 01.9**	**-0.2**
JIKH	**Ishinomakikobu**	**16.07**	**44**	P	**Pn**	**20 14 59.1**	**-2.7**
TIY	**Taiyuan**	**16.19**	**313**	*e*P	**P**	**20 15 06.8**	**+2.5**
TIY				sP	**sP**	**20 15 40.0**	**-0.7**
TIY				S	**Sn**	**20 18 05.8**	**+2.6**
TIY				pmax	pmax		
	comp=Z,2µm,1.5s						
TIY				pmax	pmax		
	comp=Z,60µm,4.3s						
TIY				LR	LR		
	comp=Z,30µm,5.6s						
TIY				LR	LR		
	comp=Z,36µm,8.2s						
TIY				LR	LR		
	comp=Z,35µm,11.9s						
JMK	**Ichinoseki**	**16.33**	**42**	P	**Pn**	**20 15 02.7**	**-2.3**
RCP	**Roxas**	**16.36**	**196**	⇓*e*P	**P**	**20 15 07.5**	**+1.3**
CN2	**Changchun**	**16.41**	**355**	⇓*i*P	**P**	**20 15 07.6**	**+1.0**
CN2				*e*sP	sP	20 15 39.6	-3.1
CN2				*e*S	**Sn**	**20 18 04.0**	**-4.3**
CN2				ScP	**ScP**	**20 23 13.9**	**-0.8**
CN2				ScS	**ScS**	**20 26 52.3**	**-1.4**
CN2				pmax	pmax		
	comp=Z,2µm,2.0s						
CN2				pmax	pmax		
	comp=Z,38µm,5.0s						
OCLP	**Ormoc**	**16.49**	**189**	*e*P	**P**	**20 15 09.4**	**+1.8**
JSZI	**Iwateshizukuis**	**16.70**	**39**	P	**Pn**	**20 15 08.0**	**-1.6**
JOM	**Ohasama**	**16.71**	**41**	P	**Pn**	**20 15 07.6**	**-2.1**
BUSP	**Coron**	**16.74**	**205**	*e*P	**Pn**	**20 15 09.4**	**-0.7**
XAN	**Xi'an**	**17.13**	**297**	P	**Pn**	**20 15 16.5**	**+1.6**
XAN				S	**Sn**	**20 18 26.2**	**+0.3**
XAN				PcP	**PcP**	**20 19 53.4**	**+1.0**
XAN				pmax	pmax		
	comp=Z,2µm,1.8s						
XAN				LR	LR		
	comp=Z,78µm,14.2s						
XAN				LR	LR		
	comp=Z,31µm,14.2s						
XAN				LR	LR		
	comp=Z,44µm,12.3s						
XAN	**Xi'an**	**17.13**	**297**	P	**Pn**	**20 15 17.1**	**+2.2**
XAN	**Xi'an**	**17.13**	**297**	P	**Pn**	**20 15 17.1**	**+2.2**
XAN				pmax	pmax		
	comp=Z,8µm,1.8s						
USA0B	**Ussuriysk Arra**	**17.16**	**11**	P	**P**	**20 15 15.2**	**+0.4**
USA0B	**Ussuriysk Arra**	**17.16**	**11**	P	**P**	**20 15 15.2**	**+0.4**
USA0B				pmax	pmax		
	comp=Z,971nm,1.9s						
USRK	**Ussuriysk Ar.**	**17.16**	**11**	P	**P**	**20 15 15.1**	**+0.3**
	baz=185,slow=9.1,SNR=55						
USRK				ScP	**ScP**	**20 23 16.4**	**+0.3**
	baz=282,slow=1.0,SNR=4.5						
USRK				P3KPbc		20 50 12.6	
	baz=45,slow=8.4,SNR=5.6						
MDJ	**Mudanjiang**	**17.25**	**5**	P	**Pn**	**20 15 18.3**	**+2.1**
MDJ				sP	sP	20 15 50.1	-1.8
MDJ				S	**Sn**	**20 18 27.3**	**-1.2**
MDJ				PcP	**PcP**	**20 19 55.5**	**+3.2**
MDJ				ScP	**ScP**	**20 23 21.1**	**+4.7**
MDJ				PcS	**PcS**	**20 23 31.6**	**+3.2**
MDJ				ScS	**ScS**	**20 26 55.3**	**-0.8**
MDJ				pmax	pmax		
	comp=Z,100nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,13µm,9.9s						
MDJ	**Mudanjiang**	**17.25**	**5**	P	**Pn**	**20 15 17.2**	**+1.0**
GUIM	**Jordan**	**17.30**	**196**	*e*P	**Pn**	**20 15 18.5**	**+1.5**
MSLP	**Maasin**	**17.36**	**188**	*e*P	**Pn**	**20 15 17.8**	**+0.1**
CUYO	**Cuyo Island**	**17.52**	**201**	*e*P	**Pn**	**20 15 20.8**	**+1.1**
ENPP	**El Nido**	**17.76**	**206**	*e*P	**Pn**	**20 15 22.4**	**-0.2**
TBP	**Tagbilaran**	**17.94**	**191**	*i* P	**Pn**	**20 15 26.0**	**+1.3**
TBP				*i* S	**Sn**	**20 18 45.2**	**-0.2**
QIZ	**Qiongzhong**	**18.10**	**246**	P	**P**	**20 15 25.5**	**+0.1**
QIZ				sP	**sP**	**20 15 59.2**	**-2.0**
QIZ				S	**S**	**20 18 47.5**	**+0.6**
QIZ				PcP	**PcP**	**20 19 52.8**	**-1.4**
QIZ				pmax	pmax		
	comp=Z,8µm,6.1s						
QIZ	**Qiongzhong**	**18.10**	**246**	P	**P**	**20 15 26.6**	**+1.3**
QIZ				IAmb	IAmb	20 15 52.7	
	comp=Z,6µm,2.2s						
BUTP	**Butuan**	**18.43**	**185**	*e*P	**Pn**	**20 15 31.0**	**+0.5**
GYA	**Guiyang**	**18.45**	**272**	⇓*i*P	**P**	**20 15 30.7**	**+1.4**
GYA				S	**S**	**20 18 49.3**	**-4.7**
GYA				PcP	**PcP**	**20 19 54.2**	**-0.6**
GYA				ScP	**ScP**	**20 23 20.0**	**+0.6**
GYA				ScS	**ScS**	**20 26 59.9**	**-0.8**
GYA				pmax	pmax		
	comp=Z,7µm,4.8s						
GYA				LR	LR		
	comp=Z,19µm,11.6s						
GYA				LR	LR		
	comp=Z,19µm,10.5s						
GYA				LR	LR		
	comp=Z,19µm,12.2s						
HHC	**Hu-ho-hao-te**	**18.66**	**320**	*e*P	**Pn**	**20 15 33.9**	**+0.7**
HHC				sP	sP	20 16 06.9	-1.1
HHC				S	**S**	**20 19 02.0**	**+4.1**
HHC				ScP	**ScP**	**20 23 14.9**	**-4.7**
HHC				pmax	pmax		
	comp=Z,27µm,3.8s						
CGP	**Cagayan de Oro**	**19.03**	**188**	⇓*e*P	**Pn**	**20 15 37.5**	**-0.1**
TEY	**Ternei**	**19.08**	**20**	*e*P	**Pn**	**20 15 38.3**	**+0.4**
TEY				*e*		20 19 00.6	
DCPH	**Dipolog City**	**19.11**	**192**	⇑*e*P	**Pn**	**20 15 39.3**	**+0.7**
BTO	**Baotou**	**19.41**	**317**	*e*P	**Pn**	**20 15 42.9**	**+0.9**
BTO				S	**S**	**20 19 11.7**	**-1.1**
ERM	**Erimo**	**19.48**	**38**	P	**P**	**20 15 37.1**	**-3.0**
ERM	**Erimo**	**19.48**	**38**	c *e*P	**P**	**20 15 38.2**	**-2.0**
ERM				pmax	pmax		
	comp=Z,144nm,1.0s						
BUKP	**Musuan**	**19.56**	**187**	*e*P	**P**	**20 15 42.2**	**+0.9**
PAGZ	**Pagadian**	**19.83**	**192**	*e*P	**P**	**20 15 44.0**	**-0.2**
CTBH	**Cotabato--PC H**	**20.30**	**189**	⇑*e*P	**P**	**20 15 50.0**	**+0.7**
DAV	**Davao City (W)**	**20.31**	**185**	P	**P**	**20 15 50.7**	**+1.3**
	comp=Z,115nm,0.4s,baz=8.1,slow=7.1,SNR=3.3						
DAV				S	**S**	**20 19 21.1**	**-10**
	comp=Z,235nm,0.4s,baz=86,slow=23,SNR=3.4						
DAV	**Davao City (W)**	**20.31**	**185**	⇑*e*P	Pn	20 15 59.4	+6.8
MATI	**Mati**	**20.39**	**183**	*e*P	**P**	**20 15 49.3**	**-1.0**
KCP	**Kidapawan**	**20.41**	**186**	⇑*e*P	**P**	**20 15 50.3**	**-0.3**
BATP	**Bataraza**	**20.60**	**208**	*e*P	**P**	**20 15 54.3**	**+1.8**
ASAJ	**Asahikawa**	**20.70**	**32**	P	**P**	**20 15 52.3**	**-1.1**
	comp=Z,15nm,0.3s,baz=238,slow=8.5,SNR=53						
ASAJ				ScP	**ScP**	**20 23 24.9**	**+0.8**
	comp=Z,86nm,1.1s,baz=237,slow=11,SNR=5.9						
ASAJ				LR	LR	20 24 54.3	
	comp=Z,19µm,19.2s,baz=226,slow=39						
CD2	**Chengdu**	**20.86**	**285**	P	**P**	**20 15 54.6**	**-0.7**
CD2				pP	pP	20 16 20.0	+2.7
CD2				S	**S**	**20 19 33.9**	**-7.6**
CD2				sS	sS	20 20 16.6	-1.0
CD2				pmax	pmax		
	comp=Z,1µm,1.2s						
CD2				pmax	pmax		
	comp=Z,18µm,14.7s						
CD2				LR	LR		
	comp=Z,1µm,19.2s						
CD2				LR	LR		
	comp=Z,1µm,24.2s						
CD2				LR	LR		
	comp=Z,75µm,10.7s						
SKMP	**Bagumbayan, Su**	**20.96**	**188**	*e*P	**P**	**20 15 56.2**	**-0.1**
DDMP	**Don Marcelino,**	**21.26**	**184**	*e*P	**P**	**20 15 59.2**	**-0.3**
GSPH	**General Santos**	**21.34**	**187**	*e*P	P	20 16 11.1	+10
GUMO	**Guam**	**21.39**	**127**	P	**P**	**20 16 00.9**	**-0.1**
	comp=Z,646nm,0.7s,baz=235,slow=2.1,SNR=16						
GUMO				S	**S**	**20 19 51.2**	**-0.5**
	comp=Z,48nm,0.4s,baz=6.8,slow=21,SNR=2.1						
GUMO	**Guam**	**21.39**	**127**	P	**P**	**20 16 01.6**	**+0.5**
GUMO	**Guam**	**21.39**	**127**	P	**P**	**20 16 01.6**	**+0.5**
GUMO				pmax	pmax		
	comp=Z,6µm,1.6s						
LZH	**Lanzhou**	**21.72**	**299**	⇓P	**P**	**20 16 04.8**	**+0.3**
LZH				pP	pP	20 16 26.8	+0.1
LZH				PP	**PnPn**	**20 16 33.7**	**+1.4**
LZH				S	**S**	**20 19 56.2**	**-1.5**
LZH				sS	sS	20 20 28.9	-5.8
LZH				pmax	pmax		
	comp=Z,1µm,1.4s						
LZH				pmax	pmax		
	comp=Z,9µm,7.6s						
LZH				LR	LR		
	comp=Z,41µm,13.6s						
LZH				LR	LR		
	comp=Z,32µm,16.8s						
LZH				LR	LR		
	comp=Z,34µm,16.2s						
NMR	**Nemuro--Hokkai**	**21.79**	**38**	*e*P	**P**	**20 16 03.7**	**-1.3**
NMR				*i* S	**S**	**20 19 57.6**	**-0.9**
KLR	**Kul'dur**	**22.04**	**8**	P	**P**	**20 16 05.9**	**-1.7**
	comp=Z,13nm,0.4s,baz=191,slow=7.3,SNR=37						
KLR				PP	**PnPn**	**20 16 40.0**	**+3.6**
	comp=Z,320nm,1.2s,baz=201,slow=9.4,SNR=16						
KLR				S	**S**	**20 19 58.1**	**-4.6**
	comp=Z,46nm,1.1s,baz=218,slow=9.8,SNR=3.7						
KLR				PcP	**PcP**	**20 20 02.4**	**+1.5**
	comp=Z,55nm,0.8s,baz=277,slow=4.1,SNR=5.4						
KLR				ScP	**ScP**	**20 23 27.6**	**+0.3**
	comp=Z,135nm,1.1s,baz=252,slow=2.7,SNR=18						
KLR				P3KPbc		20 49 49.6	
	comp=Z,2.5nm,1.0s,baz=0.3,slow=6.5,SNR=5.6						
KMI	**Kunming**	**22.16**	**270**	P	**P**	**20 16 09.5**	**+0.2**
KMI				pP	pP	20 16 28.0	-3.6
KMI				PP	**PnPn**	**20 16 41.4**	**+3.0**
KMI				S	**S**	**20 19 59.4**	**-6.3**
KMI				pmax	pmax		
	comp=Z,510nm,1.6s						
KMI				pmax	pmax		
	comp=Z,9µm,5.1s						
KMI				LR	LR		
	comp=Z,21µm,13.2s						
KMI				LR	LR		
	comp=Z,26µm,11.3s						
KMI				LR	LR		
	comp=Z,26µm,10.5s						
SLVN	**Son La**	**22.16**	**259**	P	**P**	**20 16 11.4**	**+2.2**
SLVN				IAmb	IAmb	20 16 39.8	
	comp=Z,3µm,1.8s						
GRPR	**Tuman**	**22.23**	**37**	*e*P	**P**	**20 16 09.0**	**-0.5**
YUK	**Yuzh-Kuril'sk**	**22.30**	**37**	*e*P	**P**	**20 16 09.7**	**-0.6**
YUK				*i* S	**S**	**20 20 06.9**	**-0.3**
YUK				pmax	pmax		
	comp=Z,429nm,0.5s						
YUK				pmax	pmax		
	comp=E,59nm,0.3s						
YUK				pmax	pmax		
	comp=N,104nm,0.5s						
YUK				pmax	pmax		
	comp=Z,3µm,1.8s						
HIA	**Hailar**	**22.58**	**347**	P	**P**	**20 16 11.4**	**-1.7**
HIA	**Hailar**	**22.58**	**347**	P	**P**	**20 16 11.4**	**-1.7**
HIA				pmax	pmax		
	comp=Z,618nm,1.4s						
YSS	**Yuzh-Sakhalins**	**22.97**	**28**	P	**P**	**20 16 15.9**	**-0.9**
YSS	**Yuzh-Sakhalins**	**22.97**	**28**	d *i*P	**P**	**20 16 15.7**	**-1.1**
YSS				*e**SP	**sP**	**20 16 52.2**	**-2.0**
YSS				*e*S	**S**	**20 20 15.2**	**-2.6**
YSS				*e*		20 27 14.1	
YSS				pmax	pmax		
	comp=N,60nm,1.3s						
YSS				pmax	pmax		
	comp=Z,120nm,1.3s						
YSS				pmax	pmax		
	comp=E,40nm,0.9s						
YSS				pmax	pmax		
	comp=Z,4µm,4.3s						
YSS				pmax	pmax		
	comp=N,2µm,3.8s						
YSS				pmax	pmax		
	comp=E,2µm,4.1s						
YSS				smax	smax		
	comp=N,40µm,15.5s						
YSS				smax	smax		
	comp=E,16µm,17.9s						
YSS				MLR	MLR		
	comp=Z,10µm,17.0s						
YSS				MLR	MLR		
	comp=N,8µm,19.0s						
DLV	**T Lat**	**23.44**	**233**	P	**P**	**20 16 22.4**	**+0.7**
UBPT	**Khong Chiam**	**23.63**	**244**	P	**P**	**20 16 25.5**	**+2.3**
UBPT				IAmb	IAmb	20 16 29.6	
	comp=Z,985nm,1.3s						
KKM	**Kota Kinabalu**	**23.74**	**208**	P	**P**	**20 16 26.2**	**+1.9**
KUR	**Kuril'sk**	**24.17**	**37**	d *i*P	**P**	**20 16 27.2**	**-0.6**
KUR				*e**PP	**pP**	**20 16 46.5**	**-5.8**
KUR				*e*		20 17 08.9	
KUR				*i* S	**S**	**20 20 36.9**	**-0.3**
KUR				pmax	pmax		
	comp=Z,833nm,1.2s						
KUR				pmax	pmax		
	comp=E,178nm,1.1s						
KUR				pmax	pmax		
	comp=N,263nm,1.4s						
KUR				pmax	pmax		
	comp=Z,12µm,6.4s						
KUR				MLR	MLR		
	comp=Z,6µm,13.0s						
KUR				MLR	MLR		
	comp=N,7µm,15.0s						
KUR				MLR	MLR		
	comp=E,6µm,12.0s						
GRNR	**Gornyy**	**24.32**	**14**	⇑*i*P	**P**	**20 16 28.1**	**-1.0**
GRNR				*e*S	**S**	**20 20 41.9**	**+2.3**
GRNR				*e*SS	**SnSn**	**20 21 26.6**	**-10**
GRNR				pmax	pmax		
	comp=Z,40nm,1.0s						
GRNR				smax	smax		
	comp=N,20nm,1.2s						
GRNR				MLR	MLR		
	comp=Z,9µm,12.0s						
SPMM	**Sapulut**	**24.85**	**207**	P	**P**	**20 16 36.0**	**+1.7**
GTA	**Gaotai**	**25.79**	**305**	⇓P	**P**	**20 16 42.3**	**-0.4**
GTA				pP	pP	20 17 06.0	-2.0
GTA				sP	sP	20 17 19.8	-1.8
GTA				S	**S**	**20 21 02.4**	**-0.9**
GTA				sS	sS	20 21 43.6	-4.0
GTA				ScP	**ScP**	**20 23 38.4**	**+0.5**
GTA				PcS	**PcS**	**20 23 51.2**	**+1.0**
GTA				ScS	**ScS**	**20 27 26.8**	**-0.7**
GTA				pmax	pmax		
	comp=Z,570nm,1.1s						
GTA				pmax	pmax		
	comp=Z,12µm,9.8s						
GTA				LR	LR		
	comp=Z,38µm,14.0s						
GTA				LR	LR		
	comp=Z,24µm,16.2s						
GTA				LR	LR		
	comp=Z,37µm,15.2s						
ULN	**Ulaanbaatar**	**25.82**	**328**	P	**P**	**20 16 44.6**	**+1.7**
ULN	**Ulaanbaatar**	**25.82**	**328**	P	**P**	**20 16 44.6**	**+1.7**
ULN				pmax	pmax		
	comp=Z,9µm,2.0s						
SONM	**Songino Array**	**26.12**	**327**	P	**P**	**20 16 45.5**	**0.0**
	comp=Z,49nm,0.5s,baz=142,slow=4.9,SNR=138						
SONM				PcP	**PcP**	**20 20 11.1**	**+1.1**
	comp=Z,26nm,0.6s,baz=172,slow=3.0,SNR=6.2						
SONM				ScP	**ScP**	**20 23 38.7**	**0.0**
	comp=Z,28nm,0.9s,baz=161,slow=4.4,SNR=9.1						
SONM				LR	LR	20 29 05.5	
	comp=Z,14µm,18.6s,baz=130,slow=41						
SONM				P3KPbc		20 49 36.6	
	comp=Z,0.5nm,0.8s,baz=289,slow=1.5,SNR=5.0						
SONM				P3KP		20 50 32.4	
	comp=Z,1.1nm,1.0s,baz=212,slow=1.4,SNR=5.4						
TYV	**Tymovskoe**	**26.15**	**22**	*e*P	**P**	**20 16 46.0**	**+0.4**
TYV				*e*S	**S**	**20 21 11.4**	**+3.0**
TYV				pmax	pmax		
	comp=Z,1µm,6.8s						
TYV				pmax	pmax		
	comp=Z,48nm,0.9s						
TYV				smax	smax		
	comp=E,40nm,1.8s						
TYV				smax	smax		
	comp=N,13µm,6.2s						
ZEA	**Zeya**	**26.29**	**360**	d*e*P	**P**	**20 16 44.9**	**-2.0**
ZEA				*e*		20 17 22.0	
ZEA				*e*S	**S**	**20 21 06.0**	**-4.6**
ZEA				pmax	pmax		

	comp=E,36nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,95nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,8µm,10.0s						
ZEA				pmax	pmax		
	comp=Z,7µm,7.0s						
ZEA				pmax	pmax		
	comp=E,900nm,8.0s						
ZEA				pmax	pmax		
	comp=N,4µm,6.0s						
ZEA				smax	smax		
	comp=E,9µm,14.0s						
ZEA				MLR	MLR		
	comp=N,16µm,10.0s						
ZEA				MLR	MLR		
	comp=Z,16µm,10.0s						
TNTI	**Ternate**	**26.50**	**180**	P	**P**	**20 16 48.5**	**-0.6**
	comp=Z,17µmcomp=Z,12µmcomp=Z,354nm,1.1s						
TNTI	**Ternate**	**26.50**	**180**	P	**P**	**20 16 49.5**	**+0.4**
CIT	**Chita**	**26.66**	**341**	*e*P	**P**	**20 16 49.8**	**-0.5**
CIT				*e*		20 17 42.8	
CIT				*e*		20 20 07.8	
CIT				*e*		20 21 08.9	
CIT				pmax	pmax		
	comp=Z,2µm,1.8s						
PBKT	**Sadao Pong**	**26.66**	**252**	P	**P**	**20 16 52.5**	**+1.9**
PBKT				IAmb	IAmb	20 16 53.7	
	comp=Z,913nm,1.5s						
KMSI	**Cibinong**	**26.89**	**187**	P	**P**	**20 16 52.3**	**-0.3**
	comp=Z,487nmcomp=Z,3µmcomp=Z,220nm,0.9s						
MRSI	**Marisa**	**27.29**	**192**	P	**P**	**20 16 56.4**	**+0.2**
	comp=Z,18µmcomp=Z,8µmcomp=Z,160nm,1.1s						
CHTO	**Chiang Mai**	**27.43**	**258**	P	**P**	**20 16 58.7**	**+1.2**
CHTO				IAmb	IAmb	20 17 31.1	
	comp=Z,3µm,2.7s						
CHTO	**Chiang Mai**	**27.43**	**258**	P	**P**	**20 16 58.7**	**+1.2**
CHTO				pmax	pmax		
	comp=Z,3µm,2.7s						
CM31	**Chiang Mai Arr**	**27.57**	**257**	P	**P**	**20 16 59.7**	**+0.9**
CMAR	**Chiang Mai Arr**	**27.57**	**257**	P	**P**	**20 16 59.1**	**+0.4**
	comp=Z,36nm,1.0s,baz=58,slow=6.1,SNR=73						
CMAR				PP	**PnPn**	**20 17 51.8**	**+0.9**
	comp=Z,56nm,1.0s,baz=66,slow=7.9,SNR=5.5						
CMAR				PcP	**PcP**	**20 20 15.7**	**+2.0**
	comp=Z,84nm,0.9s,baz=31,slow=1.1,SNR=18						
CMAR				S	**S**	**20 21 33.3**	**+1.7**
	comp=Z,3.2nm,0.9s,baz=74,slow=20,SNR=2.1						
CMAR				ScP	**ScP**	**20 23 44.1**	**+0.7**
	comp=Z,45nm,0.9s,baz=54,slow=0.4,SNR=18						
CMAR				PKiKP	**PKiKP**	**20 27 51.1**	**+0.7**
	comp=Z,4.0nm,0.8s,baz=271,slow=1.7,SNR=6.4						
CMAR				LR	LR	20 29 16.4	
	comp=Z,13µm,18.5s,baz=9.0,slow=39						
CMAR				P3KPbc		20 49 28.6	
	comp=Z,1.9nm,0.8s,baz=258,slow=4.9,SNR=16						
CMAR				P3KP		20 50 33.4	
	comp=Z,1.5nm,0.9s,baz=295,slow=4.1,SNR=5.8						
MPSI	**Mapaga**	**27.86**	**196**	P	**P**	**20 17 02.0**	**+0.7**
	comp=Z,15µmcomp=Z,5µmcomp=Z,161nm,1.0s						
LBMI	**Labuha**	**27.90**	**180**	P	**P**	**20 17 01.1**	**-0.6**
	comp=Z,10µmcomp=Z,209nm,1.0s						
LKP	**Lekhapani**	**27.92**	**277**	*i* P	**P**	**20 16 58.5**	**-3.3**
LKP				*i* pP	**pP**	**20 17 27.8**	**+0.6**
SIJI	**Sorong**	**28.38**	**172**	P	**P**	**20 17 06.3**	**+0.3**
	comp=Z,28nm,0.7s,baz=8.0,slow=11,SNR=16						
SIJI				ScP	**ScP**	**20 23 45.5**	**-0.4**
	comp=Z,48nm,1.2s,baz=1.8,slow=5.0,SNR=12						
SIJI				LR	LR	20 26 35.1	
	comp=Z,25µm,21.8s,baz=347,slow=32						
LUWI	**Luwuk**	**28.64**	**190**	P	**P**	**20 17 08.7**	**+0.5**
APSI	**Ampana**	**28.70**	**192**	P	**P**	**20 17 09.1**	**+0.4**
	comp=Z,8µmcomp=Z,4µmcomp=Z,166nm,1.6s						
SBUM	**Sibu**	**28.74**	**213**	P	**P**	**20 17 10.2**	**+1.1**
SBUM	**Sibu**	**28.74**	**213**	P	**P**	**20 17 11.0**	**+1.9**
SANI	**Sanana**	**29.33**	**183**	P	**P**	**20 17 12.5**	**-1.8**
	comp=Z,20µmcomp=Z,7µmcomp=Z,293nm,0.9s						
ZAK	**Zakamensk**	**29.35**	**328**	*e*P	**P**	**20 17 12.9**	**-1.5**
ZAK				pmax	pmax		
	comp=Z,87nm,1.7s						
SMKI	**Samarinda**	**29.37**	**201**	P	**P**	**20 17 14.4**	**-0.3**
	comp=Z,17µmcomp=Z,8µmcomp=Z,373nm,1.0s						
JORH	**JORHAT**	**29.41**	**276**	⇓*i*P	**P**	**20 17 13.2**	**-1.8**
TLY	**Talaya**	**30.08**	**330**	P	**P**	**20 17 20.5**	**-0.2**
	comp=Z,25nm,0.5s,baz=146,slow=7.0,SNR=77						
TLY				PcP	**PcP**	**20 20 20.7**	**+1.3**
	comp=Z,68nm,0.9s,baz=245,slow=3.1,SNR=6.7						
TLY				ScP	**ScP**	**20 23 51.5**	**+0.7**
	comp=Z,20nm,1.0s,baz=70,slow=5.1,SNR=4.2						
TLY				LR	LR	20 30 23.6	
	comp=Z,8µm,19.1s,baz=127,slow=38						
TLY				PKP2bc		20 51 49.9	
	comp=Z,3.2nm,0.5s,baz=158,slow=7.9,SNR=3.2						
TLY	**Talaya**	**30.08**	**330**	P	**P**	**20 17 21.8**	**+1.1**
TLY				IAmb	IAmb	20 17 53.3	
	comp=Z,960nm,2.1s						
TLY	**Talaya**	**30.08**	**330**	⇓*i*P	**P**	**20 17 20.3**	**-0.4**
TLY				*e*S	**S**	**20 22 16.1**	**+5.7**
TLY				*e*SS	**SnSn**	**20 24 00.0**	**+3.3**
TLY				pmax	pmax		
	comp=Z,275nm,1.1s						
TLY				MLR	MLR		
	comp=Z,30µm,14.0s						
IRK	**Irkutsk**	**30.21**	**331**	*e*P	**P**	**20 17 20.5**	**-1.3**
IRK				*e*		20 27 45.5	
IRK				pmax	pmax		
	comp=Z,391nm,2.9s						
NLAI	**Namlea**	**30.48**	**180**	P	**P**	**20 17 20.7**	**-3.8**
	comp=Z,4µmcomp=Z,122nm,0.9s						
KSM	**Kuching**	**30.53**	**215**	P	**P**	**20 17 26.0**	**+1.1**
KSM	**Kuching**	**30.53**	**215**	P	**P**	**20 17 27.0**	**+2.1**
FAKI	**Fak Fak**	**30.54**	**170**	P	**P**	**20 17 24.9**	**-0.1**
	comp=Z,26µmcomp=Z,8µmcomp=Z,443nm,0.7s						
FAKI	**Fak Fak**	**30.54**	**170**	P	**P**	**20 17 25.3**	**+0.3**
FAKI				IAmb	IAmb	20 17 29.6	
	comp=Z,333nm,0.8s						
TEZP	**TEZPUR**	**30.71**	**277**	⇓*i*P	**P**	**20 17 25.4**	**-1.1**
TEZP				IAmb	IAmb	20 17 30.0	
	comp=Z,112nm,0.8s						
TEZP				*i* x	x	20 17 51.9	
AAI	**Ambon**	**30.94**	**178**	P	**P**	**20 17 27.9**	**-0.6**
	comp=Z,23µmcomp=Z,5µmcomp=Z,330nm,0.9s						
SMPI	**Sarmi**	**31.23**	**158**	P	**P**	**20 17 31.4**	**+0.3**
	comp=Z,16µmcomp=Z,564nm,2.0s						
MOY	**Mondy**	**31.29**	**328**	*e*P	**P**	**20 17 30.2**	**-1.2**
MOY				pmax	pmax		
	comp=Z,523nm,3.3s						
SHL	**Shillong**	**31.71**	**275**	⇓*i*P	**P**	**20 17 33.3**	**-2.2**
SHL				IAmb	IAmb	20 17 50.3	
	comp=Z,117nm,0.8s						
LSA	**Lhasa**	**31.78**	**283**	P	**P**	**20 17 36.6**	**+0.2**
LSA				pmax	pmax		
	comp=Z,180nm,1.3s						
LSA				LR	LR		
	comp=Z,72µm,12.8s						
LSA				LR	LR		
	comp=Z,37µm,11.4s						
LSA				LR	LR		
	comp=Z,58µm,12.1s						
LSA	**Lhasa**	**31.78**	**283**	*i* P	**P**	**20 17 36.6**	**+0.2**
	SNR=18						
LSA	**Lhasa**	**31.78**	**283**	P	**P**	**20 17 38.3**	**+1.9**
LSA	**Lhasa**	**31.78**	**283**	P	**P**	**20 17 38.3**	**+1.9**
LSA				pmax	pmax		
	comp=Z,431nm,1.4s						
BOD	**Bodaibo**	**31.80**	**346**	*e*P	**P**	**20 17 33.8**	**-1.9**
BOD				pmax	pmax		
	comp=Z,41nm,1.5s						
SKR	**Severo-Kuril’s**	**31.89**	**35**	*e*P	**P**	**20 17 34.6**	**-1.9**
SKR				*e**PP	**sP**	**20 18 14.8**	**-1.1**
SKR				*e*		20 18 47.5	
SKR				*e*S	**S**	**20 22 34.4**	**-4.1**
SKR				*e*SSS	SSS	20 24 43.3	
SKR				pmax	pmax		
	comp=Z,600nm,3.3s						
SKR				pmax	pmax		
	comp=Z,2µm,3.0s						
SKR				pmax	pmax		
	comp=Z,184nm,1.6s						
SIMRM	**Sittwe**	**32.27**	**265**	P	**P**	**20 17 42.1**	**+1.9**
SIMRM				IAmb	IAmb	20 17 44.3	
	comp=Z,691nm,1.8s						
SIMRM					**PcP**	**20 20 28.2**	**+2.4**
KBKI	**Kotabaru**	**32.39**	**201**	P	**P**	**20 17 41.0**	**-0.2**
	comp=Z,397nmcomp=Z,24nm,0.8s						
BRDH	**Bariadhala**	**32.60**	**270**	P	**P**	**20 17 44.0**	**+0.9**
	comp=Z,176nm,0.4s,baz=84,slow=8.8,SNR=26						
BRDH				PcP	**PcP**	**20 20 28.6**	**+1.9**
	comp=Z,213nm,0.5s,baz=92,slow=22,SNR=6.0						
BBSI	**Bau Bau**	**33.04**	**189**	P	**P**	**20 17 46.4**	**-0.5**
	comp=Z,2µmcomp=Z,52nm,0.8s						
KAPI	**Kappang**	**33.07**	**194**	P	**P**	**20 17 47.1**	**-0.1**
	comp=Z,27nm,0.9s,baz=19,slow=5.4,SNR=11						
KAPI				PcP	**PcP**	**20 20 29.8**	**+1.7**
	comp=Z,87nm,1.1s,baz=39,slow=3.4,SNR=5.7						
KAPI				ScP	**ScP**	**20 24 01.5**	**+0.2**
	comp=Z,44nm,1.1s,baz=289,slow=2.3,SNR=5.8						
KULM	**Kulim**	**33.60**	**234**	P	**P**	**20 17 53.8**	**+1.9**
KULM				IAmb	IAmb	20 17 55.1	
	comp=Z,350nm,1.1s						
KULM				PcP	**PcP**	**20 20 31.7**	**+2.1**
KULM	**Kulim**	**33.60**	**234**	P	**P**	**20 17 54.0**	**+2.1**
IPM	**Ipoh**	**33.90**	**232**	P	**P**	**20 17 55.7**	**+1.2**
IPM				IAmb	IAmb	20 17 57.6	
	comp=Z,530nm,1.1s						
IPM				PcP	**PcP**	**20 20 31.8**	**+1.2**
IPM	**Ipoh**	**33.90**	**232**	P	**P**	**20 17 56.0**	**+1.5**
MYKOM	**Kota Tinggi**	**33.99**	**225**	P	**P**	**20 17 57.2**	**+2.0**
MYKOM				PcP	**PcP**	**20 20 33.3**	**+2.6**
MYKOM	**Kota Tinggi**	**33.99**	**225**	P	**P**	**20 17 57.0**	**+1.8**
PEA0B	**Petropavlovsk-**	**34.12**	**33**	P	**P**	**20 17 56.0**	**0.0**
PEA0B				PcP	**PcP**	**20 20 33.0**	**+2.6**
PEA0B	**Petropavlovsk-**	**34.12**	**33**	P	**P**	**20 17 56.0**	**0.0**
PEA0B						20 20 33.0	
PEA0B				pmax	pmax		
	comp=Z,428nm,1.6s						
PETK	**Petropavlovsk-**	**34.12**	**33**	P	**P**	**20 17 55.1**	**-0.9**
	comp=Z,13nm,0.5s,baz=219,slow=9.5,SNR=34						
PETK				PcP	**PcP**	**20 20 31.0**	**+0.5**
	comp=Z,29nm,0.9s,baz=180,slow=4.4,SNR=3.9						
PETK				S	**S**	**20 23 13.0**	**-0.1**
	comp=Z,2.5nm,0.8s,baz=278,slow=25,SNR=3.5						
PETK				ScP	**ScP**	**20 24 04.6**	**+0.1**
	comp=Z,15nm,0.9s,baz=146,slow=8.6,SNR=5.5						
PETK				PKiKP	**PKiKP**	**20 27 55.1**	**+1.1**
	comp=Z,7.2nm,1.0s,baz=114,slow=6.6,SNR=3.9						
PETK				LR	LR	20 32 12.4	
	comp=Z,5µm,21.2s,baz=228,slow=37						
TPRI	**Tanjung Pinang**	**34.25**	**224**	P	**P**	**20 17 58.0**	**+0.6**
	comp=Z,23µmcomp=Z,4µmcomp=Z,93nm,1.2s						
GTK	**Tadong**	**34.30**	**279**	⇓*i*P	**P**	**20 17 56.1**	**-1.9**
GTK				IAmb	IAmb	20 18 07.2	
	comp=Z,107nm,0.7s						
PET	**Petropavlovsk**	**34.54**	**34**	P	**P**	**20 17 59.5**	**0.0**
PET				IAmb	IAmb	20 18 01.8	
	comp=Z,827nm,1.6s						
PET	**Petropavlovsk**	**34.54**	**34**	κ *i*P	**P**	**20 17 58.7**	**-0.8**
PET				*e**PP	**pP**	**20 18 24.5**	**-0.9**
PET				*e**SP	**sP**	**20 18 38.1**	**-0.9**
PET				*e*		20 20 32.5	
PET				*i* S	**S**	**20 23 16.7**	**-2.7**
PET				*e*		20 28 06.2	
PET				pmax	pmax		
	comp=Z,294nm,1.5s						
PET				MLR	MLR		
	comp=Z,9µm,19.0s						
PET				MLR	MLR		
	comp=Z,8µm,14.0s						
YAK	**Yakutsk**	**34.64**	**2**	P	**P**	**20 17 59.3**	**-0.9**
	comp=Z,78nm,0.7s,baz=15,slow=2.2,SNR=34						
YAK				PcP	**PcP**	**20 20 32.8**	**+1.1**
	comp=Z,94nm,0.7s,baz=21,slow=2.0,SNR=7.0						
YAK				S	**S**	**20 23 17.7**	**-3.0**
	comp=Z,9.8nm,0.8s,baz=122,slow=22,SNR=4.7						
YAK				ScP	**ScP**	**20 24 06.3**	**+0.2**
	comp=Z,128nm,1.0s,baz=325,slow=1.0,SNR=20						
YAK	**Yakutsk**	**34.64**	**2**	P	**P**	**20 17 59.5**	**-0.7**
YAK				IAmb	IAmb	20 18 20.1	
	comp=Z,959nm,1.4s						
YAK				PcP	**PcP**	**20 20 32.2**	**+0.4**
YAK	**Yakutsk**	**34.64**	**2**	*d* *i*P	**P**	**20 17 57.9**	**-2.3**
YAK				*e*		20 20 32.5	
YAK				*e*S	**S**	**20 23 19.7**	**-1.1**
YAK				*e*		20 28 05.8	
YAK				pmax	pmax		
	comp=Z,103nm,0.8s						
YAK				pmax	pmax		
	comp=N,88nm,1.4s						
YAK				pmax	pmax		
	comp=E,25nm,1.2s						
YAK				smax	smax		
	comp=N,1µm,2.8s						
YAK				smax	smax		
	comp=E,881nm,2.2s						
TAPN	**Taplejung**	**35.08**	**279**	*e*P	**P**	**20 18 04.5**	**-0.3**
	comp=E,1µm,1.4s						
DGPR	**DIGLIPUR**	**35.10**	**253**	⇓*i*P	**P**	**20 18 05.0**	**+0.2**
DGPR				IAmb	IAmb	20 18 14.4	
	comp=Z,817nm,1.3s						
SAUI	**Saumlaki**	**35.41**	**173**	P	**P**	**20 18 06.6**	**-0.7**
	comp=Z,27µmcomp=Z,18µmcomp=Z,898nm,0.9s						
ODAN	**Odare**	**35.44**	**278**	*e*P	**P**	**20 18 07.7**	**-0.2**
	comp=Z,690nm,0.5s						
WMQ	**Urumqi**	**35.75**	**308**	P	**P**	**20 18 09.7**	**-0.4**
WMQ				pP	pP	20 18 41.0	+4.9
WMQ				PP	**PnPn**	**20 19 36.0**	**+2.0**
WMQ				PcP	**PcP**	**20 20 36.4**	**+0.9**
WMQ				S	**S**	**20 23 36.9**	**-1.5**
WMQ				ScP	**ScP**	**20 24 11.4**	**+0.7**
WMQ				SS	**SnSn**	**20 26 03.8**	**-10**
WMQ				ScS	**ScS**	**20 28 15.2**	**-0.8**
WMQ				pmax	pmax		
	comp=Z,510nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,6µm,5.1s						
WMQ				LR	LR		
	comp=Z,21µm,15.1s						
WMQ				LR	LR		
	comp=Z,11µm,10.5s						
WMQ				LR	LR		
	comp=Z,22µm,25.1s						
WMQ	**Urumqi**	**35.75**	**308**	P	**P**	**20 18 10.5**	**+0.4**
WMQ				PcP	**PcP**	**20 20 37.9**	**+2.4**
WMQ	**Urumqi**	**35.75**	**308**	P	**P**	**20 18 10.5**	**+0.4**
WMQ						20 20 37.9	
WMQ				pmax	pmax		
	comp=Z,1µm,1.3s						
MA2	**Magadan**	**35.96**	**20**	P	**P**	**20 18 11.9**	**+0.2**
	comp=Z,14nm,0.7s,baz=201,slow=9.5,SNR=4.9						
MA2				PcP	**PcP**	**20 20 36.5**	**+0.8**
	comp=Z,62nm,0.8s,baz=136,slow=1.8,SNR=6.2						
MA2	**Magadan**	**35.96**	**20**	P	**P**	**20 18 12.0**	**+0.4**
MA2				PcP	**PcP**	**20 20 36.6**	**+0.9**
MA2	**Magadan**	**35.96**	**20**	*i* P	**P**	**20 18 10.4**	**-1.2**
MA2				pmax	pmax		
	comp=Z,36nm,0.9s						
PBA	**Port Blair**	**36.01**	**251**	*e*P	P	20 18 12.0	-0.6
PBA				IAmb	IAmb	20 18 26.6	
	comp=Z,172nm,1.1s						
PBA	**Port Blair**	**36.01**	**251**	P	P	20 18 13.4	+0.8
PBA				IAmb	IAmb	20 18 47.2	
	comp=Z,1µm,1.4s						
PBA				PcP	PcP	20 20 38.6	+1.9
RAMN	**Ramite**	**36.12**	**279**	*e*P	**P**	**20 18 13.2**	**-0.5**
	comp=Z,138nm,0.4s						
MMRI	**Maumere**	**36.18**	**189**	P	**P**	**20 18 13.6**	**-0.4**
	comp=Z,9µmcomp=Z,4µmcomp=Z,235nm,1.0s						
MMRI	**Maumere**	**36.18**	**189**	P	**P**	**20 18 13.7**	**-0.2**
MMRI				PP	**PP**	**20 19 33.6**	**-5.1**
JIRN	**Jiri**	**36.36**	**280**	*e*P	**P**	**20 18 15.5**	**-0.4**
	comp=Z,754nm,0.9s						
EDFI	**Ende, Flores**	**36.37**	**189**	P	**P**	**20 18 13.2**	**-2.5**
	comp=Z,5µmcomp=Z,2µmcomp=Z,35nm,1.3s						
LHMI	**Lhok Sumawe**	**36.38**	**238**	P	**P**	**20 18 16.5**	**+0.8**
	comp=Z,41µmcomp=Z,11µmcomp=Z,610nm,1.2s						
PSI	**Prapat**	**36.56**	**233**	P	**P**	**20 18 18.6**	**+1.2**
	comp=Z,162nm,1.0s,baz=11,slow=4.8,SNR=159						
PSI				PcP	**PcP**	**20 20 39.6**	**+1.1**
	comp=Z,180nm,1.1s,baz=260,slow=3.8,SNR=7.5						
PSI	**Prapat**	**36.56**	**233**	P	**P**	**20 18 20.1**	**+2.7**
PSI				pmax	pmax		
	comp=Z,321nm,1.2s						
GUN	**Gumba**	**36.59**	**281**	*e*P	**P**	**20 18 17.7**	**-0.1**
	comp=Z,555nm,0.5s						
RPSI	**Rantau Prapat**	**36.64**	**233**	P	**P**	**20 18 20.1**	**+2.2**
RPSI				IAmb	IAmb	20 18 20.3	
	comp=Z,321nm,1.2s						
BKNI	**Bangkinang**	**36.91**	**228**	P	**P**	**20 18 20.3**	**+0.1**
	comp=Z,24µmcomp=Z,7µmcomp=Z,692nm,1.2s						
H11N2	**WAKE ISLAND Hy**	**36.95**	**93**	P	**P**	**20 18 20.2**	**-0.1**
	baz=263,slow=10,SNR=12						
H11N2				T	T	20 56 33.5	
	baz=290,slow=74,SNR=22						
H11N1	**WAKE ISLAND Hy**	**36.95**	**93**	P	**P**	**20 18 20.5**	**+0.2**
	baz=263,slow=10,SNR=24						
H11N1				T	T	20 56 32.0	
	baz=290,slow=74,SNR=32						
H11N3	**WAKE ISLAND Hy**	**36.96**	**93**	P	**P**	**20 18 20.7**	**+0.3**
	baz=263,slow=10,SNR=18						
H11N3				T	T	20 56 30.7	
	baz=290,slow=74,SNR=30						
PKI	**Pulchoki**	**37.05**	**280**	*e*P	**P**	**20 18 21.2**	**-0.5**
	comp=Z,379nm,0.6s						
PKIN	**Phulchoki**	**37.06**	**280**	*e*P	**P**	**20 18 21.2**	**-0.6**
	comp=Z,314nm,0.5s						
SOEI	**Soe**	**37.08**	**185**	P	**P**	**20 18 19.8**	**-1.9**
	comp=Z,11µmcomp=Z,4µmcomp=Z,188nm,0.9s						
SOEI	**Soe**	**37.08**	**185**	P	**P**	**20 18 20.0**	**-1.7**
SOEI				IAmb	IAmb	20 19 15.8	
	comp=Z,246nm,0.9s						
KKN	**Kakani**	**37.13**	**281**	*e*P	**P**	**20 18 21.8**	**-0.5**
	comp=Z,2µm,1.2s						
H11S3	**WAKE ISLAND Hy**	**37.19**	**95**	T	T	20 57 18.0	
	baz=290,slow=75,SNR=20						
H11S1	**WAKE ISLAND Hy**	**37.19**	**95**	T	T	20 57 07.8	
	baz=290,slow=75,SNR=21						
SRBI	**Singaraja**	**37.20**	**200**	P	**P**	**20 18 22.9**	**+0.3**
	comp=Z,2µmcomp=Z,88nm,1.1s						
H11S2	**WAKE ISLAND Hy**	**37.20**	**95**	T	T	20 57 13.8	
	baz=290,slow=75,SNR=21						
PLAI	**Plampang**	**37.21**	**196**	P	**P**	**20 18 22.2**	**-0.4**
	comp=Z,8µmcomp=Z,7µmcomp=Z,356nm,0.9s						
DMN	**Daman**	**37.31**	**280**	*e*P	**P**	**20 18 23.5**	**-0.3**
MLSI	**Meulaboh, Aceh**	**37.41**	**238**	P	**P**	**20 18 24.2**	**-0.2**
	comp=Z,26µmcomp=Z,8µmcomp=Z,558nm,0.6s						
BOK	**Bokaro**	**37.42**	**274**	⇓*i*P	**P**	**20 18 24.8**	**+0.3**
BOK				IAmb	IAmb	20 18 28.5	
	comp=Z,391nm,1.1s						
BOK				*i* x	x	20 18 55.5	
CMBY	**CAMPBELL BAY**	**37.61**	**244**	*e*P	**P**	**20 18 26.2**	**+0.1**
CMBY				IAmb	IAmb	20 18 30.5	
	comp=Z,192nm,1.0s						
SDSI	**Sungai Dareh**	**37.62**	**226**	P	**P**	**20 18 25.2**	**-1.0**
	comp=Z,5µmcomp=Z,150nm,1.4s						
WBSI	**Waikabubak, Su**	**37.64**	**193**	P	**P**	**20 18 24.7**	**-1.6**
	comp=Z,3µmcomp=Z,235nm,1.1s						
GKN	**Gorkha**	**37.66**	**281**	*e*P	**P**	**20 18 26.1**	**-0.5**
	comp=Z,473nm,0.5s						
PDSI	**Padang**	**38.22**	**227**	P	**P**	**20 18 30.6**	**-0.7**
	comp=Z,14µmcomp=Z,3µmcomp=Z,54nm,0.6s						
DANN	**Dangsing**	**38.37**	**282**	*e*P	**P**	**20 18 32.7**	**0.0**
	comp=Z,924nm,0.6s						
WOJI	**Wonogiri, Jawa**	**38.48**	**207**	P	**P**	**20 18 33.2**	**-0.2**
	comp=Z,7µmcomp=Z,5µmcomp=Z,116nm,1.3s						
KRJI	**Kerinci**	**38.49**	**224**	P	**P**	**20 18 33.0**	**-0.6**
	comp=Z,24µmcomp=Z,14µmcomp=Z,723nm,1.6s						
ZSN	**Zaisan**	**38.60**	**313**	⇓*i*P	**P**	**20 18 33.8**	**-0.4**
	comp=Z,638nm,2.9s						
ZSN				*e*PP	**PP**	**20 20 03.5**	**-1.3**
ZSN				*e*S	**S**	**20 24 20.1**	**-1.4**
ZSN	**Zaisan**	**38.60**	**313**	*d* *i*P	**P**	**20 18 33.7**	**-0.4**
ZSN				*e*		20 20 03.4	
ZSN				*e*S	**S**	**20 24 20.1**	**-1.4**
ZSN				pmax	pmax		
	comp=Z,638nm,2.9s						
KLSI		**38.67**	**218**	P	**P**	**20 18 35.3**	**+0.3**
	comp=Z,7µmcomp=Z,3µmcomp=Z,93nm,1.2s						
SNSI	**Sinabang, Aceh**	**38.70**	**235**	P	**P**	**20 18 36.0**	**+0.7**
	comp=Z,9µmcomp=Z,578nm,1.3s						
PCJI	**Pacitan**	**38.71**	**206**	P	**P**	**20 18 35.4**	**+0.1**
	comp=Z,5µmcomp=Z,64nm,0.8s						
UGM	**Wanagama**	**38.71**	**207**	P	**P**	**20 18 37.0**	**+1.6**
UGM				IAmb	IAmb	20 19 16.8	
	comp=Z,768nm,1.4s						
MDSI	**Maura Dua**	**38.81**	**219**	P	**P**	**20 18 36.1**	**0.0**
	comp=Z,17µmcomp=Z,4µmcomp=Z,268nm,1.0s						
LEM	**Lembang**	**39.03**	**212**	P	**P**	**20 18 39.0**	**+0.9**
	comp=Z,259nm,0.9s,baz=51,slow=4.3,SNR=61						
LEM				S	**S**	**20 24 31.8**	**+3.1**
	comp=Z,32nm,1.1s,baz=293,slow=7.9,SNR=11						
LEM	**Lembang**	**39.03**	**212**	P	**P**	**20 18 39.1**	**+0.9**
	comp=Z,10µmcomp=Z,6µmcomp=Z,198nm,1.0s						
KSI	**Kapahiang**	**39.04**	**222**	P	**P**	**20 18 38.6**	**+0.5**
	comp=Z,7µmcomp=Z,389nm,1.0s						
PBSI	**Pulau Batu**	**39.05**	**230**	P	**P**	**20 18 38.4**	**+0.3**
SEY	**Seymchan**	**39.13**	**18**	P	**P**	**20 18 37.4**	**-0.8**
	comp=Z,32nm,0.7s,baz=206,slow=7.4,SNR=47						
SEY				PcP	**PcP**	**20 20 46.0**	**+0.6**
	comp=Z,60nm,0.8s,baz=226,slow=7.2,SNR=5.7						
SEY				ScP	**ScP**	**20 24 23.2**	**+0.3**
	comp=Z,88nm,1.1s,baz=205,slow=3.8,SNR=13						
SEY	**Seymchan**	**39.13**	**18**	*i* P	**P**	**20 18 36.3**	**-1.9**
MNAI	**Manna**	**39.40**	**220**	P	**P**	**20 18 42.8**	**+1.8**
MNAI				IAmb	IAmb	20 19 30.3	
	comp=Z,564nm,1.2s						
RABL	**Rabaul**	**39.53**	**139**	P	**P**	**20 18 41.8**	**-0.4**
KRVT	**Keravat (AS076**	**39.54**	**139**	P	**P**	**20 18 43.1**	**+0.8**
	comp=Z,613nm,0.9s,baz=328,slow=9.5,SNR=11						
KRVT				LR	LR	20 32 02.4	
	comp=Z,5µm,20.7s,baz=322,slow=31						
CISI	**Cisompet, Garu**	**39.57**	**211**	P	**P**	**20 18 44.4**	**+1.9**
MK31	**Makanchi Array**	**40.14**	**311**	P	**P**	**20 18 47.1**	**+0.2**
MK31				IAmb	IAmb	20 18 48.8	
	comp=Z,1µm,1.9s						
MK31	**Makanchi Array**	**40.14**	**311**	P	**P**	**20 18 47.1**	**+0.2**
MK31				pmax	pmax		
	comp=Z,1µm,2.0s						
MKAR	**Makanchi Array**	**40.14**	**311**	P	**P**	**20 18 46.5**	**-0.4**
	comp=Z,160nm,0.7s,baz=92,slow=10,SNR=828						
MKAR				PcP	**PcP**	**20 20 49.8**	**+0.8**
	comp=Z,128nm,0.8s,baz=96,slow=3.7,SNR=9.4						
MKAR				ScP	**ScP**	**20 24 26.9**	**-0.3**
	comp=Z,50nm,0.9s,baz=91,slow=6.2,SNR=10						
MKAR				S	**S**	**20 24 38.3**	**-6.3**
	comp=Z,7.9nm,0.7s,baz=100,slow=15,SNR=6.0						
MKAR				ScS	**ScS**	**20 28 39.2**	**-1.8**
	comp=Z,26nm,1.0s,baz=90,slow=6.1,SNR=10						
MTN	**Manton Dam**	**40.20**	**174**	P	**P**	**20 18 47.0**	**-0.5**
MTN				IAmb	IAmb	20 18 51.1	
	comp=Z,498nm,0.9s						
MAKZ	**Makanchi**	**40.36**	**311**	P	**P**	**20 18 49.0**	**+0.3**
MAKZ				PcP	**PcP**	**20 20 50.8**	**+1.0**
MAKZ	**Makanchi**	**40.36**	**311**	P	**P**	**20 18 49.0**	**+0.3**
MAKZ						20 20 50.8	
MAKZ				pmax	pmax		
	comp=Z,2µm,1.9s						
CHLP	**Challavanipeta**	**40.65**	**267**	*e*P	**P**	**20 18 52.1**	**+0.7**
CHLP				IAmb	IAmb	20 18 54.8	
	comp=Z,334nm,1.2s						
CHLP				*e*pP	**pP**	**20 19 19.0**	**+1.1**
CHLP				*e*PcP	**PcP**	**20 20 52.3**	**+1.2**
CHLP				*e*ScP	**ScP**	**20 24 30.3**	**+0.7**
CHLP				*e*PcS	**PcS**	**20 24 42.6**	**+0.5**
CHLP				*e*S	**S**	**20 24 49.5**	**-3.1**
CHLP				*e*		20 25 24.8	
CHLP				*e*ScS	**ScS**	**20 28 44.6**	**-0.2**
CHLP				IVMsBB		20 32 49.7	
	comp=Z,3µm,25.3s						
ZAA0	**Zalesovo Array**	**40.81**	**322**	P	**P**	**20 18 51.9**	**-0.4**
ZAA0				IAmb	IAmb	20 18 57.0	
	comp=Z,886nm,1.9s						
ZAA0				PcP	**PcP**	**20 20 51.5**	**+0.6**
ZALV	**Zalesovo Beam**	**40.81**	**322**	P	**P**	**20 18 51.4**	**-0.9**
	comp=Z,42nm,0.4s,baz=112,slow=8.8,SNR=142						
ZALV				PcP	**PcP**	**20 20 51.0**	**0.0**
	comp=Z,37nm,0.4s,baz=115,slow=4.4,SNR=11						
ZALV				ScP	**ScP**	**20 24 28.8**	**-0.8**
	comp=Z,120nm,1.0s,baz=118,slow=3.7,SNR=17						
ZALV				ScS	**ScS**	**20 28 40.5**	**-4.2**
	comp=Z,5.3nm,1.0s,baz=184,slow=5.8,SNR=3.7						
ZALV				LR	LR	20 37 02.8	
	comp=Z,7µm,21.0s,baz=112,slow=38						
ZALV	**Zalesovo Beam**	**40.81**	**322**	*i* P	**P**	**20 18 51.4**	**-0.9**
ZALV				pmax	pmax		
	comp=Z,44nm,0.4s						
PMG	**Port Moresby**	**41.35**	**150**	P	**P**	**20 18 57.4**	**+0.4**
	comp=Z,170nm,0.9s,baz=38,slow=4.1,SNR=30						
PMG				pP	**pP**	**20 19 22.7**	**-1.3**
	comp=Z,179nm,1.1s,baz=352,slow=12,SNR=3.9						
PMG				PKP2ab		20 52 23.2	
	comp=Z,16nm,0.9s,baz=203,slow=2.9,SNR=3.8						
PMG	**Port Moresby**	**41.35**	**150**	P	**P**	**20 18 57.5**	**+0.4**
UZB	**Uzynbulak**	**41.85**	**305**	⇓*i*P	**P**	**20 19 00.9**	**-0.2**
	comp=Z,801nm,1.6s						
UZB				*e*PP	**PP**	**20 20 39.3**	**-0.9**
UZB				*e*S	**S**	**20 25 08.7**	**-1.6**
UZB	**Uzynbulak**	**41.85**	**305**	*d* *i*P	**P**	**20 19 00.9**	**-0.2**
UZB				*e*		20 20 39.2	

UZB				eS	S	20 25 08.6	-1.6
UZB				pmax	pmax		
	comp=Z,801nm,1.6s						
KPKS	**Kokpek**	42.13	305	⇓iP	P	20 19 03.0	-0.4
	comp=Z,883nm,1.5s						
KPKS				ePP	PP	20 20 40.7	-2.3
KPKS				eS	S	20 25 13.1	-1.1
KPKS	**Kokpek**	42.13	305	d iP	P	20 19 02.9	-0.4
KPKS				e		20 20 40.7	
KPKS				eS	S	20 25 13.1	-1.1
KPKS				pmax	pmax		
	comp=Z,883nm,1.5s						
SEM	**Semipalatinsk**	42.32	316	eS	S	20 25 23.2	+6.2
TDK	**Taldyqorghan**	42.50	308	⇑iP	P	20 19 06.5	+0.2
TDK				ePP	PP	20 20 46.5	-0.5
TDK				eS	S	20 25 17.2	-2.4
TDK	**Taldyqorghan**	42.50	308	c iP	P	20 19 06.4	+0.2
TDK				e		20 20 46.4	
TDK				eS	S	20 25 17.1	-2.4
SMY	**Shemya**	42.78	41	P	P	20 19 09.6	+1.3
SMY				IAmb	IAmb	20 19 10.7	
	comp=Z,740nm,1.4s						
SMY	**Shemya**	42.78	41	P	P	20 19 09.6	+1.3
SMY				pmax	pmax		
	comp=Z,741nm,1.4s						
KNRA	**Kununurra**	42.87	178	P	P	20 19 09.8	+0.4
KNRA				IAmb	IAmb	20 19 38.1	
	comp=Z,619nm,1.1s						
DDI	**Dehra Dun**	42.98	286	⇓iP	P	20 19 10.0	-0.3
DDI				IAmb	IAmb	20 19 14.2	
	comp=Z,405nm,0.8s						
PVM	**Polavaram**	43.26	266	eP	P	20 19 13.0	+0.3
PVM				IAmb	IAmb	20 19 14.6	
	comp=Z,516nm,1.7s						
PVM				epP	pwP	20 19 43.5	+2.1
PVM				ePcP	PcP	20 21 00.0	+0.3
PVM				eScP	ScP	20 24 40.6	+0.5
PVM				ePcS	PcS	20 24 52.4	-0.3
PVM				eS	S	20 25 27.5	-3.7
PVM				e		20 26 05.5	
PVM				eScS	ScS	20 29 00.6	-0.2
PVM				IVMs_BB	IVMs_BB	20 33 53.1	
	comp=Z,3μm,25.4s						
MDOK	**Medeo**	43.29	305	i P	P	20 19 13.0	+0.2
MDOK				ePP	PP	20 20 55.4	-0.2
MDOK				eS	S	20 25 29.5	-1.9
MDOK	**Medeo**	43.29	305	i P	P	20 19 13.0	+0.2
MDOK				e		20 20 55.3	
MDOK				eS	S	20 25 29.4	-1.9
TNSS	**Tian-Shan**	43.35	305	⇓iP	P	20 19 14.1	+0.5
TNSS				ePP	PP	20 20 57.4	+0.9
TNSS				eS	S	20 25 33.0	+0.2
TNSS	**Tian-Shan**	43.35	305	⇓iP	P	20 19 14.0	+0.5
TNSS				e		20 20 57.4	
TNSS				eS	S	20 25 32.9	+0.2
CHKK	**Chushkaly**	43.39	306	i P	P	20 19 13.3	-0.2
CHKK				ePP	PcP	20 20 59.9	+0.1
CHKK				eS	S	20 25 31.8	-0.8
CHKK	**Chushkaly**	43.39	306	i P	P	20 19 13.2	-0.2
CHKK				e		20 20 59.9	
CHKK				eS	S	20 25 31.7	-0.8
AAA	**Alma-Ata**	43.39	305	⇓iP	P	20 19 14.0	+0.5
AAA				ePP	PP	20 20 56.6	+0.1
AAA				eS	S	20 25 31.2	-1.4
AAA	**Alma-Ata**	43.39	305	i P	P	20 19 14.5	+1.0
AAA				eS	S	20 25 32.4	-0.2
AAA				pmax	pmax		
	comp=Z,5μm,4.3s						
AAA				smax	smax		
	comp=N,2μm,9.3s						
AAA				MLR	MLR		
	comp=Z,8μm,12.0s						
KURK	**Kurchatov**	43.40	316	P	P	20 19 13.3	-0.1
KURK				IAmb	IAmb	20 19 17.9	
	comp=Z,986nm,1.4s						
KURK	**Kurchatov**	43.40	316		ScP	20 24 39.7	-0.4
KURK	**Kurchatov**	43.40	316	P	P	20 19 13.0	-0.3
KURK				*PP	pP	20 19 38.4	-1.8
KURK						20 20 59.9	
KURBB	**Kurchatov Arra**	43.44	316	P	P	20 19 13.0	-0.6
	comp=Z,72nm,0.4s,baz=104,slow=8.3,SNR=277						
KURBB				pP	pP	20 19 38.4	-2.0
	comp=Z,40nm,0.5s,baz=104,slow=9.0,SNR=2.7						
KURBB				PcP	PcP	20 20 59.9	+0.2
	comp=Z,125nm,1.0s,baz=106,slow=3.5,SNR=14						
KURBB				ScP	ScP	20 24 39.7	-0.6
KURBB				PKPPKP	P'P'df	20 51 01.3	-4.7
	comp=Z,1.5nm,1.1s,baz=272,slow=1.9,SNR=4.2						
SMLA	**Simla**	43.62	287	⇓iP	P	20 19 15.2	-0.1
SMLA				IAmb	IAmb	20 19 19.0	
	comp=Z,492nm,0.6s						
MTBS	**Maitube**	43.74	305	eP	P	20 19 16.4	0.0
MTBS				ePP	PcP	20 21 01.7	+0.6
MTBS	**Maitube**	43.74	305	eP	P	20 19 16.3	0.0
MTBS				e		20 21 01.7	
ULHL	**Ulahol**	43.83	303	P	P	20 19 18.5	+1.3
	SNR=28						
KUU	**Kurty**	43.86	306	⇓iP	P	20 19 17.1	-0.2
KUU				ePP	PcP	20 20 59.5	-1.9
KUU				eS	S	20 25 37.5	-1.9
KUU	**Kurty**	43.86	306	d iP	P	20 19 17.0	-0.2
KUU				e		20 20 59.5	
KUU				eS	S	20 25 37.4	-1.9
COEN	**Coen**	43.91	158	P	P	20 19 18.4	+0.6
KSH	**Kashi**	43.97	300	P	P	20 19 21.6	+3.4
KSH				sP	sP	20 19 59.6	+1.3
KSH				PcP	PP	20 21 04.1	+1.3
KSH				S	S	20 25 45.2	+4.0
KSH				sS	sS	20 26 30.6	+3.0
KSH				pmax	pmax		
	comp=Z,260nm,1.6s						
KSH				pmax	pmax		
	comp=Z,17μm,5.6s						
KSH				LR	LR		
	comp=Z,38μm,19.1s						
KSH				LR	LR		
	comp=Z,24μm,14.3s						
KSH				LR	LR		
	comp=Z,21μm,16.3s						
NDI	**New Delhi**	43.98	284	eP	P	20 19 17.0	-1.3
NDI				epP	pwP	20 19 48.0	+2.9
DHRM	**DHARAMSHALA**	44.19	289	⇓iP	P	20 19 18.8	-1.5
BHK	**Bhakra**	44.21	288	eP	P	20 19 21.0	+0.9
BHK				ex	x	20 21 03.5	
NGP	**Nagpur**	44.23	273	eP	P	20 19 19.9	-0.5
NGP				IAmb	IAmb	20 19 24.4	
	comp=Z,104nm,0.9s						
NGP				i pP	pwP	20 19 50.7	+1.5
TIXI	**Tiksi**	44.27	1	P	P	20 19 17.6	-2.4
	comp=Z,20nm,0.3s,baz=161,slow=6.7,SNR=59						
TIXI				PcP	PcP	20 21 02.6	+0.4
	comp=Z,59nm,0.7s,baz=183,slow=1.4,SNR=6.7						
TIXI				ScP	ScP	20 24 41.8	-1.5
	comp=Z,89nm,1.2s,baz=180,slow=2.8,SNR=13						
TIXI	**Tiksi**	44.27	1	P	P	20 19 19.1	-0.9
TIXI				PcP	PcP	20 21 02.4	+0.2
TIXI				IAmb	IAmb	20 21 03.4	
	comp=Z,645nm,1.8s						
TIXI	**Tiksi**	44.27	1	d iP	P	20 19 17.5	-2.5
TIXI				pmax	pmax		
	comp=Z,149nm,2.9s						
GGR	**Gangavaram**	44.32	268	eP	P	20 19 21.1	-0.1
GGR				IAmb	IAmb	20 19 23.8	
	comp=Z,218nm,1.3s						
GGR				epP	pwP	20 19 49.5	-0.6
GGR				ePcP	PcP	20 21 03.6	+0.2
GGR				eScP	ScP	20 24 44.8	+0.4
GGR				ePcS	PcS	20 24 56.1	-1.0
GGR				eS	S	20 25 40.2	-6.3
GGR				e		20 26 20.2	
GGR				eScS	ScS	20 29 04.8	-2.8
GGR				IVMs_BB	IVMs_BB	20 34 18.8	
	comp=Z,2μm,32.3s						
MYLAV	**Mylavaram**	44.33	266	eP	P	20 19 21.6	+0.5
MYLAV				IAmb	IAmb	20 19 23.3	
	comp=Z,557nm,1.8s						
MYLAV				epP	pwP	20 19 52.6	+2.6
MYLAV				ePcP	PcP	20 21 04.5	+1.2
MYLAV				eScP	ScP	20 24 45.3	+0.9
MYLAV				ePcS	PcS	20 24 57.3	+0.2
MYLAV				eS	S	20 25 41.3	-5.3
MYLAV				e		20 26 21.1	
MYLAV				eScS	ScS	20 29 07.3	-0.2
MYLAV				IVMs_BB	IVMs_BB	20 34 11.4	
	comp=Z,2μm,23.4s						
KZA	**Kyzart**	44.55	303	P	P	20 19 24.3	+1.1
	SNR=276						
THN	**Thein Dam**	44.66	289	eP	P	20 19 25.0	+1.4
THN				ex	x	20 24 52.5	
RPR	**Rampur**	44.76	270	eP	P	20 19 24.8	+0.1
RPR				IAmb	IAmb	20 19 27.7	
	comp=Z,190nm,1.3s						
RPR				epP	pP	20 19 51.4	-0.1
RPR				ePcP	PcP	20 21 05.0	+0.2
RPR				eScP	ScP	20 24 46.2	0.0
RPR				ePcS	PcS	20 24 56.8	-2.0
RPR				eS	S	20 25 48.1	-4.8
RPR				e		20 26 27.8	
RPR				eScS	ScS	20 29 08.5	-1.8
RPR				IVMsBB		20 34 44.0	
	comp=Z,2μm,16.8s						
KBK	**Karagaybulak**	44.80	304	P	P	20 19 25.5	+0.7
	SNR=116						
CHMS	**Chumysh**	44.96	304	P	P	20 19 26.2	+0.2
	SNR=195						
BHPL	**Bhopal**	45.06	276	⇓iP	P	20 19 24.1	-2.9
BHPL				IAmb	IAmb	20 19 30.7	
	comp=Z,148nm,1.0s						
BHPL				i pP	pP	20 19 55.2	+1.4
BHPL				ex	x	20 21 06.1	
SGDS	**Sogindy**	45.07	305	⇓iP	P	20 19 26.7	-0.2
	comp=Z,550nm,2.2s						
SGDS				ePP	PP	20 21 12.7	-1.7
SGDS				eS	S	20 25 58.5	+1.6
UCH	**Uchtor**	45.11	303	P	P	20 19 28.8	+1.1
	SNR=359						
AAK	**Ala-Archa**	45.13	304	P	P	20 19 27.9	+0.4
	comp=Z,67nm,0.6s,baz=108,slow=5.6,SNR=186						
AAK				PcP	PcP	20 21 06.6	+0.6
	comp=Z,114nm,0.8s,baz=123,slow=2.7,SNR=12						
AAK				ScP	ScP	20 24 47.3	-0.3
	comp=Z,64nm,0.9s,baz=117,slow=2.7,SNR=9.4						
AAK	**Ala-Archa**	45.13	304	P	P	20 19 27.9	+0.4
	SNR=73						
AAK	**Ala-Archa**	45.13	304	i P	P	20 19 27.8	+0.4
	SNR=147						
AAK	**Ala-Archa**	45.13	304	P	P	20 19 28.5	+1.0
AAK				PcP	PcP	20 21 07.4	+1.4
AAK				IAmb	IAmb	20 21 08.7	
	comp=Z,1μm,1.8s						
USP	**Ospenovka**	45.16	305	P	P	20 19 27.4	-0.1
	SNR=144						
ADKI	**Addanki**	45.26	265	eP	P	20 19 29.2	+0.6
ADKI				IAmb	IAmb	20 19 31.0	
	comp=Z,422nm,1.7s						
ADKI				epP	pwP	20 19 58.5	+0.9
ADKI				ePcP	PcP	20 21 07.9	+1.3
ADKI				eScP	ScP	20 24 49.1	+0.8
ADKI				ePcS	PcS	20 25 01.3	+0.4
ADKI				eS	S	20 25 57.6	-2.5
ADKI				e		20 26 34.5	
ADKI				eScS	ScS	20 29 13.5	0.0
ADKI				IVMsBB		20 34 39.1	
	comp=Z,3μm,29.3s						
FITZ	**Fitzroy Crossi**	45.28	182	P	P	20 19 28.8	+0.2
	comp=Z,251nm,1.0s,baz=10,slow=6.8,SNR=128						
FITZ				PcP	PcP	20 21 08.8	+2.3
	comp=Z,22nm,0.5s,baz=22,slow=4.7,SNR=2.8						
FITZ				ScP	ScP	20 24 47.8	-0.3
	comp=Z,18nm,1.2s,baz=357,slow=5.9,SNR=4.1						
FITZ				S	S	20 25 57.5	-2.6
	comp=Z,7.9nm,0.9s,baz=97,slow=21,SNR=4.8						
FITZ				PKP2ab		20 52 06.4	
	comp=Z,11nm,1.2s,baz=172,slow=4.7,SNR=9.1						
FITZ	**Fitzroy Crossi**	45.28	182	P	P	20 19 29.1	+0.5
NJS	**Nagarjunasagar**	45.58	267	eP	P	20 19 31.3	+0.2
NJS				IAmb	IAmb	20 19 33.2	
	comp=Z,105nm,1.1s						
NJS				epP	pwP	20 20 02.5	+2.4
NJS				ePcP	PcP	20 21 08.4	+0.7
NJS				eScP	ScP	20 24 49.8	+0.1
NJS				eS	S	20 26 01.1	-3.6
NJS				e		20 26 37.3	
NJS				eScS	ScS	20 29 15.1	-0.5
NJS				IVMs_BB	IVMs_BB	20 34 48.0	
	comp=Z,2μm,46.1s						
SRSP	**Sriramsagar**	45.58	270	eP	P	20 19 31.1	-0.1
SRSP				IAmb	IAmb	20 19 33.3	
	comp=Z,138nm,1.0s						
SRSP				epP	pwP	20 20 00.2	+0.2
SRSP				ePcP	PcP	20 21 08.1	+0.4
SRSP				eScP	ScP	20 24 49.5	-0.2
SRSP				ePcS	PcS	20 24 59.4	-2.8
SRSP				eS	S	20 25 59.3	-5.5
SRSP				e		20 26 36.1	
SRSP				eScS	ScS	20 29 12.5	-3.1
SRSP				IVMsBB		20 34 29.2	
	comp=Z,2μm,15.2s						
BTLS	**Baital**	45.58	307	⇑iP	P	20 19 30.4	-0.5
	comp=Z,240nm,1.6s						
BTLS				ePP	PP	20 21 18.1	-1.6
BTLS				eS	S	20 26 02.7	-1.5
BTLS	**Baital**	45.58	307	c iP	P	20 19 30.3	-0.5
BTLS				e		20 21 18.1	
BTLS				eS	S	20 26 02.6	-1.6
BTLS				pmax	pmax		
	comp=Z,240nm,1.6s						
EKS2	**Erkin-Say**	45.66	304	P	P	20 19 32.0	+0.3
	SNR=106						
AML	**Almayashu**	45.71	303	P	P	20 19 32.9	+0.5
	SNR=181						
HYB	**Hyderabad**	45.93	268	i P	P	20 19 33.0	-0.9
	comp=Z,230nm,1.0s						
HYB				epP	pwP	20 20 05.0	+2.1
HYB				e		20 20 28.5	
HYB				ePcP	PcP	20 21 09.0	0.0
HYB				ePP	PP	20 21 26.0	+2.2
HYB				eScP	ScP	20 24 51.0	-0.1
HYB				eS	S	20 26 09.0	-0.8
HYB				eScS	ScS	20 29 17.0	-1.0
HYB	**Hyderabad**	45.93	268	⇓iP	P	20 19 32.9	-0.9
HYB				i pP	pwP	20 20 02.6	-0.3
HYB				ex	x	20 21 06.5	
HYBB	**Hyderabad (bro**	45.93	268	eP	P	20 19 33.9	0.0
HYBB				IAmb	IAmb	20 19 35.7	
	comp=Z,142nm,1.1s						
HYBB				epP	pwP	20 20 02.9	0.0
HYBB				ePcP	PcP	20 21 09.2	+0.2
HYBB				eScP	ScP	20 24 51.2	+0.1
HYBB				eS	S	20 26 05.2	-4.6
HYBB				e		20 26 43.0	
HYBB				eScS	ScS	20 29 16.0	-2.0
HYBB				IVMsBB		20 35 15.9	
	comp=Z,2μm,23.8s						
SRLM	**Srisailam**	46.12	266	eP	P	20 19 35.5	+0.1
SRLM				IAmb	IAmb	20 19 37.1	
	comp=Z,484nm,1.7s						
SRLM				epP	pwP	20 20 06.4	+2.0
SRLM				ePcP	PcP	20 21 10.1	+0.4
SRLM				ePP	PP	20 21 28.2	+2.5
SRLM				eScP	ScP	20 24 52.0	0.0
SRLM				ePcS	PcS	20 25 03.8	-0.8
SRLM				eS	S	20 26 08.6	-4.0
SRLM				e		20 26 45.3	
SRLM				eScS	ScS	20 29 18.4	-0.8
SRLM				IVMs_BB	IVMs_BB	20 34 38.9	
	comp=Z,2μm,50.4s						
MDRS	**Chennai**	46.15	262	⇓iP	P	20 19 36.9	+1.3
MDRS				IAmb	IAmb	20 19 43.5	
	comp=Z,111nm,1.1s						
SKHT	**Srikalahasti**	46.34	263	eP	P	20 19 38.0	+0.9
SKHT				epP	pwP	20 20 10.0	+3.9
SKHT				ePcP	PcP	20 21 11.7	+1.3
SKHT				eScP	ScP	20 24 53.0	+0.2
SKHT				ePcS	PcS	20 25 06.3	+0.8
SKHT				eS	S	20 26 13.3	-2.4
SKHT				e		20 26 50.7	
SKHT				eScS	ScS	20 29 21.1	+0.5
SKHT				IVMsBB		20 35 03.6	
	comp=Z,2μm,17.9s						
NIL	**Nilore**	46.55	291	P	P	20 19 39.2	+0.6
NIL				IAmb	IAmb	20 19 41.9	
	comp=Z,1μm,1.4s						
NIL	**Nilore**	46.55	291	P	P	20 19 39.2	+0.6
NIL				pmax	pmax		
	comp=Z,1μm,1.5s						
BILL	**Bilibino**	46.80	19	P	P	20 19 38.8	-1.1
BILL	**Bilibino**	46.80	19	ceP	P	20 19 38.9	-1.1
BILL				pmax	pmax		
	comp=Z,134nm,1.6s						
BRZS	**Berezniki**	47.01	314	⇓iP	P	20 19 41.5	-0.4
BRZS				ePP	PP	20 21 34.8	+1.4
BRZS	**Berezniki**	47.01	314	d iP	P	20 19 41.4	-0.4
BRZS				e		20 21 34.8	
WB0	**Warramunga Arr**	47.41	171	P	P	20 19 45.2	0.0
KLRI	**Killari**	47.43	270	eP	P	20 19 45.2	-0.4
KLRI				IAmb	IAmb	20 19 48.3	
	comp=Z,497nm,1.1s						
KLRI				epP	pwP	20 20 16.3	+1.6
KLRI				ePcP	PcP	20 21 13.9	-0.4
KLRI				eScP	ScP	20 24 57.0	-0.4
KLRI				ePcS	PcS	20 25 07.6	-2.5
KLRI				eS	S	20 26 25.6	-5.6
KLRI				e		20 27 05.5	
KLRI				eScS	ScS	20 29 24.1	-3.8
KLRI				IVMs_BB	IVMs_BB	20 36 03.2	
	comp=Z,4μm,22.5s						
DZA	**Taraz**	47.47	304	i P	P	20 19 45.5	-0.1
	comp=Z,587nm,2.2s						
DZA				ePP	PP	20 21 35.6	-2.2
DZA	**Taraz**	47.47	304	i P	P	20 19 45.4	-0.1
DZA				e		20 21 35.5	
DZA				pmax	pmax		
	comp=Z,587nm,2.2s						
WRAB	**Tennant Creek**	47.57	171	P	P	20 19 46.8	+0.3
WRAB	**Tennant Creek**	47.57	171	ceP	P	20 19 45.9	-0.5
WRAB				pmax	pmax		
	comp=Z,156nm,0.7s						
WRA	**Warramunga Arr**	47.57	171	P	P	20 19 46.2	-0.3
	comp=Z,141nm,0.7s,baz=352,slow=8.1,SNR=172						
WRA				pP	pP	20 20 13.3	-0.6
	comp=Z,179nm,1.0s,baz=347,slow=8.2,SNR=7.4						
WRA				ScP	ScP	20 24 57.1	-0.6
	comp=Z,35nm,1.1s,baz=349,slow=4.5,SNR=12						
WRA				S	S	20 26 30.9	-1.9
	comp=Z,6.0nm,0.9s,baz=346,slow=13,SNR=7.2						
WRA				ScS	ScS	20 29 25.6	-2.7
	comp=Z,2.6nm,1.1s,baz=322,slow=5.3,SNR=4.9						
WRA				LR	LR	20 40 36.7	
	comp=Z,5μm,19.4s,baz=15,slow=37						
WRA				PKPPKP	P'P'df	20 50 58.6	+1.7
	comp=Z,4.7nm,1.1s,baz=185,slow=1.7,SNR=7.0						
WRA				PKP2ab		20 51 56.2	
	comp=Z,5.0nm,0.9s,baz=178,slow=3.4,SNR=8.4						
WB2	**Warramunga Arr**	47.58	171	P	P	20 19 46.6	+0.1
WB2				IAmb	IAmb	20 20 15.9	
	comp=Z,410nm,1.2s						
WR0	**Warramunga Arr**	47.62	171	P	P	20 19 46.8	0.0
WR0				IAmb	IAmb	20 20 16.3	
	comp=Z,374nm,1.1s						
NRIK	**Noril'sk**	47.87	342	P	P	20 19 46.9	-1.3
	comp=Z,17nm,0.4s,baz=132,slow=7.4,SNR=24						
NRIK				PcP	PcP	20 21 15.8	+0.8
	comp=Z,164nm,0.8s,baz=141,slow=3.8,SNR=16						
NRIK				ScP	ScP	20 24 57.5	-0.7
	comp=Z,84nm,1.0s,baz=149,slow=4.6,SNR=9.9						
NRIK				LR	LR	20 42 37.8	
	comp=Z,12μm,18.2s,baz=135,slow=39						
URV	**Uravakonda**	48.02	266	eP	P	20 19 50.2	+0.1
URV				IAmb	IAmb	20 19 51.9	
	comp=Z,1μm,1.8s						
URV				epP	pP	20 20 18.7	+1.4
URV				ePcP	PcP	20 21 16.9	+0.5
URV				eScP	ScP	20 25 00.2	+0.3
URV				ePcS	PcS	20 25 11.2	-1.4
URV				eS	S	20 26 34.5	-5.1
URV				e		20 27 12.1	
URV				eScS	ScS	20 29 30.2	-1.6
URV				IVMs_BB	IVMs_BB	20 35 49.4	
	comp=Z,4μm,20.1s						
JBG	**Jabagly**	48.05	304	d iP	P	20 19 50.5	+0.3
JBG				e		20 21 43.0	
JBG				eS	S	20 26 38.1	-1.6
KK31	**Karatay Array**	48.07	305	P	P	20 19 51.6	+1.4
KK31				IAmb	IAmb	20 21 19.1	
	comp=Z,862nm,1.2s						
KK31	**Karatay Array**	48.07	305	P	P	20 19 51.6	+1.4
KK31				pmax	pmax		
	comp=Z,862nm,1.3s						
KKAR	**Karatay Array**	48.07	305	P	P	20 19 51.6	+1.4
KKAR				IAmb	IAmb	20 21 19.1	
	comp=Z,862nm,1.2s						
KKAR	**Karatay Array**	48.07	305	P	P	20 19 51.6	+1.4
KKAR				pmax	pmax		
	comp=Z,862nm,1.3s						
ADK	**Adak**	48.11	44	P	P	20 19 50.2	-0.1
ADK				IAmb	IAmb	20 21 17.7	
	comp=Z,2μm,2.9s						
ADK	**Adak**	48.11	44	P	P	20 19 50.2	-0.1
ADK				pmax	pmax		
	comp=Z,2μm,2.9s						
HNR	**Honiara**	48.39	135	LR	LR	20 39 42.5	
	comp=Z,4μm,20.4s,baz=325,slow=35						
IUG	**Iuzhnay**	48.44	303	⇓iP	P	20 19 53.4	+0.2
IUG	**Iuzhnay**	48.44	303	d iP	P	20 19 53.3	+0.2
PALK	**Pallekele**	48.45	254	i P	P	20 19 54.7	+1.1
	SNR=30						
PALK	**Pallekele**	48.45	254	d iP	P	20 19 54.5	+1.0
PALK				pmax	pmax		
	comp=Z,795nm,1.3s						
BRLS	**Borolday**	48.56	304	i P	P	20 19 54.5	+0.5
BRLS				ePP	PP	20 21 47.4	-0.4
BRLS				eS	S	20 26 46.9	+0.2
CHM	**Chimkent**	48.75	303	⇓iP	P	20 19 55.9	+0.5
CHM				ePP	PP	20 21 48.6	-0.8
CHM				eS	S	20 26 47.7	-1.5
CHM	**Chimkent**	48.75	303	d iP	P	20 19 55.9	+0.5
CHM				e		20 21 48.6	
CHM				eS	S	20 26 47.7	-1.5
BVAR	**Borovoye Array**	48.85	318	P	P	20 19 55.7	-0.3
	comp=Z,197nm,0.8s,baz=94,slow=9.7,SNR=278						
BVAR				PcP	PcP	20 21 19.3	+0.5
	comp=Z,141nm,0.4s,baz=113,slow=3.9,SNR=24						
BRVK	**Borovoye**	48.92	318	P	P	20 19 56.5	0.0
BRVK				PcP	PcP	20 21 20.1	+1.1
BRVK				IAmb	IAmb	20 21 21.8	
	comp=Z,939nm,1.2s						
BRVK	**Borovoye**	48.92	318	ceP	P	20 19 56.1	-0.4
BRVK				pmax	pmax		
	comp=Z,949nm,1.4s						
PSA00	**Pilbara Seismi**	49.24	189	P	P	20 19 59.3	+0.1
CHGR	**Chuyangaron**	49.30	299	P	P	20 20 01.2	+1.4
CHGR				PcP	PcP	20 21 22.0	+1.2
ATKA	**Atka Island**	49.67	43	P	P	20 20 02.4	+0.1
POO	**Poona**	49.71	272	i P	P	20 20 02.9	-0.2
POO				IAmb	IAmb	20 20 06.3	
	comp=Z,554nm,1.4s						
POO				i x	x	20 20 33.8	
KAD	**Karad**	49.85	270	i P	P	20 20 03.5	-0.6
KBL	**Kabul**	49.89	293	P	P	20 20 05.8	+1.5
KBL	**Kabul**	49.89	293	P	P	20 20 05.9	+1.5
KBL				pmax	pmax		
	comp=Z,2μm,1.6s						
CTA	**Charters Tower**	50.66	157	S	S	20 27 16.3	+0.2
	comp=Z,7.6nm,1.1s,baz=235,slow=20,SNR=6.8						
GOA	**Goa**	50.85	268	⇓ix	P	20 20 08.3	-3.3
GOA				IAmb	IAmb	20 20 14.3	
	comp=Z,382nm,1.1s						
TRD	**Trivandrum**	51.09	258	⇓iP	P	20 20 14.2	+0.8
TRD				IAmb	IAmb	20 20 17.6	
	comp=Z,566nm,1.0s						
AS31	**Alice Springs**	51.19	172	P	P	20 20 14.4	+0.5
ASAR	**Alice Springs**	51.19	172	P	P	20 20 14.2	+0.2
	comp=Z,65nm,0.6s,baz=356,slow=6.1,SNR=197						
ASAR				pP	pP	20 20 41.1	-0.5
	comp=Z,36nm,0.8s,baz=358,slow=6.5,SNR=3.8						
ASAR				PcP	PcP	20 21 29.8	+2.1
	comp=Z,21nm,0.6s,baz=347,slow=4.0,SNR=2.8						
ASAR				ScP	ScP	20 25 13.3	+0.2
	comp=Z,23nm,1.0s,baz=0.5,slow=4.0,SNR=7.4						
ASAR				S	S	20 27 22.6	-0.7
	comp=Z,8.8nm,1.0s,baz=355,slow=14,SNR=5.9						
ASAR				ScS	ScS	20 29 50.6	-2.1
	comp=Z,4.5nm,1.1s,baz=345,slow=5.0,SNR=4.4						
ASAR				LR	LR	20 41 05.0	
	comp=Z,9μm,21.8s,baz=346,slow=35						
ASAR				PKPPKP	P'P'df	20 50 56.0	+4.1
	comp=Z,3.4nm,0.8s,baz=161,slow=2.0,SNR=6.5						
ASAR				PKP2bc		20 51 12.1	
	comp=Z,3.6nm,0.9s,baz=158,slow=2.2,SNR=4.1						
ASAR				PKP2ab		20 51 41.6	
	comp=Z,8.7nm,0.9s,baz=164,slow=3.5,SNR=7.9						

BHUJ	Bhuj	51.90	279	⇓iP	P	20 20 19.3	-0.1
BHUJ				IAmb	IAmb	20 20 23.2	
	comp=Z,241nm,0.8s						
BHUJ				i pP	pwP	20 20 49.2	+0.3
BHUJ				ex	x	20 21 30.9	
SPIA	Saint Paul Isl	52.53	37	P	P	20 20 25.5	+2.0
GAMB	Gambell	52.98	29	P	P	20 20 27.4	+0.7
GAMB				IAmb	IAmb	20 20 29.2	
	comp=Z,1µm,2.0s						
NIKH	Nikolski High	52.98	43	P	P	20 20 26.1	-0.8
NIKH				IAmb	IAmb	20 20 30.4	
	comp=Z,187nm,0.6s						
UNV	Unalaska Valle	54.42	42	P	P	20 20 37.6	+0.3
SVE	Sverdlovsk	54.83	322	c iP	P	20 20 39.9	-0.3
SVE				eS	S	20 28 07.1	-4.8
SVE				pmax	pmax		
	comp=Z,459nm,1.8s						
HRA	Herat	55.44	294	P	P	20 20 46.8	+1.5
HRA				PcP	PcP	20 21 45.2	+1.0
ANM	Nome	55.85	29	P	P	20 20 49.1	+1.6
ANM				IAmb	IAmb	20 20 51.2	
	comp=Z,296nm,0.8s						
ANM	Nome	55.85	29	P	P	20 20 49.1	+1.6
ANM				pmax	pmax		
	comp=Z,296nm,0.8s						
ARU	Arti	55.96	321	P	P	20 20 47.7	-0.7
	comp=Z,24nm,0.3s,baz=87,slow=5.9,SNR=135						
ARU				PcP	PcP	20 21 45.7	+0.2
	comp=Z,46nm,0.6s,baz=96,slow=1.7,SNR=11						
ARU				ScP	ScP	20 25 32.6	-0.9
	comp=Z,6.3nm,0.8s,baz=152,slow=3.9,SNR=3.6						
ARU				S	S	20 28 24.9	-2.1
	comp=Z,2.5nm,0.9s,baz=340,slow=12,SNR=2.7						
ARU	Arti	55.96	321	P	P	20 20 47.6	-0.7
ARU				PcP	PcP	20 21 45.7	+0.2
ARU	Arti	55.96	321	d iP	P	20 20 47.6	-0.8
ARU				*PP	pP	20 21 16.3	0.0
ARU				*SP	sP	20 21 25.7	-3.6
ARU						20 21 44.3	
ARU						20 22 52.1	
ARU				PPP	PPP	20 24 10.0	
ARU				S	S	20 28 26.0	-1.0
ARU				SS	SS	20 32 15.0	+0.8
ARU				SSS	SSS	20 34 29.5	
ARU				pmax	pmax		
	comp=Z,472nm,1.8s						
AKTO	Aktyubinsk	56.42	314	P	P	20 20 51.7	-0.1
	comp=Z,76nm,0.8s,baz=84,slow=8.0,SNR=77						
AKTO				PcP	PcP	20 21 47.8	+0.4
	comp=Z,165nm,0.9s,baz=98,slow=2.5,SNR=12						
AKTO				ScP	ScP	20 25 36.1	+0.4
	comp=Z,34nm,1.0s,baz=63,slow=5.9,SNR=5.4						
AKTO				S	S	20 28 32.1	-1.2
	comp=Z,2.0nm,0.6s,baz=310,slow=20,SNR=3.7						
MORW	Morawa	57.20	192	P	P	20 20 57.9	+0.5
EIDS	Eidsvold	57.26	154	P	P	20 20 58.2	+0.4
RDOG	Red Dog Mine	57.31	25	P	P	20 20 58.6	+0.8
RDOG				IAmb	IAmb	20 21 00.1	
	comp=Z,984nm,1.9s						
SANVU	Saraoutou	57.55	133	P	P	20 21 00.1	0.0
FORT	Forrest	57.88	179	P	P	20 21 02.4	+0.3
FORT				IAmb	IAmb	20 21 47.9	
	comp=Z,346nm,1.1s						
SDPT	Sand Point	57.91	40	P	P	20 21 01.6	-0.5
SDPT				IAmb	IAmb	20 21 57.0	
	comp=Z,161nm,0.6s						
GEYT	Alibeck	58.00	299	P	P	20 21 03.8	+0.7
	comp=Z,80nm,0.5s,baz=82,slow=2.1,SNR=168						
GEYT				PcP	PcP	20 21 54.0	+0.1
	comp=Z,166nm,1.0s,baz=17,slow=1.5,SNR=14						
GEYT				ScP	ScP	20 25 44.4	+1.4
	comp=Z,31nm,1.1s,baz=132,slow=2.2,SNR=4.8						
GEYT				S	S	20 28 53.4	-1.1
	comp=Z,1.6nm,0.9s,baz=64,slow=3.4,SNR=2.0						
GEYT				LR	LR	20 49 16.0	
	comp=Z,9µm,19.4s,baz=95,slow=39						
GEYT				PKP2bc		20 50 55.9	
	comp=Z,3.6nm,1.1s,baz=342,slow=9.3,SNR=6.1						
GYA0B	ALIBECK ARRAY	58.00	299	P	P	20 21 04.3	+1.2
CNBA	Chernabura Isl	58.45	41	P	P	20 21 05.1	-0.8
CNBA				IAmb	IAmb	20 21 08.8	
	comp=Z,271nm,0.8s						
KAAM	Kaadhehdhoo	58.52	252	P	P	20 21 08.7	+1.7
CHGN	Chignik	59.02	39	P	P	20 21 09.3	-0.5
CHGN				IAmb	IAmb	20 21 14.6	
	comp=Z,191nm,0.7s						
CHGN				PcP	PcP	20 22 00.2	+2.7
TTA	Tatalina	59.92	31	P	P	20 21 17.0	+1.0
TTA	Tatalina	59.92	31	P	P	20 21 17.0	+1.0
SVW2	Sparrevohn	60.20	33	P	P	20 21 19.5	+1.6
SVW2				IAmb	IAmb	20 21 20.2	
	comp=Z,379nm,1.3s						
STKA	Stephens Creek	60.52	166	P	P	20 21 20.5	+0.2
	comp=Z,78nm,0.5s,baz=347,slow=7.1,SNR=73						
STKA				pP	pP	20 21 47.6	-1.1
	comp=Z,67nm,1.1s,baz=347,slow=8.2,SNR=3.2						
STKA				S	S	20 29 25.7	-0.9
	comp=Z,3.3nm,0.9s,baz=62,slow=21,SNR=3.5						
STKA				LR	LR	20 46 24.3	
	comp=Z,5µm,21.9s,baz=333,slow=35						
STKA				PKP2bc		20 50 46.6	
	comp=Z,8.4nm,1.1s,baz=136,slow=2.4,SNR=5.9						
STKA				PKP2ab		20 50 57.4	
	comp=Z,4.3nm,0.8s,baz=165,slow=3.0,SNR=4.6						
NWAO	Narrogin (SRO)	60.78	190	P	P	20 21 22.4	+0.4
	comp=Z,139nm,0.9s,baz=21,slow=7.9,SNR=35						
NWAO				pP	pP	20 21 50.5	-0.2
	comp=Z,69nm,1.0s,baz=28,slow=10,SNR=2.6						
NWAO				LR	LR	20 49 03.2	
	comp=Z,3µm,21.2s,baz=10,slow=37						
NWAO	Narrogin (SRO)	60.78	190	P	P	20 21 22.9	+0.8
NWAO				IAmb	IAmb	20 21 24.3	
	comp=Z,303nm,1.1s						
NWAO	Narrogin (SRO)	60.78	190	P	P	20 21 22.6	+0.6
NWAO				IAmb	IAmb	20 21 24.3	
	comp=Z,220nm,1.1s						
KIRV	Kirov	60.81	324	P	P	20 21 21.6	-0.4
	comp=Z,134nm,0.4s,baz=70,slow=1.6,SNR=63						
KIRV				PcP	PcP	20 22 06.1	+1.5
	comp=Z,135nm,0.7s,baz=96,slow=4.8,SNR=6.4						
SII	Sitkinak Islan	61.33	38	P	P	20 21 26.6	+1.0
WBK	Wadi Bani Khal	61.44	282	P	P	20 21 27.8	+0.9
	SNR=93						
WBK				P	P	20 21 27.8	+0.9
	SNR=93						
WSAR	Wadi Sarin	61.52	283	P	P	20 21 28.2	+0.8
	SNR=120						
RSO	Redoubt South	61.64	34	P	P	20 21 28.7	+0.9
BIDO	Bidbid	61.87	283	P	P	20 21 30.5	+0.8
	SNR=150						
KDAK	Kodiak Island	62.04	37	P	P	20 21 30.7	+0.4
	comp=Z,388nm,0.8s,baz=274,slow=4.7,SNR=380						
KDAK				S	S	20 29 45.5	+0.1
	comp=Z,17nm,1.1s,baz=142,slow=21,SNR=28						
KDAK	Kodiak Island	62.04	37	P	P	20 21 31.0	+0.7
DZM	Mont Dzumac	62.06	139	eP	P	20 21 31.6	+0.7
	comp=Z,532nm,1.2s						
DZM				eS	S	20 29 44.7	-2.0
	comp=Z,12µm,26.4s						
DZM				eLQ	LQ	20 37 27.0	
	comp=Z,14µm,28.6s						
DZM				eLR	LR	20 40 11.2	
	comp=Z,18µm,29.6s						
DZM	Mont Dzumac	62.06	139	P	P	20 21 31.6	+0.7
	comp=Z,117nm,0.9s,baz=259,slow=7.8,SNR=54						
DZM				pP	pP	20 21 59.1	-0.5
	comp=Z,87nm,0.9s,baz=322,slow=10,SNR=4.4						
DZM				PKP2bc		20 50 42.3	
	comp=Z,5.3nm,0.8s,baz=106,slow=8.4,SNR=3.4						
DZM				PKP2ab		20 50 52.0	
	comp=Z,12nm,0.9s,baz=45,slow=5.6,SNR=3.3						
DZM	Mont Dzumac	62.06	139	P	P	20 21 31.7	+0.7
DZM				IAmb	IAmb	20 21 34.0	
	comp=Z,234nm,1.1s						
SMDO	Samad	62.09	283	P	P	20 21 31.9	+0.6
	SNR=168						
SMDO				P	P	20 21 31.9	+0.6
	SNR=168						
BPAW	Bear Paw Mtn.	62.09	29	P	P	20 21 31.8	+1.2
MLY	Manley	62.11	28	IAmb	IAmb	20 21 34.4	
	comp=Z,244nm,0.8s						
COLD	Coldfoot	62.14	26	IAmb	IAmb	20 21 37.1	
	comp=Z,390nm,2.0s						
KTH	Kantishna Hill	62.18	30	IAmb	IAmb	20 21 33.0	
	comp=Z,404nm,1.3s						
TOLK	Toolik Lake Re	62.26	24	P	P	20 21 33.1	+1.4
TOLK				IAmb	IAmb	20 21 35.4	
	comp=Z,411nm,1.2s						
TOLK	Toolik Lake Re	62.26	24	P	P	20 21 32.5	+0.8
	baz=274,SNR=154						
TOLK				S	S	20 29 48.5	+0.5
	baz=274						
JMDO	Jabal Madar	62.28	282	P	P	20 21 32.7	+0.2
	SNR=100						
JMDO				P	P	20 21 32.7	+0.2
	SNR=100						
PRGR	Permogore	62.37	328	⇓iP	P	20 21 31.2	-1.2
PRGR				e		20 22 10.1	
PRGR				e		20 31 08.9	
PRGR				pmax	pmax		
	comp=Z,435nm,1.5s						
CNPM	China Poot	62.51	35	IAmb	IAmb	20 21 37.9	
	comp=Z,248nm,0.8s						
HOQ	Hoqain	62.55	284	P	P	20 21 34.6	+0.3
	SNR=145						
HOQ				P	P	20 21 34.6	+0.3
	SNR=145						
BANOM	Banah	62.65	287	i P	P	20 21 35.2	+0.2
	SNR=20						
BANOM	Banah	62.65	287	P	P	20 21 35.6	+0.6
	SNR=20						
BRLK	Bradley Lake	62.65	34	IAmb	IAmb	20 21 38.1	
	comp=Z,384nm,0.8s						
SHME	Shamm	62.74	287	i P	P	20 21 35.8	+0.2
	SNR=17						
MDH	Madha	62.85	286	i P	P	20 21 35.4	-0.9
	SNR=8.7						
NEA	Nenana	62.87	29	P	P	20 21 37.0	+1.3
NEA				IAmb	IAmb	20 21 39.1	
	comp=Z,740nm,1.1s						
MHTO	MHTO	62.88	281	P	P	20 21 36.3	-0.1
	SNR=141						
MHTO				P	P	20 21 36.3	-0.1
	SNR=141						
BSY	Bisya	62.93	283	P	P	20 21 37.2	+0.4
	SNR=85						
MSFE	Esma-Masafi	62.95	286	P	P	20 21 37.2	+0.2
RC01	Rabbit Creek A	63.03	33	P	P	20 21 37.2	+0.3
RC01				IAmb	IAmb	20 21 38.6	
	comp=Z,666nm,1.4s						
MCK	McKinley	63.04	30	P	P	20 21 37.7	+0.8
MCK	McKinley	63.04	30	P	P	20 21 37.7	+0.8
MCK				pmax	pmax		
	comp=Z,1µm,1.6s						
SOHO	SOHO	63.04	285	P	P	20 21 37.4	-0.1
	SNR=64						
SOHO				P	P	20 21 37.4	-0.1
	SNR=64						
UOSS	Minazif	63.05	286	i P	P	20 21 37.2	-0.4
	SNR=22						
UOSS	Minazif	63.05	286	P	P	20 21 38.2	+0.6
UOSS				IAmb	IAmb	20 22 15.8	
	comp=Z,253nm,1.1s						
HATD	Hatta, Dubai	63.15	285	i P	P	20 21 39.0	+0.7
	SNR=60						
HATD	Hatta, Dubai	63.15	285	P	P	20 21 38.7	+0.4
	SNR=45						
MDM	Murphy Dome	63.18	28	P	P	20 21 39.3	+1.5
H01W3	Cape Leeuwin H	63.21	192	P	P	20 21 40.9	+3.0
	baz=40,slow=4.3,SNR=1.9						
H01W1	Cape Leeuwin H	63.22	192	P	P	20 21 41.0	+3.0
	baz=40,slow=4.3,SNR=3.5						
H01W2	Cape Leeuwin H	63.23	192	P	P	20 21 41.0	+3.0
	baz=40,slow=4.3,SNR=1.7						
PMR	Palmer	63.25	32	P	P	20 21 38.5	+0.3
PMR				IAmb	IAmb	20 21 40.1	
	comp=Z,1µm,1.6s						
PMR	Palmer	63.25	32	P	P	20 21 38.5	+0.3
PMR				pmax	pmax		
	comp=Z,1µm,1.6s						
ASHO	Ashiyiah	63.26	285	i P	P	20 21 39.4	+0.4
	SNR=14						
ASHO	Ashiyiah	63.26	285	P	P	20 21 39.6	+0.6
	SNR=74						
WRH	Wood River Hil	63.30	29	IAmb	IAmb	20 21 41.1	
	comp=Z,1µm,1.8s						
ARQ	Araqi	63.32	284	P	P	20 21 39.9	+0.5
	SNR=72						
GHO	Glory Hole Cre	63.32	32	IAmb	IAmb	20 21 41.0	
	comp=Z,301nm,1.0s						
UMQ	Umm Al-Quwin	63.32	286	i P	P	20 21 40.5	+1.2
	SNR=5.7						
UMQ	Umm Al-Quwin	63.32	286	P	P	20 21 40.6	+1.3
	SNR=6.0						
UMQ				P	P	20 21 40.6	+1.3
	SNR=6.0						
TCOL	CIGO, UAF Yank	63.35	28	P	P	20 21 39.4	+0.6
	baz=278,SNR=76						
TCOL				S	S	20 30 02.4	+0.9
	baz=278						
COLA	College	63.35	28	P	P	20 21 40.0	+1.2
COLA	College	63.35	28	P	P	20 21 40.0	+1.2
DGAR	Diego Garcia	63.35	245	i P	P	20 21 40.1	+0.5
DGAR				pmax	pmax		
	comp=Z,619nm,1.2s						
CCB	Clear Creek Bu	63.40	29	P	P	20 21 39.8	+0.6
H08S3	Diego Garcia H	63.45	245	P	P	20 21 41.4	+1.4
	baz=7.0,slow=9.8,SNR=8.6						
H08S2	Diego Garcia H	63.45	245	P	P	20 21 42.3	+2.3
	baz=7.0,slow=9.8,SNR=9.6						
H08S1	Diego Carcia H	63.47	245	P	P	20 21 42.0	+1.9
	baz=7.0,slow=9.8,SNR=3.6						
POKR	Poker Plat Res	63.49	28	P	P	20 21 40.6	+0.8
	baz=278,SNR=353						
POKR				S	S	20 30 04.7	+1.3
	baz=278						
NAZ	Nazwa, Dubai	63.50	286	i P	P	20 21 40.7	+0.2
	SNR=49						
NAZ	Nazwa, Dubai	63.50	286	P	P	20 21 41.0	+0.4
	SNR=34						
NAZ				P	P	20 21 41.0	+0.4
	SNR=34						
SML	Sawmill	63.59	32	P	P	20 21 41.1	+0.5
KNK	Knik Glacier	63.59	32	IAmb	IAmb	20 21 43.4	
	comp=Z,369nm,0.8s						
DQM	DQM	63.63	280	P	P	20 21 41.2	-0.3
	SNR=54						
FAQ	Al Faqa, Dubai	63.64	286	i P	P	20 21 41.5	+0.1
	SNR=22						
FAQ	Al Faqa, Dubai	63.64	286	P	P	20 21 41.6	+0.1
	SNR=18						
ALNE	Al Ain	63.74	285	i P	P	20 21 42.5	+0.3
	SNR=10.0						
IL31		63.77	28	P	P	20 21 41.3	-0.3
ILAR	Eielson Array	63.77	28	P	P	20 21 41.3	-0.4
	comp=Z,59nm,0.6s,baz=282,slow=3.6,SNR=275						
ILAR				ScP		20 26 08.3	
	comp=Z,1.2nm,0.6s,baz=276,slow=4.7,SNR=2.9						
ILAR				S	S	20 30 06.2	-0.6
	comp=Z,2.2nm,1.1s,baz=294,slow=12,SNR=3.7						
ILAR				PKPPKP	P'P'df	20 50 35.1	-1.3
	comp=Z,8.4nm,1.1s,baz=110,slow=1.3,SNR=17						
ILAR				PKP2bc		20 50 43.4	
	comp=Z,12nm,1.0s,baz=90,slow=1.8,SNR=14						
ILAR				LR	LR	20 52 04.2	
	comp=Z,2µm,18.3s,baz=284,slow=38						
HDA	Harding Lake	63.80	29	P	P	20 21 41.9	0.0
HDA				IAmb	IAmb	20 21 44.1	
	comp=Z,445nm,0.8s						
HDA	Harding Lake	63.80	29	P	P	20 21 41.7	-0.2
	baz=279,SNR=410						
HDA				S	S	20 30 04.7	-2.6
	baz=279						
HDA				S	S	20 30 04.7	-2.6
	baz=279						
DHY	Denali Highway	63.83	30	P	P	20 21 42.6	+0.3
DHY				IAmb	IAmb	20 21 44.2	
	comp=Z,1µm,1.9s						
GLI	Glacier Island	64.33	33	P	P	20 21 46.2	+0.8
GLI				IAmb	IAmb	20 21 48.2	
	comp=Z,320nm,0.8s						
FID	Port Fidalgo	64.66	33	P	P	20 21 48.1	+0.6
PAX	Paxson	64.70	30	P	P	20 21 48.7	+0.8
PAX				IAmb	IAmb	20 21 51.0	
	comp=Z,238nm,0.8s						
PAX	Paxson	64.70	30	P	P	20 21 48.7	+0.8
PAX				pmax	pmax		
	comp=Z,238nm,0.8s						
HIN	Hinchinbrook I	64.71	33	P	P	20 21 48.6	+0.7
HIN				IAmb	IAmb	20 21 51.0	
	comp=Z,290nm,0.9s						
MAK	Makhachkala	64.76	307	c iP	P	20 21 46.8	-1.7
MAK				e*PP	pP	20 22 13.5	-3.6
MAK				e*SP	PcP	20 22 25.1	+4.0
MAK				e		20 24 10.4	
MAK				ePPP	PPP	20 25 44.6	
MAK				eS	S	20 30 19.5	-0.2
MAK				eSS	SS	20 34 32.4	-0.1
MAK				pmax	pmax		
	comp=Z,657nm,1.3s						
MAK				MLR	MLR		
	comp=Z,4µm,15.0s						
AKT	Akhty	64.98	305	⇓iP	P	20 21 49.9	-0.2
AKT				e*PP	pP	20 22 18.4	-0.3
AKT				e		20 22 22.1	
AKT				e*SP	sP	20 22 27.8	-3.8
AKT				e		20 24 18.6	
AKT				eS	S	20 30 20.2	-2.5
AKT				e		20 30 57.4	
AKT				e		20 31 29.9	
AKT				pmax	pmax		
	comp=Z,514nm,1.1s						
EYAK	Cordova Ski Ar	65.05	33	P	P	20 21 51.2	+1.2
EYAK				IAmb	IAmb	20 21 52.9	
	comp=Z,605nm,1.4s						
SCRK	Sand Creek	65.16	29	P	P	20 21 51.3	+0.5
DOT	Dot Lake	65.19	29	P	P	20 21 51.3	+0.4
DOT				IAmb	IAmb	20 21 53.5	
	comp=Z,398nm,0.8s						
TMCR	Tamitsa	65.38	331	eP	P	20 21 49.9	-2.2
TMCR				eS	S	20 30 25.7	-0.8
TMCR				pmax	pmax		
	comp=Z,622nm,1.0s						
KLMR	Klimovskoe	65.41	327	d iP	P	20 21 50.0	-2.3
KLMR				e		20 22 21.9	
KLMR						20 24 13.9	
KLMR				S	S	20 30 22.4	-4.6
KLMR				e		20 31 30.9	
KLMR				pmax	pmax		
	comp=Z,931nm,1.5s						
KLMR				pmax	pmax		
	comp=Z,3µm,3.0s						
KLMR				MLR	MLR		
	comp=Z,6µm,12.0s						
KLMR	Klimovskoe	65.41	327	⇓iP	P	20 21 50.1	-2.3
KLMR				⇑iP	P	20 21 50.1	-2.3
KLMR				eP	P	20 21 50.1	-2.3
KLMR				AMP		20 21 52.7	
	comp=Z,3µm,3.0s						
KLMR				AMP		20 21 55.0	
	comp=Z,931nm,1.5s						
KLMR				ePcP	pP	20 22 22.0	+0.9
KLMR				PP	PP	20 24 13.9	-3.4
KLMR				S	S	20 30 22.5	-4.6
KLMR				S	S	20 30 22.5	-4.6
KLMR				eScS	SKSac	20 31 31.0	-5.1
KLMR				eScS	SKSac	20 31 31.0	-5.1
KLMR				SSS	SSS	20 38 16.3	
KLMR				SSS	SSS	20 38 16.3	
KLMR				LQ	LQ	20 43 20.5	
KLMR				LQ	LQ	20 43 20.5	
KLMR				LR	LR	20 46 48.0	
KLMR				AMP		20 53 57.8	
	comp=Z,6µm,11.9s						
MENT	Mentasta	65.49	30	P	P	20 21 54.0	+1.1
MENT				IAmb	IAmb	20 21 56.4	
	comp=Z,333nm,0.8s						
RAGM	Ragged Mountai	65.60	33	P	P	20 21 54.9	+1.3
RAGM				PP	PP	20 24 19.8	+0.7
CAN	Canberra	65.68	161	P	P	20 21 55.9	+1.5
CAN				IAmb	IAmb	20 22 28.8	
	comp=Z,1µm,2.5s						
CAN				PP	PP	20 24 17.7	-3.1
CAN	Canberra	65.68	161	P	P	20 21 55.9	+1.5
CAN						20 24 17.7	
CAN				pmax	pmax		
	comp=Z,1µm,2.5s						
GLB	Gilahina Butte	65.78	32	P	P	20 21 55.9	+1.1
GLB				IAmb	IAmb	20 21 58.1	
	comp=Z,439nm,1.1s						
LVZ	Lovozero	65.90	336	P	P	20 21 56.0	+0.6
LVZ				IAmb	IAmb	20 22 27.5	
	comp=Z,299nm,1.0s						
LVZ	Lovozero	65.90	336	i P	P	20 21 53.9	-1.5
LVZ				pmax	pmax		
	comp=Z,121nm,1.0s						
GROC	Groznyy	65.91	308	eP	P	20 21 53.7	-2.2
GROC				e*PP	pP	20 22 21.2	-3.4
GROC				e		20 22 25.0	
GROC				e*SP	sP	20 22 33.1	-4.3
GROC				eS	S	20 30 32.8	-0.9
GROC				pmax	pmax		
	comp=Z,870nm,1.3s						
VRDI	Verde Repeater	66.00	32	P	P	20 21 57.5	+1.1
VRDI				IAmb	IAmb	20 21 59.4	
	comp=Z,273nm,0.8s						
SHAO	Shalim	66.02	279	i P	P	20 21 57.0	0.0
	SNR=12						
SHAO	Shalim	66.02	279	P	P	20 21 57.3	+0.3
	SNR=11						
SHAO				P	P	20 21 57.3	+0.3
	SNR=11						
MCARA	McCarthy VSAT	66.16	32	P	P	20 21 58.7	+1.5
MCARA				IAmb	IAmb	20 22 02.3	
	comp=Z,385nm,0.8s						
EGAK	Eagle	66.18	28	P	P	20 21 58.1	+0.9
EGAK				IAmb	IAmb	20 22 01.0	
	comp=Z,230nm,1.0s						
HOPEN	Hopen	66.37	346	⇓iP	P	20 21 57.9	-0.4
HOPEN				IVmB_BB		20 21 58.5	
	comp=Z,5µm,4.4s						
HOPEN				eS	S	20 30 32.2	-6.1
HOPEN				i		20 38 26.3	
APA	Apatity	66.44	335	⇓iP	P	20 21 58.6	-0.2
APA				i *PP	pP	20 22 25.0	-2.6
APA				i		20 24 27.0	
APA				i S	S	20 30 36.0	-3.3
APA				pmax	pmax		
	comp=Z,193nm,0.9s						
APA				MLR	MLR		
	comp=Z,8µm,18.0s						
VRH	Novokhopyorsk	66.49	317	eP	P	20 21 57.5	-1.9
VRH				e*SP	PcP	20 22 29.4	+1.3
VRH				e		20 24 26.4	
VRH				ePPP	PPP	20 26 00.6	
VRH				eS	S	20 31 15.5	+35
VRH				pmax	pmax		
	comp=Z,350nm,1.0s						
VRH				pmax	pmax		
	comp=Z,400nm,1.0s						
VRH				smax	smax		
	comp=E,2µm,9.0s						
BALM	Baldy	66.56	32	IAmb	IAmb	20 22 02.3	
	comp=Z,608nm,1.6s						
MSVF	Nonsavu	66.57	126	i P	P	20 22 00.9	+0.4
MSVF				pmax	pmax		
	comp=Z,214nm,1.0s						
DMTO	DMTO	66.73	279	P	P	20 22 01.5	-0.1
	SNR=20						
DMTO				P	P	20 22 01.5	-0.1
	SNR=20						
CTGM	Chitina Glacie	67.06	32	IAmb	IAmb	20 22 06.5	
	comp=Z,268nm,0.7s						
DAWY	Dawson	67.10	28	IAmb	IAmb	20 22 05.9	
	comp=Z,1µm,1.9s						
GOF	Gofitskoye	67.30	310	⇓iP	P	20 22 04.2	-0.5
GOF				eS	SKiKP	20 31 51.6	-0.3
GOF				pmax	pmax		
	comp=Z,809nm,1.1s						
GOF				smax	smax		
	comp=N,177nm,1.5s						
GOF				smax	smax		
	comp=E,114nm,1.3s						
KIP	Kipapa	67.33	77	P	P	20 22 05.3	+0.1
KIP	Kipapa	67.33	77	P	P	20 22 05.3	+0.1
KIP				pmax	pmax		
	comp=Z,115nm,0.8s						
ZEI	Tsey	67.36	308	eP	P	20 22 01.5	-3.9
ZEI				pmax	pmax		
	comp=Z,347nm,0.7s						
RBK	Rabkut	67.47	279	P	P	20 22 06.0	-0.3
	SNR=97						
RBK				P	P	20 22 06.0	-0.3
	SNR=97						
SPA0	Spitsbergen Ar	67.50	348	eP	P	20 22 04.4	-1.0
SPA0				IVmB_BB		20 22 07.4	
	comp=Z,5µm,4.2s						

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SPA0                           eS     S       20 30 46.1 -5.7
SPA0  Spitsbergen Ar   67.50 348  P     P       20 22 04.4 -1.0
SPA0                            IAmb  IAmb    20 22 34.5
      comp=Z,743nm,1.2s
SPITS Spitsbergen Ar   67.50 348  P     P       20 22 04.0 -1.4
      comp=Z,19nm,0.4s,baz=108,slow=8.0,SNR=79
SPITS                           pP    PcP     20 22 32.2 +0.3
      comp=Z,210nm,0.8s,baz=125,slow=11,SNR=7.4
SPITS                           S     S       20 30 50.2 -1.7
      comp=Z,23nm,1.1s,baz=168,slow=16,SNR=2.6
GNI   Garni            67.53 305  P     P       20 22 07.2 +0.7
      comp=Z,374nm,1.2s,baz=98,slow=1.5,SNR=62
GNI                             S     S       20 30 54.4 +0.6
      comp=Z,13nm,1.1s,baz=31,slow=18,SNR=2.5
GNI   Garni            67.53 305 i P    P       20 22 07.3 +0.9
      SNR=69
GNI   Garni            67.53 305 deP    P       20 22 07.2 +0.7
GNI                             pmax  pmax
      comp=Z,3µm,1.5s
EPYK  Eagle Plains     67.54  26  P     P       20 22 07.0 +1.1
EPYK  Eagle Plains     67.54  26  P     P       20 22 06.5 +0.6
      baz=287,SNR=620
EPYK                            S     S       20 30 53.4 +0.7
      baz=287
MOS   Moscow           67.64 322 eP     P       20 22 01.9 -4.7
MOS                            e*PP   PcP     20 22 32.3 -0.5
MOS                            e              20 24 33.5
MOS                            ePPP   PPP     20 26 11.5
MOS                            eS     S       20 30 49.6 -4.5
MOS                             pmax  pmax
      comp=Z,617nm,1.1s
MOS                             MLR   MLR
      comp=Z,6µm,17.0s
LPSR  Galich'ya Gora   67.78 319 eP     P       20 22 06.3 -1.2
LPSR                           e*SP   pP      20 22 37.9 +1.5
LPSR                           ePPP   PPP     20 26 12.9
LPSR                           eS     SKiKP   20 31 33.6  -19
LPSR                            pmax  pmax
      comp=Z,380nm,1.1s
LPSR                            pmax  pmax
      comp=Z,550nm,1.1s
KBZ   Khabaz           67.78 309  P     P       20 22 08.0 +0.3
      comp=Z,506nm,0.9s,baz=75,slow=6.3,SNR=144
KBZ                             S     S       20 30 56.0 -0.2
      comp=Z,2.8nm,1.0s,baz=61,slow=23,SNR=2.8
KBZ                             LR    LR      20 57 49.4
      comp=Z,5µm,18.0s,baz=84,slow=41
KBZ   Khabaz           67.78 309d iP    P       20 22 07.8 +0.1
KBZ                             pmax  pmax
      comp=Z,357nm,0.9s
KVAR  Kislovodsk Arr   67.86 309  P     P       20 22 08.4  0.0
      comp=Z,178nm,1.0s,baz=100,slow=23,SNR=127
KIV   Kislovodsk       67.86 309 ⇓P     P       20 22 08.8 +0.4
KIV   Kislovodsk       67.86 309 i P    P       20 22 08.4 +0.1
      SNR=362
KIV   Kislovodsk       67.86 309 eP     P       20 22 08.3 -0.1
KIV                            e*SP   sP      20 22 47.0 -3.0
KIV                            e              20 24 39.6
KIV                            eS     S       20 30 58.6 +1.2
KIV                             pmax  pmax
      comp=Z,3µm,1.1s
KIV                             pmax  pmax
      comp=Z,6µm,4.7s
KIV                             MLR   MLR
      comp=Z,11µm,17.0s
VORR  Voronezh         67.88 318 eP     P       20 22 06.0 -2.2
VORR                           eS     S       20 30 55.0 -2.0
VORR                            pmax  pmax
      comp=Z,1µm,2.0s
KBS   Kingsbay         67.92 349⇓iP     P       20 22 07.7 -0.4
KBS                             IVmB_BB       20 22 08.2
      comp=Z,4µm,3.4s
KBS                            eS     S       20 30 57.6 +0.7
KBS                             IVMsBB        20 50 20.0
      comp=Z,2µm,10.4s
KBS   Kingsbay         67.92 349 i P    P       20 22 09.8 +1.7
KBS                             pmax  pmax
      comp=Z,234nm,0.9s
TASB  TASBURUN-IGDIR   67.95 305  P     P       20 22 09.8 +0.8
VSR   Storozhevoye     68.03 317 eP     P       20 22 07.3 -1.8
VSR                            e*SP   sP      20 22 45.5 -5.3
VSR                            e              20 24 37.8
VSR                            ePPP   PPP     20 26 15.8
VSR                            eS     SKiKP   20 31 36.4  -16
VSR                             pmax  pmax
      comp=Z,370nm,1.0s
VSR                             pmax  pmax
      comp=Z,520nm,1.1s
VSR                             smax  smax
      comp=E,1µm,8.6s
KEV   Kevo             68.03 338  P     P       20 22 09.5 +0.7
KEV                             IAmb  IAmb    20 22 35.9
      comp=Z,354nm,1.4s
KEV   Kevo             68.03 338  P     P       20 22 09.5 +0.7
KEV                             pmax  pmax
      comp=Z,354nm,1.4s
AKH   Akhalkalaki      68.06 306 ⇓P     P       20 22 10.9 +1.2
INK   Inuvik           68.11  23  P     P       20 22 09.9 +0.6
      comp=Z,344nm,0.8s,baz=286,slow=6.4,SNR=465
INK                             S     S       20 30 60.0 +0.7
      comp=Z,8.4nm,1.1s,baz=169,slow=26,SNR=11
INK                             PKPPKP P'P'df 20 50 25.0 -3.9
      comp=Z,10.0nm,1.1s,baz=96,slow=4.0,SNR=16
INK                             LR    LR      20 53 27.1
      comp=Z,3µm,21.3s,baz=282,slow=37
INK   Inuvik           68.11  23  P     P       20 22 10.4 +1.0
INK                             IAmb  IAmb    20 22 12.6
      comp=Z,552nm,1.0s
INK   Inuvik           68.11  23  P     P       20 22 10.4 +1.0
INK                             pmax  pmax
      comp=Z,552nm,1.0s
HSPB  Hornsund (broa   68.19 347 i P    P       20 22 08.8 -0.9
HSPB                           eL     L       20 51 28.3
      comp=Z,6µm,22.5s
HSPB  Hornsund (broa   68.19 347⇓iP     P       20 22 09.6 -0.1
HSPB                            IVmB_BB       20 22 10.5
      comp=Z,5µm,2.6s
HSPB                           eS     S       20 31 00.1  0.0
HSPB                            IVMsBB        20 49 39.6
      comp=Z,3µm,22.1s
HSPB  Hornsund (broa   68.19 347⇓iP     P       20 22 08.8 -0.9
HSPB                            MLR   MLR
      comp=Z,6µm,22.5s
ABTO  Aybut            68.32 279  P     P       20 22 11.3 -0.3
      SNR=140
OBN   Obninsk          68.39 322  P     P       20 22 10.4 -0.9
      comp=Z,54nm,0.4s,baz=81,slow=4.8,SNR=43
OBN   Obninsk          68.39 322 ⇓P     P       20 22 10.2 -1.1
OBN   Obninsk          68.39 322  P     P       20 22 10.8 -0.5
OBN                             IAmb  IAmb    20 22 38.3
      comp=Z,902nm,1.3s
OBN   Obninsk          68.39 322d iP    P       20 22 09.7 -1.6
OBN                            e              20 22 35.7
OBN                            e*PP   sP      20 22 47.0 -6.0
OBN                            ePPP   PPP     20 26 28.3
OBN                            eS     SKiKP   20 31 41.6  -12
OBN                             pmax  pmax
      comp=Z,211nm,1.0s
CLDR  Caldiran         68.45 304  P     P       20 22 13.2 +0.9
BJO1  Bjornoya         68.52 344 eP     P       20 22 11.7 -0.1
BJO1                           eS     S       20 30 58.9 -5.1
ARCES ARCESS Array B   68.60 338  P     P       20 22 11.7 -0.8
      comp=Z,61nm,0.9s,baz=46,slow=8.7,SNR=138
ARCES                           PcP   PcP     20 22 37.3 +0.7
      comp=Z,179nm,0.9s,baz=74,slow=5.2,SNR=17
ARCES                           ScP           20 26 29.1
      comp=Z,16nm,0.9s,baz=46,slow=5.2,SNR=4.8
ARCES                           LR    LR      20 59 04.0
      comp=Z,4µm,18.8s,baz=57,slow=42
ARE0  ARCESS Array S   68.60 338⇓iP     P       20 22 11.9 -0.5
ARE0                            IVmB_BB       20 22 14.4
      comp=Z,3µm,3.0s
ARE0                           eS     S       20 31 02.8 -2.4
ARE0                            IVMsBB        20 58 20.4
      comp=Z,3µm,8.8s
ARE0  ARCESS Array S   68.60 338  P     P       20 22 13.2 +0.8
HAMF  Hammerfest       68.78 340 eP     P       20 22 13.9 +0.5
HAMF                            IVmBBB        20 22 15.1
      comp=Z,4µm,12.1s
HAMF                            IVmB_BB       20 22 15.2
      comp=Z,2µm,2.5s
HAMF                           eS     S       20 31 05.3 -1.8
HAMF                            IVMsBB        20 57 35.2
      comp=Z,3µm,19.4s
HYT   Haines Junctio   68.89  32  IAmb  IAmb    20 22 17.8
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      comp=Z,1µm,1.8s
AGRB  Hanur-Agry       68.99 305  P     P       20 22 16.5 +0.9
VANB  Van              69.01 303  P     P       20 22 16.2 +0.5
DHAK  Deception Hill   69.10  33  IAmb  IAmb    20 22 18.9
      comp=Z,1µm,1.7s
SENK  Senkaya-Erzuru   69.14 306  P     P       20 22 17.6 +1.0
CUKT  Cukurca          69.29 302  P     P       20 22 17.3 -0.1
BCA   Borcka           69.38 307 ⇓P     P       20 22 18.2 +0.4
BCA   Borcka           69.38 307  P     P       20 22 18.2 +0.4
AKDM  Akdamar-Van      69.40 303  P     P       20 22 18.6 +0.4
MLAZ  Malazgirt-MUS    69.46 304  P     P       20 22 19.8 +1.3
KTK1  Kautokeino       69.55 338 eP     P       20 22 18.4 +0.1
KTK1                            IVmBBB        20 22 19.9
      comp=Z,3µm,4.3s
KTK1                            IVmBBB        20 22 21.6
      comp=Z,3µm,5.2s
KTK1                           eS     S       20 31 16.4 +0.1
NOR   Nord             69.67 355⇓iP     P       20 22 17.7 -1.1
NOR   Nord             69.67 355⇓iP     P       20 22 17.7 -1.1
KOPR  Koprukoy-ERZUR   69.69 305  P     P       20 22 20.9 +1.0
SOCY  Socotra          69.80 274        P       20 22 20.1 -0.7
SOCY  Socotra          69.80 274  P     P       20 22 19.7 -1.1
      SNR=149
SOC   Sochi            70.02 309d iP    P       20 22 21.0 -0.6
SOC                            e*PP   PcP     20 22 47.1 +4.0
SOC                            e*SP   pP      20 22 57.1 +6.5
SOC                            e              20 24 53.3
SOC                            ePPP   PPP     20 26 37.0
SOC                            eS     S       20 31 20.8 -1.9
SOC                            e*SS   pS      20 32 03.3 +5.7
SOC                             pmax  pmax
      comp=Z,608nm,0.8s
GURO  Guroymak-BITLI   70.03 304  P     P       20 22 22.7 +0.7
SIRT  Sirnak           70.08 303  P     P       20 22 22.3 +0.1
CHOM  Cayeli-Rize      70.11 307  P     P       20 22 22.7 +0.5
WHY   Whitehorse       70.16  31        P       20 22 24.1 +1.8
WHY                             IAmb  IAmb    20 22 25.6
      comp=Z,1µm,1.7s
VRTB  Varto-Mus        70.25 305  P     P       20 22 24.5 +1.2
MLH   Mauna Loa        70.33  78  P     P       20 22 25.3 +1.1
MLH                             IAmb  IAmb    20 22 57.4
      comp=Z,633nm,1.7s
SKAG  Skagway          70.37  33  P     P       20 22 25.5 +2.0
SKAG                            IAmb  IAmb    20 22 27.4
      comp=Z,304nm,0.9s
UWE   Uwekahuna        70.44  78  IAmb  IAmb    20 22 28.8
      comp=Z,765nm,1.7s
KARO  Karliova-Bingo   70.50 305  P     P       20 22 25.4 +0.5
TRO   Tromso           70.68 339⇓iP     P       20 22 24.3 -0.8
TRO                             IVmB_BB       20 22 25.3
      comp=Z,4µm,3.4s
TRO                            eS     S       20 31 27.2 -2.2
TRO                             IVMsBB        21 01 10.7
      comp=Z,3µm,4.8s
SVAN  Silvan-Diyarba   70.78 304  P     P       20 22 26.8 +0.4
YEDI  Yedisu-Bingol    70.82 305  P     P       20 22 27.1 +0.3
C36M  Paulatuk         70.87  21        P       20 22 26.9 +0.7
C36M  Paulatuk         70.87  21  P     P       20 22 26.4 +0.1
      baz=297
C36M                            S     S       20 31 30.9 -0.6
      baz=297
BNGB  Bingl            70.88 305  P     P       20 22 27.8 +0.7
BESE  Bessie Mountai   70.92  33  IAmb  IAmb    20 22 30.0
      comp=Z,856nm,1.7s
ANN   Anapa            71.16 311d iP    P       20 22 27.5 -1.0
ANN                            e              20 25 05.6
ANN                            ePPP   PPP     20 26 50.5
ANN                            eS     S       20 31 32.9 -2.9
ANN                            i              20 32 18.2
ANN                             pmax  pmax
      comp=N,310nm,2.3s
ANN                             pmax  pmax
      comp=Z,2µm,2.3s
ANN                             pmax  pmax
      comp=E,427nm,2.3s
ANN                             pmax  pmax
      comp=Z,4µm,7.2s
ANN                             pmax  pmax
      comp=N,620nm,3.6s
ANN                             pmax  pmax
      comp=E,1µm,7.2s
ANN                             smax  smax
      comp=N,1µm,9.9s
ANN                             smax  smax
      comp=E,2µm,9.9s
ANN                             smax  smax
      comp=Z,210nm,5.0s
ANN                             MLR   MLR
      comp=Z,4µm,13.0s
SIT   Sitka            71.24  35  IAmb  IAmb    20 22 32.0
      comp=Z,858nm,1.6s
JIS   Juneau Island    71.26  34  IAmb  IAmb    20 22 33.7
      comp=Z,250nm,0.8s
ERZN  Erzincan         71.37 305  P     P       20 22 31.5 +1.5
FIA1  FINESS Array S   71.43 330  P     P       20 22 29.2 -0.6
FIA1                            IAmb  IAmb    20 22 32.7
      comp=Z,226nm,0.8s
FINES FINESS Array B   71.43 330  P     P       20 22 28.9 -0.9
      comp=Z,58nm,0.3s,baz=73,slow=5.2,SNR=149
FINES                           LR    LR      20 57 55.6
      comp=Z,9µm,18.9s,baz=64,slow=39
MAZI  Mazidag          71.58 303  P     P       20 22 31.4 +0.1
ESPY  Espiye-Giresun   71.62 307  P     P       20 22 30.9 -0.5
DYBB  Diyarbakir       71.64 304  P     P       20 22 32.1 +0.5
SVRC  Sivrice-ELAZID   72.10 304  P     P       20 22 35.2 +0.7
VSU   Vasula           72.31 327 eP     P       20 22 34.3 -0.8
VSU   Vasula           72.31 327deP     P       20 22 33.9 -1.2
VSU                             pmax  pmax
      comp=Z,2µm,1.3s
TAU   Tasmania Unive   72.37 165  P     P       20 22 36.5 +1.0
TAU   Tasmania Unive   72.37 165  P     P       20 22 36.5 +1.0
TAU                             pmax  pmax
      comp=Z,88nm,0.9s
STEI  Steigen          72.67 338⇓iP     P       20 22 36.5 -0.5
STEI                            IVmBBB        20 22 38.6
      comp=Z,4µm,2.3s
STEI                           eS     S       20 31 45.0 -7.3
STEI                            IVMsBB        21 00 52.1
      comp=Z,5µm,13.7s
RAYN  Ar Rayn          72.67 288 i P    P       20 22 38.1 +0.1
      SNR=722
RAYN  Ar Rayn          72.67 288  P     P       20 22 38.7 +0.7
RAYN  Ar Rayn          72.67 288  P     P       20 22 38.7 +0.7
RAYN                            pmax  pmax
      comp=Z,3µm,1.9s
URFA  Urfa             72.80 304  P     P       20 22 39.3 +0.8
RSDY  Resadiye-TOKAT   72.80 307  P     P       20 22 38.5 +0.1
LOF   Lofoten          73.11 339⇓iP     P       20 22 38.6 -1.1
LOF                             IVmBBB        20 22 39.7
      comp=Z,5µm,3.9s
LOF                            eS     S       20 31 57.8 +0.5
SVSK  Karacayir        73.21 307  P     P       20 22 41.6 +0.8
DLBC  Dease Lake       73.30  32  LR    LR      20 55 15.2
      comp=Z,2µm,20.5s,baz=313,slow=36
DLBC  Dease Lake       73.30  32  P     P       20 22 43.1 +2.0
DLBC                            IAmb  IAmb    20 22 44.8
      comp=Z,977nm,1.6s
SIM   Simferopol'      73.31 312deP     P       20 22 41.2 -0.1
SIM                            e*PP   PcP     20 22 59.0 +1.9
SIM                            e              20 25 31.0
SIM                            ePPP   PPP     20 27 15.0
SIM                            eS     SKiKP   20 31 56.0 -4.7
SIM                            e              20 32 38.0
SIM                             pmax  pmax
      comp=Z,2µm,10.0s
MICGM Minsk            73.32 323⇓iP     P       20 22 41.0 -0.1
MICGM                           PM            20 22 42.0
      comp=Z,15nm,6.0s
MICGM                           PM            20 22 44.0
      comp=Z,2.4nm,1.5s
MICGM                           PM            20 22 45.0
      comp=E,1.9nm,2.0s
MICGM                           PM            20 22 45.0
      comp=N,0.7nm,1.8s
MICGM                          epP    pP      20 23 14.0 +3.6
MICGM                          ePP    PP      20 25 18.0 -7.5
MICGM                          ePPP   PPP     20 27 16.0
MICGM                          eS     SKiKP   20 31 58.0 -2.4
MICGM                          esS    pS      20 32 34.0 -1.8
MICGM                          eSS    SS      20 36 48.0 +4.4
MICGM                          eSSS   SSS     20 39 48.0
MICGM                          eLR    LR      20 47 00.0
MNK   Minsk            73.32 323⇓iP     P       20 22 41.0 -0.1
MNK                            e*PP   pP      20 23 14.0 +3.6
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MNK                            ePPP   PPP     20 27 16.0
MNK                            eS     SKiKP   20 31 58.0 -2.4
MNK                            e              20 32 34.0
MNK                            eSS    SS      20 36 48.0 +4.4
MNK                             pmax  pmax
      comp=Z,15µm,6.0s
MNK                             pmax  pmax
      comp=Z,2µm,1.5s
MNK                             pmax  pmax
      comp=E,2µm,2.0s
MNK                             pmax  pmax
      comp=N,670nm,1.8s
MNK                             MLR   MLR
      comp=Z,19µm,14.0s
DARE  Darende-Malaty   73.36 305  P     P       20 22 42.9 +1.1
TOKT  Tokat            73.38 307  P     P       20 22 42.1 +0.2
KVT   Kavak            73.45 308  P     P       20 22 42.7 +0.5
IZAR  Zarasai          73.66 325 eP     P       20 22 42.8 -0.3
NACGM Naroch           73.74 324 eP     P       20 22 42.0 -1.6
NACGM                          eP     P       20 22 42.0 -1.6
NACGM                           PM            20 22 46.0
      comp=Z,1.1nm,1.0s
NACGM                          epP    PcP     20 23 06.0 +7.3
NACGM                          esP    sP      20 23 24.0 -1.5
NACGM                          ePP    PP      20 25 28.0 -1.1
NACGM                          ePPP   PPP     20 27 14.0
NACGM                          eS     SKiKP   20 32 04.0 +2.9
NACGM                          esS    sS      20 33 08.0  +12
NACGM                          eSS    SS      20 36 40.0  -10
NACGM                          eSSS   SSS     20 41 06.0
NACGM                          eLQ    LQ      20 57 27.0
NACGM                          eLR    LR      20 59 09.0
NACGM                           LRM   MLR     21 01 20.0
      comp=Z,16nm,18.0s
DIKM  Dikmen           73.78 309  P     P       20 22 43.7 -0.4
ISAL  Salakas          73.80 325 eP     P       20 22 43.5 -0.5
MOR8  Moi Rana         73.85 337⇓iP     P       20 22 42.2 -1.8
MOR8                            IVmB_BB       20 22 44.1
      comp=Z,5µm,3.0s
MOR8                           eS     SKiKP   20 32 02.9 +1.9
MOR8                            IVMsBB        21 00 52.0
      comp=Z,3µm,12.8s
GAZ   Gaziantep        74.09 304  P     P       20 22 46.6 +0.5
GAZ   Gaziantep        74.09 304  P     P       20 22 47.3 +1.2
AKASG Malin Array Be   74.10 319  P     P       20 22 44.7 -1.0
      comp=Z,36nm,0.3s,baz=59,slow=6.5,SNR=160
AKASG                           S     S       20 32 10.1 +1.0
      comp=Z,0.1nm,0.2s,baz=67,slow=7.3,SNR=2.8
AKASG                           ScS   SKSac   20 32 40.9 -1.3
      comp=Z,0.3nm,0.5s,baz=65,slow=5.4,SNR=4.1
AKASG                           PKKP  PKKPdf  20 42 04.2 +4.1
      comp=Z,0.1nm,0.3s,baz=241,slow=3.1,SNR=4.6
AKASG                           PKPPKP P'P'df 20 50 14.3 -4.8
      comp=Z,0.1nm,0.3s,baz=246,slow=2.9,SNR=5.2
AKASG                           LR    LR      20 57 56.7
      comp=Z,9µm,19.9s,baz=80,slow=38
AKBB  Malin Array Si   74.10 319  P     P       20 22 45.1 -0.7
AKBB                            IAmb  IAmb    20 22 47.9
      comp=Z,1µm,1.7s
AKBB  Malin Array Si   74.10 319  P     P       20 22 45.1 -0.7
AKBB                            pmax  pmax
      comp=Z,1µm,1.7s
KONS  Konsvik          74.13 338 eP     P       20 22 46.0 +0.4
KONS                            IVmBBB        20 22 47.1
      comp=Z,4µm,3.1s
KONS                           eS     S       20 32 08.8 +0.1
KMRS  Kahramanmaras    74.19 304  P     P       20 22 47.1 +0.5
SARI  SarD1z-Kayseri   74.20 305  P     P       20 22 47.4 +0.6
H02N1 VAN INLET T-PH   74.20  38  P     P       20 22 47.4 +1.0
      SNR=72
STOK  Stokkvaagen      74.25 338 eP     P       20 22 46.6 +0.2
DIB   Dawson Inlet,    74.26  38  P     P       20 22 47.4 +0.8
H02S1 DAWSON INLET T   74.26  38  P     P       20 22 47.9 +1.3
      SNR=57
BNN   Bunyan           74.44 306  P     P       20 22 48.5 +0.3
YOZ   Yozgat           74.51 307  P     P       20 22 48.7 +0.1
RES   Resolute Bay     74.53  11  S     S       20 32 11.2 -1.8
      comp=Z,2.1nm,1.0s,baz=198,slow=22,SNR=12
RES                             LR    LR      20 54 29.6
      comp=Z,2µm,20.6s,baz=320,slow=35
RES   Resolute Bay     74.53  11  P     P       20 22 48.3 +0.5
RES   Resolute Bay     74.53  11  P     P       20 22 48.3 +0.5
RES                             pmax  pmax
      comp=Z,3µm,2.0s
BZK   Bozkurt          74.53 309 ⇓P     P       20 22 48.4  0.0
CORM  Corum            74.79 308  P     P       20 22 50.7 +0.5
SLIT  Slitere, Latvi   74.80 327 eP     P       20 22 48.2 -1.4
PABE  Paberze          74.94 325 eP     P       20 22 49.9 -0.6
ILGA  Ilgaz            75.08 309  P     P       20 22 53.8 +1.8
ILGA                            IAmb  IAmb    20 22 54.5
      comp=Z,2µm,2.0s
TAHT  Tahtakopru-Hat   75.15 303  P     P       20 22 52.5 +0.3
CEYT  Ceyhan           75.23 304  P     P       20 22 53.2 +0.7
CANT  Cankiri          75.33 308  P     P       20 22 53.4 +0.2
KURC  Kurucasile-Bar   75.44 310  P     P       20 22 52.7 -1.0
NSS   Namsos           75.61 336⇓iP     P       20 22 53.2 -1.0
NSS                             IVmB_BB       20 22 54.2
      comp=Z,4µm,3.3s
NSS                            eS     S       20 32 24.8 -0.4
NSS                             IVMs_BB IVMs_BB 21 02 31.7
      comp=Z,4µm,15.4s
KARA  Karaisali        75.64 305  P     P       20 22 55.3 +0.4
BR131 Keskin Array S   75.67 307  P     P       20 22 55.6 +0.4
BR131                           IAmb  IAmb    20 22 58.1
      comp=Z,712nm,1.2s
BR131 Keskin Array S   75.67 307d iP    P       20 22 54.5 -0.7
BRTR  Keskin Array B   75.67 307  P     P       20 22 55.2  0.0
      comp=Z,217nm,0.9s,baz=108,slow=2.9,SNR=198
BRTR                            S     S       20 32 25.5 -1.6
      comp=Z,0.7nm,0.9s,baz=46,slow=10,SNR=2.1
BRTR                            PKKP  PKKPdf  20 42 00.8 +2.8
      comp=Z,7.4nm,1.4s,baz=316,slow=4.0,SNR=3.9
KRTS  Karatas          75.68 304  P     P       20 22 56.3 +1.2
SORM  Soroca           75.69 317 ⇓P     P       20 22 53.8 -1.2
PBUR  Paburge          75.72 326 eP     P       20 22 54.6 -0.4
GULA  Gulagac          75.80 306  P     P       20 22 55.7 -0.2
TULEG Thule            75.80   4  P     P       20 22 55.2 +0.1
YAYX  Yaylak           75.86 307  P     P       20 22 56.0 -0.3
KIS   Kishinev         75.88 316⇓iP     P       20 22 55.0 -1.1
      comp=Z,1µm,2.0s
KIS   Kishinev         75.88 316 i PcP  PcP     20 23 07.0 -1.1
KIS                            i pP   pP      20 23 30.0 +4.4
KIS   Kishinev         75.88 316 ePP    PP      20 25 50.0 +2.6
KIS   Kishinev         75.88 316 ⇓P     P       20 22 55.2 -0.9
KIS   Kishinev         75.88 316⇓iP     P       20 22 55.0 -1.1
KIS                            i              20 23 07.0
KIS                            e              20 25 50.0
KIS                            ePPP   PPP     20 27 40.0
KIS                            i S    S       20 32 24.0 -4.8
KIS                            i              20 32 51.0
KIS                            i              20 33 20.0
KIS                             pmax  pmax
      comp=Z,1µm,2.0s
KIS                             MLR   MLR
      comp=N,5µm,14.0s
KIS                             MLR   MLR
      comp=Z,6µm,20.0s
MILM  Milestii Mici    75.92 316 ⇓P     P       20 22 55.1 -1.1
SUW   Suwalki          76.02 324 i P    P       20 22 55.8 -0.9
SUW                            eS     SKSac   20 32 51.4 -4.9
SUW                            eL     L       20 48 54.8
      comp=Z,14µm,45.9s
SUW   Suwalki          76.02 324  P     P       20 22 56.4 -0.3
SUW   Suwalki          76.02 324  P     P       20 22 56.4 -0.3
SUW                             pmax  pmax
      comp=Z,1µm,1.0s
SERE  Sereflikochisa   76.04 307  P     P       20 22 58.0 +0.7
OUZ   Omahuta          76.11 142  P     P       20 22 58.4 +1.0
HWQ   Hawqa            76.17 302 eP     P       20 22 58.1 -0.1
MSEY  Mahe Island      76.18 257 i P    P       20 22 58.9 +0.6
      SNR=49
MSEY  Mahe Island      76.18 257  P     P       20 22 59.2 +0.9
MSEY                            IAmb  IAmb    20 23 00.8
      comp=Z,777nm,1.4s
MSEY  Mahe Island      76.18 257  P     P       20 22 59.2 +0.9
MSEY                            pmax  pmax
      comp=Z,777nm,1.5s
AFSR  Afar-Bala (An    76.18 307  P     P       20 22 58.5 +0.4
MERS  Mersin           76.19 304  P     P       20 22 57.9 -0.2
ANTO  Ankara           76.21 308 ⇓P     P       20 22 58.3 +0.1
ANTO  Ankara           76.21 308  P     P       20 22 58.7 +0.5
ANTO                            IAmb  IAmb    20 23 01.1
      comp=Z,1µm,1.6s
ANTO  Ankara           76.21 308  P     P       20 22 58.7 +0.5
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ANTO				pmax	pmax		
	comp=Z,1µm,1.6s						
LOD	Lodumlu	76.22	308	P	P	20 22 58.4	+0.1
BR231	Keskin MP Arra	76.23	308	IAmb	IAmb	20 23 01.3	
	comp=Z,1µm,1.4s						
YESY	Yesilyurt	76.38	306	P	P	20 22 59.5	+0.2
LEOM	Leova	76.46	315	⇓P	P	20 22 58.8	-0.5
BHL	Bhannes	76.54	301	eP	P	20 23 00.2	0.0
RCY	Rachaya	76.57	301	eP	P	20 23 00.8	+0.4
IAS	Iasi	76.57	316	⇓P	P	20 22 59.5	-0.5
KIZK	Mersin	76.62	304	P	P	20 23 00.1	-0.4
TLCR		76.65	314	⇓P	P	20 23 00.9	+0.4
QRWL	Qaraoun	76.66	301	eP	P	20 23 01.0	+0.1
BEYL	Beirut	76.67	301	eP	P	20 23 00.5	-0.3
DQRL	Deir Qamar	76.68	301	eP	P	20 23 01.0	0.0
SILI	Silifke-Mersin	76.83	304	P	P	20 23 01.4	-0.2
KEBE	Keben-Mersin	76.95	304	P	P	20 23 02.4	0.0
RAO	Raoul Island	76.97	133	LR	LR	20 52 02.4	
	comp=Z,1µm,19.6s,baz=341,slow=32						
TBLU	Trondheim	76.97	336	⇓iP	P	20 23 00.1	-1.7
TBLU				IVmB_BB		20 23 01.5	
	comp=Z,6µm,2.5s						
TBLU				eS	S	20 32 39.7	-0.4
TBLU				IVMs_BB	IVMs_BB	21 01 36.4	
	comp=Z,3µm,14.0s						
EREN	Erenkoy	76.99	303	P	P	20 23 02.4	-0.2
JNW	Jan Mayen West	77.02	346	eP	P	20 23 03.3	+1.3
JNE	Jan Mayen East	77.02	346	eP	P	20 23 02.9	+0.9
IKL	Isikli	77.06	304	P	P	20 23 02.6	-0.3
JMIC	Jan Mayen	77.06	346	P	P	20 23 04.2	+1.9
	comp=Z,523nm,0.8s						
JMIC	Jan Mayen	77.06	346	eP	P	20 23 03.0	+0.7
TOPG	Topolog	77.06	314	⇓P	P	20 23 02.1	-0.7
MDUB	Mudurnu	77.07	309	P	P	20 23 02.9	-0.2
MDUB	Mudurnu	77.07	309	P	P	20 23 03.7	+0.6
BBB	Bella Bella	77.09	38	S	S	20 32 41.9	+0.1
	comp=Z,28nm,1.2s,baz=196,slow=5.6,SNR=1.9						
CFR	Carcaliu	77.09	314	⇓P	P	20 23 02.5	-0.4
MMAI	Mount Meron Ar	77.09	301	P	P	20 23 04.5	+1.2
	comp=Z,282nm,1.0s,baz=69,slow=8.8,SNR=9.0						
TEVE	Tevekalti-Mers	77.15	304	P	P	20 23 03.7	+0.1
JMI	Jan Mayen	77.16	346	eP	P	20 23 04.2	+1.4
GHRR		77.16	315	⇓P	P	20 23 03.5	+0.2
AKKU	Akkuyu-Mersin	77.19	304	P	P	20 23 03.3	-0.4
LADK	Ladik-KONYA	77.20	306	P	P	20 23 03.3	-0.6
EFOR	EFORIE	77.25	313	⇓P	P	20 23 03.9	+0.1
KIZT	Kizilcal	77.26	307	P	P	20 23 03.8	-0.4
DAMY	Dhamar	77.27	280	P	P	20 23 06.5	+1.7
	SNR=75						
SVRH	Sivrihisar-ESK	77.27	308	P	P	20 23 03.9	-0.3
KONT	Konya--Tatoy	77.31	306	P	P	20 23 03.8	-0.6
PRAR	RASCA	77.31	317	⇓P	P	20 23 03.6	-0.5
BERE	Bereket-Mersin	77.35	304	P	P	20 23 04.5	-0.3
MANR	Mangalia	77.39	313	⇓P	P	20 23 05.0	+0.4
HFS	Hagfors	77.39	332	P	P	20 23 03.2	-1.1
	comp=Z,137nm,0.8s,baz=58,slow=4.0,SNR=106						
PETR	Petresti	77.42	315	⇓P	P	20 23 05.7	+0.9
HARR	Harsova	77.43	314	⇓P	P	20 23 04.9	+0.1
TESR	Tescani	77.43	316	⇓P	P	20 23 04.5	-0.4
LVV	L'vov	77.49	320	eP	P	20 23 02.0	-3.1
LVV				e		20 23 32.4	
LVV				e		20 25 55.7	
LVV				e		20 27 53.4	
LVV				eS	S	20 32 39.3	-7.0
LVV				e		20 33 27.1	
LVV				e		20 37 46.9	
LVV				MLR	MLR		
	comp=N,4µm,19.0s						
LVV				MLR	MLR		
	comp=E,5µm,19.0s						
LVV				MLR	MLR		
	comp=Z,6µm,19.0s						
ODBI	Odobesti	77.51	315	⇑P	P	20 23 06.4	+1.1
TEKE	Tekeli-Mersin	77.52	304	P	P	20 23 05.0	-0.5
SAUV	Serdivan-Sakar	77.55	309	P	P	20 23 04.2	-1.4
GULT	Gulveren	77.56	309	P	P	20 23 04.9	-0.9
SPNC	Sapanca-Adapaz	77.59	309	P	P	20 23 05.8	0.0
CIFT	Cifteler, Eski	77.63	308	P	P	20 23 05.4	-0.8
SRCK	Saricakaya, Es	77.65	309	P	P	20 23 05.8	-0.4
NC405	NORSAR Array S	77.65	333	P	P	20 23 05.1	-0.7
VRI	Vrincioaia	77.67	315	⇓P	P	20 23 06.5	+0.3
PSN	Preselentsi	77.71	313	i P	P	20 23 06.9	+0.5
NC303	NORSAR Array S	77.72	334	P	P	20 23 06.3	+0.2
NC303				IAmb	IAmb	20 23 08.0	
	comp=Z,1µm,1.4s						
PLOR	Plostina	77.73	315	⇓P	P	20 23 07.3	+0.7
GRER		77.74	315	⇓P	P	20 23 08.0	+1.5
YKA	Yellowknife Ar	77.78	25	P	P	20 23 06.8	+0.3
	comp=Z,234nm,0.8s,baz=298,slow=5.3,SNR=822						
YKA				PKiKP	PKiKP	20 28 44.4	+0.2
	comp=Z,3.9nm,0.7s,baz=308,slow=1.6,SNR=4.8						
YKA				S	S	20 32 49.0	0.0
	comp=Z,1.6nm,0.9s,baz=316,slow=9.5,SNR=4.0						
YKA				PKKP	PKKPdf	20 41 54.7	+0.3
	comp=Z,0.9nm,0.9s,baz=121,slow=2.0,SNR=3.8						
YKA				PKKPbc	PKKPbc	20 42 06.3	-2.0
	comp=Z,2.3nm,0.4s,baz=125,slow=2.8,SNR=9.7						
BUR08	Bucovina Ar. S	77.81	317	P	P	20 23 07.6	+0.6
BUR08				IAmb	IAmb	20 23 09.3	
	comp=Z,1µm,2.0s						
BURAR	Bucovina Array	77.81	317	⇓P	P	20 23 06.8	-0.3
BISRR	Bisoca	77.83	315	⇓P	P	20 23 07.9	+0.8
SILT	Sile	77.84	310	P	P	20 23 07.1	-0.1
AMRR	Amara	77.85	314	⇑P	P	20 23 07.9	+0.7
CSS	Mathiatis	77.85	303	P	P	20 23 06.8	-0.6
CSS	Mathiatis	77.85	303	P	P	20 23 08.1	+0.7
CSS				IAmb	IAmb	20 23 10.0	
	comp=Z,597nm,0.9s						
NB201	NORSAR Array S	77.85	333	P	P	20 23 06.6	-0.3
NB201				IAmb	IAmb	20 23 08.6	
	comp=Z,670nm,1.1s						
NB2	NORSAR Subarra	77.89	333	P	P	20 23 06.1	-1.1
	comp=Z,3µm,2.5s,baz=53,slow=5.9						
NB2	NORSAR Subarra	77.89	333	P	P	20 23 06.1	-1.1
	baz=53,slow=5.9						
NOA	NORSAR Array B	77.89	333	P	P	20 23 06.0	-1.2
	comp=Z,76nm,0.7s,baz=53,slow=5.6,SNR=222						
NOA				LR	LR	21 02 19.6	
	comp=Z,5µm,18.1s,baz=55,slow=39						
NOA	NORSAR Array B	77.89	333	P	P	20 23 06.0	-1.1
NC204	NORSAR Array S	77.93	334	P	P	20 23 06.9	-0.5
NC204				IAmb	IAmb	20 23 09.2	
	comp=Z,695nm,1.1s						
NC602	NORSAR Array S	77.94	333	⇓iP	P	20 23 06.9	-0.4
NC602				IVmB_BB		20 23 07.2	
	comp=Z,4µm,2.6s						
NC602				eS	S	20 32 49.5	-1.2
NC602	NORSAR Array S	77.94	333	IAmb	IAmb	20 23 08.8	
	comp=Z,662nm,1.4s						
PGOR	Pogoanele	77.94	314	⇓P	P	20 23 08.8	+1.1
HRT	Hereke	77.97	310	P	P	20 23 07.6	-0.4
GAZI	Gazipasa	78.06	305	P	P	20 23 07.8	-0.8
NBO00	NORSAR Array S	78.07	334	IAmb	IAmb	20 23 09.8	
	comp=Z,725nm,1.3s						
LEF	Lefka	78.11	303	⇓P	P	20 23 08.6	-0.2
LEF	Lefka	78.11	303	P	P	20 23 08.6	-0.2
CAVI	Cavuskoy	78.12	309	P	P	20 23 09.0	+0.2
ISR	Istrita	78.12	315	⇓P	P	20 23 09.7	+0.9
DOMB	Dombas	78.13	335	⇓iP	P	20 23 07.4	-1.0
DOMB				IVmB_BB		20 23 08.7	
	comp=Z,6µm,2.6s						
DOMB				eS	S	20 32 53.1	+0.3
DOMB				IVMsBB		21 00 56.6	
	comp=Z,4µm,20.3s						
NAO01	NORSAR Array S	78.13	333	P	P	20 23 07.4	-1.1
NAO01				IAmb	IAmb	20 23 09.9	
	comp=Z,723nm,1.4s						
RASA	Rasa	78.15	314	⇓P	P	20 23 09.2	+0.4
OZUR		78.16	316	⇓P	P	20 23 09.6	+0.7
KLYT	Kilyos	78.21	310	P	P	20 23 08.2	-1.0
KULLO	Kullorsuaq	78.21	1	⇓iP	P	20 23 08.3	-0.3
	comp=Z,395nm,0.9s						
KULLO	Kullorsuaq	78.21	1	⇓iP	P	20 23 08.3	-0.3
KULLO				pmax	pmax		
	comp=Z,400nm,0.9s						
ISK	Istanbul-Kandi	78.28	310	P	P	20 23 09.0	-0.6
ISK	Istanbul-Kandi	78.28	310	P	P	20 23 09.4	-0.2
KAVV	Kandilli-Istan	78.28	310	P	P	20 23 09.6	0.0
YLV	Yalova	78.28	310	P	P	20 23 09.3	-0.5
BEL	Belsk	78.33	323	i P	P	20 23 09.8	+0.1
BEL				eL	L	20 51 10.9	
	comp=Z,15µm,49.2s						
BEL	Belsk	78.33	323	⇓iP	P	20 23 09.8	+0.1
BEL				MLR	MLR		
	comp=Z,15µm,49.2s						
MLR	Muntele Rosu	78.33	315	P	P	20 23 09.7	-0.3
	comp=Z,90nm,1.0s,baz=17,slow=4.6,SNR=61						
MLR				S	S	20 32 55.0	-0.8
	comp=Z,11nm,1.2s,baz=233,slow=18,SNR=3.4						
MLR	Muntele Rosu	78.33	315	⇑P	P	20 23 10.2	+0.2
MLR	Muntele Rosu	78.33	315	P	P	20 23 10.4	+0.4
MLR				IAmb	IAmb	20 23 13.1	
	comp=Z,439nm,1.3s						
MLR	Muntele Rosu	78.33	315	P	P	20 23 10.4	+0.4
MLR				pmax	pmax		
	comp=Z,439nm,1.3s						
KWP	Kalwaria Pacla	78.34	320	i P	P	20 23 10.0	+0.2
KWP				eS	SKSac	20 33 12.8	-0.7
KWP				eL	L	20 56 58.3	
	comp=Z,12µm,29.8s						
KWP	Kalwaria Pacla	78.34	320	P	P	20 23 10.7	+0.9
KWP	Kalwaria Pacla	78.34	320	P	P	20 23 10.7	+0.9
KWP				pmax	pmax		
	comp=Z,2µm,1.6s						
SHUT	Suhut-Afyon	78.34	307	P	P	20 23 10.3	+0.1
MOL	Molde	78.37	336	⇓iP	P	20 23 08.7	-1.0
MOL				IVmB_BB		20 23 10.4	
	comp=Z,9µm,2.8s						
MOL				eS	S	20 32 56.4	+1.2
MOL				IVMsBB		21 08 18.8	
	comp=Z,3µm,12.2s						
BGKT	Bogazkoy	78.42	310	P	P	20 23 09.8	-0.6
PRD	Provadia	78.44	313	i P	P	20 23 10.7	+0.3
DOPR	Dopca	78.46	316	⇓P	P	20 23 11.2	+0.6
SECR		78.46	315	⇑P	P	20 23 11.0	+0.4
ARCR	ARCALIA	78.57	317	⇓P	P	20 23 11.8	+0.7
CTKS	Kestanelik-??a	78.58	311	P	P	20 23 10.9	-0.3
CTYL	Yalikoy Yolu	78.62	311	P	P	20 23 10.9	-0.6
ARMT	Armutlu	78.63	310	P	P	20 23 11.1	-0.5
ISP	Isparta	78.68	307	P	P	20 23 11.6	-0.4
ISP	Isparta	78.68	307	P	P	20 23 11.6	-0.4
ISP				pmax	pmax		
	comp=Z,2µm,1.5s						
MDNY	Mudanya-Bursa	78.70	310	P	P	20 23 11.6	-0.4
OSL	Oslo	78.73	333	eP	P	20 23 12.0	+0.3
OSL				IVmB_BB		20 23 12.1	
	comp=Z,7µm,2.5s						
OSL				eS	S	20 32 59.5	+0.3
SLVT	Silivri	78.78	311	P	P	20 23 12.5	+0.1
BCK	Bucak	78.79	306	P	P	20 23 11.4	-1.2
BMR	Baia Mare	78.81	318	⇓P	P	20 23 12.8	+0.4
AKN	Aaknes	78.81	336	eP	P	20 23 12.4	+0.2
AKN				IVmB_BB		20 23 14.3	
	comp=Z,7µm,2.5s						
AKN				eS	S	20 32 59.5	-0.6
AKN				IVMs_BB	IVMs_BB	21 02 47.8	
	comp=Z,4µm,14.4s						
EIL	Elat	78.84	298	P	P	20 23 12.6	-0.3
	comp=Z,300nm,1.1s						
RAZG	Razgrad	78.85	313	⇓P	P	20 23 13.0	+0.3
SGRR	Singureni	78.89	314	⇑P	P	20 23 13.3	+0.4
VOIR		78.92	315	⇓P	P	20 23 12.8	-0.4
KOLS	Kolonicke sedl	78.92	320	eP	P	20 23 12.6	-0.4
KOLS				pmax	pmax		
	comp=Z,152nm,1.6s						
KOLS	Kolonicke sedl	78.92	320	eP	P	20 23 12.6	-0.4
KOLS	Kolonicke sedl	78.92	320	eS	SKSac	20 33 17.0	-0.6
GEDZ	Gediz	78.93	308	P	P	20 23 13.4	+0.1
MDB	Medias	79.00	316	⇑P	P	20 23 14.5	+1.0
UZH	Uzhgorod	79.06	319	eP	P	20 23 12.0	-1.7
UZH				i		20 23 24.0	
UZH				e*PP	pP	20 23 40.2	-3.2
UZH				e		20 23 53.2	
UZH				e		20 26 16.0	
UZH				ePPP	PPP	20 28 09.8	
UZH				eS	S	20 33 01.0	-2.1
UZH				ePS	PnS	20 34 03.2	+1.9
UZH				MLR	MLR		
	comp=N,800nm,14.0s						
UZH				MLR	MLR		
	comp=E,2µm,14.0s						
UZH				MLR	MLR		
	comp=Z,1µm,14.0s						
PHSR	Pinarhisar	79.06	311	P	P	20 23 14.1	+0.2
CRLT	Corlu	79.15	311	P	P	20 23 14.9	+0.5
TRPA	Tarpa	79.16	319	⇓P	P	20 23 14.5	+0.2
KORT	Korkueli	79.16	306	P	P	20 23 14.7	0.0
CJR	Cluj-Napoca	79.21	317	⇑P	P	20 23 15.3	+0.6
ARR	Arges	79.21	316	⇓P	P	20 23 15.1	+0.4
SIMA	Simav-Kutahya	79.21	308	P	P	20 23 14.4	-0.5
SKAR	Skarslia	79.25	334	⇓iP	P	20 23 14.3	-0.3
SKAR				IVmB_BB		20 23 15.4	
	comp=Z,7µm,2.7s						
SKAR				eS	S	20 33 06.1	+1.3
SKAR				IVMsBB		21 03 14.9	
	comp=Z,4µm,14.2s						
GOLR		79.25	315	⇓P	P	20 23 14.5	-0.3
STHS	Stebnicka Huta	79.27	320	eP	P	20 23 15.8	+0.9
STHS	Stebnicka Huta	79.27	320	eP	P	20 23 15.8	+0.9
JMB	Yambol	79.31	312	i P	P	20 23 15.5	+0.3
KONO	Kongsberg	79.36	333	⇓iP	P	20 23 14.8	-0.3
KONO				IVmB_BB		20 23 15.5	
	comp=Z,6µm,2.7s						
KONO				eS	S	20 33 06.6	+0.7
KONO				IVMsBB		21 02 29.9	
	comp=Z,4µm,13.4s						
KONO	Kongsberg	79.36	333	P	P	20 23 15.1	-0.1
KONO				IAmb	IAmb	20 23 16.8	
	comp=Z,656nm,1.8s						
KONO	Kongsberg	79.36	333	ceP	P	20 23 14.1	-1.1
KONO				pmax	pmax		
	comp=Z,84nm,1.1s						
SZH	Strazhica	79.36	313	i P	P	20 23 15.4	-0.1
HUMR	Humele	79.39	315	⇓P	P	20 23 14.9	-0.7
CRVS	Cervenica-Dubn	79.40	320	eP	P	20 23 15.7	+0.1
CRVS				pmax	pmax		
	comp=Z,2µm,1.9s						
CRVS	Cervenica-Dubn	79.40	320	eP	P	20 23 15.7	+0.1
CRVS	Cervenica-Dubn	79.40	320	eS	SKSac	20 33 19.6	-1.5
EDC	Edincik	79.41	310	P	P	20 23 15.5	-0.3
COPA	Copaceanca	79.42	314	⇓P	P	20 23 15.4	-0.3
GKP	Gorka Klasztor	79.46	325	i P	P	20 23 15.4	-0.4
GKP				eS	S	20 33 18.8	+12
GKP				eL	L	20 50 26.7	
	comp=Z,24µm,57.2s						
GKP	Gorka Klasztor	79.46	325	⇓iP	P	20 23 15.4	-0.4
GKP				eS	S	20 33 18.8	+12
GKP				MLR	MLR		
	comp=Z,24µm,57.2s						
MRMT	Marmara Adasi	79.48	310	P	P	20 23 15.8	-0.5
EDRB	Edirne	79.48	312	P	P	20 23 16.1	-0.1
EDRB	Edirne	79.48	312	P	P	20 23 16.3	+0.1
ZIMR		79.55	314	⇓P	P	20 23 16.3	-0.2
ELND	Elena	79.56	313	⇓P	P	20 23 16.9	+0.3
ELL	Elmali	79.59	306	P	P	20 23 17.1	+0.1
ELL	Elmali	79.59	306	P	P	20 23 17.1	+0.1
ELL	Elmali	79.59	306	P	P	20 23 17.1	+0.1
ELL				pmax	pmax		
	comp=Z,8µm,1.5s						
BSD	Bornholm Skovb	79.61	327	i P	P	20 23 16.0	-0.6
	comp=Z,373nm,0.9s						
BSD	Bornholm Skovb	79.61	327	i P	P	20 23 16.0	-0.6
BSD				pmax	pmax		
	comp=Z,370nm,0.9s						
BSD				MLR	MLR		
	comp=Z,7µm,13.0s						
OJC	Ojcow	79.68	321	i P	P	20 23 17.1	0.0
OJC				eS	S	20 33 21.3	+12
OJC				eL	L	20 52 52.3	
	comp=Z,12µm,38.1s						
OJC	Ojcow	79.68	321	P	P	20 23 17.4	+0.2
OJC				IAmb	IAmb	20 23 20.3	
	comp=Z,1µm,1.5s						
OJC	Ojcow	79.68	321	⇓iP	P	20 23 17.1	0.0
OJC				eS	S	20 33 21.3	+12
OJC				MLR	MLR		
	comp=Z,12µm,38.1s						
KULA	Kula-Manisa	79.69	308	P	P	20 23 16.6	-0.9
KULA	Kula-Manisa	79.69	308	P	P	20 23 15.9	-1.6
DRGR		79.70	317	⇓P	P	20 23 17.5	+0.1
LOT	Lotru	79.71	316	⇓P	P	20 23 17.9	+0.4
BALB	Balikesir	79.72	309	P	P	20 23 17.3	-0.2
RKY	Sarkoy-Tekirda	79.72	310	P	P	20 23 17.4	-0.2
HYA	Hoyanger	79.75	335	eP	P	20 23 17.7	+0.5
HYA				IVmB_BB		20 23 17.7	
	comp=Z,6µm,2.7s						
HYA				eS	S	20 33 11.4	+1.5
MANT	Manisa	79.77	308	P	P	20 23 18.8	+0.6
PVL	Pavlikeni	79.77	313	i P	P	20 23 18.8	+1.1
KRBG	Karabiga-Canak	79.78	310	P	P	20 23 17.7	-0.1
SUMG	Summit	79.79	356	⇓iP	P	20 23 18.4	+0.6
	comp=Z,2µm,1.1s						
SUMG	Summit	79.79	356	IAmb	IAmb	20 23 19.4	
	comp=Z,1µm,1.5s						
SUMG	Summit	79.79	356	⇓iP	P	20 23 18.4	+0.6
SUMG				pmax	pmax		
	comp=Z,2µm,1.1s						
NIE	Niedzica	79.81	321	i P	P	20 23 18.0	+0.1
NIE				eS	S	20 33 23.7	+13
NIE				eL	L	20 53 01.9	
	comp=Z,6µm,39.5s						
NIE	Niedzica	79.81	321	⇓iP	P	20 23 18.0	+0.1
NIE				eS	S	20 33 23.7	+13
NIE				MLR	MLR		
	comp=Z,6µm,39.5s						
FOO	Floro	79.90	336	⇓iP	P	20 23 17.9	-0.1
FOO				IVmB_BB		20 23 18.7	
	comp=Z,6µm,2.3s						
FOO				eS	S	20 33 12.1	+0.7
FOO				IVMsBB		21 03 29.6	
	comp=Z,4µm,14.5s						
ATD	Arta Tunnel	79.94	278	i P	P	20 23 20.6	+1.5
ATD				i S	S	20 33 15.1	+1.6
ATD	Arta Tunnel	79.94	278	i P	P	20 23 20.6	+1.5
ATD				i S	S	20 33 15.1	+1.6
SCO	Scoresbysund	79.94	350	⇓iP	P	20 23 18.3	+0.2
	comp=Z,1µm,1.1s						
SCO	Scoresbysund	79.94	350	P	P	20 23 19.4	+1.3
SCO				IAmb	IAmb	20 23 21.4	
	comp=Z,1µm,1.1s						
SCO	Scoresbysund	79.94	350	⇓iP	P	20 23 18.3	+0.2
SCO				pmax	pmax		
	comp=Z,1µm,1.1s						
VLAD	Vladila	80.00	314	⇓P	P	20 23 19.0	0.0
DEV	Deva	80.03	317	⇓P	P	20 23 19.4	+0.4
AKAS	Kas	80.04	306	P	P	20 23 16.2	-3.3
KSL	Kastellorizon	80.09	305	P	P	20 23 33.8	+14
LPK	Lapseki	80.15	310	P	P	20 23 20.5	+0.7
PLVB	Pleven	80.15	314	⇓P	P	20 23 20.0	+0.2
KECS	Kecovo	80.17	320	eP	P	20 23 21.1	+1.3
KECS				pmax	pmax		
	comp=Z,98nm,1.1s						
KECS	Kecovo	80.17	320	eP	P	20 23 21.1	+1.3
ERIK	Erikli-Kesan	80.18	311	P	P	20 23 19.9	0.0
DIM	Dimitrovgrad	80.19	312	i P	P	20 23 20.7	+0.7
FETY	Fethiye	80.23	306	P	P	20 23 18.7	-1.7
FETY	Fethiye	80.23	306	P	P	20 23 19.0	-1.4
URZ	Urewera	80.25	142	P	P	20 23 20.2	+0.1
	comp=Z,29nm,0.8s,baz=261,slow=4.3,SNR=12						
URZ				LR	LR	20 54 42.3	
	comp=Z,3µm,21.1s,baz=328,slow=32						
URZ	Urewera	80.25	142	P	P	20 23 20.3	+0.2
GELI	Tayfur-Gelibol	80.33	310	P	P	20 23 20.7	-0.1
GZR	Gura Zlata	80.34	316	⇓P	P	20 23 20.8	0.0
SUE	Sulen	80.36	335	i P	P	20 23 19.5	-0.9
SUE				IVmB_BB		20 23 21.2	
	comp=Z,11µm,2.4s						
SUE				eS	S	20 33 16.0	-0.3
ODD1	Odda	80.38	334	eP	P	20 23 20.9	+0.2
ODD1				IVmB_BB		20 23 22.8	
	comp=Z,6µm,2.3s						
ODD1				eS	S	20 33 16.9	+0.2
ALN	Alexandroupoli	80.39	311	P	P	20 23 20.4	-0.7
ENEZ	Enez	80.39	311	P	P	20 23 20.9	-0.2
ENEZ	Enez	80.39	311	P	P	20 23 20.4	-0.7
LANS	Liptovska Anna	80.41	321	eP	P	20 23 21.8	+0.7
LANS	Liptovska Anna	80.41	321	eP	P	20 23 21.8	+0.7
SRE	Strehaia	80.44	315	⇓P	P	20 23 21.9	+0.6
KDZ	Kurdzhali	80.45	312	i P	P	20 23 22.0	+0.5
DALY	Dalyan (Mula)	80.46	306	P	P	20 23 21.2	-0.3
COP	Copenhagen	80.46	329	i P	P	20 23 21.1	0.0
	comp=Z,262nm,1.0s						
COP	Copenhagen	80.46	329	i P	P	20 23 21.1	0.0
COP				pmax	pmax		
	comp=Z,260nm,1.0s						
COP				MLR	MLR		
	comp=Z,5µm,14.0s						
AYDB	Zeytinkoy-Aydi	80.48	308	P	P	20 23 22.2	+0.4
ASK	Askoy	80.57	335	eP	P	20 23 22.0	+0.4
ASK				IVmB_BB		20 23 22.4	
	comp=Z,6µm,2.6s						
ASK				eS	S	20 33 17.6	-0.9
BER	Bergen	80.58	335	⇓iP	P	20 23 21.5	-0.2
BER				IVmB_BB		20 23 23.8	
	comp=Z,7µm,2.7s						
BER				eS	S	20 33 19.1	+0.6
BER				IVMsBB		21 04 39.5	
	comp=Z,4µm,11.4s						
YER	Yerkesik	80.58	307	P	P	20 23 21.8	-0.5
YER	Yerkesik	80.58	307	P	P	20 23 21.7	-0.5
SIRR	Siria	80.59	317	⇓P	P	20 23 22.3	+0.2
RDO	Rodhopi	80.61	311	P	P	20 23 21.6	-0.6
HOMB	Homborsund	80.65	332	⇓iP	P	20 23 21.5	-0.6
HOMB				IVmB_BB		20 23 22.2	
	comp=Z,8µm,3.0s						
HOMB				eS	S	20 33 20.5	+1.1
DKL	Dikili	80.65	309	P	P	20 23 22.2	-0.3
BAIL	Bailesti	80.66	315	⇑P	P	20 23 23.1	+0.7
RGN	Rugen	80.70	327	eP	P	20 23 22.6	+0.2
RGN	Rugen	80.70	327	eP	P	20 23 22.6	+0.2
	comp=Z,638nm,1.4s,baz=53,slow=5.0						
EZN	Ezine	80.70	310	P	P	20 23 21.8	-0.9
EZN	Ezine	80.70	310	P	P	20 23 22.6	-0.1
PLD	Plovdiv	80.71	313	i P	P	20 23 22.8	0.0
THZ	Tophouse	80.71	147	P	P	20 23 19.0	-3.6
MPEP	Malo Peshtene	80.73	314	i P	P	20 23 23.2	+0.3
BLS5	Blasjo	80.76	334	⇓iP	P	20 23 22.4	-0.3
BLS5				IVmB_BB		20 23 23.5	
	comp=Z,8µm,2.5s						
BLS5				eS	S	20 33 19.4	-1.2
BLS5				IVMsBB		21 02 44.8	
	comp=Z,3µm,12.3s						
TURN	Turunc	80.77	307	P	P	20 23 23.4	+0.2
OKC	Ostrava-Krasne	80.79	322	eP	P	20 23 23.6	+0.6
OKC				ePP	PP	20 26 20.2	-8.0
OKC				eS	S	20 33 14.0	-7.3
OKC				AMS	AMS	21 01 50.0	
	comp=Z,8µm,15.8s						
OKC	Ostrava-Krasne	80.79	322	eP	P	20 23 23.6	+0.6
OKC				e		20 33 14.0	
OKC				MLR	MLR		
	comp=Z,8µm,15.8s						
PUNG	Punghina	80.79	315	⇓P	P	20 23 23.6	+0.4
PSZ	Piszkesteto	80.80	319	⇓P	P	20 23 23.4	+0.1
PGB	Panagyurishte	80.84	313	i P	P	20 23 23.8	+0.2
BLCB	Balcova	80.88	308	P	P	20 23 23.6	-0.1
BOZC	Bozcaada	80.88	310	P	P	20 23 23.6	-0.1
RZN	Rozhen	80.90	312	i P	P	20 23 24.3	+0.3
RIGZ	Rimuhau	80.93	142	P	P	20 23 25.7	+1.9
SMTH	Samothraki Isl	80.94	311	P	P	20 23 22.6	-1.4
BZS	Buzias	80.94	317	⇓P	P	20 23 23.4	-0.6
PRK	Paraskevi	81.01	310	P	P	20 23 25.2	+0.8
CNGZ	Carnagh Statio	81.01	142	P	P	20 23 26.3	+2.1
GCAM	G?zelcaml?	81.06	308	P	P	20 23 24.9	+0.2
ARG	Arkhangelos	81.11	306	P	P	20 23 23.1	-1.9
VYHS	Vyhne	81.11	320	eP	P	20 23 25.0	+0.2
VYHS				pmax	pmax		
	comp=Z,776nm,1.4s						
VYHS	Vyhne	81.11	320	eP	P	20 23 25.0	+0.2
VYHS	Vyhne	81.11	320	eS	S	20 33 33.8	+9.1
TIM	Timisoara	81.12	317	⇓P	P	20 23 25.6	+0.8
SNART	Snartemo	81.14	332	eP	P	20 23 25.0	+0.3
SNART				IVmB_BB		20 23 25.1	
	comp=Z,3µm,2.6s						
SNART				eS	S	20 33 22.6	-1.9
MORC	Moravsky Berou	81.16	322	⇓P	P	20 23 24.7	-0.4
MORC	Moravsky Berou	81.16	322	P	P	20 23 26.2	+1.1
MORC				IAmb	IAmb	20 23 29.0	
	comp=Z,2µm,2.0s						
MORC	Moravsky Berou	81.16	322	P	P	20 23 26.2	+1.1
MORC				pmax	pmax		
	comp=Z,2µm,2.0s						
MORC	Moravsky Berou	81.16	322	⇓iP	P	20 23 24.7	-0.4
MORC	Moravsky Berou	81.16	322	eS	S	20 33 32.0	+6.8
LTZ	Lake Taylor	81.19	148	P	P	20 23 25.2	+0.1
URLA	Izmir	81.20	309	P	P	20 23 24.9	-0.6
KSP	Ksiaz	81.26	323	i P	P	20 23 25.6	+0.1
KSP				eS	S	20 33 30.1	+4.1
KSP				eL	L	20 52 30.9	

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       comp=Z,18µm,51.8s
KSP    Ksiaz             81.26 323⇓iP     P         20 23 25.6 +0.1
KSP                               eS      S         20 33 30.1 +4.1
KSP                                MLR    MLR
       comp=Z,18µm,51.8s
DAT    Datca             81.27 307  P     P         20 23 24.7  -1.3
DAT    Datca             81.27 307  P     P         20 23 25.4  -0.6
BODT   Bodrum            81.30 307  P     P         20 23 25.2  -0.8
BODT   Bodrum            81.30 307  P     P         20 23 25.9  -0.1
MDVR   Moldovita         81.30 316 ⇓P     P         20 23 25.7  -0.2
SIGR   SIGRI             81.31 310  P     P         20 23 25.0  -1.0
SMG    Samos             81.33 308  P     P         20 23 25.2  -1.0
BANR   Banloc            81.35 317 ⇓P     P         20 23 26.5 +0.4
RPZ    Rata Peaks        81.36 150  LR    LR        20 59 12.0
       comp=Z,719nm,19.0s,baz=320,slow=35
KAVA   Kavala            81.36 312  P     P         20 23 26.1  -0.1
KMY    Karmoy            81.37 334 eP     P         20 23 26.2 +0.3
KMY                                IVmB_BB          20 23 26.5
       comp=Z,9µm,2.7s
KMY                               eS      S         20 33 28.2 +1.4
STAV   Stavanger         81.37 333⇓iP     P         20 23 25.4  -0.5
STAV                               IVmB_BB          20 23 26.4
       comp=Z,9µm,2.5s
STAV                              eS      S         20 33 26.8  -0.1
STAV                               IVMs_BB IVMs_BB  21 02 53.0
       comp=Z,4µm,18.9s
KRLC   Kraliky           81.41 322 eP     P         20 23 26.2  -0.2
KRLC                              ex      x         20 23 36.2
KRLC                              ePP     PP        20 26 32.2  -1.2
KRLC                              eSKS    S         20 33 32.5 +4.7
KRLC                               AMS    AMS       21 03 30.0
       comp=Z,8µm,13.9s
KRLC   Kraliky           81.41 322 eP     P         20 23 26.2  -0.2
KRLC                              e                 20 26 32.2
KRLC                              e                 20 33 32.5
KRLC                               MLR    MLR
       comp=Z,8µm,13.9s
VTS    Vitosha           81.41 314  P     P         20 23 27.4 +0.8
VTS    Vitosha           81.41 314 ⇓P     P         20 23 27.2 +0.5
VTS    Vitosha           81.41 314 i P    P         20 23 27.5 +0.8
VTS    Vitosha           81.41 314  P     P         20 23 27.7 +1.0
VTS    Vitosha           81.41 314  P     P         20 23 27.7 +1.0
VTS                                pmax   pmax
       comp=Z,3µm,2.1s
THAS   Thassos island    81.41 311  P     P         20 23 25.5  -1.0
PGC    Sidney            81.44  39  P     P         20 23 28.5 +2.0
LIA    Limnos Island     81.44 310  P     P         20 23 26.2  -0.5
OSTC   Ostas             81.45 323 eP     P         20 23 27.2 +0.6
OSTC                              ePP     PP        20 26 28.8  -4.9
OSTC                              eSKS    S         20 33 26.9  -1.3
OSTC                               AMS    AMS       21 02 00.0
       comp=Z,6µm,15.9s
MUD    Monsted U'grnd    81.48 330⇓iP     P         20 23 26.2  -0.3
       comp=Z,390nm,1.0s
MUD    Monsted U'grnd    81.48 330⇓iP     P         20 23 26.2  -0.3
MUD                                pmax   pmax
       comp=Z,390nm,1.0s
MUD                                MLR    MLR
       comp=Z,10µm,17.0s
DPC    Dobruska-Polom    81.51 323 eP     P         20 23 27.2 +0.3
DPC                               ex      x         20 23 49.2
DPC                               ePP     PP        20 26 28.2  -6.0
DPC                               eSKS    S         20 33 25.1  -3.7
DPC                                AMS    AMS       21 03 20.0
       comp=Z,7µm,17.4s
DPC    Dobruska-Polom    81.51 323 eP     P         20 23 27.2 +0.3
DPC                               e                 20 33 25.1
DPC                                MLR    MLR
       comp=Z,7µm,17.4s
KHZ    Kahutara          81.51 147  P     P         20 23 26.3  -0.4
CHVC   Chvalec           81.52 323 eP     P         20 23 27.1 +0.1
CHVC                              ePP     PP        20 26 30.5  -3.8
CHVC                              eSKS    S         20 33 26.0  -2.9
CHVC                               AMS    AMS       21 05 50.0
       comp=Z,7µm,14.7s
CHOS   Chios island      81.56 309  P     P         20 23 26.8  -0.7
JAVC   Velka Javorina    81.57 321⇓iP     P         20 23 28.2 +0.9
JAVC   Velka Javorina    81.57 321 eS     S         20 33 38.4 +8.9
UPC    Upice             81.59 323 eP     P         20 23 28.0 +0.7
UPC                               ePP     PP        20 26 25.0   -10
UPC                               eS      S         20 33 27.2  -2.3
UPC                                AMS    AMS       21 04 10.0
       comp=Z,7µm,16.1s
UPC    Upice             81.59 323 eP     P         20 23 28.0 +0.7
UPC                               e                 20 33 27.2
UPC                                MLR    MLR
       comp=Z,7µm,16.1s
MMB    Musomiste         81.59 313 i P    P         20 23 27.5   0.0
NVR    Nevrokopi         81.62 312  P     P         20 23 26.6  -1.1
RUE    Ruedersdorf       81.65 325 eP     P         20 23 27.6 +0.2
RUE    Ruedersdorf       81.65 325 eP     P         20 23 27.7 +0.2
       comp=Z,917nm,1.2s,baz=53,slow=5.0
GVZ    Greta Valley S    81.69 148  P     P         20 23 28.1 +0.4
SRO    Srobarova         81.77 320 eP     P         20 23 29.5 +1.3
SRO                                pmax   pmax
       comp=Z,135nm,1.2s
SRO    Srobarova         81.77 320 eP     P         20 23 29.5 +1.3
A04D   Lummi Island      81.82  39  P     P         20 23 30.1 +1.7
       baz=302,SNR=5.9
KKB    Krupnik           81.88 313 i P    P         20 23 29.2 +0.2
SMOL   Smolenice         81.89 321 eP     P         20 23 29.6 +0.7
SMOL                               pmax   pmax
       comp=Z,502nm,1.6s
SMOL   Smolenice         81.89 321 eP     P         20 23 29.6 +0.7
SMOL   Smolenice         81.89 321 eS     S         20 33 39.8 +7.1
SRS    Serrai            81.91 312  P     P         20 23 28.1  -1.1
VRAC   Vranov            81.93 322  P     P         20 23 29.4 +0.3
       comp=Z,442nm,1.0s,baz=66,slow=5.6,SNR=88
VRAC   Vranov            81.93 322 ⇓P     P         20 23 29.7 +0.6
VRAC   Vranov            81.93 322⇓iP     P         20 23 29.1   0.0
VRAC   Vranov            81.93 322 eS     S         20 33 37.8 +4.7
OUR    Ouranopolis       82.04 311  P     P         20 23 29.0  -0.8
MODS   Modra-Piesok      82.05 321 eP     P         20 23 29.2  -0.6
MODS                               pmax   pmax
       comp=Z,694nm,1.4s
MODS   Modra-Piesok      82.05 321 eP     P         20 23 29.2  -0.6
MODS   Modra-Piesok      82.05 321 eS     S         20 33 38.7 +4.3
KARP   Karpathos         82.11 306  P     P         20 23 29.7  -0.7
KARP   Karpathos         82.11 306  P     P         20 23 30.9 +0.5
KRUC   Moravsky          82.17 322⇓iP     P         20 23 29.5  -0.9
KRUC   Moravsky          82.17 322 eS     S         20 33 39.7 +4.2
SOH    Sokhos            82.22 312  P     P         20 23 30.0  -0.8
ODZ    Otahua Downs      82.22 151  P     P         20 23 31.2 +0.9
D03D   Eldon             82.24  40  P     P         20 23 32.6 +1.9
       baz=302,SNR=68
ZST    Bratislava        82.25 321 eP     P         20 23 30.7  -0.1
ZST                               eS      S         20 33 40.0 +3.7
ZST    Bratislava        82.25 321 eP     P         20 23 30.7  -0.1
FRGS   Fruska Gora       82.27 317 eP     P         20 23 26.4  -4.6
PVCC   Panska Ves        82.34 324 eP     P         20 23 32.0 +0.8
PVCC                              ex      x         20 23 41.6
PVCC                              ePP     PP        20 26 28.1   -13
PVCC                              eS      S         20 33 34.6  -2.6
PVCC                               AMS    AMS       21 06 30.0
       comp=Z,8µm,17.0s
PVCC   Panska Ves        82.34 324 eP     P         20 23 32.0 +0.8
PVCC                              e                 20 33 34.6
PVCC                               MLR    MLR
       comp=Z,8µm,17.0s
KNT    Kendrikon         82.35 312  P     P         20 23 30.2  -1.2
B05A   Bryant            82.41  39  P     P         20 23 32.9 +1.4
       baz=303,SNR=36
PAIG   Paliouri          82.44 311  P     P         20 23 30.9  -1.0
BRG    Berggiesshubel    82.48 324 i P    P         20 23 31.8  -0.1
       comp=Z,634nm,1.3s
BRG                                PP     PP        20 26 33.0  -9.0
BRG                                S      S         20 33 41.0 +2.4
BRG                                SS     SS        20 38 52.0  -9.2
BRG                               ePKKP   PKKPbc    20 41 57.3  -0.2
       comp=Z,9.4nm,1.3s
BRG                               ePKPPKP P'P'df    20 49 57.1  -6.8
       comp=Z,18nm,1.8s
BRG    Berggiesshubel    82.48 324 eP     P         20 23 31.7  -0.2
       comp=Z,632nm,1.3s,baz=53,slow=5.0
BRG    Berggiesshubel    82.48 324 i P    P         20 23 31.8  -0.1
BRG                                S      S         20 33 41.0 +2.4
BRG                                pmax   pmax
       comp=Z,634nm,1.3s
BRG                                pmax   pmax
       comp=Z,9.0nm,1.3s
BRG                                pmax   pmax
       comp=Z,18nm,1.8s
BRG                                MLR    MLR
       comp=N,7µm,26.7s
BRG                                MLR    MLR
       comp=E,9µm,20.3s
BRG                                MLR    MLR
       comp=Z,6µm,23.1s
VAY    Valandovo         82.48 313 i P    P         20 23 31.8  -0.3
BSEG   Bad Segeberg      82.49 328 eP     P         20 23 31.9 +0.1
       comp=Z,1µm,1.3s,baz=53,slow=5.0
E03A   Lebam             82.49  41  IAmb  IAmb      20 23 36.8
       comp=Z,266nm,0.9s
HORT   Hortiatis         82.50 312  P     P         20 23 30.4  -1.9
TREC   Trest             82.54 322 eP     P         20 23 32.4 +0.1
TREC                              ex      x         20 23 42.6
TREC                              ePP     PP        20 26 30.8   -12
TREC                              eS      S         20 33 35.2  -4.2
TREC                               AMS    AMS       21 03 10.0
       comp=Z,9µm,17.4s
TREC   Trest             82.54 322 eP     P         20 23 32.4 +0.1
TREC                              e                 20 33 35.2
TREC                               MLR    MLR
       comp=Z,9µm,17.4s
THE    Thessaloniki      82.57 312  P     P         20 23 31.6  -0.9
GOPC   GO Pecny, Ondr    82.57 323 eP     P         20 23 33.3 +0.8
GOPC                              ex      x         20 23 45.0
GOPC                              ePP     PP        20 26 37.0  -5.9
GOPC                              eSKS    S         20 33 43.0 +3.3
GOPC                               AMS    AMS       21 04 50.0
       comp=Z,10µm,16.1s
GOPC   GO Pecny, Ondr    82.57 323 eP     P         20 23 33.3 +0.8
GOPC                              e                 20 33 43.0
GOPC                               MLR    MLR
       comp=Z,10µm,16.1s
D04E   Lakebay           82.61  40  P     P         20 23 35.0 +2.4
       baz=303,SNR=18
PRU    Pruhonice         82.66 323 eP     P         20 23 33.2 +0.3
PRU                               ex      x         20 23 45.6
PRU                               ePP     PP        20 26 40.2  -3.4
PRU                               eSKS    S         20 33 44.2 +3.7
PRU                                AMS    AMS       21 04 50.0
       comp=Z,8µm,14.4s
PRU    Pruhonice         82.66 323 eP     P         20 23 33.2 +0.3
PRU                               e                 20 26 40.2
PRU                               e                 20 33 44.2
PRU                                MLR    MLR
       comp=Z,8µm,14.4s
AOS    Alonnisos         82.67 310  P     P         20 23 31.7  -1.4
PRA    Prague            82.67 323 eP     P         20 23 34.2 +1.3
PRA                               ePCP    PcP       20 23 39.5 +1.9
PRA                               ePP     PP        20 26 35.7  -8.0
PRA                               eSKS    S         20 33 36.9  -3.7
PRA                                AMS    AMS       21 03 30.0
       comp=Z,7µm,16.8s
PRA    Prague            82.67 323 eP     P         20 23 34.2 +1.3
PRA                               e                 20 33 36.9
PRA                                MLR    MLR
       comp=Z,7µm,16.8s
DIVS   Divibare          82.71 316 eP     P         20 23 32.9  -0.5
CLL    Collm             82.72 325⇓iP     P         20 23 33.8 +0.7
       comp=Z,547nm,1.1s
CLL                               epP     pP        20 24 07.0 +4.0
CLL                               i PP    PP        20 26 44.6 +0.7
       comp=Z,193nm,1.6s
CLL                               e                 20 27 05.0
CLL                               epPP              20 27 16.0
CLL                               ePPP    PPP       20 28 36.0
CLL                               ePPPP             20 30 00.0
CLL                               eS      S         20 33 42.0 +1.1
CLL                               ePS     PnS       20 34 46.0  -0.3
CLL                               eSS     SS        20 39 06.0 +1.3
CLL                               ePKKPdf PKKPdf    20 41 46.0  -0.5
CLL                               ePKKPbc PKKPbc    20 41 58.0 +1.0
CLL                               eSSS    SSS       20 42 30.0
CLL                               eSSSS             20 45 24.0
CLL                               epSKKPdf          20 45 55.0
CLL                               ePKPPKPdf P'P'df  20 49 58.0  -5.4
CLL                               eSKPPKPbc         20 53 10.0
CLL                                LmV              21 04 00.0
       comp=Z,11µm,18.8s
CLL    Collm             82.72 325 eP     P         20 23 33.6 +0.5
       comp=Z,547nm,1.1s,baz=53,slow=5.0
CLL    Collm             82.72 325  P     P         20 23 34.7 +1.6
CLL    Collm             82.72 325⇓iP     P         20 23 33.8 +0.7
CLL                               e*SP    pP        20 24 07.0 +4.0
CLL                               i                 20 26 44.6
CLL                               eS      S         20 33 42.0 +1.1
CLL                                pmax   pmax
       comp=Z,547nm,1.1s
CLL                                pmax   pmax
       comp=N,193nm,1.6s
FBE    Freiberg          82.76 324 eP     P         20 23 33.4 +0.1
       comp=N,4µm,2.3s,baz=53,slow=5.0
TEKS   Tekeris           82.76 317 eP     P         20 23 32.6  -0.9
GRG    Griva             82.78 312  P     P         20 23 33.0  -0.7
YEL1   Yell              82.80 337 eP     P         20 23 33.6 +0.2
F03A   Seaside           82.82  42  P     P         20 23 36.1 +2.3
F03A                               IAmb   IAmb      20 23 37.2
       comp=Z,576nm,1.3s
KARY   Karystos          82.85 309  P     P         20 23 33.1  -1.0
SKO    Skopje            82.89 314 i P    P         20 23 34.5 +0.3
SANT   Santorini         82.94 307  P     P         20 23 32.1  -2.5
SANT   Santorini         82.94 307 ⇓P     P         20 23 33.1  -1.6
SANT   Santorini         82.94 307  P     P         20 23 34.2  -0.4
SKIA   Skiathos          82.96 310  P     P         20 23 32.8  -1.8
SAP1   Santorini-Akro    82.99 307  P     P         20 23 32.1  -2.7
ZKR    Zakros            83.00 306  P     P         20 23 33.8  -1.1
XOR    Xorichti          83.04 311  P     P         20 23 33.6  -1.5
NEO    Neokhori          83.05 311  P     P         20 23 33.1  -2.0
D05A   Enumclaw          83.06  40  IAmb  IAmb      20 23 38.6
       comp=Z,432nm,1.1s
F04D   Rainier, OR       83.06  41  P     P         20 23 36.6 +1.6
       baz=303
E04D   Cinebar           83.07  41  P     P         20 23 36.7 +1.7
       baz=303,SNR=6.4
CONA   Conrad Observa    83.09 321 i P    P         20 23 35.4 +0.1
       comp=Z,389nm,1.1s,SNR=259
CONA                              i SKSac S         20 33 46.7 +1.5
       comp=Z,25nm,1.8s
CONA                              i PKKPbc PKKPbc   20 41 58.4 +2.2
       comp=Z,7.1nm,1.5s
MRKA   Markates          83.10 310  P     P         20 23 33.5  -1.9
PBCC   Pribram           83.13 323 eP     P         20 23 36.3 +1.0
PBCC                              eSKS    S         20 33 45.4 +0.2
LRW    Lerwick           83.13 337⇓eP     P         20 23 34.3  -0.7
LRW                                IAmb   IAmb      20 23 37.2
       comp=Z,793nm,1.0s
LRW                                IAMs_20 IAMs_20  21 05 05.2
       comp=Z,7µm,14.7s
LIT    Litokhoron        83.15 312  P     P         20 23 34.1  -1.5
BBLS   Lazi&#263;i       83.19 316 eP     P         20 23 35.7  -0.1
WAL1   Walls             83.19 337 eP     P         20 23 35.1  -0.2
SAN1   Sandwick          83.23 337 eP     P         20 23 35.5  -0.1
PTL    Penteli           83.23 309  P     P         20 23 34.5  -1.6
C06D   Leavenworth       83.27  39  P     P         20 23 37.1 +1.0
       baz=304
ATHU   Athens Univers    83.33 309  P     P         20 23 33.8  -2.8
RUDO   Rudo              83.34 316 eP     P         20 23 35.8  -0.7
HAPS   Han Pijesak,Bl    83.36 316 eP     P         20 23 38.8 +2.1
NPS    Neapolis          83.36 306  P     P         20 23 35.7  -1.1
BEHE   Becsehely         83.37 319 eP     P         20 23 37.2 +0.6
ATH    Athens Observa    83.37 309  P     P         20 23 34.8  -2.0
VLY    Voula,Athens      83.38 309  P     P         20 23 34.5  -2.3
G03D   McMinnville, O    83.38  42  P     P         20 23 38.1 +1.5
       baz=302
FRMA   Ierapetra Chan    83.39 306  P     P         20 23 35.0  -1.9
NEUB   Neuenburg         83.40 325 eP     P         20 23 36.6   0.0
       comp=Z,1µm,1.2s,baz=53,slow=5.0
ASSE   Asse, Remlinge    83.40 326 eP     P         20 23 36.6 +0.1
       comp=Z,2µm,1.8s,baz=53,slow=5.0
NRDL   Niedersach Rie    83.46 327 eP     P         20 23 37.1 +0.3
       comp=Z,3µm,1.9s,baz=53,slow=5.0
F04A   Amboy             83.49  41  IAmb  IAmb      20 23 41.5
       comp=Z,336nm,0.9s
LAST   Lasithi           83.51 306  P     P         20 23 36.7  -0.9
TANN   Tannenbergstha    83.51 324 eP     P         20 23 37.2  -0.2
       comp=Z,4µm,1.9s,baz=53,slow=5.0
KZN    Kozani            83.52 312  P     P         20 23 35.4  -2.2
LKR    Lokris            83.53 310  P     P         20 23 35.7  -1.9
DOB    Doboj             83.53 317 eP     P         20 23 37.1  -0.3
VILL   Villia            83.56 310  P     P         20 23 35.9  -1.9
GUNZ   Gunzen            83.61 324 eP     P         20 23 37.9 +0.1
       comp=Z,1µm,1.4s,baz=53,slow=5.0
I02D   Swisshome         83.62  43  P     P         20 23 39.7 +1.8
       baz=302
NKC    Novy Kostel       83.63 324 eP     P         20 23 38.2 +0.3
NKC                               ePP     PP        20 26 43.1  -8.4
NKC                               eSKS    S         20 33 41.9  -8.4
NKC                                AMS    AMS       21 06 20.0
       comp=Z,11µm,17.3s
NKC    Novy Kostel       83.63 324 eP     P         20 23 38.2 +0.3
NKC                               e                 20 33 41.9
NKC                                MLR    MLR
       comp=Z,11µm,17.3s
PLN    Plauen            83.63 324 eP     P         20 23 37.6  -0.2
       comp=Z,2µm,2.0s,baz=53,slow=5.0
WERN   Wernitzgruen      83.63 324 eP     P         20 23 38.0 +0.1
       comp=Z,1µm,1.3s,baz=53,slow=5.0
ILULI  Ilulissat         83.64 359⇓iP     P         20 23 37.9 +0.4
       comp=Z,828nm,0.8s
ILULI  Ilulissat         83.64 359  P     P         20 23 38.0 +0.5
ILULI  Ilulissat         83.64 359⇓iP     P         20 23 37.9 +0.4
ILULI                              pmax   pmax
       comp=Z,830nm,0.8s
ARSA   Arzberg           83.66 320 i P    P         20 23 37.9  -0.2
       comp=Z,366nm,2.0s,SNR=129
ARSA                              i S     S         20 33 50.0  -0.7
       comp=Z,27nm,1.6s
ARSA                              i PKKPbc PKKPbc   20 41 55.3 +0.5
       comp=Z,8.3nm,1.2s
KHC    Kasperske Hory    83.67 323 eP     P         20 23 38.2 +0.1
KHC                               ex      x         20 23 50.0
KHC                               ex      x         20 24 51.0
KHC                               ePP     PP        20 26 43.7  -8.2
KHC                               eSKS    S         20 33 43.4  -7.4
KHC                                AMS    AMS       21 03 50.0
       comp=Z,11µm,19.2s
KHC    Kasperske Hory    83.67 323  P     P         20 23 39.7 +1.5
KHC    Kasperske Hory    83.67 323 eP     P         20 23 38.2 +0.1
KHC                               e                 20 33 43.4
KHC                                MLR    MLR
       comp=Z,11µm,19.2s
RETH   Rethem/Aller,     83.67 327 eP     P         20 23 38.1 +0.1
       comp=Z,1µm,1.3s,baz=53,slow=5.0
KOGS   Kog               83.69 320 eP     P         20 23 37.4  -0.8
HRKL   Herakleio         83.70 306  P     P         20 23 37.1  -1.4
CLZ    Clausthal         83.72 326 eP     P         20 23 38.9 +0.5
       comp=Z,2µm,1.2s,baz=53,slow=5.0
THL    Klokotos Trika    83.73 311  P     P         20 23 35.0  -3.6
OHR    Ohrid             83.74 313 i P    P         20 23 37.9  -0.8
GEC2   GERESS Array S    83.77 322 eP     P         20 23 38.2  -0.5
       comp=Z,2µm,2.0s,baz=53,slow=5.0
GEC2   GERESS Array S    83.77 322  P     P         20 23 39.6 +0.9
GEC2                               IAmb   IAmb      20 23 42.1
       comp=Z,404nm,1.1s
GERES  GERESS Array B    83.77 322  P     P         20 23 38.8 +0.1
       comp=Z,131nm,0.9s,baz=45,slow=5.3,SNR=186
GERES                              PKiKP  PKiKP     20 28 55.0 +0.9
       comp=Z,1.2nm,0.5s,baz=62,slow=1.9,SNR=5.2
GERES                              S      S         20 33 49.6  -2.3
       comp=Z,1.2nm,1.0s,baz=40,slow=5.1,SNR=2.9
GERES                              PKKPbc PKKPbc    20 41 54.4  -0.3
       comp=Z,1.8nm,0.6s,baz=215,slow=1.6,SNR=11
GERES                              LR     LR        21 04 15.6
       comp=Z,11µm,20.0s,baz=64,slow=38
AGG    Agios Georgios    83.79 311  P     P         20 23 36.6  -2.4
AGG    Agios Georgios    83.79 311  P     P         20 23 37.6  -1.4
AGG    Agios Georgios    83.79 311  P     P         20 23 37.6  -1.4
MOX    Moxa              83.81 325 eP     P         20 23 38.8   0.0
       comp=Z,2µm,1.9s,baz=53,slow=5.0
MOX                               eL      L         21 04 18.9
       comp=Z,6µm,21.3s
UPM    Unac-Piva         83.85 316 eP     P         20 23 39.2  -0.2
LTK    Loutraki          83.86 310  P     P         20 23 36.0  -3.3
IDI    Anoyia            83.87 307  P     P         20 23 39.2  -0.2
       comp=Z,211nm,0.6s,baz=37,slow=7.7,SNR=136
IDI                                PKiKP  PKiKP     20 28 57.0 +2.4
       comp=Z,7.7nm,0.6s,baz=0.0,slow=4.0,SNR=3.3
LOUT   Loutraki          83.88 310  P     P         20 23 36.9  -2.5
B08A   Colville Reser    83.89  38  P     P         20 23 40.7 +1.4
B08A                               IAmb   IAmb      20 23 42.1
       comp=Z,316nm,1.1s
MAKR   Makrakomi, Fth    83.93 311  P     P         20 23 38.1  -1.6
DID    Didima            83.94 309  P     P         20 23 36.7  -3.0
NEST   Nestorio          83.94 313  P     P         20 23 39.4  -0.3
MANZ   Manzenberg        83.95 324 eP     P         20 23 39.6   0.0
       comp=Z,2µm,2.0s,baz=53,slow=5.0
KPRO   Kipourio          83.97 312  P     P         20 23 39.2  -0.7
KEBM   Edson Butte       83.97  45  P     P         20 23 39.0  -0.9
KEBM                               IAmb   IAmb      20 23 45.0
       comp=Z,303nm,1.2s
PENT   Pentalofos        83.99 312  P     P         20 23 38.8  -1.2
MOA    Molln             84.03 321 i P    P         20 23 40.8 +0.8
       comp=Z,550nm,1.6s,SNR=142
MOA                               i S     S         20 33 53.4  -1.0
       comp=Z,25nm,1.4s
MOA                               i PKKPbc PKKPbc   20 41 56.2 +2.2
       comp=Z,7.5nm,1.7s
ROTZ   Rotzenmuhle       84.03 324 eP     P         20 23 39.9   0.0
       comp=Z,1µm,1.3s,baz=53,slow=5.0
WET    Wettzell          84.03 323 eP     P         20 23 39.9  -0.1
       comp=Z,2µm,1.9s,baz=53,slow=5.0
PDG    Podgorica         84.04 315 ⇓P     P         20 23 40.0  -0.1
PDG    Podgorica         84.04 315 eP     P         20 23 39.7  -0.4
PDG    Podgorica         84.04 315  P     P         20 23 40.3 +0.3
PDG                                IAmb   IAmb      20 23 42.8
       comp=Z,738nm,1.1s
SIVA   Sivas             84.06 306  P     P         20 23 39.3  -1.0
KRND   KRANIDI           84.06 309  P     P         20 23 37.4  -2.9
TMBK   Timbaki Herakl    84.06 306  P     P         20 23 40.2  -0.1
H04D   Lebanon           84.07  43  P     P         20 23 41.9 +1.7
       baz=303,SNR=20
BLY    Banja Luka        84.07 318 ⇓P     P         20 23 40.3 +0.2
BLY    Banja Luka        84.07 318 eP     P         20 23 40.4 +0.2
BLY    Banja Luka        84.07 318  P     P         20 23 41.4 +1.2
BLY                                IAmb   IAmb      20 23 44.2
       comp=Z,234nm,0.8s
J01E   Myrtle Point      84.07  44  P     P         20 23 42.0 +1.8
       baz=302,SNR=15
F05D   White Salmon      84.08  41  P     P         20 23 41.9 +1.7
       baz=304,SNR=19
GTTG   Gottingen         84.11 326 eP     P         20 23 40.7 +0.5
       comp=Z,1µm,1.2s,baz=53,slow=5.0
I03D   Drain, OR         84.14  43  P     P         20 23 42.6 +2.1
       baz=303,SNR=17
ZAG    Zagreb            84.18 319 eP     P         20 23 42.7 +2.0
EVR    Evrytania         84.20 311  P     P         20 23 38.6  -2.5
DRME   Dracevica, Mon    84.21 315 eP     P         20 23 40.8  -0.2
TIR    Tirane            84.22 314 ⇓P     P         20 23 41.0   0.0
TIR    Tirane            84.22 314  P     P         20 23 42.6 +1.5
TIR    Tirane            84.22 314  P     P         20 23 42.6 +1.5
TIR                                pmax   pmax
       comp=Z,3µm,1.5s
PERS   Pernice           84.23 320 i P    P         20 23 40.7  -0.4
BRY    Bratogost         84.24 316 eP     P         20 23 40.7  -0.6
KALE   Kalithea          84.24 310  P     P         20 23 39.3  -2.0
SOKA   Soboth            84.26 320 i P    P         20 23 40.9  -0.3
       comp=Z,207nm,0.9s,SNR=189
SOKA                              i SKSac SKSac     20 33 50.7  -3.2
       comp=Z,17nm,1.4s
SOKA                              i PKKPbc PKKPbc   20 41 53.4  -0.1
       comp=Z,11nm,1.6s
TRIZ   Trizonia          84.30 310  P     P         20 23 39.0  -2.5
VAM    Vamos             84.30 307  P     P         20 23 39.5  -2.0
MGRS   Mrkonjic Grad     84.31 317 eP     P         20 23 42.5 +1.0
KLV    Kalavryta, Ach    84.41 310  P     P         20 23 38.5  -3.6
IMMV   Iera Moni Meta    84.43 307  P     P         20 23 40.5  -1.7
TREB   Trebinje          84.45 316 eP     P         20 23 41.4  -0.8
JAN    Janina            84.46 312  P     P         20 23 40.5  -1.8
K02D   Willamette Mer    84.48  44  P     P         20 23 43.6 +1.2
       baz=302,SNR=13
CRES   Cresnjev          84.49 319 eP     P         20 23 42.2  -0.1
HCY    Herceg Novi       84.51 315 eP     P         20 23 42.1  -0.4
G05D   Wamic, OR         84.52  41  P     P         20 23 44.0 +1.5
       baz=304,SNR=41
UBBA   Unterbreizbach    84.53 326 eP     P         20 23 42.3 +0.1
       comp=Z,2µm,1.7s,baz=53,slow=5.0
VLI    Veliai            84.54 309  P     P         20 23 39.8  -2.9
PVO    Paravola          84.54 311  P     P         20 23 41.2  -1.5
GRA1   Grafenberg Arr    84.58 324  P     P         20 23 44.5 +1.8
GRF    Grafenberg Arr    84.58 324 eP     P         20 23 43.1 +0.3
       comp=Z,3µm,1.4s,baz=53,slow=5.0
GRF                               eL      L         21 06 02.6
       comp=Z,8µm,19.5s
GRF    Grafenberg Arr    84.58 324  P     P         20 23 44.5 +1.8
GRF                                pmax   pmax
       comp=Z,2µm,1.3s
VLX    Vlachokerasia     84.59 309  P     P         20 23 40.2  -2.9
E07A   Sunnyside         84.62  40  P     P         20 23 45.0 +2.0
E07A                               IAmb   IAmb      20 23 46.3
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	comp=Z,420nm,1.2s						
OBKA	**Obir**	84.63	320	*i* P	P	20 23 42.5	-0.7
	comp=Z,228nm,1.0s,SNR=70						
OBKA				*i* SKSac	SKSac	20 33 53.6	-2.7
	comp=Z,43nm,1.6s						
OBKA				*i* PKKPbc	PKKPbc	20 41 54.1	+1.5
	comp=Z,15nm,1.6s						
AAE	**Adis Abeba**	84.64	277	*i* P	P	20 23 46.0	+2.0
AAE				*i* S	S	20 34 03.3	+1.2
AAE	**Adis Abeba**	84.64	277	*i* P	P	20 23 46.0	+2.0
AAE				*i* S	S	20 34 03.3	+1.2
GVD	**Gavdhos**	84.66	306	P	P	20 23 41.9	-1.5
I04A	**Tendick Farm,**	84.66	43	P	P	20 23 44.6	+1.3
	baz=303,SNR=51						
KTHA	**Kythira Island**	84.68	308	P	P	20 23 41.2	-2.3
IBBN	**Ibbenburen**	84.71	328	*e*P	P	20 23 43.1	-0.1
	comp=Z,4µm,1.9s,baz=53,slow=5.0						
ANKY	**Antikythira Is**	84.71	308	P	P	20 23 41.7	-1.9
KTHR	**Kythira**	84.72	308	P	P	20 23 42.2	-1.4
KNDR	**Palaiochora Ch**	84.75	307	P	P	20 23 42.8	-1.0
DRO	**Drossia**	84.75	310	P	P	20 23 42.8	-1.0
FURI	**Furi**	84.77	277	*i* P	P	20 23 47.3	+2.6
FURI				*i* S	S	20 34 05.1	+1.6
FURI	**Furi**	84.77	277	*i* P	P	20 23 47.3	+2.6
FURI				*i* S	S	20 34 05.1	+1.6
STON	**Ston**	84.78	316	*e*P	P	20 23 43.1	-0.6
PDO	**Prodromos**	84.78	311	P	P	20 23 42.6	-1.3
C09A	**Chrisman Ranch**	84.79	38	P	P	20 23 45.4	+1.6
C09A				IAmb	IAmb	20 23 46.8	
	comp=Z,300nm,1.2s						
BOJS	**Bojanci**	84.79	319	*i* P	P	20 23 43.7	-0.1
L02E	**Cave Junction**	84.81	45	P	P	20 23 45.7	+1.7
	baz=303,SNR=11						
IGT	**Igoumenitsa**	84.86	312	P	P	20 23 44.0	-0.3
RLS	**Riolos of Patr**	84.87	310	P	P	20 23 44.4	+0.1
HAWA	**Hanford**	84.90	40	P	P	20 23 45.0	+0.6
HAWA				IAmb	IAmb	20 23 47.6	
	comp=Z,355nm,1.2s						
RJOB	**Jochberg**	84.90	322	*e*P	P	20 23 44.6	+0.2
	comp=Z,3µm,2.0s,baz=53,slow=5.0						
LJU	**Ljubljana**	84.91	320	*e*P	P	20 23 44.1	-0.3
LJU	**Ljubljana**	84.91	320	*e*P	P	20 23 44.9	+0.5
BORG	**Borgarnes**	84.94	347	P	P	20 23 45.6	+1.5
	comp=Z,168nm,1.0s,baz=79,slow=2.6,SNR=14						
BORG	**Borgarnes**	84.94	347	P	P	20 23 46.5	+2.4
BORG				IAmb	IAmb	20 23 48.4	
	comp=Z,664nm,1.2s						
F07A	**Phinny Hill Vi**	84.96	40	IAmb	IAmb	20 23 48.0	
	comp=Z,274nm,1.1s						
KRMB	**Red Mountain**	84.96	46	P	P	20 23 45.5	+0.6
KRMB				IAmb	IAmb	20 23 48.5	
	comp=Z,2µm,2.9s						
AMT	**Artemida-Makis**	84.97	310	P	P	20 23 43.3	-1.6
HUMO	**Hull Mountain**	84.97	44	P	P	20 23 46.7	+1.9
HUMO				IAmb	IAmb	20 23 48.6	
	comp=Z,2µm,3.0s						
KBA	**Koelnbreinsper**	84.98	321	*i* P	P	20 23 44.6	-0.4
	comp=Z,337nm,1.2s,SNR=120						
KBA				*i* SKSac	SKSac	20 33 56.8	-1.9
	comp=Z,59nm,1.7s,SNR=9.1						
KBA				*i* PKKPbc	PKKPbc	20 41 54.0	+2.1
	comp=Z,2.0nm,0.7s						
ITM	**Ithomi**	85.00	309	P	P	20 23 43.5	-1.6
ITM	**Ithomi**	85.00	309	P	P	20 23 45.1	0.0
I05D	**Terrebonne, OR**	85.01	42	P	P	20 23 46.4	+1.4
	baz=304,SNR=74						
LKD2	**Lefkada island**	85.03	311	P	P	20 23 43.5	-1.7
MYKA	**Terra Mystica**	85.07	321	*i* P	P	20 23 44.4	-0.9
	comp=Z,406nm,1.6s,SNR=107						
MYKA				*i* SKSac	SKSac	20 33 55.8	-3.3
	comp=Z,15nm,1.2s						
MYKA				*i* PKKPbc	PKKPbc	20 41 54.2	+2.7
	comp=Z,5.0nm,0.7s						
KEK	**Kerkira**	85.12	312	P	P	20 23 44.3	-1.3
EVGI	**Lefkada island**	85.12	311	P	P	20 23 44.5	-1.1
CEY	**Cerknica**	85.14	320	*e*P	P	20 23 45.9	+0.3
NEW	**Newport**	85.14	37	P	P	20 23 46.6	+1.0
	baz=306,SNR=103						
J04D	**Umpqua Nationa**	85.15	43	P	P	20 23 47.5	+1.6
	baz=303,SNR=19						
MLA1	**Latheron**	85.23	336	*e*P	P	20 23 44.4	-1.3
JCC	**Jacoby Creek,**	85.26	46	P	P	20 23 47.4	+1.1
JCC				IAmb	IAmb	20 23 51.2	
	comp=Z,326nm,1.4s						
FSK	**Fiskardo**	85.27	311	P	P	20 23 44.3	-2.0
PYL	**PYLOS**	85.27	309	P	P	20 23 44.3	-2.1
BIGH	**Upper Bighouse**	85.29	337⇓	*e*P	P	20 23 45.3	-0.7
BIGH				IAMs_20	IAMs_20	21 05 06.3	
	comp=Z,7µm,21.9s						
KFL	**Anninata**	85.30	311	P	P	20 23 45.7	-0.8
RIY	**Rijeka**	85.34	319	*e*P	P	20 23 47.1	+0.6
VLS	**Valsamata**	85.40	311	P	P	20 23 45.4	-1.6
FUR	**Furstenfeldbru**	85.47	323	*e*P	P	20 23 47.5	+0.3
	comp=Z,4µm,1.4s,baz=53,slow=5.0						
BUG	**Bochum--Univer**	85.49	327	*e*P	P	20 23 47.0	-0.2
	comp=Z,2µm,1.9s,baz=53,slow=5.0						
TRI	**Trieste**	85.53	320	P	P	20 23 47.7	+0.2
TRI	**Trieste**	85.53	320	P	P	20 23 47.7	+0.2
TRI				pmax	pmax		
	comp=Z,2µm,2.0s						
PINE	**Pine Mountain**	85.55	42	IAmb	IAmb	20 23 51.6	
	comp=Z,476nm,1.3s						
L04D	**Klamath Falls**	85.59	44	P	P	20 23 49.5	+1.4
	baz=303,SNR=62						
L04D				S	S	20 34 10.4	+0.1
	baz=303						
E09A	**Wood Farm, Sta**	85.61	39	IAmb	IAmb	20 23 51.1	
	comp=Z,336nm,1.2s						
ABTA	**Abfaltersbach**	85.64	321	*i* P	P	20 23 47.0	-1.1
	comp=Z,785nm,1.3s,SNR=225						
ABTA				*i* SKSac	SKSac	20 33 58.0	-4.6
	comp=Z,62nm,1.4s,SNR=14						
ABTA				*i* PKKPbc	PKKPbc	20 41 50.8	+0.5
	comp=Z,6.0nm,1.1s						
J05D	**Fort Rock, OR**	85.66	43	P	P	20 23 50.0	+1.6
	baz=304,SNR=39						
J05D				S	S	20 34 12.5	+1.6
	baz=304						
TNS	**Taunus Mts**	85.68	326	*e*P	P	20 23 47.9	-0.3
	comp=Z,2µm,2.0s,baz=53,slow=5.0						
M02C	**Callahan**	85.70	45	P	P	20 23 50.3	+1.8
	baz=303,SNR=30						
M02C				S	S	20 34 13.1	+1.8
	baz=303						
K04D	**Chiloquin, OR**	85.71	44	P	P	20 23 50.1	+1.5
	baz=304,SNR=17						
K04D				S	S	20 34 12.4	+1.0
	baz=304						
MCD	**Coleburn Disti**	85.73	336	*e*P	P	20 23 46.9	-1.3
WATA	**Walderalm**	85.80	322	*i* P	P	20 23 48.4	-0.6
	comp=Z,525nm,1.2s,SNR=135						
WATA				*i* SKSac	SKSac	20 34 04.5	+0.6
	comp=Z,43nm,1.3s						
WATA				*i* PKKPbc	PKKPbc	20 41 50.7	+0.8
	comp=Z,7.5nm,1.6s						
WTTA	**Wattenberg**	85.81	322	*i* P	P	20 23 48.8	-0.3
	comp=Z,1µm,1.4s,SNR=304						
WTTA				*i* SKSac	SKSac	20 34 00.3	-3.7
	comp=Z,107nm,1.9s,SNR=6.8						
WTTA				*i* PKKPbc	PKKPbc	20 41 51.0	+1.0
	comp=Z,15nm,1.4s						
SFJD	**Kangerlussuaq**	85.86	359⇓	*i*P	P	20 23 48.4	-0.3
SFJD	**Kangerlussuaq**	85.86	359	P	P	20 23 49.1	+0.4
SFJD	**Kangerlussuaq**	85.86	359⇓	*i*P	P	20 23 48.4	-0.3
DRUM	**Mains of Drumt**	85.94	335⇓	*e*P	P	20 23 47.9	-1.3
DRUM				IAMs_20	IAMs_20	21 04 30.6	
	comp=Z,6µm,22.6s						
N02D	**Trinity Center**	86.02	46	P	P	20 23 51.8	+1.7
	baz=303,SNR=13						
N02D				S	S	20 34 16.1	+1.6
	baz=303						
MOTA	**Moosalm**	86.06	322	*i* P	P	20 23 49.5	-0.8
	comp=Z,433nm,1.4s,SNR=116						
MOTA				*i* SKSac	SKSac	20 34 02.4	-3.0
	comp=Z,76nm,1.7s,SNR=11						
MOTA				*i* PKKPbc	PKKPbc	20 41 50.0	+0.6
	comp=Z,7.7nm,0.9s						
SQTA	**Sankt Quirin**	86.07	322	*i* P	P	20 23 49.6	-0.7
	comp=Z,714nm,1.4s,SNR=238						
SQTA				*i* SKSac	SKSac	20 34 04.3	-1.1
	comp=Z,46nm,1.6s						
SQTA				*i* PKKPbc	PKKPbc	20 41 50.1	+0.8
	comp=Z,11nm,1.4s						
M04C	**Macdoel**	86.12	44	P	P	20 23 52.3	+1.6
	baz=304,SNR=31						
M04C				S	S	20 34 19.0	+3.5
	baz=304						
KCPM	**Cahto Peak**	86.15	47	P	P	20 23 52.4	+1.5
KCPM				IAmb	IAmb	20 23 55.6	
	comp=Z,517nm,1.7s						
RETA	**Reutte**	86.16	323	*i* P	P	20 23 49.9	-0.8
	comp=Z,305nm,1.2s,SNR=80						
RETA				*i* SKSac	SKSac	20 34 03.9	-2.0
	comp=Z,32nm,1.3s						
AHRW	**Bad Neuenahr-A**	86.16	326	*e*P	P	20 23 50.5	+0.1
	comp=Z,1µm,1.8s,baz=53,slow=5.0						
STU	**Stuttgart**	86.20	324	*e*P	P	20 23 50.4	-0.3
	comp=Z,619nm,1.1s,baz=53,slow=5.0						
STU	**Stuttgart**	86.20	324	P	P	20 23 52.0	+1.2
STU	**Stuttgart**	86.20	324	P	P	20 23 52.0	+1.2
STU				pmax	pmax		
	comp=Z,3µm,2.1s						
MDO	**Dochfour**	86.23	336	*e*P	P	20 23 49.5	-1.2
I07A	**Izee**	86.24	42	P	P	20 23 53.1	+1.9
I07A				IAmb	IAmb	20 23 56.5	
	comp=Z,861nm,2.2s						
BAI	**Bari**	86.25	315	*e*P	P	20 23 51.1	0.0
TAR1	**Taranto**	86.31	314	*e*P	P	20 23 50.5	-0.9
WALA	**Waterton Lakes**	86.35	35	P	P	20 23 53.3	+1.7
UBR	**Ueberruh**	86.39	323	*e*P	P	20 23 51.5	-0.3
	comp=Z,4µm,2.1s,baz=53,slow=5.0						
EDU	**Dundee**	86.40	335	*e*P	P	20 23 50.6	-0.9
O02D	**Mt. Diablo Mer**	86.40	46	P	P	20 23 53.9	+1.8
	baz=303,SNR=69						
O02D				S	S	20 34 20.9	+2.8
	baz=303						
F10A	**Beach Ranch, E**	86.44	39	P	P	20 23 53.7	+1.6
F10A				IAmb	IAmb	20 23 57.2	
	comp=Z,1µm,2.4s						
FETA	**Feichten**	86.45	322	*i* P	P	20 23 51.7	-0.5
	comp=Z,388nm,1.1s,SNR=122						
FETA				*i* SKSac	SKSac	20 34 03.6	-4.3
	comp=Z,128nm,1.9s,SNR=8.2						
FETA				*i* PKKPbc	PKKPbc	20 41 48.7	+0.2
	comp=Z,7.3nm,1.0s						
KAC	**Achnashellach**	86.52	337	*e*P	P	20 23 51.6	-0.5
SG1	**Sgolgore (BA)**	86.52	315	*e*P	P	20 23 51.4	-1.1
CTI	**Castel Tesino**	86.53	321	P	P	20 23 52.9	+0.3
CTI				IAmb	IAmb	20 23 54.7	
	comp=Z,660nm,1.3s						
CTI	**Castel Tesino**	86.53	321	P	P	20 23 52.9	+0.3
CTI				pmax	pmax		
	comp=Z,660nm,1.3s						
LEWI	**Lewis, Hebride**	86.57	338⇓	*e*P	P	20 23 51.5	-0.9
LEWI				IAmb	IAmb	20 23 54.2	
	comp=Z,656nm,1.0s						
SGRT	**San Giovanni R**	86.60	316	P	P	20 23 52.9	-0.1
MATE	**Matera**	86.61	314	⇓P	P	20 23 52.3	-0.6
ESY	**Stoneypath**	86.71	334	*e*P	P	20 23 51.8	-1.3
DAVA	**Damuels**	86.75	323	*i* P	P	20 23 52.8	-0.9
	comp=Z,658nm,1.4s,SNR=134						
DAVA				*i* SKSac	SKSac	20 34 02.8	-7.0
	comp=Z,38nm,1.6s						
KPL	**Plockton**	86.77	337⇓	*e*P	P	20 23 51.0	-2.3
KPL				IAmb	IAmb	20 23 54.1	
	comp=Z,4µm,2.0s						
INVG	**Invergeldie, C**	86.88	335⇓	*e*P	P	20 23 52.5	-1.3
INVG				IAMs_20	IAMs_20	21 02 49.4	
	comp=Z,8µm,22.0s						
BFO	**Black Forest**	86.92	324	*e*P	P	20 23 53.3	-1.0
	comp=Z,2µm,2.3s,baz=53,slow=5.0						
BFO	**Black Forest**	86.92	324	P	P	20 23 54.2	-0.1
BFO				IAmb	IAmb	20 23 57.3	
	comp=Z,523nm,1.4s						
BFO	**Black Forest**	86.92	324	P	P	20 23 54.2	-0.1
BFO				pmax	pmax		
	comp=Z,523nm,1.4s						
EDI	**Edinburgh**	86.93	335⇓	*e*P	P	20 23 52.1	-1.9
EDI				IAMs_20	IAMs_20	21 05 11.3	
	comp=Z,7µm,23.8s						
TEOL	**Teolo**	86.93	320	P	P	20 23 55.6	+1.3
O03E	**Paynes Creek**	86.97	46	P	P	20 23 55.4	+0.6
	baz=304,SNR=34						
O03E				S	S	20 34 24.7	+1.0
	baz=304						
EBL	**Broad Law**	86.98	334	*e*P	P	20 23 53.1	-1.3
MOD	**Modoc Plateau**	87.00	44	IAmb	IAmb	20 23 59.6	
	comp=Z,197nm,1.1s						
DAVOX	**Davos/Dischmat**	87.06	322	P	P	20 23 55.1	-0.1
	comp=Z,318nm,0.6s,baz=54,slow=3.6,SNR=328						
EAB	**Aberfoyle**	87.16	335	*e*P	P	20 23 54.0	-1.3
WLF	**Walferdange**	87.18	326	*e*P	P	20 23 55.7	+0.2
	comp=Z,488nm,1.1s,baz=53,slow=5.0						
WLF	**Walferdange**	87.18	326	P	P	20 23 56.4	+0.9
WLF	**Walferdange**	87.18	326	P	P	20 23 56.4	+0.9
WLF				pmax	pmax		
	comp=Z,2µm,2.0s						
EDMD	**Edmundbyers**	87.25	333⇓	*e*P	P	20 23 54.0	-1.7
EDMD				IAmb	IAmb	20 23 56.3	
	comp=Z,1µm,1.8s						
EDMD				IAMs_20	IAMs_20	21 07 30.3	
	comp=Z,6µm,18.2s						
EKA	**Eskdalemuir Ar**	87.35	334	P	P	20 23 56.0	-0.2
	comp=Z,43nm,0.7s,baz=53,slow=4.9,SNR=80						
EKA				PKiKP	PKiKP	20 29 06.5	+6.9
	comp=Z,1.4nm,0.6s,baz=55,slow=2.7,SNR=3.1						
EKA				S	SKSac	20 34 11.9	-0.8
	comp=Z,4.1nm,1.1s,baz=65,slow=5.6,SNR=2.7						
ESK	**Eskdalemuir**	87.38	334⇓	*e*P	P	20 23 54.5	-1.8
ESK	**Eskdalemuir**	87.38	334	P	P	20 23 55.9	-0.4
ESK	**Eskdalemuir**	87.38	334	P	P	20 23 55.9	-0.4
TIP	**Timpagrande**	87.39	313	P	P	20 23 56.2	-0.6
TIP	**Timpagrande**	87.39	313	⇓P	P	20 23 56.9	+0.1
TIP	**Timpagrande**	87.39	313	P	P	20 23 57.2	+0.4
TIP				IAmb	IAmb	20 24 00.3	
	comp=Z,1µm,1.8s						
PGBU	**Glenifferbraes**	87.50	335	*e*P	P	20 23 56.1	-0.8
PGBU				IAmb	IAmb	20 23 58.8	
	comp=Z,705nm,1.1s						
TUE	**Stuetta**	87.54	322	IAmb	IAmb	20 24 01.5	
	comp=Z,578nm,1.2s						
LMK	**Market Rasen**	87.57	332⇓	*e*P	P	20 23 56.3	-0.9
LMK				IAMs_20	IAMs_20	21 08 22.8	
	comp=Z,6µm,14.4s						
NRCA	**Norcia**	87.58	318	P	P	20 23 58.5	+0.9
WACR	**West Acre**	87.68	331⇓	*e*P	P	20 23 56.5	-1.2
WACR				IAmb	IAmb	20 23 58.5	
	comp=Z,3µm,2.0s						
WACR				IAMs_20	IAMs_20	21 08 48.8	
	comp=Z,7µm,23.2s						
MURB	**Monte Urbino**	87.68	318	P	P	20 23 59.6	+1.5
AQU	**L'Aquila**	87.69	317	*e*P	P	20 23 58.8	+0.7
AQU	**L'Aquila**	87.69	317	P	P	20 24 00.2	+2.0
AQU	**L'Aquila**	87.69	317	P	P	20 24 00.2	+2.0
AQU				pmax	pmax		
	comp=Z,2µm,1.3s						
MSO	**Missoula**	87.72	37	P	P	20 23 57.9	-0.4
MSO				IAmb	IAmb	20 24 00.9	
	comp=Z,248nm,1.4s						
MSO	**Missoula**	87.72	37	P	P	20 23 59.0	+0.6
	baz=309,SNR=88						
MSO				S	S	20 34 31.9	+1.2
	baz=309						
PAOL	**Paolisi**	87.74	316	P	P	20 23 59.6	+1.2
PAOL				IAmb	IAmb	20 24 00.6	
	comp=Z,647nm,1.6s						
HPK	**Haverah Park**	87.75	333⇓	*e*P	P	20 23 57.0	-1.1
HPK				IAmb	IAmb	20 23 59.2	
	comp=Z,2µm,1.8s						
HPK				IAMs_20	IAMs_20	21 02 39.2	
	comp=Z,7µm,28.2s						
FFC	**Flin Flon**	87.88	26	P	P	20 23 59.5	+0.8
FFC	**Flin Flon**	87.88	26	P	P	20 23 59.5	+0.8
FFC				pmax	pmax		
	comp=Z,2µm,1.8s						
ZCCA	**Zocca**	87.93	320	P	P	20 24 01.9	+2.6
BEKR	**Beckworth**	88.12	45	P	P	20 24 02.3	+1.9
LBWR	**Ladybower, Pea**	88.19	332⇓	*e*P	P	20 23 59.2	-1.0
LBWR				IAmb	IAmb	20 24 01.2	
	comp=Z,2µm,1.9s						
LBWR				IAMs_20	IAMs_20	21 11 49.2	
	comp=Z,6µm,17.5s						
OSSC	**Osservatorio P**	88.28	319		P	20 24 01.6	+0.8
GAL1	**Galloway**	88.30	335	*e*P	P	20 24 00.0	-0.6
GAL1				IAmb	IAmb	20 24 01.3	
	comp=Z,1µm,2.0s						
GAL1				IAMs_20	IAMs_20	21 09 12.8	
	comp=Z,6µm,12.6s						
VLC	**Villacollemand**	88.38	320	P	P	20 24 03.2	+1.8
CWF	**Charnwood Fore**	88.50	332	*e*P	P	20 24 00.5	-1.2
CWF				IAmb	IAmb	20 24 02.4	
	comp=Z,1µm,1.8s						
CWF				IAMs_20	IAMs_20	21 10 13.9	
	comp=Z,7µm,15.5s						
ELSH	**Elham, Standar**	88.56	329⇓	*e*P	P	20 24 01.0	-1.0
ELSH				IAmb	IAmb	20 24 03.9	
	comp=Z,658nm,0.8s						
ELSH				IAMs_20	IAMs_20	21 07 54.2	
	comp=Z,9µm,14.1s						
STNC	**Stoke**	88.61	332⇓	*e*P	P	20 24 00.9	-1.3
CLGH	**Cloghs, Cushen**	88.66	335	*e*P	P	20 24 00.5	-1.9
IOMK	**Kirk Michael**	88.69	334	*e*P	P	20 24 00.6	-2.0
IOMK				IAmb	IAmb	20 24 03.5	
	comp=Z,2µm,1.9s						
IOMK				IAMs_20	IAMs_20	21 07 49.6	
	comp=Z,14µm,23.4s						
MSSA	**Maissana**	88.78	321	IAmb	IAmb	20 24 05.3	
	comp=Z,400nm,1.2s						
WIM	**Isle of Man**	88.82	334	*e*P	P	20 24 01.8	-1.3
CASP	**Castiglione de**	88.94	319	IAmb	IAmb	20 24 06.2	
	comp=Z,593nm,1.2s						
HMNX	**Herstmonceux**	89.11	330⇓	*e*P	P	20 24 04.4	-0.1
HMNX				IAmb	IAmb	20 24 07.0	
	comp=Z,1µm,0.9s						
HMNX				IAMs_20	IAMs_20	21 08 20.4	
	comp=Z,9µm,17.2s						
EGMT	**Eagleton**	89.12	34		PcP	20 24 06.2	0.0
EGMT				IAmb	IAmb	20 24 07.8	
	comp=Z,553nm,1.2s						
EGMT	**Eagleton**	89.12	34	P	P	20 24 05.9	+1.1
	baz=312						
EGMT				S	S	20 34 43.5	-0.2
	baz=312						
WME	**Myndd Eilian**	89.24	333	*e*P	P	20 24 04.2	-0.9
GMM	**Mts of Mourne**	89.24	335	*e*P	P	20 24 04.0	-1.1
HLM1	**Long Mynd**	89.31	332⇓	*e*P	P	20 24 04.3	-1.2
HLM1				IAmb	IAmb	20 24 06.7	
	comp=Z,928nm,1.7s						
WPS	**Cemaes, Angles**	89.31	333⇓	*e*P	P	20 24 04.1	-1.3
WPS				IAmb	IAmb	20 24 06.5	
	comp=Z,1µm,2.0s						
YERR	**Yerington**	89.34	46	P	P	20 24 05.9	-0.3
YERR				IAmb	IAmb	20 24 11.0	
	comp=Z,843nm,2.6s						
WLF1	**Llynfaes**	89.36	333⇓	*e*P	P	20 24 04.2	-1.4
WLF1				IAmb	IAmb	20 24 07.8	
	comp=Z,4µm,2.2s						
DLMT	**Dillon**	89.38	38	IAmb	IAmb	20 24 09.5	
	comp=Z,390nm,1.2s						
YRC	**Rhoscolyn**	89.46	333	*e*P	P	20 24 04.8	-1.3
STRD	**Stroud**	89.56	331⇓	*e*P	P	20 24 05.8	-0.9
STRD				IAmb	IAmb	20 24 08.7	
	comp=Z,1µm,1.0s						
STRD				IAMs_20	IAMs_20	21 10 45.8	
	comp=Z,7µm,14.9s						
MCMT	**McKenzie Canyo**	89.58	38		PcP	20 24 08.6	+0.1
SWN1	**Swindon**	89.59	331⇓	*e*P	P	20 24 04.9	-1.9
SWN1				IAmb	IAmb	20 24 08.9	
	comp=Z,1µm,1.0s						
SWN1				IAMs_20	IAMs_20	21 12 03.5	
	comp=Z,7µm,19.2s						
MCH1	**Michaelchurch**	89.75	332⇓	*e*P	P	20 24 06.7	-0.8
MCH1				IAmb	IAmb	20 24 09.5	
	comp=Z,713nm,1.1s						
MCH1				IAMs_20	IAMs_20	21 09 31.0	
	comp=Z,6µm,12.2s						
MONM	**Monmouth**	89.78	332⇓	*e*P	P	20 24 06.6	-1.0
MONM				IAMs_20	IAMs_20	21 11 01.8	
	comp=Z,8µm,15.1s						
BATH	**Bath**	89.87	331⇓	*e*P	P	20 24 06.2	-1.9
BATH				IAmb	IAmb	20 24 09.8	
	comp=Z,656nm,1.0s						
BATH				IAMs_20	IAMs_20	21 12 13.5	
	comp=Z,6µm,18.5s						
VAE	**Valguarnera**	89.87	313	P	P	20 24 09.4	+0.9
	comp=Z,26nm,0.9s,baz=6.6,slow=3.3,SNR=10						
BNI	**Bardonecchia**	89.89	322		P	20 24 08.6	+0.1
BNI				IAmb	IAmb	20 24 10.3	
	comp=Z,303nm,1.6s						
KVN	**Kaiserville**	90.02	45		PcP	20 24 11.1	+0.5
ABPO	**Ambohimpanom**	90.22	249	P	P	20 24 10.4	0.0
ABPO				IAmb	IAmb	20 24 12.1	
	comp=Z,206nm,1.2s						
ABPO	**Ambohimpanom**	90.22	249	P	P	20 24 10.4	0.0
ABPO				pmax	pmax		
	comp=Z,206nm,1.2s						
NVAR	**Mina Array Bea**	90.26	46	P	P	20 24 11.8	+1.4
	comp=Z,14nm,0.7s,baz=282,slow=4.2,SNR=83						
NVAR				PKiKP	PKiKP	20 29 07.7	+2.4
	comp=Z,1.3nm,0.7s,baz=292,slow=2.8,SNR=3.4						
NVAR				S	SKSac	20 34 32.1	+1.0
	comp=Z,0.4nm,0.8s,baz=306,slow=7.7,SNR=2.7						
NVAR				PKKPbc	PKKPbc	20 41 40.7	+1.6
	comp=Z,3.2nm,1.0s,baz=157,slow=2.7,SNR=6.0						
NVAR				PKPPKP	P'P'df	20 49 49.0	-1.1
	comp=Z,2.0nm,1.1s,baz=156,slow=4.5,SNR=5.4						
NVAR				LR	LR	21 00 56.9	
	comp=Z,2µm,20.6s,baz=300,slow=33						
CORL	**Corleone**	90.35	314	IAmb	IAmb	20 24 41.9	
	comp=Z,369nm,1.5s						
MLAC	**Mammoth, Mammo**	90.38	47	P	P	20 24 13.0	+1.9
	baz=306						
MLAC				S	S	20 34 58.8	+2.6
	baz=306						
RSBS	**Rosebush, Pemb**	90.50	333⇓	*e*P	P	20 24 09.2	-1.9
RSBS				IAmb	IAmb	20 24 13.0	
	comp=Z,1µm,1.9s						
KMBO	**Kilima Mbogo**	90.58	269	P	P	20 24 13.3	+0.9
	comp=Z,184nm,1.2s,baz=50,slow=4.9,SNR=209						
KMBO				PP	PP	20 27 48.5	-0.4
	comp=Z,7.4nm,1.1s,baz=58,slow=8.6,SNR=4.0						
KMBO				S	SKSac	20 34 35.8	+2.1
	comp=Z,0.6nm,0.3s,baz=250,slow=21,SNR=8.7						
KMBO	**Kilima Mbogo**	90.58	269	*i* P	P	20 24 13.4	+1.0
KMBO				*e*S	SKSac	20 34 37.2	+3.6
KMBO	**Kilima Mbogo**	90.58	269	*i* P	P	20 24 13.2	+0.8
	SNR=280						
KMBO	**Kilima Mbogo**	90.58	269	P	P	20 24 13.6	+1.2
KMBO				IAmb	IAmb	20 24 15.3	
	comp=Z,591nm,1.5s						
KMBO	**Kilima Mbogo**	90.58	269	*i* P	P	20 24 13.4	+1.0
KMBO				*e*S	SKSac	20 34 37.2	+3.6
VOG	**Valley Oaks Go**	90.78	48	P	P	20 24 13.3	+0.6
	baz=305						
SSB	**Saint Sauveur**	90.88	324	IAmb	IAmb	20 24 14.4	
	comp=Z,412nm,2.0s						
SMMC	**Simmler**	90.95	49	P	P	20 24 15.3	+1.7
	baz=305,SNR=5.9						
SMMC				S	S	20 35 01.1	+0.1
	baz=305						
YPP	**Pitchstone Pla**	91.06	38	P	P	20 24 16.6	+2.5
LKWY	**Lake**	91.08	37	IAmb	IAmb	20 24 20.7	
	comp=Z,249nm,0.9s						
H17A	**Grant Village**	91.10	37	P	P	20 24 16.9	+2.6
H17A				IAmb	IAmb	20 24 19.5	
	comp=Z,471nm,1.3s						
H17A	**Grant Village**	91.10	37	P	P	20 24 17.7	+3.3
	baz=311,SNR=191						
H17A				S	S	20 35 08.9	+6.4
	baz=311						
TIN	**Tinemaha, Big**	91.11	47	P	P	20 24 16.0	+1.6
	baz=306,SNR=8.5						
TIN				S	S	20 35 02.4	-0.1
	baz=306						
HTL	**Hartland**	91.11	332⇓	*e*P	P	20 24 13.5	-0.4
HTL				IAMs_20	IAMs_20	21 11 44.6	
	comp=Z,8µm,16.2s						
IMW	**Indian Meadow**	91.23	38	IAmb	IAmb	20 24 19.0	
	comp=Z,188nm,1.2s						
FLWY	**Flagg Ranch**	91.24	38	IAmb	IAmb	20 24 19.2	
	comp=Z,339nm,1.2s						
VES	**Vestal, Richgr**	91.26	48	P	P	20 24 15.1	+0.3
	baz=306,SNR=15						
VES				S	S	20 35 04.0	+0.4
	baz=306						
RLMT	**Red Lodge**	91.31	36	P	P	20 24 16.4	+1.2
RLMT				IAmb	IAmb	20 24 18.7	
	comp=Z,282nm,1.1s						
RLMT	**Red Lodge**	91.31	36	P	P	20 24 16.9	+1.6
	baz=312,SNR=182						
RLMT				S	S	20 35 04.5	+0.3
	baz=312						
PKM	**Mcpherson Peak**	91.32	49	P	P	20 24 17.2	+1.8
	baz=305,SNR=7.8						
PKM				S	S	20 35 04.9	+0.3
	baz=305						
FXWY	**Fox Creek**	91.35	38	IAmb	IAmb	20 24 18.4	
	comp=Z,191nm,1.6s						

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JLP    Les Platons       91.37 330⇓eP       P        20 24 15.1  0.0
JQE    Queens East       91.38 330 eP       P        20 24 15.0 -0.1
JSA    Saint Aubin       91.44 330⇓eP       P        20 24 14.2 -1.3
JSA                                IAmb     IAmb     20 24 17.3
       comp=Z,653nm,1.4s
JSA                                IAMs_20  IAMs_20  21 10 12.2
       comp=Z,10µm,17.5s
DGMT   Dagmar            91.50  31  P       P        20 24 17.0 +1.2
       baz=316
DGMT                                S       S        20 35 05.3 -0.1
       baz=316
NRS    Narsarsuaq        91.54 356 iP       P        20 24 15.1 -0.5
       comp=Z,408nm,1.2s
NRS    Narsarsuaq        91.54 356  P       P        20 24 15.8 +0.2
NRS                                 IAmb    IAmb     20 24 16.7
       comp=Z,410nm,1.2s
NRS    Narsarsuaq        91.54 356  P       P        20 24 15.8 +0.2
NRS                                 pmax    pmax
       comp=Z,410nm,1.2s
CWC    Cottonwood Cre    91.57  47  P       P        20 24 17.5 +1.0
       baz=306
CWC                                 S       S        20 35 05.9 -0.9
       baz=306
SBC    Santa Barbara     91.64  50  S       S        20 35 10.0 +2.9
       baz=305
GRAC   Grapevine Rang    91.70  46  P       P        20 24 18.6 +1.6
       baz=307
GRAC                                S       S        20 35 07.9 +0.1
       baz=307
ISA    Isabella, Lake    91.76  48  P       P        20 24 17.9 +0.5
       baz=306,SNR=20
ISA                                 S       S        20 35 06.7 -1.7
       baz=306
LAO    LASA Array        91.79  34  IAmb    IAmb     20 24 21.9
       comp=Z,322nm,1.0s
ARVC   Arvin             91.84  49  P       P        20 24 18.8 +1.2
       baz=306,SNR=5.2
ARVC                                S       S        20 35 07.5 -1.4
       baz=306
SCZ2   Santa Cruz Isl    91.95  50  P       P        20 24 19.5 +1.3
       baz=305
SCZ2                                S       S        20 35 09.2 -0.8
       baz=305
R11A   Troy Canyon, C    92.02  44  P       P        20 24 20.1 +1.5
       baz=308,SNR=66
R11A                                S       S        20 35 10.3 -0.5
       baz=308
CCA1   Carnmenellis      92.03 332⇓eP       P        20 24 17.5 -0.6
CCA1                                IAMs_20 IAMs_20  21 12 56.7
       comp=Z,6µm,13.8s
PPT    Papeete           92.03 109  P       P        20 24 20.7 +2.0
       comp=Z,39nm,0.9s,baz=231,slow=5.4,SNR=5.2
PPT                                 LR      LR       20 58 28.1
       comp=Z,4µm,21.1s,baz=290,slow=31
PPT2   Papeete2          92.05 109 eP       P        20 24 19.3 +0.5
       comp=Z,62nm,1.2s
PPT2   Papeete2          92.05 109 eSKSac   SKSac    20 34 36.5 -4.8
       comp=Z,5µm,23.8s
PPT2                               eSP      SP       20 36 14.7 -7.3
       comp=Z,16µm,28.0s
PPT2   Papeete2          92.05 109 eLR      LR       20 53 53.1
       comp=Z,27µm,31.0s
PAE    Paea              92.08 109 eP       P        20 24 18.9 +0.1
       comp=Z,4.6nm,1.1s
MPMC   Manual Prospec    92.18  47  P       P        20 24 20.6 +1.2
       baz=306,SNR=49
MPMC                                S       S        20 35 11.4 -0.9
       baz=306
OSI    Osito Audit: C    92.21  49  P       P        20 24 20.8 +1.4
       baz=306
OSI                                 S       S        20 35 11.1 -1.2
       baz=306
TIAR   Tiarei            92.22 109 eP       P        20 24 19.8 +0.2
       comp=Z,11nm,0.9s
BLG    Laguna Peak, P    92.27  50  P       P        20 24 20.9 +1.2
       baz=306
FURC   Furnace Creek,    92.34  47  P       P        20 24 21.4 +1.5
       baz=307,SNR=26
FURC                                S       S        20 35 12.5 -0.7
       baz=307
HWUT   Hardware Ranch    92.37  40  IAmb    IAmb     20 24 23.7
       comp=Z,273nm,1.2s
LRMC   Laurel Mtn Rad    92.39  48  P       P        20 24 21.7 +1.3
       baz=306,SNR=6.3
TVO    Taravao           92.41 109 eP       P        20 24 20.7 +0.2
       comp=Z,10nm,1.0s
TPNV   Topopah Spring    92.44  46  P       P        20 24 21.9 +1.3
       baz=307,SNR=14
TPNV                                S       S        20 35 14.0 -0.6
       baz=307
EDW2   Edwards Air Fo    92.54  48  P       P        20 24 22.0 +1.0
       baz=306,SNR=35
EDW2                                S       S        20 35 15.2 -0.1
       baz=306
DUG    Dugway, Tooele    92.55  42  P       P        20 24 22.6 +1.6
       baz=310,SNR=68
DUG                                 S       S        20 35 16.6 +1.3
       baz=310
DECC   Green Verdugo     92.68  49  P       P        20 24 22.6 +1.1
       baz=306,SNR=6.2
DECC                                S       S        20 35 13.2 -3.4
       baz=306
PDAR   Pinedale Array    92.73  38  P       P        20 24 22.4 +0.5
       comp=Z,46nm,0.8s,baz=99,slow=0.2,SNR=181
PDAR                                PKiKP   PKiKP    20 29 11.7 +2.3
       comp=Z,2.3nm,0.8s,baz=97,slow=3.5,SNR=4.0
PDAR                                PKKPbc  PKKPbc   20 41 32.9 -0.1
       comp=Z,8.7nm,1.0s,baz=124,slow=2.7,SNR=27
PDAR                                PKPPKP  P'P'df   20 49 41.9 -3.3
       comp=Z,1.4nm,1.0s,baz=143,slow=5.2,SNR=6.1
FMP    Fort Macarthur    93.02  49  P       P        20 24 25.3 +2.2
       baz=306
SHOC   Shoshone, Teco    93.06  47  P       P        20 24 24.7 +1.4
       baz=307,SNR=8.3
SHOC                                S       S        20 35 21.1 +1.3
       baz=307
GSC    Goldstone, Bar    93.07  47  P       P        20 24 24.8 +1.3
       baz=307,SNR=54
GSC                                 S       S        20 35 20.9 +0.8
       baz=307
BFSC   Mount Baldy Ra    93.14  49  P       P        20 24 24.8 +1.0
       baz=306,SNR=23
RRX    Edison Barstow    93.20  48  P       P        20 24 26.2 +2.3
       baz=307
RRX                                 S       S        20 35 20.8 -0.3
       baz=307
SCI2   San Clemente I    93.28  50  S       S        20 35 25.0 +3.3
       baz=306
TUQ    Turquoise Moun    93.57  47  P       P        20 24 27.2 +1.4
       baz=307,SNR=22
TUQ                                 S       S        20 35 23.8 -0.7
       baz=307
HEC    Hector,Ludlow     93.67  48  P       P        20 24 27.6 +1.4
       baz=307,SNR=40
HEC                                 S       S        20 35 24.6 -0.7
       baz=307
ULM    Lac du Bonnet     93.71  26  P       P        20 24 25.9  0.0
       comp=Z,82nm,0.8s,baz=321,slow=4.9,SNR=115
ULM                                 S       SKSac    20 34 46.2 -3.2
       comp=Z,8.0nm,1.1s,baz=148,slow=22,SNR=6.7
ULM                                 PKKP    PKKPdf   20 41 28.9 +1.2
       comp=Z,9.9nm,1.1s,baz=142,slow=1.9,SNR=9.6
ULM                                 PKPPKP  P'P'df   20 49 40.4 -2.3
       comp=Z,0.8nm,0.5s,baz=75,slow=2.7,SNR=2.9
ULM                                 LR      LR       21 09 29.7
       comp=Z,1µm,18.7s,baz=328,slow=37
ULM    Lac du Bonnet     93.71  26  P       P        20 24 25.9  0.0
ULM                                 IAmb    IAmb     20 24 27.7
       comp=Z,180nm,1.0s
MURC   Murrieta          93.83  49  P       P        20 24 27.9 +1.0
       baz=307,SNR=15
MURC                                S       S        20 35 25.1 -1.5
       baz=307
MDND   Maddock           94.03  30  P       P        20 24 28.4 +0.9
       baz=320
MDND                                S       S        20 35 25.5 -2.3
       baz=320
TMUT   Trail Mountain    94.07  42  P       P        20 24 28.2  0.0
GMRC   Granite Mounta    94.14  47  P       P        20 24 29.9 +1.5
       baz=308,SNR=24
KEST   Kesra             94.18 314  P       P        20 24 28.1 -0.4
       comp=Z,103nm,1.0s,baz=319,slow=3.6,SNR=34
KEST                                S       SKSac    20 34 52.1 -0.7
       comp=Z,12nm,1.1s,baz=133,slow=22,SNR=17
KEST                                LR      LR       21 11 05.7
       comp=Z,3µm,19.8s,baz=0.0,slow=38
KEST   Kesra             94.18 314  P       P        20 24 29.4 +0.8
P17A   Butcher Ranch,    94.23  41  P       P        20 24 29.8 +1.0
MTPU   Mount Pierson     94.30  43  P       P        20 24 31.7 +2.3
109C   Camp Elliot, M    94.31  50  P       P        20 24 30.4 +1.4
       baz=307,SNR=8.1
109C                                S       S        20 35 28.8 -1.9
       baz=307
PFO    Pinyon Flats O    94.31  49  P       P        20 24 30.5 +1.3
PFO                                 IAmb    IAmb     20 24 33.6
       comp=Z,212nm,1.4s
PFO    Pinyon Flats O    94.31  49  P       P        20 24 30.5 +1.3
PFO                                 pmax    pmax
       comp=Z,212nm,1.5s
PFO    Pinyon Flats O    94.31  49  P       P        20 24 30.5 +1.3
       baz=307,SNR=37
PFO                                 S       S        20 35 29.0 -2.1
       baz=307
XPFO   Pion Flat         94.32  49  P       P        20 24 30.3 +1.1
XPFO                                IAmb    IAmb     20 24 33.6
       comp=Z,232nm,1.5s
BELC   Belle Mtn. Jos    94.39  48  P       P        20 24 30.7 +1.1
       baz=307,SNR=16
BELC                                S       S        20 35 29.7 -2.1
       baz=307
K22A   Casper            94.45  37  P       P        20 24 30.3 +0.6
       baz=314,SNR=28
K22A                                S       S        20 35 28.6 -3.4
       baz=314
MAHO   Mahon             94.61 320  Pdif    P        20 24 29.8 -0.5
MAHO   Mahon             94.61 320  PP      PP       20 28 20.3 +1.2
RSSD   Black Hills       94.70  34  P       P        20 24 32.1 +1.2
RSSD                                IAmb    IAmb     20 24 33.5
       comp=Z,242nm,1.4s
RSSD   Black Hills       94.70  34  P       P        20 24 32.1 +1.2
RSSD                                pmax    pmax
       comp=Z,243nm,1.4s
RSSD   Black Hills       94.70  34  P       P        20 24 31.6 +0.8
       baz=316
RSSD                                S       S        20 35 31.2 -3.0
       baz=316
MONP2  Monument Peak     94.77  49  P       P        20 24 32.7 +1.2
       baz=307,SNR=16
TBI    Tubuai            94.82 114 eSKSac   SKSac    20 34 52.5 -3.5
       comp=Z,4µm,25.8s
TBI                                eSP      SP       20 36 46.3 -6.0
       comp=Z,10µm,29.5s
TBI    Tubuai            94.82 114 eLQ      LQ       20 50 42.7
       comp=Z,9µm,37.5s
TBI                                eLR      LR       20 54 56.7
       comp=Z,13µm,34.8s
NEE2   Needles Airpor    94.82  47  P       P        20 24 32.6 +1.2
       baz=308
IRM    Iron Mountain     94.85  48  P       P        20 24 33.0 +1.5
       baz=308,SNR=28
IRM                                 S       S        20 35 38.2 +2.7
       baz=308
BC3    Big Chuckawall    94.96  48  P       P        20 24 33.5 +1.4
       baz=308,SNR=21
BC3                                 S       S        20 35 38.7 +2.1
       baz=308
CAEH   'Ain El Ouahch    95.10 316  P       P        20 24 33.2 +0.6
CAEH   'Ain El Ouahch    95.10 316  P       P        20 24 33.2 +0.6
IKP    In-Ko-Pah, Jac    95.12  49  P       P        20 24 34.2 +1.3
       baz=307,SNR=10
IKP                                 S       S        20 35 37.3 -0.8
       baz=307
SWSC   Sam W. Stewart    95.16  49  P       P        20 24 34.3 +1.5
       baz=307,SNR=6.9
O20A   White River Ci    95.23  39  P       P        20 24 34.2 +0.8
       baz=313,SNR=23
O20A                                S       S        20 35 37.6 -1.4
       baz=313
AGMN   Agassiz Nation    95.26  27  P       P        20 24 32.6 -0.5
       baz=322
AGMN                                S       S        20 35 32.9 -5.5
       baz=322
PDMCI  Parker Dam,Lak    95.42  47  P       P        20 24 35.4 +1.3
       baz=308,SNR=9.2
CKFL   Kef-Lekhel        95.42 316  P       P        20 24 34.2  0.0
CKFL   Kef-Lekhel        95.42 316  P       P        20 24 34.2  0.0
Y12C   Blythe            95.51  48  P       P        20 24 36.0 +1.5
       baz=308,SNR=14
Y12C                                S       S        20 35 40.2 -1.0
       baz=308
CASM   Ain Smara         95.65 316  P       P        20 24 36.3 +1.1
CASM   Ain Smara         95.65 316  P       P        20 24 36.3 +1.1
GLA    Glamis            95.74  48  P       P        20 24 37.2 +1.6
       baz=308
GLA                                 S       S        20 35 42.8 -0.5
       baz=308
CTEI   Djebel Teioual    95.83 316  P       P        20 24 37.5 +1.4
CTEI   Djebel Teioual    95.83 316  P       P        20 24 37.5 +1.4
DFRA   Djebel Bou Aff    95.85 316  P       P        20 24 36.3 +0.2
DFRA   Djebel Bou Aff    95.85 316  P       P        20 24 36.3 +0.2
N23A   Red Feather La    95.98  38  P       P        20 24 38.1 +1.2
       baz=314,SNR=20
N23A                                S       S        20 35 44.8 -0.8
       baz=314
TAOE   Nuku Hiva Isla    96.24  97 ePP      PP       20 28 28.5 -4.6
       comp=Z,1µm,25.2s
TAOE                               eSP      SP       20 37 03.6 -4.8
       comp=Z,7µm,27.0s
TAOE   Nuku Hiva Isla    96.24  97 eLQ      LQ       20 51 24.2
       comp=Z,14µm,27.1s
TAOE                               eLR      LR       20 55 44.6
       comp=Z,8µm,30.3s
SET    Setif             96.36 316  P       P        20 24 38.0 -0.4
SET    Setif             96.36 316  P       P        20 24 38.0 -0.4
CKHR   Kef el Ahmar      96.41 316  P       P        20 24 38.5 -0.2
CKHR   Kef el Ahmar      96.41 316  P       P        20 24 38.5 -0.2
WUAZ   Wupatki           96.42  45  P       P        20 24 40.2 +1.4
       baz=310,SNR=28
WUAZ                                S       S        20 35 49.8 +0.5
       baz=310
SUSD   Miller            96.91  31  P       P        20 24 40.9 +0.2
       baz=320,SNR=5.0
SUSD                                S       S        20 35 49.7 -3.2
       baz=320
ISCO   Idaho Springs     96.93  38  P       P        20 24 42.2 +1.0
       baz=314,SNR=14
ISCO                                S       S        20 35 52.4 -1.4
       baz=314
MVCO   Mesa Verde        97.05  42  P       Pdif     20 24 42.9 +1.0
       baz=312,SNR=9.4
MVCO                                S       S        20 35 54.1 -0.7
       baz=312
SCHQ   Schefferville     97.18   8  P       P        20 24 41.2 -0.5
       comp=Z,94nm,0.9s,baz=354,slow=4.6,SNR=58
SCHQ                                S       SKSac    20 35 06.0 -1.7
       comp=Z,4.9nm,1.0s,baz=129,slow=19,SNR=8.0
SCHQ                                PKKP    PKKPbc   20 41 19.9 -1.6
       comp=Z,4.0nm,0.8s,baz=167,slow=2.6,SNR=7.7
SCHQ                                LR      LR       21 13 19.5
       comp=Z,2µm,18.8s,baz=352,slow=38
SCHQ   Schefferville     97.18   8  P       P        20 24 41.7 +0.1
EYMN   Ely               97.26  25  IAmb    IAmb     20 24 45.2
       comp=Z,72nm,1.2s
EYMN   Ely               97.26  25  P       P        20 24 42.0 -0.2
       baz=326,SNR=28
EYMN                                S       S        20 35 49.4 -6.4
       baz=326
S22A   4UR Ranch, Cre    97.66  40  P       Pdif     20 24 45.8 +1.2
       baz=314,SNR=10
S22A                                S       S        20 36 00.9 +0.8
       baz=314
W18A   Petrified Fore    97.69  44  P       Pdif     20 24 45.8 +1.2
       baz=311
W18A                                S       S        20 35 59.8 -0.5
       baz=311
214A   Organ Pipe Nat    97.75  48  P       Pdif     20 24 46.2 +1.5
       baz=309,SNR=5.7
214A                                S       S        20 36 01.1 +0.5
       baz=309
Q24A   Divide            97.77  39  P       Pdif     20 24 45.7 +0.6
       baz=315
Q24A                                S       S        20 35 59.6 -1.4
       baz=315
OGNE   Ogallala          98.02  35  P       P        20 24 46.1 +0.3
       baz=317,SNR=9.3
OGNE                                S       S        20 35 59.3 -3.3
       baz=317
SDCO   Great Sand Dun    98.42  40  Pdiff   Pdif     20 24 48.8 +0.9
       baz=314
SDCO                                S       S        20 36 05.7 -0.9
       baz=314
UCM    Universidad Co    98.45 324  Pdif    P        20 24 48.0 +0.3
UCM    Universidad Co    98.45 324  PP      PP       20 28 50.0 +1.4
ECSD   EROS Data Cent    98.53  31  Pdiff   P        20 24 47.9 -0.1
       baz=322
ECSD                                S       S        20 36 03.3 -3.4
       baz=322
TUC    Tucson            98.85  47  Pdiff   P        20 24 49.2 -0.5
       baz=310
TUC                                 S       S        20 36 10.2 +0.2
       baz=310
SPMN   Marine on St.     98.98  27  Pdiff   P        20 24 50.0 +0.1
       baz=325
SPMN                                S       S        20 36 05.6 -4.8
       baz=325
PBRG   Braganca          99.09 327 eP       Pdif     20 24 50.9 +0.4
       comp=Z,135nm,1.6s
KSCO   Kaye Shedlock’    99.11  37  Pdiff   Pdif     20 24 50.8  0.0
       baz=316
KSCO                                S       S        20 36 08.4 -3.6
       baz=316
CART   Cartagena         99.19 321  Pdif    Pdif     20 24 50.0 -0.9
CART   Cartagena         99.19 321  PP      PP       20 28 55.6 +1.4
ESDC   Sonseca Array     99.29 324  P       Pdif     20 24 51.5  0.0
       comp=Z,37nm,0.8s,baz=30,slow=4.1,SNR=70
ESDC                                PP      PP       20 28 53.7 -1.3
       comp=Z,1.0nm,0.4s,baz=33,slow=7.7,SNR=5.9
ESDC                                S       SKSac    20 35 18.7 -0.3
       comp=Z,0.9nm,0.7s,baz=61,slow=10,SNR=2.0
ESDC                                LR      LR       21 15 39.0
       comp=Z,3µm,18.9s,baz=45,slow=39
T25A   Trinidad          99.47  40  Pdiff   Pdif     20 24 53.6 +1.0
       baz=315
BGNE   Belgrade          99.61  33  Pdiff   Pdif     20 24 53.0 +0.2
       baz=320
SESP   Santiago Espad    99.66 322  P       Pdif     20 24 55.3 +2.0
       SNR=9.4
MVO    Moncorvo          99.72 327 eP       Pdif     20 24 53.0 -0.4
       comp=Z,212nm,1.3s
MVO    Moncorvo          99.72 327 eSKSac   SKSac    20 35 21.5 +0.4
MVO    Moncorvo          99.72 327 eLR      LR       20 59 51.7
       comp=Z,3µm,18.0s
PCAB   Cabril            99.78 328 eP       Pdif     20 24 53.3 -0.3
       comp=Z,192nm,1.5s
ANMO   Albuquerque       99.80  42  Pdiff   Pdif     20 24 55.3 +1.2
       baz=313
PVRL   Vila Real         99.97 327 ePP      PP       20 29 03.3 +3.3
MATQ   Matagami         100.01  16  Pdiff   Pdif     20 24 53.7 -0.7
       baz=338
E44A   Grand Marais A   100.40  23  Pdiff   Pdif     20 24 56.2 +0.1
       baz=330
PVIS   Viseu            100.48 327 eP       Pdif     20 24 57.0 +0.3
       comp=Z,178nm,1.3s
PVIS   Viseu            100.48 327 ePP      PP       20 29 06.1 +2.2
MTE    Manteigas        100.55 327 eP       Pdif     20 24 57.2 +0.1
       comp=Z,283nm,1.7s
MTE    Manteigas        100.55 327 ePP      PP       20 29 05.5 +1.0
MTE                                eSKSac   SKSac    20 35 27.8 +2.6
MTE    Manteigas        100.55 327 eLR      LR       21 00 10.3
       comp=Z,4µm,18.0s
121A   Cookes Peak, D   100.62  45  Pdiff   Pdif     20 24 59.1 +1.4
       baz=312
CBKS   Cedar Bluff      100.78  36  Pdiff   Pdif     20 24 58.2 +0.1
       baz=319
D46A   Sault St. Mari   100.79  21  Pdiff   Pdif     20 24 57.3 -0.6
       baz=332
LSQQ   Lebel-sur-Quev   100.83  16  Pdiff   Pdif     20 24 57.4 -0.7
       baz=338
D47A   Chapleau         100.94  21  Pdiff   Pdif     20 24 57.9 -0.7
       baz=333
PCBR   Castelo Branco   100.95 326 eP       Pdif     20 24 58.9 +0.1
       comp=Z,128nm,1.8s
PCBR   Castelo Branco   100.95 326 ePP      PP       20 29 10.4 +3.0
COI    Coimbra          101.12 327 eP       Pdif     20 25 00.3 +0.8
       comp=Z,284nm,1.8s
COI    Coimbra          101.12 327 ePP      PP       20 29 09.5 +0.8
COI                                eSKSac   SKSac    20 35 26.8 -1.0
PMRV   Marv??o          101.22 326 eP       Pdif     20 25 00.7 +0.7
       comp=Z,263nm,1.8s
PMRV   Marv??o          101.22 326 ePP      PP       20 29 11.0 +1.5
PMRV                               eSKSac   SKSac    20 35 29.8 +1.4
PMRV   Marv??o          101.22 326 eLR      LR       21 00 33.5
       comp=Z,4µm,20.0s
D48A   Paudash Townsh   101.23  20  Pdiff   Pdif     20 24 58.9 -1.0
       baz=334
PCAS   Casmilo, Conde   101.29 327 eP       Pdif     20 25 01.6 +1.3
       comp=Z,143nm,1.7s
PCAS   Casmilo, Conde   101.29 327 ePP      PP       20 29 11.7 +1.8
PCAS                               eSKSac   SKSac    20 35 29.3 +0.7
HORN   Hornachuelos     101.32 324  P       Pdif     20 25 01.1 +0.6
       SNR=26
F45A   CMU Biological   101.35  23  Pdiff   Pdif     20 25 00.5 +0.1
       baz=331
E47A   Iron Bridge      101.42  21  Pdiff   Pdif     20 24 59.9 -0.8
       baz=333
SCIA   State Center     101.50  30  Pdiff   Pdif     20 25 01.7 +0.6
       baz=324
PTOM   Tomar            101.58 327 eP       Pdif     20 25 03.1 +1.5
       comp=Z,182nm,1.5s
EMAL   Malaga-Limoner   101.68 322  Pdif    Pdif     20 25 01.1 -1.0
EMAL   Malaga-Limoner   101.68 322  PP      PP       20 29 14.7 +1.7
E48A   Lockeyer         101.74  20  Pdiff   Pdif     20 25 01.5 -0.7
       baz=334
PESTR  Estremoz         101.75 326  P       Pdif     20 25 02.4 +0.1
       SNR=10
PESTR  Estremoz         101.75 326 eP       Pdif     20 25 01.1 -1.3
       comp=Z,178nm,1.9s
PESTR  Estremoz         101.75 326 ePP      PP       20 29 15.2 +1.7
PESTR                              eSKSac   SKSac    20 35 32.5 +1.6
D50A   G1974 Best Tow   101.81  19  Pdiff   Pdif     20 25 01.6 -0.8
       baz=336
G45A   Suttons Bay      101.86  23  Pdiff   Pdif     20 25 02.8 +0.1
       baz=330
G46A   Petoskey         101.89  23  Pdiff   Pdif     20 25 02.8  0.0
       baz=331
PMTG   Montargil        101.91 326 eP       Pdif     20 25 02.5 -0.6
       comp=Z,195nm,1.6s
PMTG   Montargil        101.91 326 ePP      PP       20 29 14.8 +0.1
PMTG                               eSKSac   SKSac    20 35 33.3 +1.7
MELI   Melilla          101.91 320  Pdif    Pdif     20 25 00.7 -2.4
MELI   Melilla          101.91 320  PP      PP       20 29 12.3 -2.5
JFWS   Jewell Farm      101.93  27  Pdiff   Pdif     20 25 02.4 -0.6
       baz=326
D51A   Lot 18 Range I   102.01  18  Pdiff   Pdif     20 25 02.2 -1.2
       baz=336
H45A   Beulah           102.09  24  Pdiff   Pdif     20 25 04.5 +0.8
       baz=330
KSU1   Kansas State U   102.14  34  Pdiff   Pdif     20 25 04.2 +0.2
       baz=321
F48A   Evansville       102.18  21  Pdiff   Pdif     20 25 03.6 -0.5
       baz=333
G47A   Hillman          102.36  22  Pdiff   Pdif     20 25 04.8 -0.1
       baz=332
GLMI   Grayling         102.41  23  Pdiff   Pdif     20 25 05.8 +0.6
       baz=331
F49A   Sandfield        102.42  21  Pdiff   Pdif     20 25 04.3 -0.9
       baz=334
D53A   Lac Vacive, Po   102.47  17  Pdiff   Pdif     20 25 04.6 -0.8
       baz=337
E51A   G1948 Merrick    102.49  19  Pdiff   Pdif     20 25 04.5 -1.0
       baz=336
PMAFR  Mafra            102.52 327 eP       Pdif     20 25 06.6 +0.8
       comp=Z,343nm,1.5s
PMAFR  Mafra            102.52 327 ePP      PKiKP    20 29 21.5 -5.0
PMAFR                              eSKSac   SKSac    20 35 35.2 +0.7
I45A   Fountain         102.53  24  Pdiff   Pdif     20 25 06.0 +0.4
       baz=330
PBEJ   Beja             102.53 325 eP       Pdif     20 25 06.8 +0.9
       comp=Z,198nm,1.9s
PBEJ   Beja             102.53 325 ePP      PKiKP    20 29 22.4 -4.1
AMTX   Amarillo         102.62  39  Pdiff   Pdif     20 25 07.1 +0.7
       baz=317
LIS    Lisbon           102.64 326 ePdif    Pdif     20 25 06.1 -0.3
LIS                                eSKSac   SKSac    20 35 35.1 +0.1
LIS                                 AMS     AMS      21 09 04.3
       comp=E,8µm,17.3s
LIS    Lisbon           102.64 326 eP       Pdif     20 25 06.0 -0.3
LIS                                e                 20 35 35.1
D54A   Lac Fusel, La    102.68  17  Pdiff   Pdif     20 25 05.3 -1.0
       baz=338
MNTX   Cornudas Mount   102.68  44  Pdiff   Pdif     20 25 07.7 +1.0
       baz=314
H47A   Mio              102.75  23  Pdiff   Pdif     20 25 07.6 +0.9
       baz=332
PVLZ   Peæn de          102.77 321  Pdif    Pdif     20 25 04.5 -2.4
PVLZ   Peæn de          102.77 321  PP      PKiKP    20 29 22.6 -4.4
PNCL   Nicolau / Gran   102.80 326 eP       Pdif     20 25 06.9 -0.1
       comp=E,229nm,1.9s
PNCL   Nicolau / Gran   102.80 326 ePP      PKiKP    20 29 21.9 -5.1
PNCL                               eSKSac   SKSac    20 35 37.0 +1.2
CEU    Ceuta            102.83 322  Pdif    Pdif     20 25 04.8 -2.4
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CEU	Ceuta	102.83	322	PP	PKiKP	20 29 21.7	-5.3
MESJ	Messejana	102.86	325	*e*Pdif	Pdif	20 25 06.8	-0.5
MESJ				*e*PP	PP	20 29 22.0	+0.3
MESJ				*e*SKSac	SKSac	20 35 36.0	-0.1
MESJ				AMS	AMS	21 12 07.3	
	comp=E,5µm,29.2s						
MESJ	Messejana	102.86	325	*e*P	Pdif	20 25 06.7	-0.5
MESJ				*e*		20 29 22.0	
MESJ				*e*		20 35 36.0	
I46A	Reed City	102.89	24	Pdiff	Pdif	20 25 07.9	+0.6
	baz=330						
F51A	Arnstein	102.92	19	Pdiff	Pdif	20 25 07.0	-0.4
	baz=335						
PCVE	Castro Verde	102.92	325	*e*P	Pdif	20 25 07.4	-0.2
	comp=E,245nm,1.8s						
PCVE	Castro Verde	102.92	325	*e*PP	PKiKP	20 29 23.1	-4.1
PCVE				*e*SKSac	SKSac	20 35 38.5	+2.0
PVAQ	Vaqueiros	102.93	325	P	Pdif	20 25 08.3	+0.7
	SNR=9.4						
PVAQ	Vaqueiros	102.93	325	*e*P	Pdif	20 25 07.4	-0.2
	comp=E,267nm,1.8s						
PVAQ	Vaqueiros	102.93	325	*e*PP	PKiKP	20 29 23.5	-3.8
PVAQ				*e*SKSac	SKSac	20 35 37.7	+1.2
PVAQ	Vaqueiros	102.93	325	*e*LR	LR	21 01 17.9	
	comp=E,3µm,20.0s						
E52A	Mattawa	102.95	18	Pdiff	Pdif	20 25 06.9	-0.7
	baz=336						
H48A	Harrisville	102.95	22	Pdiff	Pdif	20 25 08.1	+0.5
	baz=332						
J45A	Montague	102.99	25	Pdiff	Pdif	20 25 08.0	+0.3
	baz=330						
D55A	Sainte-Anne-du	103.09	16	Pdiff	Pdif	20 25 08.1	0.0
	baz=339						
E53A	Dumoine, Ponti	103.13	17	Pdiff	Pdif	20 25 08.0	-0.3
	baz=337						
I47A	Gladwin	103.15	23	Pdiff	Pdif	20 25 08.5	0.0
	baz=331						
PBDV	Barranco-do-Ve	103.17	325	*e*P	Pdif	20 25 08.3	-0.4
	comp=E,273nm,1.7s						
PBDV	Barranco-do-Ve	103.17	325	*e*SKSac	SKSac	20 35 38.7	+1.0
E54A	Lac Daplat, Po	103.21	17	Pdiff	Pdif	20 25 07.3	-1.3
	baz=338						
F52A	Sundridge	103.21	19	Pdiff	Pdif	20 25 08.7	0.0
	baz=336						
D56A	ZEC Mazanza, M	103.24	15	Pdiff	Pdif	20 25 09.1	+0.3
	baz=340						
I48A	Sherman Twp	103.28	22	Pdiff	Pdif	20 25 09.9	+0.9
	baz=332						
J46A	Howard City	103.33	24	Pdiff	Pdif	20 25 09.2	-0.1
	baz=330						
PTEO	Sao Teotonio	103.34	325	*e*P	Pdif	20 25 10.2	+0.8
	comp=E,240nm,1.4s						
LATQ	La Tuque	103.36	14	Pdiff	Pdif	20 25 09.4	+0.1
	baz=342						
ALGO	Algonquin Park	103.42	18	Pdiff	Pdif	20 25 09.3	-0.3
	baz=337						
D57A	Chemin Vers le	103.47	15	Pdiff	Pdif	20 25 09.9	+0.1
	baz=341						
E55A	Montcerf-Lytto	103.48	16	Pdiff	Pdif	20 25 09.9	0.0
	baz=339						
L44A	Lake County Fo	103.48	26	Pdiff	Pdif	20 25 10.9	+1.0
	baz=328						
MORF	Marmelete	103.48	325	*e*Pdif	Pdif	20 25 09.8	-0.4
MORF				*e*PP	PP	20 29 26.8	+0.2
MORF				*e*SKSac	SKSac	20 35 39.0	-0.2
MORF				AMS	AMS	21 12 14.9	
	comp=E,7µm,18.6s						
MORF	Marmelete	103.48	325	*e*P	Pdif	20 25 09.7	-0.4
MORF				*e*		20 29 26.7	
MORF				*e*		20 35 39.0	
MORF	Marmelete	103.48	325	*e*P	Pdif	20 25 11.1	+0.9
	comp=E,205nm,1.5s						
MORF	Marmelete	103.48	325	*e*SKSac	SKSac	20 35 40.1	+0.9
D58A	Chemin du LacG	103.61	14	Pdiff	Pdif	20 25 10.2	-0.3
	baz=342						
E56A	St. Veronique	103.64	16	Pdiff	Pdif	20 25 10.8	+0.2
	baz=340						
PFVI	Vila Bisbo	103.71	325	*e*P	Pdif	20 25 10.9	-0.2
	comp=E,266nm,1.7s						
PFVI	Vila Bisbo	103.71	325	*e*PP	PKiKP	20 29 29.8	+1.1
PFVI				*e*SKSac	SKSac	20 35 40.8	+0.7
J47A	Sunmer	103.73	24	Pdiff	Pdif	20 25 12.0	+0.9
	baz=331						
I49A	Point Hope	103.80	22	Pdiff	Pdif	20 25 10.1	-1.2
	baz=333						
D59A	Saint-Raymond	103.92	13	Pdiff	Pdif	20 25 11.7	-0.1
	baz=343						
G54A	Lake Saint Pet	103.92	18	Pdiff	Pdif	20 25 11.9	0.0
	baz=337						
E57A	Chemin Saint G	103.98	15	Pdiff	Pdif	20 25 12.3	+0.2
	baz=340						
F55A	Otter Lake	103.98	17	Pdiff	Pdif	20 25 12.2	+0.1
	baz=338						
G53A	Haliburton	104.02	19	Pdiff	Pdif	20 25 11.4	-0.9
	baz=336						
J48A	Bridge Port	104.04	23	Pdiff	Pdif	20 25 12.9	+0.5
	baz=332						
D61A	St Aubert, Com	104.06	12	Pdiff	Pdif	20 25 12.5	+0.1
	baz=344						
H52A	Wyevale	104.09	20	Pdiff	Pdif	20 25 12.5	-0.2
	baz=335						
K47A	Vermontville	104.16	24	Pdiff	Pdif	20 25 13.4	+0.4
	baz=331						
D60A	Saint Jean D'O	104.19	13	Pdiff	Pdif	20 25 13.0	0.0
	baz=343						
J49A	Marlette	104.20	22	Pdiff	Pdif	20 25 13.8	+0.6
	baz=332						
E58A	La Victoria	104.21	15	Pdiff	Pdif	20 25 13.2	0.0
	baz=341						
L46A	Eue Claire	104.25	25	Pdiff	Pdif	20 25 14.2	+0.8
	baz=330						
HDIL	Hopedale	104.29	28	Pdiff	Pdif	20 25 14.3	+0.7
	baz=327						
WMOK	Wichita Mounta	104.34	38	Pdiff	Pdif	20 25 14.6	+0.6
	baz=319						
K48A	Perry	104.36	23	Pdiff	Pdif	20 25 14.8	+0.9
	baz=332						
D62A	Allapoint, All	104.38	11	Pdiff	Pdif	20 25 14.4	+0.5
	baz=345						
G55A	Calabogie	104.42	17	Pdiff	Pdif	20 25 14.5	+0.4
	baz=338						
I51A	Listowel	104.50	21	Pdiff	Pdif	20 25 14.9	+0.4
	baz=334						
I52A	Shelburne	104.52	20	Pdiff	Pdif	20 25 14.8	+0.1
	baz=335						
H53A	Bobcaygeon	104.54	19	Pdiff	Pdif	20 25 14.3	-0.3
	baz=336						
F58A	St-Lin Laurent	104.57	15	Pdiff	Pdif	20 25 15.6	+0.9
	baz=341						
K49A	Clarkson	104.60	23	Pdiff	Pdif	20 25 15.7	+0.8
	baz=332						
E60A	Ste Agathe de	104.61	13	Pdiff	Pdif	20 25 14.8	-0.1
	baz=343						
MDT	Midelt	104.66	320	Pdiff	Pdif	20 25 16.5	+0.9
	comp=E,10nm,0.8s,baz=107,slow=3.0,SNR=7.7						
MDT				PKiKP	PKiKP	20 29 32.4	+1.7
	comp=E,12nm,1.0s,baz=66,slow=4.4,SNR=7.0						
MDT	Midelt	104.66	320	P	PKiKP	20 29 36.6	+5.9
	SNR=5.0						
L47A	Sherwood	104.69	24	Pdiff	Pdif	20 25 15.8	+0.4
	baz=330						
E61A	Lac Etchemin	104.74	13	Pdiff	Pdif	20 25 16.0	+0.5
	baz=344						
F59A	Saint Guilaume	104.82	14	Pdiff	Pdif	20 25 16.1	+0.3
	baz=342						
K50A	Casco	104.90	22	Pdiff	Pdif	20 25 16.8	+0.5
	baz=333						
I53A	Kortright Cn E	104.92	20	Pdiff	Pdif	20 25 17.1	+0.8
	baz=335						
H55A	Tweed	104.95	18	Pdiff	Pdif	20 25 16.5	+0.1
	baz=338						
AAM	Ann Arbor	104.96	23	Pdiff	Pdif	20 25 17.6	+1.0
	baz=332						
L48A	N Adams	105.00	24	Pdiff	Pdif	20 25 17.6	+0.9
	baz=331						
G57A	Newington	105.01	16	Pdiff	Pdif	20 25 16.7	0.0
	baz=340						
TUL1	Leonard	105.02	35	Pdiff	Pdif	20 25 18.6	+1.6
	baz=321						
M47A	Cromwell	105.06	25	Pdiff	Pdif	20 25 18.0	+1.0
	baz=330						
F61A	St Evariste	105.08	13	Pdiff	Pdif	20 25 17.7	+0.7
	baz=343						
L49A	Milan	105.09	23	Pdiff	Pdif	20 25 17.9	+0.8
	baz=332						
I55A	Frankford	105.12	18	Pdiff	Pdif	20 25 17.1	-0.1
	baz=337						
H56A	Elgin	105.16	17	Pdiff	Pdif	20 25 17.4	0.0
	baz=338						
J52A	Paris	105.18	21	Pdiff	Pdif	20 25 17.2	-0.3
	baz=335						
G58A	Ormstown	105.19	16	Pdiff	Pdif	20 25 17.0	-0.5
	baz=340						
M48A	Edgerton	105.29	24	Pdiff	Pdif	20 25 19.2	+1.1
	baz=331						
K51A	Iona Station	105.31	22	Pdiff	Pdif	20 25 19.3	+1.2
	baz=334						
SFIN	Lafayette	105.34	27	Pdiff	Pdif	20 25 18.7	+0.4
	baz=329						
TXAR	Lajitas Array	105.38	45	Pdiff	Pdif	20 25 21.1	+2.2
	comp=E,5.8nm,0.9s,baz=293,slow=2.2,SNR=19						
TXAR				PKiKP	PKiKP	20 29 34.0	+1.9
	comp=E,9.0nm,1.1s,baz=350,slow=1.1,SNR=7.2						
TXAR				Sdiff	SKSac	20 35 48.6	+0.3
	comp=E,1.0nm,1.0s,baz=271,slow=8.0,SNR=3.4						
TXAR				PKKPbc	PKKPbc	20 40 58.4	+1.1
	comp=E,8.2nm,1.0s,baz=141,slow=6.1,SNR=21						
TXAR				PKKPab	PKKPab	20 41 15.2	-2.3
	comp=E,3.4nm,1.0s,baz=142,slow=6.3,SNR=5.5						
ABTX	Abilene, Hawle	105.43	40	P	PKiKP	20 29 33.6	+1.6
	baz=318						
N47A	Urbana	105.45	25	Pdiff	Pdif	20 25 19.3	+0.5
	baz=330						
G59A	Clarenceville	105.46	15	Pdiff	Pdif	20 25 19.3	+0.6
	baz=341						
L50A	Kingsville	105.48	23	Pdiff	Pdif	20 25 19.5	+0.6
	baz=332						
CCM	Cathedral Cave	105.51	31	Pdiff	Pdif	20 25 19.8	+0.8
	baz=325						
CCM				P	PKiKP	20 29 33.2	+1.3
	baz=325						
K52A	Tillsonburg	105.52	21	Pdiff	Pdif	20 25 19.2	+0.2
	baz=334						
LONY	Lake Ozonia	105.56	16	Pdiff	Pdif	20 25 17.4	-1.8
	baz=340						
M49A	Liberty Center	105.57	24	Pdiff	Pdif	20 25 19.5	+0.2
	baz=331						
G61A	St-Isidore-de-	105.63	14	Pdiff	Pdif	20 25 20.3	+0.9
	baz=343						
N48A	Decatur	105.72	25	Pdiff	Pdif	20 25 21.1	+1.1
	baz=330						
N48A				P	PKiKP	20 29 33.4	+1.1
	baz=330						
H59A	Cadyville	105.75	15	Pdiff	Pdif	20 25 19.3	-0.7
	baz=341						
H58A	Gabriels	105.85	16	Pdiff	Pdif	20 25 20.9	+0.4
	baz=340						
AVE	Averroes	105.88	322	Pdif	Pdif	20 25 19.0	-1.9
AVE	Averroes	105.88	322	PP	PKiKP	20 29 40.8	+8.0
I57A	Carthage	105.92	17	Pdiff	Pdif	20 25 20.5	-0.3
	baz=339						
J55A	Hilton	105.96	19	Pdiff	Pdif	20 25 21.4	+0.4
	baz=337						
M50A	Fremont	105.97	23	Pdiff	Pdif	20 25 21.1	+0.1
	baz=332						
N49A	Columbus Grove	105.98	24	Pdiff	Pdif	20 25 21.0	-0.1
	baz=331						
MAW	Mawson	106.04	201	PKKPbc	PKKPbc	20 40 55.9	-0.7
	comp=E,17nm,0.8s,baz=353,slow=5.0,SNR=3.5						
H60A	Morristown	106.06	15	Pdiff	Pdif	20 25 21.9	+0.5
	baz=342						
U40A	Yellville	106.13	33	Pdiff	Pdif	20 25 21.9	-0.1
	baz=323						
U40A				P	PKiKP	20 29 33.7	+0.5
	baz=323						
O48A	Farmland	106.20	25	Pdiff	Pdif	20 25 22.3	+0.2
	baz=330						
O48A				P	PKiKP	20 29 34.2	+1.0
	baz=330						
J56A	Wolcott	106.22	18	Pdiff	Pdif	20 25 22.8	+0.7
	baz=338						
H61A	Lyndonville	106.26	14	Pdiff	Pdif	20 25 23.4	+1.1
	baz=342						
K54A	Basiliko Farm,	106.30	20	Pdiff	Pdif	20 25 22.1	-0.4
	baz=336						
J57A	Williamstown	106.33	17	Pdiff	Pdif	20 25 22.7	+0.1
	baz=338						
M51A	Elyria	106.33	23	Pdiff	Pdif	20 25 23.3	+0.6
	baz=333						
I58A	Old Forge	106.33	17	Pdiff	Pdif	20 25 22.4	-0.3
	baz=340						
ERPA	Erie	106.35	21	Pdiff	Pdif	20 25 23.3	+0.5
	baz=335						
K55A	Perry	106.38	19	Pdiff	Pdif	20 25 22.9	0.0
	baz=337						
H62A	Milan	106.38	14	Pdiff	Pdif	20 25 22.4	-0.4
	baz=343						
L53A	Girard	106.41	21	Pdiff	Pdif	20 25 22.6	-0.5
	baz=335						
M52A	Chesterland	106.42	22	Pdiff	Pdif	20 25 24.6	+1.5
	baz=334						
L54A	Sinclairville	106.45	20	Pdiff	Pdif	20 25 23.4	+0.1
	baz=336						
N50A	Nevada	106.49	24	Pdiff	Pdif	20 25 23.8	+0.4
	baz=332						
N50A				P	PKiKP	20 29 34.2	+0.5
	baz=332						
I59A	Olmsteadville	106.51	16	Pdiff	Pdif	20 25 23.0	-0.4
	baz=340						
LBNH	Lisbon	106.54	14	Pdiff	Pdif	20 25 23.6	+0.1
	baz=342						
J58A	Remsen	106.56	17	Pdiff	Pdif	20 25 23.2	-0.5
	baz=339						
J58A				P	PKiKP	20 29 34.9	+1.1
	baz=339						
O49A	Covington	106.56	25	Pdiff	Pdif	20 25 23.8	0.0
	baz=331						
I60A	Shoreham	106.60	15	Pdiff	Pdif	20 25 24.1	+0.3
	baz=341						
I60A				P	PKiKP	20 29 35.6	+1.8
	baz=341						
K56A	Middlesex	106.62	19	Pdiff	Pdif	20 25 25.2	+1.2
	baz=337						
N51A	Ashland	106.63	23	Pdiff	Pdif	20 25 24.8	+0.8
	baz=333						
N51A				P	PKiKP	20 29 34.5	+0.5
	baz=333						
J59A	Piesco	106.66	16	P	PKiKP	20 29 35.1	+1.1
	baz=340						
MATP	Matopo	106.67	255	PKKPbc	PKKPbc	20 40 52.2	-1.1
	comp=E,4.5nm,1.0s,baz=299,slow=3.2,SNR=8.6						
MATP				PKKP	PKKPdf	20 41 06.5	+0.9
	comp=E,5.0nm,0.9s,baz=256,slow=4.4,SNR=6.2						
VNDA	Vanda	106.73	173	PKKPbc	PKKPbc	20 40 54.4	-0.3
	comp=E,9.9nm,0.9s,baz=221,slow=3.7,SNR=5.5						
VNDA				PKKP	PKKPdf	20 41 08.3	+1.3
	comp=E,9.6nm,0.8s,baz=115,slow=3.1,SNR=5.1						
M53A	WI Miller and	106.74	22	Pdiff	Pdif	20 25 25.4	+0.9
	baz=334						
P48A	Milroy	106.78	26	Pdiff	Pdif	20 25 24.6	-0.1
	baz=330						
P48A				P	PKiKP	20 29 35.3	+1.0
	baz=330						
K57A	Scipio Center	106.82	18	Pdiff	Pdif	20 25 25.9	+1.1
	baz=338						
O50A	Cable	106.87	24	Pdiff	Pdif	20 25 26.3	+1.2
	baz=332						
O50A				P	PKiKP	20 29 35.3	+0.9
	baz=332						
H66A	Whiting	106.91	11	P	PKiKP	20 29 35.5	+1.2
	baz=346						
JCT	Junction City	106.91	41	P	PKiKP	20 29 36.5	+1.7
	baz=317						
ITZ	Itezhi-Tezhi	106.94	261	*i* P	Pdif	20 25 26.4	+0.5
N52A	McGinn's Farm,	106.96	23	P	PKiKP	20 29 35.6	+1.0
	baz=333						
M54A	Oil Creek Stat	107.00	21	Pdiff	Pdif	20 25 26.0	+0.3
	baz=335						
M54A				P	PKiKP	20 29 35.5	+0.8
	baz=335						
I63A	Otisfield	107.00	13	Pdiff	Pdif	20 25 27.2	+1.6
	baz=343						
ACSO	Alum Creek Sta	107.02	24	P	PKiKP	20 29 35.5	+0.7
	baz=332						
K58A	Earlville	107.02	17	Pdiff	Pdif	20 25 26.3	+0.5
	baz=339						
L56A	Greenwood	107.07	19	Pdiff	Pdif	20 25 26.2	+0.2
	baz=337						
Q48A	North Vernon	107.12	26	Pdiff	Pdif	20 25 27.5	+1.3
	baz=330						
Q48A				P	PKiKP	20 29 36.0	+1.1
	baz=330						
MIAR	Mount Ida	107.21	34	Pdiff	Pdif	20 25 28.2	+1.4
	baz=323						
MIAR				P	PKiKP	20 29 36.9	+1.6
	baz=323						
K59A	Cooperstown	107.22	17	Pdiff	Pdif	20 25 26.5	-0.2
	baz=340						
K59A				P	PKiKP	20 29 38.1	+3.0
	baz=340						
O51A	Pataskala	107.23	24	Pdiff	Pdif	20 25 27.3	+0.6
	baz=332						
O51A				P	PKiKP	20 29 36.3	+1.2
	baz=332						
N53A	Lisbon	107.25	22	Pdiff	Pdif	20 25 27.2	+0.4
	baz=334						
N53A				P	PKiKP	20 29 36.6	+1.4
	baz=334						
P50A	Jamestown	107.27	25	Pdiff	Pdif	20 25 27.6	+0.7
	baz=331						
P50A				P	PKiKP	20 29 35.7	+0.5
	baz=331						
M55A	Ridgway	107.32	20	Pdiff	Pdif	20 25 27.7	+0.5
	baz=336						
Q49A	Aurora	107.38	26	Pdiff	Pdif	20 25 28.4	+1.0
	baz=330						
Q49A				P	PKiKP	20 29 36.4	+1.0
	baz=330						
N54A	Moraine State	107.39	21	Pdiff	Pdif	20 25 27.0	-0.4
	baz=335						
L57A	Andrews Acres	107.40	19	Pdiff	Pdif	20 25 28.2	+0.7
	baz=338						
L57A				P	PKiKP	20 29 36.7	+1.3
	baz=338						
BINY	Binghamton	107.45	18	P	PKiKP	20 29 36.9	+1.4
	baz=338						
M56A	Emporium	107.48	20	P	PKiKP	20 29 36.5	+0.9
	baz=336						
WCI	Wyandotte Cave	107.50	27	Pdiff	Pdif	20 25 30.4	+2.4
	baz=329						
WCI				P	PKiKP	20 29 36.7	+1.1
	baz=329						
J62A	Henniker	107.53	15	P	PKiKP	20 29 37.3	+1.7
	baz=342						
O52A	Adamsville	107.53	23	Pdiff	Pdif	20 25 28.7	+0.6
	baz=333						
K60A	Five Rivers En	107.61	16	Pdiff	Pdif	20 25 29.7	+1.4
	baz=340						
K60A				P	PKiKP	20 29 37.4	+1.7
	baz=340						
X40A	Basin Creek Fa	107.63	34	Pdiff	Pdif	20 25 29.8	+1.2
	baz=323						
L58A	Harry Jones Me	107.64	18	Pdiff	Pdif	20 25 28.6	+0.1
	baz=338						
K61A	Williamstown	107.72	16	Pdiff	Pdif	20 25 29.2	+0.4
	baz=341						
L59A	Walton	107.72	17	Pdiff	Pdif	20 25 28.6	-0.3
	baz=339						
P52A	Corning	107.86	24	P	PKiKP	20 29 37.2	+0.9
	baz=333						
N55A	Marion Center	107.88	21	Pdiff	Pdif	20 25 29.5	-0.2
	baz=336						
R49A	Shelbyville	107.89	26	Pdiff	Pdif	20 25 31.4	+1.8
	baz=330						
R49A				P	PKiKP	20 29 37.6	+1.2
	baz=330						
M57A	Sunshine Farm,	107.93	19	Pdiff	Pdif	20 25 30.2	+0.4
	baz=337						
M57A				P	PKiKP	20 29 37.4	+1.0
	baz=337						
Q51A	Peebles	107.95	25	Pdiff	Pdif	20 25 30.0	+0.1
	baz=332						
N56A	West Decatur	107.97	20	Pdiff	Pdif	20 25 30.0	0.0
	baz=336						
N56A				P	PKiKP	20 29 37.3	+0.8
	baz=336						
O54A	Avella	107.97	22	Pdiff	Pdif	20 25 30.5	+0.5
	baz=334						
O54A				P	PKiKP	20 29 37.7	+1.2
	baz=334						
M58A	Price's Panora	108.09	19	Pdiff	Pdif	20 25 30.7	+0.2
	baz=338						
M59A	Waymart	108.22	18	Pdiff	Pdif	20 25 30.9	-0.2
	baz=339						
M59A				P	PKiKP	20 29 38.3	+1.4
	baz=339						
R50A	Paris	108.23	26	P	PKiKP	20 29 37.6	+0.6
	baz=331						
P53A	Whipple	108.25	23	P	PKiKP	20 29 38.5	+1.5
	baz=333						
S49A	Springfield	108.28	27	Pdiff	Pdif	20 25 32.4	+1.0
	baz=330						
S49A				P	PKiKP	20 29 37.8	+0.7
	baz=330						
SSPA	Standing Stone	108.35	20	Pdiff	Pdif	20 25 31.8	+0.1
	baz=337						
SSPA				P	PKiKP	20 29 38.3	+1.1
	baz=337						
O56A	Blue Knob Stat	108.47	21	Pdiff	Pdif	20 25 33.9	+1.6
	baz=336						
R51A	Hillsboro	108.50	25	Pdiff	Pdif	20 25 32.0	-0.4
	baz=331						
N58A	Sunbury	108.51	19	Pdiff	Pdif	20 25 32.6	+0.2
	baz=338						
N58A				P	PKiKP	20 29 38.3	+0.8
	baz=338						
WVT	Waverly	108.63	29	Pdiff	Pdif	20 25 34.0	+1.0
	baz=327						
WVT				P	PKiKP	20 29 38.9	+1.1
	baz=327						
N59A	State Game Lan	108.71	18	Pdiff	Pdif	20 25 33.2	-0.1
	baz=338						
N59A				P	PKiKP	20 29 39.0	+1.1
	baz=338						
833A	Chaparral WMA,	108.72	43	P	PKiKP	20 29 40.0	+1.8
	baz=317						
S50A	Richmond	108.72	26	Pdiff	Pdif	20 25 31.2	-2.2
	baz=330						
S50A				P	PKiKP	20 29 38.5	+0.5
	baz=330						
P55A	Reedsville	108.76	22	Pdiff	Pdif	20 25 36.6	+3.0
	baz=335						
P55A				P	PKiKP	20 29 38.9	+0.9
	baz=335						
Q53A	Leroy	108.76	23	Pdiff	Pdif	20 25 33.6	+0.1
	baz=333						
T49A	Edmonton	108.77	27	P	PKiKP	20 29 39.0	+0.9
	baz=330						
O57A	Amberson	108.81	20	Pdiff	Pdif	20 25 34.4	+0.6
	baz=337						
M61A	Granite Spring	108.87	17	P	PKiKP	20 29 38.8	+0.7
	baz=340						
N60A	Cedar Hill Far	108.93	18	P	PKiKP	20 29 39.2	+0.9
	baz=339						
S51A	Beattyville	109.07	26	P	PKiKP	20 29 39.5	+0.8
	baz=331						
R53A	Hurricane	109.08	24	P	PKiKP	20 29 39.5	+0.9
	baz=333						
P56A	Dayton Farm, R	109.08	21	Pdiff	Pdif	20 25 35.6	+0.6
	baz=336						
P56A				P	PKiKP	20 29 39.8	+1.2
	baz=336						
O58A	Lewisberry	109.11	19	Pdiff	Pdif	20 25 34.0	-1.1
	baz=337						
O58A				P	PKiKP	20 29 39.5	+0.9
	baz=337						
T50A	Nancy	109.12	27	Pdiff	Pdif	20 25 34.6	-0.6
	baz=330						
T50A				P	PKiKP	20 29 39.4	+0.7
	baz=330						
PAL	Palisades	109.12	17	Pdiff	Pdif	20 25 34.4	-0.6
	baz=340						
PAL				P	PKiKP	20 29 39.7	+1.1
	baz=340						
Q55A	Buckhannon	109.14	22	P	PKiKP	20 29 40.0	+1.2
	baz=334						
S52A	Salyersville	109.23	25	P	PKiKP	20 29 39.8	+0.8
	baz=332						
P57A	Homestead Farm	109.36	21	P	PKiKP	20 29 40.7	+1.6
	baz=336						
O60A	Telford	109.36	18	P	PKiKP	20 29 40.3	+1.2
	baz=339						
Q56A	Snyder Ridge,	109.39	22	P	PKiKP	20 29 40.1	+0.9
	baz=335						
T51A	Gray	109.52	26	P	PKiKP	20 29 39.9	+0.4
	baz=331						
R54A	Victor	109.55	23	P	PKiKP	20 29 39.4	-0.1
	baz=334						
P58A	Pank, Wackersv	109.58	20	P	PKiKP	20 29 40.5	+1.0
	baz=337						
S53A	Williamson	109.59	24	P	PKiKP	20 29 40.7	+1.1
	baz=332						
Q57A	Strasburg	109.65	21	P	PKiKP	20 29 41.0	+1.3
	baz=336						

P59A	Jarrettsville	109.73	19	P	PKiKP	20 29 40.4	+0.6
	baz=338						
T52A	Hallie	109.77	25	P	PKiKP	20 29 41.0	+1.0
	baz=332						
S54A	Dingess, Beckl	109.78	24	P	PKiKP	20 29 41.0	+1.0
	baz=333						
R56A	Bull Pasture M	109.89	22	P	PKiKP	20 29 41.5	+1.2
	baz=335						
Q58A	Fox Den Farm,	109.96	21	P	PKiKP	20 29 41.4	+1.2
	baz=336						
TZTN	Tazewell	110.05	26	P	PKiKP	20 29 41.3	+0.8
	baz=331						
R57A	Stanardsville	110.28	21	P	PKiKP	20 29 42.4	+1.5
	baz=336						
T54A	Tazewell	110.34	24	P	PKiKP	20 29 41.8	+0.7
	baz=333						
V51A	Loudon	110.37	27	P	PKiKP	20 29 42.2	+1.1
	baz=330						
R58A	Rapidan	110.45	21	P	PKiKP	20 29 42.5	+1.3
	baz=336						
W50A	Signal Mountai	110.49	28	P	PKiKP	20 29 42.0	+0.6
	baz=329						
S56A	Natural Bridge	110.50	23	P	PKiKP	20 29 42.3	+0.9
	baz=335						
T55A	Pulaski	110.58	24	P	PKiKP	20 29 42.4	+0.8
	baz=334						
U53A	Fall Branch	110.58	25	P	PKiKP	20 29 42.4	+0.9
	baz=332						
VBMS	Vicksburg	110.60	34	P	PKiKP	20 29 43.2	+1.6
	baz=324						
BLA	Blacksburg	110.62	23	P	PKiKP	20 29 42.6	+1.0
	baz=334						
V52A	Sevierville	110.64	26	P	PKiKP	20 29 42.5	+0.8
	baz=331						
TKL	Tuckaleechee C	110.73	27	PKKPab	PKKPab	20 40 50.6	-3.5
	comp=E,5.2nm,0.9s,baz=184,slow=2.3,SNR=4.5						
CBN	Corbin Frederi	110.73	21	P	PKiKP	20 29 43.3	+1.6
	baz=337						
R58B	Mineral	110.80	21	P	PKiKP	20 29 42.8	+0.9
	baz=336						
LBTB	Lobatse	110.89	252	SKP	SKPdf	20 33 07.9	+1.0
	comp=E,8.7nm,1.1s,baz=329,slow=2.2,SNR=3.8						
T56A	Rocky Mt	110.92	23	P	PKiKP	20 29 42.9	+0.8
	baz=334						
U55A	TA2, Sparta	111.03	24	P	PKiKP	20 29 43.4	+1.0
	baz=333						
S58A	Poland Farm, P	111.06	21	P	PKiKP	20 29 43.5	+1.1
	baz=336						
V53A	Saluda	111.10	26	P	PKiKP	20 29 43.8	+1.2
	baz=332						
W52A	Murphy	111.16	27	P	PKiKP	20 29 43.9	+1.2
	baz=330						
S59A	Mechanicsville	111.17	21	P	PKiKP	20 29 43.8	+1.3
	baz=337						
X51A	Calhoun	111.23	28	P	PKiKP	20 29 43.6	+0.8
	baz=330						
PMOZ	Porto Moniz, M	111.25	328	*e*LR	LR	21 05 39.1	
	comp=E,3µm,18.0s						
V54A	Nebo	111.33	25	P	PKiKP	20 29 44.0	+1.0
	baz=332						
S60A	Water View	111.42	20	P	PKiKP	20 29 45.6	+2.6
	baz=337						
T58A	Grand View Acr	111.51	22	P	PKiKP	20 29 44.3	+1.0
	baz=335						
V55A	Taylorsville	111.54	25	P	PKiKP	20 29 44.4	+1.1
	baz=333						
U57A	Blanch	111.70	23	P	PKiKP	20 29 44.7	+1.1
	baz=335						
T59A	Double "B" Far	111.81	21	P	PKiKP	20 29 44.8	+1.0
	baz=336						
V56A	Mocksville	111.84	24	P	PKiKP	20 29 44.5	+0.5
	baz=334						
W54A	Cherokee Point	111.85	26	P	PKiKP	20 29 44.9	+1.0
	baz=332						
Z50A	Ashland	111.89	30	P	PKiKP	20 29 44.9	+0.8
	baz=328						
X53A	Estanollee	111.92	27	P	PKiKP	20 29 45.5	+1.4
	baz=331						
U58A	Oxford	112.00	22	P	PKiKP	20 29 45.2	+1.0
	baz=335						
V57A	Coltrane Farms	112.03	24	P	PKiKP	20 29 45.4	+1.1
	baz=334						
KMSC	Kings Mountain	112.13	25	P	PKiKP	20 29 45.5	+1.0
	baz=333						
Y52A	Lilburn	112.17	28	P	PKiKP	20 29 45.6	+1.0
	baz=330						
X54A	Belton	112.25	26	P	PKiKP	20 29 46.0	+1.3
	baz=332						
U59A	Littleton	112.29	22	P	PKiKP	20 29 45.8	+1.1
	baz=336						
BOSA	Boshof	112.44	248	Pdiff	Pdif	20 25 50.6	+0.5
	comp=E,3.8nm,0.8s,baz=56,slow=8.2,SNR=4.7						
BOSA				PKiKP	PKiKP	20 29 45.8	+0.6
	comp=E,14nm,1.0s,baz=111,slow=2.8,SNR=12						
BOSA				PKKPab	PKKPab	20 40 44.7	+2.0
	comp=E,5.1nm,0.8s,baz=243,slow=2.9,SNR=5.4						
X55A	Gracelyn & Ava	112.61	26	P	PKiKP	20 29 46.1	+0.7
	baz=332						
W57A	Gilead	112.61	24	P	PKiKP	20 29 46.5	+1.1
	baz=334						
V59A	Middlesex	112.68	22	P	PKiKP	20 29 46.6	+1.2
	baz=336						
GOGA	Godfrey	112.80	28	P	PKiKP	20 29 47.4	+1.6
	baz=330						
X56A	White Oak	112.82	25	P	PKiKP	20 29 46.8	+1.0
	baz=333						
Y55A	Saluda	112.99	26	P	PKiKP	20 29 47.3	+1.2
	baz=332						
W58A	Raeford	113.01	23	P	PKiKP	20 29 47.0	+0.9
	baz=334						
BRAL	Brewton	113.14	32	P	PKiKP	20 29 48.8	+2.3
	baz=327						
TORD	Torodi Ar. Bea	113.64	300	Pdiff	Pdif	20 25 55.5	-0.1
	comp=E,1.2nm,0.9s,baz=46,slow=4.2,SNR=6.9						
TORD				PKiKP	PKiKP	20 29 47.2	-0.6
	comp=E,18nm,0.8s,baz=169,slow=1.1,SNR=51						
TORD				Sdiff	SKSac	20 36 20.6	-2.4
	comp=E,2.7nm,1.2s,baz=42,slow=12,SNR=2.4						
TORD				PKKPbc	PKKPbc	20 40 32.1	+1.6
	comp=E,3.9nm,0.6s,baz=220,slow=2.7,SNR=20						
X60A	Albert Glenn T	113.84	23	P	PKiKP	20 29 48.8	+1.1
	baz=336						
Z57A	Bowman	114.00	26	P	PKPdf	20 29 49.9	+1.8
	baz=333						
Z58A	St. Stephen	114.31	25	P	PKPdf	20 29 50.3	+1.7
	baz=334						
157A	Early Branch	114.44	26	P	PKPdf	20 29 50.5	+1.6
	baz=332						
TIGA	Tifton	114.46	29	P	PKPdf	20 29 50.9	+1.8
	baz=330						
SYO	Syowa Base	114.50	203⇑	*e*P	Pdif	20 26 17.0	+19
SYO	Syowa Base	114.50	203⇑	*e*pPdiff	pPdif	20 26 33.0	+4.3
SYO	Syowa Base	114.50	203⇑	*e*X		20 29 46.0	
TSUM	Tsumeb	115.69	261	PKKPbc	PKKPbc	20 40 25.4	+1.7
	comp=E,2.7nm,0.8s,baz=221,slow=7.6,SNR=6.7						
QSPA	South Pole Qui	117.20	180	PKP	PKPdf	20 29 53.2	+0.1
	comp=E,28nm,0.8s,baz=293,slow=0.9,SNR=7.3						
QSPA				PP	PP	20 31 07.7	+2.1
	comp=E,25nm,1.1s,baz=38,slow=5.3,SNR=3.3						
QSPA				SKP	SKPdf	20 33 17.9	+0.3
	comp=E,14nm,1.0s,baz=7.4,slow=6.1,SNR=3.8						
QSPA				PKKPab	PKKPab	20 40 17.3	-2.3
	comp=E,6.6nm,0.7s,baz=233,slow=1.4,SNR=16						
QSPA				SKKPbc	SKKPbc	20 43 57.3	-1.2
	comp=E,3.4nm,0.8s,baz=217,slow=2.3,SNR=3.5						
QSPA				SKKP		20 44 14.3	
	comp=E,5.0nm,0.9s,baz=171,slow=5.8,SNR=3.2						
SUR	Sutherland	117.26	246	PKKPbc	PKKPbc	20 40 19.3	+0.7
	comp=E,12nm,0.9s,baz=52,slow=14,SNR=1.7						
DWPF	Disney Wildern	118.27	29	P	PKiKP	20 29 57.6	+1.2
	baz=331						
CMIG	Matias Romero	119.72	48	SKP	SKPdf	20 33 24.2	+0.1
	comp=E,8.1nm,1.1s,baz=250,slow=4.5,SNR=3.6						
CMIG				PKKPab	PKKPab	20 40 10.7	-3.0
	comp=E,10nm,0.9s,baz=135,slow=3.7,SNR=14						
DBIC	Dimbokro	122.69	299	PKP	PKPdf	20 30 05.1	-0.1
	comp=E,42nm,0.8s,baz=47,slow=2.1,SNR=7.7						
DBIC				PP	PP	20 31 45.8	+2.0
	comp=E,24nm,1.0s,baz=32,slow=8.1,SNR=5.4						
DBIC				PKKPab	PKKPbc	20 39 58.1	+0.1
	comp=E,5.4nm,0.9s,baz=232,slow=1.8,SNR=5.3						
KIC	Kosan Boka	122.79	299	*e*PKP1	PKPdf	20 29 59.4	-6.1
	comp=E,12nm,0.4s						
TIC	Toumodi	122.83	299	*e*PKP1	PKPdf	20 30 00.3	-5.3
LIC	Lamto	123.10	299	*e*PKP1	PKPdf	20 29 59.5	-6.5
	comp=E,5.7nm,0.5s						
NVL	N'lazarevskaya	123.99	201	*e*PKIKP	PKPdf	20 30 05.5	-0.5
NVL				*e*SP	SP	20 41 34.8	-1.3
NVL				*e*SS	SS	20 49 03.4	+32
NVL				*e*SSS	SSS	20 53 17.4	
NVL				MLR	MLR		
	comp=Z,1µm,18.0s						
SNAA	Sanae	128.02	198	PKPdf	PKiKP	20 30 14.8	+0.3
SNAA	Sanae	128.02	198	PKP	PKPdf	20 30 14.4	+0.6
	comp=Z,39nm,1.1s,baz=97,slow=1.1,SNR=29						
SNAA				PP	PP	20 32 18.5	+0.1
	comp=Z,12nm,1.1s,baz=181,slow=5.5,SNR=2.8						
SNAA				SKPab	SKiKP	20 33 22.5	-17
	comp=Z,35nm,1.1s,baz=116,slow=3.6,SNR=8.2						
SNAA				PKKP	PKKPdf	20 40 23.7	-2.4
	comp=Z,4.1nm,0.9s,baz=216,slow=3.8,SNR=16						
SNAA				SKKPbc	SKKPbc	20 43 21.4	-0.2
	comp=Z,5.9nm,0.9s,baz=267,slow=3.8,SNR=5.3						
VNA2	Neumayer--Watz	129.66	198	PKPdf	PKiKP	20 30 18.5	+0.8
RPN	Rapa Nui	130.03	103	SKPbc	SKPbc	20 33 31.7	+0.9
VNA1	Neumayer--Stat	130.06	198	PKPdf	PKiKP	20 30 19.2	+0.9
VNA3	Neumayer Olymp	130.07	197	PKPdf	PKiKP	20 30 18.6	+0.1
JTS	Las Juntas de	131.17	44	SKPbc	SKPbc	20 33 35.0	-0.3
	comp=Z,8.4nm,0.9s,baz=68,slow=7.8,SNR=6.8						
SJG	San Juan	132.89	18	PKP	PKPdf	20 30 24.9	+0.4
	comp=Z,14nm,0.6s,baz=347,slow=2.6,SNR=5.8						
SJG				PP	PP	20 32 47.3	-2.1
	comp=Z,11nm,0.7s,baz=158,slow=5.7,SNR=3.7						
SJG				SKPbc	SKPbc	20 33 41.0	-0.3
	comp=Z,34nm,1.0s,baz=10,slow=2.8,SNR=7.3						
SJG	San Juan	132.89	18	*e*P	PKPdf	20 30 23.4	-1.1
H05N1	Guadeloupe/Mar	135.77	12	PKP	PKPdf	20 30 30.4	+0.4
	SNR=11						
SMRC	Santa Marta, M	136.32	31	*e*P	PKPdf	20 30 30.9	-0.2
URIC	Uribia, Colomb	136.83	28	*e*P	PKPdf	20 30 28.8	-3.3
SJCC	San Jacinto, C	136.96	34	*e*P	PKPdf	20 30 28.6	-3.8
CODC	Agustn Codazz	137.75	31	*e*P	PKPpre	20 30 28.2	
SMLC	San Martn de	138.45	33	*e*P	PKPdf	20 30 34.2	-0.8
UREC	San Jos de Ur	138.62	36	*e*P	PKPpre	20 30 27.4	
DBBC	Dabeiba	138.88	37	*e*P	PKPpre	20 30 28.2	
H10N2	ASCENSION HYDR	138.96	291	PKP	PKiKP	20 30 40.8	+3.0
	SNR=3.2						
ZARC	Zaragoza, Cauc	139.18	35	*e*P	PKPpre	20 30 28.8	
OCAC	Ocana	139.30	32	*e*P	PKPpre	20 30 28.5	
H10S2	ASCENSION HYDR	139.70	290	PKP	PKiKP	20 30 41.5	+2.1
	baz=30,slow=74,SNR=5.9						
H10S3	ASCENSION HYDR	139.71	290	PKP	PKiKP	20 30 42.4	+3.0
	baz=190,slow=74,SNR=2.8						
SDV	Santo Domingo	139.93	28	PKhKP	PKPpre	20 30 30.5	
	comp=Z,17nm,0.4s,baz=309,slow=1.8,SNR=37						
SDV				PKP	PKPdf	20 30 38.5	+0.5
	comp=Z,223nm,0.9s,baz=350,slow=2.3,SNR=57						
SDV				PP	PP	20 33 34.8	+0.7
	comp=Z,34nm,0.8s,baz=341,slow=7.8,SNR=6.2						
SDV				SKPbc	SKPbc	20 34 02.7	-0.4
	comp=Z,225nm,1.0s,baz=352,slow=2.5,SNR=22						
SDV	Santo Domingo	139.93	28	*e*P	PKPpre	20 30 31.6	
PIZC	Pizarro, Choco	139.93	40	*e*P	PKPdf	20 30 37.4	-0.4
HELC	Santa Helena	139.93	37	*e*P	PKPpre	20 30 29.5	
CBOC	Ciudad Bolivar	139.95	38	*e*P	PKPpre	20 30 30.9	
BRRC	Barranca, Sant	140.09	34	*e*P	PKPpre	20 30 31.5	
PTBC	PUERTO BERRIO,	140.20	35	*e*P	PKPpre	20 30 29.5	
PAMC	Pamplona, Colo	140.38	32	*e*P	PKPpre	20 30 32.1	
PLMC	San Jos del P	140.59	39	*e*P	PKPdf	20 30 39.0	0.0
TOSP	Speyside	140.76	12		PKPdf	20 30 39.4	+0.2
BARC	Barichara	140.79	33	*e*P	PKPpre	20 30 33.8	
NORC	Norcasia	140.81	37	*e*P	PKPpre	20 30 31.4	
GUY2C	Guyana, Caldas	140.83	37	*e*P	PKPpre	20 30 31.9	
PCRV	Puerto La Cruz	140.87	19	PKhKP	PKPpre	20 30 32.3	
	comp=Z,20nm,0.4s,baz=3.5,slow=5.5,SNR=18						
PCRV				PKP	PKiKP	20 30 41.7	-0.4
	comp=Z,39nm,0.7s,baz=52,slow=2.9,SNR=6.3						
PCRV				SKPbc	SKPbc	20 34 04.6	-0.7
	comp=Z,59nm,1.0s,baz=347,slow=9.6,SNR=4.7						
PLCV	Puerto La Cruz	140.89	19		PKiKP	20 30 41.7	-0.5
GR1C	Gorgona, Isla	141.02	43	*e*P	PKPdf	20 30 37.9	-1.9
SPBC	San Pablo de B	141.15	35	*e*P	PKPpre	20 30 34.0	
YOTC	Yotoco, Valle	141.31	40	*e*P	PKPpre	20 30 33.6	
RUSC	La Rusia	141.44	34	*e*P	PKPpre	20 30 33.5	
TAMC	Tame, Arauca	141.59	32	*e*P	PKPpre	20 30 35.9	
TUMC	Tumaco	141.60	45	*e*P	PKPpre	20 30 35.2	
ROSC	El Rosal	141.71	36	PKhKP	PKPpre	20 30 39.0	
	comp=Z,176nm,1.1s,baz=65,slow=4.4,SNR=9.4						
ROSC				PKP	PKiKP	20 30 43.9	-0.5
	comp=Z,118nm,0.8s,baz=64,slow=3.3,SNR=44						
ROSC				SKPbc	SKPbc	20 34 09.2	+1.2
	comp=Z,180nm,1.3s,baz=50,slow=3.3,SNR=12						
ROSC	El Rosal	141.71	36	*e*P	PKPpre	20 30 36.0	
ORTC	Ortega, Tolima	141.99	38	*e*P	PKPpre	20 30 35.4	
CHIC	Chingaza	142.20	36	*e*P	PKPpre	20 30 37.3	
POPC	Popayan, Colom	142.28	42	*e*P	PKPpre	20 30 34.0	
BBAC	Balboa, Cauca	142.36	43	*e*P	PKPdf	20 30 39.0	-3.4
PCON	Cinco Dias	142.62	41	*e*P	PKPpre	20 30 37.1	
SOTA	Rioblanco	142.65	42	*e*P	PKPpre	20 30 35.6	
OTAV	Otavalo	142.99	46	*e*P	PKPpre	20 30 39.0	
OTAV	Otavalo	142.99	46	*e*P	PKPdf	20 30 40.5	-3.4
GARC	Garzon, Huila	143.26	40	*e*P	PKPbc	20 30 41.5	+0.2
PTGC	Puerto Gaitan,	143.38	34	*e*P	PKPab	20 30 38.0	-2.2
FLOC	Florencia	143.66	41	*e*P	PKPbc	20 30 42.3	+0.1
MACC	Macarena, Meta	144.22	38	*e*P	PKPab	20 30 40.5	-3.0
H09N1	TRISTAN DA CUN	144.76	244	PKP	PKPdf	20 30 46.1	+0.5
H09W1	TRISTAN DA CUN	144.78	244	PKP	PKPdf	20 30 46.7	+1.1
	SNR=8.2						
PTLC	Puerto Leguiza	145.29	41	*e*P	PKPdf	20 30 47.8	+0.5
MDP	Montagnes des	147.67	360	PKPbc	PKPbc	20 30 53.4	-0.7
	comp=Z,180nm,0.8s,baz=345,slow=1.2,SNR=29						
ATAH	Atahualpa	148.34	55	PKPbc	PKPbc	20 30 55.6	-0.8
	comp=Z,146nm,1.0s,baz=328,slow=2.6,SNR=51						
USHA	Ushuaia	150.30	162	PKP	PKPdf	20 30 55.5	+1.3
	comp=Z,29nm,1.1s,baz=288,slow=3.1,SNR=4.9						
USHA				PKPbc	PKiKP	20 31 01.0	+0.8
	comp=Z,163nm,1.0s,baz=269,slow=1.5,SNR=36						
USHA				PKPab	PKPab	20 31 07.9	+1.9
	comp=Z,46nm,0.8s,baz=209,slow=3.7,SNR=9.0						
PTGA	Pitinga	152.55	16	PKP	PKPdf	20 30 59.8	+0.8
	comp=Z,83nm,1.0s,baz=30,slow=1.4,SNR=64						
PTGA				PKPbc	PKiKP	20 31 07.4	+1.2
	comp=Z,345nm,1.0s,baz=333,slow=9.2,SNR=50						
PTGA				PKPab	PKPab	20 31 17.1	+0.6
	comp=Z,111nm,0.8s,baz=358,slow=7.3,SNR=9.8						
PTGA				PP	PP	20 34 47.1	-1.0
	comp=Z,28nm,0.8s,baz=350,slow=5.8,SNR=5.6						
PTGA	Pitinga	152.55	16	*e*P	PKPdf	20 30 59.8	+0.8
PTGA	Pitinga	152.55	16	*e*P	PKPdf	20 31 00.4	+1.5
NNA	Nana	152.63	61	PKP	PKPdf	20 31 00.1	+1.1
	comp=Z,53nm,0.9s,baz=310,slow=3.7,SNR=31						
NNA				PKPbc	PKiKP	20 31 07.2	+0.9
	comp=Z,85nm,0.7s,baz=311,slow=4.3,SNR=40						
NNA				PKPab	PKPab	20 31 16.9	-0.2
	comp=Z,64nm,0.9s,baz=258,slow=1.7,SNR=6.7						
NBMO	Morrinhos-CE	153.15	331	*e*P	PKPdf	20 31 00.1	+0.3
NBMO	Morrinhos-CE	153.15	331	*e*P	PKPdf	20 31 01.9	+2.2
NBCL	Cascavel-CE	153.16	327	*e*P	PKPdf	20 31 01.6	+1.9
RCBR	Riachuelo	153.25	320	PKP	PKPdf	20 31 00.3	+0.4
	comp=Z,41nm,0.9s,baz=64,slow=1.8,SNR=15						
RCBR				PKPbc	PKiKP	20 31 08.9	+1.3
	comp=Z,70nm,0.9s,baz=3.9,slow=2.7,SNR=19						
RCBR				PKPab	PKPab	20 31 20.5	+0.8
	comp=Z,474nm,1.0s,baz=30,slow=5.7,SNR=36						
RCBR	Riachuelo	153.25	320	*e*P	PKPdf	20 31 00.1	+0.2
RCBR	Riachuelo	153.25	320	*e*P	PKPdf	20 31 03.2	+3.2
NBPV	Pedro Velho	153.37	319	*e*P	PKPdf	20 31 02.6	+2.5
NBPA	Parau_RN	153.85	323	*e*P	PKPdf	20 31 01.9	+1.2
NBPS	Pedro II - PI	154.72	333	*e*P	PKPdf	20 31 04.8	+2.6
NBPB	Pedra_Branca-C	154.93	328	*e*P	PKPdf	20 31 03.8	+1.5
NBRF	Rio Formoso -	155.04	315	*e*P	PKPdf	20 31 04.4	+2.0
NBLI	Livramento-PB	155.09	320	*e*P	PKPdf	20 31 03.8	+1.2
NBMA	Muriti-CE	156.08	324	*e*P	PKPdf	20 31 05.4	+1.5
NBAN	Anadia - AL	156.52	316	*e*P	PKPdf	20 31 06.9	+2.5
NBTA	Tacaratu-PE	157.16	320	*e*P	PKPdf	20 31 07.5	+2.3
NBLA	Lagarto - SE	158.48	317	*e*P	PKPdf	20 31 08.5	+1.7
SAML	Samuel	159.11	30	*e*P	PKPdf	20 31 08.2	+0.6
SAML	Samuel	159.11	30	*e*P	PKPdf	20 31 10.0	+2.5
NBPN	Ponto Novo - B	159.76	322	*e*P	PKPdf	20 31 10.3	+2.0
PLCA	Paso Flores	160.16	137	PKP	PKPdf	20 31 08.7	+0.6
	comp=Z,22nm,1.1s,baz=270,slow=2.1,SNR=21						
PLCA				PKPab	PKPab	20 31 50.2	+1.4
	comp=Z,20nm,0.9s,baz=220,slow=4.2,SNR=7.5						
PLCA	Paso Flores	160.16	137	*e*P	PKPdf	20 31 08.4	+0.3
PLCA	Paso Flores	160.16	137	*e*P	PKPdf	20 31 10.3	+2.3
SMTB	Santa Maria do	160.92	344	*e*P	PKPdf	20 31 09.4	-0.2
LPAZ	La Paz	161.89	55	PKP	PKPdf	20 31 12.4	+1.1
	comp=Z,83nm,1.2s,baz=11,slow=2.5,SNR=114						
LPAZ				PKPab	PKPab	20 31 58.4	+0.7
	comp=Z,27nm,0.9s,baz=359,slow=3.9,SNR=6.8						
LPAZ				PP	PP	20 35 46.1	+4.7
	comp=Z,7.2nm,1.0s,baz=359,slow=9.4,SNR=2.6						
LPAZ	La Paz	161.89	55		PKPdf	20 31 14.2	+2.9
LPAZ	La Paz	161.89	55	*e*P	PKPdf	20 31 12.5	+1.3
LPAZ	La Paz	161.89	55	*e*P	PKPdf	20 31 13.8	+2.5
LPAZ	La Paz	161.89	55	*i*P	PKPdf	20 31 12.7	+1.4
PSGCX	Pisagua	162.21	68	*i*P	PKPdf	20 31 12.2	+1.3
MNMC	Minye Minye	162.41	66		PKPdf	20 31 15.1	+3.7
MNMCX	Minye Minye	162.41	66	*i*P	PKPdf	20 31 12.4	+1.1
NBIT	Itapeh - BA	162.50	313	*e*P	PKPdf	20 31 13.5	+2.3
PB11	IPOC Station P	162.68	68		PKPdf	20 31 14.1	+2.7
PB11	IPOC Station P	162.68	68	*i*P	PKPdf	20 31 12.4	+1.0
GO01	Chusmiza	163.01	67		PKPdf	20 31 15.1	+2.9
PB02	IPOC Station P	163.18	73	*i*P	PKPdf	20 31 12.4	+0.6
PB08	IPOC Station P	163.27	68	*i*P	PKPdf	20 31 12.4	+0.1
CLDB	Colider	163.28	11	*e*P	PKPdf	20 31 13.1	+1.1
CLDB	Colider	163.28	11	*e*P	PKPdf	20 31 13.2	+1.1
PB07	IPOC Station P	163.35	74	*i*P	PKPdf	20 31 12.4	+0.4
PB04	IPOC Station P	163.35	76	*i*P	PKPdf	20 31 12.4	+0.4
PB10	IPOC Station P	163.39	80	*i*P	PKPdf	20 31 12.4	+0.6
PB01	IPOC Station P	163.41	71		PKPab	20 32 05.7	+2.0
PB01	IPOC Station P	163.41	71	*i*P	PKPdf	20 31 13.5	+1.5
PEL	Peldehue	163.44	114	*i*P	PKPdf	20 31 11.3	-0.3
PB05	IPOC Station P	163.49	78	*i*P	PKPdf	20 31 12.4	+0.3
EDS3	Malargue	163.51	124	*i*P	PKPdf	20 31 12.1	+0.3
PB03	IPOC Station P	163.59	75	*i*P	PKPdf	20 31 12.4	+0.2
PB14	IPOC Station P	163.82	84	*i*P	PKPdf	20 31 13.5	+0.9
GO04	Tololo Observa	163.87	104		PKPab	20 32 07.7	+2.0
GO04	Tololo Observa	163.87	104	*i*P	PKPdf	20 31 11.3	-1.1
PB09	IPOC Station P	163.93	73	*i*P	PKPdf	20 31 12.4	-0.2
PB06	IPOC Station P	163.99	77	*i*P	PKPdf	20 31 12.4	-0.2
PEXB	Peixe	164.22	344	*e*P	PKPdf	20 31 13.8	+0.9
PEXB	Peixe	164.22	344	*e*P	PKPdf	20 31 15.3	+2.5
PB15	IPOC Station P	164.24	78	*i*P	PKPdf	20 31 13.8	+0.9
GO03	Copiap	164.41	95	*i*P	PKPdf	20 31 12.4	-0.3
LVC	Limon Verde	164.52	76	PKP	PKPdf	20 31 15.0	+1.7
	comp=Z,27nm,1.2s,baz=213,slow=0.7,SNR=28						
LVC				PKPab	PKPab	20 32 10.2	+1.3
	comp=Z,27nm,0.8s,baz=276,slow=5.3,SNR=11						
LVC	Limon Verde	164.52	76	*e*P	PKPdf	20 31 14.7	+1.4
LVC	Limon Verde	164.52	76	*e*P	PKPdf	20 31 16.6	+3.2
LVC	Limon Verde	164.52	76	*i*P	PKPdf	20 31 14.1	+0.7
RTLS	Leoncito	164.90	111	*i*P	PKPdf	20 31 13.2	-0.1
ARCO	CERRO ARCO	164.94	115	*i*P	PKPdf	20 31 13.2	+0.1
AAGR	Agrelo	164.95	116	*i*P	PKPdf	20 31 14.3	+1.2
AROD	Rodeo	165.02	104	*i*P	PKPdf	20 31 14.6	+1.1
ASAL	Salagasta	165.08	114	*i*P	PKPdf	20 31 14.3	+1.1
ACCO	Cerro Coronel	165.31	106	*i*P	PKPdf	20 31 14.3	+0.5
ACDV	Cuesta del Vie	165.32	105	*i*P	PKPdf	20 31 14.5	+1.0
JANB	Januaria	165.44	326	*e*P	PKPdf	20 31 13.9	0.0
JANB	Januaria	165.44	326	*e*P	PKPdf	20 31 16.9	+3.0
RTCV	Cerro Valdivia	165.51	112	*i*P	PKPdf	20 31 13.9	+0.4
AMOG	MOGNA	165.74	108	*i*P	PKPdf	20 31 14.5	+0.7
BSFB	Barra de Sao F	166.17	306	*e*P	PKPdf	20 31 16.7	+2.4
BSFB	Barra de Sao F	166.17	306	*e*P	PKPdf	20 31 16.9	+2.6
SIV	San Ignacio	166.21	36	PKP	PKPdf	20 31 15.2	+0.8
	comp=Z,47nm,0.8s,baz=16,slow=0.1,SNR=119						
SIV				PKPab	PKPab	20 32 15.5	-0.3
	comp=Z,42nm,0.9s,baz=336,slow=2.4,SNR=15						
SIV				PP	PP	20 36 02.8	+0.1
	comp=Z,19nm,0.9s,baz=354,slow=5.3,SNR=7.4						
SJMB	Sao Joao De Ma	166.33	307	*e*P	PKPdf	20 31 14.7	+0.3
SJMB	Sao Joao De Ma	166.33	307	*e*P	PKPdf	20 31 15.6	+1.2
ACAN	Cantantal	166.51	114	*i*P	PKPdf	20 31 15.5	+1.2
TRQA	Tornquist	166.83	146	*e*P	PKPdf	20 31 19.4	+5.0
YJA	Yavi	167.22	69	*i*P	PKPdf	20 31 17.1	+1.4
ACLC	CERRO LA CRUZ	167.27	102	*i*P	PKPdf	20 31 16.4	+1.3
BDFB	Brasilia	167.50	339	PKP	PKPdf	20 31 16.5	+1.0
	comp=Z,59nm,1.0s,baz=22,slow=1.8,SNR=56						
BDFB				PKPab	PKPab	20 32 21.1	-0.4
	comp=Z,145nm,0.8s,baz=16,slow=4.5,SNR=28						
BDFB				PP	PP	20 36 09.9	+0.9
	comp=Z,27nm,1.1s,baz=21,slow=4.5,SNR=3.8						
BDFB	Brasilia	167.50	339		PKPdf	20 31 17.2	+1.7
APLL	PUNTA DE LOS L	167.51	107	*i*P	PKPdf	20 31 15.4	+0.3
HJA	Humahuaca	167.74	73	*i*P	PKPdf	20 31 18.2	+2.3
SLA	San Lorenzo	168.16	80	*i*P	PKPdf	20 31 16.5	+0.7
SALV	Santo Antonio	168.20	14	*e*P	PKPdf	20 31 16.5	+0.6
SALV	Santo Antonio	168.20	14	*e*P	PKPdf	20 31 18.1	+2.3
ARAG	Araguaiana, MT	168.31	356	*e*P	PKPdf	20 31 16.8	+0.8
ARAG	Araguaiana, MT	168.31	356	*e*P	PKPdf	20 31 19.1	+3.1
AZAP	Zapla	168.39	77	*i*P	PKPdf	20 31 17.2	+1.0
AHML	Horco Molle	168.70	90	*i*P	PKPdf	20 31 17.3	+1.3
IPMB	Ipameri, GO	169.74	335	*e*P	PKPdf	20 31 16.7	-0.2
IPMB	Ipameri, GO	169.74	335	*e*P	PKPdf	20 31 18.7	+1.9
PP1B	Ponte de Pedra	170.01	12	*e*P	PKPdf	20 31 19.4	+2.4
PP1B	Ponte de Pedra	170.01	12	*e*P	PKPdf	20 31 18.7	+1.7
BSCB	Bom Sucesso	170.37	310	*e*P	PKPdf	20 31 16.5	-0.7
BSCB	Bom Sucesso	170.37	310	*e*P	PKPdf	20 31 21.2	+4.0
LPA	La Plata	171.29	150	PKIKP	PKPdf	20 31 05.5	-12
ESAR	Angra dos Reis	171.35	299	*e*P	PKPdf	20 31 19.1	+1.6
ESAR	Angra dos Reis	171.35	299	*e*P	PKPdf	20 31 20.9	+3.4
C2SB	Chapadao do Su	171.38	1	*e*P	PKPdf	20 31 18.8	+1.2
C2SB	Chapadao do Su	171.38	1	*e*P	PKPdf	20 31 21.5	+3.9
ITRB	Iturama	172.03	344	*e*P	PKPdf	20 31 18.5	+0.5
ITRB	Iturama	172.03	344	*e*P	PKPdf	20 31 19.7	+1.7
PARB	Paraibuna	172.44	301	*e*P	PKPdf	20 31 18.5	+0.4
PARB	Paraibuna	172.44	301	*e*P	PKPdf	20 31 20.9	+2.8
AQDB	Aquidauana	172.55	22	*e*P	PKPdf	20 31 18.3	+0.2
AQDB	Aquidauana	172.55	22	*e*P	PKPdf	20 31 19.4	+1.2
BB19B	Bebedouro	172.63	328	*e*P	PKPdf	20 31 18.5	+0.3
BB19B	Bebedouro	172.63	328	*e*P	PKPdf	20 31 21.5	+3.3
OGAUY	Aigu	172.89	166	*e*P	PKPdf	20 31 21.9	+3.9
VAO	Valinhos	173.21	309	*e*P	PKPdf	20 31 19.1	+0.6
VAO	Valinhos	173.21	309	*e*P	PKPdf	20 31 20.0	+1.5
SPB	Sao Paulo	173.92	308	*e*P	PKPdf	20 31 19.3	+0.7
SPB	Sao Paulo	173.92	308	*e*P	PKPdf	20 31 21.2	+2.6
PCMB	Pacaembu	174.07	347	*e*P	PKPdf	20 31 18.4	-0.3
PCMB	Pacaembu	174.07	347	*e*P	PKPdf	20 31 21.5	+2.8
FRTB	Fartura	175.06	325	*e*P	PKPdf	20 31 19.4	+0.4
FRTB	Fartura	175.06	325	*e*P	PKPdf	20 31 21.5	+2.5
TRCB	Terra Rica	175.39	360	*e*P	PKPdf	20 31 19.8	+0.6
TRCB	Terra Rica	175.39	360	*e*P	PKPdf	20 31 21.2	+2.1
PLTB	Pedras Altas	175.60	170	*e*P	PKPdf	20 31 19.4	+0.5
PLTB	Pedras Altas	175.60	170	*e*P	PKPdf	20 31 20.9	+2.0
CPUP	Villa Florida	175.70	76	PKP	PKPdf	20 31 19.7	+0.6
	comp=Z,82nm,1.2s,baz=10,slow=1.1,SNR=53						
CPUP				PKPab	PKPab	20 32 57.4	-0.5
	comp=Z,9.4nm,0.9s,baz=322,slow=6.1,SNR=4.6						
CPUP				PP	PP	20 36 52.1	+1.0
	comp=Z,3.5nm,0.8s,baz=288,slow=7.7,SNR=5.0						
CPUP	Villa Florida	175.70	76		PKPdf	20 31 20.9	+1.9
CPUP	Villa Florida	175.70	76	*e*P	PKPdf	20 31 19.6	+0.5
CPUP	Villa Florida	175.70	76	*e*P	PKPdf	20 31 22.2	+3.1
ITQB	Itaqui	175.87	124	*e*P	PKPdf	20 31 23.4	+4.4
CPSB	Cacapava Do Su	176.95	167	*e*P	PKPdf	20 31 20.1	+0.9
CPSB	Cacapava Do Su	176.95	167	*e*P	PKPdf	20 31 21.5	+2.3
PTGB	Pitanga	177.25	348	*e*P	PKPdf	20 31 19.2	-0.3
PTGB	Pitanga	177.25	348	*e*P	PKPdf	20 31 23.1	+3.5
CNLB	Canela	177.53	220	*e*P	PKPdf	20 31 18.9	-0.6
CNLB	Canela	177.53	220	*e*P	PKPdf	20 31 22.2	+2.7
ITAB	Concordia	179.48	291	*e*P	PKPdf	20 31 20.1	+0.6
ITAB	Concordia	179.48	291	*e*P	PKPdf	20 31 22.5	+2.9

TAP 02 20:12:48.8, 22°.77N×120°.85E, h7km, ML0.7, 2C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECL	Taimali	0.19	150	*e*P	Pg	20 12 53.5	+0.8
	baz=149						
ECL				*e*S	Sg	20 12 56.5	+1.2
	baz=149						
SSD	Sandimen	0.20	264⇑	*i*P	Pg	20 12 53.2	+0.3
	baz=264						
SSD				*i*S	Sg	20 12 55.7	+0.1
	baz=264						
TWGBT	Beinan	0.22	76	P	Pg	20 12 53.5	+0.3
	baz=76						
TWGBT				*e*S	Sg	20 12 56.4	+0.2
	baz=76						
MASBT	Mashibuluo	0.25	233	⇑P	Pg	20 12 54.5	+0.7
	baz=233						
MASBT				S	Sg	20 12 58.0	+0.8
	baz=233						
SSPT	Xinbi	0.38	223	*e*P	Pb	20 12 57.5	-0.4
	baz=211						

WEL 02 20:22:41.2, 40°.7S±0°.8×17°6E±°, h31km±2km, M2.7/22, ML2.9/22, MLv2.7/22, Error ellipse: s-maj=0.0km s-min=0.0km az=95.1, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRWZ	**Pori Road**	0.12	42	P	Pn	20 22 47.2	+0.2
TIWZ	**Tintock**	0.13	172	P	Pb	20 22 35.1	-12
MRZ	**Mangatainoka R**	0.22	266	P	Pb	20 22 47.9	+0.2
POWZ	**Post Office Ro**	0.27	344	P	Pb	20 22 48.6	+0.3
BFZ	**Birch Farm**	0.29	97	P	Pn	20 22 49.1	-0.3
HOWZ	**Holdsworth Sta**	0.36	226	P	Pn	20 22 50.1	-0.3
CPWZ	**Castlepoint**	0.37	136	P	Pn	20 22 51.0	+0.5
DVHZ	**Dannevirke**	0.42	34	P	Pb	20 22 50.5	0.0
TMWZ	**Te Maipa**	0.46	177	P	Pn	20 22 51.8	+0.1
ANWZ	**Angora Road**	0.50	68	P	Pn	20 22 52.2	-0.1
OGWZ	**Otaki Gorge**	0.55	252	P	Pn	20 22 53.0	+0.1
MTW	**Mount Morrison**	0.58	208	P	Pn	20 22 53.4	0.0
PRHZ	**Porangahau**	0.70	57	P	Pb	20 22 54.9	-0.1
WPHZ	**Waipukurau**	0.73	37	P	Pb	20 22 55.8	+0.3
KIW	**Kapiti Island**	0.75	253	P	Pb	20 22 56.2	+0.3
CAW	**Cannon Point**	0.76	232	P	Pb	20 22 56.0	0.0
TRWZ	**Traveller**	0.76	190	P	Pn	20 22 55.8	-0.1
PNHZ	**Pukenui**	0.78	20	P	Pb	20 22 56.2	-0.1
PAWZ	**Paruwai Farm**	0.80	204	P	Pb	20 22 57.0	+0.2
MSWZ	**Moikau Station**	0.90	211	P	Pn	20 22 57.4	-0.4
PLWZ	**Palliser**	1.03	206	P	Pn	20 22 59.1	-0.5
BHW	**Baring Head**	1.07	224	P	Pn	20 22 59.7	-0.3
KRHZ	**Kereru**	1.08	21	P	Pn	20 23 00.3	+0.1
WAZ	**Wanganui**	1.12	323	P	Pb	20 23 02.7	+0.7
KAHZ	**Kahuranaki**	1.15	43	P	Pn	20 23 01.1	-0.2
BHHZ	**Black Hill Sta**	1.17	8	P	Pn	20 23 02.1	+0.6
MOVZ	**Moawhango**	1.24	356	P	Pn	20 23 03.3	+0.8
KWHZ	**Kaweka Forest**	1.29	20	P	Pn	20 23 03.4	+0.2
TCW	**Tory Channel**	1.33	244	P	Pn	20 23 03.4	-0.2
MCHZ	**McNeill Hill**	1.36	28	P	Pn	20 23 04.2	+0.1
DUWZ	**D'Urville Isla**	1.48	263	P	Pn	20 23 06.3	+0.5
NGZ	**Ngauruhoe**	1.48	352	P	Pb	20 23 07.4	-0.8
WTVZ	**West Tongariro**	1.54	352	P	Pb	20 23 08.2	-1.1
TUWZ	**Tuamarina**	1.65	241	P	Pn	20 23 07.3	-0.7
NNZ	**Nelson**	1.96	252	P	Pb	20 23 15.5	-0.8

ISC 02 20:25:33.8±1.1**, 44°.94N**±0°.02×**15°.01E**±0°.04**, h8**^{km}±10^{km}**, n15, **σ**0**^{s}**.66**/29**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVLJ	**Novalja**	0.38	195	*i* Pg	**Pg**	20 25 40.7	-0.6
NVLJ				Sg	**Sg**	20 25 46.6	+0.3
RIY	**Rijeka**	0.54	317	*e*Pg	**Pg**	20 25 43.7	-0.5
RIY				Sg	**Sg**	20 25 52.2	+0.9
BOJS	**Bojanci**	0.59	17	*i* Pg	**Pg**	20 25 44.8	-0.5
BOJS				*i* Sg	**Sg**	20 25 53.8	+0.7
GBRS	**Gornja Briga**	0.61	347	*i* Pg	**Pg**	20 25 45.0	-0.6
	comp=Z,9.0nm,0.1s						
UDBI	**Udbina**	0.68	127	*e*Pg	**Pg**	20 25 46.5	-0.4
UDBI				Sg	**Sg**	20 25 55.4	-0.2
OZLJ	**Ozalj**	0.75	25	*i* Pg	**Pg**	20 25 48.5	+0.1
OZLJ				Sg	**Sg**	20 25 57.6	-0.6
VISS	**Visnje**	0.88	352	*i* Pg	**Pg**	20 25 50.4	-0.2
VISS				*i* Sg	**Sg**	20 26 02.6	+0.6
CEY	**Cerknica**	0.90	333	*i* Pg	**Pg**	20 25 50.6	-0.5
CEY				*i* Sg	**Sb**	20 26 04.9	+1.0
SKDS	**Skadanscina**	0.93	311	*i* Pg	**Pg**	20 25 52.1	+0.5
SKDS				*i* Sg	**Sn**	20 26 05.9	-0.9
DUGI	**Dugi Otok**	0.94	178	*e*Pg	**Pg**	20 25 51.8	-0.1
DUGI				Sg	**Sg**	20 26 05.0	+0.8
PDKS	**Podkum**	1.13	360	*i* Pg	**Pg**	20 25 55.3	-0.1
PDKS				*i* Sg	**Sb**	20 26 10.7	+0.3
MORI	**Morici**	1.18	155	*e*Pg	**Pb**	20 25 56.0	-0.5
MORI				Sg	**Sb**	20 26 11.9	0.0
ZIRJ	**Zirje**	1.36	160	*e*Pg	**Pn**	20 25 58.8	-0.3
ZIRJ				Sg	**Sn**	20 26 17.6	+0.2
KIJV	**Kijevo**	1.37	132	*e*Pg	**Pb**	20 26 00.1	+0.4
KIJV				Sg	**Sg**	20 26 18.9	+1.2
RICI	**Ricice**	2.10	133	*e*Pn	**Pb**	20 26 11.6	-0.6
RICI				Sn	**Sb**	20 26 39.8	+1.4

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*INET **02** 20:37:01.0, 12°.50N×87°.69W, h67^{km}, ML3.6*

SNET 02 20:37:00.7±0.9**, 12°.50N×87°.87W, h29**^{km}±3^{km}**, ML2.8, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	0.78	3	*e*P	Pb	20 37 14.9	-0.9
CNCH				*e*S	Sn	20 37 27.7	+1.2
CNCH				IAML		20 37 30.0	
	comp=Z,928nm,0.2s						
LCND	**La Caada**	0.81	359	*e*P	Pn	20 37 15.9	-0.3
LCND				*e*S	Sn	20 37 27.3	+0.1
LCND				IAML		20 37 30.4	
	comp=Z,438nm,0.2s						
JUCU	**Jucuar¡n**	0.84	334	*e*P	Pn	20 37 16.5	-0.1
JUCU				*e*S	Sn	20 37 28.4	+0.5
JUCU				IAML		20 37 32.3	
	comp=Z,524nm,0.3s						
BLLM	**Bellamira**	1.00	339	*e*P	Pn	20 37 19.2	+0.3
BLLM				*e*S	Sb	20 37 33.3	+0.8
LCY	**Lacayo**	1.01	336	*e*P	Pb	20 37 19.4	-0.3
PACA	**Pacayal**	1.06	336	*e*P	Pn	20 37 19.9	+0.2
PACA				*e*S	Sb	20 37 35.0	+0.9
TECA	**Tecapa**	1.17	328	*e*P	Pn	20 37 21.5	+0.3
TECA				*e*S	Sb	20 37 37.5	+0.2
COEB	**Comit de Eme**	1.18	327	*e*P	Pn	20 37 21.7	+0.3
COEB				*e*S	Sb	20 37 38.1	+0.5
FAGO	**Alcalda de S**	1.21	349	*e*P	Pn	20 37 21.2	-0.5
FAGO				*e*S	Sb	20 37 37.9	-0.5
FAGO				IAML		20 37 41.2	
	comp=Z,32nm,0.3s						
TGUH	**Tegucigalpa,Un**	1.66	21	*e*P	Pn	20 37 27.3	-0.7

MAN 02 20:44:20.0, 9°.84N×125°.77E, h118^{km}**, mb4.5, ML3.4, MS3.2, 3C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGP	**Cagayan de Oro**	1.74	218	⇑*e*P	Pn	20 44 51.2	+1.0
CGP				*e*S	Sn	20 45 13.2	-0.1
LLP	**Lapu-Lapu**	1.84	285	⇑*i*P	Pn	20 44 52.4	+1.0
LLP				*i* S	Sn	20 45 15.9	+0.6
TBP	**Tagbilaran**	1.89	266	*e*P	Pn	20 44 52.5	+0.5
TBP				*i* S	Sn	20 45 15.9	-0.4
KCP	**Kidapawan**	2.90	194	⇑*e*P	Pn	20 45 06.4	+1.4

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*SJA **02** 20:55:13.5±0.7, 19°.16S×69°.40W, h112^{km}±3^{km}, ML4.1, MW3.9*

*NEIC **02** 20:55:13.9±2.4, 19°.15S±0°.04×69°.30W±0°.08, h111^{km}±3^{km}, Error ellipse: s-maj=10.5km s-min=4.7km az=77.0*

*IDC **02** 20:55:14.9±0.7, 19°.18S×69°.04W, h116^{km}±5^{km}, mb3.8/8, mb1 3.8/12, mb1mx3.7/37, mbtmp4.2/12, Error ellipse: s-maj=18.5km s-min=8.2km az=95.0*

*GUC **02** 20:55:14.5±0.7, 19°.16S×69°.33W, h110^{km}±2^{km}, ML4.2*

ISC 02 20:55:13.9±0.5**, 19°.17S**±0°.03×**69°.34W**±0°.05**, h114**^{km}±4^{km}**, n76, **σ**1**^{s}**.51**/105**, mb4.3**/8**, 9C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNMC	**Minye Minye**	0.25	279	⇑*i*P	**Pn**	20 55 29.9	-0.4
MNMC				*i* S	**Sn**	20 55 42.0	-0.6
MNMC				IAML		20 55 48.3	
	comp=N,18μm,0.5s						
MNMC	**Minye Minye**	0.25	279		**Pn**	20 55 29.3	-1.1
MNMC				Sn	**Sn**	20 55 41.7	-1.0
MNMCX	**Minye Minye**	0.25	279	*i* P	**Pn**	20 55 30.0	-0.3
MNMCX				*i* S	**Sn**	20 55 42.2	-0.4
GO01	**Chusmiza**	0.51	165	⇑*i*P	**Pn**	20 55 31.9	0.0
GO01				*i* S	**Sn**	20 55 45.1	-0.3
GO01				IAML		20 55 46.1	
	comp=N,21μm,0.5s						
GO01	**Chusmiza**	0.51	165		**Pn**	20 55 32.1	+0.2
GO01				Sn	**Sn**	20 55 45.5	+0.1
PB11	**IPOC Station P**	0.66	207	⇑*i*P	**Pn**	20 55 32.6	+0.1
PB11				*i* S	**Sn**	20 55 46.4	-0.2
PB11				IAML		20 55 47.3	
	comp=E,18μm,0.2s						
PB11	**IPOC Station P**	0.66	207		**Pn**	20 55 32.3	-0.3
PB11				Sn	**Sn**	20 55 46.5	-0.1
PB11	**IPOC Station P**	0.66	207	*i* P	**Pn**	20 55 32.7	+0.1
PB11				*i* S	**Sn**	20 55 46.4	-0.2
PB16	**IPOC Station P**	0.85	349	⇑*i*P	**Pn**	20 55 34.8	+0.2
PB16				*i* S	**Sn**	20 55 49.9	-0.3
PB16				IAML		20 55 51.6	
	comp=N,13μm,0.5s						
PB16	**IPOC Station P**	0.85	349	*i* P	**Pn**	20 55 35.0	+0.3
PB16				*i* S	**Sn**	20 55 50.2	0.0
PSGC	**Pisagua**	0.85	240	⇑*i*P	**Pn**	20 55 33.9	-0.2
PSGC				*i* S	**Sn**	20 55 48.7	-0.7
PSGC				IAML		20 55 49.5	
	comp=N,4μm,0.3s						
PSGCX	**Pisagua**	0.85	240	*i* P	**Pn**	20 55 34.0	-0.1
PSGCX				*i* S	**Sn**	20 55 49.2	-0.2
PB08	**IPOC Station P**	0.98	170	⇓*i*P	**Pn**	20 55 36.4	+0.7
PB08				*i* S	**Sn**	20 55 52.5	+0.5
PB08				IAML		20 55 55.0	
	comp=N,3μm,0.3s						
PB08	**IPOC Station P**	0.98	170	*i* P	**Pn**	20 55 36.4	+0.7
PB08				*i* S	**Sn**	20 55 52.8	+0.7
AP01	**Chacalluta**	1.24	310	⇑*i*P	**Pn**	20 55 37.9	-0.1
AP01				*i* S	**Sn**	20 55 55.8	-0.5
TA01	**Diego Aracena**	1.60	210	*i* P	**Pn**	20 55 42.0	-0.2
TA01				*i* S	**Sn**	20 56 03.4	-0.3
TA01				IAML		20 56 08.8	
	comp=N,2μm,0.2s						
PATCX	**Punta Patache**	1.81	205	⇓*i*P	**Pn**	20 55 45.0	+0.1
PATCX				*i* S	**Sn**	20 56 08.6	+0.2
PATCX				IAML		20 56 11.8	
	comp=E,2μm,0.4s						
PATCX	**Punta Patache**	1.81	205	*e*P	**Pn**	20 55 45.0	+0.1
PATCX				*i* S	**Sn**	20 56 08.6	+0.2
PB01	**IPOC Station P**	1.87	184	IAML		20 56 13.9	
	comp=E,1μm,0.3s						
PB01	**IPOC Station P**	1.87	184		**Pn**	20 55 46.2	+0.8
PB01				Sn	**Sn**	20 56 08.9	-0.8
PB01	**IPOC Station P**	1.87	184	*i* P	**Pn**	20 55 46.3	+0.8
PB01				*i* S	**Sn**	20 56 10.0	+0.3
PB02	**IPOC Station P**	2.20	194	*e*P	**Pn**	20 55 50.5	+0.8
PB02				IAML		20 56 25.2	
	comp=N,2μm,0.4s						
PB02	**IPOC Station P**	2.20	194	*e*P	**Pn**	20 55 50.6	+0.8
PB07	**IPOC Station P**	2.59	191	*e*P	**Pn**	20 55 55.7	+0.9
PB07				*i* S	**Sn**	20 56 21.6	-4.7
PB07				IAML		20 56 33.2	
	comp=E,1μm,0.6s						
PB07	**IPOC Station P**	2.59	191	*e*P	**Pn**	20 55 56.6	+1.7
PB07				*i* S	**Sn**	20 56 32.2	+5.8
PB09	**IPOC Station P**	2.61	178	⇓*i*P	**Pn**	20 55 56.1	+1.0
PB09				*e*S	**Sn**	20 56 22.5	-4.3
PB09	**IPOC Station P**	2.61	178	*e*P	**Pn**	20 55 56.4	+1.3
PB03	**IPOC Station P**	2.89	188	*e*P	**Pn**	20 55 59.4	+0.7
PB03				IAML		20 56 58.2	
	comp=E,537nm,0.6s						
PB03	**IPOC Station P**	2.89	188	*e*P	**Pn**	20 55 59.2	+0.5
LPAZ	**La Paz**	3.09	22	P	**Pn**	20 56 03.5	+1.7
	comp=E,4.2nm,0.3s,baz=207,slow=6.7,SNR=85						
LPAZ				S	**Sn**	20 56 38.1	-0.6
	comp=E,4.6nm,0.3s,baz=194,slow=15,SNR=4.4						
LPAZ	**La Paz**	3.09	22	Pn	**Pn**	20 56 03.4	+1.5
PB04	**IPOC Station P**	3.24	193	*e*P	**Pn**	20 56 04.9	+1.6
PB04	**IPOC Station P**	3.24	193		**Pn**	20 56 04.7	+1.4
PB04	**IPOC Station P**	3.24	193	*e*P	**Pn**	20 56 04.0	+0.6
PB04				*i* S	**Sn**	20 56 38.3	-3.1
PB04				IAML		20 57 06.8	
	comp=Z,461nm,0.3s						
LVC	**Limon Verde**	3.44	173	P	**Pn**	20 56 07.4	+1.1
	comp=Z,7.4nm,0.3s,baz=341,slow=9.1,SNR=90						
LVC				S	**Sn**	20 56 47.2	+0.5
	comp=Z,34nm,0.3s,baz=122,slow=21,SNR=22						
LVC	**Limon Verde**	3.44	173		**Pn**	20 56 07.9	+1.7
LVC	**Limon Verde**	3.44	173	*e*P	**Pn**	20 56 07.4	+1.1
PB06	**IPOC Station P**	3.52	184	⇑*i*P	**Pn**	20 56 07.7	+0.6
PB06				*i* S	**Sn**	20 56 45.0	-3.3
PB06	**IPOC Station P**	3.52	184	*e*P	**Pn**	20 56 07.7	+0.6
PB06				*i* S	**Sn**	20 56 46.0	-2.3
PB06				IAML		20 57 11.9	
	comp=Z,281nm,0.4s						
PB05	**IPOC Station P**	3.75	192	*e*P	**Pn**	20 56 10.3	+0.2
PB05	**IPOC Station P**	3.75	192	*i* P	**Pn**	20 56 10.6	+0.5
PB15	**IPOC Station P**	4.02	182	*i* P	**Pn**	20 56 14.5	+0.7
PB10	**IPOC Station P**	4.47	194	Pn	**Pn**	20 56 19.2	-0.4
PB10	**IPOC Station P**	4.47	194	*i* P	**Pn**	20 56 19.3	-0.3
YJA	**Yavi**	4.66	131	*i* P	**Pn**	20 56 25.3	+2.7
GO02	**Mina Guanaco**	5.97	182		**Pn**	20 56 39.3	-0.8
AZAP	**Zapla**	6.41	142	*i* P	**Pn**	20 56 46.3	+0.3
ASTB	**Santa Barbara**	6.58	137	*i* P	**Pn**	20 56 49.3	+1.0
SIV	**San Ignacio**	8.49	69	P	**Pn**	20 57 11.6	-2.6
	comp=Z,3.2nm,0.3s,baz=268,slow=11,SNR=63						
NNA	**Nana**	10.16	314	P	**Pn**	20 57 37.3	+0.5
	comp=Z,1.3nm,0.3s,baz=163,slow=13,SNR=5.8						
NNA				S	**Sn**	20 59 28.1	-0.9
	comp=Z,2.7nm,0.3s,baz=23,slow=8.3,SNR=3.7						
CPUP	**Villa Florida**	13.16	125	P	**Pn**	20 58 14.3	-2.2
	comp=Z,0.1nm,0.3s,baz=312,slow=12,SNR=4.6						
CPUP	**Villa Florida**	13.16	125		**Pn**	20 58 14.9	-1.5
PTGA	**Pitinga**	20.50	28	P	**P**	20 59 41.0	-2.1
	comp=Z,5.8nm,0.3s,baz=203,slow=15,SNR=14						
PTGA	**Pitinga**	20.50	28	P	**P**	20 59 41.2	-1.9
PTGA				IAmb	IAmb	20 59 45.0	
	comp=Z,7.5nm,0.3s						
BDFB	**Brasilia**	20.64	84	P	**P**	20 59 43.3	-1.4
	comp=Z,12nm,0.5s,baz=256,slow=10.0,SNR=31						
BDFB	**Brasilia**	20.64	84	P	**P**	20 59 45.3	+0.6
BDFB				IAmb	IAmb	20 59 47.3	
	comp=Z,12nm,0.6s						
PLCA	**Paso Flores**	21.52	183	P	**P**	20 59 54.9	+1.1
	comp=Z,1.7nm,1.1s,baz=343,slow=11,SNR=2.3						
PLCA				pP	**pP**	21 00 20.5	+4.9
	comp=Z,1.6nm,0.8s,baz=19,slow=12,SNR=3.3						
PLCA	**Paso Flores**	21.52	183	IAmb	IAmb	21 00 02.9	
	comp=Z,3.4nm,1.1s						
RUSC	**La Rusia**	25.18	351	P	**P**	21 00 29.7	+0.3
RCBR	**Riachuelo**	35.15	72	P	**P**	21 01 57.5	+0.5
RCBR				IAmb	IAmb	21 01 58.4	
	comp=Z,7.0nm,0.8s						
APG	**El Apazote**	39.82	327	P	**P**	21 02 38.9	+2.4
	comp=Z,3.5nm,0.7s,baz=117,slow=2.3,SNR=4.7						
DBIC	**Dimbokro**	68.48	74	P	**P**	21 06 03.5	-0.9
	comp=Z,3.3nm,0.6s,baz=222,slow=5.1,SNR=5.4						
DBIC	**Dimbokro**	68.48	74	IAmb	IAmb	21 06 08.2	
	comp=Z,15nm,1.4s						
PDAR	**Pinedale Array**	71.90	330	P	**P**	21 06 25.6	+0.7
	comp=Z,0.1nm,0.4s,baz=106,slow=9.8,SNR=2.5						
TOA0	**Torodi Ar. Sit**	76.97	71	P	**P**	21 06 53.3	-1.3
TOA0				IAmb	IAmb	21 06 59.5	
	comp=Z,6.0nm,0.6s						
TORD	**Torodi Ar. Bea**	76.97	71	P	**P**	21 06 53.5	-1.1
	comp=Z,2.7nm,0.5s,baz=251,slow=5.4,SNR=31						
TORD				pP	**pP**	21 07 22.8	-2.1
	comp=Z,0.5nm,0.5s,baz=247,slow=5.9,SNR=1.3						
SYO	**Syowa Base**	78.81	160	⇑*e*P	**P**	21 07 04.0	+0.2
SYO	**Syowa Base**	78.81	160	⇑*e*PcP	**PcP**	21 07 10.0	-2.1
YKA	**Yellowknife Ar**	88.87	341	P	**P**	21 07 55.9	+1.1
	comp=Z,1.4nm,1.0s,baz=132,slow=5.1,SNR=11						
YKA				pP	**pP**	21 08 24.6	-0.9
	comp=Z,1.3nm,0.5s,baz=133,slow=5.0,SNR=11						
ASAR	**Alice Springs**	131.76	209	pPKP	pPKPdf	21 14 44.8	-1.7
	comp=Z,0.3nm,0.7s,baz=149,slow=2.0,SNR=2.4						
WRA	**Warramunga Arr**	134.72	212	pPKP	pPKPdf	21 14 50.8	-1.3
	comp=Z,0.3nm,0.6s,baz=152,slow=1.9,SNR=2.1						
ZALV	**Zalesovo Beam**	140.01	24	PKP	**PKiKP**	21 14 30.2	-0.9
	comp=Z,0.4nm,0.4s,baz=279,slow=3.2,SNR=3.6						
ZALV				pPKP	**pPKPdf**	21 15 01.2	+0.3
	comp=Z,1.1nm,0.6s,baz=315,slow=4.6,SNR=3.6						
KSH	**Kashi**	143.91	48	PKP	**PKPdf**	21 14 37.3	+1.1
KSH				pPKP	pPKPdf	21 15 03.9	-4.7
KSH				PP	**PP**	21 17 51.4	+0.6
KSH				SKS	**SKSdf**	21 21 31.9	-3.6
MKAR	**Makanchi Array**	143.96	34	PKhKP	PKPpre	21 14 33.9	
	comp=Z,0.3nm,0.6s,baz=336,slow=2.7,SNR=4.6						
MKAR				pPKP	pPKPdf	21 15 07.8	-0.5
	comp=Z,0.2nm,0.6s,baz=296,slow=2.9,SNR=2.3						
KLR	**Kul'dur**	145.55	335	pPKPbc	pPKPbc	21 15 10.2	-0.4
	comp=Z,1.2nm,0.6s,baz=67,slow=3.4,SNR=4.0						
SONM	**Songino Array**	151.20	6	PKPbc	**PKiKP**	21 14 55.4	+0.9
	comp=Z,1.0nm,0.7s,baz=309,slow=0.9,SNR=8.6						
SONM				pPKPbc	**pPKPbc**	21 15 26.2	+0.1
	comp=Z,0.9nm,0.7s,baz=318,slow=1.6,SNR=5.6						

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*INET **02** 20:56:39.4, 12°.48N×87°.67W, h78^{km}, ML3.7*

SNET 02 20:56:39.1±1.0**, 12°.49N×87°.84W, h48**^{km}±22^{km}**, ML3.4, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	0.78	1	*e*P	Pn	20 56 53.9	-0.1
CNCH				*e*S	Sn	20 57 06.2	+1.4
CNCH				IAML		20 57 08.9	
	comp=Z,2μm,0.1s						
LCND	**La Caada**	0.82	357	*e*P	Pn	20 56 54.6	+0.2
LCND				*e*S	Sn	20 57 06.2	+0.8
LCND				IAML		20 57 08.0	
	comp=Z,600nm,0.2s						
JUCU	**Jucuar¡n**	0.86	333	*e*P	Pn	20 56 54.6	-0.4
JUCU				*e*S	Sn	20 57 07.0	+0.5
JUCU				IAML		20 57 11.3	
	comp=Z,603nm,0.2s						
BLLM	**Bellamira**	1.02	338	*e*P	Pn	20 56 57.6	+0.4
BLLM				*e*S	Sn	20 57 12.2	+1.7
PACA	**Pacayal**	1.08	334	*e*P	Pn	20 56 58.4	+0.3
PACA				*e*S	Sn	20 57 13.1	+1.1
PACA				IAML		20 57 15.2	
	comp=Z,2μm,0.2s						
TECA	**Tecapa**	1.19	327	*e*P	Pn	20 56 59.8	+0.3
TECA				*e*S	Sn	20 57 15.9	+1.2
FAGO	**Alcalda de S**	1.23	348	*e*P	Pn	20 56 60.0	+0.1
FAGO				*e*S	Sn	20 57 16.6	+1.2
TGUH	**Tegucigalpa,Un**	1.66	19	*e*P	Pn	20 57 06.0	+0.1
TGUH				*e*S	Sn	20 57 25.8	-0.2

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*TIF **02** 21:15:16.7, 41°.72N×43°.14E, h20^{km}*

*DDA **02** 21:15:16.7, 41°.71N×43°.13E, h14^{km}±2^{km}, ML3.3*

*MOS **02** 21:15:16.4±0.0, 41°.71N×43°.15E, h8^{km}, MPVA4.1*

*ISK **02** 21:15:16.3, 41°.73N×43°.11E, h5^{km}, ML3.5/9*

*IDC **02** 21:15:16.6±1.3, 41°.69N×43°.12E, h0^{km}, mb3.1/4, mb1 3.4/6, mb1mx3.1/35, mbtmp3.3/6, ML3.3/2, MS3.8/1, Ms1 3.8/1, ms1mx3.3/30, Error ellipse: s-maj=30.4km s-min=7.4km az=65.0*

*NSSP **02** 21:15:17.0, 41°.70N×43°.25E, h10^{km}, Ms3.0*

*NORS **02** 21:15:18.1±0.0, 41°.89N×43°.08E, h1^{km}, MPVA4.0*

ISC 02 21:15:16.9±1.1**, 41°.70N**±0°.01×**43°.15E**±0°.01**, h2**^{km}±9^{km}**, n110, **σ**1**^{s}**.58**/191**, mb3.3**/5**, 11C-3D, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKRG	**Bakuriani**	0.28	77	P	**Pb**	21 15 23.5	-1.3
BKRG				S	**Sb**	21 15 28.8	-1.3
BKRG	**Bakuriani**	0.28	77	*e*PG	**Pb**	21 15 23.5	-1.3
EPOS	**Posof**	0.37	239	*i* P	**Pb**	21 15 24.8	-1.5
EPOS				*i* S	**Sb**	21 15 30.3	-2.3
AKH	**Akhalkalaki**	0.38	138	P	**Pb**	21 15 25.7	-0.8
AKH				S	**Sb**	21 15 32.0	-0.9
AKH	**Akhalkalaki**	0.38	138	PG	**Pb**	21 15 25.7	-0.8
AKH				SG	**Sb**	21 15 31.8	-1.2
AKH	**Akhalkalaki**	0.38	138	*e*Pg	**Pb**	21 15 25.7	-0.8
AKH				*e*Sg	**Sb**	21 15 32.0	-0.9
AKH	**Akhalkalaki**	0.38	138	*e*PG	**Pb**	21 15 25.7	-0.8
AKH				*e*S	**Sb**	21 15 32.0	-0.9
BGD	**Bogdanovka**	0.55	142	P	**Pb**	21 15 28.6	-0.7
BGD				S	**Sb**	21 15 36.8	-0.9
BGD	**Bogdanovka**	0.55	142	*e*PG	**Pb**	21 15 28.6	-0.7
BGD				*e*S	**Sb**	21 15 36.7	-0.9
TKB	**Tkibuli**	0.67	350	P	**Pb**	21 15 29.7	-1.6
TKB				S	**Sb**	21 15 38.8	-2.2
TKB	**Tkibuli**	0.67	350	*e*PG	**Pb**	21 15 29.7	-1.6
TKB				*e*S	**Sb**	21 15 38.8	-2.2
ONI	**Oni**	0.92	14	P	**Pg**	21 15 34.4	-0.2
ONI				S	**Sb**	21 15 47.0	-1.4
ONI	**Oni**	0.92	14	PG	**Pg**	21 15 34.1	-0.5
ONI				SG	**Sb**	21 15 46.9	-1.5
ONI	**Oni**	0.92	14	*i* Pg	**Pn**	21 15 35.4	-1.5
ONI				*e*Sg	**Sn**	21 15 49.0	-1.8
ONI	**Oni**	0.92	14	*e*PG	**Pg**	21 15 34.4	-0.2
ONI				*e*S	**Sb**	21 15 47.0	-1.4
KZRT	**Kazreti**	0.99	108	P	**Pg**	21 15 35.6	-0.2
KZRT				S	**Sg**	21 15 49.1	+0.6
KZRT	**Kazreti**	0.99	108	*i* P	**Pg**	21 15 35.6	-0.2
KZRT				*i* S	**Sg**	21 15 48.8	+0.2
KZRT	**Kazreti**	0.99	108	*e*PG	**Pg**	21 15 35.6	-0.2
KZRT				*e*S	**Sg**	21 15 49.1	+0.6
BATM	**Batumi**	1.10	266	PG	**Pg**	21 15 37.3	-0.7
BATM				SG	**Sb**	21 15 52.0	-1.4
BATM	**Batumi**	1.10	266	*i* P	**Pg**	21 15 37.2	-0.7
BATM				*i* S	**Sb**	21 15 51.9	-1.4
BATM	**Batumi**	1.10	266	PG	**Pg**	21 15 37.2	-0.7
BATM				S	**Sb**	21 15 51.9	-1.4
DAGI	**Agillar**	1.12	237	*i* P	**Pg**	21 15 38.1	-0.2
STE	**Stepanavan**	1.15	127	⇑*e*P	**Pn**	21 15 40.7	+0.5
STE				⇑*e*S	**Sn**	21 15 56.4	-0.1
BCA	**Borcka**	1.17	258	PN	**Pg**	21 15 38.8	-0.6
BCA				SN	**Sb**	21 15 54.7	-0.9
TBLG	**Delisi**	1.19	88	P	**Pb**	21 15 39.5	-0.7
TBLG				S	**Sn**	21 15 56.1	-1.3
TBLG	**Delisi**	1.19	88	PN	**Pb**	21 15 39.5	-0.7
TBLG				SN	**Sn**	21 15 56.5	-0.8
TBLG	**Delisi**	1.19	88	*i* P	**Pb**	21 15 39.3	-0.9
TBLG	**Delisi**	1.19	88	*e*PG	**Pb**	21 15 39.5	-0.7
TBLG				*e*S	**Sn**	21 15 56.0	-1.3
ZEI	**Tsey**	1.23	27	*i* Pg	**Pn**	21 15 41.1	-0.1
ZEI				*e*Sg	**Sn**	21 15 59.0	+0.5
ZEI	**Tsey**	1.23	27	⇑*i*PG	**Pn**	21 15 40.3	-1.0
ZEI				*e*S	**Sn**	21 15 58.2	-0.3
BTNK	**Botanikuri**	1.23	90	P	**Pn**	21 15 40.1	-1.2
BTNK				S	**Sn**	21 15 57.7	-0.8
BTNK	**Botanikuri**	1.23	90	*i* P	**Pn**	21 15 40.0	-1.2
BTNK				*i* S	**Sn**	21 15 57.4	-1.1
BTNK	**Botanikuri**	1.23	90	*e*PG	**Pn**	21 15 40.0	-1.2
BTNK				*e*S	**Sn**	21 15 57.7	-0.8
SEAG	**Tbilisi Sea**	1.24	86	P	**Pn**	21 15 39.6	-1.7
SEAG				S	**Sb**	21 15 56.5	-1.0
SEAG	**Tbilisi Sea**	1.24	86	*e*PG	**Pn**	21 15 39.6	-1.7
SEAG				*e*S	**Sb**	21 15 56.5	-1.0
DIGR	**Digorskoe uzhe**	1.25	15	*i* Pg	**Pn**	21 15 41.1	-0.4
DIGR				*i* Sg	**Sn**	21 15 59.0	0.0
DIGR	**Digorskoe uzhe**	1.25	15	*e*PG	**Pb**	21 15 40.2	-1.0
DIGR				*e*S	**Sn**	21 15 58.1	-0.9
GUDG	**Gudauri**	1.25	52	P	**Pn**	21 15 39.9	-1.8
GUDG				S	**Sb**	21 15 57.2	-0.8
GUDG	**Gudauri**	1.25	52	*e*Pg	**Pg**	21 15 41.9	+1.0
GUDG				*e*Sg	**Sn**	21 16 00.2	+1.0
GUDG	**Gudauri**	1.25	52	*e*PG	**Pn**	21 15 39.8	-1.8
SENK	**Senkaya-Erzuru**	1.28	208	PN	**Pg**	21 15 42.1	+0.6
SENK				SN	**Sn**	21 15 59.9	0.0
DIGO	**Kars**	1.29	172	*i* P	**Pb**	21 15 41.7	-0.3
DIGO				*i* S	**Sn**	21 15 59.2	-0.9
DIGO				IAML		21 16 02.0	
	comp=N,380nm,0.8s						
DDEM	**Demirkent**	1.32	233	*i* P	**Pb**	21 15 41.9	-0.7
KORR	**Kora**	1.55	26	*e*Pg	**Pg**	21 15 47.0	+0.4
KORR				*i* Sg	**Sg**	21 16 09.4	+2.8
KORR	**Kora**	1.55	26	*e*PN	**Pg**	21 15 47.0	+0.4
KORR				*e*S	**Sg**	21 16 09.3	+2.7
ARUZ	**Aruch**	1.58	153	*i* P	**Pg**	21 15 47.6	+0.4
ARUZ				*i* S	**Sg**	21 16 09.3	+1.7
LSNR	**Lesken**	1.66	17	*i* Pg	**Pg**	21 15 48.7	0.0
LSNR				*i* Sg	**Sg**	21 16 11.7	+1.5
LSNR	**Lesken**	1.66	17	⇑*i*PN	**Pg**	21 15 48.9	+0.2
LSNR				*e*S	**Sg**	21 16 12.2	+2.0
VNNZ	**Vanand**	1.67	162	*i* P	**Pb**	21 15 48.5	+0.1
VNNZ				*i* S	**Sg**	21 16 11.9	+1.4
METS	**Metsamor**	1.70	155	*i* P	**Pg**	21 15 50.7	+1.3
METS				*i* S	**Sg**	21 16 14.9	+3.6
ARNR	**Ardon**	1.71	29	*i* Pg	**Pg**	21 15 50.4	+0.9
ARNR				*i* Sg	**Sg**	21 16 14.1	+2.5
ARNR	**Ardon**	1.71	29	⇓*i*PN	**Pg**	21 15 50.6	+1.0
ARNR				*e*S	**Sg**	21 16 15.3	+3.6
VLKR	**Vladikavkaz**	1.76	39	*i* Pg	**Pg**	21 15 50.8	+0.1
VLKR				*e*Sg	**Sg**	21 16 15.3	+1.8
VLKR	**Vladikavkaz**	1.76	39	*e*PN	**Pg**	21 15 52.3	+1.7
VLKR				*e*S	**Sg**	21 16 16.5	+3.0
KAPZ	**Kaputan**	1.80	139	*i* P	**Pg**	21 15 51.4	0.0
KAPZ				*i* S	**Sg**	21 16 15.9	+1.1
STDR	**Stavd-Durt**	1.80	22	*i* Pg	**Pg**	21 15 51.5	0.0
STDR				*e*Sg	**Sg**	21 16 17.1	+2.3
STDR	**Stavd-Durt**	1.80	22	⇑*i*PN	**Pg**	21 15 52.6	+1.1
STDR				*e*S	**Sg**	21 16 18.6	+3.8
NCK	**Nalchik**	1.83	10	*e*Pg	**Pg**	21 15 51.8	-0.2
NCK				*e*Sg	**Sg**	21 16 17.1	+1.4
NCK	**Nalchik**	1.83	10	⇑*i*PN	**Pg**	21 15 52.0	+0.1
NCK				*e*S	**Sg**	21 16 18.1	+2.4
KMGR	**Komgaron**	1.86	42	*i* Pg	**Pg**	21 15 53.0	+0.5
KMGR				*e*Sg	**Sg**	21 16 18.6	+1.9
KMGR	**Komgaron**	1.86	42	⇓*i*PN	**Pg**	21 15 53.8	+1.2
KMGR				*e*S	**Sg**	21 16 21.1	+4.4

CHOM	Cayeli-Rize	1.90	252	PN	Pb	21 15 50.5	-1.7
EATA	Eleskirt	1.90	196	*i* P	Pg	21 15 52.9	-0.4
TASB	TASBURUN-IGDIR	1.90	154	PN	Pb	21 15 51.3	-1.0
IGDI	IGDIR	1.96	159	*i* P	Pb	21 15 52.8	-0.5
IGDI				*i* S	Sb	21 16 18.7	+0.6
GNI	Garni	1.96	142	Pg	Pg	21 15 54.1	-0.4
	comp=N,10nm,0.3s,baz=323,slow=3.4,SNR=34						
GNI				Lg	Lg	21 16 20.7	
	comp=N,21nm,0.3s,baz=46,slow=18,SNR=8.6						
GNI	Garni	1.96	142	⇑*i*P	Pg	21 15 54.0	-0.4
GNI				⇑*i*S	Sg	21 16 20.6	+0.8
GNI	Garni	1.96	142	*i* PN	Pg	21 15 53.9	-0.5
GNI				*i* S	Sg	21 16 21.4	+1.6
GNI				pmax	pmax		
	comp=Z,189nm,0.8s						
GNI				smax	smax		
	comp=Z,264nm,1.8s						
KOPR	Koprukoy-ERZUR	1.97	210	PN	Pb	21 15 52.0	-1.5
BTKR	Batakoyurt	1.97	31	*e*Pg	Pg	21 15 54.6	0.0
BTKR				*e*Sg	Sg	21 16 20.8	+0.7
BTKR	Batakoyurt	1.97	31	⇓*i*PN	Pg	21 15 55.9	+1.3
BTKR				*e*S	Sg	21 16 22.0	+1.9
KBZ	Khabaz	2.04	355	Pn	Pg	21 15 54.7	-1.3
	comp=Z,7.0nm,0.3s,baz=174,slow=4.0,SNR=166						
KBZ				Lg	Lg	21 16 21.2	
	comp=Z,5.9nm,0.3s,baz=47,slow=16,SNR=8.8						
KBZ	Khabaz	2.04	355	*i* PN	Pb	21 15 53.6	-1.1
KBZ				pmax	pmax		
	comp=Z,47nm,0.9s						
SHA1	Shidzhatmaz	2.07	350	*e*Pg	Pb	21 15 54.7	-0.7
SHA1				*e*Sg	Sg	21 16 22.4	-1.1
SHA1	Shidzhatmaz	2.07	350	⇑*i*PN	Pb	21 15 55.0	-0.4
SHA1				*e*S	Sg	21 16 25.3	+1.8
AGRB	Hanur-Agry	2.12	183	PN	Pb	21 15 54.3	-1.8
DYDN	Diyadin	2.19	169	*i* P	Pg	21 15 59.2	+0.4
PRTR	Priterechnaya	2.22	22	*e*PN	Pg	21 15 58.6	-0.8
PRTR				*e*S	Sg	21 16 27.6	-0.5
DDFL	Dedoflistskaro	2.24	95	*i* P	Pg	21 15 58.9	-0.9
KVAR	Kislovodsk Arr	2.28	352	Pn	Pb	21 15 57.5	-1.4
	baz=273,slow=19,SNR=33						
KVAR				Lg	Lg	21 16 30.5	
	baz=261,slow=13,SNR=7.9						
KVAR				LR	LR	21 16 48.7	
	comp=Z,2μm,20.4s,baz=266,slow=40						
KIV	Kislovodsk	2.29	352	PN	Pn	21 15 55.7	0.0
KIV	Kislovodsk	2.29	352	*e*PN	Pb	21 15 57.0	-1.9
KIV				*e*S	Sb	21 16 25.9	-1.7
KIV				pmax	pmax		
	comp=Z,162nm,1.0s						
ARXR	Arkhyz	2.32	324	*e*Pn	Pb	21 15 58.6	-1.0
ARXR				*e*Sn	Sb	21 16 27.8	-1.0
GROC	Groznyy	2.47	52	*e*Pn	Pb	21 16 00.5	-1.5
GROC				*i* Sn	Sb	21 16 32.0	-0.9
GROC	Groznyy	2.47	52	*e*PN	Pn	21 15 57.5	-0.7
GROC				*e*		21 16 35.7	
GROC				pmax	pmax		
	comp=Z,2.0nm,0.1s						
GROC				pmax	pmax		
	comp=Z,14nm,0.4s						
GROC				smax	smax		
	comp=E,115nm,0.8s						
GROC				smax	smax		
	comp=N,72nm,0.7s						
GROC				smax	smax		
	comp=E,90nm,0.8s						
GROC				MLR	MLR		
	comp=Z,60nm,2.0s						
BTLR	Botlikh	2.48	66	*e*Pn	Pb	21 16 01.6	-0.6
BTLR				*e*Sn	Sb	21 16 33.1	-0.1
BTLR	Botlikh	2.48	66	*e*PN	Pg	21 16 04.9	+0.5
BTLR				*e*S	Sg	21 16 36.0	-0.5
GANJ	Ganja	2.61	113	PN	Pb	21 16 02.7	-1.7
BAYB	BAYBURT	2.62	238	*i* P	Pb	21 16 04.8	+0.2
BAYB				*i* S	Sg	21 16 39.1	-1.9
BAYB				IAML		21 16 43.0	
	comp=N,107nm,0.4s						
BAYT	Aydıntepe-Bayb	2.62	241	PN	Pn	21 16 00.5	+0.1
RPOR	Krasnaya Polya	2.92	314	*e*Pn	Pn	21 16 05.8	+1.4
RPOR				*e*Sn	Sb	21 16 42.6	-3.3
GNBR	Gunib	2.92	75	*i* Pn	Pb	21 16 06.4	-3.3
GNBR				*e*Sn	Sb	21 16 42.7	-3.2
GNBR	Gunib	2.92	75	*e*PN	Pb	21 16 09.9	+0.1
GNBR				*e*S	Sg	21 16 48.2	-2.6
SEKA	Sheki	3.08	98	PN	Pb	21 16 09.3	-3.1
NAX	Nakhchivan	3.09	144	PN	Pb	21 16 09.6	-3.0
SOC	Sochi	3.16	308	*e*Pn	Pn	21 16 08.7	+1.1
SOC				*e*Sn	Sb	21 16 47.6	-5.1
SOC	Sochi	3.16	308	*e*PN	Pn	21 16 08.6	+1.0
SOC				*e*		21 16 14.8	
SOC				*e*		21 16 47.4	
SOC						21 17 00.4	
SOC				pmax	pmax		
	comp=Z,23nm,0.6s						
SOC				smax	smax		
	comp=E,52nm,0.8s						
SOC				smax	smax		
	comp=N,79nm,0.7s						
SOC				MLR	MLR		
	comp=Z,496nm,12.0s						
GUZR	Guzeripl'	3.20	317	*e*Pn	Pb	21 16 10.4	-4.1
GUZR				*e*Sn	Sb	21 16 49.4	-4.6
GOF	Gofitskoye	3.36	359	⇑*e*PN	Pg	21 16 22.7	+1.4
GOF				*e*S	Sg	21 17 03.9	-1.0
GOF				smax	smax		
	comp=E,51nm,0.8s						
GOF				smax	smax		
	comp=N,106nm,0.8s						
AKT	Akhty	3.44	92	*e*PN	Pb	21 16 19.2	+0.6
AKT				*e*S	Sg	21 17 04.6	-2.8
LZRR	Lazarevskoye	3.56	310	*e*Pn	Pn	21 16 15.4	+2.2
LZRR				*e*Sn	Sn	21 16 57.6	+1.8
TPSR	Tuapse	3.81	310	*e*Pn	Pn	21 16 19.4	+2.8
TPSR				*e*Sn	Sn	21 17 02.9	+0.9
ANN	Anapa	5.20	309	*e*Pn	Pn	21 16 38.7	+3.0
ANN				*e*Sn	Sn	21 17 38.1	+1.8
OBN	Obninsk	14.11	344	⇑*e*P	Pn	21 18 39.0	+1.4
OBN				*e*S	Sn	21 21 18.2	+3.5
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,605nm,16.0s						
BRVK	Borovoye	21.47	49	*i* P	P	21 20 07.2	+0.8
BVAR	Borovoye Array	21.51	49	P	P	21 20 07.1	+0.2
	comp=Z,1.0nm,1.0s,baz=232,slow=7.1,SNR=3.4						
GERES	GERESS Array B	21.83	299	P	P	21 20 09.9	-0.6
	comp=Z,0.4nm,0.6s,baz=100,slow=10,SNR=3.4						
FINES	FINESS Array B	22.31	338	P	P	21 20 15.2	-0.2
	comp=Z,0.7nm,0.5s,baz=143,slow=12,SNR=5.7						
KURBB	Kurchatov Arra	25.87	58	P	P	21 20 48.4	-1.4
	comp=Z,0.5nm,0.6s,baz=270,slow=9.3,SNR=4.8						
KURK	Kurchatov	25.94	58	*i* P	P	21 20 52.8	+2.4
KURK				pmax	pmax		
	comp=Z,1.0nm,1.0s						

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*SJA **02** 21:21:10.7±0.9, 21.°84S×69.°93W, h78^{km}±3^{km}, ML3.8, MW3.7*

*GUC **02** 21:21:12.0±0.7, 21.°86S×69.°91W, h80^{km}±3^{km}, ML3.8*

ISC 02 21:21:12.2±1.4**, 21.°85S**±0.°03×**70.°00W**±0.°05**, h74**^{km}±7^{km}**, n31, σ0.^{s}51**/54**, 6C-6D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB07	IPOC Station P	0.16	42	⇓*i*P	Pn	21 21 23.5	+0.2
PB07				*i* S	Sn	21 21 31.7	+0.2
PB07				IAML		21 21 32.0	
	comp=N,17μm,0.1s						
PB07	IPOC Station P	0.16	42	*i* P	Pn	21 21 23.6	+0.2
PB07				*i* S	Sn	21 21 31.7	+0.2
PB03	IPOC Station P	0.31	131	⇓*i*P	Pn	21 21 23.9	-0.1
PB03				*i* S	Sn	21 21 32.3	-0.5
PB03				IAML		21 21 32.7	
	comp=E,8μm,0.1s						
PB03	IPOC Station P	0.31	131	*i* P	Pn	21 21 24.0	-0.1
PB03				*i* S	Sn	21 21 32.3	-0.5
PB04	IPOC Station P	0.51	196	⇑*i*P	Pn	21 21 25.9	+0.3
PB04				*i* S	Sn	21 21 36.1	+0.6
PB04				IAML		21 21 37.5	
	comp=N,6μm,0.1s						
PB04	IPOC Station P	0.51	196	*e*P	Pn	21 21 25.9	+0.3
PB04				*i* S	Sn	21 21 36.2	+0.6
PB04				IAML		21 21 37.0	
	comp=Z,5μm,0.1s						
PB02	IPOC Station P	0.53	11	⇓*i*P	Pn	21 21 26.0	+0.2
PB02				*i* S	Sn	21 21 36.0	+0.1
PB02				IAML		21 21 36.6	
	comp=E,12μm,0.3s						
PB02	IPOC Station P	0.53	11	*e*P	Pn	21 21 26.1	+0.2
PB02				*i* S	Sn	21 21 36.1	+0.2
PB09	IPOC Station P	0.71	86	⇓*i*P	Pn	21 21 27.5	-0.2
PB09				*i* S	Sn	21 21 38.3	-0.8
PB09				IAML		21 21 39.2	
	comp=N,6μm,0.2s						
PB09	IPOC Station P	0.71	86	*i* P	Pn	21 21 27.5	-0.2
PB09				*i* S	Sn	21 21 38.3	-0.8
PB09				IAML		21 21 39.2	
	comp=Z,3μm,0.3s						
PB01	IPOC Station P	0.93	31	⇓*i*P	Pn	21 21 29.8	-0.3
PB01				*i* S	Sn	21 21 43.1	-0.5
PB01	IPOC Station P	0.93	31	*i* P	Pn	21 21 29.9	-0.3
PB01				*i* S	Sn	21 21 43.1	-0.5
PB06	IPOC Station P	0.94	155	⇓*i*P	Pn	21 21 29.8	-0.6
PB06				*i* S	Sn	21 21 43.2	-0.7
PB06	IPOC Station P	0.94	155	*e*P	Pn	21 21 29.9	-0.6
PB06				*i* S	Sn	21 21 43.2	-0.7
PB06				IAML		21 21 45.1	
	comp=Z,1μm,0.3s						
PB05	IPOC Station P	1.02	190	⇑*i*P	Pn	21 21 31.4	+0.1
PB05				*i* S	Sn	21 21 45.5	0.0
PB05	IPOC Station P	1.02	190	*i* P	Pn	21 21 31.4	+0.1
PB05				*i* S	Sn	21 21 45.5	0.0
PATCX	Punta Patache	1.03	352	⇑*i*P	Pn	21 21 31.4	0.0
PATCX				*i* S	Sn	21 21 45.8	+0.1
PATCX	Punta Patache	1.03	352	*i* P	Pn	21 21 31.5	0.0
PATCX				*i* S	Sn	21 21 46.0	+0.3
TA01	Diego Aracena	1.28	352	⇑*i*P	Pn	21 21 34.2	-0.3
TA01				*i* S	Sn	21 21 51.3	+0.1
PB15	IPOC Station P	1.44	160	⇑*e*P	Pn	21 21 36.4	-0.3
PB15				*i* S	Sn	21 21 55.1	-0.1
PB15	IPOC Station P	1.44	160	*e*P	Pn	21 21 36.5	-0.3
PB15				*i* S	Sn	21 21 56.3	+1.1
PB10	IPOC Station P	1.74	197	⇑*i*P	Pn	21 21 39.9	-0.5
PB10	IPOC Station P	1.74	197	*i* P	Pn	21 21 40.0	-0.5
PB08	IPOC Station P	1.87	25	*i* P	Pn	21 21 42.7	+0.1
PB08	IPOC Station P	1.87	25	*e*P	Pn	21 21 42.7	+0.1
PB08				*i* S	Sn	21 22 05.8	+0.2
PB11	IPOC Station P	2.10	9	*i* P	Pn	21 21 44.9	-0.6
PSGCX	Pisagua	2.24	357	*e*P	Pn	21 21 46.2	-1.1
GO01	Chusmiza	2.29	19	*e*P	Pn	21 21 48.5	+0.1
GO01				*e*S	Sn	21 22 16.2	+0.3
MNMC	Minye Minye	2.73	8	*e*P	Pn	21 21 53.8	-0.3
MNMCX	Minye Minye	2.73	8	*e*P	Pn	21 21 53.8	-0.3
YJA	Yavi	4.18	95	*i* P	Pn	21 22 15.8	+2.0

IDC 02 21:37:21.4±1.9**, 7.°13S×129.°64E, h0**^{km}**, mb3.4**/1**, mb1 4.1**/4**, mb1mx3.5**/47**, mbtmp3.9**/4**, ML4.1**/3**, Error ellipse: s-maj=66.6km s-min=29.0km az=81.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.43	15	Pn	Pn	21 38 56.7	-0.8
	5.2nm,0.3s,baz=198,slow=19,SNR=71						
SIJI				Sn	Sn	21 39 59.6	-12
	7.5nm,0.3s,baz=274,slow=23,SNR=16						
WRA	Warramunga Arr	13.53	161	Pn	Pn	21 40 33.7	-1.0
	0.9nm,0.3s,baz=338,slow=13,SNR=36						
WRA				Sn	Sn	21 42 54.6	-11
	1.9nm,0.3s,baz=333,slow=23,SNR=12						
ASAR	Alice Springs	16.94	166	Pn	Pn	21 41 20.7	+0.6
	0.8nm,0.3s,baz=352,slow=11,SNR=35						
ASAR				Sn	Sn	21 44 18.7	-10
	0.6nm,0.3s,baz=357,slow=29,SNR=6.7						
MKAR	Makanchi Array	68.14	327	P	P	21 48 23.7	+0.3
	0.3nm,0.6s,baz=126,slow=7.7,SNR=1.3						

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*BJI **02** 21:37:19.6±0.0, 30.°90N×142.°49E, h5^{km}, mB5.1/23, mb4.5/25, Ms4.7/5, Ms7 4.7/5*

*IDC **02** 21:37:21.0±0.5, 30.°88N×142.°46E, h0^{km}, mb4.4/27, mb1 4.5/32, mb1mx4.4/56, mbtmp4.3/32, ML3.7/4, MS3.6/1, Ms1 3.6/1, ms1mx3.1/39, Error ellipse: s-maj=14.6km s-min=11.7km az=83.0*

*JMA **02** 21:37:21.1±0.2, 30.°92N×142.°75E, h43^{km}, M4.6*

*NEIC **02** 21:37:25.6±1.3, 30.°86N±0.°06×142.°4E±0.°1, h32^{km}±4^{km}, mb4.8/57, Error ellipse: s-maj=14.4km s-min=7.4km az=72.0*

ISC 02 21:37:26.0±0.4**, 30.°88N**±0.°05×**142.°53E**±0.°07**, h37**^{km}**, n128, σ1.^{s}76**/133**, mb4.7**/52**, 4C, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	3.23	314	Pn	Pn	21 38 12.0	-2.2
	18nm,0.3s,baz=127,slow=20,SNR=3.9						
JHJ				Sn	Sn	21 38 48.2	-3.2
	96nm,0.3s,baz=232,slow=21,SNR=5.6						
CBIJ	Chichi jima	3.79	185	P	Pn	21 38 19.5	-2.4
JCJ	Chichijima	3.79	185	Pn	Pn	21 38 19.4	-2.4
	14nm,0.3s,baz=72,slow=23,SNR=10						
JCJ				Sn	Sn	21 38 59.9	-5.3
	49nm,0.3s,baz=268,slow=23,SNR=4.1						
BSO1	Boso 1	3.98	341	P	Pn	21 38 22.1	-1.9
BSO1				*e*S	Sn	21 39 07.8	-1.3
BSO3	Boso 3	4.26	337	P	Pn	21 38 26.4	-1.7
BSO4	Boso 4	4.49	336	P	Pn	21 38 29.8	-1.6
JOD2	Odawara 2	5.24	327	P	Pn	21 38 40.0	-1.8
JHU	Hanno	5.65	332	P	Pn	21 38 45.9	-1.6
JHU				S	Sn	21 39 47.0	-4.1
JNY	Yasuok	5.94	320	P	Pn	21 38 52.3	+0.8
JHO	Hitachi	5.94	345	P	Pn	21 38 49.3	-2.1
JRY	Ryogami san	5.95	330	P	Pn	21 38 50.4	-1.2
JRY				*e*S	Sn	21 39 56.0	-2.5
JAG	Ashikaga	6.09	336	P	Pn	21 38 52.0	-1.5
MJAR	Matsushiro Arr	6.69	329	Pn	Pn	21 39 00.7	-1.1
	0.9nm,0.3s,baz=151,slow=12,SNR=63						
MJAR				Sn	Sn	21 40 13.9	-2.9
	0.4nm,0.3s,baz=158,slow=17,SNR=7.6						
MAJO	Matsushiro	6.70	329		Pn	21 39 00.9	-0.9
MAJO				Sn	Sn	21 40 17.1	+0.2
MAT	Matsushiro	6.70	329	P	Pn	21 39 01.1	-0.7
MAT				S	Sn	21 40 13.1	-3.7
MJB9	Matsu-Tunnel	6.70	329		Pn	21 39 01.0	-0.9
MJB9				Sn	Sn	21 40 15.1	-1.8
JMK	Ichinoseki	8.12	353	P	Pn	21 39 19.0	-2.3
JMK				S	Sn	21 40 43.6	-8.2
JKB	Kayabe	11.05	354	P	Pn	21 39 58.6	-2.8
ASAJ	Asahikawa	13.21	0	Pn	Pn	21 40 27.0	-3.9
	1.1nm,0.3s,baz=229,slow=10,SNR=9.3						
ASAJ				Sn	Sn	21 42 45.5	-11
	0.8nm,0.3s,baz=78,slow=33,SNR=6.7						
JKA	Kamikawa-asahi	13.21	0		Pn	21 40 27.0	-3.9
KSRS	Korea Array	13.75	302	Pn	Pn	21 40 38.3	0.0
	0.2nm,0.3s,baz=108,slow=12,SNR=6.1						
KSRS				LR	LR	21 46 33.4	
	comp=Z,256nm,19.4s,baz=205,slow=40						
USRK	Ussuriysk Ar.	15.68	331	Pn	Pn	21 41 01.8	-2.3
	baz=152,slow=15,SNR=5.3						
MDJ	Mudanjiang	17.08	327		Pn	21 41 19.9	-1.9
KLR	Kul'dur	20.06	339	P	P	21 41 55.9	-0.1
	7.3nm,0.7s,baz=138,slow=8.9,SNR=12						
BJT	Baijiatuau	23.26	300	P	P	21 42 29.5	-0.7
WHN	Wuhan	24.21	276	P	P	21 42 41.4	+2.2
H11N2	WAKE ISLAND Hy	24.61	111	T	T	22 08 21.6	
	baz=305						
H11N1	WAKE ISLAND Hy	24.62	111	T	T	22 08 22.9	
	baz=305						
H11N3	WAKE ISLAND Hy	24.63	111	T	T	22 08 19.6	
	baz=305						
H11S3	WAKE ISLAND Hy	25.11	114	T	T	22 08 56.4	
	baz=301						
H11S1	WAKE ISLAND Hy	25.11	114	T	T	22 08 56.9	
	baz=301						
H11S2	WAKE ISLAND Hy	25.13	114	T	T	22 08 55.7	
	baz=301						
HIA	Hailar	25.16	323	P	P	21 42 47.3	-0.5
HIA				IAmb	IAmb	21 43 04.4	
	comp=Z,8.8nm,0.5s						
XAN	Xi'an	28.46	285	P	P	21 43 14.9	-2.7
ULN	Ulaanbaatar	31.89	312	P	P	21 43 45.7	-2.2
ULN				IAmb	IAmb	21 43 55.8	
	comp=Z,10nm,1.0s						
YAK	Yakutsk	32.26	349	P	P	21 43 50.7	-0.1
	comp=Z,6.3nm,0.5s,baz=209,slow=1.2,SNR=5.9						
YAK	Yakutsk	32.26	349	P	P	21 43 50.9	+0.1
SONM	Songino Array	32.30	312	P	P	21 43 52.0	+0.5
	comp=Z,4.0nm,0.9s,baz=110,slow=8.0,SNR=28						
SEY	Seymchan	32.68	8	P	P	21 43 55.0	+0.6
	comp=Z,1.6nm,0.4s,baz=179,slow=23,SNR=5.2						
GTA	Gaotai	35.68	296	*e*P	P	21 44 20.2	-0.7
GTA				pP	pP	21 44 24.9	-4.0
GTA				sP	sP	21 44 28.1	-5.6
PBKT	Sadao Pong	40.39	259	P	P	21 44 60.0	-0.7
CMAR	Chiang Mai Arr	41.26	263	P	P	21 45 06.5	-1.3
	comp=Z,0.4nm,0.6s,baz=60,slow=6.9,SNR=3.6						
TIXI	Tiksi	41.49	354	P	P	21 45 09.2	+0.2
	comp=Z,2.6nm,0.4s,baz=147,slow=6.7,SNR=16						
TIXI	Tiksi	41.49	354	P	P	21 45 08.4	-0.6
MTN	Manton Dam	44.84	196	IAmb	IAmb	21 45 41.7	
	comp=Z,11nm,0.7s						
ANM	Nome	46.47	28	IAmb	IAmb	21 45 51.9	
	comp=Z,9.4nm,0.8s						
ZALV	Zalesovo Beam	46.89	317	P	P	21 45 52.7	+0.2
	comp=Z,2.5nm,0.6s,baz=109,slow=8.4,SNR=14						
ZALV				PcP	PcP	21 47 25.1	+0.4
	comp=Z,5.2nm,0.5s,baz=101,slow=3.4,SNR=18						
TAPN	Taplejung	47.63	280	*e*P	P	21 45 59.1	+0.1
	comp=Z,3.4nm,0.6s						
MK31	Makanchi Array	48.37	307	P	P	21 46 03.7	-0.5
MK31				IAmb	IAmb	21 46 05.8	
	comp=Z,4.8nm,0.8s						
MKAR	Makanchi Array	48.37	307	P	P	21 46 04.9	+0.7
	comp=Z,5.3nm,0.6s,baz=90,slow=9.5,SNR=76						
MKAR				PcP	PcP	21 47 30.8	+0.5
	comp=Z,1.2nm,0.8s,baz=98,slow=2.9,SNR=2.5						
MKAR				ScP	ScP	21 51 26.7	+4.6
	comp=Z,0.3nm,0.8s,baz=82,slow=3.1,SNR=2.8						
MAKZ	Makanchi	48.59	307	P	P	21 46 05.8	-0.1
MAKZ				IAmb	IAmb	21 46 08.1	
	comp=Z,5.7nm,0.5s						
RDOG	Red Dog Mine	48.65	24	P	P	21 46 06.1	+0.2
RDOG				IAmb	IAmb	21 46 09.1	
	comp=Z,7.8nm,0.8s						
RAMN	Ramite	48.69	280	*e*P	P	21 46 07.6	+0.4
	comp=Z,12nm,0.9s						
JIRN	Jiri	48.82	281	*e*P	P	21 46 08.0	-0.3
	comp=Z,18nm,0.6s						
GUN	Gumba	49.00	282	*e*P	P	21 46 09.4	-0.2
	comp=Z,19nm,1.0s						
NRIK	Noril'sk	49.26	337	P	P	21 46 10.4	-0.1
	comp=Z,5.0nm,0.9s,baz=106,slow=10,SNR=7.8						
NRIK				PcP	PcP	21 47 34.0	+1.0
	comp=Z,5.2nm,1.0s,baz=125,slow=11,SNR=3.3						
PKI	Pulchoki	49.50	281	*e*P	P	21 46 13.3	-0.2
	comp=Z,2.9nm,0.5s						
KURK	Kurchatov	50.61	312	P	P	21 46 19.9	-1.2
KURK				IAmb	IAmb	21 46 22.3	
	comp=Z,8.7nm,0.9s						
DANN	Dangsing	50.65	283	*e*P	P	21 46 21.9	-0.2
	comp=Z,9.2nm,0.5s						
WB0	Warramunga Arr	50.96	190	P	P	21 46 23.6	-0.4
WR0	Warramunga Arr	51.13	190	IAmb	IAmb	21 46 26.2	
	comp=Z,11nm,0.8s						
WRAB	Tennant Creek	51.13	190	P	P	21 46 25.4	+0.1
WRA	Warramunga Arr	51.15	190	P	P	21 46 25.2	-0.2
	comp=Z,16nm,0.8s,baz=9.2,slow=7.9,SNR=11						
WRA				PcP	PcP	21 47 42.2	+1.5
	comp=Z,2.2nm,0.8s,baz=0.9,slow=3.4,SNR=2.6						
KDAK	Kodiak Island	51.19	38	P	P	21 46 26.0	+0.7
	comp=Z,13nm,0.8s,baz=246,slow=4.8,SNR=14						
KDAK	Kodiak Island	51.19	38	P	P	21 46 26.1	+0.8
TOLK	Toolik Lake Re	53.57	25	IAmb	IAmb	21 46 46.0	
	comp=Z,5.5nm,0.8s						
KSH	Kashi	53.97	299	P	P	21 46 50.4	+4.0
KSH				PcS	PcS	21 51 53.7	+2.9
KSH				S	S	21 54 25.9	+6.2
KSH				pmax	pmax		
	comp=Z,20nm,1.6s						
KSH				pmax	pmax		
	comp=Z,140nm,4.9s						
KSH				LR	LR		
	comp=Z,610nm,16.6s						
KSH				LR	LR		
	comp=Z,420nm,11.6s						
KSH				LR	LR		
	comp=Z,910nm,19.8s						
KBK	Karagaybulak	54.08	303	P	P	21 46 48.9	+1.7
	SNR=16						
ILAR	Eielson Array	54.27	30	P	P	21 46 48.3	+0.3
	comp=Z,6.3nm,0.6s,baz=257,slow=6.3,SNR=93						
USP	Ospenovka	54.29	303	P	P	21 46 49.9	+1.3
	SNR=8.0						
AAK	Ala-Archa	54.41	303	P	P	21 46 50.6	+1.0
	SNR=5.1						
AAK	Ala-Archa	54.41	303	P	P	21 46 49.8	+0.2
AAK				IAmb	IAmb	21 46 51.5	
	comp=Z,6.7nm,0.9s						
UCH	Uchtor	54.48	302	P	P	21 46 51.9	+1.4
	SNR=6.7						
ASAR	Alice Springs	54.87	190	P	P	21 46 52.9	0.0
	comp=Z,3.2nm,0.5s,baz=12,slow=6.9,SNR=15						
ASAR				PcP	PcP	21 47 56.6	+2.0
	comp=Z,1.3nm,0.8s,baz=18,slow=3.9,SNR=3.0						
EKS2	Erkin-Say	54.92	303	P	P	21 46 54.2	+0.9
	SNR=6.7						
AML	Almayashu	55.09	302	P	P	21 46 56.8	+1.9
	SNR=21						
BRVK	Borovoye	55.57	316	P	P	21 46 57.5	-0.1
BRVK				IAmb	IAmb	21 46 58.6	
	comp=Z,3.9nm,0.8s						
MCARA	McCarthy VSAT	56.03	34	IAmb	IAmb	21 47 17.2	
	comp=Z,11nm,1.0s						
CTGM	Chitina Glacie	56.88	34	P	P	21 47 07.8	+0.8
KK31	Karatay Array	57.17	304	P	P	21 47 09.7	+0.4
KK31				IAmb	IAmb	21 47 11.1	
	comp=Z,12nm,0.8s						
KKAR	Karatay Array	57.17	304	P	P	21 47 09.6	+0.4
KKAR				IAmb	IAmb	21 47 11.1	
	comp=Z,12nm,0.8s						
NOUC	Port Laguerre	57.41	154	P	P	21 47 11.1	+0.2
DAWY	Dawson	57.53	31	IAmb	IAmb	21 47 18.7	
	comp=Z,10nm,1.1s						
NIL	Nilore	57.63	293	P	P	21 47 12.3	-0.3
NIL				IAmb	IAmb	21 47 30.8	
	comp=Z,6.4nm,0.6s						
CHGR	Chuyangaron	59.31	299	P	P	21 47 23.5	-0.8
INK	Inuvik	59.48	25	P	P	21 47 25.6	+0.8
	comp=Z,3.3nm,0.5s,baz=289,slow=5.9,SNR=29						
INK	Inuvik	59.48	25	P	P	21 47 25.8	+0.9
INK				IAmb	IAmb	21 47 42.1	
	comp=Z,4.1nm,1.1s						
KBL	Kabul	60.66	295	P	P	21 47 32.7	-1.1
KBL				IAmb	IAmb	21 47 39.9	
	comp=Z,6.8nm,0.9s						
ARU	Arti	61.65	321	P	P	21 47 40.1	+0.3
ARU				IAmb	IAmb	21 47 57.4	
	comp=Z,5.0nm,0.9s						
STKA	Stephens Creek	62.43	181	P	P	21 47 45.3	+0.1
	comp=Z,1.3nm,0.7s,baz=278,slow=6.6,SNR=3.7						
STKA	Stephens Creek	62.43	181	P	P	21 47 45.4	+0.1
C36M	Paulatuk	62.65	23	P	P	21 47 47.0	+0.7
C36M				IAmb	IAmb	21 47 47.7	
	comp=Z,6.1nm,0.7s						
ABKAR	Akbulak array	62.71	313	P	P	21 47 47.5	+0.4
ABKAR				IAmb	IAmb	21 47 47.9	
	comp=Z,4.8nm,0.6s						
FORT	Forrest	62.85	194	P	P	21 47 48.3	+0.2
HRA	Herat	65.98	297	P	P	21 48 09.4	+0.4
HRA				IAmb	IAmb	21 48 10.7	
	comp=Z,4.8nm,0.7s						
GEYT	Alibeck	67.74	302	P	P	21 48 20.8	+0.8
	comp=Z,2.8nm,0.8s,baz=36,slow=5.5,SNR=8.0						
NWAO	Narrogin (SRO)	67.83	203	P	P	21 48 20.5	+0.2
YKA	Yellowknife Ar	68.68	29	P	P	21 48 25.9	+0.6
	comp=Z,4.2nm,0.7s,baz=294,slow=6.1,SNR=57						
ARCES	ARCESS Array B	70.08	341	P	P	21 48 34.2	+0.3
	comp=Z,2.9nm,0.9s,baz=55,slow=7.8,SNR=3.1						
TULEG	Thule	71.06	7	P	P	21 48 39.5	-0.2
TULEG				IAmb	IAmb	21 48 40.8	
	comp=Z,8.7nm,0.8s						
YBH	Yreka Blue Hor	73.42	51	P	P	21 48 55.7	+1.2
	comp=Z,1.8nm,0.8s,baz=280,slow=9.5,SNR=3.1						
FINES	FINESS Array B	74.70	334	P	P	21 49 01.8	+0.3
	comp=Z,2.1nm,0.5s,baz=76,slow=6.2,SNR=20						
KBZ	Khabaz	75.67	312	P	P	21 49 07.9	+0.5
	comp=Z,9.4nm,0.8s,baz=81,slow=2.7,SNR=21						
KIV	Kislovodsk	75.69	313	P	P	21 49 07.2	-0.5
KIV				IAmb	IAmb	21 49 10.9	
	comp=Z,8.1nm,0.9s						
SUMG	Summit	76.82	0	*i* P	P	21 49 15.9	+1.9
SUMG	Summit	76.82	0	P	P	21 49 14.5	+0.5

KVN	Kaiserville	77.79	52	P	P	21 49 19.8	+0.1
NVAR	Mina Array Bea	77.96	52	P	P	21 49 22.0	+1.3
	comp=Z,1.9nm,0.7s,baz=293,slow=5.6,SNR=18						
AKASG	Malin Array Be	79.75	324	P	P	21 49 30.3	+0.2
	comp=Z,1.2nm,0.4s,baz=48,slow=6.0,SNR=14						
NB2	NORSAR Subarra	80.22	338	P	P	21 49 32.3	-0.2
	comp=Z,4.5nm,1.0s,baz=40,slow=5.3						
NOA	NORSAR Array B	80.22	338	P	P	21 49 32.5	0.0
	comp=Z,2.1nm,0.8s,baz=40,slow=5.2,SNR=7.6						
PDAR	Pinedale Array	81.32	45	P	P	21 49 39.8	+0.8
	comp=Z,0.6nm,0.7s,baz=288,slow=3.0,SNR=6.3						
BR131	Keskin Array S	83.66	313	P	P	21 49 51.3	+0.2
BR131				IAmb	IAmb	21 49 52.8	
	comp=Z,7.9nm,0.8s						
BRTR	Keskin Array B	83.66	313	P	P	21 49 52.0	+0.9
	comp=Z,7.4nm,0.8s,baz=104,slow=3.9,SNR=39						
TESR	Tescani	83.67	321	⇑P	P	21 49 50.8	-0.1
BUR08	Bucovina Ar. S	83.72	323	P	P	21 49 51.5	+0.3
BURAR	Bucovina Array	83.73	323	⇑P	P	21 49 52.3	+1.0
RAYN	Ar Rayn	83.91	294	P	P	21 49 52.4	-0.1
VRI	Vrincioaia	84.04	321	⇑P	P	21 49 53.4	+0.7
N23A	Red Feather La	84.61	45	IAmb	IAmb	21 49 58.9	
	comp=Z,7.5nm,1.1s						
DOPR	Dopca	84.70	321	⇑P	P	21 49 57.5	+1.4
GERES	GERESS Array B	88.43	329	P	P	21 50 14.1	-0.3
	comp=Z,0.2nm,0.3s,baz=45,slow=5.7,SNR=3.3						
TORD	Torodi Ar. Bea	122.27	313	PKP	PKPdf	21 56 17.7	-0.1
	comp=Z,0.9nm,1.0s,baz=13,slow=2.8,SNR=3.8						
SDV	Santo Domingo	129.25	44		PKPdf	21 56 31.7	+0.4
LPAZ	La Paz	148.49	70	PKPbc	PKPbc	21 57 10.5	+0.3
	comp=Z,4.7nm,0.8s,baz=354,slow=5.6,SNR=10.0						
LPAZ	La Paz	148.49	70	PKPbc	PKPbc	21 57 09.6	-0.5
PLCA	Paso Flores	151.57	119	PKPbc	PKiKP	21 57 18.1	+1.4
	comp=Z,2.3nm,0.8s,baz=274,slow=5.0,SNR=7.9						
PLCA	Paso Flores	151.57	119		PKiKP	21 57 17.0	+0.3

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*IDC **02** 22:04:24.9±9.8, 33°.91N×25°.34E, h0^{km}, mb3.3/1, mb1 3.4/3, mb1mx3.2/32, mbtmp3.2/3, ML3.7/2, Error ellipse: s-maj=177.3km s-min=54.2km az=35.0*

*ATH **02** 22:04:28.4, 34°.19N×25°.32E, h19^{km}±4^{km}, ML2.6/1, Error ellipse: s-maj=10.6km s-min=2.5km az=354.0*

ISC 02 22:04:28.9±2.2**, 34°.2N**±0°.2×**25°.31E**±0°.08**, h17**^{km}**, n10, σ0^{s}32**/10**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIVA	Sivas	0.91	333	P	Pb	22 04 46.5	+0.3
SIVA				AML	AML	22 05 11.5	
	comp=N,732µm,0.5s						
SIVA				AML	AML	22 05 12.6	
	comp=E,874µm,0.6s						
LAST	Lasithi	0.96	8	P	Pb	22 04 47.2	0.0
NPS	Neapolis	1.08	13	P	Pb	22 04 49.3	+0.1
IDI	Anoyia	1.13	342	P	Pn	22 04 50.0	0.0
ZKR	Zakros	1.17	39	P	Pn	22 04 51.0	+0.4
GVD	Gavdhos	1.19	302	P	Pb	22 04 51.2	+0.2
IMMV	Iera Moni Meta	1.66	319	P	Pb	22 04 59.1	0.0
AKASG	Malin Array Be	16.73	9	P	P	22 08 23.9	-0.6
	comp=E,0.4nm,0.3s,baz=202,slow=10,SNR=4.1						
GERES	GERESS Array B	16.98	333	P	P	22 08 27.7	+0.2
	comp=E,0.1nm,0.3s,baz=150,slow=11,SNR=3.9						
MKAR	Makanchi Array	44.20	56	P	P	22 12 36.8	-0.2
	comp=E,0.3nm,0.7s,baz=275,slow=6.2,SNR=4.3						

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*INET **02** 22:17:13.1, 15°.32N×93°.11W, h15^{km}, MD4.9*

*SNET **02** 22:17:13.9±1.6, 15°.26N×92°.88W, h16^{km}±999^{km}, ML5.7*

*MEX **02** 22:17:14.9±0.5, 14°.12N×93°.25W, h6^{km}±10^{km}, MD5.7*

*NEIC **02** 22:17:14.4±1.8, 14°.18N±0°.04×93°.15W±0°.04, h18^{km}±2^{km}, mb5.4/488, Ms_20 5.5/595, Mww6.0, Md5.7/25(MEX), Mwc6.0(GCMT), Error ellipse: s-maj=6.2km s-min=5.2km az=203.0*

*UCR **02** 22:17:14.6±2.5, 15°.16N×92°.93W, h107^{km}±104^{km}, ML5.2, mb6.0(NEIC)*

*BJI **02** 22:17:17.5±0.0, 14°.30N×92°.90W, h44^{km}, mB5.9/39, Ms5.9/41, Ms7 5.7/39*

*MOS **02** 22:17:18.4±1.1, 14°.49N×92°.77W, h40^{km}, mb5.5/15, MS5.6/37, Error ellipse: s-maj=9.0km s-min=5.4km az=95.7*

*GCMT **02** 22:17:20.8±0.1, 14°.35N±0°.01×93°.25W±0°.01, h16^{km}, MW6.0/147, Moment Tensor Solution. s134,c244; s147,c454; Duration: 2^{s}4 Moment tensor: Scale 10^{18} Nm; M$_{rr}$0.71±.01; M$_{\theta\theta}$-0.60±.01; M$_{\phi\phi}$-0.11±.01; M$_{r\theta}$0.81±.03; M$_{\theta\phi}$0.21±.01; M$_{\phi r}$-0.58±.03; Best double couple: M$_0$1.21600×10^{18} NP1:ϕ_s281.00000°, δ18.00000°, λ69.00000°. NP2:ϕ_s123.00000°, δ73.00000°, λ97.00000°. Principal axes: T 1.2470, Plg62.0000°, Azm43.0000°; N -0.0620, Plg7.0000°, Azm301.0000°; P -1.1840, Plg28.0000°, Azm207.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*IDC **02** 22:17:21.6±1.6, 14°.41N×92°.72W, h63^{km}±13^{km}, mb4.7/41, mb1 4.8/45, mb1mx4.8/50, mbtmp5.0/45, MS5.4/39, Ms1 5.4/39, ms1mx5.3/46 Error ellipse: s-maj=13.4km s-min=7.1km az=55.0*

*NEIC **02** 22:17:21, 14°.35N×93°.25W, h15^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.74; M$_{\theta\theta}$-0.64; M$_{\phi\phi}$-0.11; M$_{r\theta}$0.93; M$_{\theta\phi}$0.23; M$_{\phi r}$-0.56; Fault plane solution: M$_0$1.31000×10^{18} NP1:ϕ_s283.00000°, δ18.00000°, λ74.00000°. NP2:ϕ_s119.00000°, δ73.00000°, λ95.00000°. Principal axes: T 1.3283, Plg62.0000°, Azm37.0000°; N -0.0362, Plg5.0000°, Azm298.0000°; P -1.2921, Plg28.0000°, Azm205.0000°;*

*NEIC **02** 22:17:23, 14°.40N×93°.12W, h26^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.65; M$_{\theta\theta}$-0.54; M$_{\phi\phi}$-0.11; M$_{r\theta}$1.10; M$_{\theta\phi}$0.23; M$_{\phi r}$-0.32; Fault plane solution: M$_0$1.32000×10^{18} NP1:ϕ_s299.00000°, δ15.00000°, λ101.00000°. NP2:ϕ_s107.00000°, δ75.00000°, λ87.00000°. Principal axes: T 1.3279, Plg60.0000°, Azm13.0000°; N -0.0217, Plg3.0000°, Azm108.0000°; P -1.3062, Plg30.0000°, Azm200.0000°;*

*BGR **02** 22:17:25.6±0.0, 14°.02N×90°.09W, h33^{km}, mb5.0, Ms5.6*

*GCG **02** 22:17:32.4±3.4, 14°.29N×91°.91W, h50^{km}±999^{km}, MD5.4*

ISC 02 22:17:17.2±0.5**, 14°.24N**±0°.03×**92°.99W**±0°.03**, h33**^{km}±2^{km}**, h33**^{km}**:pP-P, n1428, σ1^{s}75**/1045**, mb5.3**/272**, MS5.5**/377**, 24C-5D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.96	47		Pb	22 17 35.0	-0.5
THIG					Sb	22 17 49.5	+1.5
THIG		0.96	47	eP	Pb	22 17 35.0	-0.5
THIG				i S	Sb	22 17 49.5	+1.5
ERG	Entre ros, C	1.39	82	eP	Pb	22 17 42.2	-0.5
STG3	Santiaguito 3,	1.45	71	eP	Pn	22 17 42.4	+1.0
PCIG		1.47	351		Pn	22 17 39.8	-1.6
PCIG					Sn	22 17 58.6	-0.8
PCIG		1.47	351	eP	Pn	22 17 39.8	-1.6
PCIG				i S	Sn	22 17 59.7	+0.2
FUG	Fuego 3	2.09	84	eP	Pn	22 17 51.1	+0.9
CCIG	Comitan	2.19	22		Pn	22 17 51.5	0.0
PCG	Pacaya	2.32	86	eP	Pn	22 17 54.8	+1.5
IXG	Ixpaco	2.48	91	eP	Pn	22 17 56.3	+0.9
TGIG		2.52	357		Pn	22 17 56.7	+0.7
TGIG					Sn	22 18 26.5	+0.9
TGIG		2.52	357	i S	Sn	22 18 26.5	+0.9
APG	El Apazote	2.56	73	P	Pn	22 17 58.3	+1.7
	244nm,0.3s,baz=283,slow=7.6,SNR=501						
APG				S	Sb	22 18 33.6	-0.2
	1µm,0.3s,baz=23,slow=22,SNR=8.0						
NBG	Las Nubes	2.59	82	eP	Pb	22 18 00.2	-2.9
RTR	El Retiro	3.27	96	eP	Pn	22 18 07.3	+1.0
RTR	El Retiro	3.27	96	eP	Pn	22 18 07.3	+1.0
CEVE	Cerro Verde	3.29	97	eP	Pn	22 18 07.2	+0.5
CEVE				eS	Sb	22 18 51.0	-3.9
CEVE				IAML		22 19 09.0	
	comp=Z,37µm,0.5s						
CEVE	Cerro Verde	3.29	97	eP	Pn	22 18 07.2	+0.5
CEVE				eS	Sb	22 18 51.0	-3.9
CEVE				IAML		22 19 09.0	
	comp=Z,37µm,0.5s						
SBLS	San Blas	3.29	97	eP	Pn	22 18 07.6	+0.9
SBLS	San Blas	3.29	97	eP	Pn	22 18 07.6	+0.9
SNJE	San Jose	3.31	96	eP	Pn	22 18 07.2	+0.3
SNJE	San Jose	3.31	96	eP	Pn	22 18 07.2	+0.3
MRL	Marmol	3.31	75	eP	Pn	22 18 09.6	+2.7
CMIG	Matias Romero	3.37	327	P	Pn	22 18 07.1	-0.4
	comp=Z,214nm,0.3s,baz=156,slow=12,SNR=579						
CMIG				S	Sn	22 18 46.9	+0.5
	comp=Z,561nm,0.3s,baz=102,slow=13,SNR=9.0						
CMIG				LR	LR	22 19 31.0	
	comp=Z,51µm,18.0s,baz=239,slow=38						
CMIG	Matias Romero	3.37	327		Pn	22 18 05.9	-1.6
CMIG					Sn	22 18 44.0	-2.4
CMIG	Matias Romero	3.37	327	eP	Pn	22 18 05.9	-1.6
CMIG				i S	Sn	22 18 44.0	-2.4
HUIG	Huatulco	3.37	297		Pn	22 18 03.2	-4.4
HUIG					Sn	22 18 40.7	-5.8
HUIG	Huatulco	3.37	297	eP	Pn	22 18 03.2	-4.4
HUIG				i S	Sn	22 18 40.7	-5.8
MTO3	Montecristo	3.52	87	eP	Pn	22 18 10.2	+0.3
MTO3				eS	Sn	22 18 50.2	-0.4
MTO3	Montecristo	3.52	87	eP	Pn	22 18 10.2	+0.3
MTO3				eS	Sn	22 18 50.2	-0.4
BOQS	Boqueron	3.64	98	eP	Pn	22 18 12.4	+1.0
UEES	Universidad Ev	3.68	98	eP	Pn	22 18 12.6	+0.6
UEES	Universidad Ev	3.68	98	eP	Pn	22 18 12.6	+0.6
SNET	Serv Nac Est T	3.69	98	eP	Pn	22 18 13.0	+0.9
SNET				IAML		22 19 17.4	
	comp=Z,7µm,0.7s						
SNET	Serv Nac Est T	3.69	98		Pn	22 18 12.8	+0.8
SNET	Serv Nac Est T	3.69	98	eP	Pn	22 18 13.0	+0.9
SNET				IAML		22 19 17.4	
	comp=Z,7µm,0.7s						
LFU	La Fuente	3.80	97	eP	Pn	22 18 14.3	+0.7
LFU	La Fuente	3.80	97	eP	Pn	22 18 14.3	+0.7
LFRS	El Faro	3.87	99	eP	Pn	22 18 15.0	+0.5
PAVA	Las Pavas	3.97	97	eP	Pn	22 18 17.0	+1.1
PAVA	Las Pavas	3.97	97	eP	Pn	22 18 17.0	+1.1
TECA	Tecapa	4.42	99	eP	Pn	22 18 23.3	+1.1
TECA	Tecapa	4.42	99	eP	Pn	22 18 23.3	+1.1
VHO	Vista Hermosa	4.57	308	i P	Pn	22 18 21.3	-3.0
VHO				i S	Sn	22 19 12.9	-3.4
JUCU	Jucuar¡n	4.71	101	eP	Pn	22 18 27.2	+1.1
JUCU				IAML		22 19 46.6	
	comp=Z,3µm,0.5s						
JUCU	Jucuar¡n	4.71	101	eP	Pn	22 18 27.2	+1.1
JUCU				IAML		22 19 46.6	
	comp=Z,3µm,0.5s						
LCND	La Caada	5.04	100	eP	Pn	22 18 31.5	+0.9
LCND	La Caada	5.04	100	eP	Pn	22 18 31.5	+0.9
YOIG	Yosondua	5.10	301	eP	Pn	22 18 28.6	-3.0
YOIG				eS	Sn	22 19 24.4	-5.2
CSGN	Cosiguina Volc	5.43	103	Pn	Pn	22 18 35.4	-0.6
TGUH	Tegucigalpa,Un	5.55	91		Pn	22 18 37.9	+0.2
HLIG	Huajuapan de L	5.84	308	i P	Pn	22 18 39.5	-2.3
HLIG				i S	Sn	22 19 43.8	-3.9
TLIG	Tlapa	6.30	302		Pn	22 18 45.7	-2.2
TLIG	Tlapa	6.30	302		Sn	22 19 55.2	-3.7
TLIG	Tlapa	6.30	302	eP	Pn	22 18 45.0	-2.9
TLIG				i S	Sn	22 19 55.2	-3.7
ESTN	Estel	6.54	99		Pn	22 18 51.4	+0.2
TEIG	Tepich	7.46	36	P	Pn	22 19 04.1	+0.3
	comp=Z,148nm,0.3s,baz=228,slow=23,SNR=289						
TEIG				S	Sn	22 20 25.3	-2.1
	comp=Z,44nm,0.3s,baz=139,slow=16,SNR=3.2						
TEIG				LR	LR	22 22 24.0	
	comp=Z,77µm,21.0s,baz=141,slow=42						
TEIG	Tepich	7.46	36		Pn	22 19 04.0	+0.2
PLIG	Platanillo	7.49	304		Pn	22 19 01.4	-2.9
PLIG					Sn	22 20 24.1	-4.0
PLIG	Platanillo	7.49	304	eP	Pn	22 19 01.4	-2.9
PLIG				i S	Sn	22 20 24.1	-4.0
ACON	Acoyapa	7.95	106		Pn	22 19 10.3	-0.1
ESPN	Las Esperanzas	8.71	103		Pn	22 19 21.7	+0.8
JTS	Las Juntas de	8.78	116	P	Pn	22 19 25.3	+3.2
	comp=Z,4.9nm,0.3s,baz=37,slow=7.1,SNR=17						
JTS				S	Sn	22 21 05.4	+5.4
	comp=Z,5.6nm,0.3s,baz=346,slow=7.4,SNR=1.3						
JTS	Las Juntas de	8.78	116		Pn	22 19 22.7	+0.7
JTS	Las Juntas de	8.78	116	c iP	Pn	22 19 24.4	+2.4
CEDE	Laguna Cedeo	8.92	114	eP	Pn	22 19 28.4	+4.5
MOIG	Morelia	9.52	306		Pn	22 19 29.7	-2.6
HDC	Heredia	9.65	115		Pn	22 19 34.3	+0.3
HDC	Heredia	9.65	115	eP	Pn	22 19 40.5	+6.6
LCR2	La Lucha 2	9.87	116	eP	Pn	22 19 40.4	+3.4
EDDO	Dominical	10.22	118	eP	Pn	22 19 44.6	+3.0
ICCO	Coco Island	10.44	145	eP	Pn	22 19 48.6	+4.0
EDPN	Palmar Norte	10.71	118	eP	Pn	22 19 53.1	+4.7
EDBA	Buenos Aires	10.77	117	eP	Pn	22 19 53.0	+3.7
PTJ1	Puerto Jimnez	11.06	120	eP	Pn	22 19 58.6	+5.4
BRU2	Volcan	11.45	117	eP	Pn	22 20 01.4	+2.7
ZAIG	Zacatecas	12.42	314		Pn	22 20 08.9	-3.1
CBCY	The Bluff, Cay	13.78	65		Pn	22 20 29.9	-0.5
BCIP	Isla Barro Col	13.83	110	eP	Pn	22 20 31.5	+0.4
AZU	Azuero	14.03	116	eP	Pn	22 20 33.8	0.0
PAYG	Puerto Ayora	15.06	170		Pn	22 20 45.8	-2.0
PAYG				IAmb	IAmb	22 21 05.2	
	comp=Z,353nm,1.3s						
MCJ	Malvern	15.16	74	⇓iP	P	22 20 56.9	+3.0
833A	Chaparral WMA,	15.22	338		Pn	22 20 48.3	-1.5
833A				IAmb	IAmb	22 21 05.4	
	comp=Z,199nm,0.8s						
833A	Chaparral WMA,	15.22	338	P	Pn	22 20 50.0	+0.2
	baz=155,SNR=56						
MTDJ	Mount Denham	15.36	73	Pn	Pn	22 20 52.0	+0.2
MTDJ				IAmb	IAmb	22 21 09.9	
	comp=Z,338nm,0.9s						
BBJ	Bamboo Saint A	15.64	73	⇓iP	P	22 21 01.6	+2.3
HKT	Hockley	15.85	351		Pn	22 20 58.1	+0.2
HKT	Hockley	15.85	351	P	Pn	22 20 58.1	+0.2
HKT				pmax	pmax		
	comp=Z,20nm,0.9s						
STH	Stony Hill	16.00	74	⇓iP	P	22 21 03.2	0.0
HOJ	Hope	16.05	74	i P	P	22 21 11.5	+7.9
061Z	Ochoppi	16.19	43	Pn	Pn	22 21 02.2	-0.1
CAPC	Capurgana	16.31	108	eP	P	22 21 06.8	+0.3
441A	DeRidder	16.43	359	IAmb	IAmb	22 21 19.3	
	comp=Z,414nm,1.1s						
435B	Jarrell	17.00	346	IAmb	IAmb	22 21 25.3	
	comp=Z,191nm,0.9s						
435B	Jarrell	17.00	346	P	Pn	22 21 12.3	-0.1
	baz=164,SNR=29						
342A	Flagon Creek P	17.06	2	IAmb	IAmb	22 21 27.3	
	comp=Z,281nm,0.9s						
LCBC	Los crdobas,	17.14	106	eP	Pn	22 21 14.4	0.0
SOLC	Bahia Solano	17.27	116	eP	P	22 21 17.9	+0.6
JCT	Junction City	17.33	340	P	Pn	22 21 16.0	-0.7
JCT	Junction City	17.33	340	P	Pn	22 21 16.0	-0.7
JCT				pmax	pmax		
	comp=Z,125nm,0.8s						
JCT	Junction City	17.33	340	P	Pn	22 21 17.0	+0.3
	baz=157,SNR=52						
346A	Big Creek Wild	17.37	10	IAmb	IAmb	22 21 33.5	
	comp=Z,214nm,0.8s						
DWPF	Disney Wildern	17.49	36	P	P	22 21 20.1	+0.6
DWPF	Disney Wildern	17.49	36	P	Pn	22 21 17.5	-1.1
	baz=220						
NATX	Nacogdoches	17.50	355	P	Pn	22 21 19.1	+0.4
	baz=174,SNR=8.6						
451A	Vernon	17.61	21	IAmb	IAmb	22 21 27.9	
	comp=Z,598nm,1.1s						
BRAL	Brewton	17.71	17	P	Pn	22 21 21.1	-0.2
BRAL	Brewton	17.71	17	P	P	22 21 22.6	+0.7
	baz=199						
553A	Crawfordville	17.72	25	IAmb	IAmb	22 21 34.5	
	comp=Z,474nm,1.1s						
H06E1	SOCORRO T-PHAS	17.77	287	T	T	22 39 33.7	
H06S1	SOCORRO T	17.79	287	T	T	22 39 28.0	
	baz=103						
237A	Washetta, Mont	17.86	352	IAmb	IAmb	22 21 37.9	
	comp=Z,237nm,1.1s						
656A	Willston	17.89	31	IAmb	IAmb	22 21 43.1	
	comp=Z,373nm,0.9s						
SJCC	San Jacinto, C	17.94	102	eP	Pn	22 21 19.9	-4.5
PIZC	Pizarro, Choco	17.95	119	eP	P	22 21 26.1	+1.4
TXAR	Lajitas Array	17.97	328	P	P	22 21 27.1	+2.1
	comp=Z,0.5nm,0.3s,baz=148,slow=12,SNR=124						
TXAR				S	S	22 24 54.4	+4.7
	baz=146,slow=36,SNR=0.7						
TXAR				LR	LR	22 28 45.5	
	comp=Z,3µm,20.8s,baz=0.0,slow=38						
TX31	Lajitas Ar. Si	17.98	328	P	Pn	22 21 22.2	-2.5
TX32	Lajitas Array	17.98	328	IAmb	IAmb	22 21 40.2	
	comp=Z,292nm,1.1s						
DBBC	Dabeiba	17.98	112	eP	P	22 21 26.1	+0.9
GTBY	Guantanamo Bay	18.00	69	P	P	22 21 25.3	+0.1
GTBY				IAmb	IAmb	22 21 37.9	
	comp=Z,347nm,1.2s						
VBMS	Vicksburg	18.04	7	P	Pn	22 21 25.3	0.0
VBMS				IAmb	IAmb	22 21 40.9	
	comp=Z,290nm,0.8s						
VBMS	Vicksburg	18.04	7	P	P	22 21 25.5	0.0
	baz=188,SNR=11						
WHTX	Lake Whitney,	18.13	348	IAmb	IAmb	22 21 48.8	
	comp=Z,151nm,0.9s						
WHTX	Lake Whitney,	18.13	348	P	P	22 21 26.8	+0.2
	baz=166,SNR=8.5						
UREC	San Jos de Ur	18.31	109	eP	P	22 21 26.8	-1.9
GR1C	Gorgona, Isla	18.41	126	eP	Pn	22 21 30.2	+0.2
143A	Socs Landing,	18.43	4	IAmb	IAmb	22 21 36.6	
	comp=Z,406nm,1.1s						
SMRC	Santa Marta, M	18.56	97	eP	P	22 21 26.8	-4.7
CBOC	Ciudad Bolivar	18.67	115	eP	Pn	22 21 34.4	+1.1
250A	Grady	18.69	18	IAmb	IAmb	22 21 41.7	
	comp=Z,236nm,1.1s						
TUMC	Tumaco	18.74	130	eP	Pn	22 21 36.4	+2.5
ARGC	Ariguani, Magd	18.84	101	eP	P	22 21 30.9	-3.6
PLMC	San Jos del P	18.89	118	eP	P	22 21 35.1	-0.2
Z41A	Richland Creek	18.93	0	IAmb	IAmb	22 21 56.9	
	comp=Z,267nm,0.8s						
Z41A	Richland Creek	18.93	0	P	P	22 21 35.7	+0.3
	baz=180						
HELC	Santa Helena	18.95	113	eP	P	22 21 35.8	-0.3
Z38A	Mt. Pleasant	19.02	355	IAmb	IAmb	22 21 52.8	
	comp=Z,418nm,1.3s						
ZARC	Zaragoza, Cauc	19.02	109	eP	Pn	22 21 37.8	+0.3
LPIG	La Paz	19.05	304	P	Pn	22 21 40.5	+2.8
	comp=Z,2.9nm,0.3s,baz=189,slow=2.0,SNR=15						
LPIG				S	S	22 25 19.9	+8.7
	baz=11,slow=12,SNR=0.6						
LPIG				LR	LR	22 29 09.6	
	comp=Z,7µm,18.0s,baz=122,slow=37						
TIGA	Tifton	19.16	25	IAmb	IAmb	22 21 53.1	
	comp=Z,359nm,1.1s						
TIGA	Tifton	19.16	25	P	Pn	22 21 38.6	-0.5
	baz=209,SNR=26						
456A	Hilliard	19.26	30	IAmb	IAmb	22 21 51.3	
	comp=Z,275nm,1.1s						
ABTX	Abilene, Hawle	19.28	343	P	P	22 21 38.5	-0.7
ABTX				IAmb	IAmb	22 21 49.8	
	comp=Z,149nm,0.8s						
ABTX	Abilene, Hawle	19.28	343	P	Pn	22 21 40.5	+0.1
	baz=160,SNR=59						
SMLC	San Martn de	19.31	104	eP	P	22 21 37.1	-2.5
YOTC	Yotoco, Valle	19.32	120	eP	Pn	22 21 40.6	-0.6
LRAL	Lakeview Retre	19.49	15	IAmb	IAmb	22 21 50.9	
	comp=Z,195nm,1.0s						
GUY2C	Guyana, Caldas	19.53	116	eP	Pn	22 21 44.0	0.0
CODC	Agustn Codazz	19.59	100	eP	P	22 21 37.8	-4.9
BBAC	Balboa, Cauca	19.74	127	eP	P	22 21 44.7	+0.1
PTBC	PUERTO BERRIO,	19.76	111	eP	P	22 21 44.0	-0.6
NORC	Norcasia	19.81	114	eP	P	22 21 45.4	+0.2
152A	Waverly Hall	19.83	21	IAmb	IAmb	22 21 54.2	
	comp=Z,182nm,0.9s						
POPC	Popayan, Colom	19.87	124	eP	P	22 21 45.4	-0.7
Z50A	Ashland	19.99	18	IAmb	IAmb	22 21 55.8	
	comp=Z,207nm,1.1s						
Z50A	Ashland	19.99	18	P	P	22 21 46.9	-0.1
	baz=200,SNR=72						
OTAV	Otavalo	20.02	133	eP	P	22 21 45.4	-2.5
OTAV	Otavalo	20.02	133	P	P	22 21 47.2	-0.7
OTAV	Otavalo	20.02	133	P	P	22 21 47.2	-0.7
OTAV				pmax	pmax		
	comp=Z,27nm,1.0s						
OTAV				MLR	MLR		
	comp=Z,6µm,21.0s						
OTAV	Otavalo	20.02	133	eP	P	22 21 46.6	-1.3
X40A	Basin Creek Fa	20.16	0	P	P	22 21 48.5	-0.3
	baz=180,SNR=20						
SOTA	Rioblanco	20.17	125	eP	P	22 21 49.5	-0.1
OCAC	Ocana	20.19	105	eP	P	22 21 48.1	-1.3
BRRC	Barranca, Sant	20.22	109	eP	P	22 21 48.1	-1.5
MIAR	Mount Ida	20.22	359	P	P	22 21 49.1	-0.3
	baz=178,SNR=196						
PCON	Cinco Dias	20.22	124	eP	P	22 21 49.5	-0.7
Z51A	Franklin	20.27	19	IAmb	IAmb	22 22 03.0	
	comp=Z,148nm,1.1s						
Z51A				IAMs_20	IAMs_20	22 31 04.6	
	comp=Z,15µm,19.0s						
X43A	Marvell	20.28	5	P	P	22 21 49.5	-0.5
	baz=186,SNR=18						
ORTC	Ortega, Tolima	20.29	119	eP	P	22 21 50.2	-0.2
154A	Montrose	20.39	25	IAMs_20	IAMs_20	22 30 33.0	
	comp=Z,24µm,19.0s						
Y49A	Blount Mountai	20.42	16	IAmb	IAmb	22 22 10.6	
	comp=Z,153nm,1.1s						
OXF	Oxford	20.44	8	IAmb	IAmb	22 22 10.7	
	comp=Z,238nm,0.8s						
OXF	Oxford	20.44	8	P	P	22 21 50.3	-1.5
	baz=190,SNR=18						
UALR	University of	20.45	2	IAmb	IAmb	22 22 05.4	
	comp=Z,202nm,1.1s						
SPBC	San Pablo de B	20.48	113	eP	P	22 21 50.2	-2.4
URIC	Uribia, Colomb	20.62	95	eP	P	22 21 53.0	-1.0
URIC				eP	sP	22 22 04.7	-1.9
ROSC	El Rosal	20.63	115	P	P	22 21 55.5	+1.0
	comp=Z,106nm,0.9s,baz=348,slow=4.2,SNR=71						
ROSC	El Rosal	20.63	115	eP	Pn	22 21 55.7	-1.2
ROSC	El Rosal	20.63	115	P	Pn	22 21 56.2	-0.7
MNTX	Cornudas Mount	20.75	329	IAmb	IAmb	22 22 02.2	
	comp=Z,136nm,0.9s						
MNTX	Cornudas Mount	20.75	329	P	Pn	22 21 56.8	-1.0
	baz=144,SNR=110						
257A	Skidaway Islan	20.77	30	IAmb	IAmb	22 22 09.2	
	comp=Z,250nm,0.9s						
X48A	Hartselle	20.83	14	IAmb	IAmb	22 22 07.2	
	comp=Z,135nm,1.1s						
W41B	Gary Mavity, V	20.85	2	IAmb	IAmb	22 22 14.7	
	comp=Z,168nm,1.0s						
W41B	Gary Mavity, V	20.85	2	P	P	22 21 55.9	-0.4
	baz=182,SNR=63						
W39A	Magazine	20.88	358	IAmb	IAmb	22 22 09.7	
	comp=Z,210nm,1.1s						
W39A	Magazine	20.88	358	P	P	22 21 56.9	+0.3
	baz=178,SNR=87						
BARC	Barichara	20.90	109	eP	Pn	22 21 59.2	-0.7
GOGA	Godfrey	20.95	23	IAMs_20	IAMs_20	22 30 51.9	
	comp=Z,18µm,20.0s						
GOGA	Godfrey	20.95	23	P	P	22 21 57.2	-0.2
	baz=206,SNR=18						
GARC	Garzon, Huila	21.03	123	eP	P	22 21 58.5	-0.2
WMOK	Wichita Mounta	21.06	347	P	P	22 21 58.6	-0.1
	baz=164,SNR=31						
PAMC	Pamplona, Colo	21.07	107	eP	P	22 21 59.2	-0.2
PLAL	Pickwick Lake	21.12	11	IAmb	IAmb	22 22 10.6	
	comp=Z,200nm,1.1s						
Y52A	Lilburn	21.15	21	P	P	22 22 00.7	+1.2
Y52A				IAMs_20	IAMs_20	22 31 01.8	
	comp=Z,13µm,21.0s						
Y52A	Lilburn	21.15	21	P	P	22 21 59.1	-0.4
	baz=204,SNR=50						
CHIC	Chingaza	21.25	115	eP	P	22 22 01.2	+0.1
FLOC	Florencia	21.26	125	eP	P	22 22 02.6	+1.7
FLOC	Florencia	21.26	125	P	P	22 22 01.2	+0.3
RUSC	La Rusia	21.27	111	eP	P	22 21 59.2	-2.3
RUSC	La Rusia	21.27	111	P	P	22 22 01.5	0.0
FPAL	Fort Paine	21.28	17	IAmb	IAmb	22 22 13.0	
	comp=Z,200nm,1.1s						
FPAL				IAMs_20	IAMs_20	22 31 38.1	
	comp=Z,15µm,20.0s						
SDDR	Presa de Saban	21.32	74	P	P	22 22 03.1	+1.5
SDDR				IAmb	IAmb	22 22 21.4	
	comp=Z,78nm,0.8s						
157A	Early Branch	21.36	29	P	P	22 22 01.8	0.0
	baz=213,SNR=13						
X51A	Calhoun	21.53	19	IAmb	IAmb	22 22 15.7	
	comp=Z,195nm,1.0s						
X51A				IAMs_20	IAMs_20	22 31 43.8	
	comp=Z,12µm,20.0s						
X51A	Calhoun	21.53	19	P	P	22 22 02.4	-1.2
	baz=202,SNR=28						
MSTX	Muleshoe	21.55	337	P	P	22 22 04.4	+0.5
	baz=153,SNR=143						
FCAR	Ozark Folk Cen	21.57	2	IAmb	IAmb	22 22 16.0	
	comp=Z,155nm,1.0s						
TUL1	Leonard	21.72	354	IAmb	IAmb	22 22 10.8	
	comp=Z,149nm,0.8s						
TUL1	Leonard	21.72	354	P	P	22 22 04.4	-1.2
	baz=172,SNR=56						
Z56A	Williston	21.74	27	P	P	22 22 05.4	-0.4
	baz=212,SNR=8.8						
GNAR	Gosnell	21.79	7	P	P	22 22 06.3	-0.1
158A	Hollywood	21.80	30	P	P	22 22 06.1	-0.4
	baz=215						

LCAR	**Lake Charles**	**21.80**	**4**	IAmb	IAmb	22 22 19.0	
	comp=Z,154nm,1.0s						
SC01	**Santiago de lo**	**21.92**	**73**	IAmb	IAmb	22 22 23.3	
	comp=Z,259nm,1.1s						
HHAR	**Hobbs**	**21.96**	**358**	IAmb	IAmb	22 22 18.0	
	comp=Z,166nm,1.2s						
W50A	**Signal Mountai**	**21.98**	**17**	P	**P**	**22 22 07.0**	**-1.5**
	baz=200,SNR=23						
X53A	**Estanollee**	**21.99**	**22**	P	**P**	**22 22 08.0**	**-0.6**
	baz=206,SNR=38						
Z57A	**Bowman**	**22.01**	**28**	P	**P**	**22 22 08.4**	**-0.4**
	baz=213,SNR=14						
U40A	**Yellville**	**22.02**	**0**	IAmb	IAmb	22 22 26.5	
	comp=Z,101nm,1.0s						
U40A	**Yellville**	**22.02**	**0**	P	**P**	**22 22 08.4**	**-0.4**
	baz=180,SNR=51						
Y55A	**Saluda**	**22.05**	**25**	P	**P**	**22 22 08.3**	**-0.9**
	baz=210,SNR=13						
NHSC	**New Hope**	**22.10**	**30**	P	**P**	**22 22 09.8**	**0.0**
	baz=215,SNR=9.3						
U38A	**Gravette**	**22.14**	**357**	IAmb	IAmb	22 22 23.1	
	comp=Z,195nm,1.1s						
HODGE	**Hodges**	**22.15**	**24**	IAmb	IAmb	22 22 23.1	
	comp=Z,133nm,1.0s						
HODGE				IAMs_20	IAMs_20	22 31 36.5	
	comp=Z,24µm,19.0s						
Y56A	**Pelion**	**22.16**	**27**	P	**P**	**22 22 09.5**	**-0.9**
	baz=211						
SRIG	**Santa Rosalia**	**22.16**	**309**	IAmb	IAmb	22 22 17.1	
	comp=Z,118nm,1.0s						
HSIG		**22.20**	**314**	IAmb	IAmb	22 22 18.3	
	comp=Z,105nm,1.1s						
TAMC	**Tame, Arauca**	**22.24**	**108**	*e*P	**P**	**22 22 09.5**	**-1.9**
WVT	**Waverly**	**22.28**	**11**	P	**P**	**22 22 11.6**	**0.0**
WVT				IAmb	IAmb	22 22 26.9	
	comp=Z,129nm,1.1s						
WVT	**Waverly**	**22.28**	**11**	P	**P**	**22 22 11.6**	**0.0**
WVT				pmax	pmax		
	comp=Z,129nm,1.1s						
WVT	**Waverly**	**22.28**	**11**	P	**P**	**22 22 09.0**	**-2.6**
	baz=193						
W52A	**Murphy**	**22.31**	**20**	P	**P**	**22 22 11.2**	**-0.8**
	baz=204						
X54A	**Belton**	**22.38**	**24**	P	**P**	**22 22 12.0**	**-0.7**
	baz=208,SNR=13						
MACC	**Macarena, Meta**	**22.41**	**121**	*e*P	**P**	**22 22 12.3**	**-1.0**
CPCT	**Cooper Cave**	**22.45**	**18**	IAmb	IAmb	22 22 26.9	
	comp=Z,161nm,1.2s						
Z58A	**St. Stephen**	**22.47**	**30**	P	**P**	**22 22 13.1**	**-0.5**
	baz=215,SNR=15						
SDV	**Santo Domingo**	**22.54**	**101**	P	**P**	**22 22 14.7**	**-0.1**
	comp=Z,24nm,0.6s,baz=12,slow=5.3,SNR=3.1						
SDV				PcP	**PcP**	**22 26 08.0**	**0.0**
	comp=Z,8.1nm,0.8s,baz=281,slow=10,SNR=2.1						
SDV				LR	LR	22 32 58.7	
	comp=Z,8µm,19.3s,baz=286,slow=42						
SDV	**Santo Domingo**	**22.54**	**101**	*e*P	**P**	**22 22 08.1**	**-6.7**
SDV	**Santo Domingo**	**22.54**	**101**	P	**P**	**22 22 14.7**	**-0.1**
SDV				IAmb	IAmb	22 22 26.0	
	comp=Z,84nm,0.7s						
SDV	**Santo Domingo**	**22.54**	**101**	*e*P	**P**	**22 22 13.4**	**-1.4**
PBMO	**Poplar Bluff**	**22.56**	**5**	IAmb	IAmb	22 22 18.0	
	comp=Z,90nm,0.8s						
BG3	**Lake Jocassee**	**22.56**	**22**	IAmb	IAmb	22 22 24.5	
	comp=Z,120nm,1.2s						
BG3				IAMs_20	IAMs_20	22 32 03.4	
	comp=Z,12µm,19.0s						
JSC	**Jenkinsville**	**22.60**	**26**	IAMs_20	IAMs_20	22 32 15.6	
	comp=Z,19µm,19.0s						
X55A	**Gracelyn & Ava**	**22.61**	**25**	P	**P**	**22 22 14.2**	**-0.9**
	baz=210,SNR=22						
Z59A	**Georgetown, SC**	**22.65**	**31**	P	**P**	**22 22 14.9**	**-0.7**
	baz=216						
121A	**Cookes Peak, D**	**22.66**	**326**	P	**P**	**22 22 18.5**	**+2.6**
	baz=140,SNR=356						
Y57A	**Sumter**	**22.76**	**28**	P	**P**	**22 22 16.0**	**-0.7**
	baz=213,SNR=11						
PTLC	**Puerto Leguiza**	**22.80**	**126**	*e*P	**P**	**22 22 18.5**	**+1.1**
T35A	**Sooner Cattle**	**22.80**	**353**	IAmb	IAmb	22 22 22.6	
	comp=Z,170nm,0.9s						
MGMO	**Mountain Grove**	**22.83**	**1**	IAmb	IAmb	22 22 33.8	
	comp=Z,154nm,1.1s						
V51A	**Loudon**	**22.83**	**18**	P	**P**	**22 22 16.1**	**-1.4**
	baz=202						
PAULI	**Pauline**	**22.84**	**24**	IAmb	IAmb	22 22 26.4	
	comp=Z,189nm,1.1s						
PAULI				IAMs_20	IAMs_20	22 32 06.5	
	comp=Z,25µm,19.0s						
PTGC	**Puerto Gaitan,**	**22.86**	**114**	*e*P	**P**	**22 22 15.7**	**-2.3**
TKL	**Tuckaleechee C**	**22.88**	**20**	P	**P**	**22 22 17.2**	**-0.8**
	comp=Z,22nm,0.8s,baz=190,slow=11,SNR=24						
TKL				S	**S**	**22 26 26.4**	**+0.9**
	comp=Z,6.6nm,0.7s,baz=300,slow=16,SNR=1.1						
TKL				LR	LR	22 32 57.0	
	comp=Z,11µm,18.4s,baz=202,slow=41						
TKL	**Tuckaleechee C**	**22.88**	**20**	P	**P**	**22 22 17.1**	**-0.9**
TKL				IAmb	IAmb	22 22 31.6	
	comp=Z,157nm,1.2s						
X56A	**White Oak**	**22.88**	**26**	P	**P**	**22 22 17.1**	**-0.9**
	baz=211,SNR=35						
W54A	**Cherokee Point**	**22.93**	**23**	P	**P**	**22 22 18.1**	**-0.3**
	baz=208,SNR=46						
Y58A	**Scranton**	**23.00**	**29**	P	**P**	**22 22 18.2**	**-1.0**
	baz=215,SNR=11						
DR12	**Loma Pena Alta**	**23.08**	**75**	P	**P**	**22 22 19.6**	**-0.7**
U49A	**Red Boiling Sp**	**23.10**	**15**	IAmb	IAmb	22 22 37.5	
	comp=Z,118nm,0.9s						
V52A	**Sevierville**	**23.10**	**20**	P	**P**	**22 22 19.1**	**-1.2**
	baz=204,SNR=20						
V53A	**Saluda**	**23.21**	**21**	P	**P**	**22 22 20.7**	**-0.7**
	baz=206,SNR=39						
T47A	**Sharon Grove**	**23.25**	**12**	IAmb	IAmb	22 22 31.1	
	comp=Z,90nm,1.1s						
X57A	**Johnson Farm,**	**23.27**	**28**	P	**P**	**22 22 20.8**	**-1.1**
	baz=213						
KMSC	**Kings Mountain**	**23.31**	**25**	IAmb	IAmb	22 22 32.5	
	comp=Z,229nm,1.1s						
KMSC	**Kings Mountain**	**23.31**	**25**	P	**P**	**22 22 21.5**	**-0.9**
	baz=210,SNR=47						
Y22D	**IRIS PASSCAL I**	**23.43**	**330**	P	**P**	**22 22 26.0**	**+2.3**
	baz=144,SNR=7.6						
Y59A	**Loris**	**23.45**	**31**	IAmb	IAmb	22 22 32.0	
	comp=Z,178nm,1.1s						
Y59A	**Loris**	**23.45**	**31**	P	**P**	**22 22 22.0**	**-1.7**
	baz=216,SNR=6.4						
S44A	**Carbondale**	**23.59**	**7**	IAmb	IAmb	22 22 42.3	
	comp=Z,141nm,0.8s						
W56A	**Indian Trail**	**23.62**	**26**	P	**P**	**22 22 24.2**	**-1.1**
	baz=211,SNR=19						
V54A	**Nebo**	**23.63**	**23**	P	**P**	**22 22 24.4**	**-1.0**
	baz=207,SNR=28						
X58A	**Rowland**	**23.69**	**29**	IAmb	IAmb	22 22 39.6	
	comp=Z,154nm,1.1s						
X58A	**Rowland**	**23.69**	**29**	P	**P**	**22 22 24.8**	**-1.2**
	baz=214,SNR=7.8						
T49A	**Edmonton**	**23.72**	**15**	IAmb	IAmb	22 22 38.9	
	comp=Z,80nm,1.1s						
T49A	**Edmonton**	**23.72**	**15**	P	**P**	**22 22 23.9**	**-2.4**
	baz=198,SNR=15						
TZTN	**Tazewell**	**23.76**	**19**	IAmb	IAmb	22 22 38.1	
	comp=Z,74nm,1.0s						
TZTN	**Tazewell**	**23.76**	**19**	P	**P**	**22 22 25.1**	**-1.6**
	baz=203						
CCM	**Cathedral Cave**	**23.77**	**3**	P	**P**	**22 22 25.1**	**-1.6**
CCM				IAmb	IAmb	22 22 35.4	
	comp=Z,114nm,0.9s						
CCM	**Cathedral Cave**	**23.77**	**3**	P	**P**	**22 22 25.1**	**-1.6**
CCM				pmax	pmax		
	comp=Z,114nm,0.9s						
CCM	**Cathedral Cave**	**23.77**	**3**	P	**P**	**22 22 24.9**	**-1.8**
	baz=184						
Y60A	**Bolivia**	**23.80**	**32**	IAMs_20	IAMs_20	22 32 21.6	
	comp=Z,23µm,19.0s						
Y60A	**Bolivia**	**23.80**	**32**	P	**P**	**22 22 25.5**	**-1.6**
	baz=218						
T50A	**Nancy**	**23.82**	**16**	P	**P**	**22 22 25.4**	**-1.8**
	baz=200,SNR=12						
W57A	**Gilead**	**23.89**	**27**	IAmb	IAmb	22 22 41.7	
	comp=Z,160nm,1.1s						
W57A	**Gilead**	**23.89**	**27**	P	**P**	**22 22 26.6**	**-1.3**
	baz=212,SNR=9.7						
U53A	**Fall Branch**	**23.92**	**21**	P	**P**	**22 22 27.1**	**-1.1**
	baz=205,SNR=37						
ANMO	**Albuquerque**	**23.92**	**332**	P	**P**	**22 22 30.2**	**+1.8**
	comp=Z,43nm,0.8s,baz=150,slow=12,SNR=91						
ANMO				S	**S**	**22 26 46.8**	**+3.8**
	comp=Z,2.2nm,0.8s,baz=225,slow=9.4,SNR=0.9						
ANMO				LR	LR	22 33 08.8	
	comp=Z,5µm,19.1s,baz=138,slow=40						
ANMO	**Albuquerque**	**23.92**	**332**	P	**P**	**22 22 28.4**	**0.0**
ANMO				IAmb	IAmb	22 22 42.0	
	comp=Z,94nm,1.1s						
ANMO	**Albuquerque**	**23.92**	**332**	*ce*P	**P**	**22 22 30.3**	**+1.8**
ANMO				pmax	pmax		
	comp=Z,40nm,0.8s						
ANMO	**Albuquerque**	**23.92**	**332**	P	**P**	**22 22 30.3**	**+1.8**
	baz=146						
V55A	**Taylorsville**	**23.98**	**24**	IAmb	IAmb	22 22 39.6	
	comp=Z,88nm,0.9s						
V55A				IAMs_20	IAMs_20	22 32 50.9	
	comp=Z,25µm,19.0s						
V55A	**Taylorsville**	**23.98**	**24**	P	**P**	**22 22 27.9**	**-0.8**
	baz=209,SNR=24						
T51A	**Gray**	**24.03**	**18**	P	**P**	**22 22 27.8**	**-1.4**
	baz=202,SNR=16						
X59A	**McDuffie Farm,**	**24.06**	**30**	P	**P**	**22 22 28.0**	**-1.4**
	baz=216						
USIN	**University of**	**24.09**	**10**	IAmb	IAmb	22 22 46.8	
	comp=Z,71nm,0.9s						
W58A	**Raeford**	**24.12**	**29**	P	**P**	**22 22 28.9**	**-1.2**
	baz=214,SNR=18						
V56A	**Mocksville**	**24.23**	**25**	P	**P**	**22 22 30.0**	**-1.0**
	baz=210,SNR=16						
TUC	**Tucson**	**24.23**	**321**	P	**P**	**22 22 30.6**	**-0.6**
TUC				IAmb	IAmb	22 22 36.1	
	comp=Z,198nm,1.1s						
TUC	**Tucson**	**24.23**	**321**	P	**P**	**22 22 30.7**	**-0.6**
TUC				pmax	pmax		
	comp=Z,198nm,1.1s						
TUC				MLR	MLR		
	comp=Z,11µm,21.0s						
TUC	**Tucson**	**24.23**	**321**	P	**P**	**22 22 33.4**	**+2.1**
	baz=134						
U54A	**Nelsons Funny**	**24.33**	**22**	IAMs_20	IAMs_20	22 32 58.3	
	comp=Z,20µm,20.0s						
U54A	**Nelsons Funny**	**24.33**	**22**	P	**P**	**22 22 31.0**	**-1.1**
	baz=207,SNR=38						
X60A	**Albert Glenn T**	**24.37**	**31**	P	**P**	**22 22 30.9**	**-1.4**
	baz=217						
S49A	**Springfield**	**24.43**	**15**	P	**P**	**22 22 29.8**	**-3.1**
	baz=198						
T52A	**Hallie**	**24.46**	**20**	IAmb	IAmb	22 22 51.6	
	comp=Z,70nm,1.1s						
T52A	**Hallie**	**24.46**	**20**	P	**P**	**22 22 31.3**	**-1.8**
	baz=204,SNR=11						
T53A	**Wise**	**24.49**	**21**	P	**P**	**22 22 32.0**	**-1.5**
	baz=205,SNR=7.2						
S50A	**Richmond**	**24.56**	**17**	P	**P**	**22 22 31.9**	**-2.2**
	baz=200,SNR=8.3						
V57A	**Coltrane Farms**	**24.60**	**26**	P	**P**	**22 22 33.0**	**-1.4**
	baz=212,SNR=39						
U55A	**TA2, Sparta**	**24.61**	**24**	P	**P**	**22 22 33.4**	**-1.2**
	baz=209,SNR=38						
W59A	**Clinton**	**24.61**	**30**	P	**P**	**22 22 33.2**	**-1.3**
	baz=216						
WCI	**Wyandotte Cave**	**24.62**	**13**	P	**P**	**22 22 33.2**	**-1.4**
WCI				IAmb	IAmb	22 22 50.5	
	comp=Z,75nm,0.8s						
WCI	**Wyandotte Cave**	**24.62**	**13**	IAMs_20	IAMs_20	22 34 00.2	
	comp=Z,12µm,21.0s						
WCI	**Wyandotte Cave**	**24.62**	**13**	P	**P**	**22 22 33.2**	**-1.4**
WCI				pmax	pmax		
	comp=Z,75nm,0.9s						
WCI				MLR	MLR		
	comp=Z,12µm,21.0s						
WCI	**Wyandotte Cave**	**24.62**	**13**	P	**P**	**22 22 32.9**	**-1.7**
	baz=196						
U56A	**King**	**24.74**	**25**	IAmb	IAmb	22 22 45.0	
	comp=Z,133nm,1.1s						
U56A	**King**	**24.74**	**25**	P	**P**	**22 22 34.5**	**-1.2**
	baz=210,SNR=20						
S51A	**Beattyville**	**24.75**	**18**	IAmb	IAmb	22 22 53.2	
	comp=Z,128nm,0.9s						
S51A	**Beattyville**	**24.75**	**18**	P	**P**	**22 22 34.5**	**-1.3**
	baz=202,SNR=16						
OLIL	**Olney**	**24.77**	**9**	IAmb	IAmb	22 22 52.6	
	comp=Z,62nm,0.8s						
V58A	**Windy Hill, Pi**	**24.82**	**28**	IAmb	IAmb	22 22 37.4	
	comp=Z,115nm,0.8s						
V58A	**Windy Hill, Pi**	**24.82**	**28**	P	**P**	**22 22 35.4**	**-1.0**
	baz=213,SNR=40						
W60A	**Pink Hill**	**24.88**	**31**	P	**P**	**22 22 36.1**	**-0.9**
	baz=217,SNR=6.3						
T54A	**Tazewell**	**24.90**	**22**	P	**P**	**22 22 36.1**	**-1.2**
	baz=207,SNR=22						
R49A	**Shelbyville**	**24.93**	**15**	IAmb	IAmb	22 22 52.9	
	comp=Z,56nm,1.0s						
R49A				IAMs_20	IAMs_20	22 34 16.9	
	comp=Z,16µm,19.0s						
R49A	**Shelbyville**	**24.93**	**15**	P	**P**	**22 22 35.6**	**-1.8**
	baz=198						
CNNC	**Cliffs of the**	**24.94**	**30**	IAmb	IAmb	22 22 38.5	
	comp=Z,80nm,0.9s						
CNNC	**Cliffs of the**	**24.94**	**30**	P	**P**	**22 22 37.0**	**-0.5**
	baz=217						
S52A	**Salyersville**	**24.95**	**19**	P	**P**	**22 22 36.5**	**-1.1**
	baz=203,SNR=9.3						
KSU1	**Kansas State U**	**24.96**	**353**	P	**P**	**22 22 37.1**	**-0.6**
	baz=172						
T25A	**Trinidad**	**24.97**	**338**	P	**P**	**22 22 40.4**	**+2.3**
	baz=153,SNR=334						
BAUV	**El Baul**	**24.99**	**99**	*e*P	**P**	**22 22 35.3**	**-2.9**
R50A	**Paris**	**25.14**	**16**	IAmb	IAmb	22 22 57.6	
	comp=Z,85nm,1.1s						
R50A				IAMs_20	IAMs_20	22 34 09.3	
	comp=Z,11µm,20.0s						
R50A	**Paris**	**25.14**	**16**	P	**P**	**22 22 41.0**	**+1.6**
	baz=200						
CBKS	**Cedar Bluff**	**25.19**	**348**	P	**P**	**22 22 40.2**	**+0.4**
	baz=164						
V59A	**Middlesex**	**25.20**	**29**	P	**P**	**22 22 38.7**	**-1.1**
	baz=215,SNR=31						
T55A	**Pulaski**	**25.25**	**23**	P	**P**	**22 22 39.2**	**-1.2**
	baz=208,SNR=11						
U57A	**Blanch**	**25.25**	**27**	P	**P**	**22 22 39.5**	**-0.8**
	baz=212,SNR=32						
S53A	**Williamson**	**25.26**	**21**	P	**P**	**22 22 38.7**	**-1.8**
	baz=205,SNR=12						
214A	**Organ Pipe Nat**	**25.28**	**318**	IAmb	IAmb	22 22 45.9	
	comp=Z,67nm,1.1s						
214A				IAMs_20	IAMs_20	22 32 49.4	
	comp=Z,12µm,20.0s						
214A	**Organ Pipe Nat**	**25.28**	**318**	P	**P**	**22 22 43.1**	**+2.3**
	baz=130,SNR=32						
W61A	**Ground Anchor**	**25.34**	**32**	P	**P**	**22 22 39.9**	**-1.2**
	baz=218						
X18A	**Snowflake**	**25.35**	**326**	IAmb	IAmb	22 22 47.9	
	comp=Z,96nm,1.0s						
R51A	**Hillsboro**	**25.37**	**17**	P	**P**	**22 22 40.2**	**-1.2**
	baz=202,SNR=8.6						
Q48A	**North Vernon**	**25.41**	**13**	P	**P**	**22 22 41.5**	**-0.2**
	baz=196						
T56A	**Rocky Mt**	**25.47**	**25**	P	**P**	**22 22 41.5**	**-0.8**
	baz=210,SNR=12						
BLA	**Blacksburg**	**25.47**	**24**	IAmb	IAmb	22 23 00.1	
	comp=Z,98nm,1.0s						
BLA				IAMs_20	IAMs_20	22 33 56.5	
	comp=Z,23µm,19.0s						
BLA	**Blacksburg**	**25.47**	**24**	P	**P**	**22 22 41.6**	**-0.8**
	baz=209,SNR=8.1						
BLO	**Bloomington**	**25.48**	**12**	IAMs_20	IAMs_20	22 34 30.4	
	comp=Z,10µm,22.0s						
P43A	**Skaggs, Pawnee**	**25.48**	**6**	IAmb	IAmb	22 22 56.6	
	comp=Z,75nm,1.1s						
U58A	**Oxford**	**25.57**	**28**	P	**P**	**22 22 41.9**	**-1.3**
	baz=214,SNR=9.6						
OBIP	**Obispado Ponce**	**25.62**	**78**	IAMs_20	IAMs_20	22 33 46.4	
	comp=Z,12µm,20.0s						
S54A	**Dingess, Beckl**	**25.65**	**22**	IAmb	IAmb	22 23 01.4	
	comp=Z,81nm,1.2s						
S54A				IAMs_20	IAMs_20	22 33 49.2	
	comp=Z,20µm,19.0s						
S54A	**Dingess, Beckl**	**25.65**	**22**	P	**P**	**22 22 43.6**	**-0.5**
	baz=207,SNR=14						
V60A	**Jim Taylor Roa**	**25.67**	**31**	IAmb	IAmb	22 23 03.2	
	comp=Z,138nm,1.1s						
V60A	**Jim Taylor Roa**	**25.67**	**31**	P	**P**	**22 22 42.8**	**-1.3**
	baz=217						
Q49A	**Aurora**	**25.68**	**15**	P	**P**	**22 22 43.0**	**-1.2**
	baz=198						
W18A	**Petrified Fore**	**25.68**	**327**	IAmb	IAmb	22 22 55.6	
	comp=Z,72nm,1.1s						
W18A	**Petrified Fore**	**25.68**	**327**	P	**P**	**22 22 47.2**	**+2.7**
	baz=140,SNR=28						
R52A	**Catlettsburg**	**25.69**	**19**	P	**P**	**22 22 44.0**	**-0.3**
	baz=204,SNR=8.3						
ATAH	**Atahualpa**	**25.71**	**145**	P	**P**	**22 22 46.5**	**+1.3**
	comp=Z,8.8nm,0.9s,baz=333,slow=9.2,SNR=6.5						
ATAH				S	**S**	**22 27 15.5**	**+3.3**
	comp=Z,2.9nm,0.6s,baz=113,slow=22,SNR=0.9						
ATAH				LR	LR	22 31 24.7	
	comp=Z,8µm,19.8s,baz=319,slow=33						
T57A	**Hurt**	**25.76**	**26**	P	**P**	**22 22 44.5**	**-0.5**
	baz=212,SNR=15						
Q50A	**Georgetown**	**25.77**	**16**	P	**P**	**22 22 43.9**	**-1.1**
	baz=200						
P46A	**Rosedale**	**25.78**	**10**	IAmb	IAmb	22 22 53.0	
	comp=Z,70nm,0.8s						
U59A	**Littleton**	**25.88**	**29**	P	**P**	**22 22 45.1**	**-0.9**
	baz=215,SNR=7.9						
R53A	**Hurricane**	**25.91**	**20**	IAMs_20	IAMs_20	22 34 00.9	
	comp=Z,16µm,20.0s						
R53A	**Hurricane**	**25.91**	**20**	P	**P**	**22 22 46.0**	**-0.3**
	baz=205,SNR=8.9						
SDCO	**Great Sand Dun**	**25.91**	**337**	P	**P**	**22 22 48.7**	**+2.1**
	baz=151,SNR=373						
S55A	**Lewisburg**	**25.93**	**23**	P	**P**	**22 22 46.0**	**-0.5**
	baz=208						
P48A	**Milroy**	**25.99**	**13**	IAMs_20	IAMs_20	22 34 50.8	
	comp=Z,11µm,21.0s						
P48A	**Milroy**	**25.99**	**13**	P	**P**	**22 22 45.6**	**-1.4**
	baz=197,SNR=9.8						
V61A	**Roper**	**26.03**	**32**	IAMs_20	IAMs_20	22 33 49.8	
	comp=Z,23µm,19.0s						
V61A	**Roper**	**26.03**	**32**	P	**P**	**22 22 46.5**	**-0.8**
	baz=218						
T58A	**Grand View Acr**	**26.03**	**27**	P	**P**	**22 22 46.5**	**-0.9**
	baz=213,SNR=13						
SJG	**San Juan**	**26.05**	**78**	P	**P**	**22 22 47.7**	**-0.1**
	comp=Z,7.6nm,0.5s,baz=252,slow=7.4,SNR=4.8						
SJG				PcP	**PcP**	**22 26 15.4**	**+0.1**
	comp=Z,12nm,0.8s,baz=262,slow=7.1,SNR=4.5						
SJG				LR	LR	22 33 16.7	
	comp=Z,7µm,20.5s,baz=266,slow=37						
SJG	**San Juan**	**26.05**	**78**	P	**P**	**22 22 47.3**	**-0.5**
SJG					**PcP**	**22 26 15.0**	**-0.3**
SJG	**San Juan**	**26.05**	**78**	IAMs_20	IAMs_20	22 32 21.0	
	comp=Z,12µm,22.0s						
KSCO	**Kaye Shedlock'**	**26.09**	**343**	P	**P**	**22 22 49.8**	**+1.7**
	baz=158,SNR=35						
X16A	**Lo Mia Camp, P**	**26.11**	**324**	IAmb	IAmb	22 23 00.1	
	comp=Z,78nm,1.1s						
X16A				IAMs_20	IAMs_20	22 34 40.0	
	comp=Z,12µm,18.0s						
R54A	**Victor**	**26.11**	**22**	P	**P**	**22 22 48.0**	**-0.1**
	baz=207						
Q51A	**Peebles**	**26.11**	**17**	IAmb	IAmb	22 23 02.0	
	comp=Z,63nm,0.8s						
Q51A	**Peebles**	**26.11**	**17**	P	**P**	**22 22 47.6**	**-0.6**
	baz=202,SNR=22						
S56A	**Natural Bridge**	**26.21**	**25**	P	**P**	**22 22 48.4**	**-0.7**
	baz=210,SNR=7.4						
P49A	**Miami Univ. Ec**	**26.22**	**15**	P	**P**	**22 22 48.3**	**-0.8**
	baz=198						
U60A	**Pendleton**	**26.28**	**30**	P	**P**	**22 22 48.7**	**-0.9**
	baz=216,SNR=14						
Q52A	**Bidwell**	**26.38**	**19**	P	**P**	**22 22 50.2**	**-0.3**
	baz=204,SNR=5.5						
HDIL	**Hopedale**	**26.41**	**6**	IAmb	IAmb	22 22 53.5	
	comp=Z,70nm,0.9s						
HDIL	**Hopedale**	**26.41**	**6**	P	**P**	**22 22 50.9**	**+0.1**
	baz=188,SNR=5.9						
113A	**Mohawk Valley,**	**26.42**	**318**	IAmb	IAmb	22 23 02.5	
	comp=Z,112nm,1.2s						
113A				IAMs_20	IAMs_20	22 33 12.6	
	comp=Z,11µm,20.0s						
N41A	**Harden Midland**	**26.43**	**4**	IAmb	IAmb	22 23 06.5	
	comp=Z,61nm,0.8s						
S22A	**4UR Ranch, Cre**	**26.44**	**335**	P	**P**	**22 22 54.3**	**+2.8**
	baz=148,SNR=252						
T59A	**Double "B" Far**	**26.50**	**29**	IAmb	IAmb	22 22 52.5	
	comp=Z,96nm,0.9s						
T59A	**Double "B" Far**	**26.50**	**29**	P	**P**	**22 22 50.7**	**-0.9**
	baz=215,SNR=25						
U61A	**Possum Corner**	**26.52**	**31**	IAmb	IAmb	22 22 56.8	
	comp=Z,77nm,1.0s						
U61A	**Possum Corner**	**26.52**	**31**	P	**P**	**22 22 51.3**	**-0.5**
	baz=218						
R55A	**Marlinton**	**26.52**	**23**	IAmb	IAmb	22 23 07.4	
	comp=Z,66nm,1.1s						
R55A				IAMs_20	IAMs_20	22 34 49.3	
	comp=Z,20µm,18.0s						
R55A	**Marlinton**	**26.52**	**23**	P	**P**	**22 22 51.8**	**-0.2**
	baz=209,SNR=9.9						
Q53A	**Leroy**	**26.53**	**20**	P	**P**	**22 22 51.7**	**-0.2**
	baz=205,SNR=9.5						
P50A	**Jamestown**	**26.53**	**16**	P	**P**	**22 22 50.8**	**-1.1**
	baz=200,SNR=5.2						
S57A	**Dark Hollow, R**	**26.54**	**25**	P	**P**	**22 22 51.1**	**-0.8**
	baz=212						
SFIN	**Lafayette**	**26.54**	**10**	P	**P**	**22 22 51.5**	**-0.4**
	baz=193						
P51A	**Williamsport**	**26.62**	**17**	IAmb	IAmb	22 23 07.3	
	comp=Z,55nm,1.1s						
P51A				IAMs_20	IAMs_20	22 35 06.4	
	comp=Z,10µm,18.0s						
P51A	**Williamsport**	**26.62**	**17**	P	**P**	**22 22 52.5**	**-0.2**
	baz=202						
Y14A	**Wickenburg**	**26.70**	**321**	IAmb	IAmb	22 23 04.9	
	comp=Z,85nm,1.1s						
Y14A				IAMs_20	IAMs_20	22 33 49.4	
	comp=Z,10µm,20.0s						
MVCO	**Mesa Verde**	**26.72**	**332**	P	**P**	**22 22 56.6**	**+2.7**
	baz=145,SNR=127						
S58A	**Poland Farm, P**	**26.80**	**27**	IAmb	IAmb	22 22 55.1	
	comp=Z,50nm,0.9s						
S58A	**Poland Farm, P**	**26.80**	**27**	P	**P**	**22 22 53.4**	**-0.9**
	baz=214,SNR=14						
O48A	**Farmland**	**26.81**	**13**	P	**P**	**22 22 54.8**	**+0.4**
	baz=197,SNR=12						
Q24A	**Divide**	**26.86**	**339**	P	**P**	**22 22 57.2**	**+1.9**
	baz=153						
WUAZ	**Wupatki**	**26.86**	**325**	IAmb	IAmb	22 23 02.0	
	comp=Z,72nm,0.9s						
WUAZ				IAMs_20	IAMs_20	22 35 05.3	
	comp=Z,9µm,20.0s						
WUAZ	**Wupatki**	**26.86**	**325**	P	**P**	**22 22 57.6**	**+2.4**
	baz=137,SNR=55						
Q54A	**Coxs Mills**	**26.88**	**21**	IAmb	IAmb	22 23 02.6	
	comp=Z,39nm,0.6s						
Q54A				IAMs_20	IAMs_20	22 34 27.6	
	comp=Z,18µm,20.0s						
Q54A	**Coxs Mills**	**26.88**	**21**	P	**P**	**22 22 54.4**	**-0.6**
	baz=207,SNR=11						
R56A	**Bull Pasture M**	**26.91**	**24**	P	**P**	**22 22 55.0**	**-0.4**
	baz=210						
O49A	**Covington**	**26.94**	**15**	IAMs_20	IAMs_20	22 35 27.7	
	comp=Z,15µm,19.0s						
O49A	**Covington**	**26.94**	**15**	P	**P**	**22 22 56.9**	**+1.4**
	baz=199,SNR=6.7						
T60A	**Surry**	**27.02**	**30**	IAmb	IAmb	22 22 57.3	
	comp=Z,118nm,0.8s						
T60A	**Surry**	**27.02**	**30**	P	**P**	**22 22 55.6**	**-0.7**
	baz=216,SNR=8.4						
P52A	**Corning**	**27.04**	**19**	P	**P**	**22 22 56.2**	**-0.2**
	baz=204						
O50A	**Cable**	**27.08**	**16**	P	**P**	**22 22 58.1**	**+1.3**
	baz=200						
P53A	**Whipple**	**27.14**	**20**	IAMs_20	IAMs_20	22 34 49.4	
	comp=Z,19µm,20.0s						
P53A	**Whipple**	**27.14**	**20**	P	**P**	**22 22 58.4**	**+1.0**
	baz=205						
Q55A	**Buckhannon**	**27.16**	**22**	P	**P**	**22 22 57.1**	**-0.5**
	baz=208						
R58B	**Mineral**	**27.17**	**27**	P	**P**	**22 22 56.9**	**-0.7**
	baz=213,SNR=12						
R57A	**Stanardsville**	**27.17**	**26**	P	**P**	**22 22 56.7**	**-1.0**
	baz=212,SNR=9.3						
STVI	**Saint Thomas**	**27.21**	**78**	P	**P**	**22 22 57.7**	**-0.5**
STVI				IAmb	IAmb	22 23 17.1	
	comp=Z,71nm,1.4s						
S59A	**Mechanicsville**	**27.26**	**28**	P	**P**	**22 22 57.9**	**-0.5**
	baz=215						
N47A	**Urbana**	**27.29**	**12**	IAMs_20	IAMs_20	22 35 44.4	
	comp=Z,11µm,21.0s						
N47A	**Urbana**	**27.29**	**12**	P	**P**	**22 22 59.2**	**+0.5**
	baz=195,SNR=7.9						
GLA	**Glamis**	**27.30**	**317**	IAmb	IAmb	22 23 10.4	
	comp=Z,124nm,1.1s						
GLA				IAMs_20	IAMs_20	22 33 46.6	
	comp=Z,9µm,20.0s						
GLA	**Glamis**	**27.30**	**317**	P	**P**	**22 23 01.4**	**+2.5**
	baz=128,SNR=24						
ACSO	**Alum Creek Sta**	**27.34**	**17**	IAMs_20	IAMs_20	22 35 29.4	

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      comp=Z,9µm,19.0s
ACSO  Alum Creek Sta   27.34  17   P        P        22 22 59.3 +0.1
      baz=201
O51A  Pataskala        27.36  17   P        P        22 22 59.5 +0.1
      baz=202
R58A  Rapidan          27.39  26   P        P        22 22 58.9 -0.8
      baz=213,SNR=10
N48A  Decatur          27.41  13   P        P        22 22 58.4 -1.4
      baz=197,SNR=5.7
BGNE  Belgrade         27.43 352   IAmb     IAmb     22 23 20.4
      comp=Z,94nm,1.0s
BGNE  Belgrade         27.43 352   P        P        22 23 00.5 +0.4
      baz=169
S60A  Water View       27.51  29   P        P        22 23 00.1 -0.6
      baz=216
Y12C  Blythe           27.54 319   IAmb     IAmb     22 23 05.7
      comp=Z,60nm,1.1s
Y12C                               IAMs_20  IAMs_20  22 35 46.1
      comp=Z,11µm,19.0s
Y12C  Blythe           27.54 319   P        P        22 23 03.6 +2.6
      baz=130,SNR=27
Q56A  Snyder Ridge,    27.54  24   P        P        22 23 00.8 -0.2
      baz=210,SNR=6.1
P54A  Burton           27.55  21   P        P        22 23 00.5 -0.6
      baz=207,SNR=8.3
SCIA  State Center     27.56 360   IAmb     IAmb     22 23 03.4
      comp=Z,88nm,1.1s
SCIA  State Center     27.56 360   P        P        22 23 01.0 -0.1
      baz=179
O52A  Adamsville       27.57  19   IAmb     IAmb     22 23 18.4
      comp=Z,60nm,0.9s
O52A                               IAMs_20  IAMs_20  22 35 04.7
      comp=Z,11µm,20.0s
O52A  Adamsville       27.57  19   P        P        22 23 02.0 +0.8
      baz=204
CBN   Corbin Frederi   27.59  27   P        P        22 23 01.2 -0.2
      baz=214
PDMCI Parker Dam,Lak   27.65 320   P        P        22 23 04.5 +2.5
      baz=131,SNR=56
N49A  Columbus Grove   27.67  14   IAMs_20  IAMs_20  22 35 49.1
      comp=Z,13µm,20.0s
N49A  Columbus Grove   27.67  14   P        P        22 23 00.8 -1.3
      baz=198
R59A  King George, V   27.70  28   P        P        22 23 02.3 -0.1
      baz=215,SNR=7.2
P55A  Reedsville       27.70  22   P        P        22 23 02.1 -0.3
      baz=208
SMCO  Snowmass         27.73 336   IAmb     IAmb     22 23 18.7
      comp=Z,128nm,1.1s
OGNE  Ogallala         27.75 345   IAmb     IAmb     22 23 19.9
      comp=Z,82nm,0.9s
OGNE  Ogallala         27.75 345   P        P        22 23 04.7 +1.8
      baz=161
L40A  Anamosa          27.76   3   IAmb     IAmb     22 23 12.1
      comp=Z,89nm,1.1s
ISCO  Idaho Springs    27.77 339   IAmb     IAmb     22 23 17.4
      comp=Z,55nm,1.1s
ISCO  Idaho Springs    27.77 339   P        P        22 23 05.5 +2.2
      baz=153,SNR=51
M47A  Cromwell         27.77  12   P        P        22 23 03.3 +0.3
      baz=195
L42A  Oliver, Polo     27.81   5   IAmb     IAmb     22 23 06.0
      comp=Z,61nm,0.9s
MCWV  Mont Chateau     27.83  22   IAMs_20  IAMs_20  22 35 05.8
      comp=Z,9µm,19.0s
Q57A  Strasburg        27.84  25   P        P        22 23 03.3 -0.4
      baz=211,SNR=6.1
SWSC  Sam W. Stewart   27.88 316   P        P        22 23 06.9 +2.8
      baz=126,SNR=14
O53A  New Philadelph   27.89  20   P        P        22 23 04.7 +0.7
      baz=205
IKP   In-Ko-Pah, Jac   27.92 315   P        P        22 23 07.8 +3.3
      baz=126,SNR=11
PCRV  Puerto La Cruz   28.00  95   P        P        22 23 05.8 +0.4
      comp=Z,8.8nm,0.5s,baz=322,slow=3.6,SNR=10.0
W13A  Hualapai Mount   28.02 322   IAmb     IAmb     22 23 19.7
      comp=Z,64nm,1.1s
U15A  North Rim        28.04 325   IAmb     IAmb     22 23 26.6
      comp=Z,110nm,1.4s
U15A                               IAMs_20  IAMs_20  22 35 51.7
      comp=Z,8µm,19.0s
Q58A  Fox Den Farm,    28.07  26   P        P        22 23 05.2 -0.5
      baz=213
P56A  Dayton Farm, R   28.08  24   P        P        22 23 05.5 -0.3
      baz=210
BC3   Big Chuckawall   28.08 317   P        P        22 23 08.2 +2.2
      baz=128,SNR=70
M48A  Edgerton         28.08  13   IAMs_20  IAMs_20  22 36 14.8
      comp=Z,13µm,20.0s
M48A  Edgerton         28.08  13   P        P        22 23 05.3 -0.4
      baz=197
O54A  Avella           28.11  21   IAMs_20  IAMs_20  22 35 18.0
      comp=Z,20µm,20.0s
O54A  Avella           28.11  21   P        P        22 23 05.1 -0.9
      baz=206,SNR=9.3
N51A  Ashland          28.14  17   IAMs_20  IAMs_20  22 35 52.8
      comp=Z,10µm,19.0s
N51A  Ashland          28.14  17   P        P        22 23 07.2 +0.8
      baz=202
L44A  Lake County Fo   28.18   8   P        P        22 23 06.8 +0.2
      baz=190
IRM   Iron Mountain    28.19 319   P        P        22 23 09.7 +2.7
      baz=129,SNR=44
M49A  Liberty Center   28.24  14   P        P        22 23 07.8 +0.6
      baz=199
N52A  McGinn's Farm,   28.25  18   P        P        22 23 06.5 -0.8
      baz=204,SNR=8.6
NEE2  Needles Airpor   28.25 320   P        P        22 23 10.6 +3.2
      baz=131
L46A  Eue Claire       28.27  11   IAMs_20  IAMs_20  22 36 27.3
      comp=Z,10µm,22.0s
MONP2 Monument Peak    28.27 315   P        P        22 23 10.8 +2.9
      baz=126,SNR=8.5
P57A  Homestead Farm   28.39  25   IAmb     IAmb     22 23 10.1
      comp=Z,53nm,0.9s
P57A  Homestead Farm   28.39  25   P        P        22 23 08.6 +0.1
      baz=212,SNR=19
M50A  Fremont          28.41  16            pP       22 23 14.9 -3.2
M50A                               IAMs_20  IAMs_20  22 36 13.8
      comp=Z,11µm,19.0s
M50A  Fremont          28.41  16   P        P        22 23 10.1 +1.4
      baz=200
L47A  Sherwood         28.45  12   P        P        22 23 11.0 +2.0
      baz=196
Q59A  Harwood          28.45  27   P        P        22 23 08.9 -0.2
      baz=215,SNR=8.6
O55A  Ligonier         28.51  22   P        P        22 23 10.2 +0.5
      baz=208
N53A  Lisbon           28.51  20   IAMs_20  IAMs_20  22 35 41.7
      comp=Z,17µm,19.0s
N53A  Lisbon           28.51  20   P        P        22 23 09.0 -0.7
      baz=205,SNR=7.6
L48A  N Adams          28.58  13   P        P        22 23 11.1 +0.8
      baz=197
M51A  Elyria           28.58  17   P        P        22 23 11.0 +0.8
      baz=202
BELC  Belle Mtn. Jos   28.65 317   P        P        22 23 13.9 +2.8
      baz=128,SNR=16
JFWS  Jewell Farm      28.67   4   IAmb     IAmb     22 23 16.7
      comp=Z,36nm,0.6s
JFWS  Jewell Farm      28.67   4   P        P        22 23 11.1 +0.1
      baz=185,SNR=16
P58A  Pank, Wackersv   28.69  26   P        P        22 23 10.8 -0.4
      baz=213,SNR=5.9
TPFO  Pinon Flats      28.71 316   P        P        22 23 14.5 +2.8
      baz=126,SNR=9.8
XPFO  Pion Flat        28.72 316   P        P        22 23 08.3 -3.4
XPFO  Pion Flat        28.72 316   IAMs_20  IAMs_20  22 36 39.2
      comp=Z,8µm,19.0s
PFO   Pinyon Flats O   28.72 316   P        P        22 23 13.9 +2.2
      comp=Z,19nm,1.0s,baz=121,slow=7.0,SNR=19
PFO                                LR       LR       22 34 53.9
      comp=Z,5µm,21.9s,baz=130,slow=37
PFO   Pinyon Flats O   28.72 316   P        P        22 23 12.0 +0.2
PFO   Pinyon Flats O   28.72 316   IAMs_20  IAMs_20  22 36 39.2
      comp=Z,8µm,19.0s
PFO   Pinyon Flats O   28.72 316 i P        P        22 23 14.4 +2.7
PFO                                pmax     pmax
      comp=Z,31nm,0.9s
PFO   Pinyon Flats O   28.72 316   P        P        22 23 14.6 +2.8
      baz=126,SNR=9.2
109C  Camp Elliot, M   28.74 314   P        P        22 23 14.7 +2.9
      baz=124
SABA  Saba             28.79  79 eP         PP       22 24 04.2  -13
SABA  Saba             28.79  79   IAMs_20  IAMs_20  22 36 57.5
      comp=Z,11µm,18.0s
SDMD  Soldier's Deli   28.82  27   IAMs_20  IAMs_20  22 35 53.3
      comp=Z,9µm,18.0s
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O56A  Blue Knob Stat   28.84  23   P        P        22 23 12.1 -0.5
      baz=210,SNR=6.2
N23A  Red Feather La   28.86 339   IAmb     IAmb     22 23 32.7
      comp=Z,72nm,1.1s
N23A  Red Feather La   28.86 339   P        P        22 23 14.7 +1.7
      baz=153,SNR=28
L49A  Milan            28.89  14   P        P        22 23 14.9 +1.9
      baz=199
GMRC  Granite Mounta   28.92 319   P        P        22 23 16.3 +2.9
      baz=129,SNR=22
Q60A  Greensboro       28.93  28   IAmb     IAmb     22 23 14.5
      comp=Z,75nm,0.8s
N54A  Moraine State    28.93  21   IAMs_20  IAMs_20  22 35 53.0
      comp=Z,18µm,20.0s
N54A  Moraine State    28.93  21   P        P        22 23 12.9 -0.5
      baz=207,SNR=9.2
SMRT  St. Maarten      28.97  78 eP         P        22 23 16.3 +2.4
SMRT  St. Maarten      28.97  78   IAMs_20  IAMs_20  22 36 12.3
      comp=Z,9µm,19.0s
M52A  Chesterland      29.02  18   IAMs_20  IAMs_20  22 36 10.0
      comp=Z,11µm,19.0s
M52A  Chesterland      29.02  18   P        P        22 23 15.1 +1.0
      baz=204
K46A  Dorr             29.02  11   P        P        22 23 16.6 +2.5
      baz=194
SEUS  St. Eustatius    29.03  80 eP         P        22 23 22.3 +7.8
SEUS  St. Eustatius    29.03  80   IAMs_20  IAMs_20  22 33 42.0
      comp=Z,14µm,22.0s
O20A  White River Ci   29.05 335   IAmb     IAmb     22 23 20.5
      comp=Z,81nm,0.9s
O20A  White River Ci   29.05 335   P        P        22 23 17.5 +2.9
      baz=148,SNR=63
PHWY  Pilot Hill       29.06 340   IAmb     IAmb     22 23 27.2
      comp=Z,76nm,1.1s
L50A  Kingsville       29.07  16   P        P        22 23 15.6 +1.1
      baz=200
AAM   Ann Arbor        29.10  14   IAMs_20  IAMs_20  22 37 03.9
      comp=Z,11µm,18.0s
AAM   Ann Arbor        29.10  14   P        P        22 23 16.5 +1.7
      baz=199
N55A  Marion Center    29.13  22   P        P        22 23 14.6 -0.5
      baz=209
M53A  WI Miller and    29.14  19   P        P        22 23 15.6 +0.4
      baz=205
O57A  Amberson         29.16  25   P        P        22 23 14.8 -0.6
      baz=212
P59A  Jarrettsville    29.16  27   P        P        22 23 14.6 -0.8
      baz=214,SNR=13
MURC  Murrieta         29.21 315   P        P        22 23 19.0 +3.0
      baz=125,SNR=9.2
SKI   Saint Kitts      29.26  80 eP         P        22 23 14.3 -2.2
SKI   Saint Kitts      29.26  80   IAMs_20  IAMs_20  22 34 02.0
      comp=Z,14µm,21.0s
O58A  Lewisberry       29.38  26   P        P        22 23 16.6 -0.7
      baz=213
HEC   Hector,Ludlow    29.38 318   P        P        22 23 20.5 +3.0
      baz=128,SNR=26
BBRC  Big Bear Solar   29.41 317   P        P        22 23 20.6 +2.5
      baz=127
SSPA  Standing Stone   29.42  24   P        P        22 23 17.0 -0.7
SSPA  Standing Stone   29.42  24   P        P        22 23 17.1 -0.6
      baz=211
TUQ   Turquoise Moun   29.50 320   P        P        22 23 21.7 +3.0
      baz=130,SNR=14
N56A  West Decatur     29.50  23   P        P        22 23 17.7 -0.8
      baz=210
MVL   Millersville     29.52  27   IAmb     IAmb     22 23 19.6
      comp=Z,38nm,1.0s
MVL                                IAMs_20  IAMs_20  22 36 06.8
      comp=Z,17µm,19.0s
M54A  Oil Creek Stat   29.53  21   IAMs_20  IAMs_20  22 36 12.8
      comp=Z,18µm,20.0s
ECSD  EROS Data Cent   29.55 355   IAmb     IAmb     22 23 22.9
      comp=Z,55nm,0.8s
ECSD  EROS Data Cent   29.55 355   P        P        22 23 18.9  0.0
      baz=173
K49A  Clarkson         29.60  14   P        P        22 23 20.8 +1.5
      baz=199
J45A  Montague         29.64  10   IAMs_20  IAMs_20  22 37 29.9
      comp=Z,11µm,20.0s
P60A  Greenville       29.68  28   IAmb     IAmb     22 23 20.6
      comp=Z,32nm,0.9s
P60A  Greenville       29.68  28   P        P        22 23 19.1 -0.8
      baz=216,SNR=8.2
J46A  Howard City      29.68  11   P        P        22 23 21.6 +1.7
      baz=194
L53A  Girard           29.73  19   P        P        22 23 22.2 +1.7
      baz=205
J47A  Sunmer           29.74  12   IAMs_20  IAMs_20  22 37 28.6
      comp=Z,13µm,19.0s
J47A  Sunmer           29.74  12   P        P        22 23 22.0 +1.6
      baz=196
MLYT  Lee's Yard       29.77  81 eP         P        22 23 22.5 +1.4
K50A  Casco            29.80  15   IAMs_20  IAMs_20  22 37 05.6
      comp=Z,14µm,19.0s
K50A  Casco            29.80  15   P        P        22 23 21.7 +0.7
      baz=200
M55A  Ridgway          29.81  22   P        P        22 23 20.3 -0.9
      baz=208
RRX   Edison Barstow   29.84 318   P        P        22 23 23.5 +2.0
      baz=128
O59A  Robesonia        29.85  26   P        P        22 23 21.0 -0.5
      baz=214
BFSC  Mount Baldy Ra   29.89 316   P        P        22 23 24.8 +2.7
      baz=126,SNR=14
P61A  Hammonton        29.96  29   P        P        22 23 22.0 -0.4
      baz=217
ERPA  Erie             29.97  20   IAMs_20  IAMs_20  22 36 26.3
      comp=Z,17µm,20.0s
ERPA  Erie             29.97  20   P        P        22 23 20.7 -1.8
      baz=206
GSC   Goldstone, Bar   29.97 319   IAMs_20  IAMs_20  22 35 09.7
      comp=Z,10µm,19.0s
GSC   Goldstone, Bar   29.97 319   P        P        22 23 25.7 +2.9
      baz=128,SNR=7.0
SHOC  Shoshone, Teco   30.02 320   P        P        22 23 26.3 +3.2
      baz=130
J48A  Bridge Port      30.02  14   IAMs_20  IAMs_20  22 37 34.1
      comp=Z,9µm,20.0s
M56A  Emporium         30.04  23   P        P        22 23 25.1 +1.9
      baz=210,SNR=6.1
K51A  Iona Station     30.06  17   P        P        22 23 24.2 +0.9
      baz=202
N58A  Sunbury          30.06  25   P        P        22 23 24.1 +0.7
      baz=213,SNR=6.9
MWC   Mount Wilson     30.16 316   IAmb     IAmb     22 23 29.4
      comp=Z,61nm,1.1s
ANWB  Willy Bob        30.18  79 eP         PP       22 24 24.1 -9.0
O60A  Telford          30.19  27   P        P        22 23 31.4 +6.9
      baz=215
J49A  Marlette         30.23  14   P        P        22 23 24.1 -0.6
      baz=199,SNR=9.5
GUIV  Guiria           30.25  93 eP         P        22 23 30.3 +5.0
I45A  Fountain         30.25  10   IAmb     IAmb     22 23 43.6
      comp=Z,34nm,0.5s
I45A                               IAMs_20  IAMs_20  22 37 49.0
      comp=Z,11µm,19.0s
I45A  Fountain         30.25  10   P        P        22 23 26.8 +1.8
      baz=193
L54A  Sinclairville    30.30  20   P        P        22 23 25.0 -0.4
      baz=207
M57A  Sunshine Farm,   30.32  24   P        P        22 23 25.1 -0.6
      baz=212,SNR=8.5
K52A  Tillsonburg      30.34  18   P        P        22 23 25.4 -0.4
      baz=204
DECC  Green Verdugo    30.36 315   P        P        22 23 29.5 +3.4
      baz=125,SNR=5.0
O61A  Allentown        30.40  29   P        P        22 23 25.7 -0.7
      baz=217
EDW2  Edwards Air Fo   30.49 317   P        P        22 23 29.7 +2.4
      baz=126,SNR=6.3
N59A  State Game Lan   30.52  26   P        P        22 23 26.9 -0.6
      baz=214,SNR=6.4
SUSD  Miller           30.52 352   P        P        22 23 27.7 +0.3
      baz=168
I47A  Gladwin          30.55  12   IAMs_20  IAMs_20  22 37 52.6
      comp=Z,14µm,20.0s
L55A  Hinsdale         30.56  22   P        P        22 23 29.1 +1.3
      baz=208
NNA   Nana             30.59 148   P        P        22 23 30.4 +2.1
      comp=Z,1.6nm,0.3s,baz=336,slow=10.0,SNR=2.4
NNA                                PcP      PcP      22 26 27.2 +0.7
      comp=Z,5.3nm,0.6s,baz=315,slow=5.7,SNR=2.7
NNA                                LR       LR       22 33 37.2
      comp=Z,5µm,19.4s,baz=320,slow=32
NNA   Nana             30.59 148   P        P        22 23 29.2 +0.9
NNA                                         PcP      22 26 25.5 -1.1
NNA   Nana             30.59 148 i P        P        22 23 32.5 +4.2
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NNA                                pmax     pmax
      comp=Z,59nm,1.3s
M58A  Price's Panora   30.61  25   P        P        22 23 27.3 -1.0
      baz=213,SNR=17
K22A  Casper           30.62 340   IAmb     IAmb     22 23 33.9
      comp=Z,83nm,0.8s
K22A  Casper           30.62 340   P        P        22 23 30.5 +2.0
      baz=154,SNR=62
LRMC  Laurel Mtn Rad   30.65 318   P        P        22 23 31.4 +2.6
      baz=127
TPNV  Topopah Spring   30.68 322   IAMs_20  IAMs_20  22 37 18.8
      comp=Z,8µm,19.0s
TPNV  Topopah Spring   30.68 322   P        P        22 23 32.5 +3.4
      baz=131,SNR=23
DLPL  La Plaine        30.70  84   IAMs_20  IAMs_20  22 35 21.2
      comp=Z,15µm,20.0s
FURC  Furnace Creek,   30.74 320   P        P        22 23 32.5 +3.1
      baz=130,SNR=11
N60A  Cedar Hill Far   30.78  27   P        P        22 23 29.0 -0.7
      baz=215,SNR=12
BLG   Laguna Peak, P   30.78 315   P        P        22 23 33.0 +3.2
      baz=124
FDF   Fort de France   30.82  85 eP         P        22 23 31.4 +1.0
FDF   Fort de France   30.82  85   IAMs_20  IAMs_20  22 35 04.5
      comp=Z,15µm,21.0s
OSI   Osito Audit: C   30.83 316   IAmb     IAmb     22 23 35.0
      comp=Z,43nm,1.1s
OSI   Osito Audit: C   30.83 316   P        P        22 23 31.5 +1.2
      baz=125
J52A  Paris            30.83  18   P        P        22 23 29.6 -0.6
      baz=204
SVB   Belmont          30.83  88 eP         P        22 23 28.3 -2.2
SVB   Belmont          30.83  88   IAMs_20  IAMs_20  22 37 08.5
      comp=Z,8µm,18.0s
L56A  Greenwood        30.84  23   P        P        22 23 29.7 -0.6
      baz=210
K54A  Basiliko Farm,   30.84  21   P        P        22 23 29.6 -0.7
      baz=208,SNR=5.4
I49A  Point Hope       30.85  14   IAMs_20  IAMs_20  22 37 49.2
      comp=Z,11µm,19.0s
H45A  Beulah           30.85  10   P        P        22 23 30.1 -0.2
      baz=193
BRNJ  Basking Ridge    30.87  28   IAmb     IAmb     22 23 31.3
      comp=Z,49nm,0.8s
BRNJ                               IAMs_20  IAMs_20  22 36 56.6
      comp=Z,16µm,19.0s
MPMC  Manual Prospec   30.88 319   P        P        22 23 33.6 +2.7
      baz=128,SNR=39
I48A  Sherman Twp      30.88  13   P        P        22 23 29.9 -0.6
      baz=198
SPMN  Marine on St.    30.88   0   IAmb     IAmb     22 23 38.9
      comp=Z,60nm,0.8s
SPMN  Marine on St.    30.88   0   P        P        22 23 30.7 +0.2
      baz=180,SNR=22
L57A  Andrews Acres    30.99  24   P        P        22 23 30.8 -0.8
      baz=211,SNR=7.4
TRN   Trinidad (W)     31.04  93 eP         P        22 23 42.3  +10
N61A  South Mountain   31.04  28   P        P        22 23 31.0 -1.1
      baz=217,SNR=5.6
MCLT  Moule a Chique   31.09  87 eP         P        22 23 38.3 +5.5
MCLT  Moule a Chique   31.09  87   IAMs_20  IAMs_20  22 36 32.8
      comp=Z,12µm,20.0s
SLAC  Saint Lucia, A   31.12  87 eP         P        22 23 44.3  +11
DUG   Dugway, Tooele   31.14 330   IAMs_20  IAMs_20  22 37 59.0
      comp=Z,9µm,18.0s
DUG   Dugway, Tooele   31.14 330   P        P        22 23 36.1 +3.1
      baz=140,SNR=24
K55A  Perry            31.16  22   P        P        22 23 32.0 -1.1
      baz=209
ODNJ  Ogdensburg       31.17  27   IAmb     IAmb     22 23 34.3
      comp=Z,31nm,1.0s
ODNJ                               IAMs_20  IAMs_20  22 37 06.6
      comp=Z,16µm,19.0s
M59A  Waymart          31.18  26   P        P        22 23 32.2 -1.1
      baz=214,SNR=12
I51A  Listowel         31.19  17   P        P        22 23 32.8 -0.5
      baz=203,SNR=12
ARVC  Arvin            31.20 316   P        P        22 23 36.4 +3.0
      baz=125,SNR=11
RSSD  Black Hills      31.24 345   P        P        22 23 34.0  0.0
RSSD                               IAmb     IAmb     22 23 43.4
      comp=Z,30nm,0.9s
RSSD  Black Hills      31.24 345   P        P        22 23 34.0  0.0
RSSD                               pmax     pmax
      comp=Z,30nm,0.9s
RSSD                               MLR      MLR
      comp=Z,4µm,20.0s
RSSD  Black Hills      31.24 345   P        P        22 23 35.5 +1.5
      baz=159
R11A  Troy Canyon, C   31.24 324   IAmb     IAmb     22 23 39.4
      comp=Z,44nm,1.1s
R11A  Troy Canyon, C   31.24 324   P        P        22 23 37.3 +3.2
      baz=134,SNR=52
ISA   Isabella, Lake   31.27 318   IAMs_20  IAMs_20  22 35 60.0
      comp=Z,9µm,20.0s
ISA   Isabella, Lake   31.27 318   P        P        22 23 37.2 +3.0
      baz=126,SNR=8.0
GLMI  Grayling         31.30  12   IAmb     IAmb     22 23 52.2
      comp=Z,62nm,1.0s
GLMI                               IAMs_20  IAMs_20  22 38 27.0
      comp=Z,16µm,19.0s
GLMI  Grayling         31.30  12   P        P        22 23 34.1 -0.1
      baz=196
G45A  Suttons Bay      31.32  10   IAmb     IAmb     22 23 48.7
      comp=Z,23nm,0.6s
G45A                               IAMs_20  IAMs_20  22 38 30.0
      comp=Z,12µm,20.0s
G45A  Suttons Bay      31.32  10   P        P        22 23 35.2 +0.8
      baz=194
M60A  Port Jervis      31.36  27   P        P        22 23 33.7 -1.1
      baz=216,SNR=9.4
GRAC  Grapevine Rang   31.39 321   P        P        22 23 38.8 +3.6
      baz=130
K56A  Middlesex        31.41  22   P        P        22 23 34.5 -0.8
      baz=210,SNR=14
PAL   Palisades        31.42  28   IAmb     IAmb     22 23 35.8
      comp=Z,44nm,0.8s
PAL   Palisades        31.42  28   P        P        22 23 34.0 -1.4
      baz=217,SNR=11
L58A  Harry Jones Me   31.43  25   P        P        22 23 34.8 -0.7
      baz=213,SNR=11
J54A  Appleton         31.45  20   P        P        22 23 35.1 -0.4
      baz=207
H48A  Harrisville      31.45  13   IAMs_20  IAMs_20  22 37 57.1
      comp=Z,9µm,19.0s
BBSR  BB Station       31.49  50   IAMs_20  IAMs_20  22 34 49.2
      comp=Z,8µm,21.0s
CWC   Cottonwood Cre   31.49 319   P        P        22 23 39.1 +2.8
      baz=128
BINY  Binghamton       31.50  25   IAmb     IAmb     22 23 36.9
      comp=Z,56nm,0.9s
BINY  Binghamton       31.50  25   P        P        22 23 35.2 -0.9
      baz=213,SNR=14
N62A  Caumsett State   31.57  29   P        P        22 23 35.6 -1.1
      baz=218
I53A  Kortright Cn E   31.63  19   P        P        22 23 36.5 -0.7
      baz=205
HWUT  Hardware Ranch   31.68 333   IAmb     IAmb     22 23 45.3
      comp=Z,68nm,1.0s
I52A  Shelburne        31.68  18   P        P        22 23 37.2 -0.5
      baz=204
PKM   Mcpherson Peak   31.73 315   P        P        22 23 41.6 +3.2
      baz=124,SNR=6.9
G46A  Petoskey         31.73  11   P        P        22 23 44.0 +6.0
      baz=195
M61A  Granite Spring   31.73  28   P        P        22 23 37.2 -0.9
      baz=217,SNR=17
K57A  Scipio Center    31.74  23   P        P        22 23 37.2 -1.0
      baz=211,SNR=7.8
TOSP  Speyside         31.77  91 eP         PP       22 24 48.0 -2.8
VES   Vestal, Richgr   31.78 317   P        P        22 23 41.9 +3.3
      baz=126,SNR=24
PD31  Pinedale Array   31.81 337   P        P        22 23 37.7 -1.4
PD31                               PcP      PcP      22 26 29.6 -0.1
PDAR  Pinedale Array   31.81 337   P        P        22 23 40.5 +1.4
      comp=Z,43nm,1.0s,baz=136,slow=9.1,SNR=78
PDAR                               PcP      PcP      22 26 30.0 +0.3
      comp=Z,6.5nm,0.9s,baz=137,slow=4.6,SNR=4.8
PDAR                               LR       LR       22 37 52.7
      comp=Z,4µm,18.5s,baz=156,slow=39
L59A  Walton           31.88  26   IAmb     IAmb     22 23 40.2
      comp=Z,48nm,1.0s
L59A  Walton           31.88  26   P        P        22 23 38.4 -1.1
      baz=214,SNR=11
COWI  Conover          31.92   5   IAMs_20  IAMs_20  22 38 51.5
      comp=Z,7µm,22.0s
TIN   Tinemaha, Big    31.96 320   P        P        22 23 43.9 +3.5
      baz=129,SNR=6.9
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F45A	CMU Biological	31.97	10	P	P	22 23 40.0	-0.1
	baz=194						
L60A	Shokan	32.07	27	P	P	22 23 40.1	-0.9
	baz=216,SNR=6.4						
J56A	Wolcott	32.08	22	P	P	22 23 40.0	-1.1
	baz=210,SNR=12						
SMMC	Simmler	32.09	316	P	P	22 23 44.5	+3.1
	baz=124						
K58A	Earlville	32.11	24	IAmb	IAmb	22 23 42.0	
	comp=Z,60nm,1.0s						
K58A	Earlville	32.11	24	P	P	22 23 40.3	-1.1
	baz=213,SNR=18						
KSCT	Kent School, K	32.19	28	IAmb	IAmb	22 23 42.7	
	comp=Z,47nm,0.8s						
M62A	Hamden	32.24	29	P	P	22 23 41.8	-0.7
	baz=218						
VOG	Valley Oaks Go	32.26	318	P	P	22 23 45.7	+3.0
	baz=126						
E38A	The Farm, Brul	32.28	2	IAmb	IAmb	22 23 51.0	
	comp=Z,47nm,0.9s						
H52A	Wyevale	32.29	18	P	P	22 23 42.8	-0.1
	baz=204						
E43A	Lone Tree Farm	32.43	8	IAMs_20	IAMs_20	22 39 19.5	
	comp=Z,8µm,19.0s						
K59A	Cooperstown	32.45	25	P	P	22 23 43.5	-0.9
	baz=214,SNR=5.8						
BBGH	Gun Hill	32.49	88	IAMs_20	IAMs_20	22 37 32.3	
	comp=Z,11µm,20.0s						
PAGB	Antelope Grade	32.49	316	IAmb	IAmb	22 24 02.2	
	comp=Z,27nm,0.9s						
J57A	Williamstown	32.52	23	IAmb	IAmb	22 24 02.9	
	comp=Z,48nm,1.1s						
J57A	Williamstown	32.52	23	P	P	22 23 43.8	-1.2
	baz=212,SNR=8.0						
L61A	Hillsdale 1, H	32.53	27	P	P	22 23 46.4	+1.3
	baz=217						
PECO	Prince Edward	32.60	22	IAmb	IAmb	22 23 46.0	
	comp=Z,32nm,1.1s						
I55A	Frankford	32.61	21	P	P	22 23 44.8	-0.9
	baz=208,SNR=6.6						
M63A	Gales Ferry	32.61	30	P	P	22 23 45.3	-0.5
	baz=220,SNR=10						
H53A	Bobcaygeon	32.62	19	P	P	22 23 45.0	-0.9
	baz=206,SNR=12						
SADO	Sadowa	32.62	18	P	P	22 23 45.0	-0.9
	comp=Z,6.4nm,0.6s,baz=246,slow=6.5,SNR=11						
SADO	Sadowa	32.62	18	IAMs_20	IAMs_20	22 37 58.5	
	comp=Z,13µm,21.0s						
F48A	Evansville	32.68	13	P	P	22 23 45.6	-0.7
	baz=199						
MLAC	Mammoth, Mammo	32.70	320	P	P	22 23 51.0	+4.1
	baz=128						
K60A	Five Rivers En	32.72	27	P	P	22 23 46.2	-0.6
	baz=216						
J58A	Remsen	32.76	24	IAmb	IAmb	22 23 47.4	
	comp=Z,32nm,1.0s						
J58A	Remsen	32.76	24	P	P	22 23 46.0	-1.1
	baz=213,SNR=13						
ELK	Elko	32.77	328	IAmb	IAmb	22 23 52.5	
	comp=Z,40nm,0.9s						
ELK				IAMs_20	IAMs_20	22 38 33.9	
	comp=Z,7µm,18.0s						
NV11	Mina Array Sit	32.79	322	P	P	22 23 47.7	0.0
NV11				IAMs_20	IAMs_20	22 38 52.5	
	comp=Z,10µm,18.0s						
L62A	Suffield	32.81	29	P	P	22 23 46.6	-0.9
	baz=218						
E44A	Grand Marais A	32.82	9	IAMs_20	IAMs_20	22 39 38.9	
	comp=Z,12µm,19.0s						
E46A	Sault Ste Mari	32.84	11		pP	22 23 53.2	-4.0
E46A				IAMs_20	IAMs_20	22 39 13.8	
	comp=Z,12µm,20.0s						
NVAR	Mina Array Bea	32.88	322	P	P	22 23 51.3	+2.8
	comp=Z,117nm,0.9s,baz=138,slow=7.9,SNR=283						
NVAR				PcP	PcP	22 26 34.4	+1.7
	comp=Z,13nm,0.9s,baz=123,slow=3.3,SNR=5.1						
NVAR				ScP	ScP	22 30 12.1	-2.4
	comp=Z,0.1nm,0.3s,baz=139,slow=4.3,SNR=1.9						
NVAR				LR	LR	22 38 55.1	
	comp=Z,6µm,20.2s,baz=136,slow=39						
DELO	Deloro Mine	32.89	20	IAmb	IAmb	22 24 05.3	
	comp=Z,27nm,0.8s						
TRY	Troy	32.91	27	IAmb	IAmb	22 23 49.2	
	comp=Z,44nm,1.0s						
D32A	Dogwood Acres,	32.96	355	IAmb	IAmb	22 23 50.9	
	comp=Z,46nm,1.1s						
K61A	Williamstown	33.04	27	P	P	22 23 49.1	-0.5
	baz=217,SNR=9.5						
H55A	Tweed	33.07	21	P	P	22 23 49.1	-0.7
	baz=209						
I57A	Carthage	33.10	23	P	P	22 23 49.8	-0.3
	baz=212						
G53A	Haliburton	33.10	19	P	P	22 23 50.1	0.0
	baz=206						
E47A	Iron Bridge	33.13	12	P	P	22 23 50.1	-0.2
	baz=197,SNR=12						
RYN	Ryan	33.14	322	IAmb	IAmb	22 24 02.8	
	comp=Z,81nm,1.1s						
RYN				IAMs_20	IAMs_20	22 39 20.9	
	comp=Z,6µm,18.0s						
QUA2	Belchertown	33.15	29	IAmb	IAmb	22 23 50.5	
	comp=Z,24nm,0.7s						
I58A	Old Forge	33.16	24	P	P	22 23 49.4	-1.3
	baz=213,SNR=25						
J59A	Piesco	33.16	25	IAmb	IAmb	22 23 52.0	
	comp=Z,23nm,0.8s						
J59A	Piesco	33.16	25	P	P	22 23 49.4	-1.2
	baz=214,SNR=12						
KVN	Kaiserville	33.17	323	IAmb	IAmb	22 23 56.1	
	comp=Z,84nm,1.1s						
BRYW	Bryant College	33.25	30	IAmb	IAmb	22 23 51.7	
	comp=Z,27nm,0.9s						
D46A	Sault St. Mari	33.40	11	P	P	22 23 52.8	+0.1
	baz=196						
J60A	Lant Hill Farm	33.43	26	P	P	22 23 52.2	-0.7
	baz=216,SNR=5.8						
H56A	Elgin	33.43	22	P	P	22 23 52.5	-0.5
	baz=210,SNR=7.7						
F51A	Arnstein	33.45	17	P	P	22 23 53.1	0.0
	baz=203						
F52A	Sundridge	33.50	17	P	P	22 23 53.5	0.0
	baz=204						
G54A	Lake Saint Pet	33.52	19	P	P	22 23 52.7	-1.0
	baz=207						
H17A	Grant Village	33.58	337	IAMs_20	IAMs_20	22 39 03.5	
	comp=Z,9µm,19.0s						
H17A	Grant Village	33.58	337	P	P	22 23 57.7	+3.1
	baz=148,SNR=51						
L64A	Middleborough	33.61	31	P	P	22 23 53.8	-0.6
	baz=221,SNR=12						
EYMN	Ely	33.62	2	P	P	22 23 53.8	-0.9
EYMN	Ely	33.62	2	P	P	22 23 53.7	-0.9
	baz=182,SNR=15						
H57A	Richville	33.65	23	P	P	22 23 54.2	-0.6
	baz=212						
I59A	Olmsteadville	33.69	25	P	P	22 23 54.2	-1.0
	baz=215,SNR=5.8						
NCB	Newcomb	33.69	25	P	P	22 23 54.2	-1.0
NCB				IAmb	IAmb	22 23 55.5	
	comp=Z,26nm,0.9s						
HRV	Adam Dziewonsk	33.69	29	P	P	22 23 54.3	-0.9
HRV				IAmb	IAmb	22 24 02.5	
	comp=Z,34nm,1.1s						
HRV	Adam Dziewonsk	33.69	29	P	P	22 23 54.3	-0.9
HRV				pmax	pmax		
	comp=Z,34nm,1.1s						
HRV				MLR	MLR		
	comp=Z,24µm,18.0s						
RLMT	Red Lodge	33.73	339	IAmb	IAmb	22 24 00.5	
	comp=Z,81nm,1.0s						
RLMT	Red Lodge	33.73	339	P	P	22 23 57.6	+1.8
	baz=151,SNR=51						
D47A	Chapleau	33.74	12	P	P	22 23 55.1	-0.5
	baz=197,SNR=8.8						
BCX	Boston College	33.75	30	IAMs_20	IAMs_20	22 38 50.9	
	comp=Z,11µm,18.0s						
YERR	Yerington	33.80	322	IAmb	IAmb	22 24 01.7	
	comp=Z,65nm,1.0s						
YERR				IAMs_20	IAMs_20	22 39 06.4	
	comp=Z,7µm,18.0s						
G55A	Calabogie	33.84	21	P	P	22 23 55.5	-1.0
	baz=209,SNR=11						
SAO	San Andreas Ge	33.87	317	IAmb	IAmb	22 24 09.9	
	comp=Z,31nm,1.0s						
SAO				IAMs_20	IAMs_20	22 37 28.7	
	comp=Z,6µm,19.0s						
CMB	Columbia Colle	33.92	319	P	P	22 23 57.7	+0.3
CMB				IAmb	IAmb	22 24 08.7	
	comp=Z,72nm,1.2s						
CMB	Columbia Colle	33.92	319	P	P	22 23 57.7	+0.3
CMB				pmax	pmax		
	comp=Z,72nm,1.3s						
CMB				MLR	MLR		
	comp=Z,6µm,20.0s						
MDND	Maddock	33.95	352	P	P	22 23 57.7	+0.2
	baz=168,SNR=23						
I60A	Shoreham	33.97	26	P	P	22 23 56.4	-1.2
	baz=216,SNR=17						
ALGO	Algonquin Park	34.03	19	P	P	22 23 57.2	-0.9
	baz=206						
AGMN	Agassiz Nation	34.04	357	IAmb	IAmb	22 24 00.0	
	comp=Z,65nm,1.1s						
AGMN	Agassiz Nation	34.04	357	P	P	22 23 58.5	+0.3
	baz=175						
H58A	Gabriels	34.08	24	P	P	22 23 56.9	-1.7
	baz=214,SNR=14						
PNTR	Pine Nut	34.08	322	IAMs_20	IAMs_20	22 37 25.8	
	comp=Z,5µm,18.0s						
LONY	Lake Ozonia	34.09	24	IAmb	IAmb	22 23 59.1	
	comp=Z,38nm,0.9s						
LONY	Lake Ozonia	34.09	24	P	P	22 23 57.3	-1.4
	baz=213						
E51A	G1948 Merrick	34.13	17	P	P	22 23 58.2	-0.8
	baz=204,SNR=8.4						
LAO	LASA Array	34.20	344	IAmb	IAmb	22 24 13.6	
	comp=Z,37nm,1.1s						
G57A	Newington	34.34	23	P	P	22 23 59.8	-1.1
	baz=212,SNR=10						
PAHR	Pah Rah Range	34.35	323	IAmb	IAmb	22 24 06.3	
	comp=Z,57nm,1.0s						
PAHR				IAMs_20	IAMs_20	22 39 47.1	
	comp=Z,6µm,21.0s						
RUBR	Rubicon Trail	34.40	321		P	22 24 06.1	+4.4
RUBR				IAMs_20	IAMs_20	22 39 59.0	
	comp=Z,6µm,18.0s						
H59A	Cadyville	34.46	25	P	P	22 24 00.7	-1.3
	baz=214,SNR=8.1						
F55A	Otter Lake	34.48	21	P	P	22 24 01.1	-0.9
	baz=209,SNR=6.0						
E53A	Dumoine, Ponti	34.53	19	P	P	22 24 01.8	-0.6
	baz=207						
VT1	Waterbury	34.60	26	IAMs_20	IAMs_20	22 39 04.9	
	comp=Z,12µm,19.0s						
D51A	Lot 18 Range I	34.67	16	P	P	22 24 03.0	-0.7
	baz=204						
E54A	Lac Daplat, Po	34.73	19	P	P	22 24 03.3	-0.9
	baz=208,SNR=8.8						
G58A	Ormstown	34.74	24	P	P	22 24 03.3	-0.9
	baz=213						
H60A	Morristown	34.80	26	P	P	22 24 03.5	-1.4
	baz=216,SNR=7.1						
BEKR	Beckworth	35.03	322	IAmb	IAmb	22 24 12.2	
	comp=Z,68nm,1.1s						
BEKR				IAMs_20	IAMs_20	22 37 49.9	
	comp=Z,6µm,19.0s						
G59A	Clarenceville	35.03	25	P	P	22 24 05.7	-1.0
	baz=215,SNR=6.5						
MFID	Camas Ranch	35.05	331	IAMs_20	IAMs_20	22 40 20.6	
	comp=Z,6µm,18.0s						
H61A	Lyndonville	35.11	27	P	P	22 24 08.4	+0.9
	baz=217,SNR=6.0						
E55A	Montcerf-Lytto	35.12	20	P	P	22 24 06.4	-1.1
	baz=209						
D53A	Lac Vacive, Po	35.14	18	P	P	22 24 07.5	-0.3
	baz=206						
DGMT	Dagmar	35.36	347	P	P	22 24 10.7	+1.0
	baz=161,SNR=23						
G60A	Masonville	35.39	26	P	P	22 24 08.7	-1.2
	baz=216,SNR=5.4						
D54A	Lac Fusel, La	35.53	19	P	P	22 24 10.1	-1.0
	baz=208,SNR=7.5						
E56A	St. Veronique	35.55	21	P	P	22 24 10.5	-0.7
	baz=211,SNR=12						
MCCM	Marconi Confer	35.59	318	IAMs_20	IAMs_20	22 38 32.1	
	comp=Z,6µm,19.0s						
WVOR	Wild Horse Val	35.76	327	IAmb	IAmb	22 24 18.5	
	comp=Z,72nm,1.1s						
E57A	Chemin Saint G	35.76	22	P	P	22 24 11.9	-1.2
	baz=212,SNR=9.0						
D55A	Sainte-Anne-du	35.81	21	P	P	22 24 12.6	-0.9
	baz=210,SNR=13						
GDXM	Geysers	35.90	319	IAMs_20	IAMs_20	22 38 01.7	
	comp=Z,11µm,20.0s						
PTGA	Pitinga	35.92	112	P	P	22 24 14.9	+0.1
	comp=Z,38nm,0.7s,baz=301,slow=10,SNR=69						
PTGA	Pitinga	35.92	112	P	P	22 24 15.5	+0.7
PTGA	Pitinga	35.92	112	*e*P	P	22 24 14.9	+0.1
ULM	Lac du Bonnet	35.98	357	P	P	22 24 13.7	-1.2
	comp=Z,21nm,0.5s,baz=172,slow=11,SNR=44						
ULM				PcP	PcP	22 26 41.2	+0.2
	comp=Z,18nm,1.1s,baz=161,slow=1.5,SNR=3.0						
ULM				LR	LR	22 42 47.2	
	comp=Z,6µm,19.2s,baz=172,slow=43						
ULM	Lac du Bonnet	35.98	357	P	P	22 24 13.6	-1.2
ULM				IAmb	IAmb	22 24 25.9	
	comp=Z,38nm,1.0s						
ULM					PcP	22 26 41.3	+0.2
ULM	Lac du Bonnet	35.98	357	*i* P	P	22 24 14.1	-0.8
E58A	La Victoria	36.06	23	P	P	22 24 14.3	-1.3
	baz=214,SNR=10						
D56A	ZEC Mazanza, M	36.08	21	P	P	22 24 14.7	-1.1
	baz=211,SNR=7.2						
VLDQ	Val d'Or	36.14	18	IAMs_20	IAMs_20	22 40 29.0	
	comp=Z,9µm,19.0s						
O03E	Paynes Creek	36.16	321	P	P	22 24 18.6	+2.0
	baz=128,SNR=18						
HOPS	Hopland Field	36.19	319	IAMs_20	IAMs_20	22 38 45.2	
	comp=Z,9µm,19.0s						
F60A	Warwick	36.25	25	P	P	22 24 15.7	-1.6
	baz=216,SNR=12						
G62A	West of Eustis	36.26	27	P	P	22 24 16.4	-1.0
	baz=219,SNR=5.1						
MOD	Modoc Plateau	36.31	325	IAmb	IAmb	22 24 29.1	
	comp=Z,80nm,1.1s						
MOD				IAMs_20	IAMs_20	22 39 09.1	
	comp=Z,6µm,19.0s						
D57A	Chemin Vers le	36.37	22	P	P	22 24 17.0	-1.3
	baz=212,SNR=7.8						
EGMT	Eagleton	36.44	341	P	P	22 24 21.0	+2.0
	baz=152,SNR=46						
O02D	Mt. Diablo Mer	36.69	320	P	P	22 24 22.6	+1.3
	baz=126,SNR=11						
E60A	Ste Agathe de	36.78	25	P	P	22 24 20.6	-1.2
	baz=216,SNR=8.7						
WDC	Whiskeytown Da	36.78	321	P	P	22 24 20.8	-1.1
WDC					PcP	22 26 43.7	0.0
WDC	Whiskeytown Da	36.78	321	P	P	22 24 20.8	-1.1
WDC						22 26 43.7	
WDC				pmax	pmax		
	comp=Z,21nm,1.1s						
WDC				MLR	MLR		
	comp=Z,4µm,19.0s						
D58A	Chemin du LacG	36.81	23	P	P	22 24 20.8	-1.2
	baz=214,SNR=14						
BMO	Blue Mountains	36.83	331	IAMs_20	IAMs_20	22 40 53.8	
	comp=Z,5µm,20.0s						
KCPM	Cahto Peak	36.91	319		P	22 24 26.8	+3.7
KCPM				IAMs_20	IAMs_20	22 39 19.3	
	comp=Z,6µm,20.0s						
MSO	Missoula	36.91	336	IAmb	IAmb	22 24 30.2	
	comp=Z,75nm,0.9s						
MSO	Missoula	36.91	336	P	P	22 24 25.0	+1.9
	baz=145,SNR=74						
LATQ	La Tuque	37.09	23	IAMs_20	IAMs_20	22 41 01.8	
	comp=Z,8µm,18.0s						
LATQ	La Tuque	37.09	23	P	P	22 24 23.2	-1.1
	baz=214						
G64A	Maxfield	37.10	29	P	P	22 24 22.9	-1.6
	baz=221,SNR=5.8						
M04C	Macdoel	37.11	323	P	P	22 24 27.5	+2.7
	baz=129						
N02D	Trinity Center	37.12	322	P	P	22 24 25.3	+0.5
	baz=127						
LSQQ	Lebel-sur-Quev	37.13	17	P	P	22 24 25.0	+0.3
	baz=206						
D59A	Saint-Raymond	37.14	24	P	P	22 24 23.7	-1.2
	baz=215						
F63A	Nahmakanta, Br	37.28	28	IAMs_20	IAMs_20	22 40 58.2	
	comp=Z,12µm,19.0s						
KMRM	Mail Ridge	37.29	320	IAMs_20	IAMs_20	22 39 34.3	
	comp=Z,9µm,19.0s						
I07A	Izee	37.36	328	IAmb	IAmb	22 24 33.2	
	comp=Z,38nm,1.0s						
I07A				IAMs_20	IAMs_20	22 40 51.5	
	comp=Z,5µm,19.0s						
D60A	Saint Jean D'O	37.44	25	P	P	22 24 26.1	-1.2
	baz=217,SNR=6.9						
SAML	Samuel	37.49	126	P	P	22 24 27.5	-0.7
SAML				IAmb	IAmb	22 24 45.4	
	comp=Z,49nm,1.1s						
SAML	Samuel	37.49	126	P	P	22 24 27.5	-0.7
SAML				pmax	pmax		
	comp=Z,49nm,1.1s						
SAML				MLR	MLR		
	comp=Z,4µm,18.0s						
SAML	Samuel	37.49	126	*e*P	P	22 24 27.5	-0.7
MATQ	Matagami	37.58	16	P	P	22 24 28.8	+0.3
	baz=205,SNR=8.8						
YBH	Yreka Blue Hor	37.59	323	P	P	22 24 29.6	+0.8
	comp=Z,8.1nm,0.8s,baz=95,slow=3.8,SNR=7.2						
YBH				PcP	PcP	22 26 46.4	+0.2
	comp=Z,6.9nm,0.9s,baz=81,slow=3.6,SNR=3.6						
YBH	Yreka Blue Hor	37.59	323	P	P	22 24 26.5	-2.3
YBH					PcP	22 26 45.8	-0.4
YBH				IAMs_20	IAMs_20	22 39 09.7	
	comp=Z,10µm,21.0s						
K04D	Chiloquin, OR	37.59	324	P	P	22 24 31.1	+2.2
	baz=130						
G65A	Princeton	37.62	30	IAmb	IAmb	22 24 29.4	
	comp=Z,38nm,0.8s						
G65A	Princeton	37.62	30	P	P	22 24 27.5	-1.4
	baz=223,SNR=7.5						
F10A	Beach Ranch, E	37.64	332	IAMs_20	IAMs_20	22 42 07.4	
	comp=Z,6µm,19.0s						
L04D	Klamath Falls	37.65	323	P	P	22 24 31.6	+2.2
	baz=129,SNR=7.5						
KHMM	Horse Mountain	37.69	321	IAmb	IAmb	22 24 41.2	
	comp=Z,95nm,1.0s						
J05D	Fort Rock, OR	37.74	326	P	P	22 24 31.7	+1.5
	baz=131						
F64A	Sherman	37.74	28	IAMs_20	IAMs_20	22 41 28.6	
	comp=Z,11µm,18.0s						
JTMT	Jette	37.80	336	IAmb	IAmb	22 24 43.7	
	comp=Z,118nm,1.1s						
JCC	Jacoby Creek,	37.84	320	IAmb	IAmb	22 24 34.9	
	comp=Z,88nm,1.1s						
JCC				IAMs_20	IAMs_20	22 39 09.0	
	comp=Z,6µm,21.0s						
PINE	Pine Mountain	37.92	326	IAmb	IAmb	22 24 44.7	
	comp=Z,37nm,0.9s						
PINE				IAMs_20	IAMs_20	22 42 28.9	
	comp=Z,7µm,18.0s						
G08A	Pilot Rock	37.95	330	P	P	22 24 31.1	-0.8
G08A				IAmb	IAmb	22 24 42.3	
	comp=Z,77nm,1.5s						
G08A					PcP	22 26 46.4	-0.9
D61A	St Aubert, Com	37.97	25	P	P	22 24 30.7	-1.1
	baz=218,SNR=19						
E63A	Oxbow	38.13	28	P	P	22 24 31.9	-1.3
	baz=221,SNR=7.1						
KRMB	Red Mountain	38.17	321	IAmb	IAmb	22 24 45.1	
	comp=Z,82nm,1.1s						
J04D	Umpqua Nationa	38.19	325	P	P	22 24 36.6	+2.6
	baz=130						
HUMO	Hull Mountain	38.27	323	IAMs_20	IAMs_20	22 39 31.9	
	comp=Z,8µm,20.0s						
D62A	Allapoint, All	38.36	27	P	P	22 24 33.7	-1.4
	baz=219,SNR=15						
E64A	Bridgewater	38.40	28	P	P	22 24 34.0	-1.5
	baz=221,SNR=5.8						
I05D	Terrebonne, OR	38.50	327	P	P	22 24 38.8	+2.4
	baz=132						
PQI	Presque Isle	38.50	28	IAMs_20	IAMs_20	22 42 28.4	
	comp=Z,11µm,20.0s						
I04A	Tendick Farm,	38.72	325	P	P	22 24 40.2	+1.9
	baz=130,SNR=8.7						
D63A	Stockholm	38.74	27	P	P	22 24 36.8	-1.5
	baz=221,SNR=11						
KBO	Bosley Butte	38.77	322	IAMs_20	IAMs_20	22 40 23.7	
	comp=Z,7µm,21.0s						
HAWA	Hanford	39.02	331	IAMs_20	IAMs_20	22 43 10.8	
	comp=Z,9µm,18.0s						
LPAZ	La Paz	39.03	140	P	P	22 24 42.3	+0.5
	comp=Z,5.2nm,0.6s,baz=330,slow=6.1,SNR=20						
LPAZ				LR	LR	22 41 02.3	
	comp=Z,3µm,19.4s,baz=326,slow=36						
LPAZ	La Paz	39.03	140	P	P	22 24 41.2	-0.6
LPAZ	La Paz	39.03	140	*e*P	P	22 24 41.3	-0.6
G05D	Wamic, OR	39.10	328	P	P	22 24 45.1	+3.7
	baz=133,SNR=12						
J01E	Myrtle Point	39.18	323	P	P	22 24 44.8	+2.7
	baz=128,SNR=8.4						
I03D	Drain, OR	39.18	325	P	P	22 24 44.4	+2.4
	baz=129,SNR=8.7						
H04A	Detroit Lake	39.18	327	IAMs_20	IAMs_20	22 43 19.3	
	comp=Z,8µm,18.0s						
KEBM	Edson Butte	39.23	323	IAMs_20	IAMs_20	22 43 13.3	
	comp=Z,8µm,18.0s						
E07A	Sunnyside	39.30	331	IAMs_20	IAMs_20	22 43 52.0	
	comp=Z,9µm,18.0s						
NEW	Newport	39.36	334	P	P	22 24 44.5	+1.0
	comp=Z,16nm,0.8s,baz=141,slow=7.2,SNR=27						
NEW				PcP	PcP	22 26 52.5	+1.0
	comp=Z,12nm,1.1s,baz=130,slow=7.9,SNR=2.4						
NEW	Newport	39.36	334	P	P	22 24 43.5	-0.1
NEW					PcP	22 26 51.6	0.0
NEW	Newport	39.36	334	IAMs_20	IAMs_20	22 43 50.0	
	comp=Z,7µm,18.0s						
NEW	Newport	39.36	334	P	P	22 24 44.8	+1.2
	baz=141,SNR=19						
H04D	Lebanon	39.37	326	P	P	22 24 45.5	+1.8
	baz=131,SNR=11						
C09A	Chrisman Ranch	39.49	333	P	P	22 24 45.3	+0.7
C09A				IAmb	IAmb	22 25 02.6	
	comp=Z,82nm,1.1s						
C09A				IAMs_20	IAMs_20	22 43 48.6	
	comp=Z,7µm,21.0s						
F05D	White Salmon	39.61	329	P	P	22 24 48.6	+2.9
	baz=134,SNR=24						
COR	Corvallis	39.72	326	IAMs_20	IAMs_20	22 41 41.5	
	comp=Z,6µm,19.0s						
G03D	McMinnville, O	40.10	326	P	P	22 24 52.1	+2.4
	baz=131,SNR=9.4						
B08A	Colville Reser	40.38	333	IAMs_20	IAMs_20	22 43 17.0	
	comp=Z,5µm,19.0s						
MNMC	Minye Minye	40.38	145	P	P	22 24 52.2	-0.4
MNMC				IAmb	IAmb	22 25 02.7	
	comp=Z,132nm,1.4s						
MNMC				IAMs_20	IAMs_20	22 39 54.1	
	comp=Z,6µm,21.0s						
F04D	Rainier, OR	40.54	328	P	P	22 24 56.2	+2.8
	baz=132						
E04D	Cinebar	40.63	328	P	P	22 25 02.5	+8.5
	baz=133						
F03A	Seaside	40.73	327	IAMs_20	IAMs_20	22 43 23.4	
	comp=Z,4µm,19.0s						
C06D	Leavenworth	40.77	331	P	P	22 24 57.8	+2.5
	baz=136,SNR=15						
D05A	Enumclaw	40.78	330	IAmb	IAmb	22 25 06.2	
	comp=Z,101nm,1.1s						
D05A				IAMs_20	IAMs_20	22 42 59.0	
	comp=Z,5µm,20.0s						
GBN	Guysborough	40.88	34	IAMs_20	IAMs_20	22 43 09.0	
	comp=Z,9µm,20.0s						
FFC	Flin Flon	41.00	352	P	P	22 24 57.0	+0.1
FFC	Flin Flon	41.00	352	P	P	22 24 57.0	+0.1
FFC				pmax	pmax		
	comp=Z,38nm,1.0s						
FFC				MLR	MLR		
	comp=Z,3µm,18.0s						
E03A	Lebam	41.13	328	IAmb	IAmb	22 25 12.4	
	comp=Z,97nm,1.1s						
E03A				IAMs_20	IAMs_20	22 42 01.3	
	comp=Z,5µm,20.0s						
D04E	Lakebay	41.16	329	P	P	22 25 00.8	+2.4
	baz=133						
D03D	Eldon	41.56	329	P	P	22 25 03.6	+1.9
	baz=133						
B05A	Bryant	41.58	331	P	P	22 25 03.2	+1.4
	baz=135,SNR=8.3						
NLWA	Neilton Lookou	41.85	328	IAMs_20	IAMs_20	22 42 27.4	
	comp=Z,8µm,20.0s						
A04D	Lummi Island	42.19	331	P	P	22 25 09.0	+2.2
	baz=134						
PGC	Sidney	42.50	330	IAmb	IAmb	22 25 19.3	
	comp=Z,119nm,1.2s						
LLLB	Lillooet	43.17	333	IAmb	IAmb	22 25 28.0	
	comp=Z,69nm,1.1s						
SIV	San Ignacio	43.56	132	P	P	22 25 18.6	+0.2
	comp=Z,24nm,0.9s,baz=321,slow=10,SNR=61						
SIV				LR	LR	22 42 46.8	
	comp=Z,6µm,18.6s,baz=320,slow=35						
LVC	Limon Verde	43.57	147	P	P	22 25 20.2	+1.5
	comp=Z,7.9nm,1.0s,baz=333,slow=7.9,SNR=3.9						

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LVC                                PcP       PcP       22 27 06.4 +0.3
         comp=Z,4.4nm,0.8s,baz=260,slow=17,SNR=2.2
LVC                                LR        LR        22 42 38.3
         comp=Z,3µm,20.3s,baz=323,slow=35
LVC      Limon Verde      43.57 147  P        P         22 25 18.6  -0.1
LVC      Limon Verde      43.57 147 eP        P         22 25 19.0 +0.3
RPN      Rapa Nui         44.08 201  P        P         22 25 27.0 +4.8
         comp=Z,316nm,1.3s,baz=328,slow=5.4,SNR=8.8
RPN                                LR        LR        22 39 25.2
         comp=Z,3µm,18.9s,baz=61,slow=30
RPN      Rapa Nui         44.08 201  P        P         22 25 28.7 +6.4
RPN      Rapa Nui         44.08 201  IAMs_20  IAMs_20   22 38 47.8
         comp=Z,4µm,19.0s
RPN      Rapa Nui         44.08 201  P        P         22 25 28.7 +6.4
RPN                                pmax      pmax
         comp=Z,433nm,1.3s
RPN                                MLR       MLR
         comp=Z,4µm,19.0s
FCC      Fort Churchill   44.45 359  IAMs_20  IAMs_20   22 46 01.4
         comp=Z,5µm,22.0s
GO02     Mina Guanaco     45.33 150  IAmb     IAmb      22 25 41.7
         comp=Z,81nm,1.4s
SCHQ     Schefferville    45.33  21  P        P         22 25 29.9  -2.2
         comp=Z,21nm,0.9s,baz=212,slow=5.0,SNR=22
SCHQ                               PcP       PcP       22 27 11.2   0.0
         comp=Z,17nm,0.7s,baz=233,slow=4.1,SNR=8.1
SCHQ                               LR        LR        22 46 47.6
         comp=Z,19µm,18.1s,baz=212,slow=39
SCHQ     Schefferville    45.33  21  P        P         22 25 30.0  -2.0
SCHQ                               IAmb      IAmb      22 25 32.0
         comp=Z,28nm,1.0s
SCHQ                               PcP       PcP       22 27 10.5  -0.7
SALV     Santo Antonio    47.50 128 eP        P         22 25 49.4  -0.1
GO04     Tololo Observa   49.06 154  IAMs_20  IAMs_20   22 41 53.3
         comp=Z,4µm,22.0s
DIB      Dawson Inlet,    49.80 330  IAMs_20  IAMs_20   22 47 10.6
         comp=Z,3µm,19.0s
ARAG     Araguaiana, MT   50.42 125 eP        P         22 26 12.0 +0.1
YKA      Yellowknife Ar   50.57 347  P        P         22 26 12.7 +0.3
         comp=Z,89nm,0.9s,baz=152,slow=7.3,SNR=378
YKA                                PcP       PcP       22 27 29.9 +0.1
         comp=Z,7.9nm,0.8s,baz=148,slow=3.6,SNR=2.0
YKA                                ScP       ScP       22 31 23.1  -0.4
         comp=Z,0.6nm,0.8s,baz=143,slow=4.0,SNR=2.1
YKA                                LR        LR        22 52 49.1
         comp=Z,2µm,18.8s,baz=0.0,slow=42
C2SB     Chapadao do Su   51.39 129 eP        P         22 26 19.4 +0.2
WRAK     Wrangell Islan   51.69 333  IAMs_20  IAMs_20   22 51 23.1
         comp=Z,3µm,19.0s
PEL      Peldehue         51.71 156  IAMs_20  IAMs_20   22 42 58.5
         comp=Z,5µm,22.0s
TAOE     Nuku Hiva Isla   52.10 247 eS        S         22 33 47.7 +0.6
         comp=Z,3µm,25.4s
TAOE                              eLR        LR        22 41 20.1
         comp=Z,4µm,26.6s
TAOE     Nuku Hiva Isla   52.10 247 eT        T         23 22 09.9
         comp=Z,58nm,0.2s
GO05     Huala            52.91 158  IAmb     IAmb      22 26 48.9
         comp=Z,57nm,1.1s
GO05                               IAMs_20   IAMs_20   22 43 09.7
         comp=Z,3µm,20.0s
CPUP     Villa Florida    53.19 139  P        P         22 26 31.4  -1.1
         comp=Z,4.3nm,0.9s,baz=327,slow=8.2,SNR=10
CPUP                               PcP       PcP       22 27 39.6  -0.6
         comp=Z,4.8nm,0.8s,baz=317,slow=5.3,SNR=2.2
CPUP                               LR        LR        22 50 44.0
         comp=Z,2µm,18.2s,baz=334,slow=38
CPUP     Villa Florida    53.19 139  P        P         22 26 31.0  -1.5
CPUP                               IAmb      IAmb      22 26 41.6
         comp=Z,50nm,1.4s
BDFB     Brasilia         53.47 122  P        P         22 26 34.7   0.0
         comp=Z,18nm,1.0s,baz=291,slow=5.7,SNR=17
BDFB                               LR        LR        22 51 38.9
         comp=Z,3µm,18.8s,baz=310,slow=39
BDFB     Brasilia         53.47 122  IAmb     IAmb      22 26 47.2
         comp=Z,54nm,1.2s
BDFB                               IAMs_20   IAMs_20   22 51 27.4
         comp=Z,3µm,20.0s
JIS      Juneau Island    53.70 334  IAMs_20  IAMs_20   22 50 22.6
         comp=Z,3µm,20.0s
BESE     Bessie Mountai   54.09 334  IAMs_20  IAMs_20   22 50 33.7
         comp=Z,3µm,20.0s
IPMB     Ipameri, GO      54.55 125 eP        P         22 26 42.7 +0.1
SKAG     Skagway          54.81 335  IAMs_20  IAMs_20   22 52 16.5
         comp=Z,3µm,19.0s
WHY      Whitehorse       55.37 336  IAmb     IAmb      22 26 54.9
         comp=Z,18nm,0.8s
WHY                                IAMs_20   IAMs_20   22 53 42.7
         comp=Z,4µm,20.0s
DHAK     Deception Hill   55.81 334           P         22 26 55.9 +4.8
DHAK                               IAMs_20   IAMs_20   22 53 53.2
         comp=Z,4µm,18.0s
JANB     Januaria         56.26 119 eP        P         22 26 54.9   0.0
HYT      Haines Junctio   56.50 336  IAMs_20  IAMs_20   22 53 23.5
         comp=Z,3µm,19.0s
ITAB     Concordia        57.20 136 eP        P         22 27 01.1  -0.2
PCA      Pinnacle         57.23 334  IAMs_20  IAMs_20   22 52 40.7
         comp=Z,3µm,20.0s
CTGM     Chitina Glacie   58.14 335  IAMs_20  IAMs_20   22 55 48.9
         comp=Z,3µm,19.0s
SPB      Sao Paulo        58.30 130  IAMs_20  IAMs_20   22 53 59.8
         comp=Z,4µm,19.0s
BARN     Barnard Glacie   58.33 335  IAmb     IAmb      22 27 18.9
         comp=Z,40nm,0.9s
C36M     Paulatuk         58.45 348  IAMs_20  IAMs_20   22 57 09.3
         comp=Z,5µm,20.0s
C36M     Paulatuk         58.45 348  P        P         22 27 10.5 +1.0
         baz=144,SNR=17
PLCA     Paso Flores      58.52 160  P        P         22 27 11.2 +0.7
         comp=Z,5.5nm,0.9s,baz=340,slow=7.4,SNR=15
PLCA                               LR        LR        22 47 21.5
         comp=Z,3µm,19.0s,baz=28,slow=31
PLCA     Paso Flores      58.52 160  P        P         22 27 09.7  -0.8
PLCA                               IAmb      IAmb      22 27 24.8
         comp=Z,50nm,1.1s
PLCA     Paso Flores      58.52 160 eP        P         22 27 11.4 +0.9
BALM     Baldy            58.60 334  IAMs_20  IAMs_20   22 57 08.0
         comp=Z,4µm,18.0s
TGL      Tana Glacier     58.66 334  IAMs_20  IAMs_20   22 50 35.6
         comp=Z,3µm,20.0s
CRQM     Cirque           58.80 334  IAMs_20  IAMs_20   22 50 37.6
         comp=Z,3µm,21.0s
MCARA    McCarthy VSAT    59.06 335  IAMs_20  IAMs_20   22 57 30.1
         comp=Z,4µm,18.0s
DAWY     Dawson           59.09 338  P        P         22 27 14.6 +0.4
DAWY                               IAmb      IAmb      22 27 23.2
         comp=Z,40nm,1.1s
DAWY                               IAMs_20   IAMs_20   22 55 33.2
         comp=Z,3µm,20.0s
VRDI     Verde Repeater   59.16 334  IAmb     IAmb      22 27 22.5
         comp=Z,40nm,0.8s
VRDI                               IAMs_20   IAMs_20   22 57 13.8
         comp=Z,3µm,20.0s
RAGM     Ragged Mountai   59.28 333  IAMs_20  IAMs_20   22 51 17.9
         comp=Z,3µm,21.0s
PLTB     Pedras Altas     59.32 141 eP        P         22 27 15.7  -0.5
GLB      Gilahina Butte   59.42 334  IAMs_20  IAMs_20   22 57 41.6
         comp=Z,3µm,18.0s
EPYK     Eagle Plains     59.59 341  IAmb     IAmb      22 27 30.9
         comp=Z,45nm,0.9s
EPYK                               IAMs_20   IAMs_20   22 55 24.5
         comp=Z,3µm,19.0s
EPYK     Eagle Plains     59.59 341  P        P         22 27 18.9 +1.4
         baz=129,SNR=24
EYAK     Cordova Ski Ar   59.83 333  IAMs_20  IAMs_20   22 56 40.3
         comp=Z,3µm,19.0s
INK      Inuvik           59.94 344  P        P         22 27 20.5 +0.7
         comp=Z,94nm,0.8s,baz=120,slow=6.9,SNR=118
INK      Inuvik           59.94 344  P        P         22 27 19.9 +0.2
INK                                IAMs_20   IAMs_20   22 57 44.8
         comp=Z,4µm,18.0s
RCBR     Riachuelo        60.03 105  P        P         22 27 21.4  -0.1
RCBR     Riachuelo        60.03 105  IAMs_20  IAMs_20   22 56 48.3
         comp=Z,3µm,20.0s
RCBR     Riachuelo        60.03 105  P        P         22 27 21.4  -0.1
RCBR                               pmax      pmax
         comp=Z,103nm,1.0s
RCBR                               MLR       MLR
         comp=Z,3µm,20.0s
RCBR     Riachuelo        60.03 105 eP        P         22 27 21.0  -0.4
HIN      Hinchinbrook I   60.10 333  IAMs_20  IAMs_20   22 57 10.3
         comp=Z,3µm,18.0s
MENT     Mentasta         60.12 336  IAmb     IAmb      22 27 37.9
         comp=Z,20nm,0.7s
EGAK     Eagle            60.13 338  IAmb     IAmb      22 27 24.9
         comp=Z,52nm,1.0s
EGAK                               IAMs_20   IAMs_20   22 55 08.7
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         comp=Z,3µm,20.0s
FID      Port Fidalgo     60.24 333  IAMs_20  IAMs_20   22 57 34.3
         comp=Z,3µm,19.0s
RES      Resolute Bay     60.45 359  P        P         22 27 22.9  -0.3
         comp=Z,39nm,0.8s,baz=186,slow=9.5,SNR=110
RES      Resolute Bay     60.45 359  IAMs_20  IAMs_20   22 57 16.8
         comp=Z,6µm,22.0s
GLI      Glacier Island   60.57 333  IAmb     IAmb      22 27 35.2
         comp=Z,62nm,1.2s
DOT      Dot Lake         60.61 337  IAMs_20  IAMs_20   22 55 53.4
         comp=Z,4µm,19.0s
SJMB     Sao Joao De Ma   60.64 121 eP        P         22 27 25.9 +0.5
SCRK     Sand Creek       60.75 337  IAmb     IAmb      22 27 30.4
         comp=Z,44nm,1.1s
SCRK                               IAMs_20   IAMs_20   22 55 56.9
         comp=Z,3µm,19.0s
PAX      Paxson           60.84 335  IAMs_20  IAMs_20   22 51 50.2
         comp=Z,3µm,22.0s
RIDG     Independent Ri   60.96 336  IAMs_20  IAMs_20   22 56 11.5
         comp=Z,4µm,18.0s
BSFB     Barra de Sao F   60.98 121 eP        P         22 27 28.4 +0.7
SCM      Sheep Creek Mo   61.09 334  IAMs_20  IAMs_20   22 57 18.7
         comp=Z,3µm,18.0s
DHY      Denali Highway   61.66 335  IAmb     IAmb      22 27 40.9
         comp=Z,35nm,1.1s
DHY                                IAMs_20   IAMs_20   22 56 24.8
         comp=Z,3µm,20.0s
KDAK     Kodiak Island    62.01 328  P        P         22 27 35.3 +1.3
         comp=Z,23nm,1.0s,baz=88,slow=7.2
KDAK     Kodiak Island    62.01 328  P        P         22 27 33.1  -0.9
KDAK                               IAmb      IAmb      22 27 38.7
         comp=Z,62nm,1.3s
KDAK     Kodiak Island    62.01 328  IAMs_20  IAMs_20   22 56 48.4
         comp=Z,3µm,20.0s
HDA      Harding Lake     62.09 337  IAMs_20  IAMs_20   22 56 46.5
         comp=Z,2µm,20.0s
HDA      Harding Lake     62.09 337  P        P         22 27 35.9 +1.3
         baz=117,SNR=32
IL31                      62.24 337  P        P         22 27 34.9  -0.5
ILAR     Eielson Array    62.24 337  P        P         22 27 36.6 +1.2
         comp=Z,44nm,1.0s,baz=132,slow=4.6,SNR=186
ILAR                               LR        LR        22 56 53.7
         comp=Z,2µm,19.2s,baz=135,slow=38
RND      Reindeer         62.40 335  IAMs_20  IAMs_20   22 56 48.6
         comp=Z,2µm,20.0s
CCB      Clear Creek Bu   62.53 337  IAMs_20  IAMs_20   22 57 09.0
         comp=Z,3µm,18.0s
WRH      Wood River Hil   62.56 336  IAmb     IAmb      22 27 46.8
         comp=Z,30nm,1.0s
WRH                                IAMs_20   IAMs_20   22 59 38.9
         comp=Z,3µm,18.0s
MCK      McKinley         62.58 335  IAMs_20  IAMs_20   22 57 05.2
         comp=Z,3µm,21.0s
POKR     Poker Plat Res   62.60 337  P        P         22 27 39.4 +1.4
         baz=117,SNR=21
COLA     College          62.65 337  P        P         22 27 38.2 +0.1
COLA     College          62.65 337  P        P         22 27 38.3 +0.1
COLA                               pmax      pmax
         comp=Z,62nm,0.9s
COLA                               MLR       MLR
         comp=Z,2µm,19.0s
TCOL     CIGO, UAF Yank   62.66 337  P        P         22 27 39.4 +1.2
         baz=117,SNR=16
MDM      Murphy Dome      62.84 337  IAmb     IAmb      22 27 49.5
         comp=Z,21nm,0.8s
BWN      Browne           62.97 336  IAMs_20  IAMs_20   22 57 16.0
         comp=Z,3µm,19.0s
MEH      Mehetia          62.99 241 eP        P         22 27 46.9 +5.6
         comp=Z,31nm,1.3s
MEH      Mehetia          62.99 241 eT        T         23 35 47.2
         comp=Z,5.9nm,0.3s
NEA      Nenana           62.99 336  IAMs_20  IAMs_20   22 53 33.4
         comp=Z,2µm,21.0s
KTH      Kantishna Hill   63.31 335  IAMs_20  IAMs_20   22 54 54.6
         comp=Z,2µm,20.0s
KULLO    Kullorsuaq       63.51  10 i P       P         22 27 43.4  -0.3
         comp=Z,17nm,0.9s
KULLO    Kullorsuaq       63.51  10 eP        P         22 27 43.4  -0.3
KULLO                              pmax      pmax
         comp=Z,17nm,0.9s
BPAW     Bear Paw Mtn.    63.55 335  IAMs_20  IAMs_20   22 57 45.0
         comp=Z,3µm,20.0s
MLY      Manley           63.83 336  IAMs_20  IAMs_20   22 59 37.5
         comp=Z,2µm,19.0s
TIAR     Tiarei           63.95 242 eP        P         22 27 53.1 +5.5
         comp=Z,28nm,1.2s
TIAR     Tiarei           63.95 242 eT        T         23 36 58.0
         comp=Z,1.9nm,0.2s
TVO      Taravao          63.96 242 eP        P         22 27 53.3 +5.6
         comp=Z,24nm,1.3s
PPT      Papeete          64.15 242  LR       LR        22 48 48.5
         comp=Z,1µm,18.6s,baz=47,slow=29
PPT2     Papeete2         64.16 242 eP        P         22 27 54.8 +5.8
         comp=Z,37nm,1.4s
PPT2                              eS         S         22 36 25.7 +1.3
         comp=Z,6µm,32.8s
PPT2                              eLQ        LQ        22 44 26.2
         comp=Z,4µm,32.8s
PPT2                              eLR        LR        22 46 44.0
         comp=Z,5µm,28.0s
PAE      Paea             64.19 242 eP        P         22 27 54.8 +5.7
         comp=Z,16nm,1.4s
SVW2     Sparrevohn       64.50 331  IAmb     IAmb      22 27 57.6
         comp=Z,22nm,0.8s
COLD     Coldfoot         64.56 339  IAmb     IAmb      22 27 55.2
         comp=Z,39nm,1.2s
COLD                               IAMs_20   IAMs_20   22 53 13.6
         comp=Z,4µm,22.0s
TOLK     Toolik Lake Re   64.97 340  IAmb     IAmb      22 27 57.4
         comp=Z,48nm,1.1s
TOLK                               IAMs_20   IAMs_20   23 00 31.6
         comp=Z,4µm,18.0s
TOLK     Toolik Lake Re   64.97 340  P        P         22 27 55.1 +1.6
         baz=117,SNR=37
SUMG     Summit           66.26  16 i P       P         22 28 00.7  -1.5
SUMG     Summit           66.26  16  P        P         22 28 01.1  -1.1
SUMG     Summit           66.26  16  P        P         22 28 01.1  -1.1
SUMG                               pmax      pmax
         comp=Z,15nm,0.9s
TBI      Tubuai           66.68 237 eS        S         22 36 58.1 +3.2
         comp=Z,2µm,39.5s
TBI                               eLQ        LQ        22 45 15.2
         comp=Z,1µm,24.8s
TBI                               eLR        LR        22 48 06.5
         comp=Z,4µm,30.5s
TBI      Tubuai           66.68 237 eT        T         23 40 24.3
         comp=Z,8.2nm,0.3s
SACV     Santiago Islan   66.88  80  IAMs_20  IAMs_20   22 53 08.7
         comp=Z,3µm,20.0s
GO09     Cerro Castillo   67.68 166  IAMs_20  IAMs_20   22 50 57.1
         comp=Z,3µm,20.0s
RDOG     Red Dog Mine     69.41 338  IAMs_20  IAMs_20   23 03 11.8
         comp=Z,4µm,18.0s
ANM      Nome             69.68 334  IAMs_20  IAMs_20   23 04 12.9
         comp=Z,2µm,21.0s
SCO      Scoresbysund     70.36  20 i P       P         22 28 26.9  -0.5
SCO      Scoresbysund     70.36  20 eP        P         22 28 26.9  -0.5
SCO                                MLR       MLR
         comp=Z,15µm,18.0s
PMOZ     Porto Moniz, M   70.59  60 eLR       LR        22 50 24.3
         comp=Z,2µm,24.0s
EFI      East Falkland    72.32 158  IAMs_20  IAMs_20   22 56 31.5
         comp=Z,2µm,19.0s
GAMB     Gambell          72.34 333  IAmb     IAmb      22 28 54.7
         comp=Z,31nm,1.1s
NOR      Nord             74.00   9 i P       P         22 28 50.0 +1.0
NOR      Nord             74.00   9 i P       P         22 28 50.0 +1.0
NOR                                MLR       MLR
         comp=Z,5µm,19.0s
ADK      Adak             75.05 320  P        P         22 28 55.6   0.0
ADK      Adak             75.05 320  P        P         22 28 55.6   0.0
PCAS     Casmilo, Conde   76.81  52 eP        P         22 29 05.0  -0.9
COI      Coimbra          76.86  52 eP        P         22 29 06.3 +0.1
PFVI     Vila Bisbo       76.95  55  IAMs_20  IAMs_20   23 00 11.2
         comp=Z,4µm,20.0s
PNCL     Nicolau / Gran   77.05  54 eP        P         22 29 07.6 +0.3
MORF     Marmelete        77.07  55 eP        P         22 29 06.8  -0.7
MORF                               AMb       AMB       22 29 15.8
         comp=Z,101nm,1.8s
MORF     Marmelete        77.07  55 eP        P         22 29 06.8  -0.7
PMTG     Montargil        77.16  53 eP        P         22 29 07.7  -0.2
PVIS     Viseu            77.18  51 eP        P         22 29 06.3  -1.8
PVRL     Vila Real        77.24  50 eP        P         22 29 08.0  -0.4
MESJ     Messejana        77.33  54 eP        P         22 29 08.4  -0.5
MESJ                               AMb       AMB       22 29 18.4
         comp=Z,51nm,1.8s
MESJ     Messejana        77.33  54 eP        P         22 29 08.3  -0.5
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MTE      Manteigas        77.49  51 eP        P         22 29 09.3  -0.5
MTE      Manteigas        77.49  51 eLR       LR        22 53 10.8
         comp=Z,4µm,20.0s
PBEJ     Beja             77.58  54 eP        P         22 29 10.4 +0.1
PCBR     Castelo Branco   77.62  52 eP        P         22 29 09.6  -0.8
PMRV     Marv??o          77.75  52 eP        P         22 29 09.8  -1.4
PMRV     Marv??o          77.75  52 eLR       LR        22 53 37.8
         comp=Z,3µm,20.0s
MVO      Moncorvo         77.77  50 eP        P         22 29 11.0  -0.4
MVO      Moncorvo         77.77  50 eLR       LR        22 54 03.8
         comp=Z,2µm,20.0s
PVAQ     Vaqueiros        77.79  54  IAMs_20  IAMs_20   22 58 42.3
         comp=Z,3µm,20.0s
PVAQ     Vaqueiros        77.79  54 eLR       LR        22 53 23.0
         comp=Z,3µm,22.0s
PBRG     Braganca         77.89  50 eP        P         22 29 11.8  -0.2
ESK      Eskdalemuir      78.31  36  P        P         22 29 12.8  -1.2
ESK                                IAmb      IAmb      22 29 14.7
         comp=Z,36nm,0.8s
ESK      Eskdalemuir      78.31  36  P        P         22 29 12.8  -1.2
ESK                                pmax      pmax
         comp=Z,36nm,0.9s
ESK                                MLR       MLR
         comp=Z,5µm,19.0s
EKA      Eskdalemuir Ar   78.33  36  LR       LR        23 04 56.2
         comp=Z,3µm,18.1s,baz=270,slow=37
SFS      San Fernando     79.14  55  IAMs_20  IAMs_20   23 01 46.9
         comp=Z,2µm,22.0s
SPITS    Spitsbergen Ar   80.04  11  LR       LR        23 06 03.1
         comp=Z,6µm,21.3s,baz=270,slow=37
PAB      San Pablo        80.05  52  P        P         22 29 22.8  -1.1
PAB                                IAmb      IAmb      22 29 24.7
         comp=Z,26nm,1.1s
PAB      San Pablo        80.05  52  P        P         22 29 22.8  -1.1
PAB                                pmax      pmax
         comp=Z,26nm,1.1s
PAB                                MLR       MLR
         comp=Z,4µm,20.0s
ESDC     Sonseca Array    80.32  52  P        P         22 29 24.2  -1.1
         comp=Z,13nm,0.8s,baz=294,slow=5.6,SNR=25
ESDC                               LR        LR        23 01 39.7
         comp=Z,2µm,19.7s,baz=285,slow=33
BILL     Bilibino         80.87 338  P        P         22 29 28.1 +0.4
BILL     Bilibino         80.87 338ceP        P         22 29 29.1 +1.4
BILL                               pmax      pmax
         comp=Z,138nm,1.5s
KONO     Kongsberg        84.07  30  IAMs_20  IAMs_20   23 04 31.7
         comp=Z,4µm,22.0s
NBO00    NORSAR Array S   84.19  28  P        P         22 29 44.0  -1.1
NB2      NORSAR Subarra   84.39  28  P        P         22 29 46.1  -0.1
         comp=Z,213nm,2.5s,baz=291,slow=5.3
NB2      NORSAR Subarra   84.39  28  P        P         22 29 46.1  -0.1
         baz=291,slow=5.3
NOA      NORSAR Array B   84.39  28  P        P         22 29 46.0  -0.1
         comp=Z,8.4nm,0.9s,baz=290,slow=5.1,SNR=18
NOA                                LR        LR        23 05 21.6
         comp=Z,4µm,21.9s,baz=285,slow=34
MUD      Monsted U'grnd   84.84  33 i P       P         22 29 49.3 +0.9
MUD      Monsted U'grnd   84.84  33 eP        P         22 29 49.3 +0.9
WLF      Walferdange      85.08  40 eP        P         22 29 49.0  -0.8
         comp=Z,8.6nm,0.8s,baz=288,slow=4.9
SSB      Saint Sauveur    85.22  45  IAMs_20  IAMs_20   23 02 00.8
         comp=Z,3µm,20.0s
BUG      Bochum--Univer   85.26  38 eP        P         22 29 52.1 +1.4
         comp=Z,9.3nm,0.7s,baz=288,slow=4.9
AHRW     Bad Neuenahr-A   85.41  39 eP        P         22 29 51.2  -0.2
         comp=Z,18nm,1.0s,baz=288,slow=4.9
HFS      Hagfors          85.85  29  LR       LR        23 06 15.1
         comp=Z,4µm,21.9s,baz=282,slow=34
ECH      Echery           86.13  41  P        P         22 29 53.6  -1.5
ECH                                IAMs_20   IAMs_20   23 09 06.6
         comp=Z,2µm,20.0s
ECH      Echery           86.13  41  P        P         22 29 53.6  -1.5
ECH                                MLR       MLR
         comp=Z,2µm,20.0s
ARCES    ARCESS Array B   86.21  18  P        P         22 29 55.1 +0.1
         comp=Z,5.7nm,0.8s,baz=284,slow=4.7,SNR=22
ARCES                              LR        LR        23 09 28.6
         comp=Z,4µm,18.1s,baz=311,slow=36
BSEG     Bad Segeberg     86.26  35 eP        P         22 29 56.0 +0.4
         comp=Z,25nm,0.9s,baz=288,slow=4.9
TNS      Taunus Mts       86.34  39 eP        P         22 29 56.2   0.0
         comp=Z,17nm,0.9s,baz=288,slow=4.9
TIC      Toumodi          86.44  84 ePKP2     P         22 29 57.7 +0.5
LIC      Lamto            86.53  84 ePKP2     P         22 29 57.8 +0.1
         comp=Z,120nm,1.4s
DBIC     Dimbokro         86.59  84  P        P         22 29 57.0  -1.0
         comp=Z,8.2nm,0.6s,baz=265,slow=4.4,SNR=22
DBIC                               LR        LR        23 06 01.6
         comp=Z,2µm,20.8s,baz=269,slow=34
DBIC     Dimbokro         86.59  84  P        P         22 29 55.9  -2.0
DBIC                               IAmb      IAmb      22 30 07.2
         comp=Z,34nm,1.0s
DBIC     Dimbokro         86.59  84  P        P         22 29 57.0  -1.0
BNI      Bardonecchia     86.73  44  IAmb     IAmb      22 30 08.7
         comp=Z,40nm,1.4s
BNI                                IAMs_20   IAMs_20   23 02 57.8
         comp=Z,3µm,21.0s
SENIN    Lac Senin/Sane   86.77  43  IAmb     IAmb      22 30 16.4
         comp=Z,42nm,1.4s
KIC      Kosan Boka       86.77  84 ePKP2     P         22 29 59.0 +0.1
         comp=Z,30nm,0.8s
COP      Copenhagen       86.82  33 i P       P         22 29 58.6 +0.4
COP      Copenhagen       86.82  33 eP        P         22 29 58.6 +0.4
COP                                MLR       MLR
         comp=Z,2µm,22.0s
GTTG     Gottingen        86.84  38 eP        P         22 29 58.7 +0.3
         comp=Z,21nm,0.8s,baz=288,slow=4.9
BFO      Black Forest     86.84  41 eP        P         22 29 57.9  -0.7
         comp=Z,5.7nm,0.8s,baz=288,slow=4.9
BFO      Black Forest     86.84  41  P        P         22 29 57.7  -0.9
BFO      Black Forest     86.84  41  P        P         22 29 57.7  -0.9
BFO                                pmax      pmax
         comp=Z,11nm,1.1s
BFO                                MLR       MLR
         comp=Z,4µm,19.0s
CLZ      Clausthal        86.98  37 eP        P         22 29 59.0  -0.2
         comp=Z,11nm,0.9s,baz=288,slow=4.9
STU      Stuttgart        87.25  40 eP        P         22 29 59.9  -0.6
         comp=Z,15nm,1.0s,baz=288,slow=4.9
STU      Stuttgart        87.25  40  IAMs_20  IAMs_20   23 08 31.1
         comp=Z,3µm,21.0s
NEUB     Neuenburg        88.02  37 eP        P         22 30 04.8 +0.6
         comp=Z,7.9nm,0.9s,baz=288,slow=4.9
TUE      Stuetta          88.08  42  IAMs_20  IAMs_20   23 09 31.3
         comp=Z,3µm,19.0s
MOX      Moxa             88.12  38 eP        P         22 30 05.0 +0.3
         comp=Z,3.4nm,0.9s,baz=288,slow=4.9
MOX                               eL         L         23 11 25.1
         comp=Z,3µm,18.3s
SEY      Seymchan         88.13 335  P        P         22 30 05.7 +1.3
         comp=Z,12nm,0.8s,baz=93,slow=4.4,SNR=18
SEY      Seymchan         88.13 335 i P       P         22 30 06.5 +2.1
DAVA     Damuels          88.17  42 i PcP     P         22 30 04.8  -0.3
         comp=Z,22nm,0.9s
UBR      Ueberruh         88.18  41 eP        P         22 30 05.3 +0.2
         comp=Z,9.9nm,0.9s,baz=288,slow=4.9
GRA1     Grafenberg Arr   88.21  39  IAmb     IAmb      22 30 15.7
         comp=Z,39nm,1.3s
GRA1                               IAMs_20   IAMs_20   23 16 44.2
         comp=Z,3µm,18.0s
GRF      Grafenberg Arr   88.21  39 eP        P         22 30 05.4 +0.3
         comp=Z,9.1nm,0.8s,baz=288,slow=4.9
GRF                               eL         L         23 05 35.0
         comp=Z,2µm,22.0s
DAVOX    Davos/Dischmat   88.33  42  LR       LR        23 08 11.2
         comp=Z,2µm,18.9s,baz=294,slow=35
BSD      Bornholm Skovb   88.35  33 i P       P         22 30 06.0 +0.4
BSD      Bornholm Skovb   88.35  33 eP        P         22 30 06.0 +0.4
BSD                                MLR       MLR
         comp=Z,3µm,20.0s
RETA     Reutte           88.66  41 i P       P         22 30 06.0  -1.4
         comp=Z,12nm,0.9s
CLL      Collm            88.70  37 eP        P         22 30 09.0 +1.6
CLL                               ePP        PP        22 33 36.0   0.0
CLL                               eS         S         22 40 52.0   0.0
CLL                               e                    22 41 30.0
CLL                               e(PS)                22 42 12.0
CLL                               eSS        SS        22 46 36.0  -7.1
CLL                               eSSS       SSS       22 50 24.0
CLL      Collm            88.70  37 eP        P         22 30 09.1 +1.6
         comp=Z,2.7nm,0.8s,baz=288,slow=4.9
CLL      Collm            88.70  37  IAMs_20  IAMs_20   23 09 23.1
         comp=Z,3µm,21.0s
CLL      Collm            88.70  37 eP        P         22 30 09.0 +1.6
CLL                               i *SP      sP        22 30 26.0 +5.0
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CLL				eS	S	22 40 52.0	0.0
TANN	Tannenbergstha	88.70	38	eP	P	22 30 08.8	+1.3
	comp=Z,10nm,0.9s,baz=288,slow=4.9						
NKC	Novy Kostel	88.76	38	eP	P	22 30 10.6	+2.9
NKC				epP	PcP	22 30 13.0	+3.7
NKC				AMS	AMS	23 11 20.0	
	comp=Z,3µm,19.1s						
NKC	Novy Kostel	88.76	38	eP	P	22 30 10.6	+2.9
NKC				MLR	MLR		
	comp=Z,3µm,19.1s						
FUR	Furstenfeldbru	88.76	40	eP	P	22 30 06.9	-0.9
	comp=Z,42nm,0.4s,baz=288,slow=4.9						
ROTZ	Rotzenmuhle	88.78	39	eP	P	22 30 09.6	+1.8
	comp=Z,1.8nm,0.8s,baz=288,slow=4.9						
FETA	Feichten	88.80	42	i PcP	P	22 30 07.8	-0.3
	comp=Z,7.6nm,0.8s						
MSSA	Maissana	88.89	45	IAMs_20	IAMs_20	23 08 06.8	
	comp=Z,2µm,20.0s						
MOTA	Moosalm	88.93	41	i PcP	P	22 30 08.1	-0.7
	comp=Z,9.8nm,0.9s						
SQTA	Sankt Quirin	89.04	41	i PcP	P	22 30 09.1	-0.1
	comp=Z,8.7nm,1.1s						
SALO	Salr	89.13	43	IAmb	IAmb	22 30 17.9	
	comp=Z,27nm,1.1s						
SALO				IAMs_20	IAMs_20	23 10 02.2	
	comp=Z,3µm,21.0s						
WTTA	Wattenberg	89.30	41	i PcP	PcP	22 30 11.4	-0.5
	comp=Z,12nm,1.7s						
PET	Petropavlovsk	89.40	325	eP	P	22 30 12.1	+1.5
PET				eS	S	22 40 58.6	+0.2
PET				pmax	pmax		
	comp=Z,300nm,10.5s						
PET				MLR	MLR		
	comp=Z,1µm,15.0s						
WET	Wettzell	89.41	39	eP	P	22 30 10.6	-0.2
	comp=Z,3.0nm,0.7s,baz=288,slow=4.9						
BRG	Berggiesshubel	89.42	37	eP	P	22 30 10.0	-0.7
	comp=Z,12nm,1.1s						
BRG	Berggiesshubel	89.42	37	eP	P	22 30 10.4	-0.3
	comp=Z,5.2nm,0.9s,baz=288,slow=4.9						
BRG	Berggiesshubel	89.42	37	eP	P	22 30 10.0	-0.7
BRG				pmax	pmax		
	comp=Z,12nm,1.1s						
BRG	Berggiesshubel	89.42	37	S	S	22 40 57.0	-1.7
VLC	Villacollemand	89.53	44	IAMs_20	IAMs_20	23 06 41.8	
	comp=Z,2µm,21.0s						
APA	Apatity	89.72	18	⇑iP	P	22 30 16.5	+4.7
APA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
CTI	Castel Tesino	89.73	42	IAMs_20	IAMs_20	23 10 35.9	
	comp=Z,3µm,20.0s						
TIXI	Tiksi	89.82	348	P	P	22 30 12.3	+0.1
	comp=Z,28nm,0.7s,baz=29,slow=5.0,SNR=38						
TIXI				PP	PP	22 33 46.4	+2.1
	comp=Z,1.2nm,0.2s,baz=43,slow=8.6,SNR=3.1						
TIXI	Tiksi	89.82	348	P	P	22 30 11.3	-0.8
TIXI				IAmb	IAmb	22 30 15.9	
	comp=Z,36nm,0.9s						
TIXI				IAMs_20	IAMs_20	23 17 47.4	
	comp=Z,3µm,19.0s						
TIXI	Tiksi	89.82	348	i P	P	22 30 12.5	+0.3
TIXI				pmax	pmax		
	comp=Z,34nm,0.8s						
KHC	Kasperske Hory	89.84	39	eP	P	22 30 13.0	+0.1
KHC				eSKKS	S	22 40 55.8	-7.1
KHC				AMS	AMS	23 09 40.0	
	comp=Z,4µm,20.5s						
KHC	Kasperske Hory	89.84	39	IAMs_20	IAMs_20	23 10 08.5	
	comp=Z,1µm,20.0s						
KHC	Kasperske Hory	89.84	39	eP	P	22 30 13.0	+0.1
KHC				eS	S	22 40 55.8	-7.1
KHC				MLR	MLR		
	comp=Z,4µm,20.5s						
ZCCA	Zocca	89.86	44	IAmb	IAmb	22 30 22.5	
	comp=Z,22nm,0.7s						
RJOB	Jochberg	89.87	41	eP	P	22 30 12.8	-0.2
	comp=Z,3.3nm,0.8s,baz=288,slow=4.9						
PETK	Petropavlovsk-	89.90	325	P	P	22 30 13.9	+1.0
	comp=Z,14nm,1.0s,baz=83,slow=4.6,SNR=7.9						
PVCC	Panska Ves	89.91	37	AMS	AMS	23 10 30.0	
	comp=Z,3µm,22.5s						
PRA	Prague	90.01	38	AMS	AMS	23 11 50.0	
	comp=Z,3µm,17.9s						
GEC2	GERESS Array S	90.03	39	eP	P	22 30 13.2	-0.6
	comp=Z,4.7nm,0.9s,baz=288,slow=4.9						
GEC2	GERESS Array S	90.03	39	IAMs_20	IAMs_20	23 05 52.7	
	comp=Z,3µm,22.0s						
GERES	GERESS Array B	90.03	39	P	P	22 30 13.2	-0.6
	comp=Z,4.5nm,0.9s,baz=310,slow=2.9,SNR=22						
GERES				LR	LR	23 06 47.9	
	comp=Z,2µm,21.8s,baz=288,slow=33						
ABTA	Abfaltersbach	90.04	42	i PcP	P	22 30 13.5	-0.4
	comp=Z,11nm,1.3s						
PRU	Pruhonice	90.10	38	eP	P	22 30 13.2	-0.8
PRU				epP	pP	22 30 20.9	-3.3
PRU				AMS	AMS	23 12 20.0	
	comp=Z,3µm,17.4s						
PRU	Pruhonice	90.10	38	eP	P	22 30 13.2	-0.8
PRU				e		22 30 20.9	
PRU				MLR	MLR		
	comp=Z,3µm,17.4s						
GOPC	GO Pecny, Ondr	90.28	38	eSKKS	S	22 40 58.7	-8.1
GOPC				AMS	AMS	23 12 20.0	
	comp=Z,3µm,18.0s						
CASP	Castiglione de	90.31	46	IAMs_20	IAMs_20	23 04 43.8	
	comp=Z,1µm,22.0s						
OSSC	Osservatorio P	90.33	45	IAmb	IAmb	22 30 16.1	
	comp=Z,12nm,0.9s						
OSSC				IAMs_20	IAMs_20	23 07 16.0	
	comp=Z,2µm,21.0s						
GKP	Gorka Klasztor	90.34	34	eP	P	22 30 16.5	+1.5
GKP	Gorka Klasztor	90.34	34	eP	P	22 30 16.5	+1.5
MA2	Magadan	90.44	333	P	P	22 30 16.8	+1.5
	comp=Z,29nm,0.9s,baz=86,slow=7.1,SNR=11						
MA2	Magadan	90.44	333	P	P	22 30 15.5	+0.2
MA2	Magadan	90.44	333	ceP	P	22 30 17.2	+1.9
MA2				pmax	pmax		
	comp=Z,41nm,1.2s						
KBA	Koelnbreinsper	90.45	41	i PcP	P	22 30 15.1	-0.8
	comp=Z,4.9nm,1.0s						
FINES	FINESS Array B	90.69	25	P	P	22 30 16.1	-0.3
	comp=Z,2.8nm,0.6s,baz=330,slow=2.4,SNR=24						
FINES				LR	LR	23 12 40.6	
	comp=Z,3µm,18.3s,baz=292,slow=37						
MOA	Molln	90.75	40	PcP	P	22 30 16.3	-0.7
	comp=Z,6.3nm,0.9s,SNR=6.7						
CHVC	Chvalec	90.76	37	eP	P	22 30 18.0	+0.9
CHVC				ex	x	22 30 24.4	
CHVC				AMS	AMS	23 10 20.0	
	comp=Z,3µm,21.6s						
UPC	Upice	90.77	37	AMS	AMS	23 10 00.0	
	comp=Z,3µm,20.3s						
KSP	Ksiaz	90.80	37	eP	P	22 30 18.4	+1.2
KSP	Ksiaz	90.80	37	eP	P	22 30 18.4	+1.2
MYKA	Terra Mystica	90.81	41	i PcP	P	22 30 17.6	+0.1
	comp=Z,5.1nm,1.0s						
OSTC	Ostas	90.87	37	eP	P	22 30 17.5	-0.1
OSTC				ex	x	22 30 24.7	
OSTC				AMS	AMS	23 10 20.0	
	comp=Z,4µm,21.6s						
HEL	Helsinki	90.88	26	P	P	22 30 29.3	+12
HEL				pmax	pmax		
	comp=Z,39nm,1.1s						
TREC	Trest	90.94	38	eP	P	22 30 18.3	+0.4
TREC				AMS	AMS	23 10 40.0	
	comp=Z,4µm,21.2s						
TREC	Trest	90.94	38	eP	P	22 30 18.3	+0.4
TREC				MLR	MLR		
	comp=Z,4µm,21.2s						
DPC	Dobruska-Polom	91.02	37	eP	P	22 30 18.3	0.0
DPC				epP	pP	22 30 26.0	-2.5
DPC				eSKKS	S	22 41 00.8	-13
DPC				AMS	AMS	23 10 20.0	
	comp=Z,3µm,20.8s						
DPC	Dobruska-Polom	91.02	37	eP	P	22 30 18.3	0.0
DPC				e		22 30 26.0	
DPC				eS	S	22 41 00.8	-13
DPC				MLR	MLR		
	comp=Z,3µm,20.8s						
LATE	Laterza	91.02	46	IAMs_20	IAMs_20	23 04 40.6	
	comp=Z,2µm,21.0s						
TOC7	Torodi Ar. Sit	91.24	76	IAMs_20	IAMs_20	23 08 34.2	
	comp=Z,3µm,21.0s						
TOB5	Torodi Ar. Sit	91.24	76	IAMs_20	IAMs_20	23 08 43.3	
	comp=Z,3µm,20.0s						
TOB4	Torodi Ar. Sit	91.25	76	IAMs_20	IAMs_20	23 08 33.5	
	comp=Z,3µm,20.0s						
TOA1	Torodi Ar. Sit	91.25	76	IAMs_20	IAMs_20	23 08 42.6	
	comp=Z,3µm,21.0s						
TOA0	Torodi Ar. Sit	91.26	76	P	P	22 30 19.4	-0.7
TOA0				IAMs_20	IAMs_20	23 08 33.7	
	comp=Z,3µm,21.0s						
TOA3	Torodi Ar. Sit	91.26	76	IAMs_20	IAMs_20	23 08 33.7	
	comp=Z,3µm,21.0s						
TORD	Torodi Ar. Bea	91.26	76	P	P	22 30 18.8	-1.2
	comp=Z,1.6nm,0.5s,baz=294,slow=4.9,SNR=23						
TORD				PKKPbc	PKKPbc	22 47 42.2	+0.4
	comp=Z,0.5nm,0.8s,baz=118,slow=0.0,SNR=3.0						
TORD				LR	LR	23 08 45.1	
	comp=Z,2µm,20.6s,baz=305,slow=34						
TOA2	Torodi Ar. Sit	91.26	76	IAMs_20	IAMs_20	23 08 33.8	
	comp=Z,3µm,20.0s						
TOB2	Torodi Ar. Sit	91.27	76	IAMs_20	IAMs_20	23 08 33.9	
	comp=Z,3µm,21.0s						
TOC4	Torodi Ar. Sit	91.27	76	IAMs_20	IAMs_20	23 08 34.0	
	comp=Z,3µm,21.0s						
TOB3	Torodi Ar. Sit	91.27	76	IAMs_20	IAMs_20	23 08 34.0	
	comp=Z,3µm,21.0s						
TOC2	Torodi Ar. Sit	91.28	76	IAMs_20	IAMs_20	23 08 34.2	
	comp=Z,3µm,20.0s						
TOC3	Torodi Ar. Sit	91.28	76	IAMs_20	IAMs_20	23 08 34.4	
	comp=Z,3µm,20.0s						
MURB	Monte Urbino	91.29	45	IAMs_20	IAMs_20	23 12 47.5	
	comp=Z,2µm,20.0s						
KRLC	Kraliky	91.40	37	eP	P	22 30 20.1	0.0
KRLC				epP	pP	22 30 27.8	-2.5
KRLC				AMS	AMS	23 12 30.0	
	comp=Z,2µm,19.4s						
KRLC	Kraliky	91.40	37	eP	P	22 30 20.1	0.0
KRLC				e		22 30 27.8	
KRLC				MLR	MLR		
	comp=Z,2µm,19.4s						
OBKA	Obir	91.43	41	i PcP	P	22 30 20.0	-0.4
	comp=Z,5.6nm,0.9s						
KEST	Kesra	91.51	53	P	P	22 30 20.9	-0.1
	comp=Z,15nm,1.0s,baz=285,slow=5.7,SNR=6.3						
KEST	Kesra	91.51	53	IAmb	IAmb	22 30 32.7	
	comp=Z,32nm,1.1s						
KEST				IAMs_20	IAMs_20	23 09 34.4	
	comp=Z,2µm,20.0s						
KRUC	Moravsky	91.58	38	eP	P	22 30 20.8	-0.1
VRAC	Vranov	91.60	38	LR	LR	23 08 28.5	
	comp=Z,533nm,21.5s,baz=294,slow=34						
VRAC	Vranov	91.60	38	⇑P	P	22 30 20.8	-0.2
VRAC	Vranov	91.60	38	eP	P	22 30 21.0	0.0
SOKA	Soboth	91.68	41	i PcP	P	22 30 21.0	-0.4
	comp=Z,3.6nm,0.9s						
CONA	Conrad Observa	91.71	40	i PcP	P	22 30 21.6	0.0
	comp=Z,4.7nm,1.1s						
NRCA	Norcia	91.85	45	IAMs_20	IAMs_20	23 12 12.3	
	comp=Z,3µm,22.0s						
MORC	Moravsky Berou	91.97	37	⇑P	P	22 30 22.6	-0.2
MORC	Moravsky Berou	91.97	37	IAmb	IAmb	22 30 33.1	
	comp=Z,17nm,1.3s						
MORC				IAMs_20	IAMs_20	23 13 08.5	
	comp=Z,3µm,20.0s						
MORC	Moravsky Berou	91.97	37	eP	P	22 30 23.3	+0.6
TAM	Tamanrasset	92.20	66	IAmb	IAmb	22 30 34.9	
	comp=Z,14nm,1.1s						
OKC	Ostrava-Krasne	92.30	37	eP	P	22 30 25.5	+1.3
OKC				AMS	AMS	23 15 20.0	
	comp=Z,3µm,18.6s						
OKC	Ostrava-Krasne	92.30	37	eP	P	22 30 25.5	+1.3
OKC				MLR	MLR		
	comp=Z,3µm,18.6s						
ZST	Bratislava	92.36	39	eP	P	22 30 25.1	+0.6
ZST	Bratislava	92.36	39	eP	P	22 30 25.1	+0.6
MODS	Modra-Piesok	92.39	39	eP	P	22 30 24.1	-0.6
MODS	Modra-Piesok	92.39	39	eP	P	22 30 24.1	-0.6
SMOL	Smolenice	92.43	39	eP	P	22 30 25.4	+0.6
SMOL	Smolenice	92.43	39	eP	P	22 30 25.4	+0.6
INTR	Introdacqua	92.69	46	IAMs_20	IAMs_20	23 08 57.8	
	comp=Z,2µm,20.0s						
BEL	Belsk	92.92	35	eP	P	22 30 28.1	+1.1
BEL	Belsk	92.92	35	eP	P	22 30 29.0	+2.1
BEL	Belsk	92.92	35	eP	P	22 30 29.0	+2.1
OJC	Ojcow	93.09	36	IAmb	IAmb	22 30 37.9	
	comp=Z,23nm,1.3s						
SUW	Suwalki	93.16	32	IAMs_20	IAMs_20	23 15 35.2	
	comp=Z,2µm,19.0s						
VYHS	Vyhne	93.28	38	eP	P	22 30 30.0	+1.2
VYHS	Vyhne	93.28	38	eP	P	22 30 30.0	+1.2
LANS	Liptovska Anna	93.37	37	eP	P	22 30 29.7	+0.5
LANS	Liptovska Anna	93.37	37	eP	P	22 30 29.7	+0.5
PAOL	Paolisi	93.52	46	IAMs_20	IAMs_20	23 13 32.8	
	comp=Z,2µm,21.0s						
NIE	Niedzica	93.74	37	eP	P	22 30 33.3	+2.4
NIE	Niedzica	93.74	37	eP	P	22 30 32.3	+1.4
NIE	Niedzica	93.74	37	eP	P	22 30 33.3	+2.4
BLY	Banja Luka	93.83	42	⇑P	P	22 30 32.0	+0.7
NACGM	Naroch	94.50	30	e	P	22 30 34.0	-0.2
NACGM				eLQ	LQ	23 02 22.0	
NACGM				eLR	LR	23 04 05.0	
ACER	Acerenza	94.58	46	IAMs_20	IAMs_20	23 12 01.7	
	comp=Z,2µm,20.0s						
CRVS	Cervenica-Dubn	94.65	37	eP	P	22 30 36.4	+1.3
CRVS	Cervenica-Dubn	94.65	37	eP	P	22 30 36.4	+1.3
KWP	Kalwaria Pacla	95.03	36	eP	P	22 30 40.8	+4.1
KWP	Kalwaria Pacla	95.03	36	eP	P	22 30 40.6	+3.9
KWP	Kalwaria Pacla	95.03	36	IAmb	IAmb	22 30 41.4	
	comp=Z,29nm,1.2s						
KWP				IAMs_20	IAMs_20	23 13 44.3	
	comp=Z,1µm,21.0s						
KWP	Kalwaria Pacla	95.03	36	eP	P	22 30 40.8	+4.1
KOLS	Kolonicke sedl	95.11	37	eP	P	22 30 39.0	+1.8
KOLS	Kolonicke sedl	95.11	37	eP	P	22 30 39.0	+1.8
MICGM	Minsk	95.26	30	e	P	22 30 39.0	+1.4
MICGM				eLR	LR	23 03 06.0	
MICGM				LRM	MLR	23 09 50.0	
	comp=Z,5.5nm,22.0s						
MNK	Minsk	95.26	30	eP	P	22 30 39.0	+1.4
UZH	Uzhgorod	95.27	37	eP	P	22 30 39.0	+1.2
UZH				e		22 30 51.0	
WDD	Wied Dalam	95.43	51	IAMs_20	IAMs_20	23 13 03.9	
	comp=Z,2µm,19.0s						
CEL	Celeste	95.53	48	IAMs_20	IAMs_20	23 10 00.1	
	comp=Z,2µm,20.0s						
TRPA	Tarpa	95.65	37	⇑P	P	22 30 40.5	+0.9
LVV	L'vov	95.69	35	eP	P	22 30 40.8	+1.1
LVV				MLR	MLR		
	comp=N,2µm,18.0s						
LVV				MLR	MLR		
	comp=E,2µm,18.0s						
LVV				MLR	MLR		
	comp=Z,3µm,18.0s						
TIP	Timpagrande	95.79	47	IAMs_20	IAMs_20	23 16 12.9	
	comp=Z,3µm,21.0s						
PDG	Podgorica	96.17	44	IAMs_20	IAMs_20	23 13 23.5	
	comp=Z,2µm,22.0s						
KLMR	Klimovskoe	96.17	21	eP	P	22 30 31.5	-10
KLMR				pmax	pmax		
	comp=Z,44nm,2.1s						
KLMR	Klimovskoe	96.17	21	eP	P	22 30 31.6	-10
KLMR				AMP		22 30 50.0	
	comp=Z,44nm,2.1s						
KLMR				LQ	LQ	23 04 53.5	
KLMR				LQ	LQ	23 04 53.5	
KLMR				LR	LR	23 07 04.9	
KLMR				AMP		23 08 57.9	
	comp=Z,4µm,22.8s						
BZS	Buzias	96.27	40	⇑P	P	22 30 42.5	0.0
DRGR		96.39	39	⇑P	P	22 30 43.4	+0.3
SCTE	Santa Cesarea	96.63	46	IAMs_20	IAMs_20	23 11 58.0	
	comp=Z,2µm,21.0s						
NRIK	Noril'sk	96.63	360	P	P	22 30 44.0	+0.4
	comp=Z,4.5nm,0.9s,baz=6.3,slow=4.0,SNR=7.8						
NRIK				PP	PP	22 34 36.6	-0.9
	comp=Z,0.7nm,0.3s,baz=358,slow=6.9,SNR=5.2						
NRIK				LR	LR	23 19 17.1	
	comp=Z,4µm,18.3s,baz=3.0,slow=38						
NRIK	Noril'sk	96.63	360	P	P	22 30 44.0	+0.4
MDVR	Moldovita	96.72	41	⇑P	P	22 30 44.6	0.0
YAK	Yakutsk	96.92	341	PP	PP	22 34 41.5	+1.6
	comp=Z,8.9nm,0.4s,baz=24,slow=9.3,SNR=3.1						
YAK	Yakutsk	96.92	341	P	P	22 30 44.9	-0.2
YAK				PP	PP	22 34 37.9	-2.0
YAK				IAMs_20	IAMs_20	23 23 01.1	
	comp=Z,1µm,19.0s						
YAK	Yakutsk	96.92	341	eP	P	22 30 47.2	+2.2
YAK				e*PP	sP	22 31 02.0	+3.2
YAK				e		22 34 43.1	
YAK				e		22 42 00.4	
YAK				pmax	pmax		
	comp=Z,19nm,1.0s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,171nm,3.6s						
YAK				pmax	pmax		
	comp=N,307nm,3.8s						
YAK				pmax	pmax		
	comp=E,109nm,3.5s						
YAK				MLR	MLR		
	comp=Z,1µm,22.0s						
YAK				MLR	MLR		
	comp=N,743nm,22.0s						
YAK				MLR	MLR		
	comp=E,435nm,23.0s						
TIR	Tirane	97.05	44	IAMs_20	IAMs_20	23 14 03.8	
	comp=Z,2µm,22.0s						
GZR	Gura Zlata	97.10	40	⇑P	P	22 30 46.1	-0.2
ARCR	ARCALIA	97.23	38	⇓P	Pdif	22 30 47.0	+0.1
PRGR	Permogore	97.62	19	eP	P	22 30 47.2	-1.0
PRGR				pmax	pmax		
	comp=Z,28nm,1.0s						
AKASG	Malin Array Be	98.05	33	P	P	22 30 49.6	-0.8
	comp=Z,1.0nm,0.7s,baz=296,slow=4.9,SNR=4.5						
AKASG				LR	LR	23 18 24.6	
	comp=Z,1µm,18.1s,baz=295,slow=38						
AKASG	Malin Array Be	98.05	33	ceP	Pdif	22 30 51.5	+1.1
AKBB	Malin Array Si	98.05	33	IAMs_20	IAMs_20	23 14 37.8	
	comp=Z,2µm,22.0s						
ARR	Arges	98.25	39	⇑P	Pdif	22 30 52.7	+1.2
VOIR		98.47	39	⇓P	Pdif	22 30 55.0	+2.5
URZ	Urewera	98.59	233	IAMs_20	IAMs_20	23 12 42.1	
	comp=Z,1µm,18.0s						
VTS	Vitosha	98.71	42	⇑P	Pdif	22 30 54.0	+0.3
VTS	Vitosha	98.71	42	IAMs_20	IAMs_20	23 11 39.4	
	comp=Z,2µm,22.0s						
OBN	Obninsk	98.90	27	⇑eP	Pdif	22 30 56.5	+2.4
OBN				e		22 34 53.1	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,3µm,20.0s						
MOS	Moscow	98.94	26	eP	Pdif	22 30 56.0	+1.8
MOS				e		22 41 31.7	
MOS				e		22 43 40.5	
MOS				MLR	MLR		
	comp=Z,2µm,17.0s						
MLR	Muntele Rosu	98.99	39	⇑P	P	22 30 54.1	-0.8
MLR	Muntele Rosu	98.99	39	IAmb	IAmb	22 31 04.9	
	comp=Z,20nm,1.4s						
BKZ	Black Stump Fm	99.24	232	IAMs_20	IAMs_20	23 06 14.2	
	comp=Z,2µm,21.0s						
BFZ	Birch Farm	99.70	230	IAMs_20	IAMs_20	23 09 44.5	
	comp=Z,2µm,18.0s						
YSS	Yuzh-Sakhalins	101.29	325	eP	Pdif	22 31 13.6	+8.7
YSS				e		22 35 15.2	
YSS				e		22 44 17.0	
LPSR	Galich'ya Gora	101.62	28	eP	Pdif	22 31 06.5	+0.3
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LPSR				MLR	MLR		
	comp=Z,3µm,22.0s						
NNZ	Nelson	101.93	230	IAMs_20	IAMs_20	23 07 18.5	
	comp=Z,2µm,19.0s						
QRZ	Quartz Range	102.51	231	IAMs_20	IAMs_20	23 10 27.9	
	comp=Z,2µm,22.0s						
VSR	Storozhevoye	102.66	29	eP	Pdif	22 31 06.6	-4.3
VSR				pmax	pmax		
	comp=Z,6.0nm,0.4s						
VSR				MLR	MLR		
	comp=Z,4µm,24.0s						
OXZ	Oxford	103.21	228	IAMs_20	IAMs_20	23 15 12.1	
	comp=Z,2µm,21.0s						
SANT	Santorini	103.21	47	IAMs_20	IAMs_20	23 20 49.9	
	comp=Z,1µm,20.0s						
ZEA	Zeya	104.06	337	eP	Pdif	22 31 24.6	+7.5
ZEA				e		22 35 39.0	
ZEA				pmax	pmax		
	comp=Z,32nm,1.8s						
ZEA				pmax	pmax		
	comp=Z,700nm,7.0s						
QSPA	South Pole Qui	104.19	180	IAMs_20	IAMs_20	23 09 27.7	
	comp=Z,1µm,20.0s						
BOD	Bodaibo	104.82	345	eP	Pdif	22 31 21.2	+0.8
BOD				pmax	pmax		
	comp=Z,7.0nm,1.8s						
DZM	Mont Dzumac	104.85	251	eLR	LR	23 05 56.0	
	comp=Z,2µm,24.2s						
ISP	Isparta	105.94	43	IAMs_20	IAMs_20	23 24 39.6	
	comp=Z,2µm,19.0s						
ILGA	Ilgaz	106.16	39	IAMs_20	IAMs_20	23 26 49.4	
	comp=Z,1µm,21.0s						
ANTO	Ankara	106.28	41	IAMs_20	IAMs_20	23 20 22.6	
	comp=Z,2µm,21.0s						
BRTR	Keskin Array B	106.89	40	PKiKP	PKiKP	22 35 39.8	-0.3
	comp=Z,0.7nm,0.9s,baz=339,slow=3.5,SNR=3.7						
BRTR				PKKPbc	PKKPbc	22 47 00.2	+1.4
	comp=Z,0.8nm,0.9s,baz=128,slow=4.2,SNR=3.0						
KIV	Kislovodsk	109.38	32	IAMs_20	IAMs_20	23 25 08.5	
	comp=Z,1µm,19.0s						
MDJ	Mudanjiang	109.80	329	IAMs_20	IAMs_20	23 30 34.2	
	comp=Z,1µm,20.0s						
HIA	Hailar	110.46	338	IAMs_20	IAMs_20	23 31 09.0	
	comp=Z,2µm,20.0s						
GAZ	Gaziantep	110.66	41	IAMs_20	IAMs_20	23 23 15.6	
	comp=Z,2µm,22.0s						
AKH	Akhalkalaki	111.58	34	IAMs_20	IAMs_20	23 25 29.9	
	comp=Z,2µm,21.0s						
ZAA0	Zalesovo Array	112.06	1	IAMs_20	IAMs_20	23 29 07.0	
	comp=Z,2µm,18.0s						
ZALV	Zalesovo Beam	112.06	1	PKiKP	PKiKP	22 35 49.7	+0.6
	comp=Z,0.8nm,0.5s,baz=351,slow=6.3,SNR=2.8						
ZALV				PP	PP	22 36 32.4	+0.3
	comp=Z,3.9nm,1.0s,baz=340,slow=8.3,SNR=5.9						
CN2	Changchun	112.41	331	Pdif	Pdif	22 31 54.5	0.0
CN2				PP	PP	22 36 37.3	+2.1
CN2				LR	LR		
	comp=Z,900nm,17.0s						
CN2				LR	LR		
	comp=Z,600nm,17.0s						
CN2				LR	LR		
	comp=Z,1µm,19.0s						
LHI	Lord Howe Isla	112.48	242	IAMs_20	IAMs_20	23 26 51.1	
	comp=Z,890nm,22.0s						
MAK	Makhachkala	112.53	30	eP	Pdif	22 31 57.1	+2.1
MAK				i		22 35 52.5	
MAK				e		22 36 34.1	
MAK				e		22 42 29.6	
MAK				ePS	PS	22 46 10.4	-0.6
MAK				pmax	pmax		
	comp=Z,187nm,1.9s						
TLY	Talaya	112.78	349	IAMs_20	IAMs_20	23 31 42.0	
	comp=Z,2µm,18.0s						
GNI	Garni	113.14	34	IAMs_20	IAMs_20	23 26 20.7	
	comp=Z,2µm,22.0s						
TSUM	Tsumeb	113.70	105	IAMs_20	IAMs_20	23 20 23.5	
	comp=Z,1µm,22.0s						
ZAK	Zakamensk	114.08	349	ePKIKP	PKPdf	22 35 54.2	+0.9
ZAK				e		22 36 44.5	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.8s						
KURK	Kurchatov	114.90	6	c iPKIKP	PKPdf	22 35 56.1	+1.4
KURK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
ULN	Ulaanbaatar	115.63	345	IAMs_20	IAMs_20	23 34 21.5	
	comp=Z,2µm,20.0s						
KSRS	Korea Array	115.79	325	PKP	PKPdf	22 35 57.2	+0.4
	comp=Z,1.2nm,0.4s,baz=13,slow=2.0,SNR=6.7						
SONM	Songino Array	115.82	346	PKP	PKPdf	22 35 57.1	+0.4
	comp=Z,2.2nm,0.9s,baz=116,slow=0.5,SNR=9.4						
SONM				PP	PP	22 37 02.0	+2.8
	comp=Z,4.4nm,1.0s,baz=9.7,slow=6.6,SNR=12						
INCN	Inchon	116.48	325	IAMs_20	IAMs_20	23 35 16.3	
	comp=Z,1µm,20.0s						
SYO	Syowa Base	117.68	163	⇑eX	PKiKP	22 36 14.0	+15
DL2	Dalian	118.01	330	Pdif	Pdif	22 32 16.2	-3.3
DL2				PP	PP	22 37 13.6	-1.1
DL2				AMB	AMB		
	comp=Z,370nm,6.2s						
DL2				LR	LR		

	comp=Z,750nm,19.2s						
DL2				LR	LR		
	comp=Z,870nm,19.2s						
DL2				LR	LR		
	comp=Z,2µm,20.6s						
MAKZ	**Makanchi**	**119.06**	**4**		**PKPdf**	**22 36 02.2**	**-0.7**
MAKZ	**Makanchi**	**119.06**	**4**	PKIKP	**PKPdf**	**22 36 02.2**	**-0.7**
MAKZ				MLR	MLR		
	comp=Z,2µm,19.0s						
MKAR	**Makanchi Array**	**119.10**	**4**	PKP	**PKPdf**	**22 36 02.6**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=321,slow=1.7,SNR=21						
MKAR				PP	**PP**	**22 37 22.0**	**+0.3**
	comp=Z,2.2nm,0.9s,baz=5.3,slow=5.2,SNR=4.1						
MKAR				PKKPbc	**PKKPbc**	**22 46 17.0**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=195,slow=3.9,SNR=3.3						
BJT	**Baijiatuau**	**119.58**	**335**	IAMs_20	IAMs_20	23 37 51.5	
	comp=Z,1µm,21.0s						
HHC	**Hu-ho-hao-te**	**120.65**	**339**	*e*PKP	**PKiKP**	**22 36 08.1**	**+1.8**
HHC				PP	**PP**	**22 37 35.2**	**+2.5**
HHC				AMB	AMB		
	comp=Z,2µm,8.6s						
HHC				LR	LR		
	comp=Z,5µm,19.9s						
HHC				LR	LR		
	comp=Z,5µm,20.0s						
HHC				LR	LR		
	comp=Z,6µm,19.6s						
BOSA	**Boshof**	**121.33**	**115**	PKP	**PKiKP**	**22 36 08.7**	**+0.8**
	comp=Z,12nm,0.8s,baz=243,slow=1.6,SNR=11						
BOSA	**Boshof**	**121.33**	**115**		**PKPdf**	**22 36 05.8**	**-2.0**
GEYT	**Alibeck**	**121.44**	**27**	PKP	**PKiKP**	**22 36 08.6**	**+0.8**
	comp=Z,2.5nm,0.6s,baz=306,slow=3.4,SNR=10						
LBTB	**Lobatse**	**121.59**	**111**		**PKPdf**	**22 36 08.2**	**-0.2**
LBTB	**Lobatse**	**121.59**	**111**	PKIKP	**PKPdf**	**22 36 08.2**	**-0.2**
USP	**Ospenovka**	**121.63**	**11**	P	**PKiKP**	**22 36 09.4**	**+1.3**
	SNR=12						
EKS2	**Erkin-Say**	**122.08**	**11**	P	**PKiKP**	**22 36 10.5**	**+1.4**
	SNR=11						
WMQ	**Urumqi**	**122.22**	**359**	*e*PKP	**PKiKP**	**22 36 09.6**	**+0.4**
WMQ				PP	**PP**	**22 37 43.9**	**+0.8**
WMQ				SS	SS	22 54 22.1	+2.7
WMQ				AMB	AMB		
	comp=Z,560nm,3.7s						
WMQ				LR	LR		
	comp=Z,3µm,21.3s						
WMQ				LR	LR		
	comp=Z,1µm,21.3s						
WMQ				LR	LR		
	comp=Z,4µm,24.1s						
AAK	**Ala-Archa**	**122.24**	**11**		**PKPdf**	**22 36 09.1**	**-0.2**
AAK	**Ala-Archa**	**122.24**	**11**	*c i*PKIKP	**PKiKP**	**22 36 10.4**	**+0.9**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AML	**Almayashu**	**122.58**	**12**	P	**PKiKP**	**22 36 11.7**	**+1.2**
	SNR=11						
UCH	**Uchtor**	**122.64**	**11**	P	**PKiKP**	**22 36 12.7**	**+2.1**
	SNR=14						
MBAR	**Mbarara**	**122.75**	**81**	IAMs_20	IAMs_20	23 24 21.6	
	comp=Z,918nm,22.0s						
JOW	**Kunigami**	**122.78**	**315**	IAMs_20	IAMs_20	23 18 48.6	
	comp=Z,996nm,20.0s						
ULHL	**Ulahol**	**122.92**	**10**	P	**PKiKP**	**22 36 12.6**	**+1.7**
	SNR=7.0						
LSZ	**Lusaka**	**123.27**	**99**	IAMs_20	IAMs_20	23 32 59.0	
	comp=Z,1µm,20.0s						
MAW	**Mawson**	**124.40**	**169**	PKP	**PKiKP**	**22 36 12.5**	**-0.2**
	comp=Z,15nm,0.9s,baz=333,slow=2.3,SNR=3.5						
MAW	**Mawson**	**124.40**	**169**		**PKiKP**	**22 36 12.4**	**-0.2**
RAYN	**Ar Rayn**	**124.72**	**48**		**PKPdf**	**22 36 13.0**	**-1.4**
RAYN				IAMs_20	IAMs_20	23 26 46.9	
	comp=Z,892nm,22.0s						
RAYN	**Ar Rayn**	**124.72**	**48**	PKIKP	**PKPdf**	**22 36 13.0**	**-1.4**
RAYN				MLR	MLR		
	comp=Z,900nm,22.0s						
NJ2	**Nanjing**	**124.77**	**327**	*e*PKP	**PKPdf**	**22 36 14.2**	**0.0**
GTA	**Gaotai**	**125.30**	**348**	*e*PKP	**PKiKP**	**22 36 16.0**	**+0.4**
GTA				PP	PP	22 38 13.2	+9.2
GTA				AMB	AMB		
	comp=Z,330nm,7.0s						
GTA				LR	LR		
	comp=Z,1µm,22.5s						
GTA				LR	LR		
	comp=Z,1µm,18.7s						
GTA				LR	LR		
	comp=Z,2µm,21.3s						
KSH	**Kashi**	**125.54**	**10**	PKP	**PKiKP**	**22 36 18.1**	**+2.1**
KSH				sPKP		22 36 31.4	
KSH				PP	**PP**	**22 38 12.8**	**+7.2**
KSH				SS	SS	22 55 08.4	+6.8
KSH				AMB	AMB		
	comp=Z,750nm,5.4s						
KSH				LR	LR		
	comp=Z,1µm,17.0s						
KSH				LR	LR		
	comp=Z,1µm,15.3s						
KSH				LR	LR		
	comp=Z,2µm,15.9s						
COEN	**Coen**	**125.64**	**263**	IAMs_20	IAMs_20	23 19 43.6	
	comp=Z,794nm,19.0s						
FURI	**Furi**	**126.83**	**67**	IAMs_20	IAMs_20	23 29 45.8	
	comp=Z,1µm,20.0s						
STKA	**Stephens Creek**	**127.34**	**241**	PKP	**PKiKP**	**22 36 19.6**	**0.0**
	comp=Z,9.1nm,0.7s,baz=64,slow=3.8,SNR=16						
STKA	**Stephens Creek**	**127.34**	**241**		**PKPdf**	**22 36 19.0**	**0.0**
LZH	**Lanzhou**	**127.47**	**343**	*e*PKP	**PKiKP**	**22 36 21.4**	**+1.4**
LZH				sPKP		22 36 34.3	
XAN	**Xi'an**	**127.65**	**337**	PKP	**PKiKP**	**22 36 20.5**	**+0.2**
XAN				AMB	AMB		
	comp=Z,670nm,9.4s						
XAN				LR	LR		
	comp=Z,2µm,18.8s						
XAN				LR	LR		
	comp=Z,1µm,17.3s						
XAN				LR	LR		
	comp=Z,2µm,18.1s						
XAN	**Xi'an**	**127.65**	**337**		**PKPdf**	**22 36 19.2**	**-0.5**
XAN	**Xi'an**	**127.65**	**337**	PKIKP	**PKPdf**	**22 36 19.2**	**-0.5**
XAN				MLR	MLR		
	comp=Z,2µm,19.0s						
WHN	**Wuhan**	**128.28**	**330**	PKP	**PKPdf**	**22 36 17.5**	**-3.4**
WHN				PP	**PP**	**22 38 25.4**	**+1.4**
WHN				LR	LR		
	comp=Z,4µm,21.6s						
WHN				LR	LR		
	comp=Z,1µm,13.3s						
WHN				LR	LR		
	comp=Z,3µm,20.5s						
KBL	**Kabul**	**128.57**	**19**		**PKPdf**	**22 36 20.9**	**-0.8**
KBL				IAMs_20	IAMs_20	23 41 07.3	
	comp=Z,2µm,20.0s						
KBL	**Kabul**	**128.57**	**19**	PKIKP	**PKPdf**	**22 36 20.9**	**-0.8**
KBL				MLR	MLR		
	comp=Z,2µm,20.0s						
DAMY	**Dhamar**	**129.03**	**58**	IAMs_20	IAMs_20	23 35 35.9	
	comp=Z,1µm,20.0s						
KMBO	**Kilima Mbogo**	**129.13**	**80**	PKP	**PKiKP**	**22 36 24.3**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=233,slow=3.3,SNR=6.4						
KMBO	**Kilima Mbogo**	**129.13**	**80**	IAMs_20	IAMs_20	23 34 03.7	
	comp=Z,1µm,20.0s						
ATD	**Arta Tunnel**	**129.29**	**62**	IAMs_20	IAMs_20	23 33 31.2	
	comp=Z,1µm,20.0s						
NIL	**Nilore**	**130.60**	**15**		**PKPdf**	**22 36 25.0**	**-0.4**
NIL	**Nilore**	**130.60**	**15**	PKIKP	**PKPdf**	**22 36 25.0**	**-0.4**
NIL				MLR	MLR		
	comp=Z,2µm,22.0s						
ENH	**Enshi**	**130.73**	**334**		**PKPdf**	**22 36 24.7**	**-1.0**
UOSS	**Minazif**	**130.81**	**38**	IAMs_20	IAMs_20	23 40 47.6	
	comp=Z,748nm,21.0s						
CD2	**Chengdu**	**132.30**	**340**	PKP	**PKiKP**	**22 36 29.9**	**+0.2**
CD2				sPKP		22 36 44.6	
CD2				PP	**PP**	**22 38 49.2**	**-0.7**
CD2				SKS	**SKSdf**	**22 43 35.0**	**-3.0**
CD2				SKKS	**SKKSac**	**22 45 40.4**	**-4.9**
CD2				SS	**SS**	**22 56 27.0**	**+1.6**
CD2				AMB	AMB		
	comp=Z,780nm,7.8s						
CD2				LR	LR		
	comp=Z,2µm,18.5s						
CD2				LR	LR		
	comp=Z,2µm,17.1s						
CD2				LR	LR		
	comp=Z,4µm,19.2s						
DHRM	**DHARAMSHALA**	**132.65**	**12**	*e*P	**PKPdf**	**22 36 27.9**	**-1.6**
DHRM				*i* x	x	22 39 59.3	
WR0	**Warramunga Arr**	**134.33**	**256**		**PKPdf**	**22 36 32.2**	**-0.4**
WB0	**Warramunga Arr**	**134.47**	**256**		**PKPdf**	**22 36 32.4**	**-0.5**
WR3	**Warramunga Arr**	**134.47**	**256**	IAMs_20	IAMs_20	23 35 27.4	
	comp=Z,1µm,18.0s						
WB8	**Warramunga Arr**	**134.48**	**256**	IAMs_20	IAMs_20	23 36 27.5	
	comp=Z,969nm,22.0s						
WB7	**Warramunga Arr**	**134.48**	**256**	IAMs_20	IAMs_20	23 33 30.4	
	comp=Z,1µm,22.0s						
WB5	**Warramunga Arr**	**134.49**	**256**	IAMs_20	IAMs_20	23 44 07.9	
	comp=Z,1µm,19.0s						
WC2	**Warramunga Arr**	**134.50**	**256**	IAMs_20	IAMs_20	23 35 01.9	
	comp=Z,1µm,21.0s						
WRAB	**Tennant Creek**	**134.51**	**256**		**PKPdf**	**22 36 32.3**	**-0.7**
WRAB	**Tennant Creek**	**134.51**	**256**	*c i*PKIKP	**PKiKP**	**22 36 35.0**	**+0.6**
WRAB				pmax	pmax		
	comp=Z,12nm,1.0s						
WRA	**Warramunga Arr**	**134.52**	**256**	PKP	**PKPdf**	**22 36 33.6**	**+0.6**
	comp=Z,8.1nm,0.8s,baz=86,slow=2.1,SNR=20						
ASAR	**Alice Springs**	**134.84**	**251**	PKhKP	PKPpre	22 36 20.1	
	comp=Z,0.6nm,0.7s,baz=102,slow=3.1,SNR=4.1						
ASAR				PKP	**PKPdf**	**22 36 33.8**	**+0.2**
	comp=Z,1.6nm,0.6s,baz=98,slow=2.6,SNR=9.3						
GYA	**Guiyang**	**135.25**	**335**	⇑*i*PKP	**PKPdf**	**22 36 31.7**	**-2.7**
GYA				PP	**PP**	**22 39 11.6**	**+2.6**
GYA				PKS	**PKSdf**	**22 40 03.4**	**-7.6**
GYA				SKKS		22 46 00.6	
GYA				SS	**SS**	**22 56 58.4**	**-3.1**
GYA				AMB	AMB		
	comp=Z,620nm,8.3s						
GYA				LR	LR		
	comp=Z,930nm,20.1s						
GYA				LR	LR		
	comp=Z,730nm,20.4s						
GYA				LR	LR		
	comp=Z,1µm,20.7s						
LSA	**Lhasa**	**136.13**	**355**		**PKPdf**	**22 36 35.2**	**-1.2**
LSA				IAMs_20	IAMs_20	23 43 05.9	
	comp=Z,1µm,22.0s						
LSA	**Lhasa**	**136.13**	**355**	PKIKP	**PKPdf**	**22 36 35.2**	**-1.2**
LSA				MLR	MLR		
	comp=Z,1µm,22.0s						
DANN	**Dangsing**	**137.54**	**4**	*e*P	PKPpre	22 36 31.9	
	comp=Z,107nm,1.0s						
GKN	**Gorkha**	**137.94**	**3**	*e*P	PKPpre	22 36 32.1	
	comp=Z,69nm,1.0s						
KMI	**Kunming**	**137.97**	**338**	PKP	PKPpre	22 36 32.4	
KMI				SKKS		22 46 09.8	
KMI				AMB	AMB		
	comp=Z,640nm,7.0s						
KMI				LR	LR		
	comp=Z,2µm,20.0s						
KMI				LR	LR		
	comp=Z,900nm,17.7s						
KMI				LR	LR		
	comp=Z,2µm,22.0s						
SOCY	**Socotra**	**138.04**	**53**	IAMs_20	IAMs_20	23 48 34.5	
	comp=Z,917nm,20.0s						
GUN	**Gumba**	**138.08**	**1**	*e*P	PKPpre	22 36 32.4	
	comp=Z,72nm,1.0s						
KKN	**Kakani**	**138.18**	**2**	*e*P	PKPpre	22 36 32.0	
	comp=Z,28nm,0.7s						
DMN	**Daman**	**138.35**	**3**	*e*P	PKPpre	22 36 33.0	
	comp=Z,56nm,1.0s						
PKIN	**Phulchoki**	**138.40**	**2**	*e*P	PKPpre	22 36 32.6	
	comp=Z,28nm,0.7s						
PKI	**Pulchoki**	**138.41**	**2**	*e*P	PKPpre	22 36 32.0	
	comp=Z,40nm,0.8s						
TAPN	**Taplejung**	**138.65**	**359**	*e*P	PKPpre	22 36 31.2	
	comp=Z,131nm,1.3s						
GTK	**Tadong**	**138.66**	**358**	*i* P	**PKPdf**	**22 36 39.2**	**-1.5**
GTK				*i* x	**PP**	**22 39 30.7**	**+0.9**
RAMN	**Ramite**	**139.05**	**1**	*e*P	PKPdf	22 36 33.3	-8.3
	comp=Z,50nm,0.9s						
ODAN	**Odare**	**139.14**	**359**	*e*P	PKPdf	22 36 32.0	-10
	comp=Z,45nm,1.1s						
QIZ	**Qiongzhong**	**140.01**	**325**	PKP	**PKPdf**	**22 36 41.2**	**-2.0**
QIZ				PP	**PP**	**22 39 38.3**	**-0.5**
QIZ				SS	SS	22 57 58.8	+0.4
QIZ				LR	LR		
	comp=Z,900nm,17.5s						
QIZ				LR	LR		
	comp=Z,1µm,17.5s						
QIZ	**Qiongzhong**	**140.01**	**325**	IAMs_20	IAMs_20	23 51 10.1	
	comp=Z,1µm,20.0s						
SHL	**Shillong**	**140.15**	**353**	IAMs_20	IAMs_20	23 49 50.3	
	comp=Z,2µm,22.0s						
ABPO	**Ambohimpanom**	**141.65**	**103**	IAMs_20	IAMs_20	23 36 58.6	
	comp=Z,1µm,20.0s						
BOK	**Bokaro**	**142.18**	**2**	*e*P	**PKPdf**	**22 36 43.4**	**-3.6**
FITZ	**Fitzroy Crossi**	**142.74**	**259**	PKP	**PKPdf**	**22 36 47.0**	**-1.0**
	comp=Z,4.5nm,0.6s,baz=13,slow=2.7,SNR=9.3						
APSI	**Ampana**	**143.28**	**288**	PKP	**PKPdf**	**22 36 48.2**	**-1.0**
MPSI	**Mapaga**	**144.37**	**291**	PKP	**PKPdf**	**22 36 50.4**	**-0.7**
POO	**Poona**	**144.95**	**22**	*e*P	**PKPab**	**22 36 48.0**	**-3.1**
MMRI	**Maumere**	**145.05**	**275**	PKP	**PKPbc**	**22 36 51.0**	**-0.6**
MMRI	**Maumere**	**145.05**	**275**	PKPdf	**PKPbc**	**22 36 49.5**	**-2.2**
CHTO	**Chiang Mai**	**145.11**	**340**	PKPbc	**PKPbc**	**22 36 51.0**	**-0.7**
CHTO	**Chiang Mai**	**145.11**	**340**	IAMs_20	IAMs_20	23 51 35.4	
	comp=Z,1µm,21.0s						
CHTO	**Chiang Mai**	**145.11**	**340**	PKIKP	**PKPbc**	**22 36 51.0**	**-0.7**
CHTO				MLR	MLR		
	comp=Z,1µm,21.0s						
CM31	**Chiang Mai Arr**	**145.44**	**340**		**PKPbc**	**22 36 52.2**	**-0.5**
CMAR	**Chiang Mai Arr**	**145.44**	**340**	PKPbc	**PKPab**	**22 36 53.0**	**+0.1**
	comp=Z,46nm,0.9s,baz=346,slow=4.4,SNR=180						
CMAR				PP	**PP**	**22 40 11.5**	**+0.3**
	comp=Z,1.4nm,1.0s,baz=7.1,slow=6.2,SNR=2.9						
EDFI	**Ende, Flores**	**145.60**	**275**	PKP	**PKPdf**	**22 36 52.8**	**-0.5**
BWNR	**Bhubaneshwar**	**145.66**	**2**	⇑*i*P	**PKPdf**	**22 36 53.0**	**-0.1**
TTSI	**Tana Toraja**	**145.76**	**286**	PKP	**PKPbc**	**22 36 53.7**	**-0.2**
BNSI	**Bone**	**145.95**	**283**	PKP	**PKPab**	**22 36 55.3**	**+0.3**
SPSI	**Sidrap Palu**	**146.13**	**284**	PKP	**PKPab**	**22 36 56.0**	**+0.3**
KAD	**Karad**	**146.19**	**22**	*i* P	**PKPab**	**22 36 56.2**	**+0.4**
BKSI	**Bulukumba**	**146.22**	**282**	PKP	**PKPbc**	**22 36 55.4**	**+0.1**
DLV	**T Lat**	**146.38**	**320**	PKPab	**PKPbc**	**22 36 55.9**	**-0.1**
PBKT	**Sadao Pong**	**146.42**	**335**		**PKPdf**	**22 36 53.6**	**-0.9**
KAPI	**Kappang**	**146.48**	**283**	PKPbc	**PKPbc**	**22 36 56.0**	**-0.1**
	comp=Z,32nm,0.9s,baz=121,slow=1.4,SNR=15						
NWAO	**Narrogin (SRO)**	**146.81**	**231**	PKPbc	**PKPab**	**22 36 57.2**	**-0.6**
	comp=Z,34nm,1.1s,baz=93,slow=3.7,SNR=12						
NWAO	**Narrogin (SRO)**	**146.81**	**231**	PKPab	**PKPab**	**22 36 57.4**	**-0.4**
NWAO	**Narrogin (SRO)**	**146.81**	**231**	PKP2	**PKPab**	**22 36 57.4**	**-0.4**
BASI	**Baing, Sumba**	**146.97**	**273**	PKP	**PKPbc**	**22 36 58.0**	**+0.5**
HYB	**Hyderabad**	**147.45**	**15**	*i* PKP	**PKPdf**	**22 36 56.0**	**-0.3**
HYB				*e*		22 37 05.0	
HYB	**Hyderabad**	**147.45**	**15**	*e*P	**PKPdf**	**22 36 55.1**	**-1.2**
MSEY	**Mahe Island**	**147.52**	**76**		**PKPbc**	**22 36 59.5**	**+0.4**
MSEY	**Mahe Island**	**147.52**	**76**	IAMs_20	IAMs_20	23 45 47.9	
	comp=Z,997nm,20.0s						
MSEY	**Mahe Island**	**147.52**	**76**	PKP2	**PKPbc**	**22 36 59.5**	**+0.4**
MSEY				MLR	MLR		
	comp=Z,1µm,20.0s						
GOA	**Goa**	**147.71**	**24**	*e*x	**PKPbc**	**22 37 00.4**	**+1.0**
PSAB2	**Pilbara Seismi**	**147.95**	**252**	IAMs_20	IAMs_20	23 34 27.2	
	comp=Z,1µm,22.0s						
PSA00	**Pilbara Seismi**	**147.96**	**252**	PKPbc	**PKPbc**	**22 36 59.8**	**-0.3**
PSA00				IAMs_20	IAMs_20	23 35 15.5	
	comp=Z,1µm,18.0s						
WBSI	**Waikabubak, Su**	**148.01**	**275**	PKP	**PKPbc**	**22 36 59.0**	**-1.4**
MORW	**Morawa**	**149.36**	**236**		**PKPbc**	**22 37 02.9**	**-0.5**
SBUM	**Sibu**	**150.01**	**302**		**PKPbc**	**22 37 04.7**	**-0.8**
SBUM				IAMs_20	IAMs_20	23 59 39.4	
	comp=Z,596nm,22.0s						
SRBI	**Singaraja**	**151.68**	**279**	PKP	**PKPbc**	**22 37 06.4**	**-2.9**
MDRS	**Chennai**	**152.05**	**14**	*e*P	**PKPdf**	**22 37 01.9**	**-1.6**
DGPR	**DIGLIPUR**	**152.13**	**348**	*e*P	**PKPdf**	**22 37 01.4**	**-2.2**
KSM	**Kuching**	**152.13**	**302**	IAMs_20	IAMs_20	00 01 04.6	
	comp=Z,841nm,22.0s						
JAGI	**Jajag, Banyuwa**	**152.79**	**279**		**PKPbc**	**22 37 10.8**	**-1.0**
PBA	**Port Blair**	**153.65**	**347**	*e*P	PKPdf	22 37 03.3	-2.6
TRD	**Trivandrum**	**155.29**	**24**	*e*P	**PKPdf**	**22 37 06.5**	**-1.8**
IPM	**Ipoh**	**156.78**	**322**		**PKPdf**	**22 37 10.7**	**+0.4**
IPM				IAMs_20	IAMs_20	00 01 25.4	
	comp=Z,1µm,20.0s						
LEM	**Lembang**	**158.45**	**288**	PKPab	**PKPab**	**22 37 47.3**	**+0.1**
	comp=Z,21nm,0.9s,baz=334,slow=23,SNR=4.1						

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*GCG **02** 22:25:47.1±0.9, 14°27N×94°60W, h126km±82km, MD5.1*
*SNET **02** 22:26:06.4±1.3, 13°84N×93°20W, h34km±864km, ML4.7*
*UCR **02** 22:26:06.4±1.3, 13°86N×93°21W, h34km±902km, ML4.4, mb5.1(NEIC)*
*MOS **02** 22:26:08.6±1.1, 14°23N×92°99W, h38km, mb5.4/9, Error ellipse: s-maj=12.6km s-min=6.4km az=112.0*
*MEX **02** 22:26:08.7±0.7, 14°19N×93°18W, h10km±19km, MD5.1*
*NEIC **02** 22:26:09.7±1.9, 14°20N±0°05×93°16W±0°05, h38km±2km, Error ellipse: s-maj=8.4km s-min=6.1km az=205.0*
*GCMT **02** 22:26:10.0±0.4, 14°26N±0°02×93°36W±0°04, h23km±1km, MW5.4/87, Moment Tensor Solution. s21,c23; s87,c127; Duration: 1s3 Moment tensor: Scale 10^{17}Nm; M_{rr}1.63±.14; $M_{\theta\theta}$-1.17±.08; $M_{\phi\phi}$-0.46±.07; $M_{r\theta}$0.65±.08; $M_{\theta\phi}$0.35±.04; $M_{\phi r}$-0.69±.10; Best double couple: $M_0$1.74700×10^{17} NP1:ϕ_s286.00000°, δ30.00000°, λ74.00000°. NP2:ϕ_s124.00000°, δ61.00000°, λ99.00000°. Principal axes: T 1.9310, Plg72.0000°, Azm55.0000°; N -0.3720, Plg8.0000°, Azm300.0000°; P -1.5640, Plg16.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BJI **02** 22:26:12.5±0.0, 14°40N×92°90W, h44km, mB5.5/7, Ms5.4/1, Ms7 5.4/3*
*IDC **02** 22:26:15.2±2.0, 14°40N×92°62W, h80km±17km, mb4.3/27, mb1 4.5/32, mb1mx4.4/44, mbtmp4.7/32, MS5.0/2, Ms1 5.0/2, ms1mx4.2/43, Error ellipse: s-maj=18.7km s-min=9.1km az=52.0*
ISC 02 22:26:10.2±0.4**, 14°23N**±0°04×**93°12W**±0°04**, h37**km±1km**, n556,** σ1s**88**/483**, mb5.0**/136**, 7C-1D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.06**	**51**		**Pn**	**22 26 26.6**	**-1.9**
THIG					**Sn**	**22 26 42.3**	**+0.3**
THIG		**1.06**	**51**	*e*P	**Pn**	**22 26 26.6**	**-1.9**
THIG				*i* S	**Sn**	**22 26 40.5**	**-1.5**
ERG	**Entre ros, C**	**1.51**	**82**	*e*P	**Pn**	**22 26 34.2**	**-0.6**
ERG				*e*S	Sn	22 27 09.3	+16
STG3	**Santiaguito 3,**	**1.57**	**72**	*e*P	**Pn**	**22 26 34.1**	**-1.5**
FUG	**Fuego 3**	**2.21**	**84**	*e*P	**Pn**	**22 26 43.3**	**-1.3**
FUG				*e*S	Sn	22 27 27.4	+17
CCIG	**Comitan**	**2.25**	**25**		**Pn**	**22 26 45.1**	**+0.2**
CCIG				Sn	**Sn**	**22 27 14.9**	**+3.4**
PCG	**Pacaya**	**2.44**	**86**	*e*P	**Pn**	**22 26 46.9**	**-0.7**
TGIG		**2.53**	**360**		**Pn**	**22 26 47.4**	**-1.3**
TGIG					**Sn**	**22 27 17.5**	**-0.9**
TGIG		**2.53**	**360**	*e*P	**Pn**	**22 26 47.4**	**-1.3**
TGIG				*i* S	**Sn**	**22 27 18.1**	**-0.2**
IXG	**Ixpaco**	**2.59**	**91**	*e*P	**Pn**	**22 26 48.2**	**-1.6**
IXG				*e*S	Sn	22 27 35.0	+15
APG	**El Apazote**	**2.68**	**73**	P	**Pn**	**22 26 50.8**	**-0.2**
	55nm,0.3s,baz=196,slow=13,SNR=51						
NBG	**Las Nubes**	**2.71**	**82**	*e*P	**Pn**	**22 26 52.0**	**+0.6**
HUIG	**Huatulco**	**3.27**	**298**		**Pn**	**22 26 57.0**	**-1.9**
HUIG					**Sn**	**22 27 33.9**	**-2.7**
HUIG	**Huatulco**	**3.27**	**298**	*i* P	**Pn**	**22 26 57.0**	**-1.9**
HUIG				*i* S	**Sn**	**22 27 33.9**	**-2.7**
CMIG	**Matias Romero**	**3.31**	**329**	P	**Pn**	**22 26 59.6**	**+0.2**
	48nm,0.3s,baz=135,slow=9.6,SNR=67						
CMIG				S	**Sn**	**22 27 39.0**	**+1.4**
	106nm,0.3s,baz=110,slow=17,SNR=7.6						
RTR	**El Retiro**	**3.38**	**95**	*e*P	**Pn**	**22 26 58.7**	**-2.0**
RTR				*e*S	**Sn**	**22 27 39.0**	**-0.7**
RTR	**El Retiro**	**3.38**	**95**	*e*P	**Pn**	**22 26 58.7**	**-2.0**
RTR				*e*S	**Sn**	**22 27 39.0**	**-0.7**
SBLS	**San Blas**	**3.41**	**96**	*e*P	**Pn**	**22 26 58.8**	**-2.3**
SBLS	**San Blas**	**3.41**	**96**	*e*P	**Pn**	**22 26 58.8**	**-2.3**
CEVE	**Cerro Verde**	**3.41**	**96**	*e*P	**Pn**	**22 26 59.7**	**-1.4**
CEVE				*e*S	**Sn**	**22 27 40.4**	**-0.1**
CEVE				IAML		22 27 52.9	
	comp=Z,2µm,0.5s						
CEVE	**Cerro Verde**	**3.41**	**96**	*e*P	**Pn**	**22 26 59.7**	**-1.4**
CEVE				*e*S	**Sn**	**22 27 40.4**	**-0.1**
CEVE				IAML		22 27 52.9	
	comp=Z,2µm,0.5s						
SNJE	**San Jose**	**3.43**	**96**	*e*P	**Pn**	**22 26 59.0**	**-2.2**
SNJE	**San Jose**	**3.43**	**96**	*e*P	**Pn**	**22 26 59.0**	**-2.2**
MTO3	**Montecristo**	**3.64**	**87**	*e*P	**Pn**	**22 27 03.9**	**-0.3**
MTO3	**Montecristo**	**3.64**	**87**	*e*P	**Pn**	**22 27 03.9**	**-0.3**
BOQS	**Boqueron**	**3.76**	**97**	*e*P	**Pn**	**22 27 04.5**	**-1.3**
SNET	**Serv Nac Est T**	**3.81**	**98**		**Pn**	**22 27 05.1**	**-1.3**
SNET				Sn	**Sn**	**22 27 52.7**	**+2.7**
TGUH	**Tegucigalpa,Un**	**5.67**	**91**		**Pn**	**22 27 31.5**	**-0.5**
ESTN	**Estel**	**6.65**	**99**		**Pn**	**22 27 45.7**	**+0.2**
ESTN				Sn	**Sn**	**22 29 03.2**	**+3.0**
TEIG	**Tepich**	**7.54**	**37**	P	**Pn**	**22 27 56.9**	**-0.7**
	comp=Z,48nm,0.3s,baz=329,slow=0.9,SNR=63						
TEIG				S	**Sn**	**22 29 19.5**	**-2.3**
	comp=Z,9.9nm,0.3s,baz=318,slow=23,SNR=5.7						
TEIG				LR	LR	22 31 04.4	
	comp=Z,10µm,20.1s,baz=139,slow=41						
TEIG	**Tepich**	**7.54**	**37**		**Pn**	**22 27 56.7**	**-0.9**
TEIG					**Sn**	**22 29 25.0**	**+3.2**
ACON	**Acoyapa**	**8.06**	**105**	Pn	**Pn**	**22 28 05.1**	**+0.4**
ESPN	**Las Esperanzas**	**8.82**	**102**		**Pn**	**22 28 15.7**	**+0.5**
JTS	**Las Juntas de**	**8.89**	**115**	P	**Pn**	**22 28 16.6**	**+0.4**
	comp=Z,1.5nm,0.3s,baz=300,slow=14,SNR=4.8						
JTS				S	**Sn**	**22 30 02.6**	**+7.5**
	comp=Z,0.7nm,0.3s,baz=5.2,slow=8.0,SNR=1.4						
JTS	**Las Juntas de**	**8.89**	**115**		**Pn**	**22 28 15.9**	**-0.2**
JTS	**Las Juntas de**	**8.89**	**115**	P	**Pn**	**22 28 16.0**	**-0.2**
MOIG	**Morelia**	**9.43**	**306**	Pn	**Pn**	**22 28 21.1**	**-2.6**
PAYG	**Puerto Ayora**	**15.07**	**169**	Pn	**Pn**	**22 29 39.5**	**-1.1**
PAYG				IAmb	IAmb	22 29 54.3	
	comp=Z,56nm,1.1s						
833A	**Chaparral WMA,**	**15.19**	**338**		**Pn**	**22 29 39.7**	**-2.3**
833A				IAmb	IAmb	22 29 50.4	
	comp=Z,92nm,1.0s						
833A	**Chaparral WMA,**	**15.19**	**338**	P	**Pn**	**22 29 44.1**	**+2.1**
	baz=155						
MTDJ	**Mount Denham**	**15.48**	**73**	Pn	**Pn**	**22 29 43.3**	**-2.7**
HKT	**Hockley**	**15.84**	**351**		**Pn**	**22 29 50.1**	**-0.3**
HKT	**Hockley**	**15.84**	**351**	P	**Pn**	**22 29 50.1**	**-0.3**
HKT				pmax	pmax		
	comp=Z,16nm,1.0s						
061Z	**Ochoppi**	**16.28**	**43**		**Pn**	**22 29 55.5**	**-0.6**
441A	**DeRidder**	**16.44**	**360**	IAmb	IAmb	22 30 03.0	
	comp=Z,133nm,1.0s						
435B	**Jarrell**	**16.98**	**347**		**Pn**	**22 30 04.6**	**-0.2**
435B	**Jarrell**	**16.98**	**347**	P	**Pn**	**22 30 05.5**	**+0.6**
	baz=164,SNR=6.1						
344A	**Westbrook Farm**	**17.28**	**7**	IAmb	IAmb	22 30 13.8	
	comp=Z,166nm,1.1s						
JCT	**Junction City**	**17.30**	**340**	Pn	**Pn**	**22 30 07.5**	**-1.5**
JCT	**Junction City**	**17.30**	**340**	P	**Pn**	**22 30 07.5**	**-1.5**
JCT				pmax	pmax		
	comp=Z,27nm,0.9s						
JCT	**Junction City**	**17.30**	**340**	P	**P**	**22 30 10.4**	**+0.3**
	baz=157						
346A	**Big Creek Wild**	**17.40**	**10**	IAmb	IAmb	22 30 24.4	
	comp=Z,93nm,0.8s						
060A	**Indiantown**	**17.44**	**41**		**P**	**22 30 11.2**	**-0.4**
060A				IAmb	IAmb	22 30 19.6	
	comp=Z,192nm,0.9s						
DWPF	**Disney Wildern**	**17.57**	**36**	P	**P**	**22 30 12.9**	**-0.1**
DWPF				IAmb	IAmb	22 30 21.6	
	comp=Z,138nm,1.1s						
DWPF	**Disney Wildern**	**17.57**	**36**	P	**Pn**	**22 30 12.2**	**0.0**
	baz=220						
451A	**Vernon**	**17.66**	**21**	IAmb	IAmb	22 30 26.1	
	comp=Z,178nm,1.1s						
H06E1	**SOCORRO T-PHAS**	**17.66**	**287**	T	T	22 48 21.9	
H06S1	**SOCORRO T**	**17.68**	**287**	T	T	22 48 25.8	
	baz=112						
BRAL	**Brewton**	**17.75**	**17**	P	**Pn**	**22 30 12.4**	**-2.0**
BRAL				IAmb	IAmb	22 30 20.3	
	comp=Z,182nm,1.0s						
BRAL	**Brewton**	**17.75**	**17**	P	**P**	**22 30 16.6**	**+1.6**
	baz=199,SNR=10						
553A	**Crawfordville**	**17.78**	**25**	IAmb	IAmb	22 30 17.3	
	comp=Z,123nm,0.9s						
TXAR	**Lajitas Array**	**17.92**	**329**	P	**P**	**22 30 18.8**	**+1.8**
	comp=Z,0.3nm,0.3s,baz=155,slow=12,SNR=19						
656A	**Willston**	**17.96**	**31**	IAmb	IAmb	22 30 37.6	
	comp=Z,135nm,1.1s						
VBMS	**Vicksburg**	**18.06**	**7**	P	**Pn**	**22 30 16.2**	**-2.0**
VBMS				IAmb	IAmb	22 30 22.7	
	comp=Z,87nm,0.8s						
VBMS	**Vicksburg**	**18.06**	**7**	P	**P**	**22 30 21.5**	**+3.1**
	baz=187						
143A	**Socs Landing,**	**18.45**	**5**	IAmb	IAmb	22 30 30.2	
	comp=Z,80nm,0.8s						
352A	**Blakely**	**18.74**	**22**	IAmb	IAmb	22 30 31.9	
	comp=Z,177nm,0.9s						
250A	**Grady**	**18.74**	**18**	IAmb	IAmb	22 30 32.0	
	comp=Z,101nm,1.1s						
CBOC	**Ciudad Bolivar**	**18.77**	**115**	*e*P	**Pn**	**22 30 27.0**	**-0.2**
Z41A	**Richland Creek**	**18.94**	**1**	IAmb	IAmb	22 30 47.9	
	comp=Z,140nm,1.0s						

Z41A	Richland Creek	18.94	1	P	Pn	22 30 30.8	+1.9
	baz=180,SNR=8.5						
LPIG	La Paz	18.96	304	P	Pn	22 30 33.7	+4.6
	comp=Z,5.0nm,0.3s,baz=262,slow=1.3,SNR=6.9						
HELC	Santa Helena	19.05	113	eP	P	22 30 26.3	-3.6
ZARC	Zaragoza, Cauc	19.13	109	eP	Pn	22 30 31.1	-0.3
TIGA	Tifton	19.23	25	IAmb	IAmb	22 30 33.1	
	comp=Z,137nm,0.9s						
TIGA	Tifton	19.23	25	P	P	22 30 30.9	-0.3
	baz=208,SNR=10						
ABTX	Abilene, Hawle	19.25	343	P	P	22 30 30.9	-0.6
ABTX				IAmb	IAmb	22 30 43.0	
	comp=Z,79nm,0.8s						
ABTX	Abilene, Hawle	19.25	343	P	Pn	22 30 33.7	+1.0
	baz=160,SNR=6.7						
WLAR	White Oak Lake	19.37	0	IAmb	IAmb	22 30 36.7	
	comp=Z,149nm,1.0s						
Z35A	Perchaven, San	19.38	350	IAmb	IAmb	22 30 40.5	
	comp=Z,154nm,0.9s						
SMLC	San Martn de	19.42	104	eP	Pn	22 30 35.3	+0.4
YOTC	Yotoco, Valle	19.42	120	eP	P	22 30 33.2	-0.4
GUY2C	Guyana, Caldas	19.64	115	eP	P	22 30 36.6	+0.3
BBAC	Balboa, Cauca	19.83	126	eP	P	22 30 38.0	-0.1
PTBC	PUERTO BERRIO,	19.87	111	eP	P	22 30 36.6	-1.8
152A	Waverly Hall	19.89	21	IAmb	IAmb	22 30 44.8	
	comp=Z,82nm,1.0s						
NORC	Norcasia	19.92	114	eP	P	22 30 38.7	-0.3
POPC	Popayan, Colom	19.97	124	eP	Pn	22 30 40.8	-0.8
Z50A	Ashland	20.03	18	IAmb	IAmb	22 30 52.5	
	comp=Z,81nm,1.1s						
Z50A	Ashland	20.03	18	P	P	22 30 40.5	+0.4
	baz=200						
OTAV	Otavalo	20.10	133	eP	Pn	22 30 46.3	+3.0
OTAV	Otavalo	20.10	133	P	P	22 30 38.8	-2.6
OTAV	Otavalo	20.10	133	P	P	22 30 38.8	-2.6
OTAV				pmax	pmax		
	comp=Z,14nm,1.0s						
OTAV	Otavalo	20.10	133	eP	P	22 30 39.6	-1.8
X40A	Basin Creek Fa	20.17	1	P	Pn	22 30 42.7	-0.8
	baz=180						
MIAR	Mount Ida	20.23	359	P	P	22 30 43.0	+0.9
	baz=178,SNR=28						
SOTA	Rioblanco	20.26	125	eP	P	22 30 42.9	-0.3
X43A	Marvell	20.30	5	IAmb	IAmb	22 30 51.8	
	comp=Z,129nm,0.9s						
PCON	Cinco Dias	20.32	124	eP	Pn	22 30 44.9	-1.1
ORTC	Ortega, Tolima	20.39	119	eP	Pn	22 30 46.3	-0.1
UALR	University of	20.46	2	IAmb	IAmb	22 30 50.5	
	comp=Z,99nm,1.1s						
SPBC	San Pablo de B	20.59	113	eP	P	22 30 42.9	-3.5
MNTX	Cornudas Mount	20.70	329	IAmb	IAmb	22 30 53.1	
	comp=Z,54nm,0.9s						
MNTX	Cornudas Mount	20.70	329	P	Pn	22 30 50.0	+0.2
	baz=144,SNR=18						
X34A	Smith Ranch, M	20.72	349	IAmb	IAmb	22 30 58.2	
	comp=Z,54nm,1.0s						
ROSC	El Rosal	20.74	115	P	P	22 30 49.3	+1.1
	comp=Z,58nm,1.0s,baz=98,slow=19,SNR=12						
ROSC	El Rosal	20.74	115	eP	P	22 30 49.1	+0.9
ROSC	El Rosal	20.74	115	IAmb	IAmb	22 31 01.2	
	comp=Z,116nm,1.1s						
URIC	Uribia, Colomb	20.74	95	P	P	22 30 48.3	+0.5
W41B	Gary Mavity, V	20.86	2	P	Pn	22 30 50.5	-1.1
	baz=182						
X48A	Hartselle	20.86	14	IAmb	IAmb	22 30 57.1	
	comp=Z,62nm,0.9s						
W39A	Magazine	20.88	358	P	Pn	22 30 51.4	-0.4
	baz=178,SNR=6.1						
GOGA	Godfrey	21.01	23	P	P	22 30 50.4	-0.2
GOGA				IAmb	IAmb	22 30 59.1	
	comp=Z,73nm,0.9s						
GOGA	Godfrey	21.01	23	P	P	22 30 50.4	-0.2
GOGA				pmax	pmax		
	comp=Z,73nm,0.9s						
GOGA	Godfrey	21.01	23	P	P	22 30 49.9	-0.7
	baz=206,SNR=9.8						
BARC	Barichara	21.01	109	eP	P	22 30 49.1	-2.0
WMOK	Wichita Mounta	21.05	347	P	P	22 30 53.5	+2.5
	baz=164,SNR=7.1						
GARC	Garzon, Huila	21.13	123	eP	P	22 30 55.3	+3.0
PLAL	Pickwick Lake	21.15	12	P	P	22 30 51.6	-0.5
PAMC	Pamplona, Colo	21.18	107	eP	P	22 30 52.5	-0.6
Y52A	Lilburn	21.20	21	IAmb	IAmb	22 31 06.5	
	comp=Z,98nm,0.9s						
Y52A	Lilburn	21.20	21	P	P	22 30 52.3	-0.3
	baz=204,SNR=8.5						
FPAL	Fort Paine	21.33	17	IAmb	IAmb	22 31 02.7	
	comp=Z,48nm,0.9s						
CHIC	Chingaza	21.35	115	eP	P	22 30 56.7	+1.8
FLOC	Florencia	21.35	125	eP	P	22 30 56.0	+1.5
FLOC	Florencia	21.35	125	P	P	22 30 54.1	-0.4
RUSC	La Rusia	21.38	111	eP	P	22 30 54.6	-0.6
RUSC	La Rusia	21.38	111	P	P	22 30 54.6	-0.6
157A	Early Branch	21.43	29	P	P	22 30 54.6	-0.5
	baz=213						
SDDR	Presa de Saban	21.44	74	P	P	22 30 55.5	+0.1
OKCFA	Oklahoma City	21.45	350	IAmb	IAmb	22 30 58.6	
	comp=Z,107nm,0.8s						
MSTX	Muleshoe	21.51	338	IAmb	IAmb	22 31 00.3	
	comp=Z,93nm,0.9s						
MSTX	Muleshoe	21.51	338	P	P	22 30 57.3	+1.2
	baz=153,SNR=17						
X51A	Calhoun	21.58	19	P	P	22 31 02.2	+5.6
	baz=202						
FCAR	Ozark Folk Cen	21.58	2	P	P	22 30 56.3	-0.4
FCAR				IAmb	IAmb	22 31 00.2	
	comp=Z,44nm,0.9s						
FCAR					S	22 34 55.1	+1.2
TUL1	Leonard	21.72	354	IAmb	IAmb	22 31 01.8	
	comp=Z,58nm,0.9s						
TUL1	Leonard	21.72	354	P	P	22 30 59.8	+1.6
	baz=172,SNR=9.6						
Z56A	Williston	21.80	27	IAmb	IAmb	22 31 07.8	
	comp=Z,106nm,0.9s						
Z56A	Williston	21.80	27	P	P	22 30 59.4	+0.4
	baz=212						
LCAR	Lake Charles	21.82	4	P	P	22 30 59.5	+0.3
LCAR				IAmb	IAmb	22 31 14.7	
	comp=Z,49nm,0.9s						
LCAR					PcP	22 34 59.7	+1.3
AMTX	Amarillo	21.96	341	P	P	22 31 01.6	+0.6
	baz=157						
HHAR	Hobbs	21.97	358	IAmb	IAmb	22 31 03.6	
	comp=Z,50nm,0.9s						
W50A	Signal Mountai	22.03	17	IAmb	IAmb	22 31 10.8	
	comp=Z,60nm,1.0s						
W50A	Signal Mountai	22.03	17	P	P	22 31 05.8	+4.2
	baz=200						
U40A	Yellville	22.03	1	IAmb	IAmb	22 31 03.8	
	comp=Z,60nm,0.9s						
U40A	Yellville	22.03	1	P	P	22 31 01.8	+0.3
	baz=180,SNR=12						
SC01	Santiago de lo	22.04	73	P	P	22 31 02.3	+0.5
X53A	Estanollee	22.05	22	P	P	22 31 02.2	+0.5
	baz=206						
Z57A	Bowman	22.08	29	P	P	22 31 02.1	+0.1
	baz=213,SNR=8.9						
Y55A	Saluda	22.11	26	P	P	22 31 01.6	-0.8
	baz=210						
NHSC	New Hope	22.17	30	P	P	22 31 04.1	+1.0
	baz=215,SNR=7.2						
WVT	Waverly	22.31	11	P	P	22 31 08.4	+3.9
	baz=193						
TAMC	Tame, Arauca	22.35	108	eP	P	22 31 06.3	+1.1
X54A	Belton	22.43	24	P	P	22 31 05.2	-0.6
	baz=208						
Z58A	St. Stephen	22.54	30	P	P	22 31 07.5	+0.5
	baz=215						
PBMO	Poplar Bluff	22.58	6	IAmb	IAmb	22 31 09.4	
	comp=Z,40nm,0.9s						
319A	Douglas	22.60	322	IAmb	IAmb	22 31 29.5	
	comp=Z,59nm,0.9s						
121A	Cookes Peak, D	22.60	326	P	P	22 31 10.9	+2.9
	baz=140,SNR=38						
SDV	Santo Domingo	22.65	101	P	P	22 31 06.0	-2.6
	comp=Z,26nm,0.9s,baz=298,slow=3.5,SNR=15						
SDV				PcP	PcP	22 34 59.4	-1.3
	comp=Z,3.5nm,1.0s,baz=286,slow=2.6,SNR=1.9						
SDV	Santo Domingo	22.65	101	eP	P	22 31 05.7	-2.9
SDV	Santo Domingo	22.65	101	P	P	22 31 08.8	+0.2
X55A	Gracelyn & Ava	22.66	25	P	P	22 31 06.8	-1.5
	baz=210						
U32A	Winter Ranch,	22.67	348	IAmb	IAmb	22 31 10.9	
	comp=Z,60nm,1.1s						
T35A	Sooner Cattle	22.79	353	IAmb	IAmb	22 31 10.6	
	comp=Z,67nm,0.9s						
Y57A	Sumter	22.82	28	IAmb	IAmb	22 31 17.6	
	comp=Z,84nm,0.9s						
Y57A	Sumter	22.82	28	P	P	22 31 08.8	-1.2
	baz=213,SNR=5.1						
MGMO	Mountain Grove	22.84	2	IAmb	IAmb	22 31 19.4	
	comp=Z,43nm,1.1s						
TKL	Tuckaleechee C	22.93	20	P	P	22 31 09.5	-1.6
	comp=Z,13nm,0.9s,baz=180,slow=14,SNR=4.2						
TKL	Tuckaleechee C	22.93	20	P	P	22 31 11.3	+0.2
TKL				IAmb	IAmb	22 31 28.7	
	comp=Z,66nm,1.1s						
TKL	Tuckaleechee C	22.93	20	P	P	22 31 11.3	+0.2
TKL				pmax	pmax		
	comp=Z,67nm,1.1s						
X56A	White Oak	22.94	26	P	P	22 31 09.7	-1.5
	baz=211,SNR=7.3						
W54A	Cherokee Point	22.98	23	P	P	22 31 11.1	-0.5
	baz=208,SNR=8.2						
Y58A	Scranton	23.07	30	IAmb	IAmb	22 31 20.7	
	comp=Z,89nm,0.9s						
Y58A	Scranton	23.07	30	P	P	22 31 11.4	-1.1
	baz=215						
V52A	Sevierville	23.15	20	IAmb	IAmb	22 31 32.2	
	comp=Z,65nm,1.1s						
V52A	Sevierville	23.15	20	P	P	22 31 12.9	-0.5
	baz=204						
V53A	Saluda	23.27	22	IAmb	IAmb	22 31 23.3	
	comp=Z,34nm,0.9s						
V53A	Saluda	23.27	22	P	P	22 31 13.8	-0.7
	baz=206,SNR=5.2						
S39A	Bolivar	23.36	360	P	P	22 31 15.3	-0.1
KMSC	Kings Mountain	23.37	25	IAmb	IAmb	22 31 32.5	
	comp=Z,61nm,1.1s						
KMSC	Kings Mountain	23.37	25	P	P	22 31 14.0	-1.5
	baz=209						
Y59A	Loris	23.52	31	P	P	22 31 15.4	-1.6
	baz=216						
S44A	Carbondale	23.62	8	IAmb	IAmb	22 31 28.7	
	comp=Z,41nm,0.9s						
W56A	Indian Trail	23.68	26	P	P	22 31 16.7	-1.7
	baz=211						
V54A	Nebo	23.68	23	P	P	22 31 17.3	-1.2
	baz=207						
X58A	Rowland	23.76	29	P	P	22 31 17.7	-1.5
	baz=214						
T49A	Edmonton	23.76	15	P	P	22 31 18.6	-0.6
	baz=198						
CCM	Cathedral Cave	23.78	4	P	P	22 31 18.6	-0.9
CCM				IAmb	IAmb	22 31 19.5	
	comp=Z,42nm,0.9s						
CCM	Cathedral Cave	23.78	4	P	P	22 31 18.6	-0.9
CCM				pmax	pmax		
	comp=Z,42nm,0.9s						
CCM	Cathedral Cave	23.78	4	P	P	22 31 18.5	-0.9
	baz=184						
TZTN	Tazewell	23.81	19	P	P	22 31 18.3	-1.5
	baz=203						
ANMO	Albuquerque	23.88	332	P	P	22 31 21.9	+1.4
	comp=Z,21nm,0.8s,baz=151,slow=12,SNR=16						
ANMO	Albuquerque	23.88	332	P	P	22 31 20.1	-0.5
ANMO	Albuquerque	23.88	332	i P	P	22 31 21.1	+0.5
ANMO				pmax	pmax		
	comp=Z,21nm,0.9s						
ANMO	Albuquerque	23.88	332	P	P	22 31 22.5	+2.0
	baz=146						
W57A	Gilead	23.95	27	P	P	22 31 20.3	-0.8
	baz=212						
U53A	Fall Branch	23.97	21	P	P	22 31 20.1	-1.1
	baz=205						
V55A	Taylorsville	24.03	24	IAmb	IAmb	22 31 23.8	
	comp=Z,33nm,0.9s						
V55A	Taylorsville	24.03	24	P	P	22 31 21.4	-0.4
	baz=209						
TUC	Tucson	24.17	321	P	P	22 31 22.6	-0.6
TUC				IAmb	IAmb	22 31 27.8	
	comp=Z,70nm,1.0s						
TUC	Tucson	24.17	321	P	P	22 31 22.6	-0.6
TUC				pmax	pmax		
	comp=Z,70nm,1.0s						
TUC	Tucson	24.17	321	P	P	22 31 25.6	+2.5
	baz=134						
W58A	Raeford	24.19	29	P	P	22 31 20.8	-2.4
	baz=214						
V56A	Mocksville	24.29	26	P	P	22 31 22.6	-1.6
	baz=210						
U54A	Nelsons Funny	24.39	22	P	P	22 31 24.0	-1.2
	baz=207						
SLM	Saint Louis	24.44	5	IAmb	IAmb	22 31 28.4	
	comp=Z,33nm,0.7s						
WCI	Wyandotte Cave	24.65	13	P	P	22 31 26.2	-1.2
	baz=196						
V57A	Coltrane Farms	24.66	27	P	P	22 31 25.2	-2.3
	baz=212,SNR=12						
U55A	TA2, Sparta	24.66	24	P	P	22 31 25.8	-1.9
	baz=209						
U56A	King	24.80	25	IAmb	IAmb	22 31 28.0	
	comp=Z,62nm,1.1s						
U56A	King	24.80	25	P	P	22 31 27.2	-1.5
	baz=210,SNR=5.2						
V58A	Windy Hill, Pi	24.88	28	P	P	22 31 27.5	-2.0
	baz=213,SNR=9.8						
T25A	Trinidad	24.94	338	P	P	22 31 33.1	+2.9
	baz=153,SNR=17						
W60A	Pink Hill	24.95	31	P	P	22 31 28.7	-1.4
	baz=217						
T54A	Tazewell	24.96	22	P	P	22 31 28.7	-1.6
	baz=207						
KSU1	Kansas State U	24.96	354	P	P	22 31 30.9	+0.7
	baz=171						
CNNC	Cliffs of the	25.01	31	IAmb	IAmb	22 31 29.3	
	comp=Z,38nm,0.8s						
CBKS	Cedar Bluff	25.17	348	P	P	22 31 32.5	+0.3
	baz=164,SNR=7.7						
214A	Organ Pipe Nat	25.21	318	P	P	22 31 34.9	+2.3
	baz=129						
V59A	Middlesex	25.26	29	P	P	22 31 30.8	-2.2
	baz=215,SNR=7.1						
X18A	Snowflake	25.29	326	IAmb	IAmb	22 31 40.0	
	comp=Z,29nm,1.0s						
U57A	Blanch	25.31	27	P	P	22 31 31.5	-2.0
	baz=212						
ATAH	Atahualpa	25.77	145	P	P	22 31 41.8	+3.5
	comp=Z,27nm,0.9s,baz=343,slow=5.5,SNR=9.5						
T57A	Hurt	25.83	26	P	P	22 31 36.4	-1.6
	baz=212						
KSCO	Kaye Shedlock'	26.07	343	P	P	22 31 41.9	+1.5
	baz=158						
S22A	4UR Ranch, Cre	26.40	335	IAmb	IAmb	22 31 49.8	
	comp=Z,51nm,0.9s						
S22A	4UR Ranch, Cre	26.40	335	P	P	22 31 46.0	+2.4
	baz=148,SNR=25						
HUMP	Col San Antoni	26.46	78	P	P	22 31 42.3	-1.7
HUMP					PcP	22 35 08.0	-0.7
T59A	Double "B" Far	26.56	29	P	P	22 31 42.7	-2.0
	baz=215,SNR=6.3						
MVCO	Mesa Verde	26.67	332	P	P	22 31 48.6	+2.6
	baz=144,SNR=14						
WUAZ	Wupatki	26.80	325	IAmb	IAmb	22 31 50.9	
	comp=Z,31nm,1.0s						
WUAZ	Wupatki	26.80	325	P	P	22 31 50.1	+2.9
	baz=137,SNR=8.3						
Q24A	Divide	26.82	339	P	P	22 31 49.5	+2.0
	baz=153						
S58A	Poland Farm, P	26.86	27	P	P	22 31 45.8	-1.6
	baz=213						
GLA	Glamis	27.22	317	P	P	22 31 53.5	+2.7
	baz=128						
Y12C	Blythe	27.46	319	P	P	22 31 55.6	+2.8
	baz=129,SNR=5.3						
S60A	Water View	27.58	29	P	P	22 31 53.6	-0.3
	baz=216						
PDMCI	Parker Dam,Lak	27.58	320	P	P	22 31 56.8	+2.8
	baz=131,SNR=11						
SMCO	Snowmass	27.69	336	IAmb	IAmb	22 32 01.7	
	comp=Z,47nm,1.1s						
ISCO	Idaho Springs	27.73	339	P	P	22 31 57.5	+1.9
	baz=153						
R59A	King George, V	27.77	28	P	P	22 31 54.3	-1.2
	baz=215						
SWSC	Sam W. Stewart	27.80	316	P	P	22 31 58.5	+2.6
	baz=126						
IKP	In-Ko-Pah, Jac	27.84	315	P	P	22 31 59.4	+3.1
	baz=125						
BC3	Big Chuckawall	28.00	318	P	P	22 32 00.6	+2.7
	baz=128,SNR=18						
IRM	Iron Mountain	28.12	319	P	P	22 32 01.8	+3.0
	baz=129,SNR=10.0						
Q59A	Harwood	28.52	28	P	P	22 32 00.8	-1.3
	baz=215						
BELC	Belle Mtn. Jos	28.57	318	P	P	22 32 05.5	+2.5
	baz=128,SNR=6.4						
TPFO	Pinon Flats	28.64	316	P	P	22 32 06.3	+2.8
	baz=126						
XPFO	Pion Flat	28.64	316	P	P	22 32 02.0	-1.5
PFO	Pinyon Flats O	28.64	316	P	P	22 32 06.1	+2.5
	comp=Z,6.1nm,0.8s,baz=119,slow=7.9,SNR=7.1						
PFO	Pinyon Flats O	28.64	316	P	P	22 32 01.8	-1.8
PFO	Pinyon Flats O	28.64	316	i P	P	22 32 04.8	+1.2
PFO				pmax	pmax		
	comp=Z,16nm,1.0s						
PFO	Pinyon Flats O	28.64	316	P	P	22 32 06.6	+3.0
	baz=126						
JFWS	Jewell Farm	28.69	4	P	P	22 32 04.5	+0.9
	baz=185						
GMRC	Granite Mounta	28.85	319	P	P	22 32 08.3	+2.9
	baz=129,SNR=6.8						
O56A	Blue Knob Stat	28.90	23	P	P	22 32 03.8	-1.9
	baz=210						
N54A	Moraine State	28.99	21	P	P	22 32 06.4	+0.1
	baz=207						
Q60A	Greensboro	29.00	29	P	P	22 32 04.7	-1.8
	baz=216						
O20A	White River Ci	29.01	336	P	P	22 32 10.8	+3.9
	baz=148						
MURC	Murrieta	29.13	316	P	P	22 32 10.8	+3.0
	baz=125						
HEC	Hector,Ludlow	29.30	319	P	P	22 32 12.3	+2.9
	baz=128,SNR=7.8						
TUQ	Turquoise Moun	29.43	320	P	P	22 32 13.3	+2.7
	baz=130,SNR=5.1						
ECSD	EROS Data Cent	29.55	355	P	P	22 32 11.0	-0.4
	baz=173						
BFSC	Mount Baldy Ra	29.82	316	P	P	22 32 16.6	+2.6
	baz=126						
GSC	Goldstone, Bar	29.90	319	P	P	22 32 13.8	-0.8
GSC	Goldstone, Bar	29.90	319	P	P	22 32 13.9	-0.8
GSC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
K22A	Casper	30.59	340	P	P	22 32 22.4	+1.7
	baz=153						
TPNV	Topopah Spring	30.61	322	P	P	22 32 24.2	+3.1
	baz=131,SNR=7.0						
FURC	Furnace Creek,	30.67	320	P	P	22 32 24.5	+3.1
	baz=130						
MPMC	Manual Prospec	30.81	319	P	P	22 32 25.3	+2.5
	baz=128,SNR=13						
CTU	Camp Tracy	30.98	332	P	P	22 32 23.8	-0.4
DUG	Dugway, Tooele	31.09	330	P	P	22 32 28.0	+2.8
	baz=140,SNR=5.7						
ARVC	Arvin	31.12	317	P	P	22 32 28.1	+2.8
	baz=125						
R11A	Troy Canyon, C	31.18	325	P	P	22 32 28.9	+2.9
	baz=134,SNR=15						
ISA	Isabella, Lake	31.20	318	P	P	22 32 29.0	+2.9
	baz=126						
M59A	Waymart	31.25	26	P	P	22 32 24.6	-1.8
	baz=214						
GRAC	Grapevine Rang	31.32	321	P	P	22 32 30.8	+3.6
	baz=130						
CWC	Cottonwood Cre	31.42	319	P	P	22 32 31.1	+2.9
	baz=128						
L58A	Harry Jones Me	31.49	25	P	P	22 32 26.8	-1.7
	baz=213						
PAL	Palisades	31.49	28	P	P	22 32 26.7	-1.8
	baz=217						
BINY	Binghamton	31.56	25	P	P	22 32 27.1	-2.1
	baz=213						
HWUT	Hardware Ranch	31.63	333	IAmb	IAmb	22 32 35.5	
	comp=Z,17nm,1.1s						
PKM	Mcpherson Peak	31.65	315	P	P	22 32 33.1	+2.9
	baz=124						
VES	Vestal, Richgr	31.70	317	P	P	22 32 33.5	+3.1
	baz=126,SNR=9.2						
PD31	Pinedale Array	31.77	337	IAmb	IAmb	22 32 41.5	
	comp=Z,19nm,1.1s						
PDAR	Pinedale Array	31.77	337	P	P	22 32 32.6	+1.4
	comp=Z,12nm,1.0s,baz=138,slow=8.7,SNR=23						
PDAR				PcP	PcP	22 35 22.2	+0.2
	comp=Z,1.6nm,0.9s,baz=151,slow=5.8,SNR=4.5						
M61A	Granite Spring	31.80	28	P	P	22 32 28.7	-2.5
	baz=217						
L60A	Shokan	32.13	27	P	P	22 32 32.1	-2.1
	baz=216						
K58A	Earlville	32.17	25	P	P	22 32 32.2	-2.3
	baz=213						
SADO	Sadowa	32.67	19	P	P	22 32 37.1	-1.7
	comp=Z,6.5nm,0.9s,baz=267,slow=19,SNR=2.4						
M63A	Gales Ferry	32.68	30	P	P	22 32 37.4	-1.6
	baz=220,SNR=5.7						
ELK	Elko	32.71	328	IAmb	IAmb	22 32 43.4	
	comp=Z,16nm,0.9s						
REDW	Red Top Meadow	32.78	336	P	P	22 32 39.3	-0.8
NVAR	Mina Array Bea	32.81	322	P	P	22 32 43.7	+3.2
	comp=Z,35nm,0.8s,baz=139,slow=8.7,SNR=139						
NVAR				PcP	PcP	22 35 25.6	+0.6
	comp=Z,4.0nm,0.8s,baz=141,slow=3.6,SNR=6.0						
RYN	Ryan	33.07	322	IAmb	IAmb	22 32 46.8	
	comp=Z,17nm,0.9s						
FXWY	Fox Creek	33.08	336	IAmb	IAmb	22 32 47.8	
	comp=Z,36nm,0.9s						
KVN	Kaiserville	33.10	323	IAmb	IAmb	22 32 46.9	
	comp=Z,21nm,1.0s						
I58A	Old Forge	33.22	24	P	P	22 32 41.6	-2.0
	baz=213						
IMW	Indian Meadow	33.26	336	P	P	22 32 44.0	-0.3
IMW				IAmb	IAmb	22 32 50.5	
	comp=Z,32nm,0.9s						
IMW					PcP	22 35 25.7	-0.5
H56A	Elgin	33.49	22	P	P	22 32 44.0	-1.9
	baz=210						
H17A	Grant Village	33.54	337	IAmb	IAmb	22 32 52.2	
	comp=Z,28nm,0.9s						
H17A	Grant Village	33.54	337	P	P	22 32 49.6	+2.8
	baz=148,SNR=15						
LKWY	Lake	33.62	337	IAmb	IAmb	22 32 58.8	
	comp=Z,41nm,1.1s						
L64A	Middleborough	33.68	31	P	P	22 32 46.1	-1.6
	baz=221,SNR=6.4						
RLMT	Red Lodge	33.70	339	IAmb	IAmb	22 32 50.0	
	comp=Z,23nm,1.1s						
RLMT	Red Lodge	33.70	339	P	P	22 32 49.6	+1.5
	baz=150,SNR=7.4						
YERR	Yerington	33.73	322	IAmb	IAmb	22 32 52.0	
	comp=Z,18nm,0.9s						
NCB	Newcomb	33.75	25	IAmb	IAmb	22 32 46.0	
	comp=Z,15nm,1.1s						
CMB	Columbia Colle	33.85	319	P	P	22 32 47.6	-1.7
CMB	Columbia Colle	33.85	319	P	P	22 32 47.6	-1.7
CMB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MDND	Maddock	33.95	352	P	P	22 32 49.9	0.0
	baz=168,SNR=8.2						
PNTR	Pine Nut	34.01	322	IAmb	IAmb	22 32 55.1	
	comp=Z,25nm,0.8s						
I60A	Shoreham	34.03	26	P	P	22 32 48.7	-2.0
	baz=216						
AGMN	Agassiz Nation	34.04	357	IAmb	IAmb	22 32 52.6	
	comp=Z,18nm,0.8s						
AGMN	Agassiz Nation	34.04	357	P	P	22 32 50.1	-0.6
	baz=175						
H58A	Gabriels	34.14	24	P	P	22 32 49.3	-2.4
	baz=214						
LONY	Lake Ozonia	34.15	24	P	P	22 32 49.3	-2.4
	baz=213						
LAO	LASA Array	34.17	344	IAmb	IAmb	22 32 55.3	
	comp=Z,36nm,1.1s						
PAHR	Pah Rah Range	34.28	323	IAmb	IAmb	22 32 56.5	
	comp=Z,18nm,1.0s						
BEKR	Beckworth	34.96	322	P	P	22 32 58.5	-0.5
BEKR				IAmb	IAmb	22 33 03.0	
	comp=Z,18nm,1.0s						
DGMT	Dagmar	35.35	347	IAmb	IAmb	22 33 04.2	
	comp=Z,32nm,0.8s						
DGMT	Dagmar	35.35	347	P	P	22 33 02.8	+0.7
	baz=161						
I63A	Otisfield	35.40	28	P	P	22 33 00.3	-2.2
	baz=220						
E56A	St. Veronique	35.60	22	P	P	22 33 02.5	-1.7
	baz=211						
WVOR	Wild Horse Val	35.70	327	P	P	22 33 04.5	-0.8
WVOR	Wild Horse Val	35.70	327	P	P	22 33 04.5	-0.8
E57A	Chemin Saint G	35.82	23	P	P	22 33 03.5	-2.6
	baz=212						
ULM	Lac du Bonnet	35.99	357	P	P	22 33 05.5	-1.9
	comp=Z,12nm,0.8s,baz=203,slow=8.4,SNR=7.9						
ULM				PcP	PcP	22 35 31.9	-1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,8.1nm,1.1s,baz=215,slow=6.9,SNR=3.1						
ULM	Lac du Bonnet	35.99	357	P	P	22 33 06.8	-0.7
ULM	Lac du Bonnet	35.99	357	P	P	22 33 06.8	-0.7
ULM						22 35 32.0	
ULM				pmax	pmax		
	comp=Z,14nm,1.0s						
PTGA	Pitinga	36.03	112	*e*P	P	22 33 07.2	-1.1
O03E	Paynes Creek	36.09	321	P	P	22 33 10.7	+2.0
	baz=127,SNR=7.4						
E58A	La Victoria	36.11	23	P	P	22 33 06.5	-2.1
	baz=214						
MOD	Modoc Plateau	36.25	325	IAmb	IAmb	22 33 13.0	
	comp=Z,20nm,1.0s						
F60A	Warwick	36.31	25	P	P	22 33 07.7	-2.6
	baz=216						
G62A	West of Eustis	36.33	27	P	P	22 33 08.1	-2.3
	baz=219						
EGMT	Eagleton	36.41	341	P	P	22 33 12.6	+1.4
	baz=152,SNR=13						
O02D	Mt. Diablo Mer	36.62	321	P	P	22 33 13.8	+0.6
	baz=126						
E60A	Ste Agathe de	36.84	25	P	P	22 33 11.9	-2.9
	baz=216						
D58A	Chemin du LacG	36.87	23	P	P	22 33 12.6	-2.4
	baz=214						
MSO	Missoula	36.87	336	IAmb	IAmb	22 33 20.0	
	comp=Z,37nm,0.9s						
MSO	Missoula	36.87	336	P	P	22 33 16.7	+1.5
	baz=145,SNR=29						
LATQ	La Tuque	37.14	23	P	P	22 33 15.4	-1.9
	baz=214						
G64A	Maxfield	37.16	29	P	P	22 33 14.2	-3.3
	baz=221						
SAML	Samuel	37.58	126	P	P	22 33 19.2	-2.2
SAML	Samuel	37.58	126	P	P	22 33 19.2	-2.2
SAML				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SAML	Samuel	37.58	126	*e*P	P	22 33 21.9	+0.4
L04D	Klamath Falls	37.59	324	P	P	22 33 23.1	+1.8
	baz=129						
F10A	Beach Ranch, E	37.59	332	IAmb	IAmb	22 33 23.8	
	comp=Z,44nm,0.9s						
KHMM	Horse Mountain	37.62	321	IAmb	IAmb	22 33 25.2	
	comp=Z,41nm,0.9s						
G65A	Princeton	37.69	30	P	P	22 33 19.6	-2.4
	baz=223						
JTMT	Jette	37.76	337	IAmb	IAmb	22 33 25.3	
	comp=Z,37nm,1.0s						
D61A	St Aubert, Com	38.03	26	P	P	22 33 22.6	-2.2
	baz=218,SNR=9.1						
E63A	Oxbow	38.20	28	IAmb	IAmb	22 33 24.5	
	comp=Z,24nm,1.0s						
E63A	Oxbow	38.20	28	P	P	22 33 24.0	-2.3
	baz=221						
D62A	Allapoint, All	38.42	27	IAmb	IAmb	22 33 27.0	
	comp=Z,32nm,1.1s						
D62A	Allapoint, All	38.42	27	P	P	22 33 25.7	-2.4
	baz=219,SNR=6.2						
I05D	Terrebonne, OR	38.44	327	P	P	22 33 30.9	+2.5
	baz=132						
E64A	Bridgewater	38.47	28	P	P	22 33 25.9	-2.7
	baz=221						
I04A	Tendick Farm,	38.66	325	P	P	22 33 32.0	+1.7
	baz=130						
D63A	Stockholm	38.80	27	P	P	22 33 28.7	-2.7
	baz=220,SNR=6.7						
G05D	Wamic, OR	39.04	328	P	P	22 33 36.0	+2.6
	baz=133						
LPAZ	La Paz	39.10	140	P	P	22 33 34.1	-0.9
	comp=Z,1.7nm,0.7s,baz=340,slow=5.5,SNR=3.2						
LPAZ	La Paz	39.10	140	*e*P	P	22 33 35.7	+0.8
J01E	Myrtle Point	39.11	324	P	P	22 33 36.4	+2.4
	baz=128						
I03D	Drain, OR	39.12	325	P	P	22 33 35.9	+1.9
	baz=129						
H04A	Detroit Lake	39.12	327	IAmb	IAmb	22 33 36.8	
	comp=Z,59nm,1.0s						
H04D	Lebanon	39.31	326	P	P	22 33 36.9	+1.3
	baz=130						
NEW	Newport	39.31	335	P	P	22 33 35.8	+0.1
NEW	Newport	39.31	335	P	P	22 33 35.8	+0.1
NEW				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NEW	Newport	39.31	335	P	P	22 33 36.5	+0.8
	baz=141,SNR=5.8						
F05D	White Salmon	39.56	329	P	P	22 33 40.6	+2.9
	baz=133,SNR=7.2						
G03D	McMinnville, O	40.04	327	P	P	22 33 43.9	+2.1
	baz=130						
C06D	Leavenworth	40.72	331	P	P	22 33 49.7	+2.3
	baz=136						
D05A	Enumclaw	40.73	330	IAmb	IAmb	22 33 53.5	
	comp=Z,32nm,1.0s						
FFC	Flin Flon	40.99	352	P	P	22 33 49.6	+0.2
FFC				IAmb	IAmb	22 33 50.2	
	comp=Z,22nm,0.9s						
FFC	Flin Flon	40.99	352	P	P	22 33 49.6	+0.2
FFC				pmax	pmax		
	comp=Z,22nm,1.0s						
GO01	Chusmiza	41.10	144	P	P	22 33 49.5	-1.9
B06A	Marblemount	41.43	331	IAmb	IAmb	22 33 58.2	
	comp=Z,24nm,0.9s						
B05A	Bryant	41.53	331	P	P	22 33 55.3	+1.4
	baz=134						
PGC	Sidney	42.45	330	IAmb	IAmb	22 34 04.3	
	comp=Z,46nm,1.1s						
LVC	Limon Verde	43.63	147	*e*P	P	22 34 14.6	+3.0
SIV	San Ignacio	43.64	132	P	P	22 34 10.2	-1.3
	comp=Z,11nm,1.0s,baz=317,slow=8.7,SNR=16						
SIV				PcP	PcP	22 35 57.9	-0.6
	comp=Z,3.2nm,0.9s,baz=284,slow=8.3,SNR=2.8						
FCC	Fort Churchill	44.45	359	IAmb	IAmb	22 34 17.8	
	comp=Z,20nm,0.8s						
CLDB	Colider	44.63	122	*e*P	P	22 34 17.6	-1.8
SCHQ	Schefferville	45.39	21	P	P	22 34 22.1	-2.9
	comp=Z,11nm,0.9s,baz=217,slow=9.6,SNR=9.9						
SCHQ				PcP	PcP	22 36 03.6	-0.3
	comp=Z,13nm,1.1s,baz=251,slow=5.6,SNR=5.9						
SCHQ	Schefferville	45.39	21	P	P	22 34 23.0	-2.0
SCHQ				IAmb	IAmb	22 34 24.2	
	comp=Z,15nm,1.0s						
SCHQ					PcP	22 36 04.2	+0.3
ARAG	Araguaiana, MT	50.52	125	*e*P	P	22 35 05.8	+0.6
YKA	Yellowknife Ar	50.55	347	P	P	22 35 05.2	+0.4
	comp=Z,53nm,0.9s,baz=149,slow=7.6,SNR=220						
YKA				PcP	PcP	22 36 21.9	-0.3
	comp=Z,4.3nm,0.9s,baz=143,slow=2.9,SNR=4.5						
SMTB	Santa Maria do	50.66	114	*e*P	P	22 35 06.2	-0.1
C2SB	Chapadao do Su	51.48	128	*e*P	P	22 35 12.8	+0.4
DLBC	Dease Lake	52.00	336	P	P	22 35 18.2	+2.4
	comp=Z,26nm,0.9s,baz=134,slow=3.9,SNR=16						
DLBC	Dease Lake	52.00	336	IAmb	IAmb	22 35 20.5	
	comp=Z,28nm,1.0s						
FRB	Frobisher Bay	52.33	14	P	P	22 35 14.9	-3.1
	comp=Z,3.0nm,0.8s,baz=174,slow=4.5,SNR=3.9						
FRB	Frobisher Bay	52.33	14	P	P	22 35 15.0	-3.1
CPUP	Villa Florida	53.26	139	P	P	22 35 23.4	-2.1
	comp=Z,2.5nm,0.8s,baz=345,slow=9.7,SNR=4.0						
CPUP	Villa Florida	53.26	139	P	P	22 35 23.5	-2.0
CPUP	Villa Florida	53.26	139	P	P	22 35 23.5	-2.0
CPUP				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BDFB	Brasilia	53.56	122	P	P	22 35 25.7	-2.3
	comp=Z,6.1nm,0.9s,baz=268,slow=9.8,SNR=5.9						
BDFB	Brasilia	53.56	122	P	P	22 35 27.0	-1.0
BDFB				IAmb	IAmb	22 35 34.1	
	comp=Z,13nm,0.9s						
BDFB	Brasilia	53.56	122	P	P	22 35 27.0	-1.0
BDFB				pmax	pmax		
	comp=Z,13nm,0.9s						
NBPS	Pedro II - PI	54.48	106	*e*P	P	22 35 34.0	-0.7
IPMB	Ipameri, GO	54.64	125	*e*P	P	22 35 36.8	+1.1
HYT	Haines Junctio	56.46	336	IAmb	IAmb	22 35 56.5	
	comp=Z,14nm,1.0s						
PCA	Pinnacle	57.18	334	IAmb	IAmb	22 35 56.9	
	comp=Z,27nm,0.9s						
NBCL	Cascavel-CE	57.37	105	*e*P	P	22 35 54.4	-0.9
NBMA	Muriti-CE	58.03	108	*e*P	P	22 35 59.8	-0.2
NBPN	Ponto Novo - B	58.08	113	*e*P	P	22 36 00.1	-0.2
CTGM	Chitina Glacie	58.10	335	IAmb	IAmb	22 36 02.8	
	comp=Z,22nm,1.2s						
BARN	Barnard Glacie	58.28	335	IAmb	IAmb	22 36 08.1	
	comp=Z,16nm,0.9s						
C36M	Paulatuk	58.43	348	IAmb	IAmb	22 36 09.9	
	comp=Z,11nm,0.9s						
C36M	Paulatuk	58.43	348	P	P	22 36 02.6	+0.7
	baz=144						
PLCA	Paso Flores	58.56	160	P	P	22 36 03.0	-0.2
	comp=Z,2.7nm,1.0s,baz=334,slow=9.3,SNR=5.6						
PLCA	Paso Flores	58.56	160	P	P	22 36 03.2	+0.1
PLCA				IAmb	IAmb	22 36 12.4	
	comp=Z,16nm,1.1s						
PLCA	Paso Flores	58.56	160	P	P	22 36 03.3	+0.1
PLCA				pmax	pmax		
	comp=Z,16nm,1.2s						
PLCA	Paso Flores	58.56	160	*e*P	P	22 36 05.6	+2.4
NBPA	Parau_RN	58.99	106	*e*P	P	22 36 06.7	0.0
DAWY	Dawson	59.06	338	P	P	22 36 07.1	+0.7
VRDI	Verde Repeater	59.12	334	IAmb	IAmb	22 36 10.2	
	comp=Z,16nm,1.0s						
NBTA	Tacaratu-PE	59.33	110	*e*P	P	22 36 09.1	+0.1
EPYK	Eagle Plains	59.56	341	IAmb	IAmb	22 36 19.8	
	comp=Z,27nm,1.1s						
EPYK	Eagle Plains	59.56	341	P	P	22 36 10.9	+1.1
	baz=129,SNR=8.7						
NBLI	Livramento-PB	59.71	107	*e*P	P	22 36 12.4	+0.7
INK	Inuvik	59.91	344	P	P	22 36 12.9	+0.8
INK	Inuvik	59.91	344	P	P	22 36 12.9	+0.8
INK				pmax	pmax		
	comp=Z,46nm,1.0s						
MENT	Mentasta	60.08	336	IAmb	IAmb	22 36 25.4	
	comp=Z,10.0nm,0.8s						
EGAK	Eagle	60.09	338	IAmb	IAmb	22 36 15.1	
	comp=Z,21nm,1.0s						
RCBR	Riachuelo	60.15	105	P	P	22 36 14.5	-0.2
RCBR	Riachuelo	60.15	105	P	P	22 36 14.5	-0.2
RCBR				pmax	pmax		
	comp=Z,24nm,0.9s						
RCBR	Riachuelo	60.15	105	*e*P	P	22 36 14.8	+0.1
NBIT	Itapeh - BA	60.49	116	*e*P	P	22 36 17.2	+0.3
GLI	Glacier Island	60.52	333	IAmb	IAmb	22 36 34.5	
	comp=Z,15nm,1.1s						
SCRK	Sand Creek	60.71	337	IAmb	IAmb	22 36 20.6	
	comp=Z,22nm,1.2s						
SJMB	Sao Joao De Ma	60.73	121	*e*P	P	22 36 20.0	+1.4
BSFB	Barra de Sao F	61.08	121	*e*P	P	22 36 21.8	+0.9
SEW	Seward	61.27	332	IAmb	IAmb	22 36 23.8	
	comp=Z,21nm,1.2s						
DHY	Denali Highway	61.61	335	IAmb	IAmb	22 36 30.3	
	comp=Z,9.9nm,1.0s						
PMR	Palmer	61.72	333	IAmb	IAmb	22 36 26.3	
	comp=Z,15nm,1.0s						
NBRF	Rio Formoso -	61.86	108	*e*P	P	22 36 26.5	+0.2
CNPM	China Poot	61.88	331	P	P	22 36 25.4	-0.3
KDAK	Kodiak Island	61.95	328	P	P	22 36 26.6	+0.4
	comp=Z,6.8nm,0.8s,baz=124,slow=7.3,SNR=3.1						
HDA	Harding Lake	62.05	337	IAmb	IAmb	22 36 28.1	
	comp=Z,17nm,0.9s						
HDA	Harding Lake	62.05	337	P	P	22 36 27.6	+0.8
	baz=117,SNR=11						
ILAR	Eielson Array	62.20	337	P	P	22 36 28.4	+0.6
	comp=Z,17nm,0.9s,baz=132,slow=4.6,SNR=80						
CCB	Clear Creek Bu	62.49	337	IAmb	IAmb	22 36 35.5	
	comp=Z,7.9nm,0.9s						
WRH	Wood River Hil	62.52	336	IAmb	IAmb	22 36 30.8	
	comp=Z,11nm,1.0s						
POKR	Poker Plat Res	62.57	337	P	P	22 36 31.5	+1.3
	baz=117,SNR=8.3						
COLA	College	62.61	337	P	P	22 36 30.1	-0.3
COLA					PcP	22 37 09.4	+0.3
COLA	College	62.61	337	P	P	22 36 30.1	-0.3
COLA						22 37 09.4	
COLA				pmax	pmax		
	comp=Z,21nm,0.9s						
TCOL	CIGO, UAF Yank	62.62	337	P	P	22 36 31.4	+0.9
	baz=117,SNR=5.8						
NEA	Nenana	62.95	336	IAmb	IAmb	22 36 34.7	
	comp=Z,16nm,1.2s						
PPLA	Purkeypile	63.55	334	IAmb	IAmb	22 36 38.2	
	comp=Z,24nm,1.2s						
TOLK	Toolik Lake Re	64.94	340	P	P	22 36 47.2	+1.4
	baz=117,SNR=10						
SUMG	Summit	66.30	16	*i* P	P	22 36 52.7	-2.3
SUMG	Summit	66.30	16	*e*P	P	22 36 52.7	-2.3
RDOG	Red Dog Mine	69.37	338	IAmb	IAmb	22 37 15.9	
	comp=Z,15nm,1.1s						
BORG	Borgarnes	69.47	26	LR	LR	23 07 44.8	
	comp=Z,1µm,18.1s,baz=266,slow=36						
ANM	Nome	69.64	334	IAmb	IAmb	22 37 22.3	
	comp=Z,7.7nm,0.8s						
ESDC	Sonseca Array	80.42	52	P	P	22 38 16.2	-2.2
	comp=Z,9.8nm,0.9s,baz=286,slow=5.9,SNR=13						
BILL	Bilibino	80.84	338	P	P	22 38 20.6	+0.6
BILL	Bilibino	80.84	338	*c i*P	P	22 38 20.4	+0.5
BILL				pmax	pmax		
	comp=Z,36nm,1.0s						
NB2	NORSAR Subarra	84.45	28	P	P	22 38 38.6	-0.4
	comp=Z,1.9nm,0.8s,baz=290,slow=4.8						
NOA	NORSAR Array B	84.45	28	P	P	22 38 37.2	-1.8
	comp=Z,4.7nm,0.9s,baz=291,slow=4.8,SNR=9.2						
NB201	NORSAR Array S	84.49	28	P	P	22 38 39.7	+0.6
ARCES	ARCESS Array B	86.25	18	P	P	22 38 46.3	-1.5
	comp=Z,5.8nm,0.8s,baz=349,slow=3.7,SNR=7.9						
TIC	Toumodi	86.56	84	*e*P	P	22 38 48.8	-1.5
LIC	Lamto	86.65	84	*e*P	P	22 38 48.4	-2.3
	comp=Z,5.6nm,0.5s						
DBIC	Dimbokro	86.71	84	P	P	22 38 49.3	-1.7
	comp=Z,6.7nm,0.9s,baz=239,slow=5.3,SNR=6.3						
SENIN	Lac Senin/Sane	86.86	43	P	P	22 38 50.4	-1.0
SENIN				IAmb	IAmb	22 38 57.0	
	comp=Z,13nm,1.1s						
KIC	Kosan Boka	86.89	84	*e*P	P	22 38 51.2	-0.7
	comp=Z,28nm,1.1s						
SEY	Seymchan	88.09	335	*i* P	P	22 38 57.5	+0.8
DAVA	Damuels	88.25	42	*i* P	P	22 38 56.9	-1.2
	comp=Z,5.3nm,0.8s						
RETA	Reutte	88.75	41	*i* P	P	22 38 59.0	-1.3
	comp=Z,6.5nm,1.1s						
CLL	Collm	88.78	37	*e*(P)	P	22 39 04.0	+3.8
CLL	Collm	88.78	37	*e*P	P	22 39 04.0	+3.8
MOTA	Moosalm	89.02	41	*i* P	P	22 39 00.1	-1.5
	comp=Z,10nm,1.8s						
WATA	Walderalm	89.32	41	*i* P	P	22 39 01.6	-1.4
	comp=Z,3.9nm,1.1s						
BRG	Berggiesshubel	89.50	37	*e*P	P	22 39 03.6	0.0
	comp=Z,10nm,1.3s						
BRG	Berggiesshubel	89.50	37	*e*P	P	22 39 03.6	0.0
BRG				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BRG				MLR	MLR		
	comp=N,2µm,17.9s						
BRG				MLR	MLR		
	comp=E,2µm,18.1s						
BRG				MLR	MLR		
	comp=Z,3µm,16.6s						
TIXI	Tiksi	89.80	348	P	P	22 39 04.6	0.0
TIXI				IAmb	IAmb	22 39 06.8	
	comp=Z,17nm,0.9s						
TIXI	Tiksi	89.80	348	*e*P	P	22 39 04.3	-0.3
TIXI				pmax	pmax		
	comp=Z,20nm,0.9s						
KHC	Kasperske Hory	89.93	39	*e*P	P	22 39 03.5	-2.2
KHC	Kasperske Hory	89.93	39	*e*P	P	22 39 03.5	-2.2
GERES	GERESS Array B	90.11	39	P	P	22 39 04.9	-1.8
	comp=Z,2.5nm,0.9s,baz=316,slow=3.7,SNR=11						
ABTA	Abfaltersbach	90.13	41	*i* P	P	22 39 05.7	-1.1
	comp=Z,6.5nm,1.2s						
PRU	Pruhonice	90.19	38	*e*P	P	22 39 06.6	-0.2
PRU	Pruhonice	90.19	38	*e*P	P	22 39 06.6	-0.2
KBA	Koelnbreinsper	90.54	41	*i* P	P	22 39 08.8	0.0
	comp=Z,4.9nm,1.1s						
FINES	FINESS Array B	90.74	25	P	P	22 39 07.3	-1.9
	comp=Z,4.8nm,1.0s,baz=11,slow=1.9,SNR=6.7						
FINES	FINESS Array B	90.74	25	*i* P	P	22 39 08.8	-0.4
FINES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MOA	Molln	90.83	40	*i* P	P	22 39 08.3	-1.6
	comp=Z,5.3nm,1.2s						
CHVC	Chvalec	90.84	37	*e*P	P	22 39 10.7	+0.8
CHVC				*e*x	x	22 39 21.3	
OSTC	Ostas	90.95	37	*e*P	P	22 39 09.7	-0.7
DPC	Dobruska-Polom	91.10	37	*e*P	P	22 39 10.5	-0.6
DPC	Dobruska-Polom	91.10	37	*e*P	P	22 39 10.5	-0.6
TORD	Torodi Ar. Bea	91.38	76	P	P	22 39 10.2	-2.8
	comp=Z,1.1nm,0.8s,baz=320,slow=5.5,SNR=4.5						
KRLC	Kraliky	91.48	37	*e*P	P	22 39 12.1	-0.8
KRLC				*e*x	x	22 39 19.1	
KRLC	Kraliky	91.48	37	*e*P	P	22 39 12.1	-0.8
KRLC				*e*		22 39 19.1	
VRAC	Vranov	91.68	38	⇑P	P	22 39 14.2	+0.3
CONA	Conrad Observa	91.79	40	*i* P	P	22 39 14.3	-0.1
	comp=Z,6.1nm,1.6s						
MORC	Moravsky Berou	92.05	37	⇓P	P	22 39 12.4	-3.2
TAM	Tamanrasset	92.31	66	P	P	22 39 17.0	-0.4
TAM				IAmb	IAmb	22 39 19.0	
	comp=Z,5.4nm,1.0s						
TAM	Tamanrasset	92.31	66	P	P	22 39 17.0	-0.4
TAM				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SMOL	Smolenice	92.51	39	*e*P	P	22 39 18.6	+0.9
SMOL	Smolenice	92.51	39	*e*P	P	22 39 18.6	+0.9
VYHS	Vyhne	93.36	38	*e*P	P	22 39 22.3	+0.7
VYHS				pmax	pmax		
	comp=Z,7.0nm,1.4s						
VYHS	Vyhne	93.36	38	*e*P	P	22 39 22.3	+0.7
TRPA	Tarpa	95.73	37	⇑P	P	22 39 32.5	+0.1
BZS	Buzias	96.36	40	⇑P	P	22 39 34.6	-0.7
DRGR		96.47	38	⇑P	P	22 39 35.6	-0.3
NRIK	Noril'sk	96.64	360	P	P	22 39 35.3	-0.8
	comp=Z,1.7nm,0.7s,baz=350,slow=1.9,SNR=5.3						
YAK	Yakutsk	96.89	341	*i* P	P	22 39 37.9	+0.5
YAK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GZR	Gura Zlata	97.18	40	⇑P	P	22 39 37.5	-1.7
PRGR	Permogore	97.67	19	*e*P	P	22 39 39.7	-1.2
PRGR				pmax	pmax		
	comp=Z,13nm,0.9s						
OBN	Obninsk	98.96	27	*e*P	P	22 39 44.6	-2.2
OBN				*e*		22 43 44.7	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,1µm,19.0s						
ZALV	Zalesovo Beam	112.07	1	PKiKP	PKiKP	22 44 44.8	+3.2
	comp=Z,0.4nm,0.4s,baz=34,slow=3.8,SNR=2.9						
ZALV				PP	PP	22 45 23.7	-1.0
	comp=Z,4.2nm,1.1s,baz=342,slow=9.1,SNR=7.1						
KSRS	Korea Array	115.73	325	PKP	PKPdf	22 44 49.0	0.0
	comp=Z,0.4nm,0.3s,baz=348,slow=2.3,SNR=2.5						
SONM	Songino Array	115.80	346	PKP	PKPdf	22 44 49.2	+0.1
	comp=Z,1.3nm,0.9s,baz=17,slow=1.5,SNR=3.4						
SONM				PP	PP	22 45 52.0	+0.4
	comp=Z,1.3nm,0.9s,baz=353,slow=7.1,SNR=6.6						
SYO	Syowa Base	117.70	163	⇑*e*X	Pdif	22 41 21.9	+12
MAKZ	Makanchi	119.08	4		PKPdf	22 44 54.4	-0.9
MAKZ	Makanchi	119.08	4	PKIKP	PKPdf	22 44 54.4	-0.9
MK31	Makanchi Array	119.11	4		PKPdf	22 44 54.6	-0.8
MK31	Makanchi Array	119.11	4	PKIKP	PKPdf	22 44 54.7	-0.8
MKAR	Makanchi Array	119.11	4	PKP	PKPdf	22 44 54.2	-1.2
	comp=Z,1.2nm,0.8s,baz=29,slow=2.8,SNR=8.4						
HHC	Hu-ho-hao-te	120.61	338	*e*PKP	PKiKP	22 45 04.9	+6.2
HHC				LR	LR		
	comp=Z,500nm,19.6s						
BOSA	Boshof	121.44	115	PKP	PKPdf	22 44 59.5	-1.0
	comp=Z,2.6nm,0.9s,baz=200,slow=15,SNR=3.2						
BOSA	Boshof	121.44	115		PKPdf	22 44 58.4	-2.1
BOSA	Boshof	121.44	115	PKIKP	PKPdf	22 44 58.4	-2.1
GEYT	Alibeck	121.51	27	PKP	PKPdf	22 44 58.7	-1.6
	comp=Z,1.7nm,0.9s,baz=268,slow=4.3,SNR=3.7						
WMQ	Urumqi	122.22	359	*e*PKP	PKiKP	22 45 02.1	+0.4
WMQ				LR	LR		
	comp=Z,1µm,18.5s						
NJ2	Nanjing	124.72	327	*e*PKP	PKiKP	22 45 06.9	0.0
CHGR	Chuyangaron	124.83	17		PKPdf	22 45 06.7	-0.1
KSH	Kashi	125.57	10	PKP	PKiKP	22 45 09.8	+1.2
KSH				PP	PP	22 47 04.8	+6.5
KSH				SS	SS	23 03 57.4	+3.2
STKA	Stephens Creek	127.23	241	PKP	PKPdf	22 45 11.5	+0.2
	comp=Z,3.0nm,0.7s,baz=88,slow=2.9,SNR=6.3						
XAN	Xi'an	127.61	337	PKP	PKPdf	22 45 12.2	+0.1
XAN	Xi'an	127.61	337		PKPdf	22 45 11.6	-0.5
XAN	Xi'an	127.61	337	PKIKP	PKPdf	22 45 11.6	-0.5
ENH	Enshi	130.69	334		PKPdf	22 45 17.8	-0.2
CD2	Chengdu	132.27	340	PKP	PKPdf	22 45 20.3	-0.8
WRA	Warramunga Arr	134.40	256	PKP	PKPdf	22 45 24.9	-0.4
	comp=Z,2.3nm,0.8s,baz=82,slow=1.7,SNR=14						
ASAR	Alice Springs	134.72	251	PKP	PKPdf	22 45 23.8	-2.0
	comp=Z,1.4nm,0.9s,baz=86,slow=2.9,SNR=6.6						
LSA	Lhasa	136.13	355		PKPdf	22 45 27.2	-1.7
LSA	Lhasa	136.13	355	PKIKP	PKPdf	22 45 27.2	-1.7
KMI	Kunming	137.94	338	Pdif	Pdif	22 42 43.3	+2.1
KMI				PKP	PKiKP	22 45 34.0	0.0
KMI				sPKP		22 45 47.1	
KMI				PP	PP	22 48 24.3	+6.0
KMI	Kunming	137.94	338	PKP	PKiKP	22 45 34.0	0.0
KMI				sPKP		22 45 47.1	
KMI				PP	PP	22 48 24.3	+6.0
KMI				AMB	AMB		
	comp=Z,160nm,6.0s						
CHTO	Chiang Mai	145.08	340	PKPbc	PKPbc	22 45 43.6	-0.4
CHTO	Chiang Mai	145.08	340	PKIKP	PKPbc	22 45 43.6	-0.4
CMAR	Chiang Mai Arr	145.41	340	PKPbc	PKPab	22 45 45.5	+0.2
	comp=Z,19nm,0.9s,baz=344,slow=4.2,SNR=94						
KAD	Karad	146.25	22	*i* P	PKPdf	22 45 46.4	-0.3
DLV	T Lat	146.31	319		PKPbc	22 45 48.4	+0.2
PBKT	Sadao Pong	146.38	335		PKPdf	22 45 46.6	-0.3
HYB	Hyderabad	147.49	15	*i* PKP	PKPbc	22 45 51.0	-0.3
PSA00	Pilbara Seismi	147.84	252	PKPbc	PKPbc	22 45 51.6	-0.5
KSM	Kuching	152.04	302	PKPbc	PKPbc	22 46 01.7	-1.0
PSI	Prapat	159.29	324	PKP2	PKPab	22 46 42.7	-0.4
RPSI	Rantau Prapat	159.38	324		PKPab	22 46 42.7	-0.6

IDC 02 22:30:06.6±2.7**, 6°.62S**×**130°.13E, h149**^{km}±37^{km}**, mb3.2**/1**,**
mb1 3.2/5**, mb1mx3.0**/30**, mbtmp3.6**/5**, MS4.0**/1**, Ms1 4.0**/1**,**
ms1mx3.2/9**, Error ellipse: s-maj=67.0km s-min=20.8km**
az=88.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.83	11	P	Pn	22 31 31.3	+0.3
	1.2nm,0.3s,baz=174,slow=16,SNR=8.2						
SIJI				S	Sn	22 32 31.6	-5.4
	2.3nm,0.3s,baz=234,slow=23,SNR=9.6						
KAPI	Kappang	10.44	278	LR	LR	22 37 18.3	
	comp=Z,716nm,18.2s,baz=221,slow=41						
FITZ	Fitzroy Crossi	12.22	201	P	Pn	22 32 55.2	-0.6
	0.1nm,0.3s,baz=21,slow=11,SNR=1.9						
FITZ				S	Sn	22 35 01.7	-9.2
	0.2nm,0.3s,baz=309,slow=15,SNR=1.6						
WRA	Warramunga Arr	13.86	163	P	Pn	22 33 15.5	-1.4
	0.5nm,0.3s,baz=343,slow=8.6,SNR=8.4						
WRA				S	Sn	22 35 44.1	-6.4
	0.3nm,0.3s,baz=9.7,slow=22,SNR=7.0						
ASAR	Alice Springs	17.33	168	P	Pn	22 34 00.5	+0.9
	0.2nm,0.3s,baz=347,slow=10,SNR=9.9						
MKAR	Makanchi Array	67.98	327	P	P	22 40 49.4	-0.2
	0.3nm,0.5s,baz=128,slow=6.6,SNR=5.0						

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*GCG **02** 22:30:30.8±0.8, 13°.36N×94°.11W, h28^{km}, MD4.2*
*NEIC **02** 22:30:45.0±1.4, 14°.25N±0°.07×93°.07W±0°.04, h13^{km}±6^{km},*
mb4.0/5, Md4.7/18(MEX), Error ellipse: s-maj=10.5km
s-min=4.7km az=197.0
*MEX **02** 22:30:46.1±0.7, 14°.22N×93°.14W, h0^{km}±36^{km}, MD4.7*
*IDC **02** 22:30:54.9±4.0, 14°.53N×92°.52W, h82^{km}±34^{km}, mb3.6/6,*
mb1 4.0/10, mb1mx3.6/38, mbtmp4.0/10, Error ellipse:
s-maj=50.7km s-min=18.0km az=57.0
ISC 02 22:30:45.9±3.1**, 14°.29N**±0°.07×**93°.04W**±0°.05**, h15**^{km}±21^{km}**,**
n35, σ1^{s}.24/50**, mb4.1**/8**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.97	51		Pb	22 31 04.6	+0.2
THIG					Sn	22 31 19.0	+0.5
THIG		0.97	51	*e*P	Pb	22 31 04.6	+0.2
THIG				*i* S	Sn	22 31 19.0	+0.5
PCIG		1.41	353		Pn	22 31 10.4	-0.7
PCIG					Sn	22 31 29.2	-0.3
PCIG		1.41	353	*e*P	Pn	22 31 10.4	-0.7
PCIG				*e*S	Sn	22 31 29.2	-0.3
ERG	Entre ros, C	1.43	84	*e*P	Pb	22 31 12.4	0.0
FUG	Fuego 3	2.13	86	*e*P	Pn	22 31 21.5	+0.2
CCIG	Comitan	2.16	24		Pn	22 31 22.4	+0.8
CCIG					Sn	22 31 49.1	+0.9
CCIG	Comitan	2.16	24	*i* P	Pn	22 31 22.4	+0.8
CCIG				*i* S	Sn	22 31 49.1	+0.9
TGIG		2.47	358		Pn	22 31 26.1	+0.4
TGIG					Sn	22 31 56.7	+0.9
TGIG		2.47	358	*i* P	Pn	22 31 26.1	+0.4
TGIG				*i* S	Sn	22 31 56.7	+0.9
IXG	Ixpaco	2.52	92	*e*P	Pn	22 31 26.4	-0.2
APG	El Apazote	2.59	74	P	Pn	22 31 28.1	+0.6
	24nm,0.3s,baz=200,slow=14,SNR=16						
APG				S	Sb	22 32 04.0	0.0
	57nm,0.3s,baz=100,slow=14,SNR=4.7						

NBG	Las Nubes	2.62	83	eP	Pn	22 31 30.0	+1.9
CMIG	Matias Romero	3.30	328	P	Pn	22 31 37.8	+0.7
	15nm,0.3s,baz=158,slow=12,SNR=8.8						
CMIG				S	Sn	22 32 18.8	+2.7
	27nm,0.3s,baz=111,slow=7.8,SNR=4.4						
CMIG	Matias Romero	3.30	328		Pn	22 31 36.6	-0.5
CMIG					Sn	22 32 15.5	-0.7
CMIG	Matias Romero	3.30	328	eP	Pn	22 31 36.6	-0.5
CMIG				iS	Sn	22 32 15.5	-0.7
CSGN	Cosiguina Volc	5.49	103	Pn	Pn	22 32 07.5	+0.3
TEIG	Tepich	7.45	37	P	Pn	22 32 34.7	+0.6
	18nm,0.3s,baz=49,slow=23,SNR=16						
TEIG				S	Sn	22 33 55.0	-3.4
	3.5nm,0.3s,baz=292,slow=21,SNR=1.4						
TEIG	Tepich	7.45	37	Pn	Pn	22 32 33.9	-0.3
TEIG				Sn	Sn	22 33 58.1	-0.4
JTS	Las Juntas de	8.85	116	P	Pn	22 32 55.8	+2.5
	0.4nm,0.3s,baz=315,slow=8.6,SNR=2.0						
JTS	Las Juntas de	8.85	116		Pn	22 32 52.5	-0.9
HKT	Hockley	15.79	351	Pn	Pn	22 34 26.8	-1.0
HKT				IAmb	IAmb	22 34 37.1	
	comp=Z,6.4nm,1.1s						
H06E1	SOCORRO T-PHAS	17.72	287	T	T	22 53 04.4	
TX32	Lajitas Array	17.91	328	Pn	Pn	22 34 52.9	-1.8
TXAR	Lajitas Array	17.91	328	P	P	22 34 57.6	+2.4
	comp=Z,0.1nm,0.3s,baz=141,slow=12,SNR=4.5						
HSIG		22.13	314	P	P	22 35 39.8	-1.4
HSIG				IAmb	IAmb	22 35 52.0	
	comp=Z,6.7nm,1.1s						
TKL	Tuckaleechee C	22.84	20	P	P	22 35 46.5	-2.2
	comp=Z,9.1nm,0.8s,baz=185,slow=5.2,SNR=4.3						
PDAR	Pinedale Array	31.74	337	P	P	22 37 11.3	+1.6
	comp=Z,0.5nm,0.6s,baz=135,slow=9.0,SNR=3.0						
REDW	Red Top Meadow	32.76	336	P	P	22 37 18.3	-0.3
NVAR	Mina Array Bea	32.81	322	P	P	22 37 21.8	+2.6
	comp=Z,2.0nm,0.7s,baz=131,slow=8.1,SNR=5.7						
NVAR				PcP	PcP	22 40 04.8	+0.7
	comp=Z,0.6nm,0.8s,baz=117,slow=3.1,SNR=3.6						
SIV	San Ignacio	43.63	132	P	P	22 38 49.2	-1.0
	comp=Z,1.0nm,0.6s,baz=286,slow=14,SNR=3.4						
YKA	Yellowknife Ar	50.51	347	P	P	22 39 43.4	+0.1
	comp=Z,2.9nm,0.7s,baz=150,slow=7.5,SNR=13						
YKA				PcP	PcP	22 41 01.7	+0.6
	comp=Z,0.3nm,0.6s,baz=146,slow=3.5,SNR=3.6						
INK	Inuvik	59.88	344	P	P	22 40 50.1	-0.6
INK				IAmb	IAmb	22 40 52.0	
	comp=Z,2.6nm,0.8s						
ILAR	Eielson Array	62.17	337	P	P	22 41 07.8	+1.3
	comp=Z,0.8nm,0.9s,baz=163,slow=4.4,SNR=4.7						
CMAR	Chiang Mai Arr	145.38	340	PKPbc	PKPbc	22 50 22.6	-1.5
	comp=Z,1.2nm,0.6s,baz=338,slow=2.0,SNR=4.9						

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*GCG **02** 22:44:51.3±1.1, 14°.25N×93°.26W, h81km±144km, MD4.2*
*NEIC **02** 22:44:51.5±1.1, 14°.11N±0°.09×93°.14W±0°.06, h14km±5km, Error ellipse: s-maj=13.4km s-min=6.4km az=204.0*
*MEX **02** 22:44:52.5±0.5, 14°.18N×93°.16W, h0km±96km, MD4.2*
*IDC **02** 22:45:00.3±3.6, 14°.38N×92°.75W, h75km±32km, mb3.5/7, mb1 3.8/11, mb1mx3.5/44, mbtmp3.8/11, Error ellipse: s-maj=37.4km s-min=15.7km az=54.0*
ISC 02 22:44:53.2±2.4**, 14°.37N**±0°.06×**93°.06W**±0°.05**, h13**km±14km**, n34, σ1s.34**/46**, mb4.0**/9**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.93	55		Pb	22 45 11.2	0.0
THIG					Sn	22 45 25.7	+0.5
THIG		0.93	55	eP	Pb	22 45 11.2	0.0
THIG				iS	Sn	22 45 25.7	+0.5
PCIG		1.33	353	eP	Pn	22 45 17.2	-0.4
PCIG				iS	Sg	22 45 36.3	+0.1
ERG	Entre ros, C	1.44	87	eP	Pn	22 45 19.6	+0.5
STG3	Santiaguito 3,	1.48	77	eP	Pn	22 45 19.6	-0.1
CCIG	Comitan	2.09	25		Pb	22 45 31.6	+0.4
CCIG				Sn	Sg	22 45 59.4	-1.3
FUG	Fuego 3	2.15	88	eP	Pn	22 45 28.9	0.0
FUG				eS	Sb	22 45 58.0	-0.8
TGIG		2.39	358		Pn	22 45 33.7	+1.5
TGIG					Sn	22 45 57.7	-3.7
TGIG		2.39	358	iP	Pn	22 45 32.8	+0.6
TGIG				iS	Sb	22 46 04.0	-1.7
IXG	Ixpaco	2.54	94	eP	Pn	22 45 33.6	-0.8
APG	El Apazote	2.58	76	P	Pn	22 45 35.8	+0.8
	13nm,0.3s,baz=184,slow=12,SNR=65						
APG				S	Sb	22 46 12.3	+1.0
	25nm,0.3s,baz=4.4,slow=21,SNR=8.2						
NBG	Las Nubes	2.63	85	eP	Pb	22 45 39.5	-1.0
CMIG	Matias Romero	3.23	327	P	Pn	22 45 43.8	+0.2
	6.0nm,0.3s,baz=157,slow=11,SNR=51						
CMIG				S	Sn	22 46 21.6	-0.3
	15nm,0.3s,baz=104,slow=16,SNR=5.9						
TLIG	Tlapa	6.18	302		Pn	22 46 25.1	+0.8
TLIG				Sn	Sn	22 47 35.2	+0.3
TEIG	Tepich	7.40	37	P	Pn	22 46 42.1	+1.2
	7.1nm,0.3s,baz=272,slow=0.6,SNR=28						
TEIG				S	Sn	22 48 04.8	0.0
	2.9nm,0.3s,baz=74,slow=23,SNR=3.3						
TEIG	Tepich	7.40	37		Pn	22 46 42.2	+1.3
JTS	Las Juntas de	8.90	116	P	Pn	22 47 03.4	+1.8
	0.3nm,0.3s,baz=291,slow=6.0,SNR=1.8						
JTS				S	Sn	22 48 44.1	+2.4
	0.3nm,0.3s,baz=148,slow=22,SNR=1.6						
H06E1	SOCORRO T-PHAS	17.68	287	T	T	23 07 06.2	
TXAR	Lajitas Array	17.83	328	P	P	22 49 04.6	+2.7
	0.0nm,0.3s,baz=153,slow=11,SNR=10						
TX31	Lajitas Ar. Si	17.83	328	P	Pn	22 49 02.4	+1.1
TX31				IAmb	IAmb	22 49 13.0	
	comp=Z,4.1nm,1.1s						
TX32	Lajitas Array	17.83	328	P	P	22 49 02.7	+0.7
MIAR	Mount Ida	20.09	359	P	P	22 49 27.9	+1.3
MIAR				IAmb	IAmb	22 49 32.8	
	comp=Z,8.8nm,0.8s						
AMTX	Amarillo	21.85	341	P	P	22 49 45.9	+0.2
AMTX				IAmb	IAmb	22 49 48.7	
	comp=Z,12nm,1.1s						
121A	Cookes Peak, D	22.52	326	P	P	22 49 52.4	-0.6
SDV	Santo Domingo	22.62	101	P	P	22 49 53.5	-0.7
	comp=Z,1.5nm,0.6s,baz=308,slow=11,SNR=3.6						
ANMO	Albuquerque	23.78	332	P	P	22 50 07.2	+1.4
	comp=Z,1.1nm,0.8s,baz=138,slow=6.3,SNR=5.5						
ANMO	Albuquerque	23.78	332	P	P	22 50 06.7	+0.9
ANMO				IAmb	IAmb	22 50 18.2	
	comp=Z,1.8nm,1.1s						
TUC	Tucson	24.10	321	P	P	22 50 08.2	-0.5
TUC				IAmb	IAmb	22 50 12.9	
	comp=Z,4.8nm,1.1s						
PDAR	Pinedale Array	31.66	337	P	P	22 51 18.1	+1.5
	comp=Z,0.7nm,0.9s,baz=144,slow=6.7,SNR=2.8						
NVAR	Mina Array Bea	32.74	322	P	P	22 51 28.8	+2.6
	comp=Z,1.7nm,0.7s,baz=134,slow=8.0,SNR=16						
SIV	San Ignacio	43.69	132	P	P	22 52 55.5	-2.8
	comp=Z,0.6nm,0.6s,baz=335,slow=14,SNR=3.0						
YKA	Yellowknife Ar	50.43	347	P	P	22 53 50.3	0.0
	comp=Z,3.2nm,0.7s,baz=150,slow=7.5,SNR=48						
YKA				PcP	PcP	22 55 06.3	-2.1
	comp=Z,0.3nm,0.8s,baz=150,slow=3.7,SNR=2.1						
ILAR	Eielson Array	62.10	337	P	P	22 55 13.0	-0.6
	comp=Z,0.9nm,0.9s,baz=126,slow=4.9,SNR=7.8						
CMAR	Chiang Mai Arr	145.30	340	PKPbc	PKPbc	23 04 30.7	-0.7
	comp=Z,0.8nm,0.4s,baz=345,slow=4.4,SNR=7.9						

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*UCR **02** 22:53:14.5±0.6, 12°.55N×87°.80W, h61km±11km, ML3.7*
*SNET **02** 22:53:14.5±0.6, 12°.54N×87°.82W, h55km±13km, ML3.6*
*INET **02** 22:53:14.1, 12°.48N×87°.77W, h66km, ML3.7*
ISC 02 22:53:13.5±4.3**, 12°.4N**±0°.2×**87°.8W**±0°.1**, h50**km**, n7, σ0s.34**/13**, 4D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.84	356	⇓iP	Pn	22 53 29.0	-0.2
CNCH				eS	Sn	22 53 41.1	+0.5
CNCH				IAML		22 53 45.2	
	comp=Z,2μm,0.3s						
CNCH	Conchagua	0.84	356	⇓iP	Pn	22 53 29.0	-0.2
CNCH				eS	Sn	22 53 41.1	+0.5
CNCH				IAML		22 53 45.2	
	comp=Z,2μm,0.3s						
PACA	Pacayal	1.16	332	eP	Pn	22 53 33.5	0.0
PACA				eS	Sn	22 53 48.3	0.0
PACA				IAML		22 53 50.0	
	comp=Z,2μm,0.1s						
PACA	Pacayal	1.16	332	eP	Pn	22 53 33.5	0.0
PACA				eS	Sn	22 53 48.3	0.0
PACA				IAML		22 53 50.0	
	comp=Z,2μm,0.1s						
TGUH	Tegucigalpa,Un	1.68	17	⇓iP	Pn	22 53 40.9	+0.3
TGUH				eS	Sn	22 54 00.6	-0.5
TGUH	Tegucigalpa,Un	1.68	17	⇓iP	Pn	22 53 40.9	+0.3
TGUH				eS	Sn	22 54 00.6	-0.5
LFRS	El Faro	1.72	313	eP	Pn	22 53 41.2	0.0

IDC 02 23:03:57.2±3.5**, 20°.50S×176°.08W, h0**km**, mb3.8**/3**, mb1 3.9**/3**, mb1mx3.6**/25**, mbtmp3.8**/3**, Error ellipse: s-maj=219.0km s-min=40.1km az=149.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.41	244	P	P	23 11 29.1	+0.2
	0.6nm,0.3s,baz=73,slow=17,SNR=2.5						
ASAR	Alice Springs	46.27	256	P	P	23 12 24.6	-0.1
	0.8nm,0.7s,baz=96,slow=7.7,SNR=7.5						
WRA	Warramunga Arr	46.38	262	P	P	23 12 25.2	-0.5
	0.7nm,0.8s,baz=99,slow=5.2,SNR=4.7						
ZALV	Zalesovo Beam	111.62	321	PKiKP	PKiKP	23 22 33.1	-0.3
	0.4nm,0.6s,baz=122,slow=1.9,SNR=2.9						
MKAR	Makanchi Array	112.50	313	PKiKP	PKiKP	23 22 34.6	-0.8
	0.3nm,0.6s,baz=102,slow=0.7,SNR=4.7						
BVAR	Borovoye Array	120.23	320	PKP	PKiKP	23 22 50.1	0.0
	0.4nm,0.4s,baz=87,slow=3.0,SNR=4.6						
AKASG	Malin Array Be	143.86	333	PKP	PKPbc	23 23 32.4	+0.4
	0.2nm,0.4s,baz=44,slow=4.1,SNR=5.0						
BRTR	Keskin Array B	148.15	314	PKPbc	PKPbc	23 23 45.5	+0.1
	0.7nm,0.5s,baz=33,slow=1.8,SNR=3.9						

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*INET **02** 23:07:58.0, 12°.41N×87°.75W, h62km, ML3.9*
SNET 02 23:07:58.6±0.9**, 12°.45N×87°.86W, h28**km±7km**, ML3.4, 1C-3D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.82	2	⇓eP	Pb	23 08 14.0	-0.4
CNCH				eS	Sn	23 08 26.6	+0.8
CNCH				IAML		23 08 28.7	
	comp=Z,4μm,0.2s						
LCND	La Caada	0.85	358	⇑eP	Pn	23 08 14.5	-0.3
LCND				eS	Sn	23 08 26.9	+0.5
LCND				IAML		23 08 29.2	
	comp=Z,1μm,0.2s						
JUCU	Jucuar¡n	0.88	334	eP	Pn	23 08 15.1	-0.2
JUCU				eS	Sn	23 08 27.2	0.0
JUCU				IAML		23 08 31.4	
	comp=Z,918nm,0.2s						
BLLM	Bellamira	1.05	339	eP	Pn	23 08 17.6	-0.1
LCY	Lacayo	1.06	336	eP	Pn	23 08 17.7	0.0
RANC	El Ranchito	1.06	337	eP	Pn	23 08 17.8	0.0
RANC				IAML		23 08 35.1	
	comp=Z,754nm,0.2s						
PACA	Pacayal	1.11	336	eP	Pn	23 08 18.5	+0.1
PACA				eS	Sb	23 08 33.8	+0.4
ALJI	Alcalda de J	1.11	321	⇓eP	Pn	23 08 18.4	0.0
ALJI				IAML		23 08 33.8	
	comp=Z,681nm,0.2s						
TECA	Tecapa	1.21	329	eP	Pn	23 08 19.9	0.0
COEB	Comit de Eme	1.23	328	eP	Pb	23 08 21.0	-0.3
COEB				IAML		23 08 41.3	
	comp=Z,218nm,0.3s						
FAGO	Alcalda de S	1.26	349	eP	Pn	23 08 20.8	+0.4
FAGO				eS	Sb	23 08 37.6	0.0
COEG	Centro de Oper	1.53	319	eP	Pn	23 08 24.2	0.0
COEG				eS	Sn	23 08 44.1	+0.9
COEG				IAML		23 08 48.1	
	comp=Z,465nm,0.3s						
TGUH	Tegucigalpa,Un	1.69	20	⇓iP	Pn	23 08 25.6	-0.9

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*INET **02** 23:33:53.5, 12°.46N×87°.76W, h58km, ML4.4*
*UCR **02** 23:33:54.3±1.1, 12°.49N×87°.86W, h29km±4km, ML3.8*
*SNET **02** 23:33:54.3±1.0, 12°.49N×87°.87W, h29km±3km, ML3.8*
ISC 02 23:33:53.3±4.5**, 12°.5N**±0°.2×**87°.79W**±0°.08**, h25**km±20km**, n26, σ0s.43**/43**, 8C, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.81	357	⇑eP	Pn	23 34 09.0	-0.2
CNCH				eS	Sn	23 34 21.1	+0.7
CNCH				IAML		23 34 24.6	
	comp=Z,10μm,0.3s						
CNCH	Conchagua	0.81	357	⇑eP	Pn	23 34 09.0	-0.2
CNCH				eS	Sn	23 34 21.1	+0.7
CNCH				IAML		23 34 24.6	
	comp=Z,10μm,0.3s						
LCND	La Caada	0.84	354	⇑eP	Pn	23 34 09.4	-0.2
LCND				eS	Sn	23 34 21.7	+0.6
LCND				IAML		23 34 24.0	
	comp=Z,4μm,0.2s						
LCND	La Caada	0.84	354	⇑eP	Pn	23 34 09.4	-0.2
LCND				eS	Sn	23 34 21.7	+0.6
LCND				IAML		23 34 24.0	
	comp=Z,4μm,0.2s						
JUCU	Jucuar¡n	0.90	331	eP	Pn	23 34 09.9	-0.5
JUCU				eS	Sn	23 34 22.1	-0.6
JUCU				IAML		23 34 26.1	
	comp=Z,3μm,0.3s						
JUCU	Jucuar¡n	0.90	331	eP	Pn	23 34 09.9	-0.5
JUCU				eS	Sn	23 34 22.1	-0.6
JUCU				IAML		23 34 26.1	
	comp=Z,3μm,0.3s						
BLLM	Bellamira	1.06	336	eP	Pn	23 34 12.7	0.0
BLLM	Bellamira	1.06	336	eP	Pn	23 34 12.7	0.0
LCY	Lacayo	1.07	333	eP	Pn	23 34 12.9	+0.1
LCY				eS	Sb	23 34 27.0	+0.2
LCY	Lacayo	1.07	333	eP	Pn	23 34 12.9	+0.1
LCY				eS	Sb	23 34 27.0	+0.2
PACA	Pacayal	1.12	333	eP	Pn	23 34 13.4	-0.2
PACA				eS	Sb	23 34 29.0	+0.6
PACA	Pacayal	1.12	333	eP	Pn	23 34 13.4	-0.2
PACA				eS	Sb	23 34 29.0	+0.6
TECA	Tecapa	1.23	326	eP	Pn	23 34 15.2	+0.1
TECA	Tecapa	1.23	326	eP	Pn	23 34 15.2	+0.1
COEB	Comit de Eme	1.25	325	eP	Pn	23 34 15.4	+0.1
COEB				eS	Sb	23 34 31.2	-0.9
COEB				IAML		23 34 34.0	
	comp=Z,781nm,0.3s						
COEB	Comit de Eme	1.25	325	eP	Pn	23 34 15.4	+0.1
COEB				eS	Sb	23 34 31.2	-0.9
COEB				IAML		23 34 34.0	
	comp=Z,781nm,0.3s						
FAGO	Alcalda de S	1.26	346	⇑eP	Pn	23 34 14.9	-0.4
FAGO				eS	Sb	23 34 32.2	0.0
FAGO	Alcalda de S	1.26	346	⇑eP	Pn	23 34 14.9	-0.4
FAGO				eS	Sb	23 34 32.2	0.0
COEG	Centro de Oper	1.56	317	eP	Pn	23 34 19.7	+0.2
COEG				eS	Sn	23 34 38.6	-0.3
COEG				IAML		23 34 42.5	
	comp=Z,2μm,0.4s						
COEG	Centro de Oper	1.56	317	eP	Pn	23 34 19.7	+0.2
COEG				eS	Sn	23 34 38.6	-0.3
COEG				IAML		23 34 42.5	
	comp=Z,2μm,0.4s						
TGUH	Tegucigalpa,Un	1.66	18	⇑iP	Pn	23 34 20.6	-0.3
TGUH	Tegucigalpa,Un	1.66	18	⇑iP	Pn	23 34 20.6	-0.3
LFRS	El Faro	1.69	313	eP	Pn	23 34 21.4	+0.1
LFRS				eS	Sn	23 34 41.9	-0.3
LFU	La Fuente	1.81	315	eP	Pn	23 34 23.5	+0.6
LFU	La Fuente	1.81	315	eP	Pn	23 34 23.5	+0.6
BOQS	Boqueron	1.92	311	eP	Pn	23 34 25.1	+0.5

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*GCG **02** 23:44:31.7±0.4, 15°.02N×93°.15W, h35km±999km, MD4.0*
*MEX **02** 23:44:31.4±1.0, 15°.11N×93°.08W, h91km±9km, MD3.6*
ISC 02 23:44:32.0±1.3**, 15°.08N**±0°.06×**93°.16W**±0°.05**, h35**km**, n9, σ1s.57**/17**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.62	355	eP	Pn	23 44 45.9	+1.5
PCIG				iS	Sn	23 44 57.6	+4.5
THIG		0.88	101	iP	Pn	23 44 47.8	-0.1
THIG				iS	Sn	23 45 00.5	+1.0
CCIG	Comitan	1.55	39	eP	Pn	23 44 56.7	-0.5
CCIG				iS	Sn	23 45 14.9	-1.3
STG3	Santiaguito 3,	1.58	103	eP	Pn	23 44 57.6	-0.1
STG3				eS	Sn	23 45 16.1	-0.9
TGIG		1.69	1	eP	Pn	23 44 57.3	-1.8
TGIG				iS	Sn	23 45 18.0	-1.5
FUG	Fuego 3	2.33	105	eP	Pn	23 45 11.1	+3.1
FUG				eS	Sn	23 45 36.3	+0.8
CMIG	Matias Romero	2.60	321	iP	Pn	23 45 11.1	-0.5
CMIG				iS	Sn	23 45 41.2	-0.7
IXG	Ixpaco	2.78	109	eP	Pn	23 45 14.3	+0.1
IXG				eS	Sn	23 45 47.3	+0.6
HUIG	Huatulco	2.92	284	iP	Pn	23 45 15.6	-0.4
HUIG				iS	Sn	23 45 50.1	+0.2

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*INET **02** 23:46:47.5, 12°.49N×87°.73W, h62km, ML3.5*
SNET 02 23:46:47.1±1.1**, 12°.47N×87°.93W, h27**km±6km**, ML3.1, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.80	7	eP	Pb	23 47 02.1	-0.5
CNCH				eS	Sn	23 47 14.9	+1.0
CNCH				IAML		23 47 16.4	
	comp=Z,1μm,0.1s						
LCND	La Caada	0.83	3	eP	Pb	23 47 02.5	-0.5
LCND				eS	Sn	23 47 14.5	+0.1
LCND				IAML		23 47 16.6	
	comp=Z,436nm,0.4s						
JUCU	Jucuar¡n	0.84	338	eP	Pb	23 47 02.8	-0.3
JUCU				eS	Sn	23 47 14.6	-0.1
JUCU				IAML		23 47 19.4	
	comp=Z,577nm,0.3s						
BLLM	Bellamira	1.01	343	eP	Pn	23 47 05.8	+0.2
ALJI	Alcalda de J	1.05	324	eS	Sb	23 47 21.2	+1.0
PACA	Pacayal	1.06	339	eP	Pn	23 47 06.1	-0.2
PACA				eS	Sb	23 47 21.2	+0.7
COEG	Centro de Oper	1.47	321	eS	Sn	23 47 30.9	+0.6

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*NCEDC **02** 23:53:15.4±0.7, 40°.56N±0°.02×122°.88W±0°.04, h52km±5km, Md2.7/49, Error ellipse: s-maj=4.4km s-min=2.6km az=80.0*
NEIC 02 23:53:15.3±0.7**, 40°.57N**±0°.03×**122°.89W**±0°.04**, h51**km±7km**, Error ellipse: s-maj=4.7km s-min=4.3km az=220.0, Northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBPM	Beegum Peak	0.25	178		Pn	23 53 24.4	+0.1
KHBM	Hayfork Bally	0.27	291		Pn	23 53 24.5	0.0
KHBM					Sn	23 53 31.5	+0.5
WDC	Whiskeytown Da	0.27	87	Pn	Pn	23 53 24.1	-0.1
WDC					Pn	23 53 24.3	0.0
WDC				Sn	Sn	23 53 30.6	0.0
WDC	Whiskeytown Da	0.27	87		Sn	23 53 30.8	+0.2
LGPM	Granite Peak	0.35	8		Pn	23 53 25.2	0.0
O02D	Mt. Diablo Mer	0.40	169		Pn	23 53 25.8	+0.2
N02D	Trinity Center	0.43	19		Pn	23 53 26.0	+0.1
N02D					Sn	23 53 34.1	+0.5
KCSM	Cold Springs	0.47	267		Pn	23 53 26.6	+0.2
LBKM	Bonanza King	0.54	18		Pn	23 53 27.6	+0.3
GROM	Round Mountain	0.67	165		Pn	23 53 29.1	+0.3
LSHM	Sage Hen Hill	0.69	71		Pn	23 53 28.7	-0.2
LTCM	Tuscan Springs	0.69	121		Pn	23 53 28.9	0.0
LTCM					Sn	23 53 39.1	+0.3
KHMM	Horse Mountain	0.71	296		Pn	23 53 28.9	-0.4
KHMM					Sn	23 53 39.7	+0.2
KBNM	Bluenose Ridge	0.71	199		Pn	23 53 29.7	+0.3
KMRM	Mail Ridge	0.71	241		Pn	23 53 29.4	+0.1
KMRM					Sn	23 53 40.1	+0.6
KCRM	Chalk Rock	0.72	259		Pn	23 53 29.4	0.0
GVV	Valley View	0.81	168		Pn	23 53 31.3	+0.7
M02C	Callahan	0.82	2		Pn	23 53 31.1	+0.3
KOMM	Orleans Mounta	0.83	329		Pn	23 53 30.9	0.0
KBSM	Bell Springs	0.84	220		Pn	23 53 31.1	+0.1
O03E	Paynes Creek	0.88	108		Pn	23 53 30.8	-0.6
KIPM	Iron Peak	0.88	211		Pn	23 53 31.6	0.0
JCC	Jacoby Creek,	0.90	286		Pn	23 53 31.2	-0.5
JCC	Jacoby Creek,	0.90	286		Pn	23 53 31.4	-0.3
JCC				Sn	Sn	23 53 43.7	0.0
M03C	McCloud	0.92	39		Pn	23 53 32.2	+0.2
GASB	Alder Springs	0.92	172		Pn	23 53 33.0	+0.9
KMPM	Mount Pierce	0.95	261		Pn	23 53 32.1	-0.3
KFPM	Farley Peak	1.01	204		Pn	23 53 33.5	+0.2
KCPM	Cahto Peak	1.03	211	Pn	Pn	23 53 33.5	0.0
LAMM	Antelope Mount	1.06	11		Pn	23 53 34.6	+0.6
GHMM	Hull Mountain	1.07	182		Pn	23 53 34.6	+0.4
LBFM	Black Fox Moun	1.09	44		Pn	23 53 34.9	+0.5
KCTM	Capetown	1.10	266		Pn	23 53 34.4	0.0
YBH	Yreka Blue Hor	1.17	7		Pn	23 53 36.0	+0.5
YBH	Yreka Blue Hor	1.17	7		Pn	23 53 36.1	+0.7
LHEM	Herd Peak	1.18	25		Pn	23 53 36.6	+0.9
LTIM	Timbered Crate	1.23	60		Pn	23 53 36.2	0.0
KRMB	Red Mountain	1.23	321		Pn	23 53 35.8	-0.4
MGL	Magalia	1.27	126		Pn	23 53 36.8	+0.1
GTC	Three Chop Rid	1.27	204		Pn	23 53 36.2	-0.5
GTSM	Trough Springs	1.27	170		Pn	23 53 37.5	+0.7
KSXB	Camp Six Broad	1.47	330		Pn	23 53 39.0	-0.4
ORV	Oroville	1.47	133		Pn	23 53 38.9	-0.5
ORV	Oroville	1.47	133		Pn	23 53 39.7	+0.3
ORV	Oroville	1.47	133		Pn	23 53 40.3	+0.9
GNAM	Navarro Ridge	1.48	203		Pn	23 53 39.1	-0.5
OSUM	Sutter Buttes	1.52	148		Pn	23 53 39.3	-0.7
HOPS	Hopland Field	1.58	185	Pn	Pn	23 53 41.4	+0.5
HUMO	Hull Mountain	2.04	359	Pn	Pn	23 53 47.4	+0.2
BEKR	Beckworth	2.06	109	Pn	Pn	23 53 48.0	+0.4
AFDM	Forest Hills D	2.19	137	Pn	Pn	23 53 49.0	-0.3
VAK	Adit at Lawren	2.73	169		Pn	23 53 58.2	+1.5
BGC	Bolinger Road	2.82	167		Pn	23 53 57.4	-0.5
MGNR	McGee Canyon	4.26	129		Pn	23 54 16.2	-1.7

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*IDC **02** 23:55:01.9±1.5, 14°.50N×93°.16W, h0km, mb3.5/3, mb1 3.9/6, mb1mx3.5/55, mbtmp3.6/6, ML3.5/3, Error ellipse: s-maj=33.3km s-min=20.9km az=37.0*
*MEX **02** 23:55:02.2±1.0, 14°.08N×93°.14W, h10km±29km, MD3.6*
ISC 02 23:55:02.4±2.5**, 14°.37N**±0°.08×**93°.14W**±0°.06**, h8**km±14km**, n11, σ1s.74**/18**, mb3.5**/3**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.00	57	iP	Pg	23 55 21.4	-0.2
THIG				iS	Sg	23 55 35.0	+0.3
PCIG		1.33	357	iP	Pn	23 55 26.6	-0.7
PCIG				iS	Sg	23 55 46.9	+1.6
CCIG	Comitan	2.13	27	iP	Pn	23 55 39.2	+0.7
CCIG				iS	Sb	23 56 07.5	-0.7
TGIG		2.40	0	iP	Pn	23 55 43.4	+1.3
TGIG				iS	Sb	23 56 14.5	-1.2
APG	El Apazote	2.66	76	Pn	Pn	23 55 45.2	-0.6
	3.3nm,0.3s,baz=270,slow=12,SNR=18						
APG				Sn	Sb	23 56 20.9	-2.6
	5.5nm,0.3s,baz=40,slow=20,SNR=5.2						
CMIG	Matias Romero	3.19	328	Pn	Pn	23 55 53.0	+0.2
	1.4nm,0.3s,baz=146,slow=13,SNR=12						
CMIG				Sn	Sb	23 56 34.3	-4.0
	4.0nm,0.3s,baz=58,slow=23,SNR=7.6						
CMIG	Matias Romero	3.19	328	eP	Pn	23 55 52.8	-0.1
CMIG				iS	Sn	23 56 33.5	+2.4
TEIG	Tepich	7.45	38	Pn	Pn	23 56 52.0	+0.5
	6.2nm,0.3s,baz=62,slow=0.5,SNR=26						
NVAR	Mina Array Bea	32.70	322	P	P	00 01 34.5	-1.2
	0.2nm,0.5s,baz=135,slow=9.0,SNR=2.7						
LPAZ	La Paz	39.22	140	P	P	00 02 34.2	+2.1
	0.4nm,0.4s,baz=302,slow=7.4,SNR=3.5						
YKA	Yellowknife Ar	50.42	347	P	P	00 03 59.6	-0.6
	0.6nm,0.7s,baz=150,slow=7.5,SNR=8.9						

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*MEX **02** 23:56:29.1±0.9, 13°.89N×93°.01W, h74km±34km, MD3.7*
*NEIC **02** 23:56:31.3±1.6, 14°.21N±0°.08×93°.11W±0°.03, h28km±8km, mb4.2/4, Error ellipse: s-maj=11.7km s-min=4.4km az=186.0*
*IDC **02** 23:56:36.5±4.9, 14°.41N×92°.81W, h58km±44km, mb3.6/3, mb1 3.8/6, mb1mx3.3/52, mbtmp3.7/6, ML3.8/3, Error ellipse: s-maj=44.5km s-min=40.3km az=54.0*
ISC 02 23:56:31.2±1.5**, 14°.29N**±0°.08×**93°.07W**±0°.05**, h19**km±4km**, n18, σ1s.16**/25**, mb4.1**/4**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.99	52	iP	Pg	23 56 49.5	-1.0
THIG				iS	Sn	23 57 05.3	+1.7

PCIG		1.41	354	iP	Pb	23 56 56.6	-0.4
PCIG				iS	Sg	23 57 18.1	+1.2
CCIG	Comitan	2.17	24	Pn	Pb	23 57 09.5	-0.7
CCIG	Comitan	2.17	24	iP	Pn	23 57 06.4	-0.2
CCIG				iS	Sb	23 57 37.0	+0.2
TGIG		2.47	359	eP	Pn	23 57 12.5	+1.9
TGIG				iS	Sb	23 57 44.4	-0.8
APG	El Apazote	2.62	74	P	Pn	23 57 12.7	-0.1
	18nm,0.3s,baz=257,slow=19,SNR=8.8						
APG				S	Sb	23 57 50.6	+0.9
	13nm,0.3s,baz=333,slow=18,SNR=7.9						
CMIG	Matias Romero	3.29	328	P	Pn	23 57 21.5	-0.3
	1.6nm,0.3s,baz=150,slow=16,SNR=1.9						
CMIG				S	Sn	23 57 59.9	-0.4
	4.7nm,0.3s,baz=92,slow=9.4,SNR=1.7						
TEIG	Tepich	7.47	37	P	Pn	23 58 19.9	+0.7
	7.9nm,0.3s,baz=128,slow=0.7,SNR=10						
TEIG				S	Sn	23 59 41.1	-2.4
	0.8nm,0.3s,baz=141,slow=20,SNR=1.4						
TEIG	Tepich	7.47	37		Pn	23 58 20.5	+1.3
TXAR	Lajitas Array	17.89	328	P	P	00 00 40.0	+0.2
	0.0nm,0.3s,baz=151,slow=13,SNR=2.2						
WMOK	Wichita Mounta	21.00	347	P	P	00 01 13.0	-0.7
WMOK				IAmb	IAmb	00 01 27.8	
	comp=Z,7.2nm,0.7s						
319A	Douglas	22.59	322	P	P	00 01 29.9	-0.9
ISCO	Idaho Springs	27.70	339	P	P	00 02 17.6	-1.0
NVAR	Mina Array Bea	32.80	322	P	P	00 03 06.0	+2.3
	comp=Z,0.6nm,0.6s,baz=134,slow=9.1,SNR=5.5						
YKA	Yellowknife Ar	50.51	347	P	P	00 05 27.6	-0.3
	comp=Z,1.2nm,0.6s,baz=149,slow=7.7,SNR=17						
INK	Inuvik	59.87	344	P	P	00 06 35.5	+0.2
	comp=Z,0.6nm,0.5s,baz=109,slow=7.8,SNR=4.5						
INK	Inuvik	59.87	344	P	P	00 06 35.2	-0.2
INK				IAmb	IAmb	00 06 54.4	
	comp=Z,2.0nm,1.0s						
CMAR	Chiang Mai Arr	145.37	340	PKPbc	PKPbc	00 16 07.6	-1.1
	comp=Z,0.9nm,0.3s,baz=1.6,slow=6.4,SNR=3.7						

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*IDC **03** 00:03:48.8±0.7, 14°.02N×145°.12E, h113km±4km, mb3.6/16, mb1 3.8/16, mb1mx3.5/61, mbtmp3.9/16, Error ellipse: s-maj=26.2km s-min=11.4km az=88.0*

*NEIC **03** 00:03:49.5±1.2, 14°.03N±0°.07×145°.1E±0°.1, h120km±3km, mb4.6/17, Error ellipse: s-maj=16.7km s-min=8.4km az=117.0*

ISC 03 00:03:49.8±0.5, **14°.03N**±0°.07×**145°.1E**±0°.1, **h125**km, **n45**, σ**0s.94**/39, **mb4.0**/24, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.49	207	LR	LR	00 03 56.3	
	comp=Z,103nm,18.8s,baz=189,slow=15						
GUMO				P	Pn	00 04 07.6	-0.7
	2µm,0.3s,baz=339,slow=5.8,SNR=438						
GUMO				S	Sn	00 04 20.3	-1.9
	2µm,0.3s,baz=336,slow=20,SNR=41						
GUMO	Guam	0.49	207		Pn	00 04 07.7	-0.6
PATS	Pohnpei	14.83	117	Pn	Pn	00 07 12.4	-0.9
FAKI	Fak Fak	21.11	218	P	P	00 08 24.9	+0.2
FAKI				IAmb	IAmb	00 08 39.2	
	comp=Z,16nm,1.1s						
H11S3	WAKE ISLAND Hy	21.19	75	T	T	00 29 46.3	
	baz=278,slow=74						
H11S1	WAKE ISLAND Hy	21.21	75	T	T	00 29 47.2	
	baz=278,slow=74						
H11S2	WAKE ISLAND Hy	21.21	75	T	T	00 29 48.0	
	baz=278						
H11N1	WAKE ISLAND Hy	21.60	72	T	T	00 31 43.3	
	baz=257,slow=75,SNR=8.9						
H11N2	WAKE ISLAND Hy	21.61	72	T	T	00 31 33.5	
	baz=257,slow=75,SNR=4.6						
H11N3	WAKE ISLAND Hy	21.62	72	T	T	00 31 43.1	
	baz=257,slow=75,SNR=5.4						
MJAR	Matsushiro Arr	23.25	346	P	P	00 08 45.9	-0.3
	comp=Z,2.8nm,0.7s,baz=163,slow=11,SNR=5.3						
COEN	Coen	27.87	184	P	P	00 09 28.5	+0.5
KSRS	Korea Array	27.89	330	P	P	00 09 28.3	+0.3
	comp=Z,1.1nm,0.5s,baz=133,slow=8.8,SNR=5.3						
USRK	Ussuriysk Ar.	32.09	342	P	P	00 10 06.4	+1.5
	comp=Z,1.9nm,0.7s,baz=150,slow=41,SNR=5.5						
WB0	Warramunga Arr	35.20	198	P	P	00 10 32.0	-0.1
WB0				IAmb	IAmb	00 10 32.6	
	comp=Z,12nm,1.1s						
WR0	Warramunga Arr	35.34	197	P	P	00 10 33.1	-0.2
WR0				IAmb	IAmb	00 10 34.4	
	comp=Z,3.9nm,0.7s						
WB2	Warramunga Arr	35.38	198	P	P	00 10 33.5	-0.1
WB2				IAmb	IAmb	00 10 34.7	
	comp=Z,9.4nm,0.8s						
WRA	Warramunga Arr	35.38	198	P	P	00 10 33.0	-0.7
	comp=Z,5.9nm,0.8s,baz=15,slow=8.8,SNR=25						
KLR	Kul'dur	36.78	345	P	P	00 10 46.3	+1.0
	comp=Z,0.6nm,0.3s,baz=138,slow=12,SNR=4.5						
FITZ	Fitzroy Crossi	37.25	212	P	P	00 10 49.8	+0.2
	comp=Z,2.7nm,0.7s,baz=17,slow=11,SNR=4.0						
FITZ	Fitzroy Crossi	37.25	212	IAmb	IAmb	00 10 50.5	
	comp=Z,5.2nm,1.1s						
AS31	Alice Springs	39.03	196	P	P	00 11 04.5	0.0
ASAR	Alice Springs	39.03	196	P	P	00 11 04.2	-0.3
	comp=Z,2.0nm,0.7s,baz=18,slow=12,SNR=19						
ASAR				PcP	PcP	00 13 14.3	+2.0
	comp=Z,0.5nm,0.7s,baz=46,slow=2.7,SNR=3.9						
EIDS	Eidsvold	39.59	171	P	P	00 11 09.2	+0.2
EIDS				IAmb	IAmb	00 11 17.6	
	comp=Z,7.9nm,0.9s						
PET	Petropavlovsk	40.37	13	P	P	00 11 14.4	-0.7
PET				IAmb	IAmb	00 11 19.1	
	comp=Z,5.4nm,0.3s						
UGM	Wanagama	40.65	240	P	P	00 11 17.1	-0.9
NOUC	Port Laguerre	41.49	150	P	P	00 11 25.7	+0.9
DZM	Mont Dzumac	41.54	149	P	P	00 11 28.1	+2.9
STKA	Stephens Creek	45.77	184	P	P	00 11 58.9	0.0
	comp=Z,4.6nm,0.6s,baz=355,slow=8.8,SNR=12						
STKA	Stephens Creek	45.77	184	IAmb	IAmb	00 11 59.7	
	comp=Z,1.0nm,0.6s						
SONM	Songino Array	46.50	324	P	P	00 12 05.4	+0.7
	comp=Z,0.2nm,0.5s,baz=138,slow=9.8,SNR=3.1						
BBOO	Buckleboo	47.37	190	P	P	00 12 11.9	+0.5
BBOO				IAmb	IAmb	00 12 12.2	
	comp=Z,7.8nm,0.7s						
FORT	Forrest	47.47	200	P	P	00 12 12.1	-0.1
TOO	Toolangi	51.33	180	P	P	00 12 41.6	+0.2
TOO				IAmb	IAmb	00 12 44.3	
	comp=Z,11nm,0.8s						
MK31	Makanchi Array	61.33	316	P	P	00 13 53.0	+0.6
MKAR	Makanchi Array	61.33	316	P	P	00 13 53.0	+0.7
	comp=Z,0.5nm,0.5s,baz=92,slow=8.3,SNR=14						
ZALV	Zalesovo Beam	61.40	324	P	P	00 13 53.7	+1.1
	comp=Z,0.4nm,0.5s,baz=99,slow=6.3,SNR=2.7						
ILAR	Eielson Array	68.08	25	P	P	00 14 34.9	-0.9
	comp=Z,0.3nm,0.4s,baz=247,slow=6.0,SNR=7.0						
BVAR	Borovoye Array	69.72	322	P	P	00 14 45.9	-0.3
	comp=Z,0.4nm,0.3s,baz=106,slow=7.7,SNR=5.8						
YKA	Yellowknife Ar	82.37	27	P	P	00 15 57.1	-0.5
	comp=Z,0.1nm,0.4s,baz=290,slow=5.9,SNR=5.2						
NVAR	Mina Array Bea	86.47	51	P	P	00 16 19.8	+0.6
	comp=Z,0.4nm,0.6s,baz=273,slow=5.9,SNR=4.7						
FINES	FINESS Array B	90.86	335	P	P	00 16 37.7	-1.3
	comp=Z,0.9nm,0.7s,baz=106,slow=3.0,SNR=3.0						
TORD	Torodi Ar. Bea	134.79	305	PKP	PKPdf	00 22 55.0	+0.1
	comp=Z,0.6nm,1.0s,baz=40,slow=2.9,SNR=3.1						
PLCA	Paso Flores	139.11	137	PKP	PKiKP	00 23 03.5	-1.0
	comp=Z,0.9nm,0.8s,baz=247,slow=7.7,SNR=3.4						
LPAZ	La Paz	147.87	98	PKPbc	PKiKP	00 23 23.5	-0.3
	comp=Z,0.5nm,0.5s,baz=274,slow=2.5,SNR=4.6						

IDC 03 00:05:18.5±2.0, **7°.25S**×**128°.95E**, **h0**km, **mb3.3**/1, **mb1 3.3**/4, **mb1mx3.2**/47, **mbtmp3.2**/4, **ML3.0**/3, **Error ellipse: s-maj=84.4km s-min=28.3km az=75.0**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.26	196	Pn	Pn	00 07 59.5	-1.2
	0.1nm,0.3s,baz=12,slow=15,SNR=3.9						
FITZ				Sn	Sn	00 10 01.1	-6.2
	0.1nm,0.3s,baz=319,slow=19,SNR=3.5						
WRA	Warramunga Arr	13.65	158	Pn	Pn	00 08 33.9	+0.4
	0.1nm,0.3s,baz=339,slow=9.1,SNR=7.0						
ASAR	Alice Springs	17.00	164	Pn	Pn	00 09 18.7	+0.9
	0.0nm,0.3s,baz=338,slow=9.7,SNR=3.6						
MKAR	Makanchi Array	67.87	327	P	P	00 16 18.8	0.0
	0.2nm,0.7s,baz=116,slow=5.0,SNR=2.2						

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*IASPEI **03** 00:12:08.7±0.8, 34°.29N±0°.02×118°.54W±0°.02, h16km±5km, Error ellipse: s-maj=3.2km s-min=2.7km az=6.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ANF **03** 00:12:08.2±0.2, 34°.27N×118°.55W, h14km±1km, ML2.7/31, Error ellipse: s-maj=1.7km s-min=1.3km az=23.0*

*SCEDC **03** 00:12:09.8, 34°.30N×118°.54W, h6km*

*PAS **03** 00:12:09.5±1.5, 34°.29N±0°.04×118°.54W±0°.03, h8km±3km, ML2.7/198, Error ellipse: s-maj=6.1km s-min=2.8km az=215.0*

*NEIC **03** 00:12:09.6±1.9, 34°.28N±0°.03×118°.54W±0°.05, h10km±3km, Error ellipse: s-maj=6.0km s-min=3.7km az=81.0*

ISC 03 00:12:09.5±0.8, **34°.28N**±0°.02×**118°.55W**±0°.02, **h17**km±5km, **n82**, σ**1s.20**/109, **Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OAT	Oat Mountain	0.08	320		Pg	00 12 11.7	-1.4
BLCC	Black Canyon	0.11	249		Pg	00 12 11.7	-1.5
IR2C	Iron Canyon	0.16	50		Pg	00 12 12.6	-1.3
DECC	Green Verdugo	0.18	99		Pg	00 12 16.4	+2.3
DECC	Green Verdugo	0.18	99	P	Pg	00 12 13.1	-1.0
	baz=284,SNR=255						
DECC				S	Sg	00 12 16.2	-1.1
	baz=284						
HLLC	North Hollywoo	0.19	124		Pg	00 12 13.4	-0.8
HLLC					Sg	00 12 16.9	-0.5
DJJ	Donna J Jenkin	0.19	155		Pg	00 12 16.6	+2.4
AGOC	Agoura	0.22	233		Pg	00 12 14.0	-0.7
GR2C	Griffith Obs.	0.27	128		Pg	00 12 14.4	-1.0
GR2C					Sg	00 12 18.4	-1.0
LCGC	La Cienega, Cu	0.32	153		Pg	00 12 16.3	0.0
PASC	Pasadena Art C	0.32	110		Pg	00 12 15.4	-1.0
PASC					Sg	00 12 20.1	-0.9
BHPC	Baldwin Hills	0.33	152		Pg	00 12 16.4	-0.1
OSI	Osito Audit: C	0.36	337	Pg	Pg	00 12 16.6	-0.6
OSI	Osito Audit: C	0.36	337	P	Pg	00 12 16.5	-0.6
	baz=154,SNR=11						
OSI				S	Sg	00 12 21.9	-0.3
	baz=154						
GVRC	Garvey Reservo	0.43	123		Pg	00 12 17.7	-0.5
CHFC	Chilao Flat St	0.44	83		Sg	00 12 23.5	-1.1
ALPC	Antelope	0.45	27		Pg	00 12 17.8	-1.0
BLG	Laguna Peak, P	0.46	248		Pg	00 12 18.0	-0.9
BLG					Sg	00 12 24.9	-0.2
BLG	Laguna Peak, P	0.46	248	P	Pg	00 12 17.9	-0.9
	baz=66,SNR=8.8						
BLG				Sb	Sg	00 12 24.8	-0.2
	baz=66						
FMP	Fort Macarthur	0.61	159	P	Pg	00 12 20.6	-0.9
	baz=341						
FMP				Sb	Sg	00 12 29.0	-0.6
	baz=341						
THC	Tehachapi Micr	0.63	352		Pg	00 12 21.1	-0.9
PSRC	Puddingstone R	0.65	107		Pg	00 12 21.3	-0.9
SSK	Sunset Peak	0.71	96		Pg	00 12 22.4	-1.2
MPI	Mount Pinos, F	0.72	317		Pg	00 12 23.2	-0.5
SBB	Saddle Back Bu	0.72	56		Pg	00 12 22.0	-1.7
BFSC	Mount Baldy Ra	0.74	93		Pg	00 12 22.6	-1.4
BFSC	Mount Baldy Ra	0.74	93	P	Pg	00 12 22.4	-1.6
	baz=275,SNR=58						
BFSC				S	Sg	00 12 32.6	-1.3
	baz=275						
EDW2	Edwards Air Fo	0.75	37		Pg	00 12 22.7	-1.6
EDW2	Edwards Air Fo	0.75	37	P	Pg	00 12 22.7	-1.6
	baz=218,SNR=20						
EDW2				S	Sg	00 12 32.6	-1.7
	baz=218						
ARVC	Arvin	0.87	345		Pg	00 12 25.5	-1.0
ARVC	Arvin	0.87	345	P	Pg	00 12 25.5	-1.0
	baz=164,SNR=20						
ARVC				S	Sg	00 12 37.7	-0.4
	baz=164						
SS2	San Sevaine	0.87	95		Pg	00 12 25.1	-1.4
SCZ2	Santa Cruz Isl	0.94	253	P	Pg	00 12 26.0	-1.8
	baz=71						
SCZ2				S	Sg	00 12 38.8	-1.5
	baz=71						
TEJ	El Tejon	0.95	353		Pg	00 12 26.7	-1.4
SBC	Santa Barbara	0.97	280	S	Sg	00 12 40.5	-0.7
	baz=98						
CSP	Cedar Springs	0.99	89		Pg	00 12 27.2	-1.5
RVR	Riverside	1.02	106		Pg	00 12 27.7	-1.5
SME	Santa Rosa Min	1.09	114		Pg	00 12 28.8	-1.9
PKM	Mcpherson Peak	1.20	300	P	Pb	00 12 30.5	-1.5
	baz=119						
PKM				S	Sb	00 12 47.3	0.0
	baz=119						
SCI2	San Clemente I	1.30	180	P	Pn	00 12 31.1	-1.8
	baz=0.3						
SCI2				Sg	Sg	00 12 51.4	-0.1
	baz=0.3						
SNCC	San Nicolas Is	1.31	218	Pn	Pn	00 12 34.1	+1.0
SNCC	San Nicolas Is	1.31	218	S	Sb	00 12 49.0	-1.2
	baz=38						
MURC	Murrieta	1.32	121	S	Sb	00 12 50.1	-0.3
	baz=302						
BBRC	Big Bear Solar	1.35	90	Pb	Pn	00 12 33.2	-0.6
	baz=272,SNR=9.4						
BBRC				S	Sb	00 12 51.3	-0.3
	baz=272						
ISA	Isabella, Lake	1.38	3	Pn	Pn	00 12 34.5	+0.5
ISA	Isabella, Lake	1.38	3	S	Sb	00 12 52.2	0.0
	baz=182						
LRMC	Laurel Mtn Rad	1.39	31	Sb	Sn	00 12 53.7	+1.4
	baz=211						
RRX	Edison Barstow	1.41	65	S	Sb	00 12 52.9	-0.2
	baz=246						
SMMC	Simmler	1.57	311	P	Pn	00 12 36.6	-0.1
	baz=130						
SMMC				Sb	Sn	00 12 58.4	+1.8
	baz=130						
VES	Vestal, Richgr	1.61	344	P	Pn	00 12 37.0	-0.3
	baz=164						
VES				Sb	Sb	00 12 59.9	+1.0
	baz=164						
GSC	Goldstone, Bar	1.76	54	P	Pn	00 12 38.4	-0.9
	baz=235,SNR=16						
GSC				Sb	Sb	00 13 03.9	+0.7
	baz=235						
109C	Camp Elliot, M	1.84	139		Pn	00 12 40.5	+0.2
109C	Camp Elliot, M	1.84	139	P	Pn	00 12 39.6	-0.7
	baz=320						
109C				S	Sn	00 13 02.0	-1.2
	baz=320						
PFO	Pinyon Flats O	1.86	110		Pn	00 12 41.2	+0.5
PFO	Pinyon Flats O	1.86	110	P	Pn	00 12 39.9	-0.8
	baz=292						
PFO				Sb	Sb	00 13 06.2	-0.1
	baz=292						
XPFO	Pion Flat	1.87	110		Pn	00 12 42.0	+1.2
TPFO	Pinon Flats	1.87	111	S	Sn	00 13 03.9	-0.2
	baz=292						
HEC	Hector,Ludlow	1.91	73	P	Pn	00 12 40.5	-0.8
	baz=254,SNR=6.4						
HEC				S	Sn	00 13 05.8	+0.8
	baz=254						
MPMC	Manual Prospec	1.97	26	P	Pn	00 12 39.9	-2.5
	baz=206,SNR=23						
MPMC				Sb	Sb	00 13 10.8	+1.3
	baz=206						
PAGB	Antelope Grade	2.01	317	Pn	Pn	00 12 44.2	+1.6
BELC	Belle Mtn. Jos	2.14	97	P	Pn	00 12 43.7	-0.8
	baz=279						
BELC				Sb	Sb	00 13 14.6	+0.5
	baz=279						
DAC	Darwin (Calif)	2.14	21		Pg	00 12 51.7	+1.1
BAR	Barrett	2.24	135	Pn	Pn	00 12 45.8	0.0
MONP2	Monument Peak	2.25	127	S	Sn	00 13 13.6	-0.2
	baz=309						
GMRC	Granite Mounta	2.44	77	P	Pn	00 12 47.8	-0.9
	baz=259						
TUQ	Turquoise Moun	2.45	61	P	Pn	00 12 48.8	0.0
	baz=243						
TUQ				Sb	Sb	00 13 25.1	+2.1
	baz=243						
SHOC	Shoshone, Teco	2.47	49	Sb	Sb	00 13 25.4	+1.8
	baz=230						
IKP	In-Ko-Pah, Jac	2.61	128	Sb	Sb	00 13 29.1	+1.4
	baz=310						
BC3	Big Chuckawall	2.65	103	Sb	Sb	00 13 30.7	+1.8
	baz=285						
PMPB	Monarch Peak	2.67	317	Pn	Pn	00 12 52.4	+0.7
PMPB				Pg	Pb	00 12 58.3	+1.5
IRM	Iron Mountain	2.83	92	P	Pn	00 12 53.5	-0.4
	baz=274,SNR=8.0						
IRM				Sb	Sb	00 13 37.0	+3.1
	baz=274						
TPNV	Topopah Spring	3.25	35	Pn	Pn	00 13 00.6	+0.7
TPNV	Topopah Spring	3.25	35	P	Pn	00 13 00.1	+0.2
	baz=216,SNR=12						
GLA	Glamis	3.34	111	Pn	Pn	00 13 02.6	+1.6
Y12C	Blythe	3.39	98	Pn	Pn	00 13 01.2	-0.4
Y12C					Pb	00 13 10.8	+1.8
SAO	San Andreas Ge	3.42	317	Pn	Pn	00 13 02.3	+0.2
SHPR	Sheep Range	3.55	50	Pn	Pn	00 13 04.8	+0.8
W13A	Hualapai Mount	3.93	77		Pn	00 13 09.2	-0.1
CMB	Columbia Colle	4.03	339	Pn	Pn	00 13 12.3	+1.9
113A	Mohawk Valley,	4.27	109	Pn	Pn	00 13 15.3	+1.5
Y14A	Wickenburg	4.61	93	Pn	Pn	00 13 18.2	-0.4
R11A	Troy Canyon, C	4.71	30		Pg	00 13 37.3	-2.5

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*SJA **03** 00:12:12.4±0.9, 20°.71S×67°.90W, h171km±10km, ML3.1, MW3.1*

*GUC **03** 00:12:13.1±0.7, 20°.62S×68°.27W, h183km±5km, ML3.3*

ISC 03 00:12:12.3±1.8, **20°.65S**±0°.04×**68°.04W**±0°.06, **h178**km±15km, **n27**, σ**0s.93**/48, **7C-4D**, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	IPOC Station P	1.16	296	⇓iP	Pn	00 12 42.1	+0.5
PB08				iS	Sn	00 13 04.2	+0.2
PB01	IPOC Station P	1.41	254	eP	Pn	00 12 43.6	+0.3
PB01				eS	Sn	00 13 07.0	-0.4
PB01				IAML		00 13 08.2	
	comp=E,286nm,0.2s						
GO01	Chusmiza	1.46	312	⇓iP	Pn	00 12 44.5	+0.3
GO01				eS	Sn	00 13 09.2	+0.3
GO01				IAML		00 13 14.5	
	comp=N,189nm,0.1s						
PB09	IPOC Station P	1.60	224	⇑iP	Pn	00 12 46.4	+1.2
PB09				iS	Sn	00 13 11.6	+0.8
PB09	IPOC Station P	1.60	224	iP	Pn	00 12 46.3	+1.0
PB09				eS	Sn	00 13 10.4	-0.5
PB09				IAML		00 13 13.9	
	comp=Z,69nm,0.2s						
PB11	IPOC Station P	1.76	300	⇓iP	Pn	00 12 47.0	+0.1
PB11				iS	Sn	00 13 12.8	-0.7
PB11				IAML		00 13 14.4	
	comp=N,243nm,0.3s						
PB02	IPOC Station P	1.86	249	eP	Pn	00 12 48.4	+0.6
PB02				iS	Sn	00 13 14.7	-0.7
PB02				IAML		00 13 17.0	
	comp=N,305nm,0.4s						
PATCX	Punta Patache	1.99	265	⇑iP	Pn	00 12 49.7	+0.5
PATCX				iS	Sn	00 13 16.7	-1.0
PATCX				IAML		00 13 19.0	
	comp=N,244nm,0.3s						
TA01	Diego Aracena	2.01	272	eP	Pn	00 12 49.4	+0.1
TA01				eS	Sn	00 13 16.4	-1.6
TA01				IAML		00 13 17.8	
	comp=E,176nm,0.2s						
PB07	IPOC Station P	2.03	238	eP	Pn	00 12 50.4	+0.6
PB07				iS	Sn	00 13 18.3	-0.5
PB07				IAML		00 13 19.3	
	comp=N,185nm,0.1s						
MNMC	Minye Minye	2.11	316	⇓iP	Pn	00 12 51.3	+0.6
MNMC				iS	Sn	00 13 20.3	-0.1
LVC	Limon Verde	2.12	202	eP	Pn	00 12 51.8	+0.9
LVC				eS	Sn	00 13 21.2	+0.3
LVC	Limon Verde	2.12	202	iP	Pn	00 12 51.8	+0.9
LVC				eS	Sn	00 13 19.5	-1.3
PB03	IPOC Station P	2.12	229	⇑iP	Pn	00 12 51.3	+0.5
PB03				iS	Sn	00 13 19.7	-0.9
PB03				IAML		00 13 20.3	
	comp=E,191nm,0.1s						
PSGC	Pisagua	2.22	298	eP	Pn	00 12 51.5	-0.3
PSGC				eS	Sn	00 13 20.8	-1.7
PB06	IPOC Station P	2.50	215	⇑iP	Pn	00 12 55.8	+0.8
PB06				iS	Sn	00 13 28.1	-0.2
PB06	IPOC Station P	2.50	215	iP	Pn	00 12 55.8	+0.8
PB06				eS	Sn	00 13 27.7	-0.5
PB06				IAML		00 13 31.9	
	comp=Z,57nm,0.1s						
PB04	IPOC Station P	2.59	229	eP	Pn	00 12 56.7	+0.7
PB04				iS	Sn	00 13 29.1	-1.0
PB04				IAML		00 13 31.2	
	comp=N,122nm,0.2s						
PB04	IPOC Station P	2.59	229	iP	Pn	00 12 56.9	+0.8
YJA	Yavi	2.80	123	iP	Pn	00 12 59.5	+0.7
YJA				eS	Sn	00 13 32.1	-2.9
PB15	IPOC Station P	2.88	207	⇑iP	Pn	00 13 00.5	+1.0
PB15				eS	Sn	00 13 37.0	+0.6
PB15	IPOC Station P	2.88	207	iP	Pn	00 13 00.4	+0.9
PB15				IAML		00 13 44.8	
	comp=Z,197nm,0.2s						
PB05	IPOC Station P	2.98	222	⇑iP	Pn	00 13 01.2	+0.6
PB05				iS	Sn	00 13 37.1	-1.4
PB05				IAML		00 13 39.9	
	comp=E,43nm,0.4s						
PB05	IPOC Station P	2.98	222	iP	Pn	00 13 01.3	+0.6
PB05				IAML		00 13 41.6	
	comp=Z,24nm,0.1s						
LPAZ	La Paz	4.34	359	iP	Pn	00 13 19.8	+1.5
PB14	IPOC Station P	4.52	208	iP	Pn	00 13 20.8	+0.5
PB14				IAML		00 14 16.6	
	comp=Z,15nm,0.3s						
GO02	Mina Guanaco	4.72	197	⇑iP	Pn	00 13 22.9	+0.1

IDC 03 00:15:03.5±2.0, **3°.83S**×**128°.14E**, **h0**km, **mb3.7**/2, **mb1 3.9**/3, **mb1mx3.5**/41, **mbtmp3.7**/3, **ML3.9**/1, **Error ellipse: s-maj=146.9km s-min=27.8km az=67.0**, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.11	160	P	Pn	00 19 04.7	+0.3
	0.4nm,0.3s,baz=338,slow=12,SNR=21						
ASAR	Alice Springs	20.49	165	P	P	00 19 43.1	-0.1
	2.8nm,0.4s,baz=347,slow=12,SNR=46						
MKAR	Makanchi Array	64.58	327	P	P	00 25 42.7	0.0
	0.2nm,0.4s,baz=117,slow=8.3,SNR=6.1						

IDC 03 00:15:42.6±49.0, **16°.77S**×**178°.25W**, **h0**km, **mb3.8**/3, **mb1 4.0**/3, **mb1mx3.6**/48, **mbtmp3.8**/3, **Error ellipse: s-maj=908.4km s-min=167.2km az=78.0**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.32	240	P	P	00 23 14.3	+0.6
	0.6nm,0.4s,baz=72,slow=8.6,SNR=3.4						
WRA	Warramunga Arr	45.00	258	P	P	00 23 59.9	-0.4
	0.1nm,0.2s,baz=96,slow=7.8,SNR=6.4						
ASAR	Alice Springs	45.26	253	P	P	00 24 01.9	-0.4
	2.3nm,0.6s,baz=87,slow=8.2,SNR=29						

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*MEX **03** 00:18:51.3±0.5, 13°.97N×93°.22W, h3km±16km, MD3.7*

*IDC **03** 00:18:52.4±2.3, 14°.34N×93°.00W, h0km, mb3.9/7, mb1 4.2/11, mb1mx3.9/42, mbtmp3.9/11, ML3.9/4, Error ellipse: s-maj=44.9km s-min=16.2km az=4.0*

*GCG **03** 00:18:52.7±0.4, 14°.10N×93°.21W, h38km±544km, MD4.2*

*NEIC **03** 00:18:57.9±2.3, 14°.61N±0°.07×92°.95W±0°.06, h21km±3km, mb4.3/33, Error ellipse: s-maj=10.8km s-min=7.3km az=207.0*

ISC 03 00:18:53.1±2.0, **14°.38N**±0°.06×**93°.07W**±0°.05, **h0**km±13km, **n75**, σ**1s.70**/77, **mb4.2**/19, **1C**, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.93	56	eP	Pn	00 19 12.8	-0.7
THIG				iS	Sn	00 19 28.8	+1.2
PCIG		1.32	354	eP	Pn	00 19 18.5	-0.3
PCIG				iS	Sn	00 19 40.0	+2.9
ERG	Entre ros, C	1.45	88	eP	Pg	00 19 20.3	-0.7
STG3	Santiaguito 3,	1.48	77	⇑eP	Pn	00 19 20.6	-0.6
CCIG	Comitan	2.09	25		Pn	00 19 28.5	-1.0
CCIG	Comitan	2.09	25	iP	Pn	00 19 30.4	+0.8

CCIG				i S	Sg	00 20 00.1	-0.2
FUG	Fuego 3	2.16	88	eP	Pn	00 19 29.4	-1.1
FUG				eS	Sb	00 19 57.7	-2.9
TGIG		2.38	359	eP	Pn	00 19 34.4	+0.9
TGIG				i S	Sb	00 20 07.6	+0.7
IXG	Ixpaco	2.55	94	eP	Pn	00 19 34.3	-1.7
APG	El Apazote	2.59	76	Pn	Pn	00 19 36.8	+0.3
	16nm,0.3s,baz=293,slow=7.4,SNR=64						
APG				Lg	Lg	00 20 12.9	
	26nm,0.3s,baz=311,slow=17,SNR=6.6						
NBG	Las Nubes	2.64	85	eP	Pn	00 19 38.1	+0.9
CMIG	Matias Romero	3.21	327	Pn	Pn	00 19 45.5	+0.7
	8.5nm,0.3s,baz=146,slow=12,SNR=66						
CMIG				Sn	Sn	00 20 25.6	+1.8
	15nm,0.3s,baz=104,slow=13,SNR=8.0						
CMIG	Matias Romero	3.21	327	eP	Pn	00 19 44.1	-0.8
CMIG				i S	Sn	00 20 24.6	+0.8
HUIG	Huatulco	3.25	295	i P	Pn	00 19 41.7	-3.6
HUIG				i S	Sn	00 20 19.7	-4.9
SNET	Serv Nac Est T	3.79	100	Pn	Pn	00 19 54.5	+1.7
CSGN	Cosiguina Volc	5.53	104	Pn	Pn	00 20 19.0	+2.2
TGUH	Tegucigalpa,Un	5.63	93	Pn	Pn	00 20 22.2	+4.0
TLIG	Tlapa	6.16	302	Pn	Pn	00 20 29.4	+3.9
ESTN	Estel	6.63	100	Pn	Pn	00 20 35.9	+4.0
TEIG	Tepich	7.39	38	Pn	Pn	00 20 42.8	+0.5
	16nm,0.3s,baz=229,slow=23,SNR=44						
TEIG				Sn	Sn	00 22 06.3	-0.7
	baz=308,slow=19,SNR=1.8						
TEIG	Tepich	7.39	38		Pn	00 20 43.1	+0.8
ESPN	Las Esperanzas	8.81	103	Pn	Pn	00 21 04.2	+2.5
JTS	Las Juntas de	8.91	116	Pn	Pn	00 21 06.4	+3.2
	0.7nm,0.3s,baz=283,slow=14,SNR=2.6						
CBCY	The Bluff, Cay	13.79	65	Pn	Pn	00 22 08.8	-1.2
061Z	Ochoppi	16.14	43	Pn	Pn	00 22 40.9	-0.5
553A	Crawfordville	17.63	25		Pn	00 22 59.7	-0.5
553A				IAmb	IAmb	00 23 11.2	
	comp=Z,48nm,1.4s						
TXAR	Lajitas Array	17.82	328	P	Pn	00 23 03.8	+1.1
	comp=Z,0.1nm,0.3s,baz=148,slow=12,SNR=11						
TX31	Lajitas Ar. Si	17.82	328		P	00 23 04.3	+0.8
SMLC	San Martn de	19.41	105	eP	Pn	00 23 23.9	+1.8
GUY2C	Guyana, Caldas	19.66	116	eP	P	00 23 23.9	-0.4
NORC	Norcasia	19.93	114	eP	P	00 23 25.6	-1.2
MIAR	Mount Ida	20.08	359		P	00 23 29.2	+1.0
MIAR				IAmb	IAmb	00 23 33.8	
	comp=Z,8.9nm,0.9s						
ORTC	Ortega, Tolima	20.42	119	eP	P	00 23 30.9	-1.2
GOGA	Godfrey	20.85	23	P	P	00 23 35.8	-0.8
PAMC	Pamplona, Colo	21.18	107	eP	P	00 23 41.6	+0.9
RUSC	La Rusia	21.39	111	P	P	00 23 44.4	+1.3
MSTX	Muleshoe	21.39	337	P	P	00 23 42.8	+0.2
MSTX				IAmb	IAmb	00 23 49.3	
	comp=Z,7.8nm,0.9s						
FLOC	Florencia	21.40	125	P	P	00 23 44.6	+1.9
HHAR	Hobbs	21.82	358	P	P	00 23 46.5	-0.5
AMTX	Amarillo	21.84	341	P	P	00 23 49.7	+2.4
AMTX				IAmb	IAmb	00 23 52.2	
	comp=Z,14nm,0.6s						
CSU	Charleston Sou	21.97	30	P	P	00 23 45.9	-2.8
121A	Cookes Peak, D	22.51	326	P	P	00 23 55.0	+0.3
121A				IAmb	IAmb	00 23 58.8	
	comp=Z,7.7nm,0.9s						
319A	Douglas	22.52	321	P	P	00 23 54.4	-0.2
SDV	Santo Domingo	22.63	102	eP	P	00 23 53.1	-3.0
S39A	Bolivar	23.21	359	P	P	00 24 00.6	-1.2
S39A				IAmb	IAmb	00 24 02.2	
	comp=Z,6.5nm,0.9s						
ANMO	Albuquerque	23.77	332	P	P	00 24 08.1	+0.5
	comp=Z,1.2nm,0.7s,baz=153,slow=12,SNR=6.0						
ANMO	Albuquerque	23.77	332	P	P	00 24 07.7	+0.1
TUC	Tucson	24.08	321	P	P	00 24 13.8	+3.4
T25A	Trinidad	24.82	338	IAmb	IAmb	00 24 24.2	
	comp=Z,6.8nm,0.8s						
R49A	Shelbyville	24.82	15	P	P	00 24 19.5	+2.5
S22A	4UR Ranch, Cre	26.29	335	P	P	00 24 34.7	+4.1
SMCO	Snowmass	27.57	336	IAmb	IAmb	00 24 53.1	
	comp=Z,6.4nm,1.4s						
PDAR	Pinedale Array	31.65	337	P	P	00 25 17.7	-0.6
	comp=Z,0.3nm,0.7s,baz=173,slow=8.2,SNR=3.4						
REDW	Red Top Meadow	32.66	336	IAmb	IAmb	00 25 32.0	
	comp=Z,8.8nm,1.0s						
SNOW	Snow King Moun	32.71	336	P	P	00 25 28.6	+1.0
NVAR	Mina Array Bea	32.73	322	P	P	00 25 29.1	+1.2
	comp=Z,1.9nm,0.7s,baz=136,slow=8.5,SNR=19						
FXWY	Fox Creek	32.96	336	P	P	00 25 29.9	+0.1
FXWY				IAmb	IAmb	00 25 33.9	
	comp=Z,3.3nm,1.0s						
IMW	Indian Meadow	33.15	336	P	P	00 25 30.8	-0.7
IMW				IAmb	IAmb	00 25 36.2	
	comp=Z,2.8nm,0.8s						
YERR	Yerington	33.65	322	P	P	00 25 32.7	-3.1
YERR				IAmb	IAmb	00 25 37.4	
	comp=Z,3.1nm,0.7s						
YNE	Yellowstone No	33.74	338	P	P	00 25 36.0	-0.6
MDND	Maddock	33.80	352	P	P	00 25 35.3	-1.5
LAO	LASA Array	34.04	344	P	P	00 25 36.0	-3.0
GCMT	Greycliff	34.30	339	P	P	00 25 40.8	-0.5
MCMT	McKenzie Canyo	34.68	335	P	P	00 25 44.7	-0.1
BEKR	Beckworth	34.88	322	P	P	00 25 46.7	+0.3
LRM	Limekiln Ridge	35.34	336	P	P	00 25 51.9	+1.4
ULM	Lac du Bonnet	35.84	357	P	P	00 25 52.5	-1.8
	comp=Z,0.5nm,0.3s,baz=186,slow=9.9,SNR=3.7						
F10A	Beach Ranch, E	37.48	332	IAmb	IAmb	00 26 13.6	
	comp=Z,2.5nm,0.8s						
YKA	Yellowknife Ar	50.42	347	P	P	00 27 51.5	-0.5
	comp=Z,2.7nm,0.7s,baz=150,slow=7.5,SNR=40						
YKA				PcP	PcP	00 29 09.0	-1.5
	comp=Z,0.3nm,0.7s,baz=150,slow=3.4,SNR=3.7						
INK	Inuvik	59.78	344	P	P	00 28 59.0	-0.6
	comp=Z,1.9nm,0.7s,baz=102,slow=6.3,SNR=7.8						
INK	Inuvik	59.78	344	IAmb	IAmb	00 29 00.8	
	comp=Z,5.6nm,1.4s						
ILAR	Eielson Array	62.08	337	P	P	00 29 14.7	-0.7
	comp=Z,0.8nm,0.8s,baz=137,slow=4.5,SNR=7.7						
RND	Reindeer	62.25	335	P	P	00 29 17.4	+0.8
RND				IAmb	IAmb	00 29 17.7	
	comp=Z,4.1nm,0.9s						
LZH	Lanzhou	127.32	343	ePKP	PKiKP	00 38 02.5	+1.5
LZH				pPKP		00 38 13.2	
LZH				sPKP		00 38 17.0	
CMAR	Chiang Mai Arr	145.29	340	PKPbc	PKPbc	00 38 32.5	-1.0
	comp=Z,1.4nm,0.6s,baz=320,slow=2.7,SNR=3.3						

OSPL ***03*** *00:25:05.4±1.7, 19°00N×68°77W, h0^{km}±15^{km}, ML2.4*
NEIC ***03*** *00:25:05.9±1.2, 19°4N±0°2×68°66W±0°06, h89^{km}±41^{km},*
Error ellipse: s-maj=28.5km s-min=7.4km az=183.0
RSPR ***03*** *00:25:06.3, 19°38N×68°64W, h90^{km}±7^{km}, MD3.5*
ISC 03 00:25:02.9±1.6**, 19°4N**±0°1×**68°67W**±0°04**, h10^{km}, n30,**
σ**1^{s}35**/36**, 4C-2D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.95	163	i P	Pg	00 25 15.6	-5.7
PCDR				eS	Sg	00 25 25.4	-8.4
PCDR				IAML		00 25 27.2	
	comp=Z,180nm,0.2s						
PCDR	Punta Cana, DR	0.95	163		Pn	00 25 25.4	+2.9
SDD	Santo Domingo	1.52	231	i P	Pn	00 25 26.9	-3.4
SDD				eS	Sn	00 25 42.5	-7.6
AGPR	Aguadilla, PR	1.76	123	⇓eP	Pn	00 25 34.4	+0.9
AGPR	Aguadilla, PR	1.76	123	eS	Sn	00 25 56.3	+0.3
AGPR	Aguadilla, PR	1.76	123	i P	Pn	00 25 32.9	-0.6
AGPR				IAML		00 26 02.9	
	comp=Z,39nm,0.2s						
AGPR	Aguadilla, PR	1.76	123		Pn	00 25 34.4	+0.9
AGPR					Sn	00 25 56.3	+0.3
BANI	BANI	1.90	237		Sn	00 25 54.7	-5.0
SC01	Santiago de lo	1.94	270	i P	Pn	00 25 37.4	+1.4
SC01				IAML		00 26 17.1	
	comp=Z,43nm,0.8s						
CRPR	Cabo Rojo, PR	2.05	134	⇑eP	Pn	00 25 37.6	+0.1
CRPR	Cabo Rojo, PR	2.05	134	eS	Sn	00 26 02.5	-0.6
CRPR	Cabo Rojo, PR	2.05	134		Pn	00 25 37.6	+0.1
CRPR					Sn	00 26 02.5	-0.6
AOPR	Arecibo Observ	2.11	120	⇓eP	Pn	00 25 38.6	+0.2
AOPR	Arecibo Observ	2.11	120	eS	Sn	00 26 04.3	-0.4
AOPR	Arecibo Observ	2.11	120		Pn	00 25 38.6	+0.2
AOPR					Sn	00 26 04.3	-0.4
EMPR	Esperanza - Ma	2.24	115	eS	Sn	00 26 07.0	-0.8
EMPR	Esperanza - Ma	2.24	115		Sn	00 26 07.0	-0.8
OBIP	Obispado Ponce	2.40	125	eS	Sn	00 26 10.7	-1.0
OBIP	Obispado Ponce	2.40	125		Sn	00 26 10.7	-1.0
SDDR	Presa de Saban	2.51	260	i P	Pn	00 25 44.3	+0.4
SDDR				eS	Sn	00 26 12.9	-1.8
SDDR				IAML		00 26 24.4	
	comp=Z,22nm,0.6s						
SDDR	Presa de Saban	2.51	260		Pn	00 25 44.4	+0.4
SDDR					Sn	00 26 17.8	+3.1
PDPR	Patillas Dam,	2.88	119	⇑eP	Pn	00 25 49.6	+0.7
PDPR	Patillas Dam,	2.88	119	eS	Sn	00 26 23.2	-0.3
PDPR	Patillas Dam,	2.88	119		Pn	00 25 49.6	+0.7
PDPR					Sn	00 26 23.2	-0.3
HUMP	Col San Antoni	2.96	115	⇑eP	Pn	00 25 50.6	+0.5
HUMP	Col San Antoni	2.96	115	eS	Sn	00 26 24.8	-0.9
HUMP	Col San Antoni	2.96	115		Pn	00 25 50.6	+0.5
HUMP					Sn	00 26 24.8	-0.9
MTP	Monte Pirata	3.24	114	⇑eP	Pn	00 25 54.1	+0.2
MTP	Monte Pirata	3.24	114	eS	Sn	00 26 31.6	-1.0
MTP	Monte Pirata	3.24	114		Pn	00 25 54.1	+0.2
MTP					Sn	00 26 31.6	-1.0

IDC ***03*** *00:25:12.2±3.0, 10°52N×124°16E, h0^{km}, mb3.4/3,*
mb1 3.7/3, mb1mx3.3/45, mbtmp3.4/3, Error ellipse:
s-maj=261.3km s-min=28.4km az=64.0
MAN ***03*** *00:25:13.6, 9°95N×121°84E, h23^{km}, mb4.3, ML3.2, MS2.9*
ISC 03 00:25:18.6±1.2**, 9°91N**±0°05×**122°14E**±0°09**, h27^{km}, n11,**
σ**2^{s}38**/18**, mb3.4**/3**, 3D, Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	Jordan	0.84	31	eP	Pb	00 25 32.1	-2.5
GUIM				eS	Sn	00 25 46.7	+0.5
TBP	Tagbilaran	1.71	97	⇓eP	Pn	00 25 45.3	-1.3
TBP				eS	Sn	00 26 08.2	+0.6
RCP	Roxas	1.75	20	⇓eP	Pb	00 25 51.5	+1.5
LLP	Lapu-Lapu	1.84	77	⇓eP	Pn	00 25 47.8	-0.7
LLP				eS	Sn	00 26 09.6	-1.3
PAGZ	Pagadian	2.38	149	eP	Pn	00 25 54.3	-1.6
PAGZ				eS	Sn	00 26 26.9	+2.7
OCLP	Ormoc	2.68	65	eP	Pn	00 25 59.9	-0.1
OCLP				eS	Sn	00 26 35.1	+3.5
MSLP	Maasin	2.69	85	eP	Pn	00 25 59.8	-0.3
MSLP				eS	Sn	00 26 33.5	+1.8
BUKP	Musuan	3.52	125	eP	Pn	00 26 13.0	+1.4
BUKP				eS	Sn	00 26 56.7	+4.4
WRA	Warramunga Arr	32.00	158	P	P	00 31 39.2	-3.6
	0.2nm,0.4s,baz=341,slow=9.2,SNR=8.5						
ASAR	Alice Springs	35.29	161	P	P	00 32 09.2	-2.2
	0.8nm,0.6s,baz=344,slow=7.3,SNR=12						
MKAR	Makanchi Array	49.92	325	P	P	00 34 12.7	+2.7
	0.2nm,0.8s,baz=115,slow=5.8,SNR=3.5						

SNET ***03*** *00:32:00.3±0.8, 14°04N×93°13W, h10^{km}±9^{km}, ML4.5*
UCR ***03*** *00:32:01.8±1.3, 14°23N×93°19W, h15^{km}, ML4.1,*
mb4.9(NEIC)
MEX ***03*** *00:32:03.2±0.7, 14°11N×93°22W, h8^{km}±19^{km}, MD5.1*
GCMT ***03*** *00:32:06.2±0.6, 14°15N±0°04×93°45W±0°04, h30^{km},*
MW5.2/76, Moment Tensor Solution. s22,c22; s76,c97;
Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}7.43±.49;
$M_{\theta\theta}$-4.22±.29; $M_{\phi\phi}$-3.21±.31; $M_{r\theta}$2.13±.30; $M_{\theta\phi}$0.75±.17;
$M_{\phi r}$-2.71±.34; Best double couple: $M_0$6.90500×10^{16}
NP1:ϕ_s299.00000°, δ31.00000°, λ81.00000°. NP2:
ϕ_s130.00000°, δ60.00000°, λ96.00000°. Principal axes: T
8.3690, Plg75.0000°, Azm55.0000°; N -2.9280,
Plg5.0000°, Azm307.0000°; P -5.4410, Plg14.0000°,
Azm216.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Triangular
moment-rate function
IDC ***03*** *00:32:07.8±2.6, 14°31N×92°70W, h52^{km}±22^{km}, mb4.3/25,*
mb1 4.5/28, mb1mx4.4/38, mbtmp4.6/28, ML4.4/3, MS4.2/24,
Ms1 4.2/24, ms1mx4.1/36 Error ellipse: s-maj=18.9km
s-min=10.3km az=50.0
NEIC ***03*** *00:32:09.1±2.1, 14°35N±0°04×92°93W±0°05, h61^{km}±3^{km},*
Error ellipse: s-maj=7.0km s-min=5.9km az=67.0
GCG ***03*** *00:32:14.0±0.3, 14°09N×92°25W, h75^{km}, MD4.7*
ISC 03 00:32:04.0±1.4**, 14°22N**±0°04×**93°05W**±0°04**, h26**^{km}±9^{km}**,**
n909, σ**1^{s}47**/810**, mb4.8**/206**, MS4.3**/24**, 2C-2D, Near coast**
of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.02	48		Pn	00 32 22.7	0.0
THIG					Sb	00 32 37.8	+1.6
THIG		1.02	48	eP	Pn	00 32 22.7	0.0
THIG				eS	Sb	00 32 37.8	+1.6
ERG	Entre ros, C	1.45	81	⇑eP	Pb	00 32 29.8	-0.5
PCIG		1.49	354		Pn	00 32 28.1	-1.1
PCIG					Sn	00 32 47.5	-0.2
PCIG		1.49	354	eP	Pn	00 32 28.1	-1.1
PCIG				i S	Sn	00 32 47.5	-0.2
STG3	Santiaguito 3,	1.51	71	⇑iP	Pn	00 32 30.2	+0.6
FUG	Fuego 3	2.15	84	eP	Pn	00 32 38.7	+0.3
CCIG	Comitan	2.23	23		Pb	00 32 42.0	-1.8
CCIG	Comitan	2.23	23		Pn	00 32 40.9	+1.3
CCIG					Sb	00 33 09.1	-2.1
CCIG	Comitan	2.23	23	eP	Pn	00 32 40.7	+1.1
CCIG				i S	Sb	00 33 09.1	-2.1
PCG	Pacaya	2.37	85	eP	Pn	00 32 41.7	+0.2
IXG	Ixpaco	2.53	91	eP	Pn	00 32 43.3	-0.2
TGIG		2.55	358		Pn	00 32 45.2	+1.4
TGIG					Sn	00 33 15.4	+1.3
TGIG		2.55	358	eP	Pn	00 32 44.4	+0.6
TGIG				i S	Sn	00 33 15.4	+1.3
APG	El Apazote	2.62	72	P	Pn	00 32 46.1	+1.2
	104nm,0.3s,baz=285,slow=6.9,SNR=353						
NBG	Las Nubes	2.64	82	eP	Pn	00 32 47.6	+2.3
RTR	El Retiro	3.31	95	eP	Pn	00 32 55.0	+0.5
RTR	El Retiro	3.31	95	eP	Pn	00 32 55.0	+0.5
HUIG	Huatulco	3.34	298		Pn	00 32 51.7	-2.9
HUIG					Sn	00 33 28.8	-4.6
HUIG	Huatulco	3.34	298	i P	Pn	00 32 51.7	-2.9
HUIG				i S	Sn	00 33 28.8	-4.6
CEVE	Cerro Verde	3.34	96	eP	Pn	00 32 55.4	+0.5
CEVE	Cerro Verde	3.34	96	eP	Pn	00 32 55.4	+0.5
SBLS	San Blas	3.34	96	eP	Pn	00 32 55.2	+0.4
SBLS	San Blas	3.34	96	eP	Pn	00 32 55.2	+0.4
CMIG	Matias Romero	3.36	328	P	Pn	00 32 55.4	+0.5
	25nm,0.3s,baz=135,slow=9.5,SNR=356						
CMIG				S	Sn	00 33 31.0	-3.0
	90nm,0.3s,baz=113,slow=9.7,SNR=7.4						
CMIG				LR	LR	00 33 50.9	
	comp=Z,660nm,21.4s,baz=249,slow=30						
CMIG	Matias Romero	3.36	328		Pn	00 32 53.9	-1.1
CMIG					Sn	00 33 32.7	-1.3
CMIG	Matias Romero	3.36	328	eP	Pn	00 32 53.9	-1.1
CMIG				i S	Sn	00 33 32.7	-1.3
MRL	Marmol	3.37	75	eP	Pn	00 32 56.9	+1.8
MTO3	Montecristo	3.58	87	eP	Pn	00 32 59.1	+1.1
MTO3	Montecristo	3.58	87	eP	Pn	00 32 59.1	+1.1
BOQS	Boqueron	3.69	97	eP	Pn	00 32 59.9	+0.3
SNET	Serv Nac Est T	3.74	98	eP	Pn	00 33 00.7	+0.5
SNET				IAML		00 34 10.7	
	comp=Z,887nm,0.4s						
SNET	Serv Nac Est T	3.74	98		Pn	00 33 00.4	+0.2
SNET	Serv Nac Est T	3.74	98	eP	Pn	00 33 00.7	+0.5
SNET				IAML		00 34 10.7	
	comp=Z,887nm,0.4s						
LFRS	El Faro	3.91	98	eP	Pn	00 33 03.5	+0.9
PAVA	Las Pavas	4.02	97	eP	Pn	00 33 05.3	+1.3
PAVA				IAML		00 34 15.1	
	comp=Z,580nm,0.5s						
PAVA	Las Pavas	4.02	97	eP	Pn	00 33 05.3	+1.3
PAVA				IAML		00 34 15.1	
	comp=Z,580nm,0.5s						
CNCH	Conchagua	5.15	100	eP	Pn	00 33 20.4	+0.7
CNCH	Conchagua	5.15	100	eP	Pn	00 33 20.4	+0.7
CSGN	Cosiguina Volc	5.47	102		Pn	00 33 25.5	+1.5
TGUH	Tegucigalpa,Un	5.60	91	eP	Pn	00 33 27.3	+1.5
TGUH	Tegucigalpa,Un	5.60	91	Pn	Pn	00 33 28.2	+2.3
TLIG	Tlapa	6.27	303		Pn	00 33 36.9	+1.9
ESTN	Estel	6.58	99	Pn	Pn	00 33 42.1	+2.8
TEIG	Tepich	7.52	37	P	Pn	00 33 51.7	-0.3
	comp=Z,56nm,0.3s,baz=296,slow=1.0,SNR=115						
TEIG				S	Sn	00 35 12.4	-4.0
	comp=Z,15nm,0.3s,baz=139,slow=20,SNR=2.8						
TEIG				LR	LR	00 37 11.5	
	comp=Z,4µm,21.0s,baz=318,slow=42						
TEIG	Tepich	7.52	37	eP	Pn	00 33 52.0	0.0
TEIG	Tepich	7.52	37		Pn	00 33 52.0	0.0
UNM	Universidad Na	7.77	312	Pn	Pn	00 33 59.4	+3.7
ACON	Acoyapa	7.99	105		Pn	00 34 01.1	+2.6
ACON	Acoyapa	7.99	105	eP	Pn	00 34 06.9	+8.4
PLVR	Palo Verde	8.44	116	eP	Pn	00 34 06.3	+1.4
ESPN	Las Esperanzas	8.75	102		Pn	00 34 10.9	+1.9
JTS	Las Juntas de	8.82	115	P	Pn	00 34 09.0	-0.9
	comp=Z,0.5nm,0.3s,baz=324,slow=17,SNR=3.7						
JTS	Las Juntas de	8.82	115	eP	Pn	00 34 22.2	+12
JTS	Las Juntas de	8.82	115		Pn	00 34 12.1	+2.1
JTS	Las Juntas de	8.82	115	eP	Pn	00 34 16.2	+6.3
MOIG	Morelia	9.50	306		Pn	00 34 22.8	+3.4
HDC	Heredia	9.69	115	⇓eP	Pn	00 34 29.0	+7.0
	baz=342,slow=3.6						
HDC	Heredia	9.69	115	Pn	Pn	00 34 24.5	+2.5
LCR2	La Lucha 2	9.90	116	eP	Pn	00 34 27.6	+2.7
ICCO	Coco Island	10.44	145	eP	Pn	00 34 35.1	+3.0
CNI2	El Empalme, Bo	11.39	114	eP	Pn	00 34 43.0	-2.2
BRU2	Volcan	11.49	117	eP	Pn	00 34 48.8	+2.1
BRU2	Volcan	11.49	117	eP	Pn	00 34 48.7	+2.1
BCO2	Palmira	11.66	117	eP	Pn	00 34 51.0	+1.9
DVD	David	11.87	118	eP	Pn	00 34 52.6	+0.8
CHIR3	Chiriqui UPA,	11.99	118	eP	Pn	00 34 57.0	+3.6
ZAIG	Zacatecas	12.40	315		Pn	00 35 02.8	+3.5
FSCY	Frank Sound, G	12.44	64		Pn	00 34 58.9	-0.6
CBCY	The Bluff, Cay	13.84	65	Pn	Pn	00 35 18.9	+0.2
BCIP	Isla Barro Col	13.87	110	Pn	Pn	00 35 17.6	-1.5
AZU	Azuero	14.06	116	eP	Pn	00 35 19.1	-2.6
PAYG	Puerto Ayora	15.04	169	Pn	Pn	00 35 36.1	+1.0
833A	Chaparral WMA,	15.23	338		Pn	00 35 39.4	+2.0
833A				IAmb	IAmb	00 35 45.8	
	comp=Z,58nm,0.8s						
833A	Chaparral WMA,	15.23	338	P	Pn	00 35 38.7	+1.3
	baz=156,SNR=16						
MTDJ	Mount Denham	15.42	73		Pn	00 35 39.5	-0.6
MTDJ				IAmb	IAmb	00 35 53.8	
	comp=Z,101nm,0.8s						
HKT	Hockley	15.87	351		Pn	00 35 46.1	+0.4
545A	Edgard	15.93	8	Pn	Pn	00 35 46.8	+0.3
441A	DeRidder	16.46	360		Pn	00 35 53.5	+0.3
441A				IAmb	IAmb	00 36 00.1	
	comp=Z,114nm,0.8s						
435B	Jarrell	17.01	347	IAmb	IAmb	00 36 17.8	
	comp=Z,71nm,0.9s						
435B	Jarrell	17.01	347	P	Pn	00 36 00.5	+0.3
	baz=164,SNR=6.1						
342A	Flagon Creek P	17.09	2	P	Pn	00 36 01.6	+0.4
344A	Westbrook Farm	17.29	7		P	00 36 04.6	-0.3
344A				IAmb	IAmb	00 36 08.7	
	comp=Z,90nm,1.0s						
HPIG		17.30	319	P	P	00 36 06.1	+0.9
JCT	Junction City	17.34	340	P	P	00 36 05.2	-0.4
	baz=157,SNR=5.8						
346A	Big Creek Wild	17.41	10	P	P	00 36 06.2	0.0
346A				IAmb	IAmb	00 36 22.1	
	comp=Z,91nm,1.0s						
060A	Indiantown	17.41	41		Pn	00 36 05.0	-0.1
NATX	Nacogdoches	17.53	355	Pn	P	00 36 08.2	+0.6
NATX				IAmb	IAmb	00 36 11.9	
	comp=Z,112nm,1.4s						
DWPF	Disney Wildern	17.54	36	P	P	00 36 07.3	-0.5
DWPF				IAmb	IAmb	00 36 18.0	
	comp=Z,79nm,0.8s						
DWPF	Disney Wildern	17.54	36	P	Pn	00 36 05.5	-1.4
	baz=220						
451A	Vernon	17.65	21		P	00 36 09.5	+0.5
451A				IAmb	IAmb	00 36 15.6	
	comp=Z,109nm,1.0s						
H06E1	SOCORRO T-PHAS	17.73	287	T	T	00 54 16.5	
	SNR=15						
BRAL	Brewton	17.75	17		P	00 36 11.6	+1.6
BRAL	Brewton	17.75	17	P	P	00 36 10.5	+0.5
	baz=199,SNR=15						
553A	Crawfordville	17.77	25	IAmb	IAmb	00 36 14.2	
	comp=Z,100nm,0.8s						
237A	Washetta, Mont	17.89	352		P	00 36 12.3	+0.8
237A				IAmb	IAmb	00 36 22.1	
	comp=Z,91nm,1.2s						
656A	Willston	17.95	31		P	00 36 12.3	+0.1
656A				IAmb	IAmb	00 36 27.1	
	comp=Z,108nm,0.9s						
TXAR	Lajitas Array	17.97	329	P	P	00 36 14.8	+2.2
	comp=Z,0.3nm,0.3s,baz=150,slow=13,SNR=42						
TXAR				LR	LR	00 43 21.6	
	comp=Z,164nm,20.0s,baz=0.0,slow=37						
DBBC	Dabeiba	18.02	112	eP	P	00 36 13.3	+0.1
GTBY	Guantanamo Bay	18.06	69	Pn	Pn	00 36 12.1	-1.2
GTBY				IAmb	IAmb	00 36 24.5	
	comp=Z,98nm,1.1s						
VBMS	Vicksburg	18.07	7	P	P	00 36 14.1	+0.6
VBMS				IAmb	IAmb	00 36 22.0	
	comp=Z,94nm,0.8s						
VBMS	Vicksburg	18.07	7	P	P	00 36 14.0	+0.5
	baz=188						
WHTX	Lake Whitney,	18.15	348	P	P	00 36 14.9	+0.4
WHTX	Lake Whitney,	18.15	348	P	P	00 36 15.6	+1.1
	baz=166						
UREC	San Jos de Ur	18.34	109	eP	Pn	00 36 17.7	+0.9
143A	Socs Landing,	18.47	4	P	Pn	00 36 18.9	+0.7
CBOC	Ciudad Bolivar	18.70	115	eP	Pn	00 36 22.2	+0.9
CBOC				eP	P	00 36 22.4	+1.5
250A	Grady	18.74	18	P	Pn	00 36 22.0	+0.6
250A				IAmb	IAmb	00 36 28.0	
	comp=Z,82nm,0.9s						
TUMC	Tumaco	18.76	130	P	Pn	00 36 22.5	+0.7
PLMC	San Jos del P	18.93	118	eP	P	00 36 20.0	-3.3
Z41A	Richland Creek	18.96	1	P	Pn	00 36 24.9	+0.8
Z41A	Richland Creek	18.96	1	P	Pn	00 36 24.4	+0.3
	baz=180,SNR=16						
HELC	Santa Helena	18.98	113	eP	Pn	00 36 25.2	+0.3
HELC	Santa Helena	18.98	113	i P	Pn	00 36 25.6	+0.6
	baz=295,slow=8.6						
LPIG	La Paz	19.02	304	P	Pn	00 36 28.4	+3.4
	baz=169,slow=11,SNR=3.1						
LPIG				LR	LR	00 43 46.9	
	comp=Z,311nm,20.2s,baz=130,slow=36						
Z38A	Mt. Pleasant	19.04	355	P	Pn	00 36 25.9	+0.8
Z38A				IAmb	IAmb	00 36 32.1	
	comp=Z,79nm,0.9s						
TIGA	Tifton	19.21	25	P	Pn	00 36 26.6	-0.6
	baz=209,SNR=11						
ABTX	Abilene, Hawle	19.29	343	IAmb	IAmb	00 36 38.8	
	comp=Z,54nm,1.0s						
ABTX	Abilene, Hawle	19.29	343	P	Pn	00 36 28.5	+0.4
	baz=160,SNR=17						
456A	Hilliard	19.31	30	P	Pn	00 36 28.5	+0.2
456A				IAmb	IAmb	00 36 44.4	
	comp=Z,44nm,0.8s						
YOTC	Yotoco, Valle	19.35	120	eP	P	00 36 28.4	+0.4
Z35A	Perchaven, San	19.41	349	P	Pn	00 36 30.5	+1.0
LRAL	Lakeview Retre	19.53	15	IAmb	IAmb	00 36 38.0	
	comp=Z,63nm,0.9s						
LRAL	Lakeview Retre	19.53	15	P	P	00 36 30.1	+0.6
	baz=198,SNR=36						
GUY2C	Guyana, Caldas	19.57	115	eP	Pn	00 36 32.8	+0.7
GUY2C				eP	P	00 36 33.7	+3.0
BBAC	Balboa, Cauca	19.76	126	eP	Pn	00 36 35.8	+1.7
PTBC	PUERTO BERRIO,	19.80	111	eP	Pn	00 36 33.7	-0.7
NORC	Norcasia	19.85	114	eP	Pn	00 36 35.4	+0.5
152A	Waverly Hall	19.88	21	IAmb	IAmb	00 36 40.7	
	comp=Z,95nm,1.1s						
POPC	Popayan, Colom	19.90	124	eP	Pn	00 36 35.6	-0.1
Z50A	Ashland	20.03	18	IAmb	IAmb	00 36 45.3	
	comp=Z,48nm,0.9s						
Z50A	Ashland	20.03	18	P	P	00 36 35.0	-0.1
	baz=200,SNR=20						
OTAV	Otavalo	20.04	133	eP	Pn	00 36 40.8	+3.2
OTAV	Otavalo	20.04	133	P	Pn	00 36 37.4	-0.2
OTAV	Otavalo	20.04	133	eP	P	00 36 34.9	-0.8
LGNH	Logne	20.07	75	P	P	00 36 35.7	+0.1
LGNH				IAmb	IAmb	00 36 46.1	
	comp=Z,64nm,1.3s						
255A	Hazlehurst	20.11	27	IAmb	IAmb	00 36 46.3	
	comp=Z,63nm,0.9s						
X40A	Basin Creek Fa	20.18	1	P	P	00 36 37.0	+0.3
	baz=180						
SOTA	Rioblanco	20.19	125	eP	Pn	00 36 41.6	+2.1
OCAC	Ocana	20.23	105	eP	P	00 36 37.3	-0.3
PCON	Cinco Dias	20.25	124	eP	Pn	00 36 39.9	-0.3
MIAR	Mount Ida	20.25	359	P	P	00 36 37.5	+0.1
	baz=178,SNR=62						
BRRC	Barranca, Sant	20.26	108	eP	Pn	00 36 42.6	+2.9
X43A	Marvell	20.31	5	P	Pn	00 36 39.4	-0.8
X43A	Marvell	20.31	5	P	P	00 36 37.9	-0.1
	baz=186,SNR=7.4						

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ORTC  Ortega, Tolima    20.32 119 eP     Pn     00 36 41.6 +1.1
OXF   Oxford            20.48   9 P      P      00 36 39.5 -0.4
      baz=190
UALR  University of     20.48   2 IAmb   IAmb   00 36 45.8
      comp=Z,64nm,0.8s
SPBC  San Pablo de B    20.52 113 eP     P      00 36 41.6 +1.0
ROSC  El Rosal          20.66 115 P      P      00 36 43.6 +1.1
      comp=Z,33nm,0.9s,baz=334,slow=4.4,SNR=24
ROSC  El Rosal          20.66 115 eP     Pn     00 36 46.1 +1.2
ROSC  El Rosal          20.66 115 P      Pn     00 36 45.1 +0.2
URIC  Uribia, Colomb    20.67  94 P      P      00 36 41.5 -0.6
MNTX  Cornudas Mount    20.75 329 IAmb   IAmb   00 36 48.9
      comp=Z,37nm,0.9s
MNTX  Cornudas Mount    20.75 329 P      Pn     00 36 44.5 -0.9
      baz=144,SNR=50
X34A  Smith Ranch, M    20.75 349 IAmb   IAmb   00 36 54.0
      comp=Z,42nm,0.8s
257A  Skidaway Islan    20.82  30 P      P      00 36 44.4 +0.8
X48A  Hartselle         20.87  14 IAmb   IAmb   00 36 53.0
      comp=Z,69nm,0.9s
W41B  Gary Mavity, V    20.88   2 IAmb   IAmb   00 36 54.6
      comp=Z,52nm,0.9s
W41B  Gary Mavity, V    20.88   2 P      P      00 36 45.0 +0.7
      baz=182,SNR=13
W39A  Magazine          20.90 358 IAmb   IAmb   00 36 57.0
      comp=Z,49nm,0.8s
W39A  Magazine          20.90 358 P      Pn     00 36 45.8 -1.3
      baz=178,SNR=36
BARC  Barichara         20.94 109 eP     Pn     00 36 47.0 -1.0
GOGA  Godfrey           21.00  23 P      P      00 36 45.2 -0.3
      baz=206
GARC  Garzon, Huila     21.06 123 eP     P      00 36 49.4 +2.7
WMOK  Wichita Mounta    21.08 347 P      P      00 36 47.0 +0.6
WMOK  Wichita Mounta    21.08 347 P      P      00 36 47.2 +0.8
      baz=164,SNR=13
PAMC  Pamplona, Colo    21.11 107 eP     P      00 36 46.5 -0.9
PLAL  Pickwick Lake     21.16  11 P      P      00 36 47.6 +0.4
PLAL                              IAmb   IAmb   00 36 56.4
      comp=Z,40nm,0.9s
Y52A  Lilburn           21.19  21 P      P      00 36 47.5 -0.2
      baz=204,SNR=24
CHIC  Chingaza          21.28 115 eP     P      00 36 51.4 +2.2
FLOC  Florencia         21.29 125 eP     P      00 36 50.5 +1.7
RUSC  La Rusia          21.31 111 eP     P      00 36 49.6  0.0
RUSC  La Rusia          21.31 111        PcP    00 40 54.6 +0.8
FPAL  Fort Paine        21.32  17 IAmb   IAmb   00 37 00.0
      comp=Z,42nm,0.9s
157A  Early Branch      21.41  29 P      P      00 36 48.9 -1.1
      baz=213
MSTX  Muleshoe          21.55 338 IAmb   IAmb   00 36 59.0
      comp=Z,73nm,1.0s
MSTX  Muleshoe          21.55 338 P      P      00 36 52.4 +0.7
      baz=153,SNR=29
X51A  Calhoun           21.57  19 P      P      00 36 53.6 +1.9
X51A                              IAmb   IAmb   00 37 01.8
      comp=Z,67nm,0.8s
X51A  Calhoun           21.57  19 P      P      00 36 52.2 +0.5
      baz=202,SNR=13
FCAR  Ozark Folk Cen    21.60   2 IAmb   IAmb   00 36 55.9
      comp=Z,48nm,0.8s
TUL1  Leonard           21.75 354 IAmb   IAmb   00 37 06.1
      comp=Z,31nm,0.8s
TUL1  Leonard           21.75 354 P      P      00 36 54.0 +0.5
      baz=172,SNR=10
Z56A  Williston         21.79  27 P      P      00 36 53.7 -0.3
      baz=212
GNAR  Gosnell           21.83   7 P      P      00 36 56.0 +1.6
LCAR  Lake Charles      21.83   4 IAmb   IAmb   00 37 05.7
      comp=Z,36nm,0.8s
LCAR                                     S      00 40 59.0 +4.6
SWET  Sewanee           21.87  16 IAmb   IAmb   00 37 07.4
      comp=Z,21nm,0.7s
SC01  Santiago de lo    21.98  73 P      P      00 36 56.0 -0.2
RGRS  Roger Stewart     21.98  30 P      P      00 36 56.3 +0.2
HHAR  Hobbs             21.99 358 IAmb   IAmb   00 36 59.4
      comp=Z,62nm,1.1s
AMTX  Amarillo          22.01 341 P      P      00 36 57.3 +0.8
      baz=157
W50A  Signal Mountai    22.03  17 P      P      00 36 55.7 -0.9
      baz=200,SNR=19
X53A  Estanollee        22.04  22 P      P      00 36 55.5 -1.2
      baz=206,SNR=12
U40A  Yellville         22.05   0 IAmb   IAmb   00 36 59.6
      comp=Z,45nm,0.8s
U40A  Yellville         22.05   0 P      P      00 36 56.9 +0.1
      baz=180,SNR=32
Z57A  Bowman            22.06  28 P      P      00 36 55.3 -1.6
      baz=213,SNR=10
GRTK  Grand Turk        22.07  68 P      P      00 36 53.0 -4.2
Y55A  Saluda            22.10  25 P      P      00 36 56.8 -0.5
      baz=210,SNR=6.5
SRIG  Santa Rosalia     22.14 309 P      P      00 36 57.1 -0.8
SRIG                              IAmb   IAmb   00 37 02.4
      comp=Z,86nm,1.5s
NHSC  New Hope          22.16  30 P      P      00 36 57.2 -0.8
NHSC  New Hope          22.16  30 P      P      00 36 59.1 +1.2
      baz=215,SNR=12
BANI  BANI              22.16  76 P      P      00 36 56.8 -1.5
U38A  Gravette          22.16 357 IAmb   IAmb   00 37 02.6
      comp=Z,21nm,0.7s
HSIG                    22.18 315 P      P      00 37 00.3 +1.9
HODGE Hodges            22.19  24 IAmb   IAmb   00 37 08.8
      comp=Z,49nm,1.2s
Y56A  Pelion            22.21  27 P      P      00 36 59.0 +0.4
      baz=211
TAMC  Tame, Arauca      22.28 108 eP     P      00 37 02.0 +2.5
WVT   Waverly           22.32  11 P      P      00 36 59.4 -0.3
WVT                               IAmb   IAmb   00 37 10.7
      comp=Z,33nm,0.8s
WVT   Waverly           22.32  11 P      P      00 36 59.7  0.0
      baz=193
W52A  Murphy            22.36  20 P      P      00 37 00.7 +0.6
W52A  Murphy            22.36  20 P      P      00 37 00.3 +0.1
      baz=204
X54A  Belton            22.43  24 P      P      00 37 00.5 -0.4
      baz=208,SNR=5.9
MACC  Macarena, Meta    22.44 121 eP     P      00 37 02.7 +1.4
CPCT  Cooper Cave       22.49  18 IAmb   IAmb   00 37 13.5
      comp=Z,26nm,1.0s
Z58A  St. Stephen       22.52  30 P      P      00 37 01.5 -0.4
      baz=215
SDV   Santo Domingo     22.58 101 P      P      00 37 02.4 -0.5
SDV                               IAmb   IAmb   00 37 10.2
      comp=Z,27nm,0.8s
SDV   Santo Domingo     22.58 101 eP     P      00 37 03.3 +0.4
PBMO  Poplar Bluff      22.59   5 IAmb   IAmb   00 37 14.9
      comp=Z,34nm,0.9s
X55A  Gracelyn & Ava    22.65  25 P      P      00 37 02.3 -1.0
      baz=210,SNR=12
121A  Cookes Peak, D    22.66 326 P      P      00 37 06.1 +2.5
      baz=140,SNR=69
319A  Douglas           22.66 322 IAmb   IAmb   00 37 25.7
      comp=Z,29nm,0.8s
U32A  Winter Ranch,     22.71 347 IAmb   IAmb   00 37 16.5
      comp=Z,57nm,0.9s
Y57A  Sumter            22.81  28 P      P      00 37 03.7 -1.2
      baz=213,SNR=6.4
T35A  Sooner Cattle     22.82 353 IAmb   IAmb   00 37 05.9
      comp=Z,47nm,0.9s
MGMO  Mountain Grove    22.86   2 P      P      00 37 05.1 -0.3
MGMO                              IAmb   IAmb   00 37 07.6
      comp=Z,34nm,0.8s
V51A  Loudon            22.87  18 P      P      00 37 05.0 -0.6
      baz=202,SNR=8.0
PAULI Pauline           22.89  24 IAmb   IAmb   00 37 17.0
      comp=Z,44nm,0.8s
PTGC  Puerto Gaitan,    22.89 114 eP     P      00 37 05.6 -0.4
TKL   Tuckaleechee C    22.92  20 P      P      00 37 05.8 -0.3
      comp=Z,8.0nm,0.8s,baz=183,slow=12,SNR=11
TKL                               LR     LR     00 47 44.8
      comp=Z,648nm,19.0s,baz=189,slow=41
X56A  White Oak         22.93  26 P      P      00 37 04.8 -1.4
      baz=211,SNR=15
W54A  Cherokee Point    22.97  23 P      P      00 37 05.8 -0.8
      baz=208,SNR=19
Y58A  Scranton          23.05  29 P      P      00 37 06.2 -1.2
Y58A  Scranton          23.05  29 P      P      00 37 06.9 -0.5
      baz=215
DR12  Loma Pena Alta    23.13  75 P      P      00 37 07.3 -1.2
U49A  Red Boiling Sp    23.14  15 IAmb   IAmb   00 37 22.4
      comp=Z,56nm,1.3s
V52A  Sevierville       23.15  20 P      P      00 37 07.6 -0.8
      baz=204,SNR=7.1
V53A  Saluda            23.26  21 P      P      00 37 08.5 -1.1
      baz=206,SNR=12
GUVC  San Jose del G    23.26 118 eP     P      00 37 10.5 +0.7
T47A  Sharon Grove      23.29  12 IAmb   IAmb   00 37 25.9
      comp=Z,23nm,0.8s
X57A  Johnson Farm,     23.32  28 P      P      00 37 09.2 -0.9
      baz=213
KMSC  Kings Mountain    23.36  25 IAmb   IAmb   00 37 11.5
      comp=Z,30nm,1.0s
KMSC  Kings Mountain    23.36  25 P      P      00 37 09.2 -1.3
      baz=210,SNR=14
Y22D  IRIS PASSCAL I    23.43 330 P      P      00 37 14.1 +2.7
Y22D  IRIS PASSCAL I    23.43 330 P      P      00 37 12.6 +1.2
      baz=144
Y59A  Loris             23.51  31 P      P      00 37 11.5 -0.4
      baz=216
S44A  Carbondale        23.63   8 IAmb   IAmb   00 37 27.5
      comp=Z,33nm,0.8s
W56A  Indian Trail      23.66  26 P      P      00 37 12.1 -1.4
      baz=211,SNR=7.8
V54A  Nebo              23.67  23 P      P      00 37 12.0 -1.6
      baz=208,SNR=9.5
X58A  Rowland           23.74  29 IAmb   IAmb   00 37 27.2
      comp=Z,25nm,0.8s
X58A  Rowland           23.74  29 P      P      00 37 12.7 -1.5
      baz=215
T49A  Edmonton          23.76  15 P      P      00 37 13.4 -1.0
      baz=198
CCM   Cathedral Cave    23.80   4 P      P      00 37 13.5 -1.3
CCM                               IAmb   IAmb   00 37 16.7
      comp=Z,35nm,0.9s
CCM   Cathedral Cave    23.80   4 P      P      00 37 13.3 -1.4
      baz=184
TZTN  Tazewell          23.80  19 IAmb   IAmb   00 37 18.9
      comp=Z,25nm,1.0s
TZTN  Tazewell          23.80  19 P      P      00 37 12.9 -2.0
      baz=203,SNR=5.9
T50A  Nancy             23.86  16 P      P      00 37 13.4 -2.0
      baz=200,SNR=6.0
ANMO  Albuquerque       23.93 332 P      P      00 37 18.2 +1.9
      comp=Z,13nm,0.8s,baz=144,slow=13,SNR=45
ANMO                              LR     LR     00 47 30.1
      comp=Z,189nm,20.1s,baz=143,slow=38
ANMO  Albuquerque       23.93 332 P      P      00 37 18.1 +1.9
ANMO  Albuquerque       23.93 332 P      P      00 37 18.0 +1.8
      baz=146
W57A  Gilead            23.94  27 IAmb   IAmb   00 37 31.1
      comp=Z,34nm,1.0s
W57A  Gilead            23.94  27 P      P      00 37 14.2 -1.9
      baz=212,SNR=6.0
U53A  Fall Branch       23.97  21 P      P      00 37 15.0 -1.4
      baz=206,SNR=15
V55A  Taylorsville      24.02  24 IAmb   IAmb   00 37 19.7
      comp=Z,24nm,0.9s
V55A  Taylorsville      24.02  24 P      P      00 37 16.0 -0.9
      baz=209,SNR=10
T51A  Gray              24.07  18 P      P      00 37 16.3 -1.0
      baz=202,SNR=6.0
X59A  McDuffie Farm,    24.11  30 P      P      00 37 16.6 -1.1
      baz=216
USIN  University of     24.13  10 P      P      00 37 17.0 -0.9
USIN                              IAmb   IAmb   00 37 32.1
      comp=Z,17nm,0.8s
W58A  Raeford           24.17  29 P      P      00 37 16.5 -1.7
      baz=214,SNR=8.8
TUC   Tucson            24.23 321 P      P      00 37 21.6 +2.7
TUC                               IAmb   IAmb   00 37 23.6
      comp=Z,33nm,1.0s
TUC   Tucson            24.23 321 P      P      00 37 21.2 +2.3
      baz=134
V56A  Mocksville        24.28  25 P      P      00 37 17.4 -1.9
      baz=211,SNR=8.5
U54A  Nelsons Funny     24.38  22 P      P      00 37 18.8 -1.4
      baz=207,SNR=14
X60A  Albert Glenn T    24.42  31 P      P      00 37 19.3 -1.2
      baz=217
SLM   Saint Louis       24.45   5 P      P      00 37 20.7 -0.1
SLM                               IAmb   IAmb   00 37 24.7
      comp=Z,27nm,0.7s
S49A  Springfield       24.47  15 P      P      00 37 19.3 -1.7
      baz=198
T52A  Hallie            24.50  20 IAmb   IAmb   00 37 37.8
      comp=Z,47nm,1.1s
T52A  Hallie            24.50  20 P      P      00 37 19.8 -1.5
      baz=204
T53A  Wise              24.54  21 P      P      00 37 19.8 -1.9
      baz=205
S50A  Richmond          24.60  17 P      P      00 37 20.9 -1.3
      baz=200
V57A  Coltrane Farms    24.65  27 P      P      00 37 21.0 -1.7
      baz=212,SNR=17
U55A  TA2, Sparta       24.66  24 P      P      00 37 21.4 -1.3
      baz=209,SNR=20
WCI   Wyandotte Cave    24.66  13 P      P      00 37 21.3 -1.3
WCI                               IAmb   IAmb   00 37 39.1
      comp=Z,32nm,0.9s
WCI   Wyandotte Cave    24.66  13 P      P      00 37 21.8 -0.8
      baz=196
U56A  King              24.79  25 IAmb   IAmb   00 37 23.8
      comp=Z,29nm,0.9s
U56A  King              24.79  25 P      P      00 37 22.4 -1.5
      baz=210,SNR=9.9
S51A  Beattyville       24.80  18 P      P      00 37 22.9 -1.1
      baz=202
OLIL  Olney             24.81   9 IAmb   IAmb   00 37 40.8
      comp=Z,31nm,0.9s
V58A  Windy Hill, Pi    24.86  28 P      P      00 37 22.3 -2.2
      baz=214,SNR=21
T54A  Tazewell          24.95  22 P      P      00 37 24.0 -1.4
      baz=207,SNR=8.0
R49A  Shelbyville       24.98  15 IAmb   IAmb   00 37 43.3
      comp=Z,36nm,1.0s
R49A  Shelbyville       24.98  15 P      P      00 37 24.9 -0.6
      baz=198
T25A  Trinidad          24.98 338 P      P      00 37 28.0 +2.2
      baz=153,SNR=52
KSU1  Kansas State U    24.99 353 P      P      00 37 25.0 -0.6
      baz=172
CNNC  Cliffs of the     24.99  30 P      P      00 37 24.2 -1.5
      baz=217
S52A  Salyersville      24.99  19 P      P      00 37 25.1 -0.6
      baz=203
R50A  Paris             25.19  16 IAmb   IAmb   00 37 44.8
      comp=Z,32nm,0.9s
R50A  Paris             25.19  16 P      P      00 37 26.3 -1.1
      baz=200
V59A  Middlesex         25.25  29 P      P      00 37 26.1 -1.9
      baz=215,SNR=12
MLPR  Magueyes Islan    25.25  78 P      P      00 37 29.2 +0.9
MLPR                              IAmb   IAmb   00 37 34.7
      comp=Z,36nm,1.3s
214A  Organ Pipe Nat    25.27 318 P      P      00 37 30.5 +2.2
      baz=130,SNR=6.7
T55A  Pulaski           25.30  23 P      P      00 37 27.9 -0.6
      baz=209
U57A  Blanch            25.30  27 P      P      00 37 26.8 -1.7
      baz=212,SNR=14
S53A  Williamson        25.31  21 P      P      00 37 27.9 -0.7
      baz=205
X18A  Snowflake         25.35 326 IAmb   IAmb   00 37 35.8
      comp=Z,28nm,1.2s
R51A  Hillsboro         25.41  18 P      P      00 37 28.4 -1.1
      baz=202
Q48A  North Vernon      25.45  13 P      P      00 37 28.6 -1.2
      baz=196
T56A  Rocky Mt          25.52  25 P      P      00 37 29.2 -1.3
      baz=210
BLA   Blacksburg        25.52  24 IAmb   IAmb   00 37 47.8
      comp=Z,27nm,0.9s
BLA   Blacksburg        25.52  24 P      P      00 37 29.5 -1.0
      baz=209
U58A  Oxford            25.62  28 P      P      00 37 29.9 -1.4
      baz=214
S54A  Dingess, Beckl    25.70  22 P      P      00 37 30.7 -1.4
      baz=207
ATAH  Atahualpa         25.72 145 P      P      00 37 37.9 +5.0
      comp=Z,8.7nm,0.9s,baz=338,slow=2.7,SNR=9.2
ATAH                              LR     LR     00 45 58.4
      comp=Z,378nm,18.2s,baz=318,slow=32
V60A  Jim Taylor Roa    25.72  31 IAmb   IAmb   00 37 39.4
      comp=Z,48nm,1.1s
V60A  Jim Taylor Roa    25.72  31 P      P      00 37 31.2 -1.0
      baz=217
Q49A  Aurora            25.72  15 P      P      00 37 31.1 -1.2
      baz=198
R52A  Catlettsburg      25.73  19 P      P      00 37 31.5 -1.0
      baz=204
Q50A  Georgetown        25.81  16 P      P      00 37 31.6 -1.5
      baz=200
T57A  Hurt              25.81  26 IAmb   IAmb   00 37 42.2
      comp=Z,17nm,0.8s
T57A  Hurt              25.81  26 P      P      00 37 31.8 -1.4
      baz=212,SNR=7.7
P46A  Rosedale          25.82  10 IAmb   IAmb   00 37 42.1
      comp=Z,17nm,0.8s
SDCO  Great Sand Dun    25.92 337 P      P      00 37 36.0 +1.5
SDCO                              IAmb   IAmb   00 37 40.2
      comp=Z,47nm,1.1s
SDCO  Great Sand Dun    25.92 337 P      P      00 37 36.0 +1.5
      baz=151,SNR=67
U59A  Littleton         25.93  29 P      P      00 37 32.8 -1.5
      baz=216
R53A  Hurricane         25.95  20 P      P      00 37 32.8 -1.7
R53A  Hurricane         25.95  20 P      P      00 37 33.4 -1.0
      baz=205
S55A  Lewisburg         25.98  23 P      P      00 37 33.8 -0.9
      baz=208
P48A  Milroy            26.03  14 IAmb   IAmb   00 37 51.4
      comp=Z,30nm,1.2s
P48A  Milroy            26.03  14 P      P      00 37 33.7 -1.4
      baz=197
T58A  Grand View Acr    26.08  27 P      P      00 37 33.7 -1.9
      baz=213,SNR=6.3
V61A  Roper             26.08  32 P      P      00 37 33.2 -2.4
V61A                              IAmb   IAmb   00 37 38.7
      comp=Z,39nm,0.9s
KSCO  Kaye Shedlock'    26.11 343 P      P      00 37 36.1 +0.2
KSCO                              IAmb   IAmb   00 37 38.9
      comp=Z,50nm,1.1s
KSCO  Kaye Shedlock'    26.11 343 P      P      00 37 36.7 +0.7
      baz=158,SNR=7.1
O44A  Mansfield         26.15   8 P      P      00 37 33.5 -2.6
O44A                              IAmb   IAmb   00 37 35.3
      comp=Z,15nm,0.5s
Q51A  Peebles           26.16  17 IAmb   IAmb   00 37 42.4
      comp=Z,20nm,0.8s
Q51A  Peebles           26.16  17 P      P      00 37 34.9 -1.4
      baz=202,SNR=6.3
R54A  Victor            26.16  22 P      P      00 37 35.4 -0.9
      baz=207
S56A  Natural Bridge    26.26  25 P      P      00 37 35.6 -1.6
      baz=210
U60A  Pendleton         26.33  30 P      P      00 37 36.1 -1.7
      baz=217,SNR=7.1
HUMP  Col San Antoni    26.40  78        PcP    00 41 05.0 +1.0
113A  Mohawk Valley,    26.41 318 P      P      00 37 40.3 +1.7
Q52A  Bidwell           26.42  19 P      P      00 37 38.0 -0.6
      baz=204
S22A  4UR Ranch, Cre    26.45 335 P      P      00 37 40.0 +0.8
S22A                              IAmb   IAmb   00 37 45.2
      comp=Z,43nm,1.1s
S22A  4UR Ranch, Cre    26.45 335 P      P      00 37 41.5 +2.2
      baz=149,SNR=54
HDIL  Hopedale          26.45   6 IAmb   IAmb   00 37 39.6
      comp=Z,23nm,0.8s
HDIL  Hopedale          26.45   6 P      P      00 37 38.7 -0.2
      baz=188
N41A  Harden Midland    26.46   4 P      P      00 37 38.3 -0.7
N41A                              IAmb   IAmb   00 37 42.0
      comp=Z,19nm,1.0s
T59A  Double "B" Far    26.55  29 IAmb   IAmb   00 37 39.2
      comp=Z,38nm,0.9s
T59A  Double "B" Far    26.55  29 P      P      00 37 38.1 -1.7
      baz=215,SNR=7.8
R55A  Marlinton         26.57  23 P      P      00 37 39.4 -0.7
      baz=209
P50A  Jamestown         26.57  16 P      P      00 37 39.2 -0.8
      baz=200
Q53A  Leroy             26.57  20 P      P      00 37 39.0 -1.0
      baz=205
S57A  Dark Hollow, R    26.59  26 P      P      00 37 38.5 -1.6
      baz=212
P51A  Williamsport      26.66  17 IAmb   IAmb   00 37 46.8
      comp=Z,15nm,0.8s
P51A  Williamsport      26.66  17 P      P      00 37 40.2 -0.6
      baz=202
MTP   Monte Pirata      26.68  78 P      P      00 37 40.0 -1.2
Y14A  Wickenburg        26.69 321 P      P      00 37 41.8 +0.6
MVCO  Mesa Verde        26.72 332 P      P      00 37 42.4 +0.7
MVCO  Mesa Verde        26.72 332 P      P      00 37 44.0 +2.3
      baz=145,SNR=34
O48A  Farmland          26.85  13 P      P      00 37 41.8 -0.7
      baz=197
S58A  Poland Farm, P    26.85  27 IAmb   IAmb   00 37 41.8
      comp=Z,15nm,0.7s
S58A  Poland Farm, P    26.85  27 P      P      00 37 41.3 -1.2
      baz=214
WUAZ  Wupatki           26.86 325 P      P      00 37 44.2 +1.3
WUAZ  Wupatki           26.86 325 P      P      00 37 45.2 +2.3
      baz=137,SNR=15
Q24A  Divide            26.87 339 P      P      00 37 43.3 +0.3
Q24A  Divide            26.87 339 P      P      00 37 41.9 -1.1
      baz=153
Q54A  Coxs Mills        26.92  21 IAmb   IAmb   00 37 51.3
      comp=Z,30nm,1.3s
Q54A  Coxs Mills        26.92  21 P      P      00 37 42.2 -1.0
      baz=207
R56A  Bull Pasture M    26.95  24 P      P      00 37 42.6 -1.0
      baz=210
O49A  Covington         26.98  15 P      P      00 37 43.6  0.0
O49A  Covington         26.98  15 P      P      00 37 42.4 -1.3
      baz=199
T60A  Surry             27.07  30 P      P      00 37 43.0 -1.5
      baz=217
P52A  Corning           27.08  19 P      P      00 37 43.8 -0.7
      baz=204
O50A  Cable             27.12  16 P      P      00 37 43.6 -1.3
      baz=200
P53A  Whipple           27.18  20 P      P      00 37 45.0 -0.5
P53A                              IAmb   IAmb   00 38 01.3
      comp=Z,30nm,1.4s
P53A  Whipple           27.18  20 P      P      00 37 44.4 -1.1
      baz=205
Q55A  Buckhannon        27.21  22 P      P      00 37 44.8 -1.0
      baz=208
R58B  Mineral           27.22  27 P      P      00 37 44.1 -1.7
      baz=214,SNR=7.2
R57A  Stanardsville     27.22  26 P      P      00 37 44.4 -1.5
      baz=212
STVI  Saint Thomas      27.26  78 P      P      00 37 45.4 -1.1
STVI                              IAmb   IAmb   00 37 51.6
      comp=Z,19nm,1.1s
GLA   Glamis            27.28 317 P      P      00 37 47.9 +1.3
S59A  Mechanicsville    27.31  28 P      P      00 37 45.3 -1.3
      baz=215
ACSO  Alum Creek Sta    27.38  17 P      P      00 37 46.3 -0.9
      baz=201
O51A  Pataskala         27.41  18 P      P      00 37 46.8 -0.7
      baz=202
M44A  Midewin, Midew    27.42   8 P      P      00 37 46.9 -0.7
R58A  Rapidan           27.44  26 P      P      00 37 46.1 -1.7
      baz=213,SNR=5.2
N48A  Decatur           27.45  13 P      P      00 37 46.4 -1.5
      baz=197
BGNE  Belgrade          27.46 352 P      P      00 37 48.8 +0.8
Y12C  Blythe            27.52 319 P      P      00 37 49.8 +1.2
Y12C  Blythe            27.52 319 P      P      00 37 49.3 +0.7
      baz=130
S60A  Water View        27.56  29 P      P      00 37 47.6 -1.3
      baz=216
Q56A  Snyder Ridge,     27.59  24 P      P      00 37 47.7 -1.5
      baz=210
SCIA  State Center      27.59 360 P      P      00 37 48.2 -0.9
SCIA                              IAmb   IAmb   00 37 52.0
      comp=Z,29nm,0.8s
P54A  Burton            27.60  21 P      P      00 37 48.2 -1.1
      baz=207
O52A  Adamsville        27.61  19 P      P      00 37 48.7 -0.6
O52A                              IAmb   IAmb   00 38 07.2
      comp=Z,22nm,1.0s
O52A  Adamsville        27.61  19 P      P      00 37 48.5 -0.8
      baz=204
CBN   Corbin Frederi    27.64  27 IAmb   IAmb   00 37 49.3
      comp=Z,29nm,0.8s
CBN   Corbin Frederi    27.64  27 P      P      00 37 48.7 -0.8
      baz=214
PDMCI Parker Dam,Lak    27.64 320 P      P      00 37 51.7 +2.1
      baz=131,SNR=7.0
N49A  Columbus Grove    27.71  15 P      P      00 37 50.1 -0.1
SMCO  Snowmass          27.73 336 P      P      00 37 52.5 +1.6
SMCO                              IAmb   IAmb   00 38 00.3
      comp=Z,48nm,1.3s
R59A  King George, V    27.75  28 P      P      00 37 49.3 -1.3
      baz=215,SNR=7.4
P55A  Reedsville        27.75  22 P      P      00 37 49.7 -1.0
      baz=208
OGNE  Ogallala          27.76 345 P      P      00 37 51.8 +1.0
OGNE                              IAmb   IAmb   00 37 53.2
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	comp=Z,27nm,0.9s						
OGNE	Ogallala	27.76	345	P	P	00 37 52.0	+1.2
	baz=161,SNR=5.5						
ISCO	Idaho Springs	27.77	339	P	P	00 37 52.0	+0.8
ISCO	Idaho Springs	27.77	339	P	P	00 37 53.1	+1.9
	baz=153,SNR=19						
L40A	Anamosa	27.79	3	IAmb	IAmb	00 37 51.9	
	comp=Z,29nm,0.9s						
N50A	Nevada	27.83	16	P	P	00 37 52.6	+1.3
	baz=201						
L42A	Oliver, Polo	27.84	5	P	P	00 37 50.6	-0.7
L42A				IAmb	IAmb	00 37 55.5	
	comp=Z,14nm,0.7s						
SWSC	Sam W. Stewart	27.86	316	P	P	00 37 53.3	+1.6
	baz=126						
MCWV	Mont Chateau	27.88	22	P	P	00 37 51.4	-0.3
Q57A	Strasburg	27.89	25	P	P	00 37 51.0	-0.9
	baz=211						
O53A	New Philadelph	27.93	20	P	P	00 37 51.0	-1.2
	baz=205						
U15A	North Rim	28.03	326	P	P	00 37 54.9	+1.4
R60A	Leonardtown, M	28.05	28	P	P	00 37 52.7	-0.5
	baz=216						
BC3	Big Chuckawall	28.07	317	P	P	00 37 56.0	+2.4
	baz=128,SNR=12						
Q58A	Fox Den Farm,	28.12	26	P	P	00 37 52.2	-1.6
	baz=213						
P56A	Dayton Farm, R	28.12	24	P	P	00 37 52.6	-1.3
	baz=210						
O54A	Avella	28.15	21	P	P	00 37 52.8	-1.4
O54A	Avella	28.15	21	P	P	00 37 52.8	-1.4
	baz=207						
IRM	Iron Mountain	28.18	319	P	P	00 37 57.0	+2.5
	baz=129,SNR=9.2						
N51A	Ashland	28.19	17	P	P	00 37 54.7	+0.2
L44A	Lake County Fo	28.22	8	P	P	00 37 54.6	-0.1
L44A				IAmb	IAmb	00 37 56.2	
	comp=Z,14nm,1.0s						
M49A	Liberty Center	28.28	14	P	P	00 37 55.3	0.0
	baz=199						
N52A	McGinn’s Farm,	28.29	18	P	P	00 37 54.6	-0.8
	baz=204						
L46A	Eue Claire	28.31	11	P	P	00 37 55.9	+0.4
L46A				IAmb	IAmb	00 37 56.4	
	comp=Z,8.7nm,0.6s						
L46A	Eue Claire	28.31	11	P	P	00 37 56.2	+0.7
	baz=194						
P57A	Homestead Farm	28.43	25	IAmb	IAmb	00 37 56.7	
	comp=Z,20nm,0.8s						
P57A	Homestead Farm	28.43	25	P	P	00 37 55.3	-1.3
	baz=212,SNR=8.7						
M50A	Fremont	28.45	16	P	P	00 37 56.6	-0.2
Q59A	Harwood	28.50	27	P	P	00 37 55.9	-1.4
	baz=215						
N53A	Lisbon	28.56	20	P	P	00 37 57.1	-0.7
N53A	Lisbon	28.56	20	P	P	00 37 56.7	-1.1
	baz=205						
O55A	Ligonier	28.56	22	P	P	00 37 55.9	-1.9
	baz=209						
L48A	N Adams	28.62	13	P	P	00 37 57.1	-1.3
	baz=197						
BELC	Belle Mtn. Jos	28.64	317	P	P	00 37 58.6	-0.2
	baz=128						
K43A	Burlington	28.68	7	P	P	00 37 59.8	+1.0
JFWS	Jewell Farm	28.70	4	P	P	00 37 59.0	0.0
	baz=185,SNR=14						
XPFO	Pion Flat	28.70	316	P	P	00 38 00.2	+0.9
PFO	Pinyon Flats O	28.70	316	P	P	00 38 01.3	+2.0
	comp=Z,1.7nm,0.8s,baz=129,slow=2.9,SNR=3.8						
PFO				LR	LR	00 49 42.5	
	comp=Z,360nm,21.7s,baz=132,slow=36						
PFO	Pinyon Flats O	28.70	316	P	P	00 38 00.8	+1.4
P58A	Pank, Wackersv	28.74	26	P	P	00 37 57.7	-1.7
	baz=213						
KNB	Kanab	28.75	326	P	P	00 38 01.1	+1.3
PKCU	Pink Cliffs	28.79	327	P	P	00 38 01.3	+0.9
N23A	Red Feather La	28.87	339	P	P	00 38 00.2	-0.6
	baz=153						
O56A	Blue Knob Stat	28.89	23	P	P	00 38 00.0	-0.8
O56A	Blue Knob Stat	28.89	23	P	P	00 37 59.6	-1.1
	baz=210						
GMRC	Granite Mounta	28.91	319	P	P	00 38 00.7	-0.4
	baz=129						
L49A	Milan	28.93	14	P	P	00 38 00.3	-0.8
	baz=199						
N54A	Moraine State	28.98	21	P	P	00 38 00.0	-1.5
N54A				IAmb	IAmb	00 38 01.0	
	comp=Z,10nm,0.7s						
N54A	Moraine State	28.98	21	P	P	00 38 00.2	-1.4
	baz=207						
LCMT	Little Creek M	28.98	325	P	P	00 38 02.8	+1.1
Q60A	Greensboro	28.98	28	P	P	00 37 60.0	-1.5
	baz=216						
O20A	White River Ci	29.05	336	IAmb	IAmb	00 38 08.3	
	comp=Z,26nm,1.0s						
O20A	White River Ci	29.05	336	P	P	00 38 04.5	+2.1
	baz=148,SNR=16						
K46A	Dorr	29.05	11	P	P	00 38 01.2	-0.9
	baz=194						
M52A	Chesterland	29.06	18	IAmb	IAmb	00 38 08.2	
	comp=Z,13nm,0.8s						
M52A	Chesterland	29.06	18	P	P	00 38 01.0	-1.3
	baz=204						
PHWY	Pilot Hill	29.07	341	P	P	00 38 03.5	+0.8
PHWY				IAmb	IAmb	00 38 07.4	
	comp=Z,26nm,1.5s						
SEUS	St. Eustatius	29.09	80		P	00 38 02.5	-0.2
AAM	Ann Arbor	29.14	14	P	P	00 38 03.0	0.0
N55A	Marion Center	29.18	22	P	P	00 38 02.1	-1.2
	baz=209						
MTPU	Mount Pierson	29.18	328	P	P	00 38 04.5	+0.7
M53A	WI Miller and	29.18	19	P	P	00 38 02.1	-1.2
	baz=205						
SRU	San Rafael Swe	29.20	331	P	P	00 38 04.6	+0.9
O57A	Amberson	29.20	25	P	P	00 38 02.0	-1.6
	baz=212						
P59A	Jarrettsville	29.21	27	P	P	00 38 02.1	-1.5
	baz=214						
SZCU	Shurtz Canyon	29.32	326	P	P	00 38 06.6	+1.8
Q16A	Castle Valley	29.35	330	P	P	00 38 06.1	+1.0
O58A	Lewisberry	29.43	26	P	P	00 38 04.7	-0.8
	baz=213						
CCUT	Cedar City	29.44	326	P	P	00 38 08.5	+2.6
SSPA	Standing Stone	29.47	24	P	P	00 38 04.7	-1.2
SSPA				IAmb	IAmb	00 38 12.2	
	comp=Z,24nm,1.5s						
SSPA	Standing Stone	29.47	24	P	P	00 38 04.9	-1.0
	baz=211						
TUQ	Turquoise Moun	29.49	320	P	P	00 38 05.9	-0.4
	baz=130						
MSU	Marysvale	29.53	329	P	P	00 38 08.3	+1.6
N56A	West Decatur	29.55	23	P	P	00 38 05.0	-1.7
	baz=210						
MVL	Millersville	29.57	27	IAmb	IAmb	00 38 06.2	
	comp=Z,12nm,0.8s						
ECSD	EROS Data Cent	29.58	355	IAmb	IAmb	00 38 11.9	
	comp=Z,18nm,0.9s						
ECSD					PcP	00 41 12.2	+0.9
ECSD	EROS Data Cent	29.58	355	P	P	00 38 05.6	-1.2
	baz=173,SNR=20						
M54A	Oil Creek Stat	29.58	21	P	P	00 38 05.5	-1.4
	baz=207						
P17A	Butcher Ranch,	29.59	332	P	P	00 38 08.0	+0.9
PAGS	Pennsylvania G	29.60	26	P	P	00 38 04.7	-2.3
I40A	Norwalk	29.65	4	P	P	00 38 06.7	-0.7
TMUT	Trail Mountain	29.66	331	P	P	00 38 09.8	+1.8
SHPR	Sheep Range	29.73	322	P	P	00 38 10.1	+1.7
P60A	Greenville	29.73	28	IAmb	IAmb	00 38 07.3	
	comp=Z,13nm,0.8s						
P60A	Greenville	29.73	28	P	P	00 38 06.3	-1.9
	baz=216						
TCRU	Three Creeks R	29.74	328	P	P	00 38 09.8	+1.1
L53A	Girard	29.78	19	P	P	00 38 07.5	-1.1
	baz=205						
I42A	Draeger Farm,	29.79	6	IAmb	IAmb	00 38 16.8	
	comp=Z,17nm,1.4s						
M55A	Ridgway	29.86	22	P	P	00 38 07.7	-1.6
	baz=208						
O59A	Robesonia	29.90	26	P	P	00 38 08.1	-1.5
	baz=214						
PSUB	Penn St. - Bra	29.91	28	P	P	00 38 07.7	-2.0
RDMU	Red Mountain	29.97	334	P	P	00 38 11.6	+1.0
M56A	Emporium	30.09	23	P	P	00 38 09.5	-1.9
	baz=210						
N58A	Sunbury	30.11	25	P	P	00 38 10.3	-1.3
N58A	Sunbury	30.11	25	P	P	00 38 09.7	-1.8
	baz=213						
J49A	Marlette	30.27	14	P	P	00 38 11.3	-1.6
	baz=199						
L54A	Sinclairville	30.34	20	P	P	00 38 12.4	-1.2
	baz=207						
DECC	Green Verdugo	30.34	316	P	P	00 38 13.4	-0.4
	baz=125						
M57A	Sunshine Farm,	30.36	24	IAmb	IAmb	00 38 32.2	
	comp=Z,19nm,1.1s						
M57A	Sunshine Farm,	30.36	24	P	P	00 38 12.4	-1.4
	baz=212						
PSUT	Pine Spring	30.42	327	P	P	00 38 15.9	+1.4
O61A	Allentown	30.45	29	P	P	00 38 12.9	-1.7
	baz=217						
EDW2	Edwards Air Fo	30.48	317	P	P	00 38 14.0	-1.0
	baz=126						
H43A	Windswept, Lux	30.49	7	P	P	00 38 14.3	-0.5
SUSD	Miller	30.55	352	P	P	00 38 14.4	-1.0
SUSD	Miller	30.55	352	P	P	00 38 15.0	-0.4
	baz=168						
N59A	State Game Lan	30.57	26	IAmb	IAmb	00 38 22.8	
	comp=Z,16nm,1.2s						
N59A	State Game Lan	30.57	26	P	P	00 38 14.0	-1.7
	baz=214						
NNA	Nana	30.59	148	LR	LR	00 47 58.8	
	comp=Z,320nm,20.9s,baz=289,slow=31						
L55A	Hinsdale	30.60	22	P	P	00 38 14.5	-1.4
	baz=208						
SNCC	San Nicolas Is	30.62	313	P	P	00 38 16.6	+0.4
	baz=122						
GRGR	Grenville	30.62	90	P	P	00 38 13.3	-3.1
K22A	Casper	30.63	340	IAmb	IAmb	00 38 19.1	
	comp=Z,18nm,0.8s						
K22A	Casper	30.63	340	P	P	00 38 17.4	+1.1
	baz=154,SNR=12						
LRMC	Laurel Mtn Rad	30.63	318	P	P	00 38 16.7	+0.3
	baz=127						
M58A	Price’s Panora	30.66	25	P	P	00 38 14.5	-2.0
	baz=213,SNR=5.9						
TPNV	Topopah Spring	30.67	322	P	P	00 38 18.2	+1.4
TPNV	Topopah Spring	30.67	322	P	P	00 38 19.1	+2.3
	baz=131,SNR=7.3						
FURC	Furnace Creek,	30.73	320	P	P	00 38 19.1	+2.1
	baz=130						
WVNY	West Valley, N	30.74	21	P	P	00 38 15.0	-2.1
WVNY				IAmb	IAmb	00 38 16.4	
	comp=Z,11nm,0.9s						
BLG	Laguna Peak, P	30.76	315	P	P	00 38 18.8	+1.3
	baz=124						
OSI	Osito Audit: C	30.81	316	P	P	00 38 19.5	+1.5
N60A	Cedar Hill Far	30.83	27	P	P	00 38 15.7	-2.2
	baz=216,SNR=5.3						
MPMC	Manual Prospec	30.87	319	P	P	00 38 20.7	+2.1
	baz=128,SNR=8.9						
J52A	Paris	30.88	18	P	P	00 38 17.0	-1.3
	baz=204						
L56A	Greenwood	30.88	23	P	P	00 38 16.8	-1.6
	baz=210						
K54A	Basiliko Farm,	30.89	21	P	P	00 38 17.2	-1.3
	baz=208						
SPMN	Marine on St.	30.91	0	IAmb	IAmb	00 38 19.2	
	comp=Z,18nm,0.8s						
SPMN	Marine on St.	30.91	0	P	P	00 38 17.4	-1.2
	baz=180,SNR=8.3						
BRNJ	Basking Ridge	30.92	28	P	P	00 38 16.9	-1.7
CTU	Camp Tracy	31.03	332	P	P	00 38 20.4	+0.6
L57A	Andrews Acres	31.04	24	P	P	00 38 18.5	-1.3
	baz=211						
DAC	Darwin (Calif)	31.07	319	P	P	00 38 21.9	+1.6
N61A	South Mountain	31.09	28	P	P	00 38 18.8	-1.4
	baz=217						
DUG	Dugway, Tooele	31.14	330	P	P	00 38 22.0	+1.2
DUG	Dugway, Tooele	31.14	330	P	P	00 38 22.6	+1.8
	baz=140,SNR=5.1						
ODNJ	Ogdensburg	31.22	27	IAmb	IAmb	00 38 21.0	
	comp=Z,12nm,0.9s						
M59A	Waymart	31.23	26	P	P	00 38 20.2	-1.3
	baz=214						
I51A	Listowel	31.23	17	P	P	00 38 20.5	-0.9
	baz=203						
R11A	Troy Canyon, C	31.24	324	P	P	00 38 24.0	+2.2
	baz=134,SNR=11						
RSSD	Black Hills	31.25	345	P	P	00 38 23.0	+1.1
RSSD				IAmb	IAmb	00 38 24.0	
	comp=Z,11nm,0.8s						
RSSD	Black Hills	31.25	345	P	P	00 38 22.7	+0.8
	baz=159						
G45A	Suttons Bay	31.36	10	IAmb	IAmb	00 38 24.2	
	comp=Z,9.9nm,0.8s						
G45A	Suttons Bay	31.36	10	P	P	00 38 21.3	-1.2
	baz=194						
GRAC	Grapevine Rang	31.38	321	P	P	00 38 25.7	+2.9
	baz=130,SNR=16						
M60A	Port Jervis	31.41	27	P	P	00 38 21.3	-1.7
	baz=216						
K56A	Middlesex	31.45	23	P	P	00 38 21.2	-2.2
	baz=210,SNR=6.6						
PAL	Palisades	31.47	28	IAmb	IAmb	00 38 22.9	
	comp=Z,18nm,0.8s						
PAL	Palisades	31.47	28	P	P	00 38 21.9	-1.7
	baz=217						
L58A	Harry Jones Me	31.48	25	P	P	00 38 21.5	-2.1
	baz=213,SNR=5.6						
CWC	Cottonwood Cre	31.48	319	P	P	00 38 25.5	+1.6
	baz=128						
BINY	Binghamton	31.55	25	IAmb	IAmb	00 38 23.9	
	comp=Z,17nm,0.9s						
BINY	Binghamton	31.55	25	P	P	00 38 22.6	-1.6
	baz=213,SNR=6.3						
N62A	Caumsett State	31.62	29	P	P	00 38 23.2	-1.7
	baz=218						
HWUT	Hardware Ranch	31.68	333	P	P	00 38 26.1	+0.5
HWUT				IAmb	IAmb	00 38 32.3	
	comp=Z,14nm,0.9s						
I52A	Shelburne	31.72	18	P	P	00 38 24.0	-1.8
	baz=204						
VES	Vestal, Richgr	31.77	317	P	P	00 38 26.3	+0.1
	baz=126,SNR=7.0						
M61A	Granite Spring	31.78	28	P	P	00 38 23.9	-2.4
	baz=217,SNR=6.6						
K57A	Scipio Center	31.79	23	P	P	00 38 24.6	-1.8
	baz=211						
BGU	Big Grassy Mou	31.81	331	P	P	00 38 28.0	+1.3
PD31	Pinedale Array	31.81	337	P	P	00 38 27.6	+0.8
PDAR	Pinedale Array	31.81	337	P	P	00 38 28.1	+1.3
	comp=Z,6.1nm,0.8s,baz=139,slow=9.1,SNR=35						
PDAR				PcP	PcP	00 41 17.9	+0.3
	comp=Z,0.9nm,0.7s,baz=156,slow=4.6,SNR=4.4						
PDAR				LR	LR	00 52 30.3	
	comp=Z,244nm,19.0s,baz=151,slow=38						
SPUT	South Promonto	31.84	332	P	P	00 38 27.9	+0.9
L59A	Walton	31.93	26	IAmb	IAmb	00 38 26.9	
	comp=Z,21nm,0.9s						
L59A	Walton	31.93	26	P	P	00 38 25.7	-1.9
	baz=214,SNR=6.2						
COWI	Conover	31.95	5		PcP	00 41 19.2	+1.6
F45A	CMU Biological	32.01	10	P	P	00 38 26.7	-1.5
	baz=194						
SMMC	Simmler	32.07	316	P	P	00 38 27.8	-1.1
	baz=124						
L60A	Shokan	32.12	27	P	P	00 38 27.5	-1.8
	baz=216						
J56A	Wolcott	32.13	23	P	P	00 38 27.4	-1.8
	baz=210						
K58A	Earlville	32.16	24	P	P	00 38 27.9	-1.7
	baz=213,SNR=7.9						
YLE	Yale	32.17	29	P	P	00 38 28.6	-1.0
YLE				IAmb	IAmb	00 38 32.8	
	comp=Z,23nm,0.9s						
E38A	The Farm, Brul	32.31	2	IAmb	IAmb	00 38 47.8	
	comp=Z,9.2nm,0.8s						
H52A	Wyevale	32.33	18	P	P	00 38 29.1	-1.9
	baz=204						
HVU	Hansel Valley	32.36	332	P	P	00 38 33.0	+1.4
E43A	Lone Tree Farm	32.46	8	P	P	00 38 33.2	+1.0
K59A	Cooperstown	32.49	25	P	P	00 38 30.1	-2.5
	baz=214						
J57A	Williamstown	32.57	23	IAmb	IAmb	00 38 32.4	
	comp=Z,12nm,0.9s						
J57A	Williamstown	32.57	23	P	P	00 38 30.7	-2.5
	baz=212						
L61A	Hillsdale 1, H	32.58	27	P	P	00 38 31.2	-2.0
	baz=217						
PECO	Prince Edward	32.65	22	P	P	00 38 31.5	-2.3
PECO				IAmb	IAmb	00 38 32.6	
	comp=Z,11nm,0.7s						
I55A	Frankford	32.65	21	P	P	00 38 31.6	-2.3
	baz=208						
M63A	Gales Ferry	32.66	30	P	P	00 38 32.1	-1.9
	baz=220,SNR=6.8						
H53A	Bobcaygeon	32.67	19	P	P	00 38 31.4	-2.6
	baz=206						
F48A	Evansville	32.72	14	P	P	00 38 32.9	-1.5
	baz=199						
ELK	Elko	32.77	328	P	P	00 38 36.7	+1.4
ELK				IAmb	IAmb	00 38 39.1	
	comp=Z,10.0nm,0.9s						
K60A	Five Rivers En	32.77	27	P	P	00 38 33.2	-1.8
	baz=216						
NV11	Mina Array Sit	32.78	322	P	P	00 38 37.7	+2.4
F49A	Sandfield	32.79	14	P	P	00 38 33.7	-1.4
	baz=200						
J58A	Remsen	32.80	24	IAmb	IAmb	00 38 34.1	
	comp=Z,8.4nm,0.7s						
J58A	Remsen	32.80	24	P	P	00 38 33.2	-2.1
	baz=213						
REDW	Red Top Meadow	32.82	336	P	P	00 38 37.2	+1.5
L62A	Suffield	32.86	29	P	P	00 38 33.8	-1.9
	baz=218						
SNOW	Snow King Moun	32.87	336	P	P	00 38 37.7	+1.6
NVAR	Mina Array Bea	32.87	322	P	P	00 38 39.4	+3.2
	comp=Z,18nm,0.7s,baz=134,slow=8.5,SNR=185						
NVAR				PcP	PcP	00 41 22.2	+1.7
	comp=Z,2.3nm,0.8s,baz=127,slow=3.5,SNR=5.3						
NVAR				LR	LR	00 53 49.3	
	comp=Z,873nm,18.3s,baz=152,slow=40						
DELO	Deloro Mine	32.94	20	IAmb	IAmb	00 38 35.4	
	comp=Z,11nm,0.7s						
D41A	Chassel	32.96	6	IAmb	IAmb	00 38 39.7	
	comp=Z,20nm,1.4s						
TRY	Troy	32.96	27	IAmb	IAmb	00 38 35.9	
	comp=Z,18nm,0.9s						
D32A	Dogwood Acres,	32.99	355	IAmb	IAmb	00 38 38.1	
	comp=Z,16nm,0.7s						
K61A	Williamstown	33.09	27	P	P	00 38 36.9	-0.8
	baz=217						
FXWY	Fox Creek	33.12	336	IAmb	IAmb	00 38 43.8	
	comp=Z,21nm,0.9s						
RYN	Ryan	33.13	322	P	P	00 38 40.3	+1.9
RYN				IAmb	IAmb	00 38 42.5	
	comp=Z,8.1nm,0.8s						
G53A	Haliburton	33.15	19	P	P	00 38 35.9	-2.4
	baz=206						
KVN	Kaiserville	33.16	323	P	P	00 38 40.4	+1.7
KVN				IAmb	IAmb	00 38 42.6	
	comp=Z,12nm,1.0s						
E47A	Iron Bridge	33.17	12	P	P	00 38 36.8	-1.6
	baz=197						
QUA2	Belchertown	33.20	29	P	P	00 38 36.6	-2.0
QUA2				IAmb	IAmb	00 38 50.3	
	comp=Z,31nm,1.4s						
I58A	Old Forge	33.20	24	P	P	00 38 36.5	-2.2
	baz=213,SNR=11						
J59A	Piesco	33.21	25	IAmb	IAmb	00 38 39.1	
	comp=Z,25nm,1.3s						
J59A	Piesco	33.21	25	P	P	00 38 36.8	-2.0
	baz=214						
L63A	North Scituate	33.23	30	P	P	00 38 36.8	-2.1
	baz=220						
IMW	Indian Meadow	33.31	336		PcP	00 41 23.3	+1.5
D46A	Sault St. Mari	33.44	11	P	P	00 38 39.7	-1.0
	baz=196						
H56A	Elgin	33.48	22	P	P	00 38 39.8	-1.3
	baz=210						
J60A	Lant Hill Farm	33.48	26	P	P	00 38 39.6	-1.6
	baz=216						
F52A	Sundridge	33.54	17	P	P	00 38 40.1	-1.5
	baz=204						
YPP	Pitchstone Pla	33.57	337	P	P	00 38 44.4	+2.1
PLVO	Plevna	33.58	21	P	P	00 38 40.0	-2.0
H17A	Grant Village	33.59	337	IAmb	IAmb	00 38 48.5	
	comp=Z,21nm,0.9s						
H17A	Grant Village	33.59	337	P	P	00 38 44.4	+2.0
	baz=148,SNR=22						
EYMN	Ely	33.66	2	IAmb	IAmb	00 38 46.3	
	comp=Z,7.8nm,0.8s						
EYMN					PcP	00 41 23.1	+0.8
EYMN	Ely	33.66	2	P	P	00 38 41.1	-1.5
	baz=182						
L64A	Middleborough	33.66	31	P	P	00 38 41.0	-1.7
	baz=221,SNR=7.0						
LKWY	Lake	33.67	337	P	P	00 38 44.8	+1.7
LKWY				IAmb	IAmb	00 39 00.7	
	comp=Z,20nm,0.9s						
H57A	Richville	33.69	23	P	P	00 38 41.0	-1.9
	baz=212						
YMP	Mirror Lake Pl	33.73	338	P	P	00 38 45.7	+2.1
I59A	Olmsteadville	33.74	25	P	P	00 38 41.3	-2.1
	baz=215						
NCB	Newcomb	33.74	25	IAmb	IAmb	00 38 42.2	
	comp=Z,8.7nm,0.8s						
RLMT	Red Lodge	33.74	339	IAmb	IAmb	00 38 46.5	
	comp=Z,15nm,1.0s						
RLMT	Red Lodge	33.74	339	P	P	00 38 45.3	+1.6
	baz=151,SNR=14						
HRV	Adam Dziewonsk	33.74	29	P	P	00 38 41.2	-2.2
	baz=220						
D47A	Chapleau	33.78	12	P	P	00 38 41.9	-1.9
	baz=197						
YERR	Yerington	33.79	322	P	P	00 38 45.9	+1.8
YERR				IAmb	IAmb	00 38 50.8	
	comp=Z,13nm,0.9s						
BCX	Boston College	33.80	30	P	P	00 38 44.4	+0.5
BCX				IAmb	IAmb	00 38 58.1	
	comp=Z,32nm,1.3s						
YUF	Upper Falls	33.83	337	P	P	00 38 46.2	+1.7
SAO	San Andreas Ge	33.86	317	P	P	00 38 44.4	-0.1
SAO				IAmb	IAmb	00 38 45.2	
	comp=Z,24nm,1.4s						
G55A	Calabogie	33.89	21	P	P	00 38 43.2	-1.5
	baz=209						
YNR	Norris Junctio	33.90	337	P	P	00 38 46.5	+1.5
J61A	Chester	33.94	27	P	P	00 38 43.3	-1.8
	baz=217						
MDND	Maddock	33.97	352	P	P	00 38 44.8	-0.5
	baz=168,SNR=19						
I60A	Shoreham	34.02	26	P	P	00 38 43.3	-2.6
	baz=216,SNR=5.9						
ALGO	Algonquin Park	34.07	19	P	P	00 38 44.3	-1.9
	baz=206						
PNTR	Pine Nut	34.07	322	IAmb	IAmb	00 38 50.8	
	comp=Z,16nm,0.8s						
H58A	Gabriels	34.13	24	P	P	00 38 44.0	-2.8
	baz=214,SNR=5.1						
LONY	Lake Ozonia	34.13	24	IAmb	IAmb	00 38 46.2	
	comp=Z,17nm,0.9s						
LONY	Lake Ozonia	34.13	24	P	P	00 38 44.9	-2.0
	baz=213,SNR=6.6						
E51A	G1948 Merrick	34.17	17	P	P	00 38 45.8	-1.3
	baz=204						
J62A	Henniker	34.18	28	P	P	00 38 45.4	-1.9
	baz=218						
E52A	Mattawa	34.18	18	P	P	00 38 46.1	-1.1
	baz=205						
LAO	LASA Array	34.21	344	IAmb	IAmb	00 38 49.5	
	comp=Z,14nm,0.8s						
LAO	LASA Array	34.21	344	P	P	00 38 48.2	+0.7
	baz=157						
VCNR	Virginia City	34.23	322	P	P	00 38 50.3	+2.3
VCNR				IAmb	IAmb	00 38 51.4	
	comp=Z,16nm,1.3s						
PAHR	Pah Rah Range	34.34	323	P	P	00 38 50.9	+2.1
PAHR				IAmb	IAmb	00 38 52.3	
	comp=Z,8.7nm,0.9s						
D49A	Beulah Townshi	34.37	14	P	P	00 38 47.4	-1.5
	baz=200						
G57A	Newington	34.39	23	P	P	00 38 47.3	-1.7
	baz=212						
H59A	Cadyville	34.51	25	P	P	00 38 48.3	-1.8
	baz=214						
F55A	Otter Lake	34.52	21	P	P	00 38 48.7	-1.4
	baz=209						
D50A	G1974 Best Tow	34.66	16	P	P	00 38 50.1	-1.2
	baz=203						
FRNY	Flat Rock	34.71	25	IAmb	IAmb	00 38 51.1	
	comp=Z,10nm,1.0s						
D51A	Lot 18 Range I	34.71	16	P	P	00 38 49.9	-1.9
	baz=204						
E54A	Lac Daplat, Po	34.77	19	P	P	00 38 50.4	-1.9
	baz=208						
G58A	Ormstown	34.78	24	P	P	00 38 50.5	-1.9
	baz=213						
AFDM	Forest Hills D	34.82	320	P	P	00 38 54.5	+1.6
H60A	Morristown	34.85	26	P	P	00 38 51.0	-2.1

	baz=216						
I62A	Tamworth	34.91	28	P	P	00 38 51.3	-2.2
	baz=219						
BEKR	Beckworth	35.02	322	P	P	00 38 56.9	+2.2
BEKR				IAmb	IAmb	00 38 58.7	
	comp=Z,11nm,0.9s						
G59A	Clarenceville	35.08	25	P	P	00 38 53.0	-1.9
	baz=215						
H61A	Lyndonville	35.16	27	P	P	00 38 53.8	-1.9
	baz=217						
E55A	Montcerf-Lytto	35.16	21	P	P	00 38 54.3	-1.4
	baz=209						
D53A	Lac Vacive, Po	35.19	18	P	P	00 38 55.3	-0.6
D53A	Lac Vacive, Po	35.19	18	P	P	00 38 54.6	-1.2
	baz=206						
DGMT	Dagmar	35.38	347	P	P	00 38 58.2	+0.6
	baz=161						
I63A	Otisfield	35.39	28	P	P	00 38 55.8	-1.8
	baz=220						
G60A	Masonville	35.44	26	P	P	00 38 56.1	-1.9
	baz=216						
TRQ	Mont Tremblant	35.50	22	P	P	00 38 56.4	-2.3
ORV	Oroville	35.52	321	P	P	00 39 00.6	+1.7
D54A	Lac Fusel, La	35.58	19	P	P	00 38 57.8	-1.4
	baz=208						
E56A	St. Veronique	35.60	22	P	P	00 38 57.9	-1.5
	baz=211						
WVOR	Wild Horse Val	35.75	327	P	P	00 39 02.0	+1.0
WVOR				IAmb	IAmb	00 39 04.5	
	comp=Z,20nm,1.1s						
E57A	Chemin Saint G	35.81	23	P	P	00 38 59.9	-1.3
	baz=212						
D55A	Sainte-Anne-du	35.85	21	P	P	00 38 59.7	-1.9
	baz=210,SNR=6.0						
G61A	St-Isidore-de-	35.93	26	P	P	00 39 00.8	-1.5
	baz=217						
PTGA	Pitinga	35.96	112	P	P	00 39 01.9	-1.1
	comp=Z,23nm,0.7s,baz=303,slow=8.5,SNR=42						
PTGA	Pitinga	35.96	112	P	P	00 39 03.2	+0.2
PTGA	Pitinga	35.96	112	*e*P	P	00 39 03.1	+0.2
ULM	Lac du Bonnet	36.01	357	P	P	00 39 01.9	-1.0
	comp=Z,9.8nm,0.6s,baz=177,slow=9.5,SNR=34						
ULM				PcP	PcP	00 41 29.2	+0.2
	comp=Z,5.7nm,0.7s,baz=211,slow=3.1,SNR=4.4						
ULM				LR	LR	00 57 34.7	
	comp=Z,333nm,19.0s,baz=172,slow=42						
ULM	Lac du Bonnet	36.01	357	IAmb	IAmb	00 39 02.8	
	comp=Z,10nm,0.8s						
E58A	La Victoria	36.10	23	P	P	00 39 02.2	-1.5
	baz=214						
D56A	ZEC Mazanza, M	36.13	21	P	P	00 39 02.7	-1.3
	baz=211						
O03E	Paynes Creek	36.15	321	P	P	00 39 05.7	+1.3
	baz=128						
F60A	Warwick	36.30	25	P	P	00 39 03.1	-2.4
	baz=216						
MOD	Modoc Plateau	36.30	325	P	P	00 39 06.8	+1.0
MOD				IAmb	IAmb	00 39 08.7	
	comp=Z,11nm,0.8s						
G62A	West of Eustis	36.31	27	IAmb	IAmb	00 39 04.6	
	comp=Z,16nm,0.9s						
G62A	West of Eustis	36.31	27	P	P	00 39 03.6	-2.0
	baz=219						
J08A	Circle Bar Ran	36.32	328	P	P	00 39 06.9	+1.2
D57A	Chemin Vers le	36.41	22	P	P	00 39 04.8	-1.6
	baz=212						
EGMT	Eagleton	36.45	341	P	P	00 39 08.3	+1.5
	baz=152,SNR=15						
H64A	Troy	36.47	29	P	P	00 39 05.2	-1.7
	baz=221						
G63A	Kingsbury	36.64	28	P	P	00 39 06.0	-2.4
	baz=220						
E60A	Ste Agathe de	36.83	25	P	P	00 39 08.0	-1.9
	baz=216						
D58A	Chemin du LacG	36.86	23	P	P	00 39 08.1	-2.1
	baz=214,SNR=5.4						
PKME	Peaks-Kenny Pk	36.91	28	P	P	00 39 08.6	-2.0
	baz=220						
MSO	Missoula	36.92	336	IAmb	IAmb	00 39 15.9	
	comp=Z,31nm,1.0s						
MSO	Missoula	36.92	336	P	P	00 39 12.4	+1.6
	baz=145,SNR=23						
LATQ	La Tuque	37.13	23	P	P	00 39 11.0	-1.5
	baz=214						
G64A	Maxfield	37.15	29	P	P	00 39 10.6	-2.0
	baz=221						
LSQQ	Lebel-sur-Quev	37.17	18	P	P	00 39 11.6	-1.2
	baz=206						
D59A	Saint-Raymond	37.19	24	P	P	00 39 11.3	-1.7
	baz=215						
E61A	Lac Etchemin	37.28	26	P	P	00 39 11.8	-2.0
	baz=218						
F63A	Nahmakanta, Br	37.33	28	P	P	00 39 12.1	-2.0
	baz=220						
I07A	Izee	37.36	328	P	P	00 39 14.9	+0.3
M02C	Callahan	37.45	322	P	P	00 39 14.8	-0.7
	baz=128						
D60A	Saint Jean D’O	37.48	25	P	P	00 39 13.7	-1.8
	baz=217						
SAML	Samuel	37.52	126	P	P	00 39 14.1	-2.0
SAML	Samuel	37.52	126	*e*P	P	00 39 14.6	-1.5
MATQ	Matagami	37.62	16	P	P	00 39 15.4	-1.2
	baz=205						
G65A	Princeton	37.67	30	P	P	00 39 15.5	-1.6
	baz=223						
KHMM	Horse Mountain	37.67	321	P	P	00 39 19.6	+2.2
KHMM				IAmb	IAmb	00 39 20.9	
	comp=Z,18nm,0.8s						
F64A	Sherman	37.79	28	P	P	00 39 16.2	-1.9
	baz=221						
JTMT	Jette	37.80	336	P	P	00 39 18.9	+0.5
JTMT				IAmb	IAmb	00 39 23.2	
	comp=Z,21nm,0.9s						
JTMT					PcP	00 41 35.8	+1.1
JCC	Jacoby Creek,	37.83	320	P	P	00 39 20.2	+1.8
JCC				IAmb	IAmb	00 39 22.0	
	comp=Z,28nm,1.1s						
PINE	Pine Mountain	37.91	327	P	P	00 39 19.9	+0.5
PINE				IAmb	IAmb	00 39 30.9	
	comp=Z,14nm,0.9s						
G08A	Pilot Rock	37.95	330	P	P	00 39 18.6	-1.0
G08A					PcP	00 41 36.9	+1.7
D61A	St Aubert, Com	38.02	25	P	P	00 39 17.9	-2.1
	baz=218,SNR=5.4						
E63A	Oxbow	38.18	28	P	P	00 39 19.0	-2.3
E63A				IAmb	IAmb	00 39 20.7	
	comp=Z,14nm,0.9s						
E63A	Oxbow	38.18	28	P	P	00 39 19.4	-2.0
	baz=221						
D62A	Allapoint, All	38.41	27	IAmb	IAmb	00 39 29.4	
	comp=Z,43nm,1.5s						
D62A	Allapoint, All	38.41	27	P	P	00 39 19.9	-3.4
	baz=219,SNR=6.1						
E64A	Bridgewater	38.45	28	P	P	00 39 21.5	-2.2
	baz=222						
E09A	Wood Farm, Sta	38.47	332	P	P	00 39 23.6	-0.2
I04A	Tendick Farm,	38.71	325	P	P	00 39 26.7	+0.7
	baz=130						
WALA	Waterton Lakes	38.75	338	P	P	00 39 27.2	+0.9
WALA				IAmb	IAmb	00 39 31.6	
	comp=Z,21nm,1.1s						
D63A	Stockholm	38.79	27	P	P	00 39 24.6	-1.9
	baz=221						
F07A	Phinny Hill Vi	38.85	330	P	P	00 39 26.5	-0.6
E08A	Dider Farm, El	38.87	331	P	P	00 39 27.5	+0.3
LPAZ	La Paz	39.05	140	P	P	00 39 29.8	+0.1
	comp=Z,0.7nm,0.6s,baz=325,slow=6.7,SNR=3.8						
LPAZ				LR	LR	00 54 05.8	
	comp=Z,208nm,21.0s,baz=325,slow=34						
LPAZ	La Paz	39.05	140	*e*P	P	00 39 29.1	-0.6
G05D	Wamic, OR	39.09	328	P	P	00 39 31.4	+2.3
	baz=133						
J01E	Myrtle Point	39.17	324	P	P	00 39 31.7	+2.0
	baz=128						
H04A	Detroit Lake	39.17	327	P	P	00 39 30.4	+0.6
H04A				IAmb	IAmb	00 39 41.3	
	comp=Z,47nm,1.2s						
E07A	Sunnyside	39.30	331	P	P	00 39 32.0	+1.2
NEW	Newport	39.36	335	P	P	00 39 32.3	+0.9
NEW	Newport	39.36	335	P	P	00 39 31.7	+0.3
	baz=141,SNR=5.8						
H04D	Lebanon	39.36	326	P	P	00 39 31.6	+0.3
	baz=131						
C09A	Chrisman Ranch	39.50	333	P	P	00 39 32.6	+0.1
C09A				IAmb	IAmb	00 39 42.6	
	comp=Z,12nm,0.7s						
F05D	White Salmon	39.61	329	P	P	00 39 36.1	+2.7
	baz=134						
I02D	Swisshome	39.71	325	P	P	00 39 36.2	+2.0
	baz=129						
G03D	McMinnville, O	40.10	326	P	P	00 39 39.6	+2.2
	baz=131						
LTY	Liberty	40.19	331	P	P	00 39 40.1	+1.8
B08A	Colville Reser	40.38	333	P	P	00 39 40.4	+0.5
MNMC	Minye Minye	40.39	145	P	P	00 39 41.5	+1.1
MNMC				IAmb	IAmb	00 39 54.5	
	comp=Z,20nm,1.1s						
FFC	Flin Flon	41.02	352	P	P	00 39 44.7	-0.2
FFC				IAmb	IAmb	00 39 46.0	
	comp=Z,16nm,0.9s						
D04E	Lakebay	41.16	329	P	P	00 39 47.6	+1.4
	baz=133						
LLLB	Lillooet	43.17	333	P	P	00 40 03.3	+0.7
LLLB				IAmb	IAmb	00 40 05.6	
	comp=Z,29nm,1.4s						
LVC	Limon Verde	43.57	147	P	P	00 40 06.4	-0.1
RPN	Rapa Nui	44.03	201	LR	LR	00 54 00.2	
	comp=Z,200nm,18.7s,baz=318,slow=30						
FCC	Fort Churchill	44.47	359	P	P	00 40 11.8	-1.0
FCC				IAmb	IAmb	00 40 13.6	
	comp=Z,18nm,0.7s						
CLDB	Colider	44.56	122	*e*P	P	00 40 13.0	-1.2
GO02	Mina Guanaco	45.33	150	P	P	00 40 18.6	-1.9
GO02				IAmb	IAmb	00 40 30.5	
	comp=Z,16nm,1.1s						
SCHQ	Schefferville	45.38	21	P	P	00 40 18.2	-2.0
	comp=Z,8.9nm,0.9s,baz=217,slow=5.5,SNR=9.5						
SCHQ				PcP	PcP	00 41 59.5	+0.2
	comp=Z,6.0nm,0.6s,baz=230,slow=4.5,SNR=12						
SCHQ				LR	LR	01 01 14.1	
	comp=Z,992nm,18.8s,baz=186,slow=39						
SCHQ	Schefferville	45.38	21	IAmb	IAmb	00 40 19.6	
	comp=Z,14nm,1.1s						
SALV	Santo Antonio	47.52	128	*e*P	P	00 40 37.4	-0.1
ARAG	Araguaiana, MT	50.45	125	*e*P	P	00 40 59.7	-0.2
SMTB	Santa Maria do	50.59	114	*e*P	P	00 41 00.9	-0.1
YKA	Yellowknife Ar	50.59	347	P	P	00 41 01.1	+0.8
	comp=Z,34nm,0.7s,baz=150,slow=7.5,SNR=546						
YKA				PcP	PcP	00 42 17.5	-0.3
	comp=Z,2.8nm,0.7s,baz=149,slow=3.6,SNR=6.4						
DLBC	Dease Lake	52.05	336	P	P	00 41 13.2	+1.7
CPUP	Villa Florida	53.20	139	P	P	00 41 18.2	-2.1
	comp=Z,1.0nm,0.6s,baz=12,slow=7.4,SNR=3.9						
BDFB	Brasilia	53.49	122	P	P	00 41 21.4	-1.4
	comp=Z,4.9nm,1.0s,baz=303,slow=6.4,SNR=5.3						
BDFB				LR	LR	01 05 14.0	
	comp=Z,167nm,18.1s,baz=309,slow=37						
BDFB	Brasilia	53.49	122	IAmb	IAmb	00 41 29.5	
	comp=Z,14nm,1.1s						
IPMB	Ipameri, GO	54.57	125	*e*P	P	00 41 31.1	+0.6
WHY	Whitehorse	55.37	336	P	P	00 41 36.8	+1.0
WHY				IAmb	IAmb	00 41 42.4	
	comp=Z,9.6nm,1.0s						
DHAK	Deception Hill	55.81	334	P	P	00 41 38.4	-0.5
HYT	Haines Junctio	56.51	336	P	P	00 41 45.1	+1.1
HYT				IAmb	IAmb	00 41 47.0	
	comp=Z,9.7nm,1.1s						
PCA	Pinnacle	57.23	334	P	P	00 41 49.8	+0.8
PCA				IAmb	IAmb	00 41 52.5	
	comp=Z,14nm,0.8s						
NBCL	Cascavel-CE	57.30	105	*e*P	P	00 41 50.6	+0.5
NBMA	Muriti-CE	57.96	108	*e*P	P	00 41 55.1	+0.3
NRS	Narsarsuaq	57.97	25	P	P	00 41 53.7	-0.4
NBPN	Ponto Novo - B	58.01	113	*e*P	P	00 41 56.3	+1.2
CTGM	Chitina Glacie	58.14	335	P	P	00 41 56.5	+1.0
CTGM				IAmb	IAmb	00 42 05.5	
	comp=Z,12nm,0.9s						
BARN	Barnard Glacie	58.33	335	P	P	00 41 57.2	+0.4
BARN				IAmb	IAmb	00 41 59.9	
	comp=Z,12nm,1.0s						
C36M	Paulatuk	58.47	348	P	P	00 41 57.9	+0.5
C36M				IAmb	IAmb	00 41 59.2	
	comp=Z,12nm,1.1s						
C36M	Paulatuk	58.47	348	P	P	00 41 57.9	+0.5
	baz=144						
PLCA	Paso Flores	58.52	160	P	P	00 41 58.2	0.0
	comp=Z,3.0nm,1.0s,baz=7.0,slow=8.8,SNR=4.6						
PLCA	Paso Flores	58.52	160	P	P	00 42 00.5	+2.3
PLCA				IAmb	IAmb	00 42 11.7	
	comp=Z,7.9nm,1.1s						
PLCA	Paso Flores	58.52	160	*e*P	P	00 41 58.3	+0.1
BALM	Baldy	58.60	334	P	P	00 41 59.7	+1.0
BALM				IAmb	IAmb	00 42 02.1	
	comp=Z,16nm,1.0s						
TGL	Tana Glacier	58.67	334	P	P	00 42 00.4	+1.3
CRQM	Cirque	58.80	334	P	P	00 42 00.4	+0.2
NBPA	Parau_RN	58.92	106	*e*P	P	00 42 01.6	+0.1
MCARA	McCarthy VSAT	59.06	335	P	P	00 42 02.9	+1.2
DAWY	Dawson	59.10	338	IAmb	IAmb	00 42 07.0	
	comp=Z,5.7nm,0.7s						
VRDI	Verde Repeater	59.16	334	P	P	00 42 03.9	+1.2
VRDI				IAmb	IAmb	00 42 05.4	
	comp=Z,12nm,0.9s						
NBTA	Tacaratu-PE	59.26	110	*e*P	P	00 42 04.0	+0.1
GLB	Gilahina Butte	59.42	334	P	P	00 42 05.6	+1.4
EPYK	Eagle Plains	59.60	341	IAmb	IAmb	00 42 10.5	
	comp=Z,12nm,1.0s						
EPYK	Eagle Plains	59.60	341	P	P	00 42 05.8	+0.4
	baz=129						
SFJD	Kangerlussuaq	59.62	18	P	P	00 42 04.7	-0.7
EYAK	Cordova Ski Ar	59.83	333	IAmb	IAmb	00 42 12.7	
	comp=Z,9.7nm,0.8s						
INK	Inuvik	59.95	344	P	P	00 42 08.7	+1.1
	comp=Z,30nm,0.9s,baz=123,slow=7.1,SNR=94						
RCBR	Riachuelo	60.08	105	P	P	00 42 09.7	+0.1
	comp=Z,8.6nm,0.8s,baz=278,slow=10,SNR=7.3						
RCBR	Riachuelo	60.08	105	P	P	00 42 10.1	+0.6
RCBR	Riachuelo	60.08	105	*e*P	P	00 42 09.7	+0.1
EGAK	Eagle	60.14	338	IAmb	IAmb	00 42 10.9	
	comp=Z,11nm,0.8s						
NBIT	Itapeh - BA	60.42	117	*e*P	P	00 42 12.2	+0.5
GLI	Glacier Island	60.57	333	IAmb	IAmb	00 42 30.4	
	comp=Z,12nm,1.0s						
SJMB	Sao Joao De Ma	60.67	121	*e*P	P	00 42 13.2	-0.1
SCRK	Sand Creek	60.76	337	IAmb	IAmb	00 42 16.4	
	comp=Z,7.9nm,0.9s						
NBPV	Pedro Velho	60.85	106	*e*P	P	00 42 15.1	+0.3
RIDG	Independent Ri	60.97	336	P	P	00 42 15.6	+0.7
BSFB	Barra de Sao F	61.01	121	*e*P	P	00 42 15.9	+0.2
SCM	Sheep Creek Mo	61.09	334	P	P	00 42 16.7	+1.0
SCM				IAmb	IAmb	00 42 28.5	
	comp=Z,12nm,0.9s						
SEW	Seward	61.32	332	P	P	00 42 18.1	+1.0
KNK	Knik Glacier	61.40	333	P	P	00 42 18.4	+0.7
KNK				IAmb	IAmb	00 42 20.4	
	comp=Z,12nm,0.8s						
SML	Sawmill	61.51	334	P	P	00 42 19.1	+0.6
DHY	Denali Highway	61.66	335	P	P	00 42 19.4	-0.2
DHY				IAmb	IAmb	00 42 25.4	
	comp=Z,6.0nm,0.9s						
GHO	Glory Hole Cre	61.75	333	P	P	00 42 20.5	+0.3
PMR	Palmer	61.77	333	P	P	00 42 20.5	+0.3
PMR				IAmb	IAmb	00 42 26.8	
	comp=Z,9.5nm,0.9s						
NBRF	Rio Formoso -	61.79	108	*e*P	P	00 42 21.2	+0.1
RC01	Rabbit Creek A	61.83	333	P	P	00 42 20.5	-0.1
BRLK	Bradley Lake	61.86	331	P	P	00 42 21.3	+0.4
CNPM	China Poot	61.94	331	P	P	00 42 22.1	+0.7
HDA	Harding Lake	62.10	337	P	P	00 42 23.1	+0.7
HDA				IAmb	IAmb	00 42 23.9	
	comp=Z,10nm,0.8s						
HDA	Harding Lake	62.10	337	P	P	00 42 23.3	+0.9
	baz=117,SNR=5.8						
ILAR	Eielson Array	62.24	337	P	P	00 42 23.9	+0.6
	comp=Z,9.0nm,0.9s,baz=136,slow=4.5,SNR=87						
CCB	Clear Creek Bu	62.54	337	IAmb	IAmb	00 42 27.3	
	comp=Z,4.6nm,0.8s						
WRH	Wood River Hil	62.57	336	IAmb	IAmb	00 42 26.6	
	comp=Z,5.0nm,0.9s						
COLA	College	62.66	337	P	P	00 42 27.3	+1.2
TCOL	CIGO, UAF Yank	62.66	337	P	P	00 42 26.7	+0.6
	baz=117						
SKT	Skwentna	62.97	333	IAmb	IAmb	00 42 30.1	
	comp=Z,12nm,0.9s						
NEA	Nenana	63.00	336	IAmb	IAmb	00 42 33.4	
	comp=Z,10nm,1.2s						
PPLA	Purkeypile	63.59	334	IAmb	IAmb	00 42 38.7	
	comp=Z,9.4nm,0.7s						
TULEG	Thule	63.61	6	P	P	00 42 32.4	+0.2
SVW2	Sparrevohn	64.50	331	IAmb	IAmb	00 42 39.4	
	comp=Z,6.2nm,0.8s						
COLD	Coldfoot	64.56	339	IAmb	IAmb	00 42 41.8	
	comp=Z,11nm,1.2s						
TOLK	Toolik Lake Re	64.98	340	P	P	00 42 42.8	+1.4
	baz=117,SNR=14						
SUMG	Summit	66.30	16	*i* P	P	00 42 49.0	-1.3
RDOG	Red Dog Mine	69.41	338	P	P	00 43 09.5	0.0
RDOG				IAmb	IAmb	00 43 14.2	
	comp=Z,9.3nm,1.0s						
ANM	Nome	69.68	334	P	P	00 43 11.9	+0.7
NOR	Nord	74.04	9	*i* P	P	00 43 37.7	+0.6
	comp=Z,8.3nm,1.1s						
ESDC	Sonseca Array	80.38	52	P	P	00 44 11.7	-1.8
	comp=Z,1.6nm,0.7s,baz=284,slow=5.9,SNR=7.8						
BILL	Bilibino	80.88	338	P	P	00 44 17.0	+1.4
MDT	Midelt	81.15	58	P	P	00 44 16.3	-1.5
	comp=Z,5.1nm,0.8s,baz=327,slow=8.7,SNR=2.7						
NB2	NORSAR Subarra	84.44	28	P	P	00 44 34.5	+0.2
	comp=Z,2.4nm,0.8s,baz=291,slow=4.8						
NOA	NORSAR Array B	84.44	28	P	P	00 44 33.8	-0.5
	comp=Z,5.1nm,0.9s,baz=291,slow=4.8,SNR=11						
NOA				LR	LR	01 20 08.7	
	comp=Z,241nm,21.9s,baz=280,slow=34						
ARCES	ARCESS Array B	86.25	18	P	P	00 44 42.2	-0.9
	comp=Z,4.1nm,0.6s,baz=288,slow=3.6,SNR=15						
ARCES				LR	LR	01 24 24.7	
	comp=Z,297nm,18.3s,baz=316,slow=36						
TIC	Toumodi	86.49	84	*e*PKIKP	P	00 44 44.7	-0.7
LIC	Lamto	86.58	84	*e*PKIKP	P	00 44 45.4	-0.4
	comp=Z,36nm,1.0s						
DBIC	Dimbokro	86.64	84	P	P	00 44 45.5	-0.6
	comp=Z,7.7nm,1.0s,baz=271,slow=6.1,SNR=7.5						
DBIC				LR	LR	01 16 56.6	
	comp=Z,80nm,21.4s,baz=276,slow=31						
DBIC	Dimbokro	86.64	84	IAmb	IAmb	00 44 46.4	
	comp=Z,6.5nm,0.8s						
KIC	Kosan Boka	86.83	84	*e*PKIKP	P	00 44 45.3	-1.7
	comp=Z,46nm,1.2s						
DAVA	Damuels	88.22	42	*e*P	P	00 44 52.9	-0.4
	comp=Z,2.8nm,0.6s						
DAVOX	Davos/Dischmat	88.39	42	P	P	00 44 54.1	0.0
	baz=315,slow=11						
RETA	Reutte	88.72	41	*e*P	P	00 44 54.6	-0.9
	comp=Z,2.4nm,0.6s						
CLL	Collm	88.76	37	*e*P	P	00 44 56.0	+0.5
CLL				*e*PP	PP	00 48 23.0	-1.2
CLL				Lm	MLR	01 23 00.0	
	comp=Z,200nm,20.1s						
FETA	Feichten	88.86	42	*e*P	P	00 44 55.9	-0.3
	comp=Z,0.8nm,0.5s						
MOTA	Moosalm	88.99	41	*e*P	P	00 44 56.3	-0.6
	comp=Z,0.8nm,0.5s						
BRG	Berggiesshubel	89.47	37	*e*P	P	00 44 57.8	-1.1
	comp=Z,5.8nm,1.2s						
TIXI	Tiksi	89.84	348	P	P	00 44 59.9	-0.3
GERES	GERESS Array B	90.08	39	P	P	00 45 00.8	-1.0
	comp=Z,1.8nm,1.0s,baz=306,slow=4.5,SNR=6.7						
GERES				LR	LR	01 24 05.4	
	comp=Z,165nm,20.4s,baz=284,slow=35						
ABTA	Abfaltersbach	90.10	41	*e*P	P	00 45 02.1	+0.1
	comp=Z,1.7nm,0.7s						
KBA	Koelnbreinsper	90.51	41	*e*P	P	00 45 04.3	+0.2
	comp=Z,0.7nm,0.5s						
FINES	FINESS Array B	90.73	25	P	P	00 45 03.5	-1.0
	comp=Z,1.5nm,0.5s,baz=336,slow=2.6,SNR=19						
FINES				LR	LR	01 25 03.9	
	comp=Z,142nm,20.6s,baz=300,slow=35						
MOA	Molln	90.80	40	*e*P	P	00 45 04.6	-0.5
	comp=Z,0.8nm,0.5s						
TORD	Torodi Ar. Bea	91.31	76	P	P	00 45 06.4	-1.7
	comp=Z,1.1nm,0.6s,baz=288,slow=4.4,SNR=10						
TORD				LR	LR	01 24 01.6	
	comp=Z,106nm,19.8s,baz=320,slow=34						
CONA	Conrad Observa	91.76	40	*e*P	P	00 45 09.1	-0.6
	comp=Z,0.7nm,0.4s						
TAM	Tamanrasset	92.26	66	P	P	00 45 12.9	+0.4
TAM				IAmb	IAmb	00 45 15.1	
	comp=Z,3.5nm,1.0s						
MODS	Modra-Piesok	92.45	39	*e*P	P	00 45 12.0	-0.8
VYHS	Vyhne	93.34	38	*e*P	P	00 45 16.5	-0.4
NRIK	Noril'sk	96.66	360	LR	LR	01 34 13.7	
	comp=Z,284nm,18.1s,baz=358,slow=39						
AKASG	Malin Array Be	98.10	33	P	P	00 45 36.8	-1.6
	comp=Z,0.1nm,0.3s,baz=297,slow=4.2,SNR=3.1						
AKASG				LR	LR	01 33 03.6	
	comp=Z,107nm,18.1s,baz=285,slow=37						
BRTR	Keskin Array B	106.95	40	Pdiff	Pdif	00 46 20.1	+1.8
	comp=Z,0.9nm,1.0s,baz=356,slow=7.6,SNR=3.7						
ZALV	Zalesovo Beam	112.09	1	PP	PP	00 51 19.5	-0.7
	comp=Z,1.2nm,0.7s,baz=326,slow=7.7,SNR=5.5						
SONM	Songino Array	115.84	346	PKP	PKiKP	00 50 42.0	-2.6
	comp=Z,0.2nm,0.3s,baz=116,slow=3.4,SNR=3.0						
SONM				PP	PP	00 51 45.0	-2.0
	comp=Z,0.9nm,0.8s,baz=96,slow=1.5,SNR=3.8						
MKAR	Makanchi Array	119.13	4	PKP	PKPdf	00 50 50.1	-0.8
	comp=Z,1.5nm,0.8s,baz=338,slow=2.7,SNR=12						
HHC	Hu-ho-hao-te	120.65	338	*e*PKP	PKiKP	00 50 54.5	+0.3
BOSA	Boshof	121.37	115	PKP	PKPdf	00 50 55.1	-0.7
	comp=Z,1.9nm,0.8s,baz=244,slow=4.8,SNR=4.2						
BOSA	Boshof	121.37	115		PKiKP	00 51 00.0	+4.1
GEYT	Alibeck	121.49	27	PKP	PKiKP	00 50 55.8	-0.1
	comp=Z,0.9nm,0.6s,baz=319,slow=6.3,SNR=3.9						
WMQ	Urumqi	122.24	359	*e*PKP	PKiKP	00 50 57.2	0.0
WMQ				LR	LR		
	comp=Z,240nm,14.3s						
WMQ				LR	LR		
	comp=Z,240nm,21.9s						
NJ2	Nanjing	124.77	327	*e*PKP	PKPdf	00 51 01.2	-0.9
GAR	Garm	124.83	16		PKiKP	00 51 03.5	+0.9
GTA	Gaotai	125.32	348	*e*PKP	PKiKP	00 51 03.7	+0.2
KSH	Kashi	125.58	10	PKP	PKiKP	00 51 06.0	+2.0
KSH				sPKP		00 51 20.0	
KSH				PP	PP	00 53 00.1	+6.5
KSH				PKS	PKSdf	00 54 41.1	+0.7
KSH				SS	SS	01 09 54.2	+3.7
KSH				LR	LR		
	comp=Z,220nm,12.3s						
STKA	Stephens Creek	127.28	241	PKP	PKPdf	00 51 06.8	-0.1
	comp=Z,2.8nm,0.8s,baz=56,slow=3.6,SNR=6.6						
LZH	Lanzhou	127.48	343	*e*PKP	PKPdf	00 51 07.5	+0.1
LZH				sPKP		00 51 28.7	
LZH				LR	LR		
	comp=Z,100nm,18.0s						
LZH				LR	LR		
	comp=Z,110nm,18.2s						
LZH				LR	LR		
	comp=Z,150nm,20.1s						
XAN	Xi'an	127.65	337	PKP	PKiKP	00 51 08.0	-0.2
WHN	Wuhan	128.28	330	⇓PKP	PKPdf	00 51 02.7	-6.1
CD2	Chengdu	132.31	340	PKP	PKPdf	00 51 15.4	-1.2
WRA	Warramunga Arr	134.46	256	PKP	PKPdf	00 51 21.2	+0.4
	comp=Z,1.6nm,0.8s,baz=85,slow=2.2,SNR=13						
ASAR	Alice Springs	134.78	251	PKP	PKPdf	00 51 20.9	-0.5
	comp=Z,0.8nm,0.8s,baz=104,slow=2.1,SNR=6.9						
DANN	Dangsing	137.57	4	*e*P	PKiKP	00 51 27.8	-0.9
	comp=Z,25nm,0.8s						
GKN	Gorkha	137.97	3	*e*P	PKPdf	00 51 28.0	+0.6
GUN	Gumba	138.11	1	*e*P	PKPdf	00 51 28.3	+0.4
	comp=Z,12nm,0.7s						
KKN	Kakani	138.21	2	*e*P	PKPdf	00 51 28.2	+0.3
	comp=Z,16nm,0.8s						
JIRN	Jiri	138.37	1	*e*P	PKPdf	00 51 28.2	-0.2
DMN	Daman	138.39	2	*e*P	PKPdf	00 51 28.8	+0.5
	comp=Z,6.4nm,0.5s						
PKIN	Phulchoki	138.43	2	*e*P	PKPdf	00 51 28.2	-0.2
	comp=Z,10.0nm,0.7s						
PKI	Pulchoki	138.44	2	*e*P	PKPdf	00 51 28.6	+0.1
	comp=Z,13nm,0.8s						
TAPN	Taplejung	138.68	359	*e*P	PKPdf	00 51 27.8	-1.1
	comp=Z,7.7nm,0.3s						
RAMN	Ramite	139.08	0	*e*P	PKPdf	00 51 27.3	-2.2
	comp=Z,12nm,0.8s						
ODAN	Odare	139.17	359	*e*P	PKPdf	00 51 28.5	-1.2
	comp=Z,12nm,0.9s						
CHTO	Chiang Mai	145.12	340		PKPdf	00 51 39.9	-0.3
CMAR	Chiang Mai Arr	145.45	340	PKPbc	PKPab	00 51 41.2	+0.4
	comp=Z,15nm,0.8s,baz=342,slow=4.1,SNR=78						
KAD	Karad	146.24	22	*i* P	PKPab	00 51 44.5	+0.7
DLV	T Lat	146.37	320		PKPab	00 51 45.5	+0.9
PBKT	Sadao Pong	146.42	335		PKPbc	00 51 43.7	+0.1
HYB	Hyderabad	147.49	15	*i* PKP	PKPbc	00 51 46.0	-0.7
PSA00	Pilbara Seismi	147.90	252		PKPab	00 51 50.5	+0.2

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*IDC **03** 00:32:20.4±1.3, 32.̊06N×40.̊24W, h0km, mb3.9/12, mb1 4.1/12, mb1mx3.8/48, mbtmp3.9/12, MS3.9/4, Ms1 3.9/4, ms1mx3.3/36, Error ellipse: s-maj=35.9km*

s-min=22.5km az=21.0

ISC 03 00:32:22.4±1.2, 32°.1N±0°.2×40°.2W±0°.2, h10^{km}, n23, σ0^s.86/15, mb4.1/14, MS3.9/4, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDT	Midelt	29.98	79	LR	LR	00 47 49.7	
	comp=Z,140nm,20.5s,baz=162,slow=31						
PCRV	Puerto La Cruz	31.40	231	LR	LR	00 51 11.2	
	comp=Z,386nm,18.7s,slow=36						
TIC	Toumodi	41.45	120	eP	P	00 40 11.1	+1.5
DBIC	Dimbokro	41.56	120	P	P	00 40 09.8	-0.7
	2.9nm,0.8s,baz=297,slow=11,SNR=3.3						
DBIC				LR	LR	00 54 51.6	
	comp=Z,114nm,18.1s,baz=339,slow=32						
LIC	Lamto	41.73	121	eP	P	00 40 12.2	+0.4
	27nm,0.9s						
KIC	Kosan Boka	41.85	120	eP	P	00 40 13.2	+0.4
	19nm,1.0s						
TORD	Torodi Ar. Bea	42.73	106	P	P	00 40 19.6	-0.4
	5.4nm,1.0s,baz=303,slow=7.0,SNR=19						
GERES	GERESS Array B	43.34	51	P	P	00 40 24.5	-0.1
	0.3nm,0.6s,baz=240,slow=9.0,SNR=3.4						
NOA	NORSAR Array B	43.97	33	P	P	00 40 29.2	-0.3
	0.4nm,0.8s,baz=272,slow=17,SNR=2.8						
H10N2	ASCENSION HYDR	46.72	144	T	T	01 30 41.3	
	baz=329,slow=75,SNR=37						
H10N3	ASCENSION HYDR	46.72	144	T	T	01 30 44.1	
	baz=329,slow=75,SNR=49						
H10N1	ASCENSION HYDR	46.73	144	T	T	01 30 36.0	
	baz=329,slow=75,SNR=37						
H10S3	ASCENSION HYDR	47.60	145	T	T	01 31 47.7	
	baz=329,slow=74,SNR=68						
H10S2	ASCENSION HYDR	47.61	145	T	T	01 31 48.7	
	baz=251,slow=74,SNR=67						
FINES	FINESS Array B	51.10	34	P	P	00 41 24.9	+0.1
	4.2nm,0.9s,baz=322,slow=4.3,SNR=5.8						
AKASG	Malin Array Be	53.28	48	P	P	00 41 40.6	-0.7
	2.9nm,0.8s,baz=279,slow=6.3,SNR=12						
PDAR	Pinedale Array	54.65	302	P	P	00 41 50.8	-0.9
	1.8nm,0.9s,baz=103,slow=7.5,SNR=4.5						
BRTR	Keskin Array B	58.75	60	P	P	00 42 20.3	-0.5
	0.8nm,0.8s,baz=302,slow=7.1,SNR=4.1						
NVAR	Mina Array Bea	62.27	300	P	P	00 42 45.0	0.0
	0.6nm,0.6s,baz=60,slow=5.3,SNR=2.6						
NVAR				LR	LR	01 07 49.8	
	comp=Z,144nm,20.8s,baz=349,slow=34						
NRIK	Noril'sk	71.92	17	P	P	00 43 47.4	+2.0
	0.6nm,0.3s,baz=16,slow=4.4,SNR=3.7						
H09W1	TRISTAN DA CUN	73.64	157	T	T	02 04 24.0	
	SNR=3.7						
ZALV	Zalesovo Beam	82.01	29	P	P	00 44 42.2	-0.3
	0.5nm,0.6s,baz=303,slow=6.9,SNR=5.6						
MKAR	Makanchi Array	85.92	36	P	P	00 45 02.9	+0.2
	0.4nm,0.8s,baz=310,slow=7.8,SNR=4.1						

IDC 03 00:33:28.4±1.9, 22°.70N×99°.97E, h0^{km}, mb3.4/2, mb1 3.3/3, mb1mx3.1/40, mbtmp3.2/3, ML3.1/1, Error ellipse: s-maj=42.2km s-min=17.7km az=91.0

BJI 03 00:33:29.3±0.0, 22°.60N×100°.35E, h10^{km}, ML3.3/4

ISC 03 00:33:30.2±0.9, 22°.56N±0°.06×99°.7E±0°.1, h10^{km}, n11, σ2^s.59/14, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMI	Kunming	3.77	47	Pg	Pn	00 34 31.3	+2.6
KMI				Sg	Sn	00 35 11.4	-1.9
CMMT	Chiang Mai	3.80	191	P	Pn	00 34 30.2	+1.3
CMMT				Sg	Sg	00 35 32.3	0.0
LAMP	Lampang	4.02	181	Pg	Pb	00 34 44.5	+3.2
PHRA	Phrae	4.08	173	P	Pn	00 34 30.4	-2.2
CMAR	Chiang Mai Arr	4.15	190	Pn	Pn	00 34 35.9	+2.2
	0.3nm,0.3s,baz=4.9,slow=13,SNR=5.6						
CMAR				Pg	Pb	00 34 47.5	+4.1
	3.4nm,0.3s,baz=9.2,slow=18,SNR=58						
CMAR				Lg	Lg	00 35 45.6	
	4.6nm,0.3s,baz=8.9,slow=30,SNR=21						
CM09	Chiang Mai Arr	4.15	189	Pg	Pg	00 34 48.8	-1.1
CM01	Chiang Mai Arr	4.18	190	Sg	Sg	00 35 40.8	-3.8
MHMT	Maesarieng	4.67	201	Pg	Pg	00 34 59.2	-0.5
WMQ	Urumqi	23.41	338	eP	P	00 38 37.1	-2.4
MKAR	Makanchi Array	27.97	334	P	P	00 39 21.2	+0.2
	0.2nm,0.6s,baz=142,slow=7.3,SNR=3.0						
ZALV	Zalesovo Beam	33.30	344	P	P	00 40 06.2	-1.7
	0.3nm,0.5s,baz=163,slow=11,SNR=3.7						

SJA 03 00:46:30.3±0.7, 24°.08S×66°.52W, h262^{km}±11^{km}, ML3.2, MW3.2

IDC 03 00:46:34.0±2.1, 24°.10S×66°.91W, h161^{km}±24^{km}, mb3.6/1, mb1 3.5/6, mb1mx3.3/25, mbtmp4.0/6, Error ellipse: s-maj=30.0km s-min=19.5km az=140.0

GUC 03 00:46:35.8±0.7, 24°.14S×67°.47W, h211^{km}±11^{km}, ML4.1

ISC 03 00:46:33.8±0.8, 24°.12S±0°.05×67°.15W±0°.05, h185^{km}±9^{km}, n28, σ1^s.46/46, 5C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	San Lorenzo	1.61	112	iP	Pn	00 47 08.2	+0.8
SLA				IAML		00 47 09.2	
	comp=Z,114nm,0.6s						
SLA				eS	Sn	00 47 34.9	+1.4
LVC	Limon Verde	2.21	312	P	Pn	00 47 15.4	+1.6
	comp=Z,22nm,0.3s,baz=135,slow=7.0,SNR=234						
LVC				S	Sn	00 47 45.5	+0.5
	comp=Z,38nm,0.3s,baz=81,slow=18,SNR=27						
LVC	Limon Verde	2.21	312	eP	Pn	00 47 15.4	+1.6
LVC				eS	Sn	00 47 45.3	+0.4
PB15	IPOC Station P	2.31	292⇑	iP	Pn	00 47 16.2	+1.4
PB15				iS	Sn	00 47 46.6	-0.2
GO02	Mina Guanaco	2.46	244⇑	iP	Pn	00 47 17.1	+0.6
GO02				iS	Sn	00 47 49.6	-0.2
PB06	IPOC Station P	2.63	302	eP	Pn	00 47 19.8	+1.3
PB06				iS	Sn	00 47 52.8	-0.5
PB06				IAML		00 47 55.2	
	comp=N,916nm,0.1s						
PB09	IPOC Station P	3.01	320	eP	Pn	00 47 24.8	+1.9
PB09				iS	Sn	00 48 02.1	+0.8
PB09				IAML		00 48 03.9	
	comp=N,265nm,0.6s						
PB14	IPOC Station P	3.01	260⇑	iP	Pn	00 47 23.2	+0.1
PB14				iS	Sn	00 47 59.9	-1.7
PB05	IPOC Station P	3.07	294	eP	Pn	00 47 24.5	+0.8
PB05				iS	Sn	00 48 00.6	-2.0
PB05				IAML		00 48 04.4	
	comp=N,148nm,0.3s						
AHML	Horco Molle	3.12	149	iP	Pn	00 47 24.5	+0.3
AHML				IAML		00 47 25.9	
	comp=Z,8.0nm,0.4s						
AHML				eS	Sn	00 48 01.6	-2.0
PB03	IPOC Station P	3.16	310	eP	Pn	00 47 26.1	+1.3
PB03				iS	Sn	00 48 03.2	-1.4
PB10	IPOC Station P	3.18	280⇑	iP	Pn	00 47 25.6	+0.7
PB10				eS	Sn	00 48 02.9	-1.8
PB04	IPOC Station P	3.28	302	eP	Pn	00 47 27.3	+1.0
PB04				iS	Sn	00 48 05.7	-1.5
PB07	IPOC Station P	3.47	313⇑	iP	Pn	00 47 29.5	+0.9
PB07				iS	Sn	00 48 09.6	-1.8
VCA	Vinchina	4.70	191	iP	Pn	00 47 45.3	+1.2
VCA				eS	Sn	00 48 41.7	+2.3
VCA				IAML		00 48 48.1	
	comp=Z,7.0nm,0.4s						
AROD	Rodeo	6.37	198	iP	Pn	00 48 07.2	+1.2
ACCO	Cerro Coronel	6.67	194	iP	Pn	00 48 09.8	0.0
ACCO				eS	Sn	00 49 24.1	-1.6
AMOG	MOGNA	6.90	190	iP	Pn	00 48 12.1	-0.6
RTLL	Cerro Villicun	7.28	189	iP	Pn	00 48 17.2	-0.4
RTLL				IAML		00 49 38.8	
	comp=Z,8.7nm,0.4s						
LPAZ	La Paz	7.84	353	P	Pn	00 48 27.4	+1.7
	comp=Z,0.9nm,0.3s,baz=155,slow=7.3,SNR=25						
LPAZ				S	Sn	00 49 53.7	-0.5
	comp=Z,0.2nm,0.3s,baz=68,slow=19,SNR=6.3						
RTLS	Leoncito	7.89	193	iP	Pn	00 48 25.7	-0.1
RTLS				IAML		00 49 55.2	
	comp=Z,5.1nm,0.4s						
ACAN	Cantantal	8.13	180	iP	Pn	00 48 26.3	-2.4
ASAL	Salagasta	8.57	190	iP	Pn	00 48 33.4	-1.2
SIV	San Ignacio	9.89	36	P	Pn	00 48 51.3	-0.7
	comp=Z,0.3nm,0.3s,baz=226,slow=12,SNR=9.5						
SIV				S	Sn	00 50 37.8	-4.6
	comp=Z,0.1nm,0.3s,baz=238,slow=18,SNR=2.9						
PLCA	Paso Flores	16.82	189	P	Pn	00 50 19.2	+0.7
	comp=Z,0.1nm,0.3s,baz=22,slow=12,SNR=6.9						
BDFB	Brasilia	19.85	68	P	P	00 50 51.0	+0.1
	comp=Z,1.4nm,0.3s,baz=242,slow=11,SNR=28						
TORD	Torodi Ar. Bea	76.73	69	P	P	00 58 06.4	+1.3
	comp=Z,0.9nm,0.6s,baz=265,slow=5.7,SNR=12						
MKAR	Makanchi Array	146.70	40	PKPbc	PKPab	01 05 56.4	+1.1
	comp=Z,0.4nm,0.5s,baz=308,slow=3.0,SNR=7.1						

IDC 03 00:59:34.4±0.9, 0°.27S×125°.27E, h0^{km}, mb3.9/6, mb1 4.0/7, mb1mx3.8/34, mbtmp3.9/7, ML3.8/1, MS2.8/1, Ms1 2.8/1, ms1mx2.4/38, Error ellipse: s-maj=81.1km s-min=17.4km az=72.0

DJA 03 00:59:37.2±0.4, 0°S±3°×12°5E±°, h10^{km}, M3.9/6, MLv3.9/6

ISC 03 00:59:36.2±0.7, 0°.34S±0°.06×125°.20E±0°.05, h10^{km}, n14, σ1^s.48/18, mb3.8/6, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	1.52	307	P	Pb	01 00 04.0	-0.5
KMSI				S	Sn	01 00 23.2	-0.1
SANI	Sanana	1.87	155	P	Pb	01 00 09.3	-1.2
SANI				S	Sn	01 00 31.9	-0.1
LBMI	Labuha	2.32	97	P	Pb	01 00 17.1	-1.1
TNTI	Ternate	2.44	63	P	Sn	01 00 50.3	+4.4
LUWI	Luwuk	2.52	254	P	Pg	01 00 27.1	+2.5
LUWI				S	Sg	01 00 58.4	+1.1
MRSI	Marisa	3.36	284	P	Pg	01 00 39.8	-0.7
DAV	Davao City (W)	7.37	3	LR	LR	01 04 33.4	
	comp=Z,74nm,20.9s,baz=243,slow=41						
FITZ	Fitzroy Crossi	17.65	179	P	P	01 03 43.1	-0.2
	0.3nm,0.3s,baz=18,slow=9.0,SNR=6.1						
WRA	Warramunga Arr	21.44	156	P	P	01 04 24.0	-0.7
	1.2nm,0.5s,baz=333,slow=9.2,SNR=16						
WRA				PcP	PcP	01 08 27.8	-0.5
	0.1nm,0.5s,baz=337,slow=2.0,SNR=3.1						
ASAR	Alice Springs	24.68	161	P	P	01 04 58.0	+0.5
	1.3nm,0.6s,baz=345,slow=11,SNR=13						
ASAR				PcP	PcP	01 08 34.6	-0.3
	0.4nm,0.5s,baz=332,slow=1.7,SNR=5.7						
STKA	Stephens Creek	34.99	155	P	P	01 06 29.4	+0.5
	0.9nm,0.4s,baz=325,slow=10,SNR=3.8						
USRK	Ussuriysk Ar.	44.76	7	P	P	01 07 48.9	-1.0
	0.8nm,0.5s,baz=185,slow=9.4,SNR=3.3						
SONM	Songino Array	50.70	344	P	P	01 08 35.7	-0.5
	0.2nm,0.6s,baz=179,slow=7.2,SNR=2.4						
MKAR	Makanchi Array	60.07	327	P	P	01 09 43.1	-0.5
	0.5nm,0.4s,baz=121,slow=8.2,SNR=13						

INET 03 01:02:36.2, 12°.49N×87°.74W, h59^{km}, ML4.2

SNET 03 01:02:36.3±0.8, 12°.49N×87°.96W, h13^{km}±14^{km}, ML3.4, 2C-1D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	0.79	9	eP	Pg	01 02 50.9	-0.8
CNCH				eS	Sb	01 03 03.2	+0.4
JUCU	Jucuar¡n	0.81	340	eP	Pg	01 02 51.5	-0.5
JUCU				eS	Sb	01 03 03.3	0.0
JUCU				IAML		01 03 05.2	
	comp=Z,2μm,0.3s						
LCND	La Caada	0.82	5⇓	eP	Pg	01 02 51.2	-1.0
LCND				eS	Sg	01 03 03.0	0.0
LCND				IAML		01 03 07.4	
	comp=Z,2μm,0.3s						
LCY	Lacayo	0.98	341⇑	eP	Pb	01 02 54.5	-0.9
BLLM	Bellamira	0.99	344⇑	eP	Pb	01 02 54.2	-1.1
BLLM				eS	Sb	01 03 08.4	+0.1
RANC	El Ranchito	0.99	341	eP	Pb	01 02 54.5	-1.0
RANC				IAML		01 03 11.1	
	comp=Z,1μm,0.2s						
ALJI	Alcalda de J	1.02	325	eP	Pb	01 02 55.1	-0.8
ALJI				IAML		01 03 12.3	
	comp=Z,1μm,0.2s						
PACA	Pacayal	1.04	340	eP	Pb	01 02 55.1	-1.2
TECA	Tecapa	1.13	332	eP	Pb	01 02 56.9	-1.0
TECA				eS	Sb	01 03 12.6	0.0
COEB	Comit de Eme	1.15	331	eP	Pb	01 02 57.3	-0.9
COEB				IAML		01 03 16.2	
	comp=Z,487nm,0.4s						
FAGO	Alcalda de S	1.21	353	eP	Pn	01 02 57.5	-1.5
PAVA	Las Pavas	1.54	322	eP	Pn	01 03 04.1	+0.3
PAVA				IAML		01 03 25.2	
	comp=Z,290nm,0.4s						

UPA 03 01:25:19.8±2.3, 10°.08N×83°.97W, h17^{km}±9^{km}, MW3.9

UCR 03 01:25:20.4±1.2, 9°.78N×84°.16W, h58^{km}±2^{km}, MD3.8, MW3.8

ISC 03 01:25:21.3±1.2, 9°.91N±0°.07×84°.08W±0°.06, h56^{km}±6^{km}, n35, σ1^s.04/58, 1C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJS	Escuela Geolog	0.04	40	eP	Pn	01 25 29.7	-0.1
SJS				eS	Sn	01 25 37.5	+1.5
HDC	Heredia	0.10	341	eP	Pn	01 25 24.6	-5.4
HDC	Heredia	0.10	341	eP	Pn	01 25 29.7	-0.3
HDC				eS	Sn	01 25 37.5	+1.3
LCR2	La Lucha 2	0.18	155	eP	Pn	01 25 29.4	-1.0
LCR2				eS	Sn	01 25 36.5	-0.4
SRA1	San Ramn	0.43	294	eP	Pn	01 25 31.5	-0.9
SRA1				eS	Sn	01 25 40.7	+0.4
EDDO	Dominical	0.68	162	eP	Pn	01 25 33.9	-1.2
EDDO				eS	Sn	01 25 44.4	-0.8
EDLM	Las Mercedes	0.79	142	eP	Pn	01 25 35.3	-1.2
EDLM				iS	Sn	01 25 47.1	-0.5
FORC	Fortuna	0.80	314	iP	Pn	01 25 36.5	-0.2
FORC				iS	Sn	01 25 49.2	+1.3
CEDE	Laguna Cedeo	0.84	313	iP	Pn	01 25 37.1	-0.1
CEDE				iS	Sn	01 25 50.0	+1.1
JTS	Las Juntas de	0.94	294	iP	Pn	01 25 37.4	-1.0
JTS				iS	Sn	01 25 51.2	+0.1
JTS	Las Juntas de	0.94	294	eP	Pn	01 25 37.4	-1.0
JTS				eS	Sn	01 25 50.8	-0.3
EDBA	Buenos Aires	1.09	133	eP	Pn	01 25 39.0	-1.3
EDBA				eS	Sn	01 25 53.9	-0.6
EDPN	Palmar Norte	1.12	147	eP	Pn	01 25 39.8	-1.0
EDPN				eS	Sn	01 25 55.7	+0.4
ACAL	Aguas Claras	1.19	308	iP	Pn	01 25 41.1	-0.7
ACAL				iS	Sn	01 25 57.6	+0.7
PTEN	Parque Tenorio	1.20	312	iP	Pn	01 25 41.4	-0.5
PLVR	Palo Verde	1.32	289	eP	Pn	01 25 42.8	-0.9
COLC	Colonia	1.34	304	iP	Pn	01 25 43.0	-0.7
COLC				iS	Sn	01 26 01.1	+0.6
MESS	Mesas	1.37	307	iP	Pn	01 25 43.8	-0.5
MESS				iS	Sn	01 26 01.4	0.0
GUAI	GUAI	1.45	285	iP	Pn	01 25 43.9	-1.4
EDSV	San Vito	1.54	135	eP	Pn	01 25 46.4	-0.2
EDSV				eS	Sn	01 26 07.9	+2.4
BUAI	Buenos Aires	1.56	308	iP	Pn	01 25 46.0	-0.8
PTJ1	Puerto Jimnez	1.56	150	iP	Pn	01 25 47.4	+0.7
PTJ1				iS	Sn	01 26 09.1	+3.2
BUEV	Buena Vista	1.58	304	eP	Pn	01 25 46.4	-0.6
GB1A	Borinquen Arri	1.58	305	eP	Pn	01 25 46.7	-0.4
GB1A				eS	Sn	01 26 07.0	+0.4
CNI2	El Empalme, Bo	1.66	107	iP	Pn	01 25 46.5	-1.5
CNI2				iS	Sn	01 26 07.1	-1.2
BRU2	Volcan	1.76	129⇑	iP	Pn	01 25 48.8	-0.9
	baz=327,slow=5.6						
BRU2				iS	Sn	01 26 09.7	-1.3
BRU2	Volcan	1.76	129	eP	Pn	01 25 48.7	-0.9
BCO2	Palmira	1.93	127	iP	Pn	01 25 51.4	-0.6
BCO2				iS	Sn	01 26 15.3	+0.1
SBAR3	San Bartolo, C	1.97	143	eP	Pn	01 25 54.4	+2.0
PTAR3	Potrerillos Ar	1.98	128	eP	Pn	01 25 52.0	-0.5
CHGR2	Aguacate	2.14	117	iP	Pn	01 25 54.7	0.0
DVD	David	2.17	132	iP	Pn	01 25 54.3	-0.8
DVD				iS	Sn	01 26 22.1	+1.2
LOMA3	Las Lomas, Chi	2.22	131	iP	Pn	01 25 55.6	-0.1
LOMA3				iS	Sn	01 26 21.6	-0.5
CHIR3	Chiriqui UPA,	2.29	131	iP	Pn	01 25 56.7	0.0
CHIR3				iS	Sn	01 26 25.4	+1.7
CACAO	El Cacao, Vera	4.08	128	eP	Pn	01 26 21.8	+0.7

INET 03 01:32:21.3, 12°.35N×87°.92W, h74^{km}, ML3.8

SNET 03 01:32:24.3±1.0, 12°.47N×87°.93W, h17^{km}±15^{km}, ML3.2, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	0.81	7	eP	Pb	01 32 39.2	-0.8
CNCH				eS	Sg	01 32 51.5	+0.7
CNCH				IAML		01 32 54.0	
	comp=Z,2μm,0.1s						
LCND	La Caada	0.83	3	eP	Pb	01 32 39.6	-0.8
LCND				eS	Sg	01 32 51.8	+0.2
LCND				IAML		01 32 54.7	
	comp=Z,716nm,0.3s						
JUCU	Jucuar¡n	0.84	338	eP	Pb	01 32 40.0	-0.5
JUCU				eS	Sg	01 32 52.2	+0.5
JUCU				IAML		01 32 55.4	
	comp=Z,628nm,0.3s						
PACA	Pacayal	1.06	339	eP	Pb	01 32 43.5	-0.9
FAGO	Alcalda de S	1.23	352	eP	Pn	01 32 45.9	-0.9
FAGO				eS	Sb	01 33 02.0	-0.7

IDC 03 01:36:54.4±1.3, 35°.76N×74°.46E, h0^{km}, mb3.6/4, mb1 3.6/11, mb1mx3.4/53, mbtmp3.5/11, ML3.0/7, MS3.2/1, Ms1 3.2/1, ms1mx2.6/42, Error ellipse: s-maj=24.9km s-min=21.5km az=79.0

ISC 03 01:36:58.1±0.8, 35°.54N±0°.09×74°.6E±0°.1, h35^{km}, n21, σ2^s.07/20, mb3.6/4, Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	7.08	359	Pn	Pn	01 38 40.1	+0.7
	0.2nm,0.3s,baz=198,slow=13,SNR=2.6						
AAK				Sn	Sn	01 40 02.5	+3.7
	0.0nm,0.3s,baz=175,slow=11,SNR=2.8						
DANN	Dangsing	10.58	130	eP	Pn	01 39 29.6	+2.0
	12nm,0.4s						
GKN	Gorkha	11.38	129	eP	Pn	01 39 38.7	+0.4
	16nm,0.4s						
DMN	Daman	11.95	129	eP	Pn	01 39 46.2	0.0
	12nm,0.4s						
PKIN	Phulchoki	12.16	128	eP	Pn	01 39 48.6	-0.5
	11nm,0.4s						
PKI	Pulchoki	12.17	128	eP	Pn	01 39 48.6	-0.7
	8.3nm,0.4s						
GUN	Gumba	12.25	125	eP	Pn	01 39 49.4	-1.0
	8.5nm,0.4s						
JIRN	Jiri	12.62	125	eP	Pn	01 39 54.2	-1.3
	24nm,0.5s						
MKAR	Makanchi Array	12.64	25	Pn	Pn	01 39 53.0	-2.4
	0.0nm,0.3s,baz=237,slow=5.0,SNR=2.7						
RAMN	Ramite	13.37	127	eP	Pn	01 40 01.7	-3.9
GEYT	Alibeck	13.43	285	Pn	Pn	01 40 05.1	-1.0
	0.2nm,0.3s,baz=118,slow=15,SNR=3.1						
TAPN	Taplejung	13.85	123	eP	Pn	01 40 07.5	-4.8
	3.9nm,0.3s						
KURBB	Kurchatov Arra	15.34	10	Pn	Pn	01 40 30.0	-1.9
	0.0nm,0.3s,baz=194,slow=12,SNR=4.1						
BVAR	Borovoye Array	17.73	352	P	Pn	01 41 00.5	-1.5
	0.1nm,0.3s,baz=156,slow=11,SNR=4.4						
AKTO	Aktyubinsk	19.13	326	P	P	01 41 17.9	-0.1
	0.3nm,0.3s,baz=130,slow=11,SNR=9.5						
ZALV	Zalesovo Beam	19.75	18	P	P	01 41 22.4	-2.3
	0.1nm,0.3s,baz=216,slow=12,SNR=6.3						
SONM	Songino Array	26.54	53	P	P	01 42 34.2	+1.5
	0.1nm,0.5s,baz=264,slow=9.8,SNR=3.1						
CMAR	Chiang Mai Arr	27.46	122	P	P	01 42 44.9	+3.9
	0.9nm,0.4s,baz=311,slow=12,SNR=6.2						
BRTR	Keskin Array B	32.49	290	LR	LR	02 00 24.4	
	comp=Z,38nm,18.1s,baz=310,slow=44						
TORD	Torodi Ar. Bea	68.62	271	P	P	01 47 58.4	+0.4
	0.3nm,0.6s,baz=42,slow=7.0,SNR=4.6						
YKA	Yellowknife Ar	82.02	4	P	P	01 49 14.1	-0.1
	0.4nm,0.6s,baz=348,slow=5.1,SNR=7.7						

GCG 03 01:46:31.9±0.3, 14°.03N×93°.05W, h65^{km}, MD4.0

IDC 03 01:46:31.4±3.0, 14°.45N×92°.99W, h0^{km}, mb3.5/3, mb1 3.9/6, mb1mx3.6/40, mbtmp3.6/6, ML3.7/3, MS3.1/1, Ms1 3.1/1, ms1mx2.6/28, Error ellipse: s-maj=53.2km s-min=16.6km az=4.0

MEX 03 01:46:32.4±1.0, 14°.16N×93°.11W, h8^{km}±20^{km}, MD3.7

ISC 03 01:46:34.6±1.2, 14°.24N±0°.09×93°.07W±0°.05, h37^{km}, n16, σ1^s.59/23, mb3.7/3, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.02	49	iP	Pn	01 46 50.6	-1.7
THIG				iS	Sn	01 47 04.6	-0.8
PCIG		1.47	354	eP	Pn	01 46 56.2	-2.2
PCIG				iS	Sn	01 47 15.0	-1.3
STG3	Santiaguito 3,	1.52	72	eP	Pn	01 46 58.6	-0.8
FUG	Fuego 3	2.17	84	eP	Pn	01 47 06.7	-1.6
CCIG	Comitan	2.22	24	iP	Pn	01 47 07.9	-1.1
CCIG				iS	Sn	01 47 36.1	+0.8
TGIG		2.52	359	eP	Pn	01 47 11.7	-1.4
TGIG				iS	Sn	01 47 43.0	+0.3
IXG	Ixpaco	2.55	91	eP	Pn	01 47 11.6	-1.9
APG	El Apazote	2.63	73	Pn	Pn	01 47 13.8	-0.8
	9.0nm,0.3s,baz=263,slow=8.1,SNR=37						
APG				Lg	Lg	01 47 51.7	
	11nm,0.3s,baz=304,slow=16,SNR=5.4						
HUIG	Huatulco	3.31	298	iP	Pn	01 47 21.6	-2.2
HUIG				eS	Sn	01 47 59.9	-2.0
CMIG	Matias Romero	3.33	329	Pn	Pn	01 47 22.5	-1.6
	2.7nm,0.3s,baz=140,slow=13,SNR=20						
CMIG				Sn	Sn	01 48 03.9	+1.4
	5.2nm,0.3s,baz=127,slow=15,SNR=4.9						
CMIG	Matias Romero	3.33	329	eP	Pn	01 47 23.0	-1.2
CMIG				iS	Sn	01 48 03.0	+0.5
TEIG	Tepich	7.51	37	Pn	Pn	01 48 19.3	-2.2
	6.1nm,0.3s,baz=229,slow=19,SNR=21						
TEIG				Sn	Sn	01 49 44.3	-1.1
	1.5nm,0.3s,baz=231,slow=20,SNR=2.2						
NNA	Nana	30.62	148	LR	LR	02 02 37.1	
	comp=Z,39nm,20.5s,baz=14,slow=31						
NVAR	Mina Array Bea	32.84	322	P	P	01 53 07.5	+2.5
	0.2nm,0.6s,baz=122,slow=9.7,SNR=3.6						
YKA	Yellowknife Ar	50.56	347	P	P	01 55 29.2	0.0
	0.6nm,0.6s,baz=149,slow=7.6,SNR=11						
ILAR	Eielson Array	62.22	337	P	P	01 56 53.1	+1.0
	0.6nm,1.0s,baz=161,slow=5.7,SNR=4.3						

NEIC 03 02:05:14.9±2.1, 14°.99S±0°.08×26°.95E±0°.04, h10^{km}±2^{km}, mb4.1/4, Error ellipse: s-maj=13.0km s-min=6.0km az=178.0

IDC 03 02:05:16.0±1.1, 15°.07S×27°.01E, h0^{km}, mb3.5/2, mb1 4.1/9, mb1mx3.8/31, mbtmp4.0/9, ML4.0/6, Error ellipse: s-maj=15.2km s-min=12.0km az=9.0

LSZ 03 02:05:18.0±0.3, 14°.92S×27°.19E, h10^{km}, MD3.8, ML4.5

EAF 03 02:05:21.8, 15°.24S×27°.11E, h7^{km}, MD4.0

PRE 03 02:05:28.6±1.0, 15°.75S×27°.96E, h5^{km}, ML3.4

ISC 03 02:05:16.1±0.8, 15°.16S±0°.03×27°.08E±0°.04, h9^{km}±4^{km}, n49, σ3^s.33/66, 7C, Zambia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSZ	Lusaka	1.07	97	iP	Pn	02 05 41.2	+3.6
LSZ	Lusaka	1.07	97	Pg	Pn	02 05 38.8	+1.2
	142nm,0.3s,baz=287,slow=16,SNR=1378						
LSZ				LR	LR	02 05 40.8	
	comp=Z,72nm,18.1s,baz=186,slow=21						
LSZ				Lg	Lg	02 05 53.2	
	485nm,0.3s,baz=200,slow=18,SNR=35						
LSZ	Lusaka	1.07	97	iP	Pn	02 05 41.2	+3.6
LSZ	Lusaka	1.07	97		Pn	02 05 38.8	+1.2
LSZ				Sg	Sn	02 05 55.2	+2.5
ITZ	Itezhi-Tezhi	1.18	240⇑	iP	Pg	02 05 42.2	+3.4
ITZ				i		02 05 42.3	
	baz=54,slow=22						
ITZ				iS	Sn	02 05 59.9	+4.5
ITZ	Itezhi-Tezhi	1.18	240⇑	iP	Pg	02 05 42.3	+3.5
ITZ				i		02 05 42.4	
	baz=53,slow=22						
ITZ				AMP		02 05 42.7	
	comp=Z,10μm,0.4s						
ITZ				iS	Sn	02 06 00.1	+4.8
ITZ	Itezhi-Tezhi	1.18	240⇑	iP	Pg	02 05 42.2	+3.4
ITZ				i		02 05 42.3	
	baz=54,slow=22						
ITZ				iS	Sn	02 05 59.9	+4.5
ITZ	Itezhi-Tezhi	1.18	240⇑	iP	Pg	02 05 42.3	+3.5
ITZ				i		02 05 42.5	
	baz=53,slow=22						
ITZ				iS	Sn	02 05 59.6	+4.3

ITZ	**Itezhi-Tezhi**	**1.18**	**240**	⇑*i*P	**Pg**	**02 05 42.3**	**+3.4**
ITZ				*i*		02 05 42.4	
	baz=53,slow=22						
ITZ				*i* S	**Sn**	**02 06 00.1**	**+4.8**
ITZ	**Itezhi-Tezhi**	**1.18**	**240**	⇑*i*P	**Pg**	**02 05 42.2**	**+3.4**
ITZ				*i*		02 05 42.5	
	baz=54,slow=18						
ITZ				*i* S	**Sn**	**02 06 00.3**	**+4.9**
ITZ	**Itezhi-Tezhi**	**1.18**	**240**	⇑*i*P	**Pg**	**02 05 42.2**	**+3.4**
ITZ				*i*		02 05 42.3	
	baz=54,slow=18						
ITZ				*i* S	**Sn**	**02 06 00.1**	**+4.8**
MATP	**Matopo**	**5.41**	**166**	*i* P	Pn	02 06 39.9	+2.7
MATP				*i* S	**Sn**	**02 07 39.7**	**0.0**
MATP	**Matopo**	**5.41**	**166**	Pn	**Pn**	**02 06 38.1**	**+0.9**
	comp=Z,4.1nm,0.3s,baz=350,slow=14,SNR=123						
MATP				Sn	**Sn**	**02 07 41.3**	**+1.6**
	comp=Z,14nm,0.3s,baz=52,slow=16,SNR=9.0						
MATP				Lg	Lg	02 08 10.8	
	comp=Z,26nm,0.3s,baz=260,slow=21,SNR=12						
MATP	**Matopo**	**5.41**	**166**	*i* P	Pn	02 06 39.9	+2.7
MATP				*i* S	**Sn**	**02 07 39.7**	**0.0**
MATP	**Matopo**	**5.41**	**166**		**Pn**	**02 06 38.1**	**+0.9**
MATP					**Sn**	**02 07 41.3**	**+1.6**
MSNA	**Messina**	**7.67**	**159**	*i* P	Pn	02 07 11.1	+2.9
MSNA				*i* S	**Sn**	**02 08 31.8**	**-3.6**
MSNA	**Messina**	**7.67**	**159**	*e*P	Pn	02 07 12.6	+4.4
MSNA				*e*S	**Sn**	**02 08 26.9**	**-8.4**
MSNA				AML	AML	02 09 01.2	
	comp=Z,26nm,0.5s						
MSNA	**Messina**	**7.67**	**159**	*i* P	Pn	02 07 11.1	+2.9
MSNA				*i* S	**Sn**	**02 08 31.8**	**-3.6**
ZOMB	**Zomba**	**7.98**	**93**	*i* P	**Pn**	**02 07 14.2**	**+1.7**
ZOMB				S	**Sn**	**02 08 42.7**	**-0.4**
ZOMB	**Zomba**	**7.98**	**93**	*i* P	**Pn**	**02 07 14.2**	**+1.7**
ZOMB				S	**Sn**	**02 08 42.7**	**-0.4**
LBTB	**Lobatse**	**9.91**	**188**	Pn	**Pn**	**02 07 41.6**	**+2.7**
	comp=Z,1.7nm,0.3s,baz=2.4,slow=14,SNR=19						
LBTB				Sn	**Sn**	**02 09 31.7**	**+1.4**
	comp=Z,2.8nm,0.3s,baz=98,slow=22,SNR=4.0						
LBTB				Lg	Lg	02 10 33.6	
	comp=Z,2.6nm,0.3s,baz=94,slow=22,SNR=6.5						
LBTB	**Lobatse**	**9.91**	**188**	*e*P	Pn	02 07 46.8	+7.9
LBTB				*e*S	**Sn**	**02 09 28.6**	**-1.7**
LBTB				AML	AML	02 09 53.1	
	comp=Z,16nm,0.6s						
LBTB	**Lobatse**	**9.91**	**188**		**Pn**	**02 07 40.3**	**+1.4**
LBTB				Sn	**Sn**	**02 09 31.5**	**+1.2**
TSUM	**Tsumeb**	**9.93**	**245**	*i* P	**Pn**	**02 07 40.6**	**+1.4**
TSUM				*i* S	**Sn**	**02 09 23.2**	**-7.8**
TSUM	**Tsumeb**	**9.93**	**245**	Pn	**Pn**	**02 07 39.2**	**0.0**
	comp=Z,3.4nm,0.3s,baz=60,slow=14,SNR=48						
TSUM				Sn	**Sn**	**02 09 27.6**	**-3.4**
	comp=Z,4.0nm,0.3s,baz=338,slow=24,SNR=7.7						
TSUM				Lg	Lg	02 10 30.4	
	comp=Z,3.2nm,0.3s,baz=148,slow=1.4,SNR=4.6						
TSUM	**Tsumeb**	**9.93**	**245**	*i* P	**Pn**	**02 07 40.6**	**+1.4**
TSUM				*i* S	**Sn**	**02 09 23.2**	**-7.8**
TSUM	**Tsumeb**	**9.93**	**245**		**Pn**	**02 07 40.2**	**+1.0**
TSUM					**Sn**	**02 09 27.3**	**-3.7**
PRYS	**Parys**	**11.71**	**179**	*e*P	Pn	02 08 10.6	+6.9
PRYS				*e*S	**Sn**	**02 10 08.5**	**-6.2**
PRYS				AML	AML	02 11 36.9	
	comp=Z,14nm,0.6s						
BOSA	**Boshof**	**13.50**	**187**	*i* P	**Pn**	**02 08 27.0**	**-1.0**
BOSA				*i* S	Sn	02 10 43.4	-15
BOSA	**Boshof**	**13.50**	**187**	Pn	**Pn**	**02 08 30.2**	**+2.2**
	comp=Z,0.5nm,0.3s,baz=4.1,slow=13,SNR=10						
BOSA				Sn	**Sn**	**02 10 54.4**	**-4.0**
	comp=Z,1.4nm,0.3s,baz=88,slow=7.5,SNR=5.8						
BOSA				Lg	Lg	02 12 28.1	
	comp=Z,1.2nm,0.3s,baz=287,slow=21,SNR=4.2						
BOSA	**Boshof**	**13.50**	**187**	*e*P	**P**	**02 08 35.9**	**-1.5**
BOSA				*e*S	**Sn**	**02 10 53.4**	**-5.0**
BOSA				AML	AML	02 12 41.7	
	comp=Z,16nm,0.6s						
BOSA	**Boshof**	**13.50**	**187**	*i* P	**Pn**	**02 08 27.0**	**-1.0**
BOSA				*i* S	Sn	02 10 43.4	-15
BOSA	**Boshof**	**13.50**	**187**		**Pn**	**02 08 28.8**	**+0.7**
BOSA	**Boshof**	**13.50**	**187**		**Sn**	**02 10 54.4**	**-4.0**
MBAR	**Mbarara**	**14.91**	**14**	Pn	**Pn**	**02 08 48.1**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=193,slow=20,SNR=3.7						
MBAR	**Mbarara**	**14.91**	**14**		**Pn**	**02 08 44.4**	**-3.0**
KMBO	**Kilima Mbogo**	**17.18**	**37**	Pn	**Pn**	**02 09 16.0**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=218,slow=20,SNR=5.8						
KMBO				Lg	Lg	02 14 07.7	
	comp=Z,0.1nm,0.3s,baz=270,slow=18,SNR=4.6						
KMBO	**Kilima Mbogo**	**17.18**	**37**	Pn	**Pn**	**02 09 12.4**	**-4.5**
SUR	**Sutherland**	**18.07**	**197**	P	P	02 09 35.6	+7.4
	comp=Z,0.2nm,0.3s,baz=355,slow=12,SNR=3.8						
SUR				Lg	Lg	02 14 41.7	
	comp=Z,0.4nm,0.3s,baz=313,slow=19,SNR=2.4						
SUR	**Sutherland**	**18.07**	**197**	P	**Pn**	**02 09 27.3**	**-0.5**
OPO	**Ambohidratompo**	**19.54**	**103**	P	**Pn**	**02 09 48.4**	**+2.7**
	comp=Z,0.6nm,0.3s,baz=284,slow=12,SNR=4.1						
OPO	**Ambohidratompo**	**19.54**	**103**	P	**Pn**	**02 09 48.4**	**+2.7**
TOA0	**Torodi Ar. Sit**	**37.71**	**317**	P	**P**	**02 12 29.2**	**-3.1**
TOA0				IAmb	IAmb	02 12 34.0	
	comp=Z,2.4nm,1.0s						
TORD	**Torodi Ar. Bea**	**37.71**	**317**	P	**P**	**02 12 32.5**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=136,slow=7.7,SNR=6.4						
TORD	**Torodi Ar. Bea**	**37.71**	**317**	P	**P**	**02 12 32.5**	**+0.1**
GYA0B	**ALIBECK ARRAY**	**60.31**	**28**	P	**P**	**02 15 22.8**	**-2.6**
AKBB	**Malin Array Si**	**65.60**	**1**	P	**P**	**02 15 59.2**	**-1.0**
AKBB				IAmb	IAmb	02 16 08.1	
	comp=Z,2.2nm,1.0s						
MKAR	**Makanchi Array**	**79.06**	**35**	P	**P**	**02 17 22.2**	**+1.4**
	comp=Z,0.2nm,0.7s,baz=225,slow=5.9,SNR=3.7						
MKAR	**Makanchi Array**	**79.06**	**35**	P	**P**	**02 17 22.2**	**+1.4**

JMA ***03*** *02:25:03.5±0.1, 24°.95N×122°.88E, h21$^{km}\pm1^{km}$, M2.2*

TAP ***03*** *02:25:06.1, 24°.76N×122°.84E, h18$^{km}\pm1^{km}$, ML2.9, C*

ISC 03 02:25:04.4±1.4**, 24°.86N**±0°.06×**122°.88E**±0°.03**, h19**$^{km}\pm3^{km}$**, n38,** σ**0^s.74**/64**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.41**	**171**	P	**Pg**	**02 25 13.3**	**+0.4**
JYNG				*e*S	**Sb**	**02 25 20.4**	**+1.4**
YOJ	**Yonaguni jima**	**0.41**	**163**	*e*P	**Pg**	**02 25 13.4**	**+0.5**
	baz=152						
YOJ	**Yonaguni jima**	**0.41**	**163**	P	**Pg**	**02 25 13.3**	**+0.3**
YOJ				*e*S	**Sb**	**02 25 20.2**	**+1.1**
EOS1	**EOS1**	**0.74**	**246**	P	**Pg**	**02 25 19.3**	**+0.2**
	baz=252						
EOS1				*e*S	**Sg**	**02 25 29.1**	**+0.2**
	baz=252						
TIPB	**Shuangxi**	**0.96**	**277**	*e*P	**Pg**	**02 25 23.5**	**+0.4**
	baz=283						
TWC	**Suao**	**0.96**	**255**	*e*P	**Pb**	**02 25 22.1**	**-0.4**
	baz=261						
TWC				*e*S	**Sb**	**02 25 34.6**	**-0.2**
	baz=261						
TWE	**Neicheng**	**1.11**	**263**	*e*P	**Pb**	**02 25 25.2**	**+0.3**
	baz=268						
TWE				*e*S	**Sb**	**02 25 38.9**	**-0.1**
	baz=268						
ENA	**Nanau**	**1.12**	**248**	P	**Pb**	**02 25 25.4**	**+0.3**
	baz=252						
ENA				*e*S	**Sb**	**02 25 38.2**	**-1.1**
	baz=252						
SLBB	**Yuanshan**	**1.13**	**265**	*e*P	**Pb**	**02 25 25.9**	**+0.5**
	baz=270						
HATJ	**Hateruma jima**	**1.16**	**133**	P	**Pn**	**02 25 25.4**	**-0.2**
JKRS	**Kuro-shima**	**1.20**	**121**	P	**Pn**	**02 25 25.9**	**-0.3**
JKRS				*e*S	**Sb**	**02 25 41.7**	**0.0**
ENTT	**Nioudou**	**1.21**	**260**	*e*P	**Pb**	**02 25 27.0**	**+0.3**
	baz=264						
ENTT				*e*S	**Sn**	**02 25 42.0**	**-0.1**
	baz=264						
YM01	**YM01**	**1.22**	**284**	*e*P	**Pg**	**02 25 28.3**	**+0.3**
	baz=289						
NWLT	**Wulai**	**1.25**	**267**	*e*P	**Pg**	**02 25 28.2**	**-0.4**
	baz=271						
NWLT				*e*S	**Sb**	**02 25 43.1**	**0.0**
	baz=271						
NDT	**Datong Townshi**	**1.26**	**259**	*e*P	**Pg**	**02 25 28.5**	**-0.4**
	baz=263						
NDT				*e*S	**Sn**	**02 25 43.6**	**0.0**
	baz=263						
JISG	**Ishigakijimahi**	**1.33**	**101**	P	**Pn**	**02 25 27.6**	**-0.4**
NACB	**Ninganchiao**	**1.35**	**240**	*e*P	**Pn**	**02 25 28.6**	**+0.4**
	baz=244						
NACB				*e*S	**Sn**	**02 25 45.4**	**-0.2**
	baz=244						
YHNB	**Yeheng**	**1.38**	**262**	*e*P	**Pb**	**02 25 29.9**	**+0.4**
	baz=267						
YHNB				S	**Sn**	**02 25 45.8**	**-0.5**
	baz=267						
NSK	**Sanguang**	**1.39**	**263**	*e*P	**Pg**	**02 25 30.7**	**-0.6**
	baz=267						
NSK				S	**Sn**	**02 25 45.9**	**-0.8**
	baz=267						
NNSB	**Datong**	**1.42**	**253**	*e*P	**Pb**	**02 25 30.2**	**-0.2**
	baz=257						
NNSB				*e*S	**Sb**	**02 25 48.2**	**0.0**
	baz=257						
NNSH	**Datong**	**1.42**	**253**	*e*P	**Pb**	**02 25 31.0**	**+0.6**
	baz=257						
NNSH				*e*S	**Sb**	**02 25 48.1**	**-0.1**
	baz=257						
ETLH	**Xiulin Townshi**	**1.43**	**243**	*e*P	**Pb**	**02 25 30.5**	**+0.1**
	baz=256						
ETLH				*e*S	**Sb**	**02 25 48.3**	**+0.1**
	baz=256						
NNS	**Nan Shan**	**1.43**	**253**	*e*P	**Pg**	**02 25 31.5**	**-0.5**
	baz=257						
NNS				*e*S	**Sn**	**02 25 47.6**	**-0.1**
	baz=257						
WHF	**Hehuan Shan**	**1.63**	**245**	*e*P	**Pb**	**02 25 34.0**	**-0.1**
	baz=248						
WHF				*e*S	**Sb**	**02 25 54.5**	**0.0**
	baz=248						
TDCB	**Techi**	**1.68**	**249**	*e*P	**Pb**	**02 25 35.2**	**+0.5**
	baz=260						
TDCB				*e*S	**Sb**	**02 25 55.6**	**+0.2**
	baz=260						
LIOB	**Emei**	**1.70**	**263**	*e*P	**Pb**	**02 25 35.4**	**+0.3**
	baz=267						
LIOB				*e*S	**Sb**	**02 25 56.3**	**+0.1**
	baz=267						
CHGB	**Renai**	**1.74**	**243**	*e*P	**Pb**	**02 25 35.3**	**-0.6**
	baz=247						
CHGB				*e*S	**Sb**	**02 25 56.6**	**-0.8**
	baz=247						
OWD	**Renai**	**1.79**	**240**	*e*P	**Pn**	**02 25 35.3**	**+0.9**
	baz=244						
OWD				*e*S	**Sn**	**02 25 55.9**	**-0.8**
	baz=244						
WHP	**Taichung City**	**1.85**	**252**	*e*P	**Pb**	**02 25 37.8**	**+0.2**
	baz=262						
WHP				*e*S	**Sb**	**02 26 00.6**	**+0.2**
	baz=262						
HGSD	**Ruisui**	**1.90**	**225**	*e*P	**Pn**	**02 25 36.5**	**+0.8**
	baz=228						
VWDT	**VWDT**	**1.93**	**236**	*e*P	**Pn**	**02 25 37.3**	**+1.2**
	baz=239						
VWDT				*e*S	**Sn**	**02 25 59.4**	**-0.4**
	baz=239						
SSLB	**Suanglung**	**2.05**	**239**	*e*P	**Pb**	**02 25 39.7**	**-1.4**
	baz=243						
YULB	**Yu-li**	**2.05**	**225**	*e*P	**Pn**	**02 25 38.1**	**+0.2**
	baz=214						
YULB				*e*S	**Sn**	**02 26 02.2**	**-0.7**
	baz=214						
WHYT	**Xinyi Township**	**2.18**	**238**	*e*S	**Sn**	**02 26 07.8**	**+1.7**
	baz=241						
FULB	**Fuli**	**2.19**	**222**	*e*P	**Pn**	**02 25 39.2**	**-0.7**
	baz=225						
ALS	**Alishan**	**2.32**	**235**	*e*P	**Pb**	**02 25 44.0**	**-1.8**
	baz=238						
TPUB	**Ta-pu**	**2.57**	**233**	*e*P	**Pn**	**02 25 46.8**	**+1.7**
	baz=237						
TPUB				*e*S	**Sn**	**02 26 17.1**	**+1.3**
	baz=237						
WTP	**Ta-pu**	**2.62**	**233**	*e*P	**Pb**	**02 25 48.4**	**-2.3**
	baz=236						

NIED ***03*** *02:27:00, 26°.40N×127°.40E, h56^{km}, Mw5.0 Best double couple: $M_0$4.09000×10^{16} NP1:ϕ_s355.00000°, δ64.00000°, λ58.00000°. NP2:ϕ_s230.00000°, δ41.00000°, λ138.00000°.*

BJI ***03*** *02:27:27.7±0.0, 26°.12N×127°.52E, h60^{km}, mB4.8/55, mb4.9/70, ML4.6/1, Ms4.5/68, Ms7 4.4/58*

MOS ***03*** *02:27:29.5±1.1, 26°.43N×127°.25E, h47^{km}, mb5.5/54, MS4.5/9, Error ellipse: s-maj=6.7km s-min=4.2km az=108.9*

IDC ***03*** *02:27:30.8±0.6, 26°.45N×127°.29E, h45$^{km}\pm4^{km}$, mb4.6/38, mb1 4.7/40, mb1mx4.7/48, mbtmp4.9/40, MS4.2/35, Ms1 4.2/35, ms1mx4.1/39, Error ellipse: s-maj=10.8km s-min=6.6km az=170.0*

NEIC ***03*** *02:27:31.0±2.7, 26°.29N±0°.07×127°.36E±0°.05, h58$^{km}\pm5^{km}$, mb5.2/220, Error ellipse: s-maj=11.0km s-min=4.4km az=155.0*

GCMT ***03*** *02:27:31.0±0.2, 26°.29N±0°.01×127°.47E±0°.02, h48$^{km}\pm1^{km}$, MW5.1/110, Moment Tensor Solution. s63, c89; s110, c167; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.55±.21; $M_{\theta\theta}$-0.15±.14; $M_{\phi\phi}$-4.40±.14; $M_{r\theta}$-0.72±.11; $M_{\theta\phi}$-2.23±.09; $M_{\phi r}$2.99±.12; Best double couple: $M_0$5.86900×10^{16} NP1:ϕ_s223.00000°, δ35.00000°, λ123.00000°. NP2:ϕ_s4.00000°, δ61.00000°, λ69.00000°. Principal axes: T 5.7770, Plg67.0000°, Azm234.0000°; N 0.1860, Plg18.0000°, Azm15.0000°; P -5.9620, Plg14.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

JMA ***03*** *02:27:31.2±0.2, 26°.31N×127°.35E, h47$^{km}\pm2^{km}$, M5.0*

JMA Felt III J1.

BGR ***03*** *02:27:32.4±0.0, 27°.00N×127°.16E, h33^{km}, mb5.6, Ms4.9*

ISC 03 02:27:31.0±0.3**, 26°.33N**±0°.03×**127°.34E**±0°.03**, h54**$^{km}\pm2^{km}$**, h54**^{km}**:pP-P, n743,** σ**1^s.44**/744**, mb5.2**/250**, MS4.3**/49**, 69C-16D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGN	**Aguni-jima**	**0.27**	**341**	⇓P	**Pn**	**02 27 40.1**	**-0.2**
JAGN				S	**Sn**	**02 27 46.5**	**-0.5**
JJT3	**Tamagusuku3**	**0.44**	**115**	⇑P	**Pn**	**02 27 41.6**	**-0.3**
JJT3				S	**Sn**	**02 27 49.7**	**0.0**
JKE	**Kume jima 2**	**0.50**	**270**	⇓P	**Pn**	**02 27 42.4**	**-0.2**
JKE				S	**Sn**	**02 27 50.5**	**-0.4**
JNTH	**Nagotoyohara**	**0.64**	**73**	⇑P	**Pn**	**02 27 43.7**	**-0.5**
JNTH				S	**Sn**	**02 27 52.5**	**-1.2**
JIH	**Iheya**	**0.90**	**38**	⇑P	**Pn**	**02 27 47.3**	**-0.2**
JIH				S	**Sn**	**02 27 58.7**	**-0.9**
JOW	**Kunigami**	**0.97**	**59**	⇑P	**Pn**	**02 27 48.5**	**0.0**
JOW				S	**Sn**	**02 28 00.9**	**-0.5**
JOW	**Kunigami**	**0.97**	**59**	P	**Pn**	**02 27 48.5**	**0.0**
	584nm,0.3s,baz=165,slow=13,SNR=2635						
JOW				S	**Sn**	**02 28 00.9**	**-0.5**
	3µm,0.3s,baz=107,slow=14,SNR=56						
JOW	**Kunigami**	**0.97**	**59**		**Pn**	**02 27 48.7**	**+0.2**
JOW					**Sn**	**02 28 00.2**	**-1.2**
JYRO	**Yoronjima**	**1.21**	**55**	⇑P	**Pn**	**02 27 51.5**	**-0.2**
JYRO				S	**Sn**	**02 28 06.8**	**-0.2**
JTK	**Tokunoshima**	**2.04**	**44**	⇓P	**Pn**	**02 28 02.9**	**-0.1**
JAMN	**Amaminishikomi**	**2.51**	**40**	⇓P	**Pn**	**02 28 08.8**	**-0.6**
JAM	**Amami Oshima**	**2.89**	**44**	⇓P	**Pn**	**02 28 14.3**	**-0.3**
JZK	**Kikaishima**	**3.06**	**49**	P	**Pn**	**02 28 17.3**	**+0.3**
YOJ	**Yonaguni jima**	**4.34**	**246**		**Pn**	**02 28 35.5**	**+1.1**
YOJ	**Yonaguni jima**	**4.34**	**246**	P	**Pn**	**02 28 35.5**	**+1.1**
JYAK	**Yakushimahirau**	**4.79**	**35**	⇑P	**Pn**	**02 28 40.4**	**-0.3**
TATO	**Taipei**	**5.45**	**257**		**Pn**	**02 28 51.5**	**+1.7**
NACB	**Ninganchiao**	**5.63**	**249**		**Pn**	**02 28 52.2**	**0.0**
YHNB	**Yeheng**	**5.64**	**254**		**Pn**	**02 28 54.7**	**+2.3**
YULB	**Yu-li**	**6.22**	**243**		**Pn**	**02 28 58.2**	**-2.1**
YULB					**Sn**	**02 30 06.3**	**-3.8**
SSLB	**Suanglung**	**6.32**	**248**		**Pn**	**02 29 01.4**	**-0.4**
TWG	**Pinlang**	**6.69**	**240**		**Pn**	**02 29 04.5**	**-2.3**
TWG					**Sn**	**02 30 16.4**	**-5.3**
TPUB	**Ta-pu**	**6.80**	**245**		**Pn**	**02 29 08.0**	**-0.4**
SSE	**Sheshan**	**7.19**	**313**	P	**Pn**	**02 29 13.4**	**-0.2**
SSE				S	**Sn**	**02 30 33.3**	**-0.6**
SSE				LR	LR		
	comp=N,1µm,19.2s						
SSE				LR	LR		
	comp=E,880nm,17.4s						
JNU	**Nakatsue**	**7.43**	**24**	P	**Pn**	**02 29 18.6**	**+1.7**
JNU	**Nakatsue**	**7.43**	**24**	P	**Pn**	**02 29 18.1**	**+1.2**
	17nm,0.3s,baz=217,slow=2.2,SNR=45						
JNU				S	**Sn**	**02 30 38.5**	**-1.4**
	baz=208,slow=15,SNR=1.1						
JNU				LR	LR	02 32 27.9	
	comp=Z,1µm,19.6s,baz=172,slow=40						
JNU	**Nakatsue**	**7.43**	**24**		**Pn**	**02 29 18.3**	**+1.4**
QZH	**Quanzhou**	**8.02**	**262**	P	**Pn**	**02 29 26.7**	**+1.8**
QZH				S	**Sn**	**02 30 53.1**	**-1.1**
KNMB	**Chin-men Tao**	**8.31**	**259**	Pn	**Pn**	**02 29 29.2**	**+0.3**
NJ2	**Nanjing**	**9.35**	**310**	*e*P	**Pn**	**02 29 44.8**	**+1.6**
NJ2				S	**Sn**	**02 31 30.5**	**+3.6**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,510nm,4.7s						
NJ2				smax	smax		
	comp=N,62nm,1.7s						
NJ2				smax	smax		
	comp=E,46nm,1.1s						
NJ2				LR	LR		
	comp=N,2µm,17.0s						
NJ2				LR	LR		
	comp=E,2µm,20.3s						
NJ2				LR	LR		
	comp=Z,2µm,15.1s						
JMMH	**Miemihama**	**10.59**	**43**	P	**Pn**	**02 29 58.5**	**-1.6**
SZP	**Santa**	**10.82**	**218**	Pn	**Pn**	**02 30 02.4**	**-0.9**
KSRS	**Korea Array**	**11.10**	**2**	P	**Pn**	**02 30 09.7**	**+2.7**
	0.5nm,0.3s,baz=180,slow=13,SNR=40						
KSRS				LR	LR	02 34 49.9	
	comp=Z,727nm,18.7s,baz=183,slow=40						
INCN	**Inchon**	**11.14**	**357**		**Pn**	**02 30 08.5**	**+0.9**
INCN	**Inchon**	**11.14**	**357**	P	**Pn**	**02 30 08.5**	**+0.9**
KS19	**Wonju Array Si**	**11.15**	**2**		**Pn**	**02 30 08.5**	**+0.8**
WHN	**Wuhan**	**12.18**	**293**	⇑P	**Pn**	**02 30 23.8**	**+2.0**
WHN				S	**Sn**	**02 32 35.5**	**-0.5**
WHN				pmax	pmax		
	comp=Z,130nm,1.1s						
WHN				LR	LR		
	comp=N,2µm,9.6s						
WHN				LR	LR		
	comp=E,3µm,12.1s						
WHN				LR	LR		
	comp=Z,4µm,15.7s						
INU	**Inuyama**	**12.24**	**40**		**Pn**	**02 30 23.2**	**+0.7**
INU					**Sn**	**02 32 32.4**	**-5.0**
JHJ	**Hachijo jima 2**	**12.75**	**55**	LR	LR	02 35 05.4	
	comp=Z,2µm,20.6s,baz=278,slow=36						
JIZS	**Izushimoda**	**12.98**	**47**	P	**Pn**	**02 30 34.7**	**+2.0**
TIA	**Tai'an**	**13.16**	**321**	P	**P**	**02 30 40.0**	**-3.6**
TIA				pmax	pmax		
	comp=Z,14nm,0.9s						
TIA				LR	LR		
	comp=N,890nm,13.5s						
TIA				LR	LR		
	comp=E,830nm,11.0s						
TIA				LR	LR		
	comp=Z,1µm,12.1s						
JCJ	**Chichijima**	**13.29**	**83**	P	**Pn**	**02 30 38.6**	**+1.6**
	9.4nm,0.3s,baz=276,slow=17,SNR=6.0						
JCJ				LR	LR	02 35 03.0	
	comp=Z,763nm,20.5s,baz=286,slow=34						
DL2	**Dalian**	**13.43**	**340**	P	**P**	**02 30 48.4**	**+1.9**
DL2				pP	Pn	02 30 55.7	+17
DL2				S	**S**	**02 33 21.4**	**-6.1**
MAJO	**Matsushiro**	**13.76**	**40**	P	**Pn**	**02 30 44.4**	**+1.0**
MAJO	**Matsushiro**	**13.76**	**40**	*i* P	**Pn**	**02 30 44.6**	**+1.2**
MAT	**Matsushiro**	**13.76**	**40**	P	**Pn**	**02 30 45.0**	**+1.6**
MAT				S	**Sn**	**02 33 17.2**	**+2.6**
MJAR	**Matsushiro Arr**	**13.76**	**40**	P	**Pn**	**02 30 45.5**	**+2.1**
	0.2nm,0.3s,baz=246,slow=12,SNR=4.9						
MJAR				LR	LR	02 36 15.0	
	comp=Z,704nm,20.5s,baz=220,slow=38						
MJB9	**Matsu-Tunnel**	**13.76**	**40**	P	**Pn**	**02 30 44.2**	**+0.8**
ENH	**Enshi**	**16.21**	**288**	P	**Pn**	**02 31 14.1**	**-1.1**
BJT	**Baijiatuau**	**16.53**	**328**	P	**Pn**	**02 31 17.7**	**-1.4**
BJT	**Baijiatuau**	**16.53**	**328**	P	**Pn**	**02 31 17.7**	**-1.4**
BJT				pmax	pmax		
	comp=Z,29nm,0.8s						
BJI	**Beijing**	**16.54**	**329**	P	**P**	**02 31 22.1**	**+1.0**
BJI				pP	**pP**	**02 31 28.2**	**-4.5**
BJI				sP	**sP**	**02 31 40.0**	**+0.6**
BJI				S	**S**	**02 34 31.7**	**+0.5**
BJI				pmax	pmax		
	comp=Z,40nm,0.9s						
BJI				pmax	pmax		
	comp=Z,270nm,5.5s						
BJI				LR	LR		
	comp=Z,620nm,13.7s						
BJI				LR	LR		
	comp=Z,360nm,10.4s						
ENPP	**El Nido**	**16.80**	**208**	*e*P	**P**	**02 31 23.9**	**-0.2**
TIY	**Taiyuan**	**16.96**	**316**	*e*P	**P**	**02 31 28.2**	**+2.3**
TIY				S	**Sn**	**02 34 29.9**	**-2.5**
TIY				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TIY				pmax	pmax		
	comp=Z,210nm,3.8s						
TIY				LR	LR		
	comp=Z,420nm,6.2s						
TIY				LR	LR		
	comp=Z,1µm,17.6s						
TIY				LR	LR		
	comp=Z,940nm,13.8s						
CN2	**Changchun**	**17.50**	**355**	*e*P	**P**	**02 31 33.9**	**+2.2**
CN2				*e*pP	pP	02 31 45.1	+1.7
CN2				PP	**sP**	**02 31 50.2**	**0.0**
CN2				*e*S	**Sn**	**02 34 46.4**	**+1.3**
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,500nm,18.0s						
CN2				LR	LR		
	comp=Z,600nm,18.0s						
XAN	**Xi'an**	**17.67**	**300**	P	**P**	**02 31 35.0**	**+1.3**
XAN				pmax	pmax		
	comp=Z,320nm,5.3s						
XAN				LR	LR		
	comp=Z,760nm,19.1s						
XAN				LR	LR		
	comp=Z,1µm,21.6s						
XAN				LR	LR		
	comp=Z,1µm,20.8s						
XAN	**Xi'an**	**17.67**	**300**	P	**Pn**	**02 31 31.8**	**-1.6**
XAN	**Xi'an**	**17.67**	**300**	P	**Pn**	**02 31 31.8**	**-1.6**
XAN				pmax	pmax		
	comp=Z,211nm,2.0s						
QIZ	**Qiongzhong**	**17.70**	**249**	P	P	02 31 51.7	+18
QIZ				S	S	02 35 06.3	+11
QIZ				sS	sS	02 35 21.5	+7.2
USA0B	**Ussuriysk Arra**	**18.22**	**11**	*i* P	**Pn**	**02 31 42.0**	**+2.0**
USRK	**Ussuriysk Ar.**	**18.22**	**11**	P	**P**	**02 31 38.4**	**-1.3**
	baz=170,slow=9.6,SNR=3.5						
USRK				LR	LR	02 38 14.1	
	comp=Z,317nm,20.7s,baz=178,slow=36						
MDJ	**Mudanjiang**	**18.34**	**5**	P	**Pn**	**02 31 41.8**	**+0.5**
BUKP	**Musuan**	**18.48**	**187**	*e*P	**Pn**	**02 31 44.4**	**+1.0**
GYA	**Guiyang**	**18.53**	**275**	⇑*i*P	**Pn**	**02 31 44.9**	**+0.9**
GYA				pP	pP	02 31 54.3	-0.9
GYA				PP	**sP**	**02 32 01.3**	**-0.7**
GYA				S	**S**	**02 35 12.1**	**+0.1**
GYA				sS	SnSn	02 35 25.7	+0.9
GYA				SS	**sS**	**02 35 32.2**	**+0.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GYA				pmax	pmax		
	comp=Z,160nm,4.8s						
GYA				LR	LR		
	comp=Z,720nm,16.6s						
GYA				LR	LR		
	comp=Z,1µm,17.6s						
GYA				LR	LR		
	comp=Z,1µm,17.6s						
PAGZ	**Pagadian**	**18.76**	**192**	*e*P	**Pn**	**02 31 46.4**	**-0.3**
DAV	**Davao City (W)**	**19.23**	**185**	LR	LR	02 38 18.6	
	comp=Z,670nm,21.8s,baz=332,slow=34						
KCP	**Kidapawan**	**19.34**	**187**	⇑*i*P	**Pn**	**02 31 53.0**	**-0.6**
HHC	**Hu-ho-hao-te**	**19.51**	**322**	*e*P	**Pn**	**02 31 55.3**	**-0.3**
HHC				pP	sP	02 32 10.7	-1.7
HHC				sP	pP	02 32 14.3	+8.6
HHC				S	**S**	**02 35 24.4**	**-7.1**
HHC				pmax	pmax		
	comp=Z,210nm,0.8s						
HHC				pmax	pmax		
	comp=Z,910nm,3.7s						
HHC				LR	LR		
	comp=Z,1µm,10.8s						
HHC				LR	LR		
	comp=Z,1µm,9.9s						

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HHC                               LR     LR
      comp=Z,2µm,10.1s
BTO   Baotou           20.23 319  eP     Pn      02 32 09.3 +5.2
GUMO  Guam             20.75 124  LR     LR      02 38 46.6
      comp=Z,216nm,21.5s,baz=311,slow=32
CD2   Chengdu          21.19 288  P      P       02 32 11.4  -0.7
CD2                               pP     pP      02 32 26.8 +2.8
CD2                               PP     PnPn    02 32 33.9 +0.6
CD2                               S      S       02 36 05.8 +0.9
CD2                               sS     sS      02 36 27.1 +2.5
CD2                               SS     SnSn    02 36 42.0  +12
CD2                               pmax   pmax
      comp=Z,60nm,0.6s
CD2                               pmax   pmax
      comp=Z,130nm,4.7s
CD2                               LR     LR
      comp=Z,1µm,14.2s
CD2                               LR     LR
      comp=Z,2µm,14.2s
CD2                               LR     LR
      comp=Z,3µm,17.1s
ASAJ  Asahikawa        21.62  31  P      P       02 32 15.7  -0.9
      comp=Z,6.1nm,0.4s,baz=238,slow=19,SNR=2.8
ASAJ                              LR     LR      02 41 27.4
      comp=Z,965nm,21.2s,baz=294,slow=39
JKA   Kamikawa-asahi   21.62  31  P      P       02 32 15.7  -0.9
SLVN  Son La           22.00 262  P      P       02 32 19.7  -1.2
KMI   Kunming          22.19 272  P      P       02 32 23.0  -0.1
KMI                               pP     pP      02 32 35.2 +0.1
KMI                               PP     sP      02 32 48.6 +6.9
KMI                               S      S       02 36 20.4  -4.1
KMI                               sS     sS      02 36 42.8  -2.1
KMI                               SS     SnSn    02 37 04.2 +9.4
KMI                               pmax   pmax
      comp=Z,17nm,1.5s
KMI                               pmax   pmax
      comp=Z,250nm,5.4s
KMI                               LR     LR
      comp=Z,620nm,23.1s
KMI                               LR     LR
      comp=Z,1µm,20.7s
KMI                               LR     LR
      comp=Z,1µm,14.9s
KMI   Kunming          22.19 272  P      P       02 32 21.2  -1.9
KMI   Kunming          22.19 272  P      P       02 32 21.2  -1.9
KMI                               pmax   pmax
      comp=Z,28nm,0.5s
LZH   Lanzhou          22.28 302  eP     P       02 32 24.4 +0.5
LZH                               pP     pwP     02 32 37.5  -0.5
LZH                               sP     sP      02 32 46.2 +3.9
LZH                               eS     S       02 36 22.2  -3.6
LZH                               sS     Sn      02 36 42.8 +2.3
LZH                               pmax   pmax
      comp=Z,45nm,1.2s
LZH                               pmax   pmax
      comp=Z,290nm,5.0s
LZH                               LR     LR
      comp=Z,600nm,12.1s
LZH                               LR     LR
      comp=Z,1µm,12.5s
LZH                               LR     LR
      comp=Z,1µm,14.8s
KKM   Kota Kinabalu    22.80 210  P      P       02 32 28.8  -0.6
DLV   T  Lat           22.80 235  P      P       02 32 28.2  -1.4
KLR   Kul'dur          23.12   7  P      P       02 32 30.3  -2.0
      comp=Z,3.8nm,0.9s,baz=207,slow=7.1,SNR=12
KLR                               PcP    PcP     02 36 20.9 +1.4
      comp=Z,2.0nm,0.8s,baz=207,slow=9.0,SNR=3.7
KLR                               LR     LR      02 41 38.8
      comp=Z,251nm,21.1s,baz=192,slow=37
KLR   Kul'dur          23.12   7 i P     P       02 32 31.1  -1.2
KLR                               pmax   pmax
      comp=Z,9.0nm,1.3s
YUK   Yuzh-Kuril'sk    23.17  36  eP     P       02 32 32.2  -0.7
YUK                              i S     S       02 36 40.3   0.0
YUK                               pmax   pmax
      comp=Z,253nm,1.2s
YUK                               pmax   pmax
      comp=N,85nm,1.0s
YUK                               pmax   pmax
      comp=E,72nm,1.0s
HIA   Hailar           23.65 348  P      P       02 32 35.1  -2.3
HIA                               PcP    PcP     02 36 20.1  -0.5
HIA   Hailar           23.65 348  P      P       02 32 35.1  -2.3
HIA                                              02 36 20.1
HIA                               pmax   pmax
      comp=Z,11nm,1.0s
YSS   Yuzh-Sakhalins   23.93  27  P      P       02 32 38.3  -1.6
YSS                               IAmb   IAmb    02 32 41.6
      comp=Z,82nm,1.2s
YSS   Yuzh-Sakhalins   23.93  27⇑iP     P       02 32 41.1 +1.2
YSS                               e              02 32 51.8
YSS                               eS     S       02 36 53.8 +1.3
YSS                               pmax   pmax
      comp=Z,60nm,1.3s
YSS                               MLR    MLR
      comp=E,600nm,16.0s
YSS                               MLR    MLR
      comp=Z,800nm,16.0s
KUR   Kuril'sk         25.04  36  P      P       02 32 50.4 +0.4
KUR                               S      S       02 37 17.0 +6.7
KUR                               pmax   pmax
      comp=Z,164nm,1.1s
KUR                               MLR    MLR
      comp=Z,386nm,19.0s
GRNR  Gornyy           25.38  14⇓iP     P       02 32 49.7  -3.4
GRNR                              pmax   pmax
      comp=Z,4.0nm,0.7s
GRNR                              MLR    MLR
      comp=Z,320nm,19.0s
MRSI  Marisa           26.23 192  P      P       02 33 02.0 +1.0
      comp=Z,20nm,0.8s
PBKT  Sadao Pong       26.35 254  IAmb   IAmb    02 33 21.6
      comp=Z,101nm,1.3s
GTA   Gaotai           26.43 306  P      P       02 33 01.9  -1.0
GTA                               pP     pP      02 33 16.6 +0.6
GTA                               sP     sP      02 33 23.5 +1.3
GTA                               PcP    PcP     02 36 28.8 +1.7
GTA                               pmax   pmax
      comp=Z,12nm,0.6s
GTA                               pmax   pmax
      comp=Z,220nm,7.9s
GTA                               LR     LR
      comp=Z,420nm,16.5s
GTA                               LR     LR
      comp=Z,630nm,16.8s
GTA                               LR     LR
      comp=Z,790nm,18.4s
ULN   Ulaanbaatar      26.75 329  P      P       02 33 04.6  -1.1
ULN   Ulaanbaatar      26.75 329  P      P       02 33 04.6  -1.1
ULN                               pmax   pmax
      comp=Z,20nm,0.7s
MPSI  Mapaga           26.82 197  P      P       02 33 07.0 +0.6
      comp=Z,520nmcomp=Z,20nm,1.2s
SONM  Songino Array    27.04 328  P      P       02 33 07.8  -0.6
      comp=Z,23nm,0.6s,baz=144,slow=9.0,SNR=56
SONM                              PcP    PcP     02 36 29.8 +1.4
      comp=Z,1.6nm,0.6s,baz=156,slow=3.8,SNR=4.8
SONM                              LR     LR      02 45 05.3
      comp=Z,625nm,20.3s,baz=140,slow=39
TYV   Tymovskoe        27.15  22  eP     P       02 33 09.2 +0.1
TYV                               pmax   pmax
      comp=Z,5.0nm,1.4s
CHTO  Chiang Mai       27.23 260  P      P       02 33 11.2 +1.1
CHTO                              IAmb   IAmb    02 33 12.2
      comp=Z,59nm,0.8s
CHTO                              PcP    PcP     02 36 29.6 +0.4
CHTO  Chiang Mai       27.23 260  P      P       02 33 11.2 +1.1
CHTO                                             02 36 29.6
CHTO                              pmax   pmax
      comp=Z,59nm,0.8s
CM31  Chiang Mai Arr   27.36 259  P      P       02 33 09.9  -1.4
CM31  Chiang Mai Arr   27.36 259  P      P       02 33 12.4 +1.1
      SNR=9.8
CM31                              P      P       02 33 12.4 +1.1
      SNR=9.8
CMAR  Chiang Mai Arr   27.36 259  P      P       02 33 12.6 +1.3
      comp=Z,17nm,0.7s,baz=56,slow=7.8,SNR=80
CMAR                              PcP    PcP     02 36 31.6 +2.1
      comp=Z,5.2nm,0.8s,baz=66,slow=1.1,SNR=13
CMAR                              LR     LR      02 45 14.7
      comp=Z,440nm,18.3s,baz=80,slow=39
CMAR  Chiang Mai Arr   27.36 259 i P     P       02 33 12.6 +1.3
CMAR                              pmax   pmax
      comp=Z,19nm,0.7s
ZEA   Zeya             27.38 360  eP     P       02 33 00.5  -11
ZEA                               pmax   pmax
      comp=Z,14nm,1.2s
ZEA                               MLR    MLR
      comp=N,500nm,16.0s
ZEA                               MLR    MLR
      comp=Z,500nm,16.0s
SBUM  Sibu             27.83 214  P      P       02 33 13.5  -2.0
SBUM  Sibu             27.83 214  P      P       02 33 17.0 +1.5
SANI  Sanana           28.24 183  P      P       02 33 22.7 +3.6
      comp=Z,24nm,0.7s
FAKI  Fak Fak          29.46 170  P      P       02 33 30.4 +0.4
      comp=Z,32nm,1.3s
FAKI  Fak Fak          29.46 170  P      P       02 33 27.7  -2.3
KSM   Kuching          29.65 216  P      P       02 33 29.5  -2.2
TLY   Talaya           31.04 331  P      P       02 33 42.6  -1.0
      comp=Z,2.7nm,0.4s,baz=149,slow=5.7,SNR=10
TLY   Talaya           31.04 331  P      P       02 33 42.0  -1.6
TLY   Talaya           31.04 331  eP     P       02 33 42.0  -1.6
TLY                               pmax   pmax
      comp=Z,21nm,1.0s
TLY                               MLR    MLR
      comp=Z,1µm,15.0s
SHL   Shillong         31.84 277  P      P       02 33 50.4  -0.7
SHL                               PcP    PcP     02 36 39.2  -1.8
SHL   Shillong         31.84 277  P      P       02 33 50.4  -0.7
SHL                                              02 36 39.3
SHL                               pmax   pmax
      comp=Z,17nm,1.0s
LSA   Lhasa            32.05 284  P      P       02 33 50.2  -3.1
LSA   Lhasa            32.05 284  P      P       02 33 50.2  -3.1
LSA                               pmax   pmax
      comp=Z,11nm,0.5s
MOY   Mondy            32.22 329  eP     P       02 33 53.8  -0.3
MOY                               pmax   pmax
      comp=Z,16nm,1.3s
BRDH  Bariadhala       32.62 271  LR     LR      02 50 06.4
      comp=Z,584nm,18.4s,baz=116,slow=42
KULM  Kulim            32.98 235  P      P       02 34 00.9  -0.1
KULM                              IAmb   IAmb    02 34 21.1
      comp=Z,52nm,1.2s
KULM  Kulim            32.98 235  P      P       02 34 03.0 +2.0
MYKOM Kota Tinggi      33.24 227  IAmb   IAmb    02 34 05.6
      comp=Z,19nm,0.8s
MYKOM Kota Tinggi      33.24 227  P      P       02 34 02.0  -1.3
IPM   Ipoh             33.26 234  P      P       02 34 05.0 +1.6
PEA0B Petropavlovsk-   35.03  32  P      P       02 34 17.3  -1.1
PEA0B Petropavlovsk-   35.03  32  P      P       02 34 17.3  -1.1
PEA0B                             pmax   pmax
      comp=Z,180nm,1.9s
PETK  Petropavlovsk-   35.03  32  P      P       02 34 19.4 +1.0
      comp=Z,6.6nm,0.8s,baz=179,slow=8.9,SNR=5.5
PETK                              LR     LR      02 48 54.0
      comp=Z,377nm,21.3s,baz=236,slow=37
TAPN  Taplejung        35.28 281  eP     P       02 34 21.7 +0.5
      comp=Z,26nm,0.4s
PET   Petropavlovsk    35.44  33 i P     P       02 34 22.6 +0.8
ODAN  Odare            35.63 280  eP     P       02 34 24.7 +0.6
      comp=Z,116nm,0.6s
PBA   Port Blair       35.69 252  P      P       02 34 23.8  -0.7
YAK   Yakutsk          35.73   2  LR     LR      02 49 27.8
      comp=Z,160nm,18.7s,baz=191,slow=37
YAK   Yakutsk          35.73   2  P      P       02 34 24.0  -0.2
YAK                               IAmb   IAmb    02 34 24.4
      comp=Z,35nm,1.0s
YAK   Yakutsk          35.73   2  eP     P       02 34 23.5  -0.7
YAK                               pmax   pmax
      comp=Z,27nm,0.9s
YAK                               pmax   pmax
      comp=N,14nm,0.9s
SOEI  Soe              35.99 185  P      P       02 34 25.7  -1.4
SOEI                              IAmb   IAmb    02 34 48.2
      comp=Z,32nm,1.1s
RPSI  Rantau Prapat    36.00 234  P      P       02 34 28.1 +1.0
RPSI                              PcP    PcP     02 36 52.2  -0.6
PLAI  Plampang         36.16 196  P      P       02 34 28.9 +0.5
      comp=Z,76nm,1.4s
BKNI  Bangkinang       36.20 229  P      P       02 34 29.8 +1.1
RAMN  Ramite           36.31 280  eP     P       02 34 30.4 +0.4
      comp=Z,28nm,0.5s
WMQ   Urumqi           36.43 309  P      P       02 34 31.1 +0.5
WMQ                               pmax   pmax
      comp=Z,20nm,0.9s
WMQ                               pmax   pmax
      comp=Z,130nm,4.9s
WMQ                               LR     LR
      comp=Z,330nm,17.7s
WMQ                               LR     LR
      comp=Z,410nm,19.9s
WMQ                               LR     LR
      comp=Z,690nm,21.1s
WMQ   Urumqi           36.43 309  P      P       02 34 29.7  -0.9
WMQ                               IAmb   IAmb    02 34 32.0
      comp=Z,20nm,0.9s
WMQ   Urumqi           36.43 309  P      P       02 34 29.7  -0.9
WMQ                               pmax   pmax
      comp=Z,20nm,0.9s
JIRN  Jiri             36.58 282  eP     P       02 34 32.9 +0.5
      comp=Z,58nm,0.4s
GUN   Gumba            36.81 282  eP     P       02 34 35.1 +0.7
      comp=Z,35nm,0.3s
H11N2 WAKE ISLAND Hy   36.88  92  T      T       03 13 43.1
      baz=290,slow=74,SNR=12
H11N1 WAKE ISLAND Hy   36.88  92  T      T       03 13 12.2
      baz=290,slow=74,SNR=10
JAGI  Jajag, Banyuwa   36.89 202  P      P       02 34 33.4  -1.2
JAGI                              IAmb   IAmb    02 34 54.4
      comp=Z,45nm,1.2s
H11N3 WAKE ISLAND Hy   36.90  92  T      T       03 13 12.6
      baz=290,slow=74,SNR=11
MA2   Magadan          36.98  20 i P     P       02 34 34.1  -0.9
MA2                               pmax   pmax
      comp=Z,10.0nm,1.1s
H11S3 WAKE ISLAND Hy   37.09  94  T      T       03 13 34.5
      baz=290,slow=74,SNR=11
H11S1 WAKE ISLAND Hy   37.09  94  T      T       03 13 23.8
      baz=290,slow=74,SNR=5.9
H11S2 WAKE ISLAND Hy   37.10  94  T      T       03 13 35.7
      baz=290,slow=74,SNR=6.6
PKI   Pulchoki         37.27 282  eP     P       02 34 38.4 +0.1
      comp=Z,78nm,0.4s
PKIN  Phulchoki        37.28 282  eP     P       02 34 38.4 +0.1
      comp=Z,70nm,0.4s
KKN   Kakani           37.36 282  eP     P       02 34 39.2 +0.4
      comp=Z,83nm,0.4s
DMN   Daman            37.53 282  eP     P       02 34 40.7 +0.3
      comp=Z,30nm,0.4s
KLSI                   37.83 219  P      P       02 34 44.0 +1.4
      comp=Z,10nm,1.2s
GKN   Gorkha           37.89 282  eP     P       02 34 43.7 +0.4
      comp=Z,83nm,0.3s
MDSI  Maura Dua        37.97 220  P      P       02 34 44.5 +0.7
DANN  Dangsing         38.61 283  eP     P       02 34 50.3 +0.8
      comp=Z,366nm,0.5s
MTN   Manton Dam       39.11 174  P      P       02 34 52.2  -1.1
MTN                               IAmb   IAmb    02 35 14.5
      comp=Z,23nm,0.8s
SEY   Seymchan         40.16  17 i P     P       02 35 02.4 +0.9
MK31  Makanchi Array   40.88 312  eP     P       02 35 06.7  -1.1
MKAR  Makanchi Array   40.88 312  P      P       02 35 07.1  -0.7
      comp=Z,17nm,0.4s,baz=93,slow=11,SNR=225
MKAR                              PcP    PcP     02 37 08.1 +0.5
      comp=Z,5.4nm,0.8s,baz=76,slow=5.1,SNR=5.5
MKAR                              ScP    ScP     02 40 53.8 +1.1
      comp=Z,0.4nm,0.5s,baz=100,slow=6.0,SNR=3.6
MKAR                              LR     LR      02 53 31.0
      comp=Z,264nm,18.5s,baz=108,slow=38
MAKZ  Makanchi         41.09 312  P      P       02 35 08.8  -0.7
MAKZ                              IAmb   IAmb    02 35 11.3
      comp=Z,16nm,0.6s
MAKZ  Makanchi         41.09 312  P      P       02 35 08.8  -0.7
MAKZ                              pmax   pmax
      comp=Z,16nm,0.6s
ZAA0  Zalesovo Array   41.69 323  P      P       02 35 13.6  -0.7
ZALV  Zalesovo Beam    41.69 323  P      P       02 35 13.5  -0.7
      comp=Z,22nm,0.4s,baz=113,slow=8.2,SNR=64
ZALV                              PcP    PcP     02 37 10.1 +0.1
      comp=Z,4.9nm,0.9s,baz=145,slow=3.6,SNR=5.0
ZALV                              ScP    ScP     02 40 55.4  -0.3
      comp=Z,1.1nm,0.7s,baz=139,slow=3.1,SNR=3.5
ZALV                              LR     LR      02 53 42.7
      comp=Z,408nm,21.2s,baz=104,slow=38
ZALV  Zalesovo Beam    41.69 323 i P     P       02 35 13.5  -0.7
ZALV                              pmax   pmax
      comp=Z,21nm,0.4s
COEN  Coen             42.91 157  P      P       02 35 24.5   0.0
KURK  Kurchatov        44.20 317  P      P       02 35 33.9  -0.7
KURK                              IAmb   IAmb    02 35 35.5
      comp=Z,40nm,0.8s
KURK  Kurchatov        44.20 317         PcP     02 37 19.1 +0.6
KURK  Kurchatov        44.20 317ceP     P       02 35 34.0  -0.7
KURK                              pmax   pmax
      comp=Z,72nm,1.3s
KURBB Kurchatov Arra   44.23 317  P      P       02 35 34.2  -0.7
      comp=Z,82nm,1.1s,baz=104,slow=8.4,SNR=38
KURBB                             PcP    PcP     02 37 19.1 +0.5
      comp=Z,1.9nm,0.7s,baz=116,slow=4.5,SNR=3.0
KURBB Kurchatov Arra   44.23 317  P      P       02 35 33.8  -1.1
ULHL  Ulahol           44.44 304  P      P       02 35 37.9 +0.9
      SNR=13
KSH   Kashi            44.52 300  P      P       02 35 41.7 +4.1
KSH                               sP     sP      02 36 03.6 +6.2
KSH                               PP     PP      02 37 27.7 +5.6
KSH                               S      S       02 42 13.5 +4.2
KSH                               SS     SS      02 45 26.5  -3.8
KSH                               pmax   pmax
      comp=Z,57nm,0.8s
KSH                               pmax   pmax
      comp=Z,310nm,4.5s
KSH                               LR     LR
      comp=Z,150nm,10.5s
KSH                               LR     LR
      comp=Z,200nm,10.3s
KSH                               LR     LR
      comp=Z,510nm,13.1s
KZA   Kyzart           45.17 304  P      P       02 35 43.8 +0.8
      SNR=19
TIXI  Tiksi            45.36   1  P      P       02 35 42.1  -1.5
      comp=Z,7.0nm,0.6s,baz=208,slow=4.3,SNR=18
TIXI                              PcP    PcP     02 37 21.6  -0.5
      comp=Z,1.8nm,0.3s,baz=201,slow=3.6,SNR=3.4
TIXI                              LR     LR      02 55 02.5
      comp=Z,376nm,20.6s,baz=187,slow=36
TIXI  Tiksi            45.36   1  P      P       02 35 42.0  -1.5
TIXI  Tiksi            45.36   1 i P     P       02 35 43.3  -0.2
TIXI                              pmax   pmax
      comp=Z,5.0nm,0.6s
KBK   Karagaybulak     45.43 305  P      P       02 35 45.8 +1.1
      SNR=21
CHMS  Chumysh          45.59 305  P      P       02 35 46.6 +0.7
      SNR=20
CHMS  Chumysh          45.59 305 i P     P       02 35 46.0 +0.1
CHMS                              pmax   pmax
      comp=Z,41nm,1.1s
UCH   Uchtor           45.73 304  P      P       02 35 49.1 +1.7
      SNR=64
AAK   Ala-Archa        45.76 305  P      P       02 35 46.3  -1.1
      comp=Z,7.3nm,0.4s,baz=113,slow=4.3,SNR=30
AAK   Ala-Archa        45.76 305  P      P       02 35 48.2 +0.8
      SNR=9.3
AAK   Ala-Archa        45.76 305 i P     P       02 35 47.9 +0.5
      SNR=19
AAK   Ala-Archa        45.76 305  P      P       02 35 46.1  -1.3
AAK   Ala-Archa        45.76 305ceP     P       02 35 47.3  -0.1
AAK                               pmax   pmax
      comp=Z,11nm,1.0s
USP   Ospenovka        45.80 306  P      P       02 35 48.1 +0.6
      SNR=11
HYB   Hyderabad        45.92 269 i P     P       02 35 48.0  -0.7
EKS2  Erkin-Say        46.29 305  P      P       02 35 52.2 +0.7
      SNR=12
AML   Almayashu        46.33 304  P      P       02 35 53.3 +1.2
      SNR=7.7
WB0   Warramunga Arr   46.33 171  P      P       02 35 50.7  -1.1
WRAB  Tennant Creek    46.49 171  P      P       02 35 52.6  -0.4
WRAB  Tennant Creek    46.49 171ceP     P       02 35 54.3 +1.3
WRAB                              pmax   pmax
      comp=Z,10.0nm,1.7s
WRA   Warramunga Arr   46.50 171  P      P       02 35 53.0  -0.1
      comp=Z,1.8nm,0.5s,baz=352,slow=8.5,SNR=16
WRA                               LR     LR      02 54 24.5
      comp=Z,200nm,21.0s,baz=155,slow=35
WRA   Warramunga Arr   46.50 171ceP     P       02 35 53.2 +0.1
WRA                               pmax   pmax
      comp=Z,2.0nm,0.4s
NIL   Nilore           46.97 292  P      P       02 35 57.1 +0.3
NIL   Nilore           46.97 292  P      P       02 35 57.1 +0.3
NIL                               pmax   pmax
      comp=Z,51nm,1.0s
BILL  Bilibino         47.83  19  P      P       02 36 02.8  -0.2
BILL                              IAmb   IAmb    02 36 04.2
      comp=Z,45nm,1.3s
BILL  Bilibino         47.83  19c iP     P       02 36 03.4 +0.5
BILL                             i               02 36 13.8
BILL                             i               02 37 31.4
BILL                             i               02 37 57.2
BILL                              pmax   pmax
      comp=Z,22nm,1.1s
BILL                              MLR    MLR
      comp=Z,433nm,21.0s
PSAB2 Pilbara Seismi   48.15 189  P      P       02 36 03.4  -2.5
PSAB2                             IAmb   IAmb    02 37 18.8
      comp=Z,35nm,1.6s
PSAC2 Pilbara Seismi   48.15 189  P      P       02 36 06.1 +0.2
PSAA2 Pilbara Seismi   48.16 189  P      P       02 36 05.2  -0.7
PSA00 Pilbara Seismi   48.17 189  P      P       02 36 04.7  -1.3
PSA00                             IAmb   IAmb    02 36 11.2
      comp=Z,27nm,1.4s
PSAA1 Pilbara Seismi   48.18 189  P      P       02 36 05.5  -0.6
PALK  Pallekele        48.19 255  P      P       02 36 08.4 +1.9
PSAD2 Pilbara Seismi   48.20 189  P      P       02 36 06.1  -0.1
PSAD2                             IAmb   IAmb    02 36 23.6
      comp=Z,36nm,1.6s
KK31  Karatay Array    48.70 305  P      P       02 36 10.2 +0.2
KK31                              IAmb   IAmb    02 36 11.8
      comp=Z,19nm,0.8s
KK31                              PcP    PcP     02 37 35.4 +0.8
KK31  Karatay Array    48.70 305 i P     P       02 36 10.3 +0.2
KKAR  Karatay Array    48.70 305  P      P       02 36 09.5  -0.6
KKAR                              IAmb   IAmb    02 36 11.8
      comp=Z,19nm,0.8s
KKAR                              PcP    PcP     02 37 35.4 +0.8
NRIK  Noril'sk         48.91 342  P      P       02 36 10.1  -1.2
      comp=Z,11nm,0.6s,baz=110,slow=8.9,SNR=13
NRIK                              PcP    PcP     02 37 35.7 +0.9
      comp=Z,3.0nm,0.4s,baz=140,slow=5.5,SNR=3.0
NRIK                              LR     LR      02 58 29.3
      comp=Z,382nm,19.7s,baz=131,slow=38
BVAR  Borovoye Array   49.67 318  P      P       02 36 17.4 +0.1
      comp=Z,48nm,0.7s,baz=102,slow=9.1,SNR=158
BVAR                              PcP    PcP     02 37 38.9 +1.0
      comp=Z,5.9nm,0.7s,baz=81,slow=4.9,SNR=3.7
BRVK  Borovoye         49.74 318  P      P       02 36 18.1 +0.4
BRVK  Borovoye         49.74 318ceP     P       02 36 17.9 +0.1
BRVK                              pmax   pmax
      comp=Z,111nm,1.0s
AS31  Alice Springs    50.10 172  P      P       02 36 20.7  -0.2
ASAR  Alice Springs    50.11 172  P      P       02 36 21.3 +0.4
      comp=Z,2.3nm,0.7s,baz=355,slow=7.4,SNR=28
ASAR                              PcP    PcP     02 37 40.2 +0.4
      comp=Z,2.5nm,0.9s,baz=358,slow=5.3,SNR=2.7
ASAR                              pPcP           02 37 54.8
      comp=Z,4.6nm,0.8s,baz=356,slow=4.4,SNR=6.5
ASAR                              LR     LR      02 56 41.6
      comp=Z,169nm,21.3s,baz=358,slow=35
KBL   Kabul            50.34 294  P      P       02 36 23.7 +0.8
KBL   Kabul            50.34 294  P      P       02 36 23.3 +0.4
KBL                               P      P       02 36 23.3 +0.4
KBL   Kabul            50.34 294  P      P       02 36 23.7 +0.8
KBL                               pmax   pmax
      comp=Z,85nm,0.7s
SVE   Sverdlovsk       55.70 322  eP     P       02 37 01.5  -0.2
SVE                               pmax   pmax
      comp=Z,33nm,0.8s
SVE                               MLR    MLR
      comp=Z,611nm,16.0s
AB31  Akbulak array    56.00 313 i P     P       02 37 04.0   0.0
ANM   Nome             56.80  28  IAmb   IAmb    02 37 24.4
      comp=Z,29nm,0.8s
ARU   Arti             56.82 322  P      P       02 37 08.7  -1.0
ARU                               IAmb   IAmb    02 37 10.2
      comp=Z,33nm,1.0s
ARU   Arti             56.82 322c iP     P       02 37 09.2  -0.5
ARU                                              02 38 03.2
ARU                                              02 39 14.0
ARU                               S      S       02 45 00.0 +1.1
ARU                               SS     SS      02 48 42.6  -4.6
ARU                               pmax   pmax
      comp=Z,31nm,0.9s
ARU                               MLR    MLR
      comp=Z,700nm,19.0s
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RDOG  Red Dog Mine      58.29  24   P      P       02 37 19.5  -0.5
RDOG                                IAmb   IAmb    02 37 41.1
      comp=Z,19nm,1.2s
GEYT  Alibeck           58.55 300   P      P       02 37 23.2  +0.9
      comp=Z,14nm,0.7s,baz=48,slow=2.2,SNR=37
GEYT                                LR     LR      03 06 27.8
      comp=Z,264nm,20.6s,baz=70,slow=40
GYA0B ALIBECK ARRAY     58.55 300   P      P       02 37 21.5  -0.7
STKA  Stephens Creek    59.46 166   P      P       02 37 29.0  +0.7
      comp=Z,3.5nm,0.8s,baz=339,slow=9.3,SNR=7.1
SVW2  Sparrevohn        61.11  33   IAmb   IAmb    02 37 54.7
      comp=Z,21nm,1.0s
DZM   Mont Dzumac       61.24 138  eLR     LR      02 55 57.8
      comp=Z,593nm,25.2s
WBK   Wadi Bani Khal    61.69 283   P      P       02 37 45.0  +1.1
WBK                                 P      P       02 37 45.0  +1.1
WSAR  Wadi Sarin        61.79 283   P      P       02 37 45.7  +1.1
      SNR=6.2
BIDO  Bidbid            62.14 284   P      P       02 37 47.9  +1.0
      SNR=7.8
SMDO  Samad             62.35 283   P      P       02 37 49.3  +0.8
      SNR=8.2
SMDO                                P      P       02 37 49.3  +0.8
      SNR=8.2
JMDO  Jabal Madar       62.52 283   P      P       02 37 50.1  +0.6
JMDO                                P      P       02 37 50.1  +0.6
PPLA  Purkeypile        62.60  31   IAmb   IAmb    02 38 06.1
      comp=Z,24nm,0.9s
HOQ   Hoqain            62.83 284   P      P       02 37 52.2  +0.6
      SNR=6.6
HOQ                                 P      P       02 37 52.2  +0.6
      SNR=6.6
KDAK  Kodiak Island     62.91  36   P      P       02 37 52.3  +0.8
KDAK  Kodiak Island     62.91  36   P      P       02 37 52.3  +0.8
KDAK                                pmax   pmax
      comp=Z,57nm,1.1s
BANOM Banah             62.98 287   P      P       02 37 53.5  +1.0
BPAW  Bear Paw Mtn.     63.04  29   IAmb   IAmb    02 38 08.6
      comp=Z,13nm,0.9s
MLY   Manley            63.06  28   IAmb   IAmb    02 38 07.6
      comp=Z,23nm,0.9s
MHTO  MHTO              63.10 281   P      P       02 37 53.7  +0.3
      SNR=8.7
MHTO                                P      P       02 37 53.7  +0.3
      SNR=8.7
COLD  Coldfoot          63.11  26   P      P       02 37 53.5  +0.8
KTH   Kantishna Hill    63.11  30   IAmb   IAmb    02 38 09.0
      comp=Z,14nm,0.8s
BSY   Bisya             63.19 283   P      P       02 37 54.8  +0.8
      SNR=7.0
BSY                                 P      P       02 37 54.8  +0.8
      SNR=7.0
TOLK  Toolik Lake Re    63.25  24   P      P       02 37 53.6   0.0
TOLK                                IAmb   IAmb    02 38 08.5
      comp=Z,17nm,0.8s
TOLK                                PP     PP      02 40 12.4  -0.5
TOLK  Toolik Lake Re    63.25  24   P      P       02 37 54.8  +1.2
      baz=274
MSFE  Esma-Masafi       63.27 286   P      P       02 37 55.7  +1.2
PRGR  Permogore         63.30 328  eP      P       02 37 52.4  -1.6
PRGR                               e               02 38 29.7
PRGR                                pmax   pmax
      comp=Z,20nm,0.4s
SOHO  SOHO              63.33 285   P      P       02 37 55.6  +0.7
      SNR=5.3
UOSS  Minazif           63.36 286   P      P       02 37 55.8  +0.8
UOSS  Minazif           63.36 286   P      P       02 37 55.7  +0.6
HATD  Hatta, Dubai      63.46 286   P      P       02 37 57.1  +1.4
HATD  Hatta, Dubai      63.46 286   P      P       02 37 56.6  +0.9
BRLK  Bradley Lake      63.55  34   P      P       02 37 56.3  +0.6
BRLK                                IAmb   IAmb    02 38 13.1
      comp=Z,26nm,0.8s
ASHO  Ashiyiah          63.57 286   P      P       02 37 57.5  +1.0
ASHO  Ashiyiah          63.57 286   P      P       02 37 57.3  +0.8
ARQ   Araqi             63.59 284   P      P       02 37 57.3  +0.7
NAZ   Nazwa, Dubai      63.81 286  i P     P       02 37 58.8  +0.8
      SNR=6.3
NAZ   Nazwa, Dubai      63.81 286   P      P       02 37 58.7  +0.6
NAZ                                 P      P       02 37 58.7  +0.6
DQM   DQM               63.83 280   P      P       02 37 58.8  +0.6
      SNR=5.0
DQM                                 P      P       02 37 58.8  +0.6
      SNR=5.0
RC01  Rabbit Creek A    63.94  32   P      P       02 37 57.8  -0.4
RC01                                IAmb   IAmb    02 38 12.9
      comp=Z,24nm,1.2s
FAQ   Al Faqa, Dubai    63.95 286   P      P       02 37 59.5  +0.6
FAQ   Al Faqa, Dubai    63.95 286   P      P       02 37 59.3  +0.4
MCK   McKinley          63.98  29   IAmb   IAmb    02 38 13.4
      comp=Z,33nm,1.0s
SEW   Seward            64.21  34   P      P       02 37 59.9  -0.1
SEW                                 IAmb   IAmb    02 38 18.9
      comp=Z,29nm,1.0s
TCOL  CIGO, UAF Yank    64.30  28   P      P       02 38 01.1  +0.6
      baz=277
POKR  Poker Plat Res    64.45  28   P      P       02 38 02.4  +0.9
      baz=278,SNR=7.3
KNK   Knik Glacier      64.51  32   IAmb   IAmb    02 38 16.3
      comp=Z,21nm,0.8s
SML   Sawmill           64.51  32   IAmb   IAmb    02 38 29.6
      comp=Z,15nm,0.8s
ILAR  Eielson Array     64.73  28   P      P       02 38 03.0  -0.3
      comp=Z,2.0nm,0.7s,baz=265,slow=4.1,SNR=21
ILAR                                pP     pP      02 38 15.4  -2.6
      comp=Z,5.0nm,0.8s,baz=273,slow=5.5,SNR=11
ILAR                                LR     LR      03 09 12.0
      comp=Z,72nm,20.0s,baz=293,slow=39
HDA   Harding Lake      64.75  29   P      P       02 38 02.9  -0.6
      baz=278,SNR=18
DHY   Denali Highway    64.76  30   IAmb   IAmb    02 38 19.8
      comp=Z,44nm,1.8s
PRP   Porcupine Dome    65.18  27   IAmb   IAmb    02 38 23.9
      comp=Z,16nm,0.8s
GLI   Glacier Island    65.24  32   IAmb   IAmb    02 38 21.0
      comp=Z,28nm,0.9s
FID   Port Fidalgo      65.56  33   IAmb   IAmb    02 38 24.5
      comp=Z,18nm,0.9s
AKT   Akhty             65.63 306  eP      P       02 38 10.2  +0.5
AKT                                e*PP    pP      02 38 25.9  +1.6
AKT                                e               02 38 40.8
AKT                                 pmax   pmax
      comp=Z,25nm,0.4s
PAX   Paxson            65.64  30   IAmb   IAmb    02 38 25.7
      comp=Z,18nm,0.8s
RIDG  Independent Ri    65.77  29   IAmb   IAmb    02 38 25.0
      comp=Z,18nm,0.9s
MSVF  Nonsavu           65.91 126  i P     P       02 38 11.4  -0.3
SCRK  Sand Creek        66.10  29   IAmb   IAmb    02 38 27.9
      comp=Z,25nm,0.8s
DOT   Dot Lake          66.13  29   IAmb   IAmb    02 38 28.3
      comp=Z,25nm,0.8s
KLMR  Klimovskoe        66.34 328  eP      P       02 38 10.6  -3.1
KLMR                                pmax   pmax
      comp=Z,37nm,1.4s
KLMR  Klimovskoe        66.34 328  eP      P       02 38 10.6  -3.1
KLMR                                AMP            02 38 13.7
      comp=Z,37nm,1.4s
TMCR  Tamitsa           66.34 331  eP      P       02 38 12.4  -1.3
TMCR                                pmax   pmax
      comp=Z,65nm,1.0s
MENT  Mentasta          66.43  30   IAmb   IAmb    02 38 40.9
      comp=Z,29nm,0.9s
RAGM  Ragged Mountai    66.51  33   IAmb   IAmb    02 38 31.8
      comp=Z,33nm,1.0s
GROC  Groznyy           66.58 308  eP      P       02 38 14.6  -1.1
GROC                               e*PP    pP      02 38 31.0  +0.7
GROC                               e*SP    sP      02 38 38.4  +2.1
GROC                               e               02 40 41.8
GROC                                pmax   pmax
      comp=Z,38nm,0.9s
GLB   Gilahina Butte    66.70  32   IAmb   IAmb    02 38 32.8
      comp=Z,21nm,1.0s
DMTO  DMTO              66.91 279   P      P       02 38 18.5  +0.4
VRDI  Verde Repeater    66.91  32   IAmb   IAmb    02 38 34.0
      comp=Z,17nm,0.9s
MCARA McCarthy VSAT     67.08  32   IAmb   IAmb    02 38 34.7
      comp=Z,38nm,1.0s
CRQM  Cirque            67.17  32   IAmb   IAmb    02 38 34.0
      comp=Z,25nm,1.0s
VRH   Novokhopyorsk     67.29 317  eP      P       02 38 19.1  -0.9
VRH                                 pmax   pmax
      comp=Z,80nm,1.6s
TGL   Tana Glacier      67.32  32   IAmb   IAmb    02 38 36.4
      comp=Z,18nm,0.9s
RBK   Rabkut            67.65 279   P      P       02 38 23.2  +0.3
      SNR=7.4
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TBLG  Delisi            67.73 307   P      P       02 38 20.9  -2.1
TBLG  Delisi            67.73 307   P      P       02 38 20.9  -2.1
TBLG                                pmax   pmax
      comp=Z,13nm,1.1s
WHFO  Wadi Hawf         67.88 280   P      P       02 38 24.2  -0.1
      SNR=5.3
WHFO                                P      P       02 38 24.2  -0.1
      SNR=5.3
CTGM  Chitina Glacie    67.98  32   IAmb   IAmb    02 38 39.7
      comp=Z,20nm,0.9s
GOF   Gofitskoye        68.01 310⇑eP      P       02 38 25.2  +0.5
GOF                                 pmax   pmax
      comp=Z,104nm,1.1s
ZEI   Tsey              68.03 308  eP      P       02 38 22.4  -2.7
ZEI                                 pmax   pmax
      comp=Z,28nm,0.7s
KBZ   Khabaz            68.48 309   P      P       02 38 27.9  +0.3
      comp=Z,47nm,0.9s,baz=103,slow=3.2,SNR=77
KBZ                                 LR     LR      03 11 33.2
      comp=Z,204nm,21.7s,baz=60,slow=39
KBZ   Khabaz            68.48 309  i P     P       02 38 27.9  +0.3
KBZ                                 pmax   pmax
      comp=Z,60nm,0.9s
ABTO  Aybut             68.51 279   P      P       02 38 28.5  +0.2
ABTO                                P      P       02 38 28.5  +0.2
MOS   Moscow            68.51 323  eP      P       02 38 26.3  -1.3
MOS                                 pmax   pmax
      comp=Z,41nm,0.7s
EPYK  Eagle Plains      68.51  26   P      P       02 38 28.3  +0.8
      baz=286
KIV   Kislovodsk        68.56 309  ⇓P      P       02 38 28.8  +0.5
KIV   Kislovodsk        68.56 309  i P     P       02 38 29.2  +0.9
      SNR=27
KIV   Kislovodsk        68.56 309   P      P       02 38 29.1  +0.8
KIV   Kislovodsk        68.56 309  eP      P       02 38 28.8  +0.5
KIV                                 pmax   pmax
      comp=Z,261nm,1.1s
KIV                                 MLR    MLR
      comp=Z,461nm,17.0s
SPA0  Spitsbergen Ar    68.56 348  eP      P       02 38 27.5  -0.1
SPITS Spitsbergen Ar    68.56 348   P      P       02 38 27.1  -0.5
      comp=Z,7.0nm,0.6s,baz=108,slow=8.1,SNR=23
LPSR  Galich'ya Gora    68.61 319  eP      P       02 38 27.5  -0.7
LPSR                                pmax   pmax
      comp=Z,20nm,0.7s
AKH   Akhalkalaki       68.72 307  ⇓P      P       02 38 31.4  +2.0
AKH   Akhalkalaki       68.72 307   IAmb   IAmb    02 38 31.9
      comp=Z,32nm,1.1s
PCA   Pinnacle          68.72  32   IAmb   IAmb    02 38 43.9
      comp=Z,24nm,0.9s
VSR   Storozhevoye      68.84 318  eP      P       02 38 28.7  -1.0
VSR                                 pmax   pmax
      comp=Z,30nm,1.2s
INK   Inuvik            69.11  23   P      P       02 38 31.8  +0.8
      comp=Z,15nm,0.9s,baz=294,slow=6.3,SNR=41
INK                                 pP     pP      02 38 44.3  -1.6
      comp=Z,25nm,1.0s,baz=273,slow=6.6,SNR=11
INK   Inuvik            69.11  23   IAmb   IAmb    02 38 47.0
      comp=Z,47nm,1.2s
OBN   Obninsk           69.26 322ceP      P       02 38 31.9  -0.3
OBN                                 pmax   pmax
      comp=Z,19nm,0.5s
OBN                                 MLR    MLR
      comp=Z,509nm,20.0s
ARCES ARCESS Array B    69.62 338   P      P       02 38 33.8  -0.4
      comp=Z,3.8nm,0.6s,baz=61,slow=8.0,SNR=46
ARCES                               LR     LR      03 11 32.6
      comp=Z,111nm,22.0s,baz=358,slow=38
ARE0  ARCESS Array S    69.62 338  eP      P       02 38 34.5  +0.3
HAMF  Hammerfest        69.80 340  eP      P       02 38 35.1  -0.2
SOCY  Socotra           69.89 274   P      P       02 38 34.8  -2.1
SOCY                                IAmb   IAmb    02 38 38.1
      comp=Z,35nm,0.8s
KTK1  Kautokeino        70.57 338  eP      P       02 38 39.9  -0.2
SOC   Sochi             70.73 310  eP      P       02 38 41.0  -0.5
SOC                                e               02 41 20.5
SOC                                ePPP    PPP     02 43 00.0
SOC                                eS      S       02 47 53.3  +1.4
SOC                                eSS     SS      02 52 30.4  +6.1
SOC                                 pmax   pmax
      comp=Z,56nm,0.8s
SOC                                 MLR    MLR
      comp=Z,344nm,15.0s
NOR   Nord              70.76 355  i P     P       02 38 40.8  -0.2
      comp=Z,10.0nm,0.8s
NOR   Nord              70.76 355  i P     P       02 38 40.8  -0.2
NOR                                 pmax   pmax
      comp=Z,10.0nm,0.8s
TRO   Tromso            71.70 340  eP      P       02 38 46.7  -0.1
C36M  Paulatuk          71.88  21   IAmb   IAmb    02 39 04.2
      comp=Z,24nm,0.8s
C36M  Paulatuk          71.88  21   P      P       02 38 48.2  +0.3
      baz=296
ANN   Anapa             71.89 311  eP      P       02 38 47.4  -1.1
ANN                                 pmax   pmax
      comp=Z,108nm,0.9s
FIA1  FINESS Array S    72.38 330   P      P       02 38 49.0  -2.0
FINES FINESS Array B    72.38 330   P      P       02 38 50.9  -0.2
      comp=Z,28nm,0.6s,baz=73,slow=6.4,SNR=92
FINES                               LR     LR      03 13 31.8
      comp=Z,368nm,20.3s,baz=60,slow=38
RAYN  Ar Rayn           73.02 288  i P     P       02 38 56.4  +0.7
      SNR=48
RAYN  Ar Rayn           73.02 288   P      P       02 38 56.3  +0.7
RAYN  Ar Rayn           73.02 288   P      P       02 38 56.3  +0.7
RAYN                                pmax   pmax
      comp=Z,52nm,1.1s
VSU   Vasula            73.23 327ceP      P       02 38 56.3  +0.1
VSU                                 pmax   pmax
      comp=Z,152nm,0.8s
STEI  Steigen           73.69 339  eP      P       02 38 58.0  -0.7
SIM   Simferopol'       74.05 312ceP      P       02 39 02.3  +1.0
LOF   Lofoten           74.14 339  eP      P       02 39 01.6  +0.3
NACGM Naroch            74.62 324  e       P       02 39 09.0  +4.6
GAZ   Gaziantep         74.71 304   IAmb   IAmb    02 39 07.5
      comp=Z,32nm,1.0s
MOR8  Moi Rana          74.86 337  eP      P       02 39 04.2  -1.4
AKASG Malin Array Be    74.94 319   P      P       02 39 05.8  -0.4
      comp=Z,6.0nm,0.4s,baz=58,slow=6.5,SNR=82
AKASG                               LR     LR      03 14 13.5
      comp=Z,345nm,20.9s,baz=75,slow=38
AKASG Malin Array Be    74.94 319ceP      P       02 39 05.9  -0.4
AKASG                               pmax   pmax
      comp=Z,15nm,0.6s
AKBB  Malin Array Si    74.94 319   IAmb   IAmb    02 39 06.8
      comp=Z,25nm,0.7s
AKBB  Malin Array Si    74.94 319  i P     P       02 39 06.8  +0.5
RES   Resolute Bay      75.60  11   P      P       02 39 10.1  +0.4
      comp=Z,16nm,0.8s,baz=309,slow=6.3,SNR=66
RES   Resolute Bay      75.60  11   IAmb   IAmb    02 39 28.6
      comp=Z,24nm,0.9s
BR131 Keskin Array S    76.34 308   IAmb   IAmb    02 39 16.2
      comp=Z,39nm,0.9s
BR131 Keskin Array S    76.34 308   P      P       02 39 15.2  +0.5
      SNR=17
BR131 Keskin Array S    76.34 308  i P     P       02 39 15.0  +0.3
BRTR  Keskin Array B    76.34 308   P      P       02 39 15.0  +0.3
      comp=Z,29nm,1.0s,baz=97,slow=4.3,SNR=104
BRTR                                LR     LR      03 15 42.8
      comp=Z,56nm,21.8s,baz=306,slow=38
SORM  Soroca            76.49 317  ⇓P      P       02 39 15.1  -0.1
NSS   Namsos            76.62 336  eP      P       02 39 15.5  -0.1
KIS   Kishinev          76.67 316  ⇑P      P       02 39 16.3  +0.1
MILM  Milestii Mici     76.71 316  ⇑P      P       02 39 15.9  -0.5
TULEG Thule             76.88   4   IAmb   IAmb    02 39 19.1
      comp=Z,22nm,0.9s
ANTO  Ankara            76.89 308  ⇑P      P       02 39 18.2  +0.5
ANTO  Ankara            76.89 308   P      P       02 39 17.4  -0.3
ANTO                                IAmb   IAmb    02 39 19.3
      comp=Z,40nm,1.1s
ANTO  Ankara            76.89 308   P      P       02 39 17.4  -0.3
ANTO                                pmax   pmax
      comp=Z,40nm,1.1s
SUW   Suwalki           76.91 324  eP      P       02 39 17.7  +0.3
SUW   Suwalki           76.91 324  eP      P       02 39 17.7  +0.3
BR231 Keskin MP Arra    76.91 308   IAmb   IAmb    02 39 19.4
      comp=Z,29nm,0.9s
LEOM  Leova             77.25 316  ⇑P      P       02 39 19.6  +0.1
IAS   Iasi              77.37 316  ⇑P      P       02 39 20.1  -0.1
TLCR                    77.42 314  ⇓P      P       02 39 20.8  +0.3
BIR   Birlad            77.72 316  ⇓P      P       02 39 22.9  +0.8
TOPG  Topolog           77.83 314  ⇑P      P       02 39 23.5  +0.7
CFR   Carcaliu          77.86 314  ⇑P      P       02 39 22.8  -0.1
GHRR                    77.95 315  ⇑P      P       02 39 24.5  +1.1
TBLU  Trondheim         77.96 336  eP      P       02 39 22.8  -0.4
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PRAR  RASCA             78.12 317  ⇑P      P       02 39 24.3   0.0
HARR  Harsova           78.20 314  ⇑P      P       02 39 25.7  +0.9
PETR  Petresti          78.20 315  ⇑P      P       02 39 26.3  +1.5
TESR  Tescani           78.23 316  ⇑P      P       02 39 25.0  +0.1
ODBI  Odobesti          78.30 315  ⇑P      P       02 39 26.4  +1.1
LVV   L'vov             78.33 320  eP      P       02 39 25.4  -0.1
HFS   Hagfors           78.36 332   P      P       02 39 25.1  -0.4
      comp=Z,19nm,0.7s,baz=93,slow=3.9,SNR=71
VRI   Vrincioaia        78.46 315  ⇑P      P       02 39 27.2  +1.0
PLOR  Plostina          78.51 316  ⇑P      P       02 39 27.5  +0.9
BUR08 Bucovina Ar. S    78.62 318   IAmb   IAmb    02 39 28.9
      comp=Z,22nm,0.8s
BURAR Bucovina Array    78.62 318  ⇑P      P       02 39 27.6  +0.4
PGOR  Pogoanele         78.71 315  ⇑P      P       02 39 28.7  +1.0
YKA   Yellowknife Ar    78.77  25   P      P       02 39 28.4  +0.8
      comp=Z,8.5nm,0.8s,baz=303,slow=5.0,SNR=107
YKA                                 LR     LR      03 18 14.9
      comp=Z,82nm,18.0s,baz=0.0,slow=39
NB2   NORSAR Subarra    78.87 334   P      P       02 39 27.6  -0.7
      comp=Z,27nm,0.8s,baz=53,slow=5.6
NB2   NORSAR Subarra    78.87 334   P      P       02 39 27.6  -0.7
      baz=53,slow=5.6
NOA   NORSAR Array B    78.87 334   P      P       02 39 27.8  -0.5
      comp=Z,20nm,0.8s,baz=52,slow=5.6,SNR=58
NOA                                 LR     LR      03 18 03.8
      comp=Z,177nm,20.4s,baz=245,slow=38
NC602 NORSAR Array S    78.91 333  eP      P       02 39 28.1  -0.3
OZUR                    78.95 316  ⇑P      P       02 39 29.6  +0.6
MLR   Muntele Rosu      79.12 315  ⇑P      P       02 39 30.4  +0.4
MLR   Muntele Rosu      79.12 315   IAmb   IAmb    02 39 32.3
      comp=Z,40nm,1.0s
DOMB  Dombas            79.12 335  eP      P       02 39 29.8  +0.1
KWP   Kalwaria Pacla    79.18 320  eP      P       02 39 31.1  +0.9
KWP   Kalwaria Pacla    79.18 320  eP      P       02 39 31.1  +0.9
BEL   Belsk             79.20 323  eP      P       02 39 31.4  +1.2
BEL   Belsk             79.20 323  eP      P       02 39 31.4  +1.2
SECR                    79.24 315  ⇑P      P       02 39 31.9  +1.3
DOPR  Dopca             79.25 316  ⇑P      P       02 39 31.4  +0.8
FWVZ  Far West T-bar    79.26 144   P      P       02 39 32.5  +1.6
KULLO Kullorsuaq        79.30   1  i P     P       02 39 30.3   0.0
      comp=Z,49nm,0.9s
KULLO Kullorsuaq        79.30   1  i P     P       02 39 30.3   0.0
KULLO                               pmax   pmax
      comp=Z,49nm,0.9s
ISP   Isparta           79.34 307   IAmb   IAmb    02 39 32.2
      comp=Z,49nm,1.2s
MOL   Molde             79.37 336  eP      P       02 39 31.5  +0.6
ARCR  ARCALIA           79.38 317  ⇓P      P       02 39 32.6  +1.3
HAZ   Te Kaha           79.39 142   P      P       02 39 31.1  -0.1
RUGZ  Raukumara Rang    79.48 142   P      P       02 39 29.5  -2.4
BMR   Baia Mare         79.63 318  ⇑P      P       02 39 33.5  +0.9
PKGZ  Pakihiroa         79.65 141   P      P       02 39 33.7  +0.9
MWZ   Matawai           79.66 142   P      P       02 39 29.2  -3.6
BKZ   Black Stump Fm    79.70 143   P      P       02 39 26.9  -6.1
VOIR                    79.70 316  ⇓P      P       02 39 33.5  +0.3
OSL   Oslo              79.71 333  eP      P       02 39 33.0  +0.3
KOLS  Kolonicke sedl    79.76 320  eP      P       02 39 33.7  +0.4
KOLS                                pmax   pmax
      comp=Z,6.0nm,0.8s
KOLS  Kolonicke sedl    79.76 320  eP      P       02 39 33.7  +0.4
WMGZ  Waiomatatini S    79.79 141   P      P       02 39 34.4  +1.0
AKN   Aaknes            79.81 336  eP      P       02 39 33.6  +0.3
UZH   Uzhgorod          79.89 319  eP      P       02 39 34.2  +0.2
UZH                                e               02 39 40.8
UZH                                e               02 39 47.4
KRHZ  Kereru            79.98 144   P      P       02 39 30.6  -3.8
TRPA  Tarpa             79.98 319  ⇑P      P       02 39 35.0  +0.5
ARR   Arges             80.00 316  ⇓P      P       02 39 35.6  +0.9
CJR   Cluj-Napoca       80.02 317  ⇑P      P       02 39 35.9  +1.1
PNHZ  Pukenui           80.08 144   P      P       02 39 32.5  -2.5
HUMR  Humele            80.16 315  ⇑P      P       02 39 35.7  +0.2
SKAR  Skarslia          80.23 334  eP      P       02 39 36.1  +0.4
CRVS  Cervenica-Dubn    80.25 320  eP      P       02 39 36.7  +0.8
CRVS                                pmax   pmax
      comp=Z,68nm,2.0s
CRVS  Cervenica-Dubn    80.25 320  eP      P       02 39 36.7  +0.8
MRZ   Mangatainoka R    80.31 145   P      P       02 39 40.2  +4.1
ELND  Elena             80.31 313  ⇑P      P       02 39 37.1  +0.7
ZIMR                    80.31 314  ⇑P      P       02 39 37.1  +0.7
GKP   Gorka Klasztor    80.36 325  eP      P       02 39 37.5  +1.1
GKP   Gorka Klasztor    80.36 325  eP      P       02 39 37.5  +1.1
LOT   Lotru             80.50 316  ⇑P      P       02 39 38.3  +0.8
DRGR                    80.52 318  ⇑P      P       02 39 38.2  +0.7
BSD   Bornholm Skovb    80.54 327  i P     P       02 39 37.8  +0.5
      comp=Z,35nm,0.9s
BSD   Bornholm Skovb    80.54 327  i P     P       02 39 37.8  +0.5
BSD                                 pmax   pmax
      comp=Z,35nm,0.9s
OJC   Ojcow             80.54 322  eP      P       02 39 38.4  +0.9
OJC   Ojcow             80.54 322   IAmb   IAmb    02 39 39.3
      comp=Z,35nm,0.8s
OJC   Ojcow             80.54 322  eP      P       02 39 38.4  +0.9
MTW   Mount Morrison    80.63 145   P      P       02 39 45.4  +7.5
NIE   Niedzica          80.66 321  eP      P       02 39 39.3  +1.1
NIE   Niedzica          80.66 321  eP      P       02 39 39.3  +1.1
HYA   Hoyanger          80.75 335  eP      P       02 39 38.8  +0.4
VLAD  Vladila           80.77 315  ⇑P      P       02 39 39.2  +0.4
DEV   Deva              80.83 317  ⇓P      P       02 39 40.1  +1.0
SUMG  Summit            80.88 356  i P     P       02 39 40.4  +1.0
      comp=Z,60nm,0.8s
SUMG  Summit            80.88 356   P      P       02 39 39.0  -0.4
SUMG                                IAmb   IAmb    02 39 41.9
      comp=Z,23nm,0.8s
SUMG  Summit            80.88 356  i P     P       02 39 40.4  +1.0
SUMG                                pmax   pmax
      comp=Z,60nm,0.8s
PLVB  Pleven            80.92 314  ⇑P      P       02 39 40.2  +0.6
DIM   Dimitrovgrad      80.93 312  i P     P       02 39 41.0  +1.3
KECS  Kecovo            81.01 320  eP      P       02 39 41.1  +1.0
KECS                                pmax   pmax
      comp=Z,7.0nm,0.8s
KECS  Kecovo            81.01 320  eP      P       02 39 41.1  +1.0
ALN   Alexandroupoli    81.12 311   IAmb   IAmb    02 39 42.1
      comp=Z,24nm,1.1s
GZR   Gura Zlata        81.14 316  ⇑P      P       02 39 41.6  +0.7
SRE   Strehaia          81.22 316  ⇑P      P       02 39 42.1  +0.9
LANS  Liptovska Anna    81.27 321  eP      P       02 39 43.2  +1.8
LANS                                pmax   pmax
      comp=Z,4.0nm,0.7s
LANS  Liptovska Anna    81.27 321  eP      P       02 39 43.2  +1.8
SUE   Sulen             81.35 336  eP      P       02 39 42.0  +0.4
ODD1  Odda              81.37 334  eP      P       02 39 42.2  +0.4
COP   Copenhagen        81.40 329  i P     P       02 39 43.2  +1.3
      comp=Z,42nm,0.9s
COP   Copenhagen        81.40 329  i P     P       02 39 43.2  +1.3
COP                                 pmax   pmax
      comp=Z,42nm,0.9s
SIRR  Siria             81.41 318  ⇑P      P       02 39 43.0  +0.8
MPEP  Malo Peshtene     81.50 314  i P     P       02 39 43.7  +1.0
PUNG  Punghina          81.58 315  ⇑P      P       02 39 44.0  +0.9
PGB   Panagyurishte     81.60 313  i P     P       02 39 44.2  +0.8
RGN   Rugen             81.62 327  eP      P       02 39 44.1  +1.0
      comp=Z,73nm,1.0s,baz=54,slow=5.0
PSZ   Piszkesteto       81.64 320  ⇑P      P       02 39 44.3  +0.8
OKC   Ostrava-Krasne    81.66 322  eP      P       02 39 44.3  +0.9
OKC   Ostrava-Krasne    81.66 322  eP      P       02 39 44.3  +0.9
BLS5  Blasjo            81.74 334  eP      P       02 39 43.8  +0.1
BZS   Buzias            81.75 317  ⇑P      P       02 39 44.0   0.0
VYHS  Vyhne             81.96 320  eP      P       02 39 46.0  +0.9
VYHS                                pmax   pmax
      comp=Z,27nm,0.9s
VYHS  Vyhne             81.96 320  eP      P       02 39 46.0  +0.9
MORC  Moravsky Berou    82.02 322  ⇑P      P       02 39 46.1  +0.7
MORC  Moravsky Berou    82.02 322   IAmb   IAmb    02 39 47.3
      comp=Z,24nm,1.2s
MORC  Moravsky Berou    82.02 322  eP      P       02 39 45.9  +0.5
MDVR  Moldovita         82.10 316  ⇑P      P       02 39 45.6  -0.3
SNART Snartemo          82.12 333  eP      P       02 39 46.1  +0.5
KSP   Ksiaz             82.14 323  eP      P       02 39 46.9  +1.0
KSP   Ksiaz             82.14 323  eP      P       02 39 46.9  +1.0
VTS   Vitosha           82.17 314  ⇓P      P       02 39 47.5  +1.0
VTS   Vitosha           82.17 314  i P     P       02 39 47.5  +1.0
KRLC  Kraliky           82.28 322  eP      P       02 39 47.3  +0.5
KRLC  Kraliky           82.28 322  eP      P       02 39 47.3  +0.5
OSTC  Ostas             82.33 323  eP      P       02 39 48.5  +1.5
MMB   Musomiste         82.34 313  i P     P       02 39 47.3  +0.1
DPC   Dobruska-Polom    82.39 323  eP      P       02 39 48.2  +0.9
DPC   Dobruska-Polom    82.39 323  eP      P       02 39 48.2  +0.9
CHVC  Chvalec           82.40 323  eP      P       02 39 48.4  +1.0
JAVC  Velka Javorina    82.43 321  eP      P       02 39 49.3  +1.7
MUD   Monsted U'grnd    82.43 330⇑iP      P       02 39 47.8  +0.5
      comp=Z,52nm,0.9s
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MUD	Monsted U'grnd	82.43	330	⇑*i*P	P	02 39 47.8	+0.5
MUD				pmax	pmax		
	comp=Z,52nm,0.9s						
UPC	Upice	82.47	323	*e*P	P	02 39 48.8	+1.1
UPC	Upice	82.47	323	*e*P	P	02 39 48.8	+1.1
RUE	Ruedersdorf	82.55	326	*e*P	P	02 39 49.0	+1.0
	comp=Z,34nm,0.9s,baz=54,slow=5.0						
SRO	Srobarova	82.61	320	*e*P	P	02 39 50.0	+1.6
SRO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SRO	Srobarova	82.61	320	*e*P	P	02 39 50.0	+1.6
KKB	Krupnik	82.63	313	*i* P	P	02 39 49.4	+0.7
SMOL	Smolenice	82.75	321	*e*P	P	02 39 50.6	+1.4
SMOL				pmax	pmax		
	comp=Z,14nm,1.0s						
SMOL	Smolenice	82.75	321	*e*P	P	02 39 50.6	+1.4
VRAC	Vranov	82.79	322	⇑P	P	02 39 50.6	+1.2
VRAC	Vranov	82.79	322	*e*P	P	02 39 50.3	+0.9
MODS	Modra-Piesok	82.91	321	*e*P	P	02 39 50.5	+0.5
MODS				pmax	pmax		
	comp=Z,46nm,1.5s						
MODS	Modra-Piesok	82.91	321	*e*P	P	02 39 50.5	+0.5
KRUC	Moravsky	83.04	322	*e*P	P	02 39 51.0	+0.4
D03D	Eldon	83.06	40	P	P	02 39 51.3	+0.5
	baz=302						
FRGS	Fruska Gora	83.08	317	*e*P	P	02 39 47.1	-3.9
ZST	Bratislava	83.10	321	*e*P	P	02 39 51.4	+0.4
ZST				pmax	pmax		
	comp=Z,34nm,1.8s						
ZST	Bratislava	83.10	321	*e*P	P	02 39 51.4	+0.4
PVCC	Panska Ves	83.23	324	*e*P	P	02 39 52.9	+1.3
PVCC	Panska Ves	83.23	324	*e*P	P	02 39 52.9	+1.3
VAY	Valandovo	83.23	313	*i* P	P	02 39 52.0	+0.2
VAY	Valandovo	83.23	313	*i* P	P	02 39 52.1	+0.2
B05A	Bryant	83.25	39	P	P	02 39 52.6	+0.9
	baz=302						
BRG	Berggiesshubel	83.37	324	*e*P	P	02 39 52.8	+0.5
	comp=Z,32nm,1.4s						
BRG	Berggiesshubel	83.37	324	*e*P	P	02 39 53.0	+0.7
	comp=Z,33nm,1.4s,baz=54,slow=5.0						
TREC	Trest	83.41	322	*e*P	P	02 39 53.7	+1.1
TREC	Trest	83.41	322	*e*P	P	02 39 53.7	+1.1
BSEG	Bad Segeberg	83.42	328	*e*P	P	02 39 53.6	+1.1
	comp=Z,89nm,1.0s,baz=54,slow=5.0						
GOPC	GO Pecny, Ondr	83.45	323	*e*P	P	02 39 53.5	+0.7
GOPC	GO Pecny, Ondr	83.45	323	*e*P	P	02 39 53.5	+0.7
B06A	Marblemount	83.45	39	IAmb	IAmb	02 40 08.1	
	comp=Z,31nm,1.1s						
DIVS	Divibare	83.51	316	*e*P	P	02 39 53.5	+0.2
PRU	Pruhonice	83.54	323	*e*P	P	02 39 54.1	+0.9
PRU	Pruhonice	83.54	323	*e*P	P	02 39 54.1	+0.9
PRA	Prague	83.56	323	*e*P	P	02 39 54.4	+1.1
PRA	Prague	83.56	323	*e*P	P	02 39 54.4	+1.1
CLL	Collm	83.61	325	⇑*i*P	P	02 39 54.8	+1.3
	comp=Z,20nm,0.9s						
CLL				*i* sP	sP	02 40 14.2	-0.5
CLL				*e*PP	PP	02 43 06.0	-0.1
CLL				LmV		03 20 00.0	
	comp=Z,400nm,21.4s						
CLL	Collm	83.61	325	*e*P	P	02 39 55.1	+1.5
	comp=Z,20nm,0.9s,baz=54,slow=5.0						
CLL	Collm	83.61	325	IAmb	IAmb	02 39 55.7	
	comp=Z,14nm,0.7s						
CLL	Collm	83.61	325	⇑*i*P	P	02 39 54.8	+1.3
CLL				*i* *SP	sP	02 40 14.2	-0.5
CLL				pmax	pmax		
	comp=Z,20nm,0.9s						
CLL				MLR	MLR		
	comp=Z,400nm,21.4s						
FBE	Freiberg	83.65	324	*e*P	P	02 39 54.8	+1.0
	comp=Z,61nm,1.4s,baz=54,slow=5.0						
SKO	Skopje	83.65	314	*i* P	P	02 39 55.1	+1.1
LIT	Litokhoron	83.88	312	IAmb	IAmb	02 39 56.1	
	comp=Z,32nm,1.0s						
CONA	Conrad Observa	83.95	321	*i* PcP	P	02 39 56.5	+1.1
	comp=Z,16nm,0.9s,SNR=7.3						
BBLS	Lazići	83.99	316	*e*P	P	02 39 56.5	+0.8
PBCC	Pribram	84.01	323	*e*P	P	02 39 56.8	+1.2
C06D	Leavenworth	84.11	39	P	P	02 39 54.9	-1.3
	baz=303						
RUDO	Rudo	84.14	316	*e*P	P	02 39 56.5	+0.1
HAPS	Han Pijesak,Bl	84.16	317	*e*P	P	02 39 56.4	-0.2
NEUB	Neuenburg	84.30	325	*e*P	P	02 39 58.0	+1.0
	comp=Z,68nm,1.0s,baz=54,slow=5.0						
ASSE	Asse, Remlinge	84.31	326	*e*P	P	02 39 58.0	+1.0
	comp=Z,44nm,1.2s,baz=54,slow=5.0						
NRDL	Niedersach Rie	84.38	327	*e*P	P	02 39 58.7	+1.4
	comp=Z,58nm,1.3s,baz=54,slow=5.0						
TANN	Tannenbergstha	84.41	324	*e*P	P	02 39 58.3	+0.6
	comp=Z,75nm,1.4s,baz=54,slow=5.0						
OHR	Ohrid	84.50	313	*i* P	P	02 39 58.6	+0.2
GUNZ	Gunzen	84.50	324	*e*P	P	02 39 59.1	+1.0
	comp=Z,46nm,1.2s,baz=54,slow=5.0						
AGG	Agios Georgios	84.52	311	IAmb	IAmb	02 39 58.4	
	comp=Z,32nm,0.9s						
NKC	Novy Kostel	84.52	324	*e*P	P	02 39 59.4	+1.2
NKC	Novy Kostel	84.52	324	*e*P	P	02 39 59.4	+1.2
PLN	Plauen	84.52	324	*e*P	P	02 39 58.9	+0.7
	comp=Z,31nm,1.3s,baz=54,slow=5.0						
WERN	Wernitzgruen	84.52	324	*e*P	P	02 39 59.2	+1.0
	comp=Z,53nm,1.2s,baz=54,slow=5.0						
KHC	Kasperske Hory	84.54	323	*e*P	P	02 39 59.4	+1.0
KHC				*e*x	x	02 40 04.6	
KHC	Kasperske Hory	84.54	323	*e*P	P	02 39 59.4	+1.0
RETH	Rethem/Aller,	84.59	327	*e*P	P	02 39 59.5	+1.0
	comp=Z,80nm,1.0s,baz=54,slow=5.0						
CLZ	Clausthal	84.64	326	*e*P	P	02 40 00.2	+1.4
	comp=Z,114nm,1.1s,baz=54,slow=5.0						
GEC2	GERESS Array S	84.64	323	*e*P	P	02 39 59.9	+0.9
	comp=Z,24nm,1.2s,baz=54,slow=5.0						
GEC2	GERESS Array S	84.64	323	IAmb	IAmb	02 40 00.9	
	comp=Z,18nm,1.1s						
GERES	GERESS Array B	84.64	323	P	P	02 39 59.2	+0.2
	comp=Z,6.0nm,0.8s,baz=45,slow=4.0,SNR=32						
GERES				LR	LR	03 20 30.9	
	comp=Z,449nm,20.8s,baz=69,slow=38						
UPM	Unac-Piva	84.64	316	*e*P	P	02 39 58.8	-0.4
MOX	Moxa	84.71	325	*e*P	P	02 40 00.2	+1.0
	comp=Z,51nm,1.5s,baz=54,slow=5.0						
MOX				*e*L	L	03 20 57.3	
	comp=Z,441nm,20.3s						
ILULI	Ilulissat	84.73	359	*i* P	P	02 39 58.4	-0.5
	comp=Z,42nm,0.9s						
ILULI	Ilulissat	84.73	359	*i* P	P	02 39 58.4	-0.5
ILULI				pmax	pmax		
	comp=Z,42nm,0.9s						
B08A	Colville Reser	84.74	38	IAmb	IAmb	02 40 16.0	
	comp=Z,19nm,1.1s						
PDG	Podgorica	84.82	315	⇑P	P	02 40 00.5	+0.6
PDG	Podgorica	84.82	315	*e*P	P	02 40 00.4	+0.6
MANZ	Manzenberg	84.84	324	*e*P	P	02 40 01.0	+1.2
	comp=Z,54nm,1.4s,baz=54,slow=5.0						
BLY	Banja Luka	84.89	318	⇑P	P	02 40 00.6	+0.4
BLY	Banja Luka	84.89	318	*e*P	P	02 40 00.8	+0.7
BLY	Banja Luka	84.89	318	IAmb	IAmb	02 40 01.9	
	comp=Z,24nm,1.0s						
MOA	Molln	84.89	322	*i* PcP	P	02 40 01.2	+1.0
	comp=Z,12nm,1.0s						
ROTZ	Rotzenmuhle	84.91	324	*e*P	P	02 40 01.5	+1.3
	comp=Z,55nm,1.3s,baz=54,slow=5.0						
WET	Wettzell	84.91	323	*e*P	P	02 40 01.5	+1.2
	comp=Z,22nm,1.6s,baz=54,slow=5.0						
TIR	Tirane	84.99	314	⇑P	P	02 40 01.3	+0.5
DRME	Dracevica, Mon	84.99	315	*e*P	P	02 40 01.3	+0.6
GTTG	Gottingen	85.02	326	*e*P	P	02 40 01.8	+1.2
	comp=Z,65nm,0.9s,baz=54,slow=5.0						
BRY	Bratogost	85.03	316	*e*P	P	02 40 01.3	+0.2
PERS	Pernice	85.08	320	*i* P	P	02 40 01.6	+0.4
SOKA	Soboth	85.10	320	*i* PcP	P	02 40 01.9	+0.6
	comp=Z,21nm,1.1s,SNR=6.3						
MGRS	Mrkonjic Grad	85.12	318	*e*P	P	02 40 02.5	+1.1
GOLS	Golise	85.13	319	*i* P	P	02 40 01.9	+0.5
TREB	Trebinje	85.24	316	*e*P	P	02 40 01.8	-0.2
HCY	Herceg Novi	85.29	315	*e*P	P	02 40 02.3	+0.1
CRES	Cresnjev	85.33	319	*e*P	P	02 40 02.8	+0.4
UBBA	Unterbreizbach	85.44	326	*e*P	P	02 40 03.9	+1.2
	comp=Z,88nm,1.8s,baz=54,slow=5.0						
E07A	Sunnyside	85.45	40	IAmb	IAmb	02 40 20.1	
	comp=Z,24nm,1.1s						
OBKA	Obir	85.47	320	*i* PcP	P	02 40 03.4	+0.2
	comp=Z,15nm,1.1s						
GRF	Grafenberg Arr	85.48	324	*e*P	P	02 40 04.4	+1.4
	comp=Z,80nm,1.2s,baz=54,slow=5.0						
GRF				*e*L	L	03 21 09.9	
	comp=Z,471nm,19.1s						
STON	Ston	85.57	316	*e*P	P	02 40 03.4	-0.2
IBBN	Ibbenburen	85.63	328	*e*P	P	02 40 04.6	+0.9
	comp=Z,87nm,1.1s,baz=54,slow=5.0						
C09A	Chrisman Ranch	85.64	38	P	P	02 40 03.6	-0.3
HAWA	Hanford	85.73	40	IAmb	IAmb	02 40 21.4	
	comp=Z,23nm,1.1s						
LJU	Ljubljana	85.75	320	*i* P	P	02 40 05.0	+0.6
RJOB	Jochberg	85.77	322	*e*P	P	02 40 05.6	+1.0
	comp=Z,28nm,0.9s,baz=54,slow=5.0						
F07A	Phinny Hill Vi	85.78	40	IAmb	IAmb	02 40 21.8	
	comp=Z,16nm,1.0s						
KBA	Koelnbreinsper	85.84	321	*i* PcP	P	02 40 05.3	+0.2
	comp=Z,5.4nm,0.7s						
MYKA	Terra Mystica	85.92	321	*i* PcP	P	02 40 04.9	-0.5
	comp=Z,10nm,0.8s						
J04D	Umpqua Nationa	85.93	43	P	P	02 40 06.5	+0.8
	baz=303						
CEY	Cerknica	85.98	320	*e*P	P	02 40 05.9	+0.3
NEW	Newport	86.00	37	P	P	02 40 06.5	+0.8
	comp=Z,4.5nm,0.8s,baz=312,slow=5.5,SNR=12						
NEW	Newport	86.00	37	IAmb	IAmb	02 40 22.3	
	comp=Z,13nm,1.0s						
NEW	Newport	86.00	37	P	P	02 40 06.8	+1.1
	baz=306						
PINE	Pine Mountain	86.34	42	P	P	02 40 06.8	-0.9
FUR	Furstenfeldbru	86.35	323	*e*P	P	02 40 08.7	+1.3
	comp=Z,105nm,1.1s,baz=54,slow=5.0						
L04D	Klamath Falls	86.36	44	P	P	02 40 08.4	+0.7
	baz=303						
YBH	Yreka Blue Hor	86.36	45	P	P	02 40 06.5	-1.2
YBH				IAmb	IAmb	02 40 25.0	
	comp=Z,16nm,0.9s						
YBH	Yreka Blue Hor	86.36	45	P	P	02 40 06.5	-1.2
YBH				pmax	pmax		
	comp=Z,16nm,0.9s						
BUG	Bochum--Univer	86.41	327	*e*P	P	02 40 08.5	+0.9
	comp=Z,44nm,1.5s,baz=54,slow=5.0						
E09A	Wood Farm, Sta	86.45	39	IAmb	IAmb	02 40 24.9	
	comp=Z,20nm,1.2s						
ABTA	Abfaltersbach	86.50	321	*i* PcP	P	02 40 07.8	-0.5
	comp=Z,25nm,1.2s,SNR=5.9						
TNS	Taunus Mts	86.59	326	*e*P	P	02 40 09.7	+1.1
	comp=Z,15nm,0.9s,baz=54,slow=5.0						
WATA	Walderalm	86.67	322	*e*PcP	P	02 40 09.3	+0.1
	comp=Z,18nm,1.2s,SNR=7.8						
WTTA	Wattenberg	86.68	322	*i* PcP	P	02 40 09.6	+0.3
	comp=Z,29nm,1.0s,SNR=10						
M04C	Macdoel	86.89	44	P	P	02 40 09.5	-0.8
	baz=303						
MOTA	Moosalm	86.93	322	*e*PcP	P	02 40 10.9	+0.4
	comp=Z,14nm,1.1s						
SQTA	Sankt Quirin	86.94	322	*e*PcP	P	02 40 10.8	+0.3
	comp=Z,20nm,1.1s,SNR=6.4						
SFJD	Kangerlussuaq	86.95	359	*i* P	P	02 40 09.9	0.0
SFJD	Kangerlussuaq	86.95	359	P	P	02 40 08.6	-1.3
SFJD				IAmb	IAmb	02 40 11.9	
	comp=Z,12nm,0.7s						
SFJD	Kangerlussuaq	86.95	359	*i* P	P	02 40 09.9	0.0
RETA	Reutte	87.03	323	*e*PcP	P	02 40 11.1	+0.4
	comp=Z,14nm,1.3s						
WDC	Whiskeytown Da	87.09	46	IAmb	IAmb	02 40 28.6	
	comp=Z,11nm,0.8s						
STU	Stuttgart	87.09	324	*e*P	P	02 40 11.8	+0.8
	comp=Z,37nm,1.0s,baz=54,slow=5.0						
WALA	Waterton Lakes	87.23	35	IAmb	IAmb	02 40 29.5	
	comp=Z,44nm,1.9s						
UBR	Ueberruh	87.27	323	*e*P	P	02 40 12.8	+0.8
	comp=Z,36nm,1.1s,baz=54,slow=5.0						
F10A	Beach Ranch, E	87.28	39	P	P	02 40 12.3	+0.2
FETA	Feichten	87.33	322	*e*PcP	P	02 40 13.2	+0.8
	comp=Z,21nm,1.3s,SNR=5.8						
CTI	Castel Tesino	87.39	321	IAmb	IAmb	02 40 13.4	
	comp=Z,15nm,1.1s						
MEM	Membach	87.56	327	P	P	02 40 12.5	-0.7
	comp=Z,9.6nm,0.9s						
DAVA	Damuels	87.63	323	*e*PcP	P	02 40 13.3	-0.5
	comp=Z,12nm,0.9s						
O03E	Paynes Creek	87.72	46	P	P	02 40 13.7	-0.5
	baz=303						
KPL	Plockton	87.78	337	*e*P	P	02 40 12.9	-1.1
MOD	Modoc Plateau	87.78	44	IAmb	IAmb	02 40 32.2	
	comp=Z,19nm,0.9s						
BSTI	Sart Tilman	87.79	327	PcP	P	02 40 15.4	+1.1
BFO	Black Forest	87.82	324	*e*P	P	02 40 16.6	+2.1
	comp=Z,14nm,1.2s,baz=54,slow=5.0						
BMO	Blue Mountains	87.89	40	IAmb	IAmb	02 40 32.4	
	comp=Z,12nm,1.1s						
WLF	Walferdange	88.09	326	PcP	P	02 40 16.6	+0.9
WLF				pP	pP	02 40 31.5	+0.4
WLF	Walferdange	88.09	326	*e*P	P	02 40 16.4	+0.7
	comp=Z,24nm,0.9s,baz=54,slow=5.0						
ORV	Oroville	88.31	46	IAmb	IAmb	02 40 33.4	
	comp=Z,16nm,1.0s						
EKA	Eskdalemuir Ar	88.34	334	P	P	02 40 15.8	-0.9
	comp=Z,1.4nm,0.5s,baz=38,slow=4.4,SNR=14						
BMRD	Maredsous	88.36	327	P	P	02 40 16.3	-0.6
BMRD				PcP	PcP	02 40 17.7	-0.9
BMRD				pP	pP	02 40 31.2	-1.1
DOU	Dourbes	88.58	327	PcP	P	02 40 18.3	+0.3
MSO	Missoula	88.59	37	P	P	02 40 18.3	0.0
	baz=308						
FFC	Flin Flon	88.85	26	P	P	02 40 19.9	+0.7
FFC				IAmb	IAmb	02 40 35.9	
	comp=Z,17nm,0.8s						
FFC	Flin Flon	88.85	26	P	P	02 40 19.9	+0.7
FFC				pmax	pmax		
	comp=Z,17nm,0.8s						
BEKR	Beckworth	88.88	45	IAmb	IAmb	02 40 37.2	
	comp=Z,14nm,0.9s						
AFDM	Forest Hills D	88.99	46	IAmb	IAmb	02 40 36.4	
	comp=Z,16nm,1.3s						
FRB	Frobisher Bay	89.36	7	P	P	02 40 20.8	-0.5
	comp=Z,6.0nm,0.7s,baz=339,slow=6.5,SNR=17						
PAHR	Pah Rah Range	89.59	45	IAmb	IAmb	02 40 40.1	
	comp=Z,8.4nm,0.9s						
SENIN	Lac Senin/Sane	89.59	323	IAmb	IAmb	02 40 23.9	
	comp=Z,21nm,1.3s						
MFID	Camas Ranch	89.60	41	IAmb	IAmb	02 40 42.3	
	comp=Z,16nm,1.4s						
CMB	Columbia Colle	89.88	47	IAmb	IAmb	02 40 41.2	
	comp=Z,8.2nm,0.9s						
EGMT	Eagleton	90.02	34	IAmb	IAmb	02 40 27.2	
	comp=Z,14nm,0.8s						
EGMT	Eagleton	90.02	34	P	P	02 40 24.7	-0.2
	baz=311,SNR=7.5						
FOEL	Foel Wylfa	90.14	333	*e*P	P	02 40 26.4	+1.1
DLMT	Dillon	90.23	38	IAmb	IAmb	02 40 43.4	
	comp=Z,12nm,0.9s						
STRD	Stroud	90.52	331	*e*P	P	02 40 27.0	0.0
STRD				IAmb	IAmb	02 40 28.6	
	comp=Z,38nm,0.8s						
SWN1	Swindon	90.55	331	*e*P	P	02 40 27.1	-0.1
KMBO	Kilima Mbogo	90.58	269	P	P	02 40 28.9	+0.6
	comp=Z,2.4nm,0.8s,baz=49,slow=7.8,SNR=10.0						
KMBO	Kilima Mbogo	90.58	269	P	P	02 40 28.9	+0.6
KMBO	Kilima Mbogo	90.58	269	*i* P	P	02 40 29.3	+1.0
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MCH1	Michaelchurch	90.71	332	*e*P	P	02 40 28.2	+0.3
MCH1				IAmb	IAmb	02 40 28.3	
	comp=Z,31nm,0.7s						
MONM	Monmouth	90.75	332	*e*P	P	02 40 27.4	-0.7
MONM				IAmb	IAmb	02 40 28.7	
	comp=Z,28nm,0.8s						
RYN	Ryan	90.75	46	IAmb	IAmb	02 40 45.4	
	comp=Z,7.9nm,1.1s						
KVN	Kaiserville	90.78	45	IAmb	IAmb	02 40 46.0	
	comp=Z,9.7nm,1.0s						
NVAR	Mina Array Bea	91.01	46	P	P	02 40 31.6	+1.7
	comp=Z,3.3nm,1.0s,baz=275,slow=5.1,SNR=14						
NVAR				pP	pP	02 40 44.8	-0.5
	comp=Z,6.5nm,1.0s,baz=289,slow=5.1,SNR=14						
NVAR				LR	LR	03 15 30.0	
	comp=Z,87nm,19.8s,baz=268,slow=32						
OMMB	Old Mammoth Mi	91.02	47	P	P	02 40 28.0	-2.1
NV11	Mina Array Sit	91.10	46	P	P	02 40 28.8	-1.4
NV11				IAmb	IAmb	02 40 51.2	
	comp=Z,9.6nm,1.2s						
SMMC	Simmler	91.66	49	P	P	02 40 33.8	+1.0
	baz=304						
PPT	Papeete	91.67	109	LR	LR	03 15 05.4	
	comp=Z,183nm,20.4s,baz=348,slow=31						
PPT2	Papeete2	91.68	109	*e*LR	LR	03 09 52.9	
	comp=Z,603nm,26.5s,baz=288						
H17A	Grant Village	91.95	37	IAmb	IAmb	02 40 53.3	
	comp=Z,14nm,0.9s						
H17A	Grant Village	91.95	37	P	P	02 40 35.7	+1.4
	baz=310,SNR=12						
RLMT	Red Lodge	92.18	36	P	P	02 40 35.9	+0.7
	baz=312,SNR=7.5						
CWC	Cottonwood Cre	92.30	47	P	P	02 40 35.8	-0.1
	baz=305						
DGMT	Dagmar	92.42	31	P	P	02 40 36.1	+0.1
	baz=315						
GRAC	Grapevine Rang	92.44	46	P	P	02 40 36.7	+0.3
	baz=306						
ISA	Isabella, Lake	92.48	48	P	P	02 40 37.2	+0.5
	baz=305						
LAO	LASA Array	92.69	34	P	P	02 40 37.9	+0.6
	baz=314						
AHID	Auburn Hatcher	92.72	39	P	P	02 40 35.6	-2.1
AHID				IAmb	IAmb	02 40 55.2	
	comp=Z,10nm,1.1s						
R11A	Troy Canyon, C	92.78	45	P	P	02 40 38.7	+0.6
	baz=307						
MPMC	Manual Prospec	92.91	47	P	P	02 40 38.7	0.0
	baz=306,SNR=6.9						
FURC	Furnace Creek,	93.08	47	P	P	02 40 39.9	+0.7
	baz=306						
TPNV	Topopah Spring	93.19	46	IAmb	IAmb	02 40 57.5	
	comp=Z,12nm,0.9s						
TPNV	Topopah Spring	93.19	46	P	P	02 40 41.4	+1.4
	baz=306,SNR=6.2						
HWUT	Hardware Ranch	93.19	40	IAmb	IAmb	02 40 57.3	
	comp=Z,14nm,1.1s						
EDW2	Edwards Air Fo	93.25	48	P	P	02 40 41.0	+0.8
	baz=305						
DUG	Dugway, Tooele	93.35	42	P	P	02 40 41.6	+1.0
	baz=309						
PDAR	Pinedale Array	93.58	38	P	P	02 40 42.4	+0.7
	comp=Z,2.4nm,0.9s,baz=308,slow=0.6,SNR=15						
PDAR				pP	pP	02 40 56.6	-0.5
	comp=Z,4.2nm,0.9s,baz=292,slow=1.8,SNR=11						
GSC	Goldstone, Bar	93.80	48	P	P	02 40 43.6	+0.9
	baz=306,SNR=5.7						
BFSC	Mount Baldy Ra	93.85	49	P	P	02 40 44.0	+1.0
	baz=306						
MPU	Maple Canyon	94.17	41	P	P	02 40 42.8	-1.7
TUQ	Turquoise Moun	94.30	47	P	P	02 40 46.0	+0.9
	baz=307						
TBI	Tubuai	94.37	114	*e*LR	LR	03 11 14.8	
	comp=Z,262nm,34.0s						
HEC	Hector,Ludlow	94.39	48	P	P	02 40 46.4	+1.0
	baz=306						
MURC	Murrieta	94.53	49	P	P	02 40 46.0	0.0
	baz=306						
ULM	Lac du Bonnet	94.68	26	P	P	02 40 46.2	-0.1
	comp=Z,3.6nm,0.8s,baz=310,slow=5.0,SNR=11						
ULM				pP	pP	02 41 00.4	-1.3
	comp=Z,4.0nm,0.8s,baz=336,slow=5.4,SNR=6.2						
ULM				LR	LR	03 26 27.2	
	comp=Z,111nm,18.1s,baz=343,slow=37						
GMRC	Granite Mounta	94.86	47	P	P	02 40 47.8	+0.1
	baz=307						
PFO	Pinyon Flats O	95.02	49	P	P	02 40 48.1	-0.3
PFO	Pinyon Flats O	95.02	49	P	P	02 40 48.1	-0.3
PFO				pmax	pmax		
	comp=Z,22nm,1.0s						
PFO	Pinyon Flats O	95.02	49	P	P	02 40 48.8	+0.4
	baz=306,SNR=5.3						
XPFO	Pion Flat	95.03	49	P	P	02 40 48.1	-0.3
MTPU	Mount Pierson	95.08	43	P	P	02 40 50.5	+1.6
BELC	Belle Mtn. Jos	95.10	48	P	P	02 40 48.6	-0.2
	baz=306						
K22A	Casper	95.31	37	P	P	02 40 48.6	-1.0
	baz=313						
KNB	Kanab	95.33	44	P	P	02 40 52.0	+2.2
KNB	Kanab	95.33	44	P	P	02 40 52.0	+2.2
KNB				pmax	pmax		
	comp=Z,9.0nm,0.9s						
IRM	Iron Mountain	95.58	48	P	P	02 40 51.6	+0.8
	baz=307						
RSSD	Black Hills	95.59	34	P	P	02 40 50.9	0.0
	baz=315						
BC3	Big Chuckawall	95.67	48	P	P	02 40 52.3	+0.9
	baz=307						
IKP	In-Ko-Pah, Jac	95.83	49	P	P	02 40 53.0	+1.0
	baz=306						
SWSC	Sam W. Stewart	95.86	49	P	P	02 40 53.1	+1.1
	baz=306						
O20A	White River Ci	96.06	39	P	P	02 40 52.3	-0.8
	baz=312						
Y12C	Blythe	96.23	48	P	P	02 40 54.8	+1.1
	baz=307						
WUAZ	Wupatki	97.18	45	P	Pdif	02 40 58.6	+0.3
WUAZ				IAmb	IAmb	02 41 15.8	
	comp=Z,7.1nm,1.1s						
WUAZ	Wupatki	97.18	45	P	Pdif	02 40 59.3	+1.0
	baz=310						
SCHQ	Schefferville	98.25	8	P	P	02 41 01.1	-1.3
	comp=Z,3.7nm,1.0s,baz=333,slow=4.5,SNR=3.5						
SCHQ				LR	LR	03 28 17.1	
	comp=Z,104nm,21.1s,baz=0.0,slow=37						
ESDC	Sonseca Array	100.18	324	P	Pdif	02 41 11.4	0.0
	comp=Z,1.4nm,0.7s,baz=20,slow=4.2,SNR=4.7						
TXAR	Lajitas Array	106.14	45	PP	PP	02 46 03.5	+1.8
	comp=Z,0.3nm,0.8s,baz=216,slow=4.5,SNR=2.9						
TORD	Torodi Ar. Bea	114.19	300	PKP	PKPdf	02 46 05.1	-0.1
	comp=Z,1.1nm,0.7s,baz=22,slow=1.7,SNR=6.8						
TORD				PP	PP	02 46 57.0	-3.4
	comp=Z,0.8nm,0.8s,baz=52,slow=7.7,SNR=4.0						
DBIC	Dimbokro	123.22	298	PKP	PKPdf	02 46 22.4	-0.3
	comp=Z,5.0nm,0.9s,baz=30,slow=0.3,SNR=6.3						
KIC	Kosan Boka	123.32	298	*e*PKIKP	PKPdf	02 46 22.5	-0.3
	comp=Z,24nm,1.2s						
KIC	Kosan Boka	123.32	298		PKPdf	02 46 22.5	-0.3
TIC	Toumodi	123.37	298	*e*PKIKP	PKPdf	02 46 22.6	-0.3
TIC	Toumodi	123.37	298		PKPdf	02 46 22.6	-0.3
TIC	Toumodi	123.37	298	PKIKP	PKPdf	02 46 22.6	-0.3
LIC	Lamto	123.63	298	*e*PKIKP	PKPdf	02 46 22.1	-1.3
	comp=Z,15nm,1.1s						
LIC	Lamto	123.63	298		PKPdf	02 46 22.1	-1.3
ROSC	El Rosal	142.57	37	PKP	PKPdf	02 46 59.0	-0.3
	comp=Z,2.5nm,0.3s,baz=41,slow=17,SNR=2.4						
FLOC	Florencia	144.46	42		PKPab	02 47 00.5	-0.1
ATAH	Atahualpa	148.94	57	PKPbc	PKiKP	02 47 15.7	+0.1
	comp=Z,10nm,1.0s,baz=260,slow=4.7,SNR=6.1						
NNA	Nana	153.13	63	PKPbc	PKPbc	02 47 22.9	-0.6
	comp=Z,4.9nm,0.5s,baz=176,slow=4.8,SNR=3.4						
NNA				PKPab	PKPab	02 47 36.3	+1.0
	comp=Z,21nm,1.0s,baz=299,slow=5.0,SNR=7.0						
NNA	Nana	153.13	63		PKPbc	02 47 22.0	-1.5
NNA	Nana	153.13	63	PKIKP	PKPbc	02 47 22.0	-1.5
PLCA	Paso Flores	159.35	139	PKPab	PKPab	02 48 02.4	+1.1
	comp=Z,2.1nm,1.1s,baz=42,slow=8.8,SNR=2.8						
PLCA				pPKPab	pPKPab	02 48 16.0	-0.9
	comp=Z,2.6nm,0.9s,baz=280,slow=3.5,SNR=4.3						
LPAZ	La Paz	162.47	58	PKP	PKPdf	02 47 29.1	+0.8
	comp=Z,1.0nm,0.7s,baz=245,slow=4.3,SNR=6.5						
LPAZ				PKPab	PKPab	02 48 17.7	+1.5
	comp=Z,0.8nm,0.8s,baz=315,slow=4.3,SNR=1.7						
LPAZ				pPKPab	pPKPab	02 48 28.7	-3.0
	comp=Z,2.9nm,1.0s,baz=11,slow=13,SNR=3.1						
LPAZ	La Paz	162.47	58		PKPdf	02 47 28.4	+0.2
LPAZ				PKPab	PKPab	02 48 15.0	-1.2
BDFB	Brasilia	168.52	337	PKP	PKPdf	02 47 33.3	+0.7
	comp=Z,3.4nm,0.9s,baz=36,slow=27,SNR=4.9						
BDFB				PKPab	PKPab	02 48 40.7	-1.3
	comp=Z,4.1nm,0.9s,baz=66,slow=7.2,SNR=4.6						
BDFB	Brasilia	168.52	337	PKPdf	PKPdf	02 47 31.7	-1.0

*SFS **03** 02:55:28.0, 34°.22N×5°.05W, ML3.0, LOULFA (MARRUECOS)*

*MDD **03** 02:55:29.9±1.9, 34°.30N×5°.04W, h0^{km}, mb3.7/4, Error ellipse: s-maj=17.7km s-min=10.7km az=174.0, PRXIMO*

*CNRM **03** 02:55:29.5±0.6, 34°.16N×4°.83W, h0^{km}, Error ellipse: s-maj=6.1km s-min=4.7km az=84.0*

*INMG **03** 02:55:30.8±1.9, 34°.18N×4°.90W, h20^{km}±12^{km}, ML2.0, Error ellipse: s-maj=7.0km s-min=6.3km az=94.0*

ISC 03 02:55:29.9±1.4**, 34°.26N**±0°.02×**4°.94W**±0°.03**, h19**^{km}±4^{km}**, n43,** σ1^{s}.**98**/78**, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSA	Sarsar	0.96	311	P	Pn	02 55 49.6	+1.1
RSA				S	Sn	02 56 05.8	+4.1
PALE	Palemas	1.27	40	P	Pg	02 55 53.3	-1.1
PALE				S	Sg	02 56 11.5	+0.5
MD31	MD31	1.39	174	P	Pn	02 55 53.1	-1.4
MD31				S	Sn	02 56 08.7	-3.7
MDT	Midelt	1.47	169	P	Pn	02 55 53.1	-2.4
MDT				S	Sn	02 56 11.1	-3.2

SMIR	Smir Dam	1.47	346	P	Pb	02 55 56.3	-0.4
SMIR				S	Sg	02 56 21.5	+4.1
AVE	Averroes	2.27	246	P	Pb	02 56 09.7	-0.6
AVE				S	Sb	02 56 38.9	+0.8
AVE	Averroes	2.27	246	*e*P	Pb	02 56 11.0	+0.7
AVE				*e*S	Sb	02 56 41.0	+3.0
EMIJ	Mijas	2.31	3	Pn	Pn	02 56 06.6	-0.3
	2.6nm,0.3s,SNR=9.0						
EMIJ				Sn	Sn	02 56 35.8	+0.9
	1.9nm,0.2s,SNR=7.9						
TDRA	Tendrara	2.71	116	P	Pn	02 56 14.2	+1.4
TDRA				S	Sn	02 56 46.8	+1.6
ELGU	Los Guajares,	2.82	22	Pn	Pn	02 56 14.6	+0.6
	1.5nm,0.1s,SNR=7.9						
ELGU				Sn	Sn	02 56 48.2	+0.7
	3.8nm,0.3s,SNR=7.9						
ARF	Arif	2.88	168	P	Pn	02 56 16.7	+1.7
ARF				S	Sb	02 56 53.2	-2.5
SRHM	Skhour des Reh	3.05	235	P	Pb	02 56 23.7	0.0
SRHM				S	Sg	02 57 05.4	-2.5
EBER	Berja	3.12	32	Pn	Pn	02 56 18.8	+0.5
	0.9nm,0.2s,SNR=7.9						
EBER				Sn	Sn	02 56 56.3	+1.1
	0.8nm,0.2s,SNR=7.9						
TZRR	Tazzarine	3.50	189	P	Pn	02 56 27.1	+3.6
TZRR				S	Sn	02 57 08.2	+3.7
FIGM	Figuig	3.74	123	P	Pn	02 56 24.8	-2.1
FIGM				S	Sn	02 57 11.8	+1.3
EMIN	Mina Concepcio	3.77	339	Pn	Pn	02 56 27.4	+0.3
	0.5nm,0.1s,SNR=7.2						
EMIN				Sn	Sn	02 57 09.5	-1.6
	0.4nm,0.3s,SNR=7.9						
ECAB	El Cabril	3.83	354	Pn	Pn	02 56 29.1	+1.1
	0.5nm,0.2s,SNR=6.8						
ECAB				Sn	Sn	02 57 10.4	-2.1
	0.9nm,0.1s,SNR=7.9						
PBDV	Barranco-do-Ve	3.85	322	Pn	Pn	02 56 27.2	-0.9
PBDV				Sn	Sn	02 57 10.9	-2.0
PBDV	Barranco-do-Ve	3.85	322	*e*Pn	Pn	02 56 27.2	-0.9
PBDV				*e*Sn	Sn	02 57 10.9	-2.0
EQES	Quesada	3.85	23	Pn	Pn	02 56 29.2	+0.9
	1.0nm,0.2s,SNR=7.9						
EQES				Sn	Sn	02 57 12.4	-0.7
	0.7nm,0.2s,SNR=7.9						
PVAQ	Vaqueiros	3.87	325	Pn	Pn	02 56 27.3	-1.1
PVAQ				Sn	Sn	02 57 12.2	-1.1
	3.2nm,0.4s						
PVAQ	Vaqueiros	3.87	325	*e*Pn	Pn	02 56 27.3	-1.1
PVAQ				*e*Sn	Sn	02 57 12.2	-1.1
PVAQ				A	A	02 57 14.8	
	3.2nm,0.4s						
EGRO	El Granado	3.87	328	Pn	Pn	02 56 28.7	+0.3
	2.7nm,0.2s,SNR=5.9						
EGRO				Sn	Sn	02 57 11.0	-2.3
	0.1nm,0.2s,SNR=7.9						
EADA	Adamuz	3.91	4	Pn	Pn	02 56 30.8	+1.7
	0.4nm,0.2s,SNR=7.9						
EADA				Sn	Sn	02 57 14.1	-0.5
	0.5nm,0.3s,SNR=7.9						
OUK	Oukaimeden	3.91	220	P	Pn	02 56 31.7	+2.3
OUK				S	Sn	02 57 19.1	+4.1
ZGR	Zagora	4.17	188	P	Pn	02 56 34.9	+2.3
ZGR				S	Sn	02 57 23.7	+2.8
PCVE	Castro Verde	4.20	324	Pn	Pn	02 56 33.0	0.0
PCVE	Castro Verde	4.20	324	*e*Pn	Pn	02 56 33.0	0.0
PTEO	Sao Teotonio	4.49	318	Pn	Pn	02 56 37.1	+0.1
PTEO				Sn	Sn	02 57 27.3	-1.5
PTEO	Sao Teotonio	4.49	318	*e*Pn	Pn	02 56 37.1	+0.1
PTEO				*e*Sn	Sn	02 57 27.3	-1.5
TTIG	Tnine Tigouga,	4.74	220	P	Pn	02 56 42.6	+2.1
TTIG				S	Sn	02 57 39.2	+4.2
EBAD	Badajoz	4.79	340	Pn	Pn	02 56 40.6	-0.5
	0.6nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	02 57 33.5	-2.6
	1.4nm,0.2s,SNR=7.9						
PNCL	Nicolau / Gran	4.82	324	Pn	Pn	02 56 41.3	-0.2
PNCL				Sn	Sn	02 57 33.4	-3.4
PNCL	Nicolau / Gran	4.82	324	*e*Pn	Pn	02 56 41.3	-0.2
PNCL				*e*Sn	Sn	02 57 33.4	-3.4
PESTR	Estremoz	5.07	336	*e*Pn	Pn	02 56 45.3	+0.3
PESTR				*e*Sn	Sn	02 57 41.5	-1.6
ETOB	Tobarra	5.16	31	Pn	Pn	02 56 48.6	+2.3
	1.4nm,0.2s,SNR=7.9						
PAB	San Pablo	5.30	5	Pn	Pn	02 56 48.8	+0.6
	0.2nm,0.2s,SNR=7.9						
PAB				Sn	Sn	02 57 46.2	-2.6
	0.4nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	5.46	8	Sn	Sn	02 57 50.4	-2.3
	SNR=7.9						
PMTG	Montargil	5.48	332	Pn	Pn	02 56 51.2	+0.6
PMTG	Montargil	5.48	332	*e*Pn	Pn	02 56 51.2	+0.6
PMRV	Marv??o	5.52	340	Pn	Pn	02 56 51.9	+0.7
PMRV	Marv??o	5.52	340	*e*Pn	Pn	02 56 51.9	+0.7
EPLA	Plasencia	5.87	351	Pn	Pn	02 56 55.8	-0.1
	0.3nm,0.1s,SNR=7.9						
EPLA				Sn	Sn	02 57 59.4	-3.4
	0.2nm,0.1s,SNR=7.9						

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*PRU **03** 03:01:42.1±0.0, 50°.26N×18°.75E, h0^{km}*

ISC 03 03:01:41.6±1.1**, 50°.27N**±0°.06×**18°.76E**±0°.03**, h0**^{km}**, n12, σ0^{s}85**/20**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.59	222	*e*PG	Pg	03 01 53.5	+0.7
OKC				*e*SG	Sg	03 02 00.3	-0.1
	comp=Z,4.1nm,0.4s						
OJC	Ojcow	0.67	94	*e*Pg	Pg	03 01 54.5	+0.1
OJC				*e*Sg	Sg	03 02 02.6	-0.5
MORC	Moravsky Berou	0.93	238	*e*PG	Pg	03 02 00.0	+0.6
MORC				*e*SG	Sg	03 02 11.7	+0.3
LANS	Liptovska Anna	1.22	158	*e*PG	Pg	03 02 05.1	+0.3
LANS				*e*SG	Sg	03 02 21.0	+0.4
LANS				*e*LG	Lg	03 02 24.7	
KRLC	Kraliky	1.29	262	*e*PG	Pg	03 02 05.7	-0.5
KRLC				*e*SG	Sg	03 02 22.6	-0.3
	comp=Z,3.8nm,0.4s						
DPC	Dobruska-Polom	1.56	274	*e*PG	Pn	03 02 11.4	+0.7
DPC				*e*SG	Sn	03 02 32.0	+0.3
VRAC	Vranov	1.70	236	*e*PN	Pn	03 02 13.3	+0.7
VRAC				*e*SG	Sb	03 02 35.6	-0.1
CHVC	Chvalec	1.76	281	*e*PG	Pb	03 02 15.1	+0.4
VYHS	Vyhne	1.78	178	*e*PN	Pn	03 02 13.2	-0.4
VYHS				*e*SN	Sn	03 02 35.3	-1.7
KRUC	Moravsky	1.96	233	*e*SG	Sb	03 02 43.4	+0.4
PRU	Pruhonice	2.73	266	*e*SG	Sg	03 03 07.7	-1.5
KHC	Kasperske Hory	3.55	253	*e*SG	Sg	03 03 33.7	-1.9

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*CNRM **03** 03:10:44.6±0.7, 34°.10N×4°.96W, h0^{km}, Error ellipse: s-maj=6.7km s-min=4.6km az=45.0*

*MDD **03** 03:10:45.9±3.0, 34°.33N×5°.05W, h0^{km}, mb3.0/6, Error ellipse: s-maj=25.9km s-min=21.8km az=165.0, PRXIMO SOLUCIN POBRE*

*SFS **03** 03:10:46.0, 34°.38N×5°.06W, ML2.6, KARIA BA MOHAMED (MARRUECOS)*

ISC 03 03:10:44.5±1.8**, 34°.23N**±0°.03×**4°.97W**±0°.04**, h14**^{km}±13^{km}**, n21, σ1^{s}61**/40**, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSA	Sarsar	0.96	313	P	Pb	03 11 03.7	+0.8
RSA				S	Sn	03 11 19.4	+2.2
MD31	MD31	1.37	173	P	Pn	03 11 07.7	-1.5
MD31				S	Sn	03 11 23.5	-3.6
MDT	Midelt	1.44	168	P	Pn	03 11 09.6	-0.6
MDT				S	Sn	03 11 28.2	-0.8
AVE	Averroes	2.24	246	P	Pn	03 11 23.3	+2.2
AVE				S	Sb	03 11 52.5	+0.2
AVE	Averroes	2.24	246	*e*Pn	Pb	03 11 25.6	+1.0
AVE	Averroes	2.24	246	*i* Pg	Pg	03 11 27.9	+0.6
AVE				*e*S	Sg	03 11 54.8	-1.6
EMIJ	Mijas	2.34	4	P	Pn	03 11 22.5	0.0
	0.5nm,0.2s,SNR=7.9						
EMIJ				S	Sn	03 11 50.7	-0.4
	1.4nm,0.2s,SNR=7.9						
TDRA	Tendrara	2.72	115	P	Pn	03 11 30.5	+2.6
TDRA				S	Sn	03 12 03.1	+2.4
TISM	Timmit	2.79	207	P	Pn	03 11 27.3	-1.3
TISM				S	Sb	03 12 06.5	-1.5
ELGU	Los Guajares,	2.85	22	P	Pn	03 11 30.4	+0.8
	0.8nm,0.2s,SNR=7.9						
ELGU				S	Sn	03 12 03.5	-0.4
	5.2nm,0.3s,SNR=7.9						
ARF	Arif	2.85	167	P	Pn	03 11 30.2	+0.5
ARF				S	Sn	03 12 06.0	+2.1
SRHM	Skhour des Reh	3.01	235	P	Pb	03 11 36.4	-1.5
SRHM				S	Sb	03 12 15.8	+1.2
TZRR	Tazzarine	3.47	189	P	Pn	03 11 39.0	+0.9
TZRR				S	Sn	03 12 20.1	+1.1
FIGM	Figuig	3.74	123	P	Pn	03 11 40.1	-1.8
FIGM				S	Sn	03 12 26.6	+0.7
EMIN	Mina Concepcio	3.79	339	P	Pn	03 11 42.5	0.0
	0.2nm,0.1s,SNR=7.9						
EMIN				S	Sn	03 12 24.7	-2.3
	0.4nm,0.2s,SNR=7.9						
ECAB	El Cabril	3.86	355	P	Pn	03 11 44.1	+0.7
	0.2nm,0.1s,SNR=7.9						
ECAB				S	Sn	03 12 26.1	-2.4
	0.7nm,0.2s,SNR=7.9						
EGRO	El Granado	3.88	329	P	Pn	03 11 44.0	+0.4
	0.7nm,0.1s,SNR=7.9						
EGRO				S	Sn	03 12 26.5	-2.6
	1.3nm,0.2s,SNR=7.9						
EADA	Adamuz	3.95	4	P	Pn	03 11 46.3	+1.7
	0.2nm,0.1s,SNR=7.9						
EADA				S	Sn	03 12 29.4	-1.3
	0.9nm,0.3s,SNR=7.9						
ZGR	Zagora	4.13	188	P	Pn	03 11 47.5	+0.3
ZGR				S	Sn	03 12 35.3	-0.2
TTIG	Tnine Tigouga,	4.70	220	P	Pn	03 11 56.0	+0.9
TTIG				S	Sn	03 12 51.1	+1.6
PAB	San Pablo	5.33	5	S	Sn	03 13 02.8	-2.2
	0.4nm,0.2s,SNR=7.9						

IDC 03 03:11:11.8±7.6**, 18°.25S**×**176°.55W, h0**^{km}**, mb3.7**/2**, mb1 3.9**/2**, mb1mx3.5**/38**, mbtmp3.7**/2**, Error ellipse: s-maj=329.2km s-min=120.1km az=152.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.31	260	P	P	03 19 40.0	+0.2
	0.5nm,0.7s,baz=96,slow=7.8,SNR=7.3						
ASAR	Alice Springs	46.41	254	P	P	03 19 40.2	-0.4
	0.8nm,0.5s,baz=91,slow=7.7,SNR=8.5						
AKASG	Malin Array Be	141.66	334	PKP	PKPdf	03 30 44.2	-1.0
	0.1nm,0.3s,baz=42,slow=4.2,SNR=4.3						

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*IDC **03** 03:17:44.7±0.5, 33°.07S×71°.86W, h0^{km}, mb4.8/19, mb1 4.8/24, mb1mx4.7/33, mbtmp4.7/24, ML4.4/5, MS4.6/15, Ms1 4.6/15, ms1mx4.4/29, Error ellipse: s-maj=20.1km s-min=11.3km az=74.0*

*MOS **03** 03:17:44.7±1.7, 32°.86S×71°.98W, h10^{km}, mb5.2/22, Error ellipse: s-maj=15.7km s-min=8.5km az=97.0*

*NEIC **03** 03:17:44.3±2.9, 33°.07S±0°.04×72°.05W±0°.07, h10^{km}±1^{km}, Error ellipse: s-maj=9.8km s-min=6.8km az=292.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.25; $M_{\theta\theta}$0.54; $M_{\phi\phi}$-1.79; $M_{r\theta}$1.60; $M_{\theta\phi}$-0.57; $M_{\phi r}$-4.53; Fault plane solution: $M_0$5.10000×10^{16} NP1: ϕ_s162.29000°, δ82.71000°, λ76.99000°. NP2: ϕ_s43.49000°, δ14.88000°, λ150.37000°. Principal axes: T 5.0997, Plg51.0000°, Azm58.0000°; N -0.0080, Plg13.0000°, Azm164.0000°; P -5.0916, Plg36.0000°, Azm264.0000°;*

*SJA **03** 03:17:45.5±0.7, 33°.08S×72°.14W, h10^{km}, ML4.9, MW5.0*

*GUC **03** 03:17:47.7±0.7, 33°.06S×71°.94W, h32^{km}±3^{km}, ML4.8*

*GCMT **03** 03:17:50.0±0.2, 33°.21S±0°.01×72°.11W±0°.02, h22^{km}, MW5.2/100, Moment Tensor Solution. s76,c107; s100,c153; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.70±.02; $M_{\theta\theta}$-0.06±.01; $M_{\phi\phi}$-0.64±.02; $M_{r\theta}$0.07±.02; $M_{\theta\phi}$0.01±.01; $M_{\phi r}$-0.62±.03; Best double couple: $M_0$0.91600×10^{17} NP1: ϕ_s2.00000°, δ24.00000°, λ96.00000°. NP2: ϕ_s176.00000°, δ67.00000°, λ87.00000°. Principal axes: T 0.9440, Plg68.0000°, Azm81.0000°; N -0.0580, Plg2.0000°, Azm177.0000°; P -0.8870, Plg21.0000°, Azm268.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*VAO **03** 03:17:50.8±0.8, 33°.19S×71°.87W, h48^{km}±6^{km}, mb5.0*

ISC 03 03:17:45.8±0.9**, 33°.12S**±0°.03×**72°.08W**±0°.03**, h13**^{km}±5^{km}**, n749, σ1^{s}56**/688**, mb5.2**/134**, MS4.8**/18**, 1C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA01	Torpederas	0.38	75	*e*P	Pb	03 17 55.0	+0.6
VA01				*i* S	Sb	03 18 00.4	+0.3
MT02	Curacav	0.80	100	*e*P	Pg	03 18 01.6	+0.3
MT02				*i* S	Sg	03 18 11.9	0.0
ROC1	El Roble	0.91	81		Pb	03 18 03.5	-0.1
ROC1	El Roble	0.91	81	*i* P	Pb	03 18 03.7	+0.2
ROC1				*e*S	Sb	03 18 15.5	-0.1
ROCH	El Roble	0.91	81	*e*P	Pb	03 18 03.6	0.0
ROCH				*i* S	Sg	03 18 15.3	0.0
ROCH				IAML		03 18 20.2	
	comp=N,57µm,0.5s						
PEL	Peldehue	1.17	91	*e*P	Pn	03 18 08.1	+0.1
PEL				*i* S	Sb	03 18 22.7	-0.3
PEL				IAML		03 18 30.1	
	comp=E,43µm,0.5s						
PEL	Peldehue	1.17	91		Pn	03 18 08.0	+0.1
PEL	Peldehue	1.17	91	P	Pb	03 18 08.0	+0.1
PEL	Peldehue	1.17	91	*i* P	Pn	03 18 08.2	+0.3
PEL				*e*S	Sn	03 18 26.5	+2.7
STL	Santa Lucia	1.24	105	*e*P	Pn	03 18 08.9	0.0
STL				*i* S	Sb	03 18 25.6	+0.4
STL				IAML		03 18 36.0	
	comp=E,29µm,0.6s						
FSR	Penalolen	1.35	106	*e*P	Pg	03 18 12.1	+0.3
MT03	Universidad Ad	1.36	106	*e*P	Pn	03 18 11.1	+0.4
MT03				*i* S	Sn	03 18 29.1	+0.4
FCH	Farellones	1.51	98	*e*P	Pn	03 18 13.7	+0.8
FCH				*i* S	Sb	03 18 33.6	+0.4
FCH				IAML		03 18 41.3	
	comp=N,27µm,0.4s						
LMEL	Las Melosas	1.73	115	*e*P	Pn	03 18 16.8	+1.1
LMEL				*i* S	Sb	03 18 39.7	+0.5
LMEL				IAML		03 18 45.5	
	comp=N,25µm,0.1s						
GO05	Huala	1.89	176		Pn	03 18 18.2	+0.4
GO05					Sn	03 18 38.7	-2.8
GO05	Huala	1.89	176	*i* P	Pn	03 18 18.2	+0.4
GO05				*e*S	Sg	03 18 47.9	+1.3
CO03	El Pedregal	2.56	28⇑	*i*P	Pn	03 18 28.3	+1.2
CO03				*i* S	Sb	03 19 03.1	-0.1
ARCO	CERRO ARCO	2.66	85	*i* P	Pb	03 18 32.9	-0.5
ARCO				*e*S	Sb	03 19 07.6	+1.6
ARCO				IAML		03 19 15.9	
	comp=Z,8µm,0.7s						
RTLS	Leoncito	2.70	61	*i* P	Pb	03 18 32.8	-1.4
RTLS				*e*S	Sg	03 19 12.1	-0.4
RTLS				IAML		03 19 16.5	
	comp=Z,9µm,0.8s						
UTNM	Universidad Te	2.72	86	*i* P	Pb	03 18 34.4	0.0
UTNM				*e*S	Sg	03 19 11.8	-1.4
UTNM				IAML		03 19 17.4	
	comp=Z,3µm,1.9s						
AAGR	Agrelo	2.73	90	*i* P	Pb	03 18 34.3	-0.2
AAGR				IAML		03 19 45.8	
	comp=Z,2µm,1.8s						
ASAL	Salagasta	2.78	80	*i* P	Pb	03 18 34.4	-1.0
ASAL				IAML		03 19 36.6	
	comp=Z,2µm,2.4s						
LAMA	Las Malvinas	2.99	128	*i* P	Pb	03 18 36.8	-2.1
GO04	Tololo Observa	3.14	21		Pn	03 18 35.8	+0.6
PUMA	Malargue	3.22	138	*i* P	Pb	03 18 40.2	-2.6
RTCV	Cerro Valdivia	3.24	68	*i* P	Pb	03 18 39.9	-3.4
RTCV				IAML		03 19 30.6	
	comp=Z,4µm,2.7s						
ZON	Zonda	3.28	62	*i* P	Pb	03 18 40.5	-3.4
ZON				IAML		03 19 42.4	
	comp=Z,4µm,1.1s						
EDS3	Malargue	3.45	141	*i* P	Pn	03 18 43.4	+4.0
CCHI	Chillan	3.47	180	*i* P	Pn	03 18 41.5	+2.0
RTLL	Cerro Villicun	3.54	61	*i* P	Pn	03 18 43.5	+3.0
RTLL				IAML		03 19 42.3	
	comp=Z,4µm,0.4s						
ACCO	Cerro Coronel	3.60	46	*i* P	Pn	03 18 45.0	+3.4
ACCO				IAML		03 20 06.5	
	comp=Z,2µm,0.8s						
AROD	Rodeo	3.69	38	*i* P	Pn	03 18 46.3	+3.4
ACDV	Cuesta del Vie	3.88	41	*i* P	Pn	03 18 48.7	+3.4
ACDV				IAML		03 19 53.4	
	comp=Z,4µm,0.7s						
ACAN	Cantantal	4.21	80	*i* P	Pn	03 18 52.5	+2.8
ACAN				IAML		03 20 08.6	
	comp=Z,992nm,0.6s						
CANA	Caviahue	4.83	170	*i* P	Pn	03 18 59.7	+1.4
CANA				IAML		03 20 37.6	
	comp=Z,852nm,1.7s						
MRA	San Martin	5.40	84	*i* P	Pn	03 19 08.0	+1.7
MRA				IAML		03 20 43.4	
	comp=Z,1µm,0.7s						
APLL	PUNTA DE LOS L	5.45	62	*i* P	Pn	03 19 09.4	+2.6
ACLC	CERRO LA CRUZ	5.73	51	*i* P	Pn	03 19 13.6	+2.8
GO03	Copiap	5.74	17		Pn	03 19 10.5	-0.3
PLCA	Paso Flores	7.69	171	Pn	Pn	03 19 38.9	+1.3
	comp=Z,1.5nm,0.3s,baz=352,slow=11,SNR=34						
PLCA				Lg	Lg	03 21 48.3	
	baz=315,slow=11,SNR=2.3						
PLCA	Paso Flores	7.69	171		Pn	03 19 37.2	-0.4
PLCA	Paso Flores	7.69	171	P	Pn	03 19 37.2	-0.4
PLCA	Paso Flores	7.69	171	*e*P	Pn	03 19 38.9	+1.3
GO02	Mina Guanaco	8.22	16		Pn	03 19 42.6	-2.5
PB10	IPOC Station P	9.67	8	Pn	Pn	03 20 02.9	-1.8
GO07	Milladeo Hill,	10.05	187	Pn	Pn	03 20 10.1	+0.2
LVC	Limon Verde	10.84	16	Pn	Pn	03 20 18.7	-2.4
	comp=Z,1.2nm,0.3s,baz=162,slow=5.7,SNR=7.7						
LVC				LR	LR	03 24 31.0	
	comp=Z,5µm,20.3s,baz=208,slow=38						
LVC	Limon Verde	10.84	16		Pn	03 20 17.8	-3.2
LVC	Limon Verde	10.84	16	P	Pn	03 20 17.8	-3.2
PB04	IPOC Station P	10.88	10	Pn	Pn	03 20 19.0	-2.4
LPA	La Plata	11.88	103	*e*P	Pn	03 20 27.5	-7.3
LPA				S	Sn	03 22 42.1	-5.1
LPA				PCP	PcP	03 26 23.0	+1.0
LPA				SCS	ScS	03 33 26.6	-3.7
LPA				PKIKP	PKiKP	03 34 16.7	-3.3
LPA				SKIKP	SKIKP	03 37 45.9	
PB01	IPOC Station P	12.25	11		Pn	03 20 36.2	-3.9
PB11	IPOC Station P	13.48	10		Pn	03 20 54.5	-2.5
ITQB	Itaqui	13.64	80	*e*P	Pn	03 20 58.2	-0.7
GO01	Chusmiza	13.64	12		Pn	03 20 59.3	-0.2
MNMC	Minye Minye	14.11	10		Pn	03 21 05.3	-0.4
CPUP	Villa Florida	14.48	66	Pn	Pn	03 21 07.7	-2.9
	comp=Z,0.7nm,0.3s,baz=237,slow=12,SNR=17						
CPUP				Sn	Sn	03 23 52.3	+1.3
	comp=Z,1.9nm,0.3s,baz=233,slow=15,SNR=3.4						
CPUP				Lg	Lg	03 25 10.5	
	comp=Z,1.1nm,0.3s,baz=351,slow=11,SNR=3.7						
CPUP	Villa Florida	14.48	66		Pn	03 21 10.3	-0.3
CPUP	Villa Florida	14.48	66	*e*P	Pn	03 21 11.4	+0.9
OGAUY	Aigu	14.51	100	*e*P	Pn	03 21 11.4	+0.6
PLTB	Pedras Altas	15.66	90	*e*P	Pn	03 21 26.2	0.0
CPSB	Cacapava Do Su	16.08	85	*e*P	Pn	03 21 30.2	-1.5
LPAZ	La Paz	17.14	13	Pn	Pn	03 21 44.2	-1.5
	comp=Z,0.6nm,0.3s,baz=179,slow=7.4,SNR=47						
LPAZ	La Paz	17.14	13	P	Pn	03 21 43.9	-1.8
LPAZ					Sn	03 24 50.6	-5.9
LPAZ	La Paz	17.14	13	P	Pn	03 21 43.9	-1.8
LPAZ						03 24 50.6	
LPAZ				pmax	pmax		
	comp=Z,207nm,2.0s						
LPAZ	La Paz	17.14	13	*e*P	P	03 21 46.8	-0.6
GO09	Cerro Castillo	18.14	181		Pn	03 21 55.9	-1.4
ITAB	Concordia	18.21	76	*e*P	Pn	03 21 58.3	0.0
CNLB	Canela	18.54	84	*e*P	P	03 22 02.3	0.0
AQDB	Aquidauana	19.27	53	*e*P	Pn	03 22 10.6	-0.6
PTGB	Pitanga	19.40	70	*e*P	P	03 22 12.0	+0.3
SIV	San Ignacio	19.75	33	P	P	03 22 14.7	-0.8
	comp=Z,0.6nm,0.3s,baz=227,slow=12,SNR=95						
SIV				Lg	Lg	03 28 13.5	
	comp=Z,0.1nm,0.3s,baz=307,slow=20,SNR=2.0						
SIV				LR	LR	03 31 09.3	
	comp=Z,4µm,18.2s,baz=229,slow=41						
TRCB	Terra Rica	19.99	64	*e*P	P	03 22 18.1	0.0
GO10	Punta Arenas	20.04	178	P	P	03 22 17.0	-1.4
GO10				IAmb	IAmb	03 23 08.1	
	comp=Z,152nm,1.2s						
EFI	East Falkland	21.17	155	P	P	03 22 27.8	-2.8
EFI	East Falkland	21.17	155	*i* P	P	03 22 30.9	+0.3
EFI				pmax	pmax		
	comp=Z,66nm,0.8s						
NNA	Nana	21.48	347	P	P	03 22 35.1	+0.8
	comp=Z,17nm,0.8s,baz=192,slow=10,SNR=8.8						
NNA				Lg	Lg	03 28 54.3	
	comp=Z,1.8nm,0.4s,baz=225,slow=13,SNR=4.2						
NNA	Nana	21.48	347	P	P	03 22 32.3	-2.0
NNA	Nana	21.48	347	*i* P	P	03 22 36.7	+2.4
NNA				pmax	pmax		
	comp=Z,49nm,1.0s						
PCMB	Pacaembu	21.71	63	*e*P	P	03 22 35.4	-1.3
USHA	Ushuaia	21.86	174	P	P	03 22 40.0	+2.1
	comp=Z,26nm,0.9s,baz=357,slow=15,SNR=7.2						
USHA				LR	LR	03 30 34.9	
	comp=Z,780nm,18.3s,baz=358,slow=35						
PP1B	Ponte de Pedra	21.87	49	*e*P	P	03 22 37.7	-0.7
FRTB	Fartura	22.06	70	*e*P	P	03 22 40.3	-0.2
C2SB	Chapadao do Su	22.39	55	*e*P	P	03 22 43.9	-0.1
SALV	Santo Antonio	22.67	45	*e*P	P	03 22 47.2	+0.2
ITRB	Iturama	23.54	61	*e*P	P	03 22 54.6	-1.3
SPB	Sao Paulo	23.63	73	P	P	03 22 54.0	-2.8
SPB	Sao Paulo	23.63	73	*e*P	P	03 22 56.4	-0.3
BB19B	Bebedouro	24.10	66	*e*P	P	03 23 00.8	-0.5
VAO	Valinhos	24.29	72	*e*P	P	03 23 02.4	-0.7
PARB	Paraibuna	25.21	74	*e*P	P	03 23 11.2	-0.2
ARAG	Araguaiana, MT	25.24	51	*e*P	P	03 23 10.9	-0.7
SAML	Samuel	25.42	21	*e*P	P	03 23 13.8	+0.5
SAML	Samuel	25.42	21	P	P	03 23 10.0	-3.3
SAML	Samuel	25.42	21	P	P	03 23 10.0	-3.3
SAML				pmax	pmax		
	comp=Z,83nm,0.9s						
SAML	Samuel	25.42	21	*e*P	P	03 23 14.0	+0.7
IPMB	Ipameri, GO	26.20	61	*e*P	P	03 23 19.2	-1.2
ESAR	Angra dos Reis	26.31	75	*e*P	P	03 23 20.6	-0.7
ATAH	Atahualpa	26.52	346	P	P	03 23 26.4	+2.8
	comp=Z,4.2nm,0.7s,baz=163,slow=11,SNR=4.8						
BSCB	Bom Sucesso	27.06	70	*e*P	P	03 23 27.6	-0.7
BDFB	Brasilia	27.88	57	P	P	03 23 34.7	-0.9
	comp=Z,36nm,0.8s,baz=222,slow=8.3,SNR=42						
BDFB				LR	LR	03 34 07.7	
	comp=Z,797nm,21.4s,baz=235,slow=36						
BDFB	Brasilia	27.88	57	P	P	03 23 33.0	-2.6
BDFB				IAmb	IAmb	03 23 37.2	
	comp=Z,38nm,0.8s						
BDFB				PcP	PcP	03 26 47.9	-3.4
BDFB	Brasilia	27.88	57	P	P	03 23 33.0	-2.6
BDFB						03 26 47.9	
BDFB				pmax	pmax		
	comp=Z,38nm,0.8s						
JANB	Januaria	30.93	61	*e*P	P	03 24 01.5	-1.1
SJMB	Sao Joao De Ma	31.14	70	*e*P	P	03 24 04.2	-0.1
BSFB	Barra de Sao F	31.34	71	*e*P	P	03 24 05.8	-0.3
PMSA	Palmer Station	32.06	174	P	P	03 24 09.8	-2.1
SMTB	Santa Maria do	33.08	49	*e*P	P	03 24 22.4	+0.9
PTLC	Puerto Leguiza	33.22	355	*e*P	P	03 24 23.0	+0.5
OTAV	Otavalo	33.72	348	*e*P	P	03 24 31.1	+3.6
OTAV	Otavalo	33.72	348	P	P	03 24 25.5	-2.0
OTAV				IAmb	IAmb	03 24 43.6	
	comp=Z,55nm,1.9s						
OTAV					PcP	03 27 05.4	-1.8
OTAV	Otavalo	33.72	348	*e*P	P	03 24 29.6	+2.1
PTGA	Pitinga	34.17	22	P	P	03 24 29.6	-1.3
PTGA	Pitinga	34.17	22	*e*P	P	03 24 31.3	+0.4
FLOC	Florencia	34.68	354	*e*P	P	03 24 37.4	+2.0
FLOC				*e*P	P	03 24 38.9	+3.5
FLOC	Florencia	34.68	354	P	P	03 24 33.1	-2.2
NBIT	Itapeh - BA	34.68	66	*e*P	P	03 24 33.1	-2.3
MACC	Macarena, Meta	35.12	357	*e*P	P	03 24 41.3	+2.2
GARC	Garzon, Huila	35.27	354	*e*P	P	03 24 41.9	+1.2
TUMC	Tumaco	35.32	348	P	P	03 24 39.1	-1.7
SOTA	Rioblanco	35.33	352	*e*P	P	03 24 44.4	+3.0
PCON	Cinco Dias	35.49	353	*e*P	P	03 24 42.9	-0.1
PAYG	Puerto Ayora	36.54	328	P	P	03 24 51.1	-0.2
PAYG				IAmb	IAmb	03 25 22.0	
	comp=Z,39nm,1.2s						
NBPN	Ponto Novo - B	36.71	60	*e*P	P	03 24 52.4	-0.4
ORTC	Ortega, Tolima	36.95	355	*e*P	P	03 24 54.7	-0.1
ORTC				*e*P	P	03 24 57.0	+2.2
PTGC	Puerto Gaitan,	37.12	360	*e*P	P	03 24 55.5	-0.7
YOTC	Yotoco, Valle	37.12	353	*e*P	P	03 24 57.7	+1.4
CHIC	Chingaza	37.58	357	*e*P	P	03 25 02.2	+1.7
ROSC	El Rosal	37.81	356	P	P	03 25 03.6	+1.1

	comp=Z,8.6nm,0.6s,baz=252,slow=20,SNR=3.0						
ROSC	El Rosal	37.81	356	eP	P	03 25 07.5	+5.0
ROSC	El Rosal	37.81	356	P	P	03 25 00.3	-2.2
ROSC				IAmb	IAmb	03 25 17.1	
	comp=Z,37nm,1.1s						
GUY2C	Guyana, Caldas	38.26	355	eP	P	03 25 10.6	+4.2
GUY2C				eP	P	03 25 10.6	+4.2
NBLA	Lagarto - SE	38.39	63	eP	P	03 25 06.4	-0.6
NORC	Norcasia	38.56	356	eP	P	03 25 09.8	+1.3
SPBC	San Pablo de B	38.61	357	eP	P	03 25 09.1	+0.2
RUSC	La Rusia	38.81	358	eP	P	03 25 13.3	+2.3
RUSC	La Rusia	38.81	358	P	P	03 25 10.0	-1.0
RUSC				PP	PP	03 26 35.2	-4.9
CBOC	Ciudad Bolivar	38.95	354	eP	P	03 25 13.8	+2.0
CBOC				eP	P	03 25 14.3	+2.5
HELC	Santa Helena	39.23	355	eP	P	03 25 13.6	-0.9
TAMC	Tame, Arauca	39.34	0	eP	P	03 25 16.1	+1.2
NBTA	Tacaratu-PE	39.42	60	eP	P	03 25 14.7	-1.0
PTBC	PUERTO BERRIO,	39.51	356	eP	P	03 25 15.8	-0.5
BARC	Barichara	39.51	358	eP	P	03 25 17.4	+0.8
ELOV	Elorza	39.98	4	eP	P	03 25 21.4	+1.2
NBMA	Muriti-CE	40.11	58	eP	P	03 25 20.4	-1.0
DBBC	Dabeiba	40.11	354	eP	P	03 25 24.4	+3.0
PAMC	Pamplona, Colo	40.24	359	eP	P	03 25 23.5	+0.5
NBAN	Anadia - AL	40.38	63	eP	P	03 25 23.3	-0.3
NBPS	Pedro II - PI	40.41	52	eP	P	03 25 25.0	+1.0
ZARC	Zaragoza, Cauc	40.48	356	eP	P	03 25 24.1	-0.2
UREC	San Jos de Ur	40.78	355	eP	P	03 25 24.9	-2.0
NBPB	Pedra_Branca-C	40.83	55	eP	P	03 25 27.0	-0.3
NBLI	Livramento-PB	41.41	60	eP	P	03 25 31.6	-0.7
SMLC	San Martn de	41.73	357	eP	P	03 25 34.9	+0.2
SDV	Santo Domingo	41.80	2	P	P	03 25 35.8	+0.3
	comp=Z,28nm,0.8s,baz=190,slow=0.7,SNR=25						
SDV	Santo Domingo	41.80	2	eP	P	03 25 36.6	+1.2
SDV	Santo Domingo	41.80	2	P	P	03 25 35.2	-0.2
SDV				IAmb	IAmb	03 25 41.1	
	comp=Z,30nm,0.8s						
SDV	Santo Domingo	41.80	2	eP	P	03 25 35.9	+0.5
NBPA	Parau_RN	42.40	58	eP	P	03 25 38.6	-1.7
ARGC	Ariguani, Magd	42.79	357	eP	P	03 25 43.8	+0.5
CODC	Agustn Codazz	42.84	358	eP	P	03 25 41.5	-2.2
SJCC	San Jacinto, C	42.88	356	eP	P	03 25 46.8	+2.7
RCBR	Riachuelo	43.22	59	eP	P	03 25 46.4	-0.5
NBPV	Pedro Velho	43.26	60	eP	P	03 25 47.2	0.0
PCRV	Puerto La Cruz	43.64	11	LR	LR	03 46 07.4	
	comp=Z,1µm,18.4s,slow=39						
URIC	Uribia, Colomb	44.57	0	P	P	03 25 55.2	-2.4
JTS	Las Juntas de	44.88	342	P	P	03 25 58.0	-2.1
JTS	Las Juntas de	44.88	342	P	P	03 25 58.0	-2.1
JTS				pmax	pmax		
	comp=Z,23nm,1.4s						
TOSP	Speyside	45.52	16	P	P	03 26 01.9	-3.3
MCLT	Moule a Chique	47.77	15	P	P	03 26 20.8	-2.0
VNA3	Neumayer Olymp	50.18	158	P	P	03 26 42.7	+1.9
VNA2	Neumayer--Watz	50.83	157	P	P	03 26 47.2	+1.5
	baz=281,slow=8.4						
APG	El Apazote	50.98	337	P	P	03 26 48.0	+0.5
	comp=Z,9.6nm,1.0s,baz=189,slow=3.5,SNR=6.6						
SABA	Saba	51.16	11	P	P	03 26 47.3	-1.3
PDPR	Patillas Dam,	51.18	7	IAmb	IAmb	03 26 50.2	
	comp=Z,39nm,1.1s						
BANI	BANI	51.25	2	P	P	03 26 47.1	-2.4
SJG	San Juan	51.26	7	P	P	03 26 46.2	-3.2
SJG				IAmb	IAmb	03 26 50.8	
	comp=Z,26nm,1.0s						
SJG	San Juan	51.26	7	P	P	03 26 46.2	-3.2
SJG				pmax	pmax		
	comp=Z,26nm,1.0s						
ANWB	Willy Bob	51.45	13	P	P	03 26 46.8	-4.1
SNAA	Sanae	52.41	158	P	P	03 26 59.0	+1.5
SNAA	Sanae	52.41	158	P	P	03 26 58.7	+1.2
	comp=Z,14nm,0.9s,baz=277,slow=6.9,SNR=26						
SNAA	Sanae	52.41	158	P	P	03 26 55.5	-2.0
SNAA				IAmb	IAmb	03 27 00.2	
	comp=Z,16nm,0.9s						
SNAA	Sanae	52.41	158	i P	P	03 26 58.2	+0.7
SNAA				pmax	pmax		
	comp=Z,966nm,1.0s						
CMIG	Matias Romero	54.48	333	P	P	03 27 13.9	+0.7
	comp=Z,3.6nm,1.0s,baz=172,slow=5.2,SNR=5.3						
TEIG	Tepich	55.26	341	P	P	03 27 19.6	+0.8
	comp=Z,26nm,0.8s,baz=133,slow=13,SNR=9.2						
TEIG	Tepich	55.26	341	P	P	03 27 16.3	-2.5
TLIG	Tlapa	56.40	329	P	P	03 27 23.9	-3.3
TLIG				IAmb	IAmb	03 27 40.4	
	comp=Z,24nm,1.4s						
QSPA	South Pole Qui	57.11	180	P	P	03 27 32.9	+1.2
NVL	N'lazarevskaya	57.14	157	eP	P	03 27 45.3	+14
NVL				pmax	pmax		
	comp=Z,18nm,1.0s						
DWPF	Disney Wildern	61.54	351	P	P	03 28 03.6	+1.1
	baz=171						
H06E1	SOCORRO T-PHAS	63.57	318	T	T	04 37 41.2	
	SNR=4.7						
VNDA	Vanda	64.95	191	LR	LR	03 53 03.1	
	comp=Z,203nm,21.2s,baz=135,slow=33						
TIGA	Tifton	65.13	349	IAmb	IAmb	03 28 28.4	
	comp=Z,19nm,0.9s						
TIGA	Tifton	65.13	349	P	P	03 28 27.2	+1.0
	baz=169						
352A	Blakely	65.39	348	P	P	03 28 26.5	-1.5
158A	Hollywood	65.95	353	P	P	03 28 33.5	+2.0
	baz=172						
250A	Grady	66.12	347	P	P	03 28 30.9	-1.8
346A	Big Creek Wild	66.23	344	P	P	03 28 32.6	-0.7
NHSC	New Hope	66.32	353	P	P	03 28 35.3	+1.5
	baz=172						
833A	Chaparral WMA,	66.38	334	P	P	03 28 33.6	-0.8
833A	Chaparral WMA,	66.38	334	P	P	03 28 36.8	+2.4
	baz=155						
Z58A	St. Stephen	66.50	353	P	P	03 28 36.4	+1.4
	baz=173						
Z57A	Bowman	66.56	352	P	P	03 28 36.1	+0.7
	baz=172,SNR=5.2						
HKT	Hockley	66.64	338	i P	P	03 28 36.9	+1.0
HKT				pmax	pmax		
	comp=Z,8.0nm,1.4s						
Z56A	Williston	66.67	352	P	P	03 28 34.6	-1.5
Z56A	Williston	66.67	352	P	P	03 28 37.2	+1.1
	baz=171						
SYO	Syowa Base	66.69	159⇓	eP	P	03 28 32.5	-3.4
SYO	Syowa Base	66.69	159⇓	esP	sP	03 28 45.4	+4.1
GOGA	Godfrey	67.04	350	P	P	03 28 37.0	-1.5
GOGA				IAmb	IAmb	03 28 40.2	
	comp=Z,12nm,0.9s						
GOGA	Godfrey	67.04	350	P	P	03 28 37.0	-1.5
GOGA				pmax	pmax		
	comp=Z,12nm,0.9s						
GOGA	Godfrey	67.04	350	P	P	03 28 38.8	+0.3
	baz=170,SNR=6.5						
Y58A	Scranton	67.06	353	P	P	03 28 40.0	+1.5
	baz=173						
Z51A	Franklin	67.23	348	IAmb	IAmb	03 28 42.0	
	comp=Z,18nm,1.1s						
Y57A	Sumter	67.24	353	P	P	03 28 41.2	+1.5
	baz=172						
LRAL	Lakeview Retre	67.29	346	P	P	03 28 40.6	+0.6
	baz=166						
Z50A	Ashland	67.30	347	IAmb	IAmb	03 28 42.5	
	comp=Z,20nm,1.1s						
Z50A	Ashland	67.30	347	P	P	03 28 40.7	+0.5
	baz=167,SNR=9.2						
Y55A	Saluda	67.34	351	P	P	03 28 41.6	+1.2
	baz=171,SNR=5.4						
TBI	Tubuai	67.49	256	eS	S	03 37 37.0	-1.0
	comp=Z,461nm,29.2s						
TBI	Tubuai	67.49	256	eLR	LR	03 49 09.0	
	comp=Z,1µm,26.8s,baz=110						
TBI	Tubuai	67.49	256	eT	T	04 42 19.2	
	comp=Z,10nm,0.3s						
LPIG	La Paz	67.57	322	LR	LR	03 51 47.2	
	comp=Z,135nm,18.0s,baz=132,slow=30						
X60A	Albert Glenn T	67.57	355	P	P	03 28 42.7	+0.9
	baz=174						
Y52A	Lilburn	67.58	349	IAmb	IAmb	03 28 44.2	
	comp=Z,20nm,0.9s						
Y52A	Lilburn	67.58	349	P	P	03 28 42.3	+0.4
	baz=169,SNR=7.5						
X56A	White Oak	67.78	352	P	P	03 28 43.6	+0.5
	baz=172						
X55A	Gracelyn & Ava	67.83	351	P	P	03 28 43.9	+0.4
	baz=171						
435B	Jarrell	67.98	336	P	P	03 28 46.6	+2.0
	baz=157						
X54A	Belton	68.00	351	P	P	03 28 45.6	+1.0
	baz=171,SNR=6.4						
X53A	Estanollee	68.09	350	P	P	03 28 46.1	+1.0
	baz=170,SNR=7.1						
W61A	Ground Anchor	68.10	356	P	P	03 28 46.9	+1.8
	baz=175						
W58A	Raeford	68.12	354	P	P	03 28 46.5	+1.2
	baz=173						
W59A	Clinton	68.19	354	P	P	03 28 47.7	+1.9
	baz=174						
PAULI	Pauline	68.20	351	IAmb	IAmb	03 28 48.4	
	comp=Z,17nm,1.0s						
W57A	Gilead	68.32	353	IAmb	IAmb	03 28 49.4	
	comp=Z,18nm,0.9s						
W57A	Gilead	68.32	353	P	P	03 28 47.7	+1.1
	baz=173,SNR=5.5						
W56A	Indian Trail	68.37	353	P	P	03 28 47.8	+1.0
	baz=172						
X51A	Calhoun	68.39	349	P	P	03 28 47.8	+0.8
	baz=168,SNR=8.9						
KMSC	Kings Mountain	68.46	352	IAmb	IAmb	03 28 49.4	
	comp=Z,14nm,0.9s						
KMSC	Kings Mountain	68.46	352	P	P	03 28 48.8	+1.4
	baz=172,SNR=6.8						
JCT	Junction City	68.48	334	IAmb	IAmb	03 28 51.3	
	comp=Z,26nm,1.0s						
JCT	Junction City	68.48	334	P	P	03 28 49.0	+1.3
	baz=155,SNR=10						
W54A	Cherokee Point	68.51	351	P	P	03 28 49.0	+1.2
	baz=171,SNR=5.7						
BG3	Lake Jocassee	68.52	350	P	P	03 28 45.6	-2.2
V61A	Roper	68.69	356	P	P	03 28 50.5	+1.7
	baz=176						
V60A	Jim Taylor Roa	68.70	355	P	P	03 28 50.4	+1.5
	baz=175						
W52A	Murphy	68.76	350	P	P	03 28 50.0	+0.6
	baz=169,SNR=5.9						
V59A	Middlesex	68.77	355	P	P	03 28 50.2	+0.9
	baz=174						
Z41A	Richland Creek	68.85	341	P	P	03 28 48.2	-1.6
Z41A	Richland Creek	68.85	341	P	P	03 28 51.1	+1.2
	baz=161						
V58A	Windy Hill, Pi	68.87	354	IAmb	IAmb	03 28 51.9	
	comp=Z,12nm,0.8s						
V58A	Windy Hill, Pi	68.87	354	P	P	03 28 50.5	+0.6
	baz=174						
MEH	Mehetia	68.94	262	eT	T	04 44 04.6	
	comp=Z,8.8nm,0.2s						
TXAR	Lajitas Array	68.95	331	P	P	03 28 52.2	+1.4
	comp=Z,5.5nm,0.8s,baz=148,slow=8.1,SNR=34						
TX31	Lajitas Ar. Si	68.95	331	IAmb	IAmb	03 29 08.6	
	comp=Z,19nm,1.4s						
TX32	Lajitas Array	68.95	331	IAmb	IAmb	03 29 08.6	
	comp=Z,20nm,1.4s						
V56A	Mocksville	69.03	353	P	P	03 28 51.4	+0.4
	baz=172,SNR=7.0						
W50A	Signal Mountai	69.09	348	P	P	03 28 52.4	+1.0
	baz=168,SNR=11						
V55A	Taylorsville	69.15	352	IAmb	IAmb	03 28 54.3	
	comp=Z,18nm,0.9s						
V55A	Taylorsville	69.15	352	P	P	03 28 52.2	+0.6
	baz=172,SNR=6.9						
V54A	Nebo	69.16	351	P	P	03 28 52.2	+0.4
	baz=171,SNR=10						
V53A	Saluda	69.17	351	P	P	03 28 52.4	+0.5
	baz=170,SNR=9.1						
CPCT	Cooper Cave	69.20	349	IAmb	IAmb	03 28 54.6	
	comp=Z,21nm,0.9s						
U61A	Possum Corner	69.22	356	P	P	03 28 53.3	+1.3
	baz=176						
OXF	Oxford	69.22	345	P	P	03 28 53.1	+0.9
	baz=164						
TKL	Tuckaleechee C	69.29	350	IAmb	IAmb	03 28 54.8	
	comp=Z,15nm,0.8s						
U59A	Littleton	69.32	355	P	P	03 28 54.4	+1.7
	baz=175						
PLAL	Pickwick Lake	69.39	346	IAmb	IAmb	03 28 55.6	
	comp=Z,14nm,0.9s						
U60A	Pendleton	69.40	356	P	P	03 28 54.3	+1.2
	baz=175						
U58A	Oxford	69.42	354	P	P	03 28 54.4	+1.0
	baz=174						
V52A	Sevierville	69.45	350	P	P	03 28 53.8	+0.2
	baz=170,SNR=8.6						
Z38A	Mt. Pleasant	69.46	340	P	P	03 28 51.1	-2.6
Z38A				IAmb	IAmb	03 28 56.6	
	comp=Z,21nm,0.9s						
V51A	Loudon	69.52	349	P	P	03 28 54.6	+0.6
	baz=169,SNR=7.1						
U57A	Blanch	69.53	354	P	P	03 28 54.8	+0.8
	baz=173						
U56A	King	69.55	353	IAmb	IAmb	03 28 56.8	
	comp=Z,13nm,0.8s						
U56A	King	69.55	353	P	P	03 28 54.9	+0.8
	baz=172						
U55A	TA2, Sparta	69.77	352	P	P	03 28 55.9	+0.2
	baz=172						
U53A	Fall Branch	69.82	351	P	P	03 28 56.3	+0.4
	baz=170						
U54A	Nelsons Funny	69.88	352	P	P	03 28 57.3	+1.0
	baz=171,SNR=9.3						
T59A	Double "B" Far	69.92	355	IAmb	IAmb	03 28 59.5	
	comp=Z,29nm,1.1s						
T59A	Double "B" Far	69.92	355	P	P	03 28 57.3	+0.9
	baz=175,SNR=5.3						
TVO	Taravao	69.96	261	eT	T	04 45 21.8	
	comp=Z,0.6nm,0.3s						
T58A	Grand View Acr	69.97	354	P	P	03 28 57.7	+1.0
	baz=174,SNR=5.8						
T60A	Surry	70.04	356	P	P	03 28 55.2	-1.9
T60A	Surry	70.04	356	P	P	03 28 57.4	+0.2
	baz=176						
T57A	Hurt	70.08	354	P	P	03 28 57.3	-0.1
T57A	Hurt	70.08	354	P	P	03 28 58.1	+0.7
	baz=174						
TZTN	Tazewell	70.13	350	P	P	03 28 57.4	-0.4
TZTN	Tazewell	70.13	350	P	P	03 28 58.3	+0.6
	baz=170						
CLTN	Cedars of Leba	70.14	348	IAmb	IAmb	03 29 00.5	
	comp=Z,18nm,0.9s						
TIAR	Tiarei	70.15	262	eT	T	04 45 35.9	
	comp=Z,1.7nm,0.2s						
UALR	University of	70.17	342	IAmb	IAmb	03 29 26.7	
	comp=Z,18nm,1.4s						
T56A	Rocky Mt	70.18	353	P	P	03 28 59.2	+1.1
	baz=173,SNR=5.3						
MIAR	Mount Ida	70.27	341	P	P	03 29 01.1	+2.5
	baz=161,SNR=6.1						
PPTF	Pamatai, Papee	70.32	261	P	P	03 28 59.0	-0.5
PPT2	Papeete2	70.33	261	eP	P	03 29 01.0	+1.4
	comp=Z,45nm,1.3s						
PPT2				eS	S	03 38 10.6	-1.3
	comp=Z,346nm,23.5s						
PPT2	Papeete2	70.33	261	eLR	LR	03 50 23.7	
	comp=Z,762nm,27.8s,baz=119						
PPT	Papeete	70.34	261	LR	LR	03 52 29.6	
	comp=Z,304nm,18.0s,baz=161,slow=30						
PPT	Papeete	70.34	261	P	P	03 28 59.5	-0.1
PPT	Papeete	70.34	261	P	P	03 28 59.5	-0.1
T55A	Pulaski	70.35	353	P	P	03 29 00.4	+1.3
	baz=172						
ABTX	Abilene, Hawle	70.37	336	IAmb	IAmb	03 29 02.6	
	comp=Z,22nm,0.9s						
ABTX	Abilene, Hawle	70.37	336	P	P	03 29 00.7	+1.3
	baz=156,SNR=8.2						
T54A	Tazewell	70.38	352	P	P	03 29 00.2	+0.8
	baz=171,SNR=8.3						
BLA	Blacksburg	70.40	353	P	P	03 29 00.4	+1.0
	baz=172						
T53A	Wise	70.42	351	P	P	03 28 59.9	+0.3
	baz=171						
WVT	Waverly	70.45	347	P	P	03 29 00.6	+0.9
WVT	Waverly	70.45	347	P	P	03 29 00.6	+0.9
WVT				pmax	pmax		
	comp=Z,61nm,1.0s						
WVT	Waverly	70.45	347	P	P	03 29 00.4	+0.7
	baz=166						
W41B	Gary Mavity, V	70.52	343	P	P	03 29 01.1	+0.9
	baz=162,SNR=5.7						
S58A	Poland Farm, P	70.59	355	P	P	03 29 01.4	+0.9
	baz=175						
S60A	Water View	70.59	356	P	P	03 29 02.6	+2.1
	baz=176						
T51A	Gray	70.60	350	P	P	03 29 01.5	+0.9
	baz=169,SNR=7.0						
T52A	Hallie	70.61	351	P	P	03 29 01.3	+0.6
T52A				IAmb	IAmb	03 29 16.7	
	comp=Z,38nm,1.4s						
T52A	Hallie	70.61	351	P	P	03 29 01.6	+0.9
	baz=170						
S59A	Mechanicsville	70.69	356	P	P	03 29 02.4	+1.3
	baz=175						
S56A	Natural Bridge	70.78	354	P	P	03 29 02.6	+0.9
	baz=173,SNR=6.2						
T50A	Nancy	70.79	349	P	P	03 29 02.7	+0.9
	baz=169						
S57A	Dark Hollow, R	70.81	354	P	P	03 29 00.6	-1.3
S57A				IAmb	IAmb	03 29 04.7	
	comp=Z,22nm,0.9s						
S57A	Dark Hollow, R	70.81	354	P	P	03 29 03.0	+1.1
	baz=174						
R58B	Mineral	70.93	355	IAmb	IAmb	03 29 06.0	
	comp=Z,17nm,1.1s						
R58B	Mineral	70.93	355	P	P	03 29 03.5	+0.9
	baz=175						
W39A	Magazine	70.94	341	IAmb	IAmb	03 29 06.2	
	comp=Z,25nm,0.9s						
W39A	Magazine	70.94	341	P	P	03 29 04.1	+1.4
	baz=161,SNR=14						
S55A	Lewisburg	70.97	353	P	P	03 29 04.0	+1.1
	baz=172						
T49A	Edmonton	70.99	349	IAmb	IAmb	03 29 05.2	
	comp=Z,15nm,1.1s						
T49A	Edmonton	70.99	349	P	P	03 29 03.4	+0.5
	baz=168,SNR=6.7						
S53A	Williamson	71.06	352	P	P	03 29 04.1	+0.6
	baz=171						
S54A	Dingess, Beckl	71.08	352	IAmb	IAmb	03 29 05.7	
	comp=Z,17nm,0.9s						
S54A	Dingess, Beckl	71.08	352	P	P	03 29 04.2	+0.6
	baz=172						
LCAR	Lake Charles	71.11	344	IAmb	IAmb	03 29 06.2	
	comp=Z,20nm,0.9s						
R59A	King George, V	71.11	356	P	P	03 29 05.7	+2.1
	baz=175						
CBN	Corbin Frederi	71.14	356	P	P	03 29 05.3	+1.5
	baz=175						
T47A	Sharon Grove	71.15	347	IAmb	IAmb	03 29 06.3	
	comp=Z,22nm,1.0s						
S52A	Salyersville	71.18	351	P	P	03 29 04.6	+0.5
	baz=170,SNR=6.6						
S51A	Beattyville	71.21	350	IAmb	IAmb	03 29 06.6	
	comp=Z,14nm,0.9s						
S51A	Beattyville	71.21	350	P	P	03 29 04.9	+0.6
	baz=170,SNR=7.0						
R58A	Rapidan	71.27	355	P	P	03 29 05.4	+0.8
	baz=175						
R57A	Stanardsville	71.31	355	P	P	03 29 06.4	+1.5
	baz=174,SNR=11						
S50A	Richmond	71.37	350	P	P	03 29 06.0	+0.7
	baz=169,SNR=9.8						
R54A	Victor	71.42	353	P	P	03 29 06.3	+0.7
	baz=172,SNR=5.7						
R55A	Marlinton	71.44	353	IAmb	IAmb	03 29 08.8	
	comp=Z,23nm,0.9s						
R55A	Marlinton	71.44	353	P	P	03 29 06.9	+1.2
	baz=173,SNR=6.4						
R56A	Bull Pasture M	71.49	354	P	P	03 29 07.1	+1.0
	baz=173						
X34A	Smith Ranch, M	71.58	338	IAmb	IAmb	03 29 09.8	
	comp=Z,17nm,0.8s						
S49A	Springfield	71.61	349	P	P	03 29 07.9	+1.2
	baz=168						
PBMO	Poplar Bluff	71.62	345	IAmb	IAmb	03 29 09.3	
	comp=Z,23nm,1.1s						
R53A	Hurricane	71.68	352	P	P	03 29 06.0	-1.1
R53A				IAmb	IAmb	03 29 21.5	
	comp=Z,16nm,1.1s						
R53A	Hurricane	71.68	352	P	P	03 29 08.2	+1.0
	baz=171						
MNTX	Cornudas Mount	71.73	330	IAmb	IAmb	03 29 10.0	
	comp=Z,13nm,0.9s						
MNTX	Cornudas Mount	71.73	330	P	P	03 29 08.2	+0.6
	baz=151,SNR=26						
R52A	Catlettsburg	71.77	351	P	P	03 29 08.5	+0.8
	baz=171						
U40A	Yellville	71.80	342	IAmb	IAmb	03 29 10.5	
	comp=Z,19nm,0.9s						
U40A	Yellville	71.80	342	P	P	03 29 08.2	+0.3
	baz=162,SNR=12						
R51A	Hillsboro	71.86	350	P	P	03 29 09.3	+1.1
	baz=170						
Q58A	Fox Den Farm,	71.89	355	P	P	03 29 09.6	+1.3
	baz=175						
R50A	Paris	71.95	350	P	P	03 29 09.4	+0.7
	baz=169						
HSIG		71.95	325	P	P	03 29 09.9	+0.9
HSIG				IAmb	IAmb	03 29 23.4	
	comp=Z,28nm,1.5s						
WMOK	Wichita Mounta	72.01	337	P	P	03 29 06.8	-2.4
WMOK	Wichita Mounta	72.01	337	P	P	03 29 06.8	-2.4
WMOK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
Q57A	Strasburg	72.03	355	P	P	03 29 11.4	+2.2
	baz=174,SNR=6.5						
R49A	Shelbyville	72.09	349	P	P	03 29 10.6	+1.1
	baz=168						
Q56A	Snyder Ridge,	72.10	354	P	P	03 29 10.8	+1.1
	baz=174						
Q55A	Buckhannon	72.14	353	P	P	03 29 11.2	+1.3
	baz=173						
Q53A	Leroy	72.15	352	P	P	03 29 11.3	+1.4
	baz=172						
TUL1	Leonard	72.17	340	IAmb	IAmb	03 29 12.2	
	comp=Z,18nm,1.0s						
TUL1	Leonard	72.17	340	P	P	03 29 10.8	+0.7
	baz=159,SNR=5.7						
Q54A	Coxs Mills	72.20	353	P	P	03 29 10.5	+0.2
	baz=172						
WCI	Wyandotte Cave	72.21	348	P	P	03 29 09.1	-1.2
WCI	Wyandotte Cave	72.21	348	P	P	03 29 09.1	-1.2
WCI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WCI	Wyandotte Cave	72.21	348	P	P	03 29 10.6	+0.3
	baz=167						
S44A	Carbondale	72.25	346	P	P	03 29 09.6	-0.9
S44A				IAmb	IAmb	03 29 12.9	
	comp=Z,18nm,0.9s						
U38A	Gravette	72.28	341	P	P	03 29 09.7	-1.1
SDMD	Soldier's Deli	72.30	356	P	P	03 29 10.1	-0.7
Q52A	Bidwell	72.34	352	P	P	03 29 12.5	+1.4
	baz=171,SNR=5.8						
P58A	Pank, Wackersv	72.41	356	P	P	03 29 12.0	+0.6
	baz=175,SNR=7.4						
P57A	Homestead Farm	72.45	355	P	P	03 29 12.7	+1.0
	baz=175,SNR=6.8						
Q50A	Georgetown	72.45	350	P	P	03 29 12.7	+0.9
	baz=169						
P61A	Hammonton	72.47	358	P	P	03 29 09.4	-2.4
P59A	Jarrettsville	72.48	356	P	P	03 29 13.0	+1.2
	baz=176,SNR=7.2						
P56A	Dayton Farm, R	72.53	355	P	P	03 29 13.6	+1.4
	baz=174						
Q51A	Peebles	72.54	351	IAmb	IAmb	03 29 14.6	
	comp=Z,23nm,0.9s						
Q51A	Peebles	72.54	351	P	P	03 29 12.6	+0.4
	baz=170,SNR=8.3						
P55A	Reedsville	72.62	354	P	P	03 29 13.9	+1.1
	baz=173						
P60A	Greenville	72.64	357	P	P	03 29 11.1	-1.7
P60A				IAmb	IAmb	03 29 24.3	
	comp=Z,28nm,1.4s						
P60A	Greenville	72.64	357	P	P	03 29 14.2	+1.4
	baz=177						
MSTX	Muleshoe	72.71	334	P	P	03 29 14.6	+1.1
	baz=153,SNR=26						
Q49A	Aurora	72.74	350	P	P	03 29 13.6	+0.1
	baz=169,SNR=7.2						
PSUB	Penn St. - Bra	72.75	357	P	P	03 29 11.6	-1.8
PSUB				IAmb	IAmb	03 29 25.2	
	comp=Z,21nm,1.2s						
P53A	Whipple	72.76	352	P	P	03 29 14.1	+0.6
	baz=172						
P54A	Burton	72.78	353	P	P	03 29 14.0	+0.3
	baz=172,SNR=8.2						
FVM	French Village	72.78	345	IAmb	IAmb	03 29 16.4	
	comp=Z,30nm,1.1s						
Q48A	North Vernon	72.80	349	P	P	03 29 14.1	+0.3
	baz=168,SNR=10						
O61A	Allentown	72.89	358	P	P	03 29 14.5	+0.3
	baz=178						
P51A	Williamsport	72.95	351	IAmb	IAmb	03 29 16.9	
	comp=Z,24nm,0.9s						
P51A	Williamsport	72.95	351	P	P	03 29 15.1	+0.4
	baz=170,SNR=8.1						
P52A	Corning	72.99	352	P	P	03 29 15.5	+0.6
	baz=171						

O58A	**Lewisberry**	73.02	356	P	P	03 29 16.1	+1.0
	baz=176						
OLIL	**Olney**	73.03	347	IAmb	IAmb	03 29 17.8	
	comp=Z,31nm,1.4s						
CCM	**Cathedral Cave**	73.03	344	P	P	03 29 13.7	-1.5
CCM	**Cathedral Cave**	73.03	344	P	P	03 29 13.7	-1.5
CCM				pmax	pmax		
	comp=Z,38nm,1.0s						
CCM	**Cathedral Cave**	73.03	344	P	P	03 29 16.3	+1.2
	baz=163						
AMTX	**Amarillo**	73.13	335	IAmb	IAmb	03 29 19.3	
	comp=Z,34nm,1.2s						
AMTX	**Amarillo**	73.13	335	P	P	03 29 17.6	+1.6
	baz=154						
O60A	**Telford**	73.14	357	P	P	03 29 16.9	+1.2
	baz=177						
O57A	**Amberson**	73.15	356	P	P	03 29 17.1	+1.2
	baz=175						
O59A	**Robesonia**	73.17	357	P	P	03 29 16.9	+0.9
	baz=176						
P50A	**Jamestown**	73.18	351	P	P	03 29 16.7	+0.7
	baz=170,SNR=7.4						
S39A	**Bolivar**	73.18	343	IAmb	IAmb	03 29 18.8	
	comp=Z,19nm,1.2s						
P49A	**Miami Univ. Ec**	73.23	350	P	P	03 29 17.2	+0.8
	baz=169						
O55A	**Ligonier**	73.27	354	P	P	03 29 17.6	+1.0
	baz=174						
P48A	**Milroy**	73.27	349	IAmb	IAmb	03 29 18.4	
	comp=Z,32nm,1.1s						
P48A	**Milroy**	73.27	349	P	P	03 29 16.5	-0.1
	baz=168,SNR=9.0						
T35A	**Sooner Cattle**	73.32	340	IAmb	IAmb	03 29 20.0	
	comp=Z,26nm,1.1s						
O52A	**Adamsville**	73.43	352	IAmb	IAmb	03 29 42.7	
	comp=Z,17nm,1.1s						
O52A	**Adamsville**	73.43	352	P	P	03 29 18.2	+0.7
	baz=171						
121A	**Cookes Peak, D**	73.47	329	P	P	03 29 20.7	+2.5
	baz=149,SNR=13						
O53A	**New Philadelph**	73.49	353	P	P	03 29 19.1	+1.3
	baz=172						
N61A	**South Mountain**	73.54	358	P	P	03 29 19.6	+1.5
	baz=178						
O51A	**Pataskala**	73.55	352	P	P	03 29 18.9	+0.7
	baz=171,SNR=10.0						
U32A	**Winter Ranch,**	73.58	338	IAmb	IAmb	03 29 21.7	
	comp=Z,30nm,0.9s						
SSPA	**Standing Stone**	73.59	355	P	P	03 29 15.9	-2.5
SSPA				IAmb	IAmb	03 29 33.2	
	comp=Z,33nm,1.6s						
SSPA	**Standing Stone**	73.59	355	P	P	03 29 19.3	+0.9
	baz=175						
N60A	**Cedar Hill Far**	73.68	358	P	P	03 29 20.9	+1.9
	baz=177,SNR=5.2						
ACSO	**Alum Creek Sta**	73.68	351	P	P	03 29 19.4	+0.4
	baz=170,SNR=9.6						
O50A	**Cable**	73.68	351	P	P	03 29 19.5	+0.5
	baz=170,SNR=10						
N58A	**Sunbury**	73.72	356	P	P	03 29 20.6	+1.4
	baz=176						
P46A	**Rosedale**	73.72	348	IAmb	IAmb	03 29 20.9	
	comp=Z,24nm,0.9s						
N59A	**State Game Lan**	73.75	357	P	P	03 29 20.6	+1.2
	baz=177						
N55A	**Marion Center**	73.81	355	P	P	03 29 21.0	+1.2
	baz=174,SNR=8.5						
O49A	**Covington**	73.82	350	IAmb	IAmb	03 29 21.9	
	comp=Z,25nm,0.9s						
O49A	**Covington**	73.82	350	P	P	03 29 19.6	-0.2
	baz=169,SNR=8.6						
N53A	**Lisbon**	74.01	353	P	P	03 29 22.0	+1.2
	baz=172						
O48A	**Farmland**	74.01	350	P	P	03 29 20.7	-0.2
	baz=168,SNR=6.2						
MAW	**Mawson**	74.03	164	LR	LR	04 04 26.0	
	comp=Z,841nm,18.2s,baz=232,slow=38						
N54A	**Moraine State**	74.08	354	P	P	03 29 22.2	+0.9
	baz=173						
N52A	**McGinn's Farm,**	74.10	352	P	P	03 29 22.6	+1.2
	baz=172						
M60A	**Port Jervis**	74.12	358	P	P	03 29 22.9	+1.4
	baz=178						
P43A	**Skaggs, Pawnee**	74.18	346	IAmb	IAmb	03 29 24.1	
	comp=Z,29nm,0.9s						
M62A	**Hamden**	74.20	359	P	P	03 29 23.4	+1.5
	baz=179						
N50A	**Nevada**	74.23	351	P	P	03 29 22.6	+0.4
	baz=170,SNR=14						
M58A	**Price's Panora**	74.24	357	P	P	03 29 23.8	+1.6
	baz=176						
M57A	**Sunshine Farm,**	74.24	356	P	P	03 29 23.5	+1.3
	baz=176						
N51A	**Ashland**	74.28	352	P	P	03 29 20.6	-1.9
N51A				IAmb	IAmb	03 29 24.7	
	comp=Z,22nm,1.0s						
N51A	**Ashland**	74.28	352	P	P	03 29 23.0	+0.5
	baz=171						
M59A	**Waymart**	74.36	357	P	P	03 29 24.2	+1.2
	baz=177						
SFIN	**Lafayette**	74.44	348	P	P	03 29 23.7	+0.3
	baz=167						
M56A	**Emporium**	74.45	355	IAmb	IAmb	03 29 26.3	
	comp=Z,22nm,1.1s						
M56A	**Emporium**	74.45	355	P	P	03 29 24.2	+0.7
	baz=175						
O44A	**Mansfield**	74.47	347	IAmb	IAmb	03 29 25.3	
	comp=Z,21nm,0.9s						
M55A	**Ridgway**	74.48	355	IAmb	IAmb	03 29 26.3	
	comp=Z,19nm,1.0s						
M55A	**Ridgway**	74.48	355	P	P	03 29 24.1	+0.4
	baz=174						
N49A	**Columbus Grove**	74.52	351	P	P	03 29 24.0	+0.2
	baz=169,SNR=12						
LIC	**Lamto**	74.53	72	*e*P	P	03 29 24.8	+0.2
	comp=Z,36nm,1.0s						
N48A	**Decatur**	74.58	350	P	P	03 29 24.4	+0.2
	baz=169						
M54A	**Oil Creek Stat**	74.59	354	P	P	03 29 24.6	+0.3
	baz=173						
M53A	**WI Miller and**	74.62	353	P	P	03 29 24.8	+0.4
	baz=172,SNR=5.3						
TUC	**Tucson**	74.62	327	P	P	03 29 23.4	-1.4
TUC	**Tucson**	74.62	327	P	P	03 29 23.4	-1.4
TUC				pmax	pmax		
	comp=Z,10.0nm,1.3s						
TUC	**Tucson**	74.62	327	P	P	03 29 27.0	+2.2
	baz=147						
L63A	**North Scituate**	74.62	0	P	P	03 29 25.5	+1.1
	baz=180						
M51A	**Elyria**	74.67	352	P	P	03 29 25.4	+0.7
	baz=171,SNR=8.2						
N47A	**Urbana**	74.70	349	IAmb	IAmb	03 29 26.5	
	comp=Z,26nm,0.9s						
N47A	**Urbana**	74.70	349	P	P	03 29 24.5	-0.4
	baz=168,SNR=8.6						
L60A	**Shokan**	74.77	358	P	P	03 29 26.4	+1.1
	baz=178						
ALLY	**Alegheny Colle**	74.77	354	P	P	03 29 22.6	-2.8
ALLY				IAmb	IAmb	03 29 27.8	
	comp=Z,25nm,1.1s						
M52A	**Chesterland**	74.79	353	IAmb	IAmb	03 29 27.8	
	comp=Z,15nm,0.9s						
M52A	**Chesterland**	74.79	353	P	P	03 29 26.2	+0.8
	baz=172						
TIC	**Toumodi**	74.79	71	*e*P	P	03 29 26.3	+0.2
KIC	**Kosan Boka**	74.84	72	*e*P	P	03 29 26.7	+0.3
	comp=Z,43nm,1.0s						
M50A	**Fremont**	74.84	351	IAmb	IAmb	03 29 28.0	
	comp=Z,22nm,1.0s						
M50A	**Fremont**	74.84	351	P	P	03 29 26.8	+1.1
	baz=170						
L58A	**Harry Jones Me**	74.88	357	P	P	03 29 27.4	+1.5
	baz=177						
DBIC	**Dimbokro**	74.93	72	P	P	03 29 27.1	+0.2
	comp=Z,17nm,0.9s,baz=205,slow=7.2,SNR=21						
DBIC				LR	LR	04 02 49.6	
	comp=Z,468nm,18.1s,baz=214,slow=36						
DBIC	**Dimbokro**	74.93	72	IAmb	IAmb	03 29 29.2	
	comp=Z,26nm,0.9s						
L59A	**Walton**	75.00	358	P	P	03 29 27.6	+1.0
	baz=177						
ANMO	**Albuquerque**	75.00	331	P	P	03 29 28.9	+1.9
	comp=Z,6.2nm,0.9s,baz=163,slow=11						
ANMO	**Albuquerque**	75.00	331	P	P	03 29 27.2	+0.1
ANMO	**Albuquerque**	75.00	331	*i* P	P	03 29 28.2	+1.2
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ANMO	**Albuquerque**	75.00	331	P	P	03 29 29.0	+1.9
	baz=151						
HDIL	**Hopedale**	75.02	347	IAmb	IAmb	03 29 29.0	
	comp=Z,27nm,1.1s						
HDIL	**Hopedale**	75.02	347	P	P	03 29 27.7	+1.0
	baz=165						
QUA2	**Belchertown**	75.03	360	P	P	03 29 26.1	-0.7
QUA2				IAmb	IAmb	03 29 30.1	
	comp=Z,30nm,1.1s						
M49A	**Liberty Center**	75.03	351	P	P	03 29 27.0	+0.2
	baz=170,SNR=6.3						
BINY	**Binghamton**	75.04	357	P	P	03 29 28.2	+1.3
	baz=176						
L56A	**Greenwood**	75.06	356	IAmb	IAmb	03 29 29.9	
	comp=Z,27nm,1.0s						
L56A	**Greenwood**	75.06	356	P	P	03 29 27.9	+0.9
	baz=175,SNR=5.9						
L53A	**Girard**	75.09	354	P	P	03 29 27.7	+0.6
	baz=173						
M48A	**Edgerton**	75.15	350	IAmb	IAmb	03 29 29.4	
	comp=Z,26nm,0.9s						
M48A	**Edgerton**	75.15	350	P	P	03 29 27.4	-0.1
	baz=169,SNR=8.1						
M47A	**Cromwell**	75.16	349	P	P	03 29 28.0	+0.5
	baz=168						
L55A	**Hinsdale**	75.17	355	P	P	03 29 28.8	+1.2
	baz=174,SNR=5.2						
L61B	**Northampton**	75.21	360	P	P	03 29 28.5	+0.7
	baz=179						
ERPA	**Erie**	75.22	354	IAmb	IAmb	03 29 30.2	
	comp=Z,22nm,1.1s						
ERPA	**Erie**	75.22	354	P	P	03 29 28.7	+0.8
	baz=173						
HRV	**Adam Dziewonsk**	75.26	0	P	P	03 29 29.8	+1.7
	baz=180						
214A	**Organ Pipe Nat**	75.28	325	P	P	03 29 27.5	-1.0
214A				IAmb	IAmb	03 29 45.3	
	comp=Z,24nm,1.4s						
214A	**Organ Pipe Nat**	75.28	325	P	P	03 29 30.4	+1.9
	baz=146						
L54A	**Sinclairville**	75.28	354	P	P	03 29 29.4	+1.1
	baz=174,SNR=5.8						
K60A	**Five Rivers En**	75.39	359	P	P	03 29 30.4	+1.6
	baz=178						
WVNY	**West Valley, N**	75.40	355	IAmb	IAmb	03 29 32.0	
	comp=Z,26nm,1.1s						
K62A	**Royalston**	75.42	360	P	P	03 29 26.8	-2.2
K62A				IAmb	IAmb	03 29 32.8	
	comp=Z,40nm,1.4s						
K62A	**Royalston**	75.42	360	P	P	03 29 31.0	+2.0
	baz=180						
L50A	**Kingsville**	75.45	352	P	P	03 29 30.0	+0.8
	baz=171,SNR=5.5						
L48A	**N Adams**	75.56	351	P	P	03 29 30.1	+0.3
	baz=169						
K59A	**Cooperstown**	75.57	358	P	P	03 29 31.3	+1.3
	baz=178						
K58A	**Earlville**	75.59	357	P	P	03 29 31.1	+1.1
	baz=177						
L49A	**Milan**	75.63	351	P	P	03 29 31.0	+0.7
	baz=170,SNR=5.3						
K55A	**Perry**	75.68	355	P	P	03 29 31.0	+0.4
	baz=175						
L47A	**Sherwood**	75.70	350	P	P	03 29 30.8	+0.2
	baz=169,SNR=6.6						
AAM	**Ann Arbor**	75.81	351	P	P	03 29 28.7	-2.5
AAM	**Ann Arbor**	75.81	351	P	P	03 29 28.7	-2.5
AAM				pmax	pmax		
	comp=Z,14nm,1.2s						
L46A	**Eue Claire**	75.90	349	P	P	03 29 30.1	-1.7
L46A				IAmb	IAmb	03 29 33.4	
	comp=Z,25nm,1.1s						
L46A	**Eue Claire**	75.90	349	P	P	03 29 32.1	+0.3
	baz=168						
K52A	**Tillsonburg**	75.95	353	P	P	03 29 32.4	+0.4
	baz=172						
J62A	**Henniker**	75.98	0	P	P	03 29 32.8	+0.5
	baz=180						
CBKS	**Cedar Bluff**	76.04	338	IAmb	IAmb	03 29 36.1	
	comp=Z,24nm,0.9s						
T25A	**Trinidad**	76.13	334	P	P	03 29 35.2	+1.6
	baz=152,SNR=21						
K50A	**Casco**	76.15	352	IAmb	IAmb	03 29 35.0	
	comp=Z,32nm,1.0s						
K50A	**Casco**	76.15	352	P	P	03 29 33.4	+0.3
	baz=171						
J59A	**Piesco**	76.25	358	P	P	03 29 34.8	+1.0
	baz=178						
K47A	**Vermontville**	76.35	350	P	P	03 29 34.0	-0.3
	baz=169,SNR=5.7						
K48A	**Perry**	76.36	351	P	P	03 29 34.4	0.0
	baz=170,SNR=5.2						
J52A	**Paris**	76.38	354	P	P	03 29 34.6	+0.1
	baz=173						
K46A	**Dorr**	76.48	350	P	P	03 29 35.6	+0.5
	baz=168						
L42A	**Oliver, Polo**	76.49	347	IAmb	IAmb	03 29 37.4	
	comp=Z,27nm,0.9s						
I58A	**Old Forge**	76.49	358	P	P	03 29 35.3	+0.2
	baz=177						
W18A	**Petrified Fore**	76.52	329	IAmb	IAmb	03 29 52.3	
	comp=Z,25nm,1.4s						
W18A	**Petrified Fore**	76.52	329	P	P	03 29 37.2	+1.5
	baz=148,SNR=6.3						
I59A	**Olmsteadville**	76.57	359	P	P	03 29 36.8	+1.2
	baz=178						
I60A	**Shoreham**	76.61	359	P	P	03 29 37.1	+1.4
	baz=179						
I62A	**Tamworth**	76.63	1	P	P	03 29 37.9	+2.0
	baz=180						
J48A	**Bridge Port**	76.80	351	IAmb	IAmb	03 29 38.9	
	comp=Z,26nm,0.9s						
J48A	**Bridge Port**	76.80	351	P	P	03 29 37.3	+0.4
	baz=170,SNR=8.1						
J47A	**Sunmer**	76.88	350	IAmb	IAmb	03 29 39.1	
	comp=Z,16nm,0.8s						
J47A	**Sunmer**	76.88	350	P	P	03 29 37.7	+0.4
	baz=169						
K43A	**Burlington**	76.92	348	IAmb	IAmb	03 29 39.8	
	comp=Z,20nm,1.2s						
I51A	**Listowel**	76.99	353	P	P	03 29 38.4	+0.5
	baz=172,SNR=6.3						
SDCO	**Great Sand Dun**	77.07	333	P	P	03 29 41.2	+2.2
	baz=152,SNR=14						
I55A	**Frankford**	77.14	356	P	P	03 29 39.8	+1.1
	baz=175						
KSCO	**Kaye Shedlock'**	77.17	336	P	P	03 29 41.1	+1.9
	baz=154						
H58A	**Gabriels**	77.19	358	P	P	03 29 40.4	+1.3
	baz=178						
H57A	**Richville**	77.28	358	P	P	03 29 41.2	+1.7
	baz=177						
H61A	**Lyndonville**	77.29	0	P	P	03 29 41.5	+1.9
	baz=180						
I49A	**Point Hope**	77.32	352	P	P	03 29 40.3	+0.5
	baz=171						
LONY	**Lake Ozonia**	77.41	358	P	P	03 29 42.1	+1.8
	baz=178						
H59A	**Cadyville**	77.41	359	P	P	03 29 41.4	+1.1
	baz=178						
H63A	**New Sharon**	77.44	1	P	P	03 29 43.1	+2.7
	baz=182						
H56A	**Elgin**	77.44	357	P	P	03 29 41.9	+1.5
	baz=176						
JFWS	**Jewell Farm**	77.48	346	IAmb	IAmb	03 29 43.2	
	comp=Z,17nm,0.9s						
JFWS	**Jewell Farm**	77.48	346	P	P	03 29 41.4	+0.7
	baz=164,SNR=7.2						
H65A	**Eastbrook**	77.53	3	P	P	03 29 42.7	+1.8
	baz=183						
H53A	**Bobcaygeon**	77.55	355	P	P	03 29 42.1	+1.0
	baz=174						
WUAZ	**Wupatki**	77.57	328	P	P	03 29 43.4	+1.8
	baz=147,SNR=7.7						
Y12C	**Blythe**	77.57	325	P	P	03 29 40.2	-1.2
Y12C	**Blythe**	77.57	325	P	P	03 29 43.4	+2.0
	baz=145,SNR=5.7						
S22A	**4UR Ranch, Cre**	77.58	332	P	P	03 29 43.4	+1.6
	baz=151,SNR=7.1						
I47A	**Gladwin**	77.61	351	IAmb	IAmb	03 29 43.2	
	comp=Z,20nm,1.0s						
I47A	**Gladwin**	77.61	351	P	P	03 29 41.8	+0.4
	baz=169						
I48A	**Sherman Twp**	77.67	351	P	P	03 29 42.1	+0.4
	baz=170						
H52A	**Wyevale**	77.72	354	P	P	03 29 43.1	+1.1
	baz=173						
MVCO	**Mesa Verde**	77.78	331	P	P	03 29 44.4	+1.6
	baz=149,SNR=9.9						
G57A	**Newington**	77.90	358	P	P	03 29 44.0	+1.1
	baz=177						
G58A	**Ormstown**	77.92	359	P	P	03 29 44.6	+1.5
	baz=178						
BC3	**Big Chuckawall**	77.95	324	P	P	03 29 45.7	+2.0
	baz=144,SNR=6.4						
BGNE	**Belgrade**	77.96	340	P	P	03 29 45.3	+1.9
	baz=158						
G62A	**West of Eustis**	77.98	1	P	P	03 29 43.7	+0.3
G62A	**West of Eustis**	77.98	1	P	P	03 29 45.7	+2.2
	baz=181						
Q24A	**Divide**	78.02	334	P	P	03 29 46.6	+2.4
	baz=152						
G61A	**St-Isidore-de-**	78.04	0	P	P	03 29 46.2	+2.5
	baz=180						
PKME	**Peaks-Kenny Pk**	78.06	2	P	P	03 29 45.6	+1.8
	baz=182						
G65A	**Princeton**	78.06	3	P	P	03 29 45.6	+1.8
	baz=184						
G53A	**Haliburton**	78.10	355	P	P	03 29 45.4	+1.3
	baz=174,SNR=5.4						
I42A	**Draeger Farm,**	78.17	348	IAmb	IAmb	03 29 46.9	
	comp=Z,16nm,1.0s						
IRM	**Iron Mountain**	78.20	325	P	P	03 29 46.2	+1.2
	baz=144						
PFO	**Pinyon Flats O**	78.41	323	LR	LR	03 57 31.9	
	comp=Z,363nm,19.9s,baz=146,slow=30						
PFO	**Pinyon Flats O**	78.41	323	*i* P	P	03 29 48.0	+1.7
PFO				pmax	pmax		
	comp=Z,14nm,1.0s						
PFO	**Pinyon Flats O**	78.41	323	P	P	03 29 48.4	+2.1
	baz=143,SNR=5.0						
BELC	**Belle Mtn. Jos**	78.50	324	P	P	03 29 48.6	+1.9
	baz=144						
F63A	**Nahmakanta, Br**	78.50	2	P	P	03 29 48.3	+2.0
	baz=182						
H43A	**Windswept, Lux**	78.54	349	IAmb	IAmb	03 29 49.0	
	comp=Z,19nm,1.1s						
G47A	**Hillman**	78.66	352	P	P	03 29 48.6	+1.4
	baz=170						
F64A	**Sherman**	78.69	3	P	P	03 29 49.2	+1.9
	baz=183						
F60A	**Warwick**	78.72	0	P	P	03 29 49.2	+1.7
	baz=180						
G45A	**Suttons Bay**	78.77	350	P	P	03 29 49.0	+1.2
	baz=168						
MURC	**Murrieta**	78.77	323	P	P	03 29 49.4	+1.3
	baz=143						
F52A	**Sundridge**	78.82	355	P	P	03 29 49.2	+1.1
	baz=174						
ALGO	**Algonquin Park**	78.89	356	P	P	03 29 49.5	+1.0
	baz=175						
ISCO	**Idaho Springs**	78.92	334	P	P	03 29 50.8	+1.6
	baz=152,SNR=7.1						
GMRC	**Granite Mounta**	78.96	325	P	P	03 29 50.9	+1.7
	baz=144,SNR=6.6						
F51A	**Arnstein**	79.00	354	P	P	03 29 50.4	+1.4
	baz=173						
F49A	**Sandfield**	79.03	353	P	P	03 29 50.5	+1.3
	baz=171						
E60A	**Ste Agathe de**	79.12	0	P	P	03 29 51.3	+1.6
	baz=180						
E58A	**La Victoria**	79.13	359	P	P	03 29 51.3	+1.6
	baz=179						
F48A	**Evansville**	79.16	353	P	P	03 29 50.4	+0.5
	baz=171,SNR=6.0						
E57A	**Chemin Saint G**	79.19	359	P	P	03 29 51.5	+1.4
	baz=178						
E61A	**Lac Etchemin**	79.20	1	P	P	03 29 52.5	+2.3
	baz=181						
E63A	**Oxbow**	79.25	3	P	P	03 29 52.2	+1.9
	baz=183						
E53A	**Dumoine, Ponti**	79.29	356	P	P	03 29 51.9	+1.2
	baz=175						
E54A	**Lac Daplat, Po**	79.32	356	P	P	03 29 52.3	+1.5
	baz=176						
HEC	**Hector,Ludlow**	79.33	324	P	P	03 29 53.5	+2.3
	baz=143						
E56A	**St. Veronique**	79.34	358	P	P	03 29 52.0	+1.1
	baz=177,SNR=6.8						
TSUM	**Tsumeb**	79.49	106	P	P	03 29 52.0	-0.7
TSUM				IAmb	IAmb	03 29 55.7	
	comp=Z,36nm,1.4s						
E51A	**G1948 Merrick**	79.57	355	P	P	03 29 53.6	+1.5
	baz=174						
TUQ	**Turquoise Moun**	79.61	325	P	P	03 29 54.7	+1.9
	baz=144,SNR=7.5						
D60A	**Saint Jean D'O**	79.67	1	P	P	03 29 54.4	+1.7
	baz=181						
ECSD	**EROS Data Cent**	79.70	342	IAmb	IAmb	03 29 55.7	
	comp=Z,28nm,0.9s						
ECSD	**EROS Data Cent**	79.70	342	P	P	03 29 53.7	+0.7
	baz=159,SNR=35						
E48A	**Lockeyer**	79.76	353	P	P	03 29 53.7	+0.6
	baz=171,SNR=5.6						
D57A	**Chemin Vers le**	79.79	359	P	P	03 29 54.6	+1.3
	baz=178,SNR=5.7						
D55A	**Sainte-Anne-du**	79.83	358	P	P	03 29 54.7	+1.1
	baz=177,SNR=5.5						
D58A	**Chemin du LacG**	79.85	359	P	P	03 29 54.9	+1.2
	baz=179,SNR=8.0						
E47A	**Iron Bridge**	79.85	352	P	P	03 29 54.0	+0.4
	baz=170,SNR=6.2						
D63A	**Stockholm**	79.87	3	P	P	03 29 55.0	+1.3
	baz=183						
D62A	**Allapoint, All**	79.88	2	IAmb	IAmb	03 30 05.2	
	comp=Z,33nm,1.3s						
D62A	**Allapoint, All**	79.88	2	P	P	03 29 55.2	+1.4
	baz=182						
E46A	**Sault Ste Mari**	79.89	351	IAmb	IAmb	03 29 57.0	
	comp=Z,46nm,1.5s						
GSC	**Goldstone, Bar**	79.93	324	P	P	03 29 56.1	+1.6
	baz=143						
D61A	**St Aubert, Com**	79.97	1	P	P	03 29 55.7	+1.4
	baz=182						
D53A	**Lac Vacive, Po**	80.00	356	P	P	03 29 55.4	+1.0
	baz=175						
N23A	**Red Feather La**	80.00	335	P	P	03 29 57.0	+2.0
	baz=152						
D54A	**Lac Fusel, La**	80.01	357	P	P	03 29 55.2	+0.7
	baz=176,SNR=5.2						
D51A	**Lot 18 Range I**	80.11	355	P	P	03 29 56.2	+1.1
	baz=174						
LATQ	**La Tuque**	80.14	360	P	P	03 29 56.9	+1.7
	baz=179						
SPMN	**Marine on St.**	80.22	345	P	P	03 29 56.0	+0.3
	baz=162,SNR=5.4						
D50A	**G1974 Best Tow**	80.23	355	P	P	03 29 56.4	+0.7
	baz=173						
E43A	**Lone Tree Farm**	80.27	350	IAmb	IAmb	03 29 58.5	
	comp=Z,15nm,1.0s						
D46A	**Sault St. Mari**	80.37	352	P	P	03 29 57.4	+0.9
	baz=170						
D48A	**Paudash Townsh**	80.41	353	P	P	03 29 57.3	+0.7
	baz=172						
D47A	**Chapleau**	80.43	352	P	P	03 29 57.8	+1.0
	baz=170						
D49A	**Beulah Townshi**	80.46	354	P	P	03 29 57.9	+0.9
	baz=172						
BOSA	**Boshof**	80.51	118	P	P	03 29 58.4	+0.4
	comp=Z,19nm,0.8s,baz=238,slow=4.5,SNR=26						
BOSA				LR	LR	04 01 26.1	
	comp=Z,353nm,20.5s,baz=228,slow=33						
BOSA	**Boshof**	80.51	118	IAmb	IAmb	03 30 01.0	
	comp=Z,22nm,0.9s						
MPMC	**Manual Prospec**	80.87	324	P	P	03 30 01.9	+2.2
	baz=143						
FURC	**Furnace Creek,**	80.89	325	P	P	03 30 02.3	+2.8
	baz=143						
TPNV	**Topopah Spring**	80.98	326	P	P	03 30 02.4	+2.2
	baz=144,SNR=5.6						
SUSD	**Miller**	80.99	341	P	P	03 30 01.4	+1.5
	baz=157						
ISA	**Isabella, Lake**	81.05	323	P	P	03 30 02.5	+2.0
	baz=142						
PKM	**Mcpherson Peak**	81.12	322	P	P	03 30 03.4	+2.4
	baz=141						
CWC	**Cottonwood Cre**	81.46	324	P	P	03 30 04.7	+1.9
	baz=142						
VES	**Vestal, Richgr**	81.49	323	P	P	03 30 04.7	+2.0
	baz=142						
SMMC	**Simmler**	81.55	322	P	P	03 30 05.8	+2.7
	baz=141						
GRAC	**Grapevine Rang**	81.56	325	P	P	03 30 05.9	+2.8
	baz=143						
K22A	**Casper**	81.75	335	P	P	03 30 06.2	+2.0
	baz=151						

R11A	Troy Canyon, C	81.81	327	P	P	03 30 07.1	+2.5
	baz=144,SNR=9.4						
LSQQ	Lebel-sur-Quev	81.93	357	P	P	03 30 06.2	+1.4
	baz=176						
DUG	Dugway, Tooele	82.10	330	P	P	03 30 08.2	+2.2
	baz=146						
RSSD	Black Hills	82.21	337	P	P	03 30 05.3	-1.3
RSSD	Black Hills	82.21	337	P	P	03 30 05.3	-1.3
RSSD				pmax	pmax		
	comp=Z,7.0nm,1.0s						
RSSD	Black Hills	82.21	337	P	P	03 30 08.6	+2.0
	baz=153						
EYMN	Ely	82.56	347	P	P	03 30 08.7	+0.6
	baz=164,SNR=5.6						
MATQ	Matagami	82.66	356	P	P	03 30 09.6	+1.1
	baz=175						
LBTB	Lobatse	82.70	115	P	P	03 30 07.7	-2.0
LBTB	Lobatse	82.70	115	P	P	03 30 07.7	-2.0
LBTB				pmax	pmax		
	comp=Z,35nm,1.0s						
PDAR	Pinedale Array	82.97	333	P	P	03 30 11.1	+0.5
	comp=Z,1.5nm,0.9s,baz=139,slow=5.3,SNR=9.7						
NVAR	Mina Array Bea	83.15	325	P	P	03 30 13.5	+1.9
	comp=Z,2.6nm,0.8s,baz=152,slow=5.8,SNR=19						
NVAR				LR	LR	04 00 21.3	
	comp=Z,146nm,21.5s,baz=148,slow=31						
TOA0	Torodi Ar. Sit	83.94	70	P	P	03 30 16.4	+0.4
TORD	Torodi Ar. Bea	83.94	70	P	P	03 30 15.6	-0.4
	comp=Z,28nm,0.9s,baz=252,slow=4.4,SNR=101						
TORD				LR	LR	04 04 49.1	
	comp=Z,620nm,21.7s,baz=265,slow=34						
MDND	Maddock	84.30	342	P	P	03 30 18.3	+1.2
	baz=157						
RLMT	Red Lodge	84.88	335	IAmb	IAmb	03 30 43.9	
	comp=Z,21nm,1.8s						
RLMT	Red Lodge	84.88	335	P	P	03 30 22.0	+1.7
	baz=149						
LAO	LASA Array	85.20	337	IAmb	IAmb	03 30 24.6	
	comp=Z,13nm,1.1s						
LAO	LASA Array	85.20	337	P	P	03 30 23.4	+1.8
	baz=152						
ULM	Lac du Bonnet	85.64	345	P	P	03 30 23.6	-0.1
	comp=Z,5.6nm,0.8s,baz=146,slow=4.8,SNR=14						
ULM	Lac du Bonnet	85.64	345	IAmb	IAmb	03 30 25.7	
	comp=Z,9.5nm,1.1s						
ULM	Lac du Bonnet	85.64	345	*i* P	P	03 30 24.3	+0.6
M04C	Macdoel	87.45	325	P	P	03 30 34.9	+1.9
	baz=140						
EGMT	Eagleton	87.55	336	P	P	03 30 34.9	+1.7
	baz=149						
SCHQ	Schefferville	87.71	3	P	P	03 30 34.0	+0.3
	comp=Z,14nm,1.2s,baz=219,slow=3.9,SNR=5.8						
J05D	Fort Rock, OR	88.33	326	P	P	03 30 39.2	+2.0
	baz=141						
L02E	Cave Junction	88.59	324	P	P	03 30 40.6	+2.4
	baz=139						
WALA	Waterton Lakes	89.91	334	IAmb	IAmb	03 30 47.5	
	comp=Z,14nm,1.2s						
NEW	Newport	90.48	332	P	P	03 30 49.5	+2.5
	baz=144						
C09A	Chrisman Ranch	90.58	331	IAmb	IAmb	03 30 50.4	
	comp=Z,8.9nm,1.1s						
TAM	Tamanrasset	92.48	64	P	P	03 30 56.5	-0.5
TAM				IAmb	IAmb	03 31 00.0	
	comp=Z,9.5nm,1.3s						
TAM	Tamanrasset	92.48	64	P	P	03 30 56.5	-0.5
TAM				pmax	pmax		
	comp=Z,9.0nm,1.3s						
B05A	Bryant	92.54	329	P	P	03 30 58.4	+2.0
	baz=140						
ESDC	Sonseca Array	95.99	46	LR	LR	04 14 06.4	
	comp=Z,258nm,18.7s,baz=220,slow=35						
YKA	Yellowknife Ar	101.22	341	P	Pdif	03 31 36.0	+0.6
	comp=Z,0.8nm,1.0s,baz=140,slow=4.7,SNR=5.7						
YKA				PP	PP	03 35 46.3	+1.4
	comp=Z,0.4nm,0.9s,baz=136,slow=7.6,SNR=4.5						
DZM	Mont Dzumac	101.73	234	*e*LR	LR	04 05 00.4	
	comp=Z,463nm,21.9s						
C36M	Paulatuk	108.97	343	P	PKiKP	03 36 15.2	+1.2
	baz=136						
KHC	Kasperske Hory	111.61	45	*i* PKIKP	PKiKP	03 36 20.3	+0.6
CLL	Collm	112.22	42	*e*PKIKP	PKiKP	03 36 25.0	+4.3
VYHS	Vyhne	114.52	47	*e*P	Pdif	03 32 41.7	+6.8
VYHS	Vyhne	114.52	47	*e*PDIFF	Pdif	03 32 41.7	+6.8
ASAR	Alice Springs	118.33	207	PKP	PKPdf	03 36 32.7	-0.8
	comp=Z,0.4nm,0.8s,baz=152,slow=2.5,SNR=4.7						
ASAR				PKKPbc	PKKPbc	03 46 53.0	+2.2
	comp=Z,0.6nm,0.7s,baz=345,slow=3.7,SNR=7.1						
BRTR	Keskin Array B	121.43	60	PKP	PKiKP	03 36 40.1	+0.9
	comp=Z,0.6nm,0.9s,baz=186,slow=5.8,SNR=3.2						
WRA	Warramunga Arr	121.51	209	PKP	PKPdf	03 36 39.5	-0.1
	comp=Z,1.3nm,0.8s,baz=146,slow=1.6,SNR=6.1						
WRAB	Tennant Creek	121.51	209	*i* PKIKP	PKiKP	03 36 40.1	+0.3
AKASG	Malin Array Be	121.62	47	PKP	PKPdf	03 36 38.4	-0.4
	comp=Z,0.5nm,0.5s,baz=268,slow=2.4,SNR=4.2						
RAYN	Ar Rayn	124.92	83		PKPdf	03 36 45.9	-0.1
RAYN				PP	PP	03 38 23.8	-11
RAYN	Ar Rayn	124.92	83	PKIKP	PKPdf	03 36 45.9	-0.1
H11S2	WAKE ISLAND Hy	125.75	270	T	T	05 55 34.9	
	baz=118,slow=75,SNR=117						
H11S1	WAKE ISLAND Hy	125.76	270	T	T	05 56 00.7	
	baz=118,slow=75,SNR=122						
H11S3	WAKE ISLAND Hy	125.76	270	T	T	05 55 42.7	
	baz=118,slow=75,SNR=78						
H11N3	WAKE ISLAND Hy	126.14	271	T	T	05 56 30.0	
	baz=116,slow=76,SNR=10						
H11N1	WAKE ISLAND Hy	126.15	271	T	T	05 56 02.1	
	baz=116,slow=76,SNR=4.3						
H11N2	WAKE ISLAND Hy	126.15	271	T	T	05 56 06.2	
	baz=116,slow=76,SNR=39						
OBN	Obninsk	126.82	43⇓	*e*PKIKP	PKiKP	03 36 49.3	+0.3
OBN				pmax	pmax		
	comp=Z,27nm,1.8s						
KLMR	Klimovskoe	128.72	36	*e*PKIKP	PKPdf	03 36 52.2	+0.2
KLMR				pmax	pmax		
	comp=Z,15nm,1.2s						
KLMR	Klimovskoe	128.72	36	*e*PKPdf	PKPdf	03 36 52.2	+0.2
KLMR				AMP		03 37 01.6	
	comp=Z,15nm,1.2s						
KIV	Kislovodsk	129.05	58	*i* PKIKP	PKPdf	03 36 53.2	-0.2
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
KIV				MLR	MLR		
	comp=Z,313nm,23.0s						
KBZ	Khabaz	129.16	58	PKP	PKiKP	03 36 54.8	+0.7
	comp=Z,2.0nm,0.8s,baz=139,slow=2.0,SNR=3.7						
KBZ	Khabaz	129.16	58	*i* PKIKP	PKPdf	03 36 52.5	-0.9
BILL	Bilibino	132.03	334	*e*PKIKP	PKiKP	03 37 00.0	+0.8
BILL				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ARU	Arti	139.10	40	*i* PKIKP	PKPdf	03 37 09.3	-2.3
ARU						03 40 00.1	
ARU				SS	SS	03 58 12.6	-8.9
TIXI	Tiksi	139.83	350	*e*PKIKP	PKPdf	03 37 13.4	+0.9
TIXI				pmax	pmax		
	comp=Z,9.0nm,2.0s						
PALK	Pallekele	143.97	130	PKP	PKPbc	03 37 20.0	+0.4
	comp=Z,9.8nm,0.9s,baz=218,slow=8.0,SNR=4.2						
BRVK	Borovoye	146.59	42		PKPbc	03 37 26.8	+0.3
BRVK	Borovoye	146.59	42	*i* PKP2	PKPbc	03 37 27.0	+0.5
YAK	Yakutsk	147.89	341	PKP	PKPdf	03 37 27.8	+1.0
	baz=87,slow=0.8						
YAK				PKPbc	pPKPdf	03 37 30.8	-0.2
	baz=54,slow=0.6						
YAK	Yakutsk	147.89	341	*i* PKP2	PKPbc	03 37 30.2	+0.4
YAK				*e*		03 40 54.5	
YAK				pmax	pmax		
	comp=Z,68nm,0.9s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,140nm,3.1s						
YAK				pmax	pmax		
	comp=N,75nm,3.3s						
RPSI	Rantau Prapat	148.58	163		PKPdf	03 37 30.4	+0.9
PSI	Prapat	148.68	163	PKP	PKPdf	03 37 30.4	+0.6
	comp=N,22nm,1.0s,baz=174,slow=9.2,SNR=9.3						
PSI				PKPbc	pPKPdf	03 37 33.9	-0.1
	comp=N,22nm,1.0s,baz=220,slow=3.1,SNR=20						
SBUM	Sibu	149.22	188		PKiKP	03 37 36.3	+0.2
HYB	Hyderabad	149.32	113	*i* PKP	PKPbc	03 37 35.5	+0.6
YSS	Yuzh-Sakhalins	150.23	308	*e*PKIKP	PKiKP	03 37 37.7	+0.7
YSS				*e*		03 37 44.3	
NIL	Nilore	151.12	79		PKPbc	03 37 39.0	+0.1
NIL	Nilore	151.12	79	PKIKP	PKPbc	03 37 39.0	+0.1
EKS2	Erkin-Say	151.59	60	P	PKiKP	03 37 41.5	+1.3
	SNR=10						
AML	Almayashu	151.59	62	P	PKiKP	03 37 41.4	+0.8
	SNR=7.9						
USP	Ospenovka	152.01	59	P	PKiKP	03 37 41.7	+0.7
	SNR=10						
AAK	Ala-Archa	152.11	60	P	PKiKP	03 37 42.5	+1.2
	SNR=11						
UCH	Uchtor	152.19	61	P	PKiKP	03 37 43.2	+1.3
	SNR=14						
CHMS	Chumysh	152.24	60	P	PKiKP	03 37 42.5	+1.1
	SNR=5.2						
KURK	Kurchatov	152.26	42		PKiKP	03 37 41.1	0.0
KURK				PKPab	PKPab	03 37 48.7	-2.0
KURK	Kurchatov	152.26	42	PKIKP	PKPab	03 37 48.7	-2.0
ZALV	Zalesovo Beam	153.50	31	PKP	PKPdf	03 37 36.2	+0.4
	comp=N,3.4nm,0.9s,baz=298,slow=3.2,SNR=8.6						
ZALV				PKPbc	PKiKP	03 37 44.5	+0.9
	comp=N,9.4nm,0.9s,baz=293,slow=3.7,SNR=16						
KSH	Kashi	153.57	67	PKPbc	PKPdf	03 37 38.2	+1.6
KSH				PKS	PKSdf	03 41 10.6	-0.4
KSH				PP	PP	03 41 34.2	+2.8
KSH				SKKS		03 48 21.7	
KSH				AMB	AMB		
	comp=N,90nm,4.8s						
KSH				LR	LR		
	comp=N,260nm,13.7s						
KSH				LR	LR		
	comp=N,150nm,11.7s						
KSH				LR	LR		
	comp=N,280nm,17.4s						
MJAR	Matsushiro Arr	154.96	286	PKP	PKPdf	03 37 38.9	+0.5
	comp=N,1.5nm,0.9s,baz=55,slow=4.6,SNR=2.9						
MAKZ	Makanchi	156.00	48		PKPdf	03 37 38.3	-1.3
MAKZ	Makanchi	156.00	48	PKIKP	PKPdf	03 37 38.3	-1.3
MK31	Makanchi Array	156.21	47		PKPdf	03 37 39.6	-0.2
MK31				PKPab	PKPab	03 38 06.5	-1.2
MK31	Makanchi Array	156.21	47	PKIKP	PKPdf	03 37 39.6	-0.2
MK31						03 38 06.5	
MKAR	Makanchi Array	156.21	47	PKP	PKPdf	03 37 40.5	+0.7
	comp=N,1.3nm,0.9s,baz=304,slow=0.9,SNR=7.6						
MKAR				PKPab	PKPab	03 38 08.1	+0.3
	comp=N,4.7nm,0.8s,baz=257,slow=1.0,SNR=10						
WMQ	Urumqi	160.95	50	*e*PKP	PKPdf	03 37 46.0	+0.4
WMQ				LR	LR		
	comp=N,340nm,22.7s						
KSRS	Korea Array	163.11	290	PKP	PKPdf	03 37 48.2	+0.3
	comp=N,2.8nm,1.1s,baz=109,slow=0.6,SNR=5.8						
CMAR	Chiang Mai Arr	163.32	149	PKP	PKPdf	03 37 48.9	+0.2
	comp=N,1.1nm,0.6s,baz=213,slow=4.7,SNR=7.2						
CMAR				PKPab	PKPab	03 38 39.7	+0.5
	comp=N,1.1nm,0.3s,baz=222,slow=5.8,SNR=4.7						
SONM	Songino Array	165.26	4	PKP	PKPdf	03 37 50.8	+1.1
	comp=N,0.8nm,1.0s,baz=311,slow=30,SNR=2.7						
SONM				PKPab	PKPab	03 38 48.9	+1.7
	comp=N,2.8nm,0.9s,baz=340,slow=6.0,SNR=11						
SONM				PP	PP	03 42 37.6	+4.4
	comp=N,0.7nm,1.0s,baz=340,slow=8.1,SNR=4.5						
ULN	Ulaanbaatar	165.26	2	PKPdf	PKPdf	03 37 48.3	-1.5
ULN					PKPab	03 38 47.9	+0.8
ULN	Ulaanbaatar	165.26	2	PKIKP	PKPdf	03 37 48.3	-1.5
ULN						03 38 47.9	
QIZ	Qiongzhong	165.86	187	PKP	PKPdf	03 37 50.4	-0.5
QIZ				PP	PP	03 42 37.5	+1.3
QIZ				LR	LR		
	comp=N,230nm,17.5s						
QIZ				LR	LR		
	comp=N,260nm,20.4s						
NJ2	Nanjing	170.71	266	*e*PKP	PKPdf	03 37 53.7	-0.1
KMI	Kunming	170.83	149	PKP	PKPdf	03 37 54.2	-0.2
KMI				pPKP	pPKPdf	03 37 57.5	-1.0
KMI				sPKP		03 37 58.7	
GTA	Gaotai	170.94	44	*e*PKP	PKPdf	03 37 55.9	+2.0
GTA				pPKP	sPKPdf	03 38 00.1	+0.7
HHC	Hu-ho-hao-te	171.76	340	*e*PKP	PKPdf	03 37 55.2	+1.0
HHC				LR	LR		
	comp=N,470nm,21.8s						
HHC				LR	LR		
	comp=N,360nm,21.9s						
HHC				LR	LR		
	comp=N,500nm,21.1s						
LZH	Lanzhou	175.52	48	*e*PKP	PKPdf	03 37 56.7	+0.9
LZH				pPKP	pPKPdf	03 37 59.7	-0.3
LZH				sPKP		03 38 02.1	
LZH				*e*SS	SS	04 04 50.5	-1.1
LZH				LR	LR		
	comp=N,310nm,18.0s						
LZH				LR	LR		
	comp=N,280nm,17.9s						
LZH				LR	LR		
	comp=N,340nm,20.0s						
CD2	Chengdu	175.83	121	PKP	PKPdf	03 37 55.8	-0.1
XAN	Xi'an	178.76	318	PKP	PKPdf	03 37 58.2	+1.9

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*NEIC **03** 03:29:54.5±2.2, 14°.18N±0°.05×93°.06W±0°.04, h20^{km}±2^{km}, Error ellipse: s-maj=7.1km s-min=6.0km az=197.0*

*MEX **03** 03:29:55.1±0.7, 14°.13N×93°.12W, h8^{km}±20^{km}, MD4.5*

*IDC **03** 03:29:58.2±3.6, 14°.31N×92°.77W, h38^{km}±28^{km}, mb3.7/9, mb1 4.0/12, mb1mx3.8/35, mbtmp3.9/12, ML4.0/4, MS3.7/5, Ms1 3.7/5, ms1mx3.2/39, Error ellipse: s-maj=35.3km s-min=17.8km az=45.0*

*GCG **03** 03:30:03.6±0.4, 14°.01N×92°.45W, h34^{km}, MD4.4*

ISC 03 03:29:57.0±0.6**, 14°.19N**±0°.05×**93°.03W**±0°.04**, h35**^{km}**, n95, σ1^{s}90**/95**, mb4.2**/27**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.03	46		Pn	03 30 13.5	-1.5
THIG					Sn	03 30 27.3	-0.9
THIG		1.03	46	*e*P	Pn	03 30 13.5	-1.5
THIG				*e*S	Sn	03 30 27.3	-0.9
ERG	Entre ros, C	1.44	80	*e*P	Pn	03 30 20.5	0.0
STG3	Santiaguito 3,	1.51	70	*e*P	Pn	03 30 21.4	-0.2
PCIG		1.52	353		Pn	03 30 19.4	-2.3
PCIG					Sn	03 30 39.3	-1.0
PCIG		1.52	353	*e*P	Pn	03 30 19.4	-2.3
PCIG				*i* S	Sn	03 30 39.3	-1.0
FUG	Fuego 3	2.14	83	*e*P	Pn	03 30 30.1	-0.2
CCIG	Comitan	2.26	22		Pn	03 30 33.1	+1.1
CCIG	Comitan	2.26	22		Pn	03 30 31.6	-0.3
CCIG					Sn	03 30 58.9	+0.2
CCIG	Comitan	2.26	22	*e*P	Pn	03 30 31.6	-0.3
CCIG				*i* S	Sn	03 30 58.9	+0.2
IXG	Ixpaco	2.51	90	*e*P	Pn	03 30 35.1	-0.4
TGIG		2.58	358		Pn	03 30 35.8	-0.5
TGIG					LR	03 31 06.8	
TGIG		2.58	358	*e*P	Pn	03 30 35.8	-0.5
TGIG				*i* S	Sn	03 31 06.8	+0.3
APG	El Apazote	2.61	72	Pn	Pn	03 30 37.3	+0.4
	23nm,0.3s,baz=281,slow=6.6,SNR=96						
APG				Sn	Sn	03 31 03.8	-3.8
	39nm,0.3s,baz=343,slow=16,SNR=6.1						
NBG	Las Nubes	2.63	81	*e*P	Pn	03 30 37.9	+0.7
HUIG	Huatulco	3.37	298		Pn	03 30 44.3	-2.8
HUIG					Sn	03 31 22.8	-3.1
HUIG	Huatulco	3.37	298	*i* P	Pn	03 30 44.3	-2.8
HUIG				*e*S	Sn	03 31 22.8	-3.1
CMIG	Matias Romero	3.40	329	Pn	Pn	03 30 47.0	-0.5
	12nm,0.3s,baz=146,slow=12,SNR=112						
CMIG				Sn	Sn	03 31 31.4	+4.8
	53nm,0.3s,baz=105,slow=21,SNR=8.7						
CMIG				LR	LR	03 32 09.3	
	comp=Z,319nm,18.4s,baz=308,slow=38						
CMIG	Matias Romero	3.40	329		Pn	03 30 46.3	-1.2
CMIG					Sn	03 31 25.5	-1.2
CMIG	Matias Romero	3.40	329	*e*P	Pn	03 30 46.3	-1.2
CMIG				*i* S	Sn	03 31 25.5	-1.2
SNET	Serv Nac Est T	3.72	97		Pn	03 30 51.7	-0.4
SNET					Sn	03 31 33.0	-1.8
CSGN	Cosiguina Volc	5.45	102		Pn	03 31 15.6	-0.3
TGUH	Tegucigalpa,Un	5.59	91	*e*P	Pn	03 31 15.0	-2.7
TGUH	Tegucigalpa,Un	5.59	91		Pn	03 31 18.1	+0.4
TLIG	Tlapa	6.30	303		Pn	03 31 27.1	-0.4
ESTN	Estel	6.56	99		Pn	03 31 30.5	-0.7
TEIG	Tepich	7.53	36	Pn	Pn	03 31 43.4	-0.9
	18nm,0.3s,baz=228,slow=24,SNR=44						
TEIG				Sn	Sn	03 33 06.2	-2.3
	13nm,0.3s,baz=294,slow=20,SNR=3.4						
TEIG				LR	LR	03 34 36.5	
	comp=Z,152nm,21.1s,baz=139,slow=38						
TEIG	Tepich	7.53	36	*e*P	Pn	03 31 43.0	-1.3
TEIG				*e*S	Sn	03 33 04.4	-4.1
TEIG	Tepich	7.53	36		Pn	03 31 43.6	-0.7
TEIG					Sn	03 33 08.1	-0.4
JTS	Las Juntas de	8.79	115	Pn	Pn	03 32 01.6	-0.1
	0.5nm,0.3s,baz=323,slow=15,SNR=2.3						
BCIP	Isla Barro Col	13.85	110	Pn	Pn	03 33 09.4	-1.5
061Z	Ochoppi	16.26	43	Pn	Pn	03 33 40.3	-2.4
553A	Crawfordville	17.79	25	Pn	P	03 34 02.0	-0.4
553A				IAmb	IAmb	03 34 19.5	
	comp=Z,46nm,1.4s						
656A	Willston	17.96	31	Pn	Pn	03 34 02.7	-1.3
656A				IAmb	IAmb	03 34 16.3	
	comp=Z,23nm,1.1s						
TX31	Lajitas Ar. Si	18.01	329		Pn	03 34 03.9	-0.7
TX32	Lajitas Array	18.01	329		Pn	03 34 03.5	-1.2
TXAR	Lajitas Array	18.01	329	P	P	03 34 06.9	+2.0
	comp=Z,0.1nm,0.3s,baz=163,slow=9.4,SNR=12						
352A	Blakely	18.75	22	P	Pn	03 34 12.8	-0.8
250A	Grady	18.76	18	P	Pn	03 34 13.9	+0.2
250A				IAmb	IAmb	03 34 19.0	
	comp=Z,28nm,1.2s						
Z41A	Richland Creek	18.99	1	P	P	03 34 14.1	-1.4
Z41A				IAmb	IAmb	03 34 26.3	
	comp=Z,14nm,0.6s						
TIGA	Tifton	19.23	25	P	P	03 34 17.1	-1.1
TIGA				IAmb	IAmb	03 34 26.6	
	comp=Z,13nm,0.8s						
ABTX	Abilene, Hawle	19.32	343	IAmb	IAmb	03 34 30.3	
	comp=Z,12nm,0.9s						
GUY2C	Guyana, Caldas	19.54	115	*e*P	Pn	03 34 24.2	+0.6
LRAL	Lakeview Retre	19.55	15	P	P	03 34 21.0	-0.7
152A	Waverly Hall	19.90	21	P	P	03 34 24.4	-1.1
Z50A	Ashland	20.05	18	P	Pn	03 34 28.6	-0.6
MIAR	Mount Ida	20.28	359	IAmb	IAmb	03 34 34.5	
	comp=Z,13nm,0.8s						
UALR	University of	20.51	2	P	P	03 34 31.7	-0.4
UALR				IAmb	IAmb	03 34 36.8	
	comp=Z,9.2nm,0.8s						
MNTX	Cornudas Mount	20.78	329	P	P	03 34 35.1	0.0
GOGA	Godfrey	21.02	23	P	P	03 34 36.4	-1.2
GOGA				IAmb	IAmb	03 34 46.1	
	comp=Z,21nm,1.4s						
Y52A	Lilburn	21.21	21	IAmb	IAmb	03 34 49.0	
	comp=Z,11nm,0.8s						
RUSC	La Rusia	21.28	111	*e*P	P	03 34 40.9	-0.3
RUSC	La Rusia	21.28	111	P	P	03 34 38.2	-3.0
FNO	Franklin	21.35	350	P	P	03 34 39.3	-1.8
MSTX	Muleshoe	21.59	338	IAmb	IAmb	03 34 50.8	
	comp=Z,8.9nm,0.8s						
LCAR	Lake Charles	21.86	4	P	P	03 34 44.9	-1.7
HHAR	Hobbs	22.02	358	IAmb	IAmb	03 34 50.5	
	comp=Z,9.4nm,1.2s						
U40A	Yellville	22.08	0	IAmb	IAmb	03 34 50.2	
	comp=Z,16nm,1.5s						
121A	Cookes Peak, D	22.69	326	IAmb	IAmb	03 34 59.0	
	comp=Z,12nm,1.0s						
TKL	Tuckaleechee C	22.94	20	P	P	03 34 57.4	-0.8
	comp=Z,1.7nm,0.6s,baz=180,slow=12,SNR=5.2						
TKL				LR	LR	03 45 03.7	
	comp=Z,143nm,18.1s,baz=213,slow=40						
TKL	Tuckaleechee C	22.94	20	IAmb	IAmb	03 35 11.9	
	comp=Z,9.6nm,1.2s						
S39A	Bolivar	23.41	359	IAmb	IAmb	03 35 02.9	
	comp=Z,9.3nm,0.8s						
CCM	Cathedral Cave	23.83	3	P	P	03 35 05.8	-1.0
ANMO	Albuquerque	23.96	332	P	P	03 35 09.7	+1.4
	comp=Z,2.1nm,0.7s,baz=151,slow=11,SNR=13						
ANMO	Albuquerque	23.96	332	P	P	03 35 07.2	-1.2
TUC	Tucson	24.26	321	P	P	03 35 09.4	-1.6
SDCO	Great Sand Dun	25.95	337	IAmb	IAmb	03 35 29.2	
	comp=Z,8.4nm,1.2s						
S22A	4UR Ranch, Cre	26.48	335	IAmb	IAmb	03 35 36.7	
	comp=Z,6.0nm,0.9s						
ECSD	EROS Data Cent	29.61	355	IAmb	IAmb	03 36 00.7	
	comp=Z,2.4nm,0.7s						
PDAR	Pinedale Array	31.85	337	P	P	03 36 19.4	+0.6
	comp=Z,0.9nm,0.9s,baz=128,slow=9.6,SNR=5.2						
PDAR				PcP	PcP	03 39 09.4	+0.2
	comp=Z,0.3nm,0.7s,baz=151,slow=4.1,SNR=2.8						
AHID	Auburn Hatcher	32.46	335	IAmb	IAmb	03 36 28.5	
	comp=Z,4.5nm,1.1s						
NV11	Mina Array Sit	32.82	322	IAmb	IAmb	03 36 30.5	
	comp=Z,2.8nm,0.8s						
NVAR	Mina Array Bea	32.91	322	P	P	03 36 30.6	+2.4
	comp=Z,2.4nm,0.7s,baz=134,slow=8.4,SNR=24						
NVAR				PcP	PcP	03 39 14.0	+1.8
	comp=Z,0.4nm,0.6s,baz=145,slow=2.2,SNR=3.8						
FXWY	Fox Creek	33.16	336	IAmb	IAmb	03 36 40.1	
	comp=Z,4.0nm,1.0s						
FLWY	Flagg Ranch	33.40	337	IAmb	IAmb	03 36 38.0	
	comp=Z,4.4nm,0.8s						
H17A	Grant Village	33.62	337	IAmb	IAmb	03 36 39.1	
	comp=Z,3.0nm,0.9s						
RLMT	Red Lodge	33.77	339	IAmb	IAmb	03 36 52.2	
	comp=Z,2.8nm,1.1s						
QLMT	Earthquake Lak	34.31	337	P	P	03 36 39.9	-0.5
ULM	Lac du Bonnet	36.04	357	P	P	03 36 53.2	-1.7
	comp=Z,1.3nm,0.5s,baz=180,slow=8.2,SNR=5.9						
ULM				PcP	PcP	03 39 21.1	+0.4
	comp=Z,0.9nm,0.6s,baz=170,slow=6.1,SNR=2.9						
ULM	Lac du Bonnet	36.04	357	IAmb	IAmb	03 37 00.8	
	comp=Z,5.8nm,1.4s						
F10A	Beach Ranch, E	37.67	332	IAmb	IAmb	03 37 17.1	
	comp=Z,4.9nm,0.9s						
SIV	San Ignacio	43.55	132	P	P	03 37 57.2	-0.5
	comp=Z,1.6nm,0.9s,baz=334,slow=11,SNR=4.0						
SCHQ	Schefferville	45.40	21	PcP	PcP	03 39 51.2	+0.3
	comp=Z,1.2nm,0.7s,baz=212,slow=4.4,SNR=4.6						
YKA	Yellowknife Ar	50.62	347	P	P	03 38 52.2	-0.1
	comp=Z,4.1nm,0.6s,baz=150,slow=7.5,SNR=76						
YKA				PcP	PcP	03 40 11.6	+2.1
	comp=Z,0.4nm,0.6s,baz=148,slow=3.7,SNR=4.2						
INK	Inuvik	59.98	344	P	P	03 39 60.0	+0.4
PAX	Paxson	60.87	336	P	P	03 40 06.6	+0.7
PRP	Porcupine Dome	62.13	338	IAmb	IAmb	03 40 15.9	
	comp=Z,2.3nm,0.8s						
ILAR	Eielson Array	62.28	337	P	P	03 40 15.6	+0.3
	comp=Z,1.5nm,0.9s,baz=155,slow=4.9,SNR=13						
RND	Reindeer	62.44	335	P	P	03 40 16.9	+0.5
MLY	Manley	63.87	336	P	P	03 40 26.1	+0.3
GERES	GERESS Array B	90.09	39	LR	LR	04 21 55.6	
	comp=Z,189nm,20.7s,baz=280,slow=35						
TORD	Torodi Ar. Bea	91.31	76	P	P	03 42 58.0	-1.7
	comp=Z,0.3nm,0.6s,baz=256,slow=5.5,SNR=2.1						
AKASG	Malin Array Be	98.12	33	LR	LR	04 29 34.0	
	comp=Z,103nm,19.3s,baz=280,slow=36						
KSH	Kashi	125.60	10	PKP	PKiKP	03 49 02.2	+6.6
KSH				PP	PP	03 50 55.3	+10
KSH				SKS	SKSdf	03 56 12.8	+8.0
KSH				SKKS	SKKSac	03 57 47.2	+4.6
CMAR	Chiang Mai Arr	145.48	340	PKPbc	PKPbc	03 49 32.1	-0.2
	comp=Z,1.8nm,0.5s,baz=342,slow=4.3,SNR=9.2						

KEA 03 03:30:01.2±0.0**, 40°.64N**×**122°.29E, h0**^{km}**, ML3.7**/9**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYAG	Pyongyang	3.10	120	Pg	Pb	03 30 58.5	+1.3
PYAG				Sg	Sb	03 31 37.5	+1.9
KGE	Kanggye	3.29	83	Pg	Pg	03 31 04.0	-0.3
KGE				Sg	Sg	03 31 46.0	-1.0
HJU	Haeju	3.71	133	Pg	Pg	03 31 10.3	-2.1
HJU				Sg	Sg	03 31 57.0	-3.5
HHU	Hamhung	4.07	98	Sg	Sg	03 32 10.0	-1.9
WOSN	Wonsan	4.21	109	Sg	Sg	03 32 14.0	-2.4

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*CNRM **03** 03:49:32.1±0.5, 34°.21N×4°.83W, h0^{km}, Error ellipse: s-maj=5.6km s-min=4.0km az=86.0*

*INMG **03** 03:49:33.8±2.0, 34°.19N×4°.86W, h14^{km}±9^{km}, ML2.5, Error ellipse: s-maj=6.3km s-min=4.6km az=109.0*

*IGIL **03** 03:49:33.8, 34°.27N×4°.86W, h17^{km}, ML2.4*

*SFS **03** 03:49:33.0, 34°.22N×5°.03W, ML3.2, LOULFA (MARRUECOS)*

*MDD **03** 03:49:33.5±1.8, 34°.12N×5°.06W, h16^{km}±31^{km}, mb3.8/10, Error ellipse: s-maj=37.5km s-min=8.8km az=179.0, PRXIMO*

ISC 03 03:49:34.7±1.2**, 34°.25N**±0°.02×**4°.93W**±0°.03**, h28**^{km}±13^{km}**, n58, σ1^{s}89**/112**, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSA	Sarsar	0.97	311	P	Pn	03 49 53.3	+0.8
RSA				S	Sn	03 50 08.4	+3.1

PALE	**Palemas**	1.26	40	P	Pb	03 49 58.2	+0.3
PALE				S	Sb	03 50 13.8	0.0
MD31	**MD31**	1.39	174	P	Pn	03 49 57.1	-1.2
MD31				S	Sn	03 50 13.6	-2.2
MDT	**Midelt**	1.46	169	P	Pn	03 49 57.5	-1.8
MDT				S	Sn	03 50 16.8	-0.7
SMIR	**Smir Dam**	1.47	346	P	Pb	03 50 02.1	+0.7
SMIR				S	Sb	03 50 23.9	+4.2
CEU	**Ceuta**	1.68	348	Pn	Pb	03 50 04.6	-0.3
CEU				Sn	Sn	03 50 17.2	-5.6
CEU	**Ceuta**	1.68	348	*e*P	Pb	03 50 04.6	-0.3
CEU				*e*S	Sn	03 50 17.2	-5.6
MELI	**Melilla** 69nm,0.3s,SNR=7.9	1.94	57	Sn	Sb	03 50 31.5	-1.8
MELI	**Melilla**	1.94	57	*e*P	Pn	03 50 06.9	+1.1
MELI				*e*S	Sb	03 50 33.4	+0.1
AVE	**Averroes**	2.27	246	P	Pb	03 50 14.0	-1.1
AVE				S	Sb	03 50 44.8	+2.0
AVE	**Averroes**	2.27	246	*e*P	Pb	03 50 14.6	-0.4
AVE				*e*S	Sb	03 50 44.8	+2.0
EMIJ	**Mijas** 8.4nm,0.3s,SNR=20	2.31	3	Pn	Pn	03 50 10.8	-0.1
EMIJ	3.4nm,0.5s,SNR=6.2			Sn	Sn	03 50 39.6	+1.1
EMAL	**Malaga-Limoner**	2.54	9	*e*P	Pn	03 50 14.8	+0.8
EMAL				*e*S	Sn	03 50 45.5	+1.5
TDRA	**Tendrara**	2.71	116	P	Pn	03 50 16.9	+0.4
TDRA				S	Sb	03 50 52.4	-2.9
ELGU	**Los Guajares,** 5.5nm,0.2s,SNR=7.9	2.82	22	Pn	Pn	03 50 17.9	-0.1
ELGU	2.9nm,0.3s,SNR=7.9			Sn	Sn	03 50 52.2	+1.1
TISM	**Timmit**	2.83	207	P	Pn	03 50 19.7	+1.7
TISM				S	Sb	03 50 56.7	-1.9
ARF	**Arif**	2.88	168	P	Pn	03 50 18.9	+0.2
ARF				S	Sn	03 50 55.1	+2.6
SRHM	**Skhour des Reh**	3.05	235	P	Pb	03 50 25.6	-2.8
SRHM				S	Sb	03 51 05.9	+0.7
EBER	**Berja** 2.0nm,0.3s,SNR=5.7	3.12	32	Pn	Pn	03 50 23.4	+1.2
EBER	1.9nm,0.2s,SNR=5.3			Sn	Sn	03 51 00.5	+1.8
TZRR	**Tazzarine**	3.50	189	P	Pn	03 50 28.1	+0.7
TZRR				S	Sn	03 51 11.4	+3.5
HORN	**Hornachuelos**	3.60	356	P	Pn	03 50 29.5	+0.9
HORN				S	Sn	03 51 11.0	+0.9
FIGM	**Figuig**	3.73	123	P	Pn	03 50 28.7	-1.9
FIGM				S	Sn	03 51 12.7	-1.1
EMIN	**Mina Concepcio** 1.2nm,0.3s,SNR=9.6	3.78	339	Pn	Pn	03 50 31.2	+0.1
EMIN	2.2nm,0.3s,SNR=7.9			Sn	Sn	03 51 14.8	+0.1
ECAB	**El Cabril** 0.6nm,0.2s,SNR=12	3.83	354	Pn	Pn	03 50 32.7	+0.8
ECAB	0.9nm,0.3s			Sn	Sn	03 51 17.0	+1.0
EQES	**Quesada** 2.4nm,0.3s,SNR=7.9	3.85	23	Pn	Pn	03 50 34.9	+2.7
EQES	1.2nm,0.2s,SNR=7.9			Sn	Sn	03 51 18.7	+2.1
PBDV	**Barranco-do-Ve**	3.85	322	Pn	Pn	03 50 31.0	-1.1
PBDV	5.9nm,0.4s			Sn	Sn	03 51 14.2	-2.3
PBDV	**Barranco-do-Ve**	3.85	322	*e*Pn	Pn	03 50 31.0	-1.1
PBDV				*e*Sn	Sn	03 51 14.2	-2.3
PBDV	5.9nm,0.4s			A	A	03 51 21.4	
PVAQ	**Vaqueiros**	3.87	325	Pn	Pn	03 50 31.2	-1.2
PVAQ	7.2nm,0.4s			Sn	Sn	03 51 14.5	-2.5
PVAQ	**Vaqueiros**	3.87	325	P	Pn	03 50 33.9	+1.5
PVAQ				S	Sn	03 51 19.8	+2.8
PVAQ	**Vaqueiros**	3.87	325	*e*Pn	Pn	03 50 31.2	-1.2
PVAQ				*e*Sn	Sn	03 51 14.5	-2.5
PVAQ	7.2nm,0.4s			A	A	03 51 22.5	
EGRO	**El Granado** 5.4nm,0.3s,SNR=14	3.88	328	Pn	Pn	03 50 32.5	+0.1
EGRO	3.4nm,0.3s			Sn	Sn	03 51 14.6	-2.4
OUK	**Oukaimeden**	3.92	220	P	Pn	03 50 34.6	+1.3
OUK				S	Sn	03 51 21.3	+2.7
EADA	**Adamuz** 0.5nm,0.2s,SNR=7.9	3.92	4	Pn	Pn	03 50 34.3	+1.3
EADA	1.9nm,0.4s,SNR=7.9			Sn	Sn	03 51 18.3	+0.2
ZGR	**Zagora**	4.16	188	P	Pn	03 50 35.6	-0.9
ZGR				S	Sn	03 51 26.8	+2.5
PCVE	**Castro Verde**	4.21	324	Pn	Pn	03 50 36.8	-0.2
PCVE	4.3nm,0.3s			Sn	Sn	03 51 23.5	-1.8
PCVE	**Castro Verde**	4.21	324	*e*Pn	Pn	03 50 36.8	-0.2
PCVE				*e*Sn	Sn	03 51 23.5	-1.8
PCVE	4.3nm,0.3s			A	A	03 51 30.0	
PFVI	**Vila Bisbo** 2.6nm,0.2s,SNR=7.9	4.28	313	Pn	Pn	03 50 37.6	-0.4
PFVI	2.4nm,0.1s,SNR=7.9			Sn	Sn	03 51 26.6	-0.3
PFVI	**Vila Bisbo**	4.28	313	*e*Pn	Pn	03 50 38.4	+0.5
PFVI				*e*Sn	Sn	03 51 27.5	+0.6
MORF	**Marmelete**	4.29	316	Pn	Pn	03 50 38.4	+0.2
MORF	7.5nm,0.6s			Sn	Sn	03 51 26.1	-1.3
MORF	**Marmelete**	4.29	316	*e*Pn	Pn	03 50 38.4	+0.2
MORF				*e*Sn	Sn	03 51 26.1	-1.3
MORF	7.5nm,0.6s			A	A	03 51 31.4	
MESJ	**Messejana**	4.46	324	*e*P	Pn	03 50 39.2	-1.2
MESJ				*e*S	Sn	03 51 27.1	-4.3
MESJ	comp=N,7.5nm,0.4s			AML	AML	03 51 33.6	
MESJ	**Messejana**	4.46	324	Pn	Pn	03 50 39.2	-1.2
MESJ	comp=N,7.5nm,0.4s			Sn	Sn	03 51 27.1	-4.3
PTEO	**Sao Teotonio**	4.50	318	Pn	Pn	03 50 40.2	-0.8
PTEO				Sn	Sn	03 51 30.4	-2.1
PTEO	**Sao Teotonio**	4.50	318	*e*Pn	Pn	03 50 40.2	-0.8
PTEO				*e*Sn	Sn	03 51 30.4	-2.1
EMUR	**La Murta** comp=N,2.3nm,0.5s,SNR=7.9	4.67	39	Pn	Pn	03 50 45.6	+2.2
EMUR	comp=N,0.8nm,0.4s,SNR=7.9			Sn	Sn	03 51 36.0	-0.6
EAH	**EAH**	4.70	238	P	Pn	03 50 43.7	0.0
EAH				S	Sn	03 51 41.5	+4.3
TTIG	**Tnine Tigouga,**	4.74	220	P	Pn	03 50 45.2	+0.8
TTIG				S	Sn	03 51 43.1	+4.6
EBAD	**Badajoz** comp=N,2.2nm,0.5s,SNR=7.1	4.80	340	Pn	Pn	03 50 45.1	0.0
EBAD	comp=N,2.2nm,0.3s,SNR=7.9			Sn	Sn	03 51 38.6	-1.1
PNCL	**Nicolau / Gran**	4.83	324	Pn	Pn	03 50 45.1	-0.4
PNCL	comp=N,2.1nm,0.5s			Sn	Sn	03 51 38.6	-1.8
PNCL	**Nicolau / Gran**	4.83	324	*e*Pn	Pn	03 50 45.1	-0.4
PNCL				*e*Sn	Sn	03 51 38.6	-1.8
PNCL	comp=N,2.1nm,0.5s			A	A	03 51 42.2	
PESTR	**Estremoz**	5.08	336	*e*Pn	Pn	03 50 49.5	+0.5
PESTR				*e*Sn	Sn	03 51 45.6	-1.1
ETOB	**Tobarra** comp=N,6.3nm,0.3s,SNR=17	5.16	31	Pn	Pn	03 50 53.1	+2.9
PAB	**San Pablo** comp=N,0.8nm,0.3s,SNR=7.9	5.30	5	Pn	Pn	03 50 52.2	+0.1
PAB	comp=N,1.1nm,0.2s,SNR=7.9			Sn	Sn	03 51 51.9	-0.4
PMTG	**Montargil**	5.49	332	Pn	Pn	03 50 54.2	-0.4
PMTG	comp=N,2.0nm,0.2s			Sn	Sn	03 51 56.4	-0.3
PMTG	**Montargil**	5.49	332	*e*Pn	Pn	03 50 54.2	-0.4
PMTG				*e*Sn	Sn	03 51 56.4	-0.3
PMTG	comp=N,2.0nm,0.2s			A	A	03 52 01.3	
PMRV	**Marv??o**	5.53	340	Pn	Pn	03 50 55.8	+0.6
PMRV	**Marv??o**	5.53	340	*e*Pn	Pn	03 50 55.8	+0.6
EPLA	**Plasencia** comp=N,0.8nm,0.2s,SNR=7.6	5.87	351	Pn	Pn	03 50 59.3	-0.6
EPLA	comp=N,0.5nm,0.4s,SNR=7.9			Sn	Sn	03 52 03.3	-3.0

SOME 03 03:51:33.1, 42°.95N×77°.05E, h10^{km}, 4C-7D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNSS	**Tian-Shan** 9.7nm,0.0s	0.12	319	⇑*i*P	Pg	03 51 36.4	+0.1
TNSS	45nm,0.1s			⇓*i*S	Sg	03 51 38.7	+0.2
MDOK	**Medeo** 5.3nm,0.2s	0.21	360	⇑*i*P	Pg	03 51 37.7	0.0
MDOK	16nm,0.4s			⇓*i*S	Sg	03 51 40.9	+0.1
KOTS	**Kotyrbulak** 15nm,0.2s	0.29	9	⇓*i*P	Pg	03 51 39.2	+0.2
KOTS	12nm,0.2s			⇓*i*S	Sg	03 51 43.4	+0.5
IZV	**Izvestkoviy** 4.4nm,0.1s	0.33	285	⇑*i*P	Pg	03 51 39.9	+0.1
IZV	5.2nm,0.1s			⇓*i*S	Sg	03 51 45.1	+0.9
KTBS	**Karatobe** 0.2nm,0.1s	0.81	341	*e*P	Pg	03 51 48.5	-0.2
KTBS	8.8nm,0.3s			⇑*i*S	Sg	03 51 59.4	+0.1
DGS	**Degeres** 0.8nm,0.1s	0.98	288	⇓*e*P	Pg	03 51 51.5	-0.5
DGS	0.9nm,0.2s			⇓*i*S	Sg	03 52 04.7	0.0
ARXS	**Arharly** 1.3nm,0.1s	1.38	24	*e*P	Pb	03 51 59.0	-0.1
ARXS	0.6nm,0.1s			*e*S	Sg	03 52 17.9	+0.3
UZB	**Uzynbulak** 0.2nm,0.0s	1.46	82	*e*P	Pn	03 52 00.0	+0.3
UZB	2.0nm,0.1s			*e*S	Sb	03 52 19.3	+0.2

KRNET 03 03:51:54.8±0.1, 42°.22N×75°.94E, h8^{km}, mb0.9, 6C, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol** baz=84	0.23	84	⇑*i*P	Pg	03 51 59.4	0.0
ULHL	baz=84			⇑*i*S	Sg	03 52 02.5	0.0
BOOM	**Boomskoye usch** baz=0.0	0.27	360	⇑*i*P	Pg	03 52 00.3	+0.1
BOOM	baz=0.0			⇑*i*S	Sg	03 52 03.9	+0.1
KZA	**Kyzart** baz=54	0.53	254	⇑*e*P	Pg	03 52 05.0	-0.2
KZA	baz=54			⇑*i*S	Sg	03 52 12.5	+0.3

IDC 03 04:00:24.7±1.5, 10°.53N×94°.47E, h0^{km}, mb3.6/5, mb1 3.7/5, mb1mx3.5/37, mbtmp3.6/5, MS3.1/4, Ms1 3.2/4, ms1mx3.0/32, Error ellipse: s-maj=64.0km s-min=21.7km az=57.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat** comp=Z,210nm,18.6s,baz=344,slow=41	8.86	150	LR	LR	04 06 34.3	
CMAR	**Chiang Mai Arr** comp=Z,24nm,20.2s,baz=185,slow=39	8.99	28	LR	LR	04 06 14.7	
BRDH	**Bariadhala** comp=Z,145nm,21.4s,baz=170,slow=43	12.38	348	LR	LR	04 09 16.3	
MKAR	**Makanchi Array** 0.3nm,0.7s,baz=168,slow=7.4,SNR=3.6	37.59	346	P	P	04 07 40.6	-0.4
MKAR	comp=Z,77nm,21.8s,baz=295,slow=40			LR	LR	04 25 43.1	
SONM	**Songino Array** 0.4nm,1.0s,baz=177,slow=5.8,SNR=2.5	38.51	13	P	P	04 07 48.5	-0.3
GEYT	**Alibeck** 2.8nm,0.7s,baz=134,slow=8.5,SNR=5.3	42.49	316	P	P	04 08 22.1	+0.2
WRA	**Warramunga Arr** 0.6nm,0.7s,baz=303,slow=9.3,SNR=3.2	49.57	128	P	P	04 09 17.9	0.0
ASAR	**Alice Springs** 0.6nm,0.6s,baz=296,slow=7.4,SNR=7.4	51.40	132	P	P	04 09 31.7	0.0

*IDC **03** 04:28:59.9±3.0, 27°.00N×54°.39E, h0^{km}, mb3.5/4, mb1 3.5/4, mb1mx3.3/27, mbtmp3.5/4, Error ellipse: s-maj=78.0km s-min=28.6km az=159.0*

*TEH **03** 04:29:04.4, 27°.08N×54°.47E, h31^{km}, ML3.5*

*OMAN **03** 04:29:09.7±3.4, 26°.60N×54°.74E, h15^{km}, ml3.0/4, Error ellipse: s-maj=69.3km s-min=18.5km az=130.0*

ISC 03 04:29:03.6±0.8, 27°.08N±0°.05×54°.48E±0°.05, h18^{km}, n30, $\sigma 1^{s}.50$/31, mb3.7/5, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	**Lamerd**	1.20	283	*e*Pg	Pg	04 29 26.6	-0.2
LMD1				*e*		04 29 56.4	
GENO	**Geno**	1.54	78	*e*Pn	Pn	04 29 30.8	+0.4
GENO				*e*		04 30 04.8	
JHRM	**Jahrom**	1.63	331	*e*Pn	Pn	04 29 32.4	+0.9
JHRM				*e*		04 30 02.8	
SHME	**Shamm**	1.81	124	*e*Pn	Pn	04 29 34.3	+0.4
BANOM	**Banah**	2.00	125	P	Pn	04 29 37.0	+0.5
BANOM				S	Sn	04 29 57.0	-4.0
BANOM	**Banah**	2.00	125	*e*Pn	Pn	04 29 36.9	+0.4
NIAN	**Nian**	2.15	77	*e*Pn	Pn	04 29 39.2	+0.6
NIAN				*e*		04 30 28.7	
MSFE	**Esma-Masafi**	2.28	138	*e*Pn	Pn	04 29 42.4	+2.0
NAZ	**Nazwa, Dubai**	2.34	153	*e*Pn	Pn	04 29 42.3	+1.2
MDH	**Madha**	2.41	137	*e*Pn	Pn	04 29 44.1	+2.0
ISRV	**Sarvestan**	2.59	333	*e*Pn	Pn	04 29 45.3	+0.4
ISRV				*e*		04 30 58.8	
UOSS	**Minazif**	2.63	143	*e*Pn	Pn	04 29 46.5	+1.3
HATD	**Hatta, Dubai**	2.69	146	*e*Pn	Pn	04 29 47.9	+1.9
ASHO	**Ashiyiah**	2.78	149	*e*Pn	Pn	04 29 49.0	+1.8
NGRK	**Negar Kerman**	3.24	37	*e*Pn	Pn	04 29 55.0	+1.1
SOHO	**SOHO**	3.47	147	*e*Pn	Pn	04 29 58.4	+1.7
TVBK	**TV Kerman**	3.53	34	*e*Pn	Pn	04 29 58.6	+0.8
TVBK				*e*		04 30 46.4	
KHGB	**Koh Gabri**	3.73	28	*e*Pn	Pn	04 30 01.5	+1.1
KHGB				*e*		04 30 49.0	
CHMN	**Cheshme madani**	3.87	43	*e*Pn	Pn	04 30 04.2	+1.7
MZR	**Muzera**	4.16	193	P	Pn	04 30 07.3	+1.1
IMEH	**Mehriz**	4.30	2	*e*Pn	Pn	04 30 09.9	+1.6
UMZA	**Um Al Zommool**	4.39	172	*e*Pn	Pn	04 30 10.0	+0.7
KLNJ	**Kolanjah**	4.66	328	*e*Pn	Pn	04 30 13.3	-0.1
ISAD	**Sadrabad**	4.87	352	*e*Pn	Pn	04 30 17.0	+0.8
TPRV	**Parvadeh(Tabas**	6.23	17	*e*Pn	Pn	04 30 35.9	+1.1
BRTR	**Keskin Array B** 1.0nm,0.7s,baz=134,slow=13,SNR=8.5	21.43	311	P	P	04 33 49.5	-1.3
MKAR	**Makanchi Array** 0.2nm,0.7s,baz=222,slow=7.8,SNR=2.2	29.45	41	P	P	04 35 06.4	+0.2
ZALV	**Zalesovo Beam** 0.8nm,0.5s,baz=237,slow=12,SNR=4.3	34.91	31	P	P	04 35 53.8	-0.2
FINES	**FINESS Array B** 1.8nm,1.0s,baz=144,slow=10,SNR=3.5	39.29	339	P	P	04 36 33.9	+2.8
TORD	**Torodi Ar. Bea** 0.9nm,0.9s,baz=69,slow=7.0,SNR=3.6	51.12	265	P	P	04 38 04.1	-1.5

CRAAG 03 04:37:40.0, 34°.76N×3°.38E, Ml3.5, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKET	**Djebel Ketaf**	1.35	18	P	Pb	04 38 08.6	+2.3
AKET	**Djebel Ketaf**	1.35	18	P	Pb	04 38 08.6	+2.3
EBNR	**Beni Rached**	2.15	316	P	Pg	04 38 27.5	+6.3
EBNR	**Beni Rached**	2.15	316	P	Pg	04 38 27.5	+6.3
ECHA	**Ech Chlef**	2.15	311	P	Pg	04 38 29.0	+7.8
ECHA	**Ech Chlef**	2.15	311	P	Pg	04 38 29.0	+7.8
SET	**Setif**	2.19	48	P	Pb	04 38 21.0	+0.5
SET	**Setif**	2.19	48	P	Pb	04 38 21.0	+0.5

*JMA **03** 04:43:14.0±0.2, 23°.15N×121°.53E, h0^{km}*

*TAP **03** 04:43:16.1, 23°.17N×121°.41E, h21^{km}, ML2.9, C*

ISC 03 04:43:15.9±0.9, 23°.17N±0°.02×121°.39E±0°.03, h18^{km}±2^{km}, n50, $\sigma 0^{s}.53$/91, 6C-10D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung** baz=202	0.07	198	*i* P	Pg	04 43 20.1	+0.8
CHKT	baz=202			*i* S	Sg	04 43 23.1	+1.5
FULB	**Fuli** baz=285	0.09	287	⇑*i*P	Pg	04 43 19.8	+0.3
FULB	baz=285			*i* S	Sg	04 43 23.1	+1.1
TWF1	**Yuli** baz=333	0.20	335	⇓*i*P	Pb	04 43 21.1	+0.4
TWF1	baz=333			*i* S	Sg	04 43 24.9	+0.7
YULB	**Yu-li** baz=335	0.24	339	⇓P	Pb	04 43 21.5	0.0
YULB	baz=335			S	Sg	04 43 25.7	+0.6
HGSD	**Ruisui** baz=3.0	0.32	6	P	Pb	04 43 23.9	+0.8
HGSD	baz=3.0			S	Sb	04 43 28.4	+0.4
EHY	**Hungye** baz=348	0.34	349	⇓*i*P	Pg	04 43 23.0	-0.1
EHY	baz=348			*i* S	Sg	04 43 28.2	+0.1
ELDTW	**Lidau** baz=272	0.34	273	⇓*i*P	Pg	04 43 22.9	-0.4
ELDTW	baz=272			*i* S	Sg	04 43 27.9	-0.3
TWGBT	**Beinan** baz=220	0.45	219	⇑P	Pg	04 43 25.0	-0.1
TWGBT	baz=220			S	Sb	04 43 31.9	+0.1
TWG	**Pinlang** baz=220	0.46	220	⇑*i*P	Pg	04 43 25.0	-0.1
TWG	baz=220			*i* S	Sb	04 43 32.0	+0.2
TWH	**Lutao** baz=171	0.47	170	*i* P	Pb	04 43 25.7	+0.2
TWH	baz=171			S	Sb	04 43 33.4	+1.3
EGFH	**Guangfu** baz=2.0	0.50	4	*e*S	Sb	04 43 33.1	+0.1
YUS	**Yu-Shan** baz=306	0.51	308	⇓*i*P	Pb	04 43 26.1	-0.6
YUS	baz=306			*i* S	Sg	04 43 33.3	-0.1
STYT	**Tauyuan** baz=269	0.58	269	⇑*i*P	Pb	04 43 27.2	-0.3
STYT	baz=269			*i* S	Sb	04 43 35.1	-0.3
VWDT	**VWDT** baz=337	0.62	339	⇓P	Pb	04 43 28.0	-0.2
VWDT	baz=337			S	Sb	04 43 35.8	-0.8
ALS	**Alishan** baz=301	0.64	302	⇓*i*P	Pb	04 43 28.5	-0.1
ALS	baz=301			S	Sb	04 43 36.5	-0.7
ESL	**Shilin** baz=3.0	0.64	4	*e*P	Pb	04 43 28.1	-0.4
ESL	baz=3.0			*e*S	Sg	04 43 37.9	+0.7
ECL	**Taimali** baz=215	0.70	215	P	Pb	04 43 28.4	-1.1
ECL	baz=215			S	Sb	04 43 38.7	-0.1
SLGT	**Liugui** baz=255	0.71	256	P	Pb	04 43 29.7	0.0
SLGT	baz=255			*e*S	Sb	04 43 39.4	+0.3
TPUB	**Ta-pu** baz=280	0.71	281	⇓P	Pb	04 43 30.0	+0.2
TPUB	baz=280			S	Sg	04 43 40.1	+0.8
WHYT	**Xinyi Township** baz=315	0.72	317	*e*P	Pb	04 43 29.7	-0.2
WHYT	baz=315			*e*S	Sb	04 43 39.2	-0.2
WTP	**Ta-pu** baz=275	0.72	276	⇓*i*P	Pb	04 43 30.2	+0.3
WTP	baz=275			*i* S	Sg	04 43 40.1	+0.5
SSLB	**Suanglung** baz=326	0.73	327	⇑P	Pb	04 43 29.6	-0.5
SSLB	baz=326			S	Sb	04 43 40.0	+0.1
SGST	**Jiashian** baz=263	0.75	263	*i* P	Pb	04 43 30.0	-0.3
SGST	baz=263			*i* S	Sb	04 43 40.6	+0.4
ENLB	**Shoufeng** baz=13	0.75	15	*e*P	Pb	04 43 30.6	+0.1
ENLB	baz=13			S	Sg	04 43 41.3	+0.6
CHN4	**Tsaushan** baz=283	0.76	284	*i* P	Pb	04 43 30.9	+0.4
CHN4	baz=283			S	Sg	04 43 41.5	+0.8
CHN5	**Tsauling** baz=302	0.78	303	⇓*i*P	Pb	04 43 31.3	+0.4
CHN5	baz=302			S	Sg	04 43 42.3	+0.7
CHN1	**Nanshi** baz=271	0.79	271	*e*P	Pg	04 43 31.8	+0.4
OWD	**Renai** baz=344	0.80	346	*e*P	Pb	04 43 30.7	-0.7
OWD	baz=344			*e*S	Sb	04 43 42.2	+0.2
SSD	**Sandimen** baz=239	0.82	239	P	Pb	04 43 31.0	-0.6
SSD	baz=239			S	Sb	04 43 42.4	+0.2
SNST	**Tainan City** baz=273	0.82	274	P	Pg	04 43 32.2	+0.2
SNST	baz=273			S	Sn	04 43 44.4	+0.2
TWK	**Hsinying** baz=276	0.83	277	*i* P	Pb	04 43 32.3	+0.4
TWK	baz=276			S	Sn	04 43 44.6	0.0
SMLT	**Sun Moon Lake** baz=327	0.84	328	⇑*i*P	Pb	04 43 31.8	-0.2
SMLT	baz=327			S	Sb	04 43 42.7	-0.2
TYC	**Yuchr** baz=326	0.88	326	P	Pg	04 43 33.1	+0.1
TYC	baz=326			*e*S	Sg	04 43 45.1	+0.4
MASBT	**Mashibuluo** baz=232	0.89	232	P	Pb	04 43 32.2	-0.6
MASBT	baz=232			*e*S	Sb	04 43 44.9	+0.5
CHGB	**Renai** baz=346	0.91	347	P	Pb	04 43 32.7	-0.5
CHGB	baz=346			*e*S	Sb	04 43 45.2	+0.2
EAST	**Anshuo** baz=212	0.93	213	P	Pb	04 43 33.2	-0.3
EAST	baz=212			*e*S	Sb	04 43 45.5	0.0
WDLH	**Douliu** baz=302	0.94	304	*e*P	Pb	04 43 33.2	-0.3
CHY	**Chiayi** baz=289	0.95	290	*e*P	Pb	04 43 33.5	-0.2
CHY	baz=289			*e*S	Sb	04 43 46.8	+0.9
WNT	**Mingjian** baz=317	0.96	317	P	Pb	04 43 33.0	-1.0
WNT	baz=317			S	Sn	04 43 47.7	+0.2
DPDB	**Guoxing** baz=332	0.96	334	P	Pb	04 43 33.8	-0.1
DPDB	baz=332			S	Sb	04 43 46.7	+0.3
WHF	**Hehuan Shan** baz=352	0.98	353	P	Pb	04 43 33.7	-0.8
WHF	baz=352			*e*S	Sb	04 43 47.4	+0.2
NACB	**Ninganchiao** baz=9.0	1.01	11	*e*P	Pb	04 43 34.1	-0.8
NACB	baz=9.0			*e*S	Sb	04 43 48.3	+0.4
ETLH	**Xiulin Townshi** baz=3.0	1.03	5	*e*P	Pb	04 43 34.9	-0.4
SCZT	**Fangliau** baz=222	1.07	222	*e*P	Pb	04 43 35.2	-0.6
SCZT	baz=222			*e*S	Sn	04 43 50.5	+0.3
TDCB	**Techi** baz=348	1.10	349	*e*P	Pn	04 43 35.9	-0.6
LAY	**Lan-yu** baz=172	1.14	172	*e*P	Pn	04 43 36.4	-0.5
LAY	baz=172			S	Sb	04 43 50.8	-0.6

WHP	Taichung City	1.17	340	eP	Pn	04 43 37.7	+0.2
	baz=339						
NNSB	Datong	1.25	360	eP	Pn	04 43 37.7	-0.9
	baz=359						
HATJ	Hateruma jima	2.38	68	S	Sn	04 44 22.9	+0.1
JISG	Ishigakijimahi	3.02	62	P	Pn	04 44 01.7	-1.1

*THE **03** 05:05:32.8, 37°.83N×21°.09E, h10^{km}±2^{km}, ML2.6/8, Error ellipse: s-maj=2.6km s-min=0.7km az=43.0*

*ATH **03** 05:05:32.3, 37°.84N×21°.12E, h18^{km}±1^{km}, ML2.7/13, Error ellipse: s-maj=1.5km s-min=0.7km az=204.0*

ISC 03 05:05:32.5±0.9, **37°.84N**±0°.03×**21°.11E**±0°.02, **h15**^{km}±6^{km}, **n46, σ0^{s}51**/64, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTN	Vitineika	0.10	38	P	Pg	05 05 35.7	-0.1
VTN				S	Sg	05 05 37.6	-0.3
VTN	Vitineika	0.10	38	P	Pg	05 05 35.7	-0.1
VTN				S	Sb	05 05 38.5	-0.1
KRI1	kERI	0.29	233	P	Pg	05 05 38.8	+0.3
VLMS	Volimes, Zakyn	0.35	277	P	Pg	05 05 39.8	+0.1
VLMS				S	Sb	05 05 45.9	+0.1
VLMS				AML	AML	05 05 47.3	
	comp=E,7022µm,0.2s						
VLMS				AML	AML	05 05 49.9	
	comp=N,6670µm,0.2s						
RLS	Riolos of Patr	0.36	52	P	Pg	05 05 39.7	-0.2
RLS				S	Sg	05 05 45.1	+0.2
	comp=N,2µm,0.3s						
RLS	Riolos of Patr	0.36	52	P	Pg	05 05 39.6	-0.2
RLS				S	Sg	05 05 45.0	+0.1
RLS				AML	AML	05 05 46.8	
	comp=E,3779µm,0.3s						
RLS				AML	AML	05 05 46.9	
	comp=N,5267µm,0.3s						
KFL	Anninata	0.37	318	P	Pg	05 05 39.9	-0.1
KFL	Anninata	0.37	318	P	Pg	05 05 39.9	-0.1
KFL				S	Sb	05 05 45.9	-0.4
DRO	Drossia	0.49	76	P	Pg	05 05 42.0	-0.3
DRO				S	Sb	05 05 50.2	+0.3
	comp=N,2µm,0.3s						
DRO	Drossia	0.49	76	P	Pg	05 05 41.6	-0.7
DRO				S	Sg	05 05 48.9	+0.1
DRO				AML	AML	05 05 53.6	
	comp=E,4847µm,0.2s						
DRO				AML	AML	05 05 56.0	
	comp=N,4215µm,0.3s						
VLS	Valsamata	0.53	310	P	Pg	05 05 42.1	-0.9
VLS				S	Sb	05 05 51.6	+0.6
	comp=N,550nm,0.2s						
VLS	Valsamata	0.53	310	P	Pg	05 05 42.9	-0.1
VLS				S	Sb	05 05 51.1	+0.1
AMT	Artemida-Makis	0.57	122	P	Pg	05 05 43.4	-0.2
AMT				S	Sb	05 05 52.9	+0.9
	comp=N,1µm,0.5s						
AMT	Artemida-Makis	0.57	122	P	Pg	05 05 43.5	-0.1
AMT				S	Sb	05 05 51.9	-0.1
AMT				AML	AML	05 05 53.5	
	comp=E,2139µm,0.6s						
AMT				AML	AML	05 05 53.9	
	comp=N,2655µm,0.4s						
KEF2	Argostoli. Kep	0.59	304	P	Pg	05 05 43.8	-0.2
KEF2				S	Sb	05 05 52.6	0.0
LXRA	Lixouri, Kepha	0.64	305	P	Pg	05 05 45.0	0.0
KEF1	Kardakata, Kep	0.67	312	P	Pg	05 05 45.0	-0.5
KEF1				S	Sb	05 05 54.9	0.0
KONA	Konidatara, Ke	0.72	325	P	Pg	05 05 46.0	-0.6
FSK	Fiskardo	0.76	326	P	Pg	05 05 46.6	-0.6
FSK	Fiskardo	0.76	326	P	Pg	05 05 46.5	-0.7
PDO	Prodromos	0.76	5	P	Pg	05 05 47.3	0.0
PDO	Prodromos	0.76	5	P	Pg	05 05 47.3	0.0
PDO				AML	AML	05 06 07.5	
	comp=E,1273µm,0.3s						
PDO				AML	AML	05 06 08.7	
	comp=N,1722µm,0.6s						
LAKA	Lakka	0.80	59	P	Pg	05 05 47.0	-1.0
LAKA				AML	AML	05 06 02.4	
	comp=E,983µm,0.5s						
LAKA				AML	AML	05 06 07.3	
	comp=N,620µm,0.6s						
PVO	Paravola	0.85	23	P	Pb	05 05 49.1	+0.2
PVO	Paravola	0.85	23	P	Pg	05 05 48.9	0.0
PVO				AML	AML	05 06 07.8	
	comp=E,1226µm,0.4s						
PVO				AML	AML	05 06 12.4	
	comp=N,789µm,0.4s						
KLV	Kalavryta, Ach	0.85	76	P	Pg	05 05 47.8	-1.2
KLV				AML	AML	05 06 08.1	
	comp=E,398µm,0.5s						
KLV				AML	AML	05 06 08.5	
	comp=N,416µm,0.4s						
MGNA	Meganis	0.85	343	P	Pg	05 05 48.2	-0.9
EVGI	Lefkada island	0.86	336	P	Pg	05 05 48.6	-0.6
ITM	Ithomi	0.93	135	P	Pb	05 05 49.4	-0.8
ITM				S	Sn	05 06 04.1	+0.2
	comp=N,215nm,0.8s						
ITM	Ithomi	0.93	135	P	Pb	05 05 49.8	-0.4
TRIZ	Trizonia	0.93	55	P	Pb	05 05 49.9	-0.3
TRIZ				S	Sn	05 06 04.1	+0.1
	comp=N,535nm,0.5s						
TRIZ	Trizonia	0.93	55	P	Pb	05 05 49.7	-0.6
KALE	Kalithea	0.99	56	P	Pb	05 05 50.8	-0.5
KALE				S	Sn	05 06 06.6	+1.1
	comp=N,282nm,0.3s						
KALE	Kalithea	0.99	56	P	Pb	05 05 50.7	-0.5
KALE				AML	AML	05 06 12.2	
	comp=N,706µm,0.5s						
KALE				AML	AML	05 06 17.7	
	comp=E,473µm,0.4s						
LKD2	Lefkada island	1.01	340	P	Pb	05 05 51.0	-0.7
LKD2				S	Sn	05 06 07.4	+1.2
	comp=E,255nm,0.3s						
LKD2	Lefkada island	1.01	340	P	Pb	05 05 51.0	-0.7
PYL	PYLOS	1.07	151	P	Pb	05 05 52.0	-0.6
EVR	Evrytania	1.21	27	P	Pb	05 05 55.4	+0.2
EVR				AML	AML	05 06 18.6	
	comp=E,394µm,0.6s						
EVR				AML	AML	05 06 21.4	
	comp=N,293µm,0.4s						
MAKR	Makrakomi, Fth	1.43	34	P	Pg	05 05 59.6	-0.3
MAKR				AML	AML	05 06 24.7	
	comp=N,484µm,0.4s						
MAKR				AML	AML	05 06 29.1	
	comp=E,494µm,0.4s						
PROD	Prodromos	1.48	73	P	Pg	05 06 00.5	-0.4
LTK	Loutraki	1.48	82	P	Pb	05 05 59.9	+0.2
AGG	Agios Georgios	1.53	39	P	Pb	05 06 00.4	-0.1
AGG	Agios Georgios	1.53	39	P	Pb	05 06 00.3	-0.2
AGG				AML	AML	05 06 25.2	
	comp=E,186µm,0.6s						
AGG				AML	AML	05 06 29.6	
	comp=N,175µm,0.5s						
AXAR	Agios Charalam	1.54	52	P	Pb	05 06 01.1	+0.5
AXAR				AML	AML	05 06 30.0	
	comp=E,575µm,0.4s						
AXAR				AML	AML	05 06 32.3	
	comp=N,794µm,0.4s						
LKR	Lokris	1.70	61	P	Pb	05 06 03.6	+0.2
VIL2	Platees	1.75	77	P	Pb	05 06 04.9	+0.7

WEL 03 05:23:21.1, 40°S±2°×**17°4E**±°, **h110**^{km}±4^{km}, **M3.4**/22, **ML3.9**/10, **MLv3.4**/22, **Error ellipse: s-maj=0.0km s-min=0.0km az=47.6, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LREZ	Lake Rotokare	0.68	12	P	Pn	05 23 39.7	+0.4
LREZ				S	Sn	05 23 53.6	+0.6
WAZ	Wanganui	0.70	58	P	Pn	05 23 39.7	+0.3
DUWZ	D'Urville Isla	0.71	199	P	Pn	05 23 40.0	+0.5
DUWZ				S	Sn	05 23 53.8	+0.4
NMEZ	Namu Road	0.76	340	P	Pn	05 23 40.2	+0.2
NMEZ				S	Sn	05 23 54.2	+0.1
PREZ	Palmer Road	0.79	356	P	Pn	05 23 40.4	+0.2
OHWZ	Ohakea	0.84	95	P	Pn	05 23 41.3	+0.7
OHWZ				S	Sn	05 23 55.6	+0.2
KHEZ	Kahui Hut	0.85	349	P	Pn	05 23 41.0	+0.1
KIW	Kapiti Island	0.90	145	P	Pn	05 23 41.4	+0.1
KIW				S	Sn	05 23 55.6	-0.9
NBEZ	Newall Road No	0.90	342	P	Pn	05 23 41.6	+0.4
DREZ	Durham Road	0.94	359	P	Pn	05 23 41.9	+0.3
PKE	Pukeiti	0.95	349	P	Pn	05 23 42.1	+0.3
OGWZ	Otaki Gorge	1.00	134	P	Pn	05 23 42.5	+0.3
MHEZ	Mangahewa	1.06	4	P	Pn	05 23 43.3	+0.5
TCW	Tory Channel	1.08	178	P	Pn	05 23 43.8	+0.7
VRZ	Vera Road	1.09	23	P	Pn	05 23 43.2	+0.1
MRZ	Mangatainoka R	1.16	118	P	Pn	05 23 44.0	0.0
CAW	Cannon Point	1.17	147	P	Pn	05 23 44.7	+0.6
PKVZ	Pokaka	1.21	46	P	Pn	05 23 44.8	+0.2
POWZ	Post Office Ro	1.21	103	P	Pn	05 23 44.6	+0.1
MTVZ	Mangateitei	1.22	53	P	Pn	05 23 45.1	+0.4
WEL	Wellington	1.23	160	P	Pn	05 23 45.4	+0.7
HOWZ	Holdsworth Sta	1.25	128	P	Pn	05 23 45.3	+0.3
NNZ	Nelson	1.26	210	P	Pn	05 23 45.8	+0.7
TUWZ	Tuamarina	1.31	189	P	Pn	05 23 46.2	+0.5
TRVZ	Turoa	1.32	51	P	Pn	05 23 46.1	+0.2
FWVZ	Far West T-bar	1.35	50	P	Pn	05 23 46.9	+0.6
WHVZ	Whangaehu Hut	1.35	52	P	Pn	05 23 47.0	+0.7
MOVZ	Moawhango	1.38	59	P	Pn	05 23 46.1	-0.4
TUVZ	Tukino	1.40	53	P	Pn	05 23 48.0	+1.1
PRWZ	Pori Road	1.40	108	P	Pn	05 23 47.0	+0.3
MTW	Mount Morrison	1.42	137	P	Pn	05 23 47.1	+0.3
TWVZ	Taurewa	1.42	42	P	Pn	05 23 46.7	-0.2
TIWZ	Tintock	1.42	117	P	Pn	05 23 48.0	+1.0
NGZ	Ngauruhoe	1.43	49	P	Pn	05 23 47.8	+0.6
WTVZ	West Tongariro	1.46	47	P	Pn	05 23 47.4	-0.1
QRZ	Quartz Range	1.47	241	P	Pn	05 23 47.6	+0.2
MSWZ	Moikau Station	1.50	149	P	Pn	05 23 48.5	+0.6
KRVZ	Karewarewa	1.51	47	P	Pn	05 23 48.0	-0.1
PNHZ	Pukenui	1.54	83	P	Pn	05 23 48.0	-0.3
PAWZ	Paruwai Farm	1.55	144	P	Pn	05 23 48.8	+0.4
TMWZ	Te Maipa	1.60	128	P	Pn	05 23 49.4	+0.3
BSWZ	Blackbirch Sta	1.60	189	P	Pn	05 23 50.3	+1.2
CMWZ	Cape Campbell	1.62	180	P	Pn	05 23 50.8	+1.5
KATZ	Kakaramea	1.62	45	P	Pn	05 23 49.5	+0.1
PLWZ	Palliser	1.64	152	P	Pn	05 23 49.9	+0.3
BFZ	Birch Farm	1.64	110	P	Pn	05 23 49.4	-0.1
TRWZ	Traveller	1.69	139	P	Pn	05 23 51.2	+1.1
HIZ	Hauiti	1.69	17	P	Pn	05 23 49.9	-0.2
WPHZ	Waipukurau	1.70	88	P	Pn	05 23 53.5	+3.2
RITZ	Rihia Road	1.71	48	P	Pn	05 23 50.4	0.0
KRHZ	Kereru	1.72	74	P	Pn	05 23 50.1	-0.5
RATZ	Rangitukua	1.74	44	P	Pn	05 23 51.2	+0.3
ANWZ	Angora Road	1.75	102	P	Pn	05 23 51.2	+0.3
KWHZ	Kaweka Forest	1.84	68	P	Pn	05 23 51.9	-0.2
WATZ	Wairara	1.84	40	P	Pn	05 23 52.2	+0.1
THZ	Tophouse	1.91	211	P	Pn	05 23 53.7	+0.7
BKZ	Black Stump Fm	2.00	62	P	Pn	05 23 53.2	-0.9
KUTZ	Kaahu Road	2.06	38	P	Pn	05 23 54.8	0.0
KAHZ	Kahuranaki	2.07	82	P	Pn	05 23 56.5	+1.6
TLZ	Tolley Road	2.07	30	P	Pn	05 23 54.7	-0.3
NMHZ	Naumai	2.25	63	P	Pn	05 23 56.9	-0.4
ARHZ	Aropaoanui	2.31	69	P	Pn	05 23 57.0	-1.0
KHZ	Kahutara	2.34	192	P	Pn	05 23 59.1	+0.7
MTHZ	Maungataniwha	2.40	59	P	Pn	05 23 57.9	-1.3
DSZ	Denniston Nort	2.44	228	P	Pn	05 24 00.2	+0.5
MUGZ	Murupara	2.58	51	P	Pn	05 24 00.1	-1.4
TOZ	Tahuroa Road	2.60	23	P	Pn	05 24 01.4	-0.3
KNZ	Kokohu	2.89	69	P	Pn	05 24 03.6	-1.9
URZ	Urewera	2.92	51	P	Pn	05 24 04.0	-2.0
MHGZ	Mahia Peninsul	3.01	72	P	Pn	05 24 05.7	-1.5
LTZ	Lake Taylor	3.03	208	P	Pn	05 24 07.1	-0.4
AWAZ	Awhitu Peninsu	3.08	6	P	Pn	05 24 08.5	+0.3
RIGZ	Rimuhau	3.09	64	P	Pn	05 24 06.6	-1.7
MKAZ	Moumakai	3.11	14	P	Pn	05 24 08.3	-0.2
MWZ	Matawai	3.13	56	P	Pn	05 24 06.8	-2.1
AMCZ	Amberley	3.26	201	P	Pn	05 24 10.0	-0.5
INZ	Inchbonnie	3.33	218	P	Pn	05 24 12.3	+0.9
RUGZ	Raukumara Rang	3.45	52	P	Pn	05 24 10.8	-2.4
TWGZ	Tauwhareparae	3.51	57	P	Pn	05 24 12.5	-1.4
OXZ	Oxford	3.59	206	P	Pn	05 24 14.9	0.0
PKGZ	Pakihiroa	3.75	55	P	Pn	05 24 14.8	-2.2
PUZ	Puketiti	3.75	58	P	Pn	05 24 14.6	-2.5
MQZ	McQueen's Vall	3.76	198	P	Pn	05 24 15.2	-1.9
WVZ	Waitaha Valley	3.93	220	P	Pn	05 24 19.4	0.0
WMGZ	Waiomatatini S	4.00	56	P	Pn	05 24 17.4	-3.0
RPZ	Rata Peaks	4.29	212	P	Pn	05 24 24.7	+0.4
FOZ	Fox Glacier	4.73	223	P	Pn	05 24 29.3	-0.9
ODZ	Otahua Downs	5.58	207	P	Pn	05 24 41.3	-0.3
JCZ	Jackson Bay	5.64	224	P	Pn	05 24 41.4	-1.3

*DDA **03** 05:36:42.9, 35°.96N×31°.51E, h17^{km}±2^{km}, ML2.2*

*NIC **03** 05:36:44.6±0.0, 35°.99N×32°.26E, h5^{km}±4^{km}, Ml2.1/2*

*ISK **03** 05:36:50.4, 36°.52N×32°.29E, h5^{km}, ML2.2/10*

ISC 03 05:36:39.3±1.5, **35°.79N**±0°.04×**31°.56E**±0°.04, **h6**^{km}±11^{km}, **n24, σ1^{s}54**/33, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZI	Gazipasa	0.76	54	PG	Pn	05 36 57.3	+0.7
GAZI				SG	Sg	05 37 02.7	-1.0
GAZI	Gazipasa	0.76	54	i P	Pn	05 36 56.8	+0.2
GAZI				i S	Sg	05 37 04.4	+0.7
ALAN	Alanya-ANTALYA	0.86	26	PG	Pg	05 36 55.5	-0.3
AKMS	Akamas	0.99	140	P	Pn	05 37 03.3	+3.5
AKMS				S	Sn	05 37 18.1	+3.9
AKMS				AML	AML	05 37 19.2	
	0.2nm,0.3s						
AKMS				AML	AML	05 37 19.2	
	0.2nm,0.3s						
AKMS				AML	AML	05 37 26.7	
	0.3nm,0.7s						
AKMS				AML	AML	05 37 26.7	
	0.3nm,0.7s						
ALFC	Alefka	1.05	126	P	Pn	05 37 02.1	+1.4
ALFC				AML	AML	05 37 14.3	
	0.2nm,0.2s						
ALFC				AML	AML	05 37 14.3	
	0.2nm,0.2s						
ALFC				S	Sn	05 37 14.9	-0.9
ALFC				AML	AML	05 37 19.2	
	0.3nm,0.7s						
ALFC				AML	AML	05 37 19.2	
	0.3nm,0.7s						
KEPZ	Antalya-Kepez	1.11	2	i P	Pb	05 37 00.7	-0.4
KEPZ				i S	Sg	05 37 14.6	-0.6
AKUM	Antalya-Kumluc	1.12	299	i P	Pn	05 37 02.0	+0.4
AKUM				i S	Sn	05 37 17.1	-0.3
AKUM				IAML		05 37 37.0	
	comp=N,66nm,1.8s						
TEKE	Tekeli-Mersin	1.31	74	PG	Pg	05 37 05.8	+1.4
TEKE				SG	Sb	05 37 17.8	-3.6
BERE	Bereket-Mersin	1.46	67	PG	Pb	05 37 06.4	-0.5
SZAC	Souni	1.49	133	P	Pg	05 37 10.4	+2.5
SEYD	Seydisehir-KON	1.63	8	PG	Pb	05 37 09.8	-0.1
AKKU	Akkuyu-Mersin	1.66	76	PG	Pg	05 37 12.3	+1.3
GULN	MERSIN_Gulnar	1.66	76	i P	Pb	05 37 09.8	-0.4
TEVE	Tevekalti-Mers	1.66	66	PG	Pb	05 37 09.5	-0.8
CSS	Mathiatis	1.66	119	P	Pg	05 37 09.8	-1.3
IKL	Isikli	1.78	75	PN	Pg	05 37 13.4	0.0
MVOU	Mavrovouni	1.86	114	P	Pb	05 37 11.5	-2.1
MVOU				S	Sn	05 37 33.0	-2.5
KEBE	Keben-Mersin	1.86	69	PN	Pb	05 37 13.8	0.0
GOLH	Golhisar	2.17	313	i P	Pb	05 37 17.9	-1.1
KONT	Konya--Tatoy	2.25	16	PN	Pn	05 37 18.6	+1.5
KONT	Konya--Tatoy	2.25	16	i P	Pb	05 37 20.0	-0.3
DOGA	KONYA_Doganhis	2.32	2	i P	Pn	05 37 19.8	+1.6
DOGA				i S	Sb	05 37 50.3	-0.3
KERG	Konya-Eregli	2.63	51	i P	Pb	05 37 26.5	-0.4
KERG				i S	Sn	05 37 57.0	+2.3
TAVA	DENIZLI_Tavas	2.71	309	i P	Pn	05 37 23.7	+0.2

*IDC **03** 05:39:27.4±4.1, 30°.23N×132°.29E, h0^{km}, mb3.4/4, mb1 3.7/4, mb1mx3.3/27, mbtmp3.4/4, Error ellipse: s-maj=279.5km s-min=28.1km az=103.0*

*JMA **03** 05:39:30.0±0.2, 30°.14N×132°.41E, h76^{km}, M3.0*

ISC 03 05:39:28.8±2.7, **30°.20N**±0°.05×**132°.42E**±0°.06, **h11**^{km}±16^{km}, **n17, σ1^{s}39**/23, **mb3.4**/4, **Southeast of Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTN	Tanegashima 3	1.33	291	P	Pn	05 39 53.2	-0.1
JTN				S	Sg	05 40 11.1	-0.5
JMTN	Minamitane	1.33	279	P	Pn	05 39 53.3	0.0
JMTN				eS	Sg	05 40 11.5	-0.2
JTSR	Tashiro 2	1.61	307	P	Pn	05 39 57.1	-0.2
JTSR				eS	Sn	05 40 17.8	-0.3
JNAR	Kushima--Naru	1.66	324	P	Pn	05 39 58.6	+0.8
JNAR				S	Sn	05 40 19.2	+0.2
JYAK	Yakushimahirau	1.66	272	P	Pn	05 39 57.4	-0.4
JYAK				eS	Sn	05 40 17.7	-1.3
JNKG	Nichinankitago	1.72	329	S	Sn	05 40 20.3	-0.2
JTZ	Takazaki	2.05	326	P	Pn	05 40 03.9	+0.7
JTZ				eS	Sn	05 40 29.0	+0.2
JNN	Nakanoshima	2.24	262	P	Pn	05 40 06.0	+0.2
JTO	Tosashimizu	2.68	7	P	Pn	05 40 11.5	-0.3
JTO				S	Sn	05 40 40.3	-3.9
JSJ	Shimokoshiki	2.75	303	P	Pn	05 40 12.1	-0.8
JSJ				S	Sn	05 40 44.8	-1.4
JNA	Nagahama	3.35	1	S	Sn	05 40 58.1	-2.8
JAMN	Amaminishikomi	3.44	236	P	Pn	05 40 21.8	-0.5
JAMN				S	Sn	05 41 01.0	-2.1
JMN	Monobe	3.73	19	P	Pn	05 40 26.9	+0.5
WRA	Warramunga Arr	49.88	178	P	P	05 48 22.1	-0.2
	0.2nm,0.6s,baz=353,slow=8.4,SNR=2.6						
ASAR	Alice Springs	53.57	178	P	P	05 48 51.3	+1.4
	0.1nm,0.3s,baz=11,slow=12,SNR=5.5						
YKA	Yellowknife Ar	73.36	26	P	P	05 51 01.0	+0.6
	0.5nm,1.1s,baz=296,slow=5.3,SNR=4.3						
NVAR	Mina Array Bea	85.11	48	P	P	05 52 06.0	+0.7
	0.3nm,0.7s,baz=306,slow=4.8,SNR=4.0						

*INET **03** 05:53:38.4, 12°.47N×87°.76W, h68^{km}, ML3.5*

SNET 03 05:53:39.3±1.0, **12°.55N**×**87°.88W, h47**^{km}±20^{km}, **ML2.5, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.73	4	eP	Pn	05 53 53.5	0.0
CNCH				eS	Sn	05 54 04.3	+0.7
LCND	La Caada	0.76	359	eP	Pn	05 53 53.9	+0.2
LCND				eS	Sn	05 54 05.7	+1.5
JUCU	Jucuar¡n	0.79	333	eP	Pn	05 53 54.2	0.0
JUCU				eS	Sn	05 54 05.7	+0.7
JUCU				IAML		05 54 07.7	
	comp=Z,144nm,0.2s						
PACA	Pacayal	1.01	335	eP	Pn	05 53 57.6	+0.4
PACA				eS	Sn	05 54 12.3	+1.8
COEB	Comit de Eme	1.14	326	eP	Pn	05 53 59.4	+0.5
COEB				eS	Sn	05 54 14.7	+1.2
COEB				IAML		05 54 17.9	
	comp=Z,90nm,0.1s						
COEG	Centro de Oper	1.44	318	eP	Pn	05 54 03.5	+0.4
COEG				eS	Sn	05 54 21.6	+0.7
TGUH	Tegucigalpa,Un	1.61	22	eP	Pn	05 54 05.2	-0.3
TGUH				eS	Sn	05 54 25.5	+0.3

*INET **03** 06:00:21.8, 12°.49N×87°.77W, h71^{km}, ML3.5*

SNET 03 06:00:22.2±0.6, **12°.49N**×**87°.86W, h29**^{km}±5^{km}, **ML3.1, 2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.78	2	⇓eP	Pb	06 00 37.1	-0.3
CNCH				eS	Sn	06 00 49.3	+1.1
CNCH				IAML		06 00 52.0	
	comp=Z,3µm,0.4s						
LCND	La Caada	0.81	358	⇓iP	Pn	06 00 37.5	-0.2
LCND				IAML		06 00 55.4	
	comp=Z,1µm,0.3s						
JUCU	Jucuar¡n	0.85	334	eP	Pn	06 00 38.0	-0.3
JUCU				eS	Sn	06 00 50.1	+0.4
JUCU				IAML		06 00 53.7	
	comp=Z,649nm,0.3s						
BLLM	Bellamira	1.01	339	eP	Pn	06 00 40.7	+0.2
PACA	Pacayal	1.07	335	eP	Pn	06 00 41.5	+0.1
ALJI	Alcalda de J	1.08	320	eP	Pn	06 00 41.5	+0.1
ALJI				IAML		06 00 56.7	
	comp=Z,309nm,0.2s						
COEB	Comit de Eme	1.20	327	eP	Pn	06 00 43.5	+0.4
COEB				IAML		06 01 04.5	
	comp=Z,139nm,0.4s						
FAGO	Alcalda de S	1.22	349	eP	Pn	06 00 42.9	-0.4
COEG	Centro de Oper	1.50	319	eP	Pn	06 00 47.3	+0.1
COEG				IAML		06 01 13.4	
	comp=Z,140nm,0.3s						
TGUH	Tegucigalpa,Un	1.66	20	eP	Pn	06 00 48.9	-0.6

*GCG **03** 06:10:03.4±0.5, 13°.50N×93°.17W, h11^{km}, MD4.1*

*MEX **03** 06:10:06.6±0.7, 14°.12N×93°.28W, h5^{km}±19^{km}, MD4.7*

*NEIC **03** 06:10:08.8±2.2, 14°.32N±0°.06×93°.02W±0°.05, h22^{km}±4^{km}, mb4.6/121, Md4.7/16(MEX), Error ellipse: s-maj=9.8km s-min=5.4km az=212.0*

*IDC **03** 06:10:09.4±5.2, 14°.22N×92°.95W, h33^{km}±36^{km}, mb3.9/11, mb1 4.2/15, mb1mx4.0/45, mbtmp4.2/15, ML4.1/4, MS3.9/16, Ms1 3.9/16, ms1mx3.7/39, Error ellipse: s-maj=36.3km s-min=15.0km az=36.0*

*GCMT **03** 06:10:11.9±0.5, 14°.36N±0°.04×93°.28W±0°.04, h16^{km}±2^{km}, MW4.8/67, Moment Tensor Solution. s13,c16; s67,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.54±.16; $M_{\theta\theta}$-0.94±.10; $M_{\phi\phi}$-0.59±.09; $M_{r\theta}$1.04±.24; $M_{\theta\phi}$0.38±.05; $M_{\phi r}$-1.66±.36; Best double couple: $M_0$2.37300×10^{16} NP1:ϕ_s299.00000°, δ19.00000°, λ67.00000°. NP2: ϕ_s143.00000°, δ73.00000°, λ97.00000°. Principal axes: T 2.6040, Plg61.0000°, Azm64.0000°; N -0.4620, Plg7.0000°, Azm321.0000°; P -2.1420, Plg28.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 06:10:06.4±1.3, **14°.20N**±0°.05×**93°.16W**±0°.04, **h13**^{km}±8^{km}, **n189, σ1^{s}55**/195, **mb4.5**/52, **MS3.7**/14, **2C, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.12	51		Pb	06 10 26.8	-0.8
THIG					Sn	06 10 42.5	-0.6
THIG		1.12	51	eP	Pb	06 10 26.8	-0.8
THIG				eS	Sn	06 10 42.5	-0.6
PCIG		1.50	358		Pn	06 10 31.7	-1.3
PCIG					Sb	06 10 50.9	-2.1
PCIG		1.50	358	eP	Pn	06 10 31.7	-1.3
PCIG				eS	Sb	06 10 50.9	-2.1
ERG	Entre ros, C	1.56	81	eP	Pn	06 10 34.2	+0.3
STG3	Santiaguito 3,	1.62	72	⇑eP	Pn	06 10 34.4	-0.6
FUG	Fuego 3	2.26	83	eP	Pn	06 10 43.5	-0.2
FUG				eS	Sb	06 11 13.3	-1.9
CCIG	Comitan	2.29	25		Pn	06 10 44.7	+0.5
CCIG				Sn	Sn	06 11 09.3	-3.1
CCIG	Comitan	2.29	25		Pn	06 10 44.2	0.0
CCIG					Sn	06 11 12.4	0.0
CCIG	Comitan	2.29	25	i P	Pn	06 10 44.2	0.0
CCIG				i S	Sn	06 11 12.4	0.0
TGIG		2.56	1		Pn	06 10 47.3	-0.5
TGIG					Sn	06 11 18.8	-0.1
TGIG		2.56	1	eP	Pn	06 10 47.3	-0.5
TGIG				i S	Sn	06 11 18.8	-0.1
IXG	Ixpaco	2.64	90	eP	Pn	06 10 47.7	-1.2
APG	El Apazote	2.73	73	Pn	Pn	06 10 50.4	+0.1
	20nm,0.3s,baz=181,slow=13,SNR=96						
APG				Lg	Lg	06 11 31.8	
	81nm,0.3s,baz=170,slow=13,SNR=8.0						
NBG	Las Nubes	2.75	82	eP	Pn	06 10 51.9	+1.3
HUIG	Huatulco	3.25	299		Pn	06 10 54.4	-2.7
HUIG					Sn	06 11 31.6	-4.1
HUIG	Huatulco	3.25	299	eP	Pn	06 10 54.4	-2.7
HUIG				i S	Sn	06 11 31.6	-4.1
CMIG	Matias Romero	3.32	330	Pn	Pn	06 10 58.2	0.0
	17nm,0.3s,baz=159,slow=12,SNR=261						
MRL	Marmol	3.48	75	eP	Pn	06 11 01.8	+1.3
SNET	Serv Nac Est T	3.85	97		Pn	06 11 05.0	-0.5
SNET				Sn	Sn	06 11 45.4	-5.3
CSGN	Cosiguina Volc	5.58	102	Pn	Pn	06 11 29.0	-0.3
TGUH	Tegucigalpa,Un	5.71	91		Pn	06 11 32.4	+1.3
TLIG	Tlapa	6.18	303		Pn	06 11 40.5	+2.8
TEIG	Tepich	7.59	37	Pn	Pn	06 11 56.8	-0.1
	14nm,0.3s,baz=179,slow=5.7,SNR=86						
TEIG				LR	LR	06 15 15.8	
	comp=Z,2µm,21.3s,baz=319,slow=41						
TEIG	Tepich	7.59	37	eP	Pn	06 11 57.3	+0.5
TEIG	Tepich	7.59	37		Pn	06 11 56.5	-0.4
ACON	Acoyapa	8.09	105	Pn	Pn	06 12 03.2	-0.6
ESPN	Las Esperanzas	8.86	102		Pn	06 12 14.4	+0.1
MOIG	Morelia	9.41	306		Pn	06 12 26.0	+3.9
HKT	Hockley	15.87	351		P	06 13 52.9	-0.4
HKT				IAmb	IAmb	06 13 54.5	

	comp=Z,97nm,1.8s						
061Z	Ochoppi	16.33	43	Pn	Pn	06 13 54.1	-1.4
HPIG		17.23	319		P	06 14 10.3	+1.6
553A	Crawfordville	17.83	25		Pn	06 14 13.1	-1.3
553A				IAmb	IAmb	06 14 41.2	
	comp=Z,61nm,1.1s						
TX31	Lajitas Ar. Si	17.93	329	P	P	06 14 17.9	+1.7
TX32	Lajitas Array	17.93	329	P	P	06 14 17.9	+1.7
TXAR	Lajitas Array	17.93	329	P	P	06 14 19.1	+2.9
	comp=Z,0.1nm,0.3s,baz=159,slow=11,SNR=19						
TXAR				LR	LR	06 22 27.0	
	comp=Z,112nm,19.4s,baz=0.0,slow=41						
352A	Blakely	18.78	22	P	P	06 14 23.7	-1.8
352A				IAmb	IAmb	06 14 31.6	
	comp=Z,66nm,1.1s						
250A	Grady	18.79	18	P	P	06 14 25.1	-0.5
250A				IAmb	IAmb	06 14 33.6	
	comp=Z,68nm,1.5s						
CBOC	Ciudad Bolivar	18.80	114	*e*P	Pn	06 14 27.2	+0.7
Z41A	Richland Creek	18.98	1	P	Pn	06 14 28.5	+0.2
Z41A				IAmb	IAmb	06 14 32.1	
	comp=Z,83nm,1.7s						
HELC	Santa Helena	19.08	113	*e*P	P	06 14 29.9	+0.6
ABTX	Abilene, Hawle	19.27	343	P	Pn	06 14 32.2	+0.3
YOTC	Yotoco, Valle	19.44	120	*e*P	Pn	06 14 39.2	+5.0
SMLC	San Martn de	19.45	104⇑	*e*P	Pn	06 14 36.0	+1.8
GUY2C	Guyana, Caldas	19.66	115	*e*P	Pn	06 14 38.1	+0.9
PTBC	PUERTO BERRIO,	19.90	111	*e*P	P	06 14 37.6	-0.3
X40A	Basin Creek Fa	20.20	1	P	Pn	06 14 43.1	+0.2
MIAR	Mount Ida	20.26	359		P	06 14 39.3	-2.3
MIAR				IAmb	IAmb	06 14 49.5	
	comp=Z,46nm,1.3s						
OCAC	Ocana	20.34	105	*e*P	P	06 14 44.5	+1.7
ORTC	Ortega, Tolima	20.41	118	*e*P	P	06 14 45.3	+1.7
154A	Montrose	20.50	25	P	P	06 14 42.8	-1.4
UALR	University of	20.50	2	P	P	06 14 43.9	-0.4
OXF	Oxford	20.50	9	P	P	06 14 44.3	0.0
OXF				IAmb	IAmb	06 15 25.1	
	comp=Z,32nm,1.1s						
MNTX	Cornudas Mount	20.70	329	P	P	06 14 48.6	+2.1
X34A	Smith Ranch, M	20.75	349	P	P	06 14 46.9	-0.1
X34A				IAmb	IAmb	06 14 59.7	
	comp=Z,39nm,1.3s						
ROSC	El Rosal	20.76	115	*e*P	Pn	06 14 50.1	0.0
ROSC	El Rosal	20.76	115	P	P	06 14 49.0	+1.3
W41B	Gary Mavity, V	20.90	2	P	P	06 14 48.8	+0.3
W41B				IAmb	IAmb	06 15 21.3	
	comp=Z,46nm,1.7s						
X48A	Hartselle	20.91	14	P	P	06 14 49.9	+1.2
W39A	Magazine	20.91	359	P	Pn	06 14 50.5	-0.7
BARC	Barichara	21.04	109	*e*P	P	06 14 52.2	+1.6
GOGA	Godfrey	21.06	23	P	P	06 14 49.5	-0.8
GOGA				IAmb	IAmb	06 14 57.8	
	comp=Z,27nm,1.1s						
WMOK	Wichita Mounta	21.07	347	P	P	06 14 51.4	+0.9
W35A	Tecumseh	21.13	352	P	P	06 14 51.2	+0.1
W45A	Hickory Valley	21.17	9	P	P	06 14 51.1	-0.5
W45A				IAmb	IAmb	06 15 00.1	
	comp=Z,36nm,1.0s						
PAMC	Pamplona, Colo	21.21	107	*e*P	P	06 14 52.7	0.0
Y52A	Lilburn	21.25	21	P	P	06 14 51.7	-0.7
Y52A				IAmb	IAmb	06 14 57.8	
	comp=Z,25nm,1.1s						
FNO	Franklin	21.31	350	P	P	06 14 55.0	+2.0
FLOC	Florencia	21.37	124	*e*P	P	06 14 55.3	+1.4
FLOC				*e*P	pP	06 14 56.0	-0.8
FLOC	Florencia	21.37	124	P	P	06 14 52.5	-1.4
FPAL	Fort Paine	21.37	17	P	P	06 14 51.9	-1.8
FPAL				IAmb	IAmb	06 15 02.4	
	comp=Z,32nm,1.3s						
CHIC	Chingaza	21.38	115	*e*P	P	06 14 54.8	+0.5
RUSC	La Rusia	21.41	111	*e*P	P	06 14 54.9	+0.1
RUSC	La Rusia	21.41	111	P	P	06 14 54.0	-0.8
MSTX	Muleshoe	21.52	338	P	P	06 14 55.9	+0.4
MSTX				IAmb	IAmb	06 15 26.1	
	comp=Z,28nm,1.4s						
TUL1	Leonard	21.75	354	P	P	06 14 58.0	+0.3
TUL1				IAmb	IAmb	06 15 52.9	
	comp=Z,57nm,1.8s						
LCAR	Lake Charles	21.85	4	P	P	06 14 58.5	-0.4
LCAR				IAmb	IAmb	06 15 31.7	
	comp=Z,52nm,2.0s						
Z56A	Williston	21.85	27	P	P	06 14 57.6	-1.2
Z56A				IAmb	IAmb	06 14 59.7	
	comp=Z,41nm,1.1s						
AMTX	Amarillo	21.98	341	P	P	06 15 01.0	+0.7
AMTX				IAmb	IAmb	06 15 07.4	
	comp=Z,36nm,1.1s						
HHAR	Hobbs	22.00	358	P	P	06 15 00.6	+0.1
HHAR				IAmb	IAmb	06 15 34.2	
	comp=Z,30nm,1.6s						
U40A	Yellville	22.07	1	P	P	06 15 01.1	0.0
HSIG		22.11	315	P	P	06 15 05.0	+3.3
U38A	Gravette	22.17	357	P	P	06 15 02.9	+0.6
TAMC	Tame, Arauca	22.38	108	*e*P	P	06 15 05.6	+0.9
319A	Douglas	22.60	322	P	P	06 15 07.1	+0.1
319A				IAmb	IAmb	06 15 20.2	
	comp=Z,26nm,1.4s						
121A	Cookes Peak, D	22.61	326	P	P	06 15 09.6	+2.4
121A				IAmb	IAmb	06 15 18.0	
	comp=Z,33nm,1.3s						
PBMO	Poplar Bluff	22.62	6	P	P	06 15 05.1	-2.0
BG3	Lake Jocassee	22.67	22	P	P	06 15 06.7	-0.9
SDV	Santo Domingo	22.69	101	P	P	06 15 05.3	-2.9
	comp=Z,9.1nm,0.8s,baz=309,slow=6.8,SNR=11						
SDV				LR	LR	06 25 47.8	
	comp=Z,236nm,18.8s,baz=275,slow=42						
SDV	Santo Domingo	22.69	101	*e*P	P	06 15 04.9	-3.3
SDV	Santo Domingo	22.69	101	P	P	06 15 06.7	-1.5
T35A	Sooner Cattle	22.82	353	P	P	06 15 07.9	-1.3
T35A				IAmb	IAmb	06 15 54.3	
	comp=Z,26nm,1.5s						
Y57A	Sumter	22.87	28	P	P	06 15 08.1	-1.6
Y57A				IAmb	IAmb	06 15 09.2	
	comp=Z,31nm,1.1s						
MGMO	Mountain Grove	22.87	2	P	P	06 15 10.3	+0.5
MGMO				IAmb	IAmb	06 15 40.2	
	comp=Z,50nm,1.9s						
TKL	Tuckaleechee C	22.97	20	P	P	06 15 09.1	-1.7
	comp=Z,2.6nm,0.8s,baz=208,slow=16,SNR=2.8						
TKL				LR	LR	06 25 57.8	
	comp=Z,293nm,18.0s,baz=206,slow=41						
TKL	Tuckaleechee C	22.97	20	P	P	06 15 08.7	-2.1
TKL				IAmb	IAmb	06 15 39.3	
	comp=Z,15nm,1.1s						
U49A	Red Boiling Sp	23.18	15	P	P	06 15 11.5	-1.4
V53A	Saluda	23.31	22	P	P	06 15 12.6	-1.7
T47A	Sharon Grove	23.33	12	P	P	06 15 14.7	+0.3
S39A	Bolivar	23.40	360	P	P	06 15 14.2	-0.9
S39A				IAmb	IAmb	06 15 16.1	
	comp=Z,18nm,1.1s						
KMSC	Kings Mountain	23.42	25	P	P	06 15 14.4	-1.0
KMSC				IAmb	IAmb	06 16 10.5	
	comp=Z,52nm,1.9s						
CCM	Cathedral Cave	23.82	4	P	P	06 15 17.7	-1.5
CCM				IAmb	IAmb	06 15 19.6	
	comp=Z,19nm,1.4s						
TZTN	Tazewell	23.86	19	P	P	06 15 18.9	-0.7
TZTN				IAmb	IAmb	06 15 52.7	
	comp=Z,34nm,1.4s						
ANMO	Albuquerque	23.89	332	P	P	06 15 21.4	+1.3
	comp=Z,1.8nm,0.9s,baz=150,slow=7.8,SNR=6.0						
ANMO	Albuquerque	23.89	332	P	P	06 15 20.0	-0.1
TUC	Tucson	24.16	321	P	P	06 15 23.1	+0.4
TUC				IAmb	IAmb	06 15 26.7	
	comp=Z,20nm,1.4s						
U54A	Nelsons Funny	24.43	23	P	P	06 15 22.1	-2.9
T25A	Trinidad	24.95	338	P	P	06 15 32.9	+3.1
CBKS	Cedar Bluff	25.20	348	P	P	06 15 31.6	-0.2
CBKS				IAmb	IAmb	06 15 34.4	
	comp=Z,24nm,1.2s						
214A	Organ Pipe Nat	25.20	318	P	P	06 15 33.8	+1.8
X18A	Snowflake	25.30	326	P	P	06 15 33.0	0.0
X18A				IAmb	IAmb	06 15 39.1	
	comp=Z,18nm,1.6s						
W18A	Petrified Fore	25.63	327	P	P	06 15 35.2	-0.8
W18A				IAmb	IAmb	06 15 39.6	
	comp=Z,19nm,1.7s						
ATAH	Atahualpa	25.77	144	LR	LR	06 23 46.2	
	comp=Z,180nm,18.1s,baz=345,slow=32						
SDCO	Great Sand Dun	25.89	337	P	P	06 15 39.8	+1.3
SDCO				IAmb	IAmb	06 15 42.2	
	comp=Z,18nm,1.4s						
X16A	Lo Mia Camp, P	26.04	324	P	P	06 15 41.7	+1.9
SJG	San Juan	26.22	78	LR	LR	06 25 33.8	
	comp=Z,177nm,21.8s,baz=289,slow=36						
S22A	4UR Ranch, Cre	26.41	335	P	P	06 15 42.4	-0.8
S22A				IAmb	IAmb	06 15 49.5	
	comp=Z,18nm,1.4s						
T59A	Double "B" Far	26.61	29	P	P	06 15 43.7	-1.0
T59A				IAmb	IAmb	06 15 48.3	
	comp=Z,31nm,1.6s						
Y14A	Wickenburg	26.63	321	P	P	06 15 45.3	+0.3
MVCO	Mesa Verde	26.68	332	P	P	06 15 46.6	+1.0
WUAZ	Wupatki	26.81	326	P	P	06 15 48.7	+2.1
WUAZ				IAmb	IAmb	06 15 53.4	
	comp=Z,22nm,1.8s						
SMCO	Snowmass	27.70	336	P	P	06 15 56.2	+1.3
ISCO	Idaho Springs	27.75	339	P	P	06 15 56.1	+0.9
L40A	Anamosa	27.81	3	P	P	06 15 54.0	-1.4
L40A				IAmb	IAmb	06 15 55.0	
	comp=Z,16nm,1.3s						
W13A	Hualapai Mount	27.95	322	P	P	06 15 58.7	+1.7
U15A	North Rim	27.98	326	P	P	06 15 59.3	+2.0
PFO	Pinyon Flats O	28.64	316	LR	LR	06 27 19.0	
	comp=Z,199nm,20.6s,baz=128,slow=36						
KNB	Kanab	28.70	326	P	P	06 16 04.0	+0.4
O20A	White River Ci	29.02	336	P	P	06 16 06.9	+0.5
SZCU	Shurtz Canyon	29.27	326	P	P	06 16 11.1	+2.4
Q16A	Castle Valley	29.31	330	P	P	06 16 09.1	+0.1
CCUT	Cedar City	29.39	326	P	P	06 16 09.7	-0.1
P17A	Butcher Ranch,	29.55	332	P	P	06 16 12.1	+1.0
SHPR	Sheep Range	29.67	322	P	P	06 16 13.7	+1.5
SHPR				IAmb	IAmb	06 16 23.7	
	comp=Z,13nm,1.7s						
MPU	Maple Canyon	30.39	331	P	P	06 16 19.8	+1.2
K22A	Casper	30.61	340	P	P	06 16 20.0	-0.4
K22A				IAmb	IAmb	06 16 22.5	
	comp=Z,12nm,1.4s						
NNA	Nana	30.64	147	LR	LR	06 26 03.4	
	comp=Z,129nm,21.6s,baz=336,slow=31						
TCUT	Toone Canyon	31.17	333	P	P	06 16 26.2	+0.6
PDAR	Pinedale Array	31.78	337	P	P	06 16 31.6	+0.7
	comp=Z,0.5nm,0.5s,baz=146,slow=8.8,SNR=6.1						
PDAR				LR	LR	06 31 14.3	
	comp=Z,138nm,18.1s,baz=156,slow=40						
AHID	Auburn Hatcher	32.39	335	P	P	06 16 36.7	+0.5
ELK	Elko	32.72	328	P	P	06 16 39.6	+0.5
NV11	Mina Array Sit	32.73	322	P	P	06 16 40.4	+1.2
REDW	Red Top Meadow	32.79	336	P	P	06 16 41.3	+1.6
NVAR	Mina Array Bea	32.81	322	P	P	06 16 42.7	+2.7
	comp=Z,2.2nm,0.7s,baz=132,slow=8.3,SNR=19						
SNOW	Snow King Moun	32.84	336	P	P	06 16 41.8	+1.7
FXWY	Fox Creek	33.09	336	P	P	06 16 43.4	+1.0
FXWY				IAmb	IAmb	06 16 53.4	
	comp=Z,7.2nm,1.2s						
KVN	Kaiserville	33.10	323	P	P	06 16 44.7	+2.3
KVN				IAmb	IAmb	06 16 45.3	
	comp=Z,16nm,1.7s						
IMW	Indian Meadow	33.27	336	P	P	06 16 45.2	+1.2
FLWY	Flagg Ranch	33.34	337	P	P	06 16 46.0	+1.6
FLWY				IAmb	IAmb	06 16 55.6	
	comp=Z,8.9nm,1.1s						
H17A	Grant Village	33.56	337	P	P	06 16 49.3	+2.9
H17A				IAmb	IAmb	06 16 51.5	
	comp=Z,9.4nm,1.3s						
RLMT	Red Lodge	33.71	339	P	P	06 16 46.3	-1.4
RLMT				IAmb	IAmb	06 16 50.0	
	comp=Z,10nm,1.2s						
YNE	Yellowstone No	33.87	338	P	P	06 16 49.8	+0.6
YMR	Madison River	33.94	337	P	P	06 16 51.4	+1.7
MDND	Maddock	33.97	352	P	P	06 16 48.6	-1.1
YHL	Hebgen Lake	34.17	337	P	P	06 16 53.7	+1.9
GCMT	Greycliff	34.43	339	P	P	06 16 53.8	0.0
MCMT	McKenzie Canyo	34.81	335	P	P	06 16 57.8	+0.6
DLMT	Dillon	35.15	336	P	P	06 17 01.4	+1.4
ULM	Lac du Bonnet	36.02	357	P	P	06 17 05.3	-1.9
	comp=Z,0.9nm,0.4s,baz=166,slow=8.8,SNR=5.5						
ULM				LR	LR	06 33 49.9	
	comp=Z,178nm,20.7s,baz=162,slow=39						
PTGA	Pitinga	36.06	112	P	P	06 17 07.7	-0.4
PTGA				IAmb	IAmb	06 17 08.8	
	comp=Z,11nm,1.1s						
J08A	Circle Bar Ran	36.27	328	P	P	06 17 11.3	+1.6
EGMT	Eagleton	36.43	341	P	P	06 17 11.5	+0.5
MSO	Missoula	36.89	336	P	P	06 17 16.1	+1.2
F10A	Beach Ranch, E	37.60	332	P	P	06 17 21.8	+0.8
F10A				IAmb	IAmb	06 17 24.3	
	comp=Z,11nm,1.1s						
JTMT	Jette	37.77	337	P	P	06 17 23.3	+0.8
JTMT				IAmb	IAmb	06 17 27.6	
	comp=Z,12nm,1.3s						
LPAZ	La Paz	39.11	140	LR	LR	06 33 42.2	
	comp=Z,88nm,18.3s,baz=338,slow=36						
LLLB	Lillooet	43.13	333	P	P	06 18 05.6	-1.0
LLLB				IAmb	IAmb	06 18 11.7	
	comp=Z,13nm,1.4s						
SIV	San Ignacio	43.65	132	P	P	06 18 10.2	-1.1
	comp=Z,1.6nm,0.6s,baz=311,slow=9.4,SNR=7.0						
SCHQ	Schefferville	45.43	21	LR	LR	06 38 34.6	
	comp=Z,431nm,18.5s,baz=179,slow=38						
YKA	Yellowknife Ar	50.58	347	P	P	06 19 04.4	-0.2
	comp=Z,3.9nm,0.6s,baz=151,slow=7.4,SNR=64						
GLB	Gilahina Butte	59.38	334	P	P	06 20 09.7	+1.3
INK	Inuvik	59.93	344	P	P	06 20 12.4	+0.4
EGAK	Eagle	60.11	338	P	P	06 20 11.1	-2.2
EGAK				IAmb	IAmb	06 20 14.5	
	comp=Z,8.7nm,1.4s						
RES	Resolute Bay	60.49	359	P	P	06 20 15.3	-0.4
RES				IAmb	IAmb	06 20 23.4	
	comp=Z,4.2nm,1.1s						
SCRK	Sand Creek	60.72	337	P	P	06 20 19.5	+1.9
GHO	Glory Hole Cre	61.71	333	P	P	06 20 24.4	+0.1
RC01	Rabbit Creek A	61.79	333	P	P	06 20 24.3	-0.5
PRP	Porcupine Dome	62.07	338	P	P	06 20 27.6	+0.8
IL31		62.21	337	P	P	06 20 27.2	-0.3
ILAR	Eielson Array	62.21	337	P	P	06 20 27.8	+0.2
	comp=Z,4.2nm,1.1s,baz=129,slow=4.5,SNR=15						
ILAR				LR	LR	06 51 30.6	
	comp=Z,118nm,18.1s,baz=122,slow=40						
RND	Reindeer	62.37	335	P	P	06 20 29.0	+0.3
RSO	Redoubt South	62.94	331	P	P	06 20 33.3	+0.6
TRF	Thorofare Moun	62.98	335	P	P	06 20 33.4	+0.5
MLY	Manley	63.80	336	P	P	06 20 38.3	+0.1
NOA	NORSAR Array B	84.50	28	P	P	06 22 38.1	-1.0
	comp=Z,1.9nm,1.0s,baz=285,slow=5.0,SNR=3.0						
NOA				LR	LR	06 58 12.0	
	comp=Z,144nm,21.3s,baz=280,slow=34						
FINES	FINESS Array B	90.79	25	P	P	06 23 07.7	-1.5
	comp=Z,2.0nm,1.0s,baz=270,slow=0.4,SNR=4.7						
FINES				LR	LR	07 02 59.4	
	comp=Z,235nm,20.3s,baz=263,slow=35						
TORD	Torodi Ar. Bea	91.42	76	LR	LR	07 01 37.4	
	comp=Z,56nm,20.3s,baz=325,slow=34						
KSH	Kashi	125.61	10	PKP	PKPdf	06 29 09.5	+1.3
KSH				sPKP		06 29 23.4	
KSH				PP	PP	06 31 03.6	+5.3
KSH				PKS	PKSdf	06 32 45.9	+0.9
CMAR	Chiang Mai Arr	145.42	339	PKPbc	PKPbc	06 29 44.5	-0.5
	comp=Z,0.9nm,0.3s,baz=353,slow=5.0,SNR=16						

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*IDC **03** 06:27:15.2±2.8, 14°.62N×93°.01W, h0^{km}, mb3.7/3, mb1 4.0/6, mb1mx3.6/37, mbtmp3.8/6, ML3.5/3, MS3.6/1, Ms1 3.6/1, ms1mx2.6/34, Error ellipse: s-maj=60.0km s-min=25.7km az=18.0*

*GCG **03** 06:27:16.5±0.3, 15°.54N×92°.73W, h50^{km}, MD4.1*

*MEX **03** 06:27:18.2±0.8, 14°.47N×93°.09W, h4^{km}±22^{km}, MD3.9*

*NEIC **03** 06:27:18.8±1.6, 14°.55N±0°.04×93°.06W±0°.04, h22^{km}±9^{km}, Md4.0/18(MEX), Error ellipse: s-maj=7.4km s-min=2.9km az=215.0*

ISC 03 06:27:17.0±2.1, **14°.41N**±0°.07×**93°.07W**±0°.06, **h24**^{km}±14^{km}, **n28, σ1^{s}.39**/39, **mb4.0**/3, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.92	57		Pb	06 27 33.7	-0.7
THIG					Sb	06 27 45.4	-0.8
THIG		0.92	57	*e*P	Pb	06 27 33.7	-0.7
THIG				*e*S	Sb	06 27 45.4	-0.8
PCIG		1.30	354		Pn	06 27 38.4	-1.3
PCIG					Sn	06 27 54.1	-2.2
PCIG		1.30	354	*e*P	Pn	06 27 38.4	-1.3
PCIG				*e*S	Sn	06 27 54.1	-2.2
ERG	Entre ros, C	1.45	89	*e*P	Pn	06 27 42.0	+0.2
STG3	Santiaguito 3,	1.48	78	*e*P	Pn	06 27 41.6	-0.8
CCIG	Comitan	2.07	26		Pn	06 27 51.1	+0.7
CCIG					Sb	06 28 24.5	+5.1
CCIG	Comitan	2.07	26		Pn	06 27 50.2	-0.3
CCIG					Sn	06 28 14.9	-0.7
CCIG	Comitan	2.07	26	*e*P	Pn	06 27 50.2	-0.3
CCIG				*i* S	Sn	06 28 14.9	-0.7
FUG	Fuego 3	2.16	89	*e*P	Pn	06 27 50.3	-1.4
FUG				*e*S	Sn	06 28 16.6	-1.2
TGIG		2.36	359		Pn	06 27 54.4	+0.1
TGIG					Sn	06 28 21.9	-0.7
TGIG		2.36	359	*e*P	Pn	06 27 54.4	+0.1
TGIG				*i* S	Sn	06 28 21.9	-0.7
IXG	Ixpaco	2.56	95	*e*P	Pn	06 27 55.3	-1.9
APG	El Apazote	2.59	76	Pn	Pn	06 27 57.4	-0.2
	2.7nm,0.3s,baz=296,slow=13,SNR=43						
CMIG	Matias Romero	3.19	327	Pn	Pn	06 28 05.1	-0.7
	5.9nm,0.3s,baz=162,slow=13,SNR=55						
CMIG				Sn	Sn	06 28 43.4	+0.4
	8.0nm,0.3s,baz=100,slow=17,SNR=6.3						
CMIG	Matias Romero	3.19	327		Pn	06 28 05.0	-0.8
CMIG					Sn	06 28 42.2	-0.9
CMIG	Matias Romero	3.19	327	*e*P	Pn	06 28 05.0	-0.8
CMIG				*i* S	Sn	06 28 42.2	-0.9
SNET	Serv Nac Est T	3.79	100		Pn	06 28 16.6	+2.5
TEIG	Tepich	7.38	38	Pn	Pn	06 29 02.9	-0.3
	2.7nm,0.3s,baz=233,slow=20,SNR=34						
TEIG	Tepich	7.38	38		Pn	06 29 03.8	+0.6
SMLC	San Martn de	19.42	105	*e*P	P	06 31 41.0	-0.8
OCAC	Ocana	20.30	105	*e*S	P	06 31 52.1	+0.5
PAMC	Pamplona, Colo	21.19	107	*e*S	P	06 31 53.1	-8.5
NVAR	Mina Array Bea	32.71	322	P	P	06 33 49.9	+1.9
	0.2nm,0.6s,baz=138,slow=7.3,SNR=4.0						
YKA	Yellowknife Ar	50.40	347	P	P	06 36 11.5	-0.6
	1.2nm,0.6s,baz=150,slow=7.5,SNR=26						
CPUP	Villa Florida	53.36	139	LR	LR	06 58 19.1	
	comp=Z,56nm,18.6s,baz=36,slow=35						
INK	Inuvik	59.76	344	P	P	06 37 19.2	-0.5
	0.8nm,0.7s,baz=144,slow=3.9,SNR=4.4						
CMAR	Chiang Mai Arr	145.26	340	PKPbc	PKPdf	06 46 55.0	+1.2
	1.0nm,0.3s,baz=22,slow=5.0,SNR=4.9						

UPA 03 06:29:11.4±1.0, **7°.31N**×**81°.13W**, **h14**^{km}±4^{km}, **MD2.6, MW3.8, 1C, Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CACAO	El Cacao, Vera	0.27	83⇑	*i*P	Pb	06 29 17.9	-0.1
CACAO				*i* S	Sg	06 29 21.7	+0.8
GMAL	Guarumal, Vera	0.46	347	*i* P	Pb	06 29 21.1	-0.2
GMAL				*i* S	Sb	06 29 29.4	+1.3
PONU3	Ponuga, Veragu	0.59	15	*e*P	Pb	06 29 23.4	-0.2
RSUS3	Rio de Jesus,	0.67	357	*e*P	Pb	06 29 24.8	-0.1
TOSI3	Tonosi	0.69	82	*e*P	Pg	06 29 22.9	-1.9
STIA3	Santiago, Vera	0.80	11	*e*P	Pg	06 29 26.2	-0.8
AZU	Azuero	0.97	61	*e*P	Pb	06 29 29.9	-0.2
AZU				*i* S	Sb	06 29 42.5	-0.4

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*MEX **03** 06:38:26.0±0.9, 14°.17N×93°.07W, h40^{km}±43^{km}, MD4.0*

*NEIC **03** 06:38:26.9±2.0, 14°.29N±0°.10×93°.02W±0°.05, h36^{km}±56^{km}, Error ellipse: s-maj=14.2km s-min=7.5km az=191.0*

*GCG **03** 06:38:33.4±0.3, 14°.11N×92°.31W, h15^{km}, MD4.0*

ISC 03 06:38:22.6±2.5, **14°.25N**±0°.09×**93°.05W**±0°.06, **h6**^{km}±12^{km}, **n16, σ1^{s}.65**/25, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.01	49		Pg	06 38 43.1	+1.1
THIG					Sg	06 38 55.1	+0.1
THIG		1.01	49	*e*P	Pg	06 38 43.1	+1.1
THIG				*e*S	Sg	06 38 55.1	+0.1
PCIG		1.46	354		Pn	06 38 48.7	-0.8
PCIG					Sg	06 39 07.2	-2.4
PCIG		1.46	354	*e*P	Pn	06 38 48.7	-0.8
PCIG				*i* S	Sg	06 39 07.2	-2.4
STG3	Santiaguito 3,	1.51	72	*e*P	Pn	06 38 50.9	+0.5
STG3				*e*S	Sg	06 39 07.7	-3.5
FUG	Fuego 3	2.15	84	*e*P	Pn	06 38 59.5	+0.3
CCIG	Comitan	2.21	23		Pn	06 39 02.5	+2.5
CCIG	Comitan	2.21	23		Pn	06 39 02.7	+2.7
CCIG					Sn	06 39 26.0	-1.7
CCIG	Comitan	2.21	23	*e*P	Pn	06 39 02.7	+2.7
CCIG				*i* S	Sn	06 39 26.0	-1.7
TGIG		2.52	358		Pn	06 39 04.3	+0.2
TGIG					Sn	06 39 34.8	-0.4
TGIG		2.52	358	*e*P	Pn	06 39 04.3	+0.2
TGIG				*i* S	Sn	06 39 34.8	-0.4
IXG	Ixpaco	2.53	91	*e*P	Pn	06 39 04.3	-0.1
CMIG	Matias Romero	3.33	328		Pn	06 39 16.1	+0.8
CMIG					Sn	06 39 54.8	-0.4
CMIG	Matias Romero	3.33	328	*e*P	Pn	06 39 16.1	+0.8
CMIG				*i* S	Sn	06 39 54.8	-0.4
TGUH	Tegucigalpa,Un	5.61	91	Pn	Pn	06 39 48.0	+1.3
TEIG	Tepich	7.49	37	Pn	Pn	06 40 13.4	+0.9

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*IDC **03** 06:46:30.6±1.1, 54°.36N×164°.45E, h0^{km}, mb3.7/7, mb1 3.9/8, mb1mx3.6/49, mbtmp3.7/8, ML2.8/1, MS2.7/1, Ms1 2.7/1, ms1mx2.4/34, Error ellipse: s-maj=44.9km s-min=19.3km az=152.0*

*KRSC **03** 06:46:30.7±1.5, 54°.37N×164°.15E, h49^{km}±35^{km}, ML4.0*

*NEIC **03** 06:46:34.0±1.6, 54°.4N±0°.2×164°.3E±0°.2, h28^{km}±5^{km}, mb4.4/21, Error ellipse: s-maj=29.5km s-min=13.2km az=161.0*

ISC 03 06:46:31.0±3.7, **54°.40N**±0°.04×**164°.30E**±0°.06, **h11**^{km}±24^{km}, **n74, σ1^{s}.88**/107, **mb4.2**/16, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	1.26	49	P	Pb	06 46 53.8	-1.0
BKI				S	Sb	06 47 08.8	-2.2
KBTR	Krutoberegovo	2.00	336	P	Pn	06 47 02.7	-2.1
KBTR				S	Sn	06 47 25.8	-4.0
KBG	Krutoberegovo	2.07	335	P	Pn	06 47 03.8	-1.9
KBG				S	Sn	06 47 28.4	-3.1
TUMD	Tumrok D	2.40	291	P	Pn	06 47 09.9	-0.4
TUMD				S	Sn	06 47 37.2	-2.4
KZV	Kizimen	2.43	289	P	Pn	06 47 10.7	-0.1
KZV				S	Sn	06 47 38.2	-2.4
TUMR	Tumrok	2.56	292	P	Pn	06 47 13.1	+0.5
TUMR				S	Sn	06 47 43.1	-0.7
ZLN	Zelenaya	2.58	310	P	Pn	06 47 13.2	+0.4
ZLN				S	Sn	06 47 43.9	-0.3
CIRR	Tsirk	2.66	312	P	Pn	06 47 14.6	+0.6
CIRR				S	Sn	06 47 44.6	-1.8
LGNR	Loginova	2.67	311	P	Pn	06 47 14.9	+0.7
LGNR				S	Sn	06 47 46.4	-0.3
BZMR	Bezymyannaya	2.67	307	S	Sn	06 47 45.2	-1.4
KMNR	Kamenistaya	2.70	302	P	Pn	06 47 14.7	+0.2
KMNR				S	Sn	06 47 45.3	-2.0
KIRR	Kirishev	2.75	306	P	Pn	06 47 15.6	+0.3
KIRR				S	Sn	06 47 46.8	-1.8
BDR	Baidarnaya	2.80	322	P	Pn	06 47 16.0	+0.2
BDR				S	Sn	06 47 47.6	-2.0
KRSR	Krestovskiy	2.81	312	P	Pn	06 47 15.7	-0.3
KRSR				S	Sn	06 47 48.4	-1.4
KPT	Kopyto	2.82	306	S	Sn	06 47 49.8	-0.3
KLY	Klyuchi	2.83	314	P	Pn	06 47 14.9	-1.3
KLY				S	Sn	06 47 45.9	-4.4
SPN	Mys Shipunski	2.85	245	P	Pn	06 47 15.5	-1.0
SPN				S	Sn	06 47 46.5	-4.3
KII	Karymskiy	2.87	265	P	Pn	06 47 16.4	-0.4
KII				S	Sn	06 47 47.8	-3.6
SRKR	Sorokina	2.88	323	P	Pn	06 47 16.8	-0.1
KOZ	Kozyrevsk	3.03	305	P	Pn	06 47 19.5	+0.5
KOZ				S	Sn	06 47 53.9	-1.4
NLC	Nalytchevo	3.19	249	P	Pn	06 47 20.4	-0.6
NLC				S	Sn	06 47 55.5	-3.5
SRDR	Sredinnyy	3.25	308	P	Pn	06 47 22.3	+0.3
SRDR				S	Sn	06 48 00.1	-0.5
SDLR	Sedlovina	3.40	253	P	Pn	06 47 23.8	-0.3
SDLR				S	Sn	06 48 01.5	-3.0
SMAR	Somma	3.45	253	P	Pn	06 47 24.7	-0.2
SMAR				S	Sn	06 48 02.3	-3.6
UGLR	Uglovaya	3.46	252	P	Pn	06 47 25.1	+0.2
UGLR				S	Sn	06 48 02.6	-3.3
KRER	Koryakskii	3.47	254	P	Pn	06 47 25.2	+0.1
KRER				S	Sn	06 48 02.8	-3.4
AVH	Avacha	3.49	253	P	Pn	06 47 26.0	+0.7
AVH				S	Sn	06 48 04.8	-1.7

KRX	Arik	3.50	255	P	Pn	06 47 25.7	+0.1
KRX				S	Sn	06 48 03.7	-3.4
KOK	Koryaka	3.53	254	P	Pn	06 47 26.1	+0.2
KOK				S	Sn	06 48 04.6	-3.1
ESO	Esso	3.56	298	P	Pn	06 47 25.7	-0.5
ESO				S	Sn	06 48 04.4	-3.8
DALK	Dalny	3.57	250	P	Pn	06 47 25.7	-0.6
DALK				S	Sn	06 48 04.3	-4.1
PET	Petropavlovsk	3.63	250	Pn	Pn	06 47 26.9	-0.2
PET				Sn	Sn	06 48 08.1	-1.8
RUS	Russkaya	3.98	243	P	Pn	06 47 31.7	-0.3
RUS				S	Sn	06 48 15.2	-3.4
KRMR	Karymshinskiy	4.00	249	P	Pn	06 47 32.3	+0.1
KRMR				S	Sn	06 48 16.2	-2.8
PEA0B	Petropavlovsk-	4.13	254	Pn	Pn	06 47 35.5	+1.5
PETK	Petropavlovsk-	4.13	254	Pn	Pn	06 47 34.8	+0.8
	2.7nm,0.3s,baz=89,slow=21,SNR=46						
PETK				Sn	Sn	06 48 23.1	+0.9
	2.3nm,0.3s,baz=38,slow=32,SNR=5.5						
MTVR	Mutnovka	4.13	245	P	Pn	06 47 34.3	+0.1
MTVR				S	Sn	06 48 19.5	-3.0
GRL	Gorelyy	4.16	246	P	Pn	06 47 35.0	+0.5
GRL				S	Sn	06 48 20.2	-2.9
ASAK	Asacha	4.33	245	P	Pn	06 47 37.7	+0.8
ASAK				S	Sn	06 48 24.9	-2.4
APC	Apacha	4.50	254	P	Pn	06 47 40.5	+1.5
APC				S	Sn	06 48 29.7	-1.6
KDTR	Khodutka, Kamc	4.56	238	P	Pn	06 47 39.4	-0.5
KDTR				S	Sn	06 48 27.5	-5.3
ALID	Alaid	6.39	240	P	Pn	06 48 07.2	+2.0
MA2	Magadan	9.02	311	LR	LR	06 52 34.4	
	comp=Z,46nm,20.4s,baz=136,slow=40						
OHAK	Old Harbor	23.72	66	P	P	06 51 42.6	-0.1
PPLA	Purkeypile	23.74	52	P	P	06 51 43.2	+0.1
KDAK	Kodiak Island	23.98	64	P	P	06 51 45.8	+0.5
	3.9nm,0.7s,baz=295,slow=6.0,SNR=7.5						
KDAK	Kodiak Island	23.98	64	P	P	06 51 45.6	+0.4
KTH	Kantishna Hill	24.33	50	P	P	06 51 49.1	+0.6
KTH				IAmb	IAmb	06 52 00.1	
	comp=Z,22nm,1.8s						
CNPM	China Poot	24.40	60	P	P	06 51 50.5	+1.3
MLY	Manley	24.48	46	P	P	06 51 49.8	0.0
MLY				IAmb	IAmb	06 52 27.4	
	comp=Z,18nm,2.0s						
TRF	Thorofare Moun	24.61	50	P	P	06 51 51.7	+0.6
NEA	Nenana	25.16	48	P	P	06 51 57.8	+1.9
RND	Reindeer	25.25	50	P	P	06 51 57.2	+0.4
SML	Sawmill	25.58	54	P	P	06 52 00.9	+1.1
WRH	Wood River Hil	25.59	48	P	P	06 52 01.3	+1.6
WRH				IAmb	IAmb	06 52 13.2	
	comp=Z,13nm,1.6s						
CCB	Clear Creek Bu	25.71	47	P	P	06 52 02.0	+1.1
CCB				IAmb	IAmb	06 52 18.5	
	comp=Z,16nm,1.8s						
DHY	Denali Highway	25.93	51	P	P	06 52 03.7	+0.6
SCM	Sheep Creek Mo	26.05	54	P	P	06 52 05.0	+0.9
SCM				IAmb	IAmb	06 52 49.8	
	comp=Z,21nm,1.7s						
ILAR	Eielson Array	26.11	47	P	P	06 52 04.6	+0.2
	comp=Z,1.2nm,0.9s,baz=262,slow=8.6,SNR=12						
PRP	Porcupine Dome	26.68	45	P	P	06 52 10.4	+0.5
PRP				IAmb	IAmb	06 53 04.8	
	comp=Z,15nm,2.0s						
EGAK	Eagle	28.56	47	P	P	06 52 24.9	-1.5
HYT	Haines Junctio	30.89	54	P	P	06 52 49.1	+1.8
HYT				IAmb	IAmb	06 53 17.1	
	comp=Z,12nm,1.6s						
INK	Inuvik	31.29	39	P	P	06 52 51.4	+0.9
	comp=Z,0.8nm,0.6s,baz=219,slow=7.9,SNR=4.4						
INK	Inuvik	31.29	39	P	P	06 52 51.3	+0.8
INK				IAmb	IAmb	06 53 54.9	
	comp=Z,14nm,1.9s						
H11N2	WAKE ISLAND Hy	34.66	176	T	T	07 31 15.5	
	baz=358,slow=76,SNR=4.6						
H11N3	WAKE ISLAND Hy	34.68	176	T	T	07 31 11.7	
	baz=358,slow=76,SNR=3.5						
H11N1	WAKE ISLAND Hy	34.68	176	T	T	07 31 03.7	
	baz=358,slow=76,SNR=4.8						
YKA	Yellowknife Ar	40.49	45	P	P	06 54 10.2	+0.8
	comp=Z,0.7nm,0.8s,baz=298,slow=7.6,SNR=6.9						
KURK	Kurchatov	49.14	303	P	P	06 55 19.0	+0.6
KURK				IAmb	IAmb	06 55 27.3	
	comp=Z,3.2nm,1.0s						
MKAR	Makanchi Array	49.81	297	P	P	06 55 26.1	+2.5
	comp=Z,0.4nm,0.4s,baz=50,slow=7.2,SNR=4.8						
YMP	Mirror Lake Pl	53.02	63	P	P	06 55 46.5	-1.6
ABKAR	Akbulak array	58.81	312	P	P	06 56 29.8	+0.8
ABKAR				IAmb	IAmb	06 56 32.1	
	comp=Z,1.9nm,0.9s						
TXAR	Lajitas Array	67.83	70	P	P	06 57 30.9	+1.6
	comp=Z,0.7nm,0.5s,baz=290,slow=4.8,SNR=5.1						
ASAR	Alice Springs	82.03	208	P	P	06 58 52.3	+1.3
	comp=Z,0.2nm,0.6s,baz=18,slow=7.1,SNR=4.0						

*OMAN **03** 06:46:32.3±0.4, 12°.89N×49°.70E, h34^{km}±68^{km}, ms3.1/1, Error ellipse: s-maj=21.5km s-min=7.2km az=247.0*

*IDC **03** 06:46:44.9±0.8, 13°.21N×50°.77E, h0^{km}, mb4.0/14, mb1 4.1/14, mb1mx3.9/45, mbtmp4.0/14, MS3.9/10, Ms1 3.8/10, ms1mx3.5/41, Error ellipse: s-maj=22.0km s-min=18.4km az=147.0*

*NEIC **03** 06:46:46.0±2.9, 13°.18N±0°.07×50°.9E±0°.1, h10^{km}±1^{km}, mb4.1/7, Error ellipse: s-maj=17.1km s-min=12.1km az=268.0*

ISC 03 06:46:46.2±0.6**, 13°.25N**±0°.08×**50°.89E**±0°.10**, h10**^{km}**, n38, σ1^s.61**/30**, mb4.1**/19**, MS3.8**/8**, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCY	Socotra	3.20	109		Pn	06 47 34.1	-2.7
SOCY	Socotra	3.20	109	P	Pn	06 47 34.0	-2.7
	SNR=6.0						
ABTO	Aybut	4.70	29	P	Pn	06 47 54.2	-3.0
RBK	Rabkut	5.30	37	P	Pn	06 48 03.9	-1.7
	SNR=7.2						
WHFO	Wadi Hawf	5.41	31	P	Pn	06 48 03.8	-3.3
	SNR=43						
DMTO	DMTO	5.92	41	P	Pn	06 48 12.3	-1.7
	SNR=15						
ATD	Arta Tunnel	8.04	259	LR	LR	06 51 00.6	
	comp=Z,402nm,18.9s,baz=52,slow=32						
DQM	DQM	9.21	43	P	Pn	06 48 56.7	-2.4
WSAR	Wadi Sarin	12.36	35	LR	LR	06 54 19.1	
	comp=Z,326nm,18.4s,baz=241,slow=36						
EIL	Elat	22.02	320	LR	LR	06 59 35.3	
	comp=Z,138nm,19.5s,baz=108,slow=35						
GEYT	Alibeck	25.41	13	P	P	06 52 16.1	+2.2
	1.7nm,0.4s,baz=212,slow=14,SNR=4.5						
GEYT				LR	LR	07 04 15.4	
	comp=Z,290nm,18.5s,baz=45,slow=41						
KBL	Kabul	26.84	35	P	P	06 52 26.6	-0.5
KBL				IAmb	IAmb	06 52 44.3	
	comp=Z,3.2nm,0.8s						
BRTR	Keskin Array B	30.44	333	LR	LR	07 05 06.5	
	comp=Z,75nm,20.2s,baz=246,slow=36						
KBZ	Khabaz	31.14	349	P	P	06 53 05.9	+0.9
	comp=Z,3.1nm,0.9s,baz=127,slow=3.8,SNR=5.7						
KBZ				LR	LR	07 07 41.8	
	comp=Z,192nm,20.0s,baz=125,slow=40						
KK31	Karatay Array	34.23	26	P	P	06 53 33.5	+1.3
KK31				IAmb	IAmb	06 53 41.2	
	comp=Z,2.6nm,1.1s						
KKAR	Karatay Array	34.23	26	P	P	06 53 33.4	+1.2
KKAR				IAmb	IAmb	06 53 41.2	
	comp=Z,2.6nm,1.1s						
ABKAR	Akbulak array	36.67	10	P	P	06 53 51.8	-1.2
ABKAR				IAmb	IAmb	06 54 00.6	
	comp=Z,4.0nm,0.9s						
AKASG	Malin Array Be	41.31	339	P	P	06 54 30.6	-1.2
	comp=Z,1.9nm,0.8s,baz=147,slow=7.2,SNR=6.8						
AKBB	Malin Array Si	41.31	339	P	P	06 54 30.8	-1.0
MK31	Makanchi Array	42.57	32	P	P	06 54 41.8	-0.5
MKAR	Makanchi Array	42.57	32	P	P	06 54 43.5	+1.2
	comp=Z,0.3nm,0.4s,baz=218,slow=8.3,SNR=3.1						
BRVK	Borovoye	42.62	17	P	P	06 54 41.9	-0.6
BRVK				IAmb	IAmb	06 54 50.1	
	comp=Z,3.2nm,1.1s						
BVAR	Borovoye Array	42.62	17	P	P	06 54 42.4	-0.1
	comp=Z,1.0nm,0.6s,baz=197,slow=8.8,SNR=6.8						
LBTB	Lobatse	45.33	213	P	P	06 55 05.0	+0.3
	comp=Z,4.1nm,0.9s,baz=59,slow=0.6,SNR=4.0						
LBTB	Lobatse	45.33	213	P	P	06 55 04.8	+0.1
CMAR	Chiang Mai Arr	46.41	77	P	P	06 55 15.6	+2.2
	comp=Z,0.9nm,0.5s,baz=265,slow=9.9,SNR=4.0						
TORD	Torodi Ar. Bea	47.83	276	P	P	06 55 23.1	-1.3
	comp=Z,1.6nm,0.7s,baz=89,slow=7.7,SNR=10.0						
BOSA	Boshof	48.44	211	LR	LR	07 18 27.9	
	comp=Z,96nm,18.0s,baz=17,slow=39						
ZALV	Zalesovo Beam	48.61	26	P	P	06 55 30.1	+0.2
	comp=Z,1.0nm,0.5s,baz=235,slow=9.6,SNR=5.4						
ESDC	Sonseca Array	54.73	309	P	P	06 56 16.2	+0.2
	comp=Z,1.3nm,0.8s,baz=93,slow=6.8,SNR=2.6						
DBIC	Dimbokro	55.20	269	P	P	06 56 19.8	+0.1
	comp=Z,3.8nm,1.0s,baz=113,slow=6.1,SNR=3.3						
SONM	Songino Array	57.33	41	P	P	06 56 36.2	+1.6
	comp=Z,0.9nm,0.8s,baz=249,slow=7.6,SNR=4.0						
ARCES	ARCESS Array B	58.50	350	LR	LR	07 24 40.3	
	comp=Z,172nm,19.7s,baz=288,slow=39						
KSRS	Korea Array	71.84	55	LR	LR	07 30 47.9	
	comp=Z,46nm,19.5s,baz=345,slow=37						
SEY	Seymchan	83.47	27	LR	LR	07 39 57.5	
	comp=Z,544nm,21.7s,baz=332,slow=38						
WRA	Warramunga Arr	88.44	111	P	P	06 59 39.2	-0.1
	comp=Z,1.1nm,0.7s,baz=298,slow=3.9,SNR=3.0						
ASAR	Alice Springs	88.99	114	P	P	06 59 41.7	-0.2
	comp=Z,1.0nm,0.9s,baz=278,slow=4.7,SNR=7.6						
NVAR	Mina Array Bea	127.61	349	PKP	PKiKP	07 05 53.3	+0.3
	comp=Z,0.7nm,0.8s,baz=194,slow=0.6,SNR=5.2						

IDC 03 07:12:52.8±1.3**, 13°.26N**×**50°.76E, h0**^{km}**, mb3.7**/7**, mb1 3.8**/7**, mb1mx3.6**/41**, mbtmp3.7**/7**, MS3.4**/2**, Ms1 3.4**/2**, ms1mx2.8**/45**, Error ellipse: s-maj=37.8km s-min=30.0km az=144.0, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSAR	Wadi Sarin	12.42	36	LR	LR	07 20 29.1	
	comp=Z,69nm,18.2s,baz=266,slow=37						
MKAR	Makanchi Array	42.62	32	P	P	07 20 51.5	+0.5
	0.2nm,0.5s,baz=217,slow=5.2,SNR=4.5						
KURBB	Kurchatov Arra	43.57	26	P	P	07 20 56.6	-2.0
	0.3nm,0.7s,baz=228,slow=8.0,SNR=4.4						
TORD	Torodi Ar. Bea	47.70	276	P	P	07 21 31.9	+0.1
	0.8nm,0.7s,baz=72,slow=8.1,SNR=5.7						
ZALV	Zalesovo Beam	48.65	26	P	P	07 21 37.5	-0.9
	1.3nm,0.6s,baz=235,slow=8.7,SNR=6.3						
SONM	Songino Array	57.40	41	P	P	07 22 45.2	+1.8
	0.2nm,0.7s,baz=243,slow=6.3,SNR=2.7						
TIXI	Tiksi	73.75	19	LR	LR	08 01 33.3	
	comp=Z,51nm,19.7s,baz=54,slow=40						
WRA	Warramunga Arr	88.56	111	P	P	07 25 47.9	-0.3
	3.1nm,0.6s,baz=305,slow=3.6,SNR=6.2						
ASAR	Alice Springs	89.11	114	P	P	07 25 50.4	-0.4
	0.4nm,0.7s,baz=297,slow=4.9,SNR=5.8						

*UPA **03** 07:24:16.9±1.8, 10°.60N×84°.12W, h77^{km}±18^{km}, MW3.7*

*UCR **03** 07:24:17.3±1.4, 10°.28N×84°.29W, h95^{km}±4^{km}, MD3.8, MW3.6*

ISC 03 07:24:17.8±1.5**, 10°.33N**±0°.07×**84°.26W**±0°.07**, h92**^{km}±10^{km}**, n31, σ0^s.65**/41**, 1C-3D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRA1	San Ramn	0.32	222	eP	Pn	07 24 31.2	-0.5
SRA1				eS	Sn	07 24 42.1	+0.1
HDC	Heredia	0.35	156	⇓iP	Pn	07 24 31.8	-0.2
HDC				i S	Sn	07 24 42.8	+0.4
HDC	Heredia	0.35	156	eP	Pn	07 24 31.6	-0.2
HDC				eS	Sn	07 24 43.0	+0.6
FORC	Fortuna	0.43	289	i P	Pn	07 24 32.3	+0.1
FORC				i S	Sn	07 24 43.5	+0.6
SJS	Escuela Geolog	0.43	152	eP	Pn	07 24 32.1	-0.3
CEDE	Laguna Cedeo	0.47	290	eP	Pn	07 24 32.6	+0.1
CEDE				i S	Sn	07 24 44.1	+0.6
LCR2	La Lucha 2	0.63	157	eP	Pn	07 24 33.5	-0.5
JTS	Las Juntas de	0.69	267	⇓iP	Pn	07 24 33.9	-0.5
JTS	Las Juntas de	0.69	267	eP	Pn	07 24 33.6	-0.7
ACAL	Aguas Claras	0.82	292	i P	Pn	07 24 35.5	-0.3
CUI	Cuipilapa	0.95	290	i P	Pn	07 24 35.8	-1.3
CUI				i S	Sn	07 24 51.8	+0.2
COLC	Colonia	0.99	290	i P	Pn	07 24 37.0	-0.5
PLVR	Palo Verde	1.08	271	eP	Pn	07 24 38.1	-0.6
EDDO	Dominical	1.14	160	eP	Pn	07 24 38.9	-0.3
EDLM	Las Mercedes	1.23	148	eP	Pn	07 24 39.9	-0.5
GUAI	GUAI	1.23	268	i P	Pn	07 24 40.2	-0.1
EDBA	Buenos Aires	1.51	140	eP	Pn	07 24 42.9	-0.9
ESPN	Las Esperanzas	1.86	359	eP	Pn	07 24 48.6	+0.3
ACON	Acoyapa	1.86	331	eP	Pn	07 24 48.2	-0.1
EDSV	San Vito	1.96	140	eP	Pn	07 24 49.7	0.0
CNI2	El Empalme, Bo	1.98	117	i P	Pn	07 24 49.3	-0.4
PTJ1	Puerto Jimnez	2.01	152	⇓iP	Pn	07 24 51.0	+0.8
PTJ1	Puerto Jimnez	2.01	152	eP	Pn	07 24 51.0	+0.8
BRU2	Volcan	2.17	134	⇑iP	Pn	07 24 52.1	-0.3
	baz=325,slow=28						
BRU2				i S	Sn	07 25 18.9	0.0
BRU2	Volcan	2.17	134	eP	Pn	07 24 52.1	-0.3
BCO2	Palmira	2.34	133	i P	Pn	07 24 54.5	-0.2
BCO2				i S	Sn	07 25 22.6	-0.3
PTAR3	Potrerillos Ar	2.38	133	i P	Pn	07 24 54.8	-0.4
PTAR3				i S	Sn	07 25 24.8	+1.0
SBAR3	San Bartolo, C	2.41	146	eP	Pn	07 24 57.7	+2.1
CHGR2	Aguacate	2.50	123	i P	Pn	07 24 56.4	-0.3
CHGR2				i S	Sn	07 25 25.8	-0.7
DVD	David	2.59	136	eP	Pn	07 24 57.5	-0.4
GMAL	Guarumal, Vera	3.93	130	eP	Pn	07 25 15.0	-0.9

TRN 03 07:27:45.3, 10°.43N×63°.20W, h3^{km}**, MD3.5, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIV	Guiria	0.98	77	eP	Pg	07 28 03.8	-0.3
GUIV				eS	Sb	07 28 18.1	-0.1
ORIV	Oritupano	1.36	189	eP	Pg	07 28 11.3	-0.1
ORIV				eS	Sn	07 28 31.1	+1.3
TRN	Trinidad (W)	1.78	83	eP	Pn	07 28 16.4	-0.5
TRN				eS	Sb	07 28 41.7	+0.5
GRGR	Grenville	2.27	42	eP	Pn	07 28 23.9	+0.1
GRGR				eS	Sn	07 28 53.5	+1.1

*IDC **03** 07:28:40.1±8.4, 17°.34S×172°.31W, h0^{km}, mb4.0/3, mb1 4.3/3, mb1mx3.7/28, mbtmp4.0/3, MS3.5/2, Ms1 3.5/2, ms1mx3.1/38, Error ellipse: s-maj=366.3km s-min=37.2km az=140.0*

*NEIC **03** 07:28:43.2±2.6, 17°.28S±0°.03×172°.01W±0°.09, h35^{km}±1^{km}, mb4.1/3, Error ellipse: s-maj=14.2km s-min=4.7km az=82.0*

ISC 03 07:28:40.7±0.8**, 17°.28S**±0°.07×**172°.08W**±0°.10**, h15**^{km}**, n13, σ1^s.64**/13**, mb4.1**/6**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	2.72	131	Pn	Pn	07 29 23.7	-0.1
NIUE				Sn	Sn	07 29 53.6	-2.8
AFI	Afiamalu	3.36	5	Pn	Pn	07 29 32.5	-0.3
AFI				Sn	Sn	07 30 10.8	-1.7
MSVF	Nonsavu	9.43	266	Pn	Pn	07 30 54.2	-1.9
PPT	Papeete	21.47	94	LR	LR	07 40 12.4	
	comp=Z,66nm,19.7s,baz=353,slow=32						
KKH	Kailua Kona	39.95	24	P	P	07 36 14.3	-0.3
WB0	Warramunga Arr	50.64	258	P	P	07 37 39.1	-0.6
WB0				IAmb	IAmb	07 37 46.5	
	comp=Z,3.5nm,1.1s						
WRA	Warramunga Arr	50.67	258	P	P	07 37 39.6	-0.3
	comp=Z,1.0nm,0.4s,baz=97,slow=7.1,SNR=0.1						
AS31	Alice Springs	50.76	253	P	P	07 37 41.9	+1.3
AS31				IAmb	IAmb	07 37 42.0	
	comp=Z,0.8nm,0.6s						
ASAR	Alice Springs	50.76	253	P	P	07 37 40.9	+0.3
	comp=Z,2.6nm,0.6s,baz=88,slow=8.4,SNR=50						
QSPA	South Pole Qui	72.78	180	P	P	07 40 10.4	+2.0
113A	Mohawk Valley,	74.70	48	P	P	07 40 19.9	-0.1
113A				IAmb	IAmb	07 40 25.5	
	comp=Z,2.4nm,1.0s						
ILAR	Eielson Array	84.04	11	P	P	07 41 12.7	+2.4
	comp=Z,0.4nm,0.6s,baz=225,slow=5.7,SNR=6.3						
SONM	Songino Array	97.08	318	LR	LR	08 21 44.3	
	comp=Z,44nm,18.9s,baz=21,slow=33						

*NEIC **03** 07:39:13.3±1.4, 15°.0S±0°.1×170°.77E±0°.07, h655^{km}±6^{km}, mb4.5/32, Error ellipse: s-maj=17.6km s-min=9.4km az=190.0*

*IDC **03** 07:39:16.4±1.9, 15°.07S×170°.60E, h696^{km}±26^{km}, mb3.3/8, mb1 3.7/10, mb1mx3.2/33, mbtmp4.6/10, Error ellipse: s-maj=37.4km s-min=14.6km az=146.0*

ISC 03 07:39:13.4±0.6**, 15°.03S**±0°.09×**170°.75E**±0°.09**, h650**^{km}**, n57, σ1^s.07**/57**, mb4.5**/23**, 2C, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	3.45	263	P	P	07 40 40.3	+1.1
SANVU					S	07 41 50.6	+1.5
MSVF	Nonsavu	7.50	112	P	P	07 41 11.2	+1.1
DZM	Mont Dzumac	8.11	210	P	P	07 41 17.8	+2.3
	9.4nm,0.3s,baz=196,slow=6.0,SNR=50						
DZM	Mont Dzumac	8.11	210	P	P	07 41 16.3	+0.8
NOUC	Port Laguerre	8.20	210	P	P	07 41 18.6	+2.4
HNR	Honiara	11.94	297	P	P	07 41 52.6	+1.0
	32nm,0.3s,baz=168,slow=6.2,SNR=4.4						
HNR	Honiara	11.94	297	P	P	07 41 52.3	+0.8
OUZ	Omahuta	20.27	173	P	P	07 43 06.0	-1.2
OUZ				IAmb	IAmb	07 43 10.6	
	comp=Z,21nm,1.2s						
EIDS	Eidsvold	21.11	238	P	P	07 43 15.0	+0.1
EIDS				IAmb	IAmb	07 43 18.9	
	comp=Z,13nm,1.1s						
ARMA	Armidale	23.30	226	P	P	07 43 35.1	+0.7
URZ	Urewera	23.81	168	P	P	07 43 38.4	-0.3
URZ				IAmb	IAmb	07 43 46.4	
	comp=Z,9.0nm,1.0s						
BKZ	Black Stump Fm	24.57	169	P	P	07 43 44.6	-0.8
BKZ				IAmb	IAmb	07 43 46.6	
	comp=Z,12nm,1.0s						
QRZ	Quartz Range	25.75	177	P	P	07 43 56.5	+0.9
QRZ				IAmb	IAmb	07 43 57.5	
	comp=Z,20nm,0.9s						
BFZ	Birch Farm	26.00	170	P	P	07 43 56.2	-1.7
BFZ				IAmb	IAmb	07 44 01.2	
	comp=Z,28nm,1.0s						
NNZ	Nelson	26.19	176	P	P	07 43 59.1	-0.3
SNZO	South Karori	26.41	173	P	P	07 43 59.8	-1.5
TUWZ	Tuamarina	26.45	175	P	P	07 44 01.1	-0.6
THZ	Tophouse	26.70	176	P	P	07 44 03.8	-0.2
THZ				IAmb	IAmb	07 44 05.5	
	comp=Z,13nm,0.8s						
COEN	Coen	26.72	269	P	P	07 44 04.4	-0.1
BSWZ	Blackbirch Sta	26.73	175	P	P	07 44 02.9	-1.3
KHZ	Kahutara	27.40	176	P	P	07 44 08.6	-1.4
LTZ	Lake Taylor	27.69	178	P	P	07 44 12.3	-0.3
LTZ				IAmb	IAmb	07 44 19.7	
	comp=Z,26nm,1.2s						
CAN	Canberra	28.09	220	P	P	07 44 15.8	-0.4
OXZ	Oxford	28.22	178	P	P	07 44 16.5	-0.6
OXZ				IAmb	IAmb	07 44 18.0	
	comp=Z,7.3nm,0.5s						
FOZ	Fox Glacier	28.42	181	P	P	07 44 18.9	+0.1
RPZ	Rata Peaks	28.59	180	P	P	07 44 19.3	-1.0
MQZ	McQueen's Vall	28.63	177	P	P	07 44 20.6	+0.1
LBZ	Lake Benmore	29.26	181	P	P	07 44 25.6	-0.4
LBZ				IAmb	IAmb	07 44 34.9	
	comp=Z,24nm,1.1s						
ODZ	Otahua Downs	29.92	180	P	P	07 44 31.6	0.0
ODZ				IAmb	IAmb	07 44 41.0	
	comp=Z,19nm,1.1s						
DCZ	Deep Cove	30.49	185	P	P	07 44 36.4	-0.1
DCZ				IAmb	IAmb	07 44 38.0	
	comp=Z,5.6nm,0.8s						
STKA	Stephens Creek	31.43	233	P	P	07 44 45.4	+0.7
	comp=Z,12nm,0.4s,baz=61,slow=8.8,SNR=105						
STKA	Stephens Creek	31.43	233	P	P	07 44 45.5	+0.8
TOO	Toolangi	31.70	220	P	P	07 44 47.4	+0.5
TOO				IAmb	IAmb	07 44 48.5	
	comp=Z,11nm,0.8s						
WRA	Warramunga Arr	35.03	257	P	P	07 45 14.2	-0.7
	comp=Z,3.6nm,0.5s,baz=81,slow=6.2,SNR=31						
AS31	Alice Springs	35.73	250	P	P	07 45 20.0	-0.7
AS31				IAmb	IAmb	07 45 20.8	
	comp=Z,7.5nm,0.5s						
ASAR	Alice Springs	35.73	250	P	P	07 45 20.2	-0.4
	comp=Z,8.9nm,0.4s,baz=74,slow=9.8,SNR=263						
ASAR				S	S	07 50 10.5	-3.6
	comp=Z,1.7nm,0.8s,baz=80,slow=18,SNR=9.5						
BBOO	Buckleboo	36.10	234	P	P	07 45 23.7	+0.2
MTN	Manton Dam	38.48	268	P	P	07 45 43.2	+0.2
FORT	Forrest	42.06	241	P	P	07 46 10.7	-0.4
FORT				IAmb	IAmb	07 46 11.4	
	comp=Z,20nm,0.6s						
FITZ	Fitzroy Crossi	43.27	259	P	P	07 46 21.2	+0.6
	comp=Z,2.0nm,0.5s,baz=80,slow=7.2						
FITZ	Fitzroy Crossi	43.27	259	P	P	07 46 20.4	-0.2
PSA00	Pilbara Seismi	48.60	254	P	P	07 47 00.6	0.0
NWAO	Narrogin (SRO)	51.50	240	P	P	07 47 20.8	-0.7
NWAO				IAmb	IAmb	07 47 21.7	
	comp=Z,13nm,0.9s						
MORW	Morawa	52.18	245	P	P	07 47 26.7	+0.3
NJ2	Nanjing	68.27	314	eP	P	07 49 12.1	+0.3
PETK	Petropavlovsk-	68.78	352	P	P	07 49 15.2	+0.8
	comp=Z,4.7nm,0.9s,baz=178,slow=5.3,SNR=5.5						
QSPA	South Pole Qui	75.00	180	P	P	07 49 49.3	-0.9
HHC	Hu-ho-hao-te	78.02	318	eP	P	07 50 07.4	+0.3
LZH	Lanzhou	81.04	311	⇑P	P	07 50 12.7	-10
LZH				pP	pP	07 52 28.3	-8.3
LZH				sP	PP	07 53 32.1	-8.8
LZH				PP	sP	07 53 32.9	-8.5
VRDI	Verde Repeater	84.24	20	P	P	07 50 36.2	-2.2
GLB	Gilahina Butte	84.27	20	P	P	07 50 38.6	+0.2
NVAR	Mina Array Bea	84.94	48	P	P	07 50 42.7	+0.3
	comp=Z,0.4nm,0.6s,baz=222,slow=8.9,SNR=4.2						
ILAR	Eielson Array	85.80	17	P	P	07 50 43.5	-2.1
	comp=Z,0.7nm,0.8s,baz=232,slow=5.5,SNR=6.9						
SYO	Syowa Base	89.36	196	⇑epP	pP	07 53 19.8	+0.3
WMQ	Urumqi	95.35	314	eP	P	07 51 30.4	+0.2
YKA	Yellowknife Ar	96.28	27	P	P	07 51 33.2	-0.6
	comp=Z,0.5nm,0.6s,baz=255,slow=4.6,SNR=11						
ARCES	ARCESS Array B	121.36	346	PKP	PKPdf	07 56 52.7	-1.2
	comp=Z,1.0nm,0.8s,baz=67,slow=2.7,SNR=8.6						

*KRNET **03** 07:43:39.5±0.1, 39°.59N×71°.91E, mb2.8*

*ISU **03** 07:43:40.0, 39°.50N×72°.00E, h15^{km}*

*SOME **03** 07:43:42.9, 39°.80N×72°.10E, h0^{km}*

*NNC **03** 07:43:44.8±1.5, 39°.76N×72°.08E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=11.5km s-min=5.9km az=178.0*

ISC 03 07:43:42.0±2.5**, 39°.5N**±0°.1×**71°.75E**±0°.04**, h13**^{km}±14^{km}**, n47, σ1^s.52**/76**, 17C-12D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTK	Batken	0.91	308	⇑iP	Pb	07 43 58.1	-1.7
	baz=99						
BTK				⇑iS	Sg	07 44 11.7	+0.2
	baz=99						
BTK	Batken	0.91	308	i P	Pb	07 43 59.5	-0.3
BTK				i S	Sn	07 44 14.8	+1.1
FRG	Fergana	1.23	1	⇑iP	Pb	07 43 56.8	-8.5
FRG				S	Sb	07 44 08.7	-12
ARSB	Arslanbob	2.05	27	⇓iP	Pn	07 44 15.3	-1.1
	baz=25						
ARSB				⇓iS	Sn	07 44 41.4	-0.6
	baz=25						
ARSB	Arslanbob	2.05	27	eP	Pn	07 44 14.8	-1.6
ARSB				eS	Sn	07 44 41.3	-0.7
ARK	Arkit	2.30	4	⇑iP	Pn	07 44 19.5	-0.4
	baz=1.0						
ARK				⇑iS	Sb	07 44 48.7	-3.3
	baz=1.0						
ARK	Arkit	2.30	4	eP	Pn	07 44 20.4	+0.5
ARK				eS	Sb	07 44 50.4	-1.6
IUG	Iuzhnay	2.95	334	eP	Pb	07 44 36.0	+1.4
	15nm,0.5s						
IUG				eS	Sg	07 45 14.8	-1.9
	37nm,0.3s						
IUG	Iuzhnay	2.95	334	Pg	Pb	07 44 36.0	+1.4
	15nm,0.5s						
IUG				Lg	Lg	07 45 14.8	
	37nm,0.4s						
AML	Almayashu	3.02	29	⇑iP	Pn	07 44 29.3	-0.6
	baz=27						
AML				⇑iS	Sn	07 45 05.0	-1.1
	baz=27						
JBG	Jabagly	3.06	343	Pg	Pb	07 44 38.1	+1.6
	16nm,0.3s						
JBG				Lg	Lg	07 45 18.1	
	12nm,0.3s						
ARLS	Aral	3.06	39	⇑iP	Pn	07 44 29.6	-0.8
	baz=38						

ARLS	baz=38			⇑iS	Sn	07 45 06.2	-0.8
MRKS	Merke 9.9nm,0.5s	3.43	18	eP	Pb	07 44 42.1	-0.6
MRKS	12nm,0.5s			eS	Sb	07 45 25.2	+0.8
MRKS	Merke 9.9nm,0.5s	3.43	18	Pg	Pb	07 44 42.1	-0.6
MRKS	12nm,0.5s			Lg	Lg	07 45 25.2	
UCH	Uchtor baz=36	3.44	37	⇓iP	Pn	07 44 35.1	-0.7
UCH	baz=36			⇓iS	Sn	07 45 15.3	-1.3
EKS2	Erkin-Say baz=24	3.51	25	⇑iP	Pn	07 44 35.5	-1.0
EKS2	baz=24			⇑iS	Sn	07 45 16.2	-1.8
KZA	Kyzart baz=44	3.70	45	⇑iP	Pn	07 44 38.4	-0.9
KZA	baz=44			⇑iS	Sn	07 45 21.0	-2.0
KK31	Karatay Array 0.6nm,0.3s,baz=148,slow=11,SNR=47	3.72	346	⇑Pn	Pn	07 44 39.7	+0.5
KK31	2.4nm,0.4s,baz=158,slow=15,SNR=19			⇓Pg	Pb	07 44 47.9	+0.3
KK31	3.7nm,0.5s,baz=156,slow=29			⇓Lg	Lg	07 45 37.9	
AAK	Ala-Archa baz=32	3.76	33	⇑iP	Pn	07 44 39.4	-0.5
AAK	baz=32			⇑iS	Sn	07 45 22.8	-1.3
AAK	Ala-Archa 2.4nm,0.6s	3.76	33	⇓Pn	Pn	07 44 40.4	+0.5
AAK	4.1nm,0.5s			⇓Pg	Pb	07 44 46.0	-2.4
AAK	22nm,0.7s			Lg	Lg	07 45 32.3	
BRLS	Borolday 2.4nm,0.3s	3.81	338	eP	Pb	07 44 48.9	-0.3
BRLS	6.0nm,0.2s			eS	Sb	07 45 36.5	+1.2
BRLS	Borolday 2.4nm,0.3s	3.81	338	Pg	Pb	07 44 48.9	-0.3
BRLS	5.7nm,0.2s			Lg	Lg	07 45 36.5	
KBK	Karagaybulak baz=36	3.97	36	⇓eP	Pn	07 44 42.3	-0.6
KBK	baz=36			⇓iS	Sn	07 45 27.3	-2.1
CHMS	Chumysh 5.1nm,0.4s	4.16	32	⇑Pn	Pn	07 44 45.1	-0.3
CHMS	4.8nm,0.6s			⇓Sn	Sn	07 45 33.9	-0.1
CHMS	13nm,0.6s			⇓Lg	Lg	07 45 46.0	
SGDS	Sogindy 4.7nm,0.5s	4.50	28	Pg	Pb	07 45 00.8	-0.2
SGDS	25nm,0.8s			Lg	Lg	07 45 56.4	
KST	Kastek 3.9nm,0.3s	4.75	41	eP	Pb	07 45 04.5	-0.8
KST	9.0nm,0.4s			eS	Sb	07 46 02.9	+0.3
KST	Kastek 3.9nm,0.3s	4.75	41	Pg	Pb	07 45 04.5	-0.8
KST	9.0nm,0.4s			Lg	Lg	07 46 02.9	
DGS	Degeres 2.3nm,0.5s	4.81	38	eP	Pb	07 45 05.3	-0.9
DGS	13nm,0.7s			eS	Sb	07 46 04.4	+0.3
DGS	Degeres 1.8nm,0.5s	4.81	38	Pg	Pb	07 45 05.3	-0.9
DGS	9.3nm,0.7s			Lg	Lg	07 46 04.4	
IZV	Izvestkoviy 1.7nm,0.4s	5.09	44	eP	Pb	07 45 11.3	+0.3
IZV	11nm,0.6s			eS	Sb	07 46 14.7	+2.5
IZV	Izvestkoviy 1.7nm,0.4s	5.09	44	Pg	Pb	07 45 11.3	+0.3
IZV	11nm,0.6s			Lg	Lg	07 46 14.7	
TNSS	Tian-Shan 2.7nm,0.3s	5.28	46	eP	Pb	07 45 14.4	+0.1
TNSS	5.5nm,0.6s			eS	Sb	07 46 19.7	+1.9
TNSS	Tian-Shan 2.7nm,0.3s	5.28	46	Pg	Pb	07 45 14.4	+0.1
TNSS	5.5nm,0.6s			Lg	Lg	07 46 19.7	
MDOK	Medeo 2.1nm,0.3s	5.41	46	eP	Pb	07 45 16.8	+0.3
MDOK	5.4nm,0.8s			eS	Sb	07 46 23.8	+2.3
MDOK	Medeo 1.0nm,0.6s	5.41	46	Pg	Pb	07 45 16.8	+0.3
MDOK	5.4nm,0.8s			Lg	Lg	07 46 23.8	
KOTS	Kotyrbulak 3.4nm,0.3s	5.50	45	eP	Pb	07 45 18.4	+0.4
KOTS	4.6nm,0.5s			eS	Sb	07 46 26.5	+2.7
KOTS	Kotyrbulak 3.4nm,0.3s	5.50	45	Pg	Pb	07 45 18.3	+0.4
KOTS	4.6nm,0.5s			Lg	Lg	07 46 26.5	
KUU	Kurty 0.9nm,0.2s	5.57	37	eP	Pb	07 45 19.1	-0.1
KUU	12nm,0.4s			eS	Sb	07 46 27.7	+1.7
KUU	Kurty 0.9nm,0.2s	5.57	37	Pg	Pb	07 45 19.1	-0.1
KUU	12nm,0.4s			Lg	Lg	07 46 27.7	
KTBS	Karatobe 1.0nm,0.5s	5.60	40	eP	Pb	07 45 20.1	+0.4
KTBS	14nm,0.6s			eS	Sb	07 46 29.6	+2.8
KTBS	Karatobe 1.0nm,0.5s	5.60	40	Pg	Pb	07 45 20.1	+0.4
KTBS	14nm,0.6s			Lg	Lg	07 46 29.6	
BTLS	Baital 0.8nm,0.3s	5.79	16	eP	Pb	07 45 24.6	+1.6
BTLS	3.5nm,0.5s			eS	Sb	07 46 37.6	+5.3
BTLS	Baital 0.8nm,0.3s	5.79	16	Pg	Pb	07 45 24.6	+1.6
BTLS	3.5nm,0.5s			Lg	Lg	07 46 37.6	
CHKK	Chushkaly 2.1nm,0.1s	5.86	40	eP	Pb	07 45 24.5	+0.5
CHKK	5.0nm,0.3s			eS	Sb	07 46 37.2	+3.1
CHKK	Chushkaly 2.1nm,0.1s	5.86	40	Pg	Pb	07 45 24.5	+0.5
CHKK	5.0nm,0.3s			Lg	Lg	07 46 37.2	
ARXS	Arharly 0.7nm,0.3s	6.54	42	eP	Pb	07 45 36.6	+0.9
ARXS	4.6nm,0.5s			eS	Sb	07 46 58.2	+4.5
ARXS	Arharly 0.7nm,0.3s	6.54	42	Pg	Pb	07 45 36.6	+0.9
ARXS	4.6nm,0.5s			Lg	Lg	07 46 58.2	

TAP 03 07:48:24.1, 23°.18N×121°.35E, h21^{km}, ML2.0, 2D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FULB	Fuli baz=291	0.05	292	P	Pb	07 48 28.2	+0.3
FULB	baz=291			S	Sb	07 48 31.8	+1.2
CHKT	Chengkung baz=164	0.08	168	P	Pb	07 48 28.5	+0.5
CHKT	baz=164			i S	Sb	07 48 31.5	+0.8
TWF1	Yuli baz=347	0.18	345	i P	Pb	07 48 29.5	-0.5
TWF1	baz=347			i S	Sb	07 48 33.4	-0.8
YULB	Yu-li baz=347	0.22	348	⇓P	Pb	07 48 29.9	-0.2
YULB	baz=347			S	Sb	07 48 34.1	-0.2
ELDTW	Lidau baz=271	0.30	272	⇓iP	Pb	07 48 31.3	+0.4
ELDTW	baz=271			i S	Sb	07 48 36.2	+0.5
HGSD	Ruisui baz=12	0.32	13	P	Pn	07 48 32.4	-1.2
HGSD	baz=12			eS	Sb	07 48 37.2	+1.3
TWGBT	Beinan baz=214	0.44	215	P	Pb	07 48 33.8	+0.8
TWGBT	baz=214			S	Sb	07 48 40.5	+1.4
TWG	Pinlang baz=214	0.44	216	i P	Pb	07 48 33.6	+0.6
TWG	baz=214			i S	Sb	07 48 40.5	+1.4
TTN	Taitung baz=202	0.46	204	eS	Sn	07 48 41.4	-1.6
YUS	Yu-Shan baz=309	0.48	310	P	Pb	07 48 34.2	+0.1
YUS	baz=309			S	Sb	07 48 42.0	+1.1
STYT	Tauyuan baz=268	0.54	269	P	Pb	07 48 35.5	+0.5
STYT	baz=268			S	Sb	07 48 43.6	+1.1
ALS	Alishan baz=303	0.60	304	P	Pn	07 48 36.9	-0.7
ALS	baz=303			eS	Sn	07 48 46.2	-0.7
VWDT	VWDT baz=341	0.60	342	P	Pb	07 48 36.2	+0.1
VWDT	baz=341			S	Sb	07 48 44.6	+0.4
TPUB	Ta-pu baz=280	0.67	281	P	Pn	07 48 38.6	+0.2
TPUB	baz=280			S	Sn	07 48 48.5	+0.3
WTP	Ta-pu baz=275	0.68	276	P	Pb	07 48 37.3	-0.1
WHYT	Xinyi Township baz=318	0.69	319	eP	Pn	07 48 38.8	+0.1
WHYT	baz=318			eS	Sn	07 48 47.9	-0.8
SSLB	Suanglung baz=329	0.71	329	eP	Pb	07 48 38.0	+0.2
SSLB	baz=329			eS	Sb	07 48 47.4	+0.3
CHN4	Tsaushan baz=283	0.71	284	P	Pn	07 48 39.4	+0.4
CHN4	baz=283			eS	Sn	07 48 50.6	+1.3
CHN5	Tsauling baz=304	0.74	304	eP	Pn	07 48 40.2	+0.8
CHN1	Nanshi baz=270	0.76	271	eP	Pn	07 48 39.8	+0.3
OWD	Renai baz=348	0.79	348	eP	Pn	07 48 39.9	-0.2
OWD	baz=348			eS	Sb	07 48 50.2	+0.7
TWK	Hsinying baz=276	0.80	277	eP	Pb	07 48 39.2	0.0
TWK	baz=276			eS	Sn	07 48 50.7	-0.7
SMLT	Sun Moon Lake baz=330	0.81	330	eS	Sn	07 48 51.4	-0.5
TYC	Yuchr baz=328	0.85	328	eP	Pn	07 48 40.6	-0.3
TYC	baz=328			eS	Sn	07 48 53.1	+0.4
CHGB	Renai baz=349	0.89	350	eP	Pb	07 48 41.1	+0.1
CHGB	baz=349			eS	Sn	07 48 53.8	-0.3

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*INET **03** 08:14:59.4, 12°.49N×87°.74W, h65^{km}, ML3.7*

SNET 03 08:14:59.2±1.0**, 12°.46N×87°.96W, h12^{km}**±18^{km}**, ML3.2, 3C, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.82	9	⇑eP	Pg	08 15 14.3	-0.8
CNCH				eS	Sb	08 15 26.8	+0.3
CNCH	comp=Z,3µm,0.1s			IAML		08 15 28.4	
JUCU	Jucuar¡n	0.84	340	eP	Pg	08 15 15.1	-0.3
JUCU				eS	Sb	08 15 27.1	+0.1
JUCU	comp=Z,887nm,0.4s			IAML		08 15 31.9	
LCND	La Caada	0.84	5	⇑eP	Pg	08 15 14.7	-0.8
LCND				eS	Sg	08 15 26.8	+0.2
LCND	comp=Z,946nm,0.3s			IAML		08 15 33.2	
ALJI	Alcalda de J	1.05	325	⇑iP	Pb	08 15 18.6	-0.7
ALJI	comp=Z,645nm,0.1s			IAML		08 15 34.2	
PACA	Pacayal	1.06	341	eP	Pb	08 15 18.6	-1.1
TECA	Tecapa	1.16	333	eP	Pb	08 15 20.6	-0.7
TECA				eS	Sb	08 15 36.4	+0.1
COEB	Comit de Eme	1.17	332	eP	Pb	08 15 20.4	-1.1
COEB	comp=Z,189nm,0.2s			IAML		08 15 38.1	
FAGO	Alcalda de S	1.23	353	eP	Pn	08 15 20.2	-2.1
COEG	Centro de Oper	1.46	322	eP	Pn	08 15 24.6	-0.9
COEG	comp=Z,256nm,0.2s			IAML		08 15 47.3	
PAVA	Las Pavas	1.57	323	eP	Pn	08 15 27.1	+0.1

UCR 03 08:30:28.3±1.4**, 10°.47N×84°.96W, h90^{km}**±4^{km}**, MD3.6, MW3.7, 2C-3D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACAL	Aguas Claras	0.17	336	i P	Pn	08 30 41.4	0.0
JTS	Las Juntas de	0.18	177	eP	Pn	08 30 40.8	-0.5
PTEN	Parque Tenorio	0.24	354	i P	Pn	08 30 41.9	+0.3
PTEN				i S	Sn	08 30 52.1	+0.6
CEDE	Laguna Cedeo	0.26	87	i P	Pn	08 30 42.3	+0.7
COLC	Colonia	0.30	309	i P	Pn	08 30 41.8	0.0
GUAB	Guayabo de Bag	0.35	312	i P	Pn	08 30 42.1	-0.1
MESS	Mesas	0.35	319	i P	Pn	08 30 42.3	+0.2
MESS				i S	Sn	08 30 53.0	+0.7
PLVR	Palo Verde	0.40	252	⇑eP	Pn	08 30 42.6	0.0
PLVR				eS	Sn	08 30 53.7	+0.6
BUAI	Buenos Aires	0.54	318	i P	Pn	08 30 43.5	+0.1
BUEV	Buena Vista	0.54	307	⇓iP	Pn	08 30 43.6	+0.1
BUEV				eS	Sn	08 30 55.3	+0.5
GBS3	Finca Las Img	0.57	302	i P	Pn	08 30 43.5	-0.2
GUAI	GUAI	0.57	250	i P	Pn	08 30 43.6	0.0
GUAI				i S	Sn	08 30 56.1	+1.0
NY14	Universidad de	0.59	287	i P	Pn	08 30 44.2	+0.4
SRA1	San Ramn	0.61	129	⇓iP	Pn	08 30 44.1	0.0
SRA1				eS	Sn	08 30 56.5	+0.6
LCR2	La Lucha 2	1.19	127	⇓iP	Pn	08 30 50.5	0.0
LCR2				eS	Sn	08 31 07.3	+0.1
EDDO	Dominical	1.63	138	eP	Pn	08 30 56.5	+0.9
EDDO				eS	Sn	08 31 17.4	+1.0
EDLM	Las Mercedes	1.80	131	eP	Pn	08 30 58.3	+0.3
EDLM				eS	Sn	08 31 21.7	+1.1
ESPN	Las Esperanzas	1.83	21	⇑iP	Pn	08 30 58.0	-0.3
EDBA	Buenos Aires	2.11	128	eP	Pn	08 31 02.0	0.0
EDBA				eS	Sn	08 31 27.3	-0.5

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*INET **03** 08:46:45.6, 12°.51N×87°.70W, h65^{km}, ML3.7*

SNET 03 08:46:45.1±0.7**, 12°.47N×87°.89W, h26^{km}**±6^{km}**, ML3.2, 1D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.80	4	eP	Pb	08 47 00.1	-0.4
CNCH				eS	Sn	08 47 12.3	+0.4
CNCH	comp=Z,2µm,0.4s			IAML		08 47 18.7	
LCND	La Caada	0.83	360	⇓iP	Pb	08 47 00.5	-0.5
LCND				eS	Sn	08 47 12.8	+0.2
LCND	comp=Z,722nm,0.4s			IAML		08 47 15.0	
JUCU	Jucuar¡n	0.85	336	eP	Pb	08 47 01.0	-0.3
JUCU				eS	Sn	08 47 13.0	-0.2
JUCU	comp=Z,748nm,0.3s			IAML		08 47 17.0	
PACA	Pacayal	1.08	337	eP	Pn	08 47 04.5	-0.2
ALJI	Alcalda de J	1.08	322	eP	Pn	08 47 04.6	0.0
ALJI	comp=Z,506nm,0.2s			IAML		08 47 20.0	
TECA	Tecapa	1.18	329	eP	Pb	08 47 06.6	-0.4
COEB	Comit de Eme	1.20	328	eP	Pn	08 47 06.6	+0.3
COEB	comp=Z,278nm,0.2s			IAML		08 47 27.9	
FAGO	Alcalda de S	1.23	350	eP	Pn	08 47 06.0	-0.7
COEG	Centro de Oper	1.50	320	eP	Pn	08 47 10.6	+0.2
COEG	comp=Z,245nm,0.2s			IAML		08 47 33.4	
PAVA	Las Pavas	1.60	320	eP	Pn	08 47 12.3	+0.4

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*IDC **03** 08:50:19.1±0.8, 55°.84S×25°.97W, h0^{km}, mb4.4/5, mb1 4.4/6, mb1mx4.0/33, mbtmp4.3/6, ML3.6/1, MS3.4/1, Ms1 3.4/1, ms1mx3.0/21, Error ellipse: s-maj=35.6km s-min=19.7km az=73.0*

*NEIC **03** 08:50:24.5±1.0, 55°.9S±0°.1×26°.1W±0°.2, h35^{km}±1^{km}, mb4.6/13, Error ellipse: s-maj=27.2km s-min=16.4km az=209.0*

ISC 03 08:50:20.6±0.7**, 55°.8S**±0°.1×**26°.0W**±0°.1**, h10^{km}, n42, σ0^s.70**/45**, mb4.5**/11**, 1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	6.20	280	Pn	Pn	08 51 52.8	+0.7
HOPE				Sn	Sn	08 53 01.8	-1.2
VNA1	Neumayer--Stat	16.75	159	P	P	08 54 16.7	-0.5
VNA3	Neumayer Olymp	16.98	162	P	Pn	08 54 18.3	+0.4
VNA2	Neumayer--Watz baz=324,slow=14	17.15	159	P	P	08 54 22.5	+0.9
SNAA	Sanae	18.68	157	P	P	08 54 38.2	-0.3
SNAA	Sanae 0.2nm,0.3s,baz=319,slow=10,SNR=11	18.68	157	P	P	08 54 38.4	-0.1
SNAA	Sanae	18.68	157	P	P	08 54 38.6	+0.1
PMSA	Palmer Station comp=Z,88nm,18.3s,baz=142,slow=31	20.52	229	LR	LR	09 01 00.5	
SYO	Syowa Base	31.34	141	⇓eX	P	08 56 30.2	-10
QSPA	South Pole Qui 14nm,0.6s,baz=207,slow=1.9,SNR=191	34.41	180	P	P	08 57 07.5	-0.3
QSPA	South Pole Qui	34.41	180	P	P	08 57 07.3	-0.4
CPUP	Villa Florida 1.8nm,0.8s,baz=144,slow=6.6,SNR=5.8	37.17	310	P	P	08 57 31.3	-0.3
CPUP	Villa Florida	37.17	310	P	P	08 57 31.9	+0.3
GO02	Mina Guanaco	43.98	296	P	P	08 58 28.6	+0.4
GO02	comp=Z,8.8nm,0.7s			IAmb	IAmb	08 58 30.6	
LVC	Limon Verde	45.76	299	P	P	08 58 44.3	+1.8
LVC	comp=Z,6.3nm,1.1s			IAmb	IAmb	08 58 45.8	
PB04	IPOC Station P	46.61	298	P	P	08 58 50.8	+1.8
VNDA	Vanda comp=Z,2.6nm,0.6s,baz=185,slow=7.7,SNR=6.7	46.81	182	P	P	08 58 49.9	+0.2
VNDA	Vanda	46.81	182	P	P	08 58 50.0	+0.2
GO01	Chusmiza	48.39	300	P	P	08 59 02.5	-0.7
GO01	comp=Z,3.9nm,0.8s			IAmb	IAmb	08 59 05.1	
PB11	IPOC Station P	48.54	300	P	P	08 59 05.0	+1.0
PB11	comp=Z,17nm,1.4s			IAmb	IAmb	08 59 08.2	
MNMC	Minye Minye	49.04	300	P	P	08 59 08.4	+0.4
MNMC	comp=Z,6.7nm,0.8s			IAmb	IAmb	08 59 11.8	
LPAZ	La Paz comp=Z,2.5nm,0.7s,baz=126,slow=7.6,SNR=8.8	50.79	304	P	P	08 59 22.4	+0.7
LPAZ	La Paz	50.79	304	P	P	08 59 21.9	+0.2
LPAZ	comp=Z,3.0nm,0.8s			IAmb	IAmb	08 59 26.8	
TOA0	Torodi Ar. Sit	72.56	28	P	P	09 01 47.9	+0.3
TOA0	comp=Z,3.5nm,0.8s			IAmb	IAmb	09 01 48.5	
TORD	Torodi Ar. Bea comp=Z,2.7nm,0.6s,baz=197,slow=6.2,SNR=17	72.56	28	P	P	09 01 47.8	+0.1
ACON	Acoyapa	83.51	302	P	P	09 02 47.4	-1.1
YKA	Yellowknife Ar comp=Z,0.2nm,0.6s,baz=127,slow=2.8,SNR=3.5	136.45	318	PKP	PKPdf	09 09 40.5	-0.6
INK	Inuvik	146.05	321		PKPbc	09 09 59.3	+0.3
EPYK	Eagle Plains	146.72	317	PKPdf	PKPdf	09 09 57.6	-1.8
EPYK					pPKPdf	09 10 00.9	+0.5
EPYK				PKPab	sPKPab	09 10 05.1	+1.4
DAWY	Dawson	147.13	312		PKPbc	09 10 02.1	-0.2
SCRK	Sand Creek	149.05	311		PKPbc	09 10 08.0	+0.4
SCRK				PKPab	PKPab	09 10 12.0	+0.1
RIDG	Independent Ri	149.37	310		PKPbc	09 10 08.9	+0.6
SONM	Songino Array comp=Z,0.6nm,0.6s,baz=229,slow=2.9,SNR=4.9	150.07	85	PKPbc	PKPbc	09 10 10.1	-0.5
FYU	Fort Yukon	150.09	316		PKPbc	09 10 09.8	0.0
IL31		150.46	312		PKPbc	09 10 11.0	+0.2
ILAR	Eielson Array comp=Z,4.0nm,0.8s,baz=126,slow=1.8,SNR=38	150.46	312	PKPbc	PKPbc	09 10 10.7	-0.1
CCB	Clear Creek Bu	150.82	311		PKPbc	09 10 11.4	-0.2
CCB					PKPab	09 10 19.4	+0.4
WRH	Wood River Hil	150.91	311		PKPbc	09 10 12.1	+0.3
WRH				PKPab	PKPab	09 10 20.3	+0.9
RND	Reindeer	151.04	309		PKPbc	09 10 13.1	+0.8
TOLK	Toolik Lake Re	151.94	320		PKPbc	09 10 14.5	+0.3
KTH	Kantishna Hill	151.98	309		PKPbc	09 10 14.7	+0.3
BPAW	Bear Paw Mtn.	152.10	310		PKPbc	09 10 14.4	-0.2

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*MEX **03** 08:55:42.8±0.7, 14°.05N×93°.08W, h10^{km}±21^{km}, MD4.0*

*NEIC **03** 08:55:43.2±2.1, 14°.19N±0°.07×93°.03W±0°.04, h23^{km}±6^{km}, mb4.0/1, Md4.0/20(MEX), Error ellipse: s-maj=10.6km s-min=5.6km az=180.0*

*IDC **03** 08:55:44.8±4.3, 14°.61N×92°.93W, h0^{km}, mb3.6/2, mb1 4.0/6, mb1mx3.6/41, mbtmp3.7/6, ML3.7/4, MS2.5/2, Ms1 2.5/2, ms1mx2.3/40, Error ellipse: s-maj=81.9km s-min=26.2km az=13.0*

*GCG **03** 08:55:48.7±0.5, 14°.03N×92°.53W, h14^{km}, MD4.1*

ISC 03 08:55:39.9±2.0**, 14°.10N**±0°.07×**93°.01W**±0°.04**, h5^{km}**±14^{km}**, n23, σ1^s.53**/38**, mb3.8**/3**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.08	42		Pn	08 56 01.6	-0.1
THIG					Sb	08 56 15.0	-0.5
THIG		1.08	42	eP	Pn	08 56 01.6	-0.1
THIG				i S	Sb	08 56 15.0	-0.5
STG3	Santiaguito 3,	1.52	66	eP	Pg	08 56 09.6	+0.5
PCIG		1.61	353		Pn	08 56 08.0	-1.0
PCIG					Sn	08 56 28.0	-2.2
PCIG		1.61	353	eP	Pn	08 56 08.0	-1.0
PCIG				eS	Sn	08 56 28.0	-2.2
FUG	Fuego 3	2.13	80	eP	Pb	08 56 18.3	-0.8
FUG				eS	Sb	08 56 45.1	-0.8
CCIG	Comitan	2.33	21		Pb	08 56 21.2	-1.4
CCIG				Sn	Sn	08 56 46.1	-2.0
CCIG	Comitan	2.33	21		Pn	08 56 18.6	-0.4
CCIG					Sn	08 56 48.5	+0.4
CCIG	Comitan	2.33	21	i P	Pn	08 56 18.6	-0.4
CCIG				i S	Sn	08 56 48.5	+0.4
IXG	Ixpaco	2.49	88	eP	Pn	08 56 22.7	+1.4
IXG				eS	Sn	08 56 47.9	-4.4
APG	El Apazote 4.2nm,0.3s,baz=288,slow=12,SNR=43	2.62	70	Pn	Pb	08 56 25.6	-2.0
APG	comp=Z,41nm,20.4s,baz=267,slow=30			LR	LR	08 56 56.4	
TGIG		2.67	358		Pn	08 56 24.2	+0.6
TGIG					Sn	08 56 55.8	-0.6
TGIG		2.67	358	eP	Pn	08 56 24.2	+0.6
TGIG				eS	Sn	08 56 55.8	-0.6
HUIG	Huatulco	3.43	299		Pn	08 56 33.0	-1.0
HUIG					Sn	08 57 12.5	-2.5
HUIG	Huatulco	3.43	299	eP	Pn	08 56 33.0	-1.0
HUIG				i S	Sn	08 57 12.5	-2.5
CMIG	Matias Romero 4.2nm,0.3s,baz=142,slow=13,SNR=68	3.48	329	Pn	Pn	08 56 35.5	+0.8
CMIG	Matias Romero	3.48	329		Pn	08 56 35.0	+0.3
CMIG					Sn	08 57 15.3	-1.1
CMIG	Matias Romero	3.48	329	eP	Pn	08 56 35.0	+0.3
CMIG				i S	Sn	08 57 15.3	-1.1
TEIG	Tepich 3.9nm,0.3s,baz=229,slow=24,SNR=52	7.59	36	Pn	Pn	08 57 32.0	+0.8
TEIG	comp=Z,83nm,20.4s,baz=139,slow=35			LR	LR	08 59 51.2	
TXAR	Lajitas Array 0.1nm,0.3s,baz=139,slow=7.2,SNR=3.0	18.09	329	P	P	08 59 54.2	+1.5
AMTX	Amarillo	22.13	341	P	P	09 00 36.1	-0.4
AMTX	comp=Z,7.9nm,1.2s			IAmb	IAmb	09 00 45.0	

NVAR	**Mina Array Bea**	**32.99**	**322**	P	**P**	**09 02 19.5**	**+3.4**
	comp=Z,0.5nm,0.7s,baz=121,slow=8.5,SNR=5.7						
YKA	**Yellowknife Ar**	**50.71**	**347**	P	**P**	**09 04 40.9**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=151,slow=7.6,SNR=14						

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*GCMT **03** 08:58:00.6±0.4, 13°.27N±0°.02×50°.50E±0°.04, h18^{km}±1^{km}, MW4.8/73, Moment Tensor Solution. s19,c21; s73,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.96±.15; M$_{\theta\theta}$1.73±.10; M$_{\phi\phi}$0.22±.09; M$_{r\theta}$0.06±.21; M$_{\theta\phi}$-0.24±.07; M$_{\phi r}$0.33±.30; Best double couple: M$_0$1.88900×10^{16} NP1:ϕ_s107.00000°, δ46.00000°, λ-78.00000°. NP2: ϕ_s271.00000°, δ46.00000°, λ-102.00000°. Principal axes: T 1.7690, Plg0.0000°, Azm9.0000°; N 0.2390, Plg9.0000°, Azm279.0000°; P -2.0100, Plg81.0000°, Azm100.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*OMAN **03** 08:58:01.6±1.1, 13°.41N×50°.78E, h6^{km}±15^{km}, ml3.8/3 Error ellipse: s-maj=24.3km s-min=1.6km az=107.0*

*IDC **03** 08:58:02.8±0.8, 13°.26N×50°.82E, h0^{km}, mb4.1/13, mb1 4.3/15, mb1mx3.9/58, mbtmp4.1/15, ML4.1/2, MS3.9/29, Ms1 3.9/29, ms1mx3.8/48, Error ellipse: s-maj=21.4km s-min=16.2km az=138.0*

*NEIC **03** 08:58:03.6±2.2, 13°.26N±0°.08×50°.86E±0°.05, h10^{km}±1^{km}, mb4.3/12, Error ellipse: s-maj=14.9km s-min=4.8km az=152.0*

ISC 03 08:58:03.6±0.6**, 13°.29N**±0°.08×**50°.89E**±0°.08**, h12^{km}, n59, σ1^{s}38**/42**, mb4.3**/18**, MS3.9**/26**, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCY	**Socotra**	**3.21**	**110**		**Pn**	**08 58 51.9**	**-2.1**
ABTO	**Aybut**	**4.66**	**30**	P	**Pn**	**08 59 12.1**	**-1.9**
ABTO				S	**Sn**	**09 00 08.1**	**0.0**
RBK	**Rabkut**	**5.27**	**37**	P	**Pn**	**08 59 20.7**	**-1.7**
RBK				S	**Sn**	**09 00 22.4**	**-0.7**
WHFO	**Wadi Hawf**	**5.38**	**31**	P	**Pn**	**08 59 22.1**	**-1.7**
	SNR=84						
DMTO	**DMTO**	**5.89**	**41**	P	**Pn**	**08 59 30.7**	**0.0**
	SNR=26						
ATD	**Arta Tunnel**	**8.05**	**258**	Pn	**Pn**	**09 00 00.4**	**-0.2**
	5.0nm,0.3s,baz=353,slow=4.7,SNR=15						
ATD				LR	LR	09 02 19.2	
	comp=Z,1μm,18.8s,baz=72,slow=32						
RAYN	**Ar Rayn**	**11.39**	**334**		**Pn**	**09 00 45.9**	**-0.4**
WSAR	**Wadi Sarin**	**12.32**	**35**	LR	LR	09 05 37.7	
	comp=Z,1μm,18.4s,baz=234,slow=37						
UOSS	**Minazif**	**12.63**	**23**	Pn	**Pn**	**09 01 03.8**	**+0.5**
KMBO	**Kilima Mbogo**	**19.70**	**224**	P	**Pn**	**09 02 33.3**	**-1.4**
	0.3nm,0.3s,baz=34,slow=12,SNR=8.2						
KMBO				LR	LR	09 09 58.3	
	comp=Z,394nm,18.1s,baz=94,slow=36						
KMBO	**Kilima Mbogo**	**19.70**	**224**	P	**P**	**09 02 31.5**	**-1.8**
EIL	**Elat**	**22.00**	**320**	LR	LR	09 11 17.9	
	comp=Z,394nm,19.0s,baz=135,slow=36						
HRA	**Herat**	**23.40**	**24**	P	**P**	**09 03 14.3**	**+1.7**
HRA				IAmb	IAmb	09 03 28.1	
	comp=Z,16nm,1.1s						
MMAI	**Mount Meron Ar**	**24.20**	**327**	LR	LR	09 13 10.6	
	comp=Z,260nm,18.3s,baz=130,slow=38						
MBAR	**Mbarara**	**24.28**	**237**	P	**P**	**09 03 23.1**	**+1.8**
	comp=Z,3.4nm,0.2s,baz=25,slow=7.4,SNR=5.2						
MBAR	**Mbarara**	**24.28**	**237**	P	**P**	**09 03 21.9**	**+0.6**
MBAR				IAmb	IAmb	09 03 25.4	
	comp=Z,10nm,1.1s						
GEYT	**Alibeck**	**25.37**	**13**	P	**P**	**09 03 31.9**	**+1.1**
	comp=Z,4.5nm,0.7s,baz=204,slow=14,SNR=6.9						
GEYT				LR	LR	09 15 33.7	
	comp=Z,907nm,18.7s,baz=190,slow=41						
GYA0B	**ALIBECK ARRAY**	**25.37**	**13**	P	**P**	**09 03 29.2**	**-1.6**
KBL	**Kabul**	**26.80**	**35**	P	**P**	**09 03 42.0**	**-2.0**
KBL				IAmb	IAmb	09 04 00.3	
	comp=Z,5.2nm,0.8s						
GNI	**Garni**	**27.30**	**350**	LR	LR	09 16 24.1	
	comp=Z,489nm,21.3s,baz=168,slow=40						
GNI	**Garni**	**27.30**	**350**	P	**P**	**09 03 46.8**	**-1.5**
PALK	**Pallekele**	**29.92**	**99**	LR	LR	09 13 58.2	
	comp=Z,69nm,18.0s,baz=313,slow=32						
BRTR	**Keskin Array B**	**30.41**	**333**	LR	LR	09 17 19.0	
	comp=Z,152nm,18.7s,baz=80,slow=38						
KBZ	**Khabaz**	**31.11**	**349**	P	**P**	**09 04 24.1**	**+2.2**
	comp=Z,2.7nm,0.7s,baz=161,slow=8.5,SNR=5.9						
KBZ				LR	LR	09 19 19.9	
	comp=Z,422nm,18.4s,baz=160,slow=41						
KVAR	**Kislovodsk Arr**	**31.36**	**349**	LR	LR	09 18 33.7	
	comp=Z,330nm,21.1s,baz=134,slow=39						
IDI	**Anoyia**	**32.09**	**318**	LR	LR	09 18 43.9	
	comp=Z,68nm,21.2s,baz=68,slow=39						
KSH	**Kashi**	**34.23**	**36**	P	**P**	**09 04 49.5**	**0.0**
KSH				pP	sP	09 04 53.9	+0.3
KSH				S	**S**	**09 10 13.7**	**-2.5**
KSH				sS	pS	09 10 20.3	+0.8
AAK	**Ala-Archa**	**35.67**	**30**	LR	LR	09 21 19.4	
	comp=Z,329nm,21.1s,baz=260,slow=39						
ABKAR	**Akbulak array**	**36.63**	**10**	P	**P**	**09 05 10.7**	**+0.8**
ABKAR				IAmb	IAmb	09 05 19.3	
	comp=Z,5.0nm,0.9s						
AKTO	**Aktyubinsk**	**37.50**	**7**	P	**P**	**09 05 19.4**	**+2.1**
	comp=Z,1.1nm,0.7s,baz=188,slow=7.8,SNR=9.3						
AKTO				LR	LR	09 24 17.9	
	comp=Z,325nm,18.9s,baz=196,slow=42						
BRDH	**Bariadhala**	**39.76**	**71**	LR	LR	09 21 14.8	
	comp=Z,198nm,19.9s,baz=316,slow=35						
AKASG	**Malin Array Be**	**41.27**	**339**	P	**P**	**09 05 48.8**	**+0.1**
	comp=Z,2.9nm,0.8s,baz=143,slow=7.0,SNR=9.4						
AKASG				LR	LR	09 26 30.1	
	comp=Z,120nm,20.3s,baz=295,slow=41						
MKAR	**Makanchi Array**	**42.53**	**32**	P	**P**	**09 06 00.9**	**+1.7**
	comp=Z,0.4nm,0.5s,baz=220,slow=9.2,SNR=5.6						
MKAR				LR	LR	09 26 03.9	
	comp=Z,83nm,21.1s,baz=304,slow=40						
MK31	**Makanchi Array**	**42.53**	**32**	P	**P**	**09 05 59.1**	**0.0**
BRVK	**Borovoye**	**42.58**	**17**	P	**P**	**09 06 00.8**	**+1.5**
BVAR	**Borovoye Array**	**42.58**	**17**	P	**P**	**09 06 00.6**	**+1.2**
	comp=Z,1.2nm,0.6s,baz=190,slow=7.5,SNR=9.4						
BVAR				PcP	**PcP**	**09 07 52.7**	**+1.1**
	comp=Z,1.3nm,0.7s,baz=252,slow=3.0,SNR=4.7						
OBN	**Obninsk**	**43.21**	**348**	LR	LR	09 26 12.3	
	comp=Z,48nm,19.2s,baz=174,slow=39						
KEST	**Kesra**	**43.48**	**308**	LR	LR	09 23 11.9	
	comp=Z,162nm,21.7s,baz=263,slow=35						
KURK	**Kurchatov**	**43.60**	**25**	P	**P**	**09 06 07.9**	**+0.2**
KURK				IAmb	IAmb	09 06 23.5	
	comp=Z,6.0nm,1.1s						
CMAR	**Chiang Mai Arr**	**46.40**	**77**	P	**P**	**09 06 32.5**	**+2.1**
	comp=Z,1.2nm,0.4s,baz=276,slow=8.5,SNR=5.7						
CMAR				LR	LR	09 27 03.8	
	comp=Z,29nm,18.0s,baz=280,slow=38						
GERES	**GERESS Array B**	**46.86**	**327**	P	**P**	**09 06 34.2**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=140,slow=14,SNR=3.6						
TOA0	**Torodi Ar. Sit**	**47.83**	**276**	P	**P**	**09 06 41.6**	**0.0**
TORD	**Torodi Ar. Bea**	**47.83**	**276**	P	**P**	**09 06 41.0**	**-0.6**
	comp=Z,2.1nm,0.7s,baz=89,slow=7.8,SNR=15						
KLMR	**Klimovskoe**	**48.21**	**353**	*e*	**P**	**09 06 41.6**	**-2.3**
KLMR				AMP		09 06 49.9	
	comp=Z,35nm,2.1s						
ZAA0	**Zalesovo Array**	**48.57**	**26**	P	**P**	**09 06 46.3**	**-0.5**
ZAA0				IAmb	IAmb	09 07 03.0	
	comp=Z,2.0nm,0.7s						
ZALV	**Zalesovo Beam**	**48.57**	**26**	P	**P**	**09 06 46.9**	**+0.1**
	comp=Z,2.0nm,0.7s,baz=236,slow=8.2,SNR=4.9						
FINES	**FINESS Array B**	**51.33**	**345**	LR	LR	09 30 42.4	
	comp=Z,248nm,18.2s,baz=249,slow=38						
DBIC	**Dimbokro**	**55.20**	**269**	LR	LR	09 32 50.4	
	comp=Z,54nm,18.7s,baz=344,slow=38						
NC405	**NORSAR Array S**	**55.52**	**338**	P	**P**	**09 07 38.0**	**-0.4**
NOA	**NORSAR Array B**	**55.66**	**338**	LR	LR	09 33 13.2	
	comp=Z,71nm,19.8s,baz=135,slow=38						
SONM	**Songino Array**	**57.30**	**41**	LR	LR	09 35 10.0	
	comp=Z,102nm,20.3s,baz=338,slow=39						
ARCES	**ARCESS Array B**	**58.46**	**350**	LR	LR	09 35 25.5	
	comp=Z,156nm,20.1s,baz=171,slow=38						
NRIK	**Noril'sk**	**60.62**	**14**	LR	LR	09 38 17.2	
	comp=Z,140nm,20.3s,baz=288,slow=40						
TIXI	**Tiksi**	**73.69**	**19**	LR	LR	09 46 47.6	
	comp=Z,99nm,18.4s,baz=206,slow=40						
MAW	**Mawson**	**81.14**	**175**	LR	LR	09 42 00.5	
	comp=Z,112nm,18.8s,baz=58,slow=32						
WRA	**Warramunga Arr**	**88.45**	**111**	P	**P**	**09 10 57.3**	**+0.9**
	comp=Z,2.3nm,0.7s,baz=300,slow=3.8,SNR=4.9						
ASAR	**Alice Springs**	**89.00**	**114**	P	**P**	**09 10 59.8**	**+0.8**
	comp=Z,1.6nm,0.9s,baz=291,slow=4.7,SNR=14						
PETK	**Petropavlovsk-**	**89.29**	**35**	LR	LR	09 53 32.9	
	comp=Z,46nm,18.3s,baz=239,slow=37						
NVAR	**Mina Array Bea**	**127.57**	**349**	PKP	**PKiKP**	**09 17 11.3**	**+1.3**
	comp=Z,1.0nm,0.8s,baz=11,slow=0.6,SNR=8.2						

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*IDC **03** 09:08:08.3±1.6, 24°.27S×115°.94W, h0^{km}, mb4.0/5, mb1 4.2/5, mb1mx3.9/27, mbtmp4.0/5, MS3.6/3, Ms1 3.6/3, ms1mx3.3/20, Error ellipse: s-maj=68.9km s-min=26.2km az=40.0*

ISC 03 09:08:09.8±1.7**, 24°.3S**±0°.4×**116°.0W**±0°.4**, h12^{km}, n17, σ0^{s}32**/9**, mb4.0**/5**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**6.64**	**116**	LR	LR	09 11 44.4	
	comp=Z,602nm,18.6s,baz=324,slow=33						
RAR	**Rarotonga**	**40.35**	**265**	LR	LR	09 26 59.5	
	comp=Z,72nm,21.3s,baz=90,slow=28						
PLCA	**Paso Flores**	**41.20**	**125**	P	**P**	**09 15 54.7**	**+0.2**
	3.5nm,1.0s,baz=303,slow=9.3,SNR=7.4						
PLCA				LR	LR	09 27 59.2	
	comp=Z,80nm,18.6s,baz=284,slow=29						
LPAZ	**La Paz**	**45.44**	**89**	P	**P**	**09 16 29.8**	**+0.2**
	2.3nm,0.7s,baz=281,slow=3.7,SNR=11						
BDFB	**Brasilia**	**63.96**	**96**	P	**P**	**09 18 43.0**	**-0.5**
	3.0nm,0.6s,baz=211,slow=7.8,SNR=4.8						
PDAR	**Pinedale Array**	**67.02**	**5**	P	**P**	**09 19 02.8**	**0.0**
	0.3nm,0.7s,baz=158,slow=4.8,SNR=3.9						
H11S2	**WAKE ISLAND Hy**	**86.47**	**292**	T	T	10 56 32.3	
	baz=118,slow=75,SNR=112						
H11S1	**WAKE ISLAND Hy**	**86.48**	**292**	T	T	10 56 35.2	
	baz=118,slow=75,SNR=186						
H11S3	**WAKE ISLAND Hy**	**86.49**	**292**	T	T	10 56 33.7	
	baz=118,slow=75,SNR=144						
YKA	**Yellowknife Ar**	**86.52**	**1**	P	**P**	**09 20 52.2**	**+0.2**
	0.5nm,0.9s,baz=177,slow=5.0,SNR=7.9						
H11N3	**WAKE ISLAND Hy**	**86.86**	**293**	T	T	10 57 03.9	
	baz=114,slow=77,SNR=20						
H11N1	**WAKE ISLAND Hy**	**86.87**	**293**	T	T	10 57 05.4	
	baz=114,slow=77,SNR=23						
H11N2	**WAKE ISLAND Hy**	**86.87**	**293**	T	T	10 57 06.2	
	baz=114,slow=77,SNR=31						
ZALV	**Zalesovo Beam**	**146.55**	**338**	PKPbc	**PKPab**	**09 27 52.1**	**+0.3**
	1.1nm,0.6s,baz=259,slow=1.5,SNR=3.8						
BRTR	**Keskin Array B**	**150.21**	**52**	PKPbc	**PKPbc**	**09 28 01.1**	**0.0**
	0.2nm,0.3s,baz=48,slow=2.1,SNR=3.6						
BVAR	**Borovoye Array**	**150.93**	**352**	PKPbc	**PKPbc**	**09 28 02.0**	**-0.1**
	0.5nm,0.6s,baz=27,slow=0.3,SNR=4.3						
MKAR	**Makanchi Array**	**153.21**	**331**	PKPbc	**PKPbc**	**09 28 07.2**	**-0.3**
	0.4nm,0.8s,baz=50,slow=3.8,SNR=4.4						

NNC 03 09:42:51.9±0.7**, 50°.88N×73°.66E, h0^{km}, mb3.6, mpv3.6, 8C-4D, Error ellipse: s-maj=8.4km s-min=4.5km az=38.0, Suspected Mining explosion., Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRVK	**Borovoye**	**3.02**	**318**	⇓Pg	Pb	09 43 47.6	+1.1
	6.9nm,1.2s						
BRVK				⇑Lg	Lg	09 44 27.3	
	89nm,0.9s						
KURBB	**Kurchatov Arra**	**3.10**	**93**	⇓Pg	Pb	09 43 47.5	-0.4
	6.0nm,0.6s,baz=278,slow=15						
KURBB				⇑Lg	Lg	09 44 30.6	
	79nm,0.8s,baz=275,slow=27						
KURK	**Kurchatov**	**3.15**	**91**	⇑Pg	Pb	09 43 48.5	-0.3
	6.2nm,0.8s						
KURK				⇑Lg	Lg	09 44 33.1	
	56nm,0.9s						
TDK	**Taldyqorghan**	**6.69**	**150**	Pg	Pb	09 44 53.4	+4.4
	32nm,0.2s						
TDK				Lg	Lg	09 46 23.4	
	27nm,0.2s						
KAPS	**Kapalarasan**	**6.77**	**144**	Pg	Pb	09 44 55.8	+5.4
	0.6nm,0.5s						
KAPS				Lg	Lg	09 46 25.5	
	11nm,0.9s						
MAKZ	**Makanchi**	**6.83**	**123**	⇓Sn	Sn	09 45 53.8	+2.0
	3.4nm,0.9s						
MAKZ				⇑Lg	Lg	09 46 28.2	
	16nm,0.9s						
MK31	**Makanchi Array**	**7.01**	**122**	⇑Sn	Sn	09 46 00.2	+4.0
	3.5nm,0.8s						
MK31				⇑Lg	Lg	09 46 34.9	
	14nm,0.9s,baz=318,slow=25,SNR=4.7						
ARXS	**Arharly**	**7.24**	**155**	Pg	Pb	09 45 02.7	+4.3
	0.8nm,0.2s						
ARXS				Lg	Lg	09 46 38.6	
	5.6nm,0.9s						
CHKK	**Chushkaly**	**7.38**	**161**	Pg	Pb	09 45 07.0	+6.2
	2.4nm,0.1s						
CHKK				Lg	Lg	09 46 44.8	
	6.8nm,0.3s						
KTBS	**Karatobe**	**7.46**	**163**	Pg	Pb	09 45 06.6	+4.5
	1.5nm,0.5s						
KTBS				Lg	Lg	09 46 45.5	
	7.2nm,0.8s						
DJR	**Jarkent**	**7.75**	**145**	Pg	Pb	09 45 13.2	+6.2
	0.4nm,0.2s						
DJR				Lg	Lg	09 46 55.3	
	5.7nm,0.8s						
KK31	**Karatay Array**	**8.07**	**197**	⇓Lg	Lg	09 47 09.7	
	3.9nm,0.8s						
AAK	**Ala-Archa**	**8.26**	**176**	⇑Lg	Lg	09 47 15.0	
	18nm,0.9s						

YARS 03 09:56:12.7±0.0**, 70°.78N×139°.94E, h22^{km}, ML3.5**/6**, Near north coast of eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DEPR	**Deputatskiy**	**1.39**	**181**	*i* Pg	Pb	09 56 38.5	+0.5
	0.1nm,0.3s						
DEPR				*e*Sg	Sb	09 56 56.0	+0.7
	0.3nm,0.5s						
DEPR				*e*Sg	Sb	09 56 56.0	+0.7
	0.4nm,0.7s						
YBGR	**Belaya Gora**	**3.14**	**133**	*e*Pn	Pn	09 57 02.2	+1.4
YBGR				*e*Pg	Pb	09 57 09.5	+1.8
	0.0nm,0.3s						
YBGR				*e*Sg	Sb	09 57 50.5	+5.0
	0.3nm,0.8s						
TIXI	**Tiksi**	**3.69**	**289**	*e*Pn	Pn	09 57 08.9	+0.6
TIXI				*e*Pg	Pb	09 57 19.1	+2.1
	0.0nm,0.4s						
TIXI				*e*Sn	Sn	09 57 52.4	+1.4
TIXI				*e*Sg	Sb	09 58 07.9	+6.7
	0.0nm,0.3s						
TIXI				*e*Sg	Sb	09 58 07.9	+6.7
	0.0nm,0.2s						
MOMR	**Moma**	**4.49**	**163**	*e*Pn	Pn	09 57 20.7	+1.4
MOMR				*e*Pg	Pb	09 57 34.3	+3.5
	0.0nm,0.9s						
MOMR				*e*Sn	Sn	09 58 11.2	+0.4
MOMR				*e*Sg	Sb	09 58 33.5	+9.1
	0.2nm,1.3s						
MOMR				*e*Sg	Sb	09 58 33.5	+9.1
	0.1nm,0.8s						
UNR	**Ust'-Nera**	**6.36**	**167**	*e*Sg	Sb	09 59 32.4	+14

SOME 03 10:02:00.5, 42°.97N×80°.20E, h15^{km}, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	**Uzynbulak**	**0.88**	**282**	*e*P	Pb	10 02 17.4	-0.2
	0.9nm,0.1s						
UZB				*e*S	Sn	10 02 30.3	-0.8
	9.3nm,0.2s						
DJR	**Jarkent**	**1.40**	**348**	*e*P	Pb	10 02 26.7	+0.4
	0.5nm,0.1s						
DJR				*e*S	Sg	10 02 46.2	+0.7
	6.6nm,0.1s						
ARXS	**Arharly**	**2.13**	**307**	*e*P	Pb	10 02 39.1	+0.3
	0.9nm,0.2s						
ARXS				*e*S	Sb	10 03 07.0	+1.9
	9.9nm,0.4s						
KOTS	**Kotyrbulak**	**2.28**	**278**	*e*P	Pb	10 02 42.0	+0.6
	2.2nm,0.1s						
KOTS				*e*S	Sg	10 03 11.6	-2.1
	16nm,0.5s						
TNSS	**Tian-Shan**	**2.39**	**273**	*e*P	Pb	10 02 44.6	+1.2
	1.5nm,0.2s						
TNSS				*e*S	Sg	10 03 15.9	-1.4
	3.3nm,0.4s						
KAPS	**Kapalarasan**	**2.40**	**346**	*e*P	Pb	10 02 44.1	+0.8
	0.4nm,0.2s						
KAPS				*e*S	Sb	10 03 15.0	+2.2
	6.0nm,0.3s						

KRNET 03 10:02:39.9±0.1**, 42°.65N×78°.49E, h30^{km}, mb1.8, 4C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.18**	**201**	⇑*i*P	Pb	10 02 46.1	0.0
	baz=98						
PRZ				⇑*i*S	Sb	10 02 49.9	-0.5
	baz=98						
ANVS	**Anan'yevo**	**0.62**	**283**	⇓*i*P	Pb	10 02 52.4	0.0
	baz=83						
ANVS				⇓*i*S	Sb	10 03 01.1	+0.1
	baz=83						
KDJ	**Kajisay**	**1.10**	**242**	⇑*e*P	Pb	10 03 00.3	-0.1
	baz=42						
KDJ				⇑*i*S	Sb	10 03 15.2	+0.7
	baz=42						
ULHL	**Ulahol**	**1.71**	**257**	⇓*e*P	Pb	10 03 09.8	-1.0
	baz=57						
ULHL				⇓*i*S	Sb	10 03 31.8	-0.2
	baz=57						
BOOM	**Boomskoye usch**	**1.89**	**266**	⇓*e*P	Pb	10 03 12.4	-1.4
	baz=66						
BOOM				⇓*i*S	Sb	10 03 35.8	-1.3
	baz=66						

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*ISK **03** 10:11:26.6, 39°.38N×29°.31E, h4^{km}, ML2.1/6, Suspected Mining explosion.*

DDA 03 10:11:30.4, 39°.66N×29°.45E, h7^{km}±7^{km}, ML1.8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULDT	**Uludag**	**0.54**	**333**	*i* P	Pg	10 11 40.7	-0.1
ULDT				*i* S	Sg	10 11 48.9	+0.9
GDZ	**Gediz**	**0.57**	**178**	*i* P	Pg	10 11 41.5	0.0
GDZ				*i* S	Sb	10 11 50.5	-0.7
DURS	**Dursunbey**	**0.76**	**266**	*i* P	Pg	10 11 44.6	-0.4
DURS				*i* S	Sb	10 11 57.5	+1.0
BORA	**Eskisehir**	**0.80**	**74**	PG	Pb	10 11 46.7	0.0
BORA	**Eskisehir**	**0.80**	**74**	*i* P	Pg	10 11 44.0	-1.8
BORA				*i* S	Sb	10 11 59.0	+1.1
YLV	**Yalova**	**0.91**	**356**	PN	Pn	10 11 49.9	+0.2
SRCK	**Saricakaya, Es**	**0.98**	**67**	PN	Pn	10 11 50.3	-0.3
SRCK				SN	Sn	10 12 07.7	+3.0
SRCK	**Saricakaya, Es**	**0.98**	**67**	*i* P	Pg	10 11 49.1	-0.1
SRCK				*i* S	Sn	10 12 06.4	+1.7
SRCK				IAML		10 12 10.0	
	comp=N,25nm,0.3s						
USAK	**Uak-Merkez**	**1.00**	**200**	*i* P	Pg	10 11 49.2	-0.4
USAK				*i* S	Sn	10 12 07.4	+2.0
ARMT	**Armutlu**	**1.01**	**334**	PN	Pb	10 11 50.6	+0.3
GULT	**Gulveren**	**1.12**	**46**	PN	Pn	10 11 53.8	+1.2
BALB	**Balikesir**	**1.22**	**270**	PN	Pb	10 11 50.7	-3.0
KHAL	**Karahalli**	**1.29**	**179**	*i* P	Pn	10 11 54.8	-0.2
KHAL				*i* S	Sn	10 12 14.1	+1.7
EDC	**Edincik**	**1.40**	**300**	PN	Pn	10 11 55.3	-1.1

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*SKO **03** 10:12:58.6, 40°.56N×18°.68E, h20^{km}*

*IDC **03** 10:13:05.6±1.0, 40°.81N×19°.72E, h0^{km}, mb3.8/11, mb1 3.8/17, mb1mx3.7/55, mbtmp3.7/17, ML3.3/6, MS2.9/2, Ms1 3.0/2, ms1mx2.5/39, Error ellipse: s-maj=18.1km s-min=13.0km az=29.0*

*THE **03** 10:13:05.2, 40°.88N×19°.51E, h0^{km}±3^{km}, ML3.3/6, Error ellipse: s-maj=6.1km s-min=2.2km az=329.0*

*NEIC **03** 10:13:05.8±3.4, 40°.66N±0°.03×19°.59E±0°.01, h3^{km}±6^{km}, Error ellipse: s-maj=4.4km s-min=1.2km az=191.0*

*PDG **03** 10:13:06.9±0.6, 40°.76N×19°.52E, h11^{km}±1^{km}, ML3.3/13, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*

*TIR **03** 10:13:07.2, 40°.70N×19°.69E, h3^{km}, Md4.0/6*

ISC 03 10:13:07.7±0.9**, 40°.67N**±0°.02×**19°.62E**±0°.02**, h19^{km}**±3^{km}**, n104, σ1^{s}82**/120**, mb3.9**/11**, 9C-9D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLO	**Vlora**	**0.22**	**204**	*i* PG	**Pg**	**10 13 13.2**	**+0.1**
VLO				*i* SG	**Sg**	**10 13 18.4**	**+1.7**
TPE	**Tepelena**	**0.48**	**141**	*i* PG	**Pg**	**10 13 15.9**	**-1.6**
TPE				*i* SG	**Sb**	**10 13 24.7**	**+0.3**
TIR	**Tirane**	**0.70**	**15**	⇓P	**Pg**	**10 13 20.2**	**-1.3**
TIR	**Tirane**	**0.70**	**15**		**Pg**	**10 13 20.1**	**-1.4**
KEK	**Kerkira**	**0.97**	**172**	P	**Pn**	**10 13 27.6**	**+1.3**
OHR	**Ohrid**	**1.00**	**64**	⇓*i*Pn	**Pg**	**10 13 24.4**	**-2.7**
SCTE	**Santa Cesarea**	**1.06**	**236**		**Pn**	**10 13 28.6**	**+1.0**
NEST	**Nestorio**	**1.12**	**103**	P	**Pg**	**10 13 27.2**	**-2.3**
NEST				S	**Sn**	**10 13 47.7**	**+4.2**
	828nm,0.5s						
PHP	**Peshkopia**	**1.19**	**31**	*i* PG	**Sg**	**10 13 47.2**	**+0.9**
PENT	**Pentalofos**	**1.26**	**112**	P	**Pg**	**10 13 30.1**	**-1.9**
PENT				S	**Sn**	**10 13 50.9**	**+4.1**
	940nm,0.8s						
IGT	**Igoumenitsa**	**1.27**	**154**	P	**Pn**	**10 13 31.5**	**+1.1**
IGT	**Igoumenitsa**	**1.27**	**154**	*i* PN	**Pn**	**10 13 32.0**	**+1.6**
IGT				*i* SN	**Sn**	**10 13 52.4**	**+5.5**
PUK	**Puka**	**1.38**	**9**	*i* PN	**Pb**	**10 13 33.0**	**-0.1**
PUK				*i* SN	**Sn**	**10 13 57.5**	**+7.6**
KPRO	**Kipourio**	**1.52**	**118**	P	**Pb**	**10 13 34.8**	**-0.5**
KPRO				S	**Sg**	**10 13 59.3**	**+2.6**
	955nm,0.7s						
DRME	**Dracevica, Mon**	**1.55**	**348**	*e*Pn	**Pn**	**10 13 34.5**	**+0.2**
KZN	**Kozani**	**1.68**	**102**	P	**Pb**	**10 13 37.5**	**-0.6**
KZN				S	**Sg**	**10 14 02.3**	**+0.3**
	655nm,0.6s						
BCI	**Bajram Curri**	**1.73**	**11**	*i* PN	**Pb**	**10 13 38.8**	**0.0**
BCI				*i* SN	**Sg**	**10 14 04.6**	**+1.2**
PDG	**Podgorica**	**1.78**	**351**	⇓P	**Pn**	**10 13 38.0**	**+0.6**
PDG	**Podgorica**	**1.78**	**351**	*e*Pn	**Pn**	**10 13 37.8**	**+0.4**
PDG	**Podgorica**	**1.78**	**351**		**Pn**	**10 13 37.7**	**+0.4**
TAR1	**Taranto**	**1.78**	**266**	*e*Pn	**Pg**	**10 13 42.4**	**+0.4**
SKO	**Skopje**	**1.89**	**46**	*i* Pn	**Pb**	**10 13 40.7**	**-0.9**
SKO				*i* Sn	**Sg**	**10 14 07.8**	**-0.8**
HCY	**Herceg Novi**	**1.96**	**335**	*e*Pn	**Pn**	**10 13 39.1**	**-0.9**
TSLK	**Tsoukalades, L**	**2.01**	**156**	P	**Pb**	**10 13 43.1**	**-0.6**
LKD2	**Lefkada island**	**2.05**	**157**	P	**Pb**	**10 13 42.5**	**-1.8**
LKD2				S	**Sg**	**10 14 13.5**	**-0.1**
	548nm,0.8s						
BAI	**Bari**	**2.12**	**283**	*e*Pn	**Pg**	**10 13 47.5**	**-0.9**
GRG	**Griva**	**2.13**	**81**	P	**Pn**	**10 13 43.5**	**+1.2**
THL	**Klokotos Trika**	**2.15**	**120**	P	**Pb**	**10 13 44.9**	**-1.1**
THL				S	**Sg**	**10 14 15.3**	**-1.5**
	268nm,0.9s						
STIP	**Stip**	**2.19**	**61**	⇓*i*Pn	**Pb**	**10 13 46.7**	**-0.1**
MATE	**Matera**	**2.21**	**270**	⇑P	**Pn**	**10 13 44.1**	**+0.7**
SG1	**Sgolgore (BA)**	**2.24**	**275**	*e*Pn	**Pg**	**10 13 47.7**	**-3.0**
TREB	**Trebinje**	**2.25**	**336**	*e*Pn	**Pn**	**10 13 42.9**	**-1.1**
LIT	**Litokhoron**	**2.27**	**104**	P	**Pn**	**10 13 46.0**	**+1.8**
LIT	**Litokhoron**	**2.27**	**104**		**Pb**	**10 13 46.4**	**-1.7**
VAY	**Valandovo**	**2.33**	**73**	*i* P	**Pn**	**10 13 46.2**	**+1.3**
VAY	**Valandovo**	**2.33**	**73**	⇓*i*Pn	**Pn**	**10 13 46.3**	**+1.3**
VAY				*i* Sn	**Sg**	**10 14 22.4**	**-0.2**
BRY	**Bratogost**	**2.37**	**340**	*e*Pn	**Pn**	**10 13 44.8**	**-0.9**
UPM	**Unac-Piva**	**2.58**	**348**	*e*Pn	**Pn**	**10 13 48.7**	**0.0**
STON	**Ston**	**2.62**	**327**	*e*Pn	**Pn**	**10 13 48.1**	**-0.9**
TIP	**Timpagrande**	**2.66**	**237**	P	**Pn**	**10 13 50.6**	**+1.0**
TIP	**Timpagrande**	**2.66**	**237**	⇑P	**Pn**	**10 13 50.7**	**+1.2**
TIP	**Timpagrande**	**2.66**	**237**		**Pn**	**10 13 50.5**	**+1.0**
AGG	**Agios Georgios**	**2.66**	**127**		**Pb**	**10 13 53.2**	**-1.6**
ACER	**Acerenza**	**2.79**	**274**		**Pb**	**10 13 56.1**	**-1.0**
KKB	**Krupnik**	**2.87**	**64**	*i* P	**Pn**	**10 13 53.1**	**+0.6**
RUDO	**Rudo**	**2.95**	**357**	*e*Pn	**Pn**	**10 13 55.8**	**+2.3**
SGRT	**San Giovanni R**	**3.12**	**292**		**Pn**	**10 13 56.5**	**+0.6**
BBLS	**Lazići**	**3.19**	**357**	*e*Pn	**Pb**	**10 14 01.8**	**-2.1**
MMB	**Musomiste**	**3.24**	**72**	*i* P	**Pn**	**10 13 58.2**	**+0.7**
VTS	**Vitosha**	**3.34**	**53**	⇓P	**Pn**	**10 14 00.7**	**+1.8**
VTS	**Vitosha**	**3.34**	**53**	*i* P	**Pn**	**10 14 00.1**	**+1.1**
VTS	**Vitosha**	**3.34**	**53**		**Pn**	**10 14 00.3**	**+1.3**
DIVS	**Divibare**	**3.43**	**5**	*e*Pn	**Pn**	**10 14 00.2**	**-0.1**
HAPS	**Han Pijesak,Bl**	**3.45**	**352**	*e*Pn	**Pn**	**10 13 58.0**	**-2.5**
BLKB	**Belogradchik**	**3.72**	**37**	⇓S	**Sn**	**10 14 49.5**	**+2.0**
PAOL	**Paolisi**	**3.85**	**277**		**Pn**	**10 14 08.9**	**+3.0**
TEKS	**Tekeris**	**3.87**	**359**	*e*Pn	**Pn**	**10 14 08.2**	**+1.9**
ITM	**Ithomi**	**3.93**	**152**		**Pn**	**10 14 09.8**	**+2.8**
MPEP	**Malo Peshtene**	**4.08**	**48**	*i* P	**Pn**	**10 14 10.8**	**+1.8**
MGRS	**Mrkonjic Grad**	**4.18**	**334**	*e*Pn	**Pn**	**10 14 11.6**	**+1.1**

MDVR	Moldovita	4.39	20	⇑P	Pn	10 14 15.3	+2.0
INTR	Introdacqua	4.50	289		Pn	10 14 16.2	+1.3
PLVB	Pleven	4.61	52	⇑P	Pn	10 14 18.1	+1.8
ALN	Alexandroupoli	4.89	85		Pn	10 14 21.9	+1.8
BZS	Buzias	5.15	16	⇓P	Pn	10 14 24.0	+0.2
ELND	Elena	5.19	62	⇑P	Pn	10 14 26.8	+2.5
GZR	Gura Zlata	5.25	25	⇓P	Pn	10 14 26.9	+1.6
NRCA	Norcia	5.32	296		Pn	10 14 26.9	+0.7
SIRR	Siria	5.79	14	⇑P	Pn	10 14 34.5	+2.0
MURB	Monte Urbino	5.88	298		Pn	10 14 34.9	+1.0
CRES	Cresnjev	5.98	331	*e*Pn	Pn	10 14 34.5	-0.7
VOIR		6.20	38	⇑P	Pn	10 14 40.4	+2.1
CEY	Cerknica	6.33	325	*e*Pn	Pn	10 14 39.6	-0.3
TRI	Trieste	6.60	322		Pn	10 14 42.4	-1.3
MLR	Muntele Rosu	6.68	42	Pn	Pn	10 14 43.4	-1.5
	0.3nm,0.3s,baz=229,slow=9.3,SNR=2.8						
MLR	Muntele Rosu	6.68	42	⇑P	Pn	10 14 46.5	+1.6
IDI	Anoyia	6.80	141	Pn	Pn	10 14 47.6	+1.1
	0.3nm,0.3s,baz=335,slow=14,SNR=3.1						
IDI				Sn	Sn	10 16 00.4	-3.0
	1.0nm,0.3s,baz=314,slow=18,SNR=3.2						
IDI				LR	LR	10 18 05.3	
	comp=Z,85nm,21.4s,baz=296,slow=44						
OBKA	Obir	6.89	329	*e*Pn	Pn	10 14 48.2	+0.4
	1.8nm,0.2s						
OBKA				*e*Sn	Sn	10 16 07.5	+1.7
	5.7nm,0.3s						
VRI	Vrincioaia	7.34	43	⇑P	Pn	10 14 54.5	+0.7
TEOL	Teolo	7.47	311		Pn	10 14 54.6	-1.1
VYHS	Vyhne	7.84	356	*e*PN	Pn	10 14 59.8	-0.9
VYHS				*e*SN	Sn	10 16 21.1	-7.8
KBA	Koelnbreinsper	7.84	327	*e*Pn	Pn	10 15 00.3	-0.5
	0.8nm,0.3s						
BUR08	Bucovina Ar. S	8.04	28		Pn	10 15 07.2	+3.7
MOA	Molln	8.13	334	*e*Pn	Pn	10 15 05.4	+0.6
	1.5nm,0.3s						
WTTA	Wattenberg	8.74	322	*e*Pn	Pn	10 15 13.9	+0.7
	1.2nm,0.2s						
SQTA	Sankt Quirin	8.92	320	*e*Pn	Pn	10 15 16.4	+0.8
	3.6nm,0.3s						
FETA	Feichten	9.02	318	Pn	Pn	10 15 17.9	+0.8
	0.8nm,0.3s						
MOTA	Moosalm	9.06	320	*e*Pn	Pn	10 15 17.4	-0.1
	4.3nm,0.4s,SNR=5.3						
GERES	GERESS Array B	9.19	335	Pn	Pn	10 15 18.0	-1.2
	0.4nm,0.3s,baz=155,slow=14,SNR=7.5						
DAVOX	Davos/Dischmat	9.32	314	Pn	Pn	10 15 21.9	+0.7
	0.7nm,0.3s,baz=91,slow=5.7,SNR=3.8						
DAVOX				Sn	Sn	10 16 59.0	-6.5
	0.1nm,0.3s,baz=163,slow=20,SNR=2.1						
BRTR	Keskin Array B	10.77	90	Pn	Pn	10 15 41.4	+0.4
	0.1nm,0.3s,baz=278,slow=15,SNR=2.9						
HFS	Hagfors	19.83	351	P	P	10 17 37.9	+0.8
	0.1nm,0.3s,baz=159,slow=12,SNR=2.9						
EKA	Eskdalemuir Ar	21.01	322	P	P	10 17 50.3	+0.4
	3.9nm,0.8s,baz=114,slow=8.2,SNR=5.4						
NOA	NORSAR Array B	21.04	349	P	P	10 17 51.3	+1.1
	1.7nm,0.9s,baz=159,slow=8.7,SNR=3.8						
NOA				LR	LR	10 25 54.4	
	comp=Z,40nm,20.7s,baz=260,slow=37						
FINES	FINESS Array B	21.17	9	P	P	10 17 50.5	-1.1
	0.9nm,0.6s,baz=161,slow=13,SNR=2.7						
KLMR	Klimovskoe	23.62	25	*e*	P	10 18 15.0	-2.3
KLMR				AMP		10 18 23.7	
	comp=Z,18nm,1.9s						
AKTO	Aktyubinsk	28.32	57	P	P	10 18 59.2	-0.9
	comp=Z,0.8nm,0.5s,baz=244,slow=17,SNR=3.3						
GEYT	Alibeck	29.76	83	P	P	10 19 12.6	-0.4
	comp=Z,1.4nm,0.5s,baz=294,slow=7.7,SNR=2.9						
TORD	Torodi Ar. Bea	31.60	215	P	P	10 19 30.2	+0.9
	comp=Z,0.6nm,0.9s,baz=29,slow=7.1,SNR=3.3						
ZALV	Zalesovo Beam	44.58	50	P	P	10 21 18.6	+0.3
	comp=Z,2.9nm,0.6s,baz=280,slow=8.7,SNR=14						
MKAR	Makanchi Array	44.63	60	P	P	10 21 18.4	-0.4
	comp=Z,0.7nm,0.5s,baz=284,slow=7.2,SNR=17						
SONM	Songino Array	59.43	51	P	P	10 23 09.8	+0.6
	comp=Z,1.2nm,0.9s,baz=284,slow=8.4,SNR=8.7						
YKA	Yellowknife Ar	70.81	339	P	P	10 24 23.3	+0.8
	comp=Z,0.8nm,0.8s,baz=38,slow=5.4,SNR=15						
KSRS	Korea Array	78.29	50	P	P	10 25 07.6	+1.2
	comp=Z,1.3nm,0.8s,baz=301,slow=5.4,SNR=3.2						

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*IDC **03** 10:17:35.4±2.2, 4°.16S×102°.44E, h0km, mb4.0/7, mb1 4.1/7, mb1mx3.7/46, mbtmp4.0/7, Error ellipse: s-maj=107.6km s-min=19.6km az=52.0*

*NEIC **03** 10:17:48.2±1.0, 4°.2S±0°.3×102°.6E±0°.2, h104km±6km, mb4.3/5, Error ellipse: s-maj=42.9km s-min=17.1km az=212.0*

*DJA **03** 10:17:49.7±0.4, 4°S±6°×10°3E±°, h83km±4km, M4.0/9, mb4.3/1, MLv3.9/9*

ISC 03 10:17:48.6±0.8**, 4°.1S**±0°.1×**102°.75E**±0°.09**, h103**km±6km**, n26, σ0s.57**/31**, mb4.1**/10**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	0.36	145	P	Pn	10 18 03.9	0.0
MNAI				S	Sn	10 18 14.5	-0.8
MNAI	Manna	0.36	145		Pn	10 18 03.9	0.0
MNAI				Sn	Sn	10 18 15.4	+0.2
KSI	Kapahiang	0.44	339	P	Pn	10 18 04.2	-0.2
KSI				S	Sn	10 18 16.7	+0.5
MDSI	Maura Dua	1.48	107	P	Pn	10 18 15.0	+0.2
MDSI				S	Sn	10 18 34.6	-0.1
LWLI	Liwa	1.61	126	P	Pn	10 18 17.3	+0.7
KLSI		2.07	108	P	Pn	10 18 23.1	+0.9
KLSI				S	Sn	10 18 47.9	0.0
KASI	Kota Agung	2.27	130	P	Pn	10 18 25.1	+0.3
KRJI	Kerinci	2.34	327	P	Pn	10 18 27.2	+1.3
PPSI	Pulau Pagai	3.02	295	P	Pn	10 18 36.0	+1.2
SDSI	Sungai Dareh	3.38	337	P	Pn	10 18 40.0	+0.5
PDSI	Padang	3.88	324	P	Pn	10 18 47.1	+0.9
SISI	Saibi	4.56	307	P	Pn	10 18 56.1	+0.7
PBSI	Pulau Batu	5.98	312	P	Pn	10 19 15.0	+0.2
UGM	Wanagama	8.62	117	Pn	Pn	10 19 50.8	+0.1
WB0	Warramunga Arr	34.57	119	P	P	10 24 27.8	0.0
WRA	Warramunga Arr	34.59	120	P	P	10 24 27.9	-0.1
	0.3nm,0.4s,baz=302,slow=8.6,SNR=9.2						
WR0	Warramunga Arr	34.77	120	P	P	10 24 29.1	-0.4
WR0				IAmb	IAmb	10 24 32.8	
	comp=Z,6.8nm,1.4s						
ASAR	Alice Springs	35.83	126	P	P	10 24 39.0	+0.4
	comp=Z,0.6nm,0.4s,baz=299,slow=7.7,SNR=32						
SONM	Songino Array	51.78	3	P	P	10 26 46.1	+0.2
	comp=Z,0.6nm,0.5s,baz=184,slow=9.3,SNR=6.7						
MK31	Makanchi Array	53.77	343	P	P	10 26 59.9	-0.5
MKAR	Makanchi Array	53.77	343	P	P	10 26 59.9	-0.6
	comp=Z,0.8nm,0.5s,baz=152,slow=8.9,SNR=20						
KURK	Kurchatov	58.37	342	P	P	10 27 33.2	+0.1
KURK				IAmb	IAmb	10 27 48.8	
	comp=Z,3.7nm,1.5s						
ZALV	Zalesovo Beam	59.72	348	P	P	10 27 41.5	-0.8
	comp=Z,3.7nm,0.3s,baz=163,slow=6.2,SNR=21						
ABKAR	Akbulak array	64.77	331	P	P	10 28 15.8	-0.3
ABKAR				IAmb	IAmb	10 28 16.2	
	comp=Z,2.4nm,0.7s						
FINES	FINESS Array B	87.20	332	P	P	10 30 23.3	+0.2
	comp=Z,1.6nm,0.9s,baz=101,slow=12,SNR=4.0						
ARCES	ARCESS Array B	89.34	340	P	P	10 30 33.1	0.0
	comp=Z,2.6nm,1.0s,baz=104,slow=6.6,SNR=5.0						

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*NIED **03** 10:29:00, 38°.70N×142°.30E, h32km, Mw3.6 Best double couple: $M_0$2.85000×10^{14} NP1:ϕ_s8.00000°, δ87.00000°, λ104.00000°. NP2:ϕ_s111.00000°, δ14.00000°, λ13.00000°.*

*JMA **03** 10:29:50.7±0.1, 38°.68N×142°.31E, h35km±2km, M3.8*

JMA Felt I J1.

*IDC **03** 10:29:53.4±2.6, 38°.65N×142°.24E, h52km±22km, mb3.4/8, mb1 3.5/13, mb1mx3.4/45, mbtmp3.6/13, ML3.1/4, MS2.7/1, Ms1 2.7/1, ms1mx2.4/20, Error ellipse: s-maj=25.4km s-min=14.6km az=119.0*

ISC 03 10:29:51.2±1.8**, 38°.67N**±0°.06×**142°.28E**±0°.08**, h28**km±11km**, n31, σ1s.07**/35**, mb3.7**/8**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.63	310	P	Pb	10 30 03.4	-0.3
OFUJ				S	Sb	10 30 12.0	-0.2
JKMT	Kesennumamotoy	0.65	283	P	Pb	10 30 03.7	-0.3
JKMT				S	Sb	10 30 12.6	-0.1
JIKH	Ishinomakikobu	0.74	241	P	Pn	10 30 04.8	-0.9
JIKH				S	Sb	10 30 14.4	-0.8
JIO	Ouri	0.77	254	P	Pn	10 30 05.2	-0.9
JIO				S	Sb	10 30 15.2	-0.8
JMK	Ichinoseki	0.88	289	P	Pn	10 30 07.2	-0.5
JMK				*e*S	Sn	10 30 18.7	-0.8
JOM	Ohasama	1.11	316	P	Pn	10 30 10.6	-0.3
JOM				S	Sn	10 30 25.0	-0.3
JTH	Tanohata	1.31	346	P	Pn	10 30 12.6	-1.0
JTH				*e*S	Sn	10 30 29.7	-0.4
JOU	Okura	1.31	257	P	Pn	10 30 13.4	-0.2
JOU				*e*S	Sn	10 30 30.6	+0.5
JMM	Marumori	1.42	236	P	Pn	10 30 14.3	-0.9
JRG	Rokugo	1.48	300	P	Pn	10 30 16.1	+0.2
JYK	Kaneyama	1.52	280	P	Pn	10 30 16.9	+0.3
MJAR	Matsushiro Arr	3.87	238	P	Pn	10 30 50.5	+1.7
	0.5nm,0.3s,baz=43,slow=13,SNR=34						
MJAR				LR	LR	10 32 40.1	
	comp=Z,94nm,18.9s,baz=115,slow=44						
MAT	Matsushiro	3.87	238	P	Pn	10 30 50.6	+1.7
MAT				S	Sn	10 31 35.4	+1.9
ASAJ	Asahikawa	5.45	2	P	Pn	10 31 11.1	+0.6
	0.9nm,0.3s,baz=172,slow=19,SNR=3.5						
ASAJ				S	Sn	10 32 13.7	+1.6
	0.9nm,0.3s,baz=270,slow=20,SNR=2.9						
USRK	Ussuriysk Ar.	9.50	309	P	Pn	10 32 07.7	+1.7
	baz=124,slow=14,SNR=4.0						
KSRS	Korea Array	11.39	268	P	Pn	10 32 34.0	+2.1
	0.2nm,0.3s,baz=83,slow=15,SNR=3.4						
KLR	Kul'dur	12.98	328	P	Pn	10 32 55.7	+2.0
	0.1nm,0.3s,baz=101,slow=10,SNR=2.3						
SEY	Seymchan	25.05	11	P	P	10 35 13.3	+0.6
	1.3nm,0.7s,baz=154,slow=7.7,SNR=6.1						
SONM	Songino Array	27.49	301	P	P	10 35 33.8	-1.3
	0.4nm,0.5s,baz=96,slow=8.6,SNR=2.5						
H11N2	WAKE ISLAND Hy	28.45	125	T	T	11 06 02.8	
	baz=317,slow=75,SNR=375						
H11N1	WAKE ISLAND Hy	28.46	125	T	T	11 06 04.7	
	baz=317,slow=75,SNR=251						
H11N3	WAKE ISLAND Hy	28.47	125	T	T	11 06 03.1	
	baz=317,slow=75,SNR=312						
H11S1	WAKE ISLAND Hy	29.22	127	T	T	11 07 01.4	
	baz=318,slow=76,SNR=50						
H11S3	WAKE ISLAND Hy	29.23	127	T	T	11 07 01.5	
	baz=318,slow=76,SNR=66						
H11S2	WAKE ISLAND Hy	29.24	127	T	T	11 07 02.6	
	baz=318,slow=76,SNR=47						
ZALV	Zalesovo Beam	41.34	311	P	P	10 37 33.9	-0.4
	1.8nm,0.5s,baz=94,slow=7.7,SNR=10						
MKAR	Makanchi Array	43.85	301	P	P	10 37 54.5	-0.3
	0.7nm,0.6s,baz=79,slow=12,SNR=13						
ILAR	Eielson Array	47.75	33	P	P	10 38 25.9	+0.7
	0.2nm,0.6s,baz=270,slow=5.4,SNR=2.9						
INK	Inuvik	52.62	28	P	P	10 39 01.5	-0.6
	0.3nm,0.5s,baz=321,slow=4.5,SNR=2.4						
WRA	Warramunga Arr	58.78	189	P	P	10 39 45.4	-1.4
	0.5nm,0.8s,baz=3.9,slow=7.1,SNR=4.5						
AKASG	Malin Array Be	73.42	322	P	P	10 41 19.6	-0.9
	0.5nm,0.4s,baz=47,slow=5.6,SNR=5.0						

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*IDC **03** 10:37:01.8±6.5, 18°.35S×177°.98W, h489km±66km, mb3.0/6, mb1 3.2/6, mb1mx3.1/23, mbtmp3.9/6, Error ellipse: s-maj=62.6km s-min=24.2km az=134.0*

ISC 03 10:37:02.7±1.8**, 18°.3S**±0°.4×**178°.1W**±0°.3**, h500**km**, n8, σ0s.94**/10**, mb3.5**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.69	242	P	P	10 43 42.3	-0.8
	0.5nm,0.3s,baz=107,slow=14,SNR=2.3						
WRA	Warramunga Arr	44.84	260	P	P	10 44 33.1	+1.1
	0.3nm,0.2s,baz=100,slow=6.9,SNR=2.0						
WRA				PcP	pP	10 46 03.3	-0.8
	0.3nm,0.3s,baz=90,slow=3.3,SNR=3.5						
ASAR	Alice Springs	44.95	255	P	P	10 44 34.0	+1.2
	1.2nm,0.5s,baz=88,slow=8.3,SNR=45						
ASAR				PcP	PcP	10 46 03.8	0.0
	0.5nm,0.4s,baz=105,slow=3.7,SNR=10						
PETK	Petropavlovsk-	74.12	345	P	P	10 47 47.5	+0.3
	1.5nm,0.6s,baz=122,slow=9.8,SNR=4.0						
NVAR	Mina Array Bea	79.51	44	P	P	10 48 18.2	+0.8
	0.4nm,0.6s,baz=221,slow=8.1,SNR=4.7						
ILAR	Eielson Array	86.20	13	P	P	10 48 48.9	-1.2
	0.3nm,0.5s,baz=211,slow=4.4,SNR=5.5						
BRTR	Keskin Array B	145.25	315	PKPbc	PKPbc	10 55 44.3	-0.2
	0.5nm,0.7s,baz=115,slow=3.8,SNR=3.5						
GERES	GERESS Array B	148.05	345	PKPbc	PKPbc	10 55 52.0	+0.2
	0.8nm,0.6s,baz=5.7,slow=4.0,SNR=6.8						

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*INET **03** 10:45:58.3, 12°.52N×87°.73W, h66km, ML4.0*

SNET 03 10:45:57.4±0.9**, 12°.45N×87°.93W, h20**km±7km**, ML3.4, 1C-2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.83	7	⇓*i*P	Pb	10 46 12.7	-0.5
CNCH				*e*S	Sg	10 46 25.2	+0.5
CNCH				IAML		10 46 28.2	
	comp=Z,4μm,0.2s						
LCND	La Caada	0.86	3	⇓*e*P	Pb	10 46 13.1	-0.6
LCND				*e*S	Sb	10 46 25.1	+0.4
LCND				IAML		10 46 31.0	
	comp=Z,2μm,0.2s						
JUCU	Jucuar¡n	0.86	339	*e*P	Pb	10 46 13.4	-0.3
JUCU				*e*S	Sg	10 46 25.8	+0.1
JUCU				IAML		10 46 27.3	
	comp=Z,895nm,0.2s						
LCY	Lacayo	1.03	340	*e*P	Pb	10 46 16.7	0.0
ALJI	Alcalda de J	1.07	325	⇑*e*P	Pb	10 46 17.0	-0.3
ALJI				*e*S	Sb	10 46 30.9	0.0
ALJI				IAML		10 46 33.6	
	comp=Z,786nm,0.1s						
PACA	Pacayal	1.08	339	*e*P	Pb	10 46 17.1	-0.5
TECA	Tecapa	1.18	332	*e*P	Pn	10 46 18.6	-0.4
COEB	Comit de Eme	1.20	331	*e*P	Pn	10 46 18.8	-0.3
COEB				IAML		10 46 35.8	
	comp=Z,373nm,0.3s						
FAGO	Alcalda de S	1.25	352	*e*P	Pn	10 46 18.6	-1.2
COEG	Centro de Oper	1.49	322	*e*P	Pn	10 46 22.9	-0.2
COEG				IAML		10 46 45.5	
	comp=Z,347nm,0.3s						
PAVA	Las Pavas	1.59	322	*e*P	Pn	10 46 24.5	-0.1
CEVE	Cerro Verde	2.14	310	*e*P	Pn	10 46 32.8	+0.5

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*NIED **03** 11:10:00, 25°.10N×124°.80E, h8km, Mw3.6 Best double couple: $M_0$2.99000×10^{14} NP1:ϕ_s114.00000°, δ50.00000°, λ-101.00000°. NP2:ϕ_s311.00000°, δ41.00000°, λ-77.00000°.*

JMA 03 11:10:05.2±0.2**, 25°.09N×124°.80E, h7**km**, M3.8, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIRB	Irabujima	0.43	128	P	Pg	11 10 13.6	+0.1
JIRB				S	Sg	11 10 19.2	+0.1
JIKM	Ikemajima	0.44	112	P	Pg	11 10 14.0	+0.3
JIKM				S	Sg	11 10 20.1	+0.6
JTJ	Tarama	0.46	191	P	Pg	11 10 14.1	+0.1
JTJ				S	Sg	11 10 20.6	+0.6
JMJ2	Miyako jima3	0.59	126	P	Pg	11 10 16.8	+0.2
JMJ2				S	Sg	11 10 24.6	+0.3
JOGS	Gusukube	0.64	121	P	Pg	11 10 18.1	+0.5
JOGS				S	Sg	11 10 26.4	+0.5
JISG	Ishigakijimahi	0.67	222	P	Pg	11 10 17.9	-0.2
JISG				S	Sb	11 10 28.4	-0.3
JIJ	Ishigaki jima	0.94	220	P	Pg	11 10 22.5	-0.7
JIJ				S	Sg	11 10 35.2	-0.2
JKRS	Kuro-shima	1.11	220	P	Pg	11 10 25.9	-0.7
JKRS				S	Sb	11 10 41.4	-0.1
IRIF	Iriomote-Funau	1.23	233	P	Pb	11 10 27.5	-1.3
IRIF				S	Sg	11 10 44.6	-0.2
HATJ	Hateruma jima	1.37	222	P	Pn	11 10 30.4	-0.3
HATJ				S	Sb	11 10 48.3	-0.6

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*INET **03** 11:20:58.5, 12°.47N×87°.83W, h60km, ML3.6*

SNET 03 11:20:59.7±0.8**, 12°.55N×87°.87W, h48**km±26km**, ML3.1, 1D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.72	3	⇓*e*P	Pn	11 21 13.6	-0.2
CNCH				IAML		11 21 28.4	
	comp=Z,1μm,0.3s						
LCND	La Caada	0.75	359	*e*P	Pn	11 21 14.0	0.0
LCND				*e*S	Sn	11 21 25.8	+1.2
LCND				IAML		11 21 27.6	
	comp=Z,434nm,0.3s						
JUCU	Jucuar¡n	0.79	332	*e*P	Pn	11 21 14.6	-0.1
JUCU				*e*S	Sn	11 21 26.4	+0.9
JUCU				IAML		11 21 28.8	
	comp=Z,471nm,0.3s						
BLLM	Bellamira	0.95	338	*e*P	Pn	11 21 17.0	+0.2
LCY	Lacayo	0.96	335	*e*P	Pn	11 21 17.4	+0.5
PACA	Pacayal	1.01	334	*e*P	Pn	11 21 17.9	+0.2
TECA	Tecapa	1.12	327	*e*P	Pn	11 21 19.5	+0.3
TECA				*e*S	Sn	11 21 34.8	+1.2
FAGO	Alcalda de S	1.16	349	*e*P	Pn	11 21 19.6	0.0
COEG	Centro de Oper	1.45	317	*e*P	Pn	11 21 24.5	+0.9
COEG				IAML		11 21 49.1	
	comp=Z,199nm,0.3s						
TGUH	Tegucigalpa,Un	1.60	21	*e*P	Pn	11 21 25.5	-0.2

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*SOME **03** 11:25:43.2, 40°.85N×69°.58E, h5km*

*KRNET **03** 11:25:49.1±0.1, 41°.04N×69°.75E, mb2.8*

*NNC **03** 11:25:52.2±3.6, 40°.97N×70°.21E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=25.7km s-min=13.6km az=32.0*

ISC 03 11:25:47.2±2.4**, 41°.00N**±0°.07×**69°.83E**±0°.07**, h3**km±13km**, n20, σ2s.15**/32**, 7C-4D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	1.15	7	*e*P	Pg	11 26 09.3	0.0
	13nm,0.3s						
IUG				*e*S	Sb	11 26 26.6	+1.3
	89nm,0.6s						
BTK	Batken	1.21	141	⇓*i*P	Pn	11 26 13.0	+1.9
	baz=40						
BTK				⇓*i*S	Sn	11 26 30.9	+2.9
	baz=40						
CHM	Chimkent	1.32	353	*e*P	Pg	11 26 11.2	-1.4
	102nm,0.1s						
CHM				*e*S	Sg	11 26 31.2	+1.4
	211nm,0.3s						
ARK	Arkit	1.79	63	⇑*i*P	Pg	11 26 23.2	+1.7
	baz=65						
ARK				⇑*i*S	Sg	11 26 47.9	+3.2
	baz=65						
BRLS	Borolday	2.02	0	*e*P	Pn	11 26 20.7	-1.6
	13nm,0.4s						
BRLS				*e*S	Sn	11 26 46.6	-1.5
	46nm,0.4s						
KK31	Karatay Array	2.16	13	⇑Pn	Pg	11 26 27.8	-0.8
	6.0nm,0.4s,baz=204,slow=16,SNR=54						
KK31				Sn	Sg	11 26 58.2	+1.7
	24nm,0.5s,baz=197,slow=23,SNR=22						
ARSB	Arslanbob	2.40	81	⇑*i*P	Pg	11 26 32.6	-0.6
	baz=82						
ARSB				⇑*i*S	Sb	11 27 03.5	+2.3
	baz=82						
MRKS	Merke	3.07	54	*e*P	Pg	11 26 45.4	-0.7
	7.2nm,0.6s						
MRKS				*e*S	Sg	11 27 28.4	+2.4
	12nm,0.4s						
MRKS	Merke	3.07	54	Pg	Pg	11 26 44.8	-1.3
	7.2nm,0.6s						
MRKS				Lg	Lg	11 27 19.0	
	12nm,0.4s						
ARLS	Aral	3.48	74	⇑*i*P	Pb	11 26 47.5	-2.1
	baz=75						
ARLS				⇑*i*S	Sb	11 27 30.3	-2.1
	baz=75						
AAK	Ala-Archa	3.85	63	Pg	Pg	11 26 59.8	-1.2
	2.6nm,0.5s						
AAK				Lg	Lg	11 27 50.2	
	6.5nm,0.8s						
CHMS	Chumysh	4.17	60	⇓Pg	Pg	11 27 04.9	-2.2
	4.7nm,1.1s						
CHMS				⇓Lg	Lg	11 28 00.3	
	4.1nm,0.7s						
SGDS	Sogindy	4.32	54	Pg	Pg	11 27 07.7	-2.3
	4.8nm,0.8s						
SGDS				Lg	Lg	11 27 58.1	
	4.5nm,0.4s						
DGS	Degeres	4.95	61	*e*P	Pg	11 27 19.4	-2.7
	2.9nm,0.5s						
DGS				*e*S	Sg	11 28 26.9	+0.7
	7.4nm,0.7s						
DGS	Degeres	4.95	61	Pg	Pg	11 27 19.4	-2.7
	2.9nm,0.5s						
DGS				Lg	Lg	11 28 18.3	
	7.4nm,0.7s						
KST	Kastek	5.00	64	*e*P	Pg	11 27 20.3	-2.7
	5.8nm,0.9s						
KST				*e*S	Sg	11 28 28.0	+0.3
	5.9nm,0.8s						
KST	Kastek	5.00	64	Pg	Pg	11 27 20.3	-2.7
	5.8nm,0.9s						
KST				Lg	Lg	11 28 18.6	
	5.9nm,0.8s						
BTLS	Baital	5.08	36	*e*P	Pb	11 27 20.6	+3.8
	1.1nm,0.4s						
BTLS				*e*S	Sg	11 28 29.5	-0.9
	4.0nm,0.6s						
TNSS	Tian-Shan	5.67	67	*e*P	Pg	11 27 33.3	-2.6
	2.0nm,0.5s						
TNSS				*e*S	Sg	11 28 50.4	+0.9
	3.5nm,0.8s						
TNSS	Tian-Shan	5.67	67	Pg	Pg	11 27 33.3	-2.6
	2.0nm,0.5s						
TNSS				Lg	Lg	11 28 40.8	
	3.5nm,0.8s						

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*IDC **03** 11:39:52.3±7.2, 18°.02S×173°.76W, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.7/43, mbtmp3.9/4, ML3.7/1, Error ellipse: s-maj=248.8km s-min=34.2km az=131.0*

*NEIC **03** 11:40:00.1±1.9, 17°.51S±0°.09×173°.8W±0°.1, h70km±13km, mb4.2/7, Error ellipse: s-maj=19.6km s-min=11.8km az=67.0*

ISC 03 11:40:01.9±0.8**, 17°.44S**±0°.07×**173°.55W**±0°.09**, h100**km**, n13, σ1s.44**/16**, mb4.1**/8**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	3.81	116	Pn	Pn	11 40 59.1	+0.6
NIUE				Sn	Sn	11 41 40.9	-1.4
AFI	Afiamalu	3.90	26	Pn	Pn	11 41 02.0	+2.2
	3.6nm,0.3s,baz=146,slow=3.6,SNR=4.8						
AFI				Sn	Sn	11 41 41.8	-2.9
	15nm,0.3s,baz=289,slow=21,SNR=9.8						
AFI	Afiamalu	3.90	26		Pn	11 41 01.3	+1.5
AFI				Sn	Sn	11 41 43.5	-1.1
URZ	Urewera	22.30	200	P	P	11 44 51.4	+0.3
BKZ	Black Stump Fm	23.33	200	P	P	11 45 01.6	+0.2
BKZ				IAmb	IAmb	11 45 10.4	
	comp=Z,11nm,1.2s						
STKA	Stephens Creek	42.93	242	P	P	11 47 49.4	-1.6
	comp=Z,0.5nm,0.5s,baz=63,slow=11,SNR=2.2						
BBOO	Buckleboo	47.70	241	P	P	11 48 28.0	-0.7
BBOO				IAmb	IAmb	11 48 31.2	
	comp=Z,2.1nm,0.8s						
WR0	Warramunga Arr	49.08	258	P	P	11 48 38.8	-0.7
WR0				IAmb	IAmb	11 48 45.4	
	comp=Z,8.0nm,1.4s						
WB0	Warramunga Arr	49.24	259	P	P	11 48 40.3	-0.5
WB0				IAmb	IAmb	11 48 47.7	
	comp=Z,5.0nm,1.3s						
WRA	Warramunga Arr	49.27	258	P	P	11 48 40.1	-0.8
	comp=Z,0.8nm,0.5s,baz=98,slow=6.5,SNR=9.5						
AS31	Alice Springs	49.38	254	P	P	11 48 41.4	-0.4
AS31				IAmb	IAmb	11 48 44.2	
	comp=Z,0.9nm,0.6s						
ASAR	Alice Springs	49.38	254	P	P	11 48 41.7	0.0
	comp=Z,2.8nm,0.6s,baz=90,slow=9.5,SNR=45						
QSPA	South Pole Qui	72.62	180	P	P	11 51 20.3	+1.9

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*UPA **03** 11:53:34.2±2.1, 7°.44N×81°.04W, h0km±4km, MW4.2*

*UCR **03** 11:53:36.4±3.1, 7°.68N×81°.08W, h3km±20km, MW4.0*

ISC 03 11:53:31.7±1.3**, 7°.31N**±0°.05×**81°.16W**±0°.02**, h19**km±2km**, n45, σ0s.98**/78**, 9C-26D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CACAO	El Cacao, Vera	0.30	84	⇑*i*P	Pb	11 53 39.0	+0.5
CACAO				*i* S	Sg	11 53 42.8	0.0
GMAL	Guarumal, Vera	0.46	351	⇑*i*P	Pn	11 53 43.1	-0.1

GMAL				*i* S	**Sn**	**11 53 50.4**	**-0.5**
GMAL	**Guarumal, Vera**	**0.46**	**351**	⇑*i*P	**Pn**	**11 53 43.1**	**-0.1**
GMAL				*e*S	**Sn**	**11 53 50.1**	**-0.7**
PONU3	**Ponuga, Veragu**	**0.60**	**18**	⇓*i*P	**Pb**	**11 53 44.3**	**+0.8**
PONU3				*i* S	**Sb**	**11 53 51.7**	**+0.2**
RSUS3	**Rio de Jesus,**	**0.67**	**360**	⇓*i*P	**Pn**	**11 53 46.1**	**0.0**
RSUS3				*i* S	**Sn**	**11 53 55.0**	**-1.1**
TOSI3	**Tonosi**	**0.72**	**82**	⇑*e*P	**Pb**	**11 53 45.7**	**+0.1**
TOSI3				*i* S	**Sg**	**11 53 56.1**	**+0.6**
OCU3	**Ocu, Herrera**	**0.74**	**31**	⇓*i*P	**Pg**	**11 53 46.6**	**+0.4**
OCU3				*i* S	**Sg**	**11 53 55.9**	**-0.1**
PESE3	**Pese, Herrera**	**0.80**	**42**	⇓*i*P	**Pg**	**11 53 47.4**	**-0.1**
PESE3				*e*S	**Sb**	**11 53 57.6**	**+0.1**
STIA3	**Santiago, Vera**	**0.80**	**13**	⇓*i*P	**Pn**	**11 53 47.9**	**-0.1**
STIA3				*i* S	**Sg**	**11 53 58.6**	**+0.4**
MESA3	**La Mesa, Verag**	**0.83**	**358**	⇑*e*P	**Pn**	**11 53 49.0**	**+0.6**
MESA3				*i* S	**Sn**	**11 53 59.7**	**-0.5**
PVID3	**Puerto Vidal,**	**0.86**	**329**	⇑*e*P	**Pn**	**11 53 49.9**	**+1.1**
SFRA3	**San Francisco,**	**0.95**	**11**	⇓*i*P	**Pn**	**11 53 50.3**	**+0.3**
SFRA3				*i* S	**Sn**	**11 54 02.9**	**-0.2**
CHIT3	**Chitre**	**0.97**	**49**	⇓*i*P	**Pb**	**11 53 50.1**	**+0.1**
CHIT3				*i* S	**Sb**	**11 54 02.6**	**+0.1**
ACHO3	**Achotines, Los**	**0.98**	**84**	*i* P	**Pb**	**11 53 50.0**	**-0.1**
ACHO3				*e*S	**Sn**	**11 54 05.4**	**+1.5**
AZU	**Azuero**	**1.00**	**61**	⇓*i*P	**Pb**	**11 53 50.5**	**+0.1**
	baz=245,slow=14						
AZU				*i* S	**Sb**	**11 54 02.8**	**-0.4**
AZU	**Azuero**	**1.00**	**61**	⇓*i*P	**Pb**	**11 53 50.5**	**+0.1**
AZU				*e*S	**Sb**	**11 54 03.0**	**-0.1**
CNAZ3	**Canazas, Verag**	**1.03**	**357**	⇓*e*P	**Pg**	**11 53 51.4**	**-0.4**
CNAZ3				*i* S	**Sg**	**11 54 04.8**	**-0.6**
CRIS3	**El Cristo, Coc**	**1.08**	**30**	⇓*i*P	**Pn**	**11 53 52.0**	**+0.1**
CRIS3				*i* S	**Sg**	**11 54 08.5**	**+1.6**
NANC3	**Nancito, Chiri**	**1.08**	**328**	⇓*e*P	**Pg**	**11 53 53.4**	**+0.7**
NANC3				*e*S	**Sg**	**11 54 10.2**	**+3.1**
PCRI3	**Pocri, Los San**	**1.09**	**71**	⇓*i*P	**Pg**	**11 53 52.6**	**-0.2**
PCRI3				*e*S	**Sg**	**11 54 07.2**	**0.0**
PEDA3	**Pedasi**	**1.15**	**79**	⇓*i*P	**Pg**	**11 53 53.6**	**-0.3**
PEDA3				*i* S	**Sg**	**11 54 09.1**	**+0.1**
CHIR3	**Chiriqui UPA,**	**1.58**	**313**	⇓*i*P	**Pg**	**11 54 01.9**	**-0.3**
CHIR3				*i* S	**Sg**	**11 54 25.0**	**+2.1**
PEDE3	**Pedregal, Chir**	**1.64**	**311**	*e*P	**Pg**	**11 54 04.0**	**+0.6**
LOMA3	**Las Lomas, Chi**	**1.65**	**312**	*e*P	**Pg**	**11 54 04.3**	**+0.8**
VTON	**El Valle, Cocl**	**1.66**	**39**	⇓*i*P	**Pb**	**11 54 01.6**	**-0.1**
VTON				*i* S	**Sb**	**11 54 22.8**	**+0.6**
DVD	**David**	**1.70**	**311**	⇓*e*P	**Pg**	**11 54 05.2**	**+0.7**
CHGR2	**Aguacate**	**1.89**	**329**	*e*P	**Pg**	**11 54 07.0**	**-1.0**
CHGR2				*e*S	**Sg**	**11 54 32.1**	**-0.5**
PTAR3	**Potrerillos Ar**	**1.91**	**316**	⇓*e*P	**Pg**	**11 54 07.3**	**-1.1**
PTAR3				*e*S	**Sg**	**11 54 33.5**	**+0.2**
BCO2	**Palmira**	**1.95**	**316**	*i* P	**Pg**	**11 54 08.0**	**-1.2**
BCO2				*i* S	**Sg**	**11 54 33.6**	**-0.9**
SBAR3	**San Bartolo, C**	**1.98**	**300**	⇓*e*P	**Pg**	**11 54 09.1**	**-0.7**
ZANG	**Zanguenga, Cho**	**2.08**	**38**	⇓*i*P	**Pb**	**11 54 08.8**	**0.0**
ZANG				*i* S	**Sn**	**11 54 32.3**	**+1.4**
ZANG	**Zanguenga, Cho**	**2.08**	**38**	⇓*i*P	**Pb**	**11 54 08.8**	**0.0**
CHOR3	**La Chorrera**	**2.10**	**41**	*e*P	**Pb**	**11 54 09.0**	**-0.1**
CHOR3				*e*S	**Sb**	**11 54 33.2**	**-1.6**
BRU2	**Volcan**	**2.11**	**314**	⇓*i*P	**Pg**	**11 54 10.9**	**-1.5**
	baz=155,slow=2.9						
BRU2				*e*S	**Sg**	**11 54 38.3**	**-1.6**
BRU2	**Volcan**	**2.11**	**314**	*e*P	**Pb**	**11 54 10.2**	**+0.6**
PINA	**Piqa, Costa Ab**	**2.21**	**29**	⇑*e*P	**Pb**	**11 54 11.3**	**+0.2**
BCIP	**Isla Barro Col**	**2.26**	**35**	⇓*i*P	**Pb**	**11 54 11.6**	**-0.3**
BCIP				*i* S	**Sn**	**11 54 37.0**	**+1.5**
BCIP	**Isla Barro Col**	**2.26**	**35**	⇓*i*P	**Pb**	**11 54 11.7**	**-0.3**
UPA	**Univ. de Panam**	**2.31**	**44**	⇓*e*P	**Pb**	**11 54 12.3**	**-0.5**
	baz=239,slow=9.3						
UPA				*e*S	**Sb**	**11 54 39.7**	**-1.3**
UPA	**Univ. de Panam**	**2.31**	**44**	*e*P	**Pb**	**11 54 11.9**	**-0.9**
MLIR	**Monte Lirio**	**2.31**	**34**	*e*P	**Pb**	**11 54 11.2**	**-1.6**
FRIJ	**El Hiral**	**2.37**	**37**	⇑*i*P	**Pb**	**11 54 13.1**	**-0.7**
FRIJ				*i* S	**Sn**	**11 54 38.4**	**+0.3**
CNI2	**El Empalme, Bo**	**2.47**	**328**	*e*P	**Pb**	**11 54 15.8**	**+0.3**
CNI2				*e*S	**Sb**	**11 54 44.3**	**-1.2**
CHPO	**Chepo, Panama**	**2.74**	**47**	⇑*e*P	**Pb**	**11 54 17.9**	**-2.2**
CHPO				*e*S	**Sn**	**11 54 49.9**	**+2.6**
UPD2	**Meteti**	**3.35**	**68**	⇓*e*P	**Pb**	**11 54 28.0**	**-2.5**

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*RSPR **03** 11:56:18.2, 19°.14N×66°.96W, h24km±18km, MD2.9/13*
*NEIC **03** 11:56:19±1.4, 18°.98N±0°.05×66°.92W±0°.02, h29km±12km,*
Error ellipse: s-maj=7.4km s-min=2.1km az=190.0
ISC 03 11:56:17.8±1.5, **19°.03N**±0°.06×**66°.91W**±0°.03, **h26**km±13km,
n44, σ**0ˢ.59**/53, **5C-8D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.59**	**199**	⇑*e*P	**Pn**	**11 56 29.8**	**-0.7**
AGPR	**Aguadilla, PR**	**0.59**	**199**	*e*S	**Sn**	**11 56 38.8**	**-0.4**
AGPR	**Aguadilla, PR**	**0.59**	**199**		**Pn**	**11 56 29.7**	**-0.7**
AGPR					**Sb**	**11 56 38.1**	**+0.5**
EMPR	**Esperanza - Ma**	**0.65**	**147**	⇓*e*P	**Pn**	**11 56 31.7**	**+0.4**
EMPR	**Esperanza - Ma**	**0.65**	**147**	*e*S	**Sn**	**11 56 41.2**	**+0.4**
AOPR	**Arecibo Observ**	**0.69**	**168**	⇑*e*P	**Pn**	**11 56 31.7**	**-0.3**
AOPR	**Arecibo Observ**	**0.69**	**168**	*e*S	**Sn**	**11 56 42.1**	**+0.4**
AOPR	**Arecibo Observ**	**0.69**	**168**		**Pn**	**11 56 31.6**	**-0.3**
AOPR					**Sn**	**11 56 42.0**	**+0.2**
MPR	**Mayaguez**	**0.84**	**195**		**Pn**	**11 56 33.6**	**-0.3**
LSP	**Las Mesas**	**0.86**	**191**	⇓*e*P	**Pn**	**11 56 33.9**	**-0.3**
LSP	**Las Mesas**	**0.86**	**191**	*e*S	**Sn**	**11 56 46.2**	**+0.1**
LSP	**Las Mesas**	**0.86**	**191**		**Pn**	**11 56 33.9**	**-0.3**
LSP					**Sn**	**11 56 46.2**	**+0.1**
OBIP	**Obispado Ponce**	**1.02**	**164**	⇓*e*P	**Pn**	**11 56 35.8**	**-0.5**
OBIP	**Obispado Ponce**	**1.02**	**164**	*e*S	**Sn**	**11 56 49.9**	**+0.1**
OBIP	**Obispado Ponce**	**1.02**	**164**		**Pn**	**11 56 35.9**	**-0.5**
OBIP					**Sn**	**11 56 49.5**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.03**	**191**	⇑*e*P	**Pb**	**11 56 36.5**	**-0.6**
CRPR	**Cabo Rojo, PR**	**1.03**	**191**	*e*S	**Sb**	**11 56 50.3**	**+0.1**
CRPR	**Cabo Rojo, PR**	**1.03**	**191**		**Pb**	**11 56 36.4**	**-0.6**
CRPR					**Sb**	**11 56 50.7**	**+0.5**
GBPR	**Guanica, Bosqu**	**1.05**	**179**	⇓*e*P	**Pb**	**11 56 37.2**	**0.0**
GBPR	**Guanica, Bosqu**	**1.05**	**179**	*e*S	**Sb**	**11 56 51.5**	**+0.9**
GBPR	**Guanica, Bosqu**	**1.05**	**179**		**Pb**	**11 56 37.2**	**0.0**
GBPR					**Sb**	**11 56 51.5**	**+0.9**
GCPR	**Guaynabo City**	**1.06**	**132**	⇓*e*P	**Pn**	**11 56 36.9**	**0.0**
GCPR	**Guaynabo City**	**1.06**	**132**	*e*S	**Sb**	**11 56 51.5**	**+0.7**
GCPR	**Guaynabo City**	**1.06**	**132**		**Pb**	**11 56 37.7**	**+0.3**
MLPR	**Magueyes Islan**	**1.06**	**187**	⇑*e*P	**Pn**	**11 56 36.5**	**-0.4**
MLPR	**Magueyes Islan**	**1.06**	**187**	*e*S	**Sb**	**11 56 51.2**	**+0.3**
MLPR	**Magueyes Islan**	**1.06**	**187**		**Pn**	**11 56 36.8**	**-0.1**
SJG	**San Juan**	**1.16**	**142**		**Pb**	**11 56 39.2**	**+0.1**
ICMP	**Isla Caja de M**	**1.19**	**162**	⇓*e*P	**Pn**	**11 56 38.2**	**-0.6**
ICMP	**Isla Caja de M**	**1.19**	**162**		**Pb**	**11 56 39.1**	**-0.5**
PDPR	**Patillas Dam,**	**1.31**	**140**		**Pb**	**11 56 40.9**	**-0.7**
HUMP	**Col San Antoni**	**1.33**	**131**	⇓*e*P	**Pn**	**11 56 41.0**	**+0.3**
HUMP	**Col San Antoni**	**1.33**	**131**	*e*S	**Sn**	**11 56 58.5**	**+0.9**
HUMP	**Col San Antoni**	**1.33**	**131**		**Pn**	**11 56 41.0**	**+0.3**
HUMP					**Sb**	**11 56 58.8**	**0.0**
PCDR	**Punta Cana, DR**	**1.49**	**250**	Pn	**Pb**	**11 56 43.5**	**-1.2**
MTP	**Monte Pirata**	**1.58**	**126**	⇑*e*P	**Pn**	**11 56 44.1**	**0.0**
MTP	**Monte Pirata**	**1.58**	**126**	*e*S	**Sn**	**11 57 04.5**	**+0.8**
MTP	**Monte Pirata**	**1.58**	**126**		**Pn**	**11 56 44.4**	**+0.3**
MTP					**Sn**	**11 57 04.4**	**+0.6**
CUPR	**Culebra, Puert**	**1.70**	**115**	⇓*e*P	**Pn**	**11 56 45.3**	**-0.4**
CUPR	**Culebra, Puert**	**1.70**	**115**	*e*S	**Sn**	**11 57 06.5**	**0.0**
CUPR	**Culebra, Puert**	**1.70**	**115**		**Pn**	**11 56 45.5**	**-0.2**
CUPR					**Sn**	**11 57 06.4**	**-0.2**
STVI	**Saint Thomas**	**1.97**	**110**	Pn	**Pb**	**11 56 50.9**	**-2.0**
DR12	**Loma Pena Alta**	**2.36**	**265**	Pn	**Pn**	**11 56 55.8**	**+0.9**
SDDR	**Presa de Saban**	**4.15**	**270**	Pn	**Pn**	**11 57 20.4**	**+0.9**

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*IDC **03** 12:10:58.8±0.9, 42°.84N×47°.92E, h0km, mb3.5/4, mb1 3.6/10, mb1mx3.4/48, mbtmp3.6/10, ML3.4/6, Error ellipse: s-maj=13.7km s-min=8.6km az=163.0*
*MOS **03** 12:10:59.8±1.0, 42°.73N×48°.18E, h18km, mb4.1/3, Error ellipse: s-maj=6.3km s-min=5.3km az=156.6*
*DRS **03** 12:11:01.6±0.0, 42°.70N×48°.09E, h16km*
ISC 03 12:10:59.6±1.2, **42°.77N**±0°.03×**48°.14E**±0°.03, **h9**km±8km,
n77, σ**1ˢ.61**/125, **mb3.6**/6, **14C-8D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGKR	**Sergokala**	**0.47**	**229**	*i* Pg	**Pg**	**12 11 09.0**	**+0.2**
	2µm,0.1s						
SGKR				*i* Sg	**Sg**	**12 11 14.0**	**-0.9**
	3µm,0.1s						
SGKR	**Sergokala**	**0.47**	**229**	⇑*i*PG	**Pg**	**12 11 09.0**	**+0.2**
SGKR				*i* S	**Sg**	**12 11 14.0**	**-0.9**
SGKR				pmax	pmax		
	comp=Z,2µm,0.1s						
MAK	**Makhachkala**	**0.51**	**293**	⇓*i*PG	**Pn**	**12 11 11.8**	**-1.2**
MAK				*e*		12 11 19.8	
MAK				pmax	pmax		
	comp=Z,353nm,0.2s						
MAK				smax	smax		
	comp=E,4µm,0.3s						
MAK				smax	smax		
	comp=E,3µm,0.3s						
KANR	**Karaman**	**0.64**	**312**	*e*Pg	**Pn**	**12 11 15.7**	**+0.9**
URKR	**Urkarakh**	**0.71**	**212**	*e*Pg	**Pg**	**12 11 12.9**	**-0.4**
URKR				*e*Sg	**Sg**	**12 11 21.5**	**-1.1**
URKR	**Urkarakh**	**0.71**	**212**	⇓*i*PG	**Pg**	**12 11 12.8**	**-0.4**
URKR				*i*		12 11 21.3	
URKR				pmax	pmax		
	comp=Z,657nm,0.5s						
URKR				smax	smax		
	comp=N,3µm,0.2s						
DRN	**Derbent**	**0.75**	**169**	*e*Pg	**Pb**	**12 11 14.9**	**+0.2**
	comp=N,2µm,0.4s						
DRN				*e*Sg	**Sb**	**12 11 25.2**	**+0.2**
	comp=N,6µm,0.6s						
DRN	**Derbent**	**0.75**	**169**	⇓*i*PG	**Pb**	**12 11 14.9**	**+0.2**
DRN				*e*S	**Sg**	**12 11 24.2**	**+0.4**
BUJR	**Buynaksk**	**0.76**	**275**	*e*Pg	**Pb**	**12 11 15.0**	**-0.1**
BUJR				*e*Sg	**Sb**	**12 11 25.4**	**-0.1**
BUJR	**Buynaksk**	**0.76**	**275**	*e*PG	**Pb**	**12 11 14.9**	**-0.1**
BUJR				*e*S	**Sb**	**12 11 25.3**	**-0.1**
ARKR	**Arakani**	**0.86**	**259**	*e*Pg	**Pg**	**12 11 16.0**	**-0.2**
	comp=N,94nm,0.4s						
ARKR				*e*Sg	**Sg**	**12 11 27.0**	**-0.4**
	comp=N,695nm,0.0s						
ARKR	**Arakani**	**0.86**	**259**	*e*PG	**Pg**	**12 11 16.0**	**-0.2**
ARKR				*e*S	**Sg**	**12 11 27.0**	**-0.4**
ARKR				pmax	pmax		
	comp=Z,94nm,0.4s						
KRNR	**Karanay**	**0.91**	**274**	*e*Pg	**Pg**	**12 11 17.0**	**-0.1**
	comp=Z,132nm,0.1s						
KRNR				*e*Sg	**Sg**	**12 11 29.0**	**0.0**
	comp=Z,300nm,0.2s						
KRNR	**Karanay**	**0.91**	**274**	*e*PG	**Pg**	**12 11 17.0**	**-0.1**
KRNR				*e*S	**Sg**	**12 11 29.0**	**0.0**
KRNR				pmax	pmax		
	comp=Z,132nm,0.1s						
GNBR	**Gunib**	**0.95**	**247**	*e*Pg	**Pg**	**12 11 17.6**	**-0.2**
	comp=Z,89nm,0.1s						
GNBR				*e*Sg	**Sg**	**12 11 29.9**	**-0.3**
	comp=Z,2µm,0.6s						
GNBR	**Gunib**	**0.95**	**247**	⇑*e*PG	**Pg**	**12 11 17.6**	**-0.2**
GNBR				*e*		12 11 29.8	
GNBR				pmax	pmax		
	comp=Z,265nm,0.1s						
GNBR				smax	smax		
	comp=N,1µm,0.2s						
UNCR	**Uncukul**	**0.99**	**267**	*e*Pg	**Pg**	**12 11 18.2**	**-0.5**
	comp=N,137nm,0.3s						
UNCR				*e*Sg	**Sg**	**12 11 31.0**	**-0.6**
	comp=N,944nm,0.5s						
UNCR	**Uncukul**	**0.99**	**267**	*e*PG	**Pg**	**12 11 18.2**	**-0.5**
UNCR				*e*S	**Sg**	**12 11 31.0**	**-0.6**
UNCR				pmax	pmax		
	comp=Z,137nm,0.3s						
DBC	**Dubki**	**1.00**	**285**	*i* Pg	**Pb**	**12 11 19.1**	**+0.1**
	comp=Z,247nm,0.2s						
DBC				*e*Sg	**Sb**	**12 11 32.5**	**+0.2**
	comp=Z,3µm,0.6s						
DBC	**Dubki**	**1.00**	**285**	⇓*i*PG	**Pb**	**12 11 19.1**	**+0.1**
DBC				*e*S	**Sb**	**12 11 32.5**	**+0.2**
DBC				pmax	pmax		
	comp=Z,247nm,0.2s						
KMKR	**Kumukh**	**1.00**	**231**	*i* Pg	**Pg**	**12 11 18.2**	**-0.6**
	comp=Z,206nm,0.2s						
KMKR				*e*Sg	**Sg**	**12 11 31.0**	**-0.8**
	comp=Z,2µm,0.3s						
KMKR	**Kumukh**	**1.00**	**231**	⇓*i*PG	**Pg**	**12 11 18.2**	**-0.6**
KMKR				*e*S	**Sg**	**12 11 31.0**	**-0.8**
KMKR				pmax	pmax		
	comp=Z,206nm,0.2s						
XNZR	**Khunzakh**	**1.08**	**259**	*e*Pg	**Pg**	**12 11 20.2**	**-0.2**
XNZR				*e*Sg	**Sb**	**12 11 34.4**	**-0.4**
XNZR	**Khunzakh**	**1.08**	**259**	*e*PG	**Pg**	**12 11 20.2**	**-0.2**
XNZR				*e*S	**Sb**	**12 11 34.5**	**-0.4**
DLMR	**Dylym**	**1.15**	**286**	*i* Pg	**Pn**	**12 11 22.0**	**+0.1**
	comp=Z,172nm,0.1s						
DLMR				*i* Sg	**Sn**	**12 11 38.0**	**+0.3**
	comp=Z,1µm,0.3s						
DLMR	**Dylym**	**1.15**	**286**	*i* PG	**Pn**	**12 11 22.0**	**+0.1**
DLMR				*i* S	**Sn**	**12 11 38.0**	**+0.3**
DLMR				pmax	pmax		
	comp=Z,172nm,0.1s						
KSMR	**Kasumkent**	**1.16**	**180**	*e*Pg	**Pn**	**12 11 22.0**	**-0.1**
	comp=Z,1µm,0.2s						
KSMR				*e*Sg	**Sn**	**12 11 38.0**	**-0.1**
KSMR	**Kasumkent**	**1.16**	**180**	*e*PG	**Pn**	**12 11 22.0**	**-0.1**
KSMR				*e*S	**Sn**	**12 11 38.0**	**-0.1**
KSMR				pmax	pmax		
	comp=Z,1µm,0.2s						
AKT	**Akhty**	**1.32**	**194**	*i* Pg	**Pn**	**12 11 23.2**	**-1.1**
	comp=Z,717nm,0.4s						
AKT				*e*Sg	**Sb**	**12 11 39.2**	**-2.5**
	comp=Z,3µm,0.2s						
AKT	**Akhty**	**1.32**	**194**	⇓*i*PG	**Pn**	**12 11 23.2**	**-1.1**
AKT				*e*S	**Sb**	**12 11 39.2**	**-2.5**
BTLR	**Botlikh**	**1.42**	**267**	*e*Pg	**Pb**	**12 11 26.0**	**-0.2**
	comp=Z,204nm,0.6s						
BTLR				*e*Sg	**Sn**	**12 11 44.0**	**-0.4**
	comp=Z,631nm,0.4s						
BTLR	**Botlikh**	**1.42**	**267**	*e*PG	**Pb**	**12 11 26.0**	**-0.2**
BTLR				*e*S	**Sn**	**12 11 44.0**	**-0.4**
BTLR				pmax	pmax		
	comp=Z,204nm,0.6s						
SEKA	**Sheki**	**1.71**	**205**	PN	**Pn**	**12 11 29.6**	**0.0**
GROC	**Groznyy**	**1.77**	**285**	*e*PN	**Pb**	**12 11 32.7**	**+0.4**
GROC				*e*		12 11 57.1	
GROC				pmax	pmax		
	comp=Z,113nm,0.4s						
GROC				smax	smax		
	comp=N,158nm,0.4s						
GROC				smax	smax		
	comp=E,268nm,0.5s						
GROC				smax	smax		
	comp=E,268nm,0.5s						
DDFL	**Dedoflistskaro**	**2.00**	**229**	P	**Pg**	**12 11 37.2**	**-0.8**
DDFL				S	**Sg**	**12 12 05.1**	**+1.2**
KMGR	**Komgaron**	**2.42**	**278**	*e*PN	**Pb**	**12 11 42.3**	**-1.1**
KMGR				*e*S	**Sn**	**12 12 10.7**	**+1.5**
GANJ	**Ganja**	**2.52**	**213**	PN	**Pn**	**12 11 41.4**	**+0.7**
BTKR	**Batakoyurt**	**2.71**	**284**	*e*PN	**Pb**	**12 11 48.6**	**+0.4**
BTKR				*e*S	**Sb**	**12 12 18.7**	**-2.7**
GUDG	**Gudauri**	**2.72**	**265**	P	**Pn**	**12 11 45.3**	**+1.7**
GUDG				S	**Sb**	**12 12 22.0**	**0.0**
TBLG	**Delisi**	**2.73**	**249**	P	**Pn**	**12 11 44.9**	**+1.3**
TBLG				S	**Sb**	**12 12 21.5**	**-0.6**
LACR	**Lac**	**2.83**	**273**	*e*PN	**Pn**	**12 11 46.6**	**+1.6**
ARNR	**Ardon**	**2.86**	**280**	*e*PN	**Pn**	**12 11 47.9**	**+2.5**
ARNR				*e*S	**Sb**	**12 12 22.9**	**-3.0**
KORR	**Kora**	**3.01**	**277**	*e*PN	**Pb**	**12 11 53.2**	**-0.1**
KORR				*e*S	**Sn**	**12 12 24.3**	**+0.7**
STDR	**Stavd-Durt**	**3.05**	**283**	*e*PN	**Pn**	**12 11 50.5**	**+2.6**
STDR				*e*S	**Sn**	**12 12 26.6**	**+2.1**
KZRT	**Kazreti**	**3.11**	**245**	P	**Pn**	**12 11 49.1**	**+0.3**
KZRT				S	**Sn**	**12 12 27.2**	**+1.2**
ZEI	**Tsey**	**3.12**	**272**	*ce*PN	**Pn**	**12 11 51.8**	**+2.7**
LSNR	**Lesken**	**3.21**	**281**	*e*PN	**Pb**	**12 11 54.0**	**-2.7**
LSNR				*e*S	**Sn**	**12 12 30.1**	**+1.7**
DIGR	**Digorskoe uzhe**	**3.36**	**274**	*e*PN	**Pn**	**12 11 50.5**	**-1.9**
DIGR				*e*S	**Sn**	**12 12 32.3**	**-0.1**
GNI	**Garni**	**3.66**	**225**	Pg	**Pb**	**12 12 06.5**	**+2.0**
	comp=E,2.4nm,0.3s,baz=26,slow=14,SNR=4.1						
GNI				Sn	**Sb**	**12 12 44.4**	**-4.5**
	comp=E,4.8nm,0.3s,baz=156,slow=19,SNR=4.4						
GNI	**Garni**	**3.66**	**225**	⇑*e*PN	**Pn**	**12 11 56.7**	**+0.3**
KBZ	**Khabaz**	**3.95**	**286**	Pn	**Pn**	**12 12 00.1**	**-0.2**
	comp=E,1.5nm,0.3s,baz=135,slow=10.0,SNR=41						
KBZ				Sn	**Sn**	**12 12 45.9**	**-0.8**
	comp=E,5.6nm,0.3s,baz=33,slow=10,SNR=6.4						
KBZ				Lg	Lg	12 12 58.9	
	comp=E,4.0nm,0.3s,baz=0.0,slow=2.0,SNR=3.3						
KBZ	**Khabaz**	**3.95**	**286**	*de*PN	**Pn**	**12 12 01.6**	**+1.3**
NAX	**Nakhchivan**	**4.11**	**210**	PN	**Pn**	**12 12 03.1**	**+0.5**
SHA1	**Shidzhatmaz**	**4.12**	**285**	*e*PN	**Pn**	**12 12 04.4**	**+1.5**
SHA1				*e*S	**Sn**	**12 12 49.9**	**-1.4**
KVAR	**Kislovodsk Arr**	**4.14**	**289**	Pn	**Pn**	**12 12 03.2**	**+0.1**
	baz=72,slow=20,SNR=4.9						
KVAR				Sn	**Sn**	**12 12 50.0**	**-1.7**
	baz=172,slow=15,SNR=6.9						
KIV	**Kislovodsk**	**4.15**	**288**	*e*PN	**Pn**	**12 12 04.5**	**+1.3**
KIV				*e*S	**Sn**	**12 12 54.2**	**+2.4**
KIV				pmax	pmax		
	comp=Z,26nm,0.9s						
GOF	**Gofitskoye**	**4.34**	**304**	⇑*e*PN	Pg	12 12 28.9	+6.3
GOF				*e*S	**Sg**	**12 13 15.7**	**-3.1**
GOF				pmax	pmax		
	comp=Z,23nm,0.5s						
GOF				smax	smax		
	comp=N,73nm,0.6s						
GOF				smax	smax		
	comp=E,56nm,0.6s						
GEYT	**Alibeck**	**9.02**	**119**	Pn	**Pn**	**12 13 12.0**	**+2.1**
	comp=E,0.3nm,0.3s,baz=263,slow=8.6,SNR=2.5						
AKTO	**Aktyubinsk**	**10.24**	**38**	Pn	**Pn**	**12 13 27.0**	**+0.4**
	comp=E,0.3nm,0.3s,baz=204,slow=12,SNR=7.0						
AKTO				Sn	**Sn**	**12 15 15.4**	**-6.1**
	comp=E,0.2nm,0.3s,baz=47,slow=19,SNR=3.4						
AKTO	**Aktyubinsk**	**10.24**	**38**	⇑P	**Pn**	**12 13 28.6**	**+2.0**
	comp=E,1.5nm,0.6s						
AKTO				⇑S	**Sn**	**12 15 16.4**	**-5.1**
	comp=E,5.5nm,1.2s						
AB31	**Akbulak array**	**10.46**	**48**	⇓P	**Pn**	**12 13 31.4**	**+1.8**
	comp=E,0.6nm,0.5s,baz=240,slow=14,SNR=6.1						
AB31				⇑S	**Sn**	**12 15 24.0**	**-2.7**
	comp=E,0.4nm,0.3s,baz=241,slow=23,SNR=6.5						
BR131	**Keskin Array S**	**11.33**	**259**	⇑*e*P	**Pn**	**12 13 43.1**	**+1.4**
ARU	**Arti**	**15.23**	**22**	P	**Pn**	**12 14 35.4**	**+0.8**
ARU				S	**Sn**	**12 17 26.5**	**+3.3**
BRVK	**Borovoye**	**17.99**	**47**	⇑*e*P	**P**	**12 15 11.3**	**+1.1**
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BVAR	**Borovoye Array**	**18.03**	**48**	P	**P**	**12 15 12.8**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=238,slow=14,SNR=2.8						
AAK	**Ala-Archa**	**19.35**	**81**	*i* P	**P**	**12 15 22.3**	**-3.1**
IDI	**Anoyia**	**19.51**	**255**	P	**P**	**12 15 25.3**	**-1.8**
	comp=Z,0.5nm,0.3s,baz=24,slow=12,SNR=3.2						
VSU	**Vasula**	**20.62**	**327**	⇑*e*P	**P**	**12 15 39.1**	**+0.2**
VSU				pmax	pmax		
	comp=Z,21nm,0.9s						
VYHS	**Vyhne**	**21.20**	**296**	*e*P	**P**	**12 15 50.1**	**+4.8**
VYHS	**Vyhne**	**21.20**	**296**	*e*P	**P**	**12 15 50.1**	**+4.8**
KURBB	**Kurchatov Arra**	**22.16**	**59**	P	**P**	**12 15 57.2**	**+1.7**
	comp=Z,0.4nm,0.5s,baz=262,slow=10,SNR=6.0						
KURK	**Kurchatov**	**22.23**	**58**	⇑*e*P	**P**	**12 15 56.7**	**+0.4**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.6s						
FINES	**FINESS Array B**	**22.89**	**332**	P	**P**	**12 16 02.5**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=133,slow=10,SNR=3.9						
MK31	**Makanchi Array**	**24.45**	**69**	⇑*e*P	**P**	**12 16 19.1**	**+0.5**
MKAR	**Makanchi Array**	**24.45**	**69**	P	**P**	**12 16 19.6**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=278,slow=8.1,SNR=6.3						
KHC	**Kasperske Hory**	**24.71**	**297**	⇑*e*P	**P**	**12 16 20.4**	**-0.5**
KHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HFS	**Hagfors**	**27.17**	**322**	P	**P**	**12 16 41.2**	**-1.8**
	comp=Z,3.0nm,1.0s,baz=106,slow=11,SNR=6.6						

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*JMA **03** 12:21:41.5, 38°.62N×141°.90E, h48km±1km, M3.5*
JMA Felt I J1.
*IDC **03** 12:21:42.9±2.8, 38°.62N×141°.92E, h66km±26km, mb3.3/3, mb1 3.4/5, mb1mx3.0/62, mbtmp3.5/5, ML2.7/2, Error ellipse: s-maj=41.0km s-min=18.3km az=99.0*
ISC 03 12:21:40.4±1.8, **38°.60N**±0°.04×**141°.94E**±0°.08, **h31**km±12km,
n24, σ**1ˢ.45**/29, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKMT	**Kesennumamotoy**	**0.42**	**301**	P	**Pn**	**12 21 51.4**	**+1.1**
JKMT				S	**Sn**	**12 21 58.1**	**+1.0**
JIKH	**Ishinomakikobu**	**0.47**	**233**	P	**Pn**	**12 21 52.0**	**+1.1**
JIKH				S	**Sn**	**12 21 59.4**	**+1.2**
JIO	**Ouri**	**0.48**	**253**	P	**Pn**	**12 21 52.1**	**+0.9**
JIO				S	**Sn**	**12 21 59.3**	**+0.7**
OFUJ	**Ofunato**	**0.53**	**337**	P	**Pn**	**12 21 52.6**	**+0.8**
OFUJ				S	**Sn**	**12 22 00.3**	**+0.6**
JMK	**Ichinoseki**	**0.67**	**303**	P	**Pn**	**12 21 54.4**	**+0.7**
JMK				S	**Sn**	**12 22 03.5**	**+0.4**
JOM	**Ohasama**	**1.01**	**330**	P	**Pb**	**12 21 59.0**	**-0.3**
JOM				S	**Sb**	**12 22 12.0**	**-0.3**
JOU	**Okura**	**1.03**	**257**	P	**Pb**	**12 21 59.2**	**-0.4**
JOU				S	**Sb**	**12 22 12.3**	**-0.4**
JMM	**Marumori**	**1.16**	**231**	P	**Pn**	**12 22 00.8**	**+0.3**
JMM				S	**Sn**	**12 22 15.2**	**0.0**
JYK	**Kaneyama**	**1.28**	**285**	P	**Pn**	**12 22 02.7**	**+0.6**
JRG	**Rokugo**	**1.29**	**309**	P	**Pn**	**12 22 02.9**	**+0.6**
JFK	**Kawauchi**	**1.49**	**215**	P	**Pn**	**12 22 05.5**	**+0.5**
JYS	**Shirataka**	**1.52**	**256**	P	**Pn**	**12 22 06.4**	**+1.0**
JYS				S	**Sn**	**12 22 25.0**	**+0.9**
MAT	**Matsushiro**	**3.60**	**236**	P	**Pn**	**12 22 36.6**	**+2.5**
MAT				*e*S	**Sn**	**12 23 19.6**	**+4.0**
MJAR	**Matsushiro Arr**	**3.60**	**236**	P	**Pn**	**12 22 36.0**	**+1.9**
	0.3nm,0.3s,baz=42,slow=13,SNR=14						
ASAJ	**Asahikawa**	**5.54**	**5**	P	**Pn**	**12 23 03.5**	**+2.9**
	0.3nm,0.3s,baz=199,slow=16,SNR=5.1						
ASAJ				S	**Sn**	**12 24 04.3**	**+1.0**
	0.2nm,0.3s,baz=161,slow=18,SNR=2.4						
H11N2	**WAKE ISLAND Hy**	**28.63**	**124**	T	T	12 58 00.8	
	baz=317,slow=75,SNR=55						
H11N1	**WAKE ISLAND Hy**	**28.64**	**124**	T	T	12 58 01.5	
	baz=317,slow=75,SNR=52						
H11N3	**WAKE ISLAND Hy**	**28.65**	**124**	T	T	12 58 02.4	
	baz=317,slow=75,SNR=52						
H11S1	**WAKE ISLAND Hy**	**29.40**	**126**	T	T	12 58 47.7	
	baz=318,slow=76,SNR=19						
H11S3	**WAKE ISLAND Hy**	**29.40**	**126**	T	T	12 58 48.2	
	baz=318,slow=76,SNR=19						
H11S2	**WAKE ISLAND Hy**	**29.41**	**126**	T	T	12 58 49.5	
	baz=318,slow=76,SNR=18						
MKAR	**Makanchi Array**	**43.66**	**301**	P	**P**	**12 29 40.6**	**-1.6**
	0.4nm,0.8s,baz=87,slow=6.2,SNR=3.5						
KURBB	**Kurchatov Arra**	**45.38**	**307**	P	**P**	**12 29 54.6**	**-1.2**
	1.3nm,0.5s,baz=81,slow=8.1,SNR=15						
WRA	**Warramunga Arr**	**58.66**	**188**	P	**P**	**12 31 33.2**	**-1.6**
	0.5nm,1.0s,baz=3.4,slow=6.9,SNR=2.4						

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*IDC **03** 12:29:30.1±1.9, 38°.12N×70°.56E, h0km, mb3.8/4, mb1 3.8/10, mb1mx3.5/70, mbtmp3.7/10, ML3.0/6, MS3.3/5, Ms1 3.3/5, ms1mx2.9/58, Error ellipse: s-maj=27.3km s-min=15.8km az=155.0*
*NNC **03** 12:29:32.8±2.6, 38°.43N×69°.95E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=20.4km s-min=14.0km az=5.0*
*SOME **03** 12:29:33.9, 39°.03N×71°.63E, h5km*
ISC 03 12:29:34.7±0.7, **38°.94N**±0°.04×**70°.95E**±0°.05, **h10**km, **n39**,
σ**2ˢ.20**/48, **3C-6D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**3.27**	**348**	*e*P	**Pg**	**12 30 36.1**	**-1.3**
	11nm,0.9s						
IUG				*e*S	**Sg**	**12 31 20.2**	**+0.3**
	387nm,0.7s						
CHM	**Chimkent**	**3.52**	**343**	*e*P	**Pg**	**12 30 40.6**	**-1.6**
	86nm,0.1s						
CHM				*e*S	**Sg**	**12 31 27.6**	**-0.3**
	271nm,0.4s						
AML	**Almayashu**	**3.81**	**32**	P	**Pb**	**12 30 43.3**	**+1.1**
	SNR=44						
BRLS	**Borolday**	**4.17**	**349**	*e*P	**Pb**	**12 30 47.2**	**-0.9**
	0.8nm,0.7s						
BRLS				*e*S	**Sb**	**12 31 39.1**	**+0.6**
	4.0nm,0.8s						
KK31	**Karatay Array**	**4.17**	**356**	⇑Pn	**Pb**	**12 30 46.0**	**-2.1**
	11nm,0.6s,baz=185,slow=14,SNR=79						
KK31				⇓Sn	**Sb**	**12 31 41.5**	**+3.0**
	29nm,0.6s						
KK31				⇑Lg	Lg	12 31 59.2	
	58nm,0.8s,baz=188,slow=31,SNR=8.0						
UCH	**Uchtor**	**4.25**	**38**	P	**Pb**	**12 30 49.8**	**-0.1**
	SNR=13						
EKS2	**Erkin-Say**	**4.29**	**29**	P	**Pb**	**12 30 51.4**	**+1.2**
	SNR=21						
KZA	**Kyzart**	**4.53**	**45**	P	**Pb**	**12 30 54.1**	**-0.4**
	SNR=10						
AAK	**Ala-Archa**	**4.56**	**35**	Pn	**Pb**	**12 30 54.5**	**-0.4**
	1.7nm,0.3s,baz=213,slow=9.9,SNR=17						
AAK				Sn	**Sg**	**12 32 00.4**	**-0.8**
	1.1nm,0.3s,baz=330,slow=20,SNR=2.5						
AAK				Lg	Lg	12 32 21.6	
	2.2nm,0.3s,baz=81,slow=22,SNR=4.8						

AAK				LR	LR	12 33 21.5	
	comp=Z,94nm,20.9s,baz=305,slow=43						
AAK	Ala-Archa	4.56	35	P	Pb	12 30 54.6	-0.4
	SNR=14						
AAK	Ala-Archa	4.56	35	⇓Pn	Pb	12 30 54.3	-0.6
	28nm,0.8s						
AAK				⇑Sn	Sg	12 31 59.5	-1.7
	41nm,1.1s						
KBK	Karagaybulak	4.79	38	P	Pb	12 30 57.1	-1.7
	SNR=26						
USP	Ospenovka	5.08	31	P	Pb	12 31 02.7	-1.0
	SNR=17						
CEP	Cherat	5.17	171	P	Pn	12 30 52.6	+0.4
KST	Kastek	5.58	41	*e*P	Pb	12 31 09.5	-2.7
	10nm,0.7s						
KST				*e*S	Sb	12 32 17.4	-1.8
	12nm,0.8s						
CHCP	Chirah Chowk	5.59	160	P	Pn	12 31 01.0	+3.0
DGS	Degeres	5.63	39	*e*P	Pb	12 31 09.9	-3.1
	4.4nm,0.7s						
DGS				*e*S	Sb	12 32 17.9	-2.7
	12nm,0.7s						
TNSS	Tian-Shan	6.11	46	*e*P	Pb	12 31 18.4	-2.9
	7.3nm,0.6s						
TNSS				*e*S	Sb	12 32 33.1	-1.5
	7.7nm,0.7s						
THW	Thamme Wali	6.17	174	P	Pn	12 31 04.3	-1.6
MDOK	Medeo	6.24	46	*e*P	Pb	12 31 20.9	-2.6
	9.3nm,0.6s						
MDOK				*e*S	Sb	12 32 37.2	-1.1
	8.3nm,1.3s						
MDOK	Medeo	6.24	46	P	Pb	12 31 17.5	-6.1
	13nm,0.9s						
MDOK				S	Sb	12 32 43.9	+5.6
	31nm,1.0s						
DHRM	DHARAMSHALA	7.97	145	*e*P	Pn	12 31 34.9	+4.1
DHRM				*e*S	Sn	12 33 01.4	+0.2
DHRM				IAML		12 33 09.7	
	comp=E,62nm,0.7s						
DHRM				IAML		12 33 10.4	
	comp=N,23nm,0.2s						
SMLA	Simla	9.31	145	*e*P	Pn	12 31 49.4	+0.5
SMLA				*e*S	Sn	12 33 29.6	-4.1
SMLA				IAML		12 33 43.6	
	comp=E,16nm,0.8s						
SMLA				IAML		12 33 44.0	
	comp=N,13nm,0.2s						
MKAR	Makanchi Array	11.43	43	Pn	Pn	12 32 26.9	+9.0
	comp=N,0.1nm,0.3s,baz=228,slow=13,SNR=12						
KURBB	Kurchatov Arra	12.85	22	Pn	Pn	12 32 42.4	+5.2
	comp=N,0.0nm,0.3s,baz=214,slow=12,SNR=5.2						
KURBB				Lg	Lg	12 36 42.0	
	comp=N,0.0nm,0.3s,baz=216,slow=27,SNR=3.9						
AB31	Akbulak array	12.98	326	⇓P	Pn	12 32 39.8	+0.7
	comp=N,3.0nm,0.5s,baz=142,slow=13,SNR=71						
AB31				⇓S	Sn	12 35 03.3	-0.2
	comp=N,7.2nm,0.8s,baz=266,slow=53,SNR=5.8						
BVAR	Borovoye Array	14.09	359	Pn	P	12 32 59.1	-2.9
	comp=N,0.1nm,0.3s,baz=185,slow=14,SNR=4.0						
AKTO	Aktyubinsk	14.69	326	Pn	Pn	12 33 03.0	+0.6
	comp=N,0.3nm,0.3s,baz=157,slow=13,SNR=8.0						
AKTO				Sn	Sn	12 35 45.2	-0.1
	comp=N,0.2nm,0.3s,baz=162,slow=20,SNR=4.0						
AKTO	Aktyubinsk	14.69	326	⇓P	Pn	12 33 02.8	+0.3
	comp=N,7.3nm,1.4s						
AKTO				⇓S	Sn	12 35 44.3	-0.9
	comp=N,7.7nm,0.9s						
ZALV	Zalesovo Beam	17.74	28	P	P	12 33 46.1	+3.7
	baz=220,slow=11,SNR=5.6						
ARU	Arti	19.33	339	P	Pn	12 34 04.6	+3.7
	comp=N,0.0nm,0.3s,baz=162,slow=12,SNR=3.4						
GNI	Garni	20.23	282	P	P	12 34 06.1	-4.0
	comp=N,6.7nm,0.5s,baz=110,slow=12,SNR=2.2						
OBN	Obninsk	28.10	316	LR	LR	12 48 58.4	
	comp=N,20nm,21.4s,baz=327,slow=41						
EIL	Elat	30.98	264	LR	LR	12 49 33.6	
	comp=N,28nm,20.6s,baz=273,slow=39						
FINES	FINESS Array B	35.46	324	LR	LR	12 51 05.8	
	comp=N,287nm,19.4s,baz=244,slow=36						
ARCES	ARCESS Array B	38.88	336	P	P	12 37 01.4	+1.6
	comp=N,2.8nm,0.9s,baz=114,slow=9.0,SNR=3.9						
INK	Inuvik	71.50	9	LR	LR	13 15 35.7	
	comp=N,80nm,21.6s,baz=97,slow=38						
ILAR	Eielson Array	72.44	16	P	P	12 41 03.2	+2.4
	comp=N,0.3nm,0.9s,baz=318,slow=6.6,SNR=3.7						
YKA	Yellowknife Ar	78.81	3	P	P	12 41 39.1	+1.8
	comp=N,0.2nm,0.5s,baz=352,slow=5.0,SNR=5.4						

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*BJI **03** 12:32:44.6±0.0, 1°.66S×127°.97E, h20^{km}, mB5.0/25, mb4.7/39, Ms4.7/4, Ms7 4.4/4*
*NEIC **03** 12:32:50.6±0.9, 1°.21S±0°.05×127°.51E±0°.07, h22^{km}±6^{km}, mb4.7/30, Error ellipse: s-maj=10.8km s-min=7.8km az=82.0*
*DJA **03** 12:32:50.3±0.2, 1°S±2°×12°8E±°, h10^{km}, M4.3/16, mb4.6/7, mB5.5/1, MLv4.2/16, MLv4.3/6, Mw(mB)4.9/1*
*IDC **03** 12:32:55.0±2.1, 1°.18S×127°.56E, h57^{km}±20^{km}, mb4.0/14, mb1 4.1/18, mb1mx3.8/63, mbtmp4.3/18, ML3.9/4, MS3.1/5, Ms1 3.1/5, ms1mx2.8/48, Error ellipse: s-maj=23.2km s-min=10.4km az=72.0*
ISC 03 12:32:49.5±1.2**, 1°.21S**±0°.03×**127°.55E**±0°.04**, h13**^{km}±7^{km}**,**
n95, σ1^{s}26/103**, mb4.6**/34**, 2C-1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	Labuha	0.57	355	P	Pg	12 32 59.9	-0.8
LBMI				S	Sg	12 33 06.7	-1.6
SANI	Sanana	1.77	242	P	Pn	12 33 19.4	-0.4
SANI				S	Sb	12 33 43.9	-0.1
TNTI	Ternate	1.98	355	P	Pn	12 33 22.8	+0.2
TNTI				S	Sn	12 33 46.8	-0.5
TNTI	Ternate	1.98	355		Pn	12 33 23.0	+0.3
TNTI				Sn	Sn	12 33 46.9	-0.5
NLAI	Namlea	2.07	193	P	Pb	12 33 26.0	-0.8
NLAI				S	Sb	12 33 52.7	+0.3
MSAI	Masohi	2.53	147	P	Pb	12 33 34.1	-0.6
AAI	Ambon	2.54	165	P	Pb	12 33 33.5	-1.5
SIJI	Sorong	3.73	85	P	Pn	12 33 50.2	+3.4
	3.7nm,0.3s,baz=262,slow=23,SNR=10						
SIJI				S	Sb	12 34 40.3	0.0
	1.8nm,0.3s,baz=162,slow=20,SNR=4.5						
SIJI				LR	LR	12 35 33.9	
	comp=Z,286nm,20.6s,baz=200,slow=43						
KMSI	Cibinong	3.99	296	P	Pn	12 33 51.1	+0.8
BNDI	Bandanaira	4.04	145	P	Pn	12 33 54.4	+3.3
LUWI	Luwuk	4.78	272	P	Pn	12 34 00.3	-1.0
LUWI	Luwuk	4.78	272		Pn	12 34 00.7	-0.6
LUWI				Sn	Sn	12 34 55.1	-1.4
FAKI	Fak Fak	4.99	110	P	Pn	12 34 04.9	+0.7
	0.2nm0.2nm42nm,1.0s						
FAKI	Fak Fak	4.99	110		Pn	12 34 04.8	+0.7
MRSI	Marisa	5.86	287	P	Pn	12 34 17.0	+1.0
	0.3nm44nm,0.5s						
APSI	Ampana	5.91	273	P	Pn	12 34 16.6	-0.2
	1.0nm1.0nm3µm221nm,0.5s						
SAUI	Saumlaki	7.69	151	Pn	Pn	12 34 41.7	+0.4
MPSI	Mapaga	7.81	281	P	Pn	12 34 43.9	+1.1
	0.1nm20nm,0.8s						
TTSI	Tana Toraja	7.94	257	P	Pn	12 34 45.9	+1.2
	0.2nm0.2nm36nm,0.6s						
BNSI	Bone	8.08	247	P	Pn	12 34 47.5	+0.9
	17nm,1.1s						
SPSI	Sidrap Palu	8.24	250	P	Pn	12 34 49.9	+1.1
	70nm,0.4s						
DAV	Davao City (W)	8.46	347	LR	LR	12 38 40.7	
	comp=Z,88nm,19.1s,baz=310,slow=41						
KAPI	Kappang	8.66	244	P	Pn	12 34 58.8	+4.3
	2.7nm,0.3s,baz=94,slow=6.6,SNR=6.4						
KAPI				S	Sn	12 36 31.3	-0.7
	0.5nm,0.3s,baz=51,slow=6.5,SNR=3.1						
KAPI				LR	LR	12 38 06.7	
	comp=Z,50nm,18.8s,baz=86,slow=36						
EDFI	Ende, Flores	9.49	218	P	Pn	12 35 07.4	+1.3
MTN	Manton Dam	12.09	163		Pn	12 35 42.3	+0.8
KNRA	Kununurra	14.43	175		Pn	12 36 14.1	+0.6
FITZ	Fitzroy Crossi	16.89	186	P	P	12 36 47.0	-0.7
	0.2nm,0.3s,baz=22,slow=4.4,SNR=8.5						
FITZ	Fitzroy Crossi	16.89	186	Pn	Pn	12 36 45.5	-0.2
WB0	Warramunga Arr	19.62	160	P	P	12 37 16.9	-0.9
WRA	Warramunga Arr	19.77	161	P	P	12 37 19.4	0.0
	0.7nm,0.3s,baz=339,slow=12,SNR=52						
WRA				S	S	12 40 55.2	-6.9
	0.1nm,0.3s,baz=337,slow=21,SNR=2.9						
WB2	Warramunga Arr	19.77	161	P	P	12 37 19.4	-0.1
COEN	Coen	19.98	130	P	Pn	12 37 23.8	+0.3
COEN				IAmb	IAmb	12 37 25.6	
	comp=Z,28nm,0.8s						
PMG	Port Moresby	21.14	113	LR	LR	12 46 59.5	
	comp=Z,82nm,18.5s,baz=266,slow=40						
AS31	Alice Springs	23.16	165	P	P	12 37 55.6	-0.2
ASAR	Alice Springs	23.16	165	P	P	12 37 56.0	+0.2
	comp=Z,5.3nm,0.6s,baz=344,slow=11,SNR=96						
ASAR				S	S	12 42 05.6	-1.7
	comp=Z,0.7nm,0.8s,baz=348,slow=23,SNR=6.2						
TPUB	Ta-pu	25.28	345	P	P	12 38 16.4	+0.7
YHNB	Yeheng	26.41	347	P	P	12 38 26.2	+0.2
PSI	Prapat	28.90	278	LR	LR	12 51 24.2	
	comp=Z,95nm,18.9s,baz=158,slow=38						
FORT	Forrest	29.41	179	P	P	12 38 52.9	+0.1
BBOO	Buckleboo	32.44	167	P	P	12 39 19.4	0.0
STKA	Stephens Creek	33.26	158	P	P	12 39 28.9	+2.2
	comp=Z,4.4nm,0.9s,baz=331,slow=10.0,SNR=9.7						
STKA	Stephens Creek	33.26	158	P	P	12 39 27.2	+0.5
NJ2	Nanjing	34.09	347	*e*P	P	12 39 34.5	+0.7
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CMAR	Chiang Mai Arr	34.26	306	P	P	12 39 36.5	+1.0
	comp=Z,0.5nm,0.3s,baz=130,slow=9.6,SNR=6.8						
KMI	Kunming	35.53	319	P	P	12 39 48.1	+1.4
KMI				sP	sP	12 39 59.6	+7.2
KMI				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ENH	Enshi	35.73	333	P	P	12 39 48.5	+0.4
ARMA	Armidale	36.96	144	P	P	12 40 00.4	+1.7
ARMA				IAmb	IAmb	12 40 13.8	
	comp=Z,17nm,1.2s						
KSRS	Korea Array	38.47	0	P	P	12 40 11.5	+0.3
	comp=Z,0.8nm,0.6s,baz=168,slow=8.8,SNR=4.3						
MJAR	Matsushiro Arr	38.85	14	P	P	12 40 14.0	-0.4
	comp=Z,1.6nm,0.6s,baz=178,slow=9.1,SNR=4.1						
XAN	Xi'an	39.19	335	P	P	12 40 17.6	+0.2
XAN				PP	PnPn	12 41 52.3	+2.3
XAN				pmax	pmax		
	comp=Z,21nm,0.9s						
XAN				pmax	pmax		
	comp=Z,140nm,6.1s						
XAN	Xi'an	39.19	335	P	P	12 40 17.3	-0.1
XAN				IAmb	IAmb	12 40 18.4	
	comp=Z,16nm,0.8s						
CAN	Canberra	39.37	152	P	P	12 40 20.0	+1.1
CAN				IAmb	IAmb	12 40 34.1	
	comp=Z,21nm,1.4s						
TOO	Toolangi	39.78	158	P	P	12 40 23.3	+1.0
TOO				IAmb	IAmb	12 40 26.7	
	comp=Z,18nm,1.3s						
LZH	Lanzhou	43.18	332	⇑P	P	12 40 52.2	+1.9
LZH				pP	sP	12 41 02.5	+6.4
LZH				sP	pP	12 41 03.7	+9.5
LZH				pmax	pmax		
	comp=Z,26nm,1.3s						
LZH				pmax	pmax		
	comp=Z,72nm,5.7s						
LZH				LR	LR		
	comp=Z,320nm,13.8s						
LZH				LR	LR		
	comp=Z,320nm,14.0s						
LZH				LR	LR		
	comp=Z,470nm,16.7s						
HHC	Hu-ho-hao-te	44.32	343	*e*P	P	12 41 00.1	+0.7
HHC				pmax	pmax		
	comp=Z,64nm,1.0s						
HHC				pmax	pmax		
	comp=Z,210nm,5.1s						
CN2	Changchun	44.85	358	*e*P	P	12 41 02.7	-0.7
USRK	Ussuriysk Ar.	45.38	4	P	P	12 41 07.6	0.0
	comp=Z,2.4nm,0.6s,baz=177,slow=5.2,SNR=6.5						
LSA	Lhasa	46.39	315	P	P	12 41 16.9	+0.5
LSA				IAmb	IAmb	12 41 19.4	
	comp=Z,7.4nm,0.8s						
TAPN	Taplejung	47.69	310	*e*P	P	12 41 26.8	+0.4
	comp=Z,17nm,0.9s						
ODAN	Odare	47.69	309	*e*P	P	12 41 27.8	+1.4
GTA	Gaotai	47.76	331	*e*P	P	12 41 27.1	+0.6
GTA				pP	sP	12 41 34.4	+2.1
GTA				sP	pP	12 41 37.6	+7.2
GTA				pmax	pmax		
	comp=Z,11nm,0.9s						
RAMN	Ramite	48.35	308	*e*P	P	12 41 32.3	+0.8
	comp=Z,26nm,0.6s						
JIRN	Jiri	49.01	309	*e*P	P	12 41 37.4	+0.7
	comp=Z,21nm,0.7s						
GUN	Gumba	49.37	309	*e*P	P	12 41 40.1	+0.7
	comp=Z,21nm,0.6s						
PKI	Pulchoki	49.58	309	*e*P	P	12 41 41.7	+0.7
PKIN	Phulchoki	49.59	309	*e*P	P	12 41 41.4	+0.4
KKN	Kakani	49.78	309	*e*P	P	12 41 43.4	+1.0
	comp=Z,16nm,0.8s						
DMN	Daman	49.83	308	*e*P	P	12 41 43.5	+0.6
	comp=Z,21nm,1.0s						
GKN	Gorkha	50.38	309	*e*P	P	12 41 47.4	+0.5
DANN	Dangsing	51.23	309	*e*P	P	12 41 53.9	+0.4
	comp=Z,30nm,0.7s						
SONM	Songino Array	52.22	342	P	P	12 42 00.5	+0.2
	comp=Z,2.3nm,0.8s,baz=151,slow=8.7,SNR=13						
WMQ	Urumqi	57.24	327	*e*P	P	12 42 37.5	+0.7
WMQ				pP	sP	12 42 45.1	+2.5
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,170nm,6.1s						
WMQ	Urumqi	57.24	327	P	P	12 42 36.2	-0.6
WMQ				IAmb	IAmb	12 42 38.3	
	comp=Z,7.5nm,0.8s						
MK31	Makanchi Array	62.08	326	P	P	12 43 09.6	-0.3
MK31				IAmb	IAmb	12 43 16.5	
	comp=Z,3.5nm,0.8s						
MKAR	Makanchi Array	62.08	326	P	P	12 43 09.9	0.0
	comp=Z,1.8nm,0.4s,baz=121,slow=8.1,SNR=28						
KSH	Kashi	62.14	317	P	P	12 43 12.8	+2.1
KSH				pP	sP	12 43 21.1	+4.6
KSH				S	S	12 51 35.9	0.0
KSH				pmax	pmax		
	comp=Z,13nm,1.2s						
KSH				pmax	pmax		
	comp=Z,520nm,8.8s						
KSH				LR	LR		
	comp=Z,480nm,13.1s						
MAKZ	Makanchi	62.26	326	P	P	12 43 11.0	-0.2
MAKZ				IAmb	IAmb	12 43 12.0	
	comp=Z,8.0nm,1.2s						
KDJ	Kajisay	62.59	320	P	P	12 43 13.0	-0.8
KDJ				IAmb	IAmb	12 43 20.0	
	comp=Z,3.5nm,0.8s						
YAK	Yakutsk	63.09	1	P	P	12 43 16.2	-0.2
AAK	Ala-Archa	64.58	319	P	P	12 43 26.5	-0.3
KBL	Kabul	65.21	309	P	P	12 43 30.3	-0.8
KBL				IAmb	IAmb	12 43 34.4	
	comp=Z,3.9nm,0.7s						
ZAA0	Zalesovo Array	65.34	334	P	P	12 43 30.1	-1.2
ZAA0				IAmb	IAmb	12 43 31.0	
	comp=Z,3.3nm,0.8s						
ZALV	Zalesovo Beam	65.34	334	P	P	12 43 30.3	-1.0
	comp=Z,2.5nm,0.8s,baz=106,slow=4.8,SNR=10						
GAR	Garm	65.89	314	P	P	12 43 34.7	-0.6
GAR				IAmb	IAmb	12 43 40.5	
	comp=Z,5.7nm,0.7s						
KURBB	Kurchatov Arra	66.33	328	P	P	12 43 37.2	-0.5
	comp=Z,6.2nm,0.7s,baz=127,slow=5.9,SNR=60						
KURK	Kurchatov	66.34	328	P	P	12 43 37.1	-0.6
CHGR	Chuyangaron	66.60	313	P	P	12 43 39.4	-0.5
CHGR				IAmb	IAmb	12 43 39.9	
	comp=Z,5.3nm,0.9s						
KK31	Karatay Array	67.41	318	P	P	12 43 44.3	-0.5
BVAR	Borovoye Array	71.90	328	P	P	12 44 11.6	-0.7
	comp=Z,3.6nm,0.9s,baz=134,slow=8.4,SNR=14						
BRVK	Borovoye	71.97	328	P	P	12 44 12.0	-0.7
BRVK				IAmb	IAmb	12 44 13.1	
	comp=Z,6.0nm,1.0s						
GEYT	Alibeck	74.64	310	P	P	12 44 28.8	-0.1
	comp=Z,1.6nm,0.6s,baz=170,slow=10.0,SNR=3.6						
NRIK	Noril'sk	75.39	346	P	P	12 44 32.3	-0.2
	comp=Z,5.6nm,0.6s,baz=136,slow=5.3,SNR=5.9						
AKTO	Aktyubinsk	78.03	322	P	P	12 44 47.1	-0.7
	comp=Z,2.6nm,0.7s,baz=104,slow=7.4,SNR=8.9						
SYO	Syowa Base	88.14	201	⇑*i*P	P	12 45 39.2	-0.5
SYO	Syowa Base	88.14	201	⇓*e*pP	pP	12 45 46.8	+2.8

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*AZER **03** 12:37:57.8, 40°.98N×47°.94E, h7^{km}, ML3.2*
*IASPEI **03** 12:37:59.5±0.9, 40°.97N±0°.02×47°.92E±0°.02, h8^{km}±6^{km}, Error ellipse: s-maj=3.0km s-min=2.7km az=102.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*DRS **03** 12:37:59.5±0.0, 40°.99N×47°.94E, h13^{km}*
*MOS **03** 12:37:59.1±2.2, 40°.91N×48°.03E, h13^{km}, mb3.8/1, Error ellipse: s-maj=8.8km s-min=5.7km az=107.2*
*TIF **03** 12:37:59.6, 40°.99N×47°.94E, h5^{km}± 1^{km}*
ISC 03 12:37:59.6±0.8**, 40°.96N**±0°.02×**47°.93E**±0°.02**, h8**^{km}±6^{km}**,**
n69, σ1^{s}91/121**, 5C-2D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QBL	Gabala	0.08	257	P	Pg	12 38 01.3	-0.3
	SNR=683						
QBL				S	Sg	12 38 03.2	+0.1
IML	Ismayilli	0.25	132	P	Pb	12 38 05.7	-0.8
	SNR=17						
IML				S	Sb	12 38 11.9	+0.8
XNQ	Khinaliq	0.26	37	P	Pg	12 38 04.7	-0.2
	SNR=441						
XNQ				S	Sg	12 38 08.7	+0.3
PQL	Pirkuli	0.53	109	P	Pb	12 38 10.8	-0.4
	SNR=124						
PQL				S	Sn	12 38 20.7	-2.1
AKT	Akhty	0.54	343	*i* Pg	Pg	12 38 09.7	-0.3
	535nm,0.2s						
AKT				*e*Sg	Sg	12 38 17.1	0.0
	1µm,0.3s						
AKT	Akhty	0.54	343	⇓*i*PG	Pg	12 38 09.7	-0.3
AKT				*e*S	Sg	12 38 17.1	0.0
QUBA	Quba, Azerbaij	0.57	47	P	Pb	12 38 11.6	-0.4
	SNR=33						
QUBA				S	Sn	12 38 21.4	-2.4
QSAR	Qusar	0.60	24	P	Pb	12 38 11.7	-0.8
	SNR=91						
QSAR				S	Sn	12 38 22.6	-1.9
SEKA	Sheki	0.61	294	PG	Pg	12 38 11.0	-0.3
SEKA	Sheki	0.61	294	P	Pg	12 38 11.1	-0.3
	SNR=62						
SEKA				S	Sb	12 38 20.7	-0.5
KDMR	Kurdemir	0.62	162	P	Pb	12 38 12.5	-0.1
KDMR				S	Sn	12 38 24.0	-0.6
KSMR	Kasumkent	0.66	13	*e*Pg	Pg	12 38 12.0	-0.2
KSMR				*i* Sg	Sb	12 38 22.5	-0.1
KSMR	Kasumkent	0.66	13	*e*PG	Pg	12 38 12.0	-0.2
KSMR				*i* S	Sb	12 38 22.5	-0.1
MNGR	Mingechevir, A	0.67	254	PG	Pb	12 38 13.5	0.0
MNGR	Mingechevir, A	0.67	254	P	Pb	12 38 13.6	0.0
	SNR=12						
MNGR				S	Sn	12 38 25.5	-0.5
ZRD	Zardab	0.71	196	P	Pb	12 38 14.5	+0.4
	SNR=80						
ZRD				S	Sn	12 38 27.5	+0.5
SIZA	Siyzn	0.74	81	P	Pb	12 38 14.8	0.0
	SNR=13						
SIZA				S	Sn	12 38 27.8	0.0
ATGJ	Altiaghaj	0.77	97	P	Pb	12 38 15.0	-0.2
	SNR=24						
ATGJ				S	Sn	12 38 27.4	-1.2
GBS	Qobustan	0.88	119	P	Pn	12 38 18.2	-0.1
	SNR=15						
GBS				S	Sn	12 38 34.0	+2.7
BRDA	Brd	0.91	220	P	Pn	12 38 18.4	-0.2
	SNR=5.2						
BRDA				S	Sn	12 38 33.7	+1.9
AGDM	Agdam	1.06	217	P	Pb	12 38 19.9	-0.3
	SNR=78						
AGDM				S	Sn	12 38 36.7	+1.0
DRN	Derbent	1.11	15	*i* Pg	Pg	12 38 20.6	-0.2
	223nm,0.6s						
DRN				*e*Sg	Sn	12 38 36.4	-0.3
	546nm,0.5s						
DRN	Derbent	1.11	15	*e*PG	Pg	12 38 21.2	+0.4
DRN				*e*S	Sn	12 38 36.5	-0.3
SAAT	Saatly	1.16	161	P	Pn	12 38 20.8	-1.3
SAAT				S	Sn	12 38 39.1	+0.9
ZKTA	Zakatala	1.20	305	P	Pn	12 38 21.6	-1.0
	SNR=22						
ZKTA				S	Sn	12 38 38.7	-0.4
URKR	Urkarakh	1.22	349	*e*Pg	Pg	12 38 22.5	-0.5
URKR				*e*Sg	Sn	12 38 39.3	-0.6
URKR	Urkarakh	1.22	349	*e*PG	Pg	12 38 22.5	-0.5
URKR				*e*S	Sn	12 38 39.3	-0.6
GANJ	Ganja	1.26	256	PG	Pn	12 38 22.9	-0.7
GANJ	Ganja	1.26	256	P	Pn	12 38 22.2	-1.4
	SNR=5.7						
GANJ				S	Sb	12 38 39.6	-0.5
BLQ	Beylaqan	1.27	193	P	Pn	12 38 23.1	-0.5
	SNR=7.0						
BLQ				S	Sg	12 38 41.7	+1.2
ALIB	Äli-Bayra	1.29	140	P	Pg	12 38 25.0	+0.6
	SNR=5.2						
ALIB				S	Sg	12 38 47.7	+6.5
KMKR	Kumukh	1.32	332	*i* Pg	Pg	12 38 24.5	-0.5
	94nm,0.3s						
KMKR				*i* Sg	Sg	12 38 50.0	+7.8
	289nm,0.5s						
KMKR	Kumukh	1.32	332	*i* PG	Pg	12 38 24.5	-0.5
KMKR				*i* S	Sg	12 38 50.0	+7.8
KMKR				pmax	pmax		
	comp=Z,94nm,0.3s						
DDFL	Dedoflistskaro	1.45	290	P	Pg	12 38 27.7	+0.3
DDFL				S	Sg	12 38 48.4	+2.1
DDFL	Dedoflistskaro	1.45	290	PG	Pg	12 38 27.7	+0.3
SGKR	Sergokala	1.51	352	*e*Pg	Pg	12 38 28.0	-0.5
SGKR				*i* Sg	Sg	12 38 54.0	+5.9
	comp=Z,236nm,0.3s						
SGKR	Sergokala	1.51	352	*e*PG	Pg	12 38 28.0	-0.5
SGKR				*i* S	Sg	12 38 54.0	+5.9
QRD	Qoradiz	1.57	198	Pn	Pn	12 38 28.0	+0.2
	SNR=7.8						
QRD				Sn	Sg	12 38 50.3	+0.2
GNBR	Gunib	1.60	333	*e*Pg	Pg	12 38 30.1	-0.1
	comp=Z,103nm,0.6s						
GNBR				*e*Sg	Sg	12 38 56.9	+5.9
	comp=Z,280nm,0.7s						
GNBR	Gunib	1.60	333	⇑*e*PN	Pg	12 38 31.5	+1.3
GNBR				*e*		12 38 52.4	
GNBR				pmax	pmax		
	comp=Z,103nm,0.6s						
GNBR				smax	smax		
	comp=N,217nm,1.1s						
GDB	GEDABAY	1.67	262	Pn	Pn	12 38 29.0	-0.3
	SNR=36						
GDB				Sn	Sb	12 38 51.3	-0.7
GLBA	Clilabad	1.75	168	Pn	Pb	12 38 31.0	-1.0
	SNR=7.0						
GLBA				Sn	Sb	12 38 54.3	+0.2
QZX	Qazax, Azerbai	1.94	274	Pn	Pn	12 38 33.1	+0.2
	SNR=26						
QZX				Sn	Sb	12 39 00.2	+0.7
KRNR	Karanay	2.01	338	*e*Pg	Pg	12 38 38.0	-0.2
KRNR				*e*Sg	Sg	12 39 07.0	+2.7
	comp=N,59nm,0.5s						
KRNR	Karanay	2.01	338	*e*PN	Pg	12 38 38.0	-0.2
KRNR				*e*S	Sg	12 39 07.0	+2.7
YRD	Yardimli	2.06	173	Pn	Pn	12 38 35.0	+0.3
	SNR=13						
YRD				Sn	Sn	12 39 01.4	+0.8
LRK	Lerik	2.34	172	Pn	Pn	12 38 39.0	+0.5
	SNR=15						
LRK				Sn	Sn	12 39 08.9	+1.5
LKRN	Lenkeran, Azer	2.34	164	PN	Pn	12 38 38.9	+0.6
LKRN	Lenkeran, Azer	2.34	164	Pn	Pn	12 38 39.0	+0.6
LKRN				Sn	Sb	12 39 09.4	-1.6
SBZ	Shahbuz	2.40	230	Pn	Pn	12 38 40.6	+1.3
	SNR=3.9						
SBZ				Sn	Sb	12 39 13.9	+0.9
BTNK	Botanikuri	2.47	288	P	Pn	12 38 41.5	+1.4
BTNK				S	Sb	12 39 14.4	-0.4
ASTR	Astara	2.49	164	Pn	Pn	12 38 41.1	+0.7
ASTR				Sn	Sb	12 39 13.9	-1.4
ORD	Ordubad	2.52	217	Pn	Pn	12 38 41.8	+0.9
	SNR=9.2						
ORD				Sn	Sb	12 39 16.6	+0.3
GNI	Garni	2.56	253	⇑*e*PN	Pn	12 38 40.0	-1.6
NAX	Nakhchivan	2.59	227	PN	Pn	12 38 43.2	+1.4
NAX	Nakhchivan	2.59	227	Pn	Pn	12 38 43.3	+1.4
	SNR=3.9						
NAX				Sg	Sb	12 39 20.1	+1.9

HYR	Heyderabad	2.66	243	P	Pn	12 38 44.0	+1.2
	SNR=4.1						
HYR				Sg	Sg	12 39 22.9	-2.2
KZRT	Kazreti	2.70	280	P	Pb	12 38 46.5	-1.7
KZRT				S	Sb	12 39 20.1	-1.4
KZRT	Kazreti	2.70	280	PN	Pb	12 38 46.5	-1.7
GROC	Groznyy	2.75	325	PN	Pb	12 38 49.9	+1.0
GROC				*e*		12 39 28.3	
GROC				pmax	pmax		
	comp=Z,49nm,0.4s						
GROC				smax	smax		
	comp=E,65nm,0.6s						
GROC				smax	smax		
	comp=E,66nm,0.6s						
GROC				smax	smax		
	comp=N,38nm,0.6s						
GROC				MLR	MLR		
	comp=Z,99nm,3.0s						
AKH	Akhalkalaki	3.38	279	*e*PN	Pb	12 38 55.9	-3.9
AKH				*e*S	Sn	12 39 36.1	+2.9
ZEI	Tsey	3.52	303	*e*PN	Pn	12 38 57.6	+2.9
ZEI				*e*S	Sn	12 39 38.8	+2.1
KIV	Kislovodsk	4.90	309	*e*PN	Pn	12 39 11.1	-2.5
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
ARU	Arti	16.96	21	⇑*e*P	P	12 41 57.5	-1.4
BRVK	Borovoye	19.36	44	⇑*e*P	P	12 42 24.4	-1.0
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AAK	Ala-Archa	19.85	76	⇓*e*P	Pn	12 42 31.1	-1.5
AAK				pmax	pmax		
	comp=Z,4.0nm,2.1s						
VSU	Vasula	22.07	330	⇑*e*P	P	12 42 53.5	-1.2
FINES	FINESS Array B	24.43	334	*i* P	P	12 43 17.0	-1.4
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	Makanchi Array	25.30	65	*i* P	P	12 43 26.6	+0.1

IDC 03 12:38:06.0±2.9**, 22°.89N×11°.90W, h0**^{km}**, mb3.6**/3**, mb1 3.7**/5**, mb1mx3.4**/56**, mbtmp3.7**/5**, ML3.4**/2**, Error ellipse: s-maj=82.8km s-min=32.2km az=76.0, Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDT	Midelt	11.80	32	Lg	Lg	12 44 22.2	
	0.1nm,0.3s,baz=314,slow=18,SNR=2.7						
TORD	Torodi Ar. Bea	16.14	125	Pn	Pn	12 41 53.9	-0.5
	0.1nm,0.3s,baz=316,slow=12,SNR=3.3						
TORD				Sn	Sn	12 44 57.6	+3.4
	0.1nm,0.3s,baz=315,slow=28,SNR=2.9						
DBIC	Dimbokro	17.50	156	P	Pn	12 42 10.8	-0.8
	0.2nm,0.3s,baz=310,slow=14,SNR=3.2						
GERES	GERESS Array B	32.88	32	P	P	12 44 42.0	+0.2
	0.3nm,0.3s,baz=221,slow=12,SNR=2.3						
KURBB	Kurchatov Arra	72.92	42	P	P	12 49 36.5	-0.5
	0.3nm,0.5s,baz=282,slow=7.1,SNR=4.7						
MKAR	Makanchi Array	76.42	45	P	P	12 49 57.6	+0.1
	0.3nm,0.5s,baz=291,slow=5.8,SNR=7.2						
ASAR	Alice Springs	148.62	98	PKPbc	PKPbc	12 57 55.5	-0.2
	0.4nm,0.7s,baz=303,slow=2.3,SNR=6.6						

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*IDC **03** 12:50:36.4±1.1, 38°.75N×142°.95E, h0^{km}, mb3.4/4, mb1 3.6/6, mb1mx3.4/38, mbtmp3.4/6, ML3.0/2, Error ellipse: s-maj=54.1km s-min=20.2km az=112.0*

*JMA **03** 12:50:40.6±0.1, 38°.95N×142°.34E, h35^{km}±2^{km}, M3.8*

JMA Felt I J1.

ISC 03 12:50:40.1±2.0**, 38°.96N**±0°.05×**142°.36E**±0°.09**, h26**^{km}±14^{km}**, n24, σ1^{s}25**/28**, mb3.6**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.55	283	P	Pb	12 50 51.7	+0.6
OFUJ				S	Sb	12 50 59.2	+0.5
JKMT	Kesennumamotoy	0.70	259	P	Pb	12 50 53.6	-0.1
JKMT				S	Sb	12 51 02.4	-0.6
MIYJ	Miyakonagasawa	0.75	326	P	Pb	12 50 54.4	-0.1
MIYJ				S	Sb	12 51 04.1	-0.2
JMK	Ichinoseki	0.89	270	P	Pb	12 50 56.6	-0.2
JMK				S	Sb	12 51 07.8	-0.4
JIO	Ouri	0.93	238	P	Pb	12 50 56.6	-1.0
JIO				S	Sb	12 51 07.5	-2.0
JOM	Ohasama	0.97	302	P	Pn	12 50 58.1	0.0
JOM				S	Sb	12 51 10.4	-0.4
JTH	Tanohata	1.05	339	P	Pn	12 50 58.8	-0.4
JRG	Rokugo	1.41	289	P	Pb	12 51 05.1	-0.6
JRG				*e*S	Sb	12 51 23.6	+0.4
JOU	Okura	1.45	247	P	Pn	12 51 04.9	+0.3
JOU				S	Sn	12 51 22.9	+0.1
JYK	Kaneyama	1.56	269	P	Pn	12 51 06.7	+0.6
JANG	Nango	1.56	336	P	Pn	12 51 06.3	+0.2
MAT	Matsushiro	4.08	235	P	Pn	12 51 43.5	+2.8
MAT				*e*S	Sn	12 52 27.8	+0.2
MJAR	Matsushiro Arr	4.08	235	Pn	Pn	12 51 44.2	+3.4
	0.3nm,0.3s,baz=5.6,slow=25,SNR=14						
ASAJ	Asahikawa	5.16	2	Pn	Pn	12 51 57.4	+1.8
	0.7nm,0.3s,baz=207,slow=9.9,SNR=7.6						
ASAJ				Sn	Sn	12 52 55.4	+1.1
	0.3nm,0.3s,baz=336,slow=20,SNR=2.2						
H11N2	WAKE ISLAND Hy	28.57	125	T	T	13 26 56.3	
	baz=318,slow=75,SNR=112						
H11N1	WAKE ISLAND Hy	28.57	125	T	T	13 26 57.1	
	baz=318,slow=75,SNR=100						
H11N3	WAKE ISLAND Hy	28.58	125	T	T	13 26 57.8	
	baz=318,slow=75,SNR=115						
H11S1	WAKE ISLAND Hy	29.35	127	T	T	13 27 54.6	
	baz=319,slow=76,SNR=19						
H11S3	WAKE ISLAND Hy	29.35	127	T	T	13 27 56.2	
	baz=319,slow=76,SNR=21						
H11S2	WAKE ISLAND Hy	29.36	127	T	T	13 27 56.7	
	baz=319,slow=76,SNR=18						
ILAR	Eielson Array	47.48	33	P	P	12 59 13.3	+0.9
	0.5nm,0.7s,baz=271,slow=6.9,SNR=6.6						
WRA	Warramunga Arr	59.07	189	P	P	13 00 36.6	-1.4
	0.4nm,0.8s,baz=4.7,slow=7.3,SNR=3.4						
YKA	Yellowknife Ar	61.78	31	P	P	13 00 54.3	-1.7
	0.5nm,1.1s,baz=294,slow=5.3,SNR=3.8						
ASAR	Alice Springs	62.79	189	P	P	13 01 03.5	+0.2
	0.2nm,0.8s,baz=2.0,slow=6.4,SNR=4.0						

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*IDC **03** 13:00:47.5±1.4, 33°.52N×141°.77E, h0^{km}, mb3.7/6, mb1 3.8/8, mb1mx3.6/43, mbtmp3.7/8, ML3.0/2, MS3.4/3, Ms1 3.4/3, ms1mx2.8/48, Error ellipse: s-maj=30.6km s-min=18.6km az=67.0*

*NEIC **03** 13:00:50.5±1.2, 33°.55N±0°.08×141°.81E±0°.09, h26^{km}±7^{km}, mb4.6/7, Error ellipse: s-maj=14.7km s-min=6.0km az=136.0*

*JMA **03** 13:00:54.3±0.7, 33°.69N×141°.43E, h32^{km}, M2.9*

ISC 03 13:00:51.9±0.8**, 33°.58N**±0°.06×**141°.78E**±0°.09**, h34**^{km}**, n38, σ0^{s}68**/38**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	1.26	328	P	Pn	13 01 12.8	+0.1
BSO3	Boso 3	1.61	320	P	Pn	13 01 18.0	+0.3
JHJ2	Mitsune	1.71	255	P	Pn	13 01 19.3	0.0
JHJ2	Mitsune	1.71	255	Pn	Pn	13 01 19.4	+0.1
JHJ	Hachijo jima 2	1.73	255	Pn	Pn	13 01 19.0	-0.6
	22nm,0.3s,baz=73,slow=19,SNR=5.0						
JHJ				LR	LR	13 01 34.9	
	comp=Z,100nm,20.9s,baz=94,slow=28						
JHJ				Sn	Sn	13 01 41.0	+0.4
	27nm,0.3s,baz=72,slow=19,SNR=3.2						
JHCJ	Hachijojimakas	1.73	254	P	Pn	13 01 20.3	+0.7
BSO4	Boso 4	1.85	320	P	Pn	13 01 21.6	+0.5
JMKN	Mikurajimanish	1.85	280	P	Pn	13 01 20.8	-0.5
JIZS	Izushimoda	2.66	296	P	Pn	13 01 32.0	-0.4
JOD2	Odawara 2	2.79	308	P	Pn	13 01 33.2	-1.0
JYN	Shimob	3.29	307	P	Pn	13 01 40.6	-0.5
JRY	Ryogami san	3.40	317	P	Pn	13 01 42.0	-0.5
JAG	Ashikaga	3.42	327	P	Pn	13 01 43.0	+0.1
JFT	Otama	4.11	344	P	Pn	13 01 52.9	+0.7
JFT				*e*S	Sn	13 02 37.3	-1.8
MJAR	Matsushiro Arr	4.16	316	Pn	Pn	13 01 53.6	+0.5
	0.2nm,0.3s,baz=142,slow=12,SNR=7.5						
MJAR				Sn	Sn	13 02 40.5	0.0
	0.1nm,0.3s,baz=134,slow=17,SNR=4.6						
MAJO	Matsushiro	4.16	316	Pn	Pn	13 01 52.7	-0.4
MJB9	Matsu-Tunnel	4.17	316	Pn	Pn	13 01 52.8	-0.4
JNS	Sasagawa	4.68	335	P	Pn	13 02 00.4	+0.2
ASAJ	Asahikawa	10.54	3	Pn	Pn	13 03 19.7	-0.8
	0.3nm,0.3s,baz=229,slow=19,SNR=3.8						
JKA	Kamikawa-asahi	10.54	3		Pn	13 03 19.7	-0.8
KSRS	Korea Array	11.94	293	LR	LR	13 08 07.3	
	comp=Z,55nm,18.9s,baz=350,slow=37						
MDJ	Mudanjiang	14.51	323	P	P	13 04 21.1	+0.2
SONM	Songino Array	30.08	309	P	P	13 06 59.7	+1.6
	0.9nm,0.9s,baz=105,slow=9.2,SNR=5.7						
DAV	Davao City (W)	30.35	213	LR	LR	13 16 51.1	
	comp=Z,62nm,21.2s,baz=338,slow=32						
PBKT	Sadao Pong	40.36	255	P	P	13 08 26.2	-0.4
PBKT				IAmb	IAmb	13 08 27.0	
	comp=Z,3.8nm,1.0s						
CMAR	Chiang Mai Arr	41.03	259	P	P	13 08 31.6	-0.6
	comp=Z,0.3nm,0.2s,baz=46,slow=6.8,SNR=3.0						
MK31	Makanchi Array	46.28	305	P	P	13 09 14.2	+0.1
MKAR	Makanchi Array	46.28	305	P	P	13 09 14.6	+0.5
	comp=Z,1.1nm,0.7s,baz=91,slow=9.8,SNR=13						
OHAK	Old Harbor	49.13	41	P	P	13 09 37.0	+1.0
KTH	Kantishna Hill	50.47	32	P	P	13 09 45.8	-0.4
KTH				IAmb	IAmb	13 11 19.4	
	comp=Z,24nm,1.7s						
AAK	Ala-Archa	52.45	301	LR	LR	13 32 56.5	
	comp=Z,117nm,18.7s,baz=304,slow=37						
WB0	Warramunga Arr	53.51	189	P	P	13 10 08.9	-0.2
CTAO	Charters Tower	53.53	175	P	P	13 10 08.5	-0.9
FITZ	Fitzroy Crossi	53.65	199	P	P	13 10 09.6	-0.6
	comp=Z,1.1nm,0.7s,baz=24,slow=11,SNR=2.8						
FITZ	Fitzroy Crossi	53.65	199	P	P	13 10 09.6	-0.6
FITZ				IAmb	IAmb	13 10 58.0	
	comp=Z,15nm,1.7s						
WR0	Warramunga Arr	53.68	188	P	P	13 10 09.5	-1.0
WR0				IAmb	IAmb	13 10 34.1	
	comp=Z,12nm,1.6s						
WRA	Warramunga Arr	53.69	189	P	P	13 10 10.8	+0.3
	comp=Z,1.0nm,0.8s,baz=4.7,slow=7.7,SNR=8.5						
ASAR	Alice Springs	57.42	189	P	P	13 10 37.9	+0.7
	comp=Z,0.2nm,0.5s,baz=5.8,slow=7.5,SNR=8.9						

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*IDC **03** 13:15:19.9±0.8, 66°.88N×145°.56E, h0^{km}, mb3.6/10, mb1 3.8/12, mb1mx3.6/55, mbtmp3.6/12, ML3.0/1, Error ellipse: s-maj=25.9km s-min=14.2km az=179.0*

*YARS **03** 13:15:20.2±0.0, 66°.90N×145°.04E, h14^{km}, ML4.1/5*

*NEIC **03** 13:15:22.3±1.1, 66°.9N±0°.1×145°.5E±0°.2, h15^{km}±5^{km}, mb4.4/19, Error ellipse: s-maj=16.1km s-min=11.3km az=194.0*

ISC 03 13:15:20.6±0.6**, 66°.81N**±0°.03×**145°.04E**±0°.04**, h10**^{km}**, n45, σ1^{s}93**/63**, mb4.3**/19**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	0.80	245	*i* Pg	Pg	13 15 35.3	-0.7
	2.3nm,0.7s						
MOMR				*e*Sg	Sg	13 15 46.7	+0.3
	3.3nm,0.9s						
MOMR				*e*Sg	Sg	13 15 46.7	+0.3
	1.7nm,0.5s						
YBGR	Belaya Gora	1.79	14	*i* Pg	Pn	13 15 51.1	-0.3
	0.1nm,0.5s						
YBGR				*e*Sg	Sn	13 16 13.5	-0.5
	0.8nm,0.6s						
UNR	Ust'-Nera	2.37	199	*e*Pn	Pn	13 16 00.5	+1.1
UNR				*e*Pg	Pg	13 16 04.7	-1.2
UNR				*e*Sn	Sn	13 16 30.5	+1.9
UNR				*e*Sg	Sg	13 16 37.1	+0.5
ATKR	Artyk	2.64	179	*e*Pn	Pn	13 16 04.4	+1.1
ATKR				*e*Pg	Pg	13 16 09.6	-1.5
	0.1nm,0.6s						
ATKR				*e*Sn	Sn	13 16 37.7	+2.4
ATKR				*e*Sg	Sg	13 16 45.8	+0.5
	1.6nm,0.7s						
ATKR				*e*Sg	Sg	13 16 45.8	+0.5
	1.5nm,0.5s						
DEPR	Deputatskiy	3.23	326	*e*Pn	Pn	13 16 10.9	-0.3
DEPR				*e*Pg	Pb	13 16 17.2	-0.7
	0.0nm,0.4s						
DEPR				*e*Sg	Sb	13 16 59.1	+1.9
	0.1nm,0.8s						
DEPR				*e*Sg	Sb	13 16 59.1	+1.9
	0.2nm,0.5s						
SEY	Seymchan	4.99	138	Pn	Pn	13 16 35.1	-0.3
	0.6nm,0.3s,baz=308,slow=16,SNR=18						
SEY				Pg	Pb	13 16 43.9	-4.1
	2.3nm,0.3s,baz=319,slow=16,SNR=21						
SEY				Lg	Lg	13 17 54.8	
	5.2nm,0.3s,baz=235,slow=14,SNR=6.4						
TIXI	Tiksi	7.50	318	Pn	Pn	13 17 10.0	+0.2
	2.0nm,0.3s,baz=128,slow=15,SNR=19						
TIXI				Sn	Sn	13 18 32.9	-1.9
	0.9nm,0.3s,baz=25,slow=17,SNR=6.5						
TIXI				Lg	Lg	13 19 13.2	
	1.5nm,0.3s,baz=70,slow=18,SNR=4.2						
TIXI	Tiksi	7.50	318	*e*Pn	Pn	13 17 09.2	-0.6
TIXI				*e*Pg	Pb	13 17 33.6	+3.0
	0.0nm,0.2s						
TIXI				*e*Sn	Sn	13 18 32.0	-2.8
TIXI				*e*Sg	Sg	13 19 12.4	-8.6
	0.0nm,1.1s						
TIXI				*e*Sg	Sg	13 19 12.4	-8.6
	0.1nm,1.4s						
TIXI	Tiksi	7.50	318		Pn	13 17 09.8	0.0
MA2	Magadan	7.71	158	Lg	Lg	13 19 23.3	
	0.8nm,0.3s,baz=3.4,slow=17,SNR=2.6						
YAK	Yakutsk	8.18	241	Lg	Lg	13 19 40.8	
	0.2nm,0.3s,baz=73,slow=1.1,SNR=6.0						
YAK	Yakutsk	8.18	241	*e*Pn	Pn	13 17 20.3	+1.2
YAK				*e*Pg	Pb	13 17 48.5	+6.4
YAK				*e*Sn	Sn	13 18 51.6	+0.1
YAK				*e*Sg	Sg	13 19 37.2	-5.5
BILL	Bilibino	8.25	72	Pn	Pn	13 17 21.3	+1.2
TBGR	Tabaga	8.34	240	*e*Pn	Pn	13 17 22.1	+0.8
TBGR				*e*Pg	Pb	13 17 51.6	+6.8
	0.1nm,1.3s						
TBGR				*e*Sn	Sn	13 18 55.7	+0.4
TBGR				*e*Sg	Sg	13 19 42.2	-5.5
	0.3nm,1.3s						
TBGR				*e*Sg	Sg	13 19 42.2	-5.5
	0.1nm,1.1s						
ANM	Nome	20.10	73	P	P	13 19 52.3	-1.7
NRIK	Noril'sk	20.93	303	P	Pn	13 20 05.1	-0.3
	2.2nm,0.7s,baz=78,slow=13,SNR=4.0						
TOLK	Toolik Lake Re	23.82	56	P	P	13 20 32.2	-1.0
TOLK				IAmb	IAmb	13 21 20.7	
	comp=Z,16nm,1.8s						
TTA	Tatalina	24.50	71	P	P	13 20 38.5	-1.1
MLY	Manley	25.24	64	P	P	13 20 44.5	-1.8
PPLA	Purkeypile	25.94	69	P	P	13 20 51.9	-0.8
PPLA				IAmb	IAmb	13 20 59.0	
	comp=Z,16nm,1.5s						
KTH	Kantishna Hill	26.02	67	P	P	13 20 52.6	-0.7
TRF	Thorofare Moun	26.31	66	P	P	13 20 55.7	-0.3
TRF				IAmb	IAmb	13 21 43.1	
	comp=Z,22nm,1.8s						
CCB	Clear Creek Bu	26.50	63	P	P	13 20 56.6	-0.9
CCB				IAmb	IAmb	13 21 50.7	
	comp=Z,15nm,1.9s						
WRH	Wood River Hil	26.50	63	P	P	13 20 56.8	-0.8
WRH				IAmb	IAmb	13 21 20.8	
	comp=Z,17nm,1.9s						
MCK	McKinley	26.63	65	P	P	13 20 58.6	-0.2
IL31		26.75	62	P	P	13 20 59.5	-0.2
ILAR	Eielson Array	26.75	62	P	P	13 20 59.2	-0.6
	comp=Z,0.7nm,0.7s,baz=286,slow=8.3,SNR=12						
SUA	Susitna One	27.36	70	P	P	13 21 04.2	-1.3
SUA				IAmb	IAmb	13 21 44.6	
	comp=Z,11nm,1.4s						
SONM	Songino Array	27.51	246	P	P	13 21 09.3	+2.4
	comp=Z,0.9nm,0.7s,baz=23,slow=8.8,SNR=7.3						
DHY	Denali Highway	27.59	65	P	P	13 21 07.1	-0.5
DHY				IAmb	IAmb	13 21 54.9	
	comp=Z,14nm,1.9s						
GLB	Gilahina Butte	29.92	66	P	P	13 21 27.8	-0.4
VRDI	Verde Repeater	30.19	66	P	P	13 21 30.1	-0.6
VRDI				IAmb	IAmb	13 21 44.6	
	comp=Z,11nm,1.6s						
BALM	Baldy	30.72	65	P	P	13 21 34.5	-0.8
WHY	Whitehorse	33.62	61	P	P	13 21 59.6	-1.1
WHY				IAmb	IAmb	13 22 12.5	
	comp=Z,5.7nm,1.1s						
KURK	Kurchatov	35.95	277	P	P	13 22 23.3	+2.6
KURK				IAmb	IAmb	13 22 38.0	
	comp=Z,8.5nm,1.9s						
KURBB	Kurchatov Arra	36.06	277	P	P	13 22 24.1	+2.4
	comp=Z,1.0nm,0.6s,baz=39,slow=8.5,SNR=10						
BVAR	Borovoye Array	37.33	286	P	P	13 22 35.1	+2.5
	comp=Z,0.4nm,0.7s,baz=53,slow=7.9,SNR=2.9						
MKAR	Makanchi Array	37.65	270	P	P	13 22 37.5	+2.2
	comp=Z,0.5nm,0.7s,baz=49,slow=7.3,SNR=5.6						
YKA	Yellowknife Ar	38.72	47	P	P	13 22 43.0	-1.1
	comp=Z,0.2nm,0.5s,baz=321,slow=7.5,SNR=3.8						
AAK	Ala-Archa	44.19	273	P	P	13 23 33.2	+3.8
	comp=Z,1.7nm,0.8s,baz=90,slow=10,SNR=6.2						
AAK	Ala-Archa	44.19	273	IAmb	IAmb	13 23 33.7	
	comp=Z,13nm,1.9s						
MCMT	McKenzie Canyo	54.13	59	P	P	13 24 45.8	+0.3
REDW	Red Top Meadow	56.09	58	P	P	13 24 57.8	-1.9
PDAR	Pinedale Array	57.06	58	P	P	13 25 05.3	-1.3
	comp=Z,0.2nm,0.5s,baz=8.5,slow=3.0,SNR=4.7						
NVAR	Mina Array Bea	57.84	67	P	P	13 25 12.2	+0.1
	comp=Z,0.4nm,0.7s,baz=325,slow=3.8,SNR=5.8						

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*BJI **03** 13:20:49.7±0.0, 1°.19N×127°.21E, h152^{km}, mB5.0/14, mb4.6/14*

*DJA **03** 13:20:50.7±0.3, 1°N±3°×12°7E±°, h137^{km}±2^{km}, M4.5/19, mb4.5/19, mB5.0/6, MLv4.7/15, Mw(mB)4.3/6*

*NEIC **03** 13:20:50.1±1.1, 1°.18N±0°.09×127°.20E±0°.07, h151^{km}±5^{km}, mb4.8/34, Error ellipse: s-maj=12.7km s-min=9.7km az=196.0*

*IDC **03** 13:20:51.7±1.6, 1°.19N×127°.30E, h163^{km}±14^{km}, mb3.8/9, mb1 3.9/12, mb1mx3.5/47, mbtmp4.3/12, Error ellipse: s-maj=25.9km s-min=10.2km az=66.0*

ISC 03 13:20:50.2±0.4**, 1°.26N**±0°.04×**127°.23E**±0°.06**, h150**^{km}**, n83, σ1^{s}27**/90**, mb4.7**/31**, 2C-1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.50	164	P	Pn	13 21 11.6	0.0
TNTI				S	Sn	13 21 27.3	-0.5
TNTI	Ternate	0.50	164		Pn	13 21 11.6	0.0
LBMI	Labuha	1.90	172	P	Pn	13 21 25.0	+0.8
LBMI				S	Sn	13 21 50.1	-0.3
KMSI	Cibinong	3.32	258	P	Pn	13 21 41.2	-0.4
SANI	Sanana	3.51	201	P	Pn	13 21 43.1	-1.0
NLAI	Namlea	4.47	182	P	Pn	13 21 56.8	+0.2
SIJI	Sorong	4.55	118	P	Pn	13 21 59.4	+1.6
	6.4nm,0.3s,baz=330,slow=17,SNR=20						
MSAI	Masohi	4.88	160	P	Pn	13 22 03.2	+1.2
AAI	Ambon	5.00	169	P	Pn	13 22 03.9	+0.2
LUWI	Luwuk	5.01	243	P	Pn	13 22 04.0	+0.2
LUWI	Luwuk	5.01	243		Pn	13 22 02.4	-1.4
DDMP	Don Marcelino,	5.05	343	*e*P	Pn	13 21 59.9	-4.4
DDMP				*e*S	Sn	13 22 57.7	-4.5
MRSI	Marisa	5.35	262	P	Pn	13 22 07.2	-1.0
	0.5nm2µm129nm,0.5s						
MATI	Mati	5.74	350	*e*P	Pn	13 22 11.1	-2.3
MATI				*e*S	Sn	13 22 58.6	-20
SKMP	Bagumbayan, Su	5.88	333	*e*P	Pn	13 22 13.1	-2.2
SKMP				*e*S	Sn	13 23 11.4	-10
APSI	Ampana	5.98	249	P	Pn	13 22 16.7	0.0
	0.7nm2µm176nm,0.5s						
CTBH	Cotabato--PC H	6.63	333	⇑*i*P	Pn	13 22 24.4	-1.0
BUKP	Musuan	6.92	342	*e*P	Pn	13 22 30.1	+0.8
BUKP				*e*S	Sn	13 23 44.7	-2.4
MPSI	Mapaga	7.39	263	P	Pn	13 22 36.1	+0.6
	0.2nm995nm60nm,0.8s						
PAGZ	Pagadian	7.59	330	*e*P	Pn	13 22 35.4	-2.7
TTSI	Tana Toraja	8.55	240	P	Pn	13 22 50.5	-0.5
	0.3nm2µm78nm,0.7s						
BNSI	Bone	9.07	232	P	Pn	13 22 57.8	-0.1
	800nm66nm,0.7s						
SPSI	Sidrap Palu	9.08	235	P	Pn	13 22 58.4	+0.3
KAPI	Kappang	9.73	230	P	Pn	13 23 08.8	+2.1
	5.5nm,0.3s,baz=210,slow=2.4,SNR=18						
KAPI				S	Sn	13 24 52.8	-1.7
	6.7nm,0.3s,baz=142,slow=23,SNR=12						
EDFI	Ende, Flores	11.37	209	P	P	13 23 41.4	+5.1
KKM	Kota Kinabalu	11.98	294	Pn	Pn	13 23 35.5	-0.8
MTN	Manton Dam	14.53	165		Pn	13 24 06.6	-2.3
SBUM	Sibu	15.05	275	Pn	Pn	13 24 14.9	-0.5
KNRA	Kununurra	16.89	175	P	Pn	13 24 37.1	-0.8
KNRA				IAmb	IAmb	13 24 39.3	
	comp=Z,26nm,0.8s						
KSM	Kuching	16.92	271		Pn	13 24 39.1	+0.8
FITZ	Fitzroy Crossi	19.30	185	P	P	13 25 02.8	-0.8
	comp=Z,1.6nm,0.3s,baz=20,slow=8.9,SNR=52						
FITZ	Fitzroy Crossi	19.30	185	P	P	13 25 02.4	-1.2
FITZ				IAmb	IAmb	13 25 04.0	
	comp=Z,9.4nm,0.5s						
KPJI	Karang Pucung	20.15	245	P	P	13 25 14.8	+1.9
	comp=Z,48nm,0.9s						
COEN	Coen	21.86	134	P	P	13 25 30.9	-0.3
WB0	Warramunga Arr	22.04	162	P	P	13 25 31.6	-1.4
WB0				IAmb	IAmb	13 25 39.3	
	comp=Z,49nm,0.8s						
WRAB	Tennant Creek	22.19	162	P	P	13 25 33.1	-1.3
WRAB				IAmb	IAmb	13 25 40.6	
	comp=Z,37nm,0.8s						
WRA	Warramunga Arr	22.19	162	P	P	13 25 33.4	-1.1
	comp=Z,21nm,0.4s,baz=340,slow=11,SNR=355						
WRA				S	S	13 29 26.9	-1.3
	comp=Z,0.9nm,0.8s,baz=344,slow=17,SNR=3.9						
WRA				ScP	ScP	13 32 48.2	-1.0
	comp=Z,0.5nm,1.0s,baz=347,slow=2.6,SNR=3.4						
WB2	Warramunga Arr	22.20	162	P	P	13 25 33.2	-1.3
WB2				IAmb	IAmb	13 25 40.7	
	comp=Z,37nm,0.8s						
KLSI		23.25	255	P	P	13 25 46.1	+1.7
	comp=Z,3.9nm,0.8s						
MDSI	Maura Dua	23.73	256	P	P	13 25 50.9	+2.1
	comp=Z,5.3nm,0.5s						
PSA00	Pilbara Seismi	23.81	197	P	P	13 25 49.1	-0.3
PSA00				IAmb	IAmb	13 25 50.1	
	comp=Z,17nm,0.6s						
YHNB	Yeheng	23.95	347	P	P	13 25 51.0	+0.2
YHNB				IAmb	IAmb	13 26 27.7	
	comp=Z,211nm,1.8s						
UBPT	Khong Chiam	25.60	304	P	P	13 26 07.7	+2.0
UBPT				IAmb	IAmb	13 26 08.8	
	comp=Z,9.2nm,0.8s						
AS31	Alice Springs	25.61	166	P	P	13 26 04.8	-1.0
ASAR	Alice Springs	25.61	166	P	P	13 26 05.0	-0.8
	comp=Z,3.3nm,0.6s,baz=349,slow=6.9,SNR=111						
ASAR				ScP	ScP	13 32 57.7	-0.8
	comp=Z,0.2nm,0.7s,baz=347,slow=3.3,SNR=2.8						
GIRL	Giralia	26.92	207	P	P	13 26 18.0	+0.4
NJ2	Nanjing	31.64	346	*e*P	P	13 27 01.7	+2.6
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
FORT	Forrest	31.87	179	P	P	13 27 00.3	-0.9
FORT				IAmb	IAmb	13 27 01.0	
	comp=Z,14nm,0.8s						
MORW	Morawa	32.00	199	P	P	13 27 01.9	-0.5
MORW				IAmb	IAmb	13 27 03.0	
	comp=Z,40nm,1.4s						
CMAR	Chiang Mai Arr	32.60	303	P	P	13 27 09.8	+2.0
	comp=Z,0.5nm,0.6s,baz=113,slow=6.3,SNR=5.9						
BBOO	Buckleboo	34.90	167	P	P	13 27 26.6	-0.9
BBOO				IAmb	IAmb	13 27 27.1	
	comp=Z,6.2nm,0.8s						
EIDS	Eidsvold	35.12	141	P	P	13 27 29.3	-0.1
EIDS				IAmb	IAmb	13 28 40.2	
	comp=Z,88nm,1.9s						
NWAO	Narrogin (SRO)	35.29	195	P	P	13 27 30.8	+0.1
	comp=Z,7.3nm,0.5s,baz=27,slow=7.1,SNR=13						
NWAO	Narrogin (SRO)	35.29	195	P	P	13 27 30.5	-0.2
NWAO				IAmb	IAmb	13 27 52.2	
	comp=Z,82nm,1.7s						
STKA	Stephens Creek	35.66	159	P	P	13 27 33.7	-0.2
	comp=Z,11nm,0.7s,baz=334,slow=8.4,SNR=33						
STKA	Stephens Creek	35.66	159	P	P	13 27 33.5	-0.4
ARMA	Armidale	39.15	146	P	P	13 28 04.5	+1.0
ARMA				IAmb	IAmb	13 28 05.1	
	comp=Z,12nm,0.7s						
LZH	Lanzhou	40.88	331	⇓P	P	13 28 17.0	-0.8
LZH				pP	pP	13 28 51.2	+1.1
LZH				sP	sP	13 29 09.3	+2.5
LZH				PP	PP	13 29 57.5	+2.3
LZH				pmax	pmax		
	comp=Z,27nm,1.3s						
LZH				pmax	pmax		
	comp=Z,93nm,6.0s						
CAN	Canberra	41.69	153	P	P	13 28 25.3	+1.0
CAN				IAmb	IAmb	13 28 34.1	
	comp=Z,38nm,1.5s						
HHC	Hu-ho-hao-te	41.89	342	*e*P	P	13 28 26.8	+0.9
HHC				pmax	pmax		

	comp=Z,76nm,0.9s						
HHC				pmax	pmax		
	comp=Z,280nm,4.7s						
SONM	**Songino Array**	**49.79**	**342**	P	**P**	**13 29 28.3**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=168,slow=7.4,SNR=3.3						
WMQ	**Urumqi**	**55.03**	**326**	*e*P	**P**	**13 30 08.3**	**+2.0**
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,160nm,11.3s						
WMQ				LR	LR		
	comp=Z,70nm,20.1s						
WMQ				LR	LR		
	comp=Z,160nm,23.7s						
FOZ	**Fox Glacier**	**58.64**	**145**	P	**P**	**13 30 30.9**	**-0.8**
LBZ	**Lake Benmore**	**59.37**	**145**	P	**P**	**13 30 36.7**	**0.0**
THZ	**Tophouse**	**59.46**	**142**	P	**P**	**13 30 37.0**	**-0.4**
RPZ	**Rata Peaks**	**59.47**	**144**	P	**P**	**13 30 36.5**	**-0.9**
MK31	**Makanchi Array**	**59.87**	**326**	P	**P**	**13 30 40.3**	**+0.2**
MK31				IAmb	IAmb	13 31 18.3	
	comp=Z,8.1nm,1.9s						
MKAR	**Makanchi Array**	**59.87**	**326**	P	**P**	**13 30 40.6**	**+0.6**
	comp=Z,1.2nm,0.4s,baz=116,slow=7.8,SNR=35						
TUWZ	**Tuamarina**	**59.92**	**141**	P	**P**	**13 30 39.9**	**-0.6**
MAKZ	**Makanchi**	**60.05**	**326**	P	**P**	**13 30 41.9**	**+0.6**
KSH	**Kashi**	**60.15**	**316**	P	**P**	**13 30 45.5**	**+3.2**
KSH				pP	pwP	13 31 22.8	+2.6
KSH				S	**S**	**13 38 44.6**	**+0.5**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,620nm,7.3s						
KSH				LR	LR		
	comp=Z,370nm,11.1s						
KSH				LR	LR		
	comp=Z,300nm,13.5s						
KSH				LR	LR		
	comp=Z,170nm,11.5s						
KHZ	**Kahutara**	**60.21**	**142**	P	**P**	**13 30 41.8**	**-0.6**
BKZ	**Black Stump Fm**	**60.43**	**137**	P	**P**	**13 30 43.6**	**-0.5**
AAK	**Ala-Archa**	**62.52**	**319**	P	**P**	**13 30 59.2**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=205,slow=19,SNR=2.5						
AAK	**Ala-Archa**	**62.52**	**319**	IAmb	IAmb	13 31 04.0	
	comp=Z,1.7nm,0.9s						
GAR	**Garm**	**63.97**	**313**	P	**P**	**13 31 08.0**	**+0.2**
GAR				IAmb	IAmb	13 33 28.1	
	comp=Z,23nm,1.8s						
KURK	**Kurchatov**	**64.09**	**328**	P	**P**	**13 31 08.3**	**+0.2**
KURK				IAmb	IAmb	13 31 46.5	
	comp=Z,3.1nm,0.7s						
ABKAR	**Akbulak array**	**74.37**	**321**	P	**P**	**13 32 11.0**	**-0.5**
AKTO	**Aktyubinsk**	**75.90**	**322**	P	**P**	**13 32 19.9**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=146,slow=11,SNR=3.1						
KKO	**Keanakako`i**	**77.80**	**71**	P	**P**	**13 32 31.8**	**+0.2**
SYO	**Syowa Base**	**90.31**	**201**⇑	*e*P	**P**	**13 33 33.0**	**-0.7**
TORD	**Torodi Ar. Bea**	**124.13**	**287**	PKP	**PKPdf**	**13 39 31.8**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=61,slow=2.8,SNR=2.6						
DBIC	**Dimbokro**	**131.54**	**280**	PKP	**PKPdf**	**13 39 45.4**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=24,slow=18,SNR=3.1						

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*KRSZO **03** 13:28:59.6±2.5, 47°.92N×20°.06E, h0^{km}, ML0.9, Error ellipse: s-maj=17.8km s-min=4.8km az=153.0, Explosion.*

BUD 03 13:29:00.0, 47°.96N×20°.05E, h0^{km}±743^{km}, ML0.9/1, Suspected Mining explosion., Hungary

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSZ	**Piszkesteto**	**0.12**	**250**	*e*Pg	Pg	13 29 02.0	-0.2
PSZ				*e*Sg	Sg	13 29 05.5	+1.8
PSZ	**Piszkesteto**	**0.12**	**250**	*e*Pg	Pg	13 29 02.0	-0.2
PSZ				Pg	Pg	13 29 02.0	-0.2
PSZ				*e*Lg	Lg	13 29 05.5	
PSZ				Lg	Lg	13 29 05.5	
KECS	**Kecovo**	**0.60**	**29**	*e*Pg	Pg	13 29 12.2	+0.7
KECS				*e*Sg	Sb	13 29 21.2	-1.2
KECS	**Kecovo**	**0.60**	**29**	*e*Pg	Pg	13 29 12.2	+0.7
KECS				Pg	Pg	13 29 12.2	+0.7
KECS				*e*Lg	Lg	13 29 21.2	
KECS				Lg	Lg	13 29 21.2	
KECS	**Kecovo**	**0.60**	**29**	*e*PG	Pg	13 29 12.2	+0.7
KECS				*e*SG	Sb	13 29 21.2	-1.2
VYHS	**Vyhne**	**0.97**	**304**	*e*Pg	Pb	13 29 19.5	-0.3
VYHS				*e*Sg	Sb	13 29 33.8	+0.6
VYHS	**Vyhne**	**0.97**	**304**	*e*Pg	Pb	13 29 19.5	-0.3
VYHS				Pg	Pb	13 29 19.5	-0.3
VYHS				*e*Lg	Lg	13 29 33.8	
VYHS				Lg	Lg	13 29 33.8	
VYHS	**Vyhne**	**0.97**	**304**	*e*PG	Pb	13 29 19.5	-0.3
VYHS				*e*SG	Sb	13 29 33.8	+0.6
KRUC	**Moravsky**	**2.67**	**296**	Pg	Pg	13 29 52.5	+1.3
KRUC				Sn	Sn	13 30 14.2	-3.1
KRUC	**Moravsky**	**2.67**	**296**	*e*PG	Pg	13 29 52.5	+1.3
KRUC				*e*SG	Sn	13 30 14.2	-3.1

PRU 03 13:29:24.4±0.0, 49°.80N×18°.50E, h0^{km}, Mining Induced Event Csm, E=2.3e+04, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.23**	**279**	*e*PG	Pg	13 29 29.1	+0.3
OKC				*e*SG	Sg	13 29 31.7	-0.1
MORC	**Moravsky Berou**	**0.62**	**268**	*e*PG	Pg	13 29 36.2	-0.1
MORC				*e*SG	Sg	13 29 43.9	-0.4
LANS	**Liptovska Anna**	**0.91**	**135**	*e*PG	Pg	13 29 40.6	-1.1
LANS				*e*SG	Sg	13 29 53.8	+0.3
LANS				*e*LG	Lg	13 29 58.4	
OJC	**Ojcow**	**0.94**	**63**	*e*Pg	Pg	13 29 40.8	-1.5
OJC				*e*Sg	Sg	13 29 55.4	+0.9
JAVC	**Velka Javorina**	**1.09**	**210**	*e*PG	Pg	13 29 45.5	+0.3
JAVC				*e*SG	Sg	13 29 59.9	+0.6
KRLC	**Kraliky**	**1.14**	**285**	*e*PG	Pg	13 29 45.3	-1.0
KRLC				*e*SG	Sg	13 30 01.2	+0.1
NIE	**Niedzica**	**1.23**	**107**	*e*Pg	Pg	13 29 46.5	-1.5
NIE				*e*Sg	Sb	13 30 04.5	-0.5
VYHS	**Vyhne**	**1.33**	**170**	*e*PG	Pg	13 29 48.5	-1.3
VYHS				*e*SG	Sg	13 30 07.2	+0.3
VRAC	**Vranov**	**1.34**	**249**	*e*PG	Pg	13 29 49.2	-0.8
VRAC				*e*SG	Sg	13 30 07.0	-0.3
DPC	**Dobruska-Polom**	**1.51**	**292**	*e*PG	Pn	13 29 51.5	-1.2
DPC				*e*SG	Sg	13 30 11.9	-0.9
	comp=Z,2.2nm,0.2s						
OSTC	**Ostas**	**1.65**	**298**	*e*PG	Pn	13 29 54.5	-0.2
OSTC				*e*SG	Sn	13 30 16.8	+0.2
CHVC	**Chvalec**	**1.76**	**298**	*e*SG	Sb	13 30 20.4	+0.2
	comp=Z,1.5nm,0.2s						
KHC	**Kasperske Hory**	**3.28**	**260**	*e*SG	Sg	13 31 08.6	-1.1

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*IDC **03** 13:39:47.6±2.6, 7°.13S×129°.88E, h121^{km}±29^{km}, mb3.6/4, mb1 3.7/8, mb1mx3.5/31, mbtmp4.0/8, Error ellipse: s-maj=44.1km s-min=16.3km az=78.0*

*DJA **03** 13:39:50.5±0.3, 7°S±3°×13°0E±°, h156^{km}±6^{km}, M4.5/9, mB6.0/4, mb4.4/8, MLv4.2/9, Mw(mB)5.7/4, Mwp5.2/1*

ISC 03 13:39:49.0±0.7, 7°.19S±0°.06×130°.03E±0°.09, h150^{km}, n20, σ2^{s}.17/23, mb3.8/4, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.49**	**122**	P	**Pn**	**13 40 22.5**	**+4.0**
BNDI	**Bandanaira**	**2.65**	**357**	P	**Pn**	**13 40 32.6**	**+0.5**
AAI	**Ambon**	**3.93**	**332**	P	**Pn**	**13 40 49.0**	**+0.6**
MSAI	**Masohi**	**3.97**	**344**	P	**Pn**	**13 40 50.0**	**+1.0**
MSAI				S	**Sn**	**13 41 34.9**	**-0.6**
FAKI	**Fak Fak**	**4.78**	**28**	P	**Pn**	**13 40 57.2**	**-2.5**
KMPI	**Kaimana, Papua**	**5.07**	**46**	P	**Pn**	**13 41 03.9**	**+0.5**
	1.0nm7µm73nm,0.7s						
SOEI	**Soe**	**6.24**	**245**	P	**Pn**	**13 41 19.7**	**+0.6**
	0.3nm97nm,0.8s						
SIJI	**Sorong**	**6.40**	**11**	P	**Pn**	**13 41 19.0**	**-2.2**
	2.2nm,0.3s,baz=212,slow=22,SNR=21						
SIJI				S	Sn	13 42 23.6	-10
	4.7nm,0.3s,baz=221,slow=19,SNR=10.0						
LBMI	**Labuha**	**6.98**	**339**	P	**Pn**	**13 41 28.9**	**0.0**
	0.1nm25nm,0.9s						
MMRI	**Maumere**	**7.85**	**259**	P	**Pn**	**13 41 40.1**	**-0.4**
	0.1nm15nm,0.4s						
EDFI	**Ende, Flores**	**8.40**	**259**	P	**Pn**	**13 41 48.3**	**+0.4**
	4.6nm,1.0s						
FITZ	**Fitzroy Crossi**	**11.66**	**201**	P	**Pn**	**13 42 30.1**	**-0.8**
	0.4nm,0.3s,baz=18,slow=9.2,SNR=17						
FITZ				S	Sn	13 44 30.8	-9.0
	1.0nm,0.3s,baz=46,slow=15,SNR=12						
WRA	**Warramunga Arr**	**13.35**	**162**	P	**Pn**	**13 42 53.4**	**+0.6**
	0.8nm,0.3s,baz=349,slow=13,SNR=12						
WRA				S	**Sn**	**13 45 15.9**	**-4.7**
	2.8nm,0.3s,baz=333,slow=22,SNR=12						
ASAR	**Alice Springs**	**16.80**	**168**	P	**Pn**	**13 43 38.4**	**+2.7**
	0.6nm,0.3s,baz=344,slow=9.2,SNR=108						
ASAR				S	**S**	**13 46 37.2**	**-5.3**
	0.3nm,0.3s,baz=354,slow=29,SNR=8.9						
DBJI	**Dramaga**	**23.12**	**270**	P	**P**	**13 44 43.1**	**+1.0**
	22µm138nm,0.8s						
STKA	**Stephens Creek**	**26.83**	**158**	P	**P**	**13 45 17.2**	**+1.7**
	2.2nm,0.7s,baz=323,slow=10,SNR=5.0						
RGRI	**Rengat**	**28.44**	**283**	P	**P**	**13 45 29.7**	**-0.3**
CMAR	**Chiang Mai Arr**	**39.87**	**310**	P	**P**	**13 47 08.3**	**-0.1**
	1.1nm,0.8s,baz=143,slow=6.5,SNR=7.2						
SONM	**Songino Array**	**58.63**	**342**	P	**P**	**13 49 31.6**	**+1.1**
	0.2nm,0.3s,baz=158,slow=4.2,SNR=3.2						
MKAR	**Makanchi Array**	**68.40**	**327**	P	**P**	**13 50 35.3**	**+0.8**
	2.2nm,0.6s,baz=122,slow=7.9,SNR=26						

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*IDC **03** 13:49:50.0±3.2, 14°.00N×92°.99W, h0^{km}, mb3.5/4, mb1 3.9/7, mb1mx3.6/44, mbtmp3.5/7, ML3.6/2, Error ellipse: s-maj=68.3km s-min=26.1km az=7.0*

*MEX **03** 13:49:51.7±0.9, 13°.94N×93°.14W, h10^{km}±38^{km}, MD3.9*

*NEIC **03** 13:49:52.9±1.7, 14°.09N±0°.06×93°.06W±0°.05, h21^{km}±9^{km}, mb4.1/1, Md3.9/18(MEX), Error ellipse: s-maj=9.6km s-min=6.5km az=201.0*

ISC 03 13:49:53.5±3.1, 14°.28N±0°.09×93°.03W±0°.05, h12^{km}±16^{km}, n22, σ1^{s}.11/34, mb3.8/5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.97**	**50**		**Pn**	**13 50 12.0**	**-1.0**
THIG					**Sn**	**13 50 27.2**	**+0.5**
THIG		**0.97**	**50**	*i* P	**Pn**	**13 50 12.0**	**-1.0**
THIG				*i* S	**Sn**	**13 50 27.2**	**+0.5**
PCIG		**1.43**	**353**		**Pn**	**13 50 18.1**	**-1.2**
PCIG					**Sg**	**13 50 40.3**	**+0.7**
PCIG		**1.43**	**353**	*e*P	**Pn**	**13 50 18.1**	**-1.2**
PCIG				*i* S	**Sg**	**13 50 40.3**	**+0.7**
CCIG	**Comitan**	**2.17**	**23**	Pn	**Pb**	**13 50 31.9**	**-1.0**
CCIG	**Comitan**	**2.17**	**23**		**Pn**	**13 50 30.3**	**+0.6**
CCIG					**Sb**	**13 50 59.6**	**-0.3**
CCIG	**Comitan**	**2.17**	**23**	*e*P	**Pn**	**13 50 30.3**	**+0.6**
CCIG				*i* S	**Sb**	**13 50 59.6**	**-0.3**
TGIG		**2.49**	**358**		**Pn**	**13 50 34.8**	**+0.9**
TGIG					**Sb**	**13 51 07.2**	**-1.7**
TGIG		**2.49**	**358**	*e*P	**Pn**	**13 50 34.8**	**+0.9**
TGIG				*i* S	**Sb**	**13 51 07.2**	**-1.7**
APG	**El Apazote**	**2.59**	**73**	Pn	**Pn**	**13 50 35.2**	**-0.2**
	16nm,0.3s,baz=256,slow=12,SNR=64						
APG				Sn	**Sn**	**13 51 07.2**	**+0.2**
	13nm,0.3s,baz=298,slow=6.2,SNR=6.3						
CMIG	**Matias Romero**	**3.32**	**328**	Pn	**Pn**	**13 50 45.2**	**-0.1**
	3.5nm,0.3s,baz=151,slow=14,SNR=28						
CMIG				Sn	**Sn**	**13 51 24.5**	**-0.2**
	10nm,0.3s,baz=62,slow=20,SNR=7.0						
CMIG	**Matias Romero**	**3.32**	**328**		**Pn**	**13 50 44.2**	**-1.1**
CMIG					**Sn**	**13 51 25.1**	**+0.4**
CMIG	**Matias Romero**	**3.32**	**328**	*i* P	**Pn**	**13 50 44.2**	**-1.1**
CMIG				*i* S	**Sn**	**13 51 25.1**	**+0.4**
TXAR	**Lajitas Array**	**17.93**	**328**	P	**P**	**13 54 05.9**	**+2.4**
	baz=149,slow=12,SNR=2.2						
W35A	**Tecumseh**	**21.07**	**351**	P	**P**	**13 54 37.6**	**0.0**
AMTX	**Amarillo**	**21.95**	**341**	P	**P**	**13 54 48.4**	**+1.2**
AMTX				IAmb	IAmb	13 54 50.0	
	comp=Z,9.3nm,1.1s						
PDAR	**Pinedale Array**	**31.76**	**337**	P	**P**	**13 56 19.6**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=134,slow=11,SNR=2.3						
NVAR	**Mina Array Bea**	**32.83**	**322**	P	**P**	**13 56 29.0**	**+1.7**
	comp=Z,0.7nm,0.7s,baz=137,slow=8.3,SNR=10.0						
MCMT	**McKenzie Canyo**	**34.79**	**335**	P	**P**	**13 56 45.7**	**+1.4**
YKA	**Yellowknife Ar**	**50.53**	**347**	P	**P**	**13 58 50.8**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=150,slow=7.6,SNR=22						
ILAR	**Eielson Array**	**62.19**	**337**	P	**P**	**14 00 14.2**	**-0.4**
	comp=Z,0.7nm,1.0s,baz=149,slow=4.6,SNR=5.5						
CMAR	**Chiang Mai Arr**	**145.40**	**340**	PKPbc	**PKPbc**	**14 09 30.4**	**-1.8**
	comp=Z,0.8nm,0.7s,baz=331,slow=3.7,SNR=5.6						

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*IDC **03** 14:00:47.9±0.9, 13°.57N×125°.25E, h0^{km}, mb3.5/8, mb1 3.6/8, mb1mx3.5/36, mbtmp3.5/8, Error ellipse: s-maj=47.1km s-min=17.7km az=67.0*

*MAN **03** 14:00:50.9, 13°.76N×125°.24E, h30^{km}, mb4.8, ML3.7, MS3.7*

ISC 03 14:00:52.6±0.8, 13°.73N±0°.05×125°.18E±0°.07, h33^{km}, n26, σ1^{s}.75/32, mb3.5/8, 2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	**1.00**	**263**	*e*P	**Pn**	**14 01 09.2**	**-1.1**
PVCP				*e*S	**Sn**	**14 01 23.0**	**-0.3**
CNP	**Catarman**	**1.31**	**203**	*e*P	**Pn**	**14 01 14.2**	**-0.4**
CNP				*e*S	**Sb**	**14 01 31.6**	**-1.5**
OCLP	**Ormoc**	**2.72**	**192**	*e*P	**Pn**	**14 01 34.5**	**+0.6**
OCLP				*e*S	**Sn**	**14 02 04.8**	**-0.9**
RCP	**Roxas**	**3.21**	**228**⇓	*e*P	**Pn**	**14 01 41.8**	**+1.2**
RCP				*e*S	**Sn**	**14 02 20.3**	**+2.5**
BOAC	**Boac**	**3.25**	**266**	*e*P	**Pn**	**14 01 42.5**	**+1.3**
BOAC				*e*S	**Sn**	**14 02 20.4**	**+1.5**
POLP	**Polilio Island**	**3.29**	**288**	*e*P	**Pn**	**14 01 42.8**	**+1.0**
POLP				*e*S	**Sn**	**14 02 22.2**	**+2.3**
LQP	**Lukban**	**3.55**	**277**	*e*P	**Pn**	**14 01 45.8**	**+0.1**
LQP				*e*S	**Sn**	**14 02 21.7**	**-4.9**
MSLP	**Maasin**	**3.58**	**185**	*e*P	**Pn**	**14 01 46.0**	**+0.2**
MSLP				*e*S	**Sn**	**14 02 26.2**	**-0.9**
PCPH	**Palayan**	**4.35**	**295**⇓	*e*P	**Pn**	**14 01 55.3**	**-1.1**
CAUP	**Cauayan**	**4.55**	**315**	*e*P	**Pn**	**14 01 59.0**	**-0.2**
SMPP	**San Manuel, Pa**	**4.97**	**300**	*e*P	**Pn**	**14 02 03.3**	**-1.7**
SMPP				*e*S	**Sn**	**14 02 57.4**	**-3.9**
PAGZ	**Pagadian**	**6.10**	**197**	*e*P	**Pn**	**14 02 21.4**	**+0.9**
PAGZ				*e*S	**Sn**	**14 03 27.1**	**-2.1**
CMAR	**Chiang Mai Arr**	**25.63**	**284**	P	**P**	**14 06 20.0**	**+0.7**
	0.2nm,0.4s,baz=90,slow=8.1,SNR=2.7						
WRA	**Warramunga Arr**	**34.65**	**165**	P	**P**	**14 07 37.0**	**-2.1**
	0.3nm,0.5s,baz=344,slow=9.2,SNR=7.9						
WRA				PcP	**PcP**	**14 10 12.4**	**-0.7**
	0.4nm,1.0s,baz=339,slow=3.3,SNR=2.8						
SONM	**Songino Array**	**37.43**	**339**	P	**P**	**14 08 03.9**	**+1.1**
	0.6nm,0.9s,baz=145,slow=10,SNR=3.5						
ASAR	**Alice Springs**	**38.13**	**167**	P	**P**	**14 08 08.0**	**-0.9**
	0.5nm,0.5s,baz=345,slow=7.4,SNR=26						
ASAR				PcP	**PcP**	**14 10 23.0**	**-0.4**
	0.4nm,0.9s,baz=351,slow=3.1,SNR=2.7						
H11S3	**WAKE ISLAND Hy**	**40.10**	**78**	T	T	14 52 01.6	
	baz=271						
H11S1	**WAKE ISLAND Hy**	**40.11**	**78**	T	T	14 52 02.7	
	baz=271						
H11S2	**WAKE ISLAND Hy**	**40.12**	**78**	T	T	14 52 03.9	
	baz=271						
H11N1	**WAKE ISLAND Hy**	**40.32**	**76**	T	T	14 52 14.7	
	baz=267,slow=74,SNR=5.1						
H11N2	**WAKE ISLAND Hy**	**40.32**	**76**	T	T	14 52 12.5	
	baz=267						
H11N3	**WAKE ISLAND Hy**	**40.33**	**76**	T	T	14 52 13.6	
	baz=267,slow=74,SNR=4.6						
STKA	**Stephens Creek**	**48.00**	**161**	P	**P**	**14 09 27.6**	**-0.9**
	1.3nm,0.7s,baz=270,slow=1.0,SNR=3.0						
MKAR	**Makanchi Array**	**48.66**	**321**	P	**P**	**14 09 35.8**	**+2.2**
	0.1nm,0.6s,baz=118,slow=7.1,SNR=2.7						
ZALV	**Zalesovo Beam**	**51.10**	**331**	P	**P**	**14 09 53.3**	**+1.4**
	0.2nm,0.3s,baz=117,slow=5.5,SNR=2.2						
ILAR	**Eielson Array**	**76.82**	**26**	P	**P**	**14 12 42.1**	**+1.2**
	0.2nm,0.7s,baz=280,slow=5.4,SNR=2.8						

IDC 03 14:12:02.2±2.0, 32°.11N×40°.62W, h0^{km}, mb3.6/6, mb1 3.8/6, mb1mx3.5/49, mbtmp3.6/6, MS4.0/1, Ms1 4.0/1, ms1mx3.1/33, Error ellipse: s-maj=60.8km s-min=28.5km az=22.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAVOX	**Davos/Dischmat**	**40.95**	**54**	LR	LR	14 32 42.3	
	comp=Z,200nm,19.4s,baz=254,slow=30						
TORD	**Torodi Ar. Bea**	**43.04**	**106**	P	P	14 20 04.0	+0.2
	2.4nm,1.0s,baz=293,slow=3.1,SNR=7.6						
H10N2	**ASCENSION HYDR**	**46.90**	**143**	T	T	15 10 24.0	
	baz=329						
H10N3	**ASCENSION HYDR**	**46.90**	**143**	T	T	15 10 24.5	
	baz=329						
H10N1	**ASCENSION HYDR**	**46.91**	**143**	T	T	15 10 24.0	
	baz=329						
H10S3	**ASCENSION HYDR**	**47.77**	**144**	T	T	15 11 28.8	
	baz=249						
H10S2	**ASCENSION HYDR**	**47.78**	**144**	T	T	15 11 31.5	
	baz=331						
FINES	**FINESS Array B**	**51.30**	**34**	P	P	14 21 07.9	+0.2
	2.6nm,0.9s,baz=268,slow=9.5,SNR=3.4						
AKASG	**Malin Array Be**	**53.54**	**48**	P	P	14 21 24.7	+0.1
	0.2nm,0.3s,baz=273,slow=7.1,SNR=5.2						
PDAR	**Pinedale Array**	**54.38**	**302**	P	P	14 21 30.8	-0.3
	0.3nm,0.8s,baz=61,slow=7.3,SNR=3.0						
YKA	**Yellowknife Ar**	**54.75**	**327**	P	P	14 21 33.8	+0.7
	0.1nm,0.5s,baz=79,slow=6.4,SNR=3.0						
MKAR	**Makanchi Array**	**86.13**	**35**	P	P	14 24 43.8	-1.4
	0.2nm,0.6s,baz=337,slow=6.3,SNR=3.6						

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*IDC **03** 14:13:29.1±1.7, 32°.01N×40°.43W, h0^{km}, mb3.8/9, mb1 4.0/9, mb1mx3.7/49, mbtmp3.8/9, MS3.7/4, Ms1 3.6/4, ms1mx3.3/32, Error ellipse: s-maj=58.7km s-min=21.8km az=19.0*

*NEIC **03** 14:13:31.3±0.9, 31°.9N±0°.3×40°.5W±0°.2, h15^{km}±6^{km}, mb4.3/9, Error ellipse: s-maj=40.9km s-min=18.5km az=199.0*

ISC 03 14:13:31.1±1.5, 31°.9N±0°.3×40°.4W±0°.2, h14^{km}, n26, σ1^{s}.05/17, mb3.9/11, MS3.6/4, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBN	**Guysborough**	**21.20**	**315**	P	**P**	**14 18 16.4**	**+0.2**
DRLN	**Deer Lake**	**21.55**	**328**	P	**P**	**14 18 19.7**	**-0.3**
SCHQ	**Schefferville**	**29.57**	**329**	LR	LR	14 30 30.5	
	comp=Z,123nm,19.3s,baz=101,slow=35						
VLDQ	**Val d'Or**	**32.28**	**311**	P	**P**	**14 20 01.3**	**+2.0**
ROSC	**El Rosal**	**41.64**	**237**	LR	LR	14 38 41.8	
	comp=Z,64nm,19.7s,baz=99,slow=36						
TOA0	**Torodi Ar. Sit**	**42.82**	**106**	P	**P**	**14 21 28.9**	**+0.1**
TOA0				IAmb	IAmb	14 21 30.5	
	comp=Z,5.6nm,1.1s						
TORD	**Torodi Ar. Bea**	**42.82**	**106**	P	**P**	**14 21 29.6**	**+0.7**
	comp=Z,3.6nm,1.0s,baz=301,slow=7.7,SNR=9.9						
TORD				LR	LR	14 39 16.3	
	comp=Z,130nm,19.0s,baz=5.0,slow=36						
ULM	**Lac du Bonnet**	**44.52**	**311**	P	**P**	**14 21 41.9**	**-0.3**
	comp=Z,1.8nm,0.8s,baz=71,slow=8.8,SNR=2.5						
ULM	**Lac du Bonnet**	**44.52**	**311**	IAmb	IAmb	14 21 43.4	
	comp=Z,4.5nm,1.3s						
H10N2	**ASCENSION HYDR**	**46.64**	**143**	T	T	15 11 55.4	
	baz=329,slow=75,SNR=14						
H10N3	**ASCENSION HYDR**	**46.65**	**143**	T	T	15 11 53.7	
	baz=329,slow=75,SNR=13						
H10N1	**ASCENSION HYDR**	**46.66**	**143**	T	T	15 11 54.6	
	baz=329,slow=75,SNR=15						
H10S3	**ASCENSION HYDR**	**47.52**	**144**	T	T	15 12 49.7	
	baz=329,slow=74,SNR=30						
H10S2	**ASCENSION HYDR**	**47.53**	**144**	T	T	15 12 55.4	
	baz=251,slow=74						
BDFB	**Brasilia**	**47.85**	**190**	LR	LR	14 39 32.8	
	comp=Z,69nm,18.9s,baz=130,slow=33						
MLR	**Muntele Rosu**	**52.13**	**55**	P	**P**	**14 22 41.6**	**+0.5**
AKASG	**Malin Array Be**	**53.54**	**48**	P	**P**	**14 22 50.0**	**-1.3**
	comp=Z,1.9nm,0.7s,baz=276,slow=6.5,SNR=6.8						
PD31	**Pinedale Array**	**54.63**	**302**	P	**P**	**14 22 57.5**	**-2.1**
PDAR	**Pinedale Array**	**54.63**	**302**	P	**P**	**14 22 59.2**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=74,slow=7.9,SNR=6.0						
YKA	**Yellowknife Ar**	**55.00**	**327**	P	**P**	**14 23 01.8**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=86,slow=8.1,SNR=6.6						
BR131	**Keskin Array S**	**58.99**	**60**	P	**P**	**14 23 29.8**	**-0.8**
BR131				IAmb	IAmb	14 23 30.5	
	comp=Z,4.1nm,1.5s						
INK	**Inuvik**	**61.88**	**335**	P	**P**	**14 23 49.1**	**-0.5**
	comp=Z,0.9nm,1.0s,baz=35,slow=4.8,SNR=2.7						
INK	**Inuvik**	**61.88**	**335**	P	**P**	**14 23 49.7**	**+0.1**
NVAR	**Mina Array Bea**	**62.24**	**300**	P	**P**	**14 23 51.3**	**-1.6**
	comp=Z,0.3nm,0.7s,baz=80,slow=10,SNR=2.8						
ILAR	**Eielson Array**	**68.16**	**334**	P	**P**	**14 24 31.3**	**+0.8**
	comp=Z,0.4nm,0.9s,baz=56,slow=4.8,SNR=2.6						
ZALV	**Zalesovo Beam**	**82.27**	**29**	P	**P**	**14 25 52.2**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=317,slow=6.1,SNR=3.0						

IDC 03 14:35:55.4±6.9, 10°.00S×127°.20W, h0^{km}, mb3.9/2, mb1 4.2/2, mb1mx3.7/19, mbtmp3.9/2, MS3.9/2, Ms1 3.9/2, ms1mx3.2/34, Error ellipse: s-maj=282.9km s-min=132.9km az=61.0, South Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NVAR	**Mina Array Bea**	**48.88**	**9**	LR	LR	15 01 16.7	
	comp=Z,122nm,19.4s,baz=345,slow=31						
USHA	**Ushuaia**	**64.14**	**147**	LR	LR	15 06 20.8	
	comp=Z,76nm,19.9s,baz=228,slow=28						
H11S2	**WAKE ISLAND Hy**	**71.07**	**293**	T	T	16 03 31.4	
	baz=111,SNR=2.5						
H11S1	**WAKE ISLAND Hy**	**71.08**	**293**	T	T	16 03 26.5	
	baz=111						
H11S3	**WAKE ISLAND Hy**	**71.09**	**293**	T	T	16 03 31.2	
	baz=111						
YKA	**Yellowknife Ar**	**72.93**	**6**	P	P	14 47 26.2	0.0
	2.2nm,0.8s,baz=186,slow=5.8,SNR=24						
ILAR	**Eielson Array**	**76.02**	**351**	P	P	14 47 44.3	+0.1
	0.4nm,0.8s,baz=179,slow=6.0,SNR=5.9						
BRTR	**Keskin Array B**	**145.83**	**27**	PKPbc	PKPdf	14 55 36.3	-0.4
	0.6nm,0.6s,baz=348,slow=2.6,SNR=3.9						

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*MEX **03** 15:02:03.0±0.9, 13°.97N×93°.10W, h10^{km}±38^{km}, MD3.9*

*GCG **03** 15:02:06.6±0.3, 14°.07N×92°.68W, h5^{km}±42^{km}, MD3.9*

ISC 03 15:02:01.4±2.8, 14°.2N±0°.1×93°.01W±0°.08, h2^{km}±16^{km}, n8, σ1^{s}.15/14, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**1.01**	**45**	*i* P	**Pn**	**15 02 23.2**	**+0.6**
THIG				*i* S	**Sn**	**15 02 37.3**	**-0.2**
STG3	**Santiaguito 3,**	**1.48**	**69**	*e*P	**Pg**	**15 02 29.9**	**0.0**
PCIG		**1.52**	**352**	*e*P	**Pn**	**15 02 29.1**	**-0.6**
PCIG				*i* S	**Sn**	**15 02 51.1**	**+1.0**
FUG	**Fuego 3**	**2.11**	**83**	*e*P	**Pn**	**15 02 38.8**	**+0.9**
FUG				*e*S	**Sn**	**15 03 03.8**	**-1.1**
CCIG	**Comitan**	**2.25**	**22**	*e*P	**Pn**	**15 02 40.7**	**+0.9**
CCIG				*i* S	**Sb**	**15 03 09.3**	**-1.8**
IXG	**Ixpaco**	**2.49**	**90**	*e*P	**Pn**	**15 02 43.7**	**+0.6**
TGIG		**2.58**	**358**	*e*P	**Pn**	**15 02 45.8**	**+1.5**
TGIG				*i* S	**Sn**	**15 03 17.8**	**+1.5**
CMIG	**Matias Romero**	**3.41**	**328**	*e*P	**Pn**	**15 02 55.5**	**-0.1**
CMIG				*i* S	**Sn**	**15 03 35.9**	**-0.7**

IDC 03 15:08:04.4±1.5, 4°.08N×124°.95E, h0^{km}, mb3.3/5, mb1 3.4/5, mb1mx3.2/61, mbtmp3.3/5, Error ellipse: s-maj=191.5km s-min=20.2km az=65.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.60**	**159**	P	P	15 13 36.3	+0.8
	0.2nm,0.7s,baz=338,slow=10,SNR=13						
ASAR	**Alice Springs**	**28.93**	**163**	P	P	15 14 04.8	-0.7
	0.1nm,0.5s,baz=340,slow=7.5,SNR=5.0						
MKAR	**Makanchi Array**	**56.26**	**326**	P	P	15 17 47.2	+0.5
	0.2nm,0.5s,baz=132,slow=8.6,SNR=3.9						
MKAR				PcP	PcP	15 18 42.4	-1.9
	0.3nm,0.6s,baz=99,slow=3.8,SNR=3.1						
KURBB	**Kurchatov Arra**	**60.49**	**328**	P	P	15 18 16.3	+0.1
	0.2nm,0.3s,baz=129,slow=6.4,SNR=3.7						
BVAR	**Borovoye Array**	**66.06**	**327**	P	P	15 18 53.3	+0.2
	0.2nm,0.4s,baz=111,slow=7.9,SNR=3.4						

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*SJA **03** 15:12:15.9±0.7, 33°.66S×70°.41W, h117^{km}±4^{km}, ML3.5, MW3.6*

*IDC **03** 15:12:16.7±3.1, 33°.59S×70°.22W, h96^{km}±29^{km}, mb3.7/9, mb1 3.8/12, mb1mx3.7/29, mbtmp3.9/12, MS3.1/2, Ms1 3.0/2, ms1mx2.7/22, Error ellipse: s-maj=28.4km s-min=16.5km az=100.0*

*NEIC **03** 15:12:17.0±0.9, 33°.61S±0°.06×70°.15W±0°.09, h98^{km}±6^{km}, Error ellipse: s-maj=11.2km s-min=7.0km az=62.0*

*GUC **03** 15:12:17.5±1.0, 33°.72S×70°.43W, h97^{km}±4^{km}, ML4.1*

ISC 03 15:12:17.3±0.6, 33°.65S±0°.04×70°.38W±0°.04, h106^{km}±5^{km}, n65, σ1^{s}.04/82, mb4.0/14, 7C-2D, Chile-Argentina border region

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

MT03	Universidad Ad	0.19	325	⇓iP	Pn	15 12 32.5	+0.1
MT03				i S	Sn	15 12 43.5	-0.1
FSR	Penalolen	0.21	324	eP	Pn	15 12 33.5	+1.2
FSR				i S	Sn	15 12 44.8	+1.1
ANTU	Antumapu	0.23	291	eP	Pn	15 12 33.3	+0.9
ANTU				i S	Sn	15 12 44.5	+0.8
LMEL	Las Melosas	0.24	143	⇓iP	Pn	15 12 32.2	-0.4
LMEL				i S	Sn	15 12 43.7	-0.4
LMEL				IAML		15 12 47.8	
	comp=E,13µm,0.5s						
STL	Santa Lucia	0.31	314	⇑iP	Pn	15 12 32.5	-0.2
STL				i S	Sn	15 12 44.0	-0.2
STL				IAML		15 12 46.0	
	comp=E,11µm,0.6s						
PEL	Peldehue	0.57	333	⇑iP	Pn	15 12 34.5	+0.2
PEL				i S	Sn	15 12 47.2	+0.1
PEL	Peldehue	0.57	333		Pn	15 12 34.5	+0.2
PEL				Sn	Sn	15 12 47.0	-0.1
PEL	Peldehue	0.57	333	i P	Pn	15 12 34.5	+0.2
PEL				eS	Sn	15 12 48.0	+1.0
MT02	Curacav	0.75	301	⇑iP	Pn	15 12 35.9	+0.2
MT02				i S	Sn	15 12 49.8	+0.3
MT02				IAML		15 12 51.2	
	comp=N,6µm,0.4s						
ROC1	El Roble	0.86	321	Pn	Pn	15 12 37.2	+0.1
ROC1				Sn	Sn	15 12 52.0	+0.1
ROC1	El Roble	0.86	321	i P	Pn	15 12 37.4	+0.3
ROC1				eS	Sn	15 12 53.0	+1.2
ROCH	El Roble	0.86	322	⇑iP	Pn	15 12 37.0	0.0
ROCH				i S	Sn	15 12 52.4	+0.5
ROCH				IAML		15 12 56.5	
	comp=E,7µm,0.3s						
VA01	Torpederas	1.23	300	⇑iP	Pn	15 12 41.5	+0.8
VA01				i S	Sn	15 12 58.7	+0.3
VA01				IAML		15 13 02.7	
	comp=E,3µm,0.1s						
AAGR	Agrelo	1.42	67	i P	Pn	15 12 43.1	+0.2
AAGR				eS	Sn	15 13 04.2	+1.8
AAGR				IAML		15 13 07.1	
	comp=Z,570nm,0.8s						
ARCO	CERRO ARCO	1.46	57	i P	Pn	15 12 43.9	+0.4
ARCO				eS	Sn	15 13 04.9	+1.5
ARCO				IAML		15 13 05.5	
	comp=Z,628nm,0.8s						
LAMA	Las Malvinas	1.60	143	i P	Pn	15 12 45.9	+0.7
ASAL	Salagasta	1.67	51	i P	Pn	15 12 46.7	+0.7
ASAL				eS	Sn	15 13 09.5	+1.5
ASAL				IAML		15 13 12.7	
	comp=Z,407nm,1.9s						
GO05	Huala	1.87	223	⇑iP	Pn	15 12 48.3	-0.2
GO05				i S	Sn	15 13 11.2	-1.0
GO05				IAML		15 13 20.1	
	comp=E,1µm,0.4s						
GO05	Huala	1.87	223	Pn	Pn	15 12 48.2	-0.2
MORA	Malargue	1.99	146	i P	Pn	15 12 49.9	0.0
RTLS	Leoncito	2.06	27	i P	Pn	15 12 52.4	+1.2
RTLS				eS	Sn	15 13 18.6	+1.6
RTLS				IAML		15 13 20.6	
	comp=Z,131nm,1.0s						
RTCV	Cerro Valdivia	2.36	41	i P	Pn	15 12 55.2	+0.3
RTCV				IAML		15 14 06.5	
	comp=Z,112nm,2.3s						
CO02	Combarbal	2.50	348	⇑iP	Pn	15 12 56.5	-0.2
CO02				i S	Sn	15 13 26.2	-0.7
ZON	Zonda	2.54	35	i P	Pn	15 12 57.5	+0.3
ZON				IAML		15 13 33.4	
	comp=Z,111nm,0.7s						
RTLL	Cerro Villicun	2.82	35	i P	Pn	15 13 01.2	+0.3
RTLL				IAML		15 13 36.3	
	comp=Z,211nm,0.4s						
ACAN	Cantantal	3.01	64	i P	Pn	15 13 03.3	-0.1
ACAN				IAML		15 14 05.8	
	comp=Z,52nm,0.8s						
CCHI	Chillan	3.26	205	IAML		15 14 11.3	
	comp=E,577nm,0.4s						
GO04	Tololo Observa	3.49	354		Pn	15 13 09.3	-0.6
AROD	Rodeo	3.56	13	i P	Pn	15 13 11.9	+1.0
AROD				IAML		15 14 30.2	
	comp=Z,56nm,0.8s						
ACDV	Cuesta del Vie	3.63	17	i P	Pn	15 13 12.3	+0.6
ACDV				IAML		15 14 35.2	
	comp=Z,77nm,1.0s						
APLL	PUNTA DE LOS L	4.61	46	i P	Pn	15 13 23.3	-1.6
APLL				IAML		15 14 18.8	
	comp=Z,17nm,0.7s						
ACLC	CERRO LA CRUZ	5.13	36	i P	Pn	15 13 30.1	-1.8
VCA	Vinchina	5.24	21	i P	Pn	15 13 33.1	-0.4
VCA				IAML		15 14 38.7	
	comp=Z,74nm,0.7s						
GO03	Copiap	6.04	1	Pn	Pn	15 13 42.8	-1.4
CYA	Choya	6.51	38	i P	Pn	15 13 47.9	-2.7
CYA				IAML		15 15 02.9	
	comp=Z,16nm,1.1s						
PLCA	Paso Flores	7.07	181	P	Pn	15 13 58.1	0.0
	comp=Z,0.4nm,0.3s,baz=20,slow=12,SNR=13						
PLCA	Paso Flores	7.07	181	Pn	Pn	15 13 58.5	+0.4
GO02	Mina Guanaco	8.49	5	Pn	Pn	15 14 16.8	-0.9
CPUP	Villa Florida	13.45	61	LR	LR	15 20 26.4	
	comp=Z,55nm,18.3s,baz=5.0,slow=37						
CPUP	Villa Florida	13.45	61	Pn	Pn	15 15 19.7	-4.1
LPAZ	La Paz	17.41	7	P	Pn	15 16 12.9	-1.2
	comp=Z,0.2nm,0.3s,baz=157,slow=13,SNR=11						
LPAZ	La Paz	17.41	7	P	Pn	15 16 13.1	-1.1
SIV	San Ignacio	19.49	28	P	P	15 16 35.3	-0.7
	comp=Z,0.4nm,0.3s,baz=220,slow=13,SNR=7.3						
EFI	East Falkland	20.11	157	P	P	15 16 42.0	-0.4
EFI				IAmb	IAmb	15 17 12.7	
	comp=Z,68nm,1.2s						
USHA	Ushuaia	21.22	177	P	P	15 16 55.4	+1.2
	comp=Z,9.2nm,0.8s,baz=164,slow=19,SNR=4.0						
BDFB	Brasilia	27.00	54	P	P	15 17 48.5	-1.0
	comp=Z,7.8nm,1.0s,baz=269,slow=5.8,SNR=7.1						
BDFB				LR	LR	15 29 45.0	
	comp=Z,54nm,21.9s,baz=9.3,slow=39						
BDFB	Brasilia	27.00	54	P	P	15 17 47.4	-2.1
BDFB				IAmb	IAmb	15 17 49.7	
	comp=Z,12nm,1.0s						
PTGA	Pitinga	34.17	19	P	P	15 18 52.3	-0.2
	comp=Z,1.0nm,0.3s,baz=239,slow=10.0,SNR=3.1						
PTGA	Pitinga	34.17	19	P	P	15 18 52.0	-0.4
SNAA	Sanae	51.39	158	P	P	15 21 12.0	+1.3
SNAA				IAmb	IAmb	15 21 52.4	
	comp=Z,12nm,1.5s						
QSPA	South Pole Qui	56.59	180	P	P	15 21 49.9	+1.2
	comp=Z,0.5nm,0.6s,baz=147,slow=2.4,SNR=5.0						
QSPA	South Pole Qui	56.59	180	P	P	15 21 49.5	+0.8
TXAR	Lajitas Array	70.12	329	P	P	15 23 19.1	+0.9
	comp=Z,0.6nm,0.7s,baz=152,slow=7.9,SNR=3.5						
LCAR	Lake Charles	72.03	342	P	P	15 23 30.0	+0.6
LCAR				IAmb	IAmb	15 23 30.6	
	comp=Z,30nm,2.0s						
MNTX	Cornudas Mount	72.90	329	P	P	15 23 35.4	+0.6
T25A	Trinidad	77.24	333	P	P	15 24 01.7	+1.9
T25A				IAmb	IAmb	15 24 03.7	
	comp=Z,36nm,1.9s						
ECSD	EROS Data Cent	80.65	341	P	P	15 24 18.9	+0.9
ECSD				IAmb	IAmb	15 24 19.9	
	comp=Z,3.8nm,0.8s						
TORD	Torodi Ar. Bea	82.79	69	P	P	15 24 29.5	-0.4
	comp=Z,0.4nm,0.5s,baz=256,slow=5.8,SNR=3.2						
PDAR	Pinedale Array	84.09	332	P	P	15 24 37.4	+1.2
	comp=Z,0.4nm,0.8s,baz=126,slow=9.3,SNR=4.6						
NVAR	Mina Array Bea	84.40	324	P	P	15 24 38.7	+0.8
	comp=Z,0.3nm,0.3s,baz=134,slow=8.6,SNR=6.6						
ELK	Elko	84.80	327	P	P	15 24 41.0	+1.1
ELK				IAmb	IAmb	15 24 42.5	
	comp=Z,1.8nm,0.9s						
YHH	Holmes Hill	86.30	332	P	P	15 24 48.8	+1.5
ULM	Lac du Bonnet	86.53	344	P	P	15 24 46.9	-0.9
	comp=Z,0.6nm,0.4s,baz=157,slow=2.2,SNR=3.1						
ZALV	Zalesovo Beam	153.19	33	PKPbc	PKiKP	15 32 02.2	+0.1
	comp=Z,1.5nm,1.0s,baz=274,slow=2.4,SNR=5.6						
MKAR	Makanchi Array	155.49	50	PKPab	PKPab	15 32 24.6	+0.3
	comp=Z,0.1nm,0.6s,baz=307,slow=3.1,SNR=3.0						

IDC ***03*** *15:14:20.6±2.2, 9°.40S×117°.67E, h50km±20km, mb4.1/21, mb1 4.1/23, mb1mx3.9/57, mbtmp4.4/23, ML4.2/2, MS3.3/7, Ms1 3.4/7, ms1mx3.1/39, Error ellipse: s-maj=20.2km s-min=12.4km az=62.0*

DJA ***03*** *15:14:22.5±0.3, 10°S±2°×11°8E±°, h34km±6km, M4.6/17, mb4.7/17, mB5.0/6, MLv4.7/13, MLv4.7/7, Mw(mB)4.3/6*

NEIC ***03*** *15:14:22.4±1.4, 9°.45S±0°.04×117°.70E±0°.06, h69km±5km, mb4.4/34, Error ellipse: s-maj=9.6km s-min=4.8km az=70.0*

KLM ***03*** *15:14:23.0, 9°.91S×117°.60E, h54km, mb4.6*

ISC 03 15:14:22.1±0.3**, 9°.57S**±0°.05×**117°.75E**±0°.05**, h71km, n124, σ1s59**/130**, mb4.4**/33**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.74	2	P	Pn	15 14 36.7	-0.9
PLAI				S	Sn	15 14 46.6	-2.4
WBSI	Waikabubak, Su	1.62	92	P	Pn	15 14 47.9	-0.9
WBSI				S	Sn	15 15 06.6	-2.3
WSI	Waingapu	2.52	92	P	Pn	15 15 01.9	+1.1
DNP	Denpasar	2.66	289	P	Pn	15 15 04.4	+1.6
IGBI	Denpasar	2.68	286	P	Pn	15 15 04.0	+1.0
BASI	Baing, Sumba	2.86	103	P	Pn	15 15 06.9	+1.4
SRBI	Singaraja	2.91	300	P	Pn	15 15 07.9	+1.7
JAGI	Jajag, Banyuwa	3.72	287	P	Pn	15 15 17.6	+0.4
JAGI	Jajag, Banyuwa	3.72	287		Pn	15 15 17.2	0.0
EDFI	Ende, Flores	3.98	78	P	Pn	15 15 21.8	+1.0
MMRI	Maumere	4.53	78	P	Pn	15 15 30.2	+1.9
MMRI	Maumere	4.53	78		Pn	15 15 29.4	+1.1
BKSI	Bulukumba	4.84	29	P	Pn	15 15 33.9	+1.4
KAPI	Kappang	4.95	24	P	Pn	15 15 35.5	+1.5
	15nm,0.3s,baz=188,slow=7.9,SNR=43						
KAPI				S	Sn	15 16 27.7	-2.2
	29nm,0.3s,baz=194,slow=19,SNR=6.2						
KAPI				LR	LR	15 17 45.5	
	comp=Z,228nm,22.0s,baz=169,slow=42						
BNSI	Bone	5.65	25	P	Pn	15 15 46.3	+2.7
	0.4nm0.4nm1µm93nm,0.6s						
GRJI	Gresik	5.85	296	P	Pn	15 15 48.7	+2.4
	0.4nm1µm57nm,0.7s						
SPSI	Sidrap Palu	5.92	20	P	Pn	15 15 48.3	+1.0
	0.3nm0.3nm61nm,0.7s						
KBKI	Kotabaru	6.43	346	P	Pn	15 15 55.7	+1.5
	0.1nm0.1nm304nm20nm,0.7s						
SOEI	Soe	6.43	92	P	Pn	15 15 55.9	+1.5
	0.6nm0.6nm91nm,1.0s						
SOEI	Soe	6.43	92		Pn	15 15 55.3	+1.0
PCJI	Pacitan	6.64	281	P	Pn	15 15 58.8	+1.7
	0.7nm60nm,1.0s						
TTSI	Tana Toraja	6.80	18	P	Pn	15 16 01.9	+2.5
	0.2nm0.2nm634nm50nm,0.7s						
UGM	Wanagama	7.33	282	P	Pn	15 16 09.7	+3.1
	0.8nm95nm,0.9s						
UGM	Wanagama	7.33	282	Pn	Pn	15 16 09.2	+2.6
CISI	Cisompet, Garu	10.03	281	Pn	Pn	15 16 42.1	-1.4
SANI	Sanana	11.09	48	P	Pn	15 16 59.1	+1.1
	34nm,1.1s						
FITZ	Fitzroy Crossi	11.42	139	P	Pn	15 17 00.4	-2.0
	1.6nm,0.3s,baz=334,slow=9.3,SNR=43						
FITZ				S	Sn	15 18 59.2	-9.1
	2.8nm,0.3s,baz=360,slow=23,SNR=11						
FITZ				LR	LR	15 21 50.9	
	comp=Z,129nm,19.2s,baz=314,slow=39						
PSA00	Pilbara Seismi	12.10	171		Pn	15 17 08.3	-3.4
KNRA	Kununurra	12.34	121		Pn	15 17 13.0	-1.9
LBMI	Labuha	13.15	48	P	P	15 17 35.8	+2.3
SBUM	Sibu	13.15	335	Pn	Pn	15 17 23.5	-2.5
SBUM	Sibu	13.15	335	P	P	15 17 32.0	-1.6
KSM	Kuching	13.24	326	P	P	15 17 32.0	-2.5
GIRL	Giralia	13.43	194	Pn	Pn	15 17 27.0	-2.6
MTN	Manton Dam	13.53	105		Pn	15 17 27.6	-3.4
FAKI	Fak Fak	15.85	66	P	Pn	15 17 58.0	-3.1
FAKI				IAmb	IAmb	15 18 12.4	
	comp=Z,14nm,0.8s						
SIJI	Sorong	15.99	58	P	Pn	15 18 03.8	+0.9
	comp=Z,1.7nm,0.3s,baz=302,slow=6.1,SNR=7.1						
SIJI				LR	LR	15 24 50.9	
	comp=Z,91nm,20.3s,baz=294,slow=40						
SDSI	Sungai Dareh	18.37	297	P	Pn	15 18 33.6	+1.5
WB0	Warramunga Arr	19.01	124	P	P	15 18 38.9	+0.5
WRA	Warramunga Arr	19.05	125	P	Pn	15 18 39.8	-0.5
	comp=Z,0.6nm,0.3s,baz=301,slow=9.4,SNR=34						
WRA				S	S	15 21 56.8	-15
	comp=Z,0.5nm,0.3s,baz=293,slow=21,SNR=4.2						
WRAB	Tennant Creek	19.05	125	P	Pn	15 18 40.3	-0.1
WB2	Warramunga Arr	19.06	125	P	Pn	15 18 40.0	-0.5
WR0	Warramunga Arr	19.22	124	P	Pn	15 18 41.9	-0.4
BKNI	Bangkinang	19.32	300	P	P	15 18 41.1	-0.7
MORW	Morawa	19.46	184		Pn	15 18 47.8	+2.8
MORW				IAmb	IAmb	15 18 50.1	
	comp=Z,28nm,0.6s						
AS31	Alice Springs	20.85	134	P	P	15 18 59.4	+1.0
ASAR	Alice Springs	20.85	134	P	Pn	15 19 00.2	-1.3
	comp=Z,3.2nm,0.6s,baz=309,slow=10,SNR=79						
ASAR				S	S	15 22 41.7	-5.4
	comp=Z,2.6nm,0.8s,baz=308,slow=23,SNR=6.3						
ASAR				ScP	ScP	15 26 37.9	+2.7
	comp=Z,0.8nm,0.7s,baz=323,slow=2.4,SNR=3.8						
RPSI	Rantau Prapat	22.37	302	P	P	15 19 12.9	-1.8
RPSI	Rantau Prapat	22.37	302	P	P	15 19 14.1	-0.6
RPSI				IAmb	IAmb	15 19 17.0	
	comp=Z,9.1nm,1.0s						
PSI	Prapat	22.43	302	P	P	15 19 12.9	-2.5
	comp=Z,5.3nm,0.4s,baz=164,slow=13,SNR=5.6						
PSI				LR	LR	15 28 32.1	
	comp=Z,84nm,19.5s,baz=96,slow=38						
KULM	Kulim	22.55	310	P	P	15 19 16.1	-0.5
FORT	Forrest	23.18	157	P	P	15 19 24.3	+1.4
FORT				IAmb	IAmb	15 19 46.3	
	comp=Z,17nm,0.9s						
NWAO	Narrogin (SRO)	23.25	181	P	P	15 19 24.8	+1.4
	comp=Z,7.8nm,0.8s,baz=5.7,slow=10,SNR=3.6						
NWAO				S	S	15 23 28.9	-1.2
	comp=Z,6.8nm,0.5s,baz=90,slow=16,SNR=2.2						
NWAO	Narrogin (SRO)	23.25	181		pP	15 19 38.2	+0.6
NWAO				IAmb	IAmb	15 19 51.2	
	comp=Z,25nm,0.8s						
KCSI	Kotacane, Aceh	23.78	302	P	P	15 19 29.1	+0.6
COEN	Coen	25.26	102	P	P	15 19 43.8	+1.8
COEN				IAmb	IAmb	15 20 21.3	
	comp=Z,7.2nm,0.9s						
BBOO	Buckleboo	28.64	147	P	P	15 20 13.8	+1.6
BBOO				IAmb	IAmb	15 20 40.8	
	comp=Z,20nm,1.6s						
PBKT	Sadao Pong	30.83	327	P	P	15 20 32.4	+0.8
PBKT				IAmb	IAmb	15 20 33.3	
	comp=Z,3.6nm,0.8s						
STKA	Stephens Creek	31.32	139	P	P	15 20 38.0	+2.2
	comp=Z,2.3nm,0.6s,baz=300,slow=8.2,SNR=12						
STKA				LR	LR	15 34 01.4	
	comp=Z,106nm,18.9s,baz=32,slow=38						
STKA	Stephens Creek	31.32	139	P	P	15 20 37.9	+2.1
CMAR	Chiang Mai Arr	33.47	326	P	P	15 20 55.3	+0.5
	comp=Z,1.7nm,0.8s,baz=153,slow=6.2,SNR=11						
CMAR				PcP	PcP	15 23 36.5	+1.9
	comp=Z,0.8nm,0.6s,baz=174,slow=3.9,SNR=6.3						
CMAR				ScP	ScP	15 27 14.6	+1.6
	comp=Z,0.7nm,1.0s,baz=161,slow=3.5,SNR=3.3						
CMAR				LR	LR	15 36 44.3	
	comp=Z,64nm,18.4s,baz=286,slow=40						
KMI	Kunming	37.46	337	P	P	15 21 31.0	+1.8
KMI				pP	pP	15 21 37.7	-8.2
H08S2	Diego Garcia H	44.76	269	T	T	16 10 51.2	
	baz=95,slow=74,SNR=5.6						
H08S3	Diego Garcia H	44.77	269	T	T	16 10 47.8	
	baz=95,slow=74,SNR=10.0						
H08S1	Diego Carcia H	44.78	269	T	T	16 10 55.6	
	baz=95						
ODAN	Odare	46.69	322	eP	P	15 22 43.6	-0.7
	comp=Z,9.9nm,0.8s						
TAPN	Taplejung	46.85	322	eP	P	15 22 45.3	-0.4
	comp=Z,20nm,0.9s						
RAMN	Ramite	47.24	321	eP	P	15 22 48.2	-0.4
	comp=Z,8.6nm,0.8s						
LZH	Lanzhou	47.27	345	eP	P	15 22 50.9	+2.3
LZH				pP	pwP	15 23 07.5	-0.7
LZH				sP	sP	15 23 15.3	+1.6
KSRS	Korea Array	47.74	11	P	P	15 22 52.4	+0.4
	comp=Z,5.8nm,0.9s,baz=190,slow=8.1,SNR=19						
JIRN	Jiri	48.00	321	eP	P	15 22 54.0	-0.7
	comp=Z,21nm,0.7s						
GUN	Gumba	48.37	321	eP	P	15 22 56.5	-1.0
	comp=Z,14nm,0.8s						
PKI	Pulchoki	48.42	321	eP	P	15 22 56.4	-1.5
	comp=Z,7.8nm,0.8s						
PKIN	Phulchoki	48.44	321	eP	P	15 22 56.3	-1.6
	comp=Z,7.0nm,0.7s						
DMN	Daman	48.64	320	eP	P	15 22 58.2	-1.3
	comp=Z,12nm,0.9s						
KKN	Kakani	48.66	321	eP	P	15 22 58.7	-0.9
GKN	Gorkha	49.21	320	eP	P	15 23 02.7	-1.0
MJAR	Matsushiro Arr	49.74	22	P	P	15 23 06.2	-1.3
	comp=Z,5.1nm,0.8s,baz=201,slow=7.8,SNR=12						
MJAR				LR	LR	15 42 60.0	
	comp=Z,43nm,21.2s,baz=25,slow=35						
MAJO	Matsushiro	49.74	22	P	P	15 23 08.2	+0.7
MAT	Matsushiro	49.74	22	P	P	15 23 03.9	-3.5
MJB9	Matsu-Tunnel	49.75	22	P	P	15 23 08.2	+0.7
DANN	Dangsing	50.01	320	eP	P	15 23 08.4	-1.5
HHC	Hu-ho-hao-te	50.49	354	eP	P	15 23 14.1	+1.0
GTA	Gaotai	51.51	342	eP	P	15 23 20.9	+0.1
GTA				pP	pP	15 23 25.1	-13
GTA				sP	pwP	15 23 28.6	-12
MDJ	Mudanjiang	54.99	10	P	P	15 23 45.9	-0.2
USA0B	Ussuriysk Arra	55.06	12	P	P	15 23 46.4	-0.1
USRK	Ussuriysk Ar.	55.06	12	P	P	15 23 46.6	+0.1
	comp=Z,10nm,0.7s,baz=198,slow=7.4,SNR=21						
ASAJ	Asahikawa	58.00	21	P	P	15 24 07.0	-0.5
	comp=Z,6.5nm,0.9s,baz=244,slow=7.8,SNR=6.0						
JKA	Kamikawa-asahi	58.00	21	P	P	15 24 07.0	-0.5
SONM	Songino Array	58.04	351	P	P	15 24 07.8	0.0
	comp=Z,5.4nm,0.7s,baz=168,slow=9.0,SNR=41						
WMQ	Urumqi	59.74	335	eP	P	15 24 21.7	+2.0
WMQ	Urumqi	59.74	335	P	P	15 24 19.5	-0.2
KLR	Kul'dur	59.83	11	P	P	15 24 18.5	-1.6
	comp=Z,1.3nm,0.6s,baz=218,slow=3.3,SNR=6.1						
TLY	Talaya	62.21	350	P	P	15 24 35.3	-0.9
TLY				IAmb	IAmb	15 24 37.0	
	comp=Z,2.8nm,0.9s						
KSH	Kashi	62.34	324	P	P	15 24 39.6	+2.1
KSH				pP	pwP	15 24 59.4	+1.7
KSH				PcS	PcS	15 29 19.9	0.0
KSH				S	S	15 32 58.8	+0.1
KBL	Kabul	63.64	316	P	P	15 24 45.2	-1.0
KBL				IAmb	IAmb	15 24 45.5	
	comp=Z,3.7nm,0.6s						
MK31	Makanchi Array	64.41	334	P	P	15 24 50.2	-0.7
MKAR	Makanchi Array	64.41	334	P	P	15 24 50.3	-0.6
	comp=Z,1.4nm,0.4s,baz=154,slow=7.0,SNR=30						
MAKZ	Makanchi	64.56	334	P	P	15 24 51.6	-0.2
MAKZ				IAmb	IAmb	15 25 04.4	
	comp=Z,6.2nm,1.6s						
AAK	Ala-Archa	65.26	326	P	P	15 24 56.2	-0.4
	comp=Z,3.0nm,0.8s,baz=145,slow=4.7,SNR=15						
AAK	Ala-Archa	65.26	326	P	P	15 24 56.4	-0.2
AAK				IAmb	IAmb	15 24 57.8	
	comp=Z,3.3nm,0.9s						
GAR	Garm	65.40	321	P	P	15 24 57.3	-0.3
WSAR	Wadi Sarin	66.37	300	P	P	15 25 03.6	-0.4
	comp=Z,3.3nm,0.5s,baz=79,slow=3.5,SNR=4.3						
KURBB	Kurchatov Arra	68.94	334	P	P	15 25 18.7	-0.9
	comp=Z,0.9nm,0.7s,baz=144,slow=5.6,SNR=9.9						
KURK	Kurchatov	68.97	335	P	P	15 25 19.0	-0.7
KURK				IAmb	IAmb	15 25 21.4	
	comp=Z,3.7nm,1.1s						
ZAA0	Zalesovo Array	69.14	340	P	P	15 25 18.9	-1.8
ZAA0				IAmb	IAmb	15 25 20.4	
	comp=Z,3.4nm,0.6s						
ZALV	Zalesovo Beam	69.14	340	P	P	15 25 19.3	-1.5
	comp=Z,3.5nm,0.5s,baz=146,slow=5.0,SNR=20						
PETK	Petropavlovsk-	71.10	24	P	P	15 25 32.5	-0.2
	comp=Z,2.8nm,0.8s,baz=201,slow=7.6,SNR=3.1						
YAK	Yakutsk	71.99	6	P	P	15 25 37.4	-0.5
	comp=Z,2.5nm,0.3s,baz=201,slow=0.3,SNR=4.7						
YAK	Yakutsk	71.99	6	P	P	15 25 37.2	-0.6
YAK				IAmb	IAmb	15 25 38.5	
	comp=Z,7.9nm,0.8s						
BRVK	Borovoye	74.30	332	P	P	15 25 51.5	-0.2
BRVK				IAmb	IAmb	15 25 52.8	
	comp=Z,3.2nm,1.0s						
SEY	Seymchan	77.04	15	P	P	15 26 07.6	+0.5
	comp=Z,1.8nm,0.8s,baz=90,slow=22,SNR=7.8						
ABKAR	Akbulak array	77.32	325	P	P	15 26 08.5	-0.5
ABKAR				IAmb	IAmb	15 26 09.7	
	comp=Z,3.5nm,0.6s						
RAYN	Ar Rayn	77.85	297	P	P	15 26 12.6	0.0
RAYN				IAmb	IAmb	15 26 13.7	
	comp=Z,3.9nm,0.8s						
AKTO	Aktyubinsk	79.00	326	P	P	15 26 18.2	-0.1
	comp=Z,2.8nm,0.6s,baz=100,slow=7.2,SNR=16						
TIXI	Tiksi	81.39	4	P	P	15 26 29.8	-0.9
	comp=Z,6.3nm,0.6s,baz=183,slow=4.5,SNR=42						
TIXI	Tiksi	81.39	4	P	P	15 26 29.7	-1.0
YKA	Yellowknife Ar	115.22	24	PKP	PKPdf	15 32 55.8	+0.7
	comp=Z,0.9nm,0.4s,baz=305,slow=1.8,SNR=16						
TORD	Torodi Ar. Bea	117.34	280	PKP	PKiKP	15 33 01.7	+1.1
	comp=Z,0.3nm,0.5s,baz=81,slow=1.6,SNR=2.6						
NVAR	Mina Array Bea	122.33	50	PKP	PKiKP	15 33 12.3	+2.3
	comp=Z,0.9nm,0.7s,baz=251,slow=2.0,SNR=8.3						
PDAR	Pinedale Array	127.17	43	PKP	PKiKP	15 33 20.7	+1.2
	comp=Z,0.2nm,0.4s,baz=212,slow=0.9,SNR=5.8						
CPUP	Villa Florida	143.99	188	PKP	PKPdf	15 33 50.6	+0.2
	comp=Z,1.0nm,0.6s,baz=186,slow=18,SNR=3.9						
BDFB	Brasilia	151.25	210	PKPbc	PKPbc	15 34 08.8	+0.2
	comp=Z,2.8nm,0.8s,baz=217,slow=2.2,SNR=3.1						
LPAZ	La Paz	153.65	167	PKPbc	PKiKP	15 34 17.2	+2.4
	comp=Z,0.6nm,0.5s,baz=177,slow=6.8,SNR=3.7						

NEIC ***03*** *15:15:33.2±2.1, 9°.59S±0°.08×117°.6E±0°.1, h58km±7km, mb4.4/17, Error ellipse: s-maj=17.9km s-min=12.2km az=98.0*

IDC ***03*** *15:15:35.0±3.7, 9°.45S×117°.57E, h63km±31km, mb4.0/16, mb1 4.0/17, mb1mx3.8/56, mbtmp4.3/17, ML4.5/1, MS3.2/1, Ms1 3.2/1, ms1mx2.7/37, Error ellipse: s-maj=27.5km s-min=15.8km az=65.0*

ISC 03 15:15:34.8±0.5**, 9°.58S**±0°.07×**117°.69E**±0°.10**, h71km, n43, σ1s30**/44**, mb4.3**/22**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	4.98	24	P	Pn	15 16 47.8	+0.7
	18nm,0.3s,baz=177,slow=17,SNR=3.1						
KAPI				S	Sn	15 17 41.8	-1.6
	21nm,0.3s,baz=127,slow=20,SNR=3.5						
LEM	Lembang	10.34	285	LR	LR	15 22 09.3	
	comp=Z,121nm,19.6s,baz=110,slow=39						
FITZ	Fitzroy Crossi	11.45	138	Pn	Pn	15 18 13.9	-1.6
PSA00	Pilbara Seismi	12.10	170	Pn	Pn	15 18 22.1	-2.2
KNRA	Kununurra	12.39	120	Pn	Pn	15 18 25.8	-2.5
GIRL	Giralia	13.40	194	Pn	Pn	15 18 40.8	-1.1
FAKI	Fak Fak	15.91	66	Pn	Pn	15 19 14.1	-0.4
ASAR	Alice Springs	20.89	134	P	P	15 20 13.2	+1.8
	2.3nm,0.5s,baz=314,slow=10.0,SNR=2.1						
STKA	Stephens Creek	31.35	138	P	P	15 21 51.3	+2.5
	1.3nm,0.5s,baz=312,slow=13,SNR=2.3						
STKA	Stephens Creek	31.35	138	P	P	15 21 51.1	+2.4
CMAR	Chiang Mai Arr	33.45	326	P	P	15 22 08.0	+0.8
	1.0nm,0.7s,baz=148,slow=6.2,SNR=4.8						
CMAR				PcP	PcP	15 24 48.0	+0.8
	0.6nm,0.8s,baz=178,slow=2.3,SNR=3.4						
KSRS	Korea Array	47.76	11	P	P	15 24 06.5	+1.7
	3.5nm,0.9s,baz=188,slow=7.5,SNR=7.2						
MDJ	Mudanjiang	55.01	10	P	P	15 24 58.9	0.0
USA0B	Ussuriysk Arra	55.08	13	P	P	15 24 58.3	-1.1
USRK	Ussuriysk Ar.	55.08	13	P	P	15 24 59.9	+0.5
	5.3nm,0.7s,baz=193,slow=7.0,SNR=7.1						
ULN	Ulaanbaatar	57.97	352	P	P	15 25 19.4	-0.7
ULN				IAmb	IAmb	15 25 21.0	
	comp=Z,1.8nm,0.6s						
ASAJ	Asahikawa	58.03	21	P	P	15 25 20.0	-0.3
	comp=Z,4.5nm,0.9s,baz=129,slow=11,SNR=3.0						
JKA	Kamikawa-asahi	58.03	21	P	P	15 25 20.0	-0.3
SONM	Songino Array	58.04	351	P	P	15 25 21.0	+0.5
	comp=Z,3.0nm,0.6s,baz=168,slow=8.2,SNR=8.2						
KDJ	Kajisay	63.43	327	P	P	15 25 57.4	0.0
KDJ				IAmb	IAmb	15 25 59.4	
	comp=Z,3.6nm,1.3s						
KBL	Kabul	63.60	316	P	P	15 25 57.5	-1.1
KBL				IAmb	IAmb	15 25 58.6	
	comp=Z,3.5nm,0.6s						
MK31	Makanchi Array	64.39	334	P	P	15 26 02.9	-0.5
MKAR	Makanchi Array	64.39	334	P	P	15 26 03.4	0.0
	comp=Z,0.8nm,0.4s,baz=153,slow=6.6,SNR=6.9						
ARSB	Arslanbob	65.22	324	P	P	15 26 09.2	+0.2
AAK	Ala-Archa	65.23	326	P	P	15 26 09.2	+0.1
	comp=Z,2.2nm,0.8s,baz=128,slow=3.6,SNR=4.8						
AAK	Ala-Archa	65.23	326	P	P	15 26 08.7	-0.4
AAK				IAmb	IAmb	15 26 11.7	
	comp=Z,2.2nm,0.8s						
WSAR	Wadi Sarin	66.32	301	P	P	15 26 15.5	-0.8
	comp=Z,1.2nm,0.4s,baz=103,slow=1.9,SNR=4.2						
KURBB	Kurchatov Arra	68.92	334	P	P	15 26 31.0	-1.1
	comp=Z,0.7nm,0.3s,baz=140,slow=5.8,SNR=5.6						
KURK	Kurchatov	68.95	335	P	P	15 26 29.2	-3.1
KURK				IAmb	IAmb	15 27 03.1	
	comp=Z,17nm,2.0s						

ZAA0	**Zalesovo Array**	**69.13**	**340**	P	**P**	**15 26 32.0**	**-1.3**
ZAA0				IAmb	IAmb	15 26 33.5	
	comp=Z,2.3nm,0.6s						
ZALV	**Zalesovo Beam**	**69.13**	**340**	P	**P**	**15 26 31.9**	**-1.4**
	comp=Z,2.7nm,0.5s,baz=150,slow=5.3,SNR=8.8						
MA2	**Magadan**	**73.85**	**17**	P	**P**	**15 27 00.8**	**-0.8**
	comp=Z,3.7nm,0.5s,baz=245,slow=5.5,SNR=4.9						
MA2	**Magadan**	**73.85**	**17**	P	**P**	**15 27 01.1**	**-0.5**
BRVK	**Borovoye**	**74.28**	**333**	P	**P**	**15 27 03.6**	**-0.6**
SEY	**Seymchan**	**77.06**	**15**	P	**P**	**15 27 20.7**	**+0.8**
	comp=Z,1.2nm,0.7s,baz=224,slow=22,SNR=4.2						
ABKAR	**Akbulak array**	**77.30**	**325**	P	**P**	**15 27 21.6**	**0.0**
ABKAR				IAmb	IAmb	15 27 23.1	
	comp=Z,4.8nm,1.2s						
RAYN	**Ar Rayn**	**77.80**	**297**	P	**P**	**15 27 25.6**	**+0.6**
RAYN				IAmb	IAmb	15 27 26.7	
	comp=Z,2.3nm,0.8s						
AKTO	**Aktyubinsk**	**78.97**	**326**	P	**P**	**15 27 31.2**	**+0.4**
	comp=Z,2.2nm,0.6s,baz=88,slow=7.3,SNR=7.4						
TIXI	**Tiksi**	**81.40**	**4**	P	**P**	**15 27 43.0**	**-0.4**
	comp=Z,3.0nm,0.5s,baz=178,slow=4.1,SNR=13						
TIXI	**Tiksi**	**81.40**	**4**	P	**P**	**15 27 42.3**	**-1.0**
TIXI				IAmb	IAmb	15 27 43.7	
	comp=Z,3.9nm,0.7s						
YKA	**Yellowknife Ar**	**115.25**	**24**	PKP	**PKPdf**	**15 34 09.1**	**+1.4**
	comp=Z,0.6nm,0.4s,baz=301,slow=1.7,SNR=8.2						
NVAR	**Mina Array Bea**	**122.39**	**50**	PKP	**PKiKP**	**15 34 24.7**	**+2.0**
	comp=Z,0.4nm,0.6s,baz=254,slow=1.8,SNR=3.7						
PDAR	**Pinedale Array**	**127.22**	**43**	PKP	**PKiKP**	**15 34 34.1**	**+1.8**
	comp=Z,0.2nm,0.5s,baz=82,slow=1.5,SNR=4.5						

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*KRSC **03** 15:17:43.2±1.1, 51°.91N×161°.36E, h40^{km}±15^{km}, ML4.1*
*IDC **03** 15:17:47.7±1.8, 52°.43N×160°.93E, h0^{km}, mb3.8/8, mb1 3.8/10, mb1mx3.5/52, mbtmp3.8/10, ML2.8/1, MS3.8/2, Ms1 3.8/2, ms1mx2.9/52, Error ellipse: s-maj=36.2km s-min=22.8km az=141.0*
*NEIC **03** 15:17:49.2±1.8, 52°.4N±0°.1×161°.12E±0°.09, h18^{km}±8^{km}, mb4.1/6, Error ellipse: s-maj=20.6km s-min=7.0km az=188.0*
ISC 03 15:17:47.3±2.1, **52°.0N**±0°.1×**161°.22E**±0°.08, **h46**^{km}±23^{km}, **n47**, σ**1^s.26**/39, **mb3.9**/9, **Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**1.33**	**327**	*e*P	**Pn**	**15 18 07.7**	**-1.8**
SPN				*e*S	**Sn**	**15 18 26.3**	**+0.3**
NLC	**Nalytchevo**	**1.65**	**317**	*e*P	**Pn**	**15 18 13.5**	**-0.3**
RUS	**Russkaya**	**1.72**	**286**	*e*P	**Pn**	**15 18 13.9**	**-0.9**
DALK	**Dalny**	**1.83**	**306**	*e*P	**Pn**	**15 18 15.3**	**-1.0**
DALK				*e*S	**Sn**	**15 18 39.6**	**+1.3**
PET	**Petropavlovsk**	**1.88**	**305**	*e*P	**Pn**	**15 18 16.4**	**-0.6**
PET	**Petropavlovsk**	**1.88**	**305**		**Pn**	**15 18 15.9**	**-1.1**
UGLR	**Uglovaya**	**1.91**	**311**	*e*P	**Pn**	**15 18 17.1**	**-0.3**
MTVR	**Mutnovka**	**1.93**	**286**	*e*P	**Pn**	**15 18 17.3**	**-0.5**
MTVR				*e*S	**Sn**	**15 18 42.5**	**+1.5**
SMAR	**Somma**	**1.95**	**312**	*e*P	**Pn**	**15 18 18.2**	**0.0**
KDTR	**Khodutka, Kamc**	**1.95**	**266**	*e*P	**Pn**	**15 18 17.7**	**-0.3**
AVH	**Avacha**	**1.98**	**311**	*e*P	**Pn**	**15 18 18.2**	**-0.2**
GRL	**Gorelyy**	**2.01**	**288**	*e*P	**Pn**	**15 18 19.3**	**+0.4**
KOK	**Koryaka**	**2.05**	**311**	*e*P	**Pn**	**15 18 19.1**	**-0.3**
KRMR	**Karymshinskiy**	**2.07**	**295**	*e*P	**Pn**	**15 18 18.9**	**-0.7**
KRMR				*e*S	**Sn**	**15 18 45.5**	**+1.3**
ASAK	**Asacha**	**2.08**	**282**	*e*P	**Pn**	**15 18 19.8**	**0.0**
ASAK				*e*S	**Sn**	**15 18 46.7**	**+2.2**
KRX	**Arik**	**2.08**	**312**	*e*P	**Pn**	**15 18 19.3**	**-0.6**
PEA0B	**Petropavlovsk-**	**2.43**	**299**		**Pn**	**15 18 24.3**	**-0.1**
PETK	**Petropavlovsk-**	**2.43**	**299**	Pn	**Pn**	**15 18 24.3**	**-0.2**
	17nm,0.3s,baz=94,slow=13,SNR=280						
PETK				Sn	**Sn**	**15 18 52.0**	**-0.9**
	7.9nm,0.3s,baz=111,slow=16,SNR=5.4						
APC	**Apacha**	**2.66**	**292**	*e*P	**Pn**	**15 18 28.2**	**+0.6**
APC				*e*S	**Sn**	**15 19 01.3**	**+2.8**
MIPR	**Malaya Ipel'ka**	**2.76**	**278**	*e*P	**Pn**	**15 18 30.0**	**+0.9**
PAU	**Pauzhetka**	**2.79**	**261**	*e*P	**Pn**	**15 18 28.9**	**-0.5**
KZV	**Kizimen**	**3.18**	**350**	*e*P	**Pn**	**15 18 36.2**	**+1.2**
TUMD	**Tumrok D**	**3.26**	**352**	*e*P	**Pn**	**15 18 36.4**	**+0.5**
TUMR	**Tumrok**	**3.37**	**349**	*e*P	**Pn**	**15 18 39.2**	**+1.8**
ESO	**Esso**	**4.22**	**340**	*e*P	Pn	15 18 51.8	+2.7
KRSR	**Krestovskiy**	**4.26**	**355**	*e*P	Pn	15 18 51.5	+1.8
BKI	**Bering**	**4.29**	**39**	*e*S	**Sn**	**15 19 38.9**	**+0.2**
SRDR	**Sredinnyy**	**4.43**	**349**	*e*P	**Pn**	**15 18 53.0**	**+1.0**
ATKA	**Atka Island**	**15.10**	**79**	P	P	15 21 26.6	+4.8
BILL	**Bilibino**	**16.29**	**7**	Pn	**P**	**15 21 32.2**	**-2.7**
YAK	**Yakutsk**	**19.69**	**313**	P	**Pn**	**15 22 12.3**	**-1.8**
	baz=76,slow=2.6,SNR=6.5						
YAK	**Yakutsk**	**19.69**	**313**	P	**Pn**	**15 22 11.6**	**-2.4**
YAK				IAmb	IAmb	15 22 12.9	
	comp=Z,8.9nm,0.7s						
MJAR	**Matsushiro Arr**	**22.44**	**236**	P	P	15 22 49.6	+7.4
	comp=Z,0.7nm,0.5s,baz=20,slow=11,SNR=4.1						
TIXI	**Tiksi**	**24.38**	**336**	P	**P**	**15 23 01.7**	**+1.1**
	comp=Z,1.2nm,0.5s,baz=124,slow=9.5,SNR=6.7						
TIXI	**Tiksi**	**24.38**	**336**	P	**P**	**15 23 02.0**	**+1.4**
TIXI				IAmb	IAmb	15 23 02.9	
	comp=Z,2.2nm,0.9s						
RSO	**Redoubt South**	**26.45**	**53**	P	**P**	**15 23 21.2**	**+1.4**
TOLK	**Toolik Lake Re**	**28.45**	**36**	P	P	15 23 39.8	+2.4
TOLK				IAmb	IAmb	15 23 50.0	
	comp=Z,14nm,1.8s						
RES	**Resolute Bay**	**44.10**	**22**	P	P	15 25 53.5	+3.2
	comp=Z,0.9nm,0.5s,baz=286,slow=4.2,SNR=8.6						
RES	**Resolute Bay**	**44.10**	**22**	IAmb	IAmb	15 27 09.1	
	comp=Z,8.1nm,1.9s						
MCMT	**McKenzie Canyo**	**54.31**	**61**	P	P	15 27 11.8	+2.7
ARCES	**ARCESS Array B**	**54.55**	**342**	P	P	15 27 13.5	+3.4
	comp=Z,1.8nm,0.8s,baz=42,slow=11,SNR=3.0						
CMAR	**Chiang Mai Arr**	**58.64**	**260**	P	P	15 27 45.4	+5.6
	comp=Z,0.6nm,0.6s,baz=29,slow=7.1,SNR=6.1						
AKTO	**Aktyubinsk**	**59.08**	**313**	LR	LR	15 54 33.3	
	comp=Z,56nm,21.9s,baz=303,slow=38						
FINES	**FINESS Array B**	**61.41**	**337**	P	P	15 28 02.3	+4.2
	comp=Z,0.6nm,0.4s,baz=28,slow=9.0,SNR=4.4						
NOA	**NORSAR Array B**	**64.80**	**344**	P	P	15 28 25.5	+4.8
	comp=Z,0.2nm,0.5s,baz=15,slow=5.5,SNR=2.5						
AKASG	**Malin Array Be**	**69.92**	**330**	P	P	15 28 56.9	+3.8
	comp=Z,0.6nm,0.4s,baz=28,slow=6.6,SNR=3.6						
GNI	**Garni**	**72.94**	**314**	LR	LR	16 04 24.7	
	comp=Z,73nm,18.1s,baz=330,slow=39						

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*SOME **03** 15:18:43.3, 41°.45N×74°.48E, h5^{km}*
*KRNET **03** 15:18:49.5±0.1, 40°.76N×77°.59E, h16^{km}, mb2.2*
ISC 03 15:18:48.8±3.4, **40°.6N**±0°.1×**78°.0E**±0°.1, **h30**^{km}±18^{km}, **n14**, σ**2^s.40**/25, **8C-6D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**1.63**	**338**	⇑*i*P	**Pn**	**15 19 16.0**	**+0.4**
	baz=48						
KDJ				⇑*i*S	**Sn**	**15 19 35.7**	**+0.1**
	baz=48						
NRN	**Naryn**	**1.71**	**299**	⇑*i*P	**Pn**	**15 19 15.8**	**-1.1**
	baz=99						
NRN				⇑*i*S	**Sn**	**15 19 34.9**	**-3.0**
	baz=99						
ULHL	**Ulahol**	**2.09**	**322**	⇑*i*P	**Pn**	**15 19 23.2**	**+1.2**
	baz=26						
ULHL				⇑*i*S	**Sn**	**15 19 47.7**	**+0.6**
	baz=26						
ANVS	**Anan'yevo**	**2.17**	**354**	⇓*i*P	**Pb**	**15 19 27.1**	**-0.5**
	baz=2.0						
ANVS				⇓*i*S	**Sb**	**15 19 54.1**	**-0.1**
	baz=2.0						
BOOM	**Boomskoye usch**	**2.42**	**321**	⇑*i*P	**Pn**	**15 19 28.5**	**+2.0**
	baz=25						
BOOM				⇑*i*S	**Sn**	**15 19 57.0**	**+1.8**
	baz=25						
KZA	**Kyzart**	**2.52**	**306**	⇓*e*P	**Pn**	**15 19 29.6**	**+1.5**
	baz=8.0						
KZA				⇓*i*S	**Sn**	**15 19 58.9**	**+0.8**
	baz=8.0						
TNSS	**Tian-Shan**	**2.54**	**342**	*e*P	**Pn**	**15 19 28.6**	**+0.3**
	1.6nm,0.6s						
TNSS				*e*S	**Sn**	**15 20 01.6**	**+3.2**
	3.7nm,0.2s						
IZV	**Izvestkoviy**	**2.62**	**337**	*e*P	Pn	15 19 25.1	-4.2
	0.7nm,0.2s						
IZV				*e*S	**Sn**	**15 19 55.0**	**-5.1**
	3.9nm,0.6s						
MDOK	**Medeo**	**2.64**	**345**	*e*P	**Pn**	**15 19 30.7**	**+1.3**
	1.1nm,0.3s						
MDOK				*e*S	**Sb**	**15 20 05.1**	**-2.3**
	4.5nm,0.5s						
KOTS	**Kotyrbulak**	**2.69**	**346**	*e*P	**Pn**	**15 19 33.1**	**+2.9**
	3.2nm,0.4s						
KOTS				*e*S	**Sb**	**15 20 09.3**	**+0.2**
	7.4nm,0.5s						
KBK	**Karagaybulak**	**3.06**	**313**	⇓*i*P	**Pn**	**15 19 37.0**	**+1.8**
	baz=15						
KBK				⇓*i*S	**Sn**	**15 20 11.7**	**+0.9**
	baz=15						
KTBS	**Karatobe**	**3.24**	**343**	*e*P	**Pn**	**15 19 34.6**	**-3.1**
	0.9nm,0.4s						
KTBS				*e*S	**Sn**	**15 20 11.3**	**-3.8**
	3.2nm,0.5s						
KUU	**Kurty**	**3.49**	**340**	*e*P	Pn	15 19 35.2	-5.9
	0.2nm,0.1s						
KUU				*e*S	Sn	15 20 12.4	-9.0
	2.8nm,0.7s						
ARXS	**Arharly**	**3.59**	**358**	*e*P	**Pb**	**15 19 50.9**	**-0.8**
	1.0nm,0.3s						
ARXS				*e*S	**Sb**	**15 20 39.1**	**+4.2**
	2.9nm,0.3s						

IDC 03 15:37:52.5±2.1, **2°.26N**×**124°.66E, h0**^{km}**, mb3.0**/3, **mb1 3.2**/3, **mb1mx3.0**/49, **mbtmp3.0**/3, **Error ellipse: s-maj=205.4km s-min=28.6km az=64.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.02**	**157**	P	P	15 43 08.5	-0.7
	0.3nm,0.8s,baz=334,slow=11,SNR=2.8						
ASAR	**Alice Springs**	**27.29**	**161**	P	P	15 43 40.0	+1.1
	0.1nm,0.5s,baz=352,slow=7.4,SNR=7.6						
MKAR	**Makanchi Array**	**57.61**	**327**	P	P	15 47 43.6	-0.8
	0.1nm,0.6s,baz=133,slow=8.3,SNR=2.7						

INET 03 15:58:56.6, 12°.42N×87°.79W, h68^{km}, ML3.5, Near coast of Nicaragua

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IDC 03 16:00:49.6±415.0, **54°.62N**×**35°.54E, h0**^{km}**, Error ellipse: s-maj=105.9km s-min=47.0km az=8.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**2.31**	**23**	*i*		16 16 10.0	
	baz=208,slow=315,SNR=0.6						
I31KZ	**AKTYUBINSK INF**	**14.31**	**98**	*i*		17 21 50.0	
	baz=291,slow=380,SNR=1.2						
I37NO	**I37NO**	**16.46**	**338**	*i*		17 49 43.2	
	baz=143,slow=332,SNR=1.1						

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*MOS **03** 16:10:39.4±1.1, 17°.72S×178°.66W, h540^{km}, mb4.9/48, Error ellipse: s-maj=8.3km s-min=6.7km az=56.9*
*BJI **03** 16:10:39.7±0.0, 17°.62S×178°.44W, h547^{km}, mB4.9/26, mb4.5/36*
*NEIC **03** 16:10:41.8±1.3, 17°.81S±0°.08×178°.67W±0°.10, h565^{km}±5^{km}, mb5.1/331, Error ellipse: s-maj=13.8km s-min=10.6km az=118.0*
*IDC **03** 16:10:41.5±0.6, 17°.84S×178°.64W, h557^{km}±6^{km}, mb4.5/33, mb1 4.6/34, mb1mx4.5/43, mbtmp5.3/34, Error ellipse: s-maj=10.0km s-min=7.4km az=154.0*
*GCMT **03** 16:10:43.8±0.5, 17°.83S±0°.05×178°.46W±0°.05, h574^{km}±3^{km}, MW5.3/56, Moment Tensor Solution. s56,c66; Duration: 1^s.1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.03±.05; $M_{\theta\theta}$0.83±.08; $M_{\phi\phi}$-0.86±.09; $M_{r\theta}$0.77±.09; $M_{\theta\phi}$0.01±.08; $M_{\phi r}$-0.71±.09; Best double couple: $M_0$1.34500×10^{17} NP1:ϕ_s44.00000°, δ39.00000°, λ178.00000°. NP2:ϕ_s135.00000°, δ89.00000°, λ51.00000°. Principal axes: T 1.3610, Plg34.0000°, Azm12.0000°; N -0.0310, Plg39.0000°, Azm136.0000°; P -1.3290, Plg32.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*
*BGR **03** 16:10:44.4±0.0, 18°.53S×178°.59W, h600^{km}*
ISC 03 16:10:40.6±0.4, **17°.83S**±0°.04×**178°.57W**±0°.04, **h555**^{km}±4^{km}, **h554**^{km}**:pP-P, n918**, σ**1^s.09**/948, **mb5.0**/239, **46C-20D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.22**	**271**	P	**P**	**16 12 00.7**	**+3.2**
MSVF	**Nonsavu**	**3.22**	**271**	*c i*P	**P**	**16 12 00.5**	**+3.0**
AFI	**Afiamalu**	**7.61**	**60**	P	**P**	**16 12 33.3**	**-1.5**
	253nm,0.3s,baz=54,slow=0.6,SNR=86						
AFI	**Afiamalu**	**7.61**	**60**	P	**P**	**16 12 33.0**	**-1.8**
AFI	**Afiamalu**	**7.61**	**60**	P	**P**	**16 12 33.0**	**-1.8**
NIUE	**Niue**	**8.29**	**100**	P	**P**	**16 12 42.1**	**+0.7**
	baz=8.2,SNR=49						
NIUE	**Niue**	**8.29**	**100**	P	**P**	**16 12 41.5**	**+0.1**
FUNA	**Funafuti**	**9.50**	**346**	P	**P**	**16 12 53.7**	**0.0**
RAO	**Raoul Island**	**11.38**	**177**	P	**P**	**16 13 10.9**	**-1.8**
	345nm,0.3s,baz=94,slow=2.7,SNR=8.9						
RAO				S	**S**	**16 15 15.8**	**-2.0**
	158nm,0.3s,baz=256,slow=23,SNR=5.0						
RAO	**Raoul Island**	**11.38**	**177**	P	**P**	**16 13 10.7**	**-2.0**
SANVU	**Saraoutou**	**13.84**	**278**	P	**P**	**16 13 36.9**	**-1.3**
DZM	**Mont Dzumac**	**14.71**	**251**	*e*P	**P**	**16 13 46.4**	**-0.7**
	581nm,1.2s						
DZM	**Mont Dzumac**	**14.71**	**251**	P	**P**	**16 13 46.5**	**-0.7**
	8.4nm,0.3s,baz=94,slow=21,SNR=49						
DZM	**Mont Dzumac**	**14.71**	**251**	P	**P**	**16 13 46.1**	**-1.1**
NOUC	**Port Laguerre**	**14.84**	**251**	P	**P**	**16 13 47.4**	**-1.0**
KNTN	**Kanton**	**16.40**	**25**	P	**P**	**16 14 02.8**	**-1.1**
NFK	**Norfolk Island**	**16.65**	**225**	P	**P**	**16 14 08.1**	**+2.2**
	baz=17,SNR=3.9						
RAR	**Rarotonga**	**18.03**	**104**	P	**P**	**16 14 21.1**	**+2.5**
	1.0nm,0.3s,baz=262,slow=5.8,SNR=6.1						
RAR	**Rarotonga**	**18.03**	**104**	IAmb	IAmb	16 14 31.8	
	comp=Z,48nm,1.3s						
OUZ	**Omahuta**	**18.67**	**200**	P	**P**	**16 14 25.7**	**+1.5**
KUZ	**Kuaotunu**	**19.50**	**194**	P	**P**	**16 14 32.6**	**+0.9**
WIAZ	**Waiheke Island**	**19.69**	**195**	P	**P**	**16 14 34.9**	**+1.5**
MXZ	**Matakaoa Point**	**19.85**	**187**	P	**P**	**16 14 32.6**	**-2.2**
MXZ	**Matakaoa Point**	**19.85**	**187**	P	**P**	**16 14 32.7**	**-2.2**
ETAZ	**East Tamaki Re**	**19.89**	**195**	P	**P**	**16 14 36.0**	**+0.7**
MKAZ	**Moumakai**	**19.98**	**195**	P	**P**	**16 14 37.3**	**+1.2**
WMGZ	**Waiomatatini S**	**20.09**	**187**	P	**P**	**16 14 36.0**	**-1.0**
WMGZ				S	**S**	**16 17 53.2**	**+4.6**
HAZ	**Te Kaha**	**20.11**	**188**	P	**P**	**16 14 34.3**	**-3.0**
HAZ				S	**S**	**16 17 48.6**	**-0.3**
PKGZ	**Pakihiroa**	**20.20**	**188**	P	**P**	**16 14 36.6**	**-1.5**
PKGZ				S	**S**	**16 17 47.5**	**-3.1**
RUGZ	**Raukumara Rang**	**20.33**	**189**	P	**P**	**16 14 37.7**	**-1.7**
RUGZ				S	**S**	**16 17 50.8**	**-1.9**
TGRZ	**Tauranga**	**20.34**	**192**	P	**P**	**16 14 37.7**	**-1.6**
PUZ	**Puketiti**	**20.36**	**187**	P	**P**	**16 14 38.8**	**-0.7**
PUZ				S	**S**	**16 17 49.6**	**-3.3**
TWGZ	**Tauwhareparae**	**20.49**	**188**	P	**P**	**16 14 39.6**	**-1.2**
KMRZ	**Kaimai**	**20.51**	**192**	P	**P**	**16 14 42.3**	**+1.3**
URZ	**Urewera**	**20.70**	**190**	P	**P**	**16 14 39.8**	**-2.8**
	comp=Z,70nm,0.7s,baz=47,slow=0.7,SNR=39						
URZ				S	**S**	**16 17 53.9**	**-4.5**
	comp=Z,22nm,1.0s,baz=192,slow=22,SNR=4.4						
URZ	**Urewera**	**20.70**	**190**	P	**P**	**16 14 39.6**	**-3.0**
URZ				IAmb	IAmb	16 14 41.8	
	comp=Z,75nm,0.8s						
TARA	**Tarawa**	**20.83**	**335**	P	**P**	**16 14 43.0**	**-1.1**
BKZ	**Black Stump Fm**	**21.69**	**190**	P	**P**	**16 14 48.8**	**-2.7**
HNR	**Honiara**	**22.47**	**289**	P	**P**	**16 15 01.2**	**+2.4**
	comp=Z,104nm,0.8s,baz=266,slow=3.5,SNR=8.1						
HNR	**Honiara**	**22.47**	**289**	P	**P**	**16 14 58.3**	**-0.5**
HNR	**Honiara**	**22.47**	**289**	P	**P**	**16 14 58.3**	**-0.5**
HNR				pmax	pmax		
	comp=Z,112nm,0.7s						
BFZ	**Birch Farm**	**23.21**	**190**	P	**P**	**16 15 01.7**	**-3.4**
SNZO	**South Karori**	**24.10**	**192**	P	**P**	**16 15 10.6**	**-2.3**
BHW	**Baring Head**	**24.16**	**192**	P	**P**	**16 15 11.9**	**-1.6**
QRZ	**Quartz Range**	**24.16**	**197**	P	**P**	**16 15 11.5**	**-2.1**
QRZ				IAmb	IAmb	16 15 13.9	
	comp=Z,67nm,0.8s						
PLWZ	**Palliser**	**24.24**	**191**	P	**P**	**16 15 12.4**	**-1.9**
NNZ	**Nelson**	**24.31**	**195**	P	**P**	**16 15 13.8**	**-1.1**
NNZ				IAmb	IAmb	16 15 15.1	
	comp=Z,78nm,1.1s						
TUWZ	**Tuamarina**	**24.38**	**194**	P	**P**	**16 15 13.5**	**-1.9**
LHI	**Lord Howe Isla**	**24.41**	**232**	P	**P**	**16 15 15.4**	**-0.4**
THZ	**Tophouse**	**24.94**	**195**	P	**P**	**16 15 18.9**	**-1.6**
THZ				IAmb	IAmb	16 15 21.4	
	comp=Z,36nm,0.7s						
KHZ	**Kahutara**	**25.41**	**194**	P	**P**	**16 15 22.4**	**-2.1**
LTZ	**Lake Taylor**	**26.06**	**195**	P	**P**	**16 15 28.2**	**-2.1**
OXZ	**Oxford**	**26.63**	**195**	P	**P**	**16 15 33.1**	**-2.1**
MQZ	**McQueen's Vall**	**26.84**	**194**	P	**P**	**16 15 36.2**	**-0.8**
RPZ	**Rata Peaks**	**27.25**	**197**	P	**P**	**16 15 38.5**	**-2.3**
	comp=Z,24nm,0.6s,baz=342,slow=2.2,SNR=15						
RPZ	**Rata Peaks**	**27.25**	**197**	P	**P**	**16 15 39.9**	**-0.8**
FOZ	**Fox Glacier**	**27.44**	**199**	P	**P**	**16 15 40.8**	**-1.6**
PAE	**Paea**	**27.60**	**94**	*e*P	**P**	**16 15 44.4**	**+0.3**
	comp=Z,5.2nm,0.8s						
PPT2	**Papeete2**	**27.61**	**94**	*e*P	**P**	**16 15 44.9**	**+0.6**
	comp=Z,23nm,0.8s						
PPT	**Papeete**	**27.61**	**94**	P	**P**	**16 15 45.6**	**+1.3**
	comp=Z,21nm,0.7s,baz=58,slow=9.8,SNR=4.6						
PPT	**Papeete**	**27.61**	**94**	P	**P**	**16 15 45.6**	**+1.3**
PPTF	**Pamatai, Papee**	**27.62**	**94**	P	**P**	**16 15 45.1**	**+0.7**
PPTF				IAmb	IAmb	16 16 08.0	
	comp=Z,90nm,1.5s						
TIAR	**Tiarei**	**27.83**	**94**	*e*P	**P**	**16 15 46.8**	**+0.6**
	comp=Z,8.7nm,0.8s						
TVO	**Taravao**	**27.90**	**94**	*e*P	**P**	**16 15 47.6**	**+0.8**
	comp=Z,9.6nm,0.8s						
LBZ	**Lake Benmore**	**28.11**	**197**	P	**P**	**16 15 45.9**	**-2.3**
LBZ				IAmb	IAmb	16 15 50.8	
	comp=Z,78nm,1.0s						
ODZ	**Otahua Downs**	**28.59**	**196**	P	**P**	**16 15 50.7**	**-1.7**
ODZ				IAmb	IAmb	16 16 41.3	
	comp=Z,113nm,1.5s						
WKZ	**Wanaka**	**28.86**	**198**	P	**P**	**16 15 52.9**	**-1.9**
EIDS	**Eidsvold**	**29.15**	**250**	P	**P**	**16 15 57.2**	**-0.3**
	baz=29,SNR=45						
EIDS	**Eidsvold**	**29.15**	**250**	P	**P**	**16 15 56.8**	**-0.7**
MLZ	**Mavora Lakes**	**29.62**	**199**	P	**P**	**16 16 00.9**	**-0.4**
KWAJ	**Kwajalein Atol**	**29.78**	**332**	P	**P**	**16 16 02.5**	**-0.5**
KWAJ	**Kwajalein Atol**	**29.78**	**332**	P	**P**	**16 16 02.5**	**-0.5**
KWAJ				pmax	pmax		
	comp=Z,318nm,0.8s						
ARMA	**Armidale**	**29.85**	**240**	P	**P**	**16 16 04.4**	**+0.8**
	baz=30,SNR=129						
ARMA	**Armidale**	**29.85**	**240**	P	**P**	**16 16 03.8**	**+0.2**
DCZ	**Deep Cove**	**30.02**	**200**	P	**P**	**16 16 03.2**	**-1.4**
DCZ				IAmb	IAmb	16 16 06.7	
	comp=Z,93nm,1.2s						
WHZ	**Wether Hill Ro**	**30.14**	**199**	P	**P**	**16 16 05.2**	**-0.6**
RMQ	**Roma**	**31.39**	**248**	P	**P**	**16 16 17.5**	**+0.7**
	baz=32,SNR=144						
RIV	**Riverview**	**31.41**	**234**	P	**P**	**16 16 17.8**	**+0.9**
	baz=32,SNR=4.2						
RABL	**Rabaul**	**31.70**	**292**	P	**P**	**16 16 18.2**	**-1.4**
RABL				IAmb	IAmb	16 16 26.3	
	comp=Z,100nm,1.1s						
KRVT	**Keravat (AS076**	**31.76**	**292**	P	**P**	**16 16 19.5**	**-0.6**
	comp=Z,141nm,0.7s,baz=276,slow=3.0,SNR=6.9						
CTA	**Charters Tower**	**33.31**	**260**	P	**P**	**16 16 33.2**	**0.0**
	comp=Z,78nm,0.7s,baz=96,slow=10,SNR=59						
CNB	**Canberra Magne**	**33.35**	**232**	P	**P**	**16 16 34.1**	**+0.7**
	baz=33,SNR=300						
CAN	**Canberra**	**33.63**	**232**	P	**P**	**16 16 35.9**	**+0.2**
CAN	**Canberra**	**33.63**	**232**	P	**P**	**16 16 35.9**	**+0.2**
CAN				pmax	pmax		
	comp=Z,153nm,0.8s						
YNG	**Young**	**33.71**	**234**	P	**P**	**16 16 36.8**	**+0.4**
	baz=34,SNR=17						
MILA	**Mila**	**34.22**	**229**	P	**P**	**16 16 40.7**	**+0.1**
	baz=34,SNR=10						
PMG	**Port Moresby**	**34.30**	**280**	P	**P**	**16 16 42.6**	**+1.1**
	comp=Z,190nm,0.9s,baz=76,slow=6.0,SNR=58						
PMG	**Port Moresby**	**34.30**	**280**	P	**P**	**16 16 42.1**	**+0.6**
PMG	**Port Moresby**	**34.30**	**280**	*d i*P	**P**	**16 16 41.8**	**+0.3**
PMG				pmax	pmax		
	comp=Z,1μm,1.0s						
CMSA	**Cobar Meteorol**	**35.05**	**240**	P	**P**	**16 16 47.8**	**+0.1**
	baz=35,SNR=299						
MTSU	**Mount Surprise**	**35.27**	**264**	P	**P**	**16 16 49.4**	**-0.2**
	baz=35,SNR=43						
QLP	**Quilpie**	**35.42**	**249**	P	**P**	**16 16 50.5**	**-0.2**
	baz=36,SNR=195						
MANU	**Manus Island**	**36.93**	**291**	P	**P**	**16 17 02.9**	**-0.5**
COEN	**Coen**	**36.95**	**270**	P	**P**	**16 17 03.9**	**+0.4**
	baz=37,SNR=143						
COEN	**Coen**	**36.95**	**270**	P	**P**	**16 17 03.9**	**+0.4**
TOO	**Toolangi**	**37.10**	**231**	P	**P**	**16 17 05.0**	**+0.5**
	baz=37,SNR=273						
TOO	**Toolangi**	**37.10**	**231**	P	**P**	**16 17 04.8**	**+0.3**
TOO	**Toolangi**	**37.10**	**231**	P	**P**	**16 17 04.8**	**+0.3**
TOO				pmax	pmax		
	comp=Z,353nm,0.8s						
MOO	**Moorlands**	**38.04**	**223**	P	**P**	**16 17 12.4**	**+0.4**
	baz=38,SNR=15						
STKA	**Stephens Creek**	**38.53**	**241**	P	**P**	**16 17 16.8**	**+0.6**
	baz=39,SNR=328						
STKA	**Stephens Creek**	**38.53**	**241**	P	**P**	**16 17 16.8**	**+0.6**
	comp=Z,261nm,0.8s,baz=87,slow=9.6,SNR=544						
STKA	**Stephens Creek**	**38.53**	**241**	P	**P**	**16 17 16.6**	**+0.5**
STKA				IAmb	IAmb	16 17 17.9	
	comp=Z,79nm,1.1s						
QIS	**Mount Isa**	**39.52**	**259**	P	**P**	**16 17 23.4**	**-0.9**
	baz=40,SNR=15						
HTT	**Hallett**	**41.05**	**239**	P	**P**	**16 17 36.8**	**+0.4**
	baz=41,SNR=322						
KHU	**Kahuku**	**43.20**	**33**	P	**P**	**16 17 54.0**	**+0.4**
KHU	**Kahuku**	**43.20**	**33**	P	**P**	**16 17 54.0**	**+0.4**
KHU				pmax	pmax		
	comp=Z,745nm,1.9s						
GENI	**Genyem**	**43.20**	**286**	P	**P**	**16 17 55.1**	**+1.6**
	comp=Z,4μmcomp=Z,316nm,0.8s						
BBOO	**Buckleboo**	**43.31**	**241**	P	**P**	**16 17 54.1**	**+0.1**
	baz=43,SNR=734						
BBOO	**Buckleboo**	**43.31**	**241**	P	**P**	**16 17 54.1**	**+0.1**
KHLU	**Kahalu`u**	**43.35**	**32**	P	**P**	**16 17 55.0**	**+0.5**
AIN	**Ainahou**	**43.38**	**33**	P	**P**	**16 17 55.7**	**+0.8**
HLP	**Hilina Pali**	**43.40**	**33**	P	**P**	**16 17 56.2**	**+1.2**
HUH	**Hualalai**	**43.45**	**32**	P	**P**	**16 17 56.4**	**+0.8**
KKO	**Keanakako`i**	**43.51**	**33**	P	**P**	**16 17 55.7**	**-0.1**
PUH	**Pauahi**	**43.51**	**33**	P	**P**	**16 17 56.6**	**+0.7**
PUH				IAmb	IAmb	16 17 57.7	
	comp=Z,109nm,0.9s						
MLH	**Mauna Loa**	**43.52**	**33**	P	**P**	**16 17 56.8**	**+0.8**
HATHI	**Halema'uma'u T**	**43.53**	**33**	P	**P**	**16 17 56.3**	**+0.3**
SBLHI	**Steaming Bluff**	**43.53**	**33**	P	**P**	**16 17 56.3**	**+0.4**
HMH	**Humu'ula Sheep**	**43.56**	**32**	P	**P**	**16 17 57.1**	**+0.7**
STCH	**Steam Cracks**	**43.57**	**33**	P	**P**	**16 17 57.5**	**+1.2**
KEKH	**Kekaha**	**43.66**	**26**	P	**P**	**16 17 57.5**	**+0.6**
POHA	**Pohakuloa**	**43.67**	**32**	P	**P**	**16 17 57.1**	**-0.1**
HPAH	**Hawaii Prepara**	**43.81**	**32**	P	**P**	**16 17 57.9**	**-0.2**
HLK	**Haleakala**	**44.16**	**31**	P	**P**	**16 18 01.5**	**+0.5**
KHLH	**Kahului Airpor**	**44.19**	**30**	P	**P**	**16 18 01.8**	**+0.9**
WR0	**Warramunga Arr**	**44.31**	**259**	P	**P**	**16 18 00.4**	**-1.5**
WR0				IAmb	IAmb	16 18 02.3	
	comp=Z,132nm,1.4s						
WB0	**Warramunga Arr**	**44.46**	**260**	P	**P**	**16 18 02.0**	**-1.1**
WB2	**Warramunga Arr**	**44.48**	**259**	P	**P**	**16 18 02.2**	**-1.1**
WRAB	**Tennant Creek**	**44.49**	**259**	P	**P**	**16 18 02.0**	**-1.4**
WRAB	**Tennant Creek**	**44.49**	**259**	*d i*P	**P**	**16 18 02.3**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,129nm,0.9s						
WRA	**Warramunga Arr**	**44.50**	**259**	P	**P**	**16 18 02.3**	**-1.2**
	comp=Z,85nm,0.7s,baz=92,slow=7.0,SNR=818						
WRA				PcP	**PcP**	**16 19 34.9**	**+0.1**
	comp=Z,10nm,0.7s,baz=89,slow=3.9,SNR=4.7						
WRA				PP	**PP**	**16 20 01.1**	**+3.3**
	comp=Z,11nm,0.9s,baz=94,slow=9.0,SNR=6.4						
WRA				ScP	**ScP**	**16 22 35.1**	**+0.7**
	comp=Z,6.0nm,1.2s,baz=91,slow=5.2,SNR=6.3						
WRA	**Warramunga Arr**	**44.50**	**259**	P	**P**	**16 18 02.3**	**-1.2**
WRA					**PcP**	**16 19 34.9**	**+0.1**
WRA					**PP**	**16 20 01.1**	**+3.3**
WRA					**ScP**	**16 22 35.1**	**+0.7**
AS31	**Alice Springs**	**44.66**	**254**	P	**P**	**16 18 04.2**	**-0.5**
ASAR	**Alice Springs**	**44.66**	**254**	P	**P**	**16 18 04.5**	**-0.2**
	comp=Z,835nm,0.6s,baz=88,slow=8.3						
ASAR				PcP	**PcP**	**16 19 35.5**	**+0.1**
	comp=Z,16nm,0.7s,baz=104,slow=4.3,SNR=5.2						
ASAR				ScP	**ScP**	**16 22 36.4**	**+1.3**
	comp=Z,5.3nm,1.0s,baz=86,slow=4.1,SNR=5.9						
ASAR				S	**S**	**16 23 57.5**	**-3.8**
	comp=Z,7.6nm,1.0s,baz=88,slow=16,SNR=13						
ASAR	**Alice Springs**	**44.66**	**254**	P	**P**	**16 18 04.5**	**-0.2**
ASAR					**PcP**	**16 19 35.5**	**+0.1**
ASAR					**ScP**	**16 22 36.4**	**+1.3**
ASAR					**S**	**16 23 57.5**	**-3.8**
KDU	**Kakadu**	**47.41**	**269**	P	**P**	**16 18 25.0**	**-0.5**
	baz=48,SNR=47						
MTN	**Manton Dam**	**48.65**	**268**	P	**P**	**16 18 34.1**	**-0.7**

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       baz=49,SNR=32
MTN    Manton Dam         48.65 268  P     P      16 18 33.9 -0.9
MTN                                  IAmb  IAmb   16 18 35.1
       comp=Z,79nm,0.8s
SAUI   Saumlaki           49.70 275  P     P      16 18 42.4 -0.3
WRKA   Warakurna          49.72 252  P     P      16 18 42.4 -0.3
       baz=50,SNR=369
FORT   Forrest            49.90 245  P     P      16 18 43.1 -0.7
       baz=50,SNR=221
FORT   Forrest            49.90 245  P     P      16 18 43.0 -0.9
KNRA   Kununurra          50.34 264  P     P      16 18 46.7 -0.5
       baz=50,SNR=61
KNRA   Kununurra          50.34 264  P     P      16 18 46.5 -0.7
FAKI   Fak Fak            50.41 281  P     P      16 18 49.2 +1.4
       comp=Z,40nm,1.4s
FAKI   Fak Fak            50.41 281  P     P      16 18 47.1 -0.7
FAKI                                 IAmb  IAmb   16 18 48.9
       comp=Z,168nm,1.9s
SIJI   Sorong             52.07 283  P     P      16 19 00.2 +0.4
       comp=Z,191nm,0.8s,baz=91,slow=5.4,SNR=88
SIJI   Sorong             52.07 283  P     P      16 19 00.2 +0.4
BNDI   Bandanaira         52.07 278  P     P      16 19 00.2 +0.4
       comp=Z,2µmcomp=Z,169nm,1.2s
FITZ   Fitzroy Crossi     52.89 261  P     P      16 19 05.5 -0.1
       baz=53,SNR=29
FITZ   Fitzroy Crossi     52.89 261  P     P      16 19 05.1 -0.5
FITZ                                 IAmb  IAmb   16 19 06.9
       comp=Z,169nm,1.7s
AAI    Ambon              53.96 279  P     P      16 19 13.7 +0.5
       comp=Z,95nm,1.2s
NLAI   Namlea             55.14 279  P     P      16 19 21.9 +0.4
       comp=Z,1µmcomp=Z,126nm,1.3s
KMBL   Kambalda           55.21 244  P     P      16 19 20.7 -1.1
       baz=55,SNR=14
LBMI   Labuha             55.66 282  P     P      16 19 25.8 +0.7
       comp=Z,88nm,0.9s
SOEI   Soe                55.92 270  P     P      16 19 28.3 +1.2
       comp=Z,3µmcomp=Z,328nm,1.1s
SOEI   Soe                55.92 270  P     P      16 19 28.0 +0.9
TNTI   Ternate            56.30 283  P     P      16 19 30.1 +0.6
       comp=Z,955nmcomp=Z,105nm,1.0s
TNTI   Ternate            56.30 283  P     P      16 19 29.7 +0.1
TNTI                                 IAmb  IAmb   16 19 30.9
       comp=Z,79nm,0.8s
SANI   Sanana             56.58 280  P     P      16 19 31.1 -0.4
       comp=Z,1µmcomp=Z,142nm,1.0s
PSA00  Pilbara Seismi     57.78 255  P     P      16 19 38.7 -0.8
PSA00                                IAmb  IAmb   16 19 40.0
       comp=Z,132nm,0.8s
MMRI   Maumere            58.15 271  P     P      16 19 41.7 -0.4
MMRI   Maumere            58.15 271  P     P      16 19 41.2 -1.0
MMRI                                 IAmb  IAmb   16 19 42.6
       comp=Z,70nm,0.8s
MEEK   Meekatharra        58.32 249  P     P      16 19 42.2 -1.0
       baz=58,SNR=38
EDFI   Ende, Flores       58.64 271  P     P      16 19 44.8 -0.8
KLBR   Kellerberrin       58.73 243  P     P      16 19 45.2 -0.7
       baz=59,SNR=65
NWAO   Narrogin (SRO)     59.11 242  P     P      16 19 47.9 -0.4
       baz=59,SNR=23
NWAO   Narrogin (SRO)     59.11 242  P     P      16 19 47.6 -0.8
NWAO                                 IAmb  IAmb   16 19 48.9
       comp=Z,222nm,1.6s
NWAO   Narrogin (SRO)     59.11 242  P     P      16 19 47.6 -0.8
NWAO                                 pmax  pmax
       comp=Z,222nm,1.6s
RKGY   Rocky Gully        59.28 240  P     P      16 19 49.6 +0.2
       baz=59,SNR=9.6
KMSI   Cibinong           59.37 282  P     P      16 19 50.6 +0.2
       comp=Z,4µmcomp=Z,123nm,0.8s
BLDU   Ballidu            59.68 245  P     P      16 19 51.4 -0.7
       baz=60,SNR=44
MATI   Mati               59.77 289 eP     P      16 19 49.4 -3.6
LUWI   Luwuk              59.94 279  P     P      16 19 55.1 +0.9
       comp=Z,2µmcomp=Z,176nm,1.1s
LUWI   Luwuk              59.94 279  P     P      16 19 54.3 +0.1
LUWI                                 IAmb  IAmb   16 19 55.9
       comp=Z,204nm,1.1s
MUN    Mundaring          60.02 243  P     P      16 19 54.2 -0.2
       baz=60,SNR=13
MORW   Morawa             60.37 246  P     P      16 19 56.1 -0.7
       baz=60,SNR=20
MORW   Morawa             60.37 246  P     P      16 19 56.0 -0.9
MORW                                 IAmb  IAmb   16 19 57.1
       comp=Z,45nm,0.7s
SBA    Scott Base         60.48 184  P     P      16 19 58.2 +1.6
SBA    Scott Base         60.48 184  P     P      16 19 58.2 +1.6
SBA                                  pmax  pmax
       comp=Z,44nm,1.1s
VNDA   Vanda              60.51 185  P     P      16 19 57.8 +1.0
       comp=Z,11nm,0.8s,baz=0.8,slow=7.1,SNR=16
VNDA   Vanda              60.51 185  P     P      16 19 57.6 +0.8
WBSI   Waikabubak, Su     60.59 269  P     P      16 20 00.5 +2.0
       comp=Z,62nm,0.8s
APSI   Ampana             61.04 279  P     P      16 20 02.4 +1.0
       comp=Z,2µmcomp=Z,141nm,1.2s
BKSI   Bulukumba          61.09 274  P     P      16 20 04.1 +2.3
       comp=Z,37nm,1.6s
SKMP   Bagumbayan, Su     61.14 288 eP     P      16 20 00.9 -1.1
BUTP   Butuan             61.21 291 eP     P      16 20 02.1 -0.3
BUKP   Musuan             61.24 290 eP     P      16 20 03.4 +0.6
MRSI   Marisa             61.25 281  P     P      16 20 02.5 -0.3
BNSI   Bone               61.38 275  P     P      16 20 04.1 +0.4
       comp=Z,1µmcomp=Z,93nm,1.1s
KAPI   Kappang            61.54 274  P     P      16 20 04.7 +0.1
       comp=Z,16nm,0.5s,baz=147,slow=4.9,SNR=7.5
CTBH   Cotabato--PC H     61.70 289⇑iP     P      16 20 06.4 +0.7
SPSI   Sidrap Palu        61.84 275  P     P      16 20 06.0 -0.6
PLAI   Plampang           62.34 269  P     P      16 20 09.6 -0.3
MSLP   Maasin             62.39 292 eP     P      16 20 10.1  0.0
PAGZ   Pagadian           62.73 289 eP     P      16 20 11.9 -0.5
GIRL   Giralia            62.77 253  P     P      16 20 13.4 +0.9
       baz=63,SNR=12
GIRL   Giralia            62.77 253  P     P      16 20 12.8 +0.2
OCLP   Ormoc              63.02 293 eP     P      16 20 13.8 -0.4
MPSI   Mapaga             63.11 280  P     P      16 20 14.9  0.0
PVCP   Virac              64.56 295 eP     P      16 20 23.6 -0.4
IGBI   Denpasar           64.85 268  P     P      16 20 26.2 +0.3
       comp=Z,168nm,1.0s
SRBI   Singaraja          64.98 269  P     P      16 20 26.2 -0.5
KBKI   Kotabaru           65.46 275  P     P      16 20 31.0 +1.3
       comp=Z,203nmcomp=Z,23nm,1.0s
OTRP   Odiongan           65.86 293 eP     P      16 20 31.6 -0.6
JAGI   Jajag, Banyuwa     65.89 269  P     P      16 20 30.9 -1.5
JAGI   Jajag, Banyuwa     65.89 269  P     P      16 20 30.7 -1.8
CASY   Casey              66.14 205  P     P      16 20 33.0  0.0
CASY                                 IAmb  IAmb   16 20 34.1
       comp=Z,113nm,1.1s
BOAC   Boac               66.50 294 eP     P      16 20 36.9 +0.7
GMJI   Gumukmas           66.62 269  P     P      16 20 36.1 -0.8
SJMP   San Jose           66.70 292 eP     P      16 20 37.1 -0.3
BUSP   Coron              67.32 292 eP     P      16 20 41.4 +0.2
ENPP   El Nido            67.67 291 eP     P      16 20 42.0 -1.3
MJAR   Matsushiro Arr     67.76 323  P     P      16 20 43.6 +0.1
       comp=Z,9.2nm,0.8s,baz=151,slow=6.2,SNR=16
MJAR   Matsushiro Arr     67.76 323  P     P      16 20 43.6 +0.1
MAJO   Matsushiro         67.76 323  P     P      16 20 42.5 -0.9
MAJO   Matsushiro         67.76 323ceP     P      16 20 43.2 -0.3
MAJO                                 pmax  pmax
       comp=Z,11nm,0.9s
MAT    Matsushiro         67.76 323  P     P      16 20 43.6 +0.1
MAT                                  S     S      16 28 59.4 +1.5
MJB9   Matsu-Tunnel       67.76 323  P     P      16 20 42.4 -1.1
SPMM   Sapulut            67.86 283  P     P      16 20 45.0 +0.4
LUBP   Lubang             68.02 293 eP     P      16 20 41.5 -3.9
CAUP   Cauayan            68.09 297 eP     P      16 20 51.6 +5.8
BATP   Bataraza           68.17 287 eP     P      16 20 45.6 -0.8
KKM    Kota Kinabalu      68.58 284  P     P      16 20 48.7 -0.3
KKM                                  IAmb  IAmb   16 20 50.2
       comp=Z,216nm,2.0s
SMPP   San Manuel, Pa     68.71 296 eP     P      16 20 49.4 -0.2
PCJI   Pacitan            68.80 268  P     P      16 20 50.5 +0.3
APYP   Conner             69.01 298 eP     P      16 20 51.5 +0.2
WOJI   Wonogiri, Jawa     69.14 268  P     P      16 20 52.5 +0.2
ADK    Adak               69.44   1  P     P      16 20 52.5 -0.7
ADK                                  IAmb  IAmb   16 20 53.8
       comp=Z,64nm,0.8s
ADK    Adak               69.44   1  P     P      16 20 52.5 -0.7
ADK                                  pmax  pmax
       comp=Z,64nm,0.8s
UGM    Wanagama           69.50 268  P     P      16 20 54.1 -0.4
UWJI   Ujung Watu         69.51 270  P     P      16 20 55.2 +0.7
       comp=Z,591nmcomp=Z,58nm,1.1s
SMRI   Semarang           69.81 269  P     P      16 20 57.1 +0.7
       comp=Z,144nm,0.8s
SMRI   Semarang           69.81 269  P     P      16 20 56.4 +0.1
ATKA   Atka Island        69.84   3  P     P      16 20 55.0 -0.5
SMY    Shemya             70.55 355  P     P      16 20 59.5 -0.3
SMY    Shemya             70.55 355  P     P      16 20 59.5 -0.3
SMY                                  pmax  pmax
       comp=Z,658nm,1.9s
NIKH   Nikolski High      71.01   6  P     P      16 21 01.8 -0.6
SBUM   Sibu               71.04 279  P     P      16 21 03.6  0.0
SBUM   Sibu               71.04 279  P     P      16 21 04.0 +0.4
JKA    Kamikawa-asahi     71.14 331  P     P      16 21 05.2 +1.8
ASAJ   Asahikawa          71.14 331  P     P      16 21 05.2 +1.8
       comp=Z,14nm,0.8s,baz=205,slow=3.1,SNR=12
KPJI   Karang Pucung      71.17 268  P     P      16 21 04.1 -0.2
YULB   Yu-li              71.60 303  P     P      16 21 06.1 -0.5
NACB   Ninganchiao        71.75 304  P     P      16 21 06.9 -0.6
NACB                                 IAmb  IAmb   16 21 16.3
       comp=Z,40nm,1.1s
SSLB   Suanglung          72.07 303  P     P      16 21 08.6 -0.8
SSLB                                 IAmb  IAmb   16 21 42.7
       comp=Z,63nm,1.6s
TPUB   Ta-pu              72.09 302  P     P      16 21 08.6 -0.9
TPUB                                 IAmb  IAmb   16 21 17.5
       comp=Z,34nm,0.7s
UNV    Unalaska Valle     72.14   7  P     P      16 21 08.1 -0.9
UNV                                  IAmb  IAmb   16 21 09.7
       comp=Z,173nm,1.6s
CISI   Cisompet, Garu     72.17 268  P     P      16 21 09.3 -0.9
CISI   Cisompet, Garu     72.17 268  P     P      16 21 09.1 -1.1
QSPA   South Pole Qui     72.22 180  P     P      16 21 10.0 +0.3
       comp=Z,67nm,0.9s,baz=14,slow=0.9,SNR=198
QSPA   South Pole Qui     72.22 180  P     P      16 21 09.8 +0.2
QSPA                                 IAmb  IAmb   16 21 11.1
       comp=Z,84nm,0.9s
KSM    Kuching            72.52 277  P     P      16 21 12.3 +0.1
KSM                                  IAmb  IAmb   16 21 14.0
       comp=Z,112nm,0.9s
KSM    Kuching            72.52 277  P     P      16 21 13.0 +0.8
LEM    Lembang            72.57 268  P     P      16 21 12.9 +0.3
       comp=Z,181nm,0.7s,baz=97,slow=8.9,SNR=12
CNJI   Cibinong           72.89 268  P     P      16 21 14.7 +0.4
PET    Petropavlovsk      73.27 346⇑eP     P      16 21 14.6 -0.9
PET                                  pmax  pmax
       comp=Z,51nm,1.4s
YSS    Yuzh-Sakhalins     73.28 333  P     P      16 21 14.9 -0.9
YSS    Yuzh-Sakhalins     73.28 333⇑eP     P      16 21 16.9 +1.2
YSS                                  pmax  pmax
       comp=Z,20nm,1.1s
CBJI   Citeko             73.41 268  P     P      16 21 16.8 -0.5
DBJI   Dramaga            73.47 268  P     P      16 21 17.6  0.0
SKJI   Sukabumi           73.53 268  P     P      16 21 17.5 -0.4
PEA0B  Petropavlovsk-     73.57 345  P     P      16 21 17.5 +0.2
PEA0B                                IAmb  IAmb   16 21 18.7
       comp=Z,41nm,0.8s
PEA0B  Petropavlovsk-     73.57 345⇓eP     P      16 21 17.4 +0.1
PETK   Petropavlovsk-     73.57 345  P     P      16 21 17.6 +0.4
       comp=Z,33nm,0.7s,baz=130,slow=8.1,SNR=54
KSRS   Korea Array        74.54 318  P     P      16 21 24.3 +1.2
       comp=Z,1.3nm,0.9s,baz=128,slow=7.5,SNR=3.4
KSRS   Korea Array        74.54 318  P     P      16 21 24.3 +1.2
CHGN   Chignik            75.78  11  P     P      16 21 29.2 -0.3
CHGN                                 IAmb  IAmb   16 21 32.6
       comp=Z,54nm,0.8s
VLA    Vladivostok        75.80 325deP     P      16 21 31.3 +1.3
VLA                                  pmax  pmax
       comp=Z,33nm,1.2s
CHIR   Chirikof Islan     75.89  13  P     P      16 21 30.2  0.0
KASI   Kota Agung         75.91 269  P     P      16 21 30.3 -1.0
KLSI                      75.93 270  P     P      16 21 30.3 -1.1
SCZ2   Santa Cruz Isl     76.17  47  P     P      16 21 33.6 +1.3
       baz=237
SCI2   San Clemente I     76.40  49  P     P      16 21 34.8 +1.2
       baz=238
TYV    Tymovskoe          76.40 336 eP     P      16 21 34.1 +1.0
TYV                                  pmax  pmax
       comp=Z,100nm,1.6s
TYV                                  pmax  pmax
       comp=Z,41nm,1.1s
USA0B  Ussuriysk Arra     76.47 326⇓eP     P      16 21 35.0 +1.4
USRK   Ussuriysk Ar.      76.47 326  P     P      16 21 35.5 +1.8
       comp=Z,2.5nm,0.6s,baz=123,slow=7.0,SNR=6.1
USRK   Ussuriysk Ar.      76.47 326  P     P      16 21 35.5 +1.8
LWLI   Liwa               76.47 269  P     P      16 21 33.8 -0.8
SAO    San Andreas Ge     76.47  44  P     P      16 21 34.6 +0.8
SAO                                  IAmb  IAmb   16 21 36.4
       comp=Z,58nm,0.9s
SAO    San Andreas Ge     76.47  44  P     P      16 21 34.7 +0.8
SAO                                  pmax  pmax
       comp=Z,59nm,0.9s
MDSI   Maura Dua          76.52 270  P     P      16 21 33.1 -1.5
PKM    Mcpherson Peak     76.53  46  P     P      16 21 36.0 +1.5
       baz=237,SNR=7.0
PMPB   Monarch Peak       76.60  45  P     P      16 21 35.9 +1.2
PMPB                                 IAmb  IAmb   16 21 37.4
       comp=Z,90nm,1.2s
BLG    Laguna Peak, P     76.63  47  P     P      16 21 35.9 +1.1
       baz=238
SMMC   Simmler            76.64  46  P     P      16 21 36.6 +1.7
       baz=237,SNR=8.1
PAGB   Antelope Grade     76.70  45  P     P      16 21 36.5 +1.3
HOPS   Hopland Field      76.72  41  P     P      16 21 36.4 +1.2
HOPS                                 IAmb  IAmb   16 21 37.0
       comp=Z,53nm,1.1s
SII    Sitkinak Islan     76.89  14  P     P      16 21 36.0 +0.3
SII                                  IAmb  IAmb   16 21 36.9
       comp=Z,104nm,0.7s
FMP    Fort Macarthur     76.97  48  P     P      16 21 37.5 +0.9
       baz=238
KMRM   Mail Ridge         77.06  40  P     P      16 21 38.4 +1.3
KMRM                                 IAmb  IAmb   16 21 39.9
       comp=Z,84nm,0.8s
OSI    Osito Audit: C     77.14  47  P     P      16 21 38.6 +0.9
       baz=238
DECC   Green Verdugo      77.22  48  P     P      16 21 39.1 +1.0
       baz=238
PASC   Pasadena Art C     77.28  48  P     P      16 21 39.1 +0.7
ARVC   Arvin              77.34  47  P     P      16 21 39.8 +1.1
       baz=237,SNR=5.7
109C   Camp Elliot, M     77.39  49  P     P      16 21 40.1 +1.1
109C   Camp Elliot, M     77.39  49  P     P      16 21 40.0 +1.1
       baz=239
MWC    Mount Wilson       77.40  48  P     P      16 21 39.9 +0.7
MWC                                  IAmb  IAmb   16 21 41.2
       comp=Z,37nm,0.8s
MWC    Mount Wilson       77.40  48  P     P      16 21 39.9 +0.7
MWC                                  pmax  pmax
       comp=Z,37nm,0.9s
KHMM   Horse Mountain     77.43  39  P     P      16 21 40.6 +1.4
KHMM                                 IAmb  IAmb   16 21 42.1
       comp=Z,46nm,1.1s
VES    Vestal, Richgr     77.55  46  P     P      16 21 40.8 +1.1
       baz=237
BAR    Barrett            77.59  50  P     P      16 21 39.9 -0.2
VOG    Valley Oaks Go     77.61  45  P     P      16 21 40.7 +0.6
       baz=237
MURC   Murrieta           77.69  49  P     P      16 21 41.6 +1.0
       baz=239,SNR=6.7
BFSC   Mount Baldy Ra     77.69  48  P     P      16 21 41.4 +0.6
       baz=238,SNR=11
OHAK   Old Harbor         77.70  14  P     P      16 21 40.2 +0.2
OHAK                                 IAmb  IAmb   16 21 41.4
       comp=Z,62nm,0.8s
MNAI   Manna              77.72 269  P     P      16 21 40.7 -0.5
MNAI                                 IAmb  IAmb   16 21 44.3
       comp=Z,112nm,0.8s
KRMB   Red Mountain       77.72  39  P     P      16 21 41.9 +1.2
KRMB                                 IAmb  IAmb   16 21 43.5
       comp=Z,54nm,1.1s
NJ2    Nanjing            77.77 310 eP     P      16 21 41.7 +0.7
NJ2                                  pmax  pmax
       comp=Z,15nm,0.5s
EDW2   Edwards Air Fo     77.79  47  P     P      16 21 42.4 +1.2
       baz=238,SNR=40
DLV    T  Lat             77.83 287  P     P      16 21 42.4 +0.4
ISA    Isabella, Lake     77.87  46  P     P      16 21 42.5 +0.9
ISA                                  IAmb  IAmb   16 21 44.0
       comp=Z,52nm,0.9s
ISA    Isabella, Lake     77.87  46  P     P      16 21 42.5 +0.9
ISA                                  pmax  pmax
       comp=Z,52nm,1.0s
ISA    Isabella, Lake     77.87  46  P     P      16 21 42.9 +1.3
       baz=238,SNR=40
MONP2  Monument Peak      77.88  50  P     P      16 21 43.4 +1.5
       baz=239,SNR=22
CMB    Columbia Colle     77.89  43  P     P      16 21 42.0 +0.4
CMB                                  IAmb  IAmb   16 21 43.7
       comp=Z,39nm,0.9s
CMB    Columbia Colle     77.89  43  P     P      16 21 42.0 +0.4
CMB                                  pmax  pmax
       comp=Z,39nm,1.0s
KBO    Bosley Butte       77.95  38  P     P      16 21 42.4 +0.5
WDC    Whiskeytown Da     77.98  40  P     P      16 21 42.5 +0.5
WDC                                  IAmb  IAmb   16 21 44.5
       comp=Z,62nm,1.4s
WDC    Whiskeytown Da     77.98  40  P     P      16 21 42.5 +0.5
WDC                                  pmax  pmax
       comp=Z,62nm,1.4s
IKP    In-Ko-Pah, Jac     77.99  50  P     P      16 21 43.8 +1.5
       baz=240,SNR=11
AFDM   Forest Hills D     78.03  42  P     P      16 21 42.6 +0.3
ORV    Oroville           78.04  42  P     P      16 21 42.8 +0.5
ORV    Oroville           78.04  42  P     P      16 21 42.8 +0.5
ORV                                  pmax  pmax
       comp=Z,33nm,1.1s
MDJ    Mudanjiang         78.04 325  P     P      16 21 42.7 +0.5
N02D   Trinity Center     78.12  40  P     P      16 21 44.3 +1.5
       baz=234,SNR=8.0
PFO    Pinyon Flats O     78.22  49  P     P      16 21 44.6 +1.0
       comp=Z,9.8nm,0.9s,baz=269,slow=4.3,SNR=11
PFO    Pinyon Flats O     78.22  49  P     P      16 21 44.2 +0.6
PFO    Pinyon Flats O     78.22  49ceP     P      16 21 44.5 +0.9
PFO                                  pmax  pmax
       comp=Z,27nm,1.0s
PFO    Pinyon Flats O     78.22  49  P     P      16 21 44.5 +0.9
       baz=239,SNR=6.4
XPFO   Pion Flat          78.22  49  P     P      16 21 44.3 +0.7
BBRC   Big Bear Solar     78.22  48  P     P      16 21 44.5 +0.8
       baz=239
KSI    Kapahiang          78.27 270  P     P      16 21 43.5 -0.7
M02C   Callahan           78.27  39  P     P      16 21 45.3 +1.6
       baz=234,SNR=7.7
O03E   Paynes Creek       78.27  41  P     P      16 21 44.5 +0.8
       baz=234,SNR=13
L02E   Cave Junction      78.28  38  P     P      16 21 44.6 +1.0
       baz=233
KEBM   Edson Butte        78.29  38  P     P      16 21 44.4 +0.8
LRMC   Laurel Mtn Rad     78.32  47  P     P      16 21 45.1 +0.9
       baz=238,SNR=19
SWSC   Sam W. Stewart     78.36  50  P     P      16 21 45.5 +1.3
       baz=240,SNR=8.6
KDAK   Kodiak Island      78.36  14  P     P      16 21 43.9 +0.3
       comp=Z,37nm,0.7s,baz=229,slow=2.9,SNR=28
KDAK   Kodiak Island      78.36  14  P     P      16 21 43.8 +0.2
KDAK                                 IAmb  IAmb   16 21 45.9
       comp=Z,54nm,0.8s
RRX    Edison Barstow     78.49  48  P     P      16 21 45.7 +0.8
       baz=239
CWC    Cottonwood Cre     78.56  46  P     P      16 21 46.6 +1.2
       baz=238
YBH    Yreka Blue Hor     78.56  39  P     P      16 21 46.8 +1.6
       comp=Z,27nm,0.8s,baz=212,slow=0.8,SNR=31
YBH    Yreka Blue Hor     78.56  39  P     P      16 21 46.1 +0.9
K02D   Willamette Mer     78.57  38  P     P      16 21 46.4 +1.2
       baz=233
MLAC   Mammoth, Mammo78.69  44  P     P      16 21 47.3 +1.2
       baz=237
J01E   Myrtle Point       78.70  37  P     P      16 21 46.9 +1.2
       baz=232
MYKOM  Kota Tinggi        78.74 276  P     P      16 21 47.0 +0.4
MYKOM  Kota Tinggi        78.74 276  P     P      16 21 47.0 +0.4
MPMC   Manual Prospec     78.76  46  P     P      16 21 47.7 +1.2
       baz=238,SNR=23
WAKR   Walker             78.77  43  P     P      16 21 47.8 +1.2
WAKR                                 IAmb  IAmb   16 21 49.1
       comp=Z,51nm,0.9s
TIN    Tinemaha, Big      78.78  45  P     P      16 21 47.9 +1.3
       baz=238
GSC    Goldstone, Bar     78.84  47  P     P      16 21 47.4 +0.6
GSC    Goldstone, Bar     78.84  47  P     P      16 21 47.4 +0.6
GSC                                  pmax  pmax
       comp=Z,34nm,1.4s
GSC    Goldstone, Bar     78.84  47  P     P      16 21 47.8 +1.0
       baz=239,SNR=9.5
GRNR   Gornyy             78.90 333⇑iP     P      16 21 47.9 +1.2
GRNR                                eS     S      16 30 54.6 -5.2
GRNR                                 pmax  pmax
       comp=Z,30nm,0.9s
GRNR                                 smax  smax
       comp=N,2.0nm,1.0s
GRNR                                 MLR   MLR
       comp=N,80nm,14.0s
GRNR                                 MLR   MLR
       comp=Z,90nm,14.0s
HEC    Hector,Ludlow      78.93  48  P     P      16 21 48.2 +0.9
       baz=239,SNR=8.8
BEKR   Beckworth          78.94  42  P     P      16 21 48.0 +0.7
HUMO   Hull Mountain      78.94  38  P     P      16 21 48.4 +1.3
HUMO                                 IAmb  IAmb   16 21 49.8
       comp=Z,46nm,1.1s
PNTR   Pine Nut           78.99  43  P     P      16 21 48.7 +1.0
PNTR                                 IAmb  IAmb   16 21 50.1
       comp=Z,80nm,0.9s
VCNR   Virginia City      79.07  43  P     P      16 21 48.9 +0.8
L04D   Klamath Falls      79.09  39  P     P      16 21 49.2 +1.1
       baz=234,SNR=6.9
M04C   Macdoel            79.12  40  P     P      16 21 49.5 +1.3
       baz=234,SNR=10.0
GLA    Glamis             79.12  50  P     P      16 21 49.6 +1.3
GLA                                  IAmb  IAmb   16 21 51.2
       comp=Z,41nm,1.0s
GLA    Glamis             79.12  50  P     P      16 21 49.6 +1.3
GLA                                  pmax  pmax
       comp=Z,41nm,1.0s
GLA    Glamis             79.12  50  P     P      16 21 50.0 +1.7
       baz=240,SNR=7.6
YERR   Yerington          79.16  43  P     P      16 21 49.4 +0.8
YERR                                 IAmb  IAmb   16 21 50.8
       comp=Z,60nm,1.0s
I02D   Swisshome          79.33  37  P     P      16 21 51.0 +2.0
       baz=232
GRAC   Grapevine Rang     79.34  46  P     P      16 21 50.8 +1.4
       baz=238,SNR=20
I03D   Drain, OR          79.36  37  P     P      16 21 50.5 +1.3
       baz=233
GMRC   Granite Mounta     79.39  48  P     P      16 21 50.7 +1.0
       baz=240,SNR=12
FURC   Furnace Creek,     79.41  46  P     P      16 21 50.7 +1.1
       baz=238,SNR=5.9
RYN    Ryan               79.44  44  P     P      16 21 50.7 +0.7
IRM    Iron Mountain      79.44  49  P     P      16 21 51.2 +1.3
       baz=240,SNR=17
PAHR   Pah Rah Range      79.47  42  P     P      16 21 50.7 +0.6
NVAR   Mina Array Bea     79.47  44  P     P      16 21 51.3 +1.1
       comp=Z,25nm,0.8s,baz=87,slow=3.1,SNR=21
NVAR                                 pP    pwP    16 23 50.2 +0.1
       comp=Z,5.2nm,1.1s,baz=229,slow=9.0,SNR=6.9
NVAR   Mina Array Bea     79.47  44  P     P      16 21 51.3 +1.1
NVAR                                       pwP    16 23 50.1 +0.1
SHOC   Shoshone, Teco     79.52  47  P     P      16 21 51.1 +0.8
       baz=239,SNR=6.0
TUQ    Turquoise Moun     79.53  48  P     P      16 21 51.6 +1.1
       baz=239,SNR=24
NV11   Mina Array Sit     79.57  44  P     P      16 21 51.5 +0.8
NV11                                 IAmb  IAmb   16 21 53.0
       comp=Z,51nm,1.1s
K04D   Chiloquin, OR      79.66  39  P     P      16 21 51.8 +0.8
       baz=234
Y12C   Blythe             79.69  50  P     P      16 21 52.3 +1.1
Y12C   Blythe             79.69  50  P     P      16 21 52.7 +1.5
       baz=240,SNR=5.5
113A   Mohawk Valley,     79.76  51  P     P      16 21 52.4 +0.8
J04D   Umpqua Nationa     79.81  38  P     P      16 21 53.0 +1.1
       baz=234,SNR=11
CN2    Changchun          79.87 322 eP     P      16 21 53.0 +1.1
CN2                                 eS     S      16 31 12.5 +2.5
CN2                                  pmax  pmax
       comp=Z,10.0nm,0.7s
KVN    Kaiserville        79.94  43  P     P      16 21 53.5 +0.8
KVN                                  IAmb  IAmb   16 21 54.8
       comp=Z,43nm,1.1s
KVN    Kaiserville        79.94  43  P     P      16 21 53.5 +0.8
KVN                                  pmax  pmax
       comp=Z,43nm,1.1s
I04A   Tendick Farm,      79.97  38  P     P      16 21 53.3 +0.8
       baz=234,SNR=5.5
KLR    Kul'dur            79.97 329  P     P      16 21 53.5 +1.2
       comp=Z,2.7nm,0.8s,baz=113,slow=4.6,SNR=6.4
KLR    Kul'dur            79.97 329⇑eP     P      16 21 53.4 +1.1
KLR                                  pmax  pmax
       comp=Z,14nm,1.5s
TPNV   Topopah Spring     80.08  46  P     P      16 21 54.2 +0.8
TPNV   Topopah Spring     80.08  46  P     P      16 21 54.2 +0.8
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TPNV				pmax	pmax		
	comp=Z,28nm,1.1s						
TPNV	Topopah Spring	80.08	46	P	P	16 21 54.7	+1.3
	baz=239,SNR=26						
214A	Organ Pipe Nat	80.09	52	P	P	16 21 54.4	+1.0
214A	Organ Pipe Nat	80.09	52	P	P	16 21 55.0	+1.6
	baz=242						
NEE2	Needles Airpor	80.12	49	P	P	16 21 54.8	+1.4
	baz=240						
MOD	Modoc Plateau	80.12	40	P	P	16 21 54.3	+0.8
MOD				IAmb	IAmb	16 21 55.7	
	comp=Z,42nm,0.8s						
H04D	Lebanon	80.21	37	P	P	16 21 54.9	+1.2
	baz=233						
PDMCI	Parker Dam,Lak	80.23	49	P	P	16 21 55.3	+1.3
	baz=241,SNR=11						
CNPM	China Poot	80.25	14	P	P	16 21 53.4	-0.2
CNPM				IAmb	IAmb	16 24 24.8	
	comp=Z,88nm,0.6s						
G03D	McMinnville, O	80.33	36	P	P	16 21 55.5	+1.2
	baz=233						
J05D	Fort Rock, OR	80.36	39	P	P	16 21 56.1	+1.5
	baz=234,SNR=36						
SHPR	Sheep Range	80.60	47	P	P	16 21 56.9	+0.8
RSO	Redoubt South	80.76	13	P	P	16 21 55.7	-0.8
SVW2	Sparrevohn	80.80	11	P	P	16 21 56.0	-0.3
W13A	Hualapai Mount	80.81	49	P	P	16 21 57.9	+0.6
PINE	Pine Mountain	80.83	38	P	P	16 21 58.4	+1.2
PINE				IAmb	IAmb	16 21 59.8	
	comp=Z,91nm,1.1s						
Y14A	Wickenburg	80.88	50	P	P	16 21 58.3	+0.8
I05D	Terrebonne, OR	80.91	38	P	P	16 21 58.4	+1.0
	baz=234,SNR=9.0						
BKNI	Bangkinang	80.95	273	P	P	16 22 00.6	+2.4
	comp=Z,6μmcomp=Z,104nm,1.1s						
E03A	Lebam	80.98	35	P	P	16 21 58.6	+1.0
E03A				IAmb	IAmb	16 21 59.9	
	comp=Z,68nm,1.0s						
F04D	Rainier, OR	81.00	36	P	P	16 21 59.1	+1.4
	baz=233						
MA2	Magadan	81.08	345	P	P	16 21 57.2	-0.6
	comp=Z,17nm,0.9s,baz=138,slow=7.6,SNR=14						
MA2	Magadan	81.08	345	P	P	16 21 57.4	-0.5
MA2	Magadan	81.08	345	*ce*P	P	16 21 57.3	-0.6
MA2				pmax	pmax		
	comp=Z,35nm,1.2s						
PDSI	Padang	81.12	272	P	P	16 21 58.3	-0.9
DIB	Dawson Inlet,	81.13	26	P	P	16 21 58.7	+0.6
SEW	Seward	81.17	14	P	P	16 21 58.0	-0.2
F04A	Amboy	81.24	36	P	P	16 21 59.3	+0.3
F04A				IAmb	IAmb	16 22 00.9	
	comp=Z,75nm,1.3s						
R11A	Troy Canyon, C	81.25	45	P	P	16 21 59.7	+0.2
R11A	Troy Canyon, C	81.25	45	P	P	16 22 00.2	+0.8
	baz=239,SNR=23						
NLWA	Neilton Lookou	81.33	34	P	P	16 22 00.2	+0.8
NLWA				IAmb	IAmb	16 22 01.8	
	comp=Z,48nm,1.1s						
WVOR	Wild Horse Val	81.45	40	P	P	16 22 01.0	+0.7
WVOR				IAmb	IAmb	16 22 02.7	
	comp=Z,67nm,1.0s						
WVOR	Wild Horse Val	81.45	40	P	P	16 22 01.0	+0.7
WVOR				pmax	pmax		
	comp=Z,67nm,1.0s						
G05D	Wamic, OR	81.45	37	P	P	16 22 00.9	+0.8
	baz=234						
GAMB	Gambell	81.52	3	P	P	16 22 00.3	+0.3
E04D	Cinebar	81.53	35	P	P	16 22 01.5	+1.0
	baz=233						
F05D	White Salmon	81.75	36	P	P	16 22 02.5	+0.9
	baz=234						
UBPT	Khong Chiam	81.76	289	P	P	16 22 02.9	+0.6
TUC	Tucson	81.77	52	P	P	16 22 03.8	+1.6
TUC				IAmb	IAmb	16 22 05.3	
	comp=Z,43nm,1.1s						
TUC	Tucson	81.77	52	P	P	16 22 03.8	+1.6
TUC				pmax	pmax		
	comp=Z,43nm,1.1s						
TUC	Tucson	81.77	52	P	P	16 22 04.0	+1.9
	baz=243						
D04E	Lakebay	81.80	35	P	P	16 22 03.2	+1.5
	baz=233						
D03D	Eldon	81.84	34	P	P	16 22 03.1	+1.1
	baz=232,SNR=7.8						
I07A	Izee	81.84	39	P	P	16 22 03.3	+1.0
I07A				IAmb	IAmb	16 22 04.6	
	comp=Z,47nm,0.9s						
RC01	Rabbit Creek A	81.98	14	P	P	16 22 02.1	-0.3
J08A	Circle Bar Ran	82.06	40	P	P	16 22 03.6	+0.2
J08A				IAmb	IAmb	16 22 05.6	
	comp=Z,70nm,1.1s						
SUA	Susitna One	82.09	13	P	P	16 22 02.4	-0.7
HIN	Hinchinbrook I	82.15	15	P	P	16 22 02.7	-0.6
HIN				IAmb	IAmb	16 24 59.8	
	comp=Z,30nm,0.8s						
LCMT	Little Creek M	82.19	47	P	P	16 22 05.2	+1.0
D05A	Enumclaw	82.23	35	P	P	16 22 05.0	+1.0
D05A				IAmb	IAmb	16 22 06.5	
	comp=Z,151nm,1.4s						
X16A	Lo Mia Camp, P	82.25	50	P	P	16 22 05.6	+1.0
X16A				IAmb	IAmb	16 22 07.6	
	comp=Z,41nm,0.9s						
IPM	Ipoh	82.26	277	P	P	16 22 05.1	+0.1
IPM				IAmb	IAmb	16 22 06.5	
	comp=Z,47nm,1.0s						
IPM	Ipoh	82.26	277	P	P	16 22 06.0	+1.1
PGC	Sidney	82.33	33	P	P	16 22 05.0	+0.6
PGC				IAmb	IAmb	16 22 06.3	
	comp=Z,38nm,1.1s						
CCUT	Cedar City	82.37	47	P	P	16 22 06.2	+1.0
SKT	Skwentna	82.39	13	P	P	16 22 02.8	-1.7
GLI	Glacier Island	82.42	15	P	P	16 22 04.1	-0.5
GLI				IAmb	IAmb	16 22 05.3	
	comp=Z,80nm,0.8s						
TTA	Tatalina	82.43	10	P	P	16 22 05.1	+0.4
TTA	Tatalina	82.43	10	P	P	16 22 05.1	+0.4
FID	Port Fidalgo	82.46	15	P	P	16 22 04.0	-0.8
FID				IAmb	IAmb	16 24 40.5	
	comp=Z,40nm,0.9s						
KNB	Kanab	82.49	47	P	P	16 22 06.7	+0.9
KNB	Kanab	82.49	47	P	P	16 22 06.7	+0.9
KNB				pmax	pmax		
	comp=Z,31nm,0.9s						
319A	Douglas	82.50	54	P	P	16 22 07.0	+1.1
319A				IAmb	IAmb	16 22 09.1	
	comp=Z,49nm,0.9s						
PSUT	Pine Spring	82.52	46	P	P	16 22 06.5	+0.6
KNK	Knik Glacier	82.56	14	P	P	16 22 05.0	-0.3
PMR	Palmer	82.56	14	P	P	16 22 04.8	-0.5
PMR	Palmer	82.56	14	P	P	16 22 04.8	-0.5
PMR				pmax	pmax		
	comp=Z,76nm,0.5s						
U15A	North Rim	82.58	48	P	P	16 22 07.2	+0.8
U15A				IAmb	IAmb	16 22 09.2	
	comp=Z,59nm,0.8s						
SZCU	Shurtz Canyon	82.58	47	P	P	16 22 07.1	+0.8
RAGM	Ragged Mountai	82.62	16	P	P	16 22 05.3	-0.3
RAGM				IAmb	IAmb	16 22 07.0	
	comp=Z,50nm,1.1s						
F07A	Phinny Hill Vi	82.63	37	P	P	16 22 06.5	+0.5
F07A				IAmb	IAmb	16 22 08.0	
	comp=Z,27nm,0.8s						
ELK	Elko	82.71	43	P	P	16 22 07.4	+0.5
ELK	Elko	82.71	43	P	P	16 22 07.4	+0.5
ELK				pmax	pmax		
	comp=Z,29nm,1.0s						
ANM	Nome	82.76	6	P	P	16 22 06.5	+0.2
ANM	Nome	82.76	6	P	P	16 22 06.5	+0.2
ANM				pmax	pmax		
	comp=Z,37nm,1.6s						
A04D	Lummi Island	82.77	34	P	P	16 22 07.5	+0.9
	baz=233						
GHO	Glory Hole Cre	82.77	14	P	P	16 22 06.1	-0.4
WUAZ	Wupatki	82.81	49	P	P	16 22 08.3	+0.9
WUAZ				IAmb	IAmb	16 22 10.1	
	comp=Z,44nm,1.1s						
WUAZ	Wupatki	82.81	49	P	P	16 22 08.7	+1.3
	baz=242						
B05A	Bryant	82.81	34	P	P	16 22 07.8	+0.9
	baz=233,SNR=8.3						
KULM	Kulim	82.87	278	P	P	16 22 08.0	0.0
KULM				IAmb	IAmb	16 22 09.8	
	comp=Z,58nm,1.6s						
KULM	Kulim	82.87	278	P	P	16 22 09.0	+1.0
SML	Sawmill	82.94	14	P	P	16 22 06.6	-0.7
SML				IAmb	IAmb	16 24 26.3	
	comp=Z,60nm,0.8s						
LTY	Liberty	83.00	36	P	P	16 22 07.9	0.0
E07A	Sunnyside	83.05	36	P	P	16 22 08.9	+0.7
E07A				IAmb	IAmb	16 22 10.3	
	comp=Z,60nm,1.1s						
PKCU	Pink Cliffs	83.05	47	P	P	16 22 10.2	+1.4
PPLA	Purkeypile	83.09	12	P	P	16 22 07.1	-1.0
HAWA	Hanford	83.14	37	P	P	16 22 09.0	+0.4
HAWA				IAmb	IAmb	16 22 10.8	
	comp=Z,58nm,1.1s						
SCM	Sheep Creek Mo	83.19	14	P	P	16 22 08.4	-0.2
SCM	Sheep Creek Mo	83.19	14	P	P	16 22 08.4	-0.2
SCM				pmax	pmax		
	comp=Z,89nm,0.7s						
C06D	Leavenworth	83.26	35	P	P	16 22 09.6	+0.5
	baz=234,SNR=6.3						
CRQM	Cirque	83.34	17	P	P	16 22 09.5	0.0
CRQM				IAmb	IAmb	16 22 10.7	
	comp=Z,66nm,1.0s						
X18A	Snowflake	83.40	51	P	P	16 22 11.4	+1.0
MTPU	Mount Pierson	83.42	47	P	P	16 22 12.1	+1.4
TGL	Tana Glacier	83.42	17	P	P	16 22 09.8	0.0
TGL				IAmb	IAmb	16 22 11.1	
	comp=Z,59nm,1.1s						
E08A	Dider Farm, El	83.46	37	P	P	16 22 10.7	+0.5
E08A				IAmb	IAmb	16 22 12.2	
	comp=Z,134nm,1.7s						
TCRU	Three Creeks R	83.52	46	P	P	16 22 11.9	+0.9
HPIG		83.52	59	P	P	16 22 12.1	+0.9
HPIG				IAmb	IAmb	16 22 13.8	
	comp=Z,53nm,1.7s						
BMO	Blue Mountains	83.58	39	P	P	16 22 11.3	+0.4
BMO				IAmb	IAmb	16 22 12.8	
	comp=Z,85nm,1.9s						
BMO	Blue Mountains	83.58	39	P	P	16 22 11.3	+0.4
BMO				pmax	pmax		
	comp=Z,85nm,2.0s						
PCA	Pinnacle	83.62	18	P	P	16 22 10.7	0.0
PCA				IAmb	IAmb	16 22 12.0	
	comp=Z,30nm,0.9s						
VRDI	Verde Repeater	83.65	16	P	P	16 22 10.8	-0.2
VRDI				IAmb	IAmb	16 22 12.2	
	comp=Z,54nm,1.2s						
MSU	Marysvale	83.65	46	P	P	16 22 12.2	+0.6
MSU	Marysvale	83.65	46	P	P	16 22 12.2	+0.6
SEY	Seymchan	83.67	347	P	P	16 22 11.0	+0.2
	comp=Z,44nm,0.9s,baz=156,slow=5.1,SNR=145						
SEY	Seymchan	83.67	347	P	P	16 22 11.0	+0.2
SEY	Seymchan	83.67	347	⇑*e*P	P	16 22 10.7	-0.1
RPSI	Rantau Prapat	83.69	275	P	P	16 22 11.2	-0.9
RPSI				IAmb	IAmb	16 22 12.8	
	comp=Z,41nm,0.9s						
RPSI	Rantau Prapat	83.69	275	P	P	16 22 11.6	-0.5
RPSI					PcP	16 22 19.6	+4.7
RPSI					PP	16 25 34.4	-1.0
MFID	Camas Ranch	83.72	41	P	P	16 22 12.2	+0.5
MFID				IAmb	IAmb	16 22 13.9	
	comp=Z,43nm,1.1s						
PSI	Prapat	83.73	275	P	P	16 22 11.6	-0.8
	comp=Z,37nm,0.9s,baz=148,slow=4.5,SNR=16						
PSI				PP	PP	16 25 34.4	-1.4
	comp=Z,1.8nm,0.3s,baz=166,slow=3.5,SNR=5.5						
PSI	Prapat	83.73	275	P	P	16 22 11.2	-1.2
PSI				pmax	pmax		
	comp=Z,41nm,0.9s						
GLB	Gilahina Butte	83.73	16	P	P	16 22 11.0	-0.2
GLB				IAmb	IAmb	16 22 12.3	
	comp=Z,39nm,0.7s						
BALM	Baldy	83.79	17	P	P	16 22 11.5	-0.1
BALM				IAmb	IAmb	16 22 12.8	
	comp=Z,41nm,0.8s						
W18A	Petrified Fore	83.82	50	P	P	16 22 13.3	+0.9
W18A	Petrified Fore	83.82	50	P	P	16 22 13.8	+1.3
	baz=243						
MAW	Mawson	83.88	200	P	P	16 22 12.3	+0.4
	comp=Z,26nm,0.8s,baz=146,slow=5.1,SNR=8.6						
MAW	Mawson	83.88	200	IAmb	IAmb	16 22 13.1	
	comp=Z,9.5nm,1.0s						
MCARA	McCarthy VSAT	83.89	16	P	P	16 22 11.8	-0.1
MCARA				IAmb	IAmb	16 22 13.4	
	comp=Z,49nm,1.1s						
KTH	Kantishna Hill	83.93	12	P	P	16 22 10.9	-1.3
KTH				IAmb	IAmb	16 24 51.5	
	comp=Z,66nm,0.7s						
TRF	Thorofare Moun	83.97	12	P	P	16 22 11.5	-1.0
TRF				IAmb	IAmb	16 22 13.6	
	comp=Z,72nm,0.8s						
E09A	Wood Farm, Sta	84.00	37	P	P	16 22 13.1	+0.3
E09A				IAmb	IAmb	16 22 14.6	
	comp=Z,69nm,1.6s						
BARN	Barnard Glacie	84.00	17	P	P	16 22 12.7	0.0
BARN				IAmb	IAmb	16 22 14.2	
	comp=Z,54nm,0.9s						
CTGM	Chitina Glacie	84.02	17	P	P	16 22 12.9	+0.1
CTGM				IAmb	IAmb	16 22 14.1	
	comp=Z,42nm,0.9s						
DUG	Dugway, Tooele	84.03	45	P	P	16 22 13.5	+0.1
DUG	Dugway, Tooele	84.03	45	P	P	16 22 13.5	+0.1
DUG				pmax	pmax		
	comp=Z,32nm,1.8s						
DUG	Dugway, Tooele	84.03	45	P	P	16 22 14.0	+0.7
	baz=241						
ENH	Enshi	84.10	304	P	P	16 22 13.8	0.0
ENH				IAmb	IAmb	16 22 15.9	
	comp=Z,28nm,0.9s						
121A	Cookes Peak, D	84.15	53	P	P	16 22 14.7	+0.5
121A	Cookes Peak, D	84.15	53	P	P	16 22 15.9	+1.7
	baz=245,SNR=9.8						
RND	Reindeer	84.23	13	P	P	16 22 13.2	-0.4
RND				IAmb	IAmb	16 22 14.6	
	comp=Z,82nm,0.8s						
RND	Reindeer	84.23	13	P	P	16 22 13.3	-0.4
RND				pmax	pmax		
	comp=Z,82nm,0.8s						
F10A	Beach Ranch, E	84.23	38	P	P	16 22 14.1	0.0
F10A				IAmb	IAmb	16 22 15.8	
	comp=Z,64nm,1.0s						
BGU	Big Grassy Mou	84.25	44	P	P	16 22 14.4	0.0
DHY	Denali Highway	84.26	14	P	P	16 22 13.4	-0.6
DHY				IAmb	IAmb	16 25 06.5	
	comp=Z,20nm,0.6s						
LLLB	Lillooet	84.33	32	P	P	16 22 14.6	+0.1
B08A	Colville Reser	84.36	35	P	P	16 22 14.6	0.0
B08A				IAmb	IAmb	16 22 15.9	
	comp=Z,32nm,0.9s						
BPAW	Bear Paw Mtn.	84.41	12	P	P	16 22 13.4	-1.1
NLU	North Lily Min	84.41	45	P	P	16 22 15.8	+0.4
MCK	McKinley	84.50	13	P	P	16 22 14.3	-0.6
MCK				IAmb	IAmb	16 22 15.7	
	comp=Z,60nm,1.0s						
MCK	McKinley	84.50	13	P	P	16 22 14.3	-0.6
MCK				pmax	pmax		
	comp=Z,60nm,1.0s						
Q16A	Castle Valley	84.54	46	P	P	16 22 16.6	+0.6
PAX	Paxson	84.62	15	P	P	16 22 14.8	-0.8
PAX	Paxson	84.62	15	P	P	16 22 14.8	-0.8
PAX				pmax	pmax		
	comp=Z,19nm,0.9s						
C09A	Chrisman Ranch	84.64	36	P	P	16 22 16.1	+0.1
C09A				IAmb	IAmb	16 22 17.7	
	comp=Z,38nm,1.1s						
SKAG	Skagway	84.68	21	P	P	16 22 16.3	+0.5
SKAG				IAmb	IAmb	16 22 18.3	
	comp=Z,69nm,1.4s						
TMUT	Trail Mountain	84.69	46	P	P	16 22 16.7	-0.1
MPU	Maple Canyon	84.74	45	P	P	16 22 17.2	+0.3
BWN	Browne	84.78	12	P	P	16 22 15.9	-0.4
BWN				IAmb	IAmb	16 22 16.9	
	comp=Z,89nm,1.1s						
SPUT	South Promonto	84.82	44	P	P	16 22 17.3	+0.1
HVU	Hansel Valley	84.83	43	P	P	16 22 17.6	+0.3
HVU	Hansel Valley	84.83	43	P	P	16 22 17.6	+0.3
HVU				pmax	pmax		
	comp=Z,70nm,1.7s						
GYA	Guiyang	84.87	300	*e*P	P	16 22 18.3	+0.6
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CTU	Camp Tracy	84.98	45	P	P	16 22 18.4	+0.4
MENT	Mentasta	85.02	15	P	P	16 22 17.1	-0.4
MENT				IAmb	IAmb	16 22 18.8	
	comp=Z,25nm,1.0s						
HYT	Haines Junctio	85.03	19	P	P	16 22 17.9	+0.1
KCSI	Kotacane, Aceh	85.04	275	P	P	16 22 18.6	-0.1
ZEA	Zeya	85.05	331	*e*P	P	16 22 18.4	+0.6
ZEA				pmax	pmax		
	comp=N,21nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
SRU	San Rafael Swe	85.08	46	P	P	16 22 18.9	+0.4
SRU	San Rafael Swe	85.08	46	P	P	16 22 18.9	+0.4
SRU				pmax	pmax		
	comp=Z,19nm,0.7s						
P17A	Butcher Ranch,	85.09	46	P	P	16 22 19.1	+0.5
JLU	Jordanelle	85.14	45	P	P	16 22 19.1	+0.2
JLU				pP	pwP	16 24 20.8	-0.2
MLY	Manley	85.30	11	P	P	16 22 17.6	-1.2
WRH	Wood River Hil	85.33	13	P	P	16 22 17.9	-1.0
WRH				IAmb	IAmb	16 22 20.2	
	comp=Z,50nm,1.0s						
WRH				pP	pwP	16 24 20.9	-0.1
TCUT	Toone Canyon	85.41	44	P	P	16 22 20.3	+0.1
TCUT				pP	pwP	16 24 22.4	+0.2
RIDG	Independent Ri	85.42	14	P	P	16 22 18.8	-0.6
RIDG				IAmb	IAmb	16 22 20.5	
	comp=Z,38nm,1.0s						
HDA	Harding Lake	85.52	13	P	P	16 22 19.1	-0.7
HDA				IAmb	IAmb	16 22 20.5	
	comp=Z,27nm,1.0s						
HDA	Harding Lake	85.52	13	P	P	16 22 19.2	-0.6
	baz=210						
TPTI		85.52	275	P	P	16 22 20.5	-0.5
DOT	Dot Lake	85.53	15	P	P	16 22 19.6	-0.3
DOT				IAmb	IAmb	16 22 21.0	
	comp=Z,30nm,0.8s						
NEW	Newport	85.54	36	P	P	16 22 20.3	0.0
NEW	Newport	85.54	36	P	P	16 22 20.3	0.0
NEW				pmax	pmax		
	comp=Z,18nm,0.9s						
NEW	Newport	85.54	36	P	P	16 22 20.6	+0.2
	baz=237,SNR=11						
HWUT	Hardware Ranch	85.54	44	P	P	16 22 20.8	+0.1
CCB	Clear Creek Bu	85.54	13	P	P	16 22 18.9	-1.0
CCB				IAmb	IAmb	16 22 20.3	
	comp=Z,60nm,1.3s						
MVCO	Mesa Verde	85.64	49	P	P	16 22 22.0	+0.6
MVCO	Mesa Verde	85.64	49	P	P	16 22 22.4	+1.0
	baz=244						
MNTX	Cornudas Mount	85.66	55	P	P	16 22 22.1	+0.8
MNTX	Cornudas Mount	85.66	55	P	P	16 22 22.6	+1.4
	baz=246,SNR=18						
TCOL	CIGO, UAF Yank	85.73	13	P	P	16 22 20.0	-0.8
	baz=209						
COLA	College	85.73	13	P	P	16 22 19.9	-0.8
COLA				IAmb	IAmb	16 22 21.1	
	comp=Z,112nm,1.5s						
COLA	College	85.73	13	P	P	16 22 20.0	-0.8
COLA				pmax	pmax		
	comp=Z,113nm,1.5s						
WHY	Whitehorse	85.74	20	P	P	16 22 21.4	+0.3
WHY				IAmb	IAmb	16 22 22.9	
	comp=Z,23nm,0.9s						
DLBC	Dease Lake	85.82	23	P	P	16 22 22.3	+0.8
	comp=Z,11nm,0.8s,baz=239,slow=6.0,SNR=17						
DLBC	Dease Lake	85.82	23	P	P	16 22 22.0	+0.5
DLBC				IAmb	IAmb	16 22 23.6	
	comp=Z,21nm,1.0s						
SCRK	Sand Creek	85.83	15	P	P	16 22 21.3	-0.2
IL31		85.85	13	P	P	16 22 20.4	-0.9
IL31				IAmb	IAmb	16 22 21.9	
	comp=Z,17nm,0.8s						
ILAR	Eielson Array	85.85	13	P	P	16 22 20.6	-0.8
	comp=Z,13nm,0.8s,baz=225,slow=5.0,SNR=132						
ILAR				pP	pwP	16 24 23.3	-0.3
	comp=Z,3.5nm,1.1s,baz=233,slow=5.2,SNR=5.3						
TX31	Lajitas Ar. Si	86.08	58	P	P	16 22 24.8	+1.4
TX31				IAmb	IAmb	16 22 26.7	
	comp=Z,46nm,1.1s						
TX32	Lajitas Array	86.08	58	P	P	16 22 25.0	+1.5
TX32				IAmb	IAmb	16 22 26.7	
	comp=Z,46nm,1.1s						
TXAR	Lajitas Array	86.08	58	P	P	16 22 25.4	+2.0
	comp=Z,24nm,0.8s,baz=224,slow=5.2,SNR=112						
TXAR				pP	pwP	16 24 25.6	-1.1
	comp=Z,3.5nm,1.1s,baz=208,slow=5.1,SNR=2.6						
TXAR	Lajitas Array	86.08	58	P	P	16 22 25.4	+2.0
TXAR					pwP	16 24 25.6	-1.1
XAN	Xi'an	86.09	307	P	P	16 22 24.8	+1.5
XAN				pP	pP	16 24 21.7	-2.0
XAN				S	S	16 32 16.4	+4.5
XAN				pmax	pmax		
	comp=Z,16nm,1.0s						
XAN				pmax	pmax		
	comp=Z,150nm,6.9s						
XAN	Xi'an	86.09	307	P	P	16 22 23.2	-0.2
XAN	Xi'an	86.09	307	P	P	16 22 23.2	-0.2
XAN				pmax	pmax		
	comp=Z,14nm,0.8s						
ANMO	Albuquerque	86.17	52	P	P	16 22 24.4	+0.5
ANMO	Albuquerque	86.17	52	*ce*P	P	16 22 24.8	+0.9
ANMO				pmax	pmax		
	comp=Z,19nm,1.1s						
ANMO	Albuquerque	86.17	52	P	P	16 22 24.8	+0.9
	baz=245						
PBKT	Sadao Pong	86.27	289	P	P	16 22 25.4	+0.9
MCMT	McKenzie Canyo	86.28	41	P	P	16 22 25.1	+0.9
BILL	Bilibino	86.34	354	P	P	16 22 23.8	+0.2
BILL				IAmb	IAmb	16 22 25.1	
	comp=Z,19nm,0.9s						
BILL	Bilibino	86.34	354	*i* P	P	16 22 23.2	-0.4
BILL				*i*		16 25 52.2	
BILL				pmax	pmax		
	comp=Z,25nm,1.0s						
AHID	Auburn Hatcher	86.39	43	P	P	16 22 25.2	+0.4
AHID				IAmb	IAmb	16 22 27.0	
	comp=Z,26nm,1.2s						
RDMU	Red Mountain	86.40	45	P	P	16 22 24.7	-0.2
RDOG	Red Dog Mine	86.41	6	P	P	16 22 24.2	+0.2
MLSI	Meulaboh, Aceh	86.57	276	P	P	16 22 27.6	+1.6
	comp=Z,114nm,0.9s						
MSO	Missoula	86.62	38	P	P	16 22 25.3	-0.3
MSO	Missoula	86.62	38	P	P	16 22 25.7	+0.1
	baz=240,SNR=7.4						
DLMT	Dillon	86.70	40	P	P	16 22 26.7	+0.6
DLMT				IAmb	IAmb	16 22 28.3	
	comp=Z,24nm,0.9s						
PRP	Porcupine Dome	86.79	13	P	P	16 22 25.1	-0.9
PRP				pP	pwP	16 24 28.9	+0.1
REDW	Red Top Meadow	86.84	43	P	P	16 22 27.4	+0.6
REDW				IAmb	IAmb	16 22 29.1	
	comp=Z,47nm,1.1s						
REDW				pP	pwP	16 24 29.2	-0.5
FXWY	Fox Creek	86.85	42	P	P	16 22 27.4	+0.5
JTMT	Jette	86.89	38	P	P	16 22 26.1	-0.8
SNOW	Snow King Moun	86.95	42	P	P	16 22 27.7	+0.3
SNOW				IAmb	IAmb	16 22 29.8	
	comp=Z,47nm,1.1s						
LRM	Limekiln Ridge	87.01	40	P	P	16 22 28.2	+0.5
DAWY	Dawson	87.06	16	P	P	16 22 27.0	-0.2
DAWY				IAmb	IAmb	16 22 28.7	
	comp=Z,31nm,1.2s						
S22A	4UR Ranch, Cre	87.07	49	P	P	16 22 28.8	+0.6
S22A	4UR Ranch, Cre	87.07	49	P	P	16 22 29.4	+1.2
	baz=245,SNR=16						
O20A	White River Ci	87.11	46	P	P	16 22 27.6	-0.6
O20A				IAmb	IAmb	16 22 30.3	
	comp=Z,20nm,1.1s						
O20A	White River Ci	87.11	46	P	P	16 22 29.0	+0.8
	baz=244,SNR=9.1						
QLMT	Earthquake Lak	87.17	41	P	P	16 22 28.4	+0.1
EGAK	Eagle	87.18	15	P	P	16 22 27.3	-0.3
EGAK				IAmb	IAmb	16 22 28.9	
	comp=Z,53nm,1.6s						
FLWY	Flagg Ranch	87.27	42	P	P	16 22 29.6	+0.7
FLWY				IAmb	IAmb	16 22 31.5	
	comp=Z,40nm,0.9s						
YHB	Horse Butte	87.27	41	P	P	16 22 29.9	+1.0
YPP	Pitchstone Pla	87.29	42	P	P	16 22 29.7	+0.6
YHL	Hebgen Lake	87.33	41	P	P	16 22 30.5	+1.3
COLD	Coldfoot	87.37	11	P	P	16 22 28.7	+0.2
PD31	Pinedale Array	87.40	43	P	P	16 22 29.4	-0.1
PD31				IAmb	IAmb	16 22 31.1	
	comp=Z,15nm,0.8s						
PD31					pwP	16 24 32.0	-0.7
PDAR	Pinedale Array	87.40	43	P	P	16 22 29.9	+0.4
	comp=Z,10nm,0.6s,baz=219,slow=3.0,SNR=126						
PDAR				pP	pwP	16 24 31.5	-1.1
	comp=Z,3.3nm,1.0s,baz=234,slow=4.8,SNR=8.6						

PDAR				PP	PP	16 26 02.6	-2.1
	comp=Z,4.1nm,1.0s,baz=235,slow=5.2,SNR=9.6						
PDAR	Pinedale Array	87.40	43	P	P	16 22 29.9	+0.4
PDAR					pwP	16 24 31.5	-1.1
PDAR					PP	16 26 02.6	-2.1
H17A	Grant Village	87.50	42	P	P	16 22 31.8	+1.8
H17A				IAmb	IAmb	16 22 33.4	
	comp=Z,29nm,0.9s						
H17A	Grant Village	87.50	42	P	P	16 22 32.3	+2.4
	baz=242,SNR=20						
YHH	Holmes Hill	87.51	41	P	P	16 22 30.4	+0.4
SMCO	Snowmass	87.58	48	P	P	16 22 30.9	+0.2
KMI	Kunming	87.66	297	P	P	16 22 33.1	+2.0
KMI				pmax	pmax		
	comp=Z,17nm,1.1s						
KMI				pmax	pmax		
	comp=Z,140nm,5.0s						
LKWY	Lake	87.69	42	P	P	16 22 32.3	+1.4
LKWY				IAmb	IAmb	16 22 34.4	
	comp=Z,32nm,1.1s						
LKWY	Lake	87.69	42	P	P	16 22 32.3	+1.4
LKWY				pmax	pmax		
	comp=Z,32nm,1.1s						
FYU	Fort Yukon	87.75	13	P	P	16 22 29.6	-0.7
WALA	Waterton Lakes	87.77	37	P	P	16 22 31.0	+0.1
WALA				IAmb	IAmb	16 22 32.7	
	comp=Z,17nm,0.8s						
SDCO	Great Sand Dun	88.03	49	P	P	16 22 32.7	+0.1
SDCO	Great Sand Dun	88.03	49	P	P	16 22 33.3	+0.6
	baz=246,SNR=10.0						
YNE	Yellowstone No	88.14	41	P	P	16 22 33.8	+0.8
RWWY	Rawlins	88.49	45	P	P	16 22 34.8	+0.1
RWWY				IAmb	IAmb	16 22 36.5	
	comp=Z,54nm,1.4s						
MSTX	Muleshoe	88.57	54	P	P	16 22 35.2	+0.2
MSTX				IAmb	IAmb	16 22 36.8	
	comp=Z,26nm,0.8s						
MSTX	Muleshoe	88.57	54	P	P	16 22 35.8	+0.7
	baz=248						
T25A	Trinidad	88.58	50	P	P	16 22 35.1	-0.1
T25A	Trinidad	88.58	50	P	P	16 22 35.8	+0.6
	baz=246						
RLMT	Red Lodge	88.66	41	P	P	16 22 36.1	+0.8
	baz=243						
GCMT	Greycliff	88.71	41	P	P	16 22 36.5	+1.0
CMAR	Chiang Mai Arr	88.72	290	P	P	16 22 37.2	+1.3
	comp=Z,6.7nm,0.9s,baz=112,slow=2.8,SNR=47						
CMAR				PP	PP	16 26 14.1	-1.2
	comp=Z,0.9nm,0.5s,baz=214,slow=12,SNR=5.4						
CMAR	Chiang Mai Arr	88.72	290	P	P	16 22 37.2	+1.3
CMAR					PP	16 26 14.1	-1.2
TOLK	Toolik Lake Re	88.74	10	P	P	16 22 34.7	-0.2
TOLK				IAmb	IAmb	16 22 36.1	
	comp=Z,19nm,1.2s						
TOLK	Toolik Lake Re	88.74	10	P	P	16 22 35.0	0.0
	baz=208						
Q24A	Divide	88.78	48	P	P	16 22 36.4	+0.2
Q24A				IAmb	IAmb	16 22 38.5	
	comp=Z,25nm,1.4s						
Q24A	Divide	88.78	48	P	P	16 22 37.1	+1.0
	baz=246						
ISCO	Idaho Springs	88.79	47	P	P	16 22 36.5	+0.3
ISCO				IAmb	IAmb	16 22 38.4	
	comp=Z,33nm,1.8s						
ISCO	Idaho Springs	88.79	47	P	P	16 22 36.5	+0.3
ISCO				pmax	pmax		
	comp=Z,33nm,1.8s						
ISCO	Idaho Springs	88.79	47	P	P	16 22 37.1	+0.9
	baz=246						
CHTO	Chiang Mai	88.83	290	P	P	16 22 36.9	+0.5
CHTO	Chiang Mai	88.83	290	P	P	16 22 36.9	+0.5
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
N23A	Red Feather La	89.02	46	P	P	16 22 37.7	+0.5
N23A				IAmb	IAmb	16 22 39.5	
	comp=Z,33nm,1.1s						
N23A	Red Feather La	89.02	46	P	P	16 22 38.3	+1.2
	baz=245,SNR=13						
833A	Chaparral WMA,	89.19	60	P	P	16 22 39.1	+1.2
	baz=249						
SYO	Syowa Base	89.19	193	⇑eP	P	16 22 34.8	-2.3
SYO	Syowa Base	89.19	193	⇓ePcP	PcP	16 22 37.8	-0.3
SYO	Syowa Base	89.19	193	⇑epP	pP	16 24 41.4	+3.5
CMIG	Matias Romero	89.35	72	P	P	16 22 40.3	+1.4
	comp=Z,7.2nm,0.9s,baz=276,slow=5.0,SNR=12						
CMIG	Matias Romero	89.35	72	P	P	16 22 40.3	+1.4
K22A	Casper	89.36	45	P	P	16 22 38.9	+0.3
K22A				IAmb	IAmb	16 22 40.4	
	comp=Z,51nm,1.6s						
K22A	Casper	89.36	45	P	P	16 22 39.4	+0.8
	baz=245						
YAK	Yakutsk	89.45	338	P	P	16 22 37.5	-0.8
YAK	Yakutsk	89.45	338	eP	P	16 22 37.3	-1.0
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
EPYK	Eagle Plains	89.57	16	P	P	16 22 38.3	-0.6
EPYK				IAmb	IAmb	16 22 40.0	
	comp=Z,29nm,0.9s						
EPYK	Eagle Plains	89.57	16	P	P	16 22 38.8	0.0
	baz=220						
JCT	Junction City	89.62	58	P	P	16 22 39.5	-0.4
JCT				IAmb	IAmb	16 22 41.6	
	comp=Z,14nm,0.8s						
JCT	Junction City	89.62	58	P	P	16 22 39.5	-0.4
JCT				pmax	pmax		
	comp=Z,14nm,0.8s						
JCT	Junction City	89.62	58	P	P	16 22 40.5	+0.6
	baz=249						
EGMT	Eagleton	89.69	39	P	P	16 22 39.9	+0.1
EGMT	Eagleton	89.69	39	P	P	16 22 40.5	+0.6
	baz=243						
AMTX	Amarillo	89.75	53	P	P	16 22 40.4	-0.1
AMTX				IAmb	IAmb	16 22 42.1	
	comp=Z,18nm,0.9s						
AMTX	Amarillo	89.75	53	P	P	16 22 41.1	+0.6
	baz=248						
ABTX	Abilene, Hawle	90.51	56	P	P	16 22 44.2	+0.2
ABTX	Abilene, Hawle	90.51	56	P	P	16 22 44.5	+0.5
	baz=249						
KSCO	Kaye Shedlock’	90.60	49	P	P	16 22 46.5	+2.1
	baz=248						
SNAA	Sanae	90.68	179	P	P	16 22 43.5	-0.6
SNAA	Sanae	90.68	179	P	P	16 22 43.3	-0.8
SNAA				IAmb	IAmb	16 22 44.4	
	comp=Z,37nm,1.3s						
SNAA	Sanae	90.68	179	d iP	P	16 22 43.0	-1.1
LZH	Lanzhou	90.72	308	⇓P	P	16 22 46.3	+1.2
LZH				pmax	pmax		
	comp=Z,25nm,1.4s						
LZH				pmax	pmax		
	comp=Z,100nm,5.3s						
VNA3	Neumayer Olymp	90.82	176	P	P	16 22 44.3	-0.4
LAO	LASA Array	91.25	41	P	P	16 22 48.4	+1.2
LAO	LASA Array	91.25	41	P	P	16 22 48.6	+1.5
	baz=245						
VNA2	Neumayer--Watz	91.26	177	P	P	16 22 46.5	-0.2
	baz=183,slow=4.7						
NVL	N'lazarevskaya	91.33	183	eP	P	16 22 46.1	-0.9
NVL				pmax	pmax		
	comp=Z,15nm,0.9s						
VNA1	Neumayer--Stat	91.49	177	P	P	16 22 48.0	+0.3
PLCA	Paso Flores	91.49	134	P	P	16 22 49.9	+1.3
	comp=Z,1.2nm,0.7s,baz=291,slow=7.3,SNR=4.1						
435B	Jarrell	91.52	58	P	P	16 22 49.3	+0.7
	baz=250						
RSSD	Black Hills	91.62	44	P	P	16 22 48.7	-0.3
RSSD				IAmb	IAmb	16 22 50.5	
	comp=Z,17nm,0.9s						
RSSD	Black Hills	91.62	44	P	P	16 22 48.7	-0.3
RSSD				pmax	pmax		
	comp=Z,17nm,0.9s						
RSSD	Black Hills	91.62	44	P	P	16 22 49.2	+0.2
	baz=247						
OGNE	Ogallala	91.76	47	P	P	16 22 50.1	+0.5
	baz=248						
INK	Inuvik	91.85	15	P	P	16 22 48.8	-0.5
	comp=Z,20nm,0.9s,baz=216,slow=4.5,SNR=65						
INK				PP	PP	16 26 37.5	-1.1
	comp=Z,3.9nm,1.1s,baz=210,slow=9.0,SNR=3.5						
INK	Inuvik	91.85	15	P	P	16 22 48.5	-0.7
INK				IAmb	IAmb	16 22 49.9	
	comp=Z,24nm,0.9s						
WMOK	Wichita Mounta	91.92	54	P	P	16 22 50.1	-0.3
WMOK	Wichita Mounta	91.92	54	P	P	16 22 50.2	-0.3
WMOK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
WMOK	Wichita Mounta	91.92	54	P	P	16 22 51.0	+0.5
	baz=250						
U32A	Winter Ranch,	92.32	53	P	P	16 22 52.7	+0.5
U32A				IAmb	IAmb	16 22 54.1	
	comp=Z,35nm,0.9s						
X34A	Smith Ranch, M	92.61	55	P	P	16 22 54.4	+0.8
X34A				IAmb	IAmb	16 22 55.9	
	comp=Z,33nm,1.4s						
CBKS	Cedar Bluff	92.63	50	P	P	16 22 54.5	+0.9
CBKS				IAmb	IAmb	16 22 55.5	
	comp=Z,19nm,0.9s						
CBKS	Cedar Bluff	92.63	50	P	P	16 22 54.5	+0.9
CBKS				pmax	pmax		
	comp=Z,19nm,0.9s						
FNO	Franklin	93.17	54	P	P	16 22 56.7	+0.6
DGMT	Dagmar	93.23	40	P	P	16 22 56.9	+0.8
SONM	Songino Array	93.39	319	P	P	16 22 57.7	+0.7
	comp=Z,0.9nm,1.0s,baz=106,slow=5.2,SNR=3.9						
SONM				PP	PP	16 26 49.4	-1.8
	comp=Z,0.5nm,0.8s,baz=134,slow=6.2,SNR=2.6						
SONM	Songino Array	93.39	319	P	P	16 22 57.7	+0.7
SONM					PP	16 26 49.4	-1.8
YKA	Yellowknife Ar	94.33	25	P	P	16 23 00.5	-0.2
	comp=Z,7.7nm,0.9s,baz=242,slow=4.2,SNR=76						
YKA				PP	PP	16 26 54.4	-3.4
	comp=Z,2.2nm,1.0s,baz=238,slow=7.3,SNR=6.9						
YKA				PKKP	PKKPdf	16 39 57.1	-2.2
	comp=Z,0.1nm,0.3s,baz=48,slow=2.3,SNR=6.1						
T35A	Sooner Cattle	94.39	53	P	P	16 23 02.0	+0.4
T35A				IAmb	IAmb	16 23 04.0	
	comp=Z,49nm,1.9s						
BGNE	Belgrade	94.66	48	P	P	16 23 04.0	+1.2
BGNE	Belgrade	94.66	48	P	P	16 23 03.7	+0.9
	baz=250						
KSU1	Kansas State U	95.02	51	P	P	16 23 05.7	+1.2
	baz=251						
C36M	Paulatuk	95.07	17	P	P	16 23 03.8	0.0
C36M				IAmb	IAmb	16 23 04.8	
	comp=Z,9.8nm,0.8s						
C36M	Paulatuk	95.07	17	P	P	16 23 03.3	-0.6
	baz=231						
TIXI	Tiksi	96.05	345	P	P	16 23 07.5	-0.8
	comp=Z,2.7nm,0.8s,baz=104,slow=4.6,SNR=12						
TIXI				PP	PP	16 27 07.4	-3.2
	comp=Z,1.3nm,0.3s,baz=122,slow=1.1,SNR=5.6						
TIXI	Tiksi	96.05	345	P	P	16 23 07.2	-1.0
TIXI	Tiksi	96.05	345	d iP	P	16 23 08.0	-0.2
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ECSD	EROS Data Cent	96.49	46	P	P	16 23 10.7	-0.3
	baz=252						
U40A	Yellville	97.02	54	P	Pdif	16 23 14.0	+0.5
	baz=253						
S39A	Bolivar	97.05	53	P	Pdif	16 23 14.2	+0.6
S39A				IAmb	IAmb	16 23 16.0	
	comp=Z,19nm,1.8s						
ULM	Lac du Bonnet	98.95	40	P	P	16 23 23.6	+1.8
	comp=Z,1.2nm,0.6s,baz=242,slow=5.6,SNR=3.7						
ULM				PP	PP	16 27 30.4	-2.7
	comp=Z,0.8nm,0.5s,baz=244,slow=9.4,SNR=3.2						
ULM	Lac du Bonnet	98.95	40	IAmb	IAmb	16 25 33.5	
	comp=Z,18nm,1.7s						
ULM	Lac du Bonnet	98.95	40	⇓eP	Pdif	16 23 19.3	-2.4
JFWS	Jewell Farm	100.72	48	P	Pdif	16 23 30.7	+1.0
	baz=256						
RES	Resolute Bay	105.40	16	Pdiff	Pdif	16 23 50.5	+0.7
	comp=Z,0.6nm,0.5s,baz=244,slow=2.9,SNR=5.5						
ZALV	Zalesovo Beam	108.08	322	PKiKP	PKiKP	16 28 04.5	-0.9
	comp=Z,0.8nm,0.5s,baz=48,slow=1.0,SNR=4.1						
M54A	Oil Creek Stat	108.16	51	P	PKiKP	16 28 04.0	-2.1
	baz=262						
U58A	Oxford	108.27	57	P	PKiKP	16 28 04.2	-2.2
	baz=261						
R57A	Stanardsville	108.58	55	P	PKiKP	16 28 05.0	-1.9
	baz=262						
MKAR	Makanchi Array	108.97	314	PKiKP	PKiKP	16 28 06.5	-0.9
	comp=Z,0.8nm,0.5s,baz=143,slow=0.7,SNR=21						
MKAR	Makanchi Array	108.97	314		PKiKP	16 28 06.5	-0.9
KURK	Kurchatov	111.67	318	⇑iPKIKP	PKiKP	16 28 11.3	-1.0
K59A	Cooperstown	111.86	50	P	PKiKP	16 28 11.0	-2.0
	baz=266						
D56A	ZEC Mazanza, M	112.18	46	P	PKiKP	16 28 12.3	-1.1
	baz=268						
KSH	Kashi	112.91	306	PKP	PKiKP	16 28 16.2	+0.9
KSH				PP	PP	16 29 24.6	+10
KSH				sPKP		16 31 15.1	
KSH				PKS	PKSdf	16 31 52.4	+0.4
KSH				SS	SS	16 44 25.1	+8.3
J60A	Lant Hill Farm	112.93	50	P	PKiKP	16 28 13.0	-2.0
	baz=267						
I60A	Shoreham	113.06	49	P	PKiKP	16 28 13.3	-1.9
	baz=267						
L63A	North Scituate	114.20	52	P	PKPdf	16 28 15.5	-2.0
	baz=267						
E60A	Ste Agathe de	114.44	47	P	PKPdf	16 28 15.5	-2.3
	baz=270						
D60A	Saint Jean D’O	114.81	46	P	PKPdf	16 28 16.3	-2.1
	baz=270						
BRVK	Borovoye	116.75	321	⇓iPKIKP	PKPdf	16 28 21.7	-0.3
BRVK				pmax	pmax		
	comp=Z,5.0nm,2.5s						
ARU	Arti	122.70	326	i PKIKP	PKPdf	16 28 33.1	-0.3
ARU						16 30 20.8	
ARU						16 34 49.8	
ARU				SS	SS	16 46 17.7	-2.7
ARCES	ARCESS Array B	126.21	350	PKP	PKiKP	16 28 40.2	0.0
	comp=Z,1.7nm,0.7s,baz=87,slow=1.5,SNR=7.9						
GEYT	Alibeck	126.87	304	PKP	PKiKP	16 28 42.3	-0.2
	comp=Z,2.2nm,0.8s,baz=359,slow=5.9,SNR=5.8						
BOSA	Boshof	128.40	207	PKP	PKiKP	16 28 46.4	+0.3
	comp=Z,4.1nm,0.8s,baz=72,slow=1.6,SNR=4.6						
BOSA				PP	PP	16 31 01.0	+3.5
	comp=Z,8.0nm,0.9s,baz=139,slow=7.8,SNR=6.1						
BOSA				SKPbc	SKPdf	16 31 14.0	-14
	comp=Z,4.4nm,0.9s,baz=132,slow=11,SNR=4.1						
KLMR	Klimovskoe	129.23	337	AMP		16 31 17.5	
	comp=Z,49nm,1.4s						
KLMR	Klimovskoe	129.23	337	ePKPdf	pPKPdf	16 30 55.7	+0.5
FINES	FINESS Array B	133.07	344	PKP	PKPdf	16 28 53.2	+0.2
	comp=Z,1.8nm,0.9s,baz=57,slow=7.0,SNR=5.3						
FINES				SKPbc	SKPbc	16 31 30.1	+0.9
	comp=Z,4.8nm,0.9s,baz=46,slow=8.2,SNR=7.9						
FINES	FINESS Array B	133.07	344	c iPKIKP	PKiKP	16 28 54.5	+0.3
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
OBN	Obninsk	134.16	333	ePKIKP	PKPdf	16 28 55.5	+0.4
OBN				i		16 31 32.4	
OBN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NB2	NORSAR Subarra	136.28	353	PKP	SKPbc	16 31 40.7	+1.3
	comp=Z,1.9nm,1.1s,baz=13,slow=3.0						
NOA	NORSAR Array B	136.28	353	SKPbc	SKPbc	16 31 40.6	+1.3
	comp=Z,5.8nm,1.1s,baz=16,slow=4.6,SNR=4.6						
KMBO	Kilima Mbogo	140.02	246	PKhKP	PKPpre	16 29 01.6	
	comp=Z,1.5nm,0.6s,baz=68,slow=5.4,SNR=6.5						
KMBO				SKPbc	SKiKP	16 31 53.6	-0.4
	comp=Z,3.5nm,0.9s,baz=91,slow=3.6,SNR=6.8						
KMBO	Kilima Mbogo	140.02	246	c iPKIKP	PKPdf	16 29 08.6	+1.0
KMBO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SORM	Soroca	142.65	330	⇓P	PKPdf	16 29 08.2	-2.6
SORM	Soroca	142.65	330	⇓PKHKP	PKPpre	16 29 08.2	
GAZ	Gaziantep	143.17	309		PKPbc	16 29 11.0	+0.4
BSEG	Bad Segeberg	143.32	351	ePKPbc	PKPbc	16 29 10.6	+0.3
	baz=16,slow=2.8						
HPK	Haverah Park	143.87	3	eP	PKPbc	16 29 11.6	-0.5
KWP	Kalwaria Pacla	143.94	336	ePKP	PKPdf	16 29 13.0	-0.1
KWP	Kalwaria Pacla	143.94	336		PKPbc	16 29 12.4	-0.1
KWP	Kalwaria Pacla	143.94	336	ePKIKP	PKPdf	16 29 13.0	-0.1
WME	Myndd Eilian	144.23	6	eP	PKPbc	16 29 12.5	-0.6
WLF1	Llynfaes	144.32	6	eP	PKPbc	16 29 13.1	-0.4
YRC	Rhoscolyn	144.34	6	eP	PKPbc	16 29 13.1	-0.4
LBWR	Ladybower, Pea	144.42	3	eP	PKPbc	16 29 13.5	-0.3
BUR08	Bucovina Ar. S	144.46	332		PKPab	16 29 14.6	-0.2
BURAR	Bucovina Array	144.48	332	⇑P	PKPab	16 29 15.2	+0.4
BURAR	Bucovina Array	144.48	332	⇑PKIKP	PKPab	16 29 15.2	+0.4
OJC	Ojcow	144.49	340	ePKP	PKPab	16 29 14.4	-0.2
OJC	Ojcow	144.49	340		PKPdf	16 29 13.3	-0.7
OJC	Ojcow	144.49	340	ePKIKP	PKPab	16 29 14.4	-0.2
YLL	Llanberis	144.49	6	eP	PKPdf	16 29 13.4	-0.5
RETH	Rethem/Aller,	144.62	352	ePKPbc	PKPab	16 29 14.8	-0.1
	baz=16,slow=2.8						
TESR	Tescani	144.62	329	⇑P	PKPdf	16 29 13.9	-0.5
BR131	Keskin Array S	144.62	315		PKPdf	16 29 14.8	0.0
BR131	Keskin Array S	144.62	315	dePKIKP	PKPdf	16 29 14.8	0.0
BRTR	Keskin Array B	144.62	315	PKP	PKPbc	16 29 15.0	-0.1
	comp=Z,6.8nm,0.8s,baz=132,slow=3.3,SNR=44						
BRTR	Keskin Array B	144.62	315		PKPbc	16 29 15.0	-0.1
KOLS	Kolonicke sedl	144.67	336	ePKIKP	PKPbc	16 29 15.0	+0.3
KOLS	Kolonicke sedl	144.67	336	ePKP	PKPbc	16 29 15.0	+0.3
NRDL	Niedersach Rie	144.75	351	ePKPbc	PKPab	16 29 15.2	-0.2
	baz=16,slow=2.8						
CFR	Carcaliu	144.79	327	⇑P	PKPab	16 29 15.5	-0.4
CFR	Carcaliu	144.79	327	⇑PKIKP	PKPbc	16 29 15.5	+0.4
FOEL	Foel Wylfa	144.83	5	eP	PKPbc	16 29 15.1	0.0
LLW	Llanuwychllyn	144.83	5	eP	PKPdf	16 29 14.7	+0.2
TOPG	Topolog	144.86	326	⇓P	PKPab	16 29 16.0	-0.2
UZH	Uzhgorod	144.91	336	d iPKIKP	PKPab	16 29 16.3	0.0
UZH				e		16 32 20.1	
KSP	Ksiaz	145.00	344	ePKP	PKPab	16 29 16.6	+0.1
KSP	Ksiaz	145.00	344	ePKIKP	PKPab	16 29 16.6	+0.1
NIE	Niedzica	145.00	338	ePKP	PKPab	16 29 16.5	-0.2
NIE	Niedzica	145.00	338	ePKIKP	PKPab	16 29 16.5	-0.2
CRVS	Cervenica-Dubn	145.01	337	ePKIKP	PKPab	16 29 16.5	-0.2
CRVS	Cervenica-Dubn	145.01	337	ePKP	PKPab	16 29 16.5	-0.2
VRI	Vrincioaia	145.04	329	⇑P	PKPab	16 29 17.2	+0.3
VRI	Vrincioaia	145.04	329	⇑PKIKP	PKPab	16 29 17.2	+0.3
PLOR	Plostina	145.09	329	⇑P	PKPab	16 29 17.1	0.0
PLOR	Plostina	145.09	329	⇑PKIKP	PKPab	16 29 17.1	0.0
CWF	Charnwood Fore	145.10	3	eP	PKPbc	16 29 15.9	+0.1
ANTO	Ankara	145.12	316	PKPbc	PKPbc	16 29 16.0	-0.4
ANTO	Ankara	145.12	316	PKIKP	PKPbc	16 29 16.0	-0.4
TRPA	Tarpa	145.22	335	⇑P	PKPbc	16 29 16.8	+0.4
HLM1	Long Mynd	145.22	5	eP	PKPbc	16 29 15.9	-0.4
HARR	Harsova	145.22	326	⇑P	PKPdf	16 29 14.8	-0.6
HARR	Harsova	145.22	326	⇑PKIKP	PKPdf	16 29 14.8	-0.6
ARCR	ARCALIA	145.26	332	⇑P	PKPab	16 29 17.8	+0.1
OSTC	Ostas	145.28	343	ePKP	PKPab	16 29 18.0	+0.3
CHVC	Chvalec	145.29	344	ePKP	PKPab	16 29 17.3	-0.4
CLZ	Clausthal	145.34	350	ePKPbc	PKPab	16 29 17.3	-0.6
	baz=16,slow=2.8						
OKC	Ostrava-Krasne	145.35	341	ePKP	PKPbc	16 29 16.3	-0.4
OKC	Ostrava-Krasne	145.35	341	ePKIKP	PKPbc	16 29 16.3	-0.4
CLL	Collm	145.36	347	⇑iPKPbc	PKPab	16 29 17.7	-0.2
	comp=Z,35nm,0.9s						
CLL				⇓i		16 29 26.2	
	comp=Z,15nm,1.0s						
CLL	Collm	145.36	347	ePKPbc	PKPab	16 29 17.9	0.0
	baz=16,slow=2.8						
CLL	Collm	145.36	347		PKPbc	16 29 16.7	0.0
CLL	Collm	145.36	347	⇑iPKP2	PKPab	16 29 17.7	-0.2
CLL				pmax	pmax		
	comp=Z,35nm,0.9s						
CLL				pmax	pmax		
	comp=Z,15nm,1.0s						
UPC	Upice	145.38	344	ePKP	PKPab	16 29 17.6	-0.4
UPC	Upice	145.38	344	ePKP2	PKPab	16 29 17.6	-0.4
DPC	Dobruska-Polom	145.43	343	ePKP	PKPab	16 29 18.0	-0.3
DPC	Dobruska-Polom	145.43	343	ePKP2	PKPab	16 29 18.0	-0.3
LANS	Liptovska Anna	145.51	339	ePKP2	PKPab	16 29 18.5	-0.2
LANS	Liptovska Anna	145.51	339	ePKP	PKPab	16 29 18.5	-0.2
KRLC	Kraliky	145.55	342	ePKP	PKPab	16 29 18.2	-0.6
KRLC				ex	x	16 29 26.2	
KRLC	Kraliky	145.55	342	ePKP2	PKPab	16 29 18.2	-0.6
BRG	Berggiesshubel	145.56	346	ePKP	PKPbc	16 29 17.8	+0.5
	comp=Z,18nm,0.9s						
BRG				epPKP	pPKPdf	16 31 29.6	+3.9
	comp=Z,4.0nm,1.1s						
BRG	Berggiesshubel	145.56	346	ePKPbc	PKPbc	16 29 17.8	+0.5
	baz=16,slow=2.8						
MORC	Moravsky Berou	145.59	341	⇓P	PKPab	16 29 18.3	-0.7
MORC	Moravsky Berou	145.59	341		PKPbc	16 29 17.4	-0.1
MORC	Moravsky Berou	145.59	341	PKIKP	PKPbc	16 29 17.4	-0.1
MORC	Moravsky Berou	145.59	341	ePKP	PKPbc	16 29 18.1	+0.6
DOPR	Dopca	145.62	330	⇓P	PKPab	16 29 19.1	0.0
FBE	Freiberg	145.65	347	ePKPbc	PKPab	16 29 18.4	-0.7
	baz=16,slow=2.8						
MLR	Muntele Rosu	145.69	329	⇑P	PKPbc	16 29 18.6	+0.6
MLR	Muntele Rosu	145.69	329	⇑PKP2	PKPbc	16 29 18.6	+0.6
NEUB	Neuenburg	145.70	348	ePKPbc	PKPbc	16 29 18.2	+0.5
	baz=16,slow=2.8						
PVCC	Panska Ves	145.73	345	ePKP	PKPab	16 29 19.1	-0.3
PVCC	Panska Ves	145.73	345	ePKP2	PKPab	16 29 19.1	-0.3
MCH1	Michaelchurch	145.73	5	eP	PKPbc	16 29 17.1	-0.5
MBAR	Mbarara	145.83	241		PKPbc	16 29 19.7	+0.3
MBAR	Mbarara	145.83	241	dePKIKP	PKPbc	16 29 19.6	+0.2
MONM	Monmouth	145.90	5	eP	PKPbc	16 29 17.4	-0.8
VOIR		146.16	330	⇑P	PKPbc	16 29 18.6	-0.7
VOIR		146.16	330	⇑PKIKP	PKPbc	16 29 18.6	-0.7
DRGR		146.20	333	⇑P	PKPbc	16 29 19.7	+0.4
DRGR		146.20	333	⇑PKP2	PKPbc	16 29 19.7	+0.4
PRU	Pruhonice	146.23	345	ePKP	PKPbc	16 29 19.9	+0.7
PRU	Pruhonice	146.23	345	ePKP2	PKPbc	16 29 19.9	+0.7
GOPC	GO Pecny, Ondr	146.24	344	ePKP	PKPbc	16 29 19.5	+0.3
GOPC	GO Pecny, Ondr	146.24	344	ePKP2	PKPbc	16 29 19.5	+0.3
MOX	Moxa	146.27	348	ePKPbc	PKPbc	16 29 19.7	+0.4
	baz=16,slow=2.8						
VRAC	Vranov	146.29	342	⇑P	PKiKP	16 29 20.9	-0.8
VRAC	Vranov	146.29	342	⇑PKP2	PKiKP	16 29 20.9	-0.8
VRAC	Vranov	146.29	342	ePKP	PKPbc	16 29 20.3	+0.9
VYHS	Vyhne	146.29	339	ePKP2	PKPbc	16 29 19.9	+0.5
VYHS	Vyhne	146.29	339	ePKP	PKPbc	16 29 19.9	+0.5
TANN	Tannenbergstha	146.31	347	ePKPbc	PKPbc	16 29 20.0	+0.5
	baz=16,slow=2.8						
JAVC	Velka Javorina	146.36	341	ePKP	PKiKP	16 29 21.4	-0.5
GUNZ	Gunzen	146.39	347	ePKPbc	PKPbc	16 29 20.2	+0.6
	baz=16,slow=2.8						
PSZ	Piszkesteto	146.41	337	⇑P	PKPbc	16 29 20.9	+1.1
PSZ	Piszkesteto	146.41	337		PKPbc	16 29 19.9	+0.1
PSZ	Piszkesteto	146.41	337	⇑PKP2	PKPbc	16 29 20.9	+1.1
ARR	Arges	146.42	330	⇑P	PKPbc	16 29 19.6	-0.3
WERN	Wernitzgruen	146.45	347	ePKPbc	PKPbc	16 29 20.0	+0.2
	baz=16,slow=2.8						
WOL	Wolverton	146.53	3	eP	PKPbc	16 29 19.4	-0.5
KRUC	Moravsky	146.57	342	ePKP	PKPbc	16 29 20.7	+0.6
PBCC	Pribram	146.65	345	ePKP	PKPab	16 29 24.0	+0.9
MANZ	Manzenberg	146.79	347	ePKPbc	PKPbc	16 29 21.3	+0.5
	baz=16,slow=2.8						
MODS	Modra-Piesok	146.91	341	ePKP2	PKPbc	16 29 21.6	+0.5
MODS	Modra-Piesok	146.91	341	ePKP	PKPbc	16 29 21.6	+0.5
MODS	Modra-Piesok	146.91	341	e	PKPab	16 29 29.1	+4.9
CSS	Mathiatis	146.91	307		PKPbc	16 29 20.9	-0.6
ROTZ	Rotzenmuhle	146.98	347	ePKPbc	PKPbc	16 29 22.0	+0.7
	baz=16,slow=2.8						
MEM	Membach	147.10	355	PKPdf	PKPdf	16 29 17.7	-0.7
MEM	Membach	147.10	355	PKiKP	PKPbc	16 29 22.1	+0.6
BSTI	Sart Tilman	147.16	355	PKiKP	PKPbc	16 29 22.4	+0.7
TNS	Taunus Mts	147.20	352	ePKPbc	PKPbc	16 29 22.7	+0.8
	baz=16,slow=2.8						
GRA1	Grafenberg Arr	147.25	348		PKPab	16 29 25.9	+0.3
GRF	Grafenberg Arr	147.25	348	PKP2	PKPab	16 29 25.9	+0.3
KHC	Kasperske Hory	147.26	345	ePKP	PKPbc	16 29 22.8	+0.8
KHC				ex	x	16 29 26.8	
KHC	Kasperske Hory	147.26	345		PKPbc	16 29 22.4	+0.3
KHC	Kasperske Hory	147.26	345	ePKP2	PKPbc	16 29 22.8	+0.8
BCLA	Clavier	147.34	355	PKiKP	PKPbc	16 29 22.6	+0.4
BHOU	Houvegnez	147.35	355	PKPdf	PKPdf	16 29 18.3	-0.5
BHOU	Houvegnez	147.35	355	PKiKP	PKPbc	16 29 23.0	+0.8
BMRD	Maredsous	147.50	356	PKiKP	PKPbc	16 29 23.0	+0.5
GEC2	GERESS Array S	147.50	345	ePKPbc	PKPbc	16 29 23.0	+0.2
	baz=16,slow=2.8						
GEC2	GERESS Array S	147.50	345		PKPbc	16 29 22.8	0.0
GERES	GERESS Array B	147.50	345	PKPbc	PKPbc	16 29 22.8	0.0
	comp=Z,5.0nm,0.7s,baz=18,slow=3.1,SNR=40						
GERES	GERESS Array B	147.50	345	PKPbc	PKPab	16 29 30.9	+4.2
	comp=Z,4.3nm,0.6s,baz=30,slow=2.1,SNR=12						
GERES	GERESS Array B	147.50	345		PKPbc	16 29 22.8	0.0
GERES					PKPab	16 29 30.9	+4.2
BZS	Buzias	147.60	333	⇑P	PKPbc	16 29 23.5	+0.6
BZS	Buzias	147.60	333	⇑PKP2	PKPbc	16 29 23.5	+0.6
DOU	Dourbes	147.71	356	PKiKP	PKPbc	16 29 23.7	+0.6
CONA	Conrad Observa	147.75	342	ePKiKP	PKPbc	16 29 24.0	+0.6
	comp=Z,7.9nm,0.7s,SNR=6.5						
WLF	Walferdange	148.02	354	x	PKiKP	16 29 25.1	-0.1
WLF	Walferdange	148.02	354	ePKPbc	PKiKP	16 29 25.1	-0.1
	baz=16,slow=2.8						
MOA	Molln	148.27	343	ePKiKP	PKiKP	16 29 25.7	-0.1
	comp=Z,20nm,1.4s						
ARSA	Arzberg	148.45	342	i PKiKP	PKiKP	16 29 26.3	+0.1
	comp=Z,8.7nm,1.1s						
BFO	Black Forest	149.06	351	ePKPbc	PKiKP	16 29 27.1	-0.3
	baz=16,slow=2.8						
VTS	Vitosha	149.11	328	⇑P	PKPbc	16 29 26.5	-0.5
VTS	Vitosha	149.11	328	⇑PKHKP	PKPpre	16 29 26.5	
SOKA	Soboth	149.12	342	ePKiKP	PKiKP	16 29 27.3	-0.4
	comp=Z,5.9nm,1.0s						

KBA	Koelnbreinsper	149.23	344	*e*PKiKP	PKPbc	16 29 27.4	+0.2
	comp=Z,5.7nm,0.7s						
UBR	Ueberruh	149.39	348	*e*PKPbc	PKPbc	16 29 27.7	+0.3
	baz=16,slow=2.8						
OBKA	Obir	149.41	342	*e*PKiKP	PKPbc	16 29 27.8	+0.3
	comp=Z,7.2nm,0.8s						
WATA	Walderalm	149.42	346	*e*PKiKP	PKPbc	16 29 27.6	0.0
	comp=Z,6.1nm,0.7s						
RETA	Reutte	149.45	348	*i* PKiKP	PKiKP	16 29 28.3	0.0
	comp=Z,12nm,1.4s						
WTTA	Wattenberg	149.47	346	*e*PKiKP	PKPbc	16 29 28.0	+0.2
	comp=Z,12nm,0.6s						
MOTA	Moosalm	149.51	347	*e*PKiKP	PKiKP	16 29 28.2	-0.4
	comp=Z,20nm,1.4s,SNR=4.3						
MYKA	Terra Mystica	149.56	343	*e*PKiKP	PKPbc	16 29 27.9	+0.1
	comp=Z,11nm,0.8s						
SQTA	Sankt Quirin	149.61	347	*e*PKiKP	PKiKP	16 29 28.6	-0.2
	comp=Z,12nm,0.8s,SNR=4.8						
ABTA	Abfaltersbach	149.75	345	*e*PKiKP	PKPbc	16 29 27.6	-0.7
	comp=Z,7.3nm,0.6s						
DAVA	Damuels	149.81	349	*i* PKiKP	PKPbc	16 29 28.3	-0.2
	comp=Z,14nm,1.0s						
FETA	Feichten	149.90	347	*e*PKiKP	PKPbc	16 29 28.5	-0.2
	comp=Z,8.9nm,0.9s						
BLY	Banja Luka	150.09	337		PKPab	16 29 36.9	-0.5
CTI	Castel Tesino	150.61	345	PKPbc	PKPbc	16 29 30.3	-0.1
CTI				PKPab	PKPab	16 29 39.1	-0.6
CTI	Castel Tesino	150.61	345	PKIKP	PKPbc	16 29 30.3	-0.1
CTI						16 29 39.1	
SENIN	Lac Senin/Sane	151.14	352		PKPab	16 29 42.2	+0.2
ESDC	Sonseca Array	157.74	11	PKPab	PKPab	16 30 10.3	0.0
	comp=Z,4.0nm,0.8s,baz=337,slow=4.6,SNR=6.2						
TORD	Torodi Ar. Bea	175.34	183	PKP	PKPdf	16 29 47.0	-1.0
	comp=Z,2.3nm,1.0s,baz=99,slow=1.0,SNR=7.9						
TORD				PKPab	PKPab	16 31 27.6	-0.7
	comp=Z,3.4nm,0.9s,baz=176,slow=4.4,SNR=11						
TORD				pPKPab	pPKPab	16 33 32.9	+2.5
	comp=Z,2.3nm,1.0s,baz=176,slow=4.9,SNR=6.9						
TORD				PP	PP	16 35 20.2	+0.3
	comp=Z,4.5nm,1.1s,baz=175,slow=5.0,SNR=5.2						

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*IDC **03** 16:10:49.6±3.0, 18°.04S×178°.64W, h563^{km}±38^{km}, mb4.0/15, mb1 4.1/16, mb1mx3.8/50, mbtmp4.8/16, Error ellipse: s-maj=19.8km s-min=12.2km az=178.0*

ISC 03 16:10:50.7±0.6, **18°.0S**±0°.2×**178°.65W**±0°.09, **h579**^{km}**, n39,** σ**1^s.14**/37, **mb4.4**/16, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAR	Rarotonga	18.06	103	P	P	16 14 27.3	-0.5
	0.9nm,0.3s,baz=263,slow=7.4,SNR=12						
RAR	Rarotonga	18.06	103		P	16 14 27.4	-0.5
PPT	Papeete	27.67	94	P	P	16 15 53.1	-0.5
	24nm,0.6s,baz=214,slow=9.1,SNR=7.8						
PPT	Papeete	27.67	94		P	16 15 53.1	-0.5
WRA	Warramunga Arr	44.39	260	P	P	16 18 10.8	-0.3
	19nm,0.7s,baz=93,slow=7.0,SNR=13						
WRA	Warramunga Arr	44.39	260		P	16 18 10.8	-0.3
ASAR	Alice Springs	44.54	254	P	P	16 18 12.7	+0.5
	189nm,0.7s,baz=95,slow=7.8,SNR=13						
ASAR	Alice Springs	44.54	254		P	16 18 12.7	+0.5
SIJI	Sorong	52.04	283	P	P	16 19 08.3	+0.3
	91nm,0.7s,baz=169,slow=5.1,SNR=4.1						
SIJI	Sorong	52.04	283		P	16 19 08.3	+0.3
MSAI	Masohi	53.34	279	P	P	16 19 14.3	-2.9
WSI	Waingapu	59.64	269	P	P	16 20 04.4	+4.0
VNDA	Vanda	60.31	185	P	P	16 20 03.2	-0.5
	5.3nm,0.7s,baz=32,slow=0.9,SNR=9.4						
TTSI	Tana Toraja	62.02	276	P	P	16 20 13.8	-2.2
MJAR	Matsushiro Arr	67.87	324	P	P	16 20 51.5	-0.7
	11nm,0.6s,baz=144,slow=6.3,SNR=16						
MJAR	Matsushiro Arr	67.87	324		P	16 20 51.5	-0.7
KSRS	Korea Array	74.64	318	P	P	16 21 32.4	+0.7
	2.2nm,0.8s,baz=128,slow=6.0,SNR=10						
KSRS	Korea Array	74.64	318		P	16 21 32.5	+0.7
USRK	Ussuriysk Ar.	76.59	326	P	P	16 21 43.0	+0.7
	2.7nm,0.6s,baz=136,slow=3.5,SNR=5.9						
USRK	Ussuriysk Ar.	76.59	326		P	16 21 43.0	+0.7
NVAR	Mina Array Bea	79.67	44	P	P	16 21 59.5	+0.2
	6.7nm,0.8s,baz=228,slow=9.3,SNR=8.3						
NVAR	Mina Array Bea	79.67	44		P	16 21 59.5	+0.2
PSI	Prapat	83.67	275	P	P	16 22 19.6	-0.5
	13nm,0.7s,baz=123,slow=22,SNR=4.1						
SEY	Seymchan	83.84	347	P	P	16 22 19.1	-0.5
	6.4nm,0.5s,baz=116,slow=7.1,SNR=12						
SEY	Seymchan	83.84	347		P	16 22 19.1	-0.5
TXAR	Lajitas Array	86.25	58	P	P	16 22 33.4	+1.1
	9.7nm,0.8s,baz=221,slow=7.4,SNR=12						
TXAR	Lajitas Array	86.25	58		P	16 22 33.4	+1.1
PDAR	Pinedale Array	87.59	44	P	P	16 22 38.3	-0.1
	4.0nm,0.6s,baz=219,slow=4.0,SNR=10						
PDAR	Pinedale Array	87.59	44		P	16 22 38.3	-0.1
CMAR	Chiang Mai Arr	88.71	290	P	P	16 22 44.9	+1.1
	3.4nm,0.8s,baz=101,slow=2.8,SNR=9.1						
CMAR	Chiang Mai Arr	88.71	290		P	16 22 44.9	+1.1
CMIG	Matias Romero	89.48	72	P	P	16 22 48.2	+0.8
	2.0nm,0.7s,baz=222,slow=6.8,SNR=4.3						
CMIG	Matias Romero	89.48	72		P	16 22 48.2	+0.8
SONM	Songino Array	93.49	319	P	P	16 23 05.6	+0.3
	0.6nm,0.5s,baz=136,slow=2.7,SNR=6.3						
SONM	Songino Array	93.49	319		P	16 23 05.6	+0.3
MKAR	Makanchi Array	109.06	314	PKiKP	PKiKP	16 28 14.1	-1.2
	0.5nm,0.5s,baz=241,slow=1.4,SNR=8.7						
MKAR	Makanchi Array	109.06	314		PKiKP	16 28 14.1	-1.2
BRTR	Keskin Array B	144.71	315	PKP	PKPbc	16 29 22.9	-0.2
	6.7nm,0.8s,baz=124,slow=2.2,SNR=14						
BRTR	Keskin Array B	144.71	315		PKPbc	16 29 22.9	-0.2

KRSC 03 16:21:11.6±1.7, **48°.37N**×**156°.96E, h6**^{km}±38^{km}**, ML3.7, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.38	347	*e*S	Sb	16 22 22.6	-1.9
PAU	Pauzhetka	3.11	358	*e*S	Sn	16 22 41.1	+2.6
KDTR	Khodutka, Kamc	3.52	11	*e*P	Pn	16 22 09.8	+3.1
KDTR				*e*S	Sb	16 22 54.5	-2.7
ASAK	Asacha	4.07	8	*e*P	Pn	16 22 18.0	+3.7
ASAK				*e*S	Sb	16 23 08.1	-4.9
RUS	Russkaya	4.19	13	*e*P	Pn	16 22 19.4	+3.4
RUS				*e*S	Sn	16 23 09.4	+4.2
MTVR	Mutnovka	4.20	10	*e*P	Pn	16 22 19.9	+3.7
MTVR				*e*S	Sb	16 23 11.9	-4.9
GRL	Gorelyy	4.25	9	*e*P	Pn	16 22 20.7	+3.8
KRMR	Karymshinskiy	4.53	9	*e*P	Pn	16 22 25.0	+4.4
DALK	Dalny	4.81	13	*e*P	Pn	16 22 28.1	+3.7
DALK				*e*S	Sn	16 23 25.3	+4.9
UGLR	Uglovaya	4.99	13	*e*P	Pn	16 22 31.3	+4.2
AVH	Avacha	5.03	12	*e*P	Pn	16 22 32.4	+4.8
KOK	Koryaka	5.05	11	*e*P	Pn	16 22 32.6	+4.8
SDLR	Sedlovina	5.07	13	*e*P	Pn	16 22 31.8	+3.7

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*IDC **03** 16:22:21.8±0.8, 16°.94S×173°.43W, h0^{km}, mb4.0/8, mb1 4.3/8, mb1mx4.0/42, mbtmp4.0/8, MS3.3/4, Ms1 3.3/4, ms1mx3.0/42, Error ellipse: s-maj=35.6km s-min=18.7km az=134.0*

*NEIC **03** 16:22:21.1±2.4, 16°.89S±0°.08×173°.2W±0°.1, h10^{km}±1^{km}, mb4.9/17, Error ellipse: s-maj=20.2km s-min=13.2km az=88.0*

ISC 03 16:22:21.7±0.6, **16°.88S**±0°.06×**173°.12W**±0°.09, **h10**^{km}**, n40,** σ**1^s.72**/36, **mb4.7**/16, **2C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	3.22	24	Pn	Pn	16 23 11.0	-1.4
	29nm,0.3s,baz=182,slow=2.5,SNR=27						
AFI				Sn	Sn	16 23 46.9	-4.1
	31nm,0.3s,baz=142,slow=20,SNR=8.3						
AFI				LR	LR	16 24 01.5	
	comp=Z,92nm,18.3s,baz=272,slow=29						
AFI	Afiamalu	3.22	24		Pn	16 23 11.2	-1.2
NIUE	Niue	3.75	126		Pn	16 23 18.4	-1.2
RAR	Rarotonga	13.34	111	Pn	Pn	16 25 30.0	-1.2
	1.3nm,0.3s,baz=247,slow=8.9,SNR=5.6						
RAR				LR	LR	16 29 15.4	
	comp=Z,150nm,19.9s,baz=286,slow=30						
KNTN	Kanton	14.08	6	P	P	16 25 50.0	+0.9
DZM	Mont Dzumac	19.94	252	LR	LR	16 33 16.7	
	comp=Z,288nm,21.3s,baz=78,slow=33						
PPT	Papeete	22.50	95	LR	LR	16 33 04.9	
	comp=Z,64nm,21.3s,baz=271,slow=28						
URZ	Urewera	22.96	200	P	P	16 27 27.5	+1.2
	7.9nm,0.4s,baz=45,slow=16,SNR=14						
URZ	Urewera	22.96	200	P	P	16 27 26.8	+0.5
URZ				IAmb	IAmb	16 28 02.0	
	comp=Z,87nm,1.8s						
BKZ	Black Stump Fm	23.99	200	P	P	16 27 36.0	-0.5
BKZ				IAmb	IAmb	16 27 46.8	
	comp=Z,103nm,1.8s						
TUWZ	Tuamarina	26.88	202	P	P	16 28 02.5	-0.2
THZ	Tophouse	27.55	203	P	P	16 28 07.9	-0.9
ARMA	Armidale	34.83	241	P	P	16 29 12.8	-0.4
ARMA				IAmb	IAmb	16 29 27.6	
	comp=Z,26nm,1.5s						
H11N3	WAKE ISLAND Hy	41.32	331	T	T	17 13 45.5	
	baz=148						
H11N1	WAKE ISLAND Hy	41.33	331	T	T	17 13 58.8	
	baz=148						
H11N2	WAKE ISLAND Hy	41.34	331	T	T	17 13 49.2	
	baz=148						
TOO	Toolangi	41.76	232	P	P	16 30 10.3	-1.0
TOO				IAmb	IAmb	16 30 30.1	
	comp=Z,27nm,1.6s						
STKA	Stephens Creek	43.55	241	P	P	16 30 25.4	-0.6
	comp=Z,1.7nm,0.5s,baz=73,slow=8.6,SNR=8.4						
STKA	Stephens Creek	43.55	241	P	P	16 30 24.8	-1.1
BBOO	Buckleboo	48.32	241	P	P	16 31 02.1	-1.5
WR0	Warramunga Arr	49.59	258	P	P	16 31 11.5	-2.0
WR0				IAmb	IAmb	16 32 43.5	
	comp=Z,20nm,1.9s						
WB0	Warramunga Arr	49.75	258	P	P	16 31 12.7	-2.0
WB0				IAmb	IAmb	16 32 56.2	
	comp=Z,23nm,1.9s						
WB2	Warramunga Arr	49.77	258	P	P	16 31 12.5	-2.4
WRAB	Tennant Creek	49.77	258	P	P	16 31 13.1	-1.8
WRA	Warramunga Arr	49.78	258	P	P	16 31 13.2	-1.8
	comp=Z,1.2nm,0.4s,baz=93,slow=7.2,SNR=51						
AS31	Alice Springs	49.92	253	P	P	16 31 14.4	-1.6
ASAR	Alice Springs	49.92	253	P	P	16 31 14.6	-1.4
	comp=Z,4.6nm,0.5s,baz=89,slow=8.4,SNR=223						
MTN	Manton Dam	53.89	266	P	P	16 31 44.7	-1.0
FORT	Forrest	55.00	244	P	P	16 31 52.9	-0.6
FORT				IAmb	IAmb	16 33 48.5	
	comp=Z,20nm,1.1s						
KNRA	Kununurra	55.62	262	P	P	16 31 56.2	-2.0
KNRA				IAmb	IAmb	16 33 38.2	
	comp=Z,11nm,0.8s						
FITZ	Fitzroy Crossi	58.18	259	P	P	16 32 15.0	-1.4
FITZ				IAmb	IAmb	16 32 45.5	
	comp=Z,11nm,1.5s						
PETK	Petropavlovsk-	74.11	342	P	P	16 34 00.8	+2.9
	comp=Z,1.8nm,0.7s,baz=116,slow=8.8,SNR=9.2						
NVAR	Mina Array Bea	75.25	42	P	P	16 34 08.1	+3.0
	comp=Z,0.2nm,0.4s,baz=224,slow=7.6,SNR=3.7						
NLWA	Neilton Lookou	77.71	32	P	P	16 34 18.2	-0.4
PDAR	Pinedale Array	83.18	42	P	P	16 34 50.7	+2.2
	comp=Z,0.3nm,0.6s,baz=241,slow=5.0,SNR=3.4						
ILAR	Eielson Array	83.83	11	P	P	16 34 53.1	+2.1
	comp=Z,0.2nm,0.4s,baz=220,slow=5.8,SNR=6.5						
SYO	Syowa Base	91.21	191⇑	*e*P	P	16 35 25.8	-1.0
SYO	Syowa Base	91.21	191⇑	*e*pP	P	16 35 28.4	+1.6
BRTR	Keskin Array B	147.46	320	PKPbc	PKiKP	16 42 08.6	-0.1
	comp=Z,0.8nm,0.5s,baz=54,slow=2.2,SNR=5.9						
TORD	Torodi Ar. Bea	173.77	126	PKPab	PKPab	16 44 04.3	+1.9
	comp=Z,0.6nm,0.6s,baz=264,slow=4.3,SNR=3.7						

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*DDA **03** 16:23:08.1, 36°.77N×38°.71E, h2^{km}±1^{km}, ML2.2*

*ISK **03** 16:23:08.6, 36°.81N×38°.70E, h5^{km}, ML2.5/7*

ISC 03 16:23:08.7±1.4, **36°.78N**±0°.06×**38°.72E**±0°.03, **h6**^{km}±9^{km}**, n14,** σ**0^s.51**/23, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SURC	SANLIURFA_SURC	0.13	318	*i* P	Pg	16 23 11.1	-0.4
SURC				*i* S	Sg	16 23 13.4	+0.1
SURC				IAML		16 23 16.0	
	comp=N,4µm,0.6s						
SURC				IAML		16 23 18.0	
	comp=E,3µm,0.3s						
SANL	SANLIURFA_Merk	0.44	29	*i* P	Pg	16 23 17.5	+0.2
SANL				IAML		16 23 38.0	
	comp=N,245nm,0.4s						
SANL				IAML		16 23 40.0	
	comp=E,156nm,0.6s						
URFA	Urfa	0.66	7	PG	Pg	16 23 21.2	-0.3
URFA				SG	Sg	16 23 30.7	+0.6
GZT	Gaziantep	1.08	302	*i* P	Pb	16 23 29.4	-0.6
GZT				*i* S	Sn	16 23 45.1	-0.9
GZT				IAML		16 23 46.0	
	comp=E,34nm,0.4s						
GZT				IAML		16 23 47.0	
	comp=N,26nm,0.3s						
GAZ	Gaziantep	1.27	288	PN	Pn	16 23 32.8	-0.2
GAZ				SN	Sn	16 23 50.5	+0.1
KUZU	Kuzuini	1.32	270	*i* P	Pb	16 23 33.8	-0.1
KUZU				IAML		16 23 55.0	
	comp=N,55nm,0.4s						
KUZU				IAML		16 23 57.0	
	comp=E,63nm,0.3s						
MAZI	Mazidag	1.54	63	PN	Pb	16 23 37.3	-0.3
MAZI				SN	Sg	16 23 58.0	-0.1
AKCD	Akcadag	1.64	337	*i* P	Pg	16 23 40.3	+0.2
AKCD				*i* S	Sg	16 24 01.8	+0.5
AKCD				IAML		16 24 05.0	
	comp=E,34nm,0.5s						
AKCD				IAML		16 24 07.0	
	comp=N,34nm,0.4s						
SVRC	Sivrice-ELAZID	1.66	16	PN	Pn	16 23 38.8	+0.3
SVRC				SN	Sb	16 24 00.8	-0.2
ELZG	Elazig	1.72	7	*i* P	Pg	16 23 41.4	-0.3
ELZG				*i* S	Sg	16 24 04.7	+0.6
ELZG				IAML		16 24 07.0	
	comp=E,20nm,0.3s						
ELZG				IAML		16 24 10.0	
	comp=N,17nm,0.3s						
MARD	Mardin	1.73	72	*i* P	Pb	16 23 40.4	-0.5
MARD				*i* S	Sg	16 24 04.8	+0.5
MARD				IAML		16 24 07.0	
	comp=E,31nm,0.3s						
MARD				IAML		16 24 11.0	
	comp=N,49nm,0.5s						
DARE	Darende-Malaty	2.04	332	PN	Pn	16 23 44.2	+0.6
TAHT	Tahtakopru-Hat	2.08	259	PN	Pn	16 23 45.0	+0.9
ARPR	Arapgir-MALATY	2.33	353	PN	Pn	16 23 48.2	+0.6

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*NEIC **03** 16:23:37.4±1.0, 61°.08N±0°.03×151°.07W±0°.05, h67^{km}±6^{km}, Error ellipse: s-maj=4.1km s-min=3.0km az=220.0*

AEIC 03 16:23:38±1.1, **61°.07N**±0°.02×**151°.01W**±0°.04, **h68**^{km}±6^{km}**, ML2.6**/73, **Error ellipse: s-maj=4.0km s-min=2.4km az=140.0, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPN	Captain Cook N	0.31	194			16 23 49.7	
FIS	Fire Island	0.39	78			16 23 50.0	
SUA	Susitna One	0.41	17			16 23 49.1	
SUA						16 23 58.2	
STLK	Strandline Lak	0.59	318			16 23 50.7	
SPCR	Spurr Chakacha	0.60	283			16 23 50.6	
SPCR						16 24 00.5	
RC01	Rabbit Creek A	0.62	88			16 23 51.2	
RC01						16 24 02.0	
SLKM	Skilak Lake	0.68	145			16 23 51.9	
SLKM						16 24 03.3	
SPBG	Spurr Blockage	0.69	287			16 23 51.7	
SKT	Skwentna	0.95	345			16 23 54.9	
SKT						16 24 08.3	
DFR	Drift River	0.95	241			16 23 55.0	
RDJH	Redoubt Jeurge	1.00	242			16 23 55.8	
PMR	Palmer	1.05	59	Pn		16 23 56.2	
RSO	Redoubt South	1.05	235	Pn		16 23 56.4	
RDWB	Redoubt West	1.07	238			16 23 56.7	
RDWB						16 24 11.3	
RED	Redoubt Volcan	1.08	234			16 23 56.8	
RED						16 24 11.3	
GHO	Glory Hole Cre	1.23	54			16 23 58.6	
GHO	Glory Hole Cre	1.23	54			16 24 15.1	
SEW	Seward	1.23	141	Pn		16 23 58.1	
KNK	Knik Glacier	1.28	73	Pn		16 23 59.4	
PWL	Port Wells	1.32	98			16 23 59.6	
IVE	Iliamna Volcan	1.45	224			16 24 01.9	
HOM	Homer	1.45	193			16 24 02.3	
SML	Sawmill	1.48	59			16 24 02.1	
ILS	Iliamna Low So	1.51	223			16 24 02.8	
CNPM	China Poot	1.55	184			16 24 02.9	
GLI	Glacier Island	1.92	94		P	16 24 06.5	+0.4
GLI	Glacier Island	1.92	94	Pn		16 24 06.4	
PPLA	Purkeypile	1.92	344			16 24 08.2	
SCM	Sheep Creek Mo	1.93	65			16 24 07.9	
HUR	Hurricane	2.02	18			16 24 09.8	
AU22	Augustine Moun	2.07	216			16 24 10.1	
AUP	Augustine Pinn	2.09	216			16 24 11.2	
AUH	Augustine H	2.10	216			16 24 11.2	
WAT1	Susitna Watana	2.11	32			16 24 10.8	
JPK	Jack Peak	2.14	88			16 24 10.1	
WAT6	Susitna Watana	2.17	44			16 24 10.8	
WAT2	Susitna Watana	2.22	30			16 24 12.3	
SVW2	Sparrevohn	2.22	273			16 24 11.2	
FID	Port Fidalgo	2.23	96			16 24 10.3	
HIN	Hinchinbrook I	2.31	105			16 24 11.8	
TRF	Thorofare Moun	2.41	8			16 24 14.6	
KTH	Kantishna Hill	2.49	1			16 24 15.8	
RND	Reindeer	2.55	22			16 24 16.8	
EYAK	Cordova Ski Ar	2.63	99			16 24 15.8	
DHY	Denali Highway	2.64	39			16 24 18.0	
MCK	McKinley	2.84	19	Pn		16 24 19.4	
TT01	Tatalina	3.00	310			16 24 22.1	
TTA	Tatalina	3.01	311			16 24 22.2	
BPAW	Bear Paw Mtn.	3.04	0			16 24 23.1	
GOAT	Goat Mountain	3.11	96			16 24 22.7	
RAGM	Ragged Mountai	3.19	100	Pn		16 24 23.4	
BWN	Browne	3.19	12	Pn		16 24 24.9	
PAX	Paxson	3.23	51			16 24 26.9	
KDAK	Kodiak Island	3.39	194	Pn		16 24 26.4	
GLB	Gilahina Butte	3.50	81	Pn		16 24 28.8	
NEA	Nenana	3.63	13	Pn		16 24 31.2	
BERG	Berg Lake	3.65	98			16 24 29.3	
VRDI	Verde Repeater	3.67	84	Pn		16 24 31.1	
WRH	Wood River Hil	3.67	20			16 24 31.7	
HDA	Harding Lake	3.84	27			16 24 34.1	
CRQM	Cirque	3.85	91			16 24 33.1	
MCARA	McCarthy VSAT	3.87	82	Pn		16 24 34.3	
CCB	Clear Creek Bu	3.88	21			16 24 34.6	
RIDG	Independent Ri	3.92	44	Pn		16 24 36.2	
MLY	Manley	3.98	2			16 24 35.8	
PS08	TAPS Pump Stn8	3.98	27			16 24 36.1	
TGL	Tana Glacier	4.00	91	Pn		16 24 34.8	
OHAK	Old Harbor	4.03	198			16 24 34.9	
MDM	Murphy Dome	4.10	17	Pn		16 24 38.0	
DOT	Dot Lake	4.14	48	Pn		16 24 39.0	
PTPK	Patty Peak	4.14	85			16 24 37.7	
IL31		4.17	25			16 24 38.6	
BALM	Baldy	4.21	87			16 24 38.1	
KIAG	Kiagna River	4.21	88			16 24 38.1	
SCRK	Sand Creek	4.37	45	Pn		16 24 41.5	
BARN	Barnard Glacie	4.54	86	Pn		16 24 43.6	
CTGM	Chitina Glacie	4.71	87			16 24 45.5	
SII	Sitkinak Islan	4.81	201	Pn		16 24 46.0	
IM03		5.08	347			16 24 50.9	
PRP	Porcupine Dome	5.10	27	Pn		16 24 52.1	
PCA	Pinnacle	5.39	96	Pn		16 24 53.8	
EGAK	Eagle	5.83	46	Pn		16 24 59.8	
HYT	Haines Junctio	6.58	86	Pn		16 25 09.3	
ANM	Nome	7.45	304			16 25 23.8	

LDG 03 16:27:37.6±0.1, **44°.55N**×**2°.67E, h15**^{km}**, Md2.1**/1, **Ml2.1**/18, **Error ellipse: s-maj=1.5km s-min=1.1km az=108.0, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAF	Calviac	0.57	311	*e*Pg	Pg	16 27 48.7	-0.1
CAF				*e*Sg	Sg	16 27 56.4	0.0
	5.4nm,0.2s						
LASF	Ste Croix	0.98	119	*e*Pg	Pb	16 27 56.3	0.0
LASF				*e*Sg	Sb	16 28 08.4	-0.6
	4.3nm,0.2s						
RJF	Les Rejaudoux	1.11	313	*e*Pg	Pn	16 27 58.6	0.0
RJF				*e*Sg	Sg	16 28 13.2	-0.3
	8.6nm,0.2s						
MTLF	Montolieu	1.25	195	*e*Pg	Pg	16 28 01.5	-0.3
MTLF				*e*Sn	Sb	16 28 13.7	-3.2
MTLF				*e*Sg	Sn	16 28 17.1	-0.1
	3.6nm,0.2s						
LFF	La Frestale	1.43	286	*e*Pn	Pn	16 28 00.5	-2.4
LFF				*e*Sg	Sb	16 28 22.5	+0.7
	4.4nm,0.2s						
VIVF	Saint-Julien-l	1.46	77	*e*Pg	Pb	16 28 05.1	+0.6
VIVF				*e*Sg	Sb	16 28 23.8	+0.9
	2.9nm,0.3s						
TCF	Toulx Ste Croi	1.76	350	*e*Pg	Pg	16 28 10.8	-0.7
TCF				*e*Sn	Sn	16 28 26.3	-3.6
TCF				*e*Sg	Sg	16 28 33.8	-0.6
	2.0nm,0.2s						
BGF	Bois d'Agland	2.01	4	*e*Pn	Pn	16 28 10.0	-1.0
BGF	Bois d'Agland	2.01	4	*e*Pg	Pg	16 28 15.3	-0.8
BGF				*e*Sg	Sg	16 28 40.9	-1.3
	5.8nm,0.3s						
SMF	Signal de Mont	2.25	21	*e*Pn	Pn	16 28 12.9	-1.4
SMF	Signal de Mont	2.25	21	*e*Pg	Pg	16 28 19.7	-1.0
SMF				*e*Sn	Sn	16 28 38.5	-3.3
SMF				*e*Sg	Sb	16 28 47.7	+2.1
	1.3nm,0.2s						
EPF	Esparros	2.27	229	*e*Pn	Pn	16 28 13.4	-1.2
EPF				*e*Sn	Sn	16 28 39.2	-3.1
EPF				*e*Sg	Sg	16 28 49.2	-1.4
	1.5nm,0.2s						
AVF	Avril sur Loir	2.29	12	*e*Pn	Pn	16 28 13.1	-1.7
AVF	Avril sur Loir	2.29	12	*e*Pg	Pb	16 28 20.0	+1.4
AVF				*e*Sg	Sg	16 28 49.1	-2.1
	1.2nm,0.3s						
ORIF	Oris-en-Rattie	2.32	80	*e*Pn	Pn	16 28 13.8	-1.5
ORIF				*e*Sn	Sn	16 28 39.5	-4.1
	1.3nm,0.5s						
SSF	Saint Saulge	2.58	13	*e*Pn	Pn	16 28 16.5	-2.3
SSF	Saint Saulge	2.58	13	*e*Pg	Pg	16 28 25.6	-1.4
SSF				*e*Sn	Sn	16 28 46.2	-3.6
SSF				*e*Sg	Sg	16 28 58.8	-1.6
LOR	Lormes	2.84	17	*e*Pn	Pn	16 28 20.8	-1.6
LOR	Lormes	2.84	17	*e*Pg	Pb	16 28 29.5	+1.5
	baz=188						
LOR				*e*Sn	Sn	16 28 52.3	-4.1
LOR				*e*Sg	Sg	16 29 06.7	-2.1
	1.4nm,0.3s,baz=212						
ETSF	Etsaut	2.86	236	*e*Pn	Pn	16 28 21.0	-1.8
ETSF	Etsaut	2.86	236	*e*Pg	Pg	16 28 30.7	-1.8
ETSF				*e*Sn	Sn	16 28 52.7	-4.3
	0.8nm,0.2s						

LJU 03 16:28:21.5, 45°.78N×**14°.88E, h2**^{km}**, ML0.2, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VISS	Visnje	0.04	315	*i* Pg	Pg	16 28 22.3	+0.1
VISS				*i* Sg	Sg	16 28 22.9	+0.1
	comp=Z,20nm,0.1s						

IDC 03 16:42:12.7±3.4, **1°.58N**×**92°.79E, h0**^{km}**, mb3.4**/3, **mb1 3.5**/4, **mb1mx3.3**/50, **mbtmp3.3**/4, **ML3.3**/1, **MS2.7**/1, **Ms1 2.9**/1, **ms1mx2.6**/34, **Error ellipse: s-maj=103.7km s-min=29.7km az=63.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	17.83	19	P	Pn	16 46 22.6	+0.1
	0.0nm,0.3s,baz=218,slow=10,SNR=3.6						
CMAR				LR	LR	16 52 09.1	
	comp=Z,24nm,21.7s,baz=255,slow=33						
MKAR	Makanchi Array	45.96	350	P	P	16 50 37.4	-0.2
	0.3nm,0.7s,baz=164,slow=5.8,SNR=3.5						
WRA	Warramunga Arr	46.01	120	P	P	16 50 38.2	-0.2
	0.3nm,0.5s,baz=298,slow=8.7,SNR=3.2						
SONM	Songino Array	47.56	12	P	P	16 50 50.3	0.0
	0.6nm,0.7s,baz=189,slow=8.2,SNR=4.9						

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*NNC **03** 16:56:17.0±11.0, 37°.19N×70°.62E, h0^{km}, mb3.9, mpv3.7, Error ellipse: s-maj=94.3km s-min=69.8km az=167.0*

ISC 03 16:56:17.1±3.6, **36°.9N**±0°.2×**70°.8E**±0°.1, **h35**^{km}**, n10,** σ**1^s.07**/14, **7C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	5.70	22	P	Pn	16 57 40.3	+0.7
	SNR=72						
UCH	**Uchtor**	6.05	27	P	Pn	16 57 44.6	+0.1
	SNR=12						
EKS2	**Erkin-Say**	6.21	20	P	Pn	16 57 47.5	+1.1
	SNR=9.4						
KK31	**Karatay Array**	6.23	358	⇑P	Pn	16 57 47.9	+1.3
	3.2nm,0.3s,baz=181,slow=11,SNR=85						
KK31				⇑S	Sn	16 58 58.2	+1.8
	2.4nm,0.4s,baz=190,slow=25,SNR=5.7						
AAK	**Ala-Archa**	6.41	25	P	Pn	16 57 50.1	+1.0
	SNR=5.6						
AAK	**Ala-Archa**	6.41	25	⇑P	Pn	16 57 49.8	+0.6
	3.5nm,0.4s						
AAK				⇑S	Sn	16 59 00.8	-0.3
	3.2nm,0.5s						
CHMS	**Chumysh**	6.82	25	P	Pn	16 57 55.1	+0.5
	SNR=5.1						
CHMS	**Chumysh**	6.82	25	⇓P	Pn	16 57 54.6	0.0
	1.4nm,0.3s						
CHMS				⇑S	Sn	16 59 10.3	-0.7
	1.9nm,0.5s						
USP	**Ospenovka**	6.97	23	P	Pn	16 57 57.2	+0.4
	SNR=5.0						
AB31	**Akbulak array**	14.69	331	⇑P	Pn	16 59 41.8	-0.5
	0.3nm,0.4s,baz=139,slow=14,SNR=16						
AB31				⇑S	Sn	17 02 22.0	-1.8
	2.1nm,0.8s,baz=154,slow=23,SNR=4.5						

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*IDC **03** 17:10:17.2±0.9, 46.°70N×27.°34W, h0^{km}, mb3.8/14, mb1 4.1/14, mb1mx3.8/58, mbtmp3.8/14, Error ellipse: s-maj=28.7km s-min=16.2km az=12.0*

*NEIC **03** 17:10:19.1±1.6, 46.°7N±0.°1×27.°3W±0.°2, h10^{km}±1^{km}, mb4.6/38, Error ellipse: s-maj=25.5km s-min=20.3km az=203.0*

ISC 03 17:10:19.5±0.8**, 46.°6N**±0.°2×**27.°38W**±0.°10**, h16**^{km}**, n55,** σ0.^{s}**94**/55**, mb4.4**/31**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOA	**NORSAR Array B**	26.47	43	P	P	17 15 55.4	-0.2
	1.0nm,0.9s,baz=256,slow=10,SNR=2.4						
CLL	**Collm**	26.67	65	*e*(P)	P	17 16 00.0	+2.6
CLL				*e*		17 16 03.0	
GERES	**GERESS Array B**	27.48	70	P	P	17 16 04.8	-0.1
	1.8nm,1.0s,baz=286,slow=9.6,SNR=7.1						
TULEG	**Thule**	34.36	344	P	P	17 17 04.5	-0.5
TULEG				IAmb	IAmb	17 17 11.6	
	comp=Z,6.6nm,0.7s						
AKASG	**Malin Array Be**	36.83	62	P	P	17 17 25.4	-1.2
	comp=Z,1.6nm,0.8s,baz=286,slow=8.4,SNR=4.4						
RES	**Resolute Bay**	39.77	337	P	P	17 17 51.2	+0.2
	comp=Z,2.2nm,1.0s,baz=107,slow=8.1,SNR=7.5						
RES	**Resolute Bay**	39.77	337	P	P	17 17 51.6	+0.6
TOA0	**Torodi Ar. Sit**	41.37	134	P	P	17 18 04.4	-0.4
TORD	**Torodi Ar. Bea**	41.37	134	P	P	17 18 05.4	+0.5
	comp=Z,2.2nm,0.9s,baz=332,slow=9.2,SNR=8.3						
S44A	**Carbondale**	45.66	282	P	P	17 18 36.9	-2.3
YKA	**Yellowknife Ar**	48.90	322	P	P	17 19 04.0	-0.2
	comp=Z,1.7nm,0.9s,baz=66,slow=7.7,SNR=13						
ARU	**Arti**	50.98	46	P	P	17 19 19.1	-0.9
ARU				IAmb	IAmb	17 19 20.7	
	comp=Z,7.7nm,1.0s						
LAO	**LASA Array**	51.87	301	P	P	17 19 28.3	+1.3
INK	**Inuvik**	53.02	333	P	P	17 19 34.5	-0.5
	comp=Z,2.3nm,0.9s,baz=62,slow=7.8,SNR=6.0						
INK	**Inuvik**	53.02	333	P	P	17 19 34.8	-0.2
K22A	**Casper**	54.20	297	P	P	17 19 43.2	-1.1
K22A				IAmb	IAmb	17 19 45.7	
	comp=Z,10nm,1.1s						
WALA	**Waterton Lakes**	55.02	307	P	P	17 19 48.0	-2.2
WALA				IAmb	IAmb	17 19 51.1	
	comp=Z,7.0nm,1.1s						
EPYK	**Eagle Plains**	55.16	332	P	P	17 19 50.1	-0.7
PD31	**Pinedale Array**	55.99	298	P	P	17 19 56.6	-0.7
PDAR	**Pinedale Array**	55.99	298	P	P	17 19 57.2	-0.1
	comp=Z,1.3nm,0.8s,baz=69,slow=8.1,SNR=9.7						
FXWY	**Fox Creek**	56.38	300	P	P	17 20 00.5	+0.4
TOLK	**Toolik Lake Re**	57.33	338	P	P	17 20 05.9	-0.3
DAWY	**Dawson**	57.50	331	P	P	17 20 07.8	+0.4
DAWY				IAmb	IAmb	17 20 09.0	
	comp=Z,4.6nm,1.1s						
PRP	**Porcupine Dome**	58.45	334	P	P	17 20 14.6	+0.4
PRP				IAmb	IAmb	17 20 15.9	
	comp=Z,6.9nm,1.2s						
BRVK	**Borovoye**	58.51	45	P	P	17 20 14.1	-0.6
BRVK				IAmb	IAmb	17 20 15.8	
	comp=Z,6.0nm,1.0s						
COLD	**Coldfoot**	58.52	337	P	P	17 20 14.7	+0.2
COLD				IAmb	IAmb	17 20 16.4	
	comp=Z,3.1nm,1.0s						
TMUT	**Trail Mountain**	59.03	296	P	P	17 20 19.8	+1.0
SCRK	**Sand Creek**	59.05	333	P	P	17 20 19.2	+0.8
SCRK				IAmb	IAmb	17 20 20.0	
	comp=Z,4.1nm,1.0s						
ILAR	**Eielson Array**	59.38	334	P	P	17 20 20.6	+0.1
	comp=Z,0.9nm,0.9s,baz=46,slow=5.0,SNR=9.2						
DUG	**Dugway, Tooele**	59.48	298	P	P	17 20 22.8	+1.0
DUG				IAmb	IAmb	17 20 24.2	
	comp=Z,6.4nm,1.1s						
MSU	**Marysvale**	60.10	296	P	P	17 20 27.7	+1.5
TXAR	**Lajitas Array**	60.27	282	P	P	17 20 28.8	+1.5
	comp=Z,0.5nm,0.9s,baz=18,slow=8.5,SNR=3.7						
BWN	**Browne**	60.59	335	P	P	17 20 29.6	+0.8
ELK	**Elko**	60.61	299	P	P	17 20 30.8	+1.2
TIXI	**Tiksi**	60.82	8	P	P	17 20 30.8	+0.6
PSUT	**Pine Spring**	61.13	297	P	P	17 20 34.5	+1.3
SZCU	**Shurtz Canyon**	61.23	295	P	P	17 20 35.2	+1.3
CCUT	**Cedar City**	61.43	295	P	P	17 20 36.7	+1.5
KVN	**Kaiserville**	63.39	299	P	P	17 20 48.7	+0.4
NV11	**Mina Array Sit**	63.81	299	P	P	17 20 51.2	+0.2
NV11				IAmb	IAmb	17 20 52.6	
	comp=Z,4.5nm,1.1s						
NVAR	**Mina Array Bea**	63.91	299	P	P	17 20 51.4	-0.3
	comp=Z,0.3nm,0.6s,baz=67,slow=6.9,SNR=3.8						
KURK	**Kurchatov**	63.98	43	P	P	17 20 51.3	-0.4
KURK				IAmb	IAmb	17 20 52.8	
	comp=Z,4.6nm,1.2s						
ZALV	**Zalesovo Beam**	64.49	37	P	P	17 20 55.3	+0.3
	comp=Z,0.6nm,0.6s,baz=308,slow=7.3,SNR=4.2						
GSC	**Goldstone, Bar**	65.00	296	P	P	17 20 59.7	+0.9
GSC				IAmb	IAmb	17 21 25.1	
	comp=Z,4.3nm,0.7s						
GAMB	**Gambell**	66.39	344	P	P	17 21 07.2	+0.2
AAK	**Ala-Archa**	67.39	51	P	P	17 21 15.2	+1.1
AAK				IAmb	IAmb	17 21 16.9	
	comp=Z,6.2nm,1.4s						
GAR	**Garm**	67.53	57	P	P	17 21 15.5	+0.6
MAKZ	**Makanchi**	68.30	44	P	P	17 21 19.5	-0.1
MAKZ				IAmb	IAmb	17 21 21.1	
	comp=Z,5.3nm,1.4s						
MK31	**Makanchi Array**	68.46	44	P	P	17 21 20.3	-0.2
MKAR	**Makanchi Array**	68.46	44	P	P	17 21 20.4	-0.2
	comp=Z,1.8nm,1.0s,baz=328,slow=4.3,SNR=11						
NRN	**Naryn**	69.03	52	P	P	17 21 23.2	-1.4
NRN				IAmb	IAmb	17 21 26.9	
	comp=Z,3.6nm,1.1s						
NIL	**Nilore**	72.92	59	P	P	17 21 47.8	-0.2
NIL				IAmb	IAmb	17 21 48.9	
	comp=Z,4.5nm,0.8s						
SONM	**Songino Array**	77.62	30	P	P	17 22 15.2	+0.3
	comp=Z,0.5nm,0.9s,baz=326,slow=6.2,SNR=3.9						
WRA	**Warramunga Arr**	149.46	35	PKPbc	PKPbc	17 30 07.6	-0.3
	comp=Z,0.9nm,0.9s,baz=324,slow=2.7,SNR=4.3						
ASAR	**Alice Springs**	152.58	40	PKPbc	PKPbc	17 30 14.7	-0.6
	comp=Z,0.7nm,0.9s,baz=343,slow=3.6,SNR=4.9						

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*BJI **03** 17:19:20.1±0.0, 46.°67N×27.°83W, h7^{km}, mB5.2/15, mb4.7/26, Ms5.2/8, Ms7 4.8/6*

*IDC **03** 17:19:23.3±0.5, 46.°79N×27.°35W, h0^{km}, mb4.3/40, mb1 4.4/41, mb1mx4.2/74, mbtmp4.2/41, ML4.9/1, MS4.0/32, Ms1 4.0/32, ms1mx3.8/62, Error ellipse: s-maj=14.3km s-min=9.7km az=3.0*

*NEIC **03** 17:19:24.9±1.1, 46.°75N±0.°10×27.°3W±0.°1, h10^{km}±1^{km}, mb4.9/154, Error ellipse: s-maj=17.0km s-min=15.5km az=194.0*

ISC 03 17:19:25.0±0.4**, 46.°75N**±0.°08×**27.°33W**±0.°06**, h10**^{km}**, n266,** σ0.^{s}**82**/247**, mb4.8**/120**, MS4.0**/35**, 7C-2D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKA	**Eskdalemuir Ar**	17.38	52	P	P	17 23 29.7	+0.9
	baz=253,slow=8.6,SNR=5.5						
ESDC	**Sonseca Array**	18.40	104	P	Pn	17 23 40.4	+0.2
	0.9nm,0.3s,baz=312,slow=14,SNR=5.0						
ESDC				LR	LR	17 29 14.0	
	comp=Z,337nm,19.7s,baz=280,slow=32						
UCC	**Uccle**	21.18	67	P	P	17 24 10.1	-0.1
DOU	**Dourbes**	21.36	69	P	P	17 24 12.1	-0.1
DOU				x	x	17 24 15.6	
DOU				x	x	17 24 19.0	
BMRD	**Maredsous**	21.46	69	P	P	17 24 09.3	-3.9
	comp=Z,26nm,1.5s						
BGES	**Gesves**	21.66	68	P	P	17 24 15.5	+0.1
BGES				PnPn	PnPn	17 24 35.0	-0.9
BCLA	**Clavier**	21.79	68	P	P	17 24 14.7	-2.1
BCLA				x	x	17 24 29.7	
BSTI	**Sart Tilman**	21.95	68	P	P	17 24 18.8	+0.2
BEBN	**Eben Emael**	22.01	67	P	P	17 24 20.2	+1.0
MDT	**Midelt**	22.23	121	P	P	17 24 23.0	+1.3
	comp=Z,7.9nm,1.0s,baz=297,slow=10.0,SNR=3.3						
MEM	**Membach**	22.23	68	P	P	17 24 22.5	+0.9
BHOU	**Houvegnez**	22.25	68	P	P	17 24 22.0	+0.3
ECH	**Echery**	23.24	74	P	P	17 24 32.1	-0.1
ECH				IAmb	IAmb	17 24 38.7	
	comp=Z,52nm,1.4s						
SENIN	**Lac Senin/Sane**	23.70	78	P	P	17 24 37.1	0.0
SENIN				IAmb	IAmb	17 24 43.1	
	comp=Z,71nm,1.6s						
DAVA	**Damuels**	25.22	75	*e*P	P	17 24 51.3	+0.4
	comp=Z,33nm,1.2s						
DAVOX	**Davos/Dischmat**	25.34	76	P	P	17 24 53.6	+1.6
	comp=Z,11nm,1.1s,baz=277,slow=9.9,SNR=8.3						
DAVOX				LR	LR	17 33 08.3	
	comp=Z,344nm,20.9s,baz=264,slow=33						
FETA	**Feichten**	25.84	75	*e*P	P	17 24 57.0	+0.4
	comp=Z,16nm,1.5s						
SCHQ	**Schefferville**	25.95	303	LR	LR	17 33 15.5	
	comp=Z,279nm,19.1s,baz=118,slow=32						
MOTA	**Moosalm**	26.02	74	*e*P	P	17 24 57.9	-0.3
	comp=Z,22nm,1.8s						
SQTA	**Sankt Quirin**	26.12	75	*e*P	P	17 24 59.3	+0.3
	comp=Z,19nm,1.7s						
NOA	**NORSAR Array B**	26.36	43	P	P	17 24 59.9	-1.0
	comp=Z,2.9nm,1.1s,baz=254,slow=9.7,SNR=3.2						
WTTA	**Wattenberg**	26.39	74	*e*pP	P	17 25 01.7	+0.1
	comp=Z,29nm,1.4s						
SUMG	**Summit**	26.41	352	*i* P	P	17 25 04.0	+2.3
CLL	**Collm**	26.59	65	*e*P	P	17 25 03.0	-0.1
CLL				*i* sP	sP	17 25 07.6	+1.6
	comp=Z,14nm,1.1s						
BRG	**Berggiesshubel**	27.23	66	*e*P	P	17 25 08.4	-0.4
	comp=Z,34nm,1.7s						
KHC	**Kasperske Hory**	27.27	70	*e*P	P	17 25 09.4	+0.1
HFS	**Hagfors**	27.35	46	LR	LR	17 35 40.5	
	comp=Z,220nm,18.8s,baz=259,slow=36						
GEC2	**GERESS Array S**	27.41	70	P	P	17 25 10.1	-0.5
GERES	**GERESS Array B**	27.41	70	P	P	17 25 10.0	-0.5
	comp=Z,3.5nm,1.1s,baz=262,slow=3.9,SNR=12						
GERES				LR	LR	17 35 46.0	
	comp=Z,377nm,18.2s,baz=284,slow=36						
KBA	**Koelnbreinsper**	27.57	74	*e*pP	P	17 25 12.2	+0.1
	comp=Z,9.3nm,1.1s						
MYKA	**Terra Mystica**	27.88	75	*e*pP	P	17 25 14.7	-0.2
	comp=Z,14nm,1.3s						
FRB	**Frobisher Bay**	28.32	322	P	P	17 25 17.5	-0.9
	comp=Z,4.5nm,0.8s,baz=96,slow=6.6,SNR=3.1						
FRB				LR	LR	17 33 38.2	
	comp=Z,155nm,18.5s,baz=126,slow=30						
SOKA	**Soboth**	28.79	74	*e*P	P	17 25 21.5	-1.5
	comp=Z,6.6nm,1.6s						
ARSA	**Arzberg**	28.96	73	*i* P	P	17 25 23.8	-0.6
	comp=Z,15nm,1.4s						
CONA	**Conrad Observa**	29.01	72	*e*P	P	17 25 24.5	-0.4
	comp=Z,6.0nm,1.3s						
VRAC	**Vranov**	29.18	69	LR	LR	17 36 34.7	
	comp=Z,451nm,19.2s,baz=272,slow=35						
KEST	**Kesra**	29.44	99	LR	LR	17 35 56.0	
	comp=Z,592nm,19.5s,baz=258,slow=34						
VYHS	**Vyhne**	30.80	70	*e*P	P	17 25 39.9	-0.8
HVAR	**Hvar**	30.88	80	Sg	S	17 30 14.8	-30
PSZ	**Piszkesteto**	31.64	70	⇓P	P	17 25 47.6	-0.4
PSZ	**Piszkesteto**	31.64	70	P	P	17 25 47.8	-0.3
PSZ				IAmb	IAmb	17 25 54.1	
	comp=Z,29nm,1.5s						
CRVS	**Cervenica-Dubn**	32.38	68	*e*P	P	17 25 55.8	+1.3
KOLS	**Kolonicke sedl**	32.89	68	*e*P	P	17 25 59.0	0.0
TRPA	**Tarpa**	33.28	69	⇑P	P	17 26 02.5	+0.2
BZS	**Buzias**	33.47	74	⇑P	P	17 26 03.9	-0.2
FINES	**FINESS Array B**	33.51	44	P	P	17 26 02.9	-1.3
	comp=Z,4.0nm,1.0s,baz=289,slow=5.8,SNR=7.1						
FINES				LR	LR	17 39 04.0	
	comp=Z,196nm,19.5s,baz=253,slow=35						
DRGR		33.80	71	⇑P	P	17 26 06.1	-0.9
ARCES	**ARCESS Array B**	34.33	30	P	P	17 26 10.1	-1.2
	comp=Z,4.3nm,0.9s,baz=274,slow=3.5,SNR=4.7						
BUR08	**Bucovina Ar. S**	35.13	69	P	P	17 26 19.1	+0.4
BUR08				IAmb	IAmb	17 26 21.2	
	comp=Z,28nm,1.8s						
BURAR	**Bucovina Array**	35.16	69	⇑P	P	17 26 19.3	+0.5
VOIR		35.79	72	⇓P	P	17 26 20.8	-3.4
MLR	**Muntele Rosu**	36.36	72	P	P	17 26 29.1	0.0
	comp=Z,4.0nm,0.8s,baz=329,slow=2.9,SNR=3.7						
MLR	**Muntele Rosu**	36.36	72	⇑P	P	17 26 27.8	-1.3
MLR	**Muntele Rosu**	36.36	72	IAmb	IAmb	17 26 30.1	
	comp=Z,14nm,1.3s						
AKASG	**Malin Array Be**	36.74	63	P	P	17 26 30.9	-1.2
	comp=Z,5.4nm,1.0s,baz=285,slow=8.4,SNR=11						
AKASG				LR	LR	17 40 25.1	
	comp=Z,135nm,20.7s,baz=315,slow=34						
AKBB	**Malin Array Si**	36.74	63	P	P	17 26 30.7	-1.4
SORM	**Soroca**	36.98	67	⇑P	P	17 26 32.6	-1.6
CFR	**Carcaliu**	37.91	72	⇑P	P	17 26 40.4	-1.7
RES	**Resolute Bay**	39.67	337	P	P	17 26 56.7	+0.1
	comp=Z,4.3nm,1.0s,baz=99,slow=7.1,SNR=11						
RES				LR	LR	17 40 58.1	
	comp=Z,120nm,20.8s,baz=54,slow=33						
RES	**Resolute Bay**	39.67	337	P	P	17 26 56.5	0.0
OBN	**Obninsk**	39.81	54	P	P	17 26 58.0	0.0
	comp=Z,2.8nm,0.4s,baz=219,slow=8.3,SNR=4.7						
OBN	**Obninsk**	39.81	54	IAmb	IAmb	17 27 01.1	
	comp=Z,35nm,1.4s						
KLMR	**Klimovskoe**	40.05	44	*e*P	P	17 26 53.4	-6.4
KLMR				AMP		17 27 00.5	
	comp=Z,31nm,1.9s						
FCC	**Fort Churchill**	40.44	312	P	P	17 27 03.2	+0.1
H05N1	**Guadeloupe/Mar**	41.25	234	T	T	18 10 48.4	
	SNR=5.4						
TOA0	**Torodi Ar. Sit**	41.43	134	P	P	17 27 10.7	-1.0
TORD	**Torodi Ar. Bea**	41.43	134	P	P	17 27 10.6	-1.1
	comp=Z,6.5nm,0.9s,baz=329,slow=7.7,SNR=20						
TORD				LR	LR	17 43 27.3	
	comp=Z,442nm,18.4s,baz=335,slow=35						
BRTR	**Keskin Array B**	43.98	76	P	P	17 27 32.2	-0.2
	comp=Z,1.6nm,1.1s,baz=305,slow=4.4,SNR=4.8						
BRTR				LR	LR	17 45 13.1	
	comp=Z,106nm,20.7s,baz=273,slow=35						
ULM	**Lac du Bonnet**	44.10	301	P	P	17 27 32.8	-0.2
	comp=Z,3.3nm,0.9s,baz=54,slow=7.4,SNR=5.1						
ULM				LR	LR	17 44 14.2	
	comp=Z,134nm,18.3s,baz=40,slow=34						
ULM	**Lac du Bonnet**	44.10	301	P	P	17 27 32.6	-0.4
DBIC	**Dimbokro**	44.36	147	LR	LR	17 44 48.3	
	comp=Z,169nm,18.3s,baz=339,slow=34						
KIRV	**Kirov**	45.48	46	P	P	17 27 43.1	-0.8
	comp=Z,7.4nm,0.5s,baz=264,slow=2.9,SNR=6.1						
FFC	**Flin Flon**	45.81	309	P	P	17 27 46.8	+0.2
X48A	**Hartselle**	45.94	277	P	P	17 27 48.4	+0.5
X48A				IAmb	IAmb	17 27 49.5	
	comp=Z,29nm,1.6s						
FVM	**French Village**	46.30	283	P	P	17 27 50.8	0.0
CCM	**Cathedral Cave**	46.81	283	P	P	17 27 55.1	+0.4
ECSD	**EROS Data Cent**	47.43	293	P	P	17 27 59.0	-0.5
ECSD				IAmb	IAmb	17 27 59.4	
	comp=Z,28nm,1.9s						
MGMO	**Mountain Grove**	47.98	283	P	P	17 28 03.9	0.0
MGMO				IAmb	IAmb	17 28 04.9	
	comp=Z,12nm,1.1s						
KBZ	**Khabaz**	48.03	67	P	P	17 28 04.7	+0.7
	comp=Z,2.2nm,0.9s,baz=345,slow=6.7,SNR=5.1						
KBZ				LR	LR	17 49 44.2	
	comp=Z,90nm,19.1s,baz=312,slow=38						
S39A	**Bolivar**	48.40	284	P	P	17 28 07.1	0.0
S39A				IAmb	IAmb	17 28 07.8	
	comp=Z,16nm,1.4s						
FCAR	**Ozark Folk Cen**	48.58	282	P	P	17 28 07.9	-0.6
U40A	**Yellville**	48.81	283	P	P	17 28 10.2	0.0
U40A				IAmb	IAmb	17 28 11.1	
	comp=Z,9.5nm,0.9s						
YKA	**Yellowknife Ar**	48.83	322	P	P	17 28 09.4	-0.6
	comp=Z,3.7nm,0.9s,baz=67,slow=7.5,SNR=23						
W41B	**Gary Mavity, V**	49.07	281	P	P	17 28 11.9	-0.3
W41B				IAmb	IAmb	17 28 12.6	
	comp=Z,12nm,1.1s						
143A	**Socs Landing,**	49.92	278	P	P	17 28 18.6	-0.1
W39A	**Magazine**	50.09	282	P	P	17 28 19.5	-0.5
MIAR	**Mount Ida**	50.32	281	P	P	17 28 21.7	0.0
MIAR				IAmb	IAmb	17 28 23.2	
	comp=Z,24nm,1.2s						
ASF	**Jabal al Asfar**	50.33	83	P	P	17 28 22.4	+0.4
	comp=Z,0.9nm,0.4s,baz=99,slow=5.7,SNR=3.5						
ARU	**Arti**	50.87	46	P	P	17 28 25.0	-0.6
	comp=Z,3.1nm,0.8s,baz=308,slow=6.0,SNR=12						
ARU	**Arti**	50.87	46	P	P	17 28 24.9	-0.6
ARU				IAmb	IAmb	17 28 25.9	
	comp=Z,12nm,0.9s						
T35A	**Sooner Cattle**	50.94	285	P	P	17 28 25.8	-0.7
T35A				IAmb	IAmb	17 28 26.4	
	comp=Z,14nm,0.9s						
LAO	**LASA Array**	51.84	301	P	P	17 28 33.1	0.0
LAO				IAmb	IAmb	17 28 35.2	
	comp=Z,26nm,1.2s						
W35A	**Tecumseh**	52.19	284	P	P	17 28 35.3	-0.5
SDV	**Santo Domingo**	52.71	238	P	P	17 28 39.6	-0.5
SDV				IAmb	IAmb	17 28 42.3	
	comp=Z,16nm,1.3s						
INK	**Inuvik**	52.93	333	P	P	17 28 39.9	-0.9
	comp=Z,5.7nm,1.0s,baz=49,slow=9.4,SNR=12						
INK	**Inuvik**	52.93	333	P	P	17 28 39.9	-0.9
EGMT	**Eagleton**	53.20	304	P	P	17 28 43.3	+0.1
EGMT				IAmb	IAmb	17 28 44.7	
	comp=Z,24nm,1.3s						
Z35A	**Perchaven, San**	53.51	282	P	P	17 28 45.1	-0.5
AKTO	**Aktyubinsk**	53.56	52	P	P	17 28 45.7	-0.1
	comp=Z,3.6nm,0.9s,baz=310,slow=8.5,SNR=8.5						
AKTO				LR	LR	17 51 49.0	
	comp=Z,150nm,18.9s,baz=308,slow=36						
WMOK	**Wichita Mounta**	53.70	284	P	P	17 28 46.4	-0.6
K22A	**Casper**	54.18	297	P	P	17 28 50.4	-0.2
N23A	**Red Feather La**	54.80	295	P	P	17 28 56.1	+0.8
NRIK	**Noril'sk**	54.82	23	P	P	17 28 55.4	+0.8
	comp=Z,1.5nm,0.4s,baz=306,slow=3.3,SNR=4.6						
YNE	**Yellowstone No**	54.98	301	P	P	17 28 56.3	-0.1
WALA	**Waterton Lakes**	54.98	307	P	P	17 28 55.8	-0.5
WALA				IAmb	IAmb	17 28 57.2	
	comp=Z,11nm,1.1s						
EPYK	**Eagle Plains**	55.08	332	P	P	17 28 56.2	-0.4
RWWY	**Rawlins**	55.14	296	P	P	17 28 57.1	-0.6
YMP	**Mirror Lake Pl**	55.21	301	P	P	17 28 58.7	+0.5
H10N2	**ASCENSION HYDR**	55.53	165	T	T	18 28 37.8	
	baz=349,slow=75,SNR=7.3						
ABTX	**Abilene, Hawle**	55.54	283	P	P	17 28 59.7	-0.7
AMTX	**Amarillo**	55.54	286	P	P	17 29 00.6	+0.2
AMTX				IAmb	IAmb	17 29 02.3	
	comp=Z,19nm,1.4s						
H10N3	**ASCENSION HYDR**	55.54	165	T	T	18 28 36.5	
	baz=349,slow=75,SNR=6.3						
H10N1	**ASCENSION HYDR**	55.55	165	T	T	18 28 37.2	
	baz=349,slow=75,SNR=5.6						
YHB	**Horse Butte**	55.82	301	P	P	17 29 01.2	-1.3
FLWY	**Flagg Ranch**	55.90	300	P	P	17 29 03.3	+0.3
PD31	**Pinedale Array**	55.97	298	P	P	17 29 02.6	-0.9
PD31				IAmb	IAmb	17 29 03.8	
	comp=Z,11nm,1.3s						
PDAR	**Pinedale Array**	55.97	298	P	P	17 29 02.6	-0.9
	comp=Z,4.8nm,1.0s,baz=62,slow=7.4,SNR=15						
PDAR				LR	LR	17 51 30.9	
	comp=Z,117nm,19.3s,baz=56,slow=34						
BW06	**Boulder Array**	55.97	298	P	P	17 29 02.6	-1.0
BW06				IAmb	IAmb	17 29 03.8	
	comp=Z,11nm,1.2s						
T25A	**Trinidad**	55.99	290	P	P	17 29 04.5	+0.7
T25A				IAmb	IAmb	17 29 06.0	
	comp=Z,14nm,1.2s						
MSO	**Missoula**	56.24	304	P	P	17 29 04.5	-0.8
DLMT	**Dillon**	56.29	302	P	P	17 29 05.4	-0.3
DLMT				IAmb	IAmb	17 29 07.4	
	comp=Z,12nm,1.4s						
FXWY	**Fox Creek**	56.35	300	P	P	17 29 06.0	-0.3
REDW	**Red Top Meadow**	56.40	300	P	P	17 29 06.4	-0.3
REDW				IAmb	IAmb	17 29 08.1	
	comp=Z,12nm,1.1s						
H10S3	**ASCENSION HYDR**	56.60	165	T	T	18 29 58.6	
	baz=230,slow=74,SNR=39						
H10S2	**ASCENSION HYDR**	56.60	165	T	T	18 29 57.9	
	baz=350,slow=74,SNR=40						
MSTX	**Muleshoe**	56.81	286	P	P	17 29 09.3	-0.2
MSTX				IAmb	IAmb	17 29 10.9	
	comp=Z,18nm,1.1s						
AHID	**Auburn Hatcher**	56.90	299	P	P	17 29 09.6	-0.6
NEW	**Newport**	57.19	307	P	P	17 29 11.4	-0.5
	comp=Z,14nm,1.3s,baz=44,slow=7.2,SNR=6.5						
NEW	**Newport**	57.19	307	P	P	17 29 11.4	-0.5
NEW				IAmb	IAmb	17 29 13.0	
	comp=Z,14nm,1.3s						
TOLK	**Toolik Lake Re**	57.23	338	P	P	17 29 11.8	-0.2
TOLK				IAmb	IAmb	17 29 12.8	
	comp=Z,11nm,1.1s						
RDMU	**Red Mountain**	57.24	296	P	P	17 29 12.6	0.0
DAWY	**Dawson**	57.41	331	P	P	17 29 13.3	0.0
DAWY				IAmb	IAmb	17 29 14.9	
	comp=Z,18nm,1.3s						
EGAK	**Eagle**	57.52	332	P	P	17 29 13.1	-0.8
EGAK				IAmb	IAmb	17 29 53.8	
	comp=Z,18nm,1.6s						
FYU	**Fort Yukon**	57.53	335	P	P	17 29 14.1	+0.1
HWUT	**Hardware Ranch**	57.85	298	P	P	17 29 16.4	-0.5
HWUT				IAmb	IAmb	17 29 17.9	
	comp=Z,16nm,1.3s						
ROSC	**El Rosal**	58.12	239	LR	LR	17 49 41.6	
	comp=Z,95nm,21.9s,baz=65,slow=31						
B08A	**Colville Reser**	58.33	308	P	P	17 29 19.2	-0.7
PRP	**Porcupine Dome**	58.35	334	P	P	17 29 19.9	-0.1
PRP				IAmb	IAmb	17 29 21.9	
	comp=Z,22nm,1.8s						
BRVK	**Borovoye**	58.40	45	P	P	17 29 20.3	0.0
BRVK				IAmb	IAmb	17 29 21.7	
	comp=Z,15nm,1.2s						
COLD	**Coldfoot**	58.43	337	P	P	17 29 20.4	+0.1
BVAR	**Borovoye Array**	58.47	45	P	P	17 29 20.9	0.0
	comp=Z,5.7nm,0.9s,baz=300,slow=6.0,SNR=24						
SPUT	**South Promonto**	58.56	298	P	P	17 29 21.6	-0.3
MVCO	**Mesa Verde**	58.57	292	P	P	17 29 22.6	+0.6
MVCO				IAmb	IAmb	17 29 34.0	
	comp=Z,11nm,1.2s						
P17A	**Butcher Ranch,**	58.61	296	P	P	17 29 22.3	+0.1
ANMO	**Albuquerque**	58.63	289	P	P	17 29 22.5	+0.1
SRU	**San Rafael Swe**	58.70	295	P	P	17 29 22.7	-0.2
SCRK	**Sand Creek**	58.97	333	P	P	17 29 24.7	+0.5
SCRK				IAmb	IAmb	17 29 25.4	
	comp=Z,8.0nm,1.0s						
TMUT	**Trail Mountain**	59.01	296	P	P	17 29 25.4	+0.3
BGU	**Big Grassy Mou**	59.15	298	P	P	17 29 25.5	-0.4
NLU	**North Lily Min**	59.15	297	P	P	17 29 26.4	+0.4
Q16A	**Castle Valley**	59.22	295	P	P	17 29 26.8	+0.3
DOT	**Dot Lake**	59.22	332	P	P	17 29 26.0	+0.2
DOT				IAmb	IAmb	17 29 27.6	
	comp=Z,17nm,1.6s						
IL31		59.29	334	P	P	17 29 26.1	-0.2
IL31				IAmb	IAmb	17 29 27.1	
	comp=Z,9.4nm,1.4s						
ILAR	**Eielson Array**	59.29	334	P	P	17 29 26.1	-0.2
	comp=Z,2.7nm,1.1s,baz=42,slow=4.8,SNR=17						
ILAR				LR	LR	17 51 54.5	
	comp=Z,86nm,21.2s,baz=8.5,slow=33						
BMO	**Blue Mountains**	59.30	304	P	P	17 29 26.6	-0.3
DUG	**Dugway, Tooele**	59.45	298	P	P	17 29 28.1	+0.1
HDA	**Harding Lake**	59.57	334	P	P	17 29 28.2	-0.1
HDA				IAmb	IAmb	17 29 29.0	
	comp=Z,6.6nm,0.9s						
LTY	**Liberty**	59.72	308	P	P	17 29 29.3	-0.3
LTY				IAmb	IAmb	17 29 39.6	
	comp=Z,11nm,1.1s						
WRH	**Wood River Hil**	59.87	334	P	P	17 29 30.0	-0.2
WRH				IAmb	IAmb	17 29 31.0	
	comp=Z,11nm,1.1s						
PAX	**Paxson**	60.15	332	P	P	17 29 32.5	+0.1
CTGM	**Chitina Glacie**	60.17	329	P	P	17 29 32.9	+0.3
CTGM				IAmb	IAmb	17 29 34.4	
	comp=Z,12nm,1.2s						

MLY	Manley	60.22	336	P	P	17 29 32.6	-0.1
MLY				IAmb	IAmb	17 29 34.3	
	comp=Z,9.1nm,1.2s						
TX31	Lajitas Ar. Si	60.28	282	P	P	17 29 33.9	+0.1
TX31				IAmb	IAmb	17 29 35.7	
	comp=Z,26nm,2.0s						
TX32	Lajitas Array	60.28	282	P	P	17 29 33.8	0.0
TX32				IAmb	IAmb	17 29 35.7	
	comp=Z,26nm,2.0s						
TXAR	Lajitas Array	60.28	282	P	P	17 29 34.0	+0.2
	comp=Z,1.1nm,0.7s,baz=59,slow=8.3,SNR=10.0						
TXAR				LR	LR	17 55 33.6	
	comp=Z,144nm,18.5s,baz=0.0,slow=36						
MTPU	Mount Pierson	60.38	295	P	P	17 29 35.1	+0.4
BWN	Browne	60.49	335	P	P	17 29 34.3	-0.3
ELK	Elko	60.59	299	P	P	17 29 36.6	+0.7
	comp=Z,3.4nm,0.9s,baz=43,slow=3.7,SNR=10						
ELK	Elko	60.59	299	P	P	17 29 36.5	+0.7
MCK	McKinley	60.66	334	P	P	17 29 35.9	+0.1
MCK				IAmb	IAmb	17 29 36.5	
	comp=Z,9.5nm,1.1s						
DHY	Denali Highway	60.67	333	P	P	17 29 36.1	+0.1
DHY				IAmb	IAmb	17 29 36.9	
	comp=Z,8.3nm,1.2s						
TIXI	Tiksi	60.70	8	P	P	17 29 36.5	+0.7
GEYT	Alibeck	60.81	65	P	P	17 29 37.7	+0.5
	comp=Z,2.8nm,1.1s,baz=266,slow=8.9,SNR=5.5						
GEYT				LR	LR	17 57 03.0	
	comp=Z,81nm,19.3s,baz=190,slow=37						
PKCU	Pink Cliffs	60.83	295	P	P	17 29 37.6	0.0
TGL	Tana Glacier	60.84	330	P	P	17 29 37.1	-0.1
TGL				IAmb	IAmb	17 29 37.8	
	comp=Z,11nm,1.1s						
CRQM	Cirque	60.95	330	P	P	17 29 38.1	+0.1
PSUT	Pine Spring	61.11	297	P	P	17 29 40.1	+0.7
SZCU	Shurtz Canyon	61.22	295	P	P	17 29 40.7	+0.5
KTH	Kantishna Hill	61.39	335	P	P	17 29 40.5	-0.2
KNB	Kanab	61.41	295	P	P	17 29 41.3	-0.2
CCUT	Cedar City	61.42	295	P	P	17 29 42.3	+0.8
WUAZ	Wupatki	61.44	293	P	P	17 29 42.1	+0.4
WUAZ				IAmb	IAmb	17 29 43.8	
	comp=Z,9.5nm,1.1s						
U15A	North Rim	61.45	294	P	P	17 29 41.9	0.0
WVOR	Wild Horse Val	61.54	303	P	P	17 29 42.7	+0.5
WVOR				IAmb	IAmb	17 29 48.1	
	comp=Z,6.8nm,0.8s						
RAYN	Ar Rayn	61.67	85	P	P	17 29 43.1	-0.2
RAYN				IAmb	IAmb	17 29 44.5	
	comp=Z,11nm,1.6s						
X16A	Lo Mia Camp, P	62.17	292	P	P	17 29 47.4	+0.7
X16A				IAmb	IAmb	17 29 49.2	
	comp=Z,19nm,1.9s						
KNK	Knik Glacier	62.25	332	P	P	17 29 47.2	+0.7
KNK				IAmb	IAmb	17 29 53.1	
	comp=Z,9.4nm,1.0s						
R11A	Troy Canyon, C	62.28	297	P	P	17 29 47.6	+0.3
CMIG	Matias Romero	62.41	266	LR	LR	17 56 30.9	
	comp=Z,121nm,19.2s,baz=14,slow=36						
319A	Douglas	62.71	288	P	P	17 29 51.1	+1.0
319A				IAmb	IAmb	17 29 52.3	
	comp=Z,7.8nm,1.0s						
SKT	Skwentna	62.77	334	P	P	17 29 49.6	-0.4
MOD	Modoc Plateau	62.84	303	P	P	17 29 50.8	-0.1
MOD				IAmb	IAmb	17 29 52.5	
	comp=Z,12nm,1.2s						
TUC	Tucson	63.09	289	P	P	17 29 53.4	+0.8
TUC				IAmb	IAmb	17 29 54.8	
	comp=Z,12nm,1.4s						
SHPR	Sheep Range	63.19	296	P	P	17 29 53.8	+0.4
W13A	Hualapai Mount	63.29	294	P	P	17 29 54.7	+0.6
KVN	Kaiserville	63.36	299	P	P	17 29 54.6	+0.1
TPNV	Topopah Spring	63.58	297	P	P	17 29 56.2	+0.3
TPNV				IAmb	IAmb	17 30 15.3	
	comp=Z,11nm,1.4s						
PAHR	Pah Rah Range	63.70	301	P	P	17 29 56.3	-0.4
PAHR				IAmb	IAmb	17 29 58.6	
	comp=Z,6.1nm,0.9s						
NV11	Mina Array Sit	63.79	299	P	P	17 29 57.1	-0.2
NV11				IAmb	IAmb	17 29 58.4	
	comp=Z,9.4nm,1.2s						
KURK	Kurchatov	63.87	43	P	P	17 29 56.4	-1.0
KURK				IAmb	IAmb	17 29 57.6	
	comp=Z,12nm,1.2s						
NVAR	Mina Array Bea	63.88	299	P	P	17 29 57.8	-0.2
	comp=Z,0.7nm,0.5s,baz=79,slow=6.6,SNR=7.2						
NVAR				LR	LR	17 56 33.2	
	comp=Z,156nm,18.9s,baz=7.0,slow=35						
RYN	Ryan	63.88	299	P	P	17 29 57.1	-0.8
KURBB	Kurchatov Arra	63.89	43	P	P	17 29 56.9	-0.7
	comp=Z,4.1nm,1.1s,baz=313,slow=7.5,SNR=15						
SAML	Samuel	64.00	220	P	P	17 29 58.2	-0.5
SAML				IAmb	IAmb	17 29 58.9	
	comp=Z,7.6nm,1.1s						
VCNR	Virginia City	64.13	300	P	P	17 29 57.9	-1.7
VCNR				IAmb	IAmb	17 31 03.1	
	comp=Z,5.8nm,0.5s						
PNTR	Pine Nut	64.23	300	P	P	17 30 00.2	-0.1
ZAA0	Zalesovo Array	64.38	37	P	P	17 30 00.3	-0.3
ZALV	Zalesovo Beam	64.38	37	P	P	17 30 00.5	-0.2
	comp=Z,0.8nm,0.5s,baz=309,slow=7.5,SNR=7.4						
KK31	Karatay Array	64.81	53	P	P	17 30 03.7	0.0
KK31				IAmb	IAmb	17 30 04.6	
	comp=Z,9.0nm,1.4s						
KKAR	Karatay Array	64.81	53	P	P	17 30 03.5	-0.2
KKAR				IAmb	IAmb	17 30 04.6	
	comp=Z,9.0nm,1.4s						
BDFB	Brasilia	64.84	202	P	P	17 30 04.8	+0.7
	comp=Z,1.6nm,0.3s,baz=60,slow=11,SNR=3.1						
BDFB				LR	LR	17 53 42.4	
	comp=Z,103nm,20.4s,baz=59,slow=32						
BDFB	Brasilia	64.84	202	IAmb	IAmb	17 30 10.1	
	comp=Z,7.0nm,1.0s						
DAC	Darwin (Calif)	64.84	297	P	P	17 30 04.2	0.0
GSC	Goldstone, Bar	64.99	296	P	P	17 30 05.6	+0.5
CMB	Columbia Colle	65.38	300	P	P	17 30 07.7	+0.1
ISA	Isabella, Lake	65.78	297	P	P	17 30 11.0	+0.8
PMPB	Monarch Peak	66.83	299	P	P	17 30 17.1	+0.1
CHGR	Chuyangaron	66.99	58	P	P	17 30 17.7	-0.3
BTK	Batken	67.00	56	P	P	17 30 17.2	-0.8
AAK	Ala-Archa	67.29	52	P	P	17 30 20.5	+0.6
	comp=Z,2.6nm,0.8s,baz=318,slow=5.4,SNR=7.9						
AAK	Ala-Archa	67.29	52	P	P	17 30 20.4	+0.6
AAK				IAmb	IAmb	17 30 22.3	
	comp=Z,9.4nm,1.3s						
ARSB	Arslanbob	67.36	53	P	P	17 30 19.9	-0.4
ARSB				IAmb	IAmb	17 30 21.6	
	comp=Z,13nm,1.2s						
GAR	Garm	67.43	57	P	P	17 30 21.4	+0.6
UOSS	Minazif	67.98	77	P	P	17 30 23.1	-1.2
MAKZ	Makanchi	68.19	44	P	P	17 30 24.8	-0.5
MAKZ				IAmb	IAmb	17 30 26.5	
	comp=Z,9.9nm,1.4s						
MK31	Makanchi Array	68.35	44	P	P	17 30 25.9	-0.4
MKAR	Makanchi Array	68.35	44	P	P	17 30 25.7	-0.6
	comp=Z,4.7nm,1.1s,baz=319,slow=4.8,SNR=12						
MKAR				LR	LR	18 01 36.2	
	comp=Z,128nm,18.5s,baz=307,slow=37						
NRN	Naryn	68.93	52	P	P	17 30 31.4	+1.0
NRN				IAmb	IAmb	17 30 32.2	
	comp=Z,8.0nm,1.2s						
KSH	Kashi	70.26	53	P	P	17 30 40.1	+1.7
KSH				pP	pwP	17 30 46.9	+2.4
KSH				PcP	PcP	17 31 02.0	+1.9
KSH				S	S	17 39 49.8	-0.4
KSH				sS	sS	17 39 57.8	+3.4
KSH				pmax	pmax		
	comp=Z,35nm,1.0s						
KSH				pmax	pmax		
	comp=Z,300nm,6.1s						
KSH				LR	LR		
	comp=Z,320nm,11.6s						
KSH				LR	LR		
	comp=Z,470nm,11.4s						
WSAR	Wadi Sarin	70.76	76	LR	LR	18 04 24.0	
	comp=Z,37nm,18.2s,baz=327,slow=38						
LPAZ	La Paz	72.69	221	P	P	17 30 53.7	0.0
	comp=Z,3.3nm,1.1s,baz=21,slow=8.1,SNR=6.9						
LPAZ				LR	LR	17 58 30.4	
	comp=Z,75nm,19.9s,baz=16,slow=32						
LPAZ	La Paz	72.69	221	P	P	17 30 53.9	+0.1
NIL	Nilore	72.83	59	P	P	17 30 53.8	-0.1
WMQ	Urumqi	73.11	43	eP	P	17 30 56.9	+1.5
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,100nm,6.9s						
WMQ				LR	LR		
	comp=Z,120nm,20.9s						
KMBO	Kilima Mbogo	73.69	110	P	P	17 31 00.5	+1.1
	comp=Z,1.4nm,0.9s,baz=309,slow=9.3,SNR=3.3						
KMBO				LR	LR	18 02 51.5	
	comp=Z,149nm,21.5s,baz=88,slow=35						
KMBO	Kilima Mbogo	73.69	110	IAmb	IAmb	17 31 01.3	
	comp=Z,3.2nm,1.1s						
GO01	Chusmiza	76.14	220	P	P	17 31 13.2	-0.4
SONM	Songino Array	77.50	30	P	P	17 31 20.6	-0.1
	comp=Z,2.7nm,1.1s,baz=328,slow=5.3,SNR=9.9						
CPUP	Villa Florida	77.64	207	P	P	17 31 20.8	-0.5
	comp=Z,2.6nm,1.0s,baz=0.9,slow=9.3,SNR=4.0						
CPUP	Villa Florida	77.64	207	IAmb	IAmb	17 31 21.6	
	comp=Z,3.2nm,1.0s						
ULN	Ulaanbaatar	77.70	30	P	P	17 31 22.1	+0.3
LSZ	Lusaka	79.30	126	P	P	17 31 31.0	+0.1
GTA	Gaotai	82.10	39	eP	P	17 31 45.5	-0.2
GTA				pP	pP	17 31 49.6	+1.5
GTA				sP	PcP	17 31 52.9	+1.7
KLR	Kul'dur	82.69	14	P	P	17 31 48.4	0.0
	comp=Z,1.2nm,0.9s,baz=334,slow=10.0,SNR=3.6						
DANN	Dangsing	82.82	56	eP	P	17 31 49.0	-0.9
	comp=Z,31nm,1.0s						
GKN	Gorkha	83.58	56	eP	P	17 31 52.9	-0.8
	comp=Z,36nm,1.3s						
KKN	Kakani	84.11	55	eP	P	17 31 55.8	-0.7
	comp=Z,37nm,1.3s						
DMN	Daman	84.15	56	eP	P	17 31 55.9	-0.8
	comp=Z,29nm,1.2s						
PKIN	Phulchoki	84.34	55	eP	P	17 31 56.3	-1.4
	comp=Z,22nm,1.5s						
PKI	Pulchoki	84.35	55	eP	P	17 31 56.4	-1.4
	comp=Z,15nm,1.2s						
GUN	Gumba	84.36	55	eP	P	17 31 57.4	-0.5
	comp=Z,38nm,1.1s						
JIRN	Jiri	84.72	55	eP	P	17 31 59.4	-0.4
	comp=Z,29nm,1.0s						
HHC	Hu-ho-hao-te	85.41	30	eP	P	17 32 02.0	-0.6
HHC				pmax	pmax		
	comp=Z,280nm,7.7s						
RAMN	Ramite	85.50	55	eP	P	17 32 02.3	-1.2
	comp=Z,24nm,1.4s						
TAPN	Taplejung	85.81	54	eP	P	17 32 04.4	-0.7
	comp=Z,19nm,1.1s						
LSA	Lhasa	85.83	50	P	P	17 32 06.0	+0.6
ODAN	Odare	86.02	54	eP	P	17 32 04.4	-1.6
	comp=Z,24nm,1.4s						
LZH	Lanzhou	86.61	38	eP	P	17 32 08.8	+0.1
LZH				pP	sP	17 32 13.2	+1.2
LZH				sP	pwP	17 32 15.0	+0.1
LZH				ePP	PP	17 35 32.1	+2.3
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,95nm,4.9s						
LZH				LR	LR		
	comp=Z,220nm,17.0s						
LZH				LR	LR		
	comp=Z,230nm,17.1s						
LZH				LR	LR		
	comp=Z,280nm,19.5s						
BOSA	Boshof	88.77	136	LR	LR	18 10 30.2	
	comp=Z,52nm,20.3s,baz=350,slow=34						
CD2	Chengdu	90.99	40	P	P	17 32 27.6	-1.8
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PLCA	Paso Flores	95.23	212	LR	LR	18 14 20.7	
	comp=Z,67nm,18.4s,baz=84,slow=35						
KMI	Kunming	95.43	44	P	P	17 32 52.9	+2.7
KMI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KMI				LR	LR		
	comp=Z,110nm,17.8s						
KMI				LR	LR		
	comp=Z,400nm,12.8s						
KMI				LR	LR		
	comp=Z,490nm,15.7s						
NJ2	Nanjing	95.83	28	eP	P	17 32 50.4	-1.2
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
CMAR	Chiang Mai Arr	99.07	51	LR	LR	18 21 48.6	
	comp=Z,52nm,19.3s,baz=70,slow=38						
WRA	Warramunga Arr	149.34	35	PKPbc	PKPdf	17 39 13.0	+3.2
	comp=Z,2.3nm,1.0s,baz=334,slow=3.0,SNR=9.5						
ASAR	Alice Springs	152.47	40	PKPbc	PKPbc	17 39 20.1	-1.4
	comp=Z,1.4nm,0.9s,baz=342,slow=1.8,SNR=17						

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*IDC **03** 17:22:04.6±2.6, 4°.31N×124°.59E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.1/58, mbtmp3.2/3, Error ellipse: s-maj=312.3km s-min=25.8km az=64.0*
*MAN **03** 17:22:07.1, 4°.87N×124°.58E, h10km, mb4.8, ML3.7, MS3.6*
*DJA **03** 17:22:08.5±0.7, 4°N±6°×12°4E±°, h10km, M4.1/10, mB5.5/1, mb4.0/5, MLv4.1/10, Mw(mB)5.0/1*
ISC 03 17:22:05.5±0.9, **4°.65N**±0°.04×**124°.51E**±0°.08, **h10**km, **n18**, σ**1s.95**/25, **mb3.2**/3, **2C, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	1.49	17	eP	Pn	17 22 31.0	-1.5
GSPH				eS	Sn	17 22 51.8	-0.3
SKMP	Bagumbayan, Su	1.86	1	eP	Pn	17 22 35.4	-2.0
SKMP				eS	Sn	17 22 57.2	-3.7
DDMP	Don Marcelino,	1.87	39	eP	Pn	17 22 36.0	-1.6
DDMP				eS	Sn	17 22 59.0	-2.4
CTBH	Cotabato--PC H	2.57	354⇑	eP	Pn	17 22 47.6	+0.4
CTBH				i S	Sn	17 23 17.5	-0.9
DMPH	Davao City--Mi	2.61	22⇑	eP	Pg	17 22 58.8	+3.2
DMPH				eS	Sn	17 23 20.1	+0.5
BUKP	Musuan	3.25	10	eP	Pn	17 22 56.4	-0.2
BUKP				eS	Sn	17 23 34.5	-1.0
PAGZ	Pagadian	3.37	341	eP	Pn	17 22 57.9	-0.3
PAGZ				eS	Sn	17 23 36.0	-2.3
KMSI	Cibinong	4.08	187	P	Pn	17 23 06.2	-1.8
TNTI	Ternate	4.79	143	P	Pn	17 23 17.7	-0.1
MRSI	Marisa	4.88	212	P	Pn	17 23 18.3	-0.6
LUWI	Luwuk	5.92	197	P	Pn	17 23 32.6	-0.6
	0.5nm30nm,0.8s						
LBMI	Labuha	6.04	150	P	Pn	17 23 34.8	-0.2
	0.1nm4µm10nm,0.5s						
APSI	Ampana	6.22	207	P	Pn	17 23 40.6	+3.2
MPSI	Mapaga	6.29	227	P	Pn	17 23 37.5	-0.9
	0.1nm6.8nm,0.9s						
SANI	Sanana	6.82	167	P	Pn	17 23 44.3	-1.3
	0.1nm13nm,0.8s						
WRA	Warramunga Arr	26.28	159	P	P	17 27 38.7	-2.6
	0.3nm,0.5s,baz=339,slow=10.0,SNR=5.8						
ASAR	Alice Springs	29.60	162	P	P	17 28 08.8	-2.2
	0.1nm,0.6s,baz=332,slow=6.5,SNR=4.2						
MKAR	Makanchi Array	55.55	326	P	P	17 31 44.1	+3.0
	0.2nm,0.6s,baz=144,slow=8.2,SNR=2.3						

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*TAP **03** 17:23:59.1, 23°.73N×121°.60E, h51km, ML2.9, C*
*JMA **03** 17:23:59.0±0.1, 23°.72N×121°.61E, h42km±2km, M2.4*
ISC 03 17:23:60.0±1.2, **23°.73N**±0°.02×**121°.64E**±0°.02, **h43**km±5km, **n100**, σ**0s.91**/180, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENLB	Shoufeng	0.18	350	P	Pn	17 24 07.5	+0.1
	baz=6.0						
ENLB				S	Sn	17 24 14.7	+2.1
	baz=6.0						
EGFH	Guangfu	0.20	252	i P	Pn	17 24 07.2	-0.3
	baz=259						
EGFH				S	Sn	17 24 13.8	+1.0
	baz=259						
ESL	Shilin	0.20	294	i P	Pn	17 24 07.2	-0.4
	baz=292						
ESL				S	Sn	17 24 12.8	-0.1
	baz=292						
HWA	Hwalien	0.25	354	eP	Pn	17 24 08.5	+0.6
	baz=2.0						
HWA				S	Sn	17 24 15.0	+1.5
	baz=2.0						
HGSD	Ruisui	0.30	219	P	Pn	17 24 08.9	+0.4
	baz=225						
HGSD				eS	Sn	17 24 15.7	+1.2
	baz=225						
TWD	Chiawan	0.35	354	P	Pn	17 24 08.7	-0.3
	baz=351						
TWD				S	Sn	17 24 15.2	-0.1
	baz=351						
EHY	Hungye	0.36	232	i P	Pn	17 24 08.2	-1.0
	baz=229						
EHY				S	Sn	17 24 14.9	-0.7
	baz=229						
NACB	Ninganchiao	0.44	355	P	Pn	17 24 09.3	-0.8
	baz=349						
NACB				S	Sn	17 24 16.5	-0.8
	baz=349						
VWDT	VWDT	0.45	273	P	Pn	17 24 10.1	-0.1
	baz=273						
VWDT				S	Sn	17 24 16.9	-0.6
	baz=273						
YULB	Yu-li	0.46	223	P	Pn	17 24 09.2	-1.1
	baz=226						
YULB				S	Sn	17 24 16.5	-1.1
	baz=226						
OWD	Renai	0.48	298	P	Pn	17 24 10.4	-0.2
	baz=303						
OWD				S	Sn	17 24 17.5	-0.7
	baz=303						
TWF1	Yuli	0.49	220	i P	Pn	17 24 09.6	-1.1
	baz=224						
TWF1				i S	Sn	17 24 17.2	-1.1
	baz=224						
ETLH	Xiulin Townshi	0.49	344	P	Pn	17 24 10.1	-0.8
	baz=347						
ETLH				S	Sn	17 24 17.5	-1.1
	baz=347						
WHF	Hehuan Shan	0.53	321	i P	Pn	17 24 11.0	-0.7
	baz=321						
WHF				S	Sn	17 24 19.1	-0.9
	baz=321						
CHGB	Renai	0.54	308	P	Pn	17 24 11.2	-0.3
	baz=313						
CHGB				S	Sn	17 24 19.1	-0.6
	baz=313						
FULB	Fuli	0.61	211	i P	Pn	17 24 11.8	-0.6
	baz=217						
FULB				S	Sn	17 24 21.7	+0.5
	baz=217						
SSLB	Suanglung	0.63	275	P	Pn	17 24 11.9	-0.6
	baz=276						
SSLB				S	Sn	17 24 21.3	-0.2
	baz=276						
TWT	Tachien	0.67	321	i P	Pn	17 24 13.3	+0.1
	baz=327						
TWT				S	Sn	17 24 22.3	-0.5
	baz=327						
YUS	Yu-Shan	0.67	249	P	Pn	17 24 13.0	-0.5
	baz=246						
YUS				S	Sn	17 24 22.7	-0.5
	baz=246						
CHKT	Chengkung	0.68	202	P	Pn	17 24 12.8	-0.3
	baz=198						
CHKT				S	Sn	17 24 22.9	+0.4
	baz=198						
TDCB	Techi	0.68	320	P	Pn	17 24 13.2	-0.1
	baz=327						
TDCB				S	Sn	17 24 22.2	-0.7
	baz=327						
SMLT	Sun Moon Lake	0.69	283	i P	Pn	17 24 13.2	-0.2
	baz=290						
SMLT				S	Sn	17 24 22.9	-0.2
	baz=290						
ENA	Nanau	0.70	8	i P	Pn	17 24 12.8	-0.8
	baz=1.0						
ENA				S	Sn	17 24 22.6	-0.7
	baz=1.0						
DPDB	Guoxing	0.71	295	P	Pn	17 24 13.4	-0.3
	baz=299						
DPDB				S	Sn	17 24 24.1	+0.5
	baz=299						
WHYT	Xinyi Township	0.72	267	i P	Pn	17 24 13.5	-0.2
	baz=263						
WHYT				S	Sn	17 24 23.8	+0.1
	baz=263						
NNSB	Datong	0.73	342	P	Pn	17 24 13.4	-0.7
	baz=348						
NNSB				S	Sn	17 24 22.9	-1.3
	baz=348						
NNSH	Datong	0.73	342	i P	Pn	17 24 13.3	-0.7
	baz=348						
NNSH				S	Sn	17 24 23.0	-1.2
	baz=348						
TYC	Yuchr	0.73	284	i P	Pn	17 24 13.6	-0.3
	baz=289						
TYC				S	Sn	17 24 23.6	-0.3
	baz=289						
NNS	Nan Shan	0.75	341	i P	Pn	17 24 13.2	-1.0
	baz=348						
NNS				S	Sn	17 24 23.7	-0.8
	baz=348						
ELDTW	Lidau	0.78	227	i P	Pn	17 24 13.4	-1.2
	baz=221						
ELDTW				S	Sn	17 24 24.0	-1.4
	baz=221						
ALS	Alishan	0.79	254	P	Pn	17 24 14.8	-0.1
	baz=257						
ALS				S	Sn	17 24 26.1	+0.3
	baz=257						
WHP	Taichung City	0.83	311	P	Pn	17 24 15.5	+0.1
	baz=319						
WHP				S	Sn	17 24 26.5	0.0
	baz=319						
WJS	Zhushan	0.84	276	i P	Pn	17 24 15.3	0.0
	baz=277						
WJS				S	Sn	17 24 27.6	+1.1
	baz=277						
NDT	Datong Townshi	0.88	353	i P	Pn	17 24 15.0	-0.9
	baz=355						
NDT				S	Sn	17 24 27.1	-0.4
	baz=355						
WNT	Mingjian	0.88	280	P	Pn	17 24 16.2	+0.3
	baz=281						
WNT				S	Sn	17 24 28.6	+1.0
	baz=281						
CHN5	Tsauling	0.89	262	i P	Pn	17 24 15.9	-0.1
	baz=262						
CHN5				i S	Sn	17 24 28.3	+0.5
	baz=262						
TWC	Suao	0.90	13	P	Pn	17 24 15.8	-0.4
	baz=5.0						
TWC				S	Sn	17 24 28.9	+1.0
	baz=5.0						
ENTT	Nioudou	0.91	356	i P	Pn	17 24 15.6	-0.7
	baz=358						
ENTT				S	Sn	17 24 27.2	-1.0
	baz=358						
EOS1	EOS1	0.93	29	P	Pn	17 24 17.2	+0.6
	baz=43						
EOS1				eS	Sn	17 24 30.6	+1.9
	baz=43						
YHNB	Yeheng	0.96	346	P	Pn	17 24 16.8	-0.3
	baz=355						
YHNB				S	Sn	17 24 29.1	-0.7
	baz=355						
TCU	Taichung	0.97	296	eS	Sn	17 24 30.5	+0.7
	baz=297						
NSK	Sanguang	0.97	345	P	Pn	17 24 17.0	-0.3
	baz=354						
NSK				S	Sn	17 24 29.1	-0.9
	baz=354						
STYT	Tauyuan	0.98	235	P	Pn	17 24 17.8	+0.4
	baz=243						
STYT				S	Sn	17 24 30.7	+0.5
	baz=243						
WGK	Gukeng	0.98	268	eP	Pn	17 24 18.0	+0.7
	baz=268						
WGK				eS	Sn	17 24 31.2	+1.1
	baz=268						
TWE	Neicheng	0.99	2	i P	Pn	17 24 16.7	-0.7
	baz=4.0						
TWE				eS	Sn	17 24 30.6	+0.4
	baz=4.0						
TWQ1	Liyutan	1.00	308	P	Pn	17 24 17.6	0.0
	baz=310						
TWQ1				S	Sn	17 24 31.0	+0.5
	baz=310						
WDLH	Douliu	1.01	268	P	Pn	17 24 17.8	+0.2
	baz=268						
WDLH				S	Sn	17 24 31.6	+1.0
	baz=268						
TPUB	Ta-pu	1.02	245	P	Pn	17 24 17.9	+0.1
	baz=244						
TPUB				S	Sn	17 24 31.6	+0.6
	baz=244						
SLBB	Yuanshan	1.02	0	P	Pn	17 24 16.4	-1.5
	baz=1.0						

TWH	Lutao	1.02	188	P	Pn	17 24 17.1	-0.8
	baz=179						
TWH				S	Sn	17 24 30.6	-0.4
	baz=179						
CHN4	Tsaushan	1.03	249	*i* P	Pn	17 24 18.2	+0.3
	baz=248						
CHN4				*i* S	Sn	17 24 32.2	+1.1
	baz=248						
TWGBT	Beinan	1.04	209	P	Pn	17 24 16.0	-2.1
	baz=199						
TWGBT				S	Sn	17 24 29.6	-1.9
	baz=199						
TWG	Pinlang	1.04	210	P	Pn	17 24 16.5	-1.6
	baz=199						
TWG				S	Sn	17 24 29.7	-1.8
	baz=199						
WCHH	Zhanghua	1.04	290	*e*P	Pn	17 24 18.6	+0.4
	baz=302						
WCHH				S	Sn	17 24 33.0	+1.5
	baz=302						
NWLT	Wulai	1.05	353	P	Pn	17 24 17.8	-0.5
	baz=355						
NWLT				S	Sn	17 24 31.5	-0.2
	baz=355						
NSY	Sanyi	1.05	311	*e*P	Pn	17 24 18.6	+0.3
	baz=313						
NSY				S	Sn	17 24 32.6	+0.8
	baz=313						
WTP	Ta-pu	1.05	243	*i* P	Pn	17 24 18.5	+0.2
	baz=242						
WTP				*i* S	Sn	17 24 33.1	+1.2
	baz=242						
NSTT	Nanjuang	1.07	327	P	Pn	17 24 19.2	+0.7
	baz=318						
NSTT				S	Sn	17 24 32.7	+0.5
	baz=318						
LIOB	Emei	1.07	328	P	Pn	17 24 19.4	+0.8
	baz=319						
LIOB				S	Sn	17 24 33.1	+0.8
	baz=319						
CHN2	Minshiung	1.08	260	*e*S	Sn	17 24 34.1	+1.7
	baz=260						
WDJ	Dajia District	1.10	304	*e*S	Sn	17 24 33.6	+0.8
	baz=317						
NMLH	Miaoli	1.11	316	*e*S	Sn	17 24 34.1	+0.8
	baz=318						
CHY	Chiayi	1.13	258	S	Sn	17 24 34.3	+0.6
	baz=259						
NTC	Toucheng	1.13	9	*e*P	Pn	17 24 19.4	+0.1
	baz=1.0						
NTC				S	Sn	17 24 34.9	+1.2
	baz=1.0						
TWK	Hsinying	1.15	247	P	Pn	17 24 20.4	+0.8
	baz=246						
TWK				S	Sn	17 24 34.9	+0.7
	baz=246						
CHN1	Nanshi	1.15	242	*i* P	Pn	17 24 19.7	+0.1
	baz=242						
CHN1				*i* S	Sn	17 24 35.3	+1.0
	baz=242						
SGST	Jiashian	1.16	236	P	Pn	17 24 19.6	-0.2
	baz=248						
SGST				S	Sn	17 24 35.6	+1.1
	baz=248						
SNST	Tainan City	1.16	244	*e*S	Sn	17 24 35.4	+1.0
	baz=244						
SLGT	Liugui	1.17	231	P	Pn	17 24 20.3	+0.5
	baz=238						
SLGT				S	Sn	17 24 36.7	+2.1
	baz=238						
WLTB	Daxi	1.17	343	*e*S	Sn	17 24 35.6	+0.9
	baz=349						
RLNB	Erlin	1.18	278	*e*P	Pn	17 24 20.1	+0.2
	baz=279						
RLNB				S	Sn	17 24 36.6	+1.7
	baz=279						
TATO	Taipei	1.25	354	*e*P	Pn	17 24 20.8	-0.1
	baz=3.0						
TATO				S	Sn	17 24 37.2	+0.7
	baz=3.0						
WTCT	Ta-ch'eng	1.25	276	S	Sn	17 24 38.6	+2.1
	baz=277						
TIPB	Shuangxi	1.25	8	P	Pn	17 24 20.9	-0.1
	baz=1.0						
TIPB				*e*S	Sn	17 24 36.6	-0.1
	baz=1.0						
WLGB	Puzi	1.25	259	*e*S	Sn	17 24 38.5	+1.9
	baz=259						
ECL	Taimali	1.29	209	*i* P	Pn	17 24 19.6	-1.9
	baz=202						
ECL				S	Sn	17 24 34.5	-3.1
	baz=202						
WSF	Szhu	1.30	266	*e*P	Pn	17 24 21.4	-0.2
	baz=256						
WSF				S	Sn	17 24 38.4	+0.6
	baz=256						
NWF	Wu-fen Shan	1.34	6	P	Pn	17 24 22.2	-0.1
	baz=356						
NWF				*e*S	Sn	17 24 39.2	+0.2
	baz=356						
WFSB	Wu-fen Shan	1.34	6	P	Pn	17 24 22.0	-0.3
	baz=357						
WFSB				*e*S	Sn	17 24 38.8	-0.1
	baz=357						
SSD	Sandimen	1.34	223	P	Pn	17 24 23.2	+0.9
	baz=223						
SSD				S	Sn	17 24 40.5	+1.5
	baz=223						
CHN8	Yiju	1.36	254	*e*P	Pn	17 24 22.9	+0.5
	baz=254						
CHN8				*e*S	Sn	17 24 40.0	+0.6
	baz=254						
TWS1	Kuangyinshan	1.38	352	*e*S	Sn	17 24 40.2	+0.4
	baz=4.0						
YM01	YM01	1.41	358	*e*S	Sn	17 24 39.8	-0.9
	baz=359						
YM10	YM10	1.42	357	P	Pn	17 24 22.9	-0.5
	baz=359						
YM10				*e*S	Sn	17 24 39.7	-1.3
	baz=359						
YM11	YM11	1.43	358	*e*P	Pn	17 24 22.5	-1.0
	baz=359						
YM11				*e*S	Sn	17 24 40.7	-0.4
	baz=359						
MASBT	Mashibuluo	1.45	220	P	Pn	17 24 23.7	+0.1
	baz=208						
MASBT				S	Sn	17 24 42.4	+1.0
	baz=208						
YM03	YM03	1.45	357	*e*P	Pn	17 24 23.6	-0.1
	baz=357						
ANP	Anpu	1.45	356	*e*P	Pn	17 24 24.0	+0.1
	baz=356						
EAST	Anshuo	1.52	209	P	Pn	17 24 24.4	-0.3
	baz=201						
SCZT	Fangliau	1.64	215	*e*P	Pn	17 24 27.6	+1.2
	baz=214						
SCZT				*e*S	Sn	17 24 48.0	+1.7
	baz=214						
PHUB	P'eng-hu	1.90	264	*e*P	Pn	17 24 28.9	-1.0
	baz=276						
PHUB				*e*S	Sn	17 24 51.8	-0.9
	baz=276						
PNG	Penghu	1.91	266	*e*P	Pn	17 24 28.8	-1.2
	baz=277						
IRIF	Iriomote-Funau	2.01	72	P	Pn	17 24 32.2	+0.8
IRIF				S	Sn	17 24 55.6	+0.3
JKRS	Kuro-shima	2.23	76	P	Pn	17 24 35.5	+1.1
JKRS				*e*S	Sn	17 25 02.3	+1.6
VWUC	VWUC	2.36	303	*e*S	Sn	17 25 02.6	-1.2
	baz=304						
JIJ	Ishigaki jima	2.38	74	P	Pn	17 24 36.8	+0.4
JIJ				S	Sn	17 25 04.3	-0.1
PTTC	Pingtan	2.45	316	*e*S	Sn	17 25 05.3	-0.7
	baz=317						
JISG	Ishigakijimahi	2.59	70	P	Pn	17 24 39.4	+0.1
JISG				S	Sn	17 25 08.2	-1.4
PTMZ	Houxiangcun	2.64	300	*e*S	Sn	17 25 09.7	-1.1
	baz=301						
MATB	Ma-tsu	2.86	328	*e*S	Sn	17 25 15.6	-0.6
	baz=329						

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*IDC **03** 17:33:36.9±1.2, 20°.10N×120°.47E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.5/46, mbtmp3.5/6, MS3.2/1, Ms1 3.4/1, ms1mx2.8/35, Error ellipse: s-maj=53.7km s-min=18.5km az=63.0*
*MAN **03** 17:33:38.2, 20°.25N×120°.31E, h34km, mb4.9, ML3.8, MS3.8*
ISC 03 17:33:40.9±0.9**, 20°.17N**±0°.06×**120°.48E**±0°.08**, h28km, n13, σ1ˢ.04**/17**, mb3.4**/5**, 1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	Basco	1.42	79	*e*P	Pn	17 34 03.8	-1.0
BBP				*e*S	Sn	17 34 22.8	+0.2
SIPP	Brgy, Tapao	2.23	181	⇑*e*P	Pn	17 34 14.2	-1.9
APYP	Conner	2.40	162	*e*P	Pn	17 34 17.8	-0.6
APYP				*e*S	Sn	17 34 48.0	+1.0
SGCP	Mt. Cagua	2.42	142	*e*P	Pn	17 34 18.2	-0.5
CAUP	Cauayan	3.45	158	*e*P	Pn	17 34 34.6	+1.8
CAUP				*e*S	Sn	17 35 11.6	-1.2
SMPP	San Manuel, Pa	4.00	177	*e*P	Pn	17 34 39.4	-1.0
SMPP				*e*S	Sn	17 35 27.6	+1.1
BALP	Baler	4.52	167	*e*P	Pn	17 34 48.0	+0.3
CMAR	Chiang Mai Arr	20.40	269	P	P	17 38 15.5	-0.3
	0.5nm,0.8s,baz=70,slow=10,SNR=5.3						
CMAR				LR	LR	17 45 22.1	
	comp=Z,60nm,18.8s,baz=156,slow=35						
SONM	Songino Array	29.87	341	P	P	17 39 46.8	+0.7
	0.7nm,1.0s,baz=162,slow=6.1,SNR=3.3						
MKAR	Makanchi Array	40.86	320	P	P	17 41 20.7	+0.3
	0.2nm,0.6s,baz=111,slow=8.2,SNR=3.9						
WRA	Warramunga Arr	42.11	160	P	P	17 41 30.0	-0.8
	1.5nm,0.9s,baz=334,slow=10,SNR=11						
ZALV	Zalesovo Beam	43.31	330	P	P	17 41 40.8	+0.5
	0.4nm,0.5s,baz=131,slow=5.9,SNR=2.5						
ASAR	Alice Springs	45.49	163	P	P	17 41 58.0	0.0
	1.4nm,1.1s,baz=341,slow=7.0,SNR=12						

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*ISK **03** 17:42:31.1, 35°.86N×29°.40E, h9km, ML2.9/13*
*DDA **03** 17:42:32.1, 35°.88N×29°.40E, h22km±1km, ML2.3*
*NIC **03** 17:42:35.7±0.0, 36°.07N×30°.12E, h1km±2km, Ml2.9/4*
ISC 03 17:42:30.9±1.5**, 35°.79N**±0°.05×**29°.45E**±0°.03**, h15**km±9km**, n29, σ1ˢ.19**/49**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKAS	Kas	0.46	16	PG	Pg	17 42 39.7	-0.4
AKAS				SG	Sg	17 42 45.6	-0.7
AKAS	Kas	0.46	16	*i* P	Pg	17 42 40.5	+0.5
AKAS				*i* S	Sg	17 42 46.2	-0.2
AKAS				IAML		17 42 52.0	
	comp=E,356nm,0.3s						
AKAS				IAML		17 42 53.0	
	comp=N,450nm,0.3s						
DEMR	Demre-Antalya	0.57	39	PG	Pg	17 42 42.4	+0.2
DEMR				SG	Sb	17 42 50.6	0.0
FETY	Fethiye	0.89	341	PG	Pb	17 42 47.3	-0.8
FETY				SG	Sb	17 42 59.0	-0.8
FETY	Fethiye	0.89	341	*i* P	Pb	17 42 47.5	-0.6
FETY				IAML		17 42 59.0	
	comp=E,568nm,0.3s						
FETY				IAML		17 42 59.0	
	comp=N,394nm,0.3s						
FETY				*i* S	Sb	17 42 59.2	-0.6
AKUM	Antalya-Kumluc	0.89	53	*i* P	Pb	17 42 48.7	+0.7
AKUM				*i* S	Sn	17 43 02.8	+1.2
AKUM				IAML		17 43 04.0	
	comp=E,132nm,0.3s						
AKUM				IAML		17 43 04.0	
	comp=N,105nm,0.6s						
ELL	Elmali	1.02	21	PG	Pb	17 42 50.0	-0.4
ELL				SG	Sn	17 43 04.2	-0.7
ELL	Elmali	1.02	21	P	Pb	17 42 50.0	-0.4
ELL				S	Sb	17 43 01.3	-2.3
DALY	Dalyan (Mula)	1.21	328	PN	Pn	17 42 52.9	-0.3
DALY	Dalyan (Mula)	1.21	328	*i* P	Pn	17 42 52.8	-0.3
DALY				*i* S	Sb	17 43 08.3	-0.6
DALY				IAML		17 43 11.0	
	comp=N,45nm,0.3s						
DALY				IAML		17 43 19.0	
	comp=E,63nm,0.9s						
TURN	Turunc	1.28	328	PN	Pb	17 42 56.0	+1.4
KORT	Korkueli	1.41	31	PN	Pb	17 42 57.3	+0.4
KORT	Korkueli	1.41	31	*i* P	Pg	17 42 58.0	0.0
KORT				IAML		17 43 26.0	
	comp=E,63nm,1.0s						
KORT				IAML		17 43 30.0	
	comp=N,61nm,0.4s						
GOLH	Golhisar	1.44	3	*i* P	Pn	17 42 57.0	+0.4
GOLH				IAML		17 43 15.0	
	comp=E,28nm,2.1s						
GOLH				*i* S	Sb	17 43 15.7	-0.1
GOLH				IAML		17 43 19.0	
	comp=N,56nm,0.7s						
YER	Yerkesik	1.64	325	PN	Pn	17 42 59.6	+0.4
TAVA	DENIZLI_Tavas	1.73	346	*i* P	Pn	17 43 01.4	+0.9
TAVA				*i* S	Sn	17 43 22.4	+0.1
TAVA				IAML		17 43 25.0	
	comp=N,57nm,0.4s						
TAVA				IAML		17 43 27.0	
	comp=E,36nm,0.6s						
DAT	Datca	1.78	302	PN	Pn	17 43 01.9	+0.7
DAT				SN	Sn	17 43 24.1	+0.5
KEPZ	Antalya-Kepez	2.06	57	*i* P	Pn	17 43 06.0	+1.1
KEPZ				IAML		17 43 31.0	
	comp=N,64nm,1.0s						
KEPZ				IAML		17 43 31.0	
	comp=E,15nm,1.1s						
KEPZ				*i* S	Sn	17 43 31.4	+1.0
BODT	Bodrum	2.14	307	PN	Pn	17 43 05.9	-0.2
BASM	Basmaki-Afyon	2.18	13	PN	Pn	17 43 07.7	+1.1
AYDN	Tasoluk	2.25	326	*i* P	Pb	17 43 11.8	+0.5
AYDN				*i* S	Sb	17 43 39.7	+0.7
AYDN				IAML		17 43 52.0	
	comp=N,19nm,0.8s						
AKMS	Akamas	2.48	107	P	Pn	17 43 11.7	+1.1
AKMS				S	Sn	17 43 40.3	-0.3
AKMS				AML	AML	17 43 41.9	
	comp=N,0.3nm,0.4s						
AKMS				AML	AML	17 43 41.9	
	comp=N,0.3nm,0.4s						
AKMS				AML	AML	17 43 43.0	
	comp=N,0.2nm,0.7s						
AKMS				AML	AML	17 43 43.0	
	comp=N,0.2nm,0.7s						
AYDB	Zeytinkoy-Aydi	2.49	330	PN	Pn	17 43 11.9	+1.0
SEYD	Seydisehir-KON	2.50	49	PN	Pn	17 43 13.1	+1.9
ALFC	Alefka	2.65	103	P	Pn	17 43 13.7	+0.7
ALFC				S	Sn	17 43 42.6	-2.3
ALFC				AML	AML	17 43 45.0	
	comp=N,0.2nm,0.3s						
ALFC				AML	AML	17 43 45.0	
	comp=N,0.2nm,0.3s						
ALFC				AML	AML	17 43 46.2	
	comp=N,0.2nm,0.3s						
ALFC				AML	AML	17 43 46.2	
	comp=N,0.2nm,0.3s						
DOGA	KONYA_Doganhis	2.91	37	*i* P	Pn	17 43 20.1	+3.3
DOGA				*i* S	Sb	17 43 54.4	-3.7
DOGA				IAML		17 43 57.0	
	comp=E,11nm,0.3s						
DOGA				IAML		17 43 58.0	
	comp=N,19nm,0.7s						
SZAC	Souni	2.99	109	P	Pn	17 43 19.1	+1.4
SZAC				S	Sn	17 43 53.7	+0.3
SZAC				AML	AML	17 43 55.8	
	comp=N,0.2nm,0.4s						
SZAC				AML	AML	17 43 55.8	
	comp=N,0.2nm,0.4s						
SZAC				AML	AML	17 43 55.9	
	comp=N,0.2nm,0.2s						
SZAC				AML	AML	17 43 55.9	
	comp=N,0.2nm,0.2s						
ASGA	Asgata	3.26	107	P	Pn	17 43 22.6	+1.1
ASGA				S	Sn	17 43 58.9	-1.1
ASGA				AML	AML	17 44 01.9	
	comp=N,0.1nm,0.4s						
ASGA				AML	AML	17 44 01.9	
	comp=N,0.1nm,0.4s						
MVOU	Mavrovouni	3.50	102	P	Pn	17 43 25.5	+0.8
MVOU				S	Sn	17 44 04.1	-1.8

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*BYKL **03** 17:44:11.8±0.2, 53°.62N×109°.02E, h16km±4km*
*MOS **03** 17:44:11.3±1.4, 53°.50N×109°.19E, h10km, mb3.6/1, Error ellipse: s-maj=12.9km s-min=7.8km az=63.4*
*IDC **03** 17:44:14.8±3.3, 53°.35N×109°.01E, h12km±21km, mb3.3/4, mb1 3.5/6, mb1mx3.2/58, mbtmp3.4/6, ML2.9/2, Error ellipse: s-maj=24.6km s-min=20.1km az=116.0*
ISC 03 17:44:11.1±0.6**, 53°.56N**±0°.02×**109°.17E**±0°.02**, h10km, n49, σ1ˢ.94**/104**, mb3.3**/3**, 8C-1D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXMB	Maximikha	0.39	221	*e*Pg	Pb	17 44 19.5	-0.6
MXMB				*e*		17 44 20.3	
MXMB				*e*Sg	Sb	17 44 26.3	+0.2
SYVR	Suvo	0.51	78	*e*Pg	Pb	17 44 22.4	+0.3
SYVR				⇑*i*		17 44 23.3	
SYVR				*e*		17 44 30.7	
SYVR				*e*Sg	Sn	17 44 31.4	-1.8
SYVR				max			
	1μm,0.1s						
SYVR				Smax			
	2μm,0.5s						
SYVR	Suvo	0.51	78	*e*PG	Pb	17 44 22.4	+0.3
SYVR				*e*		17 44 30.4	
SYVR				pmax	pmax		
	comp=Z,800nm,0.1s						
SYVR				smax	smax		
	comp=N,2μm,0.2s						
OGRR	Ongureny	0.94	276	⇑*i*Pg	Pg	17 44 28.3	-0.9
OGRR				⇑*i*Pb	Pb	17 44 29.0	-0.5
OGRR				*e*Sg	Sg	17 44 40.3	-1.1
OGRR				*e*Sb	Sn	17 44 44.1	+0.2
OGRR				max			
	comp=N,334nm,0.4s						
OGRR				max			
	comp=N,1μm,0.4s						
OGRR	Ongureny	0.94	276	*e*PG	Pg	17 44 28.3	-0.9
OGRR				*e*		17 44 39.2	
OGRR				pmax	pmax		
	comp=Z,331nm,0.5s						
OGRR				smax	smax		
	comp=N,1μm,0.7s						
TRTB	Turuntaevo	1.62	216	*e*	Pb	17 44 39.7	-1.4
TRTB				⇑*i*Pg	Pg	17 44 40.7	-1.5
TRTB				*e*		17 44 41.8	
TRTB				*e*Sg	Sg	17 45 03.4	+0.2
YLYR	Ulyunkhan	1.77	41	*e*Pn	Pn	17 44 42.2	+0.4
YLYR				*e*Pg	Pb	17 44 43.3	-0.3
YLYR				*e*Sg	Sg	17 45 07.7	-0.2
YLYR				Pmax			
	comp=N,127nm,0.9s						
YLYR				Smax			
	comp=N,528nm,0.4s						
YLYR	Ulyunkhan	1.77	41	*e*PN	Pb	17 44 43.1	-0.5
YLYR				*e*		17 44 44.0	
YLYR				*e*S	Sb	17 45 06.3	+0.5
YLYR				*e*		17 45 07.0	
YLYR				pmax	pmax		
	comp=Z,77nm,0.3s						
YLYR				smax	smax		
	comp=N,533nm,0.5s						
TRG	Tyrgan	1.88	246	*e*Pn	Pn	17 44 41.6	-1.7
TRG				⇑*i*Pg	Pb	17 44 43.5	-1.9
TRG				*e*Sg	Sb	17 45 07.8	-1.1
TRG				*e*		17 45 09.9	
TRG				Pmax			
	comp=N,36nm,0.2s						
TRG				max			
	comp=N,862nm,0.3s						
TRG	Tyrgan	1.88	246	*e*PN	Pb	17 44 43.7	-1.7
TRG				*e*		17 44 44.9	
TRG				*e*S	Sn	17 45 06.8	-0.2
TRG				*e*		17 45 08.7	
TRG				pmax	pmax		
	comp=Z,38nm,0.2s						
TRG				smax	smax		
	comp=E,853nm,0.3s						
FFNB	Fofonovo	2.10	225	*e*Pn	Pb	17 44 47.1	-2.2
FFNB				*e*Pg	Pg	17 44 49.6	-1.7
FFNB				*e*Sn	Sn	17 45 12.5	0.0
FFNB				*e*Sg	Sg	17 45 17.1	-1.4
KAB	Kabansk	2.15	226	*e*Pg	Pg	17 44 51.3	-0.9
KAB				*e*Sg	Sg	17 45 19.4	-0.6
STDB	Stepnoy Dvoret	2.19	232	*e*Pn	Pb	17 44 48.6	-2.2
STDB				*e*Pg	Pg	17 44 51.5	-1.6
STDB				*e*Sn	Sn	17 45 15.1	+0.3
STDB				*e*Sg	Sg	17 45 21.9	+0.4
NIZ	Nizh Angarsk	2.24	5	*e*	Pb	17 44 50.0	-1.6
NIZ				*e*Pg	Pg	17 44 50.9	-3.0
NIZ				*e*Sg	Sb	17 45 19.6	+0.3
NIZ				Pmax			
	comp=E,81nm,0.7s						
NIZ				Smax			
	comp=E,714nm,0.6s						
NIZ	Nizh Angarsk	2.24	5	*e*PN	Pb	17 44 49.5	-2.1
NIZ				*i*		17 44 51.6	
NIZ				*e*		17 45 18.6	
NIZ				pmax	pmax		
	comp=Z,81nm,0.4s						
NIZ				smax	smax		
	comp=N,656nm,0.5s						
HRMR	Khuramsha	2.35	216	*e*Pn	Pb	17 44 51.0	-2.6
HRMR				*e*		17 44 51.6	
HRMR				*e*Pg	Pg	17 44 54.0	-2.2
HRMR				*e*		17 45 00.7	
HRMR				*e*Sn	Sb	17 45 20.3	-2.4
HRMR				*e*Sg	Sg	17 45 26.0	-0.7
HRMR				Pmax			
	comp=N,299nm,0.6s						
HRMR				Smax			
	comp=N,2μm,0.5s						
KMO	Kumora	2.62	26	*e*Pn	Pn	17 44 55.3	+1.9
KMO				*e*Pg	Pb	17 44 58.3	+0.2
KMO				*e*Sg	Sg	17 45 33.3	-1.8
KMO				Pmax			
	comp=N,176nm,0.3s						
KMO				Smax			
	comp=N,556nm,0.9s						
KMO	Kumora	2.62	26	*e*PN	Pn	17 44 53.7	+0.3
KMO				*i*		17 44 58.3	
KMO				*e*		17 45 33.0	
KMO				pmax	pmax		
	comp=Z,175nm,0.4s						
KMO				smax	smax		
	comp=E,536nm,0.9s						
BGT	Bolshoye Golou	2.74	238	*e*Pn	Pn	17 44 55.0	-0.1
BGT				*e*		17 44 58.4	
BGT				*e*PgPg	PnPn	17 45 01.5	-0.7
BGT				*e*		17 45 04.8	
BGT				*e*Sg	Sb	17 45 34.7	+1.0
BGT				max			
	comp=E,31nm,0.3s						
BGT				Smax			
	comp=E,164nm,0.4s						
YOA	Uoyan	2.98	29	*e*Pn	Pn	17 44 57.5	-0.9
YOA				*e*Pg	Pb	17 45 05.2	+1.1
YOA				*e*Sg	Sg	17 45 45.4	-1.2
YOA				Pmax			
	comp=E,165nm,0.4s						
YOA				Smax			
	comp=E,984nm,0.7s						
YOA	Uoyan	2.98	29	*e*PN	Pb	17 45 05.3	+1.1
YOA				*i*		17 45 45.7	
YOA				pmax	pmax		
	comp=Z,165nm,0.4s						
YOA				smax	smax		
	comp=N,977nm,0.7s						
CIT	Chita	3.07	118	*e*Pg	Pg	17 45 08.0	-2.0
CIT				*e*Sg	Sg	17 45 51.2	+1.4
CIT				Pmax			
	comp=N,151nm,1.0s						
CIT				Smax			
	comp=N,706nm,0.7s						
CIT	Chita	3.07	118	*e*PN	Pn	17 45 01.1	+1.4
CIT				*e*		17 45 09.5	
CIT				*e*		17 45 51.1	
CIT				pmax	pmax		
	comp=Z,151nm,1.1s						
CIT				smax	smax		
	comp=E,706nm,0.7s						
LSTR	Listvyanka	3.13	239	⇓*i*Pn	Pn	17 45 00.6	+0.1
LSTR				*e*Pg	Pb	17 45 06.1	-0.7
LSTR				*e*PgPg	PbPb	17 45 08.1	-1.9
LSTR				*e*Sn	Sn	17 45 36.1	-1.8
LSTR				*e*Sg	Sb	17 45 45.4	+0.4
LSTR				max			
	comp=E,14nm,0.6s						
LSTR				Smax			
	comp=E,197nm,0.9s						
UKT	Uakit	3.24	52	⇑*i*Pn	Pn	17 45 03.8	+1.7

UKT				*e*		17 45 07.3	
UKT				⇑*e*Pg	**Pg**	**17 45 11.0**	**-2.2**
UKT				*e*		17 45 14.3	
UKT				*e*Sg	**Sg**	**17 45 53.4**	**-1.8**
UKT				max			
	comp=E,42nm,0.7s						
UKT				Smax			
	comp=E,235nm,1.7s						
IRK	**Irkutsk**	**3.24**	**248**	*e*Sg	**Sb**	**17 45 48.9**	**+0.7**
IRK				Smax			
	comp=E,1µm,0.9s						
IRK	**Irkutsk**	**3.24**	**248**	*e*PN	**Pb**	**17 45 08.5**	**-0.2**
IRK				*e*		17 45 48.9	
IRK				pmax	pmax		
	comp=Z,47nm,0.3s						
IRK				smax	smax		
	comp=N,1µm,0.6s						
SVKR	**Severomuysk**	**3.61**	**43**	*e*Sg	**Sg**	**17 46 04.2**	**-2.8**
SVKR				Smax			
	comp=N,564nm,1.1s						
TLY	**Talaya**	**3.85**	**243**	Pn	**Pn**	**17 45 10.5**	**+0.1**
	comp=N,0.0nm,0.3s,baz=18,slow=12,SNR=7.0						
TLY				Pg	**Pb**	**17 45 19.2**	**+0.1**
	comp=N,0.1nm,0.3s,baz=37,slow=7.7,SNR=25						
TLY				Lg	Lg	17 46 07.7	
	comp=N,0.1nm,0.3s,baz=242,slow=11,SNR=25						
TLY	**Talaya**	**3.85**	**243**	*e*PN	**Pn**	**17 45 10.5**	**+0.1**
TLY				*e*		17 45 19.0	
TLY				*e*		17 46 07.9	
TLY				pmax	pmax		
	comp=Z,41nm,0.5s						
TLY				smax	smax		
	comp=N,448nm,0.4s						
KPC	**Khapcheranga**	**4.34**	**151**	⇑*i*Pn	**Pn**	**17 45 18.5**	**+1.3**
KPC				*e*Pg	**Pg**	**17 45 31.9**	**-2.4**
KPC				*e*Sg	**Sg**	**17 46 29.0**	**-1.5**
KPC				Pmax			
	comp=N,17nm,0.4s						
KPC				Smax			
	comp=N,263nm,1.1s						
KPC	**Khapcheranga**	**4.34**	**151**	*e*PN	**Pn**	**17 45 18.5**	**+1.3**
KPC				*e*		17 45 30.8	
KPC				*e*S	**Sn**	**17 46 08.8**	**+0.9**
KPC				*e*		17 46 29.6	
KPC				pmax	pmax		
	comp=Z,17nm,0.4s						
KPC				smax	smax		
	comp=E,261nm,1.6s						
ARS	**Arshan**	**4.41**	**251**	*e*Pn	**Pn**	**17 45 18.5**	**+0.3**
ARS				*e*Pg	**Pb**	**17 45 29.5**	**+0.8**
ARS				*e*Sg	**Sb**	**17 46 25.5**	**+3.5**
ARS				Pmax			
	comp=E,42nm,0.9s						
ARS				Smax			
	comp=E,801nm,0.6s						
ARS	**Arshan**	**4.41**	**251**	*e*PN	**Pn**	**17 45 19.2**	**+1.0**
ARS				*e*		17 45 29.9	
ARS				*e*		17 46 25.3	
ARS				pmax	pmax		
	comp=Z,25nm,0.5s						
ARS				smax	smax		
	comp=E,794nm,0.7s						
NLYR	**Nelyaty**	**4.77**	**49**	*e*Pn	**Pn**	**17 45 26.0**	**+2.9**
NLYR				*e*Pg	**Pb**	**17 45 37.6**	**+2.8**
NLYR				*e*Sg	**Sg**	**17 46 38.9**	**-5.4**
NLYR				Pmax			
	comp=E,10.0nm,0.6s						
NLYR				Smax			
	comp=E,156nm,1.0s						
BOD	**Bodaibo**	**5.07**	**31**	*e*	**Pn**	**17 45 28.2**	**+1.1**
BOD				*e*Pg	**Pb**	**17 45 40.5**	**+0.6**
BOD				*e*Sg	**Sb**	**17 46 45.6**	**+4.8**
BOD				Pmax			
	comp=E,7.0nm,0.5s						
BOD				Smax			
	comp=E,60nm,0.5s						
BOD	**Bodaibo**	**5.07**	**31**	*e*PN	**Pn**	**17 45 29.2**	**+2.1**
BOD				*e*		17 45 43.7	
BOD				*e*		17 46 49.2	
BOD				pmax	pmax		
	comp=Z,7.0nm,0.4s						
BOD				smax	smax		
	comp=N,95nm,1.1s						
MOY	**Mondy**	**5.33**	**252**	*e*Pn	**Pn**	**17 45 32.6**	**+1.8**
MOY				*e*Pg	**Pb**	**17 45 43.5**	**-0.8**
MOY				*e*		17 46 31.6	
MOY				*e*Sg	**Sb**	**17 46 52.3**	**+4.0**
MOY				Pmax			
	comp=N,27nm,1.3s						
MOY				Smax			
	comp=N,281nm,1.4s						
MOY	**Mondy**	**5.33**	**252**	*e*PN	**Pn**	**17 45 32.5**	**+1.8**
MOY				*e*		17 45 46.5	
MOY				*e*S	**Sn**	**17 46 31.5**	**-0.7**
MOY				*e*		17 46 53.3	
MOY				pmax	pmax		
	comp=Z,27nm,0.7s						
MOY				smax	smax		
	comp=E,281nm,1.1s						
ORL	**Orlik**	**5.74**	**264**	*e*Pn	**Pn**	**17 45 37.1**	**+0.7**
ORL				*e*Sn	**Sn**	**17 46 39.9**	**-2.3**
ORL				*e*Sg	**Sb**	**17 47 06.2**	**+6.2**
ORL				Smax			
	comp=E,122nm,0.7s						
ORL	**Orlik**	**5.74**	**264**	*e*PN	**Pn**	**17 45 37.5**	**+1.1**
ORL				*e*		17 45 54.3	
ORL				*e*S	**Sn**	**17 46 39.9**	**-2.3**
ORL				*e*		17 47 06.0	
ORL				pmax	pmax		
	comp=Z,16nm,0.7s						
ORL				smax	smax		
	comp=N,121nm,1.2s						
SONM	**Songino Array**	**5.99**	**198**	Pn	**Pn**	**17 45 41.7**	**+1.8**
	comp=N,2.0nm,0.3s,baz=12,slow=13,SNR=64						
SONM				Pg	**Pg**	**17 46 01.8**	**-4.0**
	comp=N,2.8nm,0.3s,baz=3.3,slow=18,SNR=18						
SONM				Lg	Lg	17 47 21.2	
	comp=N,7.4nm,0.3s,baz=19,slow=35,SNR=11						
CRS	**Chara**	**6.19**	**54**	*e*Sg	**Sg**	**17 47 25.6**	**-4.1**
CRS				Smax			
	comp=N,95nm,1.7s						
TUP	**Tupik**	**6.42**	**78**	*e*Pn	**Pn**	**17 45 47.3**	**+1.6**
TUP				*e*Pg	Pg	17 46 08.5	-5.5
TUP				*e*		17 47 03.3	
TUP				*e*Sg	**Sg**	**17 47 33.0**	**-4.1**
TUP				Pmax			
	comp=N,4.0nm,0.8s						
TUP				Smax			
	comp=N,246nm,1.1s						
TUP	**Tupik**	**6.42**	**78**	*e*PN	**Pn**	**17 45 47.4**	**+1.7**
TUP				*e*		17 46 08.3	
TUP				*e*S	**Sn**	**17 47 01.0**	**+2.0**
TUP				*e*		17 47 32.8	
TUP				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TUP				smax	smax		
	comp=N,208nm,1.2s						
TIXI	**Tiksi**	**20.10**	**18**	P	Pn	17 48 48.8	+2.6
	comp=N,0.6nm,0.2s,baz=234,slow=3.2,SNR=6.5						
BVAR	**Borovoye Array**	**23.00**	**284**	P	**P**	**17 49 20.3**	**+4.6**
	comp=N,0.8nm,0.6s,baz=58,slow=14,SNR=5.1						
ILAR	**Eielson Array**	**48.44**	**34**	P	P	17 52 59.5	+6.5
	comp=N,0.3nm,1.0s,baz=305,slow=5.5,SNR=5.1						
ASAR	**Alice Springs**	**79.83**	**157**	P	**P**	**17 56 20.8**	**+1.4**
	comp=N,0.3nm,0.8s,baz=354,slow=5.7,SNR=4.3						

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*IDC **03** 17:44:52.0±1.1, 38°.48N×90°.75E, h0^{km}, mb3.3/4, mb1 3.6/6, mb1mx3.3/57, mbtmp3.4/6, ML3.2/2, MS3.2/1, Ms1 3.4/1, ms1mx2.8/31, Error ellipse: s-maj=119.3km s-min=19.9km az=58.0*

*BJI **03** 17:44:51.9±0.0, 38°.40N×90°.17E, h5^{km}, mb3.7/3, ML3.4/12*

ISC 03 17:44:52.5±1.1**, 38°.2N**±0°.1×**89°.6E**±0°.2**, h10^{km}, n10, σ1^{s}.91**/13**, mb3.6**/4**, 4C, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**5.80**	**346**	*e*Pn	**Pn**	**17 46 19.3**	**+0.6**
WMQ				Sn	**Sn**	**17 47 25.1**	**-0.2**
WMQ				smax	smax		
	comp=N,52nm,0.7s						
WMQ				smax	smax		
	comp=E,45nm,0.9s						
MK31	**Makanchi Array**	**10.14**	**330**	⇑P	**Pn**	**17 47 18.0**	**-0.2**
	0.4nm,0.3s,baz=144,slow=14,SNR=39						
MK31				⇑S	**Sn**	**17 49 10.5**	**-1.5**
	1.2nm,0.5s,baz=140,slow=26						
MKAR	**Makanchi Array**	**10.14**	**330**	Pn	**Pn**	**17 47 18.0**	**-0.2**
	0.6nm,0.3s,baz=143,slow=14,SNR=24						
MAKZ	**Makanchi**	**10.28**	**329**	⇑P	**Pn**	**17 47 20.1**	**+0.1**
	2.0nm,0.8s						
MAKZ				⇑S	**Sn**	**17 49 11.7**	**-3.6**
	1.4nm,0.9s						
ZALV	**Zalesovo Beam**	**16.09**	**350**	Pn	**Pn**	**17 48 38.2**	**-0.5**
	0.1nm,0.3s,baz=180,slow=13,SNR=2.5						
CMAR	**Chiang Mai Arr**	**21.29**	**155**	P	**P**	**17 49 38.8**	**-0.5**
	0.3nm,0.6s,baz=324,slow=12,SNR=3.2						
CMAR				LR	LR	17 59 46.8	
	comp=Z,69nm,20.5s,baz=90,slow=42						
NOA	**NORSAR Array B**	**52.04**	**323**	P	**P**	**17 54 05.9**	**+3.9**
	0.5nm,0.6s,baz=79,slow=7.3,SNR=2.7						
WRA	**Warramunga Arr**	**71.47**	**136**	P	**P**	**17 56 12.1**	**-1.3**
	1.1nm,1.2s,baz=329,slow=6.4,SNR=6.5						
WRA	**Warramunga Arr**	**71.47**	**136**	P	**P**	**17 56 12.1**	**-1.3**
ASAR	**Alice Springs**	**74.26**	**138**	P	**P**	**17 56 28.6**	**-1.3**
	0.3nm,0.6s,baz=329,slow=6.7,SNR=10						

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*NEIC **03** 17:48:25.3±2.2, 41°.71N±0°.03×110°.71W±0°.05, h0^{km}±2^{km}, ML2.7/90, Error ellipse: s-maj=7.1km s-min=3.0km az=127.0*

*IDC **03** 17:48:26.0±1.4, 41°.99N×110°.75W, h0^{km}, mb2.7/1, mb1 3.3/2, mb1mx3.1/50, mbtmp2.9/2, ML2.7/1, Error ellipse: s-maj=37.8km s-min=7.8km az=149.0*

ISC 03 17:48:24.5±0.9**, 41°.69N**±0°.02×**110°.65W**±0°.03**, h0^{km}, n55, σ1^{s}.30**/54**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWUT	**Hardware Ranch**	**0.69**	**264**		**Pg**	**17 48 38.2**	**+0.4**
TCUT	**Toone Canyon**	**0.81**	**226**		**Pb**	**17 48 40.8**	**-0.7**
AHID	**Auburn Hatcher**	**1.13**	**343**		**Pg**	**17 48 44.9**	**-1.2**
AHID				IAML		17 49 07.2	
	comp=E,228nm,0.5s						
JLU	**Jordanelle**	**1.24**	**210**	Pg	**Pg**	**17 48 47.9**	**-0.3**
CTU	**Camp Tracy**	**1.29**	**220**	Pg	**Pg**	**17 48 48.8**	**-0.5**
BW06	**Boulder Array**	**1.35**	**36**		**Pg**	**17 48 49.3**	**-1.0**
PD31	**Pinedale Array**	**1.35**	**36**		**Pg**	**17 48 49.5**	**-0.9**
PDAR	**Pinedale Array**	**1.35**	**36**	Pg	**Pg**	**17 48 49.6**	**-0.8**
	comp=E,3.7nm,0.3s,baz=215,slow=16,SNR=101						
PDAR				Lg	Lg	17 49 09.6	
	comp=E,10nm,0.3s,baz=211,slow=28,SNR=20						
RDMU	**Red Mountain**	**1.38**	**143**		**Pg**	**17 48 50.2**	**-0.7**
SPUT	**South Promonto**	**1.41**	**255**		**Pn**	**17 48 51.5**	**0.0**
HVU	**Hansel Valley**	**1.59**	**274**		**Pn**	**17 48 54.1**	**-0.1**
REDW	**Red Top Meadow**	**1.68**	**355**		**Pn**	**17 48 55.5**	**+0.1**
REDW				IAML		17 49 27.7	
	comp=E,126nm,0.8s						
REDW				IAML		17 49 28.0	
	comp=E,116nm,0.7s						
SNOW	**Snow King Moun**	**1.78**	**357**		**Pn**	**17 48 56.9**	**+0.2**
SNOW				IAML		17 49 27.4	
	comp=E,88nm,0.9s						
MPU	**Maple Canyon**	**1.83**	**204**		**Pn**	**17 48 57.7**	**+0.3**
BGU	**Big Grassy Mou**	**1.95**	**248**		**Pn**	**17 48 58.9**	**0.0**
FXWY	**Fox Creek**	**1.97**	**352**		**Pn**	**17 48 58.9**	**-0.5**
FXWY				IAML		17 49 34.2	
	comp=E,34nm,1.0s						
NLU	**North Lily Min**	**2.04**	**213**		**Pn**	**17 49 00.2**	**-0.1**
P17A	**Butcher Ranch,**	**2.21**	**182**		**Pb**	**17 49 04.7**	**-0.7**
DUG	**Dugway, Tooele**	**2.21**	**228**		**Pn**	**17 49 03.1**	**+0.4**
O20A	**White River Ci**	**2.39**	**130**		**Pb**	**17 49 08.1**	**-0.5**
FLWY	**Flagg Ranch**	**2.40**	**359**		**Pn**	**17 49 07.0**	**+1.9**
FLWY				IAML		17 49 47.3	
	comp=E,28nm,0.9s						
FLWY				IAML		17 49 48.0	
	comp=E,34nm,0.8s						
TMUT	**Trail Mountain**	**2.42**	**190**	Pn	**Pb**	**17 49 07.8**	**-1.3**
SRU	**San Rafael Swe**	**2.57**	**178**		**Pb**	**17 49 10.2**	**-1.4**
RWWY	**Rawlins**	**2.57**	**89**	Pn	**Pb**	**17 49 10.3**	**-1.4**
RWWY				IAML		17 49 46.7	
	comp=E,41nm,0.6s						
RWWY				IAML		17 50 04.0	
	comp=E,36nm,0.7s						
YPP	**Pitchstone Pla**	**2.59**	**358**		**Pb**	**17 49 10.2**	**-1.7**
H17A	**Grant Village**	**2.71**	**1**		**Pn**	**17 49 11.2**	**+1.7**
Q16A	**Castle Valley**	**2.79**	**188**		**Pn**	**17 49 11.4**	**+0.7**
LKWY	**Lake**	**2.88**	**4**		**Pn**	**17 49 12.6**	**+0.7**
LKWY				IAML		17 50 12.9	
	comp=E,22nm,0.9s						
LKWY				IAML		17 50 36.4	
	comp=E,22nm,0.5s						
YMR	**Madison River**	**2.99**	**356**	Pn	**Pn**	**17 49 15.0**	**+1.7**
YUF	**Upper Falls**	**3.03**	**2**	Pn	**Pn**	**17 49 14.3**	**+0.4**
YNR	**Norris Junctio**	**3.03**	**360**		**Pn**	**17 49 14.5**	**+0.6**
YHB	**Horse Butte**	**3.09**	**353**		**Pn**	**17 49 15.2**	**+0.5**
YHH	**Holmes Hill**	**3.11**	**357**		**Pn**	**17 49 16.6**	**+1.6**
YHL	**Hebgen Lake**	**3.19**	**353**		**Pn**	**17 49 16.2**	**+0.1**
QLMT	**Earthquake Lak**	**3.20**	**350**	Pn	**Pn**	**17 49 16.9**	**+0.8**
K22A	**Casper**	**3.21**	**71**		**Pn**	**17 49 17.5**	**+1.1**
K22A				IAML		17 50 05.5	
	comp=E,24nm,0.4s						
YNE	**Yellowstone No**	**3.35**	**8**		**Pn**	**17 49 21.6**	**+3.2**
MSU	**Marysvale**	**3.38**	**201**		**Pn**	**17 49 20.3**	**+1.6**
MCMT	**McKenzie Canyo**	**3.53**	**334**		**Pn**	**17 49 23.1**	**+2.4**
RLMT	**Red Lodge**	**3.58**	**16**	Pn	**Pn**	**17 49 25.1**	**+3.6**
RLMT				IAML		17 51 22.9	
	comp=E,10nm,4.3s						
RLMT				IAML		17 51 42.0	
	comp=E,12nm,4.3s						
ELK	**Elko**	**3.59**	**256**	Pg	**Pb**	**17 49 29.6**	**+0.6**
	comp=E,0.2nm,0.3s,baz=63,slow=16,SNR=8.4						
ELK				Lg	Lg	17 50 18.5	
	comp=E,0.5nm,0.3s,baz=180,slow=21,SNR=7.8						
ELK	**Elko**	**3.59**	**256**		**Pb**	**17 49 29.7**	**+0.8**
N23A	**Red Feather La**	**3.63**	**101**		**Pn**	**17 49 23.2**	**+1.0**
SMCO	**Snowmass**	**3.76**	**131**		**Pn**	**17 49 25.6**	**+1.5**
SMCO				IAML		17 50 35.1	
	comp=E,18nm,0.5s						
MTPU	**Mount Pierson**	**3.83**	**199**		**Pn**	**17 49 24.4**	**-0.5**
PHWY	**Pilot Hill**	**3.92**	**94**	Pn	**Pn**	**17 49 27.0**	**+0.8**
PHWY				IAML		17 50 35.3	
	comp=E,14nm,0.7s						
DLMT	**Dillon**	**3.94**	**340**		**Pn**	**17 49 28.8**	**+2.4**
DLMT				IAML		17 50 37.2	
	comp=E,11nm,3.7s						
DLMT				IAML		17 51 21.6	
	comp=E,14nm,4.7s						
PSUT	**Pine Spring**	**3.99**	**219**		**Pn**	**17 49 28.2**	**+1.1**
MFID	**Camas Ranch**	**4.20**	**296**	Pn	**Pn**	**17 49 29.0**	**-0.9**
MFID				IAML		17 50 42.0	
	comp=E,6.5nm,0.6s						
MFID				IAML		17 51 07.7	
	comp=E,8.9nm,4.6s						
ISCO	**Idaho Springs**	**4.26**	**115**		**Pn**	**17 49 31.3**	**+0.4**
ISCO				IAML		17 50 29.6	
	comp=E,7.1nm,3.7s						
ISCO				IAML		17 50 45.5	
	comp=E,7.4nm,2.8s						
LRM	**Limekiln Ridge**	**4.34**	**343**	Pn	**Pb**	**17 49 42.9**	**+1.2**
MVCO	**Mesa Verde**	**4.77**	**159**		**Pn**	**17 49 38.7**	**+0.9**
S22A	**4UR Ranch, Cre**	**4.91**	**142**		**Pb**	**17 49 54.5**	**+2.9**
S22A				IAML		17 51 52.3	
	comp=N,6.9nm,4.7s						
NVAR	**Mina Array Bea**	**6.71**	**244**	Pn	Pn	17 50 09.8	+5.3
	comp=N,0.1nm,0.3s,baz=60,slow=12,SNR=4.9						
YKA	**Yellowknife Ar**	**20.98**	**355**	P	**P**	**17 53 08.6**	**-0.3**
	comp=N,0.3nm,0.8s,baz=165,slow=9.9,SNR=3.6						

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*IDC **03** 17:56:35.6±6.8, 6°.43S×154°.92E, h75^{km}±46^{km}, mb3.1/5, mb1 3.4/7, mb1mx3.2/43, mbtmp3.5/7, ML2.6/2, Error ellipse: s-maj=61.4km s-min=21.7km az=86.0*

ISC 03 17:56:32.6±1.5**, 6°.4S**±0°.1×**155°.1E**±0°.2**, h56^{km}, n10, σ0^{s}.79**/9**, mb3.3**/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.75**	**304**	P	**Pn**	**17 57 28.8**	**+0.8**
	4.0nm,0.3s,baz=163,slow=4.8,SNR=8.2						
KRVT				S	**Sn**	**17 58 10.0**	**-0.8**
	4.9nm,0.3s,baz=38,slow=19,SNR=3.1						
PMG	**Port Moresby**	**8.44**	**249**	P	**Pn**	**17 58 33.3**	**+0.9**
	1.2nm,0.3s,baz=133,slow=5.4,SNR=7.5						
WRA	**Warramunga Arr**	**24.26**	**234**	P	**P**	**18 01 44.2**	**-0.6**
	0.6nm,0.7s,baz=57,slow=9.8,SNR=6.2						
ASAR	**Alice Springs**	**26.66**	**228**	P	**P**	**18 02 05.3**	**-1.2**
	0.2nm,0.7s,baz=58,slow=8.9,SNR=4.6						
ASAR				PcP	**PcP**	**18 05 29.3**	**0.0**
	0.1nm,0.6s,baz=45,slow=1.7,SNR=5.1						
H11S3	**WAKE ISLAND Hy**	**27.25**	**25**	T	T	18 30 38.7	
	baz=206,slow=74,SNR=4.2						
H11S2	**WAKE ISLAND Hy**	**27.26**	**25**	T	T	18 30 34.7	
	baz=206,slow=74,SNR=4.9						
H11S1	**WAKE ISLAND Hy**	**27.27**	**25**	T	T	18 30 17.1	
	baz=206						
CMAR	**Chiang Mai Arr**	**60.67**	**295**	P	**P**	**18 06 38.7**	**+0.1**
	0.7nm,0.7s,baz=128,slow=5.4,SNR=7.7						
SONM	**Songino Array**	**68.94**	**327**	P	**P**	**18 07 32.0**	**0.0**
	0.2nm,0.5s,baz=120,slow=4.0,SNR=3.2						
MKAR	**Makanchi Array**	**83.07**	**319**	P	**P**	**18 08 52.5**	**+0.1**
	0.2nm,0.5s,baz=108,slow=4.6,SNR=3.6						

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*SJA **03** 18:01:01.2±0.6, 25°.90S×70°.78W, h40^{km}, ML3.2, MW3.1*

*GUC **03** 18:01:02.3±0.5, 25°.59S×71°.28W, h40^{km}±3^{km}, ML3.1*

ISC 03 18:01:00.7±1.9**, 25°.80S**±0°.04×**71°.2W**±0°.2**, h31^{km}, n19, σ1^{s}.48**/32**, 2C-3D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB14	**IPOC Station P**	**1.35**	**30**	⇓*i*P	**Pb**	**18 01 24.9**	**-0.6**
PB14				*i* S	**Sn**	**18 01 41.7**	**+1.1**
PB14				IAML		18 01 42.6	
	comp=N,447nm,0.3s						
PB14	**IPOC Station P**	**1.35**	**30**	*e*P	**Pb**	**18 01 25.0**	**-0.6**
PB14				*i* S	**Sb**	**18 01 42.1**	**-0.5**
PB14				IAML		18 01 42.9	
	comp=Z,444nm,0.1s						
PB10	**IPOC Station P**	**2.34**	**14**	*e*P	**Pn**	**18 01 37.7**	**+0.7**
PB10				*i* S	**Sn**	**18 02 04.5**	**-0.2**
PB10				IAML		18 02 07.7	
	comp=E,128nm,0.2s						
PB15	**IPOC Station P**	**3.00**	**31**	*e*P	**Pn**	**18 01 48.0**	**+1.8**
PB15				*i* S	**Sn**	**18 02 23.0**	**+1.8**
PB05	**IPOC Station P**	**3.06**	**17**	⇑*i*P	**Pn**	**18 01 48.0**	**+1.0**
PB05				*i* S	**Sn**	**18 02 22.5**	**0.0**
PB05				IAML		18 02 23.2	
	comp=E,88nm,0.7s						
PB06	**IPOC Station P**	**3.40**	**25**	⇓*i*P	**Pn**	**18 01 53.1**	**+1.4**
PB06				*i* S	**Sn**	**18 02 31.7**	**+0.7**
PB04	**IPOC Station P**	**3.57**	**15**	⇑*i*P	**Pn**	**18 01 54.9**	**+0.9**
PB04				*i* S	**Sn**	**18 02 34.5**	**-0.8**
VCA	**Vinchina**	**3.93**	**139**	*i* P	**Pn**	**18 02 01.2**	**+2.1**
VCA				*i* S	**Sn**	**18 02 45.6**	**+1.3**
VCA				IAML		18 02 49.1	
	comp=Z,38nm,0.3s						
PB03	**IPOC Station P**	**3.94**	**19**	⇓*i*P	**Pn**	**18 02 00.1**	**+0.8**
PB03				*i* S	**Sn**	**18 02 44.3**	**-0.3**
PB07	**IPOC Station P**	**4.21**	**16**	*e*P	**Pn**	**18 02 03.7**	**+0.8**
PB07				*i* S	**Sn**	**18 02 49.6**	**-1.6**
PB02	**IPOC Station P**	**4.60**	**15**	*e*P	**Pn**	**18 02 08.9**	**+0.7**
PB02				*i* S	**Sn**	**18 02 58.6**	**-2.2**
AROD	**Rodeo**	**4.60**	**162**	*i* P	**Pn**	**18 02 09.4**	**+1.0**
PB01	**IPOC Station P**	**4.97**	**18**	*e*P	**Pn**	**18 02 14.2**	**+0.8**
PB01				*i* S	**Sn**	**18 03 08.4**	**-1.5**
ACCO	**Cerro Coronel**	**5.12**	**159**	*i* P	**Pn**	**18 02 16.6**	**+1.0**
AMOG	**MOGNA**	**5.64**	**156**	*i* P	**Pn**	**18 02 22.8**	**+0.3**
RTLL	**Cerro Villicun**	**6.00**	**157**	*i* P	**Pn**	**18 02 27.8**	**+0.4**
RTLL				*i* S	**Sn**	**18 03 29.8**	**-5.2**
RTLL				IAML		18 03 39.5	
	comp=Z,8.1nm,0.3s						
RTLS	**Leoncito**	**6.20**	**165**	*i* P	**Pn**	**18 02 30.5**	**+0.1**
ACAN	**Cantantal**	**7.33**	**153**	*i* P	**Pn**	**18 02 46.6**	**+0.9**
MRA	**San Martin**	**8.13**	**145**	*e*P	**Pn**	**18 02 55.4**	**-1.4**

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*VIE **03** 18:04:52.9±0.2, 47°.24N×11°.61E, h8^{km}±2^{km}, mb0.9/1, ml1.8/10, Error ellipse: s-maj=1.7km s-min=1.4km az=154.0 9 km ESE of Hall in Tirol*

*IASPEI **03** 18:04:53.1±0.8, 47°.27N±0°.03×11°.63E±0°.02, h10^{km}±4^{km}, Error ellipse: s-maj=4.6km s-min=3.3km az=22.7, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ROM **03** 18:04:53.3±0.1, 47°.191N±0°.008×11°.68E±0°.01, h4^{km}±1^{km}, ML1.6/2, Error ellipse: s-maj=0.9km s-min=0.9km az=33.0*

*BGR **03** 18:04:53.8±0.3, 47°.29N×11°.64E, h10^{km}, ML2.0/3, Error ellipse: s-maj=6.7km s-min=3.3km az=163.0*

ISC 03 18:04:53.2±0.8**, 47°.25N**±0°.02×**11°.63E**±0°.02**, h8^{km}**±4^{km}**, n30, σ0^{s}.73**/47**, 4C, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WTTA	**Wattenberg**	**0.01**	**26**	*e*Pg	**Pg**	**18 04 55.0**	**0.0**
WTTA				*e*Sg	**Sg**	**18 04 56.9**	**+0.7**
WTTA	**Wattenberg**	**0.01**	**26**	P	**Pg**	**18 04 54.6**	**-0.4**
WTTA				S	**Sg**	**18 04 56.9**	**+0.7**
WTTA	**Wattenberg**	**0.01**	**26**	*e*Pg	**Pg**	**18 04 53.7**	**-1.3**
	1.5nm,0.1s						
WTTA	**Wattenberg**	**0.01**	**26**	*i* Pg	**Pg**	**18 04 55.0**	**0.0**
	21nm,0.1s,SNR=141						
WTTA				*i* Sg	**Sg**	**18 04 56.8**	**+0.7**
	153nm,0.1s						
WATA	**Walderalm**	**0.09**	**338**	*e*Pg	**Pg**	**18 04 53.7**	**-1.9**
	8.8nm,0.1s						
WATA	**Walderalm**	**0.09**	**338**	*e*Pg	**Pg**	**18 04 55.0**	**-0.6**
	208nm,0.1s,SNR=158						
WATA				*e*Sg	**Sg**	**18 04 57.1**	**-0.3**
	106nm,0.1s						
SQTA	**Sankt Quirin**	**0.29**	**264**	*i* Pg	**Pg**	**18 04 57.1**	**-1.8**
	0.4nm,0.2s						
SQTA	**Sankt Quirin**	**0.29**	**264**	*e*Pg	**Pg**	**18 04 58.5**	**-0.5**
	4.1nm,0.1s,SNR=14						
SQTA				*e*Sg	**Sg**	**18 05 02.7**	**-0.1**
	7.4nm,0.1s						
ROSI	**Rosskopf**	**0.35**	**205**	⇑P	**Pg**	**18 05 00.2**	**-0.1**
ROSI				S	**Sg**	**18 05 05.8**	**+0.9**
ROSI				AML	AML		
	comp=E,110µm,0.6s						
ROSI				AML	AML		
	comp=N,119µm,0.4s						
MOTA	**Moosalm**	**0.37**	**285**	*i* Pg	**Pg**	**18 04 59.3**	**-1.2**
	comp=N,0.5nm,0.1s						
MOTA				*e*Sg	**Sg**	**18 05 05.1**	**-0.2**
	comp=N,4.7nm,0.1s						
RISI	**Rein**	**0.43**	**134**	P	**Pg**	**18 05 01.3**	**-0.4**
RISI				S	**Sg**	**18 05 07.6**	**+0.3**
BRES	**Bressanone**	**0.56**	**172**	⇑P	**Pg**	**18 05 04.0**	**0.0**
BRES				S	**Sb**	**18 05 12.3**	**-1.2**
ABSI	**Aberstueckl**	**0.56**	**202**	⇑P	**Pg**	**18 05 04.0**	**-0.1**
ABSI				S	**Sg**	**18 05 12.2**	**+0.6**
ABSI				AML	AML		
	comp=E,117µm,0.6s						
ABSI				AML	AML		
	comp=N,127µm,0.5s						
FETA	**Feichten**	**0.66**	**250**	*e*Pg	**Pg**	**18 05 05.1**	**-0.7**
	comp=N,0.2nm,0.1s						
FETA				*e*Sg	**Sg**	**18 05 13.8**	**-0.6**
	comp=N,2.3nm,0.2s						
ABTA	**Abfaltersbach**	**0.79**	**129**	*i* Pg	**Pg**	**18 05 07.9**	**-0.4**
	comp=N,0.2nm,0.1s						
ABTA				*e*Sg	**Sg**	**18 05 17.8**	**-0.8**
	comp=N,2.5nm,0.2s						
KOSI	**Kohlern**	**0.81**	**192**	⇑P	**Pg**	**18 05 08.4**	**-0.4**
KOSI				S	**Sb**	**18 05 20.0**	**-0.7**
KOSI				AML	AML		
	comp=E,68µm,0.3s						
KOSI				AML	AML		
	comp=N,43µm,1.6s						
APPI	**Appiano**	**0.82**	**200**	P	**Pg**	**18 05 08.7**	**-0.2**
APPI				S	**Sg**	**18 05 20.0**	**+0.4**
APPI				AML	AML		
	comp=E,60µm,0.3s						
APPI				AML	AML		
	comp=N,61µm,0.3s						
RJOB	**Jochberg**	**0.93**	**58**	*e*Pg	**Pn**	**18 05 12.2**	**-0.3**
RJOB				*e*Sg	**Sb**	**18 05 24.3**	**+0.3**
FUR	**Furstenfeldbru**	**0.94**	**346**	*e*Pg	**Pg**	**18 05 11.8**	**+0.5**
FVI	**Forni Avoltri**	**1.03**	**129**	P	**Pg**	**18 05 12.1**	**-0.8**
UBR	**Ueberruh**	**1.12**	**293**	*e*Pg	**Pb**	**18 05 15.0**	**+0.2**
UBR				*e*Sg	**Sg**	**18 05 29.6**	**+0.5**
DAVA	**Damuels**	**1.19**	**272**	*e*Pg	**Pn**	**18 05 16.4**	**+0.1**
DAVA				*e*Sg	**Sb**	**18 05 32.0**	**+0.4**
DAVA	**Damuels**	**1.19**	**272**	*e*Pg	**Pn**	**18 05 16.3**	**+0.1**
	comp=N,0.8nm,0.1s						
DAVA				Sg	**Sn**	**18 05 32.5**	**-0.2**
	comp=N,7.1nm,0.2s,SNR=5.0						
DAVOX	**Davos/Dischmat**	**1.28**	**249**	P	**Pg**	**18 05 18.6**	**+0.8**

MABI	**Malga Bissina**	1.42	213	AML	AML		
	comp=E,22µm,1.6s						
MABI				AML	AML		
	comp=N,21µm,1.6s						
PLONS	**Plons/SG**	1.55	263	*e*Sg	**Sg**	**18 05 43.7**	**+0.8**
MOA	**Molln**	1.89	71	*e*Sg	**Sb**	**18 05 52.0**	**+0.5**
WET	**Wettzell**	2.07	23	*e*Sg	**Sb**	**18 05 57.5**	**+0.6**
GEC2	**GERESS Array S**	2.12	40	*e*Sg	**Sb**	**18 05 58.6**	**+0.3**
SLE	**Schleitheim**	2.19	285	*e*Sg	**Sb**	**18 06 01.3**	**+1.1**

IDC 03 18:05:36.0±56.0, 17°.51S×179°.41W, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.6/38, mbtmp3.9/3, Error ellipse: s-maj=1015.0km s-min=163.7km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	37.99	240	P	P	18 12 56.7	+0.9
	0.5nm,0.4s,baz=84,slow=10,SNR=3.1						
WRA	**Warramunga Arr**	43.77	259	P	P	18 13 43.1	-0.5
	0.5nm,0.4s,baz=98,slow=6.9,SNR=13						
ASAR	**Alice Springs**	43.98	254	P	P	18 13 45.0	-0.4
	3.2nm,0.5s,baz=88,slow=9.2,SNR=110						

VIE 03 18:22:56.5±0.9, 47°.31N×11°.65E, h11^{km}±3^{km}, ml1.0/2, Error ellipse: s-maj=7.2km s-min=3.4km az=66.0 7 km SW of Schwaz, Austria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WTTA	**Wattenberg**	0.04	194	*i* Pg	Pg	18 22 57.0	-1.8
	0.2nm,0.0s						
WTTA				*i* Sg	Sg	18 22 58.9	-1.6
	1.5nm,0.1s						
WTTA	**Wattenberg**	0.04	194	*i* Pg	Pg	18 22 59.1	+0.3
	0.8nm,0.0s						
WTTA				*i* Sg	Sg	18 23 01.0	+0.5
	6.1nm,0.1s						
WATA	**Walderalm**	0.06	301	*i* Pg	Pg	18 22 57.1	-1.9
	1.5nm,0.1s						
WATA				*i* Sg	Sg	18 22 59.1	-1.7
	2.4nm,0.1s						
WATA	**Walderalm**	0.06	301	*i* Pg	Pg	18 22 59.1	+0.2
	6.6nm,0.1s						
WATA				*i* Sg	Sg	18 23 01.2	+0.4
	15nm,0.2s						
SQTA	**Sankt Quirin**	0.31	255	*i* Pg	Pg	18 23 00.4	-2.5
SQTA	**Sankt Quirin**	0.31	255	*i* Pg	Pg	18 23 02.9	+0.1
	0.5nm,0.1s						

NEIC 03 18:29:43.5±2.0, 6°.1S±0°.2×149°.0E±0°.2, h100^{km}±12^{km}, mb4.1/6, Error ellipse: s-maj=34.7km s-min=11.6km az=140.0

IDC 03 18:29:48.6±5.2, 6°.11S×148°.54E, h110^{km}±53^{km}, mb3.5/3, mb1 3.7/5, mb1mx3.2/43, mbtmp3.8/5, MS2.8/2, Ms1 2.8/2, ms1mx2.6/25, Error ellipse: s-maj=95.6km s-min=31.0km az=136.0

ISC 03 18:29:42.7±1.6, 5°.7S±0°.2×148°.7E±0°.2, h100^{km}, n14, σ1^{s}.43/13, mb3.9/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	3.57	67	LR	LR	18 32 08.0	
	comp=Z,240nm,19.5s,baz=233,slow=36						
RABL	**Rabaul**	3.75	66	Pn	**Pn**	**18 30 38.4**	**-0.1**
PMG	**Port Moresby**	3.96	203	P	**Pn**	**18 30 41.6**	**+0.2**
	3.6nm,0.3s,baz=25,slow=8.0,SNR=19						
PMG				S	**Sn**	**18 31 28.0**	**+1.1**
	4.5nm,0.3s,baz=339,slow=12,SNR=3.7						
PMG				LR	LR	18 32 07.7	
	comp=Z,64nm,19.5s,baz=28,slow=39						
PMG	**Port Moresby**	3.96	203		**Pn**	**18 30 40.4**	**-1.0**
WB0	**Warramunga Arr**	19.73	224	P	**P**	**18 34 03.6**	**-1.0**
WB0				IAmb	IAmb	18 34 14.2	
	comp=Z,19nm,1.8s						
WR0	**Warramunga Arr**	19.76	223	P	**P**	**18 34 03.2**	**-1.7**
WR0				IAmb	IAmb	18 34 25.5	
	comp=Z,7.8nm,1.2s						
WB2	**Warramunga Arr**	19.87	223	P	**P**	**18 34 04.1**	**-2.0**
WB2				IAmb	IAmb	18 34 09.9	
	comp=Z,19nm,1.6s						
WRA	**Warramunga Arr**	19.88	223	P	**P**	**18 34 05.6**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=47,slow=11,SNR=18						
KNRA	**Kununurra**	21.95	242	P	**P**	**18 34 29.8**	**+1.5**
KNRA				IAmb	IAmb	18 35 19.0	
	comp=Z,20nm,1.6s						
AS31	**Alice Springs**	22.84	217	P	**P**	**18 34 37.2**	**-0.3**
ASAR	**Alice Springs**	22.84	217	P	**P**	**18 34 38.8**	**+1.2**
	comp=Z,1.8nm,0.6s,baz=55,slow=9.0,SNR=19						
FITZ	**Fitzroy Crossi**	25.68	239	P	**P**	**18 35 05.7**	**+2.2**
	comp=Z,3.0nm,0.4s,baz=70,slow=9.9,SNR=22						
FITZ	**Fitzroy Crossi**	25.68	239	P	**P**	**18 35 04.9**	**+1.4**
ILAR	**Eielson Array**	84.57	23	P	P	18 42 11.8	+7.3
	comp=Z,0.3nm,0.8s,baz=249,slow=6.0,SNR=4.2						

JMA 03 18:34:02.8±0.2, 36°.31N×137°.74E, h225^{km}±2^{km}, M3.2

IDC 03 18:34:02.5±0.6, 36°.40N×137°.97E, h223^{km}±7^{km}, mb3.3/5, mb1 3.3/7, mb1mx3.0/56, mbtmp3.8/7, Error ellipse: s-maj=40.6km s-min=15.6km az=64.0

NEIC 03 18:34:02.5±1.7, 36°.4N±0°.1×138°.0E±0°.2, h225^{km}±7^{km}, mb4.3/9, Error ellipse: s-maj=20.2km s-min=14.8km az=114.0

ISC 03 18:34:02.5±0.7, 36°.40N±0°.06×137°.89E±0°.08, h227^{km}±5^{km}, n31, σ1^{s}.10/38, mb4.0/10, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJB9	**Matsu-Tunnel**	0.29	60		**Pn**	**18 34 32.4**	**+0.2**
MAJO	**Matsushiro**	0.29	60		**Pn**	**18 34 32.4**	**+0.2**
MAT	**Matsushiro**	0.29	60	P	**Pn**	**18 34 32.4**	**+0.2**
MAT				S	**S**	**18 34 54.8**	**-0.7**
MAT	**Matsushiro**	0.29	60	P	**Pn**	**18 34 32.5**	**+0.2**
MAT				S	**S**	**18 34 54.9**	**-0.6**
MJAR	**Matsushiro Arr**	0.29	61	P	**Pn**	**18 34 32.6**	**+0.4**
	5.5nm,0.3s,baz=241,slow=3.6,SNR=330						
MJAR				S	**S**	**18 34 55.3**	**-0.2**
	0.6nm,0.3s,baz=281,slow=28,SNR=14						
JRY	**Ryogami san**	0.90	115	P	**Pn**	**18 34 34.9**	**+0.3**
JRY				S	**S**	**18 34 58.7**	**-0.8**
JYN	**Shimob**	1.04	149	P	**Pn**	**18 34 35.5**	**0.0**
JSZ	**Suzu**	1.13	338	P	**Pn**	**18 34 35.8**	**0.0**
JSZ				S	**S**	**18 35 02.0**	**0.0**
JYTA	**Yamagatataniai**	1.24	230	P	**Pn**	**18 34 35.5**	**-1.2**
JYTA				S	**S**	**18 35 00.1**	**-3.1**
JAG	**Ashikaga**	1.26	88	P	**Pn**	**18 34 37.6**	**+0.8**
INU	**Inuyama**	1.27	214	Pn	**Pn**	**18 34 35.6**	**-1.3**
JFNN	**Fujinakano**	1.36	152	P	**Pn**	**18 34 38.2**	**+0.6**
JOD2	**Odawara 2**	1.49	139	P	**Pn**	**18 34 38.8**	**+0.1**
JSD	**Sado**	1.66	10	P	**Pn**	**18 34 40.9**	**+1.0**
JSD				S	**S**	**18 35 09.6**	**+0.3**
ERM	**Erimo**	6.94	34	Pn	**Pn**	**18 35 38.0**	**-4.0**
KSRS	**Korea Array**	8.06	280	P	**Pn**	**18 35 58.1**	**+1.7**
	0.1nm,0.3s,baz=98,slow=13,SNR=5.5						
KLR	**Kul'dur**	13.59	343	P	**Pn**	**18 37 06.2**	**0.0**
	0.4nm,0.3s,baz=148,slow=11,SNR=10						
ZALV	**Zalesovo Beam**	40.27	313	P	**P**	**18 41 17.7**	**+0.5**
	1.2nm,0.4s,baz=104,slow=7.9,SNR=7.7						
MK31	**Makanchi Array**	42.06	302	P	**P**	**18 41 32.1**	**+0.2**
MKAR	**Makanchi Array**	42.06	302	P	**P**	**18 41 32.4**	**+0.4**
	1.8nm,0.5s,baz=89,slow=9.9,SNR=31						
MAKZ	**Makanchi**	42.27	302	P	**P**	**18 41 33.0**	**-0.7**
KURK	**Kurchatov**	44.10	308	P	**P**	**18 41 48.4**	**+0.3**
KURK				IAmb	IAmb	18 41 49.1	
	comp=Z,9.6nm,0.6s						
BRVK	**Borovoye**	48.96	312	P	**P**	**18 42 26.5**	**+0.7**
BRVK				IAmb	IAmb	18 42 27.2	
	comp=Z,19nm,1.9s						
WRA	**Warramunga Arr**	56.14	184	P	**P**	**18 43 18.4**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=356,slow=7.7,SNR=8.8						
WR0	**Warramunga Arr**	56.14	184	P	**P**	**18 43 18.6**	**0.0**
C36M	**Paulatuk**	59.18	24	P	**P**	**18 43 38.3**	**-0.8**
C36M				IAmb	IAmb	18 45 13.4	
	comp=Z,18nm,1.9s						
ASAR	**Alice Springs**	59.86	184	P	**P**	**18 43 45.2**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=355,slow=6.3,SNR=4.2						
TULEG	**Thule**	66.08	7	P	**P**	**18 44 24.7**	**+0.2**
TULEG				IAmb	IAmb	18 44 36.7	
	comp=Z,11nm,1.4s						
FINES	**FINESS Array B**	68.03	331	P	**P**	**18 44 37.8**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=61,slow=7.0,SNR=6.2						
KEBM	**Edson Butte**	71.32	50	P	**P**	**18 44 57.0**	**-0.5**
BUR08	**Bucovina Ar. S**	77.01	320	P	**P**	**18 45 31.6**	**+1.2**
BUR08				IAmb	IAmb	18 47 16.0	
	comp=Z,7.7nm,1.6s						

SJA 03 18:46:05.3±0.8, 23°.57S×66°.87W, h231^{km}±7^{km}, ML3.6, MW3.6

IDC 03 18:46:06.4±1.3, 23°.46S×66°.65W, h191^{km}±16^{km}, mb3.3/1, mb1 3.3/6, mb1mx3.1/33, mbtmp3.7/6, Error ellipse: s-maj=24.3km s-min=20.0km az=9.0

GUC 03 18:46:07.1±0.7, 23°.48S×67°.42W, h251^{km}±17^{km}, ML4.1

ISC 03 18:46:06.4±0.9, 23°.48S±0°.06×66°.86W±0°.06, h214^{km}±10^{km}, n32, σ1^{s}.10/55, 8C-2D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	1.75	135	*i* P	**Pn**	**18 46 44.3**	**+0.4**
SLA				IAML		18 46 44.8	
	comp=Z,143nm,0.4s						
SLA				*e*S	**S**	**18 47 12.7**	**-0.1**
AZAP	**Zapla**	1.80	115	*i* P	**Pn**	**18 46 43.5**	**-0.9**
LVC	**Limon Verde**	2.08	294	P	**Pn**	**18 46 48.1**	**+0.8**
	comp=Z,17nm,0.3s,baz=96,slow=7.4,SNR=39						
LVC				S	**S**	**18 47 19.0**	**+0.3**
	comp=Z,18nm,0.3s,baz=160,slow=23,SNR=17						
LVC	**Limon Verde**	2.08	294	*i* P	**Pn**	**18 46 48.1**	**+0.8**
LVC				*i* S	**S**	**18 47 20.0**	**+1.3**
PB15	**IPOC Station P**	2.42	276	⇑*i*P	**Pn**	**18 46 51.3**	**+0.7**
PB15				*i* S	**S**	**18 47 24.7**	**0.0**
PB06	**IPOC Station P**	2.62	287	*e*P	**Pn**	**18 46 53.2**	**+0.5**
PB06				*i* S	**S**	**18 47 28.2**	**-0.2**
PB06				IAML		18 47 30.8	
	comp=N,375nm,0.4s						
PB06	**IPOC Station P**	2.62	287	*i* P	**Pn**	**18 46 53.6**	**+0.9**
PB06				IAML		18 46 53.7	
	comp=Z,250nm,0.3s						
PB06				*i* S	**S**	**18 47 28.3**	**-0.2**
PB09	**IPOC Station P**	2.77	307	⇑*i*P	**Pn**	**18 46 55.6**	**+1.2**
PB09				*i* S	**S**	**18 47 31.7**	**+0.1**
PB09	**IPOC Station P**	2.77	307	*i* P	**Pn**	**18 46 55.6**	**+1.2**
PB09				*i* S	**S**	**18 47 32.7**	**+1.2**
PB09				IAML		18 47 38.0	
	comp=Z,103nm,0.5s						
GO02	**Mina Guanaco**	3.00	236	⇓*i*P	**Pn**	**18 46 57.6**	**+0.4**
GO02				*i* S	**S**	**18 47 36.6**	**-0.1**
GO02				IAML		18 47 39.4	
	comp=N,490nm,0.1s						
PB03	**IPOC Station P**	3.03	297	⇑*i*P	**Pn**	**18 46 57.9**	**+0.5**
PB03				*i* S	**S**	**18 47 35.7**	**-1.1**
PB03				IAML		18 47 37.5	
	comp=N,244nm,0.2s						
PB03	**IPOC Station P**	3.03	297	*i* P	**Pn**	**18 46 57.9**	**+0.5**
PB03				*e*S	**S**	**18 47 35.9**	**-1.0**
PB04	**IPOC Station P**	3.24	290	⇑*i*P	**Pn**	**18 47 00.3**	**+0.5**
PB04				*i* S	**S**	**18 47 39.5**	**-1.8**
PB04				IAML		18 47 44.2	
	comp=E,240nm,0.3s						
PB04	**IPOC Station P**	3.24	290	*i* P	**Pn**	**18 47 00.4**	**+0.5**
PB04				IAML		18 47 43.6	
	comp=Z,128nm,0.1s						
PB07	**IPOC Station P**	3.30	301	⇑*i*P	**Pn**	**18 47 00.9**	**+0.4**
PB07				*i* S	**S**	**18 47 40.9**	**-1.6**
PB07	**IPOC Station P**	3.30	301	*i* P	**Pn**	**18 47 00.9**	**+0.4**
PB07				*e*S	**S**	**18 47 40.9**	**-1.6**
PB10	**IPOC Station P**	3.39	269	⇑*i*P	**Pn**	**18 47 02.0**	**+0.6**
PB10				*i* S	**S**	**18 47 42.8**	**-1.5**
PB10	**IPOC Station P**	3.39	269	*i* P	**Pn**	**18 47 02.1**	**+0.6**
PB01	**IPOC Station P**	3.44	314	⇑*i*P	**Pn**	**18 47 02.2**	**+0.2**
PB01				*i* S	**S**	**18 47 44.2**	**-1.2**
PB01	**IPOC Station P**	3.44	314	*e*P	**Pn**	**18 47 02.3**	**+0.2**
PB01				*e*S	**S**	**18 47 45.2**	**-0.2**
PB14	**IPOC Station P**	3.44	250	*i* P	**Pn**	**18 47 02.1**	**-0.2**
PB02	**IPOC Station P**	3.54	307	⇓*i*P	**Pn**	**18 47 03.3**	**0.0**
PB02				*i* S	**S**	**18 47 45.3**	**-2.3**
PB02	**IPOC Station P**	3.54	307	*e*P	**Pn**	**18 47 03.5**	**+0.2**
PB02				*e*S	**S**	**18 47 46.1**	**-1.5**
PB08	**IPOC Station P**	3.95	327	⇑*i*P	**Pn**	**18 47 09.6**	**+1.1**
PB08				*i* S	**S**	**18 47 56.4**	**-0.6**
PB08	**IPOC Station P**	3.95	327	*i* P	**Pn**	**18 47 09.7**	**+1.1**
PB08				*i* S	**S**	**18 47 58.5**	**+1.5**
PATCX	**Punta Patache**	4.04	310	*e*P	**Pn**	**18 47 08.8**	**-0.6**
PATCX				*i* S	**S**	**18 47 55.9**	**-2.7**
LPAZ	**La Paz**	7.25	350	P	**Pn**	**18 47 52.4**	**+1.8**
	comp=Z,0.3nm,0.3s,baz=167,slow=4.4,SNR=5.7						
LPAZ				S	**S**	**18 49 13.4**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=24,slow=20,SNR=2.9						
CPUP	**Villa Florida**	9.10	110	P	**Pn**	**18 48 11.8**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=275,slow=10,SNR=4.9						
SIV	**San Ignacio**	9.22	37	P	**Pn**	**18 48 13.4**	**-2.2**
	comp=Z,0.4nm,0.3s,baz=233,slow=14,SNR=6.9						
BDFB	**Brasilia**	19.38	70	P	**P**	**18 50 16.6**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=230,slow=12,SNR=8.1						
TORD	**Torodi Ar. Bea**	76.26	69	P	**P**	**18 57 32.7**	**+0.8**
	comp=Z,0.4nm,0.4s,baz=247,slow=5.2,SNR=6.3						
MKAR	**Makanchi Array**	146.04	39	PKPbc	**PKPab**	**19 05 23.1**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=290,slow=3.5,SNR=3.4						

SJA 03 18:57:54.1±0.9, 23°.36S×69°.14W, h86^{km}±4^{km}, ML3.6, MW3.4

GUC 03 18:57:54.8±0.7, 23°.36S×69°.20W, h87^{km}±3^{km}, ML3.4

ISC 03 18:57:56.1±1.5, 23°.36S±0°.03×69°.19W±0°.06, h82^{km}±9^{km}, n30, σ0^{s}.61/54, 7C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB15	**IPOC Station P**	0.30	299	⇑*i*P	**Pn**	**18 58 08.4**	**-0.5**
PB15				*i* S	**Sn**	**18 58 18.6**	**+0.3**
PB15	**IPOC Station P**	0.30	299	*i* P	**Pn**	**18 58 08.6**	**-0.3**
PB15				*i* S	**Sn**	**18 58 18.6**	**+0.3**
PB06	**IPOC Station P**	0.74	331	⇑*i*P	**Pn**	**18 58 12.1**	**-0.4**
PB06				*i* S	**Sn**	**18 58 25.0**	**+0.3**
PB06	**IPOC Station P**	0.74	331	*i* P	**Pn**	**18 58 12.2**	**-0.4**
PB06				*e*S	**Sn**	**18 58 25.2**	**+0.5**
PB06				IAML		18 58 25.6	
	comp=Z,2µm,0.3s						
LVC	**Limon Verde**	0.79	19	*i* P	**Pn**	**18 58 12.8**	**-0.5**
LVC				*i* S	**Sn**	**18 58 25.9**	**0.0**
PB05	**IPOC Station P**	1.06	298	⇑*i*P	**Pn**	**18 58 15.5**	**-0.6**
PB05				*i* S	**Sn**	**18 58 31.4**	**+0.3**
PB05				IAML		18 58 37.4	
	comp=E,852nm,0.4s						
PB05	**IPOC Station P**	1.06	298	*i* P	**Pn**	**18 58 15.6**	**-0.6**
PB05				*i* S	**Sn**	**18 58 31.5**	**+0.4**
PB10	**IPOC Station P**	1.26	263	⇓*e*P	**Pn**	**18 58 18.2**	**-0.3**
PB10				*i* S	**Sn**	**18 58 35.2**	**-0.2**
PB10				IAML		18 58 40.0	
	comp=E,713nm,0.4s						
PB10	**IPOC Station P**	1.26	263	*i* P	**Pn**	**18 58 18.5**	**0.0**
PB10				*e*S	**Sn**	**18 58 36.9**	**+1.5**
PB04	**IPOC Station P**	1.35	319	⇑*i*P	**Pn**	**18 58 19.1**	**-0.6**
PB04				*e*S	**Sn**	**18 58 37.8**	**+0.2**
PB04				IAML		18 58 41.3	
	comp=E,912nm,0.2s						
PB04	**IPOC Station P**	1.35	319	*e*P	**Pn**	**18 58 19.1**	**-0.6**
PB04				*i* S	**Sn**	**18 58 38.6**	**+1.1**
PB04				IAML		18 58 41.2	
	comp=Z,796nm,0.2s						
PB03	**IPOC Station P**	1.40	338	⇑*i*P	**Pn**	**18 58 20.1**	**-0.4**
PB03				*i* S	**Sn**	**18 58 38.9**	**+0.2**
PB03				IAML		18 58 42.0	
	comp=E,1µm,0.3s						
PB03	**IPOC Station P**	1.40	338	*e*P	**Pn**	**18 58 20.2**	**-0.2**
PB03				*i* S	**Sn**	**18 58 39.2**	**+0.5**
PB09	**IPOC Station P**	1.55	358	⇓*i*P	**Pn**	**18 58 22.6**	**+0.3**
PB09				*i* S	**Sn**	**18 58 43.4**	**+1.2**
PB09				IAML		18 58 47.4	
	comp=E,443nm,0.5s						
PB09	**IPOC Station P**	1.55	358	*e*P	**Pn**	**18 58 22.9**	**+0.5**
PB09				IAML		18 58 50.6	
	comp=Z,326nm,0.7s						
PB14	**IPOC Station P**	1.68	221	*e*P	**Pn**	**18 58 23.9**	**-0.3**
PB14				*i* S	**Sn**	**18 58 45.9**	**+0.5**
PB14	**IPOC Station P**	1.68	221	*i* P	**Pn**	**18 58 23.9**	**-0.3**
PB14				*i* S	**Sn**	**18 58 46.0**	**+0.5**
PB07	**IPOC Station P**	1.74	338	⇑*i*P	**Pn**	**18 58 24.5**	**-0.4**
PB07				*i* S	**Sn**	**18 58 46.9**	**+0.2**
PB07				IAML		18 58 50.0	
	comp=E,744nm,0.3s						
PB07	**IPOC Station P**	1.74	338	*e*P	**Pn**	**18 58 24.6**	**-0.3**
PB07				*i* S	**Sn**	**18 58 46.9**	**+0.2**
GO02	**Mina Guanaco**	1.84	191	⇓*e*P	**Pn**	**18 58 25.9**	**-0.4**
GO02				*i* S	**Sn**	**18 58 49.3**	**+0.3**
GO02				IAML		18 58 56.1	
	comp=E,547nm,0.1s						
PB02	**IPOC Station P**	2.13	342	⇑*i*P	**Pn**	**18 58 29.3**	**-0.6**
PB02				*i* S	**Sn**	**18 58 55.8**	**+0.1**
PB02				IAML		18 59 03.9	
	comp=E,514nm,0.4s						
PB02	**IPOC Station P**	2.13	342	*e*P	**Pn**	**18 58 29.4**	**-0.5**
PB02				*i* S	**Sn**	**18 58 56.8**	**+1.1**
PB01	**IPOC Station P**	2.32	353	*e*P	**Pn**	**18 58 32.0**	**-0.4**
PB01				*i* S	**Sn**	**18 59 00.5**	**+0.3**
PB01				IAML		18 59 05.7	
PB01	**IPOC Station P**	2.32	353	*e*P	**Pn**	**18 58 32.0**	**-0.4**
PB01				*i* S	**Sn**	**18 59 00.5**	**+0.3**
PATCX	**Punta Patache**	2.68	340	*e*P	**Pn**	**18 58 37.0**	**-0.2**
PATCX	**Punta Patache**	2.68	340	*e*P	**Pn**	**18 58 35.8**	**-1.5**
TA01	**Diego Aracena**	2.92	341	*e*P	**Pn**	**18 58 40.4**	**-0.1**
TA01				*e*S	**Sn**	**18 59 15.1**	**+0.5**
TA01				IAML		18 59 25.9	
	comp=N,139nm,0.7s						
PB08	**IPOC Station P**	3.20	1	*e*P	**Pn**	**18 58 44.2**	**-0.4**
PB11	**IPOC Station P**	3.60	353	*e*P	**Pn**	**18 58 48.0**	**-1.9**
GO01	**Chusmiza**	3.67	360	*e*P	**Pn**	**18 58 51.6**	**+0.5**

WEL 03 19:03:55.1±0.7, 35°S±18°×17°9E±2°9, h275^{km}±10^{km}, M4.2/16, mB4.5/3, ML4.4/12, MLv4.3/16, Mw(mB)3.6/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	2.88	198	P	Pn	19 04 46.7	-1.2
MXZ				S	S	19 05 28.7	-1.2
PKGZ	**Pakihiroa**	3.25	199	P	Pn	19 04 51.4	-0.3
MWZ	**Matawai**	3.82	203	P	Pn	19 04 58.4	+0.3
MWZ				S	S	19 05 49.3	+1.1
TKGZ	**Te Karaka**	3.83	199	P	Pn	19 04 59.9	+1.9
RTZ	**Ruatahuna**	4.26	206	P	Pn	19 05 02.6	-0.5
MTHZ	**Maungataniwha**	4.53	206	P	Pn	19 05 06.6	+0.5
MTHZ				S	S	19 06 04.3	+1.5
ARHZ	**Aropaoanui**	4.84	203	P	Pn	19 05 11.1	+1.4
BKZ	**Black Stump Fm**	4.93	207	P	Pn	19 05 11.3	+0.5
BKZ				S	S	19 06 11.6	+0.1
KAHZ	**Kahuranaki**	5.36	201	P	Pn	19 05 15.6	-0.4
BHHZ	**Black Hill Sta**	5.38	209	P	Pn	19 05 13.6	-2.5
KRHZ	**Kereru**	5.39	206	P	Pn	19 05 16.6	+0.3
KRHZ				S	S	19 06 23.2	+1.7
PNHZ	**Pukenui**	5.69	206	P	Pn	19 05 19.7	-0.3
PNHZ				S	S	19 06 27.4	-0.8
PRHZ	**Porangahau**	5.87	201	P	Pn	19 05 18.2	-3.9
BFZ	**Birch Farm**	6.37	202	P	Pn	19 05 28.5	+0.3
BFZ				S	S	19 06 44.0	+0.9
MRZ	**Mangatainoka R**	6.58	206	P	Pn	19 05 29.8	-0.9
MRZ				S	S	19 06 46.8	-0.9
HOWZ	**Holdsworth Sta**	6.81	206	P	Pn	19 05 33.0	-0.6
OGWZ	**Otaki Gorge**	6.87	208	P	Pn	19 05 34.6	+0.3
TMWZ	**Te Maipa**	6.87	203	P	Pn	19 05 34.6	+0.2
KIW	**Kapiti Island**	7.00	209	P	Pn	19 05 35.4	-0.6
MTW	**Mount Morrison**	7.04	205	P	Pn	19 05 36.2	-0.3
CAW	**Cannon Point**	7.16	207	P	Pn	19 05 37.6	-0.3
TUWZ	**Tuamarina**	7.88	211	P	Pn	19 05 46.6	-0.3

IDC 03 19:08:46.8±0.6, 59°.85N×55°.62W, h0^{km}, mb4.0/19, mb1 4.2/20, mb1mx4.0/51, mbtmp4.0/20, ML4.4/2, MS3.5/5, Ms1 3.5/5, ms1mx3.1/46, Error ellipse: s-maj=18.2km s-min=11.7km az=169.0

NEIC 03 19:08:47.1±2.3, 59°.80N±0°.07×55°.8W±0°.1, h10^{km}±1^{km}, mb4.5/71, ML4.5(OTT), Error ellipse: s-maj=12.2km s-min=7.1km az=208.0

OTT 03 19:08:48.9±0.2, 59°.79N×55°.70W, h18^{km}, ML4.5/15, Labrador Sea. 442km northeast from Nutak, Nl

DNK 03 19:08:51.0±3.4, 60°.22N×55°.32W, h0^{km}±124^{km}, ML3.1, Hypocentre not reviewed by the ISC

ANF 03 19:08:54.7±0.7, 59°.18N×57°.36W, h0^{km}, Error ellipse: s-maj=8.5km s-min=6.4km az=77.0

ISC 03 19:08:46.2±0.4, 59°.70N±0°.05×55°.91W±0°.04, h10^{km}, n183, σ2^{s}.85/193, mb4.4/33, MS3.4/4, Labrador Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NUUK	**Nuuk**	4.91	22	*e*		19 09 56.5	
	baz=211,slow=11						
NUUK				*i* P		19 09 56.9	
NUUK				*i* S		19 10 45.4	
NUUK				IAML		19 10 48.2	
	comp=Z,92nm,0.3s						
MKVL	**Makkovik**	4.95	202	PN	**Pn**	**19 10 03.0**	**+2.6**
MKVL				SN	**Sn**	**19 10 57.2**	**-0.4**
MKVL				Trac		19 10 58.5	
	comp=Z,193nm,0.2s						
KAJQ	**Kangiqsualujju**	5.25	263	PN	**Pn**	**19 10 07.1**	**+2.5**
KAJQ				SN	**Sn**	**19 11 04.7**	**-0.3**
KAJQ				Trac		19 11 07.0	
	comp=Z,229nm,0.3s						
NRS	**Narsarsuaq**	5.40	70	*i* P	**Pn**	**19 10 05.6**	**-1.0**
NRS				*e*S	**Sn**	**19 11 02.5**	**-6.2**
NRS	**Narsarsuaq**	5.40	70		Pn	19 09 58.3	-8.3
NRS	**Narsarsuaq**	5.40	70	*i* P		19 10 05.7	
NRS				*e*S		19 11 02.5	
FRB	**Frobisher Bay**	7.24	309	Pn	**Pn**	**19 10 32.2**	**+0.3**
	comp=Z,5.0nm,0.3s,baz=112,slow=12,SNR=22						
FRB				Sn	**Sn**	**19 11 46.7**	**-7.3**
	comp=Z,6.0nm,0.3s,baz=18,slow=14,SNR=3.7						
FRB	**Frobisher Bay**	7.24	309	PN	**Pn**	**19 10 33.5**	**+1.6**
FRB				SN	**Sn**	**19 11 47.9**	**-6.2**
FRB				Trac		19 12 00.8	
	comp=Z,20nm,0.3s						
SCHQ	**Schefferville**	7.67	235	Pn	**Pn**	**19 10 40.6**	**+2.8**
	comp=Z,67nm,0.3s,baz=54,slow=9.6,SNR=639						
SCHQ				Sn	**Sn**	**19 12 03.0**	**-1.6**
	comp=Z,16nm,0.3s,baz=154,slow=12,SNR=5.2						
SCHQ				LR	LR	19 13 41.7	
	comp=Z,210nm,20.5s,baz=52,slow=38						
SCHQ	**Schefferville**	7.67	235	PN	**Pn**	**19 10 40.5**	**+2.8**
SCHQ				SN	**Sn**	**19 12 03.1**	**-1.5**
SCHQ				Trac		19 12 07.8	
	comp=Z,42nm,0.2s						
SFJD	**Kangerlussuaq**	7.70	16	*i* P	**Pn**	**19 10 35.2**	**-3.0**
SFJD				*i*		19 10 36.6	
SFJD				*i* S	Sn	19 11 53.7	-12
SFJD	**Kangerlussuaq**	7.70	16	PN	**Pn**	**19 10 36.5**	**-1.6**
SFJD				SN	Sn	19 11 55.5	-10
SFJD				Trac		19 12 00.1	
	comp=Z,16nm,0.7s						
SFJD	**Kangerlussuaq**	7.70	16		**Pn**	**19 10 35.1**	**-3.0**
SFJD	**Kangerlussuaq**	7.70	16	*i* P		19 10 35.3	
SFJD				*i*		19 10 36.6	
SFJD				*i* S		19 11 53.7	
SFJD				IAML		19 11 59.0	
	comp=Z,1.8nm,0.3s						
KNGQ	**Kangiqsujuaq**	8.11	290	PN	**Pn**	**19 10 44.8**	**+1.1**
KNGQ				SN	**Sn**	**19 12 11.1**	**-4.2**
KNGQ				Trac		19 12 11.6	
	comp=Z,8.9nm,0.0s						
ISOG	**Isortoq, Green**	9.73	46	*i* P		19 11 03.9	
ILULI	**Ilulissat**	9.77	10		**Pn**	**19 11 02.5**	**-4.0**
NATG	**Natashquan Que**	10.22	206	PN	**Pn**	**19 11 14.7**	**+2.0**
NATG				SN	**Sn**	**19 13 02.8**	**-4.4**
NATG				Trac		19 13 06.0	
	comp=Z,22nm,0.3s						
ANGG	**Ammassalik, Gr**	10.26	47		**Pn**	**19 11 09.1**	**-4.1**
ANGG	**Ammassalik, Gr**	10.26	47	*e*P		19 11 09.8	
ANGG				*i* P		19 11 10.2	
ANGG				IAML		19 13 00.6	
	comp=Z,5.3nm,0.4s						
DRLN	**Deer Lake**	10.50	186	PN	**Pn**	**19 11 18.3**	**+1.7**
DRLN				SN	**Sn**	**19 13 08.7**	**-5.5**
DRLN				Trac		19 13 27.1	
	comp=Z,20nm,0.5s						
DRLN	**Deer Lake**	10.50	186		**Pn**	**19 11 19.2**	**+2.6**
SMQ	**Clarke City**	11.32	218	PN	**Pn**	**19 11 27.9**	**+0.1**
SMQ				SN	**Sn**	**19 13 26.8**	**-7.5**
SMQ				Trac		19 13 35.2	
	comp=Z,14nm,0.3s						
LG4Q	**La Grande 4**	11.69	247	PN	**Pn**	**19 11 33.5**	**+0.8**
LG4Q				SN	**Sn**	**19 13 35.5**	**-7.6**
LG4Q				Trac		19 13 37.5	
	comp=Z,89nm,0.3s						
MNQ	**Manicouagan**	11.75	224	PN	**Pn**	**19 11 35.2**	**+1.6**

MNQ				SN	Sn	19 13 38.1	-6.7
MNQ				Trac		19 13 48.0	
	comp=Z,5.6nm,0.1s						
ICQ	Pointe Anglais	12.12	218	PN	Pn	19 11 37.8	-0.8
ICQ				SN	Sn	19 13 48.0	-5.6
ICQ				Trac		19 13 53.4	
	comp=Z,19nm,0.5s						
KJKQ	Kuujjuarapik	12.53	259	PN	Pn	19 11 44.0	-0.2
KJKQ				SN	Sn	19 13 55.8	-7.8
KJKQ				Trac		19 14 00.6	
	comp=Z,29nm,0.3s						
CNQ	Baie Comeau	12.56	219	PN	Pn	19 11 44.0	-0.7
CNQ				Trac		19 14 04.2	
	comp=Z,3.2nm,0.1s						
GSQ	Grosses Roches	12.61	216	PN	Pn	19 11 45.8	+0.4
GSQ				SN	Sn	19 13 58.9	-6.8
GSQ				Trac		19 14 04.2	
	comp=Z,5.6nm,0.2s						
CHEG	Cheticamp, Nov	13.22	194	PN	Pn	19 11 54.6	+0.9
CHEG				SN	Sn	19 14 13.1	-7.6
CHEG				Trac		19 14 21.8	
	comp=Z,51nm,0.9s						
BATG	Bathurst New B	13.81	210		Pn	19 12 01.3	-0.4
NMSQ	Nemaska Statio	13.83	244	PN	Pn	19 12 01.4	-0.6
NMSQ				SN	Sn	19 14 25.1	-10
NMSQ				Trac		19 14 28.4	
	comp=Z,60nm,0.3s						
D63A	Stockholm	14.59	215	P	Pn	19 12 10.8	-1.6
	baz=25,SNR=7.4						
D63A				S	Sn	19 14 44.2	-10
	baz=25						
SUMG	Summit	14.63	21		Pn	19 12 07.6	-5.6
GBN	Guysborough	14.70	196		Pn	19 12 14.6	+0.6
D62A	Allapoint, All	14.83	217		Pn	19 12 14.5	-1.2
D62A	Allapoint, All	14.83	217	P	Pn	19 12 13.9	-1.8
	baz=27,SNR=6.1						
LMN	Caledonia Moun	14.86	205		Pn	19 12 15.6	-0.4
PQI	Presque Isle	14.89	214		Pn	19 12 15.5	-1.1
PQI				IAmb	IAmb	19 12 29.4	
	comp=Z,25nm,1.1s						
E64A	Bridgewater	15.07	213	P	Pn	19 12 17.2	-1.8
	baz=24						
E64A				S	Sn	19 14 57.0	-8.8
	baz=24						
D61A	St Aubert, Com	15.09	220	P	Pn	19 12 16.9	-2.2
	baz=29,SNR=22						
D61A				S	Sn	19 14 56.5	-10
	baz=29						
E63A	Oxbow	15.24	215		Pn	19 12 19.6	-1.5
E63A	Oxbow	15.24	215	P	Pn	19 12 19.3	-1.9
	baz=25						
E63A				S	Sn	19 15 01.6	-8.2
	baz=25						
D60A	Saint Jean D'O	15.58	221	P	Pn	19 12 23.1	-2.5
	baz=29,SNR=7.2						
D60A				S	Sn	19 15 07.6	-10
	baz=29						
F64A	Sherman	15.73	214	P	Pn	19 12 25.9	-1.6
F64A				IAmb	IAmb	19 12 28.4	
	comp=Z,42nm,1.4s						
F64A	Sherman	15.73	214	P	Pn	19 12 25.9	-1.6
	baz=24						
HAL	Halifax	15.78	201	Pn	Pn	19 12 28.5	+0.2
HAL				IAmb	IAmb	19 12 30.3	
	comp=Z,23nm,0.6s						
LATQ	La Tuque	15.83	226		Pn	19 12 26.5	-2.4
MATQ	Matagami	15.94	241	P	Pn	19 12 27.4	-2.9
	baz=43,SNR=49						
MATQ				S	Sn	19 15 14.9	-12
	baz=43						
GGN	Saint George	16.02	209	Pn	Pn	19 12 29.8	-1.5
F63A	Nahmakanta, Br	16.09	215		Pn	19 12 31.3	-0.9
F63A				IAmb	IAmb	19 12 35.8	
	comp=Z,20nm,0.7s						
F63A	Nahmakanta, Br	16.09	215	P	Pn	19 12 30.8	-1.4
	baz=25						
D58A	Chemin du LacG	16.11	226	P	Pn	19 12 30.0	-2.5
	baz=32,SNR=7.9						
G65A	Princeton	16.12	211	Pn	Pn	19 12 31.5	-1.2
G65A	Princeton	16.12	211	P	Pn	19 12 31.7	-0.9
	baz=22						
LSQQ	Lebel-sur-Quev	16.17	238	P	Pn	19 12 30.8	-2.4
	baz=41						
E60A	Ste Agathe de	16.23	222	P	Pn	19 12 32.1	-2.0
	baz=29,SNR=10.0						
G64A	Maxfield	16.40	214	P	Pn	19 12 35.1	-1.1
	baz=24						
F61A	St Evariste	16.43	220	P	Pn	19 12 35.0	-1.6
	baz=28						
H66A	Whiting	16.45	210	P	Pn	19 12 36.1	-0.6
	baz=21						
H66A				S	Sn	19 15 30.6	-8.5
	baz=21						
PKME	Peaks-Kenny Pk	16.54	215	P	Pn	19 12 37.5	-0.5
PKME				IAmb	IAmb	19 12 59.0	
	comp=Z,67nm,1.4s						
PKME	Peaks-Kenny Pk	16.54	215	P	Pn	19 12 35.7	-2.3
	baz=24						
D57A	Chemin Vers le	16.55	228	P	Pn	19 12 36.2	-1.9
	baz=33						
EMMW	East Machias	16.55	210	Pn	Pn	19 12 37.2	-1.0
EMMW				IAmb	IAmb	19 13 02.6	
	comp=Z,94nm,1.7s						
F60A	Warwick	16.75	222	P	Pn	19 12 38.5	-2.2
	baz=29						
H65A	Eastbrook	16.77	212	P	Pn	19 12 39.8	-1.1
	baz=22						
G63A	Kingsbury	16.77	216	P	Pn	19 12 39.7	-1.2
	baz=25						
D56A	ZEC Mazanza, M	16.86	230	P	Pn	19 12 39.5	-2.5
	baz=34						
E58A	La Victoria	16.87	225	P	Pn	19 12 40.6	-1.5
	baz=31,SNR=8.9						
G62A	West of Eustis	16.96	218	Pn	Pn	19 12 42.7	-0.6
G62A				IAmb	IAmb	19 12 57.4	
	comp=Z,83nm,1.8s						
G62A	West of Eustis	16.96	218	P	Pn	19 12 42.0	-1.3
	baz=26						
H64A	Troy	17.09	214	P	Pn	19 12 44.1	-0.8
	baz=23						
VLDQ	Val d'Or	17.10	237	Pn	Pn	19 12 43.0	-2.0
VLDQ				IAmb	IAmb	19 12 44.0	
	comp=Z,31nm,0.6s						
E57A	Chemin Saint G	17.16	227	P	Pn	19 12 43.7	-2.1
	baz=32,SNR=6.6						
D55A	Sainte-Anne-du	17.16	231	P	Pn	19 12 43.5	-2.3
	baz=35,SNR=9.1						
G61A	St-Isidore-de-	17.22	220	P	Pn	19 12 45.3	-1.2
	baz=28,SNR=5.8						
WVL	Waterville	17.29	215	Pn	Pn	19 12 47.4	0.0
WVL				IAmb	IAmb	19 13 20.1	
	comp=Z,59nm,1.6s						
E56A	St. Veronique	17.38	229	P	Pn	19 12 46.7	-1.8
	baz=34						
TRQ	Mont Tremblant	17.47	228		Pn	19 12 49.0	-0.7
D54A	Lac Fusel, La	17.52	233	P	Pn	19 12 48.3	-2.0
	baz=36,SNR=9.9						
SCO	Scoresbysund	17.61	38	P	Pn	19 12 50.0	-1.3
G60A	Masonville	17.65	221	P	Pn	19 12 51.0	-0.9
	baz=28,SNR=7.0						
H62A	Milan	17.73	218	Pn	Pn	19 12 52.7	-0.2
H62A				IAmb	IAmb	19 13 33.9	
	comp=Z,99nm,2.0s						
E55A	Montcerf-Lytto	17.85	231	P	Pn	19 12 53.3	-1.1
	baz=35						
I64A	Boothbay	17.87	214	P	Pn	19 12 54.8	+0.2
	baz=23						
D53A	Lac Vacive, Po	18.01	235	P	Pn	19 12 53.9	-2.5
D53A				IAmb	IAmb	19 13 05.5	
	comp=Z,22nm,0.6s						
D53A	Lac Vacive, Po	18.01	235	P	Pn	19 12 54.3	-2.1
	baz=37,SNR=7.0						
I63A	Otisfield	18.03	216	Pn	Pn	19 12 54.6	-1.9
LBNH	Lisbon	18.27	219	P	Pn	19 12 59.4	-0.2
FRNY	Flat Rock	18.31	223	P	Pn	19 12 59.5	-0.4
E54A	Lac Daplat, Po	18.32	233	P	Pn	19 12 58.0	-2.1
	baz=36,SNR=10.0						
I62A	Tamworth	18.42	218	P	P	19 13 00.7	-0.6
I62A				IAmb	IAmb	19 13 08.6	
	comp=Z,94nm,1.8s						
F55A	Otter Lake	18.48	230	P	P	19 13 01.0	-1.0
	baz=34,SNR=9.2						
H59A	Cadyville	18.51	223	P	P	19 13 01.2	-1.1
	baz=29						
E53A	Dumoine, Ponti	18.56	234	P	P	19 13 01.3	-1.6
	baz=36,SNR=13						
D51A	Lot 18 Range I	18.71	238	P	P	19 13 02.8	-1.8
	baz=39,SNR=17						
LONY	Lake Ozonia	18.84	225	P	Pn	19 13 07.0	+0.5
D50A	G1974 Best Tow	18.86	239	P	P	19 13 04.8	-1.3
	baz=39,SNR=18						
HNH	Hanover	18.87	219	P	Pn	19 13 07.5	+0.7
H58A	Gabriels	18.88	224	P	P	19 13 05.7	-0.7
	baz=29						
FFD	Franklin Falls	18.88	218	P	Pn	19 13 07.6	+0.6
FFD				IAmb	IAmb	19 13 12.7	
	comp=Z,24nm,0.9s						
E52A	Mattawa	19.04	235	P	P	19 13 07.3	-0.8
	baz=37,SNR=16						
E51A	G1948 Merrick	19.20	237	P	P	19 13 08.7	-1.2
	baz=38						
H57A	Richville	19.27	226	P	P	19 13 10.9	+0.2
	baz=31						
NCB	Newcomb	19.28	223	P	Pn	19 13 12.6	+0.8
NCB				IAmb	IAmb	19 13 42.6	
	comp=Z,63nm,1.9s						
FCC	Fort Churchill	19.38	284	P	P	19 13 11.2	-0.6
PLVO	Plevna	19.42	230	P	Pn	19 13 13.8	+0.3
PLVO				IAmb	IAmb	19 13 30.1	
	comp=Z,22nm,0.9s						
G54A	Lake Saint Pet	19.53	233	P	P	19 13 13.4	-0.1
	baz=35,SNR=14						
ACCN	Adirondack Com	19.61	222	P	Pn	19 13 16.1	+0.4
D48A	Paudash Townsh	19.72	242	P	P	19 13 15.3	-0.3
	baz=41,SNR=9.0						
K62A	Royalston	19.79	218	P	Pn	19 13 19.1	+1.2
J59A	Piesco	19.82	223	P	Pn	19 13 18.9	+0.6
J59A				IAmb	IAmb	19 13 54.5	
	comp=Z,31nm,1.4s						
F51A	Arnstein	19.86	237	P	P	19 13 17.6	+0.5
	baz=37,SNR=19						
H55A	Tweed	19.87	230	P	Pn	19 13 18.5	-0.3
	baz=33						
DELO	Deloro Mine	20.07	230	P	P	19 13 19.8	+0.4
J58A	Remsen	20.19	225	P	Pn	19 13 23.8	+1.2
J58A				IAmb	IAmb	19 13 47.9	
	comp=Z,58nm,1.7s						
PECO	Prince Edward	20.32	228	P	Pn	19 13 26.4	+2.3
PECO				IAmb	IAmb	19 13 34.8	
	comp=Z,12nm,0.6s						
D47A	Chapleau	20.39	244	P	P	19 13 23.1	+0.2
	baz=42,SNR=8.1						
J57A	Williamstown	20.40	226	P	Pn	19 13 25.3	+0.2
J57A				IAmb	IAmb	19 13 56.5	
	comp=Z,13nm,0.8s						
SADO	Sadowa	20.47	233	P	Pn	19 13 25.6	-0.3
	comp=Z,4.1nm,0.3s,baz=74,slow=10,SNR=8.6						
SADO	Sadowa	20.47	233	P	Pn	19 13 25.0	-0.9
SADO				IAmb	IAmb	19 13 47.5	
	comp=Z,39nm,1.6s						
RES	Resolute Bay	20.67	332	P	P	19 13 26.0	+0.4
	comp=Z,3.8nm,0.9s,baz=118,slow=9.4,SNR=6.2						
RES				S	S	19 17 00.5	-16
	comp=Z,1.2nm,0.6s,baz=4.0,slow=5.5,SNR=3.7						
RES	Resolute Bay	20.67	332	P	P	19 13 25.9	+0.3
J56A	Wolcott	20.84	227	P	P	19 13 27.0	-0.6
K58A	Earlville	20.84	224	P	P	19 13 26.7	-1.1
K58A				IAmb	IAmb	19 13 42.9	
	comp=Z,29nm,1.2s						
F49A	Sandfield	20.90	240	Pb	Pn	19 13 30.7	-0.2
	baz=39						
E47A	Iron Bridge	20.92	243	Pb	Pn	19 13 30.4	-0.7
	baz=41,SNR=9.2						
D46A	Sault St. Mari	20.94	245	Pb	Pn	19 13 31.3	0.0
	baz=42,SNR=14						
F48A	Evansville	21.11	241	Pb	P	19 13 33.5	+3.0
	baz=39,SNR=7.4						
L59A	Walton	21.14	223	P	P	19 13 33.0	+2.0
J55A	Hilton	21.21	229	P	P	19 13 31.9	+0.2
J55A				IAmb	IAmb	19 13 47.1	
	comp=Z,18nm,0.7s						
E46A	Sault Ste Mari	21.46	244	P	P	19 13 34.0	-0.3
E46A				IAmb	IAmb	19 13 38.7	
	comp=Z,27nm,1.2s						
E44A	Grand Marais A	22.01	247	P	P	19 13 44.2	+3.9
JMIC	Jan Mayen	22.06	40	LR	LR	19 20 24.5	
	comp=Z,87nm,19.9s,baz=82,slow=32						
H48A	Harrisville	22.30	240	P	P	19 13 46.0	+2.6
I49A	Point Hope	22.69	238	P	P	19 13 50.4	+2.8
E43A	Lone Tree Farm	22.70	248	P	P	19 13 50.8	+3.2
E43A				IAmb	IAmb	19 14 11.1	
	comp=Z,16nm,0.7s						
D41A	Chassel	22.95	251	P	P	19 13 52.2	+2.0
D41A				IAmb	IAmb	19 14 14.7	
	comp=Z,15nm,0.7s						
G45A	Suttons Bay	23.08	244	P	P	19 13 54.2	+2.6
EYMN	Ely	23.75	256	P	P	19 14 00.2	+1.9
EYMN				IAmb	IAmb	19 14 49.8	
	comp=Z,9.4nm,0.8s						
COWI	Conover	23.91	250	P	P	19 14 02.8	+2.9
COWI				IAmb	IAmb	19 14 29.4	
	comp=Z,10nm,1.0s						
ULM	Lac du Bonnet	24.45	265	S	S	19 18 30.9	+6.4
	comp=Z,2.8nm,0.5s,baz=309,slow=21,SNR=2.6						
ULM				LR	LR	19 22 48.3	
	comp=Z,107nm,18.5s,baz=25,slow=34						
G40A	Rib Lake	25.03	250	P	P	19 14 09.6	-0.5
YKA	Yellowknife Ar	27.66	301	P	P	19 14 35.0	+1.3
	comp=Z,0.3nm,0.5s,baz=67,slow=9.5,SNR=3.6						
L40A	Anamosa	27.94	247	P	P	19 14 36.3	-0.1
SPITS	Spitsbergen Ar	28.93	24	P	P	19 14 46.6	+1.7
	comp=Z,3.7nm,0.7s,baz=285,slow=16,SNR=4.2						
NOA	NORSAR Array B	31.91	58	LR	LR	19 27 23.0	
	comp=Z,100nm,19.4s,baz=235,slow=35						
INK	Inuvik	32.80	318	P	P	19 15 20.8	+1.8
	comp=Z,2.3nm,0.9s,baz=52,slow=12,SNR=8.8						
INK	Inuvik	32.80	318	P	P	19 15 20.2	+1.2
ARCES	ARCESS Array B	33.55	39	P	P	19 15 25.5	0.0
	comp=Z,2.4nm,0.8s,baz=295,slow=6.9,SNR=4.2						
PDAR	Pinedale Array	36.44	267	P	P	19 15 53.9	+2.9
	comp=Z,0.7nm,0.6s,baz=53,slow=10,SNR=6.0						
FINES	FINESS Array B	37.83	51	P	P	19 16 02.9	+0.6
	comp=Z,1.6nm,0.8s,baz=316,slow=5.3,SNR=4.0						
HYT	Haines Junctio	38.03	308	P	P	19 16 06.8	+2.6
HYT				IAmb	IAmb	19 16 09.1	
	comp=Z,8.6nm,1.1s						
PRP	Porcupine Dome	38.29	318	P	P	19 16 06.2	-0.1
SCRK	Sand Creek	38.65	315	P	P	19 16 11.9	+2.6
IL31		39.19	317	P	P	19 16 13.5	-0.2
ILAR	Eielson Array	39.19	317	P	P	19 16 16.2	+2.4
	comp=Z,3.2nm,1.0s,baz=51,slow=6.8,SNR=23						
CCB	Clear Creek Bu	39.59	318	P	P	19 16 17.2	+0.2
WRH	Wood River Hil	39.79	317	P	P	19 16 18.5	-0.2
WRH				IAmb	IAmb	19 16 53.7	
	comp=Z,20nm,1.9s						
CRQM	Cirque	40.28	311	P	P	19 16 23.7	+0.6
CRQM				IAmb	IAmb	19 16 27.0	
	comp=Z,10.0nm,0.9s						
DHY	Denali Highway	40.41	315	P	P	19 16 23.1	-0.9
MCK	McKinley	40.54	317	P	P	19 16 25.0	0.0
MCK				IAmb	IAmb	19 16 28.5	
	comp=Z,10nm,1.2s						
BPAW	Bear Paw Mtn.	41.01	318	P	P	19 16 29.6	+0.8
BPAW				IAmb	IAmb	19 16 32.5	
	comp=Z,7.5nm,0.9s						
TRF	Thorofare Moun	41.19	317	P	P	19 16 32.6	+2.1
SUA	Susitna One	42.65	315	P	P	19 16 44.0	+1.6
SUA				IAmb	IAmb	19 16 46.4	
	comp=Z,8.9nm,0.8s						
NVAR	Mina Array Bea	44.11	270	P	P	19 16 58.9	+4.4
	comp=Z,0.4nm,0.6s,baz=41,slow=4.7,SNR=3.7						
NVAR				PcP	PcP	19 18 42.9	+3.4
	comp=Z,0.8nm,0.7s,baz=57,slow=5.3,SNR=4.4						
NVAR				LR	LR	19 34 54.9	
	comp=Z,94nm,18.5s,baz=350,slow=36						
TXAR	Lajitas Array	44.13	248	P	P	19 16 58.7	+4.0
	comp=Z,1.4nm,0.9s,baz=81,slow=3.4,SNR=4.6						
SVW2	Sparrevohn	44.61	317	P	P	19 16 58.2	+0.2
SVW2				IAmb	IAmb	19 17 11.3	
	comp=Z,9.1nm,1.1s						
AKASG	Malin Array Be	46.17	61	P	P	19 17 10.7	+0.3
	comp=Z,2.4nm,0.7s,baz=313,slow=7.2,SNR=13						
BRTR	Keskin Array B	56.51	68	P	P	19 18 29.5	+1.1
	comp=Z,1.9nm,1.0s,baz=310,slow=6.3,SNR=7.3						
KBZ	Khabaz	57.49	58	P	P	19 18 37.0	+2.0
	comp=Z,4.3nm,0.9s,baz=315,slow=7.9,SNR=11						
ZALV	Zalesovo Beam	62.41	25	P	P	19 19 09.0	+0.3
	comp=Z,0.7nm,0.6s,baz=352,slow=9.0,SNR=5.0						
TORD	Torodi Ar. Bea	62.65	112	P	P	19 19 11.0	+0.3
	comp=Z,7.6nm,0.9s,baz=337,slow=6.9,SNR=30						
DBIC	Dimbokro	65.41	122	P	P	19 19 30.9	+2.0
	comp=Z,3.0nm,0.8s,baz=353,slow=8.3,SNR=4.3						
DBIC	Dimbokro	65.41	122	P	P	19 19 29.1	+0.2
MAKZ	Makanchi	68.41	30	P	P	19 19 47.9	+0.3
MAKZ				IAmb	IAmb	19 19 49.2	
	comp=Z,2.5nm,0.8s						
MK31	Makanchi Array	68.50	29	P	P	19 19 48.3	+0.1
MKAR	Makanchi Array	68.50	29	P	P	19 19 48.5	+0.3
	comp=Z,0.8nm,0.7s,baz=342,slow=6.6,SNR=13						
GEYT	Alibeck	68.63	51	P	P	19 19 51.2	+2.0
	comp=Z,1.3nm,0.6s,baz=339,slow=7.9,SNR=5.4						
SONM	Songino Array	71.86	12	P	P	19 20 10.2	+1.3
	comp=Z,0.8nm,0.8s,baz=317,slow=4.9,SNR=6.9						
CHGR	Chuyangaron	72.06	42	P	P	19 20 10.8	+0.6
GAR	Garm	72.14	41	P	P	19 20 11.8	+1.1
KSH	Kashi	73.48	37	P	P	19 20 16.8	-1.9
KSH				sP	pwP	19 20 23.9	-1.1
KSH				S	S	19 29 43.8	-4.2
KSH	Kashi	73.48	37	SKS	SKSac	19 30 18.3	-6.7
KSH	Kashi	73.48	37	SS	SS	19 34 17.0	-12
RAYN	Ar Rayn	75.53	68	P	P	19 20 31.5	+0.8
RAYN				IAmb	IAmb	19 20 32.9	
	comp=Z,4.2nm,0.9s						
WRA	Warramunga Arr	139.61	345	PKP	PKPdf	19 28 13.8	+0.1
	comp=Z,0.5nm,0.8s,baz=347,slow=2.1,SNR=4.6						
ASAR	Alice Springs	143.34	345	PKhKP	PKPpre	19 28 18.0	
	comp=Z,0.3nm,0.5s,baz=12,slow=2.4,SNR=11						

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*IDC **03** 19:09:11.8±1.7, 43°.92N×105°.57W, h0^{km}, mb3.9/4, mb1 3.8/9, mb1mx3.6/43, mbtmp3.7/9, ML3.3/5, MS3.4/2, Ms1 3.4/2, ms1mx2.7/50, Error ellipse: s-maj=55.1km s-min=7.7km az=147.0*

*NEIC **03** 19:09:11.7±1.4, 43°.81N±0°.05×105°.21W±0°.02, h0^{km}±1^{km}, ML3.5/57, Error ellipse: s-maj=9.3km s-min=3.0km az=182.0*

ISC 03 19:09:11.4±0.8**, 43°.83N**±0°.06×**105°.17W**±0°.08**, h0^{km}, n62, σ0^s.78**/60**, mb4.1**/5**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RSSD	Black Hills	0.87	70		Pn	19 09 29.8	-1.2
K22A	Casper	1.54	220		Pn	19 09 37.8	-2.5
K22A				IAML		19 10 01.5	
	comp=E,400nm,0.3s						
K22A				IAML		19 10 04.4	
	comp=N,415nm,0.6s						
PHWY	Pilot Hill	2.54	185		Pn	19 09 53.5	-0.6
RWWY	Rawlins	2.62	216		Pn	19 09 55.5	+0.3
RWWY				IAML		19 10 32.1	
	comp=N,234nm,1.0s						
RWWY				IAML		19 10 35.4	
	comp=N,333nm,0.9s						
LAO	LASA Array	2.95	346		Pn	19 09 59.2	-0.3
LAO				IAML		19 10 57.9	
	comp=N,250nm,0.9s						
N23A	Red Feather La	2.99	191		Pn	19 10 00.4	+0.1
N23A				IAML		19 10 44.0	
	comp=N,143nm,0.6s						
N23A				IAML		19 10 47.5	
	comp=E,129nm,0.6s						
RLMT	Red Lodge	3.20	295		Pn	19 10 02.9	-0.2
RLMT				IAML		19 10 59.6	
	comp=E,94nm,0.8s						
RLMT				IAML		19 11 15.6	
	comp=E,61nm,1.0s						
BW06	Boulder Array	3.38	253		Pn	19 10 04.8	-0.8
BW06				IAML		19 10 58.8	
	comp=N,63nm,0.7s						
BW06				IAML		19 11 01.9	
	comp=E,61nm,0.7s						
PDAR	Pinedale Array	3.38	253	Pn	Pn	19 10 04.8	-0.8
	comp=E,4.1nm,0.3s,baz=68,slow=16,SNR=67						
PDAR				Lg	Lg	19 10 48.6	
	comp=E,10nm,0.3s,baz=75,slow=30,SNR=13						
YNE	Yellowstone No	3.66	290		Pn	19 10 09.0	-0.4
YMP	Mirror Lake Pl	3.69	286		Pn	19 10 10.1	+0.1
OGNE	Ogallala	3.71	140		Pn	19 10 10.6	+0.6
OGNE				IAML		19 11 16.3	
	comp=E,132nm,1.2s						
GCMT	Greycliff	3.75	303		Pn	19 10 10.3	-0.3
LKWY	Lake	3.83	283		Pn	19 10 11.5	-0.3
LKWY				IAML		19 10 41.1	
	comp=E,51nm,0.7s						
H17A	Grant Village	3.93	280		Pn	19 10 14.0	+0.8
FLWY	Flagg Ranch	4.00	275		Pn	19 10 13.3	-0.8
FLWY				IAML		19 11 22.7	
	comp=E,68nm,1.9s						
FLWY				IAML		19 11 34.0	
	comp=E,50nm,1.3s						
ISCO	Idaho Springs	4.04	185		Pn	19 10 15.0	+0.2
SNOW	Snow King Moun	4.07	267		Pn	19 10 15.3	+0.2
SNOW				IAML		19 11 24.8	
	comp=E,55nm,0.9s						
SNOW				IAML		19 11 40.0	
	comp=E,59nm,0.8s						
REDW	Red Top Meadow	4.15	265		Pn	19 10 15.9	-0.3
REDW				IAML		19 11 32.1	
	comp=E,71nm,0.9s						
REDW				IAML		19 11 32.1	
	comp=E,67nm,0.8s						
YHH	Holmes Hill	4.19	285		Pn	19 10 16.4	-0.4
FXWY	Fox Creek	4.25	269		Pn	19 10 17.3	-0.2
O20A	White River Ci	4.35	213		Pn	19 10 18.6	-0.3
O20A				IAML		19 11 30.0	
	comp=E,75nm,0.9s						
O20A				IAML		19 11 41.9	
	comp=N,63nm,2.1s						
YHB	Horse Butte	4.42	284		Pn	19 10 19.3	-0.6
YHL	Hebgen Lake	4.43	285		Pn	19 10 19.6	-0.5
AHID	Auburn Hatcher	4.46	258		Pn	19 10 20.8	+0.4
AHID				IAML		19 11 32.0	
	comp=E,33nm,1.0s						
RDMU	Red Mountain	4.62	227		Pn	19 10 22.9	+0.4
DGMT	Dagmar	4.69	8		Pn	19 10 25.3	+1.9
KSCO	Kaye Shedlock'	5.18	158		Pn	19 10 30.4	+0.1
HWUT	Hardware Ranch	5.21	247		Pn	19 10 30.5	-0.2
HWUT				IAML		19 12 09.3	
	comp=E,32nm,1.1s						
EGMT	Eagleton	5.27	324		Pn	19 10 31.2	-0.2
TCUT	Toone Canyon	5.35	242		Pn	19 10 32.2	-0.5
LRM	Limekiln Ridge	5.55	294		Pn	19 10 36.0	+0.7
MCMT	McKenzie Canyo	5.60	283	Pn	Pn	19 10 37.1	+1.0
SPUT	South Promonto	5.94	247		Pn	19 10 40.6	-0.1
P17A	Butcher Ranch,	6.03	226		Pn	19 10 42.2	+0.2
SDCO	Great Sand Dun	6.09	182		Pn	19 10 43.1	+0.2
ECSD	EROS Data Cent	6.20	88		Pn	19 10 45.9	+1.9
SRU	San Rafael Swe	6.20	222		Pn	19 10 43.3	-1.0
S22A	4UR Ranch, Cre	6.21	192		Pn	19 10 44.6	0.0
TMUT	Trail Mountain	6.41	227		Pn	19 10 47.4	+0.2
Q16A	Castle Valley	6.67	225		Pn	19 10 50.3	-0.5
T25A	Trinidad	6.71	175		Pn	19 10 51.3	-0.1
DUG	Dugway, Tooele	6.75	240		Pn	19 10 50.7	-1.2
MSO	Missoula	6.87	299	Pn	Pn	19 10 53.0	-0.4
MVCO	Mesa Verde	7.08	202		Pn	19 10 55.5	-1.0
JTMT	Jette	7.47	305		Pn	19 11 02.1	+0.4
MSU	Marysvale	7.50	227		Pn	19 11 02.1	0.0
MTPU	Mount Pierson	7.85	225	Pn	Pn	19 11 06.9	-0.2
WALA	Waterton Lakes	7.98	314		Pn	19 11 07.6	-1.0
ELK	Elko	8.08	251	Pn	Pn	19 11 11.6	+1.5
	comp=E,0.3nm,0.3s,baz=54,slow=9.0,SNR=4.9						
PSUT	Pine Spring	8.42	234		Pn	19 11 15.2	+0.4
I10CA	LAC DU BONNET	8.92	41	*i*		20 03 00.0	
	baz=225,slow=350,SNR=3.0						
ULM	Lac du Bonnet	9.02	41	Pn	Pn	19 11 23.0	+0.2
	comp=E,1.3nm,0.3s,baz=233,slow=12,SNR=15						
ULM				Lg	Lg	19 13 52.9	
	comp=E,0.4nm,0.3s,baz=198,slow=19,SNR=3.4						
NEW	Newport	9.41	302	LR	LR	19 15 51.7	
	comp=E,146nm,20.3s,baz=38,slow=44						
FFC	Flin Flon	11.10	10		Pn	19 11 50.6	-0.6
NVAR	Mina Array Bea	11.28	246	Pn	Pn	19 11 54.6	+0.6
	comp=E,0.1nm,0.3s,baz=54,slow=14,SNR=4.9						
YKA	Yellowknife Ar	19.49	347	P	Pn	19 13 40.1	-0.7
	comp=E,0.1nm,0.3s,baz=159,slow=13,SNR=4.9						
PETK	Petropavlovsk-	60.23	316	P	P	19 19 22.5	+1.4
	comp=E,4.1nm,0.7s,baz=99,slow=4.7,SNR=6.4						
PETK				LR	LR	19 44 34.7	
	comp=E,64nm,20.9s,baz=249,slow=35						
ARCES	ARCESS Array B	61.30	18	P	P	19 19 27.6	-0.5
	comp=E,3.4nm,1.0s,baz=349,slow=5.1,SNR=5.0						
ZALV	Zalesovo Beam	82.22	354	P	P	19 21 33.1	-0.9
	comp=E,0.8nm,0.5s,baz=14,slow=6.7,SNR=3.9						
SONM	Songino Array	84.57	339	P	P	19 21 46.9	+0.4
	comp=E,0.2nm,0.6s,baz=12,slow=7.4,SNR=2.2						
MKAR	Makanchi Array	89.52	355	P	P	19 22 10.1	-0.3

comp=E,0.6nm,0.7s,baz=12,slow=4.3,SNR=5.3

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*NDI **03** 19:19:51.1±2.3, 27°.04N×70°.61E, h10km, ML3.5*
ISC 03 19:19:53.4±1.4**, 26°.76N**±0°.08×**71°.28E**±0°.07**, h10km, n20, σ2s52**/29**, Northern India**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AJM	Ajmer	3.02	94	eP	Pn	19 20 41.0	-0.3
AJM				i S	Sg	19 21 29.0	-1.4
BHUJ	Bhuj	3.79	203	eP	Pn	19 20 51.2	-0.6
BHUJ				eS	Sn	19 21 34.2	-2.3
KUDL	Kundal	4.83	72	eP	Pn	19 20 57.2	-8.9
KUDL				eS	Sn	19 21 57.1	-5.0
NDI	New Delhi	5.60	69	ex	Sg	19 22 55.0	+1.8
BHPL	Bhopal	6.58	121	ex	Sn	19 22 22.9	-22
BHPL				ex	Sb	19 23 07.7	+1.0
SMLA	Simla	6.75	48	eP	Pn	19 21 34.0	+1.5
SMLA				eS	Sn	19 22 50.0	+0.6
SMLA				IAML		19 22 52.4	
	comp=Z,13nm,0.2s						
SMLA				IAML		19 22 53.0	
	comp=N,38nm,0.3s						
SMLA				IAML		19 22 53.2	
	comp=E,77nm,0.2s						
THN	Thein Dam	6.85	33	ex	Sn	19 22 47.5	-4.3
DHRM	DHARAMSHALA	7.00	37	eP	Pn	19 21 35.4	-0.9
DHRM				eS	Sn	19 22 52.8	-3.3
DHRM				IAML		19 22 56.1	
	comp=N,57nm,0.2s						
JOSI	Joshimath	8.20	61	eS	Sn	19 23 23.7	-1.7
JOSI				IAML		19 23 32.5	
	comp=N,22nm,0.6s						
JOSI				IAML		19 23 32.5	
	comp=N,23nm,0.4s						
JOSI				IAML		19 23 53.3	
	comp=E,28nm,0.5s						
DANN	Dangsing	11.19	79	eP	Pn	19 22 37.6	+4.0
	comp=E,4.9nm,0.3s						
DANN				eS	Sn	19 24 39.7	+0.7
GKN	Gorkha	11.93	81	eP	Pn	19 22 47.2	+3.4
	comp=E,4.8nm,0.2s						
GKN				eS	Sn	19 24 55.9	-1.2
DMN	Daman	12.34	83	eP	Pn	19 22 51.6	+2.2
	comp=E,6.6nm,0.6s						
KKN	Kakani	12.49	82	eP	Pn	19 22 54.4	+2.9
KKN				eS	Sn	19 25 09.0	-1.9
PKIN	Phulchoki	12.59	83	eP	Pn	19 22 55.9	+3.0
	comp=E,4.7nm,0.5s						
PKI	Pulchoki	12.61	83	eP	Pn	19 22 55.9	+2.8
	comp=E,2.6nm,0.2s						
PKI				eS	Sn	19 25 12.2	-1.6
GUN	Gumba	13.03	82	eP	Pn	19 23 01.4	+2.5
	comp=E,36nm,1.0s						
JIRN	Jiri	13.30	83	eP	Pn	19 23 05.5	+2.9
	comp=E,9.0nm,0.4s						
JIRN				eS	Sn	19 25 28.1	-2.7
RAMN	Ramite	13.68	86	eP	Pn	19 23 08.1	+0.4
	comp=E,24nm,0.6s						
ODAN	Odare	14.39	86	eP	Pn	19 23 17.3	-0.1
	comp=E,8.5nm,0.7s						
TAPN	Taplejung	14.65	84	eP	Pn	19 23 23.0	+1.9
	comp=E,2.9nm,0.4s						

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*IDC **03** 19:26:11.3±1.4, 28°.50N×67°.87E, h0km, mb3.5/5, mb1 3.7/7, mb1mx3.4/37, mbtmp3.6/7, ML3.7/2, MS3.1/2, Ms1 3.3/2, ms1mx2.9/26, Error ellipse: s-maj=40.6km s-min=23.4km az=96.0*
ISC 03 19:26:13.3±0.8**, 28°.50N**±0°.06×**67°.90E**±0°.07**, h10km, n30, σ1s79**/32**, mb3.3**/5**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BHUJ	Bhuj	5.46	163	eP	Pn	19 27 38.1	+3.3
BHUJ				eS	Sn	19 28 36.4	-1.3
BHUJ				IAML		19 28 39.8	
	comp=N,58nm,0.2s						
BHUJ				IAML		19 28 42.4	
	comp=E,56nm,0.1s						
KBL	Kabul	6.10	9	P	Pn	19 27 45.9	+2.2
	SNR=6.1						
KBL				S	Sn	19 28 52.7	-0.9
KUDL	Kundal	7.58	91	eP	Pn	19 27 56.2	-7.6
KUDL				eS	Sn	19 29 15.6	-14
THN	Thein Dam	7.80	58	eS	Sn	19 29 34.0	-1.2
DHRM	DHARAMSHALA	8.16	61	eP	Pn	19 28 14.6	+2.6
DHRM				eS	Sn	19 29 42.6	-1.8
DHRM				IAML		19 29 47.5	
	comp=N,62nm,0.6s						
SMLA	Simla	8.46	70	eP	Pn	19 28 18.8	+2.8
SMLA				eS	Sn	19 29 48.3	-3.2
SMLA				IAML		19 29 53.4	
	comp=N,56nm,0.2s						
SMLA				IAML		19 29 53.6	
	comp=E,68nm,0.4s						
WSAR	Wadi Sarin	9.86	240	Pn	Pn	19 28 33.5	-1.7
	comp=E,0.7nm,0.3s,baz=80,slow=8.1,SNR=18						
WSAR				Sn	Sn	19 30 10.7	-15
	comp=E,0.7nm,0.3s,baz=345,slow=21,SNR=8.5						
WSAR				LR	LR	19 32 36.2	
	comp=E,84nm,18.4s,baz=4.0,slow=39						
WSAR	Wadi Sarin	9.86	240	P	Pn	19 28 33.3	-1.8
	SNR=18						
WSAR				S	Sn	19 30 11.2	-15
WBK	Wadi Bani Khal	9.97	236	P	Pn	19 28 35.1	-1.6
	SNR=12						
JOSI	Joshimath	10.36	76	eP	Pn	19 28 44.8	+2.7
JOSI				eS	Sn	19 30 36.1	-2.3
JOSI				IAML		19 30 45.6	
	comp=N,41nm,0.6s						
JOSI				IAML		19 30 48.0	
	comp=E,60nm,0.3s						
SMDO	Samad	10.40	241	P	Pn	19 28 41.7	-0.9
BANOM	Banah	10.64	259	P	Pn	19 28 44.9	-1.0
	SNR=15						
BANOM				S	Sn	19 30 32.4	-13
HOQ	Hoqain	10.71	245	P	Pn	19 28 44.9	-1.9
DANN	Dangsing	13.96	87	eP	Pn	19 29 32.6	+1.1
	comp=E,12nm,0.4s						
GKN	Gorkha	14.76	88	eP	Pn	19 29 40.7	-1.6
	comp=E,6.9nm,0.2s						
AAK	Ala-Archa	15.08	19	Pn	Pn	19 29 45.1	-1.4
	comp=E,0.4nm,0.3s,baz=200,slow=11,SNR=6.9						
DMN	Daman	15.22	89	eP	Pn	19 29 47.4	-1.2
KKN	Kakani	15.35	89	eP	Pn	19 29 48.5	-1.8
PKIN	Phulchoki	15.48	89	eP	Pn	19 29 51.0	-1.0
PKI	Pulchoki	15.49	89	eP	Pn	19 29 50.4	-1.8
GUN	Gumba	15.86	88	eP	Pn	19 29 55.9	-1.2
JIRN	Jiri	16.17	89	eP	Pn	19 30 00.0	-1.0
RAMN	Ramite	16.63	91	eP	Pn	19 30 06.7	-0.1
TAPN	Taplejung	17.55	89	eP	Pn	19 30 19.8	+1.4
MKAR	Makanchi Array	21.46	28	P	P	19 31 01.9	+0.1
	comp=E,0.9nm,0.8s,baz=210,slow=12,SNR=17						
KURBB	Kurchatov Arra	23.51	17	P	P	19 31 22.2	-1.2
	comp=E,0.6nm,0.6s,baz=212,slow=9.0,SNR=6.9						
BVAR	Borovoye Array	24.57	4	P	P	19 31 33.7	+0.4
	comp=E,0.8nm,0.6s,baz=180,slow=11,SNR=6.7						
CMAR	Chiang Mai Arr	30.10	103	LR	LR	19 45 49.7	
	comp=E,49nm,19.2s,baz=310,slow=39						
WRA	Warramunga Arr	80.21	119	P	P	19 38 24.3	-0.1
	comp=E,0.3nm,0.9s,baz=321,slow=4.8,SNR=5.0						
ASAR	Alice Springs	82.03	122	P	P	19 38 33.7	-0.3
	comp=E,0.6nm,0.6s,baz=308,slow=5.4,SNR=14						

IDC 03 19:42:09.5±7.8**, 14°.77N**×**92°.83W, h33**km±47km**, mb3.5**/2**, mb1 3.8**/5**, mb1mx3.4**/40**, mbtmp3.5**/5**, ML3.1**/3**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.5**/29**, Error ellipse: s-maj=102.8km s-min=27.5km az=24.0, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APG	El Apazote	2.30	84	Pn	Pn	19 42 45.4	+0.1
	3.1nm,0.3s,baz=270,slow=7.7,SNR=21						
CMIG	Matias Romero	3.03	320	Pn	Pn	19 42 54.3	-0.9
	3.2nm,0.3s,baz=145,slow=11,SNR=24						
TXAR	Lajitas Array	17.61	327	P	P	19 46 14.0	+0.7
	0.0nm,0.3s,baz=154,slow=15,SNR=3.3						
SJG	San Juan	25.80	79	LR	LR	19 59 03.7	
	comp=Z,74nm,18.6s,baz=182,slow=39						
NVAR	Mina Array Bea	32.57	321	P	P	19 48 38.2	+0.3
	0.4nm,0.6s,baz=153,slow=8.1,SNR=3.9						
YKA	Yellowknife Ar	50.09	347	P	P	19 51 00.2	-0.8
	1.2nm,0.6s,baz=150,slow=7.5,SNR=20						
CMAR	Chiang Mai Arr	145.00	340	PKPbc	PKPab	20 01 43.3	-0.2
	0.4nm,0.8s,baz=345,slow=3.1,SNR=4.8						

NNC 03 19:54:32.3±5.6**, 38°.67N**×**70°.56E, h0km, mb3.5, mpv3.1, 5C-2D, Error ellipse: s-maj=41.1km s-min=33.9km az=19.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	4.43	360	⇑Pn	Pn	19 55 39.6	-1.2
	0.9nm,0.4s,baz=179,slow=13,SNR=17						
KK31				⇓Sn	Sn	19 56 34.9	+1.8
	3.1nm,0.6s						
KK31				⇑Lg	Lg	19 56 52.2	
	1.9nm,0.5s,baz=171,slow=28,SNR=7.2						
AAK	Ala-Archa	4.97	36	⇑Pn	Pn	19 55 49.2	+0.8
	2.3nm,0.7s						
AAK				⇑Sn	Sn	19 56 49.5	+3.0
	4.3nm,1.1s						
CHMS	Chumysh	5.37	35	⇑Pn	Pn	19 55 54.2	+0.5
	1.7nm,0.5s						
CHMS				⇓Sn	Sn	19 56 54.7	-1.6
	3.1nm,0.5s						

BJI 03 19:54:34.2±0.0**, 36°.10N**×**82°.74E, h5km, ML3.4**/6**, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMQ	Urumqi	8.60	25	eP	Pn	19 56 39.2	-0.1
WMQ				smax	smax		
	comp=N,9.0nm,1.1s						
WMQ				smax	smax		
	comp=E,11nm,0.9s						

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*INET **03** 20:03:43.3, 12°.43N×87°.70W, h70km, ML3.5*
SNET 03 20:03:43.1±0.8**, 12°.44N**×**87°.75W, h13**km±8km**, ML2.9, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	0.83	355	eP	Pg	20 03 58.6	-0.6
CNCH				eS	Sb	20 04 10.9	+0.2
CNCH				IAML		20 04 13.7	
	comp=Z,441nm,0.2s						
LCND	La Caada	0.87	351	eP	Pg	20 03 59.0	-1.0
LCND				eS	Sg	20 04 11.5	+0.1
PACA	Pacayal	1.16	331	eP	Pb	20 04 03.1	-2.0
PACA				eS	Sb	20 04 18.6	-1.6
COPN	Copaltepe	1.17	103	eP	Pb	20 04 03.2	-1.9
COPN				eS	Sb	20 04 18.2	-1.9
MOMN	Momotombo	1.19	92	eP	Pn	20 04 03.4	-2.1
MOMN				eS	Sb	20 04 18.5	-2.3

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*IDC **03** 20:06:33.7±3.7, 24°.59N×94°.96E, h94km±35km, mb3.3/6, mb1 3.4/7, mb1mx3.1/40, mbtmp3.5/7, Error ellipse: s-maj=63.1km s-min=15.4km az=66.0*
ISC 03 20:06:34.4±1.7**, 24°.5N**±0°.2×**94°.9E**±0°.5**, h112km, n7, σ1s74**/8**, mb3.4**/6**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	7.08	147	P	Pn	20 08 15.4	0.0
	0.1nm,0.3s,baz=315,slow=13,SNR=4.7						
MKAR	Makanchi Array	24.46	339	P	P	20 11 43.2	+0.4
	1.6nm,0.6s,baz=154,slow=8.8,SNR=25						
SONM	Songino Array	25.07	19	P	P	20 11 48.1	-0.3
	0.4nm,0.5s,baz=197,slow=9.7,SNR=7.5						
KURBB	Kurchatov Arra	29.02	338	P	P	20 12 23.4	-0.3
	0.2nm,0.5s,baz=144,slow=8.0,SNR=4.3						
WRA	Warramunga Arr	58.52	135	P	P	20 16 20.8	+1.5
	0.6nm,0.5s,baz=322,slow=7.3,SNR=25						
ASAR	Alice Springs	61.01	139	P	P	20 16 37.9	+1.5
	1.0nm,0.6s,baz=321,slow=6.8,SNR=14						
ASAR				pP	pP	20 17 00.6	-3.2
	0.2nm,0.6s,baz=326,slow=6.7,SNR=2.0						
ILAR	Eielson Array	79.22	23	P	P	20 18 27.2	+0.3
	0.1nm,0.5s,baz=294,slow=7.8,SNR=2.8						

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*NIED **03** 20:28:00, 40°.80N×141°.20E, h92km, Mw4.1 Best double couple: M0 1.55000×10^15 NP1:φs298.00000°, δ55.00000°, λ-77.00000°. NP2:φs96.00000°, δ37.00000°, λ-108.00000°.*
*BJI **03** 20:28:12.0±0.0, 40°.70N×141°.43E, h104km, mB4.9/8, mb4.5/18*
*MOS **03** 20:28:14.3±0.9, 40°.81N×141°.36E, h112km, mb4.4/14, Error ellipse: s-maj=8.2km s-min=5.7km az=91.1*
*JMA **03** 20:28:14.9±0.1, 40°.81N×141°.26E, h95km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs98.00000°, δ43.00000°, λ-110.00000°. NP2: φs304.00000°, δ50.00000°, λ-72.00000°. Principal axes: T Plg4.0000°, Azm22.0000°; N Plg13.0000°, Azm113.0000°; P Plg76.0000°, Azm277.0000°;*
JMA Felt II J1.
*IDC **03** 20:28:15.9±1.8, 40°.78N×141°.23E, h106km±15km, mb3.8/23, mb1 3.9/28, mb1mx3.7/52, mbtmp4.1/28, MS3.3/4, Ms1 3.3/4, ms1mx2.8/45 Error ellipse: s-maj=14.2km s-min=12.1km az=101.0*
*NEIC **03** 20:28:16±0.9, 40°.90N±0°.09×141°.2E±0°.1, h105km±6km, mb4.6/23, Error ellipse: s-maj=15.7km s-min=10.2km az=130.0*
ISC 03 20:28:14.8±0.6**, 40°.81N**±0°.03×**141°.34E**±0°.04**, h96**km±5km**, n137, σ0s97**/155**, mb4.4**/46**, 18C-12D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JARK	Aomorirokkasho	0.20	7	⇓P	Pn	20 28 28.5	0.0
JARK				S	Sn	20 28 38.8	+0.1
JTM	Tenmabayashi	0.20	263	⇓P	Pn	20 28 28.1	-0.4
JTM				eS	Sn	20 28 38.1	-0.7
JAHD	Aomorihigashid	0.45	0	⇓P	Pn	20 28 30.0	+0.2
JAHD				S	Sn	20 28 41.3	+0.3
JANG	Nango	0.46	163	⇓P	Pn	20 28 29.8	-0.1
JANG				S	Sn	20 28 40.8	-0.3
JOT	Ohata	0.61	339	⇓P	Pn	20 28 31.2	+0.2
JOT				S	Sn	20 28 43.1	-0.1
JAH	Hinai	0.82	221	⇑P	Pn	20 28 32.8	-0.2
JAH				S	Sn	20 28 46.0	-0.7
JSR	Shiriuchi	1.00	316	⇓P	Pn	20 28 34.6	-0.3
JIW	Iwasaki	1.03	258	⇑P	Pn	20 28 34.9	-0.4
JKB	Kayabe	1.10	348	⇑P	Pn	20 28 36.6	+0.6
JKB				S	Sn	20 28 52.4	+0.4
JOMM	Oshimamatsumae	1.23	306	P	Pn	20 28 37.3	-0.2
JOMM				S	Sn	20 28 52.7	-2.0
JOM	Ohasama	1.34	181	⇑P	Pn	20 28 39.3	+0.4
JOM				S	Sn	20 28 57.0	0.0
JYM2	Yakumo 2	1.49	331	⇑P	Pn	20 28 41.0	+0.3
JYM2				eS	Sn	20 29 00.6	+0.2
JRG	Rokugo	1.51	201	⇑P	Pn	20 28 41.5	+0.5
JNB	Noboribetsu	1.67	352	⇑P	Pn	20 28 43.8	+0.8
ERM	Erimo	1.82	48		Pn	20 28 46.5	+1.7
ERM	Erimo	1.82	48	c iP	Pn	20 28 46.6	+1.7
ERM				pmax	pmax		
	comp=Z,221nm,0.7s						
ASAJ	Asahikawa	3.43	15	P	Pn	20 29 07.0	+0.9
	comp=Z,31nm,0.3s,baz=203,slow=14,SNR=113						
NMR	Nemuro--Hokkai	4.15	51	eP	Pn	20 29 15.6	-0.2
NMR				eS	Sn	20 29 59.9	-3.3
GLVR	Golovnino	4.26	45	eP	Pn	20 29 18.2	+0.8
GLVR				eS	Sn	20 30 04.8	-1.2
GLVR				pmax	pmax		
	comp=Z,308nm,0.1s						
GLVR				smax	smax		
	comp=N,1µm,0.3s						
GLVR				smax	smax		
	comp=E,402nm,0.2s						
GRPR	Tuman	4.57	44	eP	Pn	20 29 21.8	+0.2
GRPR				eS	Sn	20 30 11.7	-1.8
GRPR				pmax	pmax		
	comp=N,189nm,0.2s						
GRPR				pmax	pmax		
	comp=E,185nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,395nm,0.2s						
GRPR				smax	smax		
	comp=E,1µm,0.3s						
GRPR				smax	smax		
	comp=N,922nm,0.4s						
YUK	Yuzh-Kuril'sk	4.65	45	eP	Pn	20 29 23.2	+0.6
YUK				eS	Sn	20 30 13.9	-1.4
YUK				pmax	pmax		
	comp=Z,551nm,0.2s						
YUK				pmax	pmax		
	comp=N,199nm,0.3s						
YUK				pmax	pmax		
	comp=E,245nm,0.2s						
YUK				smax	smax		
	comp=N,788nm,0.5s						
YUK				smax	smax		
	comp=E,1µm,0.5s						
MJB9	Matsu-Tunnel	4.91	211		Pn	20 29 28.0	+1.7
MAJO	Matsushiro	4.92	211		Pn	20 29 28.0	+1.7
MAJO	Matsushiro	4.92	211	c iP	Pn	20 29 27.3	+1.0
MAT	Matsushiro	4.92	211	P	Pn	20 29 27.5	+1.2
MAT				S	Sn	20 30 24.3	+2.3
MJAR	Matsushiro Arr	4.92	211	P	Pn	20 29 27.5	+1.2
	comp=E,1.8nm,0.3s,baz=328,slow=14,SNR=82						
TEY	Ternei	5.47	322	⇑eP	Pn	20 29 34.4	+0.7
TEY				pmax	pmax		
	comp=E,20nm,0.6s						
TEY				pmax	pmax		
	comp=Z,40nm,0.4s						
TEY				pmax	pmax		
	comp=N,40nm,0.7s						
YSS	Yuzh-Sakhalins	6.22	9		Pn	20 29 43.8	-0.2
YSS	Yuzh-Sakhalins	6.22	9	⇓iP	Pn	20 29 45.1	+1.1
YSS				eS	Sn	20 30 53.4	-0.2
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
YSS				smax	smax		
	comp=N,30nm,1.8s						
INU	Inuyama	6.43	213		Pn	20 29 48.6	+1.8
KUR	Kuril'sk	6.51	45	deP	Pn	20 29 49.2	+1.3
KUR				eS	Sn	20 31 00.8	+0.1
KUR				pmax	pmax		
	comp=Z,95nm,0.3s						
KUR				pmax	pmax		
	comp=E,17nm,0.2s						
KUR				pmax	pmax		
	comp=N,23nm,0.3s						
KUR				smax	smax		
	comp=E,130nm,0.4s						
KUR				smax	smax		
	comp=N,83nm,0.2s						
VLA	Vladivostok	7.41	291	deP	Pn	20 30 02.3	+2.1
USA0B	Ussuriysk Arra	7.69	299		Pn	20 30 03.5	-0.5
USA0B	Ussuriysk Arra	7.69	299	deP	Pn	20 30 05.4	+1.4
USRK	Ussuriysk Ar.	7.69	299	P	Pn	20 30 05.6	+1.6
	baz=101,slow=15,SNR=29						
TYV	Tymovskoe	10.10	5	eP	Pn	20 30 37.1	+0.5
TYV				eS	Sn	20 32 29.7	+1.9
TYV				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TYV				smax	smax		
	comp=N,6.0nm,1.1s						
KLR	Kul'dur	10.80	324	P	Pn	20 30 48.9	+2.6
	comp=N,0.1nm,0.3s,baz=130,slow=12,SNR=3.8						
KSRS	Korea Array	10.95	256	LR	LR	20 34 00.9	
	comp=N,44nm,20.9s,baz=355,slow=32						
JNU	Nakatsue	11.35	231	LR	LR	20 35 41.5	
	comp=N,106nm,18.5s,baz=336,slow=40						
CN2	Changchun	12.14	289	eP	P	20 31 13.1	+0.2
PETK	Petropavlovsk-	16.56	37	P	Pn	20 32 01.0	0.0
	comp=N,0.4nm,0.3s,baz=209,slow=12,SNR=8.9						
YAK	Yakutsk	22.39	346	⇑eP	P	20 33 06.1	+1.3
YAK				pmax	pmax		
	comp=Z,3.0nm,0.4s						
SEY	Seymchan	23.11	13	P	P	20 33 11.6	-0.5
	comp=Z,2.0nm,0.5s,baz=186,slow=11,SNR=8.4						
SEY	Seymchan	23.11	13	⇑eP	P	20 33 11.4	-0.7
BOD	Bodaibo	24.38	323	eP	P	20 33 21.7	-1.9
BOD				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SONM	Songino Array	25.80	298	P	P	20 33 35.8	-1.0
	comp=Z,0.9nm,0.4s,baz=97,slow=8.2,SNR=10						
XAN	Xi'an	26.51	266	P	P	20 33 43.6	+0.3
XAN				pP	pP	20 34 08.8	+4.1
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,140nm,6.9s						
TLY	Talaya	27.94	306	LR	LR	20 46 47.3	
	comp=Z,65nm,18.4s,baz=317,slow=40						
H11N2	WAKE ISLAND Hy	30.29	126	T	T	21 05 25.6	
	baz=318,slow=75,SNR=120						
H11N1	WAKE ISLAND Hy	30.30	126	T	T	21 05 25.0	
	baz=318,slow=75,SNR=146						
H11N3	WAKE ISLAND Hy	30.30	126	T	T	21 05 26.9	
	baz=318,slow=75,SNR=110						
H11S1	WAKE ISLAND Hy	31.10	128	T	T	21 07 58.6	
	baz=323,slow=76,SNR=34						
H11S3	WAKE ISLAND Hy	31.10	128	T	T	21 07 56.2	
	baz=323,slow=76,SNR=17						
H11S2	WAKE ISLAND Hy	31.12	128	T	T	21 07 58.3	
	baz=323,slow=76,SNR=24						
GTA	Gaotai	31.58	281	eP	P	20 34 27.4	-0.9
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
WMQ	Urumqi	39.20	293	eP	P	20 35 34.2	+0.8
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,250nm,6.9s						
WMQ				LR	LR		
	comp=Z,530nm,28.9s						
WMQ				LR	LR		
	comp=Z,950nm,29.1s						
WMQ				LR	LR		
	comp=Z,100nm,13.9s						
ZAA0	Zalesovo Array	39.41	309	P	P	20 35 34.3	-0.6
ZAA0				IAmb	IAmb	20 35 34.9	
	comp=Z,6.6nm,0.6s						
ZALV	Zalesovo Beam	39.41	309	P	P	20 35 34.4	-0.4
	comp=Z,6.5nm,0.5s,baz=92,slow=8.6,SNR=35						
ZALV				PcP	PcP	20 37 41.2	+0.1
	comp=Z,2.9nm,0.4s,baz=106,slow=2.9,SNR=13						
LSA	Lhasa	41.95	271	P	P	20 35 57.1	+0.5
LSA				IAmb	IAmb	20 35 58.8	
	comp=Z,5.7nm,0.7s						
LSA	Lhasa	41.95	271	P	P	20 35 57.1	+0.5
LSA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MK31	Makanchi Array	42.16	299	P	P	20 35 56.9	-0.7
MK31	Makanchi Array	42.16	299	P	P	20 35 56.9	-0.7
MK31				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MKAR	Makanchi Array	42.16	299	P	P	20 35 57.0	-0.6
	comp=Z,4.2nm,0.7s,baz=85,slow=11,SNR=91						
MKAR				PcP	PcP	20 37 50.1	-0.1
	comp=Z,0.4nm,0.3s,baz=63,slow=4.3,SNR=5.8						
MKAR	Makanchi Array	42.16	299	ceP	P	20 35 57.0	-0.6
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
CHTO	Chiang Mai	42.30	252	P	P	20 35 58.8	-0.2
CHTO	Chiang Mai	42.30	252	P	P	20 35 58.8	-0.2
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MAKZ	Makanchi	42.36	299	P	P	20 35 58.8	-0.5
MAKZ				IAmb	IAmb	20 36 01.2	
	comp=Z,5.5nm,0.7s						
MAKZ	Makanchi	42.36	299	P	P	20 35 58.8	-0.5
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CMAR	Chiang Mai Arr	42.53	251	P	P	20 36 00.6	-0.3
	comp=Z,0.9nm,0.6s,baz=45,slow=7.2,SNR=5.7						
CMAR	Chiang Mai Arr	42.53	251	ceP	P	20 36 01.9	+1.0
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	Kurchatov	43.63	305	P	P	20 36 08.5	-0.9
KURK				IAmb	IAmb	20 36 09.6	
	comp=Z,11nm,0.8s						
KURK	Kurchatov	43.63	305	deP	P	20 36 08.5	-0.9
KURK				pmax	pmax		
	comp=Z,12nm,0.8s						
KURBB	Kurchatov Arra	43.71	305	P	P	20 36 09.4	-0.6
	comp=Z,10nm,0.6s,baz=80,slow=8.6,SNR=64						
KURBB				PcP	PcP	20 37 55.1	-0.2
	comp=Z,1.2nm,0.6s,baz=78,slow=3.7,SNR=5.8						
RSO	Redoubt South	44.03	41	P	P	20 36 10.7	-2.0
TAPN	Taplejung	45.74	270	eP	P	20 36 27.1	+0.3
	comp=Z,5.9nm,0.5s						

GHO	Glory Hole Cre	45.76	39	P	P	20 36 27.4	+1.1
ODAN	Odare	46.24	270	eP	P	20 36 30.5	-0.2
	comp=Z,7.0nm,0.4s						
ILAR	Eielson Array	46.37	34	P	P	20 36 32.6	+1.7
	comp=Z,0.3nm,0.5s,baz=258,slow=5.4,SNR=12						
JIRN	Jiri	46.73	272	eP	P	20 36 34.9	+0.2
RAMN	Ramite	46.79	271	eP	P	20 36 34.8	-0.2
	comp=Z,18nm,0.6s						
GUN	Gumba	46.84	272	eP	P	20 36 35.1	-0.4
	comp=Z,42nm,0.5s						
PRP	Porcupine Dome	46.88	33	P	P	20 36 36.1	+1.1
PRP				IAmb	IAmb	20 36 58.5	
	comp=Z,14nm,1.7s						
KKN	Kakani	47.36	272	eP	P	20 36 39.2	-0.2
	comp=Z,11nm,0.5s						
PKI	Pulchoki	47.37	272	eP	P	20 36 39.0	-0.6
	comp=Z,4.7nm,0.3s						
PKIN	Phulchoki	47.38	272	eP	P	20 36 39.4	-0.2
	comp=Z,6.1nm,0.5s						
DMN	Daman	47.58	272	eP	P	20 36 40.7	-0.5
	comp=Z,5.2nm,0.4s						
SCRK	Sand Creek	47.72	35	P	P	20 36 43.1	+1.6
GKN	Gorkha	47.73	273	eP	P	20 36 41.5	-0.7
	comp=Z,21nm,0.3s						
BVAR	Borovoye Array	48.05	310	P	P	20 36 43.6	-0.5
	comp=Z,2.0nm,0.4s,baz=75,slow=9.4,SNR=51						
BVAR				PcP	PcP	20 38 10.6	+0.1
	comp=Z,1.0nm,0.5s,baz=78,slow=4.0,SNR=4.9						
BRVK	Borovoye	48.10	310	P	P	20 36 44.0	-0.4
BRVK	Borovoye	48.10	310⇑	eP	P	20 36 44.3	-0.2
BRVK				pmax	pmax		
	comp=Z,9.0nm,3.1s						
DANN	Dangsing	48.22	274	eP	P	20 36 46.0	-0.1
	comp=Z,66nm,0.4s						
AAK	Ala-Archa	48.73	295	P	P	20 36 49.9	+0.2
	comp=Z,2.0nm,0.3s,baz=104,slow=4.9,SNR=18						
AAK	Ala-Archa	48.73	295	P	P	20 36 49.8	+0.2
AAK				IAmb	IAmb	20 36 51.6	
	comp=Z,2.6nm,0.5s						
AAK	Ala-Archa	48.73	295⇓	eP	P	20 36 49.8	+0.1
AAK				pmax	pmax		
	comp=Z,11nm,3.2s						
KSH	Kashi	48.90	291	P	P	20 36 54.6	+3.6
KSH				pP	sP	20 37 23.2	-1.6
KSH				PcS	PcS	20 42 11.2	+0.7
KSH				S	S	20 43 49.7	+2.2
KSH				SS	SS	20 47 18.4	-0.6
KSH				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KSH				LR	LR		
	comp=Z,540nm,10.9s						
KSH				LR	LR		
	comp=Z,280nm,9.3s						
KSH				LR	LR		
	comp=Z,360nm,11.3s						
ARSB	Arslanbob	50.27	294	P	P	20 37 00.6	-0.8
ARSB				IAmb	IAmb	20 37 02.9	
	comp=Z,7.8nm,0.9s						
ARSB	Arslanbob	50.27	294	P	P	20 37 00.6	-0.8
ARSB				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GAR	Garm	53.10	293	P	P	20 37 21.5	-1.0
NIL	Nilore	53.46	286	P	P	20 37 24.9	-0.2
NIL	Nilore	53.46	286	P	P	20 37 24.9	-0.2
NIL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ARU	Arti	53.53	317	P	P	20 37 24.8	-0.4
	comp=Z,0.5nm,0.3s,baz=347,slow=5.7,SNR=6.8						
ARU	Arti	53.53	317	c iP	P	20 37 24.6	-0.6
ARU				*PP	pP	20 37 48.2	-0.4
ARU						20 38 27.8	
ARU						20 39 23.0	
ARU				S	S	20 44 51.0	+0.5
ARU				SS	SKiKP	20 48 29.8	-0.4
ARU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CHGR	Chuyangaron	54.06	293	P	P	20 37 28.7	-0.8
AB31	Akbulak array	55.51	308⇑	eP	P	20 37 38.2	-1.4
AB31				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ABKAR	Akbulak array	55.51	308	P	P	20 37 39.1	-0.5
ABKAR				IAmb	IAmb	20 37 39.7	
	comp=Z,4.5nm,0.5s						
KBL	Kabul	56.08	289	P	P	20 37 43.4	-0.8
KBL				IAmb	IAmb	20 37 44.3	
	comp=Z,4.6nm,0.8s						
KBL	Kabul	56.08	289	P	P	20 37 43.4	-0.8
KBL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AKTO	Aktyubinsk	56.15	310	P	P	20 37 43.8	-0.4
	comp=Z,1.9nm,0.5s,baz=73,slow=13,SNR=7.2						
ARCES	ARCESS Array B	60.45	339	P	P	20 38 13.5	-0.3
	comp=Z,3.4nm,0.9s,baz=54,slow=8.2,SNR=4.3						
YKA	Yellowknife Ar	60.59	31	P	P	20 38 15.9	+1.1
	comp=Z,0.4nm,0.7s,baz=303,slow=6.3,SNR=5.7						
WRA	Warramunga Arr	60.79	188	P	P	20 38 15.7	-1.0
	comp=Z,1.6nm,0.3s,baz=4.4,slow=7.1,SNR=66						
GEYT	Alibeck	62.01	297	P	P	20 38 24.1	-0.7
	comp=Z,1.9nm,0.5s,baz=64,slow=5.1,SNR=4.8						
AS31	Alice Springs	64.52	188	P	P	20 38 41.0	-0.3
ASAR	Alice Springs	64.52	188	P	P	20 38 40.9	-0.5
	comp=Z,1.0nm,0.5s,baz=1.1,slow=6.9,SNR=20						
OBN	Obninsk	65.06	322	eP	P	20 38 42.8	-1.7
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	FINESS Array B	65.46	331	P	P	20 38 46.6	-0.4
	comp=Z,2.7nm,0.6s,baz=43,slow=9.1,SNR=12						
NEW	Newport	67.48	45	LR	LR	21 10 02.1	
	comp=Z,72nm,19.8s,baz=88,slow=37						
KIV	Kislovodsk	68.42	310	P	P	20 39 06.1	-0.2
KIV				IAmb	IAmb	20 39 08.0	
	comp=Z,7.2nm,0.9s						
KIV	Kislovodsk	68.42	310	eP	P	20 39 07.0	+0.8
KIV				pmax	pmax		
	comp=Z,28nm,1.1s						
KBZ	Khabaz	68.43	310	P	P	20 39 06.5	+0.4
	comp=Z,2.3nm,0.7s,baz=123,slow=1.6,SNR=9.2						
KBZ	Khabaz	68.43	310⇑	eP	P	20 39 06.1	0.0
F10A	Beach Ranch, E	68.80	47	P	P	20 39 08.9	+0.3
F10A				IAmb	IAmb	20 39 21.3	
	comp=Z,18nm,1.1s						
UOSS	Minazif	70.64	287	P	P	20 39 19.8	-0.3
UOSS				IAmb	IAmb	20 39 20.3	
	comp=Z,7.4nm,0.6s						
BEKR	Beckworth	70.65	54	P	P	20 39 20.1	0.0
NB2	NORSAR Subarra	70.69	337	P	P	20 39 19.7	-0.1
	comp=Z,0.4nm,0.6s,baz=43,slow=5.9						
NOA	NORSAR Array B	70.69	337	P	P	20 39 19.5	-0.3
	comp=Z,0.2nm,0.5s,baz=47,slow=5.3,SNR=4.3						
AKASG	Malin Array Be	71.29	322	P	P	20 39 23.0	-0.6
	comp=Z,1.3nm,0.5s,baz=45,slow=6.1,SNR=11						
PDAR	Pinedale Array	75.08	46	P	P	20 39 47.5	+1.2
	comp=Z,0.3nm,0.5s,baz=202,slow=1.4,SNR=6.2						
BUR08	Bucovina Ar. S	75.31	321	P	P	20 39 47.3	-0.1
BUR08				IAmb	IAmb	20 42 17.6	
	comp=Z,13nm,1.9s						
BRTR	Keskin Array B	76.32	311	P	P	20 39 53.1	-0.2
	comp=Z,0.8nm,0.5s,baz=96,slow=2.8,SNR=7.4						
VYHS	Vyhne	77.59	325	eP	P	20 39 59.6	-0.6
VYHS	Vyhne	77.59	325	eP	P	20 39 59.6	-0.6
CLL	Collm	77.80	330	i P	P	20 40 02.1	+0.9
CLL	Collm	77.80	330	i P	P	20 40 02.1	+0.9
GERES	GERESS Array B	79.48	328	P	P	20 40 10.6	0.0
	comp=Z,0.3nm,0.3s,baz=30,slow=6.2,SNR=4.2						
TORD	Torodi Ar. Bea	114.60	316	PKP	PKiKP	20 46 43.6	-0.5
	comp=Z,0.4nm,0.5s,baz=77,slow=1.9,SNR=3.8						

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*UPA **03** 20:33:48.9±3.1, 12°.46N×87°.51W, h0^{km}±999^{km}, MW4.9*

*INET **03** 20:33:59.8, 11°.65N×87°.08W, h3^{km}, ML4.4*

*UCR **03** 20:34:01.5, 11°.76N×87°.01W, h36^{km}, MD4.2, ML3.7, mb4.5(NEIC)*

*IDC **03** 20:34:01.8±4.1, 12°.19N×86°.47W, h37^{km}±39^{km}, mb3.4/6, mb1 3.8/7, mb1mx3.5/36, mbtmp3.6/7, ML3.7/1, MS3.3/2, Ms1 3.3/2, ms1mx2.8/37, Error ellipse: s-maj=72.1km s-min=22.9km az=55.0*

*NEIC **03** 20:34:01.9±1.9, 11°.65N±0°.04×86°.95W±0°.09, h59^{km}±15^{km}, mb4.5/17, Error ellipse: s-maj=12.5km s-min=6.2km az=93.0*

*SNET **03** 20:34:04.8±2.1, 12°.10N×87°.11W, h16^{km}±14^{km}, ML3.7*

ISC 03 20:34:00.2±1.2**, 11°.77N**±0°.04×**87°.06W**±0°.04**, h31**^{km}±9^{km}**, n74, σ1^{s}.71**/90**, mb4.3**/14**, 2C, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COPN	Copaltepe	0.61	48⇑	eP	Pn	20 34 13.4	+0.7
COPN				eS	Sn	20 34 23.3	+1.6
COPN	Copaltepe	0.61	48⇑	eP	Pn	20 34 13.4	+0.7
COPN				eS	Sn	20 34 23.3	+1.6
MOMN	Momotombo	0.81	39	eP	Pn	20 34 16.1	+0.5
MOMN				eS	Sb	20 34 25.6	-1.1
MOMN	Momotombo	0.81	39	eP	Pn	20 34 16.1	+0.5
MOMN				eS	Sb	20 34 25.6	-1.1
CRIN	San Cristobal	0.92	1	eP	Pn	20 34 19.6	+2.5
CSGN	Cosiguina Volc	1.29	338	eP	Pb	20 34 25.5	+1.5
ESTN	Estel	1.49	27		Pb	20 34 27.4	+0.2
ESTN	Estel	1.49	27	eP	Pb	20 34 28.0	+0.8
MATN	Matagalpa	1.60	44	eP	Pb	20 34 29.1	-0.1
CNCH	Conchagua	1.68	333	eP	Pb	20 34 29.5	-0.9
CNCH				eS	Sn	20 34 47.9	-0.1
CNCH				IAML		20 34 58.7	
	comp=Z,2µm,0.4s						
CNCH	Conchagua	1.68	333	eP	Pb	20 34 29.5	-0.9
CNCH				eS	Sn	20 34 47.9	-0.1
CNCH				IAML		20 34 58.7	
	comp=Z,2µm,0.4s						
LCND	La Caada	1.73	332	eP	Pb	20 34 30.1	-1.3
LCND				IAML		20 34 58.2	
	comp=Z,756nm,0.3s						
LCND	La Caada	1.73	332	eP	Pb	20 34 30.1	-1.3
LCND				IAML		20 34 58.2	
	comp=Z,756nm,0.3s						
ACON	Acoyapa	1.86	84		Pn	20 34 29.9	0.0
ACON	Acoyapa	1.86	84	eP	Pn	20 34 30.5	+0.7
NY14	Universidad de	1.87	126	i P	Pn	20 34 29.6	-0.4
JUCU	Jucuar¡n	1.88	322	eP	Pb	20 34 33.2	-0.6
JUCU				IAML		20 35 05.0	
	comp=Z,584nm,0.2s						
JUCU	Jucuar¡n	1.88	322	eP	Pb	20 34 33.2	-0.6
JUCU				IAML		20 35 05.0	
	comp=Z,584nm,0.2s						
GB1A	Borinquen Arri	1.89	120	eP	Pn	20 34 30.6	+0.3
GB1A				eS	Sn	20 34 55.6	+2.5
BUEV	Buena Vista	1.89	121	eP	Pn	20 34 30.3	-0.1
BUEV				i S	Sn	20 34 54.1	+0.9
GPS3	Bodega del ICE	1.95	121	i P	Pn	20 34 30.9	-0.3
BLLM	Bellamira	2.02	326	eP	Pb	20 34 34.7	-1.6
BLLM	Bellamira	2.02	326	eP	Pb	20 34 34.7	-1.6
PACA	Pacayal	2.09	324	eP	Pb	20 34 36.0	-1.5
PACA				eS	Sn	20 34 58.8	+0.6
PACA	Pacayal	2.09	324	eP	Pb	20 34 36.0	-1.5
PACA				eS	Sn	20 34 58.8	+0.6
COLC	Colonia	2.13	121	i P	Pn	20 34 34.1	+0.5
GUAI	GUAI	2.13	134	i P	Pn	20 34 32.0	-1.6
PLVR	Palo Verde	2.20	130	eP	Pn	20 34 36.6	+2.0
TGUH	Tegucigalpa,Un	2.28	355		Pb	20 34 38.9	-1.9
ACAL	Aguas Claras	2.29	119	i P	Pn	20 34 34.7	-1.2
JTS	Las Juntas de	2.54	125	Pn	Pn	20 34 38.9	-0.3
	comp=Z,18nm,0.3s,baz=14,slow=19,SNR=23						
JTS				Sn	Sn	20 35 07.0	-2.2
	comp=Z,26nm,0.3s,baz=299,slow=16,SNR=8.4						
JTS				LR	LR	20 35 55.1	
	comp=Z,342nm,18.1s,baz=3.5,slow=47						
JTS	Las Juntas de	2.54	125	eP	Pn	20 34 40.8	+1.5
JTS	Las Juntas de	2.54	125	eP	Pn	20 34 39.0	-0.3
CEDE	Laguna Cedeo	2.64	119	eP	Pn	20 34 41.6	+0.8
LFRS	El Faro	2.68	314	eP	Pn	20 34 43.5	+2.2
LFRS				eS	Sn	20 35 14.3	+1.5
ESPN	Las Esperanzas	2.74	81		Pn	20 34 43.1	+1.1
ESPN	Las Esperanzas	2.74	81	eP	Pn	20 34 43.2	+1.3
HDC	Heredia	3.39	121	eP	Pn	20 34 54.0	+2.9
HDC				i S	Sb	20 35 42.5	+2.0
MTO3	Montecristo	3.44	320	eP	Pn	20 34 54.3	+2.5
MTO3	Montecristo	3.44	320	eP	Pn	20 34 54.3	+2.5
LCR2	La Lucha 2	3.62	124	eP	Pn	20 34 56.0	+1.7
PTJ1	Puerto Jimnez	4.90	131	eP	Pn	20 35 16.0	+4.2
BRU2	Volcan	5.22	124	eP	Pn	20 35 20.6	+4.3
BCO2	Palmira	5.39	124	eP	Pn	20 35 19.4	+0.7
ROSC	El Rosal	14.36	118	LR	LR	20 44 21.7	
	comp=Z,176nm,18.6s,baz=50,slow=44						
FLOC	Florencia	15.18	131	P	Pn	20 37 35.7	+3.1
TXAR	Lajitas Array	23.34	321	P	P	20 39 06.9	+0.9
	comp=Z,0.9nm,0.6s,baz=146,slow=9.1,SNR=13						
TX31	Lajitas Ar. Si	23.34	321	P	P	20 39 06.6	+0.6
TX32	Lajitas Array	23.34	321	P	P	20 39 05.7	-0.3
X37A	Clayton	23.94	343	P	P	20 39 13.1	+1.5
X37A				IAmb	IAmb	20 39 14.3	
	comp=Z,10nm,0.8s						
TKL	Tuckaleechee C	23.97	7	P	P	20 39 13.8	+2.0
TKL				IAmb	IAmb	20 39 24.2	
	comp=Z,19nm,1.0s						
V51A	Loudon	24.05	5	P	P	20 39 11.0	-1.6
V53A	Saluda	24.10	8	P	P	20 39 11.5	-1.6
V52A	Sevierville	24.17	7	P	P	20 39 12.3	-1.4
X34A	Smith Ranch, M	24.75	338	P	P	20 39 19.5	+0.5
X34A				IAmb	IAmb	20 39 22.8	
	comp=Z,10nm,0.7s						
U54A	Nelsons Funny	25.09	10	P	P	20 39 22.4	+0.2
WMOK	Wichita Mounta	25.23	337	P	P	20 39 24.8	+1.5
WMOK				IAmb	IAmb	20 39 25.9	
	comp=Z,8.4nm,0.9s						
MSTX	Muleshoe	26.34	330	P	P	20 39 32.5	-1.1
MSTX				IAmb	IAmb	20 39 44.7	
	comp=Z,5.7nm,0.7s						
S39A	Bolivar	26.41	349	P	P	20 39 33.7	-0.4
R50A	Paris	26.51	5	P	P	20 39 34.9	-0.1
R50A				IAmb	IAmb	20 39 57.2	
	comp=Z,24nm,1.1s						
SAML	Samuel	31.42	130	P	P	20 40 17.0	-1.9
PHWY	Pilot Hill	33.55	335	P	P	20 40 37.9	+0.3
PHWY				IAmb	IAmb	20 41 23.2	
	comp=Z,9.9nm,0.9s						
PDAR	Pinedale Array	36.55	332	P	P	20 41 03.9	+0.5
	comp=Z,0.4nm,0.6s,baz=132,slow=10,SNR=4.2						
AGMN	Agassiz Nation	37.15	350	P	P	20 41 06.8	-1.3
AGMN				IAmb	IAmb	20 41 09.2	
	comp=Z,5.1nm,1.0s						
NVAR	Mina Array Bea	38.46	319	P	P	20 41 21.4	+1.9
	comp=Z,0.1nm,0.4s,baz=116,slow=12,SNR=2.7						
NVAR				PcP	PcP	20 43 33.8	+1.4
	comp=Z,0.6nm,0.6s,baz=120,slow=5.3,SNR=5.4						
ULM	Lac du Bonnet	39.05	351	P	P	20 41 22.3	-1.8
	comp=Z,2.6nm,0.7s,baz=183,slow=8.1,SNR=6.7						
YKA	Yellowknife Ar	54.36	345	P	P	20 43 22.5	-1.2
	comp=Z,1.0nm,0.7s,baz=139,slow=7.6,SNR=23						
YKA				PcP	PcP	20 44 26.6	-0.7
	comp=Z,0.4nm,0.7s,baz=139,slow=4.5,SNR=6.2						
ILAR	Eielson Array	66.79	336	P	P	20 44 47.9	-0.6
	comp=Z,0.6nm,0.8s,baz=103,slow=3.9,SNR=2.6						
DOU	Dourbes	82.14	41	P	P	20 46 14.4	-3.5
WLF	Walferdange	83.20	41	PcP	P	20 46 26.2	+2.7
KSH	Kashi	126.59	16	PKP	PKPdf	20 53 01.6	+0.7
KSH				sPKP		20 53 15.2	
KSH				PP	PP	20 55 02.3	+6.4
KSH				SKS	SKSdf	21 00 07.8	-3.0
ASAR	Alice Springs	139.36	247	PKP	PKPdf	20 53 25.3	+0.1
	comp=Z,0.3nm,0.9s,baz=93,slow=2.6,SNR=3.2						
WRA	Warramunga Arr	139.44	253	PKP	PKPdf	20 53 25.7	+0.3
	comp=Z,0.2nm,0.5s,baz=90,slow=2.4,SNR=6.4						
CMAR	Chiang Mai Arr	149.38	349	PKPbc	PKPbc	20 53 46.9	-0.1
	comp=Z,1.1nm,0.6s,baz=329,slow=3.5,SNR=8.4						

LJU 03 20:38:36.2, 45°.75N×14°.86E, h2^{km}, ML0.3, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VISS	Visnje	0.06	342⇓	iPg	Pg	20 38 37.3	0.0
VISS				i Sg	Sg	20 38 38.1	+0.1
	comp=Z,7.0nm,0.0s						

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*GCG **03** 20:39:10.0±0.8, 13°.10N×93°.30W, h74^{km}±112^{km}, MD4.7*

*IDC **03** 20:39:14.2±1.0, 14°.15N×93°.06W, h0^{km}, mb4.2/14, mb1 4.4/17, mb1mx4.2/36, mbtmp4.3/17, ML4.1/3, MS3.6/7, Ms1 3.6/7, ms1mx3.2/48, Error ellipse: s-maj=35.3km s-min=13.2km az=45.0*

*MEX **03** 20:39:17.5±0.7, 14°.12N×93°.15W, h20^{km}±25^{km}, MD4.1*

*NEIC **03** 20:39:21.8±2.0, 14°.33N±0°.07×92°.90W±0°.05, h50^{km}±6^{km}, mb4.4/102, Md4.3/14(MEX), Error ellipse: s-maj=10.4km s-min=6.6km az=200.0*

ISC 03 20:39:20.6±1.5**, 14°.32N**±0°.08×**93°.07W**±0°.06**, h44**^{km}±12^{km}**, n150, σ1^{s}.68**/147**, mb4.4**/56**, MS3.5**/6**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.97	53		Pn	20 39 35.4	-2.3
THIG					Sn	20 39 48.9	-1.5
THIG		0.97	53	eP	Pn	20 39 35.4	-2.3
THIG				i S	Sn	20 39 48.9	-1.5
PCIG		1.38	354		Pn	20 39 41.0	-2.4
PCIG					Sn	20 40 01.5	+1.0
PCIG		1.38	354	eP	Pn	20 39 41.0	-2.4
PCIG				i S	Sn	20 40 00.4	-0.1
ERG	Entre ros, C	1.46	85	eP	Pn	20 39 43.4	-1.1
ERG				eS	Sn	20 40 10.3	+8.0
STG3	Santiaguito 3,	1.50	75	eP	Pn	20 39 43.5	-1.7
STG3				eS	Sn	20 40 15.8	+12
CCIG	Comitan	2.14	25		Pn	20 39 54.6	+0.6
CCIG	Comitan	2.14	25		Pn	20 39 54.9	+0.8
CCIG					Sn	20 40 22.4	+2.9
CCIG	Comitan	2.14	25	eP	Pn	20 39 53.1	-1.0
CCIG				i S	Sn	20 40 20.4	+0.9
FUG	Fuego 3	2.16	86	eP	Pn	20 39 52.6	-1.7
FUG				eS	Sn	20 40 25.9	+6.0
PCG	Pacaya	2.38	88	eP	Pn	20 39 55.9	-1.5
PCG				eS	Sn	20 40 30.6	+5.0
TGIG		2.44	359		Pn	20 39 58.0	0.0
TGIG					Sn	20 40 26.7	0.0
TGIG		2.44	359	eP	Pn	20 39 57.4	-0.7
TGIG				i S	Sn	20 40 26.7	0.0
IXG	Ixpaco	2.55	93	eP	Pn	20 39 57.7	-2.0
APG	El Apazote	2.61	75	Pn	Pn	20 39 59.8	-0.7
	58nm,0.3s,baz=190,slow=12,SNR=202						
NBG	Las Nubes	2.65	84	eP	Pn	20 40 01.5	+0.4
NBG				eS	Sn	20 40 38.2	+6.1
CMIG	Matias Romero	3.26	328	Pn	Pn	20 40 08.5	-0.8
	32nm,0.3s,baz=165,slow=12,SNR=375						
CMIG				Sn	Sn	20 40 49.2	+2.3
	55nm,0.3s,baz=79,slow=23,SNR=10.0						
CMIG				LR	LR	20 41 13.0	
	comp=Z,242nm,18.9s,baz=143,slow=35						
CMIG	Matias Romero	3.26	328	i S	Sn	20 40 46.4	-0.5
CSGN	Cosiguina Volc	5.52	103	Pn	Pn	20 40 38.4	-2.0
TGUH	Tegucigalpa,Un	5.62	92		Pn	20 40 40.2	-1.6
TLIG	Tlapa	6.19	302		Pn	20 40 51.9	+2.3
ESTN	Estel	6.62	100		Pn	20 40 52.5	-3.0
JCT	Junction City	17.23	340	P	P	20 43 19.1	-0.2
H06E1	SOCORRO T-PHAS	17.68	287	T	T	21 01 29.7	
	SNR=14						
TX32	Lajitas Array	17.87	328	P	Pn	20 43 28.6	+2.4
TXAR	Lajitas Array	17.87	328	Pn	Pn	20 43 28.7	+2.6
	0.1nm,0.3s,baz=150,slow=13,SNR=23						
TX31	Lajitas Ar. Si	17.87	328	P	Pn	20 43 28.6	+2.5
ABTX	Abilene, Hawle	19.18	343	P	Pn	20 43 42.4	+0.5
ABTX				IAmb	IAmb	20 43 50.5	
	comp=Z,18nm,0.8s						
Z35A	Perchaven, San	19.30	349	P	Pn	20 43 43.1	-0.2
Z35A				IAmb	IAmb	20 43 51.0	
	comp=Z,24nm,0.8s						
X40A	Basin Creek Fa	20.08	1	P	Pn	20 43 51.3	-1.2
X40A				IAmb	IAmb	20 44 06.7	
	comp=Z,33nm,1.8s						
OTAV	Otavalo	20.12	133	P	Pn	20 43 51.0	-2.7
MIAR	Mount Ida	20.14	359	P	Pn	20 43 51.9	-1.3
MIAR				IAmb	IAmb	20 43 56.6	
	comp=Z,26nm,0.9s						
X37A	Clayton	20.28	355	P	Pn	20 43 54.4	-0.6
X37A				IAmb	IAmb	20 43 58.5	
	comp=Z,15nm,0.9s						
UALR	University of	20.37	2	P	P	20 43 52.4	-1.2
UALR				IAmb	IAmb	20 44 29.1	
	comp=Z,16nm,0.9s						
X34A	Smith Ranch, M	20.64	349		Pn	20 43 59.8	+0.6
X34A				IAmb	IAmb	20 44 19.3	
	comp=Z,14nm,0.9s						
MNTX	Cornudas Mount	20.65	329	P	Pn	20 43 59.1	-0.2
WMOK	Wichita Mounta	20.97	347	P	P	20 44 01.1	+1.0
W35A	Tecumseh	21.02	351	P	P	20 44 02.0	+1.4
FNO	Franklin	21.21	350	P	P	20 44 04.3	+1.7
FLOC	Florencia	21.36	125	P	P	20 44 04.4	-0.1
RUSC	La Rusia	21.36	111	P	P	20 44 03.9	-1.1
MSTX	Muleshoe	21.45	337	P	P	20 44 06.4	+1.1
MSTX				IAmb	IAmb	20 44 12.0	
	comp=Z,26nm,0.8s						
FCAR	Ozark Folk Cen	21.49	2	P	P	20 44 07.5	+1.9
TUL1	Leonard	21.63	354	P	P	20 44 08.9	+1.7
TUL1				IAmb	IAmb	20 44 17.5	
	comp=Z,11nm,0.8s						
LCAR	Lake Charles	21.72	4	P	P	20 44 07.7	-0.4
HHAR	Hobbs	21.88	358	P	P	20 44 10.9	+1.0
HHAR				IAmb	IAmb	20 44 12.1	
	comp=Z,7.4nm,0.7s						
AMTX	Amarillo	21.90	341	P	P	20 44 10.9	+0.8
U40A	Yellville	21.94	0	P	P	20 44 10.1	-0.4
U38A	Gravette	22.05	357	P	P	20 44 13.3	+1.6
PBMO	Poplar Bluff	22.48	6	P	P	20 44 15.7	-0.6
PBMO				IAmb	IAmb	20 44 37.0	
	comp=Z,21nm,1.4s						
121A	Cookes Peak, D	22.56	326	P	P	20 44 19.8	+2.5
121A				IAmb	IAmb	20 44 21.7	
	comp=Z,17nm,0.9s						
319A	Douglas	22.56	322	P	P	20 44 20.3	+3.0
SDV	Santo Domingo	22.62	101	P	P	20 44 17.6	-0.6
	comp=Z,3.0nm,0.3s,baz=286,slow=7.3,SNR=9.1						
SDV				LR	LR	20 55 15.3	
	comp=Z,90nm,18.1s,baz=276,slow=43						
SDV	Santo Domingo	22.62	101	P	P	20 44 15.9	-2.3
T35A	Sooner Cattle	22.71	353	P	P	20 44 17.4	-1.4
T35A				IAmb	IAmb	20 44 19.2	
	comp=Z,14nm,0.9s						
MGMO	Mountain Grove	22.75	2	P	P	20 44 18.1	-1.1
MGMO				IAmb	IAmb	20 45 00.6	
	comp=Z,39nm,2.0s						
TKL	Tuckaleechee C	22.82	20	P	P	20 44 21.3	+1.4
	comp=Z,4.0nm,0.9s,baz=187,slow=12,SNR=4.4						
TKL				LR	LR	20 54 57.1	
	comp=Z,147nm,19.4s,baz=172,slow=41						
S39A	Bolivar	23.27	359	P	P	20 44 23.1	-1.3
S39A				IAmb	IAmb	20 44 25.1	
	comp=Z,14nm,0.9s						
S44A	Carbondale	23.52	8	P	P	20 44 26.7	-0.1
S44A				IAmb	IAmb	20 44 51.6	
	comp=Z,13nm,0.9s						
CCM	Cathedral Cave	23.69	4	P	P	20 44 27.6	-0.8
CCM				IAmb	IAmb	20 44 28.5	
	comp=Z,8.4nm,0.8s						
ANMO	Albuquerque	23.82	332	P	P	20 44 32.6	+2.8
	comp=Z,3.7nm,0.7s,baz=141,slow=12,SNR=12						
ANMO	Albuquerque	23.82	332	P	P	20 44 32.7	+2.8
TUC	Tucson	24.13	321	P	P	20 44 34.6	+2.0
TUC				IAmb	IAmb	20 44 37.1	
	comp=Z,8.0nm,0.9s						
U54A	Nelsons Funny	24.29	22	P	P	20 44 33.4	-0.6
T25A	Trinidad	24.87	338	P	P	20 44 42.6	+3.1
CBKS	Cedar Bluff	25.10	348	P	P	20 44 41.2	-0.1
CBKS				IAmb	IAmb	20 45 33.3	
	comp=Z,9.4nm,0.7s						
X18A	Snowflake	25.25	326	P	P	20 44 43.3	+0.4
W18A	Petrified Fore	25.57	327	P	P	20 44 45.5	-0.3
SDCO	Great Sand Dun	25.81	337	P	P	20 44 50.1	+2.0
SDCO				IAmb	IAmb	20 44 52.6	
	comp=Z,7.7nm,0.8s						
ATAH	Atahualpa	25.82	145	LR	LR	20 53 25.3	
	comp=Z,105nm,21.0s,baz=327,slow=33						
X16A	Lo Mia Camp, P	26.00	324	P	P	20 44 51.6	+1.9
SJG	San Juan	26.11	78	LR	LR	20 54 20.4	
	comp=Z,157nm,20.0s,baz=248,slow=35						
S22A	4UR Ranch, Cre	26.34	335	P	P	20 44 55.2	+2.4
S22A				IAmb	IAmb	20 44 58.6	
	comp=Z,9.9nm,0.8s						
MVCO	Mesa Verde	26.62	332	P	P	20 44 56.1	+0.8
MVCO				IAmb	IAmb	20 45 01.0	
	comp=Z,15nm,0.8s						
WUAZ	Wupatki	26.76	325	P	P	20 44 56.3	-0.3
ISCO	Idaho Springs	27.67	339	P	P	20 45 05.6	+0.8
ISCO				IAmb	IAmb	20 45 15.3	
	comp=Z,20nm,1.9s						
KNB	Kanab	28.65	326	P	P	20 45 16.4	+2.9
O20A	White River Ci	28.95	336	P	P	20 45 17.8	+1.7
O20A				IAmb	IAmb	20 45 21.1	
	comp=Z,5.4nm,0.8s						
ECSD	EROS Data Cent	29.47	355	P	P	20 45 20.0	-0.4
ECSD				IAmb	IAmb	20 45 22.7	
	comp=Z,5.1nm,0.9s						
TCRU	Three Creeks R	29.64	328	P	P	20 45 22.0	-0.3

RDMU	Red Mountain	29.86	334	P	P	20 45 24.7	+0.5
PSUT	Pine Spring	30.32	327	P	P	20 45 31.1	+2.9
K22A	Casper	30.52	340	P	P	20 45 29.2	-0.8
K22A				IAmb	IAmb	20 45 32.9	
	comp=Z,20nm,1.6s						
TCUT	Toone Canyon	31.11	333	P	P	20 45 37.6	+2.4
RSSD	Black Hills	31.14	345	P	P	20 45 36.6	+1.2
RSSD				IAmb	IAmb	20 46 30.0	
	comp=Z,17nm,2.0s						
HWUT	Hardware Ranch	31.57	333	P	P	20 45 41.0	+1.7
BW06	Boulder Array	31.71	337	P	P	20 45 41.2	+0.8
PD31	Pinedale Array	31.71	337	P	P	20 45 41.1	+0.6
PDAR	Pinedale Array	31.71	337	P	P	20 45 42.0	+1.5
	comp=Z,3.0nm,0.9s,baz=134,slow=8.5,SNR=12						
K58A	Earlville	32.07	25	P	P	20 45 41.5	-1.9
AHID	Auburn Hatcher	32.32	335	P	P	20 45 47.3	+1.5
AHID				IAmb	IAmb	20 45 51.5	
	comp=Z,5.7nm,0.8s						
ELK	Elko	32.66	328	LR	LR	20 58 58.2	
	comp=Z,103nm,18.5s,baz=150,slow=36						
ELK	Elko	32.66	328	P	P	20 45 49.9	+0.9
NV11	Mina Array Sit	32.69	322	P	P	20 45 49.5	+0.5
NV11				IAmb	IAmb	20 45 53.2	
	comp=Z,5.2nm,0.8s						
REDW	Red Top Meadow	32.72	336	P	P	20 45 51.3	+2.0
SNOW	Snow King Moun	32.76	336	P	P	20 45 52.0	+2.2
NVAR	Mina Array Bea	32.77	322	P	P	20 45 53.0	+3.1
	comp=Z,5.4nm,0.8s,baz=135,slow=8.0,SNR=33						
FXWY	Fox Creek	33.02	336	P	P	20 45 53.3	+1.3
FXWY				IAmb	IAmb	20 45 56.7	
	comp=Z,7.8nm,0.8s						
RYN	Ryan	33.03	322	P	P	20 45 54.8	+2.7
RYN				IAmb	IAmb	20 46 21.8	
	comp=Z,5.2nm,1.4s						
KVN	Kaiserville	33.06	323	P	P	20 45 52.8	+0.5
KVN				IAmb	IAmb	20 45 56.3	
	comp=Z,5.2nm,1.1s						
FLWY	Flagg Ranch	33.26	337	P	P	20 45 55.8	+1.7
H17A	Grant Village	33.48	337	P	P	20 45 57.3	+1.3
H17A				IAmb	IAmb	20 46 01.4	
	comp=Z,3.2nm,0.7s						
LKWY	Lake	33.56	337	P	P	20 45 59.4	+2.7
YNE	Yellowstone No	33.79	338	P	P	20 45 59.7	+1.0
MDND	Maddock	33.86	352	P	P	20 45 59.3	+0.3
YHH	Holmes Hill	33.92	337	P	P	20 46 01.7	+1.9
AGMN	Agassiz Nation	33.95	357	P	P	20 45 59.2	-0.5
AGMN				IAmb	IAmb	20 46 04.5	
	comp=Z,3.6nm,0.9s						
YHB	Horse Butte	34.02	337	P	P	20 46 01.6	+1.0
YHL	Hebgen Lake	34.10	337	P	P	20 46 03.8	+2.4
QLMT	Earthquake Lak	34.17	336	P	P	20 46 02.6	+0.7
GCMT	Greycliff	34.35	339	P	P	20 46 04.0	+0.5
MCMT	McKenzie Canyo	34.74	335	P	P	20 46 08.4	+1.5
ULM	Lac du Bonnet	35.90	357	P	P	20 46 15.1	-1.4
	comp=Z,1.7nm,0.5s,baz=175,slow=12,SNR=4.8						
PTGA	Pitinga	36.02	112	P	P	20 46 17.6	-0.4
	comp=Z,5.6nm,0.6s,baz=304,slow=9.6,SNR=13						
PTGA	Pitinga	36.02	112	P	P	20 46 17.9	-0.1
J08A	Circle Bar Ran	36.22	328	P	P	20 46 20.1	+0.7
J08A				IAmb	IAmb	20 46 26.7	
	comp=Z,6.4nm,0.7s						
EGMT	Eagleton	36.34	341	P	P	20 46 21.7	+1.3
EGMT				IAmb	IAmb	20 46 22.8	
	comp=Z,8.5nm,1.1s						
MSO	Missoula	36.81	336	P	P	20 46 25.8	+1.4
MSO				IAmb	IAmb	20 46 26.9	
	comp=Z,4.9nm,0.9s						
F10A	Beach Ranch, E	37.54	332	P	P	20 46 32.0	+1.4
SAML	Samuel	37.59	126	P	P	20 46 29.9	-1.4
SAML				IAmb	IAmb	20 46 42.0	
	comp=Z,4.9nm,1.2s						
JTMT	Jette	37.70	336	P	P	20 46 33.4	+1.3
JTMT				IAmb	IAmb	20 46 34.3	
	comp=Z,5.5nm,0.9s						
FFC	Flin Flon	40.91	352	P	P	20 46 58.4	-0.1
FFC				IAmb	IAmb	20 47 40.2	
	comp=Z,12nm,1.6s						
SIV	San Ignacio	43.67	132	P	P	20 47 20.1	-1.4
	comp=Z,1.7nm,0.8s,baz=311,slow=9.0,SNR=7.8						
FCC	Fort Churchill	44.37	359	P	P	20 47 26.0	-0.5
FCC				IAmb	IAmb	20 47 26.8	
	comp=Z,3.4nm,0.7s						
SCHQ	Schefferville	45.28	21	PcP	PcP	20 49 13.3	+0.2
	comp=Z,2.0nm,0.6s,baz=236,slow=3.6,SNR=4.5						
YKA	Yellowknife Ar	50.48	347	P	P	20 48 14.4	+0.5
	comp=Z,6.5nm,0.7s,baz=150,slow=7.6,SNR=94						
YKA				PcP	PcP	20 49 33.6	+2.1
	comp=Z,0.7nm,0.7s,baz=149,slow=3.8,SNR=5.9						
DLBC	Dease Lake	51.94	336	P	P	20 48 27.6	+2.5
BDFB	Brasilia	53.57	122	P	P	20 48 36.6	-1.2
	comp=Z,1.4nm,0.5s,baz=302,slow=9.9,SNR=4.2						
INK	Inuvik	59.84	344	P	P	20 49 22.2	+0.9
	comp=Z,5.4nm,0.8s,baz=138,slow=7.4,SNR=16						
INK	Inuvik	59.84	344	P	P	20 49 22.1	+0.8
RES	Resolute Bay	60.37	359	P	P	20 49 24.6	-0.2
RES				IAmb	IAmb	20 49 25.4	
	comp=Z,3.2nm,0.8s						
PRP	Porcupine Dome	61.99	338	P	P	20 49 37.6	+1.5
PRP				IAmb	IAmb	20 49 38.2	
	comp=Z,3.4nm,0.8s						
ILAR	Eielson Array	62.14	337	P	P	20 49 37.6	+0.6
	comp=Z,2.3nm,0.9s,baz=141,slow=4.9,SNR=20						
RND	Reindeer	62.30	335	P	P	20 49 39.6	+1.4
SUA	Susitna One	62.32	333	P	P	20 49 39.7	+1.3
RSO	Redoubt South	62.87	331	P	P	20 49 43.8	+1.6
TRF	Thorofare Moun	62.91	335	P	P	20 49 44.1	+1.7
TRF				IAmb	IAmb	20 49 57.3	
	comp=Z,4.9nm,0.9s						
MLY	Manley	63.73	336	P	P	20 49 48.5	+0.8
MLY				IAmb	IAmb	20 49 49.6	
	comp=Z,4.4nm,0.8s						
BORG	Borgarnes	69.37	26	LR	LR	21 18 59.8	
	comp=Z,124nm,19.0s,baz=126,slow=34						
NOA	NORSAR Array B	84.35	28	P	P	20 51 47.7	-0.4
	comp=Z,0.7nm,0.8s,baz=290,slow=5.1,SNR=3.4						
ARCES	ARCESS Array B	86.15	18	P	P	20 51 56.0	-0.8
	comp=Z,1.5nm,0.9s,baz=272,slow=4.4,SNR=3.6						
TIC	Toumodi	86.50	84	*e*PKP2	P	20 51 59.5	-0.2
LIC	Lamto	86.59	84	*e*PKP2	P	20 51 59.4	-0.7
	comp=Z,2.7nm,0.2s						
DBIC	Dimbokro	86.65	84	P	P	20 51 59.3	-1.0
	comp=Z,2.3nm,0.7s,baz=318,slow=1.6,SNR=4.5						
KIC	Kosan Boka	86.83	84	*e*PKP2	P	20 52 00.6	-0.7
	comp=Z,8.2nm,0.8s						
TIXI	Tiksi	89.73	348	P	P	20 52 13.7	-0.1
FINES	FINESS Array B	90.64	25	P	P	20 52 17.5	-0.8
	comp=Z,1.7nm,1.0s,baz=225,slow=2.4,SNR=3.7						
KSH	Kashi	125.47	10	PKP	PKiKP	20 58 19.6	+1.7
KSH				PP	PP	21 00 13.7	+6.4
KSH				SKS	SKSdf	21 05 27.5	+1.2
WRA	Warramunga Arr	134.47	256	PKP	PKiKP	20 58 34.7	-1.6
	comp=Z,0.4nm,0.6s,baz=89,slow=2.0,SNR=8.1						
CMAR	Chiang Mai Arr	145.34	340	PKPbc	PKiKP	20 58 54.8	-3.8
	comp=Z,2.4nm,0.7s,baz=341,slow=4.2,SNR=15						

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*NORS **03** 20:50:45.6±0.0, 42°.52N×43°.86E, h10^{km}, MPVA2.9*
*TIF **03** 20:50:45.4, 42°.51N×43°.92E, h11^{km}±2^{km}*
ISC 03 20:50:45.8±1.0**, 42°.51N**±0°.02×**43°.86E**±0°.02**, h10**^{km}±9^{km}**,**
n26, σ0^{s}.97/52**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZEI	Tsey	0.28	6	*i* Pg	Pb	20 50 52.4	-0.6
ZEI				*i* Sg	Sb	20 50 57.3	-0.7
ONI	Oni	0.31	286	P	Pb	20 50 53.1	-0.4
ONI				S	Sb	20 50 58.2	-0.5
ONI	Oni	0.31	286	*e*Pg	Pg	20 50 52.1	0.0
ONI				*e*Sg	Sg	20 50 56.2	-0.2
DIGR	Digorskoe uzhe	0.45	332	*i* Pg	Pb	20 50 55.2	-0.6
DIGR				*e*Sg	Sb	20 51 01.9	-0.7
LACR	Lac	0.45	45	*i* Pg	Pb	20 50 55.9	0.0
LACR				*e*Sg	Sb	20 51 03.2	+0.4
GUDG	Gudauri	0.46	95	P	Pg	20 50 53.8	-0.9
GUDG				S	Sg	20 51 00.5	-0.3
GUDG	Gudauri	0.46	95	*e*Pg	Pb	20 50 55.8	-0.2
GUDG				*e*Sg	Sb	20 51 02.5	-0.4
KORR	Kora	0.60	15	*e*Pg	Pb	20 50 58.9	+0.5
KORR				*i* Sg	Sn	20 51 08.9	-1.2
TKB	Tkibuli	0.66	257	P	Pb	20 50 59.6	+0.3
TKB				S	Sb	20 51 09.9	+1.3
ARNR	Ardon	0.74	25	*e*Pg	Pn	20 51 01.4	-0.9
ARNR				*e*Sg	Sn	20 51 13.7	+0.1
LSNR	Lesken	0.77	358	*e*Pg	Pn	20 51 01.9	-0.9
LSNR				*e*Sg	Sn	20 51 14.0	-0.4
BKRG	Bakuriani	0.79	199	P	Pb	20 51 01.3	-0.3
BKRG				S	Sb	20 51 12.7	+0.3
VLKR	Vladikavkaz	0.81	48	*e*Pg	Pn	20 51 02.6	-0.6
VLKR				*e*Sg	Sn	20 51 15.5	+0.2
STDR	Stavd-Durt	0.88	10	*e*Pg	Pn	20 51 04.3	+0.2
STDR				*e*Sg	Sn	20 51 17.4	+0.5
KMGR	Komgaron	0.92	53	*e*Pg	Pn	20 51 04.4	-0.4
KMGR				*e*Sg	Sn	20 51 19.2	+1.1
BTKR	Batakoyurt	1.00	30	*e*Pg	Pn	20 51 06.7	+0.9
BTKR				*e*Sg	Sn	20 51 21.1	+1.1
TBLG	Delisi	1.01	140	P	Pb	20 51 05.2	-0.1
TBLG				S	Sn	20 51 19.2	-1.0
TBLG	Delisi	1.01	140	*e*Pg	Pb	20 51 05.2	-0.1
TBLG				*e*Sg	Sn	20 51 19.2	-1.0
BTNK	Botanikuri	1.08	139	P	Pg	20 51 06.1	-0.3
BTNK				S	Sn	20 51 21.4	-0.5
BTNK	Botanikuri	1.08	139	*e*Pg	Pg	20 51 06.1	-0.3
BTNK				*e*Sg	Sn	20 51 21.4	-0.5
KZRT	Kazreti	1.19	160	P	Pb	20 51 07.7	-0.6
KZRT				S	Sg	20 51 23.9	-0.1
KZRT	Kazreti	1.19	160	*e*Pg	Pb	20 51 07.7	-0.6
KZRT				*e*Sg	Sg	20 51 23.9	-0.1
BGD	Bogdanovka	1.26	189	P	Pg	20 51 09.8	-0.1
BGD				S	Sn	20 51 27.5	+0.9
SHA1	Shidzhatmaz	1.52	325	*i* Pg	Pg	20 51 14.9	+0.1
SHA1				*e*Sg	Sg	20 51 35.8	+1.3
BTLR	Botlikh	1.75	84	*e*Pg	Pb	20 51 17.8	-0.1
BTLR				*e*Sg	Sg	20 51 42.2	+0.2
DDFL	Dedoflistskaro	1.99	121	P	Pg	20 51 24.0	+0.2
DDFL				S	Sg	20 51 54.7	+5.1

LJU 03 20:59:16.0, 46°.02N×14°.73E, h9^{km}**, ML0.4, 1D,**
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDS	Vrh nad Dolski	0.08	348	⇓*i*Pg	Pg	20 59 18.4	+0.1
VNDS				*i* Sg	Sg	20 59 20.0	+0.1
	comp=Z,11nm,0.1s						
LJU	Ljubljana	0.14	280	*e*Sg	Sg	20 59 21.6	+0.3
PDKS	Podkum	0.19	78	*i* Pg	Pg	20 59 20.2	+0.2
PDKS				*i* Sg	Sg	20 59 23.0	+0.2
VISS	Visnje	0.23	160	*i* Pg	Pg	20 59 21.0	+0.3
VISS				*i* Sg	Sg	20 59 24.2	+0.4
	comp=Z,1.0nm,0.1s						
CRNS	Crni Vrh	0.33	281	*i* Pg	Pg	20 59 22.6	0.0
CRNS				*i* Sg	Sg	20 59 27.3	+0.3

ROM 03 20:59:21.7±0.2**, 43°.416N**±0°.004×**12°.504E**±0°.005**,**
h6^{km}±1^{km}**, Md1.3**/3**, 2C-1D, Error ellipse: s-maj=0.4km**
s-min=0.2km az=67.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATFO	Monte Foce - G	0.07	135	P	Pg	20 59 23.5	+0.1
ATFO				S	Sg	20 59 25.0	+0.3
ATFO				END			
ATVO	AVT- Monte Val	0.08	245	⇑P	Pg	20 59 23.7	+0.1
ATVO				S	Sg	20 59 25.1	+0.3
ATVO				END			
ATPI	Pietralunga -	0.08	295	P	Pg	20 59 23.9	+0.3
ATPI				S	Sg	20 59 25.6	+0.6
ATPI				END			
MURB	Monte Urbino	0.15	174	⇑P	Pg	20 59 25.3	+0.5
MURB				S	Sg	20 59 28.4	+1.5
NARO	Abbazia di Nar	0.20	16	⇓P	Pg	20 59 26.2	+0.4
NARO				S	Sg	20 59 29.9	+1.4
CRE	Caprese Michel	0.45	297	S	Sb	20 59 38.0	-1.2

IDC 03 21:04:58.5±2.0**, 3°.82S×128°.40E, h0**^{km}**, mb3.5**/2**,**
mb1 3.6/3**, mb1mx3.3**/33**, mbtmp3.4**/3**, ML3.1**/1**, Error**
ellipse: s-maj=138.4km s-min=27.7km az=67.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.04	161	P	Pn	21 08 57.4	-0.9
	0.1nm,0.3s,baz=339,slow=12,SNR=5.6						
ASAR	Alice Springs	20.43	165	P	P	21 09 38.0	+0.4
	0.7nm,0.5s,baz=348,slow=11,SNR=12						
MKAR	Makanchi Array	64.71	327	P	P	21 15 38.5	0.0
	0.4nm,0.5s,baz=114,slow=7.3,SNR=7.8						

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*NEIC **03** 21:09:48.0±1.4, 52°.1N±0°.1×176°.25E±0°.08, h63^{km}±8^{km},*
Error ellipse: s-maj=21.2km s-min=6.4km az=191.0
*AEIC **03** 21:09:47.6±2.8, 52°.2N±0°.1×176°.37E±0°.08, h42^{km}±6^{km},*
ML3.8/15, mb4.2/11(NEIC), Error ellipse: s-maj=21.3km
s-min=6.3km az=190.0
*IDC **03** 21:09:50.2±4.0, 52°.20N×176°.16E, h81^{km}±36^{km}, mb3.5/14,*
mb1 3.7/16, mb1mx3.5/48, mbtmp3.9/16, Error ellipse:
s-maj=26.2km s-min=13.4km az=172.0
ISC 03 21:09:47.0±0.7**, 52°.1N**±0°.1×**176°.26E**±0°.04**, h50**^{km}**, n49,**
σ1^{s}.27/48**, mb4.0**/18**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	1.48	297		Pn	21 10 12.2	+1.0
SMY					Sn	21 10 31.6	+2.3
TANO	Tanaga North	3.48	90		Sn	21 11 19.6	+1.1
TASE	Tanaga Southea	3.54	92		Pn	21 10 40.4	+1.0
TAFP	Tanaga Falls P	3.56	91		Pn	21 10 40.7	+0.9
TAFP					Sn	21 11 20.9	+0.3
TAPA	Tanaga Point A	3.68	92		Pn	21 10 42.3	+0.9
KIMD	Kanaga Island	4.04	92		Pn	21 10 47.2	+0.9
KICM	Kanaga Island	4.05	90		Pn	21 10 47.5	+1.1
KICM					Sn	21 11 33.5	+1.1
KIKV	Kanaga Island	4.07	90		Pn	21 10 47.6	+1.0
ADK	Adak	4.37	90		Pn	21 10 51.8	+1.0
ADK	Adak	4.37	90		Sn	21 11 39.0	-1.3
GSTD	Great Sitkin T	4.69	87		Pn	21 10 57.9	+2.7
GSTR	Great Sitkin T	4.74	87	Pn	Pn	21 10 56.9	+1.0
GSMY	Great Sitkin M	4.74	87		Pn	21 10 57.6	+1.7
ATKA	Atka Island	5.88	85	Pn	Pn	21 11 12.7	+1.2
PEA0B	Petropavlovsk-	11.34	283	Pn	Pn	21 12 28.4	+2.2
PEA0B					Sn	21 14 27.9	-3.4
PETK	Petropavlovsk-	11.34	283	P	Pn	21 12 28.1	+1.9
	0.5nm,0.3s,baz=97,slow=18,SNR=8.3						
CNBA	Chernabura Isl	14.63	70	Pn	Pn	21 13 09.8	-1.0
CHGN	Chignik	15.38	64	Pn	Pn	21 13 21.3	+0.8
SVW2	Sparrevohn	17.81	49		Pn	21 13 50.9	-0.1
OHAK	Old Harbor	18.26	62	P	P	21 13 54.8	-1.4
OHAK				IAmb	IAmb	21 14 08.1	
	comp=Z,23nm,1.3s						
KDAK	Kodiak Island	18.68	60	P	P	21 13 59.7	-1.0
	comp=Z,1.8nm,0.3s,baz=240,slow=3.0,SNR=42						
KDAK	Kodiak Island	18.68	60	IAmb	IAmb	21 14 00.7	
	comp=Z,13nm,0.9s						
CNPM	China Poot	19.57	55	P	P	21 14 10.8	+0.3
BRLK	Bradley Lake	19.78	54	P	P	21 14 13.0	+0.2
BRLK				IAmb	IAmb	21 14 13.8	
	comp=Z,12nm,0.5s						
ILAR	Eielson Array	22.70	42	P	P	21 14 45.1	+1.0
	comp=Z,0.6nm,0.8s,baz=247,slow=8.7,SNR=6.4						
TOLK	Toolik Lake Re	23.20	31	P	P	21 14 49.1	0.0
BARN	Barnard Glacie	24.46	52	P	P	21 15 01.6	+0.5
BARN				IAmb	IAmb	21 15 03.6	
	comp=Z,6.7nm,1.0s						
KLR	Kul'dur	28.03	282	P	P	21 15 32.6	-0.5
	comp=Z,1.5nm,0.5s,baz=82,slow=5.1,SNR=6.7						
H11N2	WAKE ISLAND Hy	33.10	196	T	T	21 51 34.4	
	baz=11,slow=76,SNR=301						
H11N3	WAKE ISLAND Hy	33.11	196	T	T	21 51 35.2	
	baz=11,slow=76,SNR=315						
H11N1	WAKE ISLAND Hy	33.12	196	T	T	21 51 37.0	
	baz=11,slow=76,SNR=358						
H11S1	WAKE ISLAND Hy	34.33	196	T	T	21 53 05.8	
	baz=10,slow=76,SNR=77						
H11S3	WAKE ISLAND Hy	34.34	196	T	T	21 53 07.2	
	baz=10,slow=76,SNR=45						
H11S2	WAKE ISLAND Hy	34.34	196	T	T	21 53 07.3	
	baz=10,slow=76,SNR=28						
YKA	Yellowknife Ar	36.98	46	P	P	21 16 51.1	0.0
	comp=Z,0.2nm,0.5s,baz=289,slow=8.1,SNR=4.5						
ULN	Ulaanbaatar	43.18	293	P	P	21 17 42.7	0.0
ULN				IAmb	IAmb	21 17 42.9	
	comp=Z,1.6nm,0.6s						
SONM	Songino Array	43.57	293	P	P	21 17 45.7	-0.1
	comp=Z,2.1nm,0.5s,baz=64,slow=7.3,SNR=31						
SONM				pP	pP	21 18 00.7	+1.7
	comp=Z,0.8nm,0.6s,baz=63,slow=7.6,SNR=5.4						
NVAR	Mina Array Bea	46.49	80	P	P	21 18 09.9	+0.6
	comp=Z,0.5nm,0.6s,baz=296,slow=6.4,SNR=4.0						
ARCES	ARCESS Array B	56.83	348	P	P	21 19 24.9	-0.8
	comp=Z,2.7nm,0.8s,baz=26,slow=9.0,SNR=3.2						
MK31	Makanchi Array	57.16	305	P	P	21 19 27.2	-1.2
MK31				IAmb	IAmb	21 19 27.6	
	comp=Z,1.3nm,0.6s						
MKAR	Makanchi Array	57.16	305	P	P	21 19 26.9	-1.5
	comp=Z,1.2nm,0.4s,baz=51,slow=6.6,SNR=18						
TX32	Lajitas Array	61.55	78	P	P	21 19 59.6	+0.6
TX32				IAmb	IAmb	21 20 04.6	
	comp=Z,3.6nm,1.4s						
TXAR	Lajitas Array	61.55	78	P	P	21 19 59.5	+0.4
	comp=Z,0.6nm,0.4s,baz=304,slow=5.8,SNR=14						
FINES	FINESS Array B	64.36	345	P	P	21 20 15.8	-1.2
	comp=Z,0.5nm,0.3s,baz=13,slow=7.3,SNR=8.1						
NOA	NORSAR Array B	66.60	352	P	P	21 20 29.3	-2.3
	comp=Z,0.7nm,0.7s,baz=8.4,slow=6.3,SNR=2.9						
HFS	Hagfors	67.27	351	P	P	21 20 34.7	-1.0
	comp=Z,1.3nm,0.5s,baz=358,slow=3.4,SNR=8.7						
CMAR	Chiang Mai Arr	67.90	272	P	P	21 20 39.7	-0.6
	comp=Z,0.5nm,0.7s,baz=23,slow=7.8,SNR=4.0						
CMAR				pP	pP	21 20 55.3	+0.9
	comp=Z,0.5nm,0.7s,baz=30,slow=6.7,SNR=3.1						
GEYT	Alibeck	75.44	314	P	P	21 21 25.8	+0.3
	comp=Z,1.7nm,0.9s,baz=30,slow=6.8,SNR=4.5						
ASAR	Alice Springs	84.02	218	P	P	21 22 11.2	-0.7
	comp=Z,0.4nm,0.7s,baz=20,slow=5.5,SNR=5.6						

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*IGIL **03** 21:20:11.8, 36°.74N×9°.64W, h22^{km}, ML1.7*
*MDD **03** 21:20:11.5±1.4, 36°.73N×9°.69W, h42^{km}±30^{km}, mb3.7/3,*
Error ellipse: s-maj=12.3km s-min=11.0km az=31.0,
PRXIMO
*INMG **03** 21:20:12.0±1.4, 36°.75N×9°.64W, h22^{km}±4^{km}, ML1.8, Error*
ellipse: s-maj=6.0km s-min=4.5km az=60.0
ISC 03 21:20:11.4±3.0**, 36°.8N**±0°.1×**9°.64W**±0°.10**, h33**^{km}±4^{km}**, n41,**
σ0^{s}.90/69**, 1C, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	0.72	64	P	Pb	21 20 25.8	+0.2
	4.7nm,0.1s,SNR=7.9						
PFVI				S	Sn	21 20 35.8	+0.7
	12nm,0.1s,SNR=6.3						
PFVI	Vila Bisbo	0.72	64	⇑*e*P	Pb	21 20 25.8	+0.2
PFVI				*e*S	Sn	21 20 36.1	+1.0
PFVI				A	A	21 20 37.2	
	14nm,0.1s						
MORF	Marmelete	0.92	58	*e*P	Pb	21 20 28.6	-0.4
MORF				*e*S	Sb	21 20 40.9	-0.1
MORF				AML	AML	21 20 42.7	
	comp=E,19nm,0.3s						
MORF	Marmelete	0.92	58	P	Pb	21 20 28.6	-0.4
MORF				S	Sb	21 20 40.9	-0.1
	comp=E,19nm,0.3s						
MORF	Marmelete	0.92	58	*e*P	Pb	21 20 28.8	-0.2
MORF				*e*S	Sb	21 20 41.6	+0.6
MORF				A	A	21 20 45.4	
	comp=E,9.2nm,0.3s						
PTEO	Sao Teotonio	1.02	45	S	Sb	21 20 44.1	+0.3
PTEO	Sao Teotonio	1.02	45	*e*S	Sb	21 20 44.1	+0.3
PBDV	Barranco-do-Ve	1.43	72	P	Pn	21 20 35.6	+0.6
PBDV				S	Sn	21 20 53.1	+0.4
	comp=E,2.8nm,0.4s						
PBDV	Barranco-do-Ve	1.43	72	*e*P	Pn	21 20 35.6	+0.6
PBDV				*e*S	Sn	21 20 53.1	+0.4
PBDV				A	A	21 20 55.8	
	comp=E,2.8nm,0.4s						
PCVE	Castro Verde	1.51	57	P	Pn	21 20 37.0	+0.9
PCVE				S	Sn	21 20 55.7	+1.1
	comp=E,4.1nm,0.6s						
PCVE	Castro Verde	1.51	57	*e*P	Pn	21 20 37.0	+0.9
PCVE				*e*S	Sn	21 20 55.7	+1.1
PCVE				A	A	21 20 57.7	
	comp=E,4.1nm,0.6s						
MESJ	Messejana	1.52	48	*e*P	Pn	21 20 36.9	+0.6
MESJ				*e*S	Sn	21 20 55.2	+0.4
MESJ				AML	AML	21 20 57.5	
	comp=E,5.9nm,0.2s						
MESJ	Messejana	1.52	48	P	Pn	21 20 36.9	+0.6
MESJ				S	Sn	21 20 55.2	+0.4
	comp=E,5.9nm,0.2s						
PNCL	Nicolau / Gran	1.56	34	P	Pn	21 20 37.6	+0.8
PNCL				S	Sn	21 20 56.6	+0.7
	comp=E,7.8nm,0.5s						
PNCL	Nicolau / Gran	1.56	34	*e*P	Pn	21 20 37.6	+0.8
PNCL				*e*S	Sn	21 20 56.6	+0.7
PNCL				A	A	21 21 01.8	
	comp=E,7.8nm,0.5s						
PVAQ	Vaqueiros	1.64	69	Pn	Pn	21 20 38.6	+0.7
PVAQ				Sn	Sn	21 20 58.1	+0.2
	comp=E,4.4nm,0.2s						
PVAQ	Vaqueiros	1.64	69	*e*Pn	Pn	21 20 38.6	+0.7
PVAQ				*e*Sn	Sn	21 20 58.1	+0.2
PVAQ				A	A	21 21 00.5	
	comp=E,4.4nm,0.2s						
PBEJ	Beja	1.85	49	Sn	Sn	21 21 03.6	+0.5
	comp=E,1.9nm,0.1s						
PBEJ	Beja	1.85	49	*e*Sn	Sn	21 21 03.6	+0.5
PBEJ				A	A	21 21 04.7	
	comp=E,3.9nm,0.1s						
EGRO	El Granado	1.86	67	P	Pn	21 20 42.2	+1.2
	comp=E,0.4nm,0.1s,SNR=7.9						
EGRO				S	Sn	21 21 02.8	-0.5
	comp=E,3.6nm,0.1s,SNR=7.9						
PMAFR	Mafra	2.15	7	P	Pn	21 20 45.1	+0.1
	comp=E,5.0nm,0.1s,SNR=7.9						
PMAFR				S	Sn	21 21 10.6	+0.2
	comp=E,19nm,0.2s,SNR=7.9						
PMAFR	Mafra	2.15	7	*e*Pn	Pn	21 20 45.0	+0.1
PMAFR				*e*Sn	Sn	21 21 11.5	+1.1
PMAFR				A	A	21 21 11.8	
	comp=E,23nm,0.2s						
PMTG	Montargil	2.50	26	Pn	Pn	21 20 50.6	+0.8
PMTG				Sn	Sn	21 21 19.2	0.0
	comp=E,4.0nm,0.4s						
PMTG	Montargil	2.50	26	*e*Pn	Pn	21 20 50.6	+0.8
PMTG				*e*Sn	Sn	21 21 19.2	0.0
PMTG				A	A	21 21 20.4	
	comp=E,4.0nm,0.4s						
EMIN	Mina Concepcio	2.54	67	P	Pn	21 20 50.4	0.0
	comp=E,0.2nm,0.1s,SNR=7.9						
EMIN				S	Sn	21 21 19.6	-0.6
	comp=E,0.9nm,0.2s,SNR=7.4						
PESTR	Estremoz	2.60	38	*e*Sn	Sn	21 21 21.7	0.0
EBAD	Badajoz	2.83	46	P	Pn	21 20 54.4	0.0
	comp=E,0.5nm,0.1s,SNR=7.9						
EBAD				S	Sn	21 21 27.2	-0.1
	comp=E,3.1nm,0.2s,SNR=8.1						
PMRV	Marv??o	3.15	34	Pn	Pn	21 20 59.5	+0.8
PMRV				Sn	Sn	21 21 34.4	-0.6
	comp=E,2.8nm,0.3s						
PMRV	Marv??o	3.15	34	*e*Pn	Pn	21 20 59.5	+0.8
PMRV				*e*Sn	Sn	21 21 34.4	-0.6
PMRV				A	A	21 21 37.5	
	comp=E,2.8nm,0.3s						
PCAS	Casmilo, Conde	3.34	15	Sn	Sn	21 21 40.1	+0.1
	comp=E,3.8nm,0.3s						
PCAS	Casmilo, Conde	3.34	15	*e*Sn	Sn	21 21 40.1	+0.1
PCAS				A	A	21 21 45.2	
	comp=E,3.8nm,0.3s						
PCBR	Castelo Branco	3.46	29	Sn	Sn	21 21 42.4	-0.3
PCBR	Castelo Branco	3.46	29	*e*Sn	Sn	21 21 42.4	-0.3
ECAB	El Cabril	3.58	68	P	Pn	21 21 05.1	+0.5
	comp=E,0.2nm,0.1s,SNR=7.9						
ECAB				S	Sn	21 21 44.0	-1.8
	comp=E,0.9nm,0.3s,SNR=7.9						
EADA	Adamuz	4.24	70	P	Pn	21 21 13.1	-0.6
	comp=E,0.2nm,0.1s,SNR=7.9						
EADA				S	Sn	21 22 00.1	-2.0
	comp=E,0.9nm,0.4s,SNR=7.9						
EPLA	Plasencia	4.27	40	S	Sn	21 22 01.3	-1.6
	comp=E,1.5nm,0.2s,SNR=7.9						
PVRL	Vila Real	4.69	18	Sn	Sn	21 22 12.8	-0.4
	comp=E,2.3nm,0.5s						
PVRL	Vila Real	4.69	18	*e*Sn	Sn	21 22 12.8	-0.4
PVRL				A	A	21 22 15.2	
	comp=E,4.7nm,0.5s						
MVO	Moncorvo	4.79	24	P	Pn	21 21 21.4	+0.2
	comp=E,2.7nm,0.2s,SNR=7.9						
MVO				S	Sn	21 22 13.4	-2.2
	comp=E,1.1nm,0.3s,SNR=4.0						
PAB	San Pablo	4.97	55	P	Pn	21 21 24.1	+0.3

	comp=E,0.2nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**21 22 17.6**	**-2.6**
	comp=E,0.1nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.18**	**13**	S	**Sn**	**21 22 22.1**	**-3.2**
	comp=E,1.5nm,0.3s,SNR=7.9						

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*TEH **03** 21:22:37.6,32°.45N×47°.02E,h16km,ML2.6*
*ISN **03** 21:22:40.0±1.4,32°.46N×47°.07E,h32km±8km,ML2.5*
ISC 03 21:22:39.7±2.7,32°.45N±0°.05×47°.10E±0°.06,h17km±20km, n12,σ0s.73/17,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBDR	**Badra**	**1.19**	**304**	*e*Pg	**Pn**	**21 23 01.0**	**-0.5**
IBDR				*e*Sg	**Sn**	**21 23 17.0**	**-0.3**
IBDR				AML	AML	21 23 20.4	
	comp=E,81nm,0.5s						
IBDR				AML	AML	21 23 20.4	
	comp=N,75nm,0.5s						
IKFM	**Kafar-mosalman**	**1.25**	**30**	*e*		21 23 04.3	
IKFM				*e*Pg	**Pn**	**21 23 01.9**	**-0.4**
IKMR	**Kamar-syah**	**1.52**	**45**	*e*		21 23 31.0	
IKMR				*e*Pn	**Pn**	**21 23 06.5**	**+0.4**
IDOB	**Doab**	**1.62**	**34**	*e*		21 23 37.1	
IDOB				*e*Pn	**Pn**	**21 23 07.9**	**+0.3**
NSR	**Nassriya**	**1.65**	**210**	*e*Pg	**Pn**	**21 23 08.0**	**+0.2**
NSR				AML	AML	21 23 17.6	
	comp=E,147nm,0.2s						
NSR				*e*Sg	**Sb**	**21 23 30.0**	**-0.1**
IKOM	**Komasi**	**1.76**	**11**	*e*Sg	**Sg**	**21 23 36.0**	**-0.4**
IKOM				*e*Pn	**Pn**	**21 23 09.6**	**0.0**
IKOM				*e*		21 23 38.9	
IGHG	**Ghaleghazi**	**1.93**	**347**	*e*Pn	**Pn**	**21 23 11.6**	**-0.4**
IGHG				*e*Sg	**Sb**	**21 23 39.8**	**+1.3**
IGHG				*e*		21 23 46.7	
KER	**Kermanshah**	**1.94**	**1**	*e*Pn	**Pn**	**21 23 12.8**	**+0.8**
KER				*e*		21 23 46.6	
BDRS	**Dareh Seyedi**	**2.12**	**44**	*e*Pn	**Pn**	**21 23 14.7**	**+0.1**
BDRS				*e*		21 23 15.0	
HSAM	**Samen**	**2.17**	**35**	*e*Pn	**Pn**	**21 23 15.2**	**0.0**
HSAM				*e*		21 23 20.0	
IDHR	**Dehrash**	**2.33**	**345**	*e*Pn	**Pn**	**21 23 16.7**	**-0.7**
IDHR				*e*		21 23 57.4	
BHD	**Baghdad**	**2.43**	**291**	*e*Pn	**Pn**	**21 23 20.0**	**+1.4**
BHD				*e*Sn	**Sn**	**21 23 47.0**	**-1.0**

IDC 03 21:35:08.8±746.0,32°.43N×133°.40E,h0km,Error ellipse: s-maj=279.6km s-min=133.1km az=48.0,Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I30JP	**ISUMI INFRASON**	**6.43**	**62**	*i*		22 18 25.0	
	baz=246,slow=318,SNR=4.7						
I45RU	**USSURIYSK INFR**	**11.80**	**355**	*i*		22 50 20.0	
	baz=176,slow=338,SNR=3.0						
I44RU	**PETROPAVLOVSK**	**27.07**	**33**	*i*		00 18 20.0	
	baz=224,slow=340,SNR=3.5						

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*GUC **03** 22:04:31.1±0.7,34°.71S×71°.81W,h46km±16km,ML3.4*
*SJA **03** 22:04:31.9±0.6,34°.63S×71°.81W,h64km±13km,ML3.1, MW3.1*
ISC 03 22:04:32.2±1.5,34°.63S±0°.06×71°.82W±0°.10,h15km±15km, n19,σ1s.19/27,3C-2D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	**Huala**	**0.39**	**194**	*e*P	**Pg**	**22 04 39.7**	**-0.3**
GO05				*i* S	**Sg**	**22 04 46.1**	**+0.7**
ANTU	**Antumapu**	**1.45**	**43**	*i* P	**Pn**	**22 04 58.1**	**+0.2**
ANTU				*i* S	**Sn**	**22 05 16.5**	**-0.2**
ANTU				IAML		22 05 21.0	
	comp=E,753nm,0.1s						
MT02	**Curacav**	**1.48**	**23**	⇑*i*P	**Pn**	**22 04 57.5**	**-0.9**
MT02				*i* S	**Sn**	**22 05 16.9**	**-0.7**
LMEL	**Las Melosas**	**1.55**	**60**	⇓*i*P	**Pn**	**22 04 57.8**	**-1.6**
LMEL				*i* S	**Sn**	**22 05 18.5**	**-0.9**
LMEL				IAML		22 05 23.6	
	comp=N,958nm,0.2s						
MT03	**Universidad Ad**	**1.57**	**44**	*i* P	**Pn**	**22 04 58.7**	**-1.0**
MT03				*i* S	**Sn**	**22 05 19.0**	**-0.9**
PEL	**Peldehue**	**1.76**	**33**	⇑*i*P	**Pn**	**22 05 01.4**	**-0.8**
PEL				*i* S	**Sn**	**22 05 24.6**	**+0.2**
PEL				IAML		22 05 30.1	
	comp=N,291nm,0.5s						
PEL	**Peldehue**	**1.76**	**33**	*i* P	**Pn**	**22 05 01.8**	**-0.4**
ROC1	**El Roble**	**1.78**	**22**	*e*P	**Pn**	**22 05 02.2**	**-0.5**
ROC1				*i* S	**Sn**	**22 05 28.3**	**+3.0**
ROCH	**El Roble**	**1.79**	**22**	⇓*i*P	**Pn**	**22 05 02.0**	**-0.8**
ROCH				*i* S	**Sn**	**22 05 26.8**	**+1.4**
ROCH				IAML		22 05 32.0	
	comp=N,451nm,0.4s						
FCH	**Farellones**	**1.82**	**45**	⇑*i*P	**Pn**	**22 05 02.2**	**-1.1**
FCH				*i* S	**Sn**	**22 05 26.4**	**+0.1**
FCH				IAML		22 05 31.3	
	comp=E,465nm,0.2s						
CCHI	**Chillan**	**1.98**	**186**	*i* P	**Pn**	**22 05 04.7**	**-0.4**
PUMA	**Malargue**	**2.13**	**115**	*i* P	**Pn**	**22 05 07.1**	**-0.1**
LAMA	**Las Malvinas**	**2.17**	**99**	*e*P	**Pn**	**22 05 06.9**	**-0.9**
EDS3	**Malargue**	**2.28**	**120**	*i* P	**Pn**	**22 05 09.9**	**+0.4**
AAGR	**Agrelo**	**2.93**	**59**	*i* P	**Pn**	**22 05 20.4**	**+2.0**
ASAL	**Salagasta**	**3.22**	**52**	*i* P	**Pn**	**22 05 24.7**	**+2.4**
ACAN	**Cantantal**	**4.53**	**60**	*i* P	**Pn**	**22 05 40.1**	**-0.2**
AGUA	**GUANDACOL**	**5.86**	**30**	*e*P	**Pn**	**22 05 58.0**	**-0.6**
APLL	**PUNTA DE LOS L**	**6.15**	**48**	*e*P	Pn	22 06 00.1	-2.5
APLL				IAML		22 07 20.7	
	comp=Z,5.2nm,0.5s						

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*ISN **03** 22:12:48.9±1.2,32°.48N×47°.09E,h7km±6km,ML3.0*
*THR **03** 22:12:49.2±0.3,32°.54N×46°.89E,h14km±8km,ML3.2*
*TEH **03** 22:12:50.8,32°.46N×47°.06E,h14km,ML3.1*
ISC 03 22:12:53.4±1.1,32°.47N±0°.04×46°.99E±0°.04,h20km,n43, σ1s.17/48,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBDR	**Badra**	**1.10**	**306**	*e*Pg	**Pn**	**22 13 11.0**	**-2.6**
IBDR				*e*Sg	**Sb**	**22 13 27.0**	**-0.6**
IBDR				AML	AML	22 13 33.8	
	comp=N,204nm,0.6s						
IBDR				AML	AML	22 13 33.8	
	comp=E,276nm,0.6s						
IKFM	**Kafar-mosalman**	**1.28**	**34**	*e*Pg	**Pn**	**22 13 14.0**	**-2.1**
IKFM				*e*		22 13 36.4	
IKMR	**Kamar-syah**	**1.57**	**48**	*e*Pg	**Pn**	**22 13 19.0**	**-1.2**
IKMR				*e*		22 13 44.3	
SHGR	**Shooshtar-Gavs**	**1.58**	**103**	*e*Pn	**Pn**	**22 13 20.0**	**-0.2**
SHGR				*e*Sg	**Sb**	**22 13 42.3**	**+0.9**
SHGR				IAML		22 13 44.2	
	comp=E,290nm,0.5s						
SHGR				IAML		22 13 45.2	
	comp=N,222nm,0.3s						
SHGR	**Shooshtar-Gavs**	**1.58**	**103**	*e*Pn	**Pn**	**22 13 20.0**	**-0.2**
NSR	**Nassriya**	**1.62**	**207**	*e*Pn	**Pn**	**22 13 20.0**	**-0.8**
NSR				*e*Sn	**Sn**	**22 13 42.0**	**+0.9**
NSR				AML	AML	22 13 54.8	
	comp=E,318nm,0.3s						
IDOB	**Doab**	**1.65**	**37**	*e*Pn	**Pn**	**22 13 21.2**	**-0.3**
IDOB				*e*		22 13 24.7	
IKOM	**Komasi**	**1.76**	**14**	*e*Pn	**Pn**	**22 13 22.7**	**-0.2**
IKOM				*e*		22 13 52.3	
KCHF	**Cheshme Sefid,**	**1.80**	**1**	*e*Pn	**Pn**	**22 13 24.1**	**+0.5**
KCHF				*e*		22 13 53.3	
AHWZ	**Ahwaz**	**1.81**	**128**	*e*Sg	**Sb**	**22 13 48.4**	**+0.4**
IGHG	**Ghaleghazi**	**1.89**	**349**	*e*Pn	**Pn**	**22 13 25.1**	**+0.3**
IGHG				*e*		22 13 59.8	
KER	**Kermanshah**	**1.92**	**4**	*e*Pn	**Pn**	**22 13 25.1**	**0.0**
IVIS	**Veis**	**2.06**	**357**	*e*Pn	**Pn**	**22 13 26.7**	**-0.3**
IVIS				*e*		22 14 00.7	
IBZA	**Bozab**	**2.13**	**20**	*e*Pn	**Pn**	**22 13 27.7**	**-0.4**
BDRS	**Dareh Seyedi**	**2.17**	**46**	*e*Pn	**Pn**	**22 13 28.0**	**-0.7**
HSAM	**Samen**	**2.21**	**37**	*e*Pn	**Pn**	**22 13 28.5**	**-0.6**
HSAM				*e*		22 13 33.4	
IDHR	**Dehrash**	**2.28**	**348**	*e*Pn	**Pn**	**22 13 30.1**	**-0.1**
IDHR				*e*		22 14 10.8	
BHD	**Baghdad**	**2.33**	**291**	*e*Pn	**Pn**	**22 13 30.0**	**-0.7**
BHD				*e*Sn	**Sn**	**22 14 02.0**	**+3.2**
BHD				AML	AML	22 14 19.1	
	comp=E,125nm,0.5s						
SNGE	**Sanandaj**	**2.64**	**6**	*e*Pn	**Pn**	**22 13 32.6**	**-2.4**
SNGE	**Sanandaj**	**2.64**	**6**	*e*Pn	**Pn**	**22 13 32.6**	**-2.4**
KHMZ	**Khomeyn**	**2.80**	**62**	*e*Pn	**Pn**	**22 13 36.4**	**-0.9**
KHMZ	**Khomeyn**	**2.80**	**62**	*e*Pn	**Pn**	**22 13 36.4**	**-0.9**
HAGD	**Aghdareh**	**2.96**	**37**	*e*Pn	**Pn**	**22 13 38.9**	**-0.6**
HAGD				*e*		22 13 48.2	
HSRG	**Sareghieh**	**2.97**	**21**	*e*Pn	**Pn**	**22 13 40.5**	**+0.8**
HSRG				*e*		22 14 32.1	
JHBN	**Jahan bin**	**3.12**	**93**	*e*Pn	**Pn**	**22 13 40.6**	**-1.2**
ASAO	**Ashtian**	**3.28**	**50**	*e*Pn	**Pn**	**22 13 42.8**	**-1.1**
ASAO	**Ashtian**	**3.28**	**50**	*e*Pn	**Pn**	**22 13 42.8**	**-1.1**
IPIR	**Pirpir**	**3.31**	**85**	*e*Pn	**Pn**	**22 13 43.4**	**-0.9**
IPIR				*e*		22 13 55.1	
IRAZ	**Razeghan**	**3.82**	**39**	*e*Pn	**Pn**	**22 13 50.9**	**-0.4**
QABG	**Abgarm-Qazvin**	**3.89**	**33**	*e*Pn	**Pn**	**22 13 51.8**	**-0.4**
QAM	**Ghamsar**	**3.95**	**70**	*e*Pn	**Pn**	**22 13 53.2**	**+0.1**
IKLH	**Kolahrood**	**3.96**	**76**	*e*Pn	**Pn**	**22 13 52.8**	**-0.4**
GHVR	**GHOM**	**4.12**	**60**	*e*Pn	**Pn**	**22 13 53.9**	**-1.4**
GHVR	**GHOM**	**4.12**	**60**	*e*Pn	**Pn**	**22 13 53.9**	**-1.4**
IQOM	**Qom**	**4.15**	**54**	*e*Pn	**Pn**	**22 13 54.8**	**-1.1**
KLNJ	**Kolanjah**	**4.18**	**109**	*e*Pn	**Pn**	**22 13 55.8**	**-0.6**
IZEF	**Zefreh**	**4.53**	**83**	*e*Pn	**Pn**	**22 14 00.1**	**-1.0**
KRSH	**Karshahi**	**4.57**	**69**	*e*Pn	**Pn**	**22 14 00.7**	**-0.9**
IRAM	**Ramesheh**	**4.62**	**97**	*e*Pn	**Pn**	**22 14 00.6**	**-1.8**
IVRN	**Varamin**	**4.69**	**56**	*e*Pn	**Pn**	**22 14 02.0**	**-1.1**
IKAZ	**Kazeroun**	**4.95**	**121**	*e*Pn	**Pn**	**22 14 05.6**	**-1.3**
IKAZ				*e*		22 15 03.8	
QALM	**Alamut, Qazvin**	**4.98**	**36**	*e*Pn	**Pn**	**22 14 06.7**	**-0.6**
MSL	**Mosul**	**5.07**	**322**	*e*Pn	**Pn**	**22 14 08.0**	**-0.2**
MSL				*e*Sn	**Sn**	**22 15 06.0**	**-0.1**

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*ASRS **03** 22:48:52.4±0.2,50°N±1°×87°.9E±1°.0,h5km,MLh3.3/18, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
*NNC **03** 22:48:55.6±1.9,50°.12N×87°.75E,h0km,mb3.7,mpv3.3, Error ellipse: s-maj=14.3km s-min=8.9km az=76.0*
ISC 03 22:48:54.5±0.8,50°.08N±0°.03×87°.87E±0°.02,h10km,n29, σ2s.03/62,9C-4D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKAR	**Aktash**	**0.29**	**327**	Pg	**Pg**	**22 48 59.6**	**-0.8**
AKAR				Sg	**Sg**	**22 49 04.2**	**-0.1**
CUR	**Chagan-Uzun**	**0.31**	**86**	Pg	**Pg**	**22 48 58.9**	**-1.8**
CUR				Sg	**Sg**	**22 49 03.2**	**-1.8**
CHBI	**Chibit, Altay**	**0.33**	**315**	Pg	**Pg**	**22 49 00.3**	**-0.9**
CHBI				Sg	**Sg**	**22 49 05.1**	**-0.5**
DGZ	**Jazzator, Alta**	**0.47**	**217**	Pg	**Pg**	**22 49 02.0**	**-1.7**
DGZ				Sg	**Sg**	**22 49 07.9**	**-2.0**
ULGR	**Ulagan, Altay**	**0.55**	**6**	Pg	**Pg**	**22 49 03.9**	**-1.3**
ULGR				Sg	**Sg**	**22 49 11.4**	**-1.1**
TUNR	**Tungur**	**0.99**	**275**	Pg	**Pg**	**22 49 11.9**	**-1.6**
TUNR				Sg	**Sg**	**22 49 24.9**	**-1.6**
ELDR	**Elanda**	**1.61**	**316**	Pg	**Pb**	**22 49 23.3**	**-0.9**
ELDR				Sg	**Sg**	**22 49 44.9**	**-1.3**
ARTR	**Artybash**	**1.76**	**348**	Pg	**Pb**	**22 49 25.9**	**-1.0**
ARTR				Sg	**Sg**	**22 49 51.2**	**+0.1**
GALT	**Gorno-Altaysk,**	**2.24**	**328**	Pg	**Pb**	**22 49 35.2**	**+0.1**
GALT				Sg	**Sg**	**22 50 05.9**	**-0.6**
TASR	**Tashtagol**	**2.69**	**0**	Pg	**Pb**	**22 49 42.8**	**+0.2**
TASR				Sg	**Sg**	**22 50 17.0**	**-3.7**
ELT	**Eltsovka**	**3.35**	**343**	P	**Pn**	**22 49 48.8**	**+2.0**
ELT				Sg	**Sg**	**22 50 44.1**	**+2.2**
DJO	**Djoy, Khakassi**	**3.42**	**36**	Pg	**Pb**	**22 49 56.5**	**+1.3**
DJO				Sg	**Sg**	**22 50 42.9**	**-1.5**
DJOS	**Djoyskaya Sosn**	**3.50**	**38**	Pg	**Pg**	**22 49 59.7**	**-1.9**
DJOS				Sg	**Sg**	**22 50 47.0**	**0.0**
VEH	**Verkhnyaya Baz**	**3.53**	**25**	Pg	**Pb**	**22 49 57.8**	**+0.8**
VEH				Sg	**Sg**	**22 50 46.9**	**-0.8**
CERR	**Cheremushki**	**3.56**	**37**	Pg	**Pg**	**22 49 59.5**	**-3.0**
CERR				Sg	**Sg**	**22 50 49.4**	**+0.7**
LUZB	**Luzhba, Kemero**	**3.65**	**10**	Pg	**Pb**	**22 50 00.2**	**+1.3**
LUZB				Sg	**Sg**	**22 50 47.8**	**-3.7**
ABNR	**Abakan**	**4.27**	**30**	Sg	**Sg**	**22 51 11.2**	**-0.2**
KZLR	**Kyzyl**	**4.48**	**66**	Pg	**Pg**	**22 50 17.7**	**-2.5**
KZLR				Sg	**Sg**	**22 51 19.6**	**+1.5**
SALR	**Pechorkino, Sa**	**4.54**	**344**	Pg	**Pg**	**22 50 19.3**	**-2.2**
SALR				S	**Sn**	**22 50 58.6**	**+2.5**
SALR				Sg	**Sg**	**22 51 17.8**	**-2.5**
MK31	**Makanchi Array**	**4.96**	**231**	⇑Pn	**Pn**	**22 50 11.4**	**+2.5**
	0.8nm,0.2s,baz=55,slow=12,SNR=76						
MK31				⇑Sn	**Sn**	**22 51 10.3**	**+3.9**
	2.8nm,0.5s,baz=57,slow=28,SNR=5.8						
MK31				⇑Lg	Lg	22 51 31.1	
	6.7nm,0.6s,baz=53,slow=29,SNR=3.5						
MKAR	**Makanchi Array**	**4.96**	**231**	P	**Pn**	**22 50 11.5**	**+2.5**
MKAR				Pg	**Pg**	**22 50 26.2**	**-3.2**
MKAR				S	**Sn**	**22 51 09.5**	**+3.1**
MKAR				Sg	**Sg**	**22 51 32.4**	**-1.2**
MAKZ	**Makanchi**	**5.11**	**232**	P	**Pn**	**22 50 13.2**	**+2.2**
MAKZ				Pg	**Pg**	**22 50 29.6**	**-2.7**
MAKZ				S	**Sn**	**22 51 11.1**	**+1.1**
MAKZ				Sg	**Sg**	**22 51 35.8**	**-2.5**
MAKZ	**Makanchi**	**5.11**	**232**	⇑Pn	**Pn**	**22 50 13.1**	**+2.1**
	3.0nm,0.7s						
MAKZ				⇓Pg	**Pg**	**22 50 28.1**	**-4.1**
	1.6nm,0.5s						
MAKZ				⇑Sn	**Sn**	**22 51 12.6**	**+2.6**
	3.2nm,0.5s						
MAKZ				⇑Lg	Lg	22 51 34.9	
	4.4nm,0.5s						
BSTK	**Bystrovka, Nov**	**5.52**	**327**	P	**Pn**	**22 50 17.0**	**+0.4**
BSTK				S	**Sn**	**22 51 20.2**	**+0.2**
TDJR	**Todzha**	**5.67**	**63**	Pg	**Pg**	**22 50 39.1**	**-3.9**
TDJR				Sg	**Sg**	**22 51 55.7**	**-0.7**
KURK	**Kurchatov**	**5.95**	**280**	P	**Pn**	**22 50 22.9**	**+0.4**
KURK				S	**Sn**	**22 51 31.7**	**+1.1**
KURK	**Kurchatov**	**5.95**	**280**	⇑Pn	**Pn**	**22 50 22.9**	**+0.4**
	1.3nm,0.5s						
KURK				⇓Sn	**Sn**	**22 51 33.2**	**+2.6**
	2.1nm,0.5s						
KURK				⇑Lg	Lg	22 52 01.5	
	4.8nm,0.5s						
KURBB	**Kurchatov Arra**	**6.00**	**279**	⇓Pn	**Pn**	**22 50 23.9**	**+0.7**
	2.5nm,0.4s						
KURBB				⇓Sn	**Sn**	**22 51 34.2**	**+2.2**
	7.1nm,0.7s						
KURBB				⇑Lg	Lg	22 52 03.5	
	20nm,0.7s						
MINR	**Mina**	**6.19**	**36**	Pg	Pg	22 50 48.0	-4.9
MINR				Sg	**Sg**	**22 52 15.8**	**+2.9**

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*THE **03** 22:54:56.7,38°.33N×20°.41E,h10km±2km,ML2.6/10,Error ellipse: s-maj=2.7km s-min=0.6km az=266.0*
*ATH **03** 22:54:56.4,38°.35N×20°.40E,h11km±2km,ML2.8/5,Error ellipse: s-maj=2.4km s-min=0.8km az=213.0*
ISC 03 22:54:56.5±0.9,38°.34N±0°.02×20°.42E±0°.04,h12km±5km, n30,σ0s.51/54,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF1	**Kardakata, Kep**	**0.07**	**144**	P	**Pg**	**22 54 58.8**	**-0.2**
KEF1				S	**Sg**	**22 55 00.3**	**-0.5**
KEF4	**Livadi, Kephal**	**0.08**	**176**	P	**Pg**	**22 54 59.0**	**-0.1**
KEF4				S	**Sg**	**22 55 01.0**	**0.0**
LXRA	**Lixouri, Kepha**	**0.14**	**173**	P	**Pg**	**22 55 00.1**	**+0.2**
LXRA				S	**Sg**	**22 55 02.9**	**+0.7**
KEF3	**Kipouria, Keph**	**0.14**	**202**	P	**Pg**	**22 55 00.0**	**+0.1**
KEF3				S	**Sg**	**22 55 03.1**	**+0.7**
KONA	**Konidatara, Ke**	**0.15**	**54**	P	**Pg**	**22 54 59.9**	**-0.2**
KONA				S	**Sg**	**22 55 02.5**	**0.0**
KONA				AML	AML	22 55 02.8	
	comp=E,6723µm,0.1s						
KONA				AML	AML	22 55 03.4	
	comp=N,8968µm,0.2s						
CHV1	**Chavriata, Kef**	**0.15**	**190**	P	**Pg**	**22 55 00.3**	**+0.2**
ARGA	**Argostoli. Kep**	**0.17**	**163**	P	**Pg**	**22 55 00.3**	**0.0**
ARGA				S	**Sg**	**22 55 03.1**	**+0.2**
FSK	**Fiskardo**	**0.17**	**43**	P	**Pg**	**22 55 00.3**	**-0.1**
FSK				S	**Sg**	**22 55 03.1**	**+0.1**
	comp=N,3µm,0.1s						
FSK	**Fiskardo**	**0.17**	**43**	P	**Pg**	**22 55 00.3**	**-0.1**
FSK				S	**Sg**	**22 55 03.0**	**0.0**
FSK				AML	AML	22 55 03.5	
	comp=E,8582µm,0.2s						
FSK				AML	AML	22 55 03.6	
	comp=N,4619µm,0.1s						
KEF2	**Argostoli. Kep**	**0.18**	**162**	P	**Pg**	**22 55 00.4**	**-0.1**
KEF2				S	**Sg**	**22 55 03.6**	**+0.3**
VLS	**Valsamata**	**0.21**	**139**	P	**Pg**	**22 55 00.8**	**-0.2**
VLS				S	**Sg**	**22 55 04.2**	**+0.1**
	comp=N,6µm,0.1s						
VLS	**Valsamata**	**0.21**	**139**	P	**Pg**	**22 55 00.8**	**-0.2**
VLS				S	**Sg**	**22 55 04.2**	**+0.1**
VLS				AML	AML	22 55 04.3	
	comp=E,11031µm,0.1s						
VLS				AML	AML	22 55 04.3	
	comp=N,13920µm,0.1s						
EVGI	**Lefkada island**	**0.34**	**33**	P	**Pg**	**22 55 03.5**	**+0.1**
EVGI				S	**Sg**	**22 55 09.0**	**+1.0**
KFL	**Anninata**	**0.37**	**128**	P	**Pg**	**22 55 03.6**	**-0.3**
KFL				S	**Sg**	**22 55 09.8**	**+1.0**
	comp=N,6µm,0.2s						
KFL	**Anninata**	**0.37**	**128**	P	**Pg**	**22 55 03.7**	**-0.3**
KFL				S	**Sg**	**22 55 09.8**	**+1.0**
MGNA	**Meganis**	**0.43**	**42**	P	**Pg**	**22 55 04.9**	**-0.2**
MGNA				S	**Sg**	**22 55 11.7**	**+0.8**
MGNA				AML	AML	22 55 12.0	
	comp=N,2994µm,0.3s						
MGNA				AML	AML	22 55 12.2	
	comp=E,2382µm,0.2s						
LKD2	**Lefkada island**	**0.49**	**23**	P	**Pg**	**22 55 05.9**	**-0.2**
LKD2				S	**Sb**	**22 55 14.7**	**+0.4**
	comp=E,298nm,0.4s						
LKD2	**Lefkada island**	**0.49**	**23**	P	**Pg**	**22 55 06.0**	**-0.2**
VLMS	**Volimes, Zakyn**	**0.50**	**157**	P	**Pg**	**22 55 06.0**	**-0.3**
VLMS				S	**Sb**	**22 55 14.3**	**-0.2**
VLMS				AML	AML	22 55 15.5	
	comp=E,3526µm,0.1s						
VLMS				AML	AML	22 55 16.3	
	comp=N,4119µm,0.2s						
TSLK	**Tsoukalades, L**	**0.52**	**21**	P	**Pg**	**22 55 06.7**	**-0.1**
TSLK				S	**Sb**	**22 55 15.5**	**+0.3**
	comp=N,358nm,0.6s						
AST1	**Astakos**	**0.57**	**69**	P	**Pg**	**22 55 07.4**	**-0.2**
PDO	**Prodromos**	**0.66**	**66**	P	**Pg**	**22 55 09.0**	**-0.3**
PDO				S	**Sg**	**22 55 18.1**	**+0.2**
	comp=N,1µm,0.4s						
PDO	**Prodromos**	**0.66**	**66**	P	**Pg**	**22 55 09.0**	**-0.3**
KRI1	**kERI**	**0.74**	**155**	P	**Pg**	**22 55 10.5**	**-0.4**
RLS	**Riolos of Patr**	**0.87**	**108**	P	**Pg**	**22 55 12.8**	**-0.6**
RLS				S	**Sn**	**22 55 27.0**	**-0.2**
	comp=N,150nm,0.4s						
PVO	**Paravola**	**0.91**	**72**	P	**Pg**	**22 55 14.0**	**-0.1**
PVO				S	**Sn**	**22 55 28.2**	**-0.1**
	comp=N,648nm,0.3s						
PVO	**Paravola**	**0.91**	**72**	P	**Pg**	**22 55 14.1**	**-0.1**
DRO	**Drossia**	**1.09**	**110**	P	**Pb**	**22 55 16.6**	**-0.7**
DRO				S	**Sn**	**22 55 33.7**	**+1.0**
	comp=N,400nm,0.4s						
AMT	**Artemida-Makis**	**1.30**	**128**	P	**Pg**	**22 55 22.0**	**+0.5**
AMT				S	**Sb**	**22 55 37.0**	**-0.5**
	comp=N,185nm,0.8s						
SG1	**Sgolgore (BA)**	**3.82**	**312**	*e*Pn	**Pn**	**22 55 56.0**	**+0.8**
SG1				Sn	**Sn**	**22 56 38.2**	**-1.9**

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*IDC **03** 23:09:52.5±25.0,34°.69N×80°.77E,h0km,mb3.1/1, mb1 3.7/3,mb1mx3.2/47,mbtmp3.7/3,ML3.5/2,Error ellipse: s-maj=365.2km s-min=72.0km az=40.0*
*BJI **03** 23:10:16.0±0.0,36°.17N×82°.54E,h7km,ML3.3/9*
ISC 03 23:10:17.1±2.7,36°.4N±0°.2×82°.40E±0°.09,h10km,n7, σ1s.51/10,3C-1D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.97**	**304**	Pg	**Pg**	**23 12 11.5**	**0.0**
KSH				Sg	**Sg**	**23 13 29.1**	**+0.2**
KSH				smax	smax		
	comp=N,47nm,1.0s						
KSH				smax	smax		
	comp=E,44nm,0.7s						
WMQ	**Urumqi**	**8.47**	**27**	*e*P	**Pn**	**23 12 22.3**	**+2.3**
WMQ				smax	smax		
	comp=N,6.0nm,0.9s						
WMQ				smax	smax		
	comp=E,6.0nm,1.5s						
MK31	**Makanchi Array**	**10.42**	**360**	Pn	**Pn**	**23 12 47.3**	**+0.7**
	0.9nm,0.4s,baz=180,slow=12,SNR=84						
MK31				⇑Sn	**Sn**	**23 14 43.3**	**0.0**
	0.5nm,0.5s,baz=183,slow=23						
MK31				⇑Lg	Lg	23 15 41.5	
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**10.42**	**360**	Pn	**Pn**	**23 12 47.5**	**+1.0**
	1.0nm,0.3s,baz=185,slow=12,SNR=79						
MAKZ	**Makanchi**	**10.44**	**358**	⇑Pn	**Pn**	**23 12 47.7**	**+0.9**
	1.9nm,0.4s						
MAKZ				⇓Sn	**Sn**	**23 14 42.7**	**-1.1**
	2.4nm,1.2s						
ZALV	**Zalesovo Beam**	**17.66**	**5**	P	**Pn**	**23 14 20.5**	**-2.6**
	0.2nm,0.3s,baz=188,slow=12,SNR=8.4						
SONM	**Songino Array**	**21.08**	**50**	P	**P**	**23 15 00.9**	**-0.7**
	0.5nm,0.7s,baz=252,slow=12,SNR=4.2						

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*BGR **03** 23:21:34.6±0.0,21°.19S×177°.38W,h500km*
*NEIC **03** 23:21:35.2±2.1,20°.4S±0°.1×177°.6W±0°.1,h498km±6km, mb4.4/46,Error ellipse: s-maj=16.7km s-min=14.3km az=132.0*
*IDC **03** 23:21:38.4±1.8,20°.51S×177°.75W,h524km±17km, mb3.7/17,mb1 3.9/17,mb1mx3.7/33,mbtmp4.5/17,Error ellipse: s-maj=23.4km s-min=9.6km az=155.0*
ISC 03 23:21:35.2±0.4,20°.45S±0°.07×177°.49W±0°.07,h500km, n166,σ1s.21/174,mb4.3/38,20C-9D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.01**	**302**	P	**P**	**23 23 03.3**	**+0.9**
MSVF				S	**S**	**23 24 15.2**	**+1.7**
NIUE	**Niue**	**7.25**	**80**	P	**P**	**23 23 25.9**	**+1.9**
AFI	**Afiamalu**	**8.49**	**41**	P	**P**	**23 23 35.8**	**-1.1**
	19nm,0.3s,baz=64,slow=1.2,SNR=12						
AFI				S	**S**	**23 25 10.6**	**-6.1**
	21nm,0.3s,baz=15,slow=19,SNR=11						
AFI	**Afiamalu**	**8.49**	**41**	P	**P**	**23 23 35.9**	**-1.0**
AFI				S	**S**	**23 25 11.4**	**-5.3**
RAO	**Raoul Island**	**8.77**	**182**	P	**P**	**23 23 36.9**	**-2.6**
FUNA	**Funafuti**	**12.28**	**344**	P	**P**	**23 24 18.1**	**+1.2**
DZM	**Mont Dzumac**	**15.07**	**261**	P	**P**	**23 24 46.5**	**+0.3**
MXZ	**Matakaoa Point**	**17.44**	**191**	P	**P**	**23 25 10.1**	**-0.1**
URZ	**Urewera**	**18.36**	**194**	P	**P**	**23 25 18.0**	**-0.6**
HIZ	**Hauiti**	**19.18**	**199**	P	**P**	**23 25 28.8**	**+2.6**
BKZ	**Black Stump Fm**	**19.36**	**194**	P	**P**	**23 25 26.3**	**-1.6**
QRZ	**Quartz Range**	**22.02**	**201**	P	**P**	**23 25 51.5**	**-0.4**
NNZ	**Nelson**	**22.11**	**199**	P	**P**	**23 25 53.2**	**+0.5**
TUWZ	**Tuamarina**	**22.14**	**197**	P	**P**	**23 25 53.1**	**+0.1**
THZ	**Tophouse**	**22.75**	**199**	P	**P**	**23 25 58.4**	**-0.2**
MLZ	**Mavora Lakes**	**27.54**	**202**	P	**P**	**23 26 40.6**	**-0.4**
MLZ				IAmb	IAmb	23 26 49.3	
	comp=Z,22nm,1.1s						
WHZ	**Wether Hill Ro**	**28.06**	**202**	P	**P**	**23 26 46.3**	**+0.9**
EIDS	**Eidsvold**	**29.32**	**254**	P	**P**	**23 26 56.0**	**-0.7**
EIDS				IAmb	IAmb	23 27 08.2	
	comp=Z,12nm,1.1s						
ARMA	**Armidale**	**29.52**	**244**	P	**P**	**23 26 59.0**	**+0.5**
STKA	**Stephens Creek**	**38.24**	**244**	P	**P**	**23 28 12.0**	**+0.1**
	comp=Z,2.1nm,0.4s,baz=96,slow=13,SNR=9.2						
STKA	**Stephens Creek**	**38.24**	**244**	P	**P**	**23 28 11.5**	**-0.4**
BBOO	**Buckleboo**	**43.00**	**244**	P	**P**	**23 28 49.5**	**-0.4**
BBOO				IAmb	IAmb	23 28 50.3	
	comp=Z,11nm,1.1s						
AS31	**Alice Springs**	**44.99**	**257**	P	**P**	**23 29 05.5**	**-0.2**
AS31				IAmb	IAmb	23 29 07.0	
	comp=Z,6.4nm,0.3s						
ASAR	**Alice Springs**	**45.00**	**257**	P	**P**	**23 29 05.2**	**-0.4**
	comp=Z,18nm,0.8s,baz=94,slow=7.7,SNR=123						
ASAR				PcP	**PcP**	**23 30 36.5**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=99,slow=3.1,SNR=5.9						
ASAR				S	**S**	**23 35 04.1**	**-3.4**
	comp=Z,4.2nm,0.9s,baz=93,slow=15,SNR=27						
WB0	**Warramunga Arr**	**45.06**	**262**	P	**P**	**23 29 05.6**	**-0.6**
WB0				IAmb	IAmb	23 29 06.0	
	comp=Z,20nm,1.1s						
WRA	**Warramunga Arr**	**45.08**	**262**	P	**P**	**23 29 05.3**	**-1.0**
	comp=Z,4.7nm,0.3s,baz=98,slow=7.7,SNR=196						
WRA				S	**S**	**23 35 05.3**	**-3.4**
	comp=Z,1.8nm,0.8s,baz=97,slow=13,SNR=6.8						
SOEI	**Soe**	**56.98**	**272**	P	**P**	**23 30 30.6**	**-2.6**
QSPA	**South Pole Qui**	**69.62**	**180**	P	**P**	**23 31 55.6**	**+2.0**
QSPA				IAmb	IAmb	23 31 56.4	
	comp=Z,8.6nm,0.9s						
MJAR	**Matsushiro Arr**	**70.45**	**323**	P	**P**	**23 31 58.8**	**0.0**
	comp=Z,4.9nm,0.6s,baz=144,slow=6.0,SNR=13						
MAT	**Matsushiro**	**70.45**	**323**	P	**P**	**23 31 59.1**	**+0.3**

PETK	Petropavlovsk-	76.34	345	P	P	23 32 32.8	+0.6
	comp=Z,3.3nm,0.7s,baz=140,slow=9.4,SNR=3.8						
KSRS	Korea Array	77.17	318	P	P	23 32 38.0	+1.1
	comp=Z,1.5nm,0.6s,baz=133,slow=6.6,SNR=5.6						
USRK	Ussuriysk Ar.	79.19	326	P	P	23 32 49.5	+1.8
	comp=Z,6.1nm,0.8s,baz=141,slow=3.5,SNR=12						
AFDM	Forest Hills D	79.28	41	P	P	23 32 49.3	+1.0
YBH	Yreka Blue Hor	79.95	38	P	P	23 32 54.9	+2.9
	comp=Z,3.3nm,0.6s,baz=144,slow=1.4,SNR=7.5						
NVAR	Mina Array Bea	80.66	43	P	P	23 32 58.4	+2.5
	comp=Z,3.4nm,0.9s,baz=222,slow=8.3,SNR=17						
PAHR	Pah Rah Range	80.72	42	P	P	23 32 56.5	+0.4
KVN	Kaiserville	81.15	43	P	P	23 32 57.1	-1.2
TUC	Tucson	82.57	52	P	P	23 33 07.4	+1.7
TUC				IAmb	IAmb	23 33 09.8	
	comp=Z,6.3nm,0.9s						
X16A	Lo Mia Camp, P	83.15	50	P	P	23 33 11.1	+2.5
X16A				IAmb	IAmb	23 33 12.6	
	comp=Z,7.7nm,1.1s						
319A	Douglas	83.23	53	P	P	23 33 11.6	+2.6
319A				IAmb	IAmb	23 33 13.3	
	comp=Z,8.8nm,0.9s						
CCUT	Cedar City	83.43	46	P	P	23 33 11.1	+1.1
U15A	North Rim	83.57	47	P	P	23 33 13.3	+2.4
U15A				IAmb	IAmb	23 33 14.6	
	comp=Z,7.1nm,0.8s						
ELK	Elko	83.92	43	P	P	23 33 14.6	+2.2
	comp=Z,1.3nm,0.8s,baz=261,slow=6.3,SNR=4.9						
MFID	Camas Ranch	85.04	40	P	P	23 33 18.0	+0.3
MFID				IAmb	IAmb	23 33 20.7	
	comp=Z,5.4nm,1.1s						
TMUT	Trail Mountain	85.78	45	P	P	23 33 23.6	+2.0
SRU	San Rafael Swe	86.14	46	P	P	23 33 23.4	+0.2
TRF	Thorofare Moun	86.30	12	IAmb	IAmb	23 33 24.2	
	comp=Z,9.8nm,0.8s						
MNTX	Cornudas Mount	86.33	54	IAmb	IAmb	23 33 27.6	
	comp=Z,4.5nm,0.9s						
ENH	Enshi	86.41	304	P	P	23 33 23.8	-0.6
RND	Reindeer	86.54	12	P	P	23 33 24.6	+0.2
RND				IAmb	IAmb	23 33 25.9	
	comp=Z,8.9nm,0.8s						
TX31	Lajitas Ar. Si	86.62	57	P	P	23 33 25.2	-0.4
TX32	Lajitas Array	86.62	57	P	P	23 33 25.5	0.0
TXAR	Lajitas Array	86.63	57	P	P	23 33 28.3	+2.7
	comp=Z,2.4nm,0.7s,baz=218,slow=6.7,SNR=21						
MCK	McKinley	86.82	12	IAmb	IAmb	23 33 27.4	
	comp=Z,5.7nm,0.8s						
ANMO	Albuquerque	87.00	51	P	P	23 33 29.7	+2.4
	comp=Z,1.5nm,0.6s,baz=203,slow=4.4,SNR=5.0						
ANMO	Albuquerque	87.00	51	P	P	23 33 25.6	-1.8
WRH	Wood River Hil	87.65	12	P	P	23 33 29.0	-0.4
WRH				IAmb	IAmb	23 33 30.6	
	comp=Z,6.2nm,0.9s						
HDA	Harding Lake	87.83	13	P	P	23 33 29.0	-1.3
HDA				IAmb	IAmb	23 33 31.5	
	comp=Z,4.4nm,0.6s						
CCB	Clear Creek Bu	87.86	12	P	P	23 33 29.8	-0.6
CCB				IAmb	IAmb	23 33 31.2	
	comp=Z,5.5nm,0.6s						
IL31		88.16	13	P	P	23 33 31.2	-0.5
IL31				IAmb	IAmb	23 33 33.5	
	comp=Z,3.6nm,1.0s						
ILAR	Eielson Array	88.16	13	P	P	23 33 31.9	+0.1
	comp=Z,1.4nm,0.7s,baz=218,slow=5.9,SNR=17						
VNA3	Neumayer Olymp	88.16	176	P	P	23 33 32.7	+0.8
XAN	Xi'an	88.48	307	P	P	23 33 35.2	+1.1
XAN				sP	PcP	23 33 48.8	+14
PDAR	Pinedale Array	88.60	43	P	P	23 33 35.9	+1.2
	comp=Z,1.5nm,0.7s,baz=204,slow=3.3,SNR=16						
VNA2	Neumayer--Watz	88.61	177	P	P	23 33 35.0	+1.0
	baz=200,slow=4.8						
DAWY	Dawson	89.28	16	IAmb	IAmb	23 33 39.1	
	comp=Z,3.9nm,0.8s						
HHC	Hu-ho-hao-te	89.66	314	*e*P	P	23 33 45.9	+6.4
KMI	Kunming	89.75	297	P	P	23 33 42.3	+1.8
CMAR	Chiang Mai Arr	90.55	289	P	P	23 33 45.6	+1.7
	comp=Z,2.2nm,0.4s,baz=125,slow=3.2,SNR=21						
CHTO	Chiang Mai	90.68	290	P	P	23 33 43.1	-1.5
CHTO				IAmb	IAmb	23 33 46.7	
	comp=Z,5.7nm,0.8s						
LZH	Lanzhou	93.12	307	⇑P	P	23 33 55.6	0.0
LZH				pP	pP	23 35 25.3	-21
LZH				sP	sP	23 36 33.7	-3.5
LZH				PP	PP	23 37 49.8	+2.0
INK	Inuvik	94.10	15	P	P	23 33 59.7	+0.6
	comp=Z,2.1nm,1.0s,baz=232,slow=6.2,SNR=4.4						
INK	Inuvik	94.10	15	IAmb	IAmb	23 34 00.4	
	comp=Z,2.5nm,1.1s						
YKA	Yellowknife Ar	96.27	25	P	P	23 34 09.8	+0.8
	comp=Z,0.3nm,0.7s,baz=233,slow=4.1,SNR=4.0						
ZALV	Zalesovo Beam	110.75	321	PKiKP	PKiKP	23 39 09.5	-1.0
	comp=Z,1.0nm,0.3s,baz=122,slow=1.9,SNR=5.7						
MKAR	Makanchi Array	111.51	313	PKiKP	PKiKP	23 39 11.7	-0.6
	comp=Z,1.0nm,0.6s,baz=230,slow=1.1,SNR=19						
KURBB	Kurchatov Arra	114.33	317	PKP	PKPdf	23 39 16.8	-0.6
	comp=Z,1.3nm,0.5s,baz=90,slow=1.9,SNR=14						
BVAR	Borovoye Array	119.35	320	PKP	PKPdf	23 39 26.8	-0.3
	comp=Z,2.5nm,0.3s,baz=127,slow=2.1,SNR=43						
GAR	Garm	119.58	304		PKiKP	23 39 28.5	+0.3
KBL	Kabul	120.28	299		PKiKP	23 39 29.9	+0.1
ARU	Arti	125.43	326	PKP	PKiKP	23 39 38.9	-0.1
	comp=Z,1.4nm,0.4s,baz=106,slow=1.6,SNR=8.5						
AKTO	Aktyubinsk	127.35	318	PKP	PKiKP	23 39 43.1	0.0
	comp=Z,1.1nm,0.7s,baz=87,slow=5.3,SNR=6.2						
ARCES	ARCESS Array B	128.96	350	PKP	PKPdf	23 39 45.3	+0.3
	comp=Z,2.4nm,0.7s,baz=19,slow=0.9,SNR=14						
FINES	FINESS Array B	135.86	344	PKhKP	PKPpre	23 39 46.0	
	comp=Z,1.2nm,0.9s,baz=121,slow=7.0,SNR=2.6						
FINES				PKP	PKiKP	23 39 59.5	-0.4
	comp=Z,0.8nm,0.5s,baz=71,slow=2.9,SNR=7.1						
FINES				SKP	SKPdf	23 42 44.3	-1.3
	comp=Z,3.5nm,1.1s,baz=230,slow=4.7,SNR=5.0						
AKASG	Malin Array Be	143.20	331	PKhKP	PKPpre	23 40 09.2	
	comp=Z,5.1nm,0.5s,baz=42,slow=4.4,SNR=57						
MBAR	Mbarara	145.34	236		PKPdf	23 40 15.1	-1.8
SORM	Soroca	145.41	329	⇑P	PKPdf	23 40 15.9	+0.3
GAZ	Gaziantep	145.57	306		PKPdf	23 40 15.6	-0.8
MILM	Milestii Mici	146.01	327	⇑P	PKPbc	23 40 17.8	-0.8
BSEG	Bad Segeberg	146.04	352	*e*PKPbc	PKPbc	23 40 19.3	+0.8
	baz=15,slow=2.5						
KWP	Kalwaria Pacla	146.73	336		PKPdf	23 40 19.1	+1.2
BR131	Keskin Array S	147.16	313		PKPbc	23 40 21.5	-0.7
BRTR	Keskin Array B	147.16	313	PKPbc	PKPbc	23 40 22.1	-0.1
	comp=Z,3.4nm,0.7s,baz=135,slow=4.8,SNR=21						
BUR08	Bucovina Ar. S	147.24	331		PKPbc	23 40 21.5	-0.6
BURAR	Bucovina Array	147.25	331	⇓P	PKiKP	23 40 23.2	-0.7
GHRR		147.31	327	⇑P	PKiKP	23 40 23.7	-0.2
RETH	Rethem/Aller,	147.34	352	*e*PKPbc	PKiKP	23 40 22.9	-0.8
	baz=15,slow=2.5						
TESR	Tescani	147.37	328	⇓P	PKPbc	23 40 22.1	-0.2
KOLS	Kolonicke sedl	147.47	336	*e*PKP	PKiKP	23 40 23.5	-0.7
KOLS				*e*		23 40 26.9	
NRDL	Niedersach Rie	147.47	351	*e*PKPbc	PKPbc	23 40 23.0	+0.8
	baz=15,slow=2.5						
CFR	Carcaliu	147.52	325	⇑P	PKPbc	23 40 23.4	+0.7
ASSE	Asse, Remlinge	147.75	351	*e*PKPbc	PKPbc	23 40 23.7	+0.7
	baz=15,slow=2.5						
VRI	Vrincioaia	147.78	327	⇑P	PKPbc	23 40 24.2	+0.7
CRVS	Cervenica-Dubn	147.80	336	*e*PKP	PKPab	23 40 28.5	+0.9
TRPA	Tarpa	148.00	334	⇓P	PKPbc	23 40 24.4	+0.6
OSTC	Ostas	148.06	343	⇑*e*PKP	PKiKP	23 40 25.4	0.0
CLZ	Clausthal	148.07	351	*e*PKPbc	PKiKP	23 40 24.9	-0.4
	baz=15,slow=2.5						
CLL	Collm	148.12	348	⇓*i*PKPbc	PKiKP	23 40 25.8	+0.4
	comp=Z,20nm,0.7s						
CLL				*e*PKPab	PKPab	23 40 30.0	+1.3
CLL	Collm	148.12	348	*e*PKPbc	PKiKP	23 40 25.8	+0.4
	baz=15,slow=2.5						
DPC	Dobruska-Polom	148.22	343	⇑*e*PKP	PKiKP	23 40 25.5	-0.2
LANS	Liptovska Anna	148.31	339	*e*PKP	PKiKP	23 40 26.4	+0.5
BRG	Berggiesshubel	148.33	346	*i* PKP	PKPbc	23 40 25.1	+0.5
	comp=Z,8.9nm,0.6s						
BRG				*i*		23 40 30.2	
	comp=Z,11nm,1.2s						
BRG	Berggiesshubel	148.33	346	*e*PKPbc	PKiKP	23 40 25.4	-0.4
	baz=15,slow=2.5						
KRLC	Kraliky	148.34	342	⇑*e*PKP	PKiKP	23 40 25.5	-0.5
DOPR	Dopca	148.37	329	⇓P	PKiKP	23 40 26.0	-0.1
MORC	Moravsky Berou	148.38	341	*e*PKP	PKiKP	23 40 25.5	-0.6
FBE	Freiberg	148.41	347	*e*PKPbc	PKiKP	23 40 25.9	-0.1
	baz=15,slow=2.5						
MLR	Muntele Rosu	148.44	328	⇓P	PKPbc	23 40 25.7	+0.5
NEUB	Neuenburg	148.45	349	*e*PKPbc	PKiKP	23 40 25.7	-0.4
	baz=15,slow=2.5						
PVCC	Panska Ves	148.50	345	⇑*e*PKP	PKiKP	23 40 26.1	-0.1
VOIR		148.92	328	⇓P	PKPbc	23 40 26.6	+0.2
PRA	Prague	148.96	345	⇑*e*PKP	PKiKP	23 40 27.0	-0.2
PRU	Pruhonice	149.01	345	⇑*e*PKP	PKiKP	23 40 26.9	-0.4
GOPC	GO Pecny, Ondr	149.02	345	⇑*e*PKP	PKiKP	23 40 27.1	-0.2
MOX	Moxa	149.02	349	*e*PKPbc	PKiKP	23 40 27.1	-0.2
	baz=15,slow=2.5						
PLN	Plauen	149.07	348	*e*PKPbc	PKiKP	23 40 27.3	-0.2
	baz=15,slow=2.5						
TANN	Tannenbergstha	149.08	348	*e*PKPbc	PKiKP	23 40 27.4	-0.1
	baz=15,slow=2.5						
VRAC	Vranov	149.08	342	⇑P	PKPbc	23 40 25.6	-0.9
VRAC	Vranov	149.08	342	*e*PKP	PKiKP	23 40 27.1	-0.4
VYHS	Vyhne	149.09	339	*e*PKP	PKiKP	23 40 27.1	-0.4
VYHS				*e*		23 40 33.9	
GUNZ	Gunzen	149.15	348	*e*PKPbc	PKiKP	23 40 27.6	0.0
	baz=15,slow=2.5						
JAVC	Velka Javorina	149.15	340	*e*PKP	PKiKP	23 40 28.6	+0.9
ARR	Arges	149.17	329	⇑P	PKiKP	23 40 28.5	+0.6
WERN	Wernitzgruen	149.21	348	*e*PKPbc	PKiKP	23 40 27.9	+0.2
	baz=15,slow=2.5						
NKC	Novy Kostel	149.25	347	⇑*e*PKP	PKiKP	23 40 27.7	-0.1
KRUC	Moravsky	149.36	342	*e*PKP	PKiKP	23 40 27.7	-0.3
KRUC				*e*		23 40 34.8	
PBCC	Pribram	149.42	345	⇑*e*PKP	PKiKP	23 40 27.9	-0.3
SMOL	Smolenice	149.53	340	*e*PKP	PKiKP	23 40 29.0	+0.6
MANZ	Manzenberg	149.55	348	*e*PKPbc	PKiKP	23 40 28.6	+0.1
	baz=15,slow=2.5						
MODS	Modra-Piesok	149.71	340	*e*PKP	PKiKP	23 40 28.5	-0.3
ROTZ	Rotzenmuhle	149.74	347	*e*PKPbc	PKiKP	23 40 29.0	+0.1
	baz=15,slow=2.5						
MEM	Membach	149.78	356	PKPbc	PKiKP	23 40 28.9	0.0
MEM				PKiKP	PKPbc	23 40 29.8	+1.7
SIRR	Siria	149.85	333	⇑P	PKiKP	23 40 29.4	+0.3
TNS	Taunus Mts	149.92	352	*e*PKPbc	PKiKP	23 40 29.4	+0.1
	baz=15,slow=2.5						
GZR	Gura Zlata	150.03	331	⇑P	PKPbc	23 40 28.9	-0.1
KHC	Kasperske Hory	150.04	345	⇑*e*PKP	PKiKP	23 40 29.4	-0.1
KHC				*e*PKPAB	PKPab	23 40 37.2	+0.4
BMRD	Maredsous	150.16	357	PKiKP	PKiKP	23 40 30.0	+0.4
GEC2	GERESS Array S	150.28	345	*e*PKPbc	PKiKP	23 40 30.1	0.0
	baz=15,slow=2.5						
GERES	GERESS Array B	150.28	345	PKP	PKPdf	23 40 24.9	+1.1
	comp=Z,0.2nm,0.5s,baz=72,slow=1.7,SNR=4.0						
GERES				PKPbc	PKiKP	23 40 30.2	+0.1
	comp=Z,3.4nm,0.8s,baz=17,slow=1.8,SNR=22						
DOU	Dourbes	150.37	357	PKPbc	PKiKP	23 40 30.2	+0.2
BZS	Buzias	150.38	332	⇓P	PKiKP	23 40 30.1	-0.1
SRE	Strehaia	150.38	329	⇓P	PKiKP	23 40 30.4	+0.1
CONA	Conrad Observa	150.53	342	*i* PKiKP	PKiKP	23 40 30.8	+0.2
	comp=Z,5.2nm,0.6s						
WLF	Walferdange	150.70	355	PKiKP	PKiKP	23 40 31.8	+1.0
WLF	Walferdange	150.70	355	*e*PKPbc	PKiKP	23 40 31.8	+1.0
	baz=15,slow=2.5						
MOA	Molln	151.06	344	*i* PKiKP	PKPbc	23 40 31.4	+0.2
	comp=Z,1.3nm,0.4s						
ARSA	Arzberg	151.25	341	*i* PKiKP	PKPbc	23 40 31.6	0.0
	comp=Z,1.3nm,0.6s						
FUR	Furstenfeldbru	151.46	348	*e*PKPbc	PKiKP	23 40 32.8	+0.3
	baz=15,slow=2.5						
SOKA	Soboth	151.91	342	*i* PKPbc	PKPbc	23 40 32.8	-0.5
	comp=Z,1.2nm,0.4s						
WATA	Walderalm	152.18	347	*i* PKiKP	PKPbc	23 40 34.0	0.0
	comp=Z,1.3nm,0.5s						
WTTA	Wattenberg	152.24	347	*e*PKPdf	PKPdf	23 40 27.3	+0.4
	comp=Z,8.4nm,1.5s						
WTTA				*e*PKiKP	PKiKP	23 40 34.4	+0.1
	comp=Z,3.3nm,0.4s						
MOTA	Moosalm	152.28	347	*e*PKiKP	PKPbc	23 40 34.1	0.0
	comp=Z,4.5nm,1.2s						
ABTA	Abfaltersbach	152.53	345	*e*PKPdf	PKPdf	23 40 26.7	-0.5
	comp=Z,3.9nm,0.8s						
ABTA				*i* PKiKP	PKPbc	23 40 34.5	-0.1
	comp=Z,4.5nm,0.6s						
FETA	Feichten	152.66	348	*i* PKPdf	PKPdf	23 40 27.8	+0.3
	comp=Z,8.0nm,1.4s						
FETA				*e*PKiKP	PKiKP	23 40 35.3	+0.2
	comp=Z,2.9nm,0.7s						
TORD	Torodi Ar. Bea	172.70	174	PKP	PKPdf	23 40 47.0	-0.3
	comp=Z,1.8nm,0.8s,baz=62,slow=0.1,SNR=9.3						
TORD				PKPab	PKPab	23 42 16.2	0.0
	comp=Z,0.5nm,0.8s,baz=151,slow=3.3,SNR=3.0						

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*IDC **03** 23:34:23.4±1.5, 2°.95S×129°.09E, h0^{km}, mb3.5/2, mb1 4.1/4, mb1mx3.6/39, mbtmp3.9/4, ML3.5/2, Error ellipse: s-maj=44.9km s-min=25.9km az=83.0*

*DJA **03** 23:34:26.6±0.3, 3°S±3°×12°9E±°, h10^{km}, M3.4/8, MLv3.4/8*

ISC 03 23:34:28.2±0.9, **2°.90S**±0°.06×**129°.22E**±0°.05, **h33**^{km}, **n11**, σ1^{s}.**23**/14, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.53	213	P	Pb	23 34 37.9	-1.4
MSAI				S	Sn	23 34 47.5	+0.2
AAI	Ambon	1.29	232	P	Pb	23 34 51.7	-0.2
AAI				S	Sb	23 35 10.9	+2.7
BNDI	Bandanaira	1.75	157	P	Pb	23 34 58.5	-1.3
NLAI	Namlea	2.14	261	P	Pn	23 35 02.8	+1.2
LBMI	Labuha	2.83	323	P	Pn	23 35 10.4	-0.7
SIJI	Sorong	2.87	45	Pn	Pn	23 35 12.4	+0.8
	15nm,0.3s,baz=262,slow=11,SNR=69						
SIJI				Sn	Sn	23 35 46.0	+0.9
	4.9nm,0.3s,baz=230,slow=22,SNR=9.9						
FAKI	Fak Fak	3.02	90	P	Pn	23 35 14.3	+0.5
SANI	Sanana	3.34	285	P	Pn	23 35 16.8	-1.3
WRA	Warramunga Arr	17.66	164	P	Pn	23 38 31.4	-0.4
	0.1nm,0.3s,baz=347,slow=13,SNR=6.0						
ASAR	Alice Springs	21.14	168	P	P	23 39 09.8	-0.7
	1.2nm,0.4s,baz=349,slow=11,SNR=18						
MKAR	Makanchi Array	64.40	326	P	P	23 45 01.2	+0.1
	0.4nm,0.7s,baz=127,slow=7.6,SNR=5.7						

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*UPA **03** 23:43:44.8±2.2, 8°.99N×84°.20W, h10^{km}±23^{km}, MW4.5*

*UCR **03** 23:43:44.4±1.6, 8°.95N×84°.21W, h4^{km}±9^{km}, MD3.2, MW3.9*

ISC 03 23:43:42.5±1.5, **8°.96N**±0°.05×**84°.14W**±0°.05, **h7**^{km}±11^{km}, **n33**, σ1^{s}.**52**/44, **5C-2D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDDO	Dominical	0.40	43	*i* P	Pn	23 43 53.7	-1.1
EDDO				*i* S	Sb	23 44 01.1	+2.7
EDLM	Las Mercedes	0.63	59	*e*P	Pn	23 43 58.2	+0.2
EDLM				*i* S	Sn	23 44 08.8	+0.4
EDPN	Palmar Norte	0.68	89	*e*P	Pn	23 43 58.7	+0.1
EDPN				*e*S	Sn	23 44 10.1	+0.8
LCR2	La Lucha 2	0.79	10	*e*P	Pn	23 43 59.9	-0.5
LCR2				*e*S	Sn	23 44 13.0	+0.3
EDBA	Buenos Aires	0.88	76	*e*P	Pn	23 44 01.7	+0.3
EDBA				*e*S	Sn	23 44 15.4	+1.0
PTJ1	Puerto Jimnez	0.93	117	⇑*e*P	Pn	23 44 03.0	+1.0
PTJ1				*e*S	Sn	23 44 19.0	+3.4
PTJ1	Puerto Jimnez	0.93	117	*e*P	Pn	23 44 02.7	+0.6
HDC	Heredia	1.04	1	⇑*i*P	Pn	23 44 04.3	+0.5
	baz=175,slow=4.6						
HDC	Heredia	1.04	1	*e*P	Pn	23 44 04.2	+0.5
EDSV	San Vito	1.16	97	*e*S	Sn	23 44 25.6	+4.0
SRA1	San Ramn	1.17	343	*e*P	Pg	23 44 06.0	+1.0
SBAR3	San Bartolo, C	1.40	117	*e*P	Pg	23 44 11.0	+1.7
BRU2	Volcan	1.44	96	⇑*i*P	Pg	23 44 10.7	+0.5
	baz=260,slow=6.5						
BRU2				*i* S	Sg	23 44 30.9	+1.9
BRU2	Volcan	1.44	96	*e*P	Pg	23 44 10.7	+0.5
JTS	Las Juntas de	1.55	329	⇑*i*P	Pn	23 44 10.3	-0.3
JTS	Las Juntas de	1.55	329	*e*P	Pn	23 44 10.3	-0.3
BCO2	Palmira	1.61	98	⇑*i*P	Pg	23 44 13.3	-0.2
BCO2				*i* S	Sn	23 44 29.8	-2.9
CEDE	Laguna Cedeo	1.62	340	*e*P	Pg	23 44 14.3	+0.7
RGM0	Gandoca	1.64	67	*e*P	Pn	23 44 08.7	-3.2
PTAR3	Potrerillos Ar	1.65	99	⇓*i*P	Pg	23 44 13.9	-0.2
CNI2	El Empalme, Bo	1.71	74	⇓*i*P	Pg	23 44 15.2	-0.1
CNI2				*i* S	Sb	23 44 36.3	+0.2
DVD	David	1.75	107	*i* P	Pg	23 44 15.5	-0.6
LOCO3	Loma Colorada,	1.79	108	*e*P	Pg	23 44 15.9	-0.9
PEDE3	Pedregal, Chir	1.79	108	*e*P	Pb	23 44 15.8	+0.1
LOMA3	Las Lomas, Chi	1.81	107	*e*P	Pb	23 44 15.3	-0.7
PLVR	Palo Verde	1.83	319	*e*P	Pg	23 44 17.7	+0.1
CHIR3	Chiriqui UPA,	1.88	107	*e*P	Pg	23 44 17.5	-1.0
CHIR3				*i* S	Sb	23 44 39.8	-1.0
CHGR2	Aguacate	1.97	90	*e*P	Pb	23 44 18.4	-0.4
CHGR2				*i* S	Sb	23 44 43.0	-0.6
GMAL	Guarumal, Vera	3.11	112	*e*P	Pb	23 44 35.3	-3.0
ACON	Acoyapa	3.16	341	*e*P	Pb	23 44 37.2	-1.9
SFRA3	San Francisco,	3.21	102	*e*P	Pn	23 44 34.3	+0.8
STIA3	Santiago, Vera	3.25	105	*e*P	Pn	23 44 32.8	-1.2
CACAO	El Cacao, Vera	3.62	116	*e*P	Pb	23 44 44.3	-2.6

MAN 03 23:52:44.2, 6°.02N×126°.17E, h18^{km}, mb4.4, ML3.2, MS3.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.46	281	*e*P	Pb	23 52 53.9	0.0
DDMP				*e*S	Sn	23 53 04.8	+1.0
MATI	Mati	0.93	5	*e*P	Pb	23 53 01.6	-0.2
MATI				*e*S	Sn	23 53 15.2	-0.1
SKMP	Bagumbayan, Su	1.69	287	*e*P	Pn	23 53 12.5	-0.4
SKMP				*e*S	Sb	23 53 35.3	-0.5
BUKP	Musuan	2.15	329	*e*P	Pn	23 53 19.9	+0.6
BUKP				*e*S	Sb	23 53 49.8	+0.7

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*NDI **04** 00:13:00.2±2.1, 30°.69N×69°.26E, h10^{km}, ML3.5*

ISC 04 00:13:05.2±3.7, **29°.7N**±0°.2×**70°.0E**±0°.2, **h10**^{km}, **n10**, σ1^{s}.**97**/13, **Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUDL	Kundal	5.87	104	*e*x	Pg	00 14 52.2	-5.4
KUDL				*e*x	Sg	00 16 13.1	-0.6
DHRM	DHARAMSHALA	5.95	63	*e*P	Pn	00 14 31.5	-2.1
DHRM				*e*S	Sn	00 15 39.5	-2.5
DHRM				IAML		00 15 44.7	
	comp=E,54nm,0.0s						
DHRM				IAML		00 15 45.7	
	comp=N,53nm,0.6s						
SMLA	Simla	6.33	75	*e*P	Pn	00 14 38.6	+0.1
SMLA				*e*S	Sn	00 15 52.1	+1.3
SMLA				IAML		00 15 54.3	
	comp=E,41nm,0.6s						
SMLA				IAML		00 15 54.7	
	comp=N,29nm,0.6s						
JOSI	Joshimath	8.29	82	*e*P	Pn	00 15 09.9	+4.1
JOSI				*e*S	Sn	00 16 41.4	+1.7
JOSI				IAML		00 16 53.9	
	comp=E,39nm,0.4s						
JOSI				IAML		00 16 54.3	
	comp=N,40nm,0.8s						
DANN	Dangsing	12.09	93	*e*P	Pn	00 15 58.5	+0.6
	comp=N,17nm,0.6s						
PKIN	Phulchoki	13.66	95	*e*P	Pn	00 16 19.0	-0.3
	comp=N,4.4nm,0.4s						
PKI	Pulchoki	13.67	95	*e*P	Pn	00 16 19.1	-0.4
GUN	Gumba	14.01	93	*e*P	Pn	00 16 22.4	-1.8
	comp=N,13nm,0.4s						
JIRN	Jiri	14.33	94	*e*P	Pn	00 16 27.1	-1.5
	comp=N,11nm,0.4s						
RAMN	Ramite	14.85	97	*e*P	Pn	00 16 34.8	-0.7

TRN 04 00:21:00.9, 10°.78N×62°.42W, h61^{km}, MD3.6, 2C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIV	Guiria	0.23	124	*e*P	Pn	00 21 10.7	-0.1
GUIV				*e*S	Sn	00 21 17.9	+0.1
TRN	Trinidad (W)	1.01	97	⇑*i*P	Pn	00 21 19.5	+0.4
TRN				*e*S	Sn	00 21 32.4	-0.2
TPP	Pointe-a-Pierr	1.06	116	⇑*i*P	Pn	00 21 20.7	+0.9
TPP				*e*S	Sn	00 21 34.6	+0.8
TBH	Brigand Hill	1.36	102	*e*P	Pn	00 21 24.2	+0.3
TBH				*e*S	Sn	00 21 41.3	+0.3
GRGR	Grenville	1.54	29	*e*P	Pn	00 21 25.8	-0.4
GRGR				*e*S	Sn	00 21 44.9	-0.4
GRHS	Sauteurs	1.62	28	*e*P	Pn	00 21 27.7	+0.4
GRHS				*e*S	Sn	00 21 47.8	+0.5
GRSS	Sisters	1.70	28	*e*P	Pn	00 21 29.2	+0.7
GRSS				*e*S	Sn	00 21 49.6	+0.4
TOSP	Speyside	1.92	74	*e*P	Pn	00 21 30.8	-0.5
TOSP				*e*S	Sn	00 21 53.1	-1.4
ORIV	Oritupano	1.96	210	*e*S	Sn	00 21 54.6	-0.8
SVB	Belmont	2.73	25	*e*P	Pn	00 21 43.6	+1.3
SVB	Belmont	2.73	25	*e*	Pn	00 21 44.6	+2.2
SVB				*e*S	Sn	00 22 12.9	-1.3
SVCV	St. Vincent, C	2.77	27	*e*P	Pn	00 21 43.7	+0.7
SVCV				*e*S	Sn	00 22 14.2	-1.1
SVV	Soufriere Volc	2.78	25	*e*P	Pn	00 21 43.3	+0.1
BAUV	El Baul	5.83	252	*e*P	Pn	00 22 25.1	+0.2
BAUV	El Baul	5.83	252	*e*S	Sn	00 23 27.9	-2.5

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*NCEDC **04** 00:48:30.8±0.7, 39°.00N±0°.01×123°.39W±0°.01, h6^{km}±4^{km}, Md2.3/42, Error ellipse: s-maj=2.1km s-min=1.0km az=204.0*

NEIC 04 00:48:31.3±0.7, **39°.00N**±0°.01×**123°.399W**±0°.006, **h5**^{km}±5^{km}, **Error ellipse: s-maj=1.7km s-min=0.5km az=191.0, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GHOM	Hamilton Openi	0.12	292		Pg	00 48 33.7	-0.1
GSNM	Snow Mountain	0.17	110		Pg	00 48 34.7	-0.1
HOPS	Hopland Field	0.26	91	Pg	Pg	00 48 36.0	-0.3
HOPS				Sg	Sg	00 48 40.3	+0.7
GDCM	Dry Creek	0.26	152		Pg	00 48 36.5	+0.1
GNAM	Navarro Ridge	0.27	318		Pg	00 48 36.5	0.0
GHLM	Highland Sprin	0.30	82		Pg	00 48 36.8	-0.4
GCVM	Cloverdale	0.38	127		Pg	00 48 38.5	-0.1
GPMM	Pine Mountain	0.39	113		Pg	00 48 38.9	+0.2
GTC	Three Chop Rid	0.42	343		Pg	00 48 39.3	0.0
GSSM	Skaggs Springs	0.42	134		Pg	00 48 39.8	+0.3
GACM	Adobe Creek	0.44	107		Pg	00 48 39.6	-0.1
GDXM	Geysers	0.51	112		Pg	00 48 41.0	-0.1
FTR	Fort Ross	0.51	159		Pg	00 48 41.5	+0.3
GSGM	Seigler Mounta	0.55	104		Pb	00 48 43.1	-0.4
NMCNC	Mill Creek, So	0.56	137		Pg	00 48 42.0	0.0
GCRM	Castle Rock Sp	0.58	113		Pg	00 48 42.3	-0.2
KRKM	Rackout Spring	0.59	17		Pg	00 48 42.9	+0.2
GHMM	Hull Mountain	0.61	36		Pg	00 48 43.4	+0.3
KFPM	Farley Peak	0.64	358		Pg	00 48 43.8	+0.2
MAC	Mark West Spri	0.69	130		Pg	00 48 45.0	+0.4
KCPM	Cahto Peak	0.70	348		Pg	00 48 44.9	+0.1
KCPM	Cahto Peak	0.70	348	Sg	Sb	00 48 56.2	+0.1
NHSM	Mount Saint He	0.70	119		Pg	00 48 44.8	0.0
GWKM	Walker Ridge	0.71	86		Pg	00 48 45.3	+0.4
MNRC	McLaughlin Min	0.76	99		Pb	00 48 46.8	-0.2
NMTM	Middletown	0.77	104		Pg	00 48 46.6	+0.6
NSHM	Saint Helena R	0.78	127		Pg	00 48 46.3	0.0
KIPM	Iron Peak	0.81	356		Pg	00 48 46.6	-0.3
NTYM	Taylor	0.84	136		Pb	00 48 47.9	-0.5
GASB	Alder Springs	0.84	39		Pg	00 48 47.5	0.0
KBNM	Bluenose Ridge	0.91	10		Pb	00 48 49.5	-0.1
GFC	Funks Creek	0.92	69		Pn	00 48 50.8	-0.2
GCK	Clark Valley	0.92	54		Pb	00 48 49.9	+0.1
KBSM	Bell Springs	0.93	351		Pg	00 48 48.6	-0.5
MCCM	Marconi Confer	0.95	154	Pg	Pg	00 48 49.5	0.0
GVV	Valley View	0.96	36		Pg	00 48 49.3	-0.4
CVS	Carmenet Viney	0.98	131		Pg	00 48 49.7	-0.5
KMRM	Mail Ridge	1.24	349		Pg	00 48 52.9	-2.3
WDC	Whiskeytown Da	1.71	22	Pn	Pn	00 49 00.4	-1.4
BEKR	Beckworth	2.51	69		Pn	00 49 11.2	-1.8
KRMB	Red Mountain	2.55	351	Pn	Pn	00 49 11.6	-1.9

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*GCG **04** 00:49:59.3±0.8, 16°.02N×93°.15W, h44^{km}±999^{km}, MD4.1*

*IDC **04** 00:50:04.8±3.7, 14°.32N×93°.02W, h0^{km}, mb3.5/4, mb1 3.9/7, mb1mx3.7/37, mbtmp3.6/7, ML3.1/2, MS3.9/1, Ms1 3.8/1, ms1mx2.7/34, Error ellipse: s-maj=69.6km s-min=23.5km az=1.0*

*MEX **04** 00:50:05.9±1.0, 14°.16N×93°.06W, h0^{km}±48^{km}, MD3.8*

*NEIC **04** 00:50:08.0±2.1, 14°.33N±0°.05×92°.96W±0°.05, h19^{km}±7^{km}, Error ellipse: s-maj=7.5km s-min=5.6km az=218.0*

ISC 04 00:50:08.6±2.9, **14°.31N**±0°.08×**93°.08W**±0°.07, **h26**^{km}±20^{km}, **n24**, σ1^{s}.**88**/35, **mb3.7**/6, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.99	53		Pn	00 50 24.3	-2.6
THIG					Sb	00 50 37.6	-2.2
THIG		0.99	53	*e*P	Pn	00 50 24.3	-2.6
THIG				*i* S	Sb	00 50 37.6	-2.2
PCIG		1.40	355		Pn	00 50 30.1	-2.3

PCIG					Sn	00 50 50.2	+0.1
PCIG		1.40	355	*i* P	Pn	00 50 30.1	-2.3
PCIG				*i* S	Sn	00 50 50.2	+0.1
ERG	Entre ros, C	1.47	85	*e*P	Pn	00 50 32.5	-1.0
ERG				*e*S	Sb	00 51 00.1	+6.5
STG3	Santiaguito 3,	1.52	74	*e*P	Pn	00 50 32.3	-2.0
STG3				*e*S	Sb	00 50 56.2	+1.0
CCIG	Comitan	2.17	25		Pn	00 50 43.9	+0.7
CCIG	Comitan	2.17	25		Pn	00 50 43.0	-0.2
CCIG					Sn	00 51 10.7	+1.4
CCIG	Comitan	2.17	25	*e*P	Pn	00 50 42.1	-1.1
CCIG				*i* S	Sn	00 51 10.1	+0.7
FUG	Fuego 3	2.18	86	*e*P	Pn	00 50 41.3	-2.0
TGIG		2.46	359		Pn	00 50 46.9	-0.2
TGIG					Sn	00 51 18.0	+1.6
TGIG		2.46	359	*e*P	Pn	00 50 46.9	-0.2
TGIG				*i* S	Sn	00 51 18.0	+1.6
APG	El Apazote	2.63	74	Pn	Pn	00 50 48.7	-0.9
	6.0nm,0.3s,baz=289,slow=7.1,SNR=21						
APG				Sn	Sn	00 51 21.3	+0.5
	15nm,0.3s,baz=328,slow=19,SNR=7.1						
CSGN	Cosiguina Volc	5.53	103	Pn	Pn	00 51 27.2	-2.2
TEIG	Tepich	7.47	37	Pn	Pn	00 51 54.9	-1.0
	baz=353,slow=0.0						
TEIG				Sn	Sn	00 53 19.7	0.0
	1.5nm,0.3s,baz=290,slow=0.0,SNR=2.9						
TXAR	Lajitas Array	17.88	329	P	P	00 54 16.8	+0.7
	0.0nm,0.3s,baz=147,slow=12,SNR=4.0						
AMTX	Amarillo	21.91	341	P	P	00 55 00.4	+0.4
AMTX				IAmb	IAmb	00 55 03.6	
	comp=Z,8.0nm,0.8s						
T25A	Trinidad	24.88	338	P	P	00 55 30.8	+1.2
T25A				IAmb	IAmb	00 55 33.9	
	comp=Z,4.5nm,0.8s						
PDAR	Pinedale Array	31.72	337	P	P	00 56 32.0	+1.4
	comp=Z,0.3nm,0.8s,baz=138,slow=9.5,SNR=2.9						
PDAR	Pinedale Array	31.72	337	P	P	00 56 32.0	+1.4
NVAR	Mina Array Bea	32.78	322	P	P	00 56 40.3	+0.4
	comp=Z,0.4nm,0.6s,baz=126,slow=9.3,SNR=3.7						
SCHQ	Schefferville	45.31	21	LR	LR	01 19 06.1	
	comp=Z,122nm,18.1s,baz=12,slow=38						
YKA	Yellowknife Ar	50.49	347	P	P	00 59 02.7	-1.5
	comp=Z,0.9nm,0.7s,baz=150,slow=7.6,SNR=11						
ILAR	Eielson Array	62.15	337	P	P	01 00 27.3	0.0
	comp=Z,0.2nm,0.7s,baz=113,slow=6.9,SNR=4.2						

IDC 04 00:52:38.2±45.0,**23°.89S**×**175°.32W**,**h0**^{km},**mb4.2**/3, **mb1 4.4**/3,**mb1mx3.8**/30,**mbtmp4.2**/3,**Error ellipse: s-maj=843.5km s-min=160.8km az=89.0,Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.71	248	P	P	01 00 03.5	-0.6
	1.6nm,0.5s,baz=101,slow=10,SNR=8.7						
ASAR	Alice Springs	46.26	259	P	P	01 01 05.7	-0.1
	1.1nm,0.4s,baz=88,slow=7.3,SNR=31						
WRA	Warramunga Arr	46.68	265	P	P	01 01 09.3	+0.2
	1.8nm,0.3s,baz=104,slow=7.8,SNR=30						

IDC 04 01:23:29.6±48.0,**16°.22S**×**174°.71W**,**h0**^{km},**mb4.0**/3, **mb1 4.2**/3,**mb1mx3.6**/46,**mbtmp4.0**/3,**Error ellipse: s-maj=907.3km s-min=176.7km az=79.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.54	240	P	P	01 31 27.7	+0.4
	1.2nm,0.4s,baz=92,slow=11,SNR=4.9						
WRA	Warramunga Arr	48.44	258	P	P	01 32 13.7	-0.5
	0.3nm,0.4s,baz=96,slow=7.4,SNR=8.5						
ASAR	Alice Springs	48.67	253	P	P	01 32 15.8	-0.2
	3.2nm,0.4s,baz=88,slow=8.2,SNR=50						

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*IDC **04** 01:26:36.5±1.7,37°.11N×140°.75E,h0^{km},mb3.4/5, mb1 3.5/6,mb1mx3.3/46,mbtmp3.3/6,ML2.6/1,Error ellipse: s-maj=37.9km s-min=25.0km az=59.0*

*JMA **04** 01:26:39.0,37°.03N×140°.61E,h8^{km}±1^{km},M3.4 Broadband fault plane solution: P waves. NP1: ϕs88.00000°,δ41.00000°,λ-137.00000°. NP2: ϕs323.00000°,δ64.00000°,λ-57.00000°. Principal axes: T Plg13.0000°, Azm30.0000°; N Plg29.0000°, Azm127.0000°; P Plg58.0000°, Azm279.0000°;*

JMA Felt I J1.

ISC 04 01:26:38.7±0.9,**37°.04N**±0°.03×**140°.64E**±0°.04,**h11**^{km}±5^{km}, **n22**,σ**0**^{s}**.86**/27,**mb3.4**/5,**6C-3D,Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFFD	Fukushimafurud	0.08	307	⇓P	Pg	01 26 41.1	-0.1
JFFD				S	Sg	01 26 42.4	-0.7
ONAJ	Iwakimizuishiy	0.14	64	⇑P	Pg	01 26 42.6	+0.6
ONAJ				S	Sg	01 26 45.2	+0.8
JFK	Kawauchi	0.37	30	⇑P	Pb	01 26 46.6	-0.8
JFK				S	Sb	01 26 52.2	-1.0
JHO	Hitachi	0.43	188	⇑P	Pg	01 26 47.0	-0.2
JHO				S	Sg	01 26 52.8	-0.2
JFT	Otama	0.54	333	⇑P	Pb	01 26 49.6	-0.5
JFT				S	Sb	01 26 56.9	-0.9
JSB	Shiboa	0.58	263	⇓P	Pb	01 26 50.5	-0.4
JSB				S	Sg	01 26 58.4	+0.7
JFY	Yanaizu	0.83	296	⇓P	Pb	01 26 54.6	-0.6
JFY				S	Sg	01 27 05.2	-0.4
JMM	Marumori	0.83	8	⇑P	Pb	01 26 54.6	-0.5
JMM				S	Sb	01 27 06.2	-0.1
JYT	Yasato	0.89	204	⇑P	Pg	01 26 55.1	-0.7
JYT				S	Sg	01 27 06.4	-1.0
MJAR	Matsushiro Arr	2.02	256	Pn	Pn	01 27 13.5	+0.9
	2.1nm,0.3s,baz=77,slow=15,SNR=31						
MJAR				Sn	Sn	01 27 39.7	+1.8
	4.0nm,0.3s,baz=79,slow=31,SNR=17						
MAT	Matsushiro	2.02	256	P	Pn	01 27 13.9	+1.3
MAT				S	Sb	01 27 40.9	+0.4
SONM	Songino Array	27.27	304	P	P	01 32 23.4	+0.4
	0.2nm,0.4s,baz=111,slow=7.9,SNR=3.2						
H11N2	WAKE ISLAND Hy	28.68	120	T	T	02 02 23.8	
	baz=312,slow=75,SNR=24						
H11N1	WAKE ISLAND Hy	28.69	120	T	T	02 02 25.9	
	baz=312,slow=75,SNR=23						
H11N3	WAKE ISLAND Hy	28.70	120	T	T	02 02 25.7	
	baz=312,slow=75,SNR=25						
H11S1	WAKE ISLAND Hy	29.39	122	T	T	02 03 18.2	
	baz=314,slow=75,SNR=37						
H11S3	WAKE ISLAND Hy	29.39	122	T	T	02 03 17.8	
	baz=314,slow=75,SNR=20						
H11S2	WAKE ISLAND Hy	29.40	122	T	T	02 03 20.1	
	baz=314,slow=75,SNR=14						
ZALV	Zalesovo Beam	41.45	312	P	P	01 34 25.3	+0.2
	0.3nm,0.3s,baz=89,slow=8.9,SNR=2.2						
MKAR	Makanchi Array	43.59	302	P	P	01 34 41.0	-1.8
	0.1nm,0.6s,baz=80,slow=9.4,SNR=2.4						
WRA	Warramunga Arr	56.99	187	P	P	01 36 23.8	-0.5
	0.5nm,0.6s,baz=2.7,slow=7.5,SNR=4.8						
ASAR	Alice Springs	60.72	187	P	P	01 36 50.9	+0.7
	0.2nm,0.6s,baz=19,slow=6.9,SNR=3.4						

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*IDC **04** 01:30:27.1±2.0,51°.11N×176°.70W,h0^{km},mb3.7/7, mb1 4.0/7,mb1mx3.5/59,mbtmp3.7/7,Error ellipse: s-maj=66.6km s-min=20.7km az=5.0*

*AEIC **04** 01:30:31.4±1.0,51°.19N±0°.04×176°.38W±0°.05,h28^{km}±5^{km}, ML2.9/19,Error ellipse: s-maj=5.8km s-min=4.5km az=164.0*

ISC 04 01:30:32.8±1.0,**51°.25N**±0°.09×**176°.42W**±0°.05,**h35**^{km},**n29**, σ**0**^{s}**.74**/27,**mb4.1**/6,**Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADK	Adak	0.66	346		Pn	01 30 45.3	-0.4
ADK				Sn	Sn	01 30 54.8	0.0
KIMD	Kanaga Island	0.72	316		Pn	01 30 45.9	-0.7
ADAG	Mount Adagdak	0.74	352		Pn	01 30 47.1	+0.3
KIKV	Kanaga Island	0.79	324		Pn	01 30 47.3	-0.1
KICM	Kanaga Island	0.83	325		Pn	01 30 48.0	+0.1
GSTD	Great Sitkin T	0.83	12		Pn	01 30 48.0	0.0
GSTD					Sn	01 30 58.8	-0.3
GSMY	Great Sitkin M	0.83	16		Pn	01 30 48.0	-0.1
GSTR	Great Sitkin T	0.88	15		Pn	01 30 48.6	-0.1
GSTR				Sn	Sn	01 30 59.9	-0.4
TAPA	Tanaga Point A	1.04	304		Pn	01 30 50.5	-0.4
TASE	Tanaga Southea	1.17	301		Pn	01 30 52.6	-0.1
TAFP	Tanaga Falls P	1.17	305		Pn	01 30 52.5	-0.3
TAFP					Sn	01 31 08.2	+0.7
GALAA	Gareloi Lava P	1.56	290		Pn	01 30 58.2	+0.2
ATKA	Atka Island	1.69	54		Pn	01 30 58.5	-1.2
ATKA	Atka Island	1.69	54		Sn	01 31 20.3	+0.2
KOKL	Mount Kliuchef	1.75	51		Pn	01 31 00.4	-0.4
KOFP	Korovin Flat P	1.78	54		Pn	01 31 00.5	-0.5
ILAR	Eielson Array	20.43	37	P	P	01 35 08.4	+1.7
	0.6nm,0.6s,baz=228,slow=9.5,SNR=32						
KLR	Kul'dur	32.65	287	P	P	01 37 00.4	-0.7
	1.6nm,0.6s,baz=59,slow=9.1,SNR=5.9						
H11N2	WAKE ISLAND Hy	34.09	209	T	T	02 13 45.5	
	baz=18,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	34.09	209	T	T	02 13 43.9	
	baz=18,slow=76,SNR=9.3						
H11N1	WAKE ISLAND Hy	34.10	209	T	T	02 13 49.9	
	baz=18,slow=76,SNR=8.0						
H11S1	WAKE ISLAND Hy	35.30	208	T	T	02 15 16.2	
	baz=17						
H11S2	WAKE ISLAND Hy	35.31	208	T	T	02 15 20.6	
	baz=17						
H11S3	WAKE ISLAND Hy	35.31	208	T	T	02 15 22.8	
	baz=17						
PDAR	Pinedale Array	44.92	74	P	P	01 38 45.1	+0.9
	2.1nm,0.6s,baz=312,slow=3.8,SNR=29						
TXAR	Lajitas Array	57.20	83	P	P	01 40 17.2	+0.9
	0.2nm,0.4s,baz=325,slow=7.7,SNR=2.4						
KURBB	Kurchatov Arra	60.29	315	P	P	01 40 36.4	-1.0
	0.8nm,0.5s,baz=42,slow=6.5,SNR=15						
MKAR	Makanchi Array	61.27	310	P	P	01 40 42.4	-1.8
	0.1nm,0.4s,baz=50,slow=6.1,SNR=4.6						
BVAR	Borovoye Array	61.94	321	P	P	01 40 48.6	0.0
	0.8nm,0.4s,baz=48,slow=6.2,SNR=7.5						

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*IDC **04** 01:52:14.5±0.8,9°.18N×126°.75E,h0^{km},mb3.8/10, mb1 3.9/11,mb1mx3.7/42,mbtmp3.8/11,ML4.6/1,MS3.3/2, Ms1 3.3/2,ms1mx2.7/46,Error ellipse: s-maj=30.3km s-min=13.5km az=95.0*

*MAN **04** 01:52:21.8,9°.08N×126°.53E,h8^{km},mb4.5,ML3.4,MS3.2*

ISC 04 01:52:15.0±2.3,**9°.12N**±0°.04×**126°.74E**±0°.08,**h3**^{km}±13^{km}, **n22**,σ**1**^{s}**.24**/26,**mb3.7**/10,**1C-2D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	1.11	262	*e*P	Pn	01 52 39.3	+1.8
BUTP				*e*S	Sn	01 52 54.6	+1.3
BUKP	Musuan	2.07	233	*e*P	Pg	01 52 54.8	+0.1
BUKP				*e*S	Sg	01 53 22.5	+1.0
MSLP	Maasin	2.11	299	*e*P	Pg	01 52 55.6	+0.2
MSLP				*e*S	Sg	01 53 25.3	+2.6
CGP	Cagayan de Oro	2.13	252	⇓*e*P	Pb	01 52 54.5	+0.3
CGP				*e*S	Sg	01 53 22.5	-0.9
DAV	Davao City (W)	2.34	209	Pn	Pn	01 52 54.4	0.0
	132nm,0.3s,baz=233,slow=3.5,SNR=3.6						
DAV				Lg	Lg	01 53 31.9	
	95nm,0.3s,baz=98,slow=15,SNR=3.8						
KCP	Kidapawan	2.66	218	⇑*e*P	Pb	01 53 03.5	+0.2
KCP				*i* S	Sb	01 53 34.6	-1.8
TBP	Tagbilaran	2.89	281	⇓*e*p	Pb	01 53 07.1	-0.2
LLP	Lapu-Lapu	2.98	294	*e*P	Pb	01 53 07.4	-1.4
LLP				*e*S	Sg	01 53 47.7	-3.1
DDMP	Don Marcelino,	3.17	199	*e*P	Sn	01 53 43.4	-0.8
TGY	Tagaytay City	7.53	312	LR	LR	01 57 36.1	
	comp=Z,167nm,18.2s,baz=27,slow=43						
FITZ	Fitzroy Crossi	27.07	182	P	P	01 57 59.7	+0.7
	0.3nm,0.3s,baz=355,slow=10,SNR=4.5						
WRA	Warramunga Arr	29.84	166	P	P	01 58 23.4	-0.3
	0.5nm,0.5s,baz=347,slow=9.3,SNR=2.3						
ASAR	Alice Springs	33.34	168	P	P	01 58 54.5	+0.1
	0.4nm,0.4s,baz=354,slow=6.5,SNR=7.6						
STKA	Stephens Creek	43.18	161	P	P	02 00 18.1	+0.9
	0.6nm,0.4s,baz=355,slow=11,SNR=2.9						
PALK	Pallekele	45.58	271	LR	LR	02 21 24.7	
	comp=Z,44nm,18.1s,baz=292,slow=38						
MKAR	Makanchi Array	53.21	323	P	P	02 01 34.9	+0.2
	1.2nm,0.6s,baz=123,slow=8.0,SNR=22						
ZALV	Zalesovo Beam	55.85	331	P	P	02 01 52.2	-1.5
	0.9nm,0.7s,baz=111,slow=6.3,SNR=3.2						
ILAR	Eielson Array	80.27	26	P	P	02 04 27.5	+0.5
	0.2nm,0.6s,baz=254,slow=4.8,SNR=3.3						
ARCES	ARCESS Array B	85.42	340	P	P	02 04 53.5	-0.2
	1.5nm,0.8s,baz=70,slow=6.0,SNR=3.2						
FINES	FINESS Array B	87.11	332	P	P	02 05 01.7	-0.4
	0.2nm,0.3s,baz=94,slow=5.6,SNR=2.7						
YKA	Yellowknife Ar	94.61	24	P	P	02 05 37.4	+0.3
	0.2nm,0.6s,baz=303,slow=4.7,SNR=3.9						
TORD	Torodi Ar. Bea	121.11	291	PKP	PKiKP	02 11 09.6	-0.9
	0.2nm,0.6s,baz=50,slow=1.9,SNR=3.0						

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*NEIC **04** 02:07:45.0±1.2,8°.82N±0°.05×71°.26W±0°.04,h32^{km}±10^{km}, ML3.2/4,Error ellipse: s-maj=7.4km s-min=5.9km az=207.0*

ISC 04 02:07:45.5±1.3,**8°.74N**±0°.05×**71°.17W**±0°.05,**h35**^{km},**n21**, σ**2**^{s}**.07**/18,**Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.55	145	*e*P	Pn	02 07 53.3	-3.6
SDV	Santo Domingo	0.55	74	*e*P	Pn	02 07 56.8	-0.3
SDV	Santo Domingo	0.55	74		Pn	02 07 58.9	+1.8
SDV				Sn	Sn	02 08 06.7	+1.5
SDV				IAML		02 08 10.3	
	832nm,0.4s						
PAMC	Pamplona, Colo	2.05	228	*e*P	Pn	02 08 17.7	-0.3
OCAC	Ocana	2.18	257	*e*P	Pn	02 08 19.8	+0.3
TAMC	Tame, Arauca	2.37	195	*e*P	Pn	02 08 23.3	+1.4
TAMC	Tame, Arauca	2.37	195	*e*P	Pn	02 08 22.6	+0.7
ELOV	Elorza	2.40	136	*e*P	Pn	02 08 24.7	+2.3
SMLC	San Martn de	2.87	272	*e*P	Pn	02 08 32.4	+3.6
BARC	Barichara	2.92	223	*e*P	Pn	02 08 33.8	+4.1
URIC	Uribia, Colomb	3.06	345	*e*P	Pn	02 08 40.8	+9.4
URIC	Uribia, Colomb	3.06	345		Pn	02 08 29.4	-2.0
URIC				Sn	Sn	02 09 04.2	-2.5
RUSC	La Rusia	3.40	214	*e*P	Pn	02 08 35.9	-0.7
RUSC	La Rusia	3.40	214		Pn	02 08 36.0	-0.6
RUSC				Sn	Sn	02 09 15.0	-1.0
ZARC	Zaragoza, Cauc	3.85	252	*e*P	Pn	02 08 49.2	+6.8
SMRC	Santa Marta, M	3.86	309	*e*P	Pn	02 08 45.0	+2.6
PTBC	PUERTO BERRIO,	3.92	236	*e*P	Pn	02 08 50.6	+7.3
SJCC	San Jacinto, C	4.12	287	*e*P	Pn	02 08 49.2	+3.1
UREC	San Jos de Ur	4.43	258	*e*P	Pn	02 08 58.3	+8.0
CHIC	Chingaza	4.81	212	*e*P	Pn	02 08 54.8	-1.1
ROSC	El Rosal	4.98	219	Pn	Pn	02 08 59.3	+1.1
ROSC				IAML		02 10 24.4	
	comp=E,22nm,1.2s						

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*IDC **04** 02:11:18.6±2.7,7°.01S×129°.51E,h116^{km}±24^{km},mb4.1/13, mb1 4.2/15,mb1mx4.1/34,mbtmp4.6/15,MS3.2/4, Ms1 3.2/4,ms1mx2.9/46,Error ellipse: s-maj=20.7km s-min=11.6km az=67.0*

*DJA **04** 02:11:18.1±0.2,7°S±2°×13°0E±°,h154^{km}±5^{km},M4.8/18, mb4.8/18,mB5.2/6,MLv4.9/12,Mw(mB)4.6/6,Mwp6.0/1*

*NEIC **04** 02:11:18.7±1.5,7°.11S±0°.07×129°.68E±0°.08,h129^{km}±6^{km}, mb4.6/32,Error ellipse: s-maj=11.6km s-min=9.5km az=69.0*

ISC 04 02:11:19.5±0.4,**7°.15S**±0°.04×**129°.64E**±0°.05,**h139**^{km},**n114**, σ**1**^{s}**.80**/119,**mb4.4**/23,**2C,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.84	117	P	Pn	02 11 52.4	+0.2
SAUI				S	Sn	02 12 17.0	-0.2
SAUI	Saumlaki	1.84	117		Pn	02 11 51.4	-0.8
SAUI				Sn	Sn	02 12 15.0	-2.2
BNDI	Bandanaira	2.62	6	P	Pn	02 12 01.9	+0.2
AAI	Ambon	3.73	337	P	Pn	02 12 14.7	-1.2
AAI				S	Sn	02 12 57.9	-1.8
MSAI	Masohi	3.84	349	P	Pn	02 12 16.8	-0.7
FAKI	Fak Fak	4.94	32	P	Pn	02 12 29.4	-2.6
FAKI	Fak Fak	4.94	32		Pn	02 12 29.0	-3.0
MTN	Manton Dam	5.85	166		Pn	02 12 43.5	-0.7
MTN				Sn	Sn	02 13 48.4	-1.9
SOEI	Soe	5.91	244	P	Pn	02 12 45.3	+0.2
	3.5nm2µm216nm,0.8s						
SOEI	Soe	5.91	244		Pn	02 12 44.9	-0.2
SOEI				Sn	Sn	02 13 49.0	-2.9
SANI	Sanana	6.24	324	P	Pn	02 12 49.0	-0.3
	0.1nm53nm,0.7s						
SIJI	Sorong	6.44	15	P	Pn	02 12 50.1	-2.0
	23nm,0.3s,baz=237,slow=23,SNR=56						
SIJI				S	Sn	02 13 58.0	-6.5
	18nm,0.3s,baz=263,slow=23,SNR=8.4						
LBMI	Labuha	6.81	342	P	Pn	02 12 55.8	-1.2
	0.3nm67nm,0.7s						
RKPI	Ransiki, Papua	7.20	39	P	Pn	02 12 59.5	-2.7
	2.8nm471nm,0.7s						
MMRI	Maumere	7.48	258	P	Pn	02 13 06.0	-0.1
	0.3nm47nm,0.6s						
MMRI	Maumere	7.48	258		Pn	02 13 04.6	-1.5
EDFI	Ende, Flores	8.03	258	P	Pn	02 13 13.6	0.0
	359nm22nm,0.6s						
KNRA	Kununurra	8.52	186		Pn	02 13 18.5	-1.5
BAKI	Biak	8.75	48	P	Pn	02 13 22.7	-0.4
	767nm,0.9s						
BASI	Baing, Sumba	9.46	251	P	Pn	02 13 31.6	-1.1
	97nm,0.6s						
BKSI	Bulukumba	9.63	280	P	Pn	02 13 35.3	+0.4
	33nm,1.0s						
KAPI	Kappang	10.06	282	LR	LR	02 18 26.6	
	comp=Z,43nm,19.1s,baz=86,slow=43						
WBSI	Waikabubak, Su	10.44	256	P	Pn	02 13 44.2	-1.5
	1µm156nm,0.6s						
FITZ	Fitzroy Crossi	11.56	199	P	Pn	02 13 57.6	-2.9
	5.6nm,0.3s,baz=21,slow=10,SNR=91						
FITZ				S	Sn	02 15 57.3	-11
	18nm,0.3s,baz=80,slow=20,SNR=15						
FITZ				LR	LR	02 19 13.5	
	comp=Z,97nm,18.3s,baz=48,slow=41						
FITZ	Fitzroy Crossi	11.56	199		Pn	02 13 57.2	-3.3
PLAI	Plampang	11.87	261	P	Pn	02 14 02.0	-2.5
	70nm,0.7s						
WB0	Warramunga Arr	13.37	160		Pn	02 14 21.4	-2.6
WRAB	Tennant Creek	13.51	161	P	Pn	02 14 23.4	-2.3
WRA	Warramunga Arr	13.51	161	P	Pn	02 14 23.0	-2.8
	6.5nm,0.3s,baz=340,slow=13,SNR=102						
WRA				S	Sn	02 16 44.8	-10
	9.6nm,0.3s,baz=331,slow=22,SNR=7.6						
WB2	Warramunga Arr	13.52	161	P	Pn	02 14 23.3	-2.5
WR0	Warramunga Arr	13.60	160	Pn	Pn	02 14 24.5	-2.4
COEN	Coen	14.92	118	P	Pn	02 14 41.4	-2.2
AS31	Alice Springs	16.93	166	P	P	02 15 07.9	-0.1
ASAR	Alice Springs	16.93	166	P	P	02 15 07.5	-0.5
	2.7nm,0.3s,baz=339,slow=9.9,SNR=67						
ASAR				S	S	02 18 07.2	-10
	0.6nm,0.3s,baz=353,slow=29,SNR=5.1						
ASAR				LR	LR	02 22 21.4	
	comp=Z,111nm,18.3s,baz=30,slow=39						
ASAR				ScP	ScP	02 23 11.7	+2.8
	0.1nm,0.3s,baz=330,slow=1.4,SNR=11						
PSAD1	Pilbara Seismi	17.10	213	P	Pn	02 15 10.3	0.0
PSAC2	Pilbara Seismi	17.15	212	P	Pn	02 15 11.0	+0.1
PSAD2	Pilbara Seismi	17.16	212	P	Pn	02 15 11.6	+0.6
PSAD2				IAmb	IAmb	02 15 13.3	
	comp=Z,56nm,0.8s						
PSAC1	Pilbara Seismi	17.17	213	P	Pn	02 15 11.5	+0.4
PSA00	Pilbara Seismi	17.18	212	P	Pn	02 15 11.2	-0.1
PMG	Port Moresby	17.48	99	P	Pn	02 15 16.9	+2.0
	comp=Z,2.6nm,0.3s,baz=270,slow=5.9,SNR=13						
PMG	Port Moresby	17.48	99	P	Pn	02 15 14.5	-0.4
PMG				IAmb	IAmb	02 15 20.1	
	comp=Z,47nm,0.9s						
PBKI	Pangkalan Bun	18.44	283	P	P	02 15 23.2	-1.3
	comp=Z,118nm,0.5s						
KKM	Kota Kinabalu	18.74	314	P	P	02 15 27.8	-0.1
KKM				IAmb	IAmb	02 15 37.5	
	comp=Z,32nm,1.0s						
SBUM	Sibu	19.83	298	P	P	02 15 39.9	+0.3
SBUM				IAmb	IAmb	02 15 42.5	
	comp=Z,17nm,0.8s						
KPJI	Karang Pucung	20.55	268	P	P	02 15 44.5	-2.8
CTA	Charters Tower	20.62	130	P	Pn	02 15 50.9	-1.0
	comp=Z,7.3nm,0.8s,baz=327,slow=9.6,SNR=3.5						
KSM	Kuching	21.11	293	P	P	02 15 53.0	-0.3
KSM				IAmb	IAmb	02 15 57.1	
	comp=Z,20nm,0.8s						
CISI	Cisompet, Garu	21.65	268	P	P	02 15 56.6	-2.6
CISI				IAmb	IAmb	02 15 59.2	
	comp=Z,36nm,0.7s						
KRVT	Keravat (AS076	22.45	84	LR	LR	02 26 12.1	
	comp=Z,123nm,18.0s,baz=130,slow=40						
FORT	Forrest	23.56	183	P	P	02 16 19.2	+1.8
MORW	Morawa	25.30	209	P	P	02 16 34.3	+1.0
BBOO	Buckleboo	26.23	168	P	P	02 16 43.1	+1.5
BBOO				IAmb	IAmb	02 16 47.5	
	comp=Z,11nm,0.9s						
STKA	Stephens Creek	27.02	157	P	P	02 16 51.1	+2.5
	comp=Z,7.0nm,0.7s,baz=322,slow=9.2,SNR=20						
STKA	Stephens Creek	27.02	157	P	P	02 16 50.1	+1.4
NWAO	Narrogin (SRO)	28.12	203	P	P	02 17 00.3	+1.8
	comp=Z,14nm,0.8s,baz=40,slow=7.1,SNR=6.6						
NWAO	Narrogin (SRO)	28.12	203	P	P	02 16 59.2	+0.7
NWAO				IAmb	IAmb	02 17 01.1	
	comp=Z,13nm,0.8s						
RPSI	Rantau Prapat	32.18	287	P	P	02 17 34.7	+0.2
PSI	Prapat	32.21	287	P	P	02 17 34.4	-0.5
	comp=Z,28nm,0.8s,baz=144,slow=6.0,SNR=28						
CMAR	Chiang Mai Arr	39.55	310	P	P	02 18 37.6	+0.3
	comp=Z,4.7nm,0.6s,baz=139,slow=7.2,SNR=17						
CMAR				PcP	PcP	02 20 43.5	+1.3
	comp=Z,1.4nm,0.7s,baz=158,slow=3.2,SNR=5.7						
CHTO	Chiang Mai	39.77	311	P	P	02 18 39.1	0.0
CHTO				IAmb	IAmb	02 18 39.8	
	comp=Z,9.8nm,0.7s						
KSRS	Korea Array	44.40	358	P	P	02 19 15.9	-0.4
	comp=Z,0.8nm,0.5s,baz=178,slow=8.5,SNR=3.0						
XAN	Xi'an	45.42	336	P	P	02 19 31.2	+6.7
XAN				pP	pP	02 19 42.9	-12
USRK	Ussuriysk Ar.	51.15	2	P	P	02 20 08.2	0.0
	comp=Z,0.9nm,0.6s,baz=191,slow=7.1,SNR=4.2						
ODAN	Odare	53.08	311	*e*P	P	02 20 23.1	-0.1
	comp=Z,32nm,0.5s						
TAPN	Taplejung	53.12	312	*e*P	P	02 20 23.1	-0.4
	comp=Z,19nm,0.4s						
RAMN	Ramite	53.72	311	*e*P	P	02 20 27.7	-0.1
	comp=Z,75nm,0.5s						
JIRN	Jiri	54.41	311	*e*P	P	02 20 32.5	-0.5
	comp=Z,13nm,0.3s						
GUN	Gumba	54.78	311	*e*P	P	02 20 35.1	-0.5
	comp=Z,52nm,0.6s						
PKI	Pulchoki	54.95	311	*e*P	P	02 20 36.5	-0.3
	comp=Z,20nm,0.5s						
PKIN	Phulchoki	54.96	311	*e*P	P	02 20 36.6	-0.2
	comp=Z,19nm,0.5s						
KKN	Kakani	55.16	311	*e*P	P	02 20 37.9	-0.3
DMN	Daman	55.20	311	*e*P	P	02 20 38.2	-0.3
	comp=Z,14nm,0.4s						
GKN	Gorkha	55.76	311	*e*P	P	02 20 42.1	-0.3
	comp=Z,32nm,0.3s						
DANN	Dangsing	56.60	311	*e*P	P	02 20 47.9	-0.6
	comp=Z,8.9nm,0.3s						
ULN	Ulaanbaatar	58.29	342	P	P	02 21 00.4	+0.5
ULN				IAmb	IAmb	02 21 01.3	
	comp=Z,3.2nm,0.8s						
SONM	Songino Array	58.47	342	P	P	02 21 01.7	+0.7
	comp=Z,1.5nm,0.4s,baz=154,slow=6.6,SNR=13						
NIL	Nilore	67.04	311	P	P	02 21 57.8	-0.2
KSH	Kashi	67.89	318	P	P	02 22 05.5	+2.2
KSH				sP	PcP	02 22 22.9	-5.9
KSH				PcS		02 26 34.4	
KSH				S	S	02 30 53.6	+2.6
MK31	Makanchi Array	68.15	327	P	P	02 22 05.0	+0.3
MK31				IAmb	IAmb	02 22 06.3	
	comp=Z,5.4nm,0.6s						
MKAR	Makanchi Array	68.15	327	P	P	02 22 05.0	+0.3
	comp=Z,8.7nm,0.4s,baz=114,slow=8.6,SNR=197						
MAKZ	Makanchi	68.33	327	P	P	02 22 05.4	-0.4
MAKZ				IAmb	IAmb	02 22 07.3	
	comp=Z,7.7nm,0.5s						
KZA	Kyzart	69.66	320	P	P	02 22 16.6	+2.0
	SNR=6.8						
UCH	Uchtor	70.20	320	P	P	02 22 19.2	+1.2
	SNR=7.0						
AAK	Ala-Archa	70.42	320	P	P	02 22 18.8	-0.1
KBL	Kabul	70.58	310	P	P	02 22 20.5	+0.3
AML	Almayashu	70.69	319	P	P	02 22 22.0	+1.1
	SNR=11						
USP	Ospenovka	70.74	321	P	P	02 22 21.4	+0.7
	SNR=6.5						
EKS2	Erkin-Say	70.89	320	P	P	02 22 23.1	+1.3
	SNR=7.0						
GAR	Garm	71.52	315	IAmb	IAmb	02 22 27.2	
	comp=Z,7.5nm,1.0s						
ZALV	Zalesovo Beam	71.56	334	P	P	02 22 24.8	-0.5
	comp=Z,2.4nm,0.5s,baz=122,slow=5.7,SNR=10.0						
VNDA	Vanda	72.35	173	P	P	02 22 31.6	+1.9
	comp=Z,1.9nm,0.7s,baz=323,slow=6.3,SNR=5.1						

KURK	**Kurchatov**	**72.45**	**329**	P	**P**	**02 22 31.1**	**+0.3**
MAW	**Mawson**	**74.69**	**201**	P	**P**	**02 22 45.3**	**+1.8**
	comp=Z,12nm,0.7s,baz=63,slow=2.3,SNR=4.8						
MAW	**Mawson**	**74.69**	**201**	P	**P**	**02 22 44.6**	**+1.1**
GEYT	**Alibeck**	**80.03**	**310**	P	**P**	**02 23 14.9**	**+1.0**
	comp=Z,0.9nm,0.5s,baz=72,slow=4.7,SNR=2.7						
ABKAR	**Akbulak array**	**82.40**	**322**	P	**P**	**02 23 26.1**	**0.0**
ABKAR				IAmb	IAmb	02 23 28.4	
	comp=Z,3.8nm,0.6s						
QSPA	**South Pole Qui**	**82.83**	**180**	P	**P**	**02 23 29.2**	**+0.9**
QSPA				IAmb	IAmb	02 23 30.8	
	comp=Z,6.3nm,0.8s						
SYO	**Syowa Base**	**83.40**	**201**	⇑eP	**P**	**02 23 32.0**	**+1.1**
SYO	**Syowa Base**	**83.40**	**201**	⇑ePcP	**PcP**	**02 23 34.6**	**-0.4**
RAYN	**Ar Rayn**	**87.48**	**294**	P	**P**	**02 23 51.9**	**-0.2**
RAYN				IAmb	IAmb	02 23 55.0	
	comp=Z,4.9nm,0.7s						
ARCES	**ARCESS Array B**	**101.59**	**340**	P	**Pdif**	**02 24 54.1**	**-1.5**
	comp=Z,3.2nm,0.9s,baz=69,slow=4.9,SNR=2.6						
YKA	**Yellowknife Ar**	**108.04**	**26**	PKiKP	**PKiKP**	**02 29 31.2**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=299,slow=1.7,SNR=6.2						
GERES	**GERESS Array B**	**112.30**	**320**	PKiKP	**PKiKP**	**02 29 40.0**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=40,slow=1.7,SNR=4.1						
PDAR	**Pinedale Array**	**117.25**	**45**	PKP	**PKiKP**	**02 29 50.6**	**+1.6**
	comp=Z,0.4nm,0.6s,baz=61,slow=0.2,SNR=5.5						
ULM	**Lac du Bonnet**	**122.76**	**33**	PKP	**PKiKP**	**02 29 59.6**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=283,slow=2.7,SNR=4.1						
ULM	**Lac du Bonnet**	**122.76**	**33**		**PKiKP**	**02 29 59.5**	**+0.2**
TXAR	**Lajitas Array**	**125.31**	**59**	PKP	**PKiKP**	**02 30 07.0**	**+1.9**
	comp=Z,0.6nm,0.5s,baz=149,slow=2.1,SNR=5.7						
TORD	**Torodi Ar. Bea**	**128.49**	**281**	PKP	**PKiKP**	**02 30 11.8**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=98,slow=2.3,SNR=15						
PLCA	**Paso Flores**	**128.86**	**160**	PKP	**PKiKP**	**02 30 13.9**	**+2.0**
	comp=Z,1.7nm,0.9s,baz=177,slow=3.8,SNR=4.1						
PLCA	**Paso Flores**	**128.86**	**160**		**PKiKP**	**02 30 13.1**	**+1.2**
DBIC	**Dimbokro**	**134.84**	**272**	PKP	**PKiKP**	**02 30 25.2**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=50,slow=3.8,SNR=5.4						
DBIC	**Dimbokro**	**134.84**	**272**		**PKPdf**	**02 30 23.7**	**+0.6**
CPUP	**Villa Florida**	**146.04**	**169**	PKPbc	**PKiKP**	**02 30 46.2**	**-0.9**
	comp=Z,12nm,0.9s,baz=150,slow=5.4,SNR=3.0						
LPAZ	**La Paz**	**150.82**	**143**	PKPbc	**PKiKP**	**02 31 00.2**	**+2.2**
	comp=Z,2.5nm,0.5s,baz=0.5,slow=2.2,SNR=17						

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*IDC **04** 02:44:37.7±1.0, 32.°05N×40.°38W, h0^{km}, mb4.0/16, mb1 4.2/16, mb1mx4.0/52, mbtmp4.0/16, MS3.6/4, Ms1 3.6/4, ms1mx3.2/44, Error ellipse: s-maj=30.8km s-min=16.0km az=14.0*

*NEIC **04** 02:44:39.9±0.6, 32.°1N±0.°1×40.°34W±0.°07, h15^{km}±4^{km}, mb4.7/28, Error ellipse: s-maj=20.3km s-min=3.0km az=203.0*

ISC 04 02:44:39.9±0.6**, 32.°1N**±0.°1×**40.°30W**±0.°09**, h14**^{km}**, n77,** σ**1.^{s}07**/68**, mb4.5**/30**, MS3.5**/4**, 5C-2D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRLN	**Deer Lake**	**21.46**	**328**	P	**P**	**02 49 27.5**	**-0.1**
DRLN				IAmb	IAmb	02 49 32.5	
	comp=Z,29nm,1.1s						
BATG	**Bathurst New B**	**24.80**	**315**	P	**P**	**02 50 01.5**	**+0.2**
SJG	**San Juan**	**27.14**	**245**	LR	LR	03 00 43.7	
	comp=Z,69nm,18.6s,baz=46,slow=36						
SCHQ	**Schefferville**	**29.47**	**328**	LR	LR	03 01 28.8	
	comp=Z,180nm,20.8s,baz=132,slow=34						
TAM	**Tamanrasset**	**41.45**	**91**	P	**P**	**02 52 26.8**	**+0.2**
TIC	**Toumodi**	**41.49**	**120**	eP	P	02 52 32.8	+6.1
DBIC	**Dimbokro**	**41.59**	**120**	P	**P**	**02 52 27.7**	**+0.2**
	comp=Z,4.6nm,0.9s,baz=304,slow=9.6,SNR=4.8						
DBIC				LR	LR	03 08 53.5	
	comp=Z,147nm,19.0s,baz=347,slow=35						
DBIC	**Dimbokro**	**41.59**	**120**	P	**P**	**02 52 27.5**	**0.0**
LIC	**Lamto**	**41.77**	**120**	eP	**P**	**02 52 28.6**	**-0.4**
	comp=Z,26nm,1.0s						
ROSC	**El Rosal**	**41.81**	**237**	LR	LR	03 07 16.6	
	comp=Z,54nm,21.9s,baz=203,slow=33						
KIC	**Kosan Boka**	**41.89**	**120**	eP	**P**	**02 52 30.6**	**+0.6**
	comp=Z,16nm,1.0s						
TOA0	**Torodi Ar. Sit**	**42.78**	**106**	P	**P**	**02 52 36.9**	**-0.3**
TORD	**Torodi Ar. Bea**	**42.78**	**106**	P	**P**	**02 52 37.4**	**+0.1**
	comp=Z,6.7nm,1.0s,baz=305,slow=6.7,SNR=21						
CLL	**Collm**	**43.12**	**47**	eP	**P**	**02 52 41.0**	**+1.5**
KHC	**Kasperske Hory**	**43.34**	**51**	eP	**P**	**02 52 42.2**	**+0.8**
KHC				epP	**sP**	**02 52 47.5**	**+1.1**
GERES	**GERESS Array B**	**43.41**	**51**	P	**P**	**02 52 43.8**	**+1.8**
	comp=Z,0.6nm,0.8s,baz=245,slow=6.4,SNR=4.9						
BRG	**Berggiesshubel**	**43.67**	**48**	eP	**P**	**02 52 44.5**	**+0.5**
	comp=Z,16nm,1.7s						
PRA	**Prague**	**43.94**	**49**	eP	**P**	**02 52 47.9**	**+1.7**
PRU	**Pruhonice**	**44.00**	**49**	eP	**P**	**02 52 48.0**	**+1.3**
NOA	**NORSAR Array B**	**44.03**	**33**	P	**P**	**02 52 47.5**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=255,slow=7.9,SNR=3.7						
UPC	**Upice**	**44.97**	**49**	eP	**P**	**02 52 55.6**	**+1.2**
CHVC	**Chvalec**	**45.00**	**49**	eP	**P**	**02 52 55.5**	**+0.8**
OSTC	**Ostas**	**45.10**	**49**	eP	**P**	**02 52 56.1**	**+0.6**
OSTC				ex	x	02 53 05.2	
DPC	**Dobruska-Polom**	**45.16**	**49**	eP	**P**	**02 52 56.6**	**+0.6**
SAML	**Samuel**	**46.30**	**212**	P	**P**	**02 53 04.7**	**-0.6**
H10N2	**ASCENSION HYDR**	**46.73**	**144**	T	T	03 43 06.6	
	baz=329,slow=75,SNR=47						
H10N3	**ASCENSION HYDR**	**46.73**	**144**	T	T	03 43 06.9	
	baz=329,slow=75,SNR=42						
H10N1	**ASCENSION HYDR**	**46.74**	**144**	T	T	03 43 08.0	
	baz=329,slow=75,SNR=52						
VYHS	**Vyhne**	**46.81**	**52**	eP	**P**	**02 53 09.2**	**+0.2**
H10S3	**ASCENSION HYDR**	**47.60**	**145**	T	T	03 44 05.0	
	baz=329,slow=74,SNR=80						
H10S2	**ASCENSION HYDR**	**47.62**	**145**	T	T	03 44 06.0	
	baz=251,slow=74,SNR=65						
FFC	**Flin Flon**	**48.37**	**317**	P	**P**	**02 53 20.9**	**-0.2**
FFC				IAmb	IAmb	02 53 26.7	
	comp=Z,11nm,1.4s						
SIRR	**Siria**	**48.88**	**54**	⇑P	**P**	**02 53 26.1**	**+1.0**
BZS	**Buzias**	**48.92**	**55**	⇑P	**P**	**02 53 26.9**	**+1.5**
KOLS	**Kolonicke sedl**	**49.06**	**51**	eP	**P**	**02 53 27.3**	**+0.9**
DRGR		**49.55**	**54**	⇑P	**P**	**02 53 31.0**	**+0.7**
GZR	**Gura Zlata**	**49.76**	**55**	⇓P	**P**	**02 53 32.5**	**+0.6**
ARR	**Arges**	**51.06**	**55**	⇑P	**P**	**02 53 42.9**	**+1.2**
BUR08	**Bucovina Ar. S**	**51.13**	**52**	P	**P**	**02 53 42.5**	**+0.2**
BUR08				IAmb	IAmb	02 53 45.2	
	comp=Z,14nm,1.4s						
BURAR	**Bucovina Array**	**51.15**	**52**	⇓P	**P**	**02 53 43.3**	**+1.0**
FINES	**FINESS Array B**	**51.16**	**34**	P	**P**	**02 53 42.0**	**-0.1**
	comp=Z,6.5nm,1.0s,baz=245,slow=4.0,SNR=9.3						
MLR	**Muntele Rosu**	**51.95**	**55**	⇑P	**P**	**02 53 49.7**	**+1.2**
MLR	**Muntele Rosu**	**51.95**	**55**	P	**P**	**02 53 48.9**	**+0.4**
AKASG	**Malin Array Be**	**53.35**	**48**	P	**P**	**02 53 58.4**	**-0.2**
	comp=Z,5.2nm,0.9s,baz=274,slow=6.5,SNR=20						
TXAR	**Lajitas Array**	**53.84**	**285**	P	**P**	**02 54 02.9**	**+0.2**
	comp=Z,0.9nm,0.9s,baz=64,slow=6.1,SNR=3.9						
PD31	**Pinedale Array**	**54.61**	**302**	P	**P**	**02 54 07.9**	**-0.3**
PD31				IAmb	IAmb	02 54 13.3	
	comp=Z,8.1nm,1.2s						
PDAR	**Pinedale Array**	**54.61**	**302**	P	**P**	**02 54 08.1**	**-0.2**
	comp=Z,2.6nm,0.9s,baz=92,slow=7.7,SNR=9.1						
BW06	**Boulder Array**	**54.61**	**302**	P	**P**	**02 54 08.3**	**0.0**
BW06				IAmb	IAmb	02 54 13.3	
	comp=Z,8.8nm,1.2s						
YKA	**Yellowknife Ar**	**54.91**	**327**	P	**P**	**02 54 09.6**	**-0.1**
	comp=Z,1.0nm,1.0s,baz=85,slow=7.6,SNR=7.3						
RDMU	**Red Mountain**	**55.15**	**300**	P	**P**	**02 54 12.1**	**-0.1**
HWUT	**Hardware Ranch**	**56.34**	**301**	P	**P**	**02 54 20.7**	**+0.1**
SPUT	**South Promonto**	**57.06**	**301**	P	**P**	**02 54 25.5**	**-0.2**
MSU	**Marysvale**	**57.65**	**298**	P	**P**	**02 54 30.1**	**+0.1**
BRTR	**Keskin Array B**	**58.82**	**60**	P	**P**	**02 54 37.8**	**-0.3**
	comp=Z,0.8nm,0.9s,baz=282,slow=6.2,SNR=4.1						
CCUT	**Cedar City**	**58.84**	**297**	P	**P**	**02 54 38.4**	**0.0**
MFID	**Camas Ranch**	**58.89**	**305**	P	**P**	**02 54 38.2**	**-0.3**
MFID				IAmb	IAmb	02 54 44.9	
	comp=Z,11nm,1.5s						
PSUT	**Pine Spring**	**58.90**	**299**	P	**P**	**02 54 38.2**	**-0.5**
J08A	**Circle Bar Ran**	**60.75**	**305**	P	**P**	**02 54 51.4**	**+0.1**
WVOR	**Wild Horse Val**	**61.15**	**304**	P	**P**	**02 54 54.3**	**+0.3**
WVOR				IAmb	IAmb	02 55 00.2	
	comp=Z,8.4nm,1.4s						
INK	**Inuvik**	**61.76**	**335**	P	**P**	**02 54 57.4**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=71,slow=4.6,SNR=2.8						
INK	**Inuvik**	**61.76**	**335**	P	**P**	**02 54 58.3**	**+0.8**
KVN	**Kaiserville**	**61.87**	**300**	P	**P**	**02 54 58.6**	**-0.5**
KVN				IAmb	IAmb	02 55 04.3	
	comp=Z,6.9nm,1.3s						
NVAR	**Mina Array Bea**	**62.23**	**300**	P	**P**	**02 55 00.5**	**-1.1**
	comp=Z,0.4nm,0.7s,baz=80,slow=5.7,SNR=4.6						
KBZ	**Khabaz**	**64.08**	**53**	P	**P**	**02 55 14.8**	**+1.4**
	comp=Z,3.2nm,1.0s,baz=220,slow=1.7,SNR=6.7						
AKH	**Akhalkalaki**	**65.33**	**55**	P	**P**	**02 55 22.0**	**+0.2**
AKH				IAmb	IAmb	02 55 23.7	
	comp=Z,7.3nm,1.1s						
GNI	**Garni**	**66.68**	**56**	P	**P**	**02 55 30.8**	**+0.2**
ILAR	**Eielson Array**	**68.04**	**334**	P	**P**	**02 55 39.2**	**+0.7**
	comp=Z,1.0nm,1.1s,baz=46,slow=3.9,SNR=5.2						
WRH	**Wood River Hil**	**68.64**	**334**	P	**P**	**02 55 42.5**	**+0.2**
WRH				IAmb	IAmb	02 55 47.9	
	comp=Z,9.7nm,1.5s						
DHY	**Denali Highway**	**69.06**	**332**	P	**P**	**02 55 45.0**	**-0.1**
DHY				IAmb	IAmb	02 55 51.7	
	comp=Z,9.4nm,1.4s						
KURK	**Kurchatov**	**81.53**	**34**	P	**P**	**02 56 57.0**	**+0.1**
KURK				IAmb	IAmb	02 56 58.3	
	comp=Z,7.5nm,1.3s						
ZALV	**Zalesovo Beam**	**82.08**	**29**	P	**P**	**02 57 00.8**	**+1.2**
	comp=Z,0.7nm,0.5s,baz=285,slow=7.5,SNR=7.2						
UOSS	**Minazif**	**82.27**	**66**	P	**P**	**02 57 00.8**	**-0.4**
MKAR	**Makanchi Array**	**85.98**	**35**	P	**P**	**02 57 20.1**	**+0.3**
	comp=Z,0.6nm,0.9s,baz=306,slow=4.8,SNR=5.8						
KSH	**Kashi**	**87.45**	**44**	P	**P**	**02 57 27.2**	**0.0**
KSH				pP	sP	02 57 31.9	-0.5
KSH	**Kashi**	**87.45**	**44**	S	**S**	**03 08 01.4**	**-6.5**
KSH	**Kashi**	**87.45**	**44**	sS	S	03 08 10.2	+2.3
ASAR	**Alice Springs**	**170.17**	**33**	PKP	**PKPdf**	**03 04 47.9**	**+0.2**
	comp=Z,0.9nm,0.9s,baz=8.1,slow=2.0,SNR=6.8						

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*INET **04** 02:45:18.2, 12.°46N×87.°76W, h64^{km}, ML4.1*

*UCR **04** 02:45:18.7±1.0, 12.°53N×87.°81W, h50^{km}±19^{km}, ML3.5*

*SNET **04** 02:45:18.9±0.8, 12.°54N×87.°83W, h33^{km}±19^{km}, ML3.5*

ISC 04 02:45:19.8±4.9**, 12.°6N**±0.°2×**87.°81W**±0.°07**, h34**^{km}±4^{km}**, n29,** σ**0.^{s}69**/46**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.71**	**358**	eP	**Pn**	**02 45 33.1**	**-0.5**
CNCH				eS	**Sb**	**02 45 44.9**	**+1.3**
CNCH	**Conchagua**	**0.71**	**358**	eP	**Pn**	**02 45 33.1**	**-0.5**
CNCH				eS	**Sb**	**02 45 44.9**	**+1.3**
LCND	**La Caada**	**0.75**	**354**	eP	**Pn**	**02 45 33.5**	**-0.5**
LCND				IAML		02 45 50.0	
	comp=Z,2μm,0.3s						
LCND	**La Caada**	**0.75**	**354**	eP	**Pn**	**02 45 33.5**	**-0.5**
LCND				IAML		02 45 50.0	
	comp=Z,2μm,0.3s						
JUCU	**Jucuar¡n**	**0.81**	**328**	eP	**Pn**	**02 45 33.7**	**-1.3**
JUCU	**Jucuar¡n**	**0.81**	**328**	eP	**Pn**	**02 45 33.7**	**-1.3**
BLLM	**Bellamira**	**0.97**	**334**	eP	**Pn**	**02 45 36.5**	**-0.6**
BLLM	**Bellamira**	**0.97**	**334**	eP	**Pn**	**02 45 36.5**	**-0.6**
LCY	**Lacayo**	**0.98**	**331**	eP	**Pn**	**02 45 36.7**	**-0.6**
LCY				eS	**Sb**	**02 45 50.7**	**-0.4**
LCY	**Lacayo**	**0.98**	**331**	eP	**Pn**	**02 45 36.7**	**-0.6**
LCY				eS	**Sb**	**02 45 50.7**	**-0.4**
RANC	**El Ranchito**	**0.99**	**332**	eP	**Pn**	**02 45 36.9**	**-0.5**
RANC				eS	**Sb**	**02 45 51.4**	**0.0**
RANC	**El Ranchito**	**0.99**	**332**	eP	**Pn**	**02 45 36.9**	**-0.5**
RANC				eS	**Sb**	**02 45 51.4**	**0.0**
PACA	**Pacayal**	**1.03**	**331**	eP	**Pn**	**02 45 37.4**	**-0.7**
PACA				eS	**Sb**	**02 45 52.0**	**-0.7**
PACA	**Pacayal**	**1.03**	**331**	eP	**Pn**	**02 45 37.4**	**-0.7**
PACA				eS	**Sb**	**02 45 52.0**	**-0.7**
ALJI	**Alcalda de J**	**1.06**	**316**	eP	**Pn**	**02 45 37.5**	**-0.9**
ALJI	**Alcalda de J**	**1.06**	**316**	eP	**Pn**	**02 45 37.5**	**-0.9**
FAGO	**Alcalda de S**	**1.17**	**345**	eP	**Pn**	**02 45 39.0**	**-0.7**
FAGO	**Alcalda de S**	**1.17**	**345**	eP	**Pn**	**02 45 39.0**	**-0.7**
COEB	**Comit de Eme**	**1.17**	**323**	eP	**Pn**	**02 45 39.3**	**-0.6**
COEB	**Comit de Eme**	**1.17**	**323**	eP	**Pn**	**02 45 39.3**	**-0.6**
TGUH	**Tegucigalpa,Un**	**1.57**	**19**	eP	**Pn**	**02 45 44.9**	**-0.6**
TGUH				eS	**Sn**	**02 46 05.0**	**+0.2**
TGUH	**Tegucigalpa,Un**	**1.57**	**19**	eP	**Pn**	**02 45 44.9**	**-0.6**
TGUH				eS	**Sn**	**02 46 05.0**	**+0.2**
LFRS	**El Faro**	**1.62**	**311**	eP	**Pn**	**02 45 45.2**	**-0.9**
LFRS				eS	**Sn**	**02 46 06.5**	**+0.7**
LBRS	**Las Brisas**	**1.68**	**314**	eP	**Pn**	**02 45 46.7**	**-0.2**
LBRS				eS	**Sn**	**02 46 07.1**	**-0.2**
LFU	**La Fuente**	**1.74**	**313**	eP	**Pn**	**02 45 47.3**	**-0.4**
LFU				eS	**Sn**	**02 46 09.2**	**+0.4**
LFU	**La Fuente**	**1.74**	**313**	eP	**Pn**	**02 45 47.3**	**-0.4**
LFU				eS	**Sn**	**02 46 09.2**	**+0.4**
BOQS	**Boqueron**	**1.85**	**309**	eP	**Pn**	**02 45 49.3**	**-0.1**
BOQS				eS	**Sn**	**02 46 12.7**	**+1.0**
CEVE	**Cerro Verde**	**2.17**	**306**	eP	**Pn**	**02 45 54.1**	**+0.3**
CEVE				eS	**Sn**	**02 46 20.4**	**+0.7**
CEVE				IAML		02 46 24.0	
	comp=Z,390nm,0.2s						
CEVE	**Cerro Verde**	**2.17**	**306**	eP	**Pn**	**02 45 54.1**	**+0.3**
CEVE				eS	**Sn**	**02 46 20.4**	**+0.7**
CEVE				IAML		02 46 24.0	
	comp=Z,390nm,0.2s						

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*SJA **04** 02:49:25.0±0.6, 29.°19S×71.°46W, h41^{km}±111^{km}, ML4.8, MW4.5*

*IDC **04** 02:49:42.3±0.7, 27.°93S×71.°23W, h0^{km}, mb4.1/11, mb1 4.2/14, mb1mx4.1/33, mbtmp4.1/14, ML4.2/3, MS3.4/7, Ms1 3.4/7, ms1mx3.3/22, Error ellipse: s-maj=23.1km s-min=19.1km az=80.0*

*NEIC **04** 02:49:44.7±1.3, 27.°92S±0.°04×71.°2W±0.°1, h55^{km}±5^{km}, Error ellipse: s-maj=14.2km s-min=5.9km az=98.0*

*GUC **04** 02:49:46.4±0.7, 27.°94S×71.°13W, h59^{km}±7^{km}, ML4.3*

ISC 04 02:49:45.9±1.1**, 27.°89S**±0.°04×**71.°21W**±0.°07**, h40**^{km}±10^{km}**, n65,** σ**2.^{s}37**/82**, mb4.3**/15**, 1C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO03	**Copiap**	**0.91**	**71**	⇓iP	**Pn**	**02 50 04.0**	**+1.6**
GO03				i S	**Sn**	**02 50 16.5**	**+2.2**
GO03				IAML		02 50 24.3	
	comp=N,9μm,0.6s						
GO03	**Copiap**	**0.91**	**71**		**Pn**	**02 50 03.1**	**+0.7**
GO03				Sn	**Sn**	**02 50 14.6**	**+0.3**
GO03	**Copiap**	**0.91**	**71**	i P	**Pn**	**02 50 03.8**	**+1.5**
GO03				eS	**Sn**	**02 50 20.7**	**+6.4**
LCO	**Las Campanas**	**1.20**	**158**	Pn	**Pn**	**02 50 05.5**	**-0.9**
LCO				Sn	**Sn**	**02 50 20.5**	**-1.2**
AC05	**El Transito**	**1.25**	**139**	⇓iP	**Pn**	**02 50 08.6**	**+1.6**
AC05				i S	**Sn**	**02 50 24.6**	**+1.9**
AC05				IAML		02 50 27.4	
	comp=N,4μm,0.4s						
CO01	**Juntas del Tor**	**2.29**	**155**	eP	**Pn**	**02 50 24.4**	**+2.9**
CO01				eS	**Sn**	**02 50 51.3**	**+2.7**
CO01				IAML		02 50 56.4	
	comp=N,2μm,0.4s						
GO04	**Tololo Observa**	**2.30**	**171**	⇓iP	**Pn**	**02 50 23.4**	**+1.9**
GO04				i S	**Sn**	**02 50 51.8**	**+3.1**
GO04	**Tololo Observa**	**2.30**	**171**	Pn	**Pn**	**02 50 20.0**	**-1.5**
CO03	**El Pedregal**	**2.97**	**171**	eP	**Pn**	**02 50 32.5**	**+1.9**
CO03				eS	**Sn**	**02 51 08.4**	**+3.3**
CO03				IAML		02 51 19.7	
	comp=E,3μm,0.6s						
GO02	**Mina Guanaco**	**3.08**	**28**	⇑iP	**Pn**	**02 50 34.9**	**+2.6**
GO02				eS	**Sn**	**02 51 12.7**	**+4.5**
GO02				IAML		02 51 29.4	
	comp=N,2μm,0.5s						
GO02	**Mina Guanaco**	**3.08**	**28**	Pn	**Pn**	**02 50 33.6**	**+1.3**
GO02				Sn	**Sn**	**02 51 06.0**	**-2.1**
PB14	**IPOC Station P**	**3.33**	**13**	i P	**Pn**	**02 50 36.5**	**+0.6**
PB14				eS	Sn	02 51 28.7	+14
PB14				IAML		02 51 37.2	
	comp=Z,718nm,0.6s						
CO04	**Los Peladeros**	**4.14**	**177**	eP	**Pn**	**02 50 48.5**	**+1.7**
CO04				eS	**Sn**	**02 51 36.4**	**+2.2**
CO04				IAML		02 52 03.6	
PB10	**IPOC Station P**	**4.40**	**8**		**Pn**	**02 50 49.4**	**-0.8**
PB10				Sn	**Sn**	**02 51 39.0**	**-1.2**
PB10	**IPOC Station P**	**4.40**	**8**	i P	**Pn**	**02 50 49.8**	**-0.4**
PB15	**IPOC Station P**	**4.92**	**19**	i P	**Pn**	**02 50 59.0**	**+1.4**
PB05	**IPOC Station P**	**5.10**	**11**	i P	**Pn**	**02 50 59.4**	**-0.5**
PEL	**Peldehue**	**5.25**	**175**	Pn	**Pn**	**02 51 01.1**	**-0.8**
PEL				Sn	**Sn**	**02 51 58.1**	**-3.2**
PB06	**IPOC Station P**	**5.37**	**16**	i P	**Pn**	**02 51 03.7**	**0.0**
PB04	**IPOC Station P**	**5.62**	**10**		**Pn**	**02 51 06.0**	**-1.1**
PB04				Sn	**Sn**	**02 52 07.9**	**-2.6**
PB04	**IPOC Station P**	**5.62**	**10**	i P	**Pn**	**02 51 06.2**	**-0.9**
LVC	**Limon Verde**	**5.66**	**22**	Pn	**Pn**	**02 51 09.3**	**+1.5**
	comp=Z,9.8nm,0.3s,baz=180,slow=8.0,SNR=26						
LVC				Sn	**Sn**	**02 52 14.3**	**+2.6**
	comp=Z,15nm,0.3s,baz=230,slow=11,SNR=3.7						
LVC				Lg	Lg	02 52 33.6	
	comp=Z,17nm,0.3s,baz=158,slow=19,SNR=9.0						
LVC				LR	LR	02 53 30.2	
	comp=Z,651nm,18.4s,baz=230,slow=40						
LVC	**Limon Verde**	**5.66**	**22**		**Pn**	**02 51 07.8**	**0.0**
LVC					**Sn**	**02 52 11.9**	**+0.2**
PB09	**IPOC Station P**	**6.33**	**17**	i P	**Pn**	**02 51 16.5**	**-0.3**
PB01	**IPOC Station P**	**7.00**	**13**		**Pn**	**02 51 25.1**	**-0.8**
PB01				Sn	**Sn**	**02 52 44.0**	**-0.4**
GO05	**Huala**	**7.12**	**185**	Pn	**Pn**	**02 51 26.6**	**-0.9**
GO05				Sn	**Sn**	**02 52 45.4**	**-1.8**
PB11	**IPOC Station P**	**8.22**	**10**	Pn	**Pn**	**02 51 40.9**	**-1.9**
GO01	**Chusmiza**	**8.39**	**13**		**Pn**	**02 51 45.0**	**-0.4**
MNMC	**Minye Minye**	**8.85**	**10**		**Pn**	**02 51 49.6**	**-1.9**
LPAZ	**La Paz**	**11.90**	**14**	Pn	**Pn**	**02 52 34.0**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=212,slow=6.2,SNR=25						
LPAZ				LR	LR	02 57 40.5	
	comp=Z,181nm,19.4s,baz=140,slow=40						
LPAZ	**La Paz**	**11.90**	**14**		**Pn**	**02 52 33.1**	**-0.5**
CPUP	**Villa Florida**	**12.46**	**86**	Pn	**Pn**	**02 52 42.5**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=251,slow=15,SNR=4.2						
CPUP				Sn	**S**	**02 55 17.7**	**-6.7**
	comp=Z,0.1nm,0.3s,baz=198,slow=19,SNR=1.7						
CPUP				Lg	Lg	02 56 08.2	
	comp=Z,0.3nm,0.3s,baz=162,slow=20,SNR=2.0						
CPUP				LR	LR	02 58 00.0	
	comp=Z,315nm,18.5s,baz=284,slow=40						
CPUP	**Villa Florida**	**12.46**	**86**		**Pn**	**02 52 39.4**	**-1.3**
PLCA	**Paso Flores**	**12.82**	**178**	LR	LR	02 58 09.5	
	comp=Z,232nm,18.6s,baz=24,slow=40						
SIV	**San Ignacio**	**15.11**	**40**	Pn	**Pn**	**02 53 12.4**	**-4.3**
	comp=Z,1.1nm,0.3s,baz=243,slow=11,SNR=19						
SIV				LR	LR	02 58 19.6	
	comp=Z,28nm,21.5s,baz=248,slow=34						
NNA	**Nana**	**16.68**	**340**	LR	LR	02 58 18.0	
	comp=Z,46nm,21.5s,baz=178,slow=31						
SAML	**Samuel**	**20.31**	**23**	P	**P**	**02 54 16.5**	**-2.0**
BDFB	**Brasilia**	**24.70**	**65**	P	**P**	**02 55 05.2**	**+1.8**
	comp=Z,3.7nm,0.7s,baz=249,slow=10,SNR=6.5						
BDFB				LR	LR	03 06 18.7	
	comp=Z,270nm,18.5s,baz=263,slow=40						
BDFB	**Brasilia**	**24.70**	**65**	P	**P**	**02 55 00.9**	**-2.6**
BDFB				IAmb	IAmb	02 55 07.0	
	comp=Z,7.9nm,0.9s						
OTAV	**Otavalo**	**28.82**	**345**		**P**	**02 55 37.9**	**-3.0**
PTGA	**Pitinga**	**29.08**	**24**	P	**P**	**02 55 44.7**	**+2.0**
	comp=Z,2.3nm,0.7s,baz=175,slow=12,SNR=4.3						
RUSC	**La Rusia**	**33.64**	**357**	P	**P**	**02 56 22.5**	**-0.9**
SNAA	**Sanae**	**57.00**	**159**	P	**P**	**02 59 29.4**	**+2.3**
	comp=Z,3.4nm,0.8s,baz=292,slow=9.3,SNR=13						
SNAA	**Sanae**	**57.00**	**159**	P	**P**	**02 59 24.0**	**-3.1**
SNAA				IAmb	IAmb	02 59 30.7	
	comp=Z,5.3nm,1.0s						
TXAR	**Lajitas Array**	**64.83**	**329**	P	**P**	**03 00 24.4**	**+3.6**
	comp=Z,0.4nm,0.7s,baz=152,slow=7.9,SNR=2.4						
LIC	**Lamto**	**72.23**	**73**	eP	**P**	**03 01 10.0**	**+2.7**
	comp=Z,20nm,1.0s						
TIC	**Toumodi**	**72.45**	**72**	eP	**P**	**03 01 11.3**	**+2.7**
KIC	**Kosan Boka**	**72.54**	**73**	eP	**P**	**03 01 12.0**	**+2.9**
	comp=Z,6.6nm,0.5s						
DBIC	**Dimbokro**	**72.61**	**72**	P	**P**	**03 01 12.2**	**+2.7**
	comp=Z,6.9nm,0.8s,baz=210,slow=6.2,SNR=16						
DBIC	**Dimbokro**	**72.61**	**72**	P	**P**	**03 01 06.6**	**-2.9**
HWUT	**Hardware Ranch**	**78.58**	**330**	P	**P**	**03 01 40.7**	**-2.7**
HWUT				IAmb	IAmb	03 01 47.6	
	comp=Z,2.3nm,0.8s						
PDAR	**Pinedale Array**	**78.68**	**332**	P	**P**	**03 01 46.5**	**+2.6**
	comp=Z,0.3nm,0.6s,baz=152,slow=4.0,SNR=3.4						
NVAR	**Mina Array Bea**	**79.33**	**324**	P	**P**	**03 01 50.0**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=149,slow=7.4,SNR=3.7						
ULM	**Lac du Bonnet**	**80.82**	**344**	P	**P**	**03 01 57.5**	**+2.5**
	comp=Z,2.3nm,0.8s,baz=56,slow=4.1,SNR=5.2						
ULM	**Lac du Bonnet**	**80.82**	**344**	P	**P**	**03 01 52.6**	**-2.4**
ULM				IAmb	IAmb	03 01 59.2	
	comp=Z,4.8nm,1.1s						
TOA0	**Torodi Ar. Sit**	**81.47**	**70**	P	**P**	**03 01 56.7**	**-2.6**
TOA0				IAmb	IAmb	03 02 03.2	
	comp=Z,3.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**81.47**	**70**	P	**P**	**03 02 02.1**	**+2.8**
	comp=Z,3.1nm,0.6s,baz=238,slow=4.9,SNR=28						
BOSA	**Boshof**	**82.29**	**118**	P	**P**	**03 02 06.2**	**+2.4**
	comp=Z,1.6nm,0.5s,baz=236,slow=3.6,SNR=5.1						
BOSA	**Boshof**	**82.29**	**118**	P	**P**	**03 02 00.4**	**-3.3**
BOSA				IAmb	IAmb	03 02 08.3	
	comp=Z,6.1nm,1.1s						
SFJD	**Kangerlussuaq**	**95.87**	**8**	P	**P**	**03 03 05.4**	**-2.1**
YKA	**Yellowknife Ar**	**96.52**	**341**	P	**P**	**03 03 12.8**	**+2.4**
	comp=Z,0.2nm,0.7s,baz=139,slow=4.1,SNR=5.9						
ASAR	**Alice Springs**	**123.30**	**208**	PKP	**PKiKP**	**03 08 40.9**	**+1.5**
	comp=Z,0.4nm,0.5s,baz=141,slow=1.9,SNR=5.3						
WRA	**Warramunga Arr**	**126.40**	**210**	PKP	**PKiKP**	**03 08 47.5**	**+2.0**
	comp=Z,1.2nm,0.6s,baz=154,slow=1.7,SNR=16						
ZALV	**Zalesovo Beam**	**148.59**	**27**	PKPbc	**PKPab**	**03 09 31.4**	**-0.2**
	comp=Z,4.9nm,0.7s,baz=296,slow=3.6,SNR=11						
MKAR	**Makanchi Array**	**151.93**	**41**	PKPbc	**PKiKP**	**03 09 38.6**	**+1.9**
	comp=Z,2.2nm,0.8s,baz=290,slow=1.6,SNR=8.4						

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*BJI **04** 02:59:31.8±0.0, 71.°40N×9.°35W, h4^{km}, mB5.1/29, mb4.8/41, Ms4.9/18, Ms7 4.5/19*

*MOS **04** 02:59:33.5±1.1, 71.°30N×9.°00W, h10^{km}, mb4.9/50, MS4.0/6, Error ellipse: s-maj=11.4km s-min=4.2km az=100.6*

*IDC **04** 02:59:34.2±0.4, 71.°32N×8.°98W, h0^{km}, mb4.5/29, mb1 4.7/34, mb1mx4.5/55, mbtmp4.5/34, ML4.3/4, MS4.0/36, Ms1 4.0/36, ms1mx3.9/45, Error ellipse: s-maj=10.4km s-min=5.0km az=61.0*

*REY **04** 02:59:36.0, 70.°88N×9.°33W, h10^{km}*

*BER **04** 02:59:35.3±1.5, 71.°32N×9.°03W, h6^{km}±19^{km}, ML3.6, ML4.8(NAO), Confirmed Earthquake*

*NEIC **04** 02:59:35.2±1.1, 71.°24N±0.°06×9.°0W±0.°2, h10^{km}±1^{km}, mb4.9/282, Error ellipse: s-maj=10.5km s-min=9.9km az=178.0*

*NAO **04** 02:59:35.6±1.4, 71.°31N×8.°25W, ML4.8*

*GCMT **04** 02:59:36.2±0.2, 71.°22N±0.°02×8.°89W±0.°03, h28^{km}, MW5.0/114, Moment Tensor Solution. s42,c45; s114,c176; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.19±.16; $M_{\theta\theta}$2.99±.13; $M_{\phi\phi}$-1.80±.10; $M_{r\theta}$0.11±.18; $M_{\theta\phi}$3.24±.09; $M_{\phi r}$0.44±.17; Best double couple: $M_0$4.06200×10^{16} NP1:ϕ_s108.00000°, δ82.00000°, λ-4.00000°. NP2:ϕ_s199.00000°, δ86.00000°, λ-172.00000°. Principal axes: T 4.6390, Plg3.0000°, Azm333.0000°; N -1.1540, Plg81.0000°, Azm224.0000°; P -3.4850, Plg9.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DNK **04** 02:59:38.4±5.8, 71.°40N×9.°56W, h15^{km}±83^{km}, ML3.7, Hypocentre not reviewed by the ISC*

*BGR **04** 02:59:40.4±0.0, 70.°87N×7.°78W, h10^{km}, mb4.9*

*DNK **04** 02:59:40.5±3.1, 71.°60N×9.°38W, h115^{km}±34^{km}, mb4.8, Hypocentre not reviewed by the ISC*

ISC 04 02:59:35.0±0.3**, 71.°25N**±0.°03×**9.°00W**±0.°03**, h10**^{km}**, n765,** σ**1.^{s}93**/710**, mb4.9**/234**, MS4.0**/39**, 68C-20D, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNW	**Jan Mayen West**	**0.29**	**140**	⇑iP	**Pb**	**02 59 41.9**	**-0.5**
JNW				eP	**Pb**	**02 59 41.9**	**-0.5**
JNW				IAML		02 59 49.4	
	comp=Z,18μm,0.5s						
JMIC	**Jan Mayen**	**0.31**	**149**	Pg	**Pb**	**02 59 42.2**	**-0.5**
JMIC				Lg	Lg	02 59 46.7	
JMIC	**Jan Mayen**	**0.31**	**149**	Pg	**Pb**	**02 59 42.2**	**-0.5**
	comp=Z,9μm,0.3s,baz=183,slow=1.9,SNR=6235						
JMIC				Lg	Lg	02 59 46.5	
	comp=Z,14μm,0.3s,baz=196,slow=19,SNR=80						
JMIC				LR	LR	03 00 02.3	
	comp=Z,43μm,21.6s,baz=313,slow=76						
JMIC	**Jan Mayen**	**0.31**	**149**	⇑iP	**Pb**	**02 59 42.1**	**-0.6**
JMIC				eS	**Sg**	**02 59 46.7**	**+1.3**
JMIC				IAML		02 59 48.5	
	comp=Z,44μm,0.3s						
JMI	**Jan Mayen**	**0.34**	**165**	eP	**Pb**	**02 59 42.6**	**-0.4**
JMI				⇑iP	**Pb**	**02 59 42.7**	**-0.4**
JMI				eS	**Sg**	**02 59 47.5**	**+1.3**
JMI				eS	**Sg**	**02 59 47.5**	**+1.3**
JMI				IAML		02 59 50.2	
	comp=Z,13μm,0.4s						
JMI				IAML		02 59 50.2	
	comp=Z,13μm,0.4s						

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JNE   Jan Mayen East      0.35 139  eP      Pg     02 59 42.5 +0.6
JNE                                 eP      Pg     02 59 42.6 +0.6
JNE                                  IAML          02 59 55.6
      comp=Z,14µm,0.4s
SCO   Scoresbysund        4.33 266  i P     Pn     03 00 41.0 +0.2
      comp=Z,34nm,0.8s
SCO   Scoresbysund        4.33 266  i P     Pn     03 00 41.0 +0.2
SCO                                 i P     Pn     03 00 41.0 +0.2
SCO                                  IAML          03 01 49.6
      comp=Z,5.6nm,0.4s
SCO   Scoresbysund        4.33 266          Pn     03 00 40.5  -0.2
SCO                                  Sn     Sn     03 01 30.2  -1.0
SCO   Scoresbysund        4.33 266   P      Pn     03 00 40.5  -0.2
SCO                                                03 01 30.2
SCO   Scoresbysund        4.33 266  i P            03 00 41.0
SCO                                 i P            03 00 41.1
SCO                                  IAmb          03 00 47.6
      comp=Z,34nm,0.8s
SCO   Scoresbysund        4.33 266  i P            03 00 41.0
SCO                                 i P            03 00 41.0
SCO                                  IAML          03 01 49.6
      comp=Z,5.6nm,0.4s
DBG   Daneborg            4.53 318  eP      Pn     03 00 41.2  -2.2
DBG                                 i S     Sn     03 01 29.3  -6.7
DBG                                  IAML          03 01 33.2
      comp=Z,89nm,0.3s
DBG   Daneborg            4.53 318  i P            03 00 41.6
DBG                                  IAmb          03 00 42.9
      comp=Z,357nm,0.7s
DBG   Daneborg            4.53 318  eP             03 00 41.2
DBG                                 i S            03 01 29.3
DBG                                  IAML          03 01 33.2
      comp=Z,89nm,0.3s
ILEI  Leirhofn            5.57 213   P      Pn     03 00 54.3  -3.5
      baz=214
ILEI                                 S      Sn     03 01 57.6  -4.1
      baz=214
IHED  Heoinshofoi         6.01 214   P      Pn     03 01 00.6  -3.2
      baz=215
IHED                                 S      Sn     03 02 08.1  -4.5
      baz=215
IDIM  Dimmadalss          6.05 212   P      Pn     03 01 02.1  -2.3
      baz=213
IDIM                                 S      Sn     03 02 09.8  -3.8
      baz=213
IBRE  Brettingsstaoi      6.09 216   P      Pn     03 01 02.2  -2.7
      baz=218
IBRE                                 S      Sn     03 02 10.1  -4.3
      baz=218
IGHA  Grjothals           6.11 211   P      Pn     03 01 02.1  -3.1
      baz=212
IGHA                                 S      Sn     03 02 12.1  -3.0
      baz=212
DAG   Danmarks Havn       6.14 339⇑iP       Pn     03 01 04.2  -1.4
      comp=Z,279nm,0.7s
DAG                                 i              03 02 09.7
DAG   Danmarks Havn       6.14 339  eP      Pn     03 01 04.3  -1.4
DAG                                 i S     Sn     03 02 08.2  -7.5
DAG                                  IAML          03 02 16.1
      comp=Z,90nm,0.3s
DAG   Danmarks Havn       6.14 339⇑iP       Pn     03 01 04.2  -1.4
DAG                                 i              03 02 09.7
DAG                                  pmax   pmax
      comp=Z,280nm,0.7s
DAG   Danmarks Havn       6.14 339⇑iP              03 01 04.2
DAG                                  IAmb          03 01 05.0
      comp=Z,279nm,0.7s
DAG                                 i              03 02 09.7
DAG   Danmarks Havn       6.14 339  eP             03 01 04.3
DAG                                 i S            03 02 08.2
DAG                                  IAML          03 02 16.1
      comp=Z,90nm,0.3s
IGRA  Granastaoir         6.21 214   P      Pn     03 01 03.7  -2.8
      baz=215
IGRA                                 S      Sn     03 02 13.6  -3.8
      baz=215
IGRS  Grimsstaoir         6.22 208   P      Pn     03 01 04.1  -2.6
      baz=209
IGRS                                 S      Sn     03 02 15.4  -2.3
      baz=209
ISIG  Siglufjorour        6.28 220   P      Pn     03 01 05.9  -1.6
      baz=221
ISIG                                 S      Sn     03 02 16.0  -3.2
      baz=221
IREN  Reynihlio           6.33 211   P      Pn     03 01 06.1  -2.2
      baz=212
IREN                                 S      Sn     03 02 18.0  -2.6
      baz=212
IHLA  Hella               6.34 217   P      Pn     03 01 05.9  -2.4
      baz=218
IHLA                                 S      Sn     03 02 16.8  -3.8
      baz=218
IMEL  Melhnausar          6.37 210   P      Pn     03 01 06.0  -2.7
      baz=211
IMEL                                 S      Sn     03 02 19.0  -2.4
      baz=211
IHRN  Hraun               6.56 223   P      Pn     03 01 10.7  -0.6
      baz=225
ISVA  Svartarkot          6.68 211   P      Pn     03 01 10.8  -2.3
      baz=212
IADA  Aoalbol             6.72 205   P      Pn     03 01 11.4  -2.3
      baz=205
IADA                                 S      Sn     03 02 27.6  -2.5
      baz=205
IASK  Askja               6.85 208   P      Pn     03 01 13.1  -2.3
      baz=209
IASK                                 S      Sn     03 02 31.2  -2.1
      baz=209
IMKO  Mokollar            6.87 207   P      Pn     03 01 13.6  -2.1
      baz=207
IMKO                                 S      Sn     03 02 32.1  -1.7
      baz=207
IVSH  V-Sauoahnukur       6.95 205   P      Pn     03 01 14.4  -2.3
      baz=205
BORG  Borgarnes           7.99 221   Pn     Pn     03 01 31.9 +0.9
      comp=Z,0.8nm,0.3s,baz=35,slow=12,SNR=6.1
BORG                                 Sn     Sn     03 03 01.9 +0.7
      comp=Z,3.1nm,0.3s,baz=197,slow=20,SNR=10
BORG                                 LR     LR     03 03 31.2
      comp=Z,457nm,18.5s,baz=46,slow=30
BORG  Borgarnes           7.99 221   Pn     Pn     03 01 30.7  -0.2
BORG                                        Sn     03 03 01.1   0.0
LOF   Lofoten             8.41 101   Pn     Pn     03 01 34.1  -2.6
LOF   Lofoten             8.41 101  eP      Pn     03 01 34.8  -2.0
LOF                                 eS      Sn     03 03 05.3  -6.2
HSPB  Hornsund (broa      8.77   38  Pn     Pn     03 01 41.1  -0.6
HSPB  Hornsund (broa      8.77   38 eP      Pn     03 01 41.5  -0.1
HSPB  Hornsund (broa      8.77   38  Pn     Pn     03 01 41.1  -0.6
HSPB  Hornsund (broa      8.77   38 eP      Pn     03 01 41.0  -0.6
HSPB  Hornsund (broa      8.77   38 eP      Pn     03 01 41.5  -0.1
BJO1  Bjornoya            8.81   56  Pn     Pn     03 01 42.5 +0.3
BJO1  Bjornoya            8.81   56 eP      Pn     03 01 43.3 +1.1
BJO1  Bjornoya            8.81   56 eP      Pn     03 01 42.9 +0.7
STEI  Steigen             9.06 100  eP      Pn     03 01 44.0  -1.5
STEI                                eS      Sn     03 03 18.8  -8.6
BRBA  Barentsburg A       9.10   31  Pn     Pn     03 01 45.7  -0.3
BRBA  Barentsburg A       9.10   31  Pn     Pn     03 01 45.7  -0.3
BRBB  Barentsburg B       9.12   31  Pn     Pn     03 01 46.1  -0.2
BRBB  Barentsburg B       9.12   31  Pn     Pn     03 01 46.1  -0.2
SUMG  Summit              9.20 292  i P     Pn     03 01 48.8 +1.0
SUMG                                eS      Sn     03 03 27.1  -4.3
SUMG  Summit              9.20 292  eP      Pn     03 01 48.8 +1.0
SUMG                                eS      Sn     03 03 27.1  -4.3
SUMG                                 IAML          03 03 32.9
      comp=Z,27nm,0.4s
SUMG  Summit              9.20 292          Pn     03 01 47.9   0.0
SUMG                                 Sn     Sn     03 03 29.3  -2.1
SUMG  Summit              9.20 292  i P     Pn     03 01 49.1 +1.2
SUMG  Summit              9.20 292  i P            03 01 49.1
SUMG  Summit              9.20 292  eP             03 01 48.8
SUMG                                eS             03 03 27.1
SUMG                                 IAML          03 03 32.9
      comp=Z,27nm,0.4s
KONS  Konsvik             9.26 110   Pn     Pn     03 01 46.0  -2.2
KONS  Konsvik             9.26 110  eP      Pn     03 01 46.6  -1.7
KONS                                eS      Sn     03 03 23.1  -9.1
KBS   Kingsbay            9.31   25  Pn     Pn     03 01 48.1  -1.0
KBS                                  Sn     Sn     03 03 26.8  -6.8
KBS   Kingsbay            9.31   25 eP      Pn     03 01 48.0  -1.0
KBS                                 eS      Sn     03 03 24.3  -9.3
KBS                                  IAML          03 03 32.4
      comp=Z,39nm,0.3s
KBS   Kingsbay            9.31   25 eP      Pn     03 01 47.7  -1.3
KBS                                 eS      Sn     03 03 23.6   -10
KBS   Kingsbay            9.31   25         Pn     03 01 48.1  -1.0
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KBS   Kingsbay            9.31   25deP      Pn     03 01 48.0  -1.0
KBS   Kingsbay            9.31   25 i P            03 01 48.1
KBS                                  IAmb          03 01 50.3
      comp=Z,166nm,0.3s
KBS   Kingsbay            9.31   25 i P            03 01 48.1
KBS                                 i S            03 03 24.3
KBS                                  IAML          03 03 32.4
      comp=Z,39nm,0.3s
STOK  Stokkvaagen         9.33 111   Pn     Pn     03 01 48.6  -0.8
STOK                                 Sn     Sn     03 03 26.1  -8.1
STOK  Stokkvaagen         9.33 111  eP      Pn     03 01 47.9  -1.4
STOK                                eS      Sn     03 03 24.6   -10
TRO   Tromso              9.46   86  Pn     Pn     03 01 48.9  -2.1
TRO   Tromso              9.46   86 eP      Pn     03 01 48.7  -2.3
SPA0  Spitsbergen Ar      9.53   32  Pn     Pn     03 01 52.7 +0.7
      baz=217,slow=18
SPA0  Spitsbergen Ar      9.53   32  Pn     Pn     03 01 52.7 +0.7
      baz=217,slow=18
SPA0  Spitsbergen Ar      9.53   32⇑iP      Pn     03 01 52.8 +0.7
SPA0                                eS      Sn     03 03 33.5  -5.5
SPA0  Spitsbergen Ar      9.53   32         Pn     03 01 52.6 +0.5
SPITS Spitsbergen Ar      9.53   32  Pn     Pn     03 01 52.8 +0.7
      baz=210,slow=18,SNR=242
SPITS                                Sn     Sn     03 03 36.8  -2.2
      baz=224,slow=22,SNR=3.6
SPITS                                LR     LR     03 04 44.5
      comp=Z,1µm,19.0s,baz=200,slow=33
MOR8  Moi Rana            9.87 110  eP      Pn     03 01 55.7  -1.1
KIF   Kilpisjarvi        10.32   88  Pn     Pn     03 02 01.9  -1.0
KIF   Kilpisjarvi        10.32   88  Pn     Pn     03 02 01.9  -1.0
NSS   Namsos             10.33 120  eP      Pn     03 02 00.6  -2.4
NSS                                 eS      Sn     03 03 48.0   -11
NOR   Nord               10.54 354   Pn     Pn     03 02 04.1  -1.7
NOR                                  Sn     Sn     03 03 56.8  -7.0
NOR   Nord               10.54 354  i P     Pn     03 02 04.0  -1.7
      comp=Z,325nm,0.8s
NOR                                 i              03 03 54.6
NOR   Nord               10.54 354  i P     Pn     03 02 04.1  -1.7
NOR                                 i              03 02 05.8
NOR                                 eS      Sn     03 03 55.2  -8.5
NOR   Nord               10.54 354  i P     Pn     03 02 04.1  -1.7
NOR                                 i              03 02 05.9
NOR                                 eS      Sn     03 03 55.3  -8.5
NOR                                  IAML          03 04 00.9
      comp=Z,54nm,0.4s
NOR   Nord               10.54 354  i P     Pn     03 02 04.1  -1.7
NOR   Nord               10.54 354  i P            03 02 04.0
NOR                                  IAmb          03 02 06.4
      comp=Z,326nm,0.8s
NOR                                 i              03 03 54.6
NOR   Nord               10.54 354  i P            03 02 04.1
NOR                                 i              03 02 05.9
NOR                                 eS             03 03 55.3
NOR                                  IAML          03 04 00.9
      comp=Z,54nm,0.4s
HAMF  Hammerfest         10.62   78  Pn     Pn     03 02 06.4  -0.5
HAMF  Hammerfest         10.62   78 eP      Pn     03 02 06.1  -0.8
HOPEN Hopen              10.65   45  Pn     Pn     03 02 08.0 +0.6
HOPEN Hopen              10.65   45 eP      Pn     03 02 07.8 +0.4
HOPEN Hopen              10.65   45 eP      Pn     03 02 07.9 +0.6
MOL   Molde              10.82 135  eP      Pn     03 02 09.1  -0.6
TBLU  Trondheim          10.89 128  eP      Pn     03 02 08.9  -1.8
TBLU                                eS      Sn     03 04 00.3   -12
AKN   Aaknes             11.04 138   Pn     Pn     03 02 09.2  -3.6
AKN                                  Sn     Sn     03 04 04.8   -11
AKN   Aaknes             11.04 138   Pn     Pn     03 02 09.2  -3.6
AKN                                  Sn     Sn     03 04 04.8   -11
KTK1  Kautokeino         11.11   86 eP      Pn     03 02 12.7  -0.9
FOO   Floro              11.16 143  eP      Pn     03 02 11.7  -2.7
FOO                                 eS      Sn     03 04 07.0   -12
HEF   Hetta              11.53   88  Pn     Pn     03 02 18.2  -1.1
HEF   Hetta              11.53   88  Pn     Pn     03 02 18.2  -1.1
LRW   Lerwick            11.60 160  eP      Pn     03 02 20.7 +0.3
SUE   Sulen              11.61 145  eP      Pn     03 02 16.7  -3.8
SUE                                 eS      Sn     03 04 17.5   -12
ARA0  ARCESS Array S     11.61   82  Pn     Pn     03 02 20.1  -0.4
      baz=291,slow=12
ARA0  ARCESS Array S     11.61   82  Pn     Pn     03 02 20.1  -0.4
      baz=291,slow=12
ARCES ARCESS Array B     11.61   82  Pn     Pn     03 02 19.9  -0.6
      comp=Z,1.5nm,0.3s,baz=291,slow=12,SNR=99
ARCES                                LR     LR     03 06 12.5
      comp=Z,552nm,18.9s,baz=294,slow=34
ARE0  ARCESS Array S     11.61   82 eP      Pn     03 02 19.9  -0.5
ARE0  ARCESS Array S     11.61   82         Pn     03 02 20.3  -0.2
DOMB  Dombas             11.63 134  eP      Pn     03 02 18.4  -2.4
SAN1  Sandwick           11.71 160  eP      Pn     03 02 21.9   0.0
HYA   Hoyanger           11.78 142  eP      Pn     03 02 20.0  -2.9
KEV   Kevo               12.00   80  Pn     Pn     03 02 25.8 +0.1
KEV   Kevo               12.00   80  Pn     Pn     03 02 25.8 +0.1
KEV   Kevo               12.00   80         Pn     03 02 25.7  -0.1
KEV   Kevo               12.00   80  P      Pn     03 02 25.7  -0.1
ASK   Askoy              12.22 145  eP      Pn     03 02 25.6  -3.3
ISOG  Isortoq, Green     12.31 257  eP             03 02 32.9
BER   Bergen             12.34 145  eP      Pn     03 02 27.3  -3.1
SKAR  Skarslia           12.66 138  eP      Pn     03 02 31.7  -3.3
NC204 NORSAR Array S     12.70 132          Pn     03 02 33.9  -1.5
NC303 NORSAR Array S     12.89 131          Pn     03 02 35.7  -2.3
NBO00 NORSAR Array S     12.92 133          Pn     03 02 37.1  -1.3
NB2   NORSAR Subarra     13.01 132   Pn     Pn     03 02 36.5  -3.2
NB2   NORSAR Subarra     13.01 132   Pn     Pn     03 02 36.5  -3.2
NOA   NORSAR Array B     13.01 132   Pn     Pn     03 02 35.8  -3.9
      comp=Z,0.1nm,0.3s,baz=323,slow=13,SNR=10
NOA                                  Sn     Sn     03 04 56.9  -7.5
      comp=Z,0.1nm,0.3s,baz=331,slow=21,SNR=4.0
NOA                                  LR     LR     03 07 12.9
      comp=Z,443nm,19.4s,baz=325,slow=35
NB201 NORSAR Array S     13.02 132   Pn     Pn     03 02 38.8  -1.0
ODD1  Odda               13.02 143  eP      Pn     03 02 36.7  -3.1
NC405 NORSAR Array S     13.07 131          Pn     03 02 40.0  -0.5
NAO01 NORSAR Array S     13.11 133          Pn     03 02 41.2 +0.2
NC602 NORSAR Array S     13.36 132          Pn     03 02 44.2  -0.2
NRA0  NORESS Array S     13.36 132   Pn     Pn     03 02 40.6  -3.7
NRA0  NORESS Array S     13.36 132   Pn     Pn     03 02 40.6  -3.7
BLS5  Blasjo             13.45 144  eP      Pn     03 02 42.6  -3.0
KONO  Kongsberg          13.88 138   Pn     Pn     03 02 50.6  -0.8
KONO  Kongsberg          13.88 138⇑eP       Pn     03 02 50.8  -0.6
KONO                                 pmax   pmax
      comp=Z,82nm,2.5s
MDO   Dochfour           14.01 170  eP      Pn     03 02 53.1  -0.1
ILULI Ilulissat          14.17 282          Pn     03 02 54.5  -0.9
ILULI Ilulissat          14.17 282   P      Pn     03 02 54.5  -0.9
KULLO Kullorsuaq         14.20 306⇓iP       Pn     03 02 51.3  -4.5
      comp=Z,50nm,0.9s
KULLO Kullorsuaq         14.20 306⇓iP       Pn     03 02 51.3  -4.5
KULLO                                pmax   pmax
      comp=Z,50nm,0.9s
KULLO Kullorsuaq         14.20 306⇓iP              03 02 51.3
KULLO                                IAmb          03 02 52.4
      comp=Z,50nm,0.9s
UPNV  Upernavik          14.34 298  i P            03 02 54.5
UPNV                                 IAmb          03 02 58.7
      comp=Z,12nm,0.8s
HFS   Hagfors            14.41 129   Pn     Pn     03 02 55.5  -3.3
      baz=321,slow=18
HFS   Hagfors            14.41 129   Pn     Pn     03 02 56.0  -2.8
      comp=Z,0.4nm,0.3s,baz=328,slow=10,SNR=14
HFS   Hagfors            14.41 129   Pn     Pn     03 02 55.5  -3.3
      baz=321,slow=18
SNART Snartemo           14.60 144  i P            03 02 58.8
APA0  Apatity Array      14.95   84  P      Pn     03 03 04.9  -1.1
      baz=305,slow=9.3
APA0  Apatity Array      14.95   84  P      Pn     03 03 04.9  -1.1
      baz=305,slow=9.3
APA   Apatity            15.10   83⇑iP      Pn     03 03 07.8  -0.3
APA                                 i              03 05 54.8
APA                                  pmax   pmax
      comp=Z,14nm,1.0s
APA                                  MLR    MLR
      comp=Z,1µm,11.0s
SFJD  Kangerlussuaq      15.18 274  i P     Pn     03 03 07.3  -1.7
SFJD  Kangerlussuaq      15.18 274  i P     Pn     03 03 07.3  -1.7
SFJD  Kangerlussuaq      15.18 274  i P            03 03 07.3
LVZ   Lovozero           15.32   81         Pn     03 03 08.4  -2.6
LVZ                                  IAmb   IAmb   03 03 13.0
      comp=Z,102nm,1.5s
LVZ   Lovozero           15.32   81⇑eP      Pn     03 03 09.9  -1.1
LVZ                                  pmax   pmax
      comp=Z,80nm,1.7s
ESY   Stoneypath         15.64 167  eP      Pn     03 03 14.8  -0.3
ZFI2  Zemlya Franca-     15.73   30 eP      Pn     03 03 17.0 +0.8
      comp=Z,43nm,1.0s
ZFI2                                eS      Sn     03 06 04.4  -5.8
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EKA   Eskdalemuir Ar     16.18 168   P      Pn     03 03 21.9  -0.2
EKA   Eskdalemuir Ar     16.18 168   Pn     Pn     03 03 21.8  -0.4
      baz=354,slow=13,SNR=20
EKA                                  Sn     Sn     03 06 13.8  -7.6
      baz=359,slow=24,SNR=3.7
EKA   Eskdalemuir Ar     16.18 168   P      Pn     03 03 21.9  -0.2
ESK   Eskdalemuir        16.20 168   P      Pn     03 03 22.8 +0.5
ESK                                  IAmb   IAmb   03 03 28.2
      comp=Z,167nm,1.4s
ESK   Eskdalemuir        16.20 168   P      Pn     03 03 22.8 +0.5
ESK                                  pmax   pmax
      comp=Z,167nm,1.4s
TULEG Thule              16.66 315   Pn     Pn     03 03 23.0  -5.1
TULEG Thule              16.66 315  i P            03 03 22.7
TULEG                                IAmb          03 03 25.0
      comp=Z,122nm,0.8s
MUD   Monsted U'grnd     16.74 143  i P     P      03 03 31.7 +0.2
      comp=Z,27nm,1.0s
MUD   Monsted U'grnd     16.74 143  i P     P      03 03 31.7 +0.2
MUD                                  pmax   pmax
      comp=Z,27nm,1.0s
MUD   Monsted U'grnd     16.74 143  i P            03 03 31.8
MUD                                  IAmb          03 03 34.1
      comp=Z,27nm,1.0s
EDMD  Edmundbyers        16.77 166  eP      Pn     03 03 30.3 +0.7
EDMD                                 IAmb   IAmb   03 03 34.1
      comp=Z,332nm,1.5s
FIA0  FINESS Array S     16.86 108   P      Pn     03 03 29.8  -0.9
      baz=318,slow=12
FIA0  FINESS Array S     16.86 108   P      Pn     03 03 29.8  -0.9
      baz=318,slow=12
FIA1  FINESS Array S     16.86 108          Pn     03 03 30.4  -0.2
FINES FINESS Array B     16.86 108   Pn     Pn     03 03 29.8  -0.9
      comp=Z,2.6nm,0.3s,baz=317,slow=11,SNR=75
FINES                                LR     LR     03 08 30.9
      comp=Z,225nm,21.8s,baz=316,slow=32
KESW  Keswick, Cumbr     16.93 168  eP      Pn     03 03 32.6 +0.9
KESW                                 IAmb   IAmb   03 03 36.4
      comp=Z,200nm,1.1s
GDLE  Glaisdale, N Y     17.27 164   IAmb   IAmb   03 03 39.8
      comp=Z,172nm,1.0s
SLVR  Solovky            17.38   89 eP      Pn     03 03 33.8  -3.4
      comp=Z,92nm,1.6s
NRS   Narsarsuaq         17.49 253   Pn     Pn     03 03 37.0  -1.6
NRS   Narsarsuaq         17.49 253   P      Pn     03 03 37.0  -1.6
NRS                                  pmax   pmax
      comp=Z,43nm,1.1s
HPK   Haverah Park       17.66 166  eP      Pn     03 03 40.8   0.0
COP   Copenhagen         18.13 138⇑iP       Pn     03 03 46.6 +0.1
      comp=Z,75nm,0.8s
COP   Copenhagen         18.13 138⇑iP       Pn     03 03 46.6 +0.1
COP                                  pmax   pmax
      comp=Z,75nm,0.8s
COP   Copenhagen         18.13 138⇑iP              03 03 46.7
COP                                  IAmb          03 03 48.7
      comp=Z,75nm,0.8s
LBWR  Ladybower, Pea     18.21 166  eP      P      03 03 47.8   0.0
LBWR                                 IAmb   IAmb   03 03 51.0
      comp=Z,422nm,1.3s
STNC  Stoke              18.48 167  eP      Pn     03 03 51.2 +0.4
STNC                                 IAmb   IAmb   03 03 57.2
      comp=Z,127nm,1.2s
TMCR  Tamitsa            18.71   89 eP      P      03 03 51.5  -1.7
TMCR  Tamitsa            18.71   89 eP      P      03 03 52.7  -0.4
TMCR                                e              03 07 23.1
TMCR                                 pmax   pmax
      comp=Z,33nm,0.9s
HLM1  Long Mynd          19.00 168  eP      P      03 03 56.6 +0.1
HLM1                                 IAmb   IAmb   03 04 00.1
      comp=Z,44nm,0.9s
WACR  West Acre          19.09 162  eP      P      03 03 57.3  -0.1
WACR                                 IAmb   IAmb   03 03 58.0
      comp=Z,267nm,0.8s
BSD   Bornholm Skovb     19.21 135⇑iP       P      03 03 57.7  -1.0
      comp=Z,41nm,0.8s
BSD   Bornholm Skovb     19.21 135⇑iP       P      03 03 57.7  -1.0
BSD                                  pmax   pmax
      comp=Z,41nm,0.8s
BSD   Bornholm Skovb     19.21 135⇑iP              03 03 57.8
BSD                                  IAmb          03 03 59.4
      comp=Z,41nm,0.8s
BSEG  Bad Segeberg       19.34 144  eP      P      03 04 00.7 +0.6
      comp=Z,41nm,1.0s,baz=345,slow=11
VSU   Vasula             19.44 113deP       P      03 04 00.8  -0.4
VSU                                  pmax   pmax
      comp=Z,169nm,1.3s
PUL   Pulkovo            19.48 106⇑eP       Pn     03 04 02.5  -0.3
MCH1  Michaelchurch      19.52 169  eP      P      03 04 02.0   0.0
MCH1                                 IAmb   IAmb   03 04 03.6
      comp=Z,56nm,0.9s
MONM  Monmouth           19.68 169  eP      P      03 04 03.3  -0.6
STRD  Stroud             19.79 167  eP      P      03 04 05.2 +0.1
STRD                                 IAmb   IAmb   03 04 08.9
      comp=Z,272nm,1.7s
PBUR  Paburge            20.15 123  eP      P      03 04 09.3 +0.4
RETH  Rethem/Aller,      20.31 147  eP      P      03 04 11.3 +0.6
      comp=Z,45nm,1.2s,baz=345,slow=11
IBBN  Ibbenburen         20.45 150  eP      P      03 04 12.9 +0.7
      comp=Z,215nm,2.3s,baz=345,slow=11
LSH   Leshukonskoye      20.70   80 eP      P      03 04 13.3  -1.5
      comp=Z,88nm,1.2s
KLNR  Kaliningrad        20.96 127ceP       P      03 04 17.6  -0.1
KLNR                                 pmax   pmax
      comp=Z,143nm,0.8s
BDSL  Dessel             21.10 155   P      P      03 04 20.1 +0.8
BMOL  Mol                21.11 155   P      P      03 04 19.4 +0.1
ASSE  Asse, Remlinge     21.13 145  eP      P      03 04 19.8 +0.4
      comp=Z,93nm,1.2s,baz=345,slow=11
PABE  Paberze            21.16 121  eP      P      03 04 20.2 +0.3
BUG   Bochum--Univer     21.21 151  eP      P      03 04 21.1 +0.7
      comp=Z,252nm,1.7s,baz=345,slow=11
CLZ   Clausthal          21.35 146  eP      P      03 04 22.4 +0.4
      comp=Z,62nm,1.2s,baz=345,slow=11
RUE   Ruedersdorf        21.41 140  eP      P      03 04 23.3 +0.7
RUE   Ruedersdorf        21.41 140  eP      P      03 04 22.9 +0.4
      comp=Z,135nm,1.2s,baz=345,slow=11
UCC   Uccle              21.42 156  ⇑P      P      03 04 22.4  -0.2
      comp=Z,73nm,0.8s
GKP   Gorka Klasztor     21.45 133  eP      P      03 04 23.4 +0.5
GKP   Gorka Klasztor     21.45 133  eP      P      03 04 23.4 +0.5
GTTG  Gottingen          21.56 146  eP      P      03 04 24.5 +0.3
      comp=Z,88nm,1.5s,baz=345,slow=11
KLMR  Klimovskoe         21.57   94 eP      P      03 04 20.1  -4.1
      comp=Z,568nm,1.6s
KLMR  Klimovskoe         21.57   94d iP     P      03 04 23.4  -0.7
KLMR                                 pmax   pmax
      comp=Z,141nm,1.1s
KLMR                                 MLR    MLR
      comp=Z,528nm,13.0s
KLMR  Klimovskoe         21.57   94⇓iP      P      03 04 23.5  -0.7
KLMR                               ⇑iP      P      03 04 23.5  -0.7
KLMR                               ⇑iP      P      03 04 23.5  -0.7
KLMR                                 AMP           03 04 24.8
      comp=Z,141nm,1.1s
KLMR                                 LQ     LQ     03 09 57.1
KLMR                                 LQ     LQ     03 09 57.1
KLMR                                 LR     LR     03 11 18.6
KLMR                                 AMP           03 11 55.4
      comp=Z,528nm,13.0s
BRQR  Ronquire           21.59 157  ⇑P      P      03 04 24.2  -0.3
      comp=Z,49nm,0.9s
IZAR  Zarasai            21.59 118  eP      P      03 04 25.1 +0.5
BEBN  Eben Emael         21.60 154   P      P      03 04 25.1 +0.5
      comp=Z,194nm,1.2s
ISAL  Salakas            21.71 118  eP      P      03 04 25.6  -0.2
BLCH  La Chartreuse      21.74 154  ⇑P      P      03 04 26.6 +0.5
      comp=Z,86nm,1.2s
BBOU  Bougnies           21.77 157  ⇑P      P      03 04 26.7 +0.4
      comp=Z,124nm,1.2s
BSTI  Sart Tilman        21.79 154  ⇑P      P      03 04 27.2 +0.5
      comp=Z,17nm,1.1s
MEM   Membach            21.83 154  ⇑P      P      03 04 27.3 +0.3
      comp=Z,104nm,1.1s
BCLA  Clavier            21.91 155  ⇑P      P      03 04 28.2 +0.2
      comp=Z,49nm,1.1s
BGES  Gesves             21.92 155  ⇑P      P      03 04 28.1   0.0
BMRD  Maredsous          21.95 156   P      P      03 04 28.6 +0.2
      comp=Z,44nm,1.1s
AHRW  Bad Neuenahr-A     22.05 152  eP      P      03 04 28.6  -0.8
      comp=Z,108nm,1.3s,baz=345,slow=11
BHOU  Houvegnez          22.07 154  ⇑P      P      03 04 30.0 +0.2
      comp=Z,73nm,1.6s
DOU   Dourbes            22.14 156  ⇑P      P      03 04 30.2  -0.2
      comp=Z,24nm,1.0s
DOU                                 ⇓pP     sP     03 04 34.3 +0.3
RCHB  Rochefort          22.16 155   P      P      03 04 30.5  -0.2
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NEUB	Neuenburg	22.21	144	eP	P	03 04 31.3	+0.1
	comp=Z,52nm,1.1s,baz=345,slow=11						
UBBA	Unterbreizbach	22.26	147	eP	P	03 04 32.2	+0.6
	comp=Z,83nm,1.5s,baz=345,slow=11						
SUW	Suwalki	22.27	124	eP	P	03 04 31.0	-0.8
SUW	Suwalki	22.27	124	eP	P	03 04 31.0	-0.8
CLL	Collm	22.36	142	eS	S	03 08 42.0	+3.8
CLL	Collm	22.36	142	eP	P	03 04 33.8	+1.0
	comp=Z,92nm,1.3s,baz=345,slow=11						
CLL	Collm	22.36	142	IAmb	IAmb	03 04 35.0	
	comp=Z,61nm,1.1s						
CLL	Collm	22.36	142	⇑iP	P	03 04 33.5	+0.7
CLL				eS	S	03 08 42.0	+3.8
CLL				pmax	pmax		
	comp=Z,92nm,1.3s						
CLL	Collm	22.36	142	⇑iP	P	03 04 33.5	+0.7
	comp=Z,92nm,1.3s						
CLL	Collm	22.36	142	e	P	03 04 48.0	+15
CLL	Collm	22.36	142	ePPP	PPP	03 05 04.0	
NACGM	Naroch	22.48	118	e	P	03 04 32.0	-2.1
NACGM				eLQ	LQ	03 10 36.0	
NACGM				eLR	LR	03 11 50.0	
MOX	Moxa	22.72	145	eP	P	03 04 36.7	0.0
	comp=Z,66nm,1.4s,baz=345,slow=11						
WLF	Walferdange	22.77	154	P	P	03 04 38.2	+1.1
WLF	Walferdange	22.77	154	eP	P	03 04 37.9	+0.8
	comp=Z,65nm,1.4s,baz=345,slow=11						
WLF	Walferdange	22.77	154	IAmb	IAmb	03 04 49.1	
	comp=Z,35nm,1.1s						
FBE	Freiberg	22.80	142	eP	P	03 04 37.5	0.0
	comp=Z,110nm,1.2s,baz=345,slow=11						
PRGR	Permogore	22.96	87	eP	P	03 04 37.7	-1.3
	comp=Z,52nm,1.3s						
PRGR	Permogore	22.96	87	eP	P	03 04 37.7	-1.3
PRGR				pmax	pmax		
	comp=Z,52nm,1.3s						
BRG	Berggiesshubel	22.96	141	eP	P	03 04 38.6	-0.5
	comp=Z,28nm,1.2s						
BRG				i		03 04 54.9	
	comp=Z,17nm,1.2s						
BRG	Berggiesshubel	22.96	141	eP	P	03 04 38.6	-0.5
	comp=Z,35nm,1.3s,baz=345,slow=11						
PLN	Plauen	22.98	144	eP	P	03 04 39.3	0.0
	comp=Z,67nm,1.2s,baz=345,slow=11						
FRB	Frobisher Bay	23.01	281	P	P	03 04 40.6	+1.1
	comp=Z,4.3nm,0.6s,baz=50,slow=7.6,SNR=8.3						
FRB				LR	LR	03 13 04.9	
	comp=Z,536nm,20.1s,baz=44,slow=35						
TANN	Tannenbergstha	23.10	143	eP	P	03 04 40.6	-0.1
	comp=Z,137nm,1.1s,baz=345,slow=11						
GUNZ	Gunzen	23.13	144	eP	P	03 04 40.9	-0.1
	comp=Z,44nm,1.2s,baz=345,slow=11						
MICGM	Minsk	23.15	117	eP	P	03 04 41.0	0.0
MICGM				ePP	PnPn	03 05 18.0	+12
MICGM				ePPP	PPP	03 05 30.0	
MICGM				eS	S	03 08 46.0	-6.1
MICGM				eSS	SnSn	03 10 10.0	+45
MICGM				eSSS	SSS	03 10 37.0	
MNK	Minsk	23.15	117	eP	P	03 04 41.0	0.0
MNK				e		03 05 18.0	
MNK				eS	S	03 08 46.0	-6.1
WERN	Wernitzgruen	23.21	144	eP	P	03 04 42.0	+0.3
	comp=Z,65nm,1.2s,baz=345,slow=11						
NKC	Novy Kostel	23.27	144	eP	P	03 04 42.8	+0.4
NKC				ex	x	03 05 01.3	
NKC	Novy Kostel	23.27	144	eP	P	03 04 42.8	+0.4
RES	Resolute Bay	23.30	318	P	P	03 04 42.7	+0.2
	comp=Z,80nm,0.8s,baz=53,slow=12,SNR=23						
RES				LR	LR	03 13 41.8	
	comp=Z,402nm,19.3s,baz=52,slow=36						
RES	Resolute Bay	23.30	318	P	P	03 04 43.3	+0.8
PVCC	Panska Ves	23.42	140	eP	P	03 04 45.9	+2.1
PVCC	Panska Ves	23.42	140	eP	P	03 04 45.9	+2.1
MANZ	Manzenberg	23.45	144	eP	P	03 04 42.6	-1.5
	comp=Z,37nm,1.6s,baz=345,slow=11						
KSP	Ksiaz	23.49	137	eP	P	03 04 44.5	0.0
KSP	Ksiaz	23.49	137	eP	P	03 04 44.5	0.0
GRA1	Grafenberg Arr	23.56	146	P	P	03 04 45.6	+0.3
GRA1				IAmb	IAmb	03 04 58.2	
	comp=Z,46nm,1.2s						
GRF	Grafenberg Arr	23.56	146	eP	P	03 04 46.5	+1.3
	comp=Z,53nm,1.2s,baz=345,slow=11						
GRF	Grafenberg Arr	23.56	146	P	P	03 04 45.6	+0.3
GRF				pmax	pmax		
	comp=Z,46nm,1.2s						
ROTZ	Rotzenmuhle	23.68	144	eP	P	03 04 47.1	+0.8
	comp=Z,34nm,1.2s,baz=345,slow=11						
CHVC	Chvalec	23.68	138	eP	P	03 04 47.2	+0.8
CHVC				ex	x	03 05 00.4	
OSTC	Ostas	23.74	138	eP	P	03 04 47.6	+0.6
OSTC				ex	x	03 04 55.0	
UPC	Upice	23.74	138	eP	P	03 04 48.6	+1.6
UPC	Upice	23.74	138	eP	P	03 04 48.6	+1.6
PRA	Prague	23.82	141	eP	P	03 04 49.2	+1.4
PRA	Prague	23.82	141	eP	P	03 04 49.2	+1.4
CLF	Chambon-Foret	23.90	161	P	P	03 04 48.9	+0.4
PRU	Pruhonice	23.93	141	eP	P	03 04 49.0	+0.3
PRU				ex	x	03 05 00.5	
PRU	Pruhonice	23.93	141	eP	P	03 04 49.0	+0.3
DPC	Dobruska-Polom	23.96	138	eP	P	03 04 49.1	0.0
DPC	Dobruska-Polom	23.96	138	eP	P	03 04 49.1	0.0
GOPC	GO Pecny, Ondr	24.05	140	eP	P	03 04 50.1	+0.2
GOPC	GO Pecny, Ondr	24.05	140	eP	P	03 04 50.1	+0.2
STU	Stuttgart	24.10	150	eP	P	03 04 51.2	+0.8
	comp=Z,39nm,1.4s,baz=345,slow=11						
STU	Stuttgart	24.10	150	P	P	03 04 50.8	+0.4
STU	Stuttgart	24.10	150	P	P	03 04 50.8	+0.4
STU				pmax	pmax		
	comp=Z,17nm,0.8s						
KRLC	Kraliky	24.32	137	eP	P	03 04 52.8	+0.3
KRLC	Kraliky	24.32	137	eP	P	03 04 52.8	+0.3
ECH	Echery	24.33	153	P	P	03 04 52.5	0.0
ECH				IAmb	IAmb	03 04 54.9	
	comp=Z,32nm,0.9s						
ECH	Echery	24.33	153	P	P	03 04 52.5	0.0
ECH				pmax	pmax		
	comp=Z,32nm,0.9s						
BFO	Black Forest	24.39	151	eP	P	03 04 53.8	+0.7
	comp=Z,180nm,2.4s,baz=345,slow=11						
BFO	Black Forest	24.39	151	P	P	03 04 53.6	+0.5
BFO				IAmb	IAmb	03 04 55.5	
	comp=Z,28nm,1.0s						
BFO	Black Forest	24.39	151	P	P	03 04 53.6	+0.5
BFO				pmax	pmax		
	comp=Z,28nm,1.0s						
WET	Wettzell	24.40	144	eP	P	03 04 54.0	+0.8
	comp=Z,82nm,1.9s,baz=345,slow=11						
KHC	Kasperske Hory	24.55	143	eP	P	03 04 55.5	+1.0
KHC				epP	sP	03 05 02.0	+3.7
KHC				ex	x	03 05 15.0	
KHC	Kasperske Hory	24.55	143	eP	P	03 04 55.5	+1.0
KHC				e		03 05 02.0	
MORC	Moravsky Berou	24.77	136	IAmb	IAmb	03 04 59.7	
	comp=Z,19nm,0.9s						
MORC	Moravsky Berou	24.77	136	eP	P	03 04 58.3	+1.8
TREC	Trest	24.78	140	eP	P	03 04 58.0	+1.4
TREC	Trest	24.78	140	eP	P	03 04 58.0	+1.4
GEC2	GERESS Array S	24.84	143	eP	P	03 04 58.4	+1.2
	comp=Z,42nm,1.1s,baz=345,slow=11						
GEC2	GERESS Array S	24.84	143	IAmb	IAmb	03 05 00.5	
	comp=Z,36nm,1.0s						
GERES	GERESS Array B	24.84	143	P	P	03 04 57.7	+0.4
	comp=Z,19nm,0.9s,baz=345,slow=6.5,SNR=86						
OKC	Ostrava-Krasne	24.85	135	eP	P	03 04 58.2	+1.0
OKC	Ostrava-Krasne	24.85	135	eP	P	03 04 58.2	+1.0
OJC	Ojcow	24.88	133	eP	P	03 04 57.3	-0.1
OJC	Ojcow	24.88	133	IAmb	IAmb	03 04 59.6	
	comp=Z,29nm,0.9s						
OJC	Ojcow	24.88	133	eP	P	03 04 57.3	-0.1
VRAC	Vranov	25.00	138	P	P	03 04 58.8	+0.2
	comp=Z,18nm,0.9s,baz=347,slow=11,SNR=23						
VRAC	Vranov	25.00	138	eP	P	03 04 58.8	+0.2
MOS	Moscow	25.04	104	eP	P	03 04 59.0	+0.2
MOS				e		03 05 33.3	
KRUC	Moravsky	25.19	138	eP	P	03 05 01.0	+0.7
OBN	Obninsk	25.24	106	LR	LR	03 14 17.0	
	comp=Z,83nm,18.6s,baz=334,slow=35						
OBN	Obninsk	25.24	106	P	P	03 05 00.4	-0.2
OBN				IAmb	IAmb	03 05 01.8	
	comp=Z,53nm,1.2s						
OBN	Obninsk	25.24	106	⇑iP	P	03 05 00.8	+0.2
OBN				e*PP	pP	03 05 03.9	+0.6
OBN				e*SP	sP	03 05 06.6	+2.1
OBN				S	S	03 09 33.0	+7.3
OBN				eSSS	SSS	03 10 28.1	
OBN				pmax	pmax		
	comp=Z,61nm,1.7s						
OBN				MLR	MLR		
	comp=Z,228nm,15.0s						
RETA	Reutte	25.61	148	eP	P	03 05 05.0	+0.8
	comp=Z,22nm,1.7s						
DAVA	Damuels	25.66	149	eP	P	03 05 06.5	+1.8
	comp=Z,44nm,1.5s,SNR=6.1						
JAVC	Velka Javorina	25.66	137	eP	P	03 05 08.6	+4.0
RJOB	Jochberg	25.73	145	eP	P	03 05 06.6	+1.3
	comp=Z,34nm,1.3s,baz=345,slow=11						
NIE	Niedzica	25.74	133	eP	P	03 05 08.9	+3.6
NIE	Niedzica	25.74	133	eP	P	03 05 08.9	+3.6
LANS	Liptovska Anna	25.80	134	eP	P	03 05 07.1	+1.3
LANS				pmax	pmax		
	comp=Z,12nm,0.9s						
LANS	Liptovska Anna	25.80	134	eP	P	03 05 07.1	+1.3
MOTA	Moosalm	25.81	148	eP	P	03 05 07.2	+1.1
	comp=Z,34nm,1.3s,SNR=7.0						
WATA	Walderalm	25.90	147	eP	P	03 05 07.7	+0.8
	comp=Z,43nm,1.6s						
MOA	Molln	25.91	142	eP	P	03 05 08.1	+1.3
	comp=Z,31nm,1.4s,SNR=11						
SMOL	Smolenice	25.93	137	eP	P	03 05 08.5	+1.5
SMOL				pmax	pmax		
	comp=Z,21nm,1.2s						
SMOL	Smolenice	25.93	137	eP	P	03 05 08.5	+1.5
SQTA	Sankt Quirin	25.95	147	eP	P	03 05 09.2	+1.9
	comp=Z,41nm,1.3s,SNR=6.8						
WTTA	Wattenberg	25.98	147	eP	P	03 05 09.1	+1.5
	comp=Z,53nm,1.3s,SNR=10						
MODS	Modra-Piesok	26.03	138	eP	P	03 05 08.3	+0.4
MODS				pmax	pmax		
	comp=Z,74nm,1.3s						
MODS	Modra-Piesok	26.03	138	eP	P	03 05 08.3	+0.4
FETA	Feichten	26.06	148	eP	P	03 05 08.9	+0.5
	comp=Z,12nm,1.2s						
KWP	Kalwaria Pacla	26.13	129	eP	P	03 05 12.3	+3.5
KWP	Kalwaria Pacla	26.13	129	IAmb	IAmb	03 05 17.9	
	comp=Z,25nm,1.0s						
KWP	Kalwaria Pacla	26.13	129	eP	P	03 05 12.3	+3.5
DAVOX	Davos/Dischmat	26.15	150	P	P	03 05 10.5	+1.3
	comp=Z,4.7nm,0.8s,baz=317,slow=14						
DAVOX				LR	LR	03 15 34.3	
	comp=Z,262nm,18.6s,baz=324,slow=37						
CONA	Conrad Observa	26.16	140	eP	P	03 05 09.7	+0.6
	comp=Z,24nm,1.5s,SNR=5.6						
SENIN	Lac Senin/Sane	26.16	154	IAmb	IAmb	03 05 13.4	
	comp=Z,29nm,1.2s						
ZST	Bratislava	26.16	138	eP	P	03 05 11.4	+2.3
ZST				pmax	pmax		
	comp=Z,334nm,2.8s						
ZST	Bratislava	26.16	138	eP	P	03 05 11.4	+2.3
VYHS	Vyhne	26.27	135	eP	P	03 05 10.3	+0.2
VYHS				pmax	pmax		
	comp=Z,35nm,1.3s						
VYHS	Vyhne	26.27	135	eP	P	03 05 10.2	+0.2
LVV	L'vov	26.30	127	eP	P	03 05 11.1	+0.8
TUE	Stuetta	26.36	151	P	P	03 05 12.4	+1.3
TUE				IAmb	IAmb	03 05 17.6	
	comp=Z,32nm,1.1s						
KBA	Koelnbreinsper	26.47	144	epP	P	03 05 13.4	+1.3
	comp=Z,12nm,1.1s						
CRVS	Cervenica-Dubn	26.50	131	eP	P	03 05 14.8	+2.6
CRVS				pmax	pmax		
	comp=Z,34nm,1.3s						
CRVS	Cervenica-Dubn	26.50	131	eP	P	03 05 14.8	+2.6
KIRV	Kirov	26.52	88	P	P	03 05 12.0	-0.1
	comp=Z,9.2nm,0.6s,baz=312,slow=7.4,SNR=5.9						
KIRV				LR	LR	03 13 52.9	
	comp=Z,228nm,20.3s,baz=330,slow=32						
ABTA	Abfaltersbach	26.64	146	eP	P	03 05 13.6	+0.1
	comp=Z,8.6nm,1.3s						
KOLS	Kolonicke sedl	26.67	130	eP	P	03 05 14.2	+0.5
KOLS				pmax	pmax		
	comp=Z,16nm,1.0s						
KOLS	Kolonicke sedl	26.67	130	eP	P	03 05 14.2	+0.5
SSB	Saint Sauveur	26.87	159	P	P	03 05 15.5	0.0
SSB				IAmb	IAmb	03 05 20.0	
	comp=Z,24nm,1.1s						
SSB	Saint Sauveur	26.87	159	P	P	03 05 15.5	0.0
SSB				pmax	pmax		
	comp=Z,24nm,1.1s						
AKASG	Malin Array Be	26.90	120	P	P	03 05 15.1	-0.6
	comp=Z,5.6nm,0.6s,baz=333,slow=9.3,SNR=24						
AKASG				LR	LR	03 15 14.3	
	comp=Z,324nm,19.8s,baz=330,slow=35						
AKBB	Malin Array Si	26.90	120	IAmb	IAmb	03 05 20.8	
	comp=Z,24nm,1.1s						
AKBB	Malin Array Si	26.90	120	deP	P	03 05 15.2	-0.5
UZH	Uzhgorod	26.96	131	c iP	P	03 05 17.2	+1.0
UZH				e		03 05 20.1	
UZH				i		03 05 26.1	
PSZ	Piszkesteto	27.05	134	IAmb	IAmb	03 05 24.8	
	comp=Z,38nm,1.4s						
SOKA	Soboth	27.18	142	eP	P	03 05 19.2	+0.8
	comp=Z,4.7nm,0.9s						
TRPA	Tarpa	27.48	131	⇑P	P	03 05 22.0	+1.1
TEOL	Teolo	27.83	148	P	P	03 05 23.7	-0.4
TEOL				IAmb	IAmb	03 05 25.5	
	comp=Z,16nm,0.8s						
LPSR	Galich'ya Gora	28.11	106	eP	P	03 05 26.5	0.0
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BURAR	Bucovina Array	28.63	127	⇑P	P	03 05 32.4	+1.0
BURAR	Bucovina Array	28.63	127	⇑P	P	03 05 32.4	+1.0
DRGR		28.77	131	⇑P	P	03 05 33.8	+1.2
DRGR		28.77	131	⇑P	P	03 05 33.8	+1.2
ARCR	ARCALIA	28.91	129	⇑P	P	03 05 34.8	+1.1
SORM	Soroca	28.98	123	⇑P	P	03 05 34.0	-0.3
SORM	Soroca	28.98	123	⇑P	P	03 05 34.0	-0.3
PRAR	RASCA	29.13	126	⇑P	P	03 05 35.9	+0.3
NRIK	Noril'sk	29.36	46	LR	LR	03 20 43.4	
	comp=Z,186nm,18.6s,baz=325,slow=43						
NRIK	Noril'sk	29.36	46	eP	P	03 05 38.2	+0.8
SCHQ	Schefferville	29.38	267	P	P	03 05 38.5	+0.8
	comp=Z,5.4nm,0.8s,baz=31,slow=8.0,SNR=13						
SCHQ				LR	LR	03 16 11.4	
	comp=Z,528nm,20.2s,baz=34,slow=34						
SCHQ	Schefferville	29.38	267	P	P	03 05 38.6	+0.8
VSR	Storozhevoye	29.39	107	deP	P	03 05 37.3	-0.6
VSR				pmax	pmax		
	comp=Z,19nm,0.9s						
BZS	Buzias	29.62	134	⇑P	P	03 05 41.1	+1.1
BZS	Buzias	29.62	134	⇑P	P	03 05 41.1	+1.1
TESR	Tescani	30.02	126	⇑P	P	03 05 44.0	+0.4
GZR	Gura Zlata	30.10	132	⇑P	P	03 05 43.7	-0.6
GZR	Gura Zlata	30.10	132	⇑P	P	03 05 43.7	-0.6
VRH	Novokhopyorsk	30.19	104	eP	P	03 05 44.4	-0.6
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LOT	Lotru	30.29	131	⇑P	P	03 05 47.6	+1.6
ARR	Arges	30.58	130	⇑P	P	03 05 49.3	+0.7
VOIR		30.62	129	⇑P	P	03 05 53.0	+4.1
VOIR		30.62	129	⇑P	P	03 05 53.0	+4.1
PLOR	Plostina	30.64	127	⇑P	P	03 05 49.4	+0.4
PLOR	Plostina	30.64	127	⇑P	P	03 05 49.4	+0.4
VRI	Vrincioaia	30.64	127	⇑P	P	03 05 50.1	+1.0
VRI	Vrincioaia	30.64	127	⇑P	P	03 05 50.1	+1.0
MLR	Muntele Rosu	30.79	128	LR	LR	03 18 43.7	
	comp=Z,1µm,19.6s,baz=332,slow=37						
MLR	Muntele Rosu	30.79	128	⇑P	P	03 05 46.2	-4.3
MLR	Muntele Rosu	30.79	128	⇑P	P	03 05 46.2	-4.3
ARU	Arti	31.20	82	LR	LR	03 18 00.0	
	comp=Z,240nm,19.5s,baz=318,slow=36						
ARU	Arti	31.20	82	P	P	03 05 53.8	-0.1
ARU				IAmb	IAmb	03 05 55.6	
	comp=Z,18nm,1.2s						
ARU	Arti	31.20	82	c iP	P	03 05 54.8	+1.0
ARU						03 06 54.5	
ARU				S	S	03 11 05.1	+5.6
ARU				pmax	pmax		
	comp=Z,21nm,1.4s						
CFR	Carcaliu	31.65	126	⇑P	P	03 05 58.0	+0.1
CFR	Carcaliu	31.65	126	⇑P	P	03 05 58.0	+0.1
PTOM	Tomar	31.71	179	eP	P	03 06 00.2	+1.7
ESDC	Sonseca Array	31.76	173	P	P	03 05 59.0	+0.1
	comp=Z,1.8nm,0.7s,baz=355,slow=9.7,SNR=4.4						
ESDC				LR	LR	03 16 56.1	
	comp=Z,205nm,19.1s,baz=355,slow=33						
PMRV	Marv??o	31.91	178	eP	P	03 06 02.1	+1.9
PMTG	Montargil	32.26	179	eP	P	03 06 04.6	+1.3
C36M	Paulatuk	33.27	324	IAmb	IAmb	03 06 14.0	
	comp=Z,16nm,1.1s						
C36M	Paulatuk	33.27	324	P	P	03 06 13.0	+1.2
	baz=32,SNR=9.9						
PBEJ	Beja	33.30	178	eP	P	03 06 14.1	+1.7
PFVI	Vila Bisbo	34.19	180	P	P	03 06 20.0	-0.1
TIXI	Tiksi	34.75	22	⇓eP	P	03 06 27.6	+2.9
TIXI				pmax	pmax		
	comp=Z,12nm,2.5s						
TIXI				MLR	MLR		
	comp=Z,85nm,16.0s						
INK	Inuvik	35.87	328	P	P	03 06 34.7	+0.4
	comp=Z,20nm,1.1s,baz=20,slow=11,SNR=36						
INK	Inuvik	35.87	328	P	P	03 06 34.6	+0.3
INK				IAmb	IAmb	03 06 36.0	
	comp=Z,33nm,1.2s						
AKTO	Aktyubinsk	36.08	89	P	P	03 06 36.5	+0.2
	comp=Z,6.8nm,0.9s,baz=316,slow=8.4,SNR=20						
AKTO				LR	LR	03 20 54.3	
	comp=Z,291nm,19.2s,baz=336,slow=36						
SOC	Sochi	36.38	113	eP	P	03 06 40.0	+1.1
SOC				eS	S	03 12 24.2	+4.4
SOC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SOC				MLR	MLR		
	comp=Z,395nm,14.0s						
KEST	Kesra	36.88	155	LR	LR	03 22 14.5	
	comp=Z,166nm,19.0s,baz=334,slow=37						
KIV	Kislovodsk	36.94	109	P	P	03 06 43.9	+0.1
KIV	Kislovodsk	36.94	109	eP	P	03 06 45.3	+1.5
KIV				pmax	pmax		
	comp=Z,31nm,1.1s						
KIV				MLR	MLR		
	comp=Z,357nm,16.0s						
YKA	Yellowknife Ar	37.09	312	P	P	03 06 45.1	+0.4
	comp=Z,16nm,0.8s,baz=32,slow=8.8,SNR=159						
YKA				PcP	PcP	03 09 05.2	+0.4
	comp=Z,1.7nm,0.7s,baz=32,slow=2.9,SNR=11						
YKA				LR	LR	03 21 32.5	
	comp=Z,380nm,18.9s,baz=0.0,slow=36						
SHA1	Shidzhatmaz	37.13	110	deP	P	03 06 47.2	+1.6
MATQ	Matagami	37.19	272	P	P	03 06 46.6	+0.8
	baz=30,SNR=5.3						
KBZ	Khabaz	37.21	109	P	P	03 06 47.7	+1.7
	comp=Z,5.1nm,0.8s,baz=270,slow=3.3,SNR=16						
KBZ				LR	LR	03 22 04.2	
	comp=Z,225nm,18.8s,baz=330,slow=36						
D60A	Saint Jean D’O	37.51	263	P	P	03 06 50.1	+1.6
	baz=28						
LSQQ	Lebel-sur-Quev	37.58	271	P	P	03 06 49.6	+0.5
	baz=29						
NEY	Neytrino	37.59	110	⇑eP	P	03 06 51.2	+1.7
NEY				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NCK	Nalchik	37.63	109	⇑eP	P	03 06 51.8	+2.2
NCK				pmax	pmax		
	comp=Z,12nm,1.0s						
LATQ	La Tuque	37.69	266	P	P	03 06 51.3	+1.2
LATQ	La Tuque	37.69	266	P	P	03 06 52.9	+2.8
	baz=28						
BRVK	Borovoye	37.74	76	P	P	03 06 50.8	+0.4
BRVK	Borovoye	37.74	76	deP	P	03 06 51.2	+0.8
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TOLK	Toolik Lake Re	37.91	338	P	P	03 06 52.5	+0.8
TOLK	Toolik Lake Re	37.91	338	P	P	03 06 53.2	+1.5
	baz=20,SNR=15						
D58A	Chemin du LacG	37.98	265	P	P	03 06 54.8	+2.3
	baz=28						
EPYK	Eagle Plains	38.16	329	IAmb	IAmb	03 06 55.3	
	comp=Z,26nm,1.1s						
EPYK	Eagle Plains	38.16	329	P	P	03 06 54.4	+0.5
	baz=24,SNR=16						
BR131	Keskin Array S	38.20	122	P	P	03 06 54.6	-0.1
BR131	Keskin Array S	38.20	122	⇑eP	P	03 06 55.8	+1.1
BRTR	Keskin Array B	38.20	122	P	P	03 06 55.8	+1.1
	comp=Z,4.7nm,0.7s,baz=342,slow=6.3,SNR=28						
BRTR				LR	LR	03 22 25.7	
	comp=Z,222nm,21.9s,baz=320,slow=36						
BRTR	Keskin Array B	38.20	122	ceP	P	03 06 56.5	+1.9
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ZEI	Tsey	38.37	109	eP	P	03 06 56.4	+0.3
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GROC	Groznyy	38.58	107	eP	P	03 06 57.9	+0.4
GROC				e		03 08 27.7	
GROC				pmax	pmax		
	comp=Z,23nm,1.6s						
D55A	Sainte-Anne-du	38.88	268	P	P	03 07 01.8	+1.7
	baz=28						
E57A	Chemin Saint G	38.99	266	P	P	03 07 03.2	+2.2
	baz=28,SNR=7.2						
D54A	Lac Fusel, La	39.15	269	P	P	03 07 03.6	+1.3
	baz=28						
E56A	St. Veronique	39.16	267	P	P	03 07 04.4	+2.0
	baz=28						
COLD	Coldfoot	39.33	337	P	P	03 07 04.0	+0.4
D53A	Lac Vacive, Po	39.55	270	P	P	03 07 06.6	+0.9
D53A	Lac Vacive, Po	39.55	270	P	P	03 07 07.4	+1.7
	baz=28,SNR=5.2						
TBLG	Delisi	39.59	109	P	P	03 07 06.6	+0.6
TBLG	Delisi	39.59	109	P	P	03 07 06.6	+0.6
TBLG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
E54A	Lac Daplat, Po	39.95	269	P	P	03 07 10.5	+1.5
	baz=28						
ELL	Elmali	40.02	128	P	P	03 07 10.9	+1.1
ELL	Elmali	40.02	128	P	P	03 07 10.9	+1.1
ELL				pmax	pmax		
	comp=Z,134nm,1.3s						
D51A	Lot 18 Range I	40.08	272	P	P	03 07 11.7	+1.6
	baz=28						
E53A	Dumoine, Ponti	40.16	270	P	P	03 07 12.9	+2.2
	baz=28,SNR=6.5						
D50A	G1974 Best Tow	40.16	272	P	P	03 07 12.3	+1.5
	baz=28						
PRP	Porcupine Dome	40.32	334	IAmb	IAmb	03 07 15.4	
	comp=Z,38nm,1.0s						
EGAK	Eagle	40.35	331	IAmb	IAmb	03 07 13.9	
	comp=Z,34nm,1.2s						
G57A	Newington	40.42	266	P	P	03 07 15.2	+2.4
	baz=27						
FFC	Flin Flon	40.44	297	P	P	03 07 13.3	+0.4
FFC	Flin Flon	40.44	297	P	P	03 07 13.4	+0.4
FFC				pmax	pmax		
	comp=Z,40nm,0.9s						
D49A	Beulah Townshi	40.56	274	P	P	03 07 16.0	+1.9
	baz=28,SNR=5.5						
E51A	G1948 Merrick	40.61	271	P	P	03 07 16.2	+1.7
	baz=28						
ALGO	Algonquin Park	40.66	270	P	P	03 07 16.5	+1.7
	baz=28						
D48A	Paudash Townsh	40.79	274	P	P	03 07 17.5	+1.6
	baz=28						
BILL	Bilibino	40.92	3	P	P	03 07 17.1	+0.3
BILL	Bilibino	40.92	3	ceP	P	03 07 17.8	+1.0
BILL				e		03 07 25.0	
BILL				e		03 09 23.2	
BILL				pmax	pmax		
	comp=Z,14nm,1.3s						
GNI	Garni	41.03	110	P	P	03 07 17.9	-0.3
GNI	Garni	41.03	110	deP	P	03 07 20.0	+1.8
GNI				pmax	pmax		
	comp=Z,47nm,1.3s						
F52A	Sundridge	41.21	271	P	P	03 07 21.4	+2.0
	baz=28						
IL31		41.22	334	P	P	03 07 20.1	+0.9
IL31				IAmb	IAmb	03 07 22.1	
	comp=Z,28nm,1.1s						
ILAR	Eielson Array	41.22	334	P	P	03 07 20.4	+1.1
	comp=Z,16nm,1.0s,baz=12,slow=7.3,SNR=105						
ILAR				PcP	PcP	03 09 17.7	-0.2
	comp=Z,1.0nm,1.0s,baz=344,slow=1.7,SNR=5.1						
ILAR				LR	LR	03 25 56.4	
	comp=Z,136nm,19.9s,baz=30,slow=38						
MDM	Murphy Dome	41.23	335	IAmb	IAmb	03 07 22.5	
	comp=Z,48nm,1.5s						
COLA	College	41.26	335	P	P	03 07 20.8	+1.2
COLA				IAmb	IAmb	03 07 22.6	
	comp=Z,32nm,0.9s						
COLA	College	41.26	335	P	P	03 07 20.8	+1.2
COLA				pmax	pmax		
	comp=Z,32nm,1.0s						
TCOL	CIGO, UAF Yank	41.26	335	P	P	03 07 21.9	+2.3
	baz=19,SNR=5.8						
F51A	Arnstein	41.28	271	P	P	03 07 21.9	+1.9
	baz=28,SNR=5.2						

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D47A  Chapleau          41.32 275   P       P       03 07 22.0 +1.7
      baz=28,SNR=9.7
ZALV  Zalesovo Beam     41.36  63   P       P       03 07 21.4 +0.8
      comp=Z,5.4nm,1.0s,baz=331,slow=8.8,SNR=9.4
ZALV                                LR      LR      03 26 15.4
      comp=Z,191nm,21.6s,baz=324,slow=39
CCB   Clear Creek Bu    41.47 335   IAmb    IAmb    03 07 23.8
      comp=Z,27nm,1.1s
E48A  Lockeyer          41.52 274   P       P       03 07 23.6 +1.6
      baz=28
SCRK  Sand Creek        41.55 332   P       P       03 07 22.7 +0.5
HDA   Harding Lake      41.57 334   IAmb    IAmb    03 07 24.7
      comp=Z,35nm,0.9s
HDA   Harding Lake      41.57 334   P       P       03 07 23.7 +1.5
      baz=19,SNR=28
G53A  Haliburton        41.58 270   P       P       03 07 24.3 +1.9
      baz=27
WRH   Wood River Hil    41.67 335   IAmb    IAmb    03 07 25.5
      comp=Z,21nm,1.1s
I57A  Carthage          41.68 266   P       P       03 07 25.8 +2.6
      baz=26
NEA   Nenana            41.71 335   IAmb    IAmb    03 07 25.8
      comp=Z,38nm,1.0s
D46A  Sault St. Mari    41.76 276   P       P       03 07 25.8 +1.9
      baz=28
DOT   Dot Lake          41.87 332   IAmb    IAmb    03 07 27.4
      comp=Z,25nm,1.0s
RIDG  Independent Ri    41.90 332   IAmb    IAmb    03 07 27.9
      comp=Z,30nm,1.1s
E47A  Iron Bridge       41.90 275   P       P       03 07 26.8 +1.8
      baz=28
F49A  Sandfield         42.12 273   P       P       03 07 28.7 +1.9
      baz=28,SNR=14
BWN   Browne            42.15 335   IAmb    IAmb    03 07 30.7
      comp=Z,20nm,0.9s
F48A  Evansville        42.25 274   P       P       03 07 29.8 +1.9
      baz=28,SNR=12
E46A  Sault Ste Mari    42.31 276   IAmb    IAmb    03 07 31.1
      comp=Z,34nm,0.9s
KURK  Kurchatov         42.35  71   P       P       03 07 29.6 +0.9
KURK  Kurchatov         42.35  71deP        P       03 07 29.2 +0.5
KURK                                pmax    pmax
      comp=Z,14nm,1.7s
BPAW  Bear Paw Mtn.     42.41 336   IAmb    IAmb    03 07 31.7
      comp=Z,25nm,1.0s
MENT  Mentasta          42.48 331   IAmb    IAmb    03 07 32.7
      comp=Z,21nm,1.1s
ULM   Lac du Bonnet     42.54 289   P       P       03 07 30.9 +0.7
      comp=Z,14nm,0.9s,baz=27,slow=8.3,SNR=28
ULM                                 LR      LR      03 24 17.0
      comp=Z,255nm,19.5s,baz=18,slow=35
ULM   Lac du Bonnet     42.54 289   IAmb    IAmb    03 07 31.9
      comp=Z,18nm,0.9s
ULM   Lac du Bonnet     42.54 289c iP       P       03 07 30.7 +0.5
E44A  Grand Marais A    42.61 277   IAmb    IAmb    03 07 33.9
      comp=Z,33nm,0.8s
E44A  Grand Marais A    42.61 277   P       P       03 07 33.2 +2.4
      baz=28,SNR=6.0
PAX   Paxson            42.72 332   IAmb    IAmb    03 07 34.1
      comp=Z,19nm,1.0s
DHY   Denali Highway    42.90 334   IAmb    IAmb    03 07 36.5
      comp=Z,25nm,1.0s
D41A  Chassel           43.06 280   IAmb    IAmb    03 07 37.1
      comp=Z,22nm,0.9s
WHY   Whitehorse        43.09 324   IAmb    IAmb    03 07 37.2
      comp=Z,26nm,1.4s
E43A  Lone Tree Farm    43.17 278   IAmb    IAmb    03 07 37.8
      comp=Z,22nm,0.8s
EYMN  Ely               43.20 283   IAmb    IAmb    03 07 37.7
      comp=Z,18nm,0.9s
EYMN  Ely               43.20 283   P       P       03 07 37.0 +1.4
      baz=28,SNR=13
G47A  Hillman           43.23 274   P       P       03 07 37.8 +2.0
      baz=27
F45A  CMU Biological    43.31 276   P       P       03 07 38.5 +2.0
      baz=27,SNR=8.1
G46A  Petoskey          43.42 276   P       P       03 07 39.2 +1.8
      baz=27
HYT   Haines Junctio    43.42 326   IAmb    IAmb    03 07 40.1
      comp=Z,24nm,1.1s
H48A  Harrisville       43.48 274   IAmb    IAmb    03 07 40.5
      comp=Z,21nm,0.9s
H48A  Harrisville       43.48 274   P       P       03 07 39.7 +1.9
      baz=27
I51A  Listowel          43.53 271   P       P       03 07 40.5 +2.2
      baz=26
PPLA  Purkeypile        43.73 337   IAmb    IAmb    03 07 45.9
      comp=Z,24nm,1.3s
GLMI  Grayling          43.78 275   P       P       03 07 42.4 +2.0
      baz=27,SNR=6.5
H47A  Mio               43.85 274   P       P       03 07 43.6 +2.7
      baz=27
J52A  Paris             43.86 270   P       P       03 07 43.2 +2.2
      baz=26
GLB   Gilahina Butte    43.91 331   IAmb    IAmb    03 07 43.9
      comp=Z,34nm,1.4s
G45A  Suttons Bay       43.92 276   IAmb    IAmb    03 07 43.8
      comp=Z,22nm,0.8s
G45A  Suttons Bay       43.92 276   P       P       03 07 43.2 +1.7
      baz=27,SNR=6.7
YAK   Yakutsk           43.94  27⇓eP        P       03 07 42.1 +0.7
YAK                                 pmax    pmax
      comp=Z,8.0nm,1.0s
I49A  Point Hope        43.99 273   IAmb    IAmb    03 07 44.7
      comp=Z,22nm,0.8s
I49A  Point Hope        43.99 273   P       P       03 07 44.3 +2.2
      baz=27
I48A  Sherman Twp       44.06 274   P       P       03 07 44.4 +1.9
      baz=27
VRDI  Verde Repeater    44.06 330   IAmb    IAmb    03 07 54.0
      comp=Z,23nm,1.5s
K52A  Tillsonburg       44.35 270   P       P       03 07 47.2 +2.3
      baz=26
GHO   Glory Hole Cre    44.37 334   IAmb    IAmb    03 07 47.1
      comp=Z,20nm,0.9s
L54A  Sinclairville     44.39 268   P       P       03 07 47.7 +2.5
      baz=26
TGL   Tana Glacier      44.41 330   IAmb    IAmb    03 07 47.4
      comp=Z,25nm,1.1s
I47A  Gladwin           44.47 274   P       P       03 07 47.9 +2.1
      baz=26,SNR=5.4
SKT   Skwentna          44.52 336   IAmb    IAmb    03 07 55.6
      comp=Z,17nm,1.2s
PMR   Palmer            44.57 334   IAmb    IAmb    03 07 55.3
      comp=Z,13nm,0.9s
J49A  Marlette          44.62 273   P       P       03 07 49.0 +2.0
      baz=26
GAMB  Gambell           44.71 349   IAmb    IAmb    03 07 49.7
      comp=Z,11nm,0.9s
I46A  Reed City         44.84 275   P       P       03 07 50.5 +1.7
      baz=26
J48A  Bridge Port       44.88 273   P       P       03 07 51.4 +2.3
      baz=26,SNR=6.8
EYAK  Cordova Ski Ar    45.07 331   IAmb    IAmb    03 07 53.1
      comp=Z,24nm,1.2s
M54A  Oil Creek Stat    45.16 268   P       P       03 07 53.9 +2.5
      baz=26
BOD   Bodaibo           45.16  39  eP       P       03 07 50.6  -0.6
BOD                                 pmax    pmax
      comp=Z,8.0nm,1.7s
G40A  Rib Lake          45.17 280   IAmb    IAmb    03 07 54.1
      comp=Z,13nm,0.9s
K49A  Clarkson          45.23 273   P       P       03 07 54.3 +2.4
      baz=26
J47A  Sunmer            45.27 274   P       P       03 07 55.2 +3.1
      baz=26
K48A  Perry             45.43 273   P       P       03 07 55.7 +2.2
      baz=26,SNR=5.9
SEY   Seymchan          45.47  12⇓eP        P       03 07 55.3 +1.8
M53A  WI Miller and     45.55 269   P       P       03 07 56.9 +2.5
      baz=25
M52A  Chesterland       45.67 270   P       P       03 07 57.8 +2.3
      baz=26
L50A  Kingsville        45.69 272   P       P       03 07 58.0 +2.4
      baz=26,SNR=7.5
MDND  Maddock           45.80 290   P       P       03 07 58.0 +1.6
      baz=27
K47A  Vermontville      45.83 274   P       P       03 07 59.0 +2.3
      baz=26,SNR=10
SVW2  Sparrevohn        45.89 338   IAmb    IAmb    03 07 58.9
      comp=Z,9.6nm,0.8s
L49A  Milan             45.94 272   P       P       03 07 59.8 +2.3
      baz=26
SPMN  Marine on St.     46.04 283   P       P       03 08 00.1 +1.8
      baz=26,SNR=10.0
SEW   Seward            46.04 334   IAmb    IAmb    03 08 00.3
      comp=Z,18nm,1.0s
K46A  Dorr              46.07 275   P       P       03 08 00.6 +2.0
      baz=26,SNR=5.8
M51A  Elyria            46.13 271   P       P       03 08 01.5 +2.4
      baz=25
L48A  N Adams           46.30 273   P       P       03 08 02.3 +1.8
      baz=26,SNR=8.1
M50A  Fremont           46.34 271   P       P       03 08 02.9 +2.2
      baz=25
N52A  McGinn's Farm,    46.44 270   P       P       03 08 03.7 +2.2
      baz=25
L47A  Sherwood          46.52 274   P       P       03 08 04.0 +1.9
      baz=26
I40A  Norwalk           46.54 280   IAmb    IAmb    03 08 04.8
      comp=Z,14nm,1.0s
N51A  Ashland           46.57 270   P       P       03 08 04.4 +2.0
      baz=25
KK31  Karatay Array     46.58  83   IAmb    IAmb    03 08 05.1
      comp=Z,15nm,1.1s
KKAR  Karatay Array     46.58  83   IAmb    IAmb    03 08 05.1
      comp=Z,15nm,1.1s
M49A  Liberty Center    46.58 272   P       P       03 08 04.6 +2.1
      baz=25,SNR=8.5
O54A  Avella            46.59 268   P       P       03 08 04.6 +1.9
      baz=25
O53A  New Philadelph    46.80 269   P       P       03 08 06.7 +2.4
      baz=25
L46A  Eue Claire        46.84 275   P       P       03 08 06.9 +2.3
      baz=26
MAKZ  Makanchi          46.85  70   P       P       03 08 05.2 +0.6
MAKZ                                        PcP     03 09 37.6 +0.3
MAKZ  Makanchi          46.85  70   P       P       03 08 05.2 +0.6
MAKZ                                                03 09 37.6
MAKZ                                pmax    pmax
      comp=Z,6.0nm,1.0s
N50A  Nevada            46.95 271   P       P       03 08 08.0 +2.5
      baz=25
MK31  Makanchi Array    46.95  70   P       P       03 08 05.6 +0.1
MK31                                IAmb    IAmb    03 08 07.4
      comp=Z,10nm,1.1s
MK31  Makanchi Array    46.95  70   P       P       03 08 05.6 +0.1
MK31                                pmax    pmax
      comp=Z,10.0nm,1.1s
MKAR  Makanchi Array    46.95  70   P       P       03 08 06.2 +0.7
      comp=Z,8.0nm,0.9s,baz=335,slow=5.5,SNR=60
MKAR                                LR      LR      03 31 30.5
      comp=Z,141nm,18.6s,baz=322,slow=41
O52A  Adamsville        47.12 269   P       P       03 08 09.0 +2.2
      baz=25
N49A  Columbus Grove    47.15 272   P       P       03 08 09.0 +2.0
      baz=25,SNR=5.8
M47A  Cromwell          47.22 274   P       P       03 08 09.7 +2.1
      baz=25,SNR=6.1
GEYT  Alibeck           47.26  97   P       P       03 08 09.0 +1.1
      comp=Z,8.1nm,0.9s,baz=324,slow=7.1,SNR=16
JFWS  Jewell Farm       47.30 279   P       P       03 08 09.8 +1.7
      baz=26,SNR=6.7
O51A  Pataskala         47.34 270   P       P       03 08 10.4 +1.9
      baz=25
ACSO  Alum Creek Sta    47.38 271   P       P       03 08 11.0 +2.2
      baz=25
N48A  Decatur           47.48 273   P       P       03 08 11.3 +1.7
      baz=25
P53A  Whipple           47.54 269   P       P       03 08 12.4 +2.3
      baz=25
O50A  Cable             47.67 271   P       P       03 08 13.3 +2.2
      baz=25,SNR=7.0
N47A  Urbana            47.67 274   P       P       03 08 12.5 +1.4
      baz=25
MOY   Mondy             47.82  52  eP       P       03 08 14.4 +2.2
MOY                                 pmax    pmax
      comp=Z,35nm,1.0s
O49A  Covington         47.86 272   P       P       03 08 14.3 +1.7
      baz=25
O48A  Farmland          48.06 273   P       P       03 08 15.7 +1.5
      baz=25,SNR=5.1
P51A  Williamsport      48.09 270   IAmb    IAmb    03 08 16.6
      comp=Z,14nm,0.9s
Q53A  Leroy             48.16 268   P       P       03 08 17.2 +2.3
      baz=24
P50A  Jamestown         48.21 271   P       P       03 08 16.9 +1.6
      baz=25
AAK   Ala-Archa         48.27  79   P       P       03 08 16.5 +0.6
AAK                                 IAmb    IAmb    03 08 18.8
      comp=Z,10nm,1.0s
AAK   Ala-Archa         48.27  79deP        P       03 08 17.4 +1.5
AAK                                 pmax    pmax
      comp=Z,14nm,1.3s
L40A  Anamosa           48.38 279   P       P       03 08 16.8 +0.3
TLY   Talaya            48.47  50⇑eP        P       03 08 18.2 +1.0
TLY                                 pmax    pmax
      comp=Z,4.0nm,0.9s
ECSD  EROS Data Cent    48.58 285   IAmb    IAmb    03 08 20.0
      comp=Z,9.2nm,0.8s
ECSD  EROS Data Cent    48.58 285   P       P       03 08 19.3 +1.2
      baz=26,SNR=7.9
P49A  Miami Univ. Ec    48.58 272   P       P       03 08 19.5 +1.4
      baz=25
SFIN  Lafayette         48.58 275   IAmb    IAmb    03 08 20.4
      comp=Z,12nm,0.8s
SFIN  Lafayette         48.58 275   P       P       03 08 19.6 +1.5
      baz=25
Q51A  Peebles           48.59 270   P       P       03 08 20.2 +2.0
      baz=24
EGMT  Eagleton          48.63 299   P       P       03 08 20.0 +1.5
      baz=25,SNR=20
SUSD  Miller            48.66 287   P       P       03 08 20.2 +1.5
      baz=26
KDAK  Kodiak Island     48.72 335   P       P       03 08 19.8 +0.8
      comp=Z,22nm,1.0s,baz=59,slow=5.7,SNR=11
KDAK  Kodiak Island     48.72 335   P       P       03 08 19.1 +0.1
BOOM  Boomskoye usch    48.86  78   IAmb    IAmb    03 08 23.6
      comp=Z,18nm,1.2s
P48A  Milroy            48.87 272   P       P       03 08 21.7 +1.3
      baz=25
R52A  Catlettsburg      48.99 269   P       P       03 08 23.3 +1.9
      baz=24
HDIL  Hopedale          49.12 277   IAmb    IAmb    03 08 33.2
      comp=Z,15nm,0.9s
HDIL  Hopedale          49.12 277   P       P       03 08 24.3 +2.0
      baz=25
TAM   Tamanrasset       49.21 162   P       P       03 08 22.1  -1.2
TAM   Tamanrasset       49.21 162   P       P       03 08 22.1  -1.2
TAM                                 pmax    pmax
      comp=Z,10.0nm,1.1s
BTK   Batken            49.42  84   IAmb    IAmb    03 08 28.1
      comp=Z,8.7nm,0.8s
Q48A  North Vernon      49.45 272   P       P       03 08 26.0 +1.2
      baz=24
BLO   Bloomington       49.49 273   IAmb    IAmb    03 08 27.2
      comp=Z,15nm,0.7s
N41A  Harden Midland    49.49 278   IAmb    IAmb    03 08 27.0
      comp=Z,19nm,0.9s
KDJ   Kajisay           49.57  77   IAmb    IAmb    03 08 28.6
      comp=Z,12nm,0.9s
ZAK   Zakamensk         49.57  51  eP       P       03 08 26.3 +0.6
ZAK                                 pmax    pmax
      comp=Z,3.0nm,1.3s
R50A  Paris             49.59 271   P       P       03 08 27.5 +1.7
      baz=24,SNR=5.6
JTMT  Jette             50.15 302   IAmb    IAmb    03 08 32.0
      comp=Z,15nm,1.0s
S50A  Richmond          50.16 271   P       P       03 08 32.1 +1.9
      baz=24,SNR=7.9
V58A  Windy Hill, Pi    50.18 265   P       P       03 08 32.4 +2.0
      baz=23
T52A  Hallie            50.23 269   P       P       03 08 33.0 +2.2
      baz=24
WCI   Wyandotte Cave    50.27 273   P       P       03 08 30.8  -0.3
WCI                                 IAmb    IAmb    03 08 33.2
      comp=Z,19nm,0.9s
WCI   Wyandotte Cave    50.27 273   P       P       03 08 30.8  -0.3
WCI                                 pmax    pmax
      comp=Z,19nm,1.0s
WCI   Wyandotte Cave    50.27 273   P       P       03 08 32.2 +1.2
      baz=24
S49A  Springfield       50.35 271   P       P       03 08 32.7 +1.1
      baz=24
NEW   Newport           50.44 305   P       P       03 08 33.1 +0.8
      baz=24,SNR=8.4
RSSD  Black Hills       50.50 292   P       P       03 08 32.7  -0.3
RSSD                                IAmb    IAmb    03 08 35.2
      comp=Z,16nm,1.4s
RSSD  Black Hills       50.50 292   P       P       03 08 32.7  -0.3
RSSD                                pmax    pmax
      comp=Z,16nm,1.5s
RSSD  Black Hills       50.50 292   P       P       03 08 34.4 +1.4
      baz=25
T50A  Nancy             50.90 271   P       P       03 08 37.8 +2.0
      baz=24
B08A  Colville Reser    50.94 306   IAmb    IAmb    03 08 39.0
      comp=Z,18nm,1.1s
T49A  Edmonton          51.05 271   P       P       03 08 38.3 +1.4
      baz=24
WMQ   Urumqi            51.27  67  eP       P       03 08 40.8 +2.2
WMQ                                 sP      pwP     03 08 49.3 +5.5
WMQ                                 pmax    pmax
      comp=Z,12nm,1.3s
WMQ                                 pmax    pmax
      comp=Z,130nm,4.9s
WMQ                                 LR      LR
      comp=Z,270nm,14.1s
WMQ                                 LR      LR
      comp=Z,160nm,19.1s
V53A  Saluda            51.48 268   P       P       03 08 42.5 +2.2
      baz=23
KSH   Kashi             51.56  80   P       P       03 08 44.7 +3.8
KSH                                 pP      pwP     03 08 49.2 +3.0
KSH                                 PcS     PcS     03 13 54.8 +2.1
KSH                                 S       S       03 16 04.9 +3.6
KSH                                 pmax    pmax
      comp=Z,54nm,1.2s
KSH                                 pmax    pmax
      comp=Z,240nm,4.4s
KSH                                 LR      LR
      comp=Z,310nm,11.2s
KSH                                 LR      LR
      comp=Z,360nm,10.8s
KSH                                 LR      LR
      comp=Z,410nm,13.3s
W54A  Cherokee Point    51.82 267   P       P       03 08 44.6 +2.0
      baz=23
CCM   Cathedral Cave    52.02 277   P       P       03 08 44.3 +0.1
CCM                                 IAmb    IAmb    03 08 45.1
      comp=Z,11nm,0.8s
CCM   Cathedral Cave    52.02 277   P       P       03 08 44.3 +0.1
CCM                                 pmax    pmax
      comp=Z,11nm,0.8s
CCM   Cathedral Cave    52.02 277   P       P       03 08 44.0  -0.2
      baz=24
H17A  Grant Village     52.18 297   IAmb    IAmb    03 08 49.1
      comp=Z,15nm,1.0s
H17A  Grant Village     52.18 297   P       P       03 08 48.4 +2.8
      baz=24,SNR=11
K22A  Casper            52.59 293   P       P       03 08 48.7 +0.2
      baz=24,SNR=14
E08A  Dider Farm, El    52.59 305   IAmb    IAmb    03 08 50.2
      comp=Z,15nm,0.8s
D03D  Eldon             52.66 309   P       P       03 08 50.0 +1.2
      baz=22
SONM  Songino Array     52.71  50   P       P       03 08 49.4 +0.1
      comp=Z,1.2nm,0.9s,baz=324,slow=7.1,SNR=9.0
SONM                                LR      LR      03 34 09.0
      comp=Z,217nm,18.1s,baz=354,slow=39
X53A  Estanollee        52.71 268   P       P       03 08 51.0 +1.6
      baz=23
V48A  Smith Brothers    52.72 272   IAmb    IAmb    03 09 00.2
      comp=Z,26nm,1.5s
W50A  Signal Mountai    52.72 270   P       P       03 08 50.8 +1.3
      baz=23
KSU1  Kansas State U    52.78 283   P       P       03 08 50.3 +0.5
      baz=24
OGNE  Ogallala          52.78 288   IAmb    IAmb    03 08 51.7
      comp=Z,23nm,0.9s
HAWA  Hanford           52.81 306   IAmb    IAmb    03 08 51.5
      comp=Z,11nm,0.8s
PBMO  Poplar Bluff      52.93 276   IAmb    IAmb    03 08 52.3
      comp=Z,12nm,1.1s
X51A  Calhoun           53.16 269   P       P       03 08 54.6 +1.9
      baz=23
MGMO  Mountain Grove    53.18 278   IAmb    IAmb    03 08 54.1
      comp=Z,17nm,0.7s
BW06  Boulder Array     53.37 296   IAmb    IAmb    03 08 55.8
      comp=Z,11nm,1.0s
PD31  Pinedale Array    53.37 296   P       P       03 08 54.6 +0.2
PDAR  Pinedale Array    53.37 296   P       P       03 08 54.6 +0.2
      comp=Z,6.2nm,0.9s,baz=45,slow=5.9,SNR=46
PDAR                                LR      LR      03 31 34.3
      comp=Z,233nm,18.0s,baz=25,slow=36
E04D  Cinebar           53.44 308   P       P       03 08 55.1 +0.6
      baz=22
PHWY  Pilot Hill        53.50 291   IAmb    IAmb    03 08 56.9
      comp=Z,15nm,1.1s
BMO   Blue Mountains    53.64 303   IAmb    IAmb    03 08 57.5
      comp=Z,16nm,0.9s
N23A  Red Feather La    54.02 292   P       P       03 09 00.2 +1.0
      baz=23,SNR=13
CBKS  Cedar Bluff       54.02 285   IAmb    IAmb    03 09 00.3
      comp=Z,14nm,1.1s
U40A  Yellville         54.09 278   IAmb    IAmb    03 09 00.7
      comp=Z,11nm,0.9s
U40A  Yellville         54.09 278   P       P       03 08 60.0 +0.5
      baz=23,SNR=6.3
G06A  Carlson Farm,     54.17 306   IAmb    IAmb    03 09 05.0
      comp=Z,8.2nm,0.9s
FCAR  Ozark Folk Cen    54.29 277   IAmb    IAmb    03 09 02.2
      comp=Z,8.4nm,0.9s
U38A  Gravette          54.51 279   IAmb    IAmb    03 09 03.3
      comp=Z,14nm,1.1s
Z50A  Ashland           54.71 270   P       P       03 09 04.5 +0.5
      baz=23
G03D  McMinnville, O    54.87 308   P       P       03 09 07.1 +2.1
      baz=21
ISCO  Idaho Springs     54.93 291   P       P       03 09 07.2 +1.3
      baz=23,SNR=5.9
HWUT  Hardware Ranch    55.02 297   IAmb    IAmb    03 09 08.4
      comp=Z,10nm,0.8s
I05D  Terrebonne, OR    55.19 306   P       P       03 09 09.0 +1.6
      baz=21
H04D  Lebanon           55.38 307   P       P       03 09 10.1 +1.5
      baz=21
O20A  White River Ci    55.41 293   P       P       03 09 10.5 +1.3
      baz=23,SNR=23
PETK  Petropavlovsk-    55.58  10   LR      LR      03 31 20.8
      comp=Z,99nm,19.6s,baz=56,slow=34
SMCO  Snowmass          55.91 292   IAmb    IAmb    03 09 15.1
      comp=Z,11nm,1.1s
I04A  Tendick Farm,     55.97 307   P       P       03 09 14.4 +1.4
      baz=21
MIAR  Mount Ida         55.99 278   IAmb    IAmb    03 09 14.7
      comp=Z,8.4nm,0.9s
MIAR  Mount Ida         55.99 278   P       P       03 09 13.8 +0.7
      baz=23
NIL   Nilore            56.06  85   P       P       03 09 14.0 +0.2
NIL                                 IAmb    IAmb    03 09 15.5
      comp=Z,16nm,1.0s
NIL   Nilore            56.06  85   P       P       03 09 14.0 +0.2
NIL                                 pmax    pmax
      comp=Z,16nm,1.0s
J05D  Fort Rock, OR     56.14 306   P       P       03 09 17.1 +2.7
      baz=21,SNR=6.8
I03D  Drain, OR         56.31 307   P       P       03 09 17.3 +2.0
      baz=21
J04D  Umpqua Nationa    56.41 306   P       P       03 09 18.4 +2.1
      baz=21
DUG   Dugway, Tooele    56.69 297   IAmb    IAmb    03 09 21.0
      comp=Z,18nm,1.0s
DUG   Dugway, Tooele    56.69 297   P       P       03 09 20.2 +1.9
      baz=22,SNR=17
RAYN  Ar Rayn           56.78 117   P       P       03 09 19.5 +0.5
RAYN  Ar Rayn           56.78 117   P       P       03 09 19.5 +0.5
RAYN                                pmax    pmax
      comp=Z,5.0nm,0.8s
ELK   Elko              56.87 299   IAmb    IAmb    03 09 22.2
      comp=Z,12nm,1.3s
MOD   Modoc Plateau     57.18 304   IAmb    IAmb    03 09 24.3
      comp=Z,10nm,0.8s
S22A  4UR Ranch, Cre    57.18 291   P       P       03 09 23.4 +1.4
      baz=22,SNR=6.9
X34A  Smith Ranch, M    57.29 281   IAmb    IAmb    03 09 24.6
      comp=Z,17nm,0.9s
K02D  Willamette Mer    57.32 307   P       P       03 09 24.5 +1.8
      baz=20
WMOK  Wichita Mounta    57.47 282   P       P       03 09 24.7 +1.0
      baz=22,SNR=5.5
M04C  Macdoel           57.70 305   P       P       03 09 26.4 +0.9
      baz=21
MVCO  Mesa Verde        58.18 292   P       P       03 09 30.7 +1.7
      baz=22,SNR=15
M02C  Callahan          58.34 306   P       P       03 09 30.7 +0.9
      baz=20
TOA0  Torodi Ar. Sit    58.44 168   P       P       03 09 30.5  -0.2
TORD  Torodi Ar. Bea    58.44 168   P       P       03 09 30.9 +0.2
      comp=Z,18nm,0.7s,baz=351,slow=7.3,SNR=148
N02D  Trinity Center    58.69 306   P       P       03 09 33.8 +1.5
      baz=20
GTA   Gaotai            58.83  59  eP       P       03 09 33.8 +0.5
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GTA				pP	pwP	03 09 38.0	-0.6
GTA				sP	sP	03 09 41.3	+4.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
PAHR	Pah Rah Range	58.98	302	IAmb	IAmb	03 09 37.1	
	comp=Z,10nm,1.0s						
WDC	Whiskeytown Da	59.01	305	IAmb	IAmb	03 09 35.9	
	comp=Z,9.2nm,1.1s						
BEKR	Beckworth	59.10	303	IAmb	IAmb	03 09 36.9	
	comp=Z,8.3nm,1.2s						
R11A	Troy Canyon, C	59.19	299	IAmb	IAmb	03 09 38.3	
	comp=Z,17nm,1.1s						
R11A	Troy Canyon, C	59.19	299	P	P	03 09 37.3	+1.3
	baz=21,SNR=22						
KVN	Kaiserville	59.24	301	IAmb	IAmb	03 09 38.5	
	comp=Z,17nm,1.1s						
MSTX	Muleshoe	59.43	286	IAmb	IAmb	03 09 41.6	
	comp=Z,7.7nm,1.0s						
MSTX	Muleshoe	59.43	286	P	P	03 09 40.8	+3.3
	baz=22						
VCNR	Virginia City	59.44	303	IAmb	IAmb	03 09 40.3	
	comp=Z,11nm,0.9s						
PNTR	Pine Nut	59.62	302	IAmb	IAmb	03 09 41.7	
	comp=Z,12nm,1.0s						
ANMO	Albuquerque	59.66	289	P	P	03 09 39.5	+0.3
ANMO	Albuquerque	59.66	289	P	P	03 09 39.5	+0.3
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ANMO	Albuquerque	59.66	289	P	P	03 09 40.3	+1.1
	baz=22						
ABTX	Abilene, Hawle	59.69	282	P	P	03 09 40.0	+0.7
	baz=22,SNR=9.0						
NVAR	Mina Array Bea	59.88	301	P	P	03 09 41.8	+1.0
	comp=Z,2.8nm,1.0s,baz=26,slow=5.0,SNR=16						
NVAR				LR	LR	03 34 20.0	
	comp=Z,151nm,19.3s,baz=352,slow=35						
WAKR	Walker	60.12	302	IAmb	IAmb	03 09 51.4	
	comp=Z,10nm,1.3s						
AFDM	Forest Hills D	60.12	303	P	P	03 09 42.8	+0.6
AFDM				IAmb	IAmb	03 09 43.9	
	comp=Z,13nm,1.0s						
YSS	Yuzh-Sakhalins	60.38	22⇓	*e*P	P	03 09 43.4	-0.3
YSS				*e*		03 09 49.4	
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
W18A	Petrified Fore	60.49	292	IAmb	IAmb	03 09 47.7	
	comp=Z,17nm,1.1s						
W18A	Petrified Fore	60.49	292	P	P	03 09 46.7	+1.8
	baz=21						
HHC	Hu-ho-hao-te	60.54	49	*e*P	P	03 09 45.5	+0.4
HHC				pmax	pmax		
	comp=Z,83nm,1.0s						
HHC				pmax	pmax		
	comp=Z,420nm,6.0s						
HHC				LR	LR		
	comp=Z,760nm,16.8s						
HHC				LR	LR		
	comp=Z,820nm,15.9s						
HHC				LR	LR		
	comp=Z,770nm,16.3s						
WUAZ	Wupatki	60.61	294	IAmb	IAmb	03 09 47.7	
	comp=Z,8.6nm,1.1s						
WUAZ	Wupatki	60.61	294	P	P	03 09 46.7	+1.0
	baz=21,SNR=5.4						
TPNV	Topopah Spring	60.69	299	IAmb	IAmb	03 09 48.1	
	comp=Z,12nm,1.0s						
TPNV	Topopah Spring	60.69	299	P	P	03 09 47.1	+0.9
	baz=21,SNR=12						
SHPR	Sheep Range	60.79	298	IAmb	IAmb	03 09 50.0	
	comp=Z,12nm,1.5s						
CMB	Columbia Colle	60.82	303	P	P	03 09 47.9	+0.9
CMB				IAmb	IAmb	03 09 49.0	
	comp=Z,7.2nm,1.0s						
CMB	Columbia Colle	60.82	303	P	P	03 09 47.9	+0.9
CMB				pmax	pmax		
	comp=Z,7.0nm,1.0s						
OMMB	Old Mammoth Mi	60.84	301	IAmb	IAmb	03 09 50.6	
	comp=Z,17nm,1.1s						
FURC	Furnace Creek,	61.31	299	P	P	03 09 51.8	+1.6
	baz=20						
USRK	Ussuriysk Ar.	61.53	31	P	P	03 09 52.2	+0.6
	comp=Z,2.3nm,0.7s,baz=292,slow=4.9,SNR=7.6						
CWC	Cottonwood Cre	61.68	300	P	P	03 09 54.8	+1.9
	baz=20						
MPMC	Manual Prospec	61.87	299	P	P	03 09 56.0	+1.7
	baz=20,SNR=8.6						
121A	Cookes Peak, D	62.31	289	IAmb	IAmb	03 09 59.6	
	comp=Z,8.9nm,1.1s						
121A	Cookes Peak, D	62.31	289	P	P	03 09 58.8	+1.6
	baz=21,SNR=5.0						
MNTX	Cornudas Mount	62.34	287	P	P	03 09 57.3	+0.1
LRMC	Laurel Mtn Rad	62.47	299	P	P	03 10 00.0	+1.9
	baz=20						
ISA	Isabella, Lake	62.52	300	IAmb	IAmb	03 10 01.2	
	comp=Z,15nm,1.2s						
ISA	Isabella, Lake	62.52	300	P	P	03 10 00.5	+2.1
	baz=20,SNR=5.6						
GMRC	Granite Mounta	62.54	297	P	P	03 10 00.7	+2.0
	baz=20,SNR=6.7						
PDMCI	Parker Dam,Lak	62.55	296	P	P	03 10 00.5	+1.9
	baz=21						
IRM	Iron Mountain	62.98	297	P	P	03 10 03.3	+1.8
	baz=20						
LZH	Lanzhou	63.05	57	*e*P	P	03 10 03.0	+0.9
LZH				pP	pwP	03 10 10.6	+3.4
LZH				sP	sP	03 10 13.9	+8.2
LZH				PP	PP	03 12 21.2	+1.0
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,190nm,8.0s						
LZH				LR	LR		
	comp=Z,330nm,16.3s						
LZH				LR	LR		
	comp=Z,240nm,18.4s						
LZH				LR	LR		
	comp=Z,220nm,17.9s						
EDW2	Edwards Air Fo	63.12	299	P	P	03 10 04.0	+1.6
	baz=20						
Y12C	Blythe	63.18	296	IAmb	IAmb	03 10 05.7	
	comp=Z,13nm,1.2s						
Y12C	Blythe	63.18	296	P	P	03 10 04.7	+1.9
	baz=20						
BELC	Belle Mtn. Jos	63.37	297	P	P	03 10 06.5	+2.2
	baz=20						
TUC	Tucson	63.42	292	P	P	03 10 06.2	+1.7
	baz=21						
TX31	Lajitas Ar. Si	64.01	284	P	P	03 10 08.9	+0.4
TXAR	Lajitas Array	64.01	284	P	P	03 10 08.9	+0.5
	comp=Z,2.9nm,1.0s,baz=54,slow=6.4,SNR=9.0						
TXAR				LR	LR	03 38 20.2	
	comp=Z,128nm,18.9s,baz=0.0,slow=36						
DANN	Dangsing	64.32	78	*e*P	P	03 10 11.1	+0.4
	comp=Z,51nm,0.9s						
DBIC	Dimbokro	64.56	175	P	P	03 10 12.3	+0.3
	comp=Z,2.4nm,0.8s,baz=353,slow=8.5,SNR=3.6						
DBIC				LR	LR	03 40 32.4	
	comp=Z,117nm,18.3s,baz=346,slow=38						
DBIC	Dimbokro	64.56	175	P	P	03 10 10.9	-1.1
DBIC				IAmb	IAmb	03 10 13.0	
	comp=Z,13nm,1.2s						
TIC	Toumodi	64.58	176	*e*P	P	03 10 12.2	0.0
KIC	Kosan Boka	64.88	175	*e*P	P	03 10 14.1	0.0
	comp=Z,29nm,1.0s						
GKN	Gorkha	64.92	77	*e*P	P	03 10 14.8	+0.3
LIC	Lamto	65.00	176	*e*P	P	03 10 13.4	-1.5
	comp=Z,48nm,1.2s						
KKN	Kakani	65.32	76	*e*P	P	03 10 17.5	+0.3
LSA	Lhasa	65.36	70	P	P	03 10 16.7	-1.0
LSA				IAmb	IAmb	03 10 20.5	
	comp=Z,10.0nm,0.8s						
LSA	Lhasa	65.36	70	P	P	03 10 16.7	-1.0
LSA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GUN	Gumba	65.40	76	*e*P	P	03 10 18.5	+0.7
	comp=Z,60nm,1.1s						
DMN	Daman	65.44	77	*e*P	P	03 10 18.5	+0.5
PKI	Pulchoki	65.57	76	*e*P	P	03 10 19.2	+0.3
JIRN	Jiri	65.73	76	*e*P	P	03 10 20.9	+0.9
	comp=Z,39nm,0.8s						
TAPN	Taplejung	66.49	74	*e*P	P	03 10 25.8	+1.0
RAMN	Ramite	66.52	76	*e*P	P	03 10 25.5	+0.6
	comp=Z,27nm,1.0s						
ODAN	Odare	66.85	75	*e*P	P	03 10 27.8	+0.8
	comp=Z,31nm,0.9s						
KSRS	Korea Array	67.35	36	LR	LR	03 41 45.4	
	comp=Z,110nm,18.0s,baz=15,slow=38						
TJN	Taejon	68.29	37	*de*P	P	03 10 35.7	+0.1
SHL	Shillong	69.45	71	P	P	03 10 42.5	-0.8
SHL				IAmb	IAmb	03 10 44.2	
	comp=Z,12nm,1.0s						
SHL	Shillong	69.45	71	P	P	03 10 42.5	-0.8
SHL				pmax	pmax		
	comp=Z,13nm,1.0s						
MJAR	Matsushiro Arr	70.00	28	P	P	03 10 47.0	+0.7
	comp=Z,2.8nm,0.9s,baz=0.0,slow=7.3,SNR=4.6						
MJAR	Matsushiro Arr	70.00	28	P	P	03 10 47.0	+0.7
NJ2	Nanjing	70.65	45	*e*P	P	03 10 49.6	-0.7
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
ROSC	El Rosal	77.65	248	LR	LR	03 44 52.4	
	comp=Z,49nm,18.4s,baz=55,slow=35						
CHTO	Chiang Mai	77.94	67	P	P	03 11 31.8	-1.1
CHTO				IAmb	IAmb	03 11 41.7	
	comp=Z,9.1nm,0.9s						
CHTO	Chiang Mai	77.94	67	P	P	03 11 31.8	-1.1
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CMAR	Chiang Mai Arr	78.27	67	P	P	03 11 35.6	+0.8
	comp=Z,1.7nm,0.6s,baz=318,slow=5.8,SNR=12						
CMAR				LR	LR	03 52 05.0	
	comp=Z,30nm,19.8s,baz=0.0,slow=40						
BDFB	Brasilia	90.66	217	LR	LR	03 47 12.1	
	comp=Z,90nm,19.7s,baz=30,slow=32						
GUMO	Guam	93.52	25	LR	LR	03 56 15.9	
	comp=Z,40nm,21.7s,baz=334,slow=36						

IDC 04 02:59:38.8±363.0**,70°.65N**×**150°.11W,h0^{km},Error ellipse: s-maj=167.9km s-min=117.6km az=158.0, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I53US	FAIRBANKS INFR	5.86	171	*i*		03 37 10.0	
	baz=352,slow=334,SNR=1.3						
I18DK	QAANAAQ INFRAS	21.30	36	*i*		05 09 00.0	
	baz=292,slow=344,SNR=1.2						
I10CA	LAC DU BONNET	32.00	101	*i*		06 15 40.0	
	baz=330,slow=341,SNR=1.5						

PRU ***04*** *03:03:24.8±0.0,49°.80N×18°.53E,h0^{km}*

ISC 04 03:03:23.9±6.1**,49°.8N**±0°.2×**18°.6E**±0°.2**,h0^{km},n4,**σ**0^{s}41**/6**,**
Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.26	277	*e*PG	Pg	03 03 28.6	-0.4
	18nm,1.3s						
OKC				*e*SG	Sg	03 03 32.6	+0.2
	comp=Z,6.3nm,0.5s						
MORC	Moravsky Berou	0.66	268	*e*PG	Pg	03 03 36.8	+0.3
MORC				*e*SG	Sg	03 03 44.7	-0.3
DPC	Dobruska-Polom	1.54	292	*e*SG	Sg	03 04 13.1	-0.2
CHVC	Chvalec	1.79	297	*e*SG	Sg	03 04 21.6	+0.3

MOS ***04*** *03:04:14.6±0.9,53°.77N×158°.52E,h178^{km},mb4.2/11, Error ellipse: s-maj=11.3km s-min=4.9km az=80.8*

KRSC ***04*** *03:04:14.2±1.0,53°.69N×158°.94E,h180^{km}±10^{km},ML4.1*

NEIC ***04*** *03:04:15.6±1.1,53°.9N±0°.1×158°.5E±0°.1,h167^{km}±6^{km}, mb4.3/12,Error ellipse: s-maj=16.9km s-min=12.7km az=177.0*

IDC ***04*** *03:04:16.1±0.5,53°.91N×158°.39E,h168^{km}±5^{km},mb3.6/26, mb1 3.8/27,mb1mx3.7/55,mbtmp4.1/27,Error ellipse: s-maj=13.5km s-min=10.0km az=175.0*

ISC 04 03:04:15.5±0.6**,53°.76N**±0°.04×**158°.77E**±0°.04**,h173**^{km}±5^{km}**,**
n153,σ**1^{s}14**/188**,mb4.0**/37**,10C-8D,Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRX	Arik	0.41	190	*e*P	Pn	03 04 39.7	+0.4
KRX	Arik	0.41	190	PN	Pn	03 04 39.7	+0.4
KOK	Koryaka	0.48	189	*e*P	Pn	03 04 39.8	+0.3
KOK	Koryaka	0.48	189	PN	Pn	03 04 39.8	+0.3
KII	Karymskiy	0.49	56	*e*P	Pn	03 04 39.7	+0.3
KII	Karymskiy	0.49	56	PN	Pn	03 04 39.7	+0.3
SDLR	Sedlovina	0.49	172	*e*P	Pn	03 04 39.7	+0.1
SDLR	Sedlovina	0.49	172	PN	Pn	03 04 39.7	+0.1
AVH	Avacha	0.50	182	*e*P	Pn	03 04 39.9	+0.3
AVH	Avacha	0.50	182	PN	Pn	03 04 39.9	+0.3
SMAR	Somma	0.50	178	*e*P	Pn	03 04 40.1	+0.4
SMAR				*e*S	Sn	03 05 00.2	+1.9
SMAR	Somma	0.50	178	PN	Pn	03 04 40.1	+0.4
SMAR				S	Sn	03 05 00.2	+1.9
UGLR	Uglovaya	0.56	176	*e*P	Pn	03 04 40.1	+0.2
UGLR	Uglovaya	0.56	176	PN	Pn	03 04 40.1	+0.2
NLC	Nalytchevo	0.69	150	*e*P	Pn	03 04 40.2	-0.1
NLC				*e*S	Sn	03 04 59.2	-0.2
NLC	Nalytchevo	0.69	150	PN	Pn	03 04 40.2	-0.1
NLC				S	Sn	03 04 59.2	-0.2
DALK	Dalny	0.73	181	*e*P	Pn	03 04 40.5	-0.1
DALK				*e*S	Sn	03 04 59.7	-0.2
DALK	Dalny	0.73	181	PN	Pn	03 04 40.5	-0.1
DALK				S	Sn	03 04 59.7	-0.2
PET	Petropavlovsk	0.74	185	*e*P	Pn	03 04 40.9	+0.2
PET				*e*S	Sn	03 05 00.4	+0.3
PET	Petropavlovsk	0.74	185		Pn	03 04 39.9	-0.8
PET				Sn	Sn	03 05 00.3	+0.3
PET	Petropavlovsk	0.74	185	κ *i*PN	Pn	03 04 40.7	0.0
PET				*e*S	Sn	03 04 59.8	-0.2
PET				pmax	pmax		
	comp=Z,1μm,1.0s						
PET				pmax	pmax		
	comp=Z,925nm,0.8s						
PET				smax	smax		
	comp=N,1μm,0.8s						
PEA0B	Petropavlovsk-	0.92	225		Pn	03 04 41.5	-0.3
PEA0B				Sn	Sn	03 05 01.2	-0.9
PEA0B	Petropavlovsk-	0.92	225	*c i*PN	Pn	03 04 41.6	-0.3
PETK	Petropavlovsk-	0.92	225	P	Pn	03 04 41.8	-0.1
	comp=N,32nm,0.3s,baz=76,slow=14,SNR=686						
PETK				S	Sn	03 05 02.0	-0.1
	comp=N,10nm,0.3s,baz=268,slow=40,SNR=13						
SPN	Mys Shipunski	1.00	131	*e*P	Pn	03 04 41.6	-0.9
SPN				*e*S	Sn	03 05 01.3	-1.9
SPN	Mys Shipunski	1.00	131	PN	Pn	03 04 41.6	-0.9
SPN				S	Sn	03 05 01.3	-1.9
KRMR	Karymshinskiy	1.01	202	*e*P	Pn	03 04 42.4	-0.1
KRMR				*e*S	Sn	03 05 03.2	-0.1
KRMR	Karymshinskiy	1.01	202	PN	Pn	03 04 42.4	-0.1
KRMR				S	Sn	03 05 03.2	-0.1
APC	Apacha	1.28	230	*e*P	Pn	03 04 45.2	+0.5
APC				*e*S	Sn	03 05 07.8	+0.5
APC	Apacha	1.28	230	PN	Pn	03 04 45.2	+0.5
APC				S	Sn	03 05 07.8	+0.5
GRL	Gorelyy	1.28	199	*e*P	Pn	03 04 45.4	+0.4
GRL				*e*S	Sn	03 05 09.5	+1.8
GRL	Gorelyy	1.28	199	PN	Pn	03 04 45.4	+0.4
GRL				S	Sn	03 05 09.5	+1.8
MTVR	Mutnovka	1.33	196	*e*P	Pn	03 04 45.6	+0.2
MTVR				*e*S	Sn	03 05 10.3	+1.9
MTVR	Mutnovka	1.33	196	PN	Pn	03 04 45.6	+0.2
MTVR				S	Sn	03 05 10.3	+1.9
RUS	Russkaya	1.34	187	*e*P	Pn	03 04 44.6	-0.7
RUS				*e*S	Sn	03 05 06.9	-1.4
RUS	Russkaya	1.34	187	PN	Pn	03 04 44.6	-0.7
RUS				S	Sn	03 05 06.9	-1.4
ASAK	Asacha	1.48	201	*e*P	Pn	03 04 47.0	+0.3
ASAK				*e*S	Sn	03 05 12.1	+1.3
ASAK	Asacha	1.48	201	PN	Pn	03 04 47.0	+0.3
ASAK				S	Sn	03 05 12.1	+1.3
KZV	Kizimen	1.62	33	*e*P	Pn	03 04 48.9	+0.8
KZV	Kizimen	1.62	33	PN	Pn	03 04 48.9	+0.8
TUMR	Tumrok	1.72	27	*e*P	Pn	03 04 50.3	+1.2
TUMR	Tumrok	1.72	27	PN	Pn	03 04 49.7	+0.6
TUMD	Tumrok D	1.73	33	*e*P	Pn	03 04 49.7	+0.6
MIPR	Malaya Ipel'ka	1.92	220	*e*P	Pn	03 04 51.8	+0.6
MIPR	Malaya Ipel'ka	1.92	220	PN	Pn	03 04 51.8	+0.6
ESO	Esso	2.17	359	*e*P	Pn	03 04 54.4	+0.6
ESO				*e*S	Sn	03 05 24.8	+1.1
ESO	Esso	2.17	359	PN	Pn	03 04 54.4	+0.6
ESO				S	Sn	03 05 24.8	+1.1
KMNR	Kamenistaya	2.17	23	*e*P	Pn	03 04 55.3	+1.3
KMNR	Kamenistaya	2.17	23	PN	Pn	03 04 55.3	+1.3
KIRR	Kirishev	2.38	22	*e*P	Pn	03 04 57.1	+0.7
KIRR				*e*S	Sn	03 05 28.9	+0.7
KIRR	Kirishev	2.38	22	PN	Pn	03 04 57.1	+0.7
KIRR				S	Sn	03 05 28.9	+0.7
KOZ	Kozyrevsk	2.39	15	*e*P	Pn	03 04 57.1	+0.8
KOZ	Kozyrevsk	2.39	15	PN	Pn	03 04 57.1	+0.8
BZMR	Bezymyannaya	2.39	24	*e*P	Pn	03 04 58.3	+1.7
BZMR	Bezymyannaya	2.39	24	PN	Pn	03 04 58.3	+1.7
ZLN	Zelenaya	2.55	27	*e*P	Pn	03 05 00.6	+2.3
ZLN	Zelenaya	2.55	27	PN	Pn	03 05 00.6	+2.3
LGNR	Loginova	2.58	25	*e*P	Pn	03 05 00.6	+1.8
LGNR	Loginova	2.58	25	PN	Pn	03 05 00.6	+1.8
SRDR	Sredinnyy	2.62	12	*e*P	Pn	03 04 59.9	+0.8
SRDR	Sredinnyy	2.62	12	PN	Pn	03 04 59.9	+0.8
CIRR	Tsirk	2.62	25	*e*P	Pn	03 05 00.9	+1.7
CIRR	Tsirk	2.62	25	PN	Pn	03 05 00.9	+1.7
KRSR	Krestovskiy	2.67	22	*e*P	Pn	03 05 00.3	+0.6
KRSR	Krestovskiy	2.67	22	PN	Pn	03 05 00.3	+0.6
KLY	Klyuchi	2.77	22	*e*P	Pn	03 05 03.1	+2.2
KLY	Klyuchi	2.77	22	PN	Pn	03 05 03.1	+2.2
BDR	Baidarnaya	3.14	25	*e*P	Pn	03 05 07.1	+1.6
BDR	Baidarnaya	3.14	25	PN	Pn	03 05 07.1	+1.6
KBG	Krutoberegovo	3.37	41	*e*P	Pn	03 05 09.9	+1.7
KBG				*e*S	Sn	03 05 49.2	-0.3
KBG	Krutoberegovo	3.37	41	PN	Pn	03 05 09.9	+1.7
KBG				S	Sn	03 05 49.2	-0.3
KBTR	Krutoberegovo	3.38	42	*e*P	Pn	03 05 08.4	0.0
KBTR				*e*S	Sn	03 05 47.9	-1.9
KBTR	Krutoberegovo	3.38	42	PN	Pn	03 05 08.4	0.0
KBTR				S	Sn	03 05 47.9	-1.9
SKR	Severo-Kuril's	3.49	209	*e*S	Sn	03 05 52.3	+0.1
SKR	Severo-Kuril's	3.49	209	*e*PN	Pn	03 05 10.3	+0.5
SKR				*e*S	Sn	03 05 52.0	-0.2
SKR				pmax	pmax		
	comp=Z,21nm,0.6s						
SKR				smax	smax		
	comp=N,133nm,0.5s						
SKR				smax	smax		
	comp=E,153nm,0.5s						
BKI	Bering	4.44	68	*e*P	Pn	03 05 21.5	-0.4
BKI				*e*S	Sn	03 06 09.6	-4.3
BKI	Bering	4.44	68	PN	Pn	03 05 21.5	-0.4
SEY	Seymchan	9.78	343⇓	*e*PN	Pn	03 06 32.1	+0.1
TYV	Tymovskoe	10.28	260	*e*PN	Pn	03 06 26.0	-13
TYV				pmax	pmax		
	comp=Z,51nm,0.9s						
TYV				pmax	pmax		
	comp=Z,600nm,3.8s						
YSS	Yuzh-Sakhalins	12.27	243⇓	*e*PN	P	03 07 15.1	+5.5
ERM	Erimo	15.70	228⇑	*e*P	Pn	03 07 45.4	-1.8
TEY	Ternei	16.81	248⇑	*i*P	Pn	03 08 02.0	+1.5
TEY				pmax	pmax		
	comp=N,20nm,0.9s						
TEY				pmax	pmax		
	comp=E,20nm,0.9s						
TEY				pmax	pmax		
	comp=Z,30nm,0.9s						
KLR	Kul'dur	17.37	266	P	Pn	03 08 07.3	0.0
	comp=Z,0.3nm,0.3s,baz=52,slow=13,SNR=7.8						
KLR	Kul'dur	17.37	266⇑	*e*P	P	03 08 03.5	-2.5
KLR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YAK	Yakutsk	17.40	310	P	Pn	03 08 05.4	-2.0
	comp=Z,0.2nm,0.3s,baz=221,slow=0.4,SNR=3.2						
YAK	Yakutsk	17.40	310	P	P	03 08 03.4	-2.7
TIXI	Tiksi	22.14	335	P	P	03 08 56.7	0.0
	comp=Z,1.8nm,0.3s,baz=130,slow=8.4,SNR=5.2						
TIXI	Tiksi	22.14	335⇑	*e*P	P	03 08 56.4	-0.2
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TIXI	Tiksi	22.14	335	PKPdf	P	03 08 56.3	-2.8
MJA0	Matsu Arr-Jizo	22.36	228	*e*P	P	03 09 00.3	+1.2
MJA0				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MAJO	Matsushiro	22.38	228⇑	*e*P	P	03 08 59.6	+0.3
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.4s						
MJAR	Matsushiro Arr	22.38	228	P	P	03 09 00.3	+1.0
	comp=Z,3.2nm,0.5s,baz=31,slow=9.3,SNR=11						
HIA	Hailar	24.48	275⇓	*e*P	P	03 09 17.3	-1.0
HIA				pmax	pmax		
	comp=Z,23nm,0.8s						
KDAK	Kodiak Island	27.18	62	P	P	03 09 43.0	+0.6
	comp=Z,3.5nm,1.0s,baz=250,slow=2.6,SNR=11						
KDAK	Kodiak Island	27.18	62	P	P	03 09 43.4	+1.0
KDAK				IAmb	IAmb	03 10 00.7	
	comp=Z,7.6nm,1.0s						
TJN	Taejon	27.86	244⇓	*e*P	P	03 09 47.8	-0.8
ILAR	Eielson Array	28.91	46	P	P	03 09 59.0	+1.2
	comp=Z,0.7nm,0.7s,baz=265,slow=4.8,SNR=8.9						
SONM	Songino Array	32.98	281	P	P	03 10 34.0	+0.2
	comp=Z,0.9nm,0.5s,baz=75,slow=7.9,SNR=4.3						
SONM	Songino Array	32.98	281	P	P	03 10 34.0	+0.2
HHC	Hu-ho-hao-te	33.87	267	*e*P	P	03 10 45.9	+4.4
ZALV	Zalesovo Beam	41.75	301	P	P	03 11 44.7	-2.4
	comp=Z,1.1nm,0.5s,baz=48,slow=7.5,SNR=3.5						
YKA	Yellowknife Ar	43.20	43	P	P	03 12 00.7	+2.0
	comp=Z,0.4nm,0.6s,baz=298,slow=7.0,SNR=3.5						
KURK	Kurchatov	46.71	301	P	P	03 12 25.6	-0.9
KURK	Kurchatov	46.71	301	*c i*P	P	03 12 25.2	-1.3
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MK31	Makanchi Array	47.15	294	P	P	03 12 29.0	-1.1
MK31				IAmb	IAmb	03 12 29.3	
	comp=Z,4.5nm,0.5s						
MK31	Makanchi Array	47.15	294	P	P	03 12 29.0	-1.1
MK31				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MKAR	Makanchi Array	47.15	294	P	P	03 12 28.9	-1.2
	comp=Z,4.9nm,0.5s,baz=54,slow=6.7,SNR=116						
MKAR				PcP	PcP	03 13 59.2	+0.4
	comp=Z,0.2nm,0.5s,baz=58,slow=3.6,SNR=2.5						
MAKZ	Makanchi	47.31	295	P	P	03 12 30.2	-1.1
MAKZ				IAmb	IAmb	03 12 30.5	
	comp=Z,4.7nm,0.5s						
MAKZ	Makanchi	47.31	295	P	P	03 12 30.2	-1.1
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BRVK	Borovoye	49.38	307	*de*P	P	03 12 45.5	-1.5
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARU	Arti	52.36	316	P	P	03 13 08.2	-1.0
	comp=Z,3.5nm,0.2s,baz=68,slow=3.4,SNR=6.4						
ARU	Arti	52.36	316	*c i*P	P	03 13 08.4	-0.8
ARU				S	S	03 20 21.4	+0.5
ARU				SS	SS	03 23 59.9	-0.3
ARU				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ARCES	ARCESS Array B	52.40	341	P	P	03 13 07.9	-1.4
	comp=Z,1.0nm,0.7s,baz=40,slow=7.1,SNR=5.1						
AAK	Ala-Archa	54.07	295	P	P	03 13 21.2	-0.8
AAK				IAmb	IAmb	03 13 21.9	
	comp=Z,4.8nm,0.8s						
AAK	Ala-Archa	54.07	295	*c i*P	P	03 13 21.3	-0.8
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KK31	Karatay Array	55.87	298	P	P	03 13 33.5	-1.2
KK31	Karatay Array	55.87	298	P	P	03 13 33.5	-1.2
KK31				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KKAR	Karatay Array	55.87	298	P	P	03 13 34.0	-0.7
KKAR				IAmb	IAmb	03 13 34.0	
	comp=Z,2.7nm,0.7s						
NVAR	Mina Array Bea	56.26	70	P	P	03 13 40.6	+2.9
	comp=Z,1.4nm,0.6s,baz=299,slow=7.4,SNR=7.9						
ABKAR	Akbulak array	56.75	309	P	P	03 13 39.8	-1.0
AKTO	Aktyubinsk	56.78	311	P	P	03 13 39.9	-1.2
	comp=Z,1.4nm,0.5s,baz=72,slow=10,SNR=7.7						
TAPN	Taplejung	57.37	273	*e*P	P	03 13 45.0	-0.9
	comp=Z,9.0nm,0.7s						
PDAR	Pinedale Array	57.88	60	P	P	03 13 51.5	+2.4
	comp=Z,1.4nm,0.5s,baz=344,slow=2.9,SNR=18						
GUN	Gumba	58.04	275	*e*P	P	03 13 49.7	-0.9
	comp=Z,5.0nm,0.3s						
JIRN	Jiri	58.04	274	*e*P	P	03 13 50.5	-0.1
RAMN	Ramite	58.33	273	*e*P	P	03 13 51.2	-1.3
	comp=Z,12nm,0.4s						
GAR	Garm	58.88	295	P	P	03 13 55.4	-0.6
GAR				IAmb	IAmb	03 13 56.6	
	comp=Z,10nm,1.2s						
DANN	Dangsing	58.97	276	*e*P	P	03 13 57.4	+0.5
	comp=Z,5.9nm,0.5s						
FINES	FINESS Array B	59.18	336	P	P	03 13 57.1	-0.4
	comp=Z,1.4nm,0.4s,baz=36,slow=8.4,SNR=20						
CHGR	Chuyangaron	59.75	295	P	P	03 14 00.9	-1.0
NB2	NORSAR Subarra	62.67	343	P	P	03 14 20.5	-0.6

	comp=Z,0.4nm,0.4s,baz=20,slow=6.9						
NOA	**NORSAR Array B**	62.67	343	P	P	03 14 20.8	-0.3
	comp=Z,0.4nm,0.4s,baz=21,slow=6.3,SNR=7.4						
VSR	**Storozhevoye**	63.82	322	⇓eP	P	03 14 28.0	-0.7
VSR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ANMO	**Albuquerque**	65.28	64	⇑eP	P	03 14 41.6	+2.9
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.0s						
GEYT	**Alibeck**	66.06	302	P	P	03 14 43.1	-0.4
	comp=Z,1.1nm,0.6s,baz=108,slow=4.7,SNR=3.2						
AKASG	**Malin Array Be**	67.62	328	P	P	03 14 51.9	-1.2
	comp=Z,0.8nm,0.4s,baz=30,slow=6.4,SNR=6.0						
KBZ	**Khabaz**	68.50	315	P	P	03 14 58.6	0.0
	comp=Z,0.8nm,0.5s,baz=95,slow=8.5,SNR=5.5						
KBZ	**Khabaz**	68.50	315	eP	P	03 14 59.6	+1.0
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.4s						
EKA	**Eskdalemuir Ar**	70.25	349	P	P	03 15 09.4	+0.2
	comp=Z,1.5nm,0.4s,baz=19,slow=5.1,SNR=18						
TXAR	**Lajitas Array**	71.10	66	P	P	03 15 17.2	+2.3
	comp=Z,0.8nm,0.5s,baz=296,slow=5.3,SNR=7.7						
CLL	**Collm**	71.44	338	eP	P	03 15 17.0	+0.6
	comp=Z,4.0nm,0.9s						
MLR	**Muntele Rosu**	73.26	327	P	P	03 15 27.2	-0.3
	comp=Z,2.0nm,0.6s,baz=344,slow=7.2,SNR=7.8						
MLR	**Muntele Rosu**	73.26	327	P	P	03 15 26.8	-0.7
GERES	**GERESS Array B**	73.58	337	P	P	03 15 28.7	-0.6
	comp=Z,0.3nm,0.3s,baz=32,slow=5.2,SNR=5.5						
GERES	**GERESS Array B**	73.58	337	eP	P	03 15 29.3	0.0
BRTR	**Keskin Array B**	75.59	319	P	P	03 15 40.7	-0.4
	comp=Z,0.7nm,0.6s,baz=106,slow=3.1,SNR=6.1						
WRA	**Warramunga Arr**	76.37	204	P	P	03 15 46.2	+0.9
	comp=Z,0.5nm,0.7s,baz=14,slow=6.0,SNR=4.7						
DAVOX	**Davos/Dischmat**	76.39	339	P	P	03 15 46.2	+0.6
	comp=Z,1.1nm,0.5s,baz=21,slow=7.3,SNR=5.7						
ASAR	**Alice Springs**	80.06	203	P	P	03 16 06.3	+0.8
	comp=Z,0.6nm,0.7s,baz=14,slow=5.4,SNR=5.8						
QSPA	**South Pole Qui**	143.51	180	PKP	PKPdf	03 23 28.5	+0.6
	comp=Z,0.9nm,0.8s,baz=45,slow=1.7,SNR=3.8						
PLCA	**Paso Flores**	144.80	89	PKPbc	PKPdf	03 23 32.2	+1.2
	comp=Z,2.1nm,0.7s,baz=341,slow=4.8,SNR=9.2						
PLCA	**Paso Flores**	144.80	89		PKPdf	03 23 32.0	+1.0
PLCA	**Paso Flores**	144.80	89	ePKIKP	PKPdf	03 23 31.8	+0.8
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.7s						

ROM 04 03:33:44.2±0.1**, 43°.378N**±0°.002×**12°.514E**±0°.004**, h8^{km}, ML1.4**/6**, 3C-4D, Error ellipse: s-maj=0.2km s-min=0.2km az=240.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATVO	**AVT- Monte Val**	0.08	273	P	Pg	03 33 46.5	+0.2
ATVO				S	Sg	03 33 48.0	+0.3
ATVO				AML	AML		
	comp=E,490μm,0.1s						
ATVO				AML	AML		
	comp=N,469μm,0.4s						
ATPI	**Pietralunga -**	0.11	312	⇑P	Pg	03 33 47.2	+0.5
ATPI				S	Sg	03 33 49.4	+0.9
ATPI				AML	AML		
	comp=E,142μm,0.2s						
ATPI				AML	AML		
	comp=N,214μm,0.3s						
MURB	**Monte Urbino**	0.12	176	P	Pg	03 33 47.1	+0.3
MURB				S	Sg	03 33 49.5	+0.8
MURB				AML	AML		
	comp=E,588μm,1.0s						
MURB				AML	AML		
	comp=N,528μm,0.2s						
ATMI	**Monte Miggiano**	0.18	256	P	Pg	03 33 48.7	+0.7
ATMI				AML	AML		
	comp=N,160μm,0.5s						
ATMI				AML	AML		
	comp=E,176μm,0.8s						
FOSV	**Fossato di Vic**	0.20	115	P	Pg	03 33 48.7	+0.5
FOSV				S	Sg	03 33 52.2	+1.3
FRON	**Frontone**	0.21	48	P	Pg	03 33 49.0	+0.6
FRON				S	Sg	03 33 52.8	+1.5
ATCC	**AVT- Casa Cast**	0.21	154	⇓P	Pg	03 33 49.3	+0.8
ATCC				S	Sg	03 33 53.1	+1.7
ATCC				AML	AML		
	comp=E,184μm,0.9s						
ATCC				AML	AML		
	comp=N,236μm,0.2s						
ATCC				AML	AML		
	comp=N,237μm,0.2s						
ATCC				AML	AML		
	comp=E,184μm,0.9s						
CDCA	**Citt' di Caste**	0.22	292	P	Pg	03 33 50.2	+1.6
NARO	**Abbazia di Nar**	0.24	12	⇓P	Pg	03 33 49.6	+0.7
NARO				S	Sg	03 33 53.7	+1.5
NARO				AML	AML		
	comp=E,73μm,1.2s						
NARO				AML	AML		
	comp=E,73μm,1.2s						
NARO				AML	AML		
	comp=N,67μm,1.4s						
PE3	**Peglio**	0.32	358	⇓P	Pb	03 33 51.7	-0.6
ARVD	**Arcevia**	0.33	69	⇑P	Pg	03 33 51.4	+0.6
SNTG	**Esanatoglia**	0.34	111	⇓P	Pg	03 33 51.2	+0.4
ASSB	**Assisi San Ben**	0.35	162	⇑P	Pg	03 33 51.5	+0.3
FSSB	**Fossombrone**	0.37	31	P	Pg	03 33 52.1	+0.6
FSSB				S	Sb	03 33 58.5	-0.5
GAG1	**Gagliole**	0.43	109	S	Sg	03 33 58.0	-0.2
MGAB	**Montegabbione**	0.55	212	P	Pg	03 33 54.6	-0.2

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*BEO **04** 03:35:15.3±0.4, 45°.45N×21°.05E, h0^{km}, ML1.6/5*

BUC 04 03:35:16.1±0.3**, 45°.47N×21°.24E, h6**^{km}±2^{km}**, ml1.8**/4**, 12C-22D, Error ellipse: s-maj=2.5km s-min=1.6km az=121.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BANR	**Banloc**	0.11	220	⇑P	Pg	03 35 17.9	-0.5
BANR				⇑S	Sg	03 35 20.2	+0.2
BANR	**Banloc**	0.11	220	⇑P	Pg	03 35 17.9	-0.5
BANR				⇑S	Sg	03 35 20.2	+0.2
BZS	**Buzias**	0.31	61	ePg	Pg	03 35 23.0	+0.9
BZS				eSg	Sb	03 35 28.9	-0.3
BZS	**Buzias**	0.31	61	⇓P	Pg	03 35 22.7	+0.6
BZS				⇓S	Sg	03 35 27.5	+1.3
BZS	**Buzias**	0.31	61	⇓P	Pg	03 35 22.7	+0.6
BZS				⇓S	Sg	03 35 27.5	+1.3
MDVR	**Moldovita**	0.76	154	⇓P	Pg	03 35 30.3	-0.5
MDVR				⇓S	Sg	03 35 41.2	+0.6
MDVR	**Moldovita**	0.76	154	⇓P	Pg	03 35 30.3	-0.5
MDVR				⇓S	Sg	03 35 41.2	+0.6
SIRR	**Siria**	0.85	20	⇓P	Pg	03 35 32.6	+0.1
SIRR				⇑S	Sb	03 35 44.6	-0.4
SIRR	**Siria**	0.85	20	⇓P	Pg	03 35 32.6	+0.1
SIRR				⇑S	Sb	03 35 44.6	-0.4
FRGS	**Fruska Gora**	1.05	253	ePg	Pg	03 35 31.5	-4.8
FRGS				eSg	Sg	03 35 45.1	-4.8
GZR	**Gura Zlata**	1.09	93	⇑P	Pg	03 35 37.0	0.0
GZR				⇓S	Sb	03 35 51.9	+0.2
GZR	**Gura Zlata**	1.09	93	⇑P	Pg	03 35 37.0	0.0
GZR				⇓S	Sb	03 35 51.9	+0.2
KUBS	**Kucevo**	1.10	163	ePg	Pg	03 35 35.6	-1.5
KUBS				eSg	Sb	03 35 51.8	-0.2
DEV	**Deva**	1.24	70	⇑P	Pg	03 35 39.6	-0.3
DEV				⇓S	Sn	03 35 57.2	+0.3
DEV	**Deva**	1.24	70	⇑P	Pg	03 35 39.6	-0.3
DEV				⇓S	Sn	03 35 57.2	+0.3
TRUS	**Trudelj**	1.38	206	ePg	Pn	03 35 38.3	-3.5
TRUS				eSg	Sb	03 35 56.1	-3.9
GRUS	**Gruza**	1.62	193	ePg	Pn	03 35 44.8	-0.3
DIVS	**Divibare**	1.63	213	ePg	Pn	03 35 43.2	-2.1
DIVS				eSg	Sn	03 36 04.4	-2.2
DRGR		1.68	37	⇓P	Pn	03 35 45.8	-0.2
DRGR				⇑S	Sn	03 36 07.4	-0.4
DRGR		1.68	37	⇓P	Pn	03 35 45.8	-0.2
DRGR				⇑S	Sn	03 36 07.4	-0.4
ZAGS	**Zajecar**	1.80	156	eSg	Sg	03 36 13.2	-0.7
BOVS	**Bovan**	1.86	169	ePg	Pb	03 35 50.1	-0.3
BOVS				eSg	Sb	03 36 14.7	+0.8
IVAS	**Ivanjica**	2.04	203	eSg	Pn	03 35 49.9	-1.1
IVAS	**Ivanjica**	2.04	203	ePg	Sb	03 36 18.6	-0.6
BLKB	**Belogradchik**	2.11	150	⇓P	Pn	03 35 52.7	+0.8
BLKB				⇓S	Sn	03 36 19.8	+1.3
BLKB	**Belogradchik**	2.11	150	⇓P	Pn	03 35 52.7	+0.8
BLKB				⇓S	Sn	03 36 19.8	+1.3
ZAPS	**Zavoj**	2.41	155	eSg	Sg	03 36 33.2	-0.3
BLY	**Banja Luka**	2.96	257	⇓P	Pn	03 36 04.1	+0.6
BLY	**Banja Luka**	2.96	257	⇓P	Pn	03 36 04.1	+0.6

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*STR **04** 03:37:59.5±1.3, 50°N±3°×°±°, h0^{km}, MLv1.7/4*

LDG 04 03:37:59.5±0.1**, 49°.77N×6°.88E, h4**^{km}**, Ml1.6**/7**, Error ellipse: s-maj=1.0km s-min=0.9km az=145.0, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABH	**Alteburg**	0.45	75	Pg	Pg	03 38 07.7	-0.3
ABH				Sg	Sg	03 38 14.3	+0.4
KTD	**Kalmit**	0.90	119	Pg	Pg	03 38 16.6	-0.1
KTD				Sg	Sg	03 38 28.7	+0.3
SUBF	**Surbourg**	1.06	143	Pg	Pg	03 38 19.4	-0.3
SUBF				Sg	Sg	03 38 33.5	0.0
GIVF	**Givet**	1.37	285	eP	Pb	03 38 25.6	-0.1
GIVF				eSn	Sg	03 38 42.0	-1.6
	1.5nm,0.2s						
CDF	**Champ du Feu**	1.38	169	ePn	Pn	03 38 23.9	-1.7
CDF				eSn	Sg	03 38 41.3	-2.4
	0.4nm,0.2s						
PAGF	**Fort de Pagny**	1.43	213	ePn	Pn	03 38 24.4	-1.8
PAGF	**Fort de Pagny**	1.43	213	ePg	Pn	03 38 26.1	-0.1
PAGF				eSn	Sb	03 38 42.6	-2.6
	0.2nm,0.2s						
PAGF				eSg	Sg	03 38 44.3	-1.1
BAIF	**Baives**	1.75	281	ePn	Pn	03 38 29.2	-1.5
BAIF	**Baives**	1.75	281	ePg	Pb	03 38 32.0	-0.2
BAIF				eSg	Sb	03 38 54.9	+0.3
	0.8nm,0.3s						
HAU	**Haudompre**	1.80	192	ePn	Pn	03 38 29.5	-1.8
HAU	**Haudompre**	1.80	192	ePg	Pb	03 38 33.0	+0.1
HAU				eSn	Sn	03 38 52.2	-2.3
	1.0nm,0.2s						
HINF	**Hinteralfeld**	1.95	181	ePn	Pn	03 38 31.6	-1.8
HINF				eSn	Sn	03 38 54.9	-3.4
	0.9nm,0.3s						
SFTF	**Sexfontaines**	1.98	219	ePn	Pn	03 38 32.2	-1.6
SFTF				eSn	Sn	03 38 56.0	-3.0
SFTF				eSg	Sb	03 39 01.6	+0.6
	1.3nm,0.3s						

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*MOS **04** 03:44:48.2±0.9, 43°.83N×146°.23E, h134^{km}, mb3.9/1, Error ellipse: s-maj=15.7km s-min=11.8km az=79.3*

*SKHL **04** 03:44:49.8±0.8, 43°.86N×146°.18E, h130^{km}±3^{km}, mb4.1/5, msh5.2/4*

*IDC **04** 03:44:51.0±2.1, 43°.76N×146°.10E, h140^{km}±18^{km}, mb3.2/10, mb1 3.4/12, mb1mx3.2/34, mbtmp3.6/12, MS3.2/1, Ms1 3.2/1, ms1mx2.4/19, Error ellipse: s-maj=21.2km s-min=16.1km az=108.0*

*JMA **04** 03:44:51.0±0.2, 43°.74N×146°.20E, h118^{km}±2^{km}, M3.5*

ISC 04 03:44:49.5±0.7**, 43°.77N**±0°.06×**146°.24E**±0°.04**, h129**^{km}±5^{km}**, n48,** σ**0^{s}.78**/69**, mb3.6**/11**, 2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	0.38	314	eP	Pn	03 45 08.0	+0.3
YUK				AMB	AMB	03 45 09.0	
	50nm,0.2s						
YUK				eS	Sn	03 45 21.5	0.0
YUK				A	A	03 45 23.3	
	400nm,0.2s						
YUK				A	A	03 45 23.3	
	150nm,0.2s						
YUK	**Yuzh-Kuril'sk**	0.38	314	ePN	Pn	03 45 08.0	+0.3
YUK				eS	Sn	03 45 21.3	-0.2
YUK				pmax	pmax		
	comp=Z,474nm,0.2s						
YUK				pmax	pmax		
	comp=N,39nm,0.1s						
YUK				pmax	pmax		
	comp=E,80nm,0.2s						
YUK				smax	smax		
	comp=E,2μm,0.6s						
YUK				smax	smax		
	comp=N,2μm,0.5s						
GRPR	**Tuman**	0.40	303	eP	Pn	03 45 07.8	-0.1
GRPR				eP	Pn	03 45 07.8	-0.1
GRPR				AMB	AMB	03 45 08.0	
	comp=N,70nm,0.2s						
GRPR				eS	Sn	03 45 21.1	-0.6
GRPR	**Tuman**	0.40	303	ePN	Pn	03 45 07.8	-0.1
GRPR				eS	Sn	03 45 21.1	-0.6
GRPR				pmax	pmax		
	comp=N,182nm,0.1s						
GRPR				pmax	pmax		
	comp=Z,696nm,0.1s						
GRPR				smax	smax		
	comp=N,1μm,0.2s						
GRPR				smax	smax		
	comp=E,510nm,0.2s						
SHO	**Shikotan**	0.44	77	eP	Pn	03 45 08.0	0.0
SHO				AMB	AMB	03 45 09.4	
	comp=E,40nm,0.2s						
SHO				eS	Sn	03 45 21.4	-0.7
SHO				A	A	03 45 23.6	
	comp=E,250nm,0.3s						
SHO				A	A	03 45 23.6	
	comp=E,510nm,0.3s						
SHO	**Shikotan**	0.44	77	ePN	Pn	03 45 08.0	0.0
SHO				eS	Sn	03 45 21.2	-0.9
SHO				pmax	pmax		
	comp=Z,44nm,0.5s						
SHO				pmax	pmax		
	comp=E,17nm,0.3s						
SHO				pmax	pmax		
	comp=N,15nm,0.2s						
SHO				smax	smax		
	comp=E,583nm,0.2s						
SHO				smax	smax		
	comp=N,604nm,0.3s						
GLVR	**Golovnino**	0.52	266	eP	Pn	03 45 09.1	+0.6
GLVR				AMB	AMB	03 45 09.7	
	comp=N,70nm,0.2s						
GLVR				eS	Sn	03 45 23.3	+0.5
GLVR				A	A	03 45 24.0	
	comp=N,170nm,0.3s						
GLVR				A	A	03 45 24.0	
	comp=N,500nm,0.3s						
GLVR	**Golovnino**	0.52	266	ePN	Pn	03 45 09.1	+0.6
GLVR				eS	Sn	03 45 23.3	+0.5
GLVR				pmax	pmax		
	comp=Z,661nm,0.2s						
GLVR				pmax	pmax		
	comp=E,72nm,0.1s						
GLVR				smax	smax		
	comp=N,2μm,0.3s						
GLVR				smax	smax		
	comp=E,5μm,0.2s						
NEM2	**Nemuro 2**	0.54	221	P	Pn	03 45 08.8	+0.2
NEM2				eS	Sn	03 45 22.2	-0.9
NMR	**Nemuro--Hokkai**	0.55	223	eP	Pn	03 45 08.8	+0.1
NMR				eS	Sn	03 45 22.3	-0.8
NMR	**Nemuro--Hokkai**	0.55	223	ePN	Pn	03 45 08.8	+0.1
NMR				eS	Sn	03 45 22.3	-0.8
JRA	**Rausu**	0.82	282	P	Pn	03 45 11.0	+0.4
JRA				eS	Sn	03 45 26.4	-0.2
JNSB	**Nemuroshibetsu**	0.89	271	P	Pn	03 45 12.0	+0.8
JKHN	**Kushirohamanak**	1.04	229	P	Pn	03 45 13.1	+0.4
JKHN				eS	Sn	03 45 29.8	-0.4
JNK	**Nakash**	1.12	261	P	Pn	03 45 13.8	+0.4
JAK	**Akkeshi**	1.36	236	P	Pn	03 45 16.2	+0.2
JAK				eS	Sn	03 45 35.5	-0.6
JTKR	**Abashiri--Toko**	1.69	277	P	Pn	03 45 20.1	+0.4
JTKR				eS	Sn	03 45 42.0	-0.7
JAR	**Ashorobuto**	1.85	256	P	Pn	03 45 22.6	+1.0
KUR	**Kuril'sk**	1.87	38	eP	Pn	03 45 21.7	0.0
KUR				AMB	AMB	03 45 22.0	
	comp=E,30nm,0.3s						
KUR				eS	Sn	03 45 46.8	+0.4
KUR				A	A	03 45 49.0	
	comp=E,170nm,0.2s						
KUR				A	A	03 45 49.0	
	comp=E,90nm,0.2s						
KUR	**Kuril'sk**	1.87	38	ePN	Pn	03 45 21.3	-0.4
KUR				eS	Sn	03 45 47.4	+1.0
KUR				pmax	pmax		
	comp=Z,31nm,0.3s						
KUR				pmax	pmax		
	comp=N,26nm,0.2s						
KUR				pmax	pmax		
	comp=E,23nm,0.2s						
KUR				smax	smax		
	comp=N,169nm,0.2s						
KUR				smax	smax		
	comp=E,85nm,0.3s						
JOB	**Onbets**	1.96	244	P	Pn	03 45 23.6	+0.8
JOB				eS	Sn	03 45 48.2	-0.1
JMP	**Maruseppu**	2.09	277	P	Pn	03 45 25.1	+0.6
JMP				eS	Sn	03 45 51.2	-0.1
JCH	**Churui**	2.40	242	P	Pn	03 45 28.7	+0.4
JCH				eS	Sn	03 45 56.3	-1.8
JKK2	**Kamakawa 2**	2.53	273	P	Pn	03 45 30.7	+0.8
JKA	**Kamikawa-asahi**	2.65	279	eP	Pn	03 45 32.9	+1.4
ASAJ	**Asahikawa**	2.65	279	P	Pn	03 45 32.7	+1.2
ASAJ	**Asahikawa**	2.65	279	P	Pn	03 45 32.9	+1.4
	comp=E,11nm,0.3s,baz=77,slow=13,SNR=58						
ASAJ				S	Sn	03 46 04.2	+0.4
	comp=E,2.4nm,0.3s,baz=340,slow=26,SNR=4.7						
ERM	**Erimo**	2.87	233	⇓ePN	Pn	03 45 35.2	+0.9
YSS	**Yuzh-Sakhalins**	4.01	324	eP	Pn	03 45 47.7	-1.6
YSS	**Yuzh-Sakhalins**	4.01	324	ePN	Pn	03 45 47.7	-1.6
TYV	**Tymovskoe**	7.50	342	ePN	Pn	03 46 45.5	+9.5
TYV				pmax	pmax		
	comp=Z,49nm,0.7s						
MJAR	**Matsushiro Arr**	9.48	223	P	Pn	03 47 04.3	+1.5
	comp=Z,0.0nm,0.3s,baz=35,slow=14,SNR=4.5						
JNU	**Nakatsue**	16.03	234	LR	LR	03 55 15.8	
	comp=Z,75nm,18.8s,baz=360,slow=39						
SONM	**Songino Array**	27.85	292	P	P	03 50 27.1	+0.2
	comp=Z,0.3nm,0.5s,baz=83,slow=8.5,SNR=2.0						
ILAR	**Eielson Array**	41.86	36	P	P	03 52 27.1	+0.7
	comp=Z,1.1nm,0.9s,baz=278,slow=8.7,SNR=12						
MKAR	**Makanchi Array**	43.98	297	P	P	03 52 44.0	+0.2
	comp=Z,0.3nm,0.5s,baz=80,slow=10,SNR=5.4						
MKAR	**Makanchi Array**	43.98	297	eP	P	03 52 44.0	+0.2
MKAR	**Makanchi Array**	43.98	297	i P	P	03 52 44.0	+0.2
KURK	**Kurchatov**	44.97	304	eP	P	03 52 49.7	-1.8
KURK	**Kurchatov**	44.97	304	⇓eP	P	03 52 49.7	-1.8
KURK				i *PP	pP	03 53 20.5	+0.1
KURK				pmax	pmax		
	comp=Z,4.0nm,2.0s						
INK	**Inuvik**	46.72	30	P	P	03 53 05.9	+1.0
	comp=Z,0.4nm,0.3s,baz=303,slow=11,SNR=6.8						
YKA	**Yellowknife Ar**	56.15	34	P	P	03 54 16.0	+0.8
	comp=Z,0.3nm,0.8s,baz=307,slow=6.5,SNR=4.3						
YKA	**Yellowknife Ar**	56.15	34	P	P	03 54 16.0	+0.8
ARCES	**ARCESS Array B**	58.99	339	P	P	03 54 34.8	-0.2
	comp=Z,1.2nm,0.8s,baz=53,slow=8.0,SNR=3.4						
WRA	**Warramunga Arr**	64.34	192	P	P	03 55 11.6	+0.2
	comp=Z,0.4nm,1.1s,baz=7.0,slow=13,SNR=2.5						
FINES	**FINESS Array B**	64.55	333	P	P	03 55 12.0	-0.3
	comp=Z,1.2nm,0.9s,baz=49,slow=9.5,SNR=3.3						
NOA	**NORSAR Array B**	69.34	338	P	P	03 55 42.5	-0.1
	comp=Z,0.7nm,0.7s,baz=32,slow=6.1,SNR=3.4						
STKA	**Stephens Creek**	75.41	184	P	P	03 56 17.7	-1.1
	comp=Z,0.7nm,0.4s,baz=313,slow=17,SNR=3.6						

IDC 04 03:54:59.0±1.1**, 12°.26N×142°.64E, h0**^{km}**, mb3.9**/6**, mb1 4.1**/6**, mb1mx3.7**/27**, mbtmp3.9**/6**, MS3.8**/2**, Ms1 3.8**/2**, ms1mx3.0**/42**, Error ellipse: s-maj=53.4km s-min=28.4km az=104.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	33.02	194	P	P	04 01 36.2	0.0
	0.8nm,1.2s,baz=17,slow=12,SNR=2.7						
TIXI	**Tiksi**	59.95	355	LR	LR	04 30 22.6	
	comp=Z,74nm,21.4s,baz=37,slow=35						
MKAR	**Makanchi Array**	60.95	317	P	P	04 05 14.7	+0.6
	0.6nm,0.8s,baz=96,slow=8.1,SNR=4.3						
ILAR	**Eielson Array**	70.69	25	P	P	04 06 16.4	-0.1
	0.6nm,0.5s,baz=249,slow=6.1,SNR=25						
YKA	**Yellowknife Ar**	85.03	27	P	P	04 07 36.9	+0.6
	0.3nm,0.5s,baz=286,slow=4.5,SNR=6.6						
ARCES	**ARCESS Array B**	87.67	342	P	P	04 07 49.2	0.0
	4.5nm,1.0s,baz=57,slow=7.4,SNR=7.4						
FINES	**FINESS Array B**	91.44	335	P	P	04 08 05.6	-1.4
	0.8nm,0.6s,baz=75,slow=7.4,SNR=4.1						
MAW	**Mawson**	97.37	202	LR	LR	04 54 26.9	
	comp=Z,56nm,18.6s,baz=60,slow=37						

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*AZER **04** 04:16:14.9, 40°.99N×47°.95E, h5^{km}, ML3.8*

*NSSP **04** 04:16:15.0, 40°.98N×47°.83E, h7^{km}, Ms3.9*

*IDC **04** 04:16:15.4±0.7, 40°.85N×47°.96E, h0^{km}, mb3.7/11, mb1 3.7/20, mb1mx3.7/49, mbtmp3.7/20, ML2.8/7, MS2.8/2, Ms1 2.8/2, ms1mx2.5/60, Error ellipse: s-maj=13.9km s-min=7.5km az=169.0*

*MOS **04** 04:16:16.3±1.2, 40°.84N×48°.17E, h14^{km}, mb4.1/1, Error ellipse: s-maj=6.5km s-min=3.6km az=123.7*

*IASPEI **04** 04:16:17.3±0.9, 40°.98N±0°.02×47°.92E±0°.02, h7^{km}±6^{km}, mb3.8/12, Error ellipse: s-maj=2.7km s-min=2.5km az=103.5, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*DRS **04** 04:16:17.2±0.0, 40°.94N×47°.98E, h14^{km}*

*TEH **04** 04:16:17.1, 40°.99N×47°.89E, h5^{km}, ML3.7*

*TIF **04** 04:16:17.2, 41°.01N×47°.90E, h5^{km}±1^{km}*

*NNC **04** 04:16:18.9±8.2, 42°.35N×46°.55E, h0^{km}, mb4.1, Error ellipse: s-maj=118.4km s-min=77.1km az=127.0*

*THR **04** 04:16:23.9±4.3, 40°.43N×47°.97E, h37^{km}±68^{km}, ML3.0*

ISC 04 04:16:17.4±0.8**, 40°.97N**±0°.01×**47°.94E**±0°.01**, h9**^{km}±5^{km}**, n174,** σ**2^{s}.03**/255**, mb3.8**/12**, 6C-8D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QBL	**Gabala**	0.08	255	P	Pg	04 16 19.2	-0.4
	SNR=3312						
QBL				S	Sg	04 16 21.0	-0.1
QBL	**Gabala**	0.08	255	ePg	Pg	04 16 19.2	-0.4
IML	**Ismayilli**	0.25	133	P	Pb	04 16 23.3	-0.9
	SNR=159						
IML				S	Sb	04 16 29.2	+0.5
IML	**Ismayilli**	0.25	133	ePg	Pb	04 16 23.2	-0.9
XNQ	**Khinaliq**	0.26	37	P	Pg	04 16 22.6	0.0
	SNR=4948						
XNQ				S	Sg	04 16 26.6	+0.4
XNQ	**Khinaliq**	0.26	37	ePg	Pg	04 16 22.6	0.0
QUB	**Quba**	0.52	38	ePg	Pb	04 16 29.3	+0.5
PQL	**Pirkuli**	0.53	109	P	Pb	04 16 28.7	-0.3
	SNR=570						
PQL				S	Sn	04 16 38.9	-1.5
PQL	**Pirkuli**	0.53	109	ePg	Pb	04 16 28.6	-0.3
AKT	**Akhty**	0.54	343	i Pg	Pg	04 16 27.6	-0.2
	927nm,0.4s						
AKT				eSg	Sg	04 16 35.2	+0.3
	3μm,0.5s						
AKT	**Akhty**	0.54	343	⇓iPG	Pg	04 16 27.6	-0.2
AKT	**Akhty**	0.54	343	ePg	Pg	04 16 27.6	-0.2
QUBA	**Quba, Azerbaij**	0.57	47	P	Pb	04 16 29.3	-0.3
	SNR=203						
QUBA				S	Sb	04 16 38.4	+0.5
QSAR	**Qusar**	0.60	24	P	Pb	04 16 29.6	-0.5
	SNR=79						
QSAR				S	Sb	04 16 38.7	0.0
QSAR	**Qusar**	0.60	24	ePg	Pb	04 16 29.6	-0.5
SEKA	**Sheki**	0.61	294	PG	Pg	04 16 28.8	-0.3
SEKA	**Sheki**	0.61	294	P	Pg	04 16 28.9	-0.3
	SNR=341						
SEKA				S	Sb	04 16 38.5	-0.5
SEKA	**Sheki**	0.61	294	ePg	Pg	04 16 28.8	-0.3
KDMR	**Kurdemir**	0.62	162	P	Pb	04 16 30.4	0.0
	SNR=4.4						
KDMR				S	Sn	04 16 41.7	-0.6
KDMR	**Kurdemir**	0.62	162	ePg	Pb	04 16 30.3	0.0
KSMR	**Kasumkent**	0.65	13	i Pg	Pg	04 16 30.0	0.0
KSMR				i Sg	Sb	04 16 39.0	-1.2
KSMR	**Kasumkent**	0.65	13	i PG	Pg	04 16 30.0	0.0
KSMR				i S	Sb	04 16 39.0	-1.2
MNGR	**Mingechevir, A**	0.67	254	PG	Pb	04 16 31.1	-0.1
MNGR	**Mingechevir, A**	0.67	254	P	Pb	04 16 31.2	-0.1
	SNR=30						
MNGR				S	Sn	04 16 43.2	-0.5
MNGR	**Mingechevir, A**	0.67	254	ePg	Pb	04 16 31.1	-0.1
ZRD	**Zardab**	0.71	196	P	Pb	04 16 32.4	+0.5
	SNR=348						
ZRD				S	Sn	04 16 45.5	+0.8
ZRD	**Zardab**	0.71	196	ePn	Pb	04 16 32.4	+0.5

SIZA	Siyzn	0.74	81	P	Pb	04 16 32.5	+0.1
SIZA				S	Sn	04 16 44.7	-0.8
SIZA	Siyzn	0.74	81	ePn	Pb	04 16 32.5	+0.1
ATGJ	Altiaghaj	0.77	98	P	Pb	04 16 32.9	0.0
	SNR=74						
ATGJ				S	Sn	04 16 45.4	-0.8
ATGJ	Altiaghaj	0.77	98	ePn	Pb	04 16 32.9	0.0
GBS	Qobustan	0.88	119	P	Pn	04 16 36.1	+0.2
	SNR=19						
GBS				S	Sn	04 16 51.9	+3.0
BRDA	Brd	0.91	220	P	Pb	04 16 35.9	+0.6
	SNR=13						
BRDA				S	Sn	04 16 51.8	+2.3
BRDA	Brd	0.91	220	ePg	Pb	04 16 35.9	+0.6
AGDM	Agdam	1.06	217	P	Pg	04 16 37.7	-0.1
	SNR=146						
AGDM				S	Sn	04 16 54.4	+1.0
DRN	Derbent	1.10	15	i Pg	Pg	04 16 38.0	-0.6
	637nm,0.7s						
DRN				eSg	Sn	04 16 54.5	+0.1
	1µm,0.5s						
DRN	Derbent	1.10	15	ePG	Pn	04 16 39.3	+0.3
DRN				eS	Sn	04 16 54.5	+0.1
SAAT	Saatly	1.16	161	P	Pg	04 16 39.2	-0.5
	SNR=5.8						
SAAT				S	Sn	04 16 56.6	+0.8
SAAT	Saatly	1.16	161	ePg	Pg	04 16 39.2	-0.5
ZKT	Zaqatala	1.18	306	ePg	Pg	04 16 39.4	-0.6
ZKTA	Zakatala	1.20	305	P	Pg	04 16 39.4	-0.9
	SNR=23						
ZKTA				S	Sn	04 16 57.1	+0.4
URKR	Urkarakh	1.22	349	ePg	Pb	04 16 40.5	-0.2
URKR				eSg	Sn	04 16 57.5	0.0
URKR	Urkarakh	1.22	349	ePG	Pn	04 16 40.7	-0.1
GANJ	Ganja	1.27	256	PG	Pg	04 16 39.7	-1.9
GANJ	Ganja	1.27	256	P	Pg	04 16 39.7	-1.9
	SNR=54						
GANJ				S	Sg	04 16 57.5	-0.6
GANJ	Ganja	1.27	256	ePg	Pg	04 16 39.7	-1.9
BLQ	Beylaqan	1.28	193	P	Pn	04 16 41.0	-0.4
	SNR=5.0						
BLQ				S	Sn	04 16 59.6	+1.0
BLQ	Beylaqan	1.28	193	ePg	Pn	04 16 41.0	-0.4
ALIB	Äli-Bayra	1.30	141	P	Pg	04 16 43.9	+1.6
	SNR=18						
ALIB				S	Sn	04 17 04.6	+5.5
ALIB	Äli-Bayra	1.30	141	ePg	Pg	04 16 43.8	+1.6
KMKR	Kumukh	1.32	332	i Pg	Pb	04 16 44.0	+1.5
	352nm,0.2s						
KMKR				i Sg	Sn	04 17 04.0	+3.9
	1µm,0.5s						
KMKR	Kumukh	1.32	332	⇑iPG	Pb	04 16 44.0	+1.5
KMKR				i S	Sn	04 17 04.0	+3.9
KMKR				pmax	pmax		
	comp=Z,352nm,0.2s						
DDFL	Dedoflistskaro	1.45	290	P	Pg	04 16 45.4	+0.1
DDFL				S	Sg	04 17 09.7	+5.6
DDFL	Dedoflistskaro	1.45	290	PN	Pg	04 16 45.3	+0.1
GOBA	Gobu	1.48	112	P	Pg	04 16 46.8	+1.0
	SNR=5.4						
GOBA				S	Sg	04 17 05.5	+0.6
GOBA	Gobu	1.48	112	ePn	Pg	04 16 46.7	+1.0
QRD	Qoradiz	1.57	198	Pn	Pn	04 16 45.1	-0.4
	SNR=57						
QRD				Sn	Sb	04 17 07.7	+1.0
GNBR	Gunib	1.60	333	ePg	Pg	04 16 47.5	-0.5
	comp=Z,387nm,0.5s						
GNBR				eSg	Sg	04 17 11.1	+2.4
	comp=Z,870nm,1.0s						
GNBR	Gunib	1.60	333	ePN	Pg	04 16 48.1	+0.1
NDR	Nardaran	1.60	103	Pn	Pn	04 16 45.4	-0.5
	SNR=8.2						
NDR				Sn	Sg	04 17 13.6	+4.7
GDB	GEDABAY	1.67	262	Pn	Pn	04 16 46.0	-1.0
	SNR=204						
GDB				Sn	Sn	04 17 08.8	+0.1
GLBA	Clilabad	1.76	168	Pn	Pn	04 16 48.1	+0.1
	SNR=43						
GLBA				Sn	Sb	04 17 12.2	+0.3
ARKR	Arakani	1.78	337	ePg	Pg	04 16 52.0	+0.5
	comp=Z,466nm,0.0s						
ARKR				eSg	Sg	04 17 17.5	+2.9
	comp=Z,2µm,0.0s						
ARKR	Arakani	1.78	337	ePN	Pg	04 16 52.0	+0.5
ARKR				eS	Sg	04 17 17.5	+2.9
XNZR	Khunzakh	1.82	330	ePg	Pg	04 16 54.2	+1.9
XNZR				eSg	Sg	04 17 21.0	+5.0
XNZR	Khunzakh	1.82	330	ePN	Pg	04 16 53.5	+1.1
QZX	Qazax, Azerbai	1.94	274	Pn	Pn	04 16 50.5	-0.1
	SNR=317						
QZX				Sn	Sb	04 17 17.8	+0.5
UNCR	Uncukul	1.94	334	ePg	Pg	04 16 54.0	-0.6
	comp=Z,528nm,0.8s						
UNCR				eSg	Sg	04 17 24.0	+4.2
	comp=Z,4µm,1.0s						
UNCR	Uncukul	1.94	334	ePN	Pg	04 16 54.0	-0.6
UNCR				eS	Sg	04 17 24.0	+4.2
UNCR				pmax	pmax		
	comp=Z,528nm,0.8s						
BUJR	Buynaksk	1.96	342	i Pg	Pg	04 16 55.0	+0.1
BUJR				eSg	Sg	04 17 22.3	+2.0
BUJR	Buynaksk	1.96	342	⇓ePN	Pg	04 16 54.8	-0.1
BUJR				e		04 17 24.4	
KRNR	Karanay	2.01	338	ePg	Pg	04 16 55.0	-0.9
KRNR	Karanay	2.01	338	ePN	Pg	04 16 55.0	-0.9
MAK	Makhachkala	2.02	351	ePN	Pg	04 16 55.6	-0.5
MAK				e		04 16 58.7	
MAK				e		04 17 00.2	
MAK				e		04 17 25.7	
MAK				e		04 17 25.8	
MAK				e		04 17 28.5	
MAK				pmax	pmax		
	comp=Z,205nm,0.4s						
MAK				smax	smax		
	comp=E,849nm,0.6s						
MAK				smax	smax		
	comp=N,782nm,0.6s						
MAK				smax	smax		
	comp=E,739nm,0.6s						
MAK				MLR	MLR		
	comp=Z,298nm,9.0s						
YRD	Yardimli	2.06	173	Pn	Pn	04 16 52.0	-0.4
	SNR=218						
YRD				Sn	Sn	04 17 18.2	-0.1
BTLR	Botlikh	2.13	324	ePg	Pg	04 16 59.9	+1.7
	comp=Z,97nm,0.6s						
BTLR				eSg	Sg	04 17 30.4	+4.7
	comp=Z,373nm,0.7s						
BTLR	Botlikh	2.13	324	ePN	Pb	04 16 56.8	+0.7
BTLR				eS	Sg	04 17 25.7	0.0
GRMI	Germi	2.15	181	ePg	Pn	04 16 53.2	-0.4
GRMI				IAML		04 17 23.1	
	comp=N,263nm,0.6s						
LRK	Lerik	2.34	172	Pn	Pn	04 16 56.2	0.0
	SNR=22						
LRK				Sn	Sn	04 17 27.2	+2.0
LKRN	Lenkeran, Azer	2.34	164	PN	Pn	04 16 56.9	+0.8
LKRN	Lenkeran, Azer	2.34	164	Pn	Pn	04 16 56.3	+0.3
	SNR=8.2						
LKRN				Sn	Sn	04 17 26.8	+1.9
SBZ	Shahbuz	2.41	230	Pn	Pn	04 16 58.0	+1.0
	SNR=112						
SBZ				Sg	Sb	04 17 31.4	+0.7
BTNK	Botanikuri	2.47	288	P	Pn	04 16 59.4	+1.5
BTNK				S	Sb	04 17 31.7	-0.8
BTNK	Botanikuri	2.47	288	PN	Pn	04 16 59.3	+1.5
ASTR	Astara	2.49	164	Pn	Pn	04 16 58.3	+0.3
	SNR=25						
ASTR				Sn	Sn	04 17 30.6	+2.0
ORD	Ordubad	2.52	217	Pn	Pn	04 16 59.4	+0.8
	SNR=114						
ORD				Sn	Sb	04 17 34.1	0.0
TBLG	Delisi	2.53	289	P	Pn	04 17 00.8	+2.3
TBLG				S	Sb	04 17 33.3	-0.8
TBLG	Delisi	2.53	289	ePN	Pb	04 17 01.9	-1.0
KAPZ	Kaputan	2.54	256	i P	Pn	04 16 59.7	+0.7
KAPZ				i S	Sb	04 17 34.4	-0.4
AHAR	Ahar	2.56	196	ePn	Pn	04 16 59.7	+0.5
GNI	Garni	2.57	253	Pn	Pn	04 17 00.4	+1.2
	comp=N,14nm,0.3s,baz=35,slow=3.1,SNR=27						
GNI				Lg	Lg	04 17 38.3	
	comp=N,25nm,0.3s,baz=250,slow=23,SNR=4.4						
GNI				LR	LR	04 18 03.2	
	comp=N,76nm,20.1s,baz=182,slow=42						
GNI	Garni	2.57	253	⇓iP	Pn	04 17 00.3	+1.0
GNI				⇓iS	Sn	04 17 33.3	+2.6
GNI	Garni	2.57	253	c iPN	Pn	04 17 00.3	+1.0
NAX	Nakhchivan	2.59	227	PN	Pn	04 17 01.1	+1.6
NAX	Nakhchivan	2.59	227	Pn	Pn	04 17 01.1	+1.6
	SNR=41						
NAX				Sg	Sg	04 17 38.9	-1.7
HYR	Heyderabad	2.67	243	Pn	Pn	04 17 02.0	+1.4
	SNR=18						
HYR				Sg	Sg	04 17 41.2	-1.8
STE	Stepanavan	2.70	272	eP	Pn	04 16 58.0	-3.1
STE				eS	Sn	04 17 34.0	0.0
KZRT	Kazreti	2.70	280	P	Pn	04 17 02.1	+1.0
KZRT				S	Sb	04 17 37.8	-1.4
KZRT	Kazreti	2.70	280	PN	Pn	04 17 01.9	+0.8
IHSH	Hashtrud	2.71	191	ePn	Pg	04 17 16.3	+7.1
IHSH				e		04 18 19.4	
IHRS	Heris	2.73	195	e		04 17 03.8	
IHRS				ePn	Pn	04 17 02.3	+0.7
GROC	Groznyy	2.75	325	ePN	Pb	04 17 05.0	-1.6
GROC				eS	Sb	04 17 39.0	-1.3
MAKU	Maku	2.97	238	ePn	Pn	04 17 05.0	+0.2
MAKU				eSg	Sb	04 17 49.1	+2.1
MAKU				IAML		04 17 51.7	
	comp=N,41nm,0.4s						
MAKU				IAML		04 18 03.5	
	comp=E,34nm,0.5s						
ARUZ	Aruch	3.00	258	i P	Pb	04 17 09.3	-1.8
ARUZ				i S	Sb	04 17 48.6	+0.7
METS	Metsamor	3.05	256	i P	Pb	04 17 10.6	-1.3
METS				i S	Sb	04 17 50.4	+1.2
KMGR	Komgaron	3.10	313	ePN	Pb	04 17 12.1	-0.6
KMGR				eS	Sn	04 17 47.2	+3.5
ISRB	Sarab	3.14	184	e		04 17 44.0	
ISRB				ePn	Pn	04 17 08.0	+0.7
VLKR	Vladikavkaz	3.20	312	ePN	Pb	04 17 11.5	-2.8
VLKR				eS	Sn	04 17 50.0	+3.9
BGD	Bogdanovka	3.29	277	P	Pb	04 17 13.8	-2.2
BGD	Bogdanovka	3.29	277	PN	Pb	04 17 14.9	-1.1
LACR	Lac	3.29	306	ePN	Pn	04 17 12.2	+3.0
LACR				eS	Sb	04 17 53.2	-3.0
AKH	Akhalkalaki	3.38	279	ePN	Pn	04 17 13.3	+2.8
AKH				eS	Sb	04 17 58.0	-0.9
BKRG	Bakuriani	3.42	285	P	Pn	04 17 12.9	+2.0
BKRG				S	Sn	04 17 55.3	+3.6
ZEI	Tsey	3.52	302	ePN	Pn	04 17 15.0	+2.6
ZEI				eS	Sn	04 17 55.8	+1.5
KORR	Kora	3.58	308	ePN	Pn	04 17 15.1	+2.0
TRKR	Terskaya	3.64	320	ePN	Pn	04 17 17.7	+3.9
TRKR				eS	Sn	04 18 00.0	+3.1
ONI	Oni	3.73	297	P	Pn	04 17 17.1	+1.9
ONI	Oni	3.73	297	ePN	Pn	04 17 16.9	+1.8
STDR	Stavd-Durt	3.75	311	ePN	Pb	04 17 20.0	-3.7
STDR				eS	Sn	04 18 02.9	+3.3
DIGR	Digorskoe uzhe	3.78	302	ePN	Pn	04 17 19.1	+3.1
DIGR				eS	Sn	04 18 04.5	+3.8
LSNR	Lesken	3.83	308	ePN	Pb	04 17 22.2	-3.0
LSNR				eS	Sb	04 18 08.4	-3.3
TKB	Tkibuli	3.95	292	PN	Pn	04 17 19.4	+1.2
ZNJK	Zanjan	4.33	172	ePn	Pn	04 17 25.2	+1.6
ZNJK				eSg	Sn	04 18 17.7	+3.4
ZNJK				IAML		04 18 19.1	
	comp=E,15nm,0.4s						
ZNJK				IAML		04 18 19.6	
	comp=N,20nm,0.5s						
NEY	Neytrino	4.50	302	ePN	Pn	04 17 29.6	+3.7
KBZ	Khabaz	4.64	308	Pn	Pn	04 17 31.2	+3.6
	comp=N,0.1nm,0.3s,baz=134,slow=12,SNR=2.8						
KBZ				Sn	Sn	04 18 27.1	+5.5
	comp=N,0.6nm,0.3s,baz=276,slow=16,SNR=4.6						
KBZ				Lg	Lg	04 18 46.1	
	comp=N,0.7nm,0.3s,baz=253,slow=8.2,SNR=4.1						
KBZ	Khabaz	4.64	308	ePN	Pn	04 17 33.0	+5.4
KBZ				eS	Sn	04 18 25.5	+3.9
SHA1	Shidzhatmaz	4.79	307	ePN	Pn	04 17 33.1	+3.2
KVAR	Kislovodsk Arr	4.89	309	Pn	Pn	04 17 34.5	+3.3
	baz=329,slow=9.0,SNR=3.1						
KVAR				Lg	Lg	04 18 45.5	
	baz=62,slow=17,SNR=8.2						
KIV	Kislovodsk	4.90	309	ePN	Pn	04 17 35.5	+4.2
KIV				eS	Sb	04 18 35.6	-6.8
KIV				pmax	pmax		
	comp=Z,18nm,0.8s						
IGZV	Ghazvin	4.91	158	ePn	Pn	04 17 31.5	-0.1
QALM	Alamut, Qazvin	5.00	154	ePn	Pn	04 17 30.8	-2.0
QABG	Abgarm-Qazvin	5.41	166	ePn	Pn	04 17 37.8	-0.6
QABG				e		04 18 44.9	
GOF	Gofitskoye	5.44	320	⇑eP	Pn	04 17 41.6	+3.0
GOF				eS	Sb	04 18 56.7	-1.2
GOF				pmax	pmax		
	comp=Z,75nm,0.6s						
GOF				smax	smax		
	comp=N,74nm,0.7s						
GOF				smax	smax		
	comp=E,42nm,0.6s						
ARXR	Arkhyz	5.58	300	i P	Pn	04 17 44.5	+3.8
IRAZ	Razeghan	5.77	164	ePn	Pn	04 17 42.6	-0.8
IRAZ				e		04 19 15.6	
IPRN	Peran	5.84	142	ePn	Pn	04 17 43.0	-1.3
IALA	Alasht	6.19	140	ePn	Pn	04 17 48.7	-0.6
IFIR	Firoozkooh	6.53	143	ePn	Pn	04 17 54.7	+0.9
SOC	Sochi	6.63	296	eP	Pn	04 17 55.8	+0.8
SOC				e		04 19 15.5	
SOC				pmax	pmax		
	comp=Z,7.0nm,0.5s						
SOC				smax	smax		
	comp=E,8.0nm,0.7s						
ISHM	Shahmirzad	6.65	139	ePn	Pn	04 17 56.1	+0.6
GEYT	Alibeck	8.44	108	Pn	Pn	04 18 20.0	+0.2
	comp=E,0.7nm,0.3s,baz=287,slow=16,SNR=4.4						
GEYT				Sn	Sn	04 19 52.6	-2.6
	comp=E,1.6nm,0.3s,baz=276,slow=28,SNR=6.3						
GYA0	ALIBECK ARRAY	8.44	108	P	Pn	04 18 17.7	-2.1
GYA0				S	Sn	04 19 51.4	-3.9
BRTR	Keskin Array B	10.98	268	Pn	Pn	04 18 57.6	+2.8
	comp=E,0.1nm,0.3s,baz=62,slow=16,SNR=3.3						
AKTO	Aktyubinsk	11.79	33	Pn	Pn	04 19 03.9	-1.8
	comp=E,1.1nm,0.3s,baz=200,slow=10,SNR=15						
AKTO				Sn	Sn	04 21 12.7	-4.7
	comp=E,1.1nm,0.3s,baz=353,slow=20,SNR=7.7						
AKTO	Aktyubinsk	11.79	33	⇓P	Pn	04 19 03.9	-1.8
	comp=E,5.9nm,0.8s						
AKTO				⇑S	Sn	04 21 13.0	-4.4
	comp=E,4.1nm,0.5s						
AB31	Akbulak array	11.85	42	⇓P	Pn	04 19 05.7	-0.7
	comp=E,0.7nm,0.4s,baz=238,slow=14,SNR=25						
AB31				⇓S	Sn	04 21 13.5	-5.2
	comp=E,2.1nm,0.6s,baz=240,slow=36,SNR=6.4						
AB31	Akbulak array	11.85	42	P	Pn	04 19 05.7	-0.7
AB31				S	Sn	04 21 13.3	-5.4
VSR	Storozhevoye	11.91	332	eP	Pn	04 19 08.9	+1.6
VSR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
LPSR	Galich'ya Gora	13.16	335	eP	Pn	04 19 26.9	+2.6
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
EIL	Elat	15.45	227	LR	LR	04 26 50.5	
	comp=Z,72nm,18.6s,baz=307,slow=41						
AKASG	Malin Array Be	16.23	313	Pn	Pn	04 20 05.4	0.0
	comp=Z,0.4nm,0.3s,baz=118,slow=12,SNR=2.8						
ARU	Arti	16.96	21	P	Pn	04 20 15.3	+0.7
	comp=Z,0.0nm,0.3s,baz=139,slow=2.8,SNR=4.5						
ARU	Arti	16.96	21	d iP	Pn	04 20 15.0	+0.4
ARU				S	Sn	04 23 24.2	+1.2
ARU				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BRVK	Borovoye	19.36	44	P	P	04 20 41.6	-1.5
BRVK	Borovoye	19.36	44	⇑iP	P	04 20 43.2	+0.1
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BVB6	Borovoye Array	19.40	44	P	Pn	04 20 45.0	+0.4
BVAR	Borovoye Array	19.40	44	P	P	04 20 43.1	-0.4
	comp=Z,1.4nm,0.3s,baz=224,slow=12,SNR=15						
AAK	Ala-Archa	19.85	76	P	Pn	04 20 49.8	-0.4
	comp=Z,0.1nm,0.3s,baz=239,slow=18,SNR=3.3						
AAK	Ala-Archa	19.85	76	⇑iP	P	04 20 45.4	-3.3
AAK				pmax	pmax		
	comp=Z,5.0nm,2.4s						
PRGR	Permogore	20.75	357	eP	P	04 20 54.6	-3.5
PRGR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VYHS	Vyhne	21.91	300	eP	P	04 21 16.7	+6.0
VYHS	Vyhne	21.91	300	ePN	P	04 21 16.7	+6.0
KURBB	Kurchatov Arra	23.27	55	P	P	04 21 25.1	+0.1
	comp=Z,2.6nm,0.9s,baz=262,slow=10,SNR=9.1						
KURK	Kurchatov	23.34	55	eP	P	04 21 25.8	0.0
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FINES	FINESS Array B	24.43	334	P	P	04 21 35.0	-1.0
	comp=Z,1.7nm,0.6s,baz=139,slow=10,SNR=13						
MKAR	Makanchi Array	25.30	65	P	P	04 21 44.2	+0.1
	comp=Z,1.1nm,0.6s,baz=274,slow=7.0,SNR=17						
GERES	GERESS Array B	25.33	300	P	P	04 21 45.9	+1.5
	comp=Z,0.5nm,0.5s,baz=102,slow=9.7,SNR=6.1						
ZALV	Zalesovo Beam	27.77	50	P	P	04 22 05.8	-0.4
	comp=Z,0.3nm,0.3s,baz=254,slow=16,SNR=2.8						
HFS	Hagfors	28.51	324	P	P	04 22 12.1	-0.7
	comp=Z,2.2nm,1.0s,baz=132,slow=8.0,SNR=3.4						
ARCES	ARCESS Array B	30.96	345	P	P	04 22 35.5	+1.1
	comp=Z,2.0nm,0.9s,baz=140,slow=9.6,SNR=5.0						
SONM	Songino Array	41.45	60	P	P	04 24 04.3	-0.1
	comp=Z,0.3nm,0.5s,baz=296,slow=10,SNR=3.9						
TORD	Torodi Ar. Bea	48.87	249	P	P	04 25 02.1	-1.4
	comp=Z,0.4nm,0.7s,baz=23,slow=6.3,SNR=3.5						
KSRS	Korea Array	59.98	65	P	P	04 26 24.0	-0.1
	comp=Z,0.8nm,0.5s,baz=273,slow=4.7,SNR=2.9						
YKA	Yellowknife Ar	75.94	352	P	P	04 28 05.2	+1.2
	comp=Z,0.1nm,0.7s,baz=12,slow=6.3,SNR=2.6						

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*UCR **04** 04:35:28.5±2.5, 9°.03N×84°.13W, h34^{km}±4^{km}, MW4.0*
*UPA **04** 04:35:30.5±3.6, 9°.29N×83°.89W, h66^{km}±71^{km}, MW3.7*
ISC 04 04:35:28.2±1.7, **9°.11N**±0°.09×**84°.06W**±0°.08, **h56**^{km}±11^{km},
n19, σ**2^{s}89**/30, **Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDDO	Dominical	0.24	53	eP	Pn	04 35 35.7	-1.8
EDDO				eS	Sn	04 35 43.0	-1.2
EDPN	Palmar Norte	0.61	104	eP	Pn	04 35 40.8	-0.4
EDPN				eS	Sn	04 35 51.9	+1.3
LCR2	La Lucha 2	0.63	5	eP	Pn	04 35 41.8	+0.1
LCR2				eS	Sn	04 35 53.8	+2.4
EDBA	Buenos Aires	0.78	86	eP	Pn	04 35 43.7	+0.4
EDBA				eS	Sn	04 35 57.0	+2.7
HDC	Heredia	0.89	357	i P	Pn	04 35 46.2	+1.3
HDC				i S	Sn	04 35 58.6	+1.6
HDC	Heredia	0.89	357	eP	Pn	04 35 46.2	+1.3
HDC				eS	Sn	04 35 59.0	+2.0
SRA1	San Ramn	1.06	337	eP	Pn	04 35 48.1	+1.0
SRA1				eS	Sn	04 36 00.4	-0.5
EDSV	San Vito	1.11	105	eP	Pn	04 35 49.0	+1.3
EDSV				eS	Sn	04 36 06.9	+4.7
BRU2	Volcan	1.39	103	eP	Pn	04 35 53.6	+2.2
BRU2				eS	Sn	04 36 08.8	-0.1
JTS	Las Juntas de	1.47	323	i P	Pn	04 35 52.5	0.0
JTS				i S	Sn	04 36 05.9	-4.8
JTS	Las Juntas de	1.47	323	eP	Pn	04 35 52.7	+0.2
BCO2	Palmira	1.56	104	i P	Pn	04 35 55.5	+1.7
BCO2				i S	Sn	04 36 08.0	-5.2
PTAR3	Potrerillos Ar	1.60	105	eP	Pn	04 35 48.2	-6.1
CNI2	El Empalme, Bo	1.60	79	eP	Pn	04 35 53.3	-0.9
CNI2				eS	Sn	04 36 09.2	-4.6
DVD	David	1.73	113	eP	Pn	04 35 57.8	+1.9
PEDE3	Pedregal, Chir	1.77	114	eP	Pn	04 35 53.2	-3.3
CHIR3	Chiriqui UPA,	1.85	112	eP	Pn	04 35 56.5	-1.1
CHGR2	Aguacate	1.90	95	eP	Pn	04 36 00.7	+2.4
CHGR2				i S	Sn	04 36 13.2	-8.0
GMAL	Guarumal, Vera	3.10	115	eP	Pn	04 36 17.7	+3.0

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*UCR **04** 04:35:52.1±2.4, 8°.88N×84°.29W, h11^{km}±31^{km}*
*UPA **04** 04:35:56.3±1.8, 9°.24N×83°.83W, h0^{km}±25^{km}, MW4.1*
ISC 04 04:35:56.3±1.7, **9°.05N**±0°.06×**84°.04W**±0°.06, **h13**^{km}±9^{km},
n22, σ**1^{s}91**/29, **Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDDO	Dominical	0.27	41	eP	Pg	04 35 54.5	-7.4
EDDO				eS	Sg	04 36 09.5	+3.8
EDLM	Las Mercedes	0.50	63	eP	Pg	04 36 03.5	-2.8
EDLM				eS	Sb	04 36 17.7	+3.3
EDPN	Palmar Norte	0.58	98	eP	Pg	04 36 04.4	-3.3
EDPN				eS	Sn	04 36 19.0	-0.7
LCR2	La Lucha 2	0.69	3	eP	Pg	04 36 07.3	-2.5
LCR2				eS	Sn	04 36 21.3	-1.5
EDBA	Buenos Aires	0.77	81	eP	Pg	04 36 10.1	-1.1
EDBA				eS	Sn	04 36 24.4	0.0
SJS	Escuela Geolog	0.89	359	eP	Pg	04 36 12.2	-1.3
SJS				eS	Sn	04 36 26.7	-0.7
PTJ1	Puerto Jimnez	0.89	125	eP	Pg	04 36 13.0	-0.5
HDC	Heredia	0.95	356	i P	Pg	04 36 13.2	-1.5
HDC				i S	Sb	04 36 26.2	-1.1
HDC	Heredia	0.95	356	eP	Pg	04 36 13.6	-1.2
HDC				eS	Sn	04 36 28.7	-0.3
EDSV	San Vito	1.08	102	eP	Pn	04 36 19.1	+1.8
EDSV				eS	Sn	04 36 34.4	+2.2
SBAR3	San Bartolo, C	1.36	122	eP	Pn	04 36 20.8	-0.2
BRU2	Volcan	1.36	101	eP	Pg	04 36 19.5	-3.0
JTS	Las Juntas de	1.53	324	eP	Pn	04 36 24.9	+1.5
BCO2	Palmira	1.53	102	eP	Pn	04 36 21.3	-2.2
PTAR3	Potrerillos Ar	1.57	103	eP	Pn	04 36 19.6	-4.4
CNI2	El Empalme, Bo	1.59	76	eP	Pn	04 36 24.3	+0.1
DVD	David	1.69	111	eP	Pn	04 36 26.0	+0.5
PEDE3	Pedregal, Chir	1.73	112	eP	Pn	04 36 27.8	+1.7
CHGR2	Aguacate	1.88	93	eP	Pn	04 36 26.9	-1.3
GMAL	Guarumal, Vera	3.06	114	eP	Pn	04 36 45.1	+0.7
CACAO	El Cacao, Vera	3.57	118	eP	Pn	04 36 51.1	-0.4
AZU	Azuero	3.93	108	e	Pn	04 36 56.1	-0.3
AZU				eP	Pb	04 36 56.3	-9.2

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*IDC **04** 04:54:22.9±1.0, 20°.64S×66°.76W, h227^{km}±20^{km}, mb3.0/2,*
mb1 3.1/5, mb1mx2.9/29, mbtmp3.5/5, Error ellipse:
s-maj=37.0km s-min=10.5km az=104.0
*SJA **04** 04:54:23.5±0.9, 20°.69S×66°.77W, h231^{km}±8^{km}, ML3.0,*
MW3.2
*SCB **04** 04:54:23.6±1.8, 20°.74S×66°.82W, h254^{km}±10^{km}, ML3.9/10,*
Error ellipse: s-maj=4.9km s-min=4.7km az=1.0
ISC 04 04:54:23.4±1.0, **20°.67S**±0°.05×**66°.84W**±0°.05, **h233**^{km}±9^{km},
n36, σ**1^{s}20**/51, **Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCB	Mochara	1.26	117	P	Pn	04 54 59.6	+0.8
MOCB				S	S	04 55 25.9	-0.6
	503nm,0.5s						
YJA	Yavi	1.94	141	P	Pn	04 55 04.8	+0.4
YJA	Yavi	1.94	141	i P	Pn	04 55 05.3	+0.9
YJA				eS	S	04 55 35.0	-1.5
YJA				IAML		04 55 37.0	
	comp=Z,40nm,0.3s						
PB08	IPOC Station P	2.23	283	P	Pn	04 55 08.3	+1.2
PB08				S	S	04 55 41.0	-0.3
PB08				AML	AML	04 55 44.7	
	comp=Z,155nm,0.2s						
PB01	IPOC Station P	2.50	261	P	Pn	04 55 10.0	+0.5
PB01				S	S	04 55 44.8	-0.9
PB01				AML	AML	04 55 47.2	
	comp=Z,156nm,0.4s						
PB09	IPOC Station P	2.50	243	i P	Pn	04 55 10.6	+0.9
PB09				eS	S	04 55 45.7	-0.2
LVC	Limon Verde	2.73	225	P	Pn	04 55 13.0	+0.8
	comp=Z,1.8nm,0.3s,baz=48,slow=12,SNR=27						
LVC				S	S	04 55 50.3	-0.2
	comp=Z,4.2nm,0.3s,baz=238,slow=20,SNR=18						
LVC	Limon Verde	2.73	225	i P	Pn	04 55 13.0	+0.8
LVC				eS	S	04 55 49.6	-0.8
LVC				IAML		04 56 00.3	
	comp=Z,14nm,0.3s						
PB11	IPOC Station P	2.79	288	P	Pn	04 55 13.1	+0.4
PB11				S	S	04 55 50.4	-1.0
PB11				AML	AML	04 55 51.3	
	comp=Z,163nm,0.3s						
HJA	Humahuaca	2.85	152	i P	Pn	04 55 14.7	+1.1
HJA				IAML		04 55 15.1	
	comp=Z,80nm,0.3s						
PB02	IPOC Station P	2.93	257	P	Pn	04 55 15.1	+1.0
PB02				S	S	04 55 52.4	-1.5
PB02				AML	AML	04 55 53.3	
	comp=Z,163nm,0.3s						
MNMC	Minye Minye	3.01	300	P	Pn	04 55 16.1	+0.8
MNMC				S	S	04 55 55.6	-0.4
MNMC				AML	AML	04 55 57.7	
	comp=Z,145nm,0.3s						

PB06	IPOC Station P	3.25	231	P	Pn	04 55 18.3	+0.5
PB06				S	S	04 55 59.2	-1.4
PB06				AML	AML	04 56 00.6	
	comp=Z,127nm,0.5s						
PB06	IPOC Station P	3.25	231	*i* P	Pn	04 55 19.0	+1.2
PSGC	Pisagua	3.26	289	P	Pn	04 55 17.8	-0.1
PSGC				S	S	04 55 57.6	-3.2
PSGC				AML	AML	04 56 00.0	
	comp=Z,149nm,0.3s						
PB04	IPOC Station P	3.50	241	P	Pn	04 55 21.0	+0.4
PB04				S	S	04 56 03.2	-2.5
PB04				AML	AML	04 56 05.9	
	comp=Z,251nm,0.3s						
PB04	IPOC Station P	3.50	241	*i* P	Pn	04 55 21.4	+0.8
PB15	IPOC Station P	3.51	224	*i* P	Pn	04 55 22.4	+1.5
PB05	IPOC Station P	3.80	235	*i* P	Pn	04 55 24.5	+0.3
BBOJ	La Paz, Jacaqu	3.89	341	P	Pn	04 55 28.1	+2.3
AZAP	Zapla	3.90	155	*i* P	Pn	04 55 25.4	-0.1
BBOE	La Paz, Chanca	3.99	344	P	Pn	04 55 29.0	+2.1
SLA	San Lorenzo	4.22	163	P	Pn	04 55 29.1	-0.1
SLA	San Lorenzo	4.22	163	*i* P	Pn	04 55 29.9	+0.8
BBOD	La Paz, Gloria	4.34	337	P	Pn	04 55 32.8	+1.6
PB10	IPOC Station P	4.46	230	*i* P	Pn	04 55 31.8	-0.1
LPAZ	La Paz	4.53	344	P	Pn	04 55 34.5	+1.0
	comp=Z,1.6nm,0.3s,baz=157,slow=6.5,SNR=86						
LPAZ				S	S	04 56 28.2	-0.7
	comp=Z,0.1nm,0.3s,baz=308,slow=20,SNR=8.3						
LPAZ	La Paz	4.53	344	P	Pn	04 55 34.7	+1.2
LPAZ				S	S	04 56 28.2	-0.7
LPAZ				AML	AML	04 56 30.9	
	comp=Z,254nm,0.6s						
LPAZ	La Paz	4.53	344	*i* P	Pn	04 55 34.5	+1.0
BBOB	La Paz, Bander	4.67	345	P	Pn	04 55 36.0	+0.9
AHML	Horco Molle	6.24	168	*i* P	Pn	04 55 55.9	+1.7
SIV	San Ignacio	7.19	51	P	Pn	04 56 05.3	-1.1
	comp=Z,0.8nm,0.3s,baz=246,slow=14,SNR=24						
SIV	San Ignacio	7.19	51	P	Pn	04 56 07.0	+0.6
CYA	Choya	7.79	173	*i* P	Pn	04 56 13.9	-0.1
PLCA	Paso Flores	20.25	188	P	P	04 58 43.3	+2.1
	comp=Z,0.9nm,0.7s,baz=18,slow=11,SNR=6.0						
TORD	Torodi Ar. Bea	75.26	70	P	P	05 05 40.0	-1.2
	comp=Z,0.4nm,0.4s,baz=253,slow=5.0,SNR=9.5						

IDC 04 04:55:21.7±1.2, 1°.79N×123°.17E, h0^{km}, mb3.8/4, mb1 3.9/4, mb1mx3.6/44, mbtmp3.8/4, Error ellipse: s-maj=172.1km s-min=21.7km az=66.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.22	154	P	P	05 00 38.4	-2.0
	1.2nm,0.7s,baz=336,slow=9.2,SNR=6.5						
ASAR	Alice Springs	27.37	158	P	P	05 01 10.1	+1.2
	0.3nm,0.9s,baz=338,slow=6.4,SNR=3.8						
MKAR	Makanchi Array	57.20	328	P	P	05 05 10.1	-0.5
	0.3nm,0.3s,baz=125,slow=7.3,SNR=8.2						
NRIK	Noril'sk	71.50	347	P	P	05 06 44.9	+0.9
	4.6nm,0.5s,baz=136,slow=6.0,SNR=5.7						

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*NNC **04** 05:02:20.3±10.0, 38°.10N×71°.60E, h142^{km}±187^{km}, mb3.0, mpv3.8, Error ellipse: s-maj=99.8km s-min=72.9km az=4.0*

ISC 04 05:02:21.8±2.4, 38°.6N±0°.2×70°.8E±0°.1, h10^{km}, n14, σ1^{s}.25/17, 4C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.15	32	P	Pn	05 03 26.1	+0.5
	SNR=26						
KK31	Karatay Array	4.47	358	P	Pn	05 03 30.9	+1.1
	1.6nm,0.3s,baz=171,slow=12,SNR=108						
KK31				S	Sb	05 04 35.7	+1.2
	24nm,0.7s,baz=172,slow=31,SNR=11						
UCH	Uchtor	4.59	37	P	Pn	05 03 31.9	+0.1
	SNR=16						
EKS2	Erkin-Say	4.63	29	P	Pn	05 03 33.8	+1.8
	SNR=9.6						
KZA	Kyzart	4.86	43	P	Pn	05 03 36.2	+0.8
	SNR=32						
AAK	Ala-Archa	4.91	34	P	Pn	05 03 36.4	+0.6
	SNR=27						
AAK	Ala-Archa	4.91	34	⇑P	Pn	05 03 36.2	+0.4
	14nm,0.5s						
AAK				⇑S	Sn	05 04 31.5	-1.2
	20nm,0.7s						
KBK	Karagaybulak	5.13	37	P	Pn	05 03 40.6	+1.7
	SNR=31						
CHMS	Chumysh	5.31	33	P	Pn	05 03 42.9	+1.7
	SNR=12						
CHMS	Chumysh	5.31	33	⇑P	Pn	05 03 41.3	+0.1
	10.0nm,0.5s						
CHMS				⇓S	Sn	05 04 40.7	-1.7
	15nm,0.8s						
USP	Ospenovka	5.43	30	P	Pn	05 03 43.5	+0.7
	SNR=9.4						
ULHL	Ulahol	5.52	47	P	Pn	05 03 45.8	+1.5
	SNR=5.9						
AB31	Akbulak array	13.16	327	⇓P	Pn	05 05 27.5	-1.2
	0.4nm,0.3s,baz=134,slow=13,SNR=27						
AKTO	Aktyubinsk	14.87	327	⇑P	P	05 05 57.9	+0.1
	2.9nm,0.9s						

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*IDC **04** 05:02:36.0±1.1, 63°.01N×151°.14W, h114^{km}±11^{km}, mb3.4/10, mb1 3.5/15, mb1mx3.3/52, mbtmp3.7/15, Error ellipse: s-maj=13.7km s-min=9.9km az=106.0*

*NEIC **04** 05:02:37.2±0.8, 63°.01N±0°.04×150°.79W±0°.09, h126^{km}±5^{km}, Error ellipse: s-maj=6.3km s-min=5.6km az=188.0*

*AEIC **04** 05:02:38±1.3, 63°.06N±0°.05×150°.76W±0°.09, h124^{km}±4^{km}, ML3.6/139, Error ellipse: s-maj=6.8km s-min=5.7km az=196.0*

ISC 04 05:02:37.3±0.7, 63°.00N±0°.03×150°.76W±0°.03, h128^{km}±5^{km}, n124, σ1^{s}.05/150, mb3.7/10, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRF	Thorofare Moun	0.50	25		Pn	05 02 56.0	-0.3
TRF					Sn	05 03 10.2	-0.6
HUR	Hurricane	0.51	92		Pn	05 02 56.0	-0.1
KTH	Kantishna Hill	0.56	353		Pn	05 02 56.5	-0.1
KTH					Sn	05 03 10.2	-1.0
PPLA	Purkeypile	0.66	262		Pn	05 02 57.5	+0.2
PPLA					Sn	05 03 11.8	-0.7
CAST	Castle Rocks	0.73	306		Pn	05 02 57.3	-0.4
RND	Reindeer	0.96	64		Pn	05 02 59.5	-0.1
RND					Sn	05 03 15.9	-0.8
WAT2	Susitna Watana	0.99	91		Pn	05 02 59.7	-0.4
WAT2					Sn	05 03 16.9	-0.4
WAT1	Susitna Watana	1.03	99		Pn	05 03 00.2	0.0
SKT	Skwentna	1.08	200		Pn	05 03 00.6	-0.2
SKT					Sn	05 03 18.2	-0.5
MCK	McKinley	1.10	47		Pn	05 03 00.9	-0.1
MCK					Sn	05 03 17.8	-1.2
BPAW	Bear Paw Mtn.	1.11	355		Pn	05 03 00.7	-0.4
BPAW					Sn	05 03 17.8	-1.3
CHUM	Lake Minchumin	1.13	322		Pn	05 03 01.1	-0.1
BWN	Browne	1.31	26		Pn	05 03 03.5	+0.4
BWN					Sn	05 03 22.5	-0.3
WAT6	Susitna Watana	1.45	106		Pn	05 03 04.4	-0.4
GHO	Glory Hole Cre	1.50	144		Pn	05 03 05.4	+0.1
GHO					Sn	05 03 26.9	+0.3
SUA	Susitna One	1.54	180		Pn	05 03 05.9	+0.1
DHY	Denali Highway	1.54	86		Pn	05 03 05.8	0.0
DHY					Sn	05 03 27.3	-0.4
STLK	Strandline Lak	1.59	199		Pn	05 03 06.2	0.0
PMR	Palmer	1.60	151		Pn	05 03 06.1	-0.2
SML	Sawmill	1.65	136		Pn	05 03 06.7	-0.3
NEA	Nenana	1.75	25		Pn	05 03 07.7	-0.4
NEA					Sn	05 03 30.0	-1.7
FIS	Fire Island	1.88	172		Pn	05 03 10.8	+1.2
WRH	Wood River Hil	1.90	38		Pn	05 03 09.5	-0.3
SPBG	Spurr Blockage	1.90	204		Pn	05 03 10.3	+0.3
KNK	Knik Glacier	1.92	145		Pn	05 03 10.0	-0.2
SPCR	Spurr Chakacha	1.93	201		Pn	05 03 10.2	-0.1
RC01	Rabbit Creek A	1.98	165		Pn	05 03 10.4	-0.4
RC01					Sn	05 03 35.6	-0.8
SCM	Sheep Creek Mo	1.98	125		Pn	05 03 10.6	-0.4
MLY	Manley	2.04	0		Pn	05 03 11.3	-0.3
MLY					Sn	05 03 35.9	-2.1
CCB	Clear Creek Bu	2.11	37		Pn	05 03 12.0	-0.3
HDA	Harding Lake	2.21	48		Pn	05 03 13.3	-0.4
CAPN	Captain Cook N	2.25	185		Pn	05 03 16.3	+2.2
MDM	Murphy Dome	2.26	28		Pn	05 03 14.1	-0.2
TCOL	CIGO, UAF Yank	2.27	33		Pn	05 03 14.3	-0.2
COLA	College	2.28	33		Pn	05 03 14.1	-0.4
PS10	TAPS Pump St10	2.30	77		Pn	05 03 15.6	+0.7
PS10					Sn	05 03 44.3	+0.6
PS08	TAPS Pump Stn8	2.34	47		Pn	05 03 14.6	-0.6
TTA	Tatalina	2.40	271		Pn	05 03 15.8	-0.3
TTA					Sn	05 03 44.9	-1.1
TT01	Tatalina	2.41	270		Pn	05 03 15.9	-0.2
PAX	Paxson	2.42	88		Pn	05 03 16.5	+0.2
PAX					Sn	05 03 45.8	-0.5
PWL	Port Wells	2.44	151		Pn	05 03 16.2	-0.4
PWL					Sn	05 03 44.8	-1.9
IL31		2.47	42		Pn	05 03 16.3	-0.6
ILAR	Eielson Array	2.47	42	P	Pn	05 03 16.4	-0.5
	5.0nm,0.3s,baz=227,slow=13,SNR=266						
ILAR				S	Sn	05 03 48.4	+1.0
	10nm,0.3s,baz=225,slow=16,SNR=13						
SLKM	Skilak Lake	2.52	174		Pn	05 03 17.4	-0.1
PS07	TAPS Pump Stn7	2.56	24		Pn	05 03 17.9	-0.2
DFR	Drift River	2.58	202		Pn	05 03 18.6	+0.1
RDJH	Redoubt Jeurge	2.60	203		Pn	05 03 19.1	+0.3
PS11	TAPS Pump St11	2.62	108		Pn	05 03 19.5	+0.7
RDWB	Redoubt West	2.71	202		Pn	05 03 20.5	+0.3
RSO	Redoubt South	2.72	201		Pn	05 03 20.8	+0.5
GLI	Glacier Island	2.74	139		Pn	05 03 19.9	-0.6
RED	Redoubt Volcan	2.76	201		Pn	05 03 21.1	+0.3
RIDG	Independent Ri	2.77	72		Pn	05 03 20.9	+0.2
RIDG					Sn	05 03 51.1	-3.2
JPK	Jack Peak	2.77	133		Pn	05 03 20.1	-0.7
PS06	TAPS Pump Stn6	2.90	8		Pn	05 03 22.5	+0.1
SVW2	Sparrevohn	2.97	232		Pn	05 03 23.2	-0.1
SEW	Seward	2.97	167		Pn	05 03 23.1	-0.2
SEW					Sn	05 03 56.2	-2.7
FID	Port Fidalgo	3.04	136		Pn	05 03 23.4	-0.8
PS12	TAPS Pump St12	3.04	118		Pn	05 03 23.5	-0.8
SCRK	Sand Creek	3.19	69		Pn	05 03 25.9	-0.4
MENT	Mentasta	3.22	88		Pn	05 03 26.7	+0.1
BRLK	Bradley Lake	3.25	181		Pn	05 03 27.2	+0.1
IM03		3.26	338		Pn	05 03 26.8	-0.3
BRSE	Bradley Lake S	3.27	180		Pn	05 03 27.2	-0.1
HIN	Hinchinbrook I	3.31	140		Pn	05 03 27.3	-0.5
HOM	Homer	3.38	188		Pn	05 03 29.4	+0.7
HOM	Homer	3.38	188		Sn	05 04 08.3	-0.2
PRP	Porcupine Dome	3.41	40		Pn	05 03 28.7	-0.5
EYAK	Cordova Ski Ar	3.42	134		Pn	05 03 29.1	-0.1
CNPM	China Poot	3.49	184		Pn	05 03 30.5	+0.2
GLB	Gilahina Butte	3.61	113		Pn	05 03 31.6	-0.2
GOAT	Goat Mountain	3.75	128		Pn	05 03 32.9	-0.8
PS05	TAPS Pump Stn5	3.83	1		Pn	05 03 34.8	+0.3
AU22	Augustine Moun	3.85	200		Pn	05 03 35.5	+0.6
AUL	Augustine Lava	3.85	201		Pn	05 03 35.6	+0.7
VRDI	Verde Repeater	3.87	114		Pn	05 03 34.7	-0.6
VRDI					Sn	05 04 17.9	-2.4
AUQ	Augustine Qik’	3.88	201		Pn	05 03 36.1	+0.8
RAGM	Ragged Mountai	3.91	129		Pn	05 03 35.1	-0.6
MCARA	McCarthy VSAT	3.97	111		Pn	05 03 36.6	+0.1
MCARA					Sn	05 04 22.4	0.0
BC03		4.09	85		Pn	05 03 37.5	-0.5
MID	Middleton Isla	4.17	147		Pn	05 03 39.2	0.0
COLD	Coldfoot	4.25	3		Pn	05 03 40.1	-0.1
CRQM	Cirque	4.25	119		Pn	05 03 40.1	-0.4
CRQM					Sn	05 04 26.6	-2.8
BERG	Berg Lake	4.26	125		Pn	05 03 39.8	-0.5
FYU	Fort Yukon	4.29	31		Pn	05 03 40.2	-0.5
PTPK	Patty Peak	4.30	111		Pn	05 03 41.0	-0.1
TGL	Tana Glacier	4.38	117		Pn	05 03 41.4	-0.6
BALM	Baldy	4.43	113		Pn	05 03 42.0	-0.7
KIAG	Kiagna River	4.48	114		Pn	05 03 42.6	-0.8
BVCY	Beaver Creek	4.60	93		Pn	05 03 44.9	0.0
EGAK	Eagle	4.60	63		Pn	05 03 44.4	-0.5
BARN	Barnard Glacie	4.71	110		Pn	05 03 46.7	+0.2
YUK2	White River	4.77	100		Pn	05 03 47.7	+0.4
GRNC	Granite Creek	4.83	114		Pn	05 03 47.2	-1.0
KAHC	Katmai Hardscr	4.83	207		Pn	05 03 48.4	+0.2
CTGM	Chitina Glacie	4.89	110		Pn	05 03 48.9	0.0
YUK3	Moose Creek	4.95	100		Pn	05 03 50.1	+0.3
KAWH	Katmai	5.04	205		Pn	05 03 51.2	+0.4
BM03	Burnt Mountain	5.14	28		Pn	05 03 51.5	-0.5
DAWY	Dawson	5.20	73		Pn	05 03 52.6	-0.3
KABU	Katmai Buttres	5.24	207		Pn	05 03 54.3	+0.7
KDAK	Kodiak Island	5.31	191	P	Pn	05 03 53.6	-0.8
	2.4nm,0.3s,baz=55,slow=8.4,SNR=78						
KDAK				S	Sn	05 04 50.6	-3.9
	7.6nm,0.3s,baz=173,slow=19,SNR=20						
KDAK	Kodiak Island	5.31	191		Pn	05 03 52.2	-2.2
TOLK	Toolik Lake Re	5.69	4		Pn	05 04 00.7	+1.2
OHAK	Old Harbor	5.93	193		Pn	05 04 00.3	-2.5
PNL	Peninsula	6.41	116		Pn	05 04 05.4	-3.7
ANM	Nome	6.66	290		Pn	05 04 12.5	0.0
SII	Sitkinak Islan	6.69	196		Pn	05 04 10.3	-2.7
RDOG	Red Dog Mine	7.14	321		Pn	05 04 19.1	+0.2
DHAK	Deception Hill	7.24	117	Pn	Pn	05 04 20.5	+0.1
INK	Inuvik	8.86	46	P	Pn	05 04 42.0	-0.1
	0.1nm,0.3s,baz=249,slow=9.7,SNR=5.3						
DLBC	Dease Lake	11.11	105	P	Pn	05 05 14.4	+2.1
	0.1nm,0.3s,baz=300,slow=8.2,SNR=3.8						
YKA	Yellowknife Ar	16.43	76	P	Pn	05 06 19.8	-0.2
	0.2nm,0.3s,baz=284,slow=11,SNR=17						
YKA				ScP	ScP	05 14 26.2	+0.4
	0.0nm,0.3s,baz=302,slow=2.2,SNR=5.4						
RES	Resolute Bay	22.20	36	P	P	05 07 24.2	+1.5
	0.3nm,0.4s,baz=236,slow=15,SNR=2.6						
SEY	Seymchan	25.13	296	P	P	05 07 49.7	-0.1
	2.5nm,0.3s,baz=84,slow=9.1,SNR=4.8						
KHMM	Horse Mountain	27.34	131		S	05 12 36.7	-3.5
PDAR	Pinedale Array	31.26	111	P	P	05 08 46.9	+2.1
	0.8nm,0.8s,baz=317,slow=6.1,SNR=7.8						
NVAR	Mina Array Bea	31.43	126	P	P	05 08 48.5	+2.2
	0.3nm,0.6s,baz=339,slow=8.7,SNR=3.3						
TXAR	Lajitas Array	45.17	116	P	P	05 10 42.9	+1.9
	0.3nm,0.5s,baz=339,slow=6.7,SNR=4.2						
SONM	Songino Array	53.90	306	P	P	05 11 48.1	+1.0
	1.2nm,0.7s,baz=28,slow=6.0,SNR=11						
ZALV	Zalesovo Beam	55.59	324	P	P	05 11 57.8	-1.1
	1.9nm,0.6s,baz=17,slow=7.7,SNR=6.8						
FINES	FINESS Array B	55.85	2	P	P	05 11 59.4	-1.3
	1.3nm,0.7s,baz=351,slow=13,SNR=3.6						
MKAR	Makanchi Array	62.74	322	P	P	05 12 47.2	-1.1
	0.7nm,0.4s,baz=39,slow=7.1,SNR=17						
AKASG	Malin Array Be	66.64	0	P	P	05 13 12.4	-1.0
	0.2nm,0.3s,baz=360,slow=6.0,SNR=5.6						

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*NEIC **04** 05:08:30.3±1.6, 51°.88N±0°.10×172°.89W±0°.08, h35^{km}±26^{km}, Error ellipse: s-maj=14.1km s-min=7.2km az=182.0*

AEIC 04 05:08:28.2±1.8, 51°.71N±0°.09×172°.86W±0°.09, h26^{km}±8^{km}, ML3.5/24, Error ellipse: s-maj=13.2km s-min=7.9km az=177.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	0.95	307		Pn	05 08 45.3	-0.6
ATKA	Atka Island	0.96	301		Pn	05 08 44.8	-1.2
ATKA					Sb	05 08 56.6	-1.9
KOKL	Mount Kliuchef	1.03	307		Pn	05 08 46.3	-0.8
KOKL					Sb	05 08 59.8	-0.6
KONE	Korovin Northe	1.03	312		Pn	05 08 46.5	-0.6
KOWE	Korovin West	1.08	308		Pn	05 08 47.4	-0.3
GSMY	Great Sitkin M	2.01	281		Pn	05 09 00.6	+0.1
GSTR	Great Sitkin T	2.02	282		Pn	05 09 01.8	+1.2
GSTD	Great Sitkin T	2.06	281		Pn	05 09 01.2	0.0
GSTD					Sn	05 09 26.7	+0.5
ADAG	Mount Adagdak	2.33	278		Pn	05 09 06.1	+1.1
ADK	Adak	2.38	276		Pn	05 09 05.7	+0.2
ADK	Adak	2.38	276	Sn	Sn	05 09 34.5	+0.7
KIRH	Kanaga Island	2.63	276		Pn	05 09 09.9	+0.9
KIKV	Kanaga Island	2.68	275		Pn	05 09 10.8	+1.1
KICM	Kanaga Island	2.70	276		Pn	05 09 11.0	+1.1
KIMD	Kanaga Island	2.72	273		Pn	05 09 11.0	+0.8
NIKH	Nikolski High	2.76	61		Pn	05 09 10.1	-0.7
NIKH					Sn	05 09 41.4	-1.9
TAPA	Tanaga Point A	3.08	274		Pn	05 09 16.5	+1.3
TASE	Tanaga Southea	3.22	274		Pn	05 09 18.0	+0.9
UNV	Unalaska Valle	4.41	59		Pn	05 09 33.7	+0.2
AKUT	Akutan	4.93	58	Pn	Pn	05 09 40.9	+0.4
SPIA	Saint Paul Isl	5.68	15	Pn	Pn	05 09 51.3	+0.4
KDAK	Kodiak Island	13.17	55	Pn	Pn	05 11 32.4	-0.9
SVW2	Sparrevohn	13.37	39	Pn	Pn	05 11 36.2	+0.1
KTH	Kantishna Hill	16.58	36	Pn	Pn	05 12 18.7	0.0
BPAW	Bear Paw Mtn.	16.88	34	Pn	Pn	05 12 22.1	-0.3

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*IDC **04** 05:15:22.8±2.1, 3°.91S×129°.09E, h75^{km}±27^{km}, mb4.0/2, mb1 4.3/6, mb1mx3.6/43, mbtmp4.4/6, Error ellipse: s-maj=28.9km s-min=15.0km az=110.0*

*NEIC **04** 05:15:23.0±2.7, 4°.01S±0°.07×129°.07E±0°.09, h80^{km}±9^{km}, mb4.2/6, Error ellipse: s-maj=13.8km s-min=9.5km az=80.0*

*DJA **04** 05:15:26.0±0.5, 4°S±5°×12°9E±°, h110^{km}±6^{km}, M4.4/7, mB5.5/1, mb4.9/1, MLv4.1/7, Mw(mB)5.0/1*

ISC 04 05:15:24.8±0.8, 4°.03S±0°.06×129°.34E±0°.04, h100^{km}, n23, σ2^{s}.66/30, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.75	131	P	Pn	05 15 46.9	+4.3
BNDI				S	Sn	05 16 01.2	+5.1
MSAI	Masohi	0.79	329	P	Pn	05 15 44.6	+1.6
AAI	Ambon	1.19	286	P	Pn	05 15 49.2	+1.9
AAI				S	Sn	05 16 06.3	+2.0
NLAI	Namlea	2.37	289	P	Pn	05 16 04.1	+2.0
NLAI				S	Sn	05 16 32.1	+1.3
FAKI	Fak Fak	3.11	69	P	Pn	05 16 14.4	+2.4
FAKI	Fak Fak	3.11	69		Pn	05 16 14.1	+2.1
FAKI				Sn	Sn	05 16 47.8	-0.6
SIJI	Sorong	3.68	32	P	Pn	05 16 19.9	+0.2
	27nm,0.3s,baz=242,slow=20,SNR=36						
SIJI				S	Sn	05 17 00.5	-1.8
	62nm,0.3s,baz=82,slow=21,SNR=26						
LBMI	Labuha	3.83	331	P	Pn	05 16 22.7	+0.9
SANI	Sanana	3.88	300	P	Pn	05 16 21.9	-0.4
RKPI	Ransiki, Papua	5.44	63	P	Pn	05 16 45.0	+1.5
MTN	Manton Dam	8.94	169		Pn	05 17 31.8	+0.8
MTN				Sn	Sn	05 19 08.7	-1.4
KAPI	Kappang	9.61	264	P	Pn	05 17 35.4	-4.8
	2.8nm,0.3s,baz=207,slow=16,SNR=4.2						
KNRA	Kununurra	11.59	183		Pn	05 18 07.2	+0.2
FITZ	Fitzroy Crossi	14.45	194	P	Pn	05 18 44.8	+0.3
	0.3nm,0.3s,baz=24,slow=6.0,SNR=12						
WB0	Warramunga Arr	16.40	163		Pn	05 19 09.8	+0.7
WB0				IAmb	IAmb	05 19 12.7	
	comp=Z,15nm,0.7s						
WRAB	Tennant Creek	16.55	163	Pn	Pn	05 19 11.0	+0.1
WRAB				IAmb	IAmb	05 19 14.4	
	comp=Z,22nm,1.3s						
WRA	Warramunga Arr	16.55	163	P	P	05 19 12.9	+1.1
	comp=Z,2.4nm,0.3s,baz=337,slow=12,SNR=13						
WRA				S	Sn	05 22 05.6	-9.2
	comp=Z,0.6nm,0.3s,baz=348,slow=23,SNR=4.9						
WR0	Warramunga Arr	16.63	163		P	05 19 12.8	+0.1
WR0				IAmb	IAmb	05 19 15.3	
	comp=Z,11nm,1.1s						
COEN	Coen	16.84	127		P	05 19 16.1	+1.1
AS31	Alice Springs	20.02	168	P	P	05 19 51.1	+1.3
ASAR	Alice Springs	20.02	168	P	P	05 19 51.0	+1.2
	comp=Z,28nm,0.6s,baz=350,slow=12,SNR=174						
ASAR				S	S	05 23 25.0	-4.5
	comp=Z,5.1nm,0.9s,baz=348,slow=20,SNR=26						
BBOO	Buckleboo	29.32	168	P	P	05 21 18.1	+0.1
BBOO				IAmb	IAmb	05 21 25.2	
	comp=Z,11nm,1.4s						
MKAR	Makanchi Array	65.40	326	P	P	05 25 56.0	-0.7
	comp=Z,0.5nm,0.5s,baz=117,slow=8.0,SNR=10						

ROM 04 05:18:40.2±0.0, 43°.431N±0°.002×12°.502E±0°.003, h9^{km}, ML1.5/7, 1C-1D, Error ellipse: s-maj=0.2km s-min=0.1km az=336.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATPI	Pietralunga -	0.08	285	⇓P	Pg	05 18 42.5	+0.2
ATPI				S	Sg	05 18 44.0	+0.1
ATPI				AML	AML		
	comp=N,633µm,1.0s						
ATPI				AML	AML		
	comp=N,632µm,1.0s						
ATPI				AML	AML		
	comp=E,519µm,0.3s						
ATFO	Monte Foce - G	0.08	142	P	Pg	05 18 42.7	+0.3
ATFO				S	Sg	05 18 44.3	+0.3
ATFO				AML	AML		
	comp=E,194µm,0.2s						
ATFO				AML	AML		
	comp=N,252µm,0.4s						
ATVO	AVT- Monte Val	0.09	235	⇑*i*P	Pg	05 18 42.7	+0.3
ATVO				S	Sg	05 18 44.2	+0.1
ATVO				AML	AML		
	comp=N,456µm,0.4s						
ATVO				AML	AML		
	comp=N,456µm,0.4s						
ATVO				AML	AML		
	comp=E,678µm,0.2s						
MURB	Monte Urbino	0.17	174	P	Pg	05 18 44.5	+0.7
MURB				S	Sg	05 18 47.7	+1.5
FRON	Frontone	0.18	62	P	Pg	05 18 44.6	+0.6
FRON				S	Sg	05 18 47.9	+1.3
FRON				AML	AML		
	comp=E,170µm,0.4s						
FRON				AML	AML		
	comp=N,404µm,0.3s						
NARO	Abbazia di Nar	0.19	18	P	Pg	05 18 44.5	+0.5
NARO				S	Sg	05 18 47.8	+1.0
NARO				AML	AML		
	comp=N,134µm,0.2s						
NARO				AML	AML		
	comp=E,193µm,0.2s						
ATMI	Monte Miggiano	0.20	241	P	Pg	05 18 44.7	+0.5
ATMI				S	Sg	05 18 48.2	+1.3
CDCA	Citt‘ di Caste	0.20	278	P	Pg	05 18 45.3	+1.1
CDCA				S	Sg	05 18 48.6	+1.6
SSFR	Montelago di S	0.20	88	P	Pg	05 18 45.0	+0.6
SSFR				S	Sg	05 18 48.7	+1.5
SSFR				AML	AML		
	comp=E,308µm,0.7s						
SSFR				AML	AML		
	comp=E,266µm,0.2s						
SSFR				AML	AML		
	comp=N,282µm,0.5s						
SSFR				AML	AML		
	comp=N,175µm,1.4s						
FOSV	Fossato di Vic	0.23	126	P	Pg	05 18 45.6	+0.7
FOSV				S	Sg	05 18 49.7	+1.6
PE3	Peglio	0.27	359	P	Pb	05 18 46.5	-0.7
PE3				S	Sb	05 18 51.1	-0.8
MPAG	Monte Paganucc	0.27	43	P	Pg	05 18 46.3	+0.6
MPAG				S	Sb	05 18 51.0	-1.2
PARC	Parchiule	0.29	319	P	Pg	05 18 46.8	+0.8
PARC				S	Sb	05 18 52.0	-0.6
ARVD	Arcevia	0.33	78	P	Pg	05 18 47.3	+0.7
ARVD				S	Sb	05 18 52.8	-0.8
FSSB	Fossombrone	0.33	37	P	Pb	05 18 47.5	-0.8
FSSB				S	Sb	05 18 52.9	-0.8
FSSB				AML	AML		
	comp=E,104µm,0.2s						
FSSB				AML	AML		
	comp=N,142µm,1.3s						
FSSB				AML	AML		
	comp=E,104µm,0.2s						
CAFI	Castiglion Fio	0.40	256	P	Pg	05 18 48.7	+0.6
CAFI				S	Sb	05 18 55.0	-0.8
FDMO	Fiordimonte	0.58	132	P	Pg	05 18 52.0	+0.5

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*BEO **04** 05:21:02.9±0.3, 45°.45N×21°.13E, h0^{km}, ML2.2/8*

BUC 04 05:21:03.7±0.3, 45°.46N×21°.23E, h2^{km}, ml2.2/11, 28C-20D, Error ellipse: s-maj=2.5km s-min=1.8km az=102.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BANR	Banloc	0.10	223	⇓P	Pg	05 21 05.1	-0.5
BANR				⇑S	Sg	05 21 07.5	+0.6
BANR	Banloc	0.10	223	⇓P	Pg	05 21 05.1	-0.5
BANR				⇑S	Sg	05 21 07.5	+0.6
TIM	Timisoara	0.28	358	⇑P	Pg	05 21 09.7	+0.7
TIM				⇑S	Sg	05 21 13.5	+0.8
TIM	Timisoara	0.28	358	⇑P	Pg	05 21 09.7	+0.7
TIM				⇑S	Sg	05 21 13.5	+0.8
BZS	Buzias	0.31	59	*e*Pg	Pg	05 21 10.3	+0.6
BZS				*e*Sg	Sg	05 21 14.9	+1.1

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BZS   Buzias            0.31  59 ⇓P     Pg     05 21 10.4 +0.7
BZS                              ⇑S     Sg     05 21 14.8 +1.1
BZS   Buzias            0.31  59 ⇓P     Pg     05 21 10.4 +0.7
BZS                              ⇑S     Sg     05 21 14.8 +1.1
MDVR  Moldovita         0.76 153 ⇑P     Pg     05 21 17.7 -0.5
MDVR                             ⇑S     Sg     05 21 28.5 +0.6
MDVR  Moldovita         0.76 153 ⇑P     Pg     05 21 17.7 -0.5
MDVR                             ⇑S     Sg     05 21 28.5 +0.6
BEO   Beograd           0.84 220 eSg    Sg     05 21 29.6 -1.1
SIRR  Siria             0.86  20 ⇓P     Pg     05 21 19.8 -0.4
SIRR                             ⇑S     Sg     05 21 32.4 +1.0
SIRR  Siria             0.86  20 ⇓P     Pg     05 21 19.8 -0.4
SIRR                             ⇑S     Sg     05 21 32.4 +1.0
FRGS  Fruska Gora       1.05 254 ePg    Pg     05 21 20.3 -3.4
FRGS                             eSg    Sg     05 21 33.1 -4.2
GZR   Gura Zlata        1.09  93 ⇓P     Pg     05 21 24.1 -0.4
GZR                              ⇓S     Sg     05 21 38.9 +0.3
GZR   Gura Zlata        1.09  93 ⇓P     Pg     05 21 24.1 -0.4
GZR                              ⇓S     Sg     05 21 38.9 +0.3
KUBS  Kucevo            1.09 163 ePg    Pg     05 21 23.2 -1.4
KUBS                             eSg    Sg     05 21 38.0 -0.7
DEV   Deva              1.25  69 ⇓P     Pg     05 21 26.9 -0.6
DEV                              ⇑S     Sb     05 21 44.7 +0.3
DEV   Deva              1.25  69 ⇓P     Pg     05 21 26.9 -0.6
DEV                              ⇑S     Sb     05 21 44.7 +0.3
TRUS  Trudelj           1.37 206 ePg    Pn     05 21 27.7 -2.1
TRUS                             eSg    Sg     05 21 44.3 -3.2
GRUS  Gruza             1.61 193 ePn    Pn     05 21 31.6 -1.5
DIVS  Divibare          1.62 214 ePn    Pn     05 21 32.6 -0.7
DIVS                             eSg    Sn     05 21 53.6 -1.2
DRGR                    1.69  37 ⇓P     Pn     05 21 32.5 -1.7
DRGR                             ⇑S     Sb     05 21 57.2 +0.1
DRGR                    1.69  37 ⇓P     Pn     05 21 32.5 -1.7
DRGR                             ⇑S     Sb     05 21 57.2 +0.1
PUNG  Punghina          1.69 134 ⇓S     Sb     05 21 57.2 +0.2
PUNG  Punghina          1.69 134 ⇓S     Sb     05 21 57.2 +0.2
LOT   Lotru             1.79  89 ⇑P     Pn     05 21 35.4 -0.2
LOT                              ⇓S     Sg     05 22 00.5 -0.5
LOT   Lotru             1.79  89 ⇑P     Pn     05 21 35.4 -0.2
LOT                              ⇓S     Sg     05 22 00.5 -0.5
ZAGS  Zajecar           1.79 156 ePn    Pn     05 21 35.0 -0.6
ZAGS                             eSg    Sb     05 22 00.0 -0.1
BOVS  Bovan             1.85 169 ePg    Pn     05 21 37.0 +0.6
BOVS                             eSg    Sg     05 22 02.5 -0.6
IVAS  Ivanjica          2.03 203 ePn    Pn     05 21 38.1 -0.9
BLKB  Belogradchik      2.10 150 ⇑S     Sb     05 22 08.7 -0.4
BLKB  Belogradchik      2.10 150 ⇑S     Sb     05 22 08.7 -0.4
ZAPS  Zavoj             2.40 155 ePn    Pn     05 21 44.7 +0.7
BARS  Barje             2.67 171 eSg    Pn     05 21 49.4 +1.7
VOIR                    2.69  89 ⇑P     Pn     05 21 48.7 +0.8
VOIR                             ⇑S     Sn     05 22 22.9 +1.8
VOIR                    2.69  89 ⇑P     Pn     05 21 48.7 +0.8
VOIR                             ⇑S     Sn     05 22 22.9 +1.8
PLVB  Pleven            3.19 129 ⇓P     Pn     05 21 54.0 -0.8
PLVB                             ⇑S     Sn     05 22 35.2 +1.8
PLVB  Pleven            3.19 129 ⇓P     Pn     05 21 54.0 -0.8
PLVB                             ⇑S     Sn     05 22 35.2 +1.8
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*IDC **04** 05:28:42.6±1.9, 9°.05N×83°.68W, h0km, mb3.6/3, mb1 3.9/7, mb1mx3.6/34, mbtmp3.8/7, ML3.5/3, MS3.5/3, Ms1 3.5/3, ms1mx3.0/45, Error ellipse: s-maj=55.4km s-min=23.3km az=38.0*

*INET **04** 05:28:44.4, 8°.32N×84°.53W, h24km, ML4.5*

*UPA **04** 05:28:45.8±2.0, 8°.87N×84°.36W, h10km±22km, MW5.3*

*UCR **04** 05:28:46.5±1.9, 8°.96N×84°.21W, h2km±7km, MD3.8, MW4.5, Fault plane solution: NP1:φs53.64000°, δ78.69000°, λ33.34000°.*

ISC 04 05:28:46.6±1.2**, 8°.94N**±0°.04×**84°.21W**±0°.04**, h18**km±4km**, n62, σ1ˢ.34**/78**, mb3.5**/3**, 12C-10D, Off coast of Costa Rica**

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Code  Station Name       Δ°   AZ°  Phase ID          Time     Res
                                   Op     ISC       h  m  s   ISC
EDDO  Dominical         0.47  48⇓iP     Pg     05 28 55.9 -0.2
EDDO                             eS     Sb     05 29 03.2 +0.3
EDLM  Las Mercedes      0.70  61⇓eP     Pg     05 28 59.9 -0.6
EDLM                             eS     Sb     05 29 11.0 +1.2
EDPN  Palmar Norte      0.75  88 i P    Pb     05 29 01.2 +0.1
EDPN                             i S    Sg     05 29 12.0 +0.7
EDPN                             eS     Sn     05 29 12.5 -0.7
LCR2  La Lucha 2        0.83  15⇓iP     Pb     05 29 02.1 -0.5
LCR2                             eS     Sn     05 29 14.6 -0.9
EDBA  Buenos Aires      0.95  76⇑eP     Pb     05 29 03.9 -0.7
EDBA                             eS     Sg     05 29 17.8  0.0
PTJ1  Puerto Jimnez     0.98 114⇓iP     Pb     05 29 05.3 +0.1
PTJ1  Puerto Jimnez     0.98 114⇓eP     Pb     05 29 05.3 +0.1
PTJ1                             eS     Sn     05 29 20.3 +1.4
SJS   Escuela Geolog    1.01   9⇓eP     Pb     05 29 05.3 -0.3
SJS                              eS     Sn     05 29 20.0 +0.2
PIRO  Carate, Puerto    1.02 121 eP     Pb     05 29 05.8 +0.1
HDC   Heredia           1.06   5⇓iP     Pb     05 29 06.4 -0.2
HDC                              i S    Sb     05 29 20.0 -0.2
HDC   Heredia           1.06   5⇓eP     Pb     05 29 06.4 -0.2
HDC                              eS     Sn     05 29 21.5 +0.4
SRA1  San Ramn          1.17 347⇑eP     Pn     05 29 07.8 -0.5
EDSV  San Vito          1.23  95⇑eP     Pn     05 29 09.3 +0.3
SBAR3 San Bartolo, C    1.45 115 eP     Pb     05 29 13.2 +0.1
BRU2  Volcan            1.51  95⇑iP     Pn     05 29 13.2 +0.3
      baz=310,slow=2.0
BRU2  Volcan            1.51  95⇑iP     Pn     05 29 13.2 +0.3
JTS   Las Juntas de     1.53 332  Pn    Pn     05 29 12.7 -0.4
      49nm,0.3s,baz=163,slow=14,SNR=151
JTS                               Sn    Sg     05 29 37.5 +1.4
      134nm,0.3s,baz=278,slow=22,SNR=13
JTS   Las Juntas de     1.53 332 eP     Pn     05 29 12.7 -0.4
JTS   Las Juntas de     1.53 332⇑eP     Pn     05 29 12.6 -0.4
FORC  Fortuna           1.59 344 i P    Pb     05 29 14.9 -0.5
FORC                             i S    Sg     05 29 36.7 -1.2
CEDE  Laguna Cedeo      1.61 343⇑eP     Pb     05 29 15.8 -0.2
BCO2  Palmira           1.68  97⇑iP     Pn     05 29 15.6 +0.4
BCO2                             eS     Sn     05 29 33.9 -2.5
RGM0  Gandoca           1.71  68⇑iP     Pb     05 29 17.7 +0.1
RGM0                             i S    Sg     05 29 44.6 +2.7
RGM0  Gandoca           1.71  68⇑iP     Pb     05 29 17.6 +0.1
PTAR3 Potrerillos Ar    1.71  98 i P    Pn     05 29 16.3 +0.6
CNI2  El Empalme, Bo    1.79  74⇑iP     Pn     05 29 17.6 +1.0
CNI2                             i S    Sb     05 29 42.0 +1.1
DVD   David             1.81 106 eP     Pn     05 29 17.7 +0.8
DVD                              i S    Sb     05 29 42.6 +0.9
GUAI  GUAI              1.84 316 i P    Pb     05 29 20.6 +0.8
LOCO3 Loma Colorada,    1.85 106 eP     Pb     05 29 19.0 -0.9
PEDE3 Pedregal, Chir    1.85 107⇓iP     Pn     05 29 18.4 +0.9
PEDE3                            i S    Sb     05 29 43.1 +0.3
LOMA3 Las Lomas, Chi    1.87 105 i P    Pn     05 29 18.8 +1.1
ACAL  Aguas Claras      1.87 334 i P    Pn     05 29 18.4 +0.5
CHIR3 Chiriqui UPA,     1.94 106⇑iP     Pn     05 29 19.9 +1.3
CHIR3                            i S    Sb     05 29 45.6 +0.3
CHGR2 Aguacate          2.04  90 eP     Pn     05 29 21.4 +1.3
CHGR2                            i S    Sn     05 29 46.0 +0.7
BUEV  Buena Vista       2.19 328 eP     Pn     05 29 23.4 +1.1
PVID3 Puerto Vidal,     2.72 109 eP     Pb     05 29 34.7 -0.1
CNAZ3 Canazas, Verag    3.03 101 eP     Pb     05 29 37.3 -2.7
CNAZ3                            i S    Sb     05 30 16.4 -0.3
MESA3 La Mesa, Verag    3.10 104 eP     Pb     05 29 39.9 -1.2
GMAL  Guarumal, Vera    3.17 111 i P    Pn     05 29 36.7 +1.1
GMAL  Guarumal, Vera    3.17 111 eP     Pn     05 29 36.9 +1.3
SFRA3 San Francisco,    3.28 102 eP     Pn     05 29 38.9 +1.8
STIA3 Santiago, Vera    3.31 104⇓eP     Pb     05 29 44.6 -0.3
OCU3  Ocu, Herrera      3.54 106 eP     Pb     05 29 48.6 -0.2
CRIS3 El Cristo, Coc    3.62 101 eP     Pn     05 29 45.1 +3.3
CACAO El Cacao, Vera    3.68 115 eP     Pn     05 29 43.6 +1.1
TOSI3 Tonosi            4.03 112 eP     Pn     05 29 49.8 +2.4
AZU   Azuero            4.06 106 eP     Pn     05 29 48.6 +0.7
AZU   Azuero            4.06 106 eP     Pn     05 29 52.2 +4.4
VTON  El Valle, Cocl    4.07  94 i P    Pn     05 29 47.0 -1.0
ZANG  Zanguenga, Cho    4.29  89 i P    Pn     05 29 52.3 +1.2
CHOR3 La Chorrera       4.40  90 eP     Pn     05 29 54.6 +2.1
UPA   Univ. de Panam    4.62  89 eP     Pn     05 29 57.2 +1.6
CHPO  Chepo, Panama     5.04  87 eP     Pn     05 30 03.2 +1.9
APG   El Apazote        8.59 315  Pn    Pn     05 30 52.8 +2.5
      0.3nm,0.3s,baz=126,slow=3.5,SNR=4.7
CMIG  Matias Romero    13.18 309  Pn    P      05 31 58.0 -4.9
      0.1nm,0.3s,baz=122,slow=13,SNR=2.7
SDV   Santo Domingo    13.42  89  Pn    Pn     05 31 47.5 -9.0
      0.1nm,0.3s,baz=293,slow=7.6,SNR=2.6
ATAH  Atahualpa        16.98 160  Pn    Pn     05 32 40.1 -3.7
      0.4nm,0.3s,baz=118,slow=10,SNR=4.0
ATAH                              LR    LR     05 38 32.9
      comp=Z,193nm,18.0s,baz=5.1,slow=35
SJG   San Juan         19.77  61  LR    LR     05 40 28.9
      comp=Z,62nm,18.0s,baz=260,slow=37
SADO  Sadowa           35.97   6  LR    LR     05 51 09.1
      comp=Z,107nm,19.0s,baz=110,slow=38
ULM   Lac du Bonnet    42.31 349  P     P      05 36 38.1 -1.1
      1.5nm,0.7s,baz=149,slow=7.2,SNR=4.8
NVAR  Mina Array Bea   42.42 319  P     P      05 36 43.1 +2.5
      0.6nm,0.8s,baz=125,slow=7.8,SNR=4.4
YKA   Yellowknife Ar   57.83 344  P     P      05 38 35.4 -1.4
      0.3nm,0.7s,baz=138,slow=7.2,SNR=4.7
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*NIED **04** 05:49:00, 31°.00N×141°.50E, h53km, Mw5.1 Best double couple: M₀5.46000×10¹⁶ NP1:φs350.00000°, δ47.00000°, λ104.00000°. NP2:φs149.00000°, δ45.00000°, λ75.00000°.*

*JMA **04** 05:49:03.1±0.4, 30°.98N×141°.55E, h36km, M5.0*

*IDC **04** 05:49:04.3±3.1, 30°.78N×140°.91E, h33km±23km, mb4.5/36, mb1 4.6/42, mb1mx4.6/53, mbtmp4.7/42, ML4.3/5, MS4.1/36, Ms1 4.1/36, ms1mx4.0/56, Error ellipse: s-maj=12.3km s-min=7.9km az=86.0*

*BJI **04** 05:49:04.0±0.0, 30°.80N×141°.10E, h60km, mB5.0/45, mb4.6/57, Ms4.5/49, Ms7 4.3/43*

*MOS **04** 05:49:04.2±1.3, 30°.87N×141°.18E, h54km, mb5.2/38, MS4.2/9, Error ellipse: s-maj=9.0km s-min=4.1km az=104.5*

*NEIC **04** 05:49:06.4±2.2, 30°.83N±0°.05×141°.05E±0°.09, h55km±3km, mb5.0/143, Error ellipse: s-maj=11.8km s-min=6.8km az=73.0*

*GCMT **04** 05:49:07.4±0.2, 30°.76N±0°.01×141°.19E±0°.01, h51km, MW5.2/111, Moment Tensor Solution. s98,c143; s111,c173; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr6.22±.15; Mθθ0.50±.13; Mφφ-6.72±.12; Mrθ-1.75±.11; Mθφ1.41±.11; Mφr1.72±.12; Best double couple: M₀7.06400×10¹⁶ NP1:φs182.00000°, δ38.00000°, λ111.00000°. NP2:φs337.00000°, δ55.00000°, λ75.00000°. Principal axes: T 6.8370, Plg75.0000°, Azm202.0000°; N 0.4540, Plg12.0000°, Azm346.0000°; P -7.2910, Plg9.0000°, Azm78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 05:49:05.6±0.4**, 30°.88N**±0°.03×**141°.13E**±0°.04**, h50**km±3km**, h50km:pP-P, n426, σ1ˢ.67**/417**, mb4.9**/152**, MS4.2**/44**, 19C-19D, Southeast of Honshu**

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Code  Station Name       Δ°   AZ°  Phase ID          Time     Res
                                   Op     ISC       h  m  s   ISC
JAOM  Aogashimamukai    1.96 324  P     Pn     05 49 37.7 +1.2
JHCJ  Hachijojimakas    2.46 333  P     Pn     05 49 43.2 -0.1
JHCJ                             eS     Sn     05 50 09.5 -2.7
JHJ2  Mitsune           2.49 334  P     Pn     05 49 43.7  0.0
JHJ2  Mitsune           2.49 334        Pn     05 49 43.7  0.0
JHJ   Hachijo jima 2    2.51 333  Pn    Pn     05 49 43.9 -0.1
      144nm,0.3s,baz=98,slow=22,SNR=22
JHJ                               Sn    Sn     05 50 12.2 -1.2
      538nm,0.3s,baz=106,slow=19,SNR=10
JHJ                               LR    LR     05 50 20.3
      comp=Z,1µm,20.0s,baz=121,slow=30
JMKN  Mikurajimanish    3.28 337  P     Pn     05 49 54.9 +0.4
JMKN                             eS     Sn     05 50 30.4 -1.8
BSO1  Boso 1            3.77 358  P     Pn     05 50 00.1 -0.6
CBIJ  Chichi jima       3.88 166  P     Pn     05 50 02.5 -0.3
CBIJ                             eS     Sn     05 50 43.5 -3.6
JCJ   Chichijima        3.88 166  Pn    Pn     05 50 02.8  0.0
      69nm,0.3s,baz=282,slow=23,SNR=12
JCJ                               Sn    Sn     05 50 44.5 -2.6
      143nm,0.3s,baz=258,slow=23,SNR=6.3
TK02  Tokai 2           4.18 318  P     Pn     05 50 10.1 +3.4
JHH2  Haha-jima-NKT2    4.33 167 eS     Sn     05 50 56.4 -1.7
TTO1  TONANKAI O.B.S    4.59 308  P     Pn     05 50 13.7 +1.5
JOD2  Odawara 2         4.70 339  P     Pn     05 50 15.0 +1.0
JYZW  Yoshizawa         5.00 326  P     Pn     05 50 21.8 +3.7
JSSY  Shinshiroyabe     5.05 324  P     Pn     05 50 22.7 +3.9
JIE   Ise               5.12 314  P     Pn     05 50 21.5 +1.8
JHU   Hanno             5.20 343  P     Pn     05 50 21.9 +1.1
JHU                              eS     Sn     05 51 18.0 -1.5
JAO   Obara             5.45 324  P     Pn     05 50 28.1 +3.7
JRY   Ryogami san       5.45 341  P     Pn     05 50 26.4 +2.0
INU   Inuyama           5.64 323        Pn     05 50 29.2 +2.3
MJAR  Matsushiro Arr    6.15 337  Pn    Pn     05 50 34.5 +0.5
      1.2nm,0.3s,baz=160,slow=12,SNR=31
MJAR                              Sn    Sn     05 51 42.6 -0.4
      baz=164,slow=10,SNR=2.8
MAJO  Matsushiro        6.15 337        Pn     05 50 36.7 +2.7
MAJO  Matsushiro        6.15 337c iP    Pn     05 50 36.4 +2.4
MAT   Matsushiro        6.15 337  P     Pn     05 50 36.7 +2.7
MAT                              eS     Sn     05 51 47.0 +4.0
MJB9  Matsu-Tunnel      6.16 337        Pn     05 50 37.2 +3.1
JMK   Ichinoseki        8.06   0  P     Pn     05 50 59.9 -0.1
JMK                               S     Sn     05 52 25.0 -4.7
JNU   Nakatsue          8.99 287  Pn    Pn     05 51 16.7 +3.9
      0.8nm,0.3s,baz=108,slow=5.3,SNR=8.6
JNU                               LR    LR     05 54 33.3
      comp=Z,2µm,20.2s,baz=123,slow=37
JNU   Nakatsue          8.99 287        Pn     05 51 16.0 +3.1
ERM   Erimo            11.23   8  Pn    Pn     05 51 43.0 -0.4
ERM   Erimo            11.23   8  P     Pn     05 51 43.0 -0.4
TJN   Taejon           12.71 299 i P    Pn     05 52 06.7 +3.0
KSRS  Korea Array      12.75 305  Pn    Pn     05 52 07.7 +3.5
      0.4nm,0.3s,baz=120,slow=14,SNR=13
KSRS                              Sn    Sn     05 54 29.8 +5.3
      baz=252,slow=13,SNR=2.6
KSRS                              LR    LR     05 57 01.5
      comp=Z,600nm,19.1s,baz=116,slow=38
NMR   Nemuro--Hokkai   12.99  15 eP     Pn     05 52 04.9 -2.6
ASAJ  Asahikawa        13.27   5  Pn    Pn     05 52 10.4 -0.8
      2.6nm,0.3s,baz=211,slow=13,SNR=7.2
ASAJ                              Sn    Sn     05 54 34.3 -2.8
      1.9nm,0.3s,baz=272,slow=31,SNR=3.7
JKA   Kamikawa-asahi   13.27   5        Pn     05 52 10.4 -0.8
JKA                                     Sn     05 54 34.3 -2.8
GRPR  Tuman            13.60  14 eP     Pn     05 52 13.4 -2.3
GRPR                              pmax  pmax
      comp=Z,67nm,0.3s
GRPR                              pmax  pmax
      comp=Z,154nm,1.7s
SHO   Shikotan         13.73  18 eP     Pn     05 52 15.8 -1.7
SHO                               pmax  pmax
      comp=Z,12nm,0.6s
SHO                               pmax  pmax
      comp=N,10.0nm,0.2s
SHO                               pmax  pmax
      comp=E,4.0nm,0.2s
SHO                               pmax  pmax
      comp=Z,128nm,2.9s
TEY   Ternei           14.58 347 eP     Pn     05 52 28.4 -0.4
USRK  Ussuriysk Ar.    15.13 334  Pn    Pn     05 52 34.9 -1.2
      baz=134,slow=8.3,SNR=3.0
USRK                              LR    LR     05 58 12.1
      comp=Z,423nm,18.3s,baz=144,slow=36
KUR   Kuril'sk         15.27  18  P     P      05 52 40.4 -1.5
KUR                              eS     Sn     05 55 17.1 -8.8
KUR                               smax  smax
      comp=N,42nm,0.5s
KUR                               smax  smax
      comp=E,32nm,0.4s
KUR                               smax  smax
      comp=Z,396nm,13.0s
YSS   Yuzh-Sakhalins   16.10   4⇓eP     Pn     05 52 46.4 -2.1
YSS                              eS     Sn     05 55 44.0 -2.0
YSS                               pmax  pmax
      comp=Z,20nm,0.7s
YSS                               MLR   MLR
      comp=Z,500nm,14.0s
YSS                               MLR   MLR
      comp=N,300nm,17.0s
YSS                               MLR   MLR
      comp=E,500nm,17.0s
MDJ   Mudanjiang       16.45 330  P     Pn     05 52 52.9  0.0
MDJ                               pP    pP     05 53 02.8 -2.7
MDJ                               sP    sP     05 53 10.6 -0.9
MDJ                               S     Sn     05 55 55.1 +0.7
MDJ                               pmax  pmax
      comp=E,20nm,1.1s
MDJ                               pmax  pmax
      comp=E,100nm,3.8s
MDJ                               LR    LR
      comp=E,910nm,19.9s
MDJ                               LR    LR
      comp=E,750nm,18.5s
MDJ                               LR    LR
      comp=E,1µm,21.4s
SSE   Sheshan          17.11 276  P     P      05 53 02.7 +0.4
SSE                               S     Sn     05 56 12.0 +1.5
SSE                               pmax  pmax
      comp=E,12nm,0.8s
SSE                               pmax  pmax
      comp=E,220nm,5.2s
SSE                               LR    LR
      comp=E,240nm,19.7s
SSE                               LR    LR
      comp=E,370nm,20.7s
GUMO  Guam             17.55 168  P     Pn     05 53 06.1 -0.7
      comp=E,22nm,0.3s,baz=211,slow=12,SNR=4.2
GUMO                              LR    LR     05 57 55.5
      comp=E,208nm,20.6s,baz=354,slow=30
GUMO  Guam             17.55 168  P     Pn     05 53 06.2 -0.5
GUMO  Guam             17.55 168  P     Pn     05 53 06.2 -0.5
GUMO                              pmax  pmax
      comp=Z,503nm,1.1s
DL2   Dalian           17.87 302  P     P      05 53 19.4 +8.7
DL2                               sP    sP     05 53 37.1  +10
DL2                               S     S      05 56 48.7  +15
UGL   Uglegorsk        18.19   2 eP     Pn     05 53 17.8 +3.4
UGL                              eS     S      05 56 40.3 +0.6
UGL                               pmax  pmax
      comp=Z,66nm,0.8s
UGL                               pmax  pmax
      comp=Z,62nm,1.2s
UGL                               smax  smax
      comp=E,1µm,4.9s
UGL                               MLR   MLR
      comp=Z,1µm,21.0s
UGL                               MLR   MLR
      comp=N,1µm,20.0s
YHNB  Yeheng           18.53 255  P     Pn     05 53 18.8  0.0
NACB  Ninganchiao      18.56 254  P     P      05 53 18.0 -0.3
NJ2   Nanjing          19.04 279 eP     P      05 53 24.1 +0.5
NJ2                               pP    pwP    05 53 36.6 -0.8
NJ2                               S     S      05 56 55.3 -1.7
NJ2                               pmax  pmax
      comp=N,12nm,0.5s
NJ2                               pmax  pmax
      comp=N,620nm,6.6s
NJ2                               LR    LR
      comp=N,310nm,10.4s
NJ2                               LR    LR
      comp=N,670nm,16.6s
NJ2                               LR    LR
      comp=N,1µm,17.0s
YULB  Yu-li            19.14 252  P     Pn     05 53 26.1  0.0
SSLB  Suanglung        19.25 253  P     Pn     05 53 27.1 -0.3
KLR   Kul'dur          19.66 341  P     P      05 53 30.1 -0.1
      comp=N,0.7nm,0.3s,baz=142,slow=11,SNR=12
KLR                               LR    LR     06 00 38.1
      comp=N,403nm,21.7s,baz=157,slow=35
TPUB  Ta-pu            19.73 252  P     P      05 53 31.6 +0.4
TPUB                              IAmb  IAmb   05 53 49.6
      comp=Z,81nm,1.4s
TYV   Tymovskoe        20.00   3 eP     P      05 53 33.9  0.0
TYV                              eS     S      05 57 13.3 -2.6
TYV                               pmax  pmax
      comp=Z,36nm,1.1s
TYV                               smax  smax
      comp=E,55nm,1.2s
GRNR  Gornyy           20.18 351⇑iP     Pn     05 53 37.4 -0.7
GRNR                             eS     Sn     05 57 23.3 -1.1
GRNR                              pmax  pmax
      comp=Z,20nm,1.1s
GRNR                              smax  smax
      comp=N,5.0nm,0.6s
QZH   Quanzhou         20.76 259  P     P      05 53 40.4 -1.9
QZH                               sP    sP     05 53 59.8 +0.5
QZH                               LR    LR
      comp=N,580nm,19.8s
QZH                               LR    LR
      comp=N,650nm,19.8s
QZH                               LR    LR
      comp=N,940nm,20.7s
BJI   Beijing          22.23 301  P     P      05 53 57.8 -0.2
BJI                               pmax  pmax
      comp=N,10.0nm,0.8s
NKL   Nikolayevsk      22.26 359  P     P      05 53 56.2 -1.9
NKL                               pmax  pmax
      comp=Z,32nm,1.1s
NKL                               pmax  pmax
      comp=N,10.0nm,0.8s
NKL                               pmax  pmax
      comp=E,2.0nm,1.1s
SKR   Severo-Kuril's   22.73  25 eP     P      05 53 50.7  -12
SZP   Santa            23.00 240  P     P      05 54 05.8 -0.5
WHN   Wuhan            23.01 276 ⇑P     P      05 54 20.9  +15
WHN                               pP    sP     05 54 40.7  +17
WHN                               S     S      05 58 17.6 +4.4
WHN                               sS    sS     05 58 41.2 +8.0
HIA   Hailar           24.46 325  P     P      05 54 20.5 +0.8
HIA                               IAmb  IAmb   05 54 21.3
      comp=Z,36nm,0.7s
HIA   Hailar           24.46 325  P     P      05 54 20.5 +0.8
HIA                               pmax  pmax
      comp=Z,36nm,0.7s
ZEA   Zeya             24.96 340 eP     P      05 54 24.6 +0.5
ZEA                              eS     S      05 58 34.0  -10
ZEA                               pmax  pmax
      comp=N,59nm,1.0s
ZEA                               pmax  pmax
      comp=E,24nm,1.0s
ZEA                               pmax  pmax
      comp=Z,82nm,0.8s
ZEA                               pmax  pmax
      comp=Z,200nm,4.0s
ZEA                               smax  smax
      comp=N,300nm,10.0s
ZEA                               MLR   MLR
      comp=N,400nm,18.0s
ZEA                               MLR   MLR
      comp=Z,300nm,18.0s
TGY   Tagaytay City    24.96 233  P     P      05 54 24.9 +0.2
      comp=Z,250nm,0.3s,baz=344,slow=7.5,SNR=5.6
TGY                               LR    LR     06 03 35.8
      comp=Z,302nm,19.3s,baz=326,slow=35
PETK  Petropavlovsk-   25.28  24  LR    LR     06 07 14.5
      comp=Z,350nm,18.6s,baz=236,slow=43
PET   Petropavlovsk    25.55  25 i P    P      05 54 27.5 -2.0
PET                               pmax  pmax
      comp=Z,29nm,1.2s
H11N2 WAKE ISLAND Hy   25.74 109  T     T      06 21 44.4
      baz=297,slow=74
H11N1 WAKE ISLAND Hy   25.75 109  T     T      06 21 30.9
      baz=97,slow=74
H11N3 WAKE ISLAND Hy   25.76 109  T     T      06 21 24.8
HHC   Hu-ho-hao-te     25.84 301 eP     P      05 54 33.7 +1.3
HHC                               PP    PnPn   05 55 14.4 +3.0
HHC                               S     S      05 59 00.3 +1.7
HHC                               pmax  pmax
      comp=Z,99nm,0.7s
HHC                               pmax  pmax
      comp=Z,470nm,4.1s
HHC                               LR    LR
      comp=Z,990nm,11.7s
HHC                               LR    LR
      comp=Z,1µm,12.7s
HHC                               LR    LR
      comp=Z,1µm,11.7s
H11S3 WAKE ISLAND Hy   26.22 112  T     T      06 22 02.3
H11S1 WAKE ISLAND Hy   26.22 112  T     T      06 22 00.0
H11S2 WAKE ISLAND Hy   26.24 112  T     T      06 22 04.0
      SNR=158
XAN   Xi'an            27.30 285  P     P      05 54 44.9 -0.7
XAN                               S     S      05 59 09.2  -13
XAN                               pmax  pmax
      comp=Z,7.0nm,0.7s
XAN                               LR    LR
      comp=Z,310nm,18.1s
XAN                               LR    LR
      comp=Z,450nm,19.1s
XAN                               LR    LR
      comp=Z,480nm,28.9s
DAV   Davao City (W)   27.81 215  LR    LR     06 03 47.7
      comp=Z,476nm,21.0s,baz=356,slow=32
MA2   Magadan          29.43  10ceP     P      05 55 03.5 -0.7
MA2                               pmax  pmax
      comp=Z,17nm,1.7s
QIZ   Qiongzhong       30.62 255  P     P      05 55 14.2 -0.9
QIZ                               S     S      06 00 12.6 -1.4
QIZ                               LR    LR
      comp=Z,260nm,13.1s
QIZ                               LR    LR
      comp=Z,450nm,20.6s
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QIZ                              LR      LR
       comp=Z,620nm,31.4s
ULN    Ulaanbaatar      31.01 313  P       P       05 55 18.9 +0.4
ULN    Ulaanbaatar      31.01 313  P       P       05 55 18.9 +0.4
ULN                                pmax    pmax
       comp=Z,4.0nm,0.6s
LZH    Lanzhou          31.40 290 eP       P       05 55 19.6 -2.5
LZH                                pP      pP      05 55 33.3 -1.0
LZH                                sP      sP      05 55 40.9 +0.9
LZH                                sS      sS      06 00 44.5 -2.4
LZH                                pmax    pmax
       comp=Z,23nm,1.0s
LZH                                pmax    pmax
       comp=Z,180nm,6.0s
LZH                                LR      LR
       comp=Z,410nm,13.0s
LZH                                LR      LR
       comp=Z,380nm,12.8s
LZH                                LR      LR
       comp=Z,600nm,16.2s
SONM   Songino Array    31.42 313  P       P       05 55 23.0 +1.0
       comp=Z,4.0nm,0.7s,baz=113,slow=9.6,SNR=12
SONM                               PcP     PcP     05 58 14.6 +0.1
       comp=Z,1.7nm,0.6s,baz=118,slow=2.6,SNR=4.3
SONM                               LR      LR      06 08 34.9
       comp=Z,344nm,20.1s,baz=110,slow=37
YAK    Yakutsk          32.05 350 eP       P       05 55 26.2 -1.0
YAK                                pmax    pmax
       comp=Z,14nm,0.9s
YAK                                pmax    pmax
       comp=N,8.0nm,1.0s
YAK                                pmax    pmax
       comp=E,5.0nm,1.3s
BOD    Bodaibo          32.77 333 eP       P       05 55 34.1 +0.5
BOD                                pmax    pmax
       comp=Z,18nm,1.1s
SEY    Seymchan         32.88   9  P       P       05 55 36.1 +1.6
       comp=Z,3.9nm,0.7s,baz=186,slow=7.7,SNR=9.1
SEY    Seymchan         32.88   9 i P      P       05 55 34.3 -0.2
SIJI   Sorong           32.94 198  P       P       05 55 34.2 -1.3
       comp=Z,11nm,0.6s,baz=11,slow=16,SNR=6.1
LBMI   Labuha           33.91 205  P       P       05 55 43.9 -0.1
       comp=Z,66nm,0.9s
KMI    Kunming          34.26 270  P       P       05 55 47.5 +0.2
KMI                                pP      pwP     05 56 02.9 +0.1
KMI                                sP      sP      05 56 07.9 +2.7
KMI                                S       S       06 01 13.3 +2.3
KMI                                sS      sS      06 01 34.6 +2.9
KMI                                pmax    pmax
       comp=Z,10.0nm,1.2s
KMI                                pmax    pmax
       comp=Z,86nm,4.8s
KMI                                LR      LR
       comp=Z,290nm,23.7s
KMI                                LR      LR
       comp=Z,250nm,22.9s
KMI                                LR      LR
       comp=Z,440nm,31.4s
TLY    Talaya           34.48 318  P       P       05 55 49.9 +1.3
       comp=Z,2.6nm,0.5s,baz=125,slow=7.2,SNR=4.5
TLY    Talaya           34.48 318 i P      P       05 55 50.0 +1.4
TLY                                pmax    pmax
       comp=Z,4.0nm,0.8s
GTA    Gaotai           34.59 296 eP       P       05 55 48.2 -1.7
GTA                                pmax    pmax
       comp=Z,4.0nm,0.6s
FAKI   Fak Fak          34.66 196  P       P       05 55 49.1 -1.4
FAKI                               IAmb    IAmb    05 56 07.4
       comp=Z,24nm,0.9s
MRSI   Marisa           35.29 215  P       P       05 55 58.0 +2.1
       comp=Z,52nm,1.1s
SANI   Sanana           35.78 207  P       P       05 55 57.6 -2.5
       comp=Z,1µmcomp=Z,80nm,0.5s
MSAI   Masohi           35.97 201  P       P       05 56 01.0 -0.7
       comp=Z,23nm,1.1s
MPSI   Mapaga           36.45 218  P       P       05 56 07.3 +1.5
       comp=Z,10nm,1.3s
KRVT   Keravat (AS076   36.50 162  LR      LR      06 08 20.9
       comp=Z,202nm,21.9s,baz=343,slow=32
APSI   Ampana           36.64 214  P       P       05 56 05.9 -1.5
       comp=Z,51nm,0.6s
ADK    Adak             37.29  43  P       P       05 56 12.2 -0.3
ADK                                IAmb    IAmb    05 56 24.6
       comp=Z,38nm,1.4s
ADK    Adak             37.29  43  P       P       05 56 12.3 -0.3
ADK                                pmax    pmax
       comp=Z,38nm,1.5s
PBKT   Sadao Pong       39.21 258  P       P       05 56 28.1 -1.0
SBUM   Sibu             39.32 230  P       P       05 56 28.7 -1.3
SBUM   Sibu             39.32 230  P       P       05 56 29.0 -1.0
BILL   Bilibino         40.01  14⇑eP       P       05 56 35.9 +0.7
BILL                              i *PP    pwP     05 56 50.7 -1.2
BILL                              e*SP     sP      05 56 55.9 +3.0
BILL                               pmax    pmax
       comp=Z,18nm,1.7s
BILL                               MLR     MLR
       comp=Z,293nm,20.0s
CMAR   Chiang Mai Arr   40.06 262  P       P       05 56 34.7 -1.5
       comp=Z,3.2nm,0.7s,baz=56,slow=6.7,SNR=12
CMAR                               PcP     PcP     05 58 40.1 -0.3
       comp=Z,1.7nm,0.4s,baz=122,slow=1.6,SNR=8.7
CMAR                               LR      LR      06 12 59.7
       comp=Z,362nm,21.1s,baz=68,slow=36
CMAR   Chiang Mai Arr   40.06 262 i P      P       05 56 36.0 -0.2
CMAR                               pmax    pmax
       comp=Z,3.0nm,0.7s
PMG    Port Moresby     40.47 171  P       P       05 56 38.9 -0.6
       comp=Z,6.5nm,0.4s,baz=111,slow=22,SNR=3.2
PMG    Port Moresby     40.47 171ceP       P       05 56 38.7 -0.8
PMG                                pmax    pmax
       comp=Z,165nm,1.7s
KSM    Kuching          41.31 231  P       P       05 56 45.7 -0.9
KSM                                IAmb    IAmb    05 56 47.9
       comp=Z,24nm,0.7s
KSM    Kuching          41.31 231  P       P       05 56 47.0 +0.5
TIXI   Tiksi            41.37 354  P       P       05 56 46.7 +0.3
       comp=Z,2.3nm,0.3s,baz=143,slow=7.6,SNR=24
TIXI   Tiksi            41.37 354  P       P       05 56 45.8 -0.6
TIXI   Tiksi            41.37 354ceP       P       05 56 46.3  0.0
TIXI                               pmax    pmax
       comp=Z,8.0nm,1.0s
NIKH   Nikolski High    42.20  44  P       P       05 56 53.6 +0.2
SOEI   Soe              43.52 205  P       P       05 57 04.1 -0.5
       comp=Z,55nm,1.4s
EDFI   Ende, Flores     43.59 208  P       P       05 57 03.7 -1.4
       comp=Z,28nm,0.7s
WMQ    Urumqi           43.69 303 eP       P       05 57 07.2 +1.5
WMQ                                pmax    pmax
       comp=Z,15nm,0.7s
WMQ                                pmax    pmax
       comp=Z,120nm,5.7s
WMQ                                LR      LR
       comp=Z,310nm,17.1s
WMQ                                LR      LR
       comp=Z,200nm,17.3s
WMQ                                LR      LR
       comp=Z,380nm,20.5s
UNV    Unalaska Valle   43.74  43  P       P       05 57 06.8 +1.0
UNV                                IAmb    IAmb    05 57 24.8
       comp=Z,62nm,1.4s
COEN   Coen             44.62 177  P       P       05 57 13.1 -0.1
SRBI   Singaraja        46.02 217  P       P       05 57 29.4 +5.0
ZALV   Zalesovo Beam    46.07 317  P       P       05 57 23.8 -0.5
       comp=Z,1.8nm,0.4s,baz=91,slow=7.8,SNR=8.7
ZALV                               PcP     PcP     05 58 60.0  0.0
       comp=Z,16nm,0.6s,baz=108,slow=3.3,SNR=26
ZALV                               LR      LR      06 16 48.3
       comp=Z,369nm,19.9s,baz=100,slow=36
TAPN   Taplejung        46.44 280 eP       P       05 57 26.7 -1.3
       comp=Z,14nm,0.5s
ODAN   Odare            46.86 279 eP       P       05 57 29.8 -1.4
       comp=Z,18nm,0.5s
JAGI   Jajag, Banyuwa   46.90 218  P       P       05 57 34.0 +2.7
ANM    Nome             47.04  28  IAmb    IAmb    05 57 35.6
       comp=Z,11nm,0.8s
MK31   Makanchi Array   47.41 307 i P      P       05 57 34.0 -1.0
MKAR   Makanchi Array   47.41 307  P       P       05 57 33.8 -1.2
       comp=Z,2.5nm,0.5s,baz=87,slow=9.2,SNR=36
MKAR                               PcP     PcP     05 59 05.8 +0.9
       comp=Z,2.9nm,0.4s,baz=78,slow=6.1,SNR=9.1
MKAR                               LR      LR      06 18 10.9
       comp=Z,289nm,19.8s,baz=90,slow=37
RAMN   Ramite           47.50 280 eP       P       05 57 34.9 -1.3
       comp=Z,24nm,0.5s
MAKZ   Makanchi         47.63 307  P       P       05 57 35.6 -1.1
MAKZ   Makanchi         47.63 307  P       P       05 57 35.6 -1.1
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MAKZ                               pmax    pmax
       comp=Z,4.0nm,0.6s
JIRN   Jiri             47.63 281 eP       P       05 57 36.4 -1.0
       comp=Z,49nm,0.4s
KNRA   Kununurra        47.79 196  P       P       05 57 36.5 -1.6
KNRA                               IAmb    IAmb    05 57 40.6
       comp=Z,14nm,0.6s
PWJI   Pagerwojo        47.81 221  P       P       05 57 37.4 -0.9
       comp=Z,20nm,0.7s
GUN    Gumba            47.82 281 eP       P       05 57 37.9 -0.9
       comp=Z,36nm,0.5s
CNBA   Chernabura Isl   47.88  42  P       P       05 57 39.0 +0.6
PKI    Pulchoki         48.32 281 eP       P       05 57 40.7 -1.9
       comp=Z,7.2nm,0.4s
PKIN   Phulchoki        48.33 281 eP       P       05 57 40.8 -1.8
       comp=Z,8.7nm,0.4s
KKN    Kakani           48.36 281 eP       P       05 57 41.5 -1.3
DMN    Daman            48.56 281 eP       P       05 57 43.0 -1.4
       comp=Z,13nm,0.5s
CHGN   Chignik          48.68  40  P       P       05 57 45.0 +0.5
NRIK   Noril'sk         48.81 338  P       P       05 57 46.1 +0.7
       comp=Z,7.8nm,0.4s,baz=111,slow=10,SNR=13
NRIK                               LR      LR      06 18 50.6
       comp=Z,484nm,20.9s,baz=128,slow=37
GKN    Gorkha           48.84 282 eP       P       05 57 45.2 -1.2
       comp=Z,24nm,0.3s
KPJI   Karang Pucung    48.93 225  P       P       05 57 46.4 -0.6
       comp=Z,24nm,1.1s
DANN   Dangsing         49.47 282 eP       P       05 57 50.3 -1.1
       comp=Z,35nm,0.4s
KURK   Kurchatov        49.72 312  P       P       05 57 51.4 -1.2
KURK                               IAmb    IAmb    05 57 55.5
       comp=Z,5.7nm,0.6s
KURK   Kurchatov        49.72 312ceP       P       05 57 51.3 -1.3
KURK                               pmax    pmax
       comp=Z,8.0nm,1.0s
MDSI   Maura Dua        49.81 232  P       P       05 57 50.9 -2.8
       comp=Z,656nmcomp=Z,29nm,0.7s
WB0    Warramunga Arr   50.77 188  P       P       05 57 59.2 -1.6
CTA    Charters Tower   50.91 174  P       P       05 58 00.8 -1.1
       comp=Z,11nm,1.0s,baz=3.0,slow=8.2,SNR=6.8
FITZ   Fitzroy Crossi   50.92 199  P       P       05 58 01.0 -0.9
       comp=Z,5.9nm,0.6s,baz=14,slow=7.7,SNR=34
FITZ   Fitzroy Crossi   50.92 199  P       P       05 58 00.2 -1.8
FITZ                               IAmb    IAmb    05 58 02.5
       comp=Z,6.6nm,0.6s
WRAB   Tennant Creek    50.94 188ceP       P       05 58 00.1 -2.0
WRAB                               pmax    pmax
       comp=Z,10.0nm,0.9s
WR0    Warramunga Arr   50.94 188  P       P       05 58 00.7 -1.4
WR0                                IAmb    IAmb    05 58 04.9
       comp=Z,9.3nm,0.8s
WRA    Warramunga Arr   50.95 188  P       P       05 58 00.3 -1.8
       comp=Z,12nm,0.4s,baz=1.6,slow=7.5,SNR=65
WRA                                PcP     PcP     05 59 18.8 +0.8
       comp=Z,10nm,0.6s,baz=359,slow=3.8,SNR=10
SII    Sitkinak Islan   51.04  40  P       P       05 58 03.9 +1.4
OHAK   Old Harbor       51.55  39  P       P       05 58 07.7 +1.4
OHAK                               IAmb    IAmb    05 58 11.4
       comp=Z,33nm,1.4s
KDAK   Kodiak Island    51.94  39  P       P       05 58 10.6 +1.4
       comp=Z,18nm,0.8s,baz=264,slow=4.2,SNR=31
KDAK                               LR      LR      06 17 00.7
       comp=Z,261nm,21.5s,baz=269,slow=32
KDAK   Kodiak Island    51.94  39  P       P       05 58 10.4 +1.2
PPLA   Purkeypile       52.42  32  P       P       05 58 15.7 +2.8
PPLA                               IAmb    IAmb    05 58 20.1
       comp=Z,18nm,1.4s
SKT    Skwentna         52.66  33  P       P       05 58 15.9 +1.4
SKT                                IAmb    IAmb    05 58 17.3
       comp=Z,15nm,1.2s
CNPM   China Poot       52.69  36  P       P       05 58 15.5 +0.7
CNPM                               IAmb    IAmb    05 58 16.5
       comp=Z,12nm,0.6s
BRLK   Bradley Lake     52.88  36  P       P       05 58 16.8 +0.6
BRLK                               IAmb    IAmb    05 58 17.9
       comp=Z,9.0nm,0.8s
KSH    Kashi            52.91 298  P       P       05 58 19.3 +2.4
KSH                                sP      sP      05 58 41.9 +6.6
KSH                                S       S       06 05 42.2 -0.3
KSH                                pmax    pmax
       comp=Z,16nm,0.8s
KSH                                pmax    pmax
       comp=Z,290nm,5.8s
KSH                                LR      LR
       comp=Z,320nm,10.7s
KSH                                LR      LR
       comp=Z,320nm,11.7s
KSH                                LR      LR
       comp=Z,240nm,11.7s
SUA    Susitna One      53.00  34  P       P       05 58 18.5 +1.3
SUA                                IAmb    IAmb    05 58 20.0
       comp=Z,7.5nm,0.6s
KTH    Kantishna Hill   53.05  31  P       P       05 58 19.0 +1.5
BPAW   Bear Paw Mtn.    53.06  31  P       P       05 58 19.5 +2.0
MLY    Manley           53.25  29  P       P       05 58 21.0 +2.1
MLY                                IAmb    IAmb    05 58 22.5
       comp=Z,13nm,1.0s
TRF    Thorofare Moun   53.32  31  P       P       05 58 21.1 +1.6
TRF                                IAmb    IAmb    05 58 23.6
       comp=Z,21nm,1.5s
AAK    Ala-Archa        53.40 302  P       P       05 58 21.2 +0.8
AAK    Ala-Archa        53.40 302ceP       P       05 58 19.8 -0.7
AAK                                pmax    pmax
       comp=Z,2.0nm,0.7s
RC01   Rabbit Creek A   53.48  34  P       P       05 58 21.8 +1.3
RC01                               IAmb    IAmb    05 58 22.7
       comp=Z,14nm,1.1s
SEW    Seward           53.60  36  P       P       05 58 22.4 +0.9
BWN    Browne           53.73  31  IAmb    IAmb    05 58 28.5
       comp=Z,21nm,1.1s
PMR    Palmer           53.78  34  IAmb    IAmb    05 58 25.1
       comp=Z,24nm,1.3s
GHO    Glory Hole Cre   53.88  34  IAmb    IAmb    05 58 27.1
       comp=Z,27nm,1.3s
MCK    McKinley         53.94  31  IAmb    IAmb    05 58 27.5
       comp=Z,15nm,1.0s
RND    Reindeer         53.97  32  IAmb    IAmb    05 58 26.0
       comp=Z,7.4nm,0.6s
TOLK   Toolik Lake Re   54.09  25  IAmb    IAmb    05 58 28.3
       comp=Z,13nm,1.1s
TOLK   Toolik Lake Re   54.09  25  P       P       05 58 27.1 +2.2
       baz=263
KNK    Knik Glacier     54.10  34  IAmb    IAmb    05 58 28.7
       comp=Z,14nm,0.8s
SML    Sawmill          54.17  34  IAmb    IAmb    05 58 28.3
       comp=Z,15nm,1.0s
MDM    Murphy Dome      54.31  30  IAmb    IAmb    05 58 29.9
       comp=Z,18nm,1.0s
WRH    Wood River Hil   54.35  30  P       P       05 58 28.2 +1.4
CCB    Clear Creek Bu   54.48  30  P       P       05 58 28.1 +0.3
SCM    Sheep Creek Mo   54.64  33  P       P       05 58 31.0 +1.9
SCM    Sheep Creek Mo   54.64  33  P       P       05 58 31.0 +1.9
SCM                                pmax    pmax
       comp=Z,30nm,1.0s
AS31   Alice Springs    54.67 188  IAmb    IAmb    05 58 30.5
       comp=Z,6.1nm,0.6s
ASAR   Alice Springs    54.67 188  P       P       05 58 27.5 -2.1
       comp=Z,5.5nm,0.5s,baz=358,slow=5.1,SNR=163
ASAR                               PcP     PcP     05 59 33.0 +1.0
       comp=Z,4.4nm,0.8s,baz=10,slow=4.5,SNR=6.2
ASAR                               LR      LR      06 22 22.6
       comp=Z,161nm,20.1s,baz=12,slow=37
BRVK   Borovoye         54.73 316  P       P       05 58 29.7 -0.1
BRVK   Borovoye         54.73 316ceP       P       05 58 29.1 -0.7
BRVK                               pmax    pmax
       comp=Z,4.0nm,0.8s
HDA    Harding Lake     54.84  30  IAmb    IAmb    05 58 32.4
       comp=Z,8.7nm,0.8s
HDA    Harding Lake     54.84  30  P       P       05 58 31.6 +1.2
       baz=269
IL31                    54.88  30  IAmb    IAmb    05 58 32.7
       comp=Z,9.2nm,0.8s
ILAR   Eielson Array    54.88  30  P       P       05 58 31.7 +1.1
       comp=Z,5.9nm,0.7s,baz=267,slow=5.9,SNR=73
ILAR                               LR      LR      06 19 57.8
       comp=Z,60nm,21.6s,baz=278,slow=34
RIDG   Independent Ri   55.76  31  IAmb    IAmb    05 58 57.3
       comp=Z,13nm,1.3s
PSA00  Pilbara Seismi   56.01 204  P       P       05 58 38.1 -1.2
SCRK   Sand Creek       56.14  31  IAmb    IAmb    05 58 42.0
       comp=Z,9.2nm,0.8s
KK31   Karatay Array    56.17 304  IAmb    IAmb    05 58 41.4
       comp=Z,5.5nm,0.6s
KKAR   Karatay Array    56.17 304  IAmb    IAmb    05 58 41.4
       comp=Z,5.5nm,0.6s
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MENT   Mentasta         56.30  32  IAmb    IAmb    05 58 44.6
       comp=Z,13nm,0.8s
GLB    Gilahina Butte   56.33  34  IAmb    IAmb    05 58 45.3
       comp=Z,21nm,1.3s
NIL    Nilore           56.52 292  P       P       05 58 42.9 -0.1
NIL    Nilore           56.52 292  P       P       05 58 42.9 -0.1
NIL                                pmax    pmax
       comp=Z,18nm,0.6s
VRDI   Verde Repeater   56.52  34  IAmb    IAmb    05 58 45.9
       comp=Z,30nm,1.5s
CRQM   Cirque           56.71  35  IAmb    IAmb    05 58 47.3
       comp=Z,23nm,1.0s
MCARA  McCarthy VSAT    56.72  34  IAmb    IAmb    05 58 47.3
       comp=Z,21nm,1.0s
TGL    Tana Glacier     56.86  35  IAmb    IAmb    05 58 48.2
       comp=Z,18nm,1.0s
BALM   Baldy            57.07  34  IAmb    IAmb    05 58 49.0
       comp=Z,7.6nm,0.7s
GAR    Garm             57.30 299  IAmb    IAmb    05 59 04.5
       comp=Z,11nm,0.7s
DZM    Mont Dzumac      57.98 152  P       P       05 58 55.6 +2.3
       comp=Z,34nm,1.1s,baz=327,slow=5.8,SNR=8.9
DZM    Mont Dzumac      57.98 152  P       P       05 58 55.7 +2.4
EPYK   Eagle Plains     59.02  28  P       P       05 59 02.4 +2.4
       baz=277
KBL    Kabul            59.57 294  P       P       05 59 03.8 -0.7
KBL                                IAmb    IAmb    05 59 05.9
       comp=Z,6.3nm,0.6s
KBL    Kabul            59.57 294  P       P       05 59 03.8 -0.7
KBL                                pmax    pmax
       comp=Z,6.0nm,0.6s
SVE    Sverdlovsk       59.69 321 eP       P       05 59 05.5 +0.8
SVE                                pmax    pmax
       comp=Z,18nm,1.0s
INK    Inuvik           60.00  25  P       P       05 59 08.1 +1.5
       comp=Z,6.2nm,0.6s,baz=290,slow=5.6,SNR=40
INK    Inuvik           60.00  25  IAmb    IAmb    05 59 08.6
       comp=Z,7.4nm,0.8s
WHY    Whitehorse       60.74  34  IAmb    IAmb    05 59 15.9
       comp=Z,8.6nm,0.9s
ARU    Arti             60.90 321  LR      LR      06 27 32.3
       comp=Z,252nm,18.8s,baz=76,slow=38
ARU    Arti             60.90 321  P       P       05 59 12.2 -0.8
ARU    Arti             60.90 321c iP      P       05 59 12.5 -0.4
ARU                                S       S       06 07 25.4 -1.6
ARU                                SS      SS      06 11 25.3 -0.9
ARU                                pmax    pmax
       comp=Z,32nm,1.4s
ABKAR  Akbulak array    61.83 313  IAmb    IAmb    05 59 20.1
       comp=Z,16nm,0.9s
STKA   Stephens Creek   62.41 180  P       P       05 59 22.8 -0.6
       comp=Z,6.7nm,0.7s,baz=350,slow=6.0,SNR=18
STKA                               LR      LR      06 26 06.3
       comp=Z,236nm,20.7s,baz=17,slow=36
STKA   Stephens Creek   62.41 180  P       P       05 59 23.1 -0.2
STKA   Stephens Creek   62.41 180  P       P       05 59 23.1 -0.2
STKA                               pmax    pmax
       comp=Z,1.0nm,0.8s
FORT   Forrest          62.56 193  P       P       05 59 22.9 -1.4
AKTO   Aktyubinsk       62.71 314  LR      LR      06 27 02.5
       comp=Z,251nm,21.1s,baz=75,slow=36
C36M   Paulatuk         63.13  23  P       P       05 59 29.0 +1.3
       baz=286
BBOO   Buckleboo        63.52 185  P       P       05 59 30.5 -0.2
BBOO                               IAmb    IAmb    05 59 31.6
       comp=Z,22nm,1.4s
DLBC   Dease Lake       63.68  36  P       P       05 59 34.1 +2.5
       comp=Z,9.9nm,1.1s,baz=273,slow=4.5,SNR=9.8
DLBC   Dease Lake       63.68  36  IAmb    IAmb    05 59 35.6
       comp=Z,25nm,1.4s
MORW   Morawa           64.23 204  P       P       05 59 34.2 -1.2
MORW                               IAmb    IAmb    05 59 47.9
       comp=Z,30nm,1.3s
KIRV   Kirov            65.07 325  LR      LR      06 30 32.5
       comp=Z,299nm,18.9s,baz=4.9,slow=38
PRGR   Permogore        65.84 329 eP       P       05 59 44.6 -0.9
PRGR                               pmax    pmax
       comp=Z,18nm,0.9s
SPA0   Spitsbergen Ar   66.51 349 eP       P       05 59 51.2 +1.5
GEYT   Alibeck          66.72 301  P       P       05 59 52.1 +0.4
       comp=Z,2.6nm,0.6s,baz=17,slow=1.5,SNR=4.9
GEYT                               LR      LR      06 32 24.8
       comp=Z,81nm,18.3s,baz=215,slow=39
HSPB   Hornsund (broa   67.41 349 eP       P       05 59 56.5 +1.2
TOO    Toolangi         68.22 176  IAmb    IAmb    06 00 02.3
       comp=Z,15nm,0.8s
RES    Resolute Bay     68.62  14  LR      LR      06 31 45.7
       comp=Z,116nm,21.6s,baz=324,slow=37
KLMR   Klimovskoe       68.86 329 eP       P       06 00 02.6 -2.0
KLMR                               pmax    pmax
       comp=Z,11nm,0.6s
KLMR   Klimovskoe       68.86 329 eP       P       06 00 02.6 -2.0
KLMR                               AMP             06 00 04.7
       comp=Z,11nm,0.6s
KEV    Kevo             69.12 340  P       P       06 00 07.1 +1.0
KEV                                IAmb    IAmb    06 00 07.5
       comp=Z,13nm,1.0s
KEV    Kevo             69.12 340  P       P       06 00 07.1 +1.0
KEV                                pmax    pmax
       comp=Z,13nm,1.0s
YKA    Yellowknife Ar   69.27  29  P       P       06 00 08.2 +1.1
       comp=Z,9.1nm,0.8s,baz=295,slow=6.0,SNR=137
YKA                                LR      LR      06 38 50.4
       comp=Z,48nm,18.0s,baz=0.0,slow=43
HAMF   Hammerfest       69.56 342 eP       P       06 00 09.3 +0.6
ARCES  ARCESS Array B   69.68 340  P       P       06 00 10.6 +1.0
       comp=Z,9.9nm,0.7s,baz=50,slow=6.9,SNR=39
ARCES                              PcP     PcP     06 00 32.6 +0.4
       comp=Z,2.6nm,0.5s,baz=65,slow=6.8,SNR=5.2
ARCES                              LR      LR      06 34 05.2
       comp=Z,295nm,20.3s,baz=36,slow=39
ARE0   ARCESS Array S   69.68 340 eP       P       06 00 10.6 +1.0
ARE0   ARCESS Array S   69.68 340  P       P       06 00 10.0 +0.4
KTK1   Kautokeino       70.64 340 eP       P       06 00 16.0 +0.5
TULEG  Thule            71.22   7  IAmb    IAmb    06 00 20.3
       comp=Z,8.8nm,0.7s
TRO    Tromso           71.46 342 eP       P       06 00 20.7 +0.3
D03D   Eldon            71.53  45  P       P       06 00 24.4 +3.2
       baz=296
B05A   Bryant           71.81  44  P       P       06 00 25.5 +2.6
       baz=296
VRH    Novokhopyorsk    72.03 319 eP       P       06 00 22.6 -1.5
VRH                                pmax    pmax
       comp=Z,20nm,0.7s
E04D   Cinebar          72.28  46  P       P       06 00 29.4 +3.7
       baz=296
AKT    Akhty            72.62 308 eP       P       06 00 28.1 +0.1
AKT                               e                06 00 45.3
AKT                                pmax    pmax
       comp=Z,39nm,0.6s
LPSR   Galich'ya Gora   72.91 321 eP       P       06 00 28.2 -1.2
LPSR                               pmax    pmax
       comp=Z,20nm,1.6s
OBN    Obninsk          72.92 324⇓iP       P       06 00 29.7 +0.4
OBN                               e                06 00 39.8
OBN                               e                06 00 46.6
OBN                                pmax    pmax
       comp=Z,11nm,0.4s
OBN                                MLR     MLR
       comp=Z,295nm,20.0s
I03D   Drain, OR        73.05  49  P       P       06 00 33.5 +3.1
       baz=297
GROC   Groznyy          73.15 310 eP       P       06 00 29.6 -1.4
GROC                              e                06 00 47.3
GROC                              eS       S       06 09 52.3 -2.7
GROC                               pmax    pmax
       comp=Z,22nm,0.5s
K02D   Willamette Mer   73.29  50  P       P       06 00 34.8 +2.8
       baz=297
VSR    Storozhevoye     73.45 320 eP       P       06 00 31.9 -0.6
VSR                                pmax    pmax
       comp=Z,10.0nm,0.6s
UOSS   Minazif          73.55 289  P       P       06 00 32.8 -0.8
STEI   Steigen          73.60 341 eP       P       06 00 33.9 +0.7
I04A   Tendick Farm,    73.61  49  P       P       06 00 36.2 +2.5
       baz=297
TAU    Tasmania Unive   73.65 175  P       P       06 00 34.2 +0.6
TAU    Tasmania Unive   73.65 175  P       P       06 00 34.2 +0.6
TAU                                pmax    pmax
       comp=Z,44nm,1.4s
G05D   Wamic, OR        73.65  47  P       P       06 00 37.0 +3.1
       baz=298
LOF    Lofoten          73.92 342 eP       P       06 00 34.6 -0.3
I05D   Terrebonne, OR   74.05  48  P       P       06 00 39.1 +2.8
       baz=298
GOF    Gofitskoye       74.07 313⇑eP       P       06 00 36.7 +0.4
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FIA1	FINESS Array S	74.16	333	IAmb	IAmb	06 00 38.0	
	comp=Z,36nm,1.3s						
FINES	FINESS Array B	74.16	333	P	P	06 00 36.9	+0.4
	comp=Z,9.5nm,0.4s,baz=65,slow=5.3,SNR=164						
YBH	Yreka Blue Hor	74.36	51	P	P	06 00 39.6	+1.4
	comp=Z,2.3nm,0.6s,baz=267,slow=5.7,SNR=4.4						
L04D	Klamath Falls	74.40	50	P	P	06 00 41.1	+2.6
	baz=298						
M02C	Callahan	74.42	51	P	P	06 00 41.5	+3.0
	baz=298						
ZEI	Tsey	74.57	311	eP	P	06 00 38.2	-1.4
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
J05D	Fort Rock, OR	74.61	49	P	P	06 00 42.6	+2.9
	baz=298						
NEW	Newport	74.75	43	P	P	06 00 42.2	+1.9
	comp=Z,4.2nm,0.9s,baz=294,slow=5.0,SNR=7.5						
NEW	Newport	74.75	43	P	P	06 00 42.5	+2.2
	baz=299						
KBZ	Khabaz	74.78	312	P	P	06 00 41.0	+0.6
	comp=Z,16nm,0.8s,baz=86,slow=2.8,SNR=44						
KBZ				LR	LR	06 36 12.7	
	comp=Z,194nm,19.9s,baz=57,slow=38						
KIV	Kislovodsk	74.81	312	eP	P	06 00 41.3	+0.5
KIV				pmax	pmax		
	comp=Z,56nm,1.1s						
KIV				MLR	MLR		
	comp=Z,376nm,18.0s						
M04C	Macdoel	74.91	50	P	P	06 00 44.3	+2.8
	baz=298						
SHA1	Shidzhatmaz	74.93	312	i P	P	06 00 42.0	+0.3
MOR8	Moi Rana	75.05	340	eP	P	06 00 41.2	-0.5
NEY	Neytrino	75.12	312	i P	P	06 00 43.6	+0.9
NEY				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KONS	Konsvik	75.20	341	eP	P	06 00 42.3	-0.2
GNI	Garni	75.25	308	ceP	P	06 00 44.8	+1.3
GNI				pmax	pmax		
	comp=Z,78nm,1.3s						
AKH	Akhalkalaki	75.49	310	⇑P	P	06 00 45.7	+0.9
VSU	Vasula	75.65	330	ceP	P	06 00 45.2	0.0
VSU				pmax	pmax		
	comp=Z,75nm,1.3s						
J08A	Circle Bar Ran	76.34	48	IAmb	IAmb	06 00 53.2	
	comp=Z,20nm,1.3s						
JTMT	Jette	76.66	42	IAmb	IAmb	06 01 07.0	
	comp=Z,13nm,1.2s						
BCA	Borcka	76.70	310	⇓P	P	06 00 52.2	+0.7
SUMG	Summit	76.83	360	i P	P	06 00 54.0	+1.9
	comp=Z,23nm,0.7s						
SUMG	Summit	76.83	360	IAmb	IAmb	06 00 54.6	
	comp=Z,8.4nm,0.6s						
SUMG	Summit	76.83	360	i P	P	06 00 54.0	+1.9
SUMG				pmax	pmax		
	comp=Z,23nm,0.7s						
SOC	Sochi	76.87	313	eP	P	06 00 52.4	0.0
SOC				e		06 03 49.9	
SOC				ePPP	PPP	06 05 29.8	
SOC				eS	S	06 10 35.7	-0.6
SOC				pmax	pmax		
	comp=Z,25nm,1.1s						
SOC				MLR	MLR		
	comp=Z,211nm,13.0s						
NSS	Namsos	76.96	340	eP	P	06 00 53.3	+0.9
QRZ	Quartz Range	77.03	156	P	P	06 00 53.9	+0.8
BKZ	Black Stump Fm	77.06	153	P	P	06 00 53.6	+0.3
BKZ				IAmb	IAmb	06 00 54.8	
	comp=Z,22nm,1.1s						
ANN	Anapa	77.66	315	eP	P	06 00 55.5	-1.3
ANN				e*PP	pP	06 01 10.0	-0.3
ANN				eS	S	06 10 41.1	-3.8
ANN				pmax	pmax		
	comp=Z,23nm,0.8s						
ANN				MLR	MLR		
	comp=Z,331nm,18.0s						
NNZ	Nelson	77.68	156	P	P	06 00 57.5	+0.8
PNTR	Pine Nut	77.71	52	IAmb	IAmb	06 01 00.3	
	comp=Z,8.1nm,0.9s						
THZ	Tophouse	78.00	156	P	P	06 00 58.4	-0.1
YERR	Yerington	78.00	52	P	P	06 01 01.1	+2.0
YERR				IAmb	IAmb	06 01 13.8	
	comp=Z,13nm,1.1s						
WAKR	Walker	78.11	52	P	P	06 01 01.6	+1.9
BSWZ	Blackbirch Sta	78.30	156	P	P	06 00 59.9	-0.2
NVAR	Mina Array Bea	78.92	52	P	P	06 01 06.3	+2.1
	comp=Z,4.2nm,0.7s,baz=288,slow=5.9,SNR=35						
NVAR				LR	LR	06 31 02.3	
	comp=Z,233nm,19.8s,baz=305,slow=32						
FFC	Flin Flon	79.03	32	P	P	06 01 05.4	+1.3
FFC				IAmb	IAmb	06 01 06.3	
	comp=Z,11nm,0.8s						
FFC	Flin Flon	79.03	32	P	P	06 01 05.4	+1.3
FFC				pmax	pmax		
	comp=Z,11nm,0.8s						
AKASG	Malin Array Be	79.04	323	P	P	06 01 03.8	-0.5
	comp=Z,7.3nm,0.5s,baz=51,slow=5.4,SNR=24						
AKASG				LR	LR	06 38 30.1	
	comp=Z,323nm,20.6s,baz=30,slow=38						
AKASG	Malin Array Be	79.04	323	i P	P	06 01 04.1	-0.2
AKASG				pmax	pmax		
	comp=Z,8.0nm,0.5s						
AKBB	Malin Array Si	79.04	323	P	P	06 01 04.2	-0.1
AKBB				IAmb	IAmb	06 01 04.7	
	comp=Z,14nm,0.6s						
AKBB	Malin Array Si	79.04	323	P	P	06 01 04.2	-0.1
AKBB				pmax	pmax		
	comp=Z,14nm,0.6s						
EGMT	Eagleton	79.08	40	P	P	06 01 06.6	+1.9
	baz=304						
RPZ	Rata Peaks	79.12	158	P	P	06 01 05.0	+0.4
LBZ	Lake Benmore	79.46	159	P	P	06 01 04.3	-2.2
NC405	NORSAR Array S	79.55	338	P	P	06 01 07.4	+0.4
NC303	NORSAR Array S	79.58	338	P	P	06 01 07.9	+0.9
NC303				IAmb	IAmb	06 01 08.2	
	comp=Z,28nm,1.0s						
DOMB	Dombas	79.69	339	eP	P	06 01 07.2	-0.5
NB201	NORSAR Array S	79.74	338	P	P	06 01 08.1	+0.1
NB2	NORSAR Subarra	79.77	338	P	P	06 01 08.1	-0.1
	comp=Z,3.1nm,0.5s,baz=42,slow=5.1						
NB2	NORSAR Subarra	79.77	338	P	P	06 01 08.1	-0.1
	baz=42,slow=5.1						
NOA	NORSAR Array B	79.77	338	P	P	06 01 08.2	+0.1
	comp=Z,7.3nm,0.8s,baz=42,slow=5.4,SNR=33						
NOA				LR	LR	06 39 52.0	
	comp=Z,305nm,21.3s,baz=45,slow=38						
NC602	NORSAR Array S	79.89	337	eP	P	06 01 08.7	0.0
NBO00	NORSAR Array S	79.92	338	P	P	06 01 08.9	0.0
AKN	Aaknes	80.21	340	eP	P	06 01 10.2	-0.2
H17A	Grant Village	80.64	44	P	P	06 01 17.6	+4.1
	baz=304						
R11A	Troy Canyon, C	80.78	51	P	P	06 01 16.0	+1.8
	baz=302						
SKAR	Skarslia	80.97	339	eP	P	06 01 14.4	-0.3
SORM	Soroca	81.02	321	⇓P	P	06 01 14.3	-0.7
SORM	Soroca	81.02	321	⇓P	P	06 01 14.3	-0.7
SOCY	Socotra	81.43	279	P	P	06 01 14.9	-3.0
SOCY				IAmb	IAmb	06 01 18.2	
	comp=Z,12nm,0.8s						
DUG	Dugway, Tooele	81.60	48	P	P	06 01 20.6	+2.1
	baz=304						
DGMT	Dagmar	81.82	38	P	P	06 01 21.2	+1.9
	baz=308						
SHPR	Sheep Range	82.05	52	IAmb	IAmb	06 01 23.4	
	comp=Z,16nm,1.2s						
PDAR	Pinedale Array	82.18	45	P	P	06 01 22.9	+1.3
	comp=Z,1.2nm,0.7s,baz=304,slow=1.6,SNR=14						
PDAR				LR	LR	06 33 59.6	
	comp=Z,88nm,20.4s,baz=324,slow=33						
BR131	Keskin Array S	82.78	312	P	P	06 01 26.0	+1.4
BR131				IAmb	IAmb	06 01 27.5	
	comp=Z,11nm,0.8s						
BR131	Keskin Array S	82.78	312	i P	P	06 01 25.1	+0.5
BRTR	Keskin Array B	82.78	312	P	P	06 01 25.2	+0.6
	comp=Z,8.7nm,0.6s,baz=100,slow=4.0,SNR=40						
BRTR				LR	LR	06 42 24.2	
	comp=Z,81nm,18.0s,baz=1.0,slow=39						
CFR	Carcaliu	82.91	319	⇓P	P	06 01 24.1	-0.9
CFR	Carcaliu	82.91	319	⇓P	P	06 01 24.1	-0.9
TESR	Tescani	82.92	321	⇓P	P	06 01 23.5	-1.6
BUR08	Bucovina Ar. S	82.99	322	P	P	06 01 26.2	+0.7
KWP	Kalwaria Pacla	83.00	325	eP	P	06 01 26.4	+1.0
KWP	Kalwaria Pacla	83.00	325	eP	P	06 01 26.4	+1.0
BURAR	Bucovina Array	83.00	322	⇓P	P	06 01 26.2	+0.6
BURAR	Bucovina Array	83.00	322	⇓P	P	06 01 26.2	+0.6
VRI	Vrincioaia	83.28	320	⇓P	P	06 01 27.9	+1.0
VRI	Vrincioaia	83.28	320	⇓P	P	06 01 27.9	+1.0
BC3	Big Chuckawall	83.38	55	P	P	06 01 29.6	+1.7
	baz=303						
KOLS	Kolonicke sedl	83.67	324	eP	P	06 01 29.6	+0.7
KOLS	Kolonicke sedl	83.67	324	eP	P	06 01 29.6	+0.7
UZH	Uzhgorod	83.86	324	eP	P	06 01 32.5	+2.7
MLR	Muntele Rosu	83.94	320	⇑P	P	06 01 28.9	-1.6
MLR	Muntele Rosu	83.94	320	⇑P	P	06 01 28.9	-1.6
DOPR	Dopca	83.94	321	⇓P	P	06 01 31.7	+1.3
OJC	Ojcow	84.02	327	eP	P	06 01 30.9	+0.2
OJC	Ojcow	84.02	327	eP	P	06 01 30.9	+0.2
TRPA	Tarpa	84.06	324	⇓P	P	06 01 31.8	+1.0
CRVS	Cervenica-Dubn	84.09	325	eP	P	06 01 29.5	-1.6
CRVS	Cervenica-Dubn	84.09	325	eP	P	06 01 29.5	-1.6
NIE	Niedzica	84.32	326	eP	P	06 01 32.6	+0.4
NIE	Niedzica	84.32	326	eP	P	06 01 32.6	+0.4
VOIR		84.46	321	⇓P	P	06 01 33.2	+0.1
VOIR		84.46	321	⇓P	P	06 01 33.2	+0.1
O20A	White River Ci	84.51	46	P	P	06 01 35.2	+1.6
	baz=306						
MDND	Maddock	84.59	36	P	P	06 01 34.9	+1.3
	baz=311						
RSSD	Black Hills	84.59	41	P	P	06 01 34.7	+0.7
	baz=309						
ARR	Arges	84.73	321	⇓P	P	06 01 35.4	+0.9
ULM	Lac du Bonnet	84.78	33	P	P	06 01 37.0	+2.5
	comp=Z,0.9nm,0.5s,baz=307,slow=2.7,SNR=3.1						
ULM				LR	LR	06 40 57.8	
	comp=Z,84nm,19.1s,baz=333,slow=37						
ULM	Lac du Bonnet	84.78	33	P	P	06 01 37.0	+2.5
LANS	Liptovska Anna	84.90	326	eP	P	06 01 35.1	-0.1
LANS	Liptovska Anna	84.90	326	eP	P	06 01 35.1	-0.1
WUAZ	Wupatki	85.15	51	P	P	06 01 38.8	+1.9
	baz=305						
MORC	Moravsky Berou	85.39	327	⇓P	P	06 01 37.5	-0.1
MORC	Moravsky Berou	85.39	327	⇓P	P	06 01 37.5	-0.1
N23A	Red Feather La	85.46	44	P	P	06 01 40.2	+1.8
	baz=308						
CHVC	Chvalec	85.50	328	eP	P	06 01 38.3	+0.2
KRLC	Kraliky	85.53	328	eP	P	06 01 39.0	+0.7
KRLC	Kraliky	85.53	328	eP	P	06 01 39.0	+0.7
DPC	Dobruska-Polom	85.54	328	eP	P	06 01 38.8	+0.4
DPC				epP	pwP	06 01 54.9	-0.6
DPC	Dobruska-Polom	85.54	328	eP	P	06 01 38.8	+0.4
DPC				e		06 01 54.9	
UPC	Upice	85.57	328	eP	P	06 01 38.6	+0.1
UPC	Upice	85.57	328	eP	P	06 01 38.6	+0.1
VYHS	Vyhne	85.66	326	eP	P	06 01 39.4	+0.5
VYHS	Vyhne	85.66	326	eP	P	06 01 39.4	+0.5
CSS	Mathiatis	85.67	308	P	P	06 01 40.0	+0.7
214A	Organ Pipe Nat	86.17	55	P	P	06 01 43.8	+2.0
	baz=304						
BRG	Berggiesshubel	86.23	330	eP	P	06 01 41.4	-0.2
	comp=Z,4.3nm,0.9s						
CLL	Collm	86.31	330	eP	P	06 01 43.0	+0.9
CLL				e(pP)	sP	06 02 01.0	+0.1
CLL	Collm	86.31	330	eP	P	06 01 43.0	+0.9
CLL				e		06 02 01.0	
ISCO	Idaho Springs	86.33	45	P	P	06 01 44.9	+2.1
	baz=308						
KHC	Kasperske Hory	87.66	329	eP	P	06 01 48.8	+0.1
KHC				epP	pwP	06 02 05.3	-0.6
KHC	Kasperske Hory	87.66	329	eP	P	06 01 48.8	+0.1
KHC				e		06 02 05.3	
GERES	GERESS Array B	87.81	328	P	P	06 01 49.3	-0.2
	comp=Z,1.1nm,0.6s,baz=33,slow=5.9,SNR=11						
GERES				LR	LR	06 44 39.0	
	comp=Z,228nm,18.8s,baz=20,slow=38						
EYMN	Ely	88.44	32	P	P	06 01 53.2	+0.7
	baz=317						
ANMO	Albuquerque	88.75	49	P	P	06 01 56.8	+2.4
	baz=308						
ECSD	EROS Data Cent	88.90	38	P	P	06 01 55.8	+1.1
	baz=314						
SCHQ	Schefferville	91.31	16	P	P	06 02 06.9	+1.2
	comp=Z,1.3nm,0.5s,baz=320,slow=3.1,SNR=7.5						
SCHQ				LR	LR	06 47 06.7	
	comp=Z,67nm,19.4s,baz=343,slow=38						
SCHQ	Schefferville	91.31	16	IAmb	IAmb	06 02 20.8	
	comp=Z,13nm,1.4s						
E44A	Grand Marais A	91.94	30	P	P	06 02 10.2	+1.4
	baz=321						
D46A	Sault St. Mari	92.53	29	P	P	06 02 12.2	+0.8
	baz=323						
D47A	Chapleau	92.78	29	P	P	06 02 13.6	+0.9
	baz=323						
WMOK	Wichita Mounta	93.75	46	P	P	06 02 18.6	+1.2
	baz=312						
TX31	Lajitas Ar. Si	94.06	52	IAmb	IAmb	06 02 22.1	
	comp=Z,7.0nm,0.9s						
TX32	Lajitas Array	94.06	52	IAmb	IAmb	06 02 22.1	
	comp=Z,7.3nm,0.9s						
TXAR	Lajitas Array	94.06	52	P	P	06 02 21.1	+2.1
	comp=Z,5.4nm,0.8s,baz=301,slow=2.9,SNR=37						
TXAR				LR	LR	06 38 22.0	
	comp=Z,106nm,22.0s,baz=0.0,slow=31						
ABTX	Abilene, Hawle	94.60	48	P	P	06 02 23.0	+1.6
	baz=311						
QSPA	South Pole Qui	120.64	180		PKPdf	06 07 50.9	-0.1
TORD	Torodi Ar. Bea	121.39	312	PKP	PKPdf	06 07 53.6	-0.4
	comp=Z,1.1nm,0.7s,baz=36,slow=1.8,SNR=10						
SYO	Syowa Base	122.57	205	⇑ePdiff	Pdif	06 04 25.0	+0.1
DBIC	Dimbokro	130.47	313	PKP	PKiKP	06 08 11.9	-0.4
	comp=Z,1.6nm,0.7s,baz=119,slow=2.5,SNR=4.3						
SNAA	Sanae	134.78	195	PKPdf	PKiKP	06 08 22.1	+2.8
VNA2	Neumayer--Watz	136.33	194	PKPdf	PKPdf	06 08 21.0	+0.3
	baz=121,slow=1.1						
VNA3	Neumayer Olymp	136.55	193	PKPdf	PKiKP	06 08 22.3	-0.5
PTGA	Pitinga	143.96	38		PKPdf	06 08 35.2	-1.0
SAML	Samuel	148.54	51		PKiKP	06 08 48.5	-0.6
SAML	Samuel	148.54	51	PKP2	PKiKP	06 08 48.5	-0.6
LPAZ	La Paz	149.62	68	PKP	PKPdf	06 08 47.7	+1.4
	comp=Z,6.6nm,1.0s,baz=18,slow=1.9,SNR=6.6						
LPAZ				PKPbc	PKiKP	06 08 52.5	+0.4
	comp=Z,11nm,0.8s,baz=339,slow=5.1,SNR=34						
PB11	IPOC Station P	150.15	76		PKiKP	06 08 52.9	+0.5
PB01	IPOC Station P	150.86	78		PKiKP	06 08 54.0	+0.1
PLCA	Paso Flores	152.62	120	PKP	PKPdf	06 08 51.0	+1.4
	comp=Z,1.9nm,1.1s,baz=225,slow=7.1,SNR=2.9						
PLCA				PKPbc	PKiKP	06 08 58.4	+1.5
	comp=Z,2.0nm,0.8s,baz=255,slow=6.7,SNR=5.6						
PLCA				PKPab	PKPab	06 09 08.6	+1.2
	comp=Z,1.8nm,0.8s,baz=279,slow=5.7,SNR=4.4						

MAN 04 05:53:25.0, 9°.89N×124°.07E, h0^{km}, mb4.5, ML3.4, MS3.2, 3C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBP	Tagbilaran	0.28	225	⇑eP	Pb	05 53 32.1	-0.8
TBP				eS	Sb	05 53 36.4	-1.9
LLP	Lapu-Lapu	0.43	347	⇓iP	Pg	05 53 33.8	+0.5
LLP				eS	Sg	05 53 40.0	+1.0
MSLP	Maasin	0.82	73	eP	Pg	05 53 40.6	-0.1
MSLP				eS	Sb	05 53 52.8	-0.9
OCLP	Ormoc	1.27	25	eP	Pg	05 53 49.2	-0.1
OCLP				eS	Sn	05 54 07.8	0.0
CGP	Cagayan de Oro	1.56	156	⇓eP	Pg	05 53 56.1	+1.3
GUIM	Jordan	1.63	297	eP	Pn	05 53 54.2	-0.6
GUIM				eS	Sn	05 54 16.7	+0.2
RCP	Roxas	2.10	322	⇑eP	Pn	05 54 01.3	-0.1
RCP				eS	Sn	05 54 29.1	+0.7
PAGZ	Pagadian	2.14	198	eP	Pn	05 54 02.1	+0.2
PAGZ				eS	Sn	05 54 29.6	+0.4
BUKP	Musuan	2.23	154	eP	Pn	05 54 03.2	0.0
BUKP				eS	Sn	05 54 32.4	+0.8
CTBH	Cotabato--PC H	2.66	176	⇑iP	Pn	05 54 11.1	+2.0
CTBH				i S	Sn	05 54 43.1	+1.0
OTRP	Odiongan	3.17	321	eP	Pn	05 54 17.9	+1.7

IASPEI **04** *05:59:45.7±0.8, 34°.11N±0°.02×117°.41W±0°.02, h12^{km}±5^{km}, Error ellipse: s-maj=2.9km s-min=2.3km az=24.6, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

ANF **04** *05:59:45.4±0.2, 34°.11N×117°.40W, h8^{km}±2^{km}, ML2.7/30, Error ellipse: s-maj=1.5km s-min=1.2km az=19.0*

NEIC **04** *05:59:46.0±2.3, 34°.048N±0°.009×117°.43W±0°.02, h10^{km}±3^{km}, Error ellipse: s-maj=2.4km s-min=1.3km az=87.0*

SCEDC **04** *05:59:46.2, 34°.11N×117°.41W, h5^{km}*

PAS **04** *05:59:46.2±1.8, 34°.11N±0°.02×117°.41W±0°.02, h5^{km}±4^{km}, ML2.7/202, Error ellipse: s-maj=3.6km s-min=2.0km az=46.0*

ISC 04 05:59:45.8±0.8, 34°.09N±0°.02×117°.42W±0°.01, h11^{km}±5^{km}, n83, σ0^{s}.75/116, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FON	Fontana	0.02	307		Pg	05 59 47.9	+0.1
CLTC	Calectric	0.08	85		Pg	05 59 48.2	-0.1
CFSC	Central Fire S	0.11	80		Pg	05 59 48.6	0.0
RSBC	Riverside Bore	0.14	147		Pb	05 59 51.7	+1.3
SS2	San Sevaine	0.14	330		Pg	05 59 48.6	-0.5
MLSC	Mira Loma	0.14	236		Pb	05 59 52.1	+1.6
HLNC	Highland	0.17	78		Pg	05 59 49.6	+0.1
CSP	Cedar Springs	0.22	13		Pg	05 59 49.8	-0.7
BFSC	Mount Baldy Ra	0.25	307		Pg	05 59 50.6	-0.5
BFSC	Mount Baldy Ra	0.25	307	P	Pg	05 59 50.6	-0.5
	baz=122,SNR=197						
BFSC				S	Sg	05 59 53.7	-0.9
	baz=122						
CFT	Crafton Hills	0.26	101		Pg	05 59 51.5	+0.3
SSK	Sunset Peak	0.26	299		Pg	05 59 51.1	-0.2
SVD	Seven Oaks Dam	0.27	85		Pg	05 59 51.3	+0.1
PSRC	Puddingstone R	0.32	271		Pg	05 59 52.6	+0.3
BTL	Butler Peak	0.38	63		Pg	05 59 53.5	0.0
BBSC	Beaumont Base	0.40	114		Pg	05 59 54.3	+0.7
BBRC	Big Bear Solar	0.45	67		Pg	05 59 54.5	-0.1
BBRC	Big Bear Solar	0.45	67	P	Pg	05 59 54.5	-0.1
	baz=250,SNR=62						
BBRC				S	Sg	06 00 00.6	0.0
	baz=250						
ADO	Adelanto Recei	0.46	358		Pg	05 59 54.4	-0.5
HMTC	Hemet	0.51	138		Pg	05 59 55.8	+0.1
MURC	Murrieta	0.52	159		Pb	05 59 56.1	-0.8
MURC					Sb	06 00 03.5	-1.1
MURC	Murrieta	0.52	159	P	Pb	05 59 56.1	-0.8
	baz=341,SNR=75						
MURC				S	Sb	06 00 03.4	-1.1
	baz=341						
MWC	Mount Wilson	0.55	285	Pg	Pg	05 59 56.4	-0.1
MWC	Mount Wilson	0.55	285		Sg	06 00 04.0	+0.1
CHFC	Chilao Flat St	0.56	296		Pg	05 59 56.1	-0.6
BACC	Bachelor Mtn.	0.57	146		Pg	05 59 56.9	+0.1
BACC					Sg	06 00 04.5	+0.2
POB	Polly Butte	0.57	134		Pg	05 59 57.0	+0.1
POB					Sg	06 00 04.7	+0.2
GVRC	Garvey Reservo	0.58	267		Pg	05 59 57.5	+0.4
PASC	Pasadena Art C	0.64	278	Pg	Pg	05 59 58.0	-0.3
LRRC	Littlerock Res	0.67	311		Pg	05 59 58.2	-0.5
SBB	Saddle Back Bu	0.69	331		Pg	05 59 58.3	-0.9
SBB					Sg	06 00 06.8	-1.4
CRY	Cary Ranch	0.77	132		Pg	06 00 00.5	-0.1
DECC	Green Verdugo	0.78	283		Pg	06 00 00.6	-0.3
DECC					Sg	06 00 11.2	+0.1
DECC	Green Verdugo	0.78	283	P	Pg	06 00 00.5	-0.3
	baz=100,SNR=7.6						
DECC				S	Sg	06 00 11.3	+0.2
	baz=100						
HYS	Haystack Butte	0.79	351		Pg	06 00 00.1	-0.9
FMP	Fort Macarthur	0.82	243	P	Pn	06 00 02.8	-0.5
	baz=61						
FMP				S	Sn	06 00 14.5	-0.9
	baz=61						
RRX	Edison Barstow	0.86	24		Pg	06 00 01.7	-0.7
RRX	Edison Barstow	0.86	24	P	Pg	06 00 01.7	-0.7
	baz=204						
RRX				S	Sg	06 00 13.3	-0.3
	baz=204						
IR2C	Iron Canyon	0.87	291		Pg	06 00 01.8	-0.8
RPV	Rancho Palos V	0.89	248		Pb	06 00 03.6	+0.4
FRD	Ford Ranch, An	0.90	131		Pg	06 00 03.0	-0.1
EDW2	Edwards Air Fo	0.93	329	P	Pg	06 00 02.6	-1.0
	baz=148,SNR=12						
EDW2				S	Sg	06 00 14.5	-1.2
	baz=148						
PFO	Pinyon Flats O	0.93	120		Pg	06 00 03.3	-0.4
PFO	Pinyon Flats O	0.93	120	P	Pg	06 00 03.2	-0.4
	baz=303,SNR=12						
PFO				S	Sg	06 00 15.4	-0.3
	baz=303						
XPFO	Pion Flat	0.93	120		Pg	06 00 03.6	-0.1
CIAC	Catalina I. Ai	1.07	231		Pn	06 00 07.1	+0.3
CIS	Catalina Islan	1.08	231	P	Pn	06 00 06.8	0.0
	baz=49						
CIS				S	Sn	06 00 21.1	-0.8
	baz=49						
HEC	Hector,Ludlow	1.16	50	P	Pb	06 00 07.4	-0.5
	baz=231,SNR=12						
HEC				S	Sb	06 00 22.5	-0.5
	baz=231						
BELC	Belle Mtn. Jos	1.18	94	P	Pb	06 00 08.0	-0.3
	baz=276,SNR=90						
BELC				S	Sn	06 00 24.8	+0.2
	baz=276						
OSI	Osito Audit: C	1.20	296	Pg	Pn	06 00 08.7	+0.1
OSI	Osito Audit: C	1.20	296	P	Pn	06 00 08.8	+0.1
	baz=114						
OSI				S	Sb	06 00 24.8	+0.5
	baz=114						
109C	Camp Elliot, M	1.22	168		Pb	06 00 08.1	-0.8
109C	Camp Elliot, M	1.22	168	P	Pb	06 00 07.9	-1.0
	baz=348						
109C				S	Sn	06 00 26.4	+1.0
	baz=348						
GSC	Goldstone, Bar	1.31	22		Pn	06 00 09.7	-0.4
GSC	Goldstone, Bar	1.31	22	P	Pn	06 00 09.8	-0.4
	baz=203,SNR=62						
GSC				S	Sb	06 00 26.8	-0.7
	baz=203						
BLG	Laguna Peak, P	1.37	271	P	Pn	06 00 11.0	+0.1
	baz=89						
BLG				S	Sg	06 00 30.6	+0.8
	baz=89						
SDRC	San Diego Road	1.40	163		Pn	06 00 11.3	0.0
MONP2	Monument Peak	1.45	145	P	Pn	06 00 12.4	+0.2
	baz=326,SNR=7.6						
MONP2				S	Sg	06 00 31.6	-0.9
	baz=326						
BAR	Barrett	1.53	156	Sn	Sb	06 00 33.1	-0.7
ARVC	Arvin	1.56	312	P	Pn	06 00 14.5	+1.0
	baz=131,SNR=6.4						
ARVC				S	Sn	06 00 34.7	+0.9
	baz=131						
GMRC	Granite Mounta	1.61	64	P	Pn	06 00 14.4	+0.1
	baz=246,SNR=18						
GMRC				S	Sb	06 00 36.9	+0.9
	baz=246						
BC3	Big Chuckawall	1.69	104	Pg	Pb	06 00 17.4	+0.4
	baz=286,SNR=19						
BC3				Sb	Sg	06 00 39.6	-0.5
	baz=286						
SWSC	Sam W. Stewart	1.77	130	Pg	Pg	06 00 19.1	-0.6
	baz=311						
SWSC				Sb	Sg	06 00 42.3	-0.2
	baz=311						
ISA	Isabella, Lake	1.80	331		Pn	06 00 17.0	+0.2
ISA	Isabella, Lake	1.80	331	P	Pn	06 00 17.0	+0.2
	baz=150,SNR=5.9						
IKP	In-Ko-Pah, Jac	1.80	142	Pb	Pb	06 00 18.9	0.0
	baz=324						
IKP				Sb	Sg	06 00 42.5	-1.2
	baz=324						
TUQ	Turquoise Moun	1.82	42	Pg	Pb	06 00 19.8	+0.6
	baz=223,SNR=8.0						
TUQ				Sb	Sb	06 00 42.6	+0.5
	baz=223						
IRM	Iron Mountain	1.89	87	Pn	Pn	06 00 17.9	-0.1
	baz=269						
IRM				Pg	Pb	06 00 20.9	+0.6
	baz=269,SNR=36						
IRM				Sb	Sg	06 00 46.0	-0.4
	baz=269						
MPMC	Manual Prospec	1.97	358	Pb	Pb	06 00 21.4	-0.4
	baz=178,SNR=14						
SHOC	Shoshone, Teco	2.04	27	Pb	Pb	06 00 23.0	+0.1
	baz=208,SNR=15						
SHOC				Sb	Sb	06 00 49.9	+1.6
	baz=208						
PKM	Mcpherson Peak	2.14	293	S	Sn	06 00 50.0	+1.8
	baz=111						
DAC	Darwin (Calif)	2.19	356	Pn	Pb	06 00 25.9	+0.3

GLA	Glamis	2.40	115	Pn	Pb	06 00 29.7	+0.7
GLA	Glamis	2.40	115	Sb	Sg	06 01 01.0	-1.7
	baz=297						
Y12C	Blythe	2.43	97	Pn	Pn	06 00 25.4	0.0
Y12C	Blythe	2.43	97	Pn	Pn	06 00 25.2	-0.3
	baz=279						
Y12C				Pg	Pg	06 00 31.2	-1.1
	baz=279,SNR=7.5						
Y12C				S	Sn	06 00 55.2	0.0
	baz=279						
Y12C				Sg	Sg	06 01 03.8	0.0
	baz=279						
TPNV	Topopah Spring	3.01	18	Pn	Pn	06 00 35.0	+1.3
TPNV	Topopah Spring	3.01	18	Sb	Sb	06 01 19.4	+3.0
	baz=199						
SHPR	Sheep Range	3.04	37	Pn	Pn	06 00 35.4	+1.4
W13A	Hualapai Mount	3.08	70		Pn	06 00 35.2	+0.5
Y14A	Wickenburg	3.67	91		Pn	06 00 43.8	+1.2
RYN	Ryan	4.62	349		Pb	06 01 05.2	-1.7
X16A	Lo Mia Camp, P	4.96	84	Pn	Pn	06 01 01.1	+0.7

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*KRAR **04** 06:00:32.3±0.1, 53°.72N×87°.98E, M2.1, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NNC 04 06:00:30.6±3.3, 53°.65N×87°.60E, h0km, mb3.6, mpv3.2, 6C-3D, Error ellipse: s-maj=24.5km s-min=21.8km az=10.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	6.25	246	⇑Pn	Pn	06 02 05.1	+1.0
	1.7nm,0.8s						
KURK				⇑Sn	Sn	06 03 16.9	+0.7
	1.0nm,0.6s						
KURK				⇑Lg	Lg	06 03 52.6	
	3.3nm,0.9s						
KURBB	Kurchatov Arra	6.35	245	⇓Pn	Pn	06 02 05.1	-0.3
	1.6nm,0.3s						
KURBB				⇓Sn	Sn	06 03 19.0	+0.5
	3.1nm,0.5s						
KURBB				⇑Lg	Lg	06 03 53.8	
	4.4nm,0.7s						
MK31	Makanchi Array	7.66	208	⇑Pn	Pn	06 02 22.2	-1.2
	0.5nm,0.6s,baz=27,slow=13,SNR=9.4						
MK31				⇓Sn	Sn	06 03 53.0	+2.2
	0.7nm,0.7s						
MK31				⇑Lg	Lg	06 04 30.6	
	1.9nm,0.9s						

IDC 04 06:02:50.6±18.0, 17°.20S×178°.74W, h494km±204km, mb3.1/4, mb1 3.4/4, mb1mx2.9/38, mbtmp4.0/4, Error ellipse: s-maj=133.9km s-min=76.0km az=137.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.70	240	P	P	06 09 31.8	+0.3
	1.0nm,0.3s,baz=98,slow=7.1,SNR=5.0						
WRA	Warramunga Arr	44.45	259	P	P	06 10 16.9	-0.5
	0.7nm,0.5s,baz=99,slow=7.0,SNR=14						
ASAR	Alice Springs	44.68	254	P	P	06 10 19.0	-0.1
	6.0nm,0.6s,baz=88,slow=8.1,SNR=99						
ILAR	Eielson Array	85.28	13	P	P	06 14 33.9	-0.3
	0.2nm,0.4s,baz=226,slow=4.8,SNR=4.3						
GERES	GERESS Array B	146.85	345	PKPbc	PKPbc	06 21 36.8	-0.4
	0.4nm,0.4s,baz=32,slow=4.1,SNR=4.1						

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*TEH **04** 06:11:04.5, 26°.78N×54°.11E, h15km, ML3.5*

*OMAN **04** 06:11:14.5±0.7, 26°.48N×54°.69E, h44km, ml2.9/10, Error ellipse: s-maj=6.2km s-min=4.3km az=7.0*

ISC 04 06:11:06.2±1.7, 26°.74N±0°.05×54°.11E±0°.06, h24km, n26, σ0ˢ.99/24, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMD1	Lamerd	1.03	306	*e*Pg	Pn	06 11 22.9	-2.4
LMD1				*e*		06 11 46.6	
JHRM	Jahrom	1.82	345	*e*Pn	Pn	06 11 37.0	+0.8
JHRM				*e*		06 12 10.5	
SHME	Shamm	1.95	110	*e*Pn	Pn	06 11 36.8	-1.1
GENO	Geno	1.95	70	*e*Pn	Pn	06 11 39.0	+0.9
GENO				*e*		06 12 26.6	
JRN	Qarnain Island	2.12	213	*e*Pn	Pn	06 11 42.3	+2.1
BANOM	Banah	2.13	112	P	Pn	06 11 39.6	-0.8
	SNR=7.0						
BANOM	Banah	2.13	112	*e*Pn	Pn	06 11 39.7	-0.6
NAZ	Nazwa, Dubai	2.24	141	*e*Pn	Pn	06 11 42.3	+0.5
MSFE	Esma-Masafi	2.30	126	*e*Pn	Pn	06 11 42.4	-0.3
FAQ	Al Faqa, Dubai	2.39	146	P	Pn	06 11 44.9	+0.9
MDH	Madha	2.44	126	P	Pn	06 11 44.4	-0.2
MDH	Madha	2.44	126	*e*Pn	Pn	06 11 44.0	-0.6
NIAN	Nian	2.56	71	*e*Pn	Pn	06 11 46.8	+0.5
NIAN				*e*		06 12 46.8	
UOSS	Minazif	2.60	133	P	Pn	06 11 46.4	-0.4
UOSS	Minazif	2.60	133	*e*Pn	Pn	06 11 45.9	-0.9
HATD	Hatta, Dubai	2.64	136	*e*Pn	Pn	06 11 47.2	-0.1
ASHO	Ashiyiah	2.70	139	P	Pn	06 11 48.1	-0.1
	SNR=16						
SOHO	SOHO	3.40	139	P	Pn	06 11 57.6	-0.2
IKAZ	Kazeroun	3.63	327	*e*	Sg	06 13 05.3	
NGRK	Negar Kerman	3.70	38	*e*Pn	Pn	06 12 02.4	+0.1
TVBK	TV Kerman	3.99	35	*e*	Sg	06 13 19.6	
HOQ	Hoqain	4.28	137	P	Pn	06 12 09.0	-0.9
CHMN	Cheshme madani	4.34	43	*e*Pn	Pn	06 12 12.3	+1.3
CHMN				*e*		06 12 13.4	
BSY	Bisya	4.87	144	P	Pn	06 12 17.4	-0.6
	SNR=12						
SMDO	Samad	5.12	135	P	Pn	06 12 21.7	+0.1
WBK	Wadi Bani Khal	6.04	132	P	Pn	06 12 33.0	-1.1
	SNR=8.6						

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*AEIC **04** 06:24:39.8±1.1, 50°.98N±0°.06×176°.03W±0°.06, h26km±8km, ML3.1/18, Error ellipse: s-maj=9.4km s-min=5.4km az=180.0*

*NEIC **04** 06:24:40.3±1.1, 51°.01N±0°.04×176°.06W±0°.06, h30km±4km, Error ellipse: s-maj=6.1km s-min=4.8km az=46.0*

*IDC **04** 06:25:01.3±2.8, 52°.32N×172°.47W, h0km, mb3.2/2, mb1 3.6/4, mb1mx3.3/56, mbtmp3.3/4, ML3.2/2, Error ellipse: s-maj=76.0km s-min=14.0km az=2.0*

ISC 04 06:24:41.1±1.5, 51°.05N±0°.10×176°.05W±0°.05, h28km, n29, σ1ˢ.11/33, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADK	Adak	0.93	335		Pn	06 24 56.9	-1.3
ADK	Adak	0.93	335		Pn	06 24 57.2	-1.0
ADK				Sn	Sn	06 25 09.8	-0.8
ADAG	Mount Adagdak	0.99	340		Pn	06 24 58.8	-0.3
GSMY	Great Sitkin M	1.00	360		Pn	06 24 58.8	-0.5
GSMY					Sb	06 25 13.4	+0.9
GSTD	Great Sitkin T	1.01	357		Pn	06 24 59.0	-0.4
GSTD					Sb	06 25 14.1	+1.1
KIMD	Kanaga Island	1.03	314		Pn	06 24 58.7	-0.9
KIMD					Sn	06 25 13.2	+0.1
GSTR	Great Sitkin T	1.05	360		Pn	06 24 59.8	-0.1
KIKV	Kanaga Island	1.09	320		Pn	06 24 59.8	-0.6
KICM	Kanaga Island	1.13	321		Pn	06 25 00.7	-0.3
TAPA	Tanaga Point A	1.34	306		Pn	06 25 03.2	-0.8
TASE	Tanaga Southea	1.47	303		Pn	06 25 05.4	-0.4
TAFP	Tanaga Falls P	1.48	306		Pn	06 25 05.4	-0.4
TAFP					Sn	06 25 25.4	+1.2
ATKA	Atka Island	1.64	44		Pn	06 25 07.2	-0.8
ATKA					Sn	06 25 27.6	-0.5
NIKH	Nikolski High	4.85	64	Pn	Pn	06 25 52.9	+0.8
UNV	Unalaska Valle	6.47	61	Pn	Pn	06 26 12.9	-1.5
KDAK	Kodiak Island	15.18	55	Pn	Pn	06 28 10.2	-3.1
	0.1nm,0.3s,baz=246,slow=10,SNR=3.1						
KDAK	Kodiak Island	15.18	55	Pn	Pn	06 28 13.4	+0.1
PETK	Petropavlovsk-	16.24	288	P	P	06 29 13.4	+44
	0.4nm,0.3s,baz=76,slow=14,SNR=4.8						
PETK				S	S	06 32 35.9	+57
	baz=95,slow=18,SNR=3.8						
CNPM	China Poot	16.40	49	Pn	Pn	06 28 27.8	-1.2
PPLA	Purkeypile	17.47	38		P	06 28 43.0	-0.6
KTH	Kantishna Hill	18.31	37		Pn	06 28 53.4	+0.7
BPAW	Bear Paw Mtn.	18.57	36		P	06 28 53.2	-2.3
MLY	Manley	19.18	34	P	P	06 29 02.2	-0.1
DHY	Denali Highway	19.49	41	P	P	06 29 04.8	-1.0
ILAR	Eielson Array	20.45	37	P	P	06 29 15.4	-0.6
	0.1nm,0.3s,baz=230,slow=10,SNR=5.4						
GLB	Gilahina Butte	20.49	47	P	P	06 29 16.1	-0.5
SCRK	Sand Creek	21.25	40	P	P	06 29 24.4	-0.3
YKA	Yellowknife Ar	34.21	47	P	P	06 31 25.8	+2.1
	0.1nm,0.6s,baz=286,slow=8.2,SNR=3.2						
PDAR	Pinedale Array	44.76	74	P	P	06 32 56.2	+4.1
	0.3nm,0.7s,baz=305,slow=5.3,SNR=2.9						

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*IDC **04** 06:31:48.0±0.8, 8°.46S×128°.25E, h0km, mb3.9/4, mb1 4.0/6, mb1mx3.7/38, mbtmp4.0/6, ML4.0/2, MS3.3/6, Ms1 3.3/6, ms1mx3.0/40, Error ellipse: s-maj=52.0km s-min=20.1km az=76.0*

ISC 04 06:31:51.1±0.7, 8°.71S±0°.06×128°.8E±0°.1, h35km, n15, σ2ˢ.25/16, mb3.9/4, MS3.1/3, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	8.17	18	Pn	Pn	06 33 48.4	+1.1
	1.2nm,0.3s,baz=198,slow=23,SNR=2.2						
SIJI				Sn	Sn	06 35 16.7	-1.8
	0.6nm,0.3s,baz=227,slow=22,SNR=2.5						
SIJI				LR	LR	06 37 38.8	
	comp=Z,192nm,18.6s,baz=224,slow=43						
FITZ	Fitzroy Crossi	9.82	198	Pn	Pn	06 34 12.3	+2.4
	1.3nm,0.3s,baz=18,slow=10,SNR=20						
FITZ				Sn	Sn	06 35 56.6	-2.3
	7.3nm,0.3s,baz=81,slow=18,SNR=13						
FITZ				LR	LR	06 39 00.6	
	comp=Z,122nm,20.2s,baz=60,slow=44						
WRA	Warramunga Arr	12.40	155	Pn	Pn	06 34 47.9	+2.6
	0.7nm,0.3s,baz=333,slow=13,SNR=16						
WRA				Sn	Sn	06 36 59.1	-3.2
	2.4nm,0.3s,baz=329,slow=22,SNR=8.9						
WRA				Lg	Lg	06 38 35.5	
	baz=324,slow=25,SNR=4.2						
ASAR	Alice Springs	15.67	162	Pn	P	06 35 31.4	-1.7
	0.4nm,0.3s,baz=337,slow=9.2,SNR=22						
ASAR				Sn	Sn	06 38 20.7	-1.3
	0.9nm,0.3s,baz=322,slow=21,SNR=8.4						
ASAR				Lg	Lg	06 40 24.6	
	baz=336,slow=32,SNR=4.4						
PMG	Port Moresby	18.17	94	LR	LR	06 44 12.6	
	comp=Z,160nm,20.9s,baz=338,slow=40						
LEM	Lembang	21.04	274	LR	LR	06 45 17.4	
	comp=Z,93nm,21.0s,baz=72,slow=40						
STKA	Stephens Creek	25.95	154	P	P	06 37 24.9	+4.4
	1.8nm,0.7s,baz=330,slow=14,SNR=4.6						
KSRS	Korea Array	45.92	359	LR	LR	06 58 12.8	
	comp=Z,23nm,20.0s,baz=310,slow=35						
SONM	Songino Array	59.68	343	P	P	06 41 51.4	-0.7
	0.5nm,0.7s,baz=160,slow=5.0,SNR=2.8						
PETK	Petropavlovsk-	66.31	19	LR	LR	07 11 31.4	
	comp=Z,35nm,20.1s,baz=62,slow=36						
MKAR	Makanchi Array	68.99	328	P	P	06 42 52.6	-0.4
	0.6nm,0.5s,baz=134,slow=8.0,SNR=12						
ZALV	Zalesovo Beam	72.58	335	P	P	06 43 13.3	-1.2
	1.6nm,0.5s,baz=130,slow=4.3,SNR=7.8						
TORD	Torodi Ar. Bea	127.92	280	PKP	PKiKP	06 50 56.6	+1.8
	0.5nm,0.6s,baz=130,slow=2.5,SNR=3.0						
CPUP	Villa Florida	144.67	171	PKP	PKiKP	06 51 27.8	-0.9
	3.7nm,0.8s,baz=280,slow=1.5,SNR=9.9						
LPAZ	La Paz	150.06	146	PKPbc	PKPab	06 51 44.0	-1.5
	1.6nm,0.9s,baz=288,slow=3.2,SNR=3.8						
LPAZ				PKPab	pPKPbc	06 51 50.5	-0.2
	1.1nm,0.6s,baz=10,slow=8.5,SNR=3.7						

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*NEIC **04** 06:44:49.0±1.6, 15°.33S±0°.07×167°.52E±0°.08, h121km±3km, mb4.7/42, Error ellipse: s-maj=11.0km s-min=9.5km az=63.0*

*IDC **04** 06:44:49.3±0.8, 15°.30S×167°.51E, h122km±6km, mb4.3/24, mb1 4.4/26, mb1mx4.2/40, mbtmp4.7/26, MS3.7/2, Ms1 3.7/2, ms1mx3.1/24, Error ellipse: s-maj=12.9km s-min=9.4km az=86.0*

*BJI **04** 06:44:49.5±0.0, 15°.23S×167°.23E, h117km, mB5.0/26, mb4.8/37*

ISC 04 06:44:49.2±0.3, 15°.36S±0°.05×167°.54E±0°.06, h124km, n112, σ1ˢ.25/128, mb4.7/42, 4C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.33	254	Pn	Pn	06 45 05.2	-1.6
SANVU				Sn	Sn	06 45 18.7	-1.3
DZM	Mont Dzumac	6.76	189	P	Pn	06 46 26.0	0.0
	26nm,0.3s,baz=295,slow=23,SNR=99						
DZM				S	Sn	06 47 43.4	+1.8
	38nm,0.3s,baz=304,slow=21,SNR=11						
DZM	Mont Dzumac	6.76	189		Pn	06 46 26.0	0.0
DZM				Sn	Sn	06 47 38.6	-3.0
NOUC	Port Laguerre	6.81	190		Pn	06 46 27.2	+0.6
NOUC				Sn	Sn	06 47 40.0	-2.8
HNR	Honiara	9.46	308	P	Pn	06 47 02.2	-0.3
	21nm,0.3s,baz=188,slow=3.6,SNR=12						
HNR				S	Sn	06 48 46.5	-0.7
	8.1nm,0.3s,baz=202,slow=18,SNR=2.2						
HNR				LR	LR	06 50 01.6	
	comp=Z,206nm,19.2s,baz=324,slow=33						
HNR	Honiara	9.46	308	P	Pn	06 47 03.0	+0.5
HNR	Honiara	9.46	308		Pn	06 47 02.5	0.0
MSVF	Nonsavu	10.36	105	Pn	Pn	06 47 14.9	+0.3
EIDS	Eidsvold	18.34	235		Pn	06 48 56.1	+0.4
EIDS				IAmb	IAmb	06 48 56.9	
	comp=Z,27nm,0.7s						
OUZ	Omahuta	20.51	166	P	P	06 49 18.6	+1.1
OUZ				IAmb	IAmb	06 49 20.4	
	comp=Z,35nm,0.9s						
PMG	Port Moresby	20.75	284	P	P	06 49 20.5	+0.2
	comp=Z,5.0nm,0.4s,baz=12,slow=14,SNR=2.7						
CTA	Charters Tower	20.80	254	P	P	06 49 21.3	+0.4
	comp=Z,3.6nm,0.5s,baz=68,slow=14,SNR=4.3						
ARMA	Armidale	20.92	222	P	P	06 49 22.8	+0.6
ARMA				IAmb	IAmb	06 49 26.0	
	comp=Z,24nm,1.2s						
COEN	Coen	23.61	270	P	P	06 49 49.6	+0.5
HIZ	Hauiti	23.95	166	P	P	06 49 52.3	+0.3
MXZ	Matakaoa Point	24.09	159	P	P	06 49 53.3	+0.1
URZ	Urewera	24.33	161	P	P	06 49 56.1	+0.7
	comp=Z,33nm,0.7s,baz=277,slow=3.6,SNR=17						
URZ	Urewera	24.33	161	P	P	06 49 56.0	+0.6
URZ				IAmb	IAmb	06 49 56.9	
	comp=Z,49nm,1.0s						
BKZ	Black Stump Fm	24.99	163	P	P	06 50 02.2	+0.7
NNZ	Nelson	26.26	170	P	P	06 50 13.9	+1.0
BFZ	Birch Farm	26.35	165	P	P	06 50 13.3	-0.4
TUWZ	Tuamarina	26.57	169	P	P	06 50 15.7	+0.1
SNZO	South Karori	26.60	168	P	P	06 50 17.6	+1.8
THZ	Tophouse	26.72	171	P	P	06 50 17.3	+0.3
THZ				IAmb	IAmb	06 50 25.4	
	comp=Z,17nm,0.8s						
LTZ	Lake Taylor	27.63	172	P	P	06 50 25.2	+0.1
LTZ				IAmb	IAmb	06 50 27.5	
	comp=Z,51nm,1.3s						
RPZ	Rata Peaks	28.42	175	P	P	06 50 33.4	+1.3
	comp=Z,15nm,0.6s,baz=340,slow=2.1,SNR=6.2						
RPZ	Rata Peaks	28.42	175	P	P	06 50 32.5	+0.4
RPZ				IAmb	IAmb	06 50 33.7	
	comp=Z,37nm,0.9s						
STKA	Stephens Creek	28.79	231	P	P	06 50 36.0	+0.5
	comp=Z,3.8nm,0.4s,baz=51,slow=8.7,SNR=17						
STKA				PcP	PcP	06 53 42.5	0.0
	comp=Z,3.3nm,0.5s,baz=44,slow=3.3,SNR=6.4						
STKA				ScP	ScP	06 57 14.8	+2.1
	comp=Z,3.1nm,0.9s,baz=22,slow=9.6,SNR=4.5						
STKA	Stephens Creek	28.79	231	P	P	06 50 36.0	+0.5
LBZ	Lake Benmore	29.02	176	P	P	06 50 38.3	+0.9
TOO	Toolangi	29.50	217	P	P	06 50 42.6	+0.7
WR0	Warramunga Arr	31.74	257	P	P	06 51 00.7	-1.0
WB0	Warramunga Arr	31.87	257	P	P	06 51 01.6	-1.2
WB0				IAmb	IAmb	06 51 02.2	
	comp=Z,5.0nm,0.7s						
WRA	Warramunga Arr	31.93	257	P	P	06 51 02.1	-1.3
	comp=Z,2.5nm,0.7s,baz=86,slow=8.8,SNR=28						
WRA				ScP	ScP	06 57 25.4	+2.2
	comp=Z,1.5nm,0.8s,baz=84,slow=3.9,SNR=5.4						
AS31	Alice Springs	32.69	250	P	P	06 51 09.5	-0.6
AS31				IAmb	IAmb	06 51 13.7	
	comp=Z,4.1nm,0.5s						
ASAR	Alice Springs	32.70	250	P	P	06 51 09.4	-0.7
	comp=Z,8.6nm,0.6s,baz=75,slow=9.1,SNR=136						
ASAR				PcP	PcP	06 53 52.5	-0.6
	comp=Z,1.2nm,0.7s,baz=84,slow=2.9,SNR=5.2						
ASAR				ScP	ScP	06 57 27.1	+1.3
	comp=Z,2.9nm,0.8s,baz=85,slow=3.5,SNR=16						
BBOO	Buckleboo	33.40	233	P	P	06 51 16.4	+0.3
BBOO				IAmb	IAmb	06 51 17.1	
	comp=Z,13nm,0.6s						
KNRA	Kununurra	37.33	264	P	P	06 51 49.3	-0.5
KNRA				IAmb	IAmb	06 51 53.2	
	comp=Z,9.3nm,0.9s						
FORT	Forrest	39.20	240	P	P	06 52 05.8	+0.4
FITZ	Fitzroy Crossi	40.16	260	P	P	06 52 13.6	+0.2
PPT	Papeete	41.13	99	P	P	06 52 22.3	+0.8
	comp=Z,9.6nm,0.5s,baz=79,slow=4.5,SNR=5.3						
PSA00	Pilbara Seismi	45.52	255	P	P	06 52 57.1	+0.4
PSA00				IAmb	IAmb	06 52 57.8	
	comp=Z,16nm,1.1s						
MRSI	Marisa	47.71	285	P	P	06 53 19.4	+5.5
NWAO	Narrogin (SRO)	48.65	240	P	P	06 53 20.4	-0.5
NWAO				IAmb	IAmb	06 53 21.6	
	comp=Z,42nm,1.5s						
NWAO	Narrogin (SRO)	48.65	240	P	P	06 53 20.5	-0.3
NWAO				IAmb	IAmb	06 53 21.6	
	comp=Z,12nm,1.0s						
MORW	Morawa	49.23	245	P	P	06 53 25.1	-0.2
MORW				IAmb	IAmb	06 53 25.8	
	comp=Z,12nm,0.8s						
PGP	Puerto Galera	54.27	300	⇑*e*P	P	06 54 05.8	+2.8
TGY	Tagaytay City	54.59	300	LR	LR	07 14 53.5	
	comp=Z,140nm,20.1s,baz=193,slow=33						
LUBP	Lubang	54.98	299	*e*P	P	06 54 05.7	-2.3
MJAR	Matsushiro Arr	58.58	332	P	P	06 54 32.1	-1.0
	comp=Z,3.0nm,0.5s,baz=156,slow=7.9,SNR=5.2						
MJAR				PcP	PcP	06 55 23.3	+1.3
	comp=Z,1.4nm,0.4s,baz=174,slow=6.1,SNR=3.6						
MAT	Matsushiro	58.58	332	P	P	06 54 32.2	-0.9
JNU	Nakatsue	59.58	324	P	P	06 54 39.2	-0.8
	comp=Z,7.9nm,0.7s,baz=47,slow=16,SNR=4.8						
JNU	Nakatsue	59.58	324	IAmb	IAmb	06 54 40.5	
	comp=Z,10nm,0.9s						
VNDA	Vanda	62.24	181	P	P	06 54 58.1	+0.7
	comp=Z,7.0nm,0.7s,baz=16,slow=5.5,SNR=11						
VNDA	Vanda	62.24	181	P	P	06 54 57.7	+0.3
VNDA				IAmb	IAmb	06 54 59.7	
	comp=Z,10nm,0.8s						
MDSI	Maura Dua	63.14	273	P	P	06 55 03.0	-1.4
ASAJ	Asahikawa	63.42	340	P	P	06 55 05.5	0.0
	comp=Z,12nm,0.8s,baz=214,slow=10.0,SNR=4.9						
KSRS	Korea Array	64.40	326	P	P	06 55 12.3	+0.2
	comp=Z,1.6nm,0.7s,baz=124,slow=7.0,SNR=4.6						
NJ2	Nanjing	66.30	316	*e*P	P	06 55 26.8	+2.3
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
USA0B	Ussuriysk Arra	67.56	333	P	P	06 55 32.5	+0.3
USA0B				IAmb	IAmb	06 55 34.5	
	comp=Z,8.3nm,0.8s						
USRK	Ussuriysk Ar.	67.56	333	P	P	06 55 32.6	+0.4
	comp=Z,4.9nm,0.7s,baz=139,slow=6.4,SNR=13						
PETK	Petropavlovsk-	68.71	354	P	P	06 55 39.8	+0.6
	comp=Z,4.5nm,0.7s,baz=159,slow=8.1,SNR=6.3						
XAN	Xi'an	74.30	313	P	P	06 56 13.0	-0.3
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,110nm,4.4s						
QSPA	South Pole Qui	74.67	180	P	P	06 56 15.2	+0.1
KMI	Kunming	74.85	302	P	P	06 56 17.9	+1.0
KMI				pP	pP	06 56 46.1	-1.8
KMI				pmax	pmax		
	comp=Z,14nm,0.9s						
KMI				pmax	pmax		
	comp=Z,70nm,3.6s						
CMAR	Chiang Mai Arr	75.44	294	P	P	06 56 21.4	+1.3
	comp=Z,2.0nm,0.3s,baz=132,slow=4.1,SNR=11						
CMAR				pP	pP	06 56 51.5	+0.3
	comp=Z,2.3nm,0.8s,baz=109,slow=4.3,SNR=1.6						
HHC	Hu-ho-hao-te	76.23	320	*e*P	P	06 56 27.9	+3.7
HHC				pmax	pmax		
	comp=Z,64nm,1.1s						
HHC				pmax	pmax		
	comp=Z,280nm,6.2s						
LZH	Lanzhou	78.93	312	⇑P	P	06 56 35.6	-3.8
LZH				pP	pP	06 57 06.2	-4.4
LZH				sP	sP	06 57 19.3	-4.5
LZH				PP	PP	06 59 38.1	-2.0
SEY	Seymchan	78.93	353	P	P	06 56 39.0	+0.4
	baz=175,slow=6.9,SNR=15						
YAK	Yakutsk	82.70	343	P	P	06 56 58.8	+0.1
	comp=Z,18nm,0.6s,baz=272,slow=0.3,SNR=7.8						
ULN	Ulaanbaatar	82.79	324	P	P	06 57 00.2	+0.5
ULN				IAmb	IAmb	06 57 01.1	
	comp=Z,15nm,1.0s						
SONM	Songino Array	83.15	324	P	P	06 57 01.7	+0.2
	comp=Z,4.4nm,0.7s,baz=142,slow=6.2,SNR=27						
GTA	Gaotai	83.28	314	*e*P	P	06 57 03.2	+0.8
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SUA	Susitna One	83.40	19	P	P	06 57 02.2	-0.3
SUA				IAmb	IAmb	06 57 04.7	
	comp=Z,6.4nm,1.2s						
RC01	Rabbit Creek A	83.43	19	P	P	06 57 02.6	+0.1
KNK	Knik Glacier	84.09	20	P	P	06 57 03.5	-2.3
KNK				IAmb	IAmb	06 57 16.7	
	comp=Z,9.6nm,1.5s						
GHO	Glory Hole Cre	84.21	19	P	P	06 57 05.7	-0.8
SCM	Sheep Creek Mo	84.76	20	P	P	06 57 09.5	+0.2
SCM				IAmb	IAmb	06 57 24.1	
	comp=Z,14nm,1.4s						
KTH	Kantishna Hill	84.95	17	P	P	06 57 09.7	-0.4
WRH	Wood River Hil	86.47	18	P	P	06 57 16.5	-1.0
IL31		87.04	18	P	P	06 57 18.5	-1.8
ILAR	Eielson Array	87.04	18	P	P	06 57 18.4	-1.9
	comp=Z,2.4nm,0.6s,baz=234,slow=4.8,SNR=28						
ILAR				pP	pP	06 57 52.9	+1.8
	comp=Z,1.0nm,0.7s,baz=242,slow=4.9,SNR=3.4						
NVAR	Mina Array Bea	87.48	49	P	P	06 57 23.7	+0.3
	comp=Z,0.9nm,0.8s,baz=228,slow=8.3,SNR=7.3						
SYO	Syowa Base	88.18	197	⇑*e*P	P	06 57 24.0	-1.8
SYO	Syowa Base	88.18	197	⇑*e*PcP	PcP	06 57 28.0	+0.5
TIXI	Tiksi	90.63	349	P	P	06 57 35.6	-1.5
	comp=Z,2.1nm,0.4s,baz=79,slow=5.7,SNR=5.7						
SNAA	Sanae	92.94	183	P	P	06 57 47.1	-0.9
SNAA	Sanae	92.94	183	P	P	06 57 47.2	-0.9
WMQ	Urumqi	93.35	314	*e*P	P	06 57 51.8	+1.4
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,130nm,6.7s						
VNA3	Neumayer Olymp	93.59	181	P	P	06 57 50.0	-1.1
VNA2	Neumayer--Watz	93.86	182	P	P	06 57 51.5	-0.7
	baz=185,slow=4.3						
VNA1	Neumayer--Stat	94.16	181	P	P	06 57 52.9	-0.7
MKAR	Makanchi Array	97.83	316	P	P	06 58 10.6	-0.1
	comp=Z,1.1nm,0.5s,baz=93,slow=5.7,SNR=20						
MKAR				pP	pP	06 58 41.9	-0.7
	comp=Z,0.6nm,0.7s,baz=88,slow=8.7,SNR=2.5						
YKA	Yellowknife Ar	97.98	27	P	P	06 58 09.6	-1.3
	comp=Z,1.1nm,0.7s,baz=256,slow=4.3,SNR=27						
ZALV	Zalesovo Beam	98.05	324	P	P	06 58 10.3	-1.1
	comp=Z,2.6nm,0.6s,baz=116,slow=3.4,SNR=12						
NRIK	Noril'sk	100.75	339	P	Pdif	06 58 22.5	-0.6
	comp=Z,1.2nm,0.3s,baz=122,slow=2.5,SNR=4.8						
KSH	Kashi	100.78	308	P	Pdif	06 58 27.9	+3.7
KSH				S	Sdif	07 09 50.2	-1.3
KSH				SS	SS	07 16 56.8	+4.6
KSH				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KSH				LR	LR		
	comp=Z,250nm,11.5s						
KSH				LR	LR		
	comp=Z,220nm,10.5s						
KSH				LR	LR		
	comp=Z,170nm,11.9s						
SPITS	Spitsbergen Ar	115.58	354	PKP	PKiKP	07 03 15.7	-0.2
	comp=Z,7.9nm,0.8s,baz=139,slow=6.6,SNR=5.1						
ARCES	ARCESS Array B	120.92	345	PKP	PKPdf	07 03 25.6	-0.8
	comp=Z,5.6nm,0.6s,baz=70,slow=1.8,SNR=36						
KLMR	Klimovskoe	121.36	333	*e*PKPdf	PKPdf	07 03 25.2	-2.2
KLMR				AMP		07 03 29.0	
	comp=Z,18nm,1.7s						
SCHQ	Schefferville	122.67	34	PKP	PKPdf	07 03 29.2	-0.9
	comp=Z,2.5nm,1.1s,baz=243,slow=3.0,SNR=3.9						
SCHQ				PKKPbc	PKKPab	07 13 23.9	+0.4
	comp=Z,1.9nm,0.6s,baz=217,slow=15,SNR=7.1						
BOSA	Boshof	123.06	220	PKP	PKPdf	07 03 31.4	-0.5
	comp=Z,2.8nm,0.7s,baz=76,slow=1.9,SNR=4.1						
FINES	FINESS Array B	126.40	338	PKP	PKPdf	07 03 36.9	-0.1
	comp=Z,3.0nm,0.8s,baz=20,slow=1.7,SNR=9.4						
KMBO	Kilima Mbogo	128.21	256	PKP	PKiKP	07 03 43.7	+0.8
	comp=Z,2.7nm,1.0s,baz=45,slow=5.4,SNR=4.6						

NB2	NORSAR Subarra	131.29	345	PKPdf	PKPdf	07 03 46.7	+0.2
	comp=Z,0.8nm,0.7s,baz=31,slow=1.9						
NOA	NORSAR Array B	131.29	345	PKP	PKPdf	07 03 46.5	+0.1
	comp=Z,1.8nm,0.9s,baz=34,slow=1.9,SNR=4.3						
AKASG	Malin Array Be	131.40	326	PKP	PKPdf	07 03 47.4	+0.5
	comp=Z,0.1nm,0.3s,baz=59,slow=1.5,SNR=4.3						
GERES	GERESS Array B	140.32	333	PKP	PKPdf	07 04 03.9	+0.2
	comp=Z,0.7nm,0.6s,baz=104,slow=1.7,SNR=4.1						
SENIN	Lac Senin/Sane	144.94	336		PKPdf	07 04 12.2	+0.1
KEST	Kesra	151.85	320	PKPbc	PKiKP	07 04 30.2	-0.2
	comp=Z,5.5nm,0.9s,baz=185,slow=4.0,SNR=5.8						
TORD	Torodi Ar. Bea	166.10	263	PKP	PKPdf	07 04 39.8	-0.8
	comp=Z,1.4nm,0.6s,baz=45,slow=0.9,SNR=7.6						
TORD				PKPab	PKPab	07 05 41.0	-0.8
	comp=Z,0.6nm,0.5s,baz=118,slow=3.1,SNR=4.3						
DBIC	Dimbokro	168.59	222	PKPab	PKPab	07 05 52.9	+0.3
	comp=Z,1.6nm,0.8s,baz=133,slow=12,SNR=4.3						

*IASPEI **04** 06:48:00.4±0.8, 34.°11N±0.°02×117.°41W±0.°02, h12^{km}±5^{km}, Error ellipse: s-maj=2.7km s-min=2.5km az=14.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*SCEDC **04** 06:48:00.9, 34.°12N×117.°42W, h5^{km}*

*ANF **04** 06:48:00.0±0.1, 34.°11N×117.°41W, h8^{km}±1^{km}, ML2.6/29, Error ellipse: s-maj=1.4km s-min=1.1km az=29.0*

*PAS **04** 06:48:00.9±1.1, 34.°12N±0.°01×117.°416W±0.°010, h5^{km}±3^{km}, ML2.6/193, Error ellipse: s-maj=2.1km s-min=1.1km az=171.0*

*NEIC **04** 06:48:00.3±1.2, 34.°10N±0.°02×117.°40W±0.°02, h14^{km}±2^{km}, Error ellipse: s-maj=2.6km s-min=2.4km az=195.0*

ISC 04 06:48:00.9±0.8**, 34.°11N**±0.°02×**117.°41W**±0.°01**, h11**^{km}±5^{km}**, n65, σ0^{s}87**/99**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FON	Fontana	0.03	243		Pg	06 48 02.6	-0.3
CLTC	Calectric	0.08	104		Pg	06 48 02.9	-0.5
RVR	Riverside	0.12	166		Pg	06 48 03.4	-0.5
SS2	San Sevaine	0.12	322		Pg	06 48 03.2	-0.6
RSBC	Riverside Bore	0.15	154		Pg	06 48 04.0	-0.4
RSBC					Sg	06 48 06.4	-0.4
RSBC	Riverside Bore	0.15	154		Pg	06 48 04.0	-0.4
RSBC					Sg	06 48 06.4	-0.4
HLNC	Highland	0.16	87		Pg	06 48 04.2	-0.2
MLSC	Mira Loma	0.17	230		Pg	06 48 04.2	-0.3
MLSC					Sg	06 48 06.8	-0.3
CSP	Cedar Springs	0.19	13		Pg	06 48 04.4	-0.7
BFSC	Mount Baldy Ra	0.24	302		Pg	06 48 05.2	-0.8
BFSC	Mount Baldy Ra	0.24	302	P	Pg	06 48 05.2	-0.8
	baz=121,SNR=134						
BFSC				S	Sg	06 48 08.6	-0.8
	baz=121						
CHNC	Chino	0.25	243		Pg	06 48 05.9	-0.1
CHNC					Sg	06 48 09.4	-0.1
SSK	Sunset Peak	0.26	293		Pg	06 48 05.7	-0.5
SVD	Seven Oaks Dam	0.26	91		Pg	06 48 06.0	-0.2
CFT	Crafton Hills	0.26	107		Pg	06 48 06.2	0.0
CRNC	Corona	0.27	208		Pg	06 48 06.0	-0.3
CRNC					Sg	06 48 09.9	-0.1
SME	Santa Rosa Min	0.29	171		Pg	06 48 06.4	-0.4
SME					Sg	06 48 10.6	-0.2
PSRC	Puddingstone R	0.33	267		Pg	06 48 07.3	-0.2
PSRC					Sg	06 48 12.1	+0.1
BTL	Butler Peak	0.37	67		Pg	06 48 08.1	-0.2
BBRC	Big Bear Solar	0.43	70	P	Pg	06 48 09.2	-0.3
	baz=250,SNR=56						
BBRC				S	Sg	06 48 15.3	+0.1
	baz=250						
MURC	Murrieta	0.54	161	P	Pg	06 48 10.9	-0.6
	baz=341,SNR=57						
MURC				S	Sg	06 48 18.1	-0.5
	baz=341						
BREC	Barre Substati	0.56	238		Pb	06 48 12.6	-0.2
GVRC	Garvey Reservo	0.59	264		Pg	06 48 12.2	-0.2
DECC	Green Verdugo	0.78	281	P	Pg	06 48 15.3	-0.6
	baz=100						
DECC				S	Sg	06 48 25.9	-0.2
	baz=100						
RRX	Edison Barstow	0.83	24	P	Pg	06 48 16.3	-0.7
	baz=205						
RRX				S	Sg	06 48 27.9	0.0
	baz=205						
FMP	Fort Macarthur	0.84	242	S	Sg	06 48 27.7	-0.2
	baz=61						
RPV	Rancho Palos V	0.91	246		Pg	06 48 18.3	-0.1
EDW2	Edwards Air Fo	0.91	328	P	Pg	06 48 17.3	-1.1
	baz=148,SNR=14						
EDW2				S	Sg	06 48 29.0	-1.2
	baz=148						
FRD	Ford Ranch, An	0.91	132		Pg	06 48 17.8	-0.7
PFO	Pinyon Flats O	0.94	122		Pg	06 48 18.2	-0.7
PFO	Pinyon Flats O	0.94	122	P	Pg	06 48 18.0	-0.9
	baz=303,SNR=9.9						
PFO				S	Sg	06 48 29.9	-1.2
	baz=303						
XPFO	Pion Flat	0.94	122		Pg	06 48 18.3	-0.7
GORC	Green Oak Ranc	0.97	171		Pg	06 48 18.1	-1.4
CIS	Catalina Islan	1.10	230	P	Pg	06 48 21.6	-0.3
	baz=49						
CIS				S	Sg	06 48 35.9	-0.3
	baz=49						
HEC	Hector,Ludlow	1.14	51	P	Pg	06 48 22.0	-0.8
	baz=232,SNR=14						
HEC				S	Sg	06 48 37.3	-0.4
	baz=232						
BELC	Belle Mtn. Jos	1.18	95	P	Pg	06 48 22.6	-1.0
	baz=276,SNR=76						
BELC				S	Sb	06 48 39.3	+0.7
	baz=276						
OSI	Osito Audit: C	1.20	295		Pg	06 48 23.5	-0.4
OSI	Osito Audit: C	1.20	295	P	Pg	06 48 23.4	-0.4
	baz=114						
OSI				S	Sg	06 48 39.2	-0.3
	baz=114						
109C	Camp Elliot, M	1.25	168		Pg	06 48 22.8	-2.0
109C				Sg	Sg	06 48 38.6	-2.4
109C	Camp Elliot, M	1.25	168	P	Pg	06 48 23.6	-1.2
	baz=348						
109C				S	Sg	06 48 41.0	0.0
	baz=348						
CPE	Camp Elliot	1.25	168		Pg	06 48 22.7	-2.2
GSC	Goldstone, Bar	1.29	23		Pg	06 48 24.6	-1.1
GSC					Sg	06 48 41.3	-1.0
GSC	Goldstone, Bar	1.29	23	P	Pg	06 48 24.5	-1.1
	baz=203,SNR=65						
GSC				S	Sg	06 48 41.4	-1.0
	baz=203						
BLG	Laguna Peak, P	1.37	270	S	Sb	06 48 43.9	-0.3
	baz=89						
MONP2	Monument Peak	1.47	146	P	Pn	06 48 27.1	-0.4
	baz=326,SNR=5.3						
MONP2				S	Sb	06 48 46.3	-0.8
	baz=326						
ARVC	Arvin	1.55	311	Pb	Pn	06 48 29.2	+0.8
	baz=131,SNR=8.9						
ARVC				S	Sn	06 48 49.3	+0.7
	baz=131						
BAR	Barrett	1.56	156		Pn	06 48 27.9	-0.6
BAR				Sn	Sn	06 48 47.7	-1.0
GMRC	Granite Mounta	1.59	65	P	Pn	06 48 28.7	-0.5
	baz=246,SNR=20						
GMRC				S	Sb	06 48 51.6	+1.0
	baz=246						
BC3	Big Chuckawall	1.69	105	Pb	Pn	06 48 31.9	+1.5
	baz=286,SNR=15						
BC3				Sb	Sg	06 48 54.9	-0.4
	baz=286						
ISA	Isabella, Lake	1.78	331		Pn	06 48 32.1	+0.5
ISA	Isabella, Lake	1.78	331	Pg	Pb	06 48 33.9	+0.4
	baz=150						
SWSC	Sam W. Stewart	1.78	130	Pb	Pb	06 48 33.7	+0.2
	baz=311						
SWSC				Sb	Sb	06 48 57.3	+1.5
	baz=311						
TUQ	Turquoise Moun	1.80	42	Pg	Pb	06 48 34.5	+0.5
	baz=223						
TUQ				Sb	Sb	06 48 57.1	+0.5
	baz=223						
IKP	In-Ko-Pah, Jac	1.82	143	Pb	Pn	06 48 33.6	+1.3
	baz=324						
IKP				S	Sn	06 48 57.1	+1.8
	baz=324						
IRM	Iron Mountain	1.88	88	Pn	Pn	06 48 33.2	+0.2
	baz=269						
IRM				Pb	Pb	06 48 35.5	+0.3
	baz=269,SNR=27						
IRM				Sb	Sg	06 49 00.9	-0.4
	baz=269						
MPMC	Manual Prospec	1.94	358	Pb	Pb	06 48 36.1	-0.4
	baz=178,SNR=8.8						
SHOC	Shoshone, Teco	2.01	27	Pb	Pb	06 48 38.1	+0.6
	baz=208,SNR=9.2						
SHOC				Sb	Sg	06 49 04.7	-0.8
	baz=208						
DAC	Darwin (Calif)	2.17	356	Pn	Pb	06 48 39.3	-0.9
GLA	Glamis	2.40	115	Pn	Pb	06 48 43.2	-0.9
GLA	Glamis	2.40	115	Sb	Sb	06 49 16.1	+2.3
	baz=297						
Y12C	Blythe	2.43	98	Pb	Pb	06 48 45.5	+1.0
	baz=280,SNR=6.1						
Y12C				Sb	Sg	06 49 18.2	-0.6
	baz=280						
TPNV	Topopah Spring	2.98	18	Pn	Pn	06 48 49.9	+1.6
TPNV	Topopah Spring	2.98	18	Sb	Sg	06 49 34.6	-2.2
	baz=199						
W13A	Hualapai Mount	3.07	70		Pn	06 48 49.5	-0.1
Y14A	Wickenburg	3.66	91		Pn	06 48 58.1	+0.5

*NEIC **04** 07:05:25.9±2.1, 24.°28S±0.°05×67.°04W±0.°09, h161^{km}±7^{km}, mb4.0/10, Md3.7(SJA), Error ellipse: s-maj=12.5km s-min=7.8km az=89.0*

*SJA **04** 07:05:26.3±0.5, 24.°24S×67.°32W, h171^{km}±16^{km}, ML3.5, MW3.6*

*IDC **04** 07:05:26.7±1.4, 24.°20S×67.°01W, h164^{km}±11^{km}, mb3.3/5, mb1 3.6/11, mb1mx3.5/29, mbtmp3.9/11, Error ellipse: s-maj=19.8km s-min=14.6km az=18.0*

*VAO **04** 07:05:28.5±0.4, 23.°99S×67.°29W, h208^{km}±6^{km}, mb4.1*

*GUC **04** 07:05:28.3±0.5, 23.°98S×67.°59W, h220^{km}±8^{km}, ML4.6*

ISC 04 07:05:26.9±0.6**, 24.°22S**±0.°04×**67.°21W**±0.°04**, h175**^{km}±7^{km}**, n83, σ1^{s}30**/111**, mb3.8**/9**, 3C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.63	108	*i* P	Pn	07 06 01.0	+1.1
SLA				*e*S	Sn	07 06 26.0	+0.6
SLA				IAML		07 06 27.2	
	comp=Z,318nm,0.9s						
HJA	Humahuaca	1.93	59	*i* P	Pn	07 06 04.8	+1.5
HJA				*e*S	Sn	07 06 33.1	+1.7
HJA				IAML		07 06 35.9	
	comp=Z,65nm,0.7s						
AZAP	Zapla	1.96	90	*i* P	Pn	07 06 04.1	+0.8
AZAP				*e*S	Sn	07 06 33.1	+1.5
AZAP				IAML		07 06 34.7	
	comp=Z,130nm,1.0s						
LVC	Limon Verde	2.24	315	P	Pn	07 06 08.3	+1.6
	comp=Z,47nm,0.3s,baz=149,slow=7.0,SNR=422						
LVC				S	Sn	07 06 38.5	+0.9
	comp=Z,109nm,0.3s,baz=315,slow=20,SNR=76						
LVC	Limon Verde	2.24	315	*e*P	Pn	07 06 08.6	+1.8
LVC				*e*S	Sn	07 06 38.4	+0.9
PB15	IPOC Station P	2.31	295	*e*P	Pn	07 06 08.6	+1.3
PB15				*i* S	Sn	07 06 39.8	+1.3
GO02	Mina Guanaco	2.36	246	⇑*i*P	Pn	07 06 09.1	+1.1
GO02				*i* S	Sn	07 06 40.7	+0.9
GO02				IAML		07 06 42.2	
	comp=N,2μm,0.2s						
GO02	Mina Guanaco	2.36	246		Pn	07 06 09.0	+1.1
GO02				Sn	Sn	07 06 40.8	+0.9
PB06	IPOC Station P	2.65	304	*e*P	Pn	07 06 12.6	+1.4
PB06				*i* S	Sn	07 06 45.9	+0.3
PB06				IAML		07 06 47.6	
	comp=N,3μm,0.3s						
PB14	IPOC Station P	2.94	261	⇑*i*P	Pn	07 06 15.3	+0.5
PB14				*i* S	Sn	07 06 51.2	-1.0
PB09	IPOC Station P	3.06	322	*e*P	Pn	07 06 18.1	+1.8
PB09				*i* S	Sn	07 06 55.4	+0.8
PB09				IAML		07 06 56.7	
	comp=N,797nm,0.5s						
AHML	Horco Molle	3.06	147	*i* P	Pn	07 06 16.5	+0.4
PB05	IPOC Station P	3.07	296	*e*P	Pn	07 06 17.1	+0.8
PB05				*i* S	Sn	07 06 53.6	-1.1
PB05				IAML		07 07 00.4	
	comp=E,770nm,0.4s						
PB10	IPOC Station P	3.14	282	*e*P	Pn	07 06 17.7	+0.6
PB10				*i* S	Sn	07 06 55.8	-0.3
PB10				IAML		07 07 00.7	
	comp=N,617nm,0.5s						
PB10	IPOC Station P	3.14	282		Pn	07 06 17.9	+0.9
PB10				Sn	Sn	07 06 54.9	-1.2
PB03	IPOC Station P	3.19	312	*e*P	Pn	07 06 18.8	+1.0
PB03				*i* S	Sn	07 06 56.6	-0.9
PB04	IPOC Station P	3.29	304	*e*P	Pn	07 06 19.8	+0.7
PB04				*i* S	Sn	07 06 58.9	-0.8
PB04	IPOC Station P	3.29	304		Pn	07 06 19.8	+0.7
PB04				Sn	Sn	07 06 58.3	-1.5
PB07	IPOC Station P	3.50	315	*e*P	Pn	07 06 22.5	+0.8
PB07				*i* S	Sn	07 07 03.0	-1.4
PB01	IPOC Station P	3.80	326	*e*P	Pn	07 06 26.0	+0.5
PB01				*i* S	Sn	07 07 09.6	-1.5
PB01	IPOC Station P	3.80	326		Pn	07 06 25.9	+0.5
PB01				Sn	Sn	07 07 10.0	-1.1
PB02	IPOC Station P	3.81	319	*i* S	Sn	07 07 10.0	-1.3
GO03	Copiap	4.32	218		Pn	07 06 30.9	-1.1
GO03				Sn	Sn	07 07 20.8	-2.3
CYA	Choya	4.39	164	*i* P	Pn	07 06 33.4	+0.6
PB08	IPOC Station P	4.44	336	⇓*i*P	Pn	07 06 35.0	+1.0
PB08				*i* S	Sn	07 07 25.9	-0.5
GO01	Chusmiza	4.89	337		Pn	07 06 40.6	+0.7
GO01				Sn	Sn	07 07 36.4	-0.6
PB11	IPOC Station P	4.99	332	⇑*i*P	Pn	07 06 40.1	-0.7
PB11				*i* S	Sn	07 07 35.5	-3.2
PB11	IPOC Station P	4.99	332		Pn	07 06 40.5	-0.3
PB11				Sn	Sn	07 07 36.3	-2.5
ACLC	CERRO LA CRUZ	5.19	178	*i* P	Pn	07 06 43.1	-0.2
MNMC	Minye Minye	5.53	336		Pn	07 06 47.9	-0.1
MNMC				Sn	Sn	07 07 49.9	-1.7
ACDV	Cuesta del Vie	6.17	196	*i* P	Pn	07 06 55.8	-0.3
ACDV				IAML		07 08 06.2	
	comp=Z,20nm,0.4s						
APLL	PUNTA DE LOS L	6.18	175	*i* P	Pn	07 06 54.9	-1.3
APLL				IAML		07 08 07.7	
	comp=Z,3.7nm,0.7s						
AROD	Rodeo	6.25	198	*i* P	Pn	07 06 57.5	0.0
AROD				IAML		07 08 10.2	
	comp=Z,7.2nm,0.7s						
ACCO	Cerro Coronel	6.55	194	*i* P	Pn	07 07 01.4	0.0
ACCO				IAML		07 08 18.9	
	comp=Z,20nm,0.5s						
GO04	Tololo Observa	6.73	208		Pn	07 07 01.0	-2.7
GO04				Sn	Sn	07 08 15.0	-5.0
AMOG	MOGNA	6.79	189	*i* P	Pn	07 07 03.7	-0.6
AMOG				IAML		07 08 20.1	
	comp=Z,19nm,0.4s						
RTCV	Cerro Valdivia	7.70	188	*i* P	Pn	07 07 16.0	-0.3
RTCV				IAML		07 09 07.3	
	comp=Z,20nm,3.8s						
LPAZ	La Paz	7.94	354	P	Pn	07 07 21.1	+1.1
	comp=Z,1.7nm,0.3s,baz=157,slow=7.2,SNR=51						
LPAZ				S	Sn	07 08 48.1	-1.3
	comp=Z,0.3nm,0.3s,baz=344,slow=20,SNR=7.5						
LPAZ	La Paz	7.94	354	*e*P	Pn	07 07 18.5	-1.6
CPUP	Villa Florida	9.18	105	P	Pn	07 07 33.8	-2.0
	comp=Z,0.1nm,0.3s,baz=297,slow=11,SNR=7.6						
CPUP	Villa Florida	9.18	105		Pn	07 07 33.3	-2.5
ROC1	El Roble	9.34	200	Pn	Pn	07 07 38.3	+0.2
SIV	San Ignacio	10.01	36	P	Pn	07 07 44.5	-2.3
	comp=Z,1.0nm,0.3s,baz=226,slow=13,SNR=36						
SIV				S	Sn	07 09 26.4	-12
	comp=Z,0.1nm,0.3s,baz=238,slow=17,SNR=4.3						
AQDB	Aquidauana	11.28	73	*e*P	Pn	07 08 04.7	+1.4
GO05	Huala	11.51	200	Pn	Pn	07 08 04.8	-1.2
PP1B	Ponte de Pedra	13.27	63	*e*P	Pn	07 08 29.2	+0.5
SALV	Santo Antonio	13.62	55	*e*P	Pn	07 08 31.1	-2.0
CPSB	Cacapava Do Su	13.70	120	*e*P	P	07 08 36.7	-0.2
PTGB	Pitanga	13.80	95	*e*P	P	07 08 38.9	+0.6
ITAB	Concordia	13.91	106	*e*P	P	07 08 38.9	-0.5
C2SB	Chapadao do Su	14.43	71	*e*P	Pn	07 08 43.3	+0.1
NNA	Nana	15.22	321	Pn	Pn	07 08 52.8	-0.2
SAML	Samuel	15.67	15	P	Pn	07 08 57.9	-0.6
SAML				IAmb	IAmb	07 08 59.8	
	comp=Z,3.9nm,0.9s						
SAML	Samuel	15.67	15	*e*P	Pn	07 08 56.2	-2.3
FRTB	Fartura	16.18	90	*e*P	P	07 09 04.5	0.0
ITRB	Iturama	16.26	77	*e*P	P	07 09 05.0	-0.5
PLCA	Paso Flores	16.70	189	P	P	07 09 10.8	+0.6
	comp=Z,0.2nm,0.3s,baz=19,slow=10,SNR=8.4						
PLCA	Paso Flores	16.70	189	P	P	07 09 10.0	-0.2
PLCA				IAmb	IAmb	07 09 19.2	
	comp=Z,5.7nm,0.6s						
PLCA	Paso Flores	16.70	189	*e*P	Pn	07 09 11.3	+0.5
ARAG	Araguaiana, MT	16.76	62	*e*P	P	07 09 09.7	-1.2
CLDB	Colider	17.15	41	*e*P	P	07 09 12.9	-2.3
VAO	Valinhos	18.59	90	*e*P	P	07 09 30.4	-0.6
IPMB	Ipameri, GO	18.77	74	*e*P	P	07 09 32.7	-0.3
PARB	Paraibuna	19.77	92	*e*P	P	07 09 44.5	+0.7
BDFB	Brasilia	19.94	68	P	P	07 09 44.8	-0.8
	comp=Z,2.0nm,0.3s,baz=237,slow=11,SNR=26						
BDFB	Brasilia	19.94	68	P	P	07 09 44.9	-0.8
BSCB	Bom Sucesso	20.95	86	*e*P	P	07 09 55.0	-1.4
JANB	Januaria	23.38	71	*e*P	P	07 10 19.2	-0.9
SMTB	Santa Maria do	24.18	54	*e*P	P	07 10 25.7	-1.6
PTGA	Pitinga	24.38	18	P	P	07 10 28.5	-0.6
	comp=Z,1.1nm,0.3s,baz=88,slow=9.6,SNR=3.2						
PTGA	Pitinga	24.38	18	P	P	07 10 29.0	-0.1
SDV	Santo Domingo	33.08	354	P	P	07 11 47.5	+1.1
SDV				IAmb	IAmb	07 12 05.9	
	comp=Z,3.7nm,1.1s						
SNAA	Sanae	59.20	161	P	P	07 15 09.7	+0.5
SNAA				IAmb	IAmb	07 15 28.2	
	comp=Z,6.2nm,1.5s						
TXAR	Lajitas Array	63.75	325	P	P	07 15 42.3	+2.0
	comp=Z,0.1nm,0.5s,baz=139,slow=5.6,SNR=2.7						
QSPA	South Pole Qui	65.98	180	P	P	07 15 55.5	+1.2
QSPA				IAmb	IAmb	07 16 08.4	
	comp=Z,1.6nm,1.0s						
SDCO	Great Sand Dun	71.38	329	P	P	07 16 30.1	+2.0
TOA0	Torodi Ar. Sit	76.83	69	P	P	07 16 59.5	-0.4
TOA0				IAmb	IAmb	07 17 00.3	
	comp=Z,2.9nm,1.0s						
TORD	Torodi Ar. Bea	76.83	69	P	P	07 16 59.3	-0.5
	comp=Z,1.4nm,0.8s,baz=256,slow=5.0,SNR=6.0						
PDAR	Pinedale Array	77.24	329	P	P	07 17 03.5	+1.6
	comp=Z,0.2nm,0.5s,baz=108,slow=6.0,SNR=2.7						
YKA	Yellowknife Ar	94.27	340	P	P	07 18 26.8	+1.1
	comp=Z,0.4nm,0.7s,baz=129,slow=4.8,SNR=8.4						
ASAR	Alice Springs	128.18	205	PKP	PKiKP	07 24 13.7	0.0
	comp=Z,0.7nm,0.7s,baz=137,slow=1.8,SNR=9.6						
WRA	Warramunga Arr	131.34	207	PKP	PKPdf	07 24 19.1	0.0
	comp=Z,0.4nm,0.5s,baz=161,slow=1.5,SNR=12						
MKAR	Makanchi Array	146.82	40	PKPbc	PKPab	07 24 49.2	-0.9
	comp=Z,0.9nm,0.6s,baz=304,slow=3.1,SNR=12						

*IDC **04** 07:44:06.4±2.7, 30.°51S×177.°86W, h71^{km}±16^{km}, mb3.5/3, mb1 3.7/4, mb1mx3.4/38, mbtmp3.8/4, Error ellipse: s-maj=59.0km s-min=15.4km az=103.0*

*NEIC **04** 07:44:07.5±1.3, 30.°42S±0.°07×178.°5W±0.°2, h42^{km}±14^{km}, mb4.2/9, Error ellipse: s-maj=26.8km s-min=2.9km az=112.0*

ISC 04 07:44:06.8±0.8**, 30.°40S**±0.°07×**178.°4W**±0.°1**, h35**^{km}**, n19, σ1^{s}56**/23**, mb4.2**/7**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.22	21	P	Pn	07 44 29.4	+2.1
	122nm,0.3s,baz=75,slow=20,SNR=7.5						
RAO				S	Sn	07 44 44.3	+1.6
	550nm,0.3s,baz=37,slow=20,SNR=16						
RAO	Raoul Island	1.22	21	Pn	Pn	07 44 28.4	+1.0
MXZ	Matakaoa Point	7.64	200	Pn	Pn	07 45 56.3	+0.7
MXZ				Sn	Sn	07 47 23.4	+2.5
URZ	Urewera	8.67	204	P	Pn	07 46 10.0	+0.4
	0.7nm,0.3s,baz=266,slow=4.8,SNR=9.3						
URZ				S	Sn	07 47 46.8	+0.7
	4.1nm,0.3s,baz=122,slow=21,SNR=18						
URZ	Urewera	8.67	204		Pn	07 46 09.8	+0.2
URZ				Sn	Sn	07 47 45.9	-0.2
BKZ	Black Stump Fm	9.69	204	Pn	Pn	07 46 23.2	-0.5
RAR	Rarotonga	19.10	66	P	Pn	07 48 27.2	-0.4
RAR				IAmb	IAmb	07 48 36.0	
	comp=Z,9.4nm,1.2s						
STKA	Stephens Creek	34.12	257	P	P	07 50 50.2	+1.9
	comp=Z,0.6nm,0.4s,baz=105,slow=11,SNR=4.5						
STKA	Stephens Creek	34.12	257	P	P	07 50 49.0	+0.7
BBOO	Buckleboo	38.61	254	P	P	07 51 26.1	-0.5
AS31	Alice Springs	42.74	267	P	P	07 52 01.1	+0.3
ASAR	Alice Springs	42.74	267	P	P	07 52 00.2	-0.6
	comp=Z,0.3nm,0.4s,baz=104,slow=7.1,SNR=7.7						
WR0	Warramunga Arr	43.55	272	P	P	07 52 07.8	+0.4
WR0				IAmb	IAmb	07 52 17.0	
	comp=Z,7.4nm,1.3s						
WB2	Warramunga Arr	43.72	272	P	P	07 52 09.3	+0.5
WB2				IAmb	IAmb	07 52 12.1	
	comp=Z,6.4nm,1.3s						
WRA	Warramunga Arr	43.73	272	P	P	07 52 08.1	-0.7
	comp=Z,0.9nm,0.4s,baz=111,slow=7.5,SNR=4.0						
WB0	Warramunga Arr	43.75	273	P	P	07 52 08.9	-0.2
WB0				IAmb	IAmb	07 52 12.8	
	comp=Z,5.9nm,1.4s						
PSAC2	Pilbara Seismi	55.55	264	P	P	07 53 38.6	-0.3
QSPA	South Pole Qui	59.72	180	P	P	07 54 07.2	-0.5
QSPA				IAmb	IAmb	07 54 09.2	
	comp=Z,4.1nm,1.5s						
FINES	FINESS Array B	145.01	340	PKPbc	PKPbc	08 03 33.8	-5.2
	comp=Z,0.3nm,0.3s,baz=73,slow=4.8,SNR=4.1						

IDC 04 07:51:16.1±17.0**, 19.°64S**×**173.°66W, h0**^{km}**, mb4.1**/5**, mb1 4.2**/5**, mb1mx3.7**/52**, mbtmp4.1**/5**, Error ellipse: s-maj=318.5km s-min=158.4km az=80.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	37.64	262	P	P	07 58 33.9	+0.8
	7.0nm,1.0s,baz=90,slow=11,SNR=4.6						
STKA	Stephens Creek	41.83	244	P	P	07 59 07.7	-0.2
	0.7nm,0.7s,baz=106,slow=15,SNR=3.1						
ASAR	Alice Springs	48.69	255	P	P	08 00 02.0	-0.5
	1.4nm,0.5s,baz=95,slow=7.4,SNR=29						
WRA	Warramunga Arr	48.76	260	P	P	08 00 02.5	-0.7
	1.0nm,0.3s,baz=97,slow=7.7,SNR=64						
FITZ	Fitzroy Crossi	57.19	261	P	P	08 01 05.5	+0.1
	1.6nm,0.9s,baz=101,slow=5.2,SNR=4.5						

IDC 04 07:56:07.0±2.7**, 46.°30N**×**150.°17E, h0**^{km}**, mb3.4**/5**, mb1 3.8**/5**, mb1mx3.4**/47**, mbtmp3.4**/5**, MS3.8**/1**, Ms1 3.8**/1**, ms1mx2.6**/46**, Error ellipse: s-maj=240.2km s-min=22.8km az=119.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11N2	WAKE ISLAND Hy	29.85	147	T	T	08 33 35.2	
	baz=337,slow=76						
H11N1	WAKE ISLAND Hy	29.86	147	T	T	08 33 36.5	
	baz=337,slow=76						
H11N3	WAKE ISLAND Hy	29.87	147	T	T	08 33 36.7	
	baz=337,slow=76						
H11S1	WAKE ISLAND Hy	30.89	148	T	T	08 34 53.0	
	baz=338,slow=76						
H11S3	WAKE ISLAND Hy	30.90	148	T	T	08 34 53.0	
	baz=338,slow=76						
H11S2	WAKE ISLAND Hy	30.91	148	T	T	08 34 53.4	
	baz=338,slow=76						
ILAR	Eielson Array	38.16	38	P	P	08 03 27.3	-0.3
	0.6nm,1.0s,baz=262,slow=6.3,SNR=4.5						
AAK	Ala-Archa	52.20	295	LR	LR	08 29 42.7	
	comp=Z,92nm,19.9s,baz=320,slow=39						
YKA	Yellowknife Ar	52.49	36	P	P	08 05 21.1	-0.1
	0.2nm,0.5s,baz=301,slow=6.5,SNR=5.4						
PDAR	Pinedale Array	66.64	52	P	P	08 06 59.6	+0.2
	0.3nm,0.7s,baz=132,slow=1.3,SNR=4.4						
WRA	Warramunga Arr	67.47	196	P	P	08 07 04.5	0.0
	0.4nm,0.5s,baz=14,slow=7.1,SNR=4.5						
ASAR	Alice Springs	71.18	196	P	P	08 07 27.5	+0.1
	0.3nm,0.7s,baz=12,slow=5.4,SNR=3.5						

*IDC **04** 07:58:51.8±1.9, 13.°22N×91.°08W, h0^{km}, mb3.3/2, mb1 3.6/5, mb1mx3.4/38, mbtmp3.3/5, ML3.7/4, MS3.5/1, Ms1 3.5/1, ms1mx2.6/22, Error ellipse: s-maj=27.7km s-min=20.1km az=119.0*

*GCG **04** 07:58:55.7±0.7, 13.°39N×91.°29W, h5^{km}±13^{km}, MD4.0*

*NEIC **04** 07:58:57.7±1.4, 13°.45N±0°.09×91°.35W±0°.07, h20km±10km, Md4.0/18(MEX), Error ellipse: s-maj=16.5km s-min=1.2km az=214.0*
*UCR **04** 07:58:57.7±1.3, 13°.49N×91°.18W, h22km±11km, ML3.4, mb4.0(NEIC)*
*SNET **04** 07:58:57.6±1.3, 13°.49N×91°.17W, h21km±11km, ML3.7*
*MEX **04** 07:58:59.1±0.4, 13°.43N×91°.26W, h16km±12km, MD4.0*
ISC 04 07:58:56.6±1.1, **13°.38N**±0°.07×**91°.29W**±0°.04, **h20**km±6km, **n58**, σ**1s.16**/83, **1C-1D**, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERG	Entre ros, C	1.08	346	eP	Pb	07 59 17.6	+0.9
IXG	Ixpaco	1.14	46	eP	Pn	07 59 15.8	-1.7
IXG	Ixpaco	1.14	46	eP	Pn	07 59 15.8	-1.7
IXG	Ixpaco	1.14	46	⇑ iP	Pn	07 59 16.8	-0.8
FUG	Fuego 3	1.15	22	⇓ eP	Pn	07 59 17.6	-0.1
STG3	Santiaguito 3,	1.35	349	eP	Pn	07 59 20.4	-0.1
NBG	Las Nubes	1.51	37	eP	Pn	07 59 23.3	+0.6
NBG				eS	Sn	07 59 41.9	-0.1
RTR	El Retiro	1.68	72	eP	Pn	07 59 24.0	-1.0
RTR	El Retiro	1.68	72	eP	Pn	07 59 24.0	-1.0
SBLS	San Blas	1.69	74	eP	Pn	07 59 23.7	-1.4
SBLS				eS	Sn	07 59 44.7	-1.5
SBLS	San Blas	1.69	74	eP	Pn	07 59 23.7	-1.4
SBLS				eS	Sn	07 59 44.7	-1.5
SNJE	San Jose	1.71	73	eP	Pn	07 59 24.1	-1.3
SNJE	San Jose	1.71	73	eP	Pn	07 59 24.1	-1.3
THIG		1.79	328		Pn	07 59 26.0	-0.3
THIG					Sn	07 59 45.9	-2.4
THIG		1.79	328	iP	Pn	07 59 26.0	-0.3
THIG				iS	Sn	07 59 45.9	-2.4
APG	El Apazote	1.80	26	Pn	Pn	07 59 27.0	+0.3
	60nm,0.3s,baz=203,slow=14,SNR=1389						
APG				Lg	Lg	07 59 50.5	
	29nm,0.3s,baz=125,slow=7.8,SNR=14						
BOQS	Boqueron	1.99	80	eP	Pn	07 59 28.6	-0.7
BOQS				eS	Sn	07 59 53.1	-0.5
SNET	Serv Nac Est T	2.03	81	eP	Pn	07 59 29.0	-0.6
SNET				eS	Sn	07 59 52.6	-1.9
SNET	Serv Nac Est T	2.03	81	Pn	Pn	07 59 29.4	-0.2
SNET	Serv Nac Est T	2.03	81	eP	Pn	07 59 29.0	-0.6
SNET				eS	Sn	07 59 52.6	-1.9
MTO3	Montecristo	2.13	61	eP	Pn	07 59 30.9	-0.3
MTO3				eS	Sn	07 59 56.9	-0.3
MTO3	Montecristo	2.13	61	eP	Pn	07 59 30.9	-0.3
MTO3				eS	Sn	07 59 56.9	-0.3
LFU	La Fuente	2.15	80	eP	Pn	07 59 31.1	-0.2
LFU				eS	Sn	07 59 56.2	-1.3
LFU	La Fuente	2.15	80	eP	Pn	07 59 31.1	-0.2
LFU				eS	Sn	07 59 56.2	-1.3
LFRS	El Faro	2.18	83	eP	Pn	07 59 31.8	-0.1
LFRS				eS	Sn	07 59 57.0	-1.4
LBRS	Las Brisas	2.22	81	eP	Pn	07 59 31.8	-0.4
MRL	Marmol	2.30	43	eP	Pn	07 59 33.8	+0.2
MRL				eS	Sn	08 00 00.9	-0.5
MRL	Marmol	2.30	43	eP	Pn	07 59 33.8	+0.2
MRL				eS	Sn	08 00 00.9	-0.5
MRL	Marmol	2.30	43	eP	Pn	07 59 34.8	+1.2
MRL				eS	Sb	08 00 04.8	-0.8
TECA	Tecapa	2.72	87	eP	Pn	07 59 39.1	-0.1
TECA	Tecapa	2.72	87	eP	Pn	07 59 39.1	-0.1
PACA	Pacayal	2.89	88	eP	Pn	07 59 41.6	0.0
PACA	Pacayal	2.89	88	eP	Pn	07 59 41.6	0.0
PCIG		2.97	321		Pn	07 59 42.6	+0.1
PCIG					Sn	08 00 16.3	-1.2
PCIG		2.97	321	eP	Pn	07 59 42.6	+0.1
PCIG				iS	Sn	08 00 16.3	-1.2
CCIG	Comitan	3.00	344		Pn	07 59 42.9	-0.2
CCIG					Sn	08 00 17.7	-0.8
CCIG	Comitan	3.00	344	Pn	Pn	07 59 44.5	+1.4
CCIG	Comitan	3.00	344	iP	Pn	07 59 42.9	-0.2
CCIG				iS	Sn	08 00 17.7	-0.8
CNCH	Conchagua	3.37	91	eP	Pn	07 59 47.8	-0.4
CNCH				eS	Sn	08 00 27.5	-0.1
CNCH				IAML		08 00 31.9	
	comp=Z,185nm,0.4s						
CNCH	Conchagua	3.37	91	eP	Pn	07 59 47.8	-0.4
CNCH				eS	Sn	08 00 27.5	-0.1
CNCH				IAML		08 00 31.9	
	comp=Z,185nm,0.4s						
TGIG		3.81	333		Pn	07 59 53.8	-0.4
TGIG					Sn	08 00 37.7	-0.8
TGIG		3.81	333	iP	Pn	07 59 53.8	-0.4
TGIG				iS	Sn	08 00 37.7	-0.8
TGUH	Tegucigalpa,Un	3.96	80	Pn	Pn	07 59 57.9	+1.6
ESTN	Estel	4.80	93	Pn	Pn	08 00 09.6	+1.7
CMIG	Matias Romero	5.06	317	Pn	Pn	08 00 11.8	+0.5
	comp=Z,1.0nm,0.3s,baz=121,slow=8.5,SNR=13						
CMIG				Sn	Sn	08 01 05.7	-3.5
	comp=Z,0.8nm,0.3s,baz=157,slow=15,SNR=2.6						
CMIG	Matias Romero	5.06	317		Pn	08 00 11.8	+0.5
CMIG					Sn	08 01 09.2	-0.1
CMIG	Matias Romero	5.06	317	iP	Pn	08 00 11.8	+0.5
CMIG				iS	Sn	08 01 09.2	-0.1
ACON	Acoyapa	6.13	103	Pn	Pn	08 00 28.8	+2.7
JTS	Las Juntas de	6.92	116	Pn	Pn	08 00 30.4	-6.6
	comp=Z,0.4nm,0.3s,baz=17,slow=20,SNR=5.6						
JTS	Las Juntas de	6.92	116	Pn	Pn	08 00 40.5	+3.5
TEIG	Tepich	7.39	23	Pn	Pn	08 00 43.7	+0.3
	comp=Z,9.3nm,0.3s,baz=197,slow=0.0,SNR=59						
TEIG	Tepich	7.39	23		Pn	08 00 44.4	+1.1
TX32	Lajitas Array	19.59	326	P	Pn	08 03 24.6	-0.4
TXAR	Lajitas Array	19.59	326	P	P	08 03 23.9	+0.3
	comp=Z,0.1nm,0.3s,baz=140,slow=11,SNR=3.4						
Z41A	Richland Creek	19.83	356	P	P	08 03 26.7	+0.6
NVAR	Mina Array Bea	34.58	321	P	P	08 05 46.5	+2.2
	comp=Z,0.5nm,0.7s,baz=125,slow=9.1,SNR=5.3						
CPUP	Villa Florida	51.47	140	LR	LR	08 27 50.1	
	comp=Z,50nm,19.9s,baz=28,slow=34						
YKA	Yellowknife Ar	51.78	346	P	P	08 08 00.7	-1.9
	comp=Z,0.1nm,0.6s,baz=146,slow=7.9,SNR=5.7						

MAN 04 08:09:21.1, 10°.00N×124°.44E, h47km, mb4.3, ML3.2, MS2.9, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.57	304	⇓ eP	Pn	08 09 29.0	-4.1
LLP				eS	Sn	08 09 36.3	-5.3
TBP	Tagbilaran	0.65	242	⇑ eP	Pn	08 09 29.2	-4.9
TBP				eS	Sn	08 09 38.6	-4.8
RCP	Roxas	2.28	313	⇓ eP	Pn	08 09 58.4	+2.1
RCP				eS	Sn	08 10 27.3	+4.1
KCP	Kidapawan	3.04	168	⇑ eP	Pn	08 10 09.9	+3.1

IDC 04 08:22:56.3±1.5, **1°.09S**×**126°.65E**, **h0**km, **mb3.0**/3, **mb1 3.3**/4, **mb1mx3.2**/40, **mbtmp3.2**/4, **ML3.3**/1, **Error ellipse: s-maj=37.3km s-min=24.7km az=52.0**, **Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.62	87	Pn	Pn	08 24 08.2	+0.7
	1.5nm,0.3s,baz=270,slow=20,SNR=3.7						
SIJI				Sn	Sn	08 25 02.1	+0.2
	2.4nm,0.3s,baz=270,slow=20,SNR=3.9						
WRA	Warramunga Arr	20.19	159	P	P	08 27 32.4	-0.4
	0.3nm,0.5s,baz=338,slow=11,SNR=7.3						
ASAR	Alice Springs	23.52	163	P	P	08 28 08.4	+0.2
	0.2nm,0.4s,baz=346,slow=13,SNR=5.5						
MKAR	Makanchi Array	61.48	327	P	P	08 33 14.8	-0.1
	0.1nm,0.4s,baz=115,slow=8.3,SNR=2.8						

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*IDC **04** 08:40:20.1±2.2, 2°.40S×127°.88E, h0km, mb3.4/2, mb1 4.0/3, mb1mx3.5/35, mbtmp3.7/3, ML4.2/1, Error ellipse: s-maj=155.0km s-min=27.4km az=67.0*
*DJA **04** 08:40:25.5±0.3, 2°S±3°×12°8E±°, h10km, M3.2/7, MLv3.2/7*
ISC 04 08:40:24.8±1.0, **2°.29S**±0°.04×**127°.91E**±0°.06, **h32**km, **n8**, σ**1s.02**/12, **Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NLAI	Namlea	1.24	221	P	Pb	08 40 47.6	-0.1
NLAI				S	Sb	08 41 03.7	+0.3
AAI	Ambon	1.42	168	P	Pb	08 40 50.5	-0.1
AAI				S	Sb	08 41 09.3	+0.9
MSAI	Masohi	1.46	136	P	Pb	08 40 51.0	-0.4
MSAI				S	Sb	08 41 11.3	+1.6
LBMI	Labuha	1.69	346	P	Pb	08 40 54.6	-0.7
LBMI				S	Sb	08 41 17.5	+1.3
SANI	Sanana	1.94	277	P	Pb	08 40 59.4	0.0
WRA	Warramunga Arr	18.64	161	P	P	08 44 38.5	-1.5
	0.8nm,0.3s,baz=339,slow=12,SNR=41						
ASAR	Alice Springs	22.03	165	P	P	08 45 15.8	-1.0
	1.6nm,0.7s,baz=350,slow=11,SNR=18						
MKAR	Makanchi Array	63.17	327	P	P	08 50 50.2	+0.5
	0.3nm,0.7s,baz=124,slow=7.2,SNR=3.6						

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*ATA **04** 08:51:01.3±2.3, 39°.05N×40°.77E, h30km±7km, ML2.0, MW4.1*
*DDA **04** 08:51:02.9, 39°.07N×40°.68E, h7km±3km, ML2.3*
*ISK **04** 08:51:02.3, 39°.06N×40°.74E, h3km, ML2.1/7*
ISC 04 08:51:02.3±0.9, **39°.07N**±0°.02×**40°.75E**±0°.02, **h9**km±7km, **n30**, σ**0s.88**/51, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNGB	Bingl	0.09	215	PG	Pg	08 51 04.3	-0.4
BNGB				SG	Sg	08 51 06.4	0.0
BNGL	BINGOL	0.34	110	eP	Pb	08 51 10.4	-0.3
BNGL				eS	Sb	08 51 15.9	-0.3
BNGL				IAML		08 51 18.3	
	comp=Z,446nm,0.2s						
BNGL	BINGOL	0.34	110	iP	Pb	08 51 10.3	-0.3
BNGL				iS	Sb	08 51 16.7	+0.5
KARO	Karliova-Bingo	0.34	44	PG	Pg	08 51 10.0	+0.9
KARO				SG	Sb	08 51 15.5	-0.9
YEDI	Yedisu-Bingol	0.40	337	PG	Pg	08 51 10.8	+0.5
YEDI				SG	Sb	08 51 17.4	-0.8
ECAT	Cat-ERZURUM	0.57	18	eP	Pg	08 51 13.8	+0.4
ECAT				eS	Sb	08 51 22.4	-0.6
ECAT				IAML		08 51 26.7	
	comp=Z,34nm,0.3s						
ECAT	Cat-ERZURUM	0.57	18	iP	Pg	08 51 13.8	+0.4
ECAT				iS	Sb	08 51 23.2	+0.2
MUSM	Mu-Merkez	0.69	119	iP	Pg	08 51 15.3	-0.3
MUSM				iS	Sg	08 51 25.3	+0.7
HANI	Diyarbakir_Han	0.70	203	iP	Pb	08 51 17.1	+0.3
HANI				iS	Sb	08 51 27.5	+0.8
TNCL	Tunceli-Merkez	0.94	273	eP	Pg	08 51 19.6	-0.8
TNCL				eS	Sb	08 51 33.0	-0.5
TNCL				IAML		08 51 35.5	
	comp=Z,59nm,0.4s						
TNCL	Tunceli-Merkez	0.94	273	iP	Pg	08 51 19.8	-0.6
TNCL				iS	Sb	08 51 33.0	-0.5
TNCL				IAML		08 51 35.0	
	comp=N,104nm,0.3s						
KOPT	Kop Dagi	0.97	349	eP	Pb	08 51 21.4	-0.2
KOPT				eS	Sn	08 51 36.5	-0.1
KOPT				IAML		08 51 51.2	
	comp=Z,14nm,0.7s						
KOPT	Kop Dagi	0.97	349	iP	Pb	08 51 21.7	+0.2
EMRE	Erzurum,Aziziy	0.98	10	iP	Pb	08 51 21.6	-0.1
SVAN	Silvan-Diyarba	0.98	159	PG	Pb	08 51 21.6	+0.1
SVAN				SG	Sn	08 51 36.3	-0.1
SVAN	Silvan-Diyarba	0.98	159	iP	Pb	08 51 21.5	-0.1
SVAN				iS	Sb	08 51 35.4	+0.8
EUZM	Uzumlu	1.03	309	eP	Pb	08 51 22.5	0.0
EUZM				eS	Sn	08 51 37.9	-0.1
EUZM				IAML		08 51 43.9	
	comp=Z,8.4nm,0.4s						
AKDA	Akdag	1.14	25	eP	Pg	08 51 21.1	-3.2
AKDA				IAML		08 51 48.1	
	comp=Z,23nm,0.4s						
BLIS	Bitlis-Merkez	1.25	121	eP	Pg	08 51 23.9	-2.5
BLIS				eS	Sb	08 51 42.9	+0.3
BLIS				IAML		08 51 50.1	
	comp=Z,11nm,0.6s						
KOPR	Koprukoy-ERZUR	1.26	42	PN	Pg	08 51 26.9	+0.3
KOPR				SN	Sn	08 51 45.3	+1.7
KRIK	Erzurum-spir	1.28	6	eP	Pg	08 51 27.6	+0.7
SVRC	Sivrice-ELAZID	1.32	239	PN	Pg	08 51 28.1	+0.5
HOMI	Horasan	1.33	42	eP	Pn	08 51 26.4	-0.9
HOMI				eS	Sb	08 51 44.3	-0.5
BAYT	Aydıntepe-Bayb	1.41	341	PN	Pg	08 51 30.4	+1.1
SRTM	Siirt_Merkez	1.42	139	iP	Pn	08 51 28.7	+0.3
SRTM				iS	Sg	08 51 50.0	+2.2
KELT	Kelkit	1.58	314	eP	Pb	08 51 31.4	-0.4
KELT				eS	Sg	08 51 54.2	+1.0
KELT				IAML		08 51 59.6	
	comp=Z,5.8nm,0.8s						
KELT	Kelkit	1.58	314	iP	Pg	08 51 32.4	-0.3
KEMA	Kemaliye	1.76	277	eP	Pb	08 51 34.5	-0.5
KEMA				IAML		08 52 00.4	
	comp=Z,3.1nm,0.5s						
KEMA	Kemaliye	1.76	277	iP	Pb	08 51 35.1	+0.1
KEMA				iS	Sg	08 51 58.7	-0.3
AGRB	Hanur-Agry	1.82	73	PN	Pb	08 51 35.7	-0.2

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*IDC **04** 09:21:19.9±1.3, 6°.18S×150°.76E, h62km±12km, mb3.7/12, mb1 3.9/14, mb1mx3.8/42, mbtmp4.0/14, MS3.3/5, Ms1 3.3/5, ms1mx3.0/42, Error ellipse: s-maj=36.0km s-min=8.3km az=126.0*
*NEIC **04** 09:21:19.5±1.6, 6°.1S±0°.2×150°.8E±0°.2, h59km±10km, mb4.2/9, Error ellipse: s-maj=38.5km s-min=8.4km az=127.0*
ISC 04 09:21:19.3±0.7, **5°.8S**±0°.1×**150°.4E**±0°.1, **h48**km, **n34**, σ**1s.75**/37, **mb4.0**/15, **MS3.6**/3, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.20	49	P	Pn	09 21 53.7	+0.3
	219nm,0.3s,baz=138,slow=1.0,SNR=102						
KRVT				S	Sn	09 22 22.3	+2.8
	204nm,0.3s,baz=160,slow=19,SNR=9.6						
KRVT				LR	LR	09 22 22.3	
	comp=Z,218nm,20.5s,baz=265,slow=28						
RABL	Rabaul	2.38	49		Pn	09 21 55.4	-0.5
RABL				Sn	Sn	09 22 24.1	+0.2
PMG	Port Moresby	4.81	221	P	Pn	09 22 30.0	+0.9
	11nm,0.3s,baz=40,slow=11,SNR=20						
PMG				S	Sn	09 23 23.7	+0.1
	7.7nm,0.3s,baz=91,slow=8.1,SNR=3.6						
PMG				LR	LR	09 23 58.9	
	comp=Z,105nm,18.2s,baz=109,slow=33						
PMG	Port Moresby	4.81	221		Pn	09 22 30.1	+0.9
PMG				Sn	Sn	09 23 24.9	+1.2
COEN	Coen	10.78	221		Pn	09 23 51.1	0.0
WB0	Warramunga Arr	20.85	227	P	P	09 25 57.5	+0.2
WB0				IAmb	IAmb	09 25 59.0	
	comp=Z,13nm,1.1s						
WR0	Warramunga Arr	20.87	226	P	P	09 25 58.4	+0.9
WB2	Warramunga Arr	21.00	226	P	P	09 25 59.3	+0.5
WRA	Warramunga Arr	21.00	226	P	P	09 25 58.0	-1.0
	comp=Z,8.9nm,0.6s,baz=53,slow=11,SNR=27						
KNRA	Kununurra	23.37	243	P	P	09 26 23.5	-0.4
KNRA				IAmb	IAmb	09 26 41.9	
	comp=Z,9.9nm,0.9s						
AS31	Alice Springs	23.82	220	P	P	09 26 28.5	+0.4
AS31				IAmb	IAmb	09 26 28.8	
	comp=Z,3.2nm,0.3s						
ASAR	Alice Springs	23.82	220	P	P	09 26 27.8	-0.3
	comp=Z,4.3nm,0.4s,baz=57,slow=9.1,SNR=138						
FITZ	Fitzroy Crossi	27.07	241	P	P	09 26 59.1	+1.6
	comp=Z,1.3nm,0.7s,baz=65,slow=10.0,SNR=3.6						
FITZ	Fitzroy Crossi	27.07	241	P	P	09 26 58.0	+0.5
FITZ				IAmb	IAmb	09 27 10.3	
	comp=Z,4.2nm,0.7s						
STKA	Stephens Creek	27.23	196	P	P	09 26 56.5	-2.3
	comp=Z,3.0nm,0.8s,baz=21,slow=12,SNR=5.7						
STKA				LR	LR	09 37 59.4	
	comp=Z,122nm,18.5s,baz=31,slow=37						
STKA	Stephens Creek	27.23	196	P	P	09 26 58.5	-0.4
KSRS	Korea Array	47.84	336	P	P	09 29 56.6	+4.3
	comp=Z,0.6nm,0.5s,baz=159,slow=9.0,SNR=3.2						
KSRS				LR	LR	09 49 07.9	
	comp=Z,61nm,19.3s,baz=353,slow=34						
HHC	Hu-ho-hao-te	58.46	326	eP	P	09 31 09.0	-1.6
LZH	Lanzhou	60.27	317	eP	P	09 31 21.8	-1.5
LZH				pP	pP	09 31 34.6	-2.2
LZH				sP	sP	09 31 40.1	-2.2
LZH				ePP	PP	09 33 36.5	-0.2
SONM	Songino Array	65.89	329	P	P	09 32 03.6	+3.4
	comp=Z,0.3nm,0.5s,baz=153,slow=4.0,SNR=3.3						
WMQ	Urumqi	74.84	318	eP	P	09 32 52.4	-2.5
MKAR	Makanchi Array	79.48	320	P	P	09 33 22.9	+2.1
	comp=Z,0.7nm,0.8s,baz=119,slow=4.5,SNR=5.3						
ZALV	Zalesovo Beam	80.63	327	P	P	09 33 28.3	+1.5
	comp=Z,0.7nm,0.5s,baz=98,slow=7.4,SNR=3.1						
KSH	Kashi	81.74	311	P	P	09 33 32.5	-0.8
KSH				sP	pP	09 33 50.3	+2.9
KSH	Kashi	81.74	311	S	S	09 43 37.6	-5.3
MCK	McKinley	82.70	23	P	P	09 33 36.6	-0.9
KURK	Kurchatov	83.06	323	P	P	09 33 40.9	+1.3
KURK	Kurchatov	83.06	323	IAmb	IAmb	09 33 42.5	
	comp=Z,2.5nm,1.1s						
KURBB	Kurchatov Arra	83.08	322	P	P	09 33 40.9	+1.1
	comp=Z,0.4nm,0.5s,baz=133,slow=4.3,SNR=3.2						
ILAR	Eielson Array	83.98	23	P	P	09 33 42.8	-1.3
	comp=Z,1.2nm,0.8s,baz=261,slow=4.9,SNR=12						
BVAR	Borovoye Array	88.58	323	P	P	09 34 07.8	+0.9
	comp=Z,0.2nm,0.5s,baz=72,slow=1.8,SNR=2.4						
AKTO	Aktyubinsk	95.91	320	LR	LR	10 21 02.1	
	comp=Z,33nm,18.5s,baz=330,slow=37						
YKA	Yellowknife Ar	97.41	28	P	P	09 34 47.3	-0.1
	comp=Z,0.3nm,0.5s,baz=272,slow=4.6,SNR=12						
TORD	Torodi Ar. Bea	148.27	286	PKPbc	PKPbc	09 41 01.4	+0.1
	comp=Z,2.9nm,0.6s,baz=90,slow=2.7,SNR=17						

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*OSPL **04** 09:33:24.1±0.6, 18°.97N×67°.06W, h92km±19km, ML3.9*
*RSPR **04** 09:33:24.5, 19°.14N×67°.47W, h79km±3km, MD3.4/15*
*NEIC **04** 09:33:24.6±1.8, 19°.16N±0°.02×67°.42W±0°.04, h32km±9km, Error ellipse: s-maj=5.4km s-min=2.9km az=64.0*
ISC 04 09:33:25.3±1.8, **19°.13N**±0°.06×**67°.42W**±0°.03, **h31**km±14km, **n62**, σ**0s.84**/71, **10C-6D**, **Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.72	156	iP	Pn	09 33 38.3	-1.1
AGPR				eS	Sb	09 33 48.8	-0.4
AGPR				IAML		09 33 50.9	
	comp=Z,3µm,0.2s						
AGPR	Aguadilla, PR	0.72	156	⇑ eP	Pn	09 33 38.4	-1.1
AGPR	Aguadilla, PR	0.72	156		Pn	09 33 38.2	-1.1
AGPR				Sn	Sb	09 33 48.8	-0.4
MPR	Mayaguez	0.95	164		Pn	09 33 42.0	-0.6
MPR				Sn	Sn	09 33 54.4	-0.7
LSP	Las Mesas	1.00	162	⇓ eP	Pn	09 33 42.8	-0.5
LSP	Las Mesas	1.00	162	eS	Sb	09 33 57.6	+0.4
LSP	Las Mesas	1.00	162		Pn	09 33 42.8	-0.5
LSP					Sb	09 33 57.6	+0.4
AOPR	Arecibo Observ	1.00	141	⇑ eP	Pn	09 33 42.2	-1.1
AOPR	Arecibo Observ	1.00	141	eS	Sb	09 33 58.4	+1.2
AOPR	Arecibo Observ	1.00	141		Pn	09 33 42.1	-1.2
AOPR					Sb	09 33 57.9	+0.7
EMPR	Esperanza - Ma	1.07	128	⇓ eP	Pn	09 33 43.9	-0.3
EMPR	Esperanza - Ma	1.07	128	eS	Sb	09 33 60.0	+1.1
EMPR	Esperanza - Ma	1.07	128		Pn	09 33 43.8	-0.4
PCDR	Punta Cana, DR	1.10	236	⇑ eP	Pn	09 33 43.9	-0.7
PCDR	Punta Cana, DR	1.10	236	eS	Sn	09 33 58.6	-0.1
PCDR	Punta Cana, DR	1.10	236		Pn	09 33 44.2	-0.3
PCDR				Sn	Sn	09 33 58.9	+0.1
CRPR	Cabo Rojo, PR	1.16	165	⇑ eP	Pn	09 33 45.1	-0.3
CRPR	Cabo Rojo, PR	1.16	165	eS	Sb	09 34 01.3	-0.2
CRPR	Cabo Rojo, PR	1.16	165		Pn	09 33 44.9	-0.5
CRPR					Sn	09 34 00.5	+0.4
CRPR				Sn	Sb	09 34 01.0	-0.5
MLPR	Magueyes Islan	1.21	163	⇑ eP	Pn	09 33 45.8	-0.3
MLPR	Magueyes Islan	1.21	163	eS	Sn	09 34 02.0	+0.5
MLPR	Magueyes Islan	1.21	163		Pn	09 33 45.8	-0.3
GBPR	Guanica, Bosqu	1.26	156	⇑ eP	Pn	09 33 46.7	-0.1
GBPR	Guanica, Bosqu	1.26	156	eS	Sb	09 34 03.7	-0.7
GBPR	Guanica, Bosqu	1.26	156		Pn	09 33 46.7	-0.1
GBPR					Sb	09 34 03.7	-0.7
OBIP	Obispado Ponce	1.33	144	⇓ eP	Pn	09 33 47.0	-0.8
OBIP	Obispado Ponce	1.33	144	eS	Sn	09 34 04.8	+0.4
OBIP	Obispado Ponce	1.33	144		Pn	09 33 46.4	-1.4
ICMP	Isla Caja de M	1.50	146		Pn	09 33 50.4	+0.3
GCPR	Guaynabo City	1.51	123	⇓ eP	Pn	09 33 49.9	-0.3
GCPR	Guaynabo City	1.51	123		Pn	09 33 49.9	-0.3
SJG	San Juan	1.57	130		Pn	09 33 50.6	-0.6
IGPR	InterUniversit	1.70	133	⇓ eP	Pn	09 33 52.9	0.0
IGPR	InterUniversit	1.70	133	eS	Sn	09 34 14.0	+0.4
IGPR	InterUniversit	1.70	133		Pn	09 33 53.0	0.0
PDPR	Patillas Dam,	1.73	130	⇑ eP	Pn	09 33 53.2	0.0
PDPR	Patillas Dam,	1.73	130	eS	Sn	09 34 14.9	+0.6
PDPR	Patillas Dam,	1.73	130		Pn	09 33 53.1	-0.1
HUMP	Col San Antoni	1.79	123	⇑ eP	Pn	09 33 53.7	-0.4
HUMP	Col San Antoni	1.79	123	eS	Sn	09 34 16.4	+0.7
HUMP	Col San Antoni	1.79	123		Pn	09 33 53.4	-0.6
DR12	Loma Pena Alta	1.89	260		Pn	09 33 55.4	-0.1
MTP	Monte Pirata	2.05	120	⇑ eP	Pn	09 33 57.1	-0.5
MTP	Monte Pirata	2.05	120	eS	Sn	09 34 22.7	+0.6
MTP	Monte Pirata	2.05	120		Pn	09 33 57.1	-0.5
CUPR	Culebra, Puert	2.19	112	⇓ eP	Pn	09 33 58.8	-0.8
CUPR	Culebra, Puert	2.19	112		Pn	09 33 58.1	-1.4
SDD	Santo Domingo	2.46	255	iP	Pn	09 34 04.7	+1.5
SDD	Santo Domingo	2.46	255		Pn	09 34 03.9	+0.6
STVI	Saint Thomas	2.46	108	⇑ eP	Pn	09 34 02.8	-0.6
STVI	Saint Thomas	2.46	108	eS	Sn	09 34 32.2	-0.2
STVI	Saint Thomas	2.46	108		Pn	09 34 02.3	-1.0
CDVI	St. Croix	2.87	118		Pn	09 34 10.3	+1.4
BANI	BANI	2.88	256		Pn	09 34 07.3	-1.9
SC01	Santiago de lo	3.14	276	iP	Pn	09 34 14.5	+1.8
SC01				IAML		09 35 15.4	
	comp=Z,204nm,0.3s						
SC01	Santiago de lo	3.14	276	Pn	Pn	09 34 10.6	-2.1
SDDR	Presa de Saban	3.66	268	iP	Pn	09 34 21.6	+1.7
SDDR				IAML		09 35 23.6	
	comp=Z,99nm,0.4s						
SDDR	Presa de Saban	3.66	268		Pn	09 34 20.7	+0.8
GRTK	Grand Turk	4.21	305	Pn	Pn	09 34 25.7	-1.7
SABA	Saba	4.24	110	Pn	Pn	09 34 27.9	+0.1
SMRT	St. Maarten	4.26	104	Pn	Pn	09 34 27.4	-0.7
SKI	Saint Kitts	4.79	111	Pn	Pn	09 34 36.0	+0.5

SCB 04 09:38:22.1±8.0, **15°.15S**×**66°.66W**, **h274**km±154km, **ML4.4**/1, **Error ellipse: s-maj=388.4km s-min=96.2km az=0.0**, **Central Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBOB	La Paz, Bander	1.73	235	P	Pn	09 39 09.0	+4.0
BBOB				S	S	09 39 33.3	-5.6
BBOB				IAML		09 39 34.9	
	1µm,0.5s						
BBOE	La Paz, Chanca	2.09	217	P	Pn	09 39 10.3	+2.3
BBOJ	La Paz, Jacaqu	2.34	219	P	Pn	09 39 08.5	-1.7
BBOD	La Paz, Gloria	2.38	231	P	Pn	09 39 05.1	-5.5
CLDB	Colider	11.40	69	P	P	09 41 00.7	-0.2

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*IDC **04** 09:41:05.6±2.4, 31°.60S×68°.64W, h91km±21km, mb3.6/4, mb1 3.6/9, mb1mx3.4/33, mbtmp3.8/9, Error ellipse: s-maj=33.9km s-min=17.2km az=96.0*
*NEIC **04** 09:41:06.4±3.1, 31°.59S±0°.06×68°.6W±0°.1, h97km±3km, Error ellipse: s-maj=12.9km s-min=8.5km az=109.0*
*SJA **04** 09:41:07.4±0.9, 31°.59S×68°.68W, h112km±3km, ML3.7, MW3.7*
ISC 04 09:41:07.2±0.6, **31°.57S**±0°.04×**68°.68W**±0°.04, **h113**km±5km, **n58**, σ**1s.77**/83, **mb4.2**/5, **San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZON	Zonda	0.02	11	iP	Pn	09 41 23.4	+0.6
ZON				IAML		09 41 24.6	
	comp=Z,1µm,0.6s						
ZON				iS	Sn	09 41 35.0	+0.6
RTLL	Cerro Villicun	0.30	37	iP	Pn	09 41 24.1	+0.7
RTLL				iS	Sn	09 41 36.4	+0.9
RTCV	Cerro Valdivia	0.32	158	iP	Pn	09 41 24.3	+0.8
RTCV				iS	Sn	09 41 36.3	+0.6
RTLS	Leoncito	0.57	246	iP	Pn	09 41 26.2	+1.0
RTLS				IAML		09 41 26.7	
	comp=Z,2µm,0.3s						
RTLS				iS	Sn	09 41 40.0	+1.2
AMOG	MOGNA	0.65	15	iP	Pn	09 41 26.9	+1.3
AMOG				iS	Sn	09 41 40.6	+1.3
ACCO	Cerro Coronel	1.03	341	iP	Pn	09 41 30.7	+1.4
ACCO				iS	Sn	09 41 48.0	+2.0
ASAL	Salagasta	1.03	187	iP	Pn	09 41 30.0	+0.9
ARCO	CERRO ARCO	1.29	189	iP	Pn	09 41 32.9	+0.9
ARCO				iS	Sn	09 41 52.2	+1.6
ARCO				IAML		09 41 53.3	
	comp=Z,1µm,0.3s						
ACDV	Cuesta del Vie	1.44	345	eP	Pn	09 41 35.3	+1.6
ACDV				iS	Sn	09 41 56.5	+2.7
ACDV				IAML		09 41 57.2	

	comp=Z,888nm,0.4s						
ACAN	Cantantal	1.45	119	iP	Pn	09 41 35.2	+1.5
ACAN				iS	Sn	09 41 54.2	+0.4
AAGR	Agrelo	1.52	185	iP	Pn	09 41 35.5	+0.9
AAGR				iS	Sn	09 41 55.6	+0.3
AROD	Rodeo	1.55	334	eP	Pn	09 41 36.9	+1.7
AROD				eS	Sn	09 41 58.1	+1.8
AGUA	GUANDACOL	2.08	5	eP	Pn	09 41 43.3	+1.8
AGUA				eS	Sn	09 42 11.0	+3.4
APLL	PUNTA DE LOS L	2.19	58	eP	Pn	09 41 44.0	+1.2
APLL				iS	Sn	09 42 11.6	+1.6
GO04	Tololo Observa	2.29	307		Pn	09 41 45.2	+1.0
GO04	Tololo Observa	2.29	307	iP	Pn	09 41 45.3	+1.0
GO04				iS	Sn	09 42 14.6	+2.0
PEL	Peldehue	2.31	227		Pn	09 41 44.9	+0.5
PEL				Sn	Sn	09 42 12.2	-0.6
PEL	Peldehue	2.31	227	iP	Pn	09 41 45.0	+0.6
PEL				iS	Sn	09 42 13.4	+0.6
ROC1	El Roble	2.42	234		Pn	09 41 46.0	0.0
ROC1				Sn	Sn	09 42 14.7	-1.0
ROC1	El Roble	2.42	234	eP	Pn	09 41 46.0	0.0
ROC1				iS	Sn	09 42 15.3	-0.4
ACLC	CERRO LA CRUZ	2.60	35	eP	Pn	09 41 49.3	+1.0
MRA	San Martin	2.66	109	iP	Pn	09 41 50.0	+1.1
MRA				iS	Sn	09 42 21.0	0.0
VCA	Vinchina	2.85	8	eP	Pn	09 41 53.2	+1.7
VCA				iS	Sn	09 42 28.1	+2.5
VCA				IAML		09 42 35.3	
	comp=Z,263nm,0.2s						
LCO	Las Campanas	3.09	325	Pn	Pn	09 41 55.2	+0.5
LAMA	Las Malvinas	3.39	187	iP	Pn	09 41 58.5	+0.1
LAMA				iS	Sn	09 42 35.8	-2.2
PUMA	Malargue	3.97	189	iP	Pn	09 42 06.4	+0.2
CYA	Choya	3.99	39	eP	Pn	09 42 06.6	0.0
CYA				iS	Sn	09 42 51.4	-1.2
GO03	Copiap	4.18	341		Pn	09 42 09.9	+0.7
EDS3	Malargue	4.24	188	iP	Pn	09 42 10.1	+0.2
GO05	Huala	4.38	217		Pn	09 42 09.3	-2.4
AHML	Horco Molle	5.59	32	iP	Pn	09 42 27.4	-0.7
GO02	Mina Guanaco	6.43	353		Pn	09 42 39.6	-0.1
PB10	IPOC Station P	8.19	348	Pn	Pn	09 43 00.8	-2.6
LVC	Limon Verde	8.92	359	P	Pn	09 43 11.7	-1.9
	comp=Z,1.9nm,0.3s,baz=160,slow=8.3,SNR=20						
LVC				S	Sn	09 44 46.2	-6.3
	comp=Z,0.3nm,0.3s,baz=17,slow=20,SNR=2.4						
LVC	Limon Verde	8.92	359		Pn	09 43 12.1	-1.5
PLCA	Paso Flores	9.27	189	P	Pn	09 43 15.7	-2.2
	comp=Z,0.1nm,0.3s,baz=38,slow=19,SNR=4.2						
PLCA	Paso Flores	9.27	189		Pn	09 43 15.9	-2.0
PB04	IPOC Station P	9.29	352	Pn	Pn	09 43 15.7	-2.7
PB01	IPOC Station P	10.51	356	Pn	Pn	09 43 31.9	-2.8
CPUP	Villa Florida	11.23	65	P	Pn	09 43 41.2	-3.1
	comp=Z,0.1nm,0.3s,baz=233,slow=12,SNR=4.2						
CPUP				S	Sn	09 45 42.9	-5.0
	comp=Z,0.1nm,0.3s,baz=179,slow=16,SNR=2.2						
CPUP	Villa Florida	11.23	65		Pn	09 43 43.5	-0.9
PB11	IPOC Station P	11.79	356	Pn	Pn	09 43 48.0	-4.0
GO01	Chusmiza	11.86	358	Pn	Pn	09 43 51.0	-2.2
GO07	Milladeo Hill,	12.19	198	Pn	Pn	09 43 55.5	-1.4
LPAZ	La Paz	15.22	2	P	P	09 44 37.8	-1.4
	comp=Z,0.1nm,0.3s,baz=181,slow=7.3,SNR=9.4						
LPAZ	La Paz	15.22	2	Pn	Pn	09 44 34.6	-2.1
LPAZ				IAmb	IAmb	09 44 42.1	
	comp=Z,2.4nm,0.8s						
SIV	San Ignacio	16.99	26	P	Pn	09 44 59.1	+1.1
	comp=Z,0.2nm,0.3s,baz=222,slow=12,SNR=10						
USHA	Ushuaia	23.26	180	P	P	09 46 05.8	+1.3
	comp=Z,8.6nm,0.8s,baz=14,slow=16,SNR=3.7						
RUSC	La Rusia	37.48	353	P	P	09 48 12.6	+2.0
SNAA	Sanae	52.79	159	P	P	09 50 11.0	+0.6
	comp=Z,0.9nm,0.7s,baz=306,slow=16,SNR=6.8						
SNAA	Sanae	52.79	159	P	P	09 50 11.4	+1.0
SNAA				IAmb	IAmb	09 50 21.5	
	comp=Z,10nm,1.5s						
QSPA	South Pole Qui	58.66	180	P	P	09 50 53.7	+1.2
QSPA				IAmb	IAmb	09 51 01.1	
	comp=Z,4.5nm,1.4s						
TXAR	Lajitas Array	69.10	328	P	P	09 52 02.9	+1.7
	comp=Z,0.2nm,0.6s,baz=146,slow=6.6,SNR=2.5						
TORD	Torodi Ar. Bea	80.71	68	P	P	09 53 08.8	+0.6
	comp=Z,1.5nm,0.6s,baz=263,slow=4.8,SNR=8.4						
ASAR	Alice Springs	120.98	204	PKP	PKiKP	09 59 46.4	-0.7
	comp=Z,0.2nm,0.6s,baz=149,slow=2.2,SNR=4.1						
WRA	Warramunga Arr	124.22	206	PKP	PKiKP	09 59 52.8	-0.7
	comp=Z,4.1nm,0.4s,baz=5.9,slow=29,SNR=11						
ZALV	Zalesovo Beam	150.66	33	PKPbc	PKiKP	10 00 46.4	+0.3
	comp=Z,2.8nm,0.7s,baz=303,slow=3.6,SNR=12						
ZALV				PKPab	PKPab	10 00 53.5	+0.7
	comp=Z,0.3nm,0.3s,baz=251,slow=8.7,SNR=3.2						
MKAR	Makanchi Array	153.04	47	PKPab	PKPab	10 01 03.9	+0.8
	comp=Z,0.7nm,0.7s,baz=279,slow=2.3,SNR=4.3						

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*IDC **04** 09:49:02.0±1.2, 33°.03S×71°.82W, h0^{km}, mb4.0/4, mb1 3.9/8, mb1mx3.8/29, mbtmp3.7/8, ML3.6/4, MS3.2/3, Ms1 3.2/3, ms1mx2.9/22, Error ellipse: s-maj=42.4km s-min=18.4km az=93.0*
*SJA **04** 09:49:03.7±0.8, 33°.05S×72°.10W, h10^{km}, ML3.6, MW3.8*
*GUC **04** 09:49:04.9±0.7, 33°.03S×72°.07W, h31^{km}±5^{km}, ML3.7*
*NEIC **04** 09:49:04.2±1.6, 33°.10S±0°.05×72°.07W±0°.08, h20^{km}±3^{km}, Error ellipse: s-maj=11.5km s-min=5.2km az=124.0*
ISC 04 09:49:03.1±1.6**, 33°.00S**±0°.04×**72°.16W**±0°.05**, h12**^{km}±9^{km}**, n43, σ1^{s}72**/54**, mb4.2**/5**, 3C-4D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA01	Torpederas	0.43	93	⇓iP	Pg	09 49 12.4	+0.9
VA01				iS	Sg	09 49 18.3	+1.1
MT02	Curacav	0.89	107	⇓iP	Pb	09 49 19.3	-1.2
MT02				iS	Sb	09 49 30.3	-2.1
ROC1	El Roble	0.96	89		Pb	09 49 21.1	-0.7
ROC1				Sn	Sb	09 49 32.5	-2.1
ROC1	El Roble	0.96	89	iP	Pb	09 49 21.2	-0.6
ROC1				eS	Sb	09 49 33.1	-1.5
ROCH	El Roble	0.96	88	⇓iP	Pb	09 49 21.1	-0.7
ROCH				iS	Sb	09 49 33.6	-1.1
ROCH				IAML		09 49 35.9	
	comp=N,3µm,0.4s						
PEL	Peldehue	1.24	97	⇓iP	Pn	09 49 25.6	-0.7
PEL				iS	Sb	09 49 41.6	-0.9
PEL				IAML		09 49 42.7	
	comp=E,2µm,0.4s						
PEL	Peldehue	1.24	97		Pn	09 49 25.6	-0.7
PEL				Sn	Sb	09 49 41.5	-1.0
CO04	Los Peladeros	1.38	46	⇑iP	Pn	09 49 28.8	+0.3
CO04				iS	Sn	09 49 46.6	-0.2
CO04				IAML		09 49 58.5	
	comp=E,1µm,0.4s						
MT03	Universidad Ad	1.46	110	eP	Pn	09 49 28.8	-0.6
MT03				eS	Sn	09 49 47.7	-0.9
MT03				IAML		09 49 56.3	
	comp=E,3µm,0.2s						
FCH	Farellones	1.60	102	iP	Pn	09 49 31.3	-0.2
FCH				iS	Sn	09 49 51.9	-0.3
FCH				IAML		09 50 00.8	
	comp=N,1µm,0.4s						
LMEL	Las Melosas	1.84	118	⇑iP	Pn	09 49 35.0	+0.4
LMEL				iS	Sn	09 49 57.9	0.0
LMEL				IAML		09 50 02.1	
	comp=N,2µm,0.4s						
GO05	Huala	2.01	175		Pn	09 49 35.5	-1.3
GO05				Sn	Sn	09 49 58.5	-3.5
GO05	Huala	2.01	175	iP	Pn	09 49 35.5	-1.3
GO05				eS	Sb	09 50 05.4	+0.8
CO02	Combarbal	2.05	29	⇑iP	Pn	09 49 38.7	+1.2
CO02				IAML		09 50 18.1	
	comp=E,1µm,0.4s						
CO03	El Pedregal	2.49	30	eP	Pn	09 49 45.0	+1.4
RTLS	Leoncito	2.70	64	iP	Pb	09 49 50.5	-1.1
RTLS				IAML		09 50 38.4	
	comp=Z,86nm,0.8s						
ARCO	CERRO ARCO	2.72	87	iP	Pb	09 49 51.8	+0.1
ARCO				IAML		09 50 35.4	
	comp=Z,248nm,0.7s						
ASAL	Salagasta	2.83	83	iP	Pb	09 49 53.1	-0.5
ASAL				IAML		09 50 35.2	
	comp=Z,233nm,1.0s						
GO04	Tololo Observa	3.05	23		Pn	09 49 52.6	+1.2
GO04	Tololo Observa	3.05	23	iP	Pn	09 49 52.7	+1.2
RTCV	Cerro Valdivia	3.26	71	iP	Pb	09 50 00.5	-0.5
RTCV				IAML		09 50 57.1	
	comp=Z,100nm,0.7s						
ZON	Zonda	3.29	65	iP	Pb	09 50 00.5	-0.9
ZON				IAML		09 51 06.7	
	comp=Z,99nm,0.9s						
ACCO	Cerro Coronel	3.57	48	iP	Pb	09 50 03.0	-3.3
ACCO				IAML		09 51 01.5	
	comp=Z,140nm,0.7s						
AROD	Rodeo	3.64	40	iP	Pn	09 50 03.3	+3.7
ACDV	Cuesta del Vie	3.83	43	iP	Pn	09 50 06.5	+4.4
ACDV				IAML		09 51 21.6	
	comp=Z,116nm,0.9s						
ACAN	Cantantal	4.25	81	iP	Pn	09 50 13.2	+5.4
ACAN				IAML		09 51 23.8	
	comp=Z,48nm,0.7s						
VCA	Vinchina	5.44	40	iP	Pn	09 50 28.1	+3.9
VCA				IAML		09 52 05.3	
	comp=Z,113nm,0.6s						
APLL	PUNTA DE LOS L	5.46	63	iP	Pn	09 50 28.6	+4.3
GO03	Copiap	5.64	18		Pn	09 50 27.6	+0.7
PLCA	Paso Flores	7.82	171	Pn	Pn	09 50 56.7	-0.1
	comp=Z,0.7nm,0.3s,baz=356,slow=12,SNR=27						
PLCA				Sn	Sn	09 52 29.0	+3.8
	baz=29,slow=18,SNR=1.2						
PLCA				Lg	Lg	09 53 04.9	
	comp=Z,0.0nm,0.3s,baz=65,slow=16,SNR=2.8						
GO02	Mina Guanaco	8.13	17	Pn	Pn	09 51 01.4	+0.1
LVC	Limon Verde	10.74	16	LR	LR	09 55 55.9	
	comp=Z,100nm,19.6s,baz=200,slow=39						
CPUP	Villa Florida	14.50	67	Pn	Pn	09 52 25.7	-2.5
	comp=Z,0.1nm,0.3s,baz=240,slow=18,SNR=2.0						
CPUP				Sn	Sn	09 55 12.5	+3.6
	comp=Z,0.1nm,0.3s,baz=219,slow=18,SNR=1.9						
CPUP	Villa Florida	14.50	67		Pn	09 52 28.0	-0.2
LPAZ	La Paz	17.04	13	Pn	Pn	09 53 00.6	-1.3
	comp=Z,0.0nm,0.3s,baz=156,slow=10.0,SNR=2.4						
SIV	San Ignacio	19.69	33	P	P	09 53 32.3	0.0
	comp=Z,0.1nm,0.3s,baz=209,slow=18,SNR=3.2						
SIV				LR	LR	10 01 37.6	
	comp=Z,65nm,20.8s,baz=248,slow=39						
BDFB	Brasilia	27.87	57	LR	LR	10 07 09.3	
	comp=Z,71nm,19.5s,baz=171,slow=39						
SNAA	Sanae	52.54	158	P	P	09 58 16.4	+0.5
SNAA				IAmb	IAmb	09 58 22.1	
	comp=Z,2.1nm,1.1s						
QSPA	South Pole Qui	57.23	180	P	P	09 58 50.9	+0.8
	comp=Z,2.0nm,0.9s,baz=138,slow=3.7,SNR=7.2						
TXAR	Lajitas Array	68.82	331	P	P	10 00 09.3	+1.9
	comp=Z,0.3nm,0.7s,baz=150,slow=7.3,SNR=2.5						
BOSA	Boshof	80.62	118	P	P	10 01 15.9	-0.2
	comp=Z,4.1nm,0.9s,baz=294,slow=4.9,SNR=3.8						
TORD	Torodi Ar. Bea	83.97	70	P	P	10 01 32.8	-0.8
	comp=Z,1.1nm,0.8s,baz=277,slow=4.2,SNR=6.1						
MKAR	Makanchi Array	156.17	47	PKPab	PKPab	10 09 24.3	-0.8
	comp=Z,0.4nm,0.7s,baz=292,slow=3.7,SNR=4.8						

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*MEX **04** 10:18:05.3±0.5, 14°.03N×93°.12W, h0^{km}±32^{km}, MD3.9*
*GCG **04** 10:18:06.8±0.3, 15°.98N×92°.21W, h99^{km}±122^{km}, MD3.7*
ISC 04 10:18:09.8±2.8**, 14°.4N**±0°.2×**92°.9W**±0°.1**, h87**^{km}**, n8, σ1^{s}23**/10**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.79	51	eP	Pn	10 18 25.4	-1.5
THIG				iS	Sn	10 18 40.6	+0.9
PCIG		1.32	347	eP	Pn	10 18 32.0	-1.2
PCIG				iS	Sn	10 18 53.2	+2.4
STG3	Santiaguito 3,	1.32	77	eP	Pn	10 18 32.7	-0.7
STG3				eS	Sn	10 18 52.9	+1.7
FUG	Fuego 3	2.00	89	eP	Pn	10 18 42.1	+0.1
FUG				eS	Sn	10 19 06.6	0.0
CCIG	Comitan	2.00	22	eP	Pn	10 18 43.5	+1.4
CCIG				iS	Sn	10 19 13.3	+6.6
TGIG		2.36	355	iP	Pn	10 18 48.4	+1.6
TGIG				iS	Sn	10 19 20.4	+5.2
IXG	Ixpaco	2.40	95	eP	Pn	10 18 46.6	-0.7
CMIG	Matias Romero	3.28	325	iP	Pn	10 18 58.8	-0.3
CMIG				iS	Sn	10 19 38.5	+1.4

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*IDC **04** 10:51:12.5±0.3, 33°.60S×71°.76W, h0^{km}, mb5.1/35, mb1 5.1/39, mb1mx5.1/44, mbtmp5.1/39, ML5.0/4, MS5.6/26, Ms1 5.6/26, ms1mx5.4/37, Error ellipse: s-maj=14.5km s-min=8.9km az=85.0*
*SJA **04** 10:51:12.6±1.0, 33°.54S×72°.26W, h10^{km}±12^{km}, ML5.8, MW5.6*
*MOS **04** 10:51:13.4±1.1, 33°.41S×71°.78W, h10^{km}, mb5.8/38, MS5.5/18, Error ellipse: s-maj=13.1km s-min=6.6km az=92.0*
*VAO **04** 10:51:14.9±0.4, 33°.56S×71°.75W, h10^{km}, mb5.5*
*BJI **04** 10:51:14.0±0.0, 33°.60S×72°.00W, h10^{km}, mB5.7/45, Ms5.8/52, Ms7 5.8/51*
*NEIC **04** 10:51:15.6±1.7, 33°.61S±0°.04×71°.96W±0°.07, h20^{km}±1^{km}, mb5.6/416, Ms_20 5.5/518, Mwb5.7/56, Mww5.7, ML5.4(GUC), Mwc5.8(GCMT), Error ellipse: s-maj=10.7km s-min=5.6km az=292.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.66; M$_{\theta\theta}$0.05; M$_{\phi\phi}$-2.71; M$_{r\theta}$0.30; M$_{\theta\phi}$0.36; M$_{\phi r}$-2.78; Fault plane solution: M$_0$3.89000×10^{17} NP1:ϕ_s173.50000°, δ67.96000°, λ90.63000°. NP2:ϕ_s351.80000°, δ22.05000°, λ88.43000°. Principal axes: T 3.8459, Plg67.0000°, Azm85.0000°; N 0.0952, Plg1.0000°, Azm353.0000°; P -3.9411, Plg23.0000°, Azm263.0000°;*
*GUC **04** 10:51:15.6±0.6, 33°.62S×72°.04W, h41^{km}±3^{km}, ML5.4*
*NEIC **04** 10:51:19, 33°.68S×72°.20W, h22^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$3.69; M$_{\theta\theta}$0.33; M$_{\phi\phi}$-4.02; M$_{r\theta}$0.46; M$_{\theta\phi}$-0.60; M$_{\phi r}$-5.12; Fault plane solution: M$_0$6.46000×10^{17} NP1:ϕ_s20.00000°, δ20.00000°, λ111.00000°. NP2:ϕ_s177.00000°, δ72.00000°, λ83.00000°. Principal axes: T 6.3201, Plg63.0000°, Azm76.0000°; N 0.2710, Plg7.0000°, Azm180.0000°; P -6.5911, Plg26.0000°, Azm273.0000°;*
*GCMT **04** 10:51:19.6±0.1, 33°.63S±0°.01×72°.16W±0°.01, h23^{km}, MW5.8/149, Moment Tensor Solution. s138,c268; s149,c294; Duration: 1^{s}9 Moment tensor: Scale 10^{17} Nm; M$_{rr}$4.08±.06; M$_{\theta\theta}$0.12±.04; M$_{\phi\phi}$-4.20±.05; M$_{r\theta}$0.19±.06; M$_{\theta\phi}$-0.56±.03; M$_{\phi r}$-4.40±.10; Best double couple: M$_0$6.07000×10^{17} NP1:ϕ_s15.00000°, δ22.00000°, λ104.00000°. NP2:ϕ_s180.00000°, δ68.00000°, λ84.00000°. Principal axes: T 6.0080, Plg66.0000°, Azm80.0000°; N 0.1270, Plg5.0000°, Azm182.0000°; P -6.1330, Plg23.0000°, Azm274.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **04** 10:51:21, 33°.60S×71°.95W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.35; M$_{\theta\theta}$-0.20; M$_{\phi\phi}$-2.15; M$_{r\theta}$0.48; M$_{\theta\phi}$-0.87; M$_{\phi r}$-4.66; Fault plane solution: M$_0$5.27000×10^{17} NP1:ϕ_s39.00000°, δ17.00000°, λ130.00000°. NP2:ϕ_s178.00000°, δ77.00000°, λ79.00000°. Principal axes: T 5.4074, Plg56.0000°, Azm74.0000°; N -0.2926, Plg11.0000°, Azm180.0000°; P -5.1148, Plg31.0000°, Azm277.0000°;*
ISC 04 10:51:14.9±0.6**, 33°.62S**±0°.03×**71°.99W**±0°.03**, h17**^{km}±3^{km}**, n1299, σ1^{s}34**/1096**, mb5.5**/246**, MS5.5**/305**, 49C-13D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA01	Torpederas	0.66	26	⇓iP	Pn	10 51 29.4	-0.1
VA01				iS	Sn	10 51 39.8	+0.4
MT02	Curacav	0.80	63	⇓iP	Pn	10 51 32.0	+0.6
MT02				iS	Sn	10 51 44.0	+1.1
ROC1	El Roble	1.03	52	Pn	Pn	10 51 36.0	+1.1
ROC1				Sn	Sn	10 51 50.4	+1.3
ROC1	El Roble	1.03	52	iP	Pn	10 51 36.1	+1.2
ROC1				eS	Sn	10 51 52.5	+3.4
ROCH	El Roble	1.04	52	⇓iP	Pg	10 51 35.9	+0.7
ROCH				iS	Sn	10 51 51.6	+2.4
ROCH				IAML		10 51 59.7	
	comp=N,160µm,0.5s						
ANTU	Antumapu	1.13	88	⇓iP	Pg	10 51 38.2	+1.4
ANTU				iS	Sg	10 51 54.6	+3.0
ANTU				IAML		10 52 01.8	
	comp=N,113µm,0.5s						
PEL	Peldehue	1.19	67	eP	Pg	10 51 38.0	+0.2
PEL				iS	Sg	10 51 55.1	+1.7
PEL	Peldehue	1.19	67		Pg	10 51 38.5	+0.6
PEL				Sn	Sb	10 51 51.5	-0.6
PEL	Peldehue	1.19	67	P	Pg	10 51 38.5	+0.6
PEL						10 51 51.5	
PEL	Peldehue	1.19	67	iP	Pg	10 51 38.8	+0.9
PEL				eS	Sg	10 51 57.5	+4.1
FSR	Penalolen	1.23	84	eP	Pg	10 51 39.8	+1.2
FSR				iS	Sg	10 51 57.6	+2.9
MT03	Universidad Ad	1.24	85	⇓iP	Pg	10 51 39.0	+0.1
MT03				iS	Sg	10 51 57.0	+1.9
MT03				IAML		10 52 06.3	
	comp=N,164µm,0.7s						
GO05	Huala	1.39	178		Pn	10 51 38.7	-0.9
GO05				Sn	Sn	10 51 57.6	+0.1
FCH	Farellones	1.45	79	iP	Pg	10 51 42.5	-0.4
FCH				eS	Sg	10 52 03.1	+1.3
FCH				IAML		10 52 09.9	
	comp=E,68µm,0.4s						
LMEL	Las Melosas	1.50	99	⇓iP	Pb	10 51 42.9	+0.4
LMEL				iS	Sg	10 52 03.4	-0.1
LMEL				IAML		10 52 09.8	
	comp=E,146µm,0.6s						
LAMA	Las Malvinas	2.65	121	iP	Pb	10 52 01.5	-0.4
LAMA				eS	Sg	10 52 40.7	+0.6
ARCO	CERRO ARCO	2.67	74	iP	Pg	10 52 04.6	-1.7
ARCO				IAML		10 52 49.1	
	comp=Z,42µm,1.2s						
AAGR	Agrelo	2.70	80	iP	Pb	10 52 02.5	-0.3
PUMA	Malargue	2.81	133	iP	Pb	10 52 03.4	-1.3
CCHI	Chillan	2.98	181	iP	Pn	10 52 03.2	+1.8
EDS3	Malargue	3.03	136	iP	Pb	10 52 06.2	-2.2
RTCV	Cerro Valdivia	3.39	60	iP	Pb	10 52 10.9	-3.7
RTCV				IAML		10 53 08.2	
	comp=Z,5µm,2.5s						
ZON	Zonda	3.47	54	iP	Pn	10 52 12.0	+3.7
ZON				IAML		10 53 17.1	
	comp=Z,33µm,1.8s						
GO04	Tololo Observa	3.58	17		Pn	10 52 10.0	+0.1
ACCO	Cerro Coronel	3.91	40	iP	Pn	10 52 17.8	+3.3
AROD	Rodeo	4.05	33	iP	Pn	10 52 19.7	+3.3
ACDV	Cuesta del Vie	4.21	36	iP	Pn	10 52 21.7	+3.2
ACDV				IAML		10 53 42.3	
	comp=Z,9µm,0.9s						
ACAN	Cantantal	4.25	73	iP	Pn	10 52 22.2	+3.3
ACAN				IAML		10 53 49.9	
	comp=Z,4µm,2.7s						
AGUA	GUANDACOL	5.08	37	iP	Pn	10 52 33.1	+2.7
AGUA				IAML		10 54 22.9	
	comp=Z,2µm,1.4s						
APLL	PUNTA DE LOS L	5.64	57	iP	Pn	10 52 39.4	+1.3
I14CL	ROBINSON CRUSO	5.68	268	i		11 25 30.0	
	baz=99,slow=324,SNR=0.3						
VCA	Vinchina	5.85	35	iP	Pn	10 52 43.0	+2.0
VCA				IAML		10 54 39.1	
	comp=Z,11µm,1.2s						
ACLC	CERRO LA CRUZ	6.00	47	iP	Pn	10 52 44.5	+1.5
GO03	Copiap	6.19	15		Pn	10 52 45.3	-0.3
GO03				Sn	Sn	10 53 57.0	+0.9
PLCA	Paso Flores	7.19	171	Pn	Pn	10 52 59.8	+0.4
	comp=Z,18nm,0.3s,baz=356,slow=11,SNR=352						
PLCA				Sn	Sn	10 54 24.0	+3.3
	comp=Z,8.2nm,0.3s,baz=11,slow=16,SNR=2.8						
PLCA				Lg	Lg	10 54 59.2	
	comp=Z,21nm,0.3s,baz=98,slow=20,SNR=5.3						
PLCA				LR	LR	10 56 07.2	
	comp=Z,45µm,18.5s,baz=14,slow=41						
PLCA	Paso Flores	7.19	171		Pn	10 53 00.2	+0.9
PLCA	Paso Flores	7.19	171	eP	Pn	10 53 00.5	+1.1
CYA	Choya	7.40	47	iP	Pn	10 53 01.1	-1.1
CYA				IAML		10 55 19.1	
	comp=Z,3µm,1.4s						
GO02	Mina Guanaco	8.68	15		Pn	10 53 17.4	-2.6
GO02				Sn	Sn	10 54 54.6	-3.1
GO07	Milladeo Hill,	9.57	187		Pn	10 53 30.6	-1.2
PB10	IPOC Station P	10.15	7	Pn	Pn	10 53 36.8	-3.1
LVC	Limon Verde	11.30	15	Pn	Pn	10 53 53.1	-2.8
	comp=Z,2.0nm,0.3s,baz=213,slow=7.8,SNR=14						
LVC				Sn	Sn	10 56 05.4	+3.4
	comp=Z,6.1nm,0.3s,baz=217,slow=17,SNR=3.7						
LVC				LR	LR	10 58 35.5	
	comp=Z,47µm,19.2s,baz=210,slow=40						
LVC	Limon Verde	11.30	15		Pn	10 53 51.7	-4.2
LVC	Limon Verde	11.30	15	eP	Pn	10 53 53.1	-2.8
PB04	IPOC Station P	11.36	9		Pn	10 53 51.1	-5.5
LPA	La Plata	11.70	100	iP	Pn	10 53 54.8	-6.3
LPA				PP	PbPb	10 54 38.4	-1.0
LPA				S	Sn	10 56 10.4	-0.9
LPA				PCP	PcP	10 59 49.9	-0.3
LPA				SCS	ScS	11 06 56.5	-1.4
LPA				SKIKP	SKIKP	11 11 11.6	
PB01	IPOC Station P	12.72	11		Pn	10 54 09.5	-5.6
ITQB	Itaqui	13.66	77	eP	Pn	10 54 25.7	-2.2
PB11	IPOC Station P	13.96	9		Pn	10 54 26.6	-5.5
GO01	Chusmiza	14.12	11		Pn	10 54 35.0	+0.5
OGAUY	Aigu	14.36	98	eP	Pn	10 54 33.8	-3.6
MNMC	Minye Minye	14.59	9		Pn	10 54 40.2	-0.7
CPUP	Villa Florida	14.62	64	Pn	Pn	10 54 39.5	-1.6
	comp=Z,0.5nm,0.3s,baz=235,slow=12,SNR=13						
CPUP				Sn	Sn	10 57 21.7	-1.1
	comp=Z,1.4nm,0.3s,baz=281,slow=16,SNR=2.3						
CPUP				LR	LR	11 00 46.3	
	comp=Z,47µm,19.8s,baz=242,slow=40						
CPUP	Villa Florida	14.62	64		Pn	10 54 39.6	-1.5
CPUP	Villa Florida	14.62	64	eP	Pn	10 54 39.7	-1.4
PLTB	Pedras Altas	15.59	88	eP	Pn	10 54 50.9	-3.0
CPSB	Cacapava Do Su	16.06	84	eP	Pn	10 54 58.0	-1.9
LPAZ	La Paz	17.60	12	P	Pn	10 55 20.1	0.0
	comp=Z,3.5nm,0.3s,baz=182,slow=8.4,SNR=143						
LPAZ	La Paz	17.60	12	P	Pn	10 55 18.7	-1.4
LPAZ	La Paz	17.60	12	P	Pn	10 55 18.7	-1.4
LPAZ				pmax	pmax		
	comp=Z,424nm,1.5s						
LPAZ	La Paz	17.60	12	eP	Pn	10 55 19.7	-0.3
GO09	Cerro Castillo	17.64	181	P	P	10 55 20.9	+0.2
ITAB	Concordia	18.25	75	eP	Pn	10 55 26.2	-1.3
CNLB	Canela	18.53	82	eP	P	10 55 30.0	-0.6
PTGB	Pitanga	19.50	68	eP	P	10 55 41.0	-0.4
AQDB	Aquidauana	19.50	52	eP	P	10 55 40.9	-0.4
GO10	Punta Arenas	19.54	178	P	Pn	10 55 42.4	-0.5
GO10				IAmb	IAmb	10 56 03.5	
	comp=Z,316nm,1.0s						
SIV	San Ignacio	20.13	32	P	P	10 55 47.5	-0.7
	comp=Z,36nm,0.8s,baz=224,slow=11,SNR=98						
SIV				LR	LR	11 05 02.4	
	comp=Z,36µm,19.3s,baz=226,slow=42						
TRCB	Terra Rica	20.14	63	eP	P	10 55 48.5	+0.1
EFI	East Falkland	20.68	155	P	P	10 55 50.5	-3.4
EFI	East Falkland	20.68	155	IAMs_20	IAMs_20	11 04 39.3	
	comp=Z,23µm,20.0s						
EFI	East Falkland	20.68	155	P	P	10 55 50.5	-3.4
EFI				pmax	pmax		
	comp=Z,327nm,0.7s						
EFI				MLR	MLR		
	comp=Z,23µm,20.0s						
USHA	Ushuaia	21.36	174	P	P	10 56 02.2	+1.1
	comp=Z,120nm,1.1s,baz=1.6,slow=5.9,SNR=14						
USHA				LR	LR	11 05 15.3	
	comp=Z,18µm,19.0s,baz=356,slow=40						
PCMB	Pacaembu	21.87	62	eP	P	10 56 05.9	-1.0
NNA	Nana	21.98	347	P	P	10 56 10.3	+2.1
	comp=Z,32nm,1.1s,baz=194,slow=12,SNR=12						
NNA	Nana	21.98	347	⇓iP	P	10 56 10.0	+1.8
NNA				pmax	pmax		
	comp=Z,204nm,1.5s						
NNA				MLR	MLR		
	comp=Z,8µm,17.0s						
PP1B	Ponte de Pedra	22.14	48	eP	P	10 56 09.1	-0.7
FRTB	Fartura	22.17	68	eP	P	10 56 08.8	-1.4
C2SB	Chapadao do Su	22.61	54	eP	P	10 56 14.4	-0.5
SALV	Santo Antonio	22.97	44	eP	P	10 56 17.4	-1.2
SPB	Sao Paulo	23.71	71	P	P	10 56 26.7	+0.7
SPB	Sao Paulo	23.71	71	eP	P	10 56 25.7	-0.3
ITRB	Iturama	23.72	60	eP	P	10 56 25.1	-1.1
BB19B	Bebedouro	24.24	65	eP	P	10 56 29.2	-1.8
VAO	Valinhos	24.38	71	eP	P	10 56 32.1	-0.3
PARB	Paraibuna	25.27	73	eP	P	10 56 39.9	-0.6
ARAG	Araguaiana, MT	25.49	51	eP	P	10 56 42.1	-0.3
SAML	Samuel	25.86	20	⇑iP	P	10 56 45.4	-0.3
SAML	Samuel	25.86	20	P	P	10 56 45.4	-0.3
SAML				IAmb	IAmb	10 56 49.7	
	comp=Z,155nm,0.9s						
SAML	Samuel	25.86	20	IAMs_20	IAMs_20	11 08 09.7	
	comp=Z,15µm,22.0s						
SAML	Samuel	25.86	20	P	P	10 56 45.4	-0.3
SAML				pmax	pmax		

	comp=Z,155nm,1.0s						
SAML				MLR	MLR		
	comp=Z,15µm,22.0s						
SAML	Samuel	25.86	20	eP	P	10 56 44.6	-1.1
ESAR	Angra dos Reis	26.37	74	eP	P	10 56 49.6	-0.8
IPMB	Ipameri, GO	26.38	60	eP	P	10 56 49.0	-1.5
ATAH	Atahualpa	27.01	346	P	P	10 56 58.1	+1.5
	comp=Z,6.4nm,0.8s,baz=163,slow=10,SNR=5.7						
CLDB	Colider	27.07	37	eP	P	10 56 55.1	-1.6
BSCB	Bom Sucesso	27.16	69	eP	P	10 56 54.6	-3.0
BDFB	Brasilia	28.09	56	P	P	10 57 04.9	-1.0
	comp=Z,58nm,0.7s,baz=226,slow=9.8,SNR=64						
BDFB				LR	LR	11 09 41.3	
	comp=Z,45µm,18.0s,baz=229,slow=40						
BDFB	Brasilia	28.09	56	P	P	10 57 05.4	-0.5
BDFB				IAmb	IAmb	10 57 06.9	
	comp=Z,119nm,0.9s						
JANB	Januaria	31.11	60	eP	P	10 57 31.8	-0.8
SJMB	Sao Joao De Ma	31.24	69	eP	P	10 57 33.2	-0.6
BSFB	Barra de Sao F	31.43	70	eP	P	10 57 34.9	-0.5
PMSA	Palmer Station	31.56	174	IAMs_20	IAMs_20	11 09 57.6	
	comp=Z,14µm,20.0s						
HOPE	Hope Point	32.36	140	P	P	10 57 44.5	+1.3
HOPE	Hope Point	32.36	140	P	P	10 57 44.5	+1.3
HOPE				pmax	pmax		
	comp=Z,218nm,1.1s						
HOPE				MLR	MLR		
	comp=Z,14µm,19.0s						
RPN	Rapa Nui	32.74	271	LR	LR	11 07 29.9	
	comp=Z,16µm,18.7s,baz=71,slow=30						
SMTB	Santa Maria do	33.35	48	eP	P	10 57 51.4	-0.9
PTLC	Puerto Leguiza	33.71	355	⇑iP	P	10 57 52.1	-3.3
OTAV	Otavalo	34.22	348	⇑iP	P	10 58 02.1	+1.8
OTAV	Otavalo	34.22	348	P	P	10 58 00.3	0.0
OTAV				IAmb	IAmb	10 59 08.4	
	comp=Z,90nm,1.4s						
OTAV	Otavalo	34.22	348	P	P	10 58 00.4	0.0
OTAV				pmax	pmax		
	comp=Z,90nm,1.5s						
OTAV	Otavalo	34.22	348	eP	P	10 58 00.7	+0.4
PTGA	Pitinga	34.61	22	P	P	10 58 02.5	-0.6
	comp=Z,74nm,0.7s,baz=289,slow=23,SNR=5.7						
PTGA				LR	LR	11 14 35.1	
	comp=Z,8µm,19.0s,baz=198,slow=41						
PTGA	Pitinga	34.61	22	P	P	10 58 03.1	0.0
PTGA				IAMs_20	IAMs_20	11 14 32.9	
	comp=Z,9µm,18.0s						
PTGA	Pitinga	34.61	22	eP	P	10 58 03.0	-0.2
NBIT	Itapeh - BA	34.81	66	eP	P	10 58 04.3	-0.7
FLOC	Florencia	35.18	354	⇑iP	P	10 58 09.1	+1.0
MACC	Macarena, Meta	35.62	357	⇑iP	P	10 58 12.8	+1.0
GARC	Garzon, Huila	35.77	354	⇑iP	P	10 58 12.1	-1.4
BBAC	Balboa, Cauca	35.79	351	eP	P	10 58 14.6	+1.0
SOTA	Rioblanco	35.83	352	⇑iP	P	10 58 16.3	+2.1
PCON	Cinco Dias	35.99	352	⇑iP	P	10 58 18.1	+2.4
GR1C	Gorgona, Isla	36.89	350	eP	P	10 58 24.5	+1.8
NBPN	Ponto Novo - B	36.89	60	eP	P	10 58 22.6	-0.2
PAYG	Puerto Ayora	37.00	329	P	P	10 58 21.7	-2.0
PAYG				IAmb	IAmb	10 59 08.5	
	comp=Z,143nm,1.6s						
PAYG	Puerto Ayora	37.00	329	IAMs_20	IAMs_20	11 09 40.0	
	comp=Z,7µm,20.0s						
ORTC	Ortega, Tolima	37.45	355	⇑iP	P	10 58 29.5	+2.0
PTGC	Puerto Gaitan,	37.61	360	⇑iP	P	10 58 29.6	+0.7
YOTC	Yotoco, Valle	37.62	353	⇑iP	P	10 58 29.2	+0.1
CHIC	Chingaza	38.08	357	⇑iP	P	10 58 34.7	+1.4
ROSC	El Rosal	38.31	356	P	P	10 58 38.9	+3.6
	comp=Z,9.8nm,0.6s,baz=180,slow=8.3,SNR=8.9						
ROSC	El Rosal	38.31	356	⇑iP	P	10 58 37.6	+2.3
ROSC	El Rosal	38.31	356	IAMs_20	IAMs_20	11 16 13.7	
	comp=Z,9µm,18.0s						
PLMC	San Jos del P	38.53	353	⇑iP	P	10 58 36.7	+0.1
NBLA	Lagarto - SE	38.55	62	eP	P	10 58 35.6	-1.2
PIZC	Pizarro, Choco	38.71	351	⇑iP	P	10 58 39.6	+1.5
GUY2C	Guyana, Caldas	38.76	355	⇑iP	P	10 58 40.4	+1.3
NORC	Norcasia	39.06	355	⇑iP	P	10 58 39.8	-1.3
SPBC	San Pablo de B	39.10	357	⇑iP	P	10 58 41.6	0.0
RUSC	La Rusia	39.31	358	⇑iP	P	10 58 44.7	+1.0
RUSC	La Rusia	39.31	358	P	P	10 58 44.1	+0.4
CBOC	Ciudad Bolivar	39.45	354	⇑iP	P	10 58 45.1	+0.6
NBTA	Tacaratu-PE	39.59	60	eP	P	10 58 45.4	-0.3
HELC	Santa Helena	39.73	354	⇑iP	P	10 58 47.6	+0.5
TAMC	Tame, Arauca	39.83	0	⇑iP	P	10 58 47.5	0.0
BARC	Barichara	40.01	358	eP	P	10 58 50.5	+1.3
PTBC	PUERTO BERRIO,	40.01	356	⇑iP	P	10 58 47.5	-1.5
NBMA	Muriti-CE	40.31	57	eP	P	10 58 51.6	0.0
ELOV	Elorza	40.47	4	⇑iP	P	10 58 52.7	0.0
NBAN	Anadia - AL	40.54	62	eP	P	10 58 52.7	-0.7
DBBC	Dabeiba	40.61	354	⇑iP	P	10 58 55.4	+1.4
NBPS	Pedro II - PI	40.66	51	eP	P	10 58 53.9	-0.6
PAMC	Pamplona, Colo	40.74	359	eP	P	10 58 53.7	-1.8
ZARC	Zaragoza, Cauc	40.97	356	⇑iP	P	10 58 56.1	-0.8
NBPB	Pedra_Branca-C	41.05	54	eP	P	10 58 57.8	+0.1
UREC	San Jos de Ur	41.28	355	⇑iP	P	10 58 58.6	-0.9
NBLI	Livramento-PB	41.60	59	eP	P	10 59 01.0	-1.2
OCAC	Ocana	41.64	358	⇑iP	P	10 59 00.2	-2.4
SOCV	Socops	41.68	2	⇑iP	P	10 59 02.3	-0.5
AZU	Azuero	41.93	348	eP	P	10 59 05.7	+1.0
NBRF	Rio Formoso -	42.04	62	eP	P	10 59 04.5	-1.2
SMLC	San Martn de	42.23	357	⇑iP	P	10 59 05.6	-1.6
SDV	Santo Domingo	42.29	2	P	P	10 59 07.4	-0.5
	comp=Z,24nm,0.9s,baz=226,slow=4.6,SNR=22						
SDV	Santo Domingo	42.29	2	⇑iP	P	10 59 07.3	-0.5
SDV	Santo Domingo	42.29	2	P	P	10 59 08.1	+0.2
SDV	Santo Domingo	42.29	2	IAMs_20	IAMs_20	11 18 22.9	
	comp=Z,7µm,19.0s						
SDV	Santo Domingo	42.29	2	eP	P	10 59 07.5	-0.4
NBMO	Morrinhos-CE	42.39	52	eP	P	10 59 08.4	-0.3
NBPA	Parau_RN	42.60	57	eP	P	10 59 10.8	+0.4
MDP	Montagnes des	42.64	29	P	P	10 59 09.4	-1.2
	comp=Z,46nm,0.8s,baz=204,slow=9.1,SNR=18						
MDP				LR	LR	11 18 49.8	
	comp=Z,17µm,19.0s,baz=200,slow=39						
NBCL	Cascavel-CE	42.88	54	eP	P	10 59 11.9	-0.7
ARGC	Ariguani, Magd	43.29	357	⇑iP	P	10 59 16.3	+0.5
CODC	Agustn Codazz	43.33	358	⇑iP	P	10 59 14.8	-1.4
SJCC	San Jacinto, C	43.38	355	⇑iP	P	10 59 16.5	-0.1
RCBR	Riachuelo	43.41	59	P	P	10 59 16.1	-0.9
	comp=Z,21nm,0.7s,baz=222,slow=13,SNR=6.9						
RCBR				LR	LR	11 18 25.7	
	comp=Z,23µm,18.9s,baz=214,slow=38						
RCBR	Riachuelo	43.41	59	P	P	10 59 17.3	+0.4
RCBR	Riachuelo	43.41	59	eP	P	10 59 16.4	-0.6
NBPV	Pedro Velho	43.44	60	eP	P	10 59 17.2	+0.1
PLCV	Puerto La Cruz	44.10	10	P	P	10 59 22.8	+0.5
PCRV	Puerto La Cruz	44.11	10	P	P	10 59 22.8	+0.4
	comp=Z,21nm,0.9s,baz=172,slow=3.5,SNR=9.0						
SMRC	Santa Marta, M	44.58	357	⇑iP	P	10 59 24.5	-1.7
URIC	Uribia, Colomb	45.07	360	⇑iP	P	10 59 26.4	-3.7
URIC	Uribia, Colomb	45.07	360	P	P	10 59 27.8	-2.2
JTS	Las Juntas de	45.38	342	P	P	10 59 34.3	+1.8
	comp=Z,1.2nm,0.3s,baz=224,slow=2.0,SNR=8.8						
JTS	Las Juntas de	45.38	342	P	P	10 59 32.6	+0.1
JTS				IAmb	IAmb	11 01 14.0	
	comp=Z,151nm,2.0s						
JTS	Las Juntas de	45.38	342	iP	P	10 59 33.9	+1.4
JTS				pmax	pmax		
	comp=Z,61nm,2.0s						
JTS				MLR	MLR		
	comp=Z,3µm,18.0s						
TOSP	Speyside	45.98	16	P	P	10 59 37.5	+0.2
TOSP				IAMs_20	IAMs_20	11 21 38.1	
	comp=Z,5µm,22.0s						
GRGR	Grenville	46.55	14	P	P	10 59 41.1	-0.7
GRGR				IAMs_20	IAMs_20	11 20 11.9	
	comp=Z,4µm,20.0s						
SVB	Belmont	47.74	14	P	P	10 59 50.6	-0.4
ESTN	Estel	48.44	341	P	P	10 59 57.2	+0.6
FDF	Fort de France	49.18	14	P	P	11 00 01.3	-0.9
FDF				IAMs_20	IAMs_20	11 22 41.0	
	comp=Z,6µm,21.0s						
FDF	Fort de France	49.18	14	P	P	11 00 01.3	-0.9
FDF				pmax	pmax		
	comp=Z,173nm,1.3s						
FDF				MLR	MLR		
	comp=Z,6µm,21.0s						
TGUH	Tegucigalpa,Un	49.60	340	eP	P	11 00 00.7	-4.8
TGUH	Tegucigalpa,Un	49.60	340	P	P	11 00 03.9	-1.6
TGUH				IAmb	IAmb	11 01 28.4	
	comp=Z,83nm,1.0s						
VNA3	Neumayer Olymp	49.70	158	P	P	11 00 06.3	+0.7
VNA1	Neumayer--Stat	50.01	157	P	P	11 00 09.1	+1.2
VNA2	Neumayer--Watz	50.35	157	P	P	11 00 11.2	+0.7
	baz=270,slow=8.0						
SKI	Saint Kitts	51.43	11	P	P	11 00 18.4	-0.7
SKI				IAMs_20	IAMs_20	11 22 44.3	
	comp=Z,7µm,22.0s						
SKI	Saint Kitts	51.43	11	P	P	11 00 18.4	-0.7
SKI				pmax	pmax		
	comp=Z,275nm,0.9s						
SKI				MLR	MLR		
	comp=Z,7µm,22.0s						
APG	El Apazote	51.46	337	P	P	11 00 21.5	+1.8
	comp=Z,6.9nm,1.0s,baz=148,slow=18,SNR=8.5						
APG				LR	LR	11 17 19.9	
	comp=Z,2µm,21.4s,baz=161,slow=30						
ICMP	Isla Caja de M	51.48	7	P	P	11 00 19.6	+0.1
MLPR	Magueyes Islan	51.51	6	P	P	11 00 19.7	-0.1
CDVI	St. Croix	51.54	9	P	P	11 00 18.4	-1.6
CRPR	Cabo Rojo, PR	51.55	6	P	P	11 00 19.3	-0.7
SEUS	St. Eustatius	51.55	11	P	P	11 00 18.9	-1.1
SEUS				IAMs_20	IAMs_20	11 24 09.4	
	comp=Z,6µm,20.0s						
OBIP	Obispado Ponce	51.63	7	P	P	11 00 19.1	-1.5
SABA	Saba	51.63	11	P	P	11 00 20.4	-0.2
PDPR	Patillas Dam,	51.66	7	P	P	11 00 19.7	-1.1
PDPR				IAmb	IAmb	11 01 23.9	
	comp=Z,68nm,1.1s						
SJG	San Juan	51.74	7	P	P	11 00 19.6	-1.9
	comp=Z,39nm,0.7s,baz=170,slow=2.2,SNR=17						
SJG	San Juan	51.74	7	eP	P	11 00 19.8	-1.6
SJG	San Juan	51.74	7	P	P	11 00 19.8	-1.6
SJG				IAmb	IAmb	11 00 22.0	
	comp=Z,66nm,0.9s						
BANI	BANI	51.74	2	P	P	11 00 22.1	+0.5
MPR	Mayaguez	51.75	6	P	P	11 00 21.3	-0.1
MTP	Monte Pirata	51.79	8	P	P	11 00 20.6	-1.3
MTP				IAmb	IAmb	11 01 23.7	
	comp=Z,62nm,1.2s						
HUMP	Col San Antoni	51.80	7	P	P	11 00 19.0	-2.9
HUMP				IAmb	IAmb	11 01 24.8	
	comp=Z,128nm,1.5s						
SDD	Santo Domingo	51.82	3	P	P	11 00 21.7	-0.3
SDD				IAMs_20	IAMs_20	11 26 19.7	
	comp=Z,5µm,18.0s						
AOPR	Arecibo Observ	51.91	6	P	P	11 00 21.1	-1.6
AOPR				IAmb	IAmb	11 01 24.2	
	comp=Z,113nm,1.2s						
ANWB	Willy Bob	51.92	12	P	P	11 00 22.5	-0.3
ANWB				IAMs_20	IAMs_20	11 24 53.3	
	comp=Z,3µm,20.0s						
SNAA	Sanae	51.92	158	P	P	11 00 22.9	+0.6
SNAA	Sanae	51.92	158	P	P	11 00 22.9	+0.6
	comp=Z,180nm,1.2s,baz=264,slow=9.0,SNR=5.1						
SNAA	Sanae	51.92	158	P	P	11 00 23.1	+0.7
SNAA				IAMs_20	IAMs_20	11 23 56.0	
	comp=Z,3µm,18.0s						
SNAA	Sanae	51.92	158	⇓iP	P	11 00 23.1	+0.7
GCPR	Guaynabo City	51.94	7	P	P	11 00 21.0	-1.9
GCPR				IAmb	IAmb	11 00 23.1	
	comp=Z,46nm,0.8s						
SMRT	St. Maarten	52.08	11	P	P	11 00 22.0	-2.0
SMRT				IAmb	IAmb	11 00 36.4	
	comp=Z,63nm,0.8s						
SMRT				IAMs_20	IAMs_20	11 24 24.5	
	comp=Z,5µm,20.0s						
STVI	Saint Thomas	52.11	8	P	P	11 00 23.1	-1.1
DR12	Loma Pena Alta	52.17	3	P	P	11 00 24.0	-0.8
SDDR	Presa de Saban	52.31	1	P	P	11 00 24.3	-1.4
SDDR				IAMs_20	IAMs_20	11 24 47.5	
	comp=Z,4µm,19.0s						
SC01	Santiago de lo	52.76	1	P	P	11 00 29.6	+0.5
SC01				IAMs_20	IAMs_20	11 25 14.5	
	comp=Z,3µm,18.0s						
CCIG	Comitan	53.22	336	IAMs_20	IAMs_20	11 19 25.7	
	comp=Z,4µm,18.0s						
GTBY	Guantanamo Bay	53.33	356	P	P	11 00 33.3	+0.1
GTBY				IAmb	IAmb	11 00 34.8	
	comp=Z,60nm,1.0s						
GRTK	Grand Turk	54.83	1	P	P	11 00 45.0	+0.9
CMIG	Matias Romero	54.95	333	P	P	11 00 46.5	+1.3
	comp=Z,3.0nm,0.7s,baz=178,slow=2.9,SNR=4.8						
TEIG	Tepich	55.75	341	P	P	11 00 50.8	+0.1
	comp=Z,44nm,1.0s,baz=355,slow=0.0						
TEIG	Tepich	55.75	341	eP	P	11 00 51.5	+0.8
TEIG	Tepich	55.75	341	P	P	11 00 48.9	-1.9
TEIG				IAmb	IAmb	11 01 21.3	
	comp=Z,56nm,0.8s						
QSPA	South Pole Qui	56.62	180	P	P	11 00 57.5	+0.8
	comp=Z,90nm,1.1s,baz=152,slow=2.6,SNR=89						
QSPA				LR	LR	11 25 05.0	
	comp=Z,2µm,19.3s,baz=164,slow=36						
QSPA	South Pole Qui	56.62	180	P	P	11 00 57.1	+0.3
QSPA	South Pole Qui	56.62	180	IAMs_20	IAMs_20	11 22 43.1	
	comp=Z,3µm,22.0s						
NVL	N'lazarevskaya	56.65	157	⇑iP	P	11 00 57.1	+0.4
NVL				ePPP	PPP	11 04 23.1	
NVL				iS	S	11 08 46.3	-1.5
NVL				pmax	pmax		
	comp=Z,195nm,1.3s						
TLIG	Tlapa	56.86	329	P	P	11 00 56.4	-2.6
ZAIG	Zacatecas	63.19	328	IAMs_20	IAMs_20	11 23 35.1	
	comp=Z,3µm,19.0s						
VNDA	Vanda	64.48	191	P	P	11 01 51.3	+1.3
	comp=Z,2.6nm,0.6s,baz=123,slow=6.8,SNR=8.2						
VNDA				LR	LR	11 28 13.3	
	comp=Z,2µm,18.0s,baz=138,slow=34						
VNDA	Vanda	64.48	191	P	P	11 01 50.1	0.0
VNDA				IAmb	IAmb	11 02 50.5	
	comp=Z,79nm,1.6s						
VNDA	Vanda	64.48	191	P	P	11 01 50.1	0.0
VNDA				pmax	pmax		
	comp=Z,79nm,1.7s						
TIGA	Tifton	65.63	349	P	P	11 01 58.2	+0.2
	baz=170						
352A	Blakely	65.89	348	IAMs_20	IAMs_20	11 35 39.4	
	comp=Z,2µm,19.0s						
BRAL	Brewton	65.99	346	P	P	11 02 01.4	+1.1
	baz=166						
SYO	Syowa Base	66.20	159	⇓eP	P	11 01 59.0	-2.3
SYO	Syowa Base	66.20	159	⇑eX	P	11 02 02.0	+0.7
250A	Grady	66.62	347	IAMs_20	IAMs_20	11 36 33.7	
	comp=Z,2µm,19.0s						
154A	Montrose	66.71	350	P	P	11 02 05.0	+0.2
SACV	Santiago Islan	66.78	52	IAMs_20	IAMs_20	11 29 17.3	
	comp=Z,2µm,21.0s						
833A	Chaparral WMA,	66.86	334	P	P	11 02 07.7	+1.8
	baz=156,SNR=8.1						
Z58A	St. Stephen	67.00	353	P	P	11 02 07.7	+1.0
	baz=173						
152A	Waverly Hall	67.02	348	P	P	11 02 06.8	0.0
Z57A	Bowman	67.06	352	P	P	11 02 07.3	+0.2
	baz=172						
HKT	Hockley	67.13	338	P	P	11 02 07.1	-0.4
HKT				IAmb	IAmb	11 02 11.3	
	comp=Z,109nm,1.7s						
HKT	Hockley	67.13	338	IAMs_20	IAMs_20	11 31 36.6	
	comp=Z,2µm,20.0s						
HKT	Hockley	67.13	338	P	P	11 02 07.1	-0.4
HKT				pmax	pmax		
	comp=Z,109nm,1.7s						
HKT				MLR	MLR		
	comp=Z,2µm,20.0s						
Z56A	Williston	67.17	351	P	P	11 02 07.2	-0.6
Z56A				IAMs_20	IAMs_20	11 34 16.2	
	comp=Z,2µm,19.0s						
Z56A	Williston	67.17	351	P	P	11 02 08.6	+0.9
	baz=172						
342A	Flagon Creek P	67.44	341	P	P	11 02 09.0	-0.4
TBI	Tubuai	67.45	256	eP	P	11 02 11.7	+1.7
	comp=Z,72nm,1.0s						
TBI				eS	S	11 11 03.9	-1.6
	comp=Z,5µm,27.8s						
TBI	Tubuai	67.45	256	eLR	LR	11 22 21.5	
	comp=Z,11µm,26.0s,baz=115						
TBI	Tubuai	67.45	256	eT	T	12 15 19.8	
	comp=Z,17nm,0.2s						
GOGA	Godfrey	67.54	350	P	P	11 02 09.8	-0.3
GOGA				IAmb	IAmb	11 02 55.8	
	comp=Z,63nm,1.4s						
GOGA	Godfrey	67.54	350	P	P	11 02 09.8	-0.3
GOGA				pmax	pmax		
	comp=Z,63nm,1.5s						
GOGA	Godfrey	67.54	350	P	P	11 02 10.4	+0.2
	baz=170,SNR=6.0						
Z51A	Franklin	67.73	348	P	P	11 02 11.5	+0.2
LRAL	Lakeview Retre	67.79	346	IAmb	IAmb	11 02 29.1	
	comp=Z,42nm,1.3s						
Z50A	Ashland	67.80	347	P	P	11 02 11.2	-0.6
Z50A				IAmb	IAmb	11 02 13.0	
	comp=Z,53nm,1.1s						
Z50A	Ashland	67.80	347	P	P	11 02 12.1	+0.4
	baz=168,SNR=12						
Y55A	Saluda	67.84	351	P	P	11 02 12.4	+0.5
	baz=171						
LPIG	La Paz	68.01	322	P	P	11 02 14.7	+1.5
	comp=Z,12nm,0.3s,baz=70,slow=12,SNR=4.7						
Y52A	Lilburn	68.08	349	P	P	11 02 14.0	+0.5
	baz=169,SNR=5.6						
JSC	Jenkinsville	68.10	352	P	P	11 02 14.4	+0.8
JSC	Jenkinsville	68.10	352	P	P	11 02 14.4	+0.8
JSC				pmax	pmax		
	comp=Z,17nm,1.1s						
JSC				MLR	MLR		
	comp=Z,700nm,19.0s						
X57A	Johnson Farm,	68.15	353	P	P	11 02 15.1	+1.1
	baz=173						
X58A	Rowland	68.17	353	P	P	11 02 15.0	+0.9
	baz=174						
HODGE	Hodges	68.18	351	P	P	11 02 14.4	+0.3
HODGE				IAmb	IAmb	11 02 15.6	
	comp=Z,47nm,1.3s						
HODGE				IAMs_20	IAMs_20	11 32 31.9	
	comp=Z,2µm,21.0s						
HPIG		68.18	328	IAmb	IAmb	11 02 47.9	
	comp=Z,43nm,1.2s						
HPIG				IAMs_20	IAMs_20	11 26 36.4	
	comp=Z,3µm,19.0s						
X56A	White Oak	68.28	352	P	P	11 02 15.5	+0.7
	baz=172						
X55A	Gracelyn & Ava	68.33	351	P	P	11 02 15.7	+0.6
	baz=171						
NATX	Nacogdoches	68.45	339	P	P	11 02 17.6	+1.7
143A	Socs Landing,	68.46	342	P	P	11 02 16.9	+1.1
435B	Jarrell	68.47	336	P	P	11 02 18.0	+2.0
	baz=157						
Y49A	Blount Mountai	68.47	347	P	P	11 02 15.7	-0.3
Y49A				IAmb	IAmb	11 03 19.5	
	comp=Z,76nm,1.6s						
X54A	Belton	68.50	351	P	P	11 02 16.9	+0.8
	baz=171,SNR=6.1						
W60A	Pink Hill	68.52	355	P	P	11 02 17.6	+1.4
	baz=175						
X53A	Estanollee	68.59	350	P	P	11 02 17.3	+0.6
	baz=170						
W58A	Raeford	68.62	354	P	P	11 02 17.8	+1.0
	baz=174						
PAULI	Pauline	68.70	351	P	P	11 02 17.8	+0.4
PAULI				IAmb	IAmb	11 02 19.0	
	comp=Z,81nm,1.3s						
W57A	Gilead	68.82	353	P	P	11 02 18.5	+0.3
	baz=173						
X51A	Calhoun	68.89	349	P	P	11 02 19.4	+0.8
X51A	Calhoun	68.89	349	P	P	11 02 19.4	+0.8
	baz=169,SNR=7.8						
MEH	Mehetia	68.94	262	eT	T	12 17 11.3	
	comp=Z,33nm,0.2s						
JCT	Junction City	68.96	334	IAmb	IAmb	11 02 30.8	
	comp=Z,54nm,0.8s						
JCT	Junction City	68.96	334	P	P	11 02 20.8	+1.6
	baz=156,SNR=22						
KMSC	Kings Mountain	68.96	352	IAmb	IAmb	11 02 20.3	
	comp=Z,37nm,1.1s						
KMSC	Kings Mountain	68.96	352	P	P	11 02 19.6	+0.6
	baz=172,SNR=5.6						
FPAL	Fort Paine	69.00	348	IAmb	IAmb	11 02 20.6	
	comp=Z,81nm,1.6s						
W54A	Cherokee Point	69.01	351	P	P	11 02 20.2	+0.9
	baz=171,SNR=7.0						
BG3	Lake Jocassee	69.02	350	P	P	11 02 20.2	+0.8
BG3				IAmb	IAmb	11 02 21.0	
	comp=Z,48nm,1.2s						
237A	Washetta, Mont	69.03	338	P	P	11 02 20.4	+0.9
X48A	Hartselle	69.17	347	P	P	11 02 20.7	+0.4
X48A				IAmb	IAmb	11 02 22.0	
	comp=Z,59nm,1.0s						
V60A	Jim Taylor Roa	69.20	355	P	P	11 02 21.7	+1.3
V60A				IAMs_20	IAMs_20	11 35 26.9	
	comp=Z,2µm,20.0s						
V60A	Jim Taylor Roa	69.20	355	P	P	11 02 22.7	+2.3
	baz=175						
W52A	Murphy	69.26	350	P	P	11 02 21.6	+0.7
	baz=170,SNR=5.8						
V59A	Middlesex	69.27	355	P	P	11 02 21.9	+1.1
	baz=174						
Z41A	Richland Creek	69.34	341	P	P	11 02 22.6	+1.2
Z41A	Richland Creek	69.34	341	P	P	11 02 23.0	+1.6
	baz=162						
V58A	Windy Hill, Pi	69.37	354	P	P	11 02 21.7	+0.2
V58A	Windy Hill, Pi	69.37	354	P	P	11 02 22.0	+0.4
	baz=174						
TX32	Lajitas Array	69.42	331	P	P	11 02 22.7	+0.6
TXAR	Lajitas Array	69.42	331	P	P	11 02 22.6	+0.5
	comp=Z,7.4nm,0.7s,baz=153,slow=8.1,SNR=97						
TXAR				LR	LR	11 28 42.4	
	comp=Z,3µm,18.2s,baz=0.0,slow=32						
V56A	Mocksville	69.53	353	P	P	11 02 23.1	+0.7
	baz=172,SNR=5.1						
V57A	Coltrane Farms	69.53	353	P	P	11 02 22.9	+0.5
	baz=173						
WHTX	Lake Whitney,	69.54	337	P	P	11 02 23.4	+0.8
WHTX	Lake Whitney,	69.54	337	P	P	11 02 23.9	+1.2
	baz=158,SNR=17						
W50A	Signal Mountai	69.59	348	P	P	11 02 23.7	+0.8
	baz=168,SNR=16						
V55A	Taylorsville	69.65	352	P	P	11 02 23.5	+0.3
V55A				IAmb	IAmb	11 02 24.8	
	comp=Z,56nm,1.1s						
V55A	Taylorsville	69.65	352	P	P	11 02 23.9	+0.7
	baz=172,SNR=6.6						
V54A	Nebo	69.66	351	P	P	11 02 23.9	+0.5
	baz=171,SNR=8.9						
V53A	Saluda	69.67	351	P	P	11 02 23.9	+0.5
	baz=170,SNR=8.3						
CPCT	Cooper Cave	69.70	349	IAmb	IAmb	11 02 25.1	
	comp=Z,60nm,1.2s						
SWET	Sewanee	69.71	348	P	P	11 02 24.5	+0.8
SWET				IAmb	IAmb	11 02 25.3	
	comp=Z,58nm,0.9s						
U61A	Possum Corner	69.71	356	P	P	11 02 25.6	+2.0
	baz=176						
OXF	Oxford	69.72	345	P	P	11 02 23.9	+0.3
OXF	Oxford	69.72	345	P	P	11 02 24.0	+0.3
OXF				pmax	pmax		
	comp=Z,86nm,0.9s						
TKL	Tuckaleechee C	69.79	350	P	P	11 02 24.2	0.0
	comp=Z,17nm,0.8s,baz=169,slow=8.1,SNR=19						
TKL	Tuckaleechee C	69.79	350	IAmb	IAmb	11 02 25.3	
	comp=Z,68nm,1.2s						
U59A	Littleton	69.82	355	P	P	11 02 25.6	+1.4
	baz=175						
WLAR	White Oak Lake	69.83	341	P	P	11 02 25.9	+1.5
PLAL	Pickwick Lake	69.89	346	P	P	11 02 24.1	-0.7
PLAL				IAmb	IAmb	11 02 26.0	
	comp=Z,34nm,0.7s						
U60A	Pendleton	69.90	356	P	P	11 02 26.1	+1.4
	baz=176						
U58A	Oxford	69.92	354	P	P	11 02 25.9	+1.0
	baz=174,SNR=5.1						
V52A	Sevierville	69.95	350	IAMs_20	IAMs_20	11 35 22.8	
	comp=Z,2µm,22.0s						
V52A	Sevierville	69.95	350	P	P	11 02 25.5	+0.4
	baz=170,SNR=8.4						
Z38A	Mt. Pleasant	69.95	340	P	P	11 02 24.6	-0.5
Z38A				IAmb	IAmb	11 02 51.3	
	comp=Z,70nm,1.1s						
TVO	Taravao	69.97	262	eP	P	11 02 27.9	+2.1
	comp=Z,14nm,1.3s						
TVO	Taravao	69.97	262	eT	T	12 18 28.0	
	comp=Z,2.0nm,0.2s						
V51A	Loudon	70.02	349	P	P	11 02 26.1	+0.5
	baz=169,SNR=5.9						
U57A	Blanch	70.03	354	P	P	11 02 26.3	+0.8
	baz=174						
U56A	King	70.05	353	P	P	11 02 25.6	-0.1
U56A				IAmb	IAmb	11 02 27.4	
	comp=Z,89nm,1.4s						
U56A	King	70.05	353	P	P	11 02 26.6	+0.9
	baz=173,SNR=5.4						
X43A	Marvell	70.06	343	P	P	11 02 27.3	+1.5
	baz=163,SNR=6.8						
TIAR	Tiarei	70.16	262	eP	P	11 02 28.9	+2.0
	comp=Z,11nm,1.0s						
TIAR	Tiarei	70.16	262	eT	T	12 18 42.4	
	comp=Z,5.7nm,0.2s						
U55A	TA2, Sparta	70.27	352	P	P	11 02 27.8	+0.6

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      baz=172
W45A  Hickory Valley     70.29 345  P        P        11 02 27.2  0.0
PAE   Paea               70.30 262 eP        P        11 02 29.7 +1.9
      comp=Z,7.7nm,1.1s
PAE   Paea               70.30 262 eT        T        12 18 53.0
      comp=Z,1.5nm,0.3s
U53A  Fall Branch        70.32 351  P        P        11 02 27.6 +0.2
      baz=171
PPTF  Pamatai, Papee     70.32 262  P        P        11 02 26.4 -1.6
PPT2  Papeete2           70.33 262 eP        P        11 02 30.3 +2.2
      comp=Z,68nm,1.3s
PPT2                               eS        S        11 11 37.5 -2.5
      comp=Z,5µm,24.0s
PPT2  Papeete2           70.33 262 eLR       LR       11 23 38.1
      comp=Z,7µm,28.2s,baz=122
PPT2  Papeete2           70.33 262 eT        T        12 18 54.6
      comp=Z,2.8nm,0.3s
PPT   Papeete            70.34 262  P        P        11 02 30.5 +2.5
      comp=Z,38nm,1.0s,baz=102,slow=7.8,SNR=6.0
PPT                                 LR       LR       11 26 13.3
      comp=Z,5µm,18.3s,baz=145,slow=30
U54A  Nelsons Funny      70.38 352  P        P        11 02 27.3 -0.5
U54A                                IAmb     IAmb     11 02 46.1
      comp=Z,66nm,1.0s
U54A                                IAMs_20  IAMs_20  11 31 37.2
      comp=Z,2µm,22.0s
U54A  Nelsons Funny      70.38 352  P        P        11 02 28.3 +0.5
      baz=171,SNR=7.6
V48A  Smith Brothers     70.38 347  P        P        11 02 27.2 -0.5
T59A  Double "B" Far     70.42 355  P        P        11 02 28.1 +0.2
T59A  Double "B" Far     70.42 355  P        P        11 02 29.1 +1.2
      baz=175,SNR=8.4
T58A  Grand View Acr     70.47 354  P        P        11 02 29.3 +1.1
      baz=174,SNR=8.1
X40A  Basin Creek Fa     70.52 342  P        P        11 02 29.4 +0.9
      baz=162,SNR=5.8
T57A  Hurt               70.58 354  P        P        11 02 29.8 +0.8
      baz=174
CLTN  Cedars of Leba     70.63 348  P        P        11 02 29.2 -0.1
CLTN                                IAmb     IAmb     11 02 30.9
      comp=Z,75nm,1.2s
UALR  University of      70.66 342  P        P        11 02 29.9 +0.4
UALR                                IAmb     IAmb     11 02 31.0
      comp=Z,44nm,1.4s
T56A  Rocky Mt           70.68 353  P        P        11 02 30.5 +0.9
      baz=173,SNR=6.8
MIAR  Mount Ida          70.77 341  IAmb     IAmb     11 02 54.9
      comp=Z,65nm,1.4s
MIAR  Mount Ida          70.77 341  P        P        11 02 30.8 +0.7
      baz=161,SNR=12
T55A  Pulaski            70.85 353  P        P        11 02 31.9 +1.3
      baz=172
ABTX  Abilene, Hawle     70.85 336  IAmb     IAmb     11 02 43.4
      comp=Z,68nm,1.1s
ABTX  Abilene, Hawle     70.85 336  P        P        11 02 31.9 +1.2
      baz=156,SNR=17
T54A  Tazewell           70.88 352  P        P        11 02 31.0 +0.1
      baz=172,SNR=8.1
BLA   Blacksburg         70.90 353  P        P        11 02 30.7 -0.3
BLA   Blacksburg         70.90 353  P        P        11 02 30.7 -0.3
BLA                                 pmax     pmax
      comp=Z,170nm,1.9s
BLA   Blacksburg         70.90 353  P        P        11 02 31.4 +0.4
      baz=173
T53A  Wise               70.92 351  P        P        11 02 31.3 +0.2
      baz=171
U49A  Red Boiling Sp     70.95 348  P        P        11 02 30.7 -0.5
WVT   Waverly            70.95 346  P        P        11 02 30.8 -0.4
WVT   Waverly            70.95 346  P        P        11 02 30.8 -0.4
WVT                                 pmax     pmax
      comp=Z,139nm,1.0s
WVT                                 MLR      MLR
      comp=Z,1µm,21.0s
WVT   Waverly            70.95 346  P        P        11 02 31.5 +0.3
      baz=166
HBAR  Harrisburg         71.00 344  P        P        11 02 31.7 +0.2
HBAR                                IAmb     IAmb     11 03 44.4
      comp=Z,43nm,0.9s
W41B  Gary Mavity, V     71.02 343  P        P        11 02 32.5 +0.9
W41B                                IAmb     IAmb     11 02 44.0
      comp=Z,50nm,1.2s
W41B  Gary Mavity, V     71.02 343  P        P        11 02 32.6 +1.0
      baz=162,SNR=14
S58A  Poland Farm, P     71.09 355  P        P        11 02 33.0 +1.0
S58A                                IAmb     IAmb     11 02 34.1
      comp=Z,75nm,1.2s
S58A  Poland Farm, P     71.09 355  P        P        11 02 33.4 +1.4
      baz=175
T51A  Gray               71.10 350  P        P        11 02 32.5 +0.4
      baz=170,SNR=7.8
T52A  Hallie             71.11 351  IAMs_20  IAMs_20  11 37 07.4
      comp=Z,2µm,20.0s
T52A  Hallie             71.11 351  P        P        11 02 32.3 +0.1
      baz=170
WHAR  Wooly Hollow       71.14 343  P        P        11 02 32.5 +0.2
S59A  Mechanicsville     71.19 356  P        P        11 02 34.0 +1.5
      baz=175,SNR=7.4
GNAR  Gosnell            71.25 345  P        P        11 02 32.2 -0.8
LNXT  Lenox              71.26 345  P        P        11 02 32.6 -0.5
S56A  Natural Bridge     71.28 354  P        P        11 02 34.0 +0.8
      baz=173,SNR=6.1
T50A  Nancy              71.29 349  P        P        11 02 33.6 +0.3
      baz=169,SNR=5.4
S57A  Dark Hollow, R     71.31 354  P        P        11 02 34.4 +1.0
S57A                                IAmb     IAmb     11 02 35.2
      comp=Z,48nm,1.0s
S57A                                IAMs_20  IAMs_20  11 36 48.8
      comp=Z,2µm,22.0s
S57A  Dark Hollow, R     71.31 354  P        P        11 02 34.5 +1.1
      baz=174,SNR=7.7
UTMT  University of      71.36 346  P        P        11 02 34.3 +0.6
GLAT  Glass              71.38 345  P        P        11 02 33.3 -0.5
R58B  Mineral            71.43 355  IAmb     IAmb     11 02 36.5
      comp=Z,96nm,1.4s
R58B  Mineral            71.43 355  P        P        11 02 35.5 +1.5
      baz=175,SNR=6.1
W39A  Magazine           71.44 341  P        P        11 02 34.7 +0.5
W39A  Magazine           71.44 341  P        P        11 02 35.2 +1.0
      baz=161,SNR=24
S55A  Lewisburg          71.47 353  P        P        11 02 35.2 +0.8
      baz=173,SNR=6.8
T49A  Edmonton           71.49 349  IAmb     IAmb     11 02 35.7
      comp=Z,62nm,1.2s
T49A  Edmonton           71.49 349  P        P        11 02 34.6 +0.2
      baz=168,SNR=12
S53A  Williamson         71.56 352  P        P        11 02 35.2 +0.2
      baz=171
S54A  Dingess, Beckl     71.58 352  P        P        11 02 34.6 -0.4
S54A                                IAmb     IAmb     11 02 36.1
      comp=Z,46nm,1.1s
S54A  Dingess, Beckl     71.58 352  P        P        11 02 35.4 +0.4
      baz=172
LCAR  Lake Charles       71.61 344  P        P        11 02 35.1 -0.1
PENMO Penman             71.63 345  P        P        11 02 36.1 +0.9
HICK  Hickman            71.63 345  P        P        11 02 36.3 +1.0
CBN   Corbin Frederi     71.63 356  P        P        11 02 36.2 +0.9
CBN                                 IAmb     IAmb     11 02 37.3
      comp=Z,80nm,1.3s
SRIG  Santa Rosalia      71.64 323  IAMs_20  IAMs_20  11 27 30.0
      comp=Z,2µm,18.0s
T47A  Sharon Grove       71.65 347  P        P        11 02 35.8 +0.4
T47A                                IAmb     IAmb     11 02 36.6
      comp=Z,82nm,1.2s
FCAR  Ozark Folk Cen     71.67 343  P        P        11 02 36.1 +0.6
S51A  Beattyville        71.71 350  P        P        11 02 36.1 +0.3
S51A                                IAmb     IAmb     11 02 48.2
      comp=Z,39nm,0.9s
S51A  Beattyville        71.71 350  P        P        11 02 36.1 +0.3
      baz=170,SNR=6.3
R58A  Rapidan            71.77 355  P        P        11 02 37.1 +1.0
      baz=175,SNR=5.4
R57A  Stanardsville      71.81 355  P        P        11 02 37.6 +1.3
      baz=174,SNR=8.2
S50A  Richmond           71.87 350  P        P        11 02 37.4 +0.7
      baz=169,SNR=10
R54A  Victor             71.92 353  P        P        11 02 37.5 +0.4
      baz=172
R56A  Bull Pasture M     71.99 354  P        P        11 02 39.3 +1.7
      baz=174,SNR=6.8
S49A  Springfield        72.11 349  P        P        11 02 38.0 -0.2
      baz=168,SNR=5.3
PBMO  Poplar Bluff       72.12 345  P        P        11 02 37.9 -0.3
PBMO                                IAmb     IAmb     11 02 50.2
      comp=Z,75nm,1.1s
R53A  Hurricane          72.18 352  IAmb     IAmb     11 02 39.8
      comp=Z,66nm,1.3s
R53A  Hurricane          72.18 352  P        P        11 02 38.7 +0.1
      baz=171
R52A  Catlettsburg       72.27 351  P        P        11 02 39.6 +0.5
      baz=171
U40A  Yellville          72.29 342  P        P        11 02 39.0 -0.3
U40A                                IAmb     IAmb     11 02 51.4
      comp=Z,42nm,0.8s
U40A  Yellville          72.29 342  P        P        11 02 39.8 +0.5
      baz=162,SNR=35
R51A  Hillsboro          72.36 350  P        P        11 02 40.0 +0.4
      baz=170,SNR=7.0
Q58A  Fox Den Farm,      72.39 355  P        P        11 02 41.0 +1.3
      baz=175
HSIG                     72.40 325  IAmb     IAmb     11 02 44.5
      comp=Z,107nm,1.8s
HSIG                                IAMs_20  IAMs_20  11 31 39.2
      comp=Z,2µm,18.0s
R50A  Paris              72.45 350  P        P        11 02 40.1 -0.1
R50A  Paris              72.45 350  P        P        11 02 40.5 +0.4
      baz=169,SNR=7.3
WMOK  Wichita Mounta     72.49 337  IAmb     IAmb     11 02 43.0
      comp=Z,112nm,1.9s
WMOK  Wichita Mounta     72.49 337  P        P        11 02 41.2 +0.6
      baz=157,SNR=21
Q57A  Strasburg          72.53 355  P        P        11 02 42.2 +1.5
      baz=174,SNR=7.5
R49A  Shelbyville        72.59 349  P        P        11 02 41.1 +0.1
R49A                                IAmb     IAmb     11 02 43.1
      comp=Z,54nm,1.2s
R49A  Shelbyville        72.59 349  P        P        11 02 41.1 +0.1
      baz=169,SNR=9.0
Q56A  Snyder Ridge,      72.60 354  IAmb     IAmb     11 03 05.3
      comp=Z,90nm,1.4s
Q56A  Snyder Ridge,      72.60 354  P        P        11 02 42.5 +1.4
      baz=174
Q55A  Buckhannon         72.64 353  P        P        11 02 42.5 +1.2
      baz=173
Q53A  Leroy              72.65 352  P        P        11 02 41.9 +0.6
      baz=172
TUL1  Leonard            72.66 340  IAmb     IAmb     11 02 53.6
      comp=Z,40nm,0.8s
TUL1  Leonard            72.66 340  P        P        11 02 42.1 +0.6
      baz=160,SNR=12
OKCFA Oklahoma City      72.69 338  P        P        11 02 42.0 +0.3
OKCFA                               IAmb     IAmb     11 02 54.5
      comp=Z,116nm,1.5s
USIN  University of      72.70 347  IAmb     IAmb     11 02 53.7
      comp=Z,72nm,0.9s
Q54A  Coxs Mills         72.70 353  P        P        11 02 41.4 -0.3
Q54A                                IAmb     IAmb     11 03 47.3
      comp=Z,85nm,1.8s
Q54A  Coxs Mills         72.70 353  P        P        11 02 42.0 +0.3
      baz=172
WCI   Wyandotte Cave     72.71 348  P        P        11 02 41.4 -0.3
WCI   Wyandotte Cave     72.71 348  P        P        11 02 41.4 -0.3
WCI                                 pmax     pmax
      comp=Z,24nm,0.9s
WCI   Wyandotte Cave     72.71 348  P        P        11 02 41.5 -0.2
      baz=168
EPT   El Paso            72.73 330  IAMs_20  IAMs_20  11 30 18.8
      comp=Z,4µm,19.0s
S44A  Carbondale         72.75 346  P        P        11 02 41.8 -0.2
S44A                                IAmb     IAmb     11 02 53.8
      comp=Z,63nm,1.1s
Q52A  Bidwell            72.84 352  P        P        11 02 43.3 +0.8
      baz=171,SNR=7.7
MGMO  Mountain Grove     72.91 343  P        P        11 02 43.2 +0.2
MGMO                                IAmb     IAmb     11 02 55.2
      comp=Z,43nm,1.1s
P58A  Pank, Wackersv     72.91 356  P        P        11 02 44.6 +1.7
      baz=175,SNR=7.3
P57A  Homestead Farm     72.95 355  IAmb     IAmb     11 02 45.7
      comp=Z,66nm,1.1s
P57A  Homestead Farm     72.95 355  P        P        11 02 45.2 +2.1
      baz=175,SNR=8.0
Q50A  Georgetown         72.95 350  P        P        11 02 44.2 +1.0
      baz=170
P61A  Hammonton          72.97 358  IAMs_20  IAMs_20  11 36 43.7
      comp=Z,2µm,20.0s
P59A  Jarrettsville      72.98 356  P        P        11 02 44.8 +1.6
      baz=176,SNR=9.1
P56A  Dayton Farm, R     73.03 354  P        P        11 02 45.5 +1.9
      baz=174,SNR=6.2
Q51A  Peebles            73.04 351  IAmb     IAmb     11 02 56.2
      comp=Z,40nm,0.8s
Q51A  Peebles            73.04 351  P        P        11 02 44.3 +0.6
      baz=170,SNR=7.3
P55A  Reedsville         73.12 354  P        P        11 02 44.9 +0.7
      baz=173
P60A  Greenville         73.14 357  IAMs_20  IAMs_20  11 36 55.2
      comp=Z,2µm,19.0s
P60A  Greenville         73.14 357  P        P        11 02 45.6 +1.4
      baz=177
MSTX  Muleshoe           73.19 334  P        P        11 02 45.5 +0.7
MSTX                                IAmb     IAmb     11 02 56.3
      comp=Z,53nm,0.8s
MSTX                                IAMs_20  IAMs_20  11 31 31.7
      comp=Z,2µm,20.0s
MSTX  Muleshoe           73.19 334  P        P        11 02 45.9 +1.1
      baz=154
Q49A  Aurora             73.24 350  P        P        11 02 44.8 -0.1
      baz=169,SNR=15
P53A  Whipple            73.26 352  IAmb     IAmb     11 02 46.4
      comp=Z,65nm,1.3s
P53A  Whipple            73.26 352  P        P        11 02 45.6 +0.7
      baz=172,SNR=6.5
P54A  Burton             73.28 353  P        P        11 02 45.3 +0.2
      baz=173,SNR=8.1
Q48A  North Vernon       73.30 349  P        P        11 02 45.4 +0.2
      baz=168,SNR=12
MVL   Millersville       73.36 357  P        P        11 02 46.5 +0.9
MVL                                 IAmb     IAmb     11 02 48.0
      comp=Z,58nm,1.4s
MVL                                 IAMs_20  IAMs_20  11 36 56.1
      comp=Z,2µm,20.0s
P51A  Williamsport       73.45 351  P        P        11 02 45.5 -0.6
P51A                                IAmb     IAmb     11 02 47.3
      comp=Z,95nm,1.2s
P51A  Williamsport       73.45 351  P        P        11 02 46.3 +0.2
      baz=170,SNR=9.2
P52A  Corning            73.49 352  P        P        11 02 46.5 +0.2
      baz=171,SNR=7.8
O58A  Lewisberry         73.52 356  P        P        11 02 48.0 +1.5
      baz=176,SNR=6.1
CCM   Cathedral Cave     73.53 344  P        P        11 02 45.9 -0.7
CCM   Cathedral Cave     73.53 344  P        P        11 02 45.9 -0.7
CCM                                 pmax     pmax
      comp=Z,87nm,1.0s
CCM                                 MLR      MLR
      comp=Z,900nm,19.0s
CCM   Cathedral Cave     73.53 344  P        P        11 02 46.7 +0.2
      baz=163
MAW   Mawson             73.53 164  P        P        11 02 46.5 +0.2
      comp=Z,45nm,1.1s,baz=200,slow=9.1,SNR=7.5
MAW                                 LR       LR       11 37 56.3
      comp=Z,7µm,18.4s,baz=230,slow=38
319A  Douglas            73.60 327  IAmb     IAmb     11 03 26.5
      comp=Z,82nm,1.3s
319A                                IAMs_20  IAMs_20  11 29 28.9
      comp=Z,2µm,21.0s
AMTX  Amarillo           73.61 335  IAmb     IAmb     11 03 00.1
      comp=Z,72nm,1.1s
PAGS  Pennsylvania G     73.61 356  P        P        11 02 47.6 +0.7
PAGS                                IAMs_20  IAMs_20  11 37 04.6
      comp=Z,2µm,20.0s
O60A  Telford            73.64 357  P        P        11 02 48.9 +1.7
      baz=177,SNR=5.8
O57A  Amberson           73.65 355  P        P        11 02 48.5 +1.2
      baz=175,SNR=5.4
O59A  Robesonia          73.67 357  P        P        11 02 48.8 +1.5
      baz=176,SNR=6.5
BLO   Bloomington        73.67 348  IAmb     IAmb     11 03 00.4
      comp=Z,36nm,0.8s
BLO                                 IAMs_20  IAMs_20  11 37 49.3
      comp=Z,2µm,22.0s
S39A  Bolivar            73.67 342  P        P        11 02 46.9 -0.5
S39A                                IAmb     IAmb     11 02 49.1
      comp=Z,100nm,1.5s
P50A  Jamestown          73.68 351  P        P        11 02 47.8 +0.4
      baz=170,SNR=10
P49A  Miami Univ. Ec     73.73 350  P        P        11 02 47.3 -0.4
      baz=169,SNR=9.2
O55A  Ligonier           73.77 354  P        P        11 02 48.7 +0.7
      baz=174
O56A  Blue Knob Stat     73.77 355  IAmb     IAmb     11 02 50.2
      comp=Z,105nm,1.6s
O56A  Blue Knob Stat     73.77 355  P        P        11 02 49.0 +1.0
      baz=174,SNR=5.3
P48A  Milroy             73.77 349  P        P        11 02 47.4 -0.6
      baz=168,SNR=13
T35A  Sooner Cattle      73.81 340  IAmb     IAmb     11 03 00.8
      comp=Z,60nm,1.0s
O54A  Avella             73.84 353  IAMs_20  IAMs_20  11 38 31.8
      comp=Z,2µm,21.0s
O52A  Adamsville         73.93 352  IAMs_20  IAMs_20  11 37 32.1
      comp=Z,2µm,20.0s
O52A  Adamsville         73.93 352  P        P        11 02 49.2 +0.3
      baz=172
121A  Cookes Peak, D     73.93 329  IAmb     IAmb     11 03 36.3
      comp=Z,57nm,1.1s
121A                                IAMs_20  IAMs_20  11 30 15.6
      comp=Z,3µm,20.0s
121A  Cookes Peak, D     73.93 329  P        P        11 02 51.5 +2.2
      baz=150,SNR=26
BRNJ  Basking Ridge      73.97 358  IAMs_20  IAMs_20  11 37 12.2
      comp=Z,2µm,21.0s
O53A  New Philadelph     73.99 353  P        P        11 02 49.6 +0.4
      baz=172
N61A  South Mountain     74.03 358  P        P        11 02 51.2 +1.8
      baz=178
O51A  Pataskala          74.05 352  P        P        11 02 49.9 +0.3
      baz=171,SNR=11
U32A  Winter Ranch,      74.07 338  P        P        11 02 50.0 +0.1
U32A                                IAmb     IAmb     11 03 02.5
      comp=Z,67nm,0.9s
SSPA  Standing Stone     74.09 355  P        P        11 02 50.2 +0.4
SSPA  Standing Stone     74.09 355  P        P        11 02 50.9 +1.1
      baz=175
N60A  Cedar Hill Far     74.18 358  P        P        11 02 51.7 +1.4
      baz=177,SNR=6.5
ACSO  Alum Creek Sta     74.18 351  P        P        11 02 50.2 -0.2
ACSO                                IAmb     IAmb     11 03 02.2
      comp=Z,57nm,0.9s
ACSO  Alum Creek Sta     74.18 351  P        P        11 02 50.8 +0.5
      baz=171,SNR=16
O50A  Cable              74.18 351  P        P        11 02 50.9 +0.6
      baz=170,SNR=11
N58A  Sunbury            74.22 356  IAMs_20  IAMs_20  11 37 32.7
      comp=Z,2µm,20.0s
N58A  Sunbury            74.22 356  P        P        11 02 51.9 +1.4
      baz=176,SNR=6.0
P46A  Rosedale           74.22 348  IAmb     IAmb     11 03 02.4
      comp=Z,48nm,0.9s
N59A  State Game Lan     74.25 357  IAmb     IAmb     11 02 53.4
      comp=Z,63nm,1.2s
N59A                                IAMs_20  IAMs_20  11 37 17.5
      comp=Z,2µm,21.0s
N59A  State Game Lan     74.25 357  P        P        11 02 52.2 +1.4
      baz=177,SNR=5.5
PAL   Palisades          74.28 358  IAMs_20  IAMs_20  11 37 17.3
      comp=Z,2µm,21.0s
N55A  Marion Center      74.31 354  P        P        11 02 52.2 +1.1
      baz=174,SNR=8.7
O49A  Covington          74.32 350  P        P        11 02 51.0 -0.2
O49A                                IAmb     IAmb     11 02 52.2
      comp=Z,106nm,1.3s
O49A  Covington          74.32 350  P        P        11 02 51.4 +0.3
      baz=169,SNR=13
ODNJ  Ogdensburg         74.37 358  IAmb     IAmb     11 04 15.1
      comp=Z,95nm,1.8s
ODNJ                                IAMs_20  IAMs_20  11 37 23.8
      comp=Z,2µm,21.0s
N56A  West Decatur       74.39 355  P        P        11 02 52.5 +0.8
      baz=175
N53A  Lisbon             74.51 353  IAMs_20  IAMs_20  11 38 53.4
      comp=Z,2µm,21.0s
N53A  Lisbon             74.51 353  P        P        11 02 53.2 +0.9
      baz=172
O48A  Farmland           74.51 350  P        P        11 02 51.7 -0.6
      baz=169,SNR=8.9
YLE   Yale               74.57 359  IAMs_20  IAMs_20  11 37 17.0
      comp=Z,2µm,20.0s
M61A  Granite Spring     74.58 359  P        P        11 02 53.9 +1.3
      baz=178
N54A  Moraine State      74.58 354  P        P        11 02 53.2 +0.5
N54A  Moraine State      74.58 354  P        P        11 02 53.6 +0.9
      baz=173,SNR=6.6
N52A  McGinn's Farm,     74.60 352  P        P        11 02 53.4 +0.6
      baz=172
LIC   Lamto              74.61  72 eP        P        11 02 53.2 -0.3
      comp=Z,118nm,0.7s
M60A  Port Jervis        74.62 358  P        P        11 02 54.2 +1.4
      baz=178
P43A  Skaggs, Pawnee     74.68 346  IAmb     IAmb     11 03 05.0
      comp=Z,72nm,0.9s
M62A  Hamden             74.70 359  P        P        11 02 55.2 +2.0
      baz=179
N50A  Nevada             74.73 351  P        P        11 02 54.0 +0.4
      baz=170,SNR=17
M58A  Price's Panora     74.74 357  P        P        11 02 54.9 +1.3
      baz=176
M57A  Sunshine Farm,     74.74 356  IAMs_20  IAMs_20  11 37 39.5
      comp=Z,2µm,21.0s
M57A  Sunshine Farm,     74.74 356  P        P        11 02 54.6 +1.1
      baz=176
N51A  Ashland            74.78 352  P        P        11 02 54.0 +0.1
N51A                                IAmb     IAmb     11 02 55.0
      comp=Z,93nm,1.3s
N51A  Ashland            74.78 352  P        P        11 02 54.4 +0.6
      baz=171,SNR=7.5
M59A  Waymart            74.86 357  P        P        11 02 55.7 +1.5
      baz=177
TIC   Toumodi            74.87  71 eP        P        11 02 54.4 -0.6
KIC   Kosan Boka         74.92  72 eP        P        11 02 54.9 -0.4
      comp=Z,184nm,0.8s
SFIN  Lafayette          74.94 348  P        P        11 02 54.5 -0.2
SFIN                                IAmb     IAmb     11 02 55.3
      comp=Z,64nm,1.4s
SFIN  Lafayette          74.94 348  P        P        11 02 54.5 -0.2
      baz=167,SNR=6.8
M56A  Emporium           74.95 355  IAmb     IAmb     11 02 56.6
      comp=Z,84nm,1.3s
M56A                                IAMs_20  IAMs_20  11 39 14.9
      comp=Z,2µm,19.0s
M56A  Emporium           74.95 355  P        P        11 02 55.7 +0.9
      baz=175,SNR=7.8
O44A  Mansfield          74.97 347  IAmb     IAmb     11 03 06.8
      comp=Z,69nm,1.2s
SUR   Sutherland         74.98 119  LR       LR       11 30 32.6
      comp=Z,2µm,21.9s,baz=234,slow=32
SUR   Sutherland         74.98 119  P        P        11 02 55.8 +0.2
SUR   Sutherland         74.98 119  IAMs_20  IAMs_20  11 34 19.0
      comp=Z,3µm,21.0s
M55A  Ridgway            74.98 355  P        P        11 02 55.6 +0.6
M55A                                IAmb     IAmb     11 03 07.1
      comp=Z,47nm,1.1s
M55A  Ridgway            74.98 355  P        P        11 02 55.8 +0.8
      baz=174,SNR=9.2
KSCT  Kent School, K     74.99 359  IAMs_20  IAMs_20  11 37 43.1
      comp=Z,2µm,21.0s
DBIC  Dimbokro           75.02  71  P        P        11 02 55.8 -0.1
      comp=Z,55nm,0.8s,baz=210,slow=6.0,SNR=69
DBIC                                LR       LR       11 34 46.5
      comp=Z,4µm,18.6s,baz=216,slow=35
DBIC  Dimbokro           75.02  71  P        P        11 02 54.0 -1.8
DBIC  Dimbokro           75.02  71  P        P        11 02 54.0 -1.8
DBIC                                pmax     pmax
      comp=Z,95nm,1.0s
N49A  Columbus Grove     75.02 350  P        P        11 02 55.0 -0.2
N49A  Columbus Grove     75.02 350  P        P        11 02 55.5 +0.3
      baz=170,SNR=20
TUC   Tucson             75.07 327  P        P        11 02 55.9  0.0
TUC   Tucson             75.07 327  IAMs_20  IAMs_20  11 30 38.9
      comp=Z,2µm,19.0s
TUC   Tucson             75.07 327  P        P        11 02 55.9  0.0
TUC                                 pmax     pmax
      comp=Z,32nm,1.3s
TUC   Tucson             75.07 327  P        P        11 02 58.0 +2.2
      baz=147
N48A  Decatur            75.08 350  P        P        11 02 55.5 -0.1
      baz=169,SNR=7.6
M54A  Oil Creek Stat     75.09 354  P        P        11 02 55.9 +0.2
M54A                                IAmb     IAmb     11 04 32.3
      comp=Z,71nm,1.6s
M54A                                IAMs_20  IAMs_20  11 40 35.7
      comp=Z,2µm,20.0s
M54A  Oil Creek Stat     75.09 354  P        P        11 02 56.1 +0.5
      baz=174
L63A  North Scituate     75.11   0  P        P        11 02 57.4 +1.7
      baz=180
M53A  WI Miller and      75.12 353  P        P        11 02 56.3 +0.6
      baz=173,SNR=6.2
M51A  Elyria             75.17 352  P        P        11 02 56.7 +0.6
      baz=171,SNR=8.1
N47A  Urbana             75.20 349  P        P        11 02 55.4 -0.8
N47A                                IAmb     IAmb     11 03 08.0
      comp=Z,70nm,1.0s
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N47A	**Urbana**	75.20	349	P	**P**	**11 02 56.0**	**-0.2**
	baz=168,SNR=14						
L60A	**Shokan**	75.27	358	P	**P**	**11 02 58.2**	**+1.6**
	baz=178						
ALLY	**Alegheny Colle**	75.27	354	IAmb	IAmb	11 02 58.1	
	comp=Z,49nm,1.1s						
M52A	**Chesterland**	75.29	353	P	**P**	**11 02 57.3**	**+0.5**
M52A				IAmb	IAmb	11 02 58.1	
	comp=Z,70nm,1.2s						
M52A				IAMs_20	IAMs_20	11 39 29.0	
	comp=Z,2μm,20.0s						
M52A	**Chesterland**	75.29	353	P	**P**	**11 02 57.4**	**+0.7**
	baz=172,SNR=6.4						
M50A	**Fremont**	75.34	351	IAmb	IAmb	11 02 58.2	
	comp=Z,112nm,1.4s						
M50A	**Fremont**	75.34	351	P	**P**	**11 02 57.6**	**+0.5**
	baz=171,SNR=7.0						
L58A	**Harry Jones Me**	75.38	357	P	**P**	**11 02 58.7**	**+1.4**
	baz=177						
L57A	**Andrews Acres**	75.38	356	P	**P**	**11 02 58.2**	**+0.9**
	baz=176						
ANMO	**Albuquerque**	75.47	331	P	**P**	**11 02 58.6**	**+0.4**
ANMO	**Albuquerque**	75.47	331	P	**P**	**11 02 58.6**	**+0.4**
ANMO				pmax	pmax		
	comp=Z,45nm,1.3s						
ANMO	**Albuquerque**	75.47	331	P	**P**	**11 03 00.1**	**+1.9**
	baz=151						
L59A	**Walton**	75.49	358	IAMs_20	IAMs_20	11 37 59.4	
	comp=Z,2μm,21.0s						
L59A	**Walton**	75.49	358	P	**P**	**11 02 59.5**	**+1.6**
	baz=177,SNR=5.4						
HDIL	**Hopedale**	75.52	346	P	**P**	**11 02 58.2**	**+0.2**
	baz=165,SNR=8.7						
QUA2	**Belchertown**	75.53	360	P	**P**	**11 02 59.3**	**+1.3**
M49A	**Liberty Center**	75.53	351	P	**P**	**11 02 58.5**	**+0.4**
	baz=170,SNR=14						
BINY	**Binghamton**	75.54	357	P	**P**	**11 02 59.2**	**+1.1**
L56A	**Greenwood**	75.56	356	P	**P**	**11 02 58.7**	**+0.4**
L56A				IAmb	IAmb	11 03 00.3	
	comp=Z,82nm,1.1s						
L56A				IAMs_20	IAMs_20	11 37 56.2	
	comp=Z,2μm,21.0s						
L56A	**Greenwood**	75.56	356	P	**P**	**11 02 59.4**	**+1.0**
	baz=175,SNR=10						
L53A	**Girard**	75.59	354	P	**P**	**11 02 59.0**	**+0.6**
	baz=173,SNR=7.8						
M48A	**Edgerton**	75.65	350	P	**P**	**11 02 58.7**	**-0.1**
M48A				IAmb	IAmb	11 02 59.7	
	comp=Z,66nm,1.1s						
M48A				IAMs_20	IAMs_20	11 36 50.6	
	comp=Z,2μm,22.0s						
M48A	**Edgerton**	75.65	350	P	**P**	**11 02 59.0**	**+0.2**
	baz=169						
M47A	**Cromwell**	75.66	349	P	**P**	**11 02 59.0**	**+0.1**
	baz=168						
L55A	**Hinsdale**	75.67	355	P	**P**	**11 03 00.0**	**+1.1**
	baz=174,SNR=9.7						
L61B	**Northampton**	75.70	359	P	**P**	**11 03 00.1**	**+1.1**
	baz=180						
ERPA	**Erie**	75.72	354	IAmb	IAmb	11 03 00.6	
	comp=Z,52nm,1.1s						
214A	**Organ Pipe Nat**	75.73	325	IAmb	IAmb	11 03 38.2	
	comp=Z,58nm,1.4s						
214A				IAMs_20	IAMs_20	11 33 38.3	
	comp=Z,2μm,18.0s						
214A	**Organ Pipe Nat**	75.73	325	P	**P**	**11 03 01.6**	**+2.1**
	baz=146,SNR=12						
HRV	**Adam Dziewonsk**	75.76	0	P	**P**	**11 03 00.4**	**+1.0**
HRV	**Adam Dziewonsk**	75.76	0	P	**P**	**11 03 00.4**	**+1.0**
HRV				pmax	pmax		
	comp=Z,43nm,1.2s						
HRV				MLR	MLR		
	comp=Z,2μm,21.0s						
HRV	**Adam Dziewonsk**	75.76	0	P	**P**	**11 03 01.3**	**+1.9**
	baz=180						
L54A	**Sinclairville**	75.78	354	P	**P**	**11 03 00.7**	**+1.1**
	baz=174,SNR=12						
R32A	**Long Quarter,**	75.86	339	P	**P**	**11 03 00.6**	**+0.4**
R32A				IAmb	IAmb	11 03 12.8	
	comp=Z,59nm,0.9s						
KSU1	**Kansas State U**	75.87	340	P	**P**	**11 03 00.7**	**+0.6**
	baz=159						
K60A	**Five Rivers En**	75.89	359	P	**P**	**11 03 01.8**	**+1.7**
	baz=178						
WVNY	**West Valley, N**	75.90	355	P	**P**	**11 03 00.7**	**+0.5**
WVNY				IAmb	IAmb	11 03 02.2	
	comp=Z,68nm,1.1s						
K62A	**Royalston**	75.91	360	P	**P**	**11 03 01.7**	**+1.5**
	baz=180						
L50A	**Kingsville**	75.95	352	P	**P**	**11 03 00.4**	**-0.1**
	baz=171,SNR=7.9						
N41A	**Harden Midland**	75.98	345	P	**P**	**11 02 59.2**	**-1.5**
N41A				IAmb	IAmb	11 03 01.9	
	comp=Z,85nm,1.1s						
TRY	**Troy**	76.00	359	IAmb	IAmb	11 03 03.4	
	comp=Z,65nm,1.1s						
TRY				IAMs_20	IAMs_20	11 40 37.8	
	comp=Z,2μm,21.0s						
L48A	**N Adams**	76.06	350	P	**P**	**11 03 01.3**	**+0.2**
	baz=169,SNR=9.8						
K59A	**Cooperstown**	76.07	358	P	**P**	**11 03 02.2**	**+1.0**
	baz=178						
K58A	**Earlville**	76.09	357	P	**P**	**11 03 00.6**	**-0.7**
K58A				IAMs_20	IAMs_20	11 38 19.2	
	comp=Z,2μm,21.0s						
K58A	**Earlville**	76.09	357	P	**P**	**11 03 02.4**	**+1.1**
	baz=177,SNR=6.3						
M44A	**Midewin, Midew**	76.09	348	P	**P**	**11 03 00.8**	**-0.5**
M44A				IAmb	IAmb	11 03 13.5	
	comp=Z,77nm,0.9s						
M44A				IAMs_20	IAMs_20	11 39 17.2	
	comp=Z,2μm,22.0s						
K57A	**Scipio Center**	76.09	357	P	**P**	**11 03 02.0**	**+0.7**
	baz=176						
K56A	**Middlesex**	76.11	356	P	**P**	**11 03 02.2**	**+0.8**
	baz=176						
K54A	**Basiliko Farm,**	76.11	355	P	**P**	**11 03 02.5**	**+1.1**
	baz=174,SNR=6.9						
L49A	**Milan**	76.13	351	P	**P**	**11 03 02.2**	**+0.7**
	baz=170,SNR=8.7						
K55A	**Perry**	76.18	355	P	**P**	**11 03 02.8**	**+0.9**
	baz=175,SNR=6.8						
L47A	**Sherwood**	76.20	350	P	**P**	**11 03 02.0**	**+0.1**
	baz=169,SNR=11						
AAM	**Ann Arbor**	76.31	351	IAMs_20	IAMs_20	11 40 08.0	
	comp=Z,1μm,19.0s						
L46A	**Eue Claire**	76.40	349	P	**P**	**11 03 02.4**	**-0.7**
L46A				IAmb	IAmb	11 03 14.2	
	comp=Z,56nm,1.1s						
L46A	**Eue Claire**	76.40	349	P	**P**	**11 03 03.2**	**+0.1**
	baz=168						
K52A	**Tillsonburg**	76.45	353	P	**P**	**11 03 04.0**	**+0.7**
	baz=173						
K51A	**Iona Station**	76.47	353	P	**P**	**11 03 04.2**	**+0.8**
	baz=172						
J62A	**Henniker**	76.47	0	P	**P**	**11 03 05.7**	**+2.2**
	baz=180						
X18A	**Snowflake**	76.57	329	P	**P**	**11 03 05.8**	**+1.3**
X18A				IAMs_20	IAMs_20	11 40 07.5	
	comp=Z,2μm,18.0s						
J61A	**Chester**	76.60	360	P	**P**	**11 03 06.5**	**+2.3**
	baz=180						
T25A	**Trinidad**	76.61	334	IAmb	IAmb	11 03 09.3	
	comp=Z,62nm,1.0s						
T25A				IAMs_20	IAMs_20	11 33 41.4	
	comp=Z,2μm,19.0s						
T25A	**Trinidad**	76.61	334	P	**P**	**11 03 06.7**	**+2.1**
	baz=153,SNR=41						
K50A	**Casco**	76.65	352	IAmb	IAmb	11 03 05.3	
	comp=Z,62nm,0.9s						
K50A				IAMs_20	IAMs_20	11 40 16.0	
	comp=Z,2μm,20.0s						
K50A	**Casco**	76.65	352	P	**P**	**11 03 04.7**	**+0.3**
	baz=171,SNR=5.5						
ACCN	**Adirondack Com**	76.65	359	P	**P**	**11 03 05.4**	**+1.0**
ACCN				IAmb	IAmb	11 03 06.8	
	comp=Z,64nm,1.4s						
ACCN				IAMs_20	IAMs_20	11 41 06.0	
	comp=Z,2μm,21.0s						
J56A	**Wolcott**	76.65	356	P	**P**	**11 03 04.9**	**+0.5**
J56A				IAMs_20	IAMs_20	11 38 57.2	
	comp=Z,2μm,21.0s						
J56A	**Wolcott**	76.65	356	P	**P**	**11 03 05.0**	**+0.6**
	baz=176						
J58A	**Remsen**	76.67	358	P	**P**	**11 03 04.0**	**-0.5**
J58A				IAmb	IAmb	11 04 21.6	
	comp=Z,84nm,1.9s						
J58A				IAMs_20	IAMs_20	11 38 55.6	
	comp=Z,2μm,21.0s						
J55A	**Hilton**	76.70	356	IAMs_20	IAMs_20	11 40 16.4	
	comp=Z,2μm,19.0s						
J57A	**Williamstown**	76.75	357	IAmb	IAmb	11 03 06.8	
	comp=Z,44nm,1.1s						
J57A				IAMs_20	IAMs_20	11 40 33.3	
	comp=Z,2μm,20.0s						
J57A	**Williamstown**	76.75	357	P	**P**	**11 03 06.1**	**+1.1**
	baz=177,SNR=7.6						
J59A	**Piesco**	76.75	358	P	**P**	**11 03 06.3**	**+1.2**
J59A				IAMs_20	IAMs_20	11 38 52.7	
	comp=Z,2μm,20.0s						
J59A	**Piesco**	76.75	358	P	**P**	**11 03 06.1**	**+1.0**
	baz=178,SNR=6.0						
J54A	**Appleton**	76.76	355	P	**P**	**11 03 06.0**	**+0.9**
	baz=174						
RAR	**Rarotonga**	76.80	253	LR	LR	11 29 00.5	
	comp=Z,3μm,18.2s,baz=139,slow=30						
L44A	**Lake County Fo**	76.83	348	P	**P**	**11 03 05.8**	**+0.3**
L44A				IAmb	IAmb	11 03 06.7	
	comp=Z,93nm,1.2s						
L44A	**Lake County Fo**	76.83	348	P	**P**	**11 03 06.1**	**+0.6**
	baz=166						
K47A	**Vermontville**	76.85	350	P	**P**	**11 03 05.7**	**+0.1**
	baz=169,SNR=9.1						
113A	**Mohawk Valley,**	76.86	325	IAMs_20	IAMs_20	11 33 36.1	
	comp=Z,2μm,19.0s						
K48A	**Perry**	76.86	351	P	**P**	**11 03 05.9**	**+0.2**
	baz=170,SNR=13						
J52A	**Paris**	76.88	354	P	**P**	**11 03 06.4**	**+0.6**
	baz=173,SNR=12						
HNH	**Hanover**	76.95	360	IAmb	IAmb	11 04 15.2	
	comp=Z,73nm,1.6s						
W18A	**Petrified Fore**	76.98	329	IAmb	IAmb	11 04 11.3	
	comp=Z,59nm,1.2s						
W18A				IAMs_20	IAMs_20	11 33 38.3	
	comp=Z,2μm,18.0s						
W18A	**Petrified Fore**	76.98	329	P	**P**	**11 03 09.2**	**+2.4**
	baz=148,SNR=5.2						
K46A	**Dorr**	76.98	350	P	**P**	**11 03 06.1**	**-0.2**
	baz=168,SNR=5.4						
I58A	**Old Forge**	76.99	358	P	**P**	**11 03 07.3**	**+0.9**
	baz=178,SNR=7.6						
L42A	**Oliver, Polo**	76.99	347	IAmb	IAmb	11 03 18.7	
	comp=Z,60nm,0.9s						
I59A	**Olmsteadville**	77.06	359	P	**P**	**11 03 07.7**	**+0.9**
	baz=178						
I60A	**Shoreham**	77.10	359	P	**P**	**11 03 08.6**	**+1.6**
	baz=179,SNR=5.3						
I62A	**Tamworth**	77.12	0	P	**P**	**11 03 08.2**	**+1.1**
I62A				IAmb	IAmb	11 03 11.2	
	comp=Z,76nm,1.5s						
I62A	**Tamworth**	77.12	0	P	**P**	**11 03 09.5**	**+2.4**
	baz=181						
X16A	**Lo Mia Camp, P**	77.14	327	IAMs_20	IAMs_20	11 32 14.5	
	comp=Z,2μm,20.0s						
I61A	**Oroboro, Fairl**	77.18	360	P	**P**	**11 03 09.4**	**+2.0**
	baz=180						
I57A	**Carthage**	77.26	357	P	**P**	**11 03 09.1**	**+1.3**
	baz=177,SNR=7.1						
J49A	**Marlette**	77.28	352	P	**P**	**11 03 07.9**	**-0.1**
	baz=171,SNR=6.5						
J48A	**Bridge Port**	77.30	351	IAmb	IAmb	11 03 09.2	
	comp=Z,85nm,1.1s						
J48A				IAMs_20	IAMs_20	11 40 45.5	
	comp=Z,2μm,20.0s						
J48A	**Bridge Port**	77.30	351	P	**P**	**11 03 08.5**	**+0.4**
	baz=170,SNR=10						
I63A	**Otisfield**	77.31	1	IAmb	IAmb	11 03 11.4	
	comp=Z,66nm,1.1s						
I63A	**Otisfield**	77.31	1	P	**P**	**11 03 10.9**	**+2.7**
	baz=181,SNR=5.8						
PECO	**Prince Edward**	77.32	356	P	**P**	**11 03 08.5**	**+0.3**
PECO				IAMs_20	IAMs_20	11 39 26.8	
	comp=Z,2μm,20.0s						
J47A	**Sumner**	77.38	350	IAmb	IAmb	11 03 21.6	
	comp=Z,45nm,0.8s						
J47A				IAMs_20	IAMs_20	11 38 04.3	
	comp=Z,2μm,20.0s						
J47A	**Sumner**	77.38	350	P	**P**	**11 03 08.9**	**+0.4**
	baz=169,SNR=8.1						
K43A	**Burlington**	77.42	348	P	**P**	**11 03 08.7**	**-0.1**
K43A				IAmb	IAmb	11 03 20.7	
	comp=Z,49nm,1.1s						
K43A				IAMs_20	IAMs_20	11 38 56.5	
	comp=Z,2μm,22.0s						
LBNH	**Lisbon**	77.49	0	P	**P**	**11 03 08.4**	**-0.8**
LBNH				IAmb	IAmb	11 03 11.8	
	comp=Z,41nm,1.1s						
LBNH	**Lisbon**	77.49	0	P	**P**	**11 03 08.4**	**-0.8**
LBNH				pmax	pmax		
	comp=Z,41nm,1.1s						
I51A	**Listowel**	77.49	353	P	**P**	**11 03 09.7**	**+0.5**
	baz=172,SNR=17						
SDCO	**Great Sand Dun**	77.55	333	P	**P**	**11 03 09.3**	**-0.8**
GLA	**Glamis**	77.60	324	IAmb	IAmb	11 03 14.2	
	comp=Z,74nm,1.6s						
GLA				IAMs_20	IAMs_20	11 31 54.8	
	comp=Z,3μm,18.0s						
I55A	**Frankford**	77.64	356	P	**P**	**11 03 10.8**	**+0.9**
	baz=175						
SCIA	**State Center**	77.65	344	P	**P**	**11 03 10.3**	**+0.2**
SCIA				IAmb	IAmb	11 03 22.4	
	comp=Z,64nm,1.1s						
KSCO	**Kaye Shedlock'**	77.65	336	P	**P**	**11 03 10.4**	**0.0**
KSCO	**Kaye Shedlock'**	77.65	336	P	**P**	**11 03 12.5**	**+2.1**
	baz=154,SNR=14						
H58A	**Gabriels**	77.69	358	P	**P**	**11 03 11.6**	**+1.3**
	baz=178,SNR=7.4						
H57A	**Richville**	77.77	358	P	**P**	**11 03 11.8**	**+1.1**
	baz=177,SNR=5.5						
H61A	**Lyndonville**	77.78	0	P	**P**	**11 03 12.6**	**+1.8**
	baz=180,SNR=9.8						
H60A	**Morristown**	77.81	359	P	**P**	**11 03 13.1**	**+2.1**
	baz=180						
I49A	**Point Hope**	77.82	352	P	**P**	**11 03 11.1**	**+0.2**
I49A				IAmb	IAmb	11 03 11.9	
	comp=Z,60nm,1.2s						
I49A	**Point Hope**	77.82	352	P	**P**	**11 03 10.9**	**-0.1**
	baz=171,SNR=5.7						
H62A	**Milan**	77.83	1	IAMs_20	IAMs_20	11 36 47.2	
	comp=Z,2μm,22.0s						
WVL	**Waterville**	77.84	2	P	**P**	**11 03 11.8**	**+0.7**
WVL				IAmb	IAmb	11 03 14.0	
	comp=Z,75nm,1.3s						
LONY	**Lake Ozonia**	77.90	358	IAMs_20	IAMs_20	11 41 47.2	
	comp=Z,2μm,19.0s						
H59A	**Cadyville**	77.91	359	P	**P**	**11 03 13.2**	**+1.7**
	baz=179						
IKP	**In-Ko-Pah, Jac**	77.91	323	P	**P**	**11 03 15.9**	**+4.0**
	baz=144						
H63A	**New Sharon**	77.93	1	P	**P**	**11 03 14.1**	**+2.5**
	baz=182						
H64A	**Troy**	77.93	2	P	**P**	**11 03 13.6**	**+2.0**
	baz=182						
DELO	**Deloro Mine**	77.94	356	P	**P**	**11 03 12.3**	**+0.7**
DELO				IAMs_20	IAMs_20	11 39 37.1	
	comp=Z,2μm,21.0s						
H56A	**Elgin**	77.94	357	P	**P**	**11 03 12.8**	**+1.2**
	baz=176,SNR=7.5						
H55A	**Tweed**	77.94	356	P	**P**	**11 03 12.5**	**+0.9**
	baz=176						
JFWS	**Jewell Farm**	77.98	346	P	**P**	**11 03 12.5**	**+0.6**
JFWS				IAmb	IAmb	11 03 25.5	
	comp=Z,86nm,1.2s						
JFWS	**Jewell Farm**	77.98	346	P	**P**	**11 03 12.5**	**+0.6**
JFWS				pmax	pmax		
	comp=Z,86nm,1.3s						
JFWS	**Jewell Farm**	77.98	346	P	**P**	**11 03 12.6**	**+0.6**
	baz=165,SNR=13						
SWSC	**Sam W. Stewart**	77.99	323	P	**P**	**11 03 14.9**	**+2.7**
	baz=144						
H65A	**Eastbrook**	78.02	3	P	**P**	**11 03 14.2**	**+2.1**
	baz=183						
Y12C	**Blythe**	78.02	325	P	**P**	**11 03 14.2**	**+1.8**
Y12C				IAmb	IAmb	11 03 51.0	
	comp=Z,51nm,1.2s						
Y12C				IAMs_20	IAMs_20	11 31 40.0	
	comp=Z,2μm,20.0s						
Y12C	**Blythe**	78.02	325	P	**P**	**11 03 14.9**	**+2.5**
	baz=145,SNR=13						
WUAZ	**Wupatki**	78.03	328	P	**P**	**11 03 13.6**	**+1.0**
WUAZ	**Wupatki**	78.03	328	P	**P**	**11 03 14.9**	**+2.3**
	baz=147,SNR=20						
H53A	**Bobcaygeon**	78.05	355	P	**P**	**11 03 13.1**	**+0.9**
	baz=174,SNR=8.0						
S22A	**4UR Ranch, Cre**	78.06	332	IAmb	IAmb	11 03 26.3	
	comp=Z,78nm,1.9s						
S22A				IAMs_20	IAMs_20	11 33 20.7	
	comp=Z,2μm,19.0s						
S22A	**4UR Ranch, Cre**	78.06	332	P	**P**	**11 03 14.7**	**+1.8**
	baz=151,SNR=21						
EMMW	**East Machias**	78.07	3	P	**P**	**11 03 13.1**	**+0.8**
EMMW				IAmb	IAmb	11 03 16.4	
	comp=Z,58nm,1.1s						
FRNY	**Flat Rock**	78.10	359	P	**P**	**11 03 11.4**	**-1.1**
I47A	**Gladwin**	78.11	351	P	**P**	**11 03 12.3**	**-0.3**
I47A				IAmb	IAmb	11 03 29.3	
	comp=Z,55nm,0.8s						
I47A				IAMs_20	IAMs_20	11 41 13.7	
	comp=Z,2μm,20.0s						
I47A	**Gladwin**	78.11	351	P	**P**	**11 03 12.9**	**+0.3**
	baz=169,SNR=8.2						
H66A	**Whiting**	78.15	3	P	**P**	**11 03 15.0**	**+2.3**
	baz=184						
I46A	**Reed City**	78.16	350	P	**P**	**11 03 12.7**	**-0.3**
	baz=169						
I48A	**Sherman Twp**	78.17	351	P	**P**	**11 03 13.2**	**+0.3**
	baz=170,SNR=9.0						
BAR	**Barrett**	78.22	323	P	**P**	**11 03 11.1**	**-2.5**
BAR				IAMs_20	IAMs_20	11 31 19.6	
	comp=Z,3μm,19.0s						
H52A	**Wyevale**	78.22	354	P	**P**	**11 03 14.0**	**+0.8**
	baz=173,SNR=7.4						
MVCO	**Mesa Verde**	78.25	331	P	**P**	**11 03 13.6**	**-0.2**
MVCO				IAmb	IAmb	11 04 18.0	
	comp=Z,58nm,1.3s						
MVCO	**Mesa Verde**	78.25	331	P	**P**	**11 03 15.6**	**+1.7**
	baz=150,SNR=14						
HAL	**Halifax**	78.26	6	IAMs_20	IAMs_20	11 37 07.6	
	comp=Z,2μm,21.0s						
MONP2	**Monument Peak**	78.26	323	P	**P**	**11 03 16.1**	**+2.1**
	baz=144						
SADO	**Sadowa**	78.29	355	P	**P**	**11 03 14.2**	**+0.6**
	comp=Z,13nm,0.8s,baz=239,slow=3.2,SNR=14						
SADO	**Sadowa**	78.29	355	IAMs_20	IAMs_20	11 41 08.5	
	comp=Z,2μm,21.0s						
PDMCI	**Parker Dam,Lak**	78.29	325	P	**P**	**11 03 16.3**	**+2.4**
	baz=145						
G60A	**Masonville**	78.35	360	P	**P**	**11 03 16.0**	**+2.1**
	baz=180						
G63A	**Kingsbury**	78.39	2	P	**P**	**11 03 16.0**	**+1.9**
	baz=182,SNR=8.0						
BC3	**Big Chuckawall**	78.39	324	P	**P**	**11 03 16.8**	**+2.2**
	baz=144,SNR=18						
G57A	**Newington**	78.40	358	P	**P**	**11 03 15.4**	**+1.3**
	baz=178,SNR=7.1						
G58A	**Ormstown**	78.42	359	P	**P**	**11 03 15.4**	**+1.1**
	baz=178,SNR=6.9						
PLVO	**Plevna**	78.42	356	IAMs_20	IAMs_20	11 40 09.0	
	comp=Z,2μm,21.0s						
G62A	**West of Eustis**	78.48	1	IAmb	IAmb	11 03 17.4	
	comp=Z,67nm,1.0s						
G62A	**West of Eustis**	78.48	1	P	**P**	**11 03 16.7**	**+2.0**
	baz=181,SNR=11						
Q24A	**Divide**	78.50	334	IAMs_20	IAMs_20	11 35 43.3	
	comp=Z,1μm,18.0s						
Q24A	**Divide**	78.50	334	P	**P**	**11 03 17.1**	**+1.8**
	baz=152,SNR=12						
GGN	**Saint George**	78.51	4	P	**P**	**11 03 16.1**	**+1.4**
GGN				IAmb	IAmb	11 03 17.5	
	comp=Z,73nm,1.0s						
G61A	**St-Isidore-de-**	78.53	0	P	**P**	**11 03 16.9**	**+1.9**
	baz=180,SNR=5.7						
G65A	**Princeton**	78.55	3	IAmb	IAmb	11 03 17.3	
	comp=Z,67nm,1.4s						
G65A	**Princeton**	78.55	3	P	**P**	**11 03 17.0**	**+2.0**
	baz=184						
PKME	**Peaks-Kenny Pk**	78.55	2	P	**P**	**11 03 16.9**	**+1.9**
	baz=182						
G64A	**Maxfield**	78.56	2	P	**P**	**11 03 16.5**	**+1.5**
	baz=183						
G53A	**Haliburton**	78.60	355	P	**P**	**11 03 16.4**	**+1.1**
	baz=174,SNR=12						
109C	**Camp Elliot, M**	78.60	323	IAMs_20	IAMs_20	11 31 20.4	
	comp=Z,3μm,19.0s						
G55A	**Calabogie**	78.62	357	P	**P**	**11 03 16.3**	**+1.0**
	baz=176,SNR=8.2						
H48A	**Harrisville**	78.63	352	IAmb	IAmb	11 03 16.7	
	comp=Z,96nm,1.3s						
H48A				IAMs_20	IAMs_20	11 42 52.5	
	comp=Z,2μm,20.0s						
H48A	**Harrisville**	78.63	352	P	**P**	**11 03 15.9**	**+0.4**
	baz=170,SNR=7.1						
IRM	**Iron Mountain**	78.65	325	P	**P**	**11 03 17.7**	**+1.8**
	baz=144,SNR=16						
I42A	**Draeger Farm,**	78.67	348	IAmb	IAmb	11 03 27.7	
	comp=Z,42nm,0.9s						
I42A				IAMs_20	IAMs_20	11 43 59.7	
	comp=Z,1μm,18.0s						
G54A	**Lake Saint Pet**	78.84	356	P	**P**	**11 03 17.6**	**+0.9**
	baz=175,SNR=7.3						
XPFO	**Pion Flat**	78.85	323	P	**P**	**11 03 18.2**	**+1.0**
XPFO	**Pion Flat**	78.85	323	IAMs_20	IAMs_20	11 30 37.0	
	comp=Z,3μm,21.0s						
PFO	**Pinyon Flats O**	78.86	323	P	**P**	**11 03 18.5**	**+1.3**
	comp=Z,9.8nm,0.8s,baz=127,slow=5.1,SNR=13						
PFO	**Pinyon Flats O**	78.86	323	P	**P**	**11 03 18.1**	**+1.0**
PFO	**Pinyon Flats O**	78.86	323	IAMs_20	IAMs_20	11 30 37.0	
	comp=Z,3μm,21.0s						
PFO	**Pinyon Flats O**	78.86	323	P	**P**	**11 03 18.2**	**+1.0**
PFO				pmax	pmax		
	comp=Z,30nm,1.1s						
PFO	**Pinyon Flats O**	78.86	323	P	**P**	**11 03 19.8**	**+2.6**
	baz=144,SNR=9.3						
GLMI	**Grayling**	78.91	351	P	**P**	**11 03 17.1**	**0.0**
GLMI				IAmb	IAmb	11 03 30.2	
	comp=Z,39nm,0.9s						
GLMI				IAMs_20	IAMs_20	11 41 45.0	
	comp=Z,2μm,20.0s						
BELC	**Belle Mtn. Jos**	78.94	324	P	**P**	**11 03 19.7**	**+2.0**
	baz=144,SNR=8.0						
I40A	**Norwalk**	78.99	346	IAmb	IAmb	11 03 29.2	
	comp=Z,75nm,1.4s						
I40A				IAMs_20	IAMs_20	11 42 11.2	
	comp=Z,1μm,19.0s						
F63A	**Nahmakanta, Br**	79.00	2	P	**P**	**11 03 18.5**	**+1.0**
F63A				IAMs_20	IAMs_20	11 38 09.1	
	comp=Z,2μm,20.0s						
F63A	**Nahmakanta, Br**	79.00	2	P	**P**	**11 03 19.1**	**+1.6**
	baz=182,SNR=5.8						
H43A	**Windswept, Lux**	79.04	349	IAmb	IAmb	11 03 19.2	
	comp=Z,67nm,1.2s						
G47A	**Hillman**	79.16	351	P	**P**	**11 03 19.5**	**+1.1**
	baz=170,SNR=8.0						
F64A	**Sherman**	79.18	3	IAmb	IAmb	11 03 21.2	
	comp=Z,58nm,1.1s						
F64A	**Sherman**	79.18	3	P	**P**	**11 03 20.5**	**+2.1**
	baz=183,SNR=6.8						
F55A	**Otter Lake**	79.18	357	P	**P**	**11 03 19.9**	**+1.4**
	baz=176						
U15A	**North Rim**	79.20	328	IAmb	IAmb	11 04 24.9	
	comp=Z,110nm,2.0s						
OGNE	**Ogallala**	79.20	337	P	**P**	**11 03 20.4**	**+1.6**
OGNE				IAmb	IAmb	11 03 31.9	
	comp=Z,98nm,1.6s						
MURC	**Murrieta**	79.21	323	P	**P**	**11 03 21.5**	**+2.5**
	baz=143,SNR=11						
F60A	**Warwick**	79.22	0	P	**P**	**11 03 19.9**	**+1.2**
	baz=180						
GBN	**Guysborough**	79.23	7	IAMs_20	IAMs_20	11 39 28.3	
	comp=Z,2μm,20.0s						
G45A	**Suttons Bay**	79.27	350	IAmb	IAmb	11 03 32.2	
	comp=Z,53nm,1.3s						
G45A				IAMs_20	IAMs_20	11 42 01.4	
	comp=Z,1μm,20.0s						
TSUM	**Tsumeb**	79.28	106	LR	LR	11 33 29.6	
	comp=Z,7μm,21.1s,baz=240,slow=32						
TSUM	**Tsumeb**	79.28	106	P	**P**	**11 03 18.6**	**-1.3**
TSUM				IAmb	IAmb	11 03 30.4	
	comp=Z,69nm,1.1s						
F52A	**Sundridge**	79.32	355	P	**P**	**11 03 20.0**	**+0.8**
	baz=174,SNR=8.5						
SMCO	**Snowmass**	79.36	333	IAmb	IAmb	11 04 38.5	
	comp=Z,53nm,1.2s						
SMCO				IAMs_20	IAMs_20	11 35 09.2	
	comp=Z,2μm,18.0s						
LMN	**Caledonia Moun**	79.37	5	P	**P**	**11 03 20.4**	**+0.9**
LMN				IAMs_20	IAMs_20	11 38 42.9	
	comp=Z,2μm,22.0s						
ALGO	**Algonquin Park**	79.39	356	P	**P**	**11 03 20.3**	**+0.7**
	baz=175,SNR=7.7						
ISCO	**Idaho Springs**	79.40	334	P	**P**	**11 03 20.3**	**+0.1**
ISCO	**Idaho Springs**	79.40	334	P	**P**	**11 03 20.3**	**+0.1**

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ISCO                                   pmax     pmax
      comp=Z,35nm,1.4s
ISCO  Idaho Springs     79.40 334    P        P        11 03 22.0 +1.8
      baz=152,SNR=17
GMRC  Granite Mounta    79.41 325    P        P        11 03 22.7 +2.5
      baz=144,SNR=15
F51A  Arnstein          79.50 354    P        P        11 03 20.8 +0.6
      baz=173,SNR=7.1
F49A  Sandfield         79.53 353    P        P        11 03 20.8 +0.4
      baz=172,SNR=14
BBRC  Big Bear Solar    79.61 324    P        P        11 03 24.2 +2.9
      baz=143
E60A  Ste Agathe de     79.62   0    P        P        11 03 21.9 +1.1
      baz=180,SNR=9.1
E58A  La Victoria       79.63 359    P        P        11 03 21.9 +1.0
      baz=179,SNR=7.5
F48A  Evansville        79.66 352    P        P        11 03 21.7 +0.6
      baz=171,SNR=14
E57A  Chemin Saint G    79.68 358    P        P        11 03 22.2 +1.0
      baz=178,SNR=8.8
E61A  Lac Etchemin      79.69   1    P        P        11 03 23.3 +2.0
      baz=181
E63A  Oxbow             79.74   3    IAmb     IAmb     11 03 24.1
      comp=Z,127nm,1.7s
E63A  Oxbow             79.74   3    P        P        11 03 23.2 +1.7
      baz=183,SNR=5.2
E64A  Bridgewater       79.75   3    P        P        11 03 23.4 +1.8
      baz=184
E52A  Mattawa           79.76 355    P        P        11 03 22.4 +0.8
      baz=174
HEC   Hector,Ludlow     79.77 324    P        P        11 03 24.9 +2.8
      baz=144,SNR=16
E55A  Montcerf-Lytto    79.79 357    P        P        11 03 22.8 +1.0
      baz=177
E53A  Dumoine, Ponti    79.79 356    P        P        11 03 22.7 +0.9
      baz=175,SNR=8.5
E54A  Lac Daplat, Po    79.82 356    P        P        11 03 22.7 +0.7
      baz=176,SNR=9.8
E56A  St. Veronique     79.84 358    P        P        11 03 22.6 +0.6
      baz=178,SNR=13
F45A  CMU Biological    79.88 350    P        P        11 03 22.8 +0.6
      baz=169,SNR=7.7
BFSC  Mount Baldy Ra    79.95 323    P        P        11 03 25.2 +2.1
      baz=143,SNR=6.8
PQI   Presque Isle      80.00   3    IAmb     IAmb     11 03 36.6
      comp=Z,104nm,1.9s
TUQ   Turquoise Moun    80.06 325    P        P        11 03 26.2 +2.5
      baz=144,SNR=5.5
E51A  G1948 Merrick     80.07 355    P        P        11 03 24.0 +0.7
      baz=174,SNR=8.7
LCMT  Little Creek M    80.11 328    P        P        11 03 25.1 +1.1
MWC   Mount Wilson      80.14 323    IAMs_20  IAMs_20  11 31 56.2
      comp=Z,2µm,21.0s
PASC  Pasadena Art C    80.17 323    IAmb     IAmb     11 03 28.2
      comp=Z,104nm,1.9s
PASC  Pasadena Art C    80.17 323    IAMs_20  IAMs_20  11 31 34.8
      comp=Z,2µm,21.0s
D60A  Saint Jean D'O    80.17   1    P        P        11 03 25.1 +1.3
      baz=181,SNR=6.4
ECSD  EROS Data Cent    80.20 342    IAmb     IAmb     11 03 36.3
      comp=Z,60nm,0.9s
ECSD  EROS Data Cent    80.20 342    P        P        11 03 24.8 +0.7
      baz=159,SNR=38
BOSA  Boshof            80.21 118  i P        P        11 03 25.6 +0.7
BOSA  Boshof            80.21 118    P        P        11 03 25.0 +0.1
      comp=Z,41nm,1.1s,baz=238,slow=5.0,SNR=20
BOSA                                 LR       LR       11 34 04.9
      comp=Z,2µm,21.9s,baz=237,slow=32
BOSA  Boshof            80.21 118  i P        P        11 03 25.6 +0.7
BOSA  Boshof            80.21 118    P        P        11 03 25.0 +0.1
D59A  Saint-Raymond     80.26   0    P        P        11 03 25.9 +1.6
      baz=180
E48A  Lockeyer          80.26 353    P        P        11 03 24.8 +0.4
      baz=172,SNR=17
D57A  Chemin Vers le    80.28 359    P        P        11 03 25.4 +0.9
      baz=178,SNR=13
D55A  Sainte-Anne-du    80.33 358    P        P        11 03 25.1 +0.5
      baz=177,SNR=13
D56A  ZEC Mazanza, M    80.34 358    P        P        11 03 25.5 +0.8
      baz=178,SNR=8.1
D58A  Chemin du LacG    80.35 359    P        P        11 03 25.7 +0.9
      baz=179,SNR=19
E47A  Iron Bridge       80.35 352    P        P        11 03 25.2 +0.4
      baz=171,SNR=14
D63A  Stockholm         80.36   3    P        P        11 03 26.3 +1.4
      baz=183,SNR=5.4
D62A  Allapoint, All    80.37   2    IAmb     IAmb     11 03 27.2
      comp=Z,61nm,1.1s
D62A                                 IAMs_20  IAMs_20  11 37 00.6
      comp=Z,2µm,22.0s
D62A  Allapoint, All    80.37   2    P        P        11 03 26.1 +1.2
      baz=182,SNR=12
GSC   Goldstone, Bar    80.38 324    IAMs_20  IAMs_20  11 31 52.4
      comp=Z,2µm,20.0s
GSC   Goldstone, Bar    80.38 324    P        P        11 03 27.6 +2.2
      baz=144,SNR=11
E46A  Sault Ste Mari    80.39 351    IAmb     IAmb     11 03 26.3
      comp=Z,104nm,1.3s
E46A                                 IAMs_20  IAMs_20  11 44 05.1
      comp=Z,2µm,20.0s
CASY  Casey             80.40 181    P        P        11 03 26.3 +1.2
CASY                                 IAmb     IAmb     11 03 39.2
      comp=Z,68nm,1.1s
D61A  St Aubert, Com    80.47   1    P        P        11 03 26.9 +1.5
      baz=182
N23A  Red Feather La    80.48 335    P        P        11 03 26.3 +0.3
N23A                                 IAmb     IAmb     11 03 48.0
      comp=Z,68nm,1.6s
N23A                                 IAMs_20  IAMs_20  11 36 29.9
      comp=Z,2µm,19.0s
N23A  Red Feather La    80.48 335    P        P        11 03 27.6 +1.5
      baz=152,SNR=7.9
D53A  Lac Vacive, Po    80.49 356    P        P        11 03 24.8 -0.7
D53A                                 IAMs_20  IAMs_20  11 41 20.8
      comp=Z,2µm,20.0s
D53A  Lac Vacive, Po    80.49 356    P        P        11 03 26.0 +0.5
      baz=175
D54A  Lac Fusel, La     80.51 357    P        P        11 03 25.7 +0.1
      baz=176,SNR=11
SHPR  Sheep Range       80.57 326    IAMs_20  IAMs_20  11 33 44.3
      comp=Z,1µm,18.0s
SHOC  Shoshone, Teco    80.60 325    P        P        11 03 28.6 +2.1
      baz=144
CCUT  Cedar City        80.61 328    P        P        11 03 28.6 +1.9
D51A  Lot 18 Range I    80.61 355    P        P        11 03 26.7 +0.5
      baz=174,SNR=6.1
EDW2  Edwards Air Fo    80.63 323    P        P        11 03 28.8 +2.1
      baz=143,SNR=5.1
LATQ  La Tuque          80.64 359    P        P        11 03 27.7 +1.4
LATQ  La Tuque          80.64 359    P        P        11 03 27.5 +1.2
      baz=179,SNR=7.5
PHWY  Pilot Hill        80.67 335    IAmb     IAmb     11 03 37.4
      comp=Z,90nm,1.8s
O20A  White River Ci    80.67 333    IAmb     IAmb     11 03 41.0
      comp=Z,87nm,1.6s
O20A                                 IAMs_20  IAMs_20  11 34 49.0
      comp=Z,2µm,20.0s
O20A  White River Ci    80.67 333    P        P        11 03 28.7 +1.7
      baz=150,SNR=12
SPMN  Marine on St.     80.72 345    P        P        11 03 26.8  0.0
      baz=163,SNR=7.3
D50A  G1974 Best Tow    80.73 355    P        P        11 03 27.3 +0.5
      baz=173,SNR=11
E43A  Lone Tree Farm    80.77 350    IAmb     IAmb     11 03 28.7
      comp=Z,56nm,1.2s
OSI   Osito Audit: C    80.79 323    IAMs_20  IAMs_20  11 34 45.3
      comp=Z,2µm,18.0s
OSI   Osito Audit: C    80.79 323    P        P        11 03 30.2 +2.6
      baz=142
E44A  Grand Marais A    80.85 350    IAMs_20  IAMs_20  11 44 33.3
      comp=Z,2µm,19.0s
E44A  Grand Marais A    80.85 350    P        P        11 03 29.0 +1.5
      baz=168,SNR=8.6
D46A  Sault St. Mari    80.87 352    P        P        11 03 28.1 +0.5
      baz=170,SNR=11
D48A  Paudash Townsh    80.91 353    P        P        11 03 28.1 +0.3
      baz=172,SNR=7.4
D47A  Chapleau          80.93 352    P        P        11 03 28.2 +0.3
      baz=171,SNR=8.7
LRMC  Laurel Mtn Rad    80.95 324    P        P        11 03 30.9 +2.4
      baz=143
D49A  Beulah Townshi    80.96 354    P        P        11 03 28.8 +0.7
      baz=172,SNR=10.0
TMUT  Trail Mountain    81.14 330    P        P        11 03 31.1 +1.5
MPMC  Manual Prospec    81.32 324    P        P        11 03 32.3 +1.8
      baz=143,SNR=11
FURC  Furnace Creek,    81.34 325    P        P        11 03 32.9 +2.5
      baz=144,SNR=16
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TPNV  Topopah Spring    81.44 326    P        P        11 03 33.4 +2.3
      baz=144,SNR=16
SUSD  Miller            81.48 341    IAmb     IAmb     11 03 44.6
      comp=Z,72nm,1.0s
ISA   Isabella, Lake    81.49 323    P        P        11 03 33.1 +1.8
ISA                                  IAMs_20  IAMs_20  11 32 52.8
      comp=Z,2µm,21.0s
ISA   Isabella, Lake    81.49 323    P        P        11 03 33.1 +1.8
ISA                                  pmax     pmax
      comp=Z,23nm,1.1s
ISA   Isabella, Lake    81.49 323    P        P        11 03 33.8 +2.5
      baz=142,SNR=9.2
VLDQ  Val d'Or          81.51 356    IAmb     IAmb     11 03 32.8
      comp=Z,43nm,1.0s
VLDQ                                 IAMs_20  IAMs_20  11 43 53.2
      comp=Z,2µm,20.0s
DAC   Darwin (Calif)    81.54 324    IAMs_20  IAMs_20  11 32 49.2
      comp=Z,3µm,21.0s
PKM   Mcpherson Peak    81.56 322    P        P        11 03 34.4 +2.6
      baz=141,SNR=7.5
PSUT  Pine Spring       81.64 328    P        P        11 03 33.9 +1.7
RWWY  Rawlins           81.64 334    P        P        11 03 33.2 +1.0
RWWY                                 IAMs_20  IAMs_20  11 36 01.5
      comp=Z,1µm,20.0s
E38A  The Farm, Brul    81.78 347    IAMs_20  IAMs_20  11 44 41.0
      comp=Z,1µm,19.0s
CWC   Cottonwood Cre    81.91 324    P        P        11 03 36.0 +2.5
      baz=143
MPU   Maple Canyon      81.92 330    P        P        11 03 34.8 +1.2
VES   Vestal, Richgr    81.94 323    P        P        11 03 35.8 +2.3
      baz=142,SNR=11
SMMC  Simmler           81.98 322    P        P        11 03 36.9 +3.0
      baz=141
GRAC  Grapevine Rang    82.01 325    P        P        11 03 36.4 +2.5
      baz=143,SNR=10
K22A  Casper            82.23 335    P        P        11 03 35.5 +0.3
K22A                                 IAmb     IAmb     11 04 00.0
      comp=Z,57nm,1.2s
K22A  Casper            82.23 335    P        P        11 03 36.7 +1.6
      baz=152,SNR=18
R11A  Troy Canyon, C    82.26 327    IAmb     IAmb     11 04 14.8
      comp=Z,55nm,1.4s
R11A                                 IAMs_20  IAMs_20  11 35 38.2
      comp=Z,2µm,18.0s
R11A  Troy Canyon, C    82.26 327    P        P        11 03 37.8 +2.4
      baz=145,SNR=23
LBTB  Lobatse           82.43 115  i P        P        11 03 37.1 +0.5
LBTB  Lobatse           82.43 115  i P        P        11 03 37.1 +0.5
LBTB  Lobatse           82.43 115    P        P        11 03 36.4 -0.3
LBTB  Lobatse           82.43 115    P        P        11 03 36.4 -0.3
LBTB                                 pmax     pmax
      comp=Z,124nm,1.1s
LSQQ  Lebel-sur-Quev    82.43 357    P        P        11 03 36.3 +0.6
      baz=176
DUG   Dugway, Tooele    82.56 330    P        P        11 03 36.8 -0.1
DUG                                  IAmb     IAmb     11 04 09.1
      comp=Z,56nm,1.4s
DUG   Dugway, Tooele    82.56 330    P        P        11 03 36.8 -0.1
DUG                                  pmax     pmax
      comp=Z,56nm,1.4s
DUG   Dugway, Tooele    82.56 330    P        P        11 03 38.8 +1.9
      baz=147,SNR=21
RSSD  Black Hills       82.70 337    P        P        11 03 38.2 +0.7
RSSD  Black Hills       82.70 337    P        P        11 03 38.3 +0.7
RSSD                                 pmax     pmax
      comp=Z,16nm,0.9s
RSSD  Black Hills       82.70 337    P        P        11 03 38.7 +1.1
      baz=154
TCUT  Toone Canyon      82.76 331    P        P        11 03 39.5 +1.4
EYMN  Ely               83.06 347    P        P        11 03 39.1  0.0
EYMN                                 IAmb     IAmb     11 03 40.3
      comp=Z,38nm,1.2s
EYMN  Ely               83.06 347    P        P        11 03 39.4 +0.3
      baz=164,SNR=13
CMLA  Cha da Macela     83.14  35    P        P        11 03 39.5 -0.2
CMLA  Cha da Macela     83.14  35    P        P        11 03 39.6 -0.2
CMLA                                 pmax     pmax
      comp=Z,232nm,0.3s
MATQ  Matagami          83.16 356    P        P        11 03 39.8 +0.3
      baz=175,SNR=6.7
MLAC  Mammoth, Mammo83.22 324        P        P        11 03 43.1 +2.6
      baz=142,SNR=7.4
HWUT  Hardware Ranch    83.24 331    P        P        11 03 41.1 +0.7
HWUT                                 IAmb     IAmb     11 04 44.4
      comp=Z,94nm,1.6s
BGU   Big Grassy Mou    83.27 330    P        P        11 03 40.6  0.0
OMMB  Old Mammoth Mi    83.29 324    P        P        11 03 42.5 +1.6
SPUT  South Promonto    83.34 331    P        P        11 03 41.5 +0.6
PDAR  Pinedale Array    83.44 333    P        P        11 03 41.6 +0.2
      comp=Z,3.6nm,0.8s,baz=142,slow=7.1,SNR=20
PDAR                                 PKiKP    PKiKP    11 09 00.4 +1.4
      comp=Z,0.6nm,0.7s,baz=132,slow=6.2,SNR=3.3
PDAR  Pinedale Array    83.44 333    P        PKiKP    11 09 00.4 +1.4
D32A  Dogwood Acres,    83.48 343    IAmb     IAmb     11 03 42.8
      comp=Z,74nm,1.2s
DRLN  Deer Lake         83.51   9    P        P        11 03 42.0 +0.6
DRLN                                 IAMs_20  IAMs_20  11 40 16.5
      comp=Z,2µm,22.0s
NVAR  Mina Array Bea    83.59 325    P        P        11 03 44.0 +1.6
      comp=Z,5.4nm,0.8s,baz=151,slow=4.8,SNR=33
NVAR                                 PKiKP    PKiKP    11 09 00.1 +0.8
      comp=Z,0.7nm,0.6s,baz=141,slow=6.5,SNR=4.8
NVAR                                 LR       LR       11 34 12.4
      comp=Z,1µm,21.7s,baz=150,slow=31
SAO   San Andreas Ge    83.85 322    IAMs_20  IAMs_20  11 33 22.4
      comp=Z,2µm,20.0s
HVU   Hansel Valley     83.87 331    P        P        11 03 44.6 +1.0
HVU   Hansel Valley     83.87 331    P        P        11 03 44.7 +1.0
HVU                                  pmax     pmax
      comp=Z,45nm,1.4s
RPZ   Rata Peaks        83.96 221    P        P        11 03 45.8 +1.6
      comp=Z,29nm,1.0s,baz=120,slow=12,SNR=3.3
KVN   Kaiserville       83.99 326    IAMs_20  IAMs_20  11 34 09.0
      comp=Z,1µm,21.0s
AHID  Auburn Hatcher    84.03 332    P        P        11 03 45.5 +1.0
TORD  Torodi Ar. Bea    84.04  70    P        P        11 03 44.9  0.0
      comp=Z,56nm,0.8s,baz=259,slow=4.3,SNR=165
TORD                                 PKiKP    PKiKP    11 09 01.1 +0.7
      comp=Z,9.0nm,0.8s,baz=245,slow=4.2,SNR=8.7
TORD                                 LR       LR       11 38 23.4
      comp=Z,2µm,21.9s,baz=260,slow=34
ELK   Elko              84.06 328    P        P        11 03 44.5 -0.2
ELK   Elko              84.06 328    P        P        11 03 44.5 -0.2
ELK                                  pmax     pmax
      comp=Z,14nm,1.0s
WAKR  Walker            84.20 324    IAmb     IAmb     11 03 49.9
      comp=Z,85nm,1.8s
WAKR                                 IAMs_20  IAMs_20  11 34 37.6
      comp=Z,3µm,20.0s
AGMN  Agassiz Nation    84.30 344    IAmb     IAmb     11 03 57.3
      comp=Z,22nm,0.8s
AGMN  Agassiz Nation    84.30 344    P        P        11 03 45.9 +0.4
      baz=160
REDW  Red Top Meadow    84.44 333    IAmb     IAmb     11 04 24.4
      comp=Z,33nm,1.2s
REDW                                 IAMs_20  IAMs_20  11 36 50.7
      comp=Z,2µm,20.0s
YERR  Yerington         84.48 325    IAmb     IAmb     11 04 39.3
      comp=Z,40nm,1.3s
YERR                                 IAMs_20  IAMs_20  11 35 01.0
      comp=Z,3µm,20.0s
SNOW  Snow King Moun    84.49 333    IAmb     IAmb     11 04 49.9
      comp=Z,44nm,1.3s
SNOW                                 IAMs_20  IAMs_20  11 38 10.0
      comp=Z,3µm,19.0s
PNTR  Pine Nut          84.74 325    IAmb     IAmb     11 04 15.2
      comp=Z,82nm,1.7s
PNTR                                 IAMs_20  IAMs_20  11 35 17.8
      comp=Z,3µm,20.0s
FXWY  Fox Creek         84.74 333    IAMs_20  IAMs_20  11 37 11.7
      comp=Z,2µm,20.0s
MDND  Maddock           84.80 342    P        P        11 03 49.1 +1.2
      baz=157
VCNR  Virginia City     84.92 325    IAMs_20  IAMs_20  11 35 24.7
      comp=Z,2µm,20.0s
FLWY  Flagg Ranch       85.00 333    P        P        11 03 50.1 +0.8
FLWY                                 IAmb     IAmb     11 04 30.2
      comp=Z,26nm,0.8s
PAHR  Pah Rah Range     85.12 325    IAmb     IAmb     11 03 54.1
      comp=Z,63nm,1.5s
PAHR                                 IAMs_20  IAMs_20  11 37 10.0
      comp=Z,2µm,18.0s
H17A  Grant Village     85.22 333    P        P        11 03 51.7 +1.2
H17A  Grant Village     85.22 333    P        P        11 03 52.4 +1.9
      baz=149
AFDM  Forest Hills D    85.30 324    IAmb     IAmb     11 03 54.2
      comp=Z,65nm,1.7s
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AFDM                                 IAMs_20  IAMs_20  11 34 42.5
      comp=Z,1µm,19.0s
LKWY  Lake              85.30 334    IAmb     IAmb     11 04 22.0
      comp=Z,32nm,1.2s
RLMT  Red Lodge         85.36 335    IAmb     IAmb     11 04 50.8
      comp=Z,35nm,1.2s
YMR   Madison River     85.60 333    P        P        11 03 53.3 +1.0
CRZF  Crozet Islands    85.61 145    IAMs_20  IAMs_20  11 39 11.5
      comp=Z,1µm,18.0s
YHH   Holmes Hill       85.66 333    P        P        11 03 53.5 +0.8
LAO   LASA Array        85.69 337    IAmb     IAmb     11 04 13.4
      comp=Z,43nm,1.2s
BEKR  Beckworth         85.71 325    IAmb     IAmb     11 03 56.8
      comp=Z,54nm,1.6s
BEKR                                 IAMs_20  IAMs_20  11 35 48.5
      comp=Z,2µm,20.0s
YHL   Hebgen Lake       85.83 333    P        P        11 03 54.5 +0.9
ORV   Oroville          86.02 324    IAMs_20  IAMs_20  11 35 33.9
      comp=Z,2µm,19.0s
ULM   Lac du Bonnet     86.14 345    P        P        11 03 54.1 -0.5
      comp=Z,11nm,0.9s,baz=160,slow=4.0,SNR=27
ULM   Lac du Bonnet     86.14 345    IAmb     IAmb     11 03 55.7
      comp=Z,40nm,1.2s
ULM   Lac du Bonnet     86.14 345⇑i P        P        11 03 53.9 -0.7
MCMT  McKenzie Canyo    86.45 332    P        P        11 03 58.0 +1.4
DGMT  Dagmar            86.64 339    P        P        11 03 58.5 +1.3
      baz=154,SNR=16
O03E  Paynes Creek      86.74 324    P        P        11 03 59.1 +1.2
      baz=140
DLMT  Dillon            86.80 333    IAmb     IAmb     11 04 36.4
      comp=Z,47nm,1.4s
DLMT                                 IAMs_20  IAMs_20  11 39 09.2
      comp=Z,3µm,18.0s
WVOR  Wild Horse Val    86.93 327    IAMs_20  IAMs_20  11 40 05.7
      comp=Z,2µm,18.0s
MATP  Matopo            87.21 113  i P        P        11 03 48.7   -12
MATP  Matopo            87.21 113  i P        P        11 03 48.7   -12
MOD   Modoc Plateau     87.27 326    IAMs_20  IAMs_20  11 37 57.8
      comp=Z,2µm,19.0s
WDC   Whiskeytown Da    87.32 324    IAmb     IAmb     11 04 38.2
      comp=Z,29nm,1.1s
J08A  Circle Bar Ran    87.59 328    P        P        11 04 02.8 +0.9
J08A                                 IAMs_20  IAMs_20  11 39 19.2
      comp=Z,2µm,18.0s
N02D  Trinity Center    87.70 324    P        P        11 04 04.7 +2.2
      baz=140,SNR=5.2
M04C  Macdoel           87.90 325    P        P        11 04 05.2 +1.7
      baz=140,SNR=12
EGMT  Eagleton          88.03 336    IAmb     IAmb     11 04 25.1
      comp=Z,43nm,1.4s
EGMT  Eagleton          88.03 336    P        P        11 04 04.8 +0.9
      baz=149,SNR=8.4
M02C  Callahan          88.09 324    P        P        11 04 05.9 +1.5
      baz=140
KHMM  Horse Mountain    88.13 323    IAmb     IAmb     11 04 23.8
      comp=Z,45nm,1.2s
SCHQ  Schefferville     88.20   3    P        P        11 04 04.0 -0.5
      comp=Z,9.9nm,1.0s,baz=178,slow=3.6,SNR=16
SCHQ                                 LR       LR       11 44 22.8
      comp=Z,1µm,21.0s,baz=178,slow=36
BMO   Blue Mountains    88.28 330    P        P        11 04 04.6 -0.6
BMO   Blue Mountains    88.28 330    P        P        11 04 04.6 -0.6
BMO                                  pmax     pmax
      comp=Z,22nm,1.3s
YBH   Yreka Blue Hor    88.28 325    IAmb     IAmb     11 04 46.9
      comp=Z,27nm,1.1s
YBH                                  IAMs_20  IAMs_20  11 46 28.6
      comp=Z,2µm,22.0s
L04D  Klamath Falls     88.46 325    P        P        11 04 07.4 +1.2
      baz=140,SNR=6.8
MSO   Missoula          88.54 333    P        P        11 04 06.8 +0.4
I07A  Izee              88.62 328    IAmb     IAmb     11 04 21.2
      comp=Z,68nm,1.8s
J05D  Fort Rock, OR     88.78 326    P        P        11 04 09.7 +2.0
      baz=141,SNR=9.4
PINE  Pine Mountain     89.04 327    IAmb     IAmb     11 04 37.3
      comp=Z,34nm,1.2s
PINE                                 IAMs_20  IAMs_20  11 42 09.5
      comp=Z,2µm,18.0s
F10A  Beach Ranch, E    89.15 330    IAMs_20  IAMs_20  11 39 34.4
      comp=Z,1µm,18.0s
J04D  Umpqua Nationa    89.15 326    P        P        11 04 11.5 +2.0
      baz=140
G08A  Pilot Rock        89.33 329    P        P        11 04 10.9 +0.7
G08A                                 IAmb     IAmb     11 04 12.8
      comp=Z,60nm,2.0s
G08A                                 IAMs_20  IAMs_20  11 40 13.3
      comp=Z,2µm,18.0s
JTMT  Jette             89.43 333    P        P        11 04 10.6  0.0
JTMT                                 IAMs_20  IAMs_20  11 40 23.8
      comp=Z,2µm,20.0s
K02D  Willamette Mer    89.48 325    P        P        11 04 12.9 +2.0
      baz=139
I05D  Terrebonne, OR    89.64 327    P        P        11 04 14.0 +2.4
      baz=141,SNR=5.7
LSZ   Lusaka            89.88 108    P        P        11 04 14.7 +1.1
LSZ   Lusaka            89.88 108    P        P        11 04 14.7 +1.1
LSZ                                  pmax     pmax
      comp=Z,85nm,1.4s
E09A  Wood Farm, Sta    89.96 330    IAMs_20  IAMs_20  11 40 40.9
      comp=Z,2µm,19.0s
G06A  Carlson Farm,     90.02 328    IAMs_20  IAMs_20  11 40 35.6
      comp=Z,2µm,18.0s
F07A  Phinny Hill Vi    90.23 329    IAMs_20  IAMs_20  11 40 50.0
      comp=Z,2µm,18.0s
E08A  Dider Farm, El    90.33 330    P        P        11 04 15.9 +1.2
E08A                                 IAmb     IAmb     11 04 16.6
      comp=Z,42nm,1.7s
E08A                                 IAMs_20  IAMs_20  11 41 31.6
      comp=Z,2µm,18.0s
WALA  Waterton Lakes    90.38 334    P        P        11 04 14.6 -0.4
WALA                                 IAmb     IAmb     11 04 17.0
      comp=Z,60nm,1.6s
HAWA  Hanford           90.45 329    IAmb     IAmb     11 04 46.9
      comp=Z,67nm,1.6s
D08A  Wollman Farm,     90.72 330    P        P        11 04 17.4 +0.9
D08A                                 IAmb     IAmb     11 04 29.1
      comp=Z,65nm,1.9s
D08A                                 IAMs_20  IAMs_20  11 40 14.9
      comp=Z,2µm,19.0s
E07A  Sunnyside         90.72 329    IAMs_20  IAMs_20  11 39 49.0
      comp=Z,2µm,20.0s
NEW   Newport           90.95 332    P        P        11 04 17.9 +0.4
NEW   Newport           90.95 332    P        P        11 04 18.0 +0.4
NEW                                  pmax     pmax
      comp=Z,10.0nm,1.1s
NEW   Newport           90.95 332    P        P        11 04 17.8 +0.2
      baz=144
C09A  Chrisman Ranch    91.05 331    P        P        11 04 18.8 +0.8
C09A                                 IAMs_20  IAMs_20  11 41 01.5
      comp=Z,2µm,20.0s
F04A  Amboy             91.36 327    IAMs_20  IAMs_20  11 39 08.9
      comp=Z,2µm,21.0s
MDT   Midelt            91.55  51    P        P        11 04 20.6 -0.2
      comp=Z,3.6nm,0.9s,baz=304,slow=8.6,SNR=3.5
MDT                                  LR       LR       11 44 27.4
      comp=Z,2µm,21.8s,baz=245,slow=35
LTY   Liberty           91.62 329    IAMs_20  IAMs_20  11 42 02.5
      comp=Z,2µm,18.0s
FFC   Flin Flon         91.70 343    P        P        11 04 20.7 -0.1
FFC                                  IAmb     IAmb     11 04 30.7
      comp=Z,38nm,1.9s
FFC   Flin Flon         91.70 343    IAMs_20  IAMs_20  11 47 12.4
      comp=Z,2µm,22.0s
FFC   Flin Flon         91.70 343    P        P        11 04 20.7 -0.1
FFC                                  pmax     pmax
      comp=Z,38nm,1.9s
FFC                                  MLR      MLR
      comp=Z,2µm,22.0s
F03A  Seaside           91.87 327    IAMs_20  IAMs_20  11 44 07.5
      comp=Z,2µm,18.0s
B08A  Colville Reser    91.92 331    P        P        11 04 22.7 +0.6
B08A                                 IAmb     IAmb     11 04 23.6
      comp=Z,34nm,1.6s
B08A                                 IAMs_20  IAMs_20  11 41 14.7
      comp=Z,2µm,21.0s
E03A  Lebam             92.34 327    IAMs_20  IAMs_20  11 43 45.9
      comp=Z,2µm,19.0s
TAM   Tamanrasset       92.62  64    P        P        11 04 25.4 -0.7
TAM                                  IAmb     IAmb     11 04 28.4
      comp=Z,21nm,1.1s
TAM   Tamanrasset       92.62  64    P        P        11 04 25.4 -0.7
TAM                                  pmax     pmax
      comp=Z,21nm,1.1s
TAM                                  MLR      MLR
      comp=Z,8µm,21.0s
B06A  Marblemount       92.94 330    IAMs_20  IAMs_20  11 43 02.7
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	comp=Z,2µm,18.0s						
ESDC	**Sonseca Array**	**96.28**	**46**	P	**P**	**11 04 41.8**	**-0.5**
	comp=Z,4.4nm,0.9s,baz=243,slow=5.7,SNR=4.3						
ESDC				LR	LR	11 47 00.9	
	comp=Z,2µm,19.3s,baz=235,slow=35						
TOO	**Toolangi**	**101.05**	**210**	IAMs_20	IAMs_20	11 45 14.6	
	comp=Z,2µm,18.0s						
CAN	**Canberra**	**101.42**	**213**	IAMs_20	IAMs_20	11 45 20.7	
	comp=Z,1µm,19.0s						
DZM	**Mont Dzumac**	**101.50**	**234**	*e*SKSac	**SKSac**	**11 15 43.6**	**-1.9**
	comp=Z,719nm,29.5s						
DZM				*e*SP	**SP**	**11 18 17.2**	**-0.2**
	comp=Z,740nm,26.4s						
DZM				*e*SS	**SS**	**11 23 49.7**	**+2.8**
	comp=Z,3µm,27.1s						
DZM	**Mont Dzumac**	**101.50**	**234**	*e*LQ	LQ	11 33 54.1	
	comp=Z,1µm,33.8s						
DZM				*e*LR	LR	11 38 09.3	
	comp=Z,4µm,28.6s,baz=125						
NOUC	**Port Laguerre**	**101.57**	**234**	IAMs_20	IAMs_20	11 42 24.7	
	comp=Z,2µm,20.0s						
YKA	**Yellowknife Ar**	**101.71**	**341**	P	**Pdif**	**11 05 05.7**	**-0.2**
	comp=Z,0.6nm,0.8s,baz=139,slow=4.6,SNR=11						
YKA				PKKP	**PKKPdf**	**11 21 19.3**	**-2.1**
	comp=Z,0.2nm,0.7s,baz=326,slow=3.5,SNR=3.7						
ABPO	**Ambohimpanom**	**101.94**	**122**	IAMs_20	IAMs_20	11 44 20.9	
	comp=Z,2µm,22.0s						
DLBC	**Dease Lake**	**103.67**	**333**	IAMs_20	IAMs_20	11 48 46.4	
	comp=Z,2µm,21.0s						
ARMA	**Armidale**	**104.14**	**218**	IAMs_20	IAMs_20	11 46 14.2	
	comp=Z,1µm,19.0s						
JIS	**Juneau Island**	**105.28**	**331**	IAMs_20	IAMs_20	11 56 29.0	
	comp=Z,972nm,19.0s						
WHY	**Whitehorse**	**107.00**	**333**	IAMs_20	IAMs_20	11 52 22.3	
	comp=Z,2µm,19.0s						
HYT	**Haines Junctio**	**108.12**	**332**	IAMs_20	IAMs_20	11 53 09.9	
	comp=Z,1µm,18.0s						
EIDS	**Eidsvold**	**108.46**	**221**	IAMs_20	IAMs_20	11 46 47.0	
	comp=Z,2µm,20.0s						
MURB	**Monte Urbino**	**108.54**	**50**	IAMs_20	IAMs_20	12 05 12.1	
	comp=Z,1µm,18.0s						
RES	**Resolute Bay**	**109.09**	**354**	PKKPbc	PKKPbc	11 20 50.2	-1.4
	comp=Z,0.6nm,0.7s,baz=355,slow=8.0,SNR=4.0						
RES	**Resolute Bay**	**109.09**	**354**	IAMs_20	IAMs_20	12 01 26.8	
	comp=Z,2µm,20.0s						
C36M	**Paulatuk**	**109.47**	**343**	IAMs_20	IAMs_20	11 59 07.2	
	comp=Z,1µm,21.0s						
CTGM	**Chitina Glacie**	**109.72**	**331**	IAMs_20	IAMs_20	11 46 21.5	
	comp=Z,948nm,20.0s						
TULEG	**Thule**	**109.91**	**1**	IAMs_20	IAMs_20	11 55 48.4	
	comp=Z,1µm,21.0s						
BALM	**Baldy**	**110.17**	**331**	IAMs_20	IAMs_20	11 48 34.4	
	comp=Z,918nm,20.0s						
TGL	**Tana Glacier**	**110.22**	**330**	IAMs_20	IAMs_20	11 54 14.5	
	comp=Z,958nm,20.0s						
CRQM	**Cirque**	**110.35**	**330**	IAMs_20	IAMs_20	11 54 19.4	
	comp=Z,1µm,21.0s						
MCARA	**McCarthy VSAT**	**110.64**	**331**	IAMs_20	IAMs_20	11 58 17.6	
	comp=Z,857nm,19.0s						
DAWY	**Dawson**	**110.73**	**334**	IAMs_20	IAMs_20	11 54 44.9	
	comp=Z,1µm,20.0s						
VRDI	**Verde Repeater**	**110.73**	**331**	IAMs_20	IAMs_20	11 54 40.1	
	comp=Z,923nm,21.0s						
GLB	**Gilahina Butte**	**110.99**	**331**	IAMs_20	IAMs_20	11 54 48.0	
	comp=Z,1µm,22.0s						
INK	**Inuvik**	**111.33**	**339**	PKKPbc	PKKPbc	11 20 42.7	-1.4
	comp=Z,0.7nm,0.8s,baz=3.4,slow=2.5,SNR=3.5						
EYAK	**Cordova Ski Ar**	**111.33**	**329**	IAMs_20	IAMs_20	11 48 16.1	
	comp=Z,1µm,20.0s						
NKC	**Novy Kostel**	**111.74**	**43**	AMS	AMS	11 57 10.0	
	comp=Z,3µm,18.6s						
FID	**Port Fidalgo**	**111.74**	**329**	IAMs_20	IAMs_20	11 56 01.0	
	comp=Z,1µm,19.0s						
GERES	**GERESS Array B**	**111.86**	**45**	PKiKP	**PKiKP**	**11 09 48.4**	**-0.2**
	comp=Z,1.7nm,0.9s,baz=222,slow=1.6,SNR=6.8						
KHC	**Kasperske Hory**	**111.91**	**45**	AMS	AMS	12 07 50.0	
	comp=Z,3µm,20.2s						
KHC	**Kasperske Hory**	**111.91**	**45**	IAMs_20	IAMs_20	12 07 55.8	
	comp=Z,931nm,18.0s						
GLI	**Glacier Island**	**112.07**	**329**	IAMs_20	IAMs_20	11 56 34.6	
	comp=Z,875nm,18.0s						
DOT	**Dot Lake**	**112.24**	**333**	IAMs_20	IAMs_20	11 55 27.1	
	comp=Z,1µm,19.0s						
SCRK	**Sand Creek**	**112.38**	**333**	IAMs_20	IAMs_20	11 55 32.7	
	comp=Z,2µm,19.0s						
PAX	**Paxson**	**112.44**	**332**	IAMs_20	IAMs_20	12 06 04.4	
	comp=Z,964nm,21.0s						
CLL	**Collm**	**112.53**	**43**	*e*PP	**PP**	**11 10 37.0**	**+0.2**
CLL				*e*SKSac	**SKSac**	**11 16 42.0**	**+10**
CLL				*e*Sdif	**Sdif**	**11 18 19.0**	**+2.2**
CLL				*e*PS	**PS**	**11 20 16.0**	**+5.2**
CLL				*e*(PPS)		11 21 29.0	
CLL				*e*SS	**SS**	**11 26 18.0**	**+0.9**
CLL				*e*		11 28 42.0	
CLL				*e*SSS	SSS	11 30 24.0	
CLL				*e*SSSS		11 33 42.0	
CLL				Lm	MLR	11 58 00.0	
	comp=Z,2µm,18.9s						
SEW	**Seward**	**112.72**	**328**	IAMs_20	IAMs_20	12 02 41.8	
	comp=Z,1µm,21.0s						
PRA	**Prague**	**112.82**	**44**	AMS	AMS	11 55 00.0	
	comp=Z,3µm,22.7s						
PRU	**Pruhonice**	**112.85**	**44**	AMS	AMS	11 59 40.0	
	comp=Z,3µm,22.4s						
BRG	**Berggiesshubel**	**112.88**	**43**	*e*P	PKiKP	11 10 00.1	+10
	comp=Z,4.0nm,1.2s						
BRG	**Berggiesshubel**	**112.88**	**43**	SS	SS	11 30 30.0	
KNK	**Knik Glacier**	**112.91**	**329**	IAMs_20	IAMs_20	11 56 12.7	
	comp=Z,918nm,20.0s						
GOPC	**GO Pecny, Ondr**	**112.96**	**45**	AMS	AMS	11 57 30.0	
	comp=Z,3µm,21.9s						
SML	**Sawmill**	**113.04**	**330**	IAMs_20	IAMs_20	12 06 43.3	
	comp=Z,998nm,21.0s						
PVCC	**Panska Ves**	**113.09**	**44**	AMS	AMS	12 00 10.0	
	comp=Z,2µm,21.0s						
TREC	**Trest**	**113.11**	**45**	AMS	AMS	12 06 00.0	
	comp=Z,2µm,18.5s						
OHAK	**Old Harbor**	**113.19**	**324**	IAMs_20	IAMs_20	11 48 29.5	
	comp=Z,2µm,20.0s						
BRLK	**Bradley Lake**	**113.20**	**327**	IAMs_20	IAMs_20	11 48 56.7	
	comp=Z,1µm,19.0s						
FORT	**Forrest**	**113.21**	**199**	IAMs_20	IAMs_20	12 02 14.5	
	comp=Z,1µm,20.0s						
GHO	**Glory Hole Cre**	**113.27**	**330**	IAMs_20	IAMs_20	12 06 53.4	
	comp=Z,1µm,21.0s						
PMR	**Palmer**	**113.28**	**330**	IAMs_20	IAMs_20	12 06 47.5	
	comp=Z,934nm,20.0s						
RC01	**Rabbit Creek A**	**113.30**	**329**	IAMs_20	IAMs_20	12 05 17.2	
	comp=Z,1µm,20.0s						
HDA	**Harding Lake**	**113.72**	**333**	IAMs_20	IAMs_20	11 56 23.1	
	comp=Z,1µm,20.0s						
PRP	**Porcupine Dome**	**113.73**	**334**	IAMs_20	IAMs_20	12 07 45.1	
	comp=Z,1µm,20.0s						
ILAR	**Eielson Array**	**113.87**	**333**	PKiKP	**PKiKP**	**11 09 52.1**	**+0.3**
	comp=Z,1.1nm,0.9s,baz=180,slow=1.9,SNR=7.3						
UPC	**Upice**	**113.92**	**44**	AMS	AMS	11 59 00.0	
	comp=Z,2µm,16.5s						
CHVC	**Chvalec**	**113.98**	**44**	AMS	AMS	11 58 50.0	
	comp=Z,2µm,15.6s						
RND	**Reindeer**	**114.00**	**331**	IAMs_20	IAMs_20	11 49 45.6	
	comp=Z,1000nm,21.0s						
DPC	**Dobruska-Polom**	**114.04**	**45**	AMS	AMS	11 58 20.0	
	comp=Z,2µm,18.9s						
OSTC	**Ostas**	**114.06**	**44**	AMS	AMS	11 59 00.0	
	comp=Z,2µm,14.2s						
CCB	**Clear Creek Bu**	**114.16**	**333**	IAMs_20	IAMs_20	11 56 45.7	
	comp=Z,1µm,21.0s						
MCK	**McKinley**	**114.18**	**332**	IAMs_20	IAMs_20	11 55 12.3	
	comp=Z,1µm,22.0s						
WRH	**Wood River Hil**	**114.19**	**333**	IAMs_20	IAMs_20	11 56 47.5	
	comp=Z,1µm,20.0s						
KRLC	**Kraliky**	**114.20**	**45**	AMS	AMS	12 07 00.0	
	comp=Z,2µm,16.0s						
COLA	**College**	**114.29**	**333**	IAMs_20	IAMs_20	11 56 48.2	
	comp=Z,1µm,19.0s						
MDM	**Murphy Dome**	**114.47**	**333**	IAMs_20	IAMs_20	11 56 36.8	
	comp=Z,979nm,22.0s						
SKT	**Skwentna**	**114.47**	**329**	IAMs_20	IAMs_20	11 51 03.1	
	comp=Z,845nm,19.0s						
BWN	**Browne**	**114.59**	**332**	IAMs_20	IAMs_20	11 58 33.4	
	comp=Z,1µm,18.0s						
TRF	**Thorofare Moun**	**114.60**	**331**	IAMs_20	IAMs_20	11 56 53.3	
	comp=Z,997nm,21.0s						
NEA	**Nenana**	**114.62**	**332**	IAMs_20	IAMs_20	11 57 29.0	
	comp=Z,1µm,18.0s						
VYHS	**Vyhne**	**114.80**	**47**	*e*P	**Pdif**	**11 06 04.3**	**-0.3**
VYHS				*e*		11 09 55.2	
VYHS	**Vyhne**	**114.80**	**47**	*e*PDIFF	**Pdif**	**11 06 04.3**	**-0.3**
VYHS	**Vyhne**	**114.80**	**47**	*e*PKP	**PKiKP**	**11 09 55.2**	**+1.0**
KTH	**Kantishna Hill**	**114.90**	**331**	IAMs_20	IAMs_20	12 06 01.3	
	comp=Z,837nm,20.0s						
OKC	**Ostrava-Krasne**	**114.91**	**46**	AMS	AMS	12 03 00.0	
	comp=Z,2µm,16.6s						
BPAW	**Bear Paw Mtn.**	**115.16**	**332**	IAMs_20	IAMs_20	11 57 02.2	
	comp=Z,910nm,19.0s						
CTAO	**Charters Tower**	**115.33**	**220**	IAMs_20	IAMs_20	11 52 20.9	
	comp=Z,1µm,18.0s						
MLY	**Manley**	**115.46**	**333**	IAMs_20	IAMs_20	11 58 37.0	
	comp=Z,1µm,18.0s						
SVW2	**Sparrevohn**	**115.88**	**328**	IAMs_20	IAMs_20	11 50 01.9	
	comp=Z,1µm,19.0s						
COLD	**Coldfoot**	**116.18**	**335**		**PKiKP**	**11 09 57.2**	**+1.0**
TOLK	**Toolik Lake Re**	**116.55**	**336**		**PKiKP**	**11 09 57.4**	**+0.4**
TOLK	**Toolik Lake Re**	**116.55**	**336**	P	**PKiKP**	**11 09 58.4**	**+1.4**
	baz=114						
UZH	**Uzhgorod**	**116.98**	**48***c*	*i*PKIKP	**PKiKP**	**11 09 58.9**	**+0.6**
UZH				*i*		11 10 00.1	
ASAR	**Alice Springs**	**117.93**	**207**	PKP	**PKPdf**	**11 10 00.6**	**-0.5**
	comp=Z,2.2nm,0.7s,baz=148,slow=2.0,SNR=21						
ASAR				PKKPbc	**PKKPbc**	**11 20 19.2**	**-1.4**
	comp=Z,1.5nm,0.8s,baz=343,slow=3.4,SNR=10						
BUR08	**Bucovina Ar. S**	**118.46**	**50**		**PKiKP**	**11 10 01.7**	**+0.3**
KIS	**Kishinev**	**120.59**	**51**	*e*PKP	**PKiKP**	**11 10 06.0**	**+0.6**
KIS	**Kishinev**	**120.59**	**51**	*e*PP	PP	11 11 38.0	+4.7
KIS	**Kishinev**	**120.59**	**51**	*e*PS	PS	11 21 25.0	+0.9
KIS	**Kishinev**	**120.59**	**51**	*e*PKIKP	**PKiKP**	**11 10 06.0**	**+0.6**
KIS				*e*		11 11 38.0	
KIS				*e*PPP	PPP	11 14 06.0	
KIS				*e*PS	**PS**	**11 21 25.0**	**+0.9**
KIS				*e*PPS	PPS	11 22 52.0	
WR9	**Warramunga Arr**	**121.03**	**209**	IAMs_20	IAMs_20	12 02 24.9	
	comp=Z,1µm,19.0s						
WR8	**Warramunga Arr**	**121.04**	**209**	IAMs_20	IAMs_20	12 02 24.1	
	comp=Z,1µm,18.0s						
ANTO	**Ankara**	**121.04**	**60**	IAMs_20	IAMs_20	12 04 03.5	
	comp=Z,2µm,21.0s						
RDOG	**Red Dog Mine**	**121.04**	**334**	IAMs_20	IAMs_20	12 12 17.5	
	comp=Z,1µm,20.0s						
WR7	**Warramunga Arr**	**121.05**	**209**	IAMs_20	IAMs_20	12 03 10.4	
	comp=Z,1µm,21.0s						
WR6	**Warramunga Arr**	**121.06**	**209**	IAMs_20	IAMs_20	12 02 25.7	
	comp=Z,1µm,18.0s						
WR5	**Warramunga Arr**	**121.07**	**209**	IAMs_20	IAMs_20	11 53 43.0	
	comp=Z,1µm,19.0s						
WR4	**Warramunga Arr**	**121.08**	**209**	IAMs_20	IAMs_20	11 53 19.3	
	comp=Z,1µm,22.0s						
WR3	**Warramunga Arr**	**121.09**	**209**	IAMs_20	IAMs_20	12 10 03.5	
	comp=Z,1µm,20.0s						
WC4	**Warramunga Arr**	**121.10**	**209**	IAMs_20	IAMs_20	11 54 00.7	
	comp=Z,1µm,21.0s						
WR2	**Warramunga Arr**	**121.10**	**209**	IAMs_20	IAMs_20	11 53 42.8	
	comp=Z,1µm,21.0s						
WB2	**Warramunga Arr**	**121.11**	**209**		**PKPdf**	**11 10 07.1**	**-0.2**
WB2				IAMs_20	IAMs_20	11 53 54.0	
	comp=Z,1µm,18.0s						
WR1	**Warramunga Arr**	**121.11**	**209**	IAMs_20	IAMs_20	11 53 12.2	
	comp=Z,1µm,21.0s						
WRA	**Warramunga Arr**	**121.11**	**209**	PKP	**PKPdf**	**11 10 06.9**	**-0.4**
	comp=Z,5.4nm,0.7s,baz=163,slow=1.6,SNR=32						
WRA				PKKPbc	**PKKPbc**	**11 20 08.2**	**-0.6**
	comp=Z,2.1nm,0.5s,baz=350,slow=4.9,SNR=23						
WRAB	**Tennant Creek**	**121.12**	**209***c*	*i*PKIKP	**PKPdf**	**11 10 07.2**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WC1	**Warramunga Arr**	**121.13**	**209**	IAMs_20	IAMs_20	11 53 54.6	
	comp=Z,1µm,21.0s						
WB4	**Warramunga Arr**	**121.14**	**209**	IAMs_20	IAMs_20	12 02 35.9	
	comp=Z,1µm,20.0s						
WB5	**Warramunga Arr**	**121.16**	**209**	IAMs_20	IAMs_20	12 05 05.4	
	comp=Z,1µm,18.0s						
WB8	**Warramunga Arr**	**121.21**	**209**	IAMs_20	IAMs_20	11 52 25.7	
	comp=Z,1µm,20.0s						
ANM	**Nome**	**121.22**	**330**	IAMs_20	IAMs_20	12 02 46.4	
	comp=Z,975nm,19.0s						
WB0	**Warramunga Arr**	**121.25**	**209**		**PKPdf**	**11 10 07.3**	**-0.3**
WB0				IAMs_20	IAMs_20	11 53 04.8	
	comp=Z,1µm,22.0s						
KBS	**Kingsbay**	**121.58**	**13**	IAMs_20	IAMs_20	11 58 24.8	
	comp=Z,1µm,22.0s						
KBS	**Kingsbay**	**121.58**	**13***c*	*i*PKIKP	**PKiKP**	**11 10 08.5**	**+2.0**
KBS				pmax	pmax		
	comp=Z,182nm,1.7s						
BRTR	**Keskin Array B**	**121.61**	**61**	PKP	**PKPdf**	**11 10 07.5**	**-0.3**
	comp=Z,3.5nm,0.8s,baz=197,slow=3.9,SNR=11						
BR131	**Keskin Array S**	**121.61**	**61**	*i* PKIKP	**PKiKP**	**11 10 08.2**	**+0.3**
AKASG	**Malin Array Be**	**121.90**	**47**	PKP	**PKPdf**	**11 10 06.2**	**-1.5**
	comp=Z,6.5nm,0.8s,baz=269,slow=2.2,SNR=21						
AKBB	**Malin Array Si**	**121.90**	**47**		**PKPdf**	**11 10 07.3**	**-0.4**
AKBB	**Malin Array Si**	**121.90**	**47**⇑	*i*PKIKP	**PKiKP**	**11 10 08.0**	**+0.1**
COEN	**Coen**	**122.02**	**221**	IAMs_20	IAMs_20	11 54 44.3	
	comp=Z,2µm,21.0s						
SPITS	**Spitsbergen Ar**	**122.30**	**14**	PKP	**PKPdf**	**11 10 07.2**	**-0.6**
	comp=Z,6.5nm,1.0s,baz=190,slow=7.3,SNR=5.9						
VSU	**Vasula**	**122.37**	**38***c*	*i*PKIKP	**PKiKP**	**11 10 08.6**	**+0.1**
VSU				pmax	pmax		
	comp=Z,88nm,2.5s						
FINES	**FINESS Array B**	**122.65**	**34**	PKP	**PKPdf**	**11 10 08.0**	**-0.8**
	comp=Z,4.8nm,1.0s,baz=234,slow=4.7,SNR=7.1						
FINES				PKKPbc	**PKKPab**	**11 20 00.5**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=145,slow=4.7,SNR=4.0						
GAZ	**Gaziantep**	**123.42**	**65**	IAMs_20	IAMs_20	12 07 52.5	
	comp=Z,2µm,20.0s						
ARCES	**ARCESS Array B**	**123.65**	**25**	PKP	**PKPdf**	**11 10 10.1**	**-0.4**
	comp=Z,1.8nm,0.7s,baz=236,slow=3.1,SNR=14						
GAMB	**Gambell**	**123.80**	**328**	IAMs_20	IAMs_20	12 02 51.7	
	comp=Z,903nm,21.0s						
ANN	**Anapa**	**125.77**	**56**	*i* PKIKP	**PKiKP**	**11 10 16.0**	**+0.3**
ANN				*e*		11 12 03.9	
ANN				*e*		11 17 14.1	
ANN				*e*		11 17 28.1	
ANN				*e*SS	SS	11 29 20.1	+12
ANN				pmax	pmax		
	comp=Z,53nm,1.8s						
FITZ	**Fitzroy Crossi**	**125.89**	**201**	PKP	**PKPdf**	**11 10 16.5**	**0.0**
	comp=Z,6.0nm,0.7s,baz=202,slow=4.5,SNR=14						
FITZ	**Fitzroy Crossi**	**125.89**	**201**		**PKPdf**	**11 10 15.1**	**-1.4**
LVZ	**Lovozero**	**126.91**	**27***c*	*i*PKIKP	**PKiKP**	**11 10 17.5**	**+0.1**
LVZ				pmax	pmax		
	comp=Z,37nm,2.5s						
SOC	**Sochi**	**127.07**	**58**	*i* PKIKP	**PKPdf**	**11 10 17.9**	**0.0**
SOC				*e*		11 12 12.2	
SOC				*e*PS	**PS**	**11 22 13.4**	**-8.2**
SOC				*e*SS	SS	11 29 19.1	-5.6
SOC				pmax	pmax		
	comp=Z,19nm,1.1s						
OBN	**Obninsk**	**127.13**	**43***d*	*i*PKIKP	**PKiKP**	**11 10 17.9**	**-0.2**
OBN				*e*		11 12 15.5	
OBN				PS	**PS**	**11 22 16.0**	**-5.6**
OBN				pmax	pmax		
	comp=Z,59nm,1.7s						
OBN				MLR	MLR		
	comp=Z,2µm,18.0s						
KNRA	**Kununurra**	**127.13**	**205**		**PKPdf**	**11 10 18.4**	**-0.5**
MOS	**Moscow**	**127.80**	**42**	*i* PKIKP	**PKPdf**	**11 10 17.7**	**-1.1**
MOS				*e*		11 12 18.9	
MOS				pmax	pmax		
	comp=Z,44nm,1.2s						
VSR	**Storozhevoye**	**128.16**	**48**	*e*PKIKP	**PKPdf**	**11 10 18.7**	**-1.0**
VSR				pmax	pmax		
	comp=Z,20nm,1.3s						
VSR				MLR	MLR		
	comp=Z,2µm,20.0s						
LPSR	**Galich'ya Gora**	**128.20**	**46**	*e*PKIKP	**PKPdf**	**11 10 20.0**	**+0.3**
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
TMCR	**Tamitsa**	**128.36**	**32**	*e*PKIKP	**PKiKP**	**11 10 20.4**	**+0.2**
MTN	**Manton Dam**	**128.81**	**209**		**PKPdf**	**11 10 21.8**	**-0.4**
KLMR	**Klimovskoe**	**129.07**	**36**	*e*PKIKP	**PKPdf**	**11 10 17.6**	**-3.5**
KLMR				pmax	pmax		
	comp=Z,107nm,1.4s						
KLMR	**Klimovskoe**	**129.07**	**36**	*e*PKPdf	**PKPdf**	**11 10 17.7**	**-3.4**
KLMR				AMP		11 10 22.9	
	comp=Z,107nm,1.4s						
KLMR				LQ	LQ	11 50 38.4	
KLMR				LQ	LQ	11 50 38.4	
KLMR				LR	LR	11 58 24.9	
KLMR				AMP		12 13 45.6	
	comp=Z,2µm,17.9s						
NEY	**Neytrino**	**129.13**	**59**	*i* PKIKP	**PKiKP**	**11 10 22.6**	**-0.2**
KIV	**Kislovodsk**	**129.25**	**58**	IAMs_20	IAMs_20	12 08 11.6	
	comp=Z,1µm,21.0s						
KIV	**Kislovodsk**	**129.25**	**58**	*i* PKIKP	**PKiKP**	**11 10 22.9**	**0.0**
KIV				*e*		11 12 31.5	
KIV				*e*SS	SS	11 29 54.2	+2.2
KIV				pmax	pmax		
	comp=Z,43nm,1.1s						
KIV				MLR	MLR		
	comp=Z,4µm,23.0s						
KBZ	**Khabaz**	**129.36**	**58**	PKP	**PKiKP**	**11 10 23.2**	**+0.3**
	comp=Z,5.9nm,1.0s,baz=283,slow=2.3,SNR=14						
GOF	**Gofitskoye**	**129.72**	**57**⇑	*e*PKHKP	PKPpre	11 09 55.7	
VRH	**Novokhopyorsk**	**129.75**	**49**	*e*PKIKP	**PKPdf**	**11 10 21.9**	**-0.8**
VRH				pmax	pmax		
	comp=Z,20nm,1.4s						
NCK	**Nalchik**	**129.81**	**59**	*i* PKIKP	**PKiKP**	**11 10 24.3**	**+0.4**
ZEI	**Tsey**	**129.88**	**60**	*i* PKIKP	**PKPdf**	**11 10 23.7**	**+0.2**
ZEI				pmax	pmax		
	comp=Z,12nm,1.3s						
GNI	**Garni**	**129.91**	**63**	IAMs_20	IAMs_20	12 11 38.3	
	comp=Z,924nm,20.0s						
GNI	**Garni**	**129.91**	**63***c*	*i*PKIKP	**PKiKP**	**11 10 24.4**	**0.0**
GNI				pmax	pmax		
	comp=Z,86nm,1.7s						
GROC	**Groznyy**	**131.32**	**59**	*i* PKIKP	**PKPdf**	**11 10 26.0**	**0.0**
GROC				*e*		11 12 44.7	
GROC				pmax	pmax		
	comp=Z,39nm,1.2s						
PRGR	**Permogore**	**131.98**	**35**	*e*PKIKP	**PKPdf**	**11 10 24.9**	**-1.7**
PRGR				pmax	pmax		
	comp=Z,65nm,1.6s						
BILL	**Bilibino**	**132.51**	**334**		**PKPdf**	**11 10 27.8**	**+0.4**
BILL	**Bilibino**	**132.51**	**334***d*	*i*PKIKP	**PKiKP**	**11 10 28.5**	**-0.1**
BILL				*e*		11 10 33.6	
BILL				*e*		11 12 59.2	
BILL				PPP	PPP	11 15 42.0	
BILL				*e*SSS	SSS	11 35 23.0	
BILL				pmax	pmax		
	comp=Z,27nm,1.7s						
BILL				MLR	MLR		
	comp=Z,1µm,19.0s						
MAK	**Makhachkala**	**132.51**	**60**	*i* PKIKP	**PKPdf**	**11 10 26.3**	**-1.9**
MAK				*e*		11 12 49.7	
MAK				pmax	pmax		
	comp=Z,91nm,0.9s						
WSAR	**Wadi Sarin**	**135.72**	**90**	PKP	**PKPdf**	**11 10 35.0**	**+0.2**
	comp=Z,8.0nm,0.9s,baz=210,slow=4.0,SNR=4.8						
MMRI	**Maumere**	**135.86**	**200**	IAMs_20	IAMs_20	12 14 30.1	
	comp=Z,776nm,19.0s						
CISI	**Cisompet, Garu**	**139.05**	**180**	IAMs_20	IAMs_20	12 11 38.1	
	comp=Z,1µm,18.0s						
ARU	**Arti**	**139.43**	**40**		**PKPdf**	**11 10 41.1**	**+0.4**
ARU	**Arti**	**139.43**	**40**	*i* PKIKP	**PKPdf**	**11 10 41.2**	**+0.6**
ARU						11 13 32.6	
ARU				SS	SS	11 31 47.2	-6.2
ARU				MLR	MLR		
	comp=Z,3µm,20.0s						
GEYT	**Alibeck**	**139.68**	**69**	PKhKP	PKPpre	11 10 33.4	
	comp=Z,2.0nm,0.5s,baz=236,slow=10,SNR=4.4						
GEYT				PKP	**PKPdf**	**11 10 41.3**	**-0.5**
	comp=Z,4.4nm,0.9s,baz=232,slow=9.1,SNR=6.7						
SEY	**Seymchan**	**139.72**	**330**	PKhKP	PKPpre	11 10 32.7	
	baz=180,slow=20						
SEY				PKP	**PKPdf**	**11 10 39.7**	**-1.3**
	comp=Z,8.9nm,0.9s,baz=184,slow=19,SNR=2.8						
PETK	**Petropavlovsk-**	**139.92**	**314**	PKhKP	PKPpre	11 10 33.6	
	comp=Z,5.2nm,1.0s,baz=83,slow=7.6,SNR=5.6						
PETK				PKP	**PKPdf**	**11 10 42.1**	**+0.4**
	comp=Z,4.9nm,0.9s,baz=96,slow=3.9,SNR=5.7						
AKTO	**Aktyubinsk**	**140.06**	**50**	PKIKP	**PKPdf**	**11 10 41.1**	**-0.9**
TIXI	**Tiksi**	**140.33**	**350**	PKPdf	**PKPdf**	**11 10 42.7**	**+0.8**
TIXI				IAMs_20	IAMs_20	12 17 16.6	
	comp=Z,658nm,20.0s						
TIXI	**Tiksi**	**140.33**	**350**	*i* PKIKP	**PKPdf**	**11 10 41.9**	**+0.1**
SKR	**Severo-Kuril's**	**141.23**	**311**	*e*PKHKP	PKPpre	11 10 28.2	
MA2	**Magadan**	**141.83**	**326**	IAMs_20	IAMs_20	12 17 29.6	
	comp=Z,761nm,21.0s						
MA2	**Magadan**	**141.83**	**326**	*i* PKIKP	**PKPdf**	**11 10 45.8**	**+0.9**
LUWI	**Luwuk**	**142.83**	**205**	IAMs_20	IAMs_20	12 15 26.2	
	comp=Z,724nm,19.0s						
PALK	**Pallekele**	**143.60**	**130**	PKP	PKPbc	11 10 46.8	0.0
	comp=Z,21nm,1.0s,baz=213,slow=4.1,SNR=9.4						
BKB	**Balikpapan**	**144.31**	**195**		**PKPdf**	**11 10 51.2**	**+0.5**
BKB				IAMs_20	IAMs_20	12 10 03.4	
	comp=Z,1µm,22.0s						
KAD	**Karad**	**145.60**	**110**	*i* P	**PKPdf**	**11 10 52.6**	**-0.3**
POO	**Poona**	**146.01**	**108**⇑	*i*P	**PKPdf**	**11 10 51.5**	**-2.0**
	comp=Z,270nm,1.0s						
URV	**Uravakonda**	**146.55**	**116**	*e*PKPbc	**PKPdf**	**11 10 53.9**	**-0.6**
URV				*e*PKPab	**PKPbc**	**11 10 55.2**	**-0.8**
BRVK	**Borovoye**	**146.90**	**43**		**PKPdf**	**11 10 54.5**	**+0.5**
BRVK	**Borovoye**	**146.90**	**43**	PKIKP	**PKPdf**	**11 10 53.6**	**-0.3**
KUR	**Kuril'sk**	**147.41**	**303**	*e*PKP2	**PKPbc**	**11 10 57.2**	**-0.3**
SKHT	**Srikalahasti**	**147.57**	**121**	*e*PKPbc	**PKPdf**	**11 10 56.5**	**+0.4**
SKHT				*e*PKPab	**PKPbc**	**11 10 59.0**	**+0.2**
KBL	**Kabul**	**147.84**	**77**		**PKPdf**	**11 10 56.7**	**+0.3**
KBL	**Kabul**	**147.84**	**77**	PKIKP	**PKPdf**	**11 10 56.7**	**+0.3**
KLRI	**Killari**	**147.92**	**111**	*e*PKPbc	**PKPdf**	**11 10 58.1**	**+1.3**
KSM	**Kuching**	**147.95**	**184**	PKPbc	**PKPbc**	**11 11 00.1**	**+0.1**
KSM				IAMs_20	IAMs_20	12 16 25.8	
	comp=Z,816nm,21.0s						
RPSI	**Rantau Prapat**	**148.08**	**163**		**PKPbc**	**11 11 00.2**	**-0.1**
MYKOM	**Kota Tinggi**	**148.10**	**172**	IAMs_20	IAMs_20	12 14 47.4	
	comp=Z,1µm,20.0s						
PSI	**Prapat**	**148.19**	**163**	PKP2	**PKPbc**	**11 11 00.2**	**-0.5**
YAK	**Yakutsk**	**148.39**	**341**	PKPbc	**PKPbc**	**11 10 59.4**	**-0.2**
	comp=Z,27nm,0.7s,baz=212,slow=0.6,SNR=16						
YAK	**Yakutsk**	**148.39**	**341**		**PKPbc**	**11 11 00.0**	**+0.5**
YAK				IAMs_20	IAMs_20	12 27 50.7	
	comp=Z,885nm,20.0s						
YAK	**Yakutsk**	**148.39**	**341**	*i* PKIKP	**PKPdf**	**11 10 55.3**	**-0.8**
YAK				*e*SS	SS	11 33 31.4	-3.9
YAK				pmax	pmax		
	comp=Z,65nm,0.8s						
YAK				pmax	pmax		
	comp=N,15nm,1.1s						
YAK				pmax	pmax		
	comp=E,14nm,1.5s						
YAK				pmax	pmax		
	comp=Z,194nm,4.3s						
YAK				pmax	pmax		
	comp=N,104nm,4.3s						
YAK				pmax	pmax		
	comp=E,192nm,4.5s						
SRLM	**Srisailam**	**148.50**	**116**	*e*PKPdf	**PKPdf**	**11 10 57.2**	**-0.5**
SRLM				*e*PKiKP	**PKPbc**	**11 11 01.2**	**-0.1**
CHM	**Chimkent**	**148.72**	**63**	PKP2	**PKiKP**	**11 11 02.7**	**+0.1**
SBUM	**Sibu**	**148.74**	**188**		**PKPbc**	**11 11 02.1**	**+0.1**
HYB	**Hyderabad**	**149.05**	**114**	*i* PKP	**PKPbc**	**11 11 01.0**	**-1.7**
HYBB	**Hyderabad (bro**	**149.05**	**114**	*e*PKPdf	**PKPdf**	**11 10 58.2**	**-0.4**
NJS	**Nagarjunasagar**	**149.09**	**116**	*e*PKPdf	**PKPdf**	**11 10 58.7**	**+0.1**
ADKI	**Addanki**	**149.13**	**118**	*e*PKPdf	**PKPdf**	**11 10 58.8**	**+0.2**
ADKI				*e*PKiKP	**PKPbc**	**11 11 02.8**	**0.0**
GAR	**Garm**	**149.30**	**69**	PKPbc	**PKPbc**	**11 11 03.4**	**+0.6**
KK31	**Karatay Array**	**149.32**	**61**	PKPbc	**PKPbc**	**11 11 02.5**	**-0.1**
KK31	**Karatay Array**	**149.32**	**61**	PKP2	**PKPbc**	**11 11 02.5**	**-0.1**
KKAR	**Karatay Array**	**149.32**	**61**	PKPbc	**PKPbc**	**11 11 02.4**	**-0.2**
KKAR	**Karatay Array**	**149.32**	**61**	PKP2	**PKPbc**	**11 11 02.4**	**-0.2**
NKL	**Nikolayevsk**	**149.66**	**320**	*e*PKHKP	PKPpre	11 10 59.4	
NKL				MLR	MLR		
	comp=Z,999nm,22.0s						
NKL				MLR	MLR		
	comp=N,162nm,13.0s						
NKL				MLR	MLR		
	comp=E,32nm,14.0s						
MYLAV	**Mylavaram**	**150.20**	**118**	*e*PKPdf	**PKPdf**	**11 11 00.9**	**+0.6**
MYLAV				*e*pPKPdf	**pPKPdf**	**11 11 05.9**	**-0.3**
IPM	**Ipoh**	**150.29**	**166**	PKPbc	**PKPbc**	**11 11 05.0**	**-0.9**
RPR	**Rampur**	**150.47**	**113**	*e*PKPdf	**PKPdf**	**11 11 00.4**	**-0.3**
RPR				*e*PKiKP	**PKPbc**	**11 11 05.4**	**-0.7**
GGR	**Gangavaram**	**150.54**	**115**	*e*PKPdf	**PKPdf**	**11 11 01.2**	**+0.2**
YSS	**Yuzh-Sakhalins**	**150.60**	**307**	PKPdf	**PKPdf**	**11 11 00.0**	**-0.1**
YSS					**PKiKP**	**11 11 05.9**	**-0.3**
YSS	**Yuzh-Sakhalins**	**150.60**	**307**⇓	*i*PKIKP	**PKPbc**	**11 11 04.2**	**-1.3**
YSS				*e*		11 11 12.6	
YSS				*e*SS	SS	11 33 56.0	-5.6
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
NIL	**Nilore**	**151.14**	**80**		**PKPdf**	**11 11 01.1**	**-0.4**
NIL				PKPbc	**PKPbc**	**11 11 07.2**	**-0.1**
NIL	**Nilore**	**151.14**	**80**	PKIKP	**PKPbc**	**11 11 07.2**	**-0.1**
PVM	**Polavaram**	**151.25**	**118**	*e*PKPdf	**PKPdf**	**11 11 02.4**	**+0.4**
PVM				*e*PKiKP	**PKPbc**	**11 11 07.8**	**-0.2**
JKA	**Kamikawa-asahi**	**151.29**	**302**		**PKPbc**	**11 11 07.5**	**+0.2**
ASAJ	**Asahikawa**	**151.29**	**302**	PKPbc	**PKPbc**	**11 11 07.5**	**+0.2**
	comp=Z,18nm,0.8s,baz=48,slow=8.5,SNR=8.8						
KKM	**Kota Kinabalu**	**151.53**	**197**		**PKPbc**	**11 11 08.0**	**-0.9**
KKM				IAMs_20	IAMs_20	12 26 05.8	

	comp=Z,855nm,20.0s						
EKS2	**Erkin-Say**	**151.76**	**61**	P	**PKPdf**	**11 11 04.4**	**+2.2**
	SNR=11						
AML	**Almayashu**	**151.76**	**62**	P	**PKPdf**	**11 11 03.1**	**+0.5**
	SNR=12						
USP	**Ospenovka**	**152.20**	**60**	P	**PKPdf**	**11 11 03.0**	**+0.3**
	SNR=7.5						
AAK	**Ala-Archa**	**152.29**	**61**	PKP	**PKPdf**	**11 11 03.6**	**+0.5**
	comp=Z,6.9nm,1.0s,baz=306,slow=1.6,SNR=15						
AAK				PKPbc	**PKiKP**	**11 11 10.2**	**+0.1**
	comp=Z,34nm,0.8s,baz=174,slow=1.8,SNR=56						
AAK	**Ala-Archa**	**152.29**	**61**	P	**PKPdf**	**11 11 04.6**	**+1.6**
	SNR=6.6						
AAK	**Ala-Archa**	**152.29**	**61**		**PKPdf**	**11 11 03.4**	**+0.3**
AAK					**sPKPdf**	**11 11 10.6**	**-0.2**
AAK				PKPab	**PKPab**	**11 11 21.1**	**+1.2**
AAK	**Ala-Archa**	**152.29**	**61**	PKIKP	**PKPdf**	**11 11 03.4**	**+0.3**
UCH	**Uchtor**	**152.35**	**62**	P	**PKPdf**	**11 11 04.4**	**+0.8**
	SNR=15						
FRU1	**Bishkek**	**152.36**	**61**	IAMs_20	IAMs_20	12 32 28.3	
	comp=Z,1µm,20.0s						
CHMS	**Chumysh**	**152.42**	**60**	P	**PKiKP**	**11 11 10.7**	**+0.5**
	SNR=9.1						
KURBB	**Kurchatov Arra**	**152.56**	**43**	PKP	**PKPdf**	**11 11 03.4**	**+0.5**
	comp=Z,5.5nm,1.0s,baz=300,slow=2.4,SNR=19						
KURBB				PKPbc	**PKiKP**	**11 11 10.6**	**+0.4**
	comp=Z,23nm,1.0s,baz=298,slow=3.0,SNR=43						
KURK	**Kurchatov**	**152.57**	**43**		**PKPdf**	**11 11 02.8**	**-0.2**
KURK					**sPKPdf**	**11 11 10.1**	**-0.7**
KURK				PKPab	**PKPab**	**11 11 19.1**	**-1.4**
KURK	**Kurchatov**	**152.57**	**43**	PKIKP	**PKPdf**	**11 11 01.8**	**-1.1**
KBK	**Karagaybulak**	**152.62**	**61**	P	**PKPdf**	**11 11 04.5**	**+1.0**
	SNR=5.6						
KZA	**Kyzart**	**152.91**	**62**	P	**PKiKP**	**11 11 13.1**	**+1.3**
	SNR=5.0						
ULHL	**Ulahol**	**153.62**	**62**	P	**PKPdf**	**11 11 02.4**	**-2.7**
	SNR=5.4						
KSH	**Kashi**	**153.69**	**68**	PKPbc	**PKPdf**	**11 11 06.9**	**+1.7**
KSH				SKKS		11 21 46.7	
KSH				AMB	AMB		
	comp=Z,2µm,6.0s						
KSH				LR	LR		
	comp=Z,1µm,16.3s						
KSH				LR	LR		
	comp=Z,1µm,16.9s						
KSH				LR	LR		
	comp=Z,690nm,13.7s						
CHLP	**Challavanipeta**	**153.83**	**119**	*e*PKPdf	**PKPdf**	**11 11 04.5**	**-1.2**
ZAA0	**Zalesovo Array**	**153.88**	**32**		**PKPdf**	**11 11 04.3**	**-0.4**
ZAA0				PKPab	**PKPab**	**11 11 26.9**	**+1.0**
ZALV	**Zalesovo Beam**	**153.88**	**32**	PKP	**PKPdf**	**11 11 03.6**	**-1.2**
	comp=Z,11nm,1.0s,baz=280,slow=2.6,SNR=32						
ZALV				PKPbc	**PKPbc**	**11 11 12.5**	**-0.2**
	comp=Z,27nm,0.8s,baz=277,slow=2.5,SNR=20						
MJAR	**Matsushiro Arr**	**155.16**	**285**	PKP	**PKPdf**	**11 11 06.6**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=197,slow=6.1,SNR=4.3						
MAJO	**Matsushiro**	**155.17**	**285**	IAMs_20	IAMs_20	12 36 16.8	
	comp=Z,938nm,20.0s						
MJB9	**Matsu-Tunnel**	**155.17**	**285**	IAMs_20	IAMs_20	12 36 06.8	
	comp=Z,949nm,19.0s						
ZEA	**Zeya**	**155.69**	**332**	*i* PKIKP	**PKPdf**	**11 11 05.4**	**-1.9**
ZEA				*e*		11 15 10.0	
ZEA				pmax	pmax		
	comp=Z,32nm,1.8s						
ZEA				pmax	pmax		
	comp=Z,400nm,10.0s						
ZEA				pmax	pmax		
	comp=Z,400nm,13.0s						
INU	**Inuyama**	**156.06**	**282**	IAMs_20	IAMs_20	12 32 17.4	
	comp=Z,629nm,20.0s						
MAKZ	**Makanchi**	**156.28**	**49**		**PKPdf**	**11 11 07.6**	**-0.7**
MAKZ				PKPab	**PKPab**	**11 11 36.1**	**-0.3**
MAKZ	**Makanchi**	**156.28**	**49**	PKIKP	**PKPdf**	**11 11 07.1**	**-1.2**
KLR	**Kul'dur**	**156.48**	**319**	PKP	**PKPdf**	**11 11 07.2**	**-1.2**
	comp=Z,3.1nm,1.0s,baz=224,slow=2.2,SNR=7.4						
MK31	**Makanchi Array**	**156.48**	**48**		**PKPdf**	**11 11 08.7**	**+0.1**
MK31	**Makanchi Array**	**156.48**	**48**	*i* PKIKP	**PKPdf**	**11 11 07.2**	**-1.4**
MKAR	**Makanchi Array**	**156.48**	**48**	PKP	**PKPdf**	**11 11 08.6**	**0.0**
	comp=Z,5.6nm,0.9s,baz=310,slow=1.4,SNR=38						
MKAR				PKPab	**PKPab**	**11 11 36.1**	**-1.2**
	comp=Z,6.8nm,0.6s,baz=269,slow=3.4,SNR=14						
DANN	**Dangsing**	**158.57**	**98**	*e*P	**PKPdf**	**11 11 12.1**	**0.0**
	comp=Z,110nm,1.0s						
GKN	**Gorkha**	**159.18**	**99**	*e*P	**PKPdf**	**11 11 12.3**	**-0.4**
DMN	**Daman**	**159.41**	**101**	*e*P	**PKPdf**	**11 11 12.4**	**-0.7**
KKN	**Kakani**	**159.62**	**100**	*e*P	**PKPdf**	**11 11 13.5**	**+0.2**
PKIN	**Phulchoki**	**159.64**	**101**	*e*P	**PKPdf**	**11 11 12.7**	**-0.7**
PKI	**Pulchoki**	**159.65**	**101**	*e*P	**PKPdf**	**11 11 13.0**	**-0.5**
MDJ	**Mudanjiang**	**160.04**	**310**	PKP	**PKPdf**	**11 11 11.7**	**-1.2**
GUN	**Gumba**	**160.16**	**101**	*e*P	**PKPdf**	**11 11 13.7**	**-0.4**
JIRN	**Jiri**	**160.32**	**102**	*e*P	**PKPdf**	**11 11 13.8**	**-0.5**
RAMN	**Ramite**	**160.37**	**104**	*e*P	**PKPdf**	**11 11 14.1**	**-0.1**
	comp=Z,162nm,1.5s						
ODAN	**Odare**	**160.97**	**105**	*e*P	**PKPdf**	**11 11 15.4**	**+0.6**
WMQ	**Urumqi**	**161.20**	**51**	*e*PKP	**PKPdf**	**11 11 14.1**	**-0.2**
WMQ				PKPab	**PKPab**	**11 11 59.3**	**+1.3**
WMQ				PP	**PP**	**11 15 43.6**	**+2.3**
WMQ				SS	SS	11 35 55.7	-0.4
WMQ				AMB	AMB		
	comp=Z,420nm,3.9s						
WMQ				LR	LR		
	comp=Z,1µm,16.3s						
WMQ				LR	LR		
	comp=Z,840nm,19.7s						
WMQ				LR	LR		
	comp=Z,2µm,20.7s						
MOY	**Mondy**	**161.25**	**14**	*e*PKIKP	**PKPdf**	**11 11 15.1**	**+0.9**
MOY				pmax	pmax		
	comp=Z,69nm,2.7s						
TAPN	**Taplejung**	**161.43**	**104**	*e*P	**PKPdf**	**11 11 15.1**	**-0.3**
	comp=Z,53nm,1.4s						
TLY	**Talaya**	**161.67**	**9**	PKPdf	**PKPdf**	**11 11 14.4**	**-0.1**
TLY					**PKPab**	**11 11 59.4**	**-0.2**
TLY	**Talaya**	**161.67**	**9**	PKIKP	**PKPdf**	**11 11 14.4**	**-0.1**
TLY						11 11 59.4	
PBKT	**Sadao Pong**	**161.88**	**158**		**PKPdf**	**11 11 16.0**	**+0.3**
PBKT				PKPab	**PKPab**	**11 12 01.6**	**+0.3**
CMAR	**Chiang Mai Arr**	**162.86**	**149**	PKP	**PKPdf**	**11 11 17.0**	**+0.3**
	comp=Z,4.9nm,0.9s,baz=245,slow=2.4,SNR=27						
CMAR				PKPab	**PKPab**	**11 12 04.5**	**-1.1**
	comp=Z,7.6nm,1.1s,baz=228,slow=4.5,SNR=7.0						
ZAK	**Zakamensk**	**162.89**	**10**	*e*PKIKP	**PKPdf**	**11 11 15.6**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.6s						
CHTO	**Chiang Mai**	**163.18**	**149**		**PKPdf**	**11 11 16.8**	**-0.2**
CHTO					**PKPab**	**11 12 06.6**	**-0.4**
CHTO	**Chiang Mai**	**163.18**	**149**	PKIKP	**PKPdf**	**11 11 16.8**	**-0.2**
CHTO						11 12 06.6	
KSRS	**Korea Array**	**163.35**	**289**	PKP	**PKPdf**	**11 11 16.3**	**-0.3**
	comp=Z,4.1nm,1.1s,baz=86,slow=1.4,SNR=11						
LSA	**Lhasa**	**165.12**	**101**		**PKPdf**	**11 11 19.5**	**+0.4**
LSA					**PKPab**	**11 12 15.6**	**-0.5**
LSA	**Lhasa**	**165.12**	**101**	PKIKP	**PKPdf**	**11 11 19.5**	**+0.4**
LSA						11 12 15.6	
QIZ	**Qiongzhong**	**165.38**	**187**	PKP	**PKPdf**	**11 11 17.1**	**-1.8**
QIZ				PP	**PP**	**11 16 02.6**	**+0.4**
QIZ				SS	SS	11 36 39.2	+2.1
QIZ				AMB	AMB		
	comp=Z,330nm,3.8s						
QIZ				LR	LR		
	comp=Z,730nm,19.0s						
QIZ				LR	LR		
	comp=Z,710nm,19.3s						
QIZ				LR	LR		
	comp=Z,1µm,19.1s						
SONM	**Songino Array**	**165.75**	**4**	PKP	**PKPdf**	**11 11 17.4**	**-1.2**
	comp=Z,1.5nm,0.9s,baz=270,slow=1.0,SNR=12						
SONM				PKPab	**PKPab**	**11 12 18.6**	**+0.9**
	comp=Z,4.9nm,0.9s,baz=335,slow=3.1,SNR=10						
SONM				PP	**PP**	**11 16 06.8**	**+2.5**
	comp=Z,2.7nm,1.0s,baz=344,slow=4.9,SNR=6.1						
ULN	**Ulaanbaatar**	**165.75**	**3**		**PKPdf**	**11 11 16.0**	**-2.5**
ULN					**PKPab**	**11 12 17.4**	**-0.4**
SLVN	**Son La**	**167.23**	**162**		**PKPdf**	**11 11 20.8**	**+0.4**
QZH	**Quanzhou**	**167.36**	**230**	PKP	**PKPdf**	**11 11 20.8**	**+0.5**
QZH				SKKS		11 23 04.5	
QZH				LR	LR		
	comp=Z,690nm,20.8s						
QZH				LR	LR		
	comp=Z,520nm,15.6s						
QZH				LR	LR		
	comp=Z,960nm,20.4s						
DL2	**Dalian**	**167.81**	**300**	PKP	**PKPdf**	**11 11 21.9**	**+1.7**
DL2				PP	**PP**	**11 16 18.9**	**+2.8**
DL2				SKS	**SKSdf**	**11 18 22.2**	**-1.0**
DL2				AMB	AMB		
	comp=Z,280nm,9.9s						
DL2				LR	LR		
	comp=Z,700nm,21.6s						
DL2				LR	LR		
	comp=Z,780nm,21.2s						
DL2				LR	LR		
	comp=Z,1µm,21.0s						
KMI	**Kunming**	**170.37**	**150**	PKP	**PKPdf**	**11 11 21.4**	**-1.1**
KMI				pPKP	pPKPdf	11 11 23.6	-4.8
KMI				sPKP		11 11 25.4	
NJ2	**Nanjing**	**170.75**	**263**	*e*PKP	**PKPdf**	**11 11 23.3**	**+1.1**
NJ2				LR	LR		
	comp=Z,1µm,18.4s						
NJ2				LR	LR		
	comp=Z,870nm,18.0s						
NJ2				LR	LR		
	comp=Z,2µm,18.9s						
BJI	**Beijing**	**170.84**	**317**	PKP	**PKPdf**	**11 11 22.1**	**+0.1**
BJI				SS	SS	11 37 37.1	+3.6
BJI				LR	LR		
	comp=Z,630nm,20.4s						
BJI				LR	LR		
	comp=Z,890nm,20.0s						
BJI				LR	LR		
	comp=Z,1µm,21.8s						
GTA	**Gaotai**	**171.23**	**46**	*e*PKP	**PKPdf**	**11 11 22.3**	**-0.1**
GTA				PKPab	**PKPab**	**11 12 43.1**	**+0.7**
GTA				SKKS		11 23 16.9	
GTA				SS	**SS**	**11 37 38.5**	**+0.7**
GTA				LR	LR		
	comp=Z,520nm,23.0s						
GTA				LR	LR		
	comp=Z,770nm,22.3s						
GTA				LR	LR		
	comp=Z,1µm,22.1s						
TIA	**Tai'an**	**172.08**	**292**	PKP	**PKPdf**	**11 11 22.8**	**0.0**
TIA				LR	LR		
	comp=Z,850nm,15.2s						
TIA				LR	LR		
	comp=Z,650nm,26.5s						
TIA				LR	LR		
	comp=Z,980nm,20.6s						
HHC	**Hu-ho-hao-te**	**172.25**	**340**	*e*PKP	**PKPdf**	**11 11 23.5**	**+0.7**
HHC				PP	**PP**	**11 16 36.6**	**-0.7**
HHC	**Hu-ho-hao-te**	**172.25**	**340**	*e*PKP	**PKPdf**	**11 11 24.0**	**+1.1**
HHC				PP	**PP**	**11 16 41.9**	**+4.6**
HHC				SKS	**SKSdf**	**11 18 18.1**	**-7.3**
HHC				SS	**SS**	**11 37 45.9**	**-0.5**
HHC				AMB	AMB		
	comp=Z,1µm,9.1s						
HHC				LR	LR		
	comp=Z,3µm,20.2s						
HHC				LR	LR		
	comp=Z,3µm,21.6s						
HHC				LR	LR		
	comp=Z,4µm,20.6s						
GYA	**Guiyang**	**172.77**	**170**	PKP	**PKPdf**	**11 11 23.4**	**-0.1**
GYA				PKPab	**PKPab**	**11 12 47.4**	**-1.9**
GYA				PP	**PP**	**11 16 38.5**	**-1.2**
GYA				SS	SS	11 37 48.8	-2.3
GYA				AMB	AMB		
	comp=Z,260nm,6.7s						
GYA				LR	LR		
	comp=Z,520nm,16.6s						
GYA				LR	LR		
	comp=Z,630nm,19.8s						
GYA				LR	LR		
	comp=Z,690nm,19.4s						
BTO	**Baotou**	**172.84**	**348**	*e*PKP	**PKPdf**	**11 11 22.8**	**-0.3**
WHN	**Wuhan**	**173.81**	**242**	⇓PKP	**PKPdf**	**11 11 24.3**	**+0.7**
TIY	**Taiyuan**	**174.56**	**320**	*e*PKP	**PKPdf**	**11 11 23.4**	**-0.4**
TIY				PKPab	**pPKPab**	**11 13 01.7**	**-0.9**
TIY				PP	**PP**	**11 16 52.6**	**+3.4**
TIY				AMB	AMB		
	comp=Z,140nm,6.1s						
TIY				LR	LR		
	comp=Z,730nm,18.2s						
TIY				LR	LR		
	comp=Z,1µm,19.5s						
TIY				LR	LR		
	comp=Z,2µm,18.6s						
CD2	**Chengdu**	**175.50**	**126**	PKP	**PKPdf**	**11 11 23.0**	**-1.2**
CD2				SKS	**SKSdf**	**11 18 26.3**	**-0.3**
CD2				SKKS	**SKKSac**	**11 23 38.8**	**-1.1**
CD2				AMB	AMB		
	comp=Z,1µm,7.1s						
CD2				LR	LR		
	comp=Z,1µm,17.1s						
CD2				LR	LR		
	comp=Z,1µm,17.1s						
CD2				LR	LR		
	comp=Z,2µm,21.4s						
LZH	**Lanzhou**	**175.78**	**53**	⇑PKP	**PKPdf**	**11 11 23.9**	**-0.4**
LZH				PKPab	**PKPab**	**11 13 03.6**	**+0.9**
LZH				PP	**PP**	**11 16 57.5**	**+1.9**
LZH				SKKS		11 23 40.8	
LZH				SS	**SS**	**11 38 23.5**	**+1.1**
LZH				AMB	AMB		
	comp=Z,810nm,9.5s						
LZH				LR	LR		
	comp=Z,1µm,17.8s						
LZH				LR	LR		
	comp=Z,2µm,18.0s						
LZH				LR	LR		
	comp=Z,2µm,19.9s						
XAN	**Xi'an**	**179.13**	**299**	PKP	**PKPdf**	**11 11 24.2**	**-0.5**
XAN				PP	**PP**	**11 17 10.3**	**-1.2**
XAN				SS	SS	11 38 50.3	-3.9
XAN				AMB	AMB		
	comp=Z,850nm,9.6s						
XAN				LR	LR		
	comp=Z,1µm,18.1s						
XAN				LR	LR		
	comp=Z,410nm,18.1s						
XAN				LR	LR		
	comp=Z,1µm,21.1s						
XAN	**Xi'an**	**179.13**	**299**		**PKPdf**	**11 11 24.2**	**-0.5**

*GUC **04** 10:56:33.9±0.8, 33°.61S×71°.95W, h33^{km}±4^{km}, ML4.4*
*NEIC **04** 10:56:33.2±2.3, 33°.67S±0°.05×72°.0W±0°.1, h15^{km}±4^{km},*
Error ellipse: s-maj=14.3km s-min=1.9km az=116.0
ISC 04 10:56:31.6±1.8**, 33°.67S**±0°.04×**72°.08W**±0°.06**, h8**^{km}±11^{km}**,**
n51, σ1^{s}.09/57**, mb5.2**/13**, 2C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA01	**Torpederas**	**0.74**	**29**	*e*P	**Pg**	**10 56 46.3**	**+0.4**
VA01				*i* S	**Sb**	**10 56 57.1**	**0.0**
VA01				IAML		10 57 02.1	
	comp=E,11µm,0.1s						
MT02	**Curacav**	**0.89**	**63**	*e*P	**Pg**	**10 56 48.8**	**+0.1**
MT02				*i* S	**Sg**	**10 56 60.0**	**-0.4**
ROC1	**El Roble**	**1.13**	**52**		**Pb**	**10 56 53.1**	**-0.5**
ROCH	**El Roble**	**1.14**	**52**	*e*P	**Pb**	**10 56 53.2**	**-0.5**
ROCH				*i* S	**Sb**	**10 57 08.2**	**-0.5**
ROCH				IAML		10 57 16.9	
	comp=N,17µm,0.3s						
PEL	**Peldehue**	**1.28**	**66**	*e*P	**Pn**	**10 56 55.5**	**-0.4**
PEL				*i* S	**Sb**	**10 57 11.2**	**-1.5**
PEL	**Peldehue**	**1.28**	**66**	Pn	**Pn**	**10 56 55.3**	**-0.6**
MT03	**Universidad Ad**	**1.32**	**83**	*i* S	**Sb**	**10 57 13.0**	**-1.0**
GO05	**Huala**	**1.34**	**175**	Pn	**Pn**	**10 56 55.9**	**-0.8**
FCH	**Farellones**	**1.54**	**78**	*e*P	**Pb**	**10 57 00.5**	**0.0**
FCH				*i* S	**Sb**	**10 57 20.1**	**-0.2**
LMEL	**Las Melosas**	**1.57**	**97**	*e*P	**Pn**	**10 57 00.6**	**+0.5**
LMEL				*i* S	**Sn**	**10 57 20.8**	**+0.1**
CO04	**Los Peladeros**	**1.87**	**30**	*e*P	**Pn**	**10 57 05.4**	**+1.1**
CO04				*i* S	**Sb**	**10 57 29.1**	**-0.9**
CO04				IAML		10 57 37.1	
	comp=N,7µm,0.4s						
GO04	**Tololo Observa**	**3.66**	**18**	Pn	**Pn**	**10 57 31.5**	**+2.8**
LCO	**Las Campanas**	**4.79**	**15**	Pn	**Pn**	**10 57 45.2**	**+0.8**
GO03	**Copiap**	**6.26**	**15**	Pn	**Pn**	**10 58 05.8**	**+1.3**
PLCA	**Paso Flores**	**7.15**	**171**	Pn	**Pn**	**10 58 17.9**	**+1.3**
GO09	**Cerro Castillo**	**17.59**	**181**	Pn	**Pn**	**11 00 37.0**	**0.0**
LPAZ	**La Paz**	**17.67**	**13**	Pn	**Pn**	**11 00 36.1**	**-2.8**
EFI	**East Falkland**	**20.67**	**155**	P	**P**	**11 01 12.8**	**+1.0**
EFI				IAmb	IAmb	11 01 20.5	
	comp=Z,46nm,0.8s						
SAML	**Samuel**	**25.94**	**20**	P	**P**	**11 02 05.0**	**+0.5**
BDFB	**Brasilia**	**28.18**	**56**	P	**P**	**11 02 24.9**	**0.0**
HOPE	**Hope Point**	**32.36**	**140**	P	**P**	**11 03 03.7**	**+2.4**
HOPE				IAmb	IAmb	11 03 06.9	
	comp=Z,43nm,1.1s						
PTGA	**Pitinga**	**34.69**	**22**	P	**P**	**11 03 22.6**	**+0.7**
PTGA				IAmb	IAmb	11 03 23.7	
	comp=Z,21nm,0.8s						
GRGR	**Grenville**	**46.62**	**14**	P	**P**	**11 05 01.5**	**+1.1**
ICMP	**Isla Caja de M**	**51.54**	**7**	P	**P**	**11 05 38.7**	**+0.6**
MLPR	**Magueyes Islan**	**51.58**	**6**	P	**P**	**11 05 38.6**	**+0.3**
CRPR	**Cabo Rojo, PR**	**51.61**	**6**	P	**P**	**11 05 38.6**	**0.0**
CRPR				IAmb	IAmb	11 05 40.0	
	comp=Z,21nm,0.8s						
BANI	**BANI**	**51.80**	**2**	P	**P**	**11 05 41.9**	**+1.7**
SNAA	**Sanae**	**51.90**	**158**	P	**P**	**11 05 39.9**	**-0.5**
TEIG	**Tepich**	**55.78**	**342**	P	**P**	**11 06 08.4**	**-0.7**
TEIG				IAmb	IAmb	11 06 11.6	
	comp=Z,16nm,0.8s						
QSPA	**South Pole Qui**	**56.56**	**180**	P	**P**	**11 06 14.9**	**+0.4**
QSPA				IAmb	IAmb	11 06 18.1	
	comp=Z,22nm,1.1s						
656A	**Willston**	**63.48**	**350**	P	**P**	**11 07 03.1**	**+1.1**
553A	**Crawfordville**	**64.58**	**348**	P	**P**	**11 07 10.9**	**+1.6**
SYO	**Syowa Base**	**66.18**	**159**	⇑*e*P	**P**	**11 07 19.0**	**-0.3**
SYO	**Syowa Base**	**66.18**	**159**	⇑*e*pP	pP	11 07 24.0	+2.2
V48A	**Smith Brothers**	**70.42**	**347**	P	**P**	**11 07 45.3**	**-0.8**
LCAR	**Lake Charles**	**71.64**	**344**	P	**P**	**11 07 52.1**	**-1.4**
LCAR				IAmb	IAmb	11 07 55.5	
	comp=Z,14nm,0.7s						
FCAR	**Ozark Folk Cen**	**71.70**	**343**	P	**P**	**11 07 52.6**	**-1.3**
PBMO	**Poplar Bluff**	**72.15**	**345**	P	**P**	**11 07 57.5**	**+0.9**
PBMO				IAmb	IAmb	11 07 58.3	
	comp=Z,12nm,0.6s						
U40A	**Yellville**	**72.32**	**343**	P	**P**	**11 07 58.5**	**+0.9**
U40A				IAmb	IAmb	11 07 59.9	
	comp=Z,11nm,0.8s						
Q51A	**Peebles**	**73.08**	**351**	P	**P**	**11 08 03.1**	**+1.0**
Q51A				IAmb	IAmb	11 08 03.6	
	comp=Z,13nm,0.8s						
CCM	**Cathedral Cave**	**73.56**	**344**	P	**P**	**11 08 03.9**	**-1.0**
CCM				IAmb	IAmb	11 08 07.2	
	comp=Z,17nm,0.7s						
LIC	**Lamto**	**74.71**	**72**	*e*P	**P**	**11 08 13.1**	**+0.9**
	comp=Z,4.1nm,0.4s						
TIC	**Toumodi**	**74.97**	**71**	*e*P	**P**	**11 08 14.6**	**+0.8**
KIC	**Kosan Boka**	**75.01**	**72**	*e*P	**P**	**11 08 14.7**	**+0.7**
	comp=Z,21nm,0.8s						
L40A	**Anamosa**	**77.39**	**346**	P	**P**	**11 08 27.7**	**+0.9**
L40A				IAmb	IAmb	11 08 29.3	
	comp=Z,22nm,1.1s						
ECSD	**EROS Data Cent**	**80.23**	**342**	P	**P**	**11 08 40.9**	**-1.6**
SPUT	**South Promonto**	**83.35**	**331**	P	**P**	**11 08 57.5**	**-1.7**
BRVK	**Borovoye**	**147.00**	**43**	PKPbc	**PKPbc**	**11 16 13.6**	**-0.8**
RPSI	**Rantau Prapat**	**148.05**	**163**		**PKPbc**	**11 16 18.6**	**+0.2**
HYB	**Hyderabad**	**149.10**	**114**	*i* PKP	**PKiKP**	**11 16 22.0**	**-0.3**
NIL	**Nilore**	**151.22**	**80**		**PKPbc**	**11 16 24.4**	**-1.4**

*MEX **04** 11:03:54.9±0.4, 25°.51N×99°.45W, h5^{km}, MD4.0*
*NEIC **04** 11:03:55.5±1.8, 25°.42N±0°.01×99°.31W±0°.09, h37^{km}±10^{km},*
Error ellipse: s-maj=11.2km s-min=1.9km az=93.0
ISC 04 11:03:54.2±0.8**, 25°.55N**±0°.04×**99°.43W**±0°.05**, h10**^{km}**, n28,**
σ1^{s}.12/37**, Northern Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNIG	**Linares**	**0.65**	**183**		**Pg**	**11 04 06.0**	**-0.7**
LNIG					**Sg**	**11 04 14.8**	**-0.4**
LNIG	**Linares**	**0.65**	**183**	*e*P	**Pg**	**11 04 06.0**	**-0.7**
LNIG				*e*S	**Sg**	**11 04 14.8**	**-0.4**
MNIG	**Monterrey**	**0.78**	**275**	*e*P	**Pg**	**11 04 07.8**	**-1.5**
MNIG				*e*S	**Sg**	**11 04 19.0**	**-0.5**
KVTX	**Kingsville**	**2.42**	**34**		**Pn**	**11 04 33.8**	**0.0**
KVTX					**Sb**	**11 05 07.5**	**-0.2**
KVTX	**Kingsville**	**2.42**	**34**	*e*P	**Pn**	**11 04 32.8**	**-1.0**
KVTX				*e*S	**Sn**	**11 05 01.7**	**-1.8**
833A	**Chaparral WMA,**	**2.77**	**1**		**Pn**	**11 04 39.5**	**+0.9**
833A				Sn	**Sn**	**11 05 12.6**	**+0.5**
735A	**Kenedy**	**3.60**	**23**	Pn	**Pn**	**11 04 51.4**	**+1.4**
735A				Sn	**Sn**	**11 05 33.8**	**+1.3**
ZAIG	**Zacatecas**	**3.98**	**227**		**Pn**	**11 04 56.0**	**+0.4**
JCT	**Junction City**	**4.92**	**356**		**Pn**	**11 05 09.4**	**+1.0**
JCT					**Sn**	**11 06 06.2**	**+0.8**
JCT	**Junction City**	**4.92**	**356**	*e*P	**Pn**	**11 05 07.7**	**-0.7**
JCT				*i* S	**Sn**	**11 06 04.8**	**-0.7**
TX31	**Lajitas Ar. Si**	**5.33**	**316**	Pn	**Pn**	**11 05 15.2**	**+1.3**
TX32	**Lajitas Array**	**5.33**	**316**	Pn	**Pn**	**11 05 15.2**	**+1.2**
HPIG		**5.77**	**285**		**Pn**	**11 05 20.1**	**0.0**
WHTX	**Lake Whitney,**	**6.65**	**15**	Pn	**Pn**	**11 05 31.9**	**-0.1**
ABTX	**Abilene, Hawle**	**7.05**	**359**	Pn	**Pn**	**11 05 37.6**	**+0.1**
237A	**Washetta, Mont**	**7.17**	**25**	Pn	**Pn**	**11 05 37.9**	**-1.3**
MNTX	**Cornudas Mount**	**8.06**	**321**	Pn	**Pn**	**11 05 52.8**	**+1.5**
MSTX	**Muleshoe**	**8.88**	**342**		**Pn**	**11 06 02.7**	**0.0**
X34A	**Smith Ranch, M**	**9.13**	**8**	Pn	**Pn**	**11 06 06.2**	**+0.1**
WMOK	**Wichita Mounta**	**9.18**	**3**	Pn	**Pn**	**11 06 05.8**	**-0.9**
AMTX	**Amarillo**	**9.51**	**349**	Pn	**Pn**	**11 06 10.9**	**-0.4**
121A	**Cookes Peak, D**	**10.09**	**316**	Pn	**Pn**	**11 06 21.3**	**+1.9**
MIAR	**Mount Ida**	**10.30**	**28**	Pn	**Pn**	**11 06 19.4**	**-2.6**
X40A	**Basin Creek Fa**	**10.58**	**31**	Pn	**Pn**	**11 06 25.8**	**-0.1**
U32A	**Winter Ranch,**	**10.80**	**2**	Pn	**Pn**	**11 06 28.7**	**-0.3**
W41B	**Gary Mavity, V**	**11.42**	**31**	Pn	**Pn**	**11 06 35.5**	**-1.9**
WHAR	**Wooly Hollow**	**11.49**	**31**	Pn	**Pn**	**11 06 36.5**	**-1.9**
352A	**Blakely**	**14.05**	**62**	Pn	**Pn**	**11 07 14.7**	**+1.4**

*IDC **04** 11:04:49.8±1.6, 33°.53S×71°.85W, h0^{km}, mb3.7/2,*
mb1 3.9/3, mb1mx3.7/25, mbtmp3.6/3, ML3.3/1, Error
ellipse: s-maj=63.7km s-min=35.5km az=66.0
*SJA **04** 11:04:56.1±1.0, 33°.31S×71°.89W, h10^{km}, ML3.3, MW3.4*
ISC 04 11:04:52.7±1.4**, 33°.25S**±0°.07×**71°.92W**±0°.09**, h10**^{km}**, n13,**
σ1^{s}.50/14**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROC1	**El Roble**	**0.81**	**71**	*i* P	**Pn**	**11 05 11.6**	**+1.2**
ROC1				*e*S	**Sn**	**11 05 24.2**	**+1.6**
PEL	**Peldehue**	**1.04**	**85**	*i* P	**Pn**	**11 05 15.3**	**+1.8**
PEL				*e*S	**Sg**	**11 05 26.2**	**-0.1**
ARCO	**CERRO ARCO**	**2.55**	**82**	*i* P	**Pg**	**11 05 41.5**	**0.0**
ARCO				IAML		11 06 32.4	
	comp=Z,176nm,0.5s						
AAGR	**Agrelo**	**2.60**	**87**	*i* P	**Pg**	**11 05 42.6**	**+0.1**
AAGR				IAML		11 06 23.1	
	comp=Z,154nm,3.2s						
ASAL	**Salagasta**	**2.68**	**77**	*i* P	**Pg**	**11 05 44.8**	**+0.7**
ASAL				IAML		11 06 38.3	
	comp=Z,153nm,0.8s						
EDS3	**Malargue**	**3.27**	**141**	*i* P	**Pb**	**11 05 49.6**	**-1.2**
ACCO	**Cerro Coronel**	**3.60**	**43**	*i* P	**Pb**	**11 05 56.4**	**-0.3**
ACCO				IAML		11 07 05.3	
	comp=Z,66nm,0.8s						
AMOG	**MOGNA**	**3.71**	**53**	*i* P	**Pb**	**11 05 56.1**	**-2.3**
AMOG				IAML		11 07 15.2	
	comp=Z,53nm,0.5s						
ACDV	**Cuesta del Vie**	**3.89**	**39**	*i* P	**Pb**	**11 05 59.7**	**-1.8**
ACDV				IAML		11 07 27.1	
	comp=Z,44nm,1.5s						
ACAN	**Cantantal**	**4.11**	**78**	*i* P	**Pb**	**11 06 02.7**	**-2.4**
ACAN				IAML		11 07 11.2	
	comp=Z,26nm,2.5s						
PLCA	**Paso Flores**	**7.55**	**172**	Pn	Pn	11 06 37.2	-5.6
	comp=Z,0.1nm,0.3s,baz=359,slow=17,SNR=3.1						
TXAR	**Lajitas Array**	**69.13**	**331**	P	**P**	**11 15 59.7**	**+0.5**
	comp=Z,0.7nm,1.1s,baz=154,slow=8.6,SNR=2.9						
TORD	**Torodi Ar. Bea**	**83.86**	**70**	P	**P**	**11 17 22.0**	**-0.9**
	comp=Z,0.6nm,0.9s,baz=253,slow=4.6,SNR=2.3						

IDC 04 11:04:59.1±1.8**, 33°.64S×72°.10W, h0**^{km}**, mb3.6**/2**,**
mb1 3.9/4**, mb1mx3.7**/27**, mbtmp3.6**/4**, ML3.7**/2**, Error**
ellipse: s-maj=62.6km s-min=32.9km az=78.0, Off coast
of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**7.19**	**171**	Pn	Pn	11 06 46.0	+0.4
	0.5nm,0.3s,baz=350,slow=13,SNR=8.9						
LPAZ	**La Paz**	**17.64**	**13**	P	P	11 09 07.8	-0.3
	0.0nm,0.3s,baz=211,slow=12,SNR=2.9						
TXAR	**Lajitas Array**	**69.39**	**331**	P	P	11 16 08.8	-0.1
	0.1nm,0.5s,baz=152,slow=8.2,SNR=3.7						
TORD	**Torodi Ar. Bea**	**84.14**	**70**	P	P	11 17 32.2	-0.2
	0.8nm,0.8s,baz=246,slow=5.1,SNR=3.7						

ROM 04 11:07:45.4±0.1**, 43°.432N**±0°.003×**12°.499E**±0°.005**, $h8^{km}$, ML1.4**/5**, 4C-2D, Error ellipse: s-maj=0.3km s-min=0.2km az=115.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATPI	**Pietralunga -**	0.07	285	⇓P	Pg	11 07 47.8	+0.3
ATPI				S	Sg	11 07 49.2	+0.2
ATPI				AML	AML		
	comp=E,446µm,0.5s						
ATPI				AML	AML		
	comp=N,510µm,1.0s						
ATPI				AML	AML		
	comp=N,509µm,1.0s						
ATPI				AML	AML		
	comp=E,447µm,0.5s						
ATFO	**Monte Foce - G**	0.08	141	⇓P	Pg	11 07 47.9	+0.3
ATFO				S	Sg	11 07 49.6	+0.3
ATVO	**AVT- Monte Val**	0.08	234	⇑P	Pg	11 07 47.9	+0.3
ATVO				S	Sg	11 07 49.6	+0.4
ATVO				AML	AML		
	comp=N,450µm,0.1s						
ATVO				AML	AML		
	comp=E,606µm,0.1s						
ATVO				AML	AML		
	comp=N,450µm,0.1s						
MURB	**Monte Urbino**	0.17	174	P	Pg	11 07 49.6	+0.6
MURB				S	Sg	11 07 52.9	+1.5
FRON	**Frontone**	0.19	62	P	Pg	11 07 49.8	+0.5
FRON				S	Sg	11 07 53.2	+1.3
FRON				AML	AML		
	comp=N,272µm,1.3s						
FRON				AML	AML		
	comp=E,124µm,0.8s						
NARO	**Abbazia di Nar**	0.19	18	⇑P	Pg	11 07 49.8	+0.5
NARO				S	Sg	11 07 53.1	+1.1
NARO				AML	AML		
	comp=E,133µm,1.6s						
NARO				AML	AML		
	comp=N,118µm,0.8s						
ATMI	**Monte Miggiano**	0.19	240	P	Pg	11 07 50.8	+1.3
SSFR	**Montelago di S**	0.21	89	P	Pg	11 07 50.3	+0.7
SSFR				S	Sg	11 07 53.9	+1.3
ATTE	**AVT- Monte Tez**	0.26	204	P	Pg	11 07 51.1	+0.6
ATTE				S	Sg	11 07 55.4	+1.4
PE3	**Peglio**	0.26	360	P	Pb	11 07 52.1	-0.3
PE3				S	Sb	11 07 56.4	-0.8
ATCC	**AVT- Casa Cast**	0.27	157	⇑P	Pg	11 07 51.6	+0.8
ATCC				S	Sb	11 07 56.5	-0.7
MPAG	**Monte Paganucc**	0.27	44	P	Pg	11 07 51.5	+0.6
MPAG				S	Sb	11 07 56.3	-1.2
PARC	**Parchiule**	0.29	319	P	Pg	11 07 51.8	+0.7
PARC				S	Sb	11 07 56.8	-1.1
FSSB	**Fossombrone**	0.33	38	P	Pg	11 07 52.6	+0.7
FSSB				S	Sb	11 07 58.3	-0.8
ASSB	**Assisi San Ben**	0.41	163	P	Pg	11 07 53.9	+0.5
ASSB				S	Sb	11 08 00.6	-0.6
ASSB				AML	AML		
	comp=N,56µm,1.5s						
ASSB				AML	AML		
	comp=E,66µm,1.6s						
EL6	**Elcito**	0.45	103	P	Pg	11 07 54.9	+0.6
EL6				S	Sb	11 08 02.2	-0.4
IMOL	**Imola, Italy**	1.08	330	⇑P	Pn	11 08 06.6	-0.2

SJA 04 11:07:47.2±0.8**, 33°.59S×71°.67W, $h22^{km}$**$\pm 204^{km}$**, ML3.0, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROC1	**El Roble**	0.82	42	*i* P	Pb	11 07 58.6	-4.3
ROC1				*e*S	Sn	11 08 15.6	+0.4
GO05	**Huala**	1.44	189	*i* P	Pn	11 08 01.0	-11
GO05				*e*S	Sn	11 08 22.6	-7.6
ARCO	**CERRO ARCO**	2.41	73	*i* P	Pn	11 08 27.5	+2.0
ARCO				IAML		11 09 09.5	
	comp=Z,86nm,0.5s						
AAGR	**Agrelo**	2.43	79	*i* P	Pb	11 08 28.5	-1.8
AAGR				IAML		11 09 41.4	
	comp=Z,65nm,2.5s						
LAMA	**Las Malvinas**	2.44	124	*i* P	Pn	11 08 23.7	-2.1
ASAL	**Salagasta**	2.58	68	*i* P	Pb	11 08 30.9	-1.9
ASAL				IAML		11 09 15.4	
	comp=Z,71nm,0.9s						
PUMA	**Malargue**	2.65	137	*i* P	Pn	11 08 27.6	-1.0
RTLS	**Leoncito**	2.68	49	*i* P	Pb	11 08 32.4	-2.3
RTLS				IAML		11 09 24.5	
	comp=Z,45nm,0.7s						
RTCV	**Cerro Valdivia**	3.15	58	*i* P	Pn	11 08 38.3	+2.8
RTCV				IAML		11 09 53.9	
	comp=Z,53nm,4.8s						
ACCO	**Cerro Coronel**	3.72	37	*i* P	Pn	11 08 41.5	-2.1
ACCO				IAML		11 09 48.1	
	comp=Z,28nm,0.9s						
AMOG	**MOGNA**	3.77	46	*i* P	Pn	11 08 41.9	-2.2
AMOG				IAML		11 09 52.3	
	comp=Z,31nm,0.4s						
ACDV	**Cuesta del Vie**	4.04	33	*i* P	Pn	11 08 45.2	-2.6
ACDV				IAML		11 10 22.0	
	comp=Z,26nm,2.8s						
AGUA	**GUANDACOL**	4.90	34	*i* P	Pn	11 08 57.7	-2.0
AGUA				IAML		11 10 33.3	
	comp=Z,14nm,2.1s						

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*IDC **04** 11:16:23.2±0.8, 33°.54S×72°.07W, $h0^{km}$, mb3.9/9, mb1 4.1/12, mb1mx3.9/36, mbtmp3.9/12, ML3.7/3, MS4.3/1, Ms1 4.3/1, ms1mx3.6/38, Error ellipse: s-maj=32.2km s-min=18.0km az=85.0*

*NEIC **04** 11:16:25.9±1.5, 33°.73S±0°.05×71°.95W±0°.08, $h19^{km}\pm 3^{km}$, mb4.4/16, Error ellipse: s-maj=11.7km s-min=4.7km az=124.0*

ISC 04 11:16:26.2±0.6**, 33°.65S**±0°.07×**71°.97W**±0°.09**, $h19^{km}$, n53, σ0^{s}.91**/53**, mb4.3**/14**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROC1	**El Roble**	1.04	50		Pb	11 16 44.5	-1.2
ROC1				Sg	Sb	11 16 59.4	+0.4
PEL	**Peldehue**	1.19	65		Pn	11 16 47.6	-0.1
GO05	**Huala**	1.36	179		Pn	11 16 47.2	-3.0
GO04	**Tololo Observa**	3.60	16		Pn	11 17 21.6	+0.3
GO03	**Copiap**	6.21	14	Pn	Pn	11 17 57.0	0.0
PLCA	**Paso Flores**	7.16	171	Pn	Pn	11 18 11.3	+1.4
	0.6nm,0.3s,baz=352,slow=11,SNR=14						
PLCA	**Paso Flores**	7.16	171	Pn	Pn	11 18 07.4	-2.6
GO02	**Mina Guanaco**	8.70	14	Pn	Pn	11 18 30.5	-0.8
PB10	**IPOC Station P**	10.17	7	Pn	Pn	11 18 51.9	+0.7
LVC	**Limon Verde**	11.32	15	Pn	Pn	11 19 07.0	-0.2
PB01	**IPOC Station P**	12.74	11	Pn	Pn	11 19 26.5	0.0
MNMC	**Minye Minye**	14.61	9	Pn	Pn	11 19 53.1	+0.9
CPUP	**Villa Florida**	14.62	64	Pn	Pn	11 19 53.5	+1.5
	0.0nm,0.3s,baz=242,slow=16,SNR=2.1						
CPUP				LR	LR	11 26 43.8	
	comp=Z,1µm,18.5s,baz=202,slow=42						
CPUP	**Villa Florida**	14.62	64		Pn	11 19 53.2	+1.1
LPAZ	**La Paz**	17.63	12	P	Pn	11 20 30.0	-1.4
	0.1nm,0.3s,baz=191,slow=5.2,SNR=8.7						
LPAZ	**La Paz**	17.63	12	P	P	11 20 31.8	-0.5
SIV	**San Ignacio**	20.14	32	P	P	11 20 58.4	-1.0
	1.1nm,0.7s,baz=251,slow=16,SNR=3.1						
SIV	**San Ignacio**	20.14	32	P	P	11 20 58.4	-1.0
PTGA	**Pitinga**	34.63	21	P	P	11 23 13.7	-0.6
	2.7nm,0.7s,baz=177,slow=8.7,SNR=4.5						
PTGA	**Pitinga**	34.63	21	P	P	11 23 14.6	+0.3
PTGA				IAmb	IAmb	11 23 15.0	
	comp=Z,4.0nm,0.8s						
SNAA	**Sanae**	51.89	158	P	P	11 25 33.4	+0.3
	comp=Z,2.5nm,1.1s,baz=279,slow=8.6,SNR=3.0						
SNAA	**Sanae**	51.89	158	P	P	11 25 33.2	+0.2
QSPA	**South Pole Qui**	56.59	180	P	P	11 26 08.7	+1.2
	comp=Z,3.1nm,1.0s,baz=147,slow=4.0,SNR=5.0						
QSPA	**South Pole Qui**	56.59	180	P	P	11 26 09.0	+1.5
TXAR	**Lajitas Array**	69.45	331	P	P	11 27 32.2	-1.0
	comp=Z,1.0nm,0.7s,baz=152,slow=8.4,SNR=12						
TXAR	**Lajitas Array**	69.45	331	P	P	11 27 32.2	-1.0
TX32	**Lajitas Array**	69.46	331	P	P	11 27 34.1	+0.9
WHTX	**Lake Whitney,**	69.57	337	P	P	11 27 33.9	+0.1
CPCT	**Cooper Cave**	69.73	349	P	P	11 27 35.1	+0.4
CPCT				IAmb	IAmb	11 27 43.1	
	comp=Z,4.8nm,1.1s						
SWET	**Sewanee**	69.74	348	P	P	11 27 34.8	0.0
SWET				IAmb	IAmb	11 27 40.1	
	comp=Z,3.6nm,0.9s						
U61A	**Possum Corner**	69.74	356		P	11 27 36.1	+1.5
TKL	**Tuckaleechee C**	69.82	350	P	P	11 27 35.5	+0.2
V48A	**Smith Brothers**	70.41	347	P	P	11 27 39.1	+0.3
WVT	**Waverly**	70.98	346	P	P	11 27 42.6	+0.3
W41B	**Gary Mavity, V**	71.05	343	P	P	11 27 42.9	+0.2
W41B				IAmb	IAmb	11 27 44.0	
	comp=Z,1.7nm,0.7s						
T49A	**Edmonton**	71.52	349	P	P	11 27 45.9	+0.3
LCAR	**Lake Charles**	71.64	344	P	P	11 27 46.5	+0.3
MNTX	**Cornudas Mount**	72.23	330	P	P	11 27 50.2	+0.2
MNTX				IAmb	IAmb	11 27 50.5	
	comp=Z,2.7nm,0.8s						
HHAR	**Hobbs**	72.53	342	P	P	11 27 52.0	+0.3
HHAR				IAmb	IAmb	11 27 52.2	
	comp=Z,2.5nm,0.8s						
MSTX	**Muleshoe**	73.22	334	P	P	11 27 56.1	+0.2
MSTX				IAmb	IAmb	11 27 57.1	
	comp=Z,4.4nm,0.8s						
PDAR	**Pinedale Array**	83.47	333	P	P	11 28 52.0	-0.5
	comp=Z,0.5nm,0.9s,baz=204,slow=2.0,SNR=3.4						
PDAR	**Pinedale Array**	83.47	333	P	P	11 28 52.0	-0.5
NVAR	**Mina Array Bea**	83.63	325	P	P	11 28 53.7	+0.2
	comp=Z,0.6nm,0.7s,baz=164,slow=6.1,SNR=5.8						
NVAR	**Mina Array Bea**	83.63	325	P	P	11 28 53.7	+0.2
TORD	**Torodi Ar. Bea**	84.03	70	P	P	11 28 55.5	-0.3
	comp=Z,1.0nm,0.8s,baz=263,slow=2.9,SNR=5.8						
TORD	**Torodi Ar. Bea**	84.03	70	P	P	11 28 55.5	-0.3
ULM	**Lac du Bonnet**	86.17	345	P	P	11 29 05.0	-0.6
	comp=Z,1.4nm,0.9s,baz=294,slow=1.8,SNR=3.9						
ULM	**Lac du Bonnet**	86.17	345	P	P	11 29 05.0	-0.6
ULM	**Lac du Bonnet**	86.17	345	IAmb	IAmb	11 29 05.8	
	comp=Z,1.4nm,0.8s						
BVAR	**Borovoye Array**	146.98	43	PKPbc	PKPbc	11 36 07.3	+0.3
	comp=Z,0.7nm,0.7s,baz=274,slow=4.3,SNR=4.6						
BVAR	**Borovoye Array**	146.98	43		PKPbc	11 36 07.3	+0.3
ZALV	**Zalesovo Beam**	153.90	32	PKPbc	PKiKP	11 36 24.2	+0.5
	comp=Z,1.2nm,0.6s,baz=318,slow=4.2,SNR=5.3						
ZALV	**Zalesovo Beam**	153.90	32		PKiKP	11 36 24.2	+0.5

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*IDC **04** 11:17:14.1±0.6, 33°.66S×71°.94W, $h0^{km}$, mb4.5/14, mb1 4.5/18, mb1mx4.4/35, mbtmp4.4/18, ML4.1/4, MS4.5/2, Ms1 4.5/2, ms1mx3.8/37, Error ellipse: s-maj=22.8km s-min=14.1km az=85.0*

*NEIC **04** 11:17:16.2±1.2, 33°.65S±0°.04×72°.02W±0°.08, $h11^{km}\pm 3^{km}$, Error ellipse: s-maj=10.6km s-min=1.6km az=118.0*

*GUC **04** 11:17:19.3±0.7, 33°.62S×71°.92W, $h34^{km}\pm 4^{km}$, ML4.4*

ISC 04 11:17:18.5±0.9**, 33°.65S**±0°.04×**71°.97W**±0°.05**, $h28^{km}$**$\pm 5^{km}$**, n161, σ0^{s}.87**/159**, mb4.9**/53**, 1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA01	**Torpederas**	0.68	24	*e*P	Pb	11 17 31.9	+0.1
VA01				*i* S	Sn	11 17 42.3	+0.4
VA01				IAML		11 17 44.3	
	comp=E,32µm,0.6s						
MT02	**Curacav**	0.80	61	*e*P	Pn	11 17 34.1	+0.1
MT02				*i* S	Sn	11 17 45.2	+0.3
MT02				IAML		11 17 47.8	
	comp=N,18µm,0.4s						
ROC1	**El Roble**	1.04	51	Pn	Pn	11 17 37.6	+0.1
ROC1					Sb	11 17 49.8	-1.7
ROCH	**El Roble**	1.05	50	*e*P	Pb	11 17 38.6	+0.4
ROCH				*i* S	Sb	11 17 53.0	+1.4
ROCH				IAML		11 17 55.6	
	comp=N,21µm,0.6s						
PEL	**Peldehue**	1.19	65	⇓*i*P	Pb	11 17 40.7	+0.2
PEL				*e*S	Sb	11 17 56.5	+1.0
PEL				IAML		11 17 59.0	
	comp=E,22µm,0.4s						
PEL	**Peldehue**	1.19	65	Pn	Pb	11 17 40.6	+0.2
PEL					Sb	11 17 56.0	+0.6
MT03	**Universidad Ad**	1.23	83	*e*P	Pb	11 17 41.0	-0.3
MT03				*i* S	Sb	11 17 58.1	+1.4
MT03				IAML		11 18 04.7	
	comp=N,21µm,0.2s						
GO05	**Huala**	1.36	178	Pn	Pn	11 17 41.7	0.0
GO05				Sn	Sn	11 17 59.2	+0.3
FCH	**Farellones**	1.44	78	*i* P	Pb	11 17 45.3	+0.4
FCH				*i* S	Sb	11 18 03.9	+0.9
FCH				IAML		11 18 10.6	
	comp=N,10µm,0.4s						
LMEL	**Las Melosas**	1.49	98	*e*P	Pb	11 17 45.1	-0.5
LMEL				*i* S	Sb	11 18 05.3	+1.1
LMEL				IAML		11 18 10.1	
	comp=N,7µm,0.7s						
CO04	**Los Peladeros**	1.81	28	*e*P	Pb	11 17 50.5	-0.6
CO04				*e*S	Sb	11 18 14.6	+1.2
GO04	**Tololo Observa**	3.60	16	Pn	Pn	11 18 13.6	+0.8
LCO	**Las Campanas**	4.75	14	Pn	Pn	11 18 28.4	0.0
GO03	**Copiap**	6.21	14	Pn	Pn	11 18 48.0	-0.5
PLCA	**Paso Flores**	7.17	171	Pn	Pn	11 19 01.6	+0.1
	comp=N,0.7nm,0.3s,baz=343,slow=12,SNR=4.7						
PLCA				Lg	Lg	11 20 51.5	
	comp=N,0.3nm,0.3s,baz=131,slow=19,SNR=1.7						
PLCA	**Paso Flores**	7.17	171	Pn	Pn	11 19 01.3	-0.2
LVC	**Limon Verde**	11.32	15	Pn	Pn	11 19 58.4	-0.3
	comp=N,0.9nm,0.3s,baz=131,slow=9.3,SNR=3.0						
LVC				Lg	Lg	11 23 02.2	
	comp=N,3.3nm,0.3s,baz=294,slow=19,SNR=5.4						
LVC				LR	LR	11 24 44.1	
	comp=N,2µm,18.7s,baz=182,slow=40						
CPUP	**Villa Florida**	14.63	64	Pn	Pn	11 20 41.0	-2.6
	comp=N,0.2nm,0.3s,baz=257,slow=12,SNR=3.9						
CPUP				Lg	Lg	11 24 51.5	
	comp=N,0.3nm,0.3s,baz=352,slow=13,SNR=3.4						
CPUP	**Villa Florida**	14.63	64		Pn	11 20 41.4	-2.1
LPAZ	**La Paz**	17.63	12	P	Pn	11 21 22.9	+0.1
	comp=N,0.4nm,0.3s,baz=190,slow=7.2,SNR=12						
LPAZ	**La Paz**	17.63	12	P	P	11 21 24.2	+0.6
SIV	**San Ignacio**	20.14	32	P	P	11 21 50.3	-0.3
	comp=N,3.3nm,0.6s,baz=181,slow=5.8,SNR=8.6						
EFI	**East Falkland**	20.66	155	P	P	11 21 55.9	+0.1
EFI				IAmb	IAmb	11 21 59.9	
	comp=Z,65nm,1.2s						
NNA	**Nana**	22.01	347	P	P	11 22 11.2	+0.5
	comp=Z,6.6nm,0.6s,baz=198,slow=15,SNR=2.8						
NNA	**Nana**	22.01	347	P	P	11 22 10.8	0.0
NNA				IAmb	IAmb	11 22 14.2	
	comp=Z,47nm,1.5s						
SPB	**Sao Paulo**	23.71	71	P	P	11 22 28.6	+0.5
SPB				IAmb	IAmb	11 22 29.8	
	comp=Z,27nm,0.9s						
SAML	**Samuel**	25.88	20	P	P	11 22 48.9	+0.9
BDFB	**Brasilia**	28.09	56	P	P	11 23 07.6	-0.4
	comp=Z,3.0nm,0.4s,baz=257,slow=9.6,SNR=4.9						
BDFB	**Brasilia**	28.09	56	P	P	11 23 08.1	0.0
BDFB				IAmb	IAmb	11 23 08.4	
	comp=Z,26nm,1.5s						
PTGA	**Pitinga**	34.63	21	P	P	11 24 05.3	-0.1
	comp=Z,12nm,0.8s,baz=198,slow=9.5,SNR=15						
PTGA	**Pitinga**	34.63	21	P	P	11 24 05.7	+0.3
PTGA				IAmb	IAmb	11 24 06.4	
	comp=Z,12nm,0.8s						
RUSC	**La Rusia**	39.34	358	P	P	11 24 46.9	+1.0
SDV	**Santo Domingo**	42.31	2	P	P	11 25 08.5	-1.7
	comp=Z,4.9nm,0.8s,baz=242,slow=8.0,SNR=3.6						
VNA3	**Neumayer Olymp**	49.67	158	P	P	11 26 08.7	+1.4
VNA1	**Neumayer--Stat**	49.98	157	P	P	11 26 11.0	+1.4
VNA2	**Neumayer--Watz**	50.32	157	P	P	11 26 13.5	+1.2
	baz=284,slow=8.1						
MLPR	**Magueyes Islan**	51.54	6	P	P	11 26 22.0	+0.1
CRPR	**Cabo Rojo, PR**	51.57	6	P	P	11 26 22.6	+0.4
OBIP	**Obispado Ponce**	51.65	7	P	P	11 26 21.7	-1.0
BANI	**BANI**	51.77	2	P	P	11 26 24.8	+1.0
SNAA	**Sanae**	51.89	158	P	P	11 26 25.3	+1.2
SNAA	**Sanae**	51.89	158	P	P	11 26 24.4	+0.2
	comp=Z,16nm,1.1s,baz=278,slow=6.0,SNR=13						
SNAA	**Sanae**	51.89	158	P	P	11 26 25.6	+1.5
QSPA	**South Pole Qui**	56.59	180	P	P	11 26 58.6	0.0
	comp=Z,13nm,1.0s,baz=139,slow=3.1,SNR=13						
QSPA	**South Pole Qui**	56.59	180	P	P	11 26 58.5	0.0
833A	**Chaparral WMA,**	66.89	334	P	P	11 28 09.4	+1.3
Z50A	**Ashland**	67.83	347	P	P	11 28 14.5	+0.6
Z50A				IAmb	IAmb	11 28 14.8	
	comp=Z,12nm,1.0s						
HPIG		68.21	328	P	P	11 28 18.1	+1.4
HPIG				IAmb	IAmb	11 28 19.1	
	comp=Z,8.5nm,1.1s						
143A	**Socs Landing,**	68.48	342	P	P	11 28 19.5	+1.5
JCT	**Junction City**	68.99	334	P	P	11 28 22.4	+1.1
JCT				IAmb	IAmb	11 28 23.3	
	comp=Z,17nm,0.9s						
237A	**Washetta, Mont**	69.06	338	P	P	11 28 22.9	+1.3
X48A	**Hartselle**	69.20	347	P	P	11 28 22.7	+0.2
X48A				IAmb	IAmb	11 28 24.0	
	comp=Z,14nm,0.9s						
TX31	**Lajitas Ar. Si**	69.45	331	P	P	11 28 24.6	+0.3
TX32	**Lajitas Array**	69.45	331	P	P	11 28 23.9	-0.4
TXAR	**Lajitas Array**	69.45	331	P	P	11 28 25.1	+0.9
	comp=Z,2.4nm,0.7s,baz=151,slow=8.6,SNR=19						
WHTX	**Lake Whitney,**	69.57	337	P	P	11 28 25.9	+1.2
WHTX				IAmb	IAmb	11 28 26.6	
	comp=Z,14nm,0.8s						
W50A	**Signal Mountai**	69.62	348	P	P	11 28 25.3	+0.2
W50A				IAmb	IAmb	11 28 26.5	
	comp=Z,15nm,0.9s						
V53A	**Saluda**	69.70	351	P	P	11 28 25.0	-0.6
OXF	**Oxford**	69.75	345	P	P	11 28 26.1	+0.3
V48A	**Smith Brothers**	70.41	347	P	P	11 28 30.4	+0.5
MIAR	**Mount Ida**	70.80	341	P	P	11 28 32.8	+0.5
MIAR				IAmb	IAmb	11 28 40.0	
	comp=Z,10nm,1.2s						
ABTX	**Abilene, Hawle**	70.88	335	P	P	11 28 33.2	+0.4
ABTX				IAmb	IAmb	11 28 34.6	
	comp=Z,15nm,0.9s						
WVT	**Waverly**	70.98	346	P	P	11 28 33.7	+0.4
WHAR	**Wooly Hollow**	71.17	343	P	P	11 28 35.2	+0.7
WHAR				IAmb	IAmb	11 28 35.9	
	comp=Z,13nm,1.1s						
W39A	**Magazine**	71.47	341	P	P	11 28 37.3	+1.1
LCAR	**Lake Charles**	71.64	344	P	P	11 28 37.7	+0.4
T47A	**Sharon Grove**	71.67	347	P	P	11 28 37.7	+0.2
T47A				IAmb	IAmb	11 28 38.4	
	comp=Z,11nm,0.9s						
PBMO	**Poplar Bluff**	72.15	345	P	P	11 28 40.7	+0.4
PBMO				IAmb	IAmb	11 28 41.4	
	comp=Z,9.0nm,0.7s						
MNTX	**Cornudas Mount**	72.23	330	P	P	11 28 41.6	+0.6
U40A	**Yellville**	72.32	342	P	P	11 28 41.7	+0.3
U40A				IAmb	IAmb	11 28 42.6	
	comp=Z,10nm,0.8s						
HHAR	**Hobbs**	72.53	342	P	P	11 28 43.0	+0.4
HHAR				IAmb	IAmb	11 28 43.8	
	comp=Z,8.7nm,0.9s						
TUL1	**Leonard**	72.69	340	P	P	11 28 43.3	-0.4
TUL1				IAmb	IAmb	11 28 44.7	
	comp=Z,11nm,0.9s						
MGMO	**Mountain Grove**	72.93	343	P	P	11 28 43.5	-1.6
MGMO				IAmb	IAmb	11 28 46.3	
	comp=Z,9.3nm,1.0s						
MSTX	**Muleshoe**	73.21	334	P	P	11 28 48.3	+1.4
MSTX				IAmb	IAmb	11 28 48.4	
	comp=Z,14nm,0.9s						
FVM	**French Village**	73.30	345	IAmb	IAmb	11 28 48.4	
	comp=Z,21nm,1.2s						
CCM	**Cathedral Cave**	73.55	344	P	P	11 28 49.1	+0.5
AMTX	**Amarillo**	73.64	335	P	P	11 28 49.6	+0.2
AMTX				IAmb	IAmb	11 28 51.8	
	comp=Z,19nm,1.1s						
S39A	**Bolivar**	73.70	342	P	P	11 28 49.7	+0.1
S39A				IAmb	IAmb	11 28 50.8	
	comp=Z,19nm,1.4s						
LIC	**Lamto**	74.61	72	*e*P	P	11 28 55.8	+0.4
	comp=Z,9.4nm,0.7s						
TIC	**Toumodi**	74.87	71	*e*P	P	11 28 57.4	+0.4
KIC	**Kosan Boka**	74.92	72	*e*P	P	11 28 57.7	+0.5
	comp=Z,18nm,0.8s						
DBIC	**Dimbokro**	75.02	71	P	P	11 28 58.5	+0.7
	comp=Z,6.8nm,0.8s,baz=225,slow=6.3,SNR=8.1						
DBIC	**Dimbokro**	75.02	71	P	P	11 28 58.2	+0.5
DBIC				IAmb	IAmb	11 28 59.4	
	comp=Z,8.3nm,0.9s						
ANMO	**Albuquerque**	75.50	331	P	P	11 29 00.2	-0.1
214A	**Organ Pipe Nat**	75.76	325	IAmb	IAmb	11 29 04.5	
	comp=Z,7.5nm,1.0s						
CBKS	**Cedar Bluff**	76.56	338	IAmb	IAmb	11 29 08.0	
	comp=Z,14nm,1.0s						
T25A	**Trinidad**	76.64	334	IAmb	IAmb	11 29 09.5	
	comp=Z,16nm,1.0s						
X16A	**Lo Mia Camp, P**	77.17	327	IAmb	IAmb	11 29 12.6	
	comp=Z,8.5nm,1.1s						
Y14A	**Wickenburg**	77.48	326	P	P	11 29 11.3	-0.1
KSCO	**Kaye Shedlock'**	77.68	336	IAmb	IAmb	11 29 15.0	
	comp=Z,7.7nm,0.9s						
WUAZ	**Wupatki**	78.06	328	IAmb	IAmb	11 29 17.6	
	comp=Z,9.1nm,1.1s						
I42A	**Draeger Farm,**	78.70	348	P	P	11 29 18.0	+0.2
I42A				IAmb	IAmb	11 29 19.4	
	comp=Z,15nm,1.2s						
XPFO	**Pion Flat**	78.88	323	P	P	11 29 18.6	-0.6
PFO	**Pinyon Flats O**	78.88	323	P	P	11 29 19.2	0.0
ISCO	**Idaho Springs**	79.43	334	P	P	11 29 23.0	+0.6
BOSA	**Boshof**	80.19	118	P	P	11 29 25.3	-1.4
	comp=Z,2.5nm,0.9s,baz=225,slow=4.3,SNR=2.1						
ECSD	**EROS Data Cent**	80.23	342	P	P	11 29 26.7	+0.6
ECSD				IAmb	IAmb	11 29 27.5	
	comp=Z,11nm,0.9s						
E46A	**Sault Ste Mari**	80.42	351	P	P	11 29 27.4	+0.3
E46A				IAmb	IAmb	11 29 28.8	
	comp=Z,21nm,1.2s						
SZCU	**Shurtz Canyon**	80.55	328	P	P	11 29 28.2	-0.1
SHPR	**Sheep Range**	80.59	326	P	P	11 29 28.5	-0.1
CCUT	**Cedar City**	80.63	328	P	P	11 29 29.9	+1.1
E43A	**Lone Tree Farm**	80.80	350	IAmb	IAmb	11 29 30.5	
	comp=Z,8.7nm,1.0s						
Q16A	**Castle Valley**	80.83	330	P	P	11 29 29.7	-0.1
P17A	**Butcher Ranch,**	81.13	331	P	P	11 29 30.2	-1.1
RDMU	**Red Mountain**	81.59	332	P	P	11 29 34.5	+0.7
D41A	**Chassel**	81.71	349	IAmb	IAmb	11 29 35.5	
	comp=Z,14nm,0.8s						
DUG	**Dugway, Tooele**	82.59	330	IAmb	IAmb	11 29 42.2	
	comp=Z,9.6nm,1.4s						
PD31	**Pinedale Array**	83.47	333	P	P	11 29 44.4	+0.9
PDAR	**Pinedale Array**	83.47	333	P	P	11 29 43.8	+0.2
	comp=Z,1.9nm,1.0s,baz=142,slow=5.1,SNR=8.4						
NVAR	**Mina Array Bea**	83.62	325	P	P	11 29 44.6	+0.2
	comp=Z,1.6nm,0.9s,baz=148,slow=6.1,SNR=10.0						
KVN	**Kaiserville**	84.02	326	P	P	11 29 45.5	-0.9
KVN				IAmb	IAmb	11 29 48.7	
	comp=Z,9.7nm,1.3s						
TOA0	**Torodi Ar. Sit**	84.04	70	P	P	11 29 45.9	-1.0
TOA0				IAmb	IAmb	11 29 48.4	
	comp=Z,8.1nm,0.8s						
TORD	**Torodi Ar. Bea**	84.04	70	P	P	11 29 47.2	+0.4
	comp=Z,6.8nm,0.8s,baz=261,slow=4.5,SNR=24						
ELK	**Elko**	84.09	328	P	P	11 29 45.5	-1.3
YERR	**Yerington**	84.51	325	P	P	11 29 48.2	-0.7
FLWY	**Flagg Ranch**	85.03	333	P	P	11 29 52.6	+1.2
FLWY				IAmb	IAmb	11 29 53.5	
	comp=Z,5.8nm,1.0s						
RLMT	**Red Lodge**	85.39	335	P	P	11 29 53.7	+0.5
RLMT				IAmb	IAmb	11 29 54.7	
	comp=Z,10nm,1.5s						
YNE	**Yellowstone No**	85.56	334	P	P	11 29 54.0	-0.1
YHH	**Holmes Hill**	85.68	333	P	P	11 29 54.7	-0.1
LAO	**LASA Array**	85.72	337	P	P	11 29 55.2	+0.6
LAO				IAmb	IAmb	11 30 04.4	
	comp=Z,4.7nm,1.0s						
RAO	**Raoul Island**	86.11	237	LR	LR	11 59 56.5	
	comp=Z,306nm,19.7s,baz=120,slow=30						
ULM	**Lac du Bonnet**	86.17	345	P	P	11 29 56.3	-0.3
	comp=Z,4.3nm,0.9s,baz=147,slow=2.8,SNR=7.5						
ULM	**Lac du Bonnet**	86.17	345	IAmb	IAmb	11 29 58.0	
	comp=Z,5.2nm,1.0s						
DGMT	**Dagmar**	86.67	339	P	P	11 30 00.4	+1.2
DLMT	**Dillon**	86.83	333	IAmb	IAmb	11 30 03.2	
	comp=Z,13nm,1.5s						
LRM	**Limekiln Ridge**	87.16	333	P	P	11 30 02.5	+0.6
J08A	**Circle Bar Ran**	87.62	328	P	P	11 30 04.7	+0.7
ASAR	**Alice Springs**	117.91	207	PKP	PKPdf	11 36 02.1	-0.9
	comp=Z,0.5nm,0.7s,baz=141,slow=2.0,SNR=5.9						
MLR	**Muntele Rosu**	118.22	52	PKP	PKPdf	11 36 01.6	-1.2
	comp=Z,1.4nm,0.6s,baz=210,slow=9.0,SNR=3.2						
MLR	**Muntele Rosu**	118.22	52		PKiKP	11 36 03.2	+0.3
WRA	**Warramunga Arr**	121.10	209	PKP	PKPdf	11 36 08.3	-0.8
	comp=Z,1.6nm,0.9s,baz=152,slow=1.9,SNR=3.9						
H11S2	**WAKE ISLAND Hy**	125.83	269	T	T	13 55 12.9	
	baz=118,slow=75,SNR=6.3						
H11S1	**WAKE ISLAND Hy**	125.84	269	T	T	13 55 11.5	
	baz=118,slow=75,SNR=9.5						
H11S3	**WAKE ISLAND Hy**	125.85	269	T	T	13 55 17.9	
	baz=118,slow=75,SNR=5.0						
H11N3	**WAKE ISLAND Hy**	126.23	271	T	T	13 55 29.0	
H11N1	**WAKE ISLAND Hy**	126.25	271	T	T	13 55 39.9	
H11N2	**WAKE ISLAND Hy**	126.25	271	T	T	13 55 35.6	

	SNR=4.0						
KLMR	Klimovskoe	129.09	36	ePKPdf	PKPdf	11 36 21.8	-1.2
KLMR				AMP		11 36 25.9	
	comp=Z,15nm,1.4s						
PETK	Petropavlovsk-	139.95	314	PKP	PKPdf	11 36 44.0	+0.5
	comp=Z,1.1nm,0.7s,baz=213,slow=0.4,SNR=4.8						
AKTO	Aktyubinsk	140.07	50	PKP	PKPdf	11 36 44.5	+0.7
	comp=Z,1.0nm,0.8s,baz=284,slow=3.5,SNR=3.7						
TIXI	Tiksi	140.35	350	PKP	PKPdf	11 36 43.4	-0.3
	comp=Z,1.3nm,0.8s,baz=346,slow=4.5,SNR=3.6						
BRVK	Borovoye	146.91	43		PKPab	11 36 59.5	+0.3
BVAR	Borovoye Array	146.98	43	PKPbc	PKPdf	11 36 56.9	+0.9
	comp=Z,3.3nm,0.8s,baz=271,slow=2.2,SNR=13						
RPSI	Rantau Prapat	148.05	163		PKPbc	11 37 01.1	-0.9
GAR	Garm	149.30	69	PKPbc	PKiKP	11 37 05.8	-0.1
NIL	Nilore	151.13	80		PKiKP	11 37 10.0	+0.3
ARSB	Arslanbob	151.30	64		PKiKP	11 37 11.0	+1.1
AAK	Ala-Archa	152.29	61	PKPbc	PKPbc	11 37 11.4	-0.3
	comp=Z,5.3nm,0.9s,baz=187,slow=1.9,SNR=11						
AAK	Ala-Archa	152.29	61		PKPbc	11 37 11.8	+0.2
KURBB	Kurchatov Arra	152.57	43	PKPbc	PKiKP	11 37 12.7	+0.6
	comp=Z,3.2nm,0.9s,baz=304,slow=3.1,SNR=8.6						
KURK	Kurchatov	152.58	43	PKPdf	PKPdf	11 37 03.6	-1.2
KURK				PKPbc	pPKPdf	11 37 13.0	-1.1
KURK					sPKPbc	11 37 23.6	-0.6
KSH	Kashi	153.69	68	PKPbc	PKPdf	11 37 06.9	-0.1
KSH				SKS	SKSdf	11 44 08.1	-3.9
KSH				LR	LR		
	comp=Z,220nm,10.2s						
KSH				LR	LR		
	comp=Z,250nm,12.0s						
ZALV	Zalesovo Beam	153.90	32	PKP	PKPdf	11 37 07.0	+0.4
	comp=Z,0.8nm,0.5s,baz=270,slow=1.5,SNR=4.1						
ZALV				PKPbc	PKiKP	11 37 14.8	+0.1
	comp=Z,4.7nm,0.8s,baz=295,slow=3.6,SNR=10						
MKAR	Makanchi Array	156.49	48	PKP	PKPdf	11 37 10.3	-0.1
	comp=Z,0.9nm,0.8s,baz=298,slow=2.6,SNR=4.5						
MKAR				PKPab	PKPab	11 37 39.2	0.0
	comp=Z,1.3nm,0.7s,baz=304,slow=4.1,SNR=6.3						
WMQ	Urumqi	161.21	51	ePKP	PKPdf	11 37 17.2	+1.0
CMAR	Chiang Mai Arr	162.83	149	PKP	PKPdf	11 37 18.9	+0.5
	comp=Z,0.5nm,0.4s,baz=250,slow=2.3,SNR=6.0						
ULN	Ulaanbaatar	165.78	3		PKPab	11 38 18.4	-1.3
NJ2	Nanjing	170.75	263	ePKP	PKPdf	11 37 23.8	-0.3
HHC	Hu-ho-hao-te	172.28	340	ePKP	PKPdf	11 37 26.5	+1.8
CD2	Chengdu	175.47	126	PKP	PKPdf	11 37 25.6	-0.5
LZH	Lanzhou	175.79	54	ePKP	PKPdf	11 37 26.5	+0.4
LZH				pPKP	pPKPdf	11 37 30.1	-5.3
LZH				sPKP		11 37 31.3	
LZH				PKPab	PKPab	11 39 06.7	+2.0
LZH				LR	LR		
	comp=Z,160nm,18.0s						
LZH				LR	LR		
	comp=Z,160nm,18.1s						
LZH				LR	LR		
	comp=Z,210nm,20.0s						

IDC ***04*** *11:19:38.4±1.5, 59.°89N×153.°05W, h83^{km}±25^{km}, mb3.6/8, mb1 3.8/13, mb1mx3.4/61, mbtmp4.0/13, Error ellipse: s-maj=28.7km s-min=10.1km az=112.0*

NEIC ***04*** *11:19:40.4±1.3, 59.°86N±0.°03×152.°89W±0.°03, h108^{km}±4^{km}, Error ellipse: s-maj=4.8km s-min=1.6km az=196.0*

AEIC ***04*** *11:19:41.8±1.4, 59.°86N±0.°03×152.°88W±0.°06, h104^{km}±3^{km}, ML3.5/140, mb3.9/6(NEIC), Error ellipse: s-maj=5.0km s-min=3.9km az=148.0*

ISC 04 11:19:40.8±0.6, **59.°85N**±0.°04×**152.°89W**±0.°04, **h109**^{km}±5^{km}, **n147**, σ**0^{s}.95**/165, **mb3.9**/10, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILS	Iliamna Low So	0.14	321		Pn	11 19 55.7	-0.4
IVE	Iliamna Volcan	0.18	340		Pn	11 19 55.8	-0.4
AU22	Augustine Moun	0.54	206		Pn	11 19 57.4	-0.3
AU22					Sn	11 20 10.1	-0.4
AUL	Augustine Lava	0.54	211		Pn	11 19 57.6	-0.2
AUL					Sn	11 20 10.2	-0.5
AUP	Augustine Pinn	0.56	209		Pn	11 19 57.8	-0.2
AUH	Augustine H	0.56	210		Pn	11 19 58.0	-0.1
AUQ	Augustine Qik'	0.56	208		Pn	11 19 57.8	-0.3
AUQ					Sn	11 20 10.3	-0.7
AUW	Augustine West	0.56	212		Pn	11 19 57.8	-0.2
RED	Redoubt Volcan	0.57	6		Pn	11 19 58.0	-0.2
RED					Sn	11 20 10.7	-0.6
RSO	Redoubt South	0.62	6		Pn	11 19 58.5	-0.1
RSO				Sn	Sn	11 20 09.9	-2.2
RDWB	Redoubt West	0.64	2		Pn	11 19 58.5	-0.3
RDWB					Sn	11 20 11.5	-0.8
HOM	Homer	0.66	106		Pn	11 19 58.7	0.0
HOM				Sn	Sn	11 20 12.7	+0.4
RDJH	Redoubt Jeurge	0.75	3		Pn	11 19 59.5	-0.1
RDJH					Sn	11 20 13.3	-0.5
DFR	Drift River	0.75	8		Pn	11 19 59.5	-0.1
DFR					Sn	11 20 13.2	-0.6
CNPM	China Poot	0.90	110		Pn	11 20 00.6	-0.3
CNPM				Sn	Sn	11 20 15.2	-0.9
BRLK	Bradley Lake	1.02	94		Pn	11 20 01.6	-0.5
BRLK				Sn	Sn	11 20 17.4	-0.8
BRSE	Bradley Lake S	1.09	95		Pn	11 20 02.4	-0.5
BRSE					Sn	11 20 18.7	-0.9
CAPN	Captain Cook N	1.26	42		Pn	11 20 06.5	+1.8
SPCR	Spurr Chakacha	1.40	14		Pn	11 20 06.5	+0.1
SPBG	Spurr Blockage	1.44	10		Pn	11 20 07.2	+0.3
SPBG					Sn	11 20 26.5	-0.2
SLKM	Skilak Lake	1.49	63		Pn	11 20 06.7	-0.7
KAHG	Katmai Hook Gl	1.60	213		Pn	11 20 08.7	-0.1
KAHC	Katmai Hardscr	1.62	223		Pn	11 20 08.8	-0.3
KAHC					Sn	11 20 29.8	-0.8
STLK	Strandline Lak	1.73	17		Pn	11 20 10.7	+0.2
SEW	Seward	1.75	80		Pn	11 20 10.1	-0.4
SEW				Sn	Sn	11 20 32.0	-1.1
SVW2	Sparrevohn	1.83	314		Pn	11 20 11.4	-0.2
SVW2				Sn	Sn	11 20 34.9	-0.1
SUA	Susitna One	1.93	32	Pn	Pn	11 20 13.4	+0.4
RC01	Rabbit Creek A	2.00	50		Pn	11 20 13.4	-0.2
KELA	Mount Kelaz	2.04	227		Pn	11 20 14.0	-0.2
KDAK	Kodiak Island	2.08	175	P	Pn	11 20 13.0	-1.7
	61nm,0.3s,baz=25,slow=9.5,SNR=716						
KDAK				S	Sn	11 20 38.0	-2.6
	77nm,0.3s,baz=309,slow=22,SNR=29						
SKT	Skwentna	2.24	17		Pn	11 20 16.7	0.0
PWL	Port Wells	2.48	64		Pn	11 20 18.8	-1.1
PMR	Palmer	2.54	45		Pn	11 20 19.7	-0.9
OHAK	Old Harbor	2.64	185		Pn	11 20 20.2	-1.8
KNK	Knik Glacier	2.69	52		Pn	11 20 21.7	-0.9
GHO	Glory Hole Cre	2.74	44		Pn	11 20 22.3	-1.0
PLK2	Peulik 2	2.75	222		Pn	11 20 23.5	+0.1
PLK3	Peulik 3	2.79	221		Pn	11 20 24.1	+0.1
PLK1	Peulik 1	2.82	225		Pn	11 20 24.3	0.0
SML	Sawmill	2.97	47		Pn	11 20 25.4	-0.9
GLI	Glacier Island	3.06	68		Pn	11 20 26.4	-1.1
PPLA	Purkeypile	3.08	6		Pn	11 20 28.6	+0.8
HIN	Hinchinbrook I	3.24	78		Pn	11 20 29.0	-0.9
FID	Port Fidalgo	3.32	71		Pn	11 20 28.9	-2.1
JPK	Jack Peak	3.34	66		Pn	11 20 30.0	-1.3
MID	Middleton Isla	3.35	94		Pn	11 20 30.5	-0.9
SII	Sitkinak Islan	3.37	192		Pn	11 20 29.8	-1.9
SCM	Sheep Creek Mo	3.37	51		Pn	11 20 30.9	-0.8
TT01	Tatalina	3.42	335		Pn	11 20 32.0	-0.2
TTA	Tatalina	3.44	335		Pn	11 20 32.1	-0.4
HUR	Hurricane	3.51	25		Pn	11 20 33.8	+0.4
EYAK	Cordova Ski Ar	3.63	76		Pn	11 20 33.7	-1.4
WAT1	Susitna Watana	3.65	33		Pn	11 20 34.8	-0.6
WAT6	Susitna Watana	3.70	40		Pn	11 20 35.4	-0.8
WAT2	Susitna Watana	3.75	32		Pn	11 20 36.0	-0.7
TRF	Thorofare Moun	3.82	18		Pn	11 20 37.7	-0.1
KTH	Kantishna Hill	3.83	13		Pn	11 20 37.4	-0.4
RND	Reindeer	4.06	27		Pn	11 20 40.7	-0.1
GOAT	Goat Mountain	4.14	76		Pn	11 20 40.6	-1.4
RAGM	Ragged Mountai	4.15	79	Pn	Pn	11 20 41.5	-0.5
DHY	Denali Highway	4.18	37		Pn	11 20 42.1	-0.5
PS11	TAPS Pump St11	4.25	55		Pn	11 20 43.0	-0.4
CHIR	Chirikof Islan	4.29	201		Pn	11 20 41.9	-2.1
MCK	McKinley	4.33	24		Pn	11 20 44.5	+0.1
BPAW	Bear Paw Mtn.	4.36	11		Pn	11 20 43.8	-1.1
CHGN	Chignik	4.61	222		Pn	11 20 47.8	-0.4
BWN	Browne	4.63	19		Pn	11 20 48.7	+0.2
PAX	Paxson	4.74	46		Pn	11 20 50.0	-0.1
GLB	Gilahina Butte	4.75	66		Pn	11 20 49.1	-1.0
VRDI	Verde Repeater	4.86	69		Pn	11 20 50.9	-0.9
CRQM	Cirque	4.94	75		Pn	11 20 52.0	-0.8
NEA	Nenana	5.07	19		Pn	11 20 53.7	-0.6
TGL	Tana Glacier	5.09	75		Pn	11 20 54.4	-0.3
MCARA	McCarthy VSAT	5.10	68		Pn	11 20 54.1	-0.7
WRH	Wood River Hil	5.16	24		Pn	11 20 54.9	-0.7
MLY	Manley	5.30	10		Pn	11 20 56.7	-0.8
PTPK	Patty Peak	5.32	71		Pn	11 20 57.4	-0.6
KIAG	Kiagna River	5.33	74		Pn	11 20 57.6	-0.6
BALM	Baldy	5.36	73		Pn	11 20 57.6	-0.8
HDA	Harding Lake	5.36	29		Pn	11 20 57.7	-0.6
CCB	Clear Creek Bu	5.37	24		Pn	11 20 57.7	-0.7
MENT	Mentasta	5.39	51		Pn	11 20 57.2	-1.5
RIDG	Independent Ri	5.46	41		Pn	11 20 59.3	-0.4
PS08	TAPS Pump Stn8	5.50	28		Pn	11 20 59.6	-0.5
TCOL	CIGO, UAF Yank	5.56	23		Pn	11 21 00.5	-0.4
COLA	College	5.56	23		Pn	11 21 00.0	-0.9
MDM	Murphy Dome	5.57	21		Pn	11 21 00.5	-0.6
GRNC	Granite Creek	5.61	76		Pn	11 21 01.7	-0.2
DOT	Dot Lake	5.67	44	Pn	Pn	11 21 02.5	0.0
IL31		5.68	27		Pn	11 21 01.6	-1.0
ILAR	Eielson Array	5.68	27	P	Pn	11 21 01.6	-1.0
	4.5nm,0.3s,baz=224,slow=13,SNR=184						
ILAR				S	Sn	11 22 02.3	-4.0
	1.2nm,0.3s,baz=212,slow=17,SNR=5.9						
BARN	Barnard Glacie	5.69	73		Pn	11 21 03.4	+0.5
CTGM	Chitina Glacie	5.84	74		Pn	11 21 05.3	+0.4
PS07	TAPS Pump Stn7	5.88	19		Pn	11 21 04.6	-0.7
SCRK	Sand Creek	5.90	42		Pn	11 21 04.7	-1.0
SDPT	Sand Point	6.08	225		Pn	11 21 07.8	-0.3
IM03		6.17	357		Pn	11 21 09.4	+0.2
PS06	TAPS Pump Stn6	6.20	12		Pn	11 21 09.4	-0.2
YUK2	White River	6.21	67		Pn	11 21 10.0	+0.2
CNBA	Chernabura Isl	6.21	219		Pn	11 21 08.1	-1.7
BC03		6.22	54		Pn	11 21 09.6	-0.4
PCA	Pinnacle	6.35	82	Pn	Pn	11 21 11.6	-0.2
BVCY	Beaver Creek	6.37	61		Pn	11 21 12.7	+0.7
YUK3	Moose Creek	6.38	67		Pn	11 21 12.9	+0.6
PRP	Porcupine Dome	6.62	28		Pn	11 21 14.5	-1.0
PNL	Peninsula	6.82	86		Pn	11 21 17.5	-0.6
DT1	Dutton Round H	6.94	231		Pn	11 21 19.3	-0.5
PS05	TAPS Pump Stn5	7.06	7		Pn	11 21 21.4	0.0
YUK4	Talbot Arm	7.17	72		Pn	11 21 23.4	+0.3
EGAK	Eagle	7.36	43		Pn	11 21 24.3	-1.1
YUK7	Dusty Glacier	7.39	78		Pn	11 21 26.3	+0.4
ANM	Nome	7.50	314	Pn	Pn	11 21 27.5	+0.1
COLD	Coldfoot	7.50	8		Pn	11 21 27.9	+0.5
DHAK	Deception Hill	7.52	89		Pn	11 21 28.6	+1.1
YUK5	Granite Creek	7.54	74		Pn	11 21 28.2	+0.3
FYU	Fort Yukon	7.57	24		Pn	11 21 27.5	-0.7
FALS	False Pass	7.58	233		Pn	11 21 28.4	0.0
DAWY	Dawson	7.63	51		Pn	11 21 29.8	+0.6
HYT	Haines Junctio	7.70	76		Pn	11 21 31.4	+1.3
BM03	Burnt Mountain	8.44	22		Pn	11 21 38.2	-1.8
SKAG	Skagway	8.90	85		Pn	11 21 47.8	+1.6
TOLK	Toolik Lake Re	8.94	8		Pn	11 21 46.9	+0.1
WHY	Whitehorse	8.99	77		Pn	11 21 48.7	+1.1
RDOG	Red Dog Mine	9.32	336	Pn	Pn	11 21 51.7	-0.2
EPYK	Eagle Plains	9.79	41	Pn	Pn	11 21 56.6	-1.8
WRAK	Wrangell Islan	11.38	99	Pn	Pn	11 22 19.9	+0.2
DLBC	Dease Lake	11.81	87	P	Pn	11 22 26.6	+1.0
	2.1nm,0.3s,baz=280,slow=7.7,SNR=32						
DLBC	Dease Lake	11.81	87		Pn	11 22 27.1	+1.5
INK	Inuvik	11.93	37	P	Pn	11 22 26.1	-0.8
	0.2nm,0.3s,baz=243,slow=20,SNR=9.2						
INK	Inuvik	11.93	37	Pn	Pn	11 22 27.4	+0.5
MOBC	Moresby Island	13.33	111	Pn	Pn	11 22 47.2	+1.8
ATKA	Atka Island	14.11	247		P	11 22 59.0	-0.6
C36M	Paulatuk	15.42	40		Pn	11 23 08.7	-3.2
C36M				IAmb	IAmb	11 23 10.5	
	comp=Z,2.2nm,0.8s						
ADK	Adak	15.48	250	Pn	P	11 23 13.9	-1.0
ADK				IAmb	IAmb	11 23 18.5	
	comp=Z,29nm,1.1s						
YKA	Yellowknife Ar	18.46	65	P	Pn	11 23 48.4	-0.7
	comp=Z,0.3nm,0.3s,baz=277,slow=9.6,SNR=24						
RES	Resolute Bay	25.40	32	P	P	11 24 59.0	+1.5
SEY	Seymchan	25.71	301	P	P	11 25 00.6	+0.2
	comp=Z,0.6nm,0.4s,baz=91,slow=14,SNR=2.3						
PETK	Petropavlovsk-	27.54	278	P	P	11 25 15.8	-1.0
	comp=Z,2.1nm,0.8s,baz=74,slow=13,SNR=11						
FCC	Fort Churchill	29.19	66	P	P	11 25 33.4	+2.0
FCC				IAmb	IAmb	11 25 37.7	
	comp=Z,2.3nm,1.0s						
P48A	Milroy	45.88	85	P	P	11 27 53.6	+1.8
KSRS	Korea Array	53.27	283	P	P	11 28 48.4	+0.5
	comp=Z,1.1nm,0.8s,baz=39,slow=7.9,SNR=3.9						
SONM	Songino Array	54.92	306	P	P	11 28 59.9	0.0
	comp=Z,1.0nm,0.7s,baz=32,slow=6.1,SNR=7.5						
ZALV	Zalesovo Beam	57.53	324	P	P	11 29 17.8	-0.4
	comp=Z,1.7nm,0.5s,baz=28,slow=7.0,SNR=7.4						
KURK	Kurchatov	62.18	326	P	P	11 29 50.2	+0.2
KURK				IAmb	IAmb	11 29 52.8	
	comp=Z,1.6nm,1.1s						
BVAR	Borovoye Array	62.23	332	P	P	11 29 49.8	-0.5
	comp=Z,0.9nm,0.6s,baz=35,slow=5.6,SNR=6.9						
KURBB	Kurchatov Arra	62.29	326	P	P	11 29 50.2	-0.6
	comp=Z,0.7nm,0.4s,baz=28,slow=8.0,SNR=5.5						
MKAR	Makanchi Array	64.58	321	P	P	11 30 05.2	-0.8
	comp=Z,0.6nm,0.5s,baz=42,slow=7.1,SNR=5.0						

IDC 04 11:21:37.7±1.7, **33.°46S**×**71.°50W**, **h0**^{km}, **mb3.5**/2, **mb1 3.8**/3, **mb1mx3.6**/30, **mbtmp3.5**/3, **ML3.6**/1, **Error ellipse: s-maj=64.3km s-min=37.6km az=72.0, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLCA	Paso Flores	7.30	174	Pn	Pn	11 23 25.7	0.0
	0.2nm,0.3s,baz=355,slow=19,SNR=4.0						
TXAR	Lajitas Array	69.48	330	P	P	11 32 48.1	0.0
	0.3nm,0.8s,baz=154,slow=10.0,SNR=3.8						
TORD	Torodi Ar. Bea	83.60	70	P	P	11 34 08.2	0.0
	0.5nm,0.9s,baz=251,slow=4.4,SNR=2.6						

SJA ***04*** *11:24:19.4±0.3, 35.°17S×71.°78W, h47^{km}±7^{km}, ML4.2, MW4.5*

GUC ***04*** *11:24:19.6±0.7, 35.°15S×71.°98W, h54^{km}±2^{km}, ML4.9*

IDC ***04*** *11:24:20.7±0.6, 35.°08S×71.°69W, h47^{km}±5^{km}, mb4.3/15, mb1 4.4/19, mb1mx4.3/28, mbtmp4.5/19, MS4.4/3, Ms1 4.4/3, ms1mx3.9/30, Error ellipse: s-maj=20.2km s-min=12.5km az=86.0*

BJI ***04*** *11:24:21.0±0.0, 35.°00S×71.°90W, h43^{km}, mB5.5/2, Ms5.0/1, Ms7 4.8/1*

NEIC ***04*** *11:24:21.3±1.4, 35.°04S±0.°06×71.°7W±0.°1, h54^{km}±5^{km}, Error ellipse: s-maj=13.8km s-min=8.1km az=89.0*

VAO ***04*** *11:24:25.8±1.1, 35.°32S×71.°59W, h112^{km}±16^{km}, mb4.8*

ISC 04 11:24:20.5±0.5, **35.°05S**±0.°04×**71.°97W**±0.°06, **h48**^{km}±3^{km}, **n205**, σ**1^{s}.49**/221, **mb4.9**/45, **2C, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO05	Huala	0.05	39	eP	Pn	11 24 28.1	+0.2
GO05				iS	Sn	11 24 33.4	+0.2
GO05	Huala	0.05	39		Pn	11 24 28.1	+0.2
GO05				Sn	Sn	11 24 34.4	+1.2
GO05	Huala	0.05	39	eP	Pn	11 24 28.1	+0.2
GO05				eS	Sn	11 24 34.4	+1.2
CCHI	Chillan	1.55	183	iP	Pn	11 24 46.4	+0.7
CCHI				eS	Sn	11 25 10.6	+6.0
LMEL	Las Melosas	1.89	51	eP	Pn	11 24 51.4	+1.0
LMEL				iS	Sn	11 25 15.9	+2.8
LMEL				IAML		11 25 21.3	
	comp=N,14µm,0.6s						
MT02	Curacav	1.91	21	⇑iP	Pn	11 24 51.8	+1.2
MT02				iS	Sn	11 25 16.6	+3.1
MT02				IAML		11 25 22.7	
	comp=N,6µm,0.4s						
MT03	Universidad Ad	1.96	38	eP	Pn	11 24 52.5	+1.1
MT03				iS	Sn	11 25 17.7	+2.8
VA01	Torpederas	2.04	8	eP	Pn	11 24 53.5	+1.2
PUMA	Malargue	2.11	103	eP	Pn	11 24 54.9	+1.6
PEL	Peldehue	2.18	30	eP	Pn	11 24 55.7	+1.4
PEL				iS	Sn	11 25 23.1	+3.1
PEL				IAML		11 25 29.6	
	comp=N,8µm,0.6s						
PEL	Peldehue	2.18	30	Pn	Pn	11 24 57.1	+2.9
FCH	Farellones	2.21	39	eP	Pn	11 24 56.1	+1.2
FCH				iS	Sn	11 25 25.1	+3.9
FCH				IAML		11 25 30.0	
	comp=N,7µm,0.2s						
ROC1	El Roble	2.21	21		Pn	11 24 56.6	+1.7
ROC1				Sn	Sn	11 25 22.8	+1.5
ROC1	El Roble	2.21	21	eP	Pn	11 24 56.8	+1.8
ROC1				eS	Sn	11 25 29.7	+8.4
ROCH	El Roble	2.22	21	eP	Pn	11 24 56.6	+1.6
ROCH				iS	Sn	11 25 24.5	+3.2
LAMA	Las Malvinas	2.27	88	eP	Pn	11 24 57.9	+2.4
MORA	Malargue	2.43	97	eP	Pn	11 24 58.7	+0.9
CANA	Caviahue	2.93	166	eP	Pn	11 25 07.2	+2.6
CANA				IAML		11 25 58.6	
	comp=Z,510nm,1.2s						
AAGR	Agrelo	3.26	54	iP	Pn	11 25 11.9	+2.7
AAGR				IAML		11 26 16.3	
	comp=Z,498nm,0.8s						
ARCO	CERRO ARCO	3.35	50	iP	Pn	11 25 13.6	+3.2
ARCO				IAML		11 26 06.6	
	comp=Z,509nm,0.7s						
ASAL	Salagasta	3.58	48	iP	Pn	11 25 16.6	+3.1
ASAL				IAML		11 26 19.6	
	comp=Z,504nm,0.7s						
RTCV	Cerro Valdivia	4.28	43	iP	Pn	11 25 24.9	+1.8
RTCV				IAML		11 26 36.6	
	comp=Z,409nm,2.2s						
ZON	Zonda	4.45	39	iP	Pn	11 25 27.3	+1.9
ZON				IAML		11 26 57.1	
	comp=Z,348nm,1.8s						
ACAN	Cantantal	4.85	57	iP	Pn	11 25 32.7	+1.7
ACAN				IAML		11 27 03.6	
	comp=Z,120nm,0.7s						
GO04	Tololo Observa	4.96	12		Pn	11 25 33.2	+0.6
GO04				Sn	Sn	11 26 29.4	+0.5
GO04	Tololo Observa	4.96	12	iP	Pn	11 25 33.4	+0.7
AMOG	MOGNA	5.03	36	iP	Pn	11 25 34.7	+1.3
AMOG				IAML		11 27 04.4	
	comp=Z,416nm,0.5s						
ACCO	Cerro Coronel	5.08	30	iP	Pn	11 25 35.6	+1.3
ACCO				IAML		11 27 00.4	
	comp=Z,319nm,1.1s						
AROD	Rodeo	5.30	24	iP	Pn	11 25 39.7	+2.3
ACDV	Cuesta del Vie	5.42	27	iP	Pn	11 25 40.5	+1.5
ACDV				IAML		11 27 19.4	
	comp=Z,187nm,0.7s						
PLCA	Paso Flores	5.78	169	P	Pn	11 25 44.9	+1.1
	comp=Z,5.3nm,0.3s,baz=3.7,slow=9.3,SNR=51						
PLCA	Paso Flores	5.78	169		Pn	11 25 44.8	+1.0
PLCA	Paso Flores	5.78	169	eP	Pn	11 25 44.9	+1.1
MRA	San Martin	5.83	65	iP	Pn	11 25 44.9	+0.4
MRA				IAML		11 27 30.4	
	comp=Z,42nm,0.6s						
LCO	Las Campanas	6.12	10	Pn	Pn	11 25 48.7	+0.2
AGUA	GUANDACOL	6.28	29	iP	Pn	11 25 51.0	+0.4
AGUA				IAML		11 27 54.9	
	comp=Z,42nm,1.4s						
APLL	PUNTA DE LOS L	6.52	46	iP	Pn	11 25 53.0	-0.9
ACLC	CERRO LA CRUZ	7.03	39	iP	Pn	11 25 59.9	-1.1
GO03	Copiap	7.58	12		Pn	11 26 07.7	-0.7
GO02	Mina Guanaco	10.06	12	Pn	Pn	11 26 39.9	-2.7
PB10	IPOC Station P	11.56	6	Pn	Pn	11 27 00.3	-2.6
LVC	Limon Verde	12.68	13	P	Pn	11 27 13.7	-4.8
	comp=Z,0.3nm,0.3s,baz=182,slow=11,SNR=3.7						
LVC	Limon Verde	12.68	13	Pn	Pn	11 27 16.2	-2.2
PB01	IPOC Station P	14.12	10	Pn	Pn	11 27 38.0	+0.1
CPUP	Villa Florida	15.29	59	P	Pn	11 27 51.2	-1.9
	comp=Z,0.2nm,0.3s,baz=225,slow=14,SNR=2.2						
CPUP	Villa Florida	15.29	59		Pn	11 27 50.9	-2.2
PB11	IPOC Station P	15.37	8	Pn	Pn	11 27 53.4	-1.0
PB11				IAmb	IAmb	11 28 01.1	
	comp=Z,48nm,0.8s						
GO01	Chusmiza	15.52	10	Pn	Pn	11 27 56.1	-0.5
MNMC	Minye Minye	15.99	8		Pn	11 28 02.2	-0.3
MNMC				IAmb	IAmb	11 28 09.1	
	comp=Z,61nm,0.8s						
LPAZ	La Paz	19.00	11	P	Pn	11 28 40.5	+0.6
	comp=Z,1.4nm,0.3s,baz=182,slow=6.3,SNR=35						
LPAZ				LR	LR	11 36 39.5	
	comp=Z,531nm,18.8s,baz=28,slow=39						
LPAZ	La Paz	19.00	11	P	P	11 28 36.2	-2.7
LPAZ	La Paz	19.00	11	eP	Pn	11 28 41.4	+1.5
USHA	Ushuaia	19.93	174	P	P	11 28 49.2	+1.1
	comp=Z,0.6nm,0.3s,baz=330,slow=3.8,SNR=4.1						
PTGB	Pitanga	20.06	64	eP	P	11 28 48.7	-1.1
AQDB	Aquidauana	20.40	49	eP	P	11 28 53.3	-0.1
TRCB	Terra Rica	20.82	59	eP	P	11 28 57.2	-0.9
SIV	San Ignacio	21.34	30	P	P	11 29 03.1	-0.6
	comp=Z,12nm,0.7s,baz=215,slow=12,SNR=33						
PCMB	Pacaembu	22.56	59	eP	P	11 29 13.9	-2.7
NNA	Nana	23.38	348	P	P	11 29 26.7	+1.7
	comp=Z,6.8nm,0.4s,baz=219,slow=11,SNR=4.5						
NNA	Nana	23.38	348	P	P	11 29 23.5	-1.6
NNA				IAmb	IAmb	11 29 27.7	
	comp=Z,59nm,1.8s						
C2SB	Chapadao do Su	23.47	51	eP	P	11 29 25.3	-0.5
SALV	Santo Antonio	24.01	42	eP	P	11 29 30.2	-0.7
IPMB	Ipameri, GO	27.11	57	eP	P	11 29 57.4	-1.6
SAML	Samuel	27.20	19	P	P	11 30 00.1	+0.4
ATAH	Atahualpa	28.40	346	LR	LR	11 39 13.4	
	comp=Z,1µm,22.0s,baz=339,slow=31						
BDFB	Brasilia	28.89	54	P	P	11 30 13.2	-1.8
	comp=Z,7.7nm,0.8s,baz=205,slow=6.0,SNR=8.1						
BDFB	Brasilia	28.89	54	P	P	11 30 13.0	-2.0
JANB	Januaria	31.82	58	eP	P	11 30 39.2	-1.7
SMTB	Santa Maria do	34.31	46	eP	P	11 31 01.2	-1.3
OTAV	Otavalo	35.62	349	eP	P	11 31 16.1	+1.8
PTGA	Pitinga	35.93	21	P	P	11 31 16.1	-0.3
	comp=Z,14nm,1.1s,baz=206,slow=10.0,SNR=12						
PTGA	Pitinga	35.93	21	P	P	11 31 16.2	-0.3
PTGA				IAmb	IAmb	11 31 16.9	
	comp=Z,14nm,1.1s						
PTGA	Pitinga	35.93	21	eP	P	11 31 16.1	-0.3
SOTA	Rioblanco	37.24	352	eP	P	11 31 30.7	+2.6
PCON	Cinco Dias	37.41	353	eP	P	11 31 33.3	+3.7
ORTC	Ortega, Tolima	38.87	355	eP	P	11 31 43.9	+2.6
CHIC	Chingaza	39.50	357	eP	P	11 31 48.1	+1.1
GUY2C	Guyana, Caldas	40.18	355	eP	P	11 31 54.9	+2.2
NORC	Norcasia	40.49	356	eP	P	11 31 56.8	+2.0
RUSC	La Rusia	40.73	358	eP	P	11 31 59.2	+1.9
RUSC	La Rusia	40.73	358	P	P	11 31 57.4	+0.1
CBOC	Ciudad Bolivar	40.87	354	eP	P	11 31 59.3	+1.2
HELC	Santa Helena	41.16	355	eP	P	11 32 02.1	+1.4
PTBC	PUERTO BERRIO,	41.43	356	eP	P	11 32 01.8	-0.7
DBBC	Dabeiba	42.03	354	eP	P	11 32 09.6	+2.1
ZARC	Zaragoza, Cauc	42.40	356	eP	P	11 32 10.8	+0.4
SMLC	San Martn de	43.66	357	eP	P	11 32 19.4	-1.1
SDV	Santo Domingo	43.71	2	eP	P	11 32 20.5	-0.7
SDV	Santo Domingo	43.71	2	P	P	11 32 21.2	0.0
RCBR	Riachuelo	44.15	57	P	P	11 32 24.1	-0.5
	comp=Z,3.4nm,0.5s,baz=227,slow=11,SNR=4.6						
RCBR	Riachuelo	44.15	57	P	P	11 32 22.5	-2.2
RCBR				IAmb	IAmb	11 33 55.8	
	comp=Z,33nm,1.3s						
URIC	Uribia, Colomb	46.49	360	P	P	11 32 41.4	-1.6
GRGR	Grenville	47.93	14	P	P	11 32 54.2	0.0
VNA3	Neumayer Olymp	48.37	157	P	P	11 32 56.9	-0.2
VNA2	Neumayer--Watz	49.03	157	P	P	11 33 01.8	-0.3
	baz=287,slow=8.5						
FDF	Fort de France	50.56	14	P	P	11 33 14.3	0.0
SNAA	Sanae	50.59	158	P	P	11 33 13.7	-0.4
SNAA	Sanae	50.59	158	P	P	11 33 13.6	-0.4
	comp=Z,5.8nm,0.8s,baz=267,slow=8.0,SNR=29						
SNAA	Sanae	50.59	158	P	P	11 33 13.8	-0.4
SNAA				IAmb	IAmb	11 33 14.7	
	comp=Z,9.9nm,1.0s						
MLPR	Magueyes Islan	52.93	6	P	P	11 33 31.4	-0.5
CRPR	Cabo Rojo, PR	52.96	6	P	P	11 33 31.7	-0.5
QSPA	South Pole Qui	55.19	180	P	P	11 33 48.1	0.0
	comp=Z,7.4nm,0.8s,baz=335,slow=0.0,SNR=24						
QSPA	South Pole Qui	55.19	180	P	P	11 33 48.4	+0.2
QSPA				IAmb	IAmb	11 34 08.5	
	comp=Z,12nm,1.1s						
CMIG	Matias Romero	56.24	333	LR	LR	11 52 16.3	
	comp=Z,282nm,19.0s,baz=124,slow=30						
SYO	Syowa Base	64.87	158	⇑eP	P	11 34 47.2	-7.0
Z50A	Ashland	69.19	348	P	P	11 35 22.0	+0.1
Z50A				IAmb	IAmb	11 37 08.0	
	comp=Z,40nm,1.8s						
143A	Socs Landing,	69.82	343	P	P	11 35 27.2	+1.4
143A				IAmb	IAmb	11 35 28.1	
	comp=Z,18nm,0.8s						
237A	Washetta, Mont	70.36	339	P	P	11 35 30.9	+1.7
TX32	Lajitas Array	70.68	331	P	P	11 35 32.2	+0.9
TXAR	Lajitas Array	70.68	331	P	P	11 35 32.9	+1.6
	comp=Z,1.4nm,0.4s,baz=155,slow=8.6,SNR=59						

TXAR				pP	pP	11 35 45.6	+0.6
	comp=Z,0.8nm,0.5s,baz=151,slow=9.2,SNR=6.7						
TXAR				sP	sP	11 35 51.3	+0.9
	comp=Z,1.1nm,0.5s,baz=153,slow=9.3,SNR=6.0						
TX31	Lajitas Ar. Si	70.68	331	P	P	11 35 32.4	+1.1
V58A	Windy Hill, Pi	70.79	354	P	P	11 35 32.1	+0.4
V55A	Taylorsville	71.06	352	P	P	11 35 34.2	+0.8
OXF	Oxford	71.10	345	P	P	11 35 34.2	+0.6
OXF				IAmb	IAmb	11 35 34.2	
	comp=Z,14nm,0.7s						
CPCT	Cooper Cave	71.11	349	P	P	11 35 33.5	-0.1
CPCT				IAmb	IAmb	11 38 05.2	
	comp=Z,48nm,1.9s						
SWET	Sewanee	71.11	348	P	P	11 35 34.2	+0.5
SWET				IAmb	IAmb	11 35 35.0	
	comp=Z,15nm,0.7s						
V48A	Smith Brothers	71.78	347	P	P	11 35 38.4	+0.7
U54A	Nelsons Funny	71.79	352	P	P	11 35 38.5	+0.7
T59A	Double "B" Far	71.84	355	P	P	11 35 37.4	-0.6
CLTN	Cedars of Leba	72.03	348	P	P	11 35 40.2	+1.0
ABTX	Abilene, Hawle	72.16	336	P	P	11 35 41.2	+1.2
WVT	Waverly	72.34	347	P	P	11 35 40.0	-1.0
WVT				IAmb	IAmb	11 35 42.7	
	comp=Z,18nm,0.8s						
U49A	Red Boiling Sp	72.35	348	P	P	11 35 41.3	+0.3
W41B	Gary Mavity, V	72.38	343	P	P	11 35 42.0	+0.7
W41B				IAmb	IAmb	11 35 55.7	
	comp=Z,50nm,1.9s						
WHAR	Wooly Hollow	72.50	343	P	P	11 35 42.7	+0.7
T52A	Hallie	72.52	351	P	P	11 35 42.2	+0.2
S57A	Dark Hollow, R	72.73	354	P	P	11 35 43.6	+0.3
W39A	Magazine	72.79	341	P	P	11 35 45.1	+1.4
W39A				IAmb	IAmb	11 36 04.5	
	comp=Z,20nm,1.4s						
T49A	Edmonton	72.89	349	P	P	11 35 44.6	+0.3
T49A				IAmb	IAmb	11 35 53.5	
	comp=Z,44nm,1.9s						
LCAR	Lake Charles	72.98	344	P	P	11 35 45.0	+0.2
FCAR	Ozark Folk Cen	73.04	343	P	P	11 35 45.4	+0.3
S51A	Beattyville	73.12	350	P	P	11 35 46.1	+0.5
S51A				IAmb	IAmb	11 35 51.3	
	comp=Z,22nm,1.3s						
T45A	Paducah	73.36	346	P	P	11 35 47.3	+0.3
X34A	Smith Ranch, M	73.39	338	P	P	11 35 47.8	+0.5
PBMO	Poplar Bluff	73.50	345	P	P	11 35 48.5	+0.7
PBMO				IAmb	IAmb	11 35 48.6	
	comp=Z,8.8nm,0.5s						
W35A	Tecumseh	73.61	339	P	P	11 35 48.4	-0.2
U40A	Yellville	73.66	343	P	P	11 35 49.4	+0.6
U40A				IAmb	IAmb	11 35 49.6	
	comp=Z,6.2nm,0.6s						
WMOK	Wichita Mounta	73.81	337	P	P	11 35 49.8	0.0
HHAR	Hobbs	73.86	342	P	P	11 35 50.6	+0.6
HHAR				IAmb	IAmb	11 36 02.2	
	comp=Z,26nm,1.8s						
TUL1	Leonard	74.01	340	P	P	11 35 52.0	+1.2
FVM	French Village	74.66	345	P	P	11 35 54.9	+0.3
FVM				IAmb	IAmb	11 35 55.8	
	comp=Z,13nm,1.2s						
CCM	Cathedral Cave	74.90	344	P	P	11 35 56.6	+0.6
CCM				IAmb	IAmb	11 35 57.4	
	comp=Z,11nm,0.8s						
AMTX	Amarillo	74.91	335	P	P	11 35 55.6	-0.6
S39A	Bolivar	75.04	343	P	P	11 35 57.2	+0.4
LIC	Lamto	75.05	71	*e*P	P	11 35 56.8	-0.7
	comp=Z,22nm,0.6s						
P48A	Milroy	75.18	349	P	P	11 35 57.2	-0.3
P48A				IAmb	IAmb	11 35 58.4	
	comp=Z,17nm,1.2s						
TIC	Toumodi	75.32	71	*e*P	P	11 35 58.4	-0.6
	comp=Z,5.5nm,0.3s						
KIC	Kosan Boka	75.36	71	*e*P	P	11 35 58.9	-0.3
	comp=Z,28nm,0.6s						
KIC	Kosan Boka	75.36	71	P	P	11 35 58.9	-0.3
U32A	Winter Ranch,	75.39	338	P	P	11 36 00.0	+1.1
DBIC	Dimbokro	75.46	71	P	P	11 35 59.5	-0.3
	comp=Z,9.5nm,0.6s,baz=206,slow=5.9,SNR=18						
DBIC	Dimbokro	75.46	71	P	P	11 35 59.4	-0.4
DBIC				IAmb	IAmb	11 36 00.4	
	comp=Z,11nm,0.7s						
SSPA	Standing Stone	75.51	355	P	P	11 36 00.0	+0.6
O44A	Mansfield	76.36	347	P	P	11 36 03.8	-0.5
O44A				IAmb	IAmb	11 37 13.6	
	comp=Z,43nm,1.7s						
M56A	Emporium	76.37	355	P	P	11 36 05.1	+0.8
N49A	Columbus Grove	76.43	351	P	P	11 36 04.3	-0.4
N49A				IAmb	IAmb	11 37 54.8	
	comp=Z,48nm,1.9s						
M54A	Oil Creek Stat	76.51	354	P	P	11 36 05.6	+0.5
M54A				IAmb	IAmb	11 38 16.9	
	comp=Z,30nm,1.5s						
L56A	Greenwood	76.98	356	P	P	11 36 07.7	-0.1
L56A				IAmb	IAmb	11 37 58.3	
	comp=Z,28nm,1.3s						
S22A	4UR Ranch, Cre	79.33	333	P	P	11 36 20.9	-0.3
BOSA	Boshof	79.53	118	P	P	11 36 21.6	-1.1
	comp=Z,6.1nm,0.7s,baz=238,slow=3.4,SNR=7.6						
BOSA	Boshof	79.53	118	P	P	11 36 21.9	-0.7
BOSA				IAmb	IAmb	11 37 58.0	
	comp=Z,29nm,1.5s						
SADO	Sadowa	79.71	355	P	P	11 36 23.4	+0.7
SADO				IAmb	IAmb	11 39 04.4	
	comp=Z,27nm,1.6s						
SMCO	Snowmass	80.64	333	P	P	11 36 30.5	+2.1
TRQ	Mont Tremblant	80.93	358	P	P	11 36 29.8	+0.4
ECSD	EROS Data Cent	81.56	342	P	P	11 36 33.0	+0.3
E46A	Sault Ste Mari	81.80	351	P	P	11 36 33.6	-0.3
E46A				IAmb	IAmb	11 36 34.9	
	comp=Z,11nm,1.1s						
LBTB	Lobatse	81.81	115	P	P	11 36 34.4	-0.5
LBTB				IAmb	IAmb	11 36 34.5	
	comp=Z,12nm,0.9s						
SRU	San Rafael Swe	81.95	331	P	P	11 36 36.1	+0.9
E43A	Lone Tree Farm	82.18	350	P	P	11 36 36.4	+0.5
E43A				IAmb	IAmb	11 37 12.9	
	comp=Z,32nm,2.0s						
HWUT	Hardware Ranch	84.50	331	P	P	11 36 49.5	+1.3
HWUT				IAmb	IAmb	11 37 10.0	
	comp=Z,13nm,1.6s						
TORD	Torodi Ar. Bea	84.51	70	P	P	11 36 48.1	-0.5
	comp=Z,8.1nm,0.7s,baz=272,slow=5.3,SNR=45						
PDAR	Pinedale Array	84.72	333	P	P	11 36 49.9	+0.5
	comp=Z,0.6nm,0.5s,baz=137,slow=6.9,SNR=8.7						
PDAR				pP	pP	11 37 04.6	+1.2
	comp=Z,0.6nm,0.6s,baz=160,slow=4.7,SNR=4.5						
NVAR	Mina Array Bea	84.78	325	P	P	11 36 51.4	+1.6
	comp=Z,0.7nm,0.8s,baz=154,slow=6.2,SNR=7.1						
NVAR				pP	pP	11 37 05.1	+1.3
	comp=Z,0.7nm,0.7s,baz=163,slow=5.7,SNR=5.3						
AGMN	Agassiz Nation	85.68	344	P	P	11 36 54.1	+0.4
AGMN				IAmb	IAmb	11 37 16.2	
	comp=Z,20nm,1.9s						
YHH	Holmes Hill	86.94	333	P	P	11 37 00.4	+0.1
ULM	Lac du Bonnet	87.52	345	P	P	11 37 03.5	+0.9
	comp=Z,4.2nm,0.8s,baz=182,slow=3.2,SNR=11						
ULM	Lac du Bonnet	87.52	345	P	P	11 37 02.6	0.0
ULM				IAmb	IAmb	11 37 03.7	
	comp=Z,4.4nm,0.8s						
DGMT	Dagmar	87.98	339	P	P	11 37 05.1	+0.1
DGMT				IAmb	IAmb	11 37 06.9	
	comp=Z,15nm,1.1s						
SCHQ	Schefferville	89.63	3	P	P	11 37 12.6	+0.1
	comp=Z,1.1nm,0.4s,baz=170,slow=4.1,SNR=5.3						
SCHQ	Schefferville	89.63	3	P	P	11 37 12.2	-0.3
YKA	Yellowknife Ar	103.07	341	Pdiff	Pdif	11 38 13.6	+0.3
	comp=Z,0.3nm,0.8s,baz=133,slow=5.0,SNR=5.2						
WRA	Warramunga Arr	119.87	209	PKP	PKPdf	11 43 05.3	-0.7
	comp=Z,0.4nm,0.3s,baz=159,slow=1.8,SNR=10						
WRA				pPKP	pPKPdf	11 43 19.1	-1.6
	comp=Z,0.6nm,0.5s,baz=169,slow=1.6,SNR=3.6						
BRTR	Keskin Array B	122.29	61	PKP	PKPdf	11 43 10.0	-0.2
	comp=Z,0.9nm,0.7s,baz=182,slow=2.1,SNR=4.6						
AKASG	Malin Array Be	122.85	48	PKP	PKPdf	11 43 09.5	-1.2
	comp=Z,0.3nm,0.4s,baz=286,slow=1.7,SNR=3.2						
ARCES	ARCESS Array B	124.94	25	PKP	PKPdf	11 43 14.6	+0.4
	comp=Z,1.7nm,0.9s,baz=219,slow=4.2,SNR=2.7						
BRVK	Borovoye	147.93	44	PKPbc	PKPbc	11 43 59.5	-0.3
CHGR	Chuyangaron	148.84	72	PKPbc	PKPdf	11 44 00.2	+1.3
KKAR	Karatay Array	149.98	63		PKPbc	11 44 05.0	-0.4
NIL	Nilore	151.33	83		PKPbc	11 44 08.2	-0.8
ARSB	Arslanbob	151.88	67		PKPbc	11 44 08.7	-1.4
AML	Almayashu	152.38	65	P	PKiKP	11 44 12.2	+0.4
	SNR=11						
EKS2	Erkin-Say	152.40	64	P	PKiKP	11 44 11.8	+0.4
	SNR=12						
USP	Ospenovka	152.88	62	P	PKiKP	11 44 12.8	+0.5
	SNR=7.0						
AAK	Ala-Archa	152.93	64	P	PKiKP	11 44 13.1	+0.5
	SNR=9.1						
AAK	Ala-Archa	152.93	64		PKPbc	11 44 12.6	+0.2
UCH	Uchtor	152.98	65	P	PKiKP	11 44 13.7	+0.6
	SNR=13						
KSH	Kashi	154.18	71	PKPbc	PKPdf	11 44 07.3	+0.3
KSH				pPKP	PKiKP	11 44 18.1	+2.9
KSH				PP	PP	11 48 02.6	-2.1
KSH				SS	SS	12 07 37.6	-3.1
KSH				AMB	AMB		
	comp=Z,290nm,7.8s						
ZALV	Zalesovo Beam	155.07	34	PKPbc	PKPdf	11 44 16.7	+9.2
	comp=Z,0.4nm,0.4s,baz=312,slow=2.5,SNR=3.4						
ZALV				PKPab	pPKPbc	11 44 31.7	+0.8
	comp=Z,2.7nm,0.6s,baz=296,slow=5.3,SNR=6.9						
MKAR	Makanchi Array	157.39	51	PKPbc	PKPdf	11 44 23.9	+13
	comp=Z,0.6nm,0.8s,baz=256,slow=3.6,SNR=4.5						
MKAR				PKPab	PKPab	11 44 40.7	-1.8
	comp=Z,2.6nm,0.8s,baz=344,slow=2.2,SNR=13						
WMQ	Urumqi	162.05	55	*e*PKP	PKPdf	11 44 16.8	+0.5
ULN	Ulaanbaatar	167.17	3	PKPdf	PKPdf	11 44 17.5	-3.3
ULN				PKPab	PKPab	11 45 25.9	+0.6
NJ2	Nanjing	170.49	255	*e*PKP	PKPdf	11 44 23.2	0.0
HHC	Hu-ho-hao-te	173.57	335	*e*PKP	PKPdf	11 44 25.7	+1.2
CD2	Chengdu	174.53	138	PKP	PKPdf	11 44 24.3	-0.8
LZH	Lanzhou	176.43	72	*e*PKP	PKPdf	11 44 25.5	0.0
LZH				pPKP	pPKPdf	11 44 39.1	-1.2
LZH				sPKP		11 44 44.2	
LZH				PKPab	PKPab	11 46 08.3	+1.3
LZH				LR	LR		
	comp=Z,160nm,17.9s						
LZH				LR	LR		
	comp=Z,150nm,18.1s						
LZH				LR	LR		
	comp=Z,190nm,20.0s						

PDG ***04*** *11:38:40.2±0.4, 38°.22N×20°.30E, h13^{km}±1^{km}, ML3.8/13, Error ellipse: s-maj=0.9km s-min=1.0km az=0.0*

IDC ***04*** *11:38:40.0±1.0, 38°.24N×20°.17E, h0^{km}, mb3.8/10, mb1 3.9/13, mb1mx3.7/49, mbtmp3.8/13, ML3.4/3, Error ellipse: s-maj=21.5km s-min=17.7km az=68.0*

THE ***04*** *11:38:40.8, 38°.19N×20°.32E, h10^{km}±2^{km}, ML3.6/9, Error ellipse: s-maj=2.5km s-min=0.7km az=70.0*

ATH ***04*** *11:38:40.3, 38°.19N×20°.29E, h11^{km}, ML3.6/15, Error ellipse: s-maj=1.5km s-min=0.9km az=76.0*

ISC 04 11:38:40.7±0.8**, 38°.19N**±0°.02×**20°.30E**±0°.03**, h7**^{km}±5^{km}**, n113, σ1**^{s}**19**/134**, mb3.8**/10**, 11C-4D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF3	Kipouria, Keph	0.04	78	P	Pg	11 38 42.4	+0.1
KEF3				S	Sg	11 38 43.1	-0.1
LXRA	Lixouri, Kepha	0.11	87	P	Pg	11 38 43.4	+0.2
LXRA				S	Sg	11 38 45.1	+0.3
KEF4	Livadi, Kephal	0.12	57	P	Pg	11 38 43.5	+0.2
KEF4				S	Sg	11 38 45.5	+0.4
ARGA	Argostoli. Kep	0.14	97	P	Pg	11 38 44.0	+0.3
ARGA				S	Sg	11 38 46.0	+0.2
KEF2	Argostoli. Kep	0.15	101	P	Pg	11 38 44.1	+0.3
KEF2				S	Sg	11 38 46.4	+0.4
KEF1	Kardakata, Kep	0.16	58	P	Pg	11 38 44.2	+0.1
KEF1				S	Sg	11 38 46.7	+0.4
VLS	Valsamata	0.23	94	P	Pg	11 38 45.2	-0.1
VLS				S	Sg	11 38 48.7	+0.2
	44µm,0.2s						
VLS	Valsamata	0.23	94	P	Pg	11 38 45.3	-0.1
VLS				S	Sg	11 38 48.6	+0.2
VLS				AML	AML	11 38 48.9	
	comp=N,83444µm,0.3s						
VLS				AML	AML	11 38 49.1	
	comp=E,87448µm,0.1s						
KONA	Konidatara, Ke	0.32	43	P	Pg	11 38 47.0	0.0
KONA				S	Sg	11 38 51.6	+0.5
KONA				AML	AML	11 38 52.4	
	comp=N,53561µm,0.5s						
KONA				AML	AML	11 38 56.5	
	comp=E,32600µm,0.5s						
FSK	Fiskardo	0.34	38	P	Pg	11 38 47.3	-0.1
FSK				S	Sg	11 38 52.6	+0.8
	comp=E,20µm,0.6s						
FSK	Fiskardo	0.34	38	P	Pg	11 38 47.3	-0.1
FSK				S	Sg	11 38 51.3	-0.5
FSK				AML	AML	11 38 53.1	
	comp=E,57043µm,0.7s						
FSK				AML	AML	11 38 53.4	
	comp=N,23965µm,0.5s						
KFL	Anninata	0.40	102	P	Pg	11 38 48.1	-0.3
KFL				S	Sg	11 38 54.3	+0.7
	comp=N,23µm,0.5s						
KFL	Anninata	0.40	102	P	Pg	11 38 48.2	-0.3
KFL				S	Sg	11 38 53.7	+0.1
KFL				AML	AML	11 38 58.9	
	comp=E,55262µm,0.4s						
KFL				AML	AML	11 39 00.3	
	comp=N,38461µm,1.0s						
VLMS	Volimes, Zakyn	0.43	138	P	Pg	11 38 48.9	-0.1
VLMS				S	Sb	11 38 55.5	-1.8
VLMS				AML	AML	11 38 56.4	
	comp=E,39847µm,0.4s						
VLMS				AML	AML	11 39 02.2	
	comp=N,33007µm,0.5s						
MGNA	Meganis	0.60	40	P	Pg	11 38 51.8	-0.6
MGNA				S	Sg	11 39 00.1	-0.1
MGNA				AML	AML	11 39 04.1	
	comp=N,7005µm,0.6s						
MGNA				AML	AML	11 39 05.1	
	comp=E,8019µm,0.6s						
LKD2	Lefkada island	0.66	25	P	Pg	11 38 53.0	-0.4
LKD2				S	Sb	11 39 03.4	-0.6
	comp=E,3µm,0.5s						
LKD2	Lefkada island	0.66	25	P	Pg	11 38 52.8	-0.6
LKD2				S	Sb	11 39 03.3	-0.6
LKD2				AML	AML	11 39 12.7	
	comp=E,7260µm,0.5s						
LKD2				AML	AML	11 39 13.4	
	comp=N,4921µm,0.6s						
VTN	Vitineika	0.75	111	P	Pg	11 38 54.9	-0.4
PDO	Prodromos	0.80	60	P	Pg	11 38 55.5	-0.7
PDO				S	Sg	11 39 06.6	-0.1
	comp=N,6µm,0.5s						
PDO	Prodromos	0.80	60	P	Pg	11 38 55.8	-0.4
PDO				S	Sg	11 39 06.6	-0.1
PDO				AML	AML	11 39 15.0	
	comp=N,7811µm,0.4s						
PDO				AML	AML	11 39 15.8	
	comp=E,9534µm,0.5s						
RLS	Riolos of Patr	0.93	98	P	Pg	11 38 57.7	-0.9
RLS				S	Sg	11 39 10.6	-0.1
	comp=E,2µm,0.6s						
RLS	Riolos of Patr	0.93	98	P	Pg	11 38 57.5	-1.1
RLS				AML	AML	11 39 17.9	
	comp=E,2773µm,0.7s						
RLS				AML	AML	11 39 20.2	
	comp=N,4488µm,0.7s						
PVO	Paravola	1.05	66	P	Pg	11 39 00.4	-0.6
PVO				S	Sn	11 39 16.6	-0.2
	comp=N,3µm,0.6s						
PVO	Paravola	1.05	66	P	Pg	11 39 00.6	-0.4
PVO				AML	AML	11 39 24.8	
	comp=E,6917µm,0.6s						
PVO				AML	AML	11 39 28.2	
	comp=N,6134µm,0.5s						
DRO	Drossia	1.14	102	P	Pb	11 39 01.5	-1.3
DRO				S	Sn	11 39 18.4	-0.6
	comp=N,3µm,0.7s						
DRO	Drossia	1.14	102	P	Pb	11 39 01.6	-1.2
AMT	Artemida-Makis	1.30	120	P	Pn	11 39 04.3	-1.0
AMT	Artemida-Makis	1.30	120	P	Pn	11 39 04.2	-1.0
AMT				AML	AML	11 39 32.6	
	comp=N,8015µm,0.6s						
AMT				AML	AML	11 39 33.0	
	comp=E,4670µm,0.9s						
LAKA	Lakka	1.32	88	P	Pn	11 39 04.5	-1.2
LAKA	Lakka	1.32	88	P	Pn	11 39 04.6	-1.2
LAKA				AML	AML	11 39 25.7	
	comp=N,2669µm,0.5s						
LAKA				AML	AML	11 39 40.0	
	comp=E,2214µm,1.4s						
IGT	Igoumenitsa	1.34	1	P	Pg	11 39 05.8	-0.6
IGT	Igoumenitsa	1.34	1	P	Pg	11 39 05.8	-0.6
IGT				AML	AML	11 39 39.1	
	comp=E,2864µm,0.6s						
IGT				AML	AML	11 39 41.0	
	comp=N,2445µm,0.9s						
EVR	Evrytania	1.39	58	P	Pn	11 39 05.8	-0.8
TRIZ	Trizonia	1.41	82	P	Pn	11 39 05.6	-1.1
TRIZ	Trizonia	1.41	82	P	Pn	11 39 05.6	-1.1
ALIK	Aliki, Aigiali	1.43	87	P	Pn	11 39 05.7	-1.4
KALE	Kalithea	1.46	82	P	Pn	11 39 06.6	-1.0
KALE	Kalithea	1.46	82	P	Pn	11 39 06.7	-1.0
KALE				AML	AML	11 39 36.2	
	comp=N,2383µm,0.6s						
KALE				AML	AML	11 39 36.7	
	comp=E,2449µm,1.1s						
KLV	Kalavryta, Ach	1.47	95	P	Pn	11 39 06.9	-0.8
KLV	Kalavryta, Ach	1.47	95	P	Pn	11 39 07.0	-0.7
KLV				AML	AML	11 39 41.2	
	comp=N,2248µm,1.1s						
KLV				AML	AML	11 39 48.8	
	comp=E,1749µm,1.1s						
KEK	Kerkira	1.57	346	P	Pb	11 39 09.3	-0.7
KEK	Kerkira	1.57	346	P	Pb	11 39 09.2	-0.9
KASA	Kassiopi	1.57	350	P	Pb	11 39 10.0	-0.2
ITM	Ithomi	1.64	128	P	Pb	11 39 10.3	-1.0
ITM	Ithomi	1.64	128	P	Pb	11 39 10.4	-1.0
MAKR	Makrakomi, Fth	1.65	60	P	Pn	11 39 09.5	-0.7
MAKR	Makrakomi, Fth	1.65	60	P	Pb	11 39 10.7	-0.8
PYL	PYLOS	1.73	138	P	Pb	11 39 11.5	-1.3
AGG	Agios Georgios	1.79	62	P	Pn	11 39 11.4	-0.7
AGG				S	Sb	11 39 35.2	-1.4
	comp=E,900nm,0.7s						
AGG	Agios Georgios	1.79	62	P	Pb	11 39 13.3	-0.6
VLX	Vlachokerasia	1.84	116	P	Pn	11 39 12.8	-0.1
THL	Klokotos Trika	1.92	44	P	Pb	11 39 14.2	-1.8
THL	Klokotos Trika	1.92	44	P	Pb	11 39 15.3	-0.7
AXAR	Agios Charalam	1.94	72	P	Pn	11 39 13.7	-0.4
AXAR	Agios Charalam	1.94	72	P	Pb	11 39 15.7	-0.7
KPRO	Kipourio	1.94	25	P	Pb	11 39 16.5	0.0
LTK	Loutraki	2.11	94	P	Pb	11 39 17.5	-1.8
LOUT	Loutraki	2.12	95	P	Pn	11 39 16.6	0.0
LOUT	Loutraki	2.12	95	P	Pb	11 39 17.8	-1.8
LKR	Lokris	2.17	77	P	Pb	11 39 18.4	-1.9
VIL2	Platees	2.34	89	P	Pb	11 39 21.3	-2.0
VILL	Villia	2.38	90	P	Pn	11 39 19.4	-0.8
DID	Didima	2.42	106	P	Pn	11 39 21.5	+0.7
DID	Didima	2.42	106	P	Pb	11 39 22.8	-1.9
XOR	Xorichti	2.55	62	P	Pn	11 39 23.6	+1.1
SKIA	Skiathos	2.66	68	P	Pn	11 39 25.5	+1.5
VLY	Voula,Athens	2.78	96	P	Pn	11 39 26.5	+0.8
OHR	Ohrid	2.94	7	*i* Pn	Pb	11 39 30.0	-3.5
TIP	Timpagrande	2.94	291	⇑P	Pn	11 39 28.5	+0.5
TIP				⇑S	Sn	11 40 03.3	-0.2
AOS	Alonnisos	2.97	70	P	Pn	11 39 29.0	+0.8
TIR	Tirane	3.17	354	⇑P	Pn	11 39 32.9	+1.9
TIR				⇑S	Sb	11 40 12.5	-3.6
VAY	Valandovo	3.58	29	*i* Pn	Pn	11 39 38.8	+2.2
MATE	Matera	3.71	312	⇑P	Pn	11 39 39.7	+1.3
STIP	Stip	3.79	22	*i* Pn	Pn	11 39 42.1	+2.6
SG1	Sgolgore (BA)	3.85	314	*e*Pn	Pn	11 39 41.1	+0.7
DRME	Dracevica, Mon	4.08	348	*e*Pn	Pn	11 39 43.4	-0.1
PDG	Podgorica	4.30	350	⇑P	Pn	11 39 48.3	+1.7
PDG				⇑S	Sn	11 40 39.8	+2.8
PDG	Podgorica	4.30	350	*e*Pn	Pn	11 39 46.2	-0.4
IDI	Anoyia	4.69	127	Pn	Pn	11 39 53.0	+1.0
	comp=E,0.7nm,0.3s,baz=303,slow=17,SNR=3.5						
IDI				Sn	Sn	11 40 49.1	+2.4
	comp=E,1.5nm,0.3s,baz=179,slow=22,SNR=6.8						
TREB	Trebinje	4.76	342	*e*Pn	Pn	11 39 51.3	-1.5
VTS	Vitosha	4.95	26	⇓P	Pn	11 40 00.3	+4.6
STON	Ston	5.07	338	*e*Pn	Pn	11 39 56.1	-1.1
UPM	Unac-Piva	5.11	348	*e*Pn	Pn	11 39 57.2	-0.7
DIVS	Divibare	5.90	358	*e*Pn	Pn	11 40 07.8	-0.9
HAPS	Han Pijesak,Bl	5.97	351	*e*Pn	Pn	11 40 07.8	-1.9
ELND	Elena	6.35	40	⇓P	Pn	11 40 18.0	+3.3
BLY	Banja Luka	6.95	341	⇓P	Pn	11 40 25.8	+2.8
GZR	Gura Zlata	7.43	14	⇑P	Pn	11 40 32.4	+2.8
VOIR		8.06	25	⇑P	Pn	11 40 42.7	+4.5
MLR	Muntele Rosu	8.42	28	Pn	Pn	11 40 46.2	+3.0
	comp=E,0.1nm,0.3s,baz=159,slow=17,SNR=2.3						
MLR	Muntele Rosu	8.42	28	⇑P	Pn	11 40 47.8	+4.5
CRES	Cresnjev	8.43	336	*e*Pn	Pn	11 40 42.3	-1.0
CEY	Cerknica	8.71	332	*e*Pn	Pn	11 40 46.8	-0.4
PLOR	Plostina	8.99	30	⇓P	Pn	11 40 55.9	+4.9
VRI	Vrincioaia	9.03	30	⇑P	Pn	11 40 56.2	+4.7
SOKA	Soboth	9.33	337	*e*Pn	Pn	11 40 54.6	-1.0
	comp=E,423nm,0.0s						
OBKA	Obir	9.33	335	*i* Pn	Pn	11 40 55.6	-0.1
	comp=E,6.9nm,0.4s						
ARSA	Arzberg	9.71	340	*i* Pn	Pn	11 41 00.6	-0.2
	comp=E,0.6nm,0.2s						
VYHS	Vyhne	10.35	355	*e*SN	Sn	11 42 48.9	-17
WTTA	Wattenberg	11.07	328	*e*Pn	Pn	11 41 20.7	+1.1
	comp=E,0.8nm,0.2s						
WATA	Walderalm	11.15	328	*e*Pn	Pn	11 41 21.5	+0.8
	comp=E,4.2nm,0.4s						
GERES	GERESS Array B	11.67	338	Pn	Pn	11 41 26.3	-1.3
	comp=E,0.2nm,0.3s,baz=167,slow=14,SNR=6.6						
HFS	Hagfors	22.36	351	P	P	11 43 38.5	-0.6
	comp=E,3.6nm,0.6s,baz=160,slow=10,SNR=10						
EKA	Eskdalemuir Ar	23.31	325	P	P	11 43 48.3	-0.8
	comp=E,3.4nm,0.9s,baz=130,slow=9.4,SNR=3.6						
FINES	FINESS Array B	23.55	7	P	P	11 43 51.1	-0.3
	comp=E,1.5nm,0.6s,baz=182,slow=9.0,SNR=7.1						
NB2	NORSAR Subarra	23.57	349	P	P	11 43 52.0	+0.3
	comp=Z,1.6nm,0.7s,baz=158,slow=9.3						
NOA	NORSAR Array B	23.57	349	P	P	11 43 51.1	-0.6
	comp=Z,1.0nm,0.6s,baz=158,slow=9.2,SNR=6.0						
TORD	Torodi Ar. Bea	29.93	219	P	P	11 44 49.5	0.0
	comp=Z,0.8nm,0.8s,baz=33,slow=7.7,SNR=3.2						
ARCES	ARCESS Array B	31.53	4	P	P	11 45 02.7	-0.4
	comp=Z,0.9nm,0.8s,baz=188,slow=10.0,SNR=3.7						
MKAR	Makanchi Array	45.44	58	P	P	11 46 59.6	-0.6
	comp=Z,1.0nm,0.5s,baz=278,slow=7.0,SNR=12						
ZALV	Zalesovo Beam	45.81	48	P	P	11 47 03.7	+0.8
	comp=Z,1.4nm,0.4s,baz=279,slow=8.1,SNR=5.0						
CMAR	Chiang Mai Arr	70.06	82	P	P	11 49 55.0	+1.2
	comp=Z,0.5nm,0.3s,baz=312,slow=7.2,SNR=3.6						
YKA	Yellowknife Ar	73.31	340	P	P	11 50 14.6	+2.0
	comp=Z,0.1nm,0.6s,baz=39,slow=5.6,SNR=2.7						

SJA 04 11:39:03.8±0.9**, 33°.71S**×**72°.97W, h10**^{km}**, ML4.1, MW3.7, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO05	Huala	1.55	147	*i* P	Pb	11 39 33.0	+0.4
GO05				*e*S	Sg	11 39 54.4	+0.6
ARCO	CERRO ARCO	3.49	77	*i* P	Pn	11 40 00.5	+2.2
ARCO				IAML		11 41 26.9	
	comp=Z,652nm,1.2s						
AAGR	Agrelo	3.52	81	*i* P	Pn	11 39 58.5	-0.1
AAGR				IAML		11 41 36.3	
	comp=Z,253nm,0.8s						
EDS3	Malargue	3.58	126	*i* P	Pn	11 40 02.3	+2.8
EDS3				*e*S	Sb	11 40 52.1	+1.2
RTLS	Leoncito	3.63	59	*i* P	Pn	11 40 03.8	+3.4
RTLS				IAML		11 41 36.6	
	comp=Z,540nm,0.9s						
ASAL	Salagasta	3.64	73	*i* P	Pn	11 40 04.3	+4.0
ASAL				IAML		11 41 35.2	
	comp=Z,652nm,0.8s						
RTCV	Cerro Valdivia	4.16	65	*i* P	Pn	11 40 09.0	+1.6
RTCV				IAML		11 41 51.9	
	comp=Z,145nm,1.3s						
ZON	Zonda	4.21	60	*i* P	Pb	11 40 13.4	-4.7
ZON				IAML		11 41 59.0	
	comp=Z,179nm,0.8s						
AMOG	MOGNA	4.69	55	*i* P	Pn	11 40 15.9	+1.2
AMOG				IAML		11 42 15.4	
	comp=Z,114nm,0.4s						
ACDV	Cuesta del Vie	4.81	44	*i* P	Pn	11 40 20.1	+3.6
ACDV				IAML		11 42 18.8	
	comp=Z,118nm,0.8s						

NORS 04 11:39:38.8±0.0**, 42°.96N**×**45°.34E, h28**^{km}**, MPVA3.2, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMGR	Komgaron	0.36	286	*e*Pg	Pb	11 39 45.6	-1.5
KMGR				*e*Sg	Sb	11 39 51.4	-1.3
VLKR	Vladikavkaz	0.50	280	*e*Pg	Pb	11 39 48.0	-1.1

VLKR				*i* Sg	Sb	11 39 55.0	-1.2
BTKR	**Batakoyurt**	**0.72**	**305**	*e*Pg	Pb	11 39 52.6	-0.2
BTKR				*e*Sg	Sn	11 40 03.4	+0.1
LACR	**Lac**	**0.78**	**261**	*e*Pg	Pb	11 39 53.5	-0.4
LACR				*e*Sg	Sb	11 40 03.8	-0.4
ARNR	**Ardon**	**0.81**	**286**	*e*Pg	Pb	11 39 53.9	-0.4
ARNR				*e*Sg	Sn	11 40 05.2	-0.2
STDR	**Stavd-Durt**	**1.02**	**294**	*e*Pg	Pb	11 39 59.2	+1.3
ZEI	**Tsey**	**1.07**	**261**	*e*Pg	Pb	11 39 58.7	-0.2
ZEI				*e*Sg	Sb	11 40 13.0	+0.4
DIGR	**Digorskoe uzhe**	**1.30**	**268**	*e*Pg	Pb	11 40 02.2	-0.4
GNBR	**Gunib**	**1.32**	**115**	*i* Pg	Pb	11 40 07.5	+4.5
GNBR				*e*Sg	Sb	11 40 27.9	+8.3

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*IDC **04** 11:39:56.4±0.9, 33°.65S×71°.89W, h0^{km}, mb3.8/6, mb1 3.9/9, mb1mx3.8/41, mbtmp3.7/9, ML3.8/3, Error ellipse: s-maj=35.6km s-min=19.6km az=88.0*
*GUC **04** 11:40:00.4±0.8, 33°.59S×71°.96W, h31^{km}±8^{km}, ML3.8*
*NEIC **04** 11:40:01.2±1.9, 33°.65S±0°.05×71°.9W±0°.1, h33^{km}±5^{km}, Error ellipse: s-maj=14.7km s-min=6.2km az=110.0*
ISC 04 11:39:58.5±1.7**, 33°.66S**±0°.04×**72°.03W**±0°.07**, h14**^{km}±11^{km}**, n35, σ1^{s}.09**/42**, mb4.0**/6**, 1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA01	**Torpederas**	**0.71**	**27**	*e*P	**Pb**	**11 40 12.9**	**+0.3**
VA01				*e*S	**Sb**	**11 40 22.8**	**+0.6**
MT02	**Curacav**	**0.85**	**62⇓**	*i*P	**Pb**	**11 40 15.4**	**+0.5**
MT02				*i* S	**Sb**	**11 40 26.8**	**+0.7**
MT02				IAML		11 40 29.3	
	comp=N,7μm,0.3s						
ROC1	**El Roble**	**1.09**	**52**	Pn	**Pn**	**11 40 19.9**	**+0.5**
ROCH	**El Roble**	**1.09**	**52**	*e*P	**Pn**	**11 40 19.7**	**+0.2**
ROCH				*i* S	**Sg**	**11 40 34.4**	**+0.4**
ROCH				IAML		11 40 37.8	
	comp=E,3μm,0.3s						
PEL	**Peldehue**	**1.24**	**66**	*e*P	**Pg**	**11 40 22.2**	**-0.2**
PEL				*i* S	**Sg**	**11 40 38.7**	**+0.2**
PEL				IAML		11 40 41.1	
	comp=N,4μm,0.5s						
PEL	**Peldehue**	**1.24**	**66**	Pn	**Pg**	**11 40 22.1**	**-0.2**
MT03	**Universidad Ad**	**1.28**	**83**	*e*P	**Pg**	**11 40 23.3**	**+0.1**
MT03				*e*S	**Sg**	**11 40 40.0**	**+0.1**
MT03				IAML		11 40 45.9	
	comp=E,6μm,0.3s						
GO05	**Huala**	**1.35**	**176**	Pn	**Pg**	**11 40 24.5**	**0.0**
FCH	**Farellones**	**1.49**	**78**	*e*P	**Pg**	**11 40 27.1**	**-0.1**
FCH				*i* S	**Sg**	**11 40 46.5**	**-0.2**
FCH				IAML		11 40 49.7	
	comp=N,2μm,0.5s						
LMEL	**Las Melosas**	**1.54**	**98**	*e*P	**Pb**	**11 40 27.0**	**+0.2**
LMEL				*i* S	**Sg**	**11 40 47.7**	**-0.3**
LMEL				IAML		11 40 51.3	
	comp=N,3μm,0.2s						
GO04	**Tololo Observa**	**3.63**	**17**	Pn	**Pn**	**11 40 54.1**	**-0.3**
LCO	**Las Campanas**	**4.77**	**14**	Pn	**Pn**	**11 41 12.1**	**+2.0**
GO03	**Copiap**	**6.24**	**15**	Pn	**Pn**	**11 41 29.5**	**-0.6**
PLCA	**Paso Flores**	**7.16**	**171**	Pn	**Pn**	**11 41 43.7**	**+0.9**
	comp=N,0.4nm,0.3s,baz=5.0,slow=9.8,SNR=5.9						
PLCA	**Paso Flores**	**7.16**	**171**		**Pn**	**11 41 44.2**	**+1.4**
PB10	**IPOC Station P**	**10.19**	**8**	Pn	**Pn**	**11 42 22.6**	**-1.7**
LVC	**Limon Verde**	**11.34**	**15**	Lg	Lg	11 45 42.0	
	comp=N,0.5nm,0.3s,baz=51,slow=14,SNR=2.9						
LVC	**Limon Verde**	**11.34**	**15**	Pn	**Pn**	**11 42 37.1**	**-3.3**
PB01	**IPOC Station P**	**12.77**	**11**	Pn	**Pn**	**11 42 55.9**	**-3.7**
CPUP	**Villa Florida**	**14.67**	**64**	Pn	**Pn**	**11 43 24.9**	**-0.8**
	comp=N,0.2nm,0.3s,baz=212,slow=15,SNR=2.3						
CPUP				Lg	Lg	11 47 27.4	
	comp=N,0.2nm,0.3s,baz=164,slow=18,SNR=2.8						
GO09	**Cerro Castillo**	**17.60**	**181**	P	**P**	**11 44 05.1**	**+0.9**
GO09				IAmb	IAmb	11 44 10.6	
	comp=Z,9.4nm,1.1s						
LPAZ	**La Paz**	**17.65**	**12**	P	**Pn**	**11 44 04.5**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=2.0,slow=25,SNR=5.4						
LPAZ	**La Paz**	**17.65**	**12**		**Pn**	**11 44 04.0**	**-0.6**
LPAZ	**La Paz**	**17.65**	**12**	P	**Pn**	**11 44 04.7**	**+0.2**
LPAZ				IAmb	IAmb	11 44 10.9	
	comp=Z,2.3nm,0.8s						
SIV	**San Ignacio**	**20.18**	**32**	P	**P**	**11 44 32.6**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=224,slow=14,SNR=3.4						
NNA	**Nana**	**22.01**	**347**	P	**P**	**11 44 53.2**	**+0.7**
NNA				IAmb	IAmb	11 44 59.0	
	comp=Z,5.2nm,0.8s						
SNAA	**Sanae**	**51.90**	**158**	P	**P**	**11 49 05.3**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=278,slow=8.5,SNR=3.8						
SNAA	**Sanae**	**51.90**	**158**	P	**P**	**11 49 05.1**	**-1.0**
SNAA				IAmb	IAmb	11 49 06.4	
	comp=Z,2.1nm,1.0s						
QSPA	**South Pole Qui**	**56.58**	**180**	P	**P**	**11 49 41.2**	**+0.8**
	comp=Z,1.8nm,0.9s,baz=103,slow=0.6,SNR=5.1						
QSPA	**South Pole Qui**	**56.58**	**180**	P	**P**	**11 49 41.5**	**+1.0**
TXAR	**Lajitas Array**	**69.44**	**331**	P	**P**	**11 51 06.7**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=155,slow=8.8,SNR=9.8						
NVAR	**Mina Array Bea**	**83.61**	**325**	P	**P**	**11 52 27.2**	**+0.8**
	comp=Z,0.3nm,0.9s,baz=166,slow=7.0,SNR=3.7						
TORD	**Torodi Ar. Bea**	**84.09**	**70**	P	**P**	**11 52 28.2**	**-1.0**
	comp=Z,0.9nm,0.7s,baz=265,slow=4.5,SNR=5.1						
ZALV	**Zalesovo Beam**	**153.93**	**32**	PKPbc	**PKPbc**	**11 59 56.4**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=283,slow=2.6,SNR=4.2						
ZALV				PKPab	**PKPab**	**12 00 10.1**	**0.0**
	comp=Z,0.6nm,0.3s,baz=318,slow=6.0,SNR=4.0						
MKAR	**Makanchi Array**	**156.53**	**48**	PKPab	**PKPab**	**12 00 20.8**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=337,slow=1.8,SNR=3.6						

JMA 04 11:41:05.0±0.1**, 37°.61N×141°.87E, h34**^{km}±3^{km}**, M3.7, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.77**	**336**	P	Pn	11 41 19.4	0.0
JIKH				S	Sn	11 41 29.0	-0.8
JMST	**Minamisoumatoc**	**0.79**	**279**	P	Pn	11 41 19.8	+0.1
JMST				S	Sn	11 41 29.9	-0.4
JFK	**Kawauchi**	**0.83**	**253**	P	Pn	11 41 20.3	0.0
JFK				S	Sn	11 41 30.8	-0.5
JMM	**Marumori**	**0.89**	**287**	P	Pn	11 41 21.5	+0.4
JMM				S	Sn	11 41 32.7	-0.1
JIO	**Ouri**	**0.94**	**334**	P	Pn	11 41 22.0	+0.2
JIO				S	Sn	11 41 33.2	-0.8
ONAJ	**Iwakimizuishiy**	**0.99**	**240**	P	Pn	11 41 22.4	-0.2
ONAJ				S	Sn	11 41 34.5	-0.9
JOU	**Okura**	**1.22**	**309**	P	Pn	11 41 26.5	+0.9
JOU				S	Sb	11 41 42.1	-0.8
JFT	**Otama**	**1.22**	**266**	P	Pb	11 41 26.9	-0.7
JFT				S	Sb	11 41 42.3	-0.8
JMK	**Ichinoseki**	**1.43**	**339**	P	Pn	11 41 29.6	+1.0
JMK				S	Sn	11 41 46.6	+0.4
MAT	**Matsushiro**	**3.12**	**251**	P	Pn	11 41 53.0	+1.2
MAT				*e*S	Sb	11 42 33.2	-4.1

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*GCG **04** 11:42:10.4±0.3, 12°.92N×90°.00W, h7^{km}±7^{km}, MD4.1*
*INET **04** 11:42:10.5, 13°.13N×89°.46W, h27^{km}, ML3.2*
*UCR **04** 11:42:10.5±1.3, 13°.23N×89°.40W, h60^{km}±5^{km}, ML3.9*
*SNET **04** 11:42:10.4±1.0, 13°.23N×89°.39W, h60^{km}±4^{km}, ML3.9*
ISC 04 11:42:11.8±1.5**, 13°.23N**±0°.07×**89°.37W**±0°.04**, h54**^{km}±8^{km}**, n69, σ0^{s}.80**/121**, 10D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.26**	**10⇓**	*e*P	**Pn**	**11 42 20.4**	**-0.6**
LALI				*e*S	**Sn**	**11 42 27.3**	**-0.2**
LALI	**Alcalda de L**	**0.26**	**10⇓**	*e*P	**Pn**	**11 42 20.4**	**-0.6**
LALI				*e*S	**Sn**	**11 42 27.3**	**-0.2**
SNET	**Serv Nac Est T**	**0.47**	**16**	*e*P	**Pn**	**11 42 22.5**	**-0.6**
SNET				*e*S	**Sn**	**11 42 32.0**	**+0.8**
SNET				IAML		11 42 34.8	
	comp=Z,7μm,0.2s						
SNET	**Serv Nac Est T**	**0.47**	**16**	*e*P	**Pn**	**11 42 22.5**	**-0.6**
SNET				*e*S	**Sn**	**11 42 32.0**	**+0.8**
SNET				IAML		11 42 34.8	
	comp=Z,7μm,0.2s						
LFRS	**El Faro**	**0.49**	**37**	*e*P	**Pn**	**11 42 22.8**	**-0.5**
UTEC	**Universidad Te**	**0.49**	**19**	*e*P	**Pn**	**11 42 22.9**	**-0.5**
UTEC	**Universidad Te**	**0.49**	**19**	*e*P	**Pn**	**11 42 22.9**	**-0.5**
UEES	**Universidad Ev**	**0.50**	**14**	*e*P	**Pn**	**11 42 22.8**	**-0.6**
UEES				*e*S	**Sn**	**11 42 32.9**	**+1.1**
UEES	**Universidad Ev**	**0.50**	**14**	*e*P	**Pn**	**11 42 22.8**	**-0.6**
UEES				*e*S	**Sn**	**11 42 32.9**	**+1.1**
OPAM	**Oficina de Pla**	**0.51**	**19**	*e*P	**Pn**	**11 42 22.8**	**-0.7**
OPAM				*e*S	**Sn**	**11 42 32.8**	**+0.9**
OPAM				IAML		11 42 36.2	
	comp=Z,7μm,0.2s						
OPAM	**Oficina de Pla**	**0.51**	**19**	*e*P	**Pn**	**11 42 22.8**	**-0.7**
OPAM				*e*S	**Sn**	**11 42 32.8**	**+0.9**
OPAM				IAML		11 42 36.2	
	comp=Z,7μm,0.2s						
BOQS	**Boqueron**	**0.51**	**10⇓**	*e*P	**Pn**	**11 42 23.2**	**-0.4**
BOQS				*e*S	**Sn**	**11 42 33.3**	**+1.1**
UESS	**Universidad de**	**0.51**	**18**	*e*P	**Pn**	**11 42 23.0**	**-0.5**
UESS				*e*S	**Sn**	**11 42 33.4**	**+1.4**
UESS	**Universidad de**	**0.51**	**18**	*e*P	**Pn**	**11 42 23.0**	**-0.5**
UESS				*e*S	**Sn**	**11 42 33.4**	**+1.4**
AEIL	**Aeropuerto Ilo**	**0.52**	**28**	*e*P	**Pn**	**11 42 23.5**	**-0.2**
AEIL				*e*S	**Sn**	**11 42 33.1**	**+0.9**
AEIL				IAML		11 42 39.0	
	comp=Z,7μm,0.2s						
AEIL	**Aeropuerto Ilo**	**0.52**	**28**	*e*P	**Pn**	**11 42 23.5**	**-0.2**
AEIL				*e*S	**Sn**	**11 42 33.1**	**+0.9**
AEIL				IAML		11 42 39.0	
	comp=Z,7μm,0.2s						
UDBS	**Universidad Do**	**0.52**	**23**	*e*P	**Pn**	**11 42 23.3**	**-0.4**
UDBS				*e*S	**Sn**	**11 42 33.1**	**+0.9**
UDBS				IAML		11 42 36.0	
	comp=Z,5μm,0.2s						
UDBS	**Universidad Do**	**0.52**	**23**	*e*P	**Pn**	**11 42 23.3**	**-0.4**
UDBS				*e*S	**Sn**	**11 42 33.1**	**+0.9**
UDBS				IAML		11 42 36.0	
	comp=Z,5μm,0.2s						
LFU	**La Fuente**	**0.57**	**26⇓**	*e*P	**Pn**	**11 42 24.0**	**-0.3**
LFU	**La Fuente**	**0.57**	**26⇓**	*e*P	**Pn**	**11 42 24.0**	**-0.3**
LBRS	**Las Brisas**	**0.59**	**32**	*e*P	**Pn**	**11 42 24.1**	**-0.4**
COEG	**Centro de Oper**	**0.61**	**51**	*e*P	**Pn**	**11 42 23.9**	**-0.9**
COEG				*e*S	**Sn**	**11 42 34.8**	**+0.7**
COEG	**Centro de Oper**	**0.61**	**51**	*e*P	**Pn**	**11 42 23.9**	**-0.9**
COEG				*e*S	**Sn**	**11 42 34.8**	**+0.7**
CEVE	**Cerro Verde**	**0.64**	**337⇓**	*e*P	**Pn**	**11 42 24.4**	**-0.8**
CEVE				*e*S	**Sn**	**11 42 34.6**	**-0.4**
CEVE				*e*S	**Sn**	**11 42 36.0**	**+0.9**
CEVE				IAML		11 42 38.5	
	comp=Z,8μm,0.2s						
CEVE	**Cerro Verde**	**0.64**	**337⇓**	*e*P	**Pn**	**11 42 24.4**	**-0.8**
CEVE				*e*S	**Sn**	**11 42 34.6**	**-0.4**
CEVE				*e*S	**Sn**	**11 42 36.0**	**+0.9**
CEVE				IAML		11 42 38.5	
	comp=Z,8μm,0.2s						
SBLS	**San Blas**	**0.65**	**338**	*e*P	**Pn**	**11 42 24.4**	**-1.0**
SBLS	**San Blas**	**0.65**	**338**	*e*P	**Pn**	**11 42 24.4**	**-1.0**
SNJE	**San Jose**	**0.68**	**340⇓**	*e*P	**Pn**	**11 42 24.8**	**-0.9**
SNJE				*e*S	**Sn**	**11 42 35.7**	**+0.1**
SNJE	**San Jose**	**0.68**	**340⇓**	*e*P	**Pn**	**11 42 24.8**	**-0.9**
SNJE				*e*S	**Sn**	**11 42 35.7**	**+0.1**
UESV	**Universidad de**	**0.69**	**54**	*e*P	**Pn**	**11 42 25.2**	**-0.4**
UESV				*e*S	**Sn**	**11 42 35.7**	**-0.1**
UESV	**Universidad de**	**0.69**	**54**	*e*P	**Pn**	**11 42 25.2**	**-0.4**
UESV				*e*S	**Sn**	**11 42 35.7**	**-0.1**
RTR	**El Retiro**	**0.71**	**338**	*e*P	**Pn**	**11 42 25.4**	**-0.7**
RTR				*e*S	**Sn**	**11 42 37.7**	**+1.2**
RTR	**El Retiro**	**0.71**	**338**	*e*P	**Pn**	**11 42 25.4**	**-0.7**
RTR				*e*S	**Sn**	**11 42 37.7**	**+1.2**
UNIC	**Universidad Ca**	**0.77**	**347**	*e*P	**Pn**	**11 42 26.1**	**-0.6**
UNIC	**Universidad Ca**	**0.77**	**347**	*e*P	**Pn**	**11 42 26.1**	**-0.6**
ALJI	**Alcalda de J**	**0.78**	**83**	*e*P	**Pn**	**11 42 26.0**	**-0.8**
ALJI				*e*S	**Sn**	**11 42 38.0**	**+0.3**
ALJI				IAML		11 42 43.6	
	comp=Z,1μm,0.3s						
ALJI	**Alcalda de J**	**0.78**	**83**	*e*P	**Pn**	**11 42 26.0**	**-0.8**
ALJI				*e*S	**Sn**	**11 42 38.0**	**+0.3**
ALJI				IAML		11 42 43.6	
	comp=Z,1μm,0.3s						
COEB	**Comit de Eme**	**0.86**	**72**	*e*P	**Pn**	**11 42 27.0**	**-0.9**
COEB				*e*S	**Sn**	**11 42 40.0**	**+0.4**
COEB	**Comit de Eme**	**0.86**	**72**	*e*P	**Pn**	**11 42 27.0**	**-0.9**
COEB				*e*S	**Sn**	**11 42 40.0**	**+0.4**
TECA	**Tecapa**	**0.88**	**73**	*e*P	**Pn**	**11 42 27.2**	**-1.0**
TECA				*e*S	**Sn**	**11 42 41.1**	**+0.7**
TECA	**Tecapa**	**0.88**	**73**	*e*P	**Pn**	**11 42 27.2**	**-1.0**
TECA				*e*S	**Sn**	**11 42 41.1**	**+0.7**
LLGN	**La Laguna**	**1.01**	**24**	*e*P	**Pn**	**11 42 29.2**	**-0.7**
LLGN				*e*S	**Sn**	**11 42 43.3**	**0.0**
LLGN				IAML		11 42 46.5	
	comp=Z,1μm,0.4s						
LLGN	**La Laguna**	**1.01**	**24**	*e*P	**Pn**	**11 42 29.2**	**-0.7**
LLGN				*e*S	**Sn**	**11 42 43.3**	**0.0**
LLGN				IAML		11 42 46.5	
	comp=Z,1μm,0.4s						
PACA	**Pacayal**	**1.04**	**77**	*e*P	**Pn**	**11 42 30.1**	**-0.2**
PACA				*e*S	**Sn**	**11 42 45.7**	**+1.6**
PACA	**Pacayal**	**1.04**	**77**	*e*P	**Pn**	**11 42 30.1**	**-0.2**
PACA				*e*S	**Sn**	**11 42 45.7**	**+1.6**
LCY	**Lacayo**	**1.06**	**79**	*e*P	**Pn**	**11 42 30.1**	**-0.5**
LCY				*e*S	**Sn**	**11 42 45.4**	**+0.9**
LCY	**Lacayo**	**1.06**	**79**	*e*P	**Pn**	**11 42 30.1**	**-0.5**
LCY				*e*S	**Sn**	**11 42 45.4**	**+0.9**
RANC	**El Ranchito**	**1.07**	**79**	*e*P	**Pn**	**11 42 30.1**	**-0.6**
RANC				*e*S	**Sn**	**11 42 45.9**	**+1.3**
RANC	**El Ranchito**	**1.07**	**79**	*e*P	**Pn**	**11 42 30.1**	**-0.6**
RANC				*e*S	**Sn**	**11 42 45.9**	**+1.3**
JUCU	**Jucuar¡n**	**1.09**	**89**	*e*P	**Pn**	**11 42 30.0**	**-0.9**
JUCU				*e*S	**Sn**	**11 42 45.9**	**+0.8**
JUCU				IAML		11 42 48.0	
	comp=Z,2μm,0.2s						
JUCU	**Jucuar¡n**	**1.09**	**89**	*e*P	**Pn**	**11 42 30.0**	**-0.9**
JUCU				*e*S	**Sn**	**11 42 45.9**	**+0.8**
JUCU				IAML		11 42 48.0	
	comp=Z,2μm,0.2s						
BLLM	**Bellamira**	**1.12**	**79**	*e*P	**Pn**	**11 42 31.1**	**-0.2**
BLLM				*e*S	**Sn**	**11 42 46.5**	**+0.8**
BLLM	**Bellamira**	**1.12**	**79**	*e*P	**Pn**	**11 42 31.1**	**-0.2**
BLLM				*e*S	**Sn**	**11 42 46.5**	**+0.8**
MTO3	**Montecristo**	**1.16**	**0**	*e*P	**Pn**	**11 42 31.1**	**-0.9**
MTO3				*e*S	**Sn**	**11 42 47.0**	**0.0**
MTO3	**Montecristo**	**1.16**	**0**	*e*P	**Pn**	**11 42 31.1**	**-0.9**
MTO3				*e*S	**Sn**	**11 42 47.0**	**0.0**
FAGO	**Alcalda de S**	**1.31**	**69**	*e*P	**Pn**	**11 42 32.8**	**-1.0**
FAGO	**Alcalda de S**	**1.31**	**69**	*e*P	**Pn**	**11 42 32.8**	**-1.0**
IXG	**Ixpaco**	**1.40**	**312⇓**	*i*P	**Pn**	**11 42 34.7**	**-0.5**
LCND	**La Caada**	**1.44**	**87**	*e*P	**Pn**	**11 42 34.9**	**-0.6**
LCND				*e*S	**Sn**	**11 42 53.7**	**+0.3**
LCND				IAML		11 42 57.7	
	comp=Z,1μm,0.3s						
LCND	**La Caada**	**1.44**	**87**	*e*P	**Pn**	**11 42 34.9**	**-0.6**
LCND				*e*S	**Sn**	**11 42 53.7**	**+0.3**
LCND				IAML		11 42 57.7	
	comp=Z,1μm,0.3s						
CNCH	**Conchagua**	**1.49**	**88**	*e*P	**Pn**	**11 42 35.8**	**-0.6**
CNCH				*e*S	**Sn**	**11 42 55.8**	**+0.9**
CNCH				IAML		11 43 01.0	
	comp=Z,4μm,0.2s						
CNCH	**Conchagua**	**1.49**	**88**	*e*P	**Pn**	**11 42 35.8**	**-0.6**
CNCH				*e*S	**Sn**	**11 42 55.8**	**+0.9**
CNCH				IAML		11 43 01.0	
	comp=Z,4μm,0.2s						
NBG	**Las Nubes**	**1.65**	**325**	*e*P	**Pn**	**11 42 40.9**	**+2.3**
MRL	**Marmol**	**1.86**	**351**	*e*P	**Pn**	**11 42 41.0**	**-0.5**
MRL	**Marmol**	**1.86**	**351**	*e*P	**Pn**	**11 42 41.0**	**-0.5**
FUG	**Fuego 3**	**1.88**	**310**	*e*P	**Pn**	**11 42 42.3**	**+0.7**
FUG				*e*S	**Sn**	**11 43 04.9**	**+0.7**
TGUH	**Tegucigalpa,Un**	**2.20**	**68**	*e*P	**Pn**	**11 42 45.0**	**-1.0**
TGUH	**Tegucigalpa,Un**	**2.20**	**68**	*e*P	**Pn**	**11 42 45.0**	**-1.0**
STG3	**Santiaguito 3,**	**2.60**	**305**	*e*S	**Sn**	**11 43 20.4**	**-1.5**

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*SJA **04** 11:55:59.7±0.5, 33°.76S×72°.82W, h40^{km}, ML3.1, MW3.3*
*GUC **04** 11:56:03.5±0.6, 33°.70S×72°.06W, h25^{km}±9^{km}, ML3.1*
ISC 04 11:56:00.2±2.0**, 33°.62S**±0°.05×**72°.22W**±0°.09**, h10**^{km}±13^{km}**, n16, σ1^{s}.42**/26**, 1C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA01	**Torpederas**	**0.77**	**39**	*e*P	**Pn**	**11 56 17.4**	**+0.5**
VA01				*i* S	**Sn**	**11 56 27.4**	**-1.1**
MT02	**Curacav**	**0.97**	**69⇓**	*i*P	**Pb**	**11 56 19.5**	**+0.3**
MT02				*i* S	**Sb**	**11 56 31.5**	**-0.5**
MT02				IAML		11 56 33.7	
	comp=E,826nm,0.7s						
ROCH	**El Roble**	**1.20**	**58⇑**	*i*P	**Pg**	**11 56 23.8**	**+0.5**
ROCH				*i* S	**Sb**	**11 56 38.7**	**-0.1**
ROCH				IAML		11 56 46.3	
	comp=N,543nm,0.4s						
PEL	**Peldehue**	**1.37**	**70⇓**	*i*P	**Pb**	**11 56 26.1**	**+0.2**
PEL				*i* S	**Sn**	**11 56 43.1**	**-0.4**
PEL				IAML		11 56 47.8	
	comp=N,651nm,0.5s						
GO05	**Huala**	**1.41**	**170**	*e*P	**Pb**	**11 56 26.3**	**-0.2**
GO05				*i* S	**Sn**	**11 56 43.6**	**-0.9**
MT03	**Universidad Ad**	**1.43**	**85**	*e*P	**Pn**	**11 56 26.4**	**+0.1**
MT03				*e*S	**Sn**	**11 56 43.7**	**-1.6**
MT03				IAML		11 56 45.2	
	comp=E,1μm,0.3s						
FCH	**Farellones**	**1.64**	**80**	*e*P	**Pn**	**11 56 30.0**	**+0.7**
FCH				*i* S	**Sn**	**11 56 50.4**	**-0.3**
FCH				IAML		11 56 51.5	
	comp=N,399nm,0.3s						
LMEL	**Las Melosas**	**1.70**	**98**	*e*P	**Pn**	**11 56 30.2**	**+0.2**
LMEL				*i* S	**Sn**	**11 56 50.4**	**-1.4**
LMEL				IAML		11 56 54.0	
	comp=N,609nm,0.2s						
LAMA	**Las Malvinas**	**2.81**	**119**	*i* P	**Pb**	**11 56 49.9**	**-0.6**
ARCO	**CERRO ARCO**	**2.86**	**75**	*e*P	**Pb**	**11 56 52.1**	**+0.7**
AAGR	**Agrelo**	**2.89**	**80**	*i* P	**Pb**	**11 56 53.1**	**+1.3**
PUMA	**Malargue**	**2.95**	**130**	*i* P	**Pb**	**11 56 52.8**	**-0.1**
RTLS	**Leoncito**	**3.06**	**54**	*e*P	**Pb**	**11 56 55.9**	**+0.9**
RTLS				*i* S	**Sg**	**11 57 36.8**	**-1.7**
RTLS				IAML		11 57 41.4	
	comp=Z,40nm,0.6s						
RTLL	**Cerro Villicun**	**3.90**	**55**	*e*P	**Pb**	**11 57 06.8**	**-2.3**
RTLL				*i* S	**Sb**	**11 57 58.4**	**+2.0**
ACCO	**Cerro Coronel**	**4.04**	**42**	*i* P	**Pb**	**11 57 08.8**	**-2.8**
AMOG	**MOGNA**	**4.14**	**51**	*e*P	**Pn**	**11 57 07.0**	**+3.5**

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*IDC **04** 11:59:14.1±0.8, 28°.72N×141°.94E, h0^{km}, mb3.5/7, mb1 3.7/8, mb1mx3.5/30, mbtmp3.4/8, ML2.5/1, Error ellipse: s-maj=31.1km s-min=16.9km az=88.0*
ISC 04 11:59:19.1±0.8**, 28°.66N**±0°.08×**141°.9E**±0°.2**, h36**^{km}**, n12, σ0^{s}.87**/10**, mb3.5**/7**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.58**	**171**	Pn	**Pn**	**11 59 44.3**	**-0.3**
	40nm,0.3s,baz=91,slow=21,SNR=9.9						
JCJ				Sn	**Sn**	**12 00 03.3**	**-0.5**
	45nm,0.3s,baz=357,slow=22,SNR=7.6						
MJAR	**Matsushiro Arr**	**8.45**	**339**	Pn	**Pn**	**12 01 18.8**	**-0.2**
	0.1nm,0.3s,baz=160,slow=12,SNR=4.0						
H11N2	**WAKE ISLAND Hy**	**24.44**	**106**	T	T	12 30 08.7	
	baz=296,slow=75,SNR=16						
H11N1	**WAKE ISLAND Hy**	**24.44**	**106**	T	T	12 30 08.9	
	baz=296,slow=75,SNR=8.5						
H11N3	**WAKE ISLAND Hy**	**24.45**	**106**	T	T	12 30 11.4	
	baz=296,slow=75,SNR=15						
ZALV	**Zalesovo Beam**	**48.15**	**318**	P	**P**	**12 07 55.5**	**+0.1**
	0.3nm,0.4s,baz=90,slow=12,SNR=2.8						
WRA	**Warramunga Arr**	**48.87**	**189**	P	**P**	**12 08 00.9**	**-0.5**
	0.7nm,0.5s,baz=7.7,slow=7.8,SNR=11						
MKAR	**Makanchi Array**	**49.29**	**309**	P	**P**	**12 08 04.2**	**-0.3**
	0.1nm,0.4s,baz=93,slow=8.7,SNR=3.9						
ASAR	**Alice Springs**	**52.59**	**189**	P	**P**	**12 08 31.3**	**+1.9**
	0.1nm,0.5s,baz=3.8,slow=5.5,SNR=3.9						
ILAR	**Eielson Array**	**56.47**	**29**	P	**P**	**12 08 57.0**	**-0.1**
	0.3nm,0.8s,baz=262,slow=6.6,SNR=4.4						
YKA	**Yellowknife Ar**	**70.89**	**29**	P	**P**	**12 10 31.5**	**-0.6**
	0.4nm,0.6s,baz=296,slow=6.0,SNR=6.3						
NVAR	**Mina Array Bea**	**79.76**	**52**	P	**P**	**12 11 24.6**	**+0.7**
	0.3nm,0.5s,baz=297,slow=5.9,SNR=3.5						

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*IDC **04** 12:00:42.2±1.5, 32°.15N×40°.36W, h0^{km}, mb3.5/6, mb1 3.8/6, mb1mx3.5/38, mbtmp3.5/6, MS3.9/2, Ms1 3.9/2, ms1mx3.5/32, Error ellipse: s-maj=55.9km s-min=21.5km az=11.0*
*NEIC **04** 12:00:43.8±1.2, 32°.2N±0°.1×40°.4W±0°.2, h10^{km}±2^{km}, mb4.1/2, Error ellipse: s-maj=34.0km s-min=11.8km az=227.0*
ISC 04 12:00:44.2±1.4**, 32°.1N**±0°.3×**40°.4W**±0°.2**, h14**^{km}**, n15, σ0^{s}.57**/8**, mb3.8**/7**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRLN	**Deer Lake**	**21.39**	**328**	P	**P**	**12 05 31.5**	**+0.1**
DRLN				IAmb	IAmb	12 05 37.8	
	comp=Z,8.6nm,0.9s						
SJG	**San Juan**	**27.11**	**245**	LR	LR	12 15 52.0	
	comp=Z,95nm,19.1s,baz=48,slow=34						
TORD	**Torodi Ar. Bea**	**42.84**	**106**	P	**P**	**12 08 42.5**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=293,slow=6.2,SNR=2.6						
H10N2	**ASCENSION HYDR**	**46.79**	**144**	T	T	12 59 12.4	
	baz=329,slow=75,SNR=12						
H10N3	**ASCENSION HYDR**	**46.80**	**144**	T	T	12 59 10.2	
	baz=329,slow=75,SNR=12						
H10N1	**ASCENSION HYDR**	**46.81**	**144**	T	T	12 59 12.2	
	baz=329,slow=75,SNR=12						
H10S3	**ASCENSION HYDR**	**47.67**	**145**	T	T	13 00 23.3	
	baz=329,slow=74,SNR=19						
H10S2	**ASCENSION HYDR**	**47.68**	**145**	T	T	13 00 24.3	
	baz=251,slow=74,SNR=15						
SIV	**San Ignacio**	**51.81**	**206**	LR	LR	12 30 09.5	
	comp=Z,291nm,18.6s,baz=98,slow=34						
AKASG	**Malin Array Be**	**53.37**	**48**	P	**P**	**12 10 02.2**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=281,slow=5.8,SNR=4.0						
TXAR	**Lajitas Array**	**53.78**	**285**	P	**P**	**12 10 06.2**	**-0.4**
	comp=Z,0.4nm,0.9s,baz=69,slow=4.9,SNR=3.8						
PDAR	**Pinedale Array**	**54.54**	**302**	P	**P**	**12 10 12.4**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=79,slow=7.7,SNR=5.9						
YKA	**Yellowknife Ar**	**54.84**	**327**	P	**P**	**12 10 14.2**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=92,slow=9.3,SNR=3.5						
TMUT	**Trail Mountain**	**56.64**	**299**	P	**P**	**12 10 27.0**	**-0.3**
BRTR	**Keskin Array B**	**58.85**	**60**	P	**P**	**12 10 43.0**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=286,slow=5.4,SNR=3.0						

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*UPA **04** 12:04:10.2±1.8, 8°.70N×84°.36W, h18^{km}±36^{km}, MW4.4*
*UCR **04** 12:04:12.3±1.7, 8°.93N×84°.20W, h16^{km}±22^{km}, MW3.7*
ISC 04 12:04:09.3±2.0**, 8°.84N**±0°.07×**84°.26W**±0°.06**, h8**^{km}±13^{km}**, n18, σ0^{s}.50**/25**, 1D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDDO	**Dominical**	**0.57**	**43**	*e*P	**Pg**	**12 04 20.9**	**+0.4**
EDDO				*e*S	**Sg**	**12 04 27.8**	**-0.1**
EDPN	**Palmar Norte**	**0.80**	**81**	*e*P	**Pb**	**12 04 26.1**	**+0.5**
EDPN				*e*S	**Sb**	**12 04 37.0**	**+0.4**
LCR2	**La Lucha 2**	**0.94**	**16**	*e*P	**Pg**	**12 04 27.1**	**-0.3**
LCR2				*e*S	**Sg**	**12 04 39.2**	**-0.4**
PTJ1	**Puerto Jimnez**	**0.99**	**107**	*e*P	**Pg**	**12 04 28.6**	**+0.1**
HDC	**Heredia**	**1.17**	**7**	*e*P	**Pg**	**12 04 31.9**	**+0.1**
HDC	**Heredia**	**1.17**	**7**	*e*P	**Pg**	**12 04 31.7**	**-0.1**
HDC				*e*S	**Sg**	**12 04 46.4**	**-0.6**
SRA1	**San Ramn**	**1.26**	**350**	*e*P	**Pg**	**12 04 33.7**	**+0.2**
SBAR3	**San Bartolo, C**	**1.46**	**111**	*e*P	**Pn**	**12 04 36.0**	**0.0**
BRU2	**Volcan**	**1.55**	**91**	*i* P	**Pb**	**12 04 38.4**	**-0.1**
	baz=282,slow=5.6						
BRU2	**Volcan**	**1.55**	**91**	*e*P	**Pb**	**12 04 38.3**	**-0.1**
JTS	**Las Juntas de**	**1.60**	**335**	*i* P	**Pn**	**12 04 38.4**	**+0.4**
JTS	**Las Juntas de**	**1.60**	**335**	*e*P	**Pn**	**12 04 37.9**	**0.0**
CEDE	**Laguna Cedeo**	**1.70**	**345**	*e*P	**Pg**	**12 04 42.1**	**+0.1**
BCO2	**Palmira**	**1.72**	**94⇓**	*i*P	**Pn**	**12 04 40.7**	**+1.0**
BCO2				*i* S	**Sb**	**12 05 03.0**	**0.0**
DVD	**David**	**1.83**	**102**	*e*P	**Pn**	**12 04 39.8**	**-1.3**
CNI2	**El Empalme, Bo**	**1.86**	**72**	*e*P	**Pn**	**12 04 41.7**	**+0.2**
CNI2				*i* S	**Sb**	**12 05 06.7**	**-0.3**
CHGR2	**Aguacate**	**2.09**	**87**	*e*P	**Pn**	**12 04 45.5**	**+0.7**
CHGR2				*i* S	**Sn**	**12 05 10.6**	**-0.4**
GB1A	**Borinquen Arri**	**2.27**	**330**	*e*P	**Pb**	**12 04 50.8**	**+0.2**

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*SOME **04** 12:07:57.7, 40°.77N×69°.75E, h10^{km}*
*KRNET **04** 12:07:58.2±0.1, 41°.06N×69°.41E, mb2.6*
*NNC **04** 12:08:04.9±3.5, 41°.06N×69°.95E, h0^{km}, mb3.4, mpv3.0, Error ellipse: s-maj=25.2km s-min=13.6km az=44.0*
ISC 04 12:07:59.3±2.3**, 40°.93N**±0°.06×**69°.3E**±0°.1**, h10**^{km}**, n13, σ1^{s}.49**/21**, 10C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**1.34**	**24⇓**	*e*P	**Pg**	**12 08 25.3**	**+0.4**
	8.7nm,0.3s						
IUG				*e*S	**Sg**	**12 08 45.0**	**+2.7**
	107nm,0.3s						
IUG	**Iuzhnay**	**1.34**	**24**	P	**Pg**	**12 08 25.3**	**+0.4**
	9.0nm,0.3s						
IUG				S	**Sb**	**12 08 39.4**	**-2.3**
	107nm,0.3s						
BTK	**Batken**	**1.45**	**126⇑**	*i*P	**Pn**	**12 08 25.6**	**0.0**
	baz=33						
BTK				⇑*i*S	**Sb**	**12 08 45.4**	**+0.4**

	baz=33						
ARK	Arkit	2.19	66	⇑iP	Pn	12 08 35.4	-0.4
	baz=69						
ARK				⇑iS	Sn	12 09 02.9	-0.1
	baz=69						
KK31	Karatay Array	2.35	22	Pn	Pb	12 08 40.8	-1.0
	3.3nm,0.4s,baz=202,slow=13,SNR=41						
KK31				⇑Sn	Sb	12 09 11.6	+0.8
	11nm,0.5s,baz=199,slow=27,SNR=20						
ARSB	Arslanbob	2.81	81	⇑iP	Pn	12 08 44.5	+0.1
	baz=83						
ARSB				⇑iS	Sn	12 09 18.3	-0.2
	baz=83						
MRKS	Merke	3.45	57	eP	Pb	12 08 58.4	-2.1
	4.5nm,0.6s						
MRKS				eS	Sb	12 09 41.9	-0.6
	9.4nm,0.6s						
MRKS	Merke	3.45	57	Pg	Pb	12 08 58.4	-2.1
	4.5nm,0.6s						
MRKS				Lg	Lg	12 09 37.3	
	9.4nm,0.6s						
ARLS	Aral	3.90	75	⇑iP	Pn	12 08 59.6	+0.3
	baz=76						
ARLS				⇑iS	Sn	12 09 44.2	-1.0
	baz=76						
AAK	Ala-Archa	4.25	65	⇓Pg	Pb	12 09 11.0	-3.1
	1.5nm,0.5s						
AAK				⇑Lg	Lg	12 10 05.0	
	3.2nm,0.7s						
DGS	Degeres	5.34	62	Pg	Pb	12 09 34.2	+1.4
	1.9nm,0.5s						
DGS				Lg	Lg	12 10 38.9	
	5.1nm,0.7s						
KST	Kastek	5.40	65	Pg	Pb	12 09 35.2	+1.5
	2.3nm,0.4s						
KST				Lg	Lg	12 10 41.0	
	5.6nm,0.4s						
KRBS	Karabastau	5.48	58	Pg	Pb	12 09 36.1	+1.1
	0.9nm,0.5s						
KRBS				Lg	Lg	12 10 41.4	
	1.6nm,0.5s						

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*IDC **04** 12:15:56.6±1.3, 33°.66S×72°.00W, h0^{km}, mb3.5/4, mb1 3.8/7, mb1mx3.7/21, mbtmp3.6/7, ML3.7/3, Error ellipse: s-maj=37.8km s-min=30.0km az=88.0*
*SJA **04** 12:15:58.6±0.7, 33°.70S×72°.02W, h20^{km}±7^{km}, ML3.8, MW4.2*
*GUC **04** 12:15:59.2±0.5, 33°.70S×71°.94W, h37^{km}±4^{km}, ML3.6*
ISC 04 12:15:58.4±1.5, **33°.67S**±0°.03×**72°.01W**±0°.05, **h9**^{km}±10^{km}, **n38,** σ**1^{s}.93**/59, **mb3.8**/3, **4C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA01	Torpederas	0.72	25	⇑iP	Pb	12 16 13.2	+0.2
VA01				i S	Sb	12 16 24.1	+1.2
VA01				IAML		12 16 25.9	
	comp=E,4µm,0.1s						
MT02	Curacav	0.84	61	eP	Pb	12 16 15.0	-0.1
MT02				i S	Sb	12 16 26.6	+0.1
MT02				IAML		12 16 29.5	
	comp=E,3µm,0.4s						
ROC1	El Roble	1.08	50	eP	Pn	12 16 20.1	+0.1
ROC1				eS	Sn	12 16 35.5	+0.3
ROCH	El Roble	1.09	50	eP	Pn	12 16 19.9	-0.2
ROCH				i S	Sn	12 16 35.1	-0.3
PEL	Peldehue	1.23	65	⇓iP	Pg	12 16 22.4	+0.5
PEL				i S	Sn	12 16 39.0	+0.5
PEL				IAML		12 16 43.7	
	comp=E,3µm,0.5s						
PEL	Peldehue	1.23	65	eP	Pg	12 16 22.5	+0.5
PEL				eS	Sn	12 16 39.9	+1.3
MT03	Universidad Ad	1.27	82	⇑eP	Pb	12 16 22.6	+0.1
MT03				eS	Sb	12 16 38.6	-0.3
GO05	Huala	1.34	177	⇑iP	Pn	12 16 22.9	-0.4
GO05				i S	Sb	12 16 40.6	-0.3
GO05				IAML		12 16 46.8	
	comp=N,1µm,0.5s						
GO05	Huala	1.34	177	eP	Pn	12 16 23.1	-0.1
GO05				eS	Sg	12 16 41.9	+0.6
FCH	Farellones	1.48	77	⇑eP	Pn	12 16 25.8	+0.3
FCH				i S	Sb	12 16 45.4	+0.2
FCH				IAML		12 16 51.8	
	comp=N,2µm,0.4s						
LMEL	Las Melosas	1.52	97	⇓iP	Pb	12 16 26.6	-0.1
LMEL				i S	Sg	12 16 47.7	+0.6
LMEL				IAML		12 16 51.0	
	comp=N,3µm,0.2s						
CO04	Los Peladeros	1.84	28	eP	Pb	12 16 31.8	-0.6
CO04				i S	Sb	12 16 56.0	+0.3
CO04				IAML		12 17 04.7	
	comp=N,1µm,0.6s						
ARCO	CERRO ARCO	2.71	73	eP	Pb	12 16 48.2	+1.1
ARCO				eS	Sg	12 17 25.4	0.0
ARCO				IAML		12 17 27.4	
	comp=Z,635nm,0.9s						
AAGR	Agrelo	2.73	78	eP	Pb	12 16 47.4	0.0
AAGR				IAML		12 17 36.6	
	comp=Z,300nm,0.8s						
ASAL	Salagasta	2.88	69	eP	Pb	12 16 49.9	0.0
ASAL				eS	Sg	12 17 29.7	-1.0
ASAL				IAML		12 17 35.7	
	comp=Z,611nm,0.8s						
RTLS	Leoncito	2.95	51	eP	Pb	12 16 51.2	-0.2
RTLS				eS	Sg	12 17 31.2	-2.0
RTLS				IAML		12 17 37.1	
	comp=Z,190nm,0.9s						
EDS3	Malargue	3.00	135	eP	Pb	12 16 52.4	+0.3
RTCV	Cerro Valdivia	3.44	59	eP	Pb	12 16 57.0	-2.4
RTCV				IAML		12 18 01.9	
	comp=Z,202nm,0.9s						
ZON	Zonda	3.52	54	i P	Pb	12 17 01.5	+0.6
ZON				eS	Sg	12 17 51.2	-0.3
ZON				IAML		12 17 59.4	
	comp=Z,220nm,0.8s						
GO04	Tololo Observa	3.64	17	eP	Pn	12 16 54.4	-0.7
GO04				eS	Sb	12 17 50.8	+3.4
ACCO	Cerro Coronel	3.96	40	eP	Pn	12 17 03.0	+3.4
ACCO				IAML		12 18 09.8	
	comp=Z,125nm,1.5s						
AMOG	MOGNA	4.04	48	eP	Pn	12 17 03.2	+2.8
AMOG				IAML		12 18 17.1	
	comp=Z,112nm,0.6s						
AROD	Rodeo	4.11	32	eP	Pn	12 17 04.3	+2.7
AROD				eS	Sb	12 18 05.5	+4.5
ACDV	Cuesta del Vie	4.27	36	eP	Pn	12 17 06.9	+3.1
ACDV				eS	Sg	12 18 11.5	-4.0
ACDV				IAML		12 18 14.3	
	comp=Z,98nm,0.9s						
ACAN	Cantantal	4.29	72	eP	Pb	12 17 10.0	-3.9
ACAN				eS	Sb	12 18 06.7	+0.9
ACAN				IAML		12 18 18.5	
	comp=Z,61nm,0.7s						
AGUA	GUANDACOL	5.14	37	eP	Pn	12 17 17.9	+2.3
AGUA				IAML		12 18 56.6	
	comp=Z,17nm,1.2s						
APLL	PUNTA DE LOS L	5.69	56	i P	Pn	12 17 26.6	+3.5
APLL				eS	Sb	12 18 39.7	-6.5
VCA	Vinchina	5.90	35	eP	Pn	12 17 27.5	+1.3
VCA				eP	Pn	12 17 27.6	+1.4
VCA				IAML		12 19 21.0	
	comp=Z,80nm,1.2s						
ACLC	CERRO LA CRUZ	6.05	47	eP	Pn	12 17 32.2	+4.1
PLCA	Paso Flores	7.14	171	Pn	Pn	12 17 44.1	+1.1
	comp=Z,0.5nm,0.3s,baz=358,slow=12,SNR=20						
PLCA				Lg	Lg	12 19 40.4	
	comp=Z,0.1nm,0.3s,baz=292,slow=18,SNR=2.7						
LVC	Limon Verde	11.36	15	Lg	Lg	12 21 44.4	
	comp=Z,0.6nm,0.3s,baz=113,slow=15,SNR=3.2						
CPUP	Villa Florida	14.66	64	Pn	Pn	12 19 26.1	0.0
	comp=Z,0.1nm,0.3s,baz=232,slow=17,SNR=2.3						
CPUP				Lg	Lg	12 23 37.2	
	comp=Z,0.1nm,0.3s,baz=291,slow=8.5,SNR=4.3						
LPAZ	La Paz	17.66	12	P	Pn	12 20 05.5	+0.2
	comp=Z,0.1nm,0.3s,baz=195,slow=8.9,SNR=3.3						
SIV	San Ignacio	20.18	32	P	P	12 20 33.6	+0.2
	comp=Z,0.3nm,0.5s,baz=225,slow=8.6,SNR=2.5						
TXAR	Lajitas Array	69.46	331	P	P	12 27 06.8	-0.3
	comp=Z,0.4nm,0.6s,baz=149,slow=8.1,SNR=5.1						
NVAR	Mina Array Bea	83.63	325	P	P	12 28 27.5	+0.2
	comp=Z,0.4nm,0.8s,baz=144,slow=5.1,SNR=3.0						
TORD	Torodi Ar. Bea	84.08	70	P	P	12 28 28.9	-1.0
	comp=Z,0.9nm,0.8s,baz=262,slow=5.6,SNR=4.1						
ZALV	Zalesovo Beam	153.94	32	PKPbc	PKPbc	12 35 56.0	-1.6
	comp=Z,0.7nm,0.5s,baz=292,slow=4.0,SNR=4.0						

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*KRNET **04** 12:24:59.5±0.1, 42°.00N×72°.10E, h14^{km}, mb2.9*
*NNC **04** 12:24:59.9±0.5, 42°.02N×72°.11E, h0^{km}, mb3.2, mpv3.0, Error ellipse: s-maj=6.7km s-min=2.0km az=169.0*
*SOME **04** 12:24:59.4, 41°.97N×72°.12E, h10^{km}*
*KNET **04** 12:25:01.9±0.6, 42°.05N×72°.27E, h3^{km}±3^{km}, ml2.4, Error ellipse: s-maj=5.1km s-min=3.2km az=154.0*
ISC 04 12:24:59.4±1.1, **41°.98N**±0°.03×**72°.13E**±0°.02, **h6**^{km}±10^{km}, **n52,** σ**1^{s}.50**/88, **31C-25D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	Arkit	0.22	214	⇑iP	Pg	12 25 04.5	+0.6
	baz=2.0						
ARK				⇑iS	Sg	12 25 08.1	+1.2
	baz=2.0						
ARSB	Arslanbob	0.92	136	⇓iP	Pb	12 25 17.3	-0.5
	baz=36						
ARSB				⇓iS	Sb	12 25 30.7	+0.5
	baz=36						
MRKS	Merke	1.11	46	⇑eP	Pg	12 25 21.2	+0.5
	baz=48						
MRKS				⇑eS	Sn	12 25 36.6	-0.7
	baz=48						
MRKS	Merke	1.11	46	⇑eP	Pg	12 25 21.2	+0.5
	15nm,0.1s						
MRKS				eS	Sn	12 25 36.6	-0.7
	54nm,0.1s						
MRKS	Merke	1.11	46	P	Pg	12 25 21.0	+0.3
	22nm,0.2s						
MRKS				S	Sn	12 25 36.7	-0.7
	49nm,0.2s						
AML	Almayashu	1.17	82	⇑iP	Pb	12 25 22.1	-0.2
	baz=83						
AML				⇑iS	Sn	12 25 38.3	-0.9
	baz=83						
AML	Almayashu	1.17	82	⇑P	Pg	12 25 22.4	+0.4
	8.8nm,0.1s,SNR=48						
AML				⇑S	Sn	12 25 38.6	-0.5
	27nm,0.2s						
EKS2	Erkin-Say	1.40	60	⇑iP	Pg	12 25 26.1	-0.1
	baz=62						
EKS2				⇑iS	Sg	12 25 45.1	+0.8
	baz=62						
EKS2	Erkin-Say	1.40	60	⇑P	Pg	12 25 26.3	+0.1
	1.7nm,0.1s,SNR=5.8						
EKS2				⇑S	Sg	12 25 45.4	+1.2
	16nm,0.3s						
IUG	Iuzhnay	1.57	277	eP	Pb	12 25 28.5	-0.4
	baz=76						
IUG				eS	Sg	12 25 49.6	-0.4
	baz=76						
IUG	Iuzhnay	1.57	277	eP	Pb	12 25 28.5	-0.4
	2.4nm,0.2s						
IUG				eS	Sg	12 25 49.6	-0.4
	108nm,0.3s						
IUG	Iuzhnay	1.57	277	P	Pb	12 25 28.5	-0.4
	2.8nm,0.2s						
IUG				S	Sg	12 25 49.6	-0.4
	108nm,0.3s						
ARLS	Aral	1.64	94	⇓iP	Pb	12 25 30.6	+0.5
	baz=94						
ARLS				⇓iS	Sg	12 25 53.3	+1.2
	baz=94						
KK31	Karatay Array	1.64	314	Pg	Pb	12 25 29.1	-1.0
	2.1nm,0.2s,baz=135,slow=17,SNR=85						
KK31				Lg	Lg	12 25 50.8	
	6.1nm,0.2s,baz=135,slow=29,SNR=13						
UCH	Uchtor	1.79	81	⇑iP	Pb	12 25 33.2	+0.4
	baz=82						
UCH				⇑iS	Sg	12 25 57.7	+0.8
	baz=82						
UCH	Uchtor	1.79	81	⇑P	Pb	12 25 33.3	+0.4
	4.9nm,0.2s,SNR=14						
AAK	Ala-Archa	1.87	69	⇑iP	Pb	12 25 34.4	+0.4
	baz=70						
AAK				⇑iS	Sg	12 25 59.7	+0.2
	baz=70						
AAK	Ala-Archa	1.87	69	⇓P	Pg	12 25 35.0	-0.2
	8.7nm,0.2s,SNR=9.3						
AAK				⇓S	Sg	12 25 59.9	+0.5
	9.0nm,0.3s						
AAK	Ala-Archa	1.87	69	⇓Pg	Pg	12 25 34.7	-0.5
	4.6nm,0.3s						
AAK				⇑Lg	Lg	12 26 01.5	
	13nm,0.6s						
FRU1	Bishkek	2.03	65	⇓iP	Pb	12 25 36.8	+0.1
	baz=66						
FRU1				⇓iS	Sg	12 26 04.0	-0.5
	baz=66						
BTK	Batken	2.17	208	⇓iP	Pb	12 25 38.8	-0.2
	baz=7.0						
BTK				⇓iS	Sg	12 26 07.5	-1.4
	baz=7.0						
USP	Ospenovka	2.17	53	⇓iP	Pb	12 25 38.8	-0.3
	baz=54						
USP				⇓iS	Sg	12 26 07.5	-1.5
	baz=54						
USP	Ospenovka	2.17	53	⇓P	Pb	12 25 39.3	+0.2
	7.3nm,0.3s,SNR=10						
USP				⇑S	Sg	12 26 08.7	-0.3
	42nm,0.2s						
CHMS	Chumysh	2.19	61	⇓iP	Pb	12 25 38.9	-0.5
	baz=62						
CHMS				⇓iS	Sb	12 26 08.0	+1.3
	baz=62						
CHMS	Chumysh	2.19	61	⇓P	Pg	12 25 40.3	-1.0
	5.3nm,0.3s,SNR=5.3						
CHMS				⇓S	Sg	12 26 09.8	+0.2
	52nm,0.4s						
CHMS	Chumysh	2.19	61	⇓Pg	Pb	12 25 40.0	+0.6
	3.5nm,0.4s						
CHMS				⇑Lg	Lg	12 26 09.4	
	7.5nm,0.3s						
KBK	Karagaybulak	2.19	71	⇓iP	Pb	12 25 39.4	-0.2
	baz=72						
KBK				⇓iS	Sb	12 26 08.4	+1.3
	baz=72						
KBK	Karagaybulak	2.19	71	⇓P	Pg	12 25 41.1	-0.4
	12nm,0.3s,SNR=11						
KZA	Kyzart	2.32	87	⇑iP	Pb	12 25 41.3	-0.6
	baz=87						
KZA				⇑iS	Sb	12 26 12.1	+1.1
	baz=87						
KZA	Kyzart	2.32	87	⇑P	Pg	12 25 43.6	-0.4
	10nm,0.3s,SNR=9.3						
SGDS	Sogindy	2.35	51	Pg	Pb	12 25 42.4	+0.1
	5.8nm,0.6s						
SGDS				Lg	Lg	12 26 14.0	
	34nm,0.2s						
BOOM	Boomskoye usch	2.87	79	⇑iP	Pb	12 25 48.6	-2.5
	baz=79						
BOOM				⇑iS	Sb	12 26 24.5	-2.1
	baz=79						
NRN	Naryn	2.95	99	⇑iP	Pb	12 25 49.6	-2.9
	baz=0.0						
NRN				⇑iS	Sb	12 26 26.6	-2.3
	baz=0.0						
DGS	Degeres	2.97	64	eP	Pb	12 25 54.3	+1.6
	2.5nm,0.3s						
DGS				eS	Sg	12 26 33.9	-0.7
	24nm,0.6s						
DGS	Degeres	2.97	64	Pg	Pb	12 25 54.3	+1.6
	2.5nm,0.3s						
DGS				Lg	Lg	12 26 34.3	
	28nm,0.4s						
KST	Kastek	3.02	68	eP	Pb	12 25 54.1	+0.4
	3.0nm,0.4s						
KST				eS	Sb	12 26 33.5	+2.6
	32nm,0.6s						
KST	Kastek	3.02	68	Pg	Pb	12 25 54.1	+0.4
	3.0nm,0.4s						
KST				Lg	Lg	12 26 33.7	
	19nm,0.7s						
ULHL	Ulahol	3.07	84	⇑iP	Pb	12 25 51.2	-3.3
	baz=84						
ULHL				⇑iS	Sb	12 26 29.4	-2.9
	baz=84						
KRBS	Karabastau	3.12	55	eP	Pb	12 25 56.4	+1.2
	1.1nm,0.2s						
KRBS				eS	Sg	12 26 37.3	-2.2
	9.8nm,0.4s						
KRBS	Karabastau	3.12	55	Pg	Pb	12 25 56.4	+1.2
	1.6nm,0.5s						
KRBS				Lg	Lg	12 26 37.3	
	9.8nm,0.4s						
BTLS	Baital	3.36	24	eP	Pb	12 26 00.5	+1.2
	0.8nm,0.2s						
BTLS				eS	Sg	12 26 44.4	-2.9
	10nm,0.4s						
BTLS	Baital	3.36	24	Pg	Pb	12 26 00.5	+1.2
	0.8nm,0.2s						
BTLS				Lg	Lg	12 26 44.8	
	10nm,0.4s						
KUU	Kurty	3.63	57	eP	Pb	12 26 05.9	+1.9
	0.9nm,0.2s						
KUU				eS	Sg	12 26 53.5	-2.5
	12nm,0.4s						
KUU	Kurty	3.63	57	Pg	Pb	12 26 05.9	+1.9
	0.9nm,0.2s						
KUU				Lg	Lg	12 26 53.5	
	12nm,0.4s						
TNSS	Tian-Shan	3.71	72	eP	Pb	12 26 07.9	+2.3
	2.0nm,0.3s						
TNSS				eS	Sg	12 26 56.8	-1.8
	12nm,0.4s						
TNSS	Tian-Shan	3.71	72	Pg	Pb	12 26 07.9	+2.3
TNSS				Lg	Lg	12 26 56.8	
KDJ	Kajisay	3.76	86	⇓iP	Pn	12 26 01.1	+3.0
	baz=86						
KDJ				⇓iS	Sn	12 26 46.8	+4.0
	baz=86						
MDOK	Medeo	3.82	70	eP	Pg	12 26 10.0	-2.6
	1.5nm,0.4s						
MDOK				eS	Sg	12 27 00.6	-1.4
	8.8nm,0.7s						
MDOK	Medeo	3.82	70	Pg	Pg	12 26 10.0	-2.6
	1.5nm,0.4s						
MDOK				Lg	Lg	12 27 00.6	
	8.8nm,0.7s						
CHKK	Chushkaly	4.03	61	eP	Pb	12 26 13.2	+2.5
	0.9nm,0.1s						
CHKK				eS	Sg	12 27 06.1	-2.6
	9.4nm,0.3s						
CHKK	Chushkaly	4.03	61	Pg	Pb	12 26 13.2	+2.5
	0.9nm,0.1s						
CHKK				Lg	Lg	12 27 06.1	
	9.0nm,0.3s						
MK31	Makanchi Array	8.72	53	⇓Pn	Pn	12 27 05.1	-0.9
	0.1nm,0.3s,baz=231,slow=12,SNR=4.4						
MK31				⇑Lg	Lg	12 29 33.3	
	1.3nm,0.7s						

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*UCR **04** 12:25:49.7±1.4, 12°.52N×87°.81W, h60^{km}±17^{km}, ML3.6*
*INET **04** 12:25:49.5, 12°.47N×87°.71W, h59^{km}, ML4.3*
*SNET **04** 12:25:49.7±1.2, 12°.52N×87°.82W, h57^{km}±16^{km}, ML3.6*
ISC 04 12:25:49.1±3.6, **12°.4N**±0°.2×**87°.77W**±0°.08, **h52**^{km}±31^{km}, **n36,** σ**0^{s}.54**/64, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.83	355	eP	Pn	12 26 04.4	-0.3
CNCH				eS	Sn	12 26 17.5	+1.3
CNCH	Conchagua	0.83	355	eP	Pn	12 26 04.4	-0.3
CNCH				eS	Sn	12 26 17.5	+1.3
LCND	La Caada	0.87	352	eP	Pn	12 26 04.7	-0.5
LCND				eS	Sn	12 26 16.8	0.0
LCND	La Caada	0.87	352	eP	Pn	12 26 04.7	-0.5
LCND				eS	Sn	12 26 16.8	0.0
JUCU	Jucuar¡n	0.93	330	eP	Pn	12 26 05.5	-0.5
JUCU				eS	Sn	12 26 18.6	+0.2
JUCU				IAML		12 26 22.4	
	comp=Z,3µm,0.3s						
JUCU	Jucuar¡n	0.93	330	eP	Pn	12 26 05.5	-0.5
JUCU				eS	Sn	12 26 18.6	+0.2
JUCU				IAML		12 26 22.4	
	comp=Z,3µm,0.3s						
BLLM	Bellamira	1.09	335	eP	Pn	12 26 07.9	-0.3
BLLM				eS	Sn	12 26 22.2	-0.2
BLLM	Bellamira	1.09	335	eP	Pn	12 26 07.9	-0.3
BLLM				eS	Sn	12 26 22.2	-0.2
VSM	San Miguel	1.10	333	eP	Pn	12 26 08.8	+0.4
VSM				eS	Sn	12 26 23.9	+1.2
VSM	San Miguel	1.10	333	eP	Pn	12 26 08.8	+0.4
VSM				eS	Sn	12 26 23.9	+1.2
LCY	Lacayo	1.10	332	eP	Pn	12 26 08.2	-0.1
LCY				eS	Sn	12 26 23.0	+0.4
LCY	Lacayo	1.10	332	eP	Pn	12 26 08.2	-0.1
LCY				eS	Sn	12 26 23.0	+0.4
PACA	Pacayal	1.15	332	eP	Pn	12 26 08.9	-0.1
PACA				eS	Sn	12 26 24.1	+0.2
PACA	Pacayal	1.15	332	eP	Pn	12 26 08.9	-0.1
PACA				eS	Sn	12 26 24.1	+0.2
ALJI	Alcalda de J	1.18	318	eP	Pn	12 26 08.9	-0.4
ALJI				eS	Sn	12 26 23.2	-1.1
ALJI				IAML		12 26 25.0	
	comp=Z,2µm,0.2s						
ALJI	Alcalda de J	1.18	318	eP	Pn	12 26 08.9	-0.4
ALJI				eS	Sn	12 26 23.2	-1.1
ALJI				IAML		12 26 25.0	
	comp=Z,2µm,0.2s						
TECA	Tecapa	1.27	326	eP	Pn	12 26 10.3	-0.4
TECA				eS	Sn	12 26 25.8	-0.9
TECA	Tecapa	1.27	326	eP	Pn	12 26 10.3	-0.4
TECA				eS	Sn	12 26 25.8	-0.9
COEB	Comit de Eme	1.28	325	eP	Pn	12 26 10.6	-0.2
COEB				eS	Sn	12 26 26.3	-0.7
COEB	Comit de Eme	1.28	325	eP	Pn	12 26 10.6	-0.2
COEB				eS	Sn	12 26 26.3	-0.7
FAGO	Alcalda de S	1.29	345	eP	Pn	12 26 10.4	-0.3
FAGO				eS	Sn	12 26 27.4	+0.5
FAGO				IAML		12 26 31.8	
	comp=Z,250nm,0.3s						
FAGO	Alcalda de S	1.29	345	eP	Pn	12 26 10.4	-0.3
FAGO				eS	Sn	12 26 27.4	+0.5
FAGO				IAML		12 26 31.8	
	comp=Z,250nm,0.3s						
COEG	Centro de Oper	1.59	317	eP	Pn	12 26 14.9	-0.1
COEG				eS	Sn	12 26 34.5	0.0
COEG				IAML		12 26 39.2	
	comp=Z,1µm,0.3s						
COEG	Centro de Oper	1.59	317	eP	Pn	12 26 14.9	-0.1
COEG				eS	Sn	12 26 34.5	0.0
COEG				IAML		12 26 39.2	
	comp=Z,1µm,0.3s						
TGUH	Tegucigalpa,Un	1.67	17	eP	Pn	12 26 16.1	0.0
TGUH				eS	Sn	12 26 36.0	-0.5
TGUH	Tegucigalpa,Un	1.67	17	eP	Pn	12 26 16.1	0.0
TGUH				eS	Sn	12 26 36.0	-0.5
LFRS	El Faro	1.72	313	eP	Pn	12 26 16.9	+0.1
LFRS				eS	Sn	12 26 37.6	-0.1
LBRS	Las Brisas	1.79	316	eP	Pn	12 26 18.2	+0.6
LBRS				eS	Sn	12 26 39.6	+0.3
LFU	La Fuente	1.85	315	eP	Pn	12 26 19.1	+0.7
LFU	La Fuente	1.85	315	eP	Pn	12 26 19.1	+0.7
SBLS	San Blas	2.28	308	eP	Pn	12 26 25.1	+0.6
SBLS	San Blas	2.28	308	eP	Pn	12 26 25.1	+0.6
MTO3	Montecristo	2.49	322	eP	Pn	12 26 27.3	0.0
MTO3	Montecristo	2.49	322	eP	Pn	12 26 27.3	0.0
IXG	Ixpaco	3.12	304	eP	Pn	12 26 36.0	0.0
IXG	Ixpaco	3.12	304	eP	Pn	12 26 36.0	0.0

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*MEX **04** 12:30:54.5±0.5, 14°.78N×92°.41W, h86^{km}±4^{km}, MD3.7*
*GCG **04** 12:30:55.2±0.6, 15°.35N×92°.22W, h62^{km}±55^{km}, MD3.8*
ISC 04 12:30:55.9±1.7, **14°.88N**±0°.10×**92°.46W**±0°.08, **h68**^{km}±11^{km}, **n8,** σ**0^{s}.66**/16, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.19	83	eP	Pn	12 31 05.9	-0.3
THIG				eS	Sn	12 31 13.8	0.0
STG3	Santiaguito 3,	0.88	101	eP	Pn	12 31 12.6	-0.3
STG3				eS	Sn	12 31 26.2	+0.6
PCIG		1.09	318	eP	Pn	12 31 15.1	-0.4
PCIG				eS	Sn	12 31 31.1	+1.0
CCIG	Comitan	1.43	13	i P	Pn	12 31 19.4	-0.6
CCIG				i S	Sn	12 31 38.4	+0.3
FUG	Fuego 3	1.63	105	eP	Pn	12 31 21.7	-1.0
FUG				eS	Sn	12 31 43.1	+0.3
TGIG		1.99	341	i P	Pn	12 31 27.6	+0.2
TGIG				i S	Sn	12 31 51.4	0.0
IXG	Ixpaco	2.08	110	eP	Pn	12 31 28.9	+0.2
IXG				eS	Sn	12 31 54.5	+0.7
CMIG	Matias Romero	3.20	314	i P	Pn	12 31 42.9	-0.9
CMIG				i S	Sn	12 32 21.6	+0.8

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*SKHL **04** 12:41:19.1±0.7, 42°.95N×145°.86E, h36^{km}±1^{km}, mb3.8/1*

*JMA **04** 12:41:19.0±0.1, 43.°00N×145.°83E, h43^{km}±1^{km}, M2.5*
ISC 04 12:41:19.3±1.9**, 42.°98N**±0.°08×**145.°85E**±0.°06**, h34**^{km}±2^{km}**,**
n13, σ0^{s}.89/25**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.39	349	P	Pb	12 41 28.2	-0.1
NEM2				*e*S	Sb	12 41 34.5	0.0
NMR	Nemuro--Hokkai	0.40	347	*e*P	Pb	12 41 28.3	-0.1
NMR				*e*S	Sb	12 41 34.6	-0.1
JKHN	Kushirohamanak	0.51	282	P	Pb	12 41 30.0	-0.1
JKHN				*e*S	Sb	12 41 37.9	+0.3
JAK	Akkeshi	0.84	271	P	Pn	12 41 34.4	-0.3
JAK				*e*S	Sn	12 41 45.8	-0.1
JNSB	Nemuroshibetsu	1.00	323	P	Pn	12 41 36.5	-0.5
JNSB				*e*S	Sn	12 41 49.5	-0.4
JNK	Nakash	1.02	307	P	Pn	12 41 36.7	-0.5
JNK				*e*S	Sn	12 41 49.0	-1.4
YUK	Yuzh-Kuril'sk	1.05	1	*e*P	Pn	12 41 37.4	-0.2
YUK				AMB	AMB	12 41 39.2	
	20nm,0.2s						
YUK				*e*S	Sn	12 41 51.4	+0.3
YUK				A	A	12 41 51.9	
	120nm,0.2s						
YUK				A	A	12 41 51.9	
	130nm,0.2s						
JRA	Rausu	1.09	331	P	Pn	12 41 37.8	-0.4
JRA				*e*S	Sn	12 41 51.4	-0.7
SHO	Shikotan	1.14	38	*e*P	Pn	12 41 37.5	-1.3
SHO				*e*S	Sn	12 41 51.8	-1.5
SHO				A	A	12 41 53.6	
	100nm,0.3s						
SHO				A	A	12 41 53.6	
	130nm,0.3s						
JOB	Onbets	1.48	268	P	Pn	12 41 43.2	-0.3
JOB				*e*S	Sn	12 42 01.8	+0.2
JAR	Ashorobuto	1.55	282	P	Pn	12 41 44.5	0.0
JTKR	Abashiri--Toko	1.72	306	P	Pn	12 41 47.6	+0.8
JTKR				*e*S	Sn	12 42 09.4	+1.7
KUR	Kuril'sk	2.68	32	*e*P	Pn	12 42 01.6	+1.6
KUR				*e*S	Sn	12 42 32.9	+1.6
KUR				A	A	12 42 37.6	
	20nm,0.3s						
KUR				A	A	12 42 37.6	
	10.0nm,0.3s						

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*IDC **04** 12:42:41.4±1.9, 51.°42N×176.°13W, h0^{km}, mb3.2/7, mb1 3.6/9, mb1mx3.4/47, mbtmp3.5/9, ML3.4/2, Error ellipse: s-maj=53.9km s-min=19.4km az=178.0*
*NEIC **04** 12:42:44.4±1.3, 51.°04N±0.°06×176.°08W±0.°07, h30^{km}±7^{km}, Error ellipse: s-maj=9.3km s-min=3.9km az=213.0*
*AEIC **04** 12:42:44.4±1.5, 51.°07N±0.°05×176.°03W±0.°06, h25^{km}±3^{km}, ML3.3/23, mb3.7/24(NEIC), Error ellipse: s-maj=7.2km s-min=4.7km az=202.0*
ISC 04 12:42:44.0±1.0**, 51.°01N**±0.°08×**176.°14W**±0.°05**, h28**^{km}**, n59,**
σ1^{s}.36/61**, mb3.5**/8**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETKA	Kagalaska Isla	0.87	349		Pb	12 42 59.5	-1.0
ADK	Adak	0.94	339		Pn	12 43 00.1	-1.2
ADK				Sg	Sb	12 43 13.2	-0.6
ADAG	Mount Adagdak	1.02	344		Pn	12 43 02.4	0.0
KIMD	Kanaga Island	1.02	318		Pn	12 43 02.2	-0.2
GSMY	Great Sitkin M	1.04	3		Pn	12 43 02.4	-0.3
GSTD	Great Sitkin T	1.05	360		Pn	12 43 02.6	-0.3
GSTD					Sb	12 43 17.4	+0.5
KIKV	Kanaga Island	1.09	324		Pn	12 43 03.4	0.0
KIKV					Sb	12 43 18.4	+0.5
GSTR	Great Sitkin T	1.09	3		Pn	12 43 03.0	-0.4
KICM	Kanaga Island	1.13	324		Pn	12 43 04.1	+0.2
TAPA	Tanaga Point A	1.33	308		Pn	12 43 06.8	+0.2
TASE	Tanaga Southea	1.45	306		Pn	12 43 09.0	+0.6
TAFP	Tanaga Falls P	1.46	308		Pn	12 43 08.8	+0.4
TAFP					Sb	12 43 29.2	+0.6
ATKA	Atka Island	1.70	45		Pn	12 43 10.6	-1.2
ATKA	Atka Island	1.70	45		Sn	12 43 31.2	-1.4
KOKL	Mount Kliuchef	1.79	42		Pn	12 43 12.7	-0.3
KOFP	Korovin Flat P	1.80	44		Pn	12 43 12.1	-1.0
NIKH	Nikolski High	4.91	64		Pn	12 43 56.5	+0.6
OKWE	Okmok W’ng Wal	5.44	60		Pn	12 44 04.5	+1.4
UNV	Unalaska Valle	6.54	61	Pn	Pn	12 44 18.2	0.0
SPIA	Saint Paul Isl	7.08	27	Pn	Pn	12 44 28.6	+3.0
FALS	False Pass	8.59	58	Pn	Pn	12 44 45.6	-0.7
CNBA	Chernabura Isl	10.69	63	Pn	Pn	12 45 14.5	-0.6
OHAK	Old Harbor	14.73	56	Pn	Pn	12 46 06.5	-3.6
KDAK	Kodiak Island	15.25	54	Pn	Pn	12 46 14.1	-3.0
	0.3nm,0.3s,baz=288,slow=5.6,SNR=8.9						
KDAK				Sn	Sn	12 49 10.3	+5.4
	0.1nm,0.3s,baz=135,slow=20,SNR=5.9						
KDAK	Kodiak Island	15.25	54		Pn	12 46 14.3	-2.8
PETK	Petropavlovsk-	16.20	288	Pn	Pn	12 46 30.8	+1.4
	0.5nm,0.3s,baz=88,slow=13,SNR=16						
CNPM	China Poot	16.47	49	Pn	Pn	12 46 31.5	-1.3
BRLK	Bradley Lake	16.72	49	Pn	Pn	12 46 33.4	-2.5
BRLK				IAmb	IAmb	12 46 40.4	
	comp=Z,9.1nm,1.1s						
SKT	Skwentna	17.34	41		P	12 46 44.9	0.0
SKT				IAmb	IAmb	12 46 55.3	
	comp=Z,8.5nm,1.5s						
SUA	Susitna One	17.45	43	Pn	Pn	12 46 43.5	-1.6
GHO	Glory Hole Cre	18.37	44	P	P	12 46 55.5	-0.7
GHO				IAmb	IAmb	12 47 06.8	
	comp=Z,7.6nm,1.4s						
KTH	Kantishna Hill	18.37	37	P	Pn	12 46 56.9	+0.5
TRF	Thorofare Moun	18.56	38	P	P	12 46 58.2	-0.3
TRF				IAmb	IAmb	12 47 03.0	
	comp=Z,7.7nm,1.4s						
BPAW	Bear Paw Mtn.	18.64	36	P	Pn	12 46 59.3	-0.3
SML	Sawmill	18.64	44	P	P	12 46 58.2	-1.0
SML				IAmb	IAmb	12 46 59.7	
	comp=Z,6.1nm,1.0s						
SCM	Sheep Creek Mo	19.09	44	P	P	12 47 03.6	-0.6
SCM				IAmb	IAmb	12 47 11.9	
	comp=Z,6.3nm,1.2s						
RND	Reindeer	19.11	39	P	P	12 47 04.3	-0.1
MCK	McKinley	19.23	38	P	Pn	12 47 06.1	-0.6
MLY	Manley	19.25	34	P	P	12 47 06.1	+0.2
MLY				IAmb	IAmb	12 47 17.5	
	comp=Z,5.4nm,1.4s						
EYAK	Cordova Ski Ar	19.40	49	P	P	12 47 07.7	+0.2
DHY	Denali Highway	19.56	41	P	P	12 47 09.3	0.0
DHY				IAmb	IAmb	12 47 28.0	
	comp=Z,7.5nm,1.5s						
WRH	Wood River Hil	19.91	37	P	P	12 47 12.4	-0.7
WRH				IAmb	IAmb	12 47 24.3	
	comp=Z,5.3nm,1.4s						
CCB	Clear Creek Bu	20.11	36	P	P	12 47 14.9	-0.2
HDA	Harding Lake	20.32	38	P	P	12 47 16.6	-0.9
ILAR	Eielson Array	20.51	37	P	P	12 47 17.8	-1.8
	comp=Z,0.2nm,0.5s,baz=231,slow=9.8,SNR=7.2						
GLB	Gilahina Butte	20.56	47	P	P	12 47 20.8	+0.6
DOT	Dot Lake	21.16	41	P	P	12 47 26.5	0.0
DOT				IAmb	IAmb	12 47 36.3	
	comp=Z,2.2nm,0.7s						
SCRK	Sand Creek	21.31	40	P	P	12 47 28.2	-0.1
SCRK				IAmb	IAmb	12 47 39.1	
	comp=Z,2.9nm,0.8s						
EGAK	Eagle	22.75	39	P	P	12 47 44.0	+0.4
INK	Inuvik	26.82	34	P	P	12 48 19.7	-1.6
	comp=Z,0.3nm,0.4s,baz=168,slow=2.5,SNR=4.4						
INK	Inuvik	26.82	34	P	P	12 48 20.6	-0.8
INK				IAmb	IAmb	12 48 25.4	
	comp=Z,2.3nm,1.4s						
H11N2	WAKE ISLAND Hy	33.97	209	T	T	13 25 54.2	
	baz=18,slow=76,SNR=6.0						
H11N3	WAKE ISLAND Hy	33.97	209	T	T	13 26 21.7	
	baz=18,slow=76,SNR=5.5						
H11N1	WAKE ISLAND Hy	33.98	209	T	T	13 26 08.7	
	baz=18,slow=76,SNR=3.7						
YKA	Yellowknife Ar	34.27	46	P	P	12 49 26.9	-0.3
	comp=Z,0.2nm,0.6s,baz=284,slow=7.9,SNR=3.0						
NVAR	Mina Array Bea	41.93	84	P	P	12 50 33.0	+0.7
	comp=Z,0.3nm,0.7s,baz=331,slow=7.2,SNR=2.9						
PDAR	Pinedale Array	44.82	73	P	P	12 50 56.7	+1.2
	comp=Z,0.4nm,0.7s,baz=294,slow=5.6,SNR=4.6						
SONM	Songino Array	48.30	298	P	P	12 51 23.0	+0.4
	comp=Z,0.2nm,0.3s,baz=50,slow=13,SNR=3.1						
MKAR	Makanchi Array	61.57	310	P	P	12 52 57.3	-1.1
	comp=Z,0.2nm,0.5s,baz=45,slow=6.8,SNR=5.5						

NNC 04 12:45:49.9±9.7**, 37.°35N**×**70.°72E, h0**^{km}**, mb3.7, mpv3.5,**
2C-2D, Error ellipse: s-maj=96.8km s-min=52.0km
az=155.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.75	358	⇑P	Pn	12 47 18.1	+1.6
	1.2nm,0.3s,baz=182,slow=14,SNR=31						
KK31				S	Sn	12 48 27.2	+4.0
	1.8nm,0.3s,baz=182,slow=22,SNR=4.0						
AAK	Ala-Archa	6.03	28	⇑P	Pn	12 47 19.9	-0.5
	3.8nm,0.5s						
AAK				⇓S	Sn	12 48 30.0	-0.1
	1.7nm,0.6s						
AB31	Akbulak array	14.23	330	⇓P	Pn	12 49 11.1	-1.5
	0.3nm,0.4s,baz=139,slow=13,SNR=18						

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*IDC **04** 13:05:36.1±8.0, 31.°19S×179.°87E, h450^{km}±100^{km}, mb2.7/2, mb1 3.1/3, mb1mx2.9/20, mbtmp3.8/3, Error ellipse: s-maj=99.3km s-min=44.9km az=7.0*
ISC 04 13:05:38.1±3.9**, 31.°2S**±0.°2×**179.°6E**±0.°5**, h450**^{km}**, n17,**
σ1^{s}.13/17**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	6.68	188	P	P	13 07 20.3	+1.0
HAZ	Te Kaha	6.71	193	P	P	13 07 19.9	+0.2
PKGZ	Pakihiroa	6.79	190	P	P	13 07 21.6	+1.0
RUGZ	Raukumara Rang	6.94	193	P	P	13 07 22.6	+0.4
PUZ	Puketiti	6.95	189	P	P	13 07 22.2	0.0
TWGZ	Tauwhareparae	7.09	191	P	P	13 07 25.2	+1.5
OPRZ	Ohinepanea	7.09	200	P	P	13 07 26.7	+3.0
MWZ	Matawai	7.32	193	P	P	13 07 26.5	+0.3
URZ	Urewera	7.34	196	P	P	13 07 25.7	-0.6
	5.7nm,0.3s,baz=303,slow=2.1,SNR=43						
URZ				S	S	13 08 53.9	-1.1
	0.8nm,0.3s,baz=265,slow=23,SNR=11						
URZ	Urewera	7.34	196	P	P	13 07 26.1	-0.2
TKGZ	Te Karaka	7.37	191	P	P	13 07 26.5	-0.1
RAGZ	Rawiri	7.50	193	P	P	13 07 28.7	+0.6
MUGZ	Murupara	7.63	197	P	P	13 07 30.7	+1.3
RIGZ	Rimuhau	7.64	191	P	P	13 07 30.0	+0.4
ASAR	Alice Springs	41.04	269	P	P	13 12 40.7	-0.4
	0.2nm,0.3s,baz=107,slow=7.5,SNR=14						
WRA	Warramunga Arr	42.10	274	P	P	13 12 48.9	-0.6
	0.4nm,0.3s,baz=112,slow=7.8,SNR=7.7						
FINES	FINESS Array B	145.16	338	PKPbc	PKPbc	13 24 20.6	-2.8
	0.9nm,0.9s,baz=64,slow=3.2,SNR=3.9						

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*SJA **04** 13:21:29.2±0.8, 33.°77S×72.°70W, h30^{km}, ML3.5, MW3.8*
*GUC **04** 13:21:32.0±1.1, 33.°65S×72.°06W, h28^{km}±58^{km}, ML3.3*
ISC 04 13:21:27.5±1.7**, 33.°60S**±0.°04×**72.°19W**±0.°07**, h4**^{km}±12^{km}**,**
n17, σ1^{s}.07/28**, 3C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA01	Torpederas	0.73	38	*e*P	Pn	13 21 45.3	+0.6
VA01				*i* S	Sb	13 21 54.8	+1.5
VA01				IAML		13 21 58.1	
	comp=N,2µm,0.8s						
MT02	Curacav	0.94	69	*e*P	Pn	13 21 47.7	+0.1
MT02				*i* S	Sb	13 21 59.2	-0.1
MT02				IAML		13 22 02.4	
	comp=E,2µm,0.7s						
ROCH	El Roble	1.17	58	*e*P	Pn	13 21 51.9	+1.0
ROCH				*i* S	Sb	13 22 06.5	+0.4
ROCH				IAML		13 22 10.0	
	comp=N,1µm,0.3s						
PEL	Peldehue	1.34	71	⇑*i*P	Pg	13 21 53.8	+0.7
PEL				*i* S	Sb	13 22 10.5	-0.3
PEL				IAML		13 22 15.2	
	comp=E,1µm,0.4s						
MT03	Universidad Ad	1.41	86	⇑*e*P	Pn	13 21 54.2	+0.1
MT03				*i* S	Sb	13 22 12.0	-0.8
MT03				IAML		13 22 14.4	
	comp=E,2µm,0.4s						
GO05	Huala	1.42	171	⇑*i*P	Pg	13 21 55.4	+0.6
GO05				*i* S	Sb	13 22 12.8	-0.5
GO05				IAML		13 22 20.8	
	comp=E,589nm,0.5s						
FCH	Farellones	1.61	81	*e*P	Pg	13 21 59.0	+0.6
FCH				*i* S	Sn	13 22 18.7	+0.2
FCH				IAML		13 22 21.1	
	comp=E,628nm,0.2s						
LMEL	Las Melosas	1.67	99	*e*P	Pb	13 21 58.9	-0.1
LMEL				*e*S	Sn	13 22 19.7	-0.2
LMEL				IAML		13 22 23.7	
	comp=N,2µm,0.3s						
CO04	Los Peladeros	1.86	34	*e*P	Pg	13 22 03.7	+0.6
CO04				*i* S	Sg	13 22 27.5	+0.3
AAGR	Agrelo	2.86	81	*e*P	Pg	13 22 22.1	-0.2
AAGR				IAML		13 23 20.7	
	comp=Z,147nm,0.5s						
ASAL	Salagasta	2.99	71	*e*P	Pg	13 22 24.0	-0.8
ASAL				*e*S	Sg	13 23 04.9	+1.4
ASAL				IAML		13 23 08.3	
	comp=Z,156nm,0.9s						
RTLS	Leoncito	3.03	54	*e*P	Pg	13 22 24.5	-1.1
RTLS				*e*S	Sg	13 23 05.6	+0.8
RTLS				IAML		13 23 28.7	
	comp=Z,36nm,0.5s						
ACCO	Cerro Coronel	4.00	42	*e*P	Pg	13 22 42.2	-2.1
ACCO				IAML		13 23 56.2	
	comp=Z,46nm,0.6s						
AMOG	MOGNA	4.10	51	*e*P	Pb	13 22 39.3	-1.1
AMOG				*e*S	Sb	13 23 32.7	+2.3
AMOG				IAML		13 23 43.1	
	comp=Z,58nm,0.3s						
ACDV	Cuesta del Vie	4.30	38	*e*P	Pb	13 22 42.9	-0.9
ACDV				IAML		13 24 06.9	
	comp=Z,39nm,0.9s						
ACAN	Cantantal	4.41	74	*e*P	Pb	13 22 43.4	-2.2
ACAN				IAML		13 24 41.5	
	comp=Z,19nm,0.8s						
AGUA	GUANDACOL	5.17	39	*e*P	Pb	13 22 53.7	-5.0

LJU 04 13:54:11.3, 45.°74N×**14.°88E, h2**^{km}**, ML0.6, Northwestern**
Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VISS	Visnje	0.07	336	*i* Sg	Sg	13 54 13.6	+0.1
	comp=Z,18nm,0.1s						

LJU 04 13:54:39.3, 45.°75N×**14.°87E, h2**^{km}**, ML0.6, 2D,**
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VISS	Visnje	0.06	337	⇓*i*Pg	Pg	13 54 40.6	0.0
	comp=Z,18nm,0.1s						
VISS	Visnje	0.06	337	⇓*i*Pg	Pg	13 54 40.6	0.0

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*IDC **04** 14:00:32.5±1.6, 26.°00S×29.°23E, h0^{km}, mb3.8/2, mb1 3.7/5, mb1mx3.5/38, mbtmp3.7/5, ML2.9/2, Error ellipse: s-maj=26.1km s-min=20.8km az=40.0*
ISC 04 14:00:33.0±1.4**, 25.°93S**±0.°07×**29.°0E**±0.°1**, h3**^{km}**, n13,**
σ1^{s}.28/17**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	Lobatse	3.18	286	Pn	Pb	14 01 29.2	-1.1
	baz=110,slow=11						
LBTB				Pg	Pg	14 01 35.5	+1.3
	baz=103,slow=17						
LBTB				Lg	Lg	14 02 20.4	
	16nm,0.3s,baz=15,slow=20,SNR=9.2						
BOSA	Boshof	4.25	230	*i*	Pn	14 01 39.9	+1.0
	baz=48,slow=16						
BOSA				*i* P	Pb	14 01 39.9	-8.7
BOSA				*i* S	Sn	14 02 27.9	-1.2
BOSA	Boshof	4.25	230	Pn	Pn	14 01 39.1	+0.2
	0.2nm,0.3s,baz=56,slow=14,SNR=4.5						
BOSA				Lg	Lg	14 02 46.7	
	14nm,0.3s,baz=148,slow=21,SNR=23						
BOSA	Boshof	4.25	230	*i*	Pn	14 01 39.9	+1.0
	baz=48,slow=16						
BOSA				*i* P	Pb	14 01 39.9	-8.7
BOSA				*i* S	Sn	14 02 27.9	-1.2
I47ZA	BOSHOF INFRASO	4.27	230	*i*		14 26 00.0	
	baz=54,slow=328,SNR=1.7						
MATP	Matopo	5.49	355	*i* P	Pn	14 01 56.4	+0.5
MATP				*i* S	Sn	14 02 58.9	-0.8
MATP	Matopo	5.49	355	Pn	Pn	14 01 55.1	-0.9
	1.0nm,0.3s,baz=172,slow=13,SNR=15						
MATP				Sn	Sn	14 02 58.2	-1.5
	2.0nm,0.3s,baz=26,slow=9.3,SNR=7.8						
MATP				Lg	Lg	14 03 21.7	
	2.6nm,0.3s,baz=99,slow=15,SNR=6.0						
MATP	Matopo	5.49	355	*i* P	Pn	14 01 56.4	+0.5
MATP				*i* S	Sn	14 02 58.9	-0.8
LSZ	Lusaka	10.62	356	Pn	Pn	14 03 07.4	+1.0
	0.4nm,0.3s,baz=174,slow=13,SNR=13						
LSZ				Sn	Sn	14 05 03.7	-2.3
	0.7nm,0.3s,baz=222,slow=3.2,SNR=5.0						
LSZ				Lg	Lg	14 06 06.1	
	0.4nm,0.3s,baz=58,slow=9.5,SNR=3.1						
TSUM	Tsumeb	12.47	300	Lg	Lg	14 07 13.0	
	0.2nm,0.3s,baz=238,slow=14,SNR=3.8						
I35NA	TSUMEB INFRASO	12.48	300	*i*		15 17 40.0	
	baz=124,slow=312,SNR=1.7						
TORD	Torodi Ar. Bea	47.05	322	P	P	14 09 08.0	+1.8
	1.0nm,0.7s,baz=139,slow=7.5,SNR=6.4						
QSPA	South Pole Qui	64.25	180	P	P	14 11 08.8	-0.5
	0.8nm,1.0s,baz=243,slow=2.3,SNR=3.9						

KRSC 04 14:11:11.7±1.1**, 48.°48N**×**156.°65E, h36**^{km}±17^{km}**, ML3.7,**
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril’s	2.24	351	*e*P	Pn	14 11 48.4	+2.3
SKR				*e*S	Sn	14 12 15.6	+3.2
PAU	Pauzhetka	3.00	2	*e*S	Sn	14 12 36.4	+5.2
KDTR	Khodutka, Kamc	3.46	15	*e*P	Pn	14 12 07.3	+4.4
KDTR				*e*S	Sn	14 12 48.3	+5.7
MTVR	Mutnovka	4.13	13	*e*P	Pn	14 12 16.7	+4.4
MTVR				*e*S	Sn	14 13 04.3	+5.0
RUS	Russkaya	4.13	16	*e*S	Sn	14 13 04.0	+4.8
GRL	Gorelyy	4.18	12	*e*P	Pn	14 12 18.5	+5.6
KOK	Koryaka	4.98	14	*e*P	Pn	14 12 28.8	+4.9
SDLR	Sedlovina	5.01	16	*e*P	Pn	14 12 29.5	+5.2

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*TEH **04** 14:11:16.7, 38.°87N×43.°63E, h5^{km}, ML3.3*
*ISK **04** 14:11:16.9, 38.°85N×43.°70E, h5^{km}, ML3.5/14*
*NSSP **04** 14:11:17.0, 38.°82N×43.°77E, h10^{km}, Ms3.4*
*DDA **04** 14:11:17.1, 38.°87N×43.°62E, h14^{km}±1^{km}, ML3.5*
ISC 04 14:11:18.0±0.9**, 38.°89N**±0.°02×**43.°62E**±0.°02**, h6**^{km}±7^{km}**,**
n56, σ1^{s}.48/78**, 1C-1D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.10	339	*i* P	Pg	14 11 20.1	-0.4
VMUR				*i* S	Sg	14 11 23.2	+1.1
VMUR				IAML		14 11 25.0	
	comp=N,22µm,0.4s						
VMUR				IAML		14 11 26.0	
	comp=E,15µm,0.2s						
VMUR	Van-Muradiye	0.10	339	*e*Pg	Pg	14 11 20.0	-0.4
CLDR	Caldiran	0.34	43	PG	Pg	14 11 24.3	-0.5
CLDR				SG	Sb	14 11 30.5	-1.9
CLDR	Caldiran	0.34	43	*i* P	Pg	14 11 23.9	-0.8
CLDR				*i* S	Sb	14 11 30.9	-1.5
CLDR				IAML		14 11 31.0	
	comp=N,5µm,0.5s						
CLDR	Caldiran	0.34	43	*e*Pg	Pg	14 11 24.8	0.0
VANB	Van	0.35	211	PG	Pb	14 11 25.7	-1.0
VANB				SG	Sb	14 11 33.0	+0.5
VANB	Van	0.35	211	*e*Pg	Pb	14 11 26.0	-0.7
TVAN	Van	0.40	205	*i* P	Pg	14 11 25.4	-0.5
TVAN				*i* S	Sb	14 11 33.7	-0.4
TVAN				IAML		14 11 35.0	
	comp=N,4µm,0.5s						
TVAN	Van	0.40	205	*e*Pg	Pg	14 11 25.3	-0.5
DYDN	Diyadin	0.65	5	*i* P	Pg	14 11 29.8	-0.9
DYDN				*i* S	Sb	14 11 40.4	-1.0
DYDN				IAML		14 11 41.0	
	comp=N,3µm,0.4s						
DYDN	Diyadin	0.65	5	*e*Pg	Pg	14 11 29.7	-0.9
GEVA	Gevas	0.73	217	*i* P	Pg	14 11 30.9	-1.1
GEVA				*i* S	Sb	14 11 42.8	-0.7
GEVA	Gevas	0.73	217	*e*Pg	Pg	14 11 30.9	-1.1
AKDM	Akdamar-Van	0.75	222	*e*Pg	Pg	14 11 32.4	-0.1
MLAZ	Malazgirt-MUS	0.87	287	PG	Pb	14 11 35.6	0.0
MLAZ	Malazgirt-MUS	0.87	287	*e*Pg	Pb	14 11 35.6	0.0
BASK	Baskale_VAN	0.89	160	*i* P	Pg	14 11 33.7	-1.5
BASK				*i* S	Sn	14 11 49.9	-0.8
BASK	Baskale_VAN	0.89	160	*e*Pg	Pg	14 11 33.7	-1.5
IGDI	IGDIR	1.04	20	*i* P	Pg	14 11 36.7	-1.2
IGDI				*i* S	Sn	14 11 55.0	+0.9
IGDI	IGDIR	1.04	20	*e*Pg	Pg	14 11 36.7	-1.2
TASB	TASBURUN-IGDIR	1.19	24	PN	Pn	14 11 40.9	-0.4
TASB	TASBURUN-IGDIR	1.19	24	*e*Pg	Pn	14 11 41.8	+0.5
VNNZ	Vanand	1.22	7	*e*P	Pb	14 11 41.1	-0.4
VNNZ				*e*S	Sn	14 11 58.4	-0.1
HYR	Heyderabad	1.26	49	*e*Pg	Pn	14 11 43.0	+0.7
BLIS	Bitlis-Merkez	1.27	248	*i* P	Pn	14 11 40.0	-2.5
BLIS				*i* S	Sg	14 11 58.3	-0.6
BLIS	Bitlis-Merkez	1.27	248	*e*Pg	Pn	14 11 39.9	-2.5
GURO	Guroymak-BITLI	1.29	255	*e*Pg	Pg	14 11 43.3	+0.6
EATA	Eleskirt	1.30	318	*i* P	Pn	14 11 41.7	-1.3
EATA				*i* S	Sn	14 12 02.1	+1.2
EATA	Eleskirt	1.30	318	*e*Pg	Pn	14 11 41.7	-1.3
METS	Metsamor	1.30	16	*e*P	Pg	14 11 44.6	+1.6
METS				*e*S	Sn	14 12 03.4	+2.8
HAKT	HAKKARI	1.33	177	*i* P	Pn	14 11 40.8	-2.6
HAKT				*i* S	Sn	14 12 07.2	+5.6
NRKZ	NAREK	1.37	36	*e*P	Pb	14 11 43.4	-0.7
NRKZ				*e*S	Sn	14 12 02.5	+0.3
ARUZ	Aruch	1.44	15	*e*P	Pg	14 11 44.9	-0.6
ARUZ				*e*S	Sg	14 12 05.3	+1.1
GNI	Garni	1.53	34	⇓*i*P	Pg	14 11 46.5	-0.8
GNI				⇑*i*S	Sg	14 12 08.4	+1.3
GNI	Garni	1.53	34	PN	Pg	14 11 46.5	-0.8
SRTM	Siirt_Merkez	1.61	236	*i* P	Pn	14 11 47.2	+0.2
SRTM				*i* S	Sg	14 12 11.5	+1.8
CUKT	Cukurca	1.64	180	PN	Pb	14 11 48.0	-0.8
CUKT	Cukurca	1.64	180	*i* P	Pb	14 11 48.0	-0.8
CUKT				*i* S	Sg	14 12 17.0	+6.2
KAPZ	Kaputan	1.65	30	*e*P	Pb	14 11 48.6	-0.4
KAPZ				*e*S	Sg	14 12 11.2	0.0
MUSM	Mu-Merkez	1.65	265	*i* P	Pn	14 11 46.7	-1.0
SIRT	Sirnak	1.67	214	PN	Pb	14 11 48.9	-0.3
SIRN	Sırnak	1.69	215	*i* P	Pb	14 11 48.7	-0.8
VRTB	Varto-Mus	1.71	280	PN	Pb	14 11 50.0	+0.1
KOPR	Koprukoy-ERZUR	1.75	309	PN	Pb	14 11 51.0	+0.3
BNGL	BINGOL	1.93	273	*i* P	Pb	14 11 53.1	-0.6
SENK	Senkaya-Erzuru	1.93	330	PN	Pb	14 11 53.6	-0.2
SVAN	Silvan-Diyarba	2.04	249	PN	Pb	14 11 54.8	-0.7
SVAN	Silvan-Diyarba	2.04	249	*i* P	Pn	14 11 53.4	+0.5
SVAN				*i* S	Sg	14 12 22.9	-0.6
KARO	Karliova-Bingo	2.04	283	PN	Pb	14 11 54.9	-0.7
ITBZ	Tabriz	2.09	108	*e*Pn	Pb	14 11 54.4	-2.0
STE	Stepanavan	2.18	15	*e*P	Pn	14 11 55.0	0.0
STE				*e*S	Sb	14 12 26.0	+0.7
BNGB	Bingl	2.29	273	PN	Pb	14 11 58.5	-1.4
YEDI	Yedisu-Bingol	2.45	284	PN	Pb	14 12 00.8	-1.8
IHRS	Heris	2.74	101	*e*		14 12 07.6	
IHRS				*e*Pn	Pn	14 12 03.9	+1.1
IHSH	Hashtrud	2.92	100	*e*Pn	Pg	14 12 12.1	-1.8
IHSH				*e*		14 12 27.7	
ISRB	Sarab	3.36	107	*e*Pn	Pn	14 12 12.7	+1.5
ISRB				*e*		14 12 31.2	

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*GUC **04** 14:29:34.3±0.7, 33.°65S×72.°05W, h47^{km}±4^{km}, ML3.2*
*SJA **04** 14:29:35.6±0.8, 33.°49S×71.°96W, h20^{km}±6^{km}, ML3.2, MW3.5*
ISC 04 14:29:32.6±2.1**, 33.°67S**±0.°04×**72.°03W**±0.°08**, h7**^{km}±12^{km}**,**
n25, σ1^{s}.32/36**, 4C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MT02	Curacav	0.85	61	⇓*i*P	Pn	14 29 50.0	-1.0
MT02				*i* S	Sn	14 30 02.1	-1.7
MT02				IAML		14 30 05.8	
	comp=E,895nm,0.4s						
ROC1	El Roble	1.09	51	*i* P	Pn	14 29 54.5	-0.2
ROC1				*i* S	Sn	14 30 09.4	-0.8
ROCH	El Roble	1.10	51	⇑*i*P	Pn	14 29 54.4	-0.3
ROCH				*i* S	Sn	14 30 09.3	-0.9

ROCH				IAML		14 30 13.3	
	comp=E,980nm,0.4s						
PEL	Peldehue	1.24	65	⇑iP	Pn	14 29 56.5	+0.1
PEL				iS	Sn	14 30 13.3	-0.1
PEL				IAML		14 30 21.7	
	comp=N,902nm,0.5s						
PEL	Peldehue	1.24	65	iP	Pn	14 29 56.9	+0.5
PEL				iS	Sn	14 30 13.5	0.0
CLCH	Cerro Calan	1.27	78	⇑iP	Pg	14 29 57.1	0.0
CLCH				iS	Sn	14 30 13.7	-0.7
CLCH				IAML		14 30 23.5	
	comp=N,852nm,0.4s						
MT03	Universidad Ad	1.28	83	iP	Pg	14 29 57.2	0.0
MT03				iS	Sn	14 30 14.4	-0.2
GO05	Huala	1.34	177	eP	Pn	14 29 57.4	-0.5
GO05				iS	Sn	14 30 16.2	+0.3
GO05				IAML		14 30 20.1	
	comp=E,484nm,0.5s						
FCH	Farellones	1.49	77	⇓iP	Pb	14 30 00.4	-0.4
FCH				iS	Sg	14 30 20.8	+0.2
FCH				IAML		14 30 25.7	
	comp=N,859nm,0.3s						
LMEL	Las Melosas	1.53	97	⇓iP	Pn	14 30 00.7	+0.1
LMEL				eS	Sb	14 30 20.8	-0.3
LMEL				IAML		14 30 26.1	
	comp=N,679nm,0.4s						
CO02	Combarbal	2.61	20	⇑iP	Pn	14 30 15.0	-0.4
LAMA	Las Malvinas	2.65	119	iP	Pb	14 30 20.0	-0.5
LAMA				iS	Sg	14 30 57.5	-0.4
AAGR	Agrelo	2.74	79	iP	Pb	14 30 23.1	+1.0
AAGR				IAML		14 31 04.9	
	comp=Z,59nm,1.1s						
PUMA	Malargue	2.80	131	iP	Pb	14 30 23.4	+0.3
ASAL	Salagasta	2.89	69	iP	Pb	14 30 24.2	-0.3
ASAL				IAML		14 31 14.4	
	comp=Z,63nm,0.8s						
RTLS	Leoncito	2.96	52	iP	Pb	14 30 23.7	-2.3
MORA	Malargue	2.97	124	iP	Pb	14 30 25.4	-0.5
MORA				iS	Sb	14 31 02.1	-0.4
RTCV	Cerro Valdivia	3.45	59	iP	Pb	14 30 32.5	-1.6
RTCV				IAML		14 31 26.9	
	comp=Z,36nm,1.2s						
ACCO	Cerro Coronel	3.97	40	iP	Pn	14 30 37.1	+2.8
ACCO				IAML		14 31 47.2	
	comp=Z,38nm,0.5s						
AMOG	MOGNA	4.05	49	iP	Pn	14 30 37.6	+2.5
AMOG				IAML		14 31 46.9	
	comp=Z,44nm,0.4s						
AROD	Rodeo	4.11	33	iP	Pn	14 30 38.8	+2.6
ACDV	Cuesta del Vie	4.28	36	iP	Pn	14 30 41.2	+2.8
ACDV				IAML		14 31 49.5	
	comp=Z,18nm,0.5s						
ACAN	Cantantal	4.30	72	iP	Pn	14 30 43.1	+4.5
MRA	San Martin	5.44	78	iP	Pn	14 30 56.9	+2.6
VCA	Vinchina	5.91	35	iP	Pn	14 31 02.8	+2.0
VCA				IAML		14 32 46.1	
	comp=Z,30nm,0.8s						

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*IDC **04** 14:53:07.5±0.9, 19°.36N×121°.31E, h0^{km}, mb3.6/7, mb1 3.7/8, mb1mx3.6/36, mbtmp3.6/8, ML3.7/1, MS2.8/1, Ms1 2.8/1, ms1mx2.4/39, Error ellipse: s-maj=44.7km s-min=18.3km az=73.0*

*MAN **04** 14:53:12.5, 19°.28N×121°.12E, h21^{km}, mb4.8, ML3.7, MS3.6*

ISC 04 14:53:14.5±1.2, 19°.35N±0°.05×121°.18E±0°.09, h53^{km}±13^{km}, n22, σ2ˢ.26/20, mb3.5/7, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBP	Basco	1.32	34	eP	Pn	14 53 36.1	-0.5
BBP				eS	Sn	14 53 55.2	+2.1
SGCP	Mt. Cagua	1.37	143	eP	Pn	14 53 36.0	-1.3
SGCP				eS	Sn	14 53 54.7	+0.2
APYP	Conner	1.48	178	eP	Pn	14 53 35.6	-3.2
APYP				eS	Sn	14 53 54.8	-2.2
SIPP	Brgy, Tapao	1.57	206	⇓eP	Pn	14 53 38.0	-2.0
SIPP				eS	Sn	14 54 04.2	+4.9
CAUP	Cauayan	2.46	165	eP	Pn	14 53 53.4	+1.1
CAUP				eS	Sn	14 54 26.2	+5.0
BOLP	Bolinao	3.18	202	eP	Pn	14 54 01.4	-0.8
BALP	Baler	3.60	174	eP	Pn	14 54 07.8	-0.1
JNU	Nakatsue	16.23	30	LR	LR	15 04 07.9	
	comp=Z,33nm,18.2s,baz=34,slow=41						
KSRS	Korea Array	18.98	17	P	P	14 57 29.9	-1.7
	0.2nm,0.3s,baz=199,slow=21,SNR=3.4						
SONM	Songino Array	30.86	340	P	P	14 59 25.9	0.0
	0.7nm,0.8s,baz=151,slow=9.5,SNR=6.2						
WRA	Warramunga Arr	41.12	161	P	P	15 00 52.8	-0.8
	0.2nm,0.4s,baz=343,slow=9.0,SNR=8.4						
MKAR	Makanchi Array	41.91	320	P	P	15 01 00.8	+0.9
	0.5nm,0.4s,baz=114,slow=7.7,SNR=11						
H11S3	WAKE ISLAND Hy	42.97	83	T	T	15 46 44.5	
	baz=278,slow=75,SNR=3.1						
H11S1	WAKE ISLAND Hy	42.98	83	T	T	15 46 44.5	
	baz=278,slow=75,SNR=5.4						
H11S2	WAKE ISLAND Hy	42.98	83	T	T	15 46 46.6	
	baz=278,slow=75,SNR=4.1						
H11N1	WAKE ISLAND Hy	42.98	82	T	T	15 46 44.3	
	baz=278,slow=75,SNR=9.7						
H11N2	WAKE ISLAND Hy	42.99	82	T	T	15 46 44.4	
	baz=278,slow=75,SNR=7.6						
H11N3	WAKE ISLAND Hy	43.00	82	T	T	15 46 45.0	
	baz=278,slow=75,SNR=11						
ZALV	Zalesovo Beam	44.35	330	P	P	15 01 18.7	-0.7
	0.5nm,0.4s,baz=116,slow=6.9,SNR=4.5						
ASAR	Alice Springs	44.52	163	P	P	15 01 21.1	0.0
	0.2nm,0.5s,baz=348,slow=7.6,SNR=8.9						
ILAR	Eielson Array	73.51	27	P	P	15 04 40.9	-0.5
	0.2nm,0.6s,baz=276,slow=6.6,SNR=6.4						
YKA	Yellowknife Ar	87.42	23	P	P	15 05 56.9	+1.0
	1.0nm,0.7s,baz=313,slow=4.3,SNR=20						

WEL 04 14:57:17.6, 45°S±3°×16°7E±°, h70^{km}±3^{km}, M3.9/16, ML4.0/16, MLv3.9/16, Error ellipse: s-maj=0.0km s-min=0.0km az=56.7, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DCZ	Deep Cove	0.34	213	P	Pn	14 57 29.8	+0.7
DCZ				S	Sn	14 57 38.1	+0.6
MLZ	Mavora Lakes	0.53	111	P	Pn	14 57 31.6	+0.8
MLZ				S	Sn	14 57 41.4	+0.9
MSZ	Milford Sound	0.62	36	P	Pn	14 57 31.6	0.0
MSZ				S	Sn	14 57 42.9	+0.9
WHZ	Wether Hill Ro	0.81	153	P	Pn	14 57 35.0	+1.2
WHZ				S	Sn	14 57 47.5	+1.7
PYZ	Puysegur Point	1.11	207	P	Pn	14 57 39.2	+1.6
WKZ	Wanaka	1.19	73	P	Pn	14 57 39.5	+0.9
WKZ				S	Sn	14 57 55.5	+1.3
EAZ	Earnscleugh	1.34	93	P	Pn	14 57 41.7	+1.2
EAZ				S	Sn	14 57 58.0	+0.4
JCZ	Jackson Bay	1.48	42	P	Pn	14 57 42.3	-0.1
APZ	The Paps	1.70	167	P	Pn	14 57 46.5	+1.2
TUZ	Tuapeka	1.74	117	P	Pn	14 57 46.8	+1.0
SYZ	Scrubby Hill	1.82	139	P	Pn	14 57 48.2	+1.4
LBZ	Lake Benmore	2.13	69	P	Pn	14 57 50.8	-0.2
ODZ	Otahua Downs	2.29	88	P	Pn	14 57 53.4	+0.2
HHSZ	Highcliff Hill	2.35	109	P	Pn	14 57 54.8	+0.8
FOZ	Fox Glacier	2.38	47	P	Pn	14 57 53.4	-1.0
RPZ	Rata Peaks	2.99	62	P	Pn	14 58 01.5	-1.2
WVZ	Waitaha Valley	3.19	50	P	Pn	14 58 04.5	-0.8
OXZ	Oxford	3.80	62	P	Pn	14 58 11.9	-1.8
INZ	Inchbonnie	3.81	51	P	Pn	14 58 13.0	-0.7
LTZ	Lake Taylor	4.25	57	P	Pn	14 58 17.6	-2.2
DSZ	Denniston Nort	4.69	44	P	Pn	14 58 24.7	-1.2
QRZ	Quartz Range	5.74	43	P	Pn	14 58 39.1	-1.1

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*IDC **04** 15:26:08.5±1.6, 33°.69S×72°.06W, h0^{km}, mb3.5/3, mb1 3.7/5, mb1mx3.6/25, mbtmp3.5/5, ML3.7/2, MS3.3/1, Ms1 3.3/1, ms1mx2.7/20, Error ellipse: s-maj=48.9km s-min=30.6km az=84.0*

*GUC **04** 15:26:10.7±0.6, 33°.68S×72°.06W, h40^{km}±3^{km}, ML3.6*

*SJA **04** 15:26:13.1±0.8, 33°.49S×71°.97W, h18^{km}±6^{km}, ML3.4, MW3.6*

ISC 04 15:26:11.6±2.1, 33°.67S±0°.03×72°.07W±0°.06, h18^{km}±10^{km}, n31, σ1ˢ.46/42, 1C-6D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA01	Torpederas	0.73	29	iP	Pb	15 26 25.6	-0.2
VA01				iS	Sg	15 26 36.6	+0.9
VA01				IAML		15 26 39.2	
	comp=N,4µm,0.2s						
MT02	Curacav	0.88	63	⇓iP	Pb	15 26 27.4	-1.0
MT02				iS	Sb	15 26 40.4	+0.6
MT02				IAML		15 26 44.4	
	comp=E,2µm,0.5s						
ROC1	El Roble	1.12	52	iP	Pn	15 26 32.0	-0.7
ROC1				iS	Sn	15 26 48.0	+0.3
ROCH	El Roble	1.13	52	⇑iP	Pn	15 26 31.7	-0.9
ROCH				iS	Sn	15 26 48.2	+0.4
PEL	Peldehue	1.27	66	⇓iP	Pn	15 26 34.1	-0.5
PEL				iS	Sn	15 26 51.0	-0.2
PEL				IAML		15 26 59.0	
	comp=N,2µm,0.4s						
PEL	Peldehue	1.27	66	iP	Pn	15 26 34.3	-0.2
PEL				iS	Sn	15 26 50.9	-0.2
CLCH	Cerro Calan	1.31	79	eP	Pn	15 26 34.4	-0.7
CLCH				iS	Sn	15 26 52.8	+0.6
CLCH				IAML		15 27 00.8	
	comp=N,2µm,0.2s						
MT03	Universidad Ad	1.32	83	⇓iP	Pn	15 26 34.3	-0.9
MT03				iS	Sn	15 26 52.8	+0.5
GO05	Huala	1.35	175	⇓iP	Pn	15 26 34.7	-0.8
GO05				iS	Sn	15 26 52.9	0.0
GO05				IAML		15 26 57.3	
	comp=E,1µm,0.5s						
FCH	Farellones	1.53	78	⇓iP	Pn	15 26 37.8	-0.5
FCH				iS	Sn	15 26 57.1	-0.8
FCH				IAML		15 27 04.3	
	comp=N,2µm,0.4s						
LMEL	Las Melosas	1.57	97	⇓iP	Pn	15 26 38.0	-0.7
LMEL				iS	Sn	15 26 59.6	+0.9
LMEL				IAML		15 27 04.7	
	comp=N,2µm,0.2s						
CO04	Los Peladeros	1.86	30	eP	Pn	15 26 43.5	+0.6
CO04				iS	Sb	15 27 08.1	-0.2
CO04				IAML		15 27 11.9	
	comp=E,1µm,0.6s						
LAMA	Las Malvinas	2.69	119	iP	Pb	15 26 57.2	-1.9
ARCO	CERRO ARCO	2.76	74	iP	Pb	15 26 59.7	-0.8
ARCO				IAML		15 27 43.5	
	comp=Z,254nm,0.7s						
AAGR	Agrelo	2.78	79	iP	Pb	15 26 58.8	-2.0
AAGR				IAML		15 27 50.6	
	comp=Z,133nm,0.6s						
PUMA	Malargue	2.83	131	iP	Pn	15 26 59.1	+3.2
PUMA				iS	Sb	15 27 36.3	+0.3
ASAL	Salagasta	2.92	69	iP	Pb	15 27 01.0	-2.2
ASAL				IAML		15 27 52.5	
	comp=Z,116nm,1.2s						
RTLS	Leoncito	2.99	52	eP	Pn	15 27 00.9	+2.5
RTLS				IAML		15 27 51.9	
	comp=Z,86nm,0.4s						
EDS3	Malargue	3.04	134	iP	Pb	15 27 04.3	-1.0
EDS3				iS	Sb	15 27 46.0	+3.9
RTCV	Cerro Valdivia	3.48	60	iP	Pn	15 27 07.3	+2.4
RTCV				IAML		15 28 05.6	
	comp=Z,77nm,1.3s						
ACCO	Cerro Coronel	3.99	41	iP	Pn	15 27 14.3	+2.1
ACCO				IAML		15 28 23.6	
	comp=Z,106nm,0.6s						
AROD	Rodeo	4.13	33	iP	Pn	15 27 16.4	+2.3
AROD				IAML		15 28 26.6	
	comp=Z,37nm,0.6s						
ACDV	Cuesta del Vie	4.29	37	iP	Pn	15 27 18.5	+2.3
ACDV				IAML		15 28 32.3	
	comp=Z,36nm,0.4s						
MRA	San Martin	5.48	79	iP	Pn	15 27 34.3	+1.9
PLCA	Paso Flores	7.16	171	Pn	Pn	15 27 55.5	+0.1
	comp=Z,0.3nm,0.3s,baz=346,slow=11,SNR=11						
LVC	Limon Verde	11.36	15	Lg	Lg	15 31 52.4	
	comp=Z,0.3nm,0.3s,baz=288,slow=16,SNR=3.1						
LPAZ	La Paz	17.67	13	P	Pn	15 30 16.8	-0.6
	comp=Z,0.1nm,0.3s,baz=183,slow=11,SNR=5.3						
SIV	San Ignacio	20.21	32	P	Pn	15 30 46.8	-0.7
	comp=Z,1.1nm,0.6s,baz=236,slow=10,SNR=4.7						
BDFB	Brasilia	28.17	56	LR	LR	15 44 28.5	
	comp=Z,62nm,18.4s,baz=327,slow=39						
TXAR	Lajitas Array	69.43	331	P	P	15 37 18.7	0.0
	comp=Z,0.3nm,0.7s,baz=152,slow=7.9,SNR=2.6						
TORD	Torodi Ar. Bea	84.12	70	P	P	15 38 40.7	-1.1
	comp=Z,0.5nm,0.6s,baz=259,slow=4.8,SNR=2.9						

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*IDC **04** 15:41:14.6±1.4, 33°.69S×72°.01W, h0^{km}, mb3.6/3, mb1 3.8/5, mb1mx3.6/30, mbtmp3.6/5, ML3.6/2, MS3.2/3, Ms1 3.2/3, ms1mx2.9/23, Error ellipse: s-maj=48.7km s-min=30.3km az=85.0*

*SJA **04** 15:41:14.9±0.6, 33°.59S×72°.25W, h30^{km}, ML3.5, MW3.6*

*GUC **04** 15:41:18.0±0.7, 33°.71S×72°.02W, h25^{km}±14^{km}, ML3.5*

ISC 04 15:41:17.2±1.4, 33°.68S±0°.04×72°.00W±0°.05, h19^{km}±4^{km}, n31, σ1ˢ.25/39, 4C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA01	Torpederas	0.72	24	⇑eP	Pn	15 41 31.7	-0.6
VA01				iS	Sn	15 41 42.0	-0.9
VA01				IAML		15 41 43.9	
	comp=E,3µm,0.6s						
MT02	Curacav	0.83	60	⇓iP	Pn	15 41 33.8	-0.2
MT02				iS	Sn	15 41 45.2	-0.5
MT02				IAML		15 41 47.6	
	comp=E,2µm,0.4s						
ROC1	El Roble	1.08	50	eP	Pg	15 41 38.1	-0.1
ROC1				iS	Sg	15 41 54.6	+2.2
ROCH	El Roble	1.09	50	⇑iP	Pg	15 41 37.9	-0.5
ROCH				iS	Sg	15 41 53.2	+0.6
ROCH				IAML		15 41 56.2	
	comp=N,2µm,0.4s						
PEL	Peldehue	1.22	64	⇑iP	Pg	15 41 40.1	-0.7
PEL				iS	Sg	15 41 56.2	-0.6
PEL				IAML		15 42 02.6	
	comp=E,2µm,0.6s						
PEL	Peldehue	1.22	64	eP	Pg	15 41 40.5	-0.3
PEL				iS	Sg	15 41 59.5	+2.7
FSR	Penalolen	1.24	81	eP	Pb	15 41 40.1	+0.1
FSR				iS	Sg	15 41 56.7	-0.8
CLCH	Cerro Calan	1.25	77	⇑iP	Pb	15 41 40.2	0.0
CLCH				iS	Sg	15 41 57.6	-0.2
MT03	Universidad Ad	1.25	82	eP	Pb	15 41 40.2	-0.1
MT03				iS	Sn	15 41 56.7	+0.4
MT03				IAML		15 42 04.6	
	comp=E,3µm,0.4s						
GO05	Huala	1.33	178	eP	Pn	15 41 40.3	-0.5
GO05				iS	Sn	15 41 57.6	-0.3
GO05				IAML		15 42 03.1	
	comp=E,2µm,0.5s						
FCH	Farellones	1.47	77	⇓iP	Pb	15 41 44.2	+0.1
FCH				iS	Sg	15 42 04.0	-0.7
FCH				IAML		15 42 10.3	
	comp=E,1µm,0.2s						
LMEL	Las Melosas	1.50	97	eP	Pb	15 41 44.4	-0.2
LMEL				iS	Sb	15 42 04.0	+0.6
CO04	Los Peladeros	1.85	28	eP	Pb	15 41 50.2	-0.3
AAGR	Agrelo	2.72	78	eP	Pb	15 42 05.1	-0.1
AAGR				IAML		15 42 49.8	
	comp=Z,185nm,0.6s						
ASAL	Salagasta	2.87	69	eP	Pb	15 42 06.6	-1.2
ASAL				IAML		15 42 55.6	
	comp=Z,156nm,0.7s						
RTCV	Cerro Valdivia	3.43	59	eP	Pn	15 42 09.0	-0.7
RTCV				IAML		15 43 08.9	
	comp=Z,102nm,2.5s						
ACCO	Cerro Coronel	3.96	40	eP	Pn	15 42 14.6	-2.7
ACCO				IAML		15 43 34.4	
	comp=Z,82nm,0.6s						
AMOG	MOGNA	4.04	48	eP	Pn	15 42 14.4	-3.6
AMOG				IAML		15 43 25.0	
	comp=Z,71nm,0.4s						
AROD	Rodeo	4.11	32	eP	Pn	15 42 22.2	+2.9
AROD				IAML		15 43 31.3	
	comp=Z,42nm,0.9s						
ACDV	Cuesta del Vie	4.27	36	eP	Pn	15 42 20.3	-1.1
ACDV				IAML		15 43 49.6	
	comp=Z,52nm,0.8s						
ACAN	Cantantal	4.28	72	eP	Pn	15 42 23.4	+2.0
ACAN				IAML		15 43 30.6	
	comp=Z,39nm,0.6s						
AGUA	GUANDACOL	5.14	37	eP	Pn	15 42 27.9	-5.4
AGUA				IAML		15 44 00.2	
	comp=Z,12nm,0.6s						
PLCA	Paso Flores	7.13	171	Pn	Pn	15 43 01.2	+0.7
	comp=Z,0.2nm,0.3s,baz=350,slow=12,SNR=10.0						
PLCA				Lg	Lg	15 44 57.3	
	comp=Z,0.2nm,0.3s,baz=277,slow=16,SNR=3.8						
LVC	Limon Verde	11.36	15	Lg	Lg	15 47 01.9	
	comp=Z,0.4nm,0.3s,baz=320,slow=15,SNR=4.3						
LVC				LR	LR	15 48 38.3	
	comp=Z,100nm,18.1s,baz=200,slow=39						
CPUP	Villa Florida	14.66	64	LR	LR	15 50 56.9	
	comp=Z,96nm,18.6s,baz=228,slow=40						
LPAZ	La Paz	17.67	12	P	Pn	15 45 22.8	-0.2
	comp=Z,0.1nm,0.3s,baz=200,slow=13,SNR=5.6						
SIV	San Ignacio	20.19	32	P	Pn	15 45 52.3	-0.4
	comp=Z,1.9nm,0.9s,baz=225,slow=9.4,SNR=6.5						
SIV				LR	LR	15 54 55.5	
	comp=Z,78nm,18.4s,baz=275,slow=41						
TXAR	Lajitas Array	69.47	331	P	P	15 52 25.0	+0.6
	comp=Z,0.1nm,0.5s,baz=150,slow=9.4,SNR=2.9						
TORD	Torodi Ar. Bea	84.07	70	P	P	15 53 47.1	+0.1
	comp=Z,1.1nm,0.8s,baz=244,slow=3.9,SNR=4.5						
ZALV	Zalesovo Beam	153.94	32	PKPbc	PKiKP	16 01 15.2	+0.3
	comp=Z,0.5nm,0.6s,baz=323,slow=2.2,SNR=3.7						
MKAR	Makanchi Array	156.53	48	PKPab	PKPab	16 01 39.3	-0.3
	comp=Z,0.2nm,0.5s,baz=270,slow=3.4,SNR=3.5						

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*TEH **04** 15:44:06.4, 32°.76N×47°.44E, h12^{km}, ML2.5*

*ISN **04** 15:44:06.1±0.4, 32°.79N×47°.49E, h15^{km}±2^{km}, ML2.5*

ISC 04 15:44:06.3±1.6, 32°.77N±0°.07×47°.48E±0°.06, h8^{km}±13^{km}, n9, σ0ˢ.91/14, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKFM	Kafar-mosalman	0.81	22	ePg	Pn	15 44 22.8	-1.4
IKFM				e		15 44 48.6	
IKMR	Kamar-syah	1.06	45	ePg	Pg	15 44 27.0	+0.2
IKMR				eSg	Sn	15 44 43.1	+0.6
IKMR				e		15 44 47.8	
IDOB	Doab	1.17	30	ePg	Pg	15 44 28.8	-0.1
IDOB				e		15 44 54.4	
IBDR	Badra	1.35	285	ePg	Pb	15 44 31.0	-0.9
IBDR				eSg	Sg	15 44 49.0	-0.7
IBDR				AML	AML	15 44 52.4	
	comp=N,77nm,0.5s						
IBDR				AML	AML	15 44 53.9	
	comp=E,92nm,0.8s						
IKOM	Komasi	1.40	1	ePn	Pb	15 44 32.7	-0.2
IKOM				e		15 44 34.5	
IKOM				eSg	Sg	15 44 53.4	+1.9
BMDN	Meydan	1.44	51	ePn	Pg	15 44 34.4	+0.3
BMDN				e		15 45 03.1	
BDRS	Dareh Seyedi	1.67	44	ePn	Pg	15 44 37.8	-0.5
BDRS				e		15 45 05.8	
NSR	Nassriya	2.09	213	ePn	Pn	15 44 42.0	+0.3
NSR				eSn	Sn	15 45 08.0	+0.1
BHD	Baghdad	2.65	282	ePn	Pn	15 44 50.0	+0.6
BHD				eSn	Sn	15 45 22.5	+0.7

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*IDC **04** 15:56:47.2±2.5, 4°.27S×130°.25E, h0^{km}, mb3.3/1, mb1 3.7/3, mb1mx3.4/29, mbtmp3.5/3, ML3.6/2, Error ellipse: s-maj=162.2km s-min=28.8km az=70.0*

*DJA **04** 15:56:51.5±2.6, 3°S±8°×13°2E±°, h22^{km}±29^{km}, M3.4/6, MLv3.4/6*

ISC 04 15:56:44.8±0.9, 4°.10S±0°.07×131°.79E±0°.08, h10^{km}, n7, σ2ˢ.72/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	1.25	22	P	Pn	15 57 08.9	+0.4
FAKI				S	Sb	15 57 22.0	-2.9
BNDI	Bandanaira	1.93	257	P	Pg	15 57 22.9	+1.1
MSAI	Masohi	2.95	285	P	Pn	15 57 31.9	+0.1
RKPI	Ransiki, Papua	3.50	43	P	Pn	15 57 41.7	+2.3
WRA	Warramunga Arr	15.95	171	Pn	P	16 00 32.7	-0.4
	0.2nm,0.3s,baz=349,slow=13,SNR=13						
WRA				Sn	Sn	16 03 23.5	-3.0
	0.2nm,0.3s,baz=1.5,slow=23,SNR=6.3						
ASAR	Alice Springs	19.57	174	P	Pn	16 01 18.2	+3.9
	0.4nm,0.3s,baz=348,slow=9.9,SNR=54						
ASAR				S	S	16 04 50.6	-3.5
	0.1nm,0.3s,baz=349,slow=28,SNR=4.8						
MKAR	Makanchi Array	66.82	325	P	P	16 07 36.2	-0.7
	0.4nm,1.0s,baz=123,slow=5.3,SNR=2.8						

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*MEX **04** 15:58:22.5±0.8, 14°.00N×93°.14W, h12^{km}±28^{km}, MD3.9*

*GCG **04** 15:58:23.0±0.6, 14°.18N×93°.17W, h35^{km}±999^{km}, MD4.1*

ISC 04 15:58:20.8±2.8, 14°.2N±0°.1×93°.07W±0°.08, h4^{km}±15^{km}, n8, σ1ˢ.05/14, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.06	47	iP	Pg	15 58 41.2	0.0
THIG				iS	Sn	15 58 57.0	-0.8
PCIG		1.52	355	eP	Pn	15 58 48.4	-0.4
PCIG				iS	Sn	15 59 08.8	-0.3
STG3	Santiaguito 3,	1.54	70	eP	Pb	15 58 49.9	-0.2
FUG	Fuego 3	2.17	83	eP	Pn	15 58 59.1	+1.1
FUG				eS	Sb	15 59 26.6	-1.7
CCIG	Comitan	2.27	23	eP	Pn	15 59 00.5	+1.2
CCIG				eS	Sn	15 59 29.0	+1.0
IXG	Ixpaco	2.55	90	eP	Pn	15 59 03.8	+0.7
TGIG		2.58	359	eP	Pn	15 59 04.0	+0.5
TGIG				eS	Sn	15 59 36.6	+1.2
CMIG	Matias Romero	3.38	329	eP	Pn	15 59 15.1	+0.7
CMIG				iS	Sn	15 59 54.1	-0.9

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*NIED **04** 16:02:00, 23°.30N×120°.70E, h17^{km}, Mw3.8 Best double couple: M₀5.69000×10^{14} NP1:φ$_s$319.00000°, δ89.00000°, λ177.00000°. NP2:φ$_s$49.00000°, δ87.00000°, λ1.00000°.*

*BJI **04** 16:02:38.6±0.0, 23°.44N×120°.92E, h21^{km}, ML3.4/4*

*TAP **04** 16:02:39.7, 23°.22N×120°.72E, h8^{km}, ML4.1, B*

*IDC **04** 16:02:39.6±1.2, 23°.15N×121°.46E, h0^{km}, mb3.3/4, mb1 3.5/4, mb1mx3.2/36, mbtmp3.3/4, MS2.6/1, Ms1 2.6/1, ms1mx2.4/26, Error ellipse: s-maj=71.9km s-min=24.9km az=67.0*

*JMA **04** 16:02:39.7±0.1, 23°.25N×120°.74E, h0^{km}, M4.0*

*ASIES **04** 16:02:40.8, 23°.19N×120°.74E, h12^{km}, MW3.4*

*IASPEI **04** 16:02:40.3±0.8, 23°.23N±0°.01×120°.73E±0°.01, h8^{km}±5^{km}, mb3.4/4, Error ellipse: s-maj=1.9km s-min=1.7km az=100.3, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

ISC 04 16:02:40.1±0.8, 23°.23N±0°.01×120°.73E±0°.01, h10^{km}±4^{km}, n153, σ1ˢ.03/257, mb3.4/4, 34C-20D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STYT	Tauyuan	0.07	161	⇓iP	Pg	16 02 42.2	-0.2
	baz=143						
STYT				iS	Sg	16 02 43.8	-0.3
	baz=143						
WTP	Ta-pu	0.11	278	⇓iP	Pg	16 02 42.6	-0.3
	baz=286						
WTP				iS	Sg	16 02 44.6	-0.3
	baz=286						
TPUB	Ta-pu	0.12	307	⇓P	Pg	16 02 43.0	-0.1
	baz=316						
TPUB				S	Sg	16 02 45.2	+0.1
	baz=316						
CHN4	Tsaushan	0.17	313	⇓iP	Pg	16 02 44.3	+0.3
	baz=327						
CHN4				iS	Sg	16 02 47.6	+1.1
	baz=327						
CHN1	Nanshi	0.19	256	⇑iP	Pg	16 02 44.5	+0.2
	baz=260						
CHN1				iS	Sg	16 02 47.7	+0.7
	baz=260						
SGST	Jiashian	0.20	223	⇑iP	Pg	16 02 43.5	-0.8
	baz=221						
SGST				S	Sg	16 02 47.2	-0.1
	baz=221						
SNST	Tainan City	0.22	267	⇓P	Pg	16 02 45.1	+0.4
	baz=271						
SNST				S	Sg	16 02 48.8	+1.1
	baz=271						
TWK	Hsinying	0.23	279	⇓iP	Pg	16 02 45.2	+0.3
	baz=284						

TWK	baz=284			S	Sg	16 02 49.0	+1.0
SLGT	**Liugui** baz=191	0.25	198	⇑iP	Pg	16 02 45.4	+0.2
SLGT	baz=191			S	Sg	16 02 49.0	+0.3
ELDTW	**Lidau** baz=96	0.27	99	⇓iP	Pb	16 02 46.2	-0.9
ELDTW	baz=96			S	Sb	16 02 50.4	-1.3
ALS	**Alishan** baz=17	0.29	14	⇑iP	Pb	16 02 46.6	-1.0
ALS	baz=17			S	Sb	16 02 51.8	-0.8
YUS	**Yu-Shan** baz=40	0.33	38	⇑iP	Pb	16 02 47.6	-0.8
YUS	baz=40			iS	Sb	16 02 52.7	-1.3
CHN5	**Tsauling** baz=2.0	0.37	352	⇑iP	Pb	16 02 48.1	-0.8
CHN5	baz=2.0			S	Sb	16 02 54.6	-0.2
CHN3	**Shinhua** baz=259	0.37	246	P	Pb	16 02 49.1	+0.2
CHN3	baz=259			S	Sb	16 02 55.9	+1.2
CHN2	**Minshiung** baz=326	0.38	322	P	Pb	16 02 49.0	0.0
CHN2	baz=326			S	Sb	16 02 55.8	+0.7
CHY	**Chiayi** baz=318	0.39	313	eP	Pb	16 02 48.9	-0.2
CHY	baz=318			eS	Sb	16 02 55.6	+0.4
WLGB	**Puzi** baz=306	0.47	302	⇓P	Pb	16 02 50.3	-0.2
WLGB	baz=306			eS	Sb	16 02 58.6	+1.1
WHYT	**Xinyi Township** baz=15	0.48	14	⇑eP	Pb	16 02 50.0	-0.7
WHYT	baz=15			eS	Sb	16 02 57.9	+0.1
WGK	**Gukeng** baz=345	0.48	341	eP	Pb	16 02 50.9	+0.2
WGK	baz=345			S	Sb	16 02 59.3	+1.4
WDLH	**Douliu** baz=342	0.49	339	eP	Pb	16 02 51.3	+0.4
WDLH	baz=342			S	Sb	16 02 59.5	+1.4
SSD	**Sandimen** baz=178	0.49	191	⇑iP	Pb	16 02 49.9	-1.0
SSD	baz=178			S	Sg	16 02 56.3	+0.1
CHN8	**Yiju** baz=288	0.49	284	⇓eP	Pb	16 02 50.5	-0.4
CHN8	baz=288			eS	Sb	16 02 58.8	+0.6
TWM1	**Shoushan** baz=213	0.49	215	⇑P	Pb	16 02 51.6	+0.6
SCLT	**Jiali** baz=266	0.50	264	eP	Pb	16 02 51.0	0.0
SCLT	baz=266			eS	Sb	16 02 59.7	+1.4
TAI1	**Yung-k'ang** baz=265	0.50	248	eP	Pb	16 02 51.4	+0.4
TWG	**Pinlang** baz=128	0.51	142	⇓iP	Pb	16 02 50.8	-0.5
TWG	baz=128			S	Sb	16 02 58.3	-0.5
FULB	**Fuli** baz=84	0.52	93	⇓iP	Pb	16 02 51.5	+0.1
FULB	baz=84			eS	Sb	16 02 59.3	+0.3
TWGBT	**Beinan** baz=128	0.52	142	⇓P	Pb	16 02 50.8	-0.6
TWGBT	baz=128			S	Sb	16 02 58.7	-0.3
TWF1	**Yuli** baz=76	0.53	77	⇑iP	Pb	16 02 51.3	-0.3
TWF1	baz=76			S	Sb	16 02 58.2	-1.2
YULB	**Yu-li** baz=72	0.54	73	⇑P	Pb	16 02 51.3	-0.6
YULB	baz=72			S	Sg	16 02 57.9	-0.1
SGLT	**Jiouru** baz=190	0.55	204	P	Pn	16 02 52.7	-1.4
SGLT	baz=190			eS	Sn	16 03 02.2	-1.0
WJS	**Zhushan** baz=347	0.59	360	⇑eP	Pb	16 02 53.0	+0.4
WJS	baz=347			eS	Sb	16 03 02.1	+1.1
SSLB	**Suanglung** baz=29	0.59	20	⇑P	Pg	16 02 51.8	+0.1
SSLB	baz=29			eS	Sb	16 03 00.5	-0.6
CHKT	**Chengkung** baz=101	0.60	102	⇓iP	Pb	16 02 53.2	+0.5
CHKT	baz=101			eS	Sb	16 03 02.3	+1.1
SNJT	**Kaohsiung City** baz=216	0.60	218	eP	Pn	16 02 53.7	-1.0
EHY	**Hungye** baz=68	0.61	63	⇑iP	Pb	16 02 52.6	-0.3
EHY	baz=68			eS	Sb	16 03 00.4	-1.2
TTN	**Taitung** baz=138	0.61	141	⇓P	Pb	16 02 53.3	+0.4
TTN	baz=138			S	Sb	16 03 02.2	+0.7
WSF	**Szhu** baz=315	0.62	311	⇓iP	Pb	16 02 52.8	-0.3
WSF	baz=315			S	Sb	16 03 02.7	+0.8
MASBT	**Mashibuluo** baz=182	0.62	188	⇑P	Pb	16 02 52.2	-0.9
VWDT	**VWDT** baz=39	0.64	36	⇑P	Pb	16 02 53.2	-0.3
VWDT	baz=39			eS	Sg	16 03 01.2	+0.2
WNT	**Mingjian** baz=359	0.65	356	⇑P	Pb	16 02 54.1	+0.5
WNT	baz=359			S	Sb	16 03 04.2	+1.6
ECL	**Taimali** baz=152	0.66	162	⇓iP	Pb	16 02 53.2	-0.6
ECL	baz=152			S	Sb	16 03 02.2	-0.9
TYC	**Yuchr** baz=19	0.68	10	⇑iP	Pb	16 02 54.4	+0.2
TYC	baz=19			S	Sn	16 03 05.5	-1.1
HGSD	**Ruisui** baz=74	0.69	68	⇑eP	Pb	16 02 54.6	+0.3
HGSD	baz=74			S	Sb	16 03 04.1	+0.3
WSSB	**Gushan** baz=232	0.73	217	⇑eP	Pn	16 02 56.6	0.0
WSSB	baz=232			eS	Sn	16 03 08.4	+0.6
WMLT	**Mailiao** baz=324	0.74	321	eP	Pb	16 02 54.9	-0.2
WMLT	baz=324			eS	Sb	16 03 06.3	+1.0
RLNB	**Erlin** baz=323	0.74	333	eP	Pb	16 02 55.2	0.0
RLNB	baz=323			S	Sb	16 03 06.2	+0.8
WTCT	**Ta-ch'eng** baz=330	0.75	327	P	Pb	16 02 55.2	-0.2
WTCT	baz=330			S	Sb	16 03 06.6	+0.8
SSPT	**Xinbi** baz=177	0.76	192	⇑iP	Pb	16 02 55.5	0.0
SSPT	baz=177			eS	Sb	16 03 06.2	+0.3
KAU	**Kaohsiung** baz=209	0.77	211	eP	Pn	16 02 56.5	-0.6
KAU	baz=209			eS	Sn	16 03 10.2	+1.5
EGFH	**Guangfu** baz=65	0.77	56	⇑eP	Pb	16 02 55.8	0.0
EGFH	baz=65			eS	Sb	16 03 06.3	0.0
DPDB	**Guoxing** baz=21	0.82	13	⇑P	Pb	16 02 56.7	+0.2
DPDB	baz=21			S	Sb	16 03 09.0	+1.3
OWD	**Renai** baz=40	0.83	29	⇑P	Pg	16 02 56.2	0.0
EAST	**Anshuo** baz=164	0.85	173	⇑iP	Pb	16 02 56.7	-0.3
EAST	baz=164			S	Sb	16 03 09.0	+0.4
TWH	**Lutao** baz=126	0.86	127	⇓iP	Pb	16 02 57.3	+0.1
TWH	baz=126			S	Sn	16 03 10.7	-0.3
WCHH	**Zhanghua** baz=351	0.86	349	eP	Pb	16 02 57.4	+0.2
WCHH	baz=351			eS	Sn	16 03 10.2	-0.8
SCZT	**Fangliau** baz=184	0.86	187	⇑eP	Pb	16 02 56.7	-0.5
SCZT	baz=184			eS	Sb	16 03 08.4	-0.4
ESL	**Shilin** baz=48	0.87	48	eP	Pb	16 02 57.2	-0.1
ESL	baz=48			eS	Sb	16 03 09.3	+0.2
TAW	**Tawu** baz=167	0.88	170	eP	Pb	16 02 57.4	-0.1
TAW	baz=167			eS	Sb	16 03 09.8	+0.4
TCU	**Taichung** baz=359	0.91	357	eP	Pn	16 02 58.6	-0.5
TCU	baz=359			eS	Sn	16 03 12.1	-0.2
CHGB	**Renai** baz=35	0.92	26	⇑P	Pg	16 02 57.9	0.0
CHGB	baz=35			S	Sn	16 03 12.5	-0.4
WLCH	**Liuqiu** baz=198	0.93	200	eP	Pn	16 03 00.4	+1.1
WLCH	baz=198			eS	Sn	16 03 16.5	+3.7
TWP	**Hsiaoliuchiu** baz=199	0.94	201	eP	Pn	16 03 00.3	+0.8
TWP	baz=199			eS	Sn	16 03 16.4	+3.4
WDGT	**Dungji** baz=274	0.99	272	⇓P	Pg	16 02 58.6	-0.5
WDGT	baz=274			S	Sb	16 03 12.4	0.0
WHF	**Hehuan Shan** baz=29	1.03	28	⇑eP	Pb	16 03 00.1	-0.4
WHF	baz=29			S	Sn	16 03 15.6	-0.3
ENLB	**Shoufeng** baz=50	1.04	50	P	Pb	16 03 00.2	-0.2
ENLB	baz=50			eS	Sn	16 03 15.3	-0.2
WHP	**Taichung City** baz=22	1.06	11	⇑eP	Pn	16 03 01.3	+0.1
WHP	baz=22			S	Sn	16 03 18.0	+1.9
TDCB	**Techi** baz=22	1.09	21	⇑P	Pg	16 03 00.8	-0.4
TDCB	baz=22			eS	Sn	16 03 16.8	-0.1
HWA	**Hwalien** baz=47	1.09	47	eP	Pn	16 03 02.1	+0.5
HWA	baz=47			eS	Sn	16 03 17.4	+0.7
TWT	**Tachien** baz=22	1.10	22	eP	Pg	16 03 00.9	-0.4
TWT	baz=22			S	Sn	16 03 16.8	-0.3
PHUB	**P'eng-hu** baz=288	1.10	285	⇓P	Pg	16 03 00.1	-1.2
PHUB	baz=288			S	Sg	16 03 15.3	-0.4
TWQ1	**Liyutan** baz=4.0	1.11	2	⇑eP	Pn	16 03 02.0	+0.2
TWQ1	baz=4.0			eS	Sn	16 03 18.2	+1.0
WDJ	**Dajia District** baz=357	1.11	356	eP	Pn	16 03 02.4	+0.5
WDJ	baz=357			S	Sn	16 03 18.9	+1.6
PNG	**Penghu** baz=291	1.13	287	eP	Pg	16 03 00.8	-1.1
PNG	baz=291			eS	Sg	16 03 15.8	-0.9
TWD	**Chiawan** baz=43	1.16	43	eP	Pn	16 03 02.6	+0.2
TWD	baz=43			S	Sn	16 03 18.7	+0.3
NSY	**Sanyi** baz=349	1.18	1	eP	Pn	16 03 03.7	+0.9
NSY	baz=349			S	Sn	16 03 21.1	+2.1
ETLH	**Xiulin Townshi** baz=35	1.19	35	eP	Pg	16 03 02.6	-0.5
ETLH	baz=35			eS	Sn	16 03 20.4	+1.1
VCHM	**Qimei** baz=272	1.20	269	⇓P	Pb	16 03 01.7	-1.3
VCHM	baz=272			eS	Sg	16 03 17.3	-1.5
PTSB	**Yuanli** baz=348	1.21	359	eP	Pg	16 03 04.0	+0.5
PTSB	baz=348			eS	Sn	16 03 20.7	+1.0
HEN	**Hengchun** baz=176	1.22	180	eP	Pn	16 03 04.0	+0.7
HEN	baz=176			eS	Sn	16 03 22.2	+2.4
NACB	**Ninganchiao** baz=51	1.23	40	⇑P	Pb	16 03 03.3	-0.2
NACB	baz=51			S	Sn	16 03 20.1	0.0
TWK1	**Hengchun** baz=174	1.28	177	eP	Pg	16 03 04.7	-0.1
TWK1	baz=174			eS	Sn	16 03 23.4	+1.9
TWKBT	**Hengchun** baz=174	1.29	177	eP	Pg	16 03 04.8	0.0
TWKBT	baz=174			eS	Sn	16 03 22.4	+0.9
NMLH	**Miaoli** baz=352	1.30	2	eP	Pg	16 03 05.4	+0.2
NMLH	baz=352			eS	Sn	16 03 24.0	+2.1
NNSB	**Datong** baz=27	1.33	26	⇑P	Pb	16 03 05.2	-0.2
NNSB	baz=27			eS	Sn	16 03 24.8	+1.9
NNSH	**Datong** baz=27	1.33	26	eP	Pn	16 03 05.0	0.0
NNSH	baz=27			eS	Sn	16 03 25.5	+2.6
TSEB	**Hengchuen, Pin** baz=172	1.33	173	eP	Pg	16 03 06.5	+0.8
TSEB	baz=172			eS	Sn	16 03 24.9	+2.3
NNS	**Nan Shan** baz=27	1.34	26	P	Pb	16 03 05.4	-0.1
NNS	baz=27			eS	Sn	16 03 25.0	+2.0
LAY	**Lan-yu** baz=145	1.41	147	eP	Pb	16 03 05.8	-0.7
LAY	baz=145			eS	Sg	16 03 24.4	-1.0
NSTT	**Nanjuang** baz=360	1.42	10	⇑P	Pb	16 03 06.8	+0.1
NSTT	baz=360			eS	Sg	16 03 27.0	+1.2
LIOB	**Emei** baz=360	1.43	10	P	Pb	16 03 07.2	+0.2
LIOB	baz=360			S	Sg	16 03 27.1	+0.8
ENA	**Nanau** baz=49	1.51	38	eP	Pb	16 03 08.4	+0.1
ENA	baz=49			eS	Sb	16 03 27.7	+0.2
NDT	**Datong Townshi** baz=17	1.54	27	eP	Pb	16 03 09.0	+0.1
NDT	baz=17			eS	Sg	16 03 31.3	+1.5
NSK	**Sanguang** baz=22	1.55	22	eP	Pb	16 03 09.2	+0.2
NSK	baz=22			eS	Sg	16 03 29.6	-0.5
YHNB	**Yeheng** baz=23	1.55	22	P	Pg	16 03 09.3	-0.6
YHNB	baz=23			eS	Sg	16 03 31.0	+1.0
SBCB	**Hsinchu** baz=351	1.57	8	eP	Pb	16 03 09.1	-0.3
SBCB	baz=351			eS	Sg	16 03 30.2	-0.6
HSN	**Hsinchu** baz=353	1.58	8	eP	Pg	16 03 11.6	+1.1
ENTT	**Nioudou** baz=18	1.60	28	eP	Pb	16 03 10.0	+0.2
ENTT	baz=18			eS	Sg	16 03 32.7	+1.1
WLTB	**Daxi** baz=27	1.68	16	eP	Pb	16 03 11.4	+0.2
WLTB	baz=27			eS	Sg	16 03 34.8	+0.5
NWLT	**Wulai** baz=27	1.69	24	eP	Pb	16 03 11.2	-0.2
TWC	**Suao** baz=46	1.71	36	eP	Pb	16 03 11.9	+0.2
TWC	baz=46			eS	Sg	16 03 35.7	+0.4
TWE	**Neicheng** baz=30	1.71	30	eP	Pg	16 03 12.3	-0.7
TWE	baz=30			eS	Sg	16 03 36.4	+1.1
SLBB	**Yuanshan** baz=19	1.73	28	eP	Pb	16 03 11.8	-0.3
NCUH	**Zhongli** baz=359	1.78	13	eP	Pg	16 03 13.8	-0.5
NCU	**National Centr** baz=359	1.78	13	eP	Pb	16 03 12.7	-0.3
ILA	**Ilan** baz=51	1.79	31	eP	Pb	16 03 13.0	-0.1
EOS1	**EOS1** baz=64	1.83	44	eP	Pg	16 03 14.4	-0.9
TATO	**Taipei** baz=24	1.87	22	eP	Pb	16 03 13.3	-1.1
NHDH	**Xindian Distri** baz=25	1.87	23	eP	Pg	16 03 16.3	+0.2
NTC	**Toucheng** baz=50	1.90	32	eP	Pg	16 03 15.9	-0.8
TWA	**Mucha** baz=27	1.91	24	eP	Pb	16 03 14.9	-0.2
TAP1	**Taipei** baz=24	1.94	22	eP	Pb	16 03 15.1	-0.5
TWS1	**Kuangyinshan** baz=21	1.96	18	eP	Pb	16 03 14.9	-1.2
TIPB	**Shuangxi** baz=10.0	2.00	30	eP	Pb	16 03 16.3	-0.4
TIPB	baz=10.0			eS	Sg	16 03 43.7	-0.8
YM01	**YM01** baz=24	2.06	22	eP	Pn	16 03 15.0	+0.2
YM10	**YM10** baz=23	2.06	21	eP	Pn	16 03 16.1	+1.2
NWF	**Wu-fen Shan** baz=11	2.07	27	eP	Pb	16 03 18.1	+0.2
WFSB	**Wu-fen Shan** baz=12	2.07	27	eP	Pb	16 03 17.3	-0.5
YM11	**YM11** baz=24	2.08	22	eP	Pn	16 03 16.0	+0.8
ANP	**Anpu** baz=4.0	2.08	20	eP	Pn	16 03 15.9	+0.7
YM03	**YM03** baz=23	2.08	21	eP	Pn	16 03 16.0	+0.8
VWUC	**VWUC** baz=329	2.11	326	eP	Pn	16 03 14.5	-1.1
TWB1	**Santiao Chiao** baz=51	2.11	33	eP	Pb	16 03 17.6	-0.9
TWY	**Chenhua** baz=23	2.19	21	eP	Pb	16 03 18.8	-1.0
PTMZ	**Houxiangcun** baz=323	2.33	321	eP	Pn	16 03 17.6	-0.9
JYNG	**Yonagunijimaku**	2.36	59	P	Pb	16 03 20.9	-1.9
JYNG				eS	Sb	16 03 51.2	-0.9
KNM	**Kinmen** baz=300	2.41	300	eP	Pn	16 03 20.2	+0.5
YOJ	**Yonaguni jima** baz=74	2.42	59	eP	Pb	16 03 21.8	-2.0
YOJ	**Yonaguni jima**	2.42	59	P	Pb	16 03 22.0	-1.8
YOJ				eS	Sb	16 03 52.2	-1.5
PTTC	**Pingtan** baz=341	2.42	339	eP	Pn	16 03 19.6	-0.2
KNMB	**Chin-men Tao** baz=302	2.47	300	eP	Pn	16 03 19.5	-1.0
QZH	**Quanzhou**	2.59	312	ePn	Pn	16 03 21.8	-0.4
QZH				Sn	Sn	16 03 49.1	-4.7
QZH	comp=N,190nm,0.5s			smax	smax		
QZH	comp=E,96nm,0.7s			smax	smax		
ZPLA	**Ao Xicun** baz=287	2.82	285	eP	Pn	16 03 24.5	-0.9
HATJ	**Hateruma jima**	2.94	73	P	Pn	16 03 28.1	+1.2
HATJ				eS	Sn	16 04 03.7	+1.5
IRIF	**Iriomote-Funau**	2.96	68	P	Pn	16 03 29.5	+2.3
IRIF				eS	Sb	16 04 06.1	-3.1
MATB	**Ma-tsu** baz=348	3.00	346	eP	Pn	16 03 27.0	-0.7
ZZJH	**Jiuhuzhen** baz=296	3.10	294	eP	Pn	16 03 28.3	-0.8
JKRS	**Kuro-shima**	3.17	71	P	Pn	16 03 32.4	+2.3
JKRS				S	Sn	16 04 09.9	+2.0
MHZQ	**Yeshan** baz=333	3.25	332	eP	Pn	16 03 31.3	+0.1
JIJ	**Ishigaki jima**	3.32	69	P	Pn	16 03 33.8	+1.6
JIJ				eS	Sn	16 04 12.9	+1.1
LYJJ	**Jianjiangzhen** baz=346	3.42	345	eP	Pn	16 03 33.2	-0.3
JISG	**Ishigakijimahi**	3.54	67	P	Pn	16 03 36.5	+1.3
JISG				eS	Sn	16 04 19.2	+2.0
XPSS	**Dashiqiu** baz=353	3.72	353	eP	Pn	16 03 37.8	+0.2
JTJ	**Tarama**	3.90	68	P	Pn	16 03 41.7	+1.6
JTJ				eS	Sn	16 04 28.0	+2.1
JIRB	**Irabujima**	4.36	68	eS	Sn	16 04 39.6	+2.2
JIKM	**Ikemajima**	4.46	67	eS	Sn	16 04 41.5	+1.7
JMJ2	**Miyako jima3**	4.46	69	P	Pn	16 03 49.6	+1.7
JMJ2				eS	Sn	16 04 42.2	+2.2
VDOS	**Pratas Island** baz=235	4.49	237	eP	Pn	16 03 48.7	+0.4
KSRS	**Korea Array** comp=Z,22nm,18.5s,baz=320,slow=40	15.47	22	LR	LR	16 12 57.1	
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=107,slow=9.4,SNR=3.0	38.74	317	P	P	16 10 09.9	+5.3
WRA	**Warramunga Arr** 0.3nm,0.7s,baz=343,slow=8.8,SNR=3.3	44.92	162	P	P	16 10 53.6	-1.7
ASAR	**Alice Springs** 0.2nm,0.4s,baz=340,slow=7.0,SNR=5.0	48.34	164	P	P	16 11 21.4	-0.7
YKA	**Yellowknife Ar** 0.1nm,0.3s,baz=314,slow=4.6,SNR=4.0	84.00	23	P	P	16 15 10.6	0.0

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*IDC **04** 16:19:53.9±2.4, 32°.05S×69°.59W, h91^{km}±22^{km}, mb3.8/5, mb1 3.7/10, mb1mx3.6/29, mbtmp4.0/10, Error ellipse: s-maj=30.7km s-min=17.7km az=104.0*

*SJA **04** 16:19:55.5±0.8, 32°.06S×69°.60W, h103^{km}±3^{km}, ML4.0, MW4.0*

*GUC **04** 16:19:55.9±0.7, 32°.04S×69°.94W, h126^{km}±7^{km}, ML4.0*

*NEIC **04** 16:19:55.5±1.2, 32°.06S±0°.03×69°.5W±0°.1, h107^{km}±7^{km}, mb4.6/7, Error ellipse: s-maj=15.4km s-min=4.0km az=82.0*

ISC 04 16:19:55.4±0.7**, 32°.03S**±0°.04×**69°.63W**±0°.04**, h111**^{km}±6^{km}**, n61, σ1§16**/79**, mb4.1**/9**, 3C-5D, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLS	**Leoncito**	0.36	50	iP	Pn	16 20 12.3	+0.3
RTLS				eS	Sn	16 20 24.6	+0.2
RTLS	comp=Z,3μm,0.4s			IAML		16 20 25.9	
ASAL	**Salagasta**	0.87	130	iP	Pn	16 20 15.8	+0.3
ASAL				eS	Sn	16 20 30.0	-0.7
RTCV	**Cerro Valdivia**	0.94	80	iP	Pn	16 20 16.2	+0.1
RTCV				eS	Sn	16 20 31.2	-0.6
ZON	**Zonda**	0.94	59	iP	Pn	16 20 16.4	+0.1
ZON				eS	Sn	16 20 31.4	-0.4
ZON	comp=Z,1μm,0.4s			IAML		16 20 33.4	
ARCO	**CERRO ARCO**	1.00	144	iP	Pn	16 20 17.4	+0.5
ARCO				eS	Sn	16 20 32.7	-0.3
ARCO				IAML		16 20 35.7	

	comp=Z,5µm,0.8s						
UTNM	**Universidad Te**	**1.08**	**143**	*i* P	**Pn**	**16 20 18.6**	**+1.0**
CO04	**Los Peladeros**	**1.15**	**269**	⇑*i*P	**Pn**	**16 20 18.9**	**+0.3**
CO04				*i* S	**Sn**	**16 20 36.3**	**+0.3**
AAGR	**Agrelo**	**1.25**	**147**	*i* P	**Pn**	**16 20 20.0**	**+0.5**
AAGR				*e*S	**Sn**	**16 20 37.5**	**-0.2**
FCH	**Farellones**	**1.41**	**203**	⇓*i*P	**Pn**	**16 20 22.6**	**+1.1**
FCH				*i* S	**Sn**	**16 20 43.4**	**+2.1**
FCH				IAML		16 20 44.5	
	comp=E,2µm,0.2s						
PEL	**Peldehue**	**1.42**	**219**	*e*P	**Pn**	**16 20 21.6**	**+0.2**
PEL				*i* S	**Sn**	**16 20 41.1**	**-0.1**
PEL				IAML		16 20 44.1	
	comp=N,2µm,0.5s						
PEL	**Peldehue**	**1.42**	**219**	Pn	**Pn**	**16 20 21.6**	**+0.2**
PEL	**Peldehue**	**1.42**	**219**	*i* P	**Pn**	**16 20 22.0**	**+0.6**
PEL				*e*S	**Sn**	**16 20 41.6**	**+0.4**
AMOG	**MOGNA**	**1.46**	**42**	*i* P	**Pn**	**16 20 22.7**	**+0.8**
CO03	**El Pedregal**	**1.50**	**322**	IAML		16 20 48.1	
	comp=E,4µm,0.2s						
ROCH	**El Roble**	**1.50**	**231**	⇓*i*P	**Pn**	**16 20 22.8**	**+0.3**
ROCH				*i* S	**Sn**	**16 20 42.7**	**-0.3**
ROCH				IAML		16 20 45.3	
	comp=E,5µm,0.4s						
ROC1	**El Roble**	**1.50**	**231**	Pn	**Pn**	**16 20 22.7**	**+0.1**
ROC1	**El Roble**	**1.50**	**231**	*i* P	**Pn**	**16 20 22.9**	**+0.3**
ROC1				*e*S	**Sn**	**16 20 43.4**	**+0.2**
ACCO	**Cerro Coronel**	**1.52**	**19**	*i* P	**Pn**	**16 20 24.2**	**+1.3**
CLCH	**Cerro Calan**	**1.56**	**209**	⇓*i*P	**Pn**	**16 20 24.0**	**+0.9**
CLCH				*i* S	**Sn**	**16 20 45.4**	**+1.2**
CLCH				IAML		16 20 48.0	
	comp=E,3µm,0.6s						
FSR	**Penalolen**	**1.63**	**208**	*i* S	**Sn**	**16 20 46.3**	**+0.7**
MT03	**Universidad Ad**	**1.64**	**207**	*e*P	**Pn**	**16 20 24.8**	**+0.8**
MT03				*i* S	**Sn**	**16 20 46.7**	**+0.9**
MT03				IAML		16 20 49.7	
	comp=N,5µm,0.2s						
MT02	**Curacav**	**1.77**	**226**	⇓*i*P	**Pn**	**16 20 25.2**	**-0.3**
MT02				*i* S	**Sn**	**16 20 47.7**	**-0.8**
MT02				IAML		16 20 53.8	
	comp=E,869nm,0.4s						
AROD	**Rodeo**	**1.86**	**4**	*i* P	**Pn**	**16 20 29.0**	**+1.8**
LMEL	**Las Melosas**	**1.87**	**195**	⇓*i*P	**Pn**	**16 20 27.9**	**+0.9**
LMEL				*i* S	**Sn**	**16 20 52.9**	**+1.8**
LMEL				IAML		16 21 00.1	
	comp=N,1µm,0.1s						
ACDV	**Cuesta del Vie**	**1.91**	**13**	*i* P	**Pn**	**16 20 29.1**	**+1.6**
VA01	**Torpederas**	**1.97**	**239**	*e*P	**Pn**	**16 20 26.9**	**-1.2**
VA01				*i* S	**Sn**	**16 20 50.2**	**-2.8**
VA01				IAML		16 21 00.5	
	comp=E,2µm,0.5s						
ACAN	**Cantantal**	**2.08**	**97**	*i* P	**Pn**	**16 20 29.6**	**+0.1**
GO04	**Tololo Observa**	**2.11**	**331**	⇑*i*P	**Pn**	**16 20 30.9**	**+0.7**
GO04				*i* S	**Sn**	**16 20 57.6**	**+1.0**
GO04	**Tololo Observa**	**2.11**	**331**	Pn	**Pn**	**16 20 30.8**	**+0.7**
LAMA	**Las Malvinas**	**2.92**	**173**	*i* P	**Pn**	**16 20 40.8**	**+0.5**
MRA	**San Martin**	**3.33**	**98**	*i* P	**Pn**	**16 20 45.3**	**-0.7**
MRA				IAML		16 21 47.2	
	comp=Z,176nm,0.3s						
PUMA	**Malargue**	**3.46**	**178**	*i* P	**Pn**	**16 20 48.4**	**+0.9**
VCA	**Vinchina**	**3.51**	**21**	*i* P	**Pn**	**16 20 49.8**	**+1.4**
VCA				IAML		16 21 39.3	
	comp=Z,866nm,0.9s						
GO05	**Huala**	**3.54**	**212**	⇑*e*P	**Pn**	**16 20 46.6**	**-2.0**
GO05				*e*S	**Sn**	**16 21 26.7**	**-3.0**
GO05	**Huala**	**3.54**	**212**		**Pn**	**16 20 46.6**	**-2.0**
GO03	**Copiap**	**4.46**	**353**	Pn	**Pn**	**16 21 00.9**	**-0.1**
CYA	**Choya**	**4.88**	**44**	*i* P	**Pn**	**16 21 04.8**	**-1.9**
CYA				IAML		16 22 02.0	
	comp=Z,67nm,0.5s						
AHML	**Horco Molle**	**6.43**	**37**	*i* P	**Pn**	**16 21 25.6**	**-2.2**
GO02	**Mina Guanaco**	**6.85**	**0**	Pn	**Pn**	**16 21 32.0**	**-1.6**
PLCA	**Paso Flores**	**8.71**	**185**	P	**Pn**	**16 21 57.2**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=14,slow=17,SNR=3.9						
PLCA	**Paso Flores**	**8.71**	**185**	Pn	**Pn**	**16 21 56.3**	**-2.3**
LVC	**Limon Verde**	**9.41**	**4**	P	**Pn**	**16 22 06.0**	**-2.4**
	comp=Z,0.6nm,0.3s,baz=183,slow=9.7,SNR=6.2						
LVC	**Limon Verde**	**9.41**	**4**	Pn	**Pn**	**16 22 05.5**	**-2.9**
CPUP	**Villa Florida**	**12.15**	**65**	P	**Pn**	**16 22 42.8**	**-2.1**
	comp=Z,0.0nm,0.3s,baz=248,slow=19,SNR=2.4						
LPAZ	**La Paz**	**15.73**	**5**	P	**Pn**	**16 23 31.9**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=180,slow=14,SNR=8.8						
SIV	**San Ignacio**	**17.77**	**28**	P	**P**	**16 23 55.6**	**+0.5**
	comp=Z,1.6nm,0.3s,baz=211,slow=9.0,SNR=18						
EFI	**East Falkland**	**21.38**	**160**	P	**P**	**16 24 33.7**	**-0.1**
EFI				IAmb	IAmb	16 25 10.0	
	comp=Z,91nm,1.4s						
USHA	**Ushuaia**	**22.80**	**178**	P	**P**	**16 24 49.1**	**+0.6**
	comp=Z,7.4nm,0.8s,baz=354,slow=19,SNR=4.4						
SAML	**Samuel**	**23.74**	**16**	P	**P**	**16 24 58.0**	**+0.4**
SAML				IAmb	IAmb	16 24 59.9	
	comp=Z,5.1nm,0.8s						
BDFB	**Brasilia**	**25.55**	**55**	P	**P**	**16 25 14.2**	**0.0**
	comp=Z,1.9nm,0.4s,baz=274,slow=8.3,SNR=4.0						
BDFB	**Brasilia**	**25.55**	**55**	P	**P**	**16 25 14.0**	**-0.2**
TXAR	**Lajitas Array**	**69.07**	**328**	P	**P**	**16 30 50.7**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=158,slow=7.7,SNR=3.8						
WVT	**Waverly**	**69.92**	**344**	P	**P**	**16 30 55.4**	**+1.0**
WVT				IAmb	IAmb	16 30 55.8	
	comp=Z,6.3nm,0.7s						
LCAR	**Lake Charles**	**70.69**	**342**	P	**P**	**16 31 00.1**	**+1.1**
LCAR				IAmb	IAmb	16 31 52.6	
	comp=Z,22nm,1.9s						
DBIC	**Dimbokro**	**72.62**	**70**	P	**P**	**16 31 11.7**	**+0.5**
	comp=Z,1.9nm,0.4s,baz=222,slow=8.1,SNR=5.1						
DBIC	**Dimbokro**	**72.62**	**70**	P	**P**	**16 31 11.4**	**+0.2**
DBIC				IAmb	IAmb	16 31 19.2	
	comp=Z,16nm,1.4s						
P48A	**Milroy**	**72.63**	**347**	P	**P**	**16 31 10.8**	**+0.1**
TORD	**Torodi Ar. Bea**	**81.62**	**69**	P	**P**	**16 32 02.2**	**+0.7**
	comp=Z,2.6nm,0.8s,baz=257,slow=5.4,SNR=9.8						
WRA	**Warramunga Arr**	**123.45**	**207**	PKP	**PKPdf**	**16 38 39.6**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=165,slow=1.5,SNR=2.9						
ZALV	**Zalesovo Beam**	**151.49**	**32**	PKPbc	**PKiKP**	**16 39 36.6**	**+0.4**
	comp=Z,1.5nm,0.3s,baz=311,slow=3.7,SNR=4.3						
MKAR	**Makanchi Array**	**153.95**	**47**	PKPab	**PKPab**	**16 39 56.1**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=309,slow=4.0,SNR=7.5						

KRSC 04 16:40:13.3±1.0**,55°.44N**×**163°.33E,h62**^{km}±22^{km}**,ML4.1,**
Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.82**	**340**	*i* P	Pn	16 40 29.9	+0.7
KBTR				*e*S	Sn	16 40 41.1	+0.3
KBG	**Krutoberegovo**	**0.89**	**337**	*i* P	Pn	16 40 30.8	+0.8
KBG				*e*S	Sn	16 40 43.4	+1.1
BKI	**Bering**	**1.53**	**98**	*e*P	Pn	16 40 41.1	+2.8
BKI				*e*S	Sn	16 40 59.7	+2.5
ZLN	**Zelenaya**	**1.54**	**293**	*i* P	Pn	16 40 41.2	+2.5
ZLN				*e*S	Sn	16 41 00.0	+2.2
SMKR	**Semkarok**	**1.55**	**318**	*e*P	Pn	16 40 41.0	+2.2
CIRR	**Tsirk**	**1.61**	**296**	*e*P	Pn	16 40 41.9	+2.3
CIRR				*e*S	Sn	16 41 02.3	+2.8
LGNR	**Loginova**	**1.63**	**294**	*e*P	Pn	16 40 42.6	+2.6
BDR	**Baidarnaya**	**1.64**	**314**	*e*P	Pn	16 40 42.3	+2.3
BDR				*e*S	Sn	16 41 02.5	+2.3
TUMD	**Tumrok D**	**1.69**	**263**	*e*P	Pn	16 40 43.1	+2.4
TUMD				*e*S	Sn	16 41 03.0	+1.7
SRKR	**Sorokina**	**1.72**	**316**	*e*P	Pn	16 40 43.5	+2.5
KRSR	**Krestovskiy**	**1.75**	**298**	*i* P	Pn	16 40 43.3	+1.9
KRSR				*e*S	Sn	16 41 04.2	+1.5
KLY	**Klyuchi**	**1.75**	**301**	*e*P	Pn	16 40 42.0	+0.7
KLY				*e*S	Sn	16 41 01.8	-0.7
KIRR	**Kirishev**	**1.77**	**288**	*e*P	Pn	16 40 44.7	+2.9
KIRR				*e*S	Sn	16 41 05.6	+2.2
KZV	**Kizimen**	**1.77**	**261**	*e*P	Pn	16 40 44.1	+2.3
KZV				*e*S	Sn	16 41 05.3	+1.9
KMNR	**Kamenistaya**	**1.79**	**281**	*e*P	Pn	16 40 45.1	+3.1
KMNR				*e*S	Sn	16 41 07.0	+3.3
TUMR	**Tumrok**	**1.83**	**266**	*i* P	Pn	16 40 45.6	+3.1
TUMR				*e*S	Sn	16 41 07.4	+2.7
KPT	**Kopyto**	**1.84**	**288**	*e*S	Sn	16 41 07.4	+2.5
KOZ	**Kozyrevsk**	**2.05**	**289**	*e*P	Pn	16 40 49.2	+3.7
KOZ				*e*S	Sn	16 41 14.4	+4.4
SRDR	**Sredinnyy**	**2.22**	**295**	*e*P	Pn	16 40 51.1	+3.3
SRDR				*e*S	Sn	16 41 17.2	+3.1
KII	**Karymskiy**	**2.66**	**240**	*e*P	Pn	16 40 56.6	+2.8
KII				*e*S	Sn	16 41 27.0	+2.2
ESO	**Esso**	**2.67**	**282**	*e*P	Pn	16 40 56.9	+3.0
ESO				*e*S	Sn	16 41 27.4	+2.4
SPN	**Mys Shipunski**	**3.04**	**221**	*e*P	Pn	16 41 00.6	+1.6
SPN				*e*S	Sn	16 41 32.9	-1.3
NLC	**Nalytchevo**	**3.26**	**227**	*e*P	Pn	16 41 03.6	+1.7
NLC				*e*S	Sn	16 41 39.8	+0.4
SDLR	**Sedlovina**	**3.39**	**232**	*e*P	Pn	16 41 07.2	+3.4
SDLR				*e*S	Sn	16 41 45.8	+3.0
SMAR	**Somma**	**3.43**	**232**	*e*P	Pn	16 41 07.8	+3.3
KRX	**Arik**	**3.44**	**235**	*e*P	Pn	16 41 08.3	+3.7
KRX				*e*S	Sn	16 41 46.8	+2.7
UGLR	**Uglovaya**	**3.46**	**232**	*e*P	Pn	16 41 08.2	+3.4
UGLR				*e*S	Sn	16 41 48.1	+3.6
AVH	**Avacha**	**3.46**	**233**	*e*P	Pn	16 41 08.4	+3.6
AVH				*e*S	Sn	16 41 47.7	+3.2
KOK	**Koryaka**	**3.49**	**234**	*e*P	Pn	16 41 08.7	+3.5
DALK	**Dalny**	**3.61**	**230**	*e*P	Pn	16 41 09.3	+2.6
OSSR	**Ossora**	**3.82**	**358**	*e*P	Pn	16 41 12.1	+2.5
OSSR				*e*S	Sn	16 41 54.2	+1.0
KRMR	**Karymshinskiy**	**4.03**	**232**	*e*P	Pn	16 41 16.2	+3.8
KRMR				*e*S	Sn	16 42 00.6	+2.4
PALN	**Palana**	**4.09**	**335**	*e*P	Pn	16 41 15.3	+2.1
RUS	**Russkaya**	**4.15**	**225**	*e*P	Pn	16 41 17.2	+3.2
GRL	**Gorelyy**	**4.24**	**229**	*e*P	Pn	16 41 20.0	+4.5
GRL				*e*S	Sn	16 42 07.0	+3.2
MTVR	**Mutnovka**	**4.25**	**228**	*e*P	Pn	16 41 19.5	+3.9
MTVR				*e*S	Sn	16 42 05.3	+1.4
APC	**Apacha**	**4.42**	**238**	*e*P	Pn	16 41 23.0	+5.3
APC				*e*S	Sn	16 42 12.2	+4.4
ASAK	**Asacha**	**4.44**	**229**	*e*P	Pn	16 41 22.5	+4.4
ASAK				*e*S	Sn	16 42 12.3	+3.8
KDTR	**Khodutka, Kamc**	**4.80**	**223**	*e*P	Pn	16 41 25.8	+2.9
MIPR	**Malaya Ipel'ka**	**5.02**	**234**	*e*P	Pn	16 41 30.6	+4.6
TILK	**Tilichiki**	**5.24**	**15**	*e*P	Pn	16 41 33.3	+4.4
PAU	**Pauzhetka**	**5.57**	**227**	*e*P	Pn	16 41 38.0	+4.5
ALID	**Alaid**	**6.55**	**229**	*e*P	Pn	16 41 51.5	+4.5

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*SJA **04** 16:46:31.7±0.7,23°.07S×66°.72W,h203^{km}±26^{km},ML3.6, MW3.7*
*IDC **04** 16:46:31.3±1.5,23°.09S×66°.50W,h200^{km}±22^{km},mb3.1/1, mb1 3.3/6,mb1mx3.1/31,mbtmp3.8/6,MS2.9/1,Ms1 2.9/1, ms1mx2.4/7,Error ellipse: s-maj=30.7km s-min=17.2km az=120.0*
*NEIC **04** 16:46:31.5±1.6,23°.1S±0°.1×66°.6W±0°.1,h209^{km}±10^{km}, mb4.2/2,Error ellipse: s-maj=18.7km s-min=14.1km az=119.0*
ISC 04 16:46:31.7±0.8**,23°.06S**±0°.05×**66°.64W**±0°.06**,h222**^{km}**,n31,**
σ**1^{s}.44**/38**,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AZAP	**Zapla**	**1.84**	**129**	*i* P	**Pn**	**16 47 10.4**	**-0.3**
AZAP				*e*S	**S**	**16 47 38.9**	**-2.1**
SLA	**San Lorenzo**	**1.95**	**148**	*i* P	**Pn**	**16 47 12.3**	**+0.8**
SLA				*e*S	**S**	**16 47 44.9**	**+2.2**
LVC	**Limon Verde**	**2.15**	**282**	P	**Pn**	**16 47 14.3**	**+0.5**
	20nm,0.3s,baz=96,slow=6.3,SNR=16						
LVC				S	**S**	**16 47 45.9**	**-0.5**
	1.8nm,0.3s,baz=252,slow=19,SNR=2.9						
PB01	**IPOC Station P**	**3.32**	**307**	Pn	**Pn**	**16 47 27.0**	**+0.6**
PB04	**IPOC Station P**	**3.33**	**282**	Pn	**Pn**	**16 47 26.1**	**-0.3**
GO02	**Mina Guanaco**	**3.41**	**232**	Pn	**Pn**	**16 47 27.6**	**0.0**
PB10	**IPOC Station P**	**3.63**	**262**	Pn	**Pn**	**16 47 29.6**	**-0.2**
AHML	**Horco Molle**	**3.89**	**163**	*e*P	**Pn**	**16 47 33.2**	**+0.2**
AHML				*e*S	**S**	**16 48 21.5**	**+0.3**
GO01	**Chusmiza**	**4.14**	**324**	Pn	**Pn**	**16 47 36.8**	**+0.3**
PB11	**IPOC Station P**	**4.33**	**319**	Pn	**Pn**	**16 47 38.0**	**-0.6**
MNMC	**Minye Minye**	**4.79**	**324**	Pn	**Pn**	**16 47 43.5**	**-0.9**
CYA	**Choya**	**5.41**	**172**	*i* P	**Pn**	**16 47 52.4**	**+0.6**
CYA				*e*S	**S**	**16 48 53.3**	**-1.9**
CYA				IAML		16 48 59.5	
	comp=Z,4.3nm,2.3s						
VCA	**Vinchina**	**5.82**	**194**	*e*P	**Pn**	**16 47 58.0**	**+0.8**
VCA				*e*S	**S**	**16 49 05.8**	**+0.8**
VCA				IAML		16 49 38.0	
	comp=Z,8.1nm,2.9s						
AGUA	**GUANDACOL**	**6.61**	**194**	*i* P	**Pn**	**16 48 06.7**	**-0.5**
LPAZ	**La Paz**	**6.89**	**348**	P	**Pn**	**16 48 12.4**	**+1.1**
	comp=Z,0.8nm,0.3s,baz=159,slow=7.6,SNR=20						
LPAZ				S	**S**	**16 49 29.1**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=166,slow=25,SNR=4.0						
LPAZ	**La Paz**	**6.89**	**348**	Pn	**Pn**	**16 48 11.7**	**+0.4**
ACDV	**Cuesta del Vie**	**7.42**	**197**	*i* P	**Pn**	**16 48 18.0**	**+0.4**
ACDV				IAML		16 50 22.7	
	comp=Z,5.7nm,1.6s						
AROD	**Rodeo**	**7.52**	**199**	*i* P	**Pn**	**16 48 19.5**	**+0.5**
AROD				*e*S	**S**	**16 49 48.0**	**+3.4**
ACCO	**Cerro Coronel**	**7.80**	**196**	*i* P	**Pn**	**16 48 22.0**	**-0.6**
AMOG	**MOGNA**	**8.02**	**192**	*i* P	**Pn**	**16 48 23.3**	**-1.9**
AMOG				*e*S	**S**	**16 49 51.4**	**-4.7**
AMOG				IAML		16 49 51.9	
	comp=Z,3.8nm,0.4s						
SIV	**San Ignacio**	**8.77**	**38**	P	**Pn**	**16 48 33.5**	**-1.5**
	comp=Z,0.8nm,0.3s,baz=226,slow=13,SNR=15						
SIV				LR	LR	16 52 32.2	
	comp=Z,75nm,19.4s,baz=312,slow=41						
RTCV	**Cerro Valdivia**	**8.93**	**191**	*i* P	**Pn**	**16 48 36.5**	**-0.4**
RTCV				IAML		16 50 20.1	
	comp=Z,12nm,3.7s						
RTLS	**Leoncito**	**9.02**	**195**	*i* P	**Pn**	**16 48 38.0**	**-0.2**
RTLS				IAML		16 51 00.7	
	comp=Z,1.9nm,4.4s						
ACAN	**Cantantal**	**9.19**	**183**	*i* P	**Pn**	**16 48 38.4**	**-1.8**
ACAN				IAML		16 50 29.9	
	comp=Z,10nm,2.3s						
ASAL	**Salagasta**	**9.69**	**191**	*i* P	**Pn**	**16 48 45.5**	**-1.1**
ASAL				IAML		16 51 19.2	
	comp=Z,4.0nm,2.1s						
PLCA	**Paso Flores**	**17.92**	**190**	P	**P**	**16 50 24.8**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=22,slow=16,SNR=2.9						
PLCA	**Paso Flores**	**17.92**	**190**	IAmb	IAmb	16 51 12.9	
	comp=Z,17nm,1.6s						
BDFB	**Brasilia**	**19.05**	**71**	P	**P**	**16 50 37.7**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=231,slow=14,SNR=5.0						
BDFB	**Brasilia**	**19.05**	**71**	IAmb	IAmb	16 50 39.3	
	comp=Z,5.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**75.92**	**69**	P	**P**	**16 57 56.2**	**+1.7**
	comp=Z,0.3nm,0.5s,baz=260,slow=4.0,SNR=2.7						
MKAR	**Makanchi Array**	**145.59**	**39**	PKPbc	**PKPdf**	**17 05 45.3**	**+1.9**
	comp=Z,0.3nm,0.8s,baz=320,slow=3.7,SNR=3.8						

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*THE **04** 16:48:12.9,38°.14N×20°.42E,h14^{km},ML2.5/4,Error ellipse: s-maj=0.9km s-min=0.6km az=217.0*
*ATH **04** 16:48:12.7,38°.14N×20°.40E,h14^{km}±1^{km},ML2.5/1,Error ellipse: s-maj=2.0km s-min=1.2km az=258.0*
ISC 04 16:48:12.8±1.5**,38°.15N**±0°.04×**20°.42E**±0°.05**,h15**^{km}±6^{km},
n20,σ**0^{s}.30**/36**,Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHV1	**Chavriata, Kef**	**0.04**	**320**	P	**Pg**	**16 48 15.6**	**+0.1**
CHV1				S	**Sg**	**16 48 17.5**	**+0.2**
	6µm,0.2s						
LXRA	**Lixouri, Kepha**	**0.05**	**16**	P	**Pg**	**16 48 15.8**	**+0.2**
LXRA				S	**Sg**	**16 48 17.7**	**+0.2**
KEF2	**Argostoli. Kep**	**0.06**	**73**	P	**Pg**	**16 48 15.4**	**-0.2**
KEF2				S	**Sg**	**16 48 17.2**	**-0.2**
ARG2	**Argostoli**	**0.06**	**61**	P	**Pg**	**16 48 15.6**	**0.0**
ARG2				S	**Sg**	**16 48 17.4**	**-0.1**
	4µm,0.1s						
KEF3	**Kipouria, Keph**	**0.08**	**314**	P	**Pg**	**16 48 15.8**	**0.0**
KEF3				S	**Sg**	**16 48 17.4**	**-0.4**
AGT1	**Agia Thekli**	**0.10**	**345**	P	**Pg**	**16 48 16.1**	**0.0**
KEF4	**Livadi, Kephal**	**0.11**	**2**	P	**Pg**	**16 48 16.1**	**-0.1**
KEF4				S	**Sg**	**16 48 18.5**	**+0.2**
KEF1	**Kardakata, Kep**	**0.14**	**18**	P	**Pg**	**16 48 16.5**	**0.0**
KEF1				S	**Sg**	**16 48 18.9**	**0.0**
VLS	**Valsamata**	**0.14**	**78**	P	**Pg**	**16 48 16.3**	**-0.2**
VLS				S	**Sg**	**16 48 18.9**	**-0.1**
	2µm,0.1s						
VLS	**Valsamata**	**0.14**	**78**	P	**Pg**	**16 48 16.4**	**-0.2**
VLS				S	**Sg**	**16 48 19.0**	**-0.1**
VLS				AML	AML	16 48 19.1	
	comp=N,4587µm,0.2s						
VLS				AML	AML	16 48 19.1	
	comp=E,4114µm,0.1s						
VSK1	**VASILIKIADES**	**0.28**	**24**	P	**Pg**	**16 48 18.8**	**0.0**
VSK1				S	**Sg**	**16 48 23.7**	**+0.8**
KFL	**Anninata**	**0.29**	**98**	P	**Pg**	**16 48 18.9**	**-0.1**
KFL				S	**Sg**	**16 48 23.7**	**+0.5**
	comp=E,462nm,0.4s						
KFL	**Anninata**	**0.29**	**98**	P	**Pg**	**16 48 18.9**	**-0.1**
KFL				S	**Sg**	**16 48 23.7**	**+0.5**
KONA	**Konidatara, Ke**	**0.30**	**23**	P	**Pg**	**16 48 19.0**	**-0.1**
KONA				S	**Sg**	**16 48 24.0**	**+0.6**
FSK	**Fiskardo**	**0.33**	**20**	P	**Pg**	**16 48 19.4**	**-0.3**
FSK				S	**Sg**	**16 48 24.7**	**+0.5**
VLMS	**Volimes, Zakyn**	**0.33**	**145**	P	**Pg**	**16 48 19.5**	**-0.2**
VLMS				S	**Sg**	**16 48 24.9**	**+0.5**
EVGI	**Lefkada island**	**0.51**	**21**	P	**Pg**	**16 48 22.5**	**-0.4**
EVGI				S	**Sb**	**16 48 30.7**	**0.0**
LKD2	**Lefkada island**	**0.67**	**16**	P	**Pg**	**16 48 25.6**	**-0.3**
PDO	**Prodromos**	**0.75**	**53**	P	**Pg**	**16 48 27.1**	**-0.4**
PVO	**Paravola**	**0.99**	**61**	P	**Pb**	**16 48 31.6**	**-0.1**

WEL 04 17:01:41.0,39°S±2°×**17°5E**±°**,h21**^{km}±1^{km}**,M2.1**/7**,ML2.2**/7**,**
MLv2.1/7**,Error ellipse: s-maj=0.0km s-min=0.0km**
az=153.3,North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PKVZ	**Pokaka**	**0.11**	**102**	P	Pb	17 01 45.7	-1.9
MTVZ	**Mangateitei**	**0.24**	**120**	P	Pb	17 01 47.2	+0.1
TWVZ	**Taurewa**	**0.26**	**43**	P	Pb	17 01 48.5	+1.1
FWVZ	**Far West T-bar**	**0.27**	**88**	P	Pb	17 01 47.7	+0.1
VRZ	**Vera Road**	**0.38**	**292**	P	Pb	17 01 49.5	+0.7
MOVZ	**Moawhango**	**0.45**	**109**	P	Pb	17 01 50.6	+0.5
WAZ	**Wanganui**	**0.52**	**199**	P	Pb	17 01 51.9	+0.5
WATZ	**Wairara**	**0.69**	**37**	P	Pb	17 01 54.6	+0.2
HIZ	**Hauiti**	**0.80**	**340**	P	Pn	17 01 56.6	-0.4
TLZ	**Tolley Road**	**0.97**	**16**	P	Pb	17 01 58.8	-0.3
PNHZ	**Pukenui**	**1.00**	**130**	P	Pn	17 02 00.9	+1.0
MRZ	**Mangatainoka R**	**1.42**	**169**	P	Pb	17 02 07.3	+0.5

IDC 04 17:02:39.1±6.5**,6°.04S**×**155°.09E,h164**^{km}±49^{km}**,mb2.9**/4**,**
mb1 3.2/5**,mb1mx3.0**/26**,mbtmp3.4**/5**,Error ellipse:**
s-maj=65.8km s-min=24.8km az=112.0,
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.51**	**299**	P	Pn	17 03 33.0	-0.5
	2.3nm,0.3s,baz=108,slow=20,SNR=1.5						
KRVT				S	Sn	17 04 16.4	+0.6
	3.4nm,0.3s,baz=218,slow=19,SNR=1.0						
WRA	**Warramunga Arr**	**24.44**	**234**	P	P	17 07 43.2	+0.4
	0.9nm,0.4s,baz=58,slow=10,SNR=17						
ASAR	**Alice Springs**	**26.88**	**227**	P	P	17 08 04.0	-0.8
	0.1nm,0.5s,baz=60,slow=9.2,SNR=4.5						
ILAR	**Eielson Array**	**82.46**	**22**	P	P	17 14 42.6	-0.2
	0.2nm,0.8s,baz=234,slow=4.3,SNR=2.2						
MKAR	**Makanchi Array**	**82.76**	**319**	P	P	17 14 45.2	+0.4
	0.1nm,0.6s,baz=116,slow=4.4,SNR=2.2						

IDC 04 17:02:46.8±28.0**,29°.41S**×**179°.24W,h0**^{km}**,mb4.0**/4**,**
mb1 4.2/4**,mb1mx3.9**/23**,mbtmp4.0**/4**,Error ellipse:**
s-maj=527.8km s-min=151.2km az=98.0,Kermadec
Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**33.67**	**256**	P	P	17 09 30.0	+0.4
	0.8nm,0.4s,baz=88,slow=16,SNR=3.9						
ASAR	**Alice Springs**	**42.09**	**266**	P	P	17 10 40.4	-0.5
	0.4nm,0.3s,baz=106,slow=7.4,SNR=32						
WRA	**Warramunga Arr**	**42.99**	**272**	P	P	17 10 48.4	+0.2
	1.1nm,0.3s,baz=112,slow=8.0,SNR=35						
FITZ	**Fitzroy Crossi**	**51.29**	**270**	P	P	17 11 52.4	-0.5
	3.8nm,1.1s,baz=100,slow=6.6,SNR=2.5						

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*THE **04** 17:10:07.8,38°.63N×20°.49E,h11^{km}±1^{km},ML3.1/10,Error ellipse: s-maj=1.3km s-min=0.4km az=103.0*
*ATH **04** 17:10:08.1,38°.63N×20°.55E,h8^{km}±1^{km},ML2.8/17,Error ellipse: s-maj=2.0km s-min=0.6km az=213.0*
ISC 04 17:10:08.1±0.9**,38°.63N**±0°.02×**20°.54E**±0°.03**,h12**^{km}±5^{km},
n50,σ**0^{s}.53**/74**,Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EVGI	**Lefkada island**	**0.10**	**96**	P	**Pg**	**17 10 10.6**	**-0.3**
EVGI				S	**Sg**	**17 10 13.3**	**+0.4**
FSK	**Fiskardo**	**0.17**	**173**	P	**Pg**	**17 10 11.8**	**-0.2**
FSK				S	**Sg**	**17 10 14.9**	**+0.2**
	5µm,0.4s						
FSK	**Fiskardo**	**0.17**	**173**	P	**Pg**	**17 10 11.8**	**-0.2**
FSK				S	**Sg**	**17 10 14.4**	**-0.3**
FSK				AML	AML	17 10 15.2	
	comp=N,8254µm,0.4s						
FSK				AML	AML	17 10 19.7	
	comp=E,10872µm,0.4s						
LKD2	**Lefkada island**	**0.18**	**31**	P	**Pg**	**17 10 11.9**	**-0.3**
LKD2				S	**Sg**	**17 10 15.3**	**+0.2**
	comp=E,9µm,0.3s						
LKD2	**Lefkada island**	**0.18**	**31**	P	**Pg**	**17 10 12.0**	**-0.3**
LKD2				S	**Sg**	**17 10 14.6**	**-0.5**
LKD2				AML	AML	17 10 15.7	
	comp=N,17711µm,0.3s						
LKD2				AML	AML	17 10 15.9	
	comp=E,14493µm,0.3s						
MGNA	**Meganis**	**0.20**	**83**	P	**Pg**	**17 10 12.4**	**-0.1**
MGNA				S	**Sg**	**17 10 15.5**	**0.0**
MGNA				AML	AML	17 10 16.1	
	comp=N,17551µm,0.2s						
MGNA				AML	AML	17 10 17.9	
	comp=E,6420µm,0.3s						
KONA	**Konidatara, Ke**	**0.21**	**172**	P	**Pg**	**17 10 12.4**	**-0.2**
KONA				S	**Sg**	**17 10 15.6**	**0.0**
KONA				AML	AML	17 10 18.4	
	comp=E,5051µm,0.3s						
KONA				AML	AML	17 10 21.9	
	comp=N,6570µm,0.3s						
TSLK	**Tsoukalades, L**	**0.22**	**26**	P	**Pg**	**17 10 12.7**	**-0.1**
TSLK				S	**Sg**	**17 10 16.6**	**+0.7**
	comp=N,9µm,0.5s						
VSK1	**VASILIKIADES**	**0.22**	**174**	P	**Pg**	**17 10 12.5**	**-0.4**
VSK1				S	**Sg**	**17 10 16.2**	**+0.1**
	comp=N,4µm,0.4s						
KEF1	**Kardakata, Kep**	**0.36**	**188**	P	**Pg**	**17 10 14.9**	**-0.4**
KEF1				S	**Sg**	**17 10 20.0**	**0.0**
KEF4	**Livadi, Kephal**	**0.38**	**193**	P	**Pg**	**17 10 15.4**	**-0.3**
KEF4				S	**Sg**	**17 10 21.5**	**+0.7**
LXRA	**Lixouri, Kepha**	**0.44**	**190**	P	**Pg**	**17 10 16.5**	**-0.2**
LXRA				S	**Sg**	**17 10 23.2**	**+0.7**
AST1	**Astakos**	**0.44**	**101**	P	**Pg**	**17 10 17.0**	**+0.1**
AST1				S	**Sb**	**17 10 24.2**	**-0.3**
	comp=N,5µm,0.3s						
KEF3	**Kipouria, Keph**	**0.45**	**199**	P	**Pg**	**17 10 16.5**	**-0.5**
KEF3				S	**Sg**	**17 10 23.0**	**0.0**
ARG2	**Argostoli**	**0.45**	**185**	P	**Pg**	**17 10 16.5**	**-0.5**
ARG2				S	**Sg**	**17 10 23.8**	**+0.8**
	comp=N,6µm,0.3s						
VLS	**Valsamata**	**0.45**	**175**	P	**Pg**	**17 10 16.6**	**-0.4**
VLS				S	**Sg**	**17 10 23.3**	**+0.1**
	comp=N,2µm,0.2s						
VLS	**Valsamata**	**0.45**	**175**	P	**Pg**	**17 10 16.7**	**-0.4**
VLS				S	**Sg**	**17 10 23.2**	**+0.1**
VLS				AML	AML	17 10 24.3	
	comp=E,4415µm,0.3s						
VLS				AML	AML	17 10 24.9	
	comp=N,3885µm,0.1s						
ARGA	**Argostoli. Kep**	**0.46**	**186**	P	**Pg**	**17 10 16.6**	**-0.5**
ARGA				S	**Sg**	**17 10 23.4**	**+0.3**
KEF2	**Argostoli. Kep**	**0.47**	**185**	P	**Pg**	**17 10 16.9**	**-0.4**
KEF2				S	**Sg**	**17 10 24.1**	**+0.6**
PDO	**Prodromos**	**0.51**	**93**	P	**Pg**	**17 10 17.9**	**-0.2**
PDO				S	**Sb**	**17 10 26.9**	**+0.5**
PDO	**Prodromos**	**0.51**	**93**	P	**Pg**	**17 10 17.9**	**-0.2**
KFL	**Anninata**	**0.56**	**159**	P	**Pg**	**17 10 18.5**	**-0.5**
KFL	**Anninata**	**0.56**	**159**	P	**Pg**	**17 10 18.6**	**-0.4**
KFL				S	**Sg**	**17 10 26.8**	**+0.4**
KFL				AML	AML	17 10 32.8	
	comp=N,2872µm,0.3s						
KFL				AML	AML	17 10 33.0	
	comp=E,4423µm,0.6s						
VLMS	**Volimes, Zakyn**	**0.76**	**172**	P	**Pg**	**17 10 22.0**	**-0.8**
VLMS				AML	AML	17 10 41.3	
	comp=N,2516µm,0.4s						
VLMS				AML	AML	17 10 41.3	
	comp=E,2364µm,0.4s						
PVO	**Paravola**	**0.78**	**91**	P	**Pb**	**17 10 23.4**	**-0.2**
PVO				S	**Sb**	**17 10 35.1**	**+1.0**
	comp=E,1µm,0.3s						
PVO	**Paravola**	**0.78**	**91**	P	**Pb**	**17 10 23.4**	**-0.2**

PVO				AML	AML	17 10 37.2	
	comp=N,2527µm,0.4s						
PVO				AML	AML	17 10 43.3	
	comp=E,1827µm,0.3s						
VTN	Vitineika	0.88	144	P	Pg	17 10 25.1	+0.1
IGT	Igoumenitsa	0.92	350	P	Pg	17 10 24.3	-1.5
IGT				S	Sb	17 10 39.2	+1.1
	comp=E,858nm,0.4s						
IGT	Igoumenitsa	0.92	350	P	Pg	17 10 25.2	-0.6
IGT				AML	AML	17 10 43.7	
	comp=N,1950µm,0.3s						
IGT				AML	AML	17 10 43.9	
	comp=E,1481µm,0.4s						
KRI1	kERI	0.99	167	P	Pg	17 10 25.9	-1.3
EVR	Evrytania	1.03	74	P	Pg	17 10 27.5	-0.6
EVR				S	Sn	17 10 43.6	+0.5
	comp=E,212nm,0.5s						
EVR	Evrytania	1.03	74	P	Pg	17 10 27.4	-0.6
EVR				AML	AML	17 10 56.3	
	comp=E,430µm,0.6s						
EVR				AML	AML	17 10 57.6	
	comp=N,363µm,0.6s						
KASA	Kassiopi	1.21	337	P	Pb	17 10 31.2	+0.2
KEK	Kerkira	1.22	332	P	Pb	17 10 31.1	-0.1
KEK				AML	AML	17 10 55.4	
	comp=N,344µm,0.4s						
KEK				AML	AML	17 10 58.3	
	comp=E,768µm,0.5s						
TRIZ	Trizonia	1.23	102	P	Pb	17 10 30.5	-0.9
TRIZ	Trizonia	1.23	102	P	Pb	17 10 30.4	-0.9
MEV	Metsovon	1.27	25	P	Pn	17 10 32.0	+0.1
KALE	Kalithea	1.28	100	P	Pn	17 10 31.3	-0.7
KALE				AML	AML	17 11 03.2	
	comp=N,689µm,0.5s						
KALE				AML	AML	17 11 03.3	
	comp=E,499µm,0.7s						
MAKR	Makrakomi, Fth	1.30	72	P	Pn	17 10 32.3	0.0
MAKR				AML	AML	17 10 58.9	
	comp=N,829µm,0.5s						
MAKR				AML	AML	17 11 01.3	
	comp=E,872µm,0.6s						
AMT	Artemida-Makis	1.44	139	P	Pn	17 10 34.7	+0.6
AGG	Agios Georgios	1.46	74	P	Pb	17 10 35.2	0.0
AGG				AML	AML	17 11 03.9	
	comp=E,508µm,0.7s						
AGG				AML	AML	17 11 05.9	
	comp=N,469µm,0.6s						
KPRO	Kipourio	1.47	26	P	Pg	17 10 36.2	-0.2
KPRO				AML	AML	17 11 05.0	
	comp=E,680µm,0.7s						
KPRO				AML	AML	17 11 06.1	
	comp=N,593µm,0.5s						
THL	Klokotos Trika	1.48	50	P	Pb	17 10 35.6	0.0
THL				AML	AML	17 11 01.9	
	comp=E,352µm,0.5s						
THL				AML	AML	17 11 04.5	
	comp=N,506µm,0.7s						
AXAR	Agios Charalam	1.67	85	P	Pg	17 10 39.6	-0.5
AXAR				AML	AML	17 11 12.7	
	comp=N,957µm,0.7s						
AXAR				AML	AML	17 11 18.2	
	comp=E,706µm,0.5s						
ITM	Ithomi	1.82	142	P	Pb	17 10 41.5	+0.1
NEST	Nestorio	1.83	12	P	Pg	17 10 42.7	-0.5
PYL	PYLOS	1.98	151	P	Pb	17 10 43.6	-0.5
LTK	Loutraki	2.01	107	P	Pb	17 10 44.6	0.0
XOR	Xorichti	2.20	70	P	Pb	17 10 47.2	-0.6
MRKA	Markates	2.39	87	P	Pb	17 10 50.0	-1.1

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*NIED **04** 17:30:00, 39°.70N×141°.90E, h29^{km}, Mw3.7 Best double couple: M$_0$4.06000×10^{14} NP1:ϕ_s257.00000°, δ86.00000°, λ18.00000°. NP2:ϕ_s166.00000°, δ72.00000°, λ176.00000°.*

*JMA **04** 17:30:44.0±0.1, 39°.74N×141°.94E, h26^{km}±1^{km}, M4.0 Broadband fault plane solution: P waves. NP1: ϕ_s148.00000°, δ80.00000°, λ170.00000°. NP2: ϕ_s240.00000°, δ80.00000°, λ10.00000°. Principal axes: T Plg14.0000°, Azm104.0000°; N Plg76.0000°, Azm284.0000°; P Plg0.0000°, Azm14.0000°;*

JMA Felt II J1.

*IDC **04** 17:30:45.9±2.1, 39°.78N×142°.27E, h49^{km}±19^{km}, mb3.3/11, mb1 3.5/15, mb1mx3.3/46, mbtmp3.6/15, ML3.8/2, MS3.1/1, Ms1 3.1/1, ms1mx2.4/22 Error ellipse: s-maj=26.4km s-min=13.8km az=107.0*

*NEIC **04** 17:30:45.7±2.4, 39°.75N±0°.07×142°.3E±0°.1, h50^{km}±9^{km}, mb4.4/5, Error ellipse: s-maj=15.7km s-min=8.3km az=111.0*

ISC 04 17:30:43.2±1.0**, 39°.73N**±0°.03×**142°.04E**±0°.07**, h27**^{km}±6^{km}**, n46, σ2^{s}06**/47**, mb3.6**/11**, 2C-7D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	0.23	228	⇓P	Pb	17 30 49.5	+0.1
MIYJ				S	Sb	17 30 52.9	-0.7
JTH	Tanohata	0.25	327	⇓P	Pb	17 30 49.8	+0.2
JTH				S	Sb	17 30 53.7	-0.3
JKEN	Kujiedanarisaw	0.54	332	⇓P	Pb	17 30 53.8	-0.3
JKEN				S	Sb	17 31 01.1	-0.4
JKZ	Kuzumaki	0.60	295	⇑P	Pb	17 30 54.4	-0.8
JKZ				S	Sb	17 31 01.3	-2.1
JOM	Ohasama	0.63	246	⇑P	Pb	17 30 55.0	-0.7
JOM				S	Sb	17 31 03.0	-1.2
OFUJ	Ofunato	0.71	204	⇓P	Pb	17 30 56.8	-0.2
JANG	Nango	0.76	328	⇓P	Pb	17 30 57.0	-0.8
JANG				*e*S	Sb	17 31 06.4	-1.4
JMK	Ichinoseki	1.00	220	⇓P	Pn	17 31 01.5	0.0
JMK				S	Sb	17 31 14.2	-0.5
JKMT	Kesennumamotoy	1.02	206	⇓P	Pn	17 31 01.9	+0.2
JKMT				*e*S	Sb	17 31 15.3	+0.2
ERM	Erimo	2.43	20		Pn	17 31 23.6	+2.5
MAJO	Matsushiro	4.39	225		Pn	17 31 51.7	+3.6
MAT	Matsushiro	4.39	225	P	Pn	17 31 52.3	+4.2
MAT				*e*S	Sb	17 32 44.9	-7.2
MJAR	Matsushiro Arr	4.39	225	P	Pn	17 31 51.2	+3.2
	0.1nm,0.3s,baz=34,slow=14,SNR=11						
MJB9	Matsu-Tunnel	4.39	225		Pn	17 31 51.2	+3.1
ASAJ	Asahikawa	4.40	5	P	Pn	17 31 50.4	+2.2
	6.2nm,0.3s,baz=216,slow=10.0,SNR=76						
ASAJ				S	Sn	17 32 38.5	0.0
	baz=150,slow=16,SNR=2.0						
JKA	Kamikawa-asahi	4.40	5		Pn	17 31 50.4	+2.2
JKA					Sn	17 32 38.5	0.0
INU	Inuyama	5.92	224	Pn	Pn	17 32 11.8	+2.7
JHJ	Hachijo jima 2	6.84	196	LR	LR	17 35 24.9	
	comp=Z,140nm,20.0s,baz=122,slow=40						
JHJ2	Mitsune	6.84	196	Pn	Pn	17 32 23.0	+1.2
YSS	Yuzh-Sakhalins	7.24	4	Pn	Pn	17 32 28.0	+0.9
USA0B	Ussuriysk Arra	8.72	304	Pn	Pn	17 32 53.5	+6.0
USRK	Ussuriysk Ar.	8.72	304	P	Pn	17 32 51.9	+4.5
	baz=105,slow=16,SNR=3.6						
JNU	Nakatsue	11.15	237	Pn	Pn	17 33 27.1	+6.3
KSRS	Korea Array	11.28	263	P	Pn	17 33 27.6	+5.0
	0.2nm,0.3s,baz=72,slow=14,SNR=3.2						
PET	Petropavlovsk	17.49	35	Pn	Pn	17 34 41.2	-3.8
PET				IAmb	IAmb	17 34 58.0	
	comp=Z,75nm,1.4s						
MA2	Magadan	20.62	13	P	P	17 35 19.2	-0.9
	comp=Z,4.0nm,0.6s,baz=196,slow=6.1,SNR=5.1						
MA2	Magadan	20.62	13	P	P	17 35 19.6	-0.6
MA2				IAmb	IAmb	17 35 53.4	
	comp=Z,28nm,1.6s						
SEY	Seymchan	24.05	12	P	P	17 35 56.6	+0.8
	comp=Z,2.0nm,1.0s,baz=253,slow=11,SNR=2.6						
H11N2	WAKE ISLAND Hy	29.21	126	T	T	18 07 15.4	
	baz=318,slow=75,SNR=979						
H11N1	WAKE ISLAND Hy	29.22	126	T	T	18 07 17.6	
	baz=318,slow=75,SNR=1128						
H11N3	WAKE ISLAND Hy	29.23	126	T	T	18 07 18.2	
	baz=318,slow=75,SNR=886						
H11S1	WAKE ISLAND Hy	30.01	128	T	T	18 08 18.2	
	baz=320,slow=76,SNR=60						
H11S3	WAKE ISLAND Hy	30.01	128	T	T	18 08 27.4	
	baz=320,slow=76,SNR=54						
H11S2	WAKE ISLAND Hy	30.03	128	T	T	18 08 23.7	
	baz=320,slow=76,SNR=65						
ZALV	Zalesovo Beam	40.51	310	P	P	17 38 20.5	+0.9
	comp=Z,0.3nm,0.4s,baz=99,slow=8.9,SNR=2.3						
MKAR	Makanchi Array	43.16	300	P	P	17 38 42.4	+1.0
	comp=Z,0.2nm,0.6s,baz=87,slow=7.9,SNR=3.5						
KURK	Kurchatov	44.70	306	P	P	17 38 53.6	0.0
KURBB	Kurchatov Arra	44.78	306	P	P	17 38 54.8	+0.6
	comp=Z,0.8nm,0.4s,baz=79,slow=8.9,SNR=4.7						
BRLK	Bradley Lake	45.48	41	P	P	17 38 59.0	-0.8
ILAR	Eielson Array	46.97	34	P	P	17 39 10.6	-0.8
	comp=Z,0.4nm,0.9s,baz=284,slow=7.3,SNR=3.6						
SCRK	Sand Creek	48.30	35	P	P	17 39 23.0	+1.2
SCRK				IAmb	IAmb	17 39 28.1	
	comp=Z,5.2nm,1.5s						
BVAR	Borovoye Array	49.16	311	P	P	17 39 30.2	+1.8
	comp=Z,0.1nm,0.3s,baz=81,slow=10,SNR=3.0						
WRA	Warramunga Arr	59.80	188	P	P	17 40 46.2	+0.2
	comp=Z,0.4nm,0.8s,baz=8.6,slow=4.6,SNR=5.2						
ASAR	Alice Springs	63.52	188	P	P	17 41 11.8	+0.8
	comp=Z,0.4nm,0.7s,baz=1.5,slow=7.2,SNR=5.4						
FINES	FINESS Array B	66.67	332	P	P	17 41 30.9	-0.1
	comp=Z,1.0nm,0.9s,baz=15,slow=13,SNR=3.8						
NOA	NORSAR Array B	71.89	337	P	P	17 42 03.4	-0.1
	comp=Z,0.6nm,0.8s,baz=19,slow=5.9,SNR=3.4						

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*ATH **04** 17:36:33.7, 38°.14N×20°.41E, h17^{km}±1^{km}, ML2.5/5, Error ellipse: s-maj=2.4km s-min=1.2km az=253.0*

*THE **04** 17:36:34.1, 38°.14N×20°.42E, h15^{km}, ML2.6/3, Error ellipse: s-maj=0.9km s-min=0.6km az=227.0*

ISC 04 17:36:34.1±1.2**, 38°.15N**±0°.03×**20°.43E**±0°.05**, h16**^{km}±5^{km}**, n27, σ0^{s}27**/46**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.05	314	P	Pg	17 36 36.9	-0.1
CHV1				S	Sg	17 36 39.1	+0.2
ARGA	Argostoli. Kep	0.05	57	P	Pg	17 36 36.8	-0.2
ARGA				S	Sg	17 36 38.6	-0.2
KEF2	Argostoli. Kep	0.05	72	P	Pg	17 36 36.9	-0.1
KEF2				S	Sg	17 36 38.6	-0.3
LXRA	Lixouri, Kepha	0.05	10	P	Pg	17 36 37.0	0.0
LXRA				S	Sg	17 36 39.0	+0.1
ARG2	Argostoli	0.06	59	P	Pg	17 36 36.9	-0.1
ARG2				S	Sg	17 36 38.8	-0.1
AGT1	Agia Thekli	0.11	342	P	Pg	17 36 37.5	0.0
AGT1				S	Sb	17 36 40.0	-0.3
KEF4	Livadi, Kephal	0.11	359	P	Pg	17 36 37.5	-0.1
KEF4				S	Sg	17 36 39.8	0.0
VLS	Valsamata	0.13	78	P	Pg	17 36 37.7	-0.2
VLS				S	Sg	17 36 40.3	0.0
	12µm,0.1s						
VLS	Valsamata	0.13	78	P	Pg	17 36 37.7	-0.2
VLS				S	Sg	17 36 40.4	0.0
VLS				AML	AML	17 36 40.4	
	comp=N,17358µm,0.2s						
VLS				AML	AML	17 36 40.5	
	comp=E,28003µm,0.1s						
KEF1	Kardakata, Kep	0.13	15	P	Pg	17 36 37.8	0.0
KEF1				S	Sg	17 36 40.2	-0.1
VSK1	VASILIKIADES	0.28	23	P	Pg	17 36 40.2	+0.1
VSK1				S	Sb	17 36 45.2	-0.2
KFL	Anninata	0.29	98	P	Pg	17 36 40.2	0.0
KFL				S	Sb	17 36 45.2	-0.3
	comp=E,1µm,0.2s						
KFL	Anninata	0.29	98	P	Pg	17 36 40.1	-0.1
KFL				S	Sg	17 36 45.0	+0.6
KFL				AML	AML	17 36 45.7	
	comp=N,3366µm,0.3s						
KFL				AML	AML	17 36 45.9	
	comp=E,2342µm,0.1s						
KONA	Konidatara, Ke	0.30	22	P	Pg	17 36 40.4	-0.1
KONA				S	Sg	17 36 45.4	+0.6
KONA				AML	AML	17 36 45.8	
	comp=E,1378µm,0.2s						
KONA				AML	AML	17 36 46.1	
	comp=N,1704µm,0.2s						
FSK	Fiskardo	0.33	19	P	Pg	17 36 40.8	-0.1
FSK				S	Sb	17 36 46.3	-0.4
	comp=N,515nm,0.2s						
FSK	Fiskardo	0.33	19	P	Pg	17 36 40.8	-0.1
FSK				S	Sb	17 36 46.2	-0.4
FSK				AML	AML	17 36 46.6	
	comp=E,1111µm,0.1s						
FSK				AML	AML	17 36 49.1	
	comp=N,608µm,0.5s						
VLMS	Volimes, Zakyn	0.33	145	P	Pg	17 36 40.9	-0.1
VLMS				S	Sb	17 36 46.2	-0.6
VLMS				AML	AML	17 36 47.0	
	comp=N,2486µm,0.2s						
VLMS				AML	AML	17 36 47.5	
	comp=E,2123µm,0.2s						
EVGI	Lefkada island	0.50	21	P	Pg	17 36 43.9	-0.2
EVGI				S	Sb	17 36 51.8	0.0
MGNA	Meganis	0.58	29	P	Pg	17 36 45.2	-0.3
MGNA				S	Sb	17 36 53.9	0.0
VTN	Vitineika	0.64	111	P	Pg	17 36 46.6	-0.1
LKD2	Lefkada island	0.66	16	P	Pg	17 36 46.9	-0.2
LKD2	Lefkada island	0.66	16	P	Pg	17 36 46.5	-0.6
PDO	Prodromos	0.74	53	P	Pg	17 36 48.2	-0.5
PVO	Paravola	0.98	61	P	Pg	17 36 53.0	-0.1
TRIZ	Trizonia	1.31	80	P	Pn	17 36 57.9	+0.1
KLV	Kalavryta, Ach	1.36	94	P	Pb	17 36 59.6	+0.3
KALE	Kalithea	1.37	79	P	Pn	17 36 58.9	+0.2

UCR 04 17:41:23.7±1.4**, 9°.71N**×**85°.92W, h27**^{km}±5^{km}**, MD4.1, MW4.0, 1C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUAI	GUAI	0.69	36	*i* P	Pb	17 41 36.7	-0.4
GUAI				*i* S	Sb	17 41 46.8	+0.5
NY14	Universidad de	1.01	22	*i* P	Pb	17 41 42.5	0.0
JTS	Las Juntas de	1.11	59	*e*P	Pn	17 41 42.8	-0.7
GPS3	Bodega del ICE	1.17	28	*i* P	Pn	17 41 44.4	0.0
COLC	Colonia	1.18	37	*i* P	Pn	17 41 44.3	-0.2
BUEV	Buena Vista	1.19	25	*e*P	Pn	17 41 44.7	0.0
BUEV				*e*S	Sb	17 42 01.6	+0.8
GB1A	Borinquen Arri	1.22	25	⇑*i*P	Pn	17 41 45.2	+0.2
GB1A				*e*S	Sb	17 42 01.2	-0.2
CEDE	Laguna Cedeo	1.43	57	*e*P	Pn	17 41 48.2	+0.3
LCR2	La Lucha 2	1.89	89	*e*P	Pn	17 41 54.6	+0.2

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*MEX **04** 18:16:36.9±0.5, 27°.83N×105°.26W, h15^{km}, MD4.0*

*NEIC **04** 18:16:36.1±2.1, 27°.73N±0°.04×105°.61W±0°.08, h15^{km}±5^{km}, ML3.3/10, Md4.0/6(MEX), Error ellipse: s-maj=10.4km s-min=5.5km az=83.0*

ISC 04 18:16:34.6±1.0**, 27°.74N**±0°.04×**105°.53W**±0°.07**, h10**^{km}**, n14, σ0^{s}80**/18**, Northern Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HPIG		0.81	189		Pn	18 16 51.9	-0.4
HPIG				IAML		18 17 08.7	
	comp=E,895nm,0.4s						
HPIG				IAML		18 17 09.0	
	comp=N,771nm,0.3s						
HPIG		0.81	189		Pb	18 16 51.6	+0.7
HPIG					Sn	18 17 04.2	-0.4
HPIG		0.81	189	*e*P	Pb	18 16 51.6	+0.7
HPIG				*i* S	Sn	18 17 04.2	-0.4
TX31	Lajitas Ar. Si	2.28	45		Pb	18 17 15.4	-0.6
TX32	Lajitas Array	2.28	45		Pb	18 17 15.3	-0.6
CGIG		3.38	321		Pn	18 17 27.9	+0.2
CGIG					Sn	18 18 07.7	-0.4
CGIG		3.38	321	*i* P	Pn	18 17 27.9	+0.2
CGIG				*i* S	Sn	18 18 07.7	-0.4
MNTX	Cornudas Mount	3.95	2		Pn	18 17 36.2	+0.9
319A	Douglas	4.88	319		Pn	18 17 48.8	+0.5
HSIG		4.95	286	Pn	Pn	18 17 47.8	-1.3
HSIG				IAML		18 19 07.3	
	comp=N,29nm,0.8s						
HSIG				IAML		18 19 08.0	
	comp=E,15nm,1.1s						
121A	Cookes Peak, D	5.16	338		Pn	18 17 53.8	+1.6
121A				IAML		18 19 20.9	
	comp=N,22nm,0.6s						
121A				IAML		18 19 26.8	
	comp=E,26nm,0.8s						
833A	Chaparral WMA,	5.45	82	Pn	Pn	18 17 56.3	+0.4
JCT	Junction City	5.70	60	Pn	Pn	18 17 59.9	+0.4
TUC	Tucson	6.44	316	Pn	Pn	18 18 08.4	-1.3

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*IDC **04** 18:17:32.8±7.9, 36°.24N×71°.20E, h179^{km}±67^{km}, mb3.2/4, mb1 3.2/7, mb1mx2.9/39, mbtmp3.6/7, Error ellipse: s-maj=67.0km s-min=24.9km az=42.0*

*NEIC **04** 18:17:36.0±0.9, 36°.50N±0°.02×71°.2E±0°.1, h204^{km}±11^{km}, mb4.2/5, Error ellipse: s-maj=12.9km s-min=2.0km az=93.0*

*NNC **04** 18:17:39.6±6.3, 36°.78N×71°.04E, h191^{km}±83^{km}, mb2.9, mpv3.9, Error ellipse: s-maj=61.9km s-min=52.7km az=2.0*

ISC 04 18:17:35.6±0.8**, 36°.45N**±0°.06×**71°.38E**±0°.07**, h200**^{km}**, n42, σ1^{s}82**/51**, mb3.6**/5**, 2C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.68	342		Pn	18 18 21.9	+0.2
KBL	Kabul	2.70	226		Pn	18 18 22.0	0.0
KBL				Sn	Sn	18 18 55.8	-2.3
CHGR	Chuyangaron	2.83	322		Pn	18 18 22.7	-0.6
NIL	Nilore	3.19	151		Pn	18 18 30.6	+3.1
NIL				Sn	Sn	18 19 11.5	+3.4
BTK	Batken	3.63	353		Pn	18 18 34.0	+1.2
BTK				Sn	Sn	18 19 17.1	-0.8
JMU	Jammu	4.72	141	*e*P	Sn	18 19 39.0	-3.2
KSH	Kashi	4.75	48	P	Pn	18 18 45.2	-1.6
KSH				S	Sn	18 19 35.6	-7.4
KSH				smax	smax		
	comp=N,150nm,0.4s						
KSH				smax	smax		
	comp=E,99nm,0.2s						
ARSB	Arslanbob	5.03	14		Pn	18 18 50.9	+0.5
ARSB				Sn	Sn	18 19 47.8	-1.6
TAS	Tashkent	5.13	342	Pn	Pn	18 18 52.0	+0.3
AML	Almayashu	5.95	17	P	Pn	18 19 03.5	+0.9
	SNR=120						
NRN	Naryn	6.14	34		Pn	18 19 05.2	+0.2
UCH	Uchtor	6.26	22	P	Pn	18 19 07.7	+1.1
	SNR=21						
KZA	Kyzart	6.37	27	P	Pn	18 19 09.1	+1.1
	SNR=5.0						
EKS2	Erkin-Say	6.47	16	P	Pn	18 19 09.9	+0.8
	SNR=13						
AAK	Ala-Archa	6.63	20	P	Pn	18 19 12.6	+1.5
	3.9nm,0.3s,baz=180,slow=6.4,SNR=68						
AAK				S	Sn	18 20 27.3	+0.4
	0.6nm,0.3s,baz=309,slow=22,SNR=18						
AAK	Ala-Archa	6.63	20	P	Pn	18 19 12.6	+1.5
	SNR=14						
AAK	Ala-Archa	6.63	20	⇓P	Pn	18 19 11.7	+0.6
	6.6nm,0.6s						
AAK				⇑S	Sn	18 20 26.5	-0.4
	6.5nm,0.6s						
AAK	Ala-Archa	6.63	20		Pn	18 19 12.2	+1.1
AAK				Sn	Sn	18 20 26.9	+0.1
KK31	Karatay Array	6.68	354	P	Pn	18 19 11.4	-0.2
	3.0nm,0.3s,baz=179,slow=12,SNR=237						
KK31				⇑S	Sn	18 20 22.8	-5.0
	3.0nm,0.5s,baz=182,slow=22,SNR=4.6						
KK31	Karatay Array	6.68	354		Pn	18 19 11.3	-0.2
KKAR	Karatay Array	6.68	354		Pn	18 19 11.3	-0.3
KBK	Karagaybulak	6.78	23	P	Pn	18 19 15.1	+2.0
	SNR=11						
FRU1	Bishkek	6.83	21	Pn	Pn	18 19 14.7	+1.1
CHMS	Chumysh	7.04	21	P	Pn	18 19 17.5	+1.3
	SNR=9.1						
USP	Ospenovka	7.22	18	P	Pn	18 19 19.5	+0.9
	SNR=6.1						
KDJ	Kajisay	7.24	37	Pn	Pn	18 19 19.9	+0.8
MAKZ	Makanchi	13.02	34	Pn	Pn	18 20 34.0	+0.8
MK31	Makanchi Array	13.15	35	Pn	Pn	18 20 35.9	+1.0
MKAR	Makanchi Array	13.15	35	P	Pn	18 20 36.3	+1.4
	0.1nm,0.3s,baz=211,slow=14,SNR=5.0						
WMQ	Urumqi	14.47	54	*e*P	P	18 20 54.2	+1.6
AB31	Akbulak array	15.28	330	P	P	18 21 02.2	+0.8
	0.6nm,0.5s,baz=147,slow=11,SNR=17						
ABKAR	Akbulak array	15.28	330	P	P	18 21 00.2	-1.2
ABKAR				IAmb	IAmb	18 21 03.2	
	comp=Z,1.6nm,0.6s						
BVAR	Borovoye Array	16.59	358	P	Pn	18 21 18.0	+1.2
	comp=Z,0.2nm,0.3s,baz=164,slow=12,SNR=5.9						
BRVK	Borovoye	16.63	358	P	P	18 21 15.4	-0.8
AKTO	Aktyubinsk	16.98	330	⇓P	P	18 21 18.8	-1.3
	comp=Z,1.5nm,0.6s						
ZALV	Zalesovo Beam	19.83	24	P	Pn	18 21 53.9	-1.2
	comp=Z,0.3nm,0.3s,baz=219,slow=11,SNR=3.1						
FINES	FINESS Array B	37.70	326	P	P	18 24 31.3	-0.1
	comp=Z,1.6nm,0.9s,baz=125,slow=9.1,SNR=4.8						
ARCES	ARCESS Array B	41.31	338	P	P	18 25 00.6	-0.5
	comp=Z,1.5nm,0.8s,baz=115,slow=8.1,SNR=6.6						
MDJ	Mudanjiang	44.16	61	P	P	18 25 24.9	+0.5
MDJ				IAmb	IAmb	18 25 26.9	
	comp=Z,13nm,1.5s						
MMRI	Maumere	65.48	123	P	P	18 27 57.9	+0.4
ILULI	Ilulissat	66.55	341	P	P	18 28 05.0	+1.5
ILULI				IAmb	IAmb	18 28 28.8	
	comp=Z,28nm,1.2s						
WRA	Warramunga Arr	81.70	122	P	P	18 29 31.3	-0.6
	comp=Z,0.3nm,0.8s,baz=331,slow=5.4,SNR=3.3						

IDC 04 18:46:00.3±3.4**, 32°.79S**×**178°.23W, h0**^{km}**, mb4.2**/3**, mb1 4.3**/4**, mb1mx3.9**/35**, mbtmp4.1**/4**, ML3.4**/1**, Error ellipse: s-maj=68.9km s-min=37.2km az=111.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.64	214	Pn	Pn	18 47 39.0	-0.1
	0.7nm,0.3s,baz=290,slow=5.1,SNR=6.8						
URZ				Sn	Sn	18 48 55.8	+0.3
	5.8nm,0.3s,baz=218,slow=23,SNR=16						
CTA	Charters Tower	34.06	283	P	P	18 52 48.0	+1.6
	13nm,1.1s,baz=124,slow=3.6,SNR=3.6						
ASAR	Alice Springs	42.84	270	P	P	18 54 00.0	-0.3
	1.1nm,0.6s,baz=108,slow=7.5,SNR=24						
WRA	Warramunga Arr	44.04	275	P	P	18 54 09.2	-0.8
	0.9nm,0.3s,baz=113,slow=8.0,SNR=59						
FINES	FINESS Array B	147.31	339	PKPbc	PKPbc	19 05 44.2	-0.8
	0.8nm,0.6s,baz=20,slow=4.6,SNR=2.0						

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*THE **04** 18:52:27.9, 38°.19N×20°.27E, h10^{km}±1^{km}, ML3.3/7, Error ellipse: s-maj=1.3km s-min=0.4km az=103.0*

*ATH **04** 18:52:27.9, 38°.19N×20°.29E, h12^{km}, ML3.2/22, Error ellipse: s-maj=2.0km s-min=1.0km az=70.0*

*IDC **04** 18:52:29.5±1.5, 38°.32N×20°.52E, h0^{km}, mb3.6/5, mb1 3.6/6, mb1mx3.4/43, mbtmp3.5/6, ML3.6/1, Error ellipse: s-maj=32.1km s-min=26.9km az=99.0*

ISC 04 18:52:29.0±0.9**, 38°.20N**±0°.02×**20°.35E**±0°.04**, h9**^{km}±4^{km}**, n65, σ0^{s}84**/85**, mb3.7**/5**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.01	7	P	Pg	18 52 29.9	-0.7
KEF3				S	Sg	18 52 31.2	-0.6
CHV1	Chavriata, Kef	0.03	114	P	Pg	18 52 30.3	-0.4
LXRA	Lixouri, Kepha	0.07	86	P	Pg	18 52 31.1	0.0
LXRA				S	Sg	18 52 33.1	+0.5
LXR1	Lixouri, Cepha	0.07	86	P	Pg	18 52 31.1	0.0
KEF4	Livadi, Kephal	0.09	44	P	Pg	18 52 31.1	-0.2
KEF4				S	Sg	18 52 33.3	+0.4
ARGA	Argostoli. Kep	0.11	100	P	Pg	18 52 31.6	+0.1
ARGA				S	Sg	18 52 34.2	+0.8
ARG2	Argostoli	0.11	99	P	Pg	18 52 31.7	0.0
KEF2	Argostoli. Kep	0.11	105	P	Pg	18 52 31.8	+0.1
KEF2				S	Sg	18 52 34.2	+0.6
KEF1	Kardakata, Kep	0.13	50	P	Pg	18 52 31.8	-0.1
KEF1				S	Sg	18 52 34.5	+0.5
VLS	Valsamata	0.19	95	P	Pg	18 52 32.9	-0.1
VLS				S	Sg	18 52 36.6	+0.8
	48µm,0.1s						
VLS	Valsamata	0.19	95	P	Pg	18 52 32.9	-0.1
VLS				S	Sg	18 52 36.1	+0.4
VLS				AML	AML	18 52 36.7	
VLS				AML	AML	18 52 36.7	
	comp=E,84324µm,0.1s						
VSK1	VASILIKIADES	0.27	39	P	Pg	18 52 34.3	-0.2
VSK1				S	Sg	18 52 39.0	+0.8
KONA	Konidatara, Ke	0.29	37	P	Pg	18 52 34.6	-0.2
KONA				S	Sg	18 52 39.4	+0.7
KONA				AML	AML	18 52 40.0	
	comp=E,14055µm,0.4s						
KONA				AML	AML	18 52 40.8	
	comp=N,14878µm,0.4s						
FSK	Fiskardo	0.31	33	P	Pg	18 52 34.9	-0.4
FSK				S	Sg	18 52 40.0	+0.5
	comp=N,7µm,0.8s						
FSK	Fiskardo	0.31	33	P	Pg	18 52 34.9	-0.4

FSK				S	**Sg**	**18 52 39.9**	**+0.5**
FSK				AML	AML	18 52 40.7	
	comp=E,12254µm,0.5s						
FSK				AML	AML	18 52 43.5	
	comp=N,10220µm,0.8s						
KFL	**Anninata**	**0.36**	**104**	P	**Pg**	**18 52 35.9**	**-0.2**
KFL				S	**Sb**	**18 52 42.6**	**-0.7**
	comp=N,9µm,0.4s						
KFL	**Anninata**	**0.36**	**104**	P	**Pg**	**18 52 36.0**	**-0.1**
KFL				S	**Sg**	**18 52 41.5**	**+0.7**
KFL				AML	AML	18 52 43.3	
	comp=N,19875µm,0.3s						
KFL				AML	AML	18 52 46.9	
	comp=E,16938µm,0.4s						
VLMS	**Volimes, Zakyn**	**0.40**	**142**	P	**Pg**	**18 52 36.5**	**-0.4**
VLMS				S	**Sg**	**18 52 42.3**	**+0.1**
VLMS				AML	AML	18 52 43.7	
	comp=E,15333µm,0.3s						
VLMS				AML	AML	18 52 44.5	
	comp=N,18718µm,0.2s						
EVGI	**Lefkada island**	**0.49**	**30**	P	**Pg**	**18 52 38.0**	**-0.5**
EVGI				S	**Sb**	**18 52 46.3**	**-0.8**
MGNA	**Meganis**	**0.58**	**37**	P	**Pg**	**18 52 39.6**	**-0.6**
MGNA				S	**Sg**	**18 52 47.9**	**+0.1**
MGNA				AML	AML	18 52 53.0	
	comp=N,3009µm,0.5s						
MGNA				AML	AML	18 52 53.3	
	comp=E,2737µm,0.3s						
LKD2	**Lefkada island**	**0.64**	**22**	P	**Pg**	**18 52 40.5**	**-0.9**
LKD2				S	**Sb**	**18 52 50.4**	**-1.1**
	comp=E,1µm,0.8s						
LKD2	**Lefkada island**	**0.64**	**22**	P	**Pg**	**18 52 40.7**	**-0.7**
LKD2				AML	AML	18 52 56.4	
	comp=N,2654µm,0.6s						
LKD2				AML	AML	18 53 02.9	
	comp=E,1972µm,0.6s						
TSLK	**Tsoukalades, L**	**0.67**	**21**	P	**Pg**	**18 52 41.4**	**-0.6**
TSLK				S	**Sb**	**18 52 51.9**	**-0.5**
	comp=E,2µm,1.0s						
VTN	**Vitineika**	**0.72**	**113**	P	**Pg**	**18 52 42.5**	**-0.4**
VTN	**Vitineika**	**0.72**	**113**	P	**Pb**	**18 52 42.8**	**-0.8**
PDO	**Prodromos**	**0.77**	**58**	P	**Pg**	**18 52 43.4**	**-0.5**
PDO				S	**Sb**	**18 52 55.7**	**+0.5**
	comp=E,3µm,0.5s						
PDO	**Prodromos**	**0.77**	**58**	P	**Pg**	**18 52 43.3**	**-0.5**
PDO				AML	AML	18 53 01.0	
	comp=N,5206µm,0.4s						
PDO				AML	AML	18 53 01.3	
	comp=E,4613µm,0.6s						
RLS	**Riolos of Patr**	**0.89**	**99**	P	**Pg**	**18 52 45.5**	**-0.7**
RLS	**Riolos of Patr**	**0.89**	**99**	P	**Pg**	**18 52 45.4**	**-0.7**
RLS				AML	AML	18 53 05.8	
	comp=E,1063µm,0.6s						
RLS				AML	AML	18 53 08.0	
	comp=N,1715µm,0.5s						
PVO	**Paravola**	**1.02**	**65**	P	**Pg**	**18 52 48.1**	**-0.4**
PVO				S	**Sn**	**18 53 03.4**	**-0.4**
	comp=N,2µm,0.8s						
PVO	**Paravola**	**1.02**	**65**	P	**Pg**	**18 52 48.2**	**-0.4**
PVO				AML	AML	18 53 13.3	
	comp=N,2769µm,1.1s						
PVO				AML	AML	18 53 14.6	
	comp=E,3468µm,0.5s						
DRO	**Drossia**	**1.10**	**102**	P	**Pb**	**18 52 49.6**	**-0.7**
DRO	**Drossia**	**1.10**	**102**	P	**Pb**	**18 52 49.4**	**-0.9**
DRO				AML	AML	18 53 19.7	
	comp=E,3219µm,0.5s						
DRO				AML	AML	18 53 22.1	
	comp=N,3000µm,0.5s						
AMT	**Artemida-Makis**	**1.27**	**121**	P	**Pg**	**18 52 53.0**	**-0.3**
AMT				AML	AML	18 53 20.2	
	comp=N,2885µm,0.7s						
AMT				AML	AML	18 53 30.7	
	comp=E,2837µm,0.8s						
LAKA	**Lakka**	**1.29**	**88**	P	**Pn**	**18 52 52.2**	**-1.0**
LAKA				AML	AML	18 53 19.1	
	comp=E,986µm,0.9s						
LAKA				AML	AML	18 53 24.7	
	comp=N,1384µm,1.0s						
IGT	**Igoumenitsa**	**1.33**	**360**	P	**Pb**	**18 52 53.4**	**-0.8**
IGT				AML	AML	18 53 19.7	
	comp=E,1104µm,0.8s						
IGT				AML	AML	18 53 28.6	
	comp=N,813µm,0.7s						
EVR	**Evrytania**	**1.35**	**57**	P	**Pn**	**18 52 53.4**	**-0.8**
EVR				AML	AML	18 53 22.9	
	comp=N,940µm,0.8s						
EVR				AML	AML	18 53 28.2	
	comp=E,817µm,0.8s						
TRIZ	**Trizonia**	**1.37**	**82**	P	**Pn**	**18 52 53.4**	**-0.8**
TRIZ	**Trizonia**	**1.37**	**82**	P	**Pn**	**18 52 53.4**	**-0.8**
ALIK	**Aliki, Aigiali**	**1.39**	**87**	P	**Pn**	**18 52 54.1**	**-0.5**
KALE	**Kalithea**	**1.42**	**82**	P	**Pn**	**18 52 54.2**	**-0.8**
KALE	**Kalithea**	**1.42**	**82**	P	**Pn**	**18 52 54.3**	**-0.8**
KALE				AML	AML	18 53 33.3	
	comp=E,1176µm,0.8s						
KALE				AML	AML	18 53 33.7	
	comp=N,940µm,0.6s						
KLV	**Kalavryta, Ach**	**1.43**	**96**	P	**Pn**	**18 52 54.8**	**-0.4**
KLV	**Kalavryta, Ach**	**1.43**	**96**	P	**Pb**	**18 52 55.0**	**-0.8**
KLV				AML	AML	18 53 26.2	
	comp=E,803µm,0.8s						
KLV				AML	AML	18 53 29.0	
	comp=N,738µm,0.8s						
KEK	**Kerkira**	**1.57**	**344**	P	**Pb**	**18 52 56.7**	**-1.6**
KEK				AML	AML	18 53 31.6	
	comp=N,678µm,0.6s						
KEK				AML	AML	18 53 35.2	
	comp=E,1013µm,0.6s						
ITM	**Ithomi**	**1.61**	**128**	P	**Pb**	**18 52 57.9**	**-1.0**
MAKR	**Makrakomi, Fth**	**1.62**	**59**	P	**Pg**	**18 52 59.6**	**-0.4**
MAKR				AML	AML	18 53 40.1	
	comp=N,1214µm,0.8s						
MAKR				AML	AML	18 53 41.7	
	comp=E,1161µm,1.1s						
PYL	**PYLOS**	**1.71**	**139**	P	**Pb**	**18 52 59.6**	**-0.9**
MEV	**Metsovon**	**1.73**	**23**	P	**Pb**	**18 53 00.9**	**-0.2**
THL	**Klokotos Trika**	**1.89**	**43**	P	**Pb**	**18 53 03.2**	**-0.4**
THL				AML	AML	18 53 45.2	
	comp=E,588µm,0.7s						
THL				AML	AML	18 53 45.6	
	comp=N,624µm,0.8s						
AXAR	**Agios Charalam**	**1.90**	**72**	P	**Pb**	**18 53 03.8**	**-0.1**
AXAR				AML	AML	18 53 53.2	
	comp=E,1767µm,1.0s						
AXAR				AML	AML	18 53 56.1	
	comp=N,1734µm,1.0s						
PROD	**Prodromos**	**2.01**	**87**	P	**Pb**	**18 53 04.6**	**-1.1**
PROD				AML	AML	18 53 45.9	
	comp=E,658µm,0.8s						
PROD				AML	AML	18 53 48.6	
	comp=N,558µm,1.0s						
LTK	**Loutraki**	**2.07**	**94**	P	**Pb**	**18 53 05.1**	**-1.7**
LOUT	**Loutraki**	**2.08**	**95**	P	**Pb**	**18 53 05.1**	**-1.9**
LKR	**Lokris**	**2.13**	**77**	P	**Pb**	**18 53 06.8**	**-1.0**
VIL2	**Platees**	**2.30**	**89**	P	**Pb**	**18 53 08.8**	**-1.9**
DID	**Didima**	**2.39**	**106**	P	**Pb**	**18 53 10.5**	**-1.7**
VLI	**Veliai**	**2.53**	**125**	P	**Pb**	**18 53 13.2**	**-1.5**
KTHA	**Kythira Island**	**2.91**	**131**	P	**Pn**	**18 53 16.1**	**+0.7**
GERES	**GERESS Array B**	**11.68**	**338**	Pn	**Pn**	**18 55 19.2**	**+3.4**
	comp=N,0.1nm,0.3s,baz=163,slow=14,SNR=3.8						
FINES	**FINESS Array B**	**23.55**	**7**	P	**P**	**18 57 38.8**	**-0.5**
	comp=N,1.7nm,0.8s,baz=174,slow=14,SNR=3.1						
NOA	**NORSAR Array B**	**23.57**	**349**	P	**P**	**18 57 39.1**	**-0.6**
	comp=N,0.3nm,0.6s,baz=154,slow=9.5,SNR=3.2						
TORD	**Torodi Ar. Bea**	**29.96**	**219**	P	P	18 58 41.1	+3.4
	comp=N,0.7nm,1.0s,baz=31,slow=7.2,SNR=2.6						
MKAR	**Makanchi Array**	**45.41**	**58**	P	**P**	**19 00 49.1**	**+1.3**
	comp=N,0.5nm,0.5s,baz=284,slow=6.2,SNR=7.4						
ZALV	**Zalesovo Beam**	**45.78**	**48**	P	**P**	**19 00 50.4**	**-0.3**
	comp=N,0.8nm,0.6s,baz=275,slow=8.4,SNR=4.8						

IDC 04 19:31:12.8±18.0,31°.02S×179°.78E,h249km±202km,mb2.8/2,mb1 3.2/3,mb1mx3.0/30,mbtmp3.6/3,Error ellipse: s-maj=225.0km s-min=43.4km az=3.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.55**	**196**	P	Pn	19 33 00.0	-0.3
	1.2nm,0.3s,baz=282,slow=9.1,SNR=4.5						
URZ				S	S	19 34 14.5	-12
	2.3nm,0.3s,baz=86,slow=23,SNR=13						
ASAR	**Alice Springs**	**41.18**	**269**	P	P	19 38 33.0	-0.4
	0.3nm,0.8s,baz=108,slow=7.2,SNR=4.2						
WRA	**Warramunga Arr**	**42.22**	**274**	P	P	19 38 41.9	0.0
	0.3nm,0.2s,baz=112,slow=7.8,SNR=13						
FINES	**FINESS Array B**	**145.04**	**338**	PKPbc	PKPdf	19 50 18.9	-0.8
	0.4nm,0.5s,baz=48,slow=2.1,SNR=6.9						

UCR 04 19:40:40.8±1.5,12°.48N×87°.76W,h56km±21km,ML3.8
INET 04 19:40:42.4,12°.50N×87°.67W,h25km,ML3.9
SNET 04 19:40:42.3±0.9,12°.52N×87°.84W,h47km±28km,ML3.8
ISC 04 19:40:41.6±1.3,12°.53N±0°.09×87°.73W±0°.06,h63km±19km, n39,σ0ˢ.56/58,4D,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**0.47**	**21**	*e*P	**Pn**	**19 40 54.1**	**+0.5**
CRIN	**San Cristobal**	**0.69**	**76**	*e*P	**Pn**	**19 40 56.0**	**0.0**
CNCH	**Conchagua**	**0.75**	**352**	⇓*i*P	**Pn**	**19 40 56.5**	**-0.3**
CNCH				*e*S	**Sn**	**19 41 08.7**	**+0.9**
CNCH	**Conchagua**	**0.75**	**352**	⇓*i*P	**Pn**	**19 40 56.5**	**-0.3**
CNCH				*e*S	**Sn**	**19 41 08.7**	**+0.9**
LCND	**La Caada**	**0.79**	**349**	⇓*i*P	**Pn**	**19 40 56.9**	**-0.2**
LCND				*e*S	**Sn**	**19 41 09.0**	**+0.5**
LCND				IAML		19 41 11.5	
	comp=Z,3µm,0.5s						
LCND	**La Caada**	**0.79**	**349**	⇓*i*P	**Pn**	**19 40 56.9**	**-0.2**
LCND				*e*S	**Sn**	**19 41 09.0**	**+0.5**
LCND				IAML		19 41 11.5	
	comp=Z,3µm,0.5s						
JUCU	**Jucuar¡n**	**0.88**	**325**	*e*P	**Pn**	**19 40 57.5**	**-0.8**
JUCU				*e*S	**Sn**	**19 41 09.7**	**-0.9**
JUCU				IAML		19 41 14.3	
	comp=Z,3µm,0.3s						
JUCU	**Jucuar¡n**	**0.88**	**325**	*e*P	**Pn**	**19 40 57.5**	**-0.8**
JUCU				*e*S	**Sn**	**19 41 09.7**	**-0.9**
JUCU				IAML		19 41 14.3	
	comp=Z,3µm,0.3s						
CNGN	**Cerro Negro**	**1.01**	**92**	*e*P	**Pn**	**19 40 59.0**	**-0.9**
BLLM	**Bellamira**	**1.03**	**332**	*e*P	**Pn**	**19 41 00.1**	**-0.2**
BLLM				*e*S	**Sn**	**19 41 14.1**	**0.0**
BLLM	**Bellamira**	**1.03**	**332**	*e*P	**Pn**	**19 41 00.1**	**-0.2**
BLLM				*e*S	**Sn**	**19 41 14.1**	**0.0**
LCY	**Lacayo**	**1.04**	**328**	*e*P	**Pn**	**19 41 00.3**	**-0.1**
LCY				*e*S	**Sn**	**19 41 14.4**	**0.0**
LCY	**Lacayo**	**1.04**	**328**	*e*P	**Pn**	**19 41 00.3**	**-0.1**
LCY				*e*S	**Sn**	**19 41 14.4**	**0.0**
PACA	**Pacayal**	**1.10**	**328**	*e*P	**Pn**	**19 41 00.9**	**-0.2**
PACA				*e*S	**Sn**	**19 41 16.0**	**+0.4**
PACA	**Pacayal**	**1.10**	**328**	*e*P	**Pn**	**19 41 00.9**	**-0.2**
PACA				*e*S	**Sn**	**19 41 16.0**	**+0.4**
ALJI	**Alcalda de J**	**1.14**	**314**	*e*P	**Pn**	**19 41 01.2**	**-0.3**
ALJI				*e*S	**Sn**	**19 41 15.8**	**-0.6**
ALJI				IAML		19 41 18.9	
	comp=Z,3µm,0.2s						
ALJI	**Alcalda de J**	**1.14**	**314**	*e*P	**Pn**	**19 41 01.2**	**-0.3**
ALJI				*e*S	**Sn**	**19 41 15.8**	**-0.6**
ALJI				IAML		19 41 18.9	
	comp=Z,3µm,0.2s						
FAGO	**Alcalda de S**	**1.21**	**343**	*e*S	**Sn**	**19 41 18.4**	**+0.2**
FAGO	**Alcalda de S**	**1.21**	**343**	*e*S	**Sn**	**19 41 18.4**	**+0.2**
COEB	**Comit de Eme**	**1.24**	**321**	*e*P	**Pn**	**19 41 03.0**	**0.0**
COEB				*e*S	**Sn**	**19 41 18.8**	**-0.1**
COEB				IAML		19 41 20.7	
	comp=Z,1µm,0.7s						
COEB	**Comit de Eme**	**1.24**	**321**	*e*P	**Pn**	**19 41 03.0**	**0.0**
COEB				*e*S	**Sn**	**19 41 18.8**	**-0.1**
COEB				IAML		19 41 20.7	
	comp=Z,1µm,0.7s						
ESTN	**Estel**	**1.45**	**67**	*e*P	**Pn**	**19 41 05.5**	**-0.2**
COEG	**Centro de Oper**	**1.56**	**314**	*e*S	**Sn**	**19 41 26.2**	**-0.3**
COEG	**Centro de Oper**	**1.56**	**314**	*e*S	**Sn**	**19 41 26.2**	**-0.3**
MASN	**Masaya**	**1.64**	**109**	*e*P	**Pn**	**19 41 07.7**	**-0.5**
LFRS	**El Faro**	**1.69**	**310**	*e*P	**Pn**	**19 41 08.8**	**-0.3**
LFRS				*e*S	**Sn**	**19 41 29.0**	**-0.8**
MATN	**Matagalpa**	**1.81**	**77**	*e*P	**Pn**	**19 41 10.2**	**-0.3**
LFU	**La Fuente**	**1.81**	**312**	*e*P	**Pn**	**19 41 11.1**	**+0.5**
LFU	**La Fuente**	**1.81**	**312**	*e*P	**Pn**	**19 41 11.1**	**+0.5**
BOQS	**Boqueron**	**1.93**	**309**	*e*P	**Pn**	**19 41 12.3**	**0.0**
SBLS	**San Blas**	**2.25**	**305**	*e*P	**Pn**	**19 41 17.4**	**+0.6**
SBLS	**San Blas**	**2.25**	**305**	*e*P	**Pn**	**19 41 17.4**	**+0.6**
SNJE	**San Jose**	**2.26**	**306**	*e*P	**Pn**	**19 41 17.2**	**+0.4**
SNJE	**San Jose**	**2.26**	**306**	*e*P	**Pn**	**19 41 17.2**	**+0.4**
ACON	**Acoyapa**	**2.56**	**102**	*e*P	**Pn**	**19 41 19.6**	**-1.1**
GB1A	**Borinquen Arri**	**2.85**	**126**	*e*P	**Pn**	**19 41 23.7**	**-1.1**
GB1A				*e*S	**Sn**	**19 41 57.9**	**-0.1**
BUEV	**Buena Vista**	**2.85**	**127**	*e*P	**Pn**	**19 41 26.0**	**+1.2**
BUEV				*e*S	**Sn**	**19 41 57.9**	**-0.3**
ESPN	**Las Esperanzas**	**3.37**	**95**	*e*P	**Pn**	**19 41 31.6**	**-0.2**
LCR2	**La Lucha 2**	**4.59**	**127**	*e*P	**Pn**	**19 41 50.4**	**+1.7**

IDC 04 19:51:44.4±1.3,7°.24N×77°.44W,h0km,mb3.5/2,mb1 3.9/4, mb1mx3.5/35,mbtmp3.7/4,ML2.6/2,Error ellipse: s-maj=43.4km s-min=29.6km az=37.0
UPA 04 19:51:48.8±1.9,7°.17N×77°.20W,h11km±18km,MW4.3
RSNC 04 19:51:49.5±1.7,7°.23N×77°.16W,h15km±7km,ML3.3, Mw3.5
ISC 04 19:51:47.0±1.2,7°.21N±0°.03×77°.21W±0°.03,h13km±9km, n35,σ1ˢ.52/52,3D,Panama-Colombia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTAC	**Punta Ardita,**	**0.60**	**264**	*e*P	**Pn**	**19 52 01.1**	**-0.1**
PTAC				*e*S	**Sn**	**19 52 10.7**	**0.0**
PTAC				*i*		19 52 13.7	
	comp=Z,23µm,0.3s						
SOLC	**Bahia Solano**	**0.99**	**191**	*e*P	**Pb**	**19 52 07.2**	**+1.1**
SOLC				*e*S	**Sb**	**19 52 20.8**	**+1.7**
SOLC				*i*		19 52 25.9	
	comp=Z,900nm,0.5s						
DBBC	**Dabeiba**	**1.01**	**101**	*e*P	**Pg**	**19 52 06.2**	**-0.3**
DBBC				*e*S	**Sg**	**19 52 19.9**	**+0.1**
DBBC				*i*		19 52 21.9	
	comp=Z,985nm,0.6s						
CAPC	**Capurgana**	**1.43**	**354**	*e*P	**Pn**	**19 52 13.6**	**+1.0**
CAPC				*e*S	**Sn**	**19 52 32.6**	**+1.4**
CAPC				*i*		19 52 37.5	
	comp=Z,398nm,0.8s						
CAP2	**Capurgana**	**1.44**	**354**	*i* P	**Pn**	**19 52 13.5**	**+0.7**
UPD2	**Meteti**	**1.55**	**329**	*e*P	**Pb**	**19 52 15.8**	**+0.3**
UPD2				*e*S	**Sg**	**19 52 36.6**	**-0.4**
UPD2				*i*		19 52 48.0	
	comp=Z,544nm,0.6s						
UPD2	**Meteti**	**1.55**	**329**	*i* P	**Pg**	**19 52 16.4**	**-0.4**
UPD2				*i* S	**Sg**	**19 52 36.7**	**-0.3**
UREC	**San Jos de Ur**	**1.75**	**72**	*e*P	**Pn**	**19 52 17.9**	**+0.9**
UREC				*e*S	**Sn**	**19 52 38.5**	**-0.7**
UREC				*i*		19 52 44.0	
	comp=Z,182nm,0.2s						
CBOC	**Ciudad Bolivar**	**1.79**	**138**	*e*P	**Pn**	**19 52 17.0**	**-0.7**
CBOC				*e*S	**Sn**	**19 52 37.7**	**-2.7**
CBOC				*i*		19 52 52.1	
	comp=Z,113nm,0.5s						
LCBC	**Los crdobas,**	**1.84**	**27**	*e*P	**Pn**	**19 52 19.1**	**+0.9**
LCBC				*e*S	**Sn**	**19 52 41.4**	**0.0**
LCBC				*i*		19 52 51.8	
	comp=Z,123nm,0.6s						
HELC	**Santa Helena**	**1.95**	**121**	⇓*i*P	**Pn**	**19 52 21.2**	**+1.1**
HELC				*e*S	**Sn**	**19 52 46.9**	**+2.2**
HELC				*i*		19 52 56.5	
	comp=Z,53nm,0.5s						
HELC	**Santa Helena**	**1.95**	**121**	⇓*i*P	**Pn**	**19 52 21.2**	**+1.1**
ZARC	**Zaragoza, Cauc**	**2.35**	**83**	*e*P	**Pn**	**19 52 26.6**	**+1.4**
ZARC				*e*S	**Sn**	**19 52 53.5**	**-0.6**
ZARC				*i*		19 52 59.2	
	comp=Z,175nm,0.3s						
GUY2C	**Guyana, Caldas**	**2.69**	**137**	*e*P	**Pn**	**19 52 31.5**	**+1.1**
GUY2C				*i*		19 53 32.0	
	comp=Z,51nm,0.6s						
CHPO	**Chepo, Panama**	**2.71**	**316**	*i* P	**Pn**	**19 52 32.3**	**+2.1**
NORC	**Norcasia**	**2.84**	**125**	*e*P	**Pn**	**19 52 34.1**	**+2.0**
NORC				*i*		19 53 23.2	
	comp=Z,25nm,0.5s						
UPA	**Univ. de Panam**	**2.90**	**308**	*e*P	**Pn**	**19 52 33.9**	**+1.1**
CHOR3	**La Chorrera**	**3.04**	**304**	*e*P	**Pn**	**19 52 36.4**	**+1.7**
CHOR3				*i* S	**Sn**	**19 53 12.9**	**+1.9**
AZU	**Azuero**	**3.09**	**281**	⇓*i*P	**Pn**	**19 52 37.1**	**+1.6**
	baz=99,slow=6.2						
AZU				*i* S	**Sn**	**19 53 10.9**	**-1.4**
ZANG	**Zanguenga, Cho**	**3.15**	**304**	*i* P	**Pb**	**19 52 40.7**	**-2.2**
VTON	**El Valle, Cocl**	**3.20**	**296**	*e*P	**Pb**	**19 52 43.2**	**-0.5**
BCIP	**Isla Barro Col**	**3.25**	**307**	*e*P	**Pn**	**19 52 38.2**	**+0.5**
BCIP				*e*S	**Sn**	**19 53 17.1**	**+0.9**
BCIP				*i*		19 53 51.2	
	comp=Z,119nm,1.6s						
BCIP	**Isla Barro Col**	**3.25**	**307**	*i* P	**Pn**	**19 52 38.7**	**+1.1**
MLIR	**Monte Lirio**	**3.31**	**308**	*e*P	**Pb**	**19 52 44.0**	**-1.5**
SJCC	**San Jacinto, C**	**3.34**	**37**	*e*P	**Pn**	**19 52 40.6**	**+1.6**
SJCC				*i* S	**Sn**	**19 53 21.0**	**+2.4**
CACAO	**El Cacao, Vera**	**3.62**	**272**	*e*P	**Pn**	**19 52 44.5**	**+1.6**
ROSC	**El Rosal**	**3.71**	**129**	Pn	**Pn**	**19 52 45.9**	**+1.5**
	comp=Z,6.0nm,0.3s,baz=359,slow=17,SNR=7.2						
GMAL	**Guarumal, Vera**	**4.03**	**278**	*i* P	**Pn**	**19 52 50.9**	**+2.6**
BARC	**Barichara**	**4.04**	**98**	*e*P	**Pn**	**19 52 50.4**	**+1.6**
BARC				*e*S	**Sn**	**19 53 34.6**	**-1.6**
BARC				*i*		19 53 59.9	
	comp=Z,165nm,0.8s						
BCO2	**Palmira**	**5.48**	**286**	*e*P	**Pn**	**19 53 12.5**	**+4.1**
SDV	**Santo Domingo**	**6.72**	**75**	Pn	**Pn**	**19 53 28.0**	**+2.4**
	comp=Z,2.5nm,0.3s,baz=309,slow=10,SNR=13						
SDV				Sn	**Sn**	**19 54 40.7**	**-1.5**
	comp=Z,4.7nm,0.3s,baz=344,slow=18,SNR=11						
YKA	**Yellowknife Ar**	**61.55**	**341**	P	**P**	**20 02 02.0**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=130,slow=7.1,SNR=9.5						
ILAR	**Eielson Array**	**74.91**	**335**	P	**P**	**20 03 26.9**	**-0.5**
	comp=Z,0.2nm,0.7s,baz=98,slow=4.6,SNR=4.3						
ASAR	**Alice Springs**	**145.96**	**238**	PKPbc	**PKPdf**	**20 11 26.1**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=113,slow=3.1,SNR=5.4						
WRA	**Warramunga Arr**	**146.90**	**244**	PKPbc	**PKPdf**	**20 11 27.5**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=104,slow=2.3,SNR=1.7						

SJA 04 19:58:21.3±0.8,33°.30S×72°.47W,h10km,ML3.0,MW3.1
GUC 04 19:58:23.5±0.7,33°.69S×72°.08W,h20km±4km,ML3.2
ISC 04 19:58:23.2±1.5,33°.71S±0°.04×72°.08W±0°.06,h11km±11km, n19,σ1ˢ.19/32,4C-2D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA01	**Torpederas**	**0.78**	**28**	*e*P	**Pg**	**19 58 37.8**	**-0.4**
VA01				*i* S	**Sg**	**19 58 48.1**	**-0.2**
VA01				IAML		19 58 49.9	
	comp=E,1µm,0.1s						
MT02	**Curacav**	**0.91**	**61**	⇓*i*P	**Pb**	**19 58 40.0**	**-1.0**
MT02				*i* S	**Sb**	**19 58 52.0**	**-1.1**
MT02				IAML		19 58 54.7	
	comp=N,841nm,0.3s						
ROC1	**El Roble**	**1.16**	**51**	*i* P	**Pn**	**19 58 44.5**	**-1.1**
ROC1				*e*S	**Sg**	**19 59 02.0**	**+1.5**
ROCH	**El Roble**	**1.16**	**51**	⇑*e*P	**Pn**	**19 58 44.0**	**-1.6**
ROCH				*i* S	**Sb**	**19 58 59.7**	**-0.8**
ROCH				IAML		19 59 08.8	
	comp=N,764nm,0.6s						
PEL	**Peldehue**	**1.30**	**65**	*e*P	**Pn**	**19 58 46.4**	**-0.9**
PEL				*i* S	**Sb**	**19 59 03.5**	**-0.8**
PEL				IAML		19 59 05.6	
	comp=N,748nm,0.4s						
GO05	**Huala**	**1.30**	**174**	⇓*i*P	**Pn**	**19 58 46.3**	**-1.1**
GO05				*i* S	**Sn**	**19 59 03.9**	**-1.0**
GO05				IAML		19 59 09.2	
	comp=E,746nm,0.3s						
MT03	**Universidad Ad**	**1.33**	**81**	⇑*i*P	**Pn**	**19 58 47.1**	**-0.8**
MT03				*i* S	**Sn**	**19 59 04.6**	**-1.0**
MT03				IAML		19 59 11.1	
	comp=N,2µm,0.2s						
FCH	**Farellones**	**1.55**	**76**	⇑*e*P	**Pn**	**19 58 50.8**	**-0.2**
FCH				*i* S	**Sn**	**19 59 11.7**	**+0.4**
FCH				IAML		19 59 17.0	
	comp=E,592nm,0.4s						
LMEL	**Las Melosas**	**1.57**	**96**	⇑*i*P	**Pn**	**19 58 50.8**	**-0.4**
LMEL				*i* S	**Sn**	**19 59 11.2**	**-0.5**
LMEL				IAML		19 59 17.1	
	comp=N,1µm,0.2s						
CO04	**Los Peladeros**	**1.91**	**30**	*e*P	**Pn**	**19 58 56.0**	**+0.1**
CO04				*i* S	**Sn**	**19 59 19.9**	**-0.2**
CO02	**Combarbal**	**2.66**	**20**	*e*P	**Pb**	**19 59 10.0**	**-0.9**
CO02				*i* S	**Sn**	**19 59 40.4**	**+1.9**
CO02				IAML		19 59 52.3	
	comp=E,509nm,0.5s						
ARCO	**CERRO ARCO**	**2.78**	**73**	*i* P	**Pb**	**19 59 12.2**	**-0.8**
ARCO				*e*S	**Sb**	**19 59 49.6**	**+2.5**
ARCO				IAML		19 59 58.1	
	comp=Z,70nm,0.3s						
AAGR	**Agrelo**	**2.79**	**78**	*i* P	**Pb**	**19 59 12.6**	**-0.6**
AAGR				IAML		19 59 59.6	
	comp=Z,40nm,0.5s						
CCHI	**Chillan**	**2.89**	**180**	*i* P	**Pb**	**19 59 15.9**	**+1.2**
ASAL	**Salagasta**	**2.94**	**69**	*i* P	**Pb**	**19 59 16.1**	**+0.3**
ASAL				*e*S	**Sb**	**19 59 52.4**	**+0.6**
ASAL				IAML		20 00 05.9	
	comp=Z,59nm,1.2s						
RTCV	**Cerro Valdivia**	**3.51**	**59**	*i* P	**Pn**	**19 59 20.3**	**+2.6**
RTCV				IAML		20 00 21.7	
	comp=Z,26nm,0.6s						
AMOG	**MOGNA**	**4.11**	**49**	*i* P	**Pn**	**19 59 27.4**	**+1.4**
AMOG				IAML		20 00 42.0	
	comp=Z,29nm,0.4s						
AROD	**Rodeo**	**4.17**	**33**	*i* P	**Pn**	**19 59 27.3**	**+0.2**
AROD				IAML		20 00 42.2	
	comp=Z,11nm,1.1s						
ACAN	**Cantantal**	**4.36**	**72**	*i* P	**Pn**	**19 59 30.8**	**+1.4**
ACAN				IAML		20 01 06.6	
	comp=Z,13nm,2.3s						

WEL 04 20:06:59.1±0.4,33°S±9°×17°9E±2°1,h283km±12km, M4.2/20,mB4.5/6,MLv4.7/20,Mw(mB)3.6/6,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.11**	**34**	S	S	20 08 56.8	-2.1
MXZ	**Matakaoa Point**	**4.94**	**190**	P	Pn	20 08 16.1	+1.0
MXZ				S	S	20 09 16.6	+0.4
HAZ	**Te Kaha**	**5.23**	**195**	P	Pn	20 08 21.0	+2.5
HAZ				S	S	20 09 22.8	+0.5
PKGZ	**Pakihiroa**	**5.30**	**192**	P	Pn	20 08 21.6	+2.1
PKGZ				S	S	20 09 22.5	-1.5
PUZ	**Puketiti**	**5.45**	**190**	P	Pn	20 08 23.3	+2.1
PUZ				S	S	20 09 26.7	-0.5
RUGZ	**Raukumara Rang**	**5.45**	**195**	P	Pn	20 08 22.8	+1.5
RUGZ				S	S	20 09 23.5	-3.8
TWGZ	**Tauwhareparae**	**5.60**	**192**	P	Pn	20 08 25.5	+2.5
TWGZ				S	S	20 09 30.9	+0.5
MWZ	**Matawai**	**5.84**	**195**	P	Pn	20 08 28.0	+2.1
MWZ				S	S	20 09 35.4	-0.3
CNGZ	**Carnagh Statio**	**5.86**	**189**	P	Pn	20 08 27.7	+1.6
URZ	**Urewera**	**5.87**	**198**	P	Pn	20 08 27.0	+0.8
URZ				S	S	20 09 33.8	-2.4
TKGZ	**Te Karaka**	**5.88**	**192**	P	Pn	20 08 27.7	+1.5
TKGZ				S	S	20 09 34.8	-1.7
RAGZ	**Rawiri**	**6.02**	**195**	P	Pn	20 08 30.0	+1.9
MUGZ	**Murupara**	**6.16**	**200**	P	Pn	20 08 31.4	+1.5
RTZ	**Ruatahuna**	**6.24**	**198**	P	Pn	20 08 29.5	-1.3
SNGZ	**Shannon Statio**	**6.31**	**195**	P	Pn	20 08 33.0	+1.4
RAHZ	**Arahi**	**6.49**	**196**	P	Pn	20 08 33.6	-0.2
ARHZ	**Aropaoanui**	**6.85**	**196**	P	Pn	20 08 39.1	+1.0
BKZ	**Black Stump Fm**	**6.88**	**199**	P	Pn	20 08 38.5	-0.1
HIZ	**Hauiti**	**6.90**	**211**	P	Pn	20 08 40.7	+1.9
MCHZ	**McNeill Hill**	**7.09**	**197**	P	Pn	20 08 42.0	+0.8
BHHZ	**Black Hill Sta**	**7.31**	**201**	P	Pn	20 08 43.1	-0.8
KRHZ	**Kereru**	**7.36**	**199**	P	Pn	20 08 43.3	-1.2
PXZ	**Pawanui**	**7.61**	**195**	P	Pn	20 08 47.3	-0.2
PNHZ	**Pukenui**	**7.66**	**199**	P	Pn	20 08 46.7	-1.6
ANWZ	**Angora Road**	**8.11**	**196**	P	Pn	20 08 52.4	-1.2
BFZ	**Birch Farm**	**8.37**	**197**	P	Pn	20 08 55.4	-1.6
MRZ	**Mangatainoka R**	**8.53**	**200**	P	Pn	20 08 56.0	-3.0
HOWZ	**Holdsworth Sta**	**8.77**	**200**	P	Pn	20 08 58.6	-3.3
TUWZ	**Tuamarina**	**9.76**	**205**	P	Pn	20 09 10.7	-3.4

ATH 04 20:16:23.4,36°.73N×26°.64E,h29km±1km,ML2.5/1,Error ellipse: s-maj=1.9km s-min=1.2km az=20.0
DDA 04 20:16:26.3,36°.85N×26°.71E,h7km±3km,ML2.0
ISC 04 20:16:24.4±1.1,36°.73N±0°.04×26°.65E±0°.03,h24km±12km, n17,σ0ˢ.85/26,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NISR	**Nisiros**	**0.41**	**107**	P	**Pb**	**20 16 33.0**	**+0.1**
NISR				S	**Sb**	**20 16 38.7**	**-0.1**
AMGA	**Amorgos Island**	**0.61**	**279**	P	**Pb**	**20 16 35.8**	**-0.7**
AMGA				S	**Sb**	**20 16 44.5**	**-0.2**
BDRM	**Kayabasi**	**0.72**	**62**	*i* P	**Pn**	**20 16 38.9**	**-0.2**
BDRM				*i* S	**Sb**	**20 16 47.6**	**-0.2**

BDRM				IAML		20 16 48.0	
	comp=E,105nm,0.9s						
DAT	Datca	0.75	90	*i* P	Pb	20 16 38.8	0.0
DAT				*i* S	Sn	20 16 49.9	-0.3
APE	Apeiranthos	0.96	291	P	Pb	20 16 42.2	-0.1
APE				S	Sn	20 16 55.8	+0.5
SMG	Samos	0.98	9	P	Pb	20 16 42.2	-0.5
SMG				S	Sn	20 16 56.6	+0.6
SMG				AML	AML	20 16 57.8	
	comp=N,425µm,0.2s						
SMG				AML	AML	20 17 00.3	
	comp=E,562µm,0.3s						
THR2	Thira island,	1.02	254	P	Pb	20 16 43.1	-0.2
SANT	Santorini	1.02	250	P	Pb	20 16 43.2	-0.2
THR3	Thira Island,	1.05	253	P	Pn	20 16 43.5	-0.1
GCAM	G?zelcaml?	1.07	26	*i* P	Pb	20 16 44.9	+0.7
GCAM				*i* S	Sn	20 16 57.9	-0.1
GCAM				IAML		20 17 02.0	
	comp=E,72nm,0.5s						
GCAM				IAML		20 17 07.0	
	comp=N,80nm,0.4s						
KARP	Karpathos	1.25	160	P	Pn	20 16 46.5	0.0
AYDN	Tasoluk	1.35	46	*i* P	Pb	20 16 49.2	+0.2
AYDN				*i* S	Sb	20 17 07.2	+1.3
AYDN				IAML		20 17 11.0	
	comp=E,27nm,0.4s						
AYDN				IAML		20 17 14.0	
	comp=N,22nm,0.3s						
TURN	Turunc	1.58	84	*i* P	Pn	20 16 49.3	-1.5
TURN				*i* S	Sn	20 17 08.1	-2.3
TURN				IAML		20 17 09.0	
	comp=N,26nm,0.6s						
TURN				IAML		20 17 09.0	
	comp=E,23nm,0.6s						
ZKR	Zakros	1.65	192	P	Pn	20 16 52.7	+0.8
LAST	Lasithi	1.83	212	P	Pn	20 16 55.4	+0.9
TAVA	DENIZLI_Tavas	1.95	67	*i* P	Pb	20 17 01.0	+1.7
TAVA				IAML		20 17 29.0	
	comp=E,9.7nm,0.9s						
TAVA				IAML		20 17 36.0	
	comp=N,11nm,2.1s						
IDI	Anoyia	2.03	225	P	Pn	20 16 57.3	+0.2

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*IDC **04** 20:25:16.7±1.9, 8°.27S×148°.07E, h72^{km}±16^{km}, mb3.3/6, mb1 3.5/8, mb1mx3.4/35, mbtmp3.7/8, MS3.7/1, Ms1 3.7/1, ms1mx2.7/19, Error ellipse: s-maj=36.2km s-min=17.1km az=127.0*

ISC 04 20:25:13.1±0.8, **8°.0S**±0°.1×**147°.9E**±0°.2, **h35^{km}, n14, σ1^{s}39**/14, **mb3.5**/5, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	1.56	208	P	Pn	20 25 39.3	+0.9
	59nm,0.3s,baz=34,slow=6.1,SNR=104						
PMG				S	Sn	20 25 59.6	+2.1
	70nm,0.3s,baz=263,slow=20,SNR=14						
KRVT	Keravat (AS076	5.52	48	P	Pn	20 26 37.0	+4.2
	5.6nm,0.3s,baz=230,slow=19,SNR=2.3						
KRVT				S	Sn	20 27 36.6	+1.5
	2.7nm,0.3s,baz=163,slow=19,SNR=1.8						
CTA	Charters Tower	12.11	187	P	Pn	20 28 03.8	+0.5
	0.3nm,0.3s,baz=13,slow=18,SNR=2.0						
WRA	Warramunga Arr	17.69	227	P	Pn	20 29 15.9	-1.1
	0.3nm,0.3s,baz=53,slow=11,SNR=21						
WRA				S	Sn	20 32 22.3	-11
	0.1nm,0.3s,baz=45,slow=26,SNR=3.2						
ASAR	Alice Springs	20.55	219	P	P	20 29 48.3	-0.5
	0.9nm,0.7s,baz=37,slow=12,SNR=8.0						
FITZ	Fitzroy Crossi	23.86	243	P	P	20 30 22.7	-0.8
	1.1nm,0.3s,baz=55,slow=9.6,SNR=13						
STKA	Stephens Creek	24.46	193	P	P	20 30 27.1	-1.7
	0.8nm,0.5s,baz=9.5,slow=6.1,SNR=4.1						
JHJ	Hachijo jima 2	41.63	350	LR	LR	20 51 21.5	
	comp=Z,78nm,18.1s,baz=68,slow=37						
MKAR	Makanchi Array	79.61	320	P	P	20 37 18.5	+1.6
	0.3nm,0.5s,baz=98,slow=6.1,SNR=5.8						
ZALV	Zalesovo Beam	81.18	328	P	P	20 37 26.6	+1.5
	0.3nm,0.4s,baz=101,slow=6.0,SNR=2.4						
ILAR	Eielson Array	86.98	23	P	P	20 37 53.7	-0.7
	0.1nm,0.7s,baz=255,slow=4.9,SNR=3.2						
TORD	Torodi Ar. Bea	146.41	282	PKPbc	PKPbc	20 44 51.4	-0.2
	0.9nm,0.7s,baz=91,slow=3.3,SNR=4.6						
BDFB	Brasilia	151.70	146	PKPbc	PKPbc	20 45 03.5	-1.6
	1.3nm,0.5s,baz=154,slow=9.7,SNR=2.5						
DBIC	Dimbokro	152.94	269	PKPbc	PKPbc	20 45 07.2	-0.7
	3.1nm,0.9s,baz=18,slow=6.4,SNR=3.1						

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*IDC **04** 20:27:45.3±1.0, 44°.85N×106°.73W, h0^{km}, mb1 3.6/3, mb1mx3.3/49, mbtmp3.4/3, ML2.7/2, Error ellipse: s-maj=41.2km s-min=8.1km az=136.0*

*NEIC **04** 20:27:45.7±2.8, 45°.09N±0°.05×106°.85W±0°.07, h0^{km}±2^{km}, ML3.3/65, Error ellipse: s-maj=8.6km s-min=7.8km az=56.0*

ISC 04 20:27:45.6±1.0, **45°.15N**±0°.06×**106°.78W**±0°.06, **h0^{km}, n58, σ1^{s}46**/58, **Montana**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAO	LASA Array	1.59	14		Pn	20 28 14.9	-0.2
LAO				IAML		20 28 43.0	
	389nm,0.7s						
LAO				IAML		20 29 00.7	
	228nm,0.9s						
RLMT	Red Lodge	1.76	270		Pn	20 28 15.2	-2.3
GCMT	Greycliff	2.13	289		Pn	20 28 21.4	-1.2
RSSD	Black Hills	2.21	117		Pb	20 28 25.0	-1.6
RSSD				IAML		20 28 58.6	
	162nm,0.5s						
RSSD				IAML		20 28 59.4	
	236nm,0.6s						
YNE	Yellowstone No	2.29	268		Pn	20 28 22.9	-2.0
YMP	Mirror Lake Pl	2.43	262		Pn	20 28 24.7	-2.2
K22A	Casper	2.50	176		Pn	20 28 26.9	-0.9
K22A				IAML		20 29 07.1	
	comp=E,128nm,0.8s						
K22A				IAML		20 29 07.7	
	comp=N,155nm,0.7s						
LKWY	Lake	2.64	258		Pn	20 28 29.9	+0.3
YUF	Upper Falls	2.68	262		Pn	20 28 30.1	-0.2
YNR	Norris Junctio	2.80	262		Pn	20 28 29.7	-2.2
H17A	Grant Village	2.81	256		Pn	20 28 31.3	-0.6
YNM	Yellowstone No	2.82	263	Pn	Pn	20 28 32.2	+0.1
YHH	Holmes Hill	2.91	264		Pn	20 28 33.3	-0.2
FLWY	Flagg Ranch	2.99	251		Pn	20 28 35.4	+0.9
FLWY				IAML		20 29 55.4	
	comp=N,98nm,2.6s						
YPP	Pitchstone Pla	3.00	254		Pn	20 28 36.5	+1.8
YMR	Madison River	3.01	262		Pn	20 28 36.7	+1.9
BW06	Boulder Array	3.11	221		Pn	20 28 36.2	0.0
PD31	Pinedale Array	3.11	221		Pn	20 28 36.1	-0.1
PDAR	Pinedale Array	3.11	221	Pn	Pn	20 28 35.6	-0.5
	comp=N,4.3nm,0.3s,baz=54,slow=17,SNR=53						
PDAR				Lg	Lg	20 29 16.7	
	comp=N,5.0nm,0.3s,baz=45,slow=32,SNR=13						
YHL	Hebgen Lake	3.14	266		Pn	20 28 37.8	+1.2
YHB	Horse Butte	3.16	264		Pn	20 28 37.5	+0.7
QLMT	Earthquake Lak	3.31	266		Pn	20 28 40.2	+1.3
SNOW	Snow King Moun	3.31	241		Pn	20 28 38.3	-0.6
SNOW				IAML		20 29 49.7	
	comp=N,64nm,1.4s						
SNOW				IAML		20 30 44.7	
	comp=N,59nm,3.6s						
FXWY	Fox Creek	3.40	245		Pn	20 28 40.4	+0.3
REDW	Red Top Meadow	3.43	240		Pn	20 28 39.4	-1.1
REDW				IAML		20 29 40.5	
	comp=N,59nm,1.5s						
REDW				IAML		20 29 41.3	
	comp=N,60nm,1.6s						
RWWY	Rawlins	3.47	185		Pn	20 28 41.5	+0.3
RWWY				IAML		20 29 38.7	
	comp=N,59nm,0.8s						
RWWY				IAML		20 29 51.7	
	comp=N,56nm,1.4s						
EGMT	Eagleton	3.53	326		Pn	20 28 41.4	-0.4
EGMT				IAML		20 30 03.1	
	comp=N,72nm,1.1s						
DGMT	Dagmar	3.77	27		Pn	20 28 46.4	+1.4
HRY	Holter Researc	3.85	296	Pn	Pn	20 28 45.8	-0.5
AHID	Auburn Hatcher	3.92	234	Pn	Pn	20 28 46.0	-1.3
AHID				IAML		20 29 57.7	
	comp=N,43nm,1.1s						
AHID				IAML		20 30 00.6	
	comp=E,38nm,0.9s						
PHWY	Pilot Hill	3.97	165		Pn	20 28 46.2	-1.7
LRM	Limekiln Ridge	4.04	282		Pn	20 28 47.2	-1.7
DLMT	Dillon	4.11	275		Pn	20 28 49.0	-0.8
DLMT				IAML		20 29 54.2	
	comp=E,47nm,3.0s						
DLMT				IAML		20 30 18.2	
	comp=E,39nm,2.1s						
N23A	Red Feather La	4.30	171		Pn	20 28 51.6	-0.9
MCMT	McKenzie Canyo	4.32	268		Pn	20 28 51.5	-1.2
HWUT	Hardware Ranch	4.97	226		Pn	20 29 00.4	-1.2
HWUT				IAML		20 30 42.2	
	comp=E,27nm,1.5s						
HWUT				IAML		20 30 45.4	
	comp=E,26nm,2.0s						
RDMU	Red Mountain	5.01	205		Pn	20 29 02.0	-0.2
O20A	White River Ci	5.12	193		Pn	20 29 02.3	-1.5
TCUT	Toone Canyon	5.26	222		Pn	20 29 03.6	-2.2
MSO	Missoula	5.26	291		Pn	20 29 02.5	-3.1
ISCO	Idaho Springs	5.42	170		Pn	20 29 06.2	-1.7
ISCO				IAML		20 30 40.8	
	comp=E,12nm,0.9s						
OGNE	Ogallala	5.46	139		Pn	20 29 07.5	-0.8
SUSD	Miller	5.62	94	Pn	Pn	20 29 12.3	+1.9
JLU	Jordanelle	5.69	219	Pn	Pn	20 29 11.0	-0.6
CTU	Camp Tracy	5.76	221	Pn	Pn	20 29 11.3	-1.1
JTMT	Jette	5.80	299		Pn	20 29 12.1	-0.9
SMCO	Snowmass	5.97	181		Pn	20 29 14.8	-0.8
WALA	Waterton Lakes	6.24	311	Pn	Pn	20 29 17.6	-1.5
NLU	North Lily Min	6.50	219	Pn	Pn	20 29 20.1	-2.5
SRU	San Rafael Swe	6.64	206		Pn	20 29 23.0	-1.6
DUG	Dugway, Tooele	6.65	224	Pn	Pn	20 29 22.8	-1.9
TMUT	Trail Mountain	6.71	211	Pn	Pn	20 29 24.8	-0.8
Q16A	Castle Valley	7.03	209		Pn	20 29 29.8	-0.2
AGMN	Agassiz Nation	8.14	63	Pn	Pn	20 29 45.8	+0.9
T25A	Trinidad	8.20	167		Pn	20 29 48.2	+2.2
ULM	Lac du Bonnet	8.95	51	Pn	Pn	20 29 55.8	-0.3
	comp=E,0.6nm,0.3s,baz=235,slow=11,SNR=18						
ULM				Lg	Lg	20 32 27.3	
	comp=E,0.3nm,0.3s,baz=146,slow=19,SNR=3.2						
ULM	Lac du Bonnet	8.95	51	Pn	Pn	20 29 55.9	-0.1
YKA	Yellowknife Ar	17.96	348	P	P	20 32 01.3	+4.3
	comp=E,0.1nm,0.3s,baz=157,slow=13,SNR=3.3						

MAN 04 20:34:49.8, 6°.01N×126°.21E, h138^{km}, mb4.6, ML3.5, MS3.4, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	0.50	281	*e*P	Pn	20 35 10.9	+1.2
DDMP				*e*S	Sn	20 35 23.4	-1.5
MATI	Mati	0.94	3	*e*P	Pn	20 35 14.1	+1.2
MATI				*e*S	Sn	20 35 31.2	+0.7
GSPH	General Santos	1.25	274	*e*P	Pn	20 35 09.7	-6.3
GSPH				*e*S	Sn	20 35 35.0	-0.9
KCP	Kidapawan	1.49	312	⇓ *e*P	Pn	20 35 20.5	+2.0
KCP				*i* S	Sn	20 35 41.7	+1.3
SKMP	Bagumbayan, Su	1.73	287	*e*P	Pn	20 35 22.0	+0.9
SKMP				*e*S	Sn	20 35 45.9	+0.9
BUKP	Musuan	2.18	329	*e*P	Pn	20 35 25.6	-0.9
BUKP				*e*S	Sn	20 35 55.9	+1.3

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*SJA **04** 20:46:33.9±0.7, 19°.86S×69°.26W, h104^{km}±4^{km}, ML3.6, MW3.6*

*NEIC **04** 20:46:33.8±1.3, 19°.90S±0°.04×69°.1W±0°.1, h104^{km}±7^{km}, Error ellipse: s-maj=17.4km s-min=5.1km az=88.0*

*GUC **04** 20:46:34.9±0.7, 19°.88S×69°.19W, h101^{km}±2^{km}, ML4.0*

*IDC **04** 20:46:35.8±1.1, 19°.91S×68°.99W, h123^{km}±10^{km}, mb3.6/4, mb1 3.7/8, mb1mx3.4/29, mbtmp4.0/8, Error ellipse: s-maj=31.9km s-min=8.9km az=97.0*

ISC 04 20:46:33.7±0.7, **19°.88S**±0°.03×**69°.23W**±0°.06, **h104^{km}**±5^{km}, **n56, σ1^{s}57**/68, **mb4.0**/4, **7C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO01	Chusmiza	0.22	10	*i* P	Pn	20 46 49.4	+0.3
GO01				*i* S	Sn	20 47 00.8	+0.3
GO01				IAML		20 47 01.6	
	comp=E,28µm,0.1s						
GO01	Chusmiza	0.22	10		Pn	20 46 49.5	+0.3
PB08	IPOC Station P	0.27	164	*i* P	Pn	20 46 49.6	+0.5
PB08				*i* S	Sn	20 47 00.9	+0.3
PB08				IAML		20 47 03.1	
	comp=E,7µm,0.1s						
PB08	IPOC Station P	0.27	164	*i* P	Pn	20 46 49.9	+0.7
PB08				*e*S	Sn	20 47 01.9	+1.3
PB08				IAML		20 47 02.9	
	comp=Z,3µm,0.3s						
PB11	IPOC Station P	0.41	287	⇑ *i*P	Pn	20 46 50.1	+0.6
PB11				*i* S	Sn	20 47 01.9	+0.5
PB11				IAML		20 47 02.5	
	comp=E,10µm,0.2s						
PB11	IPOC Station P	0.41	287		Pn	20 46 49.9	+0.4
PB11	IPOC Station P	0.41	287	*i* P	Pn	20 46 50.2	+0.6
PB11				*e*S	Sn	20 47 02.4	+1.0
PB11				IAML		20 47 08.8	
	comp=Z,2µm,0.1s						
MNMC	Minye Minye	0.82	335	⇓ *i*P	Pn	20 46 54.2	+1.3
MNMC				*i* S	Sn	20 47 08.8	+1.4
MNMC				IAML		20 47 10.0	
	comp=E,15µm,0.3s						
MNMC	Minye Minye	0.82	335		Pn	20 46 53.6	+0.7
PSGC	Pisagua	0.88	289	⇑ *i*P	Pn	20 46 54.2	+0.9
PSGC				*i* S	Sn	20 47 09.3	+1.2
PSGC				IAML		20 47 09.9	
	comp=E,3µm,0.3s						
TA01	Diego Aracena	1.12	232	⇑ *i*P	Pn	20 46 56.7	+1.0
TA01				*i* S	Sn	20 47 13.2	+0.9
TA01				IAML		20 47 14.1	
	comp=E,2µm,0.5s						
PB01	IPOC Station P	1.18	192	⇑ *i*P	Pn	20 46 57.6	+1.0
PB01				*i* S	Sn	20 47 15.0	+1.3
PB01				IAML		20 47 16.6	
	comp=N,6µm,0.4s						
PB01	IPOC Station P	1.18	192		Pn	20 46 57.5	+1.0
PATCX	Punta Patache	1.27	223	⇑ *i*P	Pn	20 46 58.4	+0.9
PATCX				*i* S	Sn	20 47 16.8	+1.2
PATCX				IAML		20 47 23.1	
	comp=N,2µm,0.5s						
PB02	IPOC Station P	1.56	203	⇑ *i*P	Pn	20 47 02.4	+1.3
PB02				*i* S	Sn	20 47 22.6	+0.9
PB16	IPOC Station P	1.56	350	*i* P	Pn	20 47 03.3	+1.7
PB16				*i* S	Sn	20 47 24.7	+2.2
PB12	IPOC Station P	1.63	321	⇓ *i*P	Pn	20 47 02.8	+0.8
PB12				*i* S	Sn	20 47 24.7	+1.4
PB12				IAML		20 47 31.9	
	comp=N,1µm,0.3s						
AP01	Chacalluta	1.83	325	*e*P	Pn	20 47 05.7	+1.4
AP01				*i* S	Sn	20 47 28.9	+1.2
AP01				IAML		20 47 37.4	
	comp=N,3µm,0.3s						
PB09	IPOC Station P	1.90	180	*i* P	Pn	20 47 07.1	+1.7
PB09				*i* S	Sn	20 47 31.9	+2.4
PB09				IAML		20 47 36.6	
	comp=E,854nm,0.5s						
PB07	IPOC Station P	1.93	198	⇑ *i*P	Pn	20 47 07.2	+1.4
PB07				*i* S	Sn	20 47 31.7	+1.5
PB07				IAML		20 47 39.0	
	comp=E,2µm,0.4s						
PB03	IPOC Station P	2.21	193	*e*P	Pn	20 47 10.5	+1.2
PB03				*e*S	Sn	20 47 37.7	+1.2
PB04	IPOC Station P	2.58	199	IAML		20 47 58.6	
	comp=E,788nm,0.4s						
PB04	IPOC Station P	2.58	199		Pn	20 47 16.1	+1.9
PB04	IPOC Station P	2.58	199	*i* P	Pn	20 47 16.5	+2.2
LVC	Limon Verde	2.73	174	P	Pn	20 47 19.3	+3.0
	comp=E,12nm,0.3s,baz=354,slow=7.2,SNR=28						
LVC				S	Sn	20 47 51.4	+2.4
	comp=E,30nm,0.3s,baz=120,slow=22,SNR=11						
LVC	Limon Verde	2.73	174		Pn	20 47 16.8	+0.5
LVC	Limon Verde	2.73	174	*i* P	Pn	20 47 18.2	+1.8
LVC				IAML		20 48 00.1	
	comp=Z,144nm,0.3s						
PB06	IPOC Station P	2.83	186	*i* P	Pn	20 47 19.2	+1.8
PB06				IAML		20 48 02.5	
	comp=Z,327nm,0.2s						
PB05	IPOC Station P	3.09	197	*i* P	Pn	20 47 22.2	+1.4
PB05				IAML		20 48 15.7	
	comp=Z,271nm,0.6s						
PB15	IPOC Station P	3.32	184	*i* P	Pn	20 47 25.6	+1.6
PB15				*e*S	Sn	20 48 04.6	+1.8
PB15				IAML		20 48 18.6	
	comp=Z,1µm,0.2s						
LPAZ	La Paz	3.73	17	P	Pn	20 47 33.1	+3.2
	comp=Z,3.4nm,0.3s,baz=199,slow=6.7,SNR=57						
LPAZ				S	Sn	20 48 16.1	+2.8
	comp=Z,0.6nm,0.3s,baz=47,slow=20,SNR=3.5						
LPAZ	La Paz	3.73	17	Pn	Pn	20 47 32.4	+2.5
PB10	IPOC Station P	3.81	199	Pn	Pn	20 47 30.9	+0.4
PB10	IPOC Station P	3.81	199	*i* P	Pn	20 47 32.1	+1.7
PB10				IAML		20 48 31.6	
	comp=Z,158nm,0.5s						
YJA	Yavi	4.16	124	*i* P	Pn	20 47 38.6	+3.1
YJA				IAML		20 48 30.3	
	comp=Z,6.2nm,2.0s						
GO02	Mina Guanaco	5.26	184		Pn	20 47 50.4	0.0
AZAP	Zapla	5.80	139	*i* P	Pn	20 47 59.4	+1.9
AZAP				IAML		20 49 15.7	
	comp=Z,5.6nm,2.9s						
GO03	Copiap	7.73	187	Pn	Pn	20 48 22.1	-1.4
SIV	San Ignacio	8.68	65	P	Pn	20 48 34.2	-2.4
	comp=Z,4.5nm,0.3s,baz=265,slow=10,SNR=82						
GO04	Tololo Observa	10.34	188	Pn	Pn	20 48 55.4	-3.8
CPUP	Villa Florida	12.69	123	P	Pn	20 49 29.6	-0.9
	comp=Z,0.2nm,0.3s,baz=275,slow=10,SNR=4.8						
CPUP	Villa Florida	12.69	123		Pn	20 49 29.0	-1.5
PLCA	Paso Flores	20.81	183	P	Pn	20 51 08.5	-1.7
	comp=Z,2.3nm,1.0s,baz=51,slow=14,SNR=3.6						
PLCA	Paso Flores	20.81	183	P	P	20 51 07.1	+0.3
PLCA				IAmb	IAmb	20 51 17.2	
	comp=Z,15nm,1.6s						
PTGA	Pitinga	21.09	27	P	P	20 51 09.3	-0.6
PTGA				IAmb	IAmb	20 51 19.3	
	comp=Z,12nm,1.6s						
SCHQ	Schefferville	74.44	1	P	P	20 57 58.8	-1.4
	comp=Z,2.4nm,0.7s,baz=214,slow=12,SNR=5.2						
TORD	Torodi Ar. Bea	77.11	71	P	P	20 58 15.4	-0.9
	comp=Z,0.7nm,0.6s,baz=252,slow=5.4,SNR=8.7						
YKA	Yellowknife Ar	89.57	341	P	P	20 59 18.8	-0.3
	comp=Z,0.7nm,0.7s,baz=133,slow=4.8,SNR=13						
H11S2	WAKE ISLAND Hy	127.36	278	T	T	23 25 11.8	
	baz=101,slow=75,SNR=14						
H11S1	WAKE ISLAND Hy	127.37	278	T	T	23 25 07.7	
	baz=101,slow=75,SNR=18						
H11S3	WAKE ISLAND Hy	127.38	278	T	T	23 25 10.2	
	baz=101,slow=75,SNR=19						
H11N3	WAKE ISLAND Hy	127.40	280	T	T	23 25 12.2	
	baz=100,slow=74,SNR=8.5						
H11N2	WAKE ISLAND Hy	127.41	280	T	T	23 25 20.6	
	baz=100,slow=74,SNR=9.1						
H11N1	WAKE ISLAND Hy	127.41	280	T	T	23 25 20.1	
	baz=100,slow=74,SNR=5.3						
WRA	Warramunga Arr	134.18	212	PKP	PKiKP	21 05 41.1	-0.3
	comp=Z,0.3nm,0.7s,baz=154,slow=1.3,SNR=4.8						
MKAR	Makanchi Array	144.49	34	PKP	PKPdf	21 05 58.1	+0.1
	comp=Z,0.1nm,0.6s,baz=330,slow=2.7,SNR=2.0						

IDC 04 20:51:51.4±83.0, **23°.51N×107°.95E, h0^{km}, mb3.3**/3, **mb1 3.3**/3, **mb1mx3.1**/33, **mbtmp3.3**/3, **Error ellipse: s-maj=1397.0km s-min=114.2km az=157.0, Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	24.31	357	P	P	20 57 10.9	+0.2
	0.5nm,0.7s,baz=182,slow=8.7,SNR=4.0						
MKAR	Makanchi Array	31.05	325	P	P	20 58 11.3	+0.3
	0.2nm,0.5s,baz=122,slow=11,SNR=2.1						
ZALV	Zalesovo Beam	35.02	336	P	P	20 58 45.0	-0.6
	0.6nm,0.7s,baz=124,slow=7.2,SNR=2.9						

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*IDC **04** 21:21:32.9±2.5, 56°.52S×26°.59W, h87^{km}±21^{km}, mb4.5/22, mb1 4.5/24, mb1mx4.4/34, mbtmp4.8/24, MS3.5/6, Ms1 3.4/6, ms1mx3.3/19, Error ellipse: s-maj=15.1km s-min=11.4km az=49.0*

*NEIC **04** 21:21:34.2±1.8, 56°.6S±0°.1×26°.6W±0°.2, h105^{km}±5^{km}, mb4.9/23, Error ellipse: s-maj=18.2km s-min=12.3km az=202.0*

ISC 04 21:21:33.8±1.6, **56°.53S**±0°.08×**26°.63W**±0°.09, **h97^{km}**±13^{km}, **n118, σ1^{s}11**/119, **mb4.8**/26, **2C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	6.05	288		Pn	21 23 01.8	+1.2
HOPE				Sn	Sn	21 24 05.8	-2.6
VNA1	Neumayer--Stat	16.23	158	P	P	21 25 17.2	+0.3
VNA3	Neumayer Olymp	16.43	161	P	Pn	21 25 18.0	-0.1
VNA2	Neumayer--Watz	16.62	158	P	P	21 25 21.4	+0.1
	baz=314,slow=13						
SNAA	Sanae	18.17	156	P	P	21 25 37.5	-0.8
SNAA	Sanae	18.17	156	P	P	21 25 37.4	-1.0
	0.5nm,0.3s,baz=301,slow=11,SNR=21						
SNAA				S	S	21 28 48.9	-12
	0.1nm,0.3s,baz=324,slow=13,SNR=1.6						
SNAA				PcP	PcP	21 30 07.2	+0.5
	0.5nm,0.3s,baz=243,slow=4.1,SNR=7.4						
SNAA				LR	LR	21 30 51.2	
	comp=Z,95nm,21.2s,baz=188,slow=31						
SNAA	Sanae	18.17	156	P	P	21 25 37.9	-0.5
EFI	East Falkland	18.96	272	P	P	21 25 47.8	+0.8
PMSA	Palmer Station	19.82	230	P	P	21 25 57.5	+1.2
	1.1nm,0.3s,baz=56,slow=9.7,SNR=2.3						
PMSA				LR	LR	21 32 06.9	
	comp=Z,176nm,18.9s,baz=159,slow=32						
USHA	Ushuaia	23.37	256	P	P	21 26 33.1	-0.3
	3.0nm,0.7s,baz=135,slow=14,SNR=1.3						
USHA				LR	LR	21 33 11.6	
	comp=Z,169nm,20.5s,baz=86,slow=30						
SYO	Syowa Base	31.01	140	⇑ *e*P	P	21 27 39.8	-1.7
SYO	Syowa Base	31.01	140	⇑ *e*pP	pP	21 28 02.3	0.0
PLTB	Pedras Altas	31.05	311	*e*P	P	21 27 43.1	+0.8
PLCA	Paso Flores	32.39	280	P	P	21 27 52.6	-1.5
	2.3nm,0.8s,baz=155,slow=7.4,SNR=5.4						
PLCA				LR	LR	21 39 37.4	
	comp=Z,53nm,21.8s,baz=166,slow=34						
QSPA	South Pole Qui	33.72	180	P	P	21 28 05.2	-0.2
	14nm,0.6s,baz=213,slow=1.5,SNR=26						
QSPA				PcP	PcP	21 30 42.7	+0.1
	2.8nm,0.4s,baz=281,slow=0.3,SNR=6.5						
QSPA	South Pole Qui	33.72	180	P	P	21 28 03.9	-1.6
QSPA				PcP	PcP	21 30 44.9	+2.3
ITAB	Concordia	34.49	317	*e*P	P	21 28 13.3	+1.0
PTGB	Pitanga	36.76	319	*e*P	P	21 28 32.5	+0.7
CPUP	Villa Florida	37.37	311	P	P	21 28 36.3	-0.5
	5.5nm,0.6s,baz=154,slow=7.0,SNR=14						
CPUP				PcP	PcP	21 30 53.8	0.0
	1.1nm,0.4s,baz=73,slow=0.7,SNR=4.3						
CPUP				LR	LR	21 43 13.1	
	comp=Z,40nm,20.1s,baz=146,slow=35						
CPUP	Villa Florida	37.37	311	*e*P	P	21 28 37.0	+0.2
JANB	Januaria	43.54	335	*e*P	P	21 29 29.0	+1.2
BDFB	Brasilia	43.94	330	P	P	21 29 31.0	-0.1
	2.5nm,0.6s,baz=151,slow=3.9,SNR=5.0						
BDFB	Brasilia	43.94	330	P	P	21 29 30.3	-0.8
GO02	Mina Guanaco	43.99	297	P	P	21 29 30.3	-1.4
GO02				IAmb	IAmb	21 30 09.7	
	comp=Z,52nm,1.7s						
ARAG	Araguaiana, MT	45.02	325	*e*P	P	21 29 40.9	+1.3
BOSA	Boshof	45.79	75	P	P	21 29 44.7	-1.0
	comp=Z,4.3nm,0.8s,baz=215,slow=9.8,SNR=5.9						
BOSA				LR	LR	21 45 58.4	
	comp=Z,70nm,18.8s,baz=198,slow=32						
BOSA	Boshof	45.79	75	P	P	21 29 44.0	-1.7
BOSA				IAmb	IAmb	21 30 47.4	
	comp=Z,52nm,1.9s						
LVC	Limon Verde	45.81	300	P	P	21 29 46.0	-0.2
	comp=Z,17nm,0.6s,baz=123,slow=3.0,SNR=9.3						
LVC	Limon Verde	45.81	300	P	P	21 29 45.9	-0.3
LVC				IAmb	IAmb	21 29 49.1	
	comp=Z,16nm,0.7s						
LVC	Limon Verde	45.81	300	*e*P	P	21 29 47.4	+1.2
VNDA	Vanda	46.10	183	P	P	21 29 47.6	+0.2
	comp=Z,6.2nm,0.6s,baz=175,slow=6.1,SNR=27						
VNDA				PcP	PcP	21 31 24.4	+2.7
	comp=Z,3.5nm,0.9s,baz=77,slow=13,SNR=2.8						
SALV	Santo Antonio	46.16	320	*e*P	P	21 29 49.4	+0.8
PB01	IPOC Station P	47.43	300	P	P	21 29 57.5	-1.0
PB01				IAmb	IAmb	21 29 59.7	
	comp=Z,19nm,0.6s						
H10S2	ASCENSION HYDR	48.38	16	T	T	22 22 47.9	
	baz=189,slow=74,SNR=88						
H10S3	ASCENSION HYDR	48.38	16	T	T	22 22 48.2	
	baz=31,slow=74,SNR=52						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GO01	Chusmiza	48.47	302	P	P	21 30 06.9	-0.1
GO01				IAmb	IAmb	21 30 08.3	
	comp=Z,21nm,0.7s						
LBTB	Lobatse	48.85	72	P	P	21 30 08.8	-0.6
	comp=Z,6.1nm,0.7s,baz=211,slow=8.3,SNR=16						
LBTB	Lobatse	48.85	72	P	P	21 30 08.6	-0.8
LBTB				IAmb	IAmb	21 30 10.0	
	comp=Z,9.7nm,0.8s						
H10N1	ASCENSION HYDR	49.50	16	T	T	22 24 13.9	
	baz=188,slow=75,SNR=7.1						
H10N3	ASCENSION HYDR	49.50	16	T	T	22 24 12.8	
	baz=188,slow=75,SNR=36						
H10N2	ASCENSION HYDR	49.51	16	T	T	22 24 13.2	
	baz=188,slow=75,SNR=31						
CLDB	Colider	50.86	322	eP	P	21 30 23.8	-0.8
LPAZ	La Paz	50.91	305	P	P	21 30 26.5	+0.8
	comp=Z,37nm,0.5s,baz=136,slow=5.1,SNR=144						
LPAZ	La Paz	50.91	305	eP	P	21 30 26.3	+0.6
RCBR	Riachuelo	51.10	348	eP	P	21 30 25.0	-1.4
SAML	Samuel	55.37	314	P	P	21 30 57.8	+0.1
SAML				IAmb	IAmb	21 30 58.6	
	comp=Z,11nm,0.9s						
SAML	Samuel	55.37	314	eP	P	21 30 57.7	+0.1
PTGA	Pitinga	61.75	321	P	P	21 31 41.5	-0.4
	comp=Z,6.1nm,0.8s,baz=128,slow=6.0,SNR=8.4						
PTGA	Pitinga	61.75	321	IAmb	IAmb	21 31 42.5	
	comp=Z,6.3nm,0.8s						
DBIC	Dimbokro	65.48	24	P	P	21 32 07.0	+0.7
	comp=Z,1.5nm,0.6s,baz=166,slow=7.7,SNR=4.0						
DBIC	Dimbokro	65.48	24	IAmb	IAmb	21 34 20.7	
	comp=Z,24nm,1.6s						
FLOC	Florencia	70.10	307	P	P	21 32 35.0	-0.5
OTAV	Otavalo	70.18	303	eP	P	21 32 37.8	+1.3
OTAV	Otavalo	70.18	303	eP	P	21 32 37.1	+0.6
SOTA	Rioblanco	71.02	306	eP	P	21 32 43.1	+1.4
PCON	Cinco Dias	71.10	306	eP	P	21 32 44.1	+1.9
PCON				eP	P	21 32 45.7	+3.5
BBAC	Balboa, Cauca	71.21	305	eP	P	21 32 42.9	+0.4
POPC	Popayan, Colom	71.41	306	eP	P	21 32 44.5	+0.9
CHIC	Chingaza	71.99	310	eP	P	21 32 48.2	+0.9
ORTC	Ortega, Tolima	72.00	308	eP	P	21 32 46.9	-0.1
ROSC	El Rosal	72.43	309	P	P	21 32 50.9	+1.0
	comp=Z,5.0nm,0.3s,baz=267,slow=23,SNR=3.6						
ROSC	El Rosal	72.43	309	P	P	21 32 49.7	-0.2
ROSC				IAmb	IAmb	21 32 51.5	
	comp=Z,25nm,1.4s						
GR1C	Gorgona, Isla	72.49	305	eP	P	21 32 50.8	+1.0
RUSC	La Rusia	72.86	311	eP	P	21 32 52.1	-0.4
RUSC	La Rusia	72.86	311	P	P	21 32 51.2	-1.4
SPBC	San Pablo de B	73.06	310	eP	P	21 32 51.6	-1.6
GUY2C	Guyana, Caldas	73.23	309	eP	P	21 32 54.0	-0.8
NORC	Norcasia	73.32	309	eP	P	21 32 53.0	-1.8
TOA0	Torodi Ar. Sit	73.33	29	P	P	21 32 52.9	-1.7
TORD	Torodi Ar. Bea	73.33	29	P	P	21 32 55.4	+0.7
	comp=Z,4.5nm,0.5s,baz=201,slow=6.4,SNR=50						
PLMC	San Jos del P	73.34	308	eP	P	21 32 54.9	0.0
PLCV	Puerto La Cruz	73.50	321	P	P	21 32 56.6	+0.9
PCRV	Puerto La Cruz	73.52	321	P	P	21 32 56.6	+0.7
	comp=Z,36nm,1.0s,baz=162,slow=4.6,SNR=6.9						
BARC	Barichara	73.53	311	eP	P	21 32 53.5	-2.7
PAMC	Pamplona, Colo	74.00	312	eP	P	21 32 57.2	-2.0
PTBC	PUERTO BERRIO,	74.02	310	eP	P	21 32 56.5	-2.3
CBOC	Ciudad Bolivar	74.08	308	eP	P	21 32 58.7	-0.6
SDV	Santo Domingo	74.57	315	P	P	21 33 02.8	+0.6
	comp=Z,15nm,0.7s,baz=173,slow=5.4,SNR=27						
SDV	Santo Domingo	74.57	315	P	P	21 33 01.6	-0.6
SDV				IAmb	IAmb	21 33 03.5	
	comp=Z,15nm,0.7s						
SDV	Santo Domingo	74.57	315	eP	P	21 33 02.8	+0.6
SMLC	San Martn de	75.89	311	eP	P	21 33 08.1	-1.5
JTS	Las Juntas de	82.04	302	P	P	21 33 43.5	+0.4
	comp=Z,6.5nm,0.6s,baz=229,slow=18,SNR=4.1						
JTS	Las Juntas de	82.04	302	P	P	21 33 42.2	-0.9
JTS				IAmb	IAmb	21 33 44.8	
	comp=Z,36nm,1.6s						
APG	El Apazote	88.75	300	P	P	21 34 16.8	+0.2
	comp=Z,11nm,0.3s,baz=337,slow=8.9,SNR=4.2						
STKA	Stephens Creek	91.37	170	P	P	21 34 30.4	+1.8
	comp=Z,2.4nm,0.6s,baz=106,slow=5.2,SNR=8.1						
TEIG	Tepich	92.24	304	P	P	21 34 33.1	+0.6
	comp=Z,24nm,0.6s,baz=276,slow=0.0,SNR=20						
TEIG	Tepich	92.24	304	IAmb	IAmb	21 34 33.8	
	comp=Z,23nm,0.6s						
CMIG	Matias Romero	92.69	297	P	P	21 34 34.3	-0.4
	comp=Z,1.1nm,0.5s,baz=81,slow=3.9,SNR=3.8						
ASAR	Alice Springs	98.43	162	P	P	21 35 00.6	-0.4
	comp=Z,2.0nm,0.8s,baz=183,slow=3.8,SNR=20						
WRA	Warramunga Arr	102.15	162	P	Pdif	21 35 16.2	-1.3
	comp=Z,0.3nm,0.8s,baz=199,slow=4.3,SNR=1.7						
ULM	Lac du Bonnet	120.81	316	PKP	PKPdf	21 40 12.2	-1.2
	comp=Z,0.9nm,0.5s,baz=134,slow=1.1,SNR=4.5						
CMAR	Chiang Mai Arr	124.60	110	PKP	PKPdf	21 40 21.2	-0.4
	comp=Z,0.6nm,0.8s,baz=235,slow=3.6,SNR=4.1						
FINES	FINESS Array B	124.67	28	PKP	PKPdf	21 40 20.0	-0.3
	comp=Z,1.2nm,0.7s,baz=201,slow=1.5,SNR=5.7						
KSH	Kashi	128.40	74	PKP	PKiKP	21 40 29.1	+0.1
KSH				PP	PP	21 42 38.4	+3.4
KSH				SKKS		21 49 18.4	
KSH				AMB	AMB		
	comp=Z,120nm,7.8s						
KSH				LR	LR		
	comp=Z,370nm,14.7s						
KSH				LR	LR		
	comp=Z,190nm,11.2s						
KSH				LR	LR		
	comp=Z,140nm,11.4s						
AAK	Ala-Archa	129.84	71	PKP	PKPdf	21 40 31.4	+0.3
	comp=Z,0.4nm,0.3s,baz=150,slow=1.8,SNR=4.6						
ARCES	ARCESS Array B	131.28	22	PKP	PKiKP	21 40 34.1	+0.3
	comp=Z,0.8nm,0.5s,baz=122,slow=1.6,SNR=4.7						
BVAR	Borovoye Array	134.78	58	PKP	PKiKP	21 40 41.3	0.0
	comp=Z,0.6nm,0.4s,baz=124,slow=4.3,SNR=4.7						
YKA	Yellowknife Ar	136.74	317	PKP	PKPdf	21 40 42.8	-0.3
	comp=Z,1.6nm,0.5s,baz=127,slow=2.4,SNR=22						
MKAR	Makanchi Array	136.75	72	PKhKP	PKPpre	21 40 39.7	
	comp=Z,0.1nm,0.4s,baz=250,slow=3.3,SNR=3.6						
MKAR				SKPbc	SKPbc	21 44 06.0	-1.3
	comp=Z,1.0nm,1.0s,baz=260,slow=3.7,SNR=5.3						
KURBB	Kurchatov Arra	137.23	65	PKP	PKPdf	21 40 45.1	+0.7
	comp=Z,0.2nm,0.5s,baz=223,slow=2.8,SNR=4.5						
KURBB				SKPbc	SKPbc	21 44 07.5	-1.1
	comp=Z,1.0nm,1.0s,baz=222,slow=3.7,SNR=4.9						
CD2	Chengdu	137.23	105	PKP	PKPdf	21 40 44.1	-1.1
KURK	Kurchatov	137.33	65		PKPdf	21 40 43.7	-1.0
WMQ	Urumqi	137.70	79	ePKP	PKPdf	21 40 45.5	-0.2
RES	Resolute Bay	138.42	338	PKP	PKPdf	21 40 46.9	+0.9
	comp=Z,2.1nm,0.9s,baz=4.4,slow=3.4,SNR=5.8						
RES	Resolute Bay	138.42	338		PKPdf	21 40 45.2	-0.8
LZH	Lanzhou	141.21	100	ePKP	PKPdf	21 40 53.1	+0.6
LZH				sPKP		21 41 34.7	
LZH				LR	LR		
	comp=Z,140nm,18.1s						
LZH				LR	LR		
	comp=Z,140nm,18.2s						
LZH				LR	LR		
	comp=Z,170nm,20.0s						
ZALV	Zalesovo Beam	142.30	64	PKP	PKPdf	21 40 54.9	+1.3
	comp=Z,1.4nm,0.5s,baz=232,slow=4.2,SNR=8.0						
NJ2	Nanjing	145.82	121	ePKPbc	PKPdf	21 40 59.7	-0.7
INK	Inuvik	146.38	320	PKPbc	PKPbc	21 41 01.5	-0.2
	comp=Z,6.3nm,0.4s,baz=59,slow=2.6,SNR=43						
HHC	Hu-ho-hao-te	148.84	102	ePKPbc	PKPdf	21 41 06.1	+0.8
SCRK	Sand Creek	149.25	310		PKPbc	21 41 10.0	+0.3
PAX	Paxson	149.61	308		PKPbc	21 41 10.8	+0.2
PAX					PKPab	21 41 16.0	-0.1
SONM	Songino Array	150.44	87	PKPbc	PKPbc	21 41 12.7	-0.4
	comp=Z,2.4nm,0.5s,baz=220,slow=3.8,SNR=27						
ILAR	Eielson Array	150.67	311	PKPbc	PKPbc	21 41 12.7	-0.3
	comp=Z,4.0nm,0.7s,baz=136,slow=5.8,SNR=48						
WRH	Wood River Hil	151.11	310		PKPbc	21 41 14.0	+0.1
KDAK	Kodiak Island	151.31	295	PKPbc	PKiKP	21 41 14.9	-0.1
	comp=Z,7.6nm,0.5s,baz=239,slow=1.2,SNR=23						
KDAK	Kodiak Island	151.31	295		PKPbc	21 41 14.6	0.0
PPLA	Purkeypile	152.58	306		PKiKP	21 41 17.6	-0.1

NEIC ***04*** *21:22:52.1±2.2, 16°.64N±0°.05×100°.63W±0°.03, h14^{km}±5^{km}, Error ellipse: s-maj=7.5km s-min=4.6km az=172.0*

MEX ***04*** *21:22:54.0±0.7, 16°.61N×100°.66W, h20^{km}±11^{km}, MD4.4*

IDC ***04*** *21:22:57.5±1.3, 17°.47N×100°.25W, h0^{km}, mb4.2/8, mb1 4.4/11, mb1mx4.0/40, mbtmp4.2/11, ML3.4/3, MS3.6/13, Ms1 3.6/13, ms1mx3.4/41, Error ellipse: s-maj=32.8km s-min=17.1km az=37.0*

ISC 04 21:22:53.1±1.5, **16°.68N**±0°.05×**100°.59W**±0°.04, **h16**^{km}±8^{km}, **n199**, σ**1§73**/174, **mb4.3**/48, **MS3.7**/9, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.48	40		Pb	21 23 03.0	-0.2
CAIG					Sb	21 23 11.0	+0.9
CAIG	El Cayaco	0.48	40	i P	Pb	21 23 03.0	-0.2
CAIG				eS	Sb	21 23 11.0	+0.9
ACP2	Acapulco	0.70	74		Pg	21 23 06.2	-0.7
ACP2					Sg	21 23 15.9	-0.4
ACP2	Acapulco	0.70	74	eP	Pg	21 23 06.2	-0.7
ACP2				eS	Sg	21 23 15.9	-0.4
ZIIG	Zihuatanejo	1.24	318		Pn	21 23 13.0	-2.8
ZIIG	Zihuatanejo	1.24	318	eP	Pn	21 23 13.0	-2.8
ARIG	Puente Sto Nin	1.61	8		Pn	21 23 20.0	-0.9
ARIG	Puente Sto Nin	1.61	8	eP	Pn	21 23 20.0	-0.9
PLIG	Platanillo	2.00	31		Pn	21 23 26.1	-0.2
PLIG					Sn	21 23 49.8	-1.2
PLIG	Platanillo	2.00	31	eP	Pn	21 23 26.1	-0.2
PLIG				eS	Sn	21 23 49.8	-1.2
TLIG	Tlapa	2.13	65		Pn	21 23 27.5	-0.6
TLIG					Sn	21 23 54.4	+0.1
TLIG	Tlapa	2.13	65		Pn	21 23 27.6	-0.5
TLIG					Sn	21 23 52.3	-2.0
TLIG	Tlapa	2.13	65	eP	Pn	21 23 27.6	-0.5
TLIG				i S	Sn	21 23 52.3	-2.0
MAVM	Malinalco, Edo	2.50	25		Pn	21 23 33.3	0.0
MAVM					Sn	21 24 01.7	-1.7
MAVM	Malinalco, Edo	2.50	25	eP	Pn	21 23 33.3	0.0
MAVM				i S	Sn	21 24 01.7	-1.7
YAIG	Yautepec	2.61	34		Pn	21 23 34.4	-0.4
YAIG					Sn	21 24 04.8	-1.5
YAIG	Yautepec	2.61	34	eP	Pn	21 23 34.4	-0.4
YAIG				i S	Sn	21 24 04.8	-1.5
FTIG	Fresnillo de T	2.65	62	eP	Pn	21 23 34.9	-0.3
FTIG				i S	Sn	21 24 05.8	-1.3
YOIG	Yosondua	2.92	86	eP	Pn	21 23 38.8	-0.4
YOIG				i S	Sn	21 24 13.2	-1.0
UNM	Universidad Na	2.96	27		Pn	21 23 40.3	+0.6
UNM	Universidad Na	2.96	27	i P	Pn	21 23 39.3	-0.4
UNM				i S	Sn	21 24 13.5	-1.5
PPM	Popocatepetl	3.02	38	eP	Pn	21 23 40.0	-0.8
PPM				i S	Sn	21 24 15.6	-1.3
MOIG	Morelia	3.04	349		Pn	21 23 42.7	+2.0
PTVM	Pico Tres Padr	3.22	26		Pn	21 23 42.7	-0.6
PTVM	Pico Tres Padr	3.22	26	eP	Pn	21 23 42.7	-0.6
PEIG	Puerto Escondi	3.38	101	eP	Pn	21 23 44.4	-0.8
PEIG				i S	Sn	21 24 23.2	-1.8
TOIG	Toxpalan	3.65	67	eP	Pn	21 23 48.5	-0.6
TOIG				i S	Sn	21 24 30.5	-1.4
CMIG	Matias Romero	5.48	85	Pn	Pn	21 24 15.1	+1.0
	0.7nm,0.3s,baz=265,slow=15,SNR=6.4						
CMIG				Sn	Sn	21 25 12.9	-4.0
	1.7nm,0.3s,baz=290,slow=11,SNR=4.9						
CMIG				Lg	Lg	21 25 41.4	
	2.2nm,0.3s,baz=278,slow=15,SNR=4.3						
CMIG				LR	LR	21 25 56.8	
	comp=Z,136nm,18.2s,baz=271,slow=35						
ZAIG	Zacatecas	6.34	343	Pn	Pn	21 24 27.4	+1.2
APG	El Apazote	9.89	98	Pn	Pn	21 25 21.9	+7.0
	2.9nm,0.3s,baz=256,slow=8.3,SNR=1.3						
APG				Lg	Lg	21 28 07.3	
	2.0nm,0.3s,baz=50,slow=22,SNR=1.3						
APG				LR	LR	21 29 17.5	
	comp=Z,236nm,18.5s,baz=268,slow=39						
H06E1	SOCORRO T-PHAS	10.06	284	T	T	21 35 36.5	
	SNR=23						
HPIG		11.24	336	Pn	Pn	21 25 32.1	-1.2
TEIG	Tepich	12.21	71	Pn	Pn	21 25 49.3	+2.9
	1.0nm,0.3s,baz=350,slow=0.0,SNR=6.2						
TEIG	Tepich	12.21	71	Pn	P	21 25 53.0	-5.9
TXAR	Lajitas Array	12.91	348	Pn	Pn	21 25 58.2	+2.2
	baz=167,slow=13,SNR=2.9						
TXAR				Lg	Lg	21 29 34.7	
	0.0nm,0.3s,baz=156,slow=11,SNR=1.8						
TXAR				LR	LR	21 30 53.6	
	comp=Z,193nm,18.9s,baz=0.0,slow=39						
TGUH	Tegucigalpa,Un	13.11	100	Pn	Pn	21 25 58.4	-0.4
JCT	Junction City	13.76	3	Pn	P	21 26 13.6	-2.5
WHTX	Lake Whitney,	15.51	10	P	P	21 26 35.9	+0.4
WHTX				IAmb	IAmb	21 26 37.0	
	comp=Z,19nm,0.9s						
HSIG		15.54	324	Pn	Pn	21 26 32.2	+0.6
HSIG				IAmb	IAmb	21 26 39.8	
	comp=Z,19nm,1.2s						
MNTX	Cornudas Mount	15.57	345	P	P	21 26 37.5	+1.3
ABTX	Abilene, Hawle	15.90	3	Pn	P	21 26 38.2	-1.6
ESPN	Las Esperanzas	16.39	104	Pn	P	21 26 44.2	-1.3
ESPN				IAmb	IAmb	21 26 57.5	
	comp=Z,38nm,1.4s						
JTS	Las Juntas de	16.48	111	Pn	P	21 26 48.0	+1.6
	comp=Z,0.4nm,0.3s,baz=315,slow=16,SNR=2.6						
JTS	Las Juntas de	16.48	111		P	21 26 45.4	-1.0
319A	Douglas	16.63	333		P	21 26 49.1	+1.0
121A	Cookes Peak, D	17.07	339	P	P	21 26 52.1	-1.0
121A	Cookes Peak, D	17.07	339	P	P	21 26 56.0	+3.0
	baz=154						
MSTX	Muleshoe	17.33	354		Pn	21 26 53.7	-0.8
MSTX	Muleshoe	17.33	354	P	Pn	21 26 54.4	-0.1
	baz=172						
143A	Socs Landing,	17.99	26	P	Pn	21 27 00.7	-1.8
143A				IAmb	IAmb	21 27 02.5	
	comp=Z,17nm,0.9s						
WMOK	Wichita Mounta	18.06	5	P	P	21 27 05.3	+1.5
WMOK				PcP	PcP	21 31 30.0	-7.7
TUC	Tucson	18.10	331	P	P	21 27 03.9	-0.4
AMTX	Amarillo	18.16	357	P	P	21 27 06.6	+1.7
AMTX				S	Sn	21 30 21.4	-5.6
AMTX				PcP	PcP	21 31 28.0	-10
W35A	Tecumseh	18.70	10	P	P	21 27 10.7	-0.1
214A	Organ Pipe Nat	18.82	326	P	Pn	21 27 15.7	+2.9
	baz=139						
MIAR	Mount Ida	18.87	18	P	Pn	21 27 13.7	+0.5
	baz=201						
ANMO	Albuquerque	18.93	345	P	Pn	21 27 14.4	+0.1
	comp=Z,0.1nm,0.3s,baz=148,slow=16,SNR=7.9						
ANMO				LR	LR	21 33 38.3	
	comp=Z,140nm,20.2s,baz=166,slow=35						
ANMO	Albuquerque	18.93	345	P	P	21 27 13.5	-0.1
ANMO	Albuquerque	18.93	345	P	Pn	21 27 15.4	+1.2
	baz=161						
W39A	Magazine	19.42	17	P	Pn	21 27 19.4	-0.4
W39A	Magazine	19.42	17	P	Pn	21 27 19.7	-0.1
	baz=200						
TUL1	Leonard	19.62	12	P	P	21 27 17.6	-3.4
X18A	Snowflake	19.66	336	P	Pn	21 27 22.2	-0.8
WHAR	Wooly Hollow	19.96	20	P	P	21 27 24.5	-0.1
WHAR				IAmb	IAmb	21 27 38.1	
	comp=Z,11nm,0.8s						
X16A	Lo Mia Camp, P	20.17	333	IAmb	IAmb	21 27 36.1	
	comp=Z,11nm,0.8s						
HHAR	Hobbs	20.40	16	P	P	21 27 28.3	-1.1
T35A	Sooner Cattle	20.48	9	IAmb	IAmb	21 27 41.8	
	comp=Z,16nm,1.1s						
Y14A	Wickenburg	20.49	329	P	P	21 27 28.6	-1.8
FCAR	Ozark Folk Cen	20.57	20	IAmb	IAmb	21 27 31.6	
	comp=Z,8.5nm,0.8s						
T25A	Trinidad	20.66	351	IAmb	IAmb	21 27 39.6	
	comp=Z,13nm,1.0s						
T25A	Trinidad	20.66	351	P	Pn	21 27 37.5	+2.8
	baz=168,SNR=5.9						
GLA	Glamis	20.76	324	P	Pn	21 27 36.7	+0.9
	baz=137						
U40A	Yellville	20.77	18	IAmb	IAmb	21 27 36.6	
	comp=Z,9.2nm,0.8s						
U40A	Yellville	20.77	18	P	P	21 27 33.0	-0.4
	baz=201,SNR=6.5						
WUAZ	Wupatki	21.08	335	P	P	21 27 40.3	+3.3
	baz=149,SNR=19						
Y12C	Blythe	21.12	326	IAmb	IAmb	21 27 40.9	
	comp=Z,11nm,1.1s						
Y12C	Blythe	21.12	326	P	P	21 27 40.1	+2.9
	baz=138						
Z50A	Ashland	21.15	36	IAmb	IAmb	21 27 38.1	
	comp=Z,14nm,0.8s						
Z50A	Ashland	21.15	36	P	P	21 27 37.5	-0.1
	baz=223,SNR=5.2						
Y49A	Blount Mountai	21.34	34	IAmb	IAmb	21 27 59.2	
	comp=Z,10nm,0.8s						
PDMCI	Parker Dam,Lak	21.35	328	P	P	21 27 42.8	+3.1
	baz=140						
PLAL	Pickwick Lake	21.39	29	P	P	21 27 39.8	-0.3
PLAL				IAmb	IAmb	21 27 44.6	
	comp=Z,20nm,1.1s						
BC3	Big Chuckawall	21.56	324	P	P	21 27 44.5	+2.5
	baz=136						
MVCO	Mesa Verde	21.61	343	P	P	21 27 42.3	-0.4
MVCO	Mesa Verde	21.61	343	P	P	21 27 47.1	+4.4
	baz=158,SNR=11						
Z51A	Franklin	21.63	37	IAmb	IAmb	21 27 43.1	
	comp=Z,11nm,0.8s						
MGMO	Mountain Grove	21.68	18	P	P	21 27 42.6	-0.6
MGMO				IAmb	IAmb	21 27 56.4	
	comp=Z,14nm,1.2s						
S22A	4UR Ranch, Cre	21.69	347	P	P	21 27 45.5	+1.8
	baz=162						
S39A	Bolivar	21.89	16	IAmb	IAmb	21 28 03.4	
	comp=Z,11nm,0.9s						
PBMO	Poplar Bluff	21.95	22	IAmb	IAmb	21 27 47.3	
	comp=Z,10.0nm,0.9s						
TPFO	Pinon Flats	22.09	323	P	P	21 27 52.2	+4.4
	baz=134						
XPFO	Pion Flat	22.09	323	P	P	21 27 47.9	0.0
XPFO				IAmb	IAmb	21 27 54.2	
	comp=Z,11nm,1.2s						
PFO	Pinyon Flats O	22.10	323	P	P	21 27 50.3	+2.4
	comp=Z,2.7nm,0.8s,baz=144,slow=13,SNR=4.0						
PFO	Pinyon Flats O	22.10	323	P	P	21 27 47.4	-0.5
BELC	Belle Mtn. Jos	22.12	324	P	P	21 27 52.6	+4.5
	baz=136						
U15A	North Rim	22.24	334	IAmb	IAmb	21 27 56.6	
	comp=Z,15nm,1.4s						
FPAL	Fort Paine	22.29	34	IAmb	IAmb	21 27 56.8	
	comp=Z,14nm,1.0s						
KSCO	Kaye Shedlock’	22.32	356	IAmb	IAmb	21 27 52.4	
	comp=Z,11nm,0.7s						
KSCO	Kaye Shedlock’	22.32	356	P	P	21 27 50.4	+0.2
	baz=174						
WVT	Waverly	22.45	28	P	P	21 27 51.3	-0.1
WVT				IAmb	IAmb	21 27 53.7	
	comp=Z,8.8nm,0.9s						
WVT	Waverly	22.45	28	P	P	21 27 52.9	+1.4
	baz=214						
GMRC	Granite Mounta	22.52	326	P	P	21 27 55.9	+3.6
	baz=138						
GOGA	Godfrey	22.71	40	P	P	21 27 54.1	-0.1
GOGA				IAmb	IAmb	21 27 56.4	
	comp=Z,12nm,0.9s						
GOGA	Godfrey	22.71	40	P	P	21 27 54.2	-0.1
	baz=227						
X51A	Calhoun	22.72	35	P	P	21 27 54.2	-0.2
	baz=223						
CCM	Cathedral Cave	22.83	19	P	P	21 27 53.9	-1.5
CCM	Cathedral Cave	22.83	19	P	P	21 27 56.4	+1.0
	baz=203						
S44A	Carbondale	23.20	23	IAmb	IAmb	21 28 05.6	
	comp=Z,13nm,1.1s						
ISCO	Idaho Springs	23.45	350	IAmb	IAmb	21 28 05.2	
	comp=Z,11nm,1.4s						
ISCO	Idaho Springs	23.45	350	P	P	21 28 03.2	+1.1
	baz=167						
MWC	Mount Wilson	23.47	321	P	P	21 28 00.3	-1.9
W52A	Murphy	23.62	36	P	P	21 28 04.1	+0.5
	baz=224						
BG3	Lake Jocassee	24.12	38	IAmb	IAmb	21 28 10.9	
	comp=Z,8.8nm,0.8s						
LRMC	Laurel Mtn Rad	24.14	324	P	P	21 28 11.4	+2.8
	baz=135						
X54A	Belton	24.15	39	P	P	21 28 09.3	+0.8
	baz=228						
O20A	White River Ci	24.30	346	IAmb	IAmb	21 28 19.0	
	comp=Z,8.8nm,1.1s						
T49A	Edmonton	24.32	30	P	P	21 28 09.8	-0.3
	baz=217						
TMUT	Trail Mountain	24.37	340	P	P	21 28 10.6	-0.2
P17A	Butcher Ranch,	24.37	341	P	P	21 28 10.3	-0.5
MPMC	Manual Prospec	24.46	325	P	P	21 28 14.0	+2.4
	baz=136						
TPNV	Topopah Spring	24.48	329	P	P	21 28 15.1	+3.3
	baz=140						
X55A	Gracelyn & Ava	24.55	40	P	P	21 28 12.7	+0.5
	baz=229						
N23A	Red Feather La	24.57	350	IAmb	IAmb	21 28 16.6	
	comp=Z,7.7nm,0.9s						
N23A	Red Feather La	24.57	350	P	P	21 28 14.3	+1.7
	baz=167						
W54A	Cherokee Point	24.63	38	P	P	21 28 13.9	+1.0
	baz=227,SNR=5.5						
V53A	Saluda	24.67	37	P	P	21 28 14.0	+0.7
	baz=225						
X56A	White Oak	24.94	41	P	P	21 28 16.9	+1.2
	baz=230						
CWC	Cottonwood Cre	25.06	325	P	P	21 28 19.7	+2.7
	baz=136						
KMSC	Kings Mountain	25.18	39	P	P	21 28 18.9	+1.1
	baz=228						
V54A	Nebo	25.24	38	P	P	21 28 19.6	+1.1
	baz=226,SNR=5.9						
R11A	Troy Canyon, C	25.28	332	IAmb	IAmb	21 28 25.8	
	comp=Z,15nm,1.5s						
R11A	Troy Canyon, C	25.28	332	P	P	21 28 21.7	+2.7
	baz=143						
DUG	Dugway, Tooele	25.72	338	IAmb	IAmb	21 28 27.9	
	comp=Z,6.9nm,0.9s						
DUG	Dugway, Tooele	25.72	338	P	P	21 28 25.7	+2.8
	baz=151,SNR=6.9						
V55A	Taylorsville	25.73	38	P	P	21 28 24.0	+1.1
	baz=227,SNR=5.9						
U54A	Nelsons Funny	25.84	36	P	P	21 28 24.3	+0.4
	baz=225						
W57A	Gilead	26.02	41	P	P	21 28 26.3	+0.8
	baz=231						
K22A	Casper	26.38	350	IAmb	IAmb	21 28 33.0	
	comp=Z,7.4nm,1.0s						
K22A	Casper	26.38	350	P	P	21 28 32.4	+3.5
	baz=166						
OMMB	Old Mammoth Mi	26.42	326	IAmb	IAmb	21 28 36.6	
	comp=Z,6.2nm,1.1s						
NV11	Mina Array Sit	26.59	328	IAmb	IAmb	21 28 37.0	
	comp=Z,14nm,1.3s						
V57A	Coltrane Farms	26.62	40	P	P	21 28 31.3	+0.3
	baz=230						
NVAR	Mina Array Bea	26.66	328	P	P	21 28 34.5	+2.9
	comp=Z,4.7nm,0.8s,baz=153,slow=10.0,SNR=16						
RYN	Ryan	26.93	328	P	P	21 28 34.6	+0.8
RYN				IAmb	IAmb	21 28 42.4	
	comp=Z,6.8nm,1.0s						
V58A	Windy Hill, Pi	26.98	41	P	P	21 28 35.6	+1.4
	baz=231						
KVN	Kaiserville	27.04	329	IAmb	IAmb	21 28 42.8	
	comp=Z,7.1nm,1.0s						
BW06	Boulder Array	27.11	345	P	P	21 28 34.6	-0.9
BW06				IAmb	IAmb	21 28 39.8	
	comp=Z,15nm,1.4s						
PD31	Pinedale Array	27.11	345	P	P	21 28 35.8	+0.3
PD31				IAmb	IAmb	21 28 39.8	
	comp=Z,12nm,1.3s						
PDAR	Pinedale Array	27.11	345	P	P	21 28 36.5	+0.9
	comp=Z,4.7nm,0.8s,baz=145,slow=11,SNR=30						
PDAR				LR	LR	21 38 54.6	
	comp=Z,108nm,21.5s,baz=176,slow=36						
BLA	Blacksburg	27.12	37	P	P	21 28 36.2	+0.7
	baz=227						
WAKR	Walker	27.31	326	IAmb	IAmb	21 28 46.4	
	comp=Z,6.0nm,1.2s						
FXWY	Fox Creek	28.30	344	IAmb	IAmb	21 28 50.1	
	comp=Z,6.2nm,0.8s						
FLWY	Flagg Ranch	28.62	345	IAmb	IAmb	21 28 53.0	
	comp=Z,7.4nm,0.9s						
QLMT	Earthquake Lak	29.51	344	P	P	21 28 57.2	+0.3
LAO	LASA Array	30.29	352	IAmb	IAmb	21 29 07.2	
	comp=Z,6.9nm,0.9s						
MOD	Modoc Plateau	30.30	330	IAmb	IAmb	21 29 08.5	
	comp=Z,9.5nm,1.2s						
MSO	Missoula	32.04	343	P	P	21 29 18.1	-1.0
ATAH	Atahualpa	32.28	135	LR	LR	21 39 27.1	
	comp=Z,84nm,19.6s,baz=279,slow=30						
F49A	Sandfield	32.88	24	P	P	21 29 26.1	-0.2
	baz=214						
SADO	Sadowa	33.32	28	LR	LR	21 43 40.4	
	comp=Z,116nm,20.5s,baz=213,slow=38						
ULM	Lac du Bonnet	33.70	5	P	P	21 29 34.7	+1.3
	comp=Z,1.9nm,0.6s,baz=204,slow=9.6,SNR=5.4						
ULM	Lac du Bonnet	33.70	5	IAmb	IAmb	21 29 36.9	
	comp=Z,4.1nm,1.1s						
I58A	Old Forge	34.59	34	P	P	21 29 42.3	+1.0
	baz=227						
K61A	Williamstown	34.85	36	P	P	21 29 44.7	+1.1
	baz=230						
H57A	Richville	34.91	32	P	P	21 29 44.3	+0.4
	baz=226						
B08A	Colville Reser	35.12	338	IAmb	IAmb	21 29 48.9	

	comp=Z,4.7nm,1.0s						
E53A	**Dumoine, Ponti**	**35.22**	**28**	P	**P**	**21 29 46.4**	**-0.3**
	baz=220						
G58A	**Ormstown**	**36.07**	**32**	P	**P**	**21 29 54.4**	**+0.5**
	baz=227						
E56A	**St. Veronique**	**36.56**	**30**	P	**P**	**21 29 58.1**	**0.0**
	baz=224						
D55A	**Sainte-Anne-du**	**36.70**	**29**	P	**P**	**21 29 59.7**	**+0.4**
	baz=223,SNR=5.5						
E57A	**Chemin Saint G**	**36.90**	**31**	P	**P**	**21 30 01.3**	**+0.3**
	baz=225						
D56A	**ZEC Mazanza, M**	**37.06**	**30**	P	**P**	**21 30 02.8**	**+0.5**
	baz=224						
D57A	**Chemin Vers le**	**37.45**	**30**	P	**P**	**21 30 06.0**	**+0.3**
	baz=225						
LSQQ	**Lebel-sur-Quev**	**37.58**	**26**	P	**P**	**21 30 06.9**	**+0.2**
	baz=219						
FFC	**Flin Flon**	**37.98**	**359**	P	**P**	**21 30 09.3**	**-0.8**
FFC				IAmb	IAmb	21 30 12.5	
	comp=Z,6.2nm,0.8s						
G62A	**West of Eustis**	**37.99**	**35**	P	**P**	**21 30 11.7**	**+1.4**
	baz=231						
D58A	**Chemin du LacG**	**38.00**	**31**	P	**P**	**21 30 10.6**	**+0.3**
	baz=226						
E63A	**Oxbow**	**39.90**	**35**	P	**P**	**21 30 27.1**	**+0.9**
	baz=233						
D62A	**Allapoint, All**	**39.96**	**34**	P	**P**	**21 30 27.9**	**+1.2**
	baz=231,SNR=5.0						
RPN	**Rapa Nui**	**44.36**	**191**	LR	LR	21 45 05.6	
	comp=Z,105nm,20.4s,baz=284,slow=29						
LPAZ	**La Paz**	**45.80**	**134**	LR	LR	21 49 09.7	
	comp=Z,82nm,20.0s,baz=315,slow=34						
SCHQ	**Schefferville**	**46.08**	**27**	P	**P**	**21 31 16.2**	**+0.1**
	comp=Z,6.7nm,0.9s,baz=225,slow=5.0,SNR=7.1						
SCHQ	**Schefferville**	**46.08**	**27**	P	**P**	**21 31 16.4**	**+0.2**
YKA	**Yellowknife Ar**	**46.81**	**351**	P	**P**	**21 31 21.8**	**0.0**
	comp=Z,5.0nm,0.8s,baz=160,slow=7.6,SNR=62						
YKA				PcP	**PcP**	**21 32 55.0**	**+0.3**
	comp=Z,0.7nm,1.0s,baz=155,slow=3.4,SNR=3.6						
YKA				LR	LR	21 52 04.5	
	comp=Z,194nm,18.1s,baz=0.0,slow=38						
FRB	**Frobisher Bay**	**51.92**	**17**	LR	LR	21 52 56.2	
	comp=Z,48nm,18.9s,baz=62,slow=35						
EGAK	**Eagle**	**55.27**	**340**	IAmb	IAmb	21 32 37.7	
	comp=Z,3.7nm,0.8s						
INK	**Inuvik**	**55.67**	**346**	P	**P**	**21 32 27.9**	**-0.3**
INK				IAmb	IAmb	21 32 30.8	
	comp=Z,3.5nm,0.9s						
SCRK	**Sand Creek**	**55.72**	**338**	P	**P**	**21 32 28.8**	**0.0**
SCRK				IAmb	IAmb	21 32 33.0	
	comp=Z,3.3nm,1.0s						
PRP	**Porcupine Dome**	**57.17**	**339**	IAmb	IAmb	21 32 43.1	
	comp=Z,5.2nm,1.1s						
ILAR	**Eielson Array**	**57.21**	**338**	P	**P**	**21 32 40.6**	**+1.4**
	comp=Z,1.6nm,0.9s,baz=149,slow=5.8,SNR=17						
WRH	**Wood River Hil**	**57.47**	**338**	P	**P**	**21 32 41.0**	**-0.1**
WRH				IAmb	IAmb	21 32 44.5	
	comp=Z,2.5nm,0.9s						
PLCA	**Paso Flores**	**63.57**	**155**	P	P	21 33 34.9	+12
	comp=Z,3.3nm,1.0s,baz=0.2,slow=6.1,SNR=3.5						
SUMG	**Summit**	**65.99**	**17**	*i* P	**P**	**21 33 40.1**	**+1.3**
	comp=Z,25nm,1.1s						
SUMG	**Summit**	**65.99**	**17**	P	**P**	**21 33 38.7**	**-0.2**
ARCES	**ARCESS Array B**	**86.08**	**17**	LR	LR	22 15 44.5	
	comp=Z,123nm,18.0s,baz=322,slow=37						
TORD	**Torodi Ar. Bea**	**97.71**	**74**	LR	LR	22 19 48.9	
	comp=Z,28nm,18.6s,baz=335,slow=35						
LZH	**Lanzhou**	**122.65**	**337**	*e*PKP	**PKiKP**	**21 41 54.5**	**+5.5**
LZH				pPKP	sPKPdf	21 42 11.6	+16
LZH				sPKP		21 42 19.2	
KSH	**Kashi**	**124.00**	**3**	PKP	PKiKP	21 41 59.4	+7.9
KSH				PP	PP	21 43 45.4	+12
KSH				SKKS		21 50 33.4	
CMAR	**Chiang Mai Arr**	**140.14**	**330**	PKP	**PKiKP**	**21 42 25.3**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=347,slow=3.7,SNR=2.9						

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*IDC **04** 21:33:55.7±1.4, 16°.72N×100°.55W, h0^{km}, mb4.2/10, mb1 4.3/14, mb1mx4.0/54, mbtmp4.1/14, ML3.6/4, MS3.5/8, Ms1 3.5/8, ms1mx3.3/31, Error ellipse: s-maj=32.5km s-min=16.4km az=34.0*

*NEIC **04** 21:33:56.2±2.6, 16°.83N±0°.05×100°.56W±0°.06, h1^{km}±2^{km}, Error ellipse: s-maj=9.8km s-min=5.5km az=224.0*

*MEX **04** 21:33:57.7±0.6, 16°.60N×100°.67W, h16^{km}±17^{km}, MD4.3*

ISC 04 21:33:56.1±1.8**, 16°.68N**±0°.05×**100°.65W**±0°.04**, h9**^{km}±11^{km}**, n150,** σ1^s**68**/143**, mb4.3**/40**, MS3.5**/5**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.52**	**45**		**Pg**	**21 34 06.8**	**+0.6**
CAIG					**Sb**	**21 34 14.5**	**-0.6**
CAIG	**El Cayaco**	**0.52**	**45**	*i* P	**Pg**	**21 34 06.8**	**+0.6**
CAIG				*e*S	**Sb**	**21 34 14.5**	**-0.6**
ZIIG	**Zihuatanejo**	**1.21**	**320**		**Pn**	**21 34 16.7**	**-2.5**
ZIIG					**Sb**	**21 34 32.1**	**-2.8**
ZIIG	**Zihuatanejo**	**1.21**	**320**	*e*P	**Pn**	**21 34 16.7**	**-2.5**
ZIIG				*e*S	**Sb**	**21 34 32.1**	**-2.8**
MEIG	**Mezcala**	**1.58**	**38**		**Pn**	**21 34 23.3**	**-1.2**
MEIG					**Sn**	**21 34 42.6**	**-2.5**
MEIG	**Mezcala**	**1.58**	**38**	*e*P	**Pn**	**21 34 23.3**	**-1.2**
MEIG				*i* S	**Sn**	**21 34 42.6**	**-2.5**
ARIG	**Puente Sto Nin**	**1.62**	**10**		**Pn**	**21 34 23.8**	**-1.1**
ARIG					**Sn**	**21 34 43.4**	**-2.5**
ARIG	**Puente Sto Nin**	**1.62**	**10**	*e*P	**Pn**	**21 34 23.8**	**-1.1**
ARIG				*i* S	**Sn**	**21 34 43.4**	**-2.5**
UON	**La Union**	**1.70**	**319**	*i* P	**Pn**	**21 34 24.1**	**-1.8**
UON				*i* S	**Sn**	**21 34 44.3**	**-3.5**
PLIG	**Platanillo**	**2.03**	**33**		**Pn**	**21 34 29.8**	**-0.8**
PLIG					**Sn**	**21 34 54.1**	**-2.0**
PLIG	**Platanillo**	**2.03**	**33**	*e*P	**Pn**	**21 34 29.8**	**-0.8**
PLIG				*i* S	**Sn**	**21 34 54.1**	**-2.0**
TLIG	**Tlapa**	**2.18**	**66**		**Pn**	**21 34 31.5**	**-1.2**
TLIG					**Sn**	**21 34 58.8**	**-1.1**
TLIG	**Tlapa**	**2.18**	**66**		**Pn**	**21 34 31.4**	**-1.2**
TLIG					**Sn**	**21 34 57.0**	**-2.9**
TLIG	**Tlapa**	**2.18**	**66**	*e*P	**Pn**	**21 34 31.4**	**-1.2**
TLIG				*i* S	**Sn**	**21 34 57.0**	**-2.9**
YAIG	**Yautepec**	**2.64**	**35**		**Pn**	**21 34 38.1**	**-1.0**
YAIG					**Sn**	**21 35 09.7**	**-1.7**
YAIG	**Yautepec**	**2.64**	**35**	*e*P	**Pn**	**21 34 38.1**	**-1.0**
YAIG				*i* S	**Sn**	**21 35 09.7**	**-1.7**
FTIG	**Fresnillo de T**	**2.70**	**63**	*e*P	**Pn**	**21 34 38.8**	**-1.1**
FTIG				*i* S	**Sn**	**21 35 09.7**	**-3.0**
HLIG	**Huajuapan de L**	**2.95**	**67**	*e*P	**Pn**	**21 34 42.5**	**-1.0**
HLIG				*i* S	**Sn**	**21 35 16.6**	**-2.5**
UNM	**Universidad Na**	**2.98**	**28**	Pn	**Pn**	**21 34 43.7**	**-0.2**
AMVM	**AMECAMECA**	**3.02**	**36**		**Pn**	**21 34 43.9**	**-0.5**
AMVM	**AMECAMECA**	**3.02**	**36**	*e*P	**Pn**	**21 34 43.9**	**-0.5**
MOIG	**Morelia**	**3.03**	**350**		**Pn**	**21 34 44.7**	**+0.2**
MOIG					**Sn**	**21 35 23.1**	**+2.1**
PPM	**Popocatepetl**	**3.06**	**39**	*e*P	**Pn**	**21 34 44.4**	**-0.8**
PPM				*i* S	**Sn**	**21 35 19.9**	**-2.2**
PTVM	**Pico Tres Padr**	**3.25**	**27**		**Sn**	**21 35 25.6**	**-0.8**
PTVM	**Pico Tres Padr**	**3.25**	**27**	*i* S	**Sn**	**21 35 25.6**	**-0.8**
PEIG	**Puerto Escondi**	**3.43**	**101**	*e*P	**Pn**	**21 34 47.7**	**-2.1**
PEIG				*i* S	**Sn**	**21 35 27.0**	**-3.7**
CMIG	**Matias Romero**	**5.54**	**85**	Pn	**Pn**	**21 35 18.2**	**-0.6**
	1.3nm,0.3s,baz=259,slow=12,SNR=11						
CMIG				Lg	Lg	21 36 50.0	
	4.3nm,0.3s,baz=349,slow=18,SNR=4.2						
ZAIG	**Zacatecas**	**6.32**	**344**	Pn	**Pn**	**21 35 30.1**	**+0.2**
CCIG	**Comitan**	**8.18**	**92**		**Pn**	**21 35 56.6**	**+1.4**
APG	**El Apazote**	**9.94**	**98**	Pn	**Pn**	**21 36 20.6**	**+1.0**
	3.2nm,0.3s,baz=66,slow=18,SNR=1.4						
APG				Lg	Lg	21 39 13.6	
	5.2nm,0.3s,baz=86,slow=9.6,SNR=2.2						
APG				LR	LR	21 39 55.9	
	comp=Z,359nm,19.3s,baz=281,slow=37						
H06E1	**SOCORRO T-PHAS**	**10.01**	**284**	T	T	21 46 35.3	
	SNR=22						
TEIG	**Tepich**	**12.26**	**71**	Pn	**Pn**	**21 36 50.0**	**-1.0**
735A	**Kenedy**	**12.40**	**12**	Pn	**Pn**	**21 36 51.4**	**-1.5**
TXAR	**Lajitas Array**	**12.90**	**348**	Pn	**Pn**	**21 37 01.7**	**+1.9**
	0.0nm,0.3s,baz=3.2,slow=26,SNR=2.1						
TXAR				Sn	Sn	21 39 31.9	+8.3
	0.1nm,0.3s,baz=89,slow=33,SNR=1.1						
TXAR				Lg	Lg	21 40 41.0	
	0.0nm,0.3s,baz=147,slow=7.1,SNR=1.1						
ESTN	**Estel**	**14.25**	**103**	Pn	**Pn**	**21 37 17.0**	**-1.4**
HSIG		**15.51**	**324**	P	**Pn**	**21 37 35.4**	**+0.2**
HSIG				IAmb	IAmb	21 37 43.6	
	comp=Z,23nm,1.3s						
WHTX	**Lake Whitney,**	**15.52**	**10**		**Pn**	**21 37 35.5**	**+0.3**
WHTX				IAmb	IAmb	21 37 40.7	
	comp=Z,21nm,1.0s						
MNTX	**Cornudas Mount**	**15.56**	**345**		**Pn**	**21 37 35.9**	**+0.1**
ACON	**Acoyapa**	**15.71**	**105**	Pn	**Pn**	**21 37 37.1**	**-0.7**
ACON				IAmb	IAmb	21 37 38.5	
	comp=Z,23nm,1.2s						
237A	**Washetta, Mont**	**15.88**	**15**	P	**Pn**	**21 37 40.6**	**+0.7**
ABTX	**Abilene, Hawle**	**15.90**	**3**	P	**Pn**	**21 37 40.2**	**0.0**
JTS	**Las Juntas de**	**16.53**	**111**	LR	LR	21 42 31.6	
	comp=Z,66nm,20.0s,baz=349,slow=31						
JTS	**Las Juntas de**	**16.53**	**111**	P	**Pn**	**21 37 48.1**	**-0.3**
JTS				IAmb	IAmb	21 38 02.8	
	comp=Z,38nm,1.2s						
319A	**Douglas**	**16.61**	**333**		**P**	**21 37 51.2**	**-0.6**
121A	**Cookes Peak, D**	**17.06**	**339**		**Pn**	**21 37 54.7**	**-0.4**
MSTX	**Muleshoe**	**17.32**	**354**		**Pn**	**21 37 58.0**	**-0.4**
TUC	**Tucson**	**18.07**	**331**	Pn	**Pn**	**21 38 05.6**	**-2.0**
AMTX	**Amarillo**	**18.15**	**357**		**Pn**	**21 38 07.7**	**-1.0**
214A	**Organ Pipe Nat**	**18.79**	**326**	P	**Pn**	**21 38 18.7**	**+2.3**
	baz=140						
ANMO	**Albuquerque**	**18.92**	**345**	P	**Pn**	**21 38 19.3**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=159,slow=12,SNR=8.1						
ANMO				LR	LR	21 44 52.1	
	comp=Z,85nm,21.0s,baz=167,slow=35						
ANMO	**Albuquerque**	**18.92**	**345**	P	**Pn**	**21 38 17.4**	**-0.7**
ANMO	**Albuquerque**	**18.92**	**345**	P	**Pn**	**21 38 19.7**	**+1.7**
	baz=161						
W39A	**Magazine**	**19.44**	**17**	P	**Pn**	**21 38 23.2**	**-0.8**
W39A	**Magazine**	**19.44**	**17**	P	**Pn**	**21 38 23.5**	**-0.6**
	baz=200						
X18A	**Snowflake**	**19.64**	**337**	P	**P**	**21 38 24.7**	**-0.6**
TUL1	**Leonard**	**19.64**	**12**	P	**P**	**21 38 23.5**	**-1.6**
TUL1				IAmb	IAmb	21 38 25.2	
	comp=Z,11nm,0.9s						
113A	**Mohawk Valley,**	**19.93**	**326**	P	**Pn**	**21 38 29.4**	**-0.6**
113A				IAmb	IAmb	21 38 34.3	
	comp=Z,19nm,1.4s						
WHAR	**Wooly Hollow**	**19.98**	**20**	P	**P**	**21 38 28.6**	**-0.3**
WHAR				IAmb	IAmb	21 38 41.9	
	comp=Z,8.8nm,0.8s						
X16A	**Lo Mia Camp, P**	**20.14**	**333**	IAmb	IAmb	21 38 38.7	
	comp=Z,12nm,0.9s						
HHAR	**Hobbs**	**20.41**	**16**	P	**P**	**21 38 32.0**	**-1.6**
FCAR	**Ozark Folk Cen**	**20.59**	**20**	IAmb	IAmb	21 38 35.4	
	comp=Z,7.3nm,0.7s						
T25A	**Trinidad**	**20.65**	**351**	P	**P**	**21 38 35.8**	**-0.6**
T25A				IAmb	IAmb	21 38 43.4	
	comp=Z,11nm,0.9s						
GLA	**Glamis**	**20.73**	**324**	P	**P**	**21 38 37.1**	**+0.1**
GLA				IAmb	IAmb	21 38 44.0	
	comp=Z,15nm,1.1s						
U40A	**Yellville**	**20.79**	**18**	P	**P**	**21 38 37.0**	**-0.7**
	baz=201						
WUAZ	**Wupatki**	**21.06**	**335**	P	**P**	**21 38 43.6**	**+2.9**
	baz=149						
LCAR	**Lake Charles**	**21.08**	**22**	P	**P**	**21 38 38.6**	**-2.1**
Y12C	**Blythe**	**21.09**	**326**	IAmb	IAmb	21 38 44.6	
	comp=Z,9.1nm,0.9s						
Y12C	**Blythe**	**21.09**	**326**	P	**P**	**21 38 44.5**	**+3.5**
	baz=139						
Z50A	**Ashland**	**21.19**	**36**	IAmb	IAmb	21 38 42.0	
	comp=Z,10nm,0.8s						
Z50A	**Ashland**	**21.19**	**36**	P	**P**	**21 38 41.2**	**-0.8**
	baz=222						
PDMCI	**Parker Dam,Lak**	**21.32**	**328**	P	**P**	**21 38 46.3**	**+2.9**
	baz=141						
Y49A	**Blount Mountai**	**21.37**	**34**	IAmb	IAmb	21 38 53.9	
	comp=Z,11nm,0.8s						
PLAL	**Pickwick Lake**	**21.42**	**29**	P	**P**	**21 38 42.5**	**-1.9**
PLAL				IAmb	IAmb	21 38 46.9	
	comp=Z,10nm,0.8s						
152A	**Waverly Hall**	**21.47**	**39**	IAmb	IAmb	21 38 51.9	
	comp=Z,11nm,0.8s						
X48A	**Hartselle**	**21.50**	**32**	IAmb	IAmb	21 38 49.5	
	comp=Z,10.0nm,0.9s						
MVCO	**Mesa Verde**	**21.60**	**343**	P	**P**	**21 38 46.9**	**+0.3**
MVCO	**Mesa Verde**	**21.60**	**343**	P	**P**	**21 38 50.8**	**+4.2**
	baz=158						
S22A	**4UR Ranch, Cre**	**21.68**	**347**	P	**P**	**21 38 49.1**	**+1.5**
	baz=163						
MGMO	**Mountain Grove**	**21.70**	**18**	P	**P**	**21 38 47.2**	**-0.3**
MGMO				IAmb	IAmb	21 38 59.5	
	comp=Z,18nm,1.5s						
IRM	**Iron Mountain**	**21.73**	**326**	P	**P**	**21 38 51.2**	**+3.3**
	baz=138						
S39A	**Bolivar**	**21.91**	**16**	IAmb	IAmb	21 39 03.1	
	comp=Z,15nm,1.1s						
PBMO	**Poplar Bluff**	**21.97**	**22**	P	**P**	**21 38 48.5**	**-1.9**
PBMO				IAmb	IAmb	21 38 51.6	
	comp=Z,11nm,0.9s						
XPFO	**Pion Flat**	**22.06**	**323**	P	**P**	**21 38 53.2**	**+1.7**
XPFO				IAmb	IAmb	21 38 56.3	
	comp=Z,18nm,1.4s						
PFO	**Pinyon Flats O**	**22.07**	**323**	P	**P**	**21 38 53.9**	**+2.4**
	comp=Z,3.5nm,0.9s,baz=106,slow=10.0,SNR=4.4						
PFO	**Pinyon Flats O**	**22.07**	**323**	P	**P**	**21 38 52.7**	**+1.1**
PFO				IAmb	IAmb	21 38 56.3	
	comp=Z,18nm,1.4s						
U15A	**North Rim**	**22.22**	**335**	IAmb	IAmb	21 39 07.3	
	comp=Z,15nm,1.4s						
FPAL	**Fort Paine**	**22.32**	**34**	IAmb	IAmb	21 39 02.5	
	comp=Z,6.8nm,0.8s						
KSCO	**Kaye Shedlock'**	**22.32**	**356**	IAmb	IAmb	21 39 03.2	
	comp=Z,20nm,1.2s						
WVT	**Waverly**	**22.48**	**28**	P	**P**	**21 38 56.6**	**+0.8**
WVT				IAmb	IAmb	21 38 57.9	
	comp=Z,7.1nm,0.9s						
GOGA	**Godfrey**	**22.75**	**40**	P	**P**	**21 38 58.0**	**-0.6**
	baz=227						
CCM	**Cathedral Cave**	**22.85**	**19**	P	**P**	**21 38 59.9**	**+0.2**
CCM				IAmb	IAmb	21 39 02.0	
	comp=Z,5.0nm,0.7s						
HEC	**Hector,Ludlow**	**22.89**	**325**	P	**P**	**21 39 03.9**	**+3.7**
	baz=137						
PKCU	**Pink Cliffs**	**23.10**	**336**	P	**P**	**21 39 00.6**	**-2.2**
LCMT	**Little Creek M**	**23.12**	**334**	P	**P**	**21 39 01.4**	**-1.3**
TUQ	**Turquoise Moun**	**23.12**	**327**	P	**P**	**21 39 05.7**	**+2.9**
	baz=139						
S44A	**Carbondale**	**23.22**	**23**	IAmb	IAmb	21 39 09.5	
	comp=Z,10nm,0.8s						
ISCO	**Idaho Springs**	**23.44**	**350**	P	**P**	**21 39 06.2**	**+0.1**
	baz=167						
T47A	**Sharon Grove**	**23.51**	**28**	P	**P**	**21 39 06.7**	**+0.2**
T47A				IAmb	IAmb	21 39 17.9	
	comp=Z,9.4nm,0.9s						
SHPR	**Sheep Range**	**23.57**	**330**	IAmb	IAmb	21 39 11.8	
	comp=Z,7.8nm,1.1s						
CPCT	**Cooper Cave**	**23.59**	**35**	IAmb	IAmb	21 39 06.0	
	comp=Z,8.1nm,0.6s						
CCUT	**Cedar City**	**23.62**	**334**	P	**P**	**21 39 09.8**	**+2.0**
O20A	**White River Ci**	**24.29**	**346**	IAmb	IAmb	21 39 17.9	
	comp=Z,6.1nm,0.8s						
O20A	**White River Ci**	**24.29**	**346**	P	**P**	**21 39 15.9**	**+1.8**
	baz=161						
P17A	**Butcher Ranch,**	**24.36**	**341**	P	**P**	**21 39 15.0**	**+0.3**
MPMC	**Manual Prospec**	**24.43**	**325**	P	**P**	**21 39 17.5**	**+2.1**
	baz=137						
TPNV	**Topopah Spring**	**24.46**	**329**	P	**P**	**21 39 19.0**	**+3.4**
	baz=140						
N23A	**Red Feather La**	**24.56**	**350**	IAmb	IAmb	21 39 20.1	
	comp=Z,7.6nm,1.0s						
W54A	**Cherokee Point**	**24.66**	**38**	P	**P**	**21 39 17.8**	**+0.5**
	baz=227						
V53A	**Saluda**	**24.70**	**37**	P	**P**	**21 39 18.0**	**+0.2**
	baz=225						
PHWY	**Pilot Hill**	**24.89**	**351**	IAmb	IAmb	21 39 21.5	
	comp=Z,3.8nm,0.8s						
KMSC	**Kings Mountain**	**25.21**	**40**	P	**P**	**21 39 23.5**	**+1.2**
	baz=228						
R11A	**Troy Canyon, C**	**25.26**	**332**	IAmb	IAmb	21 39 29.4	
	comp=Z,13nm,1.5s						
R11A	**Troy Canyon, C**	**25.26**	**332**	P	**P**	**21 39 25.1**	**+2.2**
	baz=144						
V54A	**Nebo**	**25.28**	**38**	P	**P**	**21 39 23.5**	**+0.6**
	baz=226						
DUG	**Dugway, Tooele**	**25.70**	**338**	IAmb	IAmb	21 39 30.1	
	comp=Z,8.1nm,0.9s						
DUG	**Dugway, Tooele**	**25.70**	**338**	P	**P**	**21 39 29.8**	**+3.0**
	baz=151						
V55A	**Taylorsville**	**25.76**	**38**	P	**P**	**21 39 28.1**	**+0.8**
	baz=227						
NVAR	**Mina Array Bea**	**26.64**	**328**	P	**P**	**21 39 37.5**	**+2.1**
	comp=Z,5.1nm,0.8s,baz=156,slow=9.9,SNR=26						
NVAR				LR	LR	21 50 50.2	
	comp=Z,151nm,20.0s,baz=8.5,slow=38						
V57A	**Coltrane Farms**	**26.66**	**40**	P	**P**	**21 39 35.7**	**+0.3**
	baz=230						
KVN	**Kaiserville**	**27.01**	**329**	IAmb	IAmb	21 39 45.4	
	comp=Z,4.9nm,0.9s						
BW06	**Boulder Array**	**27.09**	**346**	IAmb	IAmb	21 39 41.7	
	comp=Z,8.8nm,1.1s						
PD31	**Pinedale Array**	**27.09**	**346**	IAmb	IAmb	21 39 41.7	
	comp=Z,8.1nm,1.1s						
PDAR	**Pinedale Array**	**27.09**	**346**	P	**P**	**21 39 40.8**	**+1.2**
	comp=Z,4.0nm,0.8s,baz=145,slow=11,SNR=28						
PDAR				LR	LR	21 51 34.8	
	comp=Z,134nm,18.6s,baz=186,slow=39						
ELK	**Elko**	**27.10**	**335**	LR	LR	21 49 54.0	
	comp=Z,133nm,18.2s,baz=158,slow=35						
OTAV	**Otavalo**	**27.30**	**125**	P	**P**	**21 39 42.3**	**+0.4**
RUBR	**Rubicon Trail**	**28.06**	**326**	P	**P**	**21 39 47.7**	**-0.5**
FXWY	**Fox Creek**	**28.28**	**344**	IAmb	IAmb	21 39 54.8	
	comp=Z,6.6nm,1.1s						
BEKR	**Beckworth**	**28.77**	**327**	IAmb	IAmb	21 39 58.2	
	comp=Z,6.4nm,1.1s						
SDV	**Santo Domingo**	**30.25**	**101**	LR	LR	21 51 40.6	
	comp=Z,90nm,20.4s,baz=335,slow=35						
J08A	**Circle Bar Ran**	**30.61**	**334**	IAmb	IAmb	21 40 13.2	
	comp=Z,4.7nm,1.1s						
MSO	**Missoula**	**32.02**	**343**	P	**P**	**21 40 23.1**	**0.0**
ULM	**Lac du Bonnet**	**33.71**	**6**	P	**P**	**21 40 36.9**	**-0.7**
	comp=Z,2.0nm,0.5s,baz=195,slow=8.9,SNR=5.8						
ULM				LR	LR	21 54 15.9	
	comp=Z,66nm,21.2s,baz=120,slow=36						
ULM	**Lac du Bonnet**	**33.71**	**6**	IAmb	IAmb	21 40 37.8	
	comp=Z,6.1nm,1.1s						
D55A	**Sainte-Anne-du**	**36.73**	**29**	P	**P**	**21 41 03.9**	**+0.2**
	baz=223						
E57A	**Chemin Saint G**	**36.93**	**31**	P	**P**	**21 41 05.6**	**+0.1**
	baz=225						
D56A	**ZEC Mazanza, M**	**37.09**	**30**	P	**P**	**21 41 06.9**	**+0.1**
	baz=224						
D57A	**Chemin Vers le**	**37.48**	**30**	P	**P**	**21 41 10.1**	**+0.1**
	baz=225						
FFC	**Flin Flon**	**37.98**	**359**	P	**P**	**21 41 13.2**	**-1.1**
FFC				IAmb	IAmb	21 41 16.3	
	comp=Z,5.7nm,0.8s						
D62A	**Allapoint, All**	**39.99**	**34**	P	**P**	**21 41 31.8**	**+0.6**
	baz=231						
LPAZ	**La Paz**	**45.84**	**134**	P	**P**	**21 42 19.9**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=251,slow=2.0,SNR=3.6						
SCHQ	**Schefferville**	**46.10**	**27**	P	**P**	**21 42 20.8**	**+0.3**
	comp=Z,6.0nm,0.9s,baz=250,slow=8.9,SNR=5.8						
SCHQ	**Schefferville**	**46.10**	**27**	P	**P**	**21 42 20.9**	**+0.3**
YKA	**Yellowknife Ar**	**46.80**	**351**	P	**P**	**21 42 26.1**	**+0.3**
	comp=Z,4.5nm,0.8s,baz=160,slow=7.6,SNR=45						
YKA				PcP	**PcP**	**21 44 03.1**	**+4.2**
	comp=Z,1.6nm,0.9s,baz=126,slow=2.2,SNR=8.4						
DLBC	**Dease Lake**	**47.01**	**339**	P	**P**	**21 42 30.4**	**+2.7**
	comp=Z,2.4nm,0.9s,baz=194,slow=4.0,SNR=3.2						
INK	**Inuvik**	**55.66**	**346**	P	**P**	**21 43 33.0**	**+0.7**
	comp=Z,3.1nm,0.9s,baz=105,slow=12,SNR=4.1						
INK				PcP	**PcP**	**21 44 30.5**	**-1.2**
	comp=Z,2.4nm,0.9s,baz=110,slow=3.8,SNR=3.6						
PRP	**Porcupine Dome**	**57.16**	**340**	P	**P**	**21 43 44.2**	**+1.0**
ILAR	**Eielson Array**	**57.19**	**338**	P	**P**	**21 43 43.2**	**-0.1**
	comp=Z,1.7nm,0.9s,baz=151,slow=5.8,SNR=7.0						
MLY	**Manley**	**58.72**	**338**	P	**P**	**21 43 55.1**	**+1.1**
LZH	**Lanzhou**	**122.63**	**336**	*e*PKP	**PKiKP**	**21 52 53.8**	**+0.6**
LZH				pPKP	sPKPdf	21 53 10.2	+14
LZH				sPKP		21 53 16.3	
CMAR	**Chiang Mai Arr**	**140.11**	**330**	PKP	**PKiKP**	**21 53 28.9**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=350,slow=3.7,SNR=2.5						

IDC 04 21:51:28.2±1.2**, 12°.43N**×**47°.98W, h0**^{km}**, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.5**/27**, mbtmp3.7**/4**, MS3.4**/4**, Ms1 3.4**/4**, ms1mx3.1**/29**, Error ellipse: s-maj=39.5km s-min=34.8km az=137.0, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CPUP	**Villa Florida**	**39.58**	**193**	P	P	21 59 01.9	+0.5
	1.4nm,0.8s,baz=27,slow=11,SNR=2.2						
DBIC	**Dimbokro**	**42.87**	**94**	LR	LR	22 14 24.2	
	comp=Z,36nm,21.6s,baz=303,slow=32						
TORD	**Torodi Ar. Bea**	**48.39**	**83**	P	P	22 00 12.9	+0.5
	1.5nm,1.0s,baz=290,slow=6.4,SNR=4.9						
TORD				PcP	PcP	22 01 36.4	-2.7
	2.0nm,1.1s,baz=293,slow=4.0,SNR=4.7						
TXAR	**Lajitas Array**	**54.19**	**297**	LR	LR	22 28 02.2	
	comp=Z,17nm,18.8s,baz=0.0,slow=40						
PDAR	**Pinedale Array**	**60.85**	**312**	P	P	22 01 42.8	0.0
	0.2nm,0.5s,baz=110,slow=11,SNR=2.1						
PDAR				LR	LR	22 27 22.2	
	comp=Z,40nm,18.1s,baz=314,slow=35						
AKASG	**Malin Array Be**	**72.39**	**41**	P	P	22 02 57.0	+0.9
	0.4nm,0.4s,baz=274,slow=6.9,SNR=4.9						
GEYT	**Alibeck**	**94.78**	**50**	LR	LR	22 52 20.5	
	comp=Z,43nm,18.0s,baz=345,slow=38						

TRN 04 21:51:57.8, 14°.75N×**60°.22W, h29**^{km}**, MD3.6, 2D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ILAM	**Ilet Lapin Mar**	**0.63**	**272**	*e*P	Pn	21 52 11.3	+0.6
MPOM	**Morne Pois Mar**	**0.69**	**244⇓**	*e*P	Pn	21 52 12.5	+1.0
LPMF	**Morne Lapointe**	**0.74**	**256⇓**	*e*P	Pn	21 52 12.9	+0.6
ZAM	**Aeronautique**	**0.80**	**257**	*e*P	Pb	21 52 13.8	+0.6
TRMF	**Trois Ilets**	**0.83**	**255**	*e*P	Pb	21 52 14.4	+0.7
BIM	**Bigot**	**0.85**	**254**	*e*P	Pb	21 52 15.1	+1.0
BAMF	**Morne Balai**	**0.90**	**274**	*e*P	Pb	21 52 15.4	+0.5
FDF	**Fort de France**	**0.90**	**269**	*e*P	Pb	21 52 15.3	+0.5
FDF				*e*S	Sn	21 52 29.1	+2.6
GBMF	**Grand Be**	**0.91**	**273**	*e*P	Pb	21 52 15.5	+0.4
CXM	**Morne La Croix**	**0.92**	**274**	*e*P	Pb	21 52 15.8	+0.6
PML	**Morne Lenard**	**0.93**	**272**	*e*P	Pb	21 52 16.1	+0.7
PCM	**Pelee Case Pet**	**0.96**	**274**	*e*P	Pb	21 52 16.3	+0.5
SLAC	**Saint Lucia, A**	**1.07**	**218**	*e*P	Pb	21 52 17.9	+0.2
SLAC				*e*S	Sb	21 52 33.1	+1.7
DLPL	**La Plaine**	**1.15**	**300**	*e*P	Pb	21 52 19.9	+0.9
DLPL				*e*S	Sb	21 52 34.8	+1.3
SLB	**Belfond**	**1.21**	**221**	*e*P	Pb	21 52 21.2	+1.0
SLB				*e*S	Sb	21 52 36.6	+1.1
MCLT	**Moule a Chique**	**1.25**	**214**	*e*P	Pb	21 52 21.1	+0.4
MCLT				*e*S	Sb	21 52 36.8	+0.4
MDN	**Morne-Daniel**	**1.26**	**297**	*e*P	Pb	21 52 25.5	+4.5
MDN				*e*S	Sb	21 52 44.3	+7.4
DWS	**Wesley**	**1.33**	**308**	*e*S	Sb	21 52 38.1	-0.6
MDPO	**Dominica; Chan**	**1.44**	**305**	*e*P	Pb	21 52 23.2	-0.8
MDPO				*e*S	Sb	21 52 41.5	-0.5
SSV	**Crater Summit**	**1.70**	**214**	*e*P	Pn	21 52 26.1	+0.5
SSV				*e*S	Sn	21 52 47.4	+1.0
SVV	**Soufriere Volc**	**1.72**	**214**	*e*P	Pb	21 52 27.4	-1.3
SVV				*e*S	Sn	21 52 47.8	+1.0
TDBA	**Terre de Bas,**	**1.75**	**309**	*e*P	Pn	21 52 27.1	+1.0
SVB	**Belmont**	**1.78**	**214**	*e*P	Pb	21 52 28.3	-1.4
SVB				*e*S	Sn	21 52 49.0	+0.8
CBE	**Ff, Capester**	**1.87**	**315**	*e*P	Pn	21 52 27.9	0.0

TAP 04 22:42:11.1, 24°.58N×**121°.83E, h70**^{km}±1^{km}**, ML2.2, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TWC	**Suao**	**0.04**	**37**	*e*P	Pn	22 42 21.6	+0.4
	baz=48						
TWC				*e*S	Sn	22 42 29.6	+1.1
	baz=48						
ENA	**Nanau**	**0.17**	**207**	*e*P	Pn	22 42 21.8	+0.3
	baz=204						
ENA				S	Sn	22 42 29.6	+0.4
	baz=204						
TWE	**Neicheng**	**0.20**	**314**	*e*P	Pn	22 42 22.0	+0.4
	baz=316						
TWE				*e*S	Sn	22 42 29.9	+0.5
	baz=316						
ENTT	**Nioudou**	**0.24**	**284**	*e*P	Pn	22 42 22.6	+0.8
	baz=283						
SLBB	**Yuanshan**	**0.24**	**315**	P	Pn	22 42 21.4	-0.5
	baz=314						
SLBB				*e*S	Sn	22 42 30.4	+0.5
	baz=314						
NTC	**Toucheng**	**0.27**	**1**	*e*S	Sn	22 42 30.7	+0.7
EOS1	**EOS1**	**0.28**	**96**	*e*P	Pn	22 42 22.5	+0.5
	baz=96						
EOS1				*e*S	Sn	22 42 31.0	+1.0
	baz=96						

NDT	Datong Townshi baz=274	0.29	274	*e*P	Pn	22 42 22.2	+0.1
NWLT	Wulai baz=303	0.35	304	*e*P	Pn	22 42 22.7	+0.1
NWLT	baz=303			S	Sn	22 42 31.6	+0.5
TIPB	Shuangxi	0.39	360	*e*P	Pn	22 42 23.1	+0.2
TIPB				*e*S	Sn	22 42 32.0	+0.5
NNSB	Datong baz=249	0.43	249	P	Pn	22 42 23.7	+0.4
NNSB	baz=249			S	Sn	22 42 33.3	+1.0
NNSH	Datong baz=249	0.43	249	P	Pn	22 42 23.8	+0.4
NNSH	baz=249			S	Sn	22 42 32.9	+0.5
NNS	Nan Shan baz=250	0.44	251	P	Pn	22 42 24.0	+0.6
NNS	baz=250			S	Sn	22 42 33.0	+0.5
NSK	Sanguang baz=282	0.44	283	*e*P	Pn	22 42 23.4	+0.1
NSK	baz=282			S	Sn	22 42 32.6	+0.2
NACB	Ninganchiao baz=207	0.46	208	*e*P	Pn	22 42 23.9	+0.4
NACB	baz=207			S	Sn	22 42 32.3	-0.2
ETLH	Xiulin Townshi baz=220	0.49	220	*e*P	Pn	22 42 23.7	-0.2
ETLH	baz=220			S	Sn	22 42 33.1	0.0
YM10	YM10 baz=337	0.62	337	*e*P	Pn	22 42 25.4	+0.3
YM10	baz=337			*e*S	Sn	22 42 36.0	+0.5
YM11	YM11 baz=338	0.63	339	*e*P	Pn	22 42 24.8	-0.4
YM11	baz=338			*e*S	Sn	22 42 35.8	+0.2
YM04	YM04 baz=335	0.63	335	*e*P	Pn	22 42 25.3	+0.1
YM04	baz=335			*e*S	Sn	22 42 36.1	+0.5
WHF	Hehuan Shan baz=229	0.67	230	*e*P	Pn	22 42 26.4	+0.3
WHF	baz=229			*e*S	Sn	22 42 37.5	+0.4
TDCB	Techi baz=241	0.69	242	*e*S	Sn	22 42 38.3	+1.3
LIOB	Emei baz=275	0.74	275	*e*P	Pn	22 42 26.5	+0.1
LIOB	baz=275			*e*S	Sn	22 42 38.1	+0.3
CHGB	Renai baz=228	0.79	229	*e*P	Pn	22 42 27.8	+0.6
CHGB	baz=228			*e*S	Sn	22 42 39.4	+0.3
ESL	Shilin baz=204	0.84	205	*e*S	Sn	22 42 39.4	-0.5
WHP	Taichung City baz=249	0.86	250	*e*P	Pn	22 42 28.8	+0.9
WHP	baz=249			*e*S	Sn	22 42 40.9	+0.6
OWD	Renai baz=223	0.86	224	*e*P	Pn	22 42 29.0	+1.0
OWD	baz=223			*e*S	Sn	22 42 40.5	+0.1
VWDT	VWDT baz=217	1.03	217	*e*P	Pn	22 42 29.9	-0.1
VWDT	baz=217			*e*S	Sn	22 42 44.5	+0.5
SSLB	Suanglung baz=225	1.12	225	*e*S	Sn	22 42 47.4	+1.3

JMA 04 22:42:17.1±0.1**, 24°.62N×123°.49E, h5^{km}, M1.5,**
Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	Iriomote-Funau	0.36	142	P	Pg	22 42 24.1	+0.1
IRIF				S	Sg	22 42 29.3	+0.6
YOJ	Yonaguni jima	0.46	250	P	Pg	22 42 26.3	+0.3
YOJ				S	Sg	22 42 32.5	+0.4
JKRS	Kuro-shima	0.61	129	P	Pg	22 42 29.3	+0.5
JKRS				*e*S	Sg	22 42 37.4	+0.7
HATJ	Hateruma jima	0.63	153	S	Sg	22 42 37.6	+0.2
JIJ	Ishigaki jima	0.65	113	P	Pg	22 42 29.8	+0.3
JIJ				*e*S	Sb	22 42 39.2	-1.0
JISG	Ishigakijimahi	0.75	92	P	Pg	22 42 31.7	+0.2
JISG				S	Sg	22 42 42.1	+0.9

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*ANF **04** 22:42:54.8±0.1, 35°.96N×117°.31W, h12^{km}±1^{km}, ML3.4/29, Error ellipse: s-maj=1.0km s-min=0.9km az=119.0*
*SCEDC **04** 22:42:55.6, 35°.96N×117°.30W, h7^{km}*
*PAS **04** 22:42:55.6±1.2, 35°.96N±0°.03×117°.30W±0°.03, h7^{km}±6^{km}, ML3.3/198, Error ellipse: s-maj=5.0km s-min=2.5km az=144.0*
*NEIC **04** 22:42:55.1±1.0, 35°.97N±0°.01×117°.30W±0°.03, h8^{km}±5^{km}, Error ellipse: s-maj=3.5km s-min=1.6km az=91.0*
ISC 04 22:42:55.6±0.9**, 35°.96N**±0°.01×**117°.30W**±0°.01**, h10**^{km}±7^{km}**,**
n99, σ1°.10/143**, Central California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPMC	Manual Prospec	0.18	302		Pg	22 42 59.1	-0.5
MPMC					Sg	22 43 01.9	-0.5
MPMC	Manual Prospec baz=122,SNR=1000	0.18	302	P	Pg	22 42 59.1	-0.5
MPMC	baz=122			S	Sg	22 43 01.9	-0.5
CLC	China Lake	0.28	239		Pg	22 43 00.8	-0.5
CLC					Sg	22 43 04.8	-0.3
QSM	Queen of Sheba	0.35	89		Pg	22 43 02.1	-0.5
WCSM	Coso Springs S	0.38	280		Pg	22 43 02.8	-0.4
DAC	Darwin (Calif)	0.39	323	Pg	Pg	22 43 02.8	-0.7
DAC				Sg	Sg	22 43 08.3	-0.3
TOW	Tower One	0.41	248		Pg	22 43 03.6	0.0
JRC2	Joshua Ridge	0.41	273		Pg	22 43 03.3	-0.4
VPEM	Volcano Peak E	0.42	268		Pg	22 43 03.5	-0.3
CCCA	Chr Cany lake	0.44	187		Pg	22 43 04.1	-0.1
CCCA					Sg	22 43 10.7	+0.6
SRTC	Snort	0.45	234		Pg	22 43 04.4	0.0
SRTC					Sg	22 43 10.3	-0.1
MFS	McCloud Flat S	0.47	289		Pg	22 43 04.5	-0.4
LRMC	Laurel Mtn Rad	0.57	213		Pg	22 43 06.1	-0.6
LRMC					Sg	22 43 13.9	-0.3
LRMC	Laurel Mtn Rad baz=33,SNR=182	0.57	213	P	Pg	22 43 06.1	-0.6
LRMC	baz=33			S	Sg	22 43 14.2	-0.1
FURC	Furnace Creek,	0.62	35		Pg	22 43 07.2	-0.3
FURC	Furnace Creek, baz=215,SNR=94	0.62	35	P	Pg	22 43 07.2	-0.3
FURC	baz=215			S	Sg	22 43 16.1	+0.4
WCHM	Chimney Peak	0.63	263		Pg	22 43 07.3	-0.6
JFS	Joseph F. Stat	0.68	206		Pg	22 43 08.0	-0.8
JFS					Sg	22 43 17.4	-0.3
CGO	Cerro Gordo	0.71	326		Pg	22 43 08.6	-0.9
GSC	Goldstone, Bar	0.77	148	Pg	Pg	22 43 09.9	-0.5
GSC	Goldstone, Bar	0.77	148		Sg	22 43 20.5	-0.1
GSC	Goldstone, Bar baz=329,SNR=240	0.77	148	P	Pg	22 43 10.0	-0.5
GSC	baz=329			S	Sg	22 43 20.5	-0.1
CWC	Cottonwood Cre	0.79	307		Pg	22 43 10.1	-0.7
CWC					Sg	22 43 20.9	-0.2
CWC	Cottonwood Cre baz=127	0.79	307	P	Pg	22 43 10.2	-0.7
CWC	baz=127			S	Sg	22 43 21.1	-0.1
FMT	Funeral Mounta	0.79	32		Pg	22 43 10.1	-0.8
WORM	Onyx Ranch	0.81	251		Pg	22 43 10.4	-0.8
WORM					Sg	22 43 21.0	-0.8
DTP	Desert Tortois	0.82	213		Pg	22 43 10.5	-1.0
SHOC	Shoshone, Teco	0.84	94		Pg	22 43 11.5	-0.2
SHOC	Shoshone, Teco baz=275,SNR=76	0.84	94	P	Pg	22 43 11.4	-0.2
SHOC	baz=275			S	Sg	22 43 22.5	-0.1
TMO	Tin Mountain	0.84	354		Pg	22 43 10.8	-1.2
WHFM	Hanning Flat	0.89	253		Pg	22 43 12.0	-0.8
AMDNV	Amargosa	0.96	59		Pg	22 43 13.2	-0.8
AMDNV					Sg	22 43 25.7	-0.9
ISA	Isabella, Lake	1.00	253	Pg	Pg	22 43 14.0	-0.7
ISA	Isabella, Lake baz=72,SNR=132	1.00	253	P	Pg	22 43 13.9	-0.8
ISA	baz=72			S	Sg	22 43 27.4	-0.4
GRAC	Grapevine Rang	1.03	357		Pg	22 43 14.7	-0.7
GRAC	Grapevine Rang baz=177,SNR=82	1.03	357	P	Pg	22 43 14.7	-0.7
GVN	Grapevine	1.04	358		Pg	22 43 14.7	-0.8
WASM	Alta Sierra Ca	1.04	258		Pg	22 43 14.9	-0.8
ALV	Alvord Mountai	1.05	148		Pg	22 43 15.0	-0.8
RRX	Edison Barstow baz=347	1.11	167	P	Pg	22 43 16.4	-0.5
RRX	baz=347			S	Sn	22 43 32.6	0.0
HYS	Haystack Butte	1.12	191		Pg	22 43 15.8	-1.2
EDW2	Edwards Air Fo	1.22	208		Pg	22 43 17.5	-1.5
EDW2	Edwards Air Fo baz=27,SNR=97	1.22	208	Pn	Pg	22 43 17.4	-1.5
EDW2	baz=27			Pg	Pb	22 43 18.4	-0.3
EDW2	baz=27			S	Sg	22 43 34.8	0.0
WOFM	Oak Flat	1.22	250		Pg	22 43 18.1	-1.0
TUQ	Turquoise Moun	1.24	115		Pg	22 43 18.4	-1.0
TUQ	Turquoise Moun baz=296,SNR=198	1.24	115	P	Pg	22 43 17.8	-1.6
TUQ	baz=296			S	Sg	22 43 35.5	0.0
TPNV	Topopah Spring	1.30	40	Pn	Pn	22 43 19.0	-0.9
TPNV				Sg	Sb	22 43 36.7	-0.3
TPNV	Topopah Spring baz=221,SNR=171	1.30	40	Pn	Pn	22 43 19.0	-0.9
TPNV	baz=221			Pg	Pb	22 43 20.2	0.0
TPNV	baz=221			S	Sb	22 43 36.5	-0.5
TIN	Tinemaha, Big baz=145	1.32	326	S	Sb	22 43 38.0	+0.4
HEC	Hector,Ludlow baz=326,SNR=54	1.38	145	P	Pn	22 43 19.6	-1.3
HEC	baz=326			S	Sb	22 43 38.9	-0.2
VES	Vestal, Richgr baz=85,SNR=10	1.45	266	Pg	Pb	22 43 22.7	+0.1
BBRC	Big Bear Solar baz=350	1.72	169	Pg	Pb	22 43 28.1	+0.7
BBRC	baz=350			Sb	Sg	22 43 50.6	-0.5
SSK	Sunset Peak	1.78	190		Pb	22 43 28.5	+0.2
OSI	Osito Audit: C	1.78	221	Pn	Pn	22 43 25.5	-0.9
GMRC	Granite Mounta	1.78	131		Pn	22 43 27.8	+1.3
GMRC	Granite Mounta baz=312,SNR=41	1.78	131	Pn	Pn	22 43 24.8	-1.7
GMRC	baz=312			Pb	Pb	22 43 27.4	-1.0
GMRC	baz=312			Sb	Sb	22 43 51.8	+1.0
SHPR	Sheep Range	1.81	72		Pn	22 43 26.8	-0.2
MWC	Mount Wilson	1.84	200		Pn	22 43 28.1	+0.7
DECC	Green Verdugo baz=26,SNR=9.8	1.90	207	Pg	Pg	22 43 31.5	-0.6
DECC	baz=26			Sb	Sg	22 43 55.9	-0.8
PASC	Pasadena Art C	1.93	202		Pn	22 43 27.8	-0.6
OMMB	Old Mammoth Mi	2.14	321		Pn	22 43 32.1	+0.6
EW2	E Wide Canyon	2.15	160		Pn	22 43 30.9	-0.5
BELC	Belle Mtn. Jos baz=332,SNR=6.3	2.23	151	P	Pn	22 43 31.7	-1.0
BELC	baz=332			Sb	Sb	22 44 05.6	+1.9
SMMC	Simmler baz=73,SNR=6.4	2.29	254	Pb	Pb	22 43 36.3	-0.7
SMMC	baz=73			Sb	Sb	22 44 06.3	+1.0
PKM	Mcpherson Peak baz=62	2.31	243	Sb	Sb	22 44 07.2	+1.1
MURC	Murrieta baz=358	2.36	178	Sb	Sb	22 44 09.5	+2.2
PAGB	Antelope Grade	2.41	265		Pn	22 43 35.4	+0.4
MMIM	Miami Mountain	2.44	307		Pb	22 43 39.6	0.0
PFO	Pinyon Flats O	2.44	163		Pn	22 43 34.8	-0.8
PFO	Pinyon Flats O baz=344	2.44	163	Pn	Pn	22 43 34.9	-0.8
PFO	baz=344			Pg	Pg	22 43 41.2	-1.2
PFO	baz=344			Sb	Sg	22 44 12.3	-1.9
XPFO	Pion Flat	2.45	163		Pn	22 43 35.0	-0.7
DNR	Dunn Ranch,Anz	2.45	167		Pb	22 43 39.3	-0.5
NEE2	Needles Airpor baz=299	2.50	118	Pg	Pg	22 43 42.2	-1.2
NEE2	baz=299			Sg	Sg	22 44 15.2	-0.6
IRM	Iron Mountain baz=316	2.52	135	Pg	Pg	22 43 43.4	-0.5
IRM	baz=316			Sb	Sg	22 44 15.2	-1.5
NV11	Mina Array Sit	2.56	345		Pn	22 43 37.5	+0.3
R11A	Troy Canyon, C	2.75	29	Pn	Pn	22 43 39.2	-0.6
R11A	Troy Canyon, C baz=210	2.75	29	Pn	Pn	22 43 39.0	-0.9
R11A	baz=210,SNR=50			Pb	Pb	22 43 44.9	0.0
R11A	baz=210			Sb	Sb	22 44 21.0	+2.3
BC3	Big Chuckawall baz=327	2.76	146	Sb	Sg	22 44 22.1	-2.1
RYN	Ryan	2.83	340		Pn	22 43 41.6	+0.6
PMPB	Monarch Peak	2.84	276		Pn	22 43 42.7	+1.6
GATR	Gnd/Air Tx Cnt	2.97	243		Pn	22 43 41.4	-1.4
WAKR	Walker	3.06	327	Pn	Pn	22 43 44.4	+0.3
WAKR				Pg	Pg	22 43 52.4	-1.8
MONP2	Monument Peak baz=347	3.15	166	Pg	Pb	22 43 53.6	+1.9
MONP2	baz=347			Sb	Sg	22 44 33.9	-2.8
Y12C	Blythe	3.18	133		Pn	22 43 44.5	-1.1
CMB	Columbia Colle	3.22	311		Pn	22 43 46.8	+0.6
BAR	Barrett	3.31	171	Pn	Pn	22 43 47.2	-0.3
BAR					Pb	22 43 55.3	+0.8
YERR	Yerington	3.39	334	Pn	Pn	22 43 49.1	+0.4
YERR					Pg	22 43 59.4	-1.1
SAO	San Andreas Ge	3.44	285		Pn	22 43 52.5	+3.4
CCUT	Cedar City	3.54	62	Pn	Pn	22 43 50.7	-0.1
CCUT					Pb	22 44 00.8	+2.4
GLA	Glamis baz=326	3.55	144	Sb	Sb	22 44 45.5	+3.8
PSUT	Pine Spring	3.76	46	Pn	Pn	22 43 53.9	+0.1
PSUT					Pg	22 44 05.6	-2.1
U15A	North Rim	4.08	82		Pn	22 44 00.0	+1.8
U15A				Pg	Pb	22 44 09.7	+2.0
113A	Mohawk Valley,	4.32	136		Pn	22 44 01.8	+0.4
WUAZ	Wupatki	4.84	94		Pb	22 44 24.1	+3.5
X16A	Lo Mia Camp, P	5.04	106		Pn	22 44 10.6	-0.7
214A	Organ Pipe Nat	5.47	136	Pn	Pn	22 44 16.8	-0.3
DUG	Dugway, Tooele	5.51	39		Pn	22 44 17.5	-0.3
DUG	Dugway, Tooele baz=221	5.51	39	Pg	Pg	22 44 38.3	-2.9
X18A	Snowflake	6.18	101		Pn	22 44 26.7	-0.3

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*ANF **04** 22:49:31.9±0.1, 35°.96N×117°.31W, h11^{km}±1^{km}, ML3.9/40, Error ellipse: s-maj=1.0km s-min=1.0km az=83.0*
*SCEDC **04** 22:49:32.8, 35°.96N×117°.30W, h7^{km}*
*PAS **04** 22:49:32.8±1.4, 35°.96N±0°.03×117°.30W±0°.03, h7^{km}±4^{km}, ML3.8/207, Error ellipse: s-maj=4.7km s-min=3.0km az=149.0*
*IDC **04** 22:49:32.6±1.3, 35°.92N×117°.58W, h0^{km}, mb3.3/1, mb1 3.4/2, mb1mx3.2/35, mbtmp3.0/2, ML3.3/1, Error ellipse: s-maj=27.5km s-min=8.0km az=73.0*
*NEIC **04** 22:49:32.2±1.6, 35°.99N±0°.03×117°.30W±0°.03, h4^{km}±6^{km}, Error ellipse: s-maj=4.1km s-min=2.5km az=147.0*
ISC 04 22:49:31.1±1.0**, 35°.98N**±0°.01×**117°.27W**±0°.01**, h4**^{km}±9^{km}**,**
n122, σ1°.04/172**, Central California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPMC	Manual Prospec	0.19	293		Sg	22 49 39.1	+1.6
MPMC	Manual Prospec baz=122,SNR=1000	0.19	293	P	Pg	22 49 36.3	+1.4
MPMC	baz=122			S	Sg	22 49 39.1	+1.6
CLC	China Lake	0.31	238		Pb	22 49 38.0	-1.3
CLC					Sg	22 49 42.0	+0.8
QSM	Queen of Sheba	0.33	93		Pb	22 49 39.3	-0.3
DAC	Darwin (Calif)	0.39	319	Pg	Pb	22 49 40.0	-0.8
DAC				Sg	Sg	22 49 45.3	+1.4
WCSM	Coso Springs S	0.40	276		Pb	22 49 39.9	-1.0
JRC2	Joshua Ridge	0.43	270		Pb	22 49 40.5	-1.0
JRC2					Sg	22 49 46.4	+1.2
TOW	Tower One	0.43	247		Pb	22 49 40.8	-0.6
VPEM	Volcano Peak E	0.44	266		Pb	22 49 40.7	-0.9
CCCA	Chr Cany lake	0.46	189		Pb	22 49 41.3	-0.6
CCCA					Sb	22 49 48.1	-1.0
SRTC	Snort	0.48	233		Pb	22 49 41.6	-0.7
MFS	McCloud Flat S	0.49	286		Pb	22 49 41.6	-0.8
FURC	Furnace Creek,	0.59	34		Pb	22 49 44.4	+0.5
FURC					Sb	22 49 53.3	+0.6
FURC	Furnace Creek, baz=215,SNR=692	0.59	34	P	Pb	22 49 44.4	+0.5
FURC	baz=215			S	Sb	22 49 53.2	+0.6
LRMC	Laurel Mtn Rad	0.60	214		Pb	22 49 43.3	-1.0
LRMC					Sg	22 49 51.3	+0.8
LRMC	Laurel Mtn Rad baz=33,SNR=777	0.60	214	P	Pb	22 49 43.3	-1.0
LRMC	baz=33			S	Sg	22 49 51.4	+0.9
WCHM	Chimney Peak	0.66	262		Pb	22 49 44.5	-0.9
CGO	Cerro Gordo	0.71	323		Pb	22 49 45.7	-0.6
CGO					Sb	22 49 55.7	-0.9
FMT	Funeral Mounta	0.76	31		Pb	22 49 47.3	+0.2
GSC	Goldstone, Bar	0.78	151	Pg	Pb	22 49 47.2	-0.1
GSC	Goldstone, Bar	0.78	151		Sb	22 49 57.8	-0.5
GSC	Goldstone, Bar baz=329,SNR=458	0.78	151	P	Pb	22 49 47.2	-0.1
GSC	baz=329			S	Sb	22 49 57.8	-0.5
CWC	Cottonwood Cre	0.80	305		Pb	22 49 47.3	-0.4
CWC					Sb	22 49 58.1	-0.8
CWC	Cottonwood Cre baz=127	0.80	305	P	Pb	22 49 47.3	-0.4
CWC	baz=127			S	Sb	22 49 58.1	-0.8
SHOC	Shoshone, Teco	0.81	96		Pn	22 49 48.8	-0.7
SHOC	Shoshone, Teco baz=275,SNR=228	0.81	96	P	Pb	22 49 48.1	+0.3
SHOC	baz=275			S	Sb	22 49 59.9	+0.7
TMO	Tin Mountain	0.83	353		Pb	22 49 47.9	-0.3
WORM	Onyx Ranch	0.84	250		Pb	22 49 47.6	-0.7
DTP	Desert Tortois	0.85	213		Pg	22 49 47.7	+0.2
WHFM	Hanning Flat	0.92	252		Pb	22 49 49.2	-0.5
AMDNV	Amargosa	0.93	59		Pn	22 49 50.6	-0.4
AMDNV					Sb	22 50 02.9	+0.4
GRAC	Grapevine Rang	1.01	356		Pn	22 49 51.9	-0.4
GRAC	Grapevine Rang baz=177,SNR=347	1.01	356	P	Pn	22 49 51.9	-0.4
GVN	Grapevine	1.02	357		Pn	22 49 51.9	-0.4
ISA	Isabella, Lake	1.03	252	Pg	Pb	22 49 51.1	-0.4
ISA				Sg	Sg	22 50 04.1	0.0
ISA	Isabella, Lake baz=72,SNR=555	1.03	252	P	Pb	22 49 51.1	-0.4
ISA	baz=72			S	Sb	22 50 04.7	-0.7
ALV	Alvord Mountai	1.06	150		Pb	22 49 52.2	+0.2
WASM	Alta Sierra Ca	1.07	257		Pb	22 49 52.1	-0.3
RRX	Edison Barstow baz=347,SNR=33	1.13	168	P	Pn	22 49 53.5	-0.2
RRX	baz=347			S	Sn	22 50 09.7	0.0
HYS	Haystack Butte	1.14	192		Pb	22 49 53.0	-0.4
TUQ	Turquoise Moun	1.23	116		Pb	22 49 54.9	-0.1
TUQ	Turquoise Moun baz=296,SNR=670	1.23	116	P	Pb	22 49 54.9	-0.1
TUQ	baz=296			S	Sn	22 50 13.0	+0.7
EDW2	Edwards Air Fo	1.25	208		Pg	22 49 54.7	-0.3
EDW2	Edwards Air Fo baz=28,SNR=438	1.25	208	P	Pg	22 49 54.7	-0.3
EDW2	baz=28			S	Sb	22 50 11.6	-0.1
WOFM	Oak Flat	1.25	250		Pb	22 49 55.1	-0.3
TPNV	Topopah Spring	1.27	40		Pn	22 49 56.2	+0.4
TPNV					Sb	22 50 13.1	+0.6
TPNV	Topopah Spring baz=221,SNR=656	1.27	40	P	Pn	22 49 56.2	+0.4
TPNV	baz=221			S	Sn	22 50 13.7	+0.2
TIN	Tinemaha, Big baz=145,SNR=24	1.32	324	P	Pb	22 49 57.2	+0.6
TIN	baz=145			S	Sn	22 50 15.1	+0.5
SBB	Saddle Back Bu	1.37	199		Pn	22 49 56.5	-0.6
HEC	Hector,Ludlow baz=326,SNR=60	1.38	146	P	Pn	22 49 56.8	-0.5
HEC	baz=326			Sb	Sn	22 50 16.7	+0.6
VES	Vestal, Richgr baz=85,SNR=30	1.48	265	Pg	Pg	22 49 59.7	+0.2
VES	baz=85			Sb	Sn	22 50 18.9	+0.6
ARVC	Arvin baz=56,SNR=31	1.53	237	P	Pb	22 49 59.7	-0.4
ARVC	baz=56			Sb	Sg	22 50 19.8	-0.5
BBRC	Big Bear Solar baz=350,SNR=23	1.74	170	Pg	Pg	22 50 05.4	+0.9
BBRC	baz=350			Sg	Sg	22 50 28.3	+1.2
VOG	Valley Oaks Go baz=102,SNR=10	1.74	282	Pg	Pg	22 50 04.3	-0.2
BFSC	Mount Baldy Ra baz=9.6	1.77	190	Pn	Pn	22 50 02.1	-0.5
BFSC	baz=9.6,SNR=50			Pg	Pg	22 50 05.2	+0.2
BFSC	baz=9.6			Sb	Sg	22 50 27.9	0.0
GMRC	Granite Mounta baz=312,SNR=126	1.78	132	Pn	Pn	22 50 01.9	-0.9
GMRC	baz=312			Pb	Pb	22 50 04.7	+0.3
GMRC	baz=312			Sb	Sg	22 50 28.5	+0.3
SHPR	Sheep Range	1.79	72		Pn	22 50 03.8	+0.8
SSK	Sunset Peak	1.80	191		Pg	22 50 05.6	0.0
OSI	Osito Audit: C	1.81	221	Pn	Pn	22 50 02.9	-0.3
OSI	Osito Audit: C baz=40	1.81	221	Sg	Sg	22 50 29.8	+0.6
MWC	Mount Wilson	1.87	200		Pn	22 50 04.5	+0.4
DECC	Green Verdugo baz=26,SNR=40	1.93	207	Pg	Pg	22 50 08.5	+0.4
DECC	baz=26			Sb	Sg	22 50 33.2	0.0
PASC	Pasadena Art C	1.96	203		Pn	22 50 06.0	+0.9
BCW	Bitter Crk WRg	2.03	240		Pg	22 50 09.6	-0.5
MLAC	Mammoth, Mammo baz=143,SNR=16	2.07	323	Pg	Pg	22 50 11.3	+0.5
BLCC	Black Canyon	2.08	214		Pn	22 50 06.3	-0.6
DJJ	Donna J Jenkin	2.11	208		Pg	22 50 11.0	-0.5
OMMB	Old Mammoth Mi	2.14	320		Pb	22 50 09.3	-1.4
BELC	Belle Mtn. Jos baz=332,SNR=13	2.24	152	P	Pn	22 50 09.0	-0.1
BELC	baz=332			Sb	Sg	22 50 43.2	+0.2
SMMC	Simmler baz=73,SNR=37	2.32	254	Pb	Pb	22 50 13.2	-0.3
SMMC	baz=73			Sb	Sg	22 50 43.7	-1.8
PKM	Mcpherson Peak baz=62,SNR=16	2.34	243	Pb	Pb	22 50 14.3	+0.2
PKM	baz=62			Sb	Sg	22 50 44.7	-1.8
MURC	Murrieta baz=358,SNR=21	2.38	178	Pg	Pg	22 50 16.1	-0.6
MURC	baz=358			Sb	Sg	22 50 47.3	-0.2
BLG	Laguna Peak, P baz=38	2.38	219	Sb	Sg	22 50 46.3	-1.2
PAGB	Antelope Grade	2.43	265		Pn	22 50 11.8	+0.1
PFO	Pinyon Flats O 8.6nm,0.3s,baz=334,slow=14,SNR=2.5	2.46	164	Pg	Pg	22 50 18.4	+0.2
PFO	24nm,0.3s,baz=36,slow=20,SNR=9.1			Lg	Lg	22 50 50.3	
PFO	Pinyon Flats O	2.46	164		Pn	22 50 12.1	-0.1
PFO	Pinyon Flats O	2.46	164	Pn	Pn	22 50 12.0	-0.1

	baz=344,SNR=22						
PFO				Pg	Pg	22 50 18.4	+0.2
	baz=344						
PFO				Sb	Sg	22 50 49.0	-1.1
	baz=344						
XPFO	Pion Flat	2.46	164		Pn	22 50 12.3	+0.1
NEE2	Needles Airpor	2.48	118	Pb	Pg	22 50 17.9	-0.8
	baz=299						
NEE2				Sb	Sg	22 50 51.4	+0.5
	baz=299						
IRM	Iron Mountain	2.52	136	P	Pn	22 50 12.3	-0.6
	baz=316,SNR=21						
IRM				Sb	Sg	22 50 52.1	0.0
	baz=316						
NV11	Mina Array Sit	2.54	344		Pn	22 50 14.2	+0.9
NVAR	Mina Array Bea	2.58	342	Pg	Pg	22 50 19.3	-1.2
	37nm,0.3s,baz=163,slow=17,SNR=114						
NVAR				Lg	Lg	22 50 55.1	
	18nm,0.3s,baz=285,slow=24,SNR=7.6						
R11A	Troy Canyon, C	2.72	29	Pn	Pn	22 50 16.1	+0.3
	baz=210,SNR=23						
R11A				Pb	Pg	22 50 22.1	-1.2
	baz=210						
R11A				Sb	Sg	22 50 58.4	-0.1
	baz=210						
CIS	Catalina Islan	2.74	200	Pg	Pg	22 50 23.5	-0.2
	baz=19,SNR=8.8						
BC3	Big Chuckawall	2.76	147	Sb	Sg	22 50 58.9	-1.0
	baz=327						
RYN	Ryan	2.82	340		Pn	22 50 18.4	+1.2
RYN				Pg	Pg	22 50 24.7	-0.5
PMPB	Monarch Peak	2.87	276		Pn	22 50 18.1	+0.4
W13A	Hualapai Mount	2.90	107		Pn	22 50 18.6	+0.3
WAKR	Walker	3.05	326		Pn	22 50 21.2	+0.8
109C	Camp Elliot, M	3.09	177		Pn	22 50 21.2	+0.5
109C				Pg	Pb	22 50 27.2	+0.5
109C	Camp Elliot, M	3.09	177	Pb	Pb	22 50 28.0	+1.4
	baz=357,SNR=7.3						
109C				Sb	Sb	22 51 06.9	+2.2
	baz=357						
MONP2	Monument Peak	3.16	167	Pg	Pg	22 50 30.6	-1.1
	baz=347,SNR=27						
MONP2				Sb	Sg	22 51 10.9	-1.8
	baz=347						
Y12C	Blythe	3.17	134		Pn	22 50 21.5	-0.4
Y12C	Blythe	3.17	134	Sb	Sg	22 51 12.3	-0.8
	baz=315						
CMB	Columbia Colle	3.23	310		Pn	22 50 23.3	+0.6
BAR	Barrett	3.33	171		Pn	22 50 24.4	+0.3
YERR	Yerington	3.38	333		Pn	22 50 25.9	+1.0
SAO	San Andreas Ge	3.46	284	Pn	Pn	22 50 26.1	+0.3
IKP	In-Ko-Pah, Jac	3.46	164	Sb	Sg	22 51 19.6	-2.7
	baz=344						
CCUT	Cedar City	3.51	62		Pn	22 50 26.9	+0.2
GLA	Glamis	3.55	145	P	Pn	22 50 26.2	-1.0
	baz=326						
SZCU	Shurtz Canyon	3.73	63		Pn	22 50 31.2	+1.5
SZCU				Pg	Pg	22 50 42.8	+0.3
PSUT	Pine Spring	3.73	46	Pn	Pn	22 50 30.8	+1.1
VCNR	Virginia City	3.81	331	Pn	Pn	22 50 30.1	-0.7
PAHR	Pah Rah Range	4.08	336	Pn	Pn	22 50 34.9	+0.4
113A	Mohawk Valley,	4.32	137		Pn	22 50 38.7	+1.1
WUAZ	Wupatki	4.82	94	Pn	Pn	22 50 46.5	+1.8
WUAZ					Pg	22 51 01.8	-1.7
WUAZ	Wupatki	4.82	94	Pg	Pg	22 51 01.4	-2.0
	baz=277						
ELK	Elko	5.02	18	Pg	Pg	22 51 05.9	-1.3
ELK				Lg	Lg	22 52 10.6	
	6.5nm,0.3s,baz=112,slow=21,SNR=8.6						
ELK	Elko	5.02	18		Pn	22 50 49.1	+1.7
ELK				Pg	Pg	22 51 06.6	-0.7
DUG	Dugway, Tooele	5.48	39	Pg	Pg	22 51 15.1	-1.1
	baz=221						
DUG				Sb	Sg	22 52 23.2	-3.9
	baz=221						
O03E	Paynes Creek	5.59	322	Sb	Sg	22 52 25.8	-4.9
	baz=139						
SRU	San Rafael Swe	6.20	58	Pn	Pn	22 51 04.1	+0.4
SRU					Pg	22 51 29.2	-0.8
W18A	Petrified Fore	6.20	96		Pn	22 51 05.9	+2.2
W18A				Pg	Pg	22 51 26.5	-3.5
W18A	Petrified Fore	6.20	96	Pg	Pg	22 51 27.9	-2.1
	baz=280						
MOD	Modoc Plateau	6.37	339	Pn	Pn	22 51 08.1	+2.3
TUC	Tucson	6.51	122	Pn	Pn	22 51 08.0	+0.2
HWUT	Hardware Ranch	7.17	37	Pn	Pn	22 51 17.8	+0.9
MFID	Camas Ranch	7.51	8		Pn	22 51 23.7	+2.2
ANMO	Albuquerque	8.88	94	Pg	Pg	22 52 16.4	-4.9
	0.1nm,0.3s,baz=284,slow=13,SNR=5.4						
PDAR	Pinedale Array	9.03	39	Pn	Pn	22 51 49.5	+7.0
	0.0nm,0.3s,baz=228,slow=9.5,SNR=2.2						
PDAR				Pg		22 52 20.6	
	0.1nm,0.3s,baz=221,slow=16,SNR=7.0						
PDAR				Lg	Lg	22 54 22.4	
	0.1nm,0.3s,baz=204,slow=32,SNR=3.4						
YKA	Yellowknife Ar	26.59	3	P	P	22 55 11.8	+1.7
	0.1nm,0.4s,baz=177,slow=9.2,SNR=6.5						

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*BJI **04** 23:14:12.0±0.0, 33.°20S×106.°00E, h5^{km}, mB5.1/26, mb4.8/35, Ms5.0/8, Ms7 4.7/8*

*IDC **04** 23:14:13.4±0.5, 33.°05S×105.°77E, h0^{km}, mb4.5/17, mb1 4.6/17, mb1mx4.3/39, mbtmp4.5/17, MS3.6/8, Ms1 3.6/8, ms1mx3.3/31, Error ellipse: s-maj=18.2km s-min=17.8km az=167.0*

*NEIC **04** 23:14:15.2±1.3, 33.°09S±0.°10×106.°0E±0.°1, h10^{km}±1^{km}, mb4.6/39, Error ellipse: s-maj=13.9km s-min=12.5km az=172.0*

ISC 04 23:14:15.2±0.4, **33.°10S**±0.°07×**106.°04E**±0.°07, **h10^{km}, n131,** σ**1^{s}40**/130, **mb4.6**/42, **MS3.6**/10, **2C, West of Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W3	Cape Leeuwin H	6.95	107	Pn	Pn	23 15 56.4	-0.5
	baz=256,slow=16,SNR=145						
H01W3				Sn	Sn	23 17 06.3	-10
	SNR=10						
H01W3				T	T	23 23 17.6	
	baz=292						
H01W2	Cape Leeuwin H	6.95	107	Pn	Pn	23 15 56.4	-0.5
	baz=256,slow=16,SNR=287						
H01W2				Sn	Sn	23 17 06.4	-10
	SNR=8.2						
H01W2				T	T	23 23 12.6	
	baz=292						
H01W1	Cape Leeuwin H	6.97	107	Pn	Pn	23 15 56.6	-0.5
	baz=256,slow=16,SNR=176						
H01W1				Sn	Sn	23 17 06.7	-10
	SNR=12						
H01W1				T	T	23 23 17.7	
	baz=292						
MUN	Mundaring	8.65	85	P	Pn	23 16 19.6	-0.9
	baz=7.8,SNR=102						
RKGY	Rocky Gully	9.22	102	P	Pn	23 16 27.2	-1.0
	baz=8.6,SNR=5.3						
NWAO	Narrogin (SRO)	9.40	92	P	Pn	23 16 30.1	-0.7
	baz=8.7,SNR=137						
NWAO	Narrogin (SRO)	9.40	92	Pn	Pn	23 16 30.3	-0.4
	21nm,0.3s,baz=247,slow=14,SNR=187						
NWAO				Sn	Sn	23 18 05.0	-11
	42nm,0.3s,baz=276,slow=12,SNR=20						
NWAO				LR	LR	23 19 32.1	
	comp=Z,264nm,19.9s,baz=296,slow=33						
NWAO	Narrogin (SRO)	9.40	92		Pn	23 16 29.9	-0.8
BLDU	Ballidu	9.40	78	P	Pn	23 16 29.5	-1.3
	baz=8.5,SNR=347						
MORW	Morawa	9.47	68	P	Pn	23 16 30.2	-1.5
	baz=8.5,SNR=72						
MORW	Morawa	9.47	68		Pn	23 16 30.3	-1.3
KLBR	Kellerberrin	10.02	85	P	Pn	23 16 37.5	-1.7
	baz=9.2,SNR=47						
MEEK	Meekatharra	12.66	63	P	Pn	23 17 10.5	-4.9
	baz=12,SNR=13						
GIRL	Giralia	12.68	37	P	Pn	23 17 12.9	-2.8
	baz=12,SNR=74						
GIRL	Giralia	12.68	37	Pn	Pn	23 17 13.2	-2.5
KMBL	Kambalda	13.52	87	P	Pn	23 17 24.6	-2.5
	baz=13,SNR=28						
PSAD3	Pilbara Seismi	16.69	50		P	23 18 11.9	+0.3
PSAC3	Pilbara Seismi	16.73	50		P	23 18 12.7	+0.6
PSA00	Pilbara Seismi	16.78	50	Pn	Pn	23 18 09.5	-0.8
PSA00				IAmb	IAmb	23 18 15.2	
	comp=Z,29nm,0.8s						
PSAB2	Pilbara Seismi	16.80	50		P	23 18 13.2	+0.3
PSAB2				IAmb	IAmb	23 18 15.5	
	comp=Z,31nm,0.8s						
FORT	Forrest	18.82	89	P	Pn	23 18 35.3	-0.3
	baz=18,SNR=36						
FORT	Forrest	18.82	89	P	P	23 18 34.9	-0.2
WRKA	Warakurna	21.02	73	P	P	23 19 01.6	+2.5
	baz=20,SNR=38						
FITZ	Fitzroy Crossi	23.08	54	P	P	23 19 21.7	+0.7
	baz=22,SNR=6.5						
FITZ	Fitzroy Crossi	23.08	54	P	P	23 19 21.8	+0.7
	comp=Z,8.3nm,0.8s,baz=230,slow=8.7,SNR=16						
FITZ				S	S	23 23 26.1	-6.2
	comp=Z,7.9nm,0.4s,baz=336,slow=18,SNR=14						
FITZ				LR	LR	23 28 39.5	
	comp=Z,103nm,18.3s,baz=232,slow=37						
FITZ	Fitzroy Crossi	23.08	54	P	P	23 19 22.6	+1.5
FITZ				IAmb	IAmb	23 19 29.3	
	comp=Z,15nm,1.1s						
LEM	Lembang	26.18	4	LR	LR	23 28 13.9	
	comp=Z,71nm,18.7s,baz=181,slow=32						
ASAR	Alice Springs	26.19	76	P	P	23 19 51.7	+1.6
	comp=Z,6.9nm,0.7s,baz=248,slow=8.0,SNR=60						
ASAR				S	S	23 24 35.5	+13
	comp=Z,0.8nm,0.6s,baz=348,slow=26,SNR=2.0						
AS31	Alice Springs	26.19	76	P	P	23 19 51.6	+1.5
EDFI	Ende, Flores	28.22	34	P	P	23 20 09.3	+0.8
	comp=Z,9.0nm,1.4s						
WRA	Warramunga Arr	28.41	70	P	P	23 20 11.2	+1.2
	comp=Z,5.8nm,0.6s,baz=235,slow=10.0,SNR=46						
WRA				S	S	23 25 29.2	+32
	comp=Z,3.1nm,0.8s,baz=227,slow=22,SNR=5.9						
WRA				LR	LR	23 32 34.4	
	comp=Z,145nm,18.2s,baz=270,slow=38						
WB2	Warramunga Arr	28.41	70	P	P	23 20 11.3	+1.2
WB2				IAmb	IAmb	23 20 40.9	
	comp=Z,12nm,1.1s						
MDSI	Maura Dua	28.52	356	P	P	23 20 12.1	+1.1
	comp=Z,7.6nm,1.1s						
WB0	Warramunga Arr	28.54	69	P	P	23 20 12.1	+0.8
WB0				IAmb	IAmb	23 20 13.2	
	comp=Z,10nm,0.9s						
STKA	Stephens Creek	29.93	97	P	P	23 20 26.1	+2.6
	comp=Z,3.4nm,0.7s,baz=264,slow=12,SNR=7.2						
STKA				LR	LR	23 32 01.5	
	comp=Z,156nm,18.4s,baz=224,slow=35						
STKA	Stephens Creek	29.93	97	P	P	23 20 24.0	+0.6
KAPI	Kappang	30.73	28	LR	LR	23 31 26.7	
	comp=Z,99nm,21.0s,baz=193,slow=34						
SPSI	Sidrap Palu	31.70	27	P	P	23 20 40.3	+1.2
	comp=Z,18nm,0.8s						
MPSI	Mapaga	35.73	24	P	P	23 21 15.7	+1.5
	comp=Z,15nm,1.0s						
SBUM	Sibu	35.84	11	P	P	23 21 16.5	+1.4
SBUM				IAmb	IAmb	23 21 17.7	
	comp=Z,9.1nm,1.0s						
SANI	Sanana	36.11	35	P	P	23 21 18.5	+1.0
	comp=Z,18nm,1.0s						
H08S2	Diego Garcia H	40.07	302	T	T	00 03 07.0	
	baz=126,slow=74,SNR=3.8						
H08S1	Diego Carcia H	40.09	302	T	T	00 03 11.5	
	baz=126						
H08S3	Diego Garcia H	40.09	302	T	T	00 03 09.3	
	baz=126,slow=74,SNR=15						
PBKT	Sadao Pong	49.63	354	P	P	23 23 07.3	+0.4
SYO	Syowa Base	51.11	205	⇑eP	P	23 23 19.0	+1.4
SYO	Syowa Base	51.11	205	⇑iPcP	PcP	23 24 31.8	-1.3
CM31	Chiang Mai Arr	51.72	351	P	P	23 23 22.4	-0.3
CM31				IAmb	IAmb	23 23 24.4	
	comp=Z,12nm,1.1s						
CMAR	Chiang Mai Arr	51.72	351	P	P	23 23 22.6	0.0
	comp=Z,3.3nm,0.7s,baz=186,slow=8.2,SNR=30						
CMAR				LR	LR	23 46 50.1	
	comp=Z,27nm,18.0s,baz=195,slow=38						
CHTO	Chiang Mai	52.07	351	P	P	23 23 25.5	+0.2
CHTO				IAmb	IAmb	23 23 26.9	
	comp=Z,12nm,1.1s						
QSPA	South Pole Qui	57.02	180	P	P	23 24 01.3	+0.3
	comp=Z,4.5nm,0.9s,baz=302,slow=2.6,SNR=11						
QSPA	South Pole Qui	57.02	180	P	P	23 24 01.3	+0.3
KMI	Kunming	57.99	356	P	P	23 24 10.6	+2.3
KMI				pmax	pmax		
	comp=Z,16nm,0.9s						
KMI	Kunming	57.99	356	P	P	23 24 09.3	+1.0
SHL	Shillong	59.88	345	P	P	23 24 21.1	-0.3
ODAN	Odare	62.21	341	eP	P	23 24 36.2	-1.1
	comp=Z,13nm,0.7s						
RAMN	Ramite	62.52	340	eP	P	23 24 37.4	-1.9
	comp=Z,12nm,0.6s						
TAPN	Taplejung	62.59	342	eP	P	23 24 39.2	-0.7
	comp=Z,36nm,0.8s						
JIRN	Jiri	63.30	340	eP	P	23 24 40.0	-4.7
PKI	Pulchoki	63.44	340	eP	P	23 24 44.3	-1.3
PKIN	Phulchoki	63.45	340	eP	P	23 24 44.2	-1.4
GUN	Gumba	63.63	340	eP	P	23 24 45.9	-0.9
	comp=Z,27nm,0.9s						
LSA	Lhasa	64.03	346	P	P	23 24 48.8	-0.8
GKN	Gorkha	64.08	339	eP	P	23 24 48.6	-1.0
	comp=Z,6.6nm,0.5s						
SNAA	Sanae	64.55	199	P	P	23 24 52.1	0.0
SNAA	Sanae	64.55	199	P	P	23 24 51.1	-1.0
	comp=Z,3.4nm,0.8s,baz=109,slow=3.9,SNR=6.8						
SNAA	Sanae	64.55	199	P	P	23 24 51.7	-0.4
SNAA				IAmb	IAmb	23 25 03.5	
	comp=Z,6.6nm,0.9s						
DANN	Dangsing	64.67	338	eP	P	23 24 52.4	-1.2
	comp=Z,24nm,0.8s						
MSVF	Nonsavu	65.69	96	P	P	23 25 02.2	+1.9
VNA2	Neumayer--Watz	66.20	199	P	P	23 25 02.3	-0.4
	baz=112,slow=5.2						
VNA3	Neumayer Olymp	66.64	199	P	P	23 25 05.6	0.0
XAN	Xi'an	66.84	3	P	P	23 25 07.3	+0.1
XAN				pP	pwP	23 25 16.6	+0.9
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
XAN				pmax	pmax		
	comp=Z,91nm,3.2s						
XAN	Xi'an	66.84	3	P	P	23 25 07.6	+0.5
LZH	Lanzhou	68.86	358	eP	P	23 25 23.5	+3.5
LZH				pP	pwP	23 25 26.7	-1.8
LZH				sP	sP	23 25 28.5	+6.4
LZH				ePP	PP	23 27 58.6	+6.1
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				pmax	pmax		
	comp=Z,76nm,6.2s						
LZH				LR	LR		
	comp=Z,170nm,15.9s						
LZH				LR	LR		
	comp=Z,170nm,16.1s						
LZH				LR	LR		
	comp=Z,240nm,17.9s						
KMBO	Kilima Mbogo	71.69	281	P	P	23 25 37.2	-0.8
	comp=Z,1.0nm,0.8s,baz=80,slow=6.1,SNR=4.6						
KMBO	Kilima Mbogo	71.69	281	P	P	23 25 37.7	-0.3
LSZ	Lusaka	71.78	263	P	P	23 25 38.2	-0.2
GTA	Gaotai	72.38	355	eP	P	23 25 41.5	+0.2
GTA				pP	sP	23 25 45.5	+2.0
GTA				sP	pwP	23 25 48.8	-1.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KSRS	Korea Array	73.10	18	P	P	23 25 46.4	+0.9
	comp=Z,5.6nm,0.9s,baz=196,slow=8.7,SNR=7.7						
NIL	Nilore	73.21	332	P	P	23 25 45.4	-0.9
MJAR	Matsushiro Arr	75.52	26	P	P	23 25 59.0	-0.7
	comp=Z,2.4nm,0.7s,baz=200,slow=7.5,SNR=5.4						
KBL	Kabul	75.72	329	P	P	23 26 00.6	-0.5
KBL				IAmb	IAmb	23 26 13.9	
	comp=Z,6.5nm,0.9s						
KSH	Kashi	77.44	337	P	P	23 26 12.0	+1.4
KSH				sP	pwP	23 26 18.9	-0.3
KSH				S	S	23 36 00.5	-0.9
KSH				SS	SS	23 41 03.7	+2.7
KSH				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,130nm,5.6s						
KSH				LR	LR		
	comp=Z,230nm,11.0s						
KSH				LR	LR		
	comp=Z,340nm,12.6s						
KSH				LR	LR		
	comp=Z,190nm,11.3s						
WMQ	Urumqi	78.37	347	eP	P	23 26 16.4	+0.8
WMQ				pP	sP	23 26 20.1	+2.4
WMQ				sP	pwP	23 26 22.4	-1.8
WMQ				PcP	PcP	23 26 26.4	+1.6
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,17nm,3.8s						
WMQ				LR	LR		
	comp=Z,380nm,29.0s						
WMQ				LR	LR		
	comp=Z,1µm,28.9s						
WMQ				LR	LR		
	comp=Z,110nm,29.1s						
HRA	Herat	78.73	324	P	P	23 26 17.3	-0.8
HRA				IAmb	IAmb	23 26 18.3	
	comp=Z,8.2nm,1.4s						
MDJ	Mudanjiang	80.27	17	P	P	23 26 26.5	+0.7
MDJ				pmax	pmax		
	comp=Z,11nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,100nm,3.5s						
MDJ	Mudanjiang	80.27	17	P	P	23 26 26.0	+0.1
USRK	Ussuriysk Ar.	80.49	19	P	P	23 26 27.3	+0.3
	comp=Z,6.3nm,0.7s,baz=226,slow=5.7,SNR=7.5						
SONM	Songino Array	80.57	0	P	P	23 26 27.3	-0.3
	comp=Z,5.9nm,0.7s,baz=180,slow=6.0,SNR=29						
ULN	Ulaanbaatar	80.60	1	P	P	23 26 27.3	-0.5
ULN				IAmb	IAmb	23 26 28.5	
	comp=Z,6.8nm,1.1s						
RAYN	Ar Rayn	80.61	306	P	P	23 26 27.6	-0.7
RAYN				IAmb	IAmb	23 26 29.9	
	comp=Z,7.7nm,1.4s						
AAK	Ala-Archa	80.73	337	P	P	23 26 28.6	0.0
MK31	Makanchi Array	82.36	344	IAmb	IAmb	23 26 37.4	
	comp=Z,8.0nm,1.8s						
MKAR	Makanchi Array	82.36	344	P	P	23 26 36.1	-0.9
	comp=Z,0.7nm,0.8s,baz=151,slow=6.0,SNR=7.4						
MAKZ	Makanchi	82.45	344	P	P	23 26 37.0	-0.5
MAKZ				IAmb	IAmb	23 26 37.8	
	comp=Z,8.1nm,1.6s						
KKAR	Karatay Array	82.52	335	P	P	23 26 37.5	-0.4
HIA	Hailar	82.91	9	P	P	23 26 39.3	-0.5
HIA				IAmb	IAmb	23 26 40.9	
	comp=Z,4.1nm,0.7s						
GEYT	Alibeck	83.57	324	P	P	23 26 43.2	-0.3
	comp=Z,4.9nm,0.8s,baz=172,slow=5.5,SNR=16						
GYA0B	ALIBECK ARRAY	83.57	324	P	P	23 26 43.3	-0.2
KURK	Kurchatov	86.90	343	IAmb	IAmb	23 26 59.8	
	comp=Z,3.8nm,0.9s						
KURK	Kurchatov	86.90	343	P	P	23 26 59.6	-0.2
ZAA0	Zalesovo Array	88.62	348	P	P	23 27 06.5	-1.4
ZALV	Zalesovo Beam	88.62	348	P	P	23 27 06.4	-1.5
	comp=Z,7.6nm,0.9s,baz=169,slow=3.0,SNR=29						
BRVK	Borovoye	91.28	339	P	P	23 27 20.7	+0.3
USHA	Ushuaia	92.30	183	LR	LR	00 10 51.7	
	comp=Z,83nm,18.4s,baz=174,slow=37						
AKTO	Aktyubinsk	93.38	332	P	P	23 27 28.2	-1.9
	comp=Z,1.2nm,0.7s,baz=113,slow=7.1,SNR=4.1						
KBZ	Khabaz	95.71	319	P	P	23 27 39.2	-1.7
	comp=Z,1.5nm,0.8s,baz=177,slow=4.5,SNR=4.3						
ARCES	ARCESS Array B	117.41	337	PKP	PKPdf	23 32 59.2	-0.8
	comp=Z,5.0nm,1.1s,baz=95,slow=7.3,SNR=4.4						
MEM	Membach	120.81	313	PKPdf	PKPdf	23 33 06.0	-1.1
ILAR	Eielson Array	126.63	31	PKP	PKPdf	23 33 16.8	-1.1
	comp=Z,0.4nm,0.7s,baz=272,slow=4.2,SNR=4.4						
INK	Inuvik	131.50	25	PKP	PKPdf	23 33 27.2	+0.2
	comp=Z,1.8nm,0.9s,baz=224,slow=3.4,SNR=5.6						
RES	Resolute Bay	137.08	8	PKP	PKiKP	23 33 38.8	-0.4
	comp=Z,1.6nm,0.7s,baz=298,slow=4.6,SNR=8.1						
YKA	Yellowknife Ar	141.00	29	PKhKP	PKPpre	23 33 38.1	
	comp=Z,0.8nm,1.0s,baz=292,slow=2.3,SNR=4.0						
YKA				PKP	PKPdf	23 33 44.3	-0.5
	comp=Z,1.1nm,0.7s,baz=313,slow=1.6,SNR=10						
NVAR	Mina Array Bea	143.89	69	PKP	PKPbc	23 33 48.5	-0.3
	comp=Z,0.6nm,0.7s,baz=267,slow=2.7,SNR=5.5						
F10A	Beach Ranch, E	144.66	56		PKPdf	23 33 51.5	-0.4
TPNV	Topopah Spring	145.36	72		PKPab	23 33 53.6	0.0
ELK	Elko	146.37	65	PKPbc	PKPab	23 33 56.9	-0.5
	comp=Z,2.4nm,0.6s,baz=268,slow=5.3,SNR=9.6						
113A	Mohawk Valley,	146.72	79		PKPab	23 33 58.0	-0.6
OTAV	Otavalo	147.04	172		PKPbc	23 33 59.9	+0.4
214A	Organ Pipe Nat	147.34	81		PKPbc	23 33 59.7	+0.4
DUG	Dugway, Tooele	148.22	66		PKPbc	23 34 01.9	+0.3
FRB	Frobisher Bay	149.15	355	PKPbc	PKPbc	23 34 01.5	-1.5
	comp=Z,10nm,0.8s,baz=54,slow=3.0,SNR=7.8						
SRU	San Rafael Swe	149.99	68		PKPbc	23 34 06.2	+0.1
SRU					PKPab	23 34 12.3	+0.4
PDAR	Pinedale Array	150.50	61	PKPbc	PKiKP	23 34 07.5	-0.5
	comp=Z,3.8nm,0.8s,baz=232,slow=1.7,SNR=11						
FFC	Flin Flon	150.76	34		PKPbc	23 34 06.6	-0.6
FFC					PKPab	23 34 14.3	0.0
MVCO	Mesa Verde	151.56	72		PKiKP	23 34 10.7	+0.3
MNTX	Cornudas Mount	153.48	84		PKiKP	23 34 14.4	+0.2
TXAR	Lajitas Array	154.36	90	PKP	PKPdf	23 34 08.3	+0.5
	comp=Z,0.5nm,0.8s,baz=222,slow=1.7,SNR=5.1						
TXAR				PKPbc	PKiKP	23 34 16.8	+0.6
	comp=Z,1.2nm,0.9s,baz=204,slow=2.7,SNR=7.8						
TXAR				PKPab	pPKPab	23 34 31.4	-0.7
	comp=Z,0.7nm,0.8s,baz=231,slow=6.3,SNR=4.9						
ULM	Lac du Bonnet	156.44	37	PKPab	PKPab	23 34 37.1	-1.3
	comp=Z,2.1nm,0.8s,baz=346,slow=3.1,SNR=4.8						
SCHQ	Schefferville	157.70	349	PKPab	PKPab	23 34 41.8	-1.9
	comp=Z,3.1nm,0.8s,baz=225,slow=17,SNR=3.6						
G40A	Rib Lake	162.54	41		PKPab	23 35 05.0	-0.2

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*ROM **04** 23:22:57.0±0.4, 45.°11N±0.°03×14.°64E±0.°02, h10^{km}, ML3.3/2, Error ellipse: s-maj=2.8km s-min=1.5km az=356.0*

*PRU **04** 23:22:56.6±0.0, 45.°09N×14.°55E, h0^{km}*

*RHSSO **04** 23:22:57.3±0.4, 45.°15N×14.°50E, h2^{km}, ML2.9/11*

*LDG **04** 23:22:58.7±0.1, 45.°25N×14.°59E, h10^{km}, Ml2.9/22, Error ellipse: s-maj=2.9km s-min=1.8km az=161.0*

ISC 04 23:22:57.1±0.8, **45.°18N**±0.°02×**14.°50E**±0.°02, **h12^{km}**±6^{km}, **n121,** σ**1^{s}69**/202, **2C-2D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIY	Rijeka	0.14	354	i Pg	Pg	23 23 00.4	-0.2
RIY				Sg	Sg	23 23 02.9	-0.2
RIY	Rijeka	0.14	354	ePg	Pg	23 23 00.2	-0.4
RIY				eSg	Sg	23 23 02.9	-0.2
KNDS	Knezji Dol	0.36	346	⇓iPg	Pg	23 23 04.2	-0.1
KNDS				i Sg	Sg	23 23 10.3	+1.2
GBRS	Gornja Briga	0.41	32	⇓iPg	Pg	23 23 05.0	-0.3
GBRS				i Sg	Sg	23 23 10.9	+0.2
SKDS	Skadanscina	0.50	317	i Pg	Pg	23 23 06.8	-0.1
CEY	Cerknica	0.56	354	ePg	Pg	23 23 07.5	-0.5
CEY				eSg	Sb	23 23 16.6	-0.2
BRJN	Brijuni	0.60	243	i Pg	Pb	23 23 10.3	+0.8
BRJN				Sg	Sb	23 23 18.6	+0.8
BOJS	Bojanci	0.62	58	i Pg	Pg	23 23 08.3	-0.8
BOJS				eSg	Sg	23 23 16.7	-0.6
BOJS	Bojanci	0.62	58	P	Pg	23 23 08.4	-0.7
BOJS				S	Sg	23 23 16.9	-0.4
VISS	Visnje	0.67	21	i Pg	Pg	23 23 09.2	-0.9
VISS				eSg	Sg	23 23 19.2	+0.4
NVLJ	Novalja	0.67	157	ePg	Pb	23 23 10.2	-0.5
NVLJ				Sg	Sb	23 23 19.7	-0.1
TRI	Trieste	0.74	316	P	Pg	23 23 11.4	-0.1
TRI				AML	AML		
	comp=E,490µm,0.5s						
TRI				AML	AML		
	comp=N,746µm,0.3s						
TRI	Trieste	0.74	316	⇑ePg	Pg	23 23 10.9	-0.5
TRI				eSg	Sb	23 23 23.1	+1.1
GBAS	Gorenja Brezov	0.76	357	ePg	Pg	23 23 11.1	-0.7
GBAS				eSg	Sb	23 23 22.6	+0.2
OZLJ	Ozalj	0.81	57	ePg	Pb	23 23 13.0	0.0
OZLJ				Sg	Sg	23 23 22.6	-0.7
LJU	Ljubljana	0.86	1	P	Pg	23 23 13.9	+0.2
LJU				S	Sn	23 23 27.5	-0.1
LJU				AML	AML		
	comp=N,1230µm,1.1s						
LJU				AML	AML		
	comp=E,1610µm,0.7s						
LJU	Ljubljana	0.86	1	ePg	Pg	23 23 13.7	0.0
LJU				eSg	Sb	23 23 26.4	+0.9
CRNS	Crni Vrh	0.92	349	ePg	Pg	23 23 14.1	-0.7
CRNS				i		23 23 15.1	
CRES	Cresnjev	0.93	46	i Pg	Pg	23 23 14.3	-0.7
CRES				i		23 23 14.6	
CRES	Cresnjev	0.93	46	ePg	Pg	23 23 14.4	-0.6
CRES				eSg	Sg	23 23 27.1	-0.1
VNDS	Vrh nad Dolski	0.93	9	i Pg	Pg	23 23 14.4	-0.7
VNDS				i		23 23 15.1	
VOJS	Vojsko	0.96	333	i Pg	Pg	23 23 14.5	-1.0

VOJS				i		23 23 15.2	
LEGS	Legarje	0.96	36	i Pg	Pg	23 23 14.8	-0.7
LEGS				e		23 23 15.3	
SABO	M.te Sabotino	1.02	322	P	Pb	23 23 16.8	+0.1
SABO	M.te Sabotino	1.02	322	ePg	Pb	23 23 16.1	-0.5
SABO				eSg	Sn	23 23 32.9	+1.4
GCIS	Gornji Cirnik	1.05	49	i Pg	Pb	23 23 17.0	-0.1
GCIS				i		23 23 17.6	
UDBI	Udbina	1.11	126	ePg	Pg	23 23 18.1	-0.3
UDBI				Sg	Sn	23 23 33.7	0.0
MOZS	Mozjanca	1.11	358	i Pg	Pb	23 23 18.6	+0.3
GOLS	Golise	1.14	43	ePg	Pb	23 23 18.6	-0.1
DRE	Drenchia	1.16	329	ePg	Pb	23 23 19.0	-0.1
DRE				eSg	Sn	23 23 37.0	+2.0
CADS	Cadrg	1.18	333	eSg	Sn	23 23 38.0	+2.7
DOBS	Dobrina	1.18	35	i Pg	Pb	23 23 19.0	-0.4
ZAG	Zagreb	1.23	58	ePg	Pg	23 23 21.0	+0.4
ZAG				Sg	Sn	23 23 37.4	+0.9
ZAG	Zagreb	1.23	58	P	Pg	23 23 21.0	+0.4
ZAG				S	Sn	23 23 38.5	+2.0
ZAG	Zagreb	1.23	58	ePg	Pb	23 23 20.0	-0.2
ZAG				eSg	Sn	23 23 36.9	+0.4
COLI	Coloredo	1.24	321	ePg	Pn	23 23 20.1	-0.1
DUGI	Dugi Otok	1.25	161	ePg	Pg	23 23 22.5	+1.4
DUGI				Sg	Sg	23 23 39.7	+2.3
PTJ	Puntijarka	1.26	54	ePg	Pg	23 23 21.5	+0.2
PTJ				Sg	Sg	23 23 39.0	+1.3
ROBS	Robic	1.27	327	i Pg	Pg	23 23 22.4	+0.9
OBKA	Obir	1.33	1	Pg	Pb	23 23 22.0	0.0
	comp=E,16nm,0.2s,SNR=53						
OBKA				Sn	Sg	23 23 41.6	+1.7
	comp=E,123nm,0.3s						
GEPF	Gemona	1.45	319	⇑P	Pg	23 23 25.4	+0.5
GEPF				S	Sg	23 23 46.7	+2.9
GEPF				AML	AML		
	comp=E,781µm,0.4s						
GEPF				AML	AML		
	comp=N,581µm,0.5s						
GROS	Grobnik	1.46	28	i Pg	Pb	23 23 24.0	-0.2
GROS				i		23 23 24.6	
PTCC	Patocco-Chiusa	1.47	327	P	Pg	23 23 25.6	+0.4
PTCC				S	Sg	23 23 47.0	+2.8
PTCC				AML	AML		
	comp=E,336µm,0.3s						
PTCC				AML	AML		
	comp=N,355µm,0.5s						
PTCC				AML	AML		
	comp=N,354µm,0.5s						
PERS	Pernice	1.52	16	i Pn	Pb	23 23 25.1	-0.1
PERS				i		23 23 25.6	
BISS	Bistriski jare	1.53	16	ePn	Pb	23 23 25.2	-0.1
BISS				i Pg	Pg	23 23 25.6	-0.8
SOKA	Soboth	1.54	14	ePn	Pb	23 23 25.6	0.0
	comp=N,21nm,0.5s,SNR=29						
SOKA				Sn	Sg	23 23 46.7	0.0
	comp=N,56nm,0.6s						
MYKA	Terra Mystica	1.57	338	Pn	Pb	23 23 26.9	+0.8
	comp=N,18nm,0.3s,SNR=24						
MYKA				Sg	Sg	23 23 48.4	+0.9
	comp=N,100nm,0.3s						
MORI	Morici	1.57	146	ePn	Pg	23 23 27.2	0.0
MORI				Sg	Sg	23 23 48.2	+0.6
POLC	Polcenigo	1.64	302	P	Pg	23 23 28.6	+0.1
POLC				AML	AML		
	comp=E,1175µm,0.5s						
POLC				AML	AML		
	comp=N,1665µm,0.5s						
MOSL	Moslavina	1.64	74	ePn	Pb	23 23 27.1	-0.2
MOSL				Sg	Sn	23 23 46.9	+0.1
STAL	STALIGIAL	1.66	311	P	Pb	23 23 28.0	+0.5
STAL				AML	AML		
	comp=E,787µm,0.3s						
STAL				AML	AML		
	comp=N,867µm,1.1s						
STAL				AML	AML		
	comp=N,902µm,1.0s						
STAL				AML	AML		
	comp=N,903µm,1.0s						
STAL				AML	AML		
	comp=N,870µm,1.1s						
STAL				AML	AML		
	comp=E,787µm,0.3s						
STAL				AML	AML		
	comp=E,984µm,0.3s						
KALN	Kalnik	1.67	55	i Pn	Pb	23 23 28.2	+0.5
KALN				Sn	Sg	23 23 50.2	-0.5
ZIRJ	Zirje	1.73	151	ePn	Pg	23 23 29.6	-0.7
ZIRJ				Sn	Sg	23 23 53.1	+0.4
KOGS	Kog	1.76	43	ePn	Pn	23 23 28.0	+0.6
KOGS				i		23 23 30.2	
KIJV	Kijevo	1.80	130	ePn	Pg	23 23 30.9	-0.6
KIJV				Sn	Sg	23 23 56.4	+1.5
BLY	Banja Luka	1.95	102	ePn	Pb	23 23 31.7	-0.8
BLY				eSn	Sb	23 23 55.9	-0.9
MGRS	Mrkonjic Grad	1.99	112	ePn	Pb	23 23 31.7	-1.5
MGRS				eSn	Sb	23 23 57.4	-0.5
TEOL	Teolo	2.01	276	P	Pb	23 23 32.8	-0.7
TEOL				AML	AML		
	comp=E,674µm,0.4s						
TEOL				AML	AML		
	comp=N,447µm,0.4s						
BEHE	Becsehely	2.05	50	ePn	Pn	23 23 32.6	+1.3
BEHE				eSn	Sb	23 23 59.2	-0.3
KBA	Koelnbreinsper	2.06	337	Pn	Pb	23 23 34.2	-0.3
	comp=N,6.7nm,0.3s,SNR=10						
KBA				Sn	Sb	23 24 02.1	+2.0
	comp=N,39nm,0.3s						
ABTA	Abfaltersbach	2.09	319	ePn	Pb	23 23 34.8	-0.2
	comp=N,1.8nm,0.2s,SNR=15						
ABTA				Sg	Sg	23 24 04.6	+0.2
	comp=N,42nm,0.3s						
ARSA	Arzberg	2.19	19	P	Pb	23 23 37.2	+0.6
ARSA				AML	AML		
	comp=E,40µm,0.4s						
ARSA				AML	AML		
	comp=N,34µm,0.5s						
ARSA	Arzberg	2.19	19	Pn	Pb	23 23 37.1	+0.5
	comp=N,2.8nm,0.2s						
RISI	Rein	2.44	317	P	Pb	23 23 40.0	-1.0
RISI				AML	AML		
	comp=N,401µm,0.6s						
RISI				AML	AML		
	comp=E,505µm,0.4s						
RICI	Ricice	2.53	131	i Pn	Pb	23 23 43.4	+1.0
RICI				Sn	Sg	23 24 17.7	-0.6
MAKA	Makarska	2.62	135	ePn	Pb	23 23 43.2	-0.7
MAKA				Sn	Sg	23 24 18.4	-2.7
MOA	Molln	2.67	357	Pn	Pb	23 23 42.7	-2.2
	comp=E,1.9nm,0.2s						
MOA				Sn	Sb	23 24 16.8	-0.8
	comp=E,14nm,0.5s						
ABSI	Aberstueckl	2.71	306	P	Pn	23 23 43.1	+2.6
ABSI				AML	AML		
	comp=E,275µm,0.6s						
ABSI				AML	AML		
	comp=N,344µm,0.5s						
WTTA	Wattenberg	2.88	317	P	Pb	23 23 46.2	-2.3
WTTA				AML	AML		
	comp=N,76µm,0.5s						
WTTA				AML	AML		
	comp=E,91µm,0.7s						
WTTA	Wattenberg	2.88	317	ePn	Pn	23 23 45.8	+2.9
	comp=E,8.8nm,0.2s,SNR=14						
CONA	Conrad Observa	2.90	18	Pn	Pn	23 23 44.3	+1.2
	comp=E,1.5nm,0.2s,SNR=7.5						
WATA	Walderalm	2.96	318	ePn	Pb	23 23 47.7	-2.1
	comp=E,10.0nm,0.2s,SNR=25						
SQTA	Sankt Quirin	3.06	313	ePn	Pb	23 23 49.2	-2.4
	comp=E,1.7nm,0.2s,SNR=8.6						
SQTA				eSn	Sb	23 24 28.9	-0.1
	comp=E,10nm,0.4s						
MOTA	Moosalm	3.20	314	ePn	Pn	23 23 50.9	+3.6
	comp=E,9.3nm,0.5s,SNR=16						
MOTA				eSn	Sb	23 24 33.5	+0.6
	comp=E,6.6nm,0.3s						
FETA	Feichten	3.21	306	ePn	Pn	23 23 50.8	+3.5
	comp=E,1.8nm,0.3s,SNR=5.0						
STON	Ston	3.26	134	ePn	Pn	23 23 48.8	+0.8
STON				eSn	Sn	23 24 27.7	+1.0
HAPS	Han Pijesak,Bl	3.36	107	ePn	Pn	23 23 51.0	+1.6
ZST	Bratislava	3.51	30	ePN	Pn	23 23 51.3	0.0
ZST				eSG	Sg	23 24 53.2	+3.6
BRY	Bratogost	3.69	127	ePn	Pn	23 23 55.2	+1.1
TREB	Trebinje	3.71	130	ePn	Pn	23 23 55.1	+0.9
TREB				eSn	Sn	23 24 38.5	+0.7
MODS	Modra-Piesok	3.72	30	ePN	Pn	23 23 54.6	+0.3
MODS				ePG	Pg	23 24 07.0	-1.3
FRGS	Fruska Gora	3.75	88	ePn	Pn	23 23 56.2	+1.4
FRGS				eSn	Sn	23 24 40.8	+1.9
RUDO	Rudo	3.82	112	ePn	Pn	23 23 56.6	+0.9
DAVA	Damuels	3.84	305	ePn	Pn	23 24 00.1	+4.1
	comp=E,1.0nm,0.2s						
KHC	Kasperske Hory	4.00	351	ePN	Pn	23 24 00.4	+2.2
KHC				eSN	Sn	23 24 47.2	+2.2
KHC				eSG	Sg	23 25 08.0	+2.5
DIVS	Divibare	4.06	104	ePn	Pn	23 24 00.5	+1.4
DIVS				eSn	Sn	23 24 47.4	+0.8
TREC	Trest	4.17	9	ePN	Pn	23 24 01.8	+1.3
PDG	Podgorica	4.40	127	eSn	Sn	23 24 54.8	0.0
VYHS	Vyhne	4.45	40	ePN	Pn	23 24 05.1	+0.8
VYHS				eSN	Sn	23 24 54.5	-1.6
PGF	Pioggiola	4.77	238	ePn	Pn	23 24 10.3	+1.5
PGF				eSn	Sn	23 25 02.8	-1.3
	comp=E,1.3nm,0.3s						
PRU	Pruhonice	4.81	0	ePN	Pn	23 24 09.9	+0.7
PRU				eSN	Sn	23 25 06.0	+1.1
KRLC	Kraliky	5.13	17	ePN	Pn	23 24 15.6	+1.9
SBF	Sospel	5.22	258	ePn	Pn	23 24 16.0	+1.0
SBF				eSn	Sn	23 25 13.2	-1.9
	comp=E,6.8nm,0.3s						
NKC	Novy Kostel	5.24	345	ePN	Pn	23 24 16.6	+1.4
NKC				eSN	Sn	23 25 17.0	+1.5
DPC	Dobruska-Polom	5.32	13	eSN	Sn	23 25 18.8	+1.4
DPC				eSG	Sg	23 25 47.3	-0.3
LPG	La Plagne	5.47	276	ePn	Pn	23 24 19.6	+1.0
LPG	La Plagne	5.47	276	eP	Pn	23 24 23.7	+5.1
LPG				eSn	Sn	23 25 19.7	-2.0
	comp=E,2.9nm,0.3s						
LPL	La Plagne	5.49	276	ePn	Pn	23 24 19.0	+0.2
LPL	La Plagne	5.49	276	eP	Pn	23 24 23.2	+4.4
LPL				eSn	Sn	23 25 19.6	-2.3
	comp=E,3.0nm,0.5s						
MBDF	Montbardon	5.51	268	ePn	Pn	23 24 19.5	+0.5
MBDF				eSn	Sn	23 25 19.9	-2.4
	comp=E,3.9nm,0.3s						
BRG	Berggiesshubel	5.71	356	PG	Sn	23 25 27.7	+0.8
BRG				SG	Sg	23 25 58.5	-1.7
	comp=E,5.1nm,0.9s						
FRF	La Foret Royal	5.86	257	ePn	Pn	23 24 24.3	+0.6
FRF				eSn	Sn	23 25 28.4	-2.3
	comp=E,1.4nm,0.2s						
HINF	Hinteralfeld	5.90	299	ePn	Pn	23 24 24.6	+0.3
HINF				eSn	Sn	23 25 28.7	-3.1
	comp=E,3.4nm,0.3s						
CDF	Champ du Feu	5.92	306	ePn	Pn	23 24 25.3	+0.7
CDF				eSn	Sn	23 25 29.2	-3.2
	comp=E,0.8nm,0.3s						
LMR	La Mourre	6.03	255	ePn	Pn	23 24 27.3	+1.3
LMR				eSn	Sn	23 25 32.4	-2.5
	comp=E,3.3nm,0.3s						
CABF	La Chapelle	6.05	287	ePn	Pn	23 24 26.7	+0.4
CABF				eSn	Sn	23 25 32.6	-2.8
	comp=E,0.7nm,0.2s						
ORIF	Oris-en-Rattie	6.12	271	ePn	Pn	23 24 28.1	+0.8
ORIF	Oris-en-Rattie	6.12	271	eP	Pn	23 24 31.5	+4.2
ORIF				eSn	Sn	23 25 34.1	-3.1
	comp=E,5.1nm,0.5s						
CLL	Collm	6.21	351	ePn	Pn	23 24 32.0	+3.5
CLL				e(Sn)	Sn	23 25 39.0	-0.4
CLL				e		23 26 10.0	
CLL				eSg	Sg	23 26 12.0	-4.3
HAU	Haudompre	6.29	300	ePn	Pn	23 24 29.3	-0.3
HAU				eSn	Sn	23 25 38.1	-3.2
	comp=E,3.6nm,0.4s						
SMRF	Simiane la Rot	6.49	262	ePn	Pn	23 24 32.7	+0.3
SMRF				eSn	Sn	23 25 43.8	-2.5
PAGF	Fort de Pagny	6.90	302	ePn	Pn	23 24 37.6	-0.3
PAGF				eSn	Sn	23 25 52.4	-3.9
	comp=E,1.2nm,0.2s						
VIVF	Saint-Julien-l	6.98	271	ePn	Pn	23 24 39.1	+0.1
VIVF				eSn	Sn	23 25 55.2	-3.1
MEZF	Maizieres J'vi	7.28	301	ePn	Pn	23 24 42.0	-1.2
MEZF				eSn	Sn	23 26 01.6	-4.1
	comp=E,2.0nm,0.3s						
SMF	Signal de Mont	7.58	285	ePn	Pn	23 24 47.5	+0.2
SMF				eSn	Sn	23 26 09.2	-3.9
	comp=E,2.2nm,0.4s						
LOR	Lormes	7.67	290	ePn	Pn	23 24 49.7	+1.1
	baz=112						
LOR	Lormes	7.67	290	ePg	Pg	23 25 20.6	-3.3
	baz=107						
LOR				eSn	Sn	23 26 11.3	-4.1
	comp=E,1.1nm,0.3s						
SSF	Saint Saulge	7.87	288	ePn	Pn	23 24 51.9	+0.7
SSF				eSn	Sn	23 26 16.1	-4.1
	comp=E,0.3nm,0.2s						
AVF	Avril sur Loir	7.93	286	ePn	Pn	23 24 52.3	+0.2
AVF				eSn	Sn	23 26 17.6	-4.1
	comp=E,0.4nm,0.3s						
BGF	Bois d'Agland	8.25	284	ePn	Pn	23 24 57.2	+0.7
BGF				eSn	Sn	23 26 24.7	-4.9
	comp=E,1.3nm,0.2s						
TCF	Toulx Ste Croi	8.67	282	ePn	Pn	23 25 02.9	+0.6
TCF				eSn	Sn	23 26 35.1	-4.9
	comp=E,0.3nm,0.3s						

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*ATH **04** 23:28:37.9, 38°.65N×20°.52E, h12^{km}±2^{km}, ML2.4/11, Error ellipse: s-maj=2.5km s-min=0.7km az=171.0*

*THE **04** 23:28:38.1, 38°.65N×20°.51E, h10^{km}±1^{km}, ML2.5/6, Error ellipse: s-maj=1.6km s-min=0.4km az=30.0*

ISC 04 23:28:38.0±0.9**, 38°.65N**±0°.02×**20°.52E**±0°.03**, h12**^{km}±6^{km}**, n34, σ0^{s}.43**/51**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVGI	Lefkada island	0.11	103	P	Pg	23 28 40.7	-0.3
EVGI				S	Sg	23 28 43.0	-0.1
LKD2	Lefkada island	0.18	36	P	Pg	23 28 41.9	-0.2
LKD2				S	Sg	23 28 44.7	-0.2
	3µm,0.3s						
LKD2	Lefkada island	0.18	36	P	Pg	23 28 41.9	-0.2
LKD2				S	Sg	23 28 44.7	-0.2
FSK	Fiskardo	0.19	171	P	Pg	23 28 42.1	-0.1
FSK				S	Sg	23 28 45.3	+0.2
	3µm,0.2s						
FSK	Fiskardo	0.19	171	P	Pg	23 28 42.1	-0.1
FSK				S	Sg	23 28 45.2	+0.2
FSK				AML	AML	23 28 46.2	
	comp=N,4455µm,0.2s						
FSK				AML	AML	23 28 46.4	
	comp=E,6933µm,0.2s						
TSLK	Tsoukalades, L	0.21	30	P	Pg	23 28 42.7	+0.2
TSLK				S	Sg	23 28 46.0	+0.4
	comp=E,3µm,0.3s						
MGNA	Meganis	0.21	87	P	Pg	23 28 42.5	-0.1
MGNA				S	Sg	23 28 45.6	0.0
MGNA				AML	AML	23 28 46.5	
	comp=N,3895µm,0.1s						
MGNA				AML	AML	23 28 47.1	
	comp=E,2758µm,0.1s						
KONA	Konidatara, Ke	0.22	171	P	Pg	23 28 42.6	-0.3
KONA				S	Sg	23 28 46.3	+0.2
KEF1	Kardakata, Kep	0.37	187	P	Pg	23 28 45.2	-0.3
KEF1				S	Sg	23 28 50.8	+0.4
LXRA	Lixouri, Kepha	0.45	189	P	Pg	23 28 46.8	-0.2
LXRA				S	Sg	23 28 53.3	+0.4
ARGA	Argostoli. Kep	0.47	184	P	Pg	23 28 46.8	-0.4
ARGA				S	Sg	23 28 54.4	+0.9
VLS	Valsamata	0.47	174	P	Pg	23 28 46.7	-0.6
VLS				S	Sb	23 28 54.7	-0.4
	comp=E,752nm,0.5s						
VLS	Valsamata	0.47	174	P	Pg	23 28 46.8	-0.6
VLS				S	Sg	23 28 53.9	+0.3
VLS				AML	AML	23 28 54.6	
	comp=E,1482µm,0.4s						
VLS				AML	AML	23 28 55.0	
	comp=N,1211µm,0.3s						
KEF2	Argostoli. Kep	0.48	183	P	Pg	23 28 47.1	-0.4
KEF2				S	Sg	23 28 54.2	+0.3
PDO	Prodromos	0.52	95	P	Pg	23 28 48.0	-0.2
PDO				S	Sb	23 28 56.1	-0.4
	comp=N,502nm,0.5s						
PDO	Prodromos	0.52	95	P	Pg	23 28 48.0	-0.2
PDO				AML	AML	23 28 58.5	
	comp=E,589µm,0.3s						
PDO				AML	AML	23 29 03.2	
	comp=N,726µm,0.2s						
KFL	Anninata	0.57	159	P	Pg	23 28 48.7	-0.6
KFL	Anninata	0.57	159	P	Pg	23 28 48.7	-0.6
VLMS	Volimes, Zakyn	0.78	172	P	Pg	23 28 52.2	-0.8
VLMS				AML	AML	23 29 10.8	
	comp=E,592µm,0.3s						
VLMS				AML	AML	23 29 12.5	
	comp=N,988µm,0.8s						
PVO	Paravola	0.79	92	P	Pg	23 28 53.4	+0.2
PVO				S	Sb	23 29 04.8	+0.6
	comp=N,402nm,0.3s						
PVO	Paravola	0.79	92	P	Pg	23 28 53.4	+0.2
PVO				S	Sg	23 29 03.6	+0.1
PVO				AML	AML	23 29 07.2	
	comp=N,1007µm,0.3s						
PVO				AML	AML	23 29 07.8	
	comp=E,586µm,0.3s						
VTN	Vitineika	0.90	144	P	Pg	23 28 55.1	-0.2
IGT	Igoumenitsa	0.90	351	P	Pg	23 28 54.5	-0.9
RLS	Riolos of Patr	0.94	128	P	Pg	23 28 55.9	-0.4
RLS				AML	AML	23 29 16.7	
	comp=E,303µm,0.4s						
RLS				AML	AML	23 29 18.5	
	comp=N,285µm,0.7s						
EVR	Evrytania	1.04	75	P	Pg	23 28 57.4	-0.7
EVR				AML	AML	23 29 21.6	
	comp=E,137µm,0.4s						
EVR				AML	AML	23 29 22.1	
	comp=N,126µm,0.5s						
JAN	Janina	1.04	14	P	Pg	23 28 58.3	+0.2
JAN				AML	AML	23 29 19.4	
	comp=E,296µm,0.5s						
JAN				AML	AML	23 29 21.7	
	comp=N,193µm,0.5s						
DRO	Drossia	1.16	126	P	Pg	23 28 59.8	-0.6
DRO				AML	AML	23 29 24.8	
	comp=E,445µm,0.5s						
DRO				AML	AML	23 29 30.2	
	comp=N,466µm,0.6s						
KEK	Kerkira	1.21	332	P	Pb	23 29 00.9	+0.1
TRIZ	Trizonia	1.25	102	P	Pb	23 29 00.7	-0.7
MAKR	Makrakomi, Fth	1.31	73	P	Pn	23 29 02.2	+0.1
MAKR	Makrakomi, Fth	1.31	73	P	Pn	23 29 02.2	+0.1
MAKR				AML	AML	23 29 29.9	
	comp=N,196µm,0.4s						
MAKR				AML	AML	23 29 31.1	
	comp=E,374µm,0.7s						
AMT	Artemida-Makis	1.45	140	P	Pb	23 29 05.5	+0.5
AGG	Agios Georgios	1.46	75	P	Pn	23 29 04.9	+0.7
ITM	Ithomi	1.84	142	P	Pb	23 29 11.7	+0.2

KEA 04 23:43:00.4±0.0**, 40°.93N**×**127°.32E, h19**^{km}**, ML2.3**/2**, North Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HHU	Hamhung	1.01	171	Pg	Pn	23 43 19.8	+0.2
HHU				Sg	Sb	23 43 32.8	+0.5
PYS	Pyongsong	2.02	214	Pg	Pg	23 43 38.4	-0.8
PYS				Sg	Sg	23 44 04.2	-1.2
SUJ	Sinuiju	2.31	250	Sg	Sg	23 44 14.3	-0.3

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*INET **04** 23:52:06.6, 10°.85N×86°.44W, h15^{km}, ML3.2*

UCR 04 23:52:06.3±1.9**, 10°.92N**×**86°.39W, h5**^{km}±10^{km}**, MD4.1, MW4.1, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NY14	Universidad de	0.89	108	i P	Pg	23 52 23.4	+0.1
GBS3	Finca Las Img	0.93	98	i P	Pg	23 52 23.8	-0.4
GBS3				i S	Sb	23 52 37.8	+0.2
BUEV	Buena Vista	0.97	97	i P	Pg	23 52 24.7	-0.3
GB1A	Borinquen Arri	0.98	96	eP	Pg	23 52 25.4	+0.3
GB1A				eS	Sn	23 52 40.4	-0.8
GPS3	Bodega del ICE	1.02	99	i P	Pb	23 52 26.4	-0.1
GPS3				i S	Sb	23 52 40.3	0.0
GPS1	Guardaparques	1.03	98	i P	Pg	23 52 25.8	-0.4
GPS1				i S	Sb	23 52 40.2	-0.4
BUAI	Buenos Aires	1.04	92	i P	Pg	23 52 26.1	-0.2
GUAI	GUAI	1.08	127	i P	Pg	23 52 25.4	-1.7
MASN	Masaya	1.09	12	eP	Pg	23 52 26.3	-0.9
COLC	Colonia	1.19	102	i P	Pg	23 52 27.8	-1.4
COLC				i S	Sg	23 52 44.4	-0.4
ACAL	Aguas Claras	1.36	102	i P	Pn	23 52 30.8	-1.3
ACAL				i S	Sb	23 52 49.0	-1.1
JTS	Las Juntas de	1.55	114	eP	Pn	23 52 33.1	-1.4
JTS				eS	Sg	23 52 55.9	-0.2
ACON	Acoyapa	1.58	49	eP	Pn	23 52 33.2	-1.9
CEDE	Laguna Cedeo	1.71	104	eP	Pn	23 52 37.3	+0.4
CEDE				eS	Sg	23 53 01.5	+0.1
CRIN	San Cristobal	1.88	340	eP	Pn	23 52 38.5	-0.7
MATN	Matagalpa	2.05	13	eP	Pn	23 52 40.6	-1.0
CSGN	Cosiguina Volc	2.34	331	eP	Pn	23 52 45.5	-0.1
ESPN	Las Esperanzas	2.41	58	eP	Pn	23 52 45.9	-0.5
LCR2	La Lucha 2	2.62	116	eP	Pn	23 52 49.6	+0.1

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*IDC **05** 00:01:52.4±3.1, 32°.57S×71°.36W, h43^{km}±28^{km}, mb3.1/2, mb1 3.5/7, mb1mx3.4/27, mbtmp3.5/7, ML3.4/5, Error ellipse: s-maj=43.0km s-min=20.0km az=109.0*

*SJA **05** 00:01:52.8±0.8, 32°.84S×71°.37W, h52^{km}±7^{km}, ML3.7, MW3.9*

*GUC **05** 00:01:53.8±0.7, 32°.69S×71°.26W, h50^{km}±3^{km}, ML3.9*

ISC 05 00:01:52.1±0.9**, 32°.62S**±0°.03×**71°.34W**±0°.05**, h32**^{km}±7^{km}**, n30, σ1^{s}.53**/45**, 7C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROCH	El Roble	0.45	142	⇑iP	Pn	00 02 03.9	+1.3
ROCH				i S	Sn	00 02 11.2	+1.5
ROCH				IAML		00 02 13.4	
	comp=N,14µm,0.3s						
ROC1	El Roble	0.45	143	i P	Pn	00 02 04.0	+1.3
ROC1				eS	Sn	00 02 11.1	+1.3
VA01	Torpederas	0.48	213	⇓iP	Pn	00 02 04.6	+1.7
VA01				i S	Sn	00 02 12.3	+2.1
VA01				IAML		00 02 13.9	
	comp=E,27µm,0.2s						
CO04	Los Peladeros	0.65	28	⇑iP	Pn	00 02 07.7	+2.3
CO04				i S	Sn	00 02 17.8	+3.1
CO04				IAML		00 02 20.5	
	comp=N,9µm,0.1s						
MT02	Curacav	0.66	165	⇓iP	Pb	00 02 05.9	+0.6
MT02				i S	Sb	00 02 14.6	+0.3
PEL	Peldehue	0.76	134	eP	Pb	00 02 06.9	-0.1
PEL				eS	Sb	00 02 17.7	+0.6
PEL				IAML		00 02 18.3	
	comp=N,7µm,0.4s						
PEL	Peldehue	0.76	134	i P	Pb	00 02 07.3	+0.3
PEL				eS	Sb	00 02 17.6	+0.6
CLCH	Cerro Calan	1.03	139	⇑iP	Pn	00 02 11.3	+0.9
CLCH				i S	Sb	00 02 24.1	-0.6
CLCH				IAML		00 02 24.8	
	comp=N,6µm,0.4s						
MT03	Universidad Ad	1.12	142	⇑iP	Pn	00 02 12.5	+0.9
MT03				i S	Sb	00 02 26.4	-0.9
MT03				IAML		00 02 26.8	
	comp=N,12µm,0.2s						
FCH	Farellones	1.13	129	⇑iP	Pn	00 02 12.7	+0.6
FCH				i S	Sb	00 02 26.9	-0.9
LMEL	Las Melosas	1.55	143	⇑iP	Pn	00 02 18.9	+1.2
LMEL				i S	Sn	00 02 37.8	+0.9
LMEL				IAML		00 02 39.7	
	comp=N,3µm,0.2s						
CO03	El Pedregal	1.86	17	eP	Pb	00 02 25.2	-0.3
CO03				i S	Sb	00 02 49.3	+0.9
CO03				IAML		00 02 52.4	
	comp=N,2µm,0.2s						
RTLS	Leoncito	1.91	65	i P	Pb	00 02 27.3	+0.8
RTLS				eS	Sb	00 02 52.5	+2.3
RTLS				IAML		00 02 52.8	
	comp=Z,676nm,0.3s						
RTCV	Cerro Valdivia	2.49	73	i P	Pb	00 02 35.3	-0.8
RTCV				eS	Sb	00 03 05.4	-1.0
ZON	Zonda	2.50	65	i P	Pb	00 02 35.3	-1.1
ZON				IAML		00 03 12.8	
	comp=Z,217nm,0.3s						
ACCO	Cerro Coronel	2.80	44	⇑iP	Pb	00 02 40.5	-1.2
AROD	Rodeo	2.92	34	i P	Pb	00 02 42.5	-1.2
AMOG	MOGNA	2.94	56	i P	Pb	00 02 41.3	-2.6
ACAN	Cantantal	3.52	86	i P	Pn	00 02 48.1	+3.4

AGUA	**GUANDACOL**	**3.96**	**39**	*i* P	Pb	00 02 56.3	-5.1
CYA	**Choya**	**6.33**	**50**	*i* P	**Pn**	**00 03 24.3**	**+0.9**
PLCA	**Paso Flores**	**8.12**	**176**	P	**Pn**	**00 03 48.0**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=357,slow=16,SNR=1.6						
PLCA				S	Sn	00 05 08.9	-10
	comp=Z,0.2nm,0.3s,baz=120,slow=15,SNR=2.1						
LVC	**Limon Verde**	**10.20**	**13**	P	**Pn**	**00 04 15.2**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=183,slow=18,SNR=2.0						
CPUP	**Villa Florida**	**13.71**	**66**	P	**Pn**	**00 05 05.3**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=242,slow=11,SNR=5.4						
CPUP				S	Sn	00 07 25.6	-10
	comp=Z,0.0nm,0.3s,baz=46,slow=13,SNR=1.5						
LPAZ	**La Paz**	**16.52**	**11**	P	**Pn**	**00 05 41.5**	**-0.6**
	comp=Z,0.0nm,0.3s,baz=180,slow=11,SNR=3.3						
SIV	**San Ignacio**	**18.99**	**32**	P	**P**	**00 06 10.6**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=229,slow=15,SNR=2.9						
SIV				S	**Sn**	**00 09 42.8**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=50,slow=5.3,SNR=3.2						
TXAR	**Lajitas Array**	**68.83**	**330**	P	**P**	**00 12 52.1**	**-1.4**
	comp=Z,0.1nm,0.4s,baz=142,slow=9.0,SNR=2.5						
TORD	**Torodi Ar. Bea**	**83.19**	**70**	P	**P**	**00 14 13.8**	**-1.7**
	comp=Z,0.4nm,0.7s,baz=258,slow=7.2,SNR=2.5						
ZALV	**Zalesovo Beam**	**152.75**	**31**	pPKPbc	**PKPab**	**00 21 60.0**	**+3.9**
	comp=Z,0.8nm,0.5s,baz=343,slow=3.0,SNR=3.6						
MKAR	**Makanchi Array**	**155.41**	**47**	PKPab	**PKPab**	**00 22 06.3**	**-1.4**
	comp=Z,0.1nm,0.5s,baz=281,slow=5.1,SNR=3.0						
MKAR				pPKPab	**sPKPab**	**00 22 21.2**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=306,slow=3.9,SNR=3.6						

UCR ***05*** *00:02:40.0±1.5, 12°.60N×87°.75W, h78^{km}±18^{km}, ML3.9*
SNET ***05*** *00:02:40.1±0.6, 12°.46N×87°.93W, h23^{km}±6^{km}, ML3.8*
INET ***05*** *00:02:40.5, 12°.44N×87°.78W, h54^{km}, ML3.6*
ISC 05 00:02:40.4±1.6**, 12°.7N**±0°.1×**87°.69W**±0°.07**, h86**^{km}±17^{km}**,**
n28, σ0^s.95/33**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**0.31**	**24**	*e*P	**Pn**	**00 02 53.7**	**+0.1**
CNCH	**Conchagua**	**0.60**	**346**	*e*P	**Pn**	**00 02 55.5**	**-0.3**
CNCH	**Conchagua**	**0.60**	**346**	*e*P	**Pn**	**00 02 55.5**	**-0.3**
CRIN	**San Cristobal**	**0.62**	**89**	*e*P	**Pn**	**00 02 56.0**	**0.0**
LCND	**La Caada**	**0.65**	**342**	IAML		00 03 10.2	
	comp=Z,3μm,0.4s						
LCND	**La Caada**	**0.65**	**342**	IAML		00 03 10.2	
	comp=Z,3μm,0.4s						
BLLM	**Bellamira**	**0.92**	**325**	*e*P	**Pn**	**00 02 58.2**	**-0.8**
BLLM	**Bellamira**	**0.92**	**325**	*e*P	**Pn**	**00 02 58.2**	**-0.8**
RANC	**El Ranchito**	**0.94**	**322**	*e*P	**Pn**	**00 02 59.3**	**-0.1**
RANC				*e*S	**Sn**	**00 03 13.9**	**+0.3**
RANC				IAML		00 03 14.5	
	comp=Z,3μm,0.1s						
RANC	**El Ranchito**	**0.94**	**322**	*e*P	**Pn**	**00 02 59.3**	**-0.1**
RANC				*e*S	**Sn**	**00 03 13.9**	**+0.3**
RANC				IAML		00 03 14.5	
	comp=Z,3μm,0.1s						
CNGN	**Cerro Negro**	**0.98**	**101**	*e*P	**Pn**	**00 02 59.2**	**-0.5**
PACA	**Pacayal**	**0.99**	**322**	*e*P	**Pn**	**00 02 59.9**	**0.0**
PACA				*e*S	**Sn**	**00 03 15.0**	**+0.5**
PACA	**Pacayal**	**0.99**	**322**	*e*P	**Pn**	**00 02 59.9**	**0.0**
PACA				*e*S	**Sn**	**00 03 15.0**	**+0.5**
TECA	**Tecapa**	**1.13**	**315**	*e*P	**Pn**	**00 03 01.3**	**-0.2**
TECA	**Tecapa**	**1.13**	**315**	*e*P	**Pn**	**00 03 01.3**	**-0.2**
ESTN	**Estel**	**1.35**	**72**	*e*P	**Pn**	**00 03 05.3**	**+1.1**
LFRS	**El Faro**	**1.63**	**305**	*i* P	**Pn**	**00 03 07.3**	**-0.5**
LFRS				*e*S	**Sn**	**00 03 28.3**	**-0.2**
MATN	**Matagalpa**	**1.74**	**82**	*e*P	**Pn**	**00 03 08.5**	**-0.6**
ACON	**Acoyapa**	**2.56**	**106**	*e*P	**Pn**	**00 03 16.6**	**-3.4**
GBS3	**Finca Las Img**	**2.90**	**131**	*e*P	**Pn**	**00 03 24.3**	**-0.2**
GB1A	**Borinquen Arri**	**2.91**	**129**	*e*P	**Pn**	**00 03 24.2**	**-0.6**
GB1A				*e*S	**Sn**	**00 03 57.9**	**-1.1**
BUEV	**Buena Vista**	**2.92**	**130**	*e*P	**Pn**	**00 03 25.2**	**+0.3**
BUEV				*e*S	**Sn**	**00 03 59.2**	**0.0**
MESS	**Mesas**	**3.12**	**128**	*e*P	**Pn**	**00 03 27.1**	**-0.5**
COLC	**Colonia**	**3.16**	**129**	*e*P	**Pn**	**00 03 29.4**	**+1.3**
CUI	**Cuipilapa**	**3.19**	**129**	*e*P	**Pn**	**00 03 28.5**	**-0.1**
GUAI	**GUAI**	**3.21**	**138**	*e*P	**Pn**	**00 03 28.5**	**-0.3**
ESPN	**Las Esperanzas**	**3.35**	**98**	*e*P	**Pn**	**00 03 31.4**	**+0.8**
LCR2	**La Lucha 2**	**4.65**	**129**	*e*P	**Pn**	**00 03 50.9**	**+2.4**

NIED ***05*** *00:08:00, 39°.20N×142°.40E, h38^{km}, Mw3.7 Best double couple: $M_0$3.56000×10^{14} NP1:ϕ_s167.00000°, δ55.00000°, λ-76.00000°. NP2:ϕ_s324.00000°, δ37.00000°, λ-109.00000°.*
IDC ***05*** *00:08:38.7±1.4, 38°.98N×142°.55E, h0^{km}, mb3.3/3, mb1 3.6/3, mb1mx3.3/30, mbtmp3.3/3, Error ellipse: s-maj=48.2km s-min=32.5km az=107.0*
JMA ***05*** *00:08:42.3±0.1, 39°.21N×142°.38E, h30^{km}±1^{km}, M3.8*
JMA Felt I J1.
ISC 05 00:08:42.4±1.9**, 39°.17N**±0°.05×**142°.35E**±0°.09**, h25**^{km}±12^{km}**,**
n19, σ0^s.83/23**, mb3.5**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.54**	**260**	P	**Pb**	**00 08 53.6**	**+0.3**
OFUJ				S	**Sb**	**00 09 01.3**	**+0.7**
MIYJ	**Miyakonagasawa**	**0.57**	**314**	P	**Pb**	**00 08 53.5**	**-0.4**
MIYJ				S	**Sb**	**00 09 01.2**	**-0.5**
JKMT	**Kesennumamotoy**	**0.77**	**242**	P	**Pn**	**00 08 57.1**	**-0.6**
JKMT				S	**Sb**	**00 09 07.7**	**+0.4**
JTH	**Tanohata**	**0.85**	**334**	P	**Pb**	**00 08 58.4**	**-0.1**
JTH				*e*S	**Sn**	**00 09 09.2**	**-1.2**
JOM	**Ohasama**	**0.87**	**290**	P	**Pn**	**00 08 58.6**	**-0.5**
JOM				S	**Sn**	**00 09 10.3**	**-0.7**
JMK	**Ichinoseki**	**0.91**	**256**	P	**Pn**	**00 08 59.2**	**-0.3**
JMK				S	**Sn**	**00 09 11.4**	**-0.4**
JIO	**Ouri**	**1.06**	**228**	P	**Pn**	**00 09 01.0**	**-0.6**
JIO				S	**Sn**	**00 09 14.3**	**-1.3**
JKZ	**Kuzumaki**	**1.13**	**316**	P	**Pn**	**00 09 02.5**	**-0.1**
JKZ				S	**Sn**	**00 09 16.7**	**-0.7**
JRG	**Rokugo**	**1.35**	**280**	P	**Pb**	**00 09 06.4**	**-0.6**
JRG				S	**Sb**	**00 09 24.7**	**+0.8**
JANG	**Nango**	**1.36**	**332**	P	**Pn**	**00 09 05.4**	**-0.4**
JANG				S	**Sn**	**00 09 22.4**	**-0.6**
H11N2	**WAKE ISLAND Hy**	**28.70**	**125**	T	T	00 44 58.8	
	baz=318,slow=75,SNR=267						
H11N1	**WAKE ISLAND Hy**	**28.70**	**125**	T	T	00 45 01.6	
	baz=318,slow=75,SNR=225						
H11N3	**WAKE ISLAND Hy**	**28.71**	**125**	T	T	00 45 02.2	
	baz=318,slow=75,SNR=189						
H11S1	**WAKE ISLAND Hy**	**29.48**	**127**	T	T	00 45 58.4	
	baz=319,slow=76,SNR=24						
H11S3	**WAKE ISLAND Hy**	**29.49**	**127**	T	T	00 46 00.3	
	baz=319,slow=76,SNR=35						
H11S2	**WAKE ISLAND Hy**	**29.50**	**127**	T	T	00 45 59.5	
	baz=319,slow=76,SNR=21						
MKAR	**Makanchi Array**	**43.64**	**300**	P	**P**	**00 16 46.7**	**+2.0**
	0.1nm,0.4s,baz=79,slow=7.5,SNR=3.3						
ILAR	**Eielson Array**	**47.30**	**33**	P	**P**	**00 17 13.9**	**+0.5**
	0.3nm,0.6s,baz=269,slow=6.1,SNR=8.0						
WRA	**Warramunga Arr**	**59.28**	**189**	P	**P**	**00 18 40.9**	**-1.0**
	0.5nm,0.8s,baz=4.4,slow=7.1,SNR=5.7						

IDC 05 01:39:54.4±1.2**, 16°.92N**×**145°.87E, h0**^{km}**, mb3.7**/5**, mb1 4.0**/5**, mb1mx3.5**/56**, mbtmp3.7**/5**, MS4.0**/1**, Ms1 4.0**/1**, ms1mx2.7**/41**, Error ellipse: s-maj=49.9km s-min=32.2km az=112.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**17.04**	**342**	LR	LR	01 49 37.2	
	comp=Z,439nm,18.7s,baz=54,slow=34						
H11S3	**WAKE ISLAND Hy**	**19.89**	**82**	T	T	02 04 58.2	
	baz=268,slow=75,SNR=91						
H11S1	**WAKE ISLAND Hy**	**19.90**	**82**	T	T	02 04 59.3	
	baz=268,slow=75,SNR=118						
H11S2	**WAKE ISLAND Hy**	**19.91**	**82**	T	T	02 04 56.9	
	baz=268,slow=75,SNR=104						
H11N1	**WAKE ISLAND Hy**	**20.14**	**79**	T	T	02 05 22.7	
	baz=266,slow=75,SNR=119						
H11N2	**WAKE ISLAND Hy**	**20.15**	**79**	T	T	02 05 23.2	
	baz=266,slow=75,SNR=106						
H11N3	**WAKE ISLAND Hy**	**20.16**	**79**	T	T	02 05 24.1	
	baz=266,slow=75,SNR=98						
WRA	**Warramunga Arr**	**38.34**	**198**	P	P	01 47 16.9	-0.4
	0.9nm,1.0s,baz=20,slow=9.2,SNR=3.0						
KURBB	**Kurchatov Arra**	**62.75**	**319**	P	P	01 50 21.7	+0.3
	0.6nm,0.7s,baz=98,slow=6.7,SNR=5.6						
INK	**Inuvik**	**70.94**	**23**	P	P	01 51 12.5	-0.7
	0.5nm,0.6s,baz=277,slow=5.7,SNR=4.3						
YKA	**Yellowknife Ar**	**79.48**	**28**	P	P	01 52 02.1	-0.4
	0.5nm,0.7s,baz=290,slow=5.3,SNR=5.2						
NVAR	**Mina Array Bea**	**84.10**	**52**	P	P	01 52 28.9	+1.1
	0.5nm,0.5s,baz=271,slow=5.7,SNR=6.2						

ISC 05 01:48:24.1±1.2**, 44°.93N**±0°.04×**15°.05E**±0°.06**, h9**^{km}**, n10,**
σ1^s.12/13**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NVLJ	**Novalja**	**0.39**	**199**	*i* Pg	**Pg**	**01 48 31.3**	**-0.4**
NVLJ				Sg	**Sg**	**01 48 36.9**	**+0.2**
RIY	**Rijeka**	**0.56**	**315**	Sg	**Sg**	**01 48 42.0**	**-0.5**
BOJS	**Bojanci**	**0.59**	**14**	*i* Pg	**Pg**	**01 48 35.2**	**-0.4**
GBRS	**Gornja Briga**	**0.63**	**345**	*i* Pg	**Pg**	**01 48 35.7**	**-0.5**
GBRS				*i* Sg	**Sg**	**01 48 45.2**	**+0.7**
OZLJ	**Ozalj**	**0.75**	**23**	*i* Pg	**Pg**	**01 48 37.1**	**-1.5**
OZLJ				Sg	**Sb**	**01 48 48.5**	**-1.1**
VISS	**Visnje**	**0.89**	**351**	*i* Pg	**Pg**	**01 48 40.5**	**-0.6**
BRJN	**Brijuni**	**0.92**	**269**	Sg	**Sg**	**01 48 52.1**	**-1.7**
CEY	**Cerknica**	**0.92**	**332**	*i* Pg	**Pb**	**01 48 42.9**	**+0.6**
SKDS	**Skadanscina**	**0.96**	**311**	*i* Pg	**Pg**	**01 48 42.7**	**+0.2**
PTJ	**Puntijarka**	**1.18**	**33**	Sg	**Sn**	**01 49 05.0**	**+2.1**

ROM 05 01:50:41.6±0.1**, 43°.064N**±0°.003×**13°.062E**±0°.006**,**
h12^{km}**, Md1.1**/1**, Error ellipse: s-maj=0.4km s-min=0.4km az=93.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDMO	**Fiordimonte**	**0.03**	**146**	P	Pg	01 50 44.3	+0.4
FDMO				S	Sg	01 50 45.9	+0.4
FDMO	**Fiordimonte**	**0.03**	**146**	P	Pg	01 50 44.3	+0.4
CESI	**CESI - Serrava**	**0.13**	**243**	P	Pg	01 50 45.4	+0.4
CESI				S	Sg	01 50 47.9	+0.6
CESI				END			
CESI	**CESI - Serrava**	**0.13**	**243**	P	Pb	01 50 45.6	-0.4
SNTG	**Esanatoglia**	**0.21**	**335**	P	Pg	01 50 46.6	+0.4
SNTG				S	Sg	01 50 50.4	+1.0
NRCA	**Norcia**	**0.23**	**171**	P	Pg	01 50 47.0	+0.3
NRCA				S	Sg	01 50 51.1	+1.1
NRCA				END			

ROM 05 01:50:42.7±0.1**, 43°.434N**±0°.002×**12°.505E**±0°.003**,**
h7^{km}**, Md1.0**/4**, Error ellipse: s-maj=0.2km s-min=0.1km az=71.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATPI	**Pietralunga -**	**0.08**	**283**	P	Pg	01 50 44.9	+0.3
ATPI				S	Sg	01 50 46.5	+0.4
ATPI				END			
ATFO	**Monte Foce - G**	**0.08**	**144**	P	Pg	01 50 45.1	+0.3
ATFO				S	Sg	01 50 46.7	+0.5
ATFO				END			
ATVO	**AVT- Monte Val**	**0.09**	**234**	P	Pg	01 50 45.1	+0.3
ATVO				S	Sg	01 50 46.8	+0.5
ATVO				END			
NARO	**Abbazia di Nar**	**0.18**	**17**	P	Pg	01 50 46.9	+0.5
NARO				S	Sg	01 50 50.3	+1.3
BADI	**Badiali**	**0.20**	**292**	P	Pg	01 50 47.4	+0.6
BADI				S	Sg	01 50 51.0	+1.4
BADI				END			

IDC 05 02:02:01.3±2.3**, 5°.88S**×**130°.02E, h0**^{km}**, mb3.9**/1**, mb1 3.9**/3**, mb1mx3.6**/25**, mbtmp3.8**/3**, ML3.8**/2**, Error ellipse: s-maj=157.8km s-min=29.7km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.60**	**164**	Pn	Pn	02 05 28.5	-0.7
	0.4nm,0.3s,baz=346,slow=13,SNR=16						
WRA				Sn	Sn	02 07 57.2	-15
	1.4nm,0.3s,baz=333,slow=23,SNR=7.5						
ASAR	**Alice Springs**	**18.07**	**168**	P	Pn	02 06 14.2	+0.2
	0.4nm,0.3s,baz=350,slow=11,SNR=22						
ASAR				S	Sn	02 09 20.9	-16
	0.3nm,0.3s,baz=352,slow=26,SNR=6.5						
MKAR	**Makanchi Array**	**67.31**	**327**	P	P	02 12 58.0	0.0
	0.6nm,0.4s,baz=130,slow=7.4,SNR=16						

IDC ***05*** *02:11:27.5±1.6, 16°.75S×178°.18W, h0^{km}, mb3.9/6, mb1 4.2/6, mb1mx3.8/44, mbtmp3.9/6, Error ellipse: s-maj=110.3km s-min=21.9km az=150.0*
NEIC 05 02:11:40.5±0.8**, 16°.8S**±0°.8×**178°.3W**±0°.5**, h104**^{km}±14^{km}**,**
mb4.1/2**, Error ellipse: s-maj=132.7km s-min=7.9km az=151.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**6.94**	**67**	Pn	Pn	02 13 20.0	+0.2
STKA	**Stephens Creek**	**39.24**	**240**	P	P	02 18 58.9	-0.1
	2.2nm,0.6s,baz=74,slow=7.4,SNR=4.4						
STKA	**Stephens Creek**	**39.24**	**240**	IAmb	IAmb	02 20 01.5	
	comp=Z,5.3nm,1.6s						
WRA	**Warramunga Arr**	**44.92**	**258**	P	P	02 19 44.9	-0.3
	comp=Z,1.3nm,0.3s,baz=96,slow=6.9,SNR=24						
AS31	**Alice Springs**	**45.17**	**253**	P	P	02 19 47.3	0.0
AS31				IAmb	IAmb	02 19 48.9	
	comp=Z,2.4nm,0.6s						
ASAR	**Alice Springs**	**45.17**	**253**	P	P	02 19 48.1	+0.8
	comp=Z,6.7nm,0.5s,baz=89,slow=8.4,SNR=88						
ILAR	**Eielson Array**	**84.79**	**13**	P	P	02 24 03.2	+0.4
	comp=Z,0.2nm,0.4s,baz=222,slow=4.8,SNR=4.8						
TXAR	**Lajitas Array**	**85.34**	**58**	P	P	02 24 06.5	0.0
	comp=Z,0.2nm,0.7s,baz=239,slow=5.1,SNR=3.1						
PDAR	**Pinedale Array**	**86.50**	**43**	P	P	02 24 11.6	-0.5
	comp=Z,0.2nm,0.6s,baz=227,slow=3.2,SNR=2.3						

IDC ***05*** *02:13:52.0±4.4, 12°.77N×146°.73E, h52^{km}±38^{km}, mb3.2/7, mb1 3.5/7, mb1mx3.3/50, mbtmp3.5/7, Error ellipse: s-maj=30.6km s-min=20.7km az=86.0*
ISC 05 02:13:50.0±1.0**, 12°.8N**±0°.2×**146°.8E**±0°.1**, h35**^{km}**, n9,**
σ0^s.85/10**, mb3.6**/7**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.09**	**294**	P	**Pn**	**02 14 23.0**	**+0.5**
	79nm,0.3s,baz=153,slow=6.8,SNR=22						
GUMO				S	**Sn**	**02 14 47.6**	**+0.2**
	121nm,0.3s,baz=336,slow=20,SNR=18						
WRA	**Warramunga Arr**	**34.74**	**201**	P	**P**	**02 20 37.3**	**+0.2**
	1.0nm,0.9s,baz=19,slow=9.1,SNR=3.5						
ASAR	**Alice Springs**	**38.34**	**199**	P	**P**	**02 21 07.9**	**+0.1**
	0.3nm,0.5s,baz=22,slow=8.0,SNR=4.2						
CMAR	**Chiang Mai Arr**	**46.38**	**283**	P	**P**	**02 22 13.6**	**+0.3**
	0.7nm,0.3s,baz=76,slow=7.5,SNR=4.1						
SONM	**Songino Array**	**48.52**	**324**	P	**P**	**02 22 29.0**	**-0.7**
	0.3nm,0.4s,baz=130,slow=6.4,SNR=4.0						
MKAR	**Makanchi Array**	**63.42**	**316**	P	**P**	**02 24 14.9**	**-1.3**
	0.4nm,0.7s,baz=91,slow=8.5,SNR=5.1						
ILAR	**Eielson Array**	**68.50**	**25**	P	**P**	**02 24 50.0**	**+1.5**
	0.2nm,0.5s,baz=252,slow=5.7,SNR=3.2						
YKA	**Yellowknife Ar**	**82.71**	**28**	P	**P**	**02 26 09.7**	**-0.2**
	0.1nm,0.5s,baz=270,slow=4.3,SNR=2.0						
LPAZ	**La Paz**	**145.99**	**100**	PKPbc	**PKPdf**	**02 33 26.5**	**-0.5**
	0.6nm,0.4s,baz=306,slow=2.7,SNR=3.6						

BJI ***05*** *02:24:21.8±0.0, 31°.51N×119°.15W, h13^{km}, mB5.6/4, mb5.3/9, Ms4.9/4, Ms7 4.6/2*
IDC ***05*** *02:24:22.2±0.8, 31°.10N×119°.59W, h0^{km}, mb4.3/14, mb1 4.4/22, mb1mx4.2/48, mbtmp4.2/22, ML3.8/7, MS3.8/30, Ms1 3.8/30, ms1mx3.7/57, Error ellipse: s-maj=16.8km s-min=12.9km az=65.0*
NEIC ***05*** *02:24:23.4±1.4, 31°.32N±0°.07×119°.41W±0°.07, h7^{km}±5^{km}, mb4.6/117, Error ellipse: s-maj=13.7km s-min=3.1km az=219.0*
MEX ***05*** *02:24:25.3±0.6, 31°.83N×118°.78W, h251^{km}±140^{km}, MD5.2*
ECX ***05*** *02:24:25.8±0.7, 31°.19N×119°.16W, h10^{km}±93^{km}, ML4.4*
GCMT ***05*** *02:24:27.4±0.4, 31°.21N±0°.02×119°.62W±0°.03, h28^{km}±1^{km}, MW4.9/90, Moment Tensor Solution. s15,c18; s90,c127; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.24±.17; $M_{\theta\theta}$1.53±.13; $M_{\phi\phi}$-0.28±.11; $M_{r\theta}$0.49±.20; $M_{\theta\phi}$2.83±.10; $M_{\phi r}$0.92±.17; Best double couple: $M_0$3.14900×10^{16} NP1:ϕ_s99.00000°, δ67.00000°, λ-8.00000°. NP2: ϕ_s192.00000°, δ83.00000°, λ-157.00000°. Principal axes: T 3.7700, Plg11.0000°, Azm323.0000°; N -1.2390, Plg66.0000°, Azm208.0000°; P -2.5290, Plg21.0000°, Azm57.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ANF ***05*** *02:24:27.8±0.6, 31°.54N×119°.27W, h2^{km}, ML4.4/38 Error ellipse: s-maj=5.8km s-min=4.3km az=52.0*
ISC 05 02:24:23.4±2.8**, 31°.25N**±0°.05×**119°.48W**±0°.05**, h9**^{km}±17^{km}**,**
n337, σ1^s.67/315**, mb4.6**/50**, MS3.9**/26**, 2C-18D, Off west coast of Baja California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCI2	**San Clemente I**	**1.90**	**24**	P	**Pn**	**02 24 55.4**	**-0.5**
	baz=203,SNR=34						
SCI2				S	**Sn**	**02 25 18.2**	**-1.8**
	baz=203						
SNCC	**San Nicolas Is**	**1.99**	**359**		**Pn**	**02 24 55.9**	**-1.4**
SNCC				Sn	**Sn**	**02 25 20.4**	**-1.9**
SNCC	**San Nicolas Is**	**1.99**	**359**	P	**Pn**	**02 24 55.7**	**-1.5**
	baz=176,SNR=7.8						
SNCC				S	**Sn**	**02 25 19.0**	**-3.3**
	baz=176						
CIS	**Catalina Islan**	**2.33**	**23**	P	**Pn**	**02 25 01.4**	**-0.5**
	baz=202,SNR=26						
CIS				S	**Sn**	**02 25 28.2**	**-2.4**
	baz=202						
TJX	**Tijuana**	**2.42**	**58**	⇓*e*P	**Pn**	**02 25 02.6**	**-0.5**
TJX				*e*S	**Sn**	**02 25 31.0**	**-1.8**
CCX	**Cicese**	**2.48**	**75**	⇓*e*P	**Pn**	**02 25 01.2**	**-2.8**
CCX				*e*S	**Sn**	**02 25 30.2**	**-4.2**
OLP	**Otay Lakes Par**	**2.56**	**57**	⇓*e*P	**Pn**	**02 25 04.1**	**-0.9**
OLP				*e*S	**Sn**	**02 25 34.4**	**-1.9**
109C	**Camp Elliot, M**	**2.60**	**50**		**Pn**	**02 25 05.0**	**-0.5**
109C				Sn	**Sn**	**02 25 35.2**	**-2.0**
109C	**Camp Elliot, M**	**2.60**	**50**	P	**Pn**	**02 25 04.9**	**-0.7**
	baz=232,SNR=54						
109C				S	**Sn**	**02 25 34.5**	**-2.7**
	baz=232						
SDRC	**San Diego Road**	**2.62**	**55**	⇓*e*P	**Pn**	**02 25 05.1**	**-0.7**
SDRC				*e*S	**Sn**	**02 25 36.1**	**-1.7**
CBX	**Cerro Bola**	**2.62**	**65**	⇓*e*P	**Pn**	**02 25 05.1**	**-1.0**
CBX				*e*S	**Sn**	**02 25 36.6**	**-1.5**
CBX	**Cerro Bola**	**2.62**	**65**	*e*P	**Pn**	**02 25 05.1**	**-1.0**
CBX				*e*S	**Sn**	**02 25 36.2**	**-1.9**
CBX	**Cerro Bola**	**2.62**	**65**		**Pn**	**02 25 05.1**	**-1.0**
CBX					**Sn**	**02 25 36.2**	**-1.9**
FMP	**Fort Macarthur**	**2.65**	**22**	P	**Pn**	**02 25 06.2**	**-0.1**
	baz=201						
FMP				S	**Sn**	**02 25 36.1**	**-2.5**
	baz=201						
TJIG	**Tijuana**	**2.66**	**63**	⇓*e*P	**Pn**	**02 25 05.7**	**-0.9**
TJIG	**Tijuana**	**2.66**	**63**	*e*P	**Pn**	**02 25 05.7**	**-0.9**
TJIG				*e*S	**Sn**	**02 25 36.4**	**-2.5**
TJIG	**Tijuana**	**2.66**	**63**		**Pn**	**02 25 05.7**	**-0.9**
TJIG					**Sn**	**02 25 36.4**	**-2.5**
SCZ2	**Santa Cruz Isl**	**2.74**	**357**	P	**Pn**	**02 25 07.5**	**0.0**
	baz=175						
SCZ2				S	**Sn**	**02 25 38.8**	**-2.0**
	baz=175						
EML	**El Monte Cty P**	**2.77**	**53**	⇓*e*P	**Pn**	**02 25 07.3**	**-0.7**
BAR	**Barrett**	**2.78**	**58**	⇓*e*P	**Pn**	**02 25 07.5**	**-0.6**
BAR	**Barrett**	**2.78**	**58**		**Pn**	**02 25 07.8**	**-0.3**
BAR				Sn	**Sn**	**02 25 39.8**	**-2.1**
BLG	**Laguna Peak, P**	**2.87**	**7**	P	**Pn**	**02 25 09.2**	**-0.1**
	baz=185,SNR=7.5						
BLG				S	**Sn**	**02 25 42.7**	**-1.3**
	baz=185						
MURC	**Murrieta**	**3.04**	**39**	P	**Pn**	**02 25 11.4**	**-0.3**
	baz=220,SNR=84						
MURC				S	**Sn**	**02 25 46.9**	**-1.3**
	baz=220						
MONP2	**Monument Peak**	**3.07**	**57**	⇓*e*P	**Pn**	**02 25 12.2**	**-0.1**
MONP2				*e*S	**Sn**	**02 25 49.1**	**-0.1**
MONP2	**Monument Peak**	**3.07**	**57**	P	**Pn**	**02 25 12.1**	**-0.1**
	baz=240,SNR=528						
MONP2				S	**Sn**	**02 25 49.1**	**-0.1**
	baz=240						
ESJX	**Sierra Juarez**	**3.11**	**75**	⇓*e*P	**Pn**	**02 25 10.9**	**-1.9**
PASC	**Pasadena Art C**	**3.11**	**20**		**Pn**	**02 25 11.5**	**-1.1**
PASC				Sn	**Sn**	**02 25 47.1**	**-2.8**
DECC	**Green Verdugo**	**3.15**	**18**	P	**Pn**	**02 25 13.6**	**+0.5**
	baz=197						
DECC				S	**Sn**	**02 25 49.4**	**-1.5**
	baz=197						
VTX	**Valle De La Tr**	**3.17**	**87**	⇓*e*P	**Pn**	**02 25 12.0**	**-1.5**
SQX	**San Quintin**	**3.17**	**101**	⇓*e*P	**Pn**	**02 25 11.2**	**-2.2**
SQX				⇑*e*		02 25 50.6	
SQX				IAML		02 25 50.6	
	comp=E,1μm,0.4s						
SBC	**Santa Barbara**	**3.19**	**357**	P	**Pn**	**02 25 13.7**	**0.0**
	baz=174						
SBC				S	**Sn**	**02 25 51.5**	**-0.3**
	baz=174						
IKP	**In-Ko-Pah, Jac**	**3.19**	**63**	⇓*e*P	**Pn**	**02 25 13.9**	**+0.1**
IKP	**In-Ko-Pah, Jac**	**3.19**	**63**	P	**Pn**	**02 25 13.9**	**+0.1**
	baz=246,SNR=259						
IKP				S	**Sn**	**02 25 50.9**	**-1.1**
	baz=246						
MWC	**Mount Wilson**	**3.20**	**22**		**Pn**	**02 25 12.4**	**-1.6**
MWC				Sn	**Sn**	**02 25 49.9**	**-2.5**
ERMX	**Rumorosa**	**3.21**	**65**	⇓*e*P	**Pn**	**02 25 14.3**	**+0.1**
BFSC	**Mount Baldy Ra**	**3.35**	**27**	P	**Pn**	**02 25 16.5**	**+0.4**
	baz=207,SNR=119						
BFSC				S	**Sn**	**02 25 53.8**	**-2.3**
	baz=207						
OSI	**Osito Audit: C**	**3.41**	**11**	S	**Sn**	**02 25 54.7**	**-2.8**
	baz=190						
SPIG	**San Pedro Mart**	**3.45**	**92**	*e*P	**Pn**	**02 25 16.4**	**-1.2**
SPIG				*e*S	**Sn**	**02 25 56.2**	**-2.6**
SPIG	**San Pedro Mart**	**3.45**	**92**		**Pn**	**02 25 16.4**	**-1.2**
SPIG					**Sn**	**02 25 56.2**	**-2.6**
SPX	**San Pedro Mart**	**3.45**	**93**	⇓*e*P	**Pn**	**02 25 15.4**	**-2.2**
SPX				⇑*e*		02 25 56.6	
SPX				IAML		02 25 58.0	
	comp=N,616nm,0.8s						
SPX	**San Pedro Mart**	**3.45**	**93**	*e*P	**Pn**	**02 25 15.4**	**-2.2**
SPX				*e*S	**Sn**	**02 25 55.5**	**-3.4**
SPX	**San Pedro Mart**	**3.45**	**93**		**Pn**	**02 25 15.4**	**-2.2**
SPX					**Sn**	**02 25 55.5**	**-3.4**
PFO	**Pinyon Flats O**	**3.47**	**47**	Pn	**Pn**	**02 25 18.7**	**+0.9**
	comp=N,59nm,0.3s,baz=227,slow=12,SNR=874						
PFO				Sn	**Sn**	**02 25 58.7**	**-0.4**
	comp=N,27nm,0.3s,baz=155,slow=21,SNR=16						
PFO				LR	LR	02 26 39.7	
	comp=N,2μm,21.7s,baz=206,slow=38						
PFO	**Pinyon Flats O**	**3.47**	**47**	Pn	**Pn**	**02 25 17.1**	**-0.7**
PFO				Sn	**Sn**	**02 25 57.8**	**-1.3**
PFO	**Pinyon Flats O**	**3.47**	**47**	P	**Pn**	**02 25 18.7**	**+0.9**
	baz=228,SNR=298						
PFO				S	**Sn**	**02 25 58.5**	**-0.6**
	baz=228						
XPFO	**Pion Flat**	**3.48**	**47**	Pn	**Pn**	**02 25 17.1**	**-0.7**
SWSC	**Sam W. Stewart**	**3.55**	**61**	⇓*e*P	**Pn**	**02 25 19.0**	**+0.3**
SWSC	**Sam W. Stewart**	**3.55**	**61**	P	**Pn**	**02 25 19.0**	**+0.3**
	baz=244,SNR=240						
SWSC				S	**Sn**	**02 26 01.5**	**+0.7**
	baz=244						
PKM	**Mcpherson Peak**	**3.64**	**356**	P	**Pn**	**02 25 20.1**	**0.0**
	baz=174,SNR=49						
PKM				S	**Sn**	**02 26 01.4**	**-1.8**
	baz=174						
BBRC	**Big Bear Solar**	**3.70**	**35**	P	**Pn**	**02 25 22.1**	**+1.2**
	baz=216,SNR=43						
BBRC				S	**Sn**	**02 26 05.2**	**+0.5**
	baz=216						
CPBX	**Cerro Prieto**	**3.74**	**71**	*e*P	**Pn**	**02 25 19.7**	**-1.6**
ECBX	**El Chinero**	**3.80**	**86**	⇓*e*P	**Pn**	**02 25 20.8**	**-1.3**
EDW2	**Edwards Air Fo**	**3.83**	**19**	P	**Pn**	**02 25 23.9**	**+1.3**
	baz=198,SNR=32						
EDW2				S	**Sn**	**02 26 06.6**	**-1.1**
	baz=198						
SALX	**Saltillo**	**3.88**	**71**	⇓*e*P	**Pn**	**02 25 19.7**	**-3.6**
ARVC	**Arvin**	**3.90**	**8**	P	**Pn**	**02 25 24.3**	**+0.7**
	baz=187,SNR=14						
ARVC				S	**Sn**	**02 26 07.8**	**-1.7**
	baz=187						
SFX	**San Felipe**	**3.98**	**92**	*e*P	**Pn**	**02 25 23.4**	**-1.2**
BELC	**Belle Mtn. Jos**	**4.02**	**46**	P	**Pn**	**02 25 26.2**	**+0.9**
	baz=228,SNR=54						
SMMC	**Simmler**	**4.07**	**354**	P	**Pn**	**02 25 26.4**	**+0.5**
	baz=172,SNR=54						

SMMC				S	Sn	02 26 12.3	-1.4
	baz=172						
BC3	Big Chuckawall	4.16	54	P	Pn	02 25 27.6	+0.4
	baz=236,SNR=102						
BC3				S	Sn	02 26 14.0	-2.1
	baz=236						
RRX	Edison Barstow	4.17	29	P	Pn	02 25 28.8	+1.5
	baz=210,SNR=17						
RRX				S	Sn	02 26 15.9	-0.3
	baz=210						
GLA	Glamis	4.34	64		Pn	02 25 29.4	-0.2
GLA	Glamis	4.34	64	P	Pn	02 25 29.9	+0.3
	baz=248,SNR=76						
GLA				S	Sn	02 26 18.9	-1.3
	baz=248						
HEC	Hector,Ludlow	4.44	36	P	Pn	02 25 32.3	+1.3
	baz=217,SNR=61						
LRMC	Laurel Mtn Rad	4.48	19	P	Pn	02 25 32.8	+1.3
	baz=199,SNR=36						
LRMC				S	Sn	02 26 21.0	-2.8
	baz=199						
ISA	Isabella, Lake	4.48	11		Pn	02 25 32.4	+0.8
ISA				Sn	Sn	02 26 22.5	-1.4
ISA	Isabella, Lake	4.48	11	P	Pn	02 25 32.8	+1.3
	baz=190,SNR=36						
ISA				S	Sn	02 26 21.6	-2.2
	baz=190						
PAGB	Antelope Grade	4.51	352		Pn	02 25 31.7	-0.3
VES	Vestal, Richgr	4.59	4	S	Sn	02 26 23.8	-2.6
	baz=183						
GSC	Goldstone, Bar	4.62	28		Pn	02 25 33.1	-0.4
GSC	Goldstone, Bar	4.62	28	P	Pn	02 25 35.2	+1.7
	baz=209,SNR=268						
GSC				S	Sn	02 26 26.7	-0.6
	baz=209						
IRM	Iron Mountain	4.67	50	P	Pn	02 25 35.0	+1.0
	baz=233,SNR=85						
IRM				S	Sn	02 26 27.4	-1.0
	baz=233						
GMRC	Granite Mounta	4.77	41	P	Pn	02 25 36.6	+1.0
	baz=223,SNR=142						
Y12C	Blythe	4.87	58		Pn	02 25 35.2	-1.7
Y12C	Blythe	4.87	58	P	Pn	02 25 37.7	+0.8
	baz=241,SNR=40						
PMPB	Monarch Peak	5.07	348		Pn	02 25 38.8	-0.8
MPMC	Manual Prospec	5.07	19	P	Pn	02 25 41.1	+1.2
	baz=199,SNR=35						
MPMC				S	Sn	02 26 37.4	-1.3
	baz=199						
113A	Mohawk Valley,	5.08	71		Pn	02 25 39.8	0.0
TUQ	Turquoise Moun	5.13	35	P	Pn	02 25 41.8	+1.3
	baz=216,SNR=60						
TUQ				S	Sn	02 26 40.3	+0.5
	baz=216						
DAC	Darwin (Calif)	5.25	17		Pn	02 25 40.9	-1.4
SHOC	Shoshone, Teco	5.35	29	P	Pn	02 25 45.3	+1.8
	baz=210,SNR=28						
SHOC				S	Sn	02 26 45.7	+0.4
	baz=210						
NEE2	Needles Airpor	5.38	48	P	Pn	02 25 45.5	+1.6
	baz=231						
PDMCI	Parker Dam,Lak	5.43	55	P	Pn	02 25 45.8	+1.3
	baz=238,SNR=49						
214A	Organ Pipe Nat	5.73	81		Pn	02 25 47.9	-0.9
214A	Organ Pipe Nat	5.73	81	P	Pn	02 25 47.6	-1.1
	baz=266,SNR=34						
214A				S	Sn	02 26 54.5	-0.2
	baz=266						
SAO	San Andreas Ge	5.74	344		Pn	02 25 47.8	-0.9
GRAC	Grapevine Rang	5.99	16	P	Pn	02 25 54.8	+2.5
	baz=197,SNR=8.3						
W13A	Hualapai Mount	6.06	49		Pn	02 25 51.8	-1.6
Y14A	Wickenburg	6.09	62		Pn	02 25 53.0	-0.6
TPNV	Topopah Spring	6.28	24		Pn	02 25 55.2	-1.2
TPNV	Topopah Spring	6.28	24	P	Pn	02 25 59.1	+2.6
	baz=206,SNR=270						
TPNV				S	Sn	02 27 07.5	-0.9
	baz=206						
SHPR	Sheep Range	6.35	33		Pn	02 25 55.9	-1.5
OMMB	Old Mammoth Mi	6.36	3		Pn	02 25 55.0	-2.5
CMB	Columbia Colle	6.81	354		Pn	02 26 03.2	-0.3
NVAR	Mina Array Bea	7.23	7	Pn	Pn	02 26 12.9	+3.5
	comp=N,0.4nm,0.3s,baz=189,slow=15,SNR=15						
NVAR				LR	LR	02 29 12.9	
	comp=N,365nm,19.4s,baz=199,slow=39						
WAKR	Walker	7.24	0		Pn	02 26 07.2	-2.4
RYN	Ryan	7.40	6		Pn	02 26 11.1	-0.7
X16A	Lo Mia Camp, P	7.47	63		Pn	02 26 11.7	-1.0
TUC	Tucson	7.48	80		Pn	02 26 12.6	-0.2
YERR	Yerington	7.72	1		Pn	02 26 14.6	-1.5
LCMT	Little Creek M	7.73	40		Pn	02 26 15.4	-0.9
R11A	Troy Canyon, C	7.77	23		Pn	02 26 15.9	-0.9
R11A	Troy Canyon, C	7.77	23	P	Pn	02 26 19.3	+2.5
	baz=205						
AFDM	Forest Hills D	7.78	351		Pn	02 26 15.9	-0.9
RUBR	Rubicon Trail	7.80	356		Pn	02 26 16.3	-1.0
PNTR	Pine Nut	7.82	359		Pn	02 26 16.9	-0.6
WUAZ	Wupatki	8.00	56	P	Pn	02 26 23.5	+3.4
	baz=240,SNR=31						
SZCU	Shurtz Canyon	8.24	38		Pn	02 26 22.0	-1.3
PAHR	Pah Rah Range	8.44	1		Pn	02 26 25.3	-0.7
319A	Douglas	8.73	87		Pn	02 26 29.6	-0.4
W18A	Petrified Fore	9.03	62	P	Pn	02 26 37.0	+2.8
	baz=248,SNR=37						
O03E	Paynes Creek	9.22	349	P	Pn	02 26 37.8	+1.2
	baz=167						
MSU	Marysvale	9.40	38		Pn	02 26 38.4	-0.9
KMRM	Mail Ridge	9.59	340		Pn	02 26 41.0	-0.6
121A	Cookes Peak, D	10.03	80		Pn	02 26 46.3	-1.5
121A	Cookes Peak, D	10.03	80	P	Pn	02 26 49.4	+1.6
	baz=266,SNR=17						
ELK	Elko	10.07	19	Pn	Pn	02 26 51.9	+3.4
	comp=N,0.8nm,0.3s,baz=199,slow=9.4,SNR=20						
ELK				LR	LR	02 30 31.2	
	comp=N,561nm,19.2s,baz=200,slow=36						
KHMM	Horse Mountain	10.20	341		Pn	02 26 50.1	+0.1
DUG	Dugway, Tooele	10.44	29	P	Pn	02 26 58.9	+5.5
	baz=213,SNR=10						
M02C	Callahan	10.48	346	P	Pn	02 26 59.5	+5.7
	baz=163,SNR=14						
M04C	Macdoel	10.68	350	P	Pn	02 27 03.4	+6.8
	baz=168,SNR=26						
YBH	Yreka Blue Hor	10.78	347	Pn	Pn	02 27 03.0	+5.0
	comp=N,0.8nm,0.3s,baz=165,slow=7.9,SNR=26						
LPIG	La Paz	10.80	129	Pn	Pn	02 27 00.7	+2.4
	comp=N,6.4nm,0.3s,baz=242,slow=1.5,SNR=14						
LPIG				LR	LR	02 30 25.3	
	comp=N,526nm,21.4s,baz=348,slow=34						
MVCO	Mesa Verde	10.86	54	P	Pn	02 27 04.5	+5.3
	baz=240,SNR=38						
L04D	Klamath Falls	11.18	349	P	Pn	02 27 09.5	+6.0
	baz=167,SNR=8.5						
L02E	Cave Junction	11.37	344	P	Pn	02 27 10.9	+4.9
	baz=161						
K04D	Chiloquin, OR	11.49	352	P	Pn	02 27 14.2	+6.4
	baz=170,SNR=7.9						
ANMO	Albuquerque	11.53	68	Pn	Pn	02 27 10.5	+2.2
	comp=N,0.1nm,0.3s,baz=258,slow=11,SNR=12						
ANMO				LR	LR	02 31 45.1	
	comp=N,816nm,18.4s,baz=257,slow=38						
ANMO	Albuquerque	11.53	68		Pn	02 27 06.9	-1.4
ANMO	Albuquerque	11.53	68	P	Pn	02 27 11.2	+2.8
	baz=255						
K02D	Willamette Mer	11.90	345	P	Pn	02 27 18.2	+4.9
	baz=162,SNR=15						
MNTX	Cornudas Mount	12.05	84		Pn	02 27 15.0	-0.3
J05D	Fort Rock, OR	12.09	354	P	Pn	02 27 22.3	+6.4
	baz=172,SNR=19						
J04D	Umpqua Nationa	12.15	351	P	Pn	02 27 23.4	+6.6
	baz=169,SNR=13						
S22A	4UR Ranch, Cre	12.28	55	P	Pn	02 27 23.3	+4.6
	baz=242,SNR=20						
J01E	Myrtle Point	12.40	345	P	Pn	02 27 25.4	+5.3
	baz=161,SNR=15						
O20A	White River Ci	12.72	43	P	Pn	02 27 29.8	+5.1
	baz=229,SNR=9.4						
I04A	Tendick Farm,	12.73	350	P	Pn	02 27 29.9	+5.3
	baz=168						
I03D	Drain, OR	12.79	347	P	Pn	02 27 30.9	+5.5
	baz=164						
I05D	Terrebonne, OR	13.15	354	P	P	02 27 36.8	-3.7
	baz=172,SNR=14						
I02D	Swisshome	13.29	346	P	P	02 27 37.7	-4.3
	baz=163,SNR=9.0						
T25A	Trinidad	13.78	61		Pn	02 27 40.3	+1.2
T25A	Trinidad	13.78	61	P	P	02 27 44.1	-3.7
	baz=249,SNR=17						
TX32	Lajitas Array	13.80	94		Pn	02 27 41.4	+2.1
TXAR	Lajitas Array	13.80	94	Pn	Pn	02 27 42.1	+2.8
	comp=N,0.2nm,0.3s,baz=271,slow=13,SNR=87						
TXAR				LR	LR	02 33 04.9	
	comp=N,573nm,18.7s,baz=0.0,slow=38						
PD31	Pinedale Array	13.95	32		Pn	02 27 41.3	-0.2
PDAR	Pinedale Array	13.95	32	Pn	P	02 27 46.4	-3.3
	comp=N,0.2nm,0.3s,baz=232,slow=14,SNR=40						
PDAR				LR	LR	02 32 32.6	
	comp=N,170nm,21.6s,baz=236,slow=35						
Q24A	Divide	14.02	53	P	P	02 27 47.4	-3.2
	baz=241						
G05D	Wamic, OR	14.04	355	P	P	02 27 47.7	-2.7
	baz=173,SNR=8.5						
ISCO	Idaho Springs	14.14	49	P	P	02 27 49.3	-2.6
	baz=237						
G03D	McMinnville, O	14.25	349	P	P	02 27 50.3	-2.4
	baz=166						
MSTX	Muleshoe	14.34	75		Pn	02 27 45.7	-1.1
MSTX	Muleshoe	14.34	75	P	P	02 27 51.6	-2.3
	baz=264,SNR=50						
N23A	Red Feather La	14.56	45	P	P	02 27 56.3	-0.2
	baz=233						
HAWA	Hanford	15.12	360	P	P	02 28 01.9	-0.5
HAWA				IAmb	IAmb	02 28 03.6	
	comp=Z,46nm,1.5s						
E08A	Dider Farm, El	15.22	1	IAmb	IAmb	02 28 08.2	
	comp=Z,23nm,1.4s						
E09A	Wood Farm, Sta	15.28	4	IAmb	IAmb	02 28 05.1	
	comp=Z,26nm,1.4s						
E07A	Sunnyside	15.29	359	IAmb	IAmb	02 28 09.4	
	comp=Z,35nm,1.5s						
AMTX	Amarillo	15.36	72	IAmb	IAmb	02 28 09.9	
	comp=Z,54nm,1.3s						
K22A	Casper	15.37	39	IAmb	IAmb	02 28 04.9	
	comp=Z,29nm,0.9s						
K22A	Casper	15.37	39	P	P	02 28 03.9	-1.4
	baz=226,SNR=16						
E04D	Cinebar	15.47	352	P	P	02 28 06.1	-0.1
	baz=170						
LON	Longmire	15.58	354	P	P	02 28 05.7	-1.8
LON				IAmb	IAmb	02 28 16.3	
	comp=Z,35nm,1.1s						
D08A	Wollman Farm,	15.79	1		Pn	02 28 05.6	-0.3
D08A				IAmb	IAmb	02 28 18.1	
	comp=Z,38nm,1.2s						
KSCO	Kaye Shedlock'	15.80	56		Pn	02 28 04.1	-2.1
KSCO				IAmb	IAmb	02 28 15.7	
	comp=Z,51nm,1.2s						
D05A	Enumclaw	16.03	354	IAmb	IAmb	02 28 21.8	
	comp=Z,57nm,1.3s						
ABTX	Abilene, Hawle	16.90	80		Pn	02 28 19.5	-0.7
ABTX				IAmb	IAmb	02 28 27.2	
	comp=Z,56nm,1.2s						
OGNE	Ogallala	17.07	51	P	Pn	02 28 22.2	-0.2
NEW	Newport	17.09	5	P	P	02 28 25.4	+1.2
	comp=Z,0.1nm,0.3s,baz=197,slow=14,SNR=5.4						
NEW				LR	LR	02 35 13.3	
	comp=Z,153nm,19.5s,baz=193,slow=38						
NEW	Newport	17.09	5	P	P	02 28 25.7	+1.5
	baz=186						
ZAIG	Zacatecas	17.26	115	P	P	02 28 26.6	0.0
PGC	Sidney	17.64	351	IAmb	IAmb	02 28 34.9	
	comp=Z,75nm,1.4s						
RSSD	Black Hills	17.70	39	P	Pn	02 28 29.8	-0.4
RSSD	Black Hills	17.70	39	P	P	02 28 33.5	+2.3
	baz=228						
WMOK	Wichita Mounta	17.71	73	P	P	02 28 33.3	+2.2
	baz=265,SNR=13						
U32A	Winter Ranch,	17.76	68	IAmb	IAmb	02 28 37.2	
	comp=Z,57nm,1.5s						
CBKS	Cedar Bluff	17.82	60		Pn	02 28 30.4	-1.3
CBKS				IAmb	IAmb	02 28 38.0	
	comp=Z,48nm,1.1s						
WALA	Waterton Lakes	18.28	12	P	Pn	02 28 37.0	-0.3
EGMT	Eagleton	18.32	21	P	P	02 28 41.1	+3.2
	baz=207						
LAO	LASA Array	18.50	30	P	P	02 28 35.8	-4.1
LAO				IAmb	IAmb	02 28 44.4	
	comp=Z,32nm,1.1s						
WHTX	Lake Whitney,	18.77	82	P	P	02 28 39.3	-3.6
WHTX	Lake Whitney,	18.77	82	P	Pn	02 28 45.3	+2.0
	baz=274,SNR=6.0						
LLLB	Lillooet	19.42	355	P	P	02 28 49.0	-0.9
T35A	Sooner Cattle	19.83	67	P	P	02 28 53.3	-1.1
T35A				IAmb	IAmb	02 28 60.0	
	comp=Z,67nm,1.4s						
BGNE	Belgrade	19.91	53	P	P	02 28 54.4	-0.8
237A	Washetta, Mont	20.17	82	P	P	02 28 56.9	-1.3
237A				IAmb	IAmb	02 29 05.7	
	comp=Z,32nm,1.2s						
KSU1	Kansas State U	20.24	61	P	Pn	02 29 02.9	+2.2
	baz=254,SNR=5.9						
TUL1	Leonard	20.26	70	P	Pn	02 29 01.7	+0.7
	baz=264,SNR=14						
HKT	Hockley	20.39	88	P	P	02 28 59.6	-0.9
HKT				IAmb	IAmb	02 29 05.5	
	comp=Z,46nm,1.4s						
DGMT	Dagmar	20.75	30	P	P	02 29 00.8	-3.6
DGMT	Dagmar	20.75	30	P	Pn	02 29 07.6	+0.8
	baz=219,SNR=15						
Z38A	Mt. Pleasant	20.80	78	IAmb	IAmb	02 29 11.4	
	comp=Z,45nm,1.1s						
NATX	Nacogdoches	21.16	82	P	P	02 29 06.9	-2.0
NATX				IAmb	IAmb	02 29 16.0	
	comp=Z,34nm,1.1s						
U38A	Gravette	21.45	69	P	P	02 29 12.9	+0.8
U38A				IAmb	IAmb	02 29 17.7	
	comp=Z,35nm,1.4s						
HHAR	Hobbs	21.79	70	IAmb	IAmb	02 29 19.5	
	comp=Z,35nm,1.2s						
W39A	Magazine	21.83	73	IAmb	IAmb	02 29 18.8	
	comp=Z,24nm,1.1s						
W39A	Magazine	21.83	73	P	P	02 29 17.6	+1.4
	baz=267,SNR=9.7						
ECSD	EROS Data Cent	21.93	49	IAmb	IAmb	02 29 21.4	
	comp=Z,23nm,0.9s						
ECSD	EROS Data Cent	21.93	49	P	P	02 29 19.5	+2.4
	baz=243,SNR=24						
MIAR	Mount Ida	21.98	74	P	P	02 29 19.9	+2.2
	baz=269,SNR=36						
S39A	Bolivar	22.46	66	IAmb	IAmb	02 29 26.6	
	comp=Z,37nm,1.2s						
MDND	Maddock	22.47	37	P	P	02 29 21.1	-1.8
Z41A	Richland Creek	22.63	78	P	P	02 29 27.8	+3.2
	baz=272,SNR=5.0						
U40A	Yellville	22.67	70	IAmb	IAmb	02 29 28.6	
	comp=Z,17nm,1.1s						
U40A	Yellville	22.67	70	P	P	02 29 27.9	+2.8
	baz=265,SNR=11						
UALR	University of	23.00	74	IAmb	IAmb	02 29 32.2	
	comp=Z,25nm,1.2s						
WHAR	Wooly Hollow	23.06	73	IAmb	IAmb	02 29 40.5	
	comp=Z,31nm,1.3s						
W41B	Gary Mavity, V	23.09	73	IAmb	IAmb	02 29 41.3	
	comp=Z,13nm,1.1s						
W41B	Gary Mavity, V	23.09	73	P	P	02 29 31.2	+1.7
	baz=268						
342A	Flagon Creek P	23.18	83	IAmb	IAmb	02 29 36.4	
	comp=Z,16nm,0.8s						
FCAR	Ozark Folk Cen	23.23	71	P	P	02 29 31.8	+0.9
LCAR	Lake Charles	24.02	71	IAmb	IAmb	02 29 40.6	
	comp=Z,17nm,1.3s						
CCM	Cathedral Cave	24.14	66	P	P	02 29 39.5	-0.2
CCM				IAmb	IAmb	02 29 44.5	
	comp=Z,28nm,1.4s						
CCM	Cathedral Cave	24.14	66	P	P	02 29 41.7	+1.9
	baz=262						
PBMO	Poplar Bluff	24.65	69	IAmb	IAmb	02 29 48.2	
	comp=Z,28nm,1.4s						
AGMN	Agassiz Nation	24.73	40	P	P	02 29 47.2	+2.1
	baz=235						
FVM	French Village	24.77	66	IAmb	IAmb	02 29 48.8	
	comp=Z,27nm,1.4s						
L40A	Anamosa	25.00	57	IAmb	IAmb	02 29 51.5	
	comp=Z,30nm,1.3s						
SPMN	Marine on St.	25.03	49	IAmb	IAmb	02 29 51.7	
	comp=Z,9.5nm,0.7s						
P43A	Skaggs, Pawnee	25.71	63	IAmb	IAmb	02 29 59.1	
	comp=Z,16nm,1.1s						
ULM	Lac du Bonnet	25.89	36	P	P	02 29 58.0	+2.5
	comp=Z,12nm,0.8s,baz=235,slow=9.5,SNR=29						
ULM				LR	LR	02 40 43.5	
	comp=Z,550nm,18.4s,baz=230,slow=38						
ULM	Lac du Bonnet	25.89	36	P	P	02 29 55.2	-0.3
ULM				IAmb	IAmb	02 29 58.8	
	comp=Z,17nm,0.9s						
CMIG	Matias Romero	26.42	117	P	P	02 30 02.2	+1.6
	comp=Z,5.4nm,0.9s,baz=286,slow=11,SNR=5.7						
CMIG				LR	LR	02 39 42.0	
	comp=Z,421nm,21.1s,baz=294,slow=35						
WVT	Waverly	26.71	71	P	P	02 30 02.0	-1.1
WVT				IAmb	IAmb	02 30 05.9	
	comp=Z,16nm,1.2s						
CLTN	Cedars of Leba	27.93	71	IAmb	IAmb	02 30 16.7	
	comp=Z,9.3nm,1.2s						
H43A	Windswept, Lux	28.11	53	IAmb	IAmb	02 30 16.8	
	comp=Z,5.2nm,0.7s						
DLBC	Dease Lake	28.12	348	P	P	02 30 17.3	+1.8
	comp=Z,2.3nm,0.9s,baz=150,slow=8.1,SNR=3.2						
DLBC				ScP	ScP	02 37 11.8	+1.1
	comp=Z,3.7nm,1.0s,baz=315,slow=1.4,SNR=5.0						
Z50A	Ashland	28.39	77	P	P	02 30 19.9	+1.8
	baz=275						
FPAL	Fort Paine	28.55	74	IAmb	IAmb	02 30 22.1	
	comp=Z,15nm,1.2s						
W50A	Signal Mountai	28.77	73	P	P	02 30 22.9	+1.3
	baz=272						
T51A	Gray	29.85	69	P	P	02 30 32.9	+1.8
	baz=270						
TKL	Tuckaleechee C	30.01	72	LR	LR	02 43 05.9	
	comp=Z,319nm,19.1s,baz=269,slow=37						
TEIG	Tepich	30.08	104	LR	LR	02 44 36.8	
	comp=Z,145nm,20.5s,baz=250,slow=40						
P50A	Jamestown	30.09	64	P	P	02 30 35.0	+1.8
	baz=265,SNR=5.1						
S51A	Beattyville	30.15	68	P	P	02 30 35.5	+1.8
	baz=269						
R51A	Hillsboro	30.18	67	P	P	02 30 35.6	+1.7
	baz=268						
I47A	Gladwin	30.25	55	P	P	02 30 35.9	+1.4
	baz=257						
Q51A	Peebles	30.40	65	P	P	02 30 37.8	+1.9
	baz=267						
P51A	Williamsport	30.65	64	IAmb	IAmb	02 30 41.6	
	comp=Z,10nm,0.9s						
N50A	Nevada	30.70	62	P	P	02 30 40.4	+1.8
	baz=264						
BG3	Lake Jocassee	30.73	73	IAmb	IAmb	02 30 42.5	
	comp=Z,12nm,1.2s						
ACSO	Alum Creek Sta	30.77	63	P	P	02 30 41.2	+2.0
	baz=265						
V53A	Saluda	30.79	72	P	P	02 30 41.4	+1.9
	baz=273						
U53A	Fall Branch	30.96	70	P	P	02 30 42.6	+1.6
	baz=272						
YKA	Yellowknife Ar	31.41	4	P	P	02 30 46.3	+1.8
	comp=Z,1.2nm,1.0s,baz=177,slow=9.0,SNR=11						
YKA				PcP	PcP	02 33 38.1	+0.4
	comp=Z,0.3nm,0.6s,baz=180,slow=2.8,SNR=4.8						
YKA				LR	LR	02 43 40.1	
	comp=Z,178nm,21.0s,baz=0.0,slow=37						
I49A	Point Hope	31.43	56	P	P	02 30 46.1	+1.2
	baz=259						
R53A	Hurricane	31.46	67	P	P	02 30 47.4	+2.2
	baz=269						
Y55A	Saluda	31.70	75	P	P	02 30 48.9	+1.5
	baz=276						
T54A	Tazewell	31.75	69	P	P	02 30 49.7	+1.8
	baz=271						
Q53A	Leroy	31.81	66	P	P	02 30 50.0	+1.6
	baz=268						
D47A	Chapleau	31.98	50	P	P	02 30 50.5	+0.7
	baz=254						
KMSC	Kings Mountain	32.03	73	IAmb	IAmb	02 30 52.5	
	comp=Z,15nm,1.1s						
KMSC	Kings Mountain	32.03	73	P	P	02 30 51.6	+1.3
	baz=274						
V55A	Taylorsville	32.08	71	P	P	02 30 52.3	+1.5
	baz=273,SNR=5.4						
U55A	TA2, Sparta	32.19	70	P	P	02 30 53.5	+1.8
	baz=272,SNR=6.5						
M53A	WI Miller and	32.63	61	P	P	02 30 57.3	+1.8
	baz=265						
P54A	Burton	32.65	64	P	P	02 30 57.3	+1.6
	baz=268						
N54A	Moraine State	33.11	62	IAmb	IAmb	02 31 04.5	
	comp=Z,8.6nm,1.0s						
N54A	Moraine State	33.11	62	P	P	02 31 02.8	+3.1
	baz=266						
O55A	Ligonier	33.58	63	P	P	02 31 05.4	+1.5
	baz=268						
L54A	Sinclairville	33.72	60	P	P	02 31 06.4	+1.4
	baz=264						
O56A	Blue Knob Stat	34.15	63	P	P	02 31 10.4	+1.6
	baz=268						
H53A	Bobcaygeon	34.54	56	P	P	02 31 13.2	+1.1
	baz=262						
G53A	Haliburton	34.59	55	P	P	02 31 12.7	+0.2
	baz=261						
O57A	Amberson	34.86	63	P	P	02 31 16.4	+1.4
	baz=269						
J55A	Hilton	34.92	58	P	P	02 31 17.0	+1.6
	baz=264						
L56A	Greenwood	35.01	60	P	P	02 31 18.1	+1.8
	baz=266						
DAWY	Dawson	35.14	345	IAmb	IAmb	02 31 20.8	
	comp=Z,7.1nm,1.1s						
J56A	Wolcott	35.62	58	P	P	02 31 23.1	+1.7
	baz=265						
PLVO	Plevna	35.67	55	IAmb	IAmb	02 31 24.1	
	comp=Z,14nm,1.1s						
G55A	Calabogie	35.95	55	P	P	02 31 25.3	+1.1
	baz=262						
PMR	Palmer	35.97	336	IAmb	IAmb	02 31 42.1	
	comp=Z,11nm,1.1s						
SCRK	Sand Creek	36.19	342	P	P	02 31 25.8	-0.4
DHY	Denali Highway	36.46	339	IAmb	IAmb	02 31 44.8	
	comp=Z,9.8nm,1.0s						
LSQQ	Lebel-sur-Quev	36.47	48	P	P	02 31 29.3	+0.6
	baz=257						
L59A	Walton	36.88	60	P	P	02 31 33.6	+1.3
	baz=268						
I58A	Old Forge	37.02	58	P	P	02 31 35.3	+1.8
	baz=266						
D55A	Sainte-Anne-du	37.06	52	P	P	02 31 34.9	+1.2
	baz=261						
E56A	St. Veronique	37.29	53	P	P	02 31 36.7	+1.1
	baz=262						
D56A	ZEC Mazanza, M	37.55	52	P	P	02 31 38.9	+1.0
	baz=261						
IL31		37.60	341	P	P	02 31 37.9	-0.1
ILAR	Eielson Array	37.60	341	P	P	02 31 39.6	+1.6
	comp=Z,3.6nm,1.0s,baz=159,slow=7.5,SNR=19						
ILAR				PcP	PcP	02 33 56.1	+0.5
	comp=Z,0.6nm,0.9s,baz=183,slow=2.5,SNR=4.3						
ILAR				LR	LR	02 46 21.9	
	comp=Z,84nm,19.4s,baz=157,slow=35						
TRF	Thorofare Moun	37.65	338	IAmb	IAmb	02 31 46.0	
	comp=Z,7.7nm,1.0s						
H58A	Gabriels	37.65	57	P	P	02 31 40.3	+1.5
	baz=265						
E57A	Chemin Saint G	37.88	53	P	P	02 31 40.6	-0.1
	baz=263						
INK	Inuvik	37.99	352	P	P	02 31 42.9	+1.7
	comp=Z,4.2nm,1.0s,baz=145,slow=9.2,SNR=10						
NEA	Nenana	38.08	340	IAmb	IAmb	02 31 49.8	
	comp=Z,11nm,1.2s						
J60A	Lant Hill Farm	38.12	58	P	P	02 31 43.8	+1.1
	baz=267						
D57A	Chemin Vers le	38.14	52	P	P	02 31 44.1	+1.3
	baz=262						
BPAW	Bear Paw Mtn.	38.33	338	P	P	02 31 44.0	-0.2
D58A	Chemin du LacG	38.83	52	P	P	02 31 49.5	+0.9
	baz=263						
MLY	Manley	38.90	339	P	P	02 31 49.1	0.0
MLY				IAmb	IAmb	02 31 56.6	
	comp=Z,9.4nm,1.0s						
H61A	Lyndonville	39.27	56	P	P	02 31 54.4	+2.1
	baz=267						
G61A	St-Isidore-de-	39.60	55	P	P	02 31 58.4	+3.3
	baz=266						
TAOE	Nuku Hiva Isla	44.52	210	*e*T	T	03 19 33.6	
	comp=Z,61nm,0.2s						
RES	Resolute Bay	45.20	9	P	P	02 32 39.5	-0.7
RES				IAmb	IAmb	02 32 45.5	
	comp=Z,9.6nm,1.5s						
ATAH	Atahualpa	54.77	127	P	P	02 33 55.4	+1.2
	comp=Z,5.9nm,0.8s,baz=285,slow=7.9,SNR=3.8						
PPT	Papeete	56.50	215	LR	LR	02 52 32.1	
	comp=Z,84nm,20.5s,baz=284,slow=30						
PPT2	Papeete2	56.52	215	*e*LR	LR	02 50 11.4	
	comp=Z,90nm,21.8s						
TBI	Tubuai	61.42	212	*e*LR	LR	02 52 39.3	

	comp=Z,128nm,27.2s						
PETK	Petropavlovsk-	61.55	317	LR	LR	02 55 53.9	
	comp=Z,43nm,21.4s,baz=63,slow=31						
PTGA	Pitinga	64.67	108	P	P	02 35 01.2	-0.8
BORG	Borgarnes	65.53	28	LR	LR	03 04 06.4	
	comp=Z,132nm,18.4s,baz=292,slow=36						
H11N3	WAKE ISLAND Hy	66.37	279	T	T	03 47 28.1	
	baz=64,slow=75,SNR=76						
H11N2	WAKE ISLAND Hy	66.37	279	T	T	03 47 35.8	
	baz=64,slow=75,SNR=25						
H11N1	WAKE ISLAND Hy	66.39	279	T	T	03 47 36.8	
	baz=64,slow=75,SNR=29						
TIXI	Tiksi	67.07	341	LR	LR	03 06 11.6	
	comp=Z,46nm,18.3s,baz=92,slow=37						
H11S1	WAKE ISLAND Hy	67.08	278	T	T	03 48 36.5	
	baz=62,slow=75,SNR=18						
H11S2	WAKE ISLAND Hy	67.09	278	T	T	03 48 23.0	
	baz=62,slow=75,SNR=15						
H11S3	WAKE ISLAND Hy	67.10	278	T	T	03 48 35.5	
	baz=62,slow=75,SNR=17						
LPAZ	La Paz	68.30	126	P	P	02 35 25.9	0.0
	comp=Z,1.9nm,1.0s,baz=355,slow=5.0,SNR=5.3						
PB11	IPOC Station P	69.71	130	P	P	02 35 33.1	-0.9
GO01	Chusmiza	69.94	129	P	P	02 35 34.5	-1.3
PB01	IPOC Station P	70.73	131	P	P	02 35 40.7	+0.5
ASAJ	Asahikawa	74.15	312	LR	LR	03 04 03.1	
	comp=Z,46nm,19.1s,baz=178,slow=32						
ARCES	ARCESS Array B	76.32	12	P	P	02 36 12.7	+0.4
	comp=Z,2.4nm,1.0s,baz=355,slow=5.2,SNR=3.9						
NRIK	Noril'sk	77.77	350	LR	LR	03 11 07.6	
	comp=Z,60nm,20.8s,baz=356,slow=36						
KLR	Kul'dur	77.92	321	LR	LR	03 05 38.9	
	comp=Z,54nm,18.6s,baz=6.0,slow=32						
NOA	NORSAR Array B	79.68	22	LR	LR	03 10 45.8	
	comp=Z,66nm,19.8s,baz=315,slow=35						
USRK	Ussuriysk Ar.	80.62	316	P	P	02 36 36.4	-0.1
	comp=Z,2.7nm,0.9s,baz=46,slow=2.7,SNR=5.9						
MJAR	Matsushiro Arr	80.85	307	P	P	02 36 37.3	-0.6
	comp=Z,1.0nm,0.3s,baz=67,slow=6.2,SNR=3.9						
MJAR				LR	LR	03 05 30.8	
	comp=Z,64nm,21.9s,baz=95,slow=30						
HFS	Hagfors	81.16	22	LR	LR	03 10 45.8	
	comp=Z,94nm,21.8s,baz=330,slow=34						
FINES	FINESS Array B	83.49	16	P	P	02 36 52.2	+1.0
	comp=Z,2.6nm,0.9s,baz=349,slow=5.7,SNR=4.1						
FINES				LR	LR	03 17 42.4	
	comp=Z,67nm,18.1s,baz=350,slow=38						
PLCA	Paso Flores	84.72	145	LR	LR	03 06 43.1	
	comp=Z,50nm,20.4s,baz=274,slow=30						
KLMR	Klimovskoe	86.63	10	eP	P	02 37 05.5	-1.5
KLMR				AMP		02 37 07.2	
	comp=Z,14nm,1.9s						
GERES	GERESS Array B	89.98	29	LR	LR	03 17 11.7	
	comp=Z,116nm,21.0s,baz=334,slow=35						
SONM	Songino Array	91.16	331	P	P	02 37 29.9	+1.0
	comp=Z,0.6nm,0.9s,baz=150,slow=3.3,SNR=4.2						
VYHS	Vyhne	92.29	26	eP	P	02 37 32.8	-1.2
ZALV	Zalesovo Beam	92.58	346	P	P	02 37 35.2	+0.1
	comp=Z,0.4nm,0.3s,baz=26,slow=3.8,SNR=4.0						
ZALV				LR	LR	03 21 18.7	
	comp=Z,23nm,21.9s,baz=12,slow=37						
AKASG	Malin Array Be	93.84	19	LR	LR	03 21 01.3	
	comp=Z,125nm,18.1s,baz=310,slow=36						
HHC	Hu-ho-hao-te	94.13	324	eP	P	02 37 43.3	+0.6
HHC				pmax	pmax		
	comp=Z,67nm,1.3s						
NJ2	Nanjing	96.26	313	eP	P	02 37 52.1	-0.3
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
MKAR	Makanchi Array	99.87	345	LR	LR	03 27 13.2	
	comp=Z,32nm,18.9s,baz=352,slow=38						
WHN	Wuhan	100.08	315	P	Pdif	02 38 07.3	-2.3
WMQ	Urumqi	101.26	340	eP	Pdif	02 38 17.5	+2.8
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WMQ				LR	LR		
	comp=Z,120nm,16.7s						
LZH	Lanzhou	101.65	325	eP	Pdif	02 38 16.1	-0.6
LZH				ePP	PP	02 42 28.7	+2.6
LZH				pmax	pmax		
	comp=Z,23nm,1.4s						
LZH				LR	LR		
	comp=Z,170nm,17.2s						
LZH				LR	LR		
	comp=Z,170nm,17.5s						
LZH				LR	LR		
	comp=Z,240nm,19.7s						
CD2	Chengdu	105.80	322	Pdif	Pdif	02 38 33.8	-1.4
BOSA	Boshof	149.41	94	PKPbc	PKPbc	02 44 13.2	-0.2
	comp=Z,11nm,1.1s,baz=253,slow=3.8,SNR=7.1						

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*SJA **05** 02:43:20.4±1.0, 33°.65S×72°.28W, h3^{km}±8^{km}, ML3.3, MW3.2*

*GUC **05** 02:43:24.2±0.7, 33°.64S×72°.01W, h42^{km}±3^{km}, ML3.5*

ISC 05 02:43:21.2±1.6**, 33°.64S**±0°.04×**72°.16W**±0°.07**, h8**^{km}±11^{km}**, n20, σ1^{s}.86**/31**, 4C-5D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA01	Torpederas	0.75	35	eP	Pn	02 43 38.6	+0.4
VA01				i S	Sn	02 43 48.6	-1.2
MT02	Curacav	0.94	66	⇓iP	Pn	02 43 40.5	-0.2
MT02				eS	Sg	02 43 52.2	+0.8
ROC1	El Roble	1.17	56	i P	Pn	02 43 45.0	+0.8
ROC1				eS	Sn	02 44 03.0	+2.6
ROCH	El Roble	1.17	56	⇑iP	Pn	02 43 44.9	+0.7
ROCH				i S	Sg	02 44 00.3	+1.2
ROCH				IAML		02 44 05.8	
	comp=E,2µm,0.4s						
PEL	Peldehue	1.33	68	⇓iP	Pg	02 43 47.2	+0.4
PEL				i S	Sb	02 44 04.2	+0.4
PEL				IAML		02 44 09.8	
	comp=E,1µm,0.4s						
GO05	Huala	1.38	172	⇑iP	Pg	02 43 47.2	-0.4
GO05				i S	Sb	02 44 04.9	-0.2
GO05				IAML		02 44 09.9	
	comp=E,1µm,0.4s						
GO05	Huala	1.38	172	i P	Pg	02 43 47.2	-0.4
GO05				eS	Sg	02 44 07.1	+1.6
CLCH	Cerro Calan	1.38	80	eP	Pn	02 43 46.9	-0.1
CLCH				IAML		02 44 15.1	
	comp=N,1µm,0.2s						
MT03	Universidad Ad	1.39	84	⇓iP	Pn	02 43 47.4	+0.3
MT03				i S	Sn	02 44 05.1	-0.6
MT03				IAML		02 44 09.5	
	comp=N,2µm,0.3s						
FCH	Farellones	1.59	79	⇓iP	Pn	02 43 50.9	+0.8
FCH				i S	Sn	02 44 11.1	0.0
LMEL	Las Melosas	1.64	98	⇓iP	Pn	02 43 51.1	+0.4
LMEL				i S	Sn	02 44 12.0	-0.1
LMEL				IAML		02 44 16.5	
	comp=N,1µm,0.2s						
CO04	Los Peladeros	1.88	32	⇑iP	Pb	02 43 54.7	-1.4
CO04				i S	Sb	02 44 20.4	+0.5
CO04				IAML		02 44 25.2	
	comp=E,781nm,0.4s						
AAGR	Agrelo	2.84	80	i P	Pb	02 44 11.6	-0.8
RTLS	Leoncito	3.04	53	i P	Pb	02 44 13.6	-2.2
RTLS				IAML		02 44 25.7	
	comp=Z,89nm,0.4s						
CO03	El Pedregal	3.06	24	⇑iP	Pn	02 44 11.7	+1.6
CO03				IAML		02 45 05.7	
	comp=E,154nm,0.3s						
RTCV	Cerro Valdivia	3.53	61	i P	Pb	02 44 20.7	-3.3
ZON	Zonda	3.61	56	i P	Pb	02 44 22.3	-3.0
ACCO	Cerro Coronel	4.02	42	i P	Pn	02 44 27.5	+4.0
ACCO				eS	Sb	02 45 18.3	-3.3
AROD	Rodeo	4.15	34	i P	Pb	02 44 29.5	-5.3
ACAN	Cantantal	4.40	73	i P	Pn	02 44 33.0	+4.5

LJU 05 02:56:41.4, 45°.78N×14°.87E, h1^{km}, ML1.2, 2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VISS	Visnje	0.03	325	⇓iPg	Pg	02 56 41.4	-0.6
VISS				i Sg	Sg	02 56 42.1	-0.5
	comp=Z,40nm,0.0s						
VISS	Visnje	0.03	325	⇓iPg	Pg	02 56 42.0	-0.1
VISS				i Sg	Sg	02 56 42.7	+0.2
	comp=Z,110nm,0.0s						
GBRS	Gornja Briga	0.25	189	i Pg	Pg	02 56 45.8	-0.3
GBRS	Gornja Briga	0.25	189	i Pg	Pg	02 56 46.4	+0.3
PDKS	Podkum	0.30	18	i Pg	Pg	02 56 47.0	-0.2
PDKS	Podkum	0.30	18	i Pg	Pg	02 56 47.5	+0.4
CEY	Cerknica	0.31	263	i Pg	Pg	02 56 47.6	+0.3
CEY	Cerknica	0.31	263	i Pg	Pg	02 56 47.6	+0.3

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*SKHL **05** 03:00:20.9±0.3, 51°.11N×131°.84E, h10^{km}±3^{km}, mb4.4/7*

*IDC **05** 03:00:21.6±1.3, 51°.10N×131°.51E, h0^{km}, mb3.6/3, mb1 3.7/4, mb1mx3.2/64, mbtmp3.6/4, ML2.2/1, Error ellipse: s-maj=40.6km s-min=12.6km az=90.0*

ISC 05 03:00:22.2±0.8**, 51°.18N**±0°.05×**131°.80E**±0°.04**, h10**^{km}**, n13, σ2^{s}.38**/24**, mb3.7**/3**, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLR	Kul'dur	1.95	181	Pn	Pn	03 00 55.0	-0.4
	69nm,0.3s,baz=358,slow=18,SNR=764						
KLR				Lg	Lg	03 01 21.1	
	91nm,0.3s,baz=266,slow=22,SNR=20						
EKMR	Ekimchan	2.02	20	ePn	Pn	03 00 56.0	-0.4
EKMR				ePg	Pb	03 00 58.0	-1.1
EKMR				AMB	AMB	03 01 01.3	
	52nm,0.4s						
EKMR				eSg	Sb	03 01 25.0	+0.7
EKMR				A	A	03 01 27.5	
	600nm,0.5s						
GRNR	Gornyy	2.95	96	ePn	Pn	03 01 07.6	-1.5
GRNR				ePg	Pb	03 01 14.0	-0.9
GRNR				AMB	AMB	03 01 15.4	
	25nm,0.3s						
GRNR				eSg	Sb	03 01 52.1	+1.1
GRNR				A	A	03 01 54.3	
	200nm,0.4s						
KHBR	Khabarovsk	3.43	141	eSg	Sb	03 02 05.5	+0.7
KHBR				A	A	03 02 10.5	
	235nm,0.9s						
ZEA	Zeya	3.78	314	ePn	Pn	03 01 21.2	+0.7
ZEA				eSg	Sg	03 02 20.8	-2.8
ZEA				A	A	03 02 27.1	
	100nm,1.0s						
ZEA				A	A	03 02 27.1	
	370nm,1.0s						
BMKR	Bomnak	3.96	334	ePn	Pn	03 01 24.0	+1.0
BMKR				ePg	Pb	03 01 34.2	+2.1
BMKR				AMB	AMB	03 01 39.9	
	12nm,0.7s						
BMKR				eSg	Sg	03 02 27.0	-2.4
BMKR				A	A	03 02 32.8	
	150nm,0.5s						
KROS	Kirovskiy	4.38	320	ePn	Pn	03 01 29.1	+0.3
KROS				eSg	Sg	03 02 40.0	-2.8
KROS				A	A	03 02 45.0	
	84nm,0.5s						
KROS				A	A	03 02 45.0	
	77nm,0.5s						
NKL	Nikolayevsk	5.81	67	ePg	Pb	03 02 06.7	+3.2
NKL				AMB	AMB	03 02 07.7	
	75nm,0.3s						
NKL				eSg	Sg	03 03 23.7	-4.9
NKL				A	A	03 03 29.5	
	134nm,0.5s						
USRK	Ussuriysk Ar.	6.99	179	Pn	Pn	03 02 03.9	-0.6
	baz=358,slow=14,SNR=9.4						
USRK				Lg	Lg	03 04 00.6	
	baz=358,slow=27,SNR=4.3						
TUP	Tupik	7.88	299	ePn	Pn	03 02 17.5	+0.7
TUP				AMB	AMB	03 02 20.2	
	9.0nm,0.3s						
TUP				ePg	Pb	03 02 44.4	+5.6
TUP				eSn	Sn	03 03 46.8	+0.8
TUP				eSg	Sg	03 04 28.7	-6.2
TUP				A	A	03 04 44.4	
	64nm,1.2s						
ILAR	Eielson Array	42.03	39	P	P	03 08 15.4	+2.1
	0.7nm,0.8s,baz=289,slow=8.2,SNR=7.1						
INK	Inuvik	45.39	31	P	P	03 08 42.7	+2.5
	0.9nm,0.9s,baz=309,slow=6.6,SNR=4.7						
FINES	FINESS Array B	53.16	325	P	P	03 09 40.1	+0.3
	0.8nm,0.7s,baz=44,slow=8.5,SNR=4.7						

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*IDC **05** 03:11:07.0±4.2, 0°.77N×98°.64E, h67^{km}±31^{km}, mb4.0/10, mb1 4.0/11, mb1mx3.6/64, mbtmp4.2/11, ML4.7/1, Error ellipse: s-maj=44.7km s-min=23.2km az=47.0*

*NEIC **05** 03:11:08.6±1.7, 0°.91N±0°.08×98°.7E±0°.1, h76^{km}±5^{km}, mb4.3/6, Error ellipse: s-maj=17.1km s-min=9.7km az=58.0*

*DJA **05** 03:11:10.1±0.4, 1°N±2°×9°9E±°, h75^{km}±7^{km}, M3.9/11, MLv3.9/11*

ISC 05 03:11:09.4±0.9**, 1°.03N**±0°.03×**98°.72E**±0°.05**, h77**^{km}±9^{km}**, n39, σ1^{s}.33**/44**, mb4.3**/14**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBSI	Pulau Batu	1.16	202	P	Pn	03 11 30.5	+0.2
PBSI				S	Sn	03 11 47.1	+1.1
RPSI	Rantau Prapat	1.67	7		Pn	03 11 37.7	+0.9
RPSI				Sn	Sn	03 11 57.7	+0.1
RPSI	Rantau Prapat	1.67	7		Pn	03 11 38.1	+1.3
RPSI					Sn	03 11 55.9	-1.7
PSI	Prapat	1.77	7	P	Pn	03 11 38.1	-0.3
	34nm,0.3s,baz=348,slow=12,SNR=80						
PSI				S	Sn	03 11 55.9	-4.4
	16nm,0.3s,baz=174,slow=14,SNR=12						
SISI	Saibi	2.37	171	P	Pn	03 11 46.4	+0.2
BKNI	Bangkinang	2.43	107	P	Pn	03 11 47.6	+0.6
BKNI	Bangkinang	2.43	107		Pn	03 11 47.2	+0.2
PDSI	Padang	2.60	138	P	Pn	03 11 50.4	+1.0
PDSI				S	Sn	03 12 20.2	+0.2
KCSI	Kotacane, Aceh	2.65	339	P	Pn	03 11 50.5	+0.5
KCSI				S	Sn	03 12 21.3	+0.1
TPTI		2.69	325	P	Pn	03 11 49.7	-0.9
TPTI				S	Sn	03 12 22.0	-0.2
SNSI	Sinabang, Aceh	2.75	300	P	Pn	03 11 53.2	+1.8
SNSI				S	Sn	03 12 22.0	-1.6
SDSI	Sungai Dareh	3.34	126	P	Pn	03 12 05.4	+6.1
MLSI	Meulaboh, Aceh	3.96	324	P	Pn	03 12 09.0	+1.2
PPSI	Pulau Pagai	3.98	161	P	Pn	03 12 07.7	-0.4
IPM	Ipoh	4.13	34		Pn	03 12 09.8	-0.4
IPM					Sn	03 12 58.6	+1.3
KRJI	Kerinci	4.14	138	P	Pn	03 12 26.5	+16
KULM	Kulim	4.65	24		Pn	03 12 18.6	+1.3
CMAR	Chiang Mai Arr	17.32	1	P	Pn	03 15 05.8	-0.5
	1.1nm,0.3s,baz=188,slow=9.8,SNR=4.7						
SHL	Shillong	25.27	345	P	P	03 16 28.3	-0.4
H08S2	Diego Garcia H	27.54	251	T	T	03 44 20.7	
	baz=73,slow=76,SNR=19						
H08S3	Diego Garcia H	27.54	251	T	T	03 44 26.4	
	baz=73,slow=76,SNR=22						
H08S1	Diego Carcia H	27.55	251	T	T	03 44 24.6	
	baz=73,slow=76,SNR=17						
WHN	Wuhan	32.89	25	P	P	03 17 39.9	+3.7
WRA	Warramunga Arr	40.66	123	P	P	03 18 40.2	-2.3
	1.3nm,0.6s,baz=304,slow=9.0,SNR=5.1						
AS31	Alice Springs	42.09	128	P	P	03 18 51.8	-2.3
SONM	Songino Array	47.09	7	P	P	03 19 34.7	+1.1
	2.1nm,0.4s,baz=189,slow=9.3,SNR=20						
SONM				PcP	PcP	03 21 05.0	+0.5
	0.3nm,0.4s,baz=182,slow=4.8,SNR=3.5						
MK31	Makanchi Array	47.79	345	P	P	03 19 39.5	+0.5
MK31				IAmb	IAmb	03 19 40.2	
	comp=Z,2.3nm,0.7s						
MKAR	Makanchi Array	47.79	345	P	P	03 19 39.4	+0.5
	comp=Z,3.5nm,0.6s,baz=154,slow=7.9,SNR=42						
MAKZ	Makanchi	47.88	345	P	P	03 19 38.4	-1.2
MAKZ				IAmb	IAmb	03 19 40.8	
	comp=Z,2.4nm,0.6s						
KURBB	Kurchatov Arra	52.30	344	P	P	03 20 13.3	+0.3
	comp=Z,1.0nm,0.3s,baz=164,slow=7.0,SNR=22						
GEYT	Alibeck	52.32	319	P	P	03 20 13.5	+0.1
	comp=Z,1.4nm,0.5s,baz=99,slow=9.2,SNR=2.9						
KURK	Kurchatov	52.36	344	P	P	03 20 13.5	+0.1
KURK				IAmb	IAmb	03 20 14.7	
	comp=Z,2.9nm,0.8s						
ZAA0	Zalesovo Array	53.98	350	P	P	03 20 24.6	-0.6
ZAA0				IAmb	IAmb	03 20 26.2	
	comp=Z,4.2nm,0.9s						
ZALV	Zalesovo Beam	53.98	350	P	P	03 20 25.4	+0.2
	comp=Z,3.5nm,0.5s,baz=179,slow=6.2,SNR=16						
KLR	Kul'dur	55.74	26	P	P	03 20 38.5	+0.4
	comp=Z,1.2nm,0.4s,baz=283,slow=5.5,SNR=6.2						
BRTR	Keskin Array B	70.35	312	P	P	03 22 14.5	-0.8
	comp=Z,0.6nm,0.6s,baz=128,slow=6.7,SNR=5.6						
ARCES	ARCESS Array B	83.21	340	P	P	03 23 26.8	-0.1
	comp=Z,1.0nm,0.4s,baz=99,slow=6.9,SNR=5.9						
SPITS	Spitsbergen Ar	87.42	348	P	P	03 23 47.1	-0.6
	comp=Z,9.8nm,0.9s,baz=94,slow=12,SNR=3.4						
TXAR	Lajitas Array	142.99	34	PKP	PKPdf	03 30 34.1	-1.0
	comp=Z,0.2nm,0.9s,baz=8.1,slow=1.3,SNR=2.6						

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*MOS **05** 03:13:16.7±1.1, 62°.27N×149°.57W, h49^{km}, mb4.5/32, Error ellipse: s-maj=13.6km s-min=6.5km az=111.9*

*IDC **05** 03:13:18.8±0.5, 62°.19N×149°.71W, h53^{km}±4^{km}, mb3.9/30, mb1 4.1/36, mb1mx4.0/65, mbtmp4.2/36, MS3.4/25, Ms1 3.4/25, ms1mx3.3/55, Error ellipse: s-maj=9.0km s-min=8.7km az=21.0*

*NEIC **05** 03:13:19.3±1.6, 62°.09N±0°.02×149°.49W±0°.06, h47^{km}±4^{km}, Error ellipse: s-maj=4.1km s-min=3.4km az=99.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-3.13; $M_{\theta\theta}$-0.29; $M_{\phi\phi}$3.42; $M_{r\theta}$1.25; $M_{\theta\phi}$0.05; $M_{\phi r}$2.07; Fault plane solution: $M_0$4.08000×10^{15} NP1: ϕ_s343.67000°, δ31.05000°, λ-120.45000°. NP2: ϕ_s198.12000°, δ63.60000°, λ-73.03000°. Principal axes: T 4.0579, Plg17.0000°, Azm276.0000°; N 0.0461, Plg15.0000°, Azm10.0000°; P -4.1041, Plg67.0000°, Azm140.0000°;*

*AEIC **05** 03:13:19.8±1.4, 62°.08N±0°.02×149°.46W±0°.06, h37^{km}±5^{km}, ML4.4/157, mb4.4/119(NEIC), Mwr4.3/80(NEIC) Error ellipse: s-maj=3.8km s-min=3.3km az=99.0*

ISC 05 03:13:16.7±0.4**, 62°.13N**±0°.02×**149°.54W**±0°.02**, h32**^{km}±2^{km}**, h32**^{km}**:pP-P, n505, σ1^{s}.59**/534**, mb4.4**/105**, MS3.4**/23**, 2D, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GHO	Glory Hole Cre	0.46	141		Pn	03 13 28.8	+1.7
GHO					Sn	03 13 36.7	+2.5
PMR	Palmer	0.57	160	P	Pn	03 13 29.6	+1.0
PMR						03 13 38.2	
PMR	Palmer	0.57	160		Pn	03 13 29.6	+1.0
PMR					Sn	03 13 38.2	+1.4
SML	Sawmill	0.66	119		Pb	03 13 30.9	+1.1
SML					Sn	03 13 40.8	+1.8
WAT1	Susitna Watana	0.84	33		Pb	03 13 34.5	+1.7
WAT1					Sb	03 13 46.7	+2.9
HUR	Hurricane	0.85	357		Pb	03 13 35.5	+2.4
SUA	Susitna One	0.88	221		Pb	03 13 34.5	+0.9
SUA					Sb	03 13 47.2	+2.1
KNK	Knik Glacier	0.88	144		Pb	03 13 34.0	+0.5
KNK					Sb	03 13 45.9	+0.8
WAT2	Susitna Watana	0.94	27		Pb	03 13 36.0	+1.4
WAT2					Sb	03 13 49.8	+2.8
WAT6	Susitna Watana	0.95	61		Pb	03 13 35.5	+0.7
WAT6					Sb	03 13 48.7	+1.6
FIS	Fire Island	1.04	199		Pb	03 13 37.2	+1.1
FIS					Sb	03 13 50.4	+0.9
RC01	Rabbit Creek A	1.05	185		Pb	03 13 36.3	0.0
RC01					Sb	03 13 50.2	+0.5
SCM	Sheep Creek Mo	1.08	105	P	Pb	03 13 37.2	+0.2
SCM	Sheep Creek Mo	1.08	105		Pb	03 13 37.1	+0.2
STLK	Strandline Lak	1.26	241		Pb	03 13 40.1	+0.2
RND	Reindeer	1.32	14	P	Pb	03 13 41.9	+1.0
RND	Reindeer	1.32	14		Pb	03 13 41.9	+1.0
TRF	Thorofare Moun	1.37	346		Pb	03 13 42.9	+1.1
DHY	Denali Highway	1.38	46		Pb	03 13 42.0	+0.1
PWL	Port Wells	1.40	155		Pn	03 13 41.1	+1.2
PWL					Sn	03 13 58.5	+1.3
PPLA	Purkeypile	1.45	303		Pb	03 13 43.7	+0.6
CRP	Crater Peak	1.52	236		Pb	03 13 44.0	-0.3
KTH	Kantishna Hill	1.56	337		Pb	03 13 45.6	+0.6
KTH					Sb	03 14 06.0	+1.6
CKT	Bend	1.58	235		Pb	03 13 44.9	-0.4
SPCR	Spurr Chakacha	1.58	235		Pb	03 13 44.6	-0.7
SPCR					Sb	03 14 05.3	+0.4
SPBG	Spurr Blockage	1.61	238		Pb	03 13 45.1	-0.7
MCK	McKinley	1.63	9	P	Pb	03 13 46.5	+0.4
MCK	McKinley	1.63	9		Pb	03 13 46.5	+0.4
SLKM	Skilak Lake	1.66	192		Pn	03 13 44.7	+1.2
GLI	Glacier Island	1.72	136		Pn	03 13 46.0	+1.7
CAST	Castle Rocks	1.75	319		Pb	03 13 48.0	0.0
JPK	Jack Peak	1.77	126		Pb	03 13 47.0	-1.5
VMT	TAPS Tl Valdez	1.84	123		Pn	03 13 47.7	+1.7
PS11	TAPS Pump St11	1.91	90		Pb	03 13 50.3	-0.6
FID	Port Fidalgo	2.02	132		Pn	03 13 49.9	+1.5
SEW	Seward	2.03	179		Pn	03 13 50.5	+1.9
BWN	Browne	2.05	1		Pb	03 13 52.5	-0.7
PAX	Paxson	2.06	64	P	Pb	03 13 52.5	-1.0
PAX	Paxson	2.06	64		Pb	03 13 52.5	-1.0
BPAW	Bear Paw Mtn.	2.08	342		Pb	03 13 52.2	-1.6
RDT	Redoubt	2.08	223		Pn	03 13 51.7	+2.3
DFR	Drift River	2.16	226		Pn	03 13 52.8	+2.3
PS10	TAPS Pump St10	2.17	52		Pb	03 13 54.4	-0.8
CHUM	Lake Minchumin	2.17	325		Pb	03 13 53.7	-1.5
PS12	TAPS Pump St12	2.19	106		Pn	03 13 52.7	+2.0
RDJH	Redoubt Jeurge	2.21	227		Pn	03 13 53.5	+2.4
HIN	Hinchinbrook I	2.27	139		Pn	03 13 53.5	+1.5
RSO	Redoubt South	2.28	224		Pn	03 13 54.7	+2.4
RDWB	Redoubt West	2.29	226		Pn	03 13 54.7	+2.4
RED	Redoubt Volcan	2.32	224		Pn	03 13 54.9	+2.2
EYAK	Cordova Ski Ar	2.42	129		Pn	03 13 55.5	+1.6
WRH	Wood River Hil	2.44	15		Pb	03 13 57.0	-2.8
BRLK	Bradley Lake	2.46	196		Pn	03 13 56.0	+1.4
NEA	Nenana	2.47	5		Pb	03 13 57.5	-2.8
BRSE	Bradley Lake S	2.47	194		Pn	03 13 56.0	+1.4
HDA	Harding Lake	2.57	26		Pn	03 13 58.9	+2.9
HDA	Harding Lake	2.57	26	P	Pn	03 13 58.9	+2.9
	baz=207,SNR=233						
HDA				S	Sb	03 14 31.0	-2.1
	baz=207						
HDA				S	Sb	03 14 31.0	-2.1
	baz=207						
CCB	Clear Creek Bu	2.64	16		Pn	03 13 59.7	+2.7
HOM	Homer	2.69	203		Pn	03 14 00.2	+2.7
RIDG	Independent Ri	2.69	51		Pb	03 14 01.5	-2.5
IVE	Iliamna Volcan	2.71	220		Pn	03 14 00.6	+2.5
PS08	TAPS Pump Stn8	2.71	26		Pn	03 14 00.8	+2.8
CNPM	China Poot	2.74	198		Pn	03 14 00.5	+2.1
ILS	Iliamna Low So	2.77	220		Pn	03 14 01.5	+2.6
GOAT	Goat Mountain	2.79	122		Pn	03 14 00.6	+1.5
GLB	Gilahina Butte	2.81	102		Pn	03 14 01.2	+1.9
MENT	Mentasta	2.82	71		Pn	03 14 02.3	+2.9
TCOL	CIGO, UAF Yank	2.85	15		Pn	03 14 03.0	+3.2
TCOL	CIGO, UAF Yank	2.85	15	P	Pn	03 14 02.9	+3.0
	baz=195,SNR=99						
TCOL				S	Sb	03 14 37.1	-4.2
	baz=195						
COLA	College	2.86	15	P	Pn	03 14 02.9	+3.0
COLA	College	2.86	15		Pn	03 14 02.9	+3.0
MDM	Murphy Dome	2.90	11		Pn	03 14 03.6	+3.1
IL31		2.91	23		Pn	03 14 03.2	+2.6
ILAR	Eielson Array	2.91	23	P	Pn	03 14 03.2	+2.6
	34nm,0.3s,baz=204,slow=14,SNR=505						
ILAR				S	Sn	03 14 36.7	+2.4
	97nm,0.3s,baz=210,slow=23,SNR=15						
RAGM	Ragged Mountai	2.93	125		Pn	03 14 03.3	+2.3
MLY	Manley	2.96	350		Pn	03 14 04.5	+3.1
VRDI	Verde Repeater	3.04	105		Pn	03 14 04.0	+1.4
SVW2	Sparrevohn	3.07	253		Pn	03 14 05.0	+2.2
TT01	Tatalina	3.10	287		Pn	03 14 05.7	+2.3
TTA	Tatalina	3.11	288	P	Pn	03 14 05.6	+2.2
TTA	Tatalina	3.11	288		Pn	03 14 05.6	+2.2
MID	Middleton Isla	3.13	149	P	Pn	03 14 05.0	+1.3
MID	Middleton Isla	3.13	149		Pn	03 14 05.0	+1.3
SCRK	Sand Creek	3.13	51		Pn	03 14 06.7	+2.8
MCARA	McCarthy VSAT	3.19	101		Pn	03 14 06.8	+2.3
PS07	TAPS Pump Stn7	3.24	9		Pn	03 14 08.7	+3.4
BERG	Berg Lake	3.31	119		Pn	03 14 07.8	+1.6
AU22	Augustine Moun	3.34	216		Pn	03 14 10.1	+3.5
AU2	Augustine Isla	3.35	216		Pn	03 14 09.3	+2.6
AUL	Augustine Lava	3.35	216		Pn	03 14 10.3	+3.6
CRQM	Cirque	3.37	111		Pn	03 14 09.1	+1.9
AUP	Augustine Pinn	3.37	216	P	Pn	03 14 09.7	+2.6
AUP	Augustine Pinn	3.37	216		Pn	03 14 09.7	+2.6
AUH	Augustine H	3.37	216		Pn	03 14 10.2	+3.2
AUW	Augustine West	3.38	217		Pn	03 14 09.7	+2.6
PTPK	Patty Peak	3.50	103		Pn	03 14 11.0	+2.0
TGL	Tana Glacier	3.50	110		Pn	03 14 10.6	+1.6
BALM	Baldy	3.61	105		Pn	03 14 11.9	+1.5
KIAG	Kiagna River	3.65	106		Pn	03 14 12.2	+1.3
BC03		3.71	72		Pn	03 14 14.4	+2.9
PS06	TAPS Pump Stn6	3.74	359		Pn	03 14 16.0	+4.0

PRP	Porcupine Dome	3.84	26		Pn	03 14 16.6	+3.1
BARN	Barnard Glacie	3.91	102		Pn	03 14 16.7	+2.1
FOSS	Fourpeaked Sta	3.92	213		Pn	03 14 17.1	+2.4
GRNC	Granite Creek	3.99	107		Pn	03 14 17.1	+1.4
BVCY	Beaver Creek	4.07	82		Pn	03 14 19.4	+2.9
CTGM	Chitina Glacie	4.10	103		Pn	03 14 19.1	+2.0
YUK2	White River	4.12	91		Pn	03 14 19.9	+2.5
YUK1	Sand Pete Hill	4.23	86		Pn	03 14 22.1	+3.2
IM03		4.29	336		Pn	03 14 22.6	+3.1
YUK3	Moose Creek	4.30	91		Pn	03 14 22.1	+2.1
KAHG	Katmai Hook Gl	4.42	217		Pn	03 14 24.1	+2.7
KAHC	Katmai Hardscr	4.42	220		Pn	03 14 23.1	+1.5
EGAK	Eagle	4.60	51		Pn	03 14 26.6	+2.7
KDAK	Kodiak Island	4.62	201	P	Pn	03 14 24.8	+0.6
	11nm,0.3s,baz=57,slow=6.8,SNR=408						
KDAK				S	Sn	03 15 13.6	-3.0
	26nm,0.3s,baz=65,slow=20,SNR=11						
KDAK				LR	LR	03 16 31.8	
	comp=Z,616nm,20.5s,baz=27,slow=42						
KDAK	Kodiak Island	4.62	201	Sn	Sn	03 15 17.3	+0.6
PS05	TAPS Pump Stn5	4.73	355		Pn	03 14 29.6	+4.0
KCG	Knife Ck. Glac	4.74	218		Pn	03 14 27.8	+2.1
KELA	Mount Kelaz	4.82	223		Pn	03 14 29.2	+2.2
FYU	Fort Yukon	4.83	21		Pn	03 14 30.5	+3.5
ACHA	Angle Creek He	4.88	219		Pn	03 14 30.3	+2.5
PCA	Pinnacle	4.94	110		Pn	03 14 30.5	+1.9
DAWY	Dawson	5.00	63		Pn	03 14 32.1	+2.7
COLD	Coldfoot	5.13	357		Pn	03 14 34.8	+3.7
YUK4	Talbot Arm	5.24	94		Pn	03 14 35.1	+2.3
OHAK	Old Harbor	5.28	203		Pn	03 14 33.1	0.0
YUK6	Outpost Mounta	5.48	98		Pn	03 14 37.8	+1.6
PNL	Peninsula	5.53	112		Pn	03 14 38.3	+1.6
PLK3	Peulik 3	5.59	220		Pn	03 14 39.7	+2.2
PLK1	Peulik 1	5.61	222		Pn	03 14 40.0	+2.3
YUK5	Granite Creek	5.66	95		Pn	03 14 40.6	+2.0
BM03	Burnt Mountain	5.71	19		Pn	03 14 42.3	+3.1
YUK7	Dusty Glacier	5.72	101		Pn	03 14 41.5	+2.1
HYT	Haines Junctio	5.91	97		Pn	03 14 43.3	+1.3
SII	Sitkinak Islan	6.07	205		Pn	03 14 44.8	+0.7
DHAK	Deception Hill	6.35	114		Pn	03 14 49.5	+1.6
TOLK	Toolik Lake Re	6.54	360		Pn	03 14 55.4	+4.9
TOLK	Toolik Lake Re	6.54	360	P	Pn	03 14 55.2	+4.7
	baz=180						
TOLK				S	Sn	03 16 08.5	+4.7
	baz=180						
EPYK	Eagle Plains	7.01	47		Pn	03 15 01.0	+4.0
EPYK	Eagle Plains	7.01	47	P	Pn	03 15 01.2	+4.2
	baz=238,SNR=14						
EPYK				S	Sn	03 16 19.4	+3.9
	baz=238						
CHIR	Chirikof Islan	7.06	209		Pn	03 14 58.2	+0.6
WHY	Whitehorse	7.19	95		Pn	03 15 00.8	+1.3
CHGN	Chignik	7.41	222		Pn	03 15 03.1	+0.8
SKAG	Skagway	7.45	105		Pn	03 15 04.5	+1.6
ANM	Nome	7.53	296	P	Pn	03 15 06.9	+2.9
ANM	Nome	7.53	296		Pn	03 15 06.8	+2.9
BESE	Bessie Mountai	8.10	110		Pn	03 15 12.8	+0.9
RDOG	Red Dog Mine	8.18	322		Pn	03 15 16.7	+3.8
JIS	Juneau Island	8.47	110		Pn	03 15 17.6	+0.7
SIT	Sitka	8.81	119	P	Pn	03 15 22.1	+0.5
SIT	Sitka	8.81	119		Pn	03 15 22.1	+0.5
INK	Inuvik	9.12	40	P	Pn	03 15 28.4	+2.6
	3.1nm,0.3s,baz=232,slow=17,SNR=110						
INK				S	Sn	03 17 07.3	+0.3
	2.8nm,0.3s,baz=234,slow=17,SNR=3.3						
INK				LR	LR	03 19 20.4	
	comp=Z,253nm,18.1s,baz=271,slow=40						
INK	Inuvik	9.12	40		Sn	03 17 09.2	+2.2
GAMB	Gambell	10.21	289		Pn	03 15 44.0	+3.3
DLBC	Dease Lake	10.35	102	P	Pn	03 15 44.3	+1.5
	1.2nm,0.3s,baz=313,slow=13,SNR=15						
DLBC				S	Sn	03 17 34.5	-3.1
	0.4nm,0.3s,baz=259,slow=19,SNR=2.0						
DLBC	Dease Lake	10.35	102		Pn	03 15 44.0	+1.2
DLBC					Sn	03 17 37.9	+0.3
C36M	Paulatuk	12.63	44		Pn	03 16 13.9	+0.2
C36M	Paulatuk	12.63	44	P	Pn	03 16 13.7	0.0
	baz=247,SNR=35						
C36M				S	Sn	03 18 31.8	-1.1
	baz=247						
BBB	Bella Bella	15.23	121	P	Pn	03 16 50.9	+1.9
	0.2nm,0.3s,baz=320,slow=17,SNR=3.1						
BBB				LR	LR	03 22 07.1	
	comp=Z,111nm,21.5s,baz=328,slow=34						
BBB	Bella Bella	15.23	121	IAmb	IAmb	03 16 56.1	
	comp=Z,19nm,0.9s						
YKA	Yellowknife Ar	16.12	73	P	Pn	03 17 01.0	+0.5
	comp=Z,0.3nm,0.3s,baz=284,slow=9.9,SNR=34						
YKA				LR	LR	03 24 33.6	
	comp=Z,52nm,19.0s,baz=0.0,slow=42						
YKA				ScP	ScP	03 25 24.2	-1.7
	baz=308,slow=1.6,SNR=5.1						
LLLB	Lillooet	19.00	115	P	Pn	03 17 36.3	+0.1
BILL	Bilibino	19.16	307	*e*P	P	03 17 34.5	-2.4
BILL				MLR	MLR		
	comp=Z,117nm,23.0s						
B05A	Bryant	20.71	119	P	Pn	03 17 57.9	+1.6
	baz=322						
B08A	Colville Reser	21.79	115	P	P	03 18 07.2	+1.7
LON	Longmire	22.04	122	P	P	03 18 10.2	+1.9
LON				pmax	pmax		
	comp=Z,9.0nm,1.1s						
LON	Longmire	22.04	122	P	P	03 18 10.2	+1.9
LTY	Liberty	22.09	119	P	P	03 18 10.7	+1.8
RES	Resolute Bay	22.59	34	P	P	03 18 14.0	+0.1
	comp=Z,1.3nm,0.5s,baz=257,slow=12,SNR=12						
RES				LR	LR	03 27 00.2	
	comp=Z,78nm,18.1s,baz=205,slow=36						
RES	Resolute Bay	22.59	34	P	P	03 18 14.5	+0.6
RES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
RES	Resolute Bay	22.59	34	P	P	03 18 14.5	+0.6
NEW	Newport	22.81	112	P	P	03 18 18.1	+1.6
	comp=Z,2.6nm,0.6s,baz=319,slow=7.8,SNR=7.1						
NEW				LR	LR	03 27 55.0	
	comp=Z,162nm,21.2s,baz=318,slow=38						
NEW	Newport	22.81	112	P	P	03 18 17.9	+1.4
NEW				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NEW	Newport	22.81	112	P	P	03 18 17.9	+1.4
NEW	Newport	22.81	112	P	P	03 18 18.5	+2.1
	baz=320						
D08A	Wollman Farm,	22.98	117	P	P	03 18 19.0	+0.9
F07A	Phinny Hill Vi	23.49	120	P	P	03 18 24.9	+1.6
F07A				IAmb	IAmb	03 18 25.4	
	comp=Z,14nm,0.7s						
WALA	Waterton Lakes	23.64	107	P	P	03 18 25.5	+0.7
WALA				IAmb	IAmb	03 18 27.7	
	comp=Z,13nm,0.9s						
I05D	Terrebonne, OR	24.22	124	P	P	03 18 31.2	+1.0
	baz=327						
I04A	Tendick Farm,	24.27	127	P	P	03 18 31.9	+1.2
	baz=329						
G08A	Pilot Rock	24.38	120	P	P	03 18 32.4	+0.7
JTMT	Jette	24.45	110	P	P	03 18 33.9	+1.5
JTMT				IAmb	IAmb	03 18 34.1	
	comp=Z,7.4nm,0.7s						
F10A	Beach Ranch, E	24.55	116	P	P	03 18 34.3	+1.1
K02D	Willamette Mer	24.75	130	P	P	03 18 37.1	+2.0
	baz=331						
J04D	Umpqua Nationa	24.86	127	P	P	03 18 37.7	+1.6
	baz=329						
J05D	Fort Rock, OR	25.15	125	P	P	03 18 40.5	+1.7
	baz=328						
I07A	Izee	25.16	122	P	P	03 18 40.8	+2.0
MSO	Missoula	25.30	111	P	P	03 18 41.1	+1.1
MSO				IAmb	IAmb	03 18 57.8	
	comp=Z,6.5nm,0.8s						
BMO	Blue Mountains	25.42	118	P	P	03 18 42.2	+1.1
BMO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BMO	Blue Mountains	25.42	118	P	P	03 18 42.2	+1.1
FFC	Flin Flon	25.45	85	P	P	03 18 41.6	+0.4
FFC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
FFC	Flin Flon	25.45	85	P	P	03 18 41.6	+0.4
FFC				IAmb	IAmb	03 18 42.2	
	comp=Z,6.7nm,0.8s						
YBH	Yreka Blue Hor	25.94	129	P	P	03 18 47.0	+1.1
	comp=Z,3.7nm,0.8s,baz=291,slow=4.4,SNR=5.0						
YBH				LR	LR	03 27 51.9	
	comp=Z,60nm,21.2s,baz=319,slow=34						
SEY	Seymchan	26.03	298	P	P	03 18 45.4	-0.9
	comp=Z,5.7nm,0.7s,baz=98,slow=7.0,SNR=14						
EGMT	Eagleton	26.28	104	P	P	03 18 49.2	+0.3
EGMT	Eagleton	26.28	104	P	P	03 18 49.5	+0.7
	baz=317,SNR=24						
LRM	Limekiln Ridge	26.73	110	P	P	03 18 53.5	+0.4
WVOR	Wild Horse Val	26.88	123	P	P	03 18 55.8	+1.4
WVOR				pmax	pmax		
	comp=Z,5.0nm,1.2s						
WVOR	Wild Horse Val	26.88	123	P	P	03 18 55.8	+1.4
WDC	Whiskeytown Da	27.01	130	P	P	03 18 57.0	+1.5
WDC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WDC	Whiskeytown Da	27.01	130	P	P	03 18 57.0	+1.5
MFID	Camas Ranch	27.21	118	P	P	03 18 57.9	+0.6
MFID				IAmb	IAmb	03 18 59.4	
	comp=Z,5.8nm,0.8s						
QLMT	Earthquake Lak	27.95	110	P	P	03 19 05.1	+1.0
GCMT	Greycliff	27.99	107	P	P	03 19 03.8	-0.5
YHL	Hebgen Lake	28.05	110	P	P	03 19 06.5	+1.5
YHB	Horse Butte	28.12	110	P	P	03 19 07.3	+1.7
YHH	Holmes Hill	28.24	110	P	P	03 19 08.4	+1.6
YMR	Madison River	28.29	110	P	P	03 19 08.6	+1.6
MA2	Magadan	28.30	292	LR	LR	03 30 46.4	
	comp=Z,58nm,20.1s,baz=99,slow=37						
MA2	Magadan	28.30	292	*i* P	P	03 19 08.1	+1.4
MA2				pmax	pmax		
	comp=Z,8.0nm,1.1s						
YNR	Norris Junctio	28.38	110	P	P	03 19 08.5	+0.6
BEKR	Beckworth	28.43	128	P	P	03 19 09.0	+0.6
BEKR				IAmb	IAmb	03 19 10.1	
	comp=Z,6.0nm,0.7s						
YNE	Yellowstone No	28.45	109	P	P	03 19 09.8	+1.3
YUF	Upper Falls	28.45	110	P	P	03 19 10.0	+1.4
YMP	Mirror Lake Pl	28.59	109	P	P	03 19 11.3	+1.5
LKWY	Lake	28.62	110	P	P	03 19 11.0	+0.9
LKWY				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LKWY	Lake	28.62	110	P	P	03 19 11.0	+0.9
LKWY				IAmb	IAmb	03 19 14.3	
	comp=Z,6.6nm,0.8s						
H17A	Grant Village	28.67	110	P	P	03 19 12.0	+1.4
H17A	Grant Village	28.67	110	P	P	03 19 13.9	+3.3
	baz=322						
RLMT	Red Lodge	28.69	108	P	P	03 19 11.9	+1.3
FLWY	Flagg Ranch	28.87	111	P	P	03 19 13.4	+1.2
FLWY				IAmb	IAmb	03 19 15.4	
	comp=Z,7.6nm,1.1s						
PETK	Petropavlovsk-	28.87	276	LR	LR	03 32 40.7	
	comp=Z,48nm,18.1s,baz=62,slow=40						
LAO	LASA Array	28.88	102	P	P	03 19 13.2	+1.1
PAHR	Pah Rah Range	28.94	127	P	P	03 19 14.5	+1.7
FXWY	Fox Creek	29.08	112	P	P	03 19 16.0	+1.9
VCNR	Virginia City	29.20	128	P	P	03 19 16.6	+1.5
VCNR				IAmb	IAmb	03 19 17.1	
	comp=Z,5.7nm,0.8s						
REDW	Red Top Meadow	29.37	112	P	P	03 19 18.6	+1.9
PNTR	Pine Nut	29.40	128	P	P	03 19 18.4	+1.4
PNTR				IAmb	IAmb	03 19 24.4	
	comp=Z,6.3nm,0.8s						
YERR	Yerington	29.62	127	P	P	03 19 20.4	+1.5
YERR				IAmb	IAmb	03 19 20.8	
	comp=Z,6.5nm,1.1s						
ELK	Elko	29.67	120	P	P	03 19 20.6	+1.1
	comp=Z,3.4nm,0.8s,baz=317,slow=7.8,SNR=18						
ELK				LR	LR	03 32 27.6	
	comp=Z,53nm,19.8s,baz=345,slow=39						
ELK	Elko	29.67	120	P	P	03 19 20.4	+1.0
ELK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ELK	Elko	29.67	120	P	P	03 19 20.4	+1.0
ELK				IAmb	IAmb	03 19 21.8	
	comp=Z,6.5nm,1.1s						
WAKR	Walker	29.97	128	P	P	03 19 23.1	+1.1
WAKR				IAmb	IAmb	03 19 24.8	
	comp=Z,7.9nm,1.1s						
KVN	Kaiserville	30.00	126	P	P	03 19 23.9	+1.7
KVN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KVN	Kaiserville	30.00	126	P	P	03 19 23.9	+1.7
KVN				IAmb	IAmb	03 19 24.4	
	comp=Z,7.2nm,1.0s						
RYN	Ryan	30.20	127	P	P	03 19 25.6	+1.5
RYN				IAmb	IAmb	03 19 26.0	
	comp=Z,5.4nm,0.9s						
BW06	Boulder Array	30.42	111	P	P	03 19 27.3	+1.3
PD31	Pinedale Array	30.42	111	P	P	03 19 27.8	+1.8
PDAR	Pinedale Array	30.42	111	P	P	03 19 27.0	+1.0
	comp=Z,1.1nm,0.5s,baz=321,slow=4.1,SNR=10						
PDAR				PcP	PcP	03 22 23.6	-1.2
	comp=Z,0.6nm,0.6s,baz=97,slow=1.9,SNR=5.6						
PDAR				LR	LR	03 31 23.8	
	comp=Z,103nm,18.4s,baz=350,slow=36						
NVAR	Mina Array Bea	30.46	127	P	P	03 19 27.6	+1.2
	comp=Z,6.2nm,0.7s,baz=312,slow=8.8,SNR=44						
NVAR				PcP	PcP	03 22 24.9	-0.1
	comp=Z,0.9nm,0.8s,baz=293,slow=2.7,SNR=4.1						
NVAR				LR	LR	03 30 22.4	
	comp=Z,50nm,19.2s,baz=332,slow=33						
NV11	Mina Array Sit	30.52	126	P	P	03 19 28.2	+1.5
TIXI	Tiksi	30.79	322	PcP	PcP	03 22 24.1	-0.9
	comp=Z,1.3nm,0.2s,baz=21,slow=1.8,SNR=3.5						
TIXI				LR	LR	03 34 51.9	
	comp=Z,49nm,18.1s,baz=43,slow=42						
OMMB	Old Mammoth Mi	30.92	128	P	P	03 19 30.9	+0.4
OMMB				IAmb	IAmb	03 19 33.1	
	comp=Z,7.2nm,1.0s						
TCUT	Toone Canyon	30.96	115	P	P	03 19 32.5	+1.7
MLAC	Mammoth, Mammo	30.97	128	P	P	03 19 33.3	+2.5
	baz=332						
DUG	Dugway, Tooele	31.13	118	P	P	03 19 33.6	+1.4
DUG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
DUG	Dugway, Tooele	31.13	118	P	P	03 19 33.6	+1.4
DUG	Dugway, Tooele	31.13	118	P	P	03 19 33.3	+1.1
	baz=327						
ULM	Lac du Bonnet	31.18	87	P	P	03 19 32.8	+0.5
	comp=Z,4.1nm,0.7s,baz=311,slow=9.6,SNR=10.0						
ULM				PcP	PcP	03 22 25.2	-1.2
	comp=Z,0.8nm,0.5s,baz=307,slow=2.9,SNR=4.2						
ULM				LR	LR	03 31 20.8	
	comp=Z,85nm,20.6s,baz=320,slow=35						
ULM	Lac du Bonnet	31.18	87	P	P	03 19 33.0	+0.7
ULM						03 22 25.2	
ULM				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ULM	Lac du Bonnet	31.18	87	P	P	03 19 33.0	+0.7
ULM				IAmb	IAmb	03 19 34.1	
	comp=Z,9.1nm,1.1s						
ULM					PcP	03 22 25.2	-1.2
R11A	Troy Canyon, C	31.58	123	P	P	03 19 37.4	+1.2
R11A				IAmb	IAmb	03 19 38.0	
	comp=Z,6.1nm,1.0s						
R11A				PcP	PcP	03 22 27.2	-0.7
R11A	Troy Canyon, C	31.58	123	P	P	03 19 37.2	+1.0
	baz=330,SNR=12						
NLU	North Lily Min	31.64	117	P	P	03 19 37.7	+0.9
RSSD	Black Hills	31.83	103	P	P	03 19 39.8	+1.4
RSSD				pmax	pmax		
	comp=Z,31nm,0.6s						
RSSD	Black Hills	31.83	103	P	P	03 19 39.8	+1.4
RSSD	Black Hills	31.83	103	P	P	03 19 39.8	+1.4
	baz=321						
K22A	Casper	31.86	108	P	P	03 19 39.6	+1.0
K22A	Casper	31.86	108	P	P	03 19 39.6	+1.0
	baz=323,SNR=8.3						
GRAC	Grapevine Rang	32.07	127	P	P	03 19 42.4	+2.0
	baz=332						
PSUT	Pine Spring	32.11	121	P	P	03 19 41.9	+1.0
CWC	Cottonwood Cre	32.30	128	P	P	03 19 44.2	+1.7
	baz=333						
RWWY	Rawlins	32.32	109	P	P	03 19 43.9	+1.1
RWWY				IAmb	IAmb	03 19 59.7	
	comp=Z,5.8nm,0.7s						
TPNV	Topopah Spring	32.54	125	P	P	03 19 45.5	+0.9
TPNV				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TPNV	Topopah Spring	32.54	125	P	P	03 19 45.5	+0.9
TPNV				IAmb	IAmb	03 19 46.4	
	comp=Z,5.8nm,1.1s						
TPNV	Topopah Spring	32.54	125	P	P	03 19 45.6	+1.0
	baz=331						
AGMN	Agassiz Nation	32.55	90	P	P	03 19 45.4	+1.1
	baz=315						
FURC	Furnace Creek,	32.73	126	P	P	03 19 47.9	+1.9
	baz=332						
MSU	Marysvale	32.82	119	P	P	03 19 48.8	+1.7
MSU	Marysvale	32.82	119	P	P	03 19 48.8	+1.7
ISA	Isabella, Lake	32.84	129	P	P	03 19 48.4	+1.2
ISA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ISA	Isabella, Lake	32.84	129	P	P	03 19 48.4	+1.2
ISA				IAmb	IAmb	03 19 48.8	
	comp=Z,5.3nm,0.9s						
ISA	Isabella, Lake	32.84	129	P	P	03 19 48.3	+1.1
	baz=334						
MPMC	Manual Prospec	32.86	128	P	P	03 19 48.9	+1.5
	baz=333,SNR=5.5						
Q16A	Castle Valley	32.89	117	P	P	03 19 49.3	+1.6
SRU	San Rafael Swe	33.00	116	P	P	03 19 49.8	+1.1
SRU				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SRU	San Rafael Swe	33.00	116	P	P	03 19 49.8	+1.1
PKM	Mcpherson Peak	33.06	132	P	P	03 19 51.1	+2.0
	baz=335						
O20A	White River Ci	33.13	112	P	P	03 19 51.4	+1.7
O20A				IAmb	IAmb	03 19 53.2	
	comp=Z,5.8nm,1.1s						
CCUT	Cedar City	33.16	121	P	P	03 19 51.7	+1.6
MTPU	Mount Pierson	33.21	119	P	P	03 19 52.5	+1.8
LRMC	Laurel Mtn Rad	33.30	128	P	P	03 19 52.6	+1.4
	baz=333						
N23A	Red Feather La	33.52	109	P	P	03 19 55.2	+2.0
	baz=324						
LCMT	Little Creek M	33.67	121	P	P	03 19 55.3	+0.9
GSC	Goldstone, Bar	33.78	127	P	P	03 19 56.9	+1.5
GSC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GSC	Goldstone, Bar	33.78	127	P	P	03 19 56.9	+1.5
GSC				IAmb	IAmb	03 19 57.2	
	comp=Z,5.6nm,0.6s						
GSC	Goldstone, Bar	33.78	127	P	P	03 19 56.8	+1.5
	baz=333,SNR=6.5						
SUSD	Miller	33.93	98	P	P	03 19 57.4	+0.8
U15A	North Rim	34.55	121	P	P	03 20 03.0	+0.8
U15A				IAmb	IAmb	03 20 04.4	
	comp=Z,3.6nm,0.8s						
FRB	Frobisher Bay	34.58	51	P	P	03 20 01.6	-0.2
	comp=Z,3.0nm,0.6s,baz=308,slow=11,SNR=9.0						
FRB				LR	LR	03 33 10.8	
	comp=Z,62nm,19.2s,baz=318,slow=34						
GMRC	Granite Mounta	34.67	126	P	P	03 20 04.3	+1.2
	baz=333						
EYMN	Ely	34.85	87	P	P	03 20 04.4	0.0
EYMN				IAmb	IAmb	03 20 19.8	
	comp=Z,5.1nm,0.8s						
EYMN	Ely	34.85	87	P	P	03 20 04.9	+0.5
	baz=316,SNR=6.8						
W13A	Hualapai Mount	35.08	124	P	P	03 20 07.1	+0.4
W13A				IAmb	IAmb	03 20 09.1	
	comp=Z,6.8nm,1.1s						
BELC	Belle Mtn. Jos	35.24	127	P	P	03 20 09.3	+1.3
	baz=333						
OGNE	Ogallala	35.24	105	P	P	03 20 09.3	+1.4
OGNE				IAmb	IAmb	03 20 13.3	
	comp=Z,9.0nm,0.9s						
IRM	Iron Mountain	35.42	126	P	P	03 20 11.1	+1.6
	baz=333						
Q24A	Divide	35.45	110	P	P	03 20 11.2	+1.2
	baz=326						
MVCO	Mesa Verde	35.46	115	P	P	03 20 10.4	+0.3
	baz=328						
YAK	Yakutsk	35.52	307	LR	LR	03 36 17.1	
	comp=Z,68nm,19.2s,baz=50,slow=39						
ECSD	EROS Data Cent	35.57	96	P	P	03 20 10.9	+0.3
ECSD				IAmb	IAmb	03 20 11.4	
	comp=Z,9.6nm,1.1s						
ECSD	EROS Data Cent	35.57	96	P	P	03 20 10.7	+0.1
	baz=320,SNR=9.8						
WUAZ	Wupatki	35.72	120	P	P	03 20 13.9	+1.8
WUAZ	Wupatki	35.72	120	P	P	03 20 13.6	+1.5
	baz=330,SNR=6.0						
S22A	4UR Ranch, Cre	35.73	113	P	P	03 20 14.2	+1.8
S22A				IAmb	IAmb	03 20 15.7	
	comp=Z,3.5nm,0.8s						
S22A	4UR Ranch, Cre	35.73	113	P	P	03 20 13.9	+1.6
	baz=327,SNR=6.4						
Y12C	Blythe	36.02	126	P	P	03 20 16.3	+1.8
Y12C				IAmb	IAmb	03 20 16.7	
	comp=Z,6.6nm,0.8s						
Y12C	Blythe	36.02	126	P	P	03 20 16.1	+1.6
	baz=333						
MONP2	Monument Peak	36.08	129	P	P	03 20 16.7	+1.4
	baz=334						
SPMN	Marine on St.	36.23	91	P	P	03 20 17.0	+0.8
SPMN					sP	03 20 28.6	-1.5
SPMN				IAmb	IAmb	03 20 31.4	
	comp=Z,10nm,1.1s						
SPMN	Marine on St.	36.23	91	P	P	03 20 17.0	+0.8
	baz=318						
SDCO	Great Sand Dun	36.30	111	P	P	03 20 17.7	+0.4
IKP	In-Ko-Pah, Jac	36.41	128	P	P	03 20 19.3	+1.4
	baz=334						
Y14A	Wickenburg	36.44	124	P	P	03 20 19.8	+1.6
Y14A				IAmb	IAmb	03 20 20.0	
	comp=Z,3.3nm,0.8s						
X16A	Lo Mia Camp, P	36.64	121	P	P	03 20 21.8	+1.7
X16A				IAmb	IAmb	03 20 22.4	
	comp=Z,4.8nm,0.9s						
BGNE	Belgrade	36.66	100	P	P	03 20 20.5	+0.6
BGNE	Belgrade	36.66	100	P	P	03 20 20.4	+0.4
	baz=322						
X18A	Snowflake	37.15	119	P	P	03 20 25.8	+1.4
X18A				IAmb	IAmb	03 20 26.6	
	comp=Z,7.6nm,0.9s						
G40A	Rib Lake	37.42	89	P	P	03 20 26.7	+0.4
G40A				IAmb	IAmb	03 20 28.0	
	comp=Z,5.2nm,0.8s						
SUMG	Summit	37.74	27	*i* P	P	03 20 29.5	+0.3
SUMG				*e*		03 20 44.5	
SUMG	Summit	37.74	27	*i* P	P	03 20 29.5	+0.3
SUMG				*e*		03 20 44.5	
CBKS	Cedar Bluff	38.00	104	P	P	03 20 32.2	+0.8
CBKS				pmax	pmax		
	comp=Z,17nm,1.0s						
CBKS	Cedar Bluff	38.00	104	P	P	03 20 32.2	+0.8
E43A	Lone Tree Farm	38.10	85	P	P	03 20 32.6	+0.6
ANMO	Albuquerque	38.25	115	P	P	03 20 35.0	+1.3
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ANMO	Albuquerque	38.25	115	P	P	03 20 35.0	+1.3
ANMO	Albuquerque	38.25	115	P	P	03 20 34.8	+1.0
	baz=329						
214A	Organ Pipe Nat	38.27	125	P	P	03 20 34.7	+1.0
214A	Organ Pipe Nat	38.27	125	P	P	03 20 35.1	+1.4
	baz=333						
TUC	Tucson	38.75	122	P	P	03 20 38.8	+1.0
TUC				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TUC	Tucson	38.75	122	P	P	03 20 38.8	+1.0
TUC	Tucson	38.75	122	P	P	03 20 39.2	+1.4
	baz=332						
D46A	Sault St. Mari	39.10	82	P	P	03 20 40.6	+0.2
	baz=317						
JFWS	Jewell Farm	39.18	91	P	P	03 20 41.1	0.0
	baz=320						
KSU1	Kansas State U	39.21	101	P	P	03 20 41.5	+0.1
	baz=324,SNR=7.1						
L40A	Anamosa	39.38	93	P	P	03 20 42.8	0.0
L40A					sP	03 20 55.5	-1.3
D47A	Chapleau	39.41	81	P	P	03 20 42.7	-0.4
	baz=317						
SPITS	Spitsbergen Ar	39.67	5	P	P	03 20 44.8	0.0
	comp=Z,14nm,1.0s,baz=35,slow=3.1,SNR=6.1						
121A	Cookes Peak, D	39.77	118	P	P	03 20 48.2	+1.7
	baz=331						
E47A	Iron Bridge	39.77	82	P	P	03 20 45.8	-0.3
	baz=318						
G46A	Petoskey	39.88	84	P	P	03 20 47.4	+0.4
	baz=318						
D48A	Paudash Townsh	39.92	80	P	P	03 20 47.3	0.0
	baz=317						
MATQ	Matagami	39.95	74	P	P	03 20 47.2	-0.3
	baz=316,SNR=6.7						
YSS	Yuzh-Sakhalins	40.08	280	*i* P	P	03 20 49.5	+0.9
YSS				pmax	pmax		
	comp=Z,11nm,1.1s						
GRNR	Gornyy	40.19	289	⇓*i*P	P	03 20 49.4	-0.1
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GRNR				MLR	MLR		
	comp=Z,50nm,16.0s						
E48A	Lockeyer	40.27	81	P	P	03 20 49.9	-0.4

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              baz=318
AMTX   Amarillo          40.38 110    P        P        03 20 52.0 +0.6
AMTX                                  IAmb     IAmb     03 20 54.0
              comp=Z,5.2nm,0.7s
F48A   Evansville        40.55  82    P        P        03 20 52.6 +0.1
              baz=318,SNR=5.0
MSTX   Muleshoe          40.67 112    P        P        03 20 54.9 +1.1
MSTX   Muleshoe          40.67 112    P        P        03 20 54.7 +0.9
              baz=328,SNR=14
LSQQ   Lebel-sur-Quev    40.76  74    P        P        03 20 53.9 -0.2
              baz=317
D50A   G1974 Best Tow    40.84  78    P        P        03 20 54.8 -0.1
              baz=318
F49A   Sandfield         40.86  81    P        P        03 20 54.9 -0.1
              baz=318
T35A   Sooner Cattle     41.02 103    P        P        03 20 56.6 +0.1
VLDQ   Val d'Or          41.23  75    P        P        03 20 56.5 -1.5
VLDQ                                  IAmb     IAmb     03 20 57.2
              comp=Z,9.2nm,1.1s
HDIL   Hopedale          41.46  93    P        P        03 21 00.1  0.0
HDIL   Hopedale          41.46  93    P        P        03 20 59.9 -0.2
              baz=322
E51A   G1948 Merrick     41.47  79    P        P        03 20 59.7 -0.4
              baz=318
WMOK   Wichita Mounta    41.80 107    P        P        03 21 03.6 +0.7
WMOK                                  pmax     pmax
              comp=Z,7.0nm,0.8s
WMOK   Wichita Mounta    41.80 107    P        P        03 21 03.6 +0.7
WMOK                                  IAmb     IAmb     03 21 04.1
              comp=Z,7.3nm,0.8s
WMOK   Wichita Mounta    41.80 107    P        P        03 21 03.1 +0.2
              baz=327,SNR=7.0
S39A   Bolivar           41.87  99    P        P        03 21 02.5 -0.9
S39A                                  IAmb     IAmb     03 21 02.8
              comp=Z,4.2nm,0.6s
D53A   Lac Vacive, Po    41.88  77    P        P        03 21 03.5  0.0
D53A                                  IAmb     IAmb     03 21 04.1
              comp=Z,7.5nm,0.8s
D53A   Lac Vacive, Po    41.88  77    P        P        03 21 03.3 -0.1
              baz=318
E52A   Mattawa           42.04  78    P        P        03 21 04.3 -0.4
              baz=318
F52A   Sundridge         42.10  79    P        P        03 21 05.0 -0.2
              baz=319
TUL1   Leonard           42.18 103    P        P        03 21 05.7 -0.3
TUL1                                  IAmb     IAmb     03 21 06.6
              comp=Z,13nm,1.1s
TUL1   Leonard           42.18 103    P        P        03 21 06.3 +0.3
              baz=326
JKA    Kamikawa-asahi    42.28 277    P        P        03 21 05.8 -0.9
ASAJ   Asahikawa         42.28 277    P        P        03 21 05.8 -0.9
              comp=Z,4.4nm,0.8s,baz=105,slow=9.5,SNR=5.4
D54A   Lac Fusel, La     42.31  76    P        P        03 21 06.8 -0.1
              baz=318
U38A   Gravette          42.39 101    P        P        03 21 07.0 -0.7
U38A                                  IAmb     IAmb     03 21 07.5
              comp=Z,8.8nm,0.8s
E53A   Dumoine, Ponti    42.42  77    P        P        03 21 07.8 -0.1
              baz=319
CCM    Cathedral Cave    42.54  97    P        P        03 21 08.0 -0.9
              baz=324
E54A   Lac Daplat, Po    42.60  77    P        P        03 21 08.9 -0.3
              baz=319
SFIN   Lafayette         42.63  91    P        P        03 21 09.9 +0.3
              baz=322
L48A   N Adams           42.66  87    P        P        03 21 09.9  0.0
              baz=321
NRIK   Noril'sk          42.72 334    P        P        03 21 09.0 -1.0
              comp=Z,1.4nm,0.3s,baz=24,slow=10.0,SNR=2.2
NRIK                                  LR       LR       03 41 35.9
              comp=Z,74nm,19.4s,baz=358,slow=40
NRIK   Noril'sk          42.72 334    P        P        03 21 09.0 -1.0
MGMO   Mountain Grove    42.79  98    P        P        03 21 10.4 -0.5
I51A   Listowel          42.82  82    P        P        03 21 11.8 +0.7
              baz=320
N47A   Urbana            42.90  89    P        P        03 21 11.8 +0.1
              baz=322
G53A   Haliburton        42.93  79    P        P        03 21 12.0  0.0
              baz=319
D55A   Sainte-Anne-du    42.94  75    P        P        03 21 12.1  0.0
              baz=318,SNR=5.2
FVM    French Village    42.98  96    P        P        03 21 12.2 -0.3
FVM                                   pmax     pmax
              comp=Z,6.0nm,0.6s
FVM    French Village    42.98  96    P        P        03 21 12.2 -0.3
FVM                                   IAmb     IAmb     03 21 12.2
              comp=Z,5.5nm,0.6s
U40A   Yellville         43.17 100    P        P        03 21 13.3 -0.7
U40A   Yellville         43.17 100    P        P        03 21 13.2 -0.8
              baz=325
ABTX   Abilene, Hawle    43.19 109    P        P        03 21 14.2 -0.1
              baz=328
D56A   ZEC Mazanza, M    43.25  74    P        P        03 21 14.3 -0.3
              baz=319,SNR=12
KLR    Kul'dur           43.37 291    P        P        03 21 14.4 -1.1
              comp=Z,1.8nm,0.6s,baz=21,slow=9.5,SNR=5.6
KLR    Kul'dur           43.37 291  i P        P        03 21 13.5 -2.0
KLR                                   pmax     pmax
              comp=Z,2.0nm,0.9s
E56A   St. Veronique     43.50  75    P        P        03 21 16.2 -0.4
              baz=319
ERM    Erimo             43.64 275  i P        P        03 21 18.0 +0.3
ERM                                   pmax     pmax
              comp=Z,32nm,1.2s
O48A   Farmland          43.64  89    P        P        03 21 17.5 -0.3
              baz=322
D57A   Chemin Vers le    43.66  74    P        P        03 21 17.6 -0.3
              baz=319,SNR=6.8
W39A   Magazine          43.69 101    P        P        03 21 17.8 -0.4
              baz=326
G55A   Calabogie         43.71  78    P        P        03 21 17.9 -0.3
              baz=320
S44A   Carbondale        43.76  95    P        P        03 21 18.6 -0.2
S44A                                  IAmb     IAmb     03 21 19.1
              comp=Z,12nm,0.9s
LATQ   La Tuque          43.88  73    P        P        03 21 19.3 -0.3
              baz=319
PBMO   Poplar Bluff      43.95  97    P        P        03 21 19.7 -0.5
TRQ    Mont Tremblant    43.96  75    P        P        03 21 20.3  0.0
E57A   Chemin Saint G    44.00  75    P        P        03 21 20.2 -0.4
              baz=319
D58A   Chemin du LacG    44.06  73    P        P        03 21 20.7 -0.4
              baz=319,SNR=8.4
TX31   Lajitas Ar. Si    44.28 116    P        P        03 21 24.2 +1.0
TX31                                  IAmb     IAmb     03 21 24.4
              comp=Z,4.8nm,0.8s
TX32   Lajitas Array     44.28 116    P        P        03 21 23.7 +0.6
TXAR   Lajitas Array     44.28 116    P        P        03 21 23.8 +0.7
              comp=Z,3.3nm,0.8s,baz=325,slow=6.9,SNR=40
TXAR                                  LR       LR       03 40 50.4
              comp=Z,62nm,21.0s,baz=0.0,slow=37
MIAR   Mount Ida         44.32 102    P        P        03 21 23.2 -0.1
MIAR                                  pmax     pmax
              comp=Z,8.0nm,1.0s
MIAR   Mount Ida         44.32 102    P        P        03 21 23.2 -0.1
MIAR                                  IAmb     IAmb     03 21 23.8
              comp=Z,8.0nm,0.9s
MIAR   Mount Ida         44.32 102    P        P        03 21 23.1 -0.1
              baz=326,SNR=5.5
WHTX   Lake Whitney,     44.70 108    P        P        03 21 26.3  0.0
              baz=328
WCI    Wyandotte Cave    44.72  92    P        P        03 21 25.9 -0.5
              baz=323
P50A   Jamestown         44.79  89    P        P        03 21 26.3 -0.6
              baz=323
L54A   Sinclairville     44.83  82    P        P        03 21 27.8 +0.5
              baz=321
JCT    Junction City     44.95 111    P        P        03 21 29.0 +0.6
JCT                                   pmax     pmax
              comp=Z,18nm,0.9s
JCT    Junction City     44.95 111    P        P        03 21 29.0 +0.6
JCT    Junction City     44.95 111    P        P        03 21 28.5 +0.1
              baz=330,SNR=8.9
G58A   Ormstown          45.00  76    P        P        03 21 27.8 -0.7
              baz=320
D60A   Saint Jean D'O    45.07  72    P        P        03 21 28.7 -0.4
              baz=319
D61A   St Aubert, Com    45.18  71    P        P        03 21 29.9  0.0
              baz=319
E60A   Ste Agathe de     45.25  73    P        P        03 21 30.3 -0.3
              baz=320
L55A   Hinsdale          45.28  82    P        P        03 21 31.0 +0.1
              baz=321
F60A   Warwick           45.33  73    P        P        03 21 30.9 -0.3
              baz=320
S49A   Springfield       45.55  91    P        P        03 21 32.0 -1.0
              baz=324
H59A   Cadyville         45.56  76    P        P        03 21 32.4 -0.6
              baz=320
WVT    Waverly           45.69  95    P        P        03 21 34.3 +0.1
WVT                                   pmax     pmax
              comp=Z,7.0nm,1.2s
WVT    Waverly           45.69  95    P        P        03 21 34.3 +0.1
WVT                                   IAmb     IAmb     03 21 38.5
              comp=Z,6.6nm,1.1s
WVT    Waverly           45.69  95    P        P        03 21 33.8 -0.4
              baz=325
F61A   St Evariste       45.76  73    P        P        03 21 34.3 -0.2
              baz=320
D62A   Allapoint, All    45.77  70    P        P        03 21 34.8 +0.2
              baz=320
G60A   Masonville        45.83  74    P        P        03 21 34.7 -0.4
              baz=320
M56A   Emporium          45.94  82    P        P        03 21 36.5 +0.3
              baz=322
T49A   Edmonton          45.98  92    P        P        03 21 36.4 -0.1
              baz=324
N55A   Marion Center     46.12  83    P        P        03 21 37.5 -0.1
              baz=322
OXF    Oxford            46.28  98    P        P        03 21 39.0 +0.2
OXF                                   pmax     pmax
              comp=Z,33nm,1.0s
OXF    Oxford            46.28  98    P        P        03 21 39.0 +0.2
U49A   Red Boiling Sp    46.34  93    P        P        03 21 39.3  0.0
T50A   Nancy             46.38  92    P        P        03 21 39.5  0.0
              baz=324
CLTN   Cedars of Leba    46.43  94    P        P        03 21 40.4 +0.4
S51A   Beattyville       46.46  90    P        P        03 21 39.9 -0.3
              baz=324
E63A   Oxbow             46.56  70    P        P        03 21 40.2 -0.6
              baz=320
F63A   Nahmakanta, Br    46.81  71    P        P        03 21 42.5 -0.3
              baz=321
E64A   Bridgewater       46.82  70    P        P        03 21 42.3 -0.6
              baz=320
T51A   Gray              46.84  91    P        P        03 21 42.7 -0.4
              baz=324
143A   Socs Landing,     46.86 101    P        P        03 21 44.4 +1.1
F64A   Sherman           47.02  71    P        P        03 21 44.2 -0.2
              baz=321
USRK   Ussuriysk Ar.     47.09 286    P        P        03 21 42.9 -2.2
              comp=Z,1.4nm,0.6s,baz=41,slow=7.7,SNR=4.0
HKT    Hockley           47.16 107  i P        P        03 21 44.6 -1.1
HKT                                   pmax     pmax
              comp=Z,4.0nm,1.2s
X48A   Hartselle         47.43  96    P        P        03 21 47.5 -0.3
V51A   Loudon            47.59  92    P        P        03 21 48.8 -0.3
              baz=325
M60A   Port Jervis       47.72  79    P        P        03 21 49.5 -0.5
              baz=322
FPAL   Fort Paine        48.03  94    P        P        03 21 52.4 -0.1
X51A   Calhoun           48.37  94    P        P        03 21 55.0 -0.1
              baz=325
W52A   Murphy            48.37  92    P        P        03 21 55.1  0.0
              baz=325
ARCES  ARCESS Array B    48.57   2    P        P        03 21 54.8 -1.4
              comp=Z,2.2nm,0.9s,baz=1.0,slow=7.3,SNR=6.6
ARCES                                 PcP      PcP      03 23 20.7 -0.6
              comp=Z,3.1nm,0.7s,baz=351,slow=4.0,SNR=5.3
Z50A   Ashland           48.95  95    P        P        03 21 59.5  0.0
Z50A   Ashland           48.95  95    P        P        03 21 59.6  0.0
              baz=326,SNR=12
Y52A   Lilburn           49.31  93    P        P        03 22 03.0 +0.6
Y52A   Lilburn           49.31  93    P        P        03 22 02.8 +0.4
              baz=326,SNR=5.4
BRAL   Brewton           50.16  98    P        P        03 22 09.2 +0.4
              baz=327
X56A   White Oak         50.22  90    P        P        03 22 09.1 -0.1
              baz=325
Y55A   Saluda            50.29  91    P        P        03 22 09.7  0.0
              baz=326
MAJO   Matsushiro        50.31 275  i P        P        03 22 08.0 -1.9
MAJO                                  pmax     pmax
              comp=Z,12nm,1.1s
TIGA   Tifton            51.55  95    P        P        03 22 18.3 -0.9
              baz=327
TLY    Talaya            52.69 311    LR       LR       03 49 11.0
              comp=Z,33nm,20.0s,baz=340,slow=41
ZAK    Zakamensk         53.90 311  e P        P        03 22 49.6  +13
ZAK                                   pmax     pmax
              comp=Z,3.0nm,0.9s
KSRS   Korea Array       54.33 284    P        P        03 22 40.1 +0.4
              comp=Z,2.5nm,0.6s,baz=25,slow=7.0,SNR=2.8
KSRS                                  LR       LR       03 46 15.5
              comp=Z,37nm,20.1s,baz=48,slow=36
SONM   Songino Array     54.88 307    P        P        03 22 44.2 +0.6
              comp=Z,1.9nm,0.8s,baz=29,slow=5.9,SNR=12
SONM                                  pP       sP       03 22 58.1 +0.4
              comp=Z,8.1nm,0.7s,baz=27,slow=6.7,SNR=28
SONM                                  LR       LR       03 47 46.2
              comp=Z,92nm,18.1s,baz=24,slow=38
PRGR   Permogore         56.02 351  e P        P        03 22 48.6 -2.8
PRGR                                  pmax     pmax
              comp=Z,8.0nm,0.4s
NOA    NORSAR Array B    56.28  11    P        P        03 22 52.0 -1.4
              comp=Z,0.9nm,0.9s,baz=351,slow=6.8,SNR=3.6
ZALV   Zalesovo Beam     56.62 325    P        P        03 22 54.6 -1.3
              comp=Z,1.3nm,0.5s,baz=33,slow=8.4,SNR=5.9
ZALV                                  pP       sP       03 23 08.3 -1.6
              comp=Z,1.5nm,0.5s,baz=20,slow=6.1,SNR=5.0
ZALV   Zalesovo Beam     56.62 325  i P        P        03 22 55.0 -0.9
ZALV                                  pmax     pmax
              comp=Z,1.0nm,0.5s
FINES  FINESS Array B    56.70   3    P        P        03 22 55.3 -1.0
              comp=Z,1.0nm,0.5s,baz=352,slow=5.8,SNR=6.8
HFS    Hagfors           57.38  10    P        P        03 22 59.0 -2.2
              comp=Z,2.9nm,1.0s,baz=38,slow=7.3,SNR=3.4
HFS                                   pP       sP       03 23 15.4 +0.1
              comp=Z,1.1nm,0.4s,baz=55,slow=5.6,SNR=2.6
ARU    Arti              59.76 342    LR       LR       03 50 51.9
              comp=Z,42nm,18.5s,baz=342,slow=38
ARU    Arti              59.76 342 d iP        P        03 23 15.7 -2.0
ARU                                   S        S        03 31 24.3 -1.8
ARU                                   pmax     pmax
              comp=Z,8.0nm,0.9s
BRVK   Borovoye          60.93 334  i P        P        03 23 24.2 -1.6
BRVK                                  pmax     pmax
              comp=Z,3.0nm,1.0s
KURK   Kurchatov         61.18 327  i P        P        03 23 27.2 -0.3
KURK                                  pmax     pmax
              comp=Z,3.0nm,1.0s
KURBB  Kurchatov Arra    61.29 327    P        P        03 23 27.0 -1.3
              comp=Z,0.7nm,0.5s,baz=29,slow=6.6,SNR=6.7
KURBB                                 pP       sP       03 23 41.2 -1.1
              comp=Z,0.8nm,0.3s,baz=31,slow=6.8,SNR=7.2
OBN    Obninsk           63.00 356  e P        P        03 23 38.0 -1.6
OBN                                 e                   03 24 14.9
OBN                                 e                   03 25 57.9
OBN                                 e PPP      PPP      03 27 24.5
OBN                                   pmax     pmax
              comp=Z,4.0nm,1.0s
MK31   Makanchi Array    63.78 323    P        P        03 23 46.9 +1.9
MK31   Makanchi Array    63.78 323    P        P        03 23 46.9 +1.9
MKAR   Makanchi Array    63.78 323    P        P        03 23 43.6 -1.4
              comp=Z,0.3nm,0.4s,baz=46,slow=7.1,SNR=12
MKAR                                  LR       LR       03 52 44.7
              comp=Z,65nm,18.4s,baz=356,slow=37
WMQ    Urumqi            64.85 318  e P        P        03 23 56.6 +4.5
WMQ                                   pmax     pmax
              comp=Z,8.0nm,0.8s
WMQ                                   pmax     pmax
              comp=Z,38nm,3.7s
AKTO   Aktyubinsk        65.66 341    LR       LR       03 54 01.0
              comp=Z,32nm,19.4s,baz=15,slow=37
WHN    Wuhan             66.22 290    P        P        03 24 11.9  +11
AKASG  Malin Array Be    67.51   1    P        P        03 24 07.8 -1.1
              comp=Z,0.7nm,0.4s,baz=2.1,slow=6.3,SNR=6.6
AKBB   Malin Array Si    67.51   1  i P        P        03 24 06.4 -2.6
GERES  GERESS Array B    68.56  12    P        P        03 24 15.3 -0.5
              comp=Z,0.6nm,0.6s,baz=5.7,slow=4.0,SNR=5.2
GERES                                 pP       sP       03 24 29.8 -0.2
              comp=Z,0.8nm,0.7s,baz=346,slow=4.8,SNR=4.6
AAK    Ala-Archa         69.73 327    P        P        03 24 25.0 +1.9
AAK                                   pmax     pmax
              comp=Z,4.0nm,0.7s
AAK    Ala-Archa         69.73 327    P        P        03 24 25.0 +1.9
AAK                                   IAmb     IAmb     03 24 37.5
              comp=Z,3.9nm,0.7s
KSH    Kashi             72.26 325    P        P        03 24 44.9 +6.4
KSH                                   S        S        03 34 04.8 +5.9
KSH                                   pmax     pmax
              comp=Z,11nm,1.1s
KSH                                   pmax     pmax
              comp=Z,260nm,4.4s
KSH                                   LR       LR
              comp=Z,190nm,10.1s
KSH                                   LR       LR
              comp=Z,200nm,15.2s
KIV    Kislovodsk        73.81 351  e P        P        03 24 46.7 -0.8
KIV                                   pmax     pmax
              comp=Z,14nm,1.0s
KBZ    Khabaz            74.02 351    P        P        03 24 48.6 +0.1
              comp=Z,4.0nm,1.1s,baz=360,slow=3.2,SNR=5.6
KBZ                                   pP       sP       03 25 02.7 -0.3
              comp=Z,3.3nm,0.8s,baz=331,slow=5.8,SNR=5.9
SHA1   Shidzhatmaz       74.03 351  i P        P        03 24 46.7 -2.3
NCK    Nalchik           74.19 350  i P        P        03 24 48.4 -1.3
NCK                                   pmax     pmax
              comp=Z,6.0nm,0.8s
NEY    Neytrino          74.51 351  i P        P        03 24 49.8 -1.9
NEY                                   pmax     pmax
              comp=Z,1.0nm,1.0s
ESDC   Sonseca Array     74.80  27    P        P        03 24 53.6 +0.3
              comp=Z,2.8nm,0.6s,baz=343,slow=5.8,SNR=19
ESDC                                  pP       sP       03 25 08.0 +0.2
              comp=Z,1.8nm,0.7s,baz=341,slow=5.4,SNR=5.8
CHGR   Chuyangaron       74.81 330    P        P        03 24 55.5 +2.0
BR131  Keskin Array S    78.46 358  i P        P        03 25 10.4 -3.7
BRTR   Keskin Array B    78.46 358    P        P        03 25 13.7 -0.4
              comp=Z,1.5nm,0.9s,baz=355,slow=4.0,SNR=8.8
BRTR   Keskin Array B    78.46 358  i P        P        03 25 13.8 -0.3
BRTR                                  pmax     pmax
              comp=Z,2.0nm,0.9s
CMAR   Chiang Mai Arr    83.44 297    P        P        03 25 40.7 -0.1
              comp=Z,1.5nm,0.3s,baz=6.0,slow=6.5,SNR=7.2
CMAR                                  LR       LR       04 07 33.1
              comp=Z,27nm,20.3s,baz=210,slow=39
BOSA   Boshof           146.31   8    PKPbc    PKPdf    03 32 52.7 +0.4
              comp=Z,5.1nm,0.5s,baz=337,slow=3.6,SNR=14
BOSA                                  pPKPbc   sPKPbc   03 33 08.3 +0.1
              comp=Z,6.9nm,0.6s,baz=357,slow=3.6,SNR=6.3
BOSA   Boshof           146.31   8             PKPdf    03 32 52.8 +0.5
```

IDC ***05*** *03:14:47.3±1.8, 7°.00S×128°.75E, h0^{km}, mb3.7/2, mb1 4.0/5, mb1mx3.7/47, mbtmp3.9/5, ML3.9/3, Error ellipse: s-maj=89.5km s-min=25.5km az=75.0*

NEIC ***05*** *03:15:08.6±1.2, 8°.2S±0°.1×128°.5E±0°.1, h229^{km}±13^{km}, mb4.0/4, Error ellipse: s-maj=20.6km s-min=16.3km az=64.0*

ISC 05 03:14:46.5±1.2**, 7°.69S**±0°.09×**128°.5E**±0°.1**, h10^{km}, n14,** σ**2^{s}.67**/15**, mb4.0**/3**, Banda Sea**

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Code   Station Name         Δ°  AZ°    Phase ID          Time       Res
                                      Op       ISC       h  m  s    ISC
MTN    Manton Dam         5.74 153             Pb       03 16 28.2 +1.3
MTN                                   S        Sb       03 17 30.5 -5.3
KNRA   Kununurra          7.94 178             Pb       03 16 55.1 -9.1
KNRA                                           Sn       03 18 20.7 +8.7
FITZ   Fitzroy Crossi    10.71 195    Pn       Pn       03 17 31.6  +12
              0.7nm,0.3s,baz=22,slow=10,SNR=26
FITZ                                  Sn       Sn       03 19 24.2 +4.2
              1.7nm,0.3s,baz=87,slow=21,SNR=9.0
FITZ   Fitzroy Crossi    10.71 195             Pn       03 17 30.2  +10
WB0    Warramunga Arr    13.30 155    Pn       P        03 18 03.6 -1.7
WRA    Warramunga Arr    13.43 156    Pn       P        03 18 07.0 +0.1
              0.5nm,0.3s,baz=337,slow=12,SNR=51
WRA                                   Sn       Sn       03 20 28.8 +2.0
              2.2nm,0.3s,baz=344,slow=21,SNR=13
WB2    Warramunga Arr    13.44 156             P        03 18 06.4 -0.5
WB2                                            Sn       03 20 29.9 +2.9
COEN   Coen              15.71 115             P        03 18 35.4 +3.3
COEN                                  IAmb     IAmb     03 18 45.3
              comp=Z,8.1nm,1.1s
AS31   Alice Springs     16.71 162    P        Pn       03 18 41.6 +0.7
ASAR   Alice Springs     16.71 162    P        P        03 18 50.6 +7.4
              comp=Z,0.5nm,0.3s,baz=338,slow=12,SNR=22
ASAR                                  S        Sn       03 21 45.3 -1.4
              comp=Z,0.2nm,0.3s,baz=329,slow=14,SNR=4.4
NWAO   Narrogin (SRO)    27.19 201    P        P        03 20 27.6 -2.9
MKAR   Makanchi Array    67.99 328    P        P        03 25 45.6 -0.3
              comp=Z,0.2nm,0.3s,baz=119,slow=6.6,SNR=4.2
KURBB  Kurchatov Arra    72.32 329    P        P        03 26 11.9 -0.4
              comp=Z,0.7nm,0.6s,baz=131,slow=5.2,SNR=7.1
KURK   Kurchatov         72.33 329    P        P        03 26 11.4 -1.0
KURK                                  IAmb     IAmb     03 26 12.6
              comp=Z,2.2nm,0.9s
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IDC ***05*** *03:26:23.1±1.0, 20°.13N×120°.26E, h0^{km}, mb3.6/8, mb1 3.8/9, mb1mx3.6/56, mbtmp3.7/9, ML3.6/1, Error ellipse: s-maj=45.4km s-min=19.6km az=74.0*

ISC 05 03:26:27.2±1.1**, 20°.2N**±0°.2×**120°.3E**±0°.3**, h28^{km}, n9,** σ**1^{s}.13**/9**, mb3.6**/8**, Philippine Islands region**

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Code   Station Name         Δ°  AZ°    Phase ID          Time       Res
                                      Op       ISC       h  m  s    ISC
KSRS   Korea Array       18.46  19    P        P        03 30 39.5 -1.3
              0.2nm,0.3s,baz=198,slow=8.7,SNR=3.4
SONM   Songino Array     29.82 341    P        P        03 32 31.6 -0.4
              0.6nm,0.8s,baz=163,slow=11,SNR=4.2
MKAR   Makanchi Array    40.76 320    P        P        03 34 05.8 -0.1
              0.4nm,0.6s,baz=116,slow=8.9,SNR=6.1
WRA    Warramunga Arr    42.16 160    P        P        03 34 16.9 -0.6
              0.8nm,0.9s,baz=343,slow=9.0,SNR=4.7
ZALV   Zalesovo Beam     43.24 330    P        P        03 34 26.0 +0.1
              0.6nm,0.4s,baz=133,slow=10,SNR=3.0
ASAR   Alice Springs     45.53 162    P        P        03 34 44.6  0.0
              0.8nm,0.7s,baz=334,slow=7.6,SNR=6.9
ILAR   Eielson Array     73.15  27    P        P        03 37 55.3 +0.3
              0.3nm,0.7s,baz=276,slow=4.9,SNR=3.5
INK    Inuvik            77.24  21    P        P        03 38 20.8 +2.3
              0.9nm,0.9s,baz=299,slow=4.6,SNR=3.2
YKA    Yellowknife Ar    86.97  22    P        P        03 39 09.7  0.0
              0.3nm,0.7s,baz=312,slow=4.3,SNR=6.7
```

IDC 05 03:43:59.1±1.7**, 3°.08N**×**128°.82E, h0^{km}, mb3.7**/5**, mb1 3.9**/5**, mb1mx3.5**/44**, mbtmp3.7**/5**, MS3.6**/1**, Ms1 3.5**/1**, ms1mx2.6**/33**, Error ellipse: s-maj=97.7km s-min=21.0km az=71.0, North of Halmahera**

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Code   Station Name         Δ°  AZ°    Phase ID          Time       Res
                                      Op       ISC       h  m  s    ISC
FITZ   Fitzroy Crossi    21.28 188    P        P        03 48 47.2 -0.1
              0.7nm,0.6s,baz=8.8,slow=11,SNR=2.8
WRA    Warramunga Arr    23.51 167    P        P        03 49 10.8 -0.2
              1.3nm,0.4s,baz=344,slow=9.9,SNR=21
ASAR   Alice Springs     27.04 170    P        P        03 49 42.5 -0.9
              0.8nm,0.5s,baz=353,slow=7.5,SNR=11
STKA   Stephens Creek    36.83 162    P        P        03 51 08.6 -0.5
              0.9nm,0.4s,baz=324,slow=11,SNR=3.9
STKA                                  LR       LR       04 07 04.0
              comp=Z,87nm,18.2s,baz=62,slow=38
MKAR   Makanchi Array    59.28 325    P        P        03 54 03.6 +0.9
              0.4nm,0.4s,baz=117,slow=7.5,SNR=11
```

ATH ***05*** *03:55:54.8, 40°.26N×21°.89E, h19^{km}±1^{km}, ML2.6/17, Error ellipse: s-maj=1.7km s-min=1.0km az=316.0*

PDG ***05*** *03:55:55.3±0.3, 40°.26N×21°.87E, h12^{km}, ML2.7/13, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*

THE 05 03:55:55.6, 40°.26N×21°.88E, h5^{km}, ML2.6/8**, Error ellipse: s-maj=0.9km s-min=0.4km az=309.0, Greece**

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Code   Station Name         Δ°  AZ°    Phase ID          Time       Res
                                      Op       ISC       h  m  s    ISC
KZN    Kozani             0.09 300    P        Pg       03 55 57.8 +0.2
KZN                                   S        Sg       03 55 59.3 +0.3
              18µm,0.3s
KZN    Kozani             0.09 300    P        Pg       03 55 57.9 +0.3
KZN                                   S        Sg       03 56 00.1 +1.0
KZN                                   AML      AML      03 56 00.2
              comp=E,50924µm,0.4s
KZN                                   AML      AML      03 56 00.7
              comp=N,18373µm,0.2s
KTI    Kastanea           0.23  54    P        Pg       03 56 00.2 +0.1
LIT    Litokhoron         0.50 109    P        Pg       03 56 04.9 -0.3
LIT                                   S        Sg       03 56 12.3 +0.7
              comp=N,1µm,0.3s
LIT    Litokhoron         0.50 109    P        Pg       03 56 04.8 -0.3
LIT                                   S        Sg       03 56 12.4 +0.8
LIT                                   AML      AML      03 56 13.5
              comp=E,2629µm,0.3s
LIT                                   AML      AML      03 56 14.9
              comp=N,2685µm,0.2s
KPRO   Kipourio           0.50 232    P        Pg       03 56 04.6 -0.6
KPRO                                  S        Sg       03 56 12.6 +0.9
              comp=N,840nm,0.4s
```

KPRO	**Kipourio**	**0.50**	**232**	P	Pg	03 56 04.7	-0.5
KPRO				S	Sg	03 56 13.0	+1.4
KPRO				AML	AML	03 56 18.1	
	comp=N,1586µm,0.5s						
KPRO				AML	AML	03 56 18.3	
	comp=E,1769µm,0.3s						
FNA	**Florina**	**0.65**	**324**	P	Pg	03 56 07.3	-0.7
FNA				S	Sg	03 56 16.7	+0.2
	comp=E,1µm,0.3s						
FNA	**Florina**	**0.65**	**324**	P	Pg	03 56 07.2	-0.8
FNA				S	Sg	03 56 17.3	+0.9
FNA				AML	AML	03 56 19.6	
	comp=N,2716µm,0.4s						
FNA				AML	AML	03 56 22.3	
	comp=E,2494µm,0.3s						
NEST	**Nestorio**	**0.65**	**284**	P	Pg	03 56 07.2	-0.9
NEST	**Nestorio**	**0.65**	**284**	P	Pg	03 56 07.1	-1.0
NEST				S	Sg	03 56 16.6	0.0
NEST				AML	AML	03 56 17.2	
	comp=N,1537µm,0.4s						
NEST				AML	AML	03 56 22.8	
	comp=E,1288µm,0.3s						
MEV	**Metsovon**	**0.69**	**226**	P	Pg	03 56 08.2	-0.6
THL	**Klokotos Trika**	**0.70**	**171**	P	Pg	03 56 08.6	-0.5
THL				S	Sg	03 56 18.8	+0.6
	comp=E,472nm,0.4s						
THL	**Klokotos Trika**	**0.70**	**171**	P	Pg	03 56 08.6	-0.4
THL				S	Sg	03 56 18.3	+0.1
THL				AML	AML	03 56 20.0	
	comp=E,970µm,0.4s						
THL				AML	AML	03 56 23.0	
	comp=N,1036µm,0.6s						
GRG	**Griva**	**0.80**	**30**	P	Pg	03 56 10.5	-0.5
GRG				S	Sb	03 56 22.4	-0.8
	comp=N,350nm,0.4s						
GRG	**Griva**	**0.80**	**30**	P	Pg	03 56 10.6	-0.5
GRG				S	Sg	03 56 22.2	+0.7
GRG				AML	AML	03 56 26.3	
	comp=N,810µm,0.4s						
GRG				AML	AML	03 56 28.4	
	comp=E,601µm,0.4s						
THE	**Thessaloniki**	**0.91**	**66**	P	Pg	03 56 13.2	+0.1
THE				AML	AML	03 56 27.8	
	comp=N,234µm,0.3s						
THE				AML	AML	03 56 28.4	
	comp=E,190µm,0.3s						
JAN	**Janina**	**0.99**	**233**	P	Pg	03 56 14.3	-0.3
JAN	**Janina**	**0.99**	**233**	P	Pg	03 56 14.3	-0.4
JAN				AML	AML	03 56 34.8	
	comp=N,274µm,0.4s						
JAN				AML	AML	03 56 36.3	
	comp=E,355µm,0.6s						
HORT	**Hortiatis**	**0.99**	**70**	P	Pg	03 56 14.4	-0.3
HORT	**Hortiatis**	**0.99**	**70**	P	Pg	03 56 14.3	-0.3
HORT				AML	AML	03 56 30.4	
	comp=N,357µm,1.0s						
HORT				AML	AML	03 56 33.3	
	comp=E,255µm,0.7s						
OHR	**Ohrid**	**1.18**	**316**	*i* Pn	Pg	03 56 17.4	-0.9
OHR				*e*Sn	Sn	03 56 35.3	0.0
VAY	**Valandovo**	**1.18**	**26**	*i* Pn	Pg	03 56 17.1	-1.2
VAY				*e*Sn	Sn	03 56 37.9	+2.6
KNT	**Kendrikon**	**1.19**	**40**	P	Pg	03 56 17.4	-1.0
KNT	**Kendrikon**	**1.19**	**40**	P	Pg	03 56 17.6	-0.8
KNT				AML	AML	03 56 41.7	
	comp=N,164µm,0.4s						
KNT				AML	AML	03 56 42.3	
	comp=E,139µm,0.9s						
SOH	**Sokhos**	**1.26**	**63**	P	Pg	03 56 19.2	-0.5
SOH				S	Sn	03 56 37.1	-0.1
	comp=E,172nm,0.5s						
SOH	**Sokhos**	**1.26**	**63**	P	Pg	03 56 19.4	-0.4
SOH				AML	AML	03 56 40.8	
	comp=E,393µm,0.3s						
SOH				AML	AML	03 56 41.2	
	comp=N,275µm,0.7s						
MAKR	**Makrakomi, Fth**	**1.26**	**171**	P	Pg	03 56 19.1	-0.7
MAKR	**Makrakomi, Fth**	**1.26**	**171**	P	Pg	03 56 18.9	-0.8
MAKR				AML	AML	03 56 44.2	
	comp=N,1744µm,0.4s						
MAKR				AML	AML	03 56 45.0	
	comp=E,2187µm,0.4s						
AGG	**Agios Georgios**	**1.29**	**164**	P	Pn	03 56 19.4	-0.8
AGG	**Agios Georgios**	**1.29**	**164**	P	Pn	03 56 19.4	-0.9
AGG				S	Sb	03 56 37.4	+0.3
AGG				AML	AML	03 56 42.3	
	comp=E,453µm,0.3s						
AGG				AML	AML	03 56 45.2	
	comp=N,614µm,0.4s						
EVR	**Evrytania**	**1.34**	**182**	P	Pn	03 56 20.0	-1.1
EVR				S	Sn	03 56 39.4	0.0
	comp=N,242nm,0.6s						
EVR	**Evrytania**	**1.34**	**182**	P	Pn	03 56 20.0	-1.1
EVR				S	Sg	03 56 38.4	-0.4
EVR				AML	AML	03 56 43.4	
	comp=N,568µm,0.5s						
EVR				AML	AML	03 56 44.4	
	comp=E,403µm,0.8s						
XOR	**Xorichti**	**1.35**	**131**	P	Pn	03 56 19.9	-1.2
XOR	**Xorichti**	**1.35**	**131**	P	Pn	03 56 19.7	-1.4
IGT	**Igoumenitsa**	**1.39**	**239**	P	Pn	03 56 21.1	-0.6
IGT	**Igoumenitsa**	**1.39**	**239**	P	Pn	03 56 21.4	-0.3
NEO	**Neokhori**	**1.41**	**132**	P	Pn	03 56 20.7	-1.2
NEO	**Neokhori**	**1.41**	**132**	P	Pn	03 56 20.6	-1.3
NEO				AML	AML	03 56 46.4	
	comp=N,465µm,0.5s						
NEO				AML	AML	03 56 51.8	
	comp=E,530µm,0.5s						
PAIG	**Paliouri**	**1.42**	**103**	P	Pn	03 56 20.4	-1.7
STIP	**Stip**	**1.45**	**9**	*i* Pn	Pb	03 56 23.2	+0.1
STIP				*e*Sn	Sg	03 56 47.8	+5.6
SRS	**Serrai**	**1.56**	**56**	P	Pn	03 56 22.9	-1.1
SRS	**Serrai**	**1.56**	**56**	P	Pn	03 56 22.7	-1.3
AXAR	**Agios Charalam**	**1.61**	**158**	P	Pn	03 56 24.5	-0.2
AXAR				AML	AML	03 56 57.6	
	comp=N,494µm,0.4s						
AXAR				AML	AML	03 56 58.2	
	comp=E,432µm,0.5s						
SKIA	**Skiathos**	**1.64**	**131**	P	Pn	03 56 23.5	-1.7
PVO	**Paravola**	**1.66**	**189**	P	Pb	03 56 26.3	-0.4
KEK	**Kerkira**	**1.69**	**252**	P	Pb	03 56 26.6	-0.5
SKO	**Skopje**	**1.74**	**349**	*i* Pn	Pb	03 56 27.9	-0.2
PDO	**Prodromos**	**1.74**	**198**	P	Pn	03 56 26.4	-0.1
LKD2	**Lefkada island**	**1.75**	**213**	P	Pn	03 56 27.1	+0.5
NVR	**Nevrokopi**	**1.86**	**54**	P	Pn	03 56 27.6	-0.5
NVR	**Nevrokopi**	**1.86**	**54**	P	Pn	03 56 27.7	-0.5
AOS	**Alonnisos**	**1.89**	**125**	P	Pn	03 56 26.9	-1.7
TRIZ	**Trizonia**	**1.90**	**175**	P	Pn	03 56 28.1	-0.5
MRKA	**Markates**	**2.04**	**139**	P	Pn	03 56 29.3	-1.3
PROD	**Prodromos**	**2.15**	**158**	P	Pn	03 56 31.4	-0.8
KLV	**Kalavryta, Ach**	**2.22**	**174**	P	Pn	03 56 32.7	-0.5
VIL2	**Platees**	**2.31**	**152**	P	Pn	03 56 34.7	+0.3
LTK	**Loutraki**	**2.39**	**159**	P	Pn	03 56 35.0	-0.4

BUC 05 03:57:14.6±0.5**, 44°.93N**×**22°.45E, h9**^{km}±3^{km}**, ml0.8**/2**, 10C-8D, Error ellipse: s-maj=4.5km s-min=2.4km az=140.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HERR	**Herculane**	**0.05**	**206**	⇓P	Pg	03 57 17.0	+0.4
HERR				⇑S	Sg	03 57 18.7	+0.8
HERR	**Herculane**	**0.05**	**206**	⇓P	Pg	03 57 17.0	+0.4
HERR				⇑S	Sg	03 57 18.7	+0.8
GZR	**Gura Zlata**	**0.52**	**26**	⇑P	Pg	03 57 24.7	0.0
GZR				⇓S	Sg	03 57 31.5	-0.1
GZR	**Gura Zlata**	**0.52**	**26**	⇑P	Pg	03 57 24.7	0.0
GZR				⇓S	Sg	03 57 31.5	-0.1
MDVR	**Moldovita**	**0.54**	**254**	⇑P	Pg	03 57 25.3	+0.1
MDVR				⇓S	Sg	03 57 32.1	-0.2
MDVR	**Moldovita**	**0.54**	**254**	⇑P	Pg	03 57 25.3	+0.1
MDVR				⇓S	Sg	03 57 32.1	-0.2
BZS	**Buzias**	**0.90**	**320**	⇑P	Pg	03 57 31.5	-0.6
BZS				⇑S	Sb	03 57 45.1	+0.4
BZS	**Buzias**	**0.90**	**320**	⇑P	Pg	03 57 31.5	-0.6
BZS				⇑S	Sb	03 57 45.1	+0.4
DRGR		**1.87**	**6**	⇓S	Sb	03 58 12.1	-0.5
DRGR		**1.87**	**6**	⇓S	Sb	03 58 12.1	-0.5

IDC 05 04:02:23.1±1.6**, 21°.63S**×**177°.12W, h0**^{km}**, mb3.8**/4**, mb1 4.2**/5**, mb1mx3.9**/25**, mbtmp4.0**/5**, ML3.9**/1**, Error ellipse: s-maj=81.4km s-min=28.3km az=157.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**16.16**	**92**	Pn	Pn	04 06 11.7	0.0
	4.7nm,0.3s,baz=286,slow=19,SNR=6.0						
STKA	**Stephens Creek**	**38.05**	**246**	P	P	04 09 43.8	+0.3
	1.0nm,0.4s,baz=66,slow=10.0,SNR=4.1						
ASAR	**Alice Springs**	**45.07**	**258**	P	P	04 10 41.2	-0.1
	1.6nm,0.7s,baz=92,slow=8.0,SNR=13						
WRA	**Warramunga Arr**	**45.27**	**263**	P	P	04 10 42.5	-0.3
	0.6nm,0.5s,baz=99,slow=8.6,SNR=2.4						
ILAR	**Eielson Array**	**89.23**	**12**	P	P	04 15 21.0	+0.5
	0.3nm,0.9s,baz=211,slow=6.3,SNR=3.0						
AKASG	**Malin Array Be**	**144.40**	**331**	PKP	PKPab	04 21 58.5	-0.8
	0.2nm,0.4s,baz=42,slow=4.6,SNR=4.1						

NEIC ***05*** *04:25:43.0±1.5, 3°.96S±0°.06×76°.4W±0°.1, h100*^{km}*±6*^{km}*, mb4.5/20, Error ellipse: s-maj=14.8km s-min=8.3km az=90.0*

IDC ***05*** *04:25:44.9±0.6, 3°.87S×76°.58W, h111*^{km}*±4*^{km}*, mb3.9/13, mb1 3.9/19, mb1mx3.8/41, mbtmp4.2/19, MS3.7/2, Ms1 3.7/2, ms1mx2.7/37, Error ellipse: s-maj=16.2km s-min=10.6km az=50.0*

ISC 05 04:25:44.4±0.4**, 3°.98S**±0°.04×**76°.47W**±0°.06**, h113**^{km}**, n83,** σ**1**^{s}.**70**/99**, mb4.4**/22**, Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**3.67**	**211**	P	Pn	04 26 40.5	+0.7
	7.8nm,0.3s,baz=26,slow=10,SNR=47						
ATAH				S	Sn	04 27 18.9	-3.8
	14nm,0.3s,baz=208,slow=23,SNR=8.3						
PTLC	**Puerto Leguiza**	**4.45**	**22**	*e*P	Pn	04 26 45.9	-4.0
PTLC				*e*P		04 26 46.0	
PTLC				*e*S	Sn	04 27 21.5	-19
PTLC				*i*		04 27 26.3	
	comp=Z,257nm,0.4s						
OTAV	**Otavalo**	**4.63**	**335**	*e*P	Pn	04 26 51.7	-1.1
OTAV	**Otavalo**	**4.63**	**335**		Pn	04 26 51.5	-1.2
CRUC	**La Cruz**	**5.53**	**355**	*e*P	Pn	04 27 04.0	-0.8
FLOC	**Florencia**	**5.59**	**8**	*e*P	Pn	04 27 04.5	-0.8
FLOC				*e*S	Sn	04 27 44.8	-24
FLOC	**Florencia**	**5.59**	**8**		Pn	04 27 04.0	-1.3
FLOC				Sn	Sn	04 28 06.0	-2.3
BBAC	**Balboa, Cauca**	**6.01**	**353**	*e*P	Pn	04 27 11.0	-0.2
SOTA	**Rioblanco**	**6.08**	**359**	*e*P	Pn	04 27 12.4	0.0
TUMC	**Tumaco**	**6.19**	**339**	*e*P	Pn	04 27 13.8	+0.4
GARC	**Garzon, Huila**	**6.20**	**9**	*e*P	Pn	04 27 13.8	-0.1
PCON	**Cinco Dias**	**6.27**	**1**	*e*P	Pn	04 27 14.9	-0.1
PCON				*e*S	Sn	04 28 04.4	-21
PCON				*i*		04 28 31.6	
	comp=Z,77nm,0.5s						
MACC	**Macarena, Meta**	**6.63**	**23**	*e*P	Pn	04 27 19.1	-0.3
GR1C	**Gorgona, Isla**	**7.14**	**346**	*e*P	Pn	04 27 24.9	-1.3
GUVC	**San Jose del G**	**7.54**	**31**	*e*P	Pn	04 27 33.3	+1.6
ORTC	**Ortega, Tolima**	**7.93**	**9**	*e*P	Pn	04 27 40.3	+3.2
NNA	**Nana**	**7.96**	**183**	P	Pn	04 27 38.6	+1.1
	comp=Z,4.3nm,0.3s,baz=0.5,slow=10,SNR=10						
NNA				S	Sn	04 29 00.3	-5.7
	comp=Z,18nm,0.3s,baz=275,slow=22,SNR=4.5						
NNA	**Nana**	**7.96**	**183**		Pn	04 27 36.1	-1.4
NNA				Sn	Sn	04 29 04.7	-1.4
CHIC	**Chingaza**	**8.98**	**18**	*e*P	Pn	04 27 52.9	+1.3
ROSC	**El Rosal**	**9.02**	**14**	P	Pn	04 27 56.6	+4.5
	comp=Z,1.3nm,0.3s,baz=37,slow=22,SNR=2.5						
ROSC	**El Rosal**	**9.02**	**14**		Pn	04 27 49.9	-2.2
GUY2C	**Guyana, Caldas**	**9.21**	**7**	*e*P	Pn	04 27 42.4	-12
RUSC	**La Rusia**	**10.38**	**19**		Pn	04 28 09.2	-1.4
SDV	**Santo Domingo**	**14.04**	**24**	P	Pn	04 28 59.5	+0.8
	comp=Z,1.1nm,0.3s,baz=63,slow=5.1,SNR=8.8						
SDV	**Santo Domingo**	**14.04**	**24**		Pn	04 28 57.1	-1.6
SAML	**Samuel**	**14.10**	**111**		Pn	04 28 57.3	-1.9
LPAZ	**La Paz**	**14.72**	**147**	P	Pn	04 29 06.5	-1.2
	comp=Z,0.2nm,0.3s,baz=333,slow=9.7,SNR=6.6						
LPAZ				S	S	04 32 03.9	+2.0
	baz=220,slow=7.9,SNR=1.9						
LPAZ	**La Paz**	**14.72**	**147**		Pn	04 29 06.2	-1.6
MNMC	**Minye Minye**	**16.49**	**156**	P	P	04 29 30.3	+0.2
JTS	**Las Juntas de**	**16.50**	**329**	LR	LR	04 35 24.4	
	comp=Z,49nm,20.7s,baz=210,slow=35						
PTGA	**Pitinga**	**16.80**	**79**	P	Pn	04 29 33.1	0.0
	comp=Z,1.2nm,0.3s,baz=278,slow=15,SNR=12						
PTGA				S	Sn	04 32 33.2	-6.9
	comp=Z,1.0nm,0.3s,baz=271,slow=10,SNR=3.2						
PTGA	**Pitinga**	**16.80**	**79**	P	Pn	04 29 32.7	-0.4
PB11	**IPOC Station P**	**17.04**	**158**	P	P	04 29 35.8	-0.2
PB11				IAmb	IAmb	04 29 45.8	
	comp=Z,32nm,0.9s						
GO01	**Chusmiza**	**17.13**	**156**	P	P	04 29 35.7	-1.7
PCRV	**Puerto La Cruz**	**18.35**	**40**	P	Pn	04 29 52.7	+0.9
	comp=Z,1.1nm,0.3s,baz=231,slow=8.3,SNR=5.7						
PB04	**IPOC Station P**	**19.25**	**162**	P	P	04 29 59.2	-1.0
PB04				IAmb	IAmb	04 30 15.2	
	comp=Z,25nm,0.8s						
SIV	**San Ignacio**	**19.28**	**129**	P	Pn	04 30 03.8	+1.1
	comp=Z,0.5nm,0.3s,baz=328,slow=11,SNR=25						
LVC	**Limon Verde**	**19.92**	**159**	P	P	04 30 07.2	-0.5
GO02	**Mina Guanaco**	**22.08**	**163**	P	P	04 30 28.9	-1.8
GO02				IAmb	IAmb	04 30 44.4	
	comp=Z,23nm,0.9s						
AOPR	**Arecibo Observ**	**24.17**	**23**	P	P	04 30 50.7	+0.4
PDPR	**Patillas Dam,**	**24.17**	**25**	P	P	04 30 48.6	-1.7
PDPR				IAmb	IAmb	04 30 51.4	
	comp=Z,15nm,0.7s						
SJG	**San Juan**	**24.20**	**25**	P	P	04 30 50.9	+0.4
	comp=Z,20nm,0.8s,baz=180,slow=8.6,SNR=9.2						
SJG	**San Juan**	**24.20**	**25**	P	P	04 30 50.3	-0.2
SJG				IAmb	IAmb	04 30 51.8	
	comp=Z,18nm,0.7s						
MDP	**Montagnes des**	**25.46**	**69**	P	P	04 31 03.8	+1.7
	comp=Z,7.9nm,0.8s,baz=255,slow=5.6,SNR=8.2						
CPUP	**Villa Florida**	**28.81**	**142**	P	P	04 31 33.2	+1.2
	comp=Z,1.7nm,0.7s,baz=334,slow=10.0,SNR=5.9						
CPUP				pP	pP	04 31 59.2	+2.4
	comp=Z,1.5nm,0.7s,baz=20,slow=8.7,SNR=2.0						
CPUP				PcP	PcP	04 34 40.6	+1.3
	comp=Z,0.9nm,0.7s,baz=259,slow=5.2,SNR=2.8						
CPUP	**Villa Florida**	**28.81**	**142**	P	P	04 31 31.1	-1.0
BDFB	**Brasilia**	**30.29**	**114**	P	P	04 31 47.8	+2.5
	comp=Z,2.5nm,0.8s,baz=253,slow=8.1,SNR=3.6						
TXAR	**Lajitas Array**	**42.16**	**324**	P	P	04 33 26.8	+0.7
	comp=Z,0.1nm,0.5s,baz=106,slow=5.7,SNR=2.6						
TXAR				pP	pP	04 33 52.9	+0.8
	comp=Z,0.6nm,0.7s,baz=135,slow=8.5,SNR=6.6						
TXAR				PcP	PcP	04 35 19.3	+0.7
	comp=Z,0.7nm,0.7s,baz=142,slow=4.6,SNR=6.1						
TXAR				pPcP		04 35 47.4	
	comp=Z,0.7nm,0.8s,baz=141,slow=6.4,SNR=5.2						
I42A	**Draeger Farm,**	**48.95**	**348**	P	P	04 34 18.3	-0.9
I42A				IAmb	IAmb	04 34 18.7	
	comp=Z,6.5nm,0.8s						
PDAR	**Pinedale Array**	**55.33**	**331**	P	P	04 35 06.5	-0.3
	comp=Z,0.8nm,0.8s,baz=128,slow=9.6,SNR=6.3						
PDAR				pP	pP	04 35 31.4	-2.5
	comp=Z,0.3nm,0.6s,baz=81,slow=12,SNR=1.9						
PDAR				PcP	PcP	04 36 05.3	-0.7
	comp=Z,0.3nm,0.6s,baz=134,slow=6.4,SNR=2.7						
ULM	**Lac du Bonnet**	**56.55**	**345**	P	P	04 35 13.5	-1.5
	comp=Z,1.3nm,0.5s,baz=164,slow=6.4,SNR=7.2						
ULM				pP	pP	04 35 40.4	-1.8
	comp=Z,2.6nm,0.7s,baz=166,slow=7.9,SNR=5.3						
ULM	**Lac du Bonnet**	**56.55**	**345**	IAmb	IAmb	04 35 14.5	
	comp=Z,5.4nm,1.1s						
NVAR	**Mina Array Bea**	**57.24**	**321**	P	P	04 35 20.7	+0.3
	comp=Z,0.3nm,0.6s,baz=110,slow=6.2,SNR=4.7						
NVAR				pP	pP	04 35 46.6	-1.2
	comp=Z,0.5nm,0.8s,baz=214,slow=6.2,SNR=2.5						
SCHQ	**Schefferville**	**59.15**	**6**	P	P	04 35 33.6	+0.5
	comp=Z,3.4nm,0.6s,baz=209,slow=5.0,SNR=8.8						
SCHQ	**Schefferville**	**59.15**	**6**	IAmb	IAmb	04 35 33.8	
	comp=Z,6.5nm,0.8s						
MSO	**Missoula**	**60.43**	**331**	IAmb	IAmb	04 35 44.0	
	comp=Z,3.9nm,0.9s						
LIC	**Lamto**	**72.05**	**82**	*e*P	P	04 36 58.1	+1.2
	comp=Z,13nm,1.0s						
LIC	**Lamto**	**72.05**	**82**	P	P	04 36 58.1	+1.2
TIC	**Toumodi**	**72.10**	**82**	*e*P	P	04 36 58.4	+1.2
	comp=Z,2.0nm,0.3s						
TIC	**Toumodi**	**72.10**	**82**	P	P	04 36 58.4	+1.2
DBIC	**Dimbokro**	**72.27**	**82**	P	P	04 36 59.7	+1.5
	comp=Z,5.9nm,0.8s,baz=246,slow=5.3,SNR=8.3						
DBIC				pP	pP	04 37 28.1	+1.5
	comp=Z,3.2nm,0.7s,baz=229,slow=4.7,SNR=2.9						
DBIC	**Dimbokro**	**72.27**	**82**	P	P	04 36 59.1	+1.0
DBIC				IAmb	IAmb	04 37 00.6	
	comp=Z,8.7nm,0.9s						
YKA	**Yellowknife Ar**	**72.35**	**342**	P	P	04 36 56.9	-0.7
	comp=Z,1.1nm,0.6s,baz=139,slow=5.9,SNR=33						
YKA				pP	pP	04 37 25.9	-0.2
	comp=Z,1.2nm,0.7s,baz=136,slow=5.9,SNR=8.9						
KIC	**Kosan Boka**	**72.35**	**82**	*e*P	P	04 37 00.1	+1.4
	comp=Z,11nm,0.8s						
KIC	**Kosan Boka**	**72.35**	**82**	P	P	04 37 00.1	+1.4
VNA3	**Neumayer Olymp**	**78.91**	**162**	P	P	04 37 36.5	+1.5
ESDC	**Sonseca Array**	**79.19**	**49**	P	P	04 37 36.6	-0.6
	comp=Z,0.4nm,0.5s,baz=263,slow=5.9,SNR=3.4						
TORD	**Torodi Ar. Bea**	**79.42**	**76**	P	P	04 37 39.6	+0.8
	comp=Z,1.8nm,0.6s,baz=280,slow=6.1,SNR=24						
TORD				pP	pP	04 38 08.0	+0.3
	comp=Z,0.6nm,0.3s,baz=279,slow=5.7,SNR=3.6						
VNA2	**Neumayer--Watz**	**79.50**	**162**	P	P	04 37 39.5	+1.3
	baz=292,slow=6.0						
SNAA	**Sanae**	**81.12**	**162**	P	P	04 37 48.3	+1.3
INK	**Inuvik**	**82.08**	**342**	P	P	04 37 51.4	-0.5
ILAR	**Eielson Array**	**85.35**	**336**	P	P	04 38 08.4	-0.3
	comp=Z,1.0nm,0.8s,baz=132,slow=4.3,SNR=14						
ILAR				pP	pP	04 38 36.8	-1.1
	comp=Z,1.0nm,0.8s,baz=131,slow=3.3,SNR=6.4						
RND	**Reindeer**	**85.74**	**335**	P	P	04 38 09.9	-0.8
QSPA	**South Pole Qui**	**86.10**	**180**	P	P	04 38 12.5	-0.1
BPAW	**Bear Paw Mtn.**	**86.84**	**335**	P	P	04 38 16.1	0.0
BPAW				IAmb	IAmb	04 38 16.4	
	comp=Z,4.8nm,0.8s						
AFI	**Afiamalu**	**94.19**	**256**	LR	LR	05 12 22.6	
	comp=Z,208nm,21.2s,baz=292,slow=30						
ZALV	**Zalesovo Beam**	**127.89**	**14**	PKP	PKiKP	04 44 37.5	+0.1
	comp=Z,1.3nm,0.7s,baz=273,slow=2.8,SNR=6.6						
MKAR	**Makanchi Array**	**133.55**	**20**	PKP	PKPdf	04 44 48.4	+0.5
	comp=Z,0.5nm,0.6s,baz=19,slow=2.7,SNR=7.0						
KSH	**Kashi**	**136.71**	**31**	PKP	PKPdf	04 44 54.0	-0.1
KSH				PP	PP	04 47 40.6	+3.9
KSH				PKS	PKSdf	04 48 29.9	-0.5
ASAR	**Alice Springs**	**139.61**	**226**	PKP	PKPdf	04 44 59.6	-0.2
	comp=Z,1.5nm,0.9s,baz=107,slow=2.2,SNR=8.6						
WRA	**Warramunga Arr**	**141.51**	**231**	PKhKP	PKPpre	04 44 57.4	
	comp=Z,0.4nm,0.6s,baz=124,slow=3.3,SNR=6.6						
WRA				PKP	PKPdf	04 45 03.6	+0.4
	comp=Z,1.4nm,0.8s,baz=125,slow=1.9,SNR=7.6						
LZH	**Lanzhou**	**148.05**	**360**	*e*PKPbc	PKPdf	04 45 13.5	-0.8
LZH				PKPbc	PKPab	04 45 21.6	+1.2
LZH				pPKP	pPKPdf	04 45 41.3	-3.8
LZH				sPKP		04 45 53.0	
CMAR	**Chiang Mai Arr**	**164.93**	**17**	PKP	PKPdf	04 45 37.1	+0.9
	comp=Z,1.2nm,0.3s,baz=278,slow=2.6,SNR=4.1						
CMAR				PKPab	PKPab	04 46 32.5	-0.2
	comp=Z,0.9nm,0.3s,baz=322,slow=6.7,SNR=4.1						

VIE ***05*** *04:30:49.8±1.2, 51°.67N×16°.25E, h0*^{km}*, mb2.8/6, ml3.1/6, ms3.4/1, Error ellipse: s-maj=14.6km s-min=5.3km az=23.0 84 km NW of Wroclaw Suspected Mining induced.*

IPEC ***05*** *04:30:51.3±0.2, 51°.56N×16°.15E, h1*^{km}*, ML2.4/3, Error ellipse: s-maj=1.9km s-min=0.9km az=42.0*

IDC ***05*** *04:30:52.4±0.7, 51°.52N×15°.90E, h0*^{km}*, mb3.2/1, mb1 3.4/9, mb1mx3.2/51, mbtmp3.3/9, ML2.9/8, MS2.7/1, Ms1 2.7/1, ms1mx2.2/33, Error ellipse: s-maj=13.8km s-min=6.7km az=105.0*

BGR ***05*** *04:30:52.5±0.4, 51°.52N×16°.11E, h1*^{km}*, ML3.2/15, Error ellipse: s-maj=4.4km s-min=2.2km az=21.0*

DNK ***05*** *04:30:53.6±3.2, 51°.61N×15°.60E, h15*^{km}*±134*^{km}*, ML2.1, Hypocentre not reviewed by the ISC*

LDG ***05*** *04:30:54.6±0.2, 51°.30N×15°.86E, h1*^{km}*, Ml3.0/4, Error ellipse: s-maj=4.9km s-min=3.2km az=17.0, Suspected Mining induced.*

UPP ***05*** *04:30:56.0±2.9, 51°.83N×15°.46E, h0*^{km}*, ML2.1, Suspected explosion*

ISC 05 04:30:50.2±0.6**, 51°.61N**±0°.03×**16°.14E**±0°.02**, h0**^{km}**, n85,** σ**1**^{s}.**36**/152**, 4C-17D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.77**	**173**	*e*Pg	Pg	04 31 05.6	+0.7
KSP				*e*Sg	Sg	04 31 14.6	-0.2
KSP	**Ksiaz**	**0.77**	**173**	*i* Pg	Pg	04 31 05.6	+0.7
KSP				*e*Sg	Sg	04 31 14.9	0.0
CHVC	**Chvalec**	**1.02**	**183**	⇓*i*PG	Pg	04 31 10.3	+0.6
CHVC				*e*SG	Sg	04 31 22.8	-0.1
OSTC	**Ostas**	**1.05**	**178**	⇓*i*PG	Pg	04 31 10.9	+0.6
OSTC				*e*SG	Sg	04 31 23.8	-0.1
	comp=Z,82nm,0.3s						
UPC	**Upice**	**1.10**	**184**	⇓*i*PG	Pg	04 31 11.4	+0.1
UPC				*e*SG	Sg	04 31 25.2	-0.4
	comp=Z,148nm,0.3s						
DPC	**Dobruska-Polom**	**1.26**	**175**	*e*Pg	Pg	04 31 14.2	-0.1
DPC				*e*Sg	Sg	04 31 29.9	-0.7
DPC	**Dobruska-Polom**	**1.26**	**175**	⇓*e*PG	Pg	04 31 14.2	-0.1
DPC				*e*SG	Sg	04 31 29.3	-1.4
	comp=Z,74nm,0.7s						
PVCC	**Panska Ves**	**1.47**	**223**	⇓*e*PG	Pn	04 31 17.9	0.0
PVCC				*e*SG	Sb	04 31 37.2	-0.3
	comp=Z,166nm,0.3s						
BRG	**Berggiesshubel**	**1.57**	**243**	PN	Pn	04 31 18.9	-0.4
BRG				PG	Pg	04 31 20.6	+0.5
BRG				SG	Sg	04 31 40.5	+0.1
	91nm,0.5s						
BRG	**Berggiesshubel**	**1.57**	**243**	*e*Pn	Pn	04 31 18.8	-0.4
BRG				*e*Pg	Pg	04 31 20.2	+0.1
BRG				*e*Sg	Sg	04 31 40.6	+0.1
KRLC	**Kraliky**	**1.58**	**165**	⇓*e*PG	Pn	04 31 19.7	+0.2
KRLC				*e*SG	Sn	04 31 39.8	-0.9
FBE	**Freiberg**	**1.88**	**250**	*e*Pg	Pg	04 31 26.1	-0.2
FBE				*e*Sg	Sg	04 31 50.9	+0.3
PRA	**Prague**	**1.88**	**216**	⇓*e*SG	Sb	04 31 49.0	-0.4
GOPC	**GO Pecny, Ondr**	**1.90**	**207**	⇓*e*PG	Pn	04 31 24.6	+0.7
PRU	**Pruhonice**	**1.91**	**213**	⇓*e*PN	Pn	04 31 23.7	-0.3
PRU				*e*PG	Pb	04 31 25.5	-0.4
PRU				*e*SG	Sn	04 31 48.7	0.0
	comp=Z,39nm,0.5s						
CLL	**Collm**	**1.99**	**263**	*e*Pn	Pn	04 31 26.1	+1.0
CLL				*e*Sg	Sg	04 31 55.4	+1.4
CLL	**Collm**	**1.99**	**263**	*i* Pn	Pn	04 31 25.8	+0.8
	comp=Z,19nm,0.5s						
CLL				*e*Pg	Pg	04 31 29.0	+0.8
CLL				*e*		04 31 32.0	
CLL				*e*		04 31 51.0	
CLL				*i* Sg	Sg	04 31 55.5	+1.5
	comp=Z,69nm,0.6s						
MORC	**Moravsky Berou**	**2.04**	**154**	*e*Pn	Pn	04 31 25.8	+0.2
MORC				*e*Sg	Sg	04 31 55.8	+0.3
MORC	**Moravsky Berou**	**2.04**	**154**	⇓P	Pn	04 31 26.0	+0.2
MORC				⇑S	Sg	04 31 55.7	+0.1
MORC	**Moravsky Berou**	**2.04**	**154**	*e*Pn	Pn	04 31 25.9	+0.2
	baz=334						
MORC				*e*Sg	Sb	04 31 53.9	0.0
	comp=Z,18nm,0.2s,baz=334						
MORC	**Moravsky Berou**	**2.04**	**154**	*e*PN	Pn	04 31 25.9	+0.2
MORC				*e*SG	Sb	04 31 53.9	0.0
OKC	**Ostrava-Krasne**	**2.18**	**144**	*e*Pn	Pn	04 31 28.1	+0.5
OKC				*e*Pg	Pb	04 31 31.4	+1.0
OKC				*e*Sg	Sg	04 32 00.8	+0.6
OKC	**Ostrava-Krasne**	**2.18**	**144**	⇓*e*PN	Pn	04 31 27.9	+0.2
OKC				*e*PG	Pb	04 31 31.2	+0.7
OKC				*e*SG	Sg	04 32 00.7	+0.5
VRAC	**Vranov**	**2.32**	**173**	Pn	Pn	04 31 29.9	+0.3
	comp=Z,2.1nm,0.3s,baz=337,slow=14,SNR=18						
VRAC				Lg	Lg	04 32 02.8	
	comp=Z,5.8nm,0.3s,baz=47,slow=20,SNR=6.8						
VRAC	**Vranov**	**2.32**	**173**	⇓P	Pn	04 31 29.9	+0.3
VRAC				⇑S	Sb	04 32 01.1	-0.9
VRAC	**Vranov**	**2.32**	**173**	*e*Pn	Pn	04 31 29.9	+0.3
	baz=353						
VRAC				*e*Sg	Sb	04 32 02.5	+0.5
	comp=Z,20nm,0.3s,baz=353						
VRAC	**Vranov**	**2.32**	**173**	*e*PN	Pn	04 31 29.9	+0.3
VRAC				*e*SG	Sb	04 32 02.5	+0.5
TREC	**Trest**	**2.35**	**191**	⇓*e*PN	Pn	04 31 30.3	+0.2
TREC				*e*PG	Pb	04 31 34.1	+0.7
TREC				*e*SG	Sb	04 32 03.5	+0.5
	comp=Z,28nm,0.3s						
PBCC	**Pribram**	**2.36**	**216**	⇓*e*PN	Pn	04 31 29.9	-0.3
PBCC				*e*PG	Pb	04 31 33.9	+0.4
PBCC				*e*SG	Sb	04 32 03.3	+0.1
	comp=Z,8.1nm,0.3s						
KRUC	**Moravsky**	**2.55**	**176**	*e*Pn	Pn	04 31 33.8	+1.0

	baz=356						
KRUC	**Moravsky**	**2.55**	**176**	*e*Pg	**Pb**	**04 31 37.5**	**+0.7**
	baz=356						
KRUC				*e*Sg	**Sb**	**04 32 09.7**	**+1.0**
	comp=Z,18nm,0.4s,baz=356						
KRUC	**Moravsky**	**2.55**	**176**	*e*PN	**Pn**	**04 31 33.9**	**+1.1**
KRUC				*e*PG	**Pb**	**04 31 37.5**	**+0.7**
KRUC				*e*SG	**Sb**	**04 32 09.7**	**+1.0**
TANN	**Tannenbergstha**	**2.61**	**244**	*e*Pn	**Pn**	**04 31 34.3**	**+0.6**
TANN				*e*Pg	**Pg**	**04 31 40.2**	**0.0**
OJC	**Ojcow**	**2.70**	**120**	*e*Pg	**Pg**	**04 31 42.6**	**+0.8**
OJC	**Ojcow**	**2.70**	**120**	*e*Pn	**Pn**	**04 31 34.4**	**-0.4**
OJC				*e*Pg	**Pg**	**04 31 42.6**	**+0.8**
OJC				*e*Sg	**Sg**	**04 32 18.2**	**+1.4**
NKC	**Novy Kostel**	**2.71**	**241**	⇓*e*PN	**Pn**	**04 31 35.4**	**+0.4**
NKC				*e*PG	**Pg**	**04 31 41.4**	**-0.7**
NKC				*e*SG	**Sg**	**04 32 17.3**	**0.0**
	comp=Z,62nm,0.3s						
KHC	**Kasperske Hory**	**2.97**	**215**	⇓*e*PN	**Pn**	**04 31 38.5**	**-0.1**
KHC				*e*PG	**Pb**	**04 31 44.8**	**+0.8**
KHC				*e*SN	**Sn**	**04 32 14.7**	**-0.3**
KHC				*e*SG	**Sg**	**04 32 24.4**	**-1.2**
	comp=Z,21nm,0.4s						
MOX	**Moxa**	**3.01**	**253**	*e*Pn	**Pn**	**04 31 39.2**	**+0.1**
MOX				*e*Pg	**Pg**	**04 31 47.6**	**-0.2**
MOX				*e*Sg	**Sg**	**04 32 26.8**	**-0.1**
MANZ	**Manzenberg**	**3.03**	**239**	*e*Pn	**Pn**	**04 31 40.0**	**+0.6**
MANZ				*e*Pg	**Pg**	**04 31 48.6**	**+0.3**
MANZ				*e*Sg	**Sg**	**04 32 26.8**	**-0.7**
ROTZ	**Rotzenmuhle**	**3.11**	**235**	*e*Pn	**Pn**	**04 31 40.8**	**+0.3**
ROTZ				*e*Sg	**Sg**	**04 32 30.3**	**+0.3**
GEC2	**GERESS Array S**	**3.18**	**211**	*e*Pn	**Pn**	**04 31 42.5**	**+1.0**
GEC2				*e*Pg	**Pg**	**04 31 49.4**	**-1.6**
GEC2				*e*Sg	**Sb**	**04 32 28.3**	**+1.5**
GERES	**GERESS Array B**	**3.18**	**211**	Pn	**Pn**	**04 31 41.4**	**-0.1**
	comp=Z,2.4nm,0.3s,baz=33,slow=13,SNR=66						
GERES				Pg	**Pb**	**04 31 48.1**	**+0.5**
	comp=Z,4.5nm,0.3s,baz=22,slow=16,SNR=33						
GERES				Lg	Lg	04 32 29.2	
	comp=Z,4.1nm,0.3s,baz=22,slow=29,SNR=11						
SMOL	**Smolenice**	**3.20**	**165**	*e*SG	**Sg**	**04 32 33.4**	**+0.4**
WET	**Wettzell**	**3.23**	**222**	*e*Pn	**Pn**	**04 31 42.2**	**+0.1**
LANS	**Liptovska Anna**	**3.25**	**138**	*e*PN	**Pn**	**04 31 43.6**	**+1.2**
LANS				*e*PG	**Pg**	**04 31 52.6**	**+0.2**
LANS				*e*SG	**Sg**	**04 32 34.3**	**-0.2**
MODS	**Modra-Piesok**	**3.32**	**167**	*e*PN	**Pn**	**04 31 44.8**	**+1.5**
MODS				*e*PG	**Pg**	**04 31 52.7**	**-1.0**
MODS				*e*SG	**Sg**	**04 32 37.3**	**+0.6**
NIE	**Niedzica**	**3.44**	**128**	*e*Pn	**Pn**	**04 31 46.5**	**+1.4**
NIE				*e*Pg	**Pg**	**04 31 56.5**	**+0.5**
NIE				*e*Sg	**Sg**	**04 32 41.4**	**+0.8**
ZST	**Bratislava**	**3.47**	**169**	*e*SG	**Sg**	**04 32 41.3**	**-0.3**
VYHS	**Vyhne**	**3.56**	**150**	*e*PN	**Pn**	**04 31 46.6**	**-0.1**
VYHS				*e*SG	**Sg**	**04 32 41.8**	**-2.9**
BSD	**Bornholm Skovb**	**3.59**	**349**	*i* P	**Pn**	**04 31 48.0**	**+1.0**
BSD				*i* S	**Sn**	**04 32 27.3**	**-2.8**
BSD	**Bornholm Skovb**	**3.59**	**349**	*e*		04 31 47.4	
	baz=188,slow=14						
BSD				*i* P		04 31 48.0	
BSD				*i* S		04 32 27.3	
BSD				IAML		04 32 38.1	
	comp=Z,2.4nm,0.3s						
CLZ	**Clausthal**	**3.60**	**276**	*e*Pn	**Pn**	**04 31 48.1**	**+0.9**
CLZ				*e*Pg	**Pg**	**04 31 58.3**	**-0.7**
CLZ				*e*Sg	**Sg**	**04 32 47.4**	**+1.7**
GRF	**Grafenberg Arr**	**3.67**	**240**	*e*Pn	**Pn**	**04 31 48.8**	**+0.6**
GRF				*e*Pg	**Pg**	**04 32 00.7**	**+0.2**
GRF				*e*Sg	**Sg**	**04 32 47.1**	**-1.0**
CONA	**Conrad Observa**	**3.69**	**183**	*e*Pn	**Pn**	**04 31 49.2**	**+0.8**
	comp=Z,1.8nm,0.3s,SNR=7.8						
MOA	**Molln**	**3.95**	**199**	*i* Pn	**Pn**	**04 31 52.6**	**+0.5**
	comp=Z,4.5nm,0.2s,SNR=14						
LUNU	**Lund**	**4.34**	**339**	P	**Pn**	**04 31 58.1**	**+0.8**
LUNU				S	**Sn**	**04 32 47.1**	**-1.5**
CRVS	**Cervenica-Dubn**	**4.35**	**126**	*e*PG	**Pg**	**04 32 14.8**	**+1.2**
CRVS				*e*SG	**Sg**	**04 33 13.4**	**+3.4**
ARSA	**Arzberg**	**4.38**	**186**	*e*Pn	**Pn**	**04 31 59.7**	**+1.7**
	comp=Z,2.2nm,0.3s						
BLEU	**Blekinge**	**4.71**	**358**	P	**Pn**	**04 32 03.9**	**+1.5**
BLEU				S	**Sn**	**04 32 54.8**	**-2.9**
KOLS	**Kolonicke sedl**	**4.75**	**122**	*e*PN	**Pn**	**04 32 03.5**	**+0.4**
BJUU	**Bjuv**	**4.84**	**339**	P	**Pn**	**04 32 04.0**	**-0.2**
KBA	**Koelnbreinsper**	**4.89**	**203**	*e*Pn	**Pn**	**04 32 06.0**	**+1.0**
	comp=Z,3.0nm,0.4s,SNR=7.4						
DEL	**Delary**	**5.05**	**346**	P	**Pn**	**04 32 07.7**	**+0.5**
VSTU	**Vaestervik**	**6.07**	**2**	P	**Pn**	**04 32 23.2**	**+2.1**
VSTU				S	**Sn**	**04 33 28.3**	**-2.9**
VSTU	**Vaestervik**	**6.07**	**2**	P		04 32 23.2	
VSTU				S		04 33 28.3	
DAVOX	**Davos/Dischmat**	**6.34**	**223**	Pn	**Pn**	**04 32 26.4**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=49,slow=9.3,SNR=5.5						
DAVOX				Lg	Lg	04 34 10.3	
	comp=Z,0.3nm,0.3s,baz=58,slow=23,SNR=2.9						
DRGR		**6.46**	**136**	⇑P	**Pn**	**04 32 27.5**	**+1.0**
CDF	**Champ du Feu**	**6.55**	**244**	*e*Pn	**Pn**	**04 32 26.9**	**-0.9**
CDF				*e*Sg	**Sb**	**04 34 10.5**	**+6.8**
	comp=Z,1.7nm,0.3s						
LNKU	**Linkoeping**	**6.64**	**357**	P	**Pn**	**04 32 30.2**	**+1.3**
LNKU	**Linkoeping**	**6.64**	**357**	P		04 32 30.2	
FKPU	**Falk**	**6.71**	**349**	P	**Pn**	**04 32 31.7**	**+1.7**
FKPU	**Falk**	**6.71**	**349**	P		04 32 31.7	
BZS	**Buzias**	**7.00**	**147**	⇑P	**Pn**	**04 32 34.5**	**+0.6**
HINF	**Hinteralfeld**	**7.12**	**241**	*e*Pn	**Pn**	**04 32 33.7**	**-1.8**
HINF	**Hinteralfeld**	**7.12**	**241**	*e*Pg	Pg	04 33 00.7	-5.8
HINF				*e*Sg	**Sb**	**04 34 28.4**	**+8.4**
	comp=Z,1.3nm,0.3s						
BURAR	**Bucovina Array**	**7.12**	**121**	⇓P	**Pn**	**04 32 36.2**	**+0.5**
HAU	**Haudompre**	**7.29**	**244**	*e*Pn	**Pn**	**04 32 35.6**	**-2.3**
HAU	**Haudompre**	**7.29**	**244**	*e*Pg	Pg	04 33 04.0	-5.8
MEZF	**Maizieres J'vi**	**7.79**	**251**	*e*Sg	Sg	04 34 49.6	-10
	comp=Z,3.1nm,0.4s						
AKASG	**Malin Array Be**	**8.28**	**91**	Pn	**Pn**	**04 32 52.4**	**+1.1**
	comp=Z,1.3nm,0.3s,baz=280,slow=12,SNR=7.2						
AKASG				Lg	Lg	04 35 25.2	
	comp=Z,0.3nm,0.3s,baz=268,slow=30,SNR=4.0						
HFS	**Hagfors**	**8.66**	**352**	Pn	**Pn**	**04 32 56.6**	**0.0**
	comp=Z,0.1nm,0.3s,baz=181,slow=17,SNR=3.7						
LOR	**Lormes**	**9.10**	**246**	*e*Pn	**Pn**	**04 33 01.1**	**-1.6**
	baz=68						
LOR	**Lormes**	**9.10**	**246**	*e*Pg	Pn	04 33 38.3	+36
	baz=68						
LOR				*e*Sn	Sn	04 34 35.3	-11
	comp=Z,1.4nm,0.4s,baz=74						
NOA	**NORSAR Array B**	**9.84**	**346**	Pn	**Pn**	**04 33 12.7**	**-0.1**
	comp=Z,0.0nm,0.3s,baz=158,slow=13,SNR=3.2						
FINES	**FINESS Array B**	**11.27**	**25**	Pn	**Pn**	**04 33 32.8**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=212,slow=11,SNR=7.7						
FINES				Sn	**Sn**	**04 35 35.6**	**-3.2**
	comp=Z,0.2nm,0.3s,baz=206,slow=20,SNR=5.0						
EKA	**Eskdalemuir Ar**	**12.08**	**296**	Pn	**Pn**	**04 33 40.8**	**-2.7**
	baz=104,slow=14,SNR=2.8						
ARCES	**ARCESS Array B**	**18.52**	**10**	Pn	**P**	**04 35 06.3**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=197,slow=12,SNR=4.3						
GNI	**Garni**	**22.82**	**109**	LR	LR	04 45 42.9	
	comp=Z,20nm,20.0s,baz=65,slow=39						
YKA	**Yellowknife Ar**	**59.78**	**336**	P	**P**	**04 40 58.3**	**+1.9**
	comp=Z,0.1nm,0.6s,baz=34,slow=6.8,SNR=3.6						

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*IDC **05** 04:33:08.1±1.0, 6°.90S×75°.70W, h0km, mb3.8/4, mb1 4.0/8, mb1mx3.7/32, mbtmp3.8/8, ML3.5/4, MS3.0/6, Ms1 3.0/6, ms1mx2.8/36, Error ellipse: s-maj=19.5km s-min=14.6km az=13.0*

ISC 05 04:33:09.8±0.9**, 6°.92S**±0°.09×**75°.70W**±0°.09**, h10km, n11, σ0s.88**/10**, mb3.7**/4**, Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.68**	**265**	Pn	**Pn**	**04 33 54.5**	**+1.0**
	12nm,0.3s,baz=80,slow=18,SNR=47						
ATAH				Pg	**Pb**	**04 33 57.6**	**-0.5**
	15nm,0.3s,baz=79,slow=16,SNR=48						
ATAH				Lg	Lg	04 34 32.0	
	40nm,0.3s,baz=239,slow=20,SNR=13						
ATAH				LR	LR	04 35 16.2	
	comp=Z,191nm,19.8s,baz=32,slow=48						
NNA	**Nana**	**5.16**	**193**	Pn	**Pn**	**04 34 28.1**	**+0.9**
	1.9nm,0.3s,baz=29,slow=13,SNR=8.9						
NNA				Sn	**Sn**	**04 35 26.2**	**-0.6**
	6.6nm,0.3s,baz=292,slow=18,SNR=5.7						
NNA				LR	LR	04 36 47.8	
	comp=Z,70nm,19.6s,baz=329,slow=42						
LPAZ	**La Paz**	**11.89**	**142**	Pn	**Pn**	**04 35 60.0**	**-0.2**
	0.1nm,0.3s,baz=315,slow=8.6,SNR=2.1						
LPAZ				Lg	Lg	04 39 26.4	
	0.2nm,0.3s,baz=304,slow=3.6,SNR=2.9						
LPAZ				LR	LR	04 41 34.0	
	comp=Z,86nm,18.4s,baz=234,slow=42						
SDV	**Santo Domingo**	**16.50**	**18**	LR	LR	04 44 44.3	
	comp=Z,73nm,18.6s,baz=254,slow=42						
PTGA	**Pitinga**	**16.85**	**69**	LR	LR	04 44 22.5	
	comp=Z,78nm,18.4s,baz=232,slow=40						
SIV	**San Ignacio**	**16.92**	**123**	Pn	**Pn**	**04 37 08.3**	**+1.4**
	0.3nm,0.3s,baz=301,slow=12,SNR=4.2						
SIV				Lg	Lg	04 42 01.0	
	0.2nm,0.3s,baz=233,slow=22,SNR=3.6						
APG	**El Apazote**	**26.25**	**326**	LR	LR	04 48 17.0	
	comp=Z,39nm,18.7s,baz=294,slow=35						
PLCA	**Paso Flores**	**33.98**	**173**	P	**P**	**04 39 53.6**	**-0.1**
	3.0nm,1.0s,baz=333,slow=6.7,SNR=3.4						
TXAR	**Lajitas Array**	**44.98**	**325**	P	**P**	**04 41 26.1**	**+0.5**
	0.7nm,0.7s,baz=149,slow=8.2,SNR=9.3						
YKA	**Yellowknife Ar**	**75.37**	**342**	P	**P**	**04 44 52.7**	**-0.5**
	0.3nm,0.5s,baz=139,slow=6.1,SNR=9.8						
TORD	**Torodi Ar. Bea**	**79.40**	**75**	P	**P**	**04 45 16.1**	**-0.7**
	0.3nm,0.3s,baz=271,slow=5.1,SNR=8.7						

WEL 05 04:50:40.5±0.7**, 35°S**±13°×**17°9E**±1°7**, h270km**±11km**, M4.0**/22**, mB4.4**/4**, MLv4.1**/22**, Mw(mB)3.5**/4**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**3.25**	**191**	P	Pn	04 51 36.7	0.0
HAZ	**Te Kaha**	**3.32**	**199**	P	Pn	04 51 38.2	+0.7
HAZ				S	S	04 52 22.5	-0.4
PKGZ	**Pakihiroa**	**3.38**	**195**	P	Pn	04 51 37.8	-0.4
PKGZ				S	S	04 52 24.9	+0.8
PUZ	**Puketiti**	**3.52**	**192**	P	Pn	04 51 39.3	-0.4
PUZ				S	S	04 52 26.0	-0.9
RUGZ	**Raukumara Rang**	**3.55**	**199**	P	Pn	04 51 39.9	-0.2
RUGZ				S	S	04 52 27.4	-0.2
TWGZ	**Tauwhareparae**	**3.67**	**195**	P	Pn	04 51 43.8	+2.3
CNGZ	**Carnagh Statio**	**3.93**	**191**	P	Pn	04 51 44.4	+0.1
MWZ	**Matawai**	**3.93**	**199**	P	Pn	04 51 44.3	0.0
MWZ				S	S	04 52 35.8	+0.4
TKGZ	**Te Karaka**	**3.96**	**195**	P	Pn	04 51 44.1	-0.4
URZ	**Urewera**	**3.99**	**204**	P	Pn	04 51 45.2	+0.3
MUGZ	**Murupara**	**4.30**	**206**	P	Pn	04 51 48.9	+0.4
MUGZ				S	S	04 52 43.2	+0.2
RTZ	**Ruatahuna**	**4.36**	**203**	P	Pn	04 51 48.2	-1.0
NMHZ	**Naumai**	**4.85**	**202**	P	Pn	04 51 55.0	0.0
NMHZ				S	S	04 52 57.5	+2.7
ARHZ	**Aropaoanui**	**4.95**	**200**	P	Pn	04 51 55.9	-0.2
ARHZ				S	S	04 52 58.4	+1.7
BKZ	**Black Stump Fm**	**5.01**	**204**	P	Pn	04 51 57.1	+0.1
BKZ				S	S	04 52 56.6	-1.8
NGZ	**Ngauruhoe**	**5.37**	**211**	P	Pn	04 52 03.4	+2.1
BHHZ	**Black Hill Sta**	**5.45**	**206**	P	Pn	04 52 02.0	-0.3
KAHZ	**Kahuranaki**	**5.48**	**199**	P	Pn	04 52 01.9	-0.7
KRHZ	**Kereru**	**5.49**	**203**	P	Pn	04 52 01.6	-1.1
MOVZ	**Moawhango**	**5.50**	**209**	P	Pn	04 52 02.1	-0.8
PXZ	**Pawanui**	**5.70**	**198**	P	Pn	04 52 06.2	+0.9
PNHZ	**Pukenui**	**5.79**	**203**	P	Pn	04 52 04.9	-1.4
DVHZ	**Dannevirke**	**6.15**	**202**	P	Pn	04 52 10.2	-0.5
PRWZ	**Pori Road**	**6.44**	**202**	P	Pn	04 52 15.0	+0.7
BFZ	**Birch Farm**	**6.48**	**200**	P	Pn	04 52 15.5	+0.8
MRZ	**Mangatainoka R**	**6.67**	**204**	P	Pn	04 52 16.5	-0.6
TIWZ	**Tintock**	**6.67**	**202**	P	Pn	04 52 17.8	+0.6
HOWZ	**Holdsworth Sta**	**6.90**	**204**	P	Pn	04 52 18.6	-1.4

IDC 05 04:56:53.6±2.7**, 6°.09S**×**129°.76E, h135km**±38km**, mb2.9**/1**, mb1 3.3**/5**, mb1mx3.1**/31**, mbtmp3.7**/5**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.6**/13**, Error ellipse: s-maj=70.5km s-min=16.4km az=91.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.39**	**16**	P	Pn	04 58 13.7	+1.5
	4.4nm,0.3s,baz=225,slow=23,SNR=43						
SIJI				S	Sn	04 59 13.0	-0.4
	4.8nm,0.3s,baz=273,slow=23,SNR=6.7						
FITZ	**Fitzroy Crossi**	**12.60**	**198**	P	Pn	04 59 47.5	-0.7
	0.5nm,0.3s,baz=4.9,slow=12,SNR=21						
FITZ				S	Sn	05 01 59.2	-8.1
	0.4nm,0.3s,baz=235,slow=22,SNR=4.6						
WRA	**Warramunga Arr**	**14.47**	**163**	P	Pn	05 00 10.8	-1.5
	0.3nm,0.3s,baz=347,slow=13,SNR=9.9						
WRA				S	Sn	05 02 43.6	-8.9
	0.7nm,0.3s,baz=337,slow=20,SNR=9.6						
ASAR	**Alice Springs**	**17.93**	**168**	P	Pn	05 00 54.4	-0.2
	0.3nm,0.3s,baz=344,slow=10,SNR=13						
ASAR				S	S	05 04 07.6	-4.8
	0.2nm,0.3s,baz=354,slow=27,SNR=3.9						
HNR	**Honiara**	**30.09**	**98**	LR	LR	05 16 58.3	
	comp=Z,57nm,20.2s,baz=140,slow=40						
MKAR	**Makanchi Array**	**67.34**	**327**	P	P	05 07 34.1	-0.1
	0.2nm,0.5s,baz=124,slow=8.2,SNR=3.4						

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*OSPL **05** 05:07:26.0±0.3, 19°.60N×73°.73W, h83km±16km, ML2.2*

*SSNC **05** 05:07:26.3±1.2, 19°.58N×73°.71W, h21km±15km, MD3.1, ML2.4, MW2.8*

ISC 05 05:07:24.7±1.3**, 19°.7N**±0°.1×**73°.71W**±0°.06**, h35km, n8, σ1s.83**/16**, Haiti region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASC	**Masc**	**0.69**	**315**	*e*Pg	**Pn**	**05 07 39.3**	**+1.4**
MASC				*e*Sg	**Sn**	**05 07 49.0**	**+1.5**
MASC				IAML		05 07 49.9	
	comp=E,137nm,0.2s						
MASC				IAML		05 07 49.9	
	comp=N,115nm,0.1s						
GTBY	**Guantanamo Bay**	**1.34**	**281**	*i* P	**Pn**	**05 07 48.4**	**+1.5**
GTBY				*e*S	**Sn**	**05 08 05.0**	**+1.6**
GTBY				IAML		05 08 08.0	
	comp=Z,23nm,0.5s						
GTMO	**Guantanamo**	**1.40**	**287**	*e*P	**Pn**	**05 07 47.7**	**0.0**
GTMO				*e*S	**Sn**	**05 08 03.8**	**-1.2**
GTMO				IAML		05 08 05.7	
	comp=E,909nm,0.1s						
GTMO				IAML		05 08 06.2	
	comp=Z,464nm,0.2s						
LGNH	**Logne**	**1.57**	**138**	*i* P	**Pn**	**05 07 50.6**	**+0.5**
LGNH				*e*S	**Sn**	**05 08 09.1**	**-0.1**
RCC	**Rio Carpintero**	**1.89**	**280**	*e*P	**Pn**	**05 07 55.8**	**+1.3**
RCC				*e*S	**Sn**	**05 08 18.7**	**+1.5**
RCC				IAML		05 08 21.4	
	comp=N,24nm,0.2s						
RCC				IAML		05 08 21.4	
	comp=E,19nm,0.1s						
SDDR	**Presa de Saban**	**2.40**	**107**	*i* P	**Pn**	**05 08 02.1**	**+0.6**
SDDR				*e*S	**Sn**	**05 08 28.6**	**-1.1**
SDDR				IAML		05 08 29.9	
	comp=Z,17nm,0.4s						
LMGC	**Las Mercedes**	**3.12**	**277**	*e*P	**Pn**	**05 08 12.2**	**+0.8**
LMGC				*e*S	**Sn**	**05 08 46.5**	**-1.0**
LMGC				IAML		05 08 49.1	
	comp=N,8.5nm,0.1s						
LMGC				IAML		05 08 49.4	
	comp=E,5.9nm,0.1s						
CCCC	**Cccc**	**4.09**	**292**	*e*P	**Pn**	**05 08 22.9**	**-1.9**
CCCC				*e*S	**Sn**	**05 09 06.7**	**-4.7**
CCCC				IAML		05 09 08.3	
	comp=E,1.6nm,0.3s						
CCCC				IAML		05 09 08.3	
	comp=N,1.2nm,0.2s						

IDC 05 05:36:02.0±869.0**, 52°.47N**×**33°.68E, h0km, Error ellipse: s-maj=349.3km s-min=102.2km az=29.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**4.74**	**24**	*i*		06 08 05.0	
	baz=208,slow=321,SNR=0.5						
I31KZ	**AKTYUBINSK INF**	**15.31**	**88**	*i*		07 11 20.0	
	baz=289,slow=314,SNR=2.1						
I34MN	**SONGINO INFRAS**	**45.04**	**65**	*i*		10 08 30.0	
	baz=301,slow=337,SNR=1.8						

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*ANF **05** 05:41:04.7±0.3, 32°.80N×115°.45W, h25km±2km, ML2.4/11, Error ellipse: s-maj=3.1km s-min=1.7km az=171.0*

*NEIC **05** 05:41:04.8±1.2, 32°.74N±0°.03×115°.43W±0°.03, h21km±5km, Error ellipse: s-maj=4.3km s-min=3.7km az=197.0*

*SCEDC **05** 05:41:05.8, 32°.79N×115°.44W, h11km*

*PAS **05** 05:41:05.8±2.4, 32°.79N±0°.01×115°.44W±0°.02, h11km±2km, ML2.6/88, Error ellipse: s-maj=2.3km s-min=1.5km az=68.0*

ISC 05 05:41:04.9±0.9**, 32°.77N**±0°.03×**115°.44W**±0°.02**, h23km**±5km**, n50, σ0s.60**/70**, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DREC	**Desert Rsrch C**	**0.04**	**356**		**Pb**	**05 41 07.9**	**-1.0**
DREC					**Sb**	**05 41 10.6**	**-1.0**
SNR	**Schaffner Ranc**	**0.09**	**4**		**Pb**	**05 41 08.4**	**-0.8**
UABX	**UABC, Campus M**	**0.14**	**179**		**Pb**	**05 41 09.9**	**+0.3**
WESC	**Westside Schoo**	**0.24**	**268**		**Pb**	**05 41 11.2**	**+0.3**
WESC					**Sb**	**05 41 15.9**	**+0.9**
COK2	**Cook Ranch 2**	**0.25**	**289**		**Pb**	**05 41 11.3**	**+0.3**
COK2					**Sb**	**05 41 16.0**	**+0.7**
SWSC	**Sam W. Stewart**	**0.35**	**300**		**Pb**	**05 41 12.5**	**0.0**
SWSC	**Sam W. Stewart**	**0.35**	**300**	P	**Pb**	**05 41 12.5**	**0.0**
	baz=116,SNR=28						
SWSC				S	**Sb**	**05 41 17.7**	**0.0**
	baz=116						
CPBX	**Cerro Prieto**	**0.37**	**161**		**Pb**	**05 41 13.7**	**+0.8**
SUP	**Superstition M**	**0.37**	**300**		**Sb**	**05 41 18.2**	**-0.1**
SUP	**Superstition M**	**0.37**	**300**		**Pb**	**05 41 13.0**	**+0.2**
CLIC	**Calipatria**	**0.38**	**349**		**Pb**	**05 41 13.2**	**+0.2**
CRR	**Carrizo Plain**	**0.46**	**285**		**Pb**	**05 41 14.4**	**+0.1**
ERRC	**Elmore Ranch**	**0.47**	**317**		**Pb**	**05 41 15.0**	**+0.5**
RMX	**La Rumorosa**	**0.56**	**253**		**Pb**	**05 41 16.2**	**+0.1**
RMX					**Sb**	**05 41 23.2**	**-0.6**
IKP	**In-Ko-Pah, Jac**	**0.57**	**258**		**Pb**	**05 41 16.6**	**+0.2**
IKP					**Sb**	**05 41 24.3**	**+0.1**
IKP	**In-Ko-Pah, Jac**	**0.57**	**258**	P	**Pb**	**05 41 16.6**	**+0.2**
	baz=76,SNR=20						
IKP				S	**Sb**	**05 41 24.3**	**+0.1**
	baz=76						
GLA	**Glamis**	**0.59**	**61**		**Pb**	**05 41 16.5**	**-0.1**
GLA					**Sb**	**05 41 24.3**	**-0.3**
GLA	**Glamis**	**0.59**	**61**	P	**Pb**	**05 41 16.5**	**-0.1**
	baz=244,SNR=9.9						
GLA				S	**Sb**	**05 41 24.3**	**-0.3**
	baz=244						
FRK	**Frink**	**0.65**	**346**		**Pb**	**05 41 17.2**	**-0.4**
CBKC	**Canebrake**	**0.69**	**281**		**Pb**	**05 41 18.6**	**+0.3**
BATC	**Bat Cave Butte**	**0.76**	**334**		**Pb**	**05 41 19.6**	**+0.1**
MONP2	**Monument Peak**	**0.83**	**279**		**Sb**	**05 41 31.9**	**+0.2**
MONP2	**Monument Peak**	**0.83**	**279**	P	**Pb**	**05 41 20.7**	**-0.1**
	baz=96,SNR=14						
MONP2				S	**Sb**	**05 41 31.9**	**+0.2**
	baz=96						
ESJX	**Sierra Juarez**	**0.87**	**209**		**Pb**	**05 41 20.9**	**-0.6**
ESJX					**Sb**	**05 41 32.8**	**0.0**
BC3	**Big Chuckawall**	**0.88**	**359**		**Pb**	**05 41 21.3**	**-0.4**
BC3					**Sb**	**05 41 33.0**	**-0.1**
BC3	**Big Chuckawall**	**0.88**	**359**	P	**Pb**	**05 41 21.2**	**-0.4**
	baz=179,SNR=30						
BC3				S	**Sb**	**05 41 32.6**	**-0.5**
	baz=179						
BORC	**Borrego Spring**	**0.96**	**302**		**Pb**	**05 41 21.9**	**-0.9**
BORC					**Sn**	**05 41 35.5**	**-0.4**
HAY	**Hayfield**	**0.96**	**348**		**Pb**	**05 41 22.5**	**-0.3**
BAR	**Barrett**	**1.04**	**265**		**Pb**	**05 41 23.9**	**-0.3**
BAR					**Sn**	**05 41 38.2**	**+0.3**
CBX	**Cerro Bola**	**1.13**	**247**		**Pb**	**05 41 25.8**	**0.0**
CBX					**Sn**	**05 41 40.6**	**+0.4**
EML	**El Monte Cty P**	**1.19**	**276**		**Pn**	**05 41 25.8**	**-0.3**
XPFO	**Pion Flat**	**1.19**	**315**		**Pn**	**05 41 26.2**	**-0.1**
XPFO	**Pion Flat**	**1.19**	**315**		**Pn**	**05 41 25.6**	**-0.7**
PFO	**Pinyon Flats O**	**1.20**	**315**		**Pn**	**05 41 26.2**	**-0.2**
PFO	**Pinyon Flats O**	**1.20**	**315**		**Pn**	**05 41 25.9**	**-0.5**
PFO	**Pinyon Flats O**	**1.20**	**315**	P	**Pn**	**05 41 25.9**	**-0.5**
	baz=134,SNR=12						
PFO				S	**Sb**	**05 41 40.6**	**-1.5**
	baz=134						
Y12C	**Blythe**	**1.25**	**38**		**Pb**	**05 41 28.3**	**+0.7**
Y12C	**Blythe**	**1.25**	**38**	P	**Pb**	**05 41 28.4**	**+0.7**
	baz=219,SNR=8.1						
Y12C				S	**Sn**	**05 41 43.3**	**+0.3**
	baz=219						
BZNA	**Buzz No.'s Pla**	**1.25**	**305**		**Pn**	**05 41 27.1**	**0.0**
DPP	**Dos Picos Cty**	**1.28**	**281**		**Pn**	**05 41 27.5**	**+0.1**
PLM	**Palomar**	**1.33**	**296**		**Pn**	**05 41 28.1**	**-0.1**
109C	**Camp Elliot, M**	**1.40**	**275**		**Pn**	**05 41 29.1**	**+0.1**
109C	**Camp Elliot, M**	**1.40**	**275**	P	**Pn**	**05 41 29.4**	**+0.3**
	baz=93,SNR=8.1						
109C				S	**Sb**	**05 41 47.6**	**-0.3**
	baz=93						
IRM	**Iron Mountain**	**1.41**	**10**	P	**Pb**	**05 41 30.4**	**-0.1**
	baz=190,SNR=14						
113A	**Mohawk Valley,**	**1.41**	**90**		**Pb**	**05 41 30.2**	**-0.3**
GMRC	**Granite Mounta**	**2.02**	**355**	P	**Pb**	**05 41 42.9**	**+1.9**
	baz=175						
214A	**Organ Pipe Nat**	**2.37**	**109**		**Pn**	**05 41 42.4**	**0.0**
214A	**Organ Pipe Nat**	**2.37**	**109**	P	**Pn**	**05 41 42.4**	**0.0**
	baz=291						
214A				S	**Sn**	**05 42 10.5**	**-0.3**
	baz=291						
FLSC	**Flash Two Peak**	**2.56**	**329**		**Pb**	**05 41 51.3**	**+1.0**
W13A	**Hualapai Mount**	**2.66**	**29**		**Pb**	**05 41 54.3**	**+2.3**

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*NIED **05** 05:54:00, 43°.70N×147°.30E, h44km, Mw3.6 Best double couple: $M_0$2.57000×10^{14} NP1:ϕ_s73.00000°, δ89.00000°, λ138.00000°. NP2:ϕ_s164.00000°, δ48.00000°, λ2.00000°.*

*SKHL **05** 05:54:30.8±0.5, 43°.83N×147°.38E, h35km±3km, mb4.0/4*

*JMA **05** 05:54:30.3±0.3, 43°.70N×147°.27E, h24km±5km, M3.9*

ISC 05 05:54:29.5±2.0**, 43°.77N**±0°.09×**147°.45E**±0°.10**, h35km, n17, σ0s.86**/31**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.46**	**283**	*i* P	**Pn**	**05 54 39.8**	**+0.2**
SHO				AMB	AMB	05 54 40.2	
	50nm,0.2s						
SHO				*i* S	**Sn**	**05 54 46.6**	**+0.1**
SHO				A	A	05 54 48.0	
	970nm,0.2s						
SHO				A	A	05 54 48.0	
	750nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.18**	**283**	*i* P	**Pn**	**05 54 49.0**	**-0.4**
YUK				AMB	AMB	05 54 50.0	
	50nm,0.2s						
YUK				*i* S	**Sn**	**05 55 03.1**	**-1.1**
YUK				A	A	05 55 07.0	
	150nm,0.2s						
YUK				A	A	05 55 07.0	
	570nm,0.2s						
GRPR	**Tuman**	**1.23**	**281**	*e*P	**Pn**	**05 54 50.0**	**-0.2**
GRPR				AMB	AMB	05 54 50.0	
	40nm,0.2s						
GRPR				*i* S	**Sn**	**05 55 04.5**	**-1.1**
GRPR				A	A	05 55 06.0	
	350nm,0.2s						
GRPR				A	A	05 55 06.0	
	420nm,0.2s						
NEM2	**Nemuro 2**	**1.30**	**252**	P	**Pn**	**05 54 51.0**	**-0.2**
NEM2				*e*S	**Sn**	**05 55 06.1**	**-1.3**
NMR	**Nemuro--Hokkai**	**1.31**	**253**	*i* P	**Pn**	**05 54 51.1**	**-0.2**
NMR				*i* S	**Sn**	**05 55 06.6**	**-1.0**
GLVR	**Golovnino**	**1.40**	**269**	*e*P	**Pn**	**05 54 52.7**	**+0.2**
GLVR				*i* S	**Sn**	**05 55 08.5**	**-1.2**
GLVR				A	A	05 55 11.0	
	570nm,0.3s						
GLVR				A	A	05 55 11.0	
	170nm,0.3s						
KUR	**Kuril'sk**	**1.49**	**11**	*i* P	**Pn**	**05 54 54.1**	**+0.3**
KUR				AMB	AMB	05 54 55.0	
	30nm,0.3s						
KUR				*i* S	**Sn**	**05 55 11.2**	**-0.8**
KUR				A	A	05 55 13.0	
	110nm,0.2s						
KUR				A	A	05 55 13.0	
	60nm,0.2s						
JRA	**Rausu**	**1.69**	**276**	P	**Pn**	**05 54 57.1**	**+0.6**
JRA				*e*S	**Sn**	**05 55 16.5**	**-0.4**
JNSB	**Nemuroshibetsu**	**1.77**	**271**	P	**Pn**	**05 54 58.4**	**+0.8**
JNSB				*e*S	**Sn**	**05 55 19.3**	**+0.4**
JKHN	**Kushirohamanak**	**1.80**	**248**	P	**Pn**	**05 54 58.4**	**+0.3**
JKHN				*e*S	**Sn**	**05 55 19.1**	**-0.6**
JNK	**Nakash**	**1.99**	**266**	P	**Pn**	**05 55 01.2**	**+0.6**
JNK				*e*S	**Sn**	**05 55 23.9**	**-0.4**

JAK	Akkeshi	2.15	250	P	Pn	05 55 03.1	+0.3
JAK				*e*S	Sn	05 55 27.5	-0.8
JTKR	Abashiri--Toko	2.57	276	P	Pn	05 55 09.9	+1.3
JAR	Ashorobuto	2.72	261	P	Pn	05 55 12.3	+1.7
JOB	Onbets	2.78	253	P	Pn	05 55 12.5	+1.1
JOB				*e*S	Sn	05 55 43.5	-0.2
JMP	Maruseppu	2.97	276	P	Pn	05 55 15.7	+1.6
JCH	Churui	3.21	250	P	Pn	05 55 18.2	+0.9
JCH				*e*S	Sn	05 55 53.5	-0.8

IDC 05 06:24:23.0±2.2,7°.11N×122°.61E,h0^{km},mb3.7/3,mb1 3.9/3,mb1mx3.5/39,mbtmp3.7/3,Error ellipse: s-maj=260.8km s-min=26.8km az=63.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	29.26	157	P	P	06 30 25.1	-1.9
	0.4nm,0.4s,baz=334,slow=11,SNR=5.4						
ASAR	Alice Springs	32.52	160	P	P	06 30 57.3	+1.5
	0.6nm,0.4s,baz=343,slow=10,SNR=13						
MKAR	Makanchi Array	52.47	326	P	P	06 33 37.5	-0.1
	0.2nm,0.3s,baz=117,slow=8.7,SNR=5.4						

UCR 05 06:25:04.8±1.3,9°.37N×84°.66W,h19^{km}±5^{km},MD3.7,MW3.1,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCR2	La Lucha 2	0.75	60	*e*P	Pb	06 25 18.5	-0.9
JTS	Las Juntas de	0.96	343	*e*P	Pb	06 25 21.1	-1.7
JTS				*e*S	Sb	06 25 35.1	-0.1
FORC	Fortuna	1.09	360	*i* P	Pb	06 25 24.4	-0.6
FORC				*e*S	Sg	06 25 40.1	-0.2
GUAI	GUAI	1.22	317	*i* P	Pn	06 25 25.8	-1.1
GUAI				*e*S	Sg	06 25 44.5	-0.1
CUI	Cuipilapa	1.37	339	*i* P	Pn	06 25 28.6	-0.5
CUI				*e*S	Sb	06 25 47.5	+0.4
MESS	Mesas	1.46	339	*i* P	Pn	06 25 30.1	-0.2
MESS				*e*S	Sb	06 25 49.4	-0.3
GBS3	Finca Las Img	1.60	331	*e*P	Pn	06 25 32.7	+0.5

IDC ***05*** *06:41:23.9±2.0,57°.41S×26°.93W,h0^{km},mb4.1/3,mb1 4.3/3,mb1mx3.9/17,mbtmp4.1/3,Error ellipse: s-maj=77.5km s-min=44.2km az=10.0*
NEIC ***05*** *06:41:40.2±1.0,56°.9S±0°.2×27°.3W±0°.3,h114^{km}±8^{km},mb4.2/7,Error ellipse: s-maj=29.9km s-min=6.0km az=220.0*
ISC 05 06:41:40.6±0.8,56°.8S±0°.1×27°.4W±0°.2,h112^{km},n17,σ1^{s}57/18,mb4.1/6,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	16.19	157	P	P	06 45 24.4	+2.1
VNA3	Neumayer Olymp	16.37	160	P	P	06 45 26.8	+2.5
VNA2	Neumayer--Watz	16.59	157	P	P	06 45 30.0	+3.3
	baz=315,slow=13						
SNAA	Sanae	18.15	155	P	P	06 45 42.2	-1.7
SNAA	Sanae	18.15	155	P	P	06 45 41.6	-2.3
EFI	East Falkland	18.55	273	P	P	06 45 47.9	-0.4
QSPA	South Pole Qui	33.50	180	P	P	06 48 08.0	-1.0
QSPA				IAmb	IAmb	06 48 11.0	
	comp=Z,2.1nm,1.1s						
CPUP	Villa Florida	37.20	312	P	P	06 48 41.3	+0.5
	comp=Z,0.9nm,0.5s,baz=153,slow=7.9,SNR=6.6						
CPUP	Villa Florida	37.20	312	P	P	06 48 41.1	+0.4
CPUP				IAmb	IAmb	06 48 57.9	
	comp=Z,5.5nm,1.4s						
LPAZ	La Paz	50.70	306	P	P	06 50 30.8	+1.5
	comp=Z,2.7nm,0.4s,baz=145,slow=3.5,SNR=31						
LPAZ	La Paz	50.70	306	P	P	06 50 30.2	+0.8
LPAZ				IAmb	IAmb	06 50 31.2	
	comp=Z,2.9nm,0.5s						
SAML	Samuel	55.22	315	P	P	06 51 02.2	+0.3
SAML				IAmb	IAmb	06 51 02.5	
	comp=Z,2.6nm,0.5s						
TORD	Torodi Ar. Bea	73.71	30	P	P	06 53 02.3	+0.2
	comp=Z,0.8nm,0.8s,baz=208,slow=5.2,SNR=3.8						
SDV	Santo Domingo	74.43	315	P	P	06 53 06.0	-0.6
SDV				IAmb	IAmb	06 53 09.7	
	comp=Z,2.8nm,1.0s						
YKA	Yellowknife Ar	136.62	318	PKP	PKPdf	07 00 46.9	-1.0
	comp=Z,0.2nm,0.3s,baz=136,slow=2.2,SNR=6.8						
ILAR	Eielson Array	150.50	311	PKPbc	PKPbc	07 01 16.7	-0.8
	comp=Z,1.4nm,0.8s,baz=136,slow=4.4,SNR=14						
ILAR				PKPab	PKPab	07 01 24.6	-0.1
	comp=Z,0.2nm,0.5s,baz=121,slow=1.7,SNR=4.4						
KDAK	Kodiak Island	151.03	295	PKPbc	PKPbc	07 01 18.7	-0.2
	comp=Z,3.8nm,0.9s,baz=170,slow=3.3,SNR=4.1						

KRSC 05 06:51:52.2±1.5,50°.64N×160°.01E,h80^{km}±30^{km},ML3.5,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	1.69	315	*e*P	Pn	06 52 21.5	+1.6
KDTR				*e*S	Sn	06 52 42.5	+1.6
RUS	Russkaya	2.03	333	*e*P	Pn	06 52 25.6	+1.2
RUS				*e*S	Sn	06 52 50.4	+1.5
MTVR	Mutnovka	2.17	329	*e*P	Pn	06 52 28.7	+2.2
MTVR				*e*S	Sn	06 52 55.1	+2.5
PAU	Pauzhetka	2.18	294	*e*S	Sn	06 52 54.9	+2.3
ASAK	Asacha	2.19	324	*e*P	Pn	06 52 29.2	+2.5
ASAK				*e*S	Sn	06 52 55.8	+2.8
GRL	Gorelyy	2.27	329	*e*P	Pn	06 52 30.3	+2.6
SPN	Mys Shipunski	2.47	0	*e*P	Pn	06 52 31.4	+1.1
SPN				*e*S	Sn	06 53 00.0	+0.5
SKR	Severo-Kuril’s	2.48	273	*e*S	Sn	06 53 01.6	+1.9
KRMR	Karymshinskiy	2.49	333	*e*P	Pn	06 52 32.8	+2.2
KRMR				*e*S	Sn	06 53 02.7	+2.7
DALK	Dalny	2.52	343	*e*P	Pn	06 52 33.7	+2.7
DALK				*e*S	Sn	06 53 03.6	+2.8
NLC	Nalytchevo	2.57	351	*e*S	Sn	06 53 05.0	+3.0
UGLR	Uglovaya	2.68	345	*e*P	Pn	06 52 36.5	+3.2
SMAR	Somma	2.73	345	*e*P	Pn	06 52 36.8	+2.7
SDLR	Sedlovina	2.74	346	*e*P	Pn	06 52 36.1	+2.1
AVH	Avacha	2.75	344	*e*P	Pn	06 52 37.4	+3.2
KOK	Koryaka	2.79	343	*e*P	Pn	06 52 38.5	+3.7
KZV	Kizimen	4.49	2	*e*P	Pn	06 53 00.6	+2.8
KZV				*e*S	Sn	06 53 50.5	+1.7
TUMD	Tumrok D	4.58	3	*e*P	Pn	06 53 01.3	+2.3
TUMR	Tumrok	4.66	1	*e*P	Pn	06 53 03.5	+3.4
KMNR	Kamenistaya	5.13	1	*e*P	Pn	06 53 08.8	+2.3

IDC ***05*** *07:30:28.9±0.8,47°.78N×156°.55E,h0^{km},mb3.7/7,mb1 3.9/10,mb1mx3.6/48,mbtmp3.7/10,ML2.8/3,Error ellipse: s-maj=27.5km s-min=17.4km az=134.0*
SKHL ***05*** *07:30:28.5±0.6,47°.73N×156°.38E,h24^{km}±3^{km},mb4.1/2*
MOS ***05*** *07:30:30.7±0.8,47°.89N×156°.65E,h26^{km},mb4.6/4,Error ellipse: s-maj=17.8km s-min=4.4km az=83.8*
ISC 05 07:30:32.8±0.8,47°.77N±0°.07×156°.57E±0°.09,h35^{km},n57,σ1^{s}95/60,mb3.8/11,4C-1D,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril’s	2.93	354	*e*P	Pn	07 31 15.6	-1.2
SKR				AMB	AMB	07 31 19.4	
	40nm,0.4s						
SKR				*e*S	Sn	07 31 48.6	-2.1
SKR				A	A	07 31 51.2	
	100nm,0.3s						
SKR				A	A	07 31 51.2	
	160nm,0.3s						
SKR	Severo-Kuril’s	2.93	354	*e*PN	Pn	07 31 16.1	-0.7
SKR				*e*S	Sn	07 31 48.6	-2.1
SKR				smax	smax		
	comp=E,157nm,0.7s						
SKR				smax	smax		
	comp=N,159nm,0.9s						
ALID	Alaid	3.17	348	PN	Pn	07 31 20.5	+0.2
ALID				S	Sn	07 31 59.0	+2.1
PAU	Pauzhetka	3.70	2	*e*P	Pn	07 31 27.6	+0.2
PAU				*e*S	Sn	07 32 08.4	-1.4
PAU	Pauzhetka	3.70	2	PN	Pn	07 31 25.6	-1.8
PAU				S	Sn	07 32 07.8	-2.0
KDTR	Khodutka, Kamc	4.16	13	PN	Pn	07 31 31.5	-2.2
MIPR	Malaya Ipel'ka	4.51	1	PN	Pn	07 31 37.9	-0.6
MIPR				S	Sn	07 32 28.5	-1.2
ASAK	Asacha	4.70	10	PN	Pn	07 31 39.5	-1.6
MTVR	Mutnovka	4.83	12	PN	Pn	07 31 41.5	-1.5
RUS	Russkaya	4.83	14	*e*P	Pn	07 31 40.7	-2.2
RUS	Russkaya	4.83	14	PN	Pn	07 31 40.7	-2.2
GRL	Gorelyy	4.88	11	PN	Pn	07 31 42.5	-1.2
KRMR	Karymshinskiy	5.16	11	PN	Pn	07 31 46.2	-1.2
APC	Apacha	5.17	4	PN	Pn	07 31 47.2	-0.4
PEA0B	Petropavlovsk-	5.39	7	⇑*i*PN	Pn	07 31 50.1	-0.5
PETK	Petropavlovsk-	5.39	7	Pn	Pn	07 31 50.3	-0.3
	comp=N,1.9nm,0.3s,baz=190,slow=16,SNR=21						
PETK				Sn	Sn	07 32 56.8	+5.4
	baz=183,slow=22,SNR=1.6						
PET	Petropavlovsk	5.42	13	*e*P	Pn	07 31 48.8	-2.2
PET				AMB	AMB	07 31 50.5	
	comp=N,10.0nm,0.5s						
PET				*e*S	Sn	07 32 49.5	-2.7
PET				A	A	07 33 02.5	
	comp=N,40nm,0.4s						
PET				A	A	07 33 02.5	
	comp=N,30nm,0.4s						
PET	Petropavlovsk	5.42	13	*e*PN	Pn	07 31 49.5	-1.5
PET				pmax	pmax		
	comp=Z,21nm,0.7s						
UGLR	Uglovaya	5.63	14	PN	Pn	07 31 52.7	-1.3
AVH	Avacha	5.67	13	PN	Pn	07 31 53.8	-0.7
KOK	Koryaka	5.68	13	*e*P	Pn	07 31 54.1	-0.6
KOK	Koryaka	5.68	13	PN	Pn	07 31 54.1	-0.6
NLC	Nalytchevo	5.69	17	PN	Pn	07 31 52.6	-2.1
KRX	Arik	5.75	13	PN	Pn	07 31 55.0	-0.7
SPN	Mys Shipunski	5.77	21	PN	Pn	07 31 53.9	-1.9
KZV	Kizimen	7.71	16	PN	Pn	07 32 22.1	-0.5
SHO	Shikotan	7.84	244	*e*P	Pn	07 32 20.8	-3.4
SHO				*e*S	Sn	07 33 44.6	-7.1
SHO	Shikotan	7.84	244	*e*PN	Pn	07 32 20.6	-3.6
TUMR	Tumrok	7.84	15	PN	Pn	07 32 23.3	-1.1
KMNR	Kamenistaya	8.31	14	PN	Pn	07 32 31.1	+0.3
NMR	Nemuro--Hokkai	8.78	244	*e*P	Pn	07 32 33.6	-3.6
NMR	Nemuro--Hokkai	8.78	244	*e*PN	Pn	07 32 33.4	-3.8
KBTR	Krutoberegovo	9.28	22	PN	Pn	07 32 40.4	-3.5
ERM	Erimo	11.11	244	⇓*e*PN	Pn	07 33 08.3	-0.8
KLR	Kul'dur	16.50	284	Pn	Pn	07 34 20.3	-1.0
	comp=Z,0.1nm,0.3s,baz=63,slow=11,SNR=3.0						
KLR	Kul'dur	16.50	284	⇑*i*P	Pn	07 34 22.6	+1.3
KLR				pmax	pmax		
	comp=Z,8.0nm,1.8s						
USRK	Ussuriysk Ar.	17.43	267	P	Pn	07 34 32.4	-0.6
	baz=84,slow=13,SNR=2.2						
BILL	Bilibino	20.91	10	*e*P	Pn	07 35 14.1	-0.4
BILL	Bilibino	20.91	10	*e*P	Pn	07 35 14.1	-0.4
BILL				*e*PPP	PPP	07 35 37.0	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.4s						
BILL				MLR	MLR		
	comp=Z,48nm,18.0s						
H11S1	WAKE ISLAND Hy	30.34	161	T	T	08 08 35.6	
	baz=347,slow=76,SNR=4.7						
H11S3	WAKE ISLAND Hy	30.35	161	T	T	08 08 38.3	
	baz=347,slow=76,SNR=6.2						
H11S2	WAKE ISLAND Hy	30.36	161	T	T	08 08 38.9	
	baz=347,slow=76,SNR=4.5						
ILAR	Eielson Array	34.27	39	P	P	07 37 15.8	+0.7
	comp=Z,0.3nm,0.6s,baz=255,slow=7.7,SNR=5.7						
WHN	Wuhan	36.46	257	P	P	07 37 32.7	-1.5
MKAR	Makanchi Array	48.55	298	P	P	07 39 13.6	+1.3
	comp=Z,0.3nm,0.5s,baz=65,slow=7.3,SNR=7.0						
YKA	Yellowknife Ar	48.68	38	P	P	07 39 14.0	+1.0
	comp=Z,0.7nm,0.8s,baz=296,slow=7.3,SNR=6.9						
KURK	Kurchatov	48.75	304	⇑*e*P	P	07 39 16.9	+3.2
KURK				pmax	pmax		
	comp=Z,3.0nm,1.5s						
BRVK	Borovoye	52.05	310	*e*P	P	07 39 40.1	+1.5
BRVK	Borovoye	52.05	310	⇑*e*P	P	07 39 40.1	+1.5
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.5s						
CMAR	Chiang Mai Arr	54.89	259	P	P	07 40 01.3	+1.4
	comp=Z,1.3nm,0.3s,baz=44,slow=6.6,SNR=5.2						
OBN	Obninsk	65.77	327	*e*P	P	07 41 14.2	+0.5
OBN	Obninsk	65.77	327	*e*P	P	07 41 14.2	+0.5
OBN				*e*		07 43 41.9	
OBN				*e*PPP	PPP	07 45 10.1	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WRA	Warramunga Arr	70.30	202	P	P	07 41 43.7	+1.2
	comp=Z,0.2nm,0.7s,baz=342,slow=9.3,SNR=2.4						
ASAR	Alice Springs	73.97	202	P	P	07 42 06.6	+2.1
	comp=Z,0.3nm,0.6s,baz=23,slow=7.3,SNR=2.9						
TXAR	Lajitas Array	74.94	63	P	P	07 42 12.0	+1.7
	comp=Z,0.6nm,0.6s,baz=299,slow=4.4,SNR=11						
CLL	Collm	76.47	337	*e*P	P	07 42 16.0	-2.5
	comp=Z,4.0nm,0.4s						
CLL	Collm	76.47	337	*e*P	P	07 42 16.0	-2.5
CLL				pmax	pmax		
	comp=Z,4.0nm,0.4s						

ANF ***05*** *07:32:13.8±0.2,33°.91N×116°.35W,h15^{km}±1^{km},ML2.6/28,Error ellipse: s-maj=1.2km s-min=1.2km az=162.0*
IASPEI ***05*** *07:32:14.0±0.8,33°.92N±0°.02×116°.35W±0°.02,h15^{km}±6^{km},Error ellipse: s-maj=2.6km s-min=2.5km az=134.1,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
SCEDC ***05*** *07:32:14.6,33°.93N×116°.35W,h6^{km}*
PAS ***05*** *07:32:14.6±1.3,33°.93N±0°.01×116°.35W±0°.02,h6^{km}±6^{km},ML2.7/171,Error ellipse: s-maj=3.0km s-min=1.5km az=103.0*
NEIC ***05*** *07:32:14.2±0.6,33°.920N±0°.009×116°.35W±0°.05,h12^{km}±5^{km},Error ellipse: s-maj=5.5km s-min=1.2km az=97.0*
ISC 05 07:32:14.7±0.8,33°.92N±0°.02×116°.35W±0°.02,h13^{km}±5^{km},n84,σ0^{s}93/119,Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EW2	E Wide Canyon	0.05	293		Pg	07 32 17.3	+0.1
BLAC	Blackrock camp	0.15	347		Pg	07 32 17.6	-0.9
BLAC					Sg	07 32 20.0	-1.1
DEVC	Devers	0.19	275		Pg	07 32 18.6	-0.3
DEVC					Sg	07 32 22.1	+0.1
BELC	Belle Mtn. Jos	0.30	74		Sg	07 32 24.8	-0.4
BELC	Belle Mtn. Jos	0.30	74	P	Pg	07 32 20.5	-0.5
	baz=256,SNR=370						
BELC				S	Sg	07 32 24.8	-0.4
	baz=256						
TPC	Twentynine Pal	0.31	53		Pg	07 32 20.4	-0.7
PFO	Pinyon Flats O	0.32	197		Pg	07 32 20.8	-0.5
PFO				Sg	Sg	07 32 25.3	-0.4
PFO	Pinyon Flats O	0.32	197		Pg	07 32 20.8	-0.5
PFO					Sg	07 32 25.2	-0.4
PFO	Pinyon Flats O	0.32	197	P	Pg	07 32 20.7	-0.5
	baz=17,SNR=105						
PFO				S	Sg	07 32 25.2	-0.5
	baz=17						
XPFO	Pion Flat	0.32	196		Pg	07 32 20.7	-0.6
XPFO	Pion Flat	0.32	196		Pg	07 32 20.7	-0.6
XPFO					Sg	07 32 25.2	-0.5
GVDA	Garner Valley	0.37	227		Pg	07 32 21.6	-0.5
GVDA					Sg	07 32 26.8	-0.3
CTCC	Cactus City	0.40	131		Pg	07 32 22.4	-0.2
DNR	Dunn Ranch,Anz	0.42	214		Sg	07 32 29.0	+0.2
SNDA	J Saunders Pla	0.43	211		Sg	07 32 28.9	-0.1
FRD	Ford Ranch, An	0.47	207		Sg	07 32 30.1	-0.3
BBSC	Beaumont Base	0.53	270		Pg	07 32 24.7	-0.3
BBRC	Big Bear Solar	0.58	306		Pg	07 32 25.5	-0.7
BBRC					Sg	07 32 33.6	-0.3
BBRC	Big Bear Solar	0.58	306	P	Pg	07 32 25.5	-0.7
	baz=125,SNR=23						
BBRC				S	Sg	07 32 33.7	-0.3
	baz=125						
HAY	Hayfield	0.59	111		Pg	07 32 26.6	+0.3
CFT	Crafton Hills	0.64	281		Pg	07 32 26.8	-0.4
BORC	Borrego Spring	0.65	185		Pg	07 32 26.9	-0.5
BACC	Bachelor Mtn.	0.65	242		Pg	07 32 26.7	-0.7
BACC					Sg	07 32 35.4	-0.6
PLM	Palomar	0.71	217		Pg	07 32 28.1	-0.4
PLM					Sg	07 32 37.6	-0.2
MURC	Murrieta	0.77	246		Pg	07 32 28.9	-0.8
MURC					Sg	07 32 39.6	-0.2
MURC	Murrieta	0.77	246	P	Pg	07 32 28.9	-0.8
	baz=65,SNR=24						
MURC				S	Sg	07 32 39.6	-0.2
	baz=65						
FRK	Frink	0.79	131		Pg	07 32 29.3	-0.6
BC3	Big Chuckawall	0.79	109		Pg	07 32 29.7	-0.3
BC3	Big Chuckawall	0.79	109	P	Pg	07 32 29.7	-0.3
	baz=290,SNR=57						
BC3				S	Sg	07 32 40.6	+0.2
	baz=290						
RSBC	Riverside Bore	0.81	274		Sg	07 32 40.2	-0.9
SME	Santa Rosa Min	0.84	264		Pg	07 32 29.9	-1.0
RVR	Riverside	0.86	275		Sg	07 32 41.2	-1.2
HEC	Hector,Ludlow	0.91	1	P	Pg	07 32 31.7	-0.5
	baz=181,SNR=12						
CSP	Cedar Springs	0.92	295		Pg	07 32 31.5	-0.9
CBKC	Canebrake	1.02	175		Pg	07 32 33.5	-0.9
HWB	Hans Werner Br	1.03	210		Pg	07 32 33.3	-1.2
IRM	Iron Mountain	1.03	76	P	Pg	07 32 33.6	-0.9
	baz=257,SNR=247						
IRM				S	Sg	07 32 47.8	-0.1
	baz=257						
MONP2	Monument Peak	1.03	183		Pg	07 32 33.8	-0.7
MONP2	Monument Peak	1.03	183	P	Pg	07 32 33.8	-0.7
	baz=3.5,SNR=9.3						
MONP2				S	Sg	07 32 47.4	-0.5
	baz=3.5						
GMRC	Granite Mounta	1.03	33		Pg	07 32 33.4	-1.2
GMRC	Granite Mounta	1.03	33	P	Pg	07 32 33.4	-1.2
	baz=214,SNR=52						
GMRC				S	Sg	07 32 46.9	-1.3
	baz=214						
DPP	Dos Picos Cty	1.04	209		Pg	07 32 33.5	-1.2
GORC	Green Oak Ranc	1.06	224		Pg	07 32 33.7	-1.4
DANC	Danby, Needles	1.07	48		Pg	07 32 34.4	-0.9
SWSC	Sam W. Stewart	1.07	155		Pg	07 32 33.5	-1.9
SWSC	Sam W. Stewart	1.07	155	P	Pg	07 32 33.5	-1.9
	baz=335,SNR=6.0						
SWSC				S	Sg	07 32 47.6	-1.8
	baz=335						
CRR	Carrizo Plain	1.08	163		Pg	07 32 34.0	-1.4
RRX	Edison Barstow	1.09	331	P	Pg	07 32 35.0	-0.8
	baz=150						
RRX				S	Sb	07 32 50.3	+0.6
	baz=150						
EML	El Monte Cty P	1.11	202		Pg	07 32 34.7	-1.3
BFSC	Mount Baldy Ra	1.13	287	P	Pg	07 32 35.6	-0.9
	baz=106,SNR=19						
BFSC				S	Sg	07 32 50.5	-0.7
	baz=106						
109C	Camp Elliot, M	1.21	212		Pg	07 32 36.5	-1.4
109C	Camp Elliot, M	1.21	212	P	Pg	07 32 36.3	-1.6
	baz=31						
109C				S	Sg	07 32 51.8	-1.8
	baz=31						
BAR	Barrett	1.27	192		Pn	07 32 37.7	-0.4
IKP	In-Ko-Pah, Jac	1.28	171	P	Pn	07 32 37.2	-1.2
	baz=351						
IKP				S	Sg	07 32 53.5	-2.5
	baz=351						
GSC	Goldstone, Bar	1.43	345		Pn	07 32 39.9	-0.6
GSC	Goldstone, Bar	1.43	345	P	Pn	07 32 40.0	-0.4
	baz=164,SNR=17						
GSC				Sb	Sb	07 32 60.0	+0.5
	baz=164						
MWC	Mount Wilson	1.45	283		Pn	07 32 40.8	0.0
BLYC	Blythe	1.53	96		Pb	07 32 43.1	+0.2
Y12C	Blythe	1.53	96		Pn	07 32 40.9	-0.8
Y12C	Blythe	1.53	96	Pn	Pn	07 32 40.5	-1.2
	baz=277						
Y12C				Pg	Pb	07 32 43.1	+0.3
	baz=277,SNR=38						
Y12C				Sg	Sg	07 33 03.9	0.0
	baz=277						
GLA	Glamis	1.54	124		Pb	07 32 43.2	+0.1
GLA	Glamis	1.54	124	Pg	Pb	07 32 43.6	+0.5
	baz=305,SNR=5.9						
GLA				Sg	Sg	07 33 04.1	-0.1
	baz=305						
PASC	Pasadena Art C	1.54	280		Pn	07 32 42.8	+0.8
PASC					Sn	07 33 02.0	+0.1
TUQ	Turquoise Moun	1.55	13	P	Pn	07 32 41.5	-0.7
	baz=193						
TUQ				Sb	Sb	07 33 03.9	+0.9
	baz=193						
NEE2	Needles Airpor	1.66	59	Pg	Pb	07 32 45.0	-0.2
	baz=240						
NEE2				Sb	Sb	07 33 07.1	+1.1
	baz=240						
EDW2	Edwards Air Fo	1.66	306	P	Pn	07 32 42.9	-0.7
	baz=125						
EDW2				Sb	Sn	07 33 06.4	+1.4
	baz=125						
DECC	Green Verdugo	1.68	282	Sb	Sn	07 33 06.8	+1.5
	baz=101						
CIS	Catalina Islan	1.80	254	Sb	Sn	07 33 09.7	+1.5
	baz=72						
LRMC	Laurel Mtn Rad	1.91	325	P	Pn	07 32 46.5	-0.5
	baz=144						
LRMC				Sb	Sb	07 33 14.7	+1.6
	baz=144						
SHOC	Shoshone, Teco	1.98	2	P	Pn	07 32 47.5	-0.4
	baz=182						
SHOC				Sb	Sg	07 33 16.9	-1.4
	baz=182						
QSM	Queen of Sheba	2.08	348		Pn	07 32 49.1	-0.3
BLG	Laguna Peak, P	2.27	276	Sb	Sb	07 33 24.2	+0.8
	baz=94						
MPMC	Manual Prospec	2.33	337	P	Pn	07 32 52.5	-0.4
	baz=156						
MPMC				Sb	Sg	07 33 27.8	-1.7
	baz=156						
W13A	Hualapai Mount	2.35	59	Pn	Pn	07 32 52.5	-0.7
ARVC	Arvin	2.38	301	Sb	Sb	07 33 28.2	+1.6
	baz=120						
113A	Mohawk Valley,	2.45	117	Pn	Pn	07 32 55.4	+1.1
ISA	Isabella, Lake	2.47	315		Pn	07 32 54.2	-0.5
ISA	Isabella, Lake	2.47	315	P	Pn	07 32 54.4	-0.3
	baz=134						
SHPR	Sheep Range	2.76	20	Pn	Pn	07 33 00.6	+1.8
Y14A	Wickenburg	2.78	89		Pn	07 32 58.4	-0.6
TPNV	Topopah Spring	3.02	2	Pn	Pn	07 33 02.5	0.0
TPNV					LR	07 33 48.2	
TPNV	Topopah Spring	3.02	2	P	Pn	07 33 02.8	+0.4
	baz=182						
TPNV				Sb	Sg	07 33 49.4	-2.4
	baz=182						
X16A	Lo Mia Camp, P	4.10	82	Pn	Pn	07 33 18.9	+1.7
U15A	North Rim	4.16	52	Pn	Pn	07 33 18.5	+0.4

IDC ***05*** *07:35:31.4±0.9,28°.76S×65°.72W,h0^{km},mb3.7/5,mb1 3.8/10,mb1mx3.7/34,mbtmp3.7/10,ML3.5/5,MS3.1/5,Ms1 3.1/5,ms1mx3.0/26,Error ellipse: s-maj=27.2km s-min=18.0km az=87.0*
SJA ***05*** *07:35:31.0±0.7,28°.71S×65°.86W,h15^{km}±3^{km},ML3.9,MW3.8*
NEIC ***05*** *07:35:34.9±0.8,28°.72S±0°.04×65°.75W±0°.10,h27^{km}±5^{km},Error ellipse: s-maj=13.3km s-min=2.0km az=113.0*
ISC 05 07:35:31.8±1.6,28°.76S±0°.04×65°.72W±0°.05,h0^{km}±11^{km},n41,σ1^{s}32/48,mb4.0/4,Santiago del Estero Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CYA	Choya	0.33	347	*e*P	Pg	07 35 37.8	-0.3
CYA				*e*S	Sg	07 35 41.6	-0.8
CYA				IAML		07 35 41.6	
	comp=Z,32µm,0.4s						
APLL	PUNTA DE LOS L	1.77	203	*i* P	Pn	07 36 03.4	-0.4
APLL				*e*S	Sn	07 36 27.7	+0.7
AHML	Horco Molle	2.00	10	*i* P	Pn	07 36 06.2	-0.7
AHML				*e*S	Sn	07 36 32.2	-0.5
AHML				IAML		07 36 36.7	
	comp=Z,1µm,0.4s						
VCA	Vinchina	2.18	270	*i* P	Pn	07 36 07.7	-1.8
VCA				*e*S	Sn	07 36 34.7	-2.6
AGUA	GUANDACOL	2.53	253	*i* P	Pn	07 36 12.6	-1.6
AGUA				*e*S	Sn	07 36 43.7	-2.1
AMOG	MOGNA	3.24	227	*i* P	Pn	07 36 23.4	-0.6
ACDV	Cuesta del Vie	3.28	244	*i* P	Pn	07 36 23.8	-0.8
ACDV				IAML		07 37 17.4	
	comp=Z,157nm,0.6s						
ACCO	Cerro Coronel	3.43	237	*i* P	Pn	07 36 26.5	-0.4
AROD	Rodeo	3.56	246	*i* P	Pn	07 36 28.4	-0.2
MRA	San Martin	3.64	180	*i* P	Pn	07 36 30.2	+0.6
ACAN	Cantantal	3.72	200	*i* P	Pn	07 36 31.5	+0.9
ZON	Zonda	3.77	222	*i* P	Pn	07 36 31.2	-0.1

ZON				IAML		07 37 40.5	
	comp=Z,191nm,0.4s						
RTCV	**Cerro Valdivia**	**3.93**	**218**	*i* P	**Pn**	**07 36 33.6**	**+0.1**
SLA	**San Lorenzo**	**4.03**	**3**	*i* P	**Pn**	**07 36 35.1**	**+0.1**
GO03	**Copiap**	**4.15**	**285**		**Pn**	**07 36 34.9**	**-1.6**
GO03	**Copiap**	**4.15**	**285**	*i* P	**Pn**	**07 36 34.9**	**-1.6**
RTLS	**Leoncito**	**4.33**	**225**	*i* P	**Pn**	**07 36 39.7**	**+0.6**
RTLS				IAML		07 37 58.8	
	comp=Z,150nm,0.4s						
GO04	**Tololo Observa**	**4.64**	**251**		**Pn**	**07 36 43.1**	**-0.3**
GO04	**Tololo Observa**	**4.64**	**251**	*i* P	**Pn**	**07 36 43.2**	**-0.3**
GO02	**Mina Guanaco**	**4.98**	**315**		**Pn**	**07 36 47.8**	**-0.3**
HJA	**Humahuaca**	**5.54**	**3**	*i* P	**Pn**	**07 36 56.6**	**+0.7**
PEL	**Peldehue**	**6.10**	**223**		**Pn**	**07 37 03.5**	**+0.2**
ROC1	**El Roble**	**6.19**	**226**		**Pn**	**07 37 03.6**	**-1.1**
LVC	**Limon Verde**	**6.77**	**334**	Pn	**Pn**	**07 37 11.6**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=150,slow=15,SNR=4.4						
LVC				Pg	**Pb**	**07 37 34.4**	**+3.8**
	comp=Z,1.1nm,0.3s,baz=181,slow=13,SNR=3.9						
LVC	**Limon Verde**	**6.77**	**334**		**Pn**	**07 37 11.1**	**-1.6**
CPUP	**Villa Florida**	**7.83**	**74**	Pn	**Pn**	**07 37 27.5**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=254,slow=12,SNR=12						
CPUP				Pg	**Pg**	**07 37 59.7**	**-2.2**
	comp=Z,2.4nm,0.3s,baz=248,slow=11,SNR=6.9						
CPUP				Lg	Lg	07 39 47.0	
	comp=Z,9.3nm,0.3s,baz=347,slow=20,SNR=7.9						
CPUP				LR	LR	07 40 34.8	
	comp=Z,73nm,20.8s,baz=250,slow=39						
CPUP	**Villa Florida**	**7.83**	**74**		**Pn**	**07 37 27.7**	**+0.6**
PLCA	**Paso Flores**	**12.58**	**197**	Pn	**Pn**	**07 38 32.9**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=33,slow=13,SNR=4.9						
PLCA				Pg		07 39 20.5	
	comp=Z,0.1nm,0.3s,baz=70,slow=6.9,SNR=4.1						
PLCA				Lg	Lg	07 42 05.2	
	comp=Z,0.3nm,0.3s,baz=131,slow=12,SNR=2.9						
PLCA	**Paso Flores**	**12.58**	**197**		**Pn**	**07 38 32.4**	**+0.3**
LPAZ	**La Paz**	**12.62**	**349**	Pn	**Pn**	**07 38 32.8**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=219,slow=6.9,SNR=4.0						
LPAZ				Sn	**Sn**	**07 40 58.1**	**+3.4**
	comp=Z,0.2nm,0.3s,baz=235,slow=7.9,SNR=3.5						
LPAZ				LR	LR	07 44 02.4	
	comp=Z,71nm,21.9s,baz=168,slow=40						
LPAZ	**La Paz**	**12.62**	**349**		**Pn**	**07 38 32.6**	**-0.5**
SIV	**San Ignacio**	**13.42**	**20**	Pn	**Pn**	**07 38 43.3**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=222,slow=12,SNR=5.6						
SIV				Lg	Lg	07 42 42.7	
	comp=Z,0.3nm,0.3s,baz=128,slow=20,SNR=2.5						
SIV				LR	LR	07 45 10.9	
	comp=Z,129nm,18.6s,baz=237,slow=43						
NNA	**Nana**	**19.66**	**326**	LR	LR	07 47 32.2	
	comp=Z,31nm,18.8s,baz=171,slow=37						
BDFB	**Brasilia**	**20.92**	**55**	P	**P**	**07 40 17.7**	**+1.5**
	comp=Z,2.4nm,0.7s,baz=235,slow=16,SNR=4.1						
BDFB				LR	LR	07 49 15.2	
	comp=Z,135nm,20.7s,baz=174,slow=39						
SNAA	**Sanae**	**54.50**	**160**	P	**P**	**07 45 00.9**	**-0.1**
	comp=Z,2.3nm,0.9s,baz=347,slow=14,SNR=3.9						
QSPA	**South Pole Qui**	**61.46**	**180**	P	**P**	**07 45 49.6**	**-0.4**
	comp=Z,1.3nm,0.9s,baz=195,slow=0.9,SNR=6.7						
QSPA	**South Pole Qui**	**61.46**	**180**	P	**P**	**07 45 49.3**	**-0.7**
TXAR	**Lajitas Array**	**68.21**	**325**	P	**P**	**07 46 34.5**	**+0.2**
	comp=Z,0.4nm,0.9s,baz=123,slow=3.3,SNR=3.2						
TORD	**Torodi Ar. Bea**	**77.28**	**67**	P	**P**	**07 47 26.4**	**-2.0**
	comp=Z,0.8nm,0.9s,baz=298,slow=6.4,SNR=3.7						
ZALV	**Zalesovo Beam**	**146.93**	**32**	PKPbc	**PKPdf**	**07 55 14.7**	**+0.8**
	comp=Z,3.0nm,0.5s,baz=293,slow=4.2,SNR=13						
MKAR	**Makanchi Array**	**149.26**	**45**	PKPbc	**PKPbc**	**07 55 20.7**	**-1.6**
	comp=Z,1.1nm,0.6s,baz=295,slow=3.1,SNR=13						

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*GCG **05** 08:00:14.2±0.3, 14°.62N×90°.47W, h183^{km}±8^{km}, MD3.8*
*MEX **05** 08:00:17.0±0.5, 14°.28N×90°.51W, h164^{km}±26^{km}, MD3.8*
ISC 05 08:00:20.3±1.6**, 14°.5N**±0°.1×**90°.7W**±0°.1**, h150**^{km}**, n7,**
σ1^s.46/12**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.38**	**144**	*e*P	**Pn**	**08 00 39.9**	**-1.5**
IXG				*e*S	**Sn**	**08 00 60.0**	**+2.7**
ERG	**Entre ros, C**	**0.88**	**268**	*i* P	**Pn**	**08 00 43.1**	**-1.0**
STG3	**Santiaguito 3,**	**0.90**	**285**	*e*P	**Pn**	**08 00 43.7**	**-0.8**
THIG		**1.60**	**286**	*i* P	**Pn**	**08 00 49.9**	**-1.0**
THIG				*i* S	**Sn**	**08 01 14.8**	**+0.3**
CCIG	**Comitan**	**2.29**	**322**	*e*P	**Pn**	**08 00 58.1**	**-0.9**
CCIG				*i* S	**Sn**	**08 01 30.2**	**+1.4**
PCIG		**2.75**	**297**	*i* P	**Pn**	**08 01 04.1**	**-0.4**
PCIG				*i* S	**Sn**	**08 01 39.9**	**+1.3**
TGIG		**3.29**	**314**	*i* P	**Pn**	**08 01 10.1**	**-1.4**
TGIG				*e*S	**Sn**	**08 01 52.1**	**+1.0**

IDC 05 08:15:46.5±3.1**, 6°.28S**×**128°.87E, h228**^{km}±44^{km}**, mb2.6**/1**,**
mb1 3.4/5**, mb1mx3.0**/39**, mbtmp3.9**/5**, Error ellipse:**
s-maj=69.1km s-min=19.8km az=85.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.88**	**24**	P	Pn	08 17 12.8	+0.1
	3.2nm,0.3s,baz=204,slow=20,SNR=3.0						
SIJI				S	S	08 18 13.9	-7.4
	4.8nm,0.3s,baz=90,slow=20,SNR=4.6						
FITZ	**Fitzroy Crossi**	**12.17**	**195**	P	Pn	08 18 33.2	+0.5
	0.6nm,0.3s,baz=15,slow=15,SNR=4.5						
FITZ				S	S	08 20 40.8	-6.7
	0.3nm,0.3s,baz=10,slow=14,SNR=1.9						
WRA	**Warramunga Arr**	**14.59**	**159**	P	Pn	08 19 00.7	-1.9
	0.6nm,0.3s,baz=341,slow=12,SNR=29						
WRA				S	S	08 21 38.3	-5.8
	0.4nm,0.3s,baz=243,slow=14,SNR=6.3						
ASAR	**Alice Springs**	**17.95**	**165**	P	P	08 19 40.6	+0.5
	0.7nm,0.3s,baz=342,slow=9.0,SNR=19						
ASAR				S	S	08 22 46.8	-7.4
	0.1nm,0.3s,baz=351,slow=24,SNR=7.0						
MKAR	**Makanchi Array**	**67.01**	**327**	P	P	08 26 14.9	-0.1
	0.1nm,0.4s,baz=115,slow=8.2,SNR=1.7						

IDC 05 08:24:59.4±1.1**, 19°.62N**×**121°.82E, h0**^{km}**, mb3.5**/6**,**
mb1 3.7/6**, mb1mx3.5**/50**, mbtmp3.5**/6**, Error ellipse:**
s-maj=74.5km s-min=21.7km az=67.0, Philippine
Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**30.81**	**340**	P	P	08 31 17.8	+0.8
	0.3nm,0.5s,baz=160,slow=12,SNR=2.0						
WRA	**Warramunga Arr**	**41.18**	**162**	P	P	08 32 45.2	-0.7
	0.2nm,0.5s,baz=343,slow=9.3,SNR=1.1						
MKAR	**Makanchi Array**	**42.10**	**319**	P	P	08 32 52.0	-1.2
	0.4nm,0.6s,baz=111,slow=7.9,SNR=1.7						
H11S3	**WAKE ISLAND Hy**	**42.33**	**84**	T	T	09 18 38.3	
	baz=279,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hy**	**42.34**	**84**	T	T	09 18 34.6	
	baz=279,slow=75,SNR=10						
H11N1	**WAKE ISLAND Hy**	**42.34**	**82**	T	T	09 18 33.3	
	baz=278,slow=75,SNR=18						
H11N2	**WAKE ISLAND Hy**	**42.34**	**82**	T	T	09 18 33.7	
	baz=278,slow=75,SNR=16						
H11S2	**WAKE ISLAND Hy**	**42.35**	**84**	T	T	09 18 33.6	
	baz=279,slow=75,SNR=9.3						
H11N3	**WAKE ISLAND Hy**	**42.36**	**82**	T	T	09 18 34.9	
	baz=278,slow=75,SNR=21						
ZALV	**Zalesovo Beam**	**44.42**	**329**	P	P	08 33 12.5	+0.6
	0.4nm,0.4s,baz=125,slow=7.2,SNR=2.4						
ASAR	**Alice Springs**	**44.60**	**164**	P	P	08 33 14.3	+0.7
	0.3nm,0.5s,baz=346,slow=7.6,SNR=3.0						
YKA	**Yellowknife Ar**	**86.93**	**23**	P	P	08 37 45.5	-0.5
	0.4nm,0.7s,baz=310,slow=4.4,SNR=6.6						

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*SOME **05** 08:29:10.9, 41°.73N×79°.67E, h5^{km}*
*NNC **05** 08:29:11.6±1.2, 41°.74N×79°.67E, h0^{km}, mb3.6, mpv3.4,*
Error ellipse: s-maj=7.7km s-min=5.0km az=149.0
*KRNET **05** 08:29:12.2±0.1, 41°.69N×79°.63E, h18^{km}, mb2.6*
ISC 05 08:29:12.1±1.9**, 41°.76N**±0°.07×**79°.75E**±0°.07**, h10**^{km}**, n42,**
σ1^s.51/68**, 6C-6D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**1.23**	**306**	⇑*i*P	**Pb**	**08 29 34.9**	**-0.8**
	baz=12						
PRZ				⇑*i*S	**Sg**	**08 29 51.7**	**-0.2**
	baz=12						
SHLS	**Shalkode**	**1.41**	**352**	*e*P	**Pg**	**08 29 37.8**	**-1.5**
	93nm,0.2s						
SHLS				*e*S	**Sg**	**08 29 57.5**	**0.0**
	158nm,0.4s						
SHLS	**Shalkode**	**1.41**	**352**	P	**Pg**	**08 29 37.8**	**-1.5**
	93nm,0.2s						
SHLS				S	**Sg**	**08 29 57.9**	**+0.3**
	163nm,0.2s						
UZB	**Uzynbulak**	**1.48**	**339**	*e*P	**Pb**	**08 29 39.0**	**-0.9**
	37nm,0.2s						
UZB				*e*S	**Sg**	**08 29 59.6**	**-0.3**
	119nm,0.5s						
UZB	**Uzynbulak**	**1.48**	**339**	P	**Pb**	**08 29 39.0**	**-0.9**
	37nm,0.2s						
UZB				S	**Sg**	**08 29 59.8**	**-0.1**
	119nm,0.5s						
ZHN	**Zhinishke**	**1.71**	**326**	*e*P	**Pb**	**08 29 43.2**	**-0.5**
	10nm,0.1s						
ZHN				*e*S	**Sg**	**08 30 06.4**	**-0.7**
	38nm,0.3s						
ZHN	**Zhinishke**	**1.71**	**326**	P	**Pb**	**08 29 43.2**	**-0.5**
	10nm,0.1s						
ZHN				S	**Sg**	**08 30 06.9**	**-0.2**
	38nm,0.3s						
ANVS	**Anan'yevo**	**1.85**	**304**	⇓*i*P	**Pb**	**08 29 45.9**	**-0.3**
	baz=8.0						
ANVS				⇓*i*S	**Sg**	**08 30 10.7**	**-0.9**
	baz=8.0						
KDJ	**Kajisay**	**1.95**	**282**	⇑*i*P	**Pb**	**08 29 46.7**	**-1.2**
	baz=84						
KDJ				⇑*i*S	**Sb**	**08 30 12.3**	**0.0**
	baz=84						
KURS	**Kuram**	**2.08**	**327**	Pg	**Pb**	**08 29 49.6**	**-0.4**
KURS				Lg	Lg	08 30 17.7	
	50nm,0.4s						
TNSS	**Tian-Shan**	**2.43**	**303**	*e*P	**Pb**	**08 29 56.2**	**-0.1**
	4.0nm,0.1s						
TNSS				*e*S	**Sg**	**08 30 28.7**	**-1.7**
	28nm,0.5s						
TNSS	**Tian-Shan**	**2.43**	**303**	Pg	**Pb**	**08 29 56.2**	**-0.1**
	4.0nm,0.1s						
TNSS				Lg	Lg	08 30 28.7	
	28nm,0.5s						
MDOK	**Medeo**	**2.44**	**306**	*e*P	**Pb**	**08 29 55.0**	**-1.2**
	5.5nm,0.3s						
MDOK				*e*S	**Sb**	**08 30 27.1**	**+0.8**
	33nm,0.5s						
MDOK	**Medeo**	**2.44**	**306**	Pg	**Pb**	**08 29 55.0**	**-1.2**
	5.5nm,0.3s						
MDOK				Lg	Lg	08 30 27.1	
	33nm,0.5s						
KOTS	**Kotyrbulak**	**2.44**	**308**	*e*P	**Pb**	**08 29 56.3**	**+0.1**
	29nm,0.2s						
KOTS				*e*S	**Sg**	**08 30 28.9**	**-1.7**
	85nm,0.4s						
KOTS	**Kotyrbulak**	**2.44**	**308**	Pg	**Pb**	**08 29 56.3**	**+0.1**
	29nm,0.2s						
KOTS				Lg	Lg	08 30 28.9	
	85nm,0.4s						
DJR	**Jarkent**	**2.57**	**1**	*e*P	**Pb**	**08 29 57.4**	**-1.0**
	0.6nm,0.3s						
DJR				*e*S	**Sb**	**08 30 30.8**	**+0.8**
	16nm,0.3s						
DJR	**Jarkent**	**2.57**	**1**	Pg	**Pb**	**08 29 57.4**	**-1.0**
	0.6nm,0.3s						
DJR				Lg	Lg	08 30 30.8	
	16nm,0.3s						
IZV	**Izvestkoviy**	**2.65**	**300**	*e*P	**Pb**	**08 29 59.3**	**-0.5**
	2.2nm,0.2s						
IZV				*e*S	**Sb**	**08 30 34.0**	**+1.6**
	58nm,0.3s						
IZV	**Izvestkoviy**	**2.65**	**300**	Pg	**Pb**	**08 29 59.3**	**-0.5**
	2.2nm,0.2s						
IZV				Lg	Lg	08 30 34.0	
	58nm,0.3s						
ULHL	**Ulahol**	**2.66**	**282**	⇓*i*P	**Pb**	**08 29 58.0**	**-1.9**
	baz=84						
ULHL				⇓*i*S	**Sn**	**08 30 29.8**	**+2.2**
	baz=84						
MTBS	**Maitube**	**2.81**	**300**	*e*P	**Pb**	**08 30 02.0**	**-0.5**
	2.4nm,0.1s						
MTBS				*e*S	**Sb**	**08 30 39.1**	**+2.1**
	18nm,0.4s						
MTBS	**Maitube**	**2.81**	**300**	Pg	**Pb**	**08 30 02.0**	**-0.5**
	2.4nm,0.1s						
MTBS				Lg	Lg	08 30 39.1	
	18nm,0.4s						
ARXS	**Arharly**	**2.83**	**331**	*e*P	**Pb**	**08 30 02.2**	**-0.5**
	5.1nm,0.5s						
ARXS				*e*S	**Sb**	**08 30 39.0**	**+1.5**
	17nm,0.6s						
ARXS	**Arharly**	**2.83**	**331**	Pg	**Pb**	**08 30 02.2**	**-0.5**
	5.1nm,0.5s						
ARXS				Lg	Lg	08 30 39.0	
	17nm,0.6s						
NRN	**Naryn**	**2.83**	**265**	⇓*i*P	**Pn**	**08 29 59.2**	**+1.5**
	baz=66						
NRN				⇓*i*S	**Sn**	**08 30 34.3**	**+2.3**
	baz=66						
CHKK	**Chushkaly**	**2.91**	**317**	*e*P	**Pb**	**08 30 04.3**	**+0.1**
	4.3nm,0.3s						
CHKK				*e*S	**Sg**	**08 30 42.9**	**-2.9**
	41nm,0.2s						
CHKK	**Chushkaly**	**2.91**	**317**	Pg	**Pb**	**08 30 04.3**	**+0.1**
	4.3nm,0.3s						
CHKK				Lg	Lg	08 30 42.9	
	41nm,0.2s						
BOOM	**Boomskoye usch**	**2.92**	**286**	⇑*i*P	**Pb**	**08 30 01.0**	**-3.5**
	baz=88						
BOOM				⇑*i*S	**Sn**	**08 30 36.6**	**+2.5**
	baz=88						
KTBS	**Karatobe**	**2.98**	**312**	*e*P	**Pb**	**08 30 05.8**	**+0.4**
	2.8nm,0.3s						
KTBS				*e*S	**Sg**	**08 30 45.3**	**-2.6**
	33nm,0.3s						
KTBS	**Karatobe**	**2.98**	**312**	Pg	**Pb**	**08 30 05.8**	**+0.4**
	2.8nm,0.3s						
KTBS				Lg	Lg	08 30 45.3	
	33nm,0.3s						
KST	**Kastek**	**3.08**	**296**	*e*P	**Pb**	**08 30 07.3**	**+0.2**
	2.9nm,0.3s						
KST				*e*S	**Sg**	**08 30 47.9**	**-3.2**
	24nm,0.7s						
KST	**Kastek**	**3.08**	**296**	Pg	**Pb**	**08 30 07.3**	**+0.2**
	2.9nm,0.3s						
KST				Lg	Lg	08 30 47.9	
	24nm,0.7s						
KUU	**Kurty**	**3.29**	**312**	*e*P	**Pb**	**08 30 10.0**	**-0.6**
	3.5nm,0.5s						
KUU				*e*S	**Sb**	**08 30 52.7**	**+2.0**
	15nm,0.5s						
KUU	**Kurty**	**3.29**	**312**	Pg	**Pb**	**08 30 10.0**	**-0.6**
	3.5nm,0.5s						
KUU				Lg	Lg	08 30 52.7	
	15nm,0.5s						
DGS	**Degeres**	**3.29**	**298**	*e*P	**Pb**	**08 30 09.7**	**-0.9**
	1.2nm,0.2s						
DGS				*e*S	**Sb**	**08 30 51.9**	**+1.1**
	14nm,0.5s						
DGS	**Degeres**	**3.29**	**298**	Pg	**Pb**	**08 30 09.7**	**-0.9**
	1.2nm,0.2s						
DGS				Lg	Lg	08 30 51.9	
	14nm,0.5s						
KAPS	**Kapalarasan**	**3.53**	**356**	*e*P	**Pg**	**08 30 17.4**	**-2.4**
	4.3nm,0.5s						
KAPS				*e*S	**Sg**	**08 31 05.3**	**-0.3**
	14nm,0.5s						
KAPS	**Kapalarasan**	**3.53**	**356**	Pg	**Pg**	**08 30 17.4**	**-2.4**
	4.3nm,0.5s						
KAPS				Lg	Lg	08 31 05.3	
	14nm,0.5s						
SGDS	**Sogindy**	**4.14**	**296**	Pg	**Pb**	**08 30 26.1**	**+1.0**
	1.9nm,0.5s						
SGDS				Lg	Lg	08 31 20.1	
	4.7nm,0.6s						
MRKS	**Merke**	**4.94**	**284**	*e*P	**Pb**	**08 30 41.2**	**+2.4**
	1.2nm,0.4s						
MRKS				*e*S	**Sg**	**08 31 45.9**	**-4.8**
	2.4nm,0.3s						
MRKS	**Merke**	**4.94**	**284**	Pg	**Pb**	**08 30 41.2**	**+2.4**
	1.2nm,0.4s						
MRKS				Lg	Lg	08 31 45.9	
	2.4nm,0.3s						

IDC 05 08:30:14.8±4.9**, 2°.97N**×**128°.59E, h90**^{km}±56^{km}**, mb3.3**/4**,**
mb1 3.5/5**, mb1mx3.1**/47**, mbtmp3.7**/5**, ML3.8**/1**, Error**
ellipse: s-maj=130.5km s-min=22.9km az=67.0,
Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.66**	**145**	P	Pn	08 31 23.1	+0.3
	4.5nm,0.3s,baz=322,slow=18,SNR=19						
SIJI				S	Sn	08 32 16.1	+0.3
	3.8nm,0.3s,baz=225,slow=21,SNR=9.1						
WRA	**Warramunga Arr**	**23.46**	**166**	P	P	08 35 16.8	+0.3
	1.1nm,0.3s,baz=346,slow=10,SNR=11						
STKA	**Stephens Creek**	**36.79**	**161**	P	P	08 37 14.0	0.0
	0.6nm,0.4s,baz=334,slow=7.9,SNR=6.2						
H11N1	**WAKE ISLAND Hy**	**40.92**	**63**	T	T	09 21 51.6	
	baz=250						
H11N2	**WAKE ISLAND Hy**	**40.94**	**63**	T	T	09 21 52.3	
	baz=250						
H11N3	**WAKE ISLAND Hy**	**40.94**	**63**	T	T	09 21 58.1	
	baz=250						
MKAR	**Makanchi Array**	**59.24**	**325**	P	P	08 40 07.5	+0.7
	0.3nm,0.6s,baz=126,slow=8.2,SNR=3.9						
KURBB	**Kurchatov Arra**	**63.38**	**327**	P	P	08 40 33.4	-1.2
	0.2nm,0.3s,baz=127,slow=6.3,SNR=2.8						

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*ATH **05** 08:59:59.6, 38°.06N×20°.23E, h15^{km}±4^{km}, ML2.8/5, Error*
ellipse: s-maj=5.4km s-min=1.6km az=58.0
*THE **05** 09:00:00.2, 38°.08N×20°.26E, h6^{km}±8^{km}, ML2.6/4, Error*
ellipse: s-maj=8.8km s-min=0.6km az=74.0
ISC 05 08:59:57.4±2.3**, 38°.05N**±0°.06×**20°.14E**±0°.10**, h21**^{km}±2^{km}**,**
n19, σ0^s.82/32**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.23**	**46**	P	**Pb**	**09 00 03.7**	**+0.4**
KEF3				S	**Sb**	**09 00 06.8**	**-0.6**
LXRA	**Lixouri, Kepha**	**0.28**	**56**	P	**Pb**	**09 00 04.5**	**+0.7**
LXRA				S	**Sb**	**09 00 08.2**	**0.0**
LXRA				AML	AML	09 00 08.3	
	comp=N,14420μm,0.6s						
LXRA				AML	AML	09 00 08.6	
	comp=E,5641μm,0.2s						
ARGA	**Argostoli. Kep**	**0.29**	**64**	P	**Pb**	**09 00 04.6**	**+0.6**
ARGA				S	**Sb**	**09 00 08.4**	**-0.1**
ARGA				AML	AML	09 00 08.8	
	comp=N,23744μm,0.3s						
ARGA				AML	AML	09 00 09.3	
	comp=E,8388μm,0.2s						
KEF2	**Argostoli. Kep**	**0.30**	**66**	P	**Pb**	**09 00 04.6**	**+0.5**
KEF2				S	**Sb**	**09 00 08.3**	**-0.4**
KEF4	**Livadi, Kephal**	**0.31**	**46**	P	**Pb**	**09 00 05.0**	**+0.8**
KEF4				S	**Sb**	**09 00 09.1**	**+0.2**
KEF1	**Kardakata, Kep**	**0.35**	**48**	P	**Pb**	**09 00 05.6**	**+0.8**
KEF1				S	**Sb**	**09 00 10.0**	**+0.2**
VLS	**Valsamata**	**0.38**	**69**	P	**Pb**	**09 00 05.7**	**+0.4**
VLS				S	**Sb**	**09 00 09.8**	**-0.8**
	comp=E,2μm,0.1s						
VLS	**Valsamata**	**0.38**	**69**	P	**Pb**	**09 00 05.7**	**+0.4**
VLS				S	**Sb**	**09 00 10.5**	**-0.2**
VLS				AML	AML	09 00 11.3	
	comp=E,4517μm,0.1s						
VLS				AML	AML	09 00 11.4	
	comp=N,4422μm,0.2s						
VLMS	**Volimes, Zakyn**	**0.44**	**112**	P	**Pn**	**09 00 07.6**	**-1.1**
VLMS				S	**Sb**	**09 00 13.7**	**+1.1**
VLMS				AML	AML	09 00 15.3	
	comp=N,5411μm,0.2s						
VLMS				AML	AML	09 00 17.0	
	comp=E,3222μm,0.2s						
KONA	**Konidatara, Ke**	**0.51**	**42**	P	**Pn**	**09 00 08.5**	**-0.9**
KONA				S	**Sn**	**09 00 15.5**	**-2.1**
KONA				AML	AML	09 00 19.1	
	comp=E,2847μm,0.7s						
KONA				AML	AML	09 00 19.7	
	comp=N,2313μm,0.5s						
KFL	**Anninata**	**0.51**	**83**	P	**Pb**	**09 00 08.0**	**+0.2**
KFL				S	**Sb**	**09 00 14.5**	**-0.3**
	comp=N,1μm,0.4s						
KFL	**Anninata**	**0.51**	**83**	P	**Pb**	**09 00 08.2**	**+0.4**
FSK	**Fiskardo**	**0.53**	**38**	P	**Pn**	**09 00 08.8**	**-1.0**
FSK				S	**Sb**	**09 00 15.0**	**-0.3**
	comp=N,1μm,0.4s						
LKD2	**Lefkada island**	**0.84**	**28**	P	**Pn**	**09 00 14.7**	**+0.5**
LKD2				S	**Sn**	**09 00 26.3**	**+0.3**
	comp=N,395nm,0.6s						
PDO	**Prodromos**	**0.99**	**56**	P	**Pn**	**09 00 16.8**	**+0.7**
PVO	**Paravola**	**1.23**	**62**	P	**Pb**	**09 00 21.2**	**+1.3**
DRO	**Drossia**	**1.24**	**94**	P	**Pb**	**09 00 21.7**	**+1.5**
TRIZ	**Trizonia**	**1.55**	**78**	P	**Pb**	**09 00 26.0**	**+0.5**
KLV	**Kalavryta, Ach**	**1.58**	**89**	P	**Pb**	**09 00 26.7**	**+0.7**

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*IDC **05** 09:04:31.5±0.4, 29°.19S×178°.31W, h177^{km}±5^{km}, mb3.3/3,*
mb1 3.7/5, mb1mx3.5/20, mbtmp4.1/5, Error ellipse:
s-maj=30.2km s-min=18.4km az=133.0
ISC 05 09:04:32.5±0.8**, 29°.4S**±0°.1×**178°.2W**±0°.2**, h200**^{km}**, n12,**
σ3^s.08/16**, mb3.4**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.27**	**52**	P	**Pn**	**09 04 56.9**	**-2.0**
	455nm,0.3s,baz=99,slow=7.5,SNR=35						
RAO				S	**Sn**	**09 05 14.6**	**-4.7**
	695nm,0.3s,baz=266,slow=24,SNR=17						
URZ	**Urewera**	**9.65**	**203**	P	**Pn**	**09 06 48.1**	**+1.0**
	1.9nm,0.3s,baz=108,slow=20,SNR=2.0						
URZ				S	**Sn**	**09 08 37.4**	**+2.5**
	4.3nm,0.3s,baz=56,slow=22,SNR=7.0						
RPZ	**Rata Peaks**	**16.66**	**208**	P	**P**	**09 08 14.2**	**+0.6**
	0.2nm,0.3s,baz=15,slow=19,SNR=1.9						
RPZ				S	**S**	**09 11 09.2**	**-8.3**
	0.2nm,0.3s,baz=191,slow=18,SNR=4.5						
ASAR	**Alice Springs**	**43.03**	**266**	P	**P**	**09 12 13.2**	**+0.6**
	0.6nm,0.4s,baz=102,slow=6.9,SNR=19						
ASAR				PcP	**PcP**	**09 13 59.6**	**+0.5**
	0.3nm,0.5s,baz=104,slow=4.0,SNR=4.9						
WRA	**Warramunga Arr**	**43.93**	**271**	P	**P**	**09 12 19.9**	**+0.1**
	0.5nm,0.4s,baz=111,slow=7.8,SNR=14						
WRA				PcP	**PcP**	**09 14 02.7**	**+0.5**
	0.8nm,0.9s,baz=124,slow=2.9,SNR=3.1						
NVAR	**Mina Array Bea**	**87.62**	**43**	P	**P**	**09 16 59.2**	**+0.9**
	0.4nm,0.6s,baz=223,slow=8.6,SNR=4.1						
MKAR	**Makanchi Array**	**117.03**	**310**	PKP	**PKiKP**	**09 22 53.9**	**+0.6**
	0.2nm,0.5s,baz=91,slow=1.3,SNR=4.6						
FINES	**FINESS Array B**	**144.18**	**340**	PKhKP	PKPpre	09 23 41.8	
	0.8nm,0.5s,baz=31,slow=4.8,SNR=6.4						
NOA	**NORSAR Array B**	**147.77**	**351**	PKPbc	**PKPbc**	**09 23 52.5**	**-0.5**
	0.7nm,0.6s,baz=14,slow=4.5,SNR=3.1						
AKASG	**Malin Array Be**	**150.43**	**324**	PKPbc	**PKiKP**	**09 24 00.8**	**+0.3**
	2.0nm,0.6s,baz=46,slow=3.2,SNR=8.7						
BRTR	**Keskin Array B**	**152.00**	**300**	PKPbc	**PKiKP**	**09 24 05.0**	**+0.7**
	0.5nm,0.7s,baz=62,slow=3.7,SNR=3.4						
TORD	**Torodi Ar. Bea**	**163.81**	**180**	PKPab	**PKPab**	**09 25 09.7**	**+4.3**
	0.3nm,0.5s,baz=184,slow=5.8,SNR=2.7						

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*ANF **05** 09:17:00.8±0.1, 33°.91N×116°.35W, h16^{km}±1^{km}, ML3.0/35,*
Error ellipse: s-maj=1.2km s-min=1.1km az=107.0
*SCEDC **05** 09:17:01.8, 33°.93N×116°.35W, h7^{km}*
*PAS **05** 09:17:01.8±1.2, 33°.930N±0°.007×116°.347W±0°.010,*
h7^{km}±3^{km}, ML3.1/203, Error ellipse: s-maj=1.3km
s-min=0.9km az=127.0
ISC 05 09:17:02.0±0.8**, 33°.92N**±0°.01×**116°.35W**±0°.01**, h14**^{km}±5^{km}**,**
n132, σ1^s.12/201**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EW2	**E Wide Canyon**	**0.05**	**294**		**Pg**	**09 17 04.5**	**-0.2**
DEVC	**Devers**	**0.19**	**275**		**Pg**	**09 17 05.8**	**-0.5**
DEVC					**Sg**	**09 17 09.1**	**-0.3**
BELC	**Belle Mtn. Jos**	**0.30**	**75**		**Pg**	**09 17 07.6**	**-0.8**
BELC					**Sg**	**09 17 12.0**	**-0.8**
BELC	**Belle Mtn. Jos**	**0.30**	**75**	P	**Pg**	**09 17 07.6**	**-0.8**
	baz=256,SNR=886						
BELC				S	**Sg**	**09 17 11.9**	**-0.9**
	baz=256						
TPC	**Twentynine Pal**	**0.31**	**54**		**Pg**	**09 17 07.5**	**-1.0**
PFO	**Pinyon Flats O**	**0.32**	**196**		**Pg**	**09 17 07.9**	**-0.7**
PFO	**Pinyon Flats O**	**0.32**	**196**	P	**Pg**	**09 17 07.9**	**-0.7**
	baz=16,SNR=289						
PFO				S	**Sg**	**09 17 12.4**	**-0.7**
	baz=16						
XPFO	**Pion Flat**	**0.32**	**196**		**Pg**	**09 17 07.9**	**-0.7**
XPFO				Sg	**Sg**	**09 17 12.4**	**-0.8**
XPFO	**Pion Flat**	**0.32**	**196**		**Pg**	**09 17 07.9**	**-0.7**
XPFO					**Sg**	**09 17 12.3**	**-0.8**
GVDA	**Garner Valley**	**0.37**	**227**		**Pg**	**09 17 08.8**	**-0.7**

GVDA					Sg	09 17 14.0	-0.6
CTCC	**Cactus City**	0.40	131		Pg	09 17 09.6	-0.5
DNR	**Dunn Ranch,Anz**	0.42	213		Pg	09 17 10.0	-0.5
DNR					Sg	09 17 16.1	-0.1
SNDA	**J Saunders Pla**	0.43	211		Pg	09 17 10.1	-0.5
SNDA					Sg	09 17 16.0	-0.4
FRD	**Ford Ranch, An**	0.47	206		Pg	09 17 10.8	-0.5
FRD					Sg	09 17 17.4	-0.4
FRD	**Ford Ranch, An**	0.47	206		Pg	09 17 10.8	-0.5
FRD					Sg	09 17 17.3	-0.4
CRY	**Cary Ranch**	0.48	222		Pg	09 17 10.9	-0.5
CRY					Sg	09 17 17.8	-0.2
BZNA	**Buzz No.'s Pla**	0.50	212		Pg	09 17 11.5	-0.5
BBSC	**Beaumont Base**	0.52	270		Pg	09 17 11.9	-0.4
BBRC	**Big Bear Solar**	0.58	306		Pg	09 17 12.7	-0.9
BBRC					Sg	09 17 20.7	-0.6
BBRC	**Big Bear Solar**	0.58	306	P	Pg	09 17 12.6	-0.9
	baz=125,SNR=62						
BBRC				S	Sg	09 17 20.8	-0.5
	baz=125						
HAY	**Hayfield**	0.59	111		Pg	09 17 13.7	+0.1
BATC	**Bat Cave Butte**	0.63	137		Pg	09 17 13.9	-0.4
CFT	**Crafton Hills**	0.64	281		Pg	09 17 13.9	-0.6
SVD	**Seven Oaks Dam**	0.65	287		Pg	09 17 13.8	-0.9
SVD					Sg	09 17 22.4	-0.8
BACC	**Bachelor Mtn.**	0.65	242		Pg	09 17 13.9	-0.8
BACC					Sg	09 17 22.7	-0.6
BORC	**Borrego Spring**	0.65	185		Pg	09 17 14.1	-0.6
PLM	**Palomar**	0.71	217		Pg	09 17 15.2	-0.6
PLM					Sg	09 17 24.7	-0.4
SALN	**Salton City**	0.71	154		Pg	09 17 15.6	-0.2
MURC	**Murrieta**	0.77	246		Pg	09 17 16.1	-0.9
MURC					Sg	09 17 26.8	-0.4
MURC	**Murrieta**	0.77	246	P	Pg	09 17 16.0	-0.9
	baz=65,SNR=62						
MURC				S	Sg	09 17 26.7	-0.4
	baz=65						
FRK	**Frink**	0.79	131		Pg	09 17 16.5	-0.8
BC3	**Big Chuckawall**	0.79	109		Pg	09 17 16.9	-0.5
BC3					Sg	09 17 27.8	-0.1
BC3	**Big Chuckawall**	0.79	109	P	Pg	09 17 16.9	-0.5
	baz=291,SNR=162						
BC3				S	Sg	09 17 27.9	0.0
	baz=291						
CFSC	**Central Fire S**	0.80	284		Pg	09 17 16.7	-0.7
CFSC					Sg	09 17 27.6	-0.3
RSBC	**Riverside Bore**	0.81	274		Pg	09 17 16.6	-1.1
RSBC					Sg	09 17 27.0	-1.5
RSBC	**Riverside Bore**	0.81	274		Sg	09 17 27.2	-1.3
SME	**Santa Rosa Min**	0.84	264		Pg	09 17 17.1	-1.2
SME					Sg	09 17 28.3	-1.1
RVR	**Riverside**	0.85	275		Pg	09 17 17.3	-1.2
RVR					Sg	09 17 28.4	-1.4
HEC	**Hector,Ludlow**	0.91	1		Pg	09 17 18.3	-1.2
HEC	**Hector,Ludlow**	0.91	1	P	Pg	09 17 18.4	-1.2
	baz=181,SNR=56						
HEC				S	Sb	09 17 31.8	+0.3
	baz=181						
CSP	**Cedar Springs**	0.92	295		Pg	09 17 18.7	-1.1
CRNC	**Corona**	1.01	268		Sg	09 17 33.6	-0.9
MLSC	**Mira Loma**	1.01	275		Pg	09 17 20.4	-1.1
MLSC					Sg	09 17 33.3	-1.4
CBKC	**Canebrake**	1.02	175		Pg	09 17 20.6	-1.1
HWB	**Hans Werner Br**	1.03	210		Pg	09 17 20.4	-1.4
HWB					Sg	09 17 34.1	-1.1
MONP2	**Monument Peak**	1.03	183		Pg	09 17 20.9	-0.9
MONP2					Sg	09 17 34.6	-0.7
MONP2	**Monument Peak**	1.03	183	P	Pg	09 17 20.9	-0.9
	baz=3.5,SNR=26						
MONP2				S	Sg	09 17 34.5	-0.8
	baz=3.5						
IRM	**Iron Mountain**	1.03	76		Pg	09 17 20.7	-1.2
IRM	**Iron Mountain**	1.03	76	P	Pg	09 17 20.7	-1.2
	baz=258,SNR=715						
IRM				S	Sg	09 17 34.9	-0.4
	baz=258						
GMRC	**Granite Mounta**	1.03	33		Pg	09 17 20.6	-1.4
GMRC					Sg	09 17 34.1	-1.5
GMRC	**Granite Mounta**	1.03	33	P	Pg	09 17 20.6	-1.4
	baz=214,SNR=125						
GMRC				S	Sg	09 17 34.0	-1.5
	baz=214						
DPP	**Dos Picos Cty**	1.04	208		Pg	09 17 20.7	-1.4
DPP					Sg	09 17 34.4	-1.4
GORC	**Green Oak Ranc**	1.06	224		Pg	09 17 20.9	-1.5
GORC					Sg	09 17 34.8	-1.5
SWSC	**Sam W. Stewart**	1.08	154		Pg	09 17 20.7	-2.1
SWSC	**Sam W. Stewart**	1.08	154	P	Pg	09 17 20.7	-2.1
	baz=335,SNR=9.2						
DANC	**Danby, Needles**	1.08	48		Pg	09 17 21.6	-1.1
CRR	**Carrizo Plain**	1.08	163		Pg	09 17 21.1	-1.7
RRX	**Edison Barstow**	1.09	331		Pg	09 17 22.1	-1.0
RRX	**Edison Barstow**	1.09	331	P	Pg	09 17 22.0	-1.0
	baz=150,SNR=13						
RRX				S	Sb	09 17 37.3	+0.6
	baz=150						
EML	**El Monte Cty P**	1.11	202		Pg	09 17 21.8	-1.5
EML					Sg	09 17 36.6	-1.1
CHNC	**Chino**	1.11	274		Pg	09 17 22.0	-1.3
CHNC					Sg	09 17 36.8	-1.0
BFSC	**Mount Baldy Ra**	1.13	287		Pg	09 17 22.3	-1.5
BFSC					Sg	09 17 37.8	-0.9
BFSC	**Mount Baldy Ra**	1.13	287	P	Pg	09 17 22.4	-1.5
	baz=106,SNR=45						
BFSC				S	Sg	09 17 37.7	-0.9
	baz=106						
109C	**Camp Elliot, M**	1.21	212		Pg	09 17 23.6	-1.6
109C	**Camp Elliot, M**	1.21	212	P	Pg	09 17 23.4	-1.8
	baz=31,SNR=13						
109C				S	Sg	09 17 39.0	-1.9
	baz=31						
CPE	**Camp Elliot**	1.21	212		Pg	09 17 23.4	-1.8
CPE					Sg	09 17 39.0	-1.9
PSRC	**Puddingstone R**	1.22	278		Pg	09 17 24.1	-1.4
PSRC					Sg	09 17 40.3	-1.2
DSCC	**Desert Studies**	1.24	9		Pg	09 17 24.0	-1.8
DSCC					Sg	09 17 41.2	-0.8
BAR	**Barrett**	1.27	192		Pn	09 17 24.7	-0.5
BAR	**Barrett**	1.27	192		Sg	09 17 41.3	-1.6
SDRC	**San Diego Road**	1.28	203		Pn	09 17 24.8	-0.6
SDRC					Sb	09 17 41.5	-0.6
IKP	**In-Ko-Pah, Jac**	1.28	171		Pn	09 17 24.3	-1.2
IKP					Sg	09 17 40.7	-2.7
IKP	**In-Ko-Pah, Jac**	1.28	171	P	Pn	09 17 24.3	-1.2
	baz=351,SNR=6.3						
IKP				S	Sg	09 17 40.6	-2.7
	baz=351						
RMX	**La Rumorosa**	1.33	170		Sn	09 17 46.2	+2.3
HYS	**Haystack Butte**	1.38	313		Pn	09 17 27.1	+0.2
OLP	**Otay Lakes Par**	1.40	200		Pn	09 17 26.9	0.0
OLP					Sb	09 17 45.0	-0.4
GSC	**Goldstone, Bar**	1.43	345		Pn	09 17 27.0	-0.6
GSC				Sn	Sg	09 17 47.4	-0.7
GSC	**Goldstone, Bar**	1.43	345	Pb	Pn	09 17 27.0	-0.6
	baz=164,SNR=40						
GSC				Sb	Sb	09 17 47.1	+0.6
	baz=164						
SBB	**Saddle Back Bu**	1.44	303		Pn	09 17 27.3	-0.4
SBB					Sb	09 17 46.4	-0.5
MWC	**Mount Wilson**	1.45	283		Pn	09 17 28.1	+0.2
MWC				Sn	Sb	09 17 47.1	0.0
CHFC	**Chilao Flat St**	1.45	287		Pn	09 17 28.4	+0.5
CHFC					Sb	09 17 47.1	-0.1
BLYC	**Blythe**	1.53	96		Pb	09 17 30.2	+0.1
Y12C	**Blythe**	1.53	96		Pn	09 17 29.4	+0.5
Y12C	**Blythe**	1.53	96	Pg	Pb	09 17 30.4	+0.3
	baz=277,SNR=72						
Y12C				Sg	Sg	09 17 51.0	-0.3
	baz=277						
GLA	**Glamis**	1.54	124		Pn	09 17 29.9	+0.8
GLA	**Glamis**	1.54	124	Pg	Pb	09 17 30.6	+0.2
	baz=305,SNR=11						
GLA				Sg	Sg	09 17 52.0	+0.4
	baz=305						
PASC	**Pasadena Art C**	1.54	280		Pn	09 17 29.4	+0.3
PASC	**Pasadena Art C**	1.54	280		Sn	09 17 49.5	+0.6
PASC	**Pasadena Art C**	1.54	280		Sn	09 17 49.6	+0.7
TUQ	**Turquoise Moun**	1.55	13		Pb	09 17 30.9	+0.3
TUQ	**Turquoise Moun**	1.55	13	Pn	Pn	09 17 28.6	-0.7
	baz=193,SNR=34						
TUQ				Pg	Pb	09 17 30.9	+0.3
	baz=193						
TUQ				Sb	Sb	09 17 51.0	+0.8
	baz=193						
FMP	**Fort Macarthur**	1.63	263	Sb	Sn	09 17 51.7	+0.7
	baz=82						
EDW2	**Edwards Air Fo**	1.66	306		Pb	09 17 32.2	-0.2
EDW2	**Edwards Air Fo**	1.66	306	Pn	Pn	09 17 30.1	-0.7
	baz=124,SNR=24						
EDW2				Pg	Pb	09 17 32.2	-0.2
	baz=124						
EDW2				Sb	Sn	09 17 53.5	+1.6
	baz=124						
NEE2	**Needles Airpor**	1.67	59	Pg	Pb	09 17 32.1	-0.3
	baz=240						
NEE2				Sb	Sb	09 17 54.1	+0.9
	baz=240						
DECC	**Green Verdugo**	1.68	282	Pg	Pb	09 17 32.5	-0.1
	baz=101,SNR=5.3						
DECC				Sb	Sb	09 17 54.1	+0.4
	baz=101						
CIS	**Catalina Islan**	1.80	254	Pb	Pn	09 17 33.8	+1.3
	baz=72						
CIS				Sb	Sn	09 17 56.7	+1.5
	baz=72						
DTP	**Desert Tortois**	1.82	318		Pn	09 17 32.4	-0.6
PDMCI	**Parker Dam,Lak**	1.87	78	Pg	Pb	09 17 35.8	-0.1
	baz=259,SNR=45						
LRMC	**Laurel Mtn Rad**	1.90	325	P	Pn	09 17 33.5	-0.6
	baz=144,SNR=27						
LRMC				Sb	Sg	09 18 01.9	-1.4
	baz=144						
SHOC	**Shoshone, Teco**	1.98	2	P	Pn	09 17 34.6	-0.4
	baz=182,SNR=13						
SHOC				Sb	Sb	09 18 03.9	+1.6
	baz=182						
SCI2	**San Clemente I**	2.06	244	Pg	Pb	09 17 39.1	0.0
	baz=62						
OSI	**Osito Audit: C**	2.08	290		Pn	09 17 37.3	+0.8
OSI	**Osito Audit: C**	2.08	290	Pg	Pb	09 17 40.9	+1.3
	baz=108						
OSI				Sb	Sb	09 18 05.3	-0.1
	baz=108						
QSM	**Queen of Sheba**	2.08	348		Pn	09 17 36.2	-0.3
SRTC	**Snort**	2.11	327		Pn	09 17 36.9	0.0
BLG	**Laguna Peak, P**	2.26	276	Sb	Sb	09 18 11.3	+0.9
	baz=94						
MPMC	**Manual Prospec**	2.33	337	P	Pn	09 17 39.5	-0.5
	baz=156,SNR=13						
MPMC				Sb	Sb	09 18 14.4	+1.9
	baz=156						
W13A	**Hualapai Mount**	2.35	59		Pn	09 17 39.7	-0.7
ARVC	**Arvin**	2.37	301	P	Pn	09 17 40.2	-0.3
	baz=120						
ARVC				Sb	Sb	09 18 15.2	+1.6
	baz=120						
ISA	**Isabella, Lake**	2.46	315		Pn	09 17 41.4	-0.4
ISA	**Isabella, Lake**	2.46	315	P	Pn	09 17 41.4	-0.4
	baz=134,SNR=9.4						
ISA				Sb	Sb	09 18 18.8	+2.4
	baz=134						
AMDNV	**Amargosa**	2.53	1		Pn	09 17 42.5	-0.1
DAC	**Darwin (Calif)**	2.56	337		Pn	09 17 43.0	-0.3
Y14A	**Wickenburg**	2.78	89		Pn	09 17 45.9	-0.3
VES	**Vestal, Richgr**	2.95	311		Pn	09 17 49.5	+1.1
TPNV	**Topopah Spring**	3.02	2		Pn	09 17 49.9	+0.3
TPNV	**Topopah Spring**	3.02	2	P	Pn	09 17 49.9	+0.3
	baz=182,SNR=7.1						
TPNV				Sb	Sg	09 18 36.4	-2.7
	baz=182						
GRAC	**Grapevine Rang**	3.18	345	P	Pn	09 17 52.3	+0.7
	baz=165,SNR=5.3						
SMMC	**Simmler**	3.31	296	Sb	Sb	09 18 44.1	+3.5
	baz=114						
LCMT	**Little Creek M**	3.99	39		Pn	09 18 03.5	+0.6
X16A	**Lo Mia Camp, P**	4.10	82		Pn	09 18 04.9	+0.5
U15A	**North Rim**	4.16	52		Pn	09 18 06.1	+0.8
KNB	**Kanab**	4.22	42		Pn	09 18 08.0	+1.9
R11A	**Troy Canyon, C**	4.46	8	Sb	Sg	09 19 20.2	-5.1
	baz=188						
NV11	**Mina Array Sit**	4.73	343	Pn	Pn	09 18 14.2	+1.2
RYN	**Ryan**	5.01	340	Pn	Pn	09 18 18.2	+1.3
PSUT	**Pine Spring**	5.03	23	Pn	Pn	09 18 18.5	+1.4
CMB	**Columbia Colle**	5.25	323		Pn	09 18 21.2	+1.2
KVN	**Kaiserville**	5.31	345	Pn	Pn	09 18 22.1	+1.1
X18A	**Snowflake**	5.34	82		Pn	09 18 23.0	+1.6
YERR	**Yerington**	5.56	336	Pn	Pn	09 18 26.4	+1.8

MAN 05 09:47:06.8, 13°.55N×121°.94E, h10^{km}, mb4.2, ML3.0, MS2.7, 1C-2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOAC	**Boac**	0.13	226	*e*P	Pg	09 47 10.7	+0.9
BOAC				*e*S	Sg	09 47 14.8	+2.8
GQP	**Guinayangan**	0.60	54	⇓*i*P	Pg	09 47 18.5	0.0
GQP				*i* S	Sb	09 47 27.8	-0.3
LQP	**Lukban**	0.68	325	*e*P	Pn	09 47 29.1	+6.4
PGP	**Puerto Galera**	0.96	267	⇓*e*P	Pg	09 47 25.1	-0.2
PGP				*e*S	Sg	09 47 37.5	-0.4
TGY	**Tagaytay City**	1.12	299	⇑*e*P	Pn	09 47 31.8	+3.1
POLP	**Polilio Island**	1.17	360	*e*P	Pb	09 47 27.5	-1.7
POLP				*e*S	Sb	09 47 40.7	-3.7
OTRP	**Odiongan**	1.18	176	*e*P	Pb	09 47 29.0	-0.4
OTRP				*e*S	Sn	09 47 45.8	+0.2
LUBP	**Lubang**	1.66	277	*e*P	Pn	09 47 34.1	-1.8
LUBP				*e*S	Sn	09 47 55.3	-2.1
BALP	**Baler**	2.21	351	*e*P	Pn	09 47 44.3	+0.8
BALP				*e*S	Sn	09 48 12.4	+1.5

*BGR **05** 09:56:54.3±0.0, 17°.45S×171°.34E, h680^{km}*

*NEIC **05** 09:56:57.8±1.8, 14°.74S±0°.08×169°.82E±0°.08, h638^{km}±1^{km}, mb5.9/400, Mwb6.4/69, Mwc6.3/64, Mww6.3, Mwc6.4(GCMT), Error ellipse: s-maj=13.7km s-min=13.3km az=262.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.57; $M_{\theta\theta}$1.97; $M_{\phi\phi}$-1.39; $M_{r\theta}$-2.56; $M_{\theta\phi}$-0.99; $M_{\phi r}$3.36; Fault plane solution: $M_0$4.68000×10^{18} NP1:ϕ_s142.84000°, δ85.65000°, λ-66.29000°. NP2:ϕ_s242.64000°, δ24.08000°, λ-169.29000°. Principal axes: T 4.8155, Plg36.0000°, Azm212.0000°; N -0.2861, Plg24.0000°, Azm321.0000°; P -4.5295, Plg44.0000°, Azm76.0000°;*

*MOS **05** 09:56:57.9±0.9, 14°.70S×169°.80E, h649^{km}, mb6.0/62 Error ellipse: s-maj=6.3km s-min=5.5km az=91.9*

*BJI **05** 09:56:57.4±0.0, 14°.72S×169°.86E, h640^{km}, mB5.3/59, mb5.2/64*

*IDC **05** 09:56:58.9±0.3, 14°.77S×169°.87E, h648^{km}±3^{km}, mb5.1/44, mb1 5.2/48, mb1mx5.1/50, mbtmp6.1/48, Error ellipse: s-maj=6.5km s-min=6.0km az=57.0*

*GCMT **05** 09:57:02.8±0.1, 14°.64S±0°.01×169°.80E±0°.01, h661^{km}, MW6.4/167, Moment Tensor Solution. s167,c392; s126,c173; Duration: 3^s.8 Moment tensor: Scale 10^{18} Nm; M_{rr}-0.31±.02; $M_{\theta\theta}$1.80±.02; $M_{\phi\phi}$-1.49±.02; $M_{r\theta}$-2.64±.03; $M_{\theta\phi}$-0.69±.02; $M_{\phi r}$3.33±.02; Best double couple: $M_0$4.61400×10^{18} NP1:ϕ_s238.00000°, δ23.00000°, λ-174.00000°. NP2:ϕ_s142.00000°, δ88.00000°, λ-68.00000°. Principal axes: T 4.6960, Plg39.0000°, Azm212.0000°; N -0.1610, Plg22.0000°, Azm321.0000°; P -4.5310, Plg43.0000°, Azm73.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

*NEIC **05** 09:57:03, 14°.56S×169°.77E, h661^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.25; $M_{\theta\theta}$1.70; $M_{\phi\phi}$-1.45; $M_{r\theta}$-2.11; $M_{\theta\phi}$-0.66; $M_{\phi r}$2.65; Fault plane solution: $M_0$3.80000×10^{18} NP1:ϕ_s142.00000°, δ88.00000°, λ-64.00000°. NP2:ϕ_s237.00000°, δ26.00000°, λ-175.00000°. Principal axes: T 3.8853, Plg37.0000°, Azm209.0000°; N -0.1788, Plg26.0000°, Azm321.0000°; P -3.7065, Plg42.0000°, Azm77.0000°;*

*NEIC **05** 09:57:04, 14°.63S×169°.62E, h660^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.16; $M_{\theta\theta}$1.72; $M_{\phi\phi}$-1.56; $M_{r\theta}$-2.07; $M_{\theta\phi}$-0.72; $M_{\phi r}$2.55; Fault plane solution: $M_0$3.74000×10^{18} NP1:ϕ_s143.00000°, δ88.00000°, λ-61.00000°. NP2:ϕ_s236.00000°, δ28.00000°, λ-176.00000°. Principal axes: T 3.8633, Plg37.0000°, Azm208.0000°; N -0.2597, Plg28.0000°, Azm322.0000°; P -3.6036, Plg40.0000°, Azm79.0000°;*

*NEIC **05** 09:57:13.2, 14°.86S×169°.46E, h652^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.38; $M_{\theta\theta}$1.86; $M_{\phi\phi}$-1.48; $M_{r\theta}$-2.45; $M_{\theta\phi}$-0.71; $M_{\phi r}$2.74; Fault plane solution: $M_0$4.10000×10^{18} NP1:ϕ_s139.54000°, δ86.43000°, λ-64.75000°. NP2:ϕ_s237.06000°, δ25.48000°, λ-171.68000°. Principal axes: T 4.2730, Plg36.0000°, Azm208.0000°; N -0.3391, Plg25.0000°, Azm318.0000°; P -3.9339, Plg43.0000°, Azm74.0000°;*

ISC 05 09:56:58.7±0.2**, 14°.84S**±0°.03×**169°.83E**±0°.03**, h648^{km}**±1^{km}**, h650^{km}:pP-P, n1950, σ1^s.81**/2252**, mb5.9**/347**, 55C-30D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	7.88	204	P	**P**	09 59 01.3	+2.6
	67nm,0.3s,baz=213,slow=13,SNR=375						
DZM				S	**S**	10 00 40.1	+3.1
	baz=31,slow=20,SNR=1.0						
DZM				ScP	**ScP**	10 06 52.4	+1.1
	3.1nm,0.3s,baz=125,slow=6.6,SNR=13						
DZM	**Mont Dzumac**	7.88	204	*e*P	**P**	09 58 58.7	0.0
	7µm,1.2s						
MSVF	**Nonsavu**	8.40	111	*c i*P	**P**	09 59 05.5	+2.0
MSVF	**Nonsavu**	8.40	111	P	**P**	09 59 04.7	+1.2
HNR	**Honiara**	11.05	298	P	**P**	09 59 28.3	-0.4
	329nm,0.3s,baz=180,slow=1.7,SNR=92						
HNR				S	**S**	10 01 31.4	0.0
	99nm,0.3s,baz=120,slow=23,SNR=9.0						
HNR	**Honiara**	11.05	298	*i* P	**P**	09 59 28.0	-0.7
HNR	**Honiara**	11.05	298	P	**P**	09 59 28.1	-0.6
FUNA	**Funafuti**	11.11	57	P	**P**	09 59 27.2	-2.0
NFK	**Norfolk Island**	14.25	187	P	**P**	09 59 58.5	+0.5
	baz=14,SNR=15						
TARA	**Tarawa**	16.37	11	P	**P**	10 00 17.8	+0.1
TARA				IAmb	IAmb	10 00 27.2	
	comp=Z,660nm,0.7s						
AFI	**Afiamalu**	17.84	89	P	**P**	10 00 31.4	+0.3
	comp=Z,84nm,0.3s,baz=34,slow=1.1,SNR=106						
AFI				S	**S**	10 03 22.4	-0.8
	comp=Z,2.2nm,0.3s,baz=239,slow=19,SNR=1.7						
AFI				ScP	**ScP**	10 07 07.0	-0.3
	comp=Z,5.1nm,0.3s,baz=238,slow=3.4,SNR=17						
AFI	**Afiamalu**	17.84	89	P	**P**	10 00 31.2	+0.1
RAO	**Raoul Island**	18.27	144	P	**P**	10 00 35.9	+1.1
	comp=Z,7.2nm,0.3s,baz=194,slow=12,SNR=3.0						
RAO				S	**S**	10 03 30.7	+1.1
	comp=Z,85nm,0.3s,baz=41,slow=19,SNR=2.9						
RAO	**Raoul Island**	18.27	144	P	**P**	10 00 37.2	+2.5
RAO				pmax	pmax		
	comp=Z,2µm,1.0s						
RAO	**Raoul Island**	18.27	144	P	**P**	10 00 37.2	+2.5
LHI	**Lord Howe Isla**	19.31	209	P	**P**	10 00 45.6	+1.5
	baz=20,SNR=138						
LHI	**Lord Howe Isla**	19.31	209	P	**P**	10 00 45.7	+1.6
NIUE	**Niue**	19.81	105	P	**P**	10 00 48.1	-0.6
	baz=20,SNR=34						
NIUE	**Niue**	19.81	105	P	**P**	10 00 49.4	+0.6
RABL	**Rabaul**	20.36	300	P	**P**	10 00 53.8	0.0
KRVT	**Keravat (AS076**	20.42	299	P	**P**	10 00 55.1	+0.8
	comp=Z,521nm,0.8s,baz=239,slow=2.0,SNR=18						
KRVT				S	**S**	10 04 01.7	-2.2
	comp=Z,192nm,0.9s,baz=44,slow=22,SNR=2.0						
KRVT				ScS	**ScS**	10 10 57.5	+0.1
	comp=Z,101nm,0.9s,baz=221,slow=20,SNR=3.2						
EIDS	**Eidsvold**	20.46	236	P	**P**	10 00 55.5	+1.0
	baz=21,SNR=332						
EIDS	**Eidsvold**	20.46	236	P	**P**	10 00 55.2	+0.6
OUZ	**Omahuta**	20.58	171	P	**P**	10 00 58.0	+2.7
OUZ				IAmb	IAmb	10 01 00.5	
	comp=Z,509nm,0.9s						
KNTN	**Kanton**	21.79	58	P	**P**	10 01 05.9	-0.5
PMG	**Port Moresby**	22.81	281	P	**P**	10 01 16.7	+1.2
	comp=Z,392nm,0.9s,baz=82,slow=6.6,SNR=66						
PMG				S	**S**	10 04 39.9	-1.5
	comp=Z,29nm,0.8s,baz=230,slow=18,SNR=1.9						
PMG				ScP	**ScP**	10 07 20.8	+1.4
	comp=Z,300nm,1.4s,baz=48,slow=18,SNR=6.0						
PMG				ScS	**ScS**	10 11 06.6	+0.2
	comp=Z,25nm,1.1s,baz=36,slow=5.3,SNR=3.1						
PMG	**Port Moresby**	22.81	281	P	**P**	10 01 16.2	+0.8
PMG				IAmb	IAmb	10 01 20.1	
	comp=Z,470nm,1.0s						
ARMA	**Armidale**	22.81	224	P	**P**	10 01 17.2	+1.7
	baz=23,SNR=1000						
ARMA	**Armidale**	22.81	224	P	**P**	10 01 16.9	+1.5
RMQ	**Roma**	22.83	236	P	**P**	10 01 17.3	+1.7
	baz=23,SNR=396						
CTA	**Charters Tower**	23.08	254	P	**P**	10 01 18.9	+1.0
	comp=Z,358nm,0.6s,baz=81,slow=11,SNR=274						
CTA				S	**S**	10 04 45.0	-0.7
	comp=Z,107nm,1.0s,baz=221,slow=15,SNR=3.7						
CTA				ScP	**ScP**	10 07 20.8	+0.7
	comp=Z,133nm,0.6s,baz=122,slow=3.3,SNR=19						
CTA				ScS	**ScS**	10 11 07.7	+0.4
	comp=Z,32nm,1.1s,baz=227,slow=19,SNR=11						
CTAO	**Charters Tower**	23.08	254	P	**P**	10 01 18.7	+0.8
CTAO				pmax	pmax		
	comp=Z,1µm,1.4s						
CTAO	**Charters Tower**	23.08	254	P	**P**	10 01 18.7	+0.8
KWAJ	**Kwajalein Atol**	23.59	355	P	**P**	10 01 21.7	-0.6
KWAJ				pmax	pmax		
	comp=Z,683nm,1.2s						
KWAJ	**Kwajalein Atol**	23.59	355	P	**P**	10 01 21.7	-0.6
KWAJ				IAmb	IAmb	10 01 24.1	
	comp=Z,683nm,1.2s						
MXZ	**Matakaoa Point**	23.86	163	P	**P**	10 01 24.2	-0.2
HIZ	**Hauiti**	24.00	170	P	**P**	10 01 27.8	+2.1
URZ	**Urewera**	24.20	166	P	**P**	10 01 28.5	+1.1
	comp=Z,535nm,0.5s,baz=290,slow=2.7,SNR=167						
URZ				S	**S**	10 05 00.4	-2.3
	comp=Z,74nm,0.7s,baz=152,slow=20,SNR=6.3						
URZ				ScP	**ScP**	10 07 22.8	+0.1
	comp=Z,45nm,0.7s,baz=265,slow=2.6,SNR=4.2						
URZ				ScS	**ScS**	10 11 07.9	-3.3
	comp=Z,31nm,0.8s,baz=167,slow=23,SNR=13						
URZ	**Urewera**	24.20	166	P	**P**	10 01 27.9	+0.4
PATS	**Pohnpei**	24.37	331	P	**P**	10 01 29.0	-0.3
	baz=24,SNR=5.0						
PATS	**Pohnpei**	24.37	331	P	**P**	10 01 28.2	-1.1
PATS				IAmb	IAmb	10 01 31.5	
	comp=Z,700nm,1.9s						
MTSU	**Mount Surprise**	24.68	259	P	**P**	10 01 33.1	+1.1
	baz=25,SNR=207						
BKZ	**Black Stump Fm**	24.94	168	P	**P**	10 01 34.3	+0.3
RIV	**Riverview**	25.36	218	P	**P**	10 01 39.5	+1.8
	baz=26,SNR=118						
MANU	**Manus Island**	25.56	298	P	**P**	10 01 40.2	+0.4
MANU				IAmb	IAmb	10 01 43.4	
	comp=Z,342nm,0.8s						
COEN	**Coen**	25.83	269	P	**P**	10 01 43.0	+0.8
	baz=26,SNR=134						
COEN	**Coen**	25.83	269	P	**P**	10 01 42.5	+0.4
COEN				IAmb	IAmb	10 01 45.7	
	comp=Z,226nm,0.9s						
QRZ	**Quartz Range**	26.00	175	P	**P**	10 01 45.3	+2.0
BFZ	**Birch Farm**	26.35	169	P	**P**	10 01 46.3	0.0
NNZ	**Nelson**	26.47	174	P	**P**	10 01 48.6	+1.3
QLP	**Quilpie**	26.59	240	P	**P**	10 01 49.5	+0.9
	baz=27,SNR=612						
SNZO	**South Karori**	26.72	172	P	**P**	10 01 49.5	+0.1
TUWZ	**Tuamarina**	26.74	173	P	**P**	10 01 50.1	+0.5
BHW	**Baring Head**	26.84	172	P	**P**	10 01 50.7	+0.3
MSWZ	**Moikau Station**	26.90	171	P	**P**	10 01 51.0	-0.1
THZ	**Tophouse**	26.96	175	P	**P**	10 01 52.4	+0.7
BSWZ	**Blackbirch Sta**	27.01	173	P	**P**	10 01 52.7	+0.7
PLWZ	**Palliser**	27.05	171	P	**P**	10 01 52.6	+0.1
CMWZ	**Cape Campbell**	27.09	173	P	**P**	10 01 53.1	+0.5
YNG	**Young**	27.38	221	P	**P**	10 01 57.0	+1.6
	baz=28,SNR=181						
CNB	**Canberra Magne**	27.45	218	P	**P**	10 01 57.7	+1.7
	baz=28,SNR=1000						
CMSA	**Cobar Meteorol**	27.63	229	P	**P**	10 01 58.5	+1.0
	baz=28,SNR=1000						
KHZ	**Kahutara**	27.67	174	P	**P**	10 01 57.9	+0.2
CAN	**Canberra**	27.68	219	P	**P**	10 01 59.3	+1.3
CAN				pmax	pmax		
	comp=Z,651nm,0.6s						
CAN	**Canberra**	27.68	219	P	**P**	10 01 59.3	+1.3
LTZ	**Lake Taylor**	27.93	176	P	**P**	10 02 00.7	+0.7
OXZ	**Oxford**	28.46	177	P	**P**	10 02 04.8	+0.2
FOZ	**Fox Glacier**	28.60	180	P	**P**	10 02 06.6	+0.9
MILA	**Mila**	28.78	216	P	**P**	10 02 08.8	+1.3
	baz=29,SNR=103						
RPZ	**Rata Peaks**	28.80	178	P	**P**	10 02 08.5	+1.1
	comp=Z,572nm,0.5s,baz=327,slow=1.5,SNR=170						
RPZ				S	**S**	10 06 11.8	-2.3

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      comp=Z,30nm,0.9s,baz=18,slow=15,SNR=1.5
RPZ                                ScP     ScP      10 07 37.5 +0.9
      comp=Z,49nm,0.7s,baz=7.0,slow=4.3,SNR=3.6
RPZ                                ScS     ScS      10 11 29.2 -2.5
      comp=Z,24nm,0.7s,baz=60,slow=1.8,SNR=5.2
RPZ   Rata Peaks         28.80 178 P       P        10 02 08.1 +0.6
MQZ   McQueen’s Vall     28.88 176 P       P        10 02 08.6 +0.5
QIS   Mount Isa          29.32 254 P       P        10 02 12.8 +0.5
      baz=30,SNR=360
LBZ   Lake Benmore       29.45 179 P       P        10 02 11.9 -1.2
RAR   Rarotonga          29.56 107 P       P        10 02 15.3 +1.1
      comp=Z,524nm,1.0s,baz=239,slow=5.9,SNR=39
RAR                                ScP     ScP      10 07 39.4  0.0
      comp=Z,40nm,0.7s,baz=242,slow=6.6,SNR=7.1
RAR   Rarotonga          29.56 107 P       P        10 02 15.4 +1.1
RAR                                pmax    pmax
      comp=Z,591nm,1.0s
RAR   Rarotonga          29.56 107 IAmb    IAmb     10 02 17.7
      comp=Z,590nm,0.9s
WKZ   Wanaka             29.90 181 P       P        10 02 17.6 +0.7
ODZ   Otahua Downs       30.12 179 P       P        10 02 18.9 +0.2
ODZ                                IAmb    IAmb     10 02 22.0
      comp=Z,560nm,1.0s
DCZ   Deep Cove          30.62 184 P       P        10 02 23.4 +0.5
STKA  Stephens Creek     30.84 232 P       P        10 02 26.7 +1.6
      baz=31,SNR=1000
STKA  Stephens Creek     30.84 232 P       P        10 02 26.6 +1.6
      comp=Z,1µm,0.5s,baz=61,slow=8.4,SNR=1304
STKA                               S       S        10 06 44.3 -1.4
      comp=Z,16nm,0.7s,baz=318,slow=24,SNR=0.8
STKA                               ScP     ScP      10 07 44.7 +1.1
      comp=Z,194nm,0.7s,baz=37,slow=2.2,SNR=14
STKA                               ScS     ScS      10 11 42.9 +0.7
      comp=Z,26nm,1.1s,baz=315,slow=23,SNR=6.9
STKA                               P3KPbc           10 33 53.1
      comp=Z,11nm,0.8s,baz=252,slow=5.3,SNR=13
STKA  Stephens Creek     30.84 232 P       P        10 02 26.4 +1.3
STKA                               IAmb    IAmb     10 02 29.4
      comp=Z,383nm,1.0s
WHZ   Wether Hill Ro     31.00 183 P       P        10 02 26.4 +0.2
TOO   Toolangi           31.29 219 P       P        10 02 30.4 +1.5
      baz=32,SNR=118
TOO   Toolangi           31.29 219 P       P        10 02 30.3 +1.5
TOO                                pmax    pmax
      comp=Z,2µm,0.6s
TOO   Toolangi           31.29 219 P       P        10 02 30.3 +1.5
PYZ   Puysegur Point     31.35 184 P       P        10 02 29.1 -0.1
GENI  Genyem             31.69 290 P       P        10 02 34.0 +1.5
      comp=Z,3µmcomp=Z,6µmcomp=Z,279nm,1.1s
H11S2 WAKE ISLAND Hy     33.26 355 P       P        10 02 42.9 -2.4
      baz=205,slow=8.2,SNR=4.4
H11S3 WAKE ISLAND Hy     33.26 355 P       P        10 02 45.5 +0.1
      baz=205,slow=8.2,SNR=2.8
H11S1 WAKE ISLAND Hy     33.28 355 P       P        10 02 45.8 +0.4
      baz=205,slow=8.2,SNR=4.1
HTT   Hallett            33.55 231 P       P        10 02 49.3 +1.3
      baz=34,SNR=695
MOO   Moorlands          33.72 211 P       P        10 02 50.9 +1.8
      baz=34,SNR=147
TAU   Tasmania Unive     34.01 210 P       P        10 02 52.0 +0.5
TAU                                pmax    pmax
      comp=Z,2µm,1.5s
TAU   Tasmania Unive     34.01 210 P       P        10 02 52.0 +0.5
WAKE  Wake Island        34.05 355 P       P        10 02 50.5 -1.6
WAKE                               IAmb    IAmb     10 02 53.8
      comp=Z,298nm,1.0s
WB0   Warramunga Arr     34.15 257 P       P        10 02 52.5 -0.5
WB2   Warramunga Arr     34.20 256 P       P        10 02 52.8 -0.6
WRAB  Tennant Creek      34.20 256c iP     P        10 02 53.0 -0.4
WRAB                               pmax    pmax
      comp=Z,1µm,1.0s
WRAB  Tennant Creek      34.20 256 P       P        10 02 52.9 -0.6
WRA   Warramunga Arr     34.21 256 P       P        10 02 53.4 -0.1
      comp=Z,840nm,0.9s,baz=83,slow=7.8,SNR=653
WRA                                PcP     PcP      10 05 09.4 -1.2
      comp=Z,46nm,0.7s,baz=82,slow=4.6,SNR=5.7
WRA                                S       S        10 07 34.0 -2.9
      comp=Z,367nm,1.1s,baz=90,slow=14,SNR=16
WRA                                ScP     ScP      10 07 56.3 +0.7
      comp=Z,198nm,0.7s,baz=84,slow=3.9,SNR=18
WRA                                SS      SS       10 10 47.5 -5.3
      comp=Z,6.4nm,0.9s,baz=70,slow=12,SNR=2.2
WRA                                ScS     ScS      10 12 01.1 +0.7
      comp=Z,8.8nm,0.8s,baz=96,slow=7.1,SNR=3.7
WRA                                P3KPbc           10 33 37.6
      comp=Z,14nm,0.8s,baz=278,slow=2.9,SNR=50
H11N1 WAKE ISLAND Hy     34.45 355 P       P        10 02 55.1 -0.1
      baz=191,slow=12,SNR=9.3
H11N3 WAKE ISLAND Hy     34.46 355 P       P        10 02 56.0 +0.8
      baz=191,slow=12,SNR=6.8
H11N2 WAKE ISLAND Hy     34.47 355 P       P        10 02 55.7 +0.4
      baz=191,slow=12,SNR=6.9
AS31  Alice Springs      34.96 250 P       P        10 02 59.9 +0.2
AS31                               IAmb    IAmb     10 03 02.4
      comp=Z,318nm,0.7s
ASAR  Alice Springs      34.96 250 P       P        10 02 59.9 +0.1
      comp=Z,903nm,0.6s,baz=76,slow=9.6,SNR=4834
ASAR                               PcP     PcP      10 05 12.8  0.0
      comp=Z,81nm,0.6s,baz=93,slow=3.3,SNR=7.2
ASAR                               S       S        10 07 45.5 -2.6
      comp=Z,191nm,0.7s,baz=80,slow=15,SNR=20
ASAR                               ScP     ScP      10 07 59.1 +0.8
      comp=Z,236nm,0.7s,baz=91,slow=4.1,SNR=19
ASAR                               P3KPbc           10 33 35.5
      comp=Z,7.5nm,0.8s,baz=268,slow=4.2,SNR=38
BBOO  Buckleboo          35.49 234 P       P        10 03 05.0 +1.1
      baz=36,SNR=1000
BBOO  Buckleboo          35.49 234 P       P        10 03 05.0 +1.1
BAKI  Biak               35.96 289 P       P        10 03 10.1 +2.1
      comp=Z,885nm,0.9s
KDU   Kakadu             36.32 269 P       P        10 03 11.2 +0.3
      baz=36,SNR=380
XMAS  Kiritimati         36.48  65 P       P        10 03 12.6 +0.4
XMAS                               IAmb    IAmb     10 03 14.9
      comp=Z,565nm,0.8s
JOHN  Johnston Islan     37.40  34 P       P        10 03 19.2 -0.4
GUMO  Guam               37.52 318 P       P        10 03 21.0 +0.4
      comp=Z,142nm,0.5s,baz=181,slow=11,SNR=6.7
GUMO  Guam               37.52 318 P       P        10 03 21.0 +0.4
GUMO                               pmax    pmax
      comp=Z,449nm,1.3s
GUMO  Guam               37.52 318 IAmb    IAmb     10 04 44.7
      comp=Z,449nm,1.2s
MTN   Manton Dam         37.60 268 P       P        10 03 21.4 +0.1
      baz=38,SNR=374
MTN   Manton Dam         37.60 268 P       P        10 03 21.6 +0.3
SAUI  Saumlaki           38.34 276 P       P        10 03 29.5 +2.2
      comp=Z,9µmcomp=Z,21µmcomp=Z,2µm,0.9s
SAUI  Saumlaki           38.34 276 P       P        10 03 28.1 +0.8
FAKI  Fak Fak            38.90 284 P       P        10 03 32.6 +0.8
      comp=Z,5µmcomp=Z,8µmcomp=Z,458nm,0.9s
FAKI  Fak Fak            38.90 284 P       P        10 03 31.2 -0.5
FAKI                               IAmb    IAmb     10 03 35.1
      comp=Z,623nm,1.2s
PAE   Paea               39.02 100 eP      P        10 03 33.5 +0.9
      comp=Z,263nm,1.2s
PPT2  Papeete2           39.02 100 eP      P        10 03 33.8 +1.0
      comp=Z,1µm,1.1s
PPT   Papeete            39.02 100 P       P        10 03 33.8 +1.0
      comp=Z,1µm,0.9s,baz=187,slow=2.9,SNR=41
PPT   Papeete            39.02 100 P       P        10 03 34.1 +1.4
PPT   Papeete            39.02 100 P       P        10 03 34.1 +1.4
PPTF  Pamatai, Papee     39.03 100 P       P        10 03 33.1 +0.2
TIAR  Tiarei             39.24 100 eP      P        10 03 35.5 +1.0
      comp=Z,396nm,1.1s
TBI   Tubuai             39.28 109 eP      P        10 03 35.9 +1.2
      comp=Z,2µm,1.0s
TVO   Taravao            39.33 100 eP      P        10 03 36.2 +1.0
      comp=Z,260nm,0.7s
KNRA  Kununurra          39.59 263 P       P        10 03 37.3 +0.1
      baz=40,SNR=469
KNRA  Kununurra          39.59 263 P       P        10 03 37.1 -0.1
WRKA  Warakurna          40.20 249 P       P        10 03 42.5 +0.4
      baz=40,SNR=1000
MEH   Mehetia            40.45 100 eP      P        10 03 45.0 +0.9
      comp=Z,959nm,1.1s
MCQ   Macquarie Isla     40.48 190 P       P        10 03 45.1 +1.5
      baz=41,SNR=9.6
MCQ   Macquarie Isla     40.48 190 P       P        10 03 44.7 +1.1
MCQ                                pmax    pmax
      comp=Z,847nm,0.9s
MCQ   Macquarie Isla     40.48 190 P       P        10 03 44.7 +1.1
SIJI  Sorong             40.54 286 P       P        10 03 44.9  0.0
      comp=Z,179nm,0.3s,baz=87,slow=4.6,SNR=105
SIJI                               ScP     ScP      10 08 20.2 +0.4
      comp=Z,19nm,0.6s,baz=87,slow=2.0,SNR=6.0
SIJI                               S       S        10 09 09.1 -0.9
      comp=Z,24nm,1.1s,baz=37,slow=24,SNR=12
SWI   Sorong             40.55 286 P       P        10 03 46.0 +1.1
BNDI  Bandanaira         40.60 281 P       P        10 03 45.9 +0.6
      comp=Z,19µmcomp=Z,2µm,1.1s
PMOR  Pomariorio Ree     40.80  96 eP      P        10 03 48.2 +1.4
      comp=Z,4µm,1.0s
VAH   Vaihoa             41.04  96 eP      P        10 03 49.7 +1.0
      comp=Z,2µm,1.0s
FORT  Forrest            41.38 240 P       P        10 03 51.7 +0.5
      baz=42,SNR=938
FORT  Forrest            41.38 240 P       P        10 03 51.5 +0.3
MSAI  Masohi             41.89 282 P       P        10 03 58.5 +3.1
      comp=Z,45nm,0.7s
FITZ  Fitzroy Crossi     42.43 259 P       P        10 04 00.3 +0.7
      baz=42,SNR=798
FITZ  Fitzroy Crossi     42.43 259 P       P        10 04 00.2 +0.7
      comp=Z,939nm,1.0s,baz=87,slow=5.0,SNR=319
FITZ                               ScP     ScP      10 08 27.9 +0.6
      comp=Z,33nm,0.7s,baz=72,slow=7.8,SNR=4.9
FITZ                               S       S        10 09 34.9 -1.9
      comp=Z,66nm,0.9s,baz=273,slow=20,SNR=11
FITZ  Fitzroy Crossi     42.43 259 P       P        10 03 59.9 +0.4
AAI   Ambon              42.48 281 P       P        10 04 01.3 +1.3
      comp=Z,5µmcomp=Z,8µmcomp=Z,686nm,0.6s
NLAI  Namlea             43.65 281 P       P        10 04 08.9 -0.1
      comp=Z,10µmcomp=Z,639nm,0.9s
LBMI  Labuha             44.13 285 P       P        10 04 14.1 +1.4
      comp=Z,4µmcomp=Z,226nm,0.9s
SOEI  Soe                44.75 271 P       P        10 04 20.1 +2.6
      comp=Z,9µmcomp=Z,11µmcomp=Z,1µm,0.8s
SOEI  Soe                44.75 271 P       P        10 04 18.8 +1.3
TNTI  Ternate            44.77 287 P       P        10 04 20.4 +2.8
      comp=Z,3µmcomp=Z,4µmcomp=Z,124nm,1.1s
TNTI  Ternate            44.77 287 P       P        10 04 18.0 +0.4
SANI  Sanana             45.08 282 P       P        10 04 21.0 +1.1
      comp=Z,6µmcomp=Z,6µmcomp=Z,400nm,1.0s
KMBL  Kambalda           46.70 241 P       P        10 04 31.9  0.0
      baz=47,SNR=375
MMRI  Maumere            46.93 272 P       P        10 04 35.4 +1.5
      comp=Z,10µmcomp=Z,18µmcomp=Z,2µm,1.0s
MMRI  Maumere            46.93 272 P       P        10 04 34.2 +0.3
KEKH  Kekaha             47.23  40 P       P        10 04 36.5 +0.7
BBSI  Bau Bau            47.35 276 P       P        10 04 38.8 +1.8
      comp=Z,3µmcomp=Z,165nm,0.9s
EDFI  Ende, Flores       47.44 272 P       P        10 04 37.7 -0.1
      comp=Z,5µmcomp=Z,12µmcomp=Z,1µm,0.9s
KDI   Kendari            47.72 278 P       P        10 04 41.4 +1.7
      comp=Z,565nm,0.9s
PSA00 Pilbara Seismi     47.80 254 P       P        10 04 40.6 +0.5
HON   Honolulu           47.83  42 P       P        10 04 39.5 -0.8
HON                                pmax    pmax
      comp=Z,540nm,0.8s
HON   Honolulu           47.83  42 P       P        10 04 39.5 -0.8
HON                                IAmb    IAmb     10 04 43.8
      comp=Z,540nm,0.8s
KMSI  Cibinong           47.85 285 P       P        10 04 43.5 +2.8
      comp=Z,6µmcomp=Z,413nm,0.6s
KIP   Kipapa             47.90  42 P       P        10 04 41.5 +0.7
KIP                                pmax    pmax
      comp=Z,690nm,0.9s
KIP   Kipapa             47.90  42 P       P        10 04 41.5 +0.7
KIP                                IAmb    IAmb     10 04 43.5
      comp=Z,690nm,0.9s
KKH   Kailua Kona        47.99  45 P       P        10 04 43.1 +1.5
KKH   Kailua Kona        47.99  45 P       P        10 04 43.1 +1.5
KHU   Kahuku             48.00  46 P       P        10 04 42.0 +0.1
KHU                                pmax    pmax
      comp=Z,2µm,1.1s
KHU   Kahuku             48.00  46 P       P        10 04 42.0 +0.1
KHLU  Kahalu`u           48.04  46 P       P        10 04 41.5 -0.6
KHLU                               IAmb    IAmb     10 04 44.8
      comp=Z,813nm,1.0s
HUH   Hualalai           48.14  46 P       P        10 04 43.3 +0.3
HUH                                IAmb    IAmb     10 04 45.9
      comp=Z,677nm,0.7s
MWH   Moku‘aweowe        48.17  46 P       P        10 04 43.3 -0.2
AIN   Ainahou            48.19  46 P       P        10 04 42.6 -0.6
MLOA  Mauna Loa Obse     48.22  46 P       P        10 04 43.8  0.0
BASI  Baing, Sumba       48.23 269 P       P        10 04 46.6 +3.2
      comp=Z,5µmcomp=Z,14µmcomp=Z,1µm,1.3s
HLP   Hilina Pali        48.25  46 P       P        10 04 43.1 -0.4
HLP                                IAmb    IAmb     10 04 46.6
      comp=Z,792nm,1.0s
SDHHI Sand Hill          48.32  46 P       P        10 04 44.2 +0.1
MLH   Mauna Loa          48.32  46 P       P        10 04 44.1 -0.2
WRMHI West Rim           48.33  46 P       P        10 04 43.5 -0.7
HMH   Humu‘ula Sheep     48.33  46 P       P        10 04 43.9 -0.5
RIM   Rim                48.34  46 P       P        10 04 43.7 -0.6
UWE   Uwekahuna          48.34  46 P       P        10 04 44.1 -0.2
UWE                                IAmb    IAmb     10 04 47.0
      comp=Z,797nm,0.9s
NPH   North Pit          48.34  46 P       P        10 04 46.0 +1.7
NPH                                IAmb    IAmb     10 04 46.9
      comp=Z,328nm,0.9s
KKO   Keanakako`i        48.34  46 P       P        10 04 42.6 -1.7
OBL   Observatory Le     48.34  46 P       P        10 04 42.6 -1.7
OBL                                IAmb    IAmb     10 04 47.5
      comp=Z,918nm,1.0s
UWB   Uwekahuna B        48.35  46 P       P        10 04 43.9 -0.4
UWB                                IAmb    IAmb     10 04 46.9
      comp=Z,582nm,1.0s
BYL   Byron's Ledge      48.36  46 P       P        10 04 44.0 -0.4
BYL                                IAmb    IAmb     10 04 47.0
      comp=Z,686nm,1.0s
SBLHI Steaming Bluff     48.36  46 P       P        10 04 43.7 -0.8
SBLHI                              IAmb    IAmb     10 04 47.0
      comp=Z,468nm,1.0s
PUH   Pauahi             48.36  46 P       P        10 04 44.0 -0.5
PUH                                IAmb    IAmb     10 04 47.2
      comp=Z,815nm,0.9s
HATHI Halema‘uma‘u T     48.36  46 P       P        10 04 43.7 -0.8
POHA  Pohakuloa          48.40  46 P       P        10 04 44.8 -0.1
STCH  Steam Cracks       48.43  46 P       P        10 04 44.7 -0.2
DDMP  Don Marcelino,     48.43 292 eP      P        10 04 45.2 +0.3
LUWI  Luwuk              48.45 282 P       P        10 04 46.4 +1.3
      comp=Z,11µmcomp=Z,941nm,0.9s
LUWI  Luwuk              48.45 282 P       P        10 04 45.6 +0.5
LUWI                               IAmb    IAmb     10 04 48.9
      comp=Z,593nm,0.7s
JCUZ  Jacuzzi            48.45  46 P       P        10 04 45.7 +0.6
NPOC  North of Pu‘u      48.45  46 P       P        10 04 45.8 +0.8
HPAH  Hawaii Prepara     48.47  45 P       P        10 04 45.3 +0.1
KHLH  Kahului Airpor     48.57  44 P       P        10 04 46.1 +0.4
WSI   Waingapu           48.60 270 P       P        10 04 48.3 +2.1
MEEK  Meekatharra        49.03 248 P       P        10 04 49.5 +0.2
      baz=49,SNR=746
TAOE  Nuku Hiva Isla     49.23  89 P       P        10 04 51.6 +0.7
WBSI  Waikabubak, Su     49.48 270 P       P        10 04 53.4 +0.7
      comp=Z,9µmcomp=Z,790nm,0.9s
APSI  Ampana             49.55 282 P       P        10 04 54.8 +1.6
      comp=Z,3µmcomp=Z,5µmcomp=Z,521nm,1.3s
JCJ   Chichijima         49.58 327 P       P        10 04 52.7 -0.3
      comp=Z,127nm,0.4s,baz=251,slow=4.7,SNR=15
SKMP  Bagumbayan, Su     49.66 292 eP      P        10 04 52.7 -1.2
MRSI  Marisa             49.73 284 P       P        10 04 55.6 +1.1
      comp=Z,4µmcomp=Z,3µmcomp=Z,178nm,0.9s
BKSI  Bulukumba          49.75 276 P       P        10 04 56.6 +2.0
      comp=Z,5µmcomp=Z,3µmcomp=Z,129nm,0.9s
BUKP  Musuan             49.79 294 eP      P        10 04 55.4 +0.4
BUTP  Butuan             49.80 296 eP      P        10 04 55.1 +0.2
BNSI  Bone               50.00 277 P       P        10 04 58.2 +1.8
      comp=Z,7µmcomp=Z,450nm,1.4s
KAPI  Kappang            50.18 276 P       P        10 04 58.2 +0.5
      comp=Z,208nm,0.8s,baz=130,slow=5.0,SNR=45
KAPI                               pP      pP       10 06 53.0 +0.6
      comp=Z,44nm,0.8s,baz=94,slow=6.8,SNR=3.1
KAPI                               ScP     ScP      10 09 02.5 +2.5
      comp=Z,59nm,1.0s,baz=6.8,slow=1.5,SNR=4.9
KAPI                               S       S        10 11 26.1 +2.1
      comp=Z,30nm,1.0s,baz=217,slow=22,SNR=13
KLBR  Kellerberrin       50.22 241 P       P        10 04 57.5 -0.3
      baz=50,SNR=182
CTBH  Cotabato--PC H     50.23 293⇓eP      P        10 04 59.1 +1.0
SPSI  Sidrap Palu        50.44 277 P       P        10 04 59.5 -0.1
      comp=Z,3µmcomp=Z,232nm,0.9s
TTSI  Tana Toraja        50.65 278 P       P        10 05 01.9 +0.8
      comp=Z,5µmcomp=Z,2µmcomp=Z,155nm,0.8s
NWAO  Narrogin (SRO)     50.83 240 P       P        10 05 02.1  0.0
      comp=Z,1µm,0.7s,baz=92,slow=5.7,SNR=246
NWAO                               pP      pP       10 06 57.5 +0.4
      comp=Z,283nm,1.1s,baz=98,slow=8.7,SNR=5.6
NWAO                               ScP     ScP      10 09 03.9 +1.4
      comp=Z,27nm,0.6s,baz=152,slow=4.8,SNR=3.6
NWAO                               S       S        10 11 30.8 -1.3
      comp=Z,11nm,0.7s,baz=184,slow=19,SNR=1.9
NWAO  Narrogin (SRO)     50.83 240 IAmb    IAmb     10 05 04.8
      comp=Z,1µm,0.9s
BLDU  Ballidu            51.01 243 P       P        10 05 03.3 -0.2
      baz=51,SNR=107
MSLP  Maasin             51.01 296 eP      P        10 05 04.9 +1.2
PLAI  Plampang           51.21 271 P       P        10 05 05.3 +0.2
      comp=Z,8µmcomp=Z,11µmcomp=Z,1µm,0.9s
PAGZ  Pagadian           51.27 293 eP      P        10 05 06.2 +0.7
RKGY  Rocky Gully        51.28 237 P       P        10 05 05.9 +0.6
      baz=51,SNR=161
MORW  Morawa             51.46 245 P       P        10 05 06.9 +0.2
      baz=52,SNR=203
MORW  Morawa             51.46 245 P       P        10 05 06.5 -0.2
MUN   Mundaring          51.57 241 P       P        10 05 07.3 -0.1
      baz=52,SNR=116
MPSI  Mapaga             51.61 282 P       P        10 05 09.2 +1.2
      comp=Z,5µmcomp=Z,3µmcomp=Z,200nm,1.2s
OCLP  Ormoc              51.67 297 eP      P        10 05 10.3 +2.0
CNP   Catarman           52.33 299 eP      P        10 05 12.1 -1.0
GIRL  Giralia            52.97 253 P       P        10 05 19.0 +1.4
      baz=53,SNR=128
GIRL  Giralia            52.97 253 P       P        10 05 17.6  0.0
GUIM  Jordan             53.21 296 eP      P        10 05 19.4  0.0
PVCP  Virac              53.30 300 eP      P        10 05 20.2 +0.3
RCP   Roxas              53.51 297⇓eP      P        10 05 22.8 +1.4
H01W1 Cape Leeuwin H     53.62 237 P       P        10 05 23.7 +2.1
      baz=99,slow=7.5,SNR=31
H01W3 Cape Leeuwin H     53.63 237 P       P        10 05 23.7 +2.0
      baz=99,slow=7.5,SNR=36
H01W2 Cape Leeuwin H     53.64 237 P       P        10 05 23.8 +2.0
      baz=99,slow=7.5,SNR=20
DNP   Denpasar           53.72 270 P       P        10 05 24.1 +1.2
      comp=Z,29µmcomp=Z,2µm,0.6s
IGBI  Denpasar           53.75 270 P       P        10 05 24.5 +1.3
      comp=Z,5µmcomp=Z,17µmcomp=Z,2µm,1.1s
SRBI  Singaraja          53.84 271 P       P        10 05 23.8  0.0
      comp=Z,7µmcomp=Z,9µmcomp=Z,603nm,0.9s
SMKI  Samarinda          53.91 280 P       P        10 05 27.2 +2.9
      comp=Z,6µmcomp=Z,11µmcomp=Z,854nm,1.0s
BKB   Balikpapan         53.96 279 P       P        10 05 29.3 +4.7
      comp=Z,7µmcomp=Z,5µmcomp=Z,394nm,1.4s
BKB   Balikpapan         53.96 279 P       P        10 05 26.5 +1.9
BKB                                IAmb    IAmb     10 05 29.5
      comp=Z,444nm,1.2s
KBKI  Kotabaru           54.08 277 P       P        10 05 26.3 +0.8
      comp=Z,2µmcomp=Z,269nm,0.9s
OTRP  Odiongan           54.52 297 eP      P        10 05 27.9 -0.5
CUYO  Cuyo Island        54.69 295 eP      P        10 05 31.0 +1.4
JAGI  Jajag, Banyuwa     54.79 270 P       P        10 05 29.3 -1.1
      comp=Z,5µmcomp=Z,9µmcomp=Z,805nm,0.8s
JAGI  Jajag, Banyuwa     54.79 270 P       P        10 05 28.8 -1.6
JAGI                               IAmb    IAmb     10 05 32.8
      comp=Z,713nm,0.9s
BOAC  Boac               55.19 298 eP      P        10 05 33.8 +0.8
KMMI  Kalianget          55.27 272 P       P        10 05 35.2 +1.5
      comp=Z,5µmcomp=Z,358nm,0.9s
GMJI  Gumukmas           55.51 270 P       P        10 05 35.2 -0.2
      comp=Z,6µmcomp=Z,7µmcomp=Z,414nm,0.7s
POLP  Polilio Island     55.73 300 eP      P        10 05 38.0 +1.3
BUSP  Coron              55.92 296 eP      P        10 05 38.1 -0.1
ENPP  El Nido            56.25 295 eP      P        10 05 41.8 +1.4
TGY   Tagaytay City      56.27 298 S       S        10 12 44.3 +0.5
      comp=Z,56nm,0.3s,baz=106,slow=7.4,SNR=2.6
TGY                                ScS     ScS      10 14 25.2 +0.8
      comp=Z,104nm,0.3s,baz=8.6,slow=18,SNR=1.7
SPMM  Sapulut            56.33 286 P       P        10 05 45.0 +4.0
BALP  Baler              56.53 301 eP      P        10 05 43.5 +1.3
BATP  Bataraza           56.67 291 eP      P        10 05 44.8 +1.5
LUBP  Lubang             56.68 298 eP      P        10 05 42.4 -0.9
GRJI  Gresik             56.74 271 P       P        10 05 47.5 +3.7
      comp=Z,2µmcomp=Z,216nm,1.0s
CAUP  Cauayan            56.94 302 eP      P        10 05 45.3 +0.3
KKM   Kota Kinabalu      57.05 287 P       P        10 05 46.0  0.0
KKM                                IAmb    IAmb     10 05 49.9
      comp=Z,1µm,1.7s
PWJI  Pagerwojo          57.15 270 P       P        10 05 46.6  0.0
      comp=Z,7µmcomp=Z,582nm,0.9s
SGCP  Mt. Cagua          57.43 303 eP      P        10 05 48.9 +0.6
SMPP  San Manuel, Pa     57.48 300 eP      P        10 05 48.6 -0.1
PCJI  Pacitan            57.72 270 P       P        10 05 51.1 +0.7
      comp=Z,16µmcomp=Z,2µm,1.1s
APYP  Conner             57.88 303 eP      P        10 05 51.5 +0.2
WOJI  Wonogiri, Jawa     58.04 270 P       P        10 05 53.3 +0.7
      comp=Z,5µmcomp=Z,8µmcomp=Z,772nm,1.0s
UWJI  Ujung Watu         58.34 272 P       P        10 05 57.1 +2.6
      comp=Z,3µmcomp=Z,276nm,1.3s
UGM   Wanagama           58.41 270 P       P        10 05 55.7 +0.6
      comp=Z,8µmcomp=Z,12µmcomp=Z,1µm,1.1s
UGM   Wanagama           58.41 270 P       P        10 05 54.9 -0.3
UGM                                IAmb    IAmb     10 05 58.4
      comp=Z,1µm,1.1s
PBKI  Pangkalan Bun      58.57 276 P       P        10 05 59.0 +2.9
      comp=Z,7µmcomp=Z,896nm,0.9s
SMRI  Semarang           58.68 271 P       P        10 05 58.2 +1.3
      comp=Z,10µmcomp=Z,12µmcomp=Z,1µm,0.9s
SMRI  Semarang           58.68 271 P       P        10 05 56.6 -0.2
SMRI                               IAmb    IAmb     10 06 01.3
      comp=Z,854nm,0.9s
INU   Inuyama            58.81 329 P       P        10 05 57.2  0.0
MJAR  Matsushiro Arr     59.18 331 P       P        10 05 59.6 -0.1
      comp=Z,37nm,0.7s,baz=159,slow=7.3,SNR=40
MJAR                               ScP     ScP      10 09 41.4 +2.4
      comp=Z,8.3nm,0.5s,baz=133,slow=5.1,SNR=7.6
MAJO  Matsushiro         59.18 331deP      P        10 05 59.9 +0.2
MAJO                               pmax    pmax
      comp=Z,104nm,1.0s
MAJO  Matsushiro         59.18 331 P       P        10 05 59.4 -0.4
MAT   Matsushiro         59.18 331 P       P        10 05 59.2 -0.5
MAT                                S       S        10 13 22.4 +2.7
MJB9  Matsu-Tunnel       59.19 331 P       P        10 05 59.4 -0.4
STKI  Sintang            59.53 279 P       P        10 06 04.2 +1.7
      comp=Z,331nm,1.1s
SBUM  Sibu               59.55 282 P       P        10 06 03.6 +0.9
SBUM  Sibu               59.55 282 P       P        10 06 04.0 +1.4
KPJI  Karang Pucung      60.08 270 P       P        10 06 06.6 +0.5
      comp=Z,6µmcomp=Z,7µmcomp=Z,917nm,1.0s
JNU   Nakatsue           60.48 323 P       P        10 06 08.4 +0.1
      comp=Z,78nm,0.9s,baz=110,slow=3.8,SNR=19
JNU   Nakatsue           60.48 323 P       P        10 06 07.9 -0.4
YULB  Yu-li              60.80 308 P       P        10 06 09.3 -1.3
KSM   Kuching            61.06 280 P       P        10 06 12.9 +0.3
KSM                                IAmb    IAmb     10 06 16.4
      comp=Z,346nm,0.8s
KSM   Kuching            61.06 280 P       P        10 06 14.0 +1.5
CISI  Cisompet, Garu     61.11 269 P       P        10 06 12.6 -0.3
      comp=Z,6µmcomp=Z,1µm,0.6s
CISI  Cisompet, Garu     61.11 269 P       P        10 06 12.1 -0.8
CISI                               IAmb    IAmb     10 06 16.6
      comp=Z,868nm,0.6s
TPUB  Ta-pu              61.26 307 P       P        10 06 11.6 -2.0
SSLB  Suanglung          61.28 308 P       P        10 06 12.8 -0.9
YHNB  Yeheng             61.45 309 P       P        10 06 15.0 +0.1
LEM   Lembang            61.46 270 S       S        10 13 49.1 +0.1
      comp=Z,148nm,1.0s,baz=296,slow=19,SNR=17
ERM   Erimo              61.69 338⇑eP      P        10 06 17.2 +1.3
ERM                                pmax    pmax
      comp=Z,34nm,0.7s
CNJI  Cibinong           61.83 270 P       P        10 06 17.3 -0.2
      comp=Z,6µmcomp=Z,11µmcomp=Z,1µm,0.9s
CBJI  Citeko             62.30 270 P       P        10 06 20.6 +0.1
      comp=Z,20µmcomp=Z,2µm,0.9s
DBJI  Dramaga            62.37 270 P       P        10 06 17.8 -3.2
      comp=Z,45µmcomp=Z,723nm,1.2s
SKJI  Sukabumi           62.45 270 P       P        10 06 22.0 +0.5
      comp=Z,24µmcomp=Z,3µm,0.9s
YUK   Yuzh-Kuril'sk      62.54 341 eP      P        10 06 20.0 -1.4
YUK                                e                10 06 52.8
YUK                                e                10 08 49.7
YUK                                eS      S        10 13 59.5 -1.1
YUK                                e                10 15 09.3
YUK                                eSS     SS       10 18 22.9 +0.5
YUK                                 pmax   pmax
      comp=Z,343nm,0.7s
YUK                                 pmax   pmax
      comp=N,130nm,0.5s
YUK                                 pmax   pmax
      comp=E,171nm,0.8s
YUK                                 pmax   pmax
      comp=Z,312nm,1.8s
VNDA  Vanda              62.83 182 P       P        10 06 23.6 +0.9
      comp=Z,206nm,0.7s,baz=356,slow=7.0,SNR=384
VNDA                               S       S        10 14 04.0 +0.7
      comp=Z,2.2nm,0.9s,baz=86,slow=14,SNR=2.0
VNDA  Vanda              62.83 182 P       P        10 06 23.9 +1.1
VNDA                               pmax    pmax
      comp=Z,225nm,0.8s
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VNDA	Vanda	62.83	182	P	P	10 06 23.9	+1.1
KUR	Kuril'sk	63.02	343	eP	P	10 06 24.5	+0.1
KUR				i		10 08 31.2	
KUR				i PPP	PPP	10 09 40.7	
KUR				i S	S	10 14 08.6	+2.3
KUR				pmax	pmax		
	comp=Z,424nm,1.0s						
KUR				pmax	pmax		
	comp=Z,2µm,2.9s						
KUR				MLR	MLR		
	comp=Z,700nm,15.0s						
SBA	Scott Base	63.05	181	P	P	10 06 26.0	+1.8
SBA				pmax	pmax		
	comp=Z,1µm,1.0s						
SBA	Scott Base	63.05	181	P	P	10 06 26.0	+1.8
SBJI	Serang	63.06	271	P	P	10 06 26.1	+0.7
	comp=Z,18µmcomp=Z,1µm,1.1s						
QZH	Quanzhou	63.71	308	P	P	10 06 25.6	-3.6
QZH				pP	pP	10 08 30.8	-2.3
QZH				S	S	10 14 15.9	+0.4
QZH				sS	sS	10 17 54.2	-3.0
JKA	Kamikawa-asahi	63.71	338	P	P	10 06 29.8	+0.9
ASAJ	Asahikawa	63.72	338	P	P	10 06 29.8	+0.9
	comp=Z,160nm,0.8s,baz=215,slow=9.9,SNR=68						
PPBI	Pangkal Pinang	64.04	275	P	P	10 06 32.7	+1.1
	comp=Z,5µmcomp=Z,19µmcomp=Z,283nm,0.9s						
BLSI	Bandar Lampung	64.10	271	P	P	10 06 32.1	+0.1
	comp=Z,4µmcomp=Z,6µmcomp=Z,649nm,0.8s						
CASY	Casey	64.38	203	P	P	10 06 34.0	+1.3
CASY				IAmb	IAmb	10 06 35.7	
	comp=Z,594nm,0.6s						
TJN	Taejon	64.82	323	⇑eP	P	10 06 36.4	+0.4
PMBI	Palembang	65.15	274	P	P	10 06 41.9	+3.3
	comp=Z,1µm,1.0s						
PMBI	Palembang	65.15	274	P	P	10 06 39.5	+0.9
KSRS	Korea Array	65.25	324	P	P	10 06 39.5	+0.9
	comp=Z,26nm,1.0s,baz=140,slow=6.3,SNR=40						
KSRS				pP	pP	10 08 44.4	+0.5
	comp=Z,5.1nm,0.7s,baz=138,slow=7.5,SNR=3.3						
KSRS				PP	PP	10 09 14.8	+0.2
	comp=Z,7.5nm,1.0s,baz=132,slow=5.8,SNR=3.2						
KS19	Wonju Array Si	65.31	324	P	P	10 06 39.0	0.0
LWLI	Liwa	65.33	271	P	P	10 06 39.7	-0.1
	comp=Z,59µmcomp=Z,415nm,0.6s						
MDSI	Maura Dua	65.34	272	P	P	10 06 38.3	-1.4
	comp=Z,4µmcomp=Z,236nm,0.9s						
HKPS	Hong Kong Po S	65.86	303	P	P	10 06 41.3	-1.4
INCN	Inchon	66.01	323	P	P	10 06 42.7	-0.7
INCN				pmax	pmax		
	comp=Z,170nm,1.3s						
INCN	Inchon	66.01	323	P	P	10 06 42.7	-0.7
YSS	Yuzh-Sakhalins	66.14	340	d iP	P	10 06 45.0	+1.1
YSS				e*PP	pP	10 08 49.7	+0.3
YSS				e*SP	sP	10 09 57.0	+0.9
YSS				i S	S	10 14 46.1	+2.7
YSS				e		10 15 11.4	
YSS				pmax	pmax		
	comp=Z,2µm,4.0s						
YSS				pmax	pmax		
	comp=Z,330nm,0.8s						
YSS				smax	smax		
	comp=E,2µm,8.0s						
YSS				MLR	MLR		
	comp=Z,600nm,19.0s						
YSS	Yuzh-Sakhalins	66.14	340	P	P	10 06 44.6	+0.7
YSS				IAmb	IAmb	10 06 48.6	
	comp=Z,314nm,0.9s						
DLV	T Lat	66.33	290	P	P	10 06 48.1	+2.1
DLV				IAmb	IAmb	10 06 50.6	
	comp=Z,305nm,1.1s						
SKR	Severo-Kuril's	66.34	351	eP	P	10 06 43.6	-1.4
SKR				e		10 07 12.0	
SKR				ePPP	PPP	10 09 57.7	
SKR				eS	S	10 14 44.3	-1.2
SKR				pmax	pmax		
	comp=Z,1µm,3.7s						
SKR				pmax	pmax		
	comp=Z,257nm,1.0s						
TPRI	Tanjung Pinang	66.43	278	P	P	10 06 49.0	+2.6
	comp=Z,11µmcomp=Z,26µmcomp=Z,319nm,1.2s						
MNAI	Manna	66.55	272	P	P	10 06 48.1	+0.9
	comp=Z,6µmcomp=Z,16µmcomp=Z,941nm,1.0s						
MNAI	Manna	66.55	272	P	P	10 06 46.5	-0.8
MNAI				IAmb	IAmb	10 06 49.8	
	comp=Z,952nm,1.0s						
TEY	Ternei	66.79	335	⇓eP	P	10 06 48.2	+0.3
TEY				pmax	pmax		
	comp=N,10.0nm,1.2s						
TEY				pmax	pmax		
	comp=Z,20nm,1.5s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.1s						
GZH	Guangzhou	66.89	303	P	P	10 06 50.2	+1.2
GZH				pP	pP	10 08 55.6	+1.0
GZH				sP	sP	10 10 01.3	-0.5
GZH				S	S	10 14 55.4	+2.3
GZH				ScS	ScS	10 15 46.3	+1.2
GZH				sS	sS	10 18 39.7	+1.7
MSHR	Mys Shultsa	67.29	330	d iP	P	10 06 51.6	+0.6
MYKOM	Kota Tinggi	67.32	278	P	P	10 06 52.1	+0.2
MYKOM	Kota Tinggi	67.32	278	P	P	10 06 53.0	+1.1
VLA	Vladivostok	67.35	331	deP	P	10 06 52.2	+0.8
VLA				pmax	pmax		
	comp=Z,174nm,1.7s						
KIWB	Kanaga Island	67.37	9	P	P	10 06 51.4	+0.1
SMY	Shemya	67.39	3	P	P	10 06 51.4	0.0
SMY				pmax	pmax		
	comp=Z,818nm,0.7s						
SMY	Shemya	67.39	3	P	P	10 06 51.4	0.0
ADK	Adak	67.47	9	P	P	10 06 51.4	-0.5
ADK				pmax	pmax		
	comp=Z,436nm,1.1s						
ADK	Adak	67.47	9	P	P	10 06 51.4	-0.5
ADK				IAmb	IAmb	10 06 54.2	
	comp=Z,436nm,1.1s						
NJ2	Nanjing	67.50	314	⇑P	P	10 06 53.7	+1.1
NJ2				S	S	10 15 00.9	+1.0
NJ2				ScS	ScS	10 15 52.4	+2.9
NJ2				sS	sS	10 18 46.0	+0.6
NJ2				SS	SS	10 19 42.3	+3.4
NJ2				pmax	pmax		
	comp=Z,54nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,430nm,4.3s						
GSTR	Great Sitkin T	67.77	9	P	P	10 06 53.6	-0.2
QIZ	Qiongzhong	67.97	298	P	P	10 06 55.0	-0.7
QIZ				pP	pP	10 09 01.5	+0.2
QIZ				sP	sP	10 10 10.6	+3.0
QIZ				S	S	10 15 06.2	+0.4
QIZ				sS	sS	10 18 52.4	+0.7
QIZ				pmax	pmax		
	comp=Z,670nm,6.0s						
QIZ	Qiongzhong	67.97	298	P	P	10 06 54.3	-1.4
USA0B	Ussuriysk Arra	68.13	332	P	P	10 06 55.5	-0.6
USA0B				pmax	pmax		
	comp=Z,84nm,1.0s						
USA0B	Ussuriysk Arra	68.13	332	P	P	10 06 55.5	-0.6
USRK	Ussuriysk Ar.	68.13	332	P	P	10 06 56.9	+0.8
	comp=Z,76nm,1.0s,baz=131,slow=5.3,SNR=49						
USRK				PKPPKP	P'P'df	10 35 06.2	+1.6
	comp=Z,3.2nm,0.9s,baz=330,slow=5.0,SNR=5.6						
ATKA	Atka Island	68.18	11	P	P	10 06 55.3	-0.9
ATKA				IAmb	IAmb	10 06 58.8	
	comp=Z,760nm,0.9s						
PET	Petropavlovsk	68.26	353	d iP	P	10 06 57.0	+0.3
PET				e		10 07 22.9	
PET				e*PP	pP	10 09 02.6	-0.8
PET				e*SP	sP	10 10 09.0	-0.8
PET				eS	S	10 15 07.4	-0.4
PET				eSS	SS	10 19 57.6	+7.8
PET				pmax	pmax		
	comp=Z,2µm,7.3s						
PET				pmax	pmax		
	comp=Z,230nm,1.2s						
PET				pmax	pmax		
	comp=Z,1µm,9.6s						
PET	Petropavlovsk	68.26	353	P	P	10 06 56.3	-0.4
PEA0B	Petropavlovsk-	68.47	352	d iP	P	10 06 58.3	+0.3
PEA0B	Petropavlovsk-	68.47	352	P	P	10 06 57.5	-0.4
PEA0B				IAmb	IAmb	10 07 01.1	
	comp=Z,499nm,1.1s						
PETK	Petropavlovsk-	68.47	352	P	P	10 06 58.3	+0.4
	comp=Z,234nm,0.7s,baz=147,slow=6.5,SNR=264						
KRJI	Kerinci	68.56	274	P	P	10 07 00.2	+0.7
	comp=Z,11µmcomp=Z,889nm,1.0s						
SDSI	Sungai Dareh	68.90	275	P	P	10 07 00.9	-0.5
	comp=Z,8µmcomp=Z,159nm,1.2s						
MDJ	Mudanjiang	69.57	331	P	P	10 07 05.9	+1.2
MDJ				pP	pP	10 09 12.5	+0.2
MDJ				sP	sP	10 10 18.7	0.0
MDJ				S	S	10 15 26.5	+3.4
MDJ				ScS	ScS	10 16 08.0	+2.6
MDJ				sS	sS	10 19 13.2	+2.7
MDJ				SS	SS	10 20 13.6	+3.6
MDJ				pmax	pmax		
	comp=Z,140nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,1µm,11.2s						
MDJ	Mudanjiang	69.57	331	P	P	10 07 04.1	-0.6
BKNI	Bangkinang	69.61	276	P	P	10 07 07.1	+1.4
	comp=Z,6µmcomp=Z,10µmcomp=Z,957nm,1.0s						
BKNI	Bangkinang	69.61	276	P	P	10 07 06.0	+0.3
TYV	Tymovskoe	69.61	342	eP	P	10 07 06.3	+1.5
TYV				eS	S	10 15 24.8	+1.5
TYV				pmax	pmax		
	comp=Z,1µm,3.9s						
TYV				pmax	pmax		
	comp=Z,172nm,1.0s						
TYV				smax	smax		
	comp=E,16nm,1.8s						
TYV				smax	smax		
	comp=E,3µm,9.9s						
PPSI	Pulau Pagai	69.80	273	P	P	10 07 09.2	+2.5
	comp=E,9µmcomp=E,813nm,1.1s						
PDSI	Padang	69.84	275	P	P	10 07 06.2	-0.8
	comp=E,2µmcomp=E,2µmcomp=E,149nm,1.0s						
WHN	Wuhan	69.87	311	P	P	10 07 07.7	+0.9
WHN				pP	pwP	10 09 18.9	+1.6
WHN				sP	sP	10 10 19.8	-1.4
WHN				S	S	10 15 27.2	+0.1
WHN				SKS	SKKSac	10 16 06.9	+0.3
WHN				sS	sS	10 19 10.8	-4.0
WHN				SS	SS	10 20 16.9	+1.8
WHN				pmax	pmax		
	comp=E,170nm,1.3s						
WHN				pmax	pmax		
	comp=E,1µm,4.2s						
DL2	Dalian	69.89	322	⇓iP	P	10 07 07.2	+0.5
DL2				pP	pP	10 09 14.5	-0.1
DL2				sP	sP	10 10 22.4	+1.6
DL2				S	S	10 15 28.3	+1.3
DL2				ScS	ScS	10 16 10.5	+2.3
DL2				sS	sS	10 19 17.8	+3.1
DL2				pmax	pmax		
	comp=E,220nm,0.8s						
DL2				pmax	pmax		
	comp=E,540nm,3.8s						
NIKH	Nikolski High	69.99	14	P	P	10 07 06.1	-0.9
SNY	Shenyang	70.69	325	⇓P	P	10 07 11.5	+0.2
SNY				pP	pP	10 09 19.6	+0.1
SNY				sP	sP	10 10 24.1	-1.5
SNY				S	S	10 15 37.9	+2.1
SNY				sS	sS	10 19 18.1	-6.2
SNY				SS	SS	10 20 33.8	+6.8
SNY				pmax	pmax		
	comp=E,430nm,4.3s						
COCO	West Island	70.74	262	P	P	10 07 13.3	+1.1
COCO				pmax	pmax		
	comp=Z,1µm,1.2s						
COCO	West Island	70.74	262	P	P	10 07 13.2	+1.1
IPM	Ipoh	70.80	280	P	P	10 07 12.5	-0.1
IPM				IAmb	IAmb	10 07 16.3	
	comp=Z,520nm,1.1s						
IPM	Ipoh	70.80	280	P	P	10 07 14.0	+1.3
CN2	Changchun	71.04	328	eP	P	10 07 13.6	+0.3
CN2				pP	pwP	10 09 28.2	+2.4
CN2				eS	S	10 15 40.1	+0.4
CN2				sS	sS	10 19 26.7	-1.8
CN2				pmax	pmax		
	comp=Z,100nm,1.2s						
CN2				pmax	pmax		
	comp=Z,470nm,5.6s						
SISI	Saibi	71.05	274	P	P	10 07 15.8	+1.7
	comp=Z,3µmcomp=Z,210nm,1.2s						
TIA	Tai'an	71.08	317	P	P	10 07 14.6	+0.8
TIA				S	S	10 15 40.0	-0.5
TIA				pmax	pmax		
	comp=Z,140nm,1.6s						
UNV	Unalaska Valle	71.34	15	P	P	10 07 13.7	-1.1
UNV				IAmb	IAmb	10 07 16.9	
	comp=Z,469nm,1.0s						
KULM	Kulim	71.40	281	P	P	10 07 16.3	+0.1
KULM	Kulim	71.40	281	P	P	10 07 17.0	+0.9
GRNR	Gornyy	71.58	338	⇓iP	P	10 07 17.6	+1.3
GRNR				eS	S	10 15 43.6	-1.8
GRNR				pmax	pmax		
	comp=Z,150nm,1.3s						
AKUT	Akutan	71.79	15	P	P	10 07 16.0	-1.4
AKUT				IAmb	IAmb	10 07 18.8	
	comp=Z,201nm,0.8s						
KLR	Kul'dur	72.13	335	P	P	10 07 20.5	+1.0
	comp=Z,36nm,0.7s,baz=131,slow=4.7,SNR=102						
PBSI	Pulau Batu	72.17	275	P	P	10 07 22.7	+2.2
	comp=Z,6µmcomp=Z,7µmcomp=Z,477nm,1.3s						
NKL	Nikolayevsk	72.21	342	eP	P	10 07 18.2	-1.6
NKL				e		10 09 27.6	
NKL				e		10 10 35.0	
NKL				eS	S	10 15 55.1	+2.9
NKL				e		10 16 31.0	
NKL				pmax	pmax		
	comp=N,4.0nm,1.0s						
NKL				pmax	pmax		
	comp=Z,157nm,1.0s						
NKL				pmax	pmax		
	comp=E,9.0nm,1.3s						
NKL				pmax	pmax		
	comp=Z,62nm,4.4s						
NKL				smax	smax		
	comp=N,8.0nm,1.9s						
NKL				smax	smax		
	comp=E,24nm,4.0s						
RPSI	Rantau Prapat	72.30	278	P	P	10 07 20.5	-0.8
RPSI				IAmb	IAmb	10 07 24.2	
	comp=Z,571nm,1.0s						
PSI	Prapat	72.33	278	S	S	10 15 55.3	-0.2
	comp=Z,19nm,0.9s,baz=244,slow=22,SNR=19						
PSI	Prapat	72.33	278	P	P	10 07 20.5	-1.1
PSI				pmax	pmax		
	comp=Z,571nm,1.0s						
FALS	False Pass	73.04	16	P	P	10 07 23.2	-1.4
FALS				IAmb	IAmb	10 07 26.5	
	comp=Z,309nm,1.0s						
ENH	Enshi	73.36	308	P	P	10 07 27.7	+0.7
SPIA	Saint Paul Isl	73.63	11	P	P	10 07 26.1	-1.7
KCSI	Kotacane, Aceh	73.63	278	P	P	10 07 28.2	-0.7
	comp=Z,2µmcomp=Z,238nm,0.9s						
GYA	Guiyang	73.83	304	⇓iP	P	10 07 31.6	+1.8
GYA				pP	pP	10 09 41.9	+1.7
GYA				PP	PP	10 10 30.2	+2.9
GYA				S	S	10 16 10.5	-0.9
GYA				SS	SS	10 21 21.1	+6.0
GYA				pmax	pmax		
	comp=Z,60nm,1.0s						
BJT	Baijiatuau	73.91	320	P	P	10 07 30.4	+0.5
BJT				pmax	pmax		
	comp=Z,104nm,1.4s						
BJT	Baijiatuau	73.91	320	P	P	10 07 30.4	+0.5
BJI	Beijing	73.92	320	P	P	10 07 30.4	+0.5
BJI				pP	pP	10 09 39.6	-0.6
BJI				S	S	10 16 14.1	+2.5
BJI				pmax	pmax		
	comp=Z,250nm,4.1s						
SLVN	Son La	73.99	298	P	P	10 07 30.4	-0.5
CNBA	Chernabura Isl	74.08	18	P	P	10 07 29.4	-1.0
CNBA				IAmb	IAmb	10 07 32.9	
	comp=Z,310nm,1.0s						
TPTI		74.13	278	P	P	10 07 30.6	-1.0
	comp=Z,596nmcomp=Z,47nm,1.1s						
SDPT	Sand Point	74.28	17	P	P	10 07 30.0	-1.5
SDPT				IAmb	IAmb	10 07 33.0	
	comp=Z,517nm,1.0s						
SNSI	Sinabang, Aceh	74.71	277	P	P	10 07 37.8	+2.9
	comp=Z,8µmcomp=Z,690nm,1.1s						
PBKT	Sadao Pong	74.79	292	P	P	10 07 35.3	+0.1
LHMI	Lhok Sumawe	74.91	280	P	P	10 07 39.8	+3.8
	comp=Z,7µmcomp=Z,5µmcomp=Z,506nm,1.0s						
TIY	Taiyuan	75.03	316	eP	P	10 07 37.5	+1.2
TIY				sP	sP	10 10 51.6	-1.1
TIY				S	S	10 16 25.7	+1.8
TIY				SKS	SKSac	10 16 43.6	-1.3
TIY				pmax	pmax		
	comp=Z,63nm,1.1s						
MLSI	Meulaboh, Aceh	75.15	279	P	P	10 07 37.9	+0.5
	comp=Z,10µmcomp=Z,1µm,1.1s						
QSPA	South Pole Qui	75.19	180	P	P	10 07 37.5	+0.7
	comp=Z,674nm,0.9s,baz=359,slow=1.3,SNR=1338						
QSPA				S	S	10 16 25.6	+0.8
	comp=Z,40nm,1.1s,baz=158,slow=22,SNR=20						
QSPA				PKKPbc	PKKPbc	10 26 49.8	-5.2
	comp=Z,1.9nm,0.8s,baz=197,slow=1.8,SNR=5.2						
QSPA	South Pole Qui	75.19	180	P	P	10 07 37.4	+0.6
RPN	Rapa Nui	75.36	115	P	P	10 07 38.5	+0.2
	comp=Z,54nm,0.6s,baz=312,slow=4.3,SNR=3.1						
XAN	Xi'an	75.60	311	P	P	10 07 40.2	+0.7
XAN				PcP	PcP	10 07 52.7	+4.0
XAN				S	S	10 16 30.5	+0.5
XAN				pmax	pmax		
	comp=Z,80nm,1.1s						
XAN				pmax	pmax		
	comp=Z,350nm,4.3s						
XAN	Xi'an	75.60	311	P	P	10 07 40.7	+1.2
XAN				pmax	pmax		
	comp=Z,132nm,1.3s						
XAN	Xi'an	75.60	311	P	P	10 07 40.7	+1.2
CHGN	Chignik	75.69	18	P	P	10 07 38.3	-1.0
CHGN				IAmb	IAmb	10 07 43.7	
	comp=Z,264nm,0.7s						
MA2	Magadan	75.75	350	P	P	10 07 39.4	-0.2
	comp=Z,176nm,0.8s,baz=145,slow=5.3,SNR=39						
MA2	Magadan	75.75	350	d iP	P	10 07 38.9	-0.7
MA2				pmax	pmax		
	comp=Z,247nm,1.0s						
MA2	Magadan	75.75	350	P	P	10 07 39.0	-0.7
CHIR	Chirikof Islan	76.14	19	P	P	10 07 41.6	-0.2
CHIR				IAmb	IAmb	10 07 44.2	
	comp=Z,345nm,0.8s						
KMI	Kunming	76.48	301	P	P	10 07 46.1	+1.4
KMI				pP	pP	10 09 59.9	+3.4
KMI				sP	sP	10 11 04.6	+2.7
KMI				S	S	10 16 42.6	+2.5
KMI				SS	SS	10 21 57.8	+2.9
KMI				pmax	pmax		
	comp=Z,110nm,1.0s						
KMI				pmax	pmax		
	comp=Z,680nm,6.6s						
KMI	Kunming	76.48	301	P	P	10 07 46.0	+1.4
KMI				pmax	pmax		
	comp=Z,79nm,0.7s						
KMI	Kunming	76.48	301	P	P	10 07 46.0	+1.4
SII	Sitkinak Islan	77.21	19	P	P	10 07 47.5	-0.1
SII				IAmb	IAmb	10 07 51.5	
	comp=Z,648nm,0.8s						
CM31	Chiang Mai Arr	77.26	293	P	P	10 07 50.3	+1.5
CM31				IAmb	IAmb	10 07 53.9	
	comp=Z,180nm,0.8s						
CMAR	Chiang Mai Arr	77.26	293	P	P	10 07 50.7	+1.9
	comp=Z,131nm,0.8s,baz=124,slow=3.9,SNR=220						
CMAR				pP	pP	10 10 00.3	-0.1
	comp=Z,19nm,1.0s,baz=123,slow=4.4,SNR=3.2						
CMAR				PKKPbc	PKKPbc	10 26 48.6	+0.5
	comp=Z,1.0nm,0.3s,baz=285,slow=4.4,SNR=4.2						
CMAR				PKPPKP	P'P'df	10 34 51.2	-0.2
	comp=Z,0.8nm,0.4s,baz=271,slow=4.1,SNR=2.7						
HHC	Hu-ho-hao-te	77.29	319	eP	P	10 07 49.7	+1.1
HHC				pP	pP	10 09 57.7	-2.7
HHC				sP	sP	10 11 02.4	-3.1
HHC				S	S	10 16 50.5	+2.8
HHC				sS	sS	10 20 36.3	-5.8
HHC				pmax	pmax		
	comp=Z,1µm,1.1s						
HHC				pmax	pmax		
	comp=Z,5µm,5.8s						
CHTO	Chiang Mai	77.39	293	P	P	10 07 50.3	+0.8
CHTO				pmax	pmax		
	comp=Z,138nm,0.8s						
CHTO	Chiang Mai	77.39	293	P	P	10 07 50.3	+0.8
ZEA	Zeya	77.39	336	deP	P	10 07 49.2	+0.6
ZEA				e		10 11 06.0	
ZEA				eS	S	10 16 52.5	+4.6
ZEA				pmax	pmax		
	comp=N,100nm,1.0s						
ZEA				pmax	pmax		
	comp=E,30nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,180nm,1.2s						
ZEA				pmax	pmax		
	comp=N,800nm,5.0s						
ZEA				pmax	pmax		
	comp=Z,1µm,5.0s						
ZEA				pmax	pmax		
	comp=Z,800nm,14.0s						
ZEA				smax	smax		
	comp=E,4µm,8.0s						
ZEA				smax	smax		
	comp=N,4µm,9.0s						
HIA	Hailar	77.63	329	P	P	10 07 49.8	-0.3
HIA				pmax	pmax		
	comp=Z,64nm,0.9s						
HIA	Hailar	77.63	329	P	P	10 07 49.8	-0.3
OHAK	Old Harbor	78.04	19	P	P	10 07 52.2	+0.2
CD2	Chengdu	78.05	307	⇑iP	P	10 07 54.3	+1.5
CD2				pP	pwP	10 10 07.2	-0.3
CD2				PP	PP	10 10 59.0	-3.0
CD2				S	S	10 16 56.0	+0.1
CD2				sS	sS	10 20 52.5	+1.6
CD2				SS	SS	10 22 17.1	-0.6
CD2				pmax	pmax		
	comp=Z,100nm,1.1s						
CD2				pmax	pmax		
	comp=Z,680nm,5.9s						
BTO	Baotou	78.15	318	eP	P	10 07 54.9	+1.7
SEY	Seymchan	78.71	352	P	P	10 07 55.5	+0.1
	comp=Z,205nm,0.8s,baz=170,slow=5.3,SNR=319						
SEY				S	S	10 17 00.1	-1.2
	comp=Z,5.9nm,1.2s,baz=8.1,slow=19,SNR=11						
SEY	Seymchan	78.71	352	d iP	P	10 07 55.4	-0.1
KDAK	Kodiak Island	78.72	19	P	P	10 07 55.7	+0.1
	comp=Z,265nm,0.9s,baz=222,slow=3.0,SNR=71						
KDAK				pP	pP	10 10 08.6	+0.8
	comp=Z,66nm,1.1s,baz=164,slow=4.9,SNR=5.0						
KDAK	Kodiak Island	78.72	19	P	P	10 07 55.2	-0.4
KDAK				IAmb	IAmb	10 07 59.6	
	comp=Z,316nm,0.9s						
GAMB	Gambell	79.65	8	P	P	10 08 00.4	0.0
GAMB				IAmb	IAmb	10 08 04.0	
	comp=Z,371nm,1.0s						
LZH	Lanzhou	80.24	311	⇑P	P	10 08 06.4	+2.1
LZH				pP	pwP	10 10 19.5	-0.7
LZH				sP	sP	10 11 21.6	-0.9
LZH				S	S	10 17 21.4	+3.0
LZH				pmax	pmax		
	comp=Z,110nm,1.2s						
LZH				pmax	pmax		
	comp=Z,400nm,4.3s						
HOM	Homer	80.51	19	P	P	10 08 05.2	+0.3
CNPM	China Poot	80.53	19	P	P	10 08 05.0	-0.1
SVW2	Sparrevohn	80.54	16	P	P	10 08 05.3	+0.2
SVW2				IAmb	IAmb	10 08 08.3	
	comp=Z,690nm,1.4s						
RSO	Redoubt South	80.82	18	P	P	10 08 05.9	-0.9
BRLK	Bradley Lake	80.83	19	P	P	10 08 06.3	-0.3
ANM	Nome	81.39	11	P	P	10 08 09.9	+0.6
ANM				pmax	pmax		
	comp=Z,497nm,1.4s						
ANM	Nome	81.39	11	P	P	10 08 09.9	+0.6
ANM				IAmb	IAmb	10 08 12.8	
	comp=Z,497nm,1.4s						
SEW	Seward	81.55	19	P	P	10 08 09.5	-0.7
SEW				IAmb	IAmb	10 08 13.4	
	comp=Z,411nm,1.2s						
TTA	Tatalina	81.96	15	P	P	10 08 12.7	+0.3
TTA	Tatalina	81.96	15	P	P	10 08 12.7	+0.3
MID	Middleton Isla	82.07	21	P	P	10 08 12.6	-0.3
MID				pmax	pmax		
	comp=Z,465nm,1.0s						
MID	Middleton Isla	82.07	21	P	P	10 08 12.6	-0.3
MID				IAmb	IAmb	10 08 16.3	
	comp=Z,465nm,1.0s						
MCCM	Marconi Confer	82.07	47	P	P	10 08 13.1	-0.3
MCCM				IAmb	IAmb	10 08 16.7	
	comp=Z,403nm,0.8s						
SUA	Susitna One	82.21	18	P	P	10 08 13.0	-0.7
SUA				IAmb	IAmb	10 08 15.9	

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             comp=Z,198nm,0.4s
RC01   Rabbit Creek A   82.22  19  P        P        10 08 12.9  -0.7
RC01                               IAmb     IAmb     10 08 17.4
             comp=Z,565nm,1.1s
KCPM   Cahto Peak       82.26  46  P        P        10 08 15.4 +0.9
HOPS   Hopland Field    82.31  46  P        P        10 08 14.4  -0.2
HOPS                               IAmb     IAmb     10 08 19.0
             comp=Z,648nm,1.2s
SKT    Skwentna         82.39  17  P        P        10 08 12.5  -2.0
KMRM   Mail Ridge       82.41  45  P        P        10 08 16.2 +1.1
GDXM   Geysers          82.42  47  P        P        10 08 16.2 +1.0
GDXM                               IAmb     IAmb     10 08 19.2
             comp=Z,215nm,1.0s
CIT    Chita            82.43 329  eP       P        10 08 15.4 +0.4
CIT                                e                 10 10 29.9
CIT                                pmax     pmax
             comp=Z,273nm,1.4s
JCC    Jacoby Creek,    82.46  44  P        P        10 08 15.3 +0.1
JCC                                IAmb     IAmb     10 08 19.1
             comp=Z,529nm,1.4s
SAO    San Andreas Ge   82.52  49  P        P        10 08 16.1 +0.4
SAO                                pmax     pmax
             comp=Z,239nm,0.9s
SAO    San Andreas Ge   82.52  49  P        P        10 08 16.1 +0.4
SAO                                IAmb     IAmb     10 08 19.4
             comp=Z,239nm,0.9s
SNCC   San Nicolas Is   82.54  53  P        P        10 08 16.9 +1.0
SNCC                               IAmb     IAmb     10 08 19.7
             comp=Z,484nm,0.9s
SNCC   San Nicolas Is   82.54  53  P        P        10 08 17.3 +1.4
             baz=247,SNR=8.4
BILL   Bilibino         82.69 359d iP       P        10 08 15.4  -0.4
BILL                               e*PP     pP       10 10 31.1 +0.4
BILL                               e*SP     sP       10 11 32.9  -1.9
BILL                               e                 10 11 35.6
BILL                               pmax     pmax
             comp=Z,550nm,1.2s
BILL   Bilibino         82.69 359  P        P        10 08 15.6  -0.2
BILL                               IAmb     IAmb     10 08 18.9
             comp=Z,485nm,1.1s
KHMM   Horse Mountain   82.69  44  P        P        10 08 17.8 +1.2
KHMM                               IAmb     IAmb     10 08 20.6
             comp=Z,447nm,0.9s
MAW    Mawson           82.71 202  P        P        10 08 17.5 +1.4
             baz=83,SNR=59
MAW    Mawson           82.71 202  P        P        10 08 17.1 +1.1
             comp=Z,152nm,0.8s,baz=110,slow=6.5,SNR=93
MAW    Mawson           82.71 202  P        P        10 08 16.5 +0.5
HIN    Hinchinbrook I   82.73  20  P        P        10 08 15.2  -1.0
SCZ2   Santa Cruz Isl   82.75  52  P        P        10 08 18.0 +1.1
             baz=247,SNR=14
PMPB   Monarch Peak     82.77  50  P        P        10 08 18.1 +1.1
PMPB                               IAmb     IAmb     10 08 21.1
             comp=Z,410nm,1.0s
PMR    Palmer           82.80  18  P        P        10 08 15.5  -0.9
PMR                                pmax     pmax
             comp=Z,271nm,1.1s
PMR    Palmer           82.80  18  P        P        10 08 15.5  -0.9
PMR                                IAmb     IAmb     10 08 20.3
             comp=Z,271nm,1.1s
KRMB   Red Mountain     82.86  44  P        P        10 08 16.9  -0.5
KRMB                               IAmb     IAmb     10 08 21.4
             comp=Z,440nm,1.3s
KNK    Knik Glacier     82.87  19  P        P        10 08 16.0  -0.9
KNK                                IAmb     IAmb     10 08 19.4
             comp=Z,698nm,1.7s
SBC    Santa Barbara    82.87  52  P        P        10 08 18.9 +1.4
             baz=247,SNR=6.1
YAK    Yakutsk          82.87 342  P        P        10 08 17.1 +0.3
             comp=Z,146nm,0.8s,baz=113,slow=0.3,SNR=48
YAK                                S        S        10 17 34.2  -8.9
             comp=Z,8.1nm,0.4s,baz=243,slow=2.3,SNR=12
YAK    Yakutsk          82.87 342d iP       P        10 08 16.2  -0.6
YAK                                e*PP     pP       10 10 29.8  -1.2
YAK                                e                 10 11 33.8
YAK                                eS       S        10 17 38.5  -4.6
YAK                                pmax     pmax
             comp=Z,327nm,1.0s
YAK                                pmax     pmax
             comp=E,50nm,1.4s
YAK                                pmax     pmax
             comp=N,66nm,1.1s
YAK                                pmax     pmax
             comp=Z,505nm,5.1s
YAK                                pmax     pmax
             comp=N,334nm,4.8s
YAK                                pmax     pmax
             comp=E,188nm,4.1s
YAK                                smax     smax
             comp=N,1µm,3.2s
YAK                                smax     smax
             comp=E,305nm,2.9s
YAK    Yakutsk          82.87 342  P        P        10 08 16.0  -0.8
YAK                                IAmb     IAmb     10 08 19.8
             comp=Z,360nm,1.0s
GLI    Glacier Island   82.90  20  P        P        10 08 16.4  -0.6
GLI                                IAmb     IAmb     10 08 18.9
             comp=Z,171nm,0.6s
PPLA   Purkeypile       82.94  16  P        P        10 08 14.6  -2.8
KBO    Bosley Butte     82.96  43  P        P        10 08 16.3  -1.6
KBO                                IAmb     IAmb     10 08 21.8
             comp=Z,453nm,1.3s
PKM    Mcpherson Peak   82.97  51  P        P        10 08 19.3 +1.1
             baz=247,SNR=94
PAGB   Antelope Grade   82.98  50  P        P        10 08 18.4 +0.3
GHO    Glory Hole Cre   83.00  18  P        P        10 08 16.5  -1.1
GHO                                IAmb     IAmb     10 08 22.1
             comp=Z,829nm,1.8s
SMMC   Simmler          83.00  51  P        P        10 08 19.4 +1.2
             baz=246,SNR=55
FID    Port Fidalgo     83.00  20  P        P        10 08 15.8  -1.7
EYAK   Cordova Ski Ar   83.10  20  P        P        10 08 16.9  -1.1
KEBM   Edson Butte      83.19  42  P        P        10 08 19.4 +0.4
KEBM                               IAmb     IAmb     10 08 22.6
             comp=Z,419nm,1.1s
SCI2   San Clemente I   83.20  53  P        P        10 08 19.9 +0.8
             baz=248,SNR=13
SML    Sawmill          83.21  19  P        P        10 08 17.9  -0.6
SML                                IAmb     IAmb     10 08 23.4
             comp=Z,443nm,1.3s
BLG    Laguna Peak, P   83.23  52  P        P        10 08 19.9 +0.6
             baz=247,SNR=8.5
RAGM   Ragged Mountai   83.35  21  P        P        10 08 18.4  -0.9
RAGM                               IAmb     IAmb     10 09 07.6
             comp=Z,420nm,0.8s
L02E   Cave Junction    83.35  43  P        P        10 08 21.1 +1.4
             baz=243,SNR=33
WDC    Whiskeytown Da   83.37  45  P        P        10 08 19.2  -0.6
WDC                                pmax     pmax
             comp=Z,643nm,1.4s
WDC    Whiskeytown Da   83.37  45  P        P        10 08 19.1  -0.6
WDC                                IAmb     IAmb     10 08 24.3
             comp=Z,642nm,1.4s
N02D   Trinity Center   83.43  45  P        P        10 08 21.5 +1.3
             baz=244,SNR=146
CIS    Catalina Islan   83.46  53  P        P        10 08 21.0 +0.5
             baz=248,SNR=15
M02C   Callahan         83.51  44  P        P        10 08 22.0 +1.4
             baz=244,SNR=129
SCM    Sheep Creek Mo   83.54  19  P        P        10 08 18.4  -1.9
SCM                                pmax     pmax
             comp=Z,282nm,1.0s
SCM    Sheep Creek Mo   83.54  19  P        P        10 08 18.4  -1.9
SCM                                IAmb     IAmb     10 08 24.7
             comp=Z,282nm,1.0s
K02D   Willamette Mer   83.55  43  P        P        10 08 21.8 +1.1
             baz=243,SNR=68
J01E   Myrtle Point     83.58  42  P        P        10 08 21.7 +0.9
             baz=243,SNR=31
ORV    Oroville         83.65  46  P        P        10 08 21.5 +0.3
ORV                                pmax     pmax
             comp=Z,310nm,1.1s
ORV    Oroville         83.65  46  P        P        10 08 21.5 +0.3
ORV                                IAmb     IAmb     10 08 24.6
             comp=Z,310nm,1.1s
FMP    Fort Macarthur   83.67  53  P        P        10 08 22.2 +0.8
             baz=248,SNR=12
OSI    Osito Audit: C   83.69  52  P        P        10 08 22.1 +0.5
OSI                                IAmb     IAmb     10 08 26.2
             comp=Z,338nm,1.1s
OSI    Osito Audit: C   83.69  52  P        P        10 08 22.7 +1.1
             baz=247,SNR=16
ULN    Ulaanbaatar      83.70 323  P        P        10 08 21.2  -0.3
ULN                                pmax     pmax
             comp=Z,38nm,1.1s
ULN    Ulaanbaatar      83.70 323  P        P        10 08 21.1  -0.3
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O03E   Paynes Creek     83.75  46  P        P        10 08 22.3 +0.5
             baz=245,SNR=382
YBH    Yreka Blue Hor   83.76  44  P        P        10 08 22.0 +0.2
YBH                                pmax     pmax
             comp=Z,648nm,1.5s
YBH    Yreka Blue Hor   83.76  44  P        P        10 08 22.0 +0.2
YBH                                IAmb     IAmb     10 08 26.4
             comp=Z,648nm,1.4s
AFDM   Forest Hills D   83.77  47  P        P        10 08 20.9  -1.0
AFDM                               IAmb     IAmb     10 08 25.3
             comp=Z,434nm,1.0s
ARVC   Arvin            83.81  51  P        P        10 08 22.9 +0.8
             baz=247,SNR=117
KTH    Kantishna Hill   83.81  17  P        P        10 08 19.5  -2.0
KTH                                IAmb     IAmb     10 08 24.7
             comp=Z,193nm,0.8s
CMB    Columbia Colle   83.81  48  P        P        10 08 22.7 +0.6
CMB                                pmax     pmax
             comp=Z,368nm,1.0s
CMB    Columbia Colle   83.81  48  P        P        10 08 22.7 +0.6
CMB                                IAmb     IAmb     10 08 25.5
             comp=Z,368nm,1.0s
H02N1  VAN INLET T-PH   83.81  31  P        P        10 08 22.2 +0.4
             SNR=25
DIB    Dawson Inlet,    83.82  31  P        P        10 08 21.0  -0.7
DIB                                IAmb     IAmb     10 08 26.0
             comp=Z,278nm,0.9s
H02S1  DAWSON INLET T   83.82  31  P        P        10 08 22.2 +0.5
             SNR=129
DECC   Green Verdugo    83.85  52  P        P        10 08 22.8 +0.4
             baz=248,SNR=21
VOG    Valley Oaks Go   83.86  50  P        P        10 08 22.9 +0.6
             baz=247,SNR=34
VES    Vestal, Richgr   83.89  51  P        P        10 08 22.9 +0.4
             baz=247,SNR=128
TRF    Thorofare Moun   83.90  17  P        P        10 08 20.3  -1.8
TRF                                IAmb     IAmb     10 08 25.4
             comp=Z,214nm,0.9s
PASC   Pasadena Art C   83.93  52  P        P        10 08 22.9 +0.2
PASC                               IAmb     IAmb     10 08 25.8
             comp=Z,206nm,0.8s
HUMO   Hull Mountain    83.98  43  P        P        10 08 23.6 +0.8
HUMO                               IAmb     IAmb     10 08 26.7
             comp=Z,315nm,1.1s
MOBC   Moresby Island   84.04  31  P        P        10 08 22.2  -0.6
MOBC                               IAmb     IAmb     10 08 26.1
             comp=Z,218nm,0.9s
MWC    Mount Wilson     84.05  52  P        P        10 08 23.9 +0.4
MWC                                pmax     pmax
             comp=Z,516nm,1.1s
MWC    Mount Wilson     84.05  52  P        P        10 08 23.9 +0.4
MWC                                IAmb     IAmb     10 08 28.3
             comp=Z,516nm,1.1s
SONM   Songino Array    84.07 323  P        P        10 08 23.5 +0.3
             comp=Z,14nm,0.6s,baz=127,slow=4.1,SNR=14
SONM                               S        S        10 17 47.2  -8.5
             comp=Z,8.9nm,1.1s,baz=145,slow=5.3,SNR=8.5
SONM                               PKKPbc   PKKPbc   10 26 33.7  -0.6
             comp=Z,2.3nm,1.0s,baz=285,slow=1.9,SNR=5.4
SONM                               PKPPKP   P'P'df   10 34 34.6  -2.6
             comp=Z,0.4nm,0.6s,baz=323,slow=0.7,SNR=4.0
I02D   Swisshome        84.07  42  P        P        10 08 24.3 +1.2
             baz=243,SNR=8.2
CRQM   Cirque           84.14  21  P        P        10 08 21.7  -1.7
CRQM                               IAmb     IAmb     10 08 26.6
             comp=Z,206nm,1.0s
I03D   Drain, OR        84.21  42  P        P        10 08 24.5 +0.7
             baz=243
BPAW   Bear Paw Mtn.    84.22  16  P        P        10 08 21.4  -2.1
L04D   Klamath Falls    84.24  44  P        P        10 08 24.9 +0.7
             baz=244,SNR=82
TGL    Tana Glacier     84.25  21  P        P        10 08 22.9  -0.9
RND    Reindeer         84.28  17  P        P        10 08 22.5  -1.3
RND                                pmax     pmax
             comp=Z,405nm,1.3s
RND    Reindeer         84.28  17  P        P        10 08 22.5  -1.3
RND                                IAmb     IAmb     10 08 26.1
             comp=Z,405nm,1.3s
ISA    Isabella, Lake   84.28  51  P        P        10 08 25.3 +0.8
ISA                                pmax     pmax
             comp=Z,393nm,0.9s
ISA    Isabella, Lake   84.28  51  P        P        10 08 25.3 +0.8
ISA                                IAmb     IAmb     10 08 28.2
             comp=Z,393nm,0.9s
ISA    Isabella, Lake   84.28  51  P        P        10 08 25.3 +0.8
             baz=247,SNR=313
109C   Camp Elliot, M   84.29  54  P        P        10 08 24.8 +0.3
109C                               IAmb     IAmb     10 08 28.7
             comp=Z,461nm,1.4s
109C   Camp Elliot, M   84.29  54  P        P        10 08 25.1 +0.6
             baz=248,SNR=44
EDW2   Edwards Air Fo   84.34  52  P        P        10 08 25.7 +0.9
             baz=248,SNR=235
BFSC   Mount Baldy Ra   84.36  53  P        P        10 08 25.5 +0.5
             baz=248,SNR=160
M04C   Macdoel          84.36  44  P        P        10 08 25.7 +0.9
             baz=245,SNR=70
VRDI   Verde Repeater   84.37  21  P        P        10 08 22.6  -1.9
RUBR   Rubicon Trail    84.39  47  P        P        10 08 25.4 +0.3
RUBR                               IAmb     IAmb     10 08 28.3
             comp=Z,244nm,0.8s
GLB    Gilahina Butte   84.40  20  P        P        10 08 23.1  -1.3
DHY    Denali Highway   84.46  18  P        P        10 08 23.6  -1.3
MURC   Murrieta         84.48  53  P        P        10 08 26.1 +0.6
             baz=248,SNR=58
MCK    McKinley         84.50  17  P        P        10 08 23.0  -1.9
MCK                                pmax     pmax
             comp=Z,145nm,0.8s
MCK    McKinley         84.50  17  P        P        10 08 22.9  -1.9
MCK                                IAmb     IAmb     10 08 29.0
             comp=Z,145nm,0.8s
GTA    Gaotai           84.54 313  P        P        10 08 26.6 +0.8
GTA                                pP       pwP      10 10 44.4 +0.4
GTA                                sP       sP       10 11 48.6 +3.7
GTA                                sS       sS       10 21 51.4   -10
GTA                                pmax     pmax
             comp=Z,78nm,1.2s
BAR    Barrett          84.55  54  P        P        10 08 26.1 +0.3
BEKR   Beckworth        84.58  47  P        P        10 08 26.5 +0.5
BEKR                               IAmb     IAmb     10 08 29.5
             comp=Z,522nm,1.3s
BALM   Baldy            84.62  21  P        P        10 08 24.7  -0.9
MCARA  McCarthy VSAT    84.63  21  P        P        10 08 24.9  -0.6
MCARA                              IAmb     IAmb     10 08 28.8
             comp=Z,272nm,1.2s
COR    Corvallis        84.63  41  P        P        10 08 26.4 +0.5
COR                                pmax     pmax
             comp=Z,405nm,1.5s
COR    Corvallis        84.63  41  P        P        10 08 26.4 +0.5
COR                                IAmb     IAmb     10 08 29.6
             comp=Z,406nm,1.4s
OMMB   Old Mammoth Mi   84.65  49  P        P        10 08 26.7 +0.1
OMMB                               IAmb     IAmb     10 08 30.9
             comp=Z,715nm,1.4s
WAKR   Walker           84.68  48  P        P        10 08 27.7 +1.1
WAKR                               IAmb     IAmb     10 08 31.2
             comp=Z,716nm,1.3s
BWN    Browne           84.70  17  P        P        10 08 24.2  -1.5
BWN                                IAmb     IAmb     10 08 28.6
             comp=Z,583nm,1.0s
PCA    Pinnacle         84.73  23  P        P        10 08 25.4  -0.7
PCA                                IAmb     IAmb     10 08 28.6
             comp=Z,271nm,1.3s
SIT    Sitka            84.77  27  P        P        10 08 25.5  -0.7
SIT                                pmax     pmax
             comp=Z,286nm,1.9s
SIT    Sitka            84.77  27  P        P        10 08 25.5  -0.7
MLAC   Mammoth, Mammo   84.78  49  P        P        10 08 28.1 +1.1
             baz=247,SNR=197
K04D   Chiloquin, OR    84.78  44  P        P        10 08 27.6 +0.8
             baz=245,SNR=14
PNTR   Pine Nut         84.80  47  P        P        10 08 27.9 +0.8
PNTR                               IAmb     IAmb     10 08 30.8
             comp=Z,859nm,1.6s
LRMC   Laurel Mtn Rad   84.81  51  P        P        10 08 28.0 +0.9
             baz=248,SNR=289
J04D   Umpqua Nationa   84.81  43  P        P        10 08 28.0 +0.9
             baz=244,SNR=16
H06S1  SOCORRO T        84.82  69  P        P        10 08 27.2  -0.1
             baz=132
MONP2  Monument Peak    84.82  54  P        P        10 08 28.2 +0.9
             baz=249,SNR=71
VCNR   Virginia City    84.85  47  P        P        10 08 23.1  -4.3
VCNR                               IAmb     IAmb     10 08 30.9
             comp=Z,419nm,1.6s
DHAK   Deception Hill   84.85  24  P        P        10 08 26.3  -0.4
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DHAK                               IAmb     IAmb     10 08 30.2
             comp=Z,519nm,1.4s
I04A   Tendick Farm,    84.86  42  P        P        10 08 27.4 +0.3
             baz=244,SNR=43
H06E1  SOCORRO T-PHAS   84.86  69  P        P        10 08 29.3 +1.7
CWC    Cottonwood Cre   84.87  50  P        P        10 08 28.3 +0.8
             baz=248
BARN   Barnard Glacie   84.88  21  P        P        10 08 25.7  -1.2
BARN                               IAmb     IAmb     10 08 29.8
             comp=Z,262nm,1.0s
CTGM   Chitina Glacie   84.93  22  P        P        10 08 25.9  -1.2
CTGM                               IAmb     IAmb     10 08 29.9
             comp=Z,175nm,1.0s
BBRC   Big Bear Solar   84.94  53  P        P        10 08 28.6 +0.7
             baz=248,SNR=81
G03D   McMinnville, O   84.94  41  P        P        10 08 28.3 +0.9
             baz=243,SNR=24
PAX    Paxson           84.97  19  P        P        10 08 25.7  -1.5
PAX                                pmax     pmax
             comp=Z,82nm,1.4s
PAX    Paxson           84.97  19  P        P        10 08 25.7  -1.5
H04D   Lebanon          84.97  42  P        P        10 08 28.5 +0.9
             baz=244,SNR=29
IKP    In-Ko-Pah, Jac   84.98  55  P        P        10 08 29.1 +1.1
             baz=249,SNR=40
RDOG   Red Dog Mine     84.99  10  P        P        10 08 27.5 +0.4
RDOG                               IAmb     IAmb     10 08 31.0
             comp=Z,311nm,1.4s
TIN    Tinemaha, Big    85.00  50  P        P        10 08 29.1 +1.1
             baz=247,SNR=33
TIN                                S        S        10 18 09.1 +4.1
             baz=247
YERR   Yerington        85.02  48  P        P        10 08 28.9 +0.7
YERR                               IAmb     IAmb     10 08 32.5
             comp=Z,575nm,1.5s
PAF    Port-aux-Franc   85.02 220  P        P        10 08 27.8 +0.1
PAF                                pmax     pmax
             comp=Z,612nm,1.0s
PAF    Port-aux-Franc   85.02 220  P        P        10 08 27.8 +0.1
MLY    Manley           85.03  16  P        P        10 08 26.4  -1.0
PFO    Pinyon Flats O   85.06  54  P        P        10 08 28.5 +0.1
PFO                                pmax     pmax
             comp=Z,327nm,1.5s
PFO    Pinyon Flats O   85.06  54  P        P        10 08 28.5 +0.1
PFO                                IAmb     IAmb     10 08 31.8
             comp=Z,327nm,1.4s
PFO    Pinyon Flats O   85.06  54  P        P        10 08 29.0 +0.6
             baz=249,SNR=54
TPFO   Pinon Flats      85.06  54  P        P        10 08 29.1 +0.7
             baz=249,SNR=51
XPFO   Pion Flat        85.06  54  P        P        10 08 28.8 +0.4
XPFO                               IAmb     IAmb     10 08 31.8
             comp=Z,361nm,1.5s
F03A   Seaside          85.08  40  P        P        10 08 27.2  -0.8
F03A                               IAmb     IAmb     10 08 31.6
             comp=Z,315nm,1.0s
RRX    Edison Barstow   85.10  52  P        P        10 08 29.2 +0.8
             baz=248,SNR=11
BRDH   Bariadhala       85.11 295  P        P        10 08 29.1 +0.5
             comp=Z,98nm,0.3s,baz=90,slow=19,SNR=5.8
NEA    Nenana           85.12  17  P        P        10 08 25.9  -1.8
MPMC   Manual Prospec   85.17  51  P        P        10 08 29.8 +0.8
             baz=248,SNR=296
MPMC                               S        S        10 18 11.0 +4.1
             baz=248
PAHR   Pah Rah Range    85.20  47  P        P        10 08 29.8 +0.9
PAHR                               IAmb     IAmb     10 08 33.4
             comp=Z,695nm,1.4s
WRH    Wood River Hil   85.31  17  P        P        10 08 27.3  -1.4
WRH                                IAmb     IAmb     10 08 30.7
             comp=Z,144nm,0.8s
SWSC   Sam W. Stewart   85.33  54  P        P        10 08 30.5 +1.0
             baz=249,SNR=74
E03A   Lebam            85.36  39  P        P        10 08 29.8 +0.5
E03A                               IAmb     IAmb     10 08 33.0
             comp=Z,557nm,1.1s
RYN    Ryan             85.39  48  P        P        10 08 30.4 +0.4
RYN                                IAmb     IAmb     10 08 33.5
             comp=Z,270nm,0.9s
H04A   Detroit Lake     85.39  42  P        P        10 08 30.0 +0.4
GSC    Goldstone, Bar   85.41  52  P        P        10 08 30.6 +0.6
GSC                                pmax     pmax
             comp=Z,444nm,1.4s
GSC    Goldstone, Bar   85.41  52  P        P        10 08 30.6 +0.6
GSC                                IAmb     IAmb     10 08 34.4
             comp=Z,444nm,1.4s
GSC    Goldstone, Bar   85.41  52  P        P        10 08 30.6 +0.6
             baz=248,SNR=149
J05D   Fort Rock, OR    85.41  43  P        P        10 08 30.8 +0.9
             baz=245,SNR=102
MOD    Modoc Plateau    85.46  45  P        P        10 08 30.5 +0.4
MOD                                IAmb     IAmb     10 08 33.6
             comp=Z,176nm,0.9s
NVAR   Mina Array Bea   85.47  48  P        P        10 08 31.0 +0.7
             comp=Z,173nm,0.8s,baz=232,slow=8.3,SNR=275
NVAR                               pP       pP       10 10 46.5 +0.5
             comp=Z,16nm,1.1s,baz=240,slow=5.1,SNR=4.2
NVAR                               PP       PP       10 12 00.8  -1.0
             comp=Z,13nm,1.0s,baz=231,slow=10.0,SNR=3.7
NVAR                               PKiKP    PKiKP    10 13 35.6 +0.4
             comp=Z,0.7nm,0.6s,baz=204,slow=2.0,SNR=4.5
NVAR                               PKKPbc   PKKPbc   10 26 30.4  -0.2
             comp=Z,3.9nm,0.7s,baz=93,slow=2.5,SNR=17
NVAR                               SKKPbc   SKKPbc   10 29 01.7  -7.9
             comp=Z,0.7nm,0.8s,baz=107,slow=3.1,SNR=2.5
NVAR                               PKPPKP   P'P'df   10 34 35.1  -0.4
             comp=Z,6.2nm,1.1s,baz=130,slow=1.8,SNR=5.0
F04D   Rainier, OR      85.49  40  P        P        10 08 31.3 +1.3
             baz=243,SNR=17
F04D                               S        S        10 18 13.0 +3.9
             baz=243
BBB    Bella Bella      85.50  33  P        P        10 08 29.5  -0.3
BBB                                IAmb     IAmb     10 08 33.3
             comp=Z,342nm,1.4s
MENT   Mentasta         85.50  19  P        P        10 08 28.9  -0.8
MENT                               IAmb     IAmb     10 08 31.3
             comp=Z,397nm,2.0s
CCB    Clear Creek Bu   85.53  17  P        P        10 08 27.7  -1.9
BELC   Belle Mtn. Jos   85.55  53  P        P        10 08 31.7 +0.9
             baz=249,SNR=229
BELC                               S        S        10 18 14.2 +3.7
             baz=249
NLWA   Neilton Lookou   85.56  39  P        P        10 08 31.1 +0.7
NLWA                               IAmb     IAmb     10 08 34.9
             comp=Z,427nm,1.4s
NV11   Mina Array Sit   85.58  49  P        P        10 08 31.4 +0.6
NV11                               IAmb     IAmb     10 08 35.1
             comp=Z,743nm,1.4s
HDA    Harding Lake     85.59  17  P        P        10 08 28.6  -1.4
HDA                                IAmb     IAmb     10 08 32.5
             comp=Z,292nm,0.9s
HDA    Harding Lake     85.59  17  P        P        10 08 28.6  -1.4
             baz=222
HDA                                S        S        10 18 09.3   0.0
             baz=222
HDA                                S        S        10 18 09.3   0.0
             baz=222
HEC    Hector,Ludlow    85.59  52  P        P        10 08 31.5 +0.6
             baz=249,SNR=36
GRAC   Grapevine Rang   85.61  50  P        P        10 08 32.0 +1.1
             baz=248,SNR=67
MDM    Murphy Dome      85.64  17  P        P        10 08 28.4  -1.9
MDM                                IAmb     IAmb     10 08 32.3
             comp=Z,188nm,0.8s
BOD    Bodaibo          85.66 334  eP       P        10 08 30.0  -0.4
BOD                                e                 10 17 54.9
BOD                                pmax     pmax
             comp=Z,71nm,1.4s
TCOL   CIGO, UAF Yank   85.68  17  P        P        10 08 28.8  -1.6
             baz=221
TCOL                               S        S        10 18 09.3  -0.7
             baz=221
COLA   College          85.69  17  P        P        10 08 28.8  -1.6
COLA                               pmax     pmax
             comp=Z,404nm,1.2s
COLA   College          85.69  17  P        P        10 08 28.8  -1.6
COLA                               IAmb     IAmb     10 08 32.5
             comp=Z,404nm,1.2s
WRAK   Wrangell Islan   85.72  28  P        P        10 08 31.0 +0.3
I05D   Terrebonne, OR   85.79  42  P        P        10 08 32.3 +0.7
             baz=245,SNR=59
FURC   Furnace Creek,   85.79  51  P        P        10 08 32.6 +1.0
             baz=248,SNR=338
F04A   Amboy            85.79  40  P        P        10 08 31.9 +0.5
F04A                               IAmb     IAmb     10 08 34.8
             comp=Z,749nm,1.4s
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SHL	Shillong	85.80	298	*e*x	P	10 08 32.1	0.0
PINE	Pine Mountain	85.82	43	P	P	10 08 32.6	+0.7
BC3	Big Chuckawall	85.85	54	P	P	10 08 33.2	+1.1
	baz=249,SNR=77						
KVN	Kaiserville	85.86	48	P	P	10 08 31.7	-0.4
KVN				pmax	pmax		
	comp=Z,773nm,1.4s						
KVN	Kaiserville	85.86	48	P	P	10 08 31.7	-0.4
IL31		85.88	17	P	P	10 08 29.4	-1.9
IL31				IAmb	IAmb	10 08 33.5	
	comp=Z,144nm,0.8s						
ILAR	Eielson Array	85.88	17	P	P	10 08 29.6	-1.8
	comp=Z,97nm,0.6s,baz=234,slow=5.1,SNR=376						
ILAR				pP	pP	10 10 47.0	-0.2
	comp=Z,38nm,1.0s,baz=232,slow=5.6,SNR=6.4						
ILAR				PKiKP	PKiKP	10 13 33.6	-1.2
	comp=Z,1.2nm,0.6s,baz=216,slow=3.7,SNR=5.1						
ILAR				PKKP	PKKPdf	10 26 22.4	-0.8
	comp=Z,1.5nm,0.4s,baz=57,slow=0.5,SNR=6.0						
ILAR				PKP2bc		10 34 18.1	
	comp=Z,0.4nm,0.8s,baz=28,slow=2.1,SNR=3.2						
BESE	Bessie Mountai	85.89	26	P	P	10 08 31.2	-0.5
BESE				IAmb	IAmb	10 08 35.3	
	comp=Z,269nm,1.2s						
DOT	Dot Lake	85.90	19	P	P	10 08 30.2	-1.4
JIS	Juneau Island	85.91	26	P	P	10 08 31.2	-0.4
E04D	Cinebar	85.98	40	P	P	10 08 33.3	+1.1
	baz=244,SNR=112						
E04D				S	S	10 18 16.1	+2.5
	baz=244						
SHOC	Shoshone, Teco	86.03	51	P	P	10 08 33.6	+0.8
	baz=249,SNR=216						
SHOC				S	S	10 18 18.6	+4.0
	baz=249						
GMRC	Granite Mounta	86.09	53	P	P	10 08 34.0	+0.7
	baz=249,SNR=128						
D03D	Eldon	86.09	39	P	P	10 08 33.8	+1.0
	baz=243,SNR=84						
D03D				S	S	10 18 18.6	+3.9
	baz=243						
TUQ	Turquoise Moun	86.12	52	P	P	10 08 34.2	+0.8
	baz=249,SNR=252						
TUQ				S	S	10 18 19.9	+4.0
	baz=249						
D04E	Lakebay	86.13	39	P	P	10 08 34.5	+1.6
	baz=244,SNR=17						
GLA	Glamis	86.13	55	P	P	10 08 34.7	+1.3
GLA				pmax	pmax		
	comp=Z,353nm,1.2s						
GLA	Glamis	86.13	55	P	P	10 08 34.7	+1.3
GLA				IAmb	IAmb	10 08 38.4	
	comp=Z,352nm,1.2s						
GLA	Glamis	86.13	55	P	P	10 08 34.6	+1.3
	baz=250,SNR=87						
GLA				S	S	10 18 21.6	+5.7
	baz=250						
SCRK	Sand Creek	86.16	19	P	P	10 08 31.4	-1.5
G05D	Wamic, OR	86.19	41	P	P	10 08 34.3	+0.9
	baz=245,SNR=36						
G05D				S	S	10 18 18.7	+2.9
	baz=245						
SKAG	Skagway	86.24	25	P	P	10 08 32.2	-0.9
HYT	Haines Junctio	86.24	23	P	P	10 08 31.8	-1.5
IRM	Iron Mountain	86.27	53	P	P	10 08 34.9	+0.9
	baz=249,SNR=268						
SRIG	Santa Rosalia	86.34	61	P	P	10 08 33.9	-0.5
SRIG				IAmb	IAmb	10 08 37.7	
	comp=Z,122nm,0.8s						
F05D	White Salmon	86.38	41	P	P	10 08 35.0	+0.8
	baz=244,SNR=60						
F05D				S	S	10 18 20.3	+2.9
	baz=244						
PGC	Sidney	86.38	38	P	P	10 08 34.4	+0.3
TPNV	Topopah Spring	86.43	50	P	P	10 08 35.4	+0.6
TPNV				pmax	pmax		
	comp=Z,370nm,1.0s						
TPNV	Topopah Spring	86.43	50	P	P	10 08 35.4	+0.6
TPNV				IAmb	IAmb	10 08 38.5	
	comp=Z,370nm,1.0s						
TPNV	Topopah Spring	86.43	50	P	P	10 08 35.7	+0.8
	baz=249,SNR=315						
LON	Longmire	86.53	40	P	P	10 08 34.7	-0.3
LON				pmax	pmax		
	comp=Z,186nm,1.2s						
LON	Longmire	86.53	40	P	P	10 08 34.7	-0.3
LON				IAmb	IAmb	10 08 38.8	
	comp=Z,186nm,1.2s						
Y12C	Blythe	86.61	54	P	P	10 08 36.3	+0.7
Y12C				IAmb	IAmb	10 08 40.1	
	comp=Z,460nm,1.2s						
Y12C	Blythe	86.61	54	P	P	10 08 36.6	+1.1
	baz=250,SNR=142						
G06A	Carlson Farm,	86.62	42	P	P	10 08 35.8	+0.3
G06A				IAmb	IAmb	10 08 39.5	
	comp=Z,272nm,1.3s						
WVOR	Wild Horse Val	86.80	45	P	P	10 08 36.6	+0.2
WVOR				pmax	pmax		
	comp=Z,631nm,1.3s						
WVOR	Wild Horse Val	86.80	45	P	P	10 08 36.6	+0.2
WVOR				IAmb	IAmb	10 08 40.9	
	comp=Z,631nm,1.3s						
PRP	Porcupine Dome	86.82	17	P	P	10 08 33.8	-2.1
A04D	Lummi Island	86.86	38	P	P	10 08 37.4	+1.1
	baz=244,SNR=139						
A04D				S	S	10 18 24.4	+2.7
	baz=244						
113A	Mohawk Valley,	86.88	55	P	P	10 08 37.5	+0.7
113A				IAmb	IAmb	10 08 41.4	
	comp=Z,384nm,1.6s						
I07A	Izee	86.88	43	P	P	10 08 37.7	+0.9
I07A				IAmb	IAmb	10 08 40.5	
	comp=Z,449nm,1.1s						
NEE2	Needles Airpor	86.89	53	P	P	10 08 37.8	+1.0
	baz=250						
NEE2				S	S	10 18 27.2	+4.4
	baz=250						
COLD	Coldfoot	86.89	15	P	P	10 08 36.4	+0.3
B05A	Bryant	87.02	38	P	P	10 08 37.9	+0.8
	baz=244,SNR=141						
B05A				S	S	10 18 25.0	+1.8
	baz=244						
ZAK	Zakamensk	87.08	324	*e*P	P	10 08 37.2	-0.3
ZAK				*e*		10 10 55.7	
ZAK				pmax	pmax		
	comp=Z,20nm,1.5s						
ZAK				pmax	pmax		
	comp=Z,15nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,16nm,1.6s						
SHPR	Sheep Range	87.08	51	P	P	10 08 38.8	+0.8
SHPR				IAmb	IAmb	10 08 42.6	
	comp=Z,638nm,1.5s						
PDMCI	Parker Dam,Lak	87.10	54	P	P	10 08 38.9	+1.1
	baz=250,SNR=213						
WHY	Whitehorse	87.15	24	P	P	10 08 36.2	-1.3
J08A	Circle Bar Ran	87.28	44	P	P	10 08 39.3	+0.7
J08A				IAmb	IAmb	10 08 42.1	
	comp=Z,444nm,1.0s						
214A	Organ Pipe Nat	87.37	56	P	P	10 08 40.3	+1.1
	baz=251						
IRK	Irkutsk	87.40	326	*e*P	P	10 08 38.4	-0.4
IRK				pmax	pmax		
	comp=Z,65nm,1.6s						
R11A	Troy Canyon, C	87.42	49	P	P	10 08 39.5	0.0
R11A				IAmb	IAmb	10 08 42.9	
	comp=Z,230nm,1.3s						
R11A	Troy Canyon, C	87.42	49	P	P	10 08 40.0	+0.5
	baz=249,SNR=243						
LTY	Liberty	87.45	40	P	P	10 08 39.4	+0.1
LTY				IAmb	IAmb	10 08 42.3	
	comp=Z,228nm,0.8s						
TLY	Talaya	87.48	325	P	P	10 08 39.2	0.0
	comp=Z,16nm,0.8s,baz=167,slow=4.1,SNR=14						
TLY				pP	pP	10 10 55.9	+0.2
	comp=Z,2.0nm,0.6s,baz=147,slow=5.6,SNR=1.5						
TLY	Talaya	87.48	325	*d i*P	P	10 08 38.7	-0.5
TLY				pmax	pmax		
	comp=Z,36nm,1.0s						
TLY	Talaya	87.48	325	P	P	10 08 38.5	-0.7
W13A	Hualapai Mount	87.57	53	P	P	10 08 40.6	+0.3
W13A				IAmb	IAmb	10 08 44.1	
	comp=Z,220nm,0.9s						
C06D	Leavenworth	87.60	39	P	P	10 08 40.3	+0.4
	baz=245						
C06D				S	S	10 18 29.7	+1.0
	baz=245						
EGAK	Eagle	87.60	19	P	P	10 08 38.2	-1.3
E07A	Sunnyside	87.67	41	P	P	10 08 41.1	+0.9
FYU	Fort Yukon	87.67	16	P	P	10 08 38.1	-1.6
LSA	Lhasa	87.72	301	P	P	10 08 42.4	+0.9
LSA	Lhasa	87.72	301	P	P	10 08 41.3	-0.2
LSA				pmax	pmax		
	comp=Z,24nm,0.6s						
LSA	Lhasa	87.72	301	P	P	10 08 41.2	-0.2
G08A	Pilot Rock	87.73	42	P	P	10 08 41.3	+0.6
G08A				IAmb	IAmb	10 08 44.1	
	comp=Z,407nm,0.9s						
HAWA	Hanford	87.81	41	P	P	10 08 41.8	+0.9
HSIG		87.96	59	P	P	10 08 42.2	+0.3
HSIG				IAmb	IAmb	10 08 46.1	
	comp=Z,552nm,1.5s						
E08A	Dider Farm, El	88.14	41	P	P	10 08 43.1	+0.7
TOLK	Toolik Lake Re	88.15	14	P	P	10 08 41.7	-0.3
TOLK	Toolik Lake Re	88.15	14	P	P	10 08 41.9	-0.1
	baz=219						
TOLK				S	S	10 18 35.9	+2.9
	baz=219						
LLLB	Lillooet	88.17	36	P	P	10 08 42.9	+0.4
LLLB				IAmb	IAmb	10 08 45.9	
	comp=Z,374nm,1.2s						
D08A	Wollman Farm,	88.46	40	P	P	10 08 44.4	+0.5
D08A				IAmb	IAmb	10 08 47.3	
	comp=Z,275nm,0.9s						
ELK	Elko	88.53	47	P	P	10 08 44.8	+0.1
ELK				pmax	pmax		
	comp=Z,225nm,1.1s						
ELK	Elko	88.53	47	P	P	10 08 44.8	+0.1
ELK				IAmb	IAmb	10 08 48.2	
	comp=Z,225nm,1.1s						
BMO	Blue Mountains	88.63	43	P	P	10 08 44.9	+0.1
BMO				pmax	pmax		
	comp=Z,197nm,1.1s						
BMO	Blue Mountains	88.63	43	P	P	10 08 44.9	+0.1
BMO				IAmb	IAmb	10 08 48.0	
	comp=Z,197nm,1.1s						
LCMT	Little Creek M	88.70	51	P	P	10 08 45.3	-0.1
B08A	Colville Reser	88.73	39	P	P	10 08 44.5	-0.6
B08A				IAmb	IAmb	10 08 48.0	
	comp=Z,380nm,1.2s						
E09A	Wood Farm, Sta	88.73	41	P	P	10 08 45.4	+0.2
E09A				IAmb	IAmb	10 08 49.1	
	comp=Z,307nm,1.1s						
PSUT	Pine Spring	88.76	50	P	P	10 08 45.9	+0.1
CCUT	Cedar City	88.80	51	P	P	10 08 45.7	-0.3
MOY	Mondy	88.95	324	*e*P	P	10 08 46.0	-0.2
MOY				pmax	pmax		
	comp=Z,47nm,1.7s						
MFID	Camas Ranch	89.08	45	P	P	10 08 47.4	+0.4
MFID				IAmb	IAmb	10 08 50.5	
	comp=Z,192nm,1.0s						
TUC	Tucson	89.11	56	P	P	10 08 47.8	+0.4
TUC				pmax	pmax		
	comp=Z,176nm,1.0s						
TUC	Tucson	89.11	56	P	P	10 08 47.8	+0.4
TUC				IAmb	IAmb	10 08 51.3	
	comp=Z,176nm,1.0s						
TUC	Tucson	89.11	56	P	P	10 08 48.5	+1.2
	baz=252						
F10A	Beach Ranch, E	89.11	42	P	P	10 08 46.5	-0.5
C09A	Chrisman Ranch	89.16	40	P	P	10 08 47.2	+0.1
C09A				IAmb	IAmb	10 08 50.1	
	comp=Z,456nm,1.6s						
U15A	North Rim	89.23	52	P	P	10 08 48.6	+0.5
X16A	Lo Mia Camp, P	89.25	54	P	P	10 08 48.8	+0.7
X16A				IAmb	IAmb	10 08 52.1	
	comp=Z,323nm,1.4s						
SYO	Syowa Base	89.30	196	⇑*i*P	P	10 08 46.4	-1.0
SYO	Syowa Base	89.30	196	⇓*i*PcP	P	10 08 47.4	0.0
PKCU	Pink Cliffs	89.55	51	P	P	10 08 50.6	+1.0
WUAZ	Wupatki	89.65	53	P	P	10 08 50.8	+0.9
WUAZ				IAmb	IAmb	10 08 53.7	
	comp=Z,180nm,0.9s						
WUAZ	Wupatki	89.65	53	P	P	10 08 50.8	+0.9
	baz=252						
WUAZ				S	S	10 18 55.3	+7.1
	baz=252						
TCRU	Three Creeks R	89.83	50	P	P	10 08 51.2	+0.4
MTPU	Mount Pierson	89.84	51	P	P	10 08 52.3	+1.4
TAPN	Taplejung	89.91	298	*e*P	P	10 08 51.6	+0.2
	comp=Z,23nm,0.4s						
MSU	Marysvale	90.00	50	P	P	10 08 52.8	+1.3
MSU	Marysvale	90.00	50	P	P	10 08 52.8	+1.3
EPYK	Eagle Plains	90.04	19	P	P	10 08 49.7	-1.1
EPYK				IAmb	IAmb	10 08 53.4	
	comp=Z,118nm,1.0s						
EPYK	Eagle Plains	90.04	19	P	P	10 08 50.0	-0.8
	baz=231						
ODAN	Odare	90.04	298	*e*P	P	10 08 52.4	+0.4
	comp=Z,170nm,1.0s						
319A	Douglas	90.05	58	P	P	10 08 52.5	+0.8
319A				IAmb	IAmb	10 08 55.7	
	comp=Z,273nm,0.9s						
NEW	Newport	90.05	40	P	P	10 08 51.2	-0.1
NEW				pmax	pmax		
	comp=Z,77nm,0.9s						
NEW	Newport	90.05	40	P	P	10 08 51.2	-0.1
NEW				IAmb	IAmb	10 08 54.0	
	comp=Z,77nm,0.8s						
NEW	Newport	90.05	40	P	P	10 08 51.3	+0.1
	baz=248						
NEW				S	S	10 18 52.5	+1.5
	baz=248						
DUG	Dugway, Tooele	90.08	48	P	P	10 08 51.8	0.0
DUG				pmax	pmax		
	comp=Z,104nm,1.2s						
DUG	Dugway, Tooele	90.08	48	P	P	10 08 51.8	0.0
DUG				IAmb	IAmb	10 08 55.8	
	comp=Z,104nm,1.1s						
DUG	Dugway, Tooele	90.08	48	P	P	10 08 52.2	+0.4
	baz=251						
DUG				S	S	10 18 55.2	+3.4
	baz=251						
BGU	Big Grassy Mou	90.17	48	P	P	10 08 52.4	+0.3
X18A	Snowflake	90.45	54	P	P	10 08 54.2	+0.6
X18A				IAmb	IAmb	10 08 58.2	
	comp=Z,241nm,1.4s						
NLU	North Lily Min	90.54	49	P	P	10 08 54.4	+0.5
TIXI	Tiksi	90.57	348	P	P	10 08 52.3	-0.8
	comp=Z,33nm,0.9s,baz=130,slow=5.0,SNR=27						
TIXI				pP	pP	10 11 10.0	-0.1
	comp=Z,11nm,1.2s,baz=129,slow=7.5,SNR=2.3						
TIXI				PKiKP	PKiKP	10 13 41.6	-0.9
	comp=Z,2.3nm,0.4s,baz=140,slow=3.3,SNR=5.4						
TIXI	Tiksi	90.57	348	*d i*P	P	10 08 52.8	-0.3
TIXI				pmax	pmax		
	comp=Z,48nm,0.9s						
TIXI	Tiksi	90.57	348	P	P	10 08 52.6	-0.5
HVU	Hansel Valley	90.63	47	P	P	10 08 53.8	-0.5
HVU	Hansel Valley	90.63	47	P	P	10 08 53.8	-0.5
CHLP	Challavanipeta	90.72	289	*e*P	P	10 08 55.3	+0.3
CHLP				*e*pP	pP	10 11 10.3	-2.3
CHLP				*e*		10 16 08.0	
CHLP				*e*SKSac	SKSac	10 18 27.5	+1.3
CHLP				*e*		10 18 56.4	
RAMN	Ramite	90.74	298	*e*P	P	10 08 55.0	-0.2
W18A	Petrified Fore	90.80	54	P	P	10 08 55.3	0.0
W18A				IAmb	IAmb	10 08 59.5	
	comp=Z,96nm,0.8s						
W18A	Petrified Fore	90.80	54	P	P	10 08 55.9	+0.7
	baz=252						
W18A				S	S	10 19 05.6	+7.2
	baz=252						
Q16A	Castle Valley	90.87	50	P	P	10 08 56.1	+0.6
MPU	Maple Canyon	90.88	49	P	P	10 08 55.9	+0.4
TMUT	Trail Mountain	90.96	50	P	P	10 08 56.7	+0.6
PALK	Pallekele	91.00	277	P	P	10 08 56.8	+0.4
	comp=Z,100nm,0.9s,baz=95,slow=2.4,SNR=30						
CTU	Camp Tracy	91.01	48	P	P	10 08 55.9	-0.1
JLU	Jordanelle	91.20	48	P	P	10 08 57.1	+0.1
JIRN	Jiri	91.29	298	*e*P	P	10 08 58.0	+0.1
	comp=Z,42nm,0.5s						
P17A	Butcher Ranch,	91.36	50	P	P	10 08 57.8	+0.1
TCUT	Toone Canyon	91.39	48	P	P	10 08 58.0	+0.1
SRU	San Rafael Swe	91.41	50	P	P	10 08 58.2	+0.2
SRU				pmax	pmax		
	comp=Z,46nm,0.7s						
SRU	San Rafael Swe	91.41	50	P	P	10 08 58.2	+0.2
HWUT	Hardware Ranch	91.43	47	P	P	10 08 58.0	0.0
MSO	Missoula	91.54	42	P	P	10 08 57.5	-0.8
MCMT	McKenzie Canyo	91.59	44	P	P	10 08 58.8	+0.1
121A	Cookes Peak, D	91.60	57	P	P	10 08 58.4	-0.5
121A				IAmb	IAmb	10 09 02.6	
	comp=Z,174nm,1.6s						
121A	Cookes Peak, D	91.60	57	P	P	10 08 59.8	+0.9
	baz=254						
GUN	Gumba	91.62	298	*e*P	P	10 08 59.6	+0.2
	comp=Z,27nm,0.4s						
JTMT	Jette	91.64	41	P	P	10 08 58.1	-0.6
HPIG		91.83	63	P	P	10 09 00.1	-0.1
DLMT	Dillon	91.93	44	P	P	10 09 00.3	+0.1
DLMT				IAmb	IAmb	10 09 04.0	
	comp=Z,58nm,0.8s						
PKI	Pulchoki	91.93	298	*e*P	P	10 09 00.6	-0.2
PKIN	Phulchoki	91.94	298	*e*P	P	10 09 00.9	+0.1
	comp=Z,33nm,0.6s						
KKN	Kakani	92.10	298	*e*P	P	10 09 01.5	+0.1
	comp=Z,29nm,0.5s						
AHID	Auburn Hatcher	92.12	46	P	P	10 09 00.6	-0.5
LRM	Limekiln Ridge	92.18	43	P	P	10 09 02.1	+0.7
DMN	Daman	92.20	298	*e*P	P	10 09 02.2	+0.3
	comp=Z,133nm,1.1s						
INK	Inuvik	92.21	18	PP	PP	10 12 48.1	-5.2
	comp=Z,23nm,1.2s,baz=218,slow=9.8,SNR=3.8						
INK				PKiKP	PKiKP	10 13 45.0	-0.3
	comp=Z,2.2nm,0.3s,baz=285,slow=5.1,SNR=5.6						
INK				PKPPKP	P'P'df	10 34 22.8	+2.2
	comp=Z,3.1nm,1.0s,baz=88,slow=3.9,SNR=5.8						
INK	Inuvik	92.21	18	P	P	10 08 58.9	-1.7
INK				pmax	pmax		
	comp=Z,40nm,1.0s						
INK	Inuvik	92.21	18	P	P	10 08 58.9	-1.7
WALA	Waterton Lakes	92.32	40	P	P	10 09 01.1	-0.8
MVCO	Mesa Verde	92.37	52	P	P	10 09 02.2	-0.3
MVCO	Mesa Verde	92.37	52	P	P	10 09 02.7	+0.2
	baz=253						
MVCO				S	S	10 19 17.4	+5.1
	baz=253						
FXWY	Fox Creek	92.45	46	P	P	10 09 02.0	-0.7
REDW	Red Top Meadow	92.48	46	P	P	10 09 02.1	-0.7
REDW				IAmb	IAmb	10 09 05.9	
	comp=Z,98nm,1.1s						
QLMT	Earthquake Lak	92.54	44	P	P	10 09 02.1	-0.9
RDMU	Red Mountain	92.55	49	P	P	10 09 02.9	-0.3
SNOW	Snow King Moun	92.58	46	P	P	10 09 03.0	-0.3
PVM	Polavaram	92.64	287	*e*P	P	10 09 03.1	-0.7
PVM				*e*pP	pP	10 11 17.4	-4.2
PVM				*e*sP	sP	10 12 22.5	-2.7
PVM				*e*		10 15 55.1	
PVM				*e*SKSac	SKSac	10 18 36.3	-0.5
PVM				*e*		10 19 12.1	
PVM				*e*pSKSac	pSKSac	10 21 54.9	+2.6
PVM				*e*sSKSac	sSKSac	10 22 58.5	+1.1
PVM				*e*sS	sS	10 23 24.9	+3.4
YHB	Horse Butte	92.68	44	P	P	10 09 03.8	+0.1
YHL	Hebgen Lake	92.72	44	P	P	10 09 04.3	+0.3
Y22D	IRIS PASSCAL I	92.72	56	P	P	10 09 06.7	+2.6
Y22D				IAmb	IAmb	10 09 09.8	
	comp=Z,66nm,0.8s						
Y22D	IRIS PASSCAL I	92.72	56	P	P	10 09 04.8	+0.7
	baz=254						
YPP	Pitchstone Pla	92.80	45	P	P	10 09 05.7	+1.3
YMR	Madison River	92.81	45	P	P	10 09 04.4	+0.1
FLWY	Flagg Ranch	92.81	45	P	P	10 09 04.3	0.0
YHH	Holmes Hill	92.92	44	P	P	10 09 04.7	-0.2
H17A	Grant Village	92.99	45	P	P	10 09 06.3	+1.2
H17A	Grant Village	92.99	45	P	P	10 09 06.4	+1.2
	baz=252						
YNM	Yellowstone No	93.00	45	P	P	10 09 04.2	-1.0
YNR	Norris Junctio	93.02	45	P	P	10 09 06.3	+1.1
YUF	Upper Falls	93.13	45	P	P	10 09 05.9	+0.1
LKWY	Lake	93.16	45	P	P	10 09 07.1	+1.2
LKWY				pmax	pmax		
	comp=Z,25nm,0.8s						
LKWY	Lake	93.16	45	P	P	10 09 07.1	+1.2
BW06	Boulder Array	93.21	47	P	P	10 09 04.8	-1.4
BW06				IAmb	IAmb	10 09 08.6	
	comp=Z,104nm,1.7s						
PD31	Pinedale Array	93.21	47	P	P	10 09 05.4	-0.7
PDAR	Pinedale Array	93.21	47	P	P	10 09 05.5	-0.6
	comp=Z,14nm,0.7s,baz=207,slow=3.2,SNR=71						
PDAR				pP	pP	10 11 25.0	+1.5
	comp=Z,17nm,1.1s,baz=242,slow=3.2,SNR=4.2						
PDAR				PP	PP	10 12 54.4	-7.6
	comp=Z,8.4nm,1.0s,baz=251,slow=4.5,SNR=3.9						
PDAR				PKiKP	PKiKP	10 13 49.2	+1.0
	comp=Z,2.0nm,0.8s,baz=234,slow=3.0,SNR=3.1						
PDAR				S	SKSac	10 18 42.0	+2.5
	comp=Z,1.7nm,1.0s,baz=224,slow=5.0,SNR=6.7						
PDAR				PKKP	PKKPdf	10 26 09.0	-0.8
	comp=Z,3.4nm,0.7s,baz=94,slow=4.7,SNR=12						
PDAR				SKKPbc	SKKPbc	10 28 49.8	-2.2
	comp=Z,2.8nm,0.7s,baz=103,slow=4.2,SNR=8.7						
PDAR				PKPPKP	P'P'df	10 34 20.2	-0.7
	comp=Z,3.2nm,1.0s,baz=106,slow=3.2,SNR=11						
NVL	N'lazarevskaya	93.27	187	⇑*i*P	P	10 09 05.2	-0.4
NVL				*e**PP	pwP	10 11 26.5	+0.7
NVL				*i* S	SKSac	10 18 34.0	-4.4
NVL				*e*		10 19 15.0	
NVL				*e*SS	SS	10 25 58.4	+4.5
NVL				*e*SSS	SSS	10 29 53.3	
NVL				pmax	pmax		
	comp=Z,160nm,0.9s						
NVL				MLR	MLR		
	comp=Z,500nm,18.0s						
ANMO	Albuquerque	93.33	55	P	P	10 09 06.6	-0.2
ANMO				pmax	pmax		
	comp=Z,67nm,1.2s						
ANMO	Albuquerque	93.33	55	P	P	10 09 06.6	-0.2
ANMO	Albuquerque	93.33	55	P	P	10 09 07.0	+0.2
	baz=254						
MNTX	Cornudas Mount	93.33	58	P	P	10 09 06.4	-0.3
YMP	Mirror Lake Pl	93.38	45	P	P	10 09 06.3	-0.6
O20A	White River Ci	93.40	49	P	P	10 09 06.9	-0.2
O20A				IAmb	IAmb	10 09 10.0	
	comp=Z,91nm,1.0s						
O20A	White River Ci	93.40	49	P	P	10 09 07.3	+0.3
	baz=254						
O20A				S	S	10 19 26.0	+5.1
	baz=254						
MYLAV	Mylavaram	93.43	286	*e*P	P	10 09 07.3	-0.2
MYLAV				*e*pP	pP	10 11 19.1	-6.2
MYLAV				*e*sP	sP	10 12 29.7	+0.6
MYLAV				*e*		10 16 06.5	
MYLAV				*e*SKSac	SKSac	10 18 41.0	-0.1
MYLAV				*e*		10 19 19.8	
MYLAV				*e*sSKSac	sSKSac	10 23 02.4	-0.1
MYLAV				*e*sS	sS	10 23 32.0	+3.5
ZAIG	Zacatecas	93.47	68	P	P	10 09 08.1	+0.2
ZAIG				IAmb	IAmb	10 11 30.2	
	comp=Z,85nm,1.4s						
DANN	Dangsing	93.54	298	*e*P	P	10 09 07.9	-0.2
	comp=Z,42nm,0.5s						
SKHT	Srikalahasti	93.56	283	*e*P	P	10 09 07.9	-0.1
SKHT				*e*pP	pP	10 11 24.0	-1.9
SKHT				*e*sP	sP	10 12 22.9	-6.6
SKHT				*e*PP	PP	10 13 05.0	+0.1
SKHT				*e*		10 16 06.7	
SKHT				*e*SKSac	SKSac	10 18 43.3	+1.4
SKHT				*e*		10 19 19.7	
SKHT				*e*sSKSac	sSKSac	10 23 05.2	+2.9
YNE	Yellowstone No	93.56	44	P	P	10 09 07.8	+0.1
SNAA	Sanae	93.56	182	P	P	10 09 06.9	-0.1
SNAA	Sanae	93.56	182	PKKP	PKKPdf	10 26 07.5	-0.2
	comp=Z,1.0nm,0.5s,baz=330,slow=4.3,SNR=7.4						
SNAA				SKKPbc	SKKPbc	10 28 47.2	-1.2
	comp=Z,2.0nm,0.8s,baz=45,slow=7.1,SNR=5.2						
SNAA	Sanae	93.56	182	P	P	10 09 06.4	-0.6
SNAA				pmax	pmax		
	comp=Z,114nm,0.8s						
SNAA	Sanae	93.56	182	P	P	10 09 06.4	-0.6
SNAA				IAmb	IAmb	10 09 09.8	
	comp=Z,114nm,0.8s						
S22A	4UR Ranch, Cre	93.79	52	P	P	10 09 09.4	+0.4
S22A	4UR Ranch, Cre	93.79	52	P	P	10 09 09.8	+0.7
	baz=254						
S22A				S	S	10 19 31.1	+6.4
	baz=254						
ADKI	Addanki	93.83	285	*e*P	P	10 09 08.9	-0.3
ADKI				*e*pP	pP	10 11 26.5	-0.6
ADKI				*e*sP	sP	10 12 26.2	-4.5
ADKI				*e*		10 16 09.7	
ADKI				*e*		10 18 09.3	
ADKI				*e*SKSac	SKSac	10 18 44.7	+1.5
ADKI				*e*ScS	S	10 19 24.2	-0.9

GCMT	Greycliff	94.02	44	P	P	10 09 10.2	+0.5
SMCO	Snowmass	94.07	51	P	P	10 09 09.5	-0.9
RLMT	Red Lodge	94.09	44	P	P	10 09 10.2	0.0
GGR	Gangavaram	94.10	287	*e*P	P	10 09 10.0	-0.5
GGR				*e*pP	pP	10 11 27.4	-1.1
GGR				*e*sP	sP	10 12 29.9	-2.2
GGR				*e*PP	PP	10 13 03.0	-6.1
GGR				*e*		10 16 09.2	
GGR				*e*SKSac	SKSac	10 18 43.3	-1.5
GGR				*e*		10 19 25.3	
VNA3	Neumayer Olymp	94.13	180	P	P	10 09 09.3	-0.3
TX31	Lajitas Ar. Si	94.16	61	P	P	10 09 11.0	+0.4
TX31				IAmb	IAmb	10 09 15.0	
	comp=Z,86nm,1.4s						
TX32	Lajitas Array	94.16	61	P	P	10 09 10.4	-0.2
TX32				IAmb	IAmb	10 09 15.0	
	comp=Z,88nm,1.4s						
TXAR	Lajitas Array	94.16	61	P	P	10 09 11.1	+0.5
	comp=Z,15nm,0.5s,baz=225,slow=5.7,SNR=227						
TXAR				PP	PP	10 13 09.9	+0.5
	comp=Z,19nm,1.0s,baz=230,slow=9.7,SNR=8.3						
TXAR				PKiKP	PKiKP	10 13 50.8	+0.7
	comp=Z,1.6nm,0.9s,baz=232,slow=1.0,SNR=2.8						
TXAR				PKKPbc	PKKPbc	10 26 08.4	-0.2
	comp=Z,2.1nm,0.6s,baz=90,slow=4.8,SNR=12						
TXAR				SKKPbc	SKKPbc	10 28 48.7	+0.4
	comp=Z,0.9nm,0.8s,baz=94,slow=3.9,SNR=4.3						
TXAR				PKPPKP	P'P'df	10 34 15.3	-4.7
	comp=Z,0.3nm,0.8s,baz=108,slow=2.9,SNR=2.7						
VNA2	Neumayer--Watz	94.43	181	P	P	10 09 10.9	0.0
	baz=172,slow=5.2						
RWWY	Rawlins	94.58	48	P	P	10 09 11.8	-0.6
RWWY				IAmb	IAmb	10 09 15.7	
	comp=Z,165nm,1.5s						
WMQ	Urumqi	94.58	314	P	P	10 09 13.1	+1.0
WMQ				pP	pP	10 11 30.7	+0.9
WMQ				SKS	SKSac	10 18 48.8	+2.5
WMQ				S	S	10 19 30.7	0.0
WMQ				sS	sS	10 23 34.6	-2.8
WMQ				SS	SS	10 26 14.4	-0.7
WMQ				pmax	pmax		
	comp=Z,29nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,120nm,3.7s						
WMQ	Urumqi	94.58	314	P	P	10 09 12.5	+0.4
WMQ				pmax	pmax		
	comp=Z,65nm,1.3s						
WMQ	Urumqi	94.58	314	P	P	10 09 12.5	+0.4
WMQ				IAmb	IAmb	10 09 16.2	
	comp=Z,65nm,1.3s						
EGMT	Eagleton	94.61	42	P	P	10 09 11.5	-0.7
EGMT				IAmb	IAmb	10 11 36.1	
	comp=Z,151nm,1.6s						
EGMT	Eagleton	94.61	42	P	P	10 09 12.2	0.0
	baz=253						
EGMT				S	S	10 19 32.6	+1.8
	baz=253						
NJS	Nagarjunasagar	94.62	286	*e*PcP	P	10 09 12.4	-0.4
NJS				*e*pP	pP	10 11 35.3	+4.3
NJS				*e*PP	PP	10 13 08.6	-4.4
NJS				*e*		10 16 15.7	
NJS				*e*		10 17 11.8	
NJS				*e*SKSac	SKSac	10 18 47.6	+0.2
NJS				*e*		10 19 29.7	
NJS				*e*pSKSac	pSKSac	10 22 05.4	+1.5
NJS				*e*sSKSac	sSKSac	10 23 09.1	-0.4
NJS				*e*sS	sS	10 23 36.8	-2.3
VNA1	Neumayer--Stat	94.72	181	P	P	10 09 12.3	+0.1
SDCO	Great Sand Dun	94.81	52	P	P	10 09 13.1	-0.5
SRLM	Srisailam	94.90	285	*e*P	P	10 09 13.8	-0.4
SRLM				*e*pP	pP	10 11 29.4	-2.8
SRLM				*e*sP	sP	10 12 33.5	-2.4
SRLM				*e*PP	PP	10 13 09.9	-5.2
SRLM				*e*		10 16 17.0	
SRLM				*e*SKSac	SKSac	10 18 48.7	-0.3
SRLM				*e*		10 19 31.4	
SRLM				*e*pSKSac	pSKSac	10 22 03.3	-2.9
SRLM				*e*sSKSac	sSKSac	10 23 11.1	0.0
SRLM				*e*sS	sS	10 23 41.8	+0.3
SRLM				*e*SS	SS	10 26 18.9	-1.7
H08S2	Diego Garcia H	95.10	261	P	P	10 09 14.5	-0.2
	baz=184						
H08S3	Diego Garcia H	95.11	261	P	P	10 09 14.8	0.0
	baz=184						
H08S1	Diego Carcia H	95.11	261	P	P	10 09 16.1	+1.2
	baz=184						
RPR	Rampur	95.18	288	*e*P	P	10 09 14.8	-0.6
ISCO	Idaho Springs	95.25	50	P	P	10 09 14.3	-1.3
ISCO				pmax	pmax		
	comp=Z,14nm,0.9s						
ISCO	Idaho Springs	95.25	50	P	P	10 09 14.3	-1.3
ISCO	Idaho Springs	95.25	50	P	P	10 09 16.2	+0.6
	baz=255						
ISCO				S	S	10 19 41.8	+4.6
	baz=255						
N23A	Red Feather La	95.29	49	P	P	10 09 14.7	-1.0
N23A				IAmb	IAmb	10 09 19.6	
	comp=Z,88nm,1.1s						
N23A	Red Feather La	95.29	49	P	P	10 09 16.2	+0.5
	baz=255						
N23A				S	S	10 19 42.2	+4.9
	baz=255						
K22A	Casper	95.32	47	P	P	10 09 15.3	-0.4
K22A	Casper	95.32	47	P	P	10 09 15.5	-0.2
	baz=255						
K22A				S	S	10 19 40.9	+3.5
	baz=255						
Q24A	Divide	95.39	51	P	P	10 09 15.3	-0.9
Q24A	Divide	95.39	51	P	P	10 09 16.5	+0.3
	baz=255						
Q24A				S	S	10 19 44.0	+5.7
	baz=255						
T25A	Trinidad	95.50	53	P	P	10 09 15.7	-1.0
T25A	Trinidad	95.50	53	P	P	10 09 16.8	+0.1
	baz=256						
HYB	Hyderabad	95.53	286	*i* P	P	10 09 16.0	-1.0
HYB				*e*SKS	SKSac	10 18 52.0	-0.2
HYBB	Hyderabad (bro	95.53	286	*e*P	P	10 09 16.1	-0.9
HYBB				*e*SKSac	SKSac	10 18 51.5	-0.8
HYBB				*e*		10 19 36.9	
C36M	Paulatuk	95.67	19	P	P	10 09 14.9	-1.4
C36M				IAmb	IAmb	10 09 17.8	
	comp=Z,162nm,1.2s						
C36M	Paulatuk	95.67	19	P	P	10 09 15.1	-1.3
	baz=243						
PHWY	Pilot Hill	95.75	49	P	P	10 09 17.0	-0.7
MSTX	Muleshoe	96.03	57	P	P	10 09 18.2	-0.8
MSTX				IAmb	IAmb	10 09 21.2	
	comp=Z,72nm,1.2s						
MSTX	Muleshoe	96.03	57	Pdiff	P	10 09 18.9	-0.1
	baz=256						
SRSP	Sriramsagar	96.07	288	*e*Pdif	P	10 09 18.7	-0.6
SRSP				*e*pP	pP	10 11 37.4	-0.1
SRSP				*e*sP	sP	10 12 36.6	-4.5
SRSP				*e*PP	PP	10 13 22.8	-1.2
SRSP				*e*SKSac	SKSac	10 18 52.8	-2.2
SRSP				*e*SKKSac	SKKSac	10 19 19.6	-3.8
SRSP				*e*		10 19 39.7	
SRSP				*e*SP	SP	10 21 11.3	+1.1
SRSP				*e*pSKSac	pSKSac	10 22 16.2	+3.6
SRSP				*e*sSKSac	sSKSac	10 23 15.7	-2.2
SRSP				*e*sS	sS	10 23 50.9	-0.7
SRSP				*e*PKKPdf	PKKPbc	10 25 52.1	-11
URV	Uravakonda	96.15	284	*e*Pdif	P	10 09 19.3	-0.5
URV				*e*pP	pP	10 11 34.8	-3.2
URV				*e*sP	sP	10 12 37.1	-4.7
URV				*e*SKSac	SKSac	10 18 53.9	-1.6
URV				*e*		10 19 42.2	
URV				*e*SP	SP	10 21 05.1	-6.1
URV				*e*pSKSac	pSKSac	10 22 09.7	-3.2
URV				*e*sSKSac	sSKSac	10 23 18.4	+0.2
URV				*e*sS	sS	10 23 54.2	+1.4
URV				*e*SS	SS	10 26 36.4	-1.6
YKA	Yellowknife Ar	96.51	27	P	P	10 09 19.6	-0.7
	comp=Z,31nm,0.5s,baz=255,slow=4.6,SNR=150						
YKA				pP	pP	10 11 39.0	+0.9
	comp=Z,12nm,1.1s,baz=249,slow=4.6,SNR=3.7						
YKA				PP	PP	10 13 29.1	+2.9
	comp=Z,9.2nm,1.0s,baz=247,slow=7.4,SNR=4.1						
YKA				PKiKP	PKiKP	10 13 52.3	-0.6
	comp=Z,1.7nm,0.5s,baz=270,slow=1.9,SNR=13						
YKA				S	SKSac	10 18 55.5	+0.2
	comp=Z,5.5nm,1.1s,baz=250,slow=5.3,SNR=5.3						
YKA				PKKPbc	PKKPbc	10 26 01.1	-2.4
	comp=Z,4.2nm,0.8s,baz=63,slow=2.5,SNR=10						
YKA				SKKP	SKKPdf	10 28 38.0	-1.1
	comp=Z,0.7nm,0.8s,baz=75,slow=2.2,SNR=2.6						
YKA				PKPPKP	P'P'df	10 34 15.3	+2.4
	comp=Z,1.0nm,0.8s,baz=58,slow=2.3,SNR=7.5						
YKA	Yellowknife Ar	96.51	27	P	P'P'df	10 34 15.3	+2.4
LAO	LASA Array	96.56	44	P	P	10 09 20.9	-0.1
LAO				IAmb	IAmb	10 11 46.0	
	comp=Z,68nm,1.4s						
AMTX	Amarillo	97.11	56	P	Pdif	10 09 23.2	-0.6
AMTX				IAmb	IAmb	10 09 26.0	
	comp=Z,35nm,0.7s						
KSCO	Kaye Shedlock'	97.31	52	Pdiff	P	10 09 24.9	+0.3
	baz=257						
RSSD	Black Hills	97.44	46		Pdif	10 09 24.3	-0.9
RSSD				IAmb	IAmb	10 09 28.1	
	comp=Z,51nm,1.2s						
RSSD	Black Hills	97.44	46	Pdiff	P	10 09 25.5	+0.3
	baz=257						
KLRI	Killari	97.49	287	*e*P	Pdif	10 09 24.9	-0.8
KLRI				*e*pP	pP	10 11 36.9	-7.2
KLRI				*e*sP	sP	10 12 48.1	+0.5
KLRI				*e*SKSac	SKSac	10 19 00.2	-2.0
KLRI				*e*Sdif	Sdif	10 19 53.3	-3.0
833A	Chaparral WMA,	97.56	63	Pdiff	P	10 09 27.1	+1.3
	baz=257						
JCT	Junction City	97.69	61	Pdiff	P	10 09 26.5	+0.1
	baz=257						
ABTX	Abilene, Hawle	98.28	59		Pdif	10 09 28.3	-0.7
ABTX				IAmb	IAmb	10 09 32.2	
	comp=Z,122nm,1.6s						
ABTX	Abilene, Hawle	98.28	59	Pdiff	P	10 09 29.1	+0.1
	baz=258						
DGMT	Dagmar	98.32	42	Pdiff	P	10 09 29.5	+0.8
	baz=257						
ZAA0	Zalesovo Array	98.95	323		Pdif	10 09 30.1	-1.2
ZALV	Zalesovo Beam	98.95	323	P	Pdif	10 09 30.7	-0.6
	comp=Z,10.0nm,0.7s,baz=112,slow=4.2,SNR=46						
ZALV				pP	pwP	10 11 51.6	-1.9
	comp=Z,14nm,1.2s,baz=103,slow=4.7,SNR=4.8						
ZALV				PKiKP	PKiKP	10 13 57.4	-0.2
	comp=Z,1.3nm,0.5s,baz=122,slow=1.9,SNR=3.3						
ZALV				S	SKSac	10 19 07.5	-0.3
	comp=Z,4.5nm,0.8s,baz=116,slow=3.4,SNR=5.5						
ZALV				PKKPbc	PKKPbc	10 25 55.5	-1.0
	comp=Z,1.5nm,0.4s,baz=285,slow=2.8,SNR=5.1						
MKAR	Makanchi Array	99.00	316	P	P	10 09 32.6	+0.7
	comp=Z,5.7nm,0.5s,baz=90,slow=5.7,SNR=36						
MKAR				pP	pP	10 11 50.5	+0.2
	comp=Z,10nm,1.1s,baz=98,slow=5.0,SNR=4.9						
MKAR				PKiKP	PKiKP	10 13 57.4	-0.6
	comp=Z,1.2nm,0.4s,baz=121,slow=1.0,SNR=7.4						
MKAR				S	SKSac	10 19 05.8	-2.7
	comp=Z,4.7nm,0.9s,baz=104,slow=6.1,SNR=8.0						
MKAR				PKKPbc	PKKPbc	10 25 54.4	-1.9
	comp=Z,0.9nm,0.4s,baz=267,slow=2.7,SNR=12						
MKAR				SKKPbc	SKKPbc	10 28 35.2	-2.3
	comp=Z,2.3nm,0.7s,baz=273,slow=2.8,SNR=7.7						
MAKZ	Makanchi	99.21	316	P	Pdif	10 09 31.2	-1.5
MAKZ				pmax	pmax		
	comp=Z,37nm,1.4s						
MAKZ	Makanchi	99.21	316		Pdif	10 09 31.2	-1.5
WMOK	Wichita Mounta	99.42	57	Pdiff	Pdif	10 09 34.9	+1.0
	baz=259						
435B	Jarrell	99.62	61	Pdiff	Pdif	10 09 35.4	+0.6
	baz=258						
WHTX	Lake Whitney,	99.96	60	Pdiff	Pdif	10 09 37.1	+0.8
	baz=259						
FFC	Flin Flon	100.92	36	P	Pdif	10 09 39.9	-0.2
FFC	Flin Flon	100.92	36		Pdif	10 09 39.9	-0.2
NRIK	Noril'sk	101.06	339	P	Pdif	10 09 40.1	-0.2
	comp=Z,17nm,0.8s,baz=130,slow=4.4,SNR=17						
SUSD	Miller	101.08	47	Pdiff	Pdif	10 09 42.4	+1.3
	baz=260						
BGNE	Belgrade	101.14	50	Pdiff	Pdif	10 09 41.9	+0.5
	baz=260						
PLCA	Paso Flores	101.41	138	P	Pdif	10 09 43.5	+0.7
	comp=Z,2.5nm,1.0s,baz=249,slow=17,SNR=2.1						
PLCA				PKiKP	PP	10 14 03.4	+0.6
	comp=Z,2.5nm,1.1s,baz=262,slow=7.4,SNR=2.1						
PLCA				PKKPbc	PKKPbc	10 25 48.8	-0.8
	comp=Z,3.6nm,1.1s,baz=37,slow=5.1,SNR=4.1						
KSU1	Kansas State U	101.92	53	Pdiff	Pdif	10 09 46.7	+1.8
	baz=261						
TUL1	Leonard	102.03	56	Pdiff	Pdif	10 09 47.1	+1.6
	baz=260						
KURK	Kurchatov	102.09	319⇓	*e*P	Pdif	10 09 45.4	+0.1
KURK	Kurchatov	102.09	319		Pdif	10 09 45.1	-0.2
KURK					PKiKP	10 14 02.6	-0.7
KURBB	Kurchatov Arra	102.13	319	P	Pdif	10 09 45.1	-0.4
	comp=Z,0.9nm,0.5s,baz=96,slow=4.1,SNR=8.3						
KURBB				PKiKP	PKiKP	10 14 02.6	-0.8
	comp=Z,1.6nm,0.6s,baz=112,slow=1.8,SNR=6.9						
KURBB				PKKPbc	PKKPbc	10 25 45.3	-2.1
	comp=Z,2.1nm,0.8s,baz=284,slow=3.3,SNR=4.4						
KURBB				SKKPbc	SKKPbc	10 28 27.4	-2.1
	comp=Z,2.6nm,0.7s,baz=282,slow=3.0,SNR=9.6						
KSH	Kashi	102.22	308	P	Pdif	10 09 46.4	0.0
ECSD	EROS Data Cent	102.63	48		Pdif	10 09 48.0	0.0
ECSD	EROS Data Cent	102.63	48	Pdiff	Pdif	10 09 48.0	0.0
	baz=262						
W39A	Magazine	103.54	57	Pdiff	Pdif	10 09 53.9	+1.7
	baz=261						
MIAR	Mount Ida	103.61	58	Pdiff	Pdif	10 09 54.5	+1.9
	baz=261						
AAK	Ala-Archa	103.78	311	Pdiff	Pdif	10 09 52.3	-1.0
	comp=Z,1.6nm,0.7s,baz=84,slow=19,SNR=2.1						
AAK				PKKPbc	PKKPbc	10 25 40.6	-2.0
	comp=Z,4.3nm,0.5s,baz=215,slow=3.6,SNR=10						
AAK				SKKPbc	SKKPbc	10 28 23.7	-1.1
	comp=Z,2.2nm,0.8s,baz=222,slow=5.2,SNR=4.2						
ULM	Lac du Bonnet	103.98	41	Pdiff	Pdif	10 09 53.2	-0.6
	comp=Z,4.2nm,0.9s,baz=265,slow=6.4,SNR=5.1						
ULM				PKiKP	PKiKP	10 14 05.1	-1.7
	comp=Z,5.6nm,0.4s,baz=267,slow=1.1,SNR=13						
ULM				SKP	SKiKP	10 16 42.1	+0.2
	comp=Z,4.5nm,0.6s,baz=277,slow=1.9,SNR=5.4						
ULM				PKKPbc	PKKPbc	10 25 40.3	-1.8
	comp=Z,4.4nm,0.5s,baz=76,slow=3.4,SNR=9.6						
ULM				SKKPbc	SS	10 28 23.7	+0.1
	comp=Z,3.0nm,0.6s,baz=71,slow=4.4,SNR=3.4						
ULM	Lac du Bonnet	103.98	41	P	Pdif	10 09 54.3	+0.5
ULM	Lac du Bonnet	103.98	41		Pdif	10 09 54.3	+0.5
ULM					PKiKP	10 14 06.1	-0.8
U40A	Yellville	104.45	56	Pdiff	Pdif	10 09 57.9	+1.6
	baz=262						
W41B	Gary Mavity, V	104.78	57	Pdiff	Pdif	10 09 60.0	+2.3
	baz=262						
SPMN	Marine on St.	105.52	47		Pdif	10 10 02.3	+1.5
LCAR	Lake Charles	105.78	56		Pdif	10 10 00.6	-1.5
EYMN	Ely	106.64	44	PKiKP	PKiKP	10 14 11.7	-0.2
	baz=266						
JFWS	Jewell Farm	107.16	49	PKiKP	PKiKP	10 14 12.4	-0.6
	baz=266						
BVAR	Borovoye Array	107.38	321	Pdiff	Pdif	10 10 08.3	-0.6
	comp=Z,1.5nm,0.7s,baz=90,slow=4.4,SNR=8.0						
BVAR				PKiKP	PKiKP	10 14 12.4	-0.7
	comp=Z,2.4nm,0.3s,baz=97,slow=1.8,SNR=15						
BVAR				SKP	SKiKP	10 16 49.1	+0.9
	comp=Z,4.6nm,0.5s,baz=116,slow=1.6,SNR=8.2						
BVAR				PKKPbc	PKKPbc	10 25 28.8	-3.1
	comp=Z,0.7nm,0.4s,baz=285,slow=2.7,SNR=4.2						
BVAR				PKKPab	PKKPab	10 25 45.7	-1.7
	comp=Z,2.3nm,0.8s,baz=355,slow=1.8,SNR=5.5						
HDIL	Hopedale	107.69	52	PKiKP	PKiKP	10 14 13.9	-0.2
	baz=266						
Z50A	Ashland	109.77	60	PKiKP	PKiKP	10 14 18.2	-0.1
	baz=265						
WCI	Wyandotte Cave	109.84	54	PKiKP	PKiKP	10 14 17.5	-0.6
	baz=267						
Q48A	North Vernon	110.32	54	PKiKP	PKiKP	10 14 18.1	-0.9
	baz=267						
T49A	Edmonton	110.38	56	PKiKP	PKiKP	10 14 18.5	-0.7
	baz=267						
K46A	Dorr	110.43	50	PKiKP	PKiKP	10 14 18.1	-1.0
	baz=268						
W50A	Signal Mountai	110.43	58	PKiKP	PKiKP	10 14 18.0	-1.5
	baz=266						
N47A	Urbana	110.44	52	PKiKP	PKiKP	10 14 17.8	-1.4
	baz=268						
M47A	Cromwell	110.51	51	PKiKP	PKiKP	10 14 20.6	+1.2
	baz=268						
J46A	Howard City	110.54	49	PKiKP	PKiKP	10 14 19.6	+0.3
	baz=269						
G45A	Suttons Bay	110.56	47	PKiKP	PKiKP	10 14 20.0	+0.6
	baz=270						
F45A	CMU Biological	110.67	46	PKiKP	PKiKP	10 14 18.7	-0.8
	baz=270						
I46A	Reed City	110.70	48	PKiKP	PKiKP	10 14 19.2	-0.5
	baz=269						
R49A	Shelbyville	110.73	54	PKiKP	PKiKP	10 14 20.3	+0.4
	baz=267						
L47A	Sherwood	110.84	50	PKiKP	PKiKP	10 14 19.6	-0.3
	baz=269						
T50A	Nancy	110.93	56	PKiKP	PKiKP	10 14 19.0	-1.3
	baz=267						
N48A	Decatur	110.94	52	PKiKP	PKiKP	10 14 19.7	-0.4
	baz=268						
K47A	Vermontville	111.00	50	PKiKP	PKiKP	10 14 19.6	-0.7
	baz=269						
G46A	Petoskey	111.13	47	PKiKP	PKiKP	10 14 19.7	-0.7
	baz=270						
P49A	Miami Univ. Ec	111.14	53	PKiKP	PKiKP	10 14 19.4	-1.2
	baz=268						
J47A	Sunmer	111.14	49	PKiKP	PKiKP	10 14 20.7	+0.2
	baz=269						
M48A	Edgerton	111.19	51	PKiKP	PKiKP	10 14 20.8	+0.1
	baz=269						
S50A	Richmond	111.31	55	PKiKP	PKiKP	10 14 20.2	-0.8
	baz=268						
Y52A	Lilburn	111.37	59	PKiKP	PKiKP	10 14 20.4	-0.8
	baz=266						
R50A	Paris	111.39	54	PKiKP	PKiKP	10 14 20.9	-0.2
	baz=268						
L48A	N Adams	111.41	50	PKiKP	PKiKP	10 14 20.8	-0.3
	baz=269						
O49A	Covington	111.45	52	PKiKP	PKiKP	10 14 20.4	-0.8
	baz=268						
LVC	Limon Verde	111.50	122	PKiKP	PKiKP	10 14 22.7	+0.4
	comp=Z,3.0nm,0.7s,baz=297,slow=4.5,SNR=2.6						
LVC				PKKPbc	PKKPbc	10 25 20.8	+1.8
	comp=Z,3.8nm,0.6s,baz=81,slow=5.7,SNR=3.3						
W52A	Murphy	111.56	58	PKiKP	PKiKP	10 14 20.8	-0.8
	baz=267						
N49A	Columbus Grove	111.58	52	PKiKP	PKiKP	10 14 20.6	-0.8
	baz=269						
T51A	Gray	111.64	56	PKiKP	PKiKP	10 14 21.7	+0.1
	baz=268						
K48A	Perry	111.66	50	PKiKP	PKiKP	10 14 20.8	-0.7
	baz=270						
D46A	Sault St. Mari	111.68	45	PKiKP	PKiKP	10 14 20.7	-0.7
	baz=271						
Q50A	Georgetown	111.68	54	PKiKP	PKiKP	10 14 21.4	-0.3
	baz=268						
M49A	Liberty Center	111.75	51	PKiKP	PKiKP	10 14 21.6	-0.1
	baz=269						
GOGA	Godfrey	111.83	60	PKiKP	PKiKP	10 14 21.1	-1.0
	baz=266						
G47A	Hillman	111.84	47	PKiKP	PKiKP	10 14 20.9	-0.9
	baz=271						
V52A	Sevierville	111.87	57	PKiKP	PKiKP	10 14 21.5	-0.6
	baz=267						
J48A	Bridge Port	111.90	49	PKiKP	PKiKP	10 14 21.2	-0.7
	baz=270						
L49A	Milan	111.91	50	PKiKP	PKiKP	10 14 21.5	-0.5
	baz=270						
S51A	Beattyville	111.95	55	PKiKP	PKiKP	10 14 21.7	-0.5
	baz=268						
I48A	Sherman Twp	111.96	48	PKiKP	PKiKP	10 14 21.4	-0.6
	baz=270						
O50A	Cable	112.00	52	PKiKP	PKiKP	10 14 21.6	-0.6
	baz=269						
X53A	Estanollee	112.04	58	PKiKP	PKiKP	10 14 23.1	+0.6
	baz=267						
Q51A	Peebles	112.18	54	PKiKP	PKiKP	10 14 21.6	-1.0
	baz=269						
E47A	Iron Bridge	112.22	46	PKiKP	PKiKP	10 14 21.5	-0.9
	baz=272						
H48A	Harrisville	112.22	48	PKiKP	PKiKP	10 14 20.9	-1.6
	baz=271						
D47A	Chapleau	112.31	45	PKiKP	PKiKP	10 14 22.3	-0.4
	baz=272						
N50A	Nevada	112.36	52	PKiKP	PKiKP	10 14 22.7	-0.2
	baz=270						
J49A	Marlette	112.37	49	PKiKP	PKiKP	10 14 23.2	+0.4
	baz=271						
T52A	Hallie	112.41	56	PKiKP	PKiKP	10 14 22.8	-0.4
	baz=268						
P51A	Williamsport	112.41	53	PKiKP	PKiKP	10 14 22.2	-0.9
	baz=269						
M50A	Fremont	112.45	51	PKiKP	PKiKP	10 14 23.1	+0.1
	baz=270						
ACSO	Alum Creek Sta	112.49	52	PKiKP	PKiKP	10 14 22.4	-0.8
	baz=269						
V53A	Saluda	112.50	57	PKiKP	PKiKP	10 14 22.5	-0.9
	baz=268						
I49A	Point Hope	112.59	48	PKiKP	PKiKP	10 14 22.6	-0.6
	baz=271						
L50A	Kingsville	112.62	50	PKiKP	PKiKP	10 14 22.9	-0.4
	baz=270						
BBAC	Balboa, Cauca	112.66	94	*e*P	PKiKP	10 14 24.1	-0.4
F48A	Evansville	112.69	46	PKiKP	PKiKP	10 14 22.1	-1.2
	baz=272						
U53A	Fall Branch	112.71	57	P	PKiKP	10 14 23.3	-0.5
	baz=268,SNR=11						
T53A	Wise	112.77	56	P	PKiKP	10 14 23.6	-0.3
	baz=268,SNR=11						
O51A	Pataskala	112.77	52	P	PKiKP	10 14 22.6	-1.2
	baz=270						
SVE	Sverdlovsk	112.79	326	*e*PKIKP	PKiKP	10 14 19.8	-3.4
SVE				pmax	pmax		
	comp=Z,34nm,1.4s						
X54A	Belton	112.80	58	P	PKiKP	10 14 23.9	-0.1
	baz=267						
N51A	Ashland	112.95	52	P	PKiKP	10 14 23.1	-0.9
	baz=270						
W54A	Cherokee Point	112.98	58	P	PKiKP	10 14 24.0	-0.3
	baz=268						
E48A	Lockeyer	112.98	46	P	PKiKP	10 14 23.2	-0.8
	baz=273,SNR=12						
Q52A	Bidwell	113.02	54	P	PKiKP	10 14 23.9	-0.3
	baz=269						
F49A	Sandfield	113.10	46	P	PKiKP	10 14 22.9	-1.2
	baz=272,SNR=7.3						
S53A	Williamson	113.11	55	P	PKiKP	10 14 24.3	-0.2
	baz=269						
P52A	Corning	113.13	53	P	PKiKP	10 14 23.2	-1.3
	baz=270,SNR=6.8						
NOR	Nord	113.14	1	*i* P	PKiKP	10 14 22.8	-0.5
NOR	Nord	113.14	1	*e*PKIKP	PKiKP	10 14 22.8	-0.5
D48A	Paudash Townsh	113.19	45	P	PKiKP	10 14 23.5	-0.8
	baz=273,SNR=10.0						
V54A	Nebo	113.20	57	P	PKiKP	10 14 24.2	-0.5
	baz=268						
Y55A	Saluda	113.20	59	P	PKiKP	10 14 24.3	-0.4
	baz=267						
R53A	Hurricane	113.26	54	P	PKiKP	10 14 23.2	-1.5
	baz=269						
SOTA	Rioblanco	113.31	94	*e*P	PKiKP	10 14 27.0	+0.8
SOTA	Rioblanco	113.31	94	*e*P	PKKPbc	10 25 15.7	+3.0
U54A	Nelsons Funny	113.33	56	P	PKiKP	10 14 24.9	-0.1
	baz=269						
O52A	Adamsville	113.36	52	P	PKiKP	10 14 24.5	-0.3
	baz=270,SNR=9.7						
X55A	Gracelyn & Ava	113.41	59	P	PKiKP	10 14 24.9	-0.1
	baz=268						
N52A	McGinn's Farm,	113.47	52	P	PKiKP	10 14 25.0	0.0
	baz=270,SNR=5.1						
T54A	Tazewell	113.54	56	P	PKiKP	10 14 24.6	-0.8
	baz=269,SNR=6.0						
PCON	Cinco Dias	113.56	94	*e*P	PKiKP	10 14 25.9	-0.8
Q53A	Leroy	113.60	54	P	PKiKP	10 14 24.8	-0.6
	baz=270,SNR=5.2						
KMSC	Kings Mountain	113.68	58	P	PKiKP	10 14 25.0	-0.7
	baz=268,SNR=5.4						
P53A	Whipple	113.71	53	P	PKiKP	10 14 25.1	-0.5
	baz=270						
M52A	Chesterland	113.72	51	P	PKiKP	10 14 25.1	-0.3
	baz=271,SNR=10.0						
S54A	Dingess, Beckl	113.76	55	P	PKiKP	10 14 24.8	-0.9
	baz=269						
V55A	Taylorsville	113.80	57	P	PKiKP	10 14 25.6	-0.3
	baz=269						
O53A	New Philadelph	113.84	52	P	PKiKP	10 14 25.7	-0.1
	baz=271,SNR=6.0						
I51A	Listowel	113.90	48	P	PKiKP	10 14 25.4	-0.4
	baz=272,SNR=5.6						
X56A	White Oak	113.91	59	P	PKiKP	10 14 25.4	-0.7
	baz=268						
U55A	TA2, Sparta	113.95	56	P	PKiKP	10 14 25.6	-0.6
	baz=269,SNR=6.8						
ARU	Arti	113.98	325	PKiKP	PKiKP	10 14 24.7	-0.8
	comp=Z,3.1nm,0.4s,baz=78,slow=3.9,SNR=12						
ARU				SKP	SKiKP	10 17 01.1	+0.1
	comp=Z,6.8nm,0.5s,baz=102,slow=2.3,SNR=10						

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ARU                                  PKKPbc  PKKPbc  10 25 10.2  -0.6
      comp=Z,1.8nm,0.2s,baz=291,slow=10,SNR=5.9
ARU                                  PKKPab  PKKPab  10 25 19.2  +1.2
      comp=Z,2.2nm,0.2s,baz=288,slow=8.1,SNR=8.7
ARU                                  SKKPbc  SKKPbc  10 27 53.6  -2.7
      comp=Z,1.7nm,0.2s,baz=256,slow=8.3,SNR=3.4
ARU   Arti               113.98 325  i PKIKP PKiKP   10 14 25.3  -0.2
ARU                                                  10 15 30.6
ARU                                                  10 20 37.6
ARU                                  SP      SP      10 24 00.4  -5.7
R54A  Victor             114.02  55  P       PKPdf   10 14 25.0  -1.2
      baz=270
YOTC  Yotoco, Valle      114.03  92  eP      PKiKP   10 14 24.1  -2.9
YOTC  Yotoco, Valle      114.03  92  eP      PKKPbc  10 25 09.9   0.0
FLOC  Florencia          114.09  95  eP      PKiKP   10 14 26.8  -0.3
N53A  Lisbon             114.12  52  P       PKPdf   10 14 25.3  -1.0
      baz=271,SNR=9.1
Q54A  Coxs Mills         114.14  54  P       PKPdf   10 14 25.4  -0.9
      baz=270,SNR=8.4
K52A  Tillsonburg        114.16  50  P       PKPdf   10 14 25.9  -0.4
      baz=272
T55A  Pulaski            114.17  56  P       PKPdf   10 14 25.9  -0.6
      baz=269
M53A  Wl Miller and      114.23  51  P       PKPdf   10 14 26.0  -0.4
      baz=271,SNR=10.0
W56A  Indian Trail       114.30  58  P       PKPdf   10 14 26.0  -0.7
      baz=269
J52A  Paris              114.32  49  P       PKPdf   10 14 26.1  -0.4
      baz=272
V56A  Mocksville         114.38  57  P       PKPdf   10 14 26.3  -0.6
      baz=269
GARC  Garzon, Huila      114.40  94  eP      PKKPbc  10 25 09.6  +0.8
S55A  Lewisburg          114.40  55  P       PKiKP   10 14 27.3  +0.3
      baz=270
P54A  Burton             114.41  53  P       PKPdf   10 14 26.1  -0.8
      baz=271,SNR=5.8
BLA   Blacksburg         114.46  56  i PKIKP PKPdf   10 14 26.3  -0.8
BLA   Blacksburg         114.46  56          PKPdf   10 14 25.7  -1.4
BLA                                          PKiKP   10 14 26.3  -0.8
BLA   Blacksburg         114.46  56  P       PKPdf   10 14 26.3  -0.8
      baz=270,SNR=6.2
OPO   Ambohidratompo114.47 241       PKP     PKiKP   10 14 28.1  +0.3
      comp=Z,17nm,0.5s,baz=76,slow=2.5,SNR=26
OPO                                  SKP     SKiKP   10 17 03.9  +0.6
      comp=Z,14nm,0.7s,baz=129,slow=1.1,SNR=11
OPO                                  PKKPbc  PKKPbc  10 25 07.6  -1.3
      comp=Z,4.4nm,0.7s,baz=292,slow=5.4,SNR=4.1
OPO                                  PKKPab  PKKPab  10 25 17.5  -0.5
      comp=Z,4.9nm,0.8s,baz=284,slow=2.0,SNR=5.2
O54A  Avella             114.48  52          PKPdf   10 14 25.7  -1.3
O54A                                         PKiKP   10 14 26.4  -0.6
O54A  Avella             114.48  52  P       PKPdf   10 14 26.1  -0.9
      baz=271,SNR=9.9
U56A  King               114.48  57  P       PKPdf   10 14 27.0  -0.2
      baz=269
L53A  Girard             114.53  50  P       PKPdf   10 14 26.8  -0.2
      baz=272,SNR=6.0
PTLC  Puerto Leguiza     114.53  97  eP      PKPdf   10 14 26.8  -1.1
D50A  G1974 Best Tow     114.53  45  P       PKPdf   10 14 25.7  -1.2
      baz=275,SNR=14
F51A  Arnstein           114.57  46  P       PKPdf   10 14 25.8  -1.2
      baz=274,SNR=14
ALLY  Alegheny Colle     114.62  51          PKPdf   10 14 26.6  -0.6
ALLY                                         PKiKP   10 14 27.7  +0.5
H52A  Wyevale            114.67  47  P       PKPdf   10 14 26.2  -1.0
      baz=273,SNR=6.8
X57A  Johnson Farm,      114.68  59  P       PKPdf   10 14 26.9  -0.6
      baz=269
R55A  Marlinton          114.70  54          PKPdf   10 14 27.0  -0.6
R55A                                         PKiKP   10 14 27.4  -0.2
R55A  Marlinton          114.70  54  P       PKPdf   10 14 26.9  -0.6
      baz=270,SNR=7.2
ERPA  Erie               114.72  50          PKPdf   10 14 26.7  -0.7
ERPA                                         PKiKP   10 14 27.2  -0.2
Q55A  Buckhannon         114.73  54  P       PKPdf   10 14 26.6  -1.0
      baz=271
N54A  Moraine State      114.76  52          PKPdf   10 14 26.7  -0.8
N54A                                         PKiKP   10 14 27.1  -0.5
N54A  Moraine State      114.76  52  P       PKPdf   10 14 26.7  -0.9
      baz=272,SNR=8.2
T56A  Rocky Mt           114.77  56  P       PKPdf   10 14 26.9  -0.7
      baz=270,SNR=5.3
W57A  Gilead             114.78  58  P       PKPdf   10 14 27.0  -0.7
      baz=269
CBOC  Ciudad Bolivar     114.81  90  eP      PKPdf   10 14 28.6   0.0
CBOC  Ciudad Bolivar     114.81  90  eP      PKKPbc  10 25 08.6  +1.3
E51A  G1948 Merrick      114.82  45  P       PKPdf   10 14 26.3  -1.1
      baz=275,SNR=12
D51A  Lot 18 Range I     114.86  45  P       PKPdf   10 14 26.7  -0.8
      baz=275,SNR=7.7
DBBC  Dabeiba            114.88  89  eP      PKiKP   10 14 29.5  +0.9
DBBC  Dabeiba            114.88  89  eP      PKKPbc  10 25 09.9  +2.9
WSAR  Wadi Sarin         114.93 289  PKP     PKiKP   10 14 29.2  +0.8
      comp=Z,6.1nm,0.7s,baz=92,slow=19,SNR=3.8
WSAR                                 PKKPbc  PKKPbc  10 25 05.6  -1.2
      comp=Z,6.2nm,0.6s,baz=259,slow=4.5,SNR=6.6
WSAR                                 PKKPab  PKKPab  10 25 16.4  +1.9
      comp=Z,5.6nm,0.7s,baz=328,slow=13,SNR=4.3
WSAR                                 SKKPbc  SKKPbc  10 27 51.8  +0.3
      comp=Z,5.7nm,0.7s,baz=225,slow=5.2,SNR=4.5
LPAZ  La Paz             114.95 116  PKP     PKPdf   10 14 29.1  -0.3
      comp=Z,5.1nm,0.5s,baz=17,slow=3.2,SNR=25
LPAZ                                 SKP             10 17 04.2
      comp=Z,5.0nm,0.7s,baz=115,slow=1.4,SNR=3.5
LPAZ                                 PKKPbc  PKKPbc  10 25 08.1  +0.3
      comp=Z,2.1nm,0.6s,baz=25,slow=3.4,SNR=7.2
LPAZ                                 PKKPab  PKKPab  10 25 16.0  -0.4
      comp=Z,3.9nm,0.9s,baz=71,slow=9.3,SNR=5.3
LPAZ  La Paz             114.95 116          PKPdf   10 14 28.9  -0.5
V57A  Coltrane Farms     114.97  57  P       PKPdf   10 14 27.3  -0.7
      baz=270
M54A  Oil Creek Stat     114.99  51          PKPdf   10 14 26.8  -1.2
M54A                                         PKiKP   10 14 27.9  -0.1
M54A  Oil Creek Stat     114.99  51  P       PKPdf   10 14 27.4  -0.5
      baz=272,SNR=13
F52A  Sundridge          115.00  46  P       PKPdf   10 14 26.6  -1.2
      baz=274,SNR=10
KBS   Kingsbay           115.02 355  ePKPdf  PKiKP   10 14 27.1  +0.1
KBS                                  ePP     PP      10 15 38.3  -0.8
KBS                                  eSKSac  SKSac   10 20 16.4  +0.4
KBS                                  eSP     SP      10 24 10.3  -4.0
KBS                                  eSS     SS      10 30 54.1  +6.8
Y58A  Scranton           115.02  59  P       PKiKP   10 14 28.4  +0.2
      baz=269
ORTC  Ortega, Tolima     115.08  93  eP      PKPdf   10 14 27.7  -1.3
ORTC  Ortega, Tolima     115.08  93  eP      PKKPbc  10 25 07.9  +1.7
S56A  Natural Bridge     115.14  55  P       PKPdf   10 14 27.1  -1.3
      baz=270
AKTO  Aktyubinsk         115.18 319  PKKPbc  PKKPbc  10 25 05.7  -0.9
      comp=Z,2.4nm,0.8s,baz=258,slow=9.3,SNR=4.1
AKTO                                 PKKPab  PKKPab  10 25 13.1  +0.3
      comp=Z,5.0nm,0.9s,baz=256,slow=4.1,SNR=5.9
SADO  Sadowa             115.20  47          PKPdf   10 14 27.9  -0.3
L54A  Sinclairville      115.22  50  P       PKPdf   10 14 27.3  -1.0
      baz=273,SNR=13
R56A  Bull Pasture M     115.26  54  P       PKPdf   10 14 27.5  -1.2
      baz=271
SPA0  Spitsbergen Ar     115.30 354  ePKPdf  PKPdf   10 14 26.2  -1.3
SPA0                                 ePP     PP      10 15 40.5  -0.6
SPA0                                 eSKPdf  SKiKP   10 17 03.3  +0.3
SPA0                                 eSS     SS      10 30 51.8  +0.7
SPA0  Spitsbergen Ar     115.30 354          PKiKP   10 14 27.9  +0.3
SPITS Spitsbergen Ar     115.30 354  PKKPbc  PKKPbc  10 25 04.2  -2.6
      comp=Z,2.9nm,0.4s,baz=170,slow=10,SNR=18
O55A  Ligonier           115.30  52  P       PKPdf   10 14 27.8  -0.8
      baz=272,SNR=10
U57A  Blanch             115.33  57  P       PKPdf   10 14 28.2  -0.5
      baz=270
HELC  Santa Helena       115.35  90  eP      PKPdf   10 14 29.5  -0.4
HELC  Santa Helena       115.35  90  eP      PKKPbc  10 25 08.4  +2.7
T57A  Hurt               115.39  56          PKPdf   10 14 27.5  -1.4
T57A  Hurt               115.39  56  P       PKPdf   10 14 27.9  -0.9
      baz=270,SNR=6.5
W58A  Raeford            115.40  58  P       PKPdf   10 14 28.0  -0.9
      baz=269
E52A  Mattawa            115.42  46  P       PKPdf   10 14 28.0  -0.6
      baz=275,SNR=13
Q56A  Snyder Ridge,      115.42  54          PKPdf   10 14 27.9  -0.9
Q56A  Snyder Ridge,      115.42  54  P       PKPdf   10 14 28.0  -0.8
      baz=271
V58A  Windy Hill, Pi     115.50  57          PKPdf   10 14 28.8  -0.3
V58A  Windy Hill, Pi     115.50  57  P       PKPdf   10 14 28.5  -0.6
      baz=270
N55A  Marion Center      115.53  52  P       PKPdf   10 14 28.2  -0.8
      baz=272
G53A  Haliburton         115.54  47  P       PKPdf   10 14 27.9  -1.0
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      baz=275,SNR=16
H53A  Bobcaygeon         115.61  47  P       PKPdf   10 14 28.5  -0.5
      baz=274,SNR=7.8
S57A  Dark Hollow, R     115.63  55  P       PKPdf   10 14 28.2  -1.1
      baz=271
HOPEN Hopen              115.65 351  ePP     PP      10 15 38.3  -5.2
HOPEN                                eSS     SS      10 30 54.6  -1.0
J54A  Appleton           115.66  49  P       PKiKP   10 14 29.7  +0.5
      baz=274
K54A  Basiliko Farm,     115.66  50  P       PKPdf   10 14 28.8  -0.4
      baz=273,SNR=10
M55A  Ridgway            115.66  51          PKPdf   10 14 28.8  -0.4
M55A  Ridgway            115.66  51  P       PKPdf   10 14 28.9  -0.4
      baz=273,SNR=9.8
P56A  Dayton Farm, R     115.68  53  P       PKPdf   10 14 28.2  -1.2
      baz=272
Y59A  Loris              115.68  59  P       PKPdf   10 14 29.4  -0.1
      baz=269
UREC  San Jos de Ur      115.69  88  eP      PKPdf   10 14 27.7  -2.4
UREC  San Jos de Ur      115.69  88  eP      PKKPbc  10 25 06.7  +2.6
MATQ  Matagami           115.72  42  P       PKPdf   10 14 27.7  -1.4
      baz=278
WVNY  West Valley, N     115.73  50          PKPdf   10 14 28.4  -1.0
NORC  Norcasia           115.84  91  eP      PKPdf   10 14 29.3  -1.1
O56A  Blue Knob Stat     115.86  52          PKPdf   10 14 28.8  -1.0
O56A  Blue Knob Stat     115.86  52  P       PKPdf   10 14 28.9  -0.8
      baz=272,SNR=9.6
ALGO  Algonquin Park     115.87  46  P       PKPdf   10 14 28.3  -1.2
      baz=275
L55A  Hinsdale           115.87  50  P       PKPdf   10 14 29.2  -0.4
      baz=273,SNR=18
G54A  Lake Saint Pet     115.89  47  P       PKPdf   10 14 28.8  -0.7
      baz=275,SNR=16
R57A  Stanardsville      115.96  54  P       PKiKP   10 14 29.9   0.0
      baz=271
U58A  Oxford             115.96  57  P       PKPdf   10 14 29.8  -0.1
      baz=270
T58A  Grand View Acr     115.97  56  P       PKPdf   10 14 29.9  -0.1
      baz=271
MACC  Macarena, Meta     115.97  95  eP      PKPdf   10 14 29.7  -1.0
MACC  Macarena, Meta     115.97  95  eP      PKKPbc  10 25 04.0  +0.8
D53A  Lac Vacive, Po     116.00  45          PKPdf   10 14 28.6  -1.1
D53A  Lac Vacive, Po     116.00  45  P       PKPdf   10 14 28.6  -1.1
      baz=276
GEYT  Alibeck            116.02 305  PKP     PKPdf   10 14 30.0  -0.1
      comp=Z,8.4nm,0.6s,baz=254,slow=2.8,SNR=12
Q57A  Strasburg          116.03  54  P       PKPdf   10 14 29.2  -0.8
      baz=272
N56A  West Decatur       116.04  52  P       PKPdf   10 14 29.5  -0.5
      baz=273,SNR=7.5
VLDQ  Val d'Or           116.05  43          PKPdf   10 14 28.3  -1.4
E53A  Dumoine, Ponti     116.09  45  P       PKPdf   10 14 29.3  -0.6
      baz=276,SNR=10
M56A  Emporium           116.10  51          PKPdf   10 14 29.5  -0.6
M56A  Emporium           116.10  51  P       PKPdf   10 14 29.2  -0.9
      baz=273,SNR=12
K55A  Perry              116.11  49  P       PKPdf   10 14 29.4  -0.7
      baz=274,SNR=5.1
ROSC  El Rosal           116.20  92  PKP     PKiKP   10 14 31.8  +0.2
      comp=Z,15nm,0.4s,baz=176,slow=23,SNR=5.7
ROSC                                 SKP     SKiKP   10 17 06.5  -0.6
      comp=Z,18nm,0.9s,baz=42,slow=10,SNR=4.1
V59A  Middlesex          116.22  57  P       PKPdf   10 14 29.8  -0.6
      baz=270
LSQQ  Lebel-sur-Quev     116.24  42  P       PKPdf   10 14 28.6  -1.5
      baz=278
J55A  Hilton             116.26  49          PKPdf   10 14 30.1  -0.2
J55A  Hilton             116.26  49  P       PKPdf   10 14 29.1  -1.2
      baz=274
I55A  Frankford          116.28  48  P       PKPdf   10 14 29.4  -0.9
      baz=275
ZARC  Zaragoza, Cauc     116.29  89  eP      PKPdf   10 14 29.7  -1.5
ZARC  Zaragoza, Cauc     116.29  89  eP      PKKPbc  10 25 03.3  +1.2
P57A  Homestead Farm 116.32  53              PKPdf   10 14 29.6  -0.9
P57A  Homestead Farm 116.32  53      P       PKPdf   10 14 29.9  -0.7
      baz=272
S58A  Poland Farm, P     116.34  55          PKPdf   10 14 30.5  -0.1
S58A  Poland Farm, P     116.34  55  P       PKPdf   10 14 29.9  -0.8
      baz=271
R58A  Rapidan            116.37  54  P       PKPdf   10 14 29.5  -1.2
      baz=272
SSPA  Standing Stone     116.37  52  P       PKPdf   10 14 29.6  -1.0
      baz=273
E54A  Lac Daplat, Po     116.42  45  P       PKPdf   10 14 29.6  -0.9
      baz=276,SNR=19
HSPB  Hornsund (broa     116.43 354  ePP     PP      10 15 43.9  -4.8
HSPB                                 eSKPdf  SKiKP   10 17 05.2   0.0
HSPB                                 eSKSac  SKSac   10 20 21.7  +0.5
HSPB                                 eSS     SS      10 31 06.2  +0.8
X60A  Albert Glenn T     116.43  59  P       PKPdf   10 14 30.2  -0.6
      baz=270
PTBC  PUERTO BERRIO,116.47  90       eP      PKPdf   10 14 29.5  -2.1
PTBC  PUERTO BERRIO,116.47  90       eP      PKKPbc  10 25 02.3  +0.8
R58B  Mineral            116.47  55          PKPdf   10 14 29.9  -0.9
R58B  Mineral            116.47  55  P       PKPdf   10 14 29.7  -1.2
      baz=272
SJCC  San Jacinto, C     116.49  86  eP      PKPdf   10 14 30.4  -1.3
SJCC  San Jacinto, C     116.49  86  eP      PKKPbc  10 25 11.1  +10
L56A  Greenwood          116.53  50          PKPdf   10 14 30.3  -0.6
L56A  Greenwood          116.53  50  P       PKPdf   10 14 30.5  -0.5
      baz=274,SNR=13
O57A  Amberson           116.58  52  P       PKPdf   10 14 30.0  -1.1
      baz=273,SNR=5.6
Q58A  Fox Den Farm,      116.60  54  P       PKPdf   10 14 30.7  -0.4
      baz=272
H55A  Tweed              116.61  47  P       PKPdf   10 14 29.9  -1.0
      baz=275,SNR=6.5
SPBC  San Pablo de B     116.63  91  eP      PKPdf   10 14 30.9  -1.1
SPBC  San Pablo de B     116.63  91  eP      PKKPbc  10 25 02.1  +1.0
PLVO  Plevna             116.64  47          PKPdf   10 14 30.4  -0.6
K56A  Middlesex          116.66  49  P       PKPdf   10 14 30.5  -0.7
      baz=274,SNR=6.7
D54A  Lac Fusel, La      116.70  44  P       PKPdf   10 14 29.5  -1.5
      baz=277,SNR=16
CHIC  Chingaza           116.72  92  eP      PKPdf   10 14 30.4  -2.2
CHIC  Chingaza           116.72  92  eP      PKKPbc  10 25 01.6  +0.4
T59A  Double "B" Far     116.75  56          PKPdf   10 14 30.8  -0.7
T59A  Double "B" Far     116.75  56  P       PKPdf   10 14 30.7  -0.7
      baz=271
CBN   Corbin Frederi     116.86  55          PKPdf   10 14 30.8  -0.8
G55A  Calabogie          116.87  47  P       PKPdf   10 14 30.3  -1.1
      baz=276,SNR=20
P58A  Pank, Wackersv     116.87  53  P       PKPdf   10 14 30.6  -1.0
      baz=273,SNR=5.4
M57A  Sunshine Farm,     116.90  51          PKPdf   10 14 31.6   0.0
M57A  Sunshine Farm,     116.90  51  P       PKPdf   10 14 31.0  -0.7
      baz=274,SNR=14
S59A  Mechanicsville     116.94  55  P       PKiKP   10 14 32.1  +0.3
      baz=272
J56A  Wolcott            116.95  49          PKPdf   10 14 30.6  -1.1
J56A  Wolcott            116.95  49  P       PKPdf   10 14 30.5  -1.1
      baz=275,SNR=14
V60A  Jim Taylor Roa     117.01  57          PKPdf   10 14 31.5  -0.4
V60A  Jim Taylor Roa     117.01  57  P       PKPdf   10 14 31.1  -0.8
      baz=271
F55A  Otter Lake         117.06  46  P       PKPdf   10 14 30.9  -0.9
      baz=277,SNR=8.9
L57A  Andrews Acres      117.06  50  P       PKPdf   10 14 31.9  -0.1
      baz=274,SNR=14
R59A  King George, V     117.07  55  P       PKPdf   10 14 31.8  -0.2
      baz=272
U60A  Pendleton          117.08  56  P       PKPdf   10 14 31.7  -0.4
      baz=271
O58A  Lewisberry         117.13  52  P       PKPdf   10 14 31.9  -0.2
      baz=273,SNR=9.5
E55A  Montcerf-Lytto     117.19  45  P       PKPdf   10 14 30.8  -1.2
      baz=277,SNR=23
SDMD  Soldier’s Deli     117.23  53          PKPdf   10 14 29.9  -2.4
N58A  Sunbury            117.24  52          PKPdf   10 14 32.1  -0.2
N58A  Sunbury            117.24  52  P       PKPdf   10 14 31.3  -0.9
      baz=274,SNR=11
K57A  Scipio Center      117.25  49  P       PKPdf   10 14 31.2  -1.0
      baz=275,SNR=16
H56A  Elgin              117.26  47  P       PKPdf   10 14 31.1  -1.1
      baz=276,SNR=8.4
PAGS  Pennsylvania G     117.28  52          PKPdf   10 14 30.9  -1.4
UOSS  Minazif            117.30 291          PKPdf   10 14 32.6  -0.2
SMLC  San Martn de       117.33  88  eP      PKPdf   10 14 31.2  -2.0
SMLC  San Martn de       117.33  88  eP      PKKPbc  10 24 59.9  +1.4
M58A  Price’s Panora     117.40  51  P       PKPdf   10 14 31.9  -0.7
      baz=274,SNR=8.7
Q59A  Harwood            117.40  54  P       PKiKP   10 14 33.5  +0.9
      baz=273
S60A  Water View         117.45  55  P       PKiKP   10 14 32.9  +0.1
      baz=272
D55A  Sainte-Anne-du     117.52  45  P       PKPdf   10 14 31.4  -1.3
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      baz=278,SNR=22
J57A  Williamstown       117.57  49          PKPdf   10 14 32.3  -0.5
J57A  Williamstown       117.57  49  P       PKPdf   10 14 31.9  -1.0
      baz=276,SNR=10
MVL   Millersville       117.57  52          PKPdf   10 14 32.1  -0.9
RUSC  La Rusia           117.64  91  eP      PKPdf   10 14 33.9  -0.5
RUSC  La Rusia           117.64  91  eP      PKKPbc  10 24 59.4  +1.4
RUSC  La Rusia           117.64  91          PKPdf   10 14 32.9  -1.6
SMRC  Santa Marta, M     117.65  85  eP      PKPdf   10 14 32.8  -1.0
O59A  Robesonia          117.68  52  P       PKPdf   10 14 32.3  -0.8
      baz=274,SNR=7.8
BINY  Binghamton         117.69  50          PKPdf   10 14 32.5  -0.6
SOCY  Socotra            117.75 276          PKPdf   10 14 33.8  -0.3
I57A  Carthage           117.76  48  P       PKPdf   10 14 32.2  -1.0
      baz=276,SNR=16
L58A  Harry Jones Me     117.80  50  P       PKPdf   10 14 32.7  -0.6
      baz=275,SNR=10
E56A  St. Veronique      117.88  45  P       PKPdf   10 14 32.2  -1.1
      baz=278,SNR=14
K58A  Earlville          117.89  49          PKPdf   10 14 32.6  -0.9
K58A  Earlville          117.89  49  P       PKPdf   10 14 33.4  -0.1
      baz=276,SNR=12
H57A  Richville          117.89  47  P       PKPdf   10 14 32.2  -1.2
      baz=277,SNR=8.4
DAG   Danmarks Havn      117.90   2  i P     PKPdf   10 14 31.0  -1.5
DAG   Danmarks Havn      117.90   2  i PKIKP PKPdf   10 14 31.0  -1.5
OCAC  Ocana              117.94  88  eP      PKPdf   10 14 33.9  -0.7
OCAC  Ocana              117.94  88  eP      PKKPbc  10 24 56.9  +0.4
N59A  State Game Lan     117.95  51          PKPdf   10 14 32.6  -1.0
N59A  State Game Lan     117.95  51  P       PKPdf   10 14 33.0  -0.7
      baz=274,SNR=9.8
D56A  ZEC Mazanza, M     118.00  44  P       PKPdf   10 14 32.4  -1.1
      baz=278,SNR=20
Q60A  Greensboro         118.03  54          PKPdf   10 14 33.3  -0.5
Q60A  Greensboro         118.03  54  P       PKPdf   10 14 33.5  -0.3
      baz=273,SNR=6.6
J58A  Remsen             118.09  49          PKPdf   10 14 33.3  -0.6
J58A  Remsen             118.09  49  P       PKPdf   10 14 33.0  -0.9
      baz=276,SNR=11
G57A  Newington          118.10  47  P       PKPdf   10 14 33.4  -0.4
      baz=277,SNR=6.5
P60A  Greenville         118.14  53          PKPdf   10 14 32.9  -1.1
P60A  Greenville         118.14  53  P       PKPdf   10 14 33.3  -0.7
      baz=274,SNR=6.4
PTGC  Puerto Gaitan,     118.15  93  eP      PKKPbc  10 24 56.0  +0.4
M59A  Waymart            118.16  51  P       PKPdf   10 14 33.5  -0.6
      baz=275,SNR=18
CODC  Agustn Codazz      118.17  87  eP      PKPdf   10 14 33.0  -1.8
BJO1  Bjornoya           118.17 351  ePKPdf  PKiKP   10 14 33.8  +0.7
BJO1                                 eSKSac  SKSac   10 20 28.5  +0.9
BJO1                                 eSS     SS      10 31 30.5  +2.8
F57A  Harrington         118.22  46  P       PKPdf   10 14 34.0   0.0
      baz=278
TRQ   Mont Tremblant     118.25  45          PKPdf   10 14 33.4  -0.8
PSUB  Penn St. - Bra     118.27  52          PKPdf   10 14 33.8  -0.5
O60A  Telford            118.28  52  P       PKPdf   10 14 34.0  -0.3
      baz=274,SNR=8.2
I58A  Old Forge          118.28  48  P       PKPdf   10 14 33.3  -1.0
      baz=277,SNR=14
LUPA  Lehigh Univers     118.28  52          PKPdf   10 14 33.7  -0.6
PAMC  Pamplona, Colo     118.34  90  eP      PKPdf   10 14 33.9  -1.9
PAMC                                 eP      PKiKP   10 14 34.8  -1.0
L59A  Walton             118.39  50          PKPdf   10 14 33.8  -0.8
L59A  Walton             118.39  50  P       PKPdf   10 14 34.6   0.0
      baz=276,SNR=8.9
LONY  Lake Ozonia        118.45  47          PKPdf   10 14 33.7  -0.8
LONY  Lake Ozonia        118.45  47  P       PKPdf   10 14 33.9  -0.6
      baz=277,SNR=9.3
N60A  Cedar Hill Far     118.46  51  P       PKPdf   10 14 33.8  -0.8
      baz=275,SNR=7.7
K59A  Cooperstown        118.47  49  P       PKPdf   10 14 33.7  -0.9
      baz=276,SNR=8.3
E57A  Chemin Saint G     118.51  45  P       PKPdf   10 14 33.5  -1.1
      baz=279,SNR=19
CPUP  Villa Florida      118.55 131  PKP     PKPdf   10 14 34.6  -0.7
      comp=Z,3.7nm,0.6s,baz=283,slow=1.1,SNR=8.3
CPUP                                 SKP     SKiKP   10 17 11.6  +0.6
      comp=Z,7.2nm,0.7s,baz=253,slow=2.8,SNR=7.4
CPUP                                 PKKPbc  PKKPbc  10 24 53.8  -1.2
      comp=Z,0.5nm,0.4s,baz=31,slow=5.2,SNR=3.4
CPUP  Villa Florida      118.55 131  PKIKP   PKPdf   10 14 35.3   0.0
CPUP  Villa Florida      118.55 131          PKPdf   10 14 35.3   0.0
D57A  Chemin Vers le     118.59  44  P       PKPdf   10 14 33.6  -1.1
      baz=279
J59A  Piesco             118.64  48          PKPdf   10 14 33.6  -1.4
J59A  Piesco             118.64  48  P       PKPdf   10 14 34.0  -0.9
      baz=277,SNR=15
G58A  Ormstown           118.75  46  P       PKPdf   10 14 33.8  -1.2
      baz=278,SNR=17
H58A  Gabriels           118.76  47  P       PKPdf   10 14 34.2  -1.0
      baz=278,SNR=11
M60A  Port Jervis        118.78  51  P       PKiKP   10 14 35.7  +0.4
      baz=276,SNR=6.4
NCB   Newcomb            118.78  48          PKPdf   10 14 34.6  -0.5
ODNJ  Ogdensburg         118.82  51          PKPdf   10 14 35.0  -0.3
BRNJ  Basking Ridge      118.88  52          PKiKP   10 14 35.7  +0.2
PRGR  Permogore          118.89 333  ePKIKP  PKPdf   10 14 31.7  -3.1
PRGR                                 pmax    pmax
      comp=Z,58nm,1.3s
O61A  Allentown          118.94  52  P       PKPdf   10 14 35.1  -0.5
      baz=275
L60A  Shokan             119.01  50  P       PKPdf   10 14 35.0  -0.6
      baz=276,SNR=5.4
I59A  Olmsteadville      119.06  48  P       PKPdf   10 14 35.3  -0.4
      baz=277
H59A  Cadyville          119.08  47  P       PKPdf   10 14 34.9  -0.8
      baz=278,SNR=6.2
N61A  South Mountain     119.08  51  P       PKPdf   10 14 35.1  -0.7
      baz=275
E58A  La Victoria        119.11  45  P       PKPdf   10 14 34.8  -0.9
      baz=279,SNR=23
FRNY  Flat Rock          119.12  47          PKPdf   10 14 34.5  -1.3
D58A  Chemin du LacG 119.25  44      P       PKPdf   10 14 34.7  -1.2
      baz=280,SNR=27
LATQ  La Tuque           119.27  44  P       PKPdf   10 14 35.3  -0.7
      baz=280
CPNY  Central Park       119.33  51          PKPdf   10 14 35.9  -0.4
TRY   Troy               119.34  49          PKPdf   10 14 36.0  -0.2
PAL   Palisades          119.35  51  PKIKP   PKPdf   10 14 35.7  -0.6
PAL   Palisades          119.35  51          PKPdf   10 14 35.7  -0.6
PAL   Palisades          119.35  51  P       PKPdf   10 14 36.2  -0.1
      baz=276,SNR=9.0
G59A  Clarenceville      119.37  46  P       PKPdf   10 14 35.1  -1.1
      baz=279,SNR=19
M61A  Granite Spring     119.42  51  P       PKPdf   10 14 35.8  -0.6
      baz=276,SNR=17
J60A  Lant Hill Farm     119.45  49  P       PKPdf   10 14 35.7  -0.8
      baz=278,SNR=6.9
I60A  Shoreham           119.47  48  P       PKPdf   10 14 36.0  -0.5
      baz=278,SNR=19
L61A  Hillsdale 1, H     119.48  50  P       PKPdf   10 14 36.3  -0.2
      baz=277,SNR=7.8
F59A  Saint Guilaume     119.53  46  P       PKPdf   10 14 36.2  -0.3
      baz=279,SNR=9.4
KSCT  Kent School, K     119.59  50          PKPdf   10 14 36.2  -0.5
E59A  St. Maurice        119.61  45  P       PKPdf   10 14 36.5  -0.1
      baz=280
K61A  Williamstown       119.64  49  P       PKiKP   10 14 36.9   0.0
      baz=277,SNR=9.3
LVZ   Lovozero           119.68 342c i PKIKP PKPdf   10 14 35.6  -0.6
LVZ                                  pmax    pmax
      comp=Z,29nm,0.7s
LVZ   Lovozero           119.68 342          PKPdf   10 14 36.0  -0.2
N62A  Caumsett State     119.69  51  P       PKPdf   10 14 36.1  -0.8
      baz=276,SNR=6.2
VT1   Waterbury          119.78  47          PKPdf   10 14 37.0  -0.1
H60A  Morristown         119.79  47  P       PKPdf   10 14 36.4  -0.7
      baz=279,SNR=7.4
ILULI Ilulissat          119.90  16  i P     PKPdf   10 14 35.5  -1.0
      comp=Z,77nm,0.6s
ILULI Ilulissat          119.90  16  PKIKP   PKPdf   10 14 36.3  -0.2
ILULI Ilulissat          119.90  16          PKPdf   10 14 36.3  -0.2
URIC  Uribia, Colomb     119.90  85  eP      PKPdf   10 14 36.2  -1.9
SUMG  Summit             119.95   9  i P     PKPdf   10 14 36.9  -0.2
SUMG                                 i               10 16 11.9
SUMG  Summit             119.95   9  i PKIKP PKPdf   10 14 36.9  -0.2
SUMG                                 i               10 16 11.9
SUMG  Summit             119.95   9          PKPdf   10 14 36.5  -0.6
G60A  Masonville         119.96  46  P       PKPdf   10 14 37.3  -0.1
      baz=279,SNR=9.2
D59A  Saint-Raymond      119.97  44  P       PKPdf   10 14 37.3  -0.1
      baz=281,SNR=6.7
YLE   Yale               120.05  51          PKiKP   10 14 37.8   0.0
M62A  Hamden             120.06  51  P       PKPdf   10 14 36.5  -1.1
      baz=277,SNR=7.4
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J61A	Chester	120.07	48	P	PKPdf	10 14 37.3	-0.3
	baz=278,SNR=14						
F60A	Warwick	120.08	45	P	PKPdf	10 14 36.8	-0.8
	baz=280,SNR=40						
L61B	Northampton	120.10	49	P	PKPdf	10 14 37.1	-0.6
	baz=278,SNR=12						
HNH	Hanover	120.21	48		PKPdf	10 14 37.7	-0.2
I61A	Oroboro, Fairl	120.23	48	P	PKPdf	10 14 37.7	-0.2
	baz=279,SNR=10						
APA	Apatity	120.25	342⇓	iPKIKP	PKPdf	10 14 35.6	-1.7
APA				i		10 16 12.0	
APA				i		10 20 39.0	
APA				pmax	pmax		
	comp=Z,25nm,0.8s						
APA				MLR	MLR		
	comp=Z,700nm,30.0s						
H61A	Lyndonville	120.34	47	P	PKPdf	10 14 37.7	-0.4
	baz=279,SNR=7.6						
E60A	Ste Agathe de	120.36	45	P	PKPdf	10 14 37.2	-0.9
	baz=281,SNR=24						
QUA2	Belchertown	120.36	50		PKPdf	10 14 38.1	-0.1
LBNH	Lisbon	120.39	47	PKIKP	PKPdf	10 14 38.1	-0.1
LBNH	Lisbon	120.39	47		PKPdf	10 14 38.1	-0.1
K62A	Royalston	120.39	49		PKPdf	10 14 37.5	-0.8
K62A	Royalston	120.39	49	P	PKPdf	10 14 37.6	-0.7
	baz=278,SNR=5.6						
KEV	Kevo	120.45	346	PKIKP	PKiKP	10 14 37.8	+0.1
KEV	Kevo	120.45	346		PKiKP	10 14 37.8	+0.1
G61A	St-Isidore-de-	120.49	46	P	PKPdf	10 14 38.2	-0.3
	baz=280,SNR=9.7						
HAMF	Hammerfest	120.51	348	ePKPdf	PKPdf	10 14 37.2	-0.5
HAMF				IVmB_BB		10 14 38.1	
	comp=Z,830nm,1.4s						
HAMF				eSKSac	SKSac	10 20 35.5	-0.4
HAMF				eSP	SP	10 25 07.8	+4.2
D60A	Saint Jean D'O	120.61	44	P	PKPdf	10 14 37.4	-1.1
	baz=282,SNR=21						
J62A	Henniker	120.62	48	P	PKPdf	10 14 38.6	-0.1
	baz=279,SNR=5.3						
SDV	Santo Domingo	120.67	88	PKP	PKPdf	10 14 38.9	-1.0
	comp=Z,44nm,0.6s,baz=264,slow=5.5						
SDV				SKP	SKiKP	10 17 14.9	-0.8
	comp=Z,52nm,0.7s,baz=270,slow=3.6,SNR=14						
SDV				PKKPab	PKKPbc	10 24 47.9	+1.0
	comp=Z,4.5nm,0.4s,baz=61,slow=3.8,SNR=14						
SDV	Santo Domingo	120.67	88	eP	PKPdf	10 14 38.4	-1.5
SDV	Santo Domingo	120.67	88	eP	PKKPbc	10 24 48.2	+1.3
SDV	Santo Domingo	120.67	88		PKPdf	10 14 38.7	-1.2
M63A	Gales Ferry	120.70	50	P	PKPdf	10 14 37.9	-1.0
	baz=277						
F61A	St Evariste	120.74	45	P	PKPdf	10 14 38.6	-0.3
	baz=281,SNR=11						
TMCR	Tamitsa	120.74	338	ePKIKP	PKPdf	10 14 36.8	-1.4
TMCR				pmax	pmax		
	comp=Z,79nm,1.2s						
I62A	Tamworth	120.86	48		PKPdf	10 14 38.8	-0.4
I62A	Tamworth	120.86	48	P	PKPdf	10 14 38.7	-0.4
	baz=279,SNR=7.1						
H62A	Milan	120.88	47		PKPdf	10 14 38.9	-0.2
H62A	Milan	120.88	47	P	PKPdf	10 14 39.0	-0.2
	baz=280,SNR=10						
K63A	Dunstable	120.91	49	P	PKPdf	10 14 38.9	-0.4
	baz=278,SNR=8.7						
HRV	Adam Dziewonsk	120.91	49	PKIKP	PKPdf	10 14 38.6	-0.7
HRV	Adam Dziewonsk	120.91	49		PKPdf	10 14 38.6	-0.7
HRV	Adam Dziewonsk	120.91	49	P	PKPdf	10 14 38.7	-0.7
	baz=278						
ARCES	ARCESS Array B	120.96	346	PKP	PKPdf	10 14 38.0	-0.6
	comp=Z,77nm,0.5s,baz=74,slow=2.0,SNR=277						
ARCES				SKP	SKiKP	10 17 13.1	-1.4
	comp=Z,19nm,0.6s,baz=60,slow=1.0,SNR=9.1						
ARCES				PKKPbc	PKKPbc	10 24 44.2	-2.6
	comp=Z,13nm,0.8s,baz=206,slow=2.7,SNR=22						
ARCES				SKKPbc	SKKPbc	10 27 35.5	+0.4
	comp=Z,2.4nm,0.7s,baz=193,slow=3.7,SNR=4.0						
ARCES	ARCESS Array B	120.96	346	PKIKP	PKPdf	10 14 38.0	-0.6
ARE0	ARCESS Array S	120.96	346	ePKPdf	PKPdf	10 14 38.2	-0.4
ARE0				IVmB_BB		10 14 39.9	
	comp=Z,1µm,0.5s						
ARE0				eSKPdf	SKPdf	10 17 13.7	-0.2
ARE0				eSKSac	SKSac	10 20 37.4	-0.1
ARE0	ARCESS Array S	120.96	346		PKPdf	10 14 38.1	-0.6
L63A	North Scituate	120.96	50	P	PKPdf	10 14 38.8	-0.6
	baz=278,SNR=8.4						
E61A	Lac Etchemin	120.99	45	P	PKPdf	10 14 39.0	-0.3
	baz=282,SNR=28						
SCHQ	Schefferville	121.00	34	PKP	PKPdf	10 14 38.2	-0.9
	comp=Z,17nm,0.7s,baz=252,slow=4.1,SNR=22						
SCHQ				PP	PP	10 16 15.0	-5.3
	comp=Z,38nm,1.1s,baz=309,slow=5.7,SNR=6.6						
SCHQ				PKKPbc	PKKPbc	10 24 45.9	-0.4
	comp=Z,25nm,0.7s,baz=104,slow=3.7,SNR=12						
BRYW	Bryant College	121.01	50		PKPdf	10 14 39.1	-0.4
D61A	St Aubert, Com	121.04	44	P	PKPdf	10 14 38.5	-0.9
	baz=282,SNR=17						
DABV	Dabajuro	121.07	86	eP	PKiKP	10 14 40.7	+0.1
SIV	San Ignacio	121.12	119	PKP	PKPdf	10 14 39.9	-0.6
	comp=Z,8.6nm,0.5s,baz=263,slow=4.3,SNR=42						
SIV				SKP	SKiKP	10 17 14.8	-1.6
	comp=Z,10.0nm,0.7s,baz=259,slow=2.0,SNR=7.1						
SIV				PKKPbc	PKKPbc	10 24 44.7	-0.7
	comp=Z,2.0nm,0.6s,baz=100,slow=4.2,SNR=4.9						
J63A	Strafford	121.14	48	P	PKPdf	10 14 39.3	-0.4
	baz=279						
G62A	West of Eustis	121.20	46		PKPdf	10 14 39.5	-0.2
G62A	West of Eustis	121.20	46	P	PKPdf	10 14 39.1	-0.7
	baz=281,SNR=11						
BCX	Boston College	121.22	49		PKPdf	10 14 39.1	-0.8
M64A	Tiverton	121.30	50	P	PKPdf	10 14 39.6	-0.4
	baz=278,SNR=6.2						
I63A	Otisfield	121.37	47		PKPdf	10 14 39.9	-0.2
I63A	Otisfield	121.37	47	P	PKPdf	10 14 40.0	-0.2
	baz=280,SNR=6.4						
ELOV	Elorza	121.38	91	eP	PKPdf	10 14 40.5	-0.5
L64A	Middleborough	121.52	50	P	PKPdf	10 14 39.8	-0.6
	baz=279,SNR=5.4						
SFJD	Kangerlussuaq	121.55	17	i P	PKPdf	10 14 38.5	-1.2
SFJD	Kangerlussuaq	121.55	17	PKIKP	PKPdf	10 14 39.1	-0.7
SFJD	Kangerlussuaq	121.55	17		PKPdf	10 14 39.1	-0.7
SDDR	Presa de Saban	121.62	77		PKPdf	10 14 40.3	-1.1
H63A	New Sharon	121.65	46	P	PKiKP	10 14 41.2	+0.4
	baz=281						
D62A	Allapoint, All	121.82	44		PKPdf	10 14 40.1	-0.8
D62A	Allapoint, All	121.82	44	P	PKPdf	10 14 39.8	-1.0
	baz=283,SNR=27						
G63A	Kingsbury	121.85	46	P	PKPdf	10 14 40.5	-0.5
	baz=282,SNR=9.9						
KLMR	Klimovskoe	121.88	334	ePKIKP	PKPdf	10 14 36.6	-4.0
KLMR				pmax	pmax		
	comp=Z,129nm,1.5s						
KLMR	Klimovskoe	121.88	334	ePKPdf	PKPdf	10 14 36.7	-3.9
KLMR				AMP		10 14 42.5	
	comp=Z,129nm,1.5s						
KLMR				PP	PP	10 16 03.8	-22
KLMR				eSKP	SKiKP	10 17 12.9	-3.5
KLMR				eSP	SP	10 24 39.5	-37
KTK1	Kautokeino	121.89	346	ePKPdf	PKPdf	10 14 39.4	-1.0
WVL	Waterville	121.93	47		PKPdf	10 14 41.2	+0.1
PKME	Peaks-Kenny Pk	122.05	46		PKPdf	10 14 41.0	-0.3
PKME	Peaks-Kenny Pk	122.05	46	P	PKPdf	10 14 41.1	-0.3
	baz=282,SNR=15						
I64A	Boothbay	122.07	47	P	PKPdf	10 14 41.2	-0.3
	baz=281,SNR=7.1						
F63A	Nahmakanta, Br	122.09	45		PKiKP	10 14 41.8	+0.1
F63A	Nahmakanta, Br	122.09	45	P	PKPdf	10 14 41.2	-0.3
	baz=282,SNR=18						
SC01	Santiago de lo	122.19	76		PKiKP	10 14 42.8	+0.2
H64A	Troy	122.22	46	P	PKPdf	10 14 41.1	-0.7
	baz=282,SNR=9.6						
TRO	Tromso	122.29	348	ePKPdf	PKPdf	10 14 40.6	-0.5
TRO				IVmB_BB		10 14 42.5	
	comp=Z,1µm,2.3s						
TRO				ePP	PP	10 16 31.8	+3.6
TRO				eSKSac	SKSac	10 20 39.7	-2.0
TRO				eSS	SS	10 32 20.5	+0.9
SAML	Samuel	122.38	111	eP	PKKPbc	10 24 41.9	+1.2
SAML	Samuel	122.38	111	PKIKP	PKPdf	10 14 42.3	-0.6
SAML	Samuel	122.38	111		PKPdf	10 14 42.3	-0.6
E63A	Oxbow	122.39	44		PKPdf	10 14 41.0	-1.0
E63A	Oxbow	122.39	44	P	PKPdf	10 14 41.0	-1.0
	baz=283,SNR=13						
G64A	Maxfield	122.42	46	P	PKPdf	10 14 41.7	-0.3
	baz=282,SNR=12						
D63A	Stockholm	122.46	43	P	PKPdf	10 14 41.0	-1.1
	baz=284,SNR=20						
F64A	Sherman	122.57	45		PKPdf	10 14 41.8	-0.6
F64A	Sherman	122.57	45	P	PKPdf	10 14 41.5	-0.9
	baz=283,SNR=8.5						
E64A	Bridgewater	122.79	44	P	PKPdf	10 14 41.8	-1.0
	baz=284,SNR=16						
H65A	Eastbrook	122.89	46	P	PKPdf	10 14 42.4	-0.6
	baz=282						
BAUV	El Baul	123.19	89	eP	PKPdf	10 14 43.8	-0.7
G65A	Princeton	123.25	45		PKPdf	10 14 43.0	-0.7
G65A	Princeton	123.25	45	P	PKPdf	10 14 43.2	-0.5
	baz=283,SNR=15						
DR12	Loma Pena Alta	123.39	77		PKPdf	10 14 43.3	-1.5
EMMW	East Machias	123.44	46		PKPdf	10 14 43.9	-0.2
H66A	Whiting	123.52	46	P	PKiKP	10 14 45.4	+0.9
	baz=283						
MAK	Makhachkala	123.53	312	eP	Pdif	10 11 12.4	-8.5
MAK				i		10 14 42.9	
MAK				e		10 16 34.5	
MAK				e		10 20 46.2	
MAK				ePS	PS	10 26 42.9	-3.5
MAK				eSS	SS	10 32 36.5	-0.6
MAK				eSSS	SSS	10 37 22.2	
MAK				pmax	pmax		
	comp=Z,132nm,0.9s						
AKT	Akhty	123.65	310	ePKIKP	PKiKP	10 14 45.9	+0.8
AKT				e		10 16 39.6	
AKT				pmax	pmax		
	comp=Z,72nm,1.1s						
GGN	Saint George	123.77	45		PKPdf	10 14 44.1	-0.5
SCO	Scoresbysund	123.90	5	i P	PKiKP	10 14 44.8	+0.3
SCO	Scoresbysund	123.90	5	i PKIKP	PKiKP	10 14 44.8	+0.3
SCO	Scoresbysund	123.90	5		PKPdf	10 14 43.4	-0.8
STEI	Steigen	124.45	349	ePKPdf	PKPdf	10 14 44.8	-0.4
STEI				IVmB_BB		10 14 46.3	
	comp=Z,1µm,1.1s						
STEI				ePP	PP	10 16 46.8	+4.3
STEI				eSKSac	SKSac	10 20 50.0	+1.3
STEI				eSS	SS	10 32 46.2	-0.2
SUR	Sutherland	124.47	212	PKP	PKiKP	10 14 47.4	+0.3
	comp=Z,41nm,0.7s,baz=115,slow=4.4,SNR=32						
SUR				PP	PP	10 16 42.8	-0.3
	comp=Z,50nm,1.1s,baz=145,slow=9.3,SNR=6.3						
SUR				PKKPbc	PKKPbc	10 24 32.0	-1.7
	comp=Z,27nm,0.8s,baz=297,slow=6.9,SNR=15						
LOF	Lofoten	124.59	349	ePKPdf	PKiKP	10 14 47.2	+1.2
LOF				epPKPdf	pPKPdf	10 17 04.2	-8.2
GROC	Groznyy	124.71	313	i PKIKP	PKPdf	10 14 46.4	-0.1
GROC				e		10 16 47.8	
GROC				e		10 20 58.5	
GROC				pmax	pmax		
	comp=Z,58nm,0.9s						
BOSA	Boshof	124.87	218	i P	PKPdf	10 14 37.9	-10
BOSA	Boshof	124.87	218	PKP	PKiKP	10 14 47.8	-0.1
	comp=Z,57nm,0.8s,baz=120,slow=1.9,SNR=47						
BOSA				PKKPbc	PKKPbc	10 24 30.6	-1.4
	comp=Z,14nm,0.7s,baz=324,slow=3.4,SNR=18						
BOSA	Boshof	124.87	218	i P	PKPdf	10 14 37.9	-10
BOSA	Boshof	124.87	218		PKPdf	10 14 47.6	+0.1
LMN	Caledonia Moun	124.97	44		PKPdf	10 14 46.8	-0.2
VRH	Novokhopyorsk	124.98	323	ePKIKP	PKPdf	10 14 46.4	-0.4
VRH				pmax	pmax		
	comp=Z,80nm,1.1s						
MOS	Moscow	125.26	329	ePKIKP	PKPdf	10 14 45.4	-1.8
MOS				pmax	pmax		
	comp=Z,126nm,1.5s						
MOS				pmax	pmax		
	comp=Z,200nm,1.6s						
MPR	Mayaguez	125.46	78		PKPdf	10 14 48.1	-0.6
CRPR	Cabo Rojo, PR	125.47	78		PKPdf	10 14 47.5	-1.1
MLPR	Magueyes Islan	125.52	78		PKPdf	10 14 47.0	-1.8
TBLG	Delisi	125.80	311	PKIKP	PKPdf	10 14 48.6	-0.1
TBLG	Delisi	125.80	311		PKPdf	10 14 48.6	-0.1
AOPR	Arecibo Observ	125.83	78		PKPdf	10 14 47.6	-1.8
OBIP	Obispado Ponce	125.94	78		PKPdf	10 14 48.2	-1.4
ICMP	Isla Caja de M	126.00	79		PKPdf	10 14 48.5	-1.2
LPSR	Galich'ya Gora	126.00	325	ePKIKP	PKPdf	10 14 48.8	+0.1
LPSR				pmax	pmax		
	comp=Z,90nm,1.2s						
OBN	Obninsk	126.09	329c	iPKIKP	PKPdf	10 14 48.8	0.0
OBN				ePPP	PPP	10 19 41.0	
OBN				pmax	pmax		
	comp=Z,113nm,1.3s						
KONS	Konsvik	126.11	349	ePKPdf	PKiKP	10 14 48.8	-0.2
KONS				ePP	PP	10 16 50.0	-3.3
GNI	Garni	126.12	309	PKP	PKPdf	10 14 49.3	-0.2
	comp=Z,24nm,0.8s,baz=342,slow=6.4,SNR=7.6						
GNI	Garni	126.12	309c	iPKIKP	PKiKP	10 14 50.6	+0.5
GNI				pmax	pmax		
	comp=Z,297nm,1.7s						
GNI	Garni	126.12	309		PKPdf	10 14 49.8	+0.2
HAL	Halifax	126.13	45	PKIKP	PKPdf	10 14 49.4	+0.2
HAL	Halifax	126.13	45		PKPdf	10 14 49.4	+0.2
MOR8	Moi Rana	126.14	348	ePKPdf	PKPdf	10 14 47.9	-0.7
MOR8				ePS	PS	10 27 06.0	-1.8
ZEI	Tsey	126.15	312	ePKIKP	PKPdf	10 14 47.8	-1.8
ZEI				pmax	pmax		
	comp=Z,30nm,1.0s						
GOF	Gofitskoye	126.16	315⇑	ePKIKP	PKPdf	10 14 39.4	-10
NCK	Nalchik	126.19	313⇓	iPKIKP	PKiKP	10 14 50.3	+0.4
PUL	Pulkovo	126.27	336⇑	iPKIKP	PKiKP	10 14 50.3	+0.8
STOK	Stokkvaagen	126.27	349	ePKPdf	PKiKP	10 14 49.3	0.0
SJG	San Juan	126.38	78	PKP	PKPdf	10 14 50.2	-0.2
	baz=24,slow=3.1						
SJG				PP	PP	10 16 56.8	-0.2
	comp=Z,25nm,0.9s,baz=283,slow=6.5,SNR=3.3						
SJG	San Juan	126.38	78	eP	PKPdf	10 14 49.3	-1.1
SJG	San Juan	126.38	78		PKPdf	10 14 49.6	-0.8
VSR	Storozhevoye	126.45	324	ePKIKP	PKPdf	10 14 49.1	-0.5
VSR				pmax	pmax		
	comp=Z,90nm,1.3s						
GCPR	Guaynabo City	126.46	78		PKPdf	10 14 50.3	-0.3
PDPR	Patillas Dam,	126.50	78		PKPdf	10 14 50.2	-0.4
KBZ	Khabaz	126.62	314	PKP	PKPdf	10 14 50.3	+0.2
	comp=Z,10.0nm,0.9s,baz=141,slow=2.0,SNR=11						
KBZ				SKPbc	SKiKP	10 17 11.3	-15
	comp=Z,6.1nm,0.8s,baz=45,slow=4.3,SNR=3.0						
KVAR	Kislovodsk Arr	126.70	314	PKP	PKiKP	10 14 52.0	+1.0
	comp=Z,3.5nm,0.5s,baz=90,slow=20,SNR=4.5						
KIV	Kislovodsk	126.71	314	i PKIKP	PKPdf	10 14 50.5	0.0
KIV				e		10 16 56.8	
KIV				e*PP	pPKPdf	10 17 10.0	-7.4
KIV				ePS	PS	10 27 11.2	-2.7
KIV				pmax	pmax		
	comp=Z,89nm,1.1s						
KIV	Kislovodsk	126.71	314		PKPdf	10 14 50.8	+0.3
FIA1	FINESS Array S	126.72	339		PKPdf	10 14 49.8	0.0
FINES	FINESS Array B	126.72	339	PKhKP	PKPpre	10 14 43.4	
	comp=Z,5.6nm,0.6s,baz=72,slow=2.0,SNR=8.2						
FINES				PKP	PKPdf	10 14 49.2	-0.6
	comp=Z,18nm,0.4s,baz=62,slow=1.9,SNR=51						
FINES				SKPbc	SKiKP	10 17 09.1	-17
	comp=Z,22nm,0.7s,baz=59,slow=4.9,SNR=12						
FINES				PKKPab	PKKPab	10 24 23.1	+0.9
	comp=Z,8.7nm,0.9s,baz=206,slow=2.3,SNR=11						
FINES				SKKPbc	SKKPbc	10 27 11.9	-3.7
	comp=Z,3.9nm,0.8s,baz=221,slow=1.3,SNR=4.7						
PCRV	Puerto La Cruz	126.72	88	PKP	PKPdf	10 14 51.2	0.0
	comp=Z,10nm,0.5s,baz=302,slow=2.4,SNR=7.9						
PCRV				SKPbc	SKiKP	10 17 10.0	-18
	comp=Z,17nm,0.9s,baz=336,slow=1.4,SNR=4.3						
PLCV	Puerto La Cruz	126.77	88		PKPdf	10 14 51.2	-0.1
AKH	Akhalkalaki	126.78	311	⇓P	PKiKP	10 14 51.7	+0.3
AKH	Akhalkalaki	126.78	311	PKIKP	PKiKP	10 14 51.2	-0.2
AKH	Akhalkalaki	126.78	311		PKiKP	10 14 51.2	-0.2
NEY	Neytrino	126.87	313⇑	iPKIKP	PKiKP	10 14 52.8	+1.3
RAYN	Ar Rayn	126.98	288	PKIKP	PKPdf	10 14 51.1	-0.5
RAYN	Ar Rayn	126.98	288		PKPdf	10 14 51.1	-0.5
SPB	Sao Paulo	127.22	136		PKPdf	10 14 50.5	-1.4
CUPR	Culebra, Puert	127.22	78		PKPdf	10 14 51.7	-0.3
LBTB	Lobatse	127.23	222	i P	PKPdf	10 14 41.2	-11
LBTB	Lobatse	127.23	222	PKhKP	PKPpre	10 14 42.5	
	comp=Z,2.9nm,0.6s,baz=287,slow=1.3,SNR=5.7						
LBTB				PKP	PKiKP	10 14 52.5	-0.3
	comp=Z,16nm,0.5s,baz=139,slow=3.8,SNR=21						
LBTB				SKPbc	SKiKP	10 17 13.4	-15
	comp=Z,37nm,1.0s,baz=126,slow=4.2,SNR=10						
LBTB				PKKPab	PKKPdf	10 24 21.6	-43
	comp=Z,6.8nm,0.9s,baz=297,slow=4.3,SNR=4.6						
LBTB	Lobatse	127.23	222	i P	PKPdf	10 14 41.2	-11
NRS	Narsarsuaq	127.26	21	i P	PKPdf	10 14 50.6	-0.2
NRS	Narsarsuaq	127.26	21	i PKIKP	PKPdf	10 14 50.6	-0.2
NRS	Narsarsuaq	127.26	21		PKPdf	10 14 50.2	-0.7
GBN	Guysborough	127.31	44		PKPdf	10 14 51.5	+0.1
DAMY	Dhamar	127.34	277		PKiKP	10 14 53.7	+0.4
STVI	Saint Thomas	127.54	78		PKPdf	10 14 51.5	-1.1
BBSR	BB Station	127.62	60		PKPdf	10 14 52.6	+0.2
CDVI	St. Croix	127.66	79		PKPdf	10 14 52.4	-0.5
HEL	Helsinki	128.01	339	PKHKP	PKPpre	10 14 29.3	
NSS	Namsos	128.08	348	ePKPdf	PKPdf	10 14 52.6	+0.3
NSS				IVmB_BB		10 14 53.9	
	comp=Z,1µm,1.8s						
NSS				ePP	PP	10 17 06.7	+0.7
NSS				eSS	SS	10 33 34.8	+3.9
BCA	Borcka	128.13	311	⇑P	PKPdf	10 14 51.9	-1.3
H09W1	TRISTAN DA CUN	128.31	178	PKP	PKPdf	10 14 53.9	+0.3
	baz=93						
MATP	Matopo	128.31	228	i P	PKPdf	10 14 41.2	-13
MATP	Matopo	128.31	228	PKhKP	PKPpre	10 14 34.4	
	comp=Z,1.9nm,0.5s,baz=158,slow=3.3,SNR=7.8						
MATP				SKPbc	SKiKP	10 17 13.7	-17
	comp=Z,165nm,0.8s,baz=136,slow=4.6,SNR=35						
MATP				PKKPab	Sdif	10 24 14.3	+0.7
	comp=Z,5.5nm,0.8s,baz=312,slow=4.0,SNR=5.6						
MATP				SKKPbc	SKKPbc	10 27 06.0	-1.3
	comp=Z,5.3nm,0.8s,baz=271,slow=2.8,SNR=5.2						
MATP	Matopo	128.31	228	i P	PKPdf	10 14 41.2	-13
H09N1	TRISTAN DA CUN	128.34	178	PKP	PKiKP	10 14 54.8	+0.4
ATD	Arta Tunnel	128.37	273	PKP	PKPdf	10 14 54.6	+0.2
	comp=Z,15nm,0.8s,baz=52,slow=3.3,SNR=4.3						
ATD				SKPbc	SKiKP	10 17 15.8	-15
	comp=Z,195nm,1.2s,baz=72,slow=0.9,SNR=27						
PTGA	Pitinga	128.39	103	PKP	PKPdf	10 14 54.2	-0.2
	comp=Z,29nm,0.6s,baz=252,slow=2.1,SNR=34						
PTGA				SKPbc	SKiKP	10 17 16.5	-14
	comp=Z,62nm,0.7s,baz=233,slow=3.8,SNR=30						
PTGA	Pitinga	128.39	103		PKPdf	10 14 53.9	-0.6
DRLN	Deer Lake	128.44	38		PKPdf	10 14 52.7	-0.8
VSU	Vasula	128.53	336	eP	pPKPdf	10 17 15.6	-4.6
VSU	Vasula	128.53	336⇑	iPKIKP	PKPdf	10 14 53.4	+0.1
VSU				pmax	pmax		
	comp=Z,259nm,1.3s						
SOC	Sochi	128.87	314	i PKIKP	PKiKP	10 14 57.9	+2.6
SOC				e		10 17 16.3	
SOC				ePS	PS	10 27 33.1	+0.9
SOC				eSS	SS	10 33 46.4	+3.9
SABA	Saba	129.10	79	eP	PKPdf	10 14 51.1	-4.5
SMRT	St. Maarten	129.29	79		PKPdf	10 14 55.3	-0.7
SKI	Saint Kitts	129.55	80	PKIKP	PKPdf	10 14 55.1	-1.4
SKI	Saint Kitts	129.55	80		PKPdf	10 14 55.1	-1.4
TBLU	Trondheim	129.57	348	ePKPdf	PKPdf	10 14 55.2	+0.1
TBLU				ePP	PP	10 17 18.7	+3.1
TBLU				IVMs_BB	IVMs_BB	10 41 19.2	
	comp=Z,1µm,19.1s						
ANN	Anapa	130.01	317	i PKIKP	PKPdf	10 14 53.3	-3.3
ANN				e		10 17 21.2	
ANN				e		10 21 01.5	
ANN				pmax	pmax		
	comp=Z,40nm,1.2s						
MLYT	Lee's Yard	130.02	80	eP	PKPdf	10 14 56.3	-1.1
ANWB	Willy Bob	130.49	79	eP	PKPdf	10 14 58.4	+0.1
KMBO	Kilima Mbogo	130.49	255	PKP	PKPdf	10 14 58.8	0.0
	comp=Z,22nm,0.9s,baz=55,slow=4.7,SNR=23						
KMBO				SKPbc	SKPbc	10 17 22.6	-0.9
	comp=Z,77nm,0.7s,baz=78,slow=5.4,SNR=36						
KMBO				SKKPbc	SKKPbc	10 27 01.2	+1.2
	comp=Z,2.5nm,0.7s,baz=236,slow=1.6,SNR=5.1						
SVB	Belmont	130.51	85		PKPdf	10 14 57.7	-0.7
IZAR	Zarasai	130.53	334	eP	pPKPdf	10 17 25.0	+0.7
MDPO	Dominica; Chan	130.61	82	eP	PKiKP	10 14 59.4	-0.1
MICGM	Minsk	130.61	332⇑	eP	pPKPdf	10 17 25.0	+0.6
MICGM				PM		10 17 27.0	
	comp=Z,0.5nm,2.0s						
ISAL	Salakas	130.70	334	eP	pPKPdf	10 17 25.4	+0.8
MOL	Molde	130.70	349	ePKPdf	PKiKP	10 14 57.9	-0.4
MOL				epPKPdf	pPKPdf	10 17 24.6	+0.5
FDF	Fort de France	130.80	83	eP	PKiKP	10 14 59.8	-0.2
FDF	Fort de France	130.80	83	PKIKP	PKPdf	10 14 57.9	-1.1
FDF	Fort de France	130.80	83		PKPdf	10 14 57.9	-1.1
SLIT	Slitere, Latvi	130.80	338	eP	pPKPdf	10 17 23.8	-0.8
DOMB	Dombas	130.90	348	ePKPdf	PKPdf	10 14 57.7	-0.1
DOMB				epPKPdf	pPKPdf	10 17 25.2	+0.6
DOMB				ePS	PS	10 27 46.4	-2.1
H05N1	Guadeloupe/Mar	131.06	81	PKP	PKPdf	10 14 58.4	-1.0
NC303	NORSAR Array S	131.14	346		PKPdf	10 14 58.3	+0.1
NC405	NORSAR Array S	131.16	346		PKPdf	10 14 58.1	-0.2
AKN	Aaknes	131.16	349	ePKPdf	PKPdf	10 14 58.6	+0.3
AKN				ePS	PS	10 27 53.8	+3.2
NC204	NORSAR Array S	131.23	347		PKPdf	10 14 57.7	-0.8
NB201	NORSAR Array S	131.31	346		PKPdf	10 14 58.1	-0.5
NB2	NORSAR Subarra	131.34	346	PKPdf	PKPdf	10 14 58.3	-0.4
	comp=Z,8.9nm,0.6s,baz=31,slow=1.9						
NB2	NORSAR Subarra	131.34	346	PKPdf	PKPdf	10 14 58.3	-0.4
	baz=31,slow=1.9						
NOA	NORSAR Array B	131.34	346	PKP	PKPdf	10 14 58.2	-0.4
	comp=Z,9.3nm,0.5s,baz=30,slow=2.0,SNR=35						
NOA				SKPbc	SKPbc	10 17 24.0	-0.9
	comp=Z,111nm,1.1s,baz=30,slow=2.7,SNR=35						
NOA				SKKPbc	SKKPbc	10 26 57.3	-2.3
	comp=Z,2.0nm,0.7s,baz=209,slow=3.7,SNR=7.2						
NBO00	NORSAR Array S	131.45	347		PKPdf	10 14 58.6	-0.2
HFS	Hagfors	131.52	344	PKKPab		10 24 06.7	
	comp=Z,2.7nm,0.7s,baz=224,slow=4.1,SNR=3.7						
HFS				SKKPbc	SKKPbc	10 26 54.1	-4.7
	comp=Z,2.6nm,0.6s,baz=177,slow=5.3,SNR=4.3						
NC602	NORSAR Array S	131.53	346	ePKPdf	PKPdf	10 14 59.1	+0.1
NC602				IVmB_BB		10 15 02.6	
	comp=Z,890nm,4.0s						
NC602				epPKPdf	pPKPdf	10 17 26.9	+1.1
NC602				ePKSdf	PKSdf	10 18 33.1	-2.0
NC602				eSKSac	SKSac	10 21 09.6	0.0
NC602				eSP	SP	10 26 37.9	-1.6
NC602				eSS	SS	10 34 14.1	+1.4
NC602	NORSAR Array S	131.53	346		PKPdf	10 14 59.1	+0.1
NAO01	NORSAR Array S	131.59	346		PKPdf	10 14 59.0	-0.1
PABE	Paberze	131.66	335	eP	pPKPdf	10 17 27.3	+0.8
LSZ	Lusaka	131.70	233	i P	PKPpre	10 14 48.1	
LSZ	Lusaka	131.70	233	PKhKP	PKPpre	10 14 50.0	
	comp=Z,8.8nm,0.7s,baz=113,slow=2.1,SNR=8.6						
LSZ				PKP	PKPdf	10 15 00.7	-0.1
	comp=Z,24nm,0.7s,baz=89,slow=0.8,SNR=6.0						
LSZ				SKPbc	SKPbc	10 17 27.2	-0.3
	comp=Z,70nm,0.7s,baz=129,slow=3.2,SNR=29						
LSZ				SKKPbc	SKKPbc	10 26 56.2	+0.8
	comp=Z,5.9nm,0.8s,baz=331,slow=5.3,SNR=5.3						
LSZ	Lusaka	131.70	233	i P	PKPpre	10 14 48.1	
BDFB	Brasilia	131.88	127	PKhKP	PKPpre	10 14 57.4	
	comp=Z,5.8nm,0.4s,baz=121,slow=0.3,SNR=9.7						
BDFB				SKPbc	SKPab	10 17 29.1	-0.7
	comp=Z,42nm,0.9s,baz=211,slow=3.3,SNR=17						
BDFB	Brasilia	131.88	127	PKIKP	PKPdf	10 14 57.8	-3.3
BDFB	Brasilia	131.88	127		PKPdf	10 14 57.8	-3.3
FOO	Floro	132.04	350	ePKPdf	PKPdf	10 15 00.3	+0.4
PBUR	Paburge	132.11	336	eP	pPKPdf	10 17 28.8	+1.7
AKASG	Malin Array Be	132.19	327	PKhKP	PKPpre	10 14 46.0	
	comp=Z,1.3nm,0.5s,baz=47,slow=3.9,SNR=7.7						
AKASG				PKP	PKPdf	10 15 00.4	-0.1
	comp=Z,3.7nm,0.4s,baz=50,slow=1.8,SNR=15						
AKASG				SKPbc	SKPbc	10 17 26.6	-1.4
	comp=Z,21nm,0.6s,baz=43,slow=4.4,SNR=24						
AKASG				SKKPbc	SKKPbc	10 26 55.2	-0.7
	comp=Z,0.3nm,0.3s,baz=257,slow=3.6,SNR=4.0						
HYA	Hoyanger	132.25	349	ePKPdf	PKPdf	10 15 00.7	+0.4
HYA				epPKPdf	pPKPdf	10 17 28.1	+1.0
SKAR	Skarslia	132.29	348	ePKPdf	PKiKP	10 15 01.6	-0.2
SKAR				epPKPdf	pPKPdf	10 17 29.7	+2.4
SKAR				eSS	SS	10 34 23.5	+1.6
OSL	Oslo	132.43	346	epPKPdf	pPKPdf	10 17 29.0	+1.5
GAZ	Gaziantep	132.54	307		PKPdf	10 15 02.1	+0.4
SUE	Sulen	132.60	350	ePKPdf	PKiKP	10 15 01.7	-0.5
SUE				ePP	PP	10 17 34.9	+0.2
KONO	Kongsberg	132.95	346	ePKPdf	PKPdf	10 15 01.7	+0.1
KONO				IVmB_BB		10 15 07.5	
	comp=Z,822nm,3.8s						
KONO				epPKPdf	pPKPdf	10 17 30.1	+1.6
KONO				eSS	SS	10 34 30.0	+0.4
SUW	Suwalki	133.01	334	ePKP	pPKPdf	10 17 31.9	+2.8
ASK	Askoy	133.06	350	ePKPdf	PKiKP	10 15 02.5	-0.6
BER	Bergen	133.13	350	eSKPdf	SKPab	10 17 33.4	-0.2
ODD1	Odda	133.34	348	ePKPdf	PKPdf	10 15 02.7	+0.2
BZK	Bozkurt	133.38	314	⇑P	PKPdf	10 15 03.4	+0.3
KLNR	Kaliningrad	133.82	336⇑	iPKIKP	PKiKP	10 15 04.5	-0.4
BLS5	Blasjo	133.82	348	ePKPdf	PKPdf	10 15 03.2	-0.1
BLS5				eSKPdf	SKPab	10 17 35.1	-1.6
ASF	Jabal al Asfar	133.91	300	PKP	PKPdf	10 15 04.7	+0.2
	comp=Z,7.2nm,0.8s,baz=352,slow=7.4,SNR=3.6						
ASF				SKPbc	SKPbc	10 17 35.0	+0.6
	comp=Z,13nm,1.0s,baz=281,slow=0.7,SNR=11						

ILGA	Ilgaz	133.92	313		PKPdf	10 15 04.7	+0.3
SORM	Soroca	134.09	324	⇑P	PKPdf	10 15 04.7	+0.6
SORM	Soroca	134.09	324	⇑PKIKP	PKPdf	10 15 04.7	+0.6
KMY	Karmoy	134.25	349	ePKPdf	PKiKP	10 15 05.0	-0.6
KMY				epPKPdf	pPKPdf	10 17 32.6	+1.6
STAV	Stavanger	134.42	349	ePKPdf	PKPdf	10 15 04.3	-0.1
STAV				eSKPdf	SKPab	10 17 37.2	-2.1
STAV				eSKPdf	SKPdf	10 17 38.2	-1.2
STAV				eSP	SP	10 27 04.7	+0.9
HOMB	Homborsund	134.44	346	eSKPdf	SKPab	10 17 38.9	-0.5
HOMB				eSKSdf	SKSdf	10 21 14.6	-0.6
HOMB				eSP	SP	10 27 05.5	+1.5
HOMB				eSS	SS	10 34 48.6	+1.3
BRTR	Keskin Array B	134.44	312	PKhKP	PKPpre	10 14 52.3	
	comp=Z,0.9nm,0.6s,baz=118,slow=3.3,SNR=4.3						
BRTR				PKP	PKPdf	10 15 04.9	-0.4
	comp=Z,7.6nm,0.8s,baz=116,slow=3.4,SNR=26						
BRTR				SKP	SKPdf	10 17 39.8	-0.6
	comp=Z,61nm,1.1s,baz=101,slow=3.9,SNR=27						
SNART	Snartemo	134.67	347	ePKPdf	PKPdf	10 15 05.6	+0.6
SNART				eSKPdf	SKPbc	10 17 36.8	+1.0
MMAI	Mount Meron Ar	134.97	302	PKP	PKPdf	10 15 06.7	+0.3
	comp=Z,7.8nm,0.6s,baz=93,slow=7.5,SNR=6.7						
MMAI				SKP	SKPdf	10 17 40.2	-1.2
	comp=Z,23nm,0.6s,baz=78,slow=4.4,SNR=13						
ANTO	Ankara	135.00	312	PKIKP	PKPdf	10 15 06.0	-0.2
ANTO	Ankara	135.00	312		PKPdf	10 15 06.0	-0.2
BSD	Bornholm Skovb	135.35	340	i P	PKiKP	10 15 08.1	+0.1
	comp=Z,123nm,1.0s						
BSD				i		10 17 38.4	
BSD				i		10 17 38.7	
BSD	Bornholm Skovb	135.35	340	ePKIKP	PKiKP	10 15 08.1	+0.1
BSD				pmax	pmax		
	comp=Z,120nm,1.0s						
TLCR		135.36	321	⇑P	PKiKP	10 15 08.4	+0.1
TLCR		135.36	321	⇑PKIKP	PKiKP	10 15 08.4	+0.1
LVV	L'vov	135.39	329	ePKIKP	PKiKP	10 15 07.9	-0.4
LVV				e		10 17 57.5	
BEL	Belsk	135.57	333	ePKP	pPKPdf	10 17 40.9	+6.9
CFR	Carcaliu	135.78	321	⇑P	PKPdf	10 15 05.9	-1.5
CFR	Carcaliu	135.78	321	⇑PKIKP	PKPdf	10 15 05.9	-1.5
MDUB	Mudurnu	135.91	314		PKPdf	10 15 07.7	-0.3
TIRR	Tirgusor	135.97	320	⇑P	PKPdf	10 15 06.4	-1.4
TIRR	Tirgusor	135.97	320	⇑PKIKP	PKPdf	10 15 06.4	-1.4
TIRR	Tirgusor	135.97	320		PKPdf	10 15 05.5	-2.3
EIL	Elat	135.99	297	PKP	PKPdf	10 15 08.8	+0.5
	comp=Z,16nm,0.9s,baz=320,slow=1.8,SNR=12						
EIL				SKP	SKPdf	10 17 42.7	-0.5
	comp=Z,24nm,0.8s,baz=95,slow=1.5,SNR=18						
BURAR	Bucovina Array	136.12	326	⇑P	PKiKP	10 15 09.6	-0.3
BURAR	Bucovina Array	136.12	326	⇑PKIKP	PKiKP	10 15 09.6	-0.3
HARR	Harsova	136.15	321	⇑P	PKiKP	10 15 09.2	-0.7
HARR	Harsova	136.15	321	⇑PKIKP	PKiKP	10 15 09.3	-0.7
KWP	Kalwaria Pacla	136.17	329	ePKP	pPKPdf	10 17 43.6	+8.4
KWP	Kalwaria Pacla	136.17	329	PKIKP	PKPdf	10 15 07.6	-0.4
KWP	Kalwaria Pacla	136.17	329		PKPdf	10 15 07.6	-0.4
VRI	Vrincioaia	136.25	323	⇑P	PKPpre	10 14 59.0	
VRI	Vrincioaia	136.25	323	⇑PKHKP	PKPpre	10 14 59.0	
PLOR	Plostina	136.31	323	⇑P	PKPpre	10 14 58.4	
PLOR	Plostina	136.31	323	⇑PKHKP	PKPpre	10 14 58.4	
RGN	Rugen	136.35	340	epPKPdf	pPKPdf	10 17 44.5	+9.4
TSUM	Tsumeb	136.52	220	i P	PKPpre	10 15 00.6	
TSUM	Tsumeb	136.52	220	PKhKP	PKPpre	10 15 00.7	
	comp=Z,20nm,0.7s,baz=108,slow=4.6,SNR=27						
TSUM				PKP	PKiKP	10 15 11.8	+0.1
	comp=Z,29nm,0.9s,baz=153,slow=3.8,SNR=10						
TSUM				SKP		10 17 44.1	
	comp=Z,50nm,0.7s,baz=140,slow=3.3,SNR=25						
TSUM	Tsumeb	136.52	220	i P	PKPpre	10 15 00.6	
MBAR	Mbarara	136.74	253	PKhKP	PKPpre	10 15 02.8	
	comp=Z,7.5nm,0.8s,baz=15,slow=5.5,SNR=3.9						
MBAR				PKP	PKiKP	10 15 12.2	-0.1
	comp=Z,20nm,0.8s,baz=141,slow=16,SNR=7.9						
MBAR				SKP	SKPdf	10 17 44.6	-0.7
	comp=Z,70nm,0.7s,baz=121,slow=5.9,SNR=28						
KOLS	Kolonicke sedl	136.84	329	ePKIKP	PKiKP	10 15 10.5	-0.8
KOLS	Kolonicke sedl	136.84	329	ePKP	PKiKP	10 15 10.5	-0.8
KOLS				ePP	pPKPdf	10 17 46.0	+10
MLR	Muntele Rosu	136.92	323	PKP	PKPdf	10 15 09.3	-0.4
	comp=Z,888nm,0.8s,baz=90,slow=20,SNR=2.7						
DOPR	Dopca	136.98	324	⇓P	PKPpre	10 15 05.5	
UZH	Uzhgorod	137.03	329	ePKHKP	PKPpre	10 14 59.8	
UZH				i		10 15 10.0	
UZH				e		10 17 27.9	
MDP	Montagnes des	137.14	99	PKhKP	PKPpre	10 15 00.9	
	comp=Z,11nm,0.8s,baz=277,slow=2.8,SNR=3.1						
MDP				SKP	SKPdf	10 17 45.4	-0.4
	comp=Z,34nm,0.6s,baz=231,slow=2.4,SNR=9.5						
OJC	Ojcow	137.15	332	ePKP	pPKPdf	10 17 45.2	+8.2
OJC	Ojcow	137.15	332	PKIKP	PKPdf	10 15 10.0	+0.2
OJC	Ojcow	137.15	332		PKPdf	10 15 10.0	+0.2
CRVS	Cervenica-Dubn	137.27	329	ePKHKP	PKPpre	10 15 03.3	
CRVS	Cervenica-Dubn	137.27	329	e	PKPpre	10 15 03.3	
CRVS	Cervenica-Dubn	137.27	329	ePKP	PKiKP	10 15 12.2	+0.1
CRVS				ePP	pPKPdf	10 17 46.9	+10
NEF	NEVSHA	137.28	319	eP	PKPdf	10 15 10.9	+0.6
VOIR		137.47	323	⇑P	PKPpre	10 15 01.6	
VOIR		137.47	323	⇑PKHKP	PKPpre	10 15 01.6	
ARR	Arges	137.75	323	⇑P	PKPpre	10 15 04.1	
BSEG	Bad Segeberg	137.80	342	ePKPbc	PKPpre	10 15 03.6	
	baz=34,slow=3.1						
BSEG				epPKPdf	pPKPdf	10 17 47.3	+9.5
HUMR	Humele	138.02	322	⇑P	PKPdf	10 15 11.8	+0.2
KECS	Kecovo	138.03	330	ePP	SKiKP	10 17 49.4	-0.3
LANS	Liptovska Anna	138.06	331	ePKIKP	PKiKP	10 15 13.3	-0.5
LANS	Liptovska Anna	138.06	331	ePKP	PKiKP	10 15 13.3	-0.5
LANS				ePP	pPKPdf	10 17 49.5	+11
COPA	Copaceanca	138.10	321	⇑P	PKPpre	10 15 03.8	
OKC	Ostrava-Krasne	138.17	333	eSKP	SKPdf	10 17 48.3	+1.8
HLG	Helgoland	138.27	344	ePKPbc	PKPpre	10 15 05.2	
	baz=34,slow=3.1						
HLG				epPKPdf	pPKPdf	10 17 47.8	+9.1
ELND	Elena	138.33	319	⇑P	PKPdf	10 15 13.4	+1.1
OSTC	Ostas	138.47	335	ePKPpre	PKPpre	10 15 05.3	
OSTC				ePKPDF	PKiKP	10 15 15.5	+0.9
OSTC				ex	x	10 16 28.5	
OSTC				eSKP	SKPdf	10 17 48.9	+1.9
MORC	Moravsky Berou	138.48	333	⇓P	PKPpre	10 15 06.6	
MORC	Moravsky Berou	138.48	333	PKIKP	PKPdf	10 15 12.8	+0.5
MORC	Moravsky Berou	138.48	333	ePKP	PKPpre	10 15 05.9	
MORC				e		10 17 48.2	
MORC	Moravsky Berou	138.48	333	PKPdf	PKPdf	10 15 12.8	+0.5
CHVC	Chvalec	138.51	335	ePKPDF	PKiKP	10 15 14.0	-0.7
CHVC				eSKP		10 17 48.9	
PVL	Pavlikeni	138.52	320	eP	PKPdf	10 15 11.3	-1.2
DPC	Dobruska-Polom	138.58	334	ePKPpre	PKPpre	10 15 04.7	
DPC				ePKPDF	PKiKP	10 15 14.7	-0.1
DPC				ex	x	10 16 29.5	
DPC	Dobruska-Polom	138.58	334	ePKHKP	PKPpre	10 15 04.7	
KRLC	Kraliky	138.59	334	ePKPpre	PKPpre	10 15 06.7	
KRLC				ePKPDF	PKiKP	10 15 13.9	-1.0
KRLC				eSKP		10 17 49.1	
KRLC	Kraliky	138.59	334	ePKHKP	PKPpre	10 15 06.7	
KRLC				e		10 15 13.9	
PSZ	Piszkesteto	138.70	329	⇓P	PKPdf	10 15 05.9	-6.9
PSZ	Piszkesteto	138.70	329	PKIKP	PKPdf	10 15 13.6	+0.8
PSZ	Piszkesteto	138.70	329	PKPdf	PKPdf	10 15 13.6	+0.8
GZR	Gura Zlata	138.80	324	⇑P	PKPdf	10 15 06.0	-7.1
GZR	Gura Zlata	138.80	324	⇑PKHKP	PKPpre	10 15 06.0	
VYHS	Vyhne	138.82	331	ePKHKP	PKPpre	10 15 04.8	
VYHS	Vyhne	138.82	331	e	PKPdf	10 15 04.8	-8.1
VYHS				ePP	pPKPdf	10 17 50.5	+10
PLVB	Pleven	138.87	321	⇓P	PKPdf	10 15 13.9	+0.8
SIRR	Siria	138.87	326	⇑P	PKPdf	10 15 06.4	-6.7
JAVC	Velka Javorina	139.10	332	ePKP	PKPdf	10 15 08.8	-4.7
NRDL	Niedersach Rie	139.11	341	ePKPbc	PKPdf	10 15 06.3	-6.9
	baz=34,slow=3.1						
NRDL				epPKPdf	pPKPdf	10 17 50.8	+11
BRG	Berggiesshubel	139.12	337	ePKP	PKPdf	10 15 06.4	-7.0
	comp=Z,5.9nm,0.8s						
BRG				i		10 15 11.1	
	comp=Z,14nm,1.4s						
BRG				i		10 15 16.3	
	comp=Z,21nm,0.8s						
BRG				epPKP	pPKPdf	10 17 32.7	-7.7
	comp=Z,7.0nm,1.0s						
BRG				SDIFF		10 25 42.0	
BRG				SS	SS	10 35 43.0	+0.6
BRG	Berggiesshubel	139.12	337	ePKPbc	PKPdf	10 15 06.7	-6.7
	baz=34,slow=3.1						
BRG				epPKPdf	pPKPdf	10 17 50.9	+10
CLL	Collm	139.12	338	ePKPpre	PKPpre	10 15 07.0	
	comp=Z,11nm,0.5s						
CLL				i PKPdf	PKPdf	10 15 13.3	-0.1
	comp=Z,17nm,0.9s						
CLL				i PKiKP	PKiKP	10 15 15.9	+0.1
CLL				i		10 15 18.6	
	comp=Z,33nm,1.0s						
CLL				i		10 16 30.9	
CLL				i SKPdf	SKiKP	10 17 50.5	-1.3
	comp=Z,90nm,1.0s						
CLL				ePP	PP	10 18 12.0	-3.1
CLL				e		10 20 02.0	
CLL				e		10 20 30.0	
CLL				ePPP	PPP	10 21 24.0	
CLL				e		10 22 23.0	
CLL				ePKKPdf	PKKPdf	10 24 42.0	-0.8
CLL				e		10 25 09.0	
CLL				eSdif	Sdif	10 25 40.0	-2.2
CLL				ePSKS		10 28 24.0	
CLL				eSKKSacr		10 30 00.0	
CLL				e		10 31 06.0	
CLL				e		10 34 12.0	
CLL				eSS	SS	10 35 42.0	-0.3
CLL				e		10 36 42.0	
CLL				e		10 37 30.0	
CLL				esSS		10 39 29.0	
CLL				eSSS	SSS	10 41 06.0	
CLL				esSSS		10 44 29.0	
CLL				esSSSS		10 48 24.0	
CLL				e		10 51 00.0	
CLL	Collm	139.12	338	ePKPbc	PKPdf	10 15 07.4	-6.0
	baz=34,slow=3.1						
CLL				epPKPdf	pPKPdf	10 17 51.8	+11
CLL	Collm	139.12	338	PKIKP	PKPdf	10 15 13.6	+0.2
EKA	Eskdalemuir Ar	139.22	354	SKPbc	SKPbc	10 17 49.7	+0.5
	comp=Z,13nm,0.5s,baz=3.4,slow=2.8,SNR=12						
EKA				SKKPbc	SKKPbc	10 26 27.4	-2.6
	comp=Z,36nm,0.9s,baz=185,slow=4.2,SNR=16						
ASSE	Asse, Remlinge	139.24	340	epPKPdf	pPKPdf	10 17 51.1	+11
VRAC	Vranov	139.25	333	PKhKP	PKPpre	10 15 05.7	
	comp=Z,3.3nm,0.5s,baz=37,slow=3.3,SNR=2.1						
VRAC				SKPbc	SKPbc	10 17 49.5	+0.1
	comp=Z,14nm,0.7s,baz=76,slow=2.8,SNR=12						
VRAC	Vranov	139.25	333	⇑P	PKPdf	10 15 05.1	-8.6
VRAC	Vranov	139.25	333	⇑PKHKP	PKPpre	10 15 05.1	
VRAC	Vranov	139.25	333	ePKP	PKPdf	10 15 10.2	-3.5
VRAC				e		10 16 29.2	
VRAC				e		10 17 50.6	
BZS	Buzias	139.31	325	⇑P	PKPdf	10 15 07.3	-6.5
BZS	Buzias	139.31	325	⇑PKHKP	PKPpre	10 15 07.3	
FBE	Freiberg	139.31	337	ePKPbc	PKPdf	10 15 08.0	-5.7
	baz=34,slow=3.1						
FBE				epPKPdf	pPKPdf	10 17 51.3	+10
HERR	Herculane	139.31	324	⇑P	PKPdf	10 15 06.7	-7.2
KRUC	Moravsky	139.52	333	ePKP	PKPdf	10 15 10.4	-3.8
KRUC				e		10 17 50.1	
GOPC	GO Pecny, Ondr	139.55	335	eSKP		10 17 51.5	
CLZ	Clausthal	139.59	340	ePKPbc	PKPdf	10 15 08.1	-6.2
	baz=34,slow=3.1						
CLZ				epPKPdf	pPKPdf	10 17 52.0	+11
PRU	Pruhonice	139.59	335	ePKPpre	PKPpre	10 15 10.9	
PRU				ePKPDF	PKiKP	10 15 17.1	+0.3
PRU				eSKP		10 17 51.6	
PRU	Pruhonice	139.59	335	ePKIKP	PKPdf	10 15 10.9	-3.4
MODS	Modra-Piesok	139.63	332	ePKIKP	PKPdf	10 15 12.1	-2.3
MODS	Modra-Piesok	139.63	332	ePKP	PKPdf	10 15 12.1	-2.3
MODS				ePP	pPKPdf	10 17 52.6	+11
NEUB	Neuenburg	139.65	339	epPKPdf	pPKPdf	10 17 52.3	+11
RZN	Rozhen	139.71	319	eP	PKPdf	10 15 10.0	-5.0
MDVR	Moldovita	139.77	324	⇓P	PKPdf	10 15 08.7	-6.1
GDLE	Glaisdale, N Y	139.83	352	eP	PKPdf	10 15 09.8	-4.7
ZST	Bratislava	139.84	332	ePKIKP	PKPdf	10 15 14.0	-0.8
ZST	Bratislava	139.84	332	ePKP	PKPdf	10 15 14.0	-0.8
GTTG	Gottingen	139.97	340	epPKPdf	pPKPdf	10 17 52.9	+11
IBBN	Ibbenburen	139.98	343	ePKPbc	PKPdf	10 15 08.2	-6.6
	baz=34,slow=3.1						
IBBN				epPKPdf	pPKPdf	10 17 52.1	+10
PBCC	Pribram	140.04	336	eSKP		10 17 52.7	
TANN	Tannenbergstha	140.05	337	epPKPdf	pPKPdf	10 17 53.1	+11
VTS	Vitosha	140.14	321	⇑P	PKPdf	10 15 09.0	-6.7
VTS	Vitosha	140.14	321	eP	PKPdf	10 15 08.2	-7.5
VTS	Vitosha	140.14	321	⇑PKHKP	PKPpre	10 15 09.0	
GUNZ	Gunzen	140.14	338	ePKPbc	PKPdf	10 15 09.5	-5.8
	baz=34,slow=3.1						
GUNZ				epPKPdf	pPKPdf	10 17 52.8	+10
MOX	Moxa	140.17	338	ePKPbc	PKPdf	10 15 09.2	-6.1
	baz=34,slow=3.1						
MOX				epPKPdf	pPKPdf	10 17 53.2	+11
WERN	Wernitzgruen	140.19	337	ePKPbc	PKPdf	10 15 09.8	-5.6
	baz=34,slow=3.1						
WERN				epPKPdf	pPKPdf	10 17 54.0	+12
NKC	Novy Kostel	140.21	337	ePKPpre	PKPpre	10 15 10.3	
NKC				eSKP		10 17 53.0	
NKC	Novy Kostel	140.21	337	ePKHKP	PKPpre	10 15 10.3	
MMB	Musomiste	140.39	319	eP	PKPdf	10 15 10.8	-5.2
IOMK	Kirk Michael	140.42	355	e	PKPdf	10 15 10.8	-4.8
IOMK				eP	PKPdf	10 15 10.8	-4.8
MANZ	Manzenberg	140.53	337	ePKPbc	PKPdf	10 15 11.0	-5.0
	baz=34,slow=3.1						
MANZ				epPKPdf	pPKPdf	10 17 54.9	+12
FRGS	Fruska Gora	140.58	326	eP	PKPdf	10 15 06.8	-9.4
UBBA	Unterbreizbach	140.58	340	ePKPbc	PKPdf	10 15 11.0	-4.9
	baz=34,slow=3.1						
UBBA				epPKPdf	pPKPdf	10 17 54.9	+12
CONA	Conrad Observa	140.60	332	ePKPdf	PKPdf	10 15 12.6	-3.7
	comp=Z,95nm,1.3s,SNR=25						
CONA				eSKPbc	SKiKP	10 17 55.7	+0.6
	comp=Z,85nm,1.8s						
KHC	Kasperske Hory	140.65	335	ePKPpre	PKPpre	10 15 11.4	
KHC				ePKPDF	PKiKP	10 15 19.0	-0.1
KHC				eSKP		10 17 50.6	
KHC	Kasperske Hory	140.65	335	ePKHKP	PKPpre	10 15 11.4	
KHC				e		10 15 19.0	
ROTZ	Rotzenmuhle	140.68	337	ePKPbc	PKPdf	10 15 11.5	-4.7
	baz=34,slow=3.1						
ROTZ				epPKPdf	pPKPdf	10 17 54.0	+11
SRS	Serrai	140.73	318	P	PKPdf	10 15 09.5	-7.1
GEC2	GERESS Array S	140.83	335	ePKPbc	PKPdf	10 15 11.7	-4.9
	baz=34,slow=3.1						
GEC2				epPKPdf	pPKPdf	10 17 55.4	+12
GERES	GERESS Array B	140.83	335	PKhKP	PKPpre	10 15 11.3	
	comp=Z,5.4nm,0.6s,baz=31,slow=4.5,SNR=38						
GERES				SKPbc	SKPbc	10 17 52.5	-1.1
	comp=Z,17nm,0.7s,baz=35,slow=3.3,SNR=9.1						
OUR	Ouranopolis	140.88	317	P	PKPdf	10 15 10.2	-6.7
BUG	Bochum--Univer	140.89	343	epPKPdf	pPKPdf	10 17 56.0	+12
WET	Wettzell	140.92	336	ePKPbc	PKPdf	10 15 12.4	-4.3
	baz=34,slow=3.1						
WET				epPKPdf	pPKPdf	10 17 55.7	+12
LBWR	Ladybower, Pea	140.95	352	eP	PKPdf	10 15 12.0	-4.6
GRA1	Grafenberg Arr	141.10	338		PKPdf	10 15 14.3	-2.7
GRF	Grafenberg Arr	141.10	338	epPKPdf	pPKPdf	10 17 56.6	+12
GRF	Grafenberg Arr	141.10	338	PKIKP	PKPdf	10 15 14.3	-2.7
KNT	Kendrikon	141.15	319	P	PKPdf	10 15 10.7	-6.7
DIVS	Divibare	141.16	325	eP	PKPdf	10 15 13.2	-4.2
WME	Myndd Eilian	141.25	354	eP	PKPdf	10 15 13.3	-3.8
ARSA	Arzberg	141.26	332	ePKPdf	PKPdf	10 15 14.1	-3.3
	comp=Z,26nm,1.2s,SNR=8.1						
ARSA				eSKPbc	SKiKP	10 17 56.6	+0.3
	comp=Z,17nm,1.1s						
WPS	Cemaes, Angles	141.26	355	eP	PKPdf	10 15 13.3	-3.8
VAY	Valandovo	141.27	319	eP	PKPdf	10 15 12.9	-4.6
VAY	Valandovo	141.27	319	i P	PKPdf	10 15 13.2	-4.3
MOA	Molln	141.36	333	i PKPdf	PKPdf	10 15 14.1	-3.5
	comp=Z,82nm,1.2s,SNR=26						
MOA				eSKPbc	SKiKP	10 17 56.8	+0.2
	comp=Z,61nm,1.4s						
WLF1	Llynfaes	141.36	354	eP	PKPdf	10 15 14.8	-2.5
YLL	Llanberis	141.49	354	eP	PKPdf	10 15 14.6	-2.9
SKO	Skopje	141.60	321	i P	PKPdf	10 15 15.1	-3.1
TNS	Taunus Mts	141.60	341	ePKPbc	PKPdf	10 15 14.7	-3.2
	baz=34,slow=3.1						
TNS				epPKPdf	pPKPdf	10 17 57.3	+12
BBLS	Lazići	141.63	325	eP	PKPdf	10 15 15.3	-2.9
FOEL	Foel Wylfa	141.63	353	eP	PKPdf	10 15 15.1	-2.8
THR3	Thira Island,	141.72	311	P	PKPdf	10 15 10.1	-8.4
LLW	Llanuwychllyn	141.73	354	eP	PKPdf	10 15 14.6	-3.4
LLW				IAmb	IAmb	10 15 17.4	
	comp=Z,69nm,1.4s						
HAPS	Han Pijesak,Bl	141.74	326	eP	PKPdf	10 15 15.0	-3.5
AHRW	Bad Neuenahr-A	141.74	342	epPKPdf	pPKPdf	10 17 58.2	+13
DOB	Doboj	141.77	327	eP	PKPdf	10 15 14.7	-3.6
RUDO	Rudo	141.81	325	eP	PKPdf	10 15 15.1	-3.4
SOKA	Soboth	141.91	332	ePKPdf	PKPdf	10 15 15.4	-3.2
	comp=Z,85nm,0.7s,SNR=34						
SOKA				eSKPbc	SKiKP	10 17 58.2	+0.4
	comp=Z,75nm,1.2s,SNR=6.5						
HLM1	Long Mynd	141.96	353	eP	PKPdf	10 15 14.7	-3.8
NPS	Neapolis	142.02	309	P	PKPdf	10 15 16.3	-2.8
RJOB	Jochberg	142.07	335	ePKPbc	PKPdf	10 15 16.4	-2.5
	baz=34,slow=3.1						
RJOB				epPKPdf	pPKPdf	10 17 58.1	+12
LAST	Lasithi	142.16	309	P	PKPdf	10 15 15.8	-3.6
BLY	Banja Luka	142.24	328	⇑P	PKPdf	10 15 16.7	-2.5
BLY	Banja Luka	142.24	328	eP	PKPdf	10 15 16.9	-2.3
BLY	Banja Luka	142.24	328		PKPdf	10 15 17.5	-1.6
UCC	Uccle	142.25	345	PKIKP	PKPdf	10 15 17.2	-1.8
UCC	Uccle	142.25	345		PKPdf	10 15 17.2	-1.8
OBKA	Obir	142.25	332	ePKPdf	PKPdf	10 15 16.3	-3.0
	comp=Z,28nm,1.0s,SNR=6.6						
OBKA				eSKPbc	SKiKP	10 17 59.8	+1.3
	comp=Z,31nm,1.0s						
FNA	Florina	142.32	319	PKIKP	PKPdf	10 15 16.7	-2.8
FNA	Florina	142.32	319		PKPdf	10 15 16.6	-2.8
CRES	Cresnjev	142.34	330	i PKPpre	PKPpre	10 15 16.5	
CRES				eSKPbc	SKiKP	10 17 59.1	+0.5
CRES	Cresnjev	142.34	330	eP	PKPdf	10 15 16.8	-2.5
FUR	Furstenfeldbru	142.34	336	ePKPbc	PKPdf	10 15 17.2	-2.0
	baz=34,slow=3.1						
UPM	Unac-Piva	142.34	324	eP	PKPdf	10 15 16.5	-3.1
KBA	Koelnbreinsper	142.35	333	ePKPdf	PKPdf	10 15 16.7	-2.9
	SNR=20						
KBA				eSKPbc	SKiKP	10 17 59.1	+0.3
	comp=Z,46nm,0.9s						
MCH1	Michaelchurch	142.49	353	eP	PKPdf	10 15 16.5	-2.8
MCH1				IAmb	IAmb	10 15 19.4	
	comp=Z,246nm,1.1s						
MGRS	Mrkonjic Grad	142.52	327	eP	PKPdf	10 15 17.9	-1.8
IDI	Anoyia	142.56	309	P	PKPdf	10 15 18.1	-2.0
IDI	Anoyia	142.56	309	PKP	PKPdf	10 15 18.3	-1.8
	comp=Z,49nm,0.4s,baz=30,slow=0.2,SNR=73						
IDI				SKPbc	SKPbc	10 17 57.8	-0.5
	comp=Z,16nm,0.6s,baz=79,slow=5.2,SNR=2.9						
IDI				SKKPab	SKKPab	10 26 21.8	+5.5
	comp=Z,14nm,0.8s,baz=239,slow=5.9,SNR=3.5						
AXAR	Agios Charalam	142.56	316	P	PKPdf	10 15 16.7	-3.2
MYKA	Terra Mystica	142.57	333	ePKPdf	PKPdf	10 15 17.1	-2.7
	comp=Z,33nm,0.6s,SNR=29						
MYKA				eSKPbc	SKiKP	10 17 59.1	-0.1
	comp=Z,55nm,0.9s,SNR=6.7						
STRD	Stroud	142.59	352	eP	PKPdf	10 15 17.1	-2.5
STRD				IAmb	IAmb	10 15 19.3	
	comp=Z,295nm,0.8s						
STU	Stuttgart	142.60	339	ePKPbc	PKPdf	10 15 18.1	-1.6
	baz=34,slow=3.1						
STU				epPKPdf	pPKPdf	10 18 00.6	+14
STU	Stuttgart	142.60	339	PKIKP	PKPdf	10 15 17.8	-1.9
STU	Stuttgart	142.60	339		PKPdf	10 15 17.8	-1.9
LJU	Ljubljana	142.61	331	i PKPpre	PKPpre	10 15 17.6	
LJU				eSKPbc	SKiKP	10 17 59.0	-0.2
LJU				eSS	SS	10 36 23.8	+1.1
LJU				e		10 40 14.8	
LJU	Ljubljana	142.61	331	eP	PKPdf	10 15 17.6	-2.2
MONM	Monmouth	142.62	352	eP	PKPdf	10 15 17.5	-2.1
MONM				IAmb	IAmb	10 15 19.8	
	comp=Z,768nm,1.5s						
PDG	Podgorica	142.62	323	⇑P	PKPdf	10 15 17.0	-2.9
PDG	Podgorica	142.62	323	eP	PKPdf	10 15 17.5	-2.4
PDG	Podgorica	142.62	323		PKPdf	10 15 17.0	-2.9
AGG	Agios Georgios	142.65	316	PKHKP	PKPpre	10 15 17.0	
AGG	Agios Georgios	142.65	316		PKPdf	10 15 17.0	-3.1
ELSH	Elham, Standar	142.65	348	eP	PKPdf	10 15 17.8	-1.8
ELSH				IAmb	IAmb	10 15 18.6	
	comp=Z,199nm,1.0s						
BOJS	Bojanci	142.67	330	i PKPpre	PKPpre	10 15 18.0	
BOJS				eSKPbc	SKiKP	10 17 59.2	-0.1
BOJS				eSS	SS	10 36 22.9	-0.4
BOJS				e		10 37 29.0	
BOJS				e		10 37 50.4	
BOJS				e		10 40 14.3	
BOJS				e		10 45 14.3	
RSBS	Rosebush, Pemb	142.72	354	eP	PKPdf	10 15 17.3	-2.5
RSBS				IAmb	IAmb	10 15 20.1	
	comp=Z,184nm,1.0s						
SIVA	Sivas	142.72	309	P	PKPdf	10 15 18.2	-2.1
BRY	Bratogost	142.74	324	eP	PKPdf	10 15 18.0	-2.3
OLDB	Oldbury-Upon-S	142.76	352	eP	PKPdf	10 15 17.5	-2.3
KPRO	Kipourio	142.78	318	P	PKPdf	10 15 17.7	-2.7
MAKR	Makrakomi, Fth	142.78	317	P	PKPdf	10 15 17.3	-3.1
WLF	Walferdange	142.79	342	ePKPbc	PKPdf	10 15 19.0	-1.0
	baz=34,slow=3.1						
WLF				epPKPdf	pPKPdf	10 18 00.6	+14
WLF	Walferdange	142.79	342	PKIKP	PKPdf	10 15 19.1	-0.9
WLF	Walferdange	142.79	342		PKPdf	10 15 19.1	-0.9
SWN1	Swindon	142.80	351	eP	PKPdf	10 15 18.2	-1.7
SWN1				IAmb	IAmb	10 15 20.6	
	comp=Z,402nm,0.7s						
DRME	Dracevica, Mon	142.82	323	eP	PKPdf	10 15 18.1	-2.2
CEY	Cerknica	142.89	331	eP	PKPdf	10 15 18.5	-1.8
WATA	Walderalm	142.89	335	i PKPdf	PKPdf	10 15 18.1	-2.4
	comp=Z,61nm,0.7s,SNR=18						
WATA				eSKPbc	SKiKP	10 18 00.3	+0.4
	comp=Z,113nm,1.1s,SNR=6.4						
WOL	Wolverton	142.91	351	eP	PKPdf	10 15 18.2	-1.9
WOL				IAmb	IAmb	10 15 20.3	
	comp=Z,753nm,1.4s						
TIR	Tirane	142.92	321	PKIKP	PKPdf	10 15 19.4	-1.1
TIR	Tirane	142.92	321		PKPdf	10 15 19.4	-1.1
WTTA	Wattenberg	142.92	335	ePKPdf	PKPdf	10 15 18.3	-2.2
	comp=Z,112nm,0.9s,SNR=35						
WTTA				eSKPbc	SKiKP	10 18 00.6	+0.6
	comp=Z,70nm,0.8s,SNR=12						
BATH	Bath	142.94	352	eP	PKPdf	10 15 18.4	-1.8
TREB	Trebinje	142.96	324	eP	PKPdf	10 15 18.5	-2.0
ABTA	Abfaltersbach	142.97	334	i PKPdf	PKPdf	10 15 18.3	-2.2
	comp=Z,217nm,1.2s,SNR=35						
ABTA				eSKPbc	SKPbc	10 17 59.1	+0.1
	comp=Z,52nm,0.7s,SNR=9.7						
VAM	Vamos	143.02	310	P	PKPbc	10 15 19.6	+0.3
EVR	Evrytania	143.05	317	P	PKPab	10 15 18.5	-0.5
HCY	Herceg Novi	143.05	324	eP	PKPab	10 15 18.6	-0.2
HMNX	Herstmonceux	143.07	349	eP	PKPab	10 15 18.3	-0.2
HMNX				IAmb	IAmb	10 15 22.0	
	comp=Z,1μm,1.5s						
MOTA	Moosalm	143.07	336	ePKPdf	PKPab	10 15 18.7	-0.2
	comp=Z,303nm,1.2s,SNR=66						
MOTA				eSKPbc	SKiKP	10 18 00.8	+0.5
	comp=Z,111nm,1.2s,SNR=7.9						
RETA	Reutte	143.09	336	ePKPdf	PKPab	10 15 18.9	0.0
	comp=Z,71nm,0.5s,SNR=40						
RETA				eSKPbc	SKiKP	10 18 00.9	+0.6
	comp=Z,30nm,0.8s						
KALE	Kalithea	143.10	316	P	PKPab	10 15 18.4	-0.8
SQTA	Sankt Quirin	143.13	336	i PKPdf	PKPab	10 15 19.0	0.0
	comp=Z,100nm,0.6s,SNR=76						
SQTA				eSKPbc	SKiKP	10 18 01.1	+0.7
	comp=Z,50nm,0.8s,SNR=8.6						
TRIZ	Trizonia	143.16	316	P	PKPab	10 15 18.8	-0.5
IMMV	Iera Moni Meta	143.16	310	P	PKPbc	10 15 19.6	-0.1
RIY	Rijeka	143.17	331	eP	PKPab	10 15 19.1	0.0
UBR	Ueberruh	143.18	337	ePKPbc	PKPbc	10 15 19.5	0.0
	baz=34,slow=3.1						
UBR				epPKPdf	pPKPdf	10 17 59.3	+11
TRI	Trieste	143.22	332	PKHKP	PKPpre	10 15 17.2	
TRI	Trieste	143.22	332		PKPab	10 15 17.2	-2.1
STON	Ston	143.22	325	eP	PKPab	10 15 18.9	-0.5
KLV	Kalavryta, Ach	143.27	315	P	PKPab	10 15 19.1	-0.8
STAL	STALIGIAL	143.27	333		PKPab	10 15 18.7	-0.8
BFO	Black Forest	143.28	339	ePKPbc	PKPbc	10 15 19.9	+0.2
	baz=34,slow=3.1						
BFO	Black Forest	143.28	339	PKIKP	PKPab	10 15 18.2	-1.3
BFO	Black Forest	143.28	339		PKPab	10 15 18.2	-1.3
JAN	Janina	143.28	318	P	PKPab	10 15 19.6	-0.2
PVO	Paravola	143.39	316	P	PKPab	10 15 19.9	-0.3
VLX	Vlachokerasia	143.44	314	P	PKPab	10 15 19.7	-0.9
ANKY	Antikythira Is	143.48	311	P	PKPab	10 15 20.2	-0.5
FETA	Feichten	143.49	336	i PKPdf	PKPab	10 15 20.5	0.0
	comp=Z,298nm,0.9s,SNR=148						
FETA				eSKPbc	SKiKP	10 18 02.1	+0.9
	comp=Z,61nm,0.9s,SNR=5.3						
HEX	Exmoor	143.50	353	eP	PKPab	10 15 20.1	-0.1
DAVA	Damuels	143.60	337	ePKPdf	PKPbc	10 15 20.9	0.0
	comp=Z,449nm,1.1s,SNR=149						
DAVA				eSKPbc	SKiKP	10 18 02.3	+0.9
	comp=Z,34nm,0.7s						
DRO	Drossia	143.61	315	P	PKPab	10 15 21.4	+0.3
PDO	Prodromos	143.63	317	P	PKPbc	10 15 20.3	-0.8

HTL	Hartland	143.64	354	*e*P	PKPbc	10 15 20.5	-0.1
HTL				IAmb	IAmb	10 15 23.1	
	comp=Z,636nm,0.8s						
IGT	Igoumenitsa	143.68	318	P	PKPbc	10 15 20.3	-0.9
RLS	Riolos of Patr	143.72	316	P	PKPbc	10 15 20.9	-0.4
ECH	Echery	143.77	340	PKIKP	PKPbc	10 15 20.9	-0.3
ECH	Echery	143.77	340		PKPbc	10 15 20.9	-0.3
ITM	Ithomi	143.85	314	P	PKPbc	10 15 21.0	-0.8
ITM	Ithomi	143.85	314		PKPbc	10 15 21.5	-0.3
LKD2	Lefkada island	143.88	317	P	PKPbc	10 15 20.8	-1.0
CTI	Castel Tesino	143.89	334	PKIKP	PKPbc	10 15 20.6	-1.1
CTI	Castel Tesino	143.89	334		PKPbc	10 15 20.6	-1.1
KEK	Kerkira	143.92	319	P	PKPbc	10 15 20.9	-1.0
DAVOX	Davos/Dischmat	144.02	336	PKP	PKPab	10 15 22.6	0.0
	comp=Z,192nm,0.6s,baz=298,slow=1.6,SNR=29						
DAVOX				SKPbc	SKiKP	10 18 02.5	+0.2
	comp=Z,44nm,0.6s,baz=260,slow=4.4,SNR=7.8						
DAVOX				SKKPbc	SKKPab	10 26 10.1	+0.2
	comp=Z,4.5nm,0.7s,baz=183,slow=5.6,SNR=4.4						
PYL	PYLOS	144.12	314	P	PKPbc	10 15 21.4	-1.2
TEOL	Teolo	144.42	333		PKPdf	10 15 22.4	-0.6
TUE	Stuetta	144.48	337		PKPdf	10 15 23.4	+0.1
CCA1	Carnmenellis	144.51	355	*e*P	PKPdf	10 15 23.0	+0.1
CCA1				IAmb	IAmb	10 15 25.7	
	comp=Z,1µm,1.4s						
SALO	Salr	144.71	335		PKPdf	10 15 23.3	-0.2
SGRT	San Giovanni R	145.05	325		PKPdf	10 15 23.7	-0.5
JLP	Les Platons	145.06	351	*e*P	PKPbc	10 15 24.5	-0.5
JQE	Queens East	145.09	351	*e*P	PKPbc	10 15 24.8	-0.2
JVM	Valle D.L. Mar	145.10	351	*e*P	PKPdf	10 15 24.5	+0.6
JSA	Saint Aubin	145.12	351	*e*P	PKPbc	10 15 25.1	0.0
JSA				IAmb	IAmb	10 15 27.6	
	comp=Z,340nm,1.1s						
MATE	Matera	145.23	323	⇑P	PKPbc	10 15 25.2	-0.6
SENIN	Lac Senin/Sane	145.32	339		PKPdf	10 15 25.1	+0.4
CLF	Chambon-Foret	145.34	345		PKPdf	10 15 24.4	-0.1
PRMA	PARMA	145.48	334		PKPdf	10 15 24.9	+0.1
ZCCA	Zocca	145.52	333		PKPdf	10 15 25.6	+0.7
ACER	Acerenza	145.58	324		PKPdf	10 15 25.6	+0.4
MURB	Monte Urbino	145.64	330		PKPdf	10 15 24.5	-0.7
MURB				PKPbc	PKPbc	10 15 27.9	+0.9
NRCA	Norcia	145.67	329		PKPdf	10 15 25.5	+0.2
NRCA				PKPbc	PKPbc	10 15 27.7	+0.6
INTR	Introdacqua	145.86	327		PKPdf	10 15 25.1	-0.5
AQU	L'Aquila	145.88	328	*e*P	PKPab	10 15 28.8	-1.1
AQU	L'Aquila	145.88	328	PKP2	PKPbc	10 15 28.4	+0.8
AQU	L'Aquila	145.88	328		PKPbc	10 15 28.4	+0.8
OSSC	Osservatorio P	146.05	332		PKPdf	10 15 24.2	-1.6
OSSC				PKPbc	PKPbc	10 15 27.5	-0.6
TIP	Timpagrande	146.13	321		PKPdf	10 15 24.7	-1.4
TIP				PKPbc	PKPbc	10 15 29.4	+0.9
MSSA	Maissana	146.18	334		PKPdf	10 15 23.9	-2.2
MSSA				PKPbc	PKPbc	10 15 28.2	-0.2
PAOL	Paolisi	146.19	325		PKPdf	10 15 25.0	-1.2
PAOL				PKPbc	PKPbc	10 15 28.4	-0.2
LATE	Laterza	146.48	330		PKPbc	10 15 28.2	-1.1
BNI	Bardonecchia	146.67	338	PKIKP	PKPdf	10 15 26.6	-0.4
BNI						10 15 31.3	
BNI	Bardonecchia	146.67	338		PKPdf	10 15 26.6	-0.4
BNI				PKPbc	PKiKP	10 15 31.2	-0.5
CASP	Castiglione de	146.79	331		PKPbc	10 15 29.5	-0.6
SSB	Saint Sauveur	147.20	341	PKIKP	PKPdf	10 15 27.9	+0.2
SSB	Saint Sauveur	147.20	341		PKPdf	10 15 27.9	+0.2
CEL	Celeste	147.23	320		PKPbc	10 15 31.1	-0.3
RCBR	Riachuelo	147.25	127	PKPbc	PKPbc	10 15 31.8	-0.3
	comp=Z,70nm,0.6s,baz=248,slow=4.4,SNR=49						
RCBR	Riachuelo	147.25	127	PKIKP	PKPdf	10 15 30.0	+1.3
RCBR						10 15 32.2	
RCBR	Riachuelo	147.25	127		PKPdf	10 15 30.0	+1.3
RCBR					PKPbc	10 15 32.2	+0.1
VAE	Valguarnera	148.63	321	PKPbc	PKPbc	10 15 34.6	-0.3
	comp=Z,21nm,0.9s,baz=0.0,slow=4.0,SNR=2.7						
CORL	Corleone	149.03	322		PKiKP	10 15 36.7	0.0
H07N1	FLORES T-PHASE	49.17	33	*e*PKP	PKPdf	10 15 32.3	+1.3
H07N1	FLORES T-PHASE	49.17	33	PKPbc	PKPbc	10 15 36.5	+0.3
CLTB	Caltabellotta	149.29	322		PKiKP	10 15 37.4	+0.1
H07S1	FLORES T-PHASE	49.36	33	*e*PKP	PKPdf	10 15 33.3	+2.0
H07S1	FLORES T-PHASE	49.36	33	PKPbc	PKiKP	10 15 37.1	-0.2
	baz=100						
PCED	Cedros	151.21	31	*e*PKP	PKiKP	10 15 42.0	+0.9
PGRA	Graciosa	151.25	30	*e*PKP	PKiKP	10 15 41.1	-0.1
HOR	Horta	151.32	31	*e*PK		10 15 41.1	
ROSA	Rosais	151.37	30	*e*PKP	PKPbc	10 15 39.6	-1.6
ROSA	Rosais	151.37	30		PKiKP	10 15 42.5	+1.0
ROSA				PKPab	PKPab	10 15 52.6	+0.1
PCAN	Candelaria	151.44	31	*e*PKP	PKiKP	10 15 42.2	+0.6
PICO	Pico	151.44	31	*e*PKP	PKiKP	10 15 41.8	+0.1
PMAN	Manadas	151.51	30	*e*PKP	PKPbc	10 15 40.9	-0.6
ADH	Angra Heroismo	151.90	29	*e*PKP	PKPdf	10 15 37.3	+2.1
MAHO	Mahon	152.01	336	*e*PKP	PKPab	10 16 07.2	+12
KEST	Kesra	152.82	323	PKPbc	PKPbc	10 15 44.4	-0.1
	comp=Z,20nm,0.6s,baz=239,slow=0.8,SNR=12						
KEST				PKPab	PKPab	10 15 59.5	+0.6
	comp=Z,24nm,0.6s,baz=255,slow=3.6,SNR=7.2						
KEST	Kesra	152.82	323	PKPdf	PKPdf	10 15 36.3	-0.5
KEST					PKiKP	10 15 44.9	+0.3
KEST				PKPab	PKPab	10 15 59.7	+0.7
PBRG	Braganca	152.96	354	*e*PKPbc	PKPbc	10 15 44.6	0.0
PBRG	Braganca	152.96	354	*e*PKPab	PKPab	10 15 59.8	+0.5
PCAB	Cabril	153.16	356	*e*PKPdf	PKPdf	10 15 36.1	-0.9
PCAB	Cabril	153.16	356	*e*PKPbc	PKiKP	10 15 46.0	+0.9
PCAB	Cabril	153.16	356	*e*PKPab	PKPab	10 16 00.9	+0.8
PSET	Sete Cidades	153.27	28	*e*PKP	PKPab	10 16 00.5	-0.2
PDA	Ponta Delgada	153.36	28	*e*PKP	PKPab	10 16 01.0	0.0
PCALD	Caldeiras da R	153.40	28	*e*PKP	PKPab	10 16 01.0	-0.2
GRON	Grota Negra	153.40	28	*e*PKP	PKPab	10 15 57.7	-3.6
CMLA	Cha da Macela	153.41	28	*e*PKP	PKPab	10 16 01.8	+0.5
CMLA	Cha da Macela	153.41	28	PKIKP	PKiKP	10 15 47.0	+1.3
CMLA						10 16 01.9	
CMLA	Cha da Macela	153.41	28	PKPdf	PKPdf	10 15 36.7	-0.7
CMLA					PKiKP	10 15 47.0	+1.3
CMLA					PKPab	10 16 01.9	+0.5
BART	Pico Bartolome	153.56	27	*e*PKP	PKPab	10 15 59.1	-2.9
PVRL	Vila Real	153.57	356	*e*PKPdf	PKPdf	10 15 36.6	-1.0
PVRL	Vila Real	153.57	356	*e*PKPbc	PKiKP	10 15 47.1	+1.1
PVRL	Vila Real	153.57	356	*e*PKPab	PKPab	10 16 03.0	+1.1
MVO	Moncorvo	153.62	355	*e*PKPdf	PKPdf	10 15 38.7	+1.0
MVO	Moncorvo	153.62	355	*e*PKPbc	PKiKP	10 15 46.6	+0.5
MVO	Moncorvo	153.62	355	*e*PKPab	PKPab	10 16 04.4	+2.3
UCM	Universidad Co	153.91	348	*e*PKP	PKPab	10 15 59.8	-3.6
PVIS	Viseu	154.14	356	*e*PKPdf	PKPdf	10 15 37.4	-1.0
PVIS	Viseu	154.14	356	*e*PKPbc	PKiKP	10 15 47.3	+0.1
PVIS	Viseu	154.14	356	*e*PKPab	PKPab	10 16 05.5	+1.2
PSMA	Santa Maria	154.22	28	*e*PKP	PKPab	10 16 03.1	-1.7
PSMN	Pico do Norte,	154.24	28	*e*PKP	PKPab	10 16 02.4	-2.5
MTE	Manteigas	154.43	355		PKPdf	10 15 38.5	-0.3
MTE				PKPbc	PKPbc	10 15 48.8	+1.0
MTE					PKPab	10 16 06.3	+0.7
MTE	Manteigas	154.43	355	*e*PKPdf	PKPdf	10 15 39.8	+1.0
MTE	Manteigas	154.43	355	*e*PKPbc	PKPbc	10 15 49.9	+2.1
MTE	Manteigas	154.43	355	*e*PKPab	PKPab	10 16 06.8	+1.2
ESBB	Sonseca Array	154.66	349		PKPab	10 16 05.9	-0.7
ESDC	Sonseca Array	154.66	349	PKP	PKPdf	10 15 38.5	-0.6
	comp=Z,1.5nm,0.6s,baz=18,slow=2.7,SNR=10						
ESDC				PKPbc	PKPbc	10 15 48.4	0.0
	comp=Z,3.2nm,0.6s,baz=1.4,slow=3.2,SNR=17						
ESDC				PKPab	PKPab	10 16 06.5	-0.1
	comp=Z,48nm,0.9s,baz=12,slow=3.8,SNR=28						
COI	Coimbra	154.68	357	PKP2	PKPab	10 16 07.4	+0.8
COI	Coimbra	154.68	357		PKPab	10 16 07.3	+0.8
PCAS	Casmilo, Conde	154.83	357	*i* LQ	LQ	10 15 50.4	
PCAS	Casmilo, Conde	154.83	357	*e*PKPab	PKPab	10 16 07.8	+0.5
PAB	San Pablo	154.86	349	PKIKP	PKPdf	10 15 38.4	-1.0
PAB						10 16 08.0	
PAB	San Pablo	154.86	349		PKPdf	10 15 38.4	-1.0
PAB				PKPab	PKPab	10 16 08.0	+0.5
PCBR	Castelo Branco	154.98	355	*e*PKPdf	PKPdf	10 15 40.4	+0.9
PCBR	Castelo Branco	154.98	355	*e*PKPab	PKPab	10 16 08.8	+0.9
PMRV	Marv??o	155.38	355	*e*PKPdf	PKPdf	10 15 38.8	-1.3
PMRV				*i* LQ	LQ	10 15 50.5	
PMRV	Marv??o	155.38	355	*e*PKPab	PKPab	10 16 10.3	+0.6
PMTG	Montargil	155.80	356	*e*PKPdf	PKPdf	10 15 41.6	+1.0
PMTG				*i* LQ	LQ	10 15 51.0	
PMTG	Montargil	155.80	356	*e*PKPab	PKPab	10 16 12.1	+0.7
CART	Cartagena	155.92	342	*e*PKP	PKPdf	10 15 42.0	+1.2
H10S2	ASCENSION HYDR	55.95	169	PKPab	PKPab	10 16 13.7	+1.4
	baz=102						
H10S3	ASCENSION HYDR	55.95	169	PKPab	PKPab	10 16 12.3	-0.1
PESTR	Estremoz	155.95	355	PKPdf	PKPdf	10 15 40.4	-0.4
PESTR					PKPab	10 16 11.1	-1.0
PMAFR	Mafra	155.96	358	*e*PKPab	PKPab	10 16 13.3	+1.1
PNCL	Nicolau / Gran	156.77	357	*e*PKPdf	PKPdf	10 15 42.7	+0.9
PNCL	Nicolau / Gran	156.77	357	*e*PKPab	PKPab	10 16 18.2	+2.5
PBEJ	Beja	156.81	355	*e*PKPdf	PKPdf	10 15 43.3	+1.4
PBEJ	Beja	156.81	355	*e*PKPab	PKPab	10 16 17.2	+1.3
ASCN	Ascension	157.00	169	PKPdf	PKPdf	10 15 42.0	-0.8
ASCN					PKPab	10 16 17.9	+0.7
MESJ	Messejana	157.02	356	*e*PKPdf	PKPdf	10 15 41.4	-0.8
H10N1	ASCENSION HYDR	57.06	169	PKPab	PKPab	10 16 17.3	+0.1
H10N3	ASCENSION HYDR	57.06	169	PKPab	PKPab	10 16 16.5	-0.6
PCVE	Castro Verde	157.22	356	*e*PKPdf	PKPdf	10 15 42.8	+0.4
PCVE	Castro Verde	157.22	356	*e*PKPab	PKPab	10 16 18.9	+1.3
PTEO	Sao Teotonio	157.34	357	*e*PKPab	PKPab	10 16 19.4	+1.2
PVAQ	Vaqueiros	157.42	355		PKPdf	10 15 42.0	-0.7
PVAQ					PKPab	10 16 19.1	+0.6
PVAQ	Vaqueiros	157.42	355	*e*PKPdf	PKPdf	10 15 42.5	-0.2
PVAQ	Vaqueiros	157.42	355	*e*PKPab	PKPab	10 16 20.0	+1.5
EMAL	Malaga-Limoner	157.57	348	*e*PKP	PKPab	10 16 13.2	-6.0
MORF	Marmelete	157.58	357	*e*PKPdf	PKPdf	10 15 41.2	-1.8
PBDV	Barranco-do-Ve	157.59	355	*e*PKPdf	PKPdf	10 15 35.9	-7.0
PBDV	Barranco-do-Ve	157.59	355	*e*PKPab	PKPab	10 16 21.0	+1.7
PFVI	Vila Bisbo	157.76	357	PKPdf	PKPdf	10 15 42.8	-0.3
PFVI					PKPab	10 16 19.8	-0.2
PFVI	Vila Bisbo	157.76	357	*e*PKPdf	PKPdf	10 15 43.1	0.0
PFVI	Vila Bisbo	157.76	357	*e*PKPab	PKPab	10 16 21.8	+1.8
CEU	Ceuta	158.59	349	*e*PKP	PKPab	10 16 21.6	-2.0
PMOZ	Porto Moniz, M	160.99	18	*e*PKPab	PKPab	10 16 36.4	+2.0
PMPST	Porto Santo, M	160.99	16	*e*PKPab	PKPab	10 16 35.4	+1.1
PMPS	Porto Santo	161.01	16	*e*PKPdf	PKPdf	10 15 48.4	+1.5
PMPS	Porto Santo	161.01	16	*e*PKPab	PKPab	10 16 35.8	+1.5
PMAR	Madeira	161.16	18	*e*PKPab	PKPab	10 16 35.5	+0.2
MDT	Midelt	161.40	345	PKP	PKPdf	10 15 47.4	0.0
	comp=Z,13nm,1.1s,baz=333,slow=2.3,SNR=5.3						
MDT				PKPab	PKPab	10 16 36.3	+0.1
	comp=Z,13nm,0.8s,baz=41,slow=2.6,SNR=9.6						
AVE	Averroes	161.45	353	*e*PKP	PKPdf	10 15 53.6	+6.3
SACV	Santiago Islan	167.01	88		PKPab	10 17 03.0	+1.4
TOA0	Torodi Ar. Sit	168.37	263		PKPdf	10 15 52.5	-1.2
TOA0				PKPab	PKPab	10 17 08.0	+0.4
TORD	Torodi Ar. Bea	168.37	263	PKP	PKPdf	10 15 52.8	-0.8
	comp=Z,31nm,1.0s,baz=16,slow=1.1,SNR=69						
TORD				PKPab	PKPab	10 17 08.0	+0.3
	comp=Z,73nm,0.7s,baz=93,slow=4.2,SNR=42						
TORD				PP	PP	10 20 57.4	-1.2
	comp=Z,18nm,1.1s,baz=113,slow=3.8,SNR=5.2						
KIC	Kosan Boka	170.03	213	*e*PKP2	PKPab	10 17 16.2	+1.5
	comp=Z,233nm,1.2s						
KIC	Kosan Boka	170.03	213	*e*P	PKPdf	10 15 52.8	-1.9
	comp=Z,78nm,0.9s						
KIC	Kosan Boka	170.03	213		PKPab	10 17 16.2	+1.5
LIC	Lamto	170.06	211	*e*PKP2	PKPab	10 17 16.1	+1.3
	comp=Z,222nm,0.9s						
LIC	Lamto	170.06	211	*e*P	PKPdf	10 15 54.2	-0.5
	comp=Z,82nm,0.8s						
LIC	Lamto	170.06	211		PKPdf	10 15 54.2	-0.5
LIC					PKPab	10 17 16.1	+1.3
DBIC	Dimbokro	170.35	213	PKP	PKPdf	10 15 54.5	-0.4
	comp=Z,30nm,0.9s,baz=152,slow=0.2,SNR=25						
DBIC				PKPab	PKPab	10 17 16.9	+0.8
	comp=Z,58nm,0.9s,baz=134,slow=5.9,SNR=19						
DBIC				PP	PP	10 21 07.5	+0.9
	comp=Z,18nm,0.9s,baz=136,slow=8.6,SNR=4.8						
DBIC	Dimbokro	170.35	213		PKPdf	10 15 53.8	-1.0
DBIC					PKPab	10 17 16.5	+0.4
TIC	Toumodi	170.42	212	*e*PKP2	PKPab	10 17 17.8	+1.4
	comp=Z,210nm,0.9s						
TIC	Toumodi	170.42	212	*e*P	PKPdf	10 15 54.3	-0.6
	comp=Z,62nm,0.9s						
TIC	Toumodi	170.42	212	PKIKP	PKPdf	10 15 54.3	-0.6
TIC						10 17 17.8	
TIC	Toumodi	170.42	212		PKPdf	10 15 54.3	-0.6
TIC					PKPab	10 17 17.8	+1.4

UPP ***05*** *09:59:50.6±3.0, 64°.45N×31°.09E, h0^{km}, ML1.7, Suspected explosion*

MOS ***05*** *09:59:53.1, 64°.68N×30°.23E, M2.9, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

HEL ***05*** *09:59:53.2±0.1, 64°.67N×30°.62E, h0^{km}, ML2.2, Explosion*

IDC ***05*** *09:59:54.1±2.7, 64°.61N×30°.85E, h0^{km}, mb1 2.9/3, mb1mx2.8/66, mbtmp2.8/3, ML2.3/3, Error ellipse: s-maj=40.5km s-min=9.7km az=103.0*

KOLA ***05*** *09:59:54.5, 64°.77N×29°.98E, h0^{km}*

NAO ***05*** *09:59:55.4±1.5, 64°.75N×30°.42E, ML2.3*

BER ***05*** *09:59:56.8±3.5, 64°.71N×30°.21E, h0^{km}, ML1.8, Suspected explosion*

ISC 05 09:59:54.5±0.9**, 64°.77N**±0°.03×**30°.42E**±0°.04**, h0**^{km}**, n56, σ1^{s}69**/84**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KU6	Riekki	1.28	350	PG	Pg	10 00 18.3	-0.8
	baz=164						
KU6				MSG		10 00 35.5	
	comp=Z,16nm,0.2s						
KU6				SB	Sg	10 00 36.8	+1.2
MSF	Maaselka	1.28	334	PG	Pg	10 00 18.7	-0.4
MSF				SN	Sn	10 00 39.6	+2.0
JOF	Joensuu	1.90	168	PG	Pn	10 00 25.1	-3.0
	baz=347						
JOF				SN	Sn	10 00 50.5	-2.2
OUL	Oulu	1.95	281	PG	Pn	10 00 30.1	+1.3
	baz=98						
OUL				SG	Sb	10 00 56.4	+0.7
OUF	Merijarvi	2.49	263	PG	Pn	10 00 37.5	+1.3
OUF				MSG		10 01 08.9	
	comp=Z,15nm,0.2s						
OUF				SG	Sb	10 01 11.6	+0.4
RNF	Rovaniemi	2.60	317	PB	Pn	10 00 39.9	+2.3
	baz=136						
RNF				SG	Sg	10 01 18.9	+1.1
OBF0	Syolatti, Pyha	2.68	267	SG	Sg	10 01 20.1	-0.2
SUF	Sumiainen	2.80	225	PG	Pn	10 00 41.6	+1.2
SUF				MSG		10 01 15.3	
	comp=Z,7.2nm,0.2s						
SUF				SG	Sb	10 01 18.9	-1.2
TOF	Tornio	2.87	300	PB	Pn	10 00 44.1	+2.7
TOF				MSG		10 01 21.0	
	comp=Z,7.6nm,0.2s						
TOF				SG	Sg	10 01 26.1	-0.5
VRF	Varrio	3.01	354	PN	Pn	10 00 43.6	+0.2
VRF				MSG		10 01 24.9	
	comp=Z,4.5nm,0.2s						
VRF				SB	Sb	10 01 26.6	+0.5
APA0	Apatity Array	3.04	19	Pn	Pn	10 00 43.7	0.0
	baz=204,slow=14						
APA0				Sn	Sn	10 01 22.5	+1.8
	baz=189,slow=28						
APA0	Apatity Array	3.04	19	P	Pn	10 00 43.9	+0.2
APA0				S	Sn	10 01 21.0	+0.3
APA0	Apatity Array	3.04	19	Pn	Pn	10 00 43.7	0.0
	baz=204,slow=14						
APA0				Sn	Sn	10 01 22.5	+1.8
	baz=189,slow=28						
APA	Apatity	3.06	22	P	Pn	10 00 44.5	+0.4
APA				S	Sn	10 01 21.8	+0.5
SGF	Sodankyl	3.12	331	PG	Pb	10 00 49.9	-0.8
KAF	Kangasniemi	3.24	217	PB	Pn	10 00 48.2	+1.6
KEF	Keuruu	3.61	226	PB	Pn	10 00 52.7	+1.1
PAJU	Pajala	3.76	310	P	Pn	10 00 54.6	+0.9
SJUU	Sjulsmark	3.80	285	P	Pn	10 00 54.7	+0.6
SJUU				S	Sn	10 01 43.0	+3.6
ERTU	Ertsjaerv	3.85	301	P	Pn	10 00 56.3	+1.5
ERTU	Ertsjaerv	3.85	301	PN	Pn	10 00 57.1	+2.2
FIA0	FINESS Array S	3.88	213	Pn	Pn	10 00 54.7	-0.6
	baz=34,slow=11						
FIA0				Pg	Pb	10 01 04.0	+0.4
	baz=22,slow=18						
FIA0				Lg	Lg	10 01 52.8	
	baz=34,slow=28						
FIA0	FINESS Array S	3.88	213	Pn	Pn	10 00 54.7	-0.6
	baz=34,slow=11						
FIA0				Pg	Pb	10 01 04.0	+0.4
	baz=22,slow=18						
FIA0				Sg	Sb	10 01 52.8	+1.7
	baz=34,slow=28						
FIA0	FINESS Array S	3.88	213	PB	Pn	10 00 56.7	+1.4
	baz=32						
FIA0				SG	Sb	10 01 53.5	+2.4
FINES	FINESS Array B	3.88	213	Pn	Pn	10 00 54.8	-0.5
	comp=Z,0.2nm,0.3s,baz=33,slow=13,SNR=6.6						
FINES				Lg	Lg	10 01 53.1	
	comp=Z,1.3nm,0.3s,baz=33,slow=28,SNR=9.0						
FINES				Rg	Rg	10 02 15.2	
	comp=Z,25nm,1.1s,baz=39,slow=38,SNR=12						
BURU	Burvik	3.89	271	P	Pn	10 00 55.3	-0.1
BURU	Burvik	3.89	271	PN	Pn	10 00 55.7	+0.2
HARU	Harads	4.18	294	P	Pn	10 01 00.7	+1.3
ODEU	Stanfors	4.20	269	P	Pn	10 00 59.0	-0.7
UMAU	Umeaa	4.33	263	PN	Pn	10 01 01.9	+0.4
UMAU				SG	Sg	10 02 12.0	-1.5
MASU	Masugnsbyn	4.36	312	P	Pn	10 01 04.3	+2.4
LILU	Lilltraesk	4.51	281	P	Pn	10 01 04.3	+0.3
HEF	Hetta	4.54	327	Pn	Pn	10 01 06.1	+1.7
HEF				Lg	Lg	10 02 16.0	
HEF	Hetta	4.54	327	*e*P	Pn	10 01 05.4	+1.1
HEF				*e*S	Sn	10 01 53.6	-4.2
HEF	Hetta	4.54	327	PN	Pn	10 01 06.1	+1.7
HEF				SG	Sg	10 02 16.5	-3.7
DUNU	Dundret	4.67	305	P	Pn	10 01 07.1	+0.9
SVAU	Svanoeiden	4.67	272	P	Pn	10 01 06.0	-0.1
LANU	Lannavaara	4.72	318	P	Pn	10 01 07.5	+0.6
PVF	Pernaja	4.73	208	SG	Sb	10 02 18.1	+2.6
KTK1	Kautokeino	5.11	330	*e*P	Pn	10 01 13.3	+1.1
KTK1				*e*S	Sn	10 02 05.8	-6.0
KTK1				IAML		10 02 40.8	
	comp=Z,3.4nm,0.4s						
ARA0	ARCESS Array S	5.16	340	Pn	Pn	10 01 12.6	-0.2
	baz=148,slow=14						
ARA0				Sn	Sn	10 02 12.2	-0.7
	baz=160,slow=28						
ARA0				Lg	Lg	10 02 32.6	
	baz=154,slow=28						
ARA0	ARCESS Array S	5.16	340	Pn	Pn	10 01 12.6	-0.2
	baz=148,slow=14						
ARA0				Sn	Sn	10 02 12.2	-0.7
	baz=160,slow=28						
ARCES	ARCESS Array B	5.16	340	Pn	Pn	10 01 12.5	-0.3
	comp=Z,0.4nm,0.3s,baz=153,slow=13,SNR=33						
ARCES				Sn	Sn	10 02 12.8	-0.1
	comp=Z,0.4nm,0.3s,baz=159,slow=20,SNR=2.0						
ARCES				Lg	Lg	10 02 31.4	
	comp=Z,0.8nm,0.3s,baz=152,slow=26,SNR=6.0						
ARE0	ARCESS Array S	5.16	340	IAML		10 02 16.8	
	comp=Z,2.1nm,0.5s						
KUA	Kurravaara	5.16	313	P	Pn	10 01 13.2	+0.3
KEV	Kevo	5.18	347	Pn	Pn	10 01 12.8	-0.3
KEV				Sn	Sn	10 02 12.8	-0.7
KEV	Kevo	5.18	347	*e*P	Pn	10 01 12.8	-0.3
KEV				Sn	Sn	10 02 12.8	-0.7
KIF	Kilpisjarvi	5.69	323	Pn	Pn	10 01 21.7	+1.6
KIF				Sn	Sn	10 02 27.9	+1.9
KIF	Kilpisjarvi	5.69	323	*e*P	Pn	10 01 22.0	+1.9
KIF				*e*S	Sn	10 02 20.6	-5.5
HFS	Hagfors	9.02	247	Pn	Pn	10 02 05.3	-0.5
	baz=64,slow=12						
HFS	Hagfors	9.02	247	Pn	Pn	10 02 05.3	-0.5
	baz=64,slow=12						
NB2	NORSAR Subarra	9.51	256	Pn	Pn	10 02 13.8	+1.2
	baz=60,slow=16						
NB2	NORSAR Subarra	9.51	256	Pn	Pn	10 02 13.8	+1.2
	baz=60,slow=16						
NOA	NORSAR Array B	9.51	256	Pn	Pn	10 02 11.4	-1.2
	comp=Z,0.0nm,0.3s,baz=63,slow=12,SNR=1.6						
NRA0	NORESS Array S	9.54	254	Pn	Pn	10 02 14.3	+1.4
	baz=48,slow=11						
NRA0	NORESS Array S	9.54	254	Pn	Pn	10 02 14.3	+1.4
	baz=48,slow=11						

NEIC ***05*** *10:21:54.7±1.9, 14°.8S±0°.1×169°.9E±0°.1, h642^{km}±9^{km}, mb4.2/14, Error ellipse: s-maj=21.7km s-min=17.8km az=120.0*

IDC ***05*** *10:21:55.2±2.5, 14°.83S×169°.87E, h656^{km}±33^{km}, mb3.1/11, mb1 3.3/12, mb1mx3.0/45, mbtmp4.1/12, Error ellipse: s-maj=23.4km s-min=17.8km az=33.0*

ISC 05 10:21:55.3±0.6**, 14°.8S**±0°.1×**169°.9E**±0°.1**, h650**^{km}**, n42, σ0^{s}83**/41**, mb4.0**/17**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.93	204	P	P	10 23 57.0	+1.2
	0.4nm,0.3s,baz=72,slow=12,SNR=5.7						
DZM	Mont Dzumac	7.93	204	P	P	10 23 55.4	-0.5
MSVF	Nonsavu	8.38	112	P	P	10 24 00.5	+0.5
URZ	Urewera	24.23	166	P	P	10 26 23.8	-0.5
	5.5nm,0.3s,baz=291,slow=2.2,SNR=9.6						
URZ	Urewera	24.23	166	P	P	10 26 23.5	-0.7
DREZ	Durham Road	24.60	172	P	P	10 26 40.5	+13
BKZ	Black Stump Fm	24.97	168	P	P	10 26 30.3	-0.5
NMHZ	Naumai	24.97	167	P	P	10 26 30.8	0.0
MOVZ	Moawhango	25.06	169	P	P	10 26 31.6	0.0
BHHZ	Black Hill Sta	25.20	169	P	P	10 26 32.2	-0.6
KWHZ	Kaweka Forest	25.20	168	P	P	10 26 32.6	-0.2
KRHZ	Kereru	25.40	168	P	P	10 26 34.0	-0.5
DVHZ	Dannevirke	26.00	169	P	P	10 26 38.4	-1.4
BFZ	Birch Farm	26.39	169	P	P	10 26 41.7	-1.4
HOWZ	Holdsworth Sta	26.47	170	P	P	10 26 42.4	-1.5
SNZO	South Karori	26.75	172	P	P	10 26 45.5	-0.8
RPZ	Rata Peaks	28.84	178	P	P	10 27 03.4	-0.9
	9.4nm,0.8s,baz=165,slow=1.6,SNR=8.4						
STKA	Stephens Creek	30.90	232	P	P	10 27 21.2	-0.9
	1.5nm,0.4s,baz=70,slow=8.6,SNR=6.1						
TOO	Toolangi	31.34	219	P	P	10 27 27.0	+1.3
WR0	Warramunga Arr	34.06	256	P	P	10 27 48.0	-0.8
WR0				IAmb	IAmb	10 28 04.4	
	comp=Z,7.5nm,1.5s						
WB0	Warramunga Arr	34.19	257	P	P	10 27 49.4	-0.5
WB0				IAmb	IAmb	10 27 52.3	
	comp=Z,12nm,1.4s						
WB2	Warramunga Arr	34.24	256	P	P	10 27 49.6	-0.7
WB2				IAmb	IAmb	10 28 02.6	
	comp=Z,7.4nm,1.4s						
WRA	Warramunga Arr	34.25	256	P	P	10 27 49.3	-1.1
	comp=Z,0.7nm,0.3s,baz=86,slow=8.8,SNR=5.8						
AS31	Alice Springs	35.00	250	P	P	10 27 56.4	-0.2
ASAR	Alice Springs	35.01	250	P	P	10 27 56.2	-0.4
	comp=Z,1.4nm,0.3s,baz=75,slow=9.5,SNR=27						
BBOO	Buckleboo	35.55	234	P	P	10 28 01.6	+0.8
KNRA	Kununurra	39.63	263	P	P	10 28 33.8	-0.2
KNRA				IAmb	IAmb	10 28 39.8	
	comp=Z,14nm,1.4s						
FITZ	Fitzroy Crossi	42.47	259	P	P	10 28 57.6	+1.3
PSA00	Pilbara Seismi	47.84	254	P	P	10 29 37.5	+0.5
PSA00				IAmb	IAmb	10 29 50.7	
	comp=Z,15nm,1.3s						
VNDA	Vanda	62.87	182	P	P	10 31 19.6	+0.1
	comp=Z,1.0nm,0.6s,baz=14,slow=7.5,SNR=5.7						
VNDA	Vanda	62.87	182	P	P	10 31 20.1	+0.6
PETK	Petropavlovsk-	68.43	352	P	P	10 31 54.1	-0.1
	comp=Z,2.6nm,0.7s,baz=161,slow=9.2,SNR=3.4						
QSPA	South Pole Qui	75.23	180	P	P	10 32 33.6	+0.2
CMAR	Chiang Mai Arr	77.28	293	P	P	10 32 46.1	+0.8
	comp=Z,0.9nm,0.4s,baz=122,slow=3.8,SNR=4.7						
OHAK	Old Harbor	77.99	19	P	P	10 32 48.4	+0.2
WRH	Wood River Hil	85.26	17	P	P	10 33 24.6	-0.2
WRH				IAmb	IAmb	10 33 36.6	
	comp=Z,6.3nm,1.5s						
NVAR	Mina Array Bea	85.42	48	P	P	10 33 26.9	+0.3
	comp=Z,0.3nm,0.6s,baz=216,slow=5.6,SNR=3.9						
ILAR	Eielson Array	85.83	17	P	P	10 33 25.6	-2.0
	comp=Z,0.4nm,0.6s,baz=238,slow=4.8,SNR=7.0						
MKAR	Makanchi Array	98.99	316	P	P	10 34 29.0	+0.7
	comp=Z,0.3nm,0.8s,baz=111,slow=3.9,SNR=3.0						
ARCES	ARCESS Array B	120.93	346	PKP	PKPdf	10 39 34.2	-0.8
	comp=Z,0.8nm,0.4s,baz=65,slow=2.2,SNR=15						
FINES	FINESS Array B	126.69	339	PKP	PKPdf	10 39 45.6	-0.6
	comp=Z,0.9nm,0.7s,baz=31,slow=3.2,SNR=3.2						
TORD	Torodi Ar. Bea	168.41	263	PKPab	PKPab	10 42 03.2	-1.0
	comp=Z,0.5nm,1.0s,baz=108,slow=4.7,SNR=2.0						

IDC ***05*** *10:26:34.2±3.9, 14°.33S×169°.70E, h633^{km}±55^{km}, mb3.1/5, mb1 3.2/6, mb1mx2.9/43, mbtmp4.1/6, Error ellipse: s-maj=68.8km s-min=31.5km az=156.0*

ISC 05 10:26:32.3±1.5**, 14°.0S**±0°.2×**169°.6E**±0°.3**, h600**^{km}**, n7, σ1^{s}08**/7**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.52	200	P	P	10 28 37.1	+0.4
	0.3nm,0.3s,baz=83,slow=18,SNR=2.6						
CTA	Charters Tower	23.09	252	P	P	10 30 53.8	0.0
	5.7nm,0.9s,baz=56,slow=7.3,SNR=2.6						
STKA	Stephens Creek	31.15	231	P	P	10 32 03.3	-0.6
	4.6nm,0.4s,baz=66,slow=8.7,SNR=27						

WRA	Warramunga Arr	34.17	255	P	P	10 32 30.1	+0.6
	0.9nm,0.4s,baz=86,slow=8.3,SNR=7.8						
ASAR	Alice Springs	35.02	249	P	P	10 32 36.7	+0.2
	2.4nm,0.4s,baz=76,slow=9.6,SNR=65						
ILAR	Eielson Array	85.20	17	P	P	10 38 06.8	+0.8
	0.2nm,0.6s,baz=238,slow=5.2,SNR=2.7						
ARCES	ARCESS Array B	120.14	346	PKP	PKPdf	10 44 13.6	-1.8
	1.0nm,0.7s,baz=38,slow=1.6,SNR=8.6						

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*IDC **05** 10:30:24.4±1.4, 14°.76S×169°.89E, h644^{km}±15^{km}, mb3.6/14, mb1 3.8/16, mb1mx3.4/43, mbtmp4.6/16, Error ellipse: s-maj=16.0km s-min=13.9km az=176.0*

*NEIC **05** 10:30:26.0±1.6, 14°.8S±0°.1×169°.8E±0°.1, h654^{km}±8^{km}, mb4.7/32, Error ellipse: s-maj=18.5km s-min=17.4km az=153.0*

ISC 05 10:30:25.7±0.5**, 14°.84S**±0°.08×**169°.77E**±0°.08**, h650**^{km}**, n79,** σ**1^{s}.22**/85**, mb4.6**/27**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	7.85	203	P	P	10 32 26.8	+1.3
	1.6nm,0.3s,baz=204,slow=9.2,SNR=17						
DZM				S	S	10 33 57.1	-6.5
	0.4nm,0.3s,baz=83,slow=19,SNR=1.7						
DZM	Mont Dzumac	7.85	203	P	P	10 32 27.4	+1.9
MSVF	Nonsavu	8.46	111	P	P	10 32 31.6	+0.6
HNR	Honiara	11.00	298	P	P	10 32 55.1	-0.1
	17nm,0.3s,baz=177,slow=2.7,SNR=5.4						
HNR	Honiara	11.00	298	P	P	10 32 55.6	+0.4
LHI	Lord Howe Isla	19.28	209	P	P	10 34 11.7	+1.1
	baz=20,SNR=3.5						
LHI	Lord Howe Isla	19.28	209	P	P	10 34 11.8	+1.1
LHI				IAmb	IAmb	10 34 23.9	
	comp=Z,43nm,1.0s						
EIDS	Eidsvold	20.41	236	P	P	10 34 21.7	+0.7
	baz=21,SNR=8.7						
EIDS	Eidsvold	20.41	236	P	P	10 34 21.7	+0.7
EIDS				IAmb	IAmb	10 34 38.1	
	comp=Z,16nm,0.6s						
ARMA	Armidale	22.77	224	P	P	10 34 43.3	+1.4
	baz=23,SNR=16						
ARMA	Armidale	22.77	224	P	P	10 34 43.4	+1.4
ARMA				IAmb	IAmb	10 34 44.3	
	comp=Z,35nm,1.3s						
RMQ	Roma	22.78	236	P	P	10 34 43.6	+1.6
	baz=23,SNR=28						
CTA	Charters Tower	23.02	254	P	P	10 34 45.0	+0.7
	comp=Z,12nm,0.5s,baz=80,slow=11,SNR=19						
MXZ	Matakaoa Point	23.87	163	P	P	10 34 50.4	-1.1
URZ	Urewera	24.21	166	P	P	10 34 53.6	-0.8
	comp=Z,3.7nm,0.3s,baz=309,slow=1.5,SNR=8.2						
URZ	Urewera	24.21	166	P	P	10 34 53.7	-0.8
MTSU	Mount Surprise	24.62	259	P	P	10 34 58.6	+0.2
	baz=25,SNR=5.1						
BKZ	Black Stump Fm	24.94	168	P	P	10 35 00.4	-0.6
COEN	Coen	25.77	269	P	P	10 35 09.6	+1.1
COEN				IAmb	IAmb	10 35 44.3	
	comp=Z,60nm,1.9s						
QLP	Quilpie	26.53	240	P	P	10 35 15.7	+0.7
	baz=27,SNR=19						
YNG	Young	27.34	221	P	P	10 35 23.1	+1.2
	baz=28,SNR=14						
CNB	Canberra Magne	27.41	218	P	P	10 35 23.7	+1.1
	baz=28,SNR=15						
CMSA	Cobar Meteorol	27.58	229	P	P	10 35 24.7	+0.7
	baz=28,SNR=62						
CAN	Canberra	27.63	219	P	P	10 35 25.7	+1.1
MILA	Mila	28.74	216	P	P	10 35 35.1	+1.1
	baz=29,SNR=4.3						
RPZ	Rata Peaks	28.80	178	P	P	10 35 33.5	-0.8
	comp=Z,9.6nm,0.8s,baz=194,slow=3.5,SNR=6.0						
QIS	Mount Isa	29.26	254	P	P	10 35 39.3	+0.6
	baz=29,SNR=15						
STKA	Stephens Creek	30.79	232	P	P	10 35 52.9	+1.3
	baz=31,SNR=143						
STKA	Stephens Creek	30.79	232	P	P	10 35 52.8	+1.2
	comp=Z,42nm,0.4s,baz=64,slow=8.5,SNR=192						
STKA				ScP	ScP	10 41 10.8	+0.7
	comp=Z,2.5nm,0.7s,baz=49,slow=4.0,SNR=4.0						
STKA	Stephens Creek	30.79	232	P	P	10 35 53.3	+1.7
TOO	Toolangi	31.24	219	P	P	10 35 56.6	+1.3
	baz=32,SNR=22						
TOO	Toolangi	31.24	219	P	P	10 35 56.7	+1.3
HTT	Hallett	33.50	231	P	P	10 36 15.4	+1.0
	baz=34,SNR=20						
WR0	Warramunga Arr	33.96	256	P	P	10 36 18.1	-0.3
WRAB	Tennant Creek	34.13	256	P	P	10 36 20.0	+0.2
WRAB				IAmb	IAmb	10 36 20.1	
	comp=Z,11nm,0.8s						
WRA	Warramunga Arr	34.15	256	P	P	10 36 19.4	-0.6
	comp=Z,11nm,0.5s,baz=84,slow=7.5,SNR=65						
WRA				S	S	10 40 59.8	-3.1
	comp=Z,0.7nm,0.7s,baz=90,slow=15,SNR=3.4						
WRA				ScP	ScP	10 41 23.3	+1.3
	comp=Z,3.7nm,1.0s,baz=89,slow=3.6,SNR=7.5						
ASAR	Alice Springs	34.90	250	P	P	10 36 26.1	-0.1
	comp=Z,23nm,0.4s,baz=76,slow=9.8,SNR=531						
ASAR				S	S	10 41 11.6	-2.5
	comp=Z,1.5nm,0.6s,baz=77,slow=16,SNR=7.8						
ASAR				ScP	ScP	10 41 25.0	+0.2
	comp=Z,3.2nm,0.7s,baz=91,slow=4.0,SNR=17						
BBOO	Buckleboo	35.44	234	P	P	10 36 31.1	+0.7
	baz=36,SNR=6.4						
BBOO	Buckleboo	35.44	234	P	P	10 36 31.3	+0.9
KDU	Kakadu	36.26	269	P	P	10 36 37.6	+0.3
	baz=36,SNR=12						
MTN	Manton Dam	37.54	268	P	P	10 36 48.0	+0.3
	baz=38,SNR=26						
MTN	Manton Dam	37.54	268	P	P	10 36 48.5	+0.7
MTN				IAmb	IAmb	10 36 48.6	
	comp=Z,15nm,0.6s						
KNRA	Kununurra	39.53	263	P	P	10 37 03.7	+0.1
	baz=40,SNR=10						
KNRA	Kununurra	39.53	263	P	P	10 37 03.8	+0.1
KNRA				IAmb	IAmb	10 37 04.0	
	comp=Z,20nm,0.5s						
WRKA	Warakurna	40.14	249	P	P	10 37 08.9	+0.4
	baz=40,SNR=97						
MCQ	Macquarie Isla	40.46	190	P	P	10 37 12.1	+1.7
FORT	Forrest	41.33	240	P	P	10 37 18.0	+0.3
	baz=42,SNR=22						
FORT	Forrest	41.33	240	P	P	10 37 17.9	+0.3
FORT				IAmb	IAmb	10 37 18.5	
	comp=Z,39nm,0.6s						
FITZ	Fitzroy Crossi	42.37	259	P	P	10 37 26.6	+0.6
	baz=42,SNR=11						
FITZ	Fitzroy Crossi	42.37	259	P	P	10 37 26.6	+0.6
	comp=Z,11nm,0.6s,baz=88,slow=7.9,SNR=11						
FITZ	Fitzroy Crossi	42.37	259	P	P	10 37 26.8	+0.9
KMBL	Kambalda	46.64	241	P	P	10 37 58.4	0.0
	baz=47,SNR=6.1						
PSA00	Pilbara Seismi	47.73	254	P	P	10 38 07.2	+0.6
PSA00				IAmb	IAmb	10 38 07.3	
	comp=Z,16nm,0.5s						
MEEK	Meekatharra	48.97	248	P	P	10 38 15.7	0.0
	baz=49,SNR=18						
KLBR	Kellerberrin	50.16	241	P	P	10 38 24.1	-0.2
	baz=50,SNR=5.1						
NWAO	Narrogin (SRO)	50.77	240	P	P	10 38 28.2	-0.3
	comp=Z,17nm,0.5s,baz=101,slow=6.9						
NWAO	Narrogin (SRO)	50.77	240	P	P	10 38 28.4	-0.1
NWAO				IAmb	IAmb	10 38 29.0	
	comp=Z,20nm,0.7s						
MORW	Morawa	51.40	245	P	P	10 38 33.4	+0.2
MUN	Mundaring	51.52	241	P	P	10 38 35.3	+1.4
	baz=52,SNR=3.3						
GIRL	Giralia	52.91	253	P	P	10 38 45.3	+1.3
UGM	Wanagama	58.35	270	P	P	10 39 21.8	+0.2
UGM				IAmb	IAmb	10 41 27.5	
	comp=Z,100nm,1.2s						
VNDA	Vanda	62.82	182	P	P	10 39 49.6	0.0
	comp=Z,1.6nm,0.8s,baz=0.0,slow=4.0,SNR=3.8						
VNDA	Vanda	62.82	182	P	P	10 39 50.0	+0.5
QSPA	South Pole Qui	75.19	180	P	P	10 41 03.6	0.0
QSPA				IAmb	IAmb	10 43 22.1	
	comp=Z,28nm,1.9s						
CMAR	Chiang Mai Arr	77.21	293	P	P	10 41 15.3	0.0
	comp=Z,0.7nm,0.3s,baz=113,slow=3.8,SNR=5.8						
OHAK	Old Harbor	78.06	20	P	P	10 41 19.0	0.0
OHAK				IAmb	IAmb	10 42 59.4	
	comp=Z,41nm,1.8s						
CMB	Columbia Colle	83.86	48	P	P	10 41 49.0	-0.2
BEKR	Beckworth	84.63	47	P	P	10 41 52.9	-0.2
WAKR	Walker	84.73	48	P	P	10 41 54.1	+0.4
NVAR	Mina Array Bea	85.52	48	P	P	10 41 56.5	-0.9
	comp=Z,1.6nm,0.8s,baz=233,slow=8.1,SNR=13						
ILAR	Eielson Array	85.90	17	P	P	10 41 55.9	-2.5
	comp=Z,0.6nm,0.7s,baz=238,slow=4.9,SNR=10.0						
TPNV	Topopah Spring	86.48	50	P	P	10 42 02.2	+0.3
TPNV				IAmb	IAmb	10 42 12.1	
	comp=Z,16nm,1.9s						
LTY	Liberty	87.50	40	P	P	10 42 06.2	-0.1
LTY				IAmb	IAmb	10 45 39.2	
	comp=Z,15nm,1.6s						
U15A	North Rim	89.29	52	P	P	10 42 16.0	+0.8
U15A				IAmb	IAmb	10 43 54.6	
	comp=Z,19nm,1.9s						
TXAR	Lajitas Array	94.21	61	P	P	10 42 37.4	-0.3
	comp=Z,0.2nm,0.4s,baz=222,slow=5.5,SNR=10.0						
YKA	Yellowknife Ar	96.55	27	P	P	10 42 45.9	-1.3
	comp=Z,0.3nm,0.5s,baz=252,slow=4.5,SNR=5.6						
ARCES	ARCESS Array B	120.95	346	PKP	PKPdf	10 48 04.1	-1.3
	comp=Z,1.7nm,0.5s,baz=77,slow=2.6,SNR=19						
FINES	FINESS Array B	126.70	339	PKP	PKPdf	10 48 15.8	-0.8
	comp=Z,0.4nm,0.4s,baz=69,slow=4.8,SNR=4.3						
TORD	Torodi Ar. Bea	168.30	263	PKPab	PKPab	10 50 33.7	-0.5
	comp=Z,0.7nm,0.7s,baz=88,slow=4.2,SNR=4.1						

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*IDC **05** 10:33:25.6±1.6, 60°.71S×26°.82W, h0^{km}, mb4.1/3, mb1 4.2/4, mb1mx3.9/27, mbtmp4.0/4, ML3.5/1, Error ellipse: s-maj=64.4km s-min=34.4km az=38.0*

ISC 05 10:33:28.2±0.9**, 60°.7S**±0°.2×**26°.9W**±0°.3**, h19**^{km}**, n10,** σ**0^{s}.80**/10**, mb4.1**/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	12.49	151	P	Pn	10 36 25.3	+0.6
VNA3	Neumayer Olymp	12.60	154	P	Pn	10 36 26.3	+0.2
VNA2	Neumayer--Watz	12.89	151	P	Pn	10 36 30.8	+0.7
	baz=312,slow=14						
SNAA	Sanae	14.50	149	P	Pn	10 36 51.9	-0.2
SNAA	Sanae	14.50	149	Pn	Pn	10 36 51.8	-0.4
	0.2nm,0.3s,baz=315,slow=14,SNR=3.1						
CPUP	Villa Florida	40.14	315	P	P	10 41 02.7	0.0
	1.3nm,0.5s,baz=144,slow=9.5,SNR=2.9						
LPAZ	La Paz	53.30	308	P	P	10 42 47.0	+0.6
	0.8nm,0.4s,baz=138,slow=8.3,SNR=3.5						
TORD	Torodi Ar. Bea	77.08	29	P	P	10 45 20.4	+0.5
	1.1nm,0.5s,baz=201,slow=6.9,SNR=6.5						
YKA	Yellowknife Ar	139.66	314	PKP	PKiKP	10 52 53.8	-1.5
	0.2nm,0.7s,baz=130,slow=2.4,SNR=4.2						
SONM	Songino Array	150.53	95	PKPbc	PKiKP	10 53 17.6	-0.7
	0.3nm,0.8s,baz=207,slow=1.3,SNR=1.5						

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*IDC **05** 10:35:21.2±3.1, 60°.48S×26°.73W, h0^{km}, mb4.0/3, mb1 4.2/3, mb1mx3.9/25, mbtmp4.0/3, Error ellipse: s-maj=102.6km s-min=47.9km az=2.0*

ISC 05 10:35:23.2±0.9**, 60°.7S**±0°.2×**26°.8W**±0°.3**, h20**^{km}**, n9,** σ**0^{s}.71**/9**, mb4.0**/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	12.47	151	P	Pn	10 38 19.4	+0.3
VNA3	Neumayer Olymp	12.58	154	P	Pn	10 38 20.5	-0.2
VNA2	Neumayer--Watz	12.87	151	P	Pn	10 38 25.1	+0.5
	baz=316,slow=13						
SNAA	Sanae	14.48	149	P	Pn	10 38 46.2	-0.5
CPUP	Villa Florida	40.17	315	P	P	10 42 57.5	-0.2
	1.0nm,0.4s,baz=149,slow=5.9,SNR=2.4						
LPAZ	La Paz	53.33	308	P	P	10 44 41.7	+0.2
	0.7nm,0.4s,baz=180,slow=8.1,SNR=3.1						
TORD	Torodi Ar. Bea	77.06	28	P	P	10 47 14.6	+0.1
	1.4nm,0.6s,baz=194,slow=6.6,SNR=7.0						
YKA	Yellowknife Ar	139.69	314	PKP	PKiKP	10 54 48.9	-1.2
	0.2nm,0.6s,baz=124,slow=2.3,SNR=3.4						
ILAR	Eielson Array	153.18	305	PKPbc	PKiKP	10 55 18.8	+0.9
	0.2nm,0.6s,baz=146,slow=3.0,SNR=4.0						

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*IDC **05** 10:40:35.2±6.4, 5°.03S×144°.83E, h96^{km}±69^{km}, mb3.3/5, mb1 3.6/7, mb1mx3.4/37, mbtmp3.8/7, ML3.7/1, Error ellipse: s-maj=48.2km s-min=27.6km az=145.0*

ISC 05 10:40:35.6±1.1**, 5°.0S**±0°.1×**144°.8E**±0°.2**, h100**^{km}**, n7,** σ**0^{s}.58**/8**, mb3.5**/5**, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.92	152	P	Pn	10 41 47.3	+0.1
	2.9nm,0.3s,baz=312,slow=14,SNR=9.0						
PMG				S	Sn	10 42 42.5	-0.4
	2.7nm,0.3s,baz=144,slow=22,SNR=1.7						
WRA	Warramunga Arr	17.98	214	P	Pn	10 44 38.9	-0.3
	0.3nm,0.3s,baz=34,slow=9.2,SNR=8.1						
ASAR	Alice Springs	21.30	209	P	P	10 45 14.3	-0.1
	1.6nm,0.7s,baz=31,slow=12,SNR=16						
FITZ	Fitzroy Crossi	22.80	234	P	P	10 45 31.0	+1.0
	1.1nm,0.5s,baz=66,slow=12,SNR=1.9						
CMAR	Chiang Mai Arr	50.89	299	P	P	10 49 26.3	-0.6
	0.5nm,0.3s,baz=116,slow=6.3,SNR=2.0						
MKAR	Makanchi Array	75.39	321	P	P	10 52 08.2	-0.2
	0.2nm,0.4s,baz=106,slow=7.5,SNR=1.4						
ILAR	Eielson Array	85.47	24	P	P	10 53 02.2	+0.4
	0.4nm,0.7s,baz=256,slow=4.1,SNR=5.7						

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*IDC **05** 11:13:57.3±5.0, 19°.32S×169°.30E, h152^{km}±57^{km}, mb3.6/5, mb1 3.9/6, mb1mx3.5/35, mbtmp4.0/6, Error ellipse: s-maj=101.1km s-min=27.2km az=160.0*

*NEIC **05** 11:14:00.2±1.7, 19°.3S±0°.1×169°.3E±0°.2, h178^{km}±8^{km}, mb4.2/9, Error ellipse: s-maj=22.0km s-min=14.6km az=100.0*

ISC 05 11:13:57.3±0.8**, 19°.3S**±0°.1×**169°.3E**±0°.1**, h150**^{km}**, n18,** σ**1^{s}.08**/19**, mb4.2**/10**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	3.87	223	P	Pn	11 14 55.7	-0.3
	2.9nm,0.3s,baz=325,slow=23,SNR=53						
DZM				S	Sn	11 15 40.8	-0.8
	4.9nm,0.3s,baz=102,slow=23,SNR=7.9						
DZM	Mont Dzumac	3.87	223		Pn	11 14 58.3	+2.3
BKZ	Black Stump Fm	20.80	164	P	P	11 18 27.1	+0.4
WB0	Warramunga Arr	32.87	263	P	P	11 20 16.6	-0.7
WRA	Warramunga Arr	32.91	263	P	P	11 20 16.9	-0.7
	0.8nm,0.5s,baz=101,slow=8.3,SNR=6.8						
AS31	Alice Springs	33.18	256	P	P	11 20 20.3	+0.4
AS31				IAmb	IAmb	11 20 20.5	
	comp=Z,2.6nm,0.5s						
ASAR	Alice Springs	33.18	256	P	P	11 20 20.1	+0.2
	comp=Z,3.6nm,0.4s,baz=83,slow=9.0,SNR=57						
KNRA	Kununurra	38.77	269	P	P	11 21 07.6	+0.1
KNRA				IAmb	IAmb	11 21 07.9	
	comp=Z,12nm,1.3s						
FITZ	Fitzroy Crossi	41.30	264	P	P	11 21 29.7	+1.3
QSPA	South Pole Qui	70.80	180	P	P	11 24 57.0	-0.3
QSPA				IAmb	IAmb	11 24 57.5	
	comp=Z,3.1nm,0.8s						
SONM	Songino Array	87.27	323	P	P	11 26 27.4	+0.4
	comp=Z,0.6nm,0.7s,baz=97,slow=9.3,SNR=4.2						
NVAR	Mina Array Bea	88.77	48	P	P	11 26 35.0	+0.5
	comp=Z,0.7nm,0.8s,baz=240,slow=7.2,SNR=5.1						
SNAA	Sanae	89.15	182	P	P	11 26 34.5	-1.0
TPNV	Topopah Spring	89.62	51	P	P	11 26 40.0	+1.5
TPNV				IAmb	IAmb	11 26 40.3	
	comp=Z,2.2nm,0.8s						
WRH	Wood River Hil	89.66	17	P	P	11 26 37.3	-0.4
WRH				IAmb	IAmb	11 26 50.1	
	comp=Z,3.6nm,1.4s						
ILAR	Eielson Array	90.23	17	P	P	11 26 39.0	-1.3
	comp=Z,0.8nm,1.0s,baz=232,slow=5.3,SNR=5.0						
YKA	Yellowknife Ar	100.66	27	P	Pdif	11 27 29.4	+1.5
	comp=Z,0.3nm,0.6s,baz=259,slow=4.3,SNR=5.0						
ARCES	ARCESS Array B	125.10	345	PKP	PKPdf	11 32 38.0	-1.2
	comp=Z,1.0nm,0.6s,baz=60,slow=2.9,SNR=7.0						

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*INET **05** 11:27:19.7, 12°.49N×87°.70W, h62^{km}, ML3.9*

*UCR **05** 11:27:19.7±1.1, 12°.50N×87°.83W, h54^{km}±22^{km}, ML3.7*

*SNET **05** 11:27:19.7±0.9, 12°.50N×87°.83W, h53^{km}±18^{km}, ML3.7*

ISC 05 11:27:19.0±3.8**, 12°.4N**±0°.2×**87°.78W**±0°.09**, h45**^{km}±59^{km}**, n29,** σ**0^{s}.44**/44**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	0.85	357	*e*P	Pn	11 27 34.5	-0.2
CNCH				*e*S	Sn	11 27 46.4	+0.3
CNCH	Conchagua	0.85	357	*e*P	Pn	11 27 34.5	-0.2
CNCH				*e*S	Sn	11 27 46.4	+0.3
LCND	La Caada	0.89	353	*e*P	Pn	11 27 34.9	-0.2
LCND				*e*S	Sn	11 27 47.4	+0.5
LCND				IAML		11 27 49.5	
	comp=Z,2µm,0.2s						
LCND	La Caada	0.89	353	*e*P	Pn	11 27 34.9	-0.2
LCND				*e*S	Sn	11 27 47.4	+0.5
LCND				IAML		11 27 49.5	
	comp=Z,2µm,0.2s						
JUCU	Jucuar¡n	0.94	331	*e*P	Pn	11 27 35.4	-0.5
JUCU				*e*S	Sn	11 27 48.2	-0.1
JUCU	Jucuar¡n	0.94	331	*e*P	Pn	11 27 35.4	-0.5
JUCU				*e*S	Sn	11 27 48.2	-0.1
BLLM	Bellamira	1.11	336	*e*P	Pn	11 27 38.1	-0.1
BLLM	Bellamira	1.11	336	*e*P	Pn	11 27 38.1	-0.1
VSM	San Miguel	1.11	334	*e*S	Sn	11 27 54.0	+1.4
VSM	San Miguel	1.11	334	*e*S	Sn	11 27 54.0	+1.4
LCY	Lacayo	1.11	333	*e*P	Pn	11 27 38.3	+0.1
LCY	Lacayo	1.11	333	*e*P	Pn	11 27 38.3	+0.1
PACA	Pacayal	1.17	333	*e*P	Pn	11 27 39.0	-0.1
PACA				*e*S	Sn	11 27 54.0	+0.1
PACA	Pacayal	1.17	333	*e*P	Pn	11 27 39.0	-0.1
PACA				*e*S	Sn	11 27 54.0	+0.1
ALJI	Alcalda de J	1.18	319	*e*P	Pn	11 27 38.8	-0.3
ALJI				*e*S	Sn	11 27 53.8	-0.3
ALJI				IAML		11 27 56.9	
	comp=Z,2µm,0.1s						
ALJI	Alcalda de J	1.18	319	*e*P	Pn	11 27 38.8	-0.3
ALJI				*e*S	Sn	11 27 53.8	-0.3
ALJI				IAML		11 27 56.9	
	comp=Z,2µm,0.1s						
TECA	Tecapa	1.28	327	*e*P	Pn	11 27 40.7	+0.1
TECA	Tecapa	1.28	327	*e*P	Pn	11 27 40.7	+0.1
COEB	Comit de Eme	1.29	326	*e*P	Pn	11 27 40.8	0.0
COEB				*e*S	Sn	11 27 56.6	-0.4
COEB	Comit de Eme	1.29	326	*e*P	Pn	11 27 40.8	0.0
COEB				*e*S	Sn	11 27 56.6	-0.4
FAGO	Alcalda de S	1.30	346	*e*P	Pn	11 27 40.4	-0.4
FAGO				*e*S	Sn	11 27 56.5	-0.5
FAGO	Alcalda de S	1.30	346	*e*P	Pn	11 27 40.4	-0.4
FAGO				*e*S	Sn	11 27 56.5	-0.5
TGUH	Tegucigalpa,Un	1.70	17	*e*P	Pn	11 27 46.3	0.0
TGUH	Tegucigalpa,Un	1.70	17	*e*P	Pn	11 27 46.3	0.0
LFRS	El Faro	1.73	314	*e*P	Pn	11 27 46.7	+0.1
LFRS				*e*S	Sn	11 28 07.1	-0.5
LFU	La Fuente	1.85	316	*e*P	Pn	11 27 48.9	+0.6
LFU	La Fuente	1.85	316	*e*P	Pn	11 27 48.9	+0.6
CEVE	Cerro Verde	2.27	308	*e*P	Pn	11 27 54.4	+0.1
CEVE	Cerro Verde	2.27	308	*e*P	Pn	11 27 54.4	+0.1

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*NEIC **05** 11:30:43.5±1.9, 21°.9S±0°.2×173°.84W±0°.09, h10^{km}±1^{km}, mb4.8/19, Error ellipse: s-maj=31.5km s-min=14.6km az=176.0*

*IDC **05** 11:30:44.7±0.7, 21°.07S×174°.74W, h0^{km}, mb4.1/12, mb1 4.4/13, mb1mx4.3/28, mbtmp4.1/13, ML4.4/1, MS4.0/7, Ms1 4.0/7, ms1mx3.6/34, Error ellipse: s-maj=31.2km s-min=17.0km az=133.0*

ISC 05 11:30:43.3±0.5**, 22°.1S**±0°.1×**173°.85W**±0°.08**, h10**^{km}**, n56,** σ**1^{s}.78**/44**, mb4.6**/22**, MS3.8**/8**, 2C, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	4.72	52		Pn	11 31 51.7	-2.8
AFI	Afiamalu	8.34	14	Pn	Pn	11 32 36.2	-8.2
	5.4nm,0.3s,baz=216,slow=3.2,SNR=5.3						
AFI				Sn	Sn	11 33 54.9	-24
	6.5nm,0.3s,baz=180,slow=16,SNR=3.5						
AFI	Afiamalu	8.34	14		Pn	11 32 36.8	-7.6
MSVF	Nonsavu	8.75	298		Pn	11 32 50.8	+0.7
RAR	Rarotonga	13.12	89	Pn	Pn	11 33 50.1	+0.4
	8.0nm,0.3s,baz=219,slow=4.4,SNR=9.0						
RAR				Sn	Sn	11 36 06.8	-8.9
	3.2nm,0.3s,baz=314,slow=23,SNR=3.8						
RAR				LR	LR	11 38 57.8	
	comp=Z,157nm,19.1s,baz=280,slow=35						
RAR	Rarotonga	13.12	89		Pn	11 33 50.5	+0.8
URZ	Urewera	17.92	204	P	P	11 34 58.7	+5.5
	0.2nm,0.3s,baz=30,slow=14,SNR=2.6						
URZ				S	Sn	11 38 05.9	-6.6
	0.2nm,0.3s,baz=17,slow=16,SNR=2.2						
DZM	Mont Dzumac	18.27	266	P	P	11 34 58.2	+0.9
	0.2nm,0.3s,baz=52,slow=12,SNR=3.3						
DZM	Mont Dzumac	18.27	266	*e*LR	LR	11 39 09.8	
	comp=Z,826nm,25.2s						
TBI	Tubuai	22.53	98	*e*LR	LR	11 41 19.7	
	comp=Z,342nm,28.2s						
PPT2	Papeete2	23.25	83	*e*LR	LR	11 41 46.0	
	comp=Z,301nm,22.8s						
PPT	Papeete	23.26	83	LR	LR	11 43 46.6	
	comp=Z,248nm,20.4s,baz=242,slow=33						
RPZ	Rata Peaks	24.96	207	P	P	11 36 14.2	+7.3
	5.9nm,0.9s,baz=20,slow=13,SNR=6.0						
HNR	Honiara	28.12	292	LR	LR	11 44 54.5	
	comp=Z,266nm,21.8s,baz=33,slow=32						
STKA	Stephens Creek	40.66	246	P	P	11 38 24.5	+0.7
	2.2nm,0.8s,baz=124,slow=13,SNR=4.0						
STKA	Stephens Creek	40.66	246	P	P	11 38 24.9	+1.0
AS31	Alice Springs	47.95	258	P	P	11 39 22.1	-0.3
ASAR	Alice Springs	47.95	258	P	P	11 39 20.9	-1.5
	4.8nm,0.9s,baz=90,slow=8.3,SNR=27						
ASAR				PcP	PcP	11 40 50.9	+0.1
	0.5nm,0.6s,baz=103,slow=4.1,SNR=3.1						
WR0	Warramunga Arr	48.04	263	P	P	11 39 22.1	-1.1
WR0				IAmb	IAmb	11 39 30.2	
	comp=Z,7.7nm,1.2s						
WB0	Warramunga Arr	48.22	263	P	P	11 39 22.9	-1.7
WB0				IAmb	IAmb	11 39 31.6	
	comp=Z,8.4nm,1.1s						
WRAB	Tennant Creek	48.22	263	P	P	11 39 22.1	-2.4
WRAB				IAmb	IAmb	11 39 31.6	
	comp=Z,9.5nm,1.1s						
WRA	Warramunga Arr	48.23	262	P	P	11 39 22.1	-2.5
	comp=Z,4.5nm,1.0s,baz=95,slow=8.0,SNR=14						
WRA				PcP	PcP	11 40 51.3	-0.5
	comp=Z,0.7nm,0.9s,baz=95,slow=2.8,SNR=2.8						
KNRA	Kununurra	54.42	266	P	P	11 40 09.8	-1.3
KNRA				IAmb	IAmb	11 40 18.0	
	comp=Z,16nm,1.3s						
FITZ	Fitzroy Crossi	56.66	262	P	P	11 40 26.4	-0.8
VNDA	Vanda	56.74	186	P	P	11 40 36.1	+9.2
	comp=Z,1.7nm,0.8s,baz=360,slow=7.2,SNR=5.0						
JCJ	Chichijima	64.78	317	LR	LR	12 04 11.3	
	comp=Z,73nm,20.4s,baz=108,slow=32						
MJAR	Matsushiro Arr	73.80	321	P	P	11 42 12.6	-5.4
	comp=Z,4.7nm,0.9s,baz=156,slow=5.6,SNR=6.7						
YBH	Yreka Blue Hor	79.16	36	LR	LR	12 15 37.1	
	comp=Z,58nm,18.3s,baz=96,slow=34						
NVAR	Mina Array Bea	79.57	41	P	P	11 42 52.8	+1.9
	comp=Z,0.6nm,0.7s,baz=224,slow=6.3,SNR=6.5						
ELK	Elko	82.86	41	LR	LR	12 14 03.1	
	comp=Z,232nm,18.0s,baz=122,slow=31						
TXAR	Lajitas Array	84.68	56	P	P	11 43 23.1	+5.4
	comp=Z,0.3nm,1.0s,baz=232,slow=5.6,SNR=3.4						
SYO	Syowa Base	86.02	191⇑	*e*P	P	11 43 23.5	-0.1
SYO	Syowa Base	86.02	191⇑	*e*PcP	P	11 43 26.4	+2.8
NEW	Newport	86.43	34	LR	LR	12 15 01.2	
	comp=Z,207nm,21.2s,baz=18,slow=31						
IPM	Ipoh	87.16	276	P	P	11 43 30.0	-0.3
TRF	Thorofare Moun	87.22	10	P	P	11 43 29.6	+0.1
TRF				IAmb	IAmb	11 43 38.1	
	comp=Z,7.8nm,0.8s						
RND	Reindeer	87.42	11	P	P	11 43 30.4	-0.1
RND				IAmb	IAmb	11 43 31.3	
	comp=Z,8.7nm,1.0s						
PDAR	Pinedale Array	87.49	42	P	P	11 43 33.2	+1.7
	comp=Z,0.1nm,0.4s,baz=184,slow=2.6,SNR=2.7						
MCK	McKinley	87.71	11	P	P	11 43 31.2	-0.6
RPSI	Rantau Prapat	88.43	274	P	P	11 43 35.3	-1.0
WRH	Wood River Hil	88.54	11	P	P	11 43 35.0	-0.6
CCB	Clear Creek Bu	88.75	11	P	P	11 43 36.3	-0.3
CCB				IAmb	IAmb	11 43 37.2	
	comp=Z,6.5nm,1.3s						
N23A	Red Feather La	88.80	45	P	P	11 43 36.8	-1.0
IL31		89.03	11	P	P	11 43 37.6	-0.3
IL31				IAmb	IAmb	11 43 50.0	
	comp=Z,4.7nm,1.2s						
ILAR	Eielson Array	89.03	11	P	P	11 43 37.7	-0.2
	comp=Z,1.6nm,1.0s,baz=222,slow=4.5,SNR=6.9						
PRP	Porcupine Dome	89.95	11	P	P	11 43 42.1	-0.4
PRP				IAmb	IAmb	11 43 42.9	
	comp=Z,7.1nm,1.4s						
ENH	Enshi	90.13	303	P	P	11 43 43.5	-0.4
PBKT	Sadao Pong	91.78	287	P	P	11 43 52.9	+1.0
PBKT				IAmb	IAmb	11 43 54.8	

	comp=Z,8.2nm,1.1s						
CMAR	**Chiang Mai Arr**	94.28	288	P	P	11 44 02.5	-0.9
	comp=Z,2.0nm,0.9s,baz=109,slow=2.6,SNR=14						
YKA	**Yellowknife Ar**	96.34	24	P	P	11 44 13.0	+1.2
	comp=Z,0.1nm,0.6s,baz=234,slow=3.8,SNR=3.3						
BVAR	**Borovoye Array**	122.76	320	PKP	PKiKP	11 49 39.1	-0.3
	comp=Z,0.3nm,0.4s,baz=52,slow=2.4,SNR=2.4						
AKASG	**Malin Array Be**	146.19	333	PKP	PKPbc	11 50 23.1	-0.6
	comp=Z,0.3nm,0.3s,baz=35,slow=3.7,SNR=12						
AKBB	**Malin Array Si**	146.19	333		PKPbc	11 50 23.2	-0.5
CLL	**Collm**	150.32	351		PKPdf	11 50 28.9	-0.6
BRTR	**Keskin Array B**	150.74	313	PKPbc	PKiKP	11 50 36.8	-0.1
	comp=Z,1.9nm,0.9s,baz=151,slow=2.8,SNR=7.8						
GERES	**GERESS Array B**	152.60	349	PKPbc	PKiKP	11 50 40.0	-0.3
	comp=Z,0.3nm,0.2s,baz=56,slow=3.4,SNR=5.6						

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*MOS **05** 12:03:27.9±1.3, 38°.52N×43°.06E, h9^{km}, mb4.1/9, Error ellipse: s-maj=7.5km s-min=5.0km az=92.7*
*IDC **05** 12:03:28.7±1.2, 38°.62N×43°.09E, h0^{km}, mb3.7/14, mb1 3.8/18, mb1mx3.7/47, mbtmp3.7/18, ML4.2/2, MS3.2/4, Ms1 3.2/4, ms1mx2.8/49, Error ellipse: s-maj=21.5km s-min=10.2km az=165.0*
*NEIC **05** 12:03:30.0±2.1, 38°.69N±0°.04×43°.21E±0°.03, h7^{km}±5^{km}, Error ellipse: s-maj=6.3km s-min=3.5km az=183.0*
*NSSP **05** 12:03:29.0, 38°.72N×43°.22E, h7^{km}, Ms3.4*
*ISK **05** 12:03:29.3, 38°.69N×43°.20E, h5^{km}, ML4.1/22*
*DDA **05** 12:03:30.0, 38°.68N×43°.19E, h7^{km}±5^{km}, MW4.0*
ISC 05 12:03:30.9±0.8, **38°.68N**±0°.02×**43°.21E**±0°.02, **h11**^{km}±6^{km}, **n153**, σ**1^{s}.55**/197, **mb3.9**/21, **22C-12D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	0.17	122	PG	Pb	12 03 35.4	-0.6
VANB				SG	Sg	12 03 39.7	+2.3
VANB	**Van**	0.17	122	Pg	Pb	12 03 35.4	-0.6
TVAN	**Van**	0.22	135	⇓iP	Pg	12 03 35.3	-0.3
TVAN				iS	Sg	12 03 39.8	+0.9
TVAN				IAML		12 03 40.0	
	comp=Z,18µm,0.7s						
AKDM	**Akdamar-Van**	0.40	207	PG	Pg	12 03 37.8	-1.0
AKDM				SG	Sg	12 03 44.9	+0.8
AKDM	**Akdamar-Van**	0.40	207	Pg	Pg	12 03 38.0	-0.8
ADCV	**BITLIS_Adilcev**	0.40	288	⇑iP	Pg	12 03 38.2	-0.6
ADCV				iS	Sg	12 03 45.0	+0.7
ADCV				IAML		12 03 45.0	
	comp=Z,6µm,0.4s						
VMUR	**Van-Muradiye**	0.42	43	⇓iP	Pg	12 03 38.5	-0.7
VMUR				iS	Sg	12 03 45.4	+0.6
VMUR				IAML		12 03 48.0	
	comp=Z,4µm,0.5s						
MLAZ	**Malazgirt-MUS**	0.69	312	PG	Pg	12 03 43.6	-0.7
MLAZ	**Malazgirt-MUS**	0.69	312	Pg	Pg	12 03 43.1	-1.2
CLDR	**Caldiran**	0.72	50	PG	Pg	12 03 43.8	-1.1
CLDR	**Caldiran**	0.72	50	⇓iP	Pg	12 03 43.5	-1.4
CLDR				iS	Sn	12 03 58.9	+0.6
CLDR	**Caldiran**	0.72	50	Pg	Pg	12 03 44.3	-0.6
TUTA	**Tutak**	0.78	337	⇓iP	Pg	12 03 44.3	-1.8
TUTA				iS	Sg	12 03 54.4	-2.0
BASK	**Baskale_VAN**	0.89	135	⇓iP	Pg	12 03 46.7	-1.3
BASK				iS	Sb	12 03 60.0	-0.3
BASK				IAML		12 04 02.0	
	comp=Z,2µm,0.5s						
BLIS	**Bitlis-Merkez**	0.90	253	⇑iP	Pg	12 03 46.8	-1.4
BLIS				iS	Sg	12 03 58.8	-1.3
BLIS				IAML		12 04 00.0	
	comp=Z,5µm,0.9s						
AGRB	**Hanur-Agry**	0.91	349	PG	Pg	12 03 47.2	-1.3
AGRB	**Hanur-Agry**	0.91	349	Pg	Pg	12 03 46.6	-1.8
DYDN	**Diyadin**	0.94	23	⇓iP	Pg	12 03 46.9	-2.2
DYDN				iS	Sb	12 04 03.0	+1.1
DYDN				IAML		12 04 23.0	
	comp=Z,648nm,0.9s						
EKAR	**Karacoban**	1.06	303	iP	Pg	12 03 51.0	-0.4
EKAR				iS	Sg	12 04 06.6	+1.3
EKAR				IAML		12 04 19.0	
	comp=Z,4µm,1.0s						
SRTM	**Siirt_Merkez**	1.23	236	⇑iP	Pn	12 03 53.3	-0.8
SRTM				iS	Sn	12 04 11.4	+0.8
SRTM				IAML		12 04 18.0	
	comp=Z,2µm,0.5s						
EATA	**Eleskirt**	1.30	335	⇓iP	Pn	12 03 53.9	-1.4
EATA				iS	Sb	12 04 11.1	-1.4
EATA				IAML		12 04 14.0	
	comp=Z,984nm,0.9s						
SIRT	**Sirnak**	1.33	208	PN	Pn	12 03 56.0	+0.6
SIRT				SN	Sg	12 04 16.1	+2.5
SIRT	**Sirnak**	1.33	208	Pn	Pn	12 03 55.8	+0.3
MUSM	**Mu-Merkez**	1.33	272	⇑iP	Pn	12 03 53.2	-2.3
MUSM				iS	Sb	12 04 12.1	-0.9
MUSM				IAML		12 04 13.0	
	comp=Z,648nm,0.3s						
SIRN	**Sırnak**	1.34	208	iP	Pn	12 03 54.7	-0.9
SIRN				iS	Sg	12 04 15.6	+1.5
SIRN				IAML		12 04 25.0	
	comp=Z,2µm,0.6s						
IGDI	**IGDIR**	1.36	29	iP	Pn	12 03 54.0	-1.9
IGDI				iS	Sg	12 04 16.2	+1.4
VRTB	**Varto-Mus**	1.45	290	PN	Pn	12 03 57.2	0.0
VRTB	**Varto-Mus**	1.45	290	⇑iP	Pn	12 03 56.4	-0.8
VRTB				iS	Sg	12 04 18.8	+1.3
VRTB				IAML		12 04 31.0	
	comp=Z,2µm,0.7s						
VRTB	**Varto-Mus**	1.45	290	Pn	Pn	12 03 57.4	+0.2
CUKT	**Cukurca**	1.47	167	PN	Pn	12 03 57.7	+0.3
CUKT	**Cukurca**	1.47	167	⇓iP	Pn	12 03 57.5	+0.1
CUKT				iS	Sg	12 04 22.6	+4.5
CUKT				IAML		12 04 41.0	
	comp=Z,814nm,0.6s						
VNNZ	**Vanand**	1.50	18	eP	Pn	12 03 57.9	+0.2
VNNZ				eS	Sg	12 04 19.2	+0.2
TASB	**TASBURUN-IGDIR**	1.52	31	PN	Pb	12 03 59.3	+0.1
METS	**Metsamor**	1.61	24	eP	Pb	12 04 01.3	+0.6
METS				eS	Sg	12 04 24.3	+1.5
BNGL	**BINGOL**	1.63	280	⇑iP	Pn	12 03 59.5	-0.3
BNGL				iS	Sb	12 04 23.4	+1.6
SVAN	**Silvan-Diyarba**	1.67	252	PN	Pn	12 04 00.8	+0.8
SVAN				SN	Sb	12 04 24.2	+1.6
SVAN	**Silvan-Diyarba**	1.67	252	⇑iP	Pn	12 04 00.3	+0.3
SVAN				iS	Sb	12 04 24.3	+1.6
SVAN				IAML		12 04 26.0	
	comp=Z,1µm,0.6s						
KOPR	**Koprukoy-ERZUR**	1.68	322	PN	Pn	12 04 00.9	+0.6
HOMI	**Horasan**	1.70	324	eP	Pn	12 04 01.9	+1.2
HOMI				iS	Sb	12 04 25.2	+1.6
HOMI				IAML		12 04 30.0	
	comp=Z,953nm,1.4s						
BTMN	**Batman**	1.72	243	⇑iP	Pn	12 04 01.4	+0.6
BTMN				iS	Sg	12 04 26.5	+0.3
BTMN				IAML		12 04 28.0	
	comp=Z,3µm,0.5s						
NRKZ	**NAREK**	1.73	40	eP	Pn	12 04 01.9	+0.9
NRKZ				eS	Sb	12 04 25.4	+0.8
DIGO	**Kars**	1.73	4	iP	Pb	12 04 02.8	-0.1
DIGO				iS	Sg	12 04 29.9	+3.2
ARUZ	**Aruch**	1.74	23	eP	Pn	12 04 01.9	+0.8
ARUZ				eS	Sb	12 04 25.7	+0.9
KARO	**Karliova-Bingo**	1.80	291	PN	Pn	12 04 02.5	+0.5
GNI	**Garni**	1.89	39	Pn	Pb	12 04 05.7	+0.3
	comp=Z,6.4nm,0.3s,baz=217,slow=2.8,SNR=17						
GNI				Lg	Lg	12 04 34.1	
	comp=Z,18nm,0.3s,baz=28,slow=22,SNR=4.5						
GNI	**Garni**	1.89	39	iP	Pb	12 04 05.5	+0.1
GNI				S	Sg	12 04 31.9	+0.3
GNI	**Garni**	1.89	39	PN	Pn	12 04 04.1	+0.9
GNI	**Garni**	1.89	39	ceP	Pb	12 04 04.9	-0.5
GNI				pmax	pmax		
	comp=Z,503nm,1.0s						
GNI	**Garni**	1.89	39		Pb	12 04 04.5	-0.9
ECAT	**Cat-ERZURUM**	1.97	299	⇑iP	Pn	12 04 04.6	+0.2
ECAT				iS	Sg	12 04 34.6	+0.4
SENK	**Senkaya-Erzuru**	1.99	341	PN	Pn	12 04 05.7	+1.0
BNGB	**Bingl**	2.00	280	PN	Pn	12 04 05.3	+0.6
KAPZ	**Kaputan**	2.00	35	eP	Pb	12 04 07.4	-0.1
KAPZ				eS	Sg	12 04 35.0	-0.3
AKDA	**Akdag**	2.02	315	⇑iP	Pn	12 04 05.2	+0.2
AKDA				iS	Sg	12 04 36.7	+1.0
EAK	**Akyaka**	2.02	9	⇓iP	Pb	12 04 08.3	+0.5
EAK				iS	Sg	12 04 38.0	+2.0
EAK				IAML		12 04 57.0	
	comp=Z,598nm,1.6s						
EMRE	**Erzurum,Aziziy**	2.19	309	iP	Pn	12 04 09.1	+1.7
EMRE				iS	Sg	12 04 41.7	+0.3
EMRE				IAML		12 04 52.0	
	comp=Z,492nm,0.6s						
YEDI	**Yedisu-Bingol**	2.21	291	PN	Pn	12 04 08.7	+1.1
HANI	**Diyarbakir_Han**	2.22	264	⇑iP	Pn	12 04 07.8	+0.1
HANI				iS	Sb	12 04 40.5	+2.0
HANI				IAML		12 04 50.0	
	comp=Z,554nm,0.6s						
MARD	**Mardin**	2.36	235	⇑iP	Pn	12 04 09.9	+0.3
MARD				iS	Sn	12 04 41.1	+2.6
MARD				IAML		12 04 53.0	
	comp=Z,2µm,0.5s						
KRIK	**Erzurum-spir**	2.42	314	⇓iP	Pg	12 04 17.2	-0.1
KRIK				iS	Sg	12 04 51.6	+2.9
DDEM	**Demirkent**	2.48	333	⇑iP	Pb	12 04 15.8	+0.3
DDEM				iS	Sb	12 04 49.0	+3.0
DDEM				IAML		12 04 53.0	
	comp=Z,136nm,0.7s						
STE	**Stepanavan**	2.48	21	eP	Pn	12 04 10.0	-1.3
STE				eS	Sn	12 04 43.0	+1.3
KOPT	**Kop Dagi**	2.49	303	⇑iP	Pn	12 04 12.2	+0.6
KOPT				iS	Sg	12 04 53.5	+2.5
KOPT				IAML		12 04 59.0	
	comp=Z,246nm,1.3s						
MAZI	**Mazidag**	2.50	242	PN	Pn	12 04 12.3	+0.7
DYBB	**Diyarbakir**	2.52	254	PN	Pn	12 04 13.4	+1.6
DIYA	**Diyarbakir**	2.54	254	iP	Pn	12 04 12.8	+0.6
DIYA				iS	Sb	12 04 50.3	+2.4
DIYA				IAML		12 05 04.0	
	comp=Z,389nm,0.6s						
DAGI	**Agillar**	2.59	338	⇑iP	Pb	12 04 17.3	-0.2
DAGI				iS	Sg	12 04 52.9	-1.3
DBAD	**Bademkaya**	2.61	334	⇓iP	Pb	12 04 17.7	0.0
DBAD				iS	Sb	12 04 52.2	+2.4
AKH	**Akhalkalaki**	2.73	4	P	Pn	12 04 12.6	-2.2
AKH	**Akhalkalaki**	2.73	4		Pn	12 04 12.6	-2.2
BAYB	**BAYBURT**	2.77	305	iP	Pb	12 04 22.7	+2.1
BAYB				iS	Sg	12 05 00.1	0.0
EPOS	**Posof**	2.84	353	iP	Pb	12 04 21.9	+0.2
EPOS				iS	Sg	12 05 00.9	-1.3
TNCL	**Tunceli-Merkez**	2.89	280	iP	Pn	12 04 20.2	+3.2
TNCL				iS	Sg	12 05 07.0	+3.1
TNCL				IAML		12 05 20.0	
	comp=Z,112nm,0.7s						
DBOC	**Borcka**	2.91	336	⇑iP	Pb	12 04 23.1	+0.2
DBOC				iS	Sb	12 05 00.1	+1.7
BAYT	**Aydıntepe-Bayb**	2.92	307	PN	Pn	12 04 19.4	+1.9
BCA	**Borcka**	3.02	337	PN	Pn	12 04 20.4	+1.8
SVRC	**Sivrice-ELAZID**	3.08	266	PN	Pn	12 04 20.5	+0.9
GANJ	**Ganja**	3.10	50	P	Pn	12 04 20.9	+1.1
TBLG	**Delisi**	3.26	21	P	Pn	12 04 22.3	+0.3
TBLG	**Delisi**	3.26	21		Pn	12 04 22.3	+0.3
KELT	**Kelkit**	3.40	297	iP	Pb	12 04 30.4	-0.7
KELT				iS	Sg	12 05 19.4	-0.6
KELT				IAML		12 05 30.0	
	comp=Z,64nm,1.7s						
MNGR	**Mingechevir, A**	3.65	54	P	Pn	12 04 28.2	+1.0
URFA	**Urfa**	3.68	252	PN	Pn	12 04 29.5	+1.8
SEKA	**Sheki**	3.97	49	P	Pn	12 04 33.3	+1.6
ZEI	**Tsey**	4.13	7	eP	Pn	12 04 38.1	+4.0
ZEI				pmax	pmax		
	comp=Z,36nm,1.1s						
LKRN	**Lenkeran, Azer**	4.36	88	P	Pn	12 04 39.0	+2.0
NEY	**Neytrino**	4.58	356	⇑eP	Pn	12 04 42.2	+2.0
GROC	**Groznyy**	4.92	23	P	Pb	12 05 00.2	+3.1
GROC				e		12 05 44.1	
GROC				pmax	pmax		
	comp=Z,62nm,0.5s						
GROC				smax	smax		
	comp=E,27nm,0.5s						
GROC				smax	smax		
	comp=E,26nm,0.6s						
GROC				smax	smax		
	comp=E,27nm,0.4s						
GROC				MLR	MLR		
	comp=Z,164nm,9.0s						
GAZ	**Gaziantep**	4.98	254		Pb	12 04 56.6	-1.4
KBZ	**Khabaz**	5.05	357	Pn	Pn	12 04 48.8	+2.4
	baz=189,slow=15,SNR=2.8						
KBZ				Pg	Pg	12 05 06.4	-1.1
	comp=Z,0.2nm,0.3s,baz=197,slow=17,SNR=7.1						
KIV	**Kislovodsk**	5.28	356	eP	Pn	12 04 52.7	+2.9
KIV				pmax	pmax		
	comp=Z,16nm,1.1s						
KIV				MLR	MLR		
	comp=Z,55nm,7.0s						
KIV	**Kislovodsk**	5.28	356	Pn	Pn	12 04 50.5	+0.7
BR131	**Keskin Array S**	7.50	281	P	Pn	12 05 23.8	+3.4
BR131	**Keskin Array S**	7.50	281		Pn	12 05 23.8	+3.4
BRTR	**Keskin Array B**	7.50	281	Pn	Pn	12 05 21.8	+1.4
	comp=Z,0.1nm,0.3s,baz=107,slow=14,SNR=7.4						
ASF	**Jabal al Asfar**	8.29	220	Pn	Pn	12 05 36.8	+5.7
	comp=Z,0.3nm,0.3s,baz=34,slow=18,SNR=2.6						
MMAI	**Mount Meron Ar**	8.49	231	Lg	Lg	12 08 01.9	
	comp=Z,6.7nm,0.3s,baz=75,slow=30,SNR=3.0						
MMAI				LR	LR	12 08 36.0	
	comp=Z,69nm,18.8s,baz=180,slow=37						
EIL	**Elat**	11.29	220	Lg	Lg	12 09 31.9	
	comp=Z,0.3nm,0.3s,baz=315,slow=20,SNR=1.9						
EIL				LR	LR	12 10 56.3	
	comp=Z,108nm,19.9s,baz=336,slow=40						
VSR	**Storozhevoye**	12.85	349	eP	Pn	12 06 34.4	+1.0
VSR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
LPSR	**Galich'ya Gora**	14.23	349	eP	Pn	12 06 51.1	-1.1
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MLR	**Muntele Rosu**	14.50	304	Pn	Pn	12 06 56.1	0.0
	comp=Z,0.2nm,0.3s,baz=108,slow=12,SNR=2.2						
MLR	**Muntele Rosu**	14.50	304		Pn	12 06 53.6	-2.4
RAYN	**Ar Rayn**	15.24	172	P	Pn	12 07 01.9	-4.1
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
RAYN	**Ar Rayn**	15.24	172		Pn	12 07 01.9	-4.1
RAYN				IAmb	IAmb	12 07 17.7	
	comp=Z,4.0nm,0.8s						
AKASG	**Malin Array Be**	15.56	325	Pn	Pn	12 07 09.3	-0.8
	comp=Z,0.6nm,0.3s,baz=126,slow=12,SNR=5.2						
AKBB	**Malin Array Si**	15.56	325	P	Pn	12 07 09.6	-0.5
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AKBB	**Malin Array Si**	15.56	325		Pn	12 07 09.6	-0.5
VTS	**Vitosha**	15.66	291	P	Pn	12 07 09.2	-2.3
VTS				pmax	pmax		
	comp=Z,10.0nm,1.5s						
VTS	**Vitosha**	15.66	291	Pn	Pn	12 07 09.2	-2.3
VTS				IAmb	IAmb	12 07 18.3	
	comp=Z,10nm,1.5s						
AKTO	**Aktyubinsk**	15.76	37	Pn	Pn	12 07 14.7	+2.1
	comp=Z,0.1nm,0.3s,baz=217,slow=6.9,SNR=4.7						
BUR08	**Bucovina Ar. S**	15.87	310		Pn	12 07 12.8	-1.5
FNA	**Florina**	16.92	284	P	Pn	12 07 25.4	-2.2
FNA				pmax	pmax		
	comp=Z,11nm,1.1s						
FNA	**Florina**	16.92	284	Pn	Pn	12 07 25.4	-2.2
OBN	**Obninsk**	17.04	347	eP	Pn	12 07 29.8	+0.9
OBN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,61nm,16.0s						
VYHS	**Vyhne**	20.12	307	eP	P	12 08 06.2	+1.6
VYHS	**Vyhne**	20.12	307	eP	P	12 08 06.2	+1.6
OJC	**Ojcow**	20.21	312	P	P	12 08 05.0	-0.6
OJC				pmax	pmax		
	comp=Z,17nm,1.4s						
OJC	**Ojcow**	20.21	312	P	P	12 08 05.0	-0.6
ARU	**Arti**	20.47	25	P	P	12 08 08.1	-0.2
	comp=Z,0.5nm,0.3s,baz=230,slow=8.1,SNR=5.7						
ARU	**Arti**	20.47	25	d iP	P	12 08 09.7	+1.3
ARU				S	Sn	12 12 00.0	-1.0
ARU				SS	SnSn	12 12 17.7	+2.1
ARU				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ARU	**Arti**	20.47	25	P	P	12 08 08.2	-0.2
ARU				IAmb	IAmb	12 08 13.5	
	comp=Z,6.2nm,1.0s						
SUW	**Suwalki**	20.54	325	P	P	12 08 10.7	+1.7
SUW				pmax	pmax		
	comp=Z,26nm,0.9s						
SUW	**Suwalki**	20.54	325	P	P	12 08 10.7	+1.7
KK31	**Karatay Array**	21.07	69	P	P	12 08 14.8	-0.1
KK31				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KK31	**Karatay Array**	21.07	69	P	P	12 08 14.8	-0.1
KK31				IAmb	IAmb	12 08 33.5	
	comp=Z,5.5nm,0.9s						
KKAR	**Karatay Array**	21.07	69	P	P	12 08 14.7	-0.3
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KKAR	**Karatay Array**	21.07	69	P	P	12 08 14.7	-0.3
KKAR				IAmb	IAmb	12 08 33.5	
	comp=Z,5.5nm,0.9s						
KBL	**Kabul**	21.12	93	P	P	12 08 14.9	-0.9
KBL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KBL	**Kabul**	21.12	93	P	P	12 08 14.9	-0.9
KLMR	**Klimovskoe**	22.32	355	eP	P	12 08 24.5	-3.6
KLMR				pmax	pmax		
	comp=Z,27nm,2.0s						
KLMR	**Klimovskoe**	22.32	355	AMP		12 08 31.1	
	comp=Z,27nm,2.0s						
KLMR	**Klimovskoe**	22.32	355	eP	Pg	12 08 24.5	0.0
VSU	**Vasula**	22.48	337	⇑iP	P	12 08 31.4	+1.5
VSU				pmax	pmax		
	comp=Z,32nm,1.3s						
GERES	**GERESS Array B**	23.47	305	P	P	12 08 39.0	-1.4
	comp=Z,0.2nm,0.4s,baz=301,slow=29,SNR=3.1						
GERES				LR	LR	12 19 17.5	
	comp=Z,73nm,18.2s,baz=164,slow=40						
BRVK	**Borovoye**	23.52	43	⇑eP	P	12 08 42.6	+1.9
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BVAR	**Borovoye Array**	23.56	44	P	P	12 08 41.4	+0.2
	comp=Z,0.3nm,0.5s,baz=256,slow=5.8,SNR=4.0						
FINES	**FINESS Array B**	25.14	341	P	P	12 08 55.1	-0.5
	comp=Z,3.5nm,1.0s,baz=142,slow=9.6,SNR=5.2						
DAVOX	**Davos/Dischmat**	25.64	299	P	P	12 09 00.7	+0.2
	comp=Z,1.3nm,0.4s,baz=328,slow=21,SNR=3.0						
KURBB	**Kurchatov Arra**	27.55	53	P	P	12 09 18.6	+1.1
	comp=Z,0.8nm,0.7s,baz=264,slow=8.7,SNR=3.9						
KURK	**Kurchatov**	27.63	53	⇑eP	P	12 09 21.1	+2.9
KURK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KURK	**Kurchatov**	27.63	53	P	P	12 09 18.6	+0.4
KURK	**Kurchatov**	27.63	53	IAmb	IAmb	12 09 23.8	
	comp=Z,2.2nm,1.0s						
HFS	**Hagfors**	28.39	329	P	P	12 09 23.4	-1.5
	comp=Z,2.8nm,0.7s,baz=163,slow=11,SNR=4.6						
HFS				LR	LR	12 21 55.2	
	comp=Z,57nm,18.4s,baz=241,slow=39						
MK31	**Makanchi Array**	29.58	61	⇑eP	P	12 09 38.7	+3.0
MKAR	**Makanchi Array**	29.58	61	P	P	12 09 36.1	+0.5
	comp=Z,0.7nm,0.8s,baz=266,slow=5.4,SNR=2.8						
NOA	**NORSAR Array B**	29.91	329	P	P	12 09 37.5	-1.0
	comp=Z,0.5nm,0.7s,baz=124,slow=8.0,SNR=2.6						
ARCES	**ARCESS Array B**	32.34	348	P	P	12 09 59.2	-0.5
	comp=Z,1.8nm,0.8s,baz=148,slow=9.9,SNR=5.4						
EKA	**Eskdalemuir Ar**	34.98	314	P	P	12 10 22.1	-0.7
	comp=Z,3.6nm,0.6s,baz=104,slow=8.9,SNR=9.8						
ESDC	**Sonseca Array**	36.25	287	P	P	12 10 32.5	-1.5
	comp=Z,0.3nm,0.4s,baz=51,slow=6.9,SNR=3.6						
CMAR	**Chiang Mai Arr**	52.11	96	P	P	12 12 41.9	+0.6
	comp=Z,0.6nm,0.3s,baz=304,slow=7.9,SNR=5.8						
WHN	**Wuhan**	57.79	75	P	P	12 13 14.7	-7.5
BILL	**Bilibino**	65.41	20	eP	P	12 14 14.9	+1.9
BILL				e		12 14 48.3	
BILL				e		12 16 37.4	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.1s						
YKA	**Yellowknife Ar**	77.60	350	P	P	12 15 26.1	-0.5
	comp=Z,0.4nm,1.0s,baz=19,slow=6.6,SNR=5.8						

HEL 05 12:05:48.8±0.1, **61°.31N**×**22°.75E, h0**^{km}**, ML1.1, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAF	**Rauma**	0.56	239	eP	Pg	12 05 58.9	-0.6
RAF				eS	Sg	12 06 06.0	-0.7
KEF	**Keuruu**	1.32	49	eP	Pg	12 06 12.5	-1.7
KEF				eS	Sg	12 06 29.7	-1.6
FIA0	**FINESS Array S**	1.61	84	eP	Pn	12 06 17.6	-0.8
FIA0				eS	Sn	12 06 38.0	-1.8
FIA1	**FINESS Array S**	1.61	84	eP	Pn	12 06 17.5	-0.9
FIA1				eS	Sn	12 06 38.0	-1.8
PVF	**Pernaja**	1.70	116	eP	Pn	12 06 18.8	-0.9
PVF				eS	Sn	12 06 41.1	-1.0
VAF	**Ylistaro**	1.74	359	eS	Sn	12 06 41.4	-1.6
KAF	**Kangasniemi**	1.87	63	eP	Pn	12 06 21.4	-0.6
KAF				eS	Sn	12 06 45.8	-0.6
KAF				MSG		12 06 50.4	
	comp=Z,0.9nm,0.1s						
SUF	**Sumiainen**	2.14	47	eP	Pn	12 06 25.8	+0.1
SUF				eS	Sn	12 06 51.7	-1.1
SUF				MSG		12 06 56.4	
	comp=Z,0.7nm,0.1s						

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*DDA **05** 12:11:50.6, 37°.88N×26°.77E, h4^{km}±1^{km}, ML2.3*
*ISK **05** 12:11:50.8, 37°.89N×26°.78E, h7^{km}, ML2.8/8*
*ATH **05** 12:11:51.0, 37°.83N×26°.73E, h18^{km}±8^{km}, ML2.8/2, Error ellipse: s-maj=9.5km s-min=1.5km az=86.0*
ISC 05 12:11:51.1±0.9, **37°.87N**±0°.03×**26°.77E**±0°.03, **h14**^{km}±8^{km}, **n26**, σ**0^{s}.54**/42, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	0.17	163	P	Pg	12 11 55.3	+0.1
SMG				S	Sg	12 11 58.2	+0.2
SMG				AML	AML	12 11 58.6	
	comp=E,15518µm,0.2s						
SMG				AML	AML	12 11 58.7	
	comp=N,23172µm,0.2s						
GCAM	**G?zelcaml?**	0.41	115	PG	Pg	12 11 59.1	-0.1
GCAM				SG	Sb	12 12 05.6	-0.5
GCAM	**G?zelcaml?**	0.41	115	iP	Pg	12 11 59.0	-0.1
GCAM				iS	Sg	12 12 05.0	+0.3
GCAM				IAML		12 12 05.0	
	comp=N,346nm,0.3s						
GCAM				IAML		12 12 06.0	
	comp=E,301nm,0.5s						
URLA	**Izmir**	0.51	344	PG	Pg	12 12 00.5	-0.6
URLA				SG	Sb	12 12 08.3	-0.8
URLA	**Izmir**	0.51	344	iP	Pg	12 12 00.5	-0.6
URLA				iS	Sg	12 12 07.8	0.0
URLA				IAML		12 12 09.0	
	comp=E,177nm,0.5s						
BLCB	**Balcova**	0.55	23	PG	Pg	12 12 01.4	-0.6
CESE	**eme**	0.59	321	PG	Pb	12 12 03.1	-0.1
CESE				SG	Sb	12 12 11.2	-0.3
KRBN	**Karaburun**	0.74	347	PG	Pg	12 12 05.3	-0.2
CHOS	**Chios island**	0.76	312	P	Pg	12 12 05.4	-0.6
CHOS				S	Sb	12 12 17.4	+0.8
CHOS				AML	AML	12 12 17.4	
	comp=E,910µm,0.3s						
CHOS				AML	AML	12 12 20.3	
	comp=N,687µm,0.4s						
CHOS	**Chios island**	0.76	312	PG	Pb	12 12 06.5	+0.2
CHOS				SG	Sb	12 12 16.9	+0.3
FOCM	**Foa**	0.84	358	PG	Pb	12 12 07.5	0.0
AYDB	**Zeytinkoy-Aydi**	0.89	85	PG	Pg	12 12 08.0	-0.3
AYDB				SG	Sb	12 12 20.8	+0.6
ZEDA	**zmir-Bergama**	1.12	12	iP	Pg	12 12 11.9	-0.8
ZEDA				iS	Sb	12 12 26.9	+0.2
ZEDA				IAML		12 12 30.0	
	comp=E,63nm,0.3s						
ZEDA				IAML		12 12 31.0	
	comp=N,84nm,0.4s						
DKL	**Dikili**	1.20	5	PN	Pn	12 12 13.9	+0.4
AMGA	**Amorgos Island**	1.25	214	P	Pn	12 12 13.7	-0.6
APE	**Apeiranthos**	1.27	231	P	Pn	12 12 14.1	-0.5
APE	**Apeiranthos**	1.27	231	PN	Pn	12 12 15.2	+0.3
AKHS	**Akhisar**	1.29	39	iP	Pn	12 12 15.2	+0.3
AKHS				iS	Sn	12 12 32.9	+0.9
AKHS				IAML		12 12 34.0	
	comp=E,48nm,1.1s						
PRK	**Paraskevi**	1.43	344	P	Pg	12 12 19.2	+0.7
AYVA	**Ayvalik**	1.43	357	iP	Pg	12 12 18.5	-0.1
AYVA				iS	Sg	12 12 37.9	+0.6
AYVA				IAML		12 12 40.0	
	comp=N,49nm,0.4s						
AYVA				IAML		12 12 41.0	
	comp=E,35nm,0.5s						
SIGR	**SIGRI**	1.52	332	PN	Pb	12 12 19.2	+0.1
MANT	**Manisa**	1.54	66	iP	Pg	12 12 20.3	-0.3
MANT				iS	Sn	12 12 38.0	-0.2

KULA	Kula-Manisa	1.62	66	PN	Pb	12 12 20.8	-0.1
STEP	BALIKESIR_Sava	1.67	26	i P	Pb	12 12 21.9	+0.1
STEP				i S	Sg	12 12 45.4	+0.4
STEP				IAML		12 12 49.0	
	comp=N,40nm,0.5s						
STEP				IAML		12 12 50.0	
	comp=E,37nm,0.4s						
BAYC	CANAKKALE_Bayr	1.87	355	i P	Pn	12 12 21.9	-0.9
BAYC				i S	Sb	12 12 49.8	+1.3
DURS	Dursunbey	2.18	37	i P	Pb	12 12 30.5	+0.1
DURS				i S	Sg	12 13 00.1	-1.1

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*BGR **05** 12:48:52.7±6.3, 37°.44N×23°.27E, h10^{km}, Error ellipse: s-maj=211.3km s-min=46.7km az=144.0*

*BEO **05** 12:49:18.9±1.0, 38°.04N×20°.15E, h0^{km}, ML5.1/13*

*IDC **05** 12:49:18.6±0.4, 38°.12N×20°.36E, h0^{km}, mb4.5/43, mb1 4.6/57, mb1mx4.5/69, mbtmp4.5/57, ML4.4/13, MS4.2/35, Ms1 4.2/35, ms1mx4.0/64, Error ellipse: s-maj=9.2km s-min=9.0km az=8.0*

*PDG **05** 12:49:19.8±0.7, 38°.13N×20°.24E, h11^{km}±1^{km}, MD5.1/10, ML4.9/14, Error ellipse: s-maj=1.1km s-min=1.2km az=0.0*

*BJI **05** 12:49:20.5±0.0, 38°.85N×20°.50E, h5^{km}, mB5.1/31, mb4.6/45, Ms4.8/19, Ms7 4.6/15*

*NEIC **05** 12:49:20.7±2.3, 38°.13N±0°.04×20°.31E±0°.02, h10^{km}±1^{km}, Error ellipse: s-maj=7.0km s-min=3.2km az=2.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.37; $M_{\theta\theta}$3.09; $M_{\phi\phi}$-2.73; $M_{r\theta}$-0.00; $M_{\theta\phi}$-0.83; $M_{\phi r}$-0.77; Fault plane solution: $M_0$3.14000×10^{16} NP1: ϕ_s54.01000°, δ77.66000°, λ-169.87000°. NP2: ϕ_s321.82000°, δ80.10000°, λ-12.53000°. Principal axes: T 3.2119, Plg2.0000°, Azm8.0000°; N -0.1554, Plg74.0000°, Azm104.0000°; P -3.0565, Plg16.0000°, Azm278.0000°;*

*ATH **05** 12:49:20.0, 38°.08N×20°.31E, h20^{km}, ML4.7/16 Error ellipse: s-maj=2.3km s-min=0.9km az=53.0*

*MOS **05** 12:49:20.4±1.4, 38°.21N×20°.27E, h20^{km}, mb4.9/40, MS4.1/21, Error ellipse: s-maj=5.0km s-min=2.9km az=80.8*

*HLW **05** 12:49:21.9, 37°.83N×20°.71E, h11^{km}±15^{km}, Md4.5, Ml5.3*

*MED_RC **05** 12:49:21.0±0.6, 38°.12N×20°.23E, h10^{km}, MW4.9/25, Moment Tensor Solution. Mantle waves: s25, c43; Duration: 1^{s}2 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.45±.10; $M_{\theta\theta}$2.41±.08; $M_{\phi\phi}$-1.97±.08; $M_{r\theta}$0.49±.31; $M_{\theta\phi}$0.15±.09; $M_{\phi r}$-1.04±.28; Best double couple: $M_0$2.51000×10^{16} NP1: ϕ_s46.00000°, δ64.00000°, λ-167.00000°. NP2: ϕ_s310.00000°, δ78.00000°, λ-27.00000°. Principal axes: T 2.4900, Plg10.0000°, Azm0.0000°; N 0.0200, Plg61.0000°, Azm108.0000°; P -2.5200, Plg27.0000°, Azm265.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*THE **05** 12:49:21.2, 38°.11N×20°.35E, h12^{km}, ML4.8/9 Error ellipse: s-maj=1.0km s-min=0.4km az=58.0*

*GCMT **05** 12:49:22.2±0.4, 37°.97N±0°.02×20°.27E±0°.02, h18^{km}±2^{km}, MW4.9/94, Moment Tensor Solution. s4, c4; s94, c129; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.95±.21; $M_{\theta\theta}$3.26±.17; $M_{\phi\phi}$-2.31±.12; $M_{r\theta}$0.29±.31; $M_{\theta\phi}$-0.50±.10; $M_{\phi r}$0.65±.35; Best double couple: $M_0$2.97100×10^{16} NP1: ϕ_s138.00000°, δ72.00000°, λ-14.00000°. NP2: ϕ_s232.00000°, δ77.00000°, λ-162.00000°. Principal axes: T 3.3180, Plg3.0000°, Azm5.0000°; N -0.6970, Plg68.0000°, Azm267.0000°; P -2.6240, Plg22.0000°, Azm96.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*GII **05** 12:49:28.1±0.0, 36°.38N×20°.43E, h10^{km}, mb4.7/2, MD4.6/2, Mm4.7/2*

*SKO **05** 12:49:35.5, 38°.99N×20°.72E, h24^{km}*

ISC 05 12:49:21.0±0.6**, 38°.12N**±0°.02×**20°.35E**±0°.02**, h14**^{km}±3^{km}**, n644, σ1^{s}69**/716**, mb4.8**/127**, MS4.3**/38**, 52C-26D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF3	Kipouria, Keph	0.08	1	P	Pg	12 49 24.4	+0.6
KEF3				S	Sg	12 49 27.0	+1.2
LXRA	Lixouri, Kepha	0.11	43	P	Pb	12 49 24.8	0.0
LXRA				S	Sb	12 49 27.9	+0.5
ARGA	Argostoli. Kep	0.12	62	P	Pg	12 49 24.7	+0.4
ARGA				S	Sb	12 49 27.6	-0.2
KEF2	Argostoli. Kep	0.12	69	P	Pg	12 49 24.7	+0.4
KEF2				S	Sb	12 49 27.7	-0.1
KEF4	Livadi, Kephal	0.15	24	P	Pb	12 49 25.4	-0.2
KEF4				S	Sb	12 49 29.1	+0.4
KEF1	Kardakata, Kep	0.18	32	P	Pb	12 49 25.8	-0.3
KEF1				S	Sb	12 49 29.8	+0.1
VLS	Valsamata	0.20	74	P	Pg	12 49 25.6	+0.1
VLS				S	Sg	12 49 28.9	+0.3
	433µm,0.3s						
VLS	Valsamata	0.20	74	P	Pg	12 49 25.6	+0.1
VLS	Valsamata	0.20	74		Pg	12 49 25.6	+0.1
VLS					Sg	12 49 28.9	+0.3
KFL	Anninata	0.35	92	P	Pg	12 49 27.8	-0.3
KFL				S	Sg	12 49 32.9	0.0
	249µm,0.4s						
KFL	Anninata	0.35	92	P	Pg	12 49 27.7	-0.3
KFL				S	Sg	12 49 33.6	+0.7
KFL				AML	AML	12 49 34.7	
KFL				AML	AML	12 49 38.8	
KFL	Anninata	0.35	92		Pg	12 49 27.8	-0.3
KFL					Sg	12 49 32.9	0.0
KONA	Konidatara, Ke	0.35	30	P	Pg	12 49 28.4	+0.2
KONA				S	Sb	12 49 34.6	+0.1
KONA				AML	AML	12 49 35.9	
KONA				AML	AML	12 49 35.9	
VLMS	Volimes, Zakyn	0.35	134	P	Pg	12 49 27.3	-0.8
VLMS				AML	AML	12 49 33.9	
VLMS				AML	AML	12 49 37.1	
FSK	Fiskardo	0.38	27	P	Pg	12 49 28.9	+0.3
FSK				S	Sb	12 49 34.7	-0.5
	152µm,0.5s						
FSK	Fiskardo	0.38	27	P	Pg	12 49 28.8	+0.3
FSK				S	Sg	12 49 34.5	+0.7
FSK				AML	AML	12 49 36.3	
FSK				AML	AML	12 49 37.1	
FSK	Fiskardo	0.38	27		Pg	12 49 28.9	+0.3
FSK					Sb	12 49 34.7	-0.5
MGNA	Meganis	0.64	33	P	Pg	12 49 33.6	+0.1
MGNA				S	Sb	12 49 43.8	+1.1
MGNA				AML	AML	12 49 46.9	
MGNA				AML	AML	12 49 47.3	
VTN	Vitineika	0.69	107	P	Pg	12 49 34.4	-0.1
VTN	Vitineika	0.69	107	P	Pg	12 49 34.4	-0.1
VTN	Vitineika	0.69	107		Pg	12 49 34.4	-0.1
LKD2	Lefkada island	0.71	20	P	Pg	12 49 34.8	0.0
LKD2				S	Sb	12 49 45.2	+0.4
	68µm,0.8s						
LKD2	Lefkada island	0.71	20	P	Pg	12 49 34.5	-0.3
LKD2				AML	AML	12 49 54.8	
LKD2				AML	AML	12 49 55.4	
LKD2	Lefkada island	0.71	20		Pg	12 49 34.8	0.0
LKD2					Sb	12 49 45.2	+0.4
PDO	Prodromos	0.81	54	P	Pg	12 49 36.6	-0.1
PDO				S	Sb	12 49 48.8	+1.1
	120µm,0.7s						
PDO	Prodromos	0.81	54	P	Pg	12 49 36.4	-0.3
PDO				AML	AML	12 49 55.5	
PDO				AML	AML	12 49 57.6	
PDO	Prodromos	0.81	54		Pg	12 49 36.6	-0.1
RLS	Riolos of Patr	0.89	94	P	Pb	12 49 37.5	-0.7
RLS				S	Sn	12 49 50.9	-0.8
	20µm,0.4s						
RLS	Riolos of Patr	0.89	94	P	Pb	12 49 37.1	-1.1
RLS				AML	AML	12 49 58.6	
	comp=N,42453µm,0.5s						
RLS				AML	AML	12 50 00.9	
	comp=E,36282µm,0.4s						
RLS	Riolos of Patr	0.89	94		Pb	12 49 37.5	-0.7
PVO	Paravola	1.05	62	P	Pb	12 49 41.0	0.0
PVO				S	Sn	12 49 55.8	0.0
	comp=E,59µm,0.7s						
PVO	Paravola	1.05	62	P	Pn	12 49 41.2	-0.1
PVO				AML	AML	12 50 02.2	
PVO				AML	AML	12 50 04.2	
PVO	Paravola	1.05	62		Pb	12 49 41.0	0.0
DRO	Drossia	1.09	99	P	Pb	12 49 41.3	-0.4
DRO				S	Sn	12 49 57.2	+0.4
	comp=E,34µm,0.6s						
DRO	Drossia	1.09	99		Pb	12 49 41.3	-0.4
UPR	University Cam	1.15	81	P	Pg	12 49 43.7	+0.6
AMT	Artemida-Makis	1.23	118	P	Pb	12 49 44.0	0.0
AMT				S	Sg	12 50 03.1	+2.4
	comp=E,42µm,0.7s						
AMT	Artemida-Makis	1.23	118		Pb	12 49 44.0	0.0
LAKA	Lakka	1.29	84	P	Pn	12 49 44.5	-0.2
LAKA	Lakka	1.29	84		Pn	12 49 44.5	-0.2
TRIZ	Trizonia	1.38	79	P	Pn	12 49 45.8	0.0
TRIZ	Trizonia	1.38	79	P	Pn	12 49 45.9	0.0
TRIZ	Trizonia	1.38	79		Pn	12 49 45.8	0.0
EVR	Evrytania	1.40	55	P	Pg	12 49 48.5	+0.7
EVR				AML	AML	12 50 11.9	
	comp=E,34796µm,1.7s						
EVR				AML	AML	12 50 20.1	
	comp=N,48024µm,1.4s						
IGT	Igoumenitsa	1.41	360	P	Pb	12 49 47.0	-0.1
IGT				AML	AML	12 50 19.2	
	comp=E,40522µm,0.7s						
IGT				AML	AML	12 50 19.2	
	comp=N,21653µm,0.4s						
KLV	Kalavryta, Ach	1.43	93	P	Pn	12 49 46.3	-0.3
KLV	Kalavryta, Ach	1.43	93	P	Pn	12 49 46.8	+0.2
KLV				AML	AML	12 50 20.6	
	comp=N,21443µm,0.7s						
KLV				AML	AML	12 50 21.8	
	comp=E,13197µm,1.0s						
KLV	Kalavryta, Ach	1.43	93		Pn	12 49 46.3	-0.3
KALE	Kalithea	1.44	79	P	Pn	12 49 46.7	0.0
KALE	Kalithea	1.44	79	P	Pn	12 49 47.0	+0.3
KALE				AML	AML	12 50 22.3	
	comp=N,31788µm,0.8s						
KALE				AML	AML	12 50 25.3	
	comp=E,25955µm,0.8s						
KALE	Kalithea	1.44	79		Pn	12 49 46.7	0.0
ITM	Ithomi	1.57	126	P	Pb	12 49 49.3	-0.5
ITM				AML	AML	12 50 19.6	
	comp=N,16840µm,0.5s						
ITM				AML	AML	12 50 23.7	
	comp=E,23968µm,1.1s						
ITM	Ithomi	1.57	126		Pb	12 49 49.5	-0.3
JAN	Janina	1.58	14	P	Pb	12 49 50.5	+0.4
JAN				AML	AML	12 50 26.8	
	comp=N,38196µm,0.5s						
JAN				AML	AML	12 50 32.3	
	comp=E,33321µm,0.7s						
KEK	Kerkira	1.65	345	P	Pb	12 49 50.5	-0.6
KASA	Kassiopi	1.65	349	P	Pb	12 49 50.8	-0.4
AGG	Agios Georgios	1.80	59	P	Pb	12 49 54.6	+0.9
AGG	Agios Georgios	1.80	59		Pb	12 49 54.6	+0.9
SCTE	Santa Cesarea	2.44	324	P	Pn	12 50 00.8	+0.5
SCTE	Santa Cesarea	2.44	324		Pn	12 50 00.7	+0.4
LIT	Litokhoron	2.59	39	P	Pb	12 50 05.5	-1.7
LIT	Litokhoron	2.59	39		Pb	12 50 05.5	-1.7
ATH	Athens Observa	2.67	92	P	Pn	12 50 04.4	+0.9
ATH				AML	AML	12 50 56.0	
	comp=N,11363µm,1.8s						
ATH				AML	AML	12 50 58.9	
	comp=E,9763µm,1.1s						
ATHU	Athens Univers	2.72	92	P	Pn	12 50 05.1	+0.8
FNA	Florina	2.77	16	P	Pn	12 50 07.1	+2.0
FNA	Florina	2.77	16		Pn	12 50 07.1	+2.0
TIP	Timpagrande	3.00	292	P	Pn	12 50 08.5	+0.3
TIP	Timpagrande	3.00	292	⇓P	Pn	12 50 08.6	+0.4
TIP	Timpagrande	3.00	292		Pn	12 50 08.5	+0.3
OHR	Ohrid	3.01	7	i Pn	Pn	12 50 10.6	+2.3
TIR	Tirane	3.24	354	⇑ePn	Pn	12 50 12.6	+1.1
TIR				eSn	Sn	12 50 51.9	+2.0
TIR	Tirane	3.24	354	⇓P	Pn	12 50 12.6	+1.1
TIR	Tirane	3.24	354		Pn	12 50 12.8	+1.3
TIR				Sn	Sn	12 50 44.8	-5.1
TAR1	Taranto	3.38	316	ePn	Pn	12 50 13.6	+0.3
TAR1				Sn	Sn	12 50 54.3	+1.1
CEL	Celeste	3.51	274		Pn	12 50 14.6	-0.6
VAY	Valandovo	3.63	28	ePn	Pn	12 50 17.7	+1.0
VAY	Valandovo	3.63	28	i Pn	Pn	12 50 18.1	+1.3
VAY				i Sg	Sn	12 51 01.9	+2.5
VAY				eLg	Lg	12 51 03.5	
	comp=E,1µm,1.1s						
VAY				eLg	Lg	12 51 04.1	
	comp=N,1µm,1.1s						
MATE	Matera	3.79	313	⇑P	Pn	12 50 19.2	+0.3
STIP	Stip	3.84	21	i Pn	Pn	12 50 22.7	+3.0
SG1	Sgolgore (BA)	3.93	315	ePn	Pn	12 50 21.4	+0.5
SG1				Sn	Sn	12 51 06.2	-0.6
SKO	Skopje	3.94	12	ePn	Pn	12 50 22.1	+1.1
SKO				eSn	Sn	12 51 08.6	+1.6
SKO	Skopje	3.94	12	i Pn	Pn	12 50 22.3	+1.3
BAI	Bari	4.01	319	ePn	Pn	12 50 22.2	+0.3
BAI				Sn	Sn	12 51 08.9	+0.2
DRME	Dracevica, Mon	4.16	348	ePn	Pn	12 50 23.7	-0.3
APE	Apeiranthos	4.25	103	⇑P	Pn	12 50 30.0	+4.6
APE	Apeiranthos	4.25	103	⇑eP	Pn	12 50 27.1	+1.7
KKB	Krupnik	4.29	28	eP	Pn	12 50 27.5	+1.6
ACER	Acerenza	4.32	309		Pn	12 50 25.8	-0.6
MMB	Musomiste	4.33	36	eP	Pn	12 50 26.9	+0.4
PDG	Podgorica	4.38	349	ePn	Pn	12 50 27.1	0.0
PDG	Podgorica	4.38	349	⇑P	Pn	12 50 27.1	0.0
PDG				⇑S	Sn	12 51 17.7	-0.3
PDG	Podgorica	4.38	349	ePn	Pn	12 50 27.0	0.0
PDG	Podgorica	4.38	349		Pn	12 50 27.2	0.0
PDG				Sn	Sn	12 51 17.2	-0.8
SANT	Santorini	4.44	112	⇑P	Pn	12 50 31.8	+3.8
SANT	Santorini	4.44	112		Pb	12 50 33.8	-4.9
IDI	Anoyia	4.62	126	Pn	Pn	12 50 30.0	-0.4
	comp=N,5.0nm,0.3s,baz=303,slow=18,SNR=22						
IDI				Sn	Sn	12 51 25.1	+1.2
	comp=N,51nm,0.3s,baz=264,slow=22,SNR=25						
IDI				Lg	Lg	12 51 56.2	
	baz=324,slow=18,SNR=1.8						
IDI				LR	LR	12 52 16.9	
	comp=N,3µm,19.6s,baz=216,slow=39						
BOSS	Bosilegrad	4.66	20	⇓i Pn	Pn	12 50 32.2	+1.2
VAE	Valguarnera	4.74	264	Pn	Pn	12 50 32.3	+0.2
	comp=N,9.6nm,0.3s,baz=117,slow=4.5,SNR=15						
VAE				Sn	Sn	12 51 29.1	+2.1
	comp=N,22nm,0.3s,baz=246,slow=23,SNR=3.4						
BARS	Barje	4.82	13	⇑ePn	Pn	12 50 34.0	+0.8
BARS	Barje	4.82	13	ePn	Pb	12 50 49.0	+3.8
TREB	Trebinje	4.84	342	ePn	Pn	12 50 32.3	-1.1
RZN	Rozhen	4.90	42	eP	Pn	12 50 36.1	+1.7
BRY	Bratogost	4.97	344	ePn	Pn	12 50 34.3	-1.0
VTS	Vitosha	5.00	25	⇑i Pn	Pn	12 50 37.1	+1.3
VTS	Vitosha	5.00	25	⇑P	Pn	12 50 37.1	+1.3
VTS	Vitosha	5.00	25	eP	Pn	12 50 37.3	+1.5
VTS	Vitosha	5.00	25	P	Pn	12 50 37.1	+1.3
VTS	Vitosha	5.00	25		Pn	12 50 37.1	+1.3
SGRT	San Giovanni R	5.07	317		Pn	12 50 36.7	+0.1
SGRT				Sn	Sn	12 51 33.6	-1.4
SELS	Selova	5.13	6	ePn	Pn	12 50 37.1	-0.3
SJES	Sjenica	5.14	357	ePn	Pn	12 50 38.3	+0.6
STON	Ston	5.16	338	ePn	Pn	12 50 37.0	-0.7
STON	Ston	5.16	338	ePn	Pn	12 50 37.0	-0.7
WDD	Wied Dalam	5.19	246		Pn	12 50 37.4	-0.8
WDD				Sn	Sn	12 51 34.6	-3.2
UPM	Unac-Piva	5.19	348	ePn	Pn	12 50 38.1	-0.3
ALN	Alexandroupoli	5.21	56	P	Pn	12 50 40.4	+1.9
ALN	Alexandroupoli	5.21	56		Pn	12 50 40.4	+1.9
KDZ	Kurdzhali	5.25	46	eP	Pn	12 50 39.9	+0.8
PAOL	Paolisi	5.33	305		Pn	12 50 42.1	+2.0
ZAPS	Zavoj	5.43	18	⇑i Pn	Pn	12 50 43.2	+1.6
IVAS	Ivanjica	5.45	359	⇑ePn	Pn	12 50 41.2	-0.7
RUDO	Rudo	5.54	353	ePn	Pn	12 50 42.3	-0.8
CORL	Corleone	5.57	270		Pn	12 50 43.0	-0.5
DIM	Dimitrovgrad	5.59	44	eP	Pn	12 50 46.1	+2.4
BOVS	Bovan	5.60	10	ePn	Pn	12 50 43.8	-0.1
CLTB	Caltabellotta	5.67	267		Pn	12 50 46.0	+1.1
GRUS	Gruza	5.77	3	⇑ePn	Pn	12 50 45.8	-0.4
BBLS	Lazići	5.78	353	⇑ePn	Pn	12 50 46.0	-0.4
BBLS	Lazići	5.78	353	ePn	Pn	12 50 46.1	-0.4
ZAGS	Zajecar	5.86	13	⇑i Pn	Pn	12 50 47.1	-0.3
DIVS	Divibare	5.98	358	⇑i Pn	Pn	12 50 48.6	-0.6
DIVS	Divibare	5.98	358	ePn	Pn	12 50 48.5	-0.6
KARP	Karpathos	6.04	113		Pn	12 50 52.5	+2.5
HAPS	Han Pijesak,Bl	6.05	350	ePn	Pn	12 50 49.2	-1.0
HAPS	Han Pijesak,Bl	6.05	350	ePn	Pn	12 50 48.5	-1.7
TRUS	Trudelj	6.10	0	⇓i Pn	Pn	12 50 50.5	-0.2
PLVB	Pleven	6.18	30	⇑P	Pn	12 50 53.7	+1.9
INTR	Introdacqua	6.28	310		Pn	12 50 53.4	0.0
KUBS	Kucevo	6.36	9	ePn	Pn	12 50 54.0	-0.4
ELND	Elena	6.39	40	⇑P	Pn	12 50 55.8	+1.2
TEKS	Tekeris	6.45	355	⇓ePn	Pn	12 50 55.2	-0.4
TEKS	Tekeris	6.45	355	ePn	Pn	12 50 54.8	-0.8
PUNG	Punghina	6.45	17	⇓P	Pn	12 50 55.8	+0.3
MANT	Manisa	6.47	84		Pn	12 50 57.2	+1.2
VLAD	Vladila	6.62	26	⇓P	Pn	12 50 59.2	+1.4
BEO	Beograd	6.68	1	ePn	Pn	12 50 58.8	+0.1
MDVR	Moldovita	6.73	8	⇑P	Pn	12 50 59.2	-0.2
MGRS	Mrkonjic Grad	6.75	340	ePn	Pn	12 51 00.0	+0.3
AQU	L'Aquila	6.79	311	ePn	Pn	12 51 03.5	+3.3
AQU	L'Aquila	6.79	311	P	Pn	12 51 00.1	-0.1
AQU	L'Aquila	6.79	311		Pn	12 51 00.1	-0.1
DOB	Doboj	6.82	346	ePn	Pn	12 50 59.1	-1.4
SRE	Strehaia	6.88	17	⇑P	Pn	12 51 02.1	+0.7
HERR	Herculane	6.93	12	⇓P	Pn	12 51 02.1	0.0
BLY	Banja Luka	7.03	341	⇑P	Pn	12 51 03.1	-0.4
BLY				⇑S	Sn	12 52 21.4	-1.9
BLY	Banja Luka	7.03	341	ePn	Pn	12 51 02.8	-0.7
BLY	Banja Luka	7.03	341		Pn	12 51 03.8	+0.3
COPA	Copaceanca	7.04	30	⇑P	Pn	12 51 05.3	+1.7
FRGS	Fruska Gora	7.04	357	ePn	Pn	12 50 57.5	-6.2
NRCA	Norcia	7.25	313		Pn	12 51 08.7	+2.1
HUMR	Humele	7.29	27	⇓P	Pn	12 51 08.4	+1.4
GZR	Gura Zlata	7.49	13	⇑P	Pn	12 51 09.9	0.0
BZS	Buzias	7.55	7	ePn	Pn	12 51 09.8	-0.8
BZS	Buzias	7.55	7	⇑P	Pn	12 51 10.4	-0.2
SLUM	Salum	7.73	147	P	Pn	12 51 09.9	-3.2
	baz=148						
SLUM				AMP		12 52 00.0	
	baz=148						
SLUM				S	Sn	12 52 28.1	-12
	baz=148						
ELL	Elmali	7.73	97	P	Pn	12 51 18.9	+5.7
ELL	Elmali	7.73	97		Pn	12 51 18.9	+5.6
LOT	Lotru	7.75	18	⇓P	Pn	12 51 14.7	+1.1
MURB	Monte Urbino	7.85	313		Pn	12 51 16.9	+2.0
ARR	Arges	7.92	22	⇑P	Pn	12 51 17.0	+1.3
DEV	Deva	7.99	13	⇓P	Pn	12 51 17.6	+1.1
VOIR		8.11	24	⇑P	Pn	12 51 19.9	+1.5
ZAG	Zagreb	8.35	339	ePn	Pn	12 51 21.0	-0.6
RIY	Rijeka	8.43	331	ePn	Pn	12 51 22.8	+0.2
MLR	Muntele Rosu	8.46	28	Pn	Pn	12 51 25.2	+1.9
	comp=N,2.2nm,0.3s,baz=246,slow=5.9,SNR=54						
MLR				LR	LR	12 54 50.7	
	comp=N,1µm,20.5s,baz=208,slow=39						
MLR	Muntele Rosu	8.46	28	⇑P	Pn	12 51 25.2	+1.9
MLR	Muntele Rosu	8.46	28		Pn	12 51 26.4	+3.1
GBRS	Gornja Briga	8.48	333	i Pn	Pn	12 51 23.5	+0.2
GBRS				eSn	Sn	12 52 54.5	-4.3
CRES	Cresnjev	8.51	336	i Pn	Pn	12 51 23.3	-0.5
CRES				eSn	Sn	12 52 53.1	-6.6
CRES	Cresnjev	8.51	336	ePn	Pn	12 51 23.2	-0.7
DOPR	Dopca	8.69	24	⇓P	Pn	12 51 28.0	+1.7
BEHE	Becsehely	8.75	344	ePn	Pn	12 51 25.8	-1.3
TIRR	Tirgusor	8.77	41	⇑P	Pn	12 51 28.4	+1.1
TIRR	Tirgusor	8.77	41	⇑P	Pn	12 51 28.4	+1.1
TIRR	Tirgusor	8.77	41	P	Pn	12 51 28.1	+0.8
TIRR	Tirgusor	8.77	41		Pn	12 51 28.1	+0.8
GRER		8.78	32	⇑P	Pn	12 51 29.6	+2.1
CEY	Cerknica	8.79	332	ePn	Pn	12 51 27.3	-0.4
BISRR	Bisoca	8.81	31	⇑P	Pn	12 51 29.7	+1.8
DRGR		8.84	11	⇑P	Pn	12 51 28.3	0.0
CJR	Cluj-Napoca	8.91	15	⇑P	Pn	12 51 29.6	+0.2
LJU	Ljubljana	9.02	333	ePn	Pn	12 51 30.5	-0.3
TRI	Trieste	9.03	329	P	Pn	12 51 30.4	-0.5
TRI	Trieste	9.03	329		Pn	12 51 30.4	-0.5
PLOR	Plostina	9.03	29	⇑P	Pn	12 51 32.9	+1.9
TOPG	Topolog	9.04	39	⇓P	Pn	12 51 32.4	+1.3
VRI	Vrincioaia	9.08	29	⇑P	Pn	12 51 33.5	+2.0
KEST	Kesra	9.13	258	Pn	Pn	12 51 31.5	-0.8
	comp=N,2.6nm,0.3s,baz=47,slow=1.0,SNR=14						
KEST				Sn	Sn	12 53 14.3	-0.6
	comp=N,2.2nm,0.3s,baz=290,slow=23,SNR=11						
KEST				LR	LR	12 55 47.1	
	comp=N,942nm,18.6s,baz=30,slow=42						
KEST	Kesra	9.13	258		Pn	12 51 32.0	-0.3
CFR	Carcaliu	9.14	37	⇓P	Pn	12 51 33.5	+1.1
SOKA	Soboth	9.41	337	i Pn	Pn	12 51 35.3	-0.9
	comp=N,52nm,0.5s,SNR=37						
SOKA				eSn	Sn	12 53 15.0	-6.7
	comp=N,76nm,0.6s						
OBKA	Obir	9.41	335	ePn	Pn	12 51 36.1	-0.2
	comp=N,17nm,0.3s,SNR=11						
OBKA				eSn	Sn	12 53 19.5	-2.4
	comp=N,315nm,0.8s						
TESR	Tescani	9.59	27	⇑P	Pn	12 51 40.3	+1.7
VLC	Villacollemand	9.63	312		Pn	12 51 41.1	+1.9
TEOL	Teolo	9.71	321		Pn	12 51 39.5	-0.7
ARSA	Arzberg	9.79	340	i Pn	Pn	12 51 39.9	-1.4
	comp=N,15nm,0.3s,SNR=12						
ARSA				eSn	Sn	12 53 25.0	-6.0
	comp=N,24nm,0.5s						
PSZ	Piszkesteto	9.80	358	⇑P	Pn	12 51 41.1	-0.4
PSZ	Piszkesteto	9.80	358	P	Pn	12 51 41.0	-0.5
PSZ	Piszkesteto	9.80	358		Pn	12 51 41.0	-0.5
SWA2		9.82	153	P	Pn	12 51 38.8	-3.0
	baz=153						
SWA2				S	Sn	12 53 19.2	-13
	baz=153						
MYKA	Terra Mystica	9.84	332	ePn	Pn	12 51 41.9	-0.2
	comp=N,9.3nm,0.4s						
STAL	STALIGIAL	9.91	328		Pn	12 51 42.2	-0.7
TRPA	Tarpa	10.13	8	⇑P	Pn	12 51 46.0	+0.1
BURAR	Bucovina Array	10.14	19	⇓P	Pn	12 51 47.7	+1.6
BUR08	Bucovina Ar. S	10.16	19		Pn	12 51 47.3	+0.8
CTI	Castel Tesino	10.22	324	P	Pn	12 51 46.7	-0.6
CTI	Castel Tesino	10.22	324		Pn	12 51 46.7	-0.6
MSSA	Maissana	10.23	311	Pn	Pn	12 51 51.0	+3.5
KBA	Koelnbreinsper	10.33	332	ePn	Pn	12 51 48.7	-0.1
	comp=N,12nm,0.3s,SNR=11						
KBA				eSn	Sn	12 53 39.4	-5.1
	comp=N,89nm,0.8s						
CONA	Conrad Observa	10.33	343	ePn	Pn	12 51 47.2	-1.6
	comp=N,2.5nm,0.3s						
CONA				Sn	Sn	12 53 40.1	-4.4
	comp=N,19nm,0.6s						
ZST	Bratislava	10.34	348	eP	Pn	12 51 46.8	-2.1
ZST				e		12 53 36.7	
ZST	Bratislava	10.34	348	ePN	Pn	12 51 46.8	-2.1
ZST				eSN	Sn	12 53 36.7	-7.9
KECS	Kecovo	10.36	1	eP	Pn	12 51 49.9	+0.8
KECS				e		12 53 39.4	
KECS	Kecovo	10.36	1	ePN	Pn	12 51 49.9	+0.8
KECS				eSN	Sn	12 53 39.4	-5.5
ABTA	Abfaltersbach	10.38	329	ePn	Pn	12 51 49.3	-0.1
	comp=N,5.3nm,0.3s,SNR=8.2						
ABTA				Sn	Sn	12 53 40.7	-4.9
	comp=N,252nm,0.9s						
VYHS	Vyhne	10.43	354	eP	Pn	12 51 49.8	-0.2
VYHS				e		12 53 41.6	
VYHS	Vyhne	10.43	354	ePN	Pn	12 51 49.8	-0.2
VYHS				eSN	Sn	12 53 41.6	-5.0
SALO	Salr	10.47	319		Pn	12 51 50.7	0.0
BR131	Keskin Array S	10.48	77	P	Pn	12 51 54.0	+3.0
BR131	Keskin Array S	10.48	77		Pn	12 51 54.0	+3.0
BRTR	Keskin Array B	10.48	77	Pn	Pn	12 51 54.2	+3.3
	comp=N,0.3nm,0.3s,baz=257,slow=12,SNR=8.9						
BRTR				Lg	Lg	12 54 49.5	
	comp=N,0.5nm,0.3s,baz=266,slow=27,SNR=5.8						
BRTR				LR	LR	12 55 48.0	
	comp=N,367nm,20.6s,baz=244,slow=37						
MODS	Modra-Piesok	10.49	349	eP	Pn	12 51 49.9	-1.0
MODS				e		12 53 40.7	
MODS	Modra-Piesok	10.49	349	ePN	Pn	12 51 49.9	-1.0
MODS				eSN	Sn	12 53 40.7	-7.5
UZH	Uzhgorod	10.60	7	d iP	Pn	12 51 52.0	-0.4
MOA	Molln	10.69	337	ePn	Pn	12 51 53.3	-0.3
	comp=N,12nm,0.3s,SNR=21						
MOA				eSn	Sn	12 53 48.3	-4.9
	comp=N,27nm,0.5s						
CRVS	Cervenica-Dubn	10.81	4	eP	Pn	12 51 55.5	+0.3
CRVS	Cervenica-Dubn	10.81	4	ePN	Pn	12 51 55.5	+0.3
KIS	Kishinev	10.84	32	eP	Pn	12 51 58.0	+2.3
KIS				eS	Sn	12 53 55.0	-1.8
KIS				LRM	MLR	12 55 58.0	
	comp=N,2µm,20.0s						
KIS	Kishinev	10.84	32	eP	Pn	12 51 58.0	+2.3
KIS				e		12 54 00.0	
KIS				MLR	MLR		
	comp=Z,2µm,20.0s						
KIS				MLR	MLR		
	comp=N,2µm,15.0s						
HBRG	Burj al `Arab	10.87	131	P	Pn	12 51 53.0	-3.2

	baz=131						
JAVC	Velka Javorina	10.91	351	ePN	Pn	12 51 56.7	0.0
CSS	Mathiatis	10.91	103		Pn	12 51 59.2	+2.5
RJOB	Jochberg	11.08	333	eP	Pn	12 52 00.0	+0.9
	comp=N,70nm,0.8s,baz=140,slow=14						
WTTA	Wattenberg	11.15	328	ePn	Pn	12 52 01.0	+0.8
	comp=N,16nm,0.3s,SNR=9.2						
WATA	Walderalm	11.23	328	ePn	Pn	12 52 02.1	+0.9
	comp=N,20nm,0.4s,SNR=12						
WATA				eSn	Sn	12 54 02.4	-4.2
	comp=N,198nm,0.8s						
SQTA	Sankt Quirin	11.30	326	ePn	Pn	12 52 02.0	-0.1
	comp=N,7.4nm,0.3s						
KRUC	Moravsky	11.30	347	ePN	Pn	12 52 01.4	-0.6
KRUC	Moravsky	11.30	347	eSN	Sn	12 54 04.4	-3.7
FETA	Feichten	11.37	325	ePn	Pn	12 52 03.8	+0.8
	comp=N,2.5nm,0.3s						
FETA				Sn	Sn	12 54 03.2	-6.6
	comp=N,56nm,0.7s						
MOTA	Moosalm	11.44	327	ePn	Pn	12 52 05.2	+1.1
	comp=N,8.0nm,0.3s,SNR=12						
MOTA				eSn	Sn	12 54 07.6	-4.1
	comp=N,61nm,0.6s						
VRAC	Vranov	11.51	348	Pn	Pn	12 52 04.3	-0.5
	comp=N,0.5nm,0.3s,baz=166,slow=13,SNR=9.0						
VRAC				Sn	Sn	12 54 08.4	-4.7
	comp=N,1.2nm,0.3s,baz=139,slow=9.0,SNR=3.6						
VRAC				LR	LR	12 56 41.7	
	comp=N,696nm,18.9s,baz=178,slow=38						
VRAC	Vranov	11.51	348	⇓P	Pn	12 52 05.6	+0.8
VRAC	Vranov	11.51	348	ePN	Pn	12 52 04.5	-0.3
DAVOX	Davos/Dischmat	11.59	322	Pn	Pn	12 52 06.6	+0.4
	comp=N,2.1nm,0.3s,baz=150,slow=18,SNR=16						
DAVOX				Sn	Sn	12 54 14.4	-1.1
	comp=N,4.0nm,0.3s,baz=301,slow=19,SNR=7.4						
DAVOX				LR	LR	12 57 28.8	
	comp=N,2µm,18.7s,baz=119,slow=42						
KWP	Kalwaria Pacla	11.63	8	P	Pn	12 52 08.4	+1.9
KWP	Kalwaria Pacla	11.63	8		Pn	12 52 08.4	+1.9
TUE	Stuetta	11.65	319		Pn	12 52 07.0	0.0
RETA	Reutte	11.70	326	ePn	Pn	12 52 10.1	+2.6
	comp=N,2.8nm,0.2s						
RETA				eSn	Sn	12 54 13.2	-4.7
	comp=N,28nm,0.5s						
TREC	Trest	11.71	344	AMS	AMS	12 57 10.0	
	comp=N,2µm,12.8s						
GEC2	GERESS Array S	11.75	338	eP	Pn	12 52 07.5	-0.7
	baz=140,slow=14						
GEC2	GERESS Array S	11.75	338		Pn	12 52 07.0	-1.2
GERES	GERESS Array B	11.75	338	Pn	Pn	12 52 07.5	-0.7
	comp=N,3.8nm,0.3s,baz=159,slow=14,SNR=60						
GERES				Sn	Sn	12 54 14.7	-4.5
	comp=N,4.7nm,0.3s,baz=158,slow=24,SNR=7.0						
GERES				LR	LR	12 57 20.6	
	comp=N,2µm,19.1s,baz=160,slow=41						
OKC	Ostrava-Krasne	11.82	353	ePN	Pn	12 52 08.9	-0.2
OKC				AMS	AMS	12 58 40.0	
	comp=N,1µm,9.6s						
OKC	Ostrava-Krasne	11.82	353	eP	Pn	12 52 08.9	-0.2
OKC				MLR	MLR		
	comp=Z,1µm,9.6s						
MORC	Moravsky Berou	11.82	351	⇓P	Pn	12 52 08.8	-0.4
MORC	Moravsky Berou	11.82	351	P	Pn	12 52 08.2	-1.0
MORC	Moravsky Berou	11.82	351	ePN	Pn	12 52 08.1	-1.1
MORC	Moravsky Berou	11.82	351	eSN	Sn	12 54 18.4	-2.5
MORC	Moravsky Berou	11.82	351		Pn	12 52 08.2	-1.0
DAVA	Damuels	11.95	323	ePn	Pn	12 52 11.6	+0.5
	comp=Z,3.3nm,0.3s						
LVV	L'vov	11.99	12	eP	Pn	12 52 14.3	+2.9
LVV				eS	Sn	12 54 27.2	+2.3
LVV				pmax	pmax		
	comp=Z,50nm,1.2s						
LVV				smax	smax		
	comp=N,160nm,2.8s						
LVV				MLR	MLR		
	comp=N,600nm,8.0s						
LVV				MLR	MLR		
	comp=Z,1µm,8.0s						
LVV				MLR	MLR		
	comp=E,1µm,9.0s						
HNAT	Natroun	12.01	132	P	Pn	12 52 08.4	-3.4
	baz=132						
KHC	Kasperske Hory	12.04	338	ePN	Pn	12 52 11.5	-0.7
KHC				ex	x	12 52 19.0	
KHC				eSN	Sn	12 54 20.3	-5.9
KHC				AMS	AMS	12 57 40.0	
	comp=E,2µm,14.1s						
KHC	Kasperske Hory	12.04	338	deP	Pn	12 52 11.1	-1.1
KHC				pmax	pmax		
	comp=Z,36nm,0.9s						
KHC	Kasperske Hory	12.04	338		Pn	12 52 10.4	-1.7
OJC	Ojcow	12.10	358	P	Pn	12 52 12.4	-0.5
OJC	Ojcow	12.10	358		Pn	12 52 12.4	-0.5
UBR	Ueberruh	12.14	325	eP	Pn	12 52 18.0	+4.5
	baz=140,slow=14						
KRLC	Kraliky	12.22	349	ePN	Pn	12 52 14.4	-0.2
KRLC				eSN	Sn	12 54 24.9	-5.7
KRLC				AMS	AMS	12 59 10.0	
	comp=Z,1µm,12.3s						
KRLC	Kraliky	12.22	349	eP	Pn	12 52 14.4	-0.2
KRLC				e		12 54 24.9	
KRLC				MLR	MLR		
	comp=Z,1µm,12.3s						
WET	Wettzell	12.27	336	eP	Pn	12 52 15.7	+0.5
	baz=140,slow=14						
SIM	Simferopol'	12.36	52	eP	P	12 52 23.2	-5.4
SIM				pmax	pmax		
	comp=Z,52nm,0.4s						
SIM				MLR	MLR		
	comp=Z,450nm,11.2s						
PBCC	Pribram	12.43	340	ePN	Pn	12 52 17.0	-0.4
GOPC	GO Pecny, Ondr	12.44	343	ePN	Pn	12 52 16.9	-0.7
GOPC				AMS	AMS	12 58 00.0	
	comp=Z,2µm,12.1s						
GOPC	GO Pecny, Ondr	12.44	343	eP	Pn	12 52 16.9	-0.7
GOPC				MLR	MLR		
	comp=Z,2µm,12.1s						
KOT	Kottamia	12.54	127	P	Pn	12 52 13.5	-5.6
	baz=127						
KOT				AMP		12 54 00.0	
	baz=127						
KOT				S	Sn	12 54 25.3	-13
	baz=127						
DPC	Dobruska-Polom	12.56	348	ePN	Pn	12 52 18.4	-0.8
DPC				AMS	AMS	12 58 20.0	
	comp=Z,2µm,13.5s						
DPC	Dobruska-Polom	12.56	348	eP	Pn	12 52 18.4	-0.8
DPC				MLR	MLR		
	comp=Z,2µm,13.5s						
PRU	Pruhonice	12.57	343	ePN	Pn	12 52 18.6	-0.7
PRU				AMS	AMS	12 58 00.0	
	comp=Z,2µm,11.0s						
PRU	Pruhonice	12.57	343	eP	Pn	12 52 18.6	-0.7
PRU				MLR	MLR		
	comp=Z,2µm,11.0s						
HSAF	As Saff	12.59	129	P	Pn	12 52 16.9	-2.8
	baz=129						
PRA	Prague	12.67	342	AMS	AMS	12 58 00.0	
	comp=Z,2µm,9.8s						
SENIN	Lac Senin/Sane	12.69	315		Pn	12 52 20.7	-0.5
HHAG	Hagoal	12.70	126	P	Pn	12 52 17.2	-4.0
	baz=126						
GLL	Jalalah	12.71	129	P	Pn	12 52 16.3	-5.1
	baz=128						
UPC	Upice	12.76	347	AMS	AMS	12 58 20.0	
	comp=Z,3µm,12.2s						
HFRF	Wahat Farafira	12.83	146	P	Pn	12 52 18.7	-4.2
	baz=146						
ROTZ	Rotzenmuhle	13.02	336	eP	Pn	12 52 25.3	-0.3
	baz=140,slow=14						
PVCC	Panska Ves	13.07	343	AMS	AMS	12 58 30.0	
	comp=Z,2µm,11.0s						
RSH		13.13	119	P	Pn	12 52 22.3	-4.8
	baz=118						
SUZ	Suez	13.24	125	P	Pn	12 52 27.4	-1.2
	baz=125						
MANZ	Manzenberg	13.25	336	eP	Pn	12 52 28.3	-0.3
	baz=140,slow=14						
MMAI	Mount Meron Ar	13.27	108	Pn	Pn	12 52 26.6	-2.4
	comp=Z,2.9nm,0.3s,baz=303,slow=13,SNR=2.1						
MMAI				Sn	Sn	12 54 45.9	-11
	comp=Z,2.9nm,0.3s,baz=324,slow=14,SNR=2.8						
NKC	Novy Kostel	13.36	338	AMS	AMS	12 58 20.0	
	comp=Z,3µm,12.0s						
STU	Stuttgart	13.36	326	P	Pn	12 52 30.1	0.0
STU	Stuttgart	13.36	326		Pn	12 52 30.1	0.0
WERN	Wernitzgruen	13.43	337	eP	Pn	12 52 32.4	+1.3
	baz=140,slow=14						
BFO	Black Forest	13.43	323	eP	Pn	12 52 32.4	+1.3
	baz=140,slow=14						
BFO	Black Forest	13.43	323	P	Pn	12 52 32.2	+1.1
BFO	Black Forest	13.43	323		Pn	12 52 32.2	+1.1
GUNZ	Gunzen	13.51	338	eP	Pn	12 52 32.0	-0.1
	baz=140,slow=14						
TANN	Tannenbergstha	13.52	338	eP	Pn	12 52 31.7	-0.6
	baz=140,slow=14						
BRG	Berggiesshubel	13.54	342	eP	Pn	12 52 31.2	-1.3
	comp=Z,10nm,0.9s						
BRG				S	Sn	12 54 55.0	-7.6
BRG	Berggiesshubel	13.54	342	eP	Pn	12 52 31.3	-1.2
	baz=140,slow=14						
TAMRE	El Minia	13.67	137	P	Pn	12 52 30.8	-3.7
	baz=137						
YTIR	Yattir	13.88	115	Pn	Pn	12 52 35.6	-1.8
ECH	Echery	13.92	321	P	Pn	12 52 38.1	+0.3
ECH	Echery	13.92	321		Pn	12 52 38.1	+0.3
DSI	Dead Sea	13.96	113	Pn	Pn	12 52 36.8	-1.6
MOX	Moxa	13.97	336	eP	Pn	12 52 37.8	-0.7
	baz=140,slow=14						
AKASG	Malin Array Be	14.07	24	Pn	Pn	12 52 39.0	-0.8
	comp=Z,2.2nm,0.3s,baz=213,slow=12,SNR=36						
AKASG				LR	LR	12 58 25.2	
	comp=Z,882nm,20.0s,baz=195,slow=39						
AKASG	Malin Array Be	14.07	24	P	Pn	12 52 39.0	-0.8
AKASG	Malin Array Be	14.07	24		Pn	12 52 38.5	-1.3
AKBB	Malin Array Si	14.07	24	P	Pn	12 52 39.1	-0.7
AKBB	Malin Array Si	14.07	24		Pn	12 52 39.0	-0.7
CLL	Collm	14.17	341	eP	Pn	12 52 43.0	+1.9
CLL				MLR	MLR		
	comp=Z,800nm,19.4s						
CLL	Collm	14.17	341	P	P	12 52 48.4	-0.2
CLL	Collm	14.17	341	eP	Pn	12 52 43.0	+1.9
CLL	Collm	14.17	341	esP	P	12 52 47.0	-1.6
GHAJ	Ghor Haditha	14.24	114	Pn	Pn	12 52 40.9	-1.3
PRNI	Paran	14.38	118	Pn	Pn	12 52 40.7	-3.5
PRNI				Sn	Sn	12 55 12.0	-11
ANN	Anapa	14.43	57	eP	Pn	12 52 41.3	-3.5
ANN				eS	Sn	12 55 21.4	-3.1
ANN				pmax	pmax		
	comp=Z,14nm,0.8s						
ANN				MLR	MLR		
	comp=E,591nm,13.0s						
ANN				MLR	MLR		
	comp=Z,493nm,13.0s						
ANN				MLR	MLR		
	comp=N,253nm,13.0s						
MBRI	Mt Berech	14.65	120	Pn	Pn	12 52 43.9	-4.1
UBBA	Unterbreizbach	14.66	333	eP	Pn	12 52 46.4	-1.5
	baz=140,slow=14						
EIL	Elat	14.76	121	Pn	Pn	12 52 46.5	-2.8
	comp=N,1.0nm,0.3s,baz=347,slow=3.0,SNR=10						
EIL	Elat	14.76	121	Pn	Pn	12 52 45.2	-4.1
ASF	Jabal al Asfar	14.78	109	Pn	Pn	12 52 50.3	+0.6
	comp=N,0.5nm,0.3s,baz=309,slow=6.0,SNR=4.0						
ASF				Sn	Sn	12 55 34.4	+1.1
	baz=43,slow=21,SNR=2.5						
TNS	Taunus Mts	14.78	329	eP	Pn	12 52 52.0	+2.4
	baz=140,slow=14						
RUE	Ruedersdorf	15.07	344	eP	P	12 53 00.3	+1.6
WLF	Walferdange	15.39	323	P	P	12 53 05.1	+2.9
	comp=Z,62nm,1.3s						
WLF	Walferdange	15.39	323	eP	P	12 53 05.4	+3.2
	baz=140,slow=14						
WLF	Walferdange	15.39	323	P	P	12 53 05.3	+3.1
WLF				pmax	pmax		
	comp=Z,68nm,0.9s						
WLF	Walferdange	15.39	323	P	P	12 53 05.3	+3.1
WLF				IAmb	IAmb	12 53 06.6	
	comp=Z,68nm,0.9s						
CLZ	Clausthal	15.40	336	eP	P	12 53 04.2	+1.8
	baz=140,slow=14						
ASSE	Asse, Remlinge	15.56	337	eP	Pn	12 53 01.6	+1.9
	baz=140,slow=14						
SOC	Sochi	15.63	63	eP	P	12 53 04.7	-0.2
SOC				e		12 56 00.6	
SOC				pmax	pmax		
	comp=Z,65nm,1.0s						
SOC				MLR	MLR		
	comp=Z,396nm,12.0s						
SUW	Suwalki	16.01	6	P	Pn	12 53 05.1	-0.6
SUW				pmax	pmax		
	comp=Z,211nm,0.9s						
SUW	Suwalki	16.01	6		Pn	12 53 05.1	-0.6
NRDL	Niedersach Rie	16.05	337	eP	P	12 53 09.0	-0.4
	baz=140,slow=14						
MEM	Membach	16.12	325	P	P	12 53 13.0	+2.7
BSTI	Sart Tilman	16.30	325	P	P	12 53 13.9	+1.7
DOU	Dourbes	16.43	322	P	P	12 53 15.8	+2.1
BMRD	Maredsous	16.48	323	P	P	12 53 13.7	-0.6
	comp=Z,29nm,0.0s						
KLNR	Kaliningrad	16.49	360	⇑eP	P	12 53 13.1	-1.2
KLNR				pmax	pmax		
	comp=Z,215nm,1.4s						
BCA	Borcka	16.68	72	⇑P	P	12 53 16.6	0.0
MICGM	Minsk	17.17	15	eP	Pn	12 53 16.0	-4.4
MICGM				ePP	pP	12 53 25.0	-0.8
MICGM				eS	Sn	12 56 29.0	-2.0
MICGM				eSS	SnSn	12 56 47.0	+2.6
MNK	Minsk	17.17	15	eP	Pn	12 53 16.0	-4.4
MNK				eS	Sn	12 56 29.0	-2.0
BSEG	Bad Segeberg	17.25	340	eP	P	12 53 24.3	+1.6
	baz=140,slow=14						
NACGM	Naroch	17.35	13	eP	Pn	12 53 21.0	-1.5
NACGM				eS	Sn	12 56 32.0	-3.2
NACGM				eLQ	LQ	12 59 08.0	
NACGM				eLR	LR	13 00 10.0	
PABE	Paberze	17.56	7	eP	Pn	12 53 24.6	-0.6
NEY	Neytrino	17.71	66	⇓eP	P	12 53 31.2	+3.0
KIV	Kislovodsk	17.81	64	eP	P	12 53 30.5	+1.3
KIV				eS	S	12 56 51.2	-2.4
KIV				pmax	pmax		
	comp=Z,116nm,1.0s						
KIV				MLR	MLR		
	comp=Z,613nm,14.0s						
KIV	Kislovodsk	17.81	64	P	P	12 53 30.9	+1.7
ISAL	Salakas	17.89	11	eP	Pn	12 53 27.9	-1.3
KBZ	Khabaz	17.92	65	P	P	12 53 30.2	0.0
	comp=Z,0.4nm,0.3s,baz=260,slow=7.8,SNR=15						
KBZ	Khabaz	17.92	65	ceP	P	12 53 32.5	+2.3
KBZ				pmax	pmax		
	comp=Z,29nm,1.0s						
PBUR	Paburge	17.94	3	eP	Pn	12 53 28.9	-0.9
IZAR	Zarasai	18.08	11	eP	Pn	12 53 30.1	-1.4
AKH	Akhalkalaki	18.08	72	P	P	12 53 35.6	+3.3
AKH				pmax	pmax		
	comp=Z,21nm,0.8s						
AKH	Akhalkalaki	18.08	72	P	P	12 53 35.5	+3.3
HLG	Helgoland	18.19	336	eP	P	12 53 33.6	+0.5
	baz=140,slow=14						
GOF	Gofitskoye	18.30	61	⇑eP	P	12 53 36.7	+2.2
GOF				pmax	pmax		
	comp=Z,80nm,0.5s						
NCK	Nalchik	18.38	66	⇑eP	Pn	12 53 38.2	+2.8
NCK				pmax	pmax		
	comp=Z,46nm,1.0s						
ZEI	Tsey	18.50	68	eP	Pn	12 53 37.3	+0.2
ZEI				pmax	pmax		
	comp=Z,23nm,0.6s						
VSR	Storozhevoye	18.65	39	eP	P	12 53 36.1	-2.2
VSR				eS	Sn	12 57 04.3	-2.5
VSR				pmax	pmax		
	comp=Z,50nm,1.8s						
VSR				smax	smax		
	comp=N,520nm,5.7s						
VSR				MLR	MLR		
	comp=Z,2µm,11.0s						
ESDC	Sonseca Array	18.98	282	P	P	12 53 41.6	-0.4
	comp=Z,0.8nm,0.3s,baz=81,slow=12,SNR=32						
GNI	Garni	19.02	76	P	P	12 53 42.8	+0.2
	comp=Z,2.4nm,0.3s,baz=275,slow=9.3,SNR=7.7						
GNI				LR	LR	13 01 12.1	
	comp=Z,751nm,18.0s,baz=290,slow=38						
GNI	Garni	19.02	76	deP	Pn	12 53 43.9	+0.5
GNI				pmax	pmax		
	comp=Z,398nm,1.7s						
GNI	Garni	19.02	76	P	Pn	12 53 44.9	+1.5
PAB	San Pablo	19.28	282	P	P	12 53 45.0	-0.3
PAB				pmax	pmax		
	comp=Z,33nm,1.1s						
PAB	San Pablo	19.28	282	P	P	12 53 45.0	-0.3
LPSR	Galich'ya Gora	19.41	36	eP	P	12 53 45.4	-1.2
LPSR				eS	Sn	12 57 23.3	-1.8
LPSR				pmax	pmax		
	comp=Z,120nm,1.4s						
LPSR				smax	smax		
	comp=N,450nm,2.4s						
LPSR				MLR	MLR		
	comp=Z,470nm,10.0s						
TAM	Tamanrasset	19.88	224	P	Pn	12 53 53.7	0.0
TAM				pmax	pmax		
	comp=Z,40nm,1.3s						
TAM	Tamanrasset	19.88	224	P	Pn	12 53 53.7	0.0
GROC	Groznyy	19.93	67	eP	P	12 53 51.6	-0.7
GROC				eS	Sn	12 57 39.9	+2.1
GROC				pmax	pmax		
	comp=Z,72nm,1.3s						
GROC				MLR	MLR		
	comp=Z,298nm,11.0s						
VRH	Novokhopyorsk	19.96	42	eP	P	12 53 52.5	-0.1
VRH				eS	S	12 57 32.9	-3.7
VRH				pmax	pmax		
	comp=Z,80nm,1.0s						
VRH				smax	smax		
	comp=N,740nm,3.9s						
VRH				MLR	MLR		
	comp=Z,1µm,13.0s						
OBN	Obninsk	20.24	28	P	P	12 53 55.3	-0.3
	comp=Z,5.4nm,0.4s,baz=56,slow=1.8,SNR=14						
OBN				LR	LR	13 02 15.6	
	comp=Z,130nm,20.8s,baz=215,slow=38						
OBN	Obninsk	20.24	28	c iP	P	12 53 54.6	-0.9
OBN				ePPP	PPP	12 54 17.6	
OBN				e		12 58 06.6	
OBN				pmax	pmax		
	comp=Z,90nm,1.3s						
OBN				MLR	MLR		
	comp=Z,903nm,16.0s						
OBN	Obninsk	20.24	28	P	P	12 53 56.1	+0.6
VSU	Vasula	20.77	9	eP	P	12 54 01.0	-0.4
VSU	Vasula	20.77	9	c iP	P	12 54 01.1	-0.2
VSU				pmax	pmax		
	comp=Z,972nm,1.0s						
MDT	Midelt	20.98	263	P	P	12 54 03.6	-0.3
	comp=Z,20nm,0.8s,baz=91,slow=9.3,SNR=18						
MDT				LR	LR	13 04 03.3	
	comp=Z,336nm,18.5s,baz=52,slow=42						
PBRG	Braganca	21.05	289	eP	P	12 54 04.3	-0.3
	comp=Z,95nm,1.6s						
MOS	Moscow	21.10	28	eP	P	12 54 02.4	-2.5
MOS				e		12 54 13.2	
MOS				eS	S	12 57 55.4	-3.8
MOS				e		12 58 07.4	
MOS				pmax	pmax		
	comp=Z,191nm,1.4s						
MOS				pmax	pmax		
	comp=Z,200nm,1.4s						
MOS				MLR	MLR		
	comp=Z,800nm,14.0s						
MAK	Makhachkala	21.16	68	eP	P	12 54 05.4	-0.2
MAK				eS	S	12 58 03.4	+2.9
MAK				pmax	pmax		
	comp=Z,260nm,0.9s						
MAK				MLR	MLR		
	comp=Z,161nm,11.0s						
MVO	Moncorvo	21.27	287	eP	P	12 54 06.4	-0.5
	comp=Z,96nm,1.4s						
AKT	Akhty	21.27	72	eP	P	12 54 07.8	+0.8
AKT				e		12 54 27.4	
AKT				pmax	pmax		
	comp=Z,88nm,1.3s						
HOMB	Homborsund	21.59	343	eP	P	12 54 12.4	+2.3
PMRV	Marv??o	21.64	282	eP	P	12 54 09.9	-0.9
	comp=Z,64nm,0.9s						
PCBR	Castelo Branco	21.67	283	eP	P	12 54 10.3	-0.8
	comp=Z,71nm,1.1s						
MTE	Manteigas	21.68	285	P	P	12 54 10.4	-0.9
MTE				IAmb	IAmb	12 54 11.6	
	comp=Z,53nm,0.9s						
MTE	Manteigas	21.68	285	eP	P	12 54 10.5	-0.9
	comp=Z,130nm,1.6s						
PVRL	Vila Real	21.78	287	eP	P	12 54 12.5	+0.1
	comp=Z,86nm,0.9s						
PESTR	Estremoz	21.85	281	P	P	12 54 11.8	-1.3
PESTR	Estremoz	21.85	281	eP	P	12 54 11.7	-1.4
	comp=Z,46nm,1.0s						
PVIS	Viseu	21.93	286	eP	P	12 54 13.0	-1.1
	comp=Z,82nm,1.4s						
SNART	Snartemo	21.96	341	eP	P	12 54 17.4	+3.2
PCAB	Cabril	22.01	288	eP	P	12 54 14.1	-0.8
	comp=Z,112nm,1.5s						
PVAQ	Vaqueiros	22.17	277	P	P	12 54 15.6	-1.0
PVAQ	Vaqueiros	22.17	277	eP	P	12 54 16.7	+0.1
	comp=Z,98nm,1.7s						
PBEJ	Beja	22.18	279	eP	P	12 54 15.2	-1.5
	comp=Z,61nm,0.8s						
PMTG	Montargil	22.32	281	eP	P	12 54 16.4	-1.7
	comp=Z,62nm,1.3s						
COI	Coimbra	22.36	284	P	P	12 54 17.9	-0.7
COI				pmax	pmax		
	comp=Z,96nm,1.0s						
COI	Coimbra	22.36	284	P	P	12 54 17.9	-0.7
COI	Coimbra	22.36	284	eP	P	12 54 18.1	-0.4
	comp=Z,141nm,1.8s						
PBDV	Barranco-do-Ve	22.37	277	eP	P	12 54 19.0	+0.3
	comp=Z,76nm,1.6s						
PCVE	Castro Verde	22.38	278	eP	P	12 54 19.2	+0.4
	comp=Z,79nm,1.1s						
PTOM	Tomar	22.40	283	eP	P	12 54 17.8	-1.3
	comp=Z,112nm,1.2s						
PCAS	Casmilo, Conde	22.43	284	eP	P	12 54 18.5	-0.9
	comp=Z,69nm,1.1s						
HFS	Hagfors	22.43	351	P	P	12 54 18.3	-0.9
	comp=Z,40nm,0.7s,baz=159,slow=9.5,SNR=62						
HFS				S	S	12 58 23.4	-1.6
	comp=Z,9.5nm,1.0s,baz=160,slow=19,SNR=5.1						
HFS				LR	LR	13 04 01.2	
	comp=Z,316nm,20.8s,baz=173,slow=39						
MESJ	Messejana	22.49	278	eP	P	12 54 19.4	-0.5
MESJ				AMb	AMB	12 54 25.1	
	comp=Z,79nm,1.6s						
MESJ				eS	S	12 58 26.9	+0.6
MESJ	Messejana	22.49	278	eP	P	12 54 19.4	-0.5
MESJ				eS	S	12 58 26.9	+0.6
PUL	Pulkovo	22.59	13	⇓eP	P	12 54 22.4	+1.6
KONO	Kongsberg	22.62	346	eP	P	12 54 20.7	-0.4
KONO	Kongsberg	22.62	346	deP	P	12 54 22.7	+1.6
KONO				pmax	pmax		
	comp=Z,31nm,1.3s						
KONO	Kongsberg	22.62	346	P	P	12 54 23.4	+2.3
KONO				IAmb	IAmb	12 54 31.4	
	comp=Z,49nm,1.1s						
OSL	Oslo	22.68	347	eP	P	12 54 20.6	-1.2
PNCL	Nicolau / Gran	22.68	279	eP	P	12 54 20.4	-1.6
	comp=Z,82nm,1.6s						
PTEO	Sao Teotonio	22.93	278	eP	P	12 54 26.4	+1.8
	comp=Z,110nm,1.0s						
BLS5	Blasjo	23.11	342	eP	P	12 54 26.5	+0.2
NC602	NORSAR Array S	23.31	349	eP	P	12 54 27.4	-0.8
NC602	NORSAR Array S	23.31	349	P	P	12 54 27.4	-0.8
EKA	Eskdalemuir Ar	23.39	325	P	P	12 54 29.4	+0.2
	comp=Z,23nm,0.8s,baz=126,slow=10,SNR=33						
ESK	Eskdalemuir	23.41	325	P	P	12 54 29.9	+0.6
ESK				pmax	pmax		
	comp=Z,69nm,0.9s						
ESK	Eskdalemuir	23.41	325	P	P	12 54 29.9	+0.6
NAO01	NORSAR Array S	23.51	348	P	P	12 54 29.6	-0.7
FINES	FINESS Array B	23.62	7	P	P	12 54 29.9	-1.4
	comp=Z,26nm,0.8s,baz=164,slow=9.9,SNR=52						
FINES				LR	LR	13 04 48.8	
	comp=Z,973nm,19.0s,baz=200,slow=39						
NC405	NORSAR Array S	23.64	350	P	P	12 54 31.0	-0.6
NB201	NORSAR Array S	23.64	349	P	P	12 54 31.4	-0.2
NB2	NORSAR Subarra	23.65	349	P	P	12 54 30.6	-1.1
	comp=Z,46nm,1.2s,baz=162,slow=9.3						
NB2	NORSAR Subarra	23.65	349	P	P	12 54 30.6	-1.1
	baz=162,slow=9.3						
NOA	NORSAR Array B	23.65	349	P	P	12 54 31.1	-0.6
	comp=Z,21nm,0.9s,baz=158,slow=9.1,SNR=50						
NOA				LR	LR	13 04 54.7	
	comp=Z,328nm,19.7s,baz=165,slow=40						
NBO00	NORSAR Array S	23.70	348	P	P	12 54 32.1	-0.1
NC303	NORSAR Array S	23.80	349	P	P	12 54 32.4	-0.7
SKAR	Skarslia	23.82	345	eP	P	12 54 33.4	0.0
NC204	NORSAR Array S	23.94	349	P	P	12 54 34.5	0.0
HYA	Hoyanger	24.71	344	eP	P	12 54 40.7	-0.7
DOMB	Dombas	24.94	347	eP	P	12 54 43.9	+0.3

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MOL   Molde            25.70 346 eP    P      12 54 50.1 -0.3
KLMR  Klimovskoe       25.74  22 eP    P      12 54 48.1 -2.7
KLMR                              S    S      12 59 18.0 -1.1
KLMR                              pmax pmax
      comp=Z,99nm,1.1s
KLMR                              MLR  MLR
      comp=Z,961nm,14.0s
KLMR  Klimovskoe       25.74  22 eP    P      12 54 48.2 -2.6
KLMR                             eP    P      12 54 48.2 -2.6
KLMR                             eP    P      12 54 48.2 -2.6
KLMR                              AMP         12 55 03.3
      comp=Z,99nm,1.1s
KLMR                              S    S      12 59 18.1 -1.1
KLMR                              S    S      12 59 18.1 -1.1
KLMR                              LQ   LQ     13 02 34.1
KLMR                              LQ   LQ     13 02 34.1
KLMR                              LR   LR     13 03 57.7
KLMR                              AMP         13 06 07.8
      comp=Z,961nm,13.8s
NSS   Namsos           26.91 352 eP    P      12 55 01.3  0.0
KIRV  Kirov            27.78  33  P    P      12 55 08.0 -1.1
      comp=Z,6.3nm,0.6s,baz=233,slow=19,SNR=5.2
TMCR  Tamitsa          28.13  16 eP    P      12 55 10.9 -1.4
TMCR                              pmax pmax
      comp=Z,22nm,0.5s
PRGR  Permogore        28.27  26 eP    P      12 55 16.1 +2.6
PRGR                              pmax pmax
      comp=Z,25nm,0.5s
MOR8  Moi Rana         28.30 355 eP    P      12 55 13.9 +0.1
KONS  Konsvik          28.72 354 eP    P      12 55 16.7 -0.8
AKTO  Aktyubinsk       29.32  53  P    P      12 55 21.7 -1.3
      comp=Z,1.2nm,0.4s,baz=262,slow=12,SNR=4.2
AKTO                              LR   LR     13 08 27.7
      comp=Z,455nm,21.3s,baz=269,slow=39
GEYT  Alibeck          29.62  79  P    P      12 55 25.1 -0.8
      comp=Z,2.0nm,0.5s,baz=128,slow=2.4,SNR=3.6
GEYT                              LR   LR     13 09 23.9
      comp=Z,138nm,19.4s,baz=205,slow=41
TOA0  Torodi Ar. Sit   29.90 219  P    P      12 55 27.9 -0.6
TOA0                              IAmb IAmb   12 55 29.3
      comp=Z,20nm,0.9s
TORD  Torodi Ar. Bea   29.90 219  P    P      12 55 27.7 -0.7
      comp=Z,19nm,0.9s,baz=33,slow=8.8,SNR=80
STEI  Steigen          30.00 356 eP    P      12 55 28.4 -0.3
AB31  Akbulak array    30.39  56 eP    P      12 55 31.1 -1.4
ABKAR Akbulak array    30.39  56  P    P      12 55 31.4 -1.1
KTK1  Kautokeino       30.99   2 eP    P      12 55 37.1 -0.4
ARU   Arti             31.19  42c iP   P      12 55 38.0 -1.5
ARU                               S    S      13 00 45.8 +0.8
ARU                               SS   SnSn   13 02 24.7 -2.3
ARU                               pmax pmax
      comp=Z,11nm,1.1s
ARU   Arti             31.19  42  P    P      12 55 38.1 -1.4
ARU                               IAmb IAmb   12 55 50.8
      comp=Z,8.2nm,0.7s
TRO   Tromso           31.58 359 eP    P      12 55 42.2 -0.5
ARCES ARCESS Array B   31.60   3  P    P      12 55 41.8 -1.1
      comp=Z,6.9nm,0.8s,baz=188,slow=11,SNR=22
ARCES                             LR   LR     13 08 23.8
      comp=Z,218nm,18.1s,baz=179,slow=36
ARE0  ARCESS Array S   31.60   3 eP    P      12 55 42.0 -0.9
SVE   Sverdlovsk       32.41  42 eP    P      12 55 49.4 -0.8
SVE                               pmax pmax
      comp=Z,26nm,0.9s
SVE                               MLR  MLR
      comp=Z,504nm,12.0s
BRVK  Borovoye         37.20  50c iP   P      12 56 30.5 -1.1
BRVK                              pmax pmax
      comp=Z,14nm,1.3s
BRVK  Borovoye         37.20  50  P    P      12 56 31.1 -0.4
BRVK                              IAmb IAmb   12 56 36.7
      comp=Z,14nm,1.1s
CHGR  Chuyangaron      37.90  74  P    P      12 56 38.5 +0.7
KK31  Karatay Array    37.94  66 eP    P      12 56 38.2 +0.1
KK31  Karatay Array    37.94  66  P    P      12 56 39.0 +1.0
KK31                              IAmb IAmb   12 56 44.1
      comp=Z,11nm,0.8s
KKAR  Karatay Array    37.94  66  P    P      12 56 39.0 +0.9
KKAR                              pmax pmax
      comp=Z,11nm,0.8s
KKAR  Karatay Array    37.94  66  P    P      12 56 39.0 +0.9
KKAR                              IAmb IAmb   12 56 44.1
      comp=Z,11nm,0.8s
GAR   Garm             38.69  73  P    P      12 56 45.5 +1.0
GAR                               IAmb IAmb   12 56 59.6
      comp=Z,20nm,1.0s
DBIC  Dimbokro         38.76 223  P    P      12 56 44.0 -1.0
      comp=Z,22nm,0.7s,baz=16,slow=10.0,SNR=30
TIC   Toumodi          38.87 223 eP    P      12 56 45.0 -1.0
      comp=Z,4.7nm,0.3s
KIC   Kosan Boka       38.96 222 eP    P      12 56 46.0 -0.8
      comp=Z,33nm,0.6s
SCO   Scoresbysund     39.19 339 i P   P      12 56 49.9 +1.8
      comp=Z,11nm,0.8s
SCO   Scoresbysund     39.19 339 i P   P      12 56 49.9 +1.8
SCO                               pmax pmax
      comp=Z,11nm,0.8s
LIC   Lamto            39.22 222 eP    P      12 56 48.3 -0.7
      comp=Z,112nm,0.8s
MBAR  Mbarara          39.71 164  P    P      12 56 52.4 -0.8
      comp=Z,4.4nm,0.2s,baz=306,slow=23,SNR=2.3
MBAR  Mbarara          39.71 164  P    P      12 56 52.4 -0.8
MBAR                              pmax pmax
      comp=Z,7.0nm,1.0s
MBAR  Mbarara          39.71 164  IAmb IAmb   12 56 58.0
      comp=Z,7.5nm,0.9s
ARSB  Arslanbob        40.10  68  P    P      12 56 58.3 +2.0
ARSB                              pmax pmax
      comp=Z,45nm,1.5s
ARSB  Arslanbob        40.10  68  P    P      12 56 58.3 +2.0
ARSB                              IAmb IAmb   12 57 07.4
      comp=Z,45nm,1.5s
SPITS Spitsbergen Ar   40.20 359  P    P      12 56 56.6 +0.1
      comp=Z,2.6nm,0.5s,baz=159,slow=14,SNR=10
AAK   Ala-Archa        40.91  66  P    P      12 57 03.7 +0.7
      comp=Z,4.9nm,0.8s,baz=224,slow=12,SNR=3.6
AAK   Ala-Archa        40.91  66⇑eP    P      12 57 04.7 +1.7
AAK                               pmax pmax
      comp=Z,7.0nm,1.0s
KMBO  Kilima Mbogo     42.06 154  P    P      12 57 13.9 +1.2
      comp=Z,0.8nm,0.3s,baz=310,slow=12,SNR=2.4
KMBO                              LR   LR     13 16 53.4
      comp=Z,195nm,18.4s,baz=77,slow=39
KURBB Kurchatov Arra   42.37  53  P    P      12 57 12.5 -2.1
KURK  Kurchatov        42.42  53ceP    P      12 57 13.3 -1.7
KURK                              pmax pmax
      comp=Z,18nm,1.7s
KURK  Kurchatov        42.42  53  P    P      12 57 13.9 -1.1
KURK                              IAmb IAmb   12 57 20.2
      comp=Z,16nm,1.1s
NIL   Nilore           42.62  79  P    P      12 57 18.6 +1.7
NIL                               pmax pmax
      comp=Z,14nm,1.0s
NIL   Nilore           42.62  79  P    P      12 57 18.6 +1.7
NIL                               IAmb IAmb   12 57 21.8
      comp=Z,14nm,0.9s
KSH   Kashi            42.77  70  P    P      12 57 17.9 -0.3
KSH                               sP   sP     12 57 24.2 +0.1
KSH                               S    S      13 03 40.1 -1.7
KSH                               pmax pmax
      comp=Z,9.0nm,1.0s
KSH                               pmax pmax
      comp=Z,350nm,5.9s
KSH                               LR   LR
      comp=Z,360nm,12.5s
KSH                               LR   LR
      comp=Z,160nm,10.4s
SUMG  Summit           44.82 339 i P   P      12 57 35.7 +1.1
      comp=Z,42nm,1.0s
SUMG  Summit           44.82 339 i P   P      12 57 35.7 +1.1
SUMG                              pmax pmax
      comp=Z,42nm,1.0s
SUMG  Summit           44.82 339  P    P      12 57 35.9 +1.3
SUMG                              IAmb IAmb   12 57 38.2
      comp=Z,13nm,0.9s
MAKZ  Makanchi         45.23  58  P    P      12 57 36.7 -1.0
MAKZ                              pmax pmax
      comp=Z,5.0nm,0.8s
MAKZ  Makanchi         45.23  58  P    P      12 57 36.7 -1.0
MK31  Makanchi Array   45.45  58 eP    P      12 57 37.7 -1.7
MK31  Makanchi Array   45.45  58  P    P      12 57 38.1 -1.3
MK31                              IAmb IAmb   12 57 49.1
      comp=Z,14nm,1.2s
MKAR  Makanchi Array   45.45  58  P    P      12 57 38.3 -1.1
      comp=Z,6.6nm,0.4s,baz=274,slow=7.3,SNR=266
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MKAR                              LR   LR     13 18 59.0
      comp=Z,271nm,21.1s,baz=284,slow=39
MKAR  Makanchi Array   45.45  58 i P   P      12 57 38.0 -1.4
MKAR                              pmax pmax
      comp=Z,7.0nm,0.4s
NOR   Nord             45.52 353 i P   P      12 57 39.0 -0.5
NOR   Nord             45.52 353 i P   P      12 57 39.0 -0.5
ZAA0  Zalesovo Array   45.83  48  P    P      12 57 41.1 -1.2
ZALV  Zalesovo Beam    45.83  48  P    P      12 57 41.1 -1.2
      comp=Z,19nm,0.4s,baz=273,slow=9.0,SNR=112
ZALV                              LR   LR     13 17 43.7
      comp=Z,312nm,21.3s,baz=282,slow=37
NRIK  Noril'sk         46.91  27  P    P      12 57 50.0 -0.6
      comp=Z,1.8nm,0.4s,baz=239,slow=6.1,SNR=4.4
NRIK                              LR   LR     13 19 09.6
      comp=Z,470nm,20.4s,baz=262,slow=38
NRIK  Noril'sk         46.91  27  P    P      12 57 50.0 -0.6
WMQ   Urumqi           49.91  61 eP    P      12 58 19.1 +5.0
WMQ                               pP   sP     12 58 22.2 +2.1
WMQ                               pmax pmax
      comp=Z,11nm,0.9s
WMQ                               pmax pmax
      comp=Z,87nm,5.1s
WMQ                               LR   LR
      comp=Z,280nm,16.7s
WMQ                               LR   LR
      comp=Z,300nm,19.7s
DANN  Dangsing         53.02  81 eP    P      12 58 36.7 -1.2
      comp=Z,37nm,0.7s
LSZ   Lusaka           53.62 171  P    P      12 58 43.2 +1.1
LSZ                               pmax pmax
      comp=Z,10.0nm,1.2s
LSZ   Lusaka           53.62 171  P    P      12 58 43.2 +1.1
LSZ                               IAmb IAmb   12 58 44.3
      comp=Z,10.0nm,1.1s
GUN   Gumba            54.88  80 eP    P      12 58 50.4 -1.2
MOY   Mondy            55.89  48 eP    P      12 58 58.2  0.0
RAMN  Ramite           55.90  81 eP    P      12 58 58.1 -0.8
ODAN  Odare            56.56  80 eP    P      12 59 02.6 -0.9
TAPN  Taplejung        56.57  80 eP    P      12 59 02.0 -1.7
TLY   Talaya           57.43  47  P    P      12 59 09.7 +0.6
      comp=Z,2.6nm,0.9s,baz=297,slow=6.0,SNR=6.1
TLY   Talaya           57.43  47⇓iP    P      12 59 09.3 +0.2
TLY                               pmax pmax
      comp=Z,4.0nm,1.0s
TLY   Talaya           57.43  47  P    P      12 59 09.6 +0.6
TLY                               IAmb IAmb   12 59 18.6
      comp=Z,8.2nm,1.2s
ZAK   Zakamensk        57.70  49 eP    P      12 59 10.4 -0.7
ZAK                               pmax pmax
      comp=Z,3.0nm,1.1s
SCHQ  Schefferville    58.41 317  P    P      12 59 16.1 +0.2
      comp=Z,3.4nm,0.6s,baz=78,slow=3.3,SNR=6.0
SCHQ                              LR   LR     13 24 43.9
      comp=Z,219nm,18.0s,baz=12,slow=36
SCHQ  Schefferville    58.41 317  P    P      12 59 15.9  0.0
TIXI  Tiksi            59.75  20⇑eP    P      12 59 24.7 -0.2
TIXI                              pmax pmax
      comp=Z,8.0nm,1.7s
TIXI  Tiksi            59.75  20  P    P      12 59 24.8 -0.1
RES   Resolute Bay     59.78 344  P    P      12 59 26.3 +1.2
RES                               pmax pmax
      comp=Z,5.0nm,1.0s
RES   Resolute Bay     59.78 344  P    P      12 59 26.3 +1.2
GTA   Gaotai           59.97  62 eP    P      12 59 25.6 -1.5
GTA                               pP   pP     12 59 29.8 -1.7
GTA                               sP   sP     12 59 33.2 +0.1
GTA                               pmax pmax
      comp=Z,3.0nm,0.9s
BOD   Bodaibo          60.50  38 eP    P      12 59 29.0 -1.3
BOD                               pmax pmax
      comp=Z,9.0nm,1.4s
SONM  Songino Array    60.60  50  P    P      12 59 30.6 -0.6
      comp=Z,4.0nm,0.9s,baz=285,slow=8.8,SNR=15
SONM                              LR   LR     13 26 35.8
      comp=Z,238nm,21.6s,baz=287,slow=37
ULN   Ulaanbaatar      60.99  50  P    P      12 59 33.4 -0.5
ULN                               pmax pmax
      comp=Z,8.0nm,1.2s
ULN   Ulaanbaatar      60.99  50  P    P      12 59 33.4 -0.5
ULN                               IAmb IAmb   12 59 51.6
      comp=Z,7.7nm,1.2s
PALK  Pallekele        62.33 103  P    P      12 59 43.6 +0.3
      comp=Z,9.0nm,1.0s,baz=294,slow=6.9,SNR=3.1
LZH   Lanzhou          64.35  63 eP    P      12 59 55.0 -1.6
LZH                              ePP   PP     13 02 18.4 +0.6
LZH                               pmax pmax
      comp=Z,23nm,1.3s
LZH                               pmax pmax
      comp=Z,85nm,7.5s
LZH                               LR   LR
      comp=Z,270nm,15.2s
LZH                               LR   LR
      comp=Z,280nm,15.5s
LZH                               LR   LR
      comp=Z,490nm,17.8s
YAK   Yakutsk          65.22  29  P    P      13 00 01.4 -0.2
      comp=Z,6.3nm,0.3s
YAK   Yakutsk          65.22  29 eP    P      13 00 00.5 -1.1
YAK                              e*PP  pP     13 00 03.8 -2.2
YAK                              e            13 00 32.3
YAK                              eS    S      13 08 42.9 -1.2
YAK                              e            13 09 58.1
YAK                               pmax pmax
      comp=Z,17nm,0.9s
YAK                               pmax pmax
      comp=E,4.0nm,1.3s
YAK                               pmax pmax
      comp=N,2.0nm,1.0s
YAK                               pmax pmax
      comp=Z,177nm,5.1s
YAK                               pmax pmax
      comp=E,105nm,5.1s
YAK                               pmax pmax
      comp=N,87nm,4.8s
YAK                               smax smax
      comp=N,79nm,3.5s
YAK                               smax smax
      comp=E,68nm,3.7s
YAK                               MLR  MLR
      comp=Z,398nm,22.0s
YAK                               MLR  MLR
      comp=N,280nm,23.0s
YAK                               MLR  MLR
      comp=E,263nm,22.0s
YAK   Yakutsk          65.22  29  IAmb IAmb   13 00 01.6
      comp=Z,25nm,0.7s
BOSA  Boshof           66.55 175  P    P      13 00 10.3 -0.2
      comp=Z,5.1nm,1.0s,baz=342,slow=3.3,SNR=4.9
BOSA  Boshof           66.55 175  P    P      13 00 10.4 -0.2
BOSA                              pmax pmax
      comp=Z,24nm,1.5s
HHC   Hu-ho-hao-te     67.18  55 eP    P      13 00 16.2 +1.5
HHC                               S    S      13 09 13.8 +4.9
HHC                               pmax pmax
      comp=Z,75nm,1.0s
HHC                               pmax pmax
      comp=Z,310nm,6.0s
HHC                               LR   LR
      comp=Z,650nm,16.2s
HHC                               LR   LR
      comp=Z,550nm,15.7s
HHC                               LR   LR
      comp=Z,610nm,16.3s
PLVO  Plevna           68.82 311  P    P      13 00 26.5 +1.7
XAN   Xi'an            68.97  63  P    P      13 00 30.0 +4.0
XAN                               pmax pmax
      comp=Z,5.0nm,1.2s
ZEA   Zeya             69.00  38 eP    P      13 00 25.8  0.0
ZEA                               pmax pmax
      comp=Z,12nm,1.0s
ZEA                               MLR  MLR
      comp=Z,400nm,15.0s
ZEA                               MLR  MLR
      comp=E,200nm,17.0s
ZEA                               MLR  MLR
      comp=N,200nm,14.0s
C36M  Paulatuk         69.68 347  P    P      13 00 30.3 +0.6
C36M                              IAmb IAmb   13 00 30.9
      comp=Z,4.8nm,0.9s
CHTO  Chiang Mai       69.83  82  P    P      13 00 33.0 +1.6
CHTO                              pmax pmax
      comp=Z,4.0nm,0.9s
CHTO  Chiang Mai       69.83  82  P    P      13 00 33.0 +1.6
CMAR  Chiang Mai Arr   70.03  82  P    P      13 00 32.2 -0.5
      comp=Z,1.9nm,0.6s,baz=301,slow=7.7,SNR=9.0
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BILL  Bilibino         71.10  13 eP    P      13 00 38.5 +0.1
BILL                             e            13 03 14.4
BILL                             ePPP  PPP    13 04 59.2
BILL                              pmax pmax
      comp=Z,10.0nm,1.3s
BILL                              MLR  MLR
      comp=Z,225nm,21.0s
BILL  Bilibino         71.10  13  P    P      13 00 38.2 -0.1
BILL                              IAmb IAmb   13 00 43.4
      comp=Z,8.0nm,1.1s
M55A  Ridgway          71.84 309  P    P      13 00 44.8 +1.4
INK   Inuvik           72.09 350  P    P      13 00 44.5 +0.2
      comp=Z,1.9nm,0.8s,baz=22,slow=12,SNR=6.0
INK   Inuvik           72.09 350  P    P      13 00 44.5 +0.2
INK                               pmax pmax
      comp=Z,4.0nm,0.9s
ERPA  Erie             72.21 310  P    P      13 00 46.9 +1.3
SEY   Seymchan         72.24  21  P    P      13 00 45.7 +0.4
      comp=Z,3.1nm,0.8s,baz=288,slow=4.3,SNR=3.8
SEY   Seymchan         72.24  21⇓eP    P      13 00 46.3 +1.0
PBKT  Sadao Pong       72.69  82  P    P      13 00 49.0 +0.3
PBKT                              IAmb IAmb   13 00 57.2
      comp=Z,6.3nm,1.1s
E44A  Grand Marais A   72.95 316  P    P      13 00 51.7 +1.8
TOLK  Toolik Lake Re   73.29 356  P    P      13 00 53.0 +1.5
TOLK                              IAmb IAmb   13 00 53.8
      comp=Z,6.1nm,0.9s
YKA   Yellowknife Ar   73.39 340  P    P      13 00 52.5 +0.4
      comp=Z,1.2nm,0.6s,baz=38,slow=5.4,SNR=25
E43A  Lone Tree Farm   73.69 316  P    P      13 00 55.3 +1.0
E43A                              IAmb IAmb   13 01 10.5
      comp=Z,8.5nm,0.9s
KLR   Kul'dur          74.00  39  P    P      13 00 55.8 -0.2
      comp=Z,5.7nm,0.8s,baz=320,slow=7.4,SNR=19
KLR   Kul'dur          74.00  39⇓iP    P      13 00 56.0  0.0
KLR                               pmax pmax
      comp=Z,11nm,1.0s
CN2   Changchun        74.02  47 eP    P      13 00 56.0 -0.2
CN2                               pmax pmax
      comp=Z,10.0nm,1.2s
RDOG  Red Dog Mine     74.12   1  P    P      13 00 57.3 +1.0
RDOG                              IAmb IAmb   13 01 09.1
      comp=Z,8.3nm,0.8s
EPYK  Eagle Plains     74.35 351  P    P      13 00 58.0 +0.3
EPYK                              IAmb IAmb   13 01 09.3
      comp=Z,7.0nm,0.9s
MA2   Magadan          74.40  24  P    P      13 00 58.3 +0.1
      comp=Z,8.5nm,0.6s,baz=360,slow=11,SNR=6.7
MA2   Magadan          74.40  24⇑eP    P      13 00 58.4 +0.3
MA2                               pmax pmax
      comp=Z,12nm,1.0s
MA2   Magadan          74.40  24  P    P      13 00 58.7 +0.6
COLD  Coldfoot         74.73 356  P    P      13 01 01.1 +1.2
WHN   Wuhan            74.73  63  P    P      13 01 03.9 +3.4
COWI  Conover          75.02 317  P    P      13 01 02.8 +0.7
COWI                              IAmb IAmb   13 01 18.6
      comp=Z,5.5nm,0.8s
EYMN  Ely              75.06 320  P    P      13 01 02.7 +0.5
FFC   Flin Flon        75.16 330  P    P      13 01 03.7 +1.1
FFC                               pmax pmax
      comp=Z,3.0nm,0.9s
FFC   Flin Flon        75.16 330  P    P      13 01 03.7 +1.1
H43A  Windswept, Lux   75.31 315  P    P      13 01 05.0 +1.3
H43A                              IAmb IAmb   13 01 12.4
      comp=Z,9.9nm,0.8s
ULM   Lac du Bonnet    75.66 324  P    P      13 01 06.1 +0.5
      comp=Z,2.7nm,0.7s,baz=46,slow=5.5,SNR=9.0
ULM                               LR   LR     13 35 00.3
      comp=Z,161nm,19.1s,baz=358,slow=36
ULM   Lac du Bonnet    75.66 324  P    P      13 01 06.1 +0.5
ULM                               pmax pmax
      comp=Z,7.0nm,0.8s
ULM   Lac du Bonnet    75.66 324  P    P      13 01 06.1 +0.5
ULM                               IAmb IAmb   13 01 23.7
      comp=Z,6.6nm,0.8s
PDPR  Patillas Dam,    76.32 282  P    P      13 01 11.1 +1.3
MDM   Murphy Dome      76.86 355  P    P      13 01 13.7 +1.5
MDM                               IAmb IAmb   13 01 15.3
      comp=Z,9.8nm,1.1s
DAWY  Dawson           76.89 351  P    P      13 01 13.5 +1.1
DAWY                              IAmb IAmb   13 01 31.4
      comp=Z,8.0nm,0.9s
MLY   Manley           76.94 356  P    P      13 01 13.9 +1.2
IL31                   76.95 354  P    P      13 01 14.1 +1.5
IL31                              IAmb IAmb   13 01 19.2
      comp=Z,8.8nm,1.4s
ILAR  Eielson Array    76.95 354  P    P      13 01 12.8 +0.1
      comp=Z,2.5nm,0.9s,baz=360,slow=4.5,SNR=24
ILAR                              LR   LR     13 37 29.0
      comp=Z,103nm,19.3s,baz=1.0,slow=38
NJ2   Nanjing          76.96  60 eP    P      13 01 14.3 +1.0
NJ2                               pmax pmax
      comp=Z,14nm,0.6s
HDA   Harding Lake     77.31 354  P    P      13 01 15.2 +0.5
HDA                               IAmb IAmb   13 01 16.3
      comp=Z,9.5nm,0.9s
WRH   Wood River Hil   77.34 355  P    P      13 01 15.3 +0.5
WRH                               IAmb IAmb   13 01 16.5
      comp=Z,9.4nm,1.0s
USRK  Ussuriysk Ar.    77.42  43  P    P      13 01 15.0 -0.6
      comp=Z,1.0nm,0.3s,baz=296,slow=4.3,SNR=10
USRK                              LR   LR     13 37 58.8
      comp=Z,255nm,19.9s,baz=314,slow=38
ANM   Nome             77.55   3  P    P      13 01 16.7 +0.7
ANM                               pmax pmax
      comp=Z,11nm,1.2s
ANM   Nome             77.55   3  P    P      13 01 16.7 +0.7
ANM                               IAmb IAmb   13 01 17.8
      comp=Z,11nm,1.2s
BPAW  Bear Paw Mtn.    77.89 356  P    P      13 01 18.2 +0.2
MCK   McKinley         78.13 355  P    P      13 01 20.2 +0.9
MCK                               pmax pmax
      comp=Z,12nm,1.1s
MCK   McKinley         78.13 355  P    P      13 01 20.2 +0.9
MCK                               IAmb IAmb   13 01 21.4
      comp=Z,12nm,1.1s
DHY   Denali Highway   78.67 354  P    P      13 01 23.2 +0.8
DHY                               IAmb IAmb   13 01 24.2
      comp=Z,10nm,1.0s
PSI   Prapat           79.29  95  P    P      13 01 26.5  0.0
      comp=Z,2.6nm,0.4s,baz=158,slow=20,SNR=3.8
RPSI  Rantau Prapat    79.35  95  P    P      13 01 26.5 -0.2
KSAR  Wonju Array Be   79.45  51  P    P      13 01 26.3 -0.7
KSAR  Wonju Array Be   79.45  51  P    P      13 01 26.3 -0.7
KSRS  Korea Array      79.47  51  P    P      13 01 26.7 -0.3
      comp=Z,4.4nm,0.9s,baz=315,slow=4.6,SNR=7.9
KSRS                              LR   LR     13 38 28.8
      comp=Z,154nm,18.1s,baz=321,slow=37
T47A  Sharon Grove     79.69 309  P    P      13 01 28.9 +0.6
T47A                              IAmb IAmb   13 01 48.2
      comp=Z,9.6nm,1.1s
HYT   Haines Junctio   79.75 349  P    P      13 01 30.6 +2.3
ECSD  EROS Data Cent   80.54 319  P    P      13 01 33.7 +0.9
YSS   Yuzh-Sakhalins   80.89  36 eP    P      13 01 33.7 -0.9
YSS                              e            13 01 37.9
YSS                               pmax pmax
      comp=Z,30nm,0.8s
YSS                               MLR  MLR
      comp=Z,400nm,15.0s
YSS   Yuzh-Sakhalins   80.89  36  P    P      13 01 34.6  0.0
PETK  Petropavlovsk-   81.91  24  LR   LR     13 43 47.0
      comp=Z,209nm,18.2s,baz=272,slow=40
PTGA  Pitinga          82.82 263  P    P      13 01 46.3 +1.0
PTGA                              IAmb IAmb   13 01 47.1
      comp=Z,7.9nm,0.9s
ASAJ  Asahikawa        82.92  38  P    P      13 01 45.1 -0.2
      comp=Z,5.0nm,0.6s,baz=292,slow=7.6,SNR=9.6
JKA   Kamikawa-asahi   82.92  38  P    P      13 01 45.1 -0.2
S39A  Bolivar          82.93 313  P    P      13 01 46.4 +0.9
S39A                              IAmb IAmb   13 02 02.3
      comp=Z,4.1nm,0.7s
BDFB  Brasilia         83.37 244  P    P      13 01 48.6 +0.5
      comp=Z,1.9nm,0.3s,baz=59,slow=10,SNR=3.9
BDFB                              LR   LR     13 40 27.8
      comp=Z,354nm,18.5s,baz=88,slow=37
BDFB  Brasilia         83.37 244  P    P      13 01 48.6 +0.5
BDFB                              pmax pmax
      comp=Z,10.0nm,1.2s
BDFB  Brasilia         83.37 244  IAmb IAmb   13 01 49.5
      comp=Z,9.8nm,1.2s
EGMT  Eagleton         83.42 329  P    P      13 01 49.4 +1.5
JNU   Nakatsue         84.13  52  P    P      13 01 51.5 -0.3
      comp=Z,6.9nm,0.9s,baz=108,slow=12,SNR=2.1
WALA  Waterton Lakes   84.20 332  P    P      13 01 53.4 +1.4
WALA                              IAmb IAmb   13 02 01.9
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	comp=Z,4.7nm,0.9s						
T35A	Sooner Cattle	85.29	314	P	P	13 01 58.9	+1.3
SDV	Santo Domingo	85.35	278	P	P	13 01 59.2	+0.8
JTMT	Jette	85.43	331	P	P	13 01 59.6	+1.4
YNE	Yellowstone No	85.93	327	P	P	13 02 02.4	+1.5
NEW	Newport	86.04	333	P	P	13 02 02.6	+1.5
NEW				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NEW	Newport	86.04	333	P	P	13 02 02.6	+1.5
MJAR	Matsushiro Arr	86.12	46	P	P	13 02 02.0	+0.3
	comp=Z,2.7nm,0.9s,baz=287,slow=6.4,SNR=3.7						
MJAR	Matsushiro Arr	86.12	46	P	P	13 02 02.0	+0.3
YHL	Hebgen Lake	86.55	328	P	P	13 02 05.9	+1.8
PDAR	Pinedale Array	87.52	326	P	P	13 02 08.5	-0.2
	comp=Z,0.3nm,0.6s,baz=90,slow=4.4,SNR=3.7						
PDAR				LR	LR	13 43 12.1	
	comp=Z,160nm,18.7s,baz=36,slow=37						
BMO	Blue Mountains	89.00	331	P	P	13 02 15.5	0.0
BMO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BMO	Blue Mountains	89.00	331	P	P	13 02 15.5	0.0
BMO				IAmb	IAmb	13 02 28.5	
	comp=Z,2.9nm,0.8s						
HWUT	Hardware Ranch	89.34	326	P	P	13 02 18.5	+1.3
HWUT				IAmb	IAmb	13 02 37.2	
	comp=Z,7.3nm,1.1s						
ROSC	El Rosal	90.71	277	LR	LR	13 39 14.2	
	comp=Z,66nm,19.8s,baz=15,slow=33						
NVAR	Mina Array Bea	94.85	329	P	P	13 02 43.8	+0.9
	comp=Z,0.1nm,0.5s,baz=30,slow=4.2,SNR=2.7						
NVAR				LR	LR	13 47 50.7	
	comp=Z,209nm,18.3s,baz=1.0,slow=37						
TXAR	Lajitas Array	94.91	313	P	P	13 02 44.0	+0.8
	comp=Z,0.6nm,0.8s,baz=81,slow=4.1,SNR=8.1						
TXAR				LR	LR	13 45 25.7	
	comp=Z,84nm,19.2s,baz=0.0,slow=36						
TXAR	Lajitas Array	94.91	313	P	P	13 02 44.0	+0.8
CPUP	Villa Florida	96.90	242	LR	LR	13 47 45.6	
	comp=Z,282nm,19.1s,baz=50,slow=36						
PAGB	Antelope Grade	97.96	329	P	P	13 02 55.7	-1.1
LPAZ	La Paz	98.70	256	LR	LR	13 48 40.9	
	comp=Z,92nm,20.3s,baz=60,slow=36						
WRA	Warramunga Arr	120.67	92	PKP	PKPdf	13 08 11.6	-1.2
	comp=Z,0.4nm,0.8s,baz=329,slow=1.9,SNR=4.3						
ASAR	Alice Springs	122.30	96	PKP	PKPdf	13 08 14.9	-1.0
	comp=Z,0.4nm,0.7s,baz=328,slow=1.8,SNR=5.5						
ASAR				PKKPbc	PKKPab	13 18 11.5	+0.3
	comp=Z,0.8nm,1.1s,baz=119,slow=3.8,SNR=4.6						

BER 05 12:50:35.0±2.1**, 59°.82N**×**9°.87E, h0^{km}, ML1.1, Suspected explosion, Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KONO	Kongsberg	0.22	219	eP	Pg	12 50 38.3	-0.8
KONO				eS	Sg	12 50 41.4	-0.5
KONO				IAML		12 50 43.4	
	comp=Z,72nm,0.6s						
STRU	Stroemstad	1.03	139	eP	Pg	12 50 53.4	-1.4
STRU				eS	Sg	12 51 07.4	-0.7
NAO01	NORSAR Array S	1.15	26	eP	Pg	12 50 54.4	-2.6
NAO01				eS	Sg	12 51 09.2	-2.7
NAO01				IAML		12 51 14.9	
	comp=Z,4.3nm,0.8s						
SKAR	Skarslia	1.17	319	eP	Pg	12 50 55.5	-1.9
SKAR				eS	Sg	12 51 10.3	-2.1
SKAR				IAML		12 51 15.6	
	comp=Z,8.6nm,0.5s						
NC602	NORSAR Array S	1.24	41	eP	Pg	12 50 57.0	-1.9
NC602				eS	Sg	12 51 12.9	-2.0
NC602				IAML		12 51 16.5	
	comp=Z,3.9nm,0.8s						
NBO00	NORSAR Array S	1.30	20	eP	Pg	12 50 58.5	-1.4
NBO00				eS	Sg	12 51 15.7	-1.0
NBO00				IAML		12 51 19.6	
	comp=Z,2.7nm,0.6s						
NB201	NORSAR Array S	1.43	29	eS	Sg	12 51 20.1	-0.7
NB201				IAML		12 51 20.6	
	comp=Z,2.5nm,0.4s						
NC204	NORSAR Array S	1.53	16	eP	Pn	12 51 02.8	-0.8
NC204				eS	Sg	12 51 22.7	-1.4
NC204				IAML		12 51 27.8	
	comp=Z,2.3nm,0.5s						
NC303	NORSAR Array S	1.60	27	eS	Sn	12 51 23.5	-2.3
ODD1	Odda	1.64	275	eS	Sn	12 51 25.2	-1.6
ODD1				IAML		12 51 28.4	
	comp=Z,5.5nm,0.5s						
CLL	Collm	8.71	167	ePP	Pn	12 52 51.0	+8.9
CLL				i (PPP)		12 53 00.0	
CLL				eS	Sg	12 55 18.0	+3.6
CLL				Lm	MLR	12 58 00.0	
	comp=N,1μm,18.9s						
CLL				Lm	MLR	12 58 00.0	
	comp=E,1μm,19.1s						
CLL				Lm	MLR	12 58 00.0	
	comp=Z,800nm,19.4s						
CLL				Lmax		12 59 00.0	

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*ATH **05** 13:13:46.0, 38°.08N×20°.34E, h20^{km}, ML3.4/12, Error ellipse: s-maj=2.0km s-min=1.0km az=46.0*
*THE **05** 13:13:46.1, 38°.08N×20°.29E, h4^{km}, ML3.6/8, Error ellipse: s-maj=1.1km s-min=0.5km az=51.0*
*IDC **05** 13:13:49.2±3.2, 38°.19N×20°.34E, h36^{km}±27^{km}, mb3.5/10, mb1 3.6/14, mb1mx3.5/44, mbtmp3.6/14, ML3.5/4, Error ellipse: s-maj=23.1km s-min=18.4km az=47.0*
*VIE **05** 13:14:36.7, 42°.66N×21°.41E, h0^{km}, mb4.1/1, ML3.0/3 74 km N of Skopje*
ISC 05 13:13:45.6±1.0**, 38°.08N**±0°.03×**20°.26E**±0°.03**, h15^{km}**±6^{km}**, n69, σ1^{s}.11**/84**, mb3.6**/10**, 4C-5D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.14	31	P	Pb	13 13 50.2	+0.3
KEF3				S	Sb	13 13 53.0	+0.2
LXRA	Lixouri, Kepha	0.18	50	P	Pb	13 13 50.6	0.0
LXRA				S	Sb	13 13 53.7	-0.4
ARGA	Argostoli. Kep	0.20	62	P	Pb	13 13 50.5	-0.4
ARGA				S	Sg	13 13 53.3	+0.1
KEF2	Argostoli. Kep	0.20	66	P	Pb	13 13 50.4	-0.5
KEF2				S	Sg	13 13 53.3	+0.1
KEF4	Livadi, Kephal	0.22	37	P	Pb	13 13 51.2	-0.1
KEF4				S	Sb	13 13 54.9	-0.2
KEF1	Kardakata, Kep	0.26	41	P	Pb	13 13 51.6	-0.3
KEF1				S	Sg	13 13 55.3	+0.4
VLS	Valsamata	0.28	70	P	Pg	13 13 51.4	-0.1
VLS				S	Sg	13 13 54.9	-0.6
	59μm,0.2s						
VLS	Valsamata	0.28	70	P	Pg	13 13 51.4	-0.1
VLS				S	Sg	13 13 55.1	-0.4
VLS				AML	AML	13 13 55.3	
VLS				AML	AML	13 13 55.9	
	comp=E,63571μm,0.1s						
VLMS	Volimes, Zakyn	0.38	123	P	Pb	13 13 53.1	-0.9
VLMS				AML	AML	13 14 04.4	
	comp=E,19997μm,0.3s						
VLMS				AML	AML	13 14 08.2	
	comp=N,26414μm,0.5s						
KFL	Anninata	0.42	86	P	Pg	13 13 53.8	-0.2
KFL				S	Sg	13 13 59.5	-0.2
	comp=N,23μm,0.4s						
KFL	Anninata	0.42	86	P	Pg	13 13 53.7	-0.3
KFL				S	Sg	13 13 58.5	-1.1
KFL				AML	AML	13 13 59.6	
	comp=N,52252μm,0.5s						
KFL				AML	AML	13 13 60.0	
	comp=E,37982μm,0.4s						
KONA	Konidatara, Ke	0.42	36	P	Pb	13 13 54.3	-0.4
KONA				S	Sg	13 14 00.4	+0.6
FSK	Fiskardo	0.44	32	P	Pg	13 13 54.6	+0.2
FSK				S	Sg	13 14 00.8	+0.3
	comp=E,11μm,0.2s						
FSK	Fiskardo	0.44	32	P	Pg	13 13 54.6	+0.2
FSK				S	Sg	13 14 00.8	+0.3
FSK				AML	AML	13 14 02.0	
	comp=N,12533μm,0.2s						
FSK				AML	AML	13 14 02.0	
	comp=E,31587μm,0.2s						
MGNA	Meganis	0.71	36	P	Pg	13 13 59.2	-0.2
MGNA				AML	AML	13 14 12.9	
	comp=E,12736μm,0.7s						
MGNA				AML	AML	13 14 13.0	
	comp=N,6968μm,0.4s						
LKD2	Lefkada island	0.77	24	P	Pg	13 14 00.3	-0.3
LKD2				S	Sb	13 14 11.8	+0.8
	comp=N,3μm,0.4s						
LKD2	Lefkada island	0.77	24	P	Pg	13 14 00.5	0.0
PDO	Prodromos	0.89	54	P	Pg	13 14 02.5	-0.3
PDO				S	Sb	13 14 15.2	+0.8
	comp=N,6μm,0.5s						
PDO	Prodromos	0.89	54	P	Pg	13 14 02.6	-0.3
RLS	Riolos of Patr	0.95	91	P	Pb	13 14 03.1	-0.7
RLS				S	Sn	13 14 17.3	-0.5
	comp=N,1μm,0.5s						
RLS	Riolos of Patr	0.95	91	P	Pb	13 14 02.3	-1.5
PVO	Paravola	1.13	62	P	Pn	13 14 06.9	0.0
PVO				S	Sn	13 14 23.2	+1.1
	comp=N,3μm,0.6s						
PVO	Paravola	1.13	62	P	Pn	13 14 06.8	-0.1
DRO	Drossia	1.15	96	P	Pb	13 14 06.7	-0.5
DRO				AML	AML	13 14 29.9	
	comp=N,4844μm,0.6s						
DRO				AML	AML	13 14 30.4	
	comp=E,6264μm,0.5s						
AMT	Artemida-Makis	1.27	115	P	Pg	13 14 09.8	-0.3
AMT				AML	AML	13 14 33.2	
	comp=N,2761μm,0.7s						
AMT				AML	AML	13 14 40.2	
	comp=E,2582μm,0.7s						
IGT	Igoumenitsa	1.45	2	P	Pg	13 14 13.0	-0.4
TRIZ	Trizonia	1.46	78	P	Pb	13 14 12.1	-0.3
TRIZ	Trizonia	1.46	78	P	Pb	13 14 11.8	-0.6
EVR	Evrytania	1.47	55	P	Pg	13 14 13.2	-0.7
EVR				AML	AML	13 14 44.3	
	comp=E,850μm,0.5s						
EVR				AML	AML	13 14 45.1	
	comp=N,1028μm,0.5s						
KLV	Kalavryta, Ach	1.49	91	P	Pb	13 14 12.8	-0.3
KLV				S	Sg	13 14 32.9	-0.8
KLV	Kalavryta, Ach	1.49	91	P	Pb	13 14 12.8	-0.3
KLV				AML	AML	13 14 44.6	
	comp=E,808μm,0.4s						
KLV				AML	AML	13 14 46.9	
	comp=N,834μm,0.6s						
KALE	Kalithea	1.51	78	P	Pb	13 14 12.7	-0.7
KALE	Kalithea	1.51	78	P	Pn	13 14 12.5	+0.3
KALE				AML	AML	13 14 45.9	
	comp=N,1503μm,0.8s						
KALE				AML	AML	13 14 50.9	
	comp=E,1311μm,0.5s						
ITM	Ithomi	1.60	124	P	Pb	13 14 14.0	-0.9
ITM				AML	AML	13 14 49.6	
	comp=N,1323μm,0.5s						
ITM				AML	AML	13 14 49.8	
	comp=E,1009μm,0.6s						
JAN	Janina	1.64	16	P	Pg	13 14 16.8	-0.3
JAN				AML	AML	13 14 48.7	
	comp=E,1827μm,0.9s						
JAN				AML	AML	13 14 48.7	
	comp=N,1272μm,0.5s						
KEK	Kerkira	1.67	348	P	Pb	13 14 15.3	-0.7
KEK				S	Sg	13 14 38.5	-0.7
	comp=N,685nm,0.5s						
KEK	Kerkira	1.67	348	P	Pb	13 14 16.1	+0.2
PYL	PYLOS	1.67	135	P	Pb	13 14 15.4	-0.6
KASA	Kassiopi	1.68	351	P	Pb	13 14 15.8	-0.4
TIP	Timpagrande	2.95	293	⇑P	Pn	13 14 27.9	-4.1
TIR	Tirane	3.27	355	⇑P	Pn	13 14 36.1	-0.2
MATE	Matera	3.76	314	P	Pn	13 14 42.4	-0.7
STIP	Stip	3.90	22	i Pn	Pn	13 14 42.1	-2.8
PDG	Podgorica	4.41	350	⇓P	Pn	13 14 50.7	-1.3
IDI	Anoyia	4.65	125	Pn	Pn	13 14 57.9	+2.5
	comp=N,0.3nm,0.3s,baz=181,slow=17,SNR=1.4						
IDI				Sn	Sn	13 15 52.0	+2.9
	comp=N,1.2nm,0.3s,baz=306,slow=22,SNR=7.5						
VAE	Valguarnera	4.67	264	Sn	Sn	13 15 50.9	+1.2
	comp=N,3.6nm,0.3s,baz=29,slow=5.8,SNR=3.6						
GZR	Gura Zlata	7.54	14	⇓P	Pn	13 15 28.0	-7.0
ARR	Arges	7.98	23	⇓P	Pn	13 15 29.5	-12
VOIR		8.17	24	⇑P	Pn	13 15 32.6	-11
MLR	Muntele Rosu	8.53	28	Pn	Pn	13 15 49.8	+1.1
	comp=N,0.2nm,0.3s,baz=210,slow=14,SNR=1.7						
MLR	Muntele Rosu	8.53	28	⇑P	Pn	13 15 35.8	-13
PLOR	Plostina	9.10	29	⇓P	Pn	13 15 41.4	-15
VRI	Vrincioaia	9.14	30	⇓P	Pn	13 15 41.9	-15
SOKA	Soboth	9.42	337	i Pn	Pn	13 16 01.4	+0.7
	comp=N,2.6nm,0.3s						
SOKA				eSn	Sn	13 17 41.8	-4.6
	comp=N,1.4nm,0.5s						
OBKA	Obir	9.42	335	i Pn	Pn	13 16 02.1	+1.3
	comp=N,2.5nm,0.3s						
OBKA				i Sn	Sn	13 17 45.1	-1.3
	comp=N,2.5nm,0.3s						
FETA	Feichten	11.36	325	Pn	Pn	13 16 43.0	+16
	comp=N,1.7nm,0.5s						
DAVOX	Davos/Dischmat	11.58	322	Pn	Pn	13 16 31.9	+1.4
	comp=N,0.2nm,0.3s,baz=320,slow=24,SNR=1.5						
GERES	GERESS Array B	11.76	338	Pn	Pn	13 16 33.7	+0.9
	comp=N,0.3nm,0.3s,baz=158,slow=14,SNR=4.1						
HFS	Hagfors	22.46	351	P	P	13 18 45.5	+1.6
	comp=N,3.8nm,0.6s,baz=154,slow=11,SNR=7.2						
EKA	Eskdalemuir Ar	23.39	325	P	P	13 18 54.0	+0.5
	comp=N,0.6nm,0.5s,baz=133,slow=10,SNR=4.6						
FINES	FINESS Array B	23.66	7	P	P	13 18 55.6	-0.6
	comp=N,0.6nm,0.5s,baz=190,slow=8.9,SNR=5.0						
NB2	NORSAR Subarra	23.67	349	P	P	13 18 57.6	+1.3
	comp=Z,0.3nm,0.4s,baz=153,slow=10						
NOA	NORSAR Array B	23.67	349	P	P	13 18 57.1	+0.8
	comp=Z,0.5nm,0.6s,baz=157,slow=9.3,SNR=2.9						
TORD	Torodi Ar. Bea	29.83	219	P	P	13 19 53.7	+1.5
	comp=Z,0.3nm,0.7s,baz=32,slow=11,SNR=2.3						
ARCES	ARCESS Array B	31.64	4	P	P	13 20 06.7	-1.0
	comp=Z,2.6nm,0.9s,baz=188,slow=12,SNR=2.6						
MKAR	Makanchi Array	45.53	58	P	P	13 22 03.9	-0.6
	comp=Z,0.4nm,0.4s,baz=273,slow=7.4,SNR=12						
ZALV	Zalesovo Beam	45.91	48	P	P	13 22 06.2	-1.2
	comp=Z,1.3nm,0.4s,baz=270,slow=9.8,SNR=6.7						
SONM	Songino Array	60.68	50	P	P	13 23 56.6	+0.4
	comp=Z,0.3nm,0.5s,baz=286,slow=7.3,SNR=2.3						
YKA	Yellowknife Ar	73.41	340	P	P	13 25 16.9	+0.3
	comp=Z,0.2nm,0.6s,baz=34,slow=6.0,SNR=3.2						

IDC 05 13:20:05.0±549.0**, 66°.84N**×**44°.26E, h0^{km}, Error ellipse: s-maj=241.6km s-min=73.9km az=114.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I37NO	I37NO	9.86	295	i		14 19 20.0	
	baz=90,slow=330,SNR=2.0						
I31KZ	AKTYUBINSK INF	17.89	150	i		15 09 10.0	
	baz=337,slow=330,SNR=1.7						
I18DK	QAANAAQ INFRAS	30.48	337	i		16 28 50.0	
	baz=43,slow=308,SNR=1.0						

WEL 05 13:35:29.6, 38°S±69°×**17°8E**±6°7**, h98^{km}**±86^{km}**, M2.3**/10**, ML2.1**/5**, MLv2.3**/10**, Error ellipse: s-maj=0.1km s-min=0.1km az=43.7, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	Te Kaha	0.15	194	P	Pn	13 35 43.8	+0.3
PKGZ	Pakihiroa	0.34	144	P	Pn	13 35 44.2	-0.1
WMGZ	Waiomatatini S	0.51	114	P	Pn	13 35 40.2	-5.1
PUZ	Puketiti	0.57	143	P	Pn	13 35 46.0	+0.2
TWGZ	Tauwhareparae	0.57	168	P	Pn	13 35 48.6	+2.8
MWZ	Matawai	0.76	198	P	Pn	13 35 48.5	+1.1
TKGZ	Te Karaka	0.82	179	P	Pn	13 35 45.8	-2.3
URZ	Urewera	0.86	221	P	Pn	13 35 48.3	-0.1
MUGZ	Murupara	1.20	224	P	Pn	13 35 52.7	+0.5
RTZ	Ruatahuna	1.20	214	P	Pn	13 35 53.0	+0.7
PRRZ	Plateau Road	1.44	232	P	Pn	13 35 56.1	+1.1
ALRZ	Allen Road	1.51	231	P	Pn	13 35 56.7	+0.9
MRHZ	Matea Rd	1.65	222	P	Pn	13 35 59.0	+1.3
HATZ	Hinemaiaia	1.87	226	P	Pn	13 36 01.0	+0.5
BKZ	Black Stump Fm	1.87	214	P	Pn	13 35 57.2	-3.3
MKAZ	Moumakai	2.19	283	P	Pn	13 36 04.8	+0.3
BHHZ	Black Hill Sta	2.33	216	P	Pn	13 36 05.5	-0.9
VRZ	Vera Road	2.84	237	P	Pn	13 36 11.5	-1.7
BFZ	Birch Farm	3.30	201	P	Pn	13 36 18.3	-1.0
HOWZ	Holdsworth Sta	3.74	208	P	Pn	13 36 21.3	-3.9
OGWZ	Otaki Gorge	3.81	212	P	Pn	13 36 21.9	-4.2
CAW	Cannon Point	4.09	211	P	Pn	13 36 24.6	-5.3
TCW	Tory Channel	4.52	216	P	Pn	13 36 30.7	-5.2
TUWZ	Tuamarina	4.85	217	P	Pn	13 36 32.7	-7.5
NNZ	Nelson	4.98	222	P	Pn	13 36 32.8	-9.2
THZ	Tophouse	5.62	221	P	Pn	13 36 41.7	-9.0

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*KRNET **05** 13:46:23.6±0.1, 41°.12N×69°.64E, mb2.6*
*ISU **05** 13:46:25.0, 41°.10N×70°.30E, h5^{km}*
*SOME **05** 13:46:25.8, 41°.02N×70°.42E, h15^{km}*
*NNC **05** 13:46:27.0±4.0, 41°.07N×70°.41E, h0^{km}, mb3.5, mpv3.3, Error ellipse: s-maj=29.4km s-min=18.0km az=33.0*
ISC 05 13:46:27.3±1.4**, 41°.18N**±0°.03×**70°.28E**±0°.04**, h15^{km}**±11^{km}**, n20, σ2^{s}.22**/37**, 11C-6D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	0.98	349	eP	Pn	13 46 46.8	+0.2
	18nm,0.2s						
IUG				eS	Sn	13 47 01.7	+1.4
	102nm,0.3s						
IUG	Iuzhnay	0.98	349	P	Pn	13 46 46.8	+0.2
	18nm,0.2s						
IUG				S	Sn	13 47 01.7	+1.4
	102nm,0.3s						
BTK	Batken	1.20	160	⇓iP	Pb	13 46 48.8	-0.9
	baz=39						
BTK				⇓iS	Sn	13 47 07.1	+1.5
	baz=39						
BTK	Batken	1.20	160	eP	Pg	13 46 50.0	-0.4
BTK				eS	Sn	13 47 08.4	+2.8
ARK	Arkit	1.41	64	⇑iP	Pg	13 46 55.7	+1.3
	baz=69						
ARK				⇑iS	Sg	13 47 19.5	+6.8
	baz=69						
ARK	Arkit	1.41	64	eP	Pg	13 46 55.0	+0.6
ARK				eS	Sg	13 47 15.4	+2.7
BRLS	Borolday	1.88	350	eP	Pb	13 46 59.8	-1.5
	13nm,0.3s						
BRLS				eS	Sb	13 47 23.9	-0.6
	7.1nm,0.2s						
BRLS	Borolday	1.88	350	P	Pb	13 46 59.7	-1.5
	13nm,0.3s						
BRLS				S	Sb	13 47 23.9	-0.6
	7.1nm,0.2s						
KK31	Karatay Array	1.93	5	⇑P	Pg	13 47 03.5	-0.8
	1.5nm,0.2s,baz=185,slow=15,SNR=54						
KK31				S	Sg	13 47 30.8	+1.5
	1.0nm,0.2s,baz=200,slow=27,SNR=4.5						
ARSB	Arslanbob	2.04	85	⇑eP	Pg	13 47 04.8	-1.7
	baz=84						
ARSB				⇑iS	Sg	13 47 35.1	+2.0
	baz=84						
ARSB	Arslanbob	2.04	85	eP	Pb	13 47 03.5	-0.7
ARSB				eS	Sg	13 47 32.2	-0.9
MRKS	Merke	2.70	54	eP	Pb	13 47 14.9	-0.4
	5.5nm,0.4s						
MRKS				eS	Sb	13 47 49.8	+1.6
	3.3nm,0.2s						
MRKS	Merke	2.70	54	Pg	Pb	13 47 14.9	-0.4
	5.5nm,0.4s						
MRKS				Lg	Lg	13 47 49.8	
	3.3nm,0.2s						
AML	Almayashu	2.73	69	⇑iP	Pb	13 47 14.5	-1.5
	baz=70						
AML				⇑iS	Sg	13 47 51.7	-3.4
	baz=70						
EKS2	Erkin-Say	3.00	59	⇑iP	Pb	13 47 17.8	-2.7
	baz=62						
EKS2				⇑iS	Sb	13 47 57.0	0.0
	baz=62						
ARLS	Aral	3.11	76	⇓iP	Pb	13 47 20.1	-2.3
	baz=76						
ARLS				⇓iS	Sb	13 48 00.8	+0.6
	baz=76						
UCH	Uchtor	3.34	70	⇑iP	Pb	13 47 23.0	-3.4
	baz=72						
UCH				⇑iS	Sb	13 48 06.4	-0.6
	baz=72						
KZA	Kyzart	3.83	75	⇓iP	Pb	13 47 29.9	-4.9
	baz=75						
KZA				⇓iS	Sb	13 48 18.5	-2.7
	baz=75						
DGS	Degeres	4.57	61	eP	Pb	13 47 48.7	+1.4
	1.7nm,0.4s						
DGS				eS	Sg	13 48 49.1	-4.9
	2.7nm,0.7s						
DGS	Degeres	4.57	61	Pg	Pb	13 47 48.7	+1.4
	1.7nm,0.4s						
DGS				Lg	Lg	13 48 49.1	
	2.7nm,0.7s						

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*IDC **05** 13:49:31.0±3.2, 5°.63S×145°.77E, h111^{km}±33^{km}, mb3.2/6, mb1 3.5/9, mb1mx3.3/40, mbtmp3.7/9, MS3.4/1, Ms1 3.3/1, ms1mx2.6/21, Error ellipse: s-maj=27.4km s-min=24.0km az=95.0*
ISC 05 13:49:30.0±1.0**, 5°.5S**±0°.1×**145°.7E**±0°.2**, h100^{km}, n11, σ1^{s}.57**/12**, mb3.5**/6**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.12	159	P	Pn	13 50 31.4	+0.6
	16nm,0.3s,baz=41,slow=5.1,SNR=69						
PMG				S	Sn	13 51 16.6	-1.3
	24nm,0.3s,baz=146,slow=21,SNR=21						
CTA	Charters Tower	14.47	178	P	P	13 52 55.9	+2.0
	0.2nm,0.3s,baz=3.2,slow=16,SNR=1.4						
SIJI	Sorong	15.09	287	P	P	13 53 00.6	-0.2
	1.2nm,0.3s,baz=71,slow=18,SNR=4.8						
WRA	Warramunga Arr	18.05	217	P	Pn	13 53 32.8	-1.6
	0.2nm,0.3s,baz=45,slow=12,SNR=11						
ASAR	Alice Springs	21.27	211	P	P	13 54 08.3	-0.1
	1.1nm,0.8s,baz=38,slow=7.9,SNR=15						
FITZ	Fitzroy Crossi	23.18	236	P	P	13 54 28.2	0.0
	0.8nm,0.4s,baz=60,slow=6.9,SNR=6.4						
STKA	Stephens Creek	26.47	188	P	P	13 54 58.3	+0.4
	0.9nm,0.5s,baz=24,slow=14,SNR=5.0						
STKA				LR	LR	14 04 59.2	
	comp=Z,76nm,20.1s,baz=223,slow=35						
CMAR	Chiang Mai Arr	51.85	299	P	P	13 58 29.2	+0.8
	0.3nm,0.4s,baz=119,slow=5.6,SNR=2.0						
SONM	Songino Array	63.36	332	P	P	13 59 50.2	+1.4
	0.2nm,0.4s,baz=130,slow=4.5,SNR=1.8						
ILAR	Eielson Array	85.60	23	P	P	14 01 55.9	-1.0
	0.5nm,0.8s,baz=258,slow=5.7,SNR=6.4						
TORD	Torodi Ar. Bea	143.68	285	PKP	PKiKP	14 08 54.7	-3.1
	0.5nm,0.9s,baz=64,slow=2.1,SNR=2.2						

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*IDC **05** 13:50:44.7±6.6, 61°.02N×57°.98W, h0^{km}, mb3.2/3, mb1 3.7/6, mb1mx3.3/66, mbtmp3.6/6, ML3.6/3, Error ellipse: s-maj=106.5km s-min=25.3km az=93.0*
*NEIC **05** 13:50:46.9±2.2, 60°.3N±0°.1×57°.0W±0°.2, h18^{km}±6^{km}, mb4.2/26, ML4.0(OTT), Error ellipse: s-maj=22.3km s-min=11.4km az=135.0*
*OTT **05** 13:50:52.8±0.2, 60°.93N×59°.26W, h18^{km}, ML4.0/7, LAlbertaRADOR Sea Seismic Zone. 306km east from Resolution Island, Nu*
ISC 05 13:50:47.4±0.6**, 60°.83N**±0°.05×**58°.97W**±0°.06**, h10^{km}, n72, σ2^{s}.83**/83**, Davis Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAJQ	Kangiqsualujju	4.12	242	PN	Pn	13 51 53.2	+2.9
KAJQ				SN	Sn	13 52 38.6	+0.1
KAJQ				Trac		13 52 40.0	
	comp=Z,6.8nm,0.1s						
NANL	Nain	4.53	199	PN	Pn	13 51 59.9	+3.9
NANL				SN	Sn	13 52 50.6	+2.0
NANL				Trac		13 52 50.9	
	comp=Z,2.0nm,0.0s						
FRB	Frobisher Bay	5.34	307	Pn	Pn	13 52 08.9	+1.8
	2.7nm,0.3s,baz=131,slow=13,SNR=18						
FRB				Sn	Sn	13 53 04.0	-4.6
	6.3nm,0.3s,baz=44,slow=7.9,SNR=9.9						
FRB	Frobisher Bay	5.34	307	PN	Pn	13 52 09.3	+2.2
FRB				SN	Sn	13 53 05.2	-3.3
FRB				Trac		13 53 08.2	
	comp=Z,20nm,0.2s						
KNGQ	Kangiqsujuaq	6.32	283	PN	Pn	13 52 22.3	+1.8
KNGQ				SN	Sn	13 53 28.3	-4.3
KNGQ				Trac		13 53 32.1	
	comp=Z,4.8nm,0.0s						
NRS	Narsarsuaq	6.60	81	Pn	Pn	13 52 11.1	-13
SFJD	Kangerlussuaq	7.20	27	i P	Pn	13 52 36.2	+3.7
SFJD				i		13 52 36.8	
SFJD	Kangerlussuaq	7.20	27	PN	Pn	13 52 36.1	+3.6
SFJD				SN	Sn	13 53 52.5	-1.6

SFJD				Trac		13 54 01.4	
	comp=Z,150nm,4.0s						
SFJD	Kangerlussuaq	7.20	27	Pn	Pn	13 52 35.8	+3.3
SCHQ	Schefferville	7.33	218	Pn	Pn	13 52 37.3	+2.9
	8.2nm,0.3s,baz=26,slow=9.3,SNR=43						
SCHQ				Sn	Sn	13 53 54.8	-2.8
	3.9nm,0.3s,baz=284,slow=17,SNR=8.8						
SCHQ	Schefferville	7.33	218	PN	Pn	13 52 37.5	+3.1
SCHQ				SN	Sn	13 53 55.6	-2.0
SCHQ				Trac		13 53 57.3	
	comp=Z,29nm,0.6s						
SCHQ	Schefferville	7.33	218	Pn	Pn	13 52 36.9	+2.5
ILULI	Ilulissat	9.04	18	PN	Pn	13 53 00.3	+2.6
ILULI				SN	Sn	13 54 36.4	-3.0
ILULI	Ilulissat	9.04	18	Pn	Pn	13 52 59.0	+1.3
ANGG	Ammassalik, Gr	10.72	54		Pn	13 53 20.5	-0.2
NATG	Natashquan Que	10.79	193	PN	Pn	13 53 22.4	+0.7
NATG				SN	Sn	13 55 15.5	-6.9
NATG				Trac		13 55 19.9	
	comp=Z,2.3nm,0.2s						
LG4Q	La Grande 4	10.90	235	PN	Pn	13 53 22.9	-0.5
LG4Q				SN	Sn	13 55 19.3	-5.9
KJKQ	Kuujjuarapik	11.37	249	PN	Pn	13 53 30.5	+0.7
KJKQ				SN	Sn	13 55 28.4	-8.3
KJKQ				Trac		13 55 31.4	
	comp=Z,3.7nm,0.1s						
SMQ	Clarke City	11.49	206	PN	Pn	13 53 32.1	+0.8
DRLN	Deer Lake	11.63	175		Pn	13 53 33.4	+0.2
ICQ	Pointe Anglais	12.27	206	PN	Pn	13 53 41.0	-1.1
ICQ				Trac		13 55 58.3	
	comp=Z,48nm,1.4s						
ILON	Igloolik, Nuna	12.79	322	PN	Pn	13 53 49.2	+0.2
ILON				SN	Sn	13 56 00.8	-10
ILON				Trac		13 56 14.0	
	comp=Z,7.5nm,0.5s						
SUMG	Summit	14.19	26	Pn	Pn	13 54 08.4	0.0
BATG	Bathurst New B	14.19	200	Pn	Pn	13 54 06.5	-1.7
D63A	Stockholm	14.81	205	P	Pn	13 54 15.2	-1.5
	baz=17						
D62A	Allapoint, All	14.97	208	Pn	Pn	13 54 17.0	-1.8
D62A	Allapoint, All	14.97	208	P	Pn	13 54 17.0	-1.8
	baz=19						
D61A	St Aubert, Com	15.13	211	P	Pn	13 54 18.5	-2.4
	baz=21						
PQI	Presque Isle	15.14	205	Pn	Pn	13 54 19.0	-2.0
E64A	Bridgewater	15.34	204	P	Pn	13 54 22.2	-1.6
	baz=16						
LMN	Caledonia Moun	15.39	196	Pn	Pn	13 54 19.8	-4.7
LMN				IAmb	IAmb	13 54 53.7	
	comp=Z,32nm,1.6s						
E63A	Oxbow	15.46	205	Pn	Pn	13 54 23.3	-2.0
E63A	Oxbow	15.46	205	P	Pn	13 54 23.4	-2.0
	baz=17						
GBN	Guysborough	15.52	187		Pn	13 54 25.1	-1.0
D60A	Saint Jean D'O	15.58	212	P	Pn	13 54 24.4	-2.5
	baz=22						
E61A	Lac Etchemin	15.92	210	P	Pn	13 54 29.7	-1.6
	baz=20						
D58A	Chemin du LacG	15.96	217	P	Pn	13 54 29.6	-2.1
	baz=25						
F64A	Sherman	15.98	204	Pn	Pn	13 54 30.4	-1.6
F63A	Nahmakanta, Br	16.29	206	Pn	Pn	13 54 34.6	-1.4
F63A				IAmb	IAmb	13 54 38.6	
	comp=Z,22nm,1.3s						
F63A	Nahmakanta, Br	16.29	206	P	Pn	13 54 34.4	-1.6
	baz=17						
D57A	Chemin Vers le	16.33	219	P	Pn	13 54 35.1	-1.5
	baz=26						
HAL	Halifax	16.45	192	Pn	Pn	13 54 31.4	-6.7
HAL				IAmb	IAmb	13 54 50.5	
	comp=Z,49nm,1.3s						
G65A	Princeton	16.46	202	Pn	Pn	13 54 34.3	-3.9
G65A				IAmb	IAmb	13 54 41.6	
	comp=Z,32nm,1.4s						
VLDQ	Val d'Or	16.58	228	Pn	Pn	13 54 36.4	-3.3
VLDQ				IAmb	IAmb	13 54 47.0	
	comp=Z,21nm,1.6s						
PKME	Peaks-Kenny Pk	16.75	206	Pn	Pn	13 54 37.3	-4.6
PKME				IAmb	IAmb	13 55 01.6	
	comp=Z,70nm,1.9s						
D55A	Sainte-Anne-du	16.83	222	P	Pn	13 54 41.6	-1.3
	baz=28						
G62A	West of Eustis	17.07	209		Pn	13 54 45.5	-0.4
G62A				IAmb	IAmb	13 54 47.0	
	comp=Z,41nm,1.7s						
D54A	Lac Fusel, La	17.11	225	P	Pn	13 54 44.9	-1.6
	baz=30						
TRQ	Mont Tremblant	17.25	219	Pn	Pn	13 54 47.0	-1.2
D53A	Lac Vacive, Po	17.54	227	Pn	Pn	13 54 49.5	-2.3
D53A	Lac Vacive, Po	17.54	227	P	Pn	13 54 49.7	-2.1
	baz=31						
SCO	Scoresbysund	17.73	42	P	P	13 54 56.4	+1.6
E54A	Lac Daplat, Po	17.92	225	P	Pn	13 54 55.3	-1.2
	baz=29						
E53A	Dumoine, Ponti	18.13	225	P	Pn	13 54 57.5	-1.6
	baz=30						
FRNY	Flat Rock	18.22	215		Pn	13 55 00.1	-0.1
FRNY				IAmb	IAmb	13 55 02.0	
	comp=Z,21nm,1.6s						
LBNH	Lisbon	18.33	211	P	P	13 55 02.7	+1.1
LBNH				IAmb	IAmb	13 55 22.3	
	comp=Z,34nm,1.7s						
LONY	Lake Ozonia	18.70	217	P	P	13 55 04.0	-1.7
RES	Resolute Bay	18.94	331	P	P	13 55 07.4	-0.7
	comp=Z,0.1nm,0.3s,baz=137,slow=11,SNR=7.5						
RES	Resolute Bay	18.94	331	P	Pn	13 55 09.0	+0.3
PLVO	Plevna	19.10	222	P	P	13 55 10.3	+0.2
PLVO				IAmb	IAmb	13 55 12.6	
	comp=Z,12nm,1.3s						
NCB	Newcomb	19.19	215	P	P	13 55 09.8	-1.3
NCB				IAmb	IAmb	13 55 37.0	
	comp=Z,28nm,1.9s						
DELO	Deloro Mine	19.75	223	P	P	13 55 15.0	-2.1
DELO				IAmb	IAmb	13 55 29.2	
	comp=Z,15nm,1.5s						
PECO	Prince Edward	20.06	221		P	13 55 21.4	+0.8
J57A	Williamstown	20.23	218	P	P	13 55 22.2	-0.2
E43A	Lone Tree Farm	21.81	241	P	P	13 55 44.2	+4.9
E43A				IAmb	IAmb	13 56 33.4	
	comp=Z,20nm,2.0s						
ULM	Lac du Bonnet	23.09	259	P	P	13 55 56.6	+3.7
	comp=Z,0.9nm,0.4s,baz=33,slow=12,SNR=3.6						
ULM	Lac du Bonnet	23.09	259	P	P	13 55 57.5	+4.6
ULM				IAmb	IAmb	13 56 51.1	
	comp=Z,17nm,1.9s						
YKA	Yellowknife Ar	25.78	298	P	P	13 56 20.4	+2.4
	comp=Z,0.2nm,0.5s,baz=66,slow=9.6,SNR=4.2						
PDAR	Pinedale Array	35.03	262	P	P	13 57 42.6	+2.4
	comp=Z,0.1nm,0.5s,baz=33,slow=10,SNR=1.6						
MNTX	Cornudas Mount	41.95	247	P	P	13 58 41.9	+3.7
AAK	Ala-Archa	70.14	35	P	P	14 01 56.6	-3.3
ARSB	Arslanbob	70.93	36	P	P	14 02 02.2	-2.4

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*IDC **05** 13:57:22.5±1.0, 38°.96N×111°.52W, h0^{km}, mb3.2/2, mb1 3.4/6, mb1mx3.3/55, mbtmp3.0/6, ML2.9/4, Error ellipse: s-maj=11.0km s-min=10.5km az=140.0*

*UUSS **05** 13:57:22.3±2.2, 38°.96N±0°.04×111°.40W±0°.06, h4^{km}±7^{km}, ML2.7/16, Error ellipse: s-maj=7.3km s-min=4.5km az=117.0*

*NEIC **05** 13:57:22.9±1.1, 39°.02N±0°.04×111°.51W±0°.06, h1^{km}±8^{km}, Error ellipse: s-maj=7.3km s-min=5.8km az=111.0*

ISC 05 13:57:23.3±0.8, **38°.97N**±0°.03×**111°.47W**±0°.03, **h7**^{km}, **n54**, σ**1^{s}.26**/57, **Utah**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
Q16A	Castle Valley	0.24	103	Pg	Pg	13 57 26.0	-2.1
TMUT	Trail Mountain	0.38	32		Pg	13 57 29.5	-1.4
MSU	Marysvale	0.72	230		Pg	13 57 36.3	-0.8
SRU	San Rafael Swe	0.75	79		Pg	13 57 35.3	-2.4
P17A	Butcher Ranch,	0.76	49		Pg	13 57 35.5	-2.3
MPU	Maple Canyon	1.05	353		Pg	13 57 42.1	-1.3
NLU	North Lily Min	1.08	335		Pg	13 57 43.1	-1.0
MTPU	Mount Pierson	1.09	211		Pg	13 57 42.8	-1.3
DUG	Dugway, Tooele	1.60	320		Pn	13 57 51.5	-0.7
JLU	Jordanelle	1.63	1		Pn	13 57 52.2	-0.4
PKCU	Pink Cliffs	1.66	204		Pn	13 57 53.2	+0.1
CTU	Camp Tracy	1.73	353		Pn	13 57 53.6	-0.4
SZCU	Shurtz Canyon	1.87	223		Pn	13 57 56.3	+0.4
PSUT	Pine Spring	1.91	257		Pn	13 57 56.6	+0.1
CCUT	Cedar City	2.06	227		Pb	13 57 59.3	-1.8
TCUT	Toone Canyon	2.14	1		Pn	13 57 59.5	-0.2
BGU	Big Grassy Mou	2.29	329		Pn	13 58 00.9	-0.7
LCMT	Little Creek M	2.41	216		Pn	13 58 04.0	+0.8
SPUT	South Promonto	2.45	342		Pn	13 58 03.5	-0.3
U15A	North Rim	2.62	195		Pn	13 58 07.6	+1.3
HWUT	Hardware Ranch	2.63	358		Pn	13 58 06.9	+0.6
O20A	White River Ci	2.75	64		Pn	13 58 09.1	+1.0
MVCO	Mesa Verde	2.93	126		Pn	13 58 11.2	+0.7
HVU	Hansel Valley	2.97	341		Pn	13 58 10.3	-0.8
R11A	Troy Canyon, C	3.28	260	Pn	Pn	13 58 15.2	-0.1
ELK	Elko	3.40	303	Pn	Pn	13 58 15.3	-1.7
	0.0nm,0.3s,baz=117,slow=9.7,SNR=2.0						
ELK				Pg	Pg	13 58 26.4	-2.0
	0.3nm,0.3s,baz=107,slow=9.8,SNR=16						
ELK				Lg	Lg	13 59 08.4	
	0.1nm,0.3s,baz=204,slow=22,SNR=1.2						
ELK	Elko	3.40	303	Pn	Pn	13 58 17.5	+0.6
WUAZ	Wupatki	3.45	179		Pn	13 58 19.0	+1.4
SMCO	Snowmass	3.51	85		Pn	13 58 19.1	+0.6
AHID	Auburn Hatcher	3.80	4	Pn	Pn	13 58 22.8	+0.4
SHPR	Sheep Range	3.82	231	Pn	Pn	13 58 23.6	+0.9
S22A	4UR Ranch, Cre	3.85	107		Pn	13 58 24.0	+0.8
BW06	Boulder Array	4.06	20	Pn	Pn	13 58 25.8	-0.2
PD31	Pinedale Array	4.06	20		Pn	13 58 26.6	+0.6
PDAR	Pinedale Array	4.06	20	Pn	Pn	13 58 26.6	+0.6
	0.2nm,0.3s,baz=202,slow=11,SNR=12						
PDAR				Pg	Pb	13 58 36.7	+1.5
	0.5nm,0.3s,baz=208,slow=12,SNR=24						
PDAR				Lg	Lg	13 59 32.7	
	0.4nm,0.3s,baz=198,slow=32,SNR=5.9						
PDAR	Pinedale Array	4.06	20		Pn	13 58 26.4	+0.4
W18A	Petrified Fore	4.09	160		Pn	13 58 28.0	+1.6
RWWY	Rawlins	4.24	49		Pn	13 58 29.8	+1.3
TPNV	Topopah Spring	4.28	243		Pn	13 58 29.5	+0.5
REDW	Red Top Meadow	4.41	6	Pn	Pn	13 58 30.8	-0.1
X18A	Snowflake	4.60	164		Pn	13 58 34.5	+1.1
N23A	Red Feather La	4.66	64		Pn	13 58 35.1	+0.8
FXWY	Fox Creek	4.67	4		Pn	13 58 34.2	-0.3
SDCO	Great Sand Dun	4.85	103		Pn	13 58 36.9	-0.1
PHWY	Pilot Hill	5.16	61		Pn	13 58 41.8	+0.6
KVN	Kaiserville	5.16	273		Pn	13 58 41.6	+0.5
K22A	Casper	5.25	44		Pn	13 58 42.9	+0.5
YPP	Pitchstone Pla	5.32	5	Pn	Pn	13 58 43.8	+0.4
NVAR	Mina Array Bea	5.37	266	Pn	Pn	13 58 46.1	+2.0
	0.1nm,0.3s,baz=64,slow=22,SNR=3.8						
ANMO	Albuquerque	5.68	134	Pn	Pn	13 58 47.9	-0.3
	0.3nm,0.3s,baz=323,slow=11,SNR=8.9						
ANMO				Pg	Pg	13 59 07.9	-4.2
	0.2nm,0.3s,baz=329,slow=16,SNR=11						
ANMO				Lg	Lg	14 00 16.3	
	0.1nm,0.3s,baz=190,slow=17,SNR=3.3						
ANMO	Albuquerque	5.68	134		Pn	13 58 48.1	-0.2
TXAR	Lajitas Array	11.58	144	Pn	Pn	14 00 12.1	+3.0
	0.0nm,0.3s,baz=330,slow=12,SNR=2.5						
YKA	Yellowknife Ar	23.63	356	P	P	14 02 35.7	+1.0
	0.5nm,0.8s,baz=173,slow=9.7,SNR=8.9						
ILAR	Eielson Array	33.05	333	P	P	14 03 59.9	+0.8
	0.3nm,0.7s,baz=134,slow=6.4,SNR=4.1						

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*NEIC **05** 14:05:35.7±1.8, 5°.52S±0°.08×147°.2E±0°.1, h233^{km}±8^{km}, mb4.7/17, Error ellipse: s-maj=18.9km s-min=9.9km az=107.0*

*IDC **05** 14:05:35.2±1.3, 5°.62S×147°.30E, h230^{km}±16^{km}, mb3.5/9, mb1 3.7/11, mb1mx3.4/44, mbtmp4.1/11, Error ellipse: s-maj=33.1km s-min=9.2km az=113.0*

ISC 05 14:05:32.8±0.6, **5°.42S**±0°.06×**147°.1E**±0°.1, **h200**^{km}, **n40**, σ**1^{s}.41**/39, **mb3.8**/13, **1C, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	Manus Island	3.37	5	Pn	Pn	14 06 32.4	+5.4
PMG	Port Moresby	3.96	178	P	Pn	14 06 36.4	+2.3
	7.7nm,0.3s,baz=334,slow=6.2,SNR=30						
PMG				S	Sn	14 07 22.5	+0.2
	23nm,0.3s,baz=217,slow=23,SNR=15						
PMG	Port Moresby	3.96	178		Pn	14 06 36.2	+2.1
COEN	Coen	9.30	204	Pn	Pn	14 07 46.8	+3.7
CTA	Charters Tower	14.60	183	P	P	14 08 52.0	+0.6
	0.3nm,0.3s,baz=11,slow=15,SNR=2.6						
SAUI	Saumlaki	15.85	260	P	Pn	14 09 07.0	+1.6
PATS	Pohnpei	16.57	43	P	Pn	14 09 12.6	-1.5
MTN	Manton Dam	17.35	244	P	Pn	14 09 22.3	-1.0
MTN				IAmb	IAmb	14 09 40.7	
	comp=Z,36nm,1.4s						
WB0	Warramunga Arr	18.84	220	P	Pn	14 09 38.9	-1.9
WR0	Warramunga Arr	18.89	219	P	Pn	14 09 39.8	-1.6
WR0				IAmb	IAmb	14 09 44.2	
	comp=Z,17nm,0.7s						
WRAB	Tennant Creek	18.99	219	P	Pn	14 09 40.9	-1.7
WRAB				IAmb	IAmb	14 09 46.6	
	comp=Z,16nm,0.7s						
WB2	Warramunga Arr	19.00	219	P	Pn	14 09 40.9	-1.8
WB2				IAmb	IAmb	14 09 45.5	
	comp=Z,40nm,1.2s						
WRA	Warramunga Arr	19.00	219	P	Pn	14 09 40.5	-2.2
	comp=Z,2.5nm,0.3s,baz=47,slow=10.0,SNR=127						
WRA				S	S	14 13 03.3	-1.5
	comp=Z,0.1nm,0.3s,baz=41,slow=20,SNR=2.0						
WRA	Warramunga Arr	19.00	219	P	P	14 09 39.5	-0.1
EIDS	Eidsvold	20.21	169	P	P	14 09 53.3	+0.8
EIDS				IAmb	IAmb	14 09 54.1	
	comp=Z,40nm,1.6s						
KNRA	Kununurra	20.64	239	P	P	14 09 57.2	0.0
KNRA				IAmb	IAmb	14 10 16.3	
	comp=Z,55nm,1.9s						
AS31	Alice Springs	22.12	214	P	P	14 10 13.0	+0.7
ASAR	Alice Springs	22.12	214	P	P	14 10 13.0	+0.7
	comp=Z,15nm,0.6s,baz=49,slow=8.2,SNR=291						
ASAR				S	S	14 13 59.2	-2.2
	comp=Z,0.8nm,0.8s,baz=32,slow=23,SNR=4.4						
ASAR	Alice Springs	22.12	214	P	P	14 10 12.1	-0.3
FITZ	Fitzroy Crossi	24.41	237	P	P	14 10 34.4	+1.2
	comp=Z,22nm,0.4s,baz=51,slow=11,SNR=117						
FITZ	Fitzroy Crossi	24.41	237	P	P	14 10 34.6	+1.5
FITZ				IAmb	IAmb	14 10 36.8	
	comp=Z,23nm,0.4s						
STKA	Stephens Creek	26.81	190	P	P	14 10 53.2	-1.4
	comp=Z,1.7nm,0.9s,baz=1.3,slow=13,SNR=2.9						
STKA	Stephens Creek	26.81	190	P	P	14 10 52.8	-1.8
BBOO	Buckleboo	29.11	199	P	P	14 11 14.7	-0.3
FORT	Forrest	30.91	213	P	P	14 11 31.3	+0.5
FORT				IAmb	IAmb	14 12 28.4	
	comp=Z,20nm,0.9s						
KSRS	Korea Array	46.23	339	P	P	14 13 39.3	+1.3
	comp=Z,3.2nm,1.0s,baz=154,slow=9.5,SNR=4.4						
USA0B	Ussuriysk Arra	51.23	346	P	P	14 14 16.6	+0.7
USA0B				IAmb	IAmb	14 14 22.0	
	comp=Z,55nm,1.9s						
USRK	Ussuriysk Ar.	51.23	346	P	P	14 14 16.2	+0.3
	comp=Z,1.1nm,0.6s,baz=148,slow=39,SNR=2.5						
PETK	Petropavlovsk-	59.00	7	P	P	14 15 12.2	+0.9
	comp=Z,1.2nm,0.5s,baz=160,slow=7.6,SNR=10						
SONM	Songino Array	63.93	331	P	P	14 15 45.9	+1.3
	comp=Z,0.5nm,0.4s,baz=151,slow=6.6,SNR=3.5						
SONM	Songino Array	63.93	331	IAmb	IAmb	14 15 47.9	
	comp=Z,1.1nm,1.0s						
SEY	Seymchan	68.28	3	P	P	14 16 12.7	+0.8
	comp=Z,1.8nm,0.8s,baz=148,slow=5.6,SNR=4.1						
MKAR	Makanchi Array	77.09	320	P	P	14 17 04.2	+0.2
	comp=Z,0.3nm,0.5s,baz=98,slow=7.6,SNR=5.6						
ZALV	Zalesovo Beam	78.55	328	P	P	14 17 10.4	-1.5
	comp=Z,0.7nm,0.6s,baz=57,slow=5.5,SNR=3.8						
ZALV	Zalesovo Beam	78.55	328	P	P	14 17 09.9	-2.1
ILAR	Eielson Array	84.94	23	P	P	14 17 44.0	-1.1
	comp=Z,1.3nm,0.7s,baz=255,slow=4.9,SNR=14						
ILAR	Eielson Array	84.94	23	P	P	14 17 43.7	-1.4
SYO	Syowa Base	91.15	200⇑	*e*sP	sP	14 19 34.0	+8.5
TORD	Torodi Ar. Bea	144.99	285	PKPbc	PKPdf	14 24 46.1	-1.1
	comp=Z,0.8nm,0.5s,baz=72,slow=3.0,SNR=6.6						
TORD	Torodi Ar. Bea	144.99	285		PKPdf	14 24 45.5	-1.8

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*IDC **05** 14:12:27.1±1.5, 10°.21N×126°.45E, h0^{km}, mb3.7/6, mb1 3.8/6, mb1mx3.5/51, mbtmp3.7/6, MS3.4/1, Ms1 3.6/1, ms1mx2.5/55, Error ellipse: s-maj=74.1km s-min=29.9km az=66.0*

*NEIC **05** 14:12:36.0±2.2, 10°.1N±0°.1×126°.4E±0°.3, h73^{km}±8^{km}, mb4.5/4, Error ellipse: s-maj=51.5km s-min=8.4km az=69.0*

ISC 05 14:12:33.1±0.9, **10°.1N**±0°.1×**126°.4E**±0°.3, **h42**^{km}, **n10**, σ**1^{s}.07**/11, **mb4.0**/7, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YHNB	Yeheng	15.28	342	Pn	Pn	14 16 07.8	+1.7
YHNB				IAmb	IAmb	14 16 31.1	
	comp=Z,56nm,1.3s						
INU	Inuyama	26.97	19	P	P	14 18 10.3	-0.5
INU				IAmb	IAmb	14 18 16.1	
	comp=Z,11nm,0.9s						
CMAR	Chiang Mai Arr	27.83	291	P	P	14 18 19.1	+0.3
	comp=Z,0.3nm,0.4s,baz=96,slow=7.3,SNR=2.2						
CMAR				LR	LR	14 29 06.0	
	comp=Z,68nm,18.0s,baz=187,slow=36						
ASAR	Alice Springs	34.33	168	P	P	14 19 16.6	+0.6
	comp=Z,0.2nm,0.7s,baz=351,slow=6.8,SNR=1.4						
ARMA	Armidale	47.01	150	P	P	14 21 00.4	-0.2
MKAR	Makanchi Array	52.25	323	P	P	14 21 39.0	-1.2
	comp=Z,0.4nm,0.5s,baz=117,slow=7.0,SNR=5.9						
MKAR				PcP	PcP	14 22 50.7	-0.5
	comp=Z,0.4nm,0.7s,baz=103,slow=5.2,SNR=4.6						
MAKZ	Makanchi	52.44	323	P	P	14 21 40.3	-1.4
ZALV	Zalesovo Beam	54.85	331	P	P	14 21 58.0	-1.1
	comp=Z,0.8nm,0.5s,baz=97,slow=7.4,SNR=4.0						
ARCES	ARCESS Array B	84.42	340	P	P	14 25 01.6	+0.7
	comp=Z,1.1nm,0.8s,baz=71,slow=7.8,SNR=3.8						
FINES	FINESS Array B	86.12	332	P	P	14 25 09.8	+0.3
	comp=Z,0.4nm,0.3s,baz=87,slow=4.2,SNR=6.8						

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*DNK **05** 14:16:37.4±1.6, 58°.37N×6°.39E, h20^{km}±8^{km}, ML1.4, Hypocentre not reviewed by the ISC*

BER 05 14:16:37.6±1.7, **58°.29N×6°.38E, h0**^{km}**, ML1.4, 2C, Explosion, Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNART	Snartemo	0.44	83⇑	*i*P	Pg	14 16 45.1	-0.9
SNART				*e*S	Sg	14 16 50.8	-0.9
SNART				IAML		14 16 54.3	
	comp=Z,22nm,0.8s						
SNART	Snartemo	0.44	83	*e*		14 16 45.1	
	baz=273,slow=16						
SNART				⇑*i*P		14 16 45.2	
SNART				IAML		14 16 56.7	
	comp=Z,5.8nm,0.3s						
STAV	Stavanger	0.74	332	*e*P	Pg	14 16 51.0	-0.8
STAV				*e*S	Sg	14 17 00.1	-1.2
STAV				IAML		14 17 05.5	
	comp=Z,10nm,0.2s						
KMY	Karmoy	1.10	328	*e*P	Pg	14 16 56.6	-2.0
KMY				*e*S	Sg	14 17 11.2	-1.7
KMY				IAML		14 17 15.0	
	comp=Z,13nm,0.1s						
HOMB	Homborsund	1.12	90	*e*P	Pg	14 16 57.4	-1.7
HOMB				*e*S	Sg	14 17 11.7	-1.9
HOMB				IAML		14 17 15.1	
	comp=Z,11nm,0.4s						
HOMB	Homborsund	1.12	90	*e*		14 16 57.1	
	baz=277,slow=12						
HOMB				*i* P		14 16 57.7	
HOMB				*e*S		14 17 12.1	
HOMB				IAML		14 17 15.2	
	comp=Z,6.8nm,0.3s						
BLS5	Blasjo	1.14	2	*e*P	Pg	14 16 57.4	-2.0
BLS5				*e*S	Sg	14 17 12.5	-1.6
BLS5				IAML		14 17 15.9	
	comp=Z,6.6nm,0.1s						
ODD1	Odda	1.63	4	*e*P	Pn	14 17 06.3	-1.3
ODD1				*e*S	Sn	14 17 26.1	-3.3
ODD1				IAML		14 17 29.3	
	comp=Z,7.7nm,0.1s						
KONO	Kongsberg	2.15	49	*e*P	Pn	14 17 13.9	-0.8
KONO				*e*S	Sn	14 17 40.1	-2.0
KONO				IAML		14 17 43.4	
	comp=Z,2.9nm,0.2s						
ASK	Askoy	2.28	345	*e*P	Pn	14 17 14.6	-1.9
ASK				*e*S	Sn	14 17 42.3	-2.9
ASK				IAML		14 17 53.3	
	comp=Z,6.7nm,0.8s						
SKAR	Skarslia	2.59	21	*e*P	Pn	14 17 19.8	-1.0
SKAR				*e*S	Sn	14 17 50.6	-2.4
SKAR				IAML		14 17 58.6	
	comp=Z,2.4nm,0.3s						
NC204	NORSAR Array S	3.73	35	*e*P	Pn	14 17 34.5	-1.9
NC204				*e*S	Sn	14 18 15.6	-5.4
NC204				IAML		14 18 31.1	
	comp=Z,4.9nm,1.1s						

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*DNK **05** 14:16:51.2±0.6, 58°.81N×15°.10E, h0^{km}, ML1.5(UPP), Explosion Hypocentre not reviewed by the ISC*

UPP 05 14:16:50.7±0.1, **58°.82N×15°.10E, h0**^{km}**, ML1.5, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASKU	Askersund	0.16	300	P	Pg	14 16 54.0	+0.3
ASKU				S	Sg	14 16 56.3	+0.5
ASKU	Askersund	0.16	300	P		14 16 54.0	
ASKU				S		14 16 56.3	
LNKU	Linkoeping	0.63	160	P	Pg	14 17 02.7	-0.1
LNKU				S	Sg	14 17 11.3	+0.4
LNKU	Linkoeping	0.63	160	P		14 17 02.7	
LNKU				S		14 17 11.3	
NRAU	Nora	0.76	358	P	Pg	14 17 05.0	-0.3
NRAU				S	Sg	14 17 15.6	+0.5
NRAU	Nora	0.76	358	P		14 17 05.0	
NRAU				S		14 17 15.6	
ESKU	Eskilstuna	0.79	58	P	Pg	14 17 05.5	-0.3
ESKU	Eskilstuna	0.79	58	P		14 17 05.5	
VIKU	Vikbolandet	0.89	110	P	Pg	14 17 07.4	-0.4
VIKU	Vikbolandet	0.89	110	P		14 17 07.4	
NASU	Vaermlandsnaes	1.00	277	P	Pg	14 17 09.2	-0.6
NASU				S	Sg	14 17 23.4	+0.6
NASU	Vaermlandsnaes	1.00	277	P		14 17 09.2	
NASU				S		14 17 23.4	
EKSU	Eksjoe	1.25	175	P	Pg	14 17 13.7	-0.9
EKSU	Eksjoe	1.25	175	P		14 17 13.7	
VSTU	Vaestervik	1.39	146	P	Pg	14 17 16.1	-1.2
VSTU	Vaestervik	1.39	146	P		14 17 16.1	
BACU	Backbrunna	1.47	44	P	Pn	14 17 17.8	-0.5
BACU	Backbrunna	1.47	44	P		14 17 17.8	
UDD	Uddeholm	1.49	330	P	Pn	14 17 18.6	-0.1
FIBU	Brunna	1.59	46	P	Pn	14 17 20.0	0.0
FIBU	Brunna	1.59	46	P		14 17 20.0	
VANU	Vaenersborg	1.61	260	P	Pn	14 17 20.3	-0.1
VANU	Vaenersborg	1.61	260	P		14 17 20.3	

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*ANF **05** 14:17:06.0±1.2, 35°.64N×97°.42W, h12^{km}±7^{km}, ML4.3/7, Error ellipse: s-maj=8.0km s-min=2.8km az=154.0*

*IDC **05** 14:17:06.8±2.4, 35°.74N×97°.65W, h0^{km}, mb1 3.5/3, mb1mx3.2/52, mbtmp3.2/3, ML3.8/2, Error ellipse: s-maj=34.5km s-min=15.4km az=111.0*

*TUL **05** 14:17:06.4±1.5, 35°.59N±0°.05×97°.38W±0°.06, h6^{km}±4^{km}, ML3.6, Mwr3.3/15(NEIC), Error ellipse: s-maj=7.1km s-min=6.3km az=200.0*

*NEIC **05** 14:17:06.2±1.6, 35°.65N±0°.04×97°.38W±0°.06, h6^{km}±5^{km}, Error ellipse: s-maj=7.4km s-min=5.8km az=109.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.23; $M_{\theta\theta}$0.77; $M_{\phi\phi}$-1.01; $M_{r\theta}$0.59; $M_{\theta\phi}$0.45; $M_{\phi r}$-0.22; Fault plane solution: $M_0$1.20000×10^{14} NP1:ϕ_s28.56000°, δ57.43000°, λ168.37000°. NP2:ϕ_s124.88000°, δ80.21000°, λ33.11000°. Principal axes: T 1.1838, Plg30.0000°, Azm352.0000°; N 0.0251, Plg56.0000°, Azm139.0000°; P -1.2088, Plg15.0000°, Azm253.0000°;*

ISC 05 14:17:06.7±0.8, **35°.60N**±0°.04×**97°.36W**±0°.04, **h7**^{km}±5^{km}, **n64**, σ**1^{s}.13**/68, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADOK	Arcadia Dam	0.05	347	Pg	Pg	14 17 08.2	0.0
ADOK				Sg	Sg	14 17 09.7	+0.3
OK009	Oakdale Elemen	0.06	247		Pg	14 17 07.7	-0.7
OK009				Sg	Sg	14 17 08.7	-0.8
OK001	Jones High Sch	0.07	128	Pg	Pg	14 17 08.6	+0.1
OKCFA	Oklahoma City	0.20	202		Pg	14 17 10.3	-0.4
OKCSW	OKLAHOMA CITY	0.21	198		Pg	14 17 10.4	-0.4
FNO	Franklin	0.35	186		Pg	14 17 13.5	0.0
X34A	Smith Ranch, M	1.07	201		Pg	14 17 26.6	-0.7
TUL1	Leonard	1.31	76		Pn	14 17 30.0	-1.4
TUL1	Leonard	1.31	76	P	Pn	14 17 30.1	-1.4

	baz=257						
TUL1				S	Sb	14 17 48.6	0.0
	baz=257						
WMOK	Wichita Mounta	1.45	234	Pn	Pn	14 17 32.0	-1.4
WMOK	Wichita Mounta	1.45	234	P	Pn	14 17 32.0	-1.4
	baz=53						
WMOK				S	Sn	14 17 51.6	-1.1
	baz=53						
T35A	Sooner Cattle	1.48	27		Pb	14 17 33.4	-1.1
U32A	Winter Ranch,	1.54	301	Pn	Pn	14 17 34.0	-0.6
X37A	Clayton	1.92	121		Pn	14 17 40.3	+0.5
Z35A	Perchaven, San	2.27	178		Pn	14 17 44.9	+0.3
U38A	Gravette	2.55	70		Pn	14 17 49.0	+0.6
HHAR	Hobbs	2.85	75		Pn	14 17 52.6	-0.1
W39A	Magazine	2.95	97		Pn	14 17 53.9	0.0
W39A	Magazine	2.95	97	P	Pn	14 17 54.2	+0.2
	baz=279						
Z38A	Mt. Pleasant	3.05	139	Pn	Pn	14 17 56.2	+0.8
MIAR	Mount Ida	3.28	108	Pn	Pn	14 17 59.0	+0.5
MIAR	Mount Ida	3.28	108	P	Pn	14 17 60.0	+1.5
	baz=290						
MIAR				S	Sn	14 18 39.0	+1.3
	baz=290						
ABTX	Abilene, Hawle	3.53	213	Pn	Pn	14 18 02.6	+0.7
ABTX	Abilene, Hawle	3.53	213	Pb	Pb	14 18 08.0	-1.4
	baz=32						
WHTX	Lake Whitney,	3.60	181	Pn	Pn	14 18 03.0	0.0
WHTX	Lake Whitney,	3.60	181	Sb	Sb	14 18 56.8	+2.1
	baz=0.9						
AMTX	Amarillo	3.61	260		Pn	14 18 02.7	-0.5
CBKS	Cedar Bluff	3.73	330		Pn	14 18 04.6	-0.1
U40A	Yellville	3.73	77	Pn	Pn	14 18 04.0	-0.7
237A	Washetta, Mont	3.82	160		Pn	14 18 05.0	-0.9
S39A	Bolivar	3.85	56		Pn	14 18 06.1	-0.3
X40A	Basin Creek Fa	3.87	105	Pn	Pn	14 18 06.6	0.0
WLAR	White Oak Lake	3.99	117	Pn	Pn	14 18 08.1	-0.1
WHAR	Wooly Hollow	4.15	93		Pn	14 18 10.4	-0.1
UALR	University of	4.19	100	Pn	Pn	14 18 11.6	+0.6
W41B	Gary Mavity, V	4.20	94		Pn	14 18 11.2	+0.1
W41B	Gary Mavity, V	4.20	94	P	Pn	14 18 11.2	+0.1
	baz=277						
W41B				S	Sn	14 19 00.8	+0.4
	baz=277						
FCAR	Ozark Folk Cen	4.27	85		Pn	14 18 11.2	-0.8
Z41A	Richland Creek	4.43	121	Pn	Pn	14 18 14.8	+0.5
LCAR	Lake Charles	5.06	83	Pn	Pn	14 18 21.8	-1.2
KSCO	Kaye Shedlock'	5.40	311	Pn	Pn	14 18 25.8	-2.0
CCM	Cathedral Cave	5.48	62		Pn	14 18 28.5	-0.2
JCT	Junction City	5.51	203	Pn	Pn	14 18 28.1	-1.1
BGNE	Belgrade	5.83	354	Pn	Pn	14 18 32.9	-0.7
T25A	Trinidad	5.89	287		Pn	14 18 34.2	-0.4
T25A	Trinidad	5.89	287	P	Pn	14 18 34.9	+0.2
	baz=103						
OGNE	Ogallala	6.48	327		Pn	14 18 42.3	-0.3
OXF	Oxford	6.61	97		Pn	14 18 44.0	-0.2
SDCO	Great Sand Dun	6.88	290		Pn	14 18 48.7	+0.4
Q24A	Divide	7.06	301	Pn	Pn	14 18 49.3	-1.4
Q24A	Divide	7.06	301	P	Pn	14 18 50.7	-0.1
	baz=116						
ANMO	Albuquerque	7.47	268	Pg	Pb	14 19 19.9	+3.2
	0.3nm,0.3s,baz=84,slow=17,SNR=3.7						
ANMO				Lg	Lg	14 20 58.6	
	1.6nm,0.3s,baz=348,slow=18,SNR=4.2						
ISCO	Idaho Springs	7.77	305	P	Pn	14 19 00.7	+0.2
	baz=120						
L40A	Anamosa	8.03	35	Pn	Pn	14 19 02.4	-1.3
ECSD	EROS Data Cent	8.14	4		Pn	14 19 04.5	-0.8
TX31	Lajitas Ar. Si	8.21	222	Pn	Pn	14 19 04.8	-1.7
TX32	Lajitas Array	8.21	222	Pn	Pn	14 19 04.8	-1.7
TXAR	Lajitas Array	8.21	222	Pn	Pn	14 19 04.9	-1.5
	0.2nm,0.3s,baz=42,slow=12,SNR=3.9						
TXAR				Pg	Pb	14 19 33.4	+4.0
	1.8nm,0.3s,baz=62,slow=16,SNR=22						
TXAR				Lg	Lg	14 21 20.8	
	1.7nm,0.3s,baz=45,slow=25,SNR=6.8						
N23A	Red Feather La	8.57	311		Pn	14 19 10.3	-1.2
N23A	Red Feather La	8.57	311	P	Pn	14 19 11.9	+0.5
	baz=126						
TKL	Tuckaleechee C	11.06	86	Lg	Lg	14 22 52.1	
	1.4nm,0.3s,baz=160,slow=24,SNR=6.9						
PDAR	Pinedale Array	11.86	311	Pn	Pn	14 19 54.0	-2.3
	0.1nm,0.3s,baz=120,slow=10,SNR=3.6						
PDAR				Pg		14 20 44.5	
	0.3nm,0.3s,baz=104,slow=16,SNR=6.6						
PDAR				Lg	Lg	14 23 17.4	
	0.3nm,0.3s,baz=114,slow=29,SNR=8.2						
ULM	Lac du Bonnet	14.68	4	Pn	Pn	14 20 29.1	-5.6
	0.1nm,0.3s,baz=143,slow=15,SNR=1.3						
ULM				Lg	Lg	14 24 39.9	
	0.5nm,0.3s,baz=283,slow=23,SNR=4.5						
SADO	Sadowa	16.63	51	Lg	Lg	14 25 44.5	
	0.4nm,0.3s,baz=286,slow=3.6,SNR=3.4						

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*IDC **05** 14:21:34.7±1.0, 32°.73S×178°.10W, h0^{km}, mb4.2/4, mb1 4.5/6, mb1mx4.1/38, mbtmp4.3/6, ML4.5/2, MS3.8/2, Ms1 3.7/2, ms1mx3.1/39, Error ellipse: s-maj=35.1km s-min=22.8km az=135.0*

*NEIC **05** 14:21:35.9±0.7, 32°.61S±0°.07×178°.1W±0°.2, h10^{km}±1^{km}, mb4.7/9, Error ellipse: s-maj=25.4km s-min=10.5km az=101.0*

ISC 05 14:21:36.6±0.8**, 32°.70S**±0°.08×**177°.9W**±0°.1**, h20**^{km}**, n37, σ1^{s}48**/38**, mb4.5**/8**, 1C, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.44	360	Pn	Pn	14 22 31.9	+2.9
	113nm,0.3s,baz=272,slow=22,SNR=2.5						
RAO				Sn	Sn	14 23 05.1	-4.2
	214nm,0.3s,baz=83,slow=21,SNR=4.2						
RAO	Raoul Island	3.44	360		Pn	14 22 28.2	-0.9
MXZ	Matakaoa Point	5.75	212	Pn	Pn	14 23 01.6	+0.8
URZ	Urewera	6.87	215	Pn	Pn	14 23 16.4	+0.3
	3.2nm,0.3s,baz=265,slow=4.0,SNR=19						
URZ				Sn	Sn	14 24 33.8	0.0
	2.5nm,0.3s,baz=313,slow=23,SNR=6.5						
URZ	Urewera	6.87	215		Pn	14 23 15.6	-0.6
OUZ	Omahuta	7.49	248	Pn	Pn	14 23 27.1	+2.4
BKZ	Black Stump Fm	7.88	214	Pn	Pn	14 23 30.0	-0.1
BFZ	Birch Farm	9.24	209	Pn	Pn	14 23 49.1	+0.4
THZ	Tophouse	11.63	216	Pn	Pn	14 24 21.9	+0.5
LTZ	Lake Taylor	12.70	215	Pn	Pn	14 24 34.0	-2.1
RPZ	Rata Peaks	13.99	215	Pn	Pn	14 24 48.9	-4.7
	0.4nm,0.3s,baz=320,slow=20,SNR=1.3						
RPZ				Sn	Sn	14 27 13.7	-15
	0.6nm,0.3s,baz=30,slow=22,SNR=5.8						
NIUE	Niue	15.34	30	P	P	14 25 17.8	+1.2
DZM	Mont Dzumac	17.45	303	LR	LR	14 30 53.1	
	comp=Z,272nm,21.6s,baz=148,slow=32						
STKA	Stephens Creek	34.10	260	LR	LR	14 41 15.2	
	comp=Z,156nm,18.6s,baz=196,slow=35						
AS31	Alice Springs	43.11	269	P	P	14 29 35.3	-0.4
ASAR	Alice Springs	43.11	269	P	P	14 29 35.5	-0.3
	2.3nm,0.6s,baz=109,slow=7.7,SNR=55						
ASAR	Alice Springs	43.11	269	P	P	14 29 35.1	-0.6
WR0	Warramunga Arr	44.13	275	P	P	14 29 43.3	-0.7
WB2	Warramunga Arr	44.30	274	P	P	14 29 44.5	-0.8
WB2				IAmb	IAmb	14 30 35.3	
	comp=Z,38nm,1.9s						
WRAB	Tennant Creek	44.30	274	P	P	14 29 44.4	-0.9
WRAB				IAmb	IAmb	14 30 05.3	
	comp=Z,6.1nm,0.8s						
WRA	Warramunga Arr	44.31	274	P	P	14 29 44.9	-0.5
	comp=Z,2.3nm,0.4s,baz=114,slow=8.1,SNR=60						
WRA	Warramunga Arr	44.31	274	P	P	14 29 44.6	-0.7
WB0	Warramunga Arr	44.34	275	P	P	14 29 44.9	-0.8
WB0				IAmb	IAmb	14 30 05.7	
	comp=Z,6.0nm,0.8s						
FORT	Forrest	45.58	257	P	P	14 29 55.1	-0.2
MTN	Manton Dam	50.45	281	P	P	14 30 32.5	-0.7
KNRA	Kununurra	50.99	276	P	P	14 30 37.7	+0.4
KNRA				IAmb	IAmb	14 31 10.8	
	comp=Z,22nm,1.4s						
FITZ	Fitzroy Crossi	52.47	272	P	P	14 30 48.1	-0.2
	comp=Z,4.2nm,1.1s,baz=104,slow=8.3,SNR=2.7						
SYO	Syowa Base	74.89	193	⇑*i*PcP	PcP	14 33 29.0	-0.3
NVAR	Mina Array Bea	89.87	43	P	P	14 34 35.4	+1.1
	comp=Z,0.8nm,0.9s,baz=211,slow=8.2,SNR=5.0						
KBZ	Khabaz	146.41	301	PKPbc	PKiKP	14 41 17.6	-1.2
	comp=Z,0.5nm,0.5s,baz=150,slow=1.3,SNR=2.1						
FINES	FINESS Array B	147.32	339	PKPbc	PKPab	14 41 19.4	-0.4
	comp=Z,4.7nm,0.6s,baz=42,slow=3.6,SNR=19						
FINES	FINESS Array B	147.32	339		PKPab	14 41 18.8	-1.0
NB2	NORSAR Subarra	151.03	351	PKP	PKiKP	14 41 29.1	+1.1
	comp=Z,1.1nm,0.8s,baz=17,slow=2.6						
NOA	NORSAR Array B	151.03	351	PKPbc	PKiKP	14 41 28.9	+0.9
	comp=Z,1.4nm,0.7s,baz=14,slow=4.2,SNR=5.8						
AKASG	Malin Array Be	153.15	320	PKPbc	PKPbc	14 41 31.9	-0.5
	comp=Z,0.4nm,0.3s,baz=69,slow=1.3,SNR=5.8						
BRTR	Keskin Array B	153.69	294	PKPbc	PKiKP	14 41 35.1	+0.8
	comp=Z,0.5nm,0.5s,baz=159,slow=4.5,SNR=4.3						
TORD	Torodi Ar. Bea	160.53	179	PKP	PKPdf	14 41 36.5	+0.9
	comp=Z,0.2nm,0.5s,baz=207,slow=4.8,SNR=1.7						
TORD				PKPab	PKPab	14 42 18.1	+1.5
	comp=Z,0.8nm,0.7s,baz=157,slow=2.9,SNR=4.5						

IDC 05 14:22:54.4±423.0**, 57°.63N**×**31°.96E, h0**^{km}**, Error ellipse: s-maj=104.1km s-min=53.5km az=119.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	3.01	105	*i*		14 46 00.0	
	baz=288,slow=378,SNR=0.3						
I37NO	I37NO	12.90	338	*i*		15 35 18.9	
	baz=145,slow=329,SNR=0.8						
I31KZ	AKTYUBINSK INF	16.87	104	*i*		16 00 10.0	
	baz=306,slow=322,SNR=3.0						

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*NIED **05** 14:32:00, 40°.10N×142°.50E, h5^{km}, Mw3.5 Best double couple: $M_0 2.25000\times10^{14}$ NP1:ϕ_s139.00000°, δ87.00000°, λ48.00000°. NP2:ϕ_s45.00000°, δ42.00000°, λ175.00000°.*

*JMA **05** 14:32:29.2±0.1, 40°.12N×142°.49E, h27^{km}±1^{km}, M3.6*

*IDC **05** 14:32:38.0±2.3, 40°.76N×141°.04E, h71^{km}±23^{km}, mb3.0/6, mb1 3.3/8, mb1mx3.1/51, mbtmp3.3/8, Error ellipse: s-maj=40.8km s-min=14.9km az=110.0*

ISC 05 14:32:30.2±1.7**, 40°.12N**±0°.04×**142°.41E**±0°.08**, h26**^{km}±13^{km}**, n24, σ1^{s}08**/23**, mb3.4**/6**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	0.46	247	P	Pb	14 32 39.7	0.0
JTH				S	Sb	14 32 47.2	+1.0
JKEN	Kujiedanarisaw	0.54	279	P	Pb	14 32 40.8	-0.4
JKEN				S	Sb	14 32 49.0	+0.4
MIYJ	Miyakonagasawa	0.71	220	P	Pb	14 32 43.1	-0.8
MIYJ				S	Sb	14 32 52.9	-0.4
JANG	Nango	0.73	291	P	Pb	14 32 43.7	-0.6
JANG				S	Sb	14 32 53.7	-0.2
JKZ	Kuzumaki	0.84	261	P	Pn	14 32 45.9	-0.4
JKZ				S	Sb	14 32 57.9	+0.8
JOM	Ohasama	1.08	233	P	Pn	14 32 49.4	-0.2
JOM				*e*S	Sn	14 33 04.0	+0.4
OFUJ	Ofunato	1.19	209	P	Pn	14 32 50.6	-0.5
JARK	Aomorirokkasho	1.19	318	P	Pn	14 32 51.0	-0.1
JARK				S	Sn	14 33 06.0	-0.4
JTM	Tenmabayashi	1.22	303	P	Pn	14 32 51.8	+0.3
JTM				S	Sb	14 33 08.2	+0.2
JAH	Hinai	1.36	273	P	Pb	14 32 54.4	-0.6
JAH				S	Sb	14 33 12.9	+0.9
ASAJ	Asahikawa	4.00	2	P	Pn	14 33 31.1	+1.5
	2.3nm,0.3s,baz=202,slow=12,SNR=32						
ASAJ				S	Sn	14 34 12.2	-3.4
	baz=318,slow=30,SNR=0.9						
MJAR	Matsushiro Arr	4.87	224	P	Pn	14 33 46.0	+4.4
	0.0nm,0.3s,baz=27,slow=16,SNR=2.6						
SEY	Seymchan	23.62	11	P	P	14 37 38.0	-0.8
	0.8nm,0.5s,baz=254,slow=23,SNR=8.2						
H11N2	WAKE ISLAND Hy	29.22	127	T	T	15 08 58.3	
	baz=320,slow=76,SNR=87						
H11N1	WAKE ISLAND Hy	29.23	127	T	T	15 09 18.5	
	baz=320,slow=76,SNR=70						
H11N3	WAKE ISLAND Hy	29.23	127	T	T	15 09 19.5	
	baz=320,slow=76,SNR=59						
H11S1	WAKE ISLAND Hy	30.03	129	T	T	15 10 00.5	
	baz=322,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	30.03	129	T	T	15 10 10.9	
	baz=322,slow=76,SNR=13						
H11S2	WAKE ISLAND Hy	30.05	129	T	T	15 10 14.1	
	baz=322,slow=76,SNR=14						
MKAR	Makanchi Array	43.21	300	P	P	14 40 22.1	-6.8
	0.3nm,0.8s,baz=87,slow=2.6,SNR=3.6						
ILAR	Eielson Array	46.49	34	P	P	14 40 58.4	+3.7
	0.4nm,1.0s,baz=290,slow=10,SNR=2.2						
WRA	Warramunga Arr	60.22	189	P	P	14 42 42.2	+6.2
	0.2nm,0.5s,baz=6.9,slow=6.9,SNR=5.5						
YKA	Yellowknife Ar	60.76	31	P	P	14 42 40.9	+1.7
	0.2nm,0.9s,baz=264,slow=5.5,SNR=2.2						
ASAR	Alice Springs	63.95	189	P	P	14 43 07.2	+6.2
	0.3nm,0.9s,baz=359,slow=3.7,SNR=4.2						

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*IDC **05** 14:40:28.6±4.7, 25°.36N×99°.30W, h0^{km}, mb3.3/2, mb1 3.7/6, mb1mx3.5/33, mbtmp3.5/6, ML3.9/4, MS3.0/10, Ms1 3.0/10, ms1mx2.9/28, Error ellipse: s-maj=150.8km s-min=21.0km az=38.0*

*NEIC **05** 14:40:31±1.7, 25°.54N±0°.03×99°.28W±0°.02, h10^{km}±2^{km}, mb4.3/5, Md4.2/6(MEX), Mwr3.9/13(SLM), Error ellipse: s-maj=5.8km s-min=3.4km az=187.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-6.42; $M_{\theta\theta}$0.97; $M_{\phi\phi}$5.45; $M_{r\theta}$2.00; $M_{\theta\phi}$-5.80; $M_{\phi r}$5.58; Fault plane solution: $M_0 1.02000\times10^{15}$ NP1:ϕ_s175.00000°, δ65.00000°, λ-55.00000°. NP2:ϕ_s296.00000°, δ42.00000°, λ-141.00000°. Principal axes: T 10.2351, Plg13.0000°, Azm240.0000°; N -0.0049, Plg31.0000°, Azm338.0000°; P -10.2303, Plg55.0000°, Azm131.0000°;*

*MEX **05** 14:40:32.9±0.6, 25°.49N×99°.47W, h3^{km}, MD4.2*

*ANF **05** 14:40:37.9±2.0, 25°.89N×99°.16W, h35^{km}, ML4.8/3, Error ellipse: s-maj=20.1km s-min=11.2km az=145.0*

ISC 05 14:40:30.4±0.6**, 25°.60N**±0°.04×**99°.28W**±0°.05**, h10**^{km}**, n58, σ2^{s}06**/61**, Northern Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNIG	Linares	0.72	193	*e*P	Pg	14 40 43.8	-0.6
LNIG				*i* S	Sg	14 40 52.5	-1.3
LNIG	Linares	0.72	193		Pg	14 40 43.8	-0.6
LNIG					Sg	14 40 52.5	-1.3
MNIG	Monterrey	0.91	271	*e*P	Pg	14 40 45.7	-2.3
MNIG				*e*S	Sg	14 40 57.5	-2.4
KVTX	Kingsville	2.30	32	*e*P	Pb	14 41 10.9	-1.1
KVTX	Kingsville	2.30	32	Pn	Pb	14 41 10.8	-1.1
KVTX					Pn	14 41 11.1	+2.6
833A	Chaparral WMA,	2.71	358		Pn	14 41 16.4	+2.3
833A	Chaparral WMA,	2.71	358	P	Pb	14 41 17.2	-1.8
	baz=177,SNR=15						
ZAIG	Zacatecas	4.12	227	Pn	Pn	14 41 34.1	+0.4
JCT	Junction City	4.88	355	*i* P	Pn	14 41 46.9	+2.9
JCT	Junction City	4.88	355		Pn	14 41 46.6	+2.6
JCT	Junction City	4.88	355	P	Pn	14 41 46.8	+2.9
	baz=174,SNR=48						
JCT				S	Sn	14 42 41.8	+1.2
	baz=174						
435B	Jarrell	5.37	16	Pn	Pn	14 41 52.5	+1.8
435B	Jarrell	5.37	16	S	Sn	14 42 54.5	+1.9
	baz=196						
TXAR	Lajitas Array	5.38	315	Pn	Pn	14 41 51.8	+0.8
	1.4nm,0.3s,baz=147,slow=15,SNR=58						
TXAR				Lg	Lg	14 43 22.1	
	12nm,0.3s,baz=147,slow=37,SNR=18						
TXAR				LR	LR	14 44 27.4	
	comp=Z,73nm,18.3s,baz=0.0,slow=43						
HPIG		5.88	284	Pn	Pn	14 41 56.9	-1.1
WHTX	Lake Whitney,	6.56	14	Pn	Pn	14 42 08.2	+1.1
WHTX	Lake Whitney,	6.56	14	P	Pn	14 42 08.9	+1.8
	baz=194						
WHTX				S	Sn	14 43 22.1	+0.2
	baz=194						
ABTX	Abilene, Hawle	7.00	357		Pn	14 42 14.2	+1.1
ABTX	Abilene, Hawle	7.00	357	P	Pn	14 42 15.4	+2.2
	baz=177,SNR=6.1						
ABTX				S	Sn	14 43 31.1	-1.7
	baz=177						
237A	Washetta, Mont	7.07	25	Pn	Pn	14 42 14.8	+0.9
MNTX	Cornudas Mount	8.10	320		Pn	14 42 29.8	+1.6
MSTX	Muleshoe	8.87	341		Pn	14 42 39.0	+0.2
MSTX	Muleshoe	8.87	341	P	Pn	14 42 40.8	+1.9
	baz=159						
X34A	Smith Ranch, M	9.05	8		Pn	14 42 42.7	+1.4
WMOK	Wichita Mounta	9.12	3		Pn	14 42 42.8	+0.7
WMOK	Wichita Mounta	9.12	3	P	Pn	14 42 43.3	+1.2
	baz=183,SNR=12						
WMOK				S	Sn	14 44 19.8	-5.0
	baz=183						
CMIG	Matias Romero	9.41	153	LR	LR	14 47 25.8	
	comp=Z,45nm,21.7s,baz=316,slow=45						
Z41A	Richland Creek	9.49	35	S	Sn	14 44 30.6	-3.3
	baz=218						
X37A	Clayton	9.57	20		Pn	14 42 49.0	+0.7
LPIG	La Paz	10.13	264	LR	LR	14 47 07.0	
	comp=Z,76nm,19.3s,baz=206,slow=40						
121A	Cookes Peak, D	10.15	315	Pn	Pn	14 42 58.1	+1.7
121A	Cookes Peak, D	10.15	315	P	Pn	14 42 58.9	+2.5
	baz=131						
MIAR	Mount Ida	10.19	28	Pn	Pn	14 42 56.6	-0.1
MIAR	Mount Ida	10.19	28	S	Sn	14 44 46.6	-4.5
	baz=210						
319A	Douglas	10.51	305		Pn	14 43 02.4	+1.1
W39A	Magazine	10.67	25	Pn	Pn	14 43 03.5	+0.1
W39A	Magazine	10.67	25	P	Pn	14 43 05.1	+1.7
	baz=208						
W39A				S	Sn	14 44 59.8	-3.1
	baz=208						
ANMO	Albuquerque	11.18	328	Pn	Pn	14 43 14.7	+4.1
	0.1nm,0.3s,baz=164,slow=2.1,SNR=3.0						
ANMO				LR	LR	14 48 01.2	
	comp=Z,36nm,20.6s,baz=142,slow=40						
W41B	Gary Mavity, V	11.30	31	P	Pn	14 43 12.8	+0.8
	baz=214						
W41B				S	Sn	14 45 13.5	-4.9
	baz=214						
TEIG	Tepich	11.46	116	Pn	Pn	14 43 13.6	-0.7
	0.6nm,0.3s,baz=284,slow=0.0,SNR=1.8						
TEIG				LR	LR	14 48 40.6	
	comp=Z,64nm,18.2s,baz=233,slow=43						
U40A	Yellville	12.05	26	S	Sn	14 45 32.9	-3.8
	baz=209						
LCAR	Lake Charles	12.55	32	Pn	Pn	14 43 29.2	+0.1
CBKS	Cedar Bluff	13.18	358	Pn	Pn	14 43 39.2	+1.4
SDCO	Great Sand Dun	13.21	338	Pn	Pn	14 43 38.5	+0.1
APG	El Apazote	13.39	140	LR	LR	14 49 01.3	
	comp=Z,42nm,21.3s,baz=98,slow=39						
T47A	Sharon Grove	15.38	40	P	P	14 44 13.8	+1.5
U49A	Red Boiling Sp	15.86	43	Pn	Pn	14 44 15.2	+1.4
U49A				IAmb	IAmb	14 44 25.1	
	comp=Z,12nm,0.5s						
MTPU	Mount Pierson	16.53	322	P	P	14 44 27.3	+1.9
TKL	Tuckaleechee C	16.67	49	LR	LR	14 51 03.6	
	comp=Z,42nm,18.2s,baz=242,slow=38						
WCI	Wyandotte Cave	16.71	38		Pn	14 44 25.1	+0.4
WCI				IAmb	IAmb	14 44 37.2	
	comp=Z,15nm,0.8s						
PFO	Pinyon Flats O	16.92	302	LR	LR	14 51 26.8	
	comp=Z,126nm,19.7s,baz=118,slow=39						
N47A	Urbana	18.97	33	P	Pn	14 44 53.3	+0.7
PDAR	Pinedale Array	19.09	336	P	Pn	14 44 55.3	+1.0
	comp=Z,0.1nm,0.3s,baz=141,slow=14,SNR=3.7						
ELK	Elko	20.11	323	LR	LR	14 53 20.0	
	comp=Z,161nm,21.2s,baz=145,slow=38						
GCMT	Greycliff	21.80	340	P	P	14 45 23.6	+0.8
YBH	Yreka Blue Hor	25.16	316	LR	LR	14 57 04.9	
	comp=Z,129nm,18.1s,baz=172,slow=39						
YKA	Yellowknife Ar	38.28	349	P	P	14 47 51.2	+0.5
	comp=Z,0.6nm,0.9s,baz=156,slow=8.2,SNR=8.5						
ILAR	Eielson Array	49.52	335	P	P	14 49 23.4	+2.5
	comp=Z,0.2nm,0.6s,baz=131,slow=4.5,SNR=5.4						

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*BJI **05** 15:02:42.5±0.0, 31°.35N×138°.20E, h372^{km}, mB4.7/45, mb4.9/65*

*MOS **05** 15:02:43.7±0.8, 31°.36N×138°.19E, h379^{km}, mb4.8/64, Error ellipse: s-maj=6.2km s-min=3.8km az=106.1*

*NEIC **05** 15:02:45.5±1.1, 31°.36N±0°.07×138°.22E±0°.08, h384^{km}±4^{km}, mb4.7/325, Error ellipse: s-maj=10.1km s-min=9.6km az=194.0*

*IDC **05** 15:02:45.1±0.5, 31°.43N×138°.24E, h378^{km}±4^{km}, mb4.2/46, mb1 4.3/52, mb1mx4.2/65, mbtmp4.9/52, Error ellipse: s-maj=7.9km s-min=7.2km az=110.0*

*JMA **05** 15:02:46.7±0.4, 31°.59N×138°.50E, h386^{km}±5^{km}, M4.3*

ISC 05 15:02:45.0±0.4**, 31°.39N**±0°.04×**138°.24E**±0°.04**, h382**^{km}±3^{km}**, h382**^{km}**:pP-P, n768, σ1^{s}09**/824**, mb4.7**/255**, 29C-25D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.68	50	P	Pn	15 03 38.2	+0.9
JAOM				*e*S	S	15 04 18.7	-0.9
JHCJ	Hachijojimakas	2.14	38	P	Pn	15 03 40.6	+0.5
JHCJ				*e*S	S	15 04 22.6	-2.0
JHJ	Hachijo jima 2	2.17	37	P	Pn	15 03 40.8	+0.4
	240nm,0.3s,baz=325,slow=16,SNR=27						
JHJ				S	S	15 04 22.5	-2.5
	171nm,0.3s,baz=82,slow=23,SNR=2.4						
JHJ2	Mitsune	2.18	37	P	Pn	15 03 40.8	+0.4
JHJ2	Mitsune	2.18	37		Pn	15 03 40.8	+0.4
TTO1	TONANKAI O.B.S	2.55	331	P	Pn	15 03 45.1	+2.4
TTO2	TONANKAI O.B.S	2.56	337	P	Pn	15 03 45.3	+2.5
TK02	Tokai 2	2.59	351	P	Pn	15 03 45.2	+2.1
TTO4	TONANKAI O.B.S	2.68	347	P	Pn	15 03 45.9	+2.1
JMKN	Mikurajimanish	2.75	24	P	Pn	15 03 44.7	+0.1
JTNC	Tanabenakahech	3.29	318	P	Pn	15 03 51.0	+1.7
JTNC				*e*S	S	15 04 42.0	+0.7
JKN2	Miekihoku	3.29	330	P	Pn	15 03 50.9	+1.6
JKN2				*e*S	S	15 04 42.1	+0.8
HMMJ	Hamamatsu 2	3.49	353	P	Pn	15 03 52.7	+1.7
INU	Inuyama	4.08	346		Pn	15 03 58.1	+1.4
MJAR	Matsushiro Arr	5.14	360	P	Pn	15 04 07.2	-0.4
	1.7nm,0.3s,baz=174,slow=11,SNR=71						
MJAR				S	S	15 05 11.6	-3.0
	1.5nm,0.3s,baz=170,slow=16,SNR=6.6						
MAJO	Matsushiro	5.14	360	*ce*P	Pn	15 04 07.6	0.0
MAJO	Matsushiro	5.14	360		Pn	15 04 07.2	-0.4
MAT	Matsushiro	5.14	360	P	Pn	15 04 07.5	-0.1
MAT				S	S	15 05 11.4	-3.3
MJB9	Matsu-Tunnel	5.15	360		Pn	15 04 07.3	-0.3
JCJ	Chichijima	5.49	140	P	Pn	15 04 08.4	-3.0
	87nm,0.3s,baz=2.2,slow=21,SNR=46						
JCJ				S	S	15 05 14.9	-6.8
	518nm,0.3s,baz=301,slow=22,SNR=26						
JNU	Nakatsue	6.47	287	P	Pn	15 04 24.3	+2.1
	2.3nm,0.3s,baz=100,slow=5.1,SNR=24						
JNU				S	S	15 05 42.9	+1.4
	0.6nm,0.3s,baz=271,slow=22,SNR=1.7						
JNU	Nakatsue	6.47	287		Pn	15 04 24.5	+2.3
JOW	Kunigami	9.83	245	P	P	15 05 03.5	+2.2
	1.1nm,0.3s,baz=122,slow=14,SNR=8.1						
TJN	Taejon	10.32	302	*de*P	P	15 05 07.5	+0.9
KSRS	Korea Array	10.45	308	P	Pn	15 05 08.8	+0.7
	4.8nm,0.3s,baz=122,slow=11,SNR=82						
KS19	Wonju Array Si	10.51	308	P	Pn	15 05 09.0	+0.1
ERM	Erimo	11.31	19	*c i*P	Pn	15 05 18.1	0.0
ERM				pmax	pmax		
	comp=Z,345nm,1.0s						
ERM	Erimo	11.31	19	P	Pn	15 05 18.2	0.0
INCN	Inchon	11.35	306	P	Pn	15 05 18.7	0.0
INCN	Inchon	11.35	306	P	Pn	15 05 18.6	0.0
VLA	Vladivostok	12.75	338	⇑*e*P	Pn	15 05 34.3	-0.7
ASAJ	Asahikawa	13.16	14	P	P	15 05 38.0	+0.2
	comp=Z,6.7nm,0.3s,baz=239,slow=10,SNR=84						
ASAJ				S	S	15 07 58.7	-2.4
	comp=Z,0.7nm,0.3s,baz=49,slow=30,SNR=2.9						
JKA	Kamikawa-asahi	13.16	14	P	P	15 05 38.0	+0.2
JKA					S	15 07 58.7	-2.4
NMR	Nemuro--Hokkai	13.35	24	⇓*i*P	Pn	15 05 43.0	+1.1
NMR				*i* S	S	15 08 07.3	+2.5
USA0B	Ussuriysk Arra	13.71	341	P	P	15 05 44.2	+0.3
USA0B	Ussuriysk Arra	13.71	341	P	P	15 05 44.2	+0.3
USRK	Ussuriysk Ar.	13.71	341	P	P	15 05 44.3	+0.5
	baz=151,slow=10,SNR=20						
USRK	Ussuriysk Ar.	13.71	341	P	P	15 05 43.9	0.0
GRPR	Tuman	13.91	23	*e*P	Pn	15 05 49.6	+1.1
GRPR				*e*S	S	15 08 21.2	+5.1
YUK	Yuzh-Kuril'sk	13.98	23	P	Pn	15 05 49.9	+0.7
YUK				*e*S	S	15 08 22.8	+5.4
SHO	Shikotan	14.19	26	P	P	15 05 49.0	-0.1
SHO				pmax	pmax		
	comp=N,7.0nm,0.4s						
SHO				pmax	pmax		
	comp=E,7.0nm,0.4s						
SHO				pmax	pmax		
	comp=Z,13nm,0.4s						
MDJ	Mudanjiang	14.85	335	P	P	15 05 56.9	+0.5
YOJ	Yonaguni jima	15.12	247	P	P	15 05 59.2	-0.3
YOJ				pmax	pmax		
	comp=Z,318nm,1.1s						
YOJ	Yonaguni jima	15.12	247	P	P	15 05 59.2	-0.3

DL2	Dalian	15.51	303	P	P	15 06 04.2	+0.6
DL2				pmax	pmax		
	comp=Z,66nm,0.9s						
YSS	Yuzh-Sakhalins	15.93	11	⇑iP	P	15 06 09.0	+1.0
YSS				eS	S	15 08 55.5	-0.6
YSS				pmax	pmax		
	comp=Z,100nm,0.4s						
YSS				smax	smax		
	comp=E,20nm,1.0s						
YSS	Yuzh-Sakhalins	15.93	11	P	P	15 06 08.7	+0.8
CN2	Changchun	15.99	324	eP	P	15 06 09.0	+0.3
CN2				eS	S	15 08 51.2	-6.2
CN2				pmax	pmax		
	comp=E,20nm,1.4s						
CN2				pmax	pmax		
	comp=E,220nm,6.6s						
TATO	Taipei	16.09	251	P	P	15 06 10.3	+0.3
YHNB	Yeheng	16.32	250	P	P	15 06 12.3	-0.3
NACB	Ninganchiao	16.38	248	P	P	15 06 12.0	-1.1
NJ2	Nanjing	16.52	277	eP	P	15 06 14.0	-0.5
NJ2				pmax	pmax		
	comp=E,22nm,0.5s						
YULB	Yu-li	17.01	246	P	P	15 06 19.2	-0.7
SSLB	Suanglung	17.08	248	P	P	15 06 20.4	-0.3
TWG	Pinlang	17.49	245	P	P	15 06 24.3	-0.7
TPUB	Ta-pu	17.58	247	P	P	15 06 25.9	-0.1
TIA	Tai'an	18.19	291	P	P	15 06 31.7	-0.6
TIA				pmax	pmax		
	comp=E,26nm,0.6s						
KLR	Kul'dur	18.48	346	P	P	15 06 34.7	-0.6
	comp=E,1.3nm,0.3s,baz=172,slow=6.0,SNR=29						
KLR				ScP	ScP	15 13 44.5	+0.4
	comp=E,0.1nm,0.3s,baz=254,slow=3.9,SNR=4.6						
GRNR	Gornyy	19.41	357	⇑iP	P	15 06 45.1	+0.3
GRNR				eS	S	15 09 58.2	-3.4
GRNR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GRNR				smax	smax		
	comp=E,1.0nm,0.9s						
GRNR				MLR	MLR		
	comp=Z,80nm,14.0s						
TYV	Tymovskoe	19.73	8	eP	P	15 06 48.6	+0.7
TYV				eS	S	15 10 01.4	-5.3
TYV				pmax	pmax		
	comp=Z,23nm,0.7s						
TYV				pmax	pmax		
	comp=Z,200nm,4.0s						
TYV				smax	smax		
	comp=E,1µm,10.0s						
BJT	Baijiatuau	19.85	302	P	P	15 06 47.7	-1.5
BJT				pmax	pmax		
	comp=Z,23nm,0.6s						
BJT	Baijiatuau	19.85	302	P	P	15 06 47.7	-1.5
BJT				IAmb	IAmb	15 06 53.4	
	comp=Z,23nm,0.6s						
BJI	Beijing	19.85	302	P	P	15 06 47.4	-1.8
BJI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WHN	Wuhan	20.50	274	P	P	15 06 55.3	0.0
WHN				pmax	pmax		
	comp=Z,56nm,0.7s						
SZP	Santa	21.21	234	P	P	15 07 01.4	-0.4
HIA	Hailar	22.65	327	P	P	15 07 14.8	+0.2
HIA				pmax	pmax		
	comp=Z,51nm,0.9s						
HIA	Hailar	22.65	327	P	P	15 07 14.8	+0.2
HIA				IAmb	IAmb	15 07 17.7	
	comp=Z,50nm,0.9s						
HHC	Hu-ho-hao-te	23.45	301	eP	P	15 07 22.4	+0.3
HHC				pmax	pmax		
	comp=Z,87nm,0.7s						
HHC				pmax	pmax		
	comp=Z,350nm,3.9s						
ZEA	Zeya	23.70	344	eP	P	15 07 23.8	-0.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BTO	Baotou	24.53	300	eP	P	15 07 32.4	+0.7
ENH	Enshi	24.69	275	P	P	15 07 32.7	-0.5
XAN	Xi'an	24.78	284	P	P	15 07 33.5	-0.4
XAN				S	S	15 11 22.9	-4.8
XAN				pmax	pmax		
	comp=Z,38nm,1.4s						
XAN	Xi'an	24.78	284	P	P	15 07 33.5	-0.4
XAN				pmax	pmax		
	comp=Z,27nm,0.9s						
XAN	Xi'an	24.78	284	P	P	15 07 33.5	-0.4
XAN				IAmb	IAmb	15 07 35.3	
	comp=Z,27nm,0.9s						
PEA0B	Petropavlovsk-	25.89	27	⇓eP	P	15 07 44.5	+0.9
PEA0B	Petropavlovsk-	25.89	27	P	P	15 07 44.4	+0.9
PEA0B				IAmb	IAmb	15 08 20.0	
	comp=Z,51nm,1.4s						
PETK	Petropavlovsk-	25.89	27	P	P	15 07 44.3	+0.8
	comp=Z,5.8nm,0.8s,baz=86,slow=22,SNR=17						
PETK				ScP	ScP	15 14 02.5	-0.8
	comp=Z,1.8nm,0.8s,baz=150,slow=18,SNR=4.1						
ULN	Ulaanbaatar	28.86	314	P	P	15 08 11.0	+0.9
ULN	Ulaanbaatar	28.86	314	P	P	15 08 10.6	+0.5
ULN				pmax	pmax		
	comp=Z,49nm,0.7s						
ULN	Ulaanbaatar	28.86	314	P	P	15 08 10.6	+0.5
LZH	Lanzhou	28.89	289	⇓P	P	15 08 10.0	-0.5
LZH				pP	pP	15 09 20.5	+0.8
LZH				PP	PnPn	15 09 30.2	+4.5
LZH				sP	sP	15 10 04.8	+0.8
LZH				pmax	pmax		
	comp=Z,26nm,1.3s						
LZH				pmax	pmax		
	comp=Z,87nm,5.2s						
SONM	Songino Array	29.26	313	P	P	15 08 14.1	+0.6
	comp=Z,23nm,0.6s,baz=126,slow=9.0,SNR=222						
SONM				PcP	PcP	15 11 10.0	+0.7
	comp=Z,1.7nm,0.4s,baz=134,slow=2.6,SNR=9.1						
SONM				ScP	ScP	15 14 13.8	-0.2
	comp=Z,1.8nm,0.9s,baz=131,slow=2.6,SNR=7.5						
SONM	Songino Array	29.26	313	P	P	15 08 13.2	-0.3
SONM	Songino Array	29.26	313		ScP	15 14 13.4	-0.6
MA2	Magadan	29.42	13	P	P	15 08 15.3	+0.7
	comp=Z,41nm,0.6s,baz=200,slow=8.9,SNR=42						
MA2				ScP	ScP	15 14 13.1	-1.0
	comp=Z,1.2nm,0.3s,baz=293,slow=4.0,SNR=3.5						
MA2	Magadan	29.42	13	c iP	P	15 08 15.2	+0.6
MA2				pmax	pmax		
	comp=Z,44nm,0.7s						
MA2	Magadan	29.42	13	P	P	15 08 14.8	+0.1
MA2				IAmb	IAmb	15 08 16.1	
	comp=Z,46nm,0.7s						
CD2	Chengdu	29.45	278	P	P	15 08 14.6	-0.7
CD2				pmax	pmax		
	comp=Z,50nm,0.7s						
YAK	Yakutsk	31.16	352	⇑eP	P	15 08 29.4	-0.3
YAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BOD	Bodaibo	31.23	335	eP	P	15 08 30.3	0.0
BOD				pmax	pmax		
	comp=Z,7.0nm,1.4s						
ZAK	Zakamensk	32.13	316	eP	P	15 08 38.5	+0.1
ZAK				pmax	pmax		
	comp=Z,109nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,32nm,0.9s						
GTA	Gaotai	32.14	295	P	P	15 08 38.4	-0.3
GTA				pP	pP	15 09 50.2	+1.6
GTA				sP	sP	15 10 33.1	+0.7
GTA				ScP	ScP	15 14 24.2	+0.4
GTA				pmax	pmax		
	comp=Z,30nm,1.0s						
GTA				pmax	pmax		
	comp=Z,150nm,10.0s						
GTA				LR	LR		
	comp=Z,86nm,5.8s						
GTA				LR	LR		
	comp=Z,140nm,5.5s						
GTA				LR	LR		
	comp=Z,100nm,6.2s						
SLVN	Son La	32.24	260	P	P	15 08 39.8	+0.1
IRK	Irkutsk	32.35	320	eP	P	15 08 40.6	+0.5
IRK				pmax	pmax		
	comp=Z,35nm,2.2s						
TLY	Talaya	32.45	319	P	P	15 08 42.2	+1.1
	comp=Z,17nm,0.6s,baz=142,slow=5.2,SNR=45						
TLY				ScP	ScP	15 14 24.1	-0.3
	comp=Z,0.6nm,0.2s,baz=120,slow=4.1,SNR=4.4						
TLY	Talaya	32.45	319	P	P	15 08 42.2	+1.1
TLY	Talaya	32.45	319	P	P	15 08 41.9	+0.8
TLY				IAmb	IAmb	15 08 44.3	
	comp=Z,17nm,0.6s						
KKM	Kota Kinabalu	32.58	224	P	P	15 08 42.8	+0.2
KKM				IAmb	IAmb	15 09 45.3	
	comp=Z,54nm,1.6s						
SEY	Seymchan	32.84	12	P	P	15 08 44.4	+0.2
	comp=Z,2.3nm,0.3s,baz=89,slow=3.4,SNR=14						
SEY				ScP	ScP	15 14 24.9	-0.6
	comp=Z,1.6nm,0.7s,baz=94,slow=16,SNR=7.2						
SEY	Seymchan	32.84	12	⇑eP	P	15 08 44.5	+0.4
DLV	T Lat	33.58	241	P	P	15 08 51.6	+0.3
DLV				IAmb	IAmb	15 08 53.3	
	comp=Z,28nm,0.9s						
MOY	Mondy	33.96	318	eP	P	15 08 54.5	+0.4
MRSI	Marisa	34.40	210	P	P	15 08 58.2	+0.1
	comp=Z,46nm,1.1s						
FAKI	Fak Fak	34.59	191	P	P	15 08 59.9	+0.2
FAKI				IAmb	IAmb	15 09 55.9	
	comp=Z,44nm,1.0s						
SANI	Sanana	35.23	202	P	P	15 09 03.9	-1.2
	comp=Z,70nm,0.7s						
LUWI	Luwuk	35.44	207	P	P	15 09 05.3	-1.6
LUWI				IAmb	IAmb	15 09 09.6	
	comp=Z,26nm,0.5s						
APSI	Ampana	35.77	209	P	P	15 09 09.3	-0.4
	comp=Z,1µmcomp=Z,92nm,0.5s						
AAI	Ambon	36.17	197	P	P	15 09 13.6	+0.6
	comp=Z,89nm,0.6s						
PBKT	Sadao Pong	36.91	255	P	P	15 09 19.8	+0.5
CHTO	Chiang Mai	37.53	260	P	P	15 09 24.7	+0.4
CHTO	Chiang Mai	37.53	260	P	P	15 09 23.8	-0.5
CHTO				pmax	pmax		
	comp=Z,28nm,0.9s						
CHTO	Chiang Mai	37.53	260	P	P	15 09 23.8	-0.5
CHTO				IAmb	IAmb	15 09 25.6	
	comp=Z,28nm,0.9s						
CM31	Chiang Mai Arr	37.70	259	P	P	15 09 25.8	+0.1
CMAR	Chiang Mai Arr	37.70	259	P	P	15 09 26.2	+0.5
	comp=Z,9.0nm,0.8s,baz=48,slow=7.8,SNR=65						
CMAR				ScP	ScP	15 14 44.5	+0.5
	comp=Z,1.6nm,0.9s,baz=31,slow=3.6,SNR=10						
CMAR	Chiang Mai Arr	37.70	259	P	P	15 09 25.7	0.0
SBUM	Sibu	37.83	226	P	P	15 09 26.1	-0.7
SBUM	Sibu	37.83	226	P	P	15 09 28.0	+1.2
BKB	Balikpapan	38.28	216	P	P	15 09 28.4	-2.1
SPSI	Sidrap Palu	39.32	210	P	P	15 09 38.4	-0.6
	comp=Z,23nm,1.2s						
BNSI	Bone	39.57	209	P	P	15 09 41.9	+0.9
	comp=Z,41nm,1.0s						
KSM	Kuching	39.77	227	P	P	15 09 44.0	+1.3
KSM				IAmb	IAmb	15 09 45.2	
	comp=Z,80nm,1.1s						
KSM	Kuching	39.77	227	P	P	15 09 45.0	+2.2
BILL	Bilibino	40.17	16	c iP	P	15 09 45.9	+0.6
BILL				e*PP	pP	15 10 59.2	+0.2
BILL				e		15 11 28.5	
BILL				pmax	pmax		
	comp=Z,39nm,0.8s						
BILL	Bilibino	40.17	16	P	P	15 09 45.8	+0.5
BILL				IAmb	IAmb	15 09 47.0	
	comp=Z,35nm,0.8s						
ATKA	Atka Island	40.21	45	P	P	15 09 45.6	-0.2
KAPI	Kappang	40.27	209	P	P	15 09 47.3	+0.6
	comp=Z,13nm,0.5s,baz=355,slow=12,SNR=6.2						
LSA	Lhasa	40.35	280	i P	P	15 09 48.6	+0.8
	SNR=8.8						
LSA	Lhasa	40.35	280	P	P	15 09 48.7	+0.8
LSA	Lhasa	40.35	280	P	P	15 09 46.9	-1.0
LSA				pmax	pmax		
	comp=Z,34nm,1.5s						
LSA	Lhasa	40.35	280	P	P	15 09 46.9	-1.0
KBKI	Kotabaru	40.40	215	P	P	15 09 48.3	+0.5
	comp=Z,255nmcomp=Z,13nm,0.6s						
TIXI	Tiksi	40.64	355	P	P	15 09 48.9	-0.1
	comp=Z,2.5nm,0.4s,baz=132,slow=7.6,SNR=17						
TIXI				ScP	ScP	15 14 54.4	-0.1
	comp=Z,0.6nm,0.5s,baz=290,slow=4.4,SNR=4.3						
TIXI	Tiksi	40.64	355	⇓iP	P	15 09 48.8	-0.2
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TIXI	Tiksi	40.64	355	P	P	15 09 48.5	-0.5
SHL	Shillong	40.93	274	P	P	15 09 51.5	-0.8
SHL				pmax	pmax		
	comp=Z,25nm,0.5s						
SHL	Shillong	40.93	274	P	P	15 09 51.5	-0.8
SHL				IAmb	IAmb	15 09 53.4	
	comp=Z,25nm,0.5s						
WMQ	Urumqi	41.33	302	eP	P	15 09 56.0	+0.9
WMQ				pmax	pmax		
	comp=Z,30nm,0.7s						
WMQ	Urumqi	41.33	302	P	P	15 09 55.0	-0.1
WMQ				pmax	pmax		
	comp=Z,76nm,1.3s						
WMQ	Urumqi	41.33	302	P	P	15 09 55.0	-0.1
WMQ				IAmb	IAmb	15 09 56.9	
	comp=Z,76nm,1.3s						
PMG	Port Moresby	41.45	167	P	P	15 09 56.0	-0.3
PMG				pmax	pmax		
	comp=Z,96nm,1.8s						
PMG	Port Moresby	41.45	167	P	P	15 09 56.0	-0.3
PMG				IAmb	IAmb	15 10 28.1	
	comp=Z,96nm,1.8s						
BRDH	Bariadhala	42.15	270	P	P	15 10 02.7	+0.8
	comp=Z,103nm,0.3s,baz=101,slow=9.4,SNR=8.0						
MMRI	Maumere	42.65	204	P	P	15 10 05.7	-0.1
MMRI				IAmb	IAmb	15 10 06.6	
	comp=Z,30nm,1.0s						
EDFI	Ende, Flores	42.94	204	P	P	15 10 07.7	-0.6
	comp=Z,16nm,0.6s						
SOEI	Soe	43.05	200	P	P	15 10 08.7	-0.4
SOEI				IAmb	IAmb	15 10 22.0	
	comp=Z,28nm,0.8s						
NIKH	Nikolski High	43.55	44	P	P	15 10 12.1	-0.5
KULM	Kulim	43.76	241	P	P	15 10 14.7	0.0
KULM				IAmb	IAmb	15 10 16.3	
	comp=Z,16nm,0.6s						
KULM	Kulim	43.76	241	P	P	15 10 16.0	+1.3
MYKOM	Kota Tinggi	43.83	235	P	P	15 10 14.7	-0.4
TAPN	Taplejung	43.91	278	eP	P	15 10 16.4	+0.3
	comp=Z,56nm,0.6s						
ZAA0	Zalesovo Array	44.01	317	P	P	15 10 15.4	-0.6
ZAA0				IAmb	IAmb	15 10 17.3	
	comp=Z,39nm,1.2s						
ZALV	Zalesovo Beam	44.01	317	P	P	15 10 15.7	-0.4
	comp=Z,16nm,0.3s,baz=102,slow=7.5,SNR=115						
ZALV				PcP	PcP	15 11 53.9	0.0
	comp=Z,10.0nm,0.6s,baz=121,slow=3.5,SNR=13						
ZALV	Zalesovo Beam	44.01	317	P	P	15 10 15.3	-0.8
IPM	Ipoh	44.01	240	P	P	15 10 16.3	-0.4
IPM				IAmb	IAmb	15 10 17.6	
	comp=Z,26nm,0.9s						
IPM	Ipoh	44.01	240	P	P	15 10 17.0	+0.3
ODAN	Odare	44.34	278	eP	P	15 10 19.5	+0.1
	comp=Z,112nm,0.4s						
MTN	Manton Dam	44.50	190	P	P	15 10 18.4	-2.0
MTN				IAmb	IAmb	15 10 20.9	
	comp=Z,18nm,0.7s						
GAMB	Gambell	44.91	29	P	P	15 10 23.7	+0.8
RAMN	Ramite	44.98	278	eP	P	15 10 24.6	+0.2
	comp=Z,151nm,0.6s						
SRBI	Singaraja	45.01	213	P	P	15 10 25.2	+0.8
	comp=Z,35nm,0.7s						
UNV	Unalaska Valle	45.06	43	P	P	15 10 24.0	-0.3
JIRN	Jiri	45.11	279	eP	P	15 10 26.3	+0.8
	comp=Z,228nm,0.4s						
MK31	Makanchi Array	45.13	307	P	P	15 10 25.2	+0.2
MK31				pmax	pmax		
	comp=Z,29nm,0.8s						
MK31	Makanchi Array	45.13	307	P	P	15 10 25.2	+0.2
MK31				IAmb	IAmb	15 10 26.2	
	comp=Z,29nm,0.8s						
MKAR	Makanchi Array	45.13	307	P	P	15 10 25.3	+0.3
	comp=Z,22nm,0.5s,baz=84,slow=10,SNR=406						
MKAR				PcP	PcP	15 11 58.1	+0.1
	comp=Z,4.3nm,0.6s,baz=93,slow=7.3,SNR=3.6						
MKAR				ScP	ScP	15 15 12.6	-0.8
	comp=Z,3.6nm,0.6s,baz=81,slow=6.1,SNR=12						
MKAR	Makanchi Array	45.13	307	ceP	P	15 10 25.2	+0.3
MKAR				pmax	pmax		
	comp=Z,15nm,0.3s						
MKAR	Makanchi Array	45.13	307	P	P	15 10 25.0	0.0
MKAR	Makanchi Array	45.13	307		ScP	15 15 12.7	-0.7
GUN	Gumba	45.29	280	eP	P	15 10 27.5	+0.6
	comp=Z,193nm,0.7s						
COEN	Coen	45.33	173	P	P	15 10 27.6	+0.7
COEN				IAmb	IAmb	15 12 05.4	
	comp=Z,46nm,1.5s						
MAKZ	Makanchi	45.34	307	P	P	15 10 27.1	+0.5
MAKZ				pmax	pmax		
	comp=Z,28nm,0.6s						
MAKZ	Makanchi	45.34	307	P	P	15 10 27.1	+0.5
MAKZ				IAmb	IAmb	15 10 27.4	
	comp=Z,28nm,0.6s						
PKI	Pulchoki	45.79	279	eP	P	15 10 30.5	-0.3
PKIN	Phulchoki	45.80	279	eP	P	15 10 30.7	-0.1
	comp=Z,16nm,0.3s						
KKN	Kakani	45.83	280	eP	P	15 10 31.3	+0.3
JAGI	Jajag, Banyuwa	45.85	214	P	P	15 10 29.1	-1.8
JAGI				IAmb	IAmb	15 10 31.0	
	comp=Z,37nm,1.0s						
DMN	Daman	46.04	279	eP	P	15 10 32.7	+0.1
PBA	Port Blair	46.27	255	P	P	15 10 34.8	+0.6
GKN	Gorkha	46.31	280	eP	P	15 10 34.8	+0.2
	comp=Z,56nm,0.3s						
SMRI	Semarang	46.55	220	P	P	15 10 36.6	+0.3
	comp=Z,100nm,1.3s						
PSI	Prapat	46.69	240	P	P	15 10 37.1	-0.4
PSI				pmax	pmax		
	comp=Z,13nm,0.7s						
RPSI	Rantau Prapat	46.76	240	P	P	15 10 37.1	-0.8
BKNI	Bangkinang	46.84	236	P	P	15 10 39.0	+0.5
DANN	Dangsing	46.94	281	eP	P	15 10 40.2	+0.6
	comp=Z,94nm,0.3s						
UGM	Wanagama	47.23	219	P	P	15 10 41.3	-0.2
NRIK	Noril'sk	47.40	338	P	P	15 10 42.5	+0.4
	comp=Z,11nm,0.4s,baz=111,slow=9.5,SNR=36						
KURK	Kurchatov	47.55	312	P	P	15 10 43.3	-0.2
KURK	Kurchatov	47.55	312	d iP	P	15 10 43.1	-0.3
KURK				pmax	pmax		
	comp=Z,62nm,1.0s						
KURK	Kurchatov	47.55	312	P	P	15 10 43.1	-0.3
KURK				IAmb	IAmb	15 10 44.2	
	comp=Z,62nm,1.0s						
KURK	Kurchatov	47.55	312		ScP	15 15 22.4	-0.9
KURBB	Kurchatov Arra	47.60	312	P	P	15 10 43.8	-0.1
	comp=Z,44nm,0.4s,baz=91,slow=9.1,SNR=463						
KURBB				ScP	ScP	15 15 22.4	-1.2
	comp=Z,1.0nm,0.6s,baz=93,slow=4.3,SNR=5.2						
KURBB	Kurchatov Arra	47.60	312	P	P	15 10 43.6	-0.3
KNRA	Kununurra	47.67	192	P	P	15 10 44.8	+0.1
ANM	Nome	47.78	29	P	P	15 10 46.1	+1.1
ANM				pmax	pmax		
	comp=Z,19nm,1.4s						
ANM	Nome	47.78	29	P	P	15 10 46.1	+1.1
PDSI	Padang	48.11	235	P	P	15 10 46.8	-1.5
	comp=Z,10nm,0.5s						
PRZ	Przheval'sk	48.20	301	P	P	15 10 50.0	+1.2
PRZ				pmax	pmax		
	comp=Z,121nm,0.7s						
PRZ	Przheval'sk	48.20	301	P	P	15 10 50.0	+1.2
MDSI	Maura Dua	48.24	228	P	P	15 10 49.4	+0.3
	comp=Z,1µmcomp=Z,131nm,0.8s						
CISI	Cisompet, Garu	48.44	222	P	P	15 10 48.5	-2.2
CISI				IAmb	IAmb	15 10 50.6	
	comp=Z,38nm,0.6s						
KSI	Kapahiang	48.64	231	P	P	15 10 51.0	-1.3
	comp=Z,11µmcomp=Z,30nm,0.9s						
SDPT	Sand Point	48.69	42	P	P	15 10 51.1	-0.8
SDPT				IAmb	IAmb	15 11 06.6	
	comp=Z,37nm,0.8s						
KASI	Kota Agung	48.83	227	P	P	15 10 51.9	-1.7
	comp=Z,1µmcomp=Z,35nm,0.8s						
MNAI	Manna	48.93	230	P	P	15 10 53.2	-1.2
KDJ	Kajisay	49.14	301	P	P	15 10 56.3	+0.4
KDJ				pmax	pmax		
	comp=Z,46nm,1.1s						
KDJ	Kajisay	49.14	301	P	P	15 10 56.3	+0.4
KDJ				IAmb	IAmb	15 10 57.3	
	comp=Z,46nm,1.1s						
CNBA	Chernabura Isl	49.18	43	P	P	15 10 55.2	-0.4
CNBA				IAmb	IAmb	15 10 55.9	
	comp=Z,29nm,0.5s						
RDOG	Red Dog Mine	49.72	25	P	P	15 11 00.7	+1.1
PPSI	Pulau Pagai	49.74	234	P	P	15 10 59.7	-0.7
	comp=Z,138nm,0.9s						
ULHL	Ulahol	49.81	301	P	P	15 11 01.5	+0.5
	SNR=30						
CHGN	Chignik	49.90	41	P	P	15 10 59.9	-1.1
CHGN				IAmb	IAmb	15 12 44.4	
	comp=Z,86nm,1.8s						
NRN	Naryn	50.12	300	P	P	15 11 03.7	+0.4
NRN				pmax	pmax		
	comp=Z,38nm,0.5s						
NRN	Naryn	50.12	300	P	P	15 11 03.7	+0.4
KSH	Kashi	50.49	297	P	P	15 11 09.9	+4.1
KSH				pP	pwP	15 12 28.4	0.0
KSH				PcS	PcS	15 16 18.6	+2.9
KSH				S	S	15 17 53.3	+3.4
KSH				pmax	pmax		
	comp=Z,97nm,0.6s						
KSH				pmax	pmax		
	comp=Z,240nm,7.3s						
KSH				LR	LR		
	comp=Z,280nm,12.8s						
KSH				LR	LR		
	comp=Z,150nm,12.0s						
KSH				LR	LR		
	comp=Z,140nm,12.7s						
KZA	Kyzart	50.57	301	P	P	15 11 08.2	+1.4
	SNR=42						
FITZ	Fitzroy Crossi	50.67	196	P	P	15 11 07.8	+0.7
KBK	Karagaybulak	50.70	302	P	P	15 11 08.2	+0.8
	SNR=10						
CHMS	Chumysh	50.79	302	P	P	15 11 08.3	+0.4
	SNR=13						
FRU1	Bishkek	50.90	302	P	P	15 11 09.2	+0.4
FRU1				pmax	pmax		
	comp=Z,38nm,0.8s						
FRU1	Bishkek	50.90	302	P	P	15 11 09.2	+0.4
FRU1				IAmb	IAmb	15 11 10.3	
	comp=Z,38nm,0.8s						
USP	Ospenovka	50.93	302	P	P	15 11 09.2	+0.3
	SNR=27						
WB0	Warramunga Arr	50.99	185	P	P	15 11 09.6	+0.1
AAK	Ala-Archa	51.03	302	P	P	15 11 10.3	+0.4
	SNR=6.0						
AAK	Ala-Archa	51.03	302	i P	P	15 11 10.2	+0.3
	SNR=15						
AAK	Ala-Archa	51.03	302	P	P	15 11 10.3	+0.4
AAK	Ala-Archa	51.03	302	d iP	P	15 11 10.0	+0.1
AAK				pmax	pmax		
	comp=Z,25nm,0.7s						
AAK	Ala-Archa	51.03	302	P	P	15 11 10.1	+0.3
AAK				IAmb	IAmb	15 11 11.1	
	comp=Z,26nm,0.7s						
UCH	Uchtor	51.09	301	P	P	15 11 11.6	+0.9
	SNR=39						
WRAB	Tennant Creek	51.16	185	deP	P	15 11 10.8	0.0
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.5s						
WRAB	Tennant Creek	51.16	185	P	P	15 11 10.7	-0.1
WB2	Warramunga Arr	51.17	185	P	P	15 11 10.8	0.0
WRA	Warramunga Arr	51.17	185	P	P	15 11 10.9	0.0
	comp=Z,4.8nm,0.3s,baz=360,slow=7.7,SNR=107						
WRA				PcP	PcP	15 12 20.8	+0.7
	comp=Z,1.7nm,0.5s,baz=358,slow=4.2,SNR=1.3						
WRA				ScP	ScP	15 15 39.4	+0.2
	comp=Z,0.6nm,0.6s,baz=0.6,slow=4.7,SNR=2.1						
WRA	Warramunga Arr	51.17	185	P	P	15 11 10.5	-0.3
WR0	Warramunga Arr	51.18	184	P	P	15 11 10.8	-0.1
CHIR	Chirikof Islan	51.46	41	P	P	15 11 12.9	+0.4
EKS2	Erkin-Say	51.55	302	P	P	15 11 14.1	+0.4
	SNR=18						
TTA	Tatalina	51.57	32	P	P	15 11 13.9	+0.5
TTA	Tatalina	51.57	32	P	P	15 11 13.9	+0.5
SVW2	Sparrevohn	51.62	35	P	P	15 11 14.8	+1.1
AML	Almayashu	51.70	301	P	P	15 11 16.3	+1.2
	SNR=52						
SII	Sitkinak Islan	52.25	40	P	P	15 11 18.4	+0.1
SII				IAmb	IAmb	15 13 18.8	
	comp=Z,43nm,1.0s						
ARSB	Arslanbob	52.38	300	P	P	15 11 20.2	+0.5
ARSB	Arslanbob	52.38	300	P	P	15 11 20.2	+0.5
BRVK	Borovoye	52.63	315	P	P	15 11 21.8	+0.7
BRVK	Borovoye	52.63	315	ceP	P	15 11 21.2	+0.1
BRVK				pmax	pmax		
	comp=Z,34nm,0.6s						
BRVK	Borovoye	52.63	315	P	P	15 11 21.3	+0.2
OHAK	Old Harbor	52.73	39	P	P	15 11 21.5	-0.2
RSO	Redoubt South	52.99	35	P	P	15 11 24.4	+0.6

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KDAK  Kodiak Island       53.09  39    P      P      15 11 24.5 +0.2
      comp=Z,29nm,0.6s,baz=271,slow=3.7,SNR=108
KDAK  Kodiak Island       53.09  39    P      P      15 11 24.4 +0.1
KDAK                                   IAmb   IAmb   15 11 25.4
      comp=Z,26nm,0.7s
PPLA  Purkeypile          53.31  32    P      P      15 11 27.3 +1.2
PPLA                                   IAmb   IAmb   15 11 27.9
      comp=Z,19nm,0.6s
SKT   Skwentna            53.60  34    P      P      15 11 28.4 +0.4
CNPM  China Poot          53.76  37    P      P      15 11 29.3 +0.2
CNPM                                   IAmb   IAmb   15 11 31.5
      comp=Z,22nm,0.6s
KK31  Karatay Array       53.83 303    P      P      15 11 30.2 +0.2
KK31                                   pmax   pmax
      comp=Z,68nm,0.5s
KK31  Karatay Array       53.83 303    P      P      15 11 30.2 +0.2
KKAR  Karatay Array       53.83 303    P      P      15 11 30.1 +0.2
KKAR                                   pmax   pmax
      comp=Z,68nm,0.5s
KKAR  Karatay Array       53.83 303    P      P      15 11 30.1 +0.2
BPAW  Bear Paw Mtn.       53.89  31    P      P      15 11 30.9 +0.9
KTH   Kantishna Hill      53.91  32    P      P      15 11 30.8 +0.6
BRLK  Bradley Lake        53.93  36    P      P      15 11 29.8 -0.6
BRLK                                   IAmb   IAmb   15 11 32.0
      comp=Z,19nm,0.6s
SUA   Susitna One         53.97  34    P      P      15 11 30.6 -0.1
NIL   Nilore              54.02 291    P      P      15 11 32.6 +1.1
NIL   Nilore              54.02 291    P      P      15 11 32.1 +0.5
NIL                                    pmax   pmax
      comp=Z,104nm,0.7s
NIL   Nilore              54.02 291    P      P      15 11 32.0 +0.5
MLY   Manley              54.03  30    P      P      15 11 32.1 +1.1
TRF   Thorofare Moun      54.19  32    P      P      15 11 33.0 +0.7
BTK   Batken              54.25 299    P      P      15 11 33.0 -0.1
BTK                                    pmax   pmax
      comp=Z,54nm,1.3s
BTK   Batken              54.25 299    P      P      15 11 33.0 -0.1
BTK                                    IAmb   IAmb   15 11 34.2
      comp=Z,54nm,1.2s
COLD  Coldfoot            54.36  27    P      P      15 11 34.5 +1.2
RC01  Rabbit Creek A      54.46  35    P      P      15 11 34.5 +0.4
BWN   Browne              54.56  31    P      P      15 11 36.1 +1.3
SEW   Seward              54.64  36    P      P      15 11 35.3  0.0
SEW                                    IAmb   IAmb   15 11 36.0
      comp=Z,20nm,0.7s
TOLK  Toolik Lake Re      54.68  25    P      P      15 11 36.7 +1.0
TOLK                                   IAmb   IAmb   15 11 37.9
      comp=Z,33nm,1.4s
TOLK  Toolik Lake Re      54.68  25    P      P      15 11 36.9 +1.2
      baz=266
NEA   Nenana              54.73  30    P      P      15 11 36.7 +0.7
NEA                                    IAmb   IAmb   15 12 45.1
      comp=Z,24nm,0.9s
PMR   Palmer              54.74  34    P      P      15 11 35.9 -0.2
PMR   Palmer              54.74  34    P      P      15 11 35.9 -0.2
MCK   McKinley            54.79  31    P      P      15 11 36.7 +0.2
MCK                                    pmax   pmax
      comp=Z,29nm,1.2s
MCK   McKinley            54.79  31    P      P      15 11 36.7 +0.2
MCK                                    IAmb   IAmb   15 11 37.8
      comp=Z,29nm,1.2s
RND   Reindeer            54.83  32    P      P      15 11 36.8  0.0
RND                                    pmax   pmax
      comp=Z,24nm,0.6s
RND   Reindeer            54.83  32    P      P      15 11 36.8  0.0
RND                                    IAmb   IAmb   15 11 37.8
      comp=Z,24nm,0.6s
GHO   Glory Hole Cre      54.83  34    P      P      15 11 36.9  0.0
GAR   Garm                54.88 298    P      P      15 11 37.7  0.0
AS31  Alice Springs       54.90 185    P      P      15 11 37.6 -0.1
ASAR  Alice Springs       54.90 185    P      P      15 11 38.1 +0.5
      comp=Z,1.9nm,0.6s,baz=22,slow=11,SNR=74
ASAR                                   ScP    ScP    15 15 55.9 +0.6
      comp=Z,0.4nm,0.6s,baz=9.9,slow=4.6,SNR=2.3
ASAR  Alice Springs       54.90 185    P      P      15 11 37.5 -0.2
KNK   Knik Glacier        55.07  34    P      P      15 11 38.6 +0.1
KNK                                    IAmb   IAmb   15 11 40.5
      comp=Z,16nm,0.6s
MDM   Murphy Dome         55.10  30    P      P      15 11 39.3 +0.7
MDM                                    IAmb   IAmb   15 11 40.6
      comp=Z,22nm,0.4s
SML   Sawmill             55.11  34    P      P      15 11 39.1 +0.3
WRH   Wood River Hil      55.16  30    P      P      15 11 40.1 +1.1
TCOL  CIGO, UAF Yank      55.25  30    P      P      15 11 40.9 +1.3
      baz=270,SNR=5.7
COLA  College             55.26  30    P      P      15 11 40.3 +0.6
COLA                                   pmax   pmax
      comp=Z,15nm,0.8s
COLA  College             55.26  30    P      P      15 11 40.3 +0.6
CCB   Clear Creek Bu      55.28  30    P      P      15 11 40.2 +0.4
PSAD1 Pilbara Seismi      55.43 201    P      P      15 11 41.5  0.0
PSAD1                                  IAmb   IAmb   15 11 42.5
      comp=Z,18nm,0.6s
PSAC1 Pilbara Seismi      55.51 201    P      P      15 11 42.1 +0.1
PSAC1                                  IAmb   IAmb   15 11 43.0
      comp=Z,17nm,0.6s
PSAC2 Pilbara Seismi      55.51 201    P      P      15 11 42.0  0.0
PSAC2                                  IAmb   IAmb   15 11 43.0
      comp=Z,14nm,0.6s
DHY   Denali Highway      55.51  32    P      P      15 11 42.3 +0.6
PSAB2 Pilbara Seismi      55.51 201    P      P      15 11 42.0  0.0
PSAB2                                  IAmb   IAmb   15 11 43.1
      comp=Z,16nm,0.5s
PSAA2 Pilbara Seismi      55.52 201    P      P      15 11 42.4 +0.3
PSAA2                                  IAmb   IAmb   15 11 43.2
      comp=Z,15nm,0.6s
PSA00 Pilbara Seismi      55.53 201    P      P      15 11 42.1 -0.1
PSA00                                  IAmb   IAmb   15 11 43.2
      comp=Z,14nm,0.6s
PSAA3 Pilbara Seismi      55.54 201    P      P      15 11 42.4 +0.1
PSAB1 Pilbara Seismi      55.54 201    P      P      15 11 42.4 +0.2
PSAA1 Pilbara Seismi      55.54 201    P      P      15 11 42.4 +0.2
PSAA1                                  IAmb   IAmb   15 11 43.3
      comp=Z,52nm,1.5s
PSAD2 Pilbara Seismi      55.54 201    P      P      15 11 42.4 +0.1
PSAD2                                  IAmb   IAmb   15 11 43.2
      comp=Z,15nm,0.6s
PSAB3 Pilbara Seismi      55.55 201    P      P      15 11 42.4 +0.1
PSAC3 Pilbara Seismi      55.59 201    P      P      15 11 42.8 +0.2
SCM   Sheep Creek Mo      55.59  34    P      P      15 11 42.7 +0.5
SCM                                    pmax   pmax
      comp=Z,28nm,1.1s
SCM   Sheep Creek Mo      55.59  34    P      P      15 11 42.7 +0.5
SCM                                    IAmb   IAmb   15 11 43.8
      comp=Z,28nm,1.1s
PSAD3 Pilbara Seismi      55.62 201    P      P      15 11 42.9 +0.1
PSAD3                                  IAmb   IAmb   15 13 22.8
      comp=Z,55nm,1.9s
HDA   Harding Lake        55.66  31    P      P      15 11 42.2 -0.3
HDA   Harding Lake        55.66  31    P      P      15 11 42.4 -0.1
      baz=272,SNR=11
IL31                      55.67  30    P      P      15 11 42.0 -0.5
ILAR  Eielson Array       55.67  30    P      P      15 11 42.2 -0.4
      comp=Z,3.3nm,0.6s,baz=266,slow=5.2,SNR=51
ILAR                                   PcP    PcP    15 12 36.4 -0.4
      comp=Z,1.2nm,0.6s,baz=274,slow=3.8,SNR=6.4
ILAR                                   ScP    ScP    15 15 59.7 +1.5
      comp=Z,0.3nm,0.7s,baz=246,slow=3.3,SNR=2.7
ILAR  Eielson Array       55.67  30    P      P      15 11 41.9 -0.7
GLI   Glacier Island      55.76  35    P      P      15 11 43.9 +0.6
CHGR  Chuyangaron         55.84 298    P      P      15 11 44.7 +0.3
FID   Port Fidalgo        56.07  35    P      P      15 11 45.9 +0.4
FID                                    IAmb   IAmb   15 12 29.9
      comp=Z,92nm,1.8s
HIN   Hinchinbrook I      56.09  35    P      P      15 11 46.4 +0.8
PRP   Porcupine Dome      56.23  29    P      P      15 11 47.5 +0.8
FYU   Fort Yukon          56.31  28    P      P      15 11 48.5 +1.4
FYU                                    IAmb   IAmb   15 11 49.9
      comp=Z,40nm,1.4s
PAX   Paxson              56.38  32    P      P      15 11 48.2 +0.5
PAX                                    pmax   pmax
      comp=Z,6.0nm,0.8s
PAX   Paxson              56.38  32    P      P      15 11 48.2 +0.5
EYAK  Cordova Ski Ar      56.44  35    P      P      15 11 48.6 +0.6
EYAK                                   IAmb   IAmb   15 11 50.0
      comp=Z,16nm,0.7s
RIDG  Independent Ri      56.61  31    P      P      15 11 49.1 -0.1
DOT   Dot Lake            56.97  31    P      P      15 11 51.8 +0.1
SCRK  Sand Creek          56.97  31    P      P      15 11 51.9  0.0
RAGM  Ragged Mountai      56.99  35    P      P      15 11 52.9 +1.0
RAGM                                   IAmb   IAmb   15 12 59.1
      comp=Z,28nm,0.8s
KBL   Kabul               57.10 293    P      P      15 11 53.4 +0.1
KBL   Kabul               57.10 293    P      P      15 11 53.1 -0.3
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KBL                                    pmax   pmax
      comp=Z,40nm,0.8s
KBL   Kabul               57.10 293    P      P      15 11 53.1 -0.3
KBL                                    IAmb   IAmb   15 11 54.3
      comp=Z,40nm,0.8s
MENT  Mentasta            57.18  32    P      P      15 11 54.3 +1.1
MENT                                   IAmb   IAmb   15 11 55.4
      comp=Z,16nm,0.7s
GLB   Gilahina Butte      57.30  34    P      P      15 11 54.9 +0.9
GLB                                    IAmb   IAmb   15 11 56.1
      comp=Z,26nm,1.0s
HON   Honolulu            57.32  83    P      P      15 11 55.1 +0.3
HON                                    pmax   pmax
      comp=Z,576nm,1.9s
HON   Honolulu            57.32  83    P      P      15 11 55.1 +0.3
VRDI  Verde Repeater      57.49  34    P      P      15 11 56.4 +0.8
VRDI                                   IAmb   IAmb   15 11 57.4
      comp=Z,21nm,0.9s
MCARA McCarthy VSAT       57.68  34    P      P      15 11 57.6 +1.0
CRQM  Cirque              57.70  35    P      P      15 11 57.8 +0.8
CRQM                                   IAmb   IAmb   15 11 59.6
      comp=Z,39nm,0.7s
SVE   Sverdlovsk          57.73 321   eP      P      15 11 57.6 +0.5
SVE                                    pmax   pmax
      comp=Z,44nm,1.1s
EIDS  Eidsvold            57.76 166    P      P      15 11 57.5 -0.1
EIDS                                   IAmb   IAmb   15 12 23.7
      comp=Z,42nm,1.8s
TGL   Tana Glacier        57.85  35    P      P      15 11 58.7 +0.7
TGL                                    IAmb   IAmb   15 11 59.8
      comp=Z,34nm,0.9s
BALM  Baldy               58.05  34    P      P      15 11 59.8 +0.5
BALM                                   IAmb   IAmb   15 12 01.0
      comp=Z,21nm,0.8s
EGAK  Eagle               58.12  30    P      P      15 11 59.7 +0.1
BARN  Barnard Glacie      58.37  34    P      P      15 12 02.5 +0.9
BARN                                   IAmb   IAmb   15 12 03.5
      comp=Z,18nm,0.8s
CTGM  Chitina Glacie      58.55  34    P      P      15 12 03.7 +0.9
PALK  Pallekele           58.63 259    P      P      15 12 04.2 +0.3
PALK  Pallekele           58.63 259    P      P      15 12 03.9  0.0
PALK                                   pmax   pmax
      comp=Z,14nm,0.8s
PALK  Pallekele           58.63 259    P      P      15 12 03.9  0.0
ARU   Arti                58.93 320 d iP      P      15 12 05.2 -0.1
ARU                                                  15 12 48.2
ARU                                    *PP    pP     15 13 25.8 +0.9
ARU                                    S      S      15 19 42.0 +1.5
ARU                                    SS     SS     15 23 37.9 -3.1
ARU                                    pmax   pmax
      comp=Z,41nm,0.7s
ARU   Arti                58.93 320    P      P      15 12 05.0 -0.2
DAWY  Dawson              58.97  31    P      P      15 12 06.0 +0.5
POO   Poona               59.04 274   eP      P      15 12 03.5 -3.2
DZM   Mont Dzumac         59.63 149    P      P      15 12 10.0 -0.5
DZM                                    IAmb   IAmb   15 13 37.7
      comp=Z,34nm,1.3s
EPYK  Eagle Plains        59.73  28    P      P      15 12 11.7 +1.2
EPYK  Eagle Plains        59.73  28    P      P      15 12 11.8 +1.2
      baz=279
POHA  Pohakuloa           60.07  84    P      P      15 12 15.6 +1.7
HMH   Humu‘ula Sheep      60.18  84    P      P      15 12 14.8 +0.2
KHU   Kahuku              60.22  85    P      P      15 12 16.3 +1.4
KHU                                    pmax   pmax
      comp=Z,624nm,2.0s
KHU   Kahuku              60.22  85    P      P      15 12 16.3 +1.4
AIN   Ainahou             60.30  84    P      P      15 12 17.1 +1.8
MLH   Mauna Loa           60.31  84    P      P      15 12 17.2 +1.7
HYT   Haines Junctio      60.41  34    P      P      15 12 16.7 +1.4
HYT                                    IAmb   IAmb   15 12 18.0
      comp=Z,21nm,0.8s
DHAK  Deception Hill      60.43  36    P      P      15 12 16.9 +1.5
AKTO  Aktyubinsk          60.58 314    P      P      15 12 16.4 -0.1
      comp=Z,15nm,0.5s,baz=88,slow=8.4,SNR=53
INK   Inuvik              60.60  25    P      P      15 12 16.9 +0.6
      comp=Z,13nm,0.5s,baz=289,slow=5.9,SNR=130
INK   Inuvik              60.60  25    P      P      15 12 16.4 +0.2
INK                                    IAmb   IAmb   15 12 17.2
      comp=Z,14nm,0.5s
WHY   Whitehorse          61.71  34    P      P      15 12 25.1 +1.2
WHY                                    IAmb   IAmb   15 12 26.3
      comp=Z,18nm,0.8s
SKAG  Skagway             61.78  35    P      P      15 12 25.6 +1.4
SKAG                                   IAmb   IAmb   15 12 26.8
      comp=Z,20nm,1.0s
BESE  Bessie Mountai      62.25  36    P      P      15 12 28.7 +1.3
BESE                                   IAmb   IAmb   15 13 40.8
      comp=Z,46nm,1.5s
HRA   Herat               62.45 295    P      P      15 12 29.5 +0.1
JIS   Juneau Island       62.57  36    P      P      15 12 30.9 +1.5
JIS                                    IAmb   IAmb   15 12 31.9
      comp=Z,24nm,1.0s
FORT  Forrest             62.58 190    P      P      15 12 30.3 +0.6
FORT                                   IAmb   IAmb   15 12 30.8
      comp=Z,26nm,1.0s
STKA  Stephens Creek      63.00 177    P      P      15 12 33.4 +0.9
      comp=Z,1.2nm,0.5s,baz=346,slow=9.6,SNR=6.5
STKA  Stephens Creek      63.00 177    P      P      15 12 33.1 +0.6
KIRV  Kirov               63.22 324    P      P      15 12 34.1 +0.5
      comp=Z,71nm,0.5s,baz=76,slow=2.4,SNR=27
C36M  Paulatuk            63.64  23    P      P      15 12 36.7 +0.5
C36M  Paulatuk            63.64  23    P      P      15 12 36.9 +0.7
      baz=289
MORW  Morawa              63.73 202    P      P      15 12 37.5 +0.2
BBOO  Buckleboo           63.88 182    P      P      15 12 39.1 +0.9
CRAG  Craig               64.05  39    P      P      15 12 40.2 +1.2
PRGR  Permogore           64.11 328   eP      P      15 12 37.7 -1.6
PRGR                                   pmax   pmax
      comp=Z,32nm,1.2s
GEYT  Alibeck             64.33 300    P      P      15 12 41.9 +0.6
      comp=Z,18nm,0.8s,baz=48,slow=4.4,SNR=41
GEYT  Alibeck             64.33 300    P      P      15 12 41.3  0.0
GYA0  ALIBECK ARRAY       64.33 300    P      P      15 12 40.5 -0.8
GYA0B ALIBECK ARRAY       64.33 300    P      P      15 12 41.8 +0.6
GYA0B                                  IAmb   IAmb   15 12 42.8
      comp=Z,20nm,0.8s
DLBC  Dease Lake          64.71  36    P      P      15 12 44.7 +1.3
DIB   Dawson Inlet,       65.14  42    P      P      15 12 46.5 +0.4
MOBC  Moresby Island      65.44  41    P      P      15 12 48.7 +0.6
SPITS Spitsbergen Ar      65.54 349    P      P      15 12 49.0 +0.7
      comp=Z,20nm,1.0s,baz=116,slow=7.5,SNR=6.4
SPITS Spitsbergen Ar      65.54 349    P      P      15 12 49.0 +0.7
LVZ   Lovozero            66.19 336    P      P      15 12 52.6  0.0
LVZ                                    pmax   pmax
      comp=Z,86nm,2.0s
LVZ   Lovozero            66.19 336    P      P      15 12 52.5  0.0
TMCR  Tamitsa             66.46 332   eP      P      15 12 50.9 -3.3
CAN   Canberra            67.12 170    P      P      15 12 59.1 +0.3
CAN                                    pmax   pmax
      comp=Z,86nm,1.6s
CAN   Canberra            67.12 170    P      P      15 12 59.0 +0.3
KLMR  Klimovskoe          67.14 328   eP      P      15 12 54.4 -4.1
KLMR                                   pmax   pmax
      comp=Z,13nm,0.6s
KLMR  Klimovskoe          67.14 328   eP      P      15 12 54.5 -4.1
KLMR                                   AMP           15 12 58.4
      comp=Z,13nm,0.6s
KEV   Kevo                67.79 339    P      P      15 13 03.0 +0.6
KEV                                    pmax   pmax
      comp=Z,87nm,1.7s
KEV   Kevo                67.79 339    P      P      15 13 03.0 +0.6
ARCES ARCESS Array B      68.35 340    P      P      15 13 06.3 +0.4
      comp=Z,6.5nm,0.6s,baz=64,slow=8.9,SNR=44
ARE0  ARCESS Array S      68.35 340   eP      P      15 13 05.9  0.0
ARE0  ARCESS Array S      68.35 340    P      P      15 13 06.4 +0.5
RES   Resolute Bay        68.70  13    P      P      15 13 08.3 +0.4
RES                                    pmax   pmax
      comp=Z,9.0nm,0.7s
RES   Resolute Bay        68.70  13    P      P      15 13 08.3 +0.4
RES                                    IAmb   IAmb   15 13 09.3
      comp=Z,8.8nm,0.7s
KTK1  Kautokeino          69.32 340   eP      P      15 13 12.7 +0.9
YKA   Yellowknife Ar      70.01  28    P      P      15 13 16.2 +0.2
      comp=Z,8.0nm,0.8s,baz=299,slow=5.9,SNR=75
YKA                                    pP     pP     15 14 39.1 -0.4
      comp=Z,1.1nm,0.9s,baz=294,slow=5.8,SNR=3.8
VRH   Novokhopyorsk       70.02 318   eP      P      15 13 15.4 -0.9
VRH                                    pmax   pmax
      comp=Z,50nm,0.6s
AKT   Akhty               70.35 307  ⇓eP      P      15 13 19.0 +0.3
AKT                                   e              15 13 37.6
AKT                                   e*PP    pP     15 14 41.8 +0.6
AKT                                    pmax   pmax
      comp=Z,68nm,0.7s
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BANOM Banah               70.53 289    P      P      15 13 20.6 +0.7
BANOM Banah               70.53 289    P      P      15 13 20.6 +0.7
SHME  Shamm               70.61 289   i P     P      15 13 21.2 +0.9
      SNR=18
JMDO  Jabal Madar         70.63 285    P      P      15 13 20.6 +0.1
LPSR  Galich'ya Gora      70.96 320   eP      P      15 13 21.3 -0.6
LPSR                                   pmax   pmax
      comp=Z,30nm,0.8s
TULEG Thule               71.01   6    P      P      15 13 21.3 -0.5
UOSS  Minazif             71.04 288    P      P      15 13 23.2 +0.3
UOSS  Minazif             71.04 288    P      P      15 13 22.6 -0.3
UOSS                                   IAmb   IAmb   15 13 23.5
      comp=Z,8.9nm,0.8s
OBN   Obninsk             71.05 323    P      P      15 13 22.8 +0.5
      comp=Z,4.2nm,0.4s,baz=214,slow=22,SNR=5.9
OBN   Obninsk             71.05 323  deP      P      15 13 22.5 +0.1
OBN                                   e              15 13 39.0
OBN                                   e*PP    pwP    15 14 47.9 -2.8
OBN                                   e              15 16 03.9
OBN                                    pmax   pmax
      comp=Z,30nm,0.8s
OBN   Obninsk             71.05 323    P      P      15 13 22.5 +0.1
SOHO  SOHO                71.13 287    P      P      15 13 24.0 +0.6
      SNR=7.8
HATD  Hatta, Dubai        71.15 288   i P     P      15 13 24.2 +0.6
      SNR=9.2
BSY   Bisya               71.21 286    P      P      15 13 24.4 +0.4
      SNR=5.1
ASHO  Ashiyiah            71.28 288   i P     P      15 13 24.6 +0.3
      SNR=10
ASHO  Ashiyiah            71.28 288    P      P      15 13 24.9 +0.5
VSR   Storozhevoye        71.45 319   eP      P      15 13 24.1 -0.8
VSR                                    pmax   pmax
      comp=Z,70nm,1.0s
ARQ   Araqi               71.50 286    P      P      15 13 26.5 +0.8
      SNR=5.7
FAQ   Al Faqa, Dubai      71.63 288    P      P      15 13 26.5 +0.1
GOF   Gofitskoye          71.90 312  ⇑eP      P      15 13 28.1 +0.5
GOF                                    pmax   pmax
      comp=Z,44nm,0.7s
LLLB  Lillooet            72.18  41    P      P      15 13 30.1 +0.8
LLLB                                   IAmb   IAmb   15 13 31.2
      comp=Z,15nm,0.8s
PGC   Sidney              72.18  44    P      P      15 13 30.4 +1.2
PGC                                    IAmb   IAmb   15 13 31.3
      comp=Z,20nm,0.8s
NCK   Nalchik             72.24 310  ⇑iP      P      15 13 30.3 +0.6
NCK                                    pmax   pmax
      comp=Z,19nm,0.6s
TBLG  Delisi              72.27 308    P      P      15 13 30.3 +0.4
TBLG                                   pmax   pmax
      comp=Z,38nm,1.4s
TBLG  Delisi              72.27 308    P      P      15 13 30.3 +0.4
TBLG                                   IAmb   IAmb   15 13 31.4
      comp=Z,38nm,1.4s
STEI  Steigen             72.31 341   eP      P      15 13 29.3 -0.3
NLWA  Neilton Lookou      72.51  45    P      P      15 13 32.8 +1.6
FIA1  FINESS Array S      72.57 332    P      P      15 13 31.2 -0.1
FIA1                                   IAmb   IAmb   15 13 31.7
      comp=Z,16nm,0.6s
FINES FINESS Array B      72.57 332    P      P      15 13 31.3 +0.1
      comp=Z,12nm,0.4s,baz=71,slow=5.4,SNR=172
FINES FINESS Array B      72.57 332    P      P      15 13 31.1 -0.1
KBZ   Khabaz              72.59 311    P      P      15 13 32.4 +0.7
      comp=Z,38nm,0.8s,baz=81,slow=3.8,SNR=65
KBZ   Khabaz              72.59 311 d iP      P      15 13 32.1 +0.5
KVAR  Kislovodsk Arr      72.62 311    P      P      15 13 33.3 +1.3
      comp=Z,9.2nm,0.7s,baz=90,slow=20,SNR=5.5
KIV   Kislovodsk          72.62 311   i P     P      15 13 32.9 +0.8
      SNR=6.2
KIV   Kislovodsk          72.62 311   eP      P      15 13 32.7 +0.7
KIV                                    pmax   pmax
      comp=Z,133nm,1.0s
KIV   Kislovodsk          72.62 311    P      P      15 13 32.2 +0.2
D03D  Eldon               72.91  44    P      P      15 13 35.7 +2.2
      baz=298
NEY   Neytrino            72.92 310  ⇓eP      P      15 13 34.4 +0.5
NEY                                    pmax   pmax
      comp=Z,3.0nm,0.8s
GNI   Garni               72.97 307  ceP      P      15 13 35.2 +1.0
GNI                                    pmax   pmax
      comp=Z,41nm,0.9s
GNI   Garni               72.97 307    P      P      15 13 34.6 +0.4
GNI                                    IAmb   IAmb   15 13 36.5
      comp=Z,32nm,1.1s
B05A  Bryant              73.16  43    P      P      15 13 36.4 +1.5
      baz=298
AKH   Akhalkalaki         73.25 308   ⇑P      P      15 13 37.4 +1.6
AKH   Akhalkalaki         73.25 308    P      P      15 13 36.9 +1.1
AKH                                    pmax   pmax
      comp=Z,22nm,1.2s
AKH   Akhalkalaki         73.25 308    P      P      15 13 36.9 +1.1
AKH                                    IAmb   IAmb   15 13 37.9
      comp=Z,22nm,1.2s
MOR8  Moi Rana            73.72 339   eP      P      15 13 36.8 -1.1
F04A  Amboy               74.08  46    P      P      15 13 41.0 +0.8
F04A                                   IAmb   IAmb   15 13 42.9
      comp=Z,24nm,1.0s
BATM  Batumi              74.36 309   ⇓P      P      15 13 42.5 +0.6
BCA   Borcka              74.48 309   ⇓P      P      15 13 43.4 +0.7
LTY   Liberty             74.49  44    P      P      15 13 43.2 +0.5
I03D  Drain, OR           74.57  48    P      P      15 13 45.0 +1.9
      baz=299
B08A  Colville Reser      74.73  42    P      P      15 13 44.5 +0.6
B08A                                   IAmb   IAmb   15 13 45.8
      comp=Z,9.0nm,0.8s
K02D  Willamette Mer      74.85  49    P      P      15 13 46.4 +1.6
      baz=299
I04A  Tendick Farm,       75.12  48    P      P      15 13 47.5 +1.2
      baz=299
E07A  Sunnyside           75.32  44    P      P      15 13 48.0 +0.7
E07A                                   IAmb   IAmb   15 13 49.6
      comp=Z,18nm,1.2s
HUMO  Hull Mountain       75.35  49    P      P      15 13 49.4 +1.8
HUMO                                   IAmb   IAmb   15 16 41.5
      comp=Z,31nm,1.8s
JCC   Jacoby Creek,       75.51  51    P      P      15 13 49.3 +0.9
I05D  Terrebonne, OR      75.52  47    P      P      15 13 50.1 +1.6
      baz=300
ANN   Anapa               75.54 314   eP      P      15 13 47.3 -1.2
ANN                                   e*PP    pP     15 15 13.9 +1.5
ANN                                   e              15 16 40.5
ANN                                   eS      S      15 22 55.8 -1.1
ANN                                    pmax   pmax
      comp=Z,73nm,1.1s
J04D  Umpqua Nationa      75.58  48    P      P      15 13 50.7 +1.6
      baz=300
HAWA  Hanford             75.60  44    P      P      15 13 50.0 +1.1
NSS   Namsos              75.61 339   eP      P      15 13 48.1 -0.4
F07A  Phinny Hill Vi      75.61  45    P      P      15 13 50.2 +1.3
F07A                                   IAmb   IAmb   15 13 51.3
      comp=Z,17nm,1.0s
C09A  Chrisman Ranch      75.62  43    P      P      15 13 49.7 +0.7
C09A                                   IAmb   IAmb   15 13 50.9
      comp=Z,15nm,0.8s
D08A  Wollman Farm,       75.62  43    P      P      15 13 49.6 +0.6
D08A                                   IAmb   IAmb   15 13 50.9
      comp=Z,19nm,0.9s
E08A  Dider Farm, El      75.83  44    P      P      15 13 51.0 +0.9
E08A                                   IAmb   IAmb   15 13 52.2
      comp=Z,12nm,0.8s
YBH   Yreka Blue Hor      75.93  50    P      P      15 13 51.3 +0.3
YBH                                    pmax   pmax
      comp=Z,13nm,1.1s
YBH   Yreka Blue Hor      75.93  50    P      P      15 13 51.2 +0.3
YBH                                    IAmb   IAmb   15 15 44.4
      comp=Z,13nm,1.1s
L04D  Klamath Falls       75.96  49    P      P      15 13 52.7 +1.6
      baz=300
NEW   Newport             76.04  42    P      P      15 13 51.9 +0.5
NEW                                    pmax   pmax
      comp=Z,12nm,0.9s
NEW   Newport             76.04  42    P      P      15 13 51.9 +0.5
NEW                                    IAmb   IAmb   15 13 53.2
      comp=Z,12nm,0.9s
NEW   Newport             76.04  42    P      P      15 13 52.5 +1.2
      baz=302
PINE  Pine Mountain       76.04  47    P      P      15 13 53.3 +1.6
J05D  Fort Rock, OR       76.11  48    P      P      15 13 53.7 +1.7
      baz=300
RBK   Rabkut              76.13 282    P      P      15 13 52.0 -0.4
SUMG  Summit              76.29 359    P      P      15 13 53.4 +0.6
SUMG                                   pmax   pmax
      comp=Z,26nm,1.7s
SUMG  Summit              76.29 359    P      P      15 13 53.4 +0.6
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SUMG				IAmb	IAmb	15 16 14.1	
	comp=Z,26nm,1.7s						
E09A	Wood Farm, Sta	76.36	44	P	P	15 13 54.2	+1.1
E09A				IAmb	IAmb	15 13 55.3	
	comp=Z,16nm,0.9s						
KCPM	Cahto Peak	76.36	52	P	P	15 13 54.6	+1.2
M04C	Macdoel	76.47	49	P	P	15 13 55.7	+1.7
	baz=300						
WDC	Whiskeytown Da	76.61	51	P	P	15 13 55.5	+0.9
WDC				pmax	pmax		
	comp=Z,11nm,1.1s						
WDC	Whiskeytown Da	76.61	51	P	P	15 13 55.5	+0.9
WDC				IAmb	IAmb	15 13 56.3	
	comp=Z,11nm,1.1s						
I07A	Izee	76.79	46	P	P	15 13 56.8	+1.1
ABTO	Aybut	76.96	282	P	P	15 13 56.8	-0.2
AKASG	Malin Array Be	77.13	322	P	P	15 13 57.2	-0.1
	comp=Z,19nm,0.5s,baz=51,slow=6.0,SNR=86						
AKASG				PP	PP	15 16 54.1	-2.4
	comp=Z,0.2nm,0.2s,baz=46,slow=9.0,SNR=4.2						
AKASG	Malin Array Be	77.13	322	P	P	15 13 57.0	-0.2
AKBB	Malin Array Si	77.13	322	P	P	15 13 56.9	-0.3
AKBB				pmax	pmax		
	comp=Z,28nm,0.7s						
AKBB	Malin Array Si	77.13	322	P	P	15 13 56.9	-0.3
F10A	Beach Ranch, E	77.19	44	P	P	15 13 59.0	+1.2
O03E	Paynes Creek	77.25	51	P	P	15 13 59.1	+0.9
	baz=300						
MOD	Modoc Plateau	77.41	49	P	P	15 13 59.6	+0.4
MOD				IAmb	IAmb	15 14 01.2	
	comp=Z,9.8nm,0.9s						
WALA	Waterton Lakes	77.41	40	P	P	15 13 59.9	+0.9
WALA				IAmb	IAmb	15 14 00.9	
	comp=Z,16nm,0.7s						
BMO	Blue Mountains	77.73	45	P	P	15 14 01.6	+0.8
BMO				pmax	pmax		
	comp=Z,11nm,0.9s						
BMO	Blue Mountains	77.73	45	P	P	15 14 01.6	+0.8
BMO				IAmb	IAmb	15 14 02.8	
	comp=Z,11nm,0.8s						
J08A	Circle Bar Ran	77.81	47	P	P	15 14 02.5	+1.3
ORV	Oroville	77.82	51	P	P	15 14 01.5	+0.2
ORV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ORV	Oroville	77.82	51	P	P	15 14 01.5	+0.2
ORV				IAmb	IAmb	15 14 02.7	
	comp=Z,9.6nm,1.1s						
JTMT	Jette	77.93	41	P	P	15 14 02.8	+0.9
JTMT				IAmb	IAmb	15 14 03.9	
	comp=Z,17nm,1.1s						
HFS	Hagfors	78.12	335	P	P	15 14 02.4	-0.1
	comp=Z,10nm,0.7s,baz=98,slow=4.5,SNR=9.9						
NC405	NORSAR Array S	78.12	337	P	P	15 14 02.5	0.0
WVOR	Wild Horse Val	78.19	47	P	P	15 14 04.3	+0.9
WVOR				pmax	pmax		
	comp=Z,12nm,1.0s						
WVOR	Wild Horse Val	78.19	47	P	P	15 14 04.2	+0.9
WVOR				IAmb	IAmb	15 14 05.5	
	comp=Z,12nm,1.0s						
SUW	Suwalki	78.20	327	*e*P	P	15 14 03.3	+0.3
SUW	Suwalki	78.20	327	*e*P	P	15 14 03.3	+0.3
SUW	Suwalki	78.20	327	P	P	15 14 03.1	+0.1
DOMB	Dombas	78.32	338	*e*P	P	15 14 03.2	-0.4
NC204	NORSAR Array S	78.32	337	P	P	15 14 03.7	0.0
NB2	NORSAR Subarra	78.34	337	P	P	15 14 03.3	-0.5
	comp=Z,2.2nm,0.5s,baz=43,slow=5.3						
NB2	NORSAR Subarra	78.34	337	P	P	15 14 03.3	-0.5
	baz=43,slow=5.3						
NOA	NORSAR Array B	78.34	337	P	P	15 14 03.4	-0.3
	comp=Z,1.9nm,0.7s,baz=49,slow=4.8,SNR=4.0						
BEKR	Beckworth	78.42	50	P	P	15 14 05.2	+0.5
BEKR				IAmb	IAmb	15 14 06.4	
	comp=Z,13nm,0.8s						
AFDM	Forest Hills D	78.48	51	P	P	15 14 05.2	+0.3
BKZ	Black Stump Fm	78.69	151	P	P	15 14 06.1	+0.2
SOCY	Socotra	78.91	278	P	P	15 14 05.8	-1.9
SORM	Soroca	79.05	320	⇑P	P	15 14 07.9	+0.1
PAHR	Pah Rah Range	79.14	50	P	P	15 14 09.1	+0.5
PAHR				IAmb	IAmb	15 14 09.9	
	comp=Z,6.8nm,0.7s						
BZK	Bozkurt	79.14	313	⇓P	P	15 14 09.1	+0.7
NNZ	Nelson	79.20	154	P	P	15 14 09.0	+0.6
PNTR	Pine Nut	79.32	51	P	P	15 14 10.6	+0.9
PNTR				IAmb	IAmb	15 14 13.7	
	comp=Z,8.8nm,0.6s						
CMB	Columbia Colle	79.35	52	P	P	15 14 10.3	+0.7
CMB				pmax	pmax		
	comp=Z,44nm,1.9s						
CMB	Columbia Colle	79.35	52	P	P	15 14 10.3	+0.7
CMB				IAmb	IAmb	15 14 11.4	
	comp=Z,44nm,1.9s						
MFID	Camas Ranch	79.40	45	P	P	15 14 10.9	+1.0
MFID				IAmb	IAmb	15 14 12.1	
	comp=Z,13nm,1.0s						
ILULI	Ilulissat	79.46	3	P	P	15 14 10.4	+0.9
ILULI				pmax	pmax		
	comp=Z,27nm,1.1s						
ILULI	Ilulissat	79.46	3	P	P	15 14 10.4	+0.9
ILULI				IAmb	IAmb	15 15 42.2	
	comp=Z,27nm,1.1s						
GAZ	Gaziantep	79.57	307	P	P	15 14 11.7	+0.8
GAZ				IAmb	IAmb	15 14 12.6	
	comp=Z,18nm,1.0s						
YERR	Yerington	79.61	51	P	P	15 14 12.0	+0.8
YERR				IAmb	IAmb	15 14 13.2	
	comp=Z,12nm,1.1s						
WAKR	Walker	79.74	51	P	P	15 14 12.8	+0.9
ILGA	Ilgaz	79.81	312	P	P	15 14 13.2	+0.9
ILGA				IAmb	IAmb	15 14 14.3	
	comp=Z,18nm,0.8s						
FFC	Flin Flon	79.88	31	P	P	15 14 11.7	-0.3
FFC				pmax	pmax		
	comp=Z,18nm,1.4s						
FFC	Flin Flon	79.88	31	P	P	15 14 11.7	-0.3
FFC				IAmb	IAmb	15 14 13.2	
	comp=Z,18nm,1.4s						
HRY	Holter Researc	79.89	41	P	P	15 14 13.3	+0.9
DLMT	Dillon	80.23	43	P	P	15 14 15.4	+1.1
DLMT				IAmb	IAmb	15 14 16.2	
	comp=Z,15nm,0.7s						
EGMT	Eagleton	80.27	39	P	P	15 14 14.9	+0.6
EGMT				IAmb	IAmb	15 14 16.1	
	comp=Z,20nm,0.9s						
EGMT	Eagleton	80.27	39	P	P	15 14 15.3	+0.9
	baz=306,SNR=12						
RYN	Ryan	80.28	51	P	P	15 14 15.4	+0.7
KVN	Kaiserville	80.33	50	P	P	15 14 15.7	+0.7
KVN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KVN	Kaiserville	80.33	50	P	P	15 14 15.7	+0.7
KVN				IAmb	IAmb	15 14 16.9	
	comp=Z,10nm,0.9s						
MCMT	McKenzie Canyo	80.39	43	P	P	15 14 15.6	+0.3
TLCR		80.49	317	⇓P	P	15 14 15.9	+0.4
NVAR	Mina Array Bea	80.53	51	P	P	15 14 16.7	+0.5
	comp=Z,4.5nm,0.6s,baz=294,slow=5.4,SNR=34						
BIR	Birlad	80.54	319	⇑P	P	15 14 16.8	+1.1
BR131	Keskin Array S	80.58	311	P	P	15 14 17.1	+0.8
	SNR=7.0						
BR131	Keskin Array S	80.58	311	P	P	15 14 16.3	0.0
BR131				pmax	pmax		
	comp=Z,14nm,0.8s						
BR131	Keskin Array S	80.58	311	P	P	15 14 16.3	0.0
BR131				IAmb	IAmb	15 14 17.5	
	comp=Z,14nm,0.8s						
BRTR	Keskin Array B	80.58	311	P	P	15 14 16.5	+0.2
	comp=Z,11nm,0.7s,baz=106,slow=4.1,SNR=57						
BRTR				pP	pP	15 15 43.0	+1.6
	comp=Z,0.2nm,0.3s,baz=32,slow=35,SNR=2.0						
BRTR				PP	PP	15 17 23.2	-2.3
	comp=Z,1.3nm,0.8s,baz=78,slow=8.6,SNR=4.1						
BRTR	Keskin Array B	80.58	311	P	P	15 14 16.2	0.0
MLAC	Mammoth, Mammo	80.60	52	P	P	15 14 19.1	+2.5
	baz=302						
NV11	Mina Array Sit	80.63	51	P	P	15 14 17.1	+0.6
PAGB	Antelope Grade	80.65	54	P	P	15 14 17.4	+0.9
PAGB				IAmb	IAmb	15 14 20.6	
	comp=Z,15nm,1.0s						
BEL	Belsk	80.69	326	*e*P	P	15 14 17.4	+1.0
BEL	Belsk	80.69	326	*e*P	P	15 14 17.4	+1.0
CFR	Carcaliu	80.88	318	⇓P	P	15 14 17.9	+0.4
TOPG	Topolog	80.92	317	⇑P	P	15 14 18.3	+0.6
TESR	Tescani	80.94	319	⇑P	P	15 14 18.0	+0.2
BUR08	Bucovina Ar. S	81.06	321	P	P	15 14 18.9	+0.4
BUR08				IAmb	IAmb	15 14 20.0	
	comp=Z,24nm,1.5s						
BURAR	Bucovina Array	81.07	321	⇓P	P	15 14 19.0	+0.5
PETR	Petresti	81.08	319	⇓P	P	15 14 19.7	+1.2
KWP	Kalwaria Pacla	81.14	324	*e*P	P	15 14 19.8	+1.0
KWP	Kalwaria Pacla	81.14	324	P	P	15 14 19.1	+0.3
KWP				pmax	pmax		
	comp=Z,39nm,1.1s						
KWP	Kalwaria Pacla	81.14	324	P	P	15 14 19.1	+0.3
QLMT	Earthquake Lak	81.21	42	P	P	15 14 20.4	+0.9
ELK	Elko	81.25	47	P	P	15 14 21.1	+1.3
	comp=Z,6.1nm,0.7s,baz=317,slow=6.1,SNR=31						
ELK	Elko	81.25	47	P	P	15 14 20.8	+1.0
ELK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ELK	Elko	81.25	47	P	P	15 14 20.8	+1.0
VRI	Vrincioaia	81.28	319	⇑P	P	15 14 20.3	+0.7
HARR	Harsova	81.29	317	⇓P	P	15 14 20.4	+0.8
HOMB	Homborsund	81.31	336	*e*P	P	15 14 19.3	-0.1
PLOR	Plostina	81.33	319	⇑P	P	15 14 20.8	+0.9
YHL	Hebgen Lake	81.34	42	P	P	15 14 21.4	+1.1
PKM	Mcpherson Peak	81.40	54	P	P	15 14 22.1	+1.4
	baz=302						
YHB	Horse Butte	81.40	42	P	P	15 14 21.7	+1.2
BISRR	Bisoca	81.48	319	⇑P	P	15 14 22.3	+1.6
YHH	Holmes Hill	81.57	42	P	P	15 14 22.4	+0.9
YMR	Madison River	81.58	42	P	P	15 14 22.7	+1.2
GCMT	Greycliff	81.65	41	P	P	15 14 22.6	+0.9
ICOR	Ion Corvin	81.70	317	⇑P	P	15 14 23.1	+1.3
SNART	Snartemo	81.71	336	*e*P	P	15 14 21.8	+0.2
MDUB	Mudurnu	81.73	313	P	P	15 14 22.5	+0.3
CWC	Cottonwood Cre	81.75	52	P	P	15 14 23.0	+0.5
	baz=303						
KOLS	Kolonicke sedl	81.80	323	*e*P	P	15 14 22.2	0.0
KOLS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KOLS	Kolonicke sedl	81.80	323	*e*P	P	15 14 22.2	0.0
YUF	Upper Falls	81.81	42	P	P	15 14 24.0	+1.3
ISA	Isabella, Lake	81.91	53	P	P	15 14 23.0	-0.2
	baz=303						
YNE	Yellowstone No	81.92	42	P	P	15 14 24.1	+0.8
MLR	Muntele Rosu	81.94	319	P	P	15 14 23.5	+0.3
	comp=Z,6.0nm,0.5s,baz=347,slow=12,SNR=8.5						
MLR	Muntele Rosu	81.94	319	⇓P	P	15 14 23.7	+0.5
MLR	Muntele Rosu	81.94	319	P	P	15 14 23.5	+0.3
MLR				pmax	pmax		
	comp=Z,22nm,1.3s						
MLR	Muntele Rosu	81.94	319	IAmb	IAmb	15 14 24.6	
	comp=Z,22nm,1.3s						
H17A	Grant Village	81.96	42	P	P	15 14 26.0	+2.5
H17A				IAmb	IAmb	15 14 27.4	
	comp=Z,23nm,0.9s						
H17A	Grant Village	81.96	42	P	P	15 14 26.6	+3.1
	baz=306,SNR=24						
LKWY	Lake	81.96	42	P	P	15 14 26.0	+2.5
LKWY				pmax	pmax		
	comp=Z,19nm,0.9s						
LKWY	Lake	81.96	42	P	P	15 14 25.9	+2.5
LKWY				IAmb	IAmb	15 14 27.4	
	comp=Z,20nm,0.8s						
DOPR	Dopca	81.97	320	⇓P	P	15 14 24.5	+1.3
FLWY	Flagg Ranch	82.08	43	P	P	15 14 25.9	+1.9
FLWY				IAmb	IAmb	15 14 27.1	
	comp=Z,14nm,0.8s						
FXWY	Fox Creek	82.15	43	P	P	15 14 25.8	+1.3
SECR		82.15	318	⇑P	P	15 14 25.2	+1.1
TRPA	Tarpa	82.17	322	⇑P	P	15 14 25.0	+1.0
DAC	Darwin (Calif)	82.17	52	P	P	15 14 26.4	+1.7
DAC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
DAC	Darwin (Calif)	82.17	52	P	P	15 14 26.4	+1.7
HVU	Hansel Valley	82.19	46	P	P	15 14 25.6	+1.0
HVU	Hansel Valley	82.19	46	P	P	15 14 25.6	+1.0
OJC	Ojcow	82.21	325	*e*P	P	15 14 24.7	+0.4
OJC	Ojcow	82.21	325	*e*P	P	15 14 24.7	+0.4
CRVS	Cervenica-Dubn	82.23	324	*e*P	P	15 14 25.4	+0.9
CRVS				pmax	pmax		
	comp=Z,34nm,1.7s						
CRVS	Cervenica-Dubn	82.23	324	*e*P	P	15 14 25.3	+0.8
RLMT	Red Lodge	82.28	41	P	P	15 14 26.1	+1.1
RLMT				IAmb	IAmb	15 14 27.3	
	comp=Z,12nm,0.7s						
R11A	Troy Canyon, C	82.36	50	P	P	15 14 26.3	+0.7
R11A				IAmb	IAmb	15 14 27.6	
	comp=Z,11nm,1.1s						
R11A	Troy Canyon, C	82.36	50	P	P	15 14 26.6	+1.0
	baz=304,SNR=13						
MPMC	Manual Prospec	82.36	52	P	P	15 14 26.5	+0.8
	baz=303,SNR=9.4						
REDW	Red Top Meadow	82.41	43	P	P	15 14 26.6	+0.8
REDW				IAmb	IAmb	15 14 28.1	
	comp=Z,18nm,1.5s						
ASF	Jabal al Asfar	82.42	303	P	P	15 14 26.4	+0.6
	comp=Z,7.2nm,0.9s,baz=23,slow=3.3,SNR=8.8						
VOIR		82.48	319	⇑P	P	15 14 26.9	+1.0
NIE	Niedzica	82.49	324	*e*P	P	15 14 26.6	+0.8
NIE	Niedzica	82.49	324	*e*P	P	15 14 26.6	+0.8
BGU	Big Grassy Mou	82.52	46	P	P	15 14 27.3	+1.0
LRMC	Laurel Mtn Rad	82.55	53	P	P	15 14 27.5	+1.0
	baz=303,SNR=5.7						
FURC	Furnace Creek,	82.56	52	P	P	15 14 27.6	+1.3
	baz=304,SNR=7.7						
SPUT	South Promonto	82.66	46	P	P	15 14 27.9	+0.9
EDW2	Edwards Air Fo	82.66	54	P	P	15 14 28.1	+1.1
	baz=303,SNR=7.1						
TPNV	Topopah Spring	82.70	51	P	P	15 14 27.8	+0.5
TPNV				pmax	pmax		
	comp=Z,12nm,0.8s						
TPNV	Topopah Spring	82.70	51	P	P	15 14 27.8	+0.5
TPNV				IAmb	IAmb	15 14 29.1	
	comp=Z,12nm,0.8s						
TPNV	Topopah Spring	82.70	51	P	P	15 14 28.3	+1.0
	baz=304,SNR=13						
ARR	Arges	82.75	319	⇑P	P	15 14 28.7	+1.4
DRGR		82.92	321	⇓P	P	15 14 28.4	+0.4
LAO	LASA Array	82.98	39	P	P	15 14 29.1	+0.7
LAO				IAmb	IAmb	15 14 30.4	
	comp=Z,15nm,0.9s						
HWUT	Hardware Ranch	83.02	45	P	P	15 14 29.7	+0.8
MMAI	Mount Meron Ar	83.03	304	P	P	15 14 29.5	+0.6
	comp=Z,14nm,0.7s,baz=48,slow=6.8,SNR=16						
LANS	Liptovska Anna	83.07	325	*e*P	P	15 14 29.9	+1.1
LANS				pmax	pmax		
	comp=Z,3.0nm,0.6s						
LANS	Liptovska Anna	83.07	325	*e*P	P	15 14 29.9	+1.1
DUG	Dugway, Tooele	83.08	47	P	P	15 14 30.1	+1.0
DUG				pmax	pmax		
	comp=Z,21nm,0.7s						
DUG	Dugway, Tooele	83.08	47	P	P	15 14 30.1	+1.0
DUG	Dugway, Tooele	83.08	47	P	P	15 14 30.6	+1.4
	baz=306,SNR=18						
BFSC	Mount Baldy Ra	83.24	54	P	P	15 14 31.4	+1.3
	baz=304						
GSC	Goldstone, Bar	83.24	53	P	P	15 14 30.4	+0.4
GSC				pmax	pmax		
	comp=Z,13nm,1.0s						
GSC	Goldstone, Bar	83.24	53	P	P	15 14 30.4	+0.4
GSC				IAmb	IAmb	15 14 31.7	
	comp=Z,12nm,0.9s						
GSC	Goldstone, Bar	83.24	53	P	P	15 14 31.0	+1.0
	baz=304,SNR=7.5						
SHOC	Shoshone, Teco	83.27	52	P	P	15 14 31.0	+1.0
	baz=304						
PSUT	Pine Spring	83.38	49	P	P	15 14 31.3	+0.5
CSS	Mathiatis	83.40	307	P	P	15 14 30.9	+0.1
TCUT	Toone Canyon	83.41	45	P	P	15 14 31.7	+0.8
CTU	Camp Tracy	83.45	46	P	P	15 14 31.4	+0.3
KSP	Ksiaz	83.46	327	*e*P	P	15 14 31.2	+0.5
KSP	Ksiaz	83.46	327	*e*P	P	15 14 31.2	+0.5
BW06	Boulder Array	83.53	43	P	P	15 14 31.4	0.0
PD31	Pinedale Array	83.53	43	P	P	15 14 31.6	+0.2
PDAR	Pinedale Array	83.53	43	P	P	15 14 31.9	+0.4
	comp=Z,3.2nm,0.7s,baz=321,slow=0.7,SNR=26						
PDAR	Pinedale Array	83.53	43	P	P	15 14 31.6	+0.2
MORC	Moravsky Berou	83.60	326	*e*P	P	15 14 31.5	+0.1
SHPR	Sheep Range	83.68	51	P	P	15 14 32.9	+0.7
SHPR				IAmb	IAmb	15 14 34.2	
	comp=Z,8.3nm,0.8s						
NLU	North Lily Min	83.68	47	P	P	15 14 33.1	+0.9
JLU	Jordanelle	83.69	46	P	P	15 14 33.1	+0.8
BBRC	Big Bear Solar	83.74	54	P	P	15 14 33.7	+1.0
	baz=304						
CHVC	Chvalec	83.75	327	*e*P	P	15 14 32.4	+0.3
KRLC	Kraliky	83.76	326	*e*P	P	15 14 32.3	+0.1
KRLC	Kraliky	83.76	326	*e*P	P	15 14 32.3	+0.1
TUQ	Turquoise Moun	83.77	52	P	P	15 14 33.7	+1.0
	baz=304,SNR=12						
DPC	Dobruska-Polom	83.78	327	*e*P	P	15 14 32.8	+0.5
DPC	Dobruska-Polom	83.78	327	*e*P	P	15 14 32.8	+0.5
VYHS	Vyhne	83.82	324	*e*P	P	15 14 32.9	+0.4
VYHS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VYHS	Vyhne	83.82	324	*e*P	P	15 14 32.9	+0.4
UPC	Upice	83.82	327	*e*P	P	15 14 32.9	+0.4
UPC	Upice	83.82	327	*e*P	P	15 14 32.9	+0.4
HEC	Hector,Ludlow	83.83	53	P	P	15 14 34.0	+1.1
	baz=304,SNR=6.1						
MURC	Murrieta	83.92	54	P	P	15 14 33.9	+0.6
	baz=304						
MPU	Maple Canyon	83.92	46	P	P	15 14 34.4	+0.9
JAVC	Velka Javorina	84.15	325	*e*P	P	15 14 35.6	+1.4
CCUT	Cedar City	84.26	49	P	P	15 14 36.1	+0.9
GMRC	Granite Mounta	84.31	53	P	P	15 14 36.2	+0.9
	baz=304,SNR=11						
VRAC	Vranov	84.37	326	P	P	15 14 34.9	-0.3
	comp=Z,6.8nm,0.7s,baz=9.4,slow=2.6,SNR=5.9						
VRAC	Vranov	84.37	326	⇑P	P	15 14 36.0	+0.8
VRAC	Vranov	84.37	326	*e*P	P	15 14 35.4	+0.2
SZCU	Shurtz Canyon	84.41	49	P	P	15 14 36.5	+0.5
PFO	Pinyon Flats O	84.42	54	P	P	15 14 36.5	+0.6
	comp=Z,19nm,0.7s,baz=320,slow=4.9,SNR=22						
PFO	Pinyon Flats O	84.42	54	P	P	15 14 36.3	+0.4
PFO				IAmb	IAmb	15 14 37.5	
	comp=Z,18nm,0.8s						
PFO	Pinyon Flats O	84.42	54	P	P	15 14 36.6	+0.7
	baz=304,SNR=12						
XPFO	Pion Flat	84.42	54	P	P	15 14 36.4	+0.4
XPFO				IAmb	IAmb	15 14 37.5	
	comp=Z,18nm,0.8s						
TPFO	Pinon Flats	84.43	54	P	P	15 14 36.6	+0.7
	baz=304,SNR=11						
MSU	Marysvale	84.46	48	P	P	15 14 37.2	+1.0
MSU	Marysvale	84.46	48	P	P	15 14 37.2	+1.0
BRG	Berggiesshubel	84.51	328	*i* P	P	15 14 36.0	+0.2
	comp=Z,6.5nm,0.9s						
BELC	Belle Mtn. Jos	84.52	53	P	P	15 14 36.9	+0.4
	baz=304,SNR=16						
TMUT	Trail Mountain	84.61	47	P	P	15 14 37.8	+0.8
CLL	Collm	84.62	329	*e*P	P	15 14 37.0	+0.6
	comp=Z,7.0nm,0.9s						
CLL				*e*		15 16 12.0	
CLL				*e*PP	PP	15 17 57.0	-0.7
CLL				*e*S	S	15 24 30.0	-0.5
CLL	Collm	84.62	329	*e*P	P	15 14 37.0	+0.6
CLL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CLL	Collm	84.62	329	P	P	15 14 37.1	+0.7
CLL				IAmb	IAmb	15 14 38.0	
	comp=Z,7.6nm,0.9s						
KRUC	Moravsky	84.63	326	*e*P	P	15 14 36.7	+0.2
LCMT	Little Creek M	84.65	50	P	P	15 14 37.8	+0.7
MTPU	Mount Pierson	84.73	48	P	P	15 14 38.8	+1.0
MDVR	Moldovita	84.73	320	⇓P	P	15 14 37.0	-0.2
BAR	Barrett	84.79	55	P	P	15 14 38.0	+0.3
BAR				IAmb	IAmb	15 14 39.1	
	comp=Z,9.4nm,0.8s						
P17A	Butcher Ranch,	84.79	47	P	P	15 14 38.5	+0.7
MONP2	Monument Peak	84.85	55	P	P	15 14 38.9	+0.7
	baz=304						
RDMU	Red Mountain	84.85	45	P	P	15 14 39.0	+0.9
Q16A	Castle Valley	84.86	47	P	P	15 14 39.4	+1.3
IRM	Iron Mountain	85.02	53	P	P	15 14 39.8	+1.1
	baz=305,SNR=5.2						
BC3	Big Chuckawall	85.09	53	P	P	15 14 40.3	+1.0
	baz=305,SNR=8.8						
SRU	San Rafael Swe	85.14	47	P	P	15 14 40.4	+0.9
SRU				pmax	pmax		
	comp=Z,16nm,0.8s						
SRU	San Rafael Swe	85.14	47	P	P	15 14 40.4	+0.9
IKP	In-Ko-Pah, Jac	85.20	55	P	P	15 14 40.8	+1.1
	baz=304						
VTS	Vitosha	85.25	318	⇑P	P	15 14 40.2	+0.3
W13A	Hualapai Mount	85.33	52	P	P	15 14 41.1	+0.6
K22A	Casper	85.36	42	P	P	15 14 40.7	+0.2
K22A				IAmb	IAmb	15 14 42.8	
	comp=Z,8.6nm,0.8s						
K22A	Casper	85.36	42	P	P	15 14 41.0	+0.5
	baz=309						
RWWY	Rawlins	85.57	43	P	P	15 14 41.6	0.0
RWWY				IAmb	IAmb	15 14 43.3	
	comp=Z,16nm,0.9s						
PDMCI	Parker Dam,Lak	85.61	52	P	P	15 14 42.6	+1.0
	baz=305						
ULM	Lac du Bonnet	85.67	31	P	P	15 14 41.4	-0.2
	comp=Z,2.1nm,0.5s,baz=298,slow=5.2,SNR=7.5						
ULM	Lac du Bonnet	85.67	31	P	P	15 14 41.1	-0.4
Y12C	Blythe	85.67	53	P	P	15 14 43.3	+1.3
	baz=305						
RSSD	Black Hills	85.81	40	P	P	15 14 42.6	-0.1
RSSD				pmax	pmax		
	comp=Z,8.0nm,0.8s						
RSSD	Black Hills	85.81	40	P	P	15 14 42.6	-0.1
RSSD				IAmb	IAmb	15 14 45.0	
	comp=Z,7.8nm,0.8s						
RSSD	Black Hills	85.81	40	P	P	15 14 43.4	+0.6
	baz=311						
GLA	Glamis	85.86	54	P	P	15 14 43.9	+1.0
	baz=305						
KHC	Kasperske Hory	85.91	327	*e*P	P	15 14 42.7	-0.2
KHC	Kasperske Hory	85.91	327	*e*P	P	15 14 42.7	-0.2
O20A	White River Ci	85.92	45	P	P	15 14 43.7	+0.4
O20A				IAmb	IAmb	15 14 45.0	
	comp=Z,13nm,1.1s						
O20A	White River Ci	85.92	45	P	P	15 14 44.1	+0.8
	baz=308						
GERES	GERESS Array B	86.06	327	P	P	15 14 43.1	-0.6
	comp=Z,2.4nm,0.7s,baz=46,slow=5.8,SNR=10						
WUAZ	Wupatki	86.75	50	P	P	15 14 47.8	+0.5
WUAZ	Wupatki	86.75	50	P	P	15 14 48.7	+1.4
	baz=307						
N23A	Red Feather La	86.81	43	P	P	15 14 48.8	+1.2
N23A				IAmb	IAmb	15 14 50.1	
	comp=Z,18nm,1.1s						
N23A	Red Feather La	86.81	43	P	P	15 14 49.3	+1.7
	baz=310						
PHWY	Pilot Hill	86.83	43	P	P	15 14 48.3	+0.6
PHWY				IAmb	IAmb	15 14 49.6	
	comp=Z,8.5nm,1.0s						
SMCO	Snowmass	87.28	45	P	P	15 14 51.1	+1.1
EKA	Eskdalemuir Ar	87.51	339	P	P	15 14 50.4	+0.1
	comp=Z,0.7nm,0.4s,baz=42,slow=3.7,SNR=5.3						
ISCO	Idaho Springs	87.70	44	P	P	15 14 53.4	+1.5
	baz=310						
S22A	4UR Ranch, Cre	88.27	46	P	P	15 14 55.8	+1.2
	baz=309						
SDCO	Great Sand Dun	89.08	45	P	P	15 14 59.1	+0.7
EYMN	Ely	89.31	31	P	P	15 14 59.1	+0.2
EYMN	Ely	89.31	31	P	P	15 14 59.4	+0.6
	baz=319						
DAVOX	Davos/Dischmat	89.33	327	P	P	15 14 58.9	-0.3
	comp=Z,7.1nm,0.6s,baz=205,slow=11,SNR=6.0						
ECSD	EROS Data Cent	89.99	36	P	P	15 15 02.6	+0.5
	baz=316						
T25A	Trinidad	90.14	45	P	P	15 15 03.9	+0.7
T25A				IAmb	IAmb	15 15 05.3	
	comp=Z,7.0nm,0.8s						
T25A	Trinidad	90.14	45	P	P	15 15 04.6	+1.4
	baz=311						
ANMO	Albuquerque	90.27	48	P	P	15 15 04.8	+1.0
	comp=Z,3.8nm,0.9s,baz=303,slow=0.7,SNR=8.0						
ANMO	Albuquerque	90.27	48	P	P	15 15 04.5	+0.6
ANMO	Albuquerque	90.27	48	P	P	15 15 05.5	+1.7
	baz=310						
E38A	The Farm, Brul	90.30	32	P	P	15 15 03.6	+0.1
E38A				IAmb	IAmb	15 15 04.6	
	comp=Z,8.7nm,1.0s						
319A	Douglas	90.64	52	P	P	15 15 06.3	+0.9
319A				IAmb	IAmb	15 15 07.6	
	comp=Z,7.3nm,0.8s						
121A	Cookes Peak, D	90.92	51	P	P	15 15 08.2	+1.4
	baz=309						
G40A	Rib Lake	91.93	32	P	P	15 15 11.5	+0.4
SSB	Saint Sauveur	92.88	329	P	P	15 15 15.0	-0.4
SSB				pmax	pmax		
	comp=Z,19nm,0.4s						
SSB	Saint Sauveur	92.88	329	P	P	15 15 15.0	-0.4
MNTX	Cornudas Mount	93.03	50	P	P	15 15 16.8	+0.4
KSU1	Kansas State U	93.30	40	P	P	15 15 17.9	+0.4
	baz=316						
D47A	Chapleau	93.48	27	P	P	15 15 18.4	+0.3

	baz=326						
TX31	Lajitas Ar. Si	95.68	51	P	P	15 15 29.1	+0.5
TX31				IAmb	IAmb	15 16 35.3	
	comp=Z,17nm,2.0s						
TX32	Lajitas Array	95.68	51	P	P	15 15 29.2	+0.6
TX32				IAmb	IAmb	15 16 35.3	
	comp=Z,17nm,2.0s						
TXAR	Lajitas Array	95.68	51	P	P	15 15 29.3	+0.7
	comp=Z,1.2nm,0.6s,baz=289,slow=3.5,SNR=19						
TXAR				pP	pP	15 16 57.7	+0.5
	comp=Z,1.1nm,0.7s,baz=292,slow=3.2,SNR=7.9						
TXAR				PP	PP	15 19 21.3	-4.0
	comp=Z,0.9nm,1.1s,baz=289,slow=3.8,SNR=4.6						
TXAR	Lajitas Array	95.68	51	P	P	15 15 28.9	+0.3
TORD	Torodi Ar. Bea	119.19	310	PKP	PKPdf	15 20 49.2	-0.7
	comp=Z,2.0nm,0.6s,baz=66,slow=1.0,SNR=23						
TORD				PP	PP	15 22 11.1	-4.5
	comp=Z,1.0nm,0.7s,baz=38,slow=5.7,SNR=5.7						
BOSA	Boshof	122.72	254	PKP	PKPdf	15 20 56.0	-0.4
	comp=Z,2.2nm,0.8s,baz=121,slow=4.0,SNR=4.7						
DBIC	Dimbokro	128.28	311	PKP	PKPdf	15 21 07.6	+0.2
	comp=Z,2.6nm,0.4s,baz=54,slow=1.4,SNR=8.4						
TIC	Toumodi	128.41	311	*e*PKIKP	PKPdf	15 21 07.8	+0.2
	comp=Z,15nm,0.4s						
KIC	Kosan Boka	128.44	310	*e*PKIKP	PKPdf	15 21 07.9	+0.2
	comp=Z,5.3nm,0.5s						
LIC	Lamto	128.73	310	*e*PKIKP	PKPdf	15 21 08.4	+0.2
	comp=Z,9.4nm,0.5s						
PTGA	Pitinga	144.97	33		PKPab	15 21 38.5	-0.1
SAML	Samuel	150.07	46	PKIKP	PKPbc	15 21 51.9	+0.1
SAML	Samuel	150.07	46		PKPbc	15 21 51.9	+0.1
LPAZ	La Paz	151.68	64	PKPbc	PKiKP	15 21 57.0	+0.6
	comp=Z,5.8nm,0.7s,baz=310,slow=1.5,SNR=16						
MNMC	Minye Minye	152.11	71		PKiKP	15 21 57.8	+1.0
PLCA	Paso Flores	155.02	120	PKPab	PKPab	15 22 21.7	+2.1
	comp=Z,3.1nm,0.6s,baz=264,slow=4.5,SNR=13						

DJA 05 15:05:50.1±0.5, 11°S±5°×11°9E±°, h10km, M4.2/12, mB4.8/1, mb4.4/6, MLv4.1/12, Mw(mB)4.1/1, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	Waikabubak, Su	1.72	26	P	Pn	15 06 20.5	+0.3
WBSI				S	Sn	15 06 41.5	-0.8
BASI	Baing, Sumba	2.15	63	P	Pn	15 06 25.3	-0.7
BASI				S	Sn	15 06 51.5	-1.2
WSI	Waingapu	2.24	47	P	Pn	15 06 27.7	+0.5
WSI				S	Sn	15 06 55.6	+0.7
PLAI	Plampang	2.50	340	P	Pn	15 06 31.2	+0.3
PLAI				S	Sn	15 07 01.1	-0.4
EDFI	Ende, Flores	3.88	51	P	Pn	15 06 48.7	-1.2
EDFI				S	Sn	15 07 30.9	-4.7
MMRI	Maumere	4.37	55	P	Pn	15 06 55.6	-1.0
JAGI	Jajag, Banyuwa	5.18	301	P	Pn	15 07 05.9	-1.8
SOEI	Soe	5.73	76	P	Pn	15 07 14.7	-0.7
	0.2nm19nm,0.6s						
GMJI	Gumukmas	5.88	299	P	Pn	15 07 19.1	+1.7
	19nm,1.0s						
BKSI	Bulukumba	6.02	14	P	Pn	15 07 21.6	+2.3
	0.2nm765nm46nm,0.6s						
PWJI	Pagerwojo	7.43	295	P	Pn	15 07 39.1	+0.4
	0.4nm14nm,1.1s						
PCJI	Pacitan	7.93	291	P	Pn	15 07 45.0	-0.5

IDC ***05*** *15:08:40.9±0.6, 37.°98N×20.°40E, h0km, mb4.1/16, mb1 4.1/21, mb1mx3.9/52, mbtmp4.0/21, ML3.5/5, MS2.8/7, Ms1 2.8/7, ms1mx2.6/58, Error ellipse: s-maj=15.7km s-min=13.7km az=106.0*

MOS ***05*** *15:08:41.2±1.5, 38.°04N×20.°15E, h15km, mb4.4/8, Error ellipse: s-maj=8.9km s-min=5.5km az=78.0*

HLW ***05*** *15:08:41.3, 38.°20N×21.°06E, h10km±15km, Md4.7, Ml5.0*

PDG ***05*** *15:08:42.9±0.2, 38.°07N×20.°27E, h20km, ML4.2/13, Error ellipse: s-maj=0.6km s-min=0.6km az=0.0*

BEO ***05*** *15:08:42.2±1.1, 38.°03N×20.°10E, h0km, ML4.0/14*

THE ***05*** *15:08:43.6, 38.°08N×20.°31E, h6km±1km, ML4.2/6, Error ellipse: s-maj=1.2km s-min=0.4km az=56.0*

ATH ***05*** *15:08:43.7, 38.°08N×20.°35E, h18km, ML3.9/20, Error ellipse: s-maj=1.8km s-min=0.7km az=62.0*

MED_RC ***05*** *15:08:44.0±0.5, 38.°09N×20.°21E, h21km, MW4.2/8, Moment Tensor Solution.Mantle waves: s8,c11; Duration: 1s0 Moment tensor: Scale 10*^{15}*Nm;* M_{rr}*0.59±.60;* $M_{\theta\theta}$*0.44±.41;* $M_{\phi\phi}$*-1.03±.36;* $M_{r\theta}$*0.67±.38;* $M_{\theta\phi}$*2.40±.17;* $M_{\phi r}$*0.65±.33; Best double couple:* M_0*2.72000×10*^{15} *NP1:*ϕ_s*101.00000°, δ71.00000°, λ16.00000°. NP2:* ϕ_s*6.00000°, δ75.00000°, λ161.00000°. Principal axes: T 2.6300, Plg24.0000°, Azm323.0000°; N 0.1800, Plg66.0000°, Azm149.0000°; P -2.8100, Plg2.0000°, Azm54.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*

NEIC ***05*** *15:08:44.9±2.7, 38.°06N±0.°05×20.°30E±0.°06, h24km±5km, mb4.3/20, ML4.2(THE) Error ellipse: s-maj=7.9km s-min=6.5km az=200.0*

ISC 05 15:08:43.9±0.7, 38.°06N±0.°02×20.°35E±0.°03, h20km±2km, n294, σ1s65/328, mb4.2/28, 23C-12D, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF3	Kipouria, Keph	0.14	360	P	Pg	15 08 47.6	-0.6
KEF3				S	Sg	15 08 50.0	-1.2
KEF2	Argostoli. Kep	0.15	45	P	Pg	15 08 47.9	-0.5
KEF2				S	Sg	15 08 50.5	-0.9
ARGA	Argostoli. Kep	0.16	41	P	Pg	15 08 47.9	-0.5
ARGA				S	Sg	15 08 50.0	-1.4
LXRA	Lixouri, Kepha	0.16	26	P	Pg	15 08 48.0	-0.4
LXRA				S	Sg	15 08 51.0	-0.5
KEF4	Livadi, Kephal	0.21	17	P	Pg	15 08 48.6	-0.5
KEF4				S	Sg	15 08 52.1	-0.6
VLS	Valsamata	0.22	58	P	Pg	15 08 48.5	-0.9
VLS				S	Sg	15 08 52.1	-1.0
	180µm,0.2s						
VLS	Valsamata	0.22	58	P	Pg	15 08 48.8	-0.6
VLS				S	Sg	15 08 52.3	-0.8
VLS				AML	AML	15 08 52.6	
VLS				AML	AML	15 08 53.0	
KEF1	Kardakata, Kep	0.24	24	P	Pg	15 08 49.0	-0.5
KEF1				S	Sg	15 08 52.2	-1.3
VLMS	Volimes, Zakyn	0.31	126	P	Pb	15 08 50.6	-0.1
VLMS				S	Sg	15 08 55.5	+0.2
VLMS				AML	AML	15 08 56.3	
VLMS				AML	AML	15 09 03.9	
KFL	Anninata	0.35	81	P	Pb	15 08 51.0	-0.5
KFL				S	Sb	15 08 56.5	-0.1
	102µm,0.3s						
KFL	Anninata	0.35	81	P	Pb	15 08 51.1	-0.5
KFL				S	Sb	15 08 56.7	0.0
KFL				AML	AML	15 08 56.9	
KFL				AML	AML	15 08 58.7	
KONA	Konidatara, Ke	0.41	25	P	Pg	15 08 51.7	-0.6
KONA				S	Sg	15 08 56.7	-1.3
KONA				AML	AML	15 08 58.7	
KONA				AML	AML	15 09 01.3	
	comp=E,69229µm,0.5s						
FSK	Fiskardo	0.43	23	P	Pg	15 08 52.0	-0.8
FSK				S	Sg	15 08 57.9	-1.0
	comp=E,32µm,0.5s						
FSK	Fiskardo	0.43	23	P	Pg	15 08 52.0	-0.8
FSK				S	Sg	15 08 58.1	-0.8
FSK				AML	AML	15 08 59.5	
	comp=E,61643µm,0.2s						
FSK				AML	AML	15 09 01.9	
	comp=N,46113µm,0.5s						
EVGI	Lefkada island	0.61	23	P	Pb	15 08 55.1	-0.8
EVGI				S	Sg	15 09 04.2	-0.1
VTN	Vitineika	0.68	102	P	Pg	15 08 57.1	-0.1
VTN				S	Sn	15 09 07.1	-1.2
VTN	Vitineika	0.68	102	P	Pg	15 08 57.2	-0.1
MGNA	Meganis	0.69	30	P	Pb	15 08 56.4	-0.8
LKD2	Lefkada island	0.77	18	P	Pb	15 08 57.6	-1.0
LKD2	Lefkada island	0.77	18	P	Pb	15 08 57.5	-1.0
LKD2				AML	AML	15 09 18.0	
	comp=E,17426µm,0.5s						
LKD2				AML	AML	15 09 21.6	
	comp=N,17138µm,0.6s						
TSLK	Tsoukalades, L	0.80	17	P	Pb	15 08 58.4	-0.8
TSLK				S	Sg	15 09 09.8	-0.5
PDO	Prodromos	0.85	50	P	Pb	15 08 59.5	-0.4
PDO				S	Sn	15 09 12.4	-0.2
	comp=N,25µm,0.3s						
PDO	Prodromos	0.85	50	P	Pb	15 08 59.5	-0.4
PDO				AML	AML	15 09 18.9	
	comp=E,34197µm,0.3s						
PDO				AML	AML	15 09 20.4	
	comp=N,37565µm,0.3s						
RLS	Riolos of Patr	0.88	90	P	Pg	15 09 00.4	-0.7
RLS				S	Sn	15 09 14.1	+0.7
	comp=N,5µm,0.5s						
RLS	Riolos of Patr	0.88	90	P	Pg	15 09 00.3	-0.7
RLS				AML	AML	15 09 23.4	
	comp=E,10202µm,0.5s						
RLS				AML	AML	15 09 23.4	
	comp=N,10076µm,0.5s						
DRO	Drossia	1.08	95	P	Pg	15 09 04.2	-0.7
DRO				S	Sg	15 09 20.6	+1.5
	comp=N,10µm,0.5s						
DRO	Drossia	1.08	95	P	Pg	15 09 03.9	-0.9
DRO				AML	AML	15 09 27.7	
	comp=E,24789µm,0.5s						
DRO				AML	AML	15 09 30.9	
	comp=N,16349µm,0.6s						
PVO	Paravola	1.08	59	P	Pg	15 09 04.0	-0.8
PVO	Paravola	1.08	59	P	Pg	15 09 04.1	-0.7
PVO				AML	AML	15 09 26.0	
	comp=N,21340µm,0.5s						
PVO				AML	AML	15 09 27.3	
	comp=E,25271µm,0.5s						
AMT	Artemida-Makis	1.20	116	P	Pg	15 09 06.6	-0.5
AMT	Artemida-Makis	1.20	116	P	Pg	15 09 06.8	-0.2
AMT				AML	AML	15 09 30.2	
	comp=E,11430µm,0.8s						
AMT				AML	AML	15 09 30.6	
	comp=N,15403µm,0.5s						
TRIZ	Trizonia	1.39	77	P	Pb	15 09 08.8	-0.4
TRIZ	Trizonia	1.39	77	P	Pb	15 09 08.9	-0.3
ALIK	Aliki, Aigiali	1.40	81	P	Pb	15 09 09.4	0.0
KLV	Kalavryta, Ach	1.42	90	P	Pb	15 09 09.3	-0.5
KLV	Kalavryta, Ach	1.42	90	P	Pb	15 09 09.6	-0.1
KLV				AML	AML	15 09 45.5	
	comp=N,2819µm,0.5s						
KLV				AML	AML	15 09 47.9	
	comp=E,3515µm,1.1s						
EVR	Evrytania	1.43	53	P	Pb	15 09 09.3	-0.6
EVR	Evrytania	1.43	53	P	Pb	15 09 09.3	-0.6
EVR				AML	AML	15 09 42.4	
	comp=E,3518µm,0.8s						
EVR				AML	AML	15 09 44.0	
	comp=N,4832µm,0.6s						
KALE	Kalithea	1.45	76	P	Pb	15 09 09.6	-0.6
KALE	Kalithea	1.45	76	P	Pb	15 09 09.7	-0.5
KALE				AML	AML	15 09 39.7	
	comp=N,5840µm,0.7s						
KALE				AML	AML	15 09 48.2	
	comp=E,3977µm,0.6s						
IGT	Igoumenitsa	1.47	359	P	Pn	15 09 09.8	+0.5
IGT	Igoumenitsa	1.47	359	P	Pb	15 09 10.2	-0.4
IGT				AML	AML	15 09 38.8	
	comp=N,4348µm,0.5s						
IGT				AML	AML	15 09 41.9	
	comp=E,5178µm,0.4s						
ITM	Ithomi	1.53	125	P	Pg	15 09 12.3	-1.1
ITM				AML	AML	15 09 46.5	
	comp=E,4183µm,0.5s						
ITM				AML	AML	15 09 46.9	
	comp=N,3959µm,0.7s						
ITM	Ithomi	1.53	125		Pg	15 09 12.4	-1.0
PYL	PYLOS	1.60	136	P	Pb	15 09 12.6	-0.3
JAN	Janina	1.64	14	P	Pg	15 09 14.8	-0.8
MAKR	Makrakomi, Fth	1.69	55	P	Pg	15 09 14.7	-1.7
MAKR				AML	AML	15 09 51.1	
	comp=N,6643µm,0.6s						
MAKR				AML	AML	15 09 53.5	
	comp=E,7929µm,0.9s						
KEK	Kerkira	1.71	346	P	Pn	15 09 13.1	+0.6
KEK	Kerkira	1.71	346	P	Pn	15 09 13.5	+0.9
KEK				AML	AML	15 09 48.6	
	comp=N,3065µm,0.6s						
KEK				AML	AML	15 09 51.1	
	comp=E,4241µm,0.5s						
KASA	Kassiopi	1.72	349	P	Pb	15 09 14.0	-0.7
DLFA	Delphi	1.74	75	P	Pg	15 09 15.9	-1.5
VLX	Vlachokerasia	1.75	112	P	Pg	15 09 16.5	-1.1
AGG	Agios Georgios	1.83	58	P	Pb	15 09 17.1	+0.4
AGG				AML	AML	15 09 54.4	
	comp=N,3534µm,0.7s						
AGG				AML	AML	15 10 03.0	
	comp=E,3012µm,1.2s						
AGG	Agios Georgios	1.83	58	P	Pb	15 09 17.1	+0.4
AGG	Agios Georgios	1.83	58		Pb	15 09 17.1	+0.4
MEV	Metsovon	1.86	21	P	Pb	15 09 17.6	+0.4
AXAR	Agios Charalam	1.95	68	P	Pg	15 09 19.3	-2.0
THL	Klokotos Trika	1.99	40	P	Pb	15 09 19.2	-0.2
THL				AML	AML	15 09 54.6	
	comp=N,2467µm,0.7s						
THL				AML	AML	15 09 55.9	
	comp=E,2579µm,0.6s						
PROD	Prodromos	2.02	84	P	Pb	15 09 19.0	-0.9
KPRO	Kipourio	2.05	22	P	Pb	15 09 20.4	-0.2
LTK	Loutraki	2.07	90	P	Pb	15 09 19.4	-1.3
LTK	Loutraki	2.07	90	P	Pb	15 09 19.6	-1.2
LOUT	Loutraki	2.07	91	P	Pb	15 09 19.9	-1.0
LKR	Lokris	2.17	73	P	Pb	15 09 21.1	-1.3
PENT	Pentalofos	2.22	16	P	Pb	15 09 22.9	-0.5
VIL2	Platees	2.31	85	P	Pb	15 09 23.2	-1.6
KRND	KRANIDI	2.32	106	P	Pb	15 09 22.8	-2.3
VILL	Villia	2.34	87	P	Pn	15 09 22.6	+1.3
DID	Didima	2.35	103	P	Pb	15 09 23.2	-2.4
NEST	Nestorio	2.42	13	P	Pb	15 09 25.8	-0.9
SCTE	Santa Cesarea	2.49	325	P	Pn	15 09 23.8	+0.5
SCTE	Santa Cesarea	2.49	325		Pn	15 09 23.6	+0.4
SCTE				Sn	Sn	15 09 52.8	-0.3
KZN	Kozani	2.50	26	P	Pb	15 09 26.3	-1.9
NEO	Neokhori	2.57	60	P	Pb	15 09 26.8	-2.6
XOR	Xorichti	2.58	59	P	Pb	15 09 26.5	-3.0
MRKA	Markates	2.63	75	P	Pn	15 09 26.6	+1.4
MRKA	Markates	2.63	75	P	Pn	15 09 26.9	+1.8
LIT	Litokhoron	2.63	39	P	Pb	15 09 27.5	-2.9
LIT	Litokhoron	2.63	39	P	Pb	15 09 27.4	-3.0
LIT	Litokhoron	2.63	39		Pb	15 09 27.4	-3.0
ATH	Athens Observa	2.66	91	P	Pb	15 09 27.8	-3.0
SKIA	Skiathos	2.68	65	P	Pb	15 09 28.5	-2.7
ATHU	Athens Univers	2.71	91	P	Pn	15 09 28.3	+1.9
VLY	Voula,Athens	2.73	93	P	Pn	15 09 28.2	+1.6
PTL	Penteli	2.77	89	P	Pn	15 09 29.0	+1.8
DION	Dionisos Attik	2.83	89	P	Pn	15 09 30.0	+2.0
FNA	Florina	2.84	16	P	Pn	15 09 30.3	+2.2
FNA	Florina	2.84	16	P	Pn	15 09 29.9	+1.8
FNA	Florina	2.84	16		Pn	15 09 29.9	+1.8
AOS	Alonnisos	2.98	67	P	Pn	15 09 32.0	+2.0
TIP	Timpagrande	3.03	293	P	Pn	15 09 31.7	+1.0
TIP	Timpagrande	3.03	293	P	Pn	15 09 31.8	+1.0
TIP	Timpagrande	3.03	293	⇑P	Pn	15 09 31.8	+1.0
TIP				⇑S	Sn	15 10 06.2	-0.3
TIP	Timpagrande	3.03	293		Pn	15 09 31.3	+0.6
OHR	Ohrid	3.07	6	*i* Pn	Pn	15 09 33.9	+2.6
PAIG	Paliouri	3.20	53	P	Pn	15 09 34.2	+1.2
KARY	Karystos	3.23	89	P	Pn	15 09 35.1	+1.7
TIR	Tirane	3.31	354	*e*Pn	Pn	15 09 36.4	+1.9
TIR	Tirane	3.31	354	⇓P	Pn	15 09 36.2	+1.7
TIR				⇑S	Sn	15 10 12.1	-1.2
TIR	Tirane	3.31	354	P	Pn	15 09 35.7	+1.2
TIR	Tirane	3.31	354		Pn	15 09 35.7	+1.2
TAR1	Taranto	3.42	317	*e*Pn	Pn	15 09 37.1	+1.0
CEL	Celeste	3.52	275	Pn	Pn	15 09 37.7	+0.2
OUR	Ouranopolis	3.62	50	P	Pn	15 09 40.3	+1.4
VAY	Valandovo	3.68	27	*e*Pn	Pn	15 09 41.3	+1.6
VAY	Valandovo	3.68	27	*e*P	Pn	15 09 43.5	+3.8
MATE	Matera	3.83	314	⇑P	Pn	15 09 42.7	+1.0
MATE				⇓S	Sn	15 10 26.0	-0.2
SG1	Sgolgore (BA)	3.97	315	*e*Pn	Pn	15 09 44.3	+0.6
BAI	Bari	4.06	320	*e*Pn	Pn	15 09 45.2	+0.4
DRME	Dracevica, Mon	4.22	348	*e*Pn	Pn	15 09 47.1	0.0
APE	Apeiranthos	4.23	102	⇑P	Pb	15 09 53.5	-4.1
APE				⇑S	Sb	15 10 45.1	-3.2
APE	Apeiranthos	4.23	102	⇓*e*P	Pn	15 09 51.2	+3.9
KKB	Krupnik	4.34	28	*e*P	Pn	15 09 52.5	+3.7
ACER	Acerenza	4.37	310		Pn	15 09 49.7	+0.6
MMB	Musomiste	4.38	35	*e*P	Pn	15 09 52.5	+3.2
SANT	Santorini	4.41	111	Pn	Pn	15 09 52.4	+2.6
PDG	Podgorica	4.45	349	*e*Pn	Pn	15 09 50.0	-0.1
PDG				*e*Sn	Sn	15 10 41.3	0.0
PDG	Podgorica	4.45	349	⇓P	Pn	15 09 50.4	+0.2
PDG				⇑S	Sn	15 10 41.4	+0.1
PDG	Podgorica	4.45	349	*e*Pn	Pn	15 09 50.1	-0.1
PDG	Podgorica	4.45	349		Pn	15 09 49.3	-0.9
IDI	Anoyia	4.58	126	Pn	Pn	15 09 52.0	-0.1
	comp=E,1.0nm,0.3s,baz=231,slow=21,SNR=1.2						
IDI				Sn	Sn	15 10 46.0	+1.3
	comp=E,7.7nm,0.3s,baz=105,slow=23,SNR=7.9						
IDI				LR	LR	15 11 49.9	
	comp=E,98nm,20.0s,baz=311,slow=42						
HCY	Herceg Novi	4.61	343	*e*Pn	Pn	15 09 51.6	-0.8
BOSS	Bosilegrad	4.72	20	*e*Pn	Pn	15 09 55.1	+1.1
VAE	Valguarnera	4.74	265	Pn	Pn	15 09 58.2	+3.9
	comp=E,2.1nm,0.3s,baz=265,slow=22,SNR=1.9						
VAE				Sn	Sn	15 10 48.6	0.0
	comp=E,6.5nm,0.3s,baz=46,slow=9.2,SNR=6.3						
BARS	Barje	4.88	13	*e*Pn	Pn	15 09 55.9	-0.3
TREB	Trebinje	4.90	342	*e*Pn	Pn	15 09 55.3	-1.1
RZN	Rozhen	4.94	41	*e*P	Pn	15 10 00.9	+3.7
BRY	Bratogost	5.03	345	*e*Pn	Pn	15 09 57.7	-0.6
VTS	Vitosha	5.06	25	*e*Pn	Pn	15 10 00.7	+2.0
VTS	Vitosha	5.06	25	⇓P	Pn	15 10 00.7	+2.0
VTS				⇓S	Sn	15 10 58.8	+2.1
VTS	Vitosha	5.06	25	*e*P	Pn	15 10 00.8	+2.0
VTS	Vitosha	5.06	25	P	Pn	15 10 00.6	+1.8
VTS	Vitosha	5.06	25		Pn	15 10 00.6	+1.8
SGRT	San Giovanni R	5.12	318		Pn	15 09 59.7	+0.3
WDD	Wied Dalam	5.17	246		Pn	15 10 00.5	+0.4
SELS	Selova	5.19	6	*e*Pn	Pn	15 10 00.6	+0.2
SJES	Sjenica	5.21	357	*e*Pn	Pn	15 10 01.8	+1.1
STON	Ston	5.21	338	*e*Pn	Pn	15 10 00.5	-0.2
STON	Ston	5.21	338	*e*Pn	Pn	15 09 59.7	-1.0
ALN	Alexandroupoli	5.24	55	P	Pn	15 10 03.4	+2.3
ALN	Alexandroupoli	5.24	55	Pn	Pn	15 10 03.4	+2.3
UPM	Unac-Piva	5.25	348	*e*Pn	Pn	15 10 01.4	-0.1
PAOL	Paolisi	5.37	305		Pn	15 10 02.8	0.0
ZAPS	Zavoj	5.49	18	*e*Pn	Pn	15 10 06.6	+2.0
IVAS	Ivanjica	5.51	359	*e*Pn	Pn	15 10 05.1	+0.2
CORL	Corleone	5.57	270	Pn	Pn	15 10 06.4	+0.7
RUDO	Rudo	5.60	353	*e*Pn	Pn	15 10 05.8	-0.3
BOVS	Bovan	5.67	10	*e*Pn	Pn	15 10 06.8	-0.1
GRUS	Gruza	5.83	3	*e*Pn	Pn	15 10 10.0	+0.8
BBLS	Lazići	5.85	353	*e*Pn	Pn	15 10 09.8	+0.3
BBLS	Lazići	5.85	353	*e*Pn	Pn	15 10 09.4	-0.1
ZAGS	Zajecar	5.92	13	*e*Pn	Pn	15 10 11.6	+1.2
KARP	Karpathos	6.01	113	Pn	Pn	15 10 14.5	+2.7
DIVS	Divibare	6.04	358	*e*Pn	Pn	15 10 11.8	-0.4
DIVS	Divibare	6.04	358	*e*Pn	Pn	15 10 11.7	-0.4
HAPS	Han Pijesak,Bl	6.11	350	*e*Pn	Pn	15 10 12.0	-1.2
TRUS	Trudelj	6.16	0	*e*Pn	Pn	15 10 13.8	+0.1
PLVB	Pleven	6.23	30	⇓P	Pn	15 10 17.4	+2.7
INTR	Introdacqua	6.33	311	Pn	Pn	15 10 17.2	+1.1
ELND	Elena	6.43	39	⇑P	Pn	15 10 19.7	+2.3
MDVR	Moldovita	6.79	8	⇓P	Pn	15 10 23.4	+0.9
MGRS	Mrkonjic Grad	6.81	340	*e*Pn	Pn	15 10 23.0	+0.3
HERR	Herculane	6.99	12	⇑P	Pn	15 10 26.0	+0.9
BLY	Banja Luka	7.09	341	⇑P	Pn	15 10 26.9	+0.4
BLY				⇑S	Sn	15 11 46.3	-0.2
BLY	Banja Luka	7.09	341	*e*Pn	Pn	15 10 26.0	-0.5
BLY	Banja Luka	7.09	341		Pn	15 10 26.4	-0.1
FRGS	Fruska Gora	7.11	357	*e*Pn	Pn	15 10 19.8	-6.9
NRCA	Norcia	7.29	313		Pn	15 10 31.4	+2.1
GZR	Gura Zlata	7.55	13	⇑P	Pn	15 10 33.7	+0.8
BZS	Buzias	7.61	7	*e*Pn	Pn	15 10 33.8	+0.2
BZS	Buzias	7.61	7	⇑P	Pn	15 10 34.9	+1.3
SLUM	Salum	7.67	147	P	Pn	15 10 30.6	-3.9
	baz=151						
SLUM				AMP		15 11 00.0	
	baz=151						
SLUM				S	Sn	15 11 51.1	-10
	baz=151						
MURB	Monte Urbino	7.90	314		Pn	15 10 40.0	+2.4
ARR	Arges	7.97	22	⇑P	Pn	15 10 40.3	+1.6
RIY	Rijeka	8.48	331	*e*Pn	Pn	15 10 45.1	-0.4
MLR	Muntele Rosu	8.52	28	Pn	Pn	15 10 49.2	+3.0
	comp=E,0.5nm,0.3s,baz=202,slow=1.7,SNR=7.1						
MLR	Muntele Rosu	8.52	28	⇓P	Pn	15 10 49.3	+3.1
MLR	Muntele Rosu	8.52	28	P	Pn	15 10 48.5	+2.3
MLR	Muntele Rosu	8.52	28		Pn	15 10 48.5	+2.3
GBRS	Gornja Briga	8.53	333	*i* Pn	Pn	15 10 46.8	+0.5
GBRS				*e*Sn	Sn	15 12 17.6	-4.4
CRES	Cresnjev	8.57	336	*e*Pn	Pn	15 10 46.2	-0.6
CEY	Cerknica	8.85	332	*e*Pn	Pn	15 10 50.5	-0.2
LJU	Ljubljana	9.08	333	*e*Pn	Pn	15 10 53.3	-0.4
TRI	Trieste	9.08	329	P	Pn	15 10 53.4	-0.4
TRI	Trieste	9.08	329	Pn	Pn	15 10 53.4	-0.4
PLOR	Plostina	9.09	29	⇑P	Pn	15 10 57.1	+3.1
KEST	Kesra	9.12	259	Sn	Sn	15 12 34.8	-1.6
	comp=E,0.3nm,0.3s,baz=145,slow=7.2,SNR=1.5						
VRI	Vrincioaia	9.13	29	⇑P	Pn	15 10 57.4	+2.9
CFR	Carcaliu	9.19	37	⇑P	Pn	15 10 58.1	+2.8
SOKA	Soboth	9.47	337	*i* Pn	Pn	15 10 58.5	-0.6
	comp=E,11nm,0.6s,SNR=5.9						
OBKA	Obir	9.47	335	*e*Pn	Pn	15 10 59.8	+0.6
	comp=E,8.2nm,0.3s						
OBKA				*e*Sn	Sn	15 12 42.5	-2.7
	comp=E,17nm,0.4s						
TESR	Tescani	9.65	27	⇑P	Pn	15 11 04.3	+2.7
VLC	Villacollemand	9.67	312	Pn	Pn	15 11 01.1	-0.8
TEOL	Teolo	9.76	321	Pn	Pn	15 11 01.7	-1.4
SWA2		9.77	153	P	Pn	15 11 01.0	-2.2
	baz=156						
SWA2				AMP		15 12 00.0	
	baz=156						
SWA2				S	Sn	15 12 42.8	-10
	baz=156						
ARSA	Arzberg	9.85	340	*i* Pn	Pn	15 11 03.8	-0.5
	comp=E,3.4nm,0.3s						
ARSA				*i* Sn	Sn	15 12 55.8	+1.6
	comp=E,2.6nm,0.5s						
MYKA	Terra Mystica	9.90	332	*e*Pn	Pn	15 11 05.5	+0.5
	comp=E,3.2nm,0.4s						
STAL	STALIGIAL	9.96	328	Pn	Pn	15 11 05.7	-0.2
BURAR	Bucovina Array	10.20	19	⇑P	Pn	15 11 12.3	+3.2
CTI	Castel Tesino	10.27	324	P	Pn	15 11 09.2	-1.0
CTI	Castel Tesino	10.27	324		Pn	15 11 09.2	-1.0
KBA	Koelnbreinsper	10.38	332	*e*Pn	Pn	15 11 12.8	+1.0
	comp=E,1.9nm,0.3s						
KBA				*i* Sn	Sn	15 13 04.4	-3.2
	comp=E,9.3nm,0.7s						
CONA	Conrad Observa	10.39	343	Pn	Pn	15 11 19.5	+7.6
	comp=E,2.0nm,0.4s						
VYHS	Vyhne	10.49	354	*e*P	Pn	15 11 13.1	0.0
VYHS				*e*		15 13 03.8	
VYHS	Vyhne	10.49	354	*e*PN	Pn	15 11 13.0	0.0
VYHS				*e*SN	Sn	15 13 03.8	-6.2
BRTR	Keskin Array B	10.49	77	Pn	Pn	15 11 14.3	+1.0
	comp=E,0.1nm,0.3s,baz=265,slow=13,SNR=3.1						
BRTR				LR	LR	15 14 57.3	
	comp=E,17nm,20.0s,baz=250,slow=36						
SALO	Salr	10.52	319	Pn	Pn	15 11 13.2	-0.3
MOA	Molln	10.75	337	*i* Pn	Pn	15 11 16.7	+0.1
	comp=E,4.5nm,0.3s,SNR=10						
MOA				*i* Sn	Sn	15 13 13.0	-3.4
	comp=E,5.2nm,0.5s						
WTTA	Wattenberg	11.21	328	*i* Pn	Pn	15 11 24.0	+1.0
	comp=E,2.2nm,0.3s						
WTTA				*i* Sn	Sn	15 13 26.7	-1.1
	comp=E,10nm,0.5s						
FETA	Feichten	11.42	325	Pn	Pn	15 11 29.7	+3.8
	comp=E,2.1nm,0.5s						
FETA				*i* Sn	Sn	15 13 30.5	-2.5
	comp=E,4.2nm,0.5s						
MOTA	Moosalm	11.50	327	*i* Pn	Pn	15 11 28.7	+1.7
	comp=E,2.8nm,0.4s						
MOTA				*e*Sn	Sn	15 13 31.7	-3.1
	comp=E,4.6nm,0.5s						
VRAC	Vranov	11.57	348	LR	LR	15 15 47.3	
	comp=E,26nm,20.2s,baz=150,slow=37						
DAVOX	Davos/Dischmat	11.64	322	Pn	Pn	15 11 28.6	-0.4
	comp=E,0.6nm,0.3s,baz=173,slow=19,SNR=4.1						
DAVOX				Sn	Sn	15 13 32.2	-6.3
	comp=E,0.4nm,0.3s,baz=205,slow=17,SNR=2.2						
TUE	Stuetta	11.70	319	Pn	Pn	15 11 30.8	+1.0
GEC2	GERESS Array S	11.81	338	Pn	Pn	15 11 30.4	-0.8
GERES	GERESS Array B	11.81	338	Pn	Pn	15 11 30.2	-1.0
	comp=E,0.7nm,0.3s,baz=157,slow=14,SNR=13						
GERES				Sn	Sn	15 13 33.2	-9.2
	comp=E,0.2nm,0.3s,baz=153,slow=29,SNR=2.3						
GERES	GERESS Array B	11.81	338	P	Pn	15 11 30.0	-1.2
GERES	GERESS Array B	11.81	338		Pn	15 11 30.0	-1.2
KHC	Kasperske Hory	12.10	338	*e*PN	Pn	15 11 33.6	-1.5
KHC				*e*SN	Sn	15 13 43.6	-5.9
KHC				*e*x	x	15 14 18.0	

KHC	**Kasperske Hory**	**12.10**	**338⇑**	*e*P	**Pn**	**15 11 34.2**	**-0.9**
KHC	**Kasperske Hory**	**12.10**	**338**		**Pn**	**15 11 34.0**	**-1.1**
GLL	**Jalalah**	**12.67**	**129**	P	**Pn**	**15 11 38.8**	**-4.3**
	baz=131						
SENIN	**Lac Senin/Sane**	**12.73**	**315**	Pn	**Pn**	**15 11 43.1**	**-0.9**
HFRF	**Wahat Farafira**	**12.78**	**146**	P	**Pn**	**15 11 42.2**	**-2.2**
	baz=149						
RSH		**13.10**	**119**	P	**Pn**	**15 11 46.3**	**-2.5**
	baz=121						
MMAI	**Mount Meron Ar**	**13.25**	**108**	LR	LR	15 18 43.5	
	comp=E,35nm,18.7s,baz=170,slow=46						
BRG	**Berggiesshubel**	**13.60**	**342**	*e*(P)	Pn	15 11 48.0	-7.5
	comp=E,5.1nm,1.1s						
WLF	**Walferdange**	**15.44**	**323**	PnPn	**P**	**15 12 27.6**	**+2.7**
NEY	**Neytrino**	**17.73**	**66⇑**	*e*P	**P**	**15 12 53.6**	**+3.1**
NEY				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KIV	**Kislovodsk**	**17.84**	**64**	*e*P	**P**	**15 12 57.1**	**+5.6**
KIV				pmax	pmax		
	comp=Z,20nm,1.0s						
KBZ	**Khabaz**	**17.94**	**64**	P	**P**	**15 12 53.1**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=278,slow=5.0,SNR=6.6						
KBZ	**Khabaz**	**17.94**	**64⇑**	*e*P	**P**	**15 12 54.8**	**+2.3**
KBZ				pmax	pmax		
	comp=Z,12nm,2.5s						
GNI	**Garni**	**19.03**	**76**	LR	LR	15 20 25.6	
	comp=Z,47nm,18.5s,baz=277,slow=37						
GNI	**Garni**	**19.03**	**76⇓**	*e*P	**Pn**	**15 13 07.1**	**+1.5**
GNI				pmax	pmax		
	comp=Z,17nm,0.7s						
OBN	**Obninsk**	**20.29**	**28*d***	*e*P	Pn	15 13 19.2	-1.0
OBN				*e*PPP	PPP	15 13 42.1	
OBN				*e*		15 17 31.4	
OBN				pmax	pmax		
	comp=Z,23nm,1.0s						
VSU	**Vasula**	**20.84**	**9*c***	*i*P	**P**	**15 13 24.1**	**+0.1**
HFS	**Hagfors**	**22.50**	**351**	P	**P**	**15 13 43.0**	**+1.1**
	comp=Z,19nm,0.7s,baz=155,slow=12,SNR=41						
NC602	**NORSAR Array S**	**23.37**	**349**	P	**P**	**15 13 51.1**	**+0.2**
EKA	**Eskdalemuir Ar**	**23.45**	**325**	P	**P**	**15 13 51.8**	**+0.1**
	comp=Z,7.3nm,0.8s,baz=124,slow=10,SNR=12						
NAO01	**NORSAR Array S**	**23.57**	**348**	P	**P**	**15 13 53.6**	**+0.7**
FINES	**FINESS Array B**	**23.68**	**7**	P	**P**	**15 13 53.3**	**-0.6**
	comp=Z,5.4nm,0.8s,baz=156,slow=9.8,SNR=6.8						
FINES				LR	LR	15 24 17.4	
	comp=Z,77nm,18.6s,baz=12,slow=39						
NC405	**NORSAR Array S**	**23.70**	**350**	P	**P**	**15 13 53.5**	**-0.7**
NC405				IAmb	IAmb	15 14 03.5	
	comp=Z,18nm,0.9s						
NB201	**NORSAR Array S**	**23.71**	**349**	P	**P**	**15 13 54.6**	**+0.4**
NB2	**NORSAR Subarra**	**23.71**	**349**	P	**P**	**15 13 54.2**	**-0.1**
	comp=Z,3.1nm,0.7s,baz=162,slow=9.3						
NOA	**NORSAR Array B**	**23.71**	**349**	P	**P**	**15 13 54.6**	**+0.4**
	comp=Z,4.2nm,0.9s,baz=158,slow=9.0,SNR=13						
NOA				LR	LR	15 23 57.6	
	comp=Z,17nm,20.1s,baz=260,slow=38						
NBO00	**NORSAR Array S**	**23.77**	**348**	P	**P**	**15 13 54.9**	**+0.1**
NC303	**NORSAR Array S**	**23.86**	**349**	P	**P**	**15 13 55.5**	**-0.2**
NC204	**NORSAR Array S**	**24.00**	**349**	P	**P**	**15 13 57.6**	**+0.5**
NC204				IAmb	IAmb	15 14 04.2	
	comp=Z,22nm,0.8s						
KLMR	**Klimovskoe**	**25.80**	**22**	*e*P	**P**	**15 14 12.2**	**-1.1**
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KLMR	**Klimovskoe**	**25.80**	**22**	*e*P	**P**	**15 14 12.3**	**-1.1**
KLMR				AMP		15 14 19.6	
	comp=Z,10.0nm,1.0s						
RAYN	**Ar Rayn**	**25.91**	**117**	*i* P	**P**	**15 14 15.3**	**+0.6**
	SNR=42						
RAYN	**Ar Rayn**	**25.91**	**117**	P	**P**	**15 14 15.2**	**+0.4**
RAYN				pmax	pmax		
	comp=Z,33nm,0.9s						
RAYN	**Ar Rayn**	**25.91**	**117**	P	**P**	**15 14 15.2**	**+0.4**
TORD	**Torodi Ar. Bea**	**29.85**	**219**	P	**P**	**15 14 50.2**	**+0.2**
	comp=Z,2.4nm,0.9s,baz=33,slow=8.8,SNR=11						
TORD	**Torodi Ar. Bea**	**29.85**	**219**	P	**P**	**15 14 50.5**	**+0.5**
DBIC	**Dimbokro**	**38.71**	**223**	P	**P**	**15 16 07.3**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=356,slow=11,SNR=5.3						
DBIC	**Dimbokro**	**38.71**	**223**	P	**P**	**15 16 07.7**	**+1.0**
DBIC				IAmb	IAmb	15 16 08.2	
	comp=Z,3.3nm,0.7s						
TIC	**Toumodi**	**38.82**	**223**	*e*P	**P**	**15 16 08.4**	**+0.8**
KIC	**Kosan Boka**	**38.91**	**222**	*e*P	**P**	**15 16 09.4**	**+1.0**
	comp=Z,12nm,0.8s						
LIC	**Lamto**	**39.18**	**222**	*e*P	**P**	**15 16 11.7**	**+1.1**
	comp=Z,14nm,0.5s						
KURBB	**Kurchatov Arra**	**42.41**	**53**	P	**P**	**15 16 36.5**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=284,slow=9.2,SNR=4.3						
KURK	**Kurchatov**	**42.46**	**53**	P	**P**	**15 16 36.5**	**-0.7**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURK	**Kurchatov**	**42.46**	**53**	P	**P**	**15 16 36.5**	**-0.7**
KSH	**Kashi**	**42.79**	**70**	P	**P**	**15 16 40.9**	**+0.6**
KSH				S	**S**	**15 23 02.4**	**-1.1**
MK31	**Makanchi Array**	**45.48**	**58**	P	**P**	**15 17 00.3**	**-1.3**
MK31				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MK31	**Makanchi Array**	**45.48**	**58**	P	**P**	**15 17 00.3**	**-1.3**
MKAR	**Makanchi Array**	**45.48**	**58**	P	**P**	**15 17 01.4**	**-0.3**
	comp=Z,1.3nm,0.4s,baz=274,slow=7.5,SNR=26						
MKAR	**Makanchi Array**	**45.48**	**58**	P	**P**	**15 17 01.1**	**-0.5**
MKAR	**Makanchi Array**	**45.48**	**58**	P	**P**	**15 17 01.1**	**-0.5**
ZALV	**Zalesovo Beam**	**45.87**	**48**	P	**P**	**15 17 04.3**	**-0.3**
	comp=Z,4.8nm,0.5s,baz=275,slow=8.8,SNR=12						
WMQ	**Urumqi**	**49.94**	**61**	*e*P	**P**	**15 17 39.5**	**+3.2**
SONM	**Songino Array**	**60.64**	**50**	P	**P**	**15 18 53.2**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=268,slow=7.7,SNR=3.9						
LZH	**Lanzhou**	**64.38**	**63**	*e*P	**P**	**15 19 20.1**	**+1.4**
LZH				pP	pP	15 19 25.6	+0.5
LZH				sP	sP	15 19 28.3	+1.3
LZH				*e*PP	**PP**	**15 21 43.5**	**+3.5**
BOSA	**Boshof**	**66.48**	**175**	P	**P**	**15 19 30.3**	**-1.8**
	comp=Z,0.7nm,0.4s,baz=244,slow=1.4,SNR=2.2						
BOSA	**Boshof**	**66.48**	**175**	P	**P**	**15 19 30.3**	**-1.8**
BOSA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BOSA	**Boshof**	**66.48**	**175**	IAmb	IAmb	15 19 45.7	
	comp=Z,3.7nm,1.1s						
CD2	**Chengdu**	**66.94**	**68**	P	**P**	**15 19 34.9**	**-0.3**
HHC	**Hu-ho-hao-te**	**67.21**	**55**	*e*P	**P**	**15 19 38.3**	**+1.5**
CMAR	**Chiang Mai Arr**	**70.04**	**82**	P	**P**	**15 19 55.1**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=303,slow=8.0,SNR=6.8						
BILL	**Bilibino**	**71.16**	**13**	*e*P	**P**	**15 19 58.4**	**-2.3**
BILL				*e*		15 20 21.7	
BILL				*e*		15 22 39.0	
BILL				*e*PPP	PPP	15 24 21.2	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
SEY	**Seymchan**	**72.30**	**21**	P	**P**	**15 20 08.6**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=5.8,slow=23,SNR=1.6						
YKA	**Yellowknife Ar**	**73.46**	**340**	P	**P**	**15 20 15.2**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=39,slow=5.6,SNR=9.6						
KLR	**Kul'dur**	**74.05**	**39⇓**	*e*P	P	15 20 23.1	+4.9
KLR				pmax	pmax		
	comp=Z,12nm,2.8s						
COWI	**Conover**	**75.07**	**317**	P	**P**	**15 20 25.6**	**+1.4**
COWI				IAmb	IAmb	15 20 26.6	
	comp=Z,2.3nm,0.7s						
EYMN	**Ely**	**75.11**	**320**	P	**P**	**15 20 25.6**	**+1.2**
EYMN				IAmb	IAmb	15 20 26.1	
	comp=Z,1.5nm,0.7s						
ULM	**Lac du Bonnet**	**75.72**	**324**	P	**P**	**15 20 29.2**	**+1.4**
	comp=Z,3.0nm,0.7s,baz=48,slow=6.2,SNR=6.9						
ULM	**Lac du Bonnet**	**75.72**	**324**	IAmb	IAmb	15 20 29.9	
	comp=Z,2.5nm,0.7s						
NJ2	**Nanjing**	**76.99**	**60**	*e*P	**P**	**15 20 36.4**	**+1.1**
ILAR	**Eielson Array**	**77.02**	**354**	P	**P**	**15 20 36.5**	**+1.6**
	comp=Z,0.3nm,0.5s,baz=357,slow=3.8,SNR=6.5						
HDA	**Harding Lake**	**77.38**	**354**	P	**P**	**15 20 38.1**	**+1.2**
HDA				IAmb	IAmb	15 20 38.3	
	comp=Z,1.8nm,0.6s						
WRH	**Wood River Hil**	**77.40**	**355**	P	**P**	**15 20 38.5**	**+1.4**
WRH				IAmb	IAmb	15 20 38.9	
	comp=Z,2.1nm,0.8s						
DHY	**Denali Highway**	**78.73**	**354**	P	**P**	**15 20 46.0**	**+1.3**
JTMT	**Jette**	**85.48**	**331**	P	**P**	**15 21 22.0**	**+1.6**
ASAR	**Alice Springs**	**122.30**	**96**	PKP	**PKPdf**	**15 27 37.5**	**-0.2**
	comp=Z,0.3nm,0.8s,baz=1.4,slow=1.9,SNR=5.9						

LJU 05 15:09:08.6, 45°.74N×14°.88E, h2^{km}, ML0.1, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VISS	**Visnje**	**0.07**	**334⇓**	*i*Pg	Pg	15 09 10.0	0.0
VISS				*i* Sg	Sg	15 09 11.2	+0.1
	comp=Z,4.0nm,0.1s						

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*KOLA **05** 15:19:56.1, 68°.18N×33°.28E, h0^{km}*

*HEL **05** 15:19:57.7±0.8, 68°.26N×33°.20E, h0^{km}, ML1.9, Explosion*

*IDC **05** 15:20:02.1±2.4, 68°.18N×32°.81E, h0^{km}, mb1 2.7/2, mb1mx2.6/61, mbtmp2.6/2, ML1.9/2, Error ellipse: s-maj=29.0km s-min=11.8km az=65.0*

ISC 05 15:19:58.3±1.4**, 68°.12N**±0°.05×**33°.23E**±0°.07**, h0^{km}, n21, σ1^{s}27**/35**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.52**	**190**	P	**Pg**	**15 20 06.5**	**-1.7**
APA0				S	**Sg**	**15 20 14.1**	**-0.8**
APA	**Apatity**	**0.55**	**173**	P	**Pg**	**15 20 07.0**	**-1.8**
APA				S	**Sg**	**15 20 15.0**	**-1.0**
VRF	**Varrio**	**1.42**	**257**	PG	**Pg**	**15 20 23.8**	**-1.6**
	baz=64						
VRF				MSG		15 20 41.2	
	comp=Z,11nm,0.2s						
VRF				SG	**Sg**	**15 20 43.0**	**-0.7**
KU6	**Riekki**	**2.47**	**213**	PN	**Pn**	**15 20 40.9**	**+1.1**
KU6				MSG		15 21 14.1	
	comp=Z,4.5nm,0.2s						
KU6				SB	**Sb**	**15 21 15.0**	**+0.5**
SGF	**Sodankyl**	**2.64**	**258**	PB	**Pn**	**15 20 42.8**	**+0.7**
SGF				SG	**Sb**	**15 21 18.9**	**-0.3**
MSF	**Maaselka**	**2.76**	**219**	PB	**Pn**	**15 20 45.7**	**+2.0**
MSF				SB	**Sb**	**15 21 21.9**	**-0.7**
KEV	**Kevo**	**2.79**	**309**	*e*P	**Pn**	**15 20 45.5**	**+1.4**
KEV				*e*S	**Sn**	**15 21 19.3**	**+0.9**
KEV	**Kevo**	**2.79**	**309**	PG	**Pn**	**15 20 45.6**	**+1.4**
KEV				MSG		15 21 17.0	
	comp=Z,4.5nm,0.2s						
KEV				SG	**Sb**	**15 21 21.2**	**-2.3**
ARCES	**ARCESS Array B**	**3.15**	**301**	Pn	**Pn**	**15 20 49.0**	**0.0**
	comp=Z,0.2nm,0.3s,baz=118,slow=15,SNR=22						
ARCES				Pg	**Pb**	**15 20 55.6**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=115,slow=14,SNR=7.5						
ARCES				Sn	**Sn**	**15 21 29.1**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=111,slow=18,SNR=5.3						
ARCES				Lg	Lg	15 21 35.8	
	comp=Z,1.0nm,0.3s,baz=117,slow=32,SNR=12						
ARE0	**ARCESS Array S**	**3.15**	**301**	*e*P	**Pn**	**15 20 48.8**	**-0.2**
ARE0				*e*S	**Sn**	**15 21 28.9**	**+1.6**
ARE0	**ARCESS Array S**	**3.15**	**301**	PB	**Pn**	**15 20 49.3**	**+0.3**
ARE0				SG	**Sn**	**15 21 29.4**	**+2.2**
RNF	**Rovaniemi**	**3.17**	**245**	PB	**Pn**	**15 20 50.7**	**+1.3**
HEF	**Hetta**	**3.57**	**279**	*e*P	**Pn**	**15 20 54.4**	**-0.5**
HEF				*e*S	**Sn**	**15 21 38.4**	**+0.6**
HEF	**Hetta**	**3.57**	**279**	PN	**Pn**	**15 20 54.7**	**-0.2**
KTK1	**Kautokeino**	**3.78**	**288**	*e*P	**Pn**	**15 20 59.1**	**+1.4**
KTK1				*e*S	**Sn**	**15 21 43.1**	**+0.4**
KTK1				IAML		15 22 08.3	
	comp=Z,2.5nm,0.6s						
LANU	**Lannavaara**	**4.21**	**274**	PN	**Pn**	**15 21 05.1**	**+1.4**
ERTU	**Ertsjaerv**	**4.55**	**255**	PN	**Pn**	**15 21 09.2**	**+0.9**
ERTU				SN	**Sn**	**15 22 02.1**	**+0.4**
KIF	**Kilpisjarvi**	**4.65**	**287**	*e*P	**Pn**	**15 21 10.4**	**+0.8**
KIF	**Kilpisjarvi**	**4.65**	**287**	PN	**Pn**	**15 21 10.3**	**+0.7**
I37NO	**I37NO**	**5.44**	**287**	*i*		15 56 40.0	
	baz=94,slow=328,SNR=1.2						
FINES	**FINESS Array B**	**7.36**	**208**	Pn	**Pn**	**15 21 48.8**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=15,slow=13,SNR=2.3						
FINES				Lg	Lg	15 23 43.2	
	comp=Z,0.1nm,0.3s,baz=36,slow=31,SNR=3.0						

IDC 05 15:26:27.1±2.1**, 1°.76N**×**126°.55E, h0^{km}, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.3**/44**, mbtmp3.5**/3**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.6**/28**, Error ellipse: s-maj=189.5km s-min=24.2km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.88**	**161**	P	P	15 31 32.2	-0.3
	1.6nm,0.6s,baz=339,slow=10,SNR=26						
KRVT	**Keravat (AS076**	**26.17**	**103**	LR	LR	15 40 42.2	
	comp=Z,94nm,19.2s,baz=183,slow=33						
ASAR	**Alice Springs**	**26.26**	**165**	P	P	15 32 04.3	+0.1
	0.3nm,0.3s,baz=345,slow=12,SNR=15						
MKAR	**Makanchi Array**	**59.07**	**326**	P	P	15 36 29.2	0.0
	0.2nm,0.3s,baz=122,slow=7.2,SNR=8.0						

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*IDC **05** 15:26:49.3±30.0, 18°.24S×175°.89W, h0^{km}, mb4.0/4, mb1 4.1/4, mb1mx3.7/36, mbtmp4.0/4, Error ellipse: s-maj=552.1km s-min=155.1km az=74.0*

*NEIC **05** 15:27:17.0±1.4, 17°.8S±0°.2×175°.6W±0°.3, h326^{km}±26^{km}, mb4.1/9, Error ellipse: s-maj=43.5km s-min=27.1km az=114.0*

ISC 05 15:27:12.5±1.8**, 17°.9S**±0°.2×**175°.7W**±0°.3**, h254^{km}, n13, σ1^{s}40**/13**, mb4.0**/8**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNTN	**Kanton**	**15.53**	**15**	P	**P**	**15 30 38.1**	**0.0**
DZM	**Mont Dzumac**	**17.27**	**253**	P	**Pn**	**15 30 59.2**	**-0.4**
URZ	**Urewera**	**21.24**	**196**	P	**P**	**15 31 38.7**	**-0.4**
CTA	**Charters Tower**	**35.98**	**260**	P	**P**	**15 33 50.5**	**+0.8**
	5.0nm,0.9s,baz=80,slow=6.1,SNR=1.9						
STKA	**Stephens Creek**	**40.89**	**242**	P	**P**	**15 34 31.0**	**+0.7**
	1.1nm,0.7s,baz=74,slow=8.9,SNR=5.6						
WR0	**Warramunga Arr**	**46.96**	**259**	P	**P**	**15 35 17.2**	**-1.4**
WR0				IAmb	IAmb	15 36 05.1	
	comp=Z,14nm,1.5s						
WB0	**Warramunga Arr**	**47.12**	**259**	P	**P**	**15 35 17.9**	**-1.9**
WB0				IAmb	IAmb	15 36 32.0	
	comp=Z,21nm,1.8s						
WB2	**Warramunga Arr**	**47.14**	**259**	P	**P**	**15 35 18.4**	**-1.6**
WB2				IAmb	IAmb	15 35 59.1	
	comp=Z,16nm,1.6s						
WRAB	**Tennant Creek**	**47.14**	**259**	P	**P**	**15 35 18.1**	**-1.9**
WRAB				IAmb	IAmb	15 36 37.6	
	comp=Z,22nm,1.8s						
WRA	**Warramunga Arr**	**47.15**	**259**	P	**P**	**15 35 21.5**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=97,slow=7.3,SNR=14						
AS31	**Alice Springs**	**47.26**	**254**	P	**P**	**15 35 20.2**	**-0.7**
ASAR	**Alice Springs**	**47.26**	**254**	P	**P**	**15 35 22.8**	**+1.9**
	comp=Z,1.1nm,0.5s,baz=91,slow=8.6,SNR=22						
ASAR	**Alice Springs**	**47.26**	**254**	P	**P**	**15 35 20.3**	**-0.6**

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*PRE **05** 15:31:10.4±1.0, 26°.97S×26°.81E, h2^{km}, ML3.0*

*EAF **05** 15:31:11.9, 27°.17S×27°.28E, h0^{km}, MD3.9*

ISC 05 15:31:11.4±1.1**, 26°.97S**±0°.04×**26°.82E**±0°.04**, h12^{km}**±9^{km}**, n17, σ1^{s}77**/32**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.48**	**85**	*e*P	**Pg**	**15 31 20.1**	**-0.8**
PRYS				*e*S	**Sg**	**15 31 26.7**	**-0.6**
PRYS				AML	AML	15 31 33.9	
	comp=Z,431nm,0.2s						
WDLM	**Western Deep L**	**0.76**	**45**	*e*P	**Pg**	**15 31 25.5**	**-0.7**
WDLM				*e*S	**Sg**	**15 31 36.1**	**-0.1**
WDLM				AML	AML	15 31 45.9	
	comp=Z,417nm,0.3s						
KLOF	**Kloof**	**0.94**	**49**	*e*P	**Pg**	**15 31 28.8**	**-0.7**
KLOF				*e*S	**Sg**	**15 31 41.5**	**-0.3**
KLOF				AML	AML	15 31 46.9	
	comp=Z,2µm,0.1s						
KSR	**Koster**	**1.11**	**4**	*e*P	**Pb**	**15 31 32.5**	**-0.2**
KSR				*e*S	**Sb**	**15 31 47.4**	**+0.2**
KSR				AML	AML	15 31 50.9	
	comp=Z,160nm,0.2s						
SWZ	**Schweizer**	**1.34**	**261**	*e*P	**Pg**	**15 31 35.8**	**-1.4**
SWZ				*e*S	**Sb**	**15 31 53.8**	**0.0**
SWZ				AML	AML	15 31 58.4	
	comp=Z,1µm,0.7s						
BOSA	**Boshof**	**2.15**	**220**	*i* P	**Pg**	**15 31 50.8**	**-1.7**
BOSA	**Boshof**	**2.15**	**220**	*e*P	**Pn**	**15 31 48.0**	**+0.9**
BOSA				*e*S	**Sn**	**15 32 15.0**	**+1.2**
BOSA				AML	AML	15 32 21.0	
	comp=Z,114nm,0.3s						
BOSA	**Boshof**	**2.15**	**220**	*i* P	**Pg**	**15 31 50.8**	**-1.7**
HVD	**Gariep Dam**	**3.81**	**197**	*e*P	**Pn**	**15 32 11.2**	**+1.3**
HVD				*e*S	**Sn**	**15 32 54.5**	**-0.2**
HVD				AML	AML	15 33 22.9	
	comp=Z,56nm,0.4s						
MSNA	**Messina**	**5.45**	**33**	*i* P	**Pn**	**15 32 33.7**	**+1.3**
MSNA				*i* S	**Sn**	**15 33 31.6**	**-3.5**
MSNA	**Messina**	**5.45**	**33**	*i* P	**Pn**	**15 32 33.7**	**+1.3**
MSNA				*i* S	**Sn**	**15 33 31.6**	**-3.5**
KEIM	**Keimoes**	**5.46**	**250**	*e*P	**Pn**	**15 32 33.7**	**+1.1**
KEIM				*e*S	**Sn**	**15 33 34.9**	**-0.6**
KEIM				AML	AML	15 34 08.6	
	comp=Z,41nm,0.3s						
MATP	**Matopo**	**6.69**	**14**	*i* P	**Pn**	**15 32 51.4**	**+1.8**
MATP				*i* S	**Sn**	**15 34 05.6**	**-0.3**
MATP	**Matopo**	**6.69**	**14**	*i* P	**Pn**	**15 32 51.4**	**+1.8**
MATP				*i* S	**Sn**	**15 34 05.6**	**-0.3**
KOMG	**Komaggas**	**8.69**	**249**	*e*P	**Pn**	**15 33 18.0**	**+1.1**
KOMG				*e*S	**Sn**	**15 34 50.7**	**-4.2**
KOMG				AML	AML	15 35 26.5	
	comp=Z,7.5nm,0.5s						
TSUM	**Tsumeb**	**11.48**	**310**	*i* P	**Pn**	**15 33 58.4**	**+3.0**
TSUM				*i* S	**Sn**	**15 36 03.1**	**-0.7**
TSUM	**Tsumeb**	**11.48**	**310**	*i* P	**Pn**	**15 33 58.4**	**+3.0**
TSUM				*i* S	**Sn**	**15 36 03.1**	**-0.7**

IDC 05 15:40:41.5±1.7**, 2°.91S**×**129°.79E, h0^{km}, mb3.4**/2**, mb1 3.6**/4**, mb1mx3.4**/37**, mbtmp3.4**/4**, ML3.1**/2**, Error ellipse: s-maj=51.7km s-min=25.7km az=89.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.50**	**36**	Pn	Pn	15 41 22.6	-1.0
	6.7nm,0.3s,baz=207,slow=21,SNR=30						
SIJI				Sn	Sn	15 41 51.0	-3.8
	4.7nm,0.3s,baz=324,slow=23,SNR=3.1						
WRA	**Warramunga Arr**	**17.50**	**166**	P	Pn	15 44 46.1	-1.1
	0.1nm,0.3s,baz=342,slow=13,SNR=2.1						
ASAR	**Alice Springs**	**21.02**	**169**	P	P	15 45 27.4	+0.5
	1.9nm,0.8s,baz=347,slow=11,SNR=24						
MKAR	**Makanchi Array**	**64.72**	**326**	P	P	15 51 22.0	+0.4
	0.4nm,0.9s,baz=142,slow=7.0,SNR=1.9						

TAP 05 16:19:33.6, 24°.57N×121°.57E, h7^{km}, ML0.7, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDT	**Datong Townshi**	**0.06**	**303**	P	Pg	16 19 36.0	+0.7
	baz=303						
NDT				S	Sg	16 19 37.2	+0.6
	baz=303						
ENTT	**Nioudou**	**0.07**	**357**	*i* P	Pg	16 19 35.9	+0.4
	baz=2.0						
ENTT				*i* S	Sg	16 19 37.2	+0.4
	baz=2.0						
YHNB	**Yeheng**	**0.20**	**300**	P	Pg	16 19 38.4	+0.7
	baz=306						
YHNB				S	Sg	16 19 41.1	+0.6
	baz=306						
NNS	**Nan Shan**	**0.22**	**235**	P	Pg	16 19 38.3	+0.3
	baz=233						
NNS				*e*S	Sg	16 19 41.8	+0.8
	baz=233						
NNSB	**Datong**	**0.22**	**231**	*e*P	Pg	16 19 38.6	+0.7
	baz=231						
NNSB				*e*S	Sg	16 19 42.1	+1.2
	baz=231						
NNSH	**Datong**	**0.22**	**231**	S	Sg	16 19 41.7	+0.7
	baz=232						
NSK	**Sanguang**	**0.22**	**299**	P	Pg	16 19 38.6	+0.6
	baz=306						
NSK				*i* S	Sg	16 19 41.7	+0.7
	baz=306						

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*NEIC **05** 16:20:27.7±2.8, 20°.19N±0°.10×120°.5E±0°.2, h10^{km}±1^{km}, mb4.7/4, Error ellipse: s-maj=28.9km s-min=16.4km az=268.0*

*MAN **05** 16:20:27.3, 20°.19N×120°.29E, h70^{km}, mb5.0, ML3.9, MS4.0*

*IDC **05** 16:20:27.4±0.9, 20°.11N×120°.86E, h0^{km}, mb3.6/8, mb1 3.9/9, mb1mx3.7/36, mbtmp3.7/9, ML3.5/1, MS2.8/1, Ms1 3.0/1, ms1mx2.5/31, Error ellipse: s-maj=38.7km s-min=18.3km az=78.0*

ISC 05 16:20:30.6±0.7**, 20°.16N**±0°.04×**120°.5E**±0°.1**, h28^{km}, n29, σ2^{s}21**/33**, mb3.7**/10**, 1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**2.23**	**180⇑**	*e*P	**Pn**	**16 21 04.6**	**-1.0**
SIPP				*e*S	**Sn**	**16 21 28.4**	**-3.8**
APYP	**Conner**	**2.41**	**162**	*e*P	**Pn**	**16 21 07.6**	**-0.5**
APYP				*e*S	**Sb**	**16 21 39.0**	**-3.5**
SGCP	**Mt. Cagua**	**2.43**	**141**	*e*P	**Pn**	**16 21 08.7**	**+0.2**
SGCP				*e*S	**Sb**	**16 21 39.7**	**-3.6**
TWG	**Pinlang**	**2.71**	**12**	Pn	**Pn**	**16 21 10.6**	**-1.8**
TPUB	**Ta-pu**	**3.13**	**3**	Pn	**Pn**	**16 21 15.1**	**-3.0**
YULB	**Yu-li**	**3.31**	**14**		**Pn**	**16 21 18.8**	**-1.8**
CAUP	**Cauayan**	**3.45**	**158**	*e*S	**Sn**	**16 22 05.7**	**+3.2**
CAUP	**Cauayan**	**3.45**	**158**	*e*P	**Pn**	**16 21 24.1**	**+1.5**
SSLB	**Suanglung**	**3.64**	**7**		**Pn**	**16 21 22.6**	**-2.6**
SMPP	**San Manuel, Pa**	**3.99**	**177**	*e*P	**Pn**	**16 21 28.4**	**-1.6**
SMPP				*e*S	**Sn**	**16 22 11.6**	**-4.3**
NACB	**Ninganchiao**	**4.13**	**15**	Pn	**Pn**	**16 21 30.4**	**-1.5**
BALP	**Baler**	**4.52**	**166**	*e*P	**Pn**	**16 21 37.2**	**-0.1**
BALP				*e*S	**Sn**	**16 22 30.8**	**+1.8**
YHNB	**Yeheng**	**4.57**	**11**	Pn	**Pn**	**16 21 36.4**	**-1.6**
KSRS	**Korea Array**	**18.42**	**19**	P	**P**	**16 24 43.4**	**-0.3**
	0.2nm,0.3s,baz=201,slow=12,SNR=4.5						
CMAR	**Chiang Mai Arr**	**20.37**	**269**	LR	LR	16 32 53.7	
	comp=Z,27nm,18.6s,baz=187,slow=36						
MJAR	**Matsushiro Arr**	**22.54**	**40**	P	**P**	**16 25 26.5**	**-1.9**
	2.6nm,1.1s,baz=243,slow=9.4,SNR=2.3						
SONM	**Songino Array**	**29.87**	**341**	P	**P**	**16 26 38.3**	**+2.5**
	0.2nm,0.4s,baz=147,slow=8.1,SNR=1.7						
SONM	**Songino Array**	**29.87**	**341**	IAmb	IAmb	16 26 46.1	
	comp=Z,1.1nm,1.0s						
MKAR	**Makanchi Array**	**40.84**	**320**	P	**P**	**16 28 12.1**	**+2.1**
	comp=Z,0.2nm,0.5s,baz=112,slow=9.4,SNR=2.9						
WRA	**Warramunga Arr**	**42.11**	**160**	P	**P**	**16 28 19.2**	**-1.4**
	comp=Z,1.2nm,0.6s,baz=342,slow=9.0,SNR=11						
WB2	**Warramunga Arr**	**42.12**	**160**	P	**P**	**16 28 19.9**	**-0.7**
WB2				IAmb	IAmb	16 29 17.1	
	comp=Z,35nm,1.9s						
WR0	**Warramunga Arr**	**42.19**	**160**	P	**P**	**16 28 20.8**	**-0.4**
WR0				IAmb	IAmb	16 29 52.8	
	comp=Z,32nm,2.0s						
ZALV	**Zalesovo Beam**	**43.30**	**330**	P	**P**	**16 28 33.5**	**+3.7**
	comp=Z,0.3nm,0.3s,baz=101,slow=7.5,SNR=2.0						
ZALV				PcP	**PcP**	**16 30 20.4**	**+2.0**
	comp=Z,0.4nm,0.5s,baz=106,slow=3.1,SNR=1.7						
ZALV	**Zalesovo Beam**	**43.30**	**330**	P	**P**	**16 28 30.9**	**+1.1**
ASAR	**Alice Springs**	**45.49**	**163**	P	**P**	**16 28 48.0**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=346,slow=7.2,SNR=52						
ABKAR	**Akbulak array**	**55.81**	**316**	P	**P**	**16 30 03.8**	**-1.5**
TTA	**Tatalina**	**69.33**	**29**	P	**P**	**16 31 36.5**	**+1.1**
ILAR	**Eielson Array**	**73.09**	**27**	P	**P**	**16 31 57.9**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=263,slow=4.5,SNR=3.0						
YKA	**Yellowknife Ar**	**86.93**	**22**	P	**P**	**16 33 14.2**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=314,slow=4.5,SNR=13						

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*INET **05** 16:22:30.3, 11°.49N×85°.98W, h123^{km}, ML3.3*

UCR 05 16:22:30.1±1.9**, 11°.41N**×**86°.12W, h129^{km}**±11^{km}**, MD3.7, MW3.7, 1D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GB1A	**Borinquen Arri**	**0.92**	**130**	*e*P	Pn	16 22 52.7	+0.3
GB1A				*e*S	Sn	16 23 10.6	+1.5
BUEV	**Buena Vista**	**0.93**	**131**	*e*P	Pn	16 22 53.0	+0.6
BUEV				*i* S	Sn	16 23 10.0	+0.7
BUAI	**Buenos Aires**	**0.94**	**124**	*i* P	Pn	16 22 52.5	+0.1
BUAI				*i* S	Sn	16 23 09.5	+0.2
NY14	**Universidad de**	**0.95**	**143**	*i* P	Pn	16 22 53.3	+0.8
NY14				*i* S	Sn	16 23 11.2	+1.7
GPS3	**Bodega del ICE**	**0.99**	**131**	*i* P	Pn	16 22 52.5	-0.4
GPS3				*i* S	Sn	16 23 10.5	+0.3
ACON	**Acoyapa**	**1.08**	**59**	*e*P	Pn	16 22 52.1	-1.6
CUI	**Cuipilapa**	**1.20**	**129**	*e*P	Pn	16 22 55.3	+0.3
CUI				*e*S	Sn	16 23 15.8	+1.9
GUAI	**GUAI**	**1.28**	**152**	*i* P	Pn	16 22 56.7	+1.0
PLVR	**Palo Verde**	**1.30**	**144**	*e*P	Pn	16 22 56.9	+0.8
PLVR				*e*S	Sn	16 23 16.8	+0.9
CRIN	**San Cristobal**	**1.57**	**325**	*e*P	Pn	16 22 58.9	-0.1
CRIN				*e*S	Sn	16 23 21.5	+0.4
JTS	**Las Juntas de**	**1.60**	**134**	*e*P	Pn	16 22 59.9	+0.6

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS				eS	Sn	16 23 21.3	-0.3
ESPN	Las Esperanzas	1.94	66	⇓iP	Pn	16 23 01.3	-2.1
CSGN	Cosiguina Volc	2.10	318	eP	Pn	16 23 05.7	+0.4
CSGN				eS	Sn	16 23 33.6	+1.3

WEL 05 16:36:57.3,40°S±3°×17°4E±°,h39^{km}±19^{km},M2.5/10, ML2.6/10,MLv2.5/10,Error ellipse: s-maj=0.0km s-min=0.0km az=69.7,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUWZ	D'Urville Isla	0.52	211	P	Pn	16 37 10.5	+2.1
KIW	Kapiti Island	0.70	137	P	Pn	16 37 10.8	0.0
WAZ	Wanganui	0.81	43	P	Pn	16 37 12.8	+0.5
OGWZ	Otaki Gorge	0.82	124	P	Pn	16 37 12.0	-0.4
TCW	Tory Channel	0.86	180	P	Pn	16 37 13.7	+0.8
CAW	Cannon Point	0.96	142	P	Pn	16 37 14.8	+0.5
MRZ	Mangatainoka R	1.04	108	P	Pn	16 37 14.3	-1.1
HOWZ	Holdsworth Sta	1.09	120	P	Pn	16 37 16.3	+0.2
TUWZ	Tuamarina	1.10	193	P	Pn	16 37 17.2	+1.0
PKE	Pukeiti	1.18	349	P	Pn	16 37 19.3	+2.0
MTW	Mount Morrison	1.23	131	P	Pn	16 37 19.0	+1.0
VRZ	Vera Road	1.28	17	P	Pn	16 37 19.0	+0.3
TIWZ	Tintock	1.30	110	P	Pn	16 37 19.3	+0.3
PRWZ	Pori Road	1.31	99	P	Pn	16 37 19.8	+0.7
QRZ	Quartz Range	1.41	250	P	Pn	16 37 21.6	+1.1
TMWZ	Te Maipa	1.44	122	P	Pn	16 37 19.3	-1.6

*NEIC **05** 16:39:01.3±1.2,25°.8S±0°.1×177°.6W±0°.2,h149^{km}±5^{km}, mb4.5/11,Error ellipse: s-maj=21.0km s-min=13.4km az=110.0*

*IDC **05** 16:39:02.1±3.2,25°.83S×177°.64W,h155^{km}±32^{km},mb3.7/8, mb1 4.0/9,mb1mx3.8/27,mbtmp4.2/9,Error ellipse: s-maj=34.8km s-min=20.9km az=162.0*

ISC 05 16:39:01.3±0.6,25°.84S±0°.07×177°.7W±0°.1,h150^{km},n38, σ1^s.12/38,mb4.2/14,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.40	183	P	Pn	16 39 54.0	+0.2
	147nm,0.3s,baz=84,slow=15,SNR=7.9						
RAO				S	Sn	16 40 36.8	+2.3
	258nm,0.3s,baz=161,slow=22,SNR=6.2						
RAO	Raoul Island	3.40	183	Pn	Pn	16 39 53.5	-0.3
GLKZ	Green Lake	3.41	183	P	Pn	16 39 54.3	+0.4
MSVF	Nonsavu	8.99	333	Pn	Pn	16 41 08.2	+0.2
NIUE	Niue	9.84	48	Pn	Pn	16 41 18.8	-0.5
AFI	Afiamalu	13.11	26	Pn	Pn	16 41 55.9	-6.2
URZ	Urewera	13.13	198	Pn	Pn	16 42 03.1	+0.9
HIZ	Hauiti	14.11	205	Pn	Pn	16 42 11.4	-3.1
BKZ	Black Stump Fm	14.15	199	Pn	Pn	16 42 11.1	-4.1
AS31	Alice Springs	43.81	262	P	P	16 46 52.8	+0.2
ASAR	Alice Springs	43.81	262	P	P	16 46 53.1	+0.5
	1.1nm,0.3s,baz=84,slow=7.6,SNR=62						
WR0	Warramunga Arr	44.20	267	P	P	16 46 56.0	+0.3
WR0				IAmb	IAmb	16 47 27.9	
	comp=Z,19nm,1.6s						
WB2	Warramunga Arr	44.38	267	P	P	16 46 57.7	+0.6
WB2				IAmb	IAmb	16 46 60.0	
	comp=Z,6.1nm,0.8s						
WRAB	Tennant Creek	44.38	267	P	P	16 46 57.7	+0.5
WRAB				IAmb	IAmb	16 48 26.8	
	comp=Z,23nm,1.8s						
WRA	Warramunga Arr	44.39	267	P	P	16 46 57.9	+0.7
	comp=Z,3.7nm,0.7s,baz=99,slow=7.1,SNR=70						
WRA	Warramunga Arr	44.39	267	P	P	16 46 56.4	-0.8
WB0	Warramunga Arr	44.39	268	P	P	16 46 57.6	+0.4
WB0				IAmb	IAmb	16 47 00.4	
	comp=Z,5.5nm,0.8s						
FORT	Forrest	47.63	251	P	P	16 47 22.1	-0.3
KNRA	Kununurra	50.78	270	P	P	16 47 47.3	+0.8
KNRA				IAmb	IAmb	16 47 48.9	
	comp=Z,26nm,1.4s						
FITZ	Fitzroy Crossi	52.78	266	P	P	16 48 02.1	+0.8
FITZ				IAmb	IAmb	16 49 36.6	
	comp=Z,15nm,1.6s						
JAGI	Jajag, Banyuwa	66.72	272	P	P	16 49 36.3	-0.4
MAW	Mawson	76.66	200	P	P	16 50 35.7	+0.6
	comp=Z,2.9nm,0.9s,baz=114,slow=12,SNR=1.8						
PETK	Petropavlovsk-	81.49	345	P	P	16 51 01.8	+0.3
	comp=Z,2.9nm,0.6s,baz=131,slow=7.2,SNR=13						
PETK	Petropavlovsk-	81.49	345	P	P	16 51 01.9	+0.5
NVAR	Mina Array Bea	84.72	43	P	P	16 51 19.4	+0.7
	comp=Z,1.3nm,0.7s,baz=218,slow=9.2,SNR=12						
NVAR	Mina Array Bea	84.72	43	P	P	16 51 19.2	+0.5
CMAR	Chiang Mai Arr	92.15	289	P	P	16 51 55.6	+1.4
	comp=Z,0.3nm,0.5s,baz=130,slow=3.6,SNR=2.3						
CMAR	Chiang Mai Arr	92.15	289	P	P	16 51 55.5	+1.2
PDAR	Pinedale Array	92.65	43	P	P	16 51 55.9	-0.4
	comp=Z,0.5nm,0.7s,baz=211,slow=1.7,SNR=4.8						
ILAR	Eielson Array	93.44	13	P	P	16 51 58.7	-0.4
	comp=Z,0.2nm,0.6s,baz=206,slow=5.2,SNR=1.6						
MKAR	Makanchi Array	115.00	312	PKP	PKPdf	16 57 23.4	-1.0
	comp=Z,0.3nm,0.5s,baz=220,slow=1.0,SNR=6.9						
ARCES	ARCESS Array B	134.20	349	PKP	PKPdf	16 58 00.4	+0.1
	comp=Z,1.7nm,0.7s,baz=337,slow=1.8,SNR=8.0						
FINES	FINESS Array B	140.94	342	PKhKP	PKPpre	16 58 06.0	
	comp=Z,0.3nm,0.4s,baz=8.7,slow=2.5,SNR=5.3						
NB2	NORSAR Subarra	144.29	353	PKP	PKPab	16 58 17.3	0.0
	comp=Z,1.2nm,0.6s,baz=11,slow=3.5						
NOA	NORSAR Array B	144.29	353	PKP	PKPab	16 58 17.3	0.0
	comp=Z,0.8nm,0.6s,baz=9.3,slow=2.3,SNR=11						
AKASG	Malin Array Be	147.73	327	PKPbc	PKPbc	16 58 27.1	-0.9
	comp=Z,1.8nm,0.4s,baz=44,slow=4.2,SNR=13						
BRTR	Keskin Array B	150.41	306	PKPbc	PKPbc	16 58 35.2	-0.1
	comp=Z,0.9nm,0.6s,baz=139,slow=3.8,SNR=6.7						
BRTR				PKPab	PKPab	16 58 42.0	-0.3
	comp=Z,1.8nm,0.6s,baz=108,slow=4.1,SNR=10						
CLL	Collm	153.29	345	ePKPbc	PKiKP	16 58 42.0	+0.6

*IDC **05** 17:16:27.0±7.5,16°.83N×98°.88W,h0^{km},mb3.5/4, mb1 3.8/5,mb1mx3.6/40,mbtmp3.4/5,MS3.1/2,Ms1 3.1/2, ms1mx2.6/35,Error ellipse: s-maj=169.6km s-min=28.6km az=17.0*

*MEX **05** 17:16:28.7±0.6,16°.55N×99°.17W,h3^{km}±5^{km},MD4.0*

ISC 05 17:16:27.2±1.3,16°.60N±0°.05×99°.15W±0°.03,h10^{km}±9^{km}, n21,σ1^s.51/33,mb3.5/4,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACP2	Acapulco	0.76	291	eP	Pg	17 16 42.2	+0.3
ACP2				eS	Sg	17 16 52.5	+0.7
CAIG	El Cayaco	1.16	293	eP	Pg	17 16 48.0	-1.6
CAIG				eS	Sg	17 17 02.7	-2.0
HMTT	Tlapaneco	1.32	25	eP	Pn	17 16 51.2	-0.6
HMTT				eS	Sg	17 17 08.4	-1.3
YOIG	Yosondua	1.56	80	eP	Pn	17 16 53.7	-1.5
YOIG				eS	Sn	17 17 14.3	-1.3
FTIG	Fresnillo de T	1.62	37	i P	Pn	17 16 55.3	-0.7
FTIG				i S	Sn	17 17 16.8	-0.3
HLIG	Huajuapan de L	1.77	46	eP	Pn	17 16 57.1	-1.0
HLIG				i S	Sn	17 17 19.6	-1.4
PLIG	Platanillo	1.81	349	eP	Pn	17 16 58.8	+0.1
PLIG				i S	Sn	17 17 20.4	-1.4
PEIG	Puerto Escondi	2.01	107	i P	Pn	17 17 00.9	-0.4
PEIG				i S	Sn	17 17 24.8	-1.7
ARIG	Puente Sto Nin	2.03	326	eP	Pn	17 17 00.3	-1.2
ARIG				eS	Sn	17 17 26.2	-0.8
YAIG	Yautepec	2.25	2	eP	Pn	17 17 04.6	-0.1
YAIG				i S	Sn	17 17 32.6	0.0
ZIIG	Zihuatanejo	2.43	295	i P	Pn	17 17 06.0	-1.1
ZIIG				i S	Sn	17 17 35.6	-1.3
HUIG	Huatulco	3.03	105	eP	Pn	17 17 15.4	+0.1
HUIG				i S	Sn	17 17 50.9	-0.9
CMIG	Matias Romero	4.11	83	Pn	Pn	17 17 27.9	-2.2
	baz=264,slow=16,SNR=1.2						
CMIG				Pg	Pb	17 17 42.5	+2.8
	10nm,0.3s,baz=249,slow=14,SNR=8.9						
CMIG				Sn	Sn	17 18 13.3	-5.1
	5.9nm,0.3s,baz=288,slow=6.4,SNR=3.1						
CMIG				Lg	Lg	17 18 33.3	
	26nm,0.3s,baz=46,slow=16,SNR=6.8						
CMIG	Matias Romero	4.11	83	i P	Pn	17 17 29.6	-0.5
CMIG				i S	Sn	17 18 18.1	-0.3
TEIG	Tepich	10.93	69	LR	LR	17 24 07.0	
	comp=Z,78nm,19.3s,baz=64,slow=43						
H06E1	SOCORRO T-PHAS	11.43	283	T	T	17 31 23.5	
	SNR=4.0						
TXAR	Lajitas Array	13.34	343	Pn	P	17 19 48.2	+1.6
	0.1nm,0.3s,baz=152,slow=12,SNR=5.1						
NVAR	Mina Array Bea	27.49	326	P	P	17 22 15.2	+1.2
	0.4nm,0.6s,baz=138,slow=7.3,SNR=2.7						
PDAR	Pinedale Array	27.56	343	P	P	17 22 15.2	+0.6
	0.6nm,0.8s,baz=140,slow=7.8,SNR=5.2						
PDAR				LR	LR	17 34 26.9	
	comp=Z,48nm,18.7s,baz=137,slow=39						
YKA	Yellowknife Ar	47.11	350	P	P	17 24 58.8	-0.5
	0.6nm,0.8s,baz=160,slow=7.7,SNR=6.6						
ILAR	Eielson Array	57.80	338	P	P	17 26 18.6	+0.1
	0.5nm,1.0s,baz=152,slow=4.9,SNR=4.0						

*IDC **05** 17:29:15.9±1.7,14°.23N×92°.84W,h0^{km},mb3.8/5, mb1 4.0/9,mb1mx3.7/49,mbtmp3.8/9,ML3.6/4,MS2.7/2, Ms1 2.7/2,ms1mx2.4/45,Error ellipse: s-maj=34.6km s-min=15.6km az=9.0*

*NEIC **05** 17:29:18.6±2.4,14°.19N±0°.06×92°.87W±0°.05,h21^{km}±9^{km}, mb4.2/5,Md3.8/18(MEX),Error ellipse: s-maj=8.9km s-min=6.9km az=196.0*

*MEX **05** 17:29:20.7±0.7,14°.14N×92°.93W,h16^{km}±41^{km},MD3.8*

*GCG **05** 17:29:20.6±0.6,14°.07N×92°.64W,h88^{km}±36^{km},MD4.2*

ISC 05 17:29:20.6±0.9,14°.18N±0°.07×92°.87W±0°.06,h37^{km},n35, σ1^s.16/48,mb4.1/7,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.93	39	eP	Pn	17 29 36.1	-1.0
THIG				i S	Sn	17 29 47.5	-1.7
THIG		0.93	39		Pn	17 29 36.1	-1.0
THIG					Sn	17 29 47.5	-1.7
ERG	Entre ros, C	1.28	78	eP	Pn	17 29 41.5	-0.5
STG3	Santiaguito 3,	1.36	67	eP	Pn	17 29 43.2	0.0
PCIG		1.55	347	eP	Pn	17 29 43.9	-1.8
PCIG				i S	Sn	17 30 02.8	-1.8
PCIG		1.55	347		Pn	17 29 43.9	-1.8
PCIG					Sn	17 30 02.8	-1.8
FUG	Fuego 3	1.98	82	eP	Pn	17 29 50.7	-1.1
FUG				eS	Sn	17 30 14.4	-1.1
CCIG	Comitan	2.21	19	i P	Pn	17 29 54.9	+0.1
CCIG				i S	Sn	17 30 20.7	-0.2
CCIG	Comitan	2.21	19		Pn	17 29 55.5	+0.6
CCIG	Comitan	2.21	19		Pn	17 29 54.9	+0.1
CCIG					Sn	17 30 20.7	-0.2
IXG	Ixpaco	2.35	90	eP	Pn	17 29 55.5	-1.3
IXG				eS	Sn	17 30 22.2	-2.4
APG	El Apazote	2.47	70	Pn	Pn	17 29 58.6	+0.1
	6.1nm,0.3s,baz=258,slow=13,SNR=29						
APG				LR	LR	17 30 19.4	
	comp=Z,51nm,22.0s,baz=82,slow=26						
APG				Lg	Lg	17 30 32.4	
	16nm,0.3s,baz=162,slow=20,SNR=5.2						
TGIG		2.59	355	i P	Pn	17 30 00.3	+0.2
TGIG				i S	Sn	17 30 30.4	0.0
TGIG		2.59	355		Pn	17 30 00.3	+0.2
TGIG					Sn	17 30 30.4	0.0
CMIG	Matias Romero	3.48	326	Pn	Pn	17 30 11.5	-0.8
	3.6nm,0.3s,baz=144,slow=12,SNR=19						
CMIG				Sn	Sn	17 30 52.7	+0.4
	8.5nm,0.3s,baz=110,slow=16,SNR=7.6						
CMIG	Matias Romero	3.48	326	i P	Pn	17 30 11.8	-0.5
CMIG				i S	Sn	17 30 51.6	-0.7
CMIG	Matias Romero	3.48	326		Pn	17 30 11.8	-0.5
CMIG					Sn	17 30 51.6	-0.7
TEIG	Tepich	7.44	35	Pn	Pn	17 31 06.7	+0.1
	5.8nm,0.3s,baz=96,slow=0.0,SNR=22						
TEIG				LR	LR	17 34 26.4	
	comp=Z,189nm,21.4s,baz=250,slow=42						
TEIG	Tepich	7.44	35		Pn	17 31 06.9	+0.3
JTS	Las Juntas de	8.65	116	Pn	Pn	17 31 23.2	0.0
	0.5nm,0.3s,baz=294,slow=20,SNR=2.4						
JTS				Sn	Sn	17 33 00.1	+0.5
	0.5nm,0.3s,baz=270,slow=20,SNR=2.4						
JTS				Lg	Lg	17 33 32.8	
	0.5nm,0.3s,baz=156,slow=22,SNR=2.5						
JTS	Las Juntas de	8.65	116	Pn	Pn	17 31 22.2	-1.1
H06E1	SOCORRO T-PHAS	17.91	287	T	T	17 51 46.6	
TXAR	Lajitas Array	18.09	328	P	P	17 33 32.6	+3.3
	0.1nm,0.3s,baz=149,slow=11,SNR=10.0						
TXAR	Lajitas Array	18.09	328		Pn	17 33 27.6	-1.5
Z50A	Ashland	20.01	17	P	P	17 33 50.0	-0.1
Z50A				IAmb	IAmb	17 33 56.1	
	comp=Z,23nm,1.4s						
Y49A	Blount Mountai	20.45	16	P	P	17 33 54.2	-0.7
121A	Cookes Peak, D	22.78	326	P	P	17 34 19.2	-1.0
121A				IAmb	IAmb	17 34 29.9	
	comp=Z,11nm,1.3s						
S39A	Bolivar	23.42	359	P	P	17 34 25.3	-1.0
S39A				IAmb	IAmb	17 34 26.1	
	comp=Z,4.3nm,0.6s						
SDCO	Great Sand Dun	26.02	337	P	P	17 34 53.0	+2.4
NVAR	Mina Array Bea	33.01	322	P	P	17 35 54.3	+1.8
	comp=Z,0.8nm,0.7s,baz=133,slow=9.2,SNR=6.3						
YKA	Yellowknife Ar	50.66	347	P	P	17 38 16.3	+0.3
	comp=Z,2.3nm,0.8s,baz=147,slow=7.9,SNR=23						
INK	Inuvik	60.03	344	P	P	17 39 23.6	+0.4
	comp=Z,1.3nm,0.8s,baz=144,slow=8.7,SNR=4.0						
RES	Resolute Bay	60.51	359	P	P	17 39 26.2	-0.3
	comp=Z,0.5nm,0.6s,baz=173,slow=6.3,SNR=3.6						
ILAR	Eielson Array	62.34	337	P	P	17 39 39.6	+0.5
	comp=Z,0.2nm,0.6s,baz=116,slow=6.1,SNR=4.0						
CMAR	Chiang Mai Arr	145.54	340	PKPbc	PKPdf	17 48 55.7	-0.1
	comp=Z,0.8nm,0.8s,baz=352,slow=2.6,SNR=4.3						

*MOS **05** 17:34:19.7±1.1,14°.79S×167°.19E,h119^{km},mb5.2/13, Error ellipse: s-maj=8.5km s-min=7.2km az=118.7*

*BJI **05** 17:34:19.9±0.0,14°.28S×167°.49E,h114^{km},mB5.2/49, mb4.9/62*

*NEIC **05** 17:34:19.6±1.8,14°.80S±0°.07×167°.26E±0°.07,h110^{km}±3^{km}, mb5.2/125,Mwb5.6/29,Mwc5.6(GCMT),Error ellipse: s-maj=10.7km s-min=9.9km az=138.0*

*IDC **05** 17:34:19.4±0.3,14°.75S×167°.24E,h105^{km}±2^{km},mb4.7/32, mb1 4.7/34,mb1mx4.7/45,mbtmp5.1/34,MS4.3/29, Ms1 4.3/29,ms1mx4.2/46,Error ellipse: s-maj=8.6km s-min=8.2km az=109.0*

*NEIC **05** 17:34:20.3,14°.78S×167°.18E,h103^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.07; $M_{\theta\theta}$0.55; $M_{\phi\phi}$-0.48; $M_{r\theta}$-2.13; $M_{\theta\phi}$1.95; $M_{\phi r}$0.19; Fault plane solution: $M_0$2.94000×10^{17} NP1:ϕ_s96.52000°, δ89.35000°,λ-46.73000°. NP2:ϕ_s187.21000°,δ43.28000°, λ-179.05000°. Principal axes: T 2.9854, Plg30.0000°, Azm152.0000°; N -0.0976, Plg43.0000°, Azm276.0000°; P -2.8878, Plg32.0000°, Azm41.0000°;*

*GCMT **05** 17:34:21.6±0.1,14°.83S±0°.01×167°.03E±0°.01,h118^{km}±1^{km}, MW5.5/150,Moment Tensor Solution. s126,c228; s150,c290; Duration: 1^s.5 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.15±.03; $M_{\theta\theta}$0.65±.04; $M_{\phi\phi}$-0.50±.03; $M_{r\theta}$-1.98±.02; $M_{\theta\phi}$1.61±.03; $M_{\phi r}$0.44±.02; Best double couple: $M_0$2.65500×10^{17} NP1:ϕ_s192.00000°,δ40.00000°, λ-177.00000°. NP2:ϕ_s99.00000°,δ88.00000°, λ-50.00000°. Principal axes: T 2.6190, Plg31.0000°, Azm157.0000°; N 0.0720, Plg40.0000°, Azm277.0000°; P -2.6910, Plg35.0000°, Azm43.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **05** 17:34:22,14°.84S×167°.04E,h119^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.15; $M_{\theta\theta}$0.62; $M_{\phi\phi}$-0.47; $M_{r\theta}$-2.09; $M_{\theta\phi}$1.68; $M_{\phi r}$0.41; Fault plane solution: $M_0$2.77000×10^{17} NP1:ϕ_s98.00000°, δ88.00000°,λ-50.00000°. NP2:ϕ_s191.00000°,δ40.00000°, λ-177.00000°. Principal axes: T 2.7405, Plg31.0000°, Azm156.0000°; N 0.0600, Plg40.0000°, Azm276.0000°; P -2.8006, Plg35.0000°, Azm42.0000°;*

ISC 05 17:34:19.7±0.2,14°.83S±0°.04×167°.22E±0°.04,h108^{km}±1^{km}, h109^{km}:pP-P,n431,σ1^s.26/529,mb5.1/131,5C-16D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.24	186	P	Pn	17 36 04.9	+1.9
	57nm,0.3s,baz=36,slow=7.6,SNR=644						
DZM				S	Sn	17 37 20.5	-3.3
	baz=287,slow=19,SNR=2.4						
DZM				LR	LR	17 38 03.8	
	comp=Z,2µm,18.6s,baz=15,slow=31						
DZM	Mont Dzumac	7.24	186	ePn	Pn	17 36 04.5	+1.5
	2µm,1.1s						
DZM				eSn	Sn	17 37 20.3	-3.5
DZM	Mont Dzumac	7.24	186		Pn	17 36 03.9	+0.9
HNR	Honiara	8.90	306	P	Pn	17 36 26.6	+1.1
	75nm,0.3s,baz=185,slow=9.1,SNR=57						
HNR				S	Sn	17 38 01.9	-2.1
	35nm,0.3s,baz=158,slow=19,SNR=2.7						
HNR				LR	LR	17 39 48.8	
	comp=Z,2µm,18.9s,baz=142,slow=37						
HNR	Honiara	8.90	306	i P	Pn	17 36 26.0	+0.5
HNR	Honiara	8.90	306		Pn	17 36 26.1	+0.5
MSVF	Nonsavu	10.79	107	P	Pn	17 36 55.4	+4.2
MSVF	Nonsavu	10.79	107		Pn	17 36 55.4	+4.2
FUNA	Funafuti	13.29	63		Pn	17 37 23.5	-0.8
NFK	Norfolk Island	14.16	177	P	Pn	17 37 36.2	+0.8
	baz=14,SNR=3.2						
TARA	Tarawa	17.04	20	P	P	17 38 12.1	+0.6
LHI	Lord Howe Isla	18.22	203	P	P	17 38 21.2	-3.1
LHI				IAmb	IAmb	17 39 08.8	
	comp=Z,166nm,1.3s						
EIDS	Eidsvold	18.41	233	P	Pn	17 38 29.3	+1.5
	baz=19,SNR=24						
EIDS	Eidsvold	18.41	233		Pn	17 38 28.6	+0.7
EIDS				IAmb	IAmb	17 38 47.9	
	comp=Z,88nm,0.9s						
RAO	Raoul Island	19.87	139	P	Pn	17 38 44.2	-0.8
	comp=Z,223nm,0.3s,baz=60,slow=23,SNR=6.1						
RAO	Raoul Island	19.87	139	P	Pn	17 38 43.9	-1.0
PMG	Port Moresby	20.33	283	P	Pn	17 38 50.6	+0.1
	comp=Z,35nm,1.1s,baz=333,slow=2.3,SNR=3.9						
PMG				LR	LR	17 45 00.0	
	comp=Z,1µm,20.7s,baz=80,slow=32						
PMG	Port Moresby	20.33	283	⇑eP	Pn	17 38 50.2	-0.3
PMG				pmax	pmax		
	comp=Z,222nm,1.3s						
PMG	Port Moresby	20.33	283	P	P	17 38 48.9	+1.4
PMG				IAmb	IAmb	17 39 30.1	
	comp=Z,120nm,0.9s						
AFI	Afiamalu	20.37	90	P	P	17 38 49.1	+1.2
	comp=Z,25nm,0.9s,baz=248,slow=19,SNR=2.2						
CTA	Charters Tower	20.67	252	P	P	17 38 52.8	+1.7
	comp=Z,17nm,0.6s,baz=86,slow=11,SNR=28						
CTA				S	S	17 42 39.0	+2.8
	comp=Z,5.8nm,0.9s,baz=190,slow=19,SNR=2.7						
CTA				LR	LR	17 45 57.9	
	comp=Z,1µm,18.2s,baz=80,slow=34						
RMQ	Roma	20.78	233	P	Pn	17 38 54.6	-1.0
	baz=21,SNR=57						
OUZ	Omahuta	21.10	165	P	P	17 38 57.0	+1.5
ARMA	Armidale	21.12	220	P	P	17 38 58.6	+2.6
	baz=21,SNR=22						
ARMA	Armidale	21.12	220	P	P	17 38 57.5	+1.6
ARMA				IAmb	IAmb	17 39 25.5	
	comp=Z,325nm,1.4s						
MTSU	Mount Surprise	22.20	258	P	P	17 39 08.9	+1.5
	baz=22,SNR=24						
NIUE	Niue	22.26	104	P	P	17 39 09.0	+1.0
PATS	Pohnpei	23.26	337	P	P	17 39 17.8	-0.1
COEN	Coen	23.30	269	P	P	17 39 20.5	+2.2
	baz=24,SNR=4.7						
COEN	Coen	23.30	269	P	P	17 39 19.4	+1.1
RIV	Riverview	23.86	215	P	P	17 39 25.3	+2.2
	baz=24,SNR=5.5						
KNTN	Kanton	23.98	62	P	P	17 39 26.4	+2.0
QLP	Quilpie	24.43	238	P	P	17 39 29.5	+1.2
	baz=25,SNR=26						
HIZ	Hauiti	24.54	165	P	P	17 39 29.1	-0.2
URZ	Urewera	24.93	161	P	P	17 39 33.1	+0.3
	comp=Z,209nm,0.9s,baz=272,slow=5.1,SNR=14						
URZ				S	S	17 43 46.4	-1.8
	comp=Z,3.1nm,0.5s,baz=348,slow=19,SNR=4.4						
URZ				LR	LR	17 47 38.9	
	comp=Z,898nm,19.6s,baz=344,slow=32						
URZ	Urewera	24.93	161	P	P	17 39 32.4	-0.3
BKZ	Black Stump Fm	25.58	163	P	P	17 39 38.4	-0.4
BKZ				IAmb	IAmb	17 39 44.0	
	comp=Z,287nm,1.6s						
CMSA	Cobar Meteorol	25.77	226	P	P	17 39 41.5	+1.0
	baz=26,SNR=20						
YNG	Young	25.78	218	P	P	17 39 42.6	+2.1
	baz=26,SNR=7.2						
CNB	Canberra Magne	25.95	215	P	P	17 39 43.9	+1.7
	baz=26,SNR=23						
CAN	Canberra	26.16	215	P	P	17 39 42.5	-1.5
CAN				pmax	pmax		
	comp=Z,51nm,0.8s						
CAN	Canberra	26.16	215	P	P	17 39 42.5	-1.5
CAN				IAmb	IAmb	17 40 28.5	
	comp=Z,51nm,0.8s						
QRZ	Quartz Range	26.31	171	P	P	17 39 47.4	+2.2
NNZ	Nelson	26.84	170	P	P	17 39 48.8	-1.1
QIS	Mount Isa	26.90	254	P	P	17 39 51.4	+0.7
	baz=27,SNR=7.7						
BFZ	Birch Farm	26.94	165	P	P	17 39 50.3	-0.5
BFZ				IAmb	IAmb	17 39 51.8	
	comp=Z,165nm,1.1s						
TUWZ	Tuamarina	27.14	169	P	P	17 39 52.5	-0.1
THZ	Tophouse	27.29	171	P	P	17 39 54.7	+0.7
THZ				IAmb	IAmb	17 40 21.0	
	comp=Z,121nm,1.4s						
MILA	Mila	27.36	213	P	P	17 39 56.5	+1.8
	baz=28,SNR=4.6						
LTZ	Lake Taylor	28.20	172	P	P	17 40 02.0	-0.1
LTZ				IAmb	IAmb	17 40 04.1	
	comp=Z,98nm,0.9s						
FOZ	Fox Glacier	28.70	176	P	P	17 40 07.2	+0.8
FOZ				IAmb	IAmb	17 40 08.8	
	comp=Z,122nm,1.2s						
OXZ	Oxford	28.70	173	P	P	17 40 05.8	-0.7
OXZ				IAmb	IAmb	17 40 08.1	
	comp=Z,137nm,1.1s						
STKA	Stephens Creek	28.89	230	P	P	17 40 10.0	+1.6
	baz=29,SNR=180						
STKA	Stephens Creek	28.89	230	P	P	17 40 09.8	+1.4
	comp=Z,63nm,0.5s,baz=44,slow=8.2,SNR=180						
STKA				ScP	ScP	17 46 47.6	+0.7
	comp=Z,3.6nm,0.6s,baz=62,slow=4.8,SNR=6.7						
STKA				LR	LR	17 50 50.0	
	comp=Z,675nm,19.9s,baz=56,slow=34						
STKA	Stephens Creek	28.89	230	P	P	17 40 08.9	+0.5
RPZ	Rata Peaks	28.98	174	P	P	17 40 09.7	+0.7
	comp=Z,18nm,0.4s,baz=1.4,slow=3.9,SNR=21						
RPZ				LR	LR	17 50 48.6	
	comp=Z,1µm,19.8s,baz=340,slow=34						
RPZ	Rata Peaks	28.98	174	P	P	17 40 10.0	+1.0
MQZ	McQueen's Vall	29.16	172	P	P	17 40 10.8	+0.3
LBZ	Lake Benmore	29.57	176	P	P	17 40 15.0	+0.7
LBZ				IAmb	IAmb	17 40 16.7	
	comp=Z,152nm,1.3s						
TOO	Toolangi	29.74	216	P	P	17 40 17.3	+1.4
	baz=30,SNR=6.6						
TOO	Toolangi	29.74	216	P	P	17 40 16.4	+0.5
TOO				pmax	pmax		
	comp=Z,85nm,1.3s						
TOO	Toolangi	29.74	216	P	P	17 40 16.4	+0.5
TOO				IAmb	IAmb	17 40 18.7	
	comp=Z,85nm,1.2s						
WKZ	Wanaka	29.94	177	P	P	17 40 18.7	+1.1
WKZ				IAmb	IAmb	17 40 28.2	
	comp=Z,57nm,0.9s						
ODZ	Otahua Downs	30.26	175	P	P	17 40 20.8	+0.5
ODZ				IAmb	IAmb	17 40 22.5	
	comp=Z,142nm,1.5s						
DCZ	Deep Cove	30.54	180	P	P	17 40 23.0	+0.3
DCZ				IAmb	IAmb	17 40 27.6	
	comp=Z,109nm,1.0s						
SMPI	Sarmi	30.89	292	P	P	17 40 26.6	+0.4
	comp=Z,61nm,1.2s						
WHZ	Wether Hill Ro	30.98	179	P	P	17 40 26.6	0.0
WHZ				IAmb	IAmb	17 40 28.0	
	comp=Z,56nm,1.1s						
HTT	Hallett	31.62	229	P	P	17 40 33.9	+1.4
	baz=32,SNR=22						
WB0	Warramunga Arr	31.69	256	P	P	17 40 32.1	-1.2
WB0				IAmb	IAmb	17 41 10.5	
	comp=Z,34nm,1.0s						
WB2	Warramunga Arr	31.74	256	P	P	17 40 33.0	-0.7
WB2				IAmb	IAmb	17 41 02.1	
	comp=Z,36nm,1.2s						
WRAB	Tennant Creek	31.74	256	⇓eP	P	17 40 32.9	-0.8
WRAB				pmax	pmax		
	comp=Z,14nm,1.4s						
WRAB	Tennant Creek	31.74	256	P	P	17 40 32.8	-0.8
WRAB				IAmb	IAmb	17 41 11.0	
	comp=Z,37nm,1.2s						
WRA	Warramunga Arr	31.75	256	P	P	17 40 33.1	-0.7
	comp=Z,2.4nm,0.5s,baz=86,slow=9.7,SNR=51						
WRA				pP	pP	17 40 56.1	-0.9

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      comp=Z,9.0nm,1.0s,baz=86,slow=8.3,SNR=6.2
WRA                               PcP     PcP     17 43 23.4 +0.5
      comp=Z,1.1nm,0.5s,baz=90,slow=3.6,SNR=3.3
WRA                               ScP     ScP     17 46 56.8 +0.3
      comp=Z,3.7nm,1.1s,baz=75,slow=3.5,SNR=7.6
WRA                               LR      LR      17 53 13.6
      comp=Z,637nm,19.0s,baz=70,slow=36
WRA   Warramunga Arr   31.75 256  P       P       17 40 33.1  -0.7
MOO   Moorlands        32.48 208  P       P       17 40 41.4 +1.5
      baz=33,SNR=5.0
AS31  Alice Springs    32.59 249  P       P       17 40 40.1  -1.0
ASAR  Alice Springs    32.59 249  P       P       17 40 40.5  -0.6
      comp=Z,7.1nm,0.5s,baz=77,slow=8.9,SNR=192
ASAR                              pP      pP      17 41 04.9   0.0
      comp=Z,28nm,1.0s,baz=76,slow=9.1,SNR=9.3
ASAR                              ScP     ScP     17 47 00.2 +0.9
      comp=Z,3.6nm,1.0s,baz=80,slow=3.8,SNR=8.1
ASAR                              PKiKP   PKiKP   17 50 51.0  -1.3
      comp=Z,0.7nm,1.1s,baz=94,slow=1.7,SNR=4.1
ASAR                              LR      LR      17 53 14.5
      comp=Z,776nm,19.6s,baz=85,slow=35
ASAR  Alice Springs    32.59 249  P       P       17 40 40.4  -0.7
TAU   Tasmania Unive   32.79 207  P       P       17 40 42.3  -0.2
TAU                               pmax    pmax
      comp=Z,245nm,1.8s
TAU   Tasmania Unive   32.79 207  P       P       17 40 42.3  -0.2
BBOO  Buckleboo        33.48 232  P       P       17 40 50.1 +1.4
      baz=34,SNR=4.8
BBOO  Buckleboo        33.48 232  P       P       17 40 49.8 +1.1
BBOO                              IAmb    IAmb    17 40 50.5
      comp=Z,68nm,0.9s
KDU   Kakadu           33.80 269  P       P       17 40 52.4 +0.8
      baz=34,SNR=5.4
MTN   Manton Dam       35.07 269  P       P       17 41 03.1 +0.4
      baz=35,SNR=4.2
GUMO  Guam             35.87 321  LR      LR      17 53 55.6
      comp=Z,392nm,21.0s,baz=142,slow=33
KNRA  Kununurra        37.08 264  P       P       17 41 19.6  -0.2
      baz=37,SNR=7.8
KNRA  Kununurra        37.08 264  P       P       17 41 18.5  -1.3
WRKA  Warakurna        37.86 248  P       P       17 41 25.9  -0.4
      baz=38,SNR=24
SIJI  Sorong           38.13 288  P       P       17 41 28.4  -0.2
      comp=Z,48nm,1.2s,baz=74,slow=6.9,SNR=5.9
SIJI                              LR      LR      17 57 13.5
      comp=Z,704nm,21.1s,baz=108,slow=36
SWI   Sorong           38.14 288  P       P       17 41 32.1 +3.4
      comp=Z,928nmcomp=Z,98nm,1.1s
FORT  Forrest          39.21 239  P       P       17 41 38.3 +0.9
      baz=39,SNR=21
FORT  Forrest          39.21 239  P       P       17 41 37.0  -0.4
FITZ  Fitzroy Crossi   39.95 259  P       P       17 41 43.8   0.0
      baz=40,SNR=16
FITZ  Fitzroy Crossi   39.95 259  P       P       17 41 43.5  -0.3
      comp=Z,4.8nm,0.5s,baz=95,slow=8.1,SNR=23
FITZ                              pP      pP      17 42 06.6  -1.7
      comp=Z,12nm,0.8s,baz=95,slow=8.6,SNR=5.1
FITZ                              LR      LR      17 57 12.6
      comp=Z,668nm,20.4s,baz=85,slow=34
FITZ  Fitzroy Crossi   39.95 259  P       P       17 41 43.7  -0.1
FITZ  Fitzroy Crossi   39.95 259  IAmb    IAmb    17 42 21.4
      comp=Z,92nm,1.8s
NLAI  Namlea           41.18 282  P       P       17 41 56.5 +2.6
      comp=Z,2µmcomp=Z,75nm,1.3s
PAE   Paea             41.51 100  eP      P       17 41 57.4 +0.8
      comp=Z,13nm,1.3s
PPT2  Papeete2         41.52 100  eP      P       17 41 57.5 +0.8
      comp=Z,58nm,1.2s
PPT2                              eLQ     LQ      17 51 31.8
      comp=Z,3µm,28.2s
PPT2                              eLR     LR      17 53 11.8
      comp=Z,476nm,27.0s
PPT   Papeete          41.52 100  P       P       17 41 55.5  -1.2
      comp=Z,32nm,0.7s,baz=78,slow=14,SNR=2.1
PPT                               LR      LR      17 58 47.6
      comp=Z,203nm,18.0s,baz=256,slow=35
TBI   Tubuai           41.68 109  eP      P       17 41 58.8 +0.9
      comp=Z,110nm,1.2s
TBI                               eLQ     LQ      17 51 53.0
      comp=Z,1µm,34.2s
TBI                               eLR     LR      17 53 40.9
      comp=Z,553nm,26.8s
LBMI  Labuha           41.70 286  P       P       17 41 57.1  -1.1
      comp=Z,5µmcomp=Z,34nm,1.2s
TIAR  Tiarei           41.74 100  eP      P       17 41 59.0 +0.5
      comp=Z,33nm,1.3s
TVO   Taravao          41.82 100  eP      P       17 41 59.8 +0.6
      comp=Z,29nm,1.3s
SOEI  Soe              42.22 272  P       P       17 42 02.7 +0.1
      comp=Z,35nm,1.3s
SOEI  Soe              42.22 272  P       P       17 42 04.8 +2.3
SOEI                              IAmb    IAmb    17 43 00.4
      comp=Z,42nm,0.9s
SANI  Sanana           42.62 283  P       P       17 42 08.0 +2.4
      comp=Z,1µmcomp=Z,30nm,1.1s
MEH   Mehetia          42.94 100  eP      P       17 42 09.0 +0.8
      comp=Z,45nm,1.1s
KMBL  Kambalda         44.50 240  P       P       17 42 21.0 +0.4
      baz=45,SNR=11
EDFI  Ende, Flores     44.91 272  P       P       17 42 26.3 +2.1
      comp=Z,415nmcomp=Z,18nm,1.3s
PSA00 Pilbara Seismi   45.37 254  P       P       17 42 28.1 +0.5
PSA00                             IAmb    IAmb    17 42 59.1
      comp=Z,64nm,1.4s
LUWI  Luwuk            45.98 283  P       P       17 42 34.0 +1.6
      comp=Z,922nmcomp=Z,43nm,1.1s
MEEK  Meekatharra      46.70 247  P       P       17 42 38.6 +0.6
      baz=47,SNR=40
APSI  Ampana           47.08 283  P       P       17 42 43.2 +2.2
      comp=Z,743nmcomp=Z,32nm,1.2s
MRSI  Marisa           47.28 285  P       P       17 42 56.8  +14
BNSI  Bone             47.49 278  P       P       17 42 46.2 +1.9
      comp=Z,34nm,1.5s
KAPI  Kappang          47.67 277  P       P       17 42 47.4 +1.8
      comp=Z,39nm,1.3s,baz=45,slow=5.4,SNR=6.6
KAPI                              pP      pP      17 43 10.8  -0.5
      comp=Z,41nm,1.2s,baz=342,slow=2.7,SNR=4.8
SPSI  Sidrap Palu      47.94 278  P       P       17 43 02.0  +14
KLBR  Kellerberrin     48.01 241  P       P       17 42 47.9  -0.2
      baz=48,SNR=9.8
JCJ   Chichijima       48.24 330  P       P       17 42 48.8  -1.0
      comp=Z,60nm,0.5s,baz=286,slow=19,SNR=4.6
NWAO  Narrogin (SRO)   48.66 239  P       P       17 42 53.1 +0.1
      comp=Z,14nm,0.5s,baz=83,slow=6.7,SNR=21
NWAO                              pP      pP      17 43 18.5  -0.2
      comp=Z,36nm,0.8s,baz=86,slow=7.2,SNR=7.2
NWAO  Narrogin (SRO)   48.66 239  P       P       17 42 52.6  -0.4
NWAO                                      pP      17 43 17.9  -0.7
BLDU  Ballidu          48.77 242  P       P       17 42 54.6 +0.7
      baz=49,SNR=6.7
MPSI  Mapaga           49.15 284  P       P       17 42 59.1 +2.1
      comp=Z,568nmcomp=Z,30nm,1.3s
MORW  Morawa           49.18 244  P       P       17 42 57.4 +0.3
      baz=49,SNR=14
MORW  Morawa           49.18 244  P       P       17 42 55.9  -1.1
MORW                              IAmb    IAmb    17 43 37.5
      comp=Z,40nm,0.8s
MUN   Mundaring        49.37 240  P       P       17 42 59.0 +0.5
      baz=50,SNR=4.1
HMH   Humu‘ula Sheep   50.17  48  P       P       17 43 03.2  -1.7
HMH                                       pwP     17 43 32.0  -1.2
TGY   Tagaytay City    54.06 300  LR      LR      18 04 48.3
      comp=Z,143nm,19.1s,baz=108,slow=34
KKM   Kota Kinabalu    54.65 289  P       P       17 43 38.6 +0.7
KKM                                       pP      17 44 03.9 +0.4
SBUM  Sibu             57.08 283  P       P       17 43 56.6 +1.4
KPJI  Karang Pucung    57.55 271  P       P       17 44 13.4  +15
MJAR  Matsushiro Arr   57.97 333  P       P       17 43 59.9  -1.0
      comp=Z,9.9nm,0.7s,baz=163,slow=7.7,SNR=16
MJAR                              pP      pP      17 44 25.1  -1.8
      comp=Z,12nm,1.0s,baz=166,slow=8.1,SNR=5.9
MJAR  Matsushiro Arr   57.97 333  P       P       17 44 00.2  -0.7
MAJO  Matsushiro       57.97 333⇓eP       P       17 43 59.6  -1.4
MAJO                              pmax    pmax
      comp=Z,43nm,1.1s
MAJO  Matsushiro       57.97 333  P       P       17 43 59.5  -1.5
MAJO                              IAmb    IAmb    17 44 01.1
      comp=Z,40nm,1.1s
MAT   Matsushiro       57.97 333  P       P       17 44 00.4  -0.6
MAT                              eS       S       17 51 37.6   -15
MJB9  Matsu-Tunnel     57.97 333  P       P       17 43 59.7  -1.3
MJB9                              IAmb    IAmb    17 44 01.0
      comp=Z,41nm,1.1s
CISI  Cisompet, Garu   58.58 270  P       P       17 44 05.1  -0.7
LEM   Lembang          58.94 271  P       P       17 44 06.9  -1.4
      comp=Z,13nm,0.5s,baz=0.9,slow=5.8,SNR=6.0
LEM                               pP      pP      17 44 34.8 +0.2

      comp=Z,54nm,0.8s,baz=290,slow=8.4,SNR=5.3
JNU   Nakatsue         58.97 325  P       P       17 44 07.6  -0.4
      comp=Z,33nm,1.0s,baz=60,slow=4.0,SNR=9.3
JNU                               pP      pP      17 44 33.7  -0.2
      comp=Z,67nm,1.0s,baz=97,slow=5.7,SNR=8.6
JNU   Nakatsue         58.97 325  P       P       17 44 08.1 +0.1
JNU                                       pP      17 44 33.7  -0.2
TPUB  Ta-pu            59.27 309  P       P       17 44 08.8  -1.4
YHNB  Yeheng           59.51 311  P       P       17 44 10.9  -1.0
YHNB                                      pwP     17 44 39.6  -0.7
KASI  Kota Agung       62.26 272  P       P       17 44 32.6 +1.9
      comp=Z,61nm,1.0s
VNDA  Vanda            62.76 181  P       P       17 44 33.2 +0.2
      comp=Z,27nm,1.1s,baz=358,slow=8.6,SNR=24
VNDA                              LR      LR      18 09 01.0
      comp=Z,108nm,20.2s,baz=7.5,slow=33
VNDA  Vanda            62.76 181  P       P       17 44 32.6  -0.4
VNDA                              IAmb    IAmb    17 44 35.1
      comp=Z,55nm,1.2s
MDSI  Maura Dua        62.81 273  P       P       17 44 34.4   0.0
      comp=Z,20nm,1.1s
SBA   Scott Base       63.04 180  P       P       17 44 35.6 +0.8
SBA                               pmax    pmax
      comp=Z,157nm,1.3s
SBA   Scott Base       63.04 180  P       P       17 44 35.6 +0.8
TJN   Taejon           63.32 325⇓eP       P       17 44 38.4 +1.2
KSRS  Korea Array      63.79 326  P       P       17 44 39.3  -1.0
      comp=Z,6.2nm,1.0s,baz=139,slow=6.6,SNR=9.9
KSRS                              pP      pP      17 45 06.5  -0.1
      comp=Z,14nm,1.0s,baz=144,slow=6.7,SNR=15
KSAR  Wonju Array Be   63.80 326  P       P       17 44 40.1  -0.3
KSAR                              *PP     pP      17 45 07.3 +0.6
KSAR  Wonju Array Be   63.80 326  P       P       17 44 40.1  -0.3
KSAR                                      pP      17 45 07.3 +0.6
MYKOM Kota Tinggi      64.82 279  P       P       17 44 49.0 +1.4
YSS   Yuzh-Sakhalins   65.31 342 eP       P       17 44 51.0 +1.0
YSS                              e*PP     pP      17 45 17.0 +0.6
YSS                              e*SP     sP      17 45 29.9 +1.9
YSS                              e                17 47 14.2
YSS                              ePPP     PPP     17 48 46.6
YSS                              eS       S       17 53 21.4  -3.7
YSS                              ePS      PnS     17 54 07.1 +6.2
YSS                               pmax    pmax
      comp=Z,30nm,1.1s
YSS                               MLR     MLR
      comp=Z,400nm,15.0s
YSS   Yuzh-Sakhalins   65.31 342  P       P       17 44 50.2 +0.2
YSS                                       pP      17 45 16.6 +0.2
NJ2   Nanjing          65.71 316 eP       P       17 44 53.4 +0.5
NJ2                               pmax    pmax
      comp=Z,24nm,0.5s
USA0B Ussuriysk Arra   66.95 333  P       P       17 45 01.1 +0.5
USA0B                                     PcP     17 45 28.1  -0.1
USRK  Ussuriysk Ar.    66.95 333  P       P       17 45 00.8 +0.2
      comp=Z,34nm,1.2s,baz=132,slow=5.7,SNR=18
USRK                              pP      pP      17 45 27.4 +0.2
      comp=Z,34nm,1.1s,baz=134,slow=5.5,SNR=8.8
USRK  Ussuriysk Ar.    66.95 333  P       P       17 45 01.0 +0.4
USRK                                      pP      17 45 27.3 +0.1
WHN   Wuhan            67.97 312  P       P       17 45 07.6 +0.3
WHN                               pP      pP      17 45 34.0   0.0
WHN                               pmax    pmax
      comp=Z,220nm,1.7s
PET   Petropavlovsk    67.97 354⇑iP       P       17 45 07.3 +0.5
PET                               pmax    pmax
      comp=Z,60nm,1.4s
PEA0B Petropavlovsk-   68.15 354  P       P       17 45 08.7 +0.8
PEA0B                             pmax    pmax
      comp=Z,153nm,1.6s
PEA0B Petropavlovsk-   68.15 354  P       P       17 45 08.7 +0.8
PETK  Petropavlovsk-   68.15 354  P       P       17 45 08.6 +0.7
      comp=Z,34nm,1.2s,baz=126,slow=7.5,SNR=12
PETK                              LR      LR      18 10 11.4
      comp=Z,247nm,20.7s,baz=224,slow=32
PETK  Petropavlovsk-   68.15 354  P       P       17 45 08.0 +0.1
IPM   Ipoh             68.32 281  P       P       17 45 09.6  -0.3
IPM   Ipoh             68.32 281  P       P       17 45 11.0 +1.1
MDJ   Mudanjiang       68.34 332  P       P       17 45 10.3 +1.0
MDJ                               pmax    pmax
      comp=Z,29nm,1.3s
MDJ                               pmax    pmax
      comp=Z,430nm,6.6s
MDJ   Mudanjiang       68.34 332  P       P       17 45 09.2  -0.2
MDJ                                       pP      17 45 36.6 +0.6
MDJ                               IAmb    IAmb    17 45 38.2
      comp=Z,93nm,1.3s
DL2   Dalian           68.35 323  P       P       17 45 09.8 +0.4
DL2                               pP      pP      17 45 37.2 +1.1
DL2                               sP      sP      17 45 50.9 +3.2
DL2                               S       S       17 54 01.1  -1.0
DL2                               pmax    pmax
      comp=Z,29nm,1.0s
DL2                               pmax    pmax
      comp=Z,320nm,5.8s
KULM  Kulim            68.92 282  P       P       17 45 15.0 +1.4
RPSI  Rantau Prapat    69.79 279  P       P       17 45 18.2  -0.7
RPSI                                      pP      17 45 43.7  -2.1
RPSI                              IAmb    IAmb    17 45 47.9
      comp=Z,24nm,1.0s
RPSI  Rantau Prapat    69.79 279  P       P       17 45 20.1 +1.1
RPSI                                      pP      17 45 43.8  -2.1
PSI   Prapat           69.82 279  P       P       17 45 20.1 +0.8
      comp=Z,3.3nm,0.3s,baz=183,slow=5.4,SNR=8.5
PSI                               pP      pP      17 45 43.8  -2.4
      comp=Z,20nm,1.0s,baz=164,slow=6.1,SNR=5.6
PSI   Prapat           69.82 279  P       P       17 45 18.2  -1.1
PSI                                               17 45 43.7
PSI                               *PP     pP      17 45 43.8  -2.4
PSI                               pmax    pmax
      comp=Z,24nm,1.0s
GRNR  Gornyy           70.67 340⇓iP       P       17 45 24.6 +1.1
GRNR                             e                17 45 50.9
GRNR                             eS       S       17 54 30.7 +1.8
GRNR                              pmax    pmax
      comp=Z,10.0nm,1.3s
GRNR                              smax    smax
      comp=E,3.0nm,1.4s
GRNR                              MLR     MLR
      comp=Z,150nm,19.0s
KLR   Kul'dur          71.08 336  LR      LR      18 13 52.8
      comp=Z,35nm,21.0s,baz=173,slow=33
KLR   Kul'dur          71.08 336d iP      P       17 45 26.2 +0.2
KLR                               pmax    pmax
      comp=Z,31nm,1.3s
ENH   Enshi            71.39 309  P       P       17 45 28.0  -0.4
BJT   Baijiatuau       72.30 321  P       P       17 45 33.6 +0.1
BJT                                       pP      17 46 02.0 +1.5
BJT                               IAmb    IAmb    17 46 02.5
      comp=Z,54nm,1.2s
BJI   Beijing          72.31 321  P       P       17 45 33.6   0.0
BJI                               pmax    pmax
      comp=Z,11nm,1.5s
PBKT  Sadao Pong       72.45 293  P       P       17 45 34.9   0.0
TIY   Taiyuan          73.30 317 eP       P       17 45 40.3 +0.7
TIY                               pP      pP      17 46 08.2 +1.5
TIY                               S       SKiKP   17 55 04.4 +3.8
XAN   Xi'an            73.72 313  P       P       17 45 42.4 +0.3
XAN                               PcP     PcP     17 45 58.7 +1.4
XAN                               pP      pP      17 46 08.4  -0.7
XAN                               PP      PP      17 48 30.8 +2.6
XAN                               S       S       17 55 04.9 +0.4
XAN                               pmax    pmax
      comp=Z,18nm,1.3s
XAN                               pmax    pmax
      comp=Z,160nm,4.1s
XAN   Xi'an            73.72 313  P       P       17 45 41.6  -0.5
XAN                                       pP      17 46 09.5 +0.4
XAN                               IAmb    IAmb    17 46 11.2
      comp=Z,46nm,1.3s
KMI   Kunming          74.31 302  P       P       17 45 47.4 +1.4
KMI                               pP      pP      17 46 15.0 +1.8
KMI                               sP      sP      17 46 29.9 +5.2
KMI                               S       S       17 55 11.1  -0.8
KMI                               sS      sS      17 56 01.7 +4.6
KMI                               pmax    pmax
      comp=Z,37nm,1.7s
KMI                               pmax    pmax
      comp=Z,190nm,4.3s
KMI                               LR      LR
      comp=Z,130nm,4.8s
KMI                               LR      LR
      comp=Z,91nm,7.2s
KMI                               LR      LR
      comp=Z,170nm,5.8s

CM31  Chiang Mai Arr   74.94 294  P       P       17 45 49.4  -0.1
CMAR  Chiang Mai Arr   74.94 294  P       P       17 45 50.9 +1.4
      comp=Z,15nm,1.2s,baz=115,slow=4.0,SNR=53
CMAR                              pP      pP      17 46 16.8 +0.4
      comp=Z,5.2nm,0.7s,baz=121,slow=3.8,SNR=3.9
CMAR                              LR      LR      18 17 49.3
      comp=Z,81nm,22.0s,baz=120,slow=35
CMAR  Chiang Mai Arr   74.94 294  P       P       17 45 50.2 +0.7
CMAR                                      pP      17 46 16.6 +0.2
CHTO  Chiang Mai       75.07 294  P       P       17 45 50.4 +0.2
CHTO                              pmax    pmax
      comp=Z,36nm,1.4s
CHTO  Chiang Mai       75.07 294  P       P       17 45 50.4 +0.2
CHTO                              IAmb    IAmb    17 45 53.4
      comp=Z,36nm,1.4s
QSPA  South Pole Qui   75.20 180  P       P       17 45 50.5 +0.2
      comp=Z,73nm,0.8s,baz=210,slow=0.7,SNR=317
QSPA                              pP      pP      17 46 17.9 +0.2
      comp=Z,27nm,1.0s,baz=48,slow=2.4,SNR=2.5
QSPA  South Pole Qui   75.20 180  P       P       17 45 50.1  -0.1
QSPA                                      pP      17 46 17.7   0.0
MA2   Magadan          75.33 351  P       P       17 45 50.5  -0.3
      comp=Z,9.8nm,1.0s,baz=179,slow=8.7
MA2   Magadan          75.33 351⇓eP       P       17 45 50.3  -0.5
MA2                               pmax    pmax
      comp=Z,26nm,1.4s
MA2   Magadan          75.33 351  P       P       17 45 49.5  -1.3
MA2                               IAmb    IAmb    17 46 19.5
      comp=Z,90nm,2.0s
HHC   Hu-ho-hao-te     75.63 320 eP       P       17 45 53.6 +0.5
HHC                               pP      pP      17 46 21.3 +1.0
HHC                               sP      sP      17 46 34.2 +2.3
HHC                               S       S       17 55 29.5 +3.9
HHC                               sS      sS      17 56 12.9 +2.3
HHC                               pmax    pmax
      comp=Z,110nm,1.1s
HHC                               pmax    pmax
      comp=Z,370nm,6.3s
CD2   Chengdu          76.03 308  P       P       17 45 56.8 +1.3
CD2                               S       S       17 55 30.7 +0.4
CD2                               pmax    pmax
      comp=Z,30nm,0.6s
CD2                               pmax    pmax
      comp=Z,250nm,5.6s
HIA   Hailar           76.35 330  P       P       17 45 56.6  -0.2
HIA                               *PP     pP      17 46 24.4 +0.5
HIA                               pmax    pmax
      comp=Z,53nm,1.3s
HIA   Hailar           76.35 330  P       P       17 45 56.6  -0.2
HIA                                       pP      17 46 24.4 +0.5
HIA                               IAmb    IAmb    17 46 26.1
      comp=Z,53nm,1.3s
ZEA   Zeya             76.36 337 eP       P       17 45 57.5 +0.7
ZEA                              e                17 46 38.0
ZEA                              eS       S       17 55 34.0 +1.1
ZEA                               pmax    pmax
      comp=N,64nm,1.8s
ZEA                               pmax    pmax
      comp=Z,79nm,1.6s
ZEA                               smax    smax
      comp=E,300nm,9.0s
BTO   Baotou           76.47 319 eP       P       17 45 59.2 +1.4
LZH   Lanzhou          78.35 312 ⇑P       P       17 46 10.0 +1.5
LZH                               pP      pP      17 46 38.4 +2.8
LZH                               sP      sP      17 46 48.6 +1.5
LZH                               S       S       17 55 55.9 +0.4
LZH                               sS      sS      17 56 46.3 +6.1
LZH                               pmax    pmax
      comp=E,39nm,1.3s
LZH                               pmax    pmax
      comp=E,230nm,6.5s
SEY   Seymchan         78.37 353⇓iP       P       17 46 07.8   0.0
OHAK  Old Harbor       78.90  21  P       P       17 46 09.8  -1.0
KDAK  Kodiak Island    79.57  21  pP      pP      17 46 41.9 +0.4
      comp=E,14nm,1.1s,baz=65,slow=7.0,SNR=4.5
KDAK  Kodiak Island    79.57  21  P       P       17 46 12.3  -2.1
KDAK                              pmax    pmax
      comp=Z,20nm,1.2s
KDAK  Kodiak Island    79.57  21  P       P       17 46 12.3  -2.1
GAMB  Gambell          80.03   9  P       P       17 46 16.5  -0.3
GAMB                              IAmb    IAmb    17 46 18.3
      comp=Z,43nm,1.6s
CIT   Chita            81.13 330 eP       P       17 46 22.1  -0.9
CIT                              e                17 46 51.2
CIT                              e                17 47 00.8
MAW   Mawson           81.78 202  P       P       17 46 26.4 +0.2
      baz=82,SNR=4.9
MAW   Mawson           81.78 202  P       P       17 46 26.3 +0.1
      comp=Z,14nm,1.0s,baz=104,slow=7.1,SNR=7.8
MAW                               pP      pP      17 46 54.3 +0.2
      comp=Z,31nm,1.2s,baz=93,slow=6.1,SNR=4.8
MAW                               LR      LR      18 17 38.1
      comp=Z,497nm,20.7s,baz=78,slow=32
MAW   Mawson           81.78 202  P       P       17 46 26.4 +0.2
ANM   Nome             81.87  12  P       P       17 46 26.2  -0.3
ANM                               *PP     pP      17 46 54.8 +1.0
ANM                               pmax    pmax
      comp=Z,58nm,2.0s
ANM   Nome             81.87  12  P       P       17 46 26.2  -0.3
ANM                                       pP      17 46 54.8 +1.0
ANM                               IAmb    IAmb    17 46 59.9
      comp=Z,58nm,2.0s
YAK   Yakutsk          82.11 343 eP       P       17 46 27.3  -0.5
YAK                              e                17 49 37.0
YAK                              eS       S       17 56 33.0  -0.3
YAK                              e*SS     sS      17 57 16.6  -3.7
YAK                               pmax    pmax
      comp=Z,38nm,1.1s
YAK                               pmax    pmax
      comp=N,18nm,1.4s
YAK                               pmax    pmax
      comp=E,10.0nm,1.2s
YAK                               pmax    pmax
      comp=Z,137nm,5.2s
YAK                               pmax    pmax
      comp=N,129nm,4.3s
YAK                               pmax    pmax
      comp=E,68nm,4.3s
YAK                               smax    smax
      comp=N,144nm,4.3s
YAK                               smax    smax
      comp=E,47nm,3.9s
YAK   Yakutsk          82.11 343  P       P       17 46 27.5  -0.3
YAK                               IAmb    IAmb    17 46 29.1
      comp=Z,81nm,1.4s
YAK                               pP      pP      17 46 54.2  -1.0
ULN   Ulaanbaatar      82.19 324  P       P       17 46 28.8   0.0
ULN                               *PP     pP      17 46 57.1 +0.7
ULN                               pmax    pmax
      comp=Z,35nm,1.1s
ULN   Ulaanbaatar      82.19 324  P       P       17 46 28.8   0.0
ULN                                       pP      17 46 57.0 +0.7
ULN                               IAmb    IAmb    17 46 58.2
      comp=Z,35nm,1.1s
SONM  Songino Array    82.55 324  P       P       17 46 30.3  -0.4
      comp=Z,17nm,1.2s,baz=140,slow=4.3,SNR=39
SONM                              pP      pP      17 46 58.2   0.0
      comp=Z,11nm,1.1s,baz=136,slow=4.7,SNR=8.6
SONM                              LR      LR      18 23 25.3
      comp=Z,47nm,19.7s,baz=138,slow=36
SONM  Songino Array    82.55 324  P       P       17 46 29.8  -0.8
SONM                                      pP      17 46 57.3  -0.9
BILL  Bilibino         82.64 360 eP       P       17 46 30.3  -0.2
BILL                             e*PP     pwP     17 46 59.7  -0.4
BILL                             e*SP     sP      17 47 12.5 +3.3
BILL                             e                17 49 38.6
BILL                             ePPP     PPP     17 51 33.4
BILL                              pmax    pmax
      comp=Z,77nm,1.4s
BILL  Bilibino         82.64 360  P       P       17 46 29.9  -0.6
BILL                              IAmb    IAmb    17 46 31.9
      comp=Z,94nm,1.4s
GTA   Gaotai           82.70 314  P       P       17 46 32.5 +0.9
GTA                               pP      pP      17 46 59.8 +0.6
GTA                               sP      sP      17 47 11.6 +1.0
GTA                               S       S       17 56 41.4 +0.7
GTA                               sS      sS      17 57 31.9 +6.0
GTA                               pmax    pmax
      comp=Z,24nm,1.2s
GTA                               pmax    pmax
      comp=Z,130nm,10.0s
GTA                               LR      LR
      comp=Z,99nm,17.2s
GTA                               LR      LR
      comp=Z,160nm,18.2s
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GTA				LR	LR		
	comp=Z,120nm,17.5s						
SUA	Susitna One	83.00	19	P	P	17 46 31.6	-1.1
SUA				IAmb	IAmb	17 46 34.4	
	comp=Z,31nm,1.2s						
RC01	Rabbit Creek A	83.04	20	P	P	17 46 32.4	-0.3
RC01				IAmb	IAmb	17 46 34.8	
	comp=Z,26nm,1.1s						
PMR	Palmer	83.61	19	P	P	17 46 35.0	-0.6
PMR				pmax	pmax		
	comp=Z,49nm,1.6s						
PMR	Palmer	83.61	19	P	P	17 46 35.0	-0.6
PMR				IAmb	IAmb	17 47 06.8	
	comp=Z,49nm,1.6s						
KNK	Knik Glacier	83.69	20	P	P	17 46 35.5	-0.5
KNK				IAmb	IAmb	17 46 38.4	
	comp=Z,28nm,1.2s						
GHO	Glory Hole Cre	83.81	19	P	P	17 46 36.4	-0.3
GHO				IAmb	IAmb	17 47 17.9	
	comp=Z,35nm,1.2s						
KTH	Kantishna Hill	84.54	17	P	P	17 46 39.0	-1.4
BOD	Bodaibo	84.54	334	eP	P	17 46 40.0	-0.4
BOD				pmax	pmax		
	comp=Z,35nm,1.7s						
TRF	Thorofare Moun	84.65	18	P	P	17 46 39.7	-1.3
BPAW	Bear Paw Mtn.	84.94	17	P	P	17 46 40.9	-1.4
PKM	Mcpherson Peak	84.95	52	P	P	17 46 43.9	+0.6
	baz=248						
RND	Reindeer	85.04	18	P	P	17 46 42.1	-0.8
RND				pmax	pmax		
	comp=Z,36nm,1.3s						
RND	Reindeer	85.04	18	P	P	17 46 42.1	-0.8
RND				IAmb	IAmb	17 47 14.7	
	comp=Z,36nm,1.3s						
DHY	Denali Highway	85.26	19	P	P	17 46 43.5	-0.6
DHY					pP	17 47 11.8	+0.2
MCK	McKinley	85.26	18	P	P	17 46 43.0	-0.9
MCK				*PP	pP	17 47 11.0	-0.5
MCK				pmax	pmax		
	comp=Z,48nm,1.5s						
MCK	McKinley	85.26	18	P	P	17 46 43.0	-0.9
MCK					pP	17 47 11.0	-0.5
MCK				IAmb	IAmb	17 47 22.2	
	comp=Z,48nm,1.5s						
BWN	Browne	85.43	18	P	P	17 46 44.0	-0.8
BWN				IAmb	IAmb	17 47 14.8	
	comp=Z,40nm,1.0s						
RDOG	Red Dog Mine	85.43	11	P	P	17 46 44.1	-0.6
RDOG				IAmb	IAmb	17 46 46.8	
	comp=Z,36nm,1.5s						
ORV	Oroville	85.49	47		pP	17 47 12.6	-0.1
YBH	Yreka Blue Hor	85.52	45	pP	pP	17 47 14.4	+1.4
	comp=Z,4.7nm,0.8s,baz=127,slow=5.1,SNR=2.6						
YBH				LR	LR	18 16 51.3	
	comp=Z,195nm,21.7s,baz=270,slow=30						
YBH	Yreka Blue Hor	85.52	45		pP	17 47 13.1	0.0
LSA	Lhasa	85.57	302	P	P	17 46 46.2	-0.6
LSA					pP	17 47 12.9	-1.5
LSA				IAmb	IAmb	17 47 31.0	
	comp=Z,23nm,1.1s						
ZAK	Zakamensk	85.60	325	eP	P	17 46 45.5	-0.5
ZAK				pmax	pmax		
	comp=Z,18nm,1.2s						
AFDM	Forest Hills D	85.63	48	P	P	17 46 46.0	-0.4
AFDM					pP	17 47 14.1	+0.6
IMAR	Indian Mountai	85.67	15	P	P	17 46 45.8	-0.1
CMB	Columbia Colle	85.70	49	P	P	17 46 46.3	-0.5
CMB				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CMB	Columbia Colle	85.70	49	P	P	17 46 46.2	-0.5
MLY	Manley	85.72	17	P	P	17 46 45.9	-0.3
BARN	Barnard Glacie	85.81	22	P	P	17 46 46.9	-0.1
TLY	Talaya	86.04	326	d iP	P	17 46 47.7	-0.4
TLY				pmax	pmax		
	comp=Z,23nm,1.3s						
WRH	Wood River Hil	86.06	18	P	P	17 46 47.2	-0.7
ISA	Isabella, Lake	86.25	52	P	P	17 46 50.1	+0.5
	baz=249						
CCB	Clear Creek Bu	86.27	18	P	P	17 46 48.1	-0.8
CCB					pP	17 47 17.2	+0.7
EDW2	Edwards Air Fo	86.34	53	P	P	17 46 49.6	-0.4
	baz=249						
HDA	Harding Lake	86.35	18	P	P	17 46 48.3	-1.0
HDA					pP	17 47 17.6	+0.6
HDA				IAmb	IAmb	17 47 21.1	
	comp=Z,27nm,1.0s						
HDA	Harding Lake	86.35	18	P	P	17 46 48.6	-0.6
	baz=224						
BEKR	Beckworth	86.42	47		pP	17 47 16.9	-0.8
RIDG	Independent Ri	86.53	19	P	P	17 46 50.1	-0.1
RIDG				IAmb	IAmb	17 47 27.3	
	comp=Z,54nm,2.0s						
OMMB	Old Mammoth Mi	86.56	50	P	P	17 46 49.8	-1.6
WAKR	Walker	86.57	49	P	P	17 46 50.8	-0.4
WAKR					pwP	17 47 20.4	-1.8
IL31		86.63	18	P	P	17 46 48.7	-1.9
ILAR	Eielson Array	86.63	18	P	P	17 46 49.0	-1.6
	comp=Z,4.3nm,0.9s,baz=236,slow=5.8,SNR=29						
ILAR				pP	pP	17 47 17.8	-0.6
	comp=Z,5.5nm,0.8s,baz=232,slow=5.8,SNR=9.3						
ILAR	Eielson Array	86.63	18	P	P	17 46 48.9	-1.8
ILAR					pP	17 47 18.0	-0.3
LRMC	Laurel Mtn Rad	86.79	52	P	P	17 46 53.2	+0.9
	baz=249						
CWC	Cottonwood Cre	86.83	51	P	P	17 46 52.8	+0.3
	baz=249						
MONP2	Monument Peak	86.88	55	P	P	17 46 53.4	+0.5
	baz=250						
SCRK	Sand Creek	86.97	19	P	P	17 46 52.2	-0.3
SCRK					pP	17 47 20.2	+0.1
BCAR	Beaver Creek A	87.09	21	P	P	17 46 52.1	-0.9
BCAR					pwP	17 47 22.5	-1.4
PFO	Pinyon Flats O	87.09	54	LR	LR	18 17 20.0	
	comp=Z,307nm,20.4s,baz=220,slow=30						
MPMC	Manual Prospec	87.14	52	P	P	17 46 54.1	+0.1
	baz=249						
NVAR	Mina Array Bea	87.37	49	P	P	17 46 53.1	-2.1
	comp=Z,1.2nm,0.9s,baz=225,slow=7.6,SNR=7.8						
NVAR				pP	pP	17 47 22.4	0.0
	comp=Z,2.6nm,0.8s,baz=230,slow=7.9,SNR=6.3						
NVAR				LR	LR	18 16 33.7	
	comp=Z,300nm,21.7s,baz=252,slow=29						
NVAR	Mina Array Bea	87.37	49	P	P	17 46 53.8	-1.3
NVAR					pP	17 47 21.8	-0.6
NV11	Mina Array Sit	87.48	49		pP	17 47 23.5	+0.7
MOY	Mondy	87.48	325	eP	P	17 46 54.9	-0.3
MOY				e		17 47 22.8	
BELC	Belle Mtn. Jos	87.58	54	P	P	17 46 56.7	+0.5
	baz=250						
HEC	Hector,Ludlow	87.60	53	P	P	17 46 56.4	+0.3
	baz=250						
TAPN	Taplejung	87.68	299	eP	P	17 46 56.9	-0.1
KVN	Kaiserville	87.74	49		pP	17 47 24.5	+0.4
ODAN	Odare	87.81	298	eP	P	17 46 57.5	0.0
	comp=Z,56nm,1.1s						
BC3	Big Chuckawall	87.90	55	P	P	17 46 58.1	+0.5
	baz=251						
GMRC	Granite Mounta	88.11	53	P	P	17 46 59.0	+0.4
	baz=250						
TUQ	Turquoise Moun	88.12	53	P	P	17 46 59.0	+0.4
	baz=250						
IRM	Iron Mountain	88.30	54	P	P	17 47 00.3	+0.9
	baz=251						
EGAK	Eagle	88.42	20	P	P	17 46 59.6	+0.4
EGAK					pP	17 47 27.6	+1.1
RAMN	Ramite	88.50	298	eP	P	17 47 00.5	-0.3
SYO	Syowa Base	88.60	197	⇓iP	P	17 47 00.8	+0.7
SYO	Syowa Base	88.60	197	⇑ePcP	PcP	17 47 02.6	+1.0
I07A	Izee	88.61	44		pP	17 47 29.2	+1.2
TOLK	Toolik Lake Re	88.76	15	P	P	17 47 02.9	+2.2
	baz=221						
SHPR	Sheep Range	89.06	52	P	P	17 47 03.1	0.0
SHPR					pP	17 47 31.4	+0.9
SHPR				IAmb	IAmb	17 47 36.9	
	comp=Z,20nm,1.5s						
JIRN	Jiri	89.06	299	eP	P	17 47 03.6	0.0
PDMCI	Parker Dam,Lak	89.14	54	P	P	17 47 04.2	+0.9
	baz=251						
BMAR	Burnt Mountain	89.18	17	P	P	17 47 03.0	+0.2
R11A	Troy Canyon, C	89.35	50	P	P	17 47 04.7	+0.3
	baz=250						
GUN	Gumba	89.40	299	eP	P	17 47 04.8	-0.3
214A	Organ Pipe Nat	89.47	57	P	P	17 47 05.6	+0.7
214A				IAmb	IAmb	17 48 28.0	
	comp=Z,24nm,1.6s						
214A	Organ Pipe Nat	89.47	57	P	P	17 47 06.1	+1.2
	baz=252						
W13A	Hualapai Mount	89.59	54	P	P	17 47 05.9	+0.2
W13A					pP	17 47 33.2	+0.2
PKI	Pulchoki	89.70	299	eP	P	17 47 05.9	-0.6
PKIN	Phulchoki	89.71	299	eP	P	17 47 06.0	-0.5
E08A	Dider Farm, El	89.80	42	P	P	17 47 03.7	-2.4
E08A				pP	pP	17 47 33.9	+0.4
E08A				IAmb	IAmb	17 47 38.5	
	comp=Z,22nm,1.3s						
KKN	Kakani	89.87	299	eP	P	17 47 06.9	-0.3
DMN	Daman	89.97	298	eP	P	17 47 07.7	0.0
	comp=Z,68nm,1.2s						
TIXI	Tiksi	90.06	349	⇓eP	P	17 47 06.0	-0.7
TIXI				pmax	pmax		
	comp=Z,13nm,1.2s						
TIXI	Tiksi	90.06	349	P	P	17 47 05.5	-1.1
BMO	Blue Mountains	90.36	44	P	P	17 47 08.6	-0.2
BMO				*PP	pP	17 47 36.9	+0.7
BMO				pmax	pmax		
	comp=Z,22nm,1.5s						
BMO	Blue Mountains	90.36	44	P	P	17 47 08.6	-0.2
BMO					pP	17 47 36.9	+0.7
BMO				IAmb	IAmb	17 47 41.6	
	comp=Z,22nm,1.5s						
ELK	Elko	90.39	48	P	P	17 47 09.5	+0.2
	comp=Z,1.4nm,0.8s,baz=249,slow=5.7,SNR=3.9						
ELK				pP	pP	17 47 36.6	0.0
	comp=Z,1.5nm,0.7s,baz=231,slow=2.7,SNR=4.1						
ELK				LR	LR	18 18 37.3	
	comp=Z,227nm,21.8s,baz=254,slow=29						
ELK	Elko	90.39	48	P	P	17 47 08.8	-0.5
ELK				pP	pP	17 47 37.0	+0.4
GKN	Gorkha	90.48	299	eP	P	17 47 09.2	-0.7
LCMT	Little Creek M	90.68	52	P	P	17 47 10.2	-0.4
LCMT					pP	17 47 38.1	+0.1
F10A	Beach Ranch, E	90.80	42	P	P	17 47 10.5	-0.4
F10A					pP	17 47 38.2	0.0
F10A				IAmb	IAmb	17 47 42.7	
	comp=Z,14nm,1.1s						
TUC	Tucson	91.22	57	P	P	17 47 11.7	-1.4
TUC				pmax	pmax		
	comp=Z,12nm,1.5s						
TUC	Tucson	91.22	57	P	P	17 47 11.7	-1.4
TUC	Tucson	91.22	57	P	P	17 47 13.9	+0.8
	baz=253						
U15A	North Rim	91.23	53	P	P	17 47 13.2	-0.2
U15A					pP	17 47 41.1	+0.3
DANN	Dangsing	91.32	299	eP	P	17 47 13.0	-1.0
NEW	Newport	91.67	40	pP	pP	17 47 42.0	-0.2
	comp=Z,1.2nm,0.5s,baz=250,slow=5.4,SNR=2.2						
NEW	Newport	91.67	40		pP	17 47 41.5	-0.7
WUAZ	Wupatki	91.67	54		pP	17 47 44.1	+1.5
MTPU	Mount Pierson	91.79	51		pP	17 47 45.4	+2.0
MSU	Marysvale	91.94	51		pP	17 47 45.6	+1.7
WMQ	Urumqi	92.76	315	eP	P	17 47 20.8	+0.8
WMQ				pP	pP	17 47 47.6	-0.5
WMQ				sP	sP	17 48 00.8	+1.3
WMQ				pmax	pmax		
	comp=Z,16nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,110nm,4.9s						
WMQ	Urumqi	92.76	315	P	P	17 47 20.0	0.0
WMQ	Urumqi	92.76	315	P	P	17 47 20.0	0.0
WMQ				IAmb	IAmb	17 47 22.3	
	comp=Z,33nm,1.4s						
WMQ				pP	pP	17 47 47.6	-0.5
NVL	N'lazarevskaya	92.95	188	eP	P	17 47 20.4	+0.1
NVL				pmax	pmax		
	comp=Z,19nm,1.0s						
SNAA	Sanae	93.45	183	P	P	17 47 22.0	-0.8
SNAA	Sanae	93.45	183	d iP	P	17 47 22.4	-0.3
SNAA	Sanae	93.45	183	P	P	17 47 21.9	-0.8
SNAA					pP	17 47 49.6	-1.4
VNA3	Neumayer Olymp	94.12	181	P	P	17 47 24.5	-1.2
VNA2	Neumayer--Watz	94.38	182	P	P	17 47 26.2	-0.7
	baz=183,slow=5.1						
VNA1	Neumayer--Stat	94.68	182	P	P	17 47 28.2	-0.1
PDAR	Pinedale Array	95.05	47	P	P	17 47 30.7	-0.1
	comp=Z,0.4nm,0.9s,baz=247,slow=8.5,SNR=2.8						
PDAR	Pinedale Array	95.05	47	P	P	17 47 30.5	-0.3
ANMO	Albuquerque	95.40	55	LR	LR	18 24 01.2	
	comp=Z,114nm,19.5s,baz=262,slow=31						
MOIG	Morelia	96.34	71	P	P	17 47 36.6	-0.5
TXAR	Lajitas Array	96.37	61	P	P	17 47 38.4	+1.5
	comp=Z,0.2nm,0.8s,baz=230,slow=4.2,SNR=3.4						
TXAR				pP	pP	17 48 04.6	+0.4
	comp=Z,1.5nm,1.1s,baz=226,slow=5.0,SNR=5.0						
TXAR				LR	LR	18 23 34.0	
	comp=Z,50nm,21.8s,baz=0.0,slow=31						
TXAR	Lajitas Array	96.37	61	P	P	17 47 38.1	+1.3
TXAR					pP	17 48 04.5	+0.2
MK31	Makanchi Array	97.24	316	P	Pdif	17 47 40.4	0.0
MK31				*PP	pP	17 48 07.7	-0.8
MK31				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MK31	Makanchi Array	97.24	316	P	Pdif	17 47 40.4	0.0
MK31				IAmb	IAmb	17 47 41.5	
	comp=Z,9.8nm,1.1s						
MK31					pP	17 48 07.7	-0.8
MKAR	Makanchi Array	97.24	316	P	Pdif	17 47 40.7	+0.3
	comp=Z,3.1nm,0.8s,baz=100,slow=6.5,SNR=27						
MKAR				pP	pP	17 48 07.4	-1.1
	comp=Z,7.0nm,0.8s,baz=96,slow=6.2,SNR=10.0						
MKAR				LR	LR	18 30 31.6	
	comp=Z,57nm,21.9s,baz=108,slow=35						
MKAR	Makanchi Array	97.24	316	P	P	17 47 39.9	-0.4
MKAR					pP	17 48 07.0	-1.5
ZAA0	Zalesovo Array	97.44	324	P	P	17 47 40.0	-1.0
ZAA0				pP	pP	17 48 07.6	-1.3
ZALV	Zalesovo Beam	97.44	324	P	P	17 47 40.2	-0.8
	comp=Z,7.7nm,1.0s,baz=108,slow=4.8,SNR=22						
ZALV				pP	pP	17 48 08.1	-0.9
	comp=Z,4.0nm,0.8s,baz=108,slow=4.8,SNR=7.1						
ZALV				LR	LR	18 30 14.4	
	comp=Z,82nm,20.6s,baz=87,slow=34						
ZALV	Zalesovo Beam	97.44	324	P	P	17 47 39.5	-1.4
ZALV					pP	17 48 07.8	-1.2
MAKZ	Makanchi	97.45	316	eP	Pdif	17 47 41.5	+0.2
MAKZ	Makanchi	97.45	316	P	Pdif	17 47 41.3	0.0
MAKZ				IAmb	IAmb	17 47 43.1	
	comp=Z,14nm,1.2s						
MAKZ					pP	17 48 08.1	-1.3
YKA	Yellowknife Ar	97.66	27	P	P	17 47 40.1	-1.7
	comp=Z,2.9nm,1.1s,baz=252,slow=4.0,SNR=14						
YKA				pP	pP	17 48 08.4	-0.9
	comp=Z,1.6nm,0.9s,baz=255,slow=4.4,SNR=4.5						
YKA				PKKPbc	PKKPbc	18 04 17.4	-2.7
	comp=Z,0.3nm,0.6s,baz=73,slow=3.4,SNR=5.1						
YKA				LR	LR	18 28 57.8	
	comp=Z,96nm,18.9s,baz=0.0,slow=34						
NRIK	Noril'sk	100.14	339	P	Pdif	17 47 52.7	-0.1
	comp=Z,1.8nm,0.4s,baz=118,slow=5.2,SNR=6.8						
NRIK				pP	pPdif	17 48 19.8	-0.8
	comp=Z,1.6nm,0.4s,baz=104,slow=2.7,SNR=2.0						
KSH	Kashi	100.22	308	P	Pdif	17 47 56.9	+2.9
KSH				S	Sdif	17 59 17.5	-3.0
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,200nm,9.3s						
KSH				LR	LR		
	comp=Z,130nm,11.2s						
KSH				LR	LR		
	comp=Z,200nm,10.4s						
KSH				LR	LR		
	comp=Z,250nm,13.5s						
KURK	Kurchatov	100.44	320	⇑eP	Pdif	17 47 53.8	-0.7
ARCES	ARCESS Array B	120.33	345	PKP	PKPdf	17 52 57.2	-0.5
	comp=Z,2.3nm,0.5s,baz=62,slow=1.4,SNR=28						
ARCES				pPKP	pPKPdf	17 53 26.1	-0.5
	comp=Z,2.8nm,0.5s,baz=61,slow=1.5,SNR=3.6						
ARCES				PKKPbc	PKKPab	18 03 06.2	+0.7
	comp=Z,4.8nm,1.1s,baz=159,slow=2.8,SNR=3.7						
KLMR	Klimovskoe	120.75	333	ePKIKP	PKPdf	17 52 56.5	-2.1
KLMR				pmax	pmax		
	comp=Z,12nm,1.3s						
KLMR	Klimovskoe	120.75	333	ePKPdf	PKPdf	17 52 56.5	-2.1
KLMR				AMP		17 53 02.2	
	comp=Z,12nm,1.3s						
SCHQ	Schefferville	122.40	34	PKKPbc	PKKPbc	18 02 58.8	-0.3
	comp=Z,1.0nm,0.6s,baz=45,slow=4.4,SNR=3.7						
BOSA	Boshof	123.27	220	PKP	PKiKP	17 53 05.0	+0.1
	comp=Z,4.1nm,0.9s,baz=141,slow=0.3,SNR=4.5						
BOSA				pPKP	pPKPdf	17 53 33.8	-0.4
	comp=Z,2.4nm,0.9s,baz=108,slow=3.2,SNR=1.9						
VRH	Novokhopyorsk	123.43	322	ePKIKP	PKPdf	17 53 02.5	-1.6
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEI	Tsey	124.27	312	i PKIKP	PKiKP	17 53 08.8	+2.2
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
NCK	Nalchik	124.34	313	⇓iPKIKP	PKiKP	17 53 07.4	+1.0
LPSR	Galich'ya Gora	124.54	324	ePKIKP	PKPdf	17 53 06.2	+0.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
RAYN	Ar Rayn	124.58	288	PKPdf	PKiKP	17 53 07.4	-0.1
RAYN				pPKPdf	pPKPdf	17 53 37.3	+0.9
OBN	Obninsk	124.76	328	ePKIKP	PKPdf	17 53 05.3	-1.1
OBN				e		17 53 37.7	
OBN				e		17 54 54.6	
OBN				ePPP	PPP	17 57 35.5	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KBZ	Khabaz	124.78	313	PKP	PKiKP	17 53 08.7	+1.5
	comp=Z,2.3nm,1.1s,baz=149,slow=5.9,SNR=3.1						
KBZ	Khabaz	124.78	313	⇓iPKIKP	PKiKP	17 53 08.9	+1.7
KIV	Kislovodsk	124.88	314	i PKIKP	PKiKP	17 53 08.7	+1.1
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
KIV				MLR	MLR		
	comp=Z,214nm,22.0s						
VSR	Storozhevoye	124.93	323	ePKIKP	PKPdf	17 53 05.2	-1.7
VSR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NEY	Neytrino	125.02	313	⇓iPKIKP	PKiKP	17 53 08.8	+0.8
FINES	FINESS Array B	125.79	338	PKP	PKPdf	17 53 08.3	0.0
	comp=Z,3.6nm,0.9s,baz=63,slow=2.6,SNR=9.1						
FINES				pPKP	pPKPdf	17 53 37.0	-0.3
	comp=Z,3.9nm,0.9s,baz=64,slow=4.4,SNR=4.0						
VSU	Vasula	127.48	335	⇓ePKIKP	PKiKP	17 53 12.1	0.0
KMBO	Kilima Mbogo	128.03	257	PKP	PKPdf	17 53 14.6	+0.2
	comp=Z,1.2nm,0.8s,baz=120,slow=6.6,SNR=4.2						
KMBO				pPKP	pPKPdf	17 53 42.0	-1.8
	comp=Z,0.8nm,0.5s,baz=219,slow=23,SNR=2.5						
LSZ	Lusaka	129.66	235	PKIKP	PKPdf	17 53 17.5	+0.3
LSZ	Lusaka	129.66	235		PKPdf	17 53 17.5	+0.3
NB2	NORSAR Subarra	130.70	345	PKPdf	PKPdf	17 53 18.0	+0.3
	comp=Z,0.3nm,0.5s,baz=31,slow=1.9						
NOA	NORSAR Array B	130.70	345	PKP	PKPdf	17 53 17.9	+0.1
	comp=Z,0.6nm,0.5s,baz=35,slow=2.2,SNR=4.3						
NOA				pPKP	pPKPdf	17 53 47.5	+0.7
	comp=Z,2.0nm,0.9s,baz=35,slow=2.0,SNR=5.4						
NOA				SKPbc	SKPab	17 56 31.9	-0.2
	comp=Z,1.7nm,0.6s,baz=31,slow=3.1,SNR=12						
AKASG	Malin Array Be	130.79	326	pPKP	pPKPdf	17 53 47.0	-0.3
	comp=Z,1.2nm,0.6s,baz=49,slow=3.0,SNR=1.6						
AKASG				SKPbc	SKPab	17 56 32.6	-0.1
	comp=Z,1.3nm,0.5s,baz=45,slow=4.5,SNR=7.4						
AKASG	Malin Array Be	130.79	326	PKIKP	PKPdf	17 53 17.3	-0.8
AKASG						17 53 47.1	
AKASG	Malin Array Be	130.79	326	PKPdf	PKPdf	17 53 17.3	-0.8
AKASG					pPKPdf	17 53 47.1	-0.2
BRTR	Keskin Array B	132.53	311	PKP	PKPdf	17 53 21.6	-0.4
	comp=Z,1.0nm,0.8s,baz=135,slow=4.2,SNR=4.7						
BRTR				pPKP	pPKPdf	17 53 51.0	-0.2
	comp=Z,0.9nm,0.8s,baz=196,slow=2.2,SNR=3.8						
BRTR				SKPbc	SKPab	17 56 40.0	-0.7
	comp=Z,1.9nm,0.7s,baz=108,slow=2.7,SNR=6.2						
KLNR	Kaliningrad	132.75	334	⇓iPKIKP	PKiKP	17 53 24.9	+2.1
BDFB	Brasilia	133.86	130	SKPbc	SKPbc	17 56 45.3	+0.8
	comp=Z,1.4nm,0.4s,baz=125,slow=5.9,SNR=3.1						
BURAR	Bucovina Array	134.66	324		PKPdf	17 53 24.7	-1.0
KOLS	Kolonicke sedl	135.50	327	ePKIKP	PKiKP	17 53 28.3	-0.4
KOLS	Kolonicke sedl	135.50	327	ePKP	PKiKP	17 53 28.3	-0.4
VYHS	Vyhne	137.54	329	ePKIKP	PKPdf	17 53 29.7	-1.2
VYHS	Vyhne	137.54	329	ePKP	PKPdf	17 53 29.7	-1.2
BRG	Berggiesshubel	138.08	335	ePKP	PKiKP	17 53 34.8	+1.0
	comp=Z,3.1nm,0.8s						
BRG				e		17 53 57.1	
	comp=Z,13nm,1.6s						
BRG				e		17 54 03.0	
	comp=Z,7.8nm,1.2s						
BRG				e		17 54 16.5	
	comp=Z,28nm,1.9s						
CLL	Collm	138.12	336	ePP	PP	17 56 22.0	+1.1
CLL				eSKPdf	SKPbc	17 56 51.0	-5.3
CLL				e		17 57 54.0	
CLL				e		18 01 48.0	
CLL				ePPS	PPS	18 08 24.0	
CLL				e		18 10 18.0	
CLL				eSS	SS	18 14 24.0	+0.7
CONA	Conrad Observa	139.38	330	ePKPdf	PKPdf	17 53 31.9	-2.5
	comp=Z,2.0nm,0.6s						
CONA				i pPKiKP	pPKiKP	17 54 05.5	-0.4
	comp=Z,11nm,1.7s						
KHC	Kasperske Hory	139.55	333	ePKPDF	PKPdf	17 53 34.7	+0.1
KHC				epPKP	pPKPdf	17 54 05.3	+1.5
KHC				ex	x	17 57 55.0	
KHC	Kasperske Hory	139.55	333	ePKIKP	PKPdf	17 53 34.7	+0.1
KHC				e		17 54 05.3	
GERES	GERESS Array B	139.71	333	PKhKP	PKPpre	17 53 28.5	
	comp=Z,0.4nm,0.5s,baz=21,slow=4.6,SNR=3.9						
GERES				PKP	PKiKP	17 53 36.6	-0.8
	comp=Z,0.8nm,0.6s,baz=42,slow=2.2,SNR=5.4						
GERES				pPKP	pPKPdf	17 54 03.7	-0.5
	comp=Z,0.9nm,0.6s,baz=93,slow=2.7,SNR=3.2						
WATA	Walderalm	141.78	333	i PKPdf	PKPdf	17 53 35.4	-3.4
	comp=Z,13nm,1.5s						
WATA				i pPKiKP	pPKiKP	17 54 11.9	+1.0
	comp=Z,15nm,1.3s						
MOTA	Moosalm	141.98	333	i PKPdf	PKPdf	17 53 34.9	-4.3
	comp=Z,8.0nm,1.1s						
MOTA				i pPKiKP	pPKiKP	17 54 12.1	+0.8
	comp=Z,18nm,1.5s						
RETA	Reutte	142.02	334	i PKPdf	PKPdf	17 53 35.1	-4.1
	comp=Z,8.7nm,1.4s						
SQTA	Sankt Quirin	142.03	333	i PKPdf	PKPdf	17 53 37.6	-1.6
	comp=Z,12nm,1.3s						
SQTA				i pPKiKP	pPKiKP	17 54 12.6	+1.2
	comp=Z,9.8nm,0.9s						
FETA	Feichten	142.39	333	i PKPdf	PKPdf	17 53 36.7	-3.3
	comp=Z,14nm,1.1s						
DAVA	Damuels	142.54	334	i PKPdf	PKPdf	17 53 36.9	-3.3
	comp=Z,11nm,1.1s						
DAVA				i pPKiKP	pPKiKP	17 54 15.4	+2.9
	comp=Z,15nm,1.6s						
TUE	Stuetta	143.41	334		PKPbc	17 53 39.4	+0.1
ZCCA	Zocca	144.31	330		PKPdf	17 53 43.0	-0.2
NRCA	Norcia	144.32	327		PKPbc	17 53 42.1	+0.2
MURB	Monte Urbino	144.33	328		PKPdf	17 53 42.7	-0.7
SENIN	Lac Senin/Sane	144.34	336		PKPbc	17 53 42.6	+0.5
INTR	Introdacqua	144.44	325		PKPbc	17 53 42.7	+0.3
TIP	Timpagrande	144.49	319		PKPbc	17 53 42.4	-0.1
AQU	L'Aquila	144.49	326	PKIKP	PKPbc	17 53 42.6	+0.2
AQU	L'Aquila	144.49	326		PKPbc	17 53 42.6	+0.1
CLF	Chambon-Foret	144.63	342		PKPbc	17 53 42.9	+0.3
PAOL	Paolisi	144.70	323		PKPab	17 53 42.7	-0.4
MSSA	Maissana	145.02	332		PKPbc	17 53 43.0	-1.1
LATE	Laterza	145.16	327		PKPab	17 53 44.6	-0.1
BNI	Bardonecchia	145.66	335	PKP2	PKPbc	17 53 46.0	-0.2
BNI	Bardonecchia	145.66	335		PKPbc	17 53 46.0	-0.2
SSB	Saint Sauveur	146.30	338	PKP2	PKPbc	17 53 47.3	-0.7
SSB	Saint Sauveur	146.30	338		PKPbc	17 53 47.3	-0.7
KEST	Kesra	151.25	320	PKPbc	PKPbc	17 54 00.6	-0.4
	comp=Z,7.5nm,0.5s,baz=143,slow=2.3,SNR=13						
KEST				pPKPbc	pPKPbc	17 54 30.3	+0.2
	comp=Z,24nm,0.8s,baz=340,slow=4.0,SNR=5.8						
PVIS	Viseu	153.86	352	ePKPdf	PKPdf	17 54 00.7	+2.1
ESDC	Sonseca Array	154.06	344	PKPab	PKPab	17 54 20.7	-0.2
	comp=Z,0.3nm,0.4s,baz=14,slow=2.4,SNR=5.8						
PMRV	Marv??o	155.04	350	ePKPab	PKPab	17 54 25.8	+0.8
PMTG	Montargil	155.52	351	ePKPab	PKPab	17 54 28.2	+1.2
PBEJ	Beja	156.49	350	ePKPab	PKPab	17 54 32.1	+0.9
PNCL	Nicolau / Gran	156.50	352	ePKPdf	PKPdf	17 54 00.3	-1.9
PNCL	Nicolau / Gran	156.50	352	ePKPab	PKPab	17 54 33.6	+2.4
PTEO	Sao Teotonio	157.09	352	ePKPdf	PKPdf	17 54 00.8	-2.2
TORD	Torodi Ar. Bea	165.85	265	PKP	PKPdf	17 54 10.5	-2.2
	comp=Z,0.8nm,0.5s,baz=336,slow=3.2,SNR=5.7						
TORD				pPKP	pPKPdf	17 54 42.0	-0.1
	comp=Z,3.0nm,1.0s,baz=240,slow=2.8,SNR=3.0						
TORD				PKPab	PKPab	17 55 13.6	+0.6
	comp=Z,1.4nm,0.9s,baz=86,slow=3.9,SNR=4.1						
TORD				pPKPab	pPKPab	17 55 40.9	-0.3
	comp=Z,8.7nm,1.0s,baz=102,slow=4.3,SNR=5.1						
TORD	Torodi Ar. Bea	165.85	265		PKPdf	17 54 11.7	-1.0
TORD					pPKPab	17 55 40.9	-0.3

*IDC **05** 17:45:40.8±1.3, 14°.62S×169°.95E, h631^{km}±14^{km}, mb3.6/17, mb1 3.8/19, mb1mx3.4/60, mbtmp4.6/19, Error ellipse: s-maj=16.5km s-min=14.3km az=15.0*

*NEIC **05** 17:45:40.3±1.7, 14°.6S±0°.2×170°.0E±0°.1, h627^{km}±12^{km}, mb4.7/32, Error ellipse: s-maj=22.2km s-min=18.7km az=202.0*

ISC 05 17:45:39.9±0.6**, 14°.52S**±0°.09×**169°.83E**±0°.08**, h614^{km}, n63, σ1^{s}66**/70**, mb4.6**/30**, 1D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	8.17	203	P	P	17 47 43.9	+2.5
	1.2nm,0.3s,baz=122,slow=17,SNR=8.4						
DZM	Mont Dzumac	8.17	203	P	P	17 47 43.2	+1.8
MSVF	Nonsavu	8.52	113	P	P	17 47 43.2	-1.5
HNR	Honiara	10.91	297	P	P	17 48 11.6	+3.5
	7.7nm,0.3s,baz=153,slow=3.7,SNR=5.6						
HNR	Honiara	10.91	297	P	P	17 48 09.9	+1.8
RAO	Raoul Island	18.53	144	P	P	17 49 24.8	+5.1
	95nm,0.3s,baz=233,slow=20,SNR=3.0						
LHI	Lord Howe Isla	19.59	208	P	P	17 49 29.5	+0.3
LHI				IAmb	IAmb	17 49 33.1	
	comp=Z,36nm,1.1s						
EIDS	Eidsvold	20.64	236	P	P	17 49 39.6	+0.8
EIDS				IAmb	IAmb	17 49 56.2	
	comp=Z,9.9nm,0.7s						
PMG	Port Moresby	22.75	280	P	P	17 49 59.6	+1.8
	comp=Z,7.7nm,0.8s,baz=305,slow=4.5,SNR=2.7						
PMG	Port Moresby	22.75	280	P	P	17 49 59.4	+1.7
PMG				IAmb	IAmb	17 50 06.3	
	comp=Z,15nm,1.0s						
ARMA	Armidale	23.04	224	P	P	17 50 01.1	+0.9
ARMA				IAmb	IAmb	17 50 01.7	
	comp=Z,8.8nm,0.5s						
CTA	Charters Tower	23.17	253	P	P	17 50 02.6	+1.2
	comp=Z,11nm,0.5s,baz=80,slow=11,SNR=28						
CTA				ScP	ScP	17 56 06.0	-1.7
	comp=Z,2.9nm,0.8s,baz=63,slow=4.5,SNR=4.1						
URZ	Urewera	24.51	166	P	P	17 50 12.7	-0.3
	comp=Z,3.5nm,0.3s,baz=350,slow=1.6,SNR=5.6						
URZ	Urewera	24.51	166	P	P	17 50 12.6	-0.4
URZ				IAmb	IAmb	17 50 22.1	
	comp=Z,20nm,1.2s						
BKZ	Black Stump Fm	25.24	168	P	P	17 50 18.4	-1.1
COEN	Coen	25.84	268	P	P	17 50 26.5	+1.4
BFZ	Birch Farm	26.66	169	P	P	17 50 29.9	-1.9
NNZ	Nelson	26.78	174	P	P	17 50 32.7	-0.1
SNZO	South Karori	27.03	172	P	P	17 50 33.2	-1.8
TUWZ	Tuamarina	27.05	173	P	P	17 50 34.1	-1.1
THZ	Tophouse	27.27	175	P	P	17 50 37.2	-0.1
THZ				IAmb	IAmb	17 50 49.6	
	comp=Z,20nm,1.1s						
CAN	Canberra	27.92	218	P	P	17 50 43.5	+0.5
KHZ	Kahutara	27.98	174	P	P	17 50 42.2	-1.1
KHZ				IAmb	IAmb	17 50 46.0	
	comp=Z,33nm,1.2s						
LTZ	Lake Taylor	28.24	176	P	P	17 50 45.2	-0.4
RPZ	Rata Peaks	29.11	178	P	P	17 50 51.3	-1.8
	comp=Z,5.3nm,0.6s,baz=321,slow=6.5,SNR=3.1						
STKA	Stephens Creek	31.04	231	P	P	17 51 10.8	+1.0
	comp=Z,24nm,0.5s,baz=63,slow=8.8,SNR=78						
STKA				ScP	ScP	17 56 29.9	-1.6
	comp=Z,1.8nm,0.6s,baz=24,slow=1.5,SNR=4.6						
TOO	Toolangi	31.53	219	P	P	17 51 14.7	+0.8
WR0	Warramunga Arr	34.09	256	P	P	17 51 35.2	-0.4
WB0	Warramunga Arr	34.22	256	P	P	17 51 36.5	-0.3
WB0				IAmb	IAmb	17 51 36.9	
	comp=Z,20nm,0.6s						
WB2	Warramunga Arr	34.27	256	P	P	17 51 36.6	-0.5
WB2				IAmb	IAmb	17 51 37.7	
	comp=Z,24nm,1.1s						
WRAB	Tennant Creek	34.27	256	P	P	17 51 36.3	-0.9
WRAB				IAmb	IAmb	17 51 37.5	
	comp=Z,22nm,1.1s						
WRA	Warramunga Arr	34.28	256	P	P	17 51 37.0	-0.3
	comp=Z,7.3nm,0.4s,baz=82,slow=6.9,SNR=115						
WRA				S	S	17 56 16.1	-6.6
	comp=Z,0.3nm,0.5s,baz=78,slow=15,SNR=2.8						
WRA				ScP	ScP	17 56 42.0	-1.2
	comp=Z,3.8nm,0.9s,baz=85,slow=3.8,SNR=15						
WRA	Warramunga Arr	34.28	256	P	P	17 51 36.7	-0.6
AS31	Alice Springs	35.06	249	P	P	17 51 43.7	0.0
AS31				IAmb	IAmb	17 51 44.3	
	comp=Z,12nm,0.5s						
ASAR	Alice Springs	35.07	249	P	P	17 51 43.7	0.0
	comp=Z,20nm,0.4s,baz=76,slow=9.6,SNR=766						
ASAR				PcP	PcP	17 53 56.7	-1.0
	comp=Z,0.3nm,0.7s,baz=55,slow=3.5,SNR=4.5						
ASAR				S	S	17 56 29.4	-5.0
	comp=Z,0.5nm,0.7s,baz=81,slow=16,SNR=5.1						
ASAR				ScP	ScP	17 56 44.2	-1.8
	comp=Z,5.6nm,0.9s,baz=88,slow=4.0,SNR=26						
ASAR	Alice Springs	35.07	249	P	P	17 51 43.1	-0.6
BBOO	Buckleboo	35.68	233	P	P	17 51 49.1	+0.5
BBOO				IAmb	IAmb	17 51 49.8	
	comp=Z,30nm,0.8s						
MTN	Manton Dam	37.61	268	P	P	17 52 05.5	+0.9
MTN				IAmb	IAmb	17 52 19.9	
	comp=Z,14nm,0.8s						
FAKI	Fak Fak	38.82	284	P	P	17 52 15.0	+0.6
FAKI				IAmb	IAmb	17 52 19.9	
	comp=Z,48nm,1.1s						
KNRA	Kununurra	39.62	263	P	P	17 52 20.8	0.0
KNRA				IAmb	IAmb	17 52 21.3	
	comp=Z,21nm,0.5s						
SIJI	Sorong	40.46	286	P	P	17 52 28.5	+1.0
	comp=Z,4.7nm,0.3s,baz=5.3,slow=23,SNR=5.6						
FORT	Forrest	41.54	240	P	P	17 52 35.7	-0.1
FITZ	Fitzroy Crossi	42.49	259	P	P	17 52 43.9	+0.6
	comp=Z,12nm,0.7s,baz=82,slow=5.0,SNR=70						
FITZ	Fitzroy Crossi	42.49	259	P	P	17 52 43.8	+0.4
PSA00	Pilbara Seismi	47.88	254	P	P	17 53 24.4	+0.1
PSA00				IAmb	IAmb	17 53 25.2	
	comp=Z,17nm,1.0s						
LUWI	Luwuk	48.38	282	P	P	17 53 29.2	+1.0
LUWI				IAmb	IAmb	17 53 30.9	
	comp=Z,22nm,0.8s						
NWAO	Narrogin (SRO)	50.98	239	P	P	17 53 46.2	-0.6
	comp=Z,11nm,0.4s,baz=88,slow=6.2,SNR=22						
NWAO	Narrogin (SRO)	50.98	239	P	P	17 53 46.3	-0.6
NWAO				IAmb	IAmb	17 53 46.9	
	comp=Z,15nm,0.8s						
MORW	Morawa	51.59	244	P	P	17 53 51.2	0.0
GIRL	Giralia	53.07	252	P	P	17 54 03.1	+1.3
JAGI	Jajag, Banyuwa	54.79	270	P	P	17 54 12.8	-1.2
LEM	Lembang	61.46	270	P	P	17 54 59.5	+0.4
	comp=Z,21nm,0.6s,baz=108,slow=14,SNR=7.9						
RPSI	Rantau Prapat	72.25	278	P	P	17 56 04.0	-1.1
PSI	Prapat	72.28	278	P	P	17 56 04.0	-1.4
	comp=Z,2.8nm,0.4s,baz=234,slow=5.3,SNR=4.1						
CMAR	Chiang Mai Arr	77.14	293	P	P	17 56 33.9	+1.7
	comp=Z,2.2nm,0.9s,baz=126,slow=4.2,SNR=15						
NVAR	Mina Array Bea	85.27	48	P	P	17 57 13.9	+0.3
	comp=Z,0.8nm,0.7s,baz=235,slow=7.6,SNR=6.1						
NVAR	Mina Array Bea	85.27	48	P	P	17 57 14.4	+0.8
ILAR	Eielson Array	85.58	17	P	P	17 57 12.0	-2.2
	comp=Z,0.3nm,0.5s,baz=234,slow=5.6,SNR=7.7						
SYO	Syowa Base	89.60	196⇓	*e*P	P	17 57 32.6	-0.4
TXAR	Lajitas Array	94.00	61	P	P	17 57 52.9	-1.3
	comp=Z,0.9nm,0.8s,baz=78,slow=4.7,SNR=2.3						
MKAR	Makanchi Array	98.77	316	P	P	17 58 15.8	+0.7
	comp=Z,1.1nm,1.2s,baz=97,slow=6.0,SNR=4.5						
ARCES	ARCESS Array B	120.66	346	PKP	PKPdf	18 03 21.4	-1.2
	comp=Z,1.6nm,0.8s,baz=5.4,slow=1.9,SNR=5.2						
TORD	Torodi Ar. Bea	168.40	265	PKPab	PKPab	18 05 51.4	-0.7
	comp=Z,1.0nm,0.8s,baz=73,slow=4.8,SNR=4.3						

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*MEX **05** 17:51:08.9±0.3, 28°.19N×112°.48W, h9^{km}±4^{km}, MD4.4*

*IDC **05** 17:51:08.1±1.7, 28°.09N×112°.15W, h0^{km}, mb3.6/5, mb1 3.8/11, mb1mx3.7/52, mbtmp3.5/11, ML3.6/5, MS3.9/10, Ms1 3.9/10, ms1mx3.6/32, Error ellipse: s-maj=26.1km s-min=14.7km az=35.0*

*NEIC **05** 17:51:10.1±3.0, 28°.11N±0°.08×112°.2W±0°.1, h13^{km}±8^{km}, mb4.1/15, Error ellipse: s-maj=15.2km s-min=10.6km az=60.0*

ISC 05 17:51:09.3±0.7**, 28°.13N**±0°.04×**112°.27W**±0°.05**, h10^{km}, n83, σ1^{s}64**/84**, mb3.7**/5**, MS4.0**/5**, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRIG	Santa Rosalia	0.81	178	*e*P	Pg	17 51 23.6	-1.3
SRIG				*e*S	Sg	17 51 35.1	-0.3
SRIG	Santa Rosalia	0.81	178		Pg	17 51 23.5	-1.3
GUYB	Guaymas	1.26	100	*e*P	Pb	17 51 31.9	-1.2
GUYB				*i* S	Sn	17 51 49.2	-0.7
HSIG		1.46	52	*e*P	Pn	17 51 33.3	-2.4
HSIG				*i* S	Sg	17 51 53.5	-2.8
HSIG		1.46	52		Pn	17 51 32.9	-2.9
NZIG	Nacozari, Sono	3.26	46	*i* P	Pn	17 51 58.8	-1.8
NZIG				*i* S	Sn	17 52 37.8	-1.8
214A	Organ Pipe Nat	3.84	353		Pn	17 52 06.4	-2.1
319A	Douglas	4.15	38		Pn	17 52 11.4	-1.4
TUC	Tucson	4.36	17		Pn	17 52 14.6	-1.1
CGIG		4.36	58	*e*P	Pn	17 52 15.1	-0.8
CGIG				*i* S	Sn	17 53 06.8	0.0
LPIG	La Paz	4.38	156	Pn	Pn	17 52 13.3	-2.6
	11nm,0.3s,baz=222,slow=19,SNR=2.7						
LPIG				Lg	Lg	17 53 29.0	
	15nm,0.3s,baz=225,slow=16,SNR=3.5						
113A	Mohawk Valley,	4.80	345		Pn	17 52 19.8	-1.9
GLA	Glamis	5.38	336		Pn	17 52 28.7	-1.0
Y14A	Wickenburg	5.82	354		Pn	17 52 35.0	-0.8
121A	Cookes Peak, D	5.85	40		Pn	17 52 34.7	-1.6
BAR	Barrett	5.92	321	Pn	Pn	17 52 35.9	-1.1
Y12C	Blythe	5.93	342		Pn	17 52 36.0	-1.1
X16A	Lo Mia Camp, P	6.31	6		Pn	17 52 42.1	-0.5
PFO	Pinyon Flats O	6.54	328	Pg	Pg	17 53 12.6	-2.0
	0.6nm,0.3s,baz=161,slow=14,SNR=4.0						
PFO				Lg	Lg	17 54 39.2	
	0.7nm,0.3s,baz=237,slow=13,SNR=20						
PFO				LR	LR	17 55 29.4	
	comp=Z,977nm,18.4s,baz=144,slow=39						
X18A	Snowflake	6.68	17		Pn	17 52 47.5	-0.1
MNTX	Cornudas Mount	6.96	58		Pn	17 52 50.0	-1.3
W13A	Hualapai Mount	7.08	349		Pn	17 52 53.1	-0.1
W18A	Petrified Fore	7.29	17	Pn	Pn	17 52 57.1	+1.0
TX31	Lajitas Ar. Si	7.65	79		Pn	17 53 01.3	+0.4
TX32	Lajitas Array	7.65	79		Pn	17 53 01.1	+0.2
TXAR	Lajitas Array	7.65	79	Pn	Pn	17 53 00.3	-0.6
	0.3nm,0.3s,baz=249,slow=13,SNR=13						
TXAR				Pg	Pb	17 53 26.4	+4.2
	0.6nm,0.3s,baz=266,slow=14,SNR=6.8						
TXAR				Sn	Sn	17 54 28.6	+0.9
	0.2nm,0.3s,baz=285,slow=14,SNR=2.6						
TXAR				Lg	Lg	17 55 03.6	
	0.2nm,0.3s,baz=249,slow=20,SNR=2.8						
TXAR	Lajitas Array	7.65	79		Pn	17 53 00.1	-0.8
GSC	Goldstone, Bar	8.12	333	Pn	Pn	17 53 06.2	-1.2
U15A	North Rim	8.27	360		Pn	17 53 11.3	+1.7
ANMO	Albuquerque	8.41	35	Pn	Pn	17 53 11.3	-0.1
	0.2nm,0.3s,baz=208,slow=12,SNR=3.6						
ANMO				Pg	Pg	17 53 53.4	+3.0
	0.2nm,0.3s,baz=209,slow=13,SNR=5.2						
ANMO				Lg	Lg	17 55 35.4	
	1.3nm,0.3s,baz=347,slow=10,SNR=13						
ANMO	Albuquerque	8.41	35		Pn	17 53 11.7	+0.2
LCMT	Little Creek M	8.89	355		Pn	17 53 19.7	+1.7
PKCU	Pink Cliffs	9.29	360		Pn	17 53 23.3	-0.3
CCUT	Cedar City	9.44	355		Pn	17 53 27.5	+1.9
SZCU	Shurtz Canyon	9.46	356		Pn	17 53 27.0	+1.1
MTPU	Mount Pierson	9.88	0		Pn	17 53 33.8	+2.0
PSUT	Pine Spring	10.46	353		Pn	17 53 41.3	+1.8
R11A	Troy Canyon, C	10.56	346		Pn	17 53 42.3	+1.4
Q16A	Castle Valley	10.80	5		Pn	17 53 46.0	+1.9
TMUT	Trail Mountain	11.17	4		Pn	17 53 51.0	+1.6
P17A	Butcher Ranch,	11.38	6		Pn	17 53 52.8	+0.6
NV11	Mina Array Sit	11.39	336		Pn	17 53 51.7	-0.5
NVAR	Mina Array Bea	11.44	335	Pn	Pn	17 53 55.2	+2.2
	baz=157,slow=16,SNR=5.0						
NVAR				Lg	Lg	17 57 20.8	
	0.1nm,0.3s,baz=163,slow=32,SNR=2.9						
NVAR				LR	LR	17 58 05.6	
	comp=Z,399nm,18.1s,baz=150,slow=36						
NVAR	Mina Array Bea	11.44	335		Pn	17 53 54.9	+1.9
KVN	Kaiserville	11.92	337		Pn	17 54 02.4	+2.9
WAKR	Walker	11.95	332		Pn	17 54 03.5	+3.6
PNTR	Pine Nut	12.51	333		Pn	17 54 09.8	+2.2
RDMU	Red Mountain	12.61	9		Pn	17 54 10.9	+2.0
BGU	Big Grassy Mou	12.78	357		Pn	17 54 09.2	-2.0
ELK	Elko	12.82	350	Pn	Pn	17 54 14.7	+2.9
	0.1nm,0.3s,baz=175,slow=12,SNR=6.4						
ELK				Lg	Lg	17 57 57.4	
	0.1nm,0.3s,baz=4.7,slow=6.2,SNR=2.8						
ELK				LR	LR	17 59 21.5	
	comp=Z,441nm,18.1s,baz=175,slow=38						
ELK	Elko	12.82	350		Pn	17 54 15.0	+3.2
HWUT	Hardware Ranch	13.46	2		Pn	17 54 23.4	+3.0
BEKR	Beckworth	13.48	332		Pn	17 54 23.4	+2.6
PD31	Pinedale Array	14.77	8		Pn	17 54 38.9	+0.4
PDAR	Pinedale Array	14.77	8	Pn	Pn	17 54 41.1	+2.7
	0.0nm,0.3s,baz=188,slow=13,SNR=4.0						
PDAR				Lg	Lg	17 58 52.7	
	baz=173,slow=16,SNR=3.4						
PDAR				LR	LR	18 00 33.3	
	comp=Z,546nm,20.0s,baz=198,slow=38						
PDAR	Pinedale Array	14.77	8		Pn	17 54 39.3	+0.8
FXWY	Fox Creek	15.51	3	P	P	17 54 51.0	-1.8
MFID	Camas Ranch	15.52	350	P	P	17 54 52.4	-0.4
MFID				IAmb	IAmb	17 55 02.4	
	comp=Z,20nm,1.6s						
FLWY	Flagg Ranch	15.97	4	P	Pn	17 54 55.3	+1.0
FLWY				IAmb	IAmb	17 55 12.3	
	comp=Z,38nm,1.5s						
YBH	Yreka Blue Hor	16.02	331	LR	LR	18 00 57.9	
	comp=Z,360nm,21.4s,baz=183,slow=37						
YPP	Pitchstone Pla	16.15	4	P	Pn	17 54 58.0	+1.3
YHH	Holmes Hill	16.66	4	P	Pn	17 55 04.4	+1.2
MCMT	McKenzie Canyo	16.67	359	P	P	17 55 06.0	+0.4
BMO	Blue Mountains	17.17	348	P	P	17 55 12.6	+1.6
DLMT	Dillon	17.20	359	P	P	17 55 10.8	-0.6
DLMT				IAmb	IAmb	17 55 38.0	
	comp=Z,26nm,1.9s						
W41B	Gary Mavity, V	18.42	63	P	Pn	17 55 23.0	-1.8
W41B				IAmb	IAmb	17 55 30.7	
	comp=Z,12nm,1.1s						
WHAR	Wooly Hollow	18.42	62	P	Pn	17 55 23.8	-1.0
WHAR				IAmb	IAmb	17 55 30.1	
	comp=Z,22nm,1.2s						
MSO	Missoula	18.71	356	P	Pn	17 55 28.8	+0.5
NEW	Newport	20.45	351	P	Pn	17 55 48.5	-0.5
	comp=Z,2.1nm,0.8s,baz=180,slow=10,SNR=3.7						
NEW	Newport	20.45	351	P	P	17 55 47.5	+0.5
NEW				IAmb	IAmb	17 55 58.9	
	comp=Z,8.4nm,1.1s						
Z51A	Franklin	23.83	71	P	P	17 56 21.4	-1.2
X51A	Calhoun	24.23	68	P	P	17 56 27.9	+1.5
ULM	Lac du Bonnet	25.37	25	P	P	17 56 37.6	+1.1
	comp=Z,0.9nm,0.5s,baz=208,slow=10.0,SNR=2.7						
ULM				LR	LR	18 07 24.3	
	comp=Z,150nm,20.5s,baz=302,slow=38						
ULM	Lac du Bonnet	25.37	25	P	P	17 56 35.7	-0.8
EYMN	Ely	25.53	34	P	P	17 56 38.8	+0.8
EYMN				IAmb	IAmb	17 57 02.2	
	comp=Z,5.0nm,0.9s						
BBB	Bella Bella	26.79	338	LR	LR	18 07 22.4	
	comp=Z,204nm,21.1s,baz=179,slow=36						
DLBC	Dease Lake	32.72	343	P	P	17 57 42.9	+1.0
	comp=Z,3.0nm,0.9s,baz=174,slow=10,SNR=3.6						
YKA	Yellowknife Ar	34.40	358	P	P	17 57 57.1	+0.7
	comp=Z,0.1nm,0.4s,baz=173,slow=7.8,SNR=3.7						
ILAR	Eielson Array	42.67	339	P	P	17 59 07.4	+1.5
	comp=Z,0.8nm,1.0s,baz=150,slow=7.0,SNR=6.1						
ILAR	Eielson Array	42.67	339	P	P	17 59 07.1	+1.2
CPUP	Villa Florida	75.62	131	LR	LR	18 34 20.7	
	comp=Z,119nm,20.7s,baz=223,slow=34						
ARCES	ARCESS Array B	77.93	14	LR	LR	18 40 44.2	
	comp=Z,64nm,18.1s,baz=330,slow=38						
AKASG	Malin Array Be	94.45	23	LR	LR	18 46 57.1	
	comp=Z,89nm,18.2s,baz=345,slow=36						

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*IDC **05** 17:58:17.9±0.7, 2°.80S×139°.57E, h0^{km}, mb3.9/13, mb1 4.1/17, mb1mx4.0/34, mbtmp4.0/17, ML3.9/3, MS4.1/9, Ms1 4.1/9, ms1mx3.6/45, Error ellipse: s-maj=24.0km s-min=14.6km az=80.0*

*BJI **05** 17:58:21.7±0.0, 2°.27S×139°.33E, h5^{km}, mB5.1/8, mb4.6/8, Ms5.0/3, Ms7 4.8/3*

*DJA **05** 17:58:22.7±0.4, 3°S±5°×14°0E±°, h42^{km}±5^{km}, M4.8/13, mb4.6/13, mB5.4/2, MLv4.9/3, Mw(mB)4.8/2*

*NEIC **05** 17:58:25.5±1.5, 3°.0S±0°.1×139°.3E±0°.1, h54^{km}±10^{km}, mb4.4/14, Error ellipse: s-maj=19.7km s-min=13.9km az=221.0*

ISC 05 17:58:23.7±0.5**, 2°.98S**±0°.06×**139°.48E**±0°.06**, h46^{km}, n58, σ1^{s}96**/52**, mb4.0**/16**, MS4.2**/9**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	Genyem	0.79	61	P	Pn	17 58 36.2	-2.2
GENI				S	Sn	17 58 47.6	-1.6
WAMI	Wamena	1.18	220	P	Pn	17 58 48.4	+4.6
FAKI	Fak Fak	7.22	270	P	Pn	18 00 07.0	+0.3
	0.3nm37nm,1.1s						
SIJI	Sorong	8.47	284	Pn	Pn	18 00 24.3	+0.5
	2.1nm,0.3s,baz=150,slow=23,SNR=6.9						
SIJI				Sn	Sn	18 01 47.5	-11
	baz=136,slow=17,SNR=2.0						
PMG	Port Moresby	9.95	130	Pn	Pn	18 00 42.5	-1.7
	0.7nm,0.3s,baz=310,slow=16,SNR=3.0						
PMG	Port Moresby	9.95	130	Pn	Pn	18 00 48.5	+4.3
LBMI	Labuha	12.19	281	P	P	18 01 34.0	+7.8
MTN	Manton Dam	12.82	220		Pn	18 01 23.8	+0.5
SANI	Sanana	13.51	274	P	Pn	18 01 29.2	-3.6
	36nm,0.7s						
KNRA	Kununurra	16.45	219	P	P	18 02 12.8	-0.7
SOEI	Soe	16.54	245	P	P	18 02 16.2	+1.5
	2µm164nm,1.2s						
SOEI	Soe	16.54	245	P	P	18 02 14.9	+0.2
GUMO	Guam	17.30	18	LR	LR	18 09 08.4	
	comp=Z,524nm,18.3s,baz=202,slow=38						
WB0	Warramunga Arr	17.41	196	Pn	Pn	18 02 23.5	+0.1
WB0				IAmb	IAmb	18 02 45.7	
	comp=Z,24nm,0.9s						
WR0	Warramunga Arr	17.55	196	P	P	18 02 26.5	+0.7
WRAB	Tennant Creek	17.58	196	P	P	18 02 26.2	+0.2
WRAB				IAmb	IAmb	18 02 49.8	
	comp=Z,32nm,0.9s						
WB2	Warramunga Arr	17.59	196	P	P	18 02 27.1	+1.0
WB2				IAmb	IAmb	18 03 12.2	
	comp=Z,31nm,0.9s						
WRA	Warramunga Arr	17.59	196	P	P	18 02 27.2	+1.0
	comp=Z,1.0nm,0.3s,baz=17,slow=12,SNR=41						
WRA				S	Sn	18 05 33.8	-7.0
	baz=11,slow=22,SNR=3.6						
WRA	Warramunga Arr	17.59	196	Pn	Pn	18 02 24.1	-1.5
APSI	Ampana	17.93	276	P	P	18 02 44.0	+14
CTA	Charters Tower	18.25	159	P	P	18 02 33.2	-0.2
	comp=Z,0.1nm,0.3s,baz=352,slow=15,SNR=3.1						
FITZ	Fitzroy Crossi	20.24	221	P	Pn	18 02 57.1	-0.4
	comp=Z,7.0nm,0.8s,baz=44,slow=14,SNR=18						
FITZ				S	S	18 06 36.8	-3.1
	comp=Z,9.6nm,0.8s,baz=172,slow=14,SNR=4.3						
FITZ				LR	LR	18 11 38.4	
	comp=Z,1µm,18.4s,baz=35,slow=39						
FITZ	Fitzroy Crossi	20.24	221	P	P	18 02 55.4	+0.2
FITZ				IAmb	IAmb	18 03 13.0	
	comp=Z,31nm,1.1s						
AS31	Alice Springs	21.26	194	P	P	18 03 07.6	+1.3
ASAR	Alice Springs	21.26	194	P	P	18 03 08.4	+2.2
	comp=Z,3.3nm,0.6s,baz=22,slow=10,SNR=56						
ASAR				S	S	18 06 56.5	-3.7
	comp=Z,2.2nm,0.9s,baz=14,slow=26,SNR=4.0						
ASAR				LR	LR	18 12 00.2	
	comp=Z,925nm,18.9s,baz=20,slow=38						
ASAR	Alice Springs	21.26	194	P	P	18 03 08.0	+1.8
EIDS	Eidsvold	24.91	154	P	P	18 03 44.9	+2.3
TGY	Tagaytay City	25.02	313	LR	LR	18 13 54.8	
	comp=Z,212nm,21.6s,baz=111,slow=38						
STKA	Stephens Creek	28.82	176	P	P	18 04 20.4	+2.8
	comp=Z,3.6nm,1.1s,baz=358,slow=13,SNR=2.3						
STKA				LR	LR	18 17 30.4	
	comp=Z,621nm,18.1s,baz=358,slow=40						
MDSI	Maura Dua	35.25	266	P	P	18 05 13.3	-1.0
	comp=Z,5.4nm,1.0s						
SDSI	Sungai Dareh	38.08	272	P	P	18 05 53.5	+15
RPSI	Rantau Prapat	40.93	278	P	P	18 06 01.2	-0.8
RPSI	Rantau Prapat	40.93	278	P	P	18 06 00.6	-1.5
RPSI				IAmb	IAmb	18 06 19.7	
	comp=Z,12nm,1.1s						
PSI	Prapat	40.94	278	P	P	18 06 01.2	-1.1
	comp=Z,2.0nm,0.4s,baz=74,slow=8.1,SNR=2.0						
WHN	Wuhan	41.06	326	P	P	18 06 03.0	+0.1
KSRS	Korea Array	41.63	346	LR	LR	18 24 12.2	
	comp=Z,106nm,18.1s,baz=151,slow=38						
CMAR	Chiang Mai Arr	45.23	300	P	P	18 06 37.0	+0.2
	comp=Z,0.4nm,0.5s,baz=132,slow=6.8,SNR=5.0						
CMAR	Chiang Mai Arr	45.23	300	P	P	18 06 36.5	-0.4
KLR	Kul'dur	52.43	354	P	P	18 07 31.6	+0.1
	comp=Z,0.5nm,0.5s,baz=166,slow=11,SNR=2.4						
PETK	Petropavlovsk-	57.94	13	P	P	18 08 10.3	-0.9
	comp=Z,2.2nm,0.8s,baz=190,slow=7.3,SNR=4.0						
SONM	Songino Array	58.29	334	P	P	18 08 14.4	+0.6
	comp=Z,0.3nm,0.5s,baz=140,slow=3.4,SNR=2.4						
MK31	Makanchi Array	70.47	322	P	P	18 09 34.0	+0.6
MKAR	Makanchi Array	70.47	322	P	P	18 09 33.9	+0.5
	comp=Z,0.9nm,0.6s,baz=96,slow=7.8,SNR=15						
MAKZ	Makanchi	70.67	322	P	P	18 09 34.7	0.0
MAKZ				IAmb	IAmb	18 10 19.9	
	comp=Z,4.2nm,1.1s						
KSH	Kashi	71.82	313	P	P	18 09 44.5	+2.5
KSH				S	S	18 19 00.9	+1.5
KSH				SKS	ScS	18 19 43.7	-0.5
KSH				pmax	pmax		
	comp=Z,8.0nm,1.4s						
KSH				pmax	pmax		
	comp=Z,160nm,4.5s						
KSH				LR	LR		
	comp=Z,160nm,9.9s						
KSH				LR	LR		
	comp=Z,260nm,11.5s						
KSH				LR	LR		
	comp=Z,140nm,13.7s						
ZALV	Zalesovo Beam	72.55	330	P	P	18 09 45.4	-0.4
	comp=Z,0.6nm,0.5s,baz=123,slow=5.3,SNR=3.0						
VNDA	Vanda	75.45	175	P	P	18 10 03.6	+1.2
	comp=Z,2.0nm,0.9s,baz=326,slow=3.6,SNR=2.9						
KDAK	Kodiak Island	80.94	30	LR	LR	18 41 52.5	
	comp=Z,135nm,21.6s,baz=251,slow=32						
GEYT	Alibeck	85.00	308	P	P	18 10 56.1	+1.5
	comp=Z,0.9nm,0.7s,baz=151,slow=3.3,SNR=3.4						
GEYT	Alibeck	85.00	308	P	P	18 10 54.2	-0.4
ILAR	Eielson Array	85.76	24	P	P	18 10 57.5	-0.2
	comp=Z,1.3nm,1.0s,baz=260,slow=5.1,SNR=7.5						
H02N1	VAN INLET T-PH	91.15	37	T	T	19 52 18.4	
	SNR=22						
H02S1	DAWSON INLET T	91.19	37	T	T	19 52 16.8	
	SNR=70						
YBH	Yreka Blue Hor	97.81	48	LR	LR	18 47 53.7	
	comp=Z,114nm,21.7s,baz=138,slow=30						
SPITS	Spitsbergen Ar	99.38	350	LR	LR	18 56 09.4	
	comp=Z,49nm,21.4s,baz=15,slow=35						
TORD	Torodi Ar. Bea	137.06	286	PKP	PKiKP	18 17 45.2	+0.6
	comp=Z,0.2nm,0.5s,baz=80,slow=1.6,SNR=2.6						
DBIC	Dimbokro	144.28	277	PKP	PKPdf	18 17 55.1	-0.6
	comp=Z,4.9nm,1.0s,baz=0.0,slow=5.1,SNR=3.0						
LPAZ	La Paz	146.67	126	PKPbc	PKPab	18 18 02.9	-0.4
	comp=Z,0.3nm,0.5s,baz=255,slow=2.3,SNR=2.3						

JMA 05 18:15:35.9±0.2**, 38°.25N**×**144°.48E, h43^{km}, M4.1, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.35	292	P	Pn	18 16 13.5	+1.5
OFUJ				S	Sn	18 16 41.4	+1.8
JIKH	Ishinomakikobu	2.37	272	P	Pn	18 16 13.5	+1.2
JIKH				*e*S	Sn	18 16 41.1	+0.9
JKMT	Kesennumamotoy	2.42	284	P	Pn	18 16 14.3	+1.3
JKMT				S	Sn	18 16 43.0	+1.6
MIYJ	Miyakonagasawa	2.46	303	P	Pn	18 16 14.9	+1.4
MIYJ				*e*S	Sn	18 16 43.4	+1.0
JIO	Ouri	2.47	276	P	Pn	18 16 15.0	+1.4
JIO				*e*S	Sn	18 16 43.9	+1.4
JMK	Ichinoseki	2.65	286	P	Pn	18 16 17.8	+1.7
JMK				S	Sn	18 16 49.6	+2.7
JOM	Ohasama	2.77	297	P	Pn	18 16 19.5	+1.7
JOM				S	Sn	18 16 52.3	+2.3
JANG	Nango	3.13	314	P	Pn	18 16 24.3	+1.6
JANG				*e*S	Sn	18 16 59.8	+1.0
JYK	Kaneyama	3.30	283	P	Pn	18 16 27.5	+2.5
JYK				S	Sn	18 17 06.1	+3.1
JFT	Otama	3.36	259	P	Pn	18 16 28.0	+2.1
JFT				S	Sn	18 17 06.6	+2.1
JOT	Ohata	4.09	321	P	Pn	18 16 37.9	+2.0
JOT				*e*S	Sn	18 17 22.8	+0.2
JCH	Churui	4.44	349	P	Pn	18 16 40.4	-0.3
JCH				*e*S	Sn	18 17 28.7	-2.4
JKB	Kayabe	4.49	325	*e*S	Sn	18 17 32.0	-0.4
BSO1	Boso 1	4.57	219	*e*S	Sn	18 17 33.7	+0.3

JRY	**Ryogami san**	**4.98**	**245**	P	Pn	18 16 49.2	+1.0
JRY				*e*S	Sn	18 17 43.3	-1.2
NEM2	**Nemuro 2**	**5.20**	**10**	P	Pn	18 16 48.5	-2.6
NEM2				*e*S	Sn	18 17 43.5	-6.2
MAT	**Matsushiro**	**5.28**	**253**	P	Pn	18 16 55.4	+3.2
MAT				S	Sn	18 17 52.5	+0.7
JTKR	**Abashiri--Toko**	**5.73**	**356**	P	Pn	18 16 58.0	-0.4
JTKR				*e*S	Sn	18 17 59.4	-3.4
JHR	**Hokuryu**	**5.87**	**340**	P	Pn	18 17 02.5	+2.2
JHR				*e*S	Sn	18 18 07.3	+1.0

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*IDC **05** 18:25:28.6±1.7, 42°.54N×126°.53W, h0^{km}, mb3.5/5, mb1 3.7/8, mb1mx3.5/60, mbtmp3.4/8, ML3.2/3, MS3.1/4, Ms1 3.1/4, ms1mx2.8/42, Error ellipse: s-maj=42.1km s-min=13.0km az=34.0*

*NEIC **05** 18:25:28.6±1.1, 42°.25N±0°.02×126°.8W±0°.1, h10^{km}±2^{km}, mb3.4/7, Error ellipse: s-maj=18.5km s-min=4.0km az=271.0*

ISC 05 18:25:29.0±1.1**, 42°.27N**±0°.07×**126°.7W**±0°.1**, h10**^{km}**, n37, σ1^{s}17**/31**, mb3.5**/7**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBO	**Bosley Butte**	**1.87**	**91**	Pn	**Pn**	**18 26 00.5**	**-0.7**
KEBM	**Edson Butte**	**1.88**	**70**	Pn	**Pn**	**18 26 00.6**	**-0.7**
KRMB	**Red Mountain**	**2.24**	**108**	Pn	**Pn**	**18 26 05.9**	**-0.4**
JCC	**Jacoby Creek,**	**2.50**	**125**	Pn	**Pn**	**18 26 09.4**	**-0.3**
HUMO	**Hull Mountain**	**2.82**	**82**		**Pn**	**18 26 13.9**	**-0.3**
YBH	**Yreka Blue Hor**	**3.05**	**99**	Pn	**Pn**	**18 26 17.1**	**-0.3**
	0.4nm,0.3s,baz=275,slow=14,SNR=5.5						
YBH				Sn	**Sn**	**18 26 53.6**	**-0.5**
	0.3nm,0.3s,baz=46,slow=7.8,SNR=3.2						
YBH				LR	LR	18 27 22.2	
	comp=Z,172nm,20.4s,baz=302,slow=38						
KMRM	**Mail Ridge**	**3.07**	**131**	Pn	**Pn**	**18 26 17.9**	**+0.3**
H04A	**Detroit Lake**	**4.10**	**52**		**Pn**	**18 26 31.8**	**0.0**
ORV	**Oroville**	**4.81**	**123**		**Pn**	**18 26 41.7**	**+0.2**
I07A	**Izee**	**5.59**	**69**		**Pn**	**18 26 53.7**	**+1.3**
LON	**Longmire**	**5.70**	**37**		**Pn**	**18 26 54.2**	**+0.4**
LTY	**Liberty**	**6.60**	**39**	Pn	**Pn**	**18 27 06.6**	**+0.4**
RYN	**Ryan**	**7.24**	**117**		**Pn**	**18 27 14.2**	**-0.9**
NVAR	**Mina Array Bea**	**7.50**	**118**	Pn	**Pn**	**18 27 20.9**	**+2.3**
	0.1nm,0.3s,baz=296,slow=15,SNR=3.1						
NVAR				LR	LR	18 30 22.1	
	comp=Z,221nm,20.2s,baz=304,slow=39						
F10A	**Beach Ranch, E**	**7.78**	**58**	Pn	**Pn**	**18 27 23.2**	**+0.8**
ELK	**Elko**	**8.77**	**96**	LR	LR	18 31 20.2	
	comp=Z,174nm,20.3s,baz=316,slow=41						
PD31	**Pinedale Array**	**12.69**	**82**		**Pn**	**18 28 31.7**	**+1.9**
PDAR	**Pinedale Array**	**12.69**	**82**	Pn	**Pn**	**18 28 31.2**	**+1.5**
	0.1nm,0.3s,baz=274,slow=18,SNR=2.2						
W18A	**Petrified Fore**	**15.06**	**113**	Pn	**Pn**	**18 28 59.8**	**-2.3**
SDCO	**Great Sand Dun**	**16.88**	**98**		**P**	**18 29 26.6**	**-1.1**
DGMT	**Dagmar**	**16.98**	**61**	P	**P**	**18 29 28.6**	**+0.1**
319A	**Douglas**	**17.67**	**122**	P	**P**	**18 29 38.8**	**+2.4**
FFC	**Flin Flon**	**20.48**	**44**	P	**P**	**18 30 07.6**	**+0.9**
YKA	**Yellowknife Ar**	**21.50**	**15**	P	**P**	**18 30 17.2**	**-0.5**
	4.1nm,0.9s,baz=202,slow=11,SNR=26						
TX31	**Lajitas Ar. Si**	**22.65**	**117**	P	**P**	**18 30 30.3**	**0.0**
TX31				IAmb	IAmb	18 30 49.8	
	comp=Z,1.3nm,0.9s						
TX32	**Lajitas Array**	**22.65**	**117**	P	**P**	**18 30 30.0**	**-0.4**
TX32				IAmb	IAmb	18 30 49.8	
	comp=Z,1.6nm,1.1s						
TXAR	**Lajitas Array**	**22.65**	**117**	P	**P**	**18 30 33.2**	**+2.9**
	comp=Z,0.4nm,0.7s,baz=304,slow=9.6,SNR=4.6						
TXAR				LR	LR	18 39 57.8	
	comp=Z,35nm,21.9s,baz=0.0,slow=38						
TXAR	**Lajitas Array**	**22.65**	**117**	P	**P**	**18 30 30.2**	**-0.2**
ILAR	**Eielson Array**	**25.30**	**340**	P	**P**	**18 30 55.1**	**-0.3**
	comp=Z,0.8nm,1.0s,baz=154,slow=8.6,SNR=5.2						
H11N3	**WAKE ISLAND Hy**	**59.65**	**270**	T	T	19 39 58.7	
	baz=51,slow=75,SNR=27						
H11N2	**WAKE ISLAND Hy**	**59.65**	**270**	T	T	19 40 02.9	
	baz=51,slow=75,SNR=16						
H11N1	**WAKE ISLAND Hy**	**59.67**	**270**	T	T	19 40 03.0	
	baz=51,slow=75,SNR=18						
H11S1	**WAKE ISLAND Hy**	**60.55**	**269**	T	T	19 41 06.3	
	baz=50,slow=75,SNR=11						
H11S2	**WAKE ISLAND Hy**	**60.56**	**269**	T	T	19 41 07.2	
	baz=50,slow=75,SNR=10.0						
H11S3	**WAKE ISLAND Hy**	**60.57**	**269**	T	T	19 41 09.1	
	baz=50,slow=75,SNR=6.5						
SONM	**Songino Array**	**78.75**	**327**	P	**P**	**18 37 31.5**	**-0.2**
	comp=Z,0.6nm,1.0s,baz=49,slow=2.9,SNR=3.1						
BVAR	**Borovoye Array**	**83.94**	**350**	P	**P**	**18 37 58.4**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=22,slow=4.8,SNR=6.2						

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*NEIC **05** 18:25:46.0±1.8, 13°.6N±0°.1×90°.66W±0°.08, h56^{km}±27^{km}, Error ellipse: s-maj=21.2km s-min=7.3km az=204.0*

*GCG **05** 18:25:47.2±0.4, 13°.63N×90°.72W, h28^{km}±2^{km}, MD3.7*

*SNET **05** 18:25:48.9±0.9, 13°.75N×90°.47W, h31^{km}±12^{km}, ML3.5*

*UCR **05** 18:25:49.1±1.1, 13°.75N×90°.46W, h31^{km}±14^{km}, ML3.6, mb3.5(NEIC)*

ISC 05 18:25:45.7±1.8**, 13°.58N**±0°.08×**90°.64W**±0°.05**, h31**^{km}±14^{km}**, n27, σ1^{s}42**/36**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IXG	**Ixpaco**	**0.62**	**18**	*e*P	**Pb**	**18 25 58.6**	**+0.3**
IXG	**Ixpaco**	**0.62**	**18**	*e*P	**Pb**	**18 25 58.6**	**+0.3**
IXG	**Ixpaco**	**0.62**	**18**	*e*P	**Pn**	**18 25 59.6**	**+1.0**
PCG	**Pacaya**	**0.81**	**2**	*e*P	**Pn**	**18 26 02.2**	**+0.9**
FUG	**Fuego 3**	**0.88**	**347**	*e*P	**Pn**	**18 26 03.2**	**+1.0**
CEVE	**Cerro Verde**	**1.02**	**76**	*e*P	**Pn**	**18 26 04.6**	**+0.4**
CEVE				*e*S	**Sb**	**18 26 18.3**	**0.0**
CEVE				IAML		18 26 22.2	
	comp=Z,2μm,0.2s						
CEVE	**Cerro Verde**	**1.02**	**76**	*e*P	**Pn**	**18 26 04.6**	**+0.4**
CEVE				*e*S	**Sb**	**18 26 18.3**	**0.0**
CEVE				IAML		18 26 22.2	
	comp=Z,2μm,0.2s						
NBG	**Las Nubes**	**1.04**	**16**	*e*P	**Pb**	**18 26 06.5**	**+1.1**
NBG				*e*S	**Sb**	**18 26 21.5**	**+2.6**
LALI	**Alcalda de L**	**1.29**	**94**	*e*S	**Sn**	**18 26 23.9**	**0.0**
LALI	**Alcalda de L**	**1.29**	**94**	*e*S	**Sn**	**18 26 23.9**	**0.0**
SNET	**Serv Nac Est T**	**1.38**	**85**	Pn	**Pn**	**18 26 09.5**	**+0.6**
STG3	**Santiaguito 3,**	**1.44**	**321**	*e*P	**Pn**	**18 26 10.9**	**+1.0**
MTO3	**Montecristo**	**1.49**	**57**	*e*P	**Pn**	**18 26 10.8**	**+0.2**
MTO3				*e*S	**Sb**	**18 26 27.8**	**-3.8**
MTO3	**Montecristo**	**1.49**	**57**	*e*P	**Pn**	**18 26 10.8**	**+0.2**
MTO3				*e*S	**Sb**	**18 26 27.8**	**-3.8**
LFRS	**El Faro**	**1.54**	**88**	*e*P	**Pn**	**18 26 12.1**	**+0.9**
LFRS				*e*S	**Sb**	**18 26 30.7**	**-2.2**
COEG	**Centro de Oper**	**1.71**	**88**	*e*P	**Pn**	**18 26 15.0**	**+1.4**
COEG	**Centro de Oper**	**1.71**	**88**	*e*P	**Pn**	**18 26 15.0**	**+1.4**
MRL	**Marmol**	**1.76**	**32**	*e*P	**Pn**	**18 26 14.8**	**+0.5**
MRL	**Marmol**	**1.76**	**32**	*e*P	**Pn**	**18 26 14.8**	**+0.5**
THIG		**2.05**	**310**		**Pn**	**18 26 17.3**	**-0.8**
THIG					**Sn**	**18 26 40.7**	**-2.0**
LCND	**La Caada**	**2.69**	**95**	*e*P	**Pn**	**18 26 28.3**	**+1.4**
LCND	**La Caada**	**2.69**	**95**	*e*P	**Pn**	**18 26 28.3**	**+1.4**
CCIG	**Comitan**	**3.05**	**332**	Pn	**Pn**	**18 26 32.2**	**+0.2**
CSGN	**Cosiguina Volc**	**3.06**	**101**		**Pn**	**18 26 32.8**	**+0.7**
PCIG		**3.27**	**311**		**Pn**	**18 26 35.3**	**+0.5**
PCIG					**Sn**	**18 27 12.1**	**-0.6**
CMIG	**Matias Romero**	**5.38**	**311**		**Pn**	**18 27 05.2**	**+1.3**
CMIG					**Sn**	**18 28 04.1**	**-0.7**
TEIG	**Tepich**	**6.99**	**19**	Pn	**Pn**	**18 27 27.1**	**+1.1**

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*IDC **05** 18:37:36.1±5.2, 36°.31N×70°.41E, h197^{km}±43^{km}, mb3.0/7, mb1 3.1/11, mb1mx2.9/62, mbtmp3.6/11, Error ellipse: s-maj=40.7km s-min=21.6km az=36.0*

*NNC **05** 18:37:45.2±5.7, 37°.19N×69°.98E, h246^{km}±73^{km}, mb2.5, mpv3.6, Error ellipse: s-maj=60.2km s-min=34.1km az=5.0*

ISC 05 18:37:37.7±1.1**, 36°.5N**±0°.1×**70°.3E**±0°.1**, h200**^{km}**, n24, σ1^{s}80**/29**, mb3.2**/6**, 3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**6.18**	**24**	P	**Pn**	**18 39 08.8**	**+1.2**
	SNR=60						
KK31	**Karatay Array**	**6.56**	**2**	P	**Pn**	**18 39 12.9**	**+0.8**
	1.0nm,0.2s,baz=193,slow=14,SNR=96						
KK31				S	**Sn**	**18 40 21.2**	**-5.8**
	1.0nm,0.3s,baz=189,slow=17,SNR=4.6						
UCH	**Uchtor**	**6.56**	**29**	P	**Pn**	**18 39 13.9**	**+1.4**
	SNR=22						
EKS2	**Erkin-Say**	**6.69**	**23**	P	**Pn**	**18 39 15.4**	**+1.5**
	SNR=19						
KZA	**Kyzart**	**6.75**	**33**	P	**Pn**	**18 39 16.2**	**+1.2**
	SNR=10						
AAK	**Ala-Archa**	**6.91**	**27**	P	**Pn**	**18 39 18.3**	**+1.5**
	2.2nm,0.3s,baz=163,slow=5.7,SNR=37						
AAK				S	**Sn**	**18 40 36.2**	**+0.7**
	1.0nm,0.3s,baz=318,slow=22,SNR=12						
AAK	**Ala-Archa**	**6.91**	**27**	P	**Pn**	**18 39 18.2**	**+1.5**
	SNR=9.1						
AAK	**Ala-Archa**	**6.91**	**27**	⇓P	**Pn**	**18 39 18.2**	**+1.4**
	5.6nm,0.6s						
AAK				⇓S	**Sn**	**18 40 35.8**	**+0.3**
	10nm,0.6s						
KBK	**Karagaybulak**	**7.10**	**29**	P	**Pn**	**18 39 21.0**	**+1.7**
	SNR=6.7						
ULHL	**Ulahol**	**7.34**	**37**	P	**Pn**	**18 39 23.7**	**+1.3**
	SNR=6.9						
USP	**Ospenovka**	**7.46**	**25**	P	**Pn**	**18 39 25.1**	**+1.2**
	SNR=5.3						
MAKZ	**Makanchi**	**13.47**	**37**	⇓P	**Pn**	**18 40 41.4**	**+0.5**
	1.9nm,0.5s						
MK31	**Makanchi Array**	**13.61**	**37**	P	**Pn**	**18 40 43.1**	**+0.4**
	0.7nm,0.6s,baz=227,slow=14,SNR=11						
MKAR	**Makanchi Array**	**13.61**	**37**	P	**Pn**	**18 40 42.8**	**+0.1**
	0.1nm,0.3s,baz=238,slow=10,SNR=10						
MKAR				S	**S**	**18 43 12.6**	**-1.6**
	0.3nm,0.3s,baz=190,slow=20,SNR=10						
AB31	**Akbulak array**	**14.77**	**333**	P	**Pn**	**18 40 56.3**	**-0.6**
	0.3nm,0.4s,baz=148,slow=13,SNR=19						
AKTO	**Aktyubinsk**	**16.46**	**331**	P	**P**	**18 41 17.3**	**+0.8**
	0.2nm,0.3s,baz=146,slow=15,SNR=2.1						
BVAR	**Borovoye Array**	**16.49**	**0**	P	**Pn**	**18 41 17.8**	**+0.2**
	0.4nm,0.3s,baz=156,slow=11,SNR=12						
ZALV	**Zalesovo Beam**	**20.13**	**26**	P	**P**	**18 41 56.8**	**+0.6**
	0.6nm,0.4s,baz=210,slow=10,SNR=4.3						
SONM	**Songino Array**	**28.80**	**56**	P	**P**	**18 43 17.6**	**+0.5**
	0.2nm,0.5s,baz=271,slow=9.3,SNR=3.3						
ARCES	**ARCESS Array B**	**40.89**	**338**	P	**P**	**18 45 01.0**	**+1.2**
	1.6nm,0.8s,baz=111,slow=8.8,SNR=2.5						
HFS	**Hagfors**	**42.67**	**322**	P	**P**	**18 45 14.9**	**+0.5**
	1.0nm,0.7s,baz=92,slow=11,SNR=2.8						
YKA	**Yellowknife Ar**	**81.23**	**2**	P	**P**	**18 49 30.4**	**-0.5**
	0.1nm,0.4s,baz=354,slow=5.8,SNR=4.0						
YKA				pP	**pP**	**18 50 22.9**	**+3.0**
	0.3nm,0.6s,baz=354,slow=5.5,SNR=3.5						
WRA	**Warramunga Arr**	**82.51**	**121**	P	**P**	**18 49 35.3**	**-2.8**
	0.2nm,0.7s,baz=323,slow=4.6,SNR=2.8						
ASAR	**Alice Springs**	**84.76**	**124**	P	**P**	**18 49 47.1**	**-2.5**
	0.2nm,0.6s,baz=322,slow=5.9,SNR=3.5						

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*IDC **05** 18:40:25.6±3.9, 38°.08N×20°.24E, h0^{km}, mb3.5/2, mb1 3.5/5, mb1mx3.2/66, mbtmp3.3/5, ML3.0/3, Error ellipse: s-maj=67.3km s-min=28.8km az=52.0*

*THE **05** 18:40:27.8, 38°.14N×20°.44E, h16^{km}, ML3.4/3, Error ellipse: s-maj=1.6km s-min=0.5km az=59.0*

ISC 05 18:40:27.5±1.6**, 38°.10N**±0°.08×**20°.41E**±0°.10**, h11**^{km}**, n10, σ1^{s}51**/14**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.16**	**60**	P	**Pg**	**18 40 31.4**	**+0.3**
VLS				S	**Sg**	**18 40 34.0**	**+0.4**
	45μm,0.1s						
KFL	**Anninata**	**0.30**	**88**	P	**Pg**	**18 40 33.6**	**+0.1**
KFL				S	**Sg**	**18 40 38.2**	**+0.7**
	11μm,0.4s						
FSK	**Fiskardo**	**0.38**	**18**	P	**Pg**	**18 40 34.5**	**-0.5**
FSK				S	**Sg**	**18 40 39.8**	**-0.3**
	5μm,0.3s						
EVGI	**Lefkada island**	**0.56**	**20**	P	**Pg**	**18 40 37.6**	**-0.7**
TRIZ	**Trizonia**	**1.33**	**78**	P	**Pn**	**18 40 50.6**	**-1.4**
IDI	**Anoyia**	**4.56**	**127**	Pn	**Pn**	**18 41 37.0**	**+0.5**
	0.1nm,0.3s,baz=163,slow=19,SNR=2.1						
IDI				Sn	**Sn**	**18 42 25.6**	**-3.9**
	0.4nm,0.3s,baz=236,slow=16,SNR=1.7						
MLR	**Muntele Rosu**	**8.46**	**27**	Pn	**Pn**	**18 42 31.8**	**+1.7**
	0.0nm,0.3s,baz=332,slow=18,SNR=1.7						
GERES	**GERESS Array B**	**11.79**	**338**	Pn	**Pn**	**18 43 15.8**	**+0.2**
	0.1nm,0.3s,baz=153,slow=15,SNR=1.8						
MKAR	**Makanchi Array**	**45.42**	**58**	P	**P**	**18 48 46.3**	**+0.2**
	0.3nm,0.6s,baz=285,slow=8.9,SNR=1.6						
ZALV	**Zalesovo Beam**	**45.81**	**48**	P	**P**	**18 48 50.8**	**+1.7**
	0.5nm,0.5s,baz=276,slow=7.3,SNR=2.5						

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*IDC **05** 18:42:02.0±0.9, 38°.33N×20°.54E, h0^{km}, mb3.6/9, mb1 3.7/17, mb1mx3.6/67, mbtmp3.6/17, ML3.6/5, Error ellipse: s-maj=17.9km s-min=14.8km az=41.0*

*ATH **05** 18:42:02.8, 38°.14N×20°.42E, h16^{km}, ML3.9/12, Error ellipse: s-maj=1.7km s-min=0.8km az=250.0*

*MOS **05** 18:42:03.5±2.0, 38°.37N×20°.18E, h12^{km}, mb4.3/3, Error ellipse: s-maj=11.7km s-min=8.7km az=79.4*

*THE **05** 18:42:03.4, 38°.15N×20°.42E, h10^{km}, ML4.1/8, Error ellipse: s-maj=0.9km s-min=0.3km az=57.0*

*PDG **05** 18:42:04.6±0.7, 38°.18N×20°.25E, h31^{km}±2^{km}, ML4.1/11, Error ellipse: s-maj=2.0km s-min=1.6km az=90.0*

ISC 05 18:42:03.7±0.6**, 38°.20N**±0°.02×**20°.41E**±0°.03**, h15**^{km}±3^{km}**, n153, σ2^{s}08**/185**, mb3.8**/11**, 11C-23D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LXRA	**Lixouri, Kepha**	**0.02**	**93**	P	**Pg**	**18 42 05.9**	**-0.5**
LXRA				S	**Sg**	**18 42 08.1**	**-0.1**
KEF4	**Livadi, Kephal**	**0.06**	**14**	P	**Pg**	**18 42 06.4**	**-0.2**
KEF4				S	**Sg**	**18 42 09.0**	**+0.5**
ARGA	**Argostoli. Kep**	**0.06**	**113**	P	**Pg**	**18 42 05.7**	**-0.9**
ARGA				S	**Sg**	**18 42 07.7**	**-0.8**
KEF2	**Argostoli. Kep**	**0.07**	**120**	P	**Pg**	**18 42 05.7**	**-1.0**
KEF2				S	**Sg**	**18 42 07.5**	**-1.1**
KEF1	**Kardakata, Kep**	**0.09**	**34**	P	**Pg**	**18 42 06.6**	**-0.3**
KEF1				S	**Sg**	**18 42 09.4**	**+0.4**
VLS	**Valsamata**	**0.15**	**99**	P	**Pg**	**18 42 06.6**	**-1.0**
VLS				S	**Sg**	**18 42 09.0**	**-1.2**
	590μm,0.4s						
VLS	**Valsamata**	**0.15**	**99**	P	**Pg**	**18 42 06.5**	**-1.0**
VLS				S	**Sg**	**18 42 09.3**	**-0.8**
KONA	**Konidatara, Ke**	**0.26**	**30**	P	**Pb**	**18 42 09.3**	**-0.8**
KONA				S	**Sg**	**18 42 14.3**	**+1.2**
KONA				AML	AML	18 42 15.4	
KONA				AML	AML	18 42 16.2	
FSK	**Fiskardo**	**0.28**	**25**	P	**Pb**	**18 42 09.7**	**-0.8**
FSK				S	**Sg**	**18 42 14.9**	**+1.0**
	28μm,0.5s						
FSK	**Fiskardo**	**0.28**	**25**	P	**Pb**	**18 42 09.7**	**-0.8**
FSK				S	**Sg**	**18 42 15.0**	**+1.0**
FSK				AML	AML	18 42 15.9	
	comp=N,50849μm,0.5s						
FSK				AML	AML	18 42 17.5	
	comp=E,55615μm,0.3s						
KFL	**Anninata**	**0.31**	**107**	P	**Pg**	**18 42 09.1**	**-1.2**
KFL				S	**Sg**	**18 42 13.8**	**-0.9**
	comp=E,192μm,0.4s						
KFL	**Anninata**	**0.31**	**107**	P	**Pg**	**18 42 09.1**	**-1.2**
KFL				S	**Sg**	**18 42 13.8**	**-0.9**
KFL				AML	AML	18 42 14.3	
KFL				AML	AML	18 42 14.7	
VLMS	**Volimes, Zakyn**	**0.38**	**148**	P	**Pg**	**18 42 09.8**	**-1.7**
VLMS				S	**Sg**	**18 42 14.9**	**-1.9**
VLMS				AML	AML	18 42 16.0	
VLMS				AML	AML	18 42 17.1	
EVGI	**Lefkada island**	**0.46**	**25**	P	**Pb**	**18 42 12.8**	**-0.7**
EVGI				S	**Sb**	**18 42 20.7**	**+0.5**
MGNA	**Meganis**	**0.55**	**34**	P	**Pb**	**18 42 14.1**	**-0.8**
MGNA				S	**Sb**	**18 42 22.2**	**-0.3**
MGNA				AML	AML	18 42 26.5	
	comp=N,11641μm,0.4s						
MGNA				AML	AML	18 42 28.2	
	comp=E,13693μm,0.5s						
LKD2	**Lefkada island**	**0.62**	**19**	P	**Pn**	**18 42 15.9**	**-2.1**
LKD2				S	**Sb**	**18 42 25.9**	**+1.2**
	comp=E,7μm,0.6s						
LKD2	**Lefkada island**	**0.62**	**19**	P	**Pn**	**18 42 15.7**	**-2.3**
TSLK	**Tsoukalades, L**	**0.65**	**17**	P	**Pn**	**18 42 16.6**	**-1.8**
TSLK				S	**Sn**	**18 42 27.1**	**-1.3**
	comp=E,9μm,0.5s						
VTN	**Vitineika**	**0.68**	**115**	P	**Pg**	**18 42 15.8**	**-1.1**
VTN				S	**Sg**	**18 42 25.4**	**-0.5**
PDO	**Prodromos**	**0.73**	**57**	P	**Pb**	**18 42 17.3**	**-0.8**
PDO	**Prodromos**	**0.73**	**57**	P	**Pb**	**18 42 17.2**	**-0.8**
RLS	**Riolos of Patr**	**0.85**	**99**	P	**Pg**	**18 42 18.7**	**-1.5**
RLS				S	**Sg**	**18 42 31.1**	**-0.2**
	comp=E,11μm,0.4s						
RLS	**Riolos of Patr**	**0.85**	**99**	P	**Pg**	**18 42 18.7**	**-1.5**
PVO	**Paravola**	**0.97**	**64**	P	**Pn**	**18 42 21.9**	**-0.9**
PVO				S	**Sn**	**18 42 36.2**	**-0.1**
	comp=E,7μm,0.4s						
PVO	**Paravola**	**0.97**	**64**	P	**Pn**	**18 42 21.7**	**-1.1**
DRO	**Drossia**	**1.06**	**103**	P	**Pb**	**18 42 22.6**	**-1.1**
DRO				S	**Sb**	**18 42 38.0**	**+0.6**
	comp=E,13μm,0.3s						
DRO	**Drossia**	**1.06**	**103**	P	**Pb**	**18 42 22.1**	**-1.6**
DRO				AML	AML	18 42 41.8	
	comp=N,26280μm,0.3s						
DRO				AML	AML	18 42 42.6	
	comp=E,25762μm,0.3s						
AMT	**Artemida-Makis**	**1.23**	**123**	P	**Pn**	**18 42 25.4**	**-0.9**
AMT	**Artemida-Makis**	**1.23**	**123**	P	**Pn**	**18 42 25.5**	**-0.8**
AMT				AML	AML	18 42 52.7	
	comp=E,10544μm,0.8s						
AMT				AML	AML	18 42 52.9	
	comp=N,11007μm,0.9s						
LAKA	**Lakka**	**1.24**	**88**	P	**Pn**	**18 42 25.2**	**-1.3**
LAKA				AML	AML	18 42 48.3	
	comp=E,9595μm,0.5s						
LAKA				AML	AML	18 42 51.5	
	comp=N,10747μm,0.8s						
EVR	**Evrytania**	**1.31**	**57**	P	**Pg**	**18 42 27.4**	**-1.6**
EVR	**Evrytania**	**1.31**	**57**	P	**Pg**	**18 42 27.2**	**-1.8**
EVR				AML	AML	18 42 54.9	
	comp=N,3995μm,0.8s						
EVR				AML	AML	18 42 58.7	
	comp=E,4505μm,0.7s						
TRIZ	**Trizonia**	**1.32**	**82**	P	**Pn**	**18 42 26.8**	**-0.8**
TRIZ	**Trizonia**	**1.32**	**82**	P	**Pn**	**18 42 26.6**	**-0.9**
IGT	**Igoumenitsa**	**1.33**	**358**	P	**Pg**	**18 42 28.3**	**-1.0**
IGT	**Igoumenitsa**	**1.33**	**358**	P	**Pg**	**18 42 28.5**	**-0.9**
ALIK	**Aliki, Aigiali**	**1.34**	**87**	P	**Pn**	**18 42 27.5**	**-0.4**
KALE	**Kalithea**	**1.38**	**82**	P	**Pn**	**18 42 27.7**	**-0.7**
KALE	**Kalithea**	**1.38**	**82**	P	**Pn**	**18 42 27.6**	**-0.8**
KALE				AML	AML	18 42 54.7	
	comp=E,5220μm,0.6s						
KALE				AML	AML	18 42 55.9	
	comp=N,6002μm,0.5s						
KLV	**Kalavryta, Ach**	**1.38**	**96**	P	**Pn**	**18 42 28.0**	**-0.5**
KLV				S	**Sn**	**18 42 46.8**	**+0.2**
KLV	**Kalavryta, Ach**	**1.38**	**96**	P	**Pn**	**18 42 28.1**	**-0.5**
JAN	**Janina**	**1.49**	**13**	P	**Pg**	**18 42 33.1**	**+0.6**
MAKR	**Makrakomi, Fth**	**1.58**	**59**	P	**Pg**	**18 42 32.7**	**-1.3**
ITM	**Ithomi**	**1.58**	**130**	P	**Pn**	**18 42 30.9**	**-0.3**
ITM				AML	AML	18 42 57.3	
	comp=E,3341μm,0.4s						
ITM				AML	AML	18 43 07.4	
	comp=N,3920μm,0.9s						
KASA	**Kassiopi**	**1.59**	**347**	P	**Pg**	**18 42 32.5**	**-1.7**
DLFA	**Delphi**	**1.67**	**80**	P	**Pb**	**18 42 33.8**	**-0.2**
AGG	**Agios Georgios**	**1.72**	**61**	P	**Pg**	**18 42 34.8**	**-1.9**
AGG				AML	AML	18 43 10.6	
	comp=E,3436μm,0.9s						
AGG				AML	AML	18 43 13.4	
	comp=N,2995μm,0.5s						
PROD	**Prodromos**	**1.96**	**88**	P	**Pb**	**18 42 37.7**	**-1.5**
LOUT	**Loutraki**	**2.04**	**95**	P	**Pn**	**18 42 38.2**	**+0.8**
PENT	**Pentalofos**	**2.07**	**16**	P	**Pg**	**18 42 40.5**	**-3.0**
LKR	**Lokris**	**2.08**	**77**	P	**Pb**	**18 42 39.9**	**-1.3**
DID	**Didima**	**2.34**	**106**	P	**Pn**	**18 42 43.0**	**+1.3**
NEO	**Neokhori**	**2.46**	**63**	P	**Pb**	**18 42 45.2**	**-2.4**
OHR	**Ohrid**	**2.92**	**6**	*i* Pn	**Pb**	**18 42 52.6**	**-2.9**
TIP	**Timpagrande**	**3.02**	**290**	⇑P	**Pn**	**18 42 52.1**	**+1.1**
TIP				⇑S	**Sn**	**18 43 27.6**	**+0.8**
TIR	**Tirane**	**3.17**	**353**	⇓P	**Pb**	**18 42 54.9**	**-4.8**
VAY	**Valandovo**	**3.53**	**27**	*e*P	**Pb**	**18 43 02.6**	**-3.3**
VAY	**Valandovo**	**3.53**	**27**	*i* Pn	Pb	18 43 00.8	-5.1
STIP	**Stip**	**3.75**	**21**	*i* Pn	**Pb**	**18 43 05.0**	**-4.5**
MATE	**Matera**	**3.77**	**312**	⇑P	**Pn**	**18 43 02.5**	**+1.3**
SG1	**Sgolgore (BA)**	**3.91**	**314**	*e*Pn	**Pn**	**18 43 03.9**	**+0.8**
SG1				Sn	**Sn**	**18 43 48.7**	**0.0**
BAI	**Bari**	**3.98**	**318**	*e*Pn	**Pn**	**18 43 04.5**	**+0.4**
BAI				(Sn)	**Sn**	**18 43 50.5**	**+0.1**
DRME	**Dracevica, Mon**	**4.09**	**347**	*e*Pn	**Pn**	**18 43 06.0**	**+0.4**
KKB	**Krupnik**	**4.20**	**28**	*e*P	Pb	18 43 10.7	-6.5
APE	**Apeiranthos**	**4.22**	**104**	⇓P	**Pb**	**18 43 13.6**	**-4.0**
APE				⇑S	**Sb**	**18 44 06.4**	**-2.1**
APE	**Apeiranthos**	**4.22**	**104**	⇓*e*P	Pn	18 43 12.7	+5.2
MMB	**Musomiste**	**4.24**	**36**	*e*P	Pb	18 43 11.8	-6.1
PDG	**Podgorica**	**4.32**	**349**	⇓P	**Pn**	**18 43 10.6**	**+1.9**
PDG				⇑S	**Sn**	**18 44 00.1**	**+1.4**
PDG	**Podgorica**	**4.32**	**349**	*e*Pn	**Pn**	**18 43 09.2**	**+0.5**
HCY	**Herceg Novi**	**4.49**	**342**	*e*Pn	**Pn**	**18 43 10.3**	**-0.8**
IDI	**Anoyia**	**4.63**	**128**	Pn	**Pn**	**18 43 13.0**	**-0.1**
	baz=322,slow=19,SNR=2.0						
IDI				Sn	**Sn**	**18 44 05.5**	**-1.1**
	comp=N,4.6nm,0.3s,baz=302,slow=21,SNR=7.4						
TREB	**Trebinje**	**4.78**	**341**	*e*Pn	**Pn**	**18 43 14.4**	**-0.7**
VAE	**Valguarnera**	**4.80**	**263**	Pn	**Pn**	**18 43 18.4**	**+3.0**
	comp=N,0.8nm,0.3s,baz=22,slow=11,SNR=2.0						
VAE				Sn	**Sn**	**18 44 11.6**	**+0.7**
	comp=N,2.1nm,0.3s,baz=37,slow=20,SNR=3.3						
RZN	**Rozhen**	**4.80**	**42**	*e*P	**Pn**	**18 43 17.8**	**+2.2**
BRY	**Bratogost**	**4.91**	**344**	*e*Pn	**Pn**	**18 43 15.8**	**-1.2**
VTS	**Vitosha**	**4.91**	**25**	⇓P	**Pn**	**18 43 19.9**	**+2.8**
VTS				⇓S	**Sn**	**18 44 17.6**	**+3.9**
VTS	**Vitosha**	**4.91**	**25**	*e*P	**Pn**	**18 43 19.6**	**+2.5**
STON	**Ston**	**5.10**	**337**	*e*Pn	**Pn**	**18 43 19.0**	**-0.5**
UPM	**Unac-Piva**	**5.12**	**348**	*e*Pn	**Pn**	**18 43 20.5**	**+0.5**
KDZ	**Kurdzhali**	**5.17**	**47**	*e*P	**Pn**	**18 43 19.6**	**-0.8**
RUDO	**Rudo**	**5.47**	**352**	*e*Pn	Pn	18 43 28.6	+4.0
BBLS	**Lazići**	**5.71**	**353**	*e*Pn	**Pn**	**18 43 28.3**	**+0.3**
DIVS	**Divibare**	**5.90**	**357**	*e*Pn	**Pn**	**18 43 29.7**	**-0.9**
HAPS	**Han Pijesak,Bl**	**5.98**	**350**	*e*Pn	**Pn**	**18 43 30.9**	**-0.8**
PLVB	**Pleven**	**6.09**	**30**	⇑P	**Pn**	**18 43 35.5**	**+2.5**
ELND	**Elena**	**6.29**	**40**	⇓P	**Pn**	**18 43 39.0**	**+3.1**
MDVR	**Moldovita**	**6.65**	**8**	⇓P	**Pn**	**18 43 43.0**	**+2.1**
MGRS	**Mrkonjic Grad**	**6.69**	**339**	*e*Pn	**Pn**	**18 43 42.7**	**+1.3**
HERR	**Herculane**	**6.84**	**12**	⇑P	**Pn**	**18 43 45.6**	**+2.2**
FRGS	**Fruska Gora**	**6.96**	**357**	*e*Pn	Pn	18 43 39.7	-5.4
BLY	**Banja Luka**	**6.97**	**341**	⇓P	**Pn**	**18 43 46.5**	**+1.3**
BLY	**Banja Luka**	**6.97**	**341**	*e*Pn	**Pn**	**18 43 45.2**	**0.0**
GZR	**Gura Zlata**	**7.40**	**13**	⇓P	**Pn**	**18 43 53.9**	**+2.8**
BZS	**Buzias**	**7.46**	**7**	⇑P	**Pn**	**18 43 54.2**	**+2.2**
DEV	**Deva**	**7.90**	**13**	⇓P	**Pn**	**18 43 59.8**	**+1.9**
VOIR		**8.02**	**24**	⇓P	**Pn**	**18 44 01.8**	**+2.2**
MLR	**Muntele Rosu**	**8.37**	**28**	Pn	**Pn**	**18 44 05.4**	**+0.9**
	comp=N,0.1nm,0.3s,baz=253,slow=14,SNR=3.0						
MLR	**Muntele Rosu**	**8.37**	**28**	⇓P	**Pn**	**18 44 06.7**	**+2.1**
RIY	**Rijeka**	**8.38**	**330**	*e*Pn	**Pn**	**18 44 04.4**	**-0.1**
CRES	**Cresnjev**	**8.46**	**336**	*e*Pn	**Pn**	**18 44 05.3**	**-0.4**
DOPR	**Dopca**	**8.60**	**24**	⇓P	**Pn**	**18 44 09.9**	**+2.4**
CEY	**Cerknica**	**8.75**	**331**	*e*Pn	**Pn**	**18 44 09.7**	**+0.1**
PLOR	**Plostina**	**8.94**	**29**	⇓P	**Pn**	**18 44 14.6**	**+2.3**
LJU	**Ljubljana**	**8.97**	**333**	*e*Pn	**Pn**	**18 44 12.5**	**-0.1**
VRI	**Vrincioaia**	**8.98**	**30**	⇓P	**Pn**	**18 44 15.7**	**+2.9**
CFR	**Carcaliu**	**9.05**	**37**	⇑P	Pn	18 44 17.4	+3.7
KEST	**Kesra**	**9.19**	**258**	Sn	**Sn**	**18 45 56.7**	**-2.2**
	comp=N,0.1nm,0.3s,baz=342,slow=20,SNR=3.1						
SOKA	**Soboth**	**9.35**	**337**	*i* Pn	**Pn**	**18 44 17.4**	**-0.5**
	comp=N,9.2nm,0.3s,SNR=9.6						
SOKA				*i* Sn	**Sn**	**18 45 57.9**	**-4.9**
	comp=N,2.1nm,0.4s						
OBKA	**Obir**	**9.36**	**334**	*e*Pn	**Pn**	**18 44 18.1**	**0.0**
	comp=N,14nm,0.5s,SNR=12						
OBKA				*e*Sn	**Sn**	**18 46 00.1**	**-3.0**
	comp=N,7.0nm,0.4s						
ARSA	**Arzberg**	**9.73**	**340**	*i* Pn	**Pn**	**18 44 23.5**	**+0.4**
	comp=N,4.6nm,0.3s,SNR=6.7						
MYKA	**Terra Mystica**	**9.79**	**331**	*i* Pn	**Pn**	**18 44 23.7**	**-0.3**
	comp=N,3.5nm,0.3s						
MYKA				*e*Sn	**Sn**	**18 46 07.6**	**-6.0**
	comp=N,4.1nm,0.6s						
BURAR	**Bucovina Array**	**10.04**	**19**	⇑P	**Pn**	**18 44 30.6**	**+3.1**
CONA	**Conrad Observa**	**10.27**	**343**	*e*Pn	**Pn**	**18 44 32.2**	**+1.7**
	comp=N,0.7nm,0.3s						
KBA	**Koelnbreinsper**	**10.28**	**332**	*i* Pn	**Pn**	**18 44 31.0**	**+0.3**
	comp=N,5.0nm,0.3s						
ABTA	**Abfaltersbach**	**10.34**	**328**	*i* Pn	**Pn**	**18 44 31.6**	**+0.2**
	comp=N,2.3nm,0.3s,SNR=5.8						
ABTA				*e*Sn	**Sn**	**18 46 21.7**	**-5.2**
	comp=N,7.5nm,0.8s						
VYHS	**Vyhne**	**10.35**	**354**	*e*SN	**Sn**	**18 46 25.8**	**-1.4**
BRTR	**Keskin Array B**	**10.42**	**77**	Pn	**Pn**	**18 44 34.9**	**+2.3**
	baz=252,slow=7.0,SNR=1.9						
MOA	**Molln**	**10.63**	**337**	*i* Pn	**Pn**	**18 44 35.8**	**+0.4**
	comp=N,12nm,0.3s,SNR=6.5						
MOA				*i* Sn	**Sn**	**18 46 30.4**	**-3.8**
	comp=N,2.7nm,0.4s						
WTTA	**Wattenberg**	**11.11**	**327**	*i* Pn	**Pn**	**18 44 42.8**	**+0.7**

	comp=N,4.8nm,0.3s,SNR=7.9						
WTTA				eSn	Sn	18 46 41.0	-5.0
	comp=N,7.2nm,0.5s						
WATA	Walderalm	11.19	327	i Pn	Pn	18 44 44.9	+1.7
	comp=N,7.6nm,0.5s,SNR=6.1						
WATA				eSn	Sn	18 46 45.3	-2.8
	comp=N,4.5nm,0.5s						
SQTA	Sankt Quirin	11.26	326	i Pn	Pn	18 44 46.3	+2.2
	comp=N,4.0nm,0.4s						
SQTA				i Sn	Sn	18 46 47.8	-1.9
	comp=N,3.1nm,0.3s						
FETA	Feichten	11.33	324	i Sn	Sn	18 46 51.5	+0.2
	comp=N,0.8nm,0.4s						
MOTA	Moosalm	11.40	326	i Pn	Pn	18 44 47.9	+1.8
	comp=N,3.3nm,0.5s						
DAVOX	Davos/Dischmat	11.56	321	Pn	Pn	18 44 49.8	+1.5
	comp=N,0.4nm,0.3s,baz=115,slow=17,SNR=3.0						
DAVOX				Sn	Sn	18 46 51.8	-5.3
	comp=N,0.4nm,0.3s,baz=328,slow=18,SNR=3.3						
RETA	Reutte	11.66	326	i Pn	Pn	18 44 52.0	+2.4
	comp=N,0.7nm,0.2s						
RETA				eSn	Sn	18 46 59.6	+0.2
	comp=N,2.6nm,0.4s						
GERES	GERESS Array B	11.69	338	Pn	Pn	18 44 48.9	-1.1
	comp=N,0.6nm,0.3s,baz=158,slow=13,SNR=12						
GERES				Sn	Sn	18 46 54.6	-5.7
	comp=N,0.5nm,0.3s,baz=152,slow=24,SNR=5.1						
DAVA	Damuels	11.92	323	i Pn	Pn	18 44 54.9	+1.8
	comp=N,1.5nm,0.2s						
DAVA				i Sn	Sn	18 47 04.3	-1.5
	comp=N,3.4nm,0.5s						
KHC	Kasperske Hory	11.98	338	ePN	Pn	18 44 53.0	-0.9
KHC				eSN	Sn	18 47 01.0	-6.3
KHC	Kasperske Hory	11.98	338	⇑eP	Pn	18 44 53.3	-0.6
MMAI	Mount Meron Ar	13.25	108	Pn	Pn	18 45 11.2	-0.1
	comp=N,0.6nm,0.3s,baz=317,slow=14,SNR=3.5						
AKASG	Malin Array Be	13.98	24	Pn	Pn	18 45 22.8	+1.7
	comp=N,0.3nm,0.3s,baz=211,slow=8.6,SNR=2.6						
CLL	Collm	14.11	341	e(PPP)		18 45 34.0	
ANN	Anapa	14.35	57	eP	Pn	18 45 21.5	-4.7
ANN				eS	Sn	18 48 00.8	-4.1
ANN				pmax	pmax		
	comp=Z,25nm,1.0s						
EIL	Elat	14.76	121	Pn	Pn	18 45 31.1	-0.8
	comp=Z,0.2nm,0.3s,baz=216,slow=19,SNR=2.9						
EIL				Sn	Sn	18 48 03.2	-12
	comp=Z,0.4nm,0.3s,baz=53,slow=15,SNR=3.8						
NEY	Neytrino	17.63	66	⇓eP	P	18 46 16.7	+6.9
NEY				pmax	pmax		
	comp=Z,1.0nm,1.2s						
KIV	Kislovodsk	17.73	64	eP	P	18 46 13.9	+3.1
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
KBZ	Khabaz	17.84	65	⇓eP	P	18 46 18.0	+6.1
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GNI	Garni	18.96	76	⇓eP	Pn	18 46 31.1	+6.0
OBN	Obninsk	20.14	28	eP	Pn	18 46 40.9	+2.0
OBN				e		18 46 55.4	
OBN				ePPP	PPP	18 47 04.4	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
VSU	Vasula	20.69	9	deP	Pn	18 46 43.5	-1.8
HFS	Hagfors	22.36	351	P	P	18 47 00.5	-0.4
	comp=Z,8.2nm,0.8s,baz=165,slow=12,SNR=19						
EKA	Eskdalemuir Ar	23.36	325	P	P	18 47 11.9	+0.6
	comp=Z,0.8nm,0.5s,baz=122,slow=13,SNR=3.1						
FINES	FINESS Array B	23.53	7	P	P	18 47 12.5	-0.4
	comp=Z,1.3nm,0.4s,baz=165,slow=12,SNR=13						
NB2	NORSAR Subarra	23.58	349	P	P	18 47 13.4	-0.1
	comp=Z,1.0nm,0.7s,baz=155,slow=10						
NOA	NORSAR Array B	23.58	349	P	P	18 47 11.7	-1.8
	comp=Z,1.5nm,0.7s,baz=150,slow=9.7,SNR=5.7						
TORD	Torodi Ar. Bea	29.99	219	P	P	18 48 14.1	+2.3
	comp=Z,0.4nm,0.6s,baz=30,slow=12,SNR=2.3						
BRVK	Borovoye	37.11	50	⇓eP	P	18 49 17.0	+3.7
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
AAK	Ala-Archa	40.83	66	⇓eP	P	18 49 48.3	+3.5
AAK				pmax	pmax		
	comp=Z,3.0nm,1.5s						
MK31	Makanchi Array	45.37	58	⇓eP	P	18 50 26.2	+4.9
MKAR	Makanchi Array	45.37	58	P	P	18 50 20.6	-0.6
	comp=Z,0.7nm,0.5s,baz=274,slow=7.3,SNR=9.1						
ZALV	Zalesovo Beam	45.74	48	P	P	18 50 22.5	-1.6
	comp=Z,1.4nm,0.6s,baz=292,slow=7.3,SNR=3.5						
CMAR	Chiang Mai Arr	69.97	82	P	P	18 53 14.6	-0.2
	comp=Z,0.3nm,0.7s,baz=302,slow=7.0,SNR=3.2						
YKA	Yellowknife Ar	73.34	340	P	P	18 53 35.2	+0.9
	comp=Z,0.1nm,0.3s,baz=41,slow=6.5,SNR=3.1						

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*ATA **05** 18:46:05.0±2.4, 39.°02N×38.°96E, h7km±72km, ML1.2, MW2.0*

DDA 05 18:46:04.1, 38.°91N×38.°93E, h7km±2km, ML1.9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.42	174	i P	Pg	18 46 13.0	+0.8
ELZG				i S	Sb	18 46 19.1	-1.3
ELZG				IAML		18 46 20.0	
	comp=N,379nm,0.3s						
ELZG				IAML		18 46 20.0	
	comp=E,815nm,0.3s						
KEMA	Kemaliye	0.49	316	eP	Pg	18 46 14.2	+0.6
KEMA				eS	Sg	18 46 21.0	+0.9
KEMA				IAML		18 46 22.4	
	comp=Z,8.4nm,0.4s						
KEMA	Kemaliye	0.49	316	eP	Pg	18 46 13.6	-0.1
KEMA				eS	Sg	18 46 20.7	+0.6
KEMA				IAML		18 46 22.4	
	comp=Z,8.7nm,0.3s						
KEMA	Kemaliye	0.49	316	i P	Pg	18 46 14.2	+0.5
KEMA				IAML		18 46 21.0	
	comp=N,61nm,0.3s						
KEMA				i S	Sg	18 46 21.4	+1.2
KEMA				IAML		18 46 22.0	
	comp=E,74nm,0.2s						
REFA	Refahiye_ERZN	0.50	345	eP	Pn	18 46 22.9	+5.1
REFA				eS	Sn	18 46 34.5	+7.6
REFA				IAML		18 46 40.3	
	comp=N,3.6nm,0.3s						
REFA	Refahiye_ERZN	0.50	345	eP	Pn	18 46 21.9	+4.0
REFA				eS	Sn	18 46 35.7	+8.8
REFA				IAML		18 46 36.2	
	comp=N,2.5nm,0.2s						
TNCL	Tunceli-Merkez	0.52	67	eP	Pg	18 46 14.1	0.0
TNCL				eS	Sg	18 46 21.0	+0.1
TNCL				IAML		18 46 23.2	
	comp=Z,67nm,0.4s						
TNCL	Tunceli-Merkez	0.52	67	eP	Pn	18 46 19.1	+1.1
TNCL	Tunceli-Merkez	0.52	67	i P	Pg	18 46 13.9	-0.2
TNCL				i S	Sg	18 46 20.2	-0.7
TNCL				IAML		18 46 22.0	
	comp=E,107nm,0.3s						
TNCL				IAML		18 46 22.0	
	comp=N,86nm,0.4s						
HEKM	Malatya_Hekimh	0.76	268	i P	Pb	18 46 19.4	-0.3
HEKM				i S	Sb	18 46 29.6	-0.8
HEKM				IAML		18 46 32.0	
	comp=E,66nm,0.5s						
HEKM				IAML		18 46 33.0	
	comp=N,59nm,0.5s						
EUZM	Uzumlu	0.99	37	eP	Pg	18 46 23.0	-0.1
EUZM				eS	Sg	18 46 36.2	+0.2
EUZM				IAML		18 46 38.6	
	comp=N,3.5nm,0.2s						
AKCD	Akcadag	1.00	232	i P	Pb	18 46 23.8	-0.1
AKCD				i S	Sg	18 46 35.8	-0.5
AKCD				IAML		18 46 42.0	
	comp=E,30nm,0.2s						
AKCD				IAML		18 46 43.0	
	comp=N,32nm,0.7s						
CUKAN	kangal_SIVAS	1.21	290	i P	Pn	18 46 27.5	0.0
CUKAN				i S	Sg	18 46 43.1	+0.1
KELT	Kelkit	1.26	11	eP	Pn	18 46 28.4	0.0
KELT				eS	Sn	18 46 46.2	+0.5
KELT				IAML		18 46 50.8	
	comp=Z,3.5nm,1.0s						
KELT	Kelkit	1.26	11	eP	Pg	18 46 27.9	-0.4
KELT				eS	Sg	18 46 43.6	-1.1
KELT				IAML		18 46 50.8	
	comp=Z,3.5nm,1.0s						
KELT	Kelkit	1.26	11	i P	Pg	18 46 27.9	-0.4
KELT				i S	Sg	18 46 42.1	-2.6

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*SNET **05** 18:56:19.8±0.8, 12.°52N×87.°89W, h51km±22km, ML3.8*
*INET **05** 18:56:19.7, 12.°51N×87.°74W, h56km, ML4.1*
*UCR **05** 18:56:20.0±0.8, 12.°52N×87.°91W, h32km±4km, ML3.7*

ISC 05 18:56:19.2±4.1**, 12.°5N**±0.°3×**87.°8W**±0.°1**, h58**km±46km**, n25, σ0.s32**/38**, 2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.78	358	⇓iP	Pn	18 56 34.1	-0.3
CNCH				eS	Sn	18 56 45.8	+0.3
CNCH				IAML		18 56 49.1	
	comp=Z,4μm,0.2s						
CNCH	Conchagua	0.78	358	⇓iP	Pn	18 56 34.1	-0.3
CNCH				eS	Sn	18 56 45.8	+0.3
CNCH				IAML		18 56 49.1	
	comp=Z,4μm,0.2s						
LCND	La Caada	0.81	355	i P	Pn	18 56 34.5	-0.3
LCND				eS	Sn	18 56 46.8	+0.6
LCND				IAML		18 56 52.5	
	comp=Z,2μm,0.3s						
LCND	La Caada	0.81	355	i P	Pn	18 56 34.5	-0.3
LCND				eS	Sn	18 56 46.8	+0.6
LCND				IAML		18 56 52.5	
	comp=Z,2μm,0.3s						
JUCU	Jucuar¡n	0.86	331	eS	Sn	18 56 47.1	-0.4
JUCU				IAML		18 56 51.7	
	comp=Z,2μm,0.3s						
JUCU	Jucuar¡n	0.86	331	eS	Sn	18 56 47.1	-0.4
JUCU				IAML		18 56 51.7	
	comp=Z,2μm,0.3s						
BLLM	Bellamira	1.03	336	eP	Pn	18 56 37.6	-0.1
BLLM	Bellamira	1.03	336	eP	Pn	18 56 37.6	-0.1
LCY	Lacayo	1.03	333	eP	Pn	18 56 37.6	-0.2
LCY	Lacayo	1.03	333	eP	Pn	18 56 37.6	-0.2
RANC	El Ranchito	1.04	334	eP	Pn	18 56 37.9	0.0
RANC				eS	Sn	18 56 52.0	+0.3
RANC				IAML		18 56 53.9	
	comp=Z,2μm,0.2s						
RANC	El Ranchito	1.04	334	eP	Pn	18 56 37.9	0.0
RANC				eS	Sn	18 56 52.0	+0.3
RANC				IAML		18 56 53.9	
	comp=Z,2μm,0.2s						
PACA	Pacayal	1.09	333	eP	Pn	18 56 38.3	-0.2
PACA				eS	Sn	18 56 53.0	+0.2
PACA	Pacayal	1.09	333	eP	Pn	18 56 38.3	-0.2
PACA				eS	Sn	18 56 53.0	+0.2
TECA	Tecapa	1.20	326	eP	Pn	18 56 40.0	-0.1
TECA	Tecapa	1.20	326	eP	Pn	18 56 40.0	-0.1
COEB	Comit de Eme	1.22	325	eP	Pn	18 56 40.5	+0.3
COEB				eS	Sn	18 56 56.1	+0.2
COEB	Comit de Eme	1.22	325	eP	Pn	18 56 40.5	+0.3
COEB				eS	Sn	18 56 56.1	+0.2
FAGO	Alcalda de S	1.23	346	eS	Sn	18 56 55.7	-0.2
FAGO	Alcalda de S	1.23	346	eS	Sn	18 56 55.7	-0.2
COEG	Centro de Oper	1.53	317	eP	Pn	18 56 43.9	-0.4
COEG				eS	Sn	18 57 03.0	-0.2
COEG	Centro de Oper	1.53	317	eP	Pn	18 56 43.9	-0.4
COEG				eS	Sn	18 57 03.0	-0.2
LFRS	El Faro	1.66	313	i P	Pn	18 56 46.2	+0.1
LFRS				eS	Sn	18 57 05.8	-0.6
CEVE	Cerro Verde	2.21	307	eP	Pn	18 56 54.1	+0.4
CEVE	Cerro Verde	2.21	307	eP	Pn	18 56 54.1	+0.4

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*SOF **05** 19:04:17.8, 42.°41N×21.°73E, h2km, MD3.4*
*TIR **05** 19:04:19.1, 42.°25N×21.°70E, h7km, Md3.5/4*
*SKO **05** 19:04:20.3, 42.°39N×21.°72E, h6km*
*PRU **05** 19:04:20.8±0.0, 42.°41N×21.°72E, h0km*
*BEO **05** 19:04:20.0±0.5, 42.°43N×21.°72E, h8km±3km, ML3.3/16*

PDG 05 19:04:19.5±0.4**, 42.°38N**×**21.°73E, h9**km±1km**, ML3.0**/11**, Error ellipse: s-maj=0.6km s-min=0.6km az=0.0, Northwestern Balkan Peninsula**

ISC 05 19:04:19.3±1.0**, 42.°40N**±0.°02×**21.°66E**±0.°02**, h10**km±9km**, n94, σ1.s36**/124**, 17C-15D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARS	Barje	0.43	15	ePg	Pg	19 04 27.8	-0.1
BARS				eSg	Sg	19 04 33.9	+0.3
SKO	Skopje	0.46	201	i Pg	Pg	19 04 28.9	+0.7
SKO				eLg	Lg	19 04 36.1	
	comp=E,105nm,0.3s						
SKO				i Sg	Sb	19 04 36.4	+0.2
SKO				eLg	Lg	19 04 36.9	
	comp=N,113nm,0.3s						
BOSS	Bosilegrad	0.61	80	ePg	Pg	19 04 30.7	-0.5
BOSS				eSg	Sg	19 04 38.4	-0.9
STIP	Stip	0.80	151	i Pg	Pg	19 04 34.6	-0.2
STIP				i Sg	Sb	19 04 46.4	+0.2
STIP				eLg	Lg	19 04 46.9	
	comp=E,118nm,0.2s						
STIP				eLg	Lg	19 04 47.8	
	comp=N,242nm,0.2s						
SELS	Selova	0.92	334	ePg	Pg	19 04 36.5	-0.5
SELS				eSg	Sb	19 04 49.8	+0.3
ZAPS	Zavoj	1.13	39	ePg	Pb	19 04 39.6	-1.4
ZAPS				eSg	Sg	19 04 54.6	-1.2
PHP	Peshkopia	1.16	232	i PN	Pn	19 04 42.7	+1.1
KKB	Krupnik	1.18	116	i Pg	Pb	19 04 41.7	-0.1
BCI	Bajram Curri	1.18	269	i PG	Pb	19 04 41.2	-0.7
BCI				i SG	Sb	19 04 52.1	-5.1
VTS	Vitosha	1.18	79	⇓P	Pb	19 04 41.2	-0.8
VTS				⇑S	Sb	19 04 56.1	-1.3
VTS	Vitosha	1.18	79	i Pg	Pb	19 04 41.1	-0.8
BOVS	Bovan	1.24	1	ePg	Pn	19 04 42.3	-0.4
BOVS				eSg	Sb	19 04 59.2	+0.4
VAY	Valandovo	1.27	147	i Pg	Pn	19 04 42.2	-0.9
VAY				i Sg	Sg	19 05 00.2	0.0
VAY				eLg	Lg	19 05 00.7	
	comp=N,275nm,0.6s						
VAY				eLg	Lg	19 05 01.0	
	comp=E,219nm,0.4s						
PUK	Puka	1.36	256	i PN	Pg	19 04 45.8	+0.3
BLKB	Belogradchik	1.43	31	⇓S	Sn	19 05 04.1	-0.2
OHR	Ohrid	1.44	207	i Pg	Pg	19 04 46.9	0.0
OHR				i Sg	Sg	19 05 06.4	+0.8
OHR				eLg	Lg	19 05 08.0	
	comp=E,508nm,0.7s						
OHR				eLg	Lg	19 05 08.7	
	comp=N,435nm,0.5s						
ZAGS	Zajecar	1.48	16	ePg	Pn	19 04 46.0	+0.1
ZAGS				eSg	Sn	19 05 05.1	-0.2
SJES	Sjenica	1.51	305	ePn	Pb	19 04 48.1	+0.5
SJES				eSg	Sg	19 05 08.4	+0.4
GRG	Griva	1.54	159	eP	Pn	19 04 47.6	+0.7
KNT	Kendrikon	1.54	143	eP	Pn	19 04 46.2	-0.6
IVAS	Ivanjica	1.62	317	ePg	Pn	19 04 48.4	+0.4
IVAS				eSg	Sg	19 05 13.2	+1.8
FNA	Florina	1.62	188	i PN	Pb	19 04 49.7	+0.3
FNA	Florina	1.62	188	eP	Pb	19 04 49.3	-0.1
GRUS	Gruza	1.65	335	ePg	Pn	19 04 48.9	+0.6
GRUS				eSg	Sb	19 05 11.3	+0.8
MMB	Musomiste	1.74	117	i Pg	Pb	19 04 51.8	+0.5
PDG	Podgorica	1.78	272	ePn	Pb	19 04 52.7	+0.6
DRME	Dracevica, Mon	1.85	264	ePn	Pg	19 04 54.8	0.0
PGB	Panagyurishte	1.86	84	i P	Pn	19 04 52.2	+0.9
SVIS	Svilajnac	1.90	350	ePn	Pn	19 04 53.0	+1.3
SVIS				eSg	Sb	19 05 19.0	+1.3
KUBS	Kucevo	2.02	0	ePn	Pn	19 04 53.5	+0.1
KUBS				eSg	Sg	19 05 23.6	-0.5
BAIL	Bailesti	2.04	37	⇓P	Pb	19 04 55.7	-0.7
BAIL				⇑S	Sb	19 05 22.7	+1.0
TRUS	Trudelj	2.04	334	ePg	Pb	19 04 55.8	-0.7
TRUS				eSg	Sg	19 05 24.5	-0.5
RUDO	Rudo	2.08	307	ePn	Pn	19 04 54.6	+0.4
DIVS	Divibare	2.09	325	ePn	Pn	19 04 55.0	+0.4
DIVS				eSg	Sg	19 05 25.8	-0.8
DIVS	Divibare	2.09	325	ePn	Pn	19 04 54.9	+0.4
HORT	Hortiatis	2.10	149	eP	Pn	19 04 54.8	+0.3
PUNG	Punghina	2.10	26	⇑P	Pb	19 04 57.1	-0.3
PUNG				⇓S	Sg	19 05 25.8	-0.9
UPM	Unac-Piva	2.18	293	ePn	Pn	19 04 57.6	+1.7
BBLS	Lazići	2.21	312	ePn	Pn	19 04 57.4	+1.3
BBLS	Lazići	2.21	312	ePn	Pn	19 04 57.2	+1.1
PLD	Plovdiv	2.28	96	i P	Pb	19 05 01.2	+0.7
PLD	Plovdiv	2.28	96	eP	Pb	19 05 01.6	+1.1
HCY	Herceg Novi	2.35	272	ePn	Pb	19 05 01.2	-0.5
DJES	Djerdap	2.35	15	eSg	Sb	19 05 33.2	+2.3
BRY	Bratogost	2.36	283	ePn	Pb	19 05 00.9	-1.1
RZN	Rozhen	2.38	106	eP	Pn	19 04 59.6	+1.0
MDVR	Moldovita	2.38	1	⇑P	Pn	19 05 00.8	+2.3
MDVR				⇑S	Sb	19 05 32.6	+0.7
PLVB	Pleven	2.39	65	⇓P	Pn	19 04 59.8	+1.3
PLVB				⇑S	Sb	19 05 30.6	-1.3
TREB	Trebinje	2.47	279	ePn	Pb	19 05 02.9	-0.9
SRE	Strehaia	2.53	26	⇑P	Pn	19 05 01.0	+0.6
HERR	Herculane	2.54	12	⇑P	Pn	19 05 01.2	+0.6
HERR				⇓S	Sb	19 05 36.7	+0.4
BEO	Beograd	2.56	341	ePn	Pn	19 05 02.1	+1.2
BEO				eSg	Sg	19 05 40.0	-1.6
VLAD	Vladila	2.56	50	⇑P	Pn	19 05 01.9	+1.0
VLAD				⇑S	Sb	19 05 35.1	-1.8
HAPS	Han Pijesak,Bl	2.60	311	ePn	Pn	19 05 01.3	-0.3
TEKS	Tekeris	2.65	325	eSg	Sg	19 05 44.0	-0.6
TEKS	Tekeris	2.65	325	ePn	Pn	19 05 03.3	+1.1
OUR	Ouranopolis	2.70	139	eP	Pn	19 05 03.4	+0.7
PVL	Pavlikeni	2.82	72	i P	Pn	19 05 03.6	-0.8
KDZ	Kurdzhali	2.89	104	eP	Pn	19 05 06.2	+0.7
KDZ	Kurdzhali	2.89	104	eP	Pb	19 05 12.0	+1.0
BANR	Banloc	3.01	353	⇑P	Pn	19 05 09.5	+2.5
FRGS	Fruska Gora	3.07	335	ePn	Pn	19 05 03.5	-4.4
GZR	Gura Zlata	3.10	15	⇑P	Pn	19 05 09.0	+0.7
COPA	Copaceanca	3.12	55	⇓P	Pn	19 05 09.9	+1.3
COPA				⇓S	Sg	19 05 59.8	+0.2
ELND	Elena	3.15	79	⇓P	Pn	19 05 09.4	+0.4
ELND				⇓S	Sg	19 05 58.9	-1.6
BZS	Buzias	3.22	359	ePn	Pn	19 05 10.4	+0.5
BZS	Buzias	3.22	359	⇓P	Pn	19 05 12.1	+2.2
BZS				⇓S	Sb	19 05 59.4	+3.6
HUMR	Humele	3.22	47	⇑P	Pn	19 05 11.5	+1.6
AGG	Agios Georgios	3.41	171	eP	Pn	19 05 13.1	+0.6
LOT	Lotru	3.41	26	⇑P	Pn	19 05 12.7	+0.1
ALN	Alexandroupoli	3.61	113	eP	Pn	19 05 15.2	0.0
AOS	Alonnisos	3.64	152	eP	Pn	19 05 15.8	+0.2
ENEZ	Enez	3.75	115	eP	Pn	19 05 19.3	+2.1
EDRB	Edirne	3.82	97	eP	Pn	19 05 19.1	+1.0
SIRR	Siria	3.87	360	⇓P	Pn	19 05 21.5	+2.7
VOIR		3.90	38	⇑P	Pn	19 05 20.4	+1.1
UKOP	Uzunkopru-Edir	3.93	107	eP	Pg	19 05 33.5	-1.0
BLY	Banja Luka	4.01	307	ePn	Pn	19 05 22.6	+1.8
ERIK	Erikli-Kesan	4.03	114	eP	Pn	19 05 21.9	+0.9
GELI	Tayfur-Gelibol	4.13	117	eP	Pn	19 05 22.6	+0.2
PRD	Provadia	4.30	77	eP	Pn	19 05 25.6	+0.9
MLR	Muntele Rosu	4.37	44	⇑P	Pn	19 05 27.3	+1.4
DRGR		4.46	9	⇑P	Pg	19 05 44.8	+0.1
DOPR	Dopca	4.46	36	⇓P	Pn	19 05 28.5	+1.5
RKY	Sarkoy-Tekirda	4.48	111	eP	Pn	19 05 29.8	+2.6
CRLT	Corlu	4.71	104	eP	Pg	19 05 51.2	+1.6
EDC	Edincik	5.09	112	eP	Pn	19 05 37.4	+1.7
CHOS	Chios island	5.22	139	eP	Pn	19 05 38.5	+1.0
CTKS	Kestanelik-??a	5.24	100	eP	Pn	19 05 37.6	-0.1
CFR	Carcaliu	5.45	57	⇓P	Pn	19 05 37.6	-2.9
VYHS	Vyhne	6.41	343	ePN	Pn	19 05 55.6	+1.8
VYHS				eSN	Sn	19 07 05.2	-1.8
ARSA	Arzberg	6.53	320	i Pn	Pn	19 05 56.4	+1.0
KOLS	Kolonicke sedl	6.55	4	eSG	Sg	19 07 53.1	+3.6
KHC	Kasperske Hory	8.79	323	ePN	Pn	19 06 23.0	-3.4

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*NIED **05** 19:41:00, 20.°40N×120.°40E, h65km, Mw4.9 Best double couple: Mo2.90000×10^16 NP1:φs212.00000°, δ51.00000°, λ63.00000°. NP2:φs71.00000°, δ46.00000°, λ119.00000°.*
*JMA **05** 19:41:49.9±0.5, 20.°37N×120.°37E, h0km, M4.3*
*IDC **05** 19:41:50.2±0.5, 20.°14N×120.°27E, h0km, mb4.1/23, mb1 4.3/25, mb1mx4.2/48, mbtmp4.1/25, ML3.9/2, MS3.8/27, Ms1 3.8/27, ms1mx3.7/52, Error ellipse: s-maj=18.3km s-min=10.9km az=75.0*
*MAN **05** 19:41:52.2, 20.°17N×120.°34E, h18km, mb5.2, ML4.2, MS4.3*
*NEIC **05** 19:41:52.7±1.6, 20.°20N±0.°05×120.°3E±0.°1, h15km±4km, mb4.5/46, Error ellipse: s-maj=14.3km s-min=7.5km az=90.0*
*BJI **05** 19:41:53.2±0.0, 20.°50N×120.°21E, h10km, mB4.8/20, mb4.2/26, Ms4.5/16, Ms7 4.3/16*
*GCMT **05** 19:41:53.7±0.4, 20.°23N±0.°04×120.°22E±0.°03, h17km±1km, MW4.8/68, Moment Tensor Solution. s12,c13; s68,c96; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-2.12±.20; Mθθ0.53±.10; Mφφ1.59±.12; Mrθ0.31±.33; Mθφ-0.79±.05; Mφr-0.51±.28; Best double couple: Mo2.15100×10^16 NP1:φs153.00000°, δ37.00000°, λ-89.00000°. NP2: φs331.00000°, δ53.00000°, λ-91.00000°. Principal axes: T 2.0970, Plg8.0000°, Azm62.0000°; N 0.1050, Plg1.0000°, Azm332.0000°; P -2.2050, Plg82.0000°, Azm236.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 19:41:54.4±0.3**, 20.°22N**±0.°03×**120.°41E**±0.°05**, h28**km**, n141, σ1.s43**/146**, mb4.4**/46**, MS3.8**/27**, 3C-4D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	Basco	1.47	81	eP	Pn	19 42 17.8	-1.3
BBP				eS	Sn	19 42 40.2	+2.8
SIPP	Brgy, Tapao	2.29	179	⇓eP	Pn	19 42 28.7	-1.6
SIPP				eS	Sn	19 42 59.8	+2.2
APYP	Conner	2.47	161	eP	Pn	19 42 31.6	-1.3
APYP				eS	Sn	19 43 02.0	-0.2
SGCP	Mt. Cagua	2.50	142	eP	Pn	19 42 32.6	-0.7
SGCP				eS	Sn	19 43 03.9	+1.0
SZP	Santa	2.66	179		Pn	19 42 33.6	-1.8
TWG	Pinlang	2.66	13		Pn	19 42 34.3	-1.2
TPUB	Ta-pu	3.07	4		Pn	19 42 38.9	-2.3
YULB	Yu-li	3.26	14		Pn	19 42 41.8	-1.9
CAUP	Cauayan	3.52	157	eP	Pn	19 42 47.9	+0.6
CAUP				eS	Sb	19 43 34.4	-4.0
SSLB	Suanglung	3.58	8		Pn	19 42 46.1	-2.2
SMPP	San Manuel, Pa	4.06	176	eP	Pn	19 42 51.7	-3.0
NACB	Ninganchiao	4.08	15		Pn	19 42 54.0	-1.0
YHNB	Yeheng	4.52	11		Pn	19 43 00.4	-0.7
BALP	Baler	4.59	166	eP	Pn	19 43 03.3	+1.3
BALP				eS	Sn	19 43 56.0	+1.6
KNMB	Chin-men Tao	4.62	336	Pn	Pn	19 42 59.9	-2.6
PCPH	Palayan	4.68	172	⇓eP	Pn	19 43 05.0	+1.7
YOJ	Yonaguni jima	4.86	29	P	Pn	19 43 07.2	+1.5
HATJ	Hateruma jima	4.95	39	P	Pn	19 43 06.4	-0.5
HATJ				eS	Sn	19 44 01.7	-1.5
QZH	Quanzhou	4.99	341	Pn	Pn	19 43 04.4	-3.1
IRIF	Iriomote-Funau	5.12	36	P	Pn	19 43 09.7	+0.5
IRIF				eS	Sn	19 44 06.7	-0.7
JKRS	Kuro-shima	5.20	39	P	Pn	19 43 10.6	+0.2
JKRS				eS	Sn	19 44 09.5	0.0
JIJ	Ishigaki jima	5.38	39	P	Pn	19 43 12.5	-0.3
JIJ				S	Sn	19 44 11.4	-2.4
JISG	Ishigakijimahi	5.65	39	P	Pn	19 43 15.7	-0.8
JISG				eS	Sn	19 44 18.4	-2.0
JTJ	Tarama	5.92	41	P	Pn	19 43 18.6	-1.7
JTJ				S	Sn	19 44 25.6	-1.7
TGY	Tagaytay City	6.11	175	LR	LR	19 45 56.6	
	comp=Z,637nm,18.1s,baz=274,slow=41						
JIRB	Irabujima	6.35	43	P	Pn	19 43 25.0	-1.2
JIRB				eS	Sn	19 44 37.7	-0.2
WHN	Wuhan	11.65	333	P	Pn	19 44 36.9	-1.9
JNU	Nakatsue	15.88	34	Pn	P	19 45 38.1	-1.4
	0.4nm,0.3s,baz=181,slow=18,SNR=3.3						
JNU	Nakatsue	15.88	34		Pn	19 45 36.2	+0.2
JNU				IAmb	IAmb	19 45 51.3	
	comp=Z,34nm,0.9s						
XAN	Xi'an	17.13	326	P	P	19 45 58.4	+5.0
XAN				pP	pwP	19 46 13.5	+8.6
XAN				S	S	19 49 13.0	+2.5
XAN				SS	SnSn	19 49 40.2	+25
KSRS	Korea Array	18.38	19	P	Pn	19 46 07.8	+0.7
	comp=Z,0.3nm,0.3s,baz=195,slow=12,SNR=9.1						
KSRS				LR	LR	19 54 08.5	
	comp=Z,144nm,18.4s,baz=198,slow=40						
PBKT	Sadao Pong	18.80	262	P	Pn	19 46 11.8	-0.7
MRSI	Marisa	19.68	175	P	P	19 46 21.7	+0.2
	comp=Z,25nm,0.9s						
MPSI	Mapaga	19.77	182	P	P	19 46 22.2	-0.2
	comp=Z,11nm,1.3s						
BJT	Baijiatuau	20.07	350	P	P	19 46 24.4	-1.1
BJT				IAmb	IAmb	19 46 40.5	
	comp=Z,30nm,1.0s						
CHTO	Chiang Mai	20.29	270	P	Pn	19 46 27.5	-2.7
CMAR	Chiang Mai Arr	20.34	269	P	Pn	19 46 28.3	-2.5
	comp=Z,1.0nm,0.8s,baz=70,slow=9.4,SNR=9.6						

CMAR				PcP	PcP	19 50 40.5	-0.9
	comp=Z,0.6nm,0.7s,baz=75,slow=1.0,SNR=4.7						
CMAR				LR	LR	19 54 19.7	
	comp=Z,433nm,18.6s,baz=90,slow=37						
CMAR	Chiang Mai Arr	20.34	269	P	Pn	19 46 28.0	-2.8
LUWI	Luwuk	21.26	173	P	P	19 46 38.5	-0.1
	comp=Z,88nm,1.2s						
LUWI	Luwuk	21.26	173		P	19 46 39.0	+0.4
LZH	Lanzhou	21.47	321	*e*P	P	19 46 29.5	-11
LZH				pP	pP	19 46 32.8	-15
LZH				sP	sP	19 46 34.4	-16
LZH				sS	sS	19 50 45.4	-2.8
LBMI	Labuha	21.86	161	P	P	19 46 40.4	-4.7
	comp=Z,27nm,1.3s						
MJAR	Matsushiro Arr	22.51	40	P	P	19 46 53.6	+1.6
	comp=Z,2.9nm,0.7s,baz=240,slow=11,SNR=9.5						
MJAR				LR	LR	19 55 23.2	
	comp=Z,108nm,21.4s,baz=255,slow=36						
SANI	Sanana	22.80	165	P	P	19 46 51.7	-3.4
	comp=Z,30nm,0.8s						
SIJI	Sorong	23.50	152	P	P	19 47 02.9	+0.6
	comp=Z,23nm,0.8s,baz=52,slow=3.3,SNR=9.8						
NLAI	Namlea	24.22	164	P	P	19 47 17.0	+8.0
GUMO	Guam	24.29	102	LR	LR	19 54 49.3	
	comp=Z,214nm,20.2s,baz=292,slow=32						
IPM	Ipoh	24.52	233	P	P	19 47 10.4	-1.3
IPM				IAmb	IAmb	19 47 11.3	
	comp=Z,12nm,1.1s						
KAPI	Kappang	25.09	182	P	P	19 47 16.7	-0.1
	comp=Z,13nm,0.4s,baz=22,slow=14,SNR=3.6						
KAPI				LR	LR	19 57 57.1	
	comp=Z,115nm,19.0s,baz=348,slow=39						
USRK	Ussuriysk Ar.	25.79	19	P	P	19 47 24.3	+1.4
	comp=Z,1.0nm,0.6s,baz=216,slow=6.5,SNR=3.4						
USRK				LR	LR	19 56 41.3	
	comp=Z,115nm,21.9s,baz=196,slow=34						
USRK	Ussuriysk Ar.	25.79	19	P	P	19 47 22.6	-0.3
GTA	Gaotai	26.07	322	*e*P	P	19 47 25.3	-0.4
GTA				pP	pP	19 47 29.5	-3.2
GTA				sP	sP	19 47 33.0	-2.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,170nm,5.2s						
GTA				LR	LR		
	comp=Z,300nm,18.2s						
GTA				LR	LR		
	comp=Z,490nm,11.7s						
GTA				LR	LR		
	comp=Z,420nm,11.0s						
PSI	Prapat	27.19	233	P	P	19 47 34.2	-1.8
	comp=Z,4.7nm,0.7s,baz=321,slow=1.6,SNR=5.4						
PSI				LR	LR	19 57 24.5	
	comp=Z,127nm,19.1s,baz=70,slow=34						
RPSI	Rantau Prapat	27.26	233	P	P	19 47 34.6	-1.9
RPSI				IAmb	IAmb	19 47 36.1	
	comp=Z,8.2nm,1.0s						
RPSI	Rantau Prapat	27.26	233	P	P	19 47 34.2	-2.3
LSA	Lhasa	28.09	295	P	P	19 47 43.8	-0.6
ULN	Ulaanbaatar	29.63	342	P	P	19 47 56.3	-1.2
SONM	Songino Array	29.80	341	P	P	19 47 58.9	-0.1
	comp=Z,2.8nm,0.9s,baz=160,slow=10,SNR=19						
SONM				LR	LR	20 00 48.0	
	comp=Z,168nm,18.5s,baz=184,slow=38						
SONM	Songino Array	29.80	341	P	P	19 47 59.1	+0.1
TAPN	Taplejung	30.69	290	*e*P	P	19 48 07.0	-0.3
ODAN	Odare	30.93	289	*e*P	P	19 48 09.2	-0.2
RAMN	Ramite	31.64	289	*e*P	P	19 48 15.9	+0.3
JIRN	Jiri	32.07	290	*e*P	P	19 48 19.4	-0.1
	comp=Z,10nm,0.6s						
GUN	Gumba	32.37	290	*e*P	P	19 48 21.8	-0.3
	comp=Z,21nm,0.7s						
KKN	Kakani	32.88	290	*e*P	P	19 48 25.5	-1.0
	comp=Z,9.3nm,0.8s						
GKN	Gorkha	33.47	290	*e*P	P	19 48 30.8	-0.8
TLY	Talaya	34.03	341	P	P	19 48 36.6	+0.6
FITZ	Fitzroy Crossi	38.42	172	P	P	19 49 12.6	-1.1
	comp=Z,1.8nm,0.7s,baz=353,slow=8.1,SNR=6.6						
FITZ	Fitzroy Crossi	38.42	172	P	P	19 49 12.5	-1.3
FITZ				IAmb	IAmb	19 49 39.7	
	comp=Z,18nm,1.6s						
MK31	Makanchi Array	40.78	320	P	P	19 49 33.2	-0.1
MKAR	Makanchi Array	40.78	320	P	P	19 49 33.9	+0.7
	comp=Z,1.9nm,0.7s,baz=115,slow=10,SNR=17						
MKAR				PcP	PcP	19 51 34.0	-0.1
	comp=Z,0.8nm,0.8s,baz=107,slow=5.0,SNR=3.8						
MKAR				LR	LR	20 07 33.4	
	comp=Z,97nm,18.2s,baz=142,slow=38						
MKAR	Makanchi Array	40.78	320	P	P	19 49 33.5	+0.3
MKAR				PcP	PcP	19 51 33.7	-0.3
MAKZ	Makanchi	40.98	319	P	P	19 49 34.8	0.0
WRAB	Tennant Creek	42.18	160	P	P	19 49 44.6	-0.3
WRAB				IAmb	IAmb	19 49 55.4	
	comp=Z,7.8nm,0.9s						
WRA	Warramunga Arr	42.18	160	P	P	19 49 44.0	-0.9
	comp=Z,2.3nm,0.7s,baz=340,slow=9.2,SNR=36						
WRA				PcP	PcP	19 51 39.2	+0.3
	comp=Z,1.5nm,0.8s,baz=348,slow=3.4,SNR=4.8						
WB2	Warramunga Arr	42.19	160	P	P	19 49 44.5	-0.4
WB2				IAmb	IAmb	19 49 55.5	
	comp=Z,9.6nm,0.9s						
WR0	Warramunga Arr	42.26	160	P	P	19 49 43.8	-1.8
WR0				IAmb	IAmb	19 49 51.3	
	comp=Z,6.8nm,0.9s						
YAK	Yakutsk	42.27	6	LR	LR	20 10 25.9	
	comp=Z,208nm,18.3s,baz=202,slow=40						
KDJ	Kajisay	42.39	311	P	P	19 49 46.8	+0.1
KSH	Kashi	42.57	307	P	P	19 49 51.8	+3.7
KSH				pP	pP	19 49 55.4	+0.1
KSH				S	S	19 56 15.2	+6.0
KSH				SS	SS	19 59 19.8	+0.3
KSH				pmax	pmax		
	comp=Z,15nm,0.8s						
KSH				LR	LR		
	comp=Z,510nm,13.2s						
KSH				LR	LR		
	comp=Z,430nm,13.5s						
KSH				LR	LR		
	comp=Z,340nm,14.4s						
ZAA0	Zalesovo Array	43.24	330	P	P	19 49 53.0	-0.1
ZALV	Zalesovo Beam	43.24	330	P	P	19 49 52.7	-0.4
	comp=Z,3.7nm,0.8s,baz=121,slow=7.4,SNR=17						
ZALV				LR	LR	20 08 45.3	
	comp=Z,127nm,19.0s,baz=100,slow=37						
ZALV	Zalesovo Beam	43.24	330	P	P	19 49 53.0	-0.1
PETK	Petropavlovsk-	43.56	32	LR	LR	20 08 29.3	
	comp=Z,128nm,18.8s,baz=239,slow=37						
NIL	Nilore	43.77	298	P	P	19 49 57.0	-0.8
NIL				IAmb	IAmb	19 49 58.9	
	comp=Z,9.5nm,0.9s						
AAK	Ala-Archa	44.44	311	P	P	19 50 02.3	-0.9
KURK	Kurchatov	44.74	323	P	P	19 50 05.0	-0.2
KURK				IAmb	IAmb	19 50 14.5	
	comp=Z,11nm,1.1s						
MA2	Magadan	44.91	21	LR	LR	20 10 06.0	
	comp=Z,88nm,18.5s,baz=196,slow=38						
ASAR	Alice Springs	45.56	163	P	P	19 50 11.8	-0.3
	comp=Z,3.2nm,0.9s,baz=344,slow=6.8,SNR=37						
ASAR				PcP	PcP	19 51 50.2	-0.2
	comp=Z,0.9nm,0.8s,baz=328,slow=4.8,SNR=2.7						
KK31	Karatay Array	47.39	310	P	P	19 50 26.2	-0.1
KK31				IAmb	IAmb	19 50 36.2	
	comp=Z,3.7nm,0.9s						
KKAR	Karatay Array	47.39	310	P	P	19 50 27.0	+0.7
KKAR				IAmb	IAmb	19 50 36.2	
	comp=Z,3.7nm,0.9s						
KKAR	Karatay Array	47.39	310	P	P	19 50 26.5	+0.2
HNR	Honiara	48.80	123	LR	LR	20 09 52.1	
	comp=Z,80nm,20.8s,baz=324,slow=34						
BRVK	Borovoye	50.41	323	P	P	19 50 49.8	+0.5
BRVK				IAmb	IAmb	19 50 58.7	
	comp=Z,14nm,1.4s						
TIXI	Tiksi	51.67	3	LR	LR	20 16 37.9	
	comp=Z,183nm,18.6s,baz=186,slow=40						
TIXI	Tiksi	51.67	3	P	P	19 50 58.2	-0.2
NRIK	Noril'sk	53.04	346	P	P	19 51 09.2	+0.6
	comp=Z,2.0nm,0.5s,baz=142,slow=6.3,SNR=2.7						
NRIK				LR	LR	20 15 05.3	
	comp=Z,78nm,19.6s,baz=153,slow=38						
STKA	Stephens Creek	55.64	158	P	P	19 51 28.1	+0.2
	comp=Z,0.9nm,0.5s,baz=0.4,slow=5.6,SNR=4.6						
STKA	Stephens Creek	55.64	158	P	P	19 51 27.0	-0.9
STKA				IAmb	IAmb	19 52 24.6	
	comp=Z,9.7nm,1.9s						
BILL	Bilibino	55.64	19	P	P	19 51 28.6	+1.1
BILL				IAmb	IAmb	19 51 37.9	
	comp=Z,3.9nm,0.8s						
ABKAR	Akbulak array	55.75	316	P	P	19 51 28.7	0.0
GEYT	Alibeck	56.25	303	P	P	19 51 32.7	+0.2
	comp=Z,1.4nm,0.8s,baz=54,slow=13,SNR=4.7						
GEYT				LR	LR	20 17 50.5	
	comp=Z,82nm,21.2s,baz=95,slow=38						
ARU	Arti	57.87	325	P	P	19 51 43.6	0.0
KBZ	Khabaz	67.43	310	P	P	19 52 47.5	0.0
	comp=Z,2.7nm,0.8s,baz=134,slow=5.0,SNR=9.6						
KBZ				LR	LR	20 26 17.7	
	comp=Z,89nm,18.2s,baz=82,slow=40						
KIV	Kislovodsk	67.55	310	P	P	19 52 49.2	+0.7
KLMR	Klimovskoe	68.14	329	*e*P	P	19 52 50.4	-1.3
KLMR				AMP		19 52 59.5	
	comp=Z,12nm,1.3s						
RAYN	Ar Rayn	68.85	288	P	P	19 52 56.8	-0.2
RAYN				IAmb	IAmb	19 53 06.6	
	comp=Z,6.5nm,1.0s						
IMAR	Indian Mountai	70.04	26	P	P	19 53 04.5	+1.0
MLY	Manley	71.39	27	P	P	19 53 13.2	+1.4
MLY				IAmb	IAmb	19 53 23.6	
	comp=Z,5.3nm,0.8s						
BPAW	Bear Paw Mtn.	71.41	28	P	P	19 53 12.4	+0.5
SUA	Susitna One	71.91	30	P	P	19 53 14.4	-0.7
MCK	McKinley	72.36	28	P	P	19 53 18.5	+0.9
RND	Reindeer	72.46	28	P	P	19 53 18.9	+0.7
WRH	Wood River Hil	72.60	27	P	P	19 53 19.5	+0.6
WRH				IAmb	IAmb	19 53 25.3	
	comp=Z,3.8nm,0.8s						
ILAR	Eielson Array	73.05	27	P	P	19 53 22.4	+0.7
	comp=Z,1.0nm,0.7s,baz=279,slow=5.6,SNR=11						
ILAR				LR	LR	20 29 11.5	
	comp=Z,49nm,18.6s,baz=236,slow=39						
RIDG	Independent Ri	74.14	27	P	P	19 53 28.1	0.0
RIDG				IAmb	IAmb	19 53 29.4	
	comp=Z,10nm,1.2s						
SCRK	Sand Creek	74.46	27	P	P	19 53 29.8	-0.2
SCRK				IAmb	IAmb	19 53 41.2	
	comp=Z,3.9nm,0.8s						
FINES	FINESS Array B	74.50	330	P	P	19 53 29.9	-0.2
	comp=Z,2.1nm,0.9s,baz=35,slow=7.0,SNR=4.5						
FINES				LR	LR	20 28 56.9	
	comp=Z,130nm,18.8s,baz=67,slow=38						
DOT	Dot Lake	74.51	27	P	P	19 53 31.3	+1.1
BRTR	Keskin Array B	74.96	307	P	P	19 53 33.8	+0.3
	comp=Z,0.8nm,0.9s,baz=123,slow=4.6,SNR=4.5						
AKASG	Malin Array Be	75.36	319	P	P	19 53 34.4	-0.9
	comp=Z,0.3nm,0.4s,baz=64,slow=5.6,SNR=4.9						
AKASG				LR	LR	20 29 00.7	
	comp=Z,52nm,18.4s,baz=115,slow=38						
DAWY	Dawson	76.38	26	P	P	19 53 42.2	+1.2
CTGM	Chitina Glacie	76.46	30	P	P	19 53 42.5	+0.8
TESR	Tescani	78.12	315	⇑P	P	19 53 49.7	-1.3
VRI	Vrincioaia	78.25	315	⇑P	P	19 53 50.6	-1.2
PLOR	Plostina	78.31	315	P	P	19 53 50.6	-1.6
MLZ	Mavora Lakes	78.36	148	P	P	19 53 53.2	+1.0
BURAR	Bucovina Array	78.73	317	⇑P	P	19 53 57.7	+3.2
MLR	Muntele Rosu	78.89	314	⇓P	P	19 53 54.4	-1.1
C36M	Paulatuk	79.76	19	P	P	19 53 59.4	-0.2
C36M				IAmb	IAmb	19 54 11.2	
	comp=Z,4.6nm,1.0s						
NOA	NORSAR Array B	81.38	332	P	P	19 54 07.9	-0.6
	comp=Z,0.7nm,0.8s,baz=64,slow=5.4,SNR=3.3						
NOA				LR	LR	20 32 30.9	
	comp=Z,70nm,18.8s,baz=300,slow=37						
VTS	Vitosha	81.65	312	⇓P	P	19 54 09.8	-0.6
VTS	Vitosha	81.65	312	P	P	19 54 10.0	-0.4
VTS				IAmb	IAmb	19 54 20.8	
	comp=Z,6.4nm,0.9s						
VYHS	Vyhne	82.46	319	*e*P	P	19 54 14.8	+0.4
RES	Resolute Bay	82.67	9	LR	LR	20 34 19.7	
	comp=Z,28nm,19.6s,baz=318,slow=38						
RES	Resolute Bay	82.67	9	P	P	19 54 15.6	+0.7
RES				IAmb	IAmb	19 54 16.5	
	comp=Z,4.8nm,0.8s						
KMBO	Kilima Mbogo	83.97	267	LR	LR	20 30 49.8	
	comp=Z,42nm,20.1s,baz=92,slow=35						
GERES	GERESS Array B	85.44	321	P	P	19 54 29.8	+0.1
	comp=Z,0.5nm,0.6s,baz=79,slow=5.1,SNR=4.8						
GERES				LR	LR	20 36 35.4	
	comp=Z,65nm,18.1s,baz=67,slow=38						
YKA	Yellowknife Ar	86.89	22	P	P	19 54 37.1	+0.8
	comp=Z,2.1nm,0.8s,baz=316,slow=4.5,SNR=32						
PPT	Papeete	95.92	106	LR	LR	20 31 58.4	
	comp=Z,91nm,18.7s,baz=246,slow=31						
TXAR	Lajitas Array	114.94	42	PKP	PKPdf	20 00 33.2	-0.2
	comp=Z,0.6nm,0.9s,baz=242,slow=1.9,SNR=2.8						

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*IDC **05** 19:48:27.9±1.6, 17°.60S×178°.59W, h518^{km}±17^{km}, mb3.7/18, mb1 3.8/20, mb1mx3.7/35, mbtmp4.6/20, Error ellipse: s-maj=14.9km s-min=11.5km az=148.0*

*NEIC **05** 19:48:29.4±1.5, 17°.5S±0°.2×178°.7W±0°.1, h539^{km}±5^{km}, mb4.5/13, Error ellipse: s-maj=26.2km s-min=14.1km az=156.0*

ISC 05 19:48:29.9±0.5**, 17°.6S**±0°.1×**178°.63W**±0°.08**, h547**^{km}**, n68,** σ**1^{s}17**/67**, mb4.2**/21**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.17	267	P	P	19 49 46.4	+0.5
AFI	Afiamalu	7.54	62	P	P	19 50 19.6	-3.6
	12nm,0.3s,baz=53,slow=4.3,SNR=9.9						
AFI	Afiamalu	7.54	62	P	P	19 50 20.4	-2.8
NIUE	Niue	8.40	102	P	P	19 50 31.9	+0.3
DZM	Mont Dzumac	14.73	250	P	P	19 51 36.1	-0.7
	1.9nm,0.3s,baz=304,slow=22,SNR=10						
DZM	Mont Dzumac	14.73	250	P	P	19 51 35.7	-1.1
URZ	Urewera	20.94	189	P	P	19 52 32.4	-2.0
	2.9nm,0.3s,baz=8.1,slow=14,SNR=3.5						
URZ	Urewera	20.94	189	P	P	19 52 32.2	-2.2
RPZ	Rata Peaks	27.48	196	P	P	19 53 30.7	-1.7
	11nm,0.9s,baz=18,slow=18,SNR=5.2						
RPZ	Rata Peaks	27.48	196	P	P	19 53 28.9	-3.6
CTA	Charters Tower	33.29	260	P	P	19 54 22.4	-0.4
	2.4nm,0.4s,baz=94,slow=11,SNR=6.9						
PMG	Port Moresby	34.19	279	P	P	19 54 31.3	+0.9
	41nm,0.9s,baz=21,slow=4.3,SNR=5.8						
PMG	Port Moresby	34.19	279	P	P	19 54 29.9	-0.6
STKA	Stephens Creek	38.60	241	P	P	19 55 07.6	+1.0
	7.7nm,0.4s,baz=87,slow=10.0,SNR=43						
STKA	Stephens Creek	38.60	241	P	P	19 55 06.7	+0.1
WRA	Warramunga Arr	44.48	259	P	P	19 55 52.3	-0.8
	4.5nm,0.5s,baz=98,slow=7.0,SNR=112						
ASAR	Alice Springs	44.67	254	P	P	19 55 54.8	+0.2
	46nm,0.6s,baz=87,slow=8.2,SNR=668						
ASAR				ScP	ScP	20 00 27.9	+2.2
	0.4nm,0.7s,baz=101,slow=4.8,SNR=3.7						
ASAR				S	S	20 01 49.8	-1.9
	0.9nm,0.9s,baz=92,slow=16,SNR=6.7						
ASAR	Alice Springs	44.67	254	P	P	19 55 54.2	-0.5
MTN	Manton Dam	48.59	268	P	P	19 56 24.1	-0.2
MTN				IAmb	IAmb	19 57 24.2	
	comp=Z,58nm,1.8s						
KNRA	Kununurra	50.31	264	P	P	19 56 36.6	-0.3
KNRA				IAmb	IAmb	19 56 37.6	
	comp=Z,14nm,0.7s						
SIJI	Sorong	51.95	283	P	P	19 56 49.7	+0.8
	comp=Z,23nm,0.6s,baz=93,slow=5.0,SNR=11						
FITZ	Fitzroy Crossi	52.87	260	P	P	19 56 56.0	+0.5
	comp=Z,2.8nm,0.4s,baz=116,slow=6.6,SNR=29						
FITZ	Fitzroy Crossi	52.87	260	P	P	19 56 55.9	+0.5
FITZ				IAmb	IAmb	19 56 57.1	
	comp=Z,31nm,1.7s						
SOEI	Soe	55.86	270	P	P	19 57 17.8	+1.2
SOEI				IAmb	IAmb	19 57 27.5	
	comp=Z,22nm,0.8s						
NWAO	Narrogin (SRO)	59.18	242	P	P	19 57 38.2	-0.5
	comp=Z,2.7nm,0.6s,baz=99,slow=13,SNR=2.8						
QSPA	South Pole Qui	72.47	180	P	P	19 59 02.4	+1.3
	comp=Z,7.4nm,0.8s,baz=289,slow=0.6,SNR=19						
QSPA	South Pole Qui	72.47	180	P	P	19 59 02.3	+1.3
QSPA				IAmb	IAmb	19 59 02.7	
	comp=Z,5.8nm,0.7s						
PETK	Petropavlovsk-	73.31	345	P	P	19 59 06.1	+0.3
	comp=Z,1.2nm,0.5s,baz=124,slow=7.8,SNR=2.8						
U15A	North Rim	82.46	48	P	P	19 59 57.5	+1.7
NEA	Nenana	84.98	12	P	P	20 00 05.3	-1.9
NEA				IAmb	IAmb	20 01 10.6	
	comp=Z,25nm,0.9s						
ILAR	Eielson Array	85.61	13	P	P	20 00 09.6	-0.7
	comp=Z,0.8nm,0.4s,baz=224,slow=5.4,SNR=20						
ILAR	Eielson Array	85.61	13	P	P	20 00 09.3	-1.0
TX31	Lajitas Ar. Si	86.00	58	P	P	20 00 12.9	-0.2
TX32	Lajitas Array	86.00	58	P	P	20 00 13.0	-0.1
TXAR	Lajitas Array	86.00	58	P	P	20 00 15.2	+2.1
	comp=Z,1.9nm,0.9s,baz=219,slow=6.8,SNR=14						
TXAR	Lajitas Array	86.00	58	P	P	20 00 13.0	-0.1
PD31	Pinedale Array	87.26	44	P	P	20 00 19.2	+0.3
PD31				IAmb	IAmb	20 01 07.6	
	comp=Z,10nm,1.9s						
PDAR	Pinedale Array	87.26	44	P	P	20 00 19.5	+0.6
	comp=Z,0.8nm,0.5s,baz=211,slow=3.6,SNR=11						
PDAR	Pinedale Array	87.26	44	P	P	20 00 19.1	+0.2
BMAR	Burnt Mountain	88.38	12	P	P	20 00 23.8	+0.5
SNAA	Sanae	90.93	179	P	P	20 00 35.5	+0.2
SNAA	Sanae	90.93	179	P	P	20 00 35.7	+0.4
	comp=Z,1.9nm,0.6s,baz=225,slow=11						
VNA3	Neumayer Olymp	91.08	176	P	P	20 00 36.4	+0.5
VNA2	Neumayer--Watz	91.52	177	P	P	20 00 38.4	+0.5
	baz=167,slow=3.0						
SONM	Songino Array	93.16	319	P	P	20 00 46.7	+0.7
	comp=Z,0.1nm,0.4s,baz=89,slow=2.6,SNR=3.0						
YKA	Yellowknife Ar	94.12	25	P	P	20 00 49.8	0.0
	comp=Z,0.7nm,0.8s,baz=243,slow=4.3,SNR=11						
MKAR	Makanchi Array	108.75	314	PKiKP	PKiKP	20 05 56.2	-0.9
	comp=Z,0.4nm,0.9s,baz=157,slow=1.1,SNR=4.9						
NOA	NORSAR Array B	136.02	353	PKP	PKPdf	20 06 49.5	+0.9
	comp=Z,1.0nm,0.9s,baz=12,slow=4.0,SNR=2.7						
BUR08	Bucovina Ar. S	144.21	332		PKPbc	20 07 02.7	-0.8
BURAR	Bucovina Array	144.22	332		PKPbc	20 07 03.8	+0.2
BRTR	Keskin Array B	144.40	315	PKP	PKPbc	20 07 04.9	+0.5
	comp=Z,0.9nm,0.6s,baz=128,slow=3.3,SNR=6.9						
BRTR	Keskin Array B	144.40	315		PKPbc	20 07 04.5	0.0
OSTC	Ostas	145.01	343	*e*PKP	PKPab	20 07 07.6	+0.9
CLL	Collm	145.09	347	⇓*i*PKPbc	PKPab	20 07 07.5	+0.6
	comp=Z,26nm,1.6s						
CLL	Collm	145.09	347		PKPab	20 07 06.9	0.0
DPC	Dobruska-Polom	145.17	343	*e*PKP	PKPab	20 07 07.4	+0.1
GOPC	GO Pecny, Ondr	145.98	344	*e*PKP	PKPbc	20 07 09.5	+0.9
KHC	Kasperske Hory	147.00	345	*e*PKP	PKPbc	20 07 12.2	+0.8
GERES	GERESS Array B	147.24	345	PKPbc	PKPbc	20 07 12.5	+0.3
	comp=Z,1.5nm,0.5s,baz=24,slow=3.6,SNR=9.7						
GERES	GERESS Array B	147.24	345		PKPbc	20 07 12.6	+0.5
CONA	Conrad Observa	147.48	342	*i* PKiKP	PKPbc	20 07 13.7	+0.9
	comp=Z,4.7nm,0.7s						
SOKA	Soboth	148.85	342	*i* PKiKP	PKPbc	20 07 16.2	0.0
	comp=Z,2.6nm,0.8s						
WATA	Walderalm	149.15	346	*e*PKiKP	PKPbc	20 07 17.5	+0.4
	comp=Z,2.1nm,0.5s						
WTTA	Wattenberg	149.21	346	*i* PKiKP	PKPbc	20 07 17.7	+0.5
	comp=Z,6.6nm,0.6s						
MYKA	Terra Mystica	149.30	343	*i* PKiKP	PKPbc	20 07 17.1	-0.2
	comp=Z,2.7nm,0.4s						
SQTA	Sankt Quirin	149.34	347	*e*PKiKP	PKPbc	20 07 17.9	+0.4
	comp=Z,2.6nm,0.5s						
ABTA	Abfaltersbach	149.49	345	*e*PKiKP	PKPbc	20 07 17.8	0.0
	comp=Z,3.5nm,0.6s						
TORD	Torodi Ar. Bea	175.59	184	PKP	PKPdf	20 07 37.7	-0.5
	comp=Z,0.7nm,0.8s,baz=194,slow=2.3,SNR=3.6						
TORD				PKPab	PKPab	20 09 19.8	+0.4
	comp=Z,0.6nm,0.7s,baz=186,slow=2.9,SNR=2.6						

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*NEIC **05** 20:01:34.8±1.6, 57°.70S±0°.05×26°.0W±0°.5, h60^{km}±9^{km}, mb4.5/6, Error ellipse: s-maj=40.7km s-min=6.8km az=85.0*

*IDC **05** 20:01:38.7±2.9, 57°.74S×25°.97W, h94^{km}±24^{km}, mb3.9/6, mb1 3.9/7, mb1mx3.7/24, mbtmp4.2/7, Error ellipse: s-maj=27.5km s-min=18.5km az=97.0*

ISC 05 20:01:35.0±0.7**, 57°.71S**±0°.10×**26°.0W**±0°.2**, h65**^{km}**, n30,** σ**1^{s}03**/32**, mb4.4**/10**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	15.01	157	P	Pn	20 05 02.7	-0.1
VNA3	Neumayer Olymp	15.20	160	P	Pn	20 05 04.7	-0.7
VNA2	Neumayer--Watz	15.40	157	P	Pn	20 05 07.5	-0.5
	baz=322,slow=14						
SNAA	Sanae	16.96	155	P	P	20 05 28.3	-0.2
SNAA	Sanae	16.96	155	P	P	20 05 28.9	+0.3
	0.8nm,0.3s,baz=15,slow=8.1,SNR=44						
SNAA				S	Sn	20 08 21.7	-13
	0.1nm,0.3s,baz=315,slow=19,SNR=3.8						
SNAA	Sanae	16.96	155		P	20 05 28.8	+0.3
QSPA	South Pole Qui	32.54	180	P	P	20 08 00.4	+1.0
	2.1nm,0.5s,baz=301,slow=0.8,SNR=11						
QSPA	South Pole Qui	32.54	180	P	P	20 08 00.0	+0.6
QSPA				IAmb	IAmb	20 09 09.8	
	comp=Z,11nm,1.5s						
VNDA	Vanda	44.94	182	P	P	20 09 43.1	+0.4
	comp=Z,1.6nm,0.6s,baz=188,slow=7.1,SNR=4.7						
BOSA	Boshof	45.78	73	P	P	20 09 49.8	-0.2
	comp=Z,2.3nm,0.8s,baz=194,slow=12,SNR=3.6						
LPAZ	La Paz	51.87	305	P	P	20 10 37.4	+0.1
	comp=Z,0.6nm,0.4s,baz=153,slow=2.3,SNR=2.8						
LSZ	Lusaka	58.39	67	P	P	20 11 23.5	-0.3
LSZ				IAmb	IAmb	20 11 48.8	
	comp=Z,6.7nm,1.4s						
LIC	Lamto	65.96	23	*e*P	P	20 12 15.0	+0.9
	comp=Z,7.7nm,0.5s						
LIC	Lamto	65.96	23	P	P	20 12 15.0	+0.9
KIC	Kosan Boka	66.15	23	*e*P	P	20 12 15.9	+0.6
	comp=Z,14nm,0.9s						
KIC	Kosan Boka	66.15	23	P	P	20 12 15.9	+0.6
TIC	Toumodi	66.37	23	*e*P	P	20 12 17.8	+1.1
TIC	Toumodi	66.37	23	P	P	20 12 17.8	+1.1
DBIC	Dimbokro	66.42	23	P	P	20 12 17.9	+0.8
	comp=Z,2.5nm,0.5s,baz=150,slow=9.8,SNR=6.4						
DBIC	Dimbokro	66.42	23	P	P	20 12 17.2	+0.2
TOA0	Torodi Ar. Sit	74.20	28	P	P	20 13 04.8	+0.3
TOA0				IAmb	IAmb	20 13 06.5	
	comp=Z,3.9nm,0.7s						
TORD	Torodi Ar. Bea	74.20	28	P	P	20 13 05.8	+1.3
	comp=Z,3.9nm,0.6s,baz=200,slow=6.3,SNR=34						
TORD	Torodi Ar. Bea	74.20	28	P	P	20 13 05.4	+0.9
FINES	FINESS Array B	125.55	28	PKP	PKiKP	20 20 26.6	-0.8
	comp=Z,1.2nm,0.8s,baz=276,slow=2.5,SNR=3.4						
YKA	Yellowknife Ar	137.84	316	PKP	PKPdf	20 20 50.0	-0.2
	comp=Z,0.4nm,0.4s,baz=127,slow=2.8,SNR=10						
YKA				SKPbc	SKPbc	20 24 14.1	-4.0
	comp=Z,0.5nm,0.9s,baz=132,slow=4.1,SNR=6.0						
SONM	Songino Array	150.15	88	PKPbc	PKPbc	20 21 17.0	-0.4
	comp=Z,0.5nm,0.5s,baz=224,slow=3.2,SNR=4.9						
SONM				pPKPbc	pPKPab	20 21 39.8	-1.1
	comp=Z,0.5nm,0.8s,baz=237,slow=3.2,SNR=2.8						
ILAR	Eielson Array	151.69	309	PKPbc	PKiKP	20 21 20.2	-0.5
	comp=Z,1.9nm,0.8s,baz=147,slow=4.6,SNR=13						
ILAR	Eielson Array	151.69	309		PKiKP	20 21 19.9	-0.8
KDAK	Kodiak Island	152.11	293	PKPbc	PKiKP	20 21 22.6	+0.9
	comp=Z,2.9nm,0.9s,baz=191,slow=1.9,SNR=8.6						
TOLK	Toolik Lake Re	153.36	317		PKiKP	20 21 24.4	+0.3

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*MDD **05** 20:05:23.2±1.8, 36°.65N×6°.96W, h41^{km}±40^{km}, mb3.8/1, Error ellipse: s-maj=16.0km s-min=9.5km az=172.0, PRXIMO*

*IGIL **05** 20:05:23.9, 36°.72N×7°.02W, h19^{km}, ML1.3*

*INMG **05** 20:05:23.1±1.4, 36°.63N×6°.94W, h31^{km}, ML1.4, Error ellipse: s-maj=5.8km s-min=4.6km az=20.0*

ISC 05 20:05:22.1±3.1**, 36°.7N**±0°.2×**6°.96W**±0°.07**, h53**^{km}±29^{km}**, n24,** σ**0^{s}68**/41**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVAQ	Vaqueiros	0.96	321	P	Pn	20 05 39.7	+0.3
PVAQ				S	Sn	20 05 51.8	-0.3
	12nm,0.4s						
PVAQ	Vaqueiros	0.96	321	*e*P	Pn	20 05 39.7	+0.3
PVAQ				*e*S	Sn	20 05 51.8	-0.3
PVAQ				A	A	20 05 52.4	
	12nm,0.4s						
EGRO	El Granado	0.97	334	P	Pn	20 05 39.9	+0.4
	2.0nm,0.1s,SNR=18						
EGRO				S	Sn	20 05 52.3	0.0
	5.0nm,0.1s,SNR=12						
PBDV	Barranco-do-Ve	0.97	307	P	Pn	20 05 39.7	+0.1
PBDV				S	Sn	20 05 52.0	-0.4
	5.4nm,0.8s						
PBDV	Barranco-do-Ve	0.97	307	*e*P	Pn	20 05 39.7	+0.1
PBDV				*e*S	Sn	20 05 52.0	-0.4
PBDV				A	A	20 05 52.5	
	5.4nm,0.8s						
EMIN	Mina Concepcio	1.13	12	P	Pn	20 05 42.0	+0.4
	0.3nm,0.1s,SNR=8.2						
EMIN				S	Sn	20 05 56.1	0.0
	5.9nm,0.1s,SNR=21						
PCVE	Castro Verde	1.30	319	P	Pn	20 05 44.5	+0.6
PCVE				S	Sn	20 05 59.6	-0.6
	1.7nm,0.3s						

PCVE	**Castro Verde**	**1.30**	**319**	*e*P	**Pn**	**20 05 44.5**	**+0.6**
PCVE				*e*S	**Sn**	**20 05 59.6**	**-0.6**
PCVE				A	A	20 06 01.2	
	1.7nm,0.3s						
PBAR	**Barrancos**	**1.51**	**358**	S	**Sn**	**20 06 05.5**	**+0.1**
PBAR	**Barrancos**	**1.51**	**358**	*e*S	**Sn**	**20 06 05.5**	**+0.1**
PBEJ	**Beja**	**1.54**	**332**	S	**Sn**	**20 06 05.9**	**-0.3**
PBEJ	**Beja**	**1.54**	**332**	*e*S	**Sn**	**20 06 05.9**	**-0.3**
MESJ	**Messejana**	**1.55**	**320**	*e*P	**Pn**	**20 05 47.8**	**+0.5**
MESJ				*e*S	**Sn**	**20 06 05.4**	**-0.9**
MESJ				AML	AML	20 06 07.2	
	comp=N,3.0nm,0.1s						
MESJ	**Messejana**	**1.55**	**320**	P	**Pn**	**20 05 47.8**	**+0.5**
MESJ				S	**Sn**	**20 06 05.4**	**-0.9**
	comp=N,3.0nm,0.1s						
PTEO	**Sao Teotonio**	**1.67**	**302**	S	**Sn**	**20 06 08.7**	**-0.4**
PTEO	**Sao Teotonio**	**1.67**	**302**	*e*S	**Sn**	**20 06 08.7**	**-0.4**
ECAB	**El Cabril**	**1.87**	**41**	S	**Sn**	**20 06 12.9**	**-1.3**
	comp=N,2.9nm,0.9s,SNR=6.4						
PNCL	**Nicolau / Gran**	**1.91**	**320**	Pn	**Pn**	**20 05 53.0**	**+0.7**
PNCL				Sn	**Sn**	**20 06 14.3**	**-0.9**
	comp=N,2.1nm,0.9s						
PNCL	**Nicolau / Gran**	**1.91**	**320**	*e*Pn	**Pn**	**20 05 53.0**	**+0.7**
PNCL				*e*Sn	**Sn**	**20 06 14.3**	**-0.9**
PNCL				A	A	20 06 17.1	
	comp=N,2.1nm,0.9s						
EBAD	**Badajoz**	**2.09**	**359**	P	**Pn**	**20 05 55.3**	**+0.6**
	comp=N,0.8nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**20 06 18.8**	**-0.7**
	comp=N,1.2nm,0.1s,SNR=7.4						
PMTG	**Montargil**	**2.60**	**338**	Pn	**Pn**	**20 06 02.5**	**+0.8**
PMTG				Sn	**Sn**	**20 06 32.0**	**-0.2**
	comp=N,1.3nm,0.7s						
PMTG	**Montargil**	**2.60**	**338**	*e*Pn	**Pn**	**20 06 02.5**	**+0.8**
PMTG				*e*Sn	**Sn**	**20 06 32.0**	**-0.2**
PMTG				A	A	20 06 34.3	
	comp=N,1.3nm,0.7s						
PMRV	**Marv??o**	**2.78**	**353**	Pn	**Pn**	**20 06 05.0**	**+0.8**
PMRV				Sn	**Sn**	**20 06 35.1**	**-1.5**
	comp=N,1.5nm,0.3s						
PMRV	**Marv??o**	**2.78**	**353**	*e*Pn	**Pn**	**20 06 05.0**	**+0.8**
PMRV				*e*Sn	**Sn**	**20 06 35.1**	**-1.5**
PMRV				A	A	20 06 37.8	
	comp=N,1.5nm,0.3s						

TAP 05 20:08:50.4, 24°.47N×121°.86E, h17^{km}, ML1.9, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.12**	**249**	P	Pb	20 08 54.4	+0.3
	baz=246						
ENA				S	Sb	20 08 57.5	+0.8
	baz=246						
TWC	**Suao**	**0.14**	**355**	P	Pb	20 08 55.0	+0.5
	baz=359						
TWC				S	Sb	20 08 58.1	+0.8
	baz=359						
EOS1	**EOS1**	**0.26**	**72**	*e*P	Pb	20 08 56.6	+0.1
	baz=72						
EOS1				*e*S	Sb	20 09 00.9	+0.2
	baz=72						
TWE	**Neicheng**	**0.30**	**325**	P	Pb	20 08 57.7	+0.3
	baz=326						
TWE				S	Sb	20 09 02.9	+0.7
	baz=326						
ENTT	**Nioudou**	**0.32**	**302**	P	Pb	20 08 58.1	+0.5
	baz=302						
ENTT				S	Sb	20 09 03.2	+0.8
	baz=302						
NDT	**Datong Townshi**	**0.34**	**293**	P	Pb	20 08 58.6	+0.6
	baz=292						
NDT				S	Sb	20 09 04.2	+1.0
	baz=292						
SLBB	**Yuanshan**	**0.35**	**324**	P	Pg	20 08 57.9	+0.1
	baz=323						
SLBB				S	Sb	20 09 03.7	+0.3
	baz=323						
NACB	**Ninganchiao**	**0.38**	**219**	*e*P	Pg	20 08 57.7	-0.6
	baz=219						
NACB				*e*S	Sg	20 09 03.7	+0.1
	baz=219						
ETLH	**Xiulin Townshi**	**0.43**	**233**	*e*P	Pb	20 09 00.2	+0.6
	baz=232						
ETLH				*e*S	Sb	20 09 06.8	+0.9
	baz=232						
NNSB	**Datong**	**0.44**	**265**	*e*P	Pb	20 08 60.0	+0.3
	baz=264						
NNSB				*e*S	Sb	20 09 06.1	+0.1
	baz=264						
NNSH	**Datong**	**0.44**	**265**	*e*P	Pb	20 08 60.0	+0.3
	baz=264						
NNSH				*e*S	Sb	20 09 05.9	-0.1
	baz=264						
NNS	**Nan Shan**	**0.45**	**266**	P	Pb	20 09 00.2	+0.3
	baz=265						
NNS				S	Sb	20 09 06.4	+0.1
	baz=265						
NWLT	**Wulai**	**0.45**	**313**	*e*P	Pb	20 09 00.2	+0.4
	baz=313						
NWLT				*e*S	Sb	20 09 06.4	+0.2
	baz=313						
TWD	**Chiawan**	**0.46**	**212**	*e*P	Pb	20 09 00.1	+0.1
	baz=211						
TWD				*e*S	Sn	20 09 08.4	-1.5
	baz=211						
YHNB	**Yeheng**	**0.48**	**294**	*e*P	Pb	20 09 01.0	+0.5
	baz=294						
YHNB				*e*S	Sb	20 09 07.8	+0.5
	baz=294						
TIPB	**Shuangxi**	**0.50**	**356**	*e*P	Pb	20 09 01.0	+0.3
	baz=356						
TIPB				*e*S	Sb	20 09 07.8	0.0
	baz=356						
NSK	**Sanguang**	**0.50**	**294**	*e*P	Pb	20 09 01.1	+0.4
	baz=294						
NSK				*e*S	Sb	20 09 08.3	+0.5
	baz=294						
WHF	**Hehuan Shan**	**0.63**	**239**	*e*P	Pb	20 09 03.8	+0.6
	baz=238						
WHF				*e*S	Sb	20 09 12.6	+0.7
	baz=238						
CHGB	**Renai**	**0.75**	**237**	*e*P	Pg	20 09 05.3	+0.2
	baz=236						
OWD	**Renai**	**0.81**	**231**	*e*P	Pg	20 09 06.5	+0.3
	baz=230						
OWD				*e*S	Sn	20 09 18.0	-0.8
	baz=230						
VWDT	**VWDT**	**0.97**	**223**	*e*P	Pn	20 09 09.1	0.0
	baz=222						
VWDT				*e*S	Sn	20 09 22.8	+0.2
	baz=222						
SSLB	**Suanglung**	**1.07**	**231**	*e*P	Pn	20 09 10.8	+0.1
	baz=230						

JMA 05 20:09:46.7±0.1, 24°.08N×123°.60E, h18^{km}±2^{km}, M1.2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.19**	**97**	P	Pb	20 09 51.3	0.0
HATJ				*e*S	Sg	20 09 54.9	+0.2
IRIF	**Iriomote-Funau**	**0.28**	**25**	P	Pg	20 09 52.8	-0.1
IRIF				S	Sg	20 09 57.2	0.0
JKRS	**Kuro-shima**	**0.41**	**67**	P	Pg	20 09 55.1	0.0
JKRS				S	Sb	20 10 01.3	0.0
JIJ	**Ishigaki jima**	**0.57**	**60**	P	Pg	20 09 57.5	-0.6
JIJ				*e*S	Sg	20 10 05.4	-0.4
JISG	**Ishigakijimahi**	**0.82**	**52**	P	Pb	20 10 02.1	-0.4
JISG				*e*S	Sb	20 10 13.3	+0.1

IDC 05 20:10:45.5±1.4, 5°.18S×150°.78E, h0^{km}, mb3.0/2, mb1 3.4/2, mb1mx3.1/38, mbtmp3.1/2, Error ellipse: s-maj=96.3km s-min=18.4km az=141.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.51**	**55**	Pn	Pg	20 11 14.5	0.0
	108nm,0.3s,baz=178,slow=3.5,SNR=48						
KRVT				Sn	Sn	20 11 34.9	+0.6
	131nm,0.3s,baz=343,slow=19,SNR=17						
WRA	**Warramunga Arr**	**21.71**	**226**	P	P	20 15 38.9	+0.4
	0.3nm,0.4s,baz=53,slow=10,SNR=7.5						
ASAR	**Alice Springs**	**24.55**	**220**	P	P	20 16 07.4	+0.2
	0.3nm,0.5s,baz=63,slow=8.4,SNR=6.5						
TORD	**Torodi Ar. Bea**	**148.50**	**287**	PKPbc	PKPbc	20 30 33.7	-1.7
	0.5nm,0.7s,baz=104,slow=3.6,SNR=3.3						

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*NIED **05** 20:25:00, 20°.40N×120°.30E, h77^{km}, Mw4.5 Best double couple: $M_0$5.95000×10^{15} NP1:ϕ_s207.00000°, δ57.00000°, λ43.00000°. NP2:ϕ_s90.00000°, δ56.00000°, λ138.00000°.*
*BJI **05** 20:25:38.5±0.0, 19°.53N×120°.64E, h10^{km}, mB4.8/14, mb4.2/14, Ms4.6/3, Ms7 4.3/3*
*JMA **05** 20:25:43.6±0.6, 20°.42N×120°.32E, h0^{km}, M4.1*
*IDC **05** 20:25:43.5±0.5, 20°.15N×120°.29E, h0^{km}, mb4.1/21, mb1 4.2/23, mb1mx4.1/48, mbtmp4.1/23, ML4.0/2, MS3.2/12, Ms1 3.3/12, ms1mx3.1/49, Error ellipse: s-maj=19.1km s-min=12.2km az=74.0*
*NEIC **05** 20:25:44.6±1.8, 20°.18N±0°.05×120°.23E±0°.10, h7^{km}±4^{km}, mb4.4/23, Error ellipse: s-maj=13.0km s-min=7.7km az=89.0*
*MAN **05** 20:25:44.5, 20°.31N×120°.21E, h44^{km}, mb5.0, ML3.9, MS4.0*

ISC 05 20:25:47.8±0.4, 20°.23N±0°.03×120°.33E±0°.06, h28^{km}, n89, σ1.^{s}19/96, mb4.3/35, MS3.2/11, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	**Basco**	**1.55**	**82**	*e*P	**Pn**	**20 26 11.3**	**-2.2**
BBP				*e*S	**Sn**	**20 26 32.2**	**-0.5**
SIPP	**Brgy, Tapao**	**2.30**	**177**	⇓*i*P	**Pn**	**20 26 22.4**	**-1.5**
SIPP				*e*S	**Sb**	**20 26 57.1**	**+0.5**
APYP	**Conner**	**2.51**	**160**	*e*P	**Pn**	**20 26 25.5**	**-1.3**
APYP				*e*S	**Sn**	**20 26 56.9**	**+0.5**
SGCP	**Mt. Cagua**	**2.56**	**140**	*e*P	**Pn**	**20 26 26.2**	**-1.2**
SGCP				*e*S	**Sn**	**20 26 57.6**	**0.0**
SZP	**Santa**	**2.67**	**177**		**Pn**	**20 26 26.6**	**-2.4**
TWG	**Pinlang**	**2.67**	**15**		**Pn**	**20 26 27.6**	**-1.4**
TPUB	**Ta-pu**	**3.07**	**5**		**Pn**	**20 26 32.1**	**-2.4**
YULB	**Yu-li**	**3.27**	**16**		**Pn**	**20 26 36.7**	**-0.6**
SSLB	**Suanglung**	**3.59**	**9**		**Pn**	**20 26 40.7**	**-1.0**
SMPP	**San Manuel, Pa**	**4.07**	**175**	*e*P	**Pn**	**20 26 46.0**	**-2.3**
SMPP				*e*S	**Sn**	**20 27 34.1**	**-0.9**
NACB	**Ninganchiao**	**4.10**	**16**	Pn	**Pn**	**20 26 46.7**	**-1.9**
YHNB	**Yeheng**	**4.52**	**12**		**Pn**	**20 26 54.5**	**-0.1**
KNMB	**Chin-men Tao**	**4.58**	**337**	Pn	**Pn**	**20 26 52.5**	**-2.8**
BALP	**Baler**	**4.62**	**165**	*e*P	**Pn**	**20 26 55.2**	**-0.6**
BALP				*e*S	**Sn**	**20 27 50.8**	**+2.2**
HATJ	**Hateruma jima**	**4.99**	**40**	P	**Pn**	**20 26 59.5**	**-1.3**
IRIF	**Iriomote-Funau**	**5.16**	**37**	P	**Pn**	**20 27 03.1**	**-0.1**
IRIF				*e*S	**Sn**	**20 28 00.9**	**-0.9**
JKRS	**Kuro-shima**	**5.25**	**40**	P	**Pn**	**20 27 04.1**	**-0.3**
JKRS				*e*S	**Sn**	**20 28 02.6**	**-1.4**
JIJ	**Ishigaki jima**	**5.42**	**40**	P	**Pn**	**20 27 05.9**	**-0.9**
JIJ				*e*S	**Sn**	**20 28 05.9**	**-2.4**
JISG	**Ishigakijimahi**	**5.69**	**40**	P	**Pn**	**20 27 09.7**	**-0.8**
JISG				*e*S	**Sn**	**20 28 13.3**	**-1.6**
JTJ	**Tarama**	**5.97**	**42**	S	**Sn**	**20 28 19.2**	**-2.6**
HKPS	**Hong Kong Po S**	**6.12**	**291**	Pn	**Pn**	**20 27 13.4**	**-3.1**
JIRB	**Irabujima**	**6.40**	**43**	*e*S	**Sn**	**20 28 32.7**	**+0.3**
JNU	**Nakatsue**	**15.91**	**34**	Pn	**P**	**20 29 31.7**	**-1.6**
	0.6nm,0.3s,baz=16,slow=7.9,SNR=5.1						
JNU				LR	LR	20 36 38.5	
	comp=Z,40nm,19.7s,baz=192,slow=41						
KSRS	**Korea Array**	**18.39**	**19**	P	**Pn**	**20 30 01.8**	**+1.0**
	0.3nm,0.3s,baz=200,slow=11,SNR=6.4						
KSRS				LR	LR	20 37 26.4	
	comp=Z,30nm,20.4s,baz=218,slow=38						
MRSI	**Marisa**	**19.69**	**175**	P	**Pn**	**20 30 16.2**	**-0.4**
	27nm,1.1s						
MPSI	**Mapaga**	**19.77**	**181**	P	**Pn**	**20 30 17.4**	**-0.2**
CMAR	**Chiang Mai Arr**	**20.26**	**269**	P	**P**	**20 30 21.9**	**+0.6**
	0.3nm,0.4s,baz=71,slow=8.2,SNR=5.0						
CMAR				PcP	**PcP**	**20 34 35.3**	**+0.7**
	0.4nm,0.5s,baz=44,slow=2.5,SNR=5.0						
CMAR				LR	LR	20 38 13.4	
	comp=Z,116nm,18.9s,baz=118,slow=37						
LBMI	**Labuha**	**21.90**	**160**	P	**P**	**20 30 38.8**	**-0.1**
	4µm27nm,0.9s						
MJAR	**Matsushiro Arr**	**22.55**	**40**	P	**P**	**20 30 46.9**	**+1.1**
	4.7nm,1.0s,baz=231,slow=9.8,SNR=5.0						
MJAR				LR	LR	20 39 04.9	
	comp=Z,47nm,21.3s,baz=90,slow=35						
SANI	**Sanana**	**22.83**	**165**	P	**P**	**20 30 44.5**	**-4.3**
	30nm,0.9s						
SIJI	**Sorong**	**23.55**	**152**	P	**P**	**20 30 55.3**	**-0.8**
	26nm,0.8s,baz=327,slow=9.7,SNR=8.1						
NLAI	**Namlea**	**24.25**	**163**	P	**P**	**20 31 04.5**	**+1.9**
	13µm40nm,1.0s						
GUMO	**Guam**	**24.37**	**102**	LR	LR	20 38 23.2	
	comp=Z,63nm,21.6s,baz=303,slow=31						
IPM	**Ipoh**	**24.46**	**233**	P	**P**	**20 31 03.7**	**-0.9**
IPM				IAmb	IAmb	20 31 06.5	
	comp=Z,7.7nm,0.7s						
MSAI	**Masohi**	**24.90**	**159**	P	**P**	**20 31 10.8**	**+2.2**
	comp=Z,17nm,1.1s						
KAPI	**Kappang**	**25.09**	**181**	LR	LR	20 42 10.1	
	comp=Z,52nm,18.5s,baz=322,slow=39						
BRDH	**Bariadhala**	**26.80**	**280**	LR	LR	20 44 02.3	
	comp=Z,118nm,18.4s,baz=160,slow=41						
PSI	**Prapat**	**27.14**	**233**	P	**P**	**20 31 28.2**	**-0.7**
	comp=Z,2.6nm,0.4s,baz=59,slow=6.4,SNR=5.0						
PSI				LR	LR	20 42 21.7	
	comp=Z,46nm,18.1s,baz=179,slow=37						
RPSI	**Rantau Prapat**	**27.20**	**233**	P	**P**	**20 31 28.2**	**-1.2**
GMJI	**Gumukmas**	**29.12**	**194**	P	P	20 32 04.6	+18
ULN	**Ulaanbaatar**	**29.59**	**342**	P	**P**	**20 31 50.9**	**+0.3**
ULN				IAmb	IAmb	20 32 00.4	
	comp=Z,6.9nm,1.2s						
SONM	**Songino Array**	**29.76**	**341**	P	**P**	**20 31 52.7**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=156,slow=9.1,SNR=12						
SONM	**Songino Array**	**29.76**	**341**	P	**P**	**20 31 51.8**	**-0.2**
ASAJ	**Asahikawa**	**30.19**	**33**	LR	LR	20 45 00.3	
	comp=Z,54nm,19.4s,baz=41,slow=38						
KLR	**Kul'dur**	**30.35**	**15**	P	**P**	**20 31 58.8**	**+1.8**
	comp=Z,0.9nm,0.5s,baz=199,slow=4.3,SNR=3.6						
KLR				LR	LR	20 44 22.7	
	comp=Z,57nm,19.8s,baz=182,slow=37						
MK31	**Makanchi Array**	**40.72**	**320**	P	**P**	**20 33 26.5**	**+0.3**
MKAR	**Makanchi Array**	**40.72**	**320**	P	**P**	**20 33 26.9**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=116,slow=9.6,SNR=9.0						
MKAR				PcP	**PcP**	**20 35 27.2**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=103,slow=6.2,SNR=4.0						
MKAR	**Makanchi Array**	**40.72**	**320**	P	**P**	**20 33 26.5**	**+0.3**
WRA	**Warramunga Arr**	**42.22**	**160**	P	**P**	**20 33 37.5**	**-1.1**
	comp=Z,3.3nm,0.6s,baz=342,slow=9.0,SNR=18						
WRA				PcP	**PcP**	**20 35 32.4**	**-0.1**
	comp=Z,4.2nm,1.1s,baz=344,slow=2.9,SNR=6.8						
WRA	**Warramunga Arr**	**42.22**	**160**	P	**P**	**20 33 38.0**	**-0.6**
WB2	**Warramunga Arr**	**42.22**	**160**	P	**P**	**20 33 38.0**	**-0.6**
WB2				IAmb	IAmb	20 33 44.0	
	comp=Z,11nm,1.1s						
WR0	**Warramunga Arr**	**42.30**	**160**	P	**P**	**20 33 38.1**	**-1.2**
KSH	**Kashi**	**42.51**	**307**	P	P	20 33 48.3	+7.3
KSH				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,320nm,4.9s						
KSH				LR	LR		
	comp=Z,210nm,12.0s						
KSH				LR	LR		
	comp=Z,250nm,12.2s						
KSH				LR	LR		
	comp=Z,190nm,10.3s						
ZAA0	**Zalesovo Array**	**43.19**	**330**	P	**P**	**20 33 46.0**	**-0.1**
ZALV	**Zalesovo Beam**	**43.19**	**330**	P	**P**	**20 33 46.0**	**-0.2**
	comp=Z,1.8nm,0.7s,baz=110,slow=7.1,SNR=10						
ZALV	**Zalesovo Beam**	**43.19**	**330**	P	**P**	**20 33 45.6**	**-0.5**
PETK	**Petropavlovsk-**	**43.60**	**32**	LR	LR	20 51 40.3	
	comp=Z,45nm,19.5s,baz=238,slow=36						
KURK	**Kurchatov**	**44.68**	**323**	P	**P**	**20 33 58.9**	**+0.8**
KURK				IAmb	IAmb	20 34 09.6	
	comp=Z,7.1nm,1.2s						
KURBB	**Kurchatov Arra**	**44.69**	**323**	P	**P**	**20 33 58.8**	**+0.5**
	comp=Z,2.6nm,0.6s,baz=120,slow=7.6,SNR=32						
KURBB				PcP	**PcP**	**20 35 40.2**	**-0.2**
	comp=Z,0.5nm,0.9s,baz=123,slow=3.4,SNR=3.4						
AS31	**Alice Springs**	**45.59**	**162**	P	**P**	**20 34 05.1**	**-0.6**
ASAR	**Alice Springs**	**45.59**	**162**	P	**P**	**20 34 05.6**	**-0.1**
	comp=Z,3.8nm,0.8s,baz=347,slow=7.2,SNR=41						
ASAR	**Alice Springs**	**45.59**	**162**	P	**P**	**20 34 05.5**	**-0.2**
GAR	**Garm**	**46.71**	**305**	P	**P**	**20 34 15.6**	**+1.0**
KK31	**Karatay Array**	**47.33**	**310**	P	**P**	**20 34 19.1**	**-0.2**
KK31				IAmb	IAmb	20 34 30.7	
	comp=Z,4.0nm,1.2s						
KKAR	**Karatay Array**	**47.33**	**310**	P	**P**	**20 34 19.2**	**0.0**
KKAR				IAmb	IAmb	20 34 30.7	
	comp=Z,4.0nm,1.2s						
KKAR	**Karatay Array**	**47.33**	**310**	P	**P**	**20 34 19.7**	**+0.5**
CHGR	**Chuyangaron**	**47.56**	**304**	P	**P**	**20 34 21.4**	**+0.2**
NRIK	**Noril'sk**	**53.02**	**346**	P	**P**	**20 35 02.4**	**+0.6**
	comp=Z,1.6nm,0.5s,baz=135,slow=1.4,SNR=2.1						
BILL	**Bilibino**	**55.66**	**19**	P	**P**	**20 35 22.3**	**+1.2**
BILL				IAmb	IAmb	20 35 22.8	
	comp=Z,4.9nm,1.0s						
STKA	**Stephens Creek**	**55.67**	**158**	P	**P**	**20 35 21.2**	**-0.5**
	comp=Z,3.5nm,0.9s,baz=322,slow=9.0,SNR=4.0						
STKA	**Stephens Creek**	**55.67**	**158**	P	**P**	**20 35 21.5**	**-0.1**
ABKAR	**Akbulak array**	**55.69**	**316**	P	**P**	**20 35 22.2**	**+0.6**
GEYT	**Alibeck**	**56.18**	**303**	P	**P**	**20 35 25.6**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=118,slow=5.2,SNR=3.3						
GEYT	**Alibeck**	**56.18**	**303**	P	**P**	**20 35 25.0**	**-0.4**
KBZ	**Khabaz**	**67.36**	**310**	P	**P**	**20 36 41.0**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=177,slow=7.0,SNR=5.5						
RAYN	**Ar Rayn**	**68.78**	**288**	P	**P**	**20 36 49.4**	**-0.5**
RAYN				IAmb	IAmb	20 36 51.3	
	comp=Z,4.4nm,1.0s						
MLY	**Manley**	**71.42**	**27**	P	**P**	**20 37 05.9**	**+0.5**
MLY				IAmb	IAmb	20 37 08.0	
	comp=Z,4.3nm,0.9s						
RND	**Reindeer**	**72.49**	**28**	P	**P**	**20 37 11.7**	**-0.1**
IL31		**73.08**	**27**	P	**P**	**20 37 14.6**	**-0.5**
ILAR	**Eielson Array**	**73.08**	**27**	P	**P**	**20 37 14.7**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=274,slow=5.6,SNR=8.9						
ILAR	**Eielson Array**	**73.08**	**27**	P	**P**	**20 37 14.8**	**-0.3**
FINES	**FINESS Array B**	**74.45**	**330**	P	**P**	**20 37 22.5**	**-0.7**
	comp=Z,1.8nm,0.9s,baz=46,slow=6.0,SNR=4.7						
AKASG	**Malin Array Be**	**75.30**	**319**	P	**P**	**20 37 28.1**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=60,slow=5.4,SNR=3.4						
BCAR	**Beaver Creek A**	**75.68**	**28**	P	**P**	**20 37 30.4**	**0.0**
NOA	**NORSAR Array B**	**81.34**	**332**	P	**P**	**20 38 01.1**	**-0.6**
	comp=Z,1.9nm,1.1s,baz=67,slow=5.6,SNR=2.8						
NOA				LR	LR	21 15 37.0	
	comp=Z,20nm,19.3s,baz=5.0,slow=37						
RES	**Resolute Bay**	**82.67**	**9**	P	**P**	**20 38 08.4**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=298,slow=5.9,SNR=10						
RES	**Resolute Bay**	**82.67**	**9**	P	**P**	**20 38 08.9**	**+0.6**
RES				IAmb	IAmb	20 38 09.9	
	comp=Z,2.3nm,0.8s						
GERES	**GERESS Array B**	**85.38**	**321**	P	**P**	**20 38 23.4**	**+0.7**
	comp=Z,0.9nm,0.9s,baz=79,slow=5.5,SNR=3.6						
YKA	**Yellowknife Ar**	**86.91**	**22**	P	**P**	**20 38 30.8**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=315,slow=4.3,SNR=20						

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*IDC **05** 20:29:00.9±0.7, 21°.18S×68°.30W, h127^{km}±8^{km}, mb3.9/6, mb1 3.9/10, mb1mx3.7/30, mbtmp4.3/10, Error ellipse: s-maj=20.3km s-min=10.3km az=103.0*
*NEIC **05** 20:29:00.4±1.7, 21°.19S±0°.05×68°.40W±0°.08, h130^{km}±6^{km}, mb4.5/8, Error ellipse: s-maj=11.6km s-min=6.2km az=75.0*
*SJA **05** 20:29:00.1±0.9, 21°.17S×68°.49W, h143^{km}±7^{km}, ML3.9, MW3.9*
*GUC **05** 20:29:01.8±0.8, 21°.19S×68°.50W, h138^{km}±4^{km}, ML4.2*

ISC 05 20:29:00.9±0.7, 21°.18S±0°.03×68°.48W±0°.05, h139^{km}±6^{km}, n76, σ1.^{s}23/106, mb4.4/8, 8C-10D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.94**	**229**	⇓*i*P	**Pn**	**20 29 24.9**	**+0.6**
PB09				*i* S	**Sn**	**20 29 42.4**	**+0.3**
PB09				IAML		20 29 43.7	
	comp=N,3µm,0.5s						
PB09	**IPOC Station P**	**0.94**	**229**	*i* P	**Pn**	**20 29 24.7**	**+0.4**
PB09				*e*S	**Sn**	**20 29 42.2**	**+0.2**
PB09				IAML		20 29 44.6	
	comp=Z,3µm,0.8s						
PB01	**IPOC Station P**	**0.95**	**278**	⇓*i*P	**Pn**	**20 29 24.1**	**-0.2**
PB01				*i* S	**Sn**	**20 29 41.5**	**-0.5**
PB01				IAML		20 29 43.5	
	comp=E,3µm,0.3s						
PB01	**IPOC Station P**	**0.95**	**278**		**Pn**	**20 29 23.6**	**-0.7**
PB01				Sn	**Sn**	**20 29 41.3**	**-0.7**
PB08	**IPOC Station P**	**1.21**	**329**	⇑*i*P	**Pn**	**20 29 27.6**	**+0.5**
PB08				*i* S	**Sn**	**20 29 47.1**	**+0.2**
PB08				IAML		20 29 48.8	
	comp=E,2µm,0.7s						
PB08	**IPOC Station P**	**1.21**	**329**	*i* P	**Pn**	**20 29 27.6**	**+0.5**
PB08				*e*S	**Sn**	**20 29 46.7**	**-0.2**
PB02	**IPOC Station P**	**1.32**	**264**	⇓*i*P	**Pn**	**20 29 28.1**	**+0.2**
PB02				*i* S	**Sn**	**20 29 48.1**	**-0.4**
PB02				IAML		20 29 50.3	
	comp=E,5µm,0.2s						
PB02	**IPOC Station P**	**1.32**	**264**	*i* P	**Pn**	**20 29 28.0**	**+0.1**
PB07	**IPOC Station P**	**1.42**	**247**	⇓*i*P	**Pn**	**20 29 29.1**	**+0.1**
PB07				*i* S	**Sn**	**20 29 49.5**	**-0.8**
PB07				IAML		20 29 50.7	
	comp=N,6µm,0.3s						
PB07	**IPOC Station P**	**1.42**	**247**	*i* P	**Pn**	**20 29 29.1**	**+0.1**
PB03	**IPOC Station P**	**1.47**	**233**	⇓*i*P	**Pn**	**20 29 29.7**	**+0.2**
PB03				*i* S	**Sn**	**20 29 50.5**	**-0.7**
PB03				IAML		20 29 51.4	
	comp=E,5µm,0.2s						
PB03	**IPOC Station P**	**1.47**	**233**	*i* P	**Pn**	**20 29 29.7**	**+0.2**
LVC	**Limon Verde**	**1.48**	**195**	P	**Pn**	**20 29 30.4**	**+0.6**
	comp=E,38nm,0.3s,baz=9.6,slow=6.8,SNR=397						
LVC				S	**Sn**	**20 29 51.2**	**-0.7**
	comp=E,169nm,0.3s,baz=113,slow=23,SNR=137						
LVC	**Limon Verde**	**1.48**	**195**	⇑*i*P	**Pn**	**20 29 30.4**	**+0.6**
LVC				*i* S	**Sn**	**20 29 51.7**	**-0.2**
LVC	**Limon Verde**	**1.48**	**195**		**Pn**	**20 29 30.2**	**+0.4**
LVC					**Sn**	**20 29 50.5**	**-1.4**
LVC	**Limon Verde**	**1.48**	**195**	*i* P	**Pn**	**20 29 30.4**	**+0.6**
LVC				IAML		20 29 53.0	
	comp=Z,458nm,0.7s						
PATCX	**Punta Patache**	**1.60**	**282**	*e*P	**Pn**	**20 29 31.0**	**+0.1**
PATCX				*e*S	**Sn**	**20 29 53.0**	**-0.6**
PATCX				IAML		20 29 55.0	
	comp=N,3µm,0.4s						
GO01	**Chusmiza**	**1.64**	**336**	⇑*i*P	**Pn**	**20 29 32.2**	**+0.4**
GO01				*e*S	**Sn**	**20 29 55.4**	**+0.1**
GO01				IAML		20 29 58.5	
	comp=E,3µm,0.3s						
GO01	**Chusmiza**	**1.64**	**336**		**Pn**	**20 29 32.0**	**+0.2**
GO01				Sn	**Sn**	**20 29 54.7**	**-0.5**
TA01	**Diego Aracena**	**1.70**	**291**	⇓*i*P	**Pn**	**20 29 31.7**	**-0.2**
TA01				*i* S	**Sn**	**20 29 54.4**	**-1.1**
TA01				IAML		20 29 56.5	
	comp=E,2µm,0.3s						
PB11	**IPOC Station P**	**1.79**	**322**	⇑*i*P	**Pn**	**20 29 32.8**	**-0.2**
PB11				*i* S	**Sn**	**20 29 57.1**	**-0.5**
PB11				IAML		20 29 58.2	
	comp=N,3µm,0.2s						
PB11	**IPOC Station P**	**1.79**	**322**		**Pn**	**20 29 31.7**	**-1.4**
PB11				Sn	**Sn**	**20 29 56.7**	**-0.9**
PB11	**IPOC Station P**	**1.79**	**322**	*i* P	**Pn**	**20 29 33.0**	**-0.1**
PB06	**IPOC Station P**	**1.83**	**213**	⇓*i*P	**Pn**	**20 29 33.9**	**+0.4**
PB06				*i* S	**Sn**	**20 29 58.3**	**-0.2**
PB06				IAML		20 29 59.2	
	comp=E,3µm,0.3s						
PB06	**IPOC Station P**	**1.83**	**213**	*i* P	**Pn**	**20 29 33.9**	**+0.4**
PB04	**IPOC Station P**	**1.93**	**233**	⇓*i*P	**Pn**	**20 29 34.9**	**+0.1**
PB04				*i* S	**Sn**	**20 29 59.4**	**-1.2**
PB04				IAML		20 30 04.5	
	comp=E,1µm,0.3s						
PB04	**IPOC Station P**	**1.93**	**233**		**Pn**	**20 29 33.8**	**-0.9**
PB04	**IPOC Station P**	**1.93**	**233**	*i* P	**Pn**	**20 29 34.9**	**+0.1**
PSGC	**Pisagua**	**2.20**	**315**	⇑*i*P	**Pn**	**20 29 37.1**	**-0.9**
PSGC				*i* S	**Sn**	**20 30 04.5**	**-1.7**
PSGC				IAML		20 30 08.2	
	comp=E,780nm,0.7s						
PSGCX	**Pisagua**	**2.20**	**315**	*i* P	**Pn**	**20 29 37.3**	**-0.6**
PB15	**IPOC Station P**	**2.22**	**204**	⇓*i*P	**Pn**	**20 29 38.8**	**+0.6**
PB15				*i* S	**Sn**	**20 30 06.9**	**-0.1**
PB15	**IPOC Station P**	**2.22**	**204**	*i* P	**Pn**	**20 29 38.9**	**+0.6**
MNMC	**Minye Minye**	**2.29**	**333**	⇑*i*P	**Pn**	**20 29 39.7**	**+0.5**
MNMC				*e*S	**Sn**	**20 30 08.8**	**+0.3**
MNMC				IAML		20 30 14.1	
	comp=E,3µm,0.5s						
MNMC	**Minye Minye**	**2.29**	**333**	Pn	**Pn**	**20 29 39.4**	**+0.2**
MNMCX	**Minye Minye**	**2.29**	**333**	*i* P	**Pn**	**20 29 39.9**	**+0.7**
PB05	**IPOC Station P**	**2.31**	**223**	⇑*i*P	**Pn**	**20 29 39.3**	**0.0**
PB05				*i* S	**Sn**	**20 30 07.1**	**-1.6**
PB05				IAML		20 30 10.7	
	comp=E,681nm,0.3s						
PB05	**IPOC Station P**	**2.31**	**223**	*i* P	**Pn**	**20 29 39.1**	**-0.2**
YJA	**Yavi**	**2.94**	**110**	*i* P	**Pn**	**20 29 48.8**	**+1.3**

PB16	**IPOC Station P**	2.99	341	⇑*i*P	Pn	20 29 48.9	+0.7
PB16				*e*S	Sn	20 30 25.2	+0.5
PB10	**IPOC Station P**	3.01	219	*e*P	Pn	20 29 47.6	-0.5
PB10				*e*S	Sn	20 30 20.5	-4.0
PB10	**IPOC Station P**	3.01	219		Pn	20 29 47.6	-0.5
PB12	**IPOC Station P**	3.08	325	⇓*i*P	Pn	20 29 47.8	-1.3
PB12				*e*S	Sn	20 30 24.3	-1.9
PB12	comp=E,360nm,0.4s			IAML		20 30 26.9	
PB14	**IPOC Station P**	3.86	207	*e*P	Pn	20 29 59.3	-0.1
PB14				*e*S	Sn	20 30 41.8	-2.9
GO02	**Mina Guanaco**	4.10	194		Pn	20 30 01.6	-0.8
AZAP	**Zapla**	4.38	135	*i* P	Pn	20 30 06.6	+0.4
ASTB	**Santa Barbara**	4.64	127	*i* P	Pn	20 30 09.6	+0.1
LPAZ	**La Paz** comp=E,6.9nm,0.3s,baz=206,slow=2.1,SNR=141	4.87	4	P	Pn	20 30 14.3	+1.2
LPAZ	comp=E,0.6nm,0.3s,baz=72,slow=19,SNR=1.6			S	Sn	20 31 09.4	+0.3
LPAZ	**La Paz**	4.87	4	Pn	Pn	20 30 13.7	+0.6
SIV	**San Ignacio** comp=E,5.5nm,0.3s,baz=255,slow=12,SNR=76	8.72	55	P	Pn	20 31 01.1	-3.0
SIV	comp=E,0.1nm,0.3s,baz=143,slow=20,SNR=3.1			S	Sn	20 32 34.6	-6.3
CFA	**Coronel Fontan** comp=E,1.5nm,0.3s,baz=35,slow=12,SNR=6.2	10.39	179	P	Pn	20 31 21.7	-4.7
CFA	comp=E,2.3nm,0.3s,baz=190,slow=20,SNR=7.7			S	Sn	20 33 01.2	-20
ATAH	**Atahualpa** comp=E,0.4nm,0.3s,baz=163,slow=11,SNR=2.7	16.93	324	P	P	20 32 50.0	+0.1
PLCA	**Paso Flores** comp=E,0.3nm,0.3s,baz=24,slow=13,SNR=11	19.57	185	P	Pn	20 33 19.8	-1.1
PLCA	**Paso Flores**	19.57	185	P	P	20 33 19.5	+1.3
BDFB	**Brasilia** comp=E,2.6nm,0.4s,baz=252,slow=7.8,SNR=4.5	20.18	78	P	P	20 33 24.0	-0.9
BDFB	**Brasilia**	20.18	78	P	P	20 33 23.3	-1.6
BDFB	comp=Z,20nm,1.8s			IAmb	IAmb	20 33 24.5	
FLOC	**Florencia**	23.68	342	P	P	20 34 00.8	+0.7
RUSC	**La Rusia**	27.28	350	P	P	20 34 34.0	+0.9
S39A	**Bolivar**	63.05	338	P	P	20 39 12.8	-0.5
S39A	comp=Z,4.7nm,0.8s			IAmb	IAmb	20 39 15.2	
N49A	**Columbus Grove**	63.48	347	P	P	20 39 16.1	0.0
N49A	comp=Z,8.6nm,0.8s			IAmb	IAmb	20 39 17.5	
DBIC	**Dimbokro** comp=Z,3.8nm,0.8s,baz=233,slow=4.4,SNR=5.0	68.26	73	P	P	20 39 47.5	+0.2
DBIC	**Dimbokro**	68.26	73	P	P	20 39 46.0	-1.3
PDAR	**Pinedale Array** comp=Z,0.4nm,0.7s,baz=163,slow=7.3,SNR=2.8	74.03	330	P	P	20 40 23.2	+1.5
ULM	**Lac du Bonnet** comp=Z,2.0nm,0.6s,baz=191,slow=5.0,SNR=5.7	75.13	342	P	P	20 40 28.4	+0.8
ULM	**Lac du Bonnet**	75.13	342	P	P	20 40 27.4	-0.2
ULM	comp=Z,19nm,1.8s			IAmb	IAmb	20 41 26.6	
TOA0	**Torodi Ar. Sit**	76.87	70	P	P	20 40 38.3	0.0
TOA0	comp=Z,6.6nm,0.8s			IAmb	IAmb	20 40 39.4	
TORD	**Torodi Ar. Bea** comp=Z,5.0nm,0.5s,baz=254,slow=5.4,SNR=63	76.87	70	P	P	20 40 38.3	+0.1
TORD	**Torodi Ar. Bea**	76.87	70	P	P	20 40 37.7	-0.5
YKA	**Yellowknife Ar** comp=Z,1.2nm,0.5s,baz=132,slow=4.7,SNR=24	91.02	340	P	P	20 41 50.6	+1.6
WRA	**Warramunga Arr** comp=Z,0.4nm,0.6s,baz=148,slow=1.7,SNR=7.2	133.43	210	PKP	PKiKP	20 48 03.1	+0.3
KURBB	**Kurchatov Arra** comp=Z,0.4nm,0.8s,baz=14,slow=1.9,SNR=3.3	140.85	33	PKP	PKiKP	20 48 16.6	-0.3
ZALV	**Zalesovo Beam** comp=Z,1.0nm,0.6s,baz=296,slow=4.1,SNR=4.5	141.49	25	PKP	PKPdf	20 48 16.2	+0.9
MKAR	**Makanchi Array** comp=Z,4.6nm,0.7s,baz=322,slow=3.4,SNR=43	145.14	36	PKPbc	PKPdf	20 48 23.7	+1.7
MKAR	**Makanchi Array**	145.14	36		PKPdf	20 48 22.4	+0.4
KLR	**Kul'dur** comp=Z,0.5nm,0.5s,baz=3.2,slow=2.9,SNR=3.3	147.70	335	PKPbc	PKiKP	20 48 30.5	-0.5
SONM	**Songino Array** comp=Z,0.4nm,0.7s,baz=322,slow=1.6,SNR=4.3	153.08	8	PKPbc	PKiKP	20 48 44.0	+1.6
CMAR	**Chiang Mai Arr** comp=Z,0.5nm,0.3s,baz=359,slow=17,SNR=4.0	167.86	101	PKP	PKPdf	20 48 50.4	-1.2

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*SOME **05** 20:37:42.6, 42°.80N×77°.37E, h15^{km}*

*NNC **05** 20:37:42.6±0.5, 42°.83N×77°.41E, h2^{km}±2^{km}, mb2.5, mpv2.8, Error ellipse: s-maj=4.8km s-min=2.1km az=7.0*

KRNET 05 20:37:42.6±0.1**, 42°.81N×77°.36E, h22**^{km}**, mb2.5, 21C-8D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ANVS	**Anan'yevo** baz=96	0.23	96	⇑*i*P	Pb	20 37 48.4	-0.3
ANVS	baz=96			⇑*i*S	Sb	20 37 52.5	-0.4
TNSS	**Tian-Shan** baz=7.0	0.38	307	*e*P	Pb	20 37 50.7	-0.2
TNSS	baz=7.0			*e*S	Sb	20 37 56.5	0.0
TNSS	**Tian-Shan** 11nm,0.1s	0.38	307	*e*P	Pb	20 37 50.7	-0.2
TNSS	39nm,0.2s			*e*S	Sb	20 37 56.4	-0.1
TNSS	**Tian-Shan** 11nm,0.1s	0.38	307	P	Pb	20 37 50.7	-0.2
TNSS	39nm,0.2s			S	Sb	20 37 56.4	-0.1
MDOK	**Medeo** baz=27	0.42	327	*e*P	Pb	20 37 51.3	-0.1
MDOK	baz=27			*e*S	Sb	20 37 57.4	-0.1
MDOK	**Medeo** 11nm,0.2s	0.42	327	*e*P	Pb	20 37 51.2	-0.2
MDOK	48nm,0.2s			*e*S	Sb	20 37 57.4	-0.1
MDOK	**Medeo** 2.1nm,0.2s	0.42	327	⇓P	Pb	20 37 51.2	-0.2
MDOK	35nm,0.6s			⇓S	Sb	20 37 57.5	0.0
MDOK	**Medeo** 11nm,0.2s	0.42	327	Pg	Pb	20 37 51.2	-0.2
MDOK	48nm,0.2s			Lg	Lg	20 37 57.4	
KOTS	**Kotyrbulak** baz=37	0.46	337	*e*P	Pb	20 37 52.1	-0.1
KOTS	baz=37			*e*S	Sb	20 37 58.9	+0.3
KOTS	**Kotyrbulak** 22nm,0.1s	0.46	337	*e*P	Pb	20 37 52.1	0.0
KOTS	89nm,0.3s			*e*S	Sb	20 37 58.9	+0.3
KOTS	**Kotyrbulak** 22nm,0.1s	0.46	337	P	Pb	20 37 52.1	0.0
KOTS	89nm,0.3s			S	Sb	20 37 58.9	+0.3
KNDC	**Almaty** 3.8nm,0.5s	0.50	325	⇑P	Pb	20 37 52.7	0.0
KNDC	43nm,0.3s			⇓S	Sb	20 38 00.3	+0.6
AAA	**Alma-Ata** baz=21	0.52	321	*e*P	Pb	20 37 53.4	+0.4
AAA	baz=21			*e*S	Sb	20 38 01.1	+1.0
AAA	**Alma-Ata** 13nm,0.1s	0.52	321	*e*P	Pb	20 37 53.4	+0.3
AAA	176nm,0.2s			*e*S	Sb	20 38 01.1	+0.9
AAA	**Alma-Ata** 14nm,0.1s	0.52	321	P	Pb	20 37 53.4	+0.3
AAA	158nm,0.2s			S	Sb	20 38 01.1	+0.9
IZV	**Izvestkoviy** baz=93	0.59	293	*e*P	Pb	20 37 54.1	-0.4
IZV	baz=93			*e*S	Sb	20 38 02.5	0.0
IZV	**Izvestkoviy** 5.9nm,0.2s	0.59	293	*e*P	Pb	20 37 54.1	-0.3
IZV	23nm,0.2s			*e*S	Sb	20 38 02.5	0.0
IZV	**Izvestkoviy** 5.9nm,0.2s	0.59	293	P	Pb	20 37 54.1	-0.3
IZV	23nm,0.2s			S	Sb	20 38 02.5	0.0
KDJ	**Kajisay** baz=90	0.69	191	⇑*i*P	Pb	20 37 56.0	-0.1
KDJ	baz=90			⇑*i*S	Sb	20 38 05.6	+0.3
MTBS	**Maitube** baz=95	0.75	295	*e*P	Pb	20 37 56.9	-0.2
MTBS	baz=95			*e*S	Sb	20 38 07.1	+0.1
MTBS	**Maitube** 2.9nm,0.2s	0.75	295	*e*P	Pb	20 37 56.9	-0.2
MTBS	11nm,0.2s			*e*S	Sb	20 38 07.0	0.0
SATY	**Saty** 18nm,0.3s	0.81	72	*e*P	Pb	20 37 58.0	-0.1
SATY	41nm,0.1s			*e*S	Sb	20 38 09.1	+0.5
SATY	**Saty** 26nm,0.2s	0.81	72	P	Pb	20 37 58.0	-0.1
SATY	34nm,0.1s			S	Sb	20 38 09.1	+0.5
PRZ	**Przheval'sk** baz=12	0.83	113	⇓*i*P	Pn	20 37 59.2	0.0
PRZ	baz=12			⇓*i*S	Sn	20 38 10.6	-0.3
ZHN	**Zhinishke** baz=65	0.87	65	*e*P	Pb	20 37 58.7	-0.3
ZHN	baz=65			*e*S	Sb	20 38 10.4	+0.1
ZHN	**Zhinishke** 3.6nm,0.1s	0.87	65	*e*P	Pb	20 37 58.7	-0.4
ZHN	12nm,0.2s			*e*S	Sb	20 38 10.4	+0.1
ZHN	**Zhinishke** 3.6nm,0.1s	0.87	65	P	Pb	20 37 58.7	-0.4
ZHN	12nm,0.2s			S	Sb	20 38 10.4	+0.1
KURS	**Kuram** baz=41	0.90	41	*e*P	Pb	20 37 59.7	+0.1
KURS	baz=41			*e*S	Sn	20 38 11.9	-0.5
KURS	**Kuram** 0.8nm,0.1s	0.90	41	*e*P	Pb	20 37 59.7	+0.1
KURS	8.4nm,0.5s			*e*S	Sn	20 38 11.9	-0.5
ULHL	**Ulahol** baz=36	1.00	236	⇑*i*P	Pb	20 38 00.9	-0.4
ULHL	baz=36			⇑*i*S	Sb	20 38 14.5	+0.4
KTBS	**Karatobe** 2.5nm,0.1s	1.03	332	*e*P	Pn	20 38 01.8	+0.1
KTBS	44nm,0.2s			*e*S	Sn	20 38 15.5	0.0
KTBS	**Karatobe** 2.5nm,0.1s	1.03	332	P	Pn	20 38 01.8	+0.1
KTBS	44nm,0.2s			S	Sn	20 38 15.5	0.0
KST	**Kastek** baz=83	1.05	283	*e*P	Pn	20 38 02.1	0.0
KST	baz=83			*e*S	Sn	20 38 16.6	+0.4
KST	**Kastek** 1.4nm,0.2s	1.05	283	*e*P	Pn	20 38 02.1	-0.1
KST	2.2nm,0.2s			*e*S	Sn	20 38 16.5	+0.3
KST	**Kastek** 1.3nm,0.2s	1.05	283	P	Pn	20 38 02.1	-0.1
KST	3.0nm,0.3s			S	Sn	20 38 16.5	+0.3
CHKK	**Chushkaly** baz=46	1.08	346	*e*P	Pb	20 38 02.8	+0.2
CHKK	baz=46			*e*S	Sn	20 38 17.2	+0.5
CHKK	**Chushkaly** 4.9nm,0.1s	1.08	346	*e*P	Pb	20 38 02.8	+0.2
CHKK	41nm,0.2s			*e*S	Sn	20 38 17.1	+0.4
CHKK	**Chushkaly** 4.9nm,0.1s	1.08	346	P	Pb	20 38 02.8	+0.2
CHKK	41nm,0.2s			S	Sn	20 38 17.1	+0.4
BOOM	**Boomskoye usch** baz=54	1.09	254	⇑*i*P	Pn	20 38 02.8	0.0
BOOM	baz=54			⇑*i*S	Sn	20 38 17.1	-0.2
DGS	**Degeres** baz=91	1.24	291	*e*P	Pb	20 38 05.5	+0.1
DGS	baz=91			*e*S	Sb	20 38 22.0	+1.0
DGS	**Degeres** 0.4nm,0.1s	1.24	291	*e*P	Pb	20 38 05.5	+0.1
DGS	6.7nm,0.3s			*e*S	Sb	20 38 22.0	+1.0
DGS	**Degeres** 0.4nm,0.1s	1.24	291	P	Pb	20 38 05.5	+0.1
DGS	6.7nm,0.3s			S	Sb	20 38 22.0	+1.0
UZB	**Uzynbulak** baz=74	1.27	74	*e*P	Pb	20 38 05.6	-0.3
UZB	baz=74			*e*S	Sb	20 38 22.3	+0.5
UZB	**Uzynbulak** 0.8nm,0.3s	1.27	74	*e*P	Pb	20 38 05.6	-0.3
UZB	9.0nm,0.2s			*e*S	Sb	20 38 22.3	+0.5
UZB	**Uzynbulak** 1.2nm,0.2s	1.27	74	P	Pb	20 38 05.6	-0.3
UZB	8.8nm,0.3s			S	Sb	20 38 22.3	+0.5
KUU	**Kurty** baz=26	1.31	326	*e*P	Pb	20 38 06.8	+0.2
KUU	baz=26			*e*S	Sb	20 38 24.0	+1.0
KUU	**Kurty** 0.5nm,0.1s	1.31	326	*e*P	Pb	20 38 06.8	+0.2
KUU	9.0nm,0.2s			*e*S	Sb	20 38 24.0	+1.0
KUU	**Kurty** 0.5nm,0.1s	1.31	326	P	Pb	20 38 06.8	+0.2
KUU	9.0nm,0.2s			S	Sb	20 38 24.0	+1.0
ARXS	**Arharly** 3.9nm,0.4s	1.44	13	*e*P	Pb	20 38 08.8	0.0
ARXS	23nm,0.2s			*e*S	Sb	20 38 28.1	+1.3
ARXS	**Arharly** 3.9nm,0.4s	1.44	13	P	Pb	20 38 09.0	+0.1
ARXS	23nm,0.2s			S	Sb	20 38 28.2	+1.4
KRBS	**Karabastau** 1.3nm,0.2s	1.52	306	*e*P	Pb	20 38 10.1	0.0
KRBS	6.3nm,0.5s			*e*S	Sb	20 38 30.0	+1.1
KRBS	**Karabastau** 2.1nm,0.2s	1.52	306	P	Pb	20 38 10.1	0.0
KRBS	5.4nm,0.3s			S	Sb	20 38 30.0	+1.1
SHLS	**Shalkode** 0.8nm,0.2s	1.58	77	*e*P	Pb	20 38 16.9	+5.7
SHLS	14nm,0.5s			*e*S	Sb	20 38 42.1	+11
SHLS	**Shalkode** 1.6nm,0.1s	1.58	77	Pg	Pb	20 38 16.9	+5.7
SHLS	10nm,0.4s			Lg	Lg	20 38 42.1	
NRN	**Naryn** baz=17	1.71	217	⇑*i*P	Pb	20 38 14.6	+1.2
NRN	baz=17			⇑*i*S	Sb	20 38 36.9	+2.3
KZA	**Kyzart** baz=46	1.72	246	⇑*i*P	Pb	20 38 14.4	+0.6
KZA	baz=46			⇑*i*S	Sb	20 38 36.8	+1.6
KBK	**Karagaybulak** baz=66	1.78	266	⇑*i*P	Pb	20 38 15.0	+0.3
KBK	baz=66			⇑*i*S	Sb	20 38 37.7	+1.1
CHMS	**Chumysh** 2.3nm,0.5s	1.93	277	⇑S	Sb	20 38 44.6	+4.0
AAK	**Ala-Archa** baz=66	2.12	266	⇑*i*P	Pb	20 38 19.8	-0.6
AAK	baz=66			⇑*i*S	Sb	20 38 45.6	-0.7
AAK	**Ala-Archa** 0.7nm,0.3s	2.12	266	⇑P	Pb	20 38 20.7	+0.4
AAK	2.8nm,0.5s			⇓S	Sb	20 38 49.5	+3.2
UCH	**Uchtor** baz=56	2.18	256	⇑*i*P	Pb	20 38 21.1	-0.5
UCH	baz=56			⇑*i*S	Sb	20 38 47.5	-0.9
DJR	**Jarkent** 0.4nm,0.1s	2.33	48	*e*P	Pb	20 38 25.1	+1.1
DJR	2.7nm,0.4s			*e*S	Sb	20 38 54.8	+2.4
DJR	**Jarkent** 0.4nm,0.2s	2.33	48	Pg	Pb	20 38 25.1	+1.1
DJR	2.1nm,0.4s			Lg	Lg	20 38 54.8	
AML	**Almayashu** baz=57	2.79	257	⇓*i*P	Pb	20 38 29.7	-2.3
AML	baz=57			⇓*i*S	Sb	20 39 02.8	-3.2
KAPS	**Kapalarasan** 0.3nm,0.4s	2.86	30	*e*P	Pb	20 38 34.1	+1.0
KAPS	4.3nm,0.4s			*e*S	Sb	20 39 10.2	+2.6
KAPS	**Kapalarasan** 0.3nm,0.3s	2.86	30	Pg	Pb	20 38 34.1	+1.1
KAPS	3.8nm,0.4s			Lg	Lg	20 39 10.2	

IDC 05 20:39:06.4±3.0**, 36°.26N×82°.11E, h0**^{km}**, mb3.3**/2**, mb1 3.5**/4**, mb1mx3.2**/39**, mbtmp3.5**/4**, ML3.2**/2**, MS4.2**/1**, Ms1 4.2**/1**, ms1mx2.6**/35**, Error ellipse: s-maj=52.5km s-min=30.7km az=148.0, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MKAR	**Makanchi Array** 0.4nm,0.3s,baz=184,slow=13,SNR=25	10.53	1	Pn	Pn	20 41 38.8	+0.3
MKAR	0.2nm,0.3s,baz=188,slow=24,SNR=4.0			Sn	Sn	20 43 34.9	-2.4
ZALV	**Zalesovo Beam** 0.1nm,0.3s,baz=195,slow=15,SNR=5.6	17.79	5	P	P	20 43 16.9	+0.8
SONM	**Songino Array** 1.2nm,0.9s,baz=239,slow=12,SNR=9.5	21.33	50	P	P	20 43 54.6	-0.4
BRTR	**Keskin Array B** 0.3nm,0.6s,baz=83,slow=6.0,SNR=2.9	37.99	290	P	P	20 46 26.2	-0.1
JMIC	**Jan Mayen** comp=Z,216nm,20.5s,baz=129,slow=35	56.40	337	LR	LR	21 11 58.5	

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*ATH **05** 20:40:04.9, 38°.14N×20°.41E, h14^{km}, ML3.3/15, Error ellipse: s-maj=1.3km s-min=0.6km az=254.0*

*THE **05** 20:40:05.5, 38°.17N×20°.43E, h12^{km}, ML3.5/8, Error ellipse: s-maj=0.8km s-min=0.3km az=59.0*

ISC 05 20:40:05.1±0.8**, 38°.17N**±0°.03×**20°.41E**±0°.03**, h14**^{km}±4^{km}**, n83, **σ**1**^{s}**.22**/124**, 10C-10D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LXRA	**Lixouri, Kepha**	0.04	31	P	**Pg**	**20 40 07.8**	**+0.1**
LXRA				S	**Sg**	**20 40 09.2**	**-0.3**
LXR1	**Lixouri, Cepha**	0.04	32	P	**Pg**	**20 40 07.8**	**+0.1**
ARGA	**Argostoli. Kep**	0.05	79	P	**Pg**	**20 40 07.7**	**-0.2**
ARGA				S	**Sg**	**20 40 09.2**	**-0.5**
KEF2	**Argostoli. Kep**	0.06	91	P	**Pg**	**20 40 07.7**	**-0.2**
KEF2				S	**Sg**	**20 40 09.6**	**-0.2**
KEF3	**Kipouria, Keph**	0.06	306	P	**Pg**	**20 40 07.8**	**-0.1**
KEF3				S	**Sg**	**20 40 09.7**	**-0.1**
KEF4	**Livadi, Kephal**	0.09	6	P	**Pg**	**20 40 08.4**	**+0.1**
KEF4				S	**Sg**	**20 40 10.8**	**+0.5**
KEF1	**Kardakata, Kep**	0.12	23	P	**Pg**	**20 40 08.6**	**0.0**
KEF1				S	**Sg**	**20 40 10.9**	**0.0**
VLS	**Valsamata**	0.14	86	P	**Pg**	**20 40 08.6**	**-0.2**
VLS	79µm,0.1s			S	**Sg**	**20 40 11.2**	**-0.1**
VLS	**Valsamata**	0.14	86	P	**Pg**	**20 40 08.6**	**-0.2**
VLS				S	**Sg**	**20 40 11.3**	**-0.1**
VLS				AML	AML	20 40 11.5	
VLS				AML	AML	20 40 11.5	
KONA	**Konidatara, Ke**	0.29	26	P	**Pg**	**20 40 11.2**	**0.0**
KONA				S	**Sg**	**20 40 15.6**	**+0.3**
KONA	comp=E,46339µm,0.3s			AML	AML	20 40 16.7	
KONA	comp=N,44274µm,0.1s			AML	AML	20 40 16.9	
KFL	**Anninata**	0.30	101	P	**Pg**	**20 40 11.2**	**-0.2**
KFL	comp=N,25µm,0.3s			S	**Sg**	**20 40 16.0**	**+0.3**
KFL	**Anninata**	0.30	101	P	**Pg**	**20 40 11.2**	**-0.2**
KFL				S	**Sg**	**20 40 16.1**	**+0.4**
KFL	comp=N,62539µm,0.4s			AML	AML	20 40 16.9	
KFL	comp=E,37848µm,0.2s			AML	AML	20 40 17.8	
FSK	**Fiskardo**	0.32	22	P	**Pg**	**20 40 11.7**	**0.0**
FSK	comp=E,15µm,0.3s			S	**Sg**	**20 40 16.6**	**+0.5**
FSK	**Fiskardo**	0.32	22	P	**Pg**	**20 40 11.6**	**0.0**
FSK				S	**Sg**	**20 40 16.8**	**+0.7**
FSK	comp=E,44676µm,0.2s			AML	AML	20 40 17.9	
FSK	comp=N,14061µm,0.4s			AML	AML	20 40 21.0	
VLMS	**Volimes, Zakyn**	0.35	145	P	**Pg**	**20 40 11.7**	**-0.6**
VLMS				S	**Sg**	**20 40 16.7**	**-0.4**
VLMS	comp=E,58279µm,0.2s			AML	AML	20 40 17.7	
VLMS	comp=N,57845µm,0.3s			AML	AML	20 40 19.6	
EVGI	**Lefkada island**	0.49	23	P	**Pg**	**20 40 14.7**	**-0.2**
EVGI				S	**Sb**	**20 40 22.6**	**0.0**
MGNA	**Meganis**	0.57	31	P	**Pg**	**20 40 15.9**	**-0.5**
MGNA				S	**Sb**	**20 40 25.0**	**+0.1**
MGNA	comp=N,4670µm,0.2s			AML	AML	20 40 26.5	
MGNA	comp=E,3584µm,0.1s			AML	AML	20 40 27.2	
LKD2	**Lefkada island**	0.65	17	P	**Pg**	**20 40 17.8**	**-0.1**
LKD2	comp=E,1µm,0.3s			S	**Sb**	**20 40 27.4**	**+0.2**
LKD2	**Lefkada island**	0.65	17	P	**Pg**	**20 40 17.9**	**+0.1**
LKD2				S	**Sb**	**20 40 27.7**	**+0.5**
LKD2	comp=N,2632µm,0.5s			AML	AML	20 40 35.3	
LKD2	comp=E,2731µm,0.4s			AML	AML	20 40 35.8	
VTN	**Vitineika**	0.66	112	P	**Pg**	**20 40 17.7**	**-0.3**
VTN				S	**Sb**	**20 40 27.4**	**0.0**
VTN	**Vitineika**	0.66	112	P	**Pg**	**20 40 17.6**	**-0.3**
TSLK	**Tsoukalades, L**	0.69	16	P	**Pg**	**20 40 18.2**	**-0.3**
PDO	**Prodromos**	0.74	54	P	**Pg**	**20 40 19.2**	**-0.4**
PDO	comp=E,4µm,0.4s			S	**Sb**	**20 40 30.1**	**+0.2**
PDO	**Prodromos**	0.74	54	P	**Pg**	**20 40 19.2**	**-0.4**
PDO				S	**Sb**	**20 40 30.5**	**+0.7**
PDO	comp=N,5542µm,0.4s			AML	AML	20 40 36.3	
PDO	comp=E,4841µm,0.3s			AML	AML	20 40 36.7	
RLS	**Riolos of Patr**	0.84	97	P	**Pg**	**20 40 20.9**	**-0.5**
RLS	comp=E,2µm,0.5s			S	**Sb**	**20 40 33.1**	**+0.5**
RLS	**Riolos of Patr**	0.84	97	P	**Pg**	**20 40 21.1**	**-0.3**
RLS				S	**Sg**	**20 40 32.3**	**-0.1**
RLS	comp=E,2797µm,0.4s			AML	AML	20 40 36.4	
RLS	comp=N,5090µm,0.6s			AML	AML	20 40 37.5	
PVO	**Paravola**	0.98	62	P	**Pb**	**20 40 23.8**	**-0.1**
PVO	**Paravola**	0.98	62	P	**Pb**	**20 40 23.8**	**-0.1**
PVO				S	**Sn**	**20 40 38.0**	**-0.2**
PVO	comp=E,4446µm,0.4s			AML	AML	20 40 45.3	
PVO	comp=N,3249µm,0.4s			AML	AML	20 40 46.6	
DRO	**Drossia**	1.05	101	P	**Pb**	**20 40 24.6**	**-0.4**
DRO	comp=N,2µm,0.4s			S	**Sn**	**20 40 39.9**	**+0.1**
DRO	**Drossia**	1.05	101	P	**Pb**	**20 40 24.7**	**-0.4**
DRO				S	**Sg**	**20 40 39.4**	**+0.3**
DRO	comp=E,5024µm,0.4s			AML	AML	20 40 44.7	
DRO	comp=N,4166µm,0.5s			AML	AML	20 40 46.6	
UPR	**University Cam**	1.09	83	P	**Pn**	**20 40 26.4**	**+0.5**
AMT	**Artemida-Makis**	1.21	121	P	**Pn**	**20 40 27.1**	**-0.5**
AMT	comp=N,1µm,0.6s			S	**Sn**	**20 40 44.1**	**+0.4**
TRIZ	**Trizonia**	1.32	81	P	**Pn**	**20 40 28.8**	**-0.3**
TRIZ	**Trizonia**	1.32	81	P	**Pn**	**20 40 28.9**	**-0.3**
EVR	**Evrytania**	1.33	55	P	**Pn**	**20 40 29.0**	**-0.3**
EVR	**Evrytania**	1.33	55	P	**Pn**	**20 40 29.8**	**+0.5**
EVR				S	**Sg**	**20 40 48.6**	**+0.6**
EVR	comp=E,693µm,0.5s			AML	AML	20 41 02.1	
EVR	comp=N,802µm,0.7s			AML	AML	20 41 02.9	

ALIK	Aliki, Aigiali	1.34	85	P	Pn	20 40 29.1	-0.3
KLV	Kalavryta, Ach	1.38	95	P	Pn	20 40 30.0	0.0
KLV	Kalavryta, Ach	1.38	95	P	Pb	20 40 30.6	-0.1
KALE	Kalithea	1.38	80	P	Pn	20 40 29.5	-0.5
KALE	Kalithea	1.38	80	P	Pn	20 40 29.7	-0.3
KALE				S	Sg	20 40 49.9	+0.3
KALE				AML	AML	20 41 00.1	
	comp=N,1311µm,0.5s						
KALE				AML	AML	20 41 02.7	
	comp=E,820µm,0.5s						
JAN	Janina	1.53	13	P	Pg	20 40 34.5	0.0
JAN				S	Sg	20 40 54.9	+0.6
JAN				AML	AML	20 41 00.1	
	comp=E,1095µm,0.3s						
JAN				AML	AML	20 41 05.4	
	comp=N,950µm,0.4s						
ITM	Ithomi	1.55	129	P	Pn	20 40 32.5	+0.2
ITM	Ithomi	1.55	129	P	Pn	20 40 33.0	+0.7
ITM				S	Sg	20 40 55.2	0.0
ITM				AML	AML	20 40 58.7	
	comp=E,707µm,0.4s						
ITM				AML	AML	20 41 05.1	
	comp=N,678µm,0.5s						
MAKR	Makrakomi, Fth	1.59	57	P	Pb	20 40 34.7	+0.4
KEK	Kerkira	1.62	343	P	Pn	20 40 34.0	+0.8
PYL	PYLOS	1.65	140	P	Pn	20 40 34.2	+0.6
AGG	Agios Georgios	1.73	60	P	Pb	20 40 37.4	+0.7
AXAR	Agios Charalam	1.86	71	P	Pb	20 40 39.7	+0.8
PROD	Prodromos	1.96	87	P	Pb	20 40 39.8	-0.8
NEST	Nestorio	2.30	12	P	Pb	20 40 46.4	0.0
TIP	Timpagrande	3.03	291	⇑P	Pn	20 40 54.8	+2.1
TIP				⇑S	Sn	20 41 31.7	+2.9
TIR	Tirane	3.21	353	⇓P	Pn	20 40 55.2	+0.2
STIP	Stip	3.78	21	*i* Pn	Pn	20 41 06.3	+3.4
MATE	Matera	3.79	312	⇑P	Pn	20 41 05.0	+1.9
MATE				⇓S	Sn	20 41 49.8	+2.3
PDG	Podgorica	4.35	349	⇓P	Pn	20 41 10.9	+0.2
PDG				⇑S	Sn	20 42 02.4	+1.2
PDG	Podgorica	4.35	349	*e*Pn	Pn	20 41 08.1	-2.6
HCY	Herceg Novi	4.52	342	*e*Pn	Pn	20 41 12.3	-0.8
TREB	Trebinje	4.81	342	*e*Pn	Pn	20 41 16.2	-0.9
BRY	Bratogost	4.94	344	*e*Pn	Pn	20 41 18.0	-1.0
VTS	Vitosha	4.94	25	⇓P	Pn	20 41 18.6	-0.4
VTS				⇑S	Sn	20 42 15.8	-0.2
STON	Ston	5.13	337	*e*Pn	Pn	20 41 20.5	-1.0
UPM	Unac-Piva	5.16	348	*e*Pn	Pn	20 41 22.9	+0.8
RUDO	Rudo	5.50	352	*e*Pn	Pn	20 41 25.9	-0.7
DIVS	Divibare	5.94	357	*e*Pn	Pn	20 41 29.5	-3.1
MGRS	Mrkonjic Grad	6.73	339	*e*Pn	Pn	20 41 44.6	+1.2
BLY	Banja Luka	7.01	341	⇓P	Pn	20 41 48.1	+0.8
BLY				⇓S	Sn	20 43 08.5	+1.8
RAZG	Razgrad	7.10	39	⇓P	Pn	20 41 48.5	0.0
SGRR	Singureni	7.36	33	⇑P	Pn	20 41 51.8	-0.3
BZS	Buzias	7.50	6	⇓P	Pn	20 41 54.8	+0.8
BZS				⇓S	Sn	20 43 19.7	+0.9
VOIR		8.05	24	⇑P	Pn	20 42 01.1	-0.5
MLR	Muntele Rosu	8.40	28	⇑P	Pn	20 42 06.5	0.0
CRES	Cresnjev	8.49	336	*e*Pn	Pn	20 42 07.0	-0.7
CEY	Cerknica	8.78	331	*e*Pn	Pn	20 42 11.5	-0.1
PLOR	Plostina	8.97	29	⇓P	Pn	20 42 13.6	-0.6
VRI	Vrincioaia	9.01	29	⇑P	Pn	20 42 14.1	-0.7
SOKA	Soboth	9.39	337	*e*Pn	Pn	20 42 19.2	-0.8
	comp=N,2.0nm,0.3s						
SOKA				*i* Sn	Sn	20 43 59.7	-5.6
	comp=N,2.3nm,0.6s						
OBKA	Obir	9.40	334	*i* Pn	Pn	20 42 20.5	+0.5
	comp=N,1.7nm,0.3s						
OBKA				*i* Sn	Sn	20 44 03.3	-2.2
	comp=N,2.7nm,0.4s						
ABTA	Abfaltersbach	10.37	328	*e*Pn	Pn	20 42 33.1	-0.3
	comp=N,1.9nm,0.6s						
ABTA				*e*Sn	Sn	20 44 23.0	-6.4
	comp=N,1.7nm,0.4s						
MOA	Molln	10.67	337	*i* Pn	Pn	20 42 38.1	+0.6
	comp=N,1.2nm,0.3s						
MOA				*e*Sn	Sn	20 44 32.5	-4.2
	comp=N,0.7nm,0.3s						
WTTA	Wattenberg	11.14	327	*e*Pn	Pn	20 42 46.2	+2.2
	comp=N,0.9nm,0.3s						
MOTA	Moosalm	11.43	326	*e*Pn	Pn	20 42 49.3	+1.2
	comp=N,0.9nm,0.4s						
MORC	Moravsky Berou	11.79	351	⇑P	Pn	20 42 53.2	+0.4

*PRE **05** 20:57:18.6±1.3, 28°.12S×26°.79E, h2^{km}, ML2.7*
*EAF **05** 20:57:24.5±0.9, 27°.63S×26°.27E, h0^{km}±36^{km}, MD3.5*
ISC 05 20:57:19.1±1.9**, 28°.21S**±0°.05×**26°.91E**±0°.09**, h16**^{km}±14^{km}**,**
n13, σ1^s.72/22**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRYS	Parys	1.34	18	*e*P	Pb	20 57 43.7	-0.2
PRYS				*e*S	Sn	20 58 00.4	-0.3
PRYS				AML	AML	20 58 02.6	
	comp=Z,425nm,0.3s						
BOSA	Boshof	1.51	254	*i* P	Pg	20 57 48.4	+0.2
BOSA	Boshof	1.51	254	*i* P	Pg	20 57 48.4	+0.2
SWZ	Schweizer	1.73	306	*e*P	Pn	20 57 48.8	+0.2
SWZ				*e*S	Sn	20 58 09.8	-0.6
SWZ				AML	AML	20 58 13.0	
	comp=Z,90nm,0.2s						
WDLM	Western Deep L	1.83	15	*e*P	Pb	20 57 51.1	-1.3
WDLM				*e*S	Sb	20 58 13.9	-1.2
WDLM				AML	AML	20 58 17.9	
	comp=Z,149nm,0.4s						
KLOF	Kloof	1.95	19	*e*P	Pb	20 57 53.6	-0.7
KLOF				*e*S	Sb	20 58 17.8	-0.7
KLOF				AML	AML	20 58 18.8	
	comp=Z,308nm,0.2s						
KSR	Koster	2.34	360	*e*P	Pn	20 57 57.9	+0.8
KSR				*e*S	Sn	20 58 26.4	+0.8
KSR				AML	AML	20 58 29.1	
	comp=Z,88nm,0.2s						
HVD	Gariep Dam	2.69	207	*e*P	Pb	20 58 04.4	-2.6
HVD				*e*S	Sn	20 58 36.3	+2.2
HVD				AML	AML	20 58 52.3	
	comp=Z,11nm,0.3s						
BUFB	Buffelsbos	6.21	197	*e*P	Pn	20 58 53.6	+3.5
BUFB				*e*S	Sn	21 00 01.1	+0.4
BUFB				AML	AML	21 00 07.0	
	comp=Z,5.2nm,0.7s						
MSNA	Messina	6.48	26	*i* P	Pn	20 58 56.5	+2.6
MSNA				*i* S	Sn	21 00 05.3	-2.2
MSNA	Messina	6.48	26	*i* P	Pn	20 58 56.5	+2.6
MSNA				*i* S	Sn	21 00 05.3	-2.2
MATP	Matopo	7.88	11	*i* P	Pn	20 59 13.7	+0.5
MATP				*i* S	Sn	21 00 32.2	-10
MATP	Matopo	7.88	11	*i* P	Pn	20 59 13.7	+0.5
MATP				*i* S	Sn	21 00 32.2	-10

JMA 05 21:01:16.9±0.1**, 24°.08N×123°.60E, h18**^{km}±2^{km}**, M2.2,**
Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATJ	Hateruma jima	0.19	97	P	Pb	21 01 21.5	0.0
HATJ				S	Sg	21 01 25.1	+0.2
IRIF	Iriomote-Funau	0.28	25	P	Pg	21 01 22.9	-0.2
IRIF				S	Sg	21 01 27.2	-0.2
JKRS	Kuro-shima	0.41	67	P	Pg	21 01 25.2	-0.1
JKRS				S	Sb	21 01 31.5	0.0
JIJ	Ishigaki jima	0.57	60	P	Pg	21 01 27.6	-0.7
JIJ				S	Sg	21 01 35.2	-0.8
JISG	Ishigakijimahi	0.82	52	P	Pb	21 01 32.1	-0.6
JISG				S	Sb	21 01 43.6	+0.2
JTJ	Tarama	1.15	61	P	Pn	21 01 37.8	-0.3
JTJ				S	Sn	21 01 53.7	+0.3

TAP 05 21:01:31.2, 24°.40N×121°.95E, h26^{km}**, ML2.0, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENA	Nanau	0.19	279	*i* P	Pb	21 01 37.4	+0.5
	baz=278						
ENA				*e*S	Sb	21 01 42.2	+1.4
	baz=278						
EOS1	EOS1	0.22	47	P	Pb	21 01 37.8	+0.6
	baz=47						
EOS1				*e*S	Sb	21 01 42.5	+1.2
	baz=47						
TWC	Suao	0.23	336	P	Pb	21 01 37.0	-0.3
	baz=338						
TWC				*e*S	Sb	21 01 42.5	+1.0
	baz=338						
NACB	Ninganchiao	0.39	236	P	Pb	21 01 40.0	+0.3
	baz=235						
NACB				*e*S	Sb	21 01 46.5	+0.9
	baz=235						
TWE	Neicheng	0.41	321	*e*P	Pn	21 01 40.9	-0.6
	baz=322						
TWE				*e*S	Sb	21 01 46.9	+0.8
	baz=322						
ENTT	Nioudou	0.42	305	P	Pn	21 01 41.0	-0.7
	baz=304						
ENTT				*e*S	Sn	21 01 48.2	-0.4
	baz=304						
NDT	Datong Townshi	0.45	297	P	Pn	21 01 41.3	-0.6
	baz=296						
NDT				*e*S	Sn	21 01 48.7	-0.5
	baz=296						
TWD	Chiawan	0.45	226	*e*P	Pb	21 01 40.9	+0.2
	baz=225						
TWD				*e*S	Sn	21 01 48.8	-0.4
	baz=225						
SLBB	Yuanshan	0.46	321	P	Pb	21 01 40.5	-0.3
	baz=320						
SLBB				*e*S	Sb	21 01 48.3	+1.0
	baz=320						
ETLH	Xiulin Townshi	0.47	246	P	Pb	21 01 41.1	+0.1
	baz=246						
ETLH				*e*S	Sn	21 01 49.2	-0.6
	baz=246						
NNSB	Datong	0.52	273	*i* P	Pb	21 01 42.3	+0.5
	baz=273						
NNSB				*e*S	Sn	21 01 50.4	-0.7
	baz=273						
NNSH	Datong	0.52	273	*e*P	Pb	21 01 42.3	+0.4
	baz=273						
NNSH				*e*S	Sn	21 01 50.2	-0.9
	baz=273						
NNS	Nan Shan	0.53	275	*e*P	Pn	21 01 42.9	-0.3
	baz=274						
NNS				*e*S	Sn	21 01 50.8	-0.5
	baz=274						
NWLT	Wulai	0.56	313	P	Pn	21 01 43.1	-0.4
	baz=312						
NWLT				*e*S	Sn	21 01 51.3	-0.5
	baz=312						
TIPB	Shuangxi	0.58	349	*e*P	Pn	21 01 43.4	-0.4
	baz=348						
TIPB				*e*S	Sn	21 01 52.3	-0.3
	baz=348						
YHNB	Yeheng	0.59	297	P	Pn	21 01 43.7	-0.2
	baz=297						
YHNB				*e*S	Sn	21 01 52.2	-0.6
	baz=297						
NSK	Sanguang	0.61	297	P	Pn	21 01 43.8	-0.4
	baz=297						
NSK				*e*S	Sn	21 01 52.5	-0.7
	baz=297						
WHF	Hehuan Shan	0.68	248	P	Pb	21 01 44.7	+0.1
	baz=247						
WHF				*e*S	Sn	21 01 55.1	-0.2
	baz=247						
TDCB	Techi	0.74	259	*e*P	Pn	21 01 45.9	-0.2
	baz=258						
TDCB				*e*S	Sn	21 01 56.5	0.0
	baz=258						
ESL	Shilin	0.75	219	*e*P	Pb	21 01 45.2	-0.4
	baz=218						
CHGB	Renai	0.79	245	P	Pb	21 01 46.4	0.0
	baz=244						
CHGB				*e*S	Sn	21 01 57.4	-0.4
	baz=244						
OWD	Renai	0.83	238	P	Pn	21 01 47.4	0.0
	baz=238						
OWD				*e*S	Sn	21 01 58.9	0.0
	baz=238						
YM04	YM04	0.84	333	*e*P	Pn	21 01 47.5	+0.2
	baz=333						
YM04				*e*S	Sn	21 01 58.8	-0.1
	baz=333						
LIOB	Emei	0.89	286	*e*P	Pn	21 01 48.5	+0.5
	baz=286						
LIOB				*e*S	Sn	21 02 00.1	+0.1
	baz=286						
NSTT	Nanjuang	0.90	285	*e*S	Sn	21 02 01.7	+1.5
	baz=285						
WHP	Taichung City	0.93	263	*e*P	Pb	21 01 49.1	+0.4
	baz=262						
WHP				*e*S	Sn	21 02 01.9	+0.9
	baz=262						
VWDT	VWDT	0.98	229	*e*P	Pn	21 01 49.3	+0.1
	baz=229						
HGSD	Ruisui	1.02	208	*e*P	Pn	21 01 50.0	+0.1
	baz=208						
SSLB	Suanglung	1.09	236	*e*P	Pn	21 01 51.0	+0.1
	baz=236						
TYC	Yuchr	1.11	244	*e*P	Pn	21 01 50.7	-0.3
	baz=243						
TYC				*e*S	Sb	21 02 07.6	+1.8
	baz=243						
YULB	Yu-li	1.17	211	*e*P	Pb	21 01 52.7	0.0
	baz=210						

JMA 05 21:02:17.3±0.3**, 37°.25N×143°.50E, h53**^{km}**, M3.5, Off east**
coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	1.93	304	P	Pn	21 02 48.8	+1.1
JIKH				*e*S	Sn	21 03 11.5	+0.8
JIO	Ouri	2.08	306	P	Pn	21 02 50.7	+0.9
JIO				S	Sn	21 03 15.5	+0.9
JFK	Kawauchi	2.10	274	P	Pn	21 02 51.0	+1.0
JMST	Minamisoumatoc	2.13	284	P	Pn	21 02 51.1	+0.7
JMST				*e*S	Sn	21 03 16.3	+0.6
ONAJ	Iwakimizuishiy	2.16	267	P	Pn	21 02 51.9	+1.0
ONAJ				*e*S	Sn	21 03 16.8	+0.2
JMK	Ichinoseki	2.47	314	P	Pn	21 02 56.0	+0.9
JMK				*e*S	Sn	21 03 25.9	+1.8
JFT	Otama	2.53	277	P	Pn	21 02 58.2	+2.2
JFT				*e*S	Sn	21 03 27.8	+2.2
JOM	Ohasama	2.82	323	P	Pn	21 03 01.9	+2.1
BSO1	Boso 1	3.30	219	P	Pn	21 03 06.1	+0.1
BSO1				*e*S	Sn	21 03 44.5	+0.8
JAG	Ashikaga	3.35	257	P	Pn	21 03 08.4	+1.3
JRY	Ryogami san	3.90	253	P	Pn	21 03 15.7	+1.0
JRY				*e*S	Sn	21 03 58.7	-0.5
JOD2	Odawara 2	4.08	242	P	Pn	21 03 17.8	+0.6
MAT	Matsushiro	4.30	262	P	Pn	21 03 22.8	+2.6
MAT				*e*S	Sn	21 04 12.7	+3.6
JCH	Churui	5.36	359	P	Pn	21 03 33.5	-1.2
JCH				*e*S	Sn	21 04 31.1	-3.9

IDC 05 21:13:27.5±6.1**, 24°.47S×179°.21E, h509**^{km}±41^{km}**, mb3.3**/5**,**
mb1 3.5/5**, mb1mx3.1**/44**, mbtmp4.3**/5**, Error ellipse:**
s-maj=97.5km s-min=52.5km az=145.0, South of Fiji
Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	30.77	272	P	P	21 19 02.3	+1.1
	4.9nm,0.4s,baz=94,slow=9.8,SNR=8.7						
STKA	Stephens Creek	33.85	249	P	P	21 19 27.4	+0.1
	1.0nm,0.4s,baz=89,slow=12,SNR=6.3						
ASAR	Alice Springs	41.24	261	P	P	21 20 27.6	-0.3
	0.9nm,0.5s,baz=92,slow=7.1,SNR=13						
WRA	Warramunga Arr	41.66	267	P	P	21 20 30.6	-0.7
	3.0nm,0.5s,baz=104,slow=7.9,SNR=24						
WRA				ScP	ScP	21 25 17.8	-0.2
	1.4nm,1.0s,baz=100,slow=3.7,SNR=5.4						
FITZ	Fitzroy Crossi	50.07	266	P	P	21 21 35.0	-0.5
	1.8nm,0.6s,baz=135,slow=8.6,SNR=6.6						
BRTR	Keskin Array B	147.34	306	PKPbc	PKPbc	21 32 13.5	-0.6
	0.3nm,0.6s,baz=141,slow=4.8,SNR=2.7						

*IDC **05** 21:14:12.9±4.0, 3°.83S×128°.54E, h74^{km}±43^{km}, mb3.4/3,*
mb1 3.7/5, mb1mx3.3/48, mbtmp3.7/5, ML3.9/2, Error
ellipse: s-maj=51.4km s-min=22.3km az=75.0
*DJA **05** 21:14:17.7±0.6, 4°S±6°×12°9E±°, h94^{km}±5^{km}, M3.7/9,*
MLv3.7/9
ISC 05 21:14:15.2±0.8**, 3°.78S**±0°.07×**128°.91E**±0°.05**, h100**^{km}**, n15,**
σ2^s.29/20**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	0.43	2	P	Pn	21 14 31.5	+0.9
MSAI				S	Sn	21 14 44.7	+2.7
AAI	Ambon	0.72	277	P	Pn	21 14 34.2	+1.4
AAI				S	Sn	21 14 48.8	+2.8
NLAI	Namlea	1.89	286	P	Pn	21 14 49.4	+3.1
NLAI				S	Sn	21 15 13.8	+3.8
SANI	Sanana	3.39	300	P	Pn	21 15 05.3	-0.8
SANI				S	Sn	21 15 42.8	-2.7
LBMI	Labuha	3.42	336	P	Pn	21 15 07.7	+1.0
FAKI	Fak Fak	3.44	76	P	Pn	21 15 09.3	+2.4
SIJI	Sorong	3.73	39	P	Pn	21 15 12.1	+1.3
	6.4nm,0.3s,baz=225,slow=20,SNR=82						
SIJI				S	Sn	21 15 53.1	-0.7
	26nm,0.3s,baz=236,slow=23,SNR=25						
SWI	Sorong	3.73	39	P	Pn	21 15 12.0	+1.3
TNTI	Ternate	4.78	341	P	Pn	21 15 25.5	+0.6
PCI	Palu	9.50	287	P	Pn	21 16 37.9	+8.7
WRA	Warramunga Arr	16.92	162	P	Pn	21 18 05.2	-0.7
	0.6nm,0.3s,baz=333,slow=13,SNR=45						
ASAR	Alice Springs	20.35	167	P	P	21 18 44.2	+0.4
	3.8nm,0.7s,baz=353,slow=13,SNR=42						
ASAR				S	S	21 22 21.8	-4.7
	0.9nm,0.8s,baz=351,slow=22,SNR=4.3						
CMAR	Chiang Mai Arr	36.88	308	P	P	21 21 12.7	-1.6
	0.4nm,0.5s,baz=129,slow=7.1,SNR=3.3						
MKAR	Makanchi Array	64.95	327	P	P	21 24 43.6	-0.7
	0.3nm,0.4s,baz=118,slow=7.8,SNR=11						
TXAR	Lajitas Array	124.15	57	PKP	PKiKP	21 33 04.5	+1.3
	0.3nm,0.7s,baz=318,slow=1.2,SNR=3.8						

*HDC **05** 21:15:00±5.0, 9°.8N±0°.1×85°.7W±0°.4, h16^{km}±10^{km}, Error*
ellipse: s-maj=0.0km s-min=0.0km az=164.0
*INET **05** 21:15:46.8, 9°.45N×85°.57W, h53^{km}, ML4.7*
*UCR **05** 21:15:49.9±1.1, 9°.85N×85°.63W, h15^{km}±4^{km}, MD4.0,*
mb4.7(NEIC), Fault plane solution: NP1:ϕ_s199.73000°,
δ30.00000°, λ-90.00000°.
*UPA **05** 21:15:51.6±1.2, 9°.90N×85°.54W, h11^{km}±48^{km}, MW5.0*
*NEIC **05** 21:15:53.3±3.0, 10°.09N±0°.07×85°.35W±0°.06, h54^{km}±5^{km},*
mb4.7/170, Md5.1(HDC), Error ellipse: s-maj=10.7km
s-min=7.9km az=203.0
*IDC **05** 21:15:53.9±0.9, 10°.25N×85°.27W, h47^{km}±7^{km}, mb4.2/22,*
mb1 4.3/25, mb1mx4.1/49, mbtmp4.4/25, ML3.4/3, MS3.9/20,
Ms1 3.9/20, ms1mx3.8/31, Error ellipse: s-maj=20.2km
s-min=10.3km az=44.0
ISC 05 21:15:49.1±1.0**, 9°.94N**±0°.04×**85°.53W**±0°.04**, h18**^{km}±5^{km}**,**
n405, σ1^s.65/393**, mb4.7**/95**, MS3.9**/17**, 8C-1D, Off coast of**
Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUAI	GUAI	0.32	3	*i* P	Pb	21 15 58.2	+1.8
GUAI				*i* S	Sb	21 16 03.2	+1.8
PLVR	Palo Verde	0.44	23	⇓*e*P	Pn	21 16 00.7	0.0
PLVR				*e*S	Sn	21 16 09.5	+1.2
JTS	Las Juntas de	0.66	59	P	Pn	21 16 04.3	+0.6
	1µm,0.3s,baz=336,slow=7.8,SNR=6485						
JTS				S	Sn	21 16 15.6	+1.9
	4µm,0.3s,baz=36,slow=19,SNR=22						
JTS	Las Juntas de	0.66	59	⇑*e*P	Pn	21 16 04.8	+1.1
JTS				*e*S	Sn	21 16 16.7	+3.0
JTS	Las Juntas de	0.66	59		Pn	21 16 04.3	+0.6
JTS					Sb	21 16 12.0	+1.0
NY14	Universidad de	0.70	359	*i* P	Pn	21 16 05.2	+1.0
COLC	Colonia	0.78	24	*i* P	Pn	21 16 06.4	+1.0
COLC				*i* S	Sn	21 16 19.7	+3.0
CUI	Cuipilapa	0.79	27	*i* P	Pn	21 16 06.6	+1.1
CUI				*e*S	Sn	21 16 19.8	+2.8
LIM1	Limonal	0.80	20	*i* P	Pn	21 16 06.6	+1.1
LIM1				*i* S	Sn	21 16 19.7	+2.6
GUAB	Guayabo de Bag	0.81	21	*i* P	Pn	21 16 06.9	+1.1
MICM	Guayabo	0.82	23	*i* P	Pn	21 16 07.1	+1.3
GPS3	Bodega del ICE	0.82	11	*i* P	Pn	21 16 06.9	+1.0
GPS3				*i* S	Sn	21 16 20.1	+2.5
GPS2	Hotel Rincn d	0.82	12	*i* P	Pn	21 16 07.0	+1.1
GPS2				*i* S	Sn	21 16 19.4	+1.7
ACAL	Aguas Claras	0.84	35	⇑*i*P	Pn	21 16 07.5	+1.4
ACAL				*i* S	Sn	21 16 21.6	+3.5
GPS1	Guardaparques	0.84	12	*i* P	Pn	21 16 07.3	+1.1
BUEV	Buena Vista	0.86	8	⇑*i*P	Pn	21 16 07.3	+0.9
BUEV				*e*S	Sn	21 16 21.1	+2.5
MESS	Mesas	0.86	22	*i* P	Pn	21 16 07.5	+1.2
GB1A	Borinquen Arri	0.88	8	*i* P	Pn	21 16 07.7	+1.0
GB1A				⇑*e*P		21 16 07.7	
GB1A				*e*S	Sn	21 16 21.8	+2.8
PTEN	Parque Tenorio	0.93	35	*i* P	Pn	21 16 09.1	+1.6
BUAI	Buenos Aires	0.95	12	*i* P	Pn	21 16 08.8	+1.2
CEDE	Laguna Cedeo	0.97	56	*i* P	Pn	21 16 10.1	+2.1
CEDE				*e*S	Sn	21 16 26.0	+4.6
FORC	Fortuna	0.99	58	*i* P	Pn	21 16 10.2	+2.0
HDC	Heredia	1.39	88	⇑*e*P	Pg	21 16 15.9	-0.2
HDC				*e*S	Sg	21 16 35.7	+1.4
HDC	Heredia	1.39	88	⇑*e*P	Pg	21 16 15.8	-0.2
HDC				*e*S	Sg	21 16 36.1	+1.8
HDC	Heredia	1.39	88		Pg	21 16 15.8	-0.2
SJS	Escuela Geolog	1.45	90	⇑*e*P	Pg	21 16 16.4	-0.7
SJS				*e*S	Sg	21 16 38.1	+2.0
LCR2	La Lucha 2	1.52	97	⇑*e*P	Pb	21 16 16.6	-0.3
LCR2				*e*S	Sn	21 16 35.0	+0.1
EDDO	Dominical	1.78	113	*e*P	Pb	21 16 21.3	+0.1
EDLM	Las Mercedes	2.02	109	*e*P	Pb	21 16 24.9	-0.5
ACON	Acoyapa	2.04	10		Pn	21 16 24.2	+1.6
EDBA	Buenos Aires	2.35	109	*e*P	Pn	21 16 28.4	+1.4
ESPN	Las Esperanzas	2.54	28		Pn	21 16 31.3	+1.8
PTJ1	Puerto Jimnez	2.60	122	*e*P	Pn	21 16 31.6	+1.2
PIRO	Carate, Puerto	2.65	125	*e*P	Pn	21 16 32.2	+1.3
RGM0	Gandoca	2.90	97	*e*P	Pn	21 16 37.1	+2.7
BRU2	Volcan	3.02	112	*e*P	Pn	21 16 39.2	+3.0
BRU2				*e*S	Sn	21 17 15.1	+3.0
BRU2	Volcan	3.02	112	*e*P	Pn	21 16 37.4	+1.1
CNI2	El Empalme, Bo	3.06	99	*e*P	Pn	21 16 38.9	+2.3
CNI2				*e*S	Sn	21 17 14.4	+1.7
BCO2	Palmira	3.20	112	*e*P	Pn	21 16 41.5	+2.8
BCO2				*e*S	Sn	21 17 20.5	+4.0
ESTN	Estel	3.25	345		Pn	21 16 40.9	+1.7
DVD	David	3.39	116	*e*P	Pn	21 16 44.5	+3.4
DVD				*e*S	Sn	21 17 23.1	+2.2
LOCO3	Loma Colorada,	3.43	116	*e*P	Pn	21 16 45.2	+3.5
LOMA3	Las Lomas, Chi	3.44	116	*e*P	Pn	21 16 45.0	+3.1
CHGR2	Aguacate	3.48	106	*e*P	Pn	21 16 45.1	+2.6
CHGR2				*e*S	Sn	21 17 26.4	+3.1
CSGN	Cosiguina Volc	3.61	327		Pn	21 16 46.4	+2.1
TGUH	Tegucigalpa,Un	4.43	337		Pn	21 16 57.8	+2.2
GMAL	Guarumal, Vera	4.76	117	*e*P	Pn	21 17 02.6	+2.5
GMAL				*e*S	Sn	21 17 56.1	+1.2
SNET	Serv Nac Est T	5.20	316	Pn	Pn	21 17 10.2	+4.1
SNET				Sn	Sn	21 18 02.9	-2.7
AZU	Azuero	5.61	112	*e*P	Pb	21 17 22.7	-4.0
AZU				*e*S	Sn	21 18 19.9	+4.1
AZU	Azuero	5.61	112	*e*P	Pn	21 17 15.6	+3.8
BCIP	Isla Barro Col	5.67	97		Pn	21 17 14.0	+1.5
CHOR3	La Chorrera	5.78	100	*e*P	Pn	21 17 16.3	+2.2
CHOR3				*e*S	Sn	21 18 21.1	+1.1
CHPO	Chepo, Panama	6.37	96	*e*P	Pn	21 17 25.4	+3.2
APG	El Apazote	6.97	317	P	Pn	21 17 34.0	+3.4
	3.7nm,0.3s,baz=159,slow=12,SNR=7.3						
TEIG	Tepich	10.56	346	P	Pn	21 18 22.7	+3.0
	baz=294,slow=0.0						
TEIG				LR	LR	21 22 51.1	
	comp=Z,1µm,19.3s,baz=73,slow=40						
CBCY	The Bluff, Cay	11.22	29		Pn	21 18 25.9	-2.8
CMIG	Matias Romero	11.54	309	P	Pn	21 18 35.3	+2.2
	0.3nm,0.3s,baz=130,slow=10,SNR=9.1						
OTAV	Otavalo	11.94	143	Pn	Pn	21 18 40.5	+1.5
ROSC	El Rosal	12.21	114	LR	LR	21 24 04.8	
	comp=Z,748nm,18.8s,baz=301,slow=40						
RUSC	La Rusia	12.96	107	Pn	Pn	21 18 45.0	-8.0
SDV	Santo Domingo	14.73	93	P	Pn	21 19 18.4	+1.5
	0.3nm,0.3s,baz=250,slow=6.0,SNR=4.5						
SDV				LR	LR	21 26 09.1	
	comp=Z,693nm,19.2s,baz=17,slow=42						
SDV	Santo Domingo	14.73	93		Pn	21 19 14.4	-2.5
TLIG	Tlapa	14.75	302		Pn	21 19 18.2	+1.1
SDDR	Presa de Saban	16.45	55	P	Pn	21 19 37.9	-1.3
MLPR	Magueyes Islan	19.62	64	P	P	21 20 14.9	-1.8
MLPR				IAmb	IAmb	21 20 19.3	
	comp=Z,58nm,1.4s						
OBIP	Obispado Ponce	20.03	64	P	P	21 20 20.2	-1.1

OBIP				IAmb	IAmb	21 20 36.6	
	comp=Z,31nm,1.1s						
553A	Crawfordville	20.17	3	P	P	21 20 23.3	+0.7
SJG	San Juan	20.46	65	LR	LR	21 28 48.2	
	comp=Z,200nm,18.2s,baz=250,slow=38						
ZAIG	Zacatecas	20.70	310	P	P	21 20 29.1	+0.2
BRAL	Brewton	21.17	356	P	P	21 20 36.1	+2.6
	baz=175						
346A	Big Creek Wild	21.65	351	P	P	21 20 39.2	+0.5
250A	Grady	21.94	358	P	P	21 20 40.6	-1.2
344A	Westbrook Farm	21.94	348	P	P	21 20 38.7	-3.1
HKT	Hockley	22.11	336	P	P	21 20 44.0	+0.5
HKT				IAmb	IAmb	21 20 47.1	
	comp=Z,45nm,1.5s						
342A	Flagon Creek P	22.24	344	P	P	21 20 43.1	-1.9
342A				IAmb	IAmb	21 20 55.8	
	comp=Z,25nm,0.8s						
833A	Chaparral WMA,	22.45	326	P	P	21 20 45.5	-1.8
833A				IAmb	IAmb	21 20 50.0	
	comp=Z,19nm,0.7s						
833A	Chaparral WMA,	22.45	326	P	P	21 20 48.5	+1.1
	baz=141,SNR=5.7						
152A	Waverly Hall	22.63	2	P	P	21 20 46.5	-2.7
VBMS	Vicksburg	22.64	349	P	P	21 20 46.8	-2.5
154A	Montrose	22.67	5	P	P	21 20 46.6	-3.0
Z50A	Ashland	23.20	359	P	P	21 20 54.1	-1.0
Z50A	Ashland	23.20	359	P	P	21 20 56.5	+1.4
	baz=179,SNR=9.0						
Z51A	Franklin	23.26	1	P	P	21 20 56.7	+0.9
NATX	Nacogdoches	23.30	340	P	P	21 20 54.2	-1.9
NATX				IAmb	IAmb	21 20 57.2	
	comp=Z,26nm,0.7s						
GOGA	Godfrey	23.43	4	P	P	21 20 57.9	+0.5
GOGA				IAmb	IAmb	21 20 59.4	
	comp=Z,33nm,0.9s						
GOGA	Godfrey	23.43	4	P	P	21 20 58.5	+1.1
	baz=185,SNR=7.0						
435B	Jarrell	23.58	333	P	P	21 20 58.0	-0.8
435B				IAmb	IAmb	21 21 01.4	
	comp=Z,24nm,0.9s						
Y52A	Lilburn	23.84	3	P	P	21 21 00.5	-0.9
Y52A				IAmb	IAmb	21 21 03.4	
	comp=Z,22nm,0.8s						
Y52A	Lilburn	23.84	3	P	P	21 21 02.5	+1.1
	baz=183,SNR=5.8						
Z58A	St. Stephen	23.87	12	P	P	21 21 02.8	+1.2
	baz=194						
237A	Washetta, Mont	23.93	338	P	P	21 21 02.0	-0.2
237A				IAmb	IAmb	21 21 03.0	
	comp=Z,23nm,0.9s						
Y55A	Saluda	24.12	7	P	P	21 21 04.5	+0.6
	baz=188,SNR=8.0						
Z41A	Richland Creek	24.15	345	P	P	21 21 03.4	-0.9
Z41A				IAmb	IAmb	21 21 05.3	
	comp=Z,24nm,0.8s						
JCT	Junction City	24.38	329	P	P	21 21 05.5	-1.0
JCT				IAmb	IAmb	21 21 12.6	
	comp=Z,14nm,0.8s						
JCT	Junction City	24.38	329	P	P	21 21 06.4	-0.1
	baz=144,SNR=7.9						
X51A	Calhoun	24.52	1	P	P	21 21 08.3	+0.7
	baz=181						
X53A	Estanollee	24.53	4	P	P	21 21 08.3	+0.6
	baz=185						
JSC	Jenkinsville	24.54	9	P	P	21 21 08.2	+0.4
JSC				IAmb	IAmb	21 21 09.5	
	comp=Z,12nm,0.7s						
WHTX	Lake Whitney,	24.56	335	P	P	21 21 07.2	-0.8
WHTX				IAmb	IAmb	21 21 18.9	
	comp=Z,21nm,0.9s						
WHTX	Lake Whitney,	24.56	335	P	P	21 21 09.4	+1.4
	baz=150						
WLAR	White Oak Lake	24.64	345	P	P	21 21 06.9	-1.8
X54A	Belton	24.66	6	P	P	21 21 09.7	+0.8
	baz=187						
X55A	Gracelyn & Ava	24.67	8	P	P	21 21 10.0	+1.0
	baz=189,SNR=6.6						
OXF	Oxford	24.71	352	P	P	21 21 07.9	-1.5
X56A	White Oak	24.78	9	P	P	21 21 10.7	+0.7
	baz=190						
Z38A	Mt. Pleasant	24.79	341	P	P	21 21 08.4	-1.6
Z38A				IAmb	IAmb	21 21 10.5	
	comp=Z,21nm,0.8s						
PAULI	Pauline	24.99	7	P	P	21 21 11.0	-1.0
PLAL	Pickwick Lake	25.03	355	P	P	21 21 10.9	-1.4
PLAL				IAmb	IAmb	21 21 14.6	
	comp=Z,23nm,0.8s						
BG3	Lake Jocassee	25.05	5	P	P	21 21 10.0	-2.4
BG3				IAmb	IAmb	21 21 14.8	
	comp=Z,17nm,0.8s						
W52A	Murphy	25.08	3	P	P	21 21 14.0	+1.3
	baz=183						
W50A	Signal Mountai	25.14	0	IAmb	IAmb	21 21 17.7	
	comp=Z,21nm,0.7s						
W50A	Signal Mountai	25.14	0	P	P	21 21 14.2	+0.9
	baz=180						
W54A	Cherokee Point	25.21	6	P	P	21 21 15.3	+1.4
	baz=187,SNR=8.8						
W45A	Hickory Valley	25.32	353	P	P	21 21 13.5	-1.4
X40A	Basin Creek Fa	25.33	346	P	P	21 21 15.8	+0.8
	baz=163						
KMSC	Kings Mountain	25.37	8	IAmb	IAmb	21 21 17.5	
	comp=Z,29nm,0.9s						
KMSC	Kings Mountain	25.37	8	P	P	21 21 16.5	+1.1
	baz=189,SNR=7.0						
UALR	University of	25.49	347	IAmb	IAmb	21 21 25.4	
	comp=Z,17nm,1.0s						
MIAR	Mount Ida	25.57	344	IAmb	IAmb	21 21 18.7	
	comp=Z,25nm,0.8s						
MIAR	Mount Ida	25.57	344	P	P	21 21 17.3	+0.2
	baz=161,SNR=16						
TKL	Tuckaleechee C	25.65	3	P	P	21 21 18.0	+0.2
	comp=Z,7.4nm,0.7s,baz=179,slow=13,SNR=6.8						
TKL	Tuckaleechee C	25.65	3	P	P	21 21 17.4	-0.5
TKL				IAmb	IAmb	21 21 29.3	
	comp=Z,21nm,1.1s						
Z35A	Perchaven, San	25.66	337	P	P	21 21 15.7	-2.3
Z35A				IAmb	IAmb	21 21 27.9	
	comp=Z,15nm,0.8s						
TXAR	Lajitas Array	25.70	321	P	P	21 21 19.4	+0.9
	comp=Z,15nm,1.0s,baz=140,slow=9.9,SNR=26						
TXAR				PcP	PcP	21 24 49.7	+0.9
	comp=Z,1.6nm,0.8s,baz=140,slow=4.7,SNR=6.1						
TXAR				LR	LR	21 32 58.7	
	comp=Z,65nm,19.8s,baz=0.0,slow=40						
TXAR	Lajitas Array	25.70	321	P	P	21 21 19.2	+0.7
TXAR					PcP	21 24 51.0	+2.2
V53A	Saluda	25.73	5	P	P	21 21 17.4	-1.3
V53A				IAmb	IAmb	21 21 33.3	
	comp=Z,20nm,1.0s						
V53A	Saluda	25.73	5	P	P	21 21 19.6	+1.0
	baz=186						
V51A	Loudon	25.76	2	P	P	21 21 19.0	+0.1
V51A				IAmb	IAmb	21 21 30.3	
	comp=Z,41nm,1.2s						
V51A	Loudon	25.76	2	P	P	21 21 19.7	+0.8
	baz=182						
V52A	Sevierville	25.84	4	P	P	21 21 20.0	+0.4
	baz=184						
W41B	Gary Mavity, V	25.85	347	IAmb	IAmb	21 21 21.6	
	comp=Z,28nm,1.5s						
W41B	Gary Mavity, V	25.85	347	P	P	21 21 20.8	+1.1
	baz=164						
V54A	Nebo	25.92	7	P	P	21 21 21.4	+1.0
	baz=188						
WHAR	Wooly Hollow	25.97	347	P	P	21 21 19.7	-1.1
ABTX	Abilene, Hawle	26.06	332	P	P	21 21 20.9	-0.8
V55A	Taylorsville	26.09	8	P	P	21 21 19.2	-2.7
X37A	Clayton	26.13	341	IAmb	IAmb	21 21 32.1	
	comp=Z,15nm,1.1s						
GNAR	Gosnell	26.22	352	P	P	21 21 22.2	-0.8
W39A	Magazine	26.24	345	IAmb	IAmb	21 21 33.7	
	comp=Z,20nm,1.1s						
W39A	Magazine	26.24	345	P	P	21 21 23.2	0.0
	baz=161,SNR=6.6						
V58A	Windy Hill, Pi	26.39	12	IAmb	IAmb	21 21 26.3	
	comp=Z,15nm,0.8s						
V58A	Windy Hill, Pi	26.39	12	P	P	21 21 24.7	+0.1
	baz=194						
U53A	Fall Branch	26.44	5	P	P	21 21 25.7	+0.7
	baz=186						
FCAR	Ozark Folk Cen	26.52	348	P	P	21 21 24.3	-1.5
V59A	Middlesex	26.55	13	P	P	21 21 26.5	+0.5
	baz=196						
U56A	King	26.70	9	IAmb	IAmb	21 21 29.1	
	comp=Z,24nm,1.1s						
U55A	TA2, Sparta	26.75	8	P	P	21 21 29.0	+1.1
	baz=190						
U57A	Blanch	26.96	11	P	P	21 21 29.8	+0.1
	baz=193						
U40A	Yellville	27.12	347	P	P	21 21 31.2	0.0
	baz=164						
T54A	Tazewell	27.23	7	P	P	21 21 32.8	+0.5
	baz=188						
HHAR	Hobbs	27.31	345	P	P	21 21 32.0	-0.8
T55A	Pulaski	27.39	8	P	P	21 21 34.4	+0.8
	baz=190						
FNO	Franklin	27.43	339	P	P	21 21 31.6	-2.4
WMOK	Wichita Mounta	27.50	336	P	P	21 21 38.0	+3.4
	baz=150						
PTGA	Pitinga	27.56	111	P	P	21 21 36.6	+1.2
	comp=Z,4.2nm,0.8s,baz=294,slow=12,SNR=7.7						
PTGA	Pitinga	27.56	111	P	P	21 21 34.1	-1.3
MGMO	Mountain Grove	27.77	348	P	P	21 21 35.9	-1.0
MGMO				IAmb	IAmb	21 21 45.3	
	comp=Z,20nm,1.5s						
S55A	Lewisburg	28.07	8	P	P	21 21 40.5	+0.7
	baz=190						
R51A	Hillsboro	28.29	3	P	P	21 21 42.2	+0.7
	baz=184						
R54A	Victor	28.41	8	P	P	21 21 43.3	+0.5
	baz=189						
R53A	Hurricane	28.45	6	P	P	21 21 43.2	+0.2
	baz=187						
CCM	Cathedral Cave	28.46	350	P	P	21 21 42.0	-1.1
CCM				IAmb	IAmb	21 21 43.8	
	comp=Z,9.3nm,0.8s						
CCM					PcP	21 24 55.2	+0.2
CCM	Cathedral Cave	28.46	350	P	P	21 21 42.4	-0.7
	baz=168						
S39A	Bolivar	28.51	347	P	P	21 21 41.5	-2.0
R55A	Marlinton	28.63	9	P	P	21 21 45.4	+0.7
	baz=191						
T35A	Sooner Cattle	28.63	341	IAmb	IAmb	21 21 45.6	
	comp=Z,7.5nm,0.6s						
R57A	Stanardsville	28.92	11	P	P	21 21 48.3	+1.0
	baz=194						
Q53A	Leroy	29.01	6	P	P	21 21 48.6	+0.6
	baz=188						
Q51A	Peebles	29.02	4	P	P	21 21 48.8	+0.7
	baz=184						
Q52A	Bidwell	29.04	5	P	P	21 21 48.7	+0.4
	baz=186						
Q54A	Coxs Mills	29.22	8	P	P	21 21 50.8	+0.9
	baz=189						
Q55A	Buckhannon	29.34	9	P	P	21 21 52.1	+1.2
	baz=191						
P48A	Milroy	29.39	0	P	P	21 21 47.8	-3.6
Q56A	Snyder Ridge,	29.52	10	P	P	21 21 51.2	-1.3
Q56A				IAmb	IAmb	21 21 54.6	
	comp=Z,14nm,0.9s						
Q56A	Snyder Ridge,	29.52	10	P	P	21 21 54.0	+1.4
	baz=192						
P53A	Whipple	29.65	6	P	P	21 21 54.5	+0.8
	baz=188,SNR=6.1						
P52A	Corning	29.72	5	P	P	21 21 54.7	+0.4
	baz=186,SNR=5.6						
P55A	Reedsville	29.88	9	P	P	21 21 56.4	+0.6
	baz=191						
P57A	Homestead Farm	30.17	12	P	P	21 21 59.9	+1.7
	baz=194						
O51A	Pataskala	30.19	4	P	P	21 21 58.7	+0.2
	baz=185						
O52A	Adamsville	30.23	6	P	P	21 21 58.7	-0.1
	baz=187,SNR=5.7						
ACSO	Alum Creek Sta	30.25	4	P	P	21 21 59.2	+0.2
	baz=185						
O53A	New Philadelph	30.42	7	P	P	21 22 00.9	+0.4
	baz=188,SNR=7.4						
121A	Cookes Peak, D	30.46	321	P	P	21 22 03.4	+2.2
	baz=132						
O55A	Ligonier	30.64	9	P	P	21 22 03.1	+0.6
	baz=192						
319A	Douglas	30.67	318	IAmb	IAmb	21 22 06.9	
	comp=Z,13nm,0.9s						
O56A	Blue Knob Stat	30.83	10	IAmb	IAmb	21 22 05.2	
	comp=Z,18nm,1.1s						
O56A	Blue Knob Stat	30.83	10	P	P	21 22 05.2	+1.1
	baz=193						
O57A	Amberson	30.95	12	P	P	21 22 06.1	+1.0
	baz=195						
N53A	Lisbon	31.02	7	P	P	21 22 06.1	+0.3
	baz=189						
LPAZ	La Paz	31.24	146	LR	LR	21 35 43.4	
	comp=Z,404nm,18.5s,baz=328,slow=38						
N55A	Marion Center	31.25	10	P	P	21 22 08.3	+0.4
	baz=192						
SSPA	Standing Stone	31.31	11	P	P	21 22 08.3	0.0
SSPA				IAmb	IAmb	21 22 09.6	
	comp=Z,13nm,0.7s						
SSPA	Standing Stone	31.31	11	P	P	21 22 09.0	+0.7
	baz=194						
O59A	Robesonia	31.36	14	P	P	21 22 10.2	+1.4
	baz=198						
ANMO	Albuquerque	31.38	326	P	P	21 22 09.0	-0.3
ANMO	Albuquerque	31.38	326	P	P	21 22 11.0	+1.7
	baz=137						
N56A	West Decatur	31.50	11	P	P	21 22 10.8	+0.7
	baz=193,SNR=5.1						
M53A	WI Miller and	31.66	7	P	P	21 22 11.7	+0.3
	baz=189,SNR=9.4						
N58A	Sunbury	31.75	13	P	P	21 22 12.8	+0.7
	baz=196						
M55A	Ridgway	31.96	10	P	P	21 22 14.5	+0.4
	baz=192,SNR=5.1						
N59A	State Game Lan	32.03	14	P	P	21 22 15.8	+1.1
	baz=198						
M56A	Emporium	32.08	10	P	P	21 22 15.3	+0.2
	baz=193,SNR=8.9						
M57A	Sunshine Farm,	32.13	12	P	P	21 22 16.5	+0.9
	baz=195,SNR=8.2						
L53A	Girard	32.22	7	P	P	21 22 16.4	0.0
	baz=189,SNR=12						
M58A	Price's Panora	32.31	13	P	P	21 22 18.2	+1.0
	baz=197						
M59A	Waymart	32.71	14	P	P	21 22 21.6	+0.9
	baz=198						
L55A	Hinsdale	32.71	10	P	P	21 22 20.9	+0.2
	baz=193,SNR=5.5						
L57A	Andrews Acres	32.83	12	P	P	21 22 22.1	+0.3
	baz=196						
L58A	Harry Jones Me	33.09	13	P	P	21 22 24.4	+0.5
	baz=197						
K55A	Perry	33.30	10	P	P	21 22 25.7	-0.1
	baz=193,SNR=9.9						
W18A	Petrified Fore	33.40	322	IAmb	IAmb	21 22 40.7	
	comp=Z,11nm,0.9s						
W18A	Petrified Fore	33.40	322	P	P	21 22 29.0	+2.0
	baz=132						
K56A	Middlesex	33.41	11	P	P	21 22 27.2	+0.5
	baz=194						
L59A	Walton	33.41	14	P	P	21 22 25.8	-1.0
L59A				IAmb	IAmb	21 22 28.1	
	comp=Z,12nm,0.8s						
L59A	Walton	33.41	14	P	P	21 22 27.6	+0.8
	baz=199						
214A	Organ Pipe Nat	33.42	315	P	P	21 22 29.6	+2.6
	baz=125						
J52A	Paris	33.46	7	P	P	21 22 26.4	-0.8
	baz=189						
K57A	Scipio Center	33.60	12	P	P	21 22 28.6	+0.2
	baz=196						
S22A	4UR Ranch, Cre	33.68	329	P	P	21 22 31.1	+1.7
	baz=140,SNR=5.6						
K58A	Earlville	33.82	13	P	P	21 22 30.3	0.0
	baz=197						
J55A	Hilton	33.87	10	P	P	21 22 30.0	-0.7
	baz=193						
I42A	Draeger Farm,	33.95	356	IAmb	IAmb	21 22 30.6	
	comp=Z,13nm,1.1s						
I49A	Point Hope	33.95	3	P	P	21 22 30.8	-0.6
	baz=184						
I51A	Listowel	33.96	6	P	P	21 22 31.1	-0.4
	baz=188,SNR=8.4						
X16A	Lo Mia Camp, P	34.00	320	IAmb	IAmb	21 22 36.2	
	comp=Z,5.7nm,0.8s						
K59A	Cooperstown	34.01	14	P	P	21 22 31.7	-0.3
	baz=199						
J56A	Wolcott	34.06	11	P	P	21 22 32.2	-0.1
	baz=195,SNR=6.6						
MVCO	Mesa Verde	34.16	326	P	P	21 22 34.7	+1.1
	baz=136						
J57A	Williamstown	34.36	12	IAmb	IAmb	21 22 35.8	
	comp=Z,12nm,0.9s						
J57A	Williamstown	34.36	12	P	P	21 22 35.0	0.0
	baz=196						
J58A	Remsen	34.47	13	P	P	21 22 35.7	-0.2
	baz=198,SNR=6.6						
Y14A	Wickenburg	34.72	318	IAmb	IAmb	21 22 41.6	
	comp=Z,17nm,1.5s						
J60A	Lant Hill Farm	34.81	16	P	P	21 22 36.5	-2.4
	baz=201						
I55A	Frankford	34.82	10	P	P	21 22 38.5	-0.4
	baz=193						
SMCO	Snowmass	34.85	330	IAmb	IAmb	21 22 43.8	
	comp=Z,8.1nm,1.4s						
I58A	Old Forge	34.85	13	P	P	21 22 39.7	+0.5
	baz=198						
I57A	Carthage	34.93	12	P	P	21 22 39.9	-0.1
	baz=197,SNR=6.3						
ECSD	EROS Data Cent	35.02	346	P	P	21 22 37.2	-3.5
ECSD				IAmb	IAmb	21 22 39.3	
	comp=Z,4.3nm,0.8s						
ECSD				PcP	PcP	21 25 13.4	+0.7
ECSD	EROS Data Cent	35.02	346	P	P	21 22 38.3	-2.4
	baz=160						
H53A	Bobcaygeon	35.02	9	P	P	21 22 40.2	-0.4
	baz=192,SNR=7.1						
SADO	Sadowa	35.13	8	P	P	21 22 40.1	-1.6
	comp=Z,15nm,0.6s,baz=238,slow=4.8,SNR=18						
I59A	Olmsteadville	35.21	15	P	P	21 22 41.9	-0.5
	baz=200						
H55A	Tweed	35.23	10	P	P	21 22 41.8	-0.6
	baz=194						
SIV	San Ignacio	35.36	137	P	P	21 22 45.5	+1.6
	comp=Z,0.8nm,0.6s,baz=321,slow=12,SNR=5.2						
H56A	Elgin	35.44	11	P	P	21 22 43.7	-0.6
	baz=196,SNR=7.8						
GLA	Glamis	35.45	315	P	P	21 22 47.8	+3.2
	baz=124						
H57A	Richville	35.49	13	P	P	21 22 44.6	-0.2
	baz=197						
G53A	Haliburton	35.55	8	P	P	21 22 44.0	-1.2
	baz=191,SNR=5.5						
F45A	CMU Biological	35.61	0	P	P	21 22 45.4	-0.3
	baz=180						
PDMCI	Parker Dam,Lak	35.69	317	P	P	21 22 49.3	+2.7
	baz=126,SNR=6.2						
SPMN	Marine on St.	35.71	351	IAmb	IAmb	21 22 46.6	
	comp=Z,10nm,0.8s						
H58A	Gabriels	35.72	14	P	P	21 22 46.6	-0.1
	baz=199						
N23A	Red Feather La	35.73	333	P	P	21 22 47.8	+0.7
	baz=144						
I61A	Oroboro, Fairl	35.78	17	P	P	21 22 47.1	-0.1
	baz=203						
G54A	Lake Saint Pet	35.90	9	P	P	21 22 47.4	-0.9
	baz=192,SNR=6.4						
G55A	Calabogie	35.99	11	P	P	21 22 48.8	-0.2
	baz=195,SNR=6.9						
W13A	Hualapai Mount	35.99	318	IAmb	IAmb	21 22 53.4	
	comp=Z,9.8nm,0.9s						
F52A	Sundridge	36.12	7	P	P	21 22 49.2	-0.9
	baz=190						
BC3	Big Chuckawall	36.22	315	P	P	21 22 54.3	+3.0
	baz=123,SNR=6.1						
H60A	Morristown	36.23	16	P	P	21 22 51.2	+0.1
	baz=201						
IRM	Iron Mountain	36.28	316	P	P	21 22 54.8	+3.0
	baz=124						
E43A	Lone Tree Farm	36.33	358	IAmb	IAmb	21 22 50.8	
	comp=Z,9.8nm,0.8s						
E47A	Iron Bridge	36.43	3	P	P	21 22 51.6	-1.2
	baz=183,SNR=6.1						
ALGO	Algonquin Park	36.45	9	P	P	21 22 52.0	-1.0
	baz=192						
E48A	Lockeyer	36.52	4	P	P	21 22 52.2	-1.3
	baz=185						
E52A	Mattawa	36.69	8	P	P	21 22 54.0	-1.0
	baz=191						
BELC	Belle Mtn. Jos	36.78	315	P	P	21 22 58.9	+2.8
	baz=123,SNR=5.6						
E51A	G1948 Merrick	36.82	7	P	P	21 22 55.1	-1.0
	baz=190						
XPFO	Pion Flat	36.89	314	P	P	21 22 59.0	+1.9
XPFO				IAmb	IAmb	21 23 00.7	
	comp=Z,9.5nm,0.9s						
E38A	The Farm, Brul	36.90	353	IAmb	IAmb	21 22 56.0	
	comp=Z,5.7nm,0.8s						
PFO	Pinyon Flats O	36.90	314	P	P	21 22 59.0	+2.0
	comp=Z,7.0nm,0.8s,baz=135,slow=4.8,SNR=8.4						
PFO	Pinyon Flats O	36.90	314	P	P	21 22 58.8	+1.7
PFO				IAmb	IAmb	21 23 00.7	
	comp=Z,9.5nm,0.9s						
PFO	Pinyon Flats O	36.90	314	P	P	21 22 59.8	+2.7
	baz=122						
E53A	Dumoine, Ponti	36.92	9	P	P	21 22 56.1	-0.8
	baz=193,SNR=6.1						
GMRC	Granite Mounta	36.99	317	P	P	21 23 00.6	+2.7
	baz=124						
D47A	Chapleau	37.04	3	P	P	21 22 56.1	-1.9
	baz=184						
E54A	Lac Daplat, Po	37.05	10	P	P	21 22 57.0	-1.0
	baz=193						
CCUT	Cedar City	37.20	322	P	P	21 22 58.7	-1.0
D48A	Paudash Townsh	37.24	4	P	P	21 22 57.7	-2.0
	baz=186						
D50A	G1974 Best Tow	37.41	6	P	P	21 22 59.5	-1.6
	baz=189						
MURC	Murrieta	37.41	314	P	P	21 23 04.5	+3.2
	baz=121						
G62A	West of Eustis	37.44	18	P	P	21 23 02.1	+0.7
	baz=204						
HEC	Hector,Ludlow	37.47	316	P	P	21 23 05.3	+3.4
	baz=124						
TUQ	Turquoise Moun	37.54	317	P	P	21 23 05.6	+3.0
	baz=125						
E56A	St. Veronique	37.55	12	P	P	21 23 01.6	-0.7
	baz=197						
D53A	Lac Vacive, Po	37.60	9	IAmb	IAmb	21 23 02.7	
	comp=Z,8.7nm,0.7s						
D53A	Lac Vacive, Po	37.60	9	P	P	21 23 02.4	-0.3
	baz=192,SNR=5.5						
E57A	Chemin Saint G	37.62	13	P	P	21 23 02.3	-0.6
	baz=198						
F60A	Warwick	37.73	16	P	P	21 23 03.5	-0.4
	baz=202						
E58A	La Victoria	37.78	14	P	P	21 23 03.6	-0.6
	baz=200,SNR=5.2						
D54A	Lac Fusel, La	37.84	10	P	P	21 23 04.0	-0.8
	baz=194,SNR=5.5						
PKME	Peaks-Kenny Pk	37.86	19	P	P	21 23 05.5	+0.5
	baz=206						
D55A	Sainte-Anne-du	37.92	11	P	P	21 23 04.5	-0.9
	baz=196,SNR=7.9						
D56A	ZEC Mazanza, M	38.09	12	P	P	21 23 06.0	-0.9
	baz=197						
E60A	Ste Agathe de	38.24	16	P	P	21 23 07.6	-0.4
	baz=202						
D57A	Chemin Vers le	38.25	13	P	P	21 23 07.4	-0.8
	baz=198						
D58A	Chemin du LacG	38.55	14	P	P	21 23 10.1	-0.6
	baz=200,SNR=6.8						
TPNV	Topopah Spring	38.63	319	IAmb	IAmb	21 23 16.0	
	comp=Z,14nm,0.9s						
TPNV	Topopah Spring	38.63	319	P	P	21 23 14.8	+3.0
	baz=126,SNR=12						
EDW2	Edwards Air Fo	38.65	315	P	P	21 23 14.3	+2.5
	baz=122						
VLDQ	Val d'Or	38.65	9	IAmb	IAmb	21 23 11.2	
	comp=Z,12nm,1.1s						
LATQ	La Tuque	38.84	14	IAmb	IAmb	21 23 13.4	
	comp=Z,8.4nm,0.8s						
LATQ	La Tuque	38.84	14	P	P	21 23 12.7	-0.4
	baz=200						
PDAR	Pinedale Array	38.86	331	P	P	21 23 13.0	-0.7
	comp=Z,1.1nm,0.7s,baz=129,slow=8.4,SNR=11						
PDAR				PcP	PcP	21 25 25.1	+0.4
	comp=Z,1.1nm,0.6s,baz=138,slow=4.9,SNR=8.8						
PDAR				LR	LR	21 42 15.4	
	comp=Z,122nm,19.9s,baz=141,slow=41						
PDAR	Pinedale Array	38.86	331	P	P	21 23 12.6	-1.1
D60A	Saint Jean D'O	38.88	16	P	P	21 23 13.0	-0.4
	baz=203						
MPMC	Manual Prospec	38.94	317	P	P	21 23 16.4	+2.0
	baz=124,SNR=7.9						
HWUT	Hardware Ranch	38.98	328	P	P	21 23 13.6	-1.1
HWUT				IAmb	IAmb	21 23 16.0	
	comp=Z,12nm,1.1s						
HWUT					PcP	21 25 26.4	+1.5
R11A	Troy Canyon, C	39.06	321	P	P	21 23 17.5	+2.1
	baz=128						

E63A	Oxbow	39.17	19	P	P	21 23 16.0	+0.1
	baz=207						
AGMN	Agassiz Nation	39.20	349	IAmb	IAmb	21 23 14.8	
	comp=Z,7.8nm,0.9s						
AGMN	Agassiz Nation	39.20	349	P	P	21 23 14.2	-2.0
	baz=164						
D61A	St Aubert, Com	39.35	17	P	P	21 23 17.4	+0.1
	baz=204						
GRAC	Grapevine Rang	39.39	318	P	P	21 23 19.0	+1.0
	baz=125,SNR=5.4						
ISA	Isabella, Lake	39.39	316	P	P	21 23 20.8	+2.7
	baz=122						
CWC	Cottonwood Cre	39.55	317	P	P	21 23 22.2	+2.7
	baz=123						
D62A	Allapoint, All	39.57	18	IAmb	IAmb	21 23 20.4	
	comp=Z,6.8nm,0.7s						
D62A	Allapoint, All	39.57	18	P	P	21 23 19.7	+0.5
	baz=206						
LSQQ	Lebel-sur-Quev	39.64	9	P	P	21 23 18.6	-1.2
	baz=193						
REDW	Red Top Meadow	39.93	331	P	P	21 23 22.5	-0.1
REDW				IAmb	IAmb	21 23 34.9	
	comp=Z,11nm,0.9s						
PKM	Mcpherson Peak	39.93	314	P	P	21 23 25.5	+2.8
	baz=120						
MATQ	Matagami	40.23	8	P	P	21 23 23.3	-1.4
	baz=192						
ELK	Elko	40.39	324	P	P	21 23 27.1	+0.7
	baz=121,slow=7.8						
ELK	Elko	40.39	324	IAmb	IAmb	21 23 28.1	
	comp=Z,4.7nm,0.9s						
NV11	Mina Array Sit	40.73	320	P	P	21 23 31.2	+2.0
OMMB	Old Mammoth Mi	40.81	318	IAmb	IAmb	21 23 33.8	
	comp=Z,12nm,1.2s						
NVAR	Mina Array Bea	40.82	319	P	P	21 23 31.9	+1.9
	comp=Z,12nm,0.7s,baz=129,slow=7.4,SNR=81						
NVAR				PcP	PcP	21 25 32.6	+1.7
	comp=Z,2.4nm,0.7s,baz=125,slow=4.5,SNR=7.1						
NVAR				LR	LR	21 41 53.9	
	comp=Z,128nm,19.9s,baz=188,slow=38						
NVAR	Mina Array Bea	40.82	319	P	P	21 23 31.9	+1.8
NVAR					PcP	21 25 33.0	+2.0
KVN	Kaiserville	41.05	320	IAmb	IAmb	21 23 35.1	
	comp=Z,7.7nm,0.8s						
RYN	Ryan	41.08	320	IAmb	IAmb	21 23 35.6	
	comp=Z,9.5nm,0.8s						
ULM	Lac du Bonnet	41.09	350	P	P	21 23 29.0	-2.7
	comp=Z,4.0nm,0.7s,baz=174,slow=9.1,SNR=10.0						
ULM				PcP	PcP	21 25 32.2	+1.0
	comp=Z,4.7nm,0.8s,baz=164,slow=3.4,SNR=6.5						
ULM				LR	LR	21 42 43.6	
	comp=Z,110nm,18.9s,baz=184,slow=39						
ULM	Lac du Bonnet	41.09	350	P	P	21 23 29.2	-2.6
WAKR	Walker	41.59	319	IAmb	IAmb	21 23 40.8	
	comp=Z,16nm,1.0s						
YERR	Yerington	41.74	319	IAmb	IAmb	21 23 41.0	
	comp=Z,13nm,0.8s						
PNTR	Pine Nut	42.03	319	IAmb	IAmb	21 23 43.5	
	comp=Z,14nm,0.8s						
ORV	Oroville	43.51	319	P	P	21 23 52.1	+0.4
ORV				IAmb	IAmb	21 23 55.9	
	comp=Z,9.7nm,0.9s						
BDFB	Brasilia	45.02	124	P	P	21 24 04.2	+0.1
	comp=Z,1.7nm,0.5s,baz=311,slow=8.5,SNR=5.1						
BDFB				LR	LR	21 45 18.0	
	comp=Z,211nm,19.8s,baz=308,slow=39						
BDFB	Brasilia	45.02	124	P	P	21 24 03.0	-1.2
CPUP	Villa Florida	45.29	143	LR	LR	21 43 41.1	
	comp=Z,131nm,20.0s,baz=324,slow=37						
YBH	Yreka Blue Hor	45.47	321	P	P	21 24 07.0	-0.5
	comp=Z,2.1nm,0.7s,baz=114,slow=4.7,SNR=4.8						
YBH	Yreka Blue Hor	45.47	321	IAmb	IAmb	21 24 11.3	
	comp=Z,9.7nm,1.2s						
HAWA	Hanford	46.44	328	IAmb	IAmb	21 24 15.5	
	comp=Z,5.6nm,0.8s						
FFC	Flin Flon	46.54	347	P	P	21 24 13.0	-2.5
G05D	Wamic, OR	46.69	325	P	P	21 24 18.5	+1.6
	baz=127						
E07A	Sunnyside	46.72	328	IAmb	IAmb	21 24 19.2	
	comp=Z,9.9nm,0.8s						
SCHQ	Schefferville	47.17	15	P	P	21 24 18.0	-2.5
	comp=Z,7.6nm,0.8s,baz=202,slow=5.4,SNR=11						
SCHQ				LR	LR	21 44 56.7	
	comp=Z,319nm,18.4s,baz=324,slow=37						
SCHQ	Schefferville	47.17	15	P	P	21 24 17.1	-3.4
SCHQ				IAmb	IAmb	21 24 19.4	
	comp=Z,9.0nm,0.8s						
LLLB	Lillooet	50.38	331	IAmb	IAmb	21 24 46.1	
	comp=Z,6.4nm,0.8s						
PLCA	Paso Flores	52.29	166	P	P	21 25 01.2	+1.5
	comp=Z,2.7nm,0.9s,baz=346,slow=10,SNR=4.4						
PLCA				LR	LR	21 44 21.6	
	comp=Z,78nm,18.5s,baz=331,slow=32						
PLCA	Paso Flores	52.29	166	P	P	21 24 58.2	-1.5
PLCA				IAmb	IAmb	21 25 11.6	
	comp=Z,5.8nm,1.0s						
FRB	Frobisher Bay	55.06	9	P	P	21 25 17.3	-2.3
	comp=Z,7.9nm,1.1s,baz=214,slow=5.3,SNR=4.1						
YKA	Yellowknife Ar	56.52	344	P	P	21 25 28.2	-1.8
	comp=Z,3.0nm,0.7s,baz=142,slow=7.0,SNR=37						
YKA				PcP	PcP	21 26 27.0	+0.4
	comp=Z,0.3nm,0.6s,baz=140,slow=4.0,SNR=5.5						
DLBC	Dease Lake	58.97	335	P	P	21 25 47.2	-0.3
	comp=Z,11nm,1.0s,baz=118,slow=5.0,SNR=11						
DLBC	Dease Lake	58.97	335	P	P	21 25 46.0	-1.4
EPYK	Eagle Plains	66.05	340	P	P	21 26 33.9	-0.7
EPYK				IAmb	IAmb	21 26 35.1	
	comp=Z,5.8nm,0.8s						
EPYK	Eagle Plains	66.05	340	P	P	21 26 34.3	-0.3
	baz=123						
INK	Inuvik	66.15	342	P	P	21 26 34.3	-0.8
	comp=Z,5.6nm,0.8s,baz=122,slow=6.8,SNR=23						
INK	Inuvik	66.15	342	P	P	21 26 34.5	-0.6
INK				IAmb	IAmb	21 26 35.4	
	comp=Z,6.5nm,0.8s						
BCAR	Beaver Creek A	66.30	336	P	P	21 26 36.0	-0.3
BCAR				PcP	PcP	21 27 07.5	+1.3
EGAK	Eagle	66.84	337	P	P	21 26 38.6	-1.0
DOT	Dot Lake	67.48	336	P	P	21 26 42.8	-1.0
HDA	Harding Lake	68.95	336	IAmb	IAmb	21 26 53.3	
	comp=Z,7.7nm,0.7s						
HDA	Harding Lake	68.95	336	P	P	21 26 52.7	-0.3
	baz=112,SNR=5.1						
ILAR	Eielson Array	69.06	336	P	P	21 26 53.0	-0.6
	comp=Z,3.4nm,0.7s,baz=119,slow=4.7,SNR=40						
ILAR				LR	LR	22 02 30.5	
	comp=Z,109nm,18.1s,baz=128,slow=41						
ILAR	Eielson Array	69.06	336	P	P	21 26 52.7	-1.0
BMAR	Burnt Mountain	69.28	339	P	P	21 26 53.4	-1.6
POKR	Poker Plat Res	69.41	337	P	P	21 26 55.2	-0.6
	baz=112						
MCK	McKinley	69.52	335	IAmb	IAmb	21 26 57.7	
	comp=Z,9.9nm,0.9s						
BPAW	Bear Paw Mtn.	70.50	335	IAmb	IAmb	21 27 02.9	
	comp=Z,10nm,0.8s						
MLY	Manley	70.69	336	IAmb	IAmb	21 27 04.1	
	comp=Z,7.7nm,0.8s						
ESDC	Sonseca Array	77.25	52	P	P	21 27 41.2	-1.5
	comp=Z,0.6nm,0.6s,baz=280,slow=5.6,SNR=5.8						
ESDC				LR	LR	21 58 30.3	
	comp=Z,107nm,19.0s,baz=295,slow=33						
ESDC	Sonseca Array	77.25	52	P	P	21 27 39.5	-3.1
RAR	Rarotonga	79.17	246	P	P	21 27 54.7	+1.2
	comp=Z,40nm,0.5s,baz=157,slow=2.5,SNR=4.3						
TIC	Toumodi	79.56	85	*e*P	P	21 27 56.0	+0.2
TIC	Toumodi	79.56	85	P	P	21 27 56.0	+0.2
LIC	Lamto	79.62	85	*e*P	P	21 27 56.5	+0.4
	comp=Z,40nm,0.7s						
LIC	Lamto	79.62	85	P	P	21 27 56.5	+0.4
DBIC	Dimbokro	79.72	85	P	P	21 27 56.8	+0.1
	comp=Z,4.1nm,0.9s,baz=254,slow=3.0,SNR=5.4						
KIC	Kosan Boka	79.88	85	*e*P	P	21 27 58.0	+0.4
	comp=Z,11nm,0.7s						
NOA	NORSAR Array B	84.63	29	LR	LR	22 07 27.0	
	comp=Z,35nm,18.0s,baz=270,slow=37						
TORD	Torodi Ar. Bea	85.11	78	P	P	21 28 23.2	-1.6
	comp=Z,0.4nm,0.7s,baz=290,slow=5.6,SNR=4.3						
ARCES	ARCESS Array B	87.92	19	P	P	21 28 35.2	-2.3
	comp=Z,4.9nm,1.0s,baz=268,slow=5.4,SNR=3.5						
ARCES				LR	LR	22 11 44.3	
	comp=Z,22nm,18.0s,baz=343,slow=38						
GERES	GERESS Array B	88.60	41	LR	LR	22 06 22.3	
	comp=Z,48nm,18.1s,baz=286,slow=34						
FINES	FINESS Array B	91.37	27	LR	LR	22 08 24.9	
	comp=Z,70nm,19.4s,baz=296,slow=35						
AKASG	Malin Array Be	97.46	36	LR	LR	22 13 40.7	
	comp=Z,60nm,18.4s,baz=320,slow=36						
ZALV	Zalesovo Beam	115.83	6	PKP	PKiKP	21 34 30.3	-0.3
	comp=Z,0.8nm,0.6s,baz=5.7,slow=2.9,SNR=5.0						
ZALV	Zalesovo Beam	115.83	6		PKiKP	21 34 29.6	-1.1
SONM	Songino Array	121.51	351	PKP	PKPdf	21 34 41.8	-0.2
	comp=Z,1.1nm,0.8s,baz=345,slow=1.1,SNR=9.5						
MKAR	Makanchi Array	122.48	10	PKP	PKPdf	21 34 43.3	-0.4
	comp=Z,0.7nm,0.7s,baz=351,slow=2.7,SNR=8.3						
MKAR	Makanchi Array	122.48	10		PKPdf	21 34 42.6	-1.1
KSRS	Korea Array	123.39	328	PKP	PKiKP	21 34 46.3	+0.4
	comp=Z,3.4nm,0.7s,baz=25,slow=2.1,SNR=8.7						
KSAR	Wonju Array Be	123.41	328		PKPdf	21 34 45.6	-0.1
KSH	Kashi	127.88	18	PKP	PKPdf	21 34 54.9	+0.5
KSH				PKS	PKSdf	21 38 28.2	-2.9
KSH	Kashi	127.88	18	SS	SS	21 54 05.3	-1.4
LZH	Lanzhou	133.37	350	*e*PKP	PKPdf	21 35 04.5	-0.5
LZH				pPKP	sPKPdf	21 35 15.2	+1.8
LZH				sPKP		21 35 19.6	
XAN	Xi'an	134.16	343	PKP	PKiKP	21 35 07.7	0.0
XAN				pPKP	sPKPdf	21 35 16.5	+1.8
WHN	Wuhan	135.44	335	PKP	PKiKP	21 35 15.8	+5.5
CD2	Chengdu	138.41	348	PKP	PKiKP	21 35 18.3	+1.8
ASAR	Alice Springs	140.01	245	PKP	PKPdf	21 35 16.8	-0.7
	comp=Z,0.7nm,0.8s,baz=97,slow=2.1,SNR=5.1						
WRA	Warramunga Arr	140.31	251	PKP	PKPdf	21 35 17.1	-0.9
	comp=Z,1.2nm,0.8s,baz=93,slow=2.4,SNR=6.1						
CHTO	Chiang Mai	151.09	351		PKPbc	21 35 41.6	-0.5
CMAR	Chiang Mai Arr	151.44	351	PKP	PKPdf	21 35 37.2	+0.3
	comp=Z,1.1nm,0.7s,baz=313,slow=2.6,SNR=10.0						
CMAR				PKPbc	sPKPdf	21 35 43.6	-1.6
	comp=Z,9.2nm,0.8s,baz=336,slow=3.2,SNR=44						
CMAR	Chiang Mai Arr	151.44	351	PKPdf	PKPdf	21 35 33.5	-3.4
PBKT	Sadao Pong	152.88	346	PKPdf	PKPdf	21 35 34.8	-4.2
PBKT					PKiKP	21 35 47.5	+1.0

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*ANF **05** 21:29:58.1±0.1, 35.°95N×117.°32W, h12^{km}±1^{km}, ML2.8/20, Error ellipse: s-maj=1.3km s-min=1.2km az=99.0*

*NEIC **05** 21:29:58.5±1.4, 35.°95N±0.°03×117.°31W±0.°02, h10^{km}±4^{km}, Error ellipse: s-maj=3.9km s-min=2.4km az=177.0*

*PAS **05** 21:29:58.9±1.2, 35.°96N±0.°02×117.°30W±0.°03, h7^{km}±5^{km}, ML2.9/154, Error ellipse: s-maj=3.3km s-min=2.2km az=70.0*

*SCEDC **05** 21:29:58.9, 35.°96N×117.°30W, h7^{km}*

ISC 05 21:29:58.7±0.8**, 35.°95N**±0.°02×**117.°31W**±0.°02**, h12**^{km}±7^{km}**, n81, σ0.^{s}81**/116**, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPMC	Manual Prospec	0.18	307		Pg	21 30 02.4	-0.5
MPMC					Sg	21 30 05.2	-0.6
MPMC	Manual Prospec	0.18	307	P	Pg	21 30 02.4	-0.5
	baz=124,SNR=1000						
MPMC				S	Sg	21 30 05.2	-0.6
	baz=124						
CLC	China Lake	0.27	240		Pg	21 30 04.0	-0.3
CLC					Sg	21 30 08.0	-0.1
QSM	Queen of Sheba	0.36	87		Pg	21 30 05.5	-0.4
WCSM	Coso Springs S	0.38	282		Pg	21 30 06.0	-0.3
TOW	Tower One	0.39	249		Pg	21 30 06.8	+0.3
DAC	Darwin (Calif)	0.40	325		Pb	21 30 07.9	0.0
JRC2	Joshua Ridge	0.41	275		Pg	21 30 06.6	-0.3
VPEM	Volcano Peak E	0.41	270		Pg	21 30 06.8	-0.1
CCCA	Chr Cany lake	0.42	186		Pg	21 30 07.3	+0.2
CCCA					Sg	21 30 13.8	+1.0
SRTC	Snort	0.44	234		Pg	21 30 07.6	+0.2
MFS	McCloud Flat S	0.47	291		Pg	21 30 07.8	-0.3
LRMC	Laurel Mtn Rad	0.56	213		Pg	21 30 09.3	-0.3
LRMC					Sg	21 30 17.2	+0.1
LRMC	Laurel Mtn Rad	0.56	213	P	Pg	21 30 09.3	-0.3
	baz=33,SNR=46						
LRMC				S	Sg	21 30 17.2	+0.1
	baz=33						
WCHM	Chimney Peak	0.62	264		Pg	21 30 10.5	-0.4
FURC	Furnace Creek,	0.63	35		Pg	21 30 10.9	-0.1
FURC	Furnace Creek,	0.63	35	P	Pg	21 30 10.8	-0.2
	baz=215,SNR=8.3						
FURC				S	Sg	21 30 19.6	+0.2
	baz=215						
JFS	Joseph F. Stat	0.67	206		Pg	21 30 11.2	-0.4
CGO	Cerro Gordo	0.72	327		Pg	21 30 11.9	-0.8
GSC	Goldstone, Bar	0.77	147		Pg	21 30 13.2	-0.3
GSC	Goldstone, Bar	0.77	147		Pg	21 30 13.3	-0.2
GSC	Goldstone, Bar	0.77	147	P	Pg	21 30 13.2	-0.3
	baz=328,SNR=35						
GSC				S	Sg	21 30 23.6	0.0
	baz=328						
WBSM	Bird Springs	0.79	239		Pg	21 30 13.5	-0.5
WBSM					Sg	21 30 24.4	0.0
CWC	Cottonwood Cre	0.79	308		Pg	21 30 13.6	-0.5
CWC					Sg	21 30 24.2	-0.3
CWC	Cottonwood Cre	0.79	308	P	Pg	21 30 13.6	-0.5
	baz=127						
CWC				S	Sg	21 30 24.4	-0.1
	baz=127						
WORM	Onyx Ranch	0.80	252		Pg	21 30 13.6	-0.6
DTP	Desert Tortois	0.81	213		Pg	21 30 13.7	-0.6
DTP					Sg	21 30 24.8	-0.1
FMT	Funeral Mounta	0.81	32		Pg	21 30 13.6	-0.8
SHOC	Shoshone, Teco	0.84	93		Pg	21 30 14.8	-0.1
SHOC					Sg	21 30 25.9	-0.1
SHOC	Shoshone, Teco	0.84	93	P	Pg	21 30 15.0	0.0
	baz=274,SNR=25						
SHOC				S	Sg	21 30 25.6	-0.3
	baz=274						
TMO	Tin Mountain	0.86	355		Pg	21 30 14.5	-0.8
WHFM	Hanning Flat	0.88	254		Pg	21 30 15.2	-0.5
AMDNV	Amargosa	0.97	59		Pg	21 30 16.7	-0.8
AMDNV					Sg	21 30 29.3	-0.8
ISA	Isabella, Lake	0.99	254		Pg	21 30 17.3	-0.5
ISA	Isabella, Lake	0.99	254	P	Pg	21 30 17.2	-0.6
	baz=73,SNR=156						
ISA				S	Sg	21 30 30.6	-0.1
	baz=73						
GVN	Grapevine	1.05	359		Pg	21 30 18.1	-0.8
HYS	Haystack Butte	1.10	191		Pg	21 30 19.6	-0.4
EDW2	Edwards Air Fo	1.20	208	P	Pg	21 30 20.8	-1.1
	baz=28,SNR=24						
EDW2				S	Sg	21 30 37.4	-0.1
	baz=28						
TUQ	Turquoise Moun	1.24	114		Sg	21 30 38.2	-0.4
TUQ	Turquoise Moun	1.24	114	P	Pg	21 30 20.5	-2.1
	baz=295,SNR=33						
TUQ				S	Sb	21 30 38.8	+0.7
	baz=295						
DSCC	Desert Studies	1.27	129		Pn	21 30 22.2	-0.1
DSCC					Sb	21 30 39.2	+0.3
TPNV	Topopah Spring	1.31	40		Pn	21 30 22.5	-0.6
TPNV					Sb	21 30 39.6	-0.7
TPNV	Topopah Spring	1.31	40	P	Pn	21 30 22.4	-0.6
	baz=221,SNR=60						
TPNV				S	Sb	21 30 40.0	-0.3
	baz=221						
TIN	Tinemaha, Big	1.33	326	S	Sg	21 30 41.6	+0.1
	baz=146						
HEC	Hector,Ludlow	1.37	144	P	Pn	21 30 23.0	-0.7
	baz=325,SNR=12						
HEC				S	Sb	21 30 42.6	+0.7
	baz=325						
MTPC	Mountain Pass	1.50	107		Sg	21 30 46.7	-0.4
BFSC	Mount Baldy Ra	1.73	190	Pg	Pb	21 30 31.6	+1.1
	baz=9.6						
BFSC				Sb	Sb	21 30 53.3	+1.0
	baz=9.6						
GMRC	Granite Mounta	1.78	130	P	Pn	21 30 28.5	-0.9
	baz=312						
GMRC				Sb	Sb	21 30 54.6	+0.9
	baz=312						
SHPR	Sheep Range	1.82	72		Pn	21 30 30.1	0.0
MWC	Mount Wilson	1.83	200		Pn	21 30 29.8	-0.3
PASC	Pasadena Art C	1.91	202	Pn	Pn	21 30 31.7	+0.5
PASC					Sn	21 30 53.5	-1.7
BLCC	Black Canyon	2.04	214		Pn	21 30 32.2	-0.6
OMMB	Old Mammoth Mi	2.15	321		Pn	21 30 35.1	+0.5
MDPB	Devils Postpil	2.20	320		Pn	21 30 35.2	-0.2
MDPB				Pg	Pb	21 30 39.0	+0.4
BELC	Belle Mtn. Jos	2.22	151	P	Pn	21 30 35.1	-0.4
	baz=332						
BELC				Sb	Sg	21 31 09.6	-0.6
	baz=332						
SMMC	Simmler	2.28	255	Pb	Pb	21 30 39.7	-0.1
	baz=73						
MURC	Murrieta	2.34	178		Pn	21 30 38.8	+1.7
MURC	Murrieta	2.34	178	Sb	Sg	21 31 12.7	-1.4
	baz=358						
PAGB	Antelope Grade	2.40	266	Pn	Pn	21 30 37.1	-0.7
PFO	Pinyon Flats O	2.44	163		Pn	21 30 37.9	-0.5
PFO	Pinyon Flats O	2.44	163	Sb	Sg	21 31 15.7	-1.3
	baz=344						
XPFO	Pion Flat	2.44	163		Pn	21 30 36.7	-1.8
MMIM	Miami Mountain	2.45	308		Pb	21 30 43.1	+0.4
IRM	Iron Mountain	2.52	135	Pn	Pn	21 30 38.3	-1.2
	baz=316						
IRM				Pg	Pg	21 30 46.7	-0.3
	baz=316						
IRM				Sb	Sg	21 31 18.8	-0.9
	baz=316						
NV11	Mina Array Sit	2.57	345		Pn	21 30 40.5	+0.2
NVAR	Mina Array Bea	2.60	343		Pn	21 30 40.8	0.0
NVAR				Pg	Pb	21 30 46.8	+1.4
R11A	Troy Canyon, C	2.76	29	Pn	Pn	21 30 42.5	-0.5
R11A					Pb	21 30 48.6	+0.5
R11A	Troy Canyon, C	2.76	29	P	Pn	21 30 42.5	-0.5
	baz=210						
R11A				Sb	Sb	21 31 24.8	+2.8
	baz=210						
PMPB	Monarch Peak	2.84	276	Pn	Pn	21 30 43.8	-0.1
PMPB					Pb	21 30 50.0	+0.6
RYN	Ryan	2.84	340	Pn	Pn	21 30 42.9	-1.2
RYN					Pb	21 30 51.5	+2.0
W13A	Hualapai Mount	2.92	106		Pn	21 30 45.4	+0.2
KVN	Kaiserville	3.16	349		Pn	21 30 48.9	+0.5
Y12C	Blythe	3.17	133	Pn	Pn	21 30 47.3	-1.1
BAR	Barrett	3.30	171	Pn	Pn	21 30 51.3	+1.0
LCMT	Little Creek M	3.44	71	Pn	Pn	21 30 53.2	+0.8
PNTR	Pine Nut	3.62	331	Pn	Pn	21 30 54.1	-0.8
PSUT	Pine Spring	3.78	46		Pn	21 30 57.3	+0.4
U15A	North Rim	4.09	82	Pn	Pn	21 30 59.8	-1.5
U15A					Pb	21 31 12.8	+2.0
MSU	Marysvale	4.83	56	Pn	Pn	21 31 13.6	+2.1
ELK	Elko	5.06	18	Pn	Pn	21 31 15.3	+0.8
DUG	Dugway, Tooele	5.53	39	Pn	Pn	21 31 19.8	-1.2

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*IDC **05** 21:37:22.3±0.9, 11.°28N×125.°91E, h0^{km}, mb3.6/8, mb1 3.7/8, mb1mx3.6/47, mbtmp3.6/8, Error ellipse: s-maj=46.0km s-min=18.8km az=66.0*

*MAN **05** 21:37:24.4, 11.°45N×126.°15E, h55^{km}, mb4.4, ML3.3, MS3.1*

ISC 05 21:37:28.3±1.9**, 11.°39N**±0.°05×**126.°1E**±0.°1**, h47**^{km}±18^{km}**, n16, σ1.^{s}98**/21**, mb3.4**/8**, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCLP	Ormoc	1.45	257	*e*P	Pn	21 37 50.7	-1.4
OCLP				*e*S	Sn	21 38 10.5	+0.6
MSLP	Maasin	1.71	223	*e*P	Pn	21 37 54.0	-1.6
MSLP				*e*S	Sn	21 38 17.1	+0.9
CNP	Catarman	1.75	310	*e*P	Pn	21 37 54.8	-1.4
CNP				*e*S	Sn	21 38 18.5	+1.1
LLP	Lapu-Lapu	2.30	243	*e*P	Pn	21 38 02.6	-1.2
LLP				*e*S	Sn	21 38 31.9	+0.9
BUTP	Butuan	2.44	190	*e*P	Pn	21 38 05.0	-0.6
BUTP				*e*S	Sn	21 38 38.2	+3.9
PVCP	Virac	2.87	320	*e*P	Pn	21 38 08.7	-2.8
PVCP				*e*S	Sn	21 38 49.9	+5.1
RCP	Roxas	3.24	273	⇓*e*P	Pn	21 38 16.7	+0.1
BUKP	Musuan	3.62	196	*e*P	Pn	21 38 20.4	-1.5
BUKP				*e*S	Sn	21 39 04.2	+0.7
CMAR	Chiang Mai Arr	27.09	288	P	P	21 43 06.0	-0.9
	0.7nm,0.8s,baz=91,slow=7.2,SNR=6.1						
WRA	Warramunga Arr	32.19	165	P	P	21 43 50.9	-1.1
	0.5nm,0.9s,baz=350,slow=9.3,SNR=3.2						
WRA				PcP	PcP	21 46 40.6	+0.5
	0.7nm,1.1s,baz=333,slow=2.3,SNR=3.0						
ASAR	Alice Springs	35.68	168	P	P	21 44 22.6	+0.3
	0.2nm,0.4s,baz=348,slow=7.3,SNR=5.6						
SONM	Songino Array	39.90	339	P	P	21 44 58.8	+0.9
	0.3nm,0.9s,baz=159,slow=12,SNR=3.7						
SONM				PcP	PcP	21 47 03.6	+0.8
	0.4nm,0.8s,baz=169,slow=2.9,SNR=3.0						
MKAR	Makanchi Array	51.01	322	P	P	21 46 26.4	+0.8
	0.4nm,0.3s,baz=119,slow=7.6,SNR=9.5						
MKAR				PcP	PcP	21 47 41.1	-0.1
	0.4nm,0.8s,baz=102,slow=4.7,SNR=2.8						
ZALV	Zalesovo Beam	53.55	331	P	P	21 46 44.7	+0.5
	0.4nm,0.6s,baz=103,slow=6.4,SNR=2.8						
KURBB	Kurchatov Arra	55.03	325	P	P	21 46 55.8	+0.7
	1.4nm,0.8s,baz=126,slow=7.3,SNR=9.5						
ILAR	Eielson Array	78.54	26	P	P	21 49 26.1	+1.6
	0.4nm,1.0s,baz=247,slow=5.8,SNR=3.1						

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*SOME **05** 21:42:06.8, 39.°98N×72.°00E, h0^{km}*

*KRNET **05** 21:42:06.7±0.1, 39.°89N×71.°94E, h15^{km}, mb3.3*

*ISU **05** 21:42:07.0, 40.°00N×73.°10E, h5^{km}*

*NNC **05** 21:42:09.0±2.1, 39.°96N×72.°14E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=15.7km s-min=7.3km az=1.0*

ISC 05 21:42:03.7±1.5**, 39.°84N**±0.°06×**72.°16E**±0.°03**, h3**^{km}±11^{km}**, n45, σ1.^{s}77**/69**, 35C-5D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRG	Fergana	0.94	342	⇑*i*P	Pg	21 42 16.9	-4.8
FRG				S	Sg	21 42 24.0	-10
BTK	Batken	1.05	282	⇑*i*P	Pg	21 42 23.2	-0.6
	baz=82						
BTK				⇑*i*S	Sg	21 42 36.0	-1.5
	baz=82						
NAM	Namangan	1.21	342	*e*P	Pn	21 42 30.0	+2.4
NAM				S	Sn	21 42 45.8	+1.3
ARSB	Arslanbob	1.61	23	⇑*i*P	Pg	21 42 37.1	+2.5
	baz=29						
ARSB				⇑*i*S	Sg	21 42 58.9	+3.5
	baz=29						
ARSB	Arslanbob	1.61	23	*e*P	Pg	21 42 37.0	+2.5
ARSB				*e*S	Sg	21 42 57.9	+2.5
ARK	Arkit	1.96	356	⇑*i*P	Pg	21 42 41.7	+0.4
	baz=1.0						
ARK				⇑*i*S	Sg	21 43 07.1	+0.4
	baz=1.0						
ARK	Arkit	1.96	356	*i* P	Pg	21 42 41.5	+0.2
ARK				*i* S	Sg	21 43 07.1	+0.4
AML	Almayashu	2.57	26	⇑*i*P	Pb	21 42 51.7	+1.1
	baz=30						
AML				⇑*i*S	Sg	21 43 24.3	-1.9
	baz=30						
ARLS	Aral	2.60	38	⇑*e*P	Pb	21 42 52.9	+1.8
	baz=42						
ARLS				⇑*i*S	Sg	21 43 26.2	-1.1
	baz=42						
TAS	Tashkent	2.64	305	⇑*e*P	Pn	21 42 49.6	+2.4
	baz=6.0						
TAS				⇑*e*S	Sn	21 43 20.8	+1.1
	baz=6.0						
IUG	Iuzhnay	2.81	326	*e*P	Pb	21 42 56.5	+1.9
	10nm,0.4s						
IUG				*e*S	Sg	21 43 32.2	-1.7
	76nm,0.6s						
IUG	Iuzhnay	2.81	326	Pg	Pb	21 42 56.5	+1.9
	10nm,0.4s						
IUG				Lg	Lg	21 43 32.7	
	76nm,0.6s						
UCH	Uchtor	2.98	36	⇑*i*P	Pb	21 42 57.7	0.0
	baz=39						
UCH				⇑*i*S	Sb	21 43 35.1	+0.5
	baz=39						
MRKS	Merke	3.01	15	*e*P	Pg	21 43 01.4	0.0
	6.8nm,0.3s						
MRKS				*e*S	Sg	21 43 40.9	+0.5
	24nm,0.5s						
MRKS	Merke	3.01	15	Pg	Pg	21 43 01.4	0.0
	6.8nm,0.3s						
MRKS				Lg	Lg	21 43 40.9	
	24nm,0.5s						
EKS2	Erkin-Say	3.07	23	⇑*i*P	Pb	21 42 58.3	-0.8
	baz=26						
EKS2				⇑*i*S	Sb	21 43 35.9	-1.1
	baz=26						
DZA	Taraz	3.11	349	*e*P	Pg	21 43 02.4	-0.9
	5.2nm,0.1s						
DZA				*e*S	Sg	21 43 42.1	-1.5
	54nm,0.3s						
DZA	Taraz	3.11	349	Pg	Pg	21 43 02.4	-0.9
DZA				Lg	Lg	21 43 41.7	
	62nm,0.2s						
CHM	Chimkent	3.14	323	*e*P	Pg	21 43 03.4	-0.5
	40nm,0.2s						

CHM				*e*S	**Sg**	**21 43 44.2**	**-0.3**
	286nm,0.4s						
KZA	**Kyzart**	**3.24**	**45**	⇑*i*P	**Pb**	**21 43 01.6**	**-0.5**
	baz=48						
KZA				⇑*i*S	**Sb**	**21 43 41.6**	**-0.5**
	baz=48						
AAK	**Ala-Archa**	**3.30**	**31**	⇓*i*P	**Pb**	**21 43 02.1**	**-1.0**
	baz=34						
AAK				⇓*i*S	**Sb**	**21 43 42.5**	**-1.3**
	baz=34						
AAK	**Ala-Archa**	**3.30**	**31**	⇑Pg	**Pg**	**21 43 07.3**	**+0.3**
	5.4nm,0.6s						
AAK				⇓Lg	Lg	21 43 50.6	
	16nm,0.4s						
NRN	**Naryn**	**3.33**	**60**	⇓*e*P	**Pb**	**21 43 02.8**	**-0.8**
	baz=62						
NRN				⇓*i*S	**Sb**	**21 43 44.4**	**-0.2**
	baz=62						
KK31	**Karatay Array**	**3.49**	**340**	Pn	Pn	21 43 03.1	+4.2
	0.3nm,0.2s,baz=0.0,slow=0.1,SNR=38						
KK31				⇑Pg	**Pg**	**21 43 09.4**	**-1.1**
	7.3nm,0.7s,baz=145,slow=15,SNR=23						
KK31				Lg	Lg	21 43 54.5	
	4.4nm,0.3s,baz=145,slow=27,SNR=7.6						
FRU1	**Bishkek**	**3.50**	**31**	⇑*e*P	**Pb**	**21 43 04.5**	**-1.9**
	baz=34						
FRU1				⇑*i*S	**Sb**	**21 43 46.9**	**-2.5**
	baz=34						
KBK	**Karagaybulak**	**3.51**	**36**	⇑*i*P	**Pb**	**21 43 05.2**	**-1.4**
	baz=38						
KBK				⇑*i*S	**Sb**	**21 43 47.7**	**-2.1**
	baz=38						
BRLS	**Borolday**	**3.63**	**332**	*e*P	**Pb**	**21 43 08.9**	**+0.3**
	0.7nm,0.2s						
BRLS				*e*S	**Sb**	**21 43 53.4**	**+0.4**
	6.2nm,0.3s						
BRLS	**Borolday**	**3.63**	**332**	Pg	**Pb**	**21 43 08.9**	**+0.3**
	5.0nm,0.3s						
BRLS				Lg	Lg	21 43 53.4	
	9.9nm,0.3s						
CHMS	**Chumysh**	**3.71**	**31**	⇑*i*P	**Pb**	**21 43 07.1**	**-2.8**
	baz=33						
CHMS				⇑*i*S	**Sb**	**21 43 51.5**	**-3.8**
	baz=33						
CHMS	**Chumysh**	**3.71**	**31**	⇑Pg	**Pg**	**21 43 14.4**	**-0.4**
	2.0nm,0.3s						
CHMS				⇑Lg	Lg	21 44 03.3	
	10.0nm,0.6s						
USP	**Ospenovka**	**3.85**	**26**	⇑*e*P	Pn	21 43 08.9	+5.0
	baz=29						
USP				⇑*i*S	**Sb**	**21 43 54.7**	**-4.6**
	baz=29						
ULHL	**Ulahol**	**3.91**	**51**	⇑*i*P	**Pb**	**21 43 11.0**	**-2.5**
	baz=53						
ULHL				⇑*i*S	**Sb**	**21 43 58.3**	**-3.0**
	baz=53						
SGDS	**Sogindy**	**4.06**	**26**	Pg	**Pg**	**21 43 20.4**	**-1.0**
	4.1nm,0.3s						
SGDS				Lg	Lg	21 44 13.3	
	18nm,0.6s						
KST	**Kastek**	**4.29**	**41**	*e*P	**Pg**	**21 43 27.1**	**+1.1**
	4.4nm,0.3s						
KST				*e*S	**Sg**	**21 44 25.0**	**+3.5**
	8.3nm,0.5s						
KST	**Kastek**	**4.29**	**41**	Pg	**Pg**	**21 43 27.1**	**+1.1**
	4.4nm,0.3s						
KST				Lg	Lg	21 44 25.4	
	8.3nm,0.5s						
DGS	**Degeres**	**4.35**	**37**	*e*P	**Pg**	**21 43 26.9**	**-0.2**
	5.6nm,0.6s						
DGS				*e*S	**Sg**	**21 44 24.8**	**+1.4**
	11nm,0.6s						
DGS	**Degeres**	**4.35**	**37**	Pg	**Pg**	**21 43 26.8**	**-0.2**
	5.6nm,0.6s						
DGS				Lg	Lg	21 44 24.3	
	11nm,0.6s						
KDJ	**Kajisay**	**4.44**	**57**	⇑*i*P	Pn	21 43 18.4	+6.3
	baz=59						
KDJ				⇑*i*S	**Sb**	**21 44 11.2**	**-5.2**
	baz=59						
KRBS	**Karabastau**	**4.67**	**33**	Pg	**Pg**	**21 43 32.4**	**-0.7**
	4.9nm,0.6s						
KRBS				Lg	Lg	21 44 33.5	
	4.4nm,0.5s						
TNSS	**Tian-Shan**	**4.81**	**47**	Pg	**Pg**	**21 43 35.1**	**-0.8**
	5.4nm,0.6s						
TNSS				Lg	Lg	21 44 38.6	
	6.2nm,0.6s						
MDOK	**Medeo**	**4.95**	**46**	Pg	**Pg**	**21 43 38.4**	**-0.1**
	2.5nm,0.6s						
MDOK				Lg	Lg	21 44 44.5	
	5.3nm,0.6s						
KOTS	**Kotyrbulak**	**5.03**	**46**	Pg	**Pg**	**21 43 39.7**	**-0.4**
	7.8nm,0.5s						
KOTS				Lg	Lg	21 44 45.7	
	5.0nm,0.6s						
KTBS	**Karatobe**	**5.14**	**40**	Pg	**Pg**	**21 43 41.0**	**-1.1**
	2.1nm,0.6s						
KTBS				Lg	Lg	21 44 48.7	
	8.8nm,0.6s						
BTLS	**Baital**	**5.38**	**14**	Pg	**Pg**	**21 43 46.4**	**-0.4**
	0.5nm,0.2s						
BTLS				Lg	Lg	21 44 57.9	
	3.4nm,0.7s						
CHKK	**Chushkaly**	**5.39**	**40**	Pg	**Pg**	**21 43 45.9**	**-1.1**
	0.7nm,0.1s						
CHKK				Lg	Lg	21 44 56.3	
	5.3nm,0.3s						

IDC ***05*** *21:47:28.9±1.1,24°.82S×176°.67W,h0^{km},mb3.7/4, mb1 4.3/7,mb1mx4.0/38,mbtmp4.2/7,ML4.3/3,MS3.5/2, Ms1 3.5/2,ms1mx3.0/43,Error ellipse: s-maj=37.6km s-min=25.8km az=123.0*

NEIC ***05*** *21:47:29.0±1.3,25°.3S±0°.2×175°.8W±0°.3,h32^{km}±5^{km}, mb4.1/5,Error ellipse: s-maj=49.7km s-min=6.6km az=117.0*

ISC 05 21:47:31.3±0.6,**25°.08S**±0°.09×**176°.0W**±0°.1,**h35**^{km}**,n30,**σ**2**^{s}**68**/29,**mb4.0**/5,**South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.50**	**202**	Pn	**Pn**	**21 48 40.5**	**+3.4**
	32nm,0.3s,baz=72,slow=20,SNR=2.4						
RAO				Sn	**Sn**	**21 49 29.2**	**+0.9**
	84nm,0.3s,baz=52,slow=19,SNR=2.9						
RAO	**Raoul Island**	**4.50**	**202**		**Pn**	**21 48 33.5**	**-3.5**
RAO					Sn	21 49 17.0	-11
NIUE	**Niue**	**8.18**	**44**	Pn	**Pn**	**21 49 26.6**	**-1.1**
NIUE					**Sn**	**21 50 54.5**	**-4.4**
AFI	**Afiamalu**	**11.79**	**20**	Pn	**Pn**	**21 50 18.5**	**+1.3**
	4.5nm,0.3s,baz=60,slow=23,SNR=4.4						
AFI				Sn	Sn	21 52 17.6	-10
	3.1nm,0.3s,baz=18,slow=20,SNR=2.7						
AFI	**Afiamalu**	**11.79**	**20**	Pn	**Pn**	**21 50 17.0**	**-0.2**
AFI					**Sn**	**21 52 28.7**	**+1.0**
OUZ	**Omahuta**	**13.54**	**219**	Pn	**Pn**	**21 50 39.7**	**-1.3**
URZ	**Urewera**	**14.39**	**202**	Pn	**Pn**	**21 50 53.6**	**+1.1**
	0.2nm,0.3s,baz=346,slow=3.2,SNR=2.1						
URZ				Sn	Sn	21 53 17.0	-14
	0.4nm,0.3s,baz=282,slow=20,SNR=2.3						
URZ	**Urewera**	**14.39**	**202**		**Pn**	**21 50 51.5**	**-1.1**
BKZ	**Black Stump Fm**	**15.42**	**203**	Pn	**Pn**	**21 51 05.0**	**-1.3**
PLWZ	**Palliser**	**17.99**	**202**		**Pn**	**21 51 35.7**	**-2.9**
THZ	**Tophouse**	**19.03**	**206**	P	**P**	**21 51 47.1**	**-3.2**
KHZ	**Kahutara**	**19.34**	**204**	P	**P**	**21 51 50.4**	**-3.3**
KHZ				IAmb	IAmb	21 51 50.6	
	comp=Z,19nm,1.1s						
LTZ	**Lake Taylor**	**20.14**	**206**	P	**P**	**21 51 58.8**	**-3.7**
LTZ				IAmb	IAmb	21 52 05.5	
	comp=Z,5.8nm,0.9s						
OXZ	**Oxford**	**20.69**	**205**	P	**P**	**21 52 05.2**	**-3.1**
RPZ	**Rata Peaks**	**21.41**	**207**	LR	LR	21 59 58.3	
	comp=Z,133nm,21.5s,baz=28,slow=35						
FOZ	**Fox Glacier**	**21.78**	**209**	P	**P**	**21 52 18.4**	**-1.6**
FOZ				IAmb	IAmb	21 52 26.9	
	comp=Z,12nm,1.1s						
HNR	**Honiara**	**27.70**	**300**	LR	LR	22 01 43.7	
	comp=Z,104nm,21.0s,baz=121,slow=32						
ASAR	**Alice Springs**	**45.48**	**261**	P	**P**	**21 55 46.2**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=91,slow=7.0,SNR=4.5						
WRA	**Warramunga Arr**	**46.00**	**266**	P	**P**	**21 55 48.0**	**-3.6**
	comp=Z,0.6nm,0.6s,baz=100,slow=8.3,SNR=8.8						
214A	**Organ Pipe Nat**	**82.75**	**50**	P	P	21 59 45.7	-6.2
SNAA	**Sanae**	**83.39**	**178**	P	**P**	**21 59 57.7**	**+3.1**
VNA3	**Neumayer Olymp**	**83.46**	**176**	P	**P**	**21 59 58.0**	**+3.0**
VNA2	**Neumayer--Watz**	**83.92**	**176**	P	**P**	**22 00 00.7**	**+3.4**
	baz=184,slow=3.5						
VNA1	**Neumayer--Stat**	**84.14**	**176**	P	**P**	**22 00 01.5**	**+3.2**
PDAR	**Pinedale Array**	**91.03**	**42**	P	P	22 00 37.4	+5.2
	comp=Z,0.8nm,1.0s,baz=182,slow=5.1,SNR=4.1						
CMAR	**Chiang Mai Arr**	**93.39**	**289**	P	**P**	**22 00 45.1**	**+1.7**
	comp=Z,0.3nm,0.5s,baz=120,slow=3.4,SNR=3.3						
MKAR	**Makanchi Array**	**115.67**	**312**	PKP	**PKiKP**	**22 06 11.6**	**+1.8**
	comp=Z,0.2nm,0.7s,baz=117,slow=2.9,SNR=3.0						
AKASG	**Malin Array Be**	**147.91**	**329**	PKPbc	**PKPbc**	**22 07 11.3**	**-1.2**
	comp=Z,0.4nm,0.4s,baz=44,slow=4.1,SNR=4.7						
BRTR	**Keskin Array B**	**151.22**	**308**	PKPbc	**PKiKP**	**22 07 23.2**	**+1.4**
	comp=Z,0.5nm,0.8s,baz=98,slow=4.4,SNR=3.8						
TORD	**Torodi Ar. Bea**	**167.92**	**169**	PKPab	**PKPab**	**22 08 45.4**	**+3.6**
	comp=Z,2.3nm,0.9s,baz=190,slow=4.0,SNR=9.4						

ATA ***05*** *21:50:23.3±2.4,38°.82N×43°.63E,h42^{km}±15^{km},ML1.2, MW2.8*

DDA ***05*** *21:50:26.7,38°.87N×43°.63E,h8^{km}±1^{km},ML1.6*

ISK ***05*** *21:50:27.4,38°.92N×43°.56E,h6^{km},ML1.9/5*

ISC 05 21:50:25.8±0.9,**38°.86N**±0°.03×**43°.58E**±0°.05,**h15**^{km}±7^{km}, **n14,**σ**1**^{s}**07**/26,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMUR	**Van-Muradiye**	**0.13**	**358**	*i* P	**Pg**	**21 50 29.7**	**+0.2**
VMUR				*i* S	**Sg**	**21 50 32.0**	**0.0**
VMUR				IAML		21 50 33.0	
	comp=E,346nm,0.2s						
VMUR				IAML		21 50 33.0	
	comp=N,231nm,0.3s						
VANB	**Van**	**0.30**	**209**	PG	**Pn**	**21 50 36.4**	**+0.6**
VANB				SG	**Sn**	**21 50 42.8**	**+0.7**
TVAN	**Van**	**0.36**	**202**	*e*P	**Pb**	**21 50 34.8**	**+0.8**
TVAN				*e*S	**Sb**	**21 50 40.7**	**+1.1**
TVAN				IAML		21 50 51.1	
	comp=Z,22nm,0.2s						
TVAN	**Van**	**0.36**	**202**	*i* P	**Pn**	**21 50 35.5**	**-1.2**
TVAN				*i* S	**Sb**	**21 50 40.6**	**+1.0**
TVAN				IAML		21 50 45.0	
	comp=N,48nm,0.4s						
TVAN				IAML		21 50 48.0	
	comp=E,45nm,0.6s						
CLDR	**Caldiran**	**0.39**	**43**	PG	**Pb**	**21 50 34.3**	**-0.2**
CLDR				SG	**Sb**	**21 50 40.7**	**+0.3**
CLDR	**Caldiran**	**0.39**	**43**	*i* P	**Pg**	**21 50 33.7**	**0.0**
CLDR				*i* S	**Sg**	**21 50 39.2**	**+0.1**
GEVA	**Gevas**	**0.68**	**217**	*e*P	**Pg**	**21 50 36.9**	**-2.3**
DYDN	**Diyadin**	**0.69**	**7**	*e*P	**Pg**	**21 50 39.4**	**+0.2**
DYDN				*e*S	**Sb**	**21 50 50.2**	**+1.2**
DYDN				IAML		21 50 53.2	
	comp=Z,8.3nm,0.3s						
DYDN	**Diyadin**	**0.69**	**7**	*i* P	**Pb**	**21 50 39.9**	**+0.3**
DYDN				*i* S	**Sg**	**21 50 48.2**	**-0.2**
DYDN				IAML		21 50 50.0	
	comp=E,34nm,0.3s						
DYDN				IAML		21 50 50.0	
	comp=N,28nm,0.2s						
AKDM	**Akdamar-Van**	**0.71**	**221**	PG	**Pn**	**21 50 41.1**	**-0.3**
AKDM				SG	**Sn**	**21 50 52.9**	**+0.7**
AGRB	**Hanur-Agry**	**0.84**	**328**	PG	**Pn**	**21 50 43.4**	**+0.1**
IGDI	**IGDIR**	**1.08**	**21**	*e*P	**Pb**	**21 50 44.5**	**-1.6**
IGDI				*e*S	**Sn**	**21 51 01.3**	**+0.1**
IGDI				IAML		21 51 08.5	
	comp=E,1.2nm,0.5s						
EATA	**Eleskirt**	**1.30**	**320**	*e*P	**Pn**	**21 50 47.3**	**-2.5**
EATA				*e*S	**Sg**	**21 51 09.8**	**+1.8**
GNI	**Garni**	**1.57**	**35**	PN	**Pg**	**21 50 55.9**	**-0.1**
GNI				SN	**Sg**	**21 51 16.9**	**+0.5**

IDC 05 22:07:51.2±3.6,**6°.28S**×**153°.78E,h0**^{km}**,mb3.3**/3**, mb1 3.5**/3**,mb1mx3.4**/42**,mbtmp3.4**/3**,Error ellipse: s-maj=131.6km s-min=36.9km az=116.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.26**	**232**	P	P	22 13 00.1	-0.4
	0.9nm,0.9s,baz=56,slow=9.5,SNR=5.1						
ASAR	**Alice Springs**	**25.77**	**226**	P	P	22 13 24.0	0.0
	0.4nm,0.8s,baz=40,slow=10,SNR=3.5						
MKAR	**Makanchi Array**	**82.08**	**319**	P	P	22 20 14.3	+0.6
	0.4nm,0.8s,baz=90,slow=4.9,SNR=3.9						
TORD	**Torodi Ar. Bea**	**151.67**	**286**	PKPbc	PKPbc	22 27 48.4	-0.4
	0.6nm,1.0s,baz=90,slow=1.4,SNR=2.1						

BJI ***05*** *22:27:05.8±0.0,5°.40S×154°.52E,h39^{km},mB5.6/62, mb5.6/78,Ms5.2/75,Ms7 5.0/73*

MOS ***05*** *22:27:05.3±1.2,5°.68S×154°.08E,h33^{km},mb5.6/28, MS4.9/19,Error ellipse: s-maj=9.2km s-min=6.3km az=104.9*

NEIC ***05*** *22:27:06.4±3.0,5°.75S±0°.06×154°.12E±0°.06,h33^{km}±1^{km}, mb5.5/212,Ms_20 5.5/614,Mwb5.5/48,Mww5.6, Mwc5.6(GCMT),Error ellipse: s-maj=10.5km s-min=9.4km az=160.0*

NEIC ***05*** *22:27:08.5,5°.80S×153°.97E,h33^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.01; $M_{\theta\theta}$-1.03; $M_{\phi\phi}$-0.98; $M_{r\theta}$0.09; $M_{\theta\phi}$1.11; $M_{\phi r}$-0.90; Fault plane solution: $M_0$2.25000×10^{17} NP1:ϕ_s300.07000°, δ37.49000°,λ66.42000°. NP2:ϕ_s148.88000°,δ56.10000°, λ107.05000°. Principal axes: T 2.2752, Plg73.0000°, Azm104.0000°; N -0.0462, Plg14.0000°, Azm319.0000°; P -2.2291, Plg10.0000°, Azm227.0000°;*

IDC ***05*** *22:27:09.0±1.3,5°.72S×154°.05E,h48^{km}±11^{km},mb4.9/32, mb1 5.1/36,mb1mx5.0/42,mbtmp5.2/36,ML4.4/4,MS4.8/32, Ms1 4.8/32,ms1mx4.7/39 Error ellipse: s-maj=12.5km s-min=9.0km az=79.0*

GCMT ***05*** *22:27:10.4±0.1,5°.99S±0°.01×153°.89E±0°.01,h41^{km}, MW5.6/147,Moment Tensor Solution. s147,c255; s141,c237; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M_{rr}2.63±.04; $M_{\theta\theta}$-1.57±.03; $M_{\phi\phi}$-1.06±.03; $M_{r\theta}$0.59±.03; $M_{\theta\phi}$1.49±.02; $M_{\phi r}$-0.97±.03; Best double couple: $M_0$2.95900×10^{17} NP1:ϕ_s302.00000°,δ35.00000°, λ77.00000°. NP2:ϕ_s138.00000°,δ56.00000°,λ99.00000°. Principal axes: T 2.8840, Plg77.0000°, Azm76.0000°; N 0.1510, Plg7.0000°, Azm313.0000°; P -3.0350, Plg11.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***05*** *22:27:10,5°.99S×153°.97E,h40^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.61; $M_{\theta\theta}$-1.60; $M_{\phi\phi}$-1.01; $M_{r\theta}$0.53; $M_{\theta\phi}$1.63; $M_{\phi r}$-0.94; Fault plane solution: $M_0$3.00000×10^{17} NP1:ϕ_s138.00000°, δ56.00000°,λ100.00000°. NP2:ϕ_s301.00000°,δ36.00000°, λ76.00000°. Principal axes: T 2.8443, Plg77.0000°, Azm81.0000°; N 0.2954, Plg8.0000°, Azm312.0000°; P -3.1397, Plg10.0000°, Azm221.0000°;*

NEIC ***05*** *22:27:11,5°.82S×153°.73E,h46^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.43; $M_{\theta\theta}$-1.21; $M_{\phi\phi}$-1.22; $M_{r\theta}$0.78; $M_{\theta\phi}$1.07; $M_{\phi r}$-1.50; Fault plane solution: $M_0$2.90000×10^{17} NP1:ϕ_s145.00000°, δ63.00000°,λ98.00000°. NP2:ϕ_s307.00000°,δ28.00000°, λ74.00000°. Principal axes: T 3.0044, Plg71.0000°, Azm73.0000°; N -0.2142, Plg7.0000°, Azm321.0000°; P -2.7902, Plg17.0000°, Azm228.0000°;*

DJA ***05*** *22:27:11.1±0.4,6°S±2°×15°4E±°,h54^{km}±4^{km},M5.5/78, mb5.5/78,mB5.9/60,MLv6.0/4,Mw(mB)5.5/60,Mwp5.5/14*

ISC 05 22:27:07.6±0.4,**5°.77S**±0°.03×**154°.14E**±0°.04,**h41**^{km}±2^{km}**, h41**^{km}**:pP-P,n854,**σ**1**^{s}**94**/575,**mb5.4**/214,**MS5.4**/366**, 29C-23D,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.52**	**309**		**Pn**	**22 27 47.5**	**+1.4**
KRVT	**Keravat (AS076**	**2.56**	**305**	P	**Pn**	**22 27 48.4**	**+1.7**
	221nm,0.3s,baz=215,slow=4.0,SNR=37						
KRVT				S	**Sn**	**22 28 17.6**	**+1.1**
	2µm,0.3s,baz=114,slow=22,SNR=13						
KRVT				LR	LR	22 28 45.2	
	comp=Z,19µm,19.1s,baz=84,slow=39						
HNR	**Honiara**	**6.81**	**123**	P	**Pn**	**22 28 49.8**	**+4.7**
	26nm,0.3s,baz=222,slow=3.4,SNR=41						
HNR				LR	LR	22 31 26.7	
	comp=Z,16µm,19.7s,baz=282,slow=37						
HNR	**Honiara**	**6.81**	**123**	*i* P	Pn	22 28 52.0	+6.9
HNR	**Honiara**	**6.81**	**123**	P	**Pn**	**22 28 48.3**	**+3.2**
HNR	**Honiara**	**6.81**	**123**		**Pn**	**22 28 48.3**	**+3.2**
PMG	**Port Moresby**	**7.80**	**242**	P	**Pn**	**22 28 59.8**	**+1.2**
	50nm,0.3s,baz=61,slow=6.5,SNR=44						
PMG				S	**Sn**	**22 30 25.7**	**-0.1**
	48nm,0.3s,baz=336,slow=23,SNR=9.7						
PMG	**Port Moresby**	**7.80**	**242**	*d i*P	**Pn**	**22 28 59.4**	**+0.7**
PMG	**Port Moresby**	**7.80**	**242**		**Pn**	**22 28 58.6**	**-0.1**
PATS	**Pohnpei**	**13.20**	**18**	P	**Pn**	**22 30 13.9**	**+1.3**
	baz=13,SNR=11						
PATS	**Pohnpei**	**13.20**	**18**		**Pn**	**22 30 14.0**	**+1.4**
PATS					**Sn**	**22 32 32.4**	**-5.7**
COEN	**Coen**	**13.51**	**232**	P	**Pn**	**22 30 16.9**	**0.0**
	baz=14,SNR=6.9						
COEN	**Coen**	**13.51**	**232**		**Pn**	**22 30 15.5**	**-1.4**
COEN				Sn	**Sn**	**22 32 38.8**	**-7.0**
GENI	**Genyem**	**14.28**	**282**	P	**Pn**	**22 30 28.1**	**+0.7**
	8µm567nm,1.4s						
MTSU	**Mount Surprise**	**15.59**	**217**	P	**Pn**	**22 30 46.5**	**+1.9**
	baz=16,SNR=10						
SMPI	**Sarmi**	**15.84**	**283**	P	**Pn**	**22 30 49.0**	**+1.1**
	7µm377nm,1.5s						
CTA	**Charters Tower**	**16.16**	**208**	P	**P**	**22 30 53.5**	**-1.1**
	1.2nm,0.3s,baz=33,slow=14,SNR=27						
CTA				LR	LR	22 36 29.3	
	comp=Z,5µm,21.1s,baz=24,slow=35						
EIDS	**Eidsvold**	**19.70**	**188**	P	**Pn**	**22 31 35.7**	**+0.3**
	baz=20,SNR=22						
EIDS	**Eidsvold**	**19.70**	**188**	P	**Pn**	**22 31 35.7**	**+0.3**
EIDS				IAmb	IAmb	22 31 38.7	
	comp=Z,467nm,1.8s						
KWAJ	**Kwajalein Atol**	**19.75**	**43**	P	**Pn**	**22 31 36.5**	**+0.5**
KWAJ				S	**S**	**22 35 10.5**	**-4.3**
KWAJ				pmax	pmax		
	comp=Z,1µm,1.1s						
KWAJ	**Kwajalein Atol**	**19.75**	**43**		**Pn**	**22 31 36.5**	**+0.5**
KWAJ				S	**S**	**22 35 10.5**	**-4.3**
TARA	**Tarawa**	**20.05**	**70**	P	Pn	22 31 39.9	+0.4
DZM	**Mont Dzumac**	**20.11**	**145**	P	Pn	22 31 40.9	+0.7
	comp=Z,145nm,0.8s,baz=329,slow=8.1,SNR=52						
DZM				LR	LR	22 37 03.3	
	comp=Z,1µm,21.4s,baz=318,slow=29						
DZM	**Mont Dzumac**	**20.11**	**145**	*e*P	Pn	22 31 40.8	+0.6
	comp=Z,596nm,0.9s						
DZM				*e*S	**S**	**22 35 22.5**	**+0.6**
	comp=Z,3µm,25.9s						
DZM				*e*LQ	LQ	22 35 49.0	
	comp=Z,8µm,30.1s						
DZM				*e*LR	LR	22 36 41.5	
	comp=Z,8µm,23.4s						
DZM	**Mont Dzumac**	**20.11**	**145**		Pn	22 31 40.5	+0.3
DZM				IAmb	IAmb	22 31 46.9	
	comp=Z,300nm,1.0s						
RKPI	**Ransiki, Papua**	**20.36**	**281**	P	Pn	22 31 43.6	+0.4
	comp=Z,25µmcomp=Z,301nm,0.9s						
QIS	**Mount Isa**	**20.37**	**222**	P	**P**	**22 31 41.8**	**+0.8**
	baz=20,SNR=93						
RMQ	**Roma**	**21.23**	**193**	P	**P**	**22 31 52.6**	**+2.5**
	baz=21,SNR=33						
GUMO	**Guam**	**21.32**	**334**	P	**P**	**22 31 51.6**	**+0.4**
	comp=Z,320nm,0.9s,baz=190,slow=10,SNR=8.9						
GUMO				LR	LR	22 40 54.9	
	comp=Z,863nm,18.3s,baz=147,slow=39						
GUMO	**Guam**	**21.32**	**334**	P	**P**	**22 31 48.9**	**-2.3**
GUMO				pmax	pmax		
	comp=Z,1µm,1.3s						
GUMO	**Guam**	**21.32**	**334**	P	**P**	**22 31 48.9**	**-2.3**
FAKI	**Fak Fak**	**22.01**	**276**	P	**P**	**22 31 56.2**	**-2.4**
FAKI				IAmb	IAmb	22 32 19.9	
	comp=Z,280nm,1.5s						
KDU	**Kakadu**	**22.45**	**251**	P	**P**	**22 32 02.5**	**-0.8**
	baz=22,SNR=28						
QLP	**Quilpie**	**22.75**	**203**	P	**P**	**22 32 07.4**	**+1.0**
	baz=23,SNR=5.8						
SAUI	**Saumlaki**	**22.78**	**263**	P	P	22 32 18.1	+11
SAUI	**Saumlaki**	**22.78**	**263**	P	**P**	**22 32 07.7**	**+0.9**
SIJI	**Sorong**	**23.34**	**281**	P	**P**	**22 32 12.3**	**-0.2**
	comp=Z,76nm,0.9s,baz=61,slow=4.3,SNR=12						
SWI	**Sorong**	**23.35**	**281**	P	**P**	**22 32 14.3**	**+1.7**
	comp=Z,3µmcomp=Z,2µmcomp=Z,146nm,1.2s						
WR0	**Warramunga Arr**	**23.70**	**232**	P	**P**	**22 32 15.4**	**-0.5**
WR0				IAmb	IAmb	22 32 17.4	
	comp=Z,174nm,1.0s						
WB0	**Warramunga Arr**	**23.71**	**232**	P	**P**	**22 32 15.6**	**-0.4**
WB0				IAmb	IAmb	22 32 17.5	
	comp=Z,233nm,1.1s						
MTN	**Manton Dam**	**23.75**	**251**	P	**P**	**22 32 16.2**	**-0.2**
	baz=24,SNR=12						
MTN	**Manton Dam**	**23.75**	**251**	P	**P**	**22 32 15.7**	**-0.7**
MTN				IAmb	IAmb	22 32 25.5	
	comp=Z,257nm,1.1s						
MTN				PcP	**PcP**	**22 36 01.5**	**+1.8**
WRAB	**Tennant Creek**	**23.84**	**232**	*d i*P	**P**	**22 32 16.6**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,249nm,1.3s						
WRAB	**Tennant Creek**	**23.84**	**232**	P	**P**	**22 32 16.5**	**-0.7**
WRAB				IAmb	IAmb	22 32 18.7	
	comp=Z,159nm,1.0s						
WB2	**Warramunga Arr**	**23.84**	**232**	P	**P**	**22 32 15.9**	**-1.3**
WB2				PcP	**PcP**	**22 36 00.8**	**+1.0**
WRA	**Warramunga Arr**	**23.85**	**232**	P	**P**	**22 32 16.9**	**-0.4**
	comp=Z,69nm,0.8s,baz=54,slow=9.6,SNR=99						
WRA				PcP	**PcP**	**22 36 00.9**	**+1.1**
	comp=Z,12nm,0.5s,baz=50,slow=2.4,SNR=8.8						
WRA				LR	LR	22 41 35.0	
	comp=Z,5µm,20.6s,baz=55,slow=36						
WRA	**Warramunga Arr**	**23.85**	**232**	P	**P**	**22 32 14.3**	**-3.0**
WRA						22 36 01.0	
WRA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
WRA	**Warramunga Arr**	**23.85**	**232**	P	**P**	**22 32 14.3**	**-3.0**
ARMA	**Armidale**	**24.63**	**185**	P	**P**	**22 32 26.3**	**+1.8**
	baz=25,SNR=44						
ARMA	**Armidale**	**24.63**	**185**	P	**P**	**22 32 24.1**	**-0.4**
ARMA				IAmb	IAmb	22 32 27.5	
	comp=Z,125nm,1.0s						
FUNA	**Funafuti**	**25.01**	**98**	P	**P**	**22 32 27.3**	**-0.7**
FUNA				IAmb	IAmb	22 32 44.8	
	comp=Z,168nm,1.0s						
LHI	**Lord Howe Isla**	**26.03**	**170**	P	**P**	**22 32 35.7**	**-1.3**
MSVF	**Nonsavu**	**26.21**	**119**	⇓*e*P	**P**	**22 32 40.7**	**+1.8**
MSVF				pmax	pmax		
	comp=Z,124nm,3.7s						
MSVF	**Nonsavu**	**26.21**	**119**	P	**P**	**22 32 39.3**	**+0.3**
MSVF				IAmb	IAmb	22 33 22.8	
	comp=Z,194nm,1.9s						
ASAR	**Alice Springs**	**26.38**	**226**	P	**P**	**22 32 40.4**	**+0.1**
	comp=Z,38nm,0.8s,baz=60,slow=8.9,SNR=155						
ASAR				PcP	**PcP**	**22 36 06.7**	**+1.2**
	comp=Z,18nm,0.7s,baz=53,slow=3.4,SNR=11						
ASAR				ScP	**ScP**	**22 39 43.0**	**+0.8**
	comp=Z,4.6nm,0.9s,baz=48,slow=3.8,SNR=6.0						
ASAR				LR	LR	22 42 52.3	
	comp=Z,5µm,21.4s,baz=92,slow=36						
ASAR	**Alice Springs**	**26.38**	**226**		**ScP**	**22 39 44.8**	**+2.6**
ASAR	**Alice Springs**	**26.38**	**226**	P	**P**	**22 32 39.4**	**-0.9**
KNRA	**Kununurra**	**26.77**	**246**	P	**P**	**22 32 44.1**	**+0.3**
	baz=27,SNR=16						
CMSA	**Cobar Meteorol**	**26.83**	**196**	P	**P**	**22 32 45.1**	**+0.9**
	baz=27,SNR=23						
NLAI	**Namlea**	**27.07**	**274**	P	**P**	**22 32 47.2**	**+0.6**
	comp=Z,1µmcomp=Z,57nm,1.7s						
LBMI	**Labuha**	**27.07**	**280**	P	**P**	**22 32 47.9**	**+1.3**
	comp=Z,198nm,1.5s						
H11S3	**WAKE ISLAND Hy**	**27.10**	**27**	T	T	23 01 02.4	
	baz=208,slow=76,SNR=1610						
H11S2	**WAKE ISLAND Hy**	**27.11**	**27**	T	T	23 01 08.6	
	baz=208,slow=76,SNR=993						
H11S1	**WAKE ISLAND Hy**	**27.12**	**27**	T	T	23 01 10.9	
	baz=208,slow=76,SNR=218						
TNTI	**Ternate**	**27.51**	**283**	P	P	22 33 07.3	+17
TNTI	**Ternate**	**27.51**	**283**	P	**P**	**22 32 48.3**	**-2.2**
TNTI				IAmb	IAmb	22 33 46.6	
	comp=Z,99nm,1.2s						
WAKE	**Wake Island**	**27.78**	**26**	P	**P**	**22 32 53.1**	**+0.3**
RIV	**Riverview**	**28.05**	**185**	P	**P**	**22 32 57.8**	**+2.6**
	baz=28,SNR=3.4						
SANI	**Sanana**	**28.32**	**276**	P	**P**	**22 33 00.9**	**+3.1**
	comp=Z,1µmcomp=Z,110nm,1.8s						
STKA	**Stephens Creek**	**28.50**	**203**	P	**P**	**22 32 59.4**	**+0.2**
	baz=29,SNR=25						
STKA	**Stephens Creek**	**28.50**	**203**	P	**P**	**22 32 59.0**	**-0.1**
	comp=Z,19nm,0.9s,baz=8.5,slow=8.6,SNR=21						
STKA				PcP	**PcP**	**22 36 10.8**	**+0.4**
	comp=Z,25nm,1.0s,baz=58,slow=3.7,SNR=4.7						

STKA				ScP	ScP	22 39 49.5	+1.1
	comp=Z,7.2nm,0.9s,baz=65,slow=10,SNR=4.8						
STKA				LR	LR	22 44 08.5	
	comp=Z,3µm,21.8s,baz=17,slow=36						
CNB	Canberra Magne	29.73	188	P	P	22 33 12.2	+2.1
	baz=30,SNR=5.3						
CAN	Canberra	29.79	188	IAmb	IAmb	22 33 14.1	
	comp=Z,148nm,1.7s						
SOEI	Soe	29.85	261	P	P	22 33 10.2	-1.3
	comp=Z,3µmcomp=Z,2µmcomp=Z,152nm,1.4s						
SOEI	Soe	29.85	261	P	P	22 33 08.9	-2.6
FITZ	Fitzroy Crossi	30.39	244	P	P	22 33 15.6	-0.6
	baz=30,SNR=70						
FITZ	Fitzroy Crossi	30.39	244	LR	LR	22 45 42.0	
	comp=Z,3µm,21.8s,baz=84,slow=37						
FITZ	Fitzroy Crossi	30.39	244	IAmb	IAmb	22 33 16.7	
	comp=Z,65nm,0.8s						
HTT	Hallett	30.94	205	P	P	22 33 21.4	+0.5
	baz=31,SNR=5.4						
WRKA	Warakurna	31.31	230	P	P	22 33 23.7	-0.5
	baz=31,SNR=36						
LUWI	Luwuk	31.65	277	P	P	22 33 38.1	+11
LUWI	Luwuk	31.65	277	P	P	22 33 26.5	-0.8
LUWI				PcP	PcP	22 36 18.9	+0.1
BBOO	Buckleboo	31.74	210	P	P	22 33 27.9	0.0
	baz=32,SNR=8.4						
BBOO	Buckleboo	31.74	210	P	P	22 33 27.0	-0.9
BBOO				PcP	PcP	22 36 19.2	+0.4
MMRI	Maumere	31.77	263	P	P	22 33 30.3	+2.0
	comp=Z,6µmcomp=Z,400nm,1.4s						
EDFI	Ende, Flores	32.31	263	P	P	22 33 32.4	-0.8
	comp=Z,1µmcomp=Z,101nm,1.6s						
TOO	Toolangi	32.62	193	P	P	22 33 38.6	+3.1
	baz=33,SNR=3.6						
TOO	Toolangi	32.62	193	P	P	22 33 35.8	+0.3
TOO				pmax	pmax		
	comp=Z,90nm,1.7s						
TOO				MLR	MLR		
	comp=Z,4µm,21.0s						
TOO	Toolangi	32.62	193	P	P	22 33 35.8	+0.3
TOO				IAmb	IAmb	22 33 56.1	
	comp=Z,90nm,1.7s						
MRSI	Marisa	32.74	280	P	P	22 33 51.2	+14
APSI	Ampana	32.78	277	P	P	22 33 37.2	0.0
	comp=Z,957nmcomp=Z,80nm,1.3s						
BASI	Baing, Sumba	33.51	260	P	P	22 33 44.6	+1.0
	comp=Z,4µmcomp=Z,250nm,0.8s						
PAGZ	Pagadian	33.53	293	eP	P	22 33 44.1	+0.4
WSI	Waingapu	33.74	261	P	P	22 33 48.3	+2.7
	comp=Z,7µmcomp=Z,733nm,1.1s						
BKSI	Bulukumba	33.85	269	P	P	22 33 48.9	+2.3
	comp=Z,711nmcomp=Z,59nm,1.5s						
BNSI	Bone	33.92	271	P	P	22 33 48.6	+1.5
	comp=Z,2µmcomp=Z,69nm,0.8s						
KNTN	Kanton	34.17	86	P	P	22 33 48.4	-1.0
SPSI	Sidrap Palu	34.29	271	P	P	22 33 50.8	+0.5
	comp=Z,956nmcomp=Z,49nm,0.7s						
TTSI	Tana Toraja	34.32	273	P	P	22 33 58.6	+8.0
OUZ	Omahuta	34.36	151	P	P	22 33 49.7	-1.0
AFI	Afiamalu	34.51	106	P	P	22 33 51.0	-1.3
AFI				pmax	pmax		
	comp=Z,368nm,2.0s						
AFI	Afiamalu	34.51	106	P	P	22 33 51.0	-1.3
WBSI	Waikabubak, Su	34.63	261	P	P	22 33 53.6	+0.2
	comp=Z,3µmcomp=Z,180nm,0.9s						
JCJ	Chichijima	34.66	341	LR	LR	22 45 05.1	
	comp=Z,811nm,19.1s,baz=188,slow=31						
MPSI	Mapaga	34.72	279	P	P	22 33 54.1	+0.1
	comp=Z,586nmcomp=Z,39nm,0.8s						
FORT	Forrest	34.91	221	P	P	22 33 55.5	0.0
	baz=35,SNR=22						
FORT	Forrest	34.91	221	P	P	22 33 52.9	-2.6
FORT				IAmb	IAmb	22 34 06.8	
	comp=Z,83nm,0.8s						
RAO	Raoul Island	35.25	135	P	P	22 33 58.8	+0.4
	comp=Z,306nm,0.6s,baz=18,slow=20,SNR=2.1						
GUIM	Jordan	35.38	297	eP	P	22 34 00.5	+0.8
PLAI	Plampang	36.18	263	P	P	22 34 05.6	-1.0
	comp=Z,935nmcomp=Z,79nm,0.8s						
OTRP	Odiongan	36.66	300	eP	P	22 34 11.2	+0.5
PSA00	Pilbara Seismi	36.71	241	P	P	22 34 09.7	-1.3
CUYO	Cuyo Island	36.87	297	eP	P	22 34 14.0	+1.5
MOO	Moorlands	37.03	189	P	P	22 34 16.1	+2.6
	baz=37,SNR=6.0						
TAU	Tasmania Unive	37.47	188	P	P	22 34 18.7	+1.5
TAU						22 36 36.9	
TAU				pmax	pmax		
	comp=Z,320nm,1.7s						
TAU	Tasmania Unive	37.47	188	P	P	22 34 18.7	+1.5
TAU				PcP	PcP	22 36 36.9	+1.8
HIZ	Hauiti	37.62	153	P	P	22 34 19.7	+1.2
HIZ				IAmb	IAmb	22 34 23.2	
	comp=Z,102nm,1.0s						
HIZ				PcP	PcP	22 36 37.0	+1.3
KBKI	Kotabaru	37.92	272	P	P	22 34 23.1	+1.7
	comp=Z,794nmcomp=Z,17nm,0.8s						
BUSP	Coron	38.09	298	eP	P	22 34 23.7	+0.9
TGY	Tagaytay City	38.41	301	LR	LR	22 47 53.2	
	comp=Z,2µm,21.8s,baz=125,slow=32						
ENPP	El Nido	38.44	296	eP	P	22 34 25.7	-0.1
URZ	Urewera	38.48	150	P	P	22 34 28.0	+2.2
	comp=Z,54nm,0.8s,baz=266,slow=2.3,SNR=25						
URZ	Urewera	38.48	150	P	P	22 34 27.5	+1.7
URZ				IAmb	IAmb	22 34 48.1	
	comp=Z,142nm,1.1s						
MXZ	Matakaoa Point	38.55	149	P	P	22 34 28.0	+1.6
QRZ	Quartz Range	38.60	157	P	P	22 34 29.1	+2.4
QRZ				IAmb	IAmb	22 34 35.5	
	comp=Z,105nm,1.1s						
BALP	Baler	38.68	304	eP	P	22 34 28.2	+0.4
LUBP	Lubang	38.82	300	eP	P	22 34 26.6	-2.3
BKZ	Black Stump Fm	38.90	152	IAmb	IAmb	22 34 50.0	
	comp=Z,51nm,0.8s						
BATP	Bataraza	39.01	292	eP	P	22 34 30.9	+0.4
NNZ	Nelson	39.26	157	P	P	22 34 33.8	+1.5
NNZ				IAmb	IAmb	22 35 04.9	
	comp=Z,62nm,1.1s						
THZ	Tophouse	39.55	158	IAmb	IAmb	22 34 55.8	
	comp=Z,65nm,0.8s						
SMPP	San Manuel, Pa	39.63	304	eP	P	22 34 34.8	-0.9
KKM	Kota Kinabalu	39.63	287	P	P	22 34 35.6	-0.3
MEEK	Meekatharra	39.70	235	P	P	22 34 36.0	-0.3
	baz=40,SNR=23						
JAGI	Jajag, Banyuwa	39.75	264	P	P	22 34 43.7	+6.9
JAGI	Jajag, Banyuwa	39.75	264	IAmb	IAmb	22 35 05.6	
	comp=Z,62nm,0.9s						
SNZO	South Karori	39.87	156	P	P	22 34 37.5	+0.2
BFZ	Birch Farm	40.01	154	IAmb	IAmb	22 34 41.0	
	comp=Z,75nm,0.8s						
FOZ	Fox Glacier	40.07	162	P	P	22 34 39.8	+0.8
FOZ				IAMs_20	IAMs_20	22 49 15.4	
	comp=Z,4µm,20.0s						
LTZ	Lake Taylor	40.20	159	P	P	22 34 42.1	+1.9
LTZ				IAmb	IAmb	22 34 43.2	
	comp=Z,59nm,0.9s						
PLWZ	Palliser	40.31	155	P	P	22 34 41.7	+0.6
KHZ	Kahutara	40.35	158	P	P	22 34 42.4	+1.1
KHZ				IAmb	IAmb	22 34 47.1	
	comp=Z,85nm,0.9s						
KHZ				IAMs_20	IAMs_20	22 50 17.0	
	comp=Z,4µm,18.0s						
RPZ	Rata Peaks	40.62	161	P	P	22 34 44.9	+1.4
	comp=Z,30nm,0.7s,baz=153,slow=0.2,SNR=14						
RPZ	Rata Peaks	40.62	161	P	P	22 34 45.0	+1.4
RPZ				IAmb	IAmb	22 34 52.3	
	comp=Z,60nm,0.9s						
LBZ	Lake Benmore	40.95	162	IAMs_20	IAMs_20	22 49 42.9	
	comp=Z,5µm,21.0s						
WKZ	Wanaka	41.02	164	IAMs_20	IAMs_20	22 49 15.6	
	comp=Z,5µm,19.0s						
MQZ	McQueen’s Vall	41.15	160	IAmb	IAmb	22 34 50.5	
	comp=Z,236nm,1.7s						
ODZ	Otahua Downs	41.69	162	IAMs_20	IAMs_20	22 49 42.3	
	comp=Z,6µm,21.0s						
KLBR	Kellerberrin	42.64	228	P	P	22 34 59.7	-0.6
	baz=43,SNR=8.7						
SBUM	Sibu	42.65	280	P	P	22 34 59.2	-1.4
SBUM	Sibu	42.65	280	P	P	22 35 02.0	+1.4
PCJI	Pacitan	42.69	264	P	P	22 35 02.7	+1.8
	comp=Z,160nm,1.2s						
MORW	Morawa	42.80	233	P	P	22 35 01.4	-0.1
	baz=43,SNR=8.0						
MORW	Morawa	42.80	233	P	P	22 35 01.5	-0.1
MORW				IAmb	IAmb	22 35 16.6	
	comp=Z,46nm,0.8s						
WOJI	Wonogiri, Jawa	42.94	265	P	P	22 35 13.1	+10

BLDU	Ballidu	42.96	230	P	P	22 35 02.6	-0.3
	baz=43,SNR=13						
TWG	Pinlang	43.04	312	IAMs_20	IAMs_20	22 52 26.6	
	comp=Z,7µm,19.0s						
NACB	Ninganchiao	43.50	314	IAmb	IAmb	22 35 12.9	
	comp=Z,146nm,1.1s						
NWAO	Narrogin (SRO)	43.68	227	P	P	22 35 07.6	-1.1
	comp=Z,7.2nm,0.7s,baz=92,slow=8.6,SNR=3.9						
NWAO				LR	LR	22 54 22.1	
	comp=Z,4µm,18.6s,baz=74,slow=37						
NWAO	Narrogin (SRO)	43.68	227	IAMs_20	IAMs_20	22 54 10.9	
	comp=Z,4µm,19.0s						
SSLB	Suanglung	43.72	313	IAmb	IAmb	22 35 10.8	
	comp=Z,93nm,1.3s						
MUN	Mundaring	43.98	229	P	P	22 35 11.1	0.0
	baz=44,SNR=6.7						
KSM	Kuching	44.35	278	IAmb	IAmb	22 35 30.7	
	comp=Z,195nm,1.5s						
KSM	Kuching	44.35	278	P	P	22 35 16.0	+1.7
JNU	Nakatsue	44.54	332	LR	LR	22 52 44.8	
	comp=Z,317nm,19.9s,baz=126,slow=35						
JNU	Nakatsue	44.54	332	IAmb	IAmb	22 35 19.8	
	comp=Z,117nm,1.0s						
MJAR	Matsushiro Arr	44.66	342	P	P	22 35 15.1	-1.3
	comp=Z,22nm,1.0s,baz=162,slow=8.1,SNR=14						
MJAR				PcP	PcP	22 36 59.5	+0.9
	comp=Z,10nm,0.9s,baz=148,slow=4.2,SNR=5.3						
MJAR				LR	LR	22 52 02.8	
	comp=Z,700nm,21.8s,baz=180,slow=34						
MJAR	Matsushiro Arr	44.66	342	P	P	22 35 15.0	-1.3
MJAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MJAR	Matsushiro Arr	44.66	342	P	P	22 35 15.0	-1.4
MAJO	Matsushiro	44.66	342	⇑eP	P	22 35 17.7	+1.3
MAJO				pmax	pmax		
	comp=Z,41nm,1.1s						
MJB9	Matsu-Tunnel	44.66	342	IAmb	IAmb	22 35 21.7	
	comp=Z,120nm,1.7s						
RKGY	Rocky Gully	44.72	225	P	P	22 35 18.6	+1.6
	baz=45,SNR=10.0						
KPJI	Karang Pucung	44.92	265	P	P	22 35 19.6	+0.7
	comp=Z,74nm,1.1s						
CISI	Cisompet, Garu	46.03	265	P	P	22 35 28.6	+0.9
	comp=Z,2µmcomp=Z,3µmcomp=Z,222nm,1.0s						
CNJI	Cibinong	46.71	265	P	P	22 35 33.2	+0.2
	comp=Z,2µmcomp=Z,237nm,1.1s						
RAR	Rarotonga	47.17	114	LR	LR	22 52 05.4	
	comp=Z,1µm,21.7s,baz=280,slow=32						
SKJI	Sukabumi	47.29	266	P	P	22 35 54.4	+17
DLV	T Lat	48.69	291	P	P	22 35 49.0	+0.4
TJN	Taejon	48.86	331	deP	P	22 35 49.7	+0.5
KSRS	Korea Array	49.47	332	P	P	22 35 54.3	+0.5
	comp=Z,24nm,0.8s,baz=148,slow=8.7,SNR=53						
KSRS				LR	LR	22 55 18.3	
	comp=Z,318nm,19.5s,baz=146,slow=34						
KSAR	Wonju Array Be	49.47	332	P	P	22 35 52.9	-1.0
KSAR	Wonju Array Be	49.47	332	P	P	22 35 52.9	-1.0
KS19	Wonju Array Si	49.53	332	IAmb	IAmb	22 35 58.5	
	comp=Z,40nm,1.1s						
MDSI	Maura Dua	49.76	269	P	P	22 35 58.7	+2.1
	comp=Z,46nm,1.1s						
LWLI	Liwa	49.85	268	P	P	22 35 59.7	+2.3
	comp=Z,8µmcomp=Z,36nm,0.9s						
TPRI	Tanjung Pinang	49.98	276	P	P	22 36 01.2	+3.0
	comp=Z,19µmcomp=Z,63nm,0.6s						
INCN	Inchon	50.09	331	P	P	22 35 59.1	+0.4
INCN				pmax	pmax		
	comp=Z,135nm,0.9s						
INCN	Inchon	50.09	331	P	P	22 35 59.1	+0.4
QIZ	Qiongzhong	50.11	301	P	P	22 35 58.9	-0.2
QIZ				S	S	22 43 08.7	+0.7
QIZ				pmax	pmax		
	comp=Z,18nm,1.3s						
QIZ				LR	LR		
	comp=Z,510nm,20.9s						
QIZ				LR	LR		
	comp=Z,400nm,24.8s						
QIZ				LR	LR		
	comp=Z,1µm,20.9s						
QIZ	Qiongzhong	50.11	301	IAmb	IAmb	22 36 02.1	
	comp=Z,76nm,1.0s						
NJ2	Nanjing	50.44	320	eP	P	22 36 02.6	+1.3
NJ2				pP	pP	22 36 12.0	-0.9
NJ2				sP	sP	22 36 16.3	-1.4
NJ2				S	S	22 43 16.4	+4.3
NJ2				pmax	pmax		
	comp=Z,60nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,470nm,5.3s						
NJ2				LR	LR		
	comp=Z,870nm,19.1s						
NJ2				LR	LR		
	comp=Z,770nm,19.6s						
NJ2				LR	LR		
	comp=Z,1µm,22.6s						
MYKOM	Kota Tinggi	50.78	277	P	P	22 36 02.4	-1.9
MYKOM				IAmb	IAmb	22 36 07.4	
	comp=Z,104nm,1.4s						
MYKOM	Kota Tinggi	50.78	277	P	P	22 36 05.0	+0.8
WHN	Wuhan	52.47	316	P	P	22 36 18.0	+1.4
WHN				S	S	22 43 43.0	+2.7
WHN				pmax	pmax		
	comp=Z,630nm,1.3s						
WHN				LR	LR		
	comp=Z,3µm,21.7s						
WHN				LR	LR		
	comp=Z,2µm,16.6s						
WHN				LR	LR		
	comp=Z,3µm,25.9s						
KRJI	Kerinci	52.66	272	P	P	22 36 20.1	+1.7
	comp=Z,7µmcomp=Z,268nm,0.4s						
SDSI	Sungai Dareh	52.82	273	P	P	22 36 19.2	-0.3
	comp=Z,1µmcomp=Z,100nm,1.4s						
TEY	Ternei	52.97	344	⇑eP	P	22 36 22.0	+2.0
TEY				pmax	pmax		
	comp=N,20nm,1.0s						
TEY				pmax	pmax		
	comp=Z,30nm,1.1s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.7s						
BKNI	Bangkinang	53.35	275	P	P	22 36 25.0	+1.6
	comp=E,1µmcomp=E,2µmcomp=E,167nm,1.1s						
YSS	Yuzh-Sakhalins	53.46	350	eP	P	22 36 23.9	+0.4
YSS				e		22 38 31.8	
YSS				eS	S	22 43 51.4	-1.7
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
YSS				MLR	MLR		
	comp=Z,800nm,17.0s						
YSS	Yuzh-Sakhalins	53.46	350	P	P	22 36 23.5	0.0
USA0B	Ussuriysk Arra	53.60	340	IAmb	IAmb	22 36 29.1	
	comp=Z,38nm,1.0s						
USRK	Ussuriysk Ar.	53.60	340	P	P	22 36 24.4	-0.2
	comp=Z,24nm,0.9s,baz=159,slow=7.4,SNR=25						
USRK				LR	LR	22 55 34.1	
	comp=Z,687nm,21.8s,baz=148,slow=32						
USRK	Ussuriysk Ar.	53.60	340	P	P	22 36 22.8	-1.8
USRK	Ussuriysk Ar.	53.60	340	P	P	22 36 22.8	-1.8
DL2	Dalian	53.69	329	P	P	22 36 24.9	-0.5
DL2				eS	S	22 43 56.3	-0.2
DL2				pmax	pmax		
	comp=Z,52nm,1.0s						
DL2				pmax	pmax		
	comp=Z,470nm,5.0s						
DL2				LR	LR		
	comp=Z,430nm,22.9s						
DL2				LR	LR		
	comp=Z,670nm,20.1s						
DL2				LR	LR		
	comp=Z,870nm,25.0s						
PDSI	Padang	53.78	273	P	P	22 36 25.9	-0.7
	comp=Z,503nmcomp=Z,34nm,0.8s						
IPM	Ipoh	54.01	280	P	P	22 36 26.7	-1.5
IPM				PcP	PcP	22 37 33.4	+0.3
IPM				IAmb	IAmb	22 37 35.5	
	comp=Z,86nm,1.1s						
IPM	Ipoh	54.01	280	P	P	22 36 29.0	+0.8
TIA	Tai'an	54.28	323	P	P	22 36 30.2	+0.4
TIA				pmax	pmax		
	comp=Z,44nm,1.1s						
TIA				LR	LR		
	comp=Z,380nm,18.5s						
TIA				LR	LR		
	comp=Z,590nm,19.2s						
TIA				LR	LR		
	comp=Z,880nm,15.0s						

KULM	Kulim	54.52	281	P	P	22 36 33.0	+1.1
MDJ	Mudanjiang	54.80	339	P	P	22 36 33.2	-0.2
MDJ				pP	pP	22 36 43.0	-2.1
MDJ				sP	sP	22 36 47.4	-2.5
MDJ				pmax	pmax		
	comp=Z,22nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,220nm,8.0s						
MDJ				LR	LR		
	comp=Z,290nm,17.5s						
MDJ				LR	LR		
	comp=Z,450nm,18.1s						
MDJ				LR	LR		
	comp=Z,320nm,22.3s						
MDJ	Mudanjiang	54.80	339	IAmb	IAmb	22 37 01.8	
	comp=Z,40nm,1.1s						
SNY	Shenyang	54.97	332	⇓P	P	22 36 36.8	+2.1
SNY				SS	SKiKP	22 47 57.5	+19
SNY				pmax	pmax		
	comp=Z,310nm,6.3s						
SNY				LR	LR		
	comp=Z,500nm,11.4s						
SNY				LR	LR		
	comp=Z,320nm,4.5s						
SNY				LR	LR		
	comp=Z,1µm,21.1s						
SISI	Saibi	55.10	272	P	P	22 36 36.9	+0.8
	comp=Z,995nmcomp=Z,52nm,0.9s						
CN2	Changchun	55.73	335	eP	P	22 36 39.4	-0.7
CN2				eS	S	22 44 25.0	+1.2
CN2				pmax	pmax		
	comp=Z,20nm,1.3s						
CN2				pmax	pmax		
	comp=Z,100nm,2.9s						
CN2				LR	LR		
	comp=Z,550nm,24.0s						
CN2				LR	LR		
	comp=Z,310nm,24.0s						
CN2				LR	LR		
	comp=Z,660nm,20.0s						
RPSI	Rantau Prapat	55.78	277	IAmb	IAmb	22 36 41.9	
	comp=Z,99nm,1.5s						
GYA	Guiyang	56.04	307	⇓iP	P	22 36 44.0	+1.2
GYA				PP	PP	22 38 51.6	+3.4
GYA				S	S	22 44 26.0	-2.8
GYA				pmax	pmax		
	comp=Z,30nm,0.9s						
GYA				pmax	pmax		
	comp=Z,190nm,5.0s						
GYA				LR	LR		
	comp=Z,600nm,17.8s						
GYA				LR	LR		
	comp=Z,520nm,17.5s						
GYA				LR	LR		
	comp=Z,2µm,18.6s						
SLVN	Son La	56.13	300	IAmb	IAmb	22 36 46.8	
	comp=Z,75nm,1.2s						
PPT	Papeete	56.17	107	LR	LR	22 58 33.1	
	comp=Z,402nm,18.4s,baz=266,slow=34						
PPT2	Papeete2	56.17	107	eS	S	22 44 34.0	+3.3
	comp=Z,710nm,25.0s						
PPT2				eLQ	LQ	22 51 08.5	
	comp=Z,2µm,34.2s						
PPT2				eLR	LR	22 53 31.3	
	comp=Z,2µm,27.0s						
SKR	Severo-Kuril’s	56.25	2	⇓eP	P	22 36 44.3	+0.6
TBI	Tubuai	56.95	114	eS	S	22 44 43.7	+3.0
	comp=Z,644nm,28.8s						
TBI				eLQ	LQ	22 51 27.0	
	comp=Z,3µm,29.8s						
TBI				eLR	LR	22 53 51.7	
	comp=Z,3µm,28.2s						
BJI	Beijing	57.44	326	P	P	22 36 52.2	-0.1
BJI				S	S	22 44 50.4	+3.9
BJI				pmax	pmax		
	comp=Z,14nm,1.4s						
BJI				LR	LR		
	comp=Z,400nm,20.2s						
BJI				LR	LR		
	comp=Z,640nm,17.4s						
BJI				LR	LR		
	comp=Z,750nm,27.5s						
TIY	Taiyuan	58.11	322	eP	P	22 36 58.3	+1.1
TIY				S	S	22 44 59.4	+3.8
TIY				SS	SS	22 48 48.5	+0.7
TIY				LR	LR		
	comp=Z,660nm,19.5s						
LHMI	Lhok Sumawe	58.14	280	P	P	22 36 58.6	+0.9
	comp=Z,3µmcomp=Z,229nm,1.1s						
KLR	Kul'dur	58.15	343	c iP	P	22 36 57.5	+0.3
KLR				pmax	pmax		
	comp=Z,120nm,1.0s						
XAN	Xi'an	58.24	316	P	P	22 36 58.7	+0.6
XAN				pP	pP	22 37 09.0	-0.9
XAN				PcP	PcP	22 37 48.2	-0.9
XAN				S	S	22 44 55.2	-2.2
XAN				SS	SS	22 48 46.4	-3.5
XAN				pmax	pmax		
	comp=Z,170nm,1.4s						
XAN				pmax	pmax		
	comp=Z,700nm,3.9s						
XAN				LR	LR		
	comp=Z,610nm,22.6s						
XAN				LR	LR		
	comp=Z,1µm,20.2s						
XAN				LR	LR		
	comp=Z,1µm,20.6s						
GRNR	Gornyy	58.35	347	⇑iP	P	22 36 58.5	0.0
GRNR				eS	S	22 44 58.6	+0.4
GRNR				pmax	pmax		
	comp=Z,20nm,1.2s						
GRNR				smax	smax		
	comp=E,2.0nm,1.3s						
GRNR				MLR	MLR		
	comp=Z,350nm,16.0s						
MLSI	Meulaboh, Aceh	58.51	279	P	P	22 36 59.6	-0.7
	comp=Z,229nm,0.8s						
KMI	Kunming	58.63	304	P	P	22 37 03.1	+1.9
KMI				pP	pP	22 37 13.9	+1.1
KMI				S	S	22 45 03.7	+0.6
KMI				sS	sS	22 45 22.5	+0.8
KMI				SS	SS	22 48 55.2	-1.5
KMI				pmax	pmax		
	comp=Z,120nm,1.7s						
KMI				pmax	pmax		
	comp=Z,580nm,3.1s						
KMI				LR	LR		
	comp=Z,480nm,16.5s						
KMI				LR	LR		
	comp=Z,820nm,21.4s						
KMI				LR	LR		
	comp=Z,970nm,21.6s						
PET	Petropavlovsk	58.70	3	eP	P	22 37 04.6	+3.8
PET				eS	S	22 45 07.0	+4.5
PET				eSS	SS	22 49 02.4	+6.1
PET				pmax	pmax		
	comp=Z,50nm,1.1s						
PET	Petropavlovsk	58.70	3	P	P	22 36 59.8	-1.0
PET				IAmb	IAmb	22 37 21.4	
	comp=Z,71nm,1.1s						
PEA0B	Petropavlovsk-	58.73	3	⇓eP	P	22 37 01.4	+0.3
PEA0B	Petropavlovsk-	58.73	3	P	P	22 37 02.4	+1.3
PETK	Petropavlovsk-	58.73	3	P	P	22 37 02.0	+0.9
	comp=Z,44nm,0.9s,baz=163,slow=7.7,SNR=21						
PETK				LR	LR	22 58 47.0	
	comp=Z,1µm,21.8s,baz=195,slow=32						
PETK	Petropavlovsk-	58.73	3	P	P	22 37 01.8	+0.6
PETK	Petropavlovsk-	58.73	3	P	P	22 37 01.8	+0.6
CMAR	Chiang Mai Arr	59.49	295	P	P	22 37 08.3	+1.3
	comp=Z,67nm,0.9s,baz=113,slow=5.1,SNR=196						
CMAR				LR	LR	23 02 44.0	
	comp=Z,306nm,19.5s,baz=110,slow=36						
CMAR	Chiang Mai Arr	59.49	295	i P	P	22 37 08.8	+1.7
CMAR				pmax	pmax		
	comp=Z,67nm,0.9s						
CMAR	Chiang Mai Arr	59.49	295	P	P	22 37 07.9	+0.8
CHTO	Chiang Mai	59.60	296	P	P	22 37 09.1	+1.2
CHTO				pmax	pmax		
	comp=Z,120nm,1.2s						
CHTO	Chiang Mai	59.60	296	P	P	22 37 09.1	+1.2
CD2	Chengdu	60.38	310	⇑iP	P	22 37 14.2	+1.2
CD2				pP	sP	22 37 29.0	-0.5
CD2				S	S	22 45 23.4	-1.8
CD2				ScS	SKKSac	22 46 54.1	-6.5
CD2				pmax	pmax		
	comp=Z,280nm,1.0s						

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CD2                                    pmax      pmax
           comp=Z,780nm,3.9s
CD2                                    LR        LR
           comp=Z,1µm,21.5s
CD2                                    LR        LR
           comp=Z,1µm,20.7s
CD2                                    LR        LR
           comp=Z,2µm,23.5s
HHC        Hu-ho-hao-te     60.61 324  eP        P         22 37 15.1 +0.6
HHC                                    pP        pP        22 37 27.3 +1.0
HHC                                    sP        sP        22 37 34.3 +3.3
HHC                                    S         S         22 45 28.2 +0.3
HHC                                    pmax      pmax
           comp=Z,510nm,1.0s
HHC                                    pmax      pmax
           comp=Z,2µm,5.9s
HHC                                    LR        LR
           comp=Z,4µm,16.4s
HHC                                    LR        LR
           comp=Z,3µm,16.2s
HHC                                    LR        LR
           comp=Z,4µm,16.4s
BTO        Baotou           61.37 323  eP        P         22 37 20.9 +1.3
HIA        Hailar           62.46 335  IAmb      IAmb      22 37 28.2
           comp=Z,33nm,1.0s
LZH        Lanzhou          62.85 316 ⇑P         P         22 37 31.6 +1.9
LZH                                    pP        pP        22 37 42.0 +0.4
LZH                                    S         S         22 45 58.4 +1.8
LZH                                    sS        sS        22 46 16.3 +0.8
LZH                                    SS        SS        22 50 05.3 +2.9
LZH                                    pmax      pmax
           comp=Z,380nm,1.3s
LZH                                    pmax      pmax
           comp=Z,2µm,5.7s
LZH                                    LR        LR
           comp=Z,720nm,16.0s
LZH                                    LR        LR
           comp=Z,1µm,15.3s
LZH                                    LR        LR
           comp=Z,1µm,18.0s
ZEA        Zeya             63.46 343  eP        P         22 37 33.1  -0.1
ZEA                                    pmax      pmax
           comp=E,46nm,1.4s
ZEA                                    pmax      pmax
           comp=N,72nm,1.2s
ZEA                                    pmax      pmax
           comp=Z,120nm,1.2s
ZEA                                    MLR       MLR
           comp=Z,500nm,18.0s
DGPR       DIGLIPUR         63.63 288  ex        P         22 37 30.9  -4.2
TAOE       Nuku Hiva Isla   65.19  97  eLR       LR        22 57 42.7
           comp=Z,1µm,23.6s
MA2        Magadan          65.20 358ceP         P         22 37 43.8  -0.6
MA2                                    pmax      pmax
           comp=Z,55nm,0.8s
MA2        Magadan          65.20 358  P         P         22 37 44.6 +0.2
MA2                                    IAmb      IAmb      22 37 48.5
           comp=Z,49nm,0.8s
NIKH       Nikolski High    66.36  23  IAMs_20   IAMs_20   23 01 26.8
           comp=Z,4µm,22.0s
CIT        Chita            67.14 334  eP        P         22 37 56.0  -1.2
CIT                                    e                   22 38 14.6
GTA        Gaotai           67.27 317 ⇑P         P         22 37 59.9 +1.6
GTA                                    pP        pP        22 38 10.4 +0.1
GTA                                    sP        sP        22 38 14.6  -0.4
GTA                                    S         S         22 46 52.3 +1.6
GTA                                    sS        sS        22 47 10.2 +0.1
GTA                                    pmax      pmax
           comp=Z,190nm,1.2s
GTA                                    pmax      pmax
           comp=Z,680nm,7.2s
GTA                                    LR        LR
           comp=Z,290nm,21.6s
GTA                                    LR        LR
           comp=Z,760nm,21.6s
GTA                                    LR        LR
           comp=Z,940nm,19.2s
TEZP       TEZPUR           67.50 302  eP        P         22 38 00.6 +0.7
TEZP                                  i pP       pP        22 38 10.1  -1.7
TEZP                                   IAmb      IAmb      22 38 11.8
           comp=Z,45nm,0.7s
ULN        Ulaanbaatar      67.52 328  P         P         22 38 00.8 +1.1
ULN                                    pmax      pmax
           comp=Z,52nm,1.0s
ULN                                    MLR       MLR
           comp=Z,600nm,21.0s
ULN        Ulaanbaatar      67.52 328  P         P         22 38 00.8 +1.1
ULN                                    IAmb      IAmb      22 38 06.9
           comp=Z,52nm,0.9s
SONM       Songino Array    67.85 327  P         P         22 38 02.5 +0.7
           comp=Z,42nm,1.1s,baz=136,slow=7.4,SNR=76
SONM                                   PKPPKP    P'P'df    23 06 23.5 +1.5
           comp=Z,1.5nm,1.2s,baz=307,slow=1.3,SNR=4.8
SONM                                   LR        LR        23 07 48.3
           comp=Z,417nm,19.0s,baz=131,slow=36
SONM       Songino Array    67.85 327  P         P         22 38 01.9 +0.1
SONM                                   pmax      pmax
           comp=Z,30nm,1.1s
SONM       Songino Array    67.85 327  P         P         22 38 01.9 +0.1
SHL        Shillong         67.94 300  eP        P         22 38 03.5 +0.6
SHL                                    IAmb      IAmb      22 38 08.3
           comp=Z,35nm,0.8s
UNV        Unalaska Valle   67.95  24  IAMs_20   IAMs_20   23 05 34.9
           comp=Z,3µm,20.0s
AKUT       Akutan           68.46  24  IAMs_20   IAMs_20   23 05 58.3
           comp=Z,3µm,20.0s
SEY        Seymchan         68.52 359⇓iP         P         22 38 05.7 +0.2
FALS       False Pass       69.94  25  IAMs_20   IAMs_20   23 06 05.2
           comp=Z,3µm,20.0s
YAK        Yakutsk          70.19 348  eP        P         22 38 16.0 +0.2
YAK                                    e*PP      pP        22 38 24.2  -3.6
YAK                                    ePPP      PPP       22 42 36.4
YAK                                    eS        S         22 47 24.4 +0.3
YAK                                    e*SS      sS        22 47 45.2 +1.6
YAK                                    pmax      pmax
           comp=Z,39nm,1.1s
YAK                                    pmax      pmax
           comp=E,16nm,1.5s
YAK                                    pmax      pmax
           comp=N,30nm,1.5s
YAK                                    pmax      pmax
           comp=Z,14nm,0.8s
YAK                                    smax      smax
           comp=E,141nm,10.4s
YAK                                    smax      smax
           comp=N,96nm,11.9s
YAK                                    MLR       MLR
           comp=Z,335nm,18.0s
YAK                                    MLR       MLR
           comp=N,219nm,20.0s
YAK                                    MLR       MLR
           comp=E,145nm,18.0s
YAK        Yakutsk          70.19 348  P         P         22 38 15.7  -0.1
YAK                                    IAmb      IAmb      22 38 20.6
           comp=Z,69nm,1.0s
ZAK        Zakamensk        71.01 328  eP        P         22 38 21.4 +0.1
ZAK                                    pmax      pmax
           comp=Z,55nm,1.1s
BOD        Bodaibo          71.17 339  eP        P         22 38 21.4  -0.5
BOD                                    pmax      pmax
           comp=Z,34nm,1.5s
GTK        Tadong           71.28 301  eP        P         22 38 24.7 +1.3
GTK                                    IAmb      IAmb      22 38 29.3
           comp=Z,32nm,0.9s
SDPT       Sand Point       71.51  25  IAMs_20   IAMs_20   23 08 41.0
           comp=Z,2µm,19.0s
CNBA       Chernabura Isl   71.55  26  IAmb      IAmb      22 38 26.6
           comp=Z,84nm,1.3s
CNBA                                   IAMs_20   IAMs_20   23 08 30.2
           comp=Z,3µm,20.0s
TLY        Talaya           71.58 330c iP        P         22 38 24.8 +0.2
TLY                                    pmax      pmax
           comp=Z,30nm,1.0s
TLY        Talaya           71.58 330  P         P         22 38 25.1 +0.5
IRK        Irkutsk          71.60 330  eP        P         22 38 24.7   0.0
IRK                                    pmax      pmax
           comp=Z,67nm,1.3s
VNDA       Vanda            71.82 178  P         P         22 38 27.1 +1.5
           comp=Z,6.9nm,0.8s,baz=319,slow=7.2,SNR=14
VNDA       Vanda            71.82 178  P         P         22 38 27.1 +1.5
VNDA                                   IAmb      IAmb      22 38 28.8
           comp=Z,147nm,1.9s
VNDA                                   PP        PP        22 40 59.7  -5.5
TAPN       Taplejung        72.04 301  eP        P         22 38 28.9 +0.7
ODAN       Odare            72.18 300  eP        P         22 38 29.6 +0.6
           comp=Z,902nm,1.5s
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SBA        Scott Base       72.34 177  P         P         22 38 29.5 +0.8
SBA                                    pmax      pmax
           comp=Z,151nm,1.7s
SBA        Scott Base       72.34 177  P         P         22 38 29.5 +0.8
SBA                                    IAmb      IAmb      22 38 33.1
           comp=Z,151nm,1.7s
BOK        Bokaro           72.68 297  eP        P         22 38 33.2 +1.5
BOK                                    IAmb      IAmb      22 38 36.2
           comp=Z,56nm,1.3s
RAMN       Ramite           72.88 300  eP        P         22 38 33.8 +0.6
MOY        Mondy            72.93 329  eP        P         22 38 33.4 +0.7
MOY                                    pmax      pmax
           comp=Z,88nm,2.5s
CHGN       Chignik          73.02  25  IAmb      IAmb      22 38 50.1
           comp=Z,34nm,1.0s
CHLP       Challavanipeta   73.13 291  eP        P         22 38 35.6 +1.2
CHLP                                   IAmb      IAmb      22 38 36.9
           comp=Z,222nm,2.0s
JIRN       Jiri             73.43 301  eP        P         22 38 37.1 +0.6
GUN        Gumba            73.76 301  eP        P         22 38 39.3 +0.9
GAMB       Gambell          73.96  15  IAMs_20   IAMs_20   23 05 37.3
           comp=Z,2µm,20.0s
PKI        Pulchoki         74.07 301  eP        P         22 38 40.4 +0.2
           comp=Z,601nm,1.6s
PKIN       Phulchoki        74.08 301  eP        P         22 38 40.5 +0.3
BILL       Bilibino         74.14   5c iP        P         22 38 39.4 +0.1
BILL                                   e                   22 38 49.5
BILL                                   e*PP      sP        22 38 57.6 +1.5
BILL                                   ePPP      PPP       22 43 10.7
BILL                                   eS        S         22 48 09.4 +0.2
BILL                                   pmax      pmax
           comp=Z,82nm,1.7s
BILL                                   MLR       MLR
           comp=Z,573nm,19.0s
BILL       Bilibino         74.14   5  P         P         22 38 39.7 +0.4
BILL                                   IAmb      IAmb      22 38 41.0
           comp=Z,52nm,1.1s
KKN        Kakani           74.24 301  eP        P         22 38 41.6 +0.5
DMN        Daman            74.34 301  eP        P         22 38 42.5 +0.8
           comp=Z,576nm,1.3s
PALK       Pallekele        74.40 279  P         P         22 38 41.0  -1.1
PALK                                   pmax      pmax
           comp=Z,40nm,0.9s
PALK                                   MLR       MLR
           comp=Z,400nm,21.0s
PALK       Pallekele        74.40 279  P         P         22 38 41.0  -1.1
PALK                                   IAmb      IAmb      22 38 53.7
           comp=Z,40nm,0.9s
GKN        Gorkha           74.84 301  eP        P         22 38 45.1 +0.6
SII        Sitkinak Islan   75.03  27  IAMs_20   IAMs_20   23 10 49.8
           comp=Z,3µm,19.0s
PVM        Polavaram        75.15 289  eP        P         22 38 46.4 +0.1
PVM                                    IAmb      IAmb      22 38 49.3
           comp=Z,26nm,1.2s
DANN       Dangsing         75.68 301  eP        P         22 38 49.6 +0.1
OHAK       Old Harbor       75.81  26  IAmb      IAmb      22 38 53.7
           comp=Z,33nm,1.0s
MYLAV      Mylavaram        75.99 289  eP        P         22 38 51.7 +0.7
MYLAV                                  IAmb      IAmb      22 38 53.7
           comp=Z,24nm,1.2s
ANM        Nome             76.31  17  IAmb      IAmb      22 38 57.6
           comp=Z,35nm,1.0s
SKHT       Srikalahasti     76.35 286  eP        P         22 38 53.6 +0.5
SKHT                                   IAmb      IAmb      22 38 54.5
           comp=Z,22nm,1.2s
KDAK       Kodiak Island    76.45  26  P         P         22 38 53.8 +1.0
           comp=Z,19nm,0.9s,baz=264,slow=3.5,SNR=9.5
KDAK       Kodiak Island    76.45  26  P         P         22 38 53.1 +0.3
KDAK                                                       22 41 42.6
KDAK                                   pmax      pmax
           comp=Z,27nm,0.9s
KDAK                                   MLR       MLR
           comp=Z,2µm,22.0s
KDAK       Kodiak Island    76.45  26  P         P         22 38 53.1 +0.3
KDAK                                   PP        PP        22 41 42.6  -2.5
KDAK       Kodiak Island    76.45  26  IAMs_20   IAMs_20   23 06 34.6
           comp=Z,2µm,22.0s
ADKI       Addanki          76.46 288  eP        P         22 38 54.1 +0.4
ADKI                                   IAmb      IAmb      22 38 54.7
           comp=Z,26nm,1.3s
GGR        Gangavaram       76.59 290  eP        P         22 38 54.5  -0.1
GGR                                    IAML                22 39 06.7
           comp=Z,3.0nm,0.7s
SVW2       Sparrevohn       77.20  23  IAmb      IAmb      22 39 15.9
           comp=Z,28nm,0.9s
SVW2                                   IAMs_20   IAMs_20   23 11 17.1
           comp=Z,2µm,20.0s
NJS        Nagarjunasagar   77.21 288  eP        P         22 38 58.0 +0.1
NJS                                    IAmb      IAmb      22 39 02.0
           comp=Z,25nm,1.2s
WMQ        Urumqi           77.35 317  P         P         22 38 59.6 +1.3
WMQ                                    pP        pP        22 39 10.6 +0.2
WMQ                                    S         S         22 48 45.7  -0.1
WMQ                                    sS        sS        22 49 03.4  -2.7
WMQ                                    pmax      pmax
           comp=Z,56nm,1.5s
WMQ                                    pmax      pmax
           comp=Z,410nm,3.7s
WMQ                                    LR        LR
           comp=Z,290nm,18.9s
WMQ                                    LR        LR
           comp=Z,240nm,21.7s
WMQ                                    LR        LR
           comp=Z,550nm,26.7s
SRLM       Srisailam        77.52 288  eP        P         22 38 59.5  -0.2
SRLM                                   IAmb      IAmb      22 39 01.2
           comp=Z,24nm,1.1s
RPR        Rampur           77.63 291  eP        P         22 39 00.5 +0.2
RPR                                    IAmb      IAmb      22 39 03.0
           comp=Z,179nm,2.4s
HOM        Homer            77.92  25  IAMs_20   IAMs_20   23 11 12.4
           comp=Z,2µm,20.0s
HYB        Hyderabad        78.07 289 i P        P         22 39 02.0  -0.8
HYB                                   e                    22 39 12.5
HYB        Hyderabad        78.07 289  IAmb      IAmb      22 39 04.7
           comp=Z,76nm,2.5s
HYBB       Hyderabad (bro   78.07 289  eP        P         22 39 02.6  -0.2
HYBB                                   IAmb      IAmb      22 39 05.2
           comp=Z,17nm,0.9s
NGP        Nagpur           78.28 293  eP        P         22 39 03.8  -0.1
NGP                                    IAmb      IAmb      22 39 10.6
           comp=Z,14nm,1.2s
BRLK       Bradley Lake     78.30  25  IAmb      IAmb      22 39 41.6
           comp=Z,46nm,1.2s
SRSP       Sriramsagar      78.53 291  eP        P         22 39 05.0  -0.2
SRSP                                   IAmb      IAmb      22 39 07.7
           comp=Z,22nm,1.1s
URV        Uravakonda       78.89 286  eP        P         22 39 07.7 +0.3
URV                                    IAmb      IAmb      22 39 09.1
           comp=Z,48nm,1.2s
LGTI       Lohaghat         78.93 301  eP        P         22 39 07.3   0.0
TIXI       Tiksi            79.03 352ceP         P         22 39 06.2  -0.7
TIXI                                   pmax      pmax
           comp=Z,35nm,1.6s
TIXI                                   MLR       MLR
           comp=Z,226nm,19.0s
TIXI       Tiksi            79.03 352  P         P         22 39 05.7  -1.3
SEW        Seward           79.09  25  IAmb      IAmb      22 39 40.3
           comp=Z,70nm,1.2s
SKT        Skwentna         79.28  23  IAMs_20   IAMs_20   23 13 18.5
           comp=Z,2µm,19.0s
SUA        Susitna One      79.30  24  IAMs_20   IAMs_20   23 08 36.0
           comp=Z,2µm,22.0s
RC01       Rabbit Creek A   79.50  24  IAmb      IAmb      22 39 28.9
           comp=Z,60nm,1.1s
RC01                                   IAMs_20   IAMs_20   23 09 06.3
           comp=Z,2µm,21.0s
PPLA       Purkeypile       79.56  22  IAmb      IAmb      22 39 39.1
           comp=Z,63nm,1.4s
PPLA                                   IAMs_20   IAMs_20   23 11 05.8
           comp=Z,2µm,20.0s
RDOG       Red Dog Mine     79.56  15  IAmb      IAmb      22 39 15.5
           comp=Z,58nm,1.1s
KLRI       Killari          80.01 289  eP        P         22 39 13.0  -0.5
KLRI                                   IAmb      IAmb      22 39 16.1
           comp=Z,76nm,1.7s
PMR        Palmer           80.02  24  IAmb      IAmb      22 39 30.8
           comp=Z,94nm,1.6s
PMR                                    IAMs_20   IAMs_20   23 08 49.0
           comp=Z,1µm,21.0s
BHPL       Bhopal           80.14 295  eP        P         22 39 14.2 +0.1
BHPL                                   IAmb      IAmb      22 39 16.8
           comp=Z,40nm,0.9s
KNK        Knik Glacier     80.20  24  IAmb      IAmb      22 39 43.1
           comp=Z,81nm,1.3s
KNK                                    IAMs_20   IAMs_20   23 09 03.7
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           comp=Z,3µm,22.0s
KTH        Kantishna Hill   80.41  22  IAMs_20   IAMs_20   23 12 42.2
           comp=Z,2µm,20.0s
SML        Sawmill          80.46  24  IAmb      IAmb      22 39 34.8
           comp=Z,96nm,1.1s
SML                                    IAMs_20   IAMs_20   23 09 13.6
           comp=Z,2µm,22.0s
GLI        Glacier Island   80.49  25  IAMs_20   IAMs_20   23 09 28.4
           comp=Z,2µm,22.0s
HIN        Hinchinbrook I   80.50  26  IAMs_20   IAMs_20   23 13 21.5
           comp=Z,2µm,19.0s
FID        Port Fidalgo     80.69  25            PcP       22 39 20.9  -1.8
FID                                    IAMs_20   IAMs_20   23 14 52.0
           comp=Z,2µm,19.0s
BPAW       Bear Paw Mtn.    80.70  21  IAMs_20   IAMs_20   23 13 38.8
           comp=Z,2µm,20.0s
IMAR       Indian Mountai   80.86  19  P         P         22 39 17.1 +0.2
IMAR                                   PP        PP        22 42 20.5  -1.2
SCM        Sheep Creek Mo   80.88  24  IAmb      IAmb      22 39 52.6
           comp=Z,51nm,1.1s
SCM                                    IAMs_20   IAMs_20   23 09 36.7
           comp=Z,3µm,22.0s
EYAK       Cordova Ski Ar   80.90  26  IAMs_20   IAMs_20   23 13 25.3
           comp=Z,2µm,19.0s
RND        Reindeer         81.11  22  IAmb      IAmb      22 39 23.2
           comp=Z,31nm,0.9s
MCK        McKinley         81.25  22  IAmb      IAmb      22 39 23.9
           comp=Z,72nm,1.0s
RAGM       Ragged Mountai   81.29  26            PcP       22 39 24.6  -0.9
RAGM                                   IAMs_20   IAMs_20   23 09 31.6
           comp=Z,2µm,21.0s
BWN        Browne           81.29  22  IAmb      IAmb      22 39 52.0
           comp=Z,103nm,1.3s
BWN                                    IAMs_20   IAMs_20   23 14 00.1
           comp=Z,2µm,20.0s
MLY        Manley           81.31  21  IAMs_20   IAMs_20   23 13 52.0
           comp=Z,2µm,20.0s
NDI        New Delhi        81.36 300  ex        P         22 39 20.0  -0.5
SMLA       Simla            81.89 302  eP        P         22 39 23.9 +0.8
MK31       Makanchi Array   81.93 319 i P        P         22 39 23.5 +0.4
MK31       Makanchi Array   81.93 319  IAmb      IAmb      22 39 25.1
           comp=Z,52nm,1.1s
MKAR       Makanchi Array   81.93 319  P         P         22 39 23.4 +0.4
           comp=Z,27nm,0.9s,baz=98,slow=6.6,SNR=154
MKAR                                   PKKPbc    PKKPbc    22 57 54.7  -0.6
           comp=Z,0.8nm,1.0s,baz=310,slow=1.6,SNR=4.2
MKAR                                   LR        LR        23 15 33.2
           comp=Z,617nm,20.4s,baz=92,slow=36
MKAR       Makanchi Array   81.93 319  P         P         22 39 22.6  -0.5
MKAR                                   PP        PP        22 42 31.3 +0.2
WRH        Wood River Hil   81.96  22  IAmb      IAmb      22 39 26.8
           comp=Z,40nm,1.2s
WRH                                    IAMs_20   IAMs_20   23 14 29.1
           comp=Z,2µm,20.0s
CRQM       Cirque           82.13  26  IAMs_20   IAMs_20   23 09 47.4
           comp=Z,2µm,22.0s
MAKZ       Makanchi         82.14 319  P         P         22 39 24.6 +0.4
MAKZ                                   pmax      pmax
           comp=Z,100nm,1.2s
MAKZ                                   MLR       MLR
           comp=Z,700nm,20.0s
MAKZ       Makanchi         82.14 319  P         P         22 39 24.6 +0.4
GLB        Gilahina Butte   82.16  25  IAmb      IAmb      22 39 29.9
           comp=Z,54nm,1.0s
GLB                                    IAMs_20   IAMs_20   23 14 35.5
           comp=Z,2µm,20.0s
KAD        Karad            82.17 288 i P        P         22 39 24.7  -0.2
PAX        Paxson           82.20  24  IAMs_20   IAMs_20   23 13 34.6
           comp=Z,2µm,20.0s
VRDI       Verde Repeater   82.21  26  IAmb      IAmb      22 39 30.3
           comp=Z,42nm,1.0s
VRDI                                   IAMs_20   IAMs_20   23 11 18.9
           comp=Z,2µm,21.0s
TCOL       CIGO, UAF Yank   82.25  21  P         P         22 39 23.2  -1.1
           baz=238
COLA       College          82.26  21  P         P         22 39 23.6  -0.7
COLA                                   pmax      pmax
           comp=Z,36nm,0.9s
COLA                                   MLR       MLR
           comp=Z,1µm,20.0s
COLA       College          82.26  21  P         P         22 39 23.6  -0.7
COLA                                   IAmb      IAmb      22 39 28.8
           comp=Z,36nm,0.9s
COLA       College          82.26  21  IAMs_20   IAMs_20   23 13 59.9
           comp=Z,1µm,20.0s
TGL        Tana Glacier     82.27  26  IAMs_20   IAMs_20   23 10 01.5
           comp=Z,1µm,21.0s
HDA        Harding Lake     82.35  22  P         P         22 39 24.4  -0.5
           baz=239
MCARA      McCarthy VSAT    82.47  26  IAmb      IAmb      22 39 32.1
           comp=Z,40nm,1.0s
MCARA                                  IAMs_20   IAMs_20   23 11 16.7
           comp=Z,2µm,22.0s
ILAR       Eielson Array    82.56  22  P         P         22 39 24.8  -1.1
           comp=Z,26nm,1.1s,baz=252,slow=4.6,SNR=30
ILAR                                   LR        LR        23 14 19.9
           comp=Z,2µm,19.5s,baz=240,slow=34
ILAR       Eielson Array    82.56  22  P         P         22 39 23.9  -2.0
ILAR       Eielson Array    82.56  22  P         P         22 39 23.9  -2.0
BALM       Baldy            82.61  26  IAmb      IAmb      22 39 31.8
           comp=Z,42nm,1.2s
BALM                                   IAMs_20   IAMs_20   23 09 37.4
           comp=Z,2µm,22.0s
POO        Poona            82.66 289⇑iP         P         22 39 24.0  -3.5
           comp=Z,90nm,1.0s
ZAA0       Zalesovo Array   82.69 326  IAmb      IAmb      22 39 30.6
           comp=Z,36nm,1.2s
ZALV       Zalesovo Beam    82.69 326  P         P         22 39 26.1  -0.7
           comp=Z,11nm,0.7s,baz=112,slow=5.9,SNR=44
ZALV                                   LR        LR        23 16 31.4
           comp=Z,404nm,20.9s,baz=106,slow=36
ZALV       Zalesovo Beam    82.69 326  P         P         22 39 25.4  -1.4
RIDG       Independent Ri   82.82  23  IAmb      IAmb      22 39 32.3
           comp=Z,61nm,1.2s
RIDG                                   IAMs_20   IAMs_20   23 10 17.0
           comp=Z,2µm,22.0s
DHRM       DHARAMSHALA      82.84 303⇓iP         P         22 39 28.8 +0.4
DHRM                                   IAmb      IAmb      22 39 31.3
           comp=Z,82nm,0.6s
BARN       Barnard Glacie   82.92  26  IAmb      IAmb      22 39 34.3
           comp=Z,41nm,1.1s
CTGM       Chitina Glacie   83.02  26  IAmb      IAmb      22 39 48.4
           comp=Z,36nm,1.0s
DOT        Dot Lake         83.08  23  IAmb      IAmb      22 39 34.8
           comp=Z,47nm,1.0s
DOT                                    IAMs_20   IAMs_20   23 10 47.8
           comp=Z,2µm,22.0s
SCRK       Sand Creek       83.27  23  IAMs_20   IAMs_20   23 11 49.8
           comp=Z,2µm,21.0s
PRP        Porcupine Dome   83.43  21  IAMs_20   IAMs_20   23 14 17.1
           comp=Z,1µm,20.0s
DHAK       Deception Hill   83.70  29  IAMs_20   IAMs_20   23 10 52.4
           comp=Z,2µm,21.0s
TOLK       Toolik Lake Re   83.72  18  P         P         22 39 32.4 +0.4
           baz=236
BCAR       Beaver Creek A   83.73  24  P         P         22 39 32.4 +0.3
QSPA       South Pole Qui   84.19 180  P         P         22 39 35.5 +1.0
           comp=Z,42nm,0.9s,baz=352,slow=1.2,SNR=101
QSPA       South Pole Qui   84.19 180  P         P         22 39 35.2 +0.6
KSH        Kashi            84.57 310  P         P         22 39 39.6 +2.6
KSH                                    S         S         22 49 59.7  -1.6
KSH                                    pmax      pmax
           comp=Z,180nm,1.1s
KSH                                    pmax      pmax
           comp=Z,1µm,6.2s
KSH                                    LR        LR
           comp=Z,420nm,13.2s
KSH                                    LR        LR
           comp=Z,1µm,16.4s
KSH                                    LR        LR
           comp=Z,1µm,15.2s
HYT        Haines Junctio   84.68  27  IAmb      IAmb      22 40 16.1
           comp=Z,34nm,0.9s
BMAR       Burnt Mountain   84.70  20  P         P         22 39 36.7  -0.2
EGAK       Eagle            84.73  23  IAmb      IAmb      22 39 59.1
           comp=Z,24nm,0.9s
EGAK                                   IAMs_20   IAMs_20   23 15 26.4
           comp=Z,2µm,20.0s
ULHL       Ulahol           84.95 313  P         P         22 39 39.9 +1.0
           SNR=75
DAWY       Dawson           85.13  24  IAmb      IAmb      22 39 44.9
           comp=Z,49nm,1.5s
DAWY                                   IAMs_20   IAMs_20   23 16 60.0
           comp=Z,1µm,20.0s
MAW        Mawson           85.19 203  P         P         22 39 40.1 +0.8
           baz=85,SNR=12
MAW        Mawson           85.19 203  P         P         22 39 40.3 +1.0
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      comp=Z,14nm,0.8s,baz=95,slow=8.2,SNR=20
MAW                                LR       LR       23 13 42.1
      comp=Z,710nm,22.0s,baz=76,slow=33
MAW   Mawson              85.19 203  P        P        22 39 38.5 -0.8
MAW                                pmax     pmax
      comp=Z,11nm,1.2s
MAW   Mawson              85.19 203  P        P        22 39 38.5 -0.8
SKAG  Skagway             85.21  29  IAMs_20  IAMs_20  23 14 25.5
      comp=Z,1µm,19.0s
KURK  Kurchatov           85.35 322c iP       P        22 39 40.1 -0.4
KURK                               pmax     pmax
      comp=Z,81nm,1.7s
KURK  Kurchatov           85.35 322  P        P        22 39 40.0 -0.4
KURBB Kurchatov Arra      85.38 322  PKKPbc   PKKPbc   22 57 46.1 -1.2
      comp=Z,0.4nm,0.4s,baz=300,slow=4.2,SNR=4.3
NIL   Nilore              85.62 304  P        P        22 39 42.5 +0.2
NIL                                pmax     pmax
      comp=Z,235nm,1.3s
NIL   Nilore              85.62 304  P        P        22 39 42.5 +0.2
KZA   Kyzart              85.64 313  P        P        22 39 44.0 +1.3
      SNR=81
WRAK  Wrangell Islan      85.77  32  IAMs_20  IAMs_20  23 12 34.3
      comp=Z,1µm,20.0s
KBK   Karagaybulak        85.97 313  P        P        22 39 44.7 +0.7
      SNR=38
CHMS  Chumysh             86.18 314  P        P        22 39 45.3 +0.5
      SNR=51
UCH   Uchtor              86.20 313  P        P        22 39 46.7 +1.2
      SNR=47
AAK   Ala-Archa           86.30 313  P        P        22 39 46.9 +1.3
      SNR=30
AAK   Ala-Archa           86.30 313c iP       P        22 39 46.2 +0.6
AAK                                pmax     pmax
      comp=Z,49nm,1.2s
AAK   Ala-Archa           86.30 313  P        P        22 39 46.1 +0.6
AAK                                IAmb     IAmb     22 39 47.9
      comp=Z,40nm,1.1s
USP   Ospenovka           86.42 314  P        P        22 39 46.1 +0.1
      SNR=42
AML   Almayashu           86.78 313  P        P        22 39 49.0 +0.7
      SNR=47
EKS2  Erkin-Say           86.82 313  P        P        22 39 49.5 +1.4
      SNR=32
EPYK  Eagle Plains        87.06  22  IAMs_20  IAMs_20  23 18 24.9
      comp=Z,2µm,20.0s
EPYK  Eagle Plains        87.06  22  P        P        22 39 48.9 +0.3
      baz=249
BBB   Bella Bella         87.06  37  IAMs_20  IAMs_20  23 15 00.8
      comp=Z,1µm,20.0s
NRIK  Noril'sk            87.31 341  P        P        22 39 48.8 -0.9
      comp=Z,21nm,0.9s,baz=109,slow=5.3,SNR=30
NRIK                               LR       LR       23 16 48.4
      comp=Z,602nm,21.9s,baz=109,slow=34
NRIK  Noril'sk            87.31 341 eP        P        22 39 48.6 -1.1
DLBC  Dease Lake          87.53  31  P        P        22 39 51.1  0.0
      comp=Z,12nm,1.0s,baz=130,slow=12,SNR=3.0
DLBC                               PP       PP       22 43 16.9 +0.5
      comp=Z,12nm,1.2s,baz=241,slow=8.3,SNR=3.8
DLBC  Dease Lake          87.53  31  IAmb     IAmb     22 39 56.3
      comp=Z,28nm,1.1s
DLBC                               IAMs_20  IAMs_20  23 16 06.8
      comp=Z,2µm,22.0s
HOPS  Hopland Field       88.01  51  IAMs_20  IAMs_20  23 13 48.7
      comp=Z,2µm,20.0s
MCCM  Marconi Confer      88.03  52  IAMs_20  IAMs_20  23 15 52.0
      comp=Z,1µm,19.0s
GDXM  Geysers             88.20  51  IAMs_20  IAMs_20  23 14 06.6
      comp=Z,2µm,20.0s
WDC   Whiskeytown Da      88.66  49  IAMs_20  IAMs_20  23 11 33.8
      comp=Z,2µm,22.0s
GAR   Garm                88.81 309  IAMs_20  IAMs_20  23 19 52.6
      comp=Z,1µm,20.0s
INK   Inuvik              88.88  21  P        P        22 39 56.8 -0.4
      comp=Z,9.5nm,1.0s,baz=299,slow=5.1,SNR=9.7
INK                                PKKPbc   PKKPdf   22 57 36.0 +1.7
      comp=Z,3.1nm,1.0s,baz=163,slow=3.1,SNR=5.6
INK   Inuvik              88.88  21  IAmb     IAmb     22 40 30.3
      comp=Z,38nm,1.4s
KBL   Kabul               89.20 305  P        P        22 39 59.0 -0.8
KBL                                pmax     pmax
      comp=Z,33nm,1.1s
KBL                                MLR      MLR
      comp=Z,700nm,22.0s
KBL   Kabul               89.20 305  P        P        22 39 59.0 -0.8
KBL                                IAmb     IAmb     22 40 00.3
      comp=Z,33nm,1.1s
KK31  Karatay Array       89.26 313  IAmb     IAmb     22 40 12.9
      comp=Z,25nm,1.2s
KKAR  Karatay Array       89.26 313  P        P        22 39 59.0 -0.6
KKAR  Karatay Array       89.26 313  P        P        22 39 59.0 -0.6
KKAR  Karatay Array       89.26 313  IAmb     IAmb     22 40 12.9
      comp=Z,25nm,1.2s
PGC   Sidney              89.29  41  IAMs_20  IAMs_20  23 15 17.0
      comp=Z,2µm,20.0s
ORV   Oroville            89.30  50  IAMs_20  IAMs_20  23 11 17.8
      comp=Z,1µm,22.0s
F04A  Amboy               89.56  44  IAMs_20  IAMs_20  23 12 12.2
      comp=Z,2µm,22.0s
AFDM  Forest Hills D      89.62  51  P        P        22 40 01.0 -0.4
CMB   Columbia Colle      89.96  52  IAMs_20  IAMs_20  23 17 20.2
      comp=Z,1µm,19.0s
LON   Longmire            90.09  43  IAMs_20  IAMs_20  23 12 41.4
      comp=Z,2µm,22.0s
BEKR  Beckworth           90.22  50  IAmb     IAmb     22 41 27.5
      comp=Z,23nm,0.9s
BEKR                               IAMs_20  IAMs_20  23 15 02.0
      comp=Z,2µm,20.0s
B06A  Marblemount         90.56  41  IAMs_20  IAMs_20  23 16 26.7
      comp=Z,1µm,20.0s
LLLB  Lillooet            90.60  39  IAMs_20  IAMs_20  23 18 17.6
      comp=Z,1µm,20.0s
VCNR  Virginia City       90.69  51  IAMs_20  IAMs_20  23 12 11.6
      comp=Z,1µm,22.0s
G06A  Carlson Farm,       90.70  45  IAMs_20  IAMs_20  23 15 17.5
      comp=Z,2µm,20.0s
BRVK  Borovoye            90.88 323ceP        P        22 40 05.7 -1.1
BRVK                               pmax     pmax
      comp=Z,25nm,1.2s
BRVK  Borovoye            90.88 323  P        P        22 40 04.9 -2.0
BRVK                               IAmb     IAmb     22 40 08.3
      comp=Z,23nm,1.1s
LTY   Liberty             90.94  43  IAMs_20  IAMs_20  23 12 56.7
      comp=Z,2µm,22.0s
MDPB  Devils Postpil      90.94  52  IAMs_20  IAMs_20  23 16 27.2
      comp=Z,1µm,20.0s
PAHR  Pah Rah Range       90.94  50  IAMs_20  IAMs_20  23 12 08.3
      comp=Z,2µm,22.0s
OMMB  Old Mammoth Mi      91.00  52  IAMs_20  IAMs_20  23 16 39.8
      comp=Z,1µm,20.0s
ISA   Isabella, Lake      91.21  54  IAMs_20  IAMs_20  23 15 10.4
      comp=Z,1µm,19.0s
F07A  Phinny Hill Vi      91.28  44  IAMs_20  IAMs_20  23 16 27.7
      comp=Z,2µm,20.0s
MWC   Mount Wilson        91.40  56  IAmb     IAmb     22 40 28.8
      comp=Z,35nm,1.4s
MWC                                IAMs_20  IAMs_20  23 18 41.5
      comp=Z,1µm,18.0s
RYN   Ryan                91.49  52  IAmb     IAmb     22 40 15.8
      comp=Z,16nm,1.1s
RYN                                IAMs_20  IAMs_20  23 18 10.5
      comp=Z,1µm,19.0s
HAWA  Hanford             91.61  44  IAMs_20  IAMs_20  23 13 50.4
      comp=Z,2µm,21.0s
CWC   Cottonwood Cre      91.61  54  P        P        22 40 11.8 +0.9
      baz=264
NVAR  Mina Array Bea      91.64  52  P        P        22 40 12.3 +1.3
      comp=Z,14nm,1.0s,baz=252,slow=6.2,SNR=22
NVAR                               LR       LR       23 18 02.7
      comp=Z,649nm,18.2s,baz=276,slow=33
NVAR  Mina Array Bea      91.64  52  P        P        22 40 11.5 +0.5
BFSC  Mount Baldy Ra      91.73  56  P        P        22 40 11.6 +0.2
      baz=264
NV11  Mina Array Sit      91.75  52  IAmb     IAmb     22 40 17.2
      comp=Z,19nm,1.1s
LRMC  Laurel Mtn Rad      91.83  55  P        P        22 40 12.1 +0.2
      baz=264
E08A  Dider Farm, El      91.94  44  IAMs_20  IAMs_20  23 16 00.3
      comp=Z,2µm,20.0s
J08A  Circle Bar Ran      92.02  47  IAmb     IAmb     22 40 51.9
      comp=Z,27nm,1.7s
MPMC  Manual Prospec      92.04  54  P        P        22 40 13.7 +0.8
      baz=264
109C  Camp Elliot, M      92.05  57  IAMs_20  IAMs_20  23 16 34.1
      comp=Z,2µm,21.0s
D08A  Wollman Farm,       92.10  43  IAMs_20  IAMs_20  23 13 32.4
      comp=Z,2µm,22.0s
GRAC  Grapevine Rang      92.23  53  P        P        22 40 15.3 +1.7
      baz=264
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BAR   Barrett             92.40  58  IAmb     IAmb     22 40 20.3
      comp=Z,30nm,1.2s
BAR                                IAMs_20  IAMs_20  23 15 26.2
      comp=Z,2µm,21.0s
C36M  Paulatuk            92.47  21  IAmb     IAmb     22 40 17.9
      comp=Z,17nm,1.1s
C36M                               IAMs_20  IAMs_20  23 21 04.8
      comp=Z,1µm,20.0s
GSC   Goldstone, Bar      92.53  55  IAMs_20  IAMs_20  23 13 42.4
      comp=Z,1µm,21.0s
FURC  Furnace Creek,      92.59  54  P        P        22 40 16.9 +1.8
      baz=265
MONP2 Monument Peak       92.63  57  P        P        22 40 17.4 +1.7
      baz=265
PFO   Pinyon Flats O      92.66  57  P        P        22 40 17.1 +1.4
      comp=Z,5.0nm,1.0s,baz=118,slow=5.6,SNR=4.1
PFO   Pinyon Flats O      92.66  57  P        P        22 40 13.5 -2.2
PFO                                pmax     pmax
      comp=Z,29nm,1.6s
PFO                                MLR      MLR
      comp=Z,2µm,19.0s
PFO   Pinyon Flats O      92.66  57  P        P        22 40 13.5 -2.2
PFO                                IAmb     IAmb     22 40 52.1
      comp=Z,29nm,1.6s
PFO   Pinyon Flats O      92.66  57  IAMs_20  IAMs_20  23 15 33.2
      comp=Z,2µm,19.0s
PFO   Pinyon Flats O      92.66  57  P        P        22 40 17.2 +1.5
      baz=265
XPFO  Pion Flat           92.66  57  P        P        22 40 13.5 -2.2
XPFO                               IAmb     IAmb     22 40 52.2
      comp=Z,29nm,1.6s
XPFO  Pion Flat           92.66  57  IAMs_20  IAMs_20  23 15 56.2
      comp=Z,2µm,19.0s
IKP   In-Ko-Pah, Jac      92.87  58  P        P        22 40 18.5 +1.9
      baz=265
BELC  Belle Mtn. Jos      93.08  56  P        P        22 40 19.6 +2.0
      baz=265
TPNV  Topopah Spring      93.12  53  IAMs_20  IAMs_20  23 16 53.0
      comp=Z,2µm,20.0s
TPNV  Topopah Spring      93.12  53  P        P        22 40 19.0 +1.2
      baz=265
F10A  Beach Ranch, E      93.16  44  IAMs_20  IAMs_20  23 14 03.5
      comp=Z,2µm,22.0s
SYO   Syowa Base          93.19 199⇓ePcP      PcP      22 40 18.8 +1.0
SYO   Syowa Base          93.19 199⇓epP       pP       22 40 29.0 -0.3
TUQ   Turquoise Moun      93.26  55  P        P        22 40 19.4 +0.9
      baz=265
GMRC  Granite Mounta      93.42  56  P        P        22 40 21.3 +2.1
      baz=265
NEW   Newport             93.42  42  P        P        22 40 20.7 +1.9
      comp=Z,5.1nm,0.9s,baz=256,slow=5.1,SNR=4.7
BC3   Big Chuckawall      93.50  57  P        P        22 40 21.2 +1.6
      baz=265
R11A  Troy Canyon, C      93.76  52  P        P        22 40 21.7 +1.0
      baz=266
IRM   Iron Mountain       93.79  56  P        P        22 40 22.8 +1.9
      baz=266
SHPR  Sheep Range         93.96  54  IAmb     IAmb     22 40 46.0
      comp=Z,19nm,1.6s
SHPR                               IAMs_20  IAMs_20  23 16 50.3
      comp=Z,2µm,20.0s
GLA   Glamis              93.98  57  IAmb     IAmb     22 40 28.7
      comp=Z,22nm,1.1s
GLA                                IAMs_20  IAMs_20  23 16 45.0
      comp=Z,2µm,19.0s
GLA   Glamis              93.98  57  P        P        22 40 23.8 +2.1
      baz=266
ELK   Elko                94.20  50  P        P        22 40 23.7 +0.9
      comp=Z,4.8nm,1.0s,baz=253,slow=6.1,SNR=5.1
ELK   Elko                94.20  50  IAMs_20  IAMs_20  23 15 19.4
      comp=Z,1µm,22.0s
Y12C  Blythe              94.28  57  P        P        22 40 25.9 +2.8
      baz=266
PDMCI Parker Dam,Lak      94.63  56  P        P        22 40 27.1 +2.5
      baz=266
113A  Mohawk Valley,      94.85  58  IAMs_20  IAMs_20  23 17 01.1
      comp=Z,2µm,20.0s
MSO   Missoula            95.48  44  IAMs_20  IAMs_20  23 15 48.0
      comp=Z,2µm,22.0s
Y14A  Wickenburg          95.55  57  IAMs_20  IAMs_20  23 17 25.7
      comp=Z,1µm,20.0s
214A  Organ Pipe Nat      95.60  59  IAMs_20  IAMs_20  23 17 55.2
      comp=Z,1µm,20.0s
214A  Organ Pipe Nat      95.60  59  P        P        22 40 32.3 +3.1
      baz=267
YKA   Yellowknife Ar      95.66  28  P        P        22 40 28.6  0.0
      comp=Z,9.8nm,1.2s,baz=268,slow=4.3,SNR=19
YKA                                pP       sP       22 40 45.3 -0.2
      comp=Z,3.2nm,0.8s,baz=264,slow=4.2,SNR=4.0
YKA                                PP       PP       22 44 18.2 -2.1
      comp=Z,2.8nm,1.1s,baz=265,slow=7.3,SNR=3.9
YKA                                PKKPbc   PKKPbc   22 57 18.8 -2.9
      comp=Z,3.4nm,1.0s,baz=89,slow=3.2,SNR=18
YKA                                LR       LR       23 19 25.7
      comp=Z,741nm,20.6s,baz=0.0,slow=33
SRIG  Santa Rosalia       95.83  63  IAMs_20  IAMs_20  23 17 48.5
      comp=Z,2µm,20.0s
DUG   Dugway, Tooele      96.01  50  IAMs_20  IAMs_20  23 15 30.5
      comp=Z,1µm,21.0s
U15A  North Rim           96.26  54  IAMs_20  IAMs_20  23 18 32.2
      comp=Z,1µm,20.0s
SVE   Sverdlovsk          96.71 326 eP        P        22 40 34.3 +0.8
SVE                                pmax     pmax
      comp=Z,21nm,1.7s
SVE                                MLR      MLR
      comp=Z,551nm,18.0s
X16A  Lo Mia Camp, P      96.87  56  IAMs_20  IAMs_20  23 18 29.5
      comp=Z,1µm,20.0s
ABKAR Akbulak array       97.07 319  P        P        22 40 33.1 -2.2
TUC   Tucson              97.34  58  IAMs_20  IAMs_20  23 19 08.1
      comp=Z,2µm,19.0s
FLWY  Flagg Ranch         97.69  46  IAMs_20  IAMs_20  23 20 26.6
      comp=Z,2µm,20.0s
ARU   Arti                97.86 326  LR       LR       23 26 01.7
      comp=Z,514nm,20.3s,baz=83,slow=36
ARU   Arti                97.86 326d iP       P        22 40 37.6 -1.1
ARU                                *PP      sP       22 40 56.6 +1.0
ARU                                                  22 44 36.1
ARU                                S        SKSac    22 51 09.6 -3.4
ARU                                pmax     pmax
      comp=Z,18nm,1.6s
ARU                                MLR      MLR
      comp=Z,576nm,21.0s
ARU   Arti                97.86 326  P        P        22 40 36.9 -1.9
ARU                                IAmb     IAmb     22 41 05.0
      comp=Z,31nm,1.6s
LKWY  Lake                97.91  46  IAMs_20  IAMs_20  23 20 26.3
      comp=Z,2µm,20.0s
GEYT  Alibeck             98.26 307  P        P        22 40 39.6 -1.4
      comp=Z,3.3nm,0.9s,baz=275,slow=3.7,SNR=10.0
GEYT                               PP       PP       22 44 36.2 -5.0
      comp=Z,2.0nm,0.7s,baz=80,slow=9.2,SNR=4.7
GEYT                               LR       LR       23 27 45.1
      comp=Z,268nm,20.2s,baz=185,slow=37
GEYT  Alibeck             98.26 307  P        P        22 40 39.0 -2.1
AKTO  Aktyubinsk          98.32 320  LR       LR       23 24 39.5
      comp=Z,276nm,21.1s,baz=80,slow=35
PDAR  Pinedale Array      98.52  48  P        P        22 40 42.1 -0.2
      comp=Z,2.5nm,1.0s,baz=255,slow=2.9,SNR=11
PDAR                               PP       PP       22 44 40.5 -2.6
      comp=Z,2.8nm,1.2s,baz=292,slow=4.0,SNR=4.1
PDAR                               LR       LR       23 21 04.8
      comp=Z,1µm,19.6s,baz=268,slow=33
PDAR  Pinedale Array      98.52  48  P        P        22 40 40.0 -2.3
319A  Douglas             98.59  59  IAMs_20  IAMs_20  23 19 12.3
      comp=Z,2µm,20.0s
MVCO  Mesa Verde          99.32  53  IAMs_20  IAMs_20  23 21 22.2
      comp=Z,1µm,20.0s
O20A  White River Ci      99.52  50  IAMs_20  IAMs_20  23 18 32.2
      comp=Z,1µm,22.0s
UOSS  Minazif             99.59 294  P        Pdif     22 40 42.9 -4.3
UOSS                               IAmb     IAmb     22 40 47.3
      comp=Z,23nm,1.1s
NVL   N'lazarevskaya      99.59 192 eP        Pdif     22 40 48.8 +2.6
NVL                                pmax     pmax
      comp=Z,15nm,1.1s
121A  Cookes Peak, D      99.88  58  IAMs_20  IAMs_20  23 20 38.4
      comp=Z,2µm,19.0s
RWWY  Rawlins            100.27  49  IAMs_20  IAMs_20  23 22 29.1
      comp=Z,1µm,20.0s
Y22D  IRIS PASSCAL I     100.61  57  IAMs_20  IAMs_20  23 20 37.5
      comp=Z,1µm,20.0s
S22A  4UR Ranch, Cre     100.65  53  IAMs_20  IAMs_20  23 21 20.2
      comp=Z,1µm,20.0s
K22A  Casper             100.75  48  IAMs_20  IAMs_20  23 18 37.7
      comp=Z,1µm,22.0s
LAO   LASA Array         100.79  44  IAMs_20  IAMs_20  23 18 45.3
      comp=Z,2µm,22.0s
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EPT   El Paso            100.96  59  IAMs_20  IAMs_20  23 17 45.1
      comp=Z,2µm,22.0s
SNAA  Sanae              101.24 187  P        Pdif     22 40 54.1 +0.4
      comp=Z,2.2nm,1.0s,baz=297,slow=8.1,SNR=4.0
SNAA  Sanae              101.24 187⇓eP        Pdif     22 40 53.5 -0.2
SNAA  Sanae              101.24 187           Pdif     22 40 50.6 -3.1
SNAA                               PP       PP       22 45 00.4 -2.0
PHWY  Pilot Hill         101.60  49  IAMs_20  IAMs_20  23 23 22.3
      comp=Z,1µm,20.0s
SDCO  Great Sand Dun     101.70  53  IAMs_20  IAMs_20  23 23 04.0
      comp=Z,1µm,19.0s
MNTX  Cornudas Mount     101.92  59  IAMs_20  IAMs_20  23 21 09.5
      comp=Z,2µm,20.0s
DGMT  Dagmar             102.03  42  IAMs_20  IAMs_20  23 22 49.1
      comp=Z,2µm,20.0s
T25A  Trinidad           102.59  53  IAMs_20  IAMs_20  23 21 29.6
      comp=Z,1µm,21.0s
FFC   Flin Flon          102.70  35  IAMs_20  IAMs_20  23 25 26.3
      comp=Z,1µm,20.0s
TXAR  Lajitas Array      103.43  61  Pdiff    Pdif     22 41 08.2 +3.8
      comp=Z,0.4nm,0.7s,baz=262,slow=4.7,SNR=3.7
TXAR                               PKKPbc   PKKPbc   22 56 59.2 +0.5
      comp=Z,0.8nm,0.8s,baz=108,slow=4.1,SNR=6.6
TXAR  Lajitas Array      103.43  61  P        Pdif     22 40 59.8 -4.6
TXAR  Lajitas Array      103.43  61           Pdif     22 40 59.8 -4.6
PRGR  Permogore          103.81 332 eP        Pdif     22 41 01.5 -3.6
PRGR                               pmax     pmax
      comp=Z,9.0nm,0.6s
KSCO  Kaye Shedlock'     103.89  51  IAMs_20  IAMs_20  23 20 33.0
      comp=Z,1µm,22.0s
MSTX  Muleshoe           104.06  57  IAMs_20  IAMs_20  23 22 59.8
      comp=Z,955nm,20.0s
OGNE  Ogallala           104.20  49  IAMs_20  IAMs_20  23 24 35.2
      comp=Z,1µm,21.0s
ZAIG  Zacatecas          104.46  68  IAMs_20  IAMs_20  23 25 05.5
      comp=Z,964nm,19.0s
AMTX  Amarillo           104.91  56  IAMs_20  IAMs_20  23 23 38.3
      comp=Z,1µm,21.0s
TULEG Thule              105.53  10  IAMs_20  IAMs_20  23 26 54.2
      comp=Z,1µm,19.0s
SUSD  Miller             106.08  45  IAMs_20  IAMs_20  23 22 35.5
      comp=Z,1µm,21.0s
CBKS  Cedar Bluff        106.16  51  IAMs_20  IAMs_20  23 20 52.9
      comp=Z,1µm,22.0s
APA   Apatity            106.70 340⇑iP        Pdif     22 41 36.0 +18
APA                                pmax     pmax
      comp=Z,4.0nm,0.9s
APA                                MLR      MLR
      comp=Z,900nm,28.0s
ABTX  Abilene, Hawle     106.75  58  IAMs_20  IAMs_20  23 21 45.2
      comp=Z,1µm,22.0s
KLMR  Klimovskoe         106.86 332 eP        Pdif     22 41 16.0 -2.7
KLMR                               pmax     pmax
      comp=Z,26nm,2.0s
KLMR                               MLR      MLR
      comp=Z,579nm,16.0s
KLMR  Klimovskoe         106.86 332 eP        Pdif     22 41 16.0 -2.7
KLMR                               AMP               22 41 34.9
      comp=Z,26nm,2.0s
KLMR                               LQ       LQ       23 17 47.1
KLMR                               LQ       LQ       23 17 47.1
KLMR                               LR       LR       23 20 23.1
KLMR                               AMP               23 32 45.9
      comp=Z,579nm,16.0s
D32A  Dogwood Acres,     107.00  43  IAMs_20  IAMs_20  23 25 44.7
      comp=Z,2µm,20.0s
BGNE  Belgrade           107.07  49  IAMs_20  IAMs_20  23 24 22.0
      comp=Z,1µm,20.0s
ULM   Lac du Bonnet      107.15  39  PP       PP       22 45 45.2 -2.1
      comp=Z,3.7nm,1.1s,baz=292,slow=7.8,SNR=4.6
ULM   Lac du Bonnet      107.15  39  IAMs_20  IAMs_20  23 31 49.4
      comp=Z,1µm,19.0s
833A  Chaparral WMA,     107.21  62  IAMs_20  IAMs_20  23 21 02.8
      comp=Z,1µm,22.0s
WMOK  Wichita Mounta     107.30  56  IAMs_20  IAMs_20  23 25 52.6
      comp=Z,1µm,20.0s
AGMN  Agassiz Nation     107.56  41  IAMs_20  IAMs_20  23 26 59.2
      comp=Z,2µm,20.0s
X34A  Smith Ranch, M     108.09  56  IAMs_20  IAMs_20  23 25 38.5
      comp=Z,1µm,20.0s
ARCES ARCESS Array B     108.18 343  PKKPbc   PKKPbc   22 56 44.1 -1.1
      comp=Z,2.6nm,0.9s,baz=214,slow=4.0,SNR=5.1
TLIG  Tlapa              108.19  73  IAMs_20  IAMs_20  23 26 49.8
      comp=Z,977nm,20.0s
KSU1  Kansas State U     108.55  51  IAMs_20  IAMs_20  23 25 13.2
      comp=Z,992nm,21.0s
735A  Kenedy             108.57  62  IAMs_20  IAMs_20  23 25 42.5
      comp=Z,1µm,21.0s
KVTX  Kingsville         108.57  63  IAMs_20  IAMs_20  23 26 55.1
      comp=Z,1µm,19.0s
WHTX  Lake Whitney,      108.64  58  IAMs_20  IAMs_20  23 31 40.1
      comp=Z,1µm,18.0s
Z35A  Perchaven, San     108.69  57  IAMs_20  IAMs_20  23 26 47.6
      comp=Z,1µm,20.0s
T35A  Sooner Cattle      108.90  53  IAMs_20  IAMs_20  23 30 01.8
      comp=Z,1µm,18.0s
AKH   Akhalkalaki        109.25 312 ⇑P        PP       22 46 06.6 +3.5
KBZ   Khabaz             109.28 314  PP       PP       22 46 02.5 -0.4
      comp=Z,3.7nm,1.0s,baz=57,slow=14,SNR=9.1
KIV   Kislovodsk         109.38 315 ⇑P        PP       22 46 05.0 +1.1
TUL1  Leonard            109.61  54  IAMs_20  IAMs_20  23 28 35.5
      comp=Z,1µm,20.0s
237A  Washetta, Mont     110.03  58  IAMs_20  IAMs_20  23 23 36.3
      comp=Z,1µm,22.0s
SPMN  Marine on St.      110.25  44  IAMs_20  IAMs_20  23 24 15.7
      comp=Z,2µm,22.0s
OBN   Obninsk            110.26 327 eP        Pdif     22 41 34.9 +1.0
OBN                                i                 22 45 33.2
OBN                                e                 22 46 07.1
OBN                                ePPP     PPP      22 48 25.4
OBN                                pmax     pmax
      comp=Z,5.0nm,0.9s
OBN                                pmax     pmax
      comp=Z,4.0nm,1.2s
OBN                                MLR      MLR
      comp=Z,569nm,21.0s
EYMN  Ely                110.48  41  IAMs_20  IAMs_20  23 27 40.6
      comp=Z,2µm,20.0s
Z38A  Mt. Pleasant       110.59  57  IAMs_20  IAMs_20  23 28 16.8
      comp=Z,1µm,19.0s
BCA   Borcka             110.63 312 ⇑P        PP       22 46 00.9  -12
U38A  Gravette           110.66  53  IAMs_20  IAMs_20  23 29 07.3
      comp=Z,965nm,20.0s
E38A  The Farm, Brul     110.78  42  IAMs_20  IAMs_20  23 28 09.6
      comp=Z,1µm,20.0s
NATX  Nacogdoches        111.03  58  IAMs_20  IAMs_20  23 24 05.7
      comp=Z,1µm,22.0s
HHAR  Hobbs              111.04  53  IAMs_20  IAMs_20  23 29 18.4
      comp=Z,1µm,20.0s
S39A  Bolivar            111.31  52  IAMs_20  IAMs_20  23 27 48.3
      comp=Z,1µm,20.0s
W39A  Magazine           111.32  55  IAMs_20  IAMs_20  23 29 36.0
      comp=Z,878nm,19.0s
SOC   Sochi              111.56 315 i PKIKP   PKiKP    22 45 35.4 -2.4
SOC                                e                 22 46 16.7
SOC                                ePPP     PPP      22 48 46.4
SOC                                ePS      SP       22 55 37.5 -9.2
SOC                                eSSS     SSS      23 05 54.5
SOC                                MLR      MLR
      comp=Z,374nm,21.0s
U40A  Yellville          111.90  53  IAMs_20  IAMs_20  23 30 23.0
      comp=Z,940nm,20.0s
G40A  Rib Lake           112.03  43  IAMs_20  IAMs_20  23 25 55.7
      comp=Z,2µm,22.0s
I40A  Norwalk            112.08  45  IAMs_20  IAMs_20  23 35 35.1
      comp=Z,800nm,20.0s
WLAR  White Oak Lake     112.09  56  IAMs_20  IAMs_20  23 29 17.4
      comp=Z,903nm,19.0s
X40A  Basin Creek Fa     112.20  55  IAMs_20  IAMs_20  23 28 18.3
      comp=Z,1µm,20.0s
MGMO  Mountain Grove     112.23  52  IAMs_20  IAMs_20  23 29 42.7
      comp=Z,971nm,20.0s
Z41A  Richland Creek     112.40  56  IAMs_20  IAMs_20  23 30 48.8
      comp=Z,929nm,20.0s
FINES FINESS Array B     112.48 336  PP       PP       22 46 26.4 +1.2
      comp=Z,2.8nm,0.9s,baz=343,slow=6.0,SNR=4.2
FINES                              PKKPbc   PKKPbc   22 56 29.0 -2.0
      comp=Z,1.3nm,0.7s,baz=256,slow=2.0,SNR=10
FCAR  Ozark Folk Cen     112.56  54  IAMs_20  IAMs_20  23 30 52.5
      comp=Z,968nm,19.0s
W41B  Gary Mavity, V     112.57  54  IAMs_20  IAMs_20  23 29 51.0
      comp=Z,1µm,20.0s
CCM   Cathedral Cave     112.86  51  IAMs_20  IAMs_20  23 26 41.6
      comp=Z,1µm,21.0s
342A  Flagon Creek P     113.06  58  IAMs_20  IAMs_20  23 29 01.3
      comp=Z,1µm,20.0s
CCAR  Cane Creek         113.16  56  IAMs_20  IAMs_20  23 29 22.6
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	comp=Z,985nm,20.0s						
I42A	Draeger Farm,	113.27	45	IAMs_20	IAMs_20	23 38 03.7	
	comp=Z,959nm,18.0s						
LCAR	Lake Charles	113.30	53	IAMs_20	IAMs_20	23 26 02.2	
	comp=Z,876nm,22.0s						
FVM	French Village	113.51	51	IAMs_20	IAMs_20	23 26 38.7	
	comp=Z,1µm,22.0s						
143A	Socs Landing,	113.64	57	IAMs_20	IAMs_20	23 32 21.7	
	comp=Z,972nm,19.0s						
PBMO	Poplar Bluff	113.74	52	IAMs_20	IAMs_20	23 29 11.8	
	comp=Z,1µm,20.0s						
X43A	Marvell	113.79	55	IAMs_20	IAMs_20	23 29 28.3	
	comp=Z,1µm,20.0s						
E43A	Lone Tree Farm	113.87	42	IAMs_20	IAMs_20	23 29 55.3	
	comp=Z,1µm,20.0s						
GNAR	Gosnell	114.22	53	IAMs_20	IAMs_20	23 32 00.6	
	comp=Z,1µm,20.0s						
CCIG	Comitan	114.35	75	IAMs_20	IAMs_20	23 23 59.3	
	comp=Z,1µm,21.0s						
PVMO	Portageville	114.39	53	IAMs_20	IAMs_20	23 34 03.0	
	comp=Z,982nm,18.0s						
344A	Westbrook Farm	114.39	58	IAMs_20	IAMs_20	23 31 56.7	
	comp=Z,1µm,19.0s						
MET	Memphis--Engin	114.45	54	IAMs_20	IAMs_20	23 29 42.7	
	comp=Z,873nm,20.0s						
VBMS	Vicksburg	114.46	57	IAMs_20	IAMs_20	23 32 00.3	
	comp=Z,987nm,20.0s						
S44A	Carbondale	114.48	51	IAMs_20	IAMs_20	23 31 03.3	
	comp=Z,1µm,20.0s						
O44A	Mansfield	114.53	48	IAMs_20	IAMs_20	23 30 49.3	
	comp=Z,1µm,21.0s						
W45A	Hickory Valley	115.04	54	IAMs_20	IAMs_20	23 29 52.4	
	comp=Z,772nm,20.0s						
T45A	Paducah	115.10	52	IAMs_20	IAMs_20	23 30 51.6	
	comp=Z,1µm,20.0s						
J45A	Montague	115.16	44	IAMs_20	IAMs_20	23 30 15.6	
	comp=Z,836nm,21.0s						
346A	Big Creek Wild	115.47	58	IAMs_20	IAMs_20	23 37 37.3	
	comp=Z,886nm,18.0s						
P46A	Rosedale	115.60	49	IAMs_20	IAMs_20	23 28 43.7	
	comp=Z,967nm,20.0s						
USIN	University of	115.64	51	IAMs_20	IAMs_20	23 26 52.2	
	comp=Z,1µm,22.0s						
WVT	Waverly	115.93	53	IAMs_20	IAMs_20	23 32 27.6	
	comp=Z,1µm,20.0s						
PLAL	Pickwick Lake	115.97	54	IAMs_20	IAMs_20	23 30 29.0	
	comp=Z,1µm,21.0s						
AKASG	Malin Array Be	116.05	325	PKP	PKPdf	22 45 46.9	+0.6
	comp=Z,0.3nm,0.2s,baz=59,slow=2.4,SNR=9.6						
AKASG				PP	PP	22 46 52.1	+1.2
	comp=Z,3.7nm,1.0s,baz=60,slow=7.6,SNR=9.1						
AKASG	Malin Array Be	116.05	325	PKIKP	PKiKP	22 45 45.1	-1.1
AKASG	Malin Array Be	116.05	325		PKiKP	22 45 45.1	-1.1
T47A	Sharon Grove	116.31	52	IAMs_20	IAMs_20	23 31 56.5	
	comp=Z,926nm,20.0s						
J47A	Sunmer	116.31	44	IAMs_20	IAMs_20	23 31 19.0	
	comp=Z,1µm,20.0s						
KMBO	Kilima Mbogo	116.61	266	PKP	PKPdf	22 45 48.8	+0.1
	comp=Z,2.5nm,0.9s,baz=49,slow=3.4,SNR=5.4						
V48A	Smith Brothers	116.81	53	IAMs_20	IAMs_20	23 29 00.1	
	comp=Z,1µm,22.0s						
X48A	Hartselle	116.91	54	IAMs_20	IAMs_20	23 32 10.9	
	comp=Z,1µm,20.0s						
BRTR	Keskin Array B	116.94	312	PKP	PKPdf	22 45 47.7	-0.8
	comp=Z,0.9nm,0.9s,baz=184,slow=3.7,SNR=4.0						
BRTR				PP	PP	22 46 58.0	+0.2
	comp=Z,6.0nm,1.0s,baz=107,slow=6.6,SNR=14						
BRTR	Keskin Array B	116.94	312	PKIKP	PKPdf	22 45 47.0	-1.5
BRTR	Keskin Array B	116.94	312		PKPdf	22 45 47.0	-1.5
P48A	Milroy	116.97	48	IAMs_20	IAMs_20	23 29 34.9	
	comp=Z,1µm,22.0s						
J48A	Bridge Port	117.00	44	IAMs_20	IAMs_20	23 31 50.5	
	comp=Z,1µm,20.0s						
CLTN	Cedars of Leba	117.12	52	IAMs_20	IAMs_20	23 32 36.2	
	comp=Z,943nm,20.0s						
LRAL	Lakeview Retre	117.24	56	IAMs_20	IAMs_20	23 35 21.8	
	comp=Z,1µm,20.0s						
AAM	Ann Arbor	117.41	45	IAMs_20	IAMs_20	23 33 42.4	
	comp=Z,974nm,20.0s						
U49A	Red Boiling Sp	117.45	52	IAMs_20	IAMs_20	23 28 46.9	
	comp=Z,841nm,22.0s						
T49A	Edmonton	117.50	51	IAMs_20	IAMs_20	23 32 36.2	
	comp=Z,1µm,20.0s						
BRAL	Brewton	117.55	58	IAMs_20	IAMs_20	23 28 44.2	
	comp=Z,1µm,20.0s						
Y49A	Blount Mountai	117.55	55	IAMs_20	IAMs_20	23 33 27.0	
	comp=Z,1µm,20.0s						
SWET	Sewanee	117.64	53	IAMs_20	IAMs_20	23 29 26.0	
	comp=Z,1µm,22.0s						
SORM	Soroca	117.64	322	⇑P	PKiKP	22 45 50.2	+0.8
SORM	Soroca	117.64	322	⇑PKIKP	PKiKP	22 45 50.2	+0.8
K50A	Casco	117.98	44	IAMs_20	IAMs_20	23 32 29.3	
	comp=Z,1µm,20.0s						
FPAL	Fort Paine	118.05	54	IAMs_20	IAMs_20	23 31 40.9	
	comp=Z,1µm,20.0s						
250A	Grady	118.05	57	IAMs_20	IAMs_20	23 34 00.4	
	comp=Z,787nm,20.0s						
Z50A	Ashland	118.08	55	IAMs_20	IAMs_20	23 33 37.9	
	comp=Z,1µm,20.0s						
M50A	Fremont	118.13	46	IAMs_20	IAMs_20	23 32 36.5	
	comp=Z,1µm,20.0s						
W50A	Signal Mountai	118.13	53	IAMs_20	IAMs_20	23 29 51.1	
	comp=Z,1µm,22.0s						
PLCA	Paso Flores	118.20	143	PKP	PKPdf	22 45 50.4	-0.5
	comp=Z,1.0nm,0.6s,baz=172,slow=22,SNR=3.3						
PLCA	Paso Flores	118.20	143	PKIKP	PKPdf	22 45 47.2	-3.7
PLCA	Paso Flores	118.20	143		PKPdf	22 45 47.2	-3.7
NB2	NORSAR Subarra	118.27	341	PKPdf	PKiKP	22 45 52.8	+2.5
	comp=Z,1.5nm,1.1s,baz=39,slow=1.9						
NOA	NORSAR Array B	118.27	341	PKP	PKPdf	22 45 50.3	0.0
	comp=Z,0.8nm,0.8s,baz=37,slow=1.8,SNR=3.8						
CPCT	Cooper Cave	118.70	53	IAMs_20	IAMs_20	23 32 50.1	
	comp=Z,1µm,21.0s						
P51A	Williamsport	118.71	48	IAMs_20	IAMs_20	23 30 27.1	
	comp=Z,1µm,21.0s						
V51A	Loudon	118.75	52	IAMs_20	IAMs_20	23 31 45.3	
	comp=Z,1µm,21.0s						
TGUH	Tegucigalpa,Un	119.09	77	IAMs_20	IAMs_20	23 29 49.9	
	comp=Z,1µm,19.0s						
152A	Waverly Hall	119.19	56	IAMs_20	IAMs_20	23 41 52.4	
	comp=Z,731nm,19.0s						
VLDQ	Val d'Or	119.24	37	IAMs_20	IAMs_20	23 44 32.1	
	comp=Z,829nm,19.0s						
TKL	Tuckaleechee C	119.24	52	IAMs_20	IAMs_20	23 31 48.3	
	comp=Z,1µm,20.0s						
W52A	Murphy	119.26	53	IAMs_20	IAMs_20	23 32 44.9	
	comp=Z,1µm,20.0s						
352A	Blakely	119.27	57	IAMs_20	IAMs_20	23 33 33.7	
	comp=Z,761nm,20.0s						
M52A	Chesterland	119.28	45	IAMs_20	IAMs_20	23 34 56.9	
	comp=Z,1µm,20.0s						
V52A	Sevierville	119.33	52	IAMs_20	IAMs_20	23 32 45.7	
	comp=Z,1µm,20.0s						
Y52A	Lilburn	119.45	54	IAMs_20	IAMs_20	23 35 37.2	
	comp=Z,1µm,19.0s						
D53A	Lac Vacive, Po	119.55	38	IAMs_20	IAMs_20	23 40 31.1	
	comp=Z,1µm,19.0s						
BURAR	Bucovina Array	119.77	323	⇓P	PKiKP	22 45 58.1	+4.4
BURAR	Bucovina Array	119.77	323	⇓PKIKP	PKiKP	22 45 58.1	+4.4
R53A	Hurricane	119.89	49	IAMs_20	IAMs_20	23 29 55.3	
	comp=Z,861nm,22.0s						
N53A	Lisbon	119.90	46	P	PKPdf	22 45 53.9	-0.1
	baz=290						
ERPA	Erie	120.04	44	IAMs_20	IAMs_20	23 34 43.7	
	comp=Z,916nm,20.0s						
GOGA	Godfrey	120.04	55	IAMs_20	IAMs_20	23 29 58.9	
	comp=Z,954nm,22.0s						
BG3	Lake Jocassee	120.08	53	IAMs_20	IAMs_20	23 33 29.5	
	comp=Z,910nm,20.0s						
BOSA	Boshof	120.10	232	PKP	PKiKP	22 45 55.6	+0.6
	comp=Z,6.6nm,0.9s,baz=130,slow=2.0,SNR=9.3						
D54A	Lac Fusel, La	120.15	38	P	PKPdf	22 45 52.7	-1.5
	baz=297						
TIGA	Tifton	120.40	57	IAMs_20	IAMs_20	23 34 13.5	
	comp=Z,925nm,21.0s						
N54A	Moraine State	120.45	45	IAMs_20	IAMs_20	23 34 47.9	
	comp=Z,1µm,20.0s						
M54A	Oil Creek Stat	120.48	45	IAMs_20	IAMs_20	23 36 39.6	
	comp=Z,1µm,20.0s						
U54A	Nelsons Funny	120.52	51	IAMs_20	IAMs_20	23 30 39.3	
	comp=Z,1µm,22.0s						
154A	Montrose	120.53	55	IAMs_20	IAMs_20	23 34 31.8	
	comp=Z,1µm,20.0s						
HODGE	Hodges	120.81	53	IAMs_20	IAMs_20	23 35 00.1	
	comp=Z,1µm,19.0s						
VOIR		120.84	320	⇓P	PKiKP	22 46 01.0	+5.2
VOIR		120.84	320	⇓PKIKP	PKiKP	22 46 01.0	+5.2
KOLS	Kolonicke sedl	120.86	325	*e*PKIKP	PKiKP	22 46 00.1	+4.4
KOLS	Kolonicke sedl	120.86	325	*e*PKP	PKiKP	22 46 00.1	+4.4
G55A	Calabogie	120.96	40	P	PKPdf	22 45 54.6	-1.2
	baz=296						
PAULI	Pauline	121.01	53	IAMs_20	IAMs_20	23 34 26.1	
	comp=Z,1µm,20.0s						
SCHQ	Schefferville	121.07	26	IAMs_20	IAMs_20	23 35 33.4	
	comp=Z,1µm,21.0s						
M55A	Ridgway	121.13	44	IAMs_20	IAMs_20	23 37 36.6	
	comp=Z,978nm,20.0s						
ARR	Arges	121.13	321	⇓P	PKiKP	22 46 01.9	+5.5
255A	Hazlehurst	121.21	56	IAMs_20	IAMs_20	23 37 05.9	
	comp=Z,1µm,20.0s						
R55A	Marlinton	121.27	48	IAMs_20	IAMs_20	23 31 44.8	
	comp=Z,1µm,22.0s						
KMSC	Kings Mountain	121.30	52	IAMs_20	IAMs_20	23 33 31.8	
	comp=Z,1µm,21.0s						
LBTB	Lobatse	121.36	236	PKP	PKPdf	22 45 56.8	-0.6
	comp=Z,4.1nm,0.8s,baz=158,slow=0.8,SNR=7.1						
M56A	Emporium	121.53	44	IAMs_20	IAMs_20	23 37 58.2	
	comp=Z,934nm,20.0s						
SUR	Sutherland	121.63	226	PKP	PKPdf	22 45 57.9	+0.1
	comp=Z,14nm,1.0s,baz=228,slow=4.7,SNR=3.6						
DRGR		121.66	323	⇑P	PKiKP	22 46 01.0	+3.6
DRGR		121.66	323	⇑PKIKP	PKiKP	22 46 01.0	+3.6
O56A	Blue Knob Stat	121.71	46	IAMs_20	IAMs_20	23 35 36.2	
	comp=Z,858nm,20.0s						
656A	Willston	121.73	59	IAMs_20	IAMs_20	23 38 10.8	
	comp=Z,952nm,19.0s						
Z56A	Williston	121.76	54	IAMs_20	IAMs_20	23 34 54.4	
	comp=Z,1µm,20.0s						
SSPA	Standing Stone	122.06	45	IAMs_20	IAMs_20	23 37 56.3	
	comp=Z,1µm,20.0s						
HDC	Heredia	122.21	82	IAMs_20	IAMs_20	23 30 40.3	
	comp=Z,872nm,20.0s						
GZR	Gura Zlata	122.29	321	⇓P	PKiKP	22 46 02.3	+3.6
GZR	Gura Zlata	122.29	321	⇓PKIKP	PKiKP	22 46 02.3	+3.6
S57A	Dark Hollow, R	122.31	49	IAMs_20	IAMs_20	23 39 09.4	
	comp=Z,1µm,20.0s						
LANS	Liptovska Anna	122.32	326	*e*PKIKP	PKiKP	22 46 04.2	+5.6
LANS	Liptovska Anna	122.32	326	*e*PKP	PKiKP	22 46 04.2	+5.6
Y57A	Sumter	122.36	53	IAMs_20	IAMs_20	23 37 28.0	
	comp=Z,759nm,18.0s						
257A	Skidaway Islan	122.39	56	IAMs_20	IAMs_20	23 35 19.2	
	comp=Z,1µm,19.0s						
P57A	Homestead Farm	122.40	46	IAMs_20	IAMs_20	23 35 50.4	
	comp=Z,950nm,19.0s						
LSZ	Lusaka	122.52	248	PKIKP	PKiKP	22 46 00.3	+0.3
LSZ	Lusaka	122.52	248		PKiKP	22 46 00.3	+0.3
SIRR	Siria	122.55	323	⇑P	PKiKP	22 46 03.3	+4.2
LONY	Lake Ozonia	122.60	40	IAMs_20	IAMs_20	23 43 31.0	
	comp=Z,890nm,18.0s						
N58A	Sunbury	122.80	44	IAMs_20	IAMs_20	23 33 52.8	
	comp=Z,840nm,20.0s						
V58A	Windy Hill, Pi	122.83	51	IAMs_20	IAMs_20	23 32 23.4	
	comp=Z,1µm,22.0s						
BZS	Buzias	122.90	322	⇑P	PKiKP	22 46 03.7	+3.9
BZS	Buzias	122.90	322	⇑PKIKP	PKiKP	22 46 03.7	+3.9
Y58A	Scranton	122.97	53	IAMs_20	IAMs_20	23 39 05.1	
	comp=Z,818nm,20.0s						
MORC	Moravsky Berou	123.00	328	⇑P	PKiKP	22 46 01.7	+1.8
MORC	Moravsky Berou	123.00	328	⇑PKIKP	PKiKP	22 46 01.7	+1.8
MORC	Moravsky Berou	123.00	328	IAMs_20	IAMs_20	23 42 07.1	
	comp=Z,688nm,20.0s						
VYHS	Vyhne	123.03	326	*e*PKIKP	PKiKP	22 46 03.8	+3.8
VYHS	Vyhne	123.03	326	*e*PKP	PKiKP	22 46 03.8	+3.8
PAGS	Pennsylvania G	123.03	45	IAMs_20	IAMs_20	23 36 08.2	
	comp=Z,1µm,20.0s						
S58A	Poland Farm, P	123.03	48	IAMs_20	IAMs_20	23 32 40.5	
	comp=Z,1µm,22.0s						
FRNY	Flat Rock	123.12	39	IAMs_20	IAMs_20	23 36 12.8	
	comp=Z,1µm,20.0s						
NCB	Newcomb	123.12	40	IAMs_20	IAMs_20	23 43 58.0	
	comp=Z,1µm,18.0s						
KRLC	Kraliky	123.23	329	*e*PKP	PKiKP	22 46 02.7	+2.3
KRLC	Kraliky	123.23	329	*e*PKIKP	PKiKP	22 46 02.7	+2.3
OSTC	Ostas	123.23	329	*e*PKP	PKiKP	22 46 04.9	+4.6
MDVR	Moldovita	123.24	321	⇑P	PKiKP	22 46 02.8	+2.2
VTS	Vitosha	123.25	318	PKIKP	PKPdf	22 45 59.5	-1.0
VTS				MLR	MLR		
	comp=Z,400nm,21.0s						
VTS	Vitosha	123.25	318		PKPdf	22 45 59.5	-1.0
MVL	Millersville	123.39	45	IAMs_20	IAMs_20	23 36 19.4	
	comp=Z,1µm,20.0s						
Y59A	Loris	123.57	53	IAMs_20	IAMs_20	23 36 47.1	
	comp=Z,992nm,20.0s						
VRAC	Vranov	123.78	328	⇓P	PKiKP	22 46 03.9	+2.5
VRAC	Vranov	123.78	328	⇓PKIKP	PKiKP	22 46 03.9	+2.5
VT1	Waterbury	123.89	39	IAMs_20	IAMs_20	23 39 55.3	
	comp=Z,1µm,19.0s						
MODS	Modra-Piesok	123.95	327	*e*PKIKP	PKiKP	22 46 05.1	+3.3
MODS	Modra-Piesok	123.95	327	*e*PKP	PKiKP	22 46 05.1	+3.3
P60A	Greenville	123.97	45	IAMs_20	IAMs_20	23 36 55.8	
	comp=Z,1µm,19.0s						
PVCC	Panska Ves	124.08	330	*e*PKP	PKiKP	22 46 06.6	+4.7
PVCC	Panska Ves	124.08	330	*e*PKIKP	PKiKP	22 46 06.6	+4.7
Q60A	Greensboro	124.14	46	IAMs_20	IAMs_20	23 42 10.5	
	comp=Z,964nm,19.0s						
BRG	Berggiesshubel	124.17	331	*e*PKP	PKiKP	22 46 04.6	+2.5
	comp=Z,7.0nm,1.0s						
BRG				*e*PP	PP	22 47 52.3	+6.0
	comp=Z,10nm,1.5s						
BRG				SDIFF		22 55 20.0	
BRG				SS	SKKSdf	23 03 56.0	+18
T60A	Surry	124.18	49	IAMs_20	IAMs_20	23 33 36.9	
	comp=Z,1µm,21.0s						
CLL	Collm	124.34	332	*e*(PKPdf)	PKiKP	22 46 06.0	+3.6
	comp=Z,8.0nm,0.9s						
CLL				*e*PP	PP	22 47 47.0	-0.4
CLL				*e*		22 48 17.0	
CLL				*e*		22 49 18.0	
CLL				*e*PPP	PPP	22 50 30.0	
CLL				*e*		22 51 42.0	
CLL				*e*		22 57 18.0	
CLL				*e*PS	PS	22 57 48.0	+0.9
CLL				*e*PPS	PPS	22 59 18.0	
CLL				*e*PPPrev		23 03 00.0	
CLL				*e*SS	SS	23 04 48.0	+12
CLL				*e*SSS	SSS	23 09 30.0	
CLL				*e*SSSS		23 12 48.0	
CLL				Lm	MLR	23 40 00.0	
	comp=N,200nm,21.0s						
CLL				Lm	MLR	23 40 00.0	
	comp=E,300nm,21.7s						
CLL				Lm	MLR	23 40 00.0	
	comp=Z,500nm,21.3s						
CLL	Collm	124.34	332	*e*PKIKP	PKiKP	22 46 06.0	+3.6
CLL				*e*		22 47 47.0	
CLL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CLL				MLR	MLR		
	comp=Z,500nm,21.3s						
BRNJ	Basking Ridge	124.35	44	IAMs_20	IAMs_20	23 36 17.9	
	comp=Z,1µm,20.0s						
TREC	Trest	124.37	328	*e*PKP	PKiKP	22 46 06.9	+4.3
TREC	Trest	124.37	328	*e*PKIKP	PKiKP	22 46 06.9	+4.3
LBNH	Lisbon	124.45	39	IAMs_20	IAMs_20	23 39 16.9	
	comp=Z,1µm,20.0s						
HNH	Hanover	124.49	40	IAMs_20	IAMs_20	23 39 13.0	
	comp=Z,1µm,19.0s						
P61A	Hammonton	124.61	45	IAMs_20	IAMs_20	23 37 23.0	
	comp=Z,1µm,20.0s						
D62A	Allapoint, All	124.66	35	IAMs_20	IAMs_20	23 42 07.0	
	comp=Z,1µm,20.0s						
H62A	Milan	124.76	38	IAMs_20	IAMs_20	23 36 05.1	
	comp=Z,970nm,20.0s						
G62A	West of Eustis	124.81	37	IAMs_20	IAMs_20	23 44 23.3	
	comp=Z,989nm,19.0s						
CONA	Conrad Observa	124.98	327	PKiKP	PKiKP	22 46 07.6	+3.6
	comp=Z,3.1nm,0.7s						
CFA	Coronel Fontan	125.11	135	PKP	PKPdf	22 46 04.5	+0.2
	comp=Z,2.9nm,0.5s,baz=226,slow=2.6,SNR=5.0						
NKC	Novy Kostel	125.31	331	*e*PKP	PKiKP	22 46 08.6	+4.2
NKC	Novy Kostel	125.31	331	*e*PKIKP	PKiKP	22 46 08.6	+4.2
FNA	Florina	125.31	317	PKIKP	PKiKP	22 46 05.7	+0.9
FNA	Florina	125.31	317		PKiKP	22 46 05.7	+0.9
E63A	Oxbow	125.39	35	IAMs_20	IAMs_20	23 45 45.4	
	comp=Z,1µm,19.0s						
F63A	Nahmakanta, Br	125.40	36	IAMs_20	IAMs_20	23 44 32.7	
	comp=Z,1µm,19.0s						
KHC	Kasperske Hory	125.45	329	*e*PKP	PKPdf	22 46 04.2	-0.2
KHC				*e*x	x	22 46 08.7	
KHC	Kasperske Hory	125.45	329	*e*PKIKP	PKPdf	22 46 04.2	-0.2
KHC				*e*		22 46 08.7	
PQI	Presque Isle	125.48	35	IAMs_20	IAMs_20	23 38 33.6	
	comp=Z,1µm,20.0s						
PKME	Peaks-Kenny Pk	125.52	37	IAMs_20	IAMs_20	23 43 50.1	
	comp=Z,1µm,20.0s						
GERES	GERESS Array B	125.57	329	PKP	PKiKP	22 46 05.2	+0.1
	comp=Z,3.9nm,0.8s,baz=48,slow=1.5,SNR=8.9						
WVL	Waterville	125.68	38	IAMs_20	IAMs_20	23 41 23.3	
	comp=Z,1µm,20.0s						
F64A	Sherman	125.75	36	IAMs_20	IAMs_20	23 42 14.9	
	comp=Z,1µm,20.0s						
G65A	Princeton	126.58	36	IAMs_20	IAMs_20	23 42 41.9	
	comp=Z,1µm,20.0s						
KBA	Koelnbreinsper	126.86	327	PKiKP	PKiKP	22 46 08.0	+0.1
	comp=Z,9.2nm,1.2s						
EMMW	East Machias	126.92	36	IAMs_20	IAMs_20	23 42 53.9	
	comp=Z,1µm,19.0s						
GGN	Saint George	127.04	36	IAMs_20	IAMs_20	23 43 40.5	
	comp=Z,992nm,20.0s						
OTAV	Otavalo	127.22	94	IAMs_20	IAMs_20	23 34 31.4	
	comp=Z,586nm,18.0s						
ABTA	Abfaltersbach	127.51	327	*e*PKiKP	PKiKP	22 46 11.4	+2.4
	comp=Z,7.7nm,0.9s						
WATA	Walderalm	127.63	329	*i* PKPdf	PKPdf	22 46 07.4	-1.4
	comp=Z,5.6nm,0.7s						
WTTA	Wattenberg	127.65	328	*i* PKiKP	PKPdf	22 46 09.0	+0.1
	comp=Z,15nm,1.0s						
LMN	Caledonia Moun	127.76	34	IAMs_20	IAMs_20	23 38 41.9	
	comp=Z,1µm,22.0s						
MOTA	Moosalm	127.87	329	*i* PKiKP	PKPdf	22 46 09.3	0.0
	comp=Z,11nm,0.9s						
SQTA	Sankt Quirin	127.90	329	*i* PKiKP	PKiKP	22 46 10.5	+0.7
	comp=Z,7.9nm,0.9s						
RETA	Reutte	127.95	329	*e*PKiKP	PKiKP	22 46 13.0	+3.1
	comp=Z,10nm,1.2s						
FETA	Feichten	128.28	329	*i* PKiKP	PKiKP	22 46 13.8	+3.1
	comp=Z,11nm,0.9s						
CTI	Castel Tesino	128.42	327	IAMs_20	IAMs_20	23 43 22.3	
	comp=Z,844nm,21.0s						
DAVA	Damuels	128.53	329	*i* pPKPdf	PKiKP	22 46 15.0	+3.8
	comp=Z,10nm,0.9s						
NRCA	Norcia	129.54	323	IAMs_20	IAMs_20	23 47 11.6	
	comp=Z,657nm,21.0s						
GBN	Guysborough	129.83	32	IAMs_20	IAMs_20	23 36 45.5	
	comp=Z,1µm,20.0s						
TSUM	Tsumeb	130.54	239	PKP	PKiKP	22 46 16.0	0.0
	comp=Z,8.6nm,1.0s,baz=122,slow=1.0,SNR=9.6						
TSUM				SKPbc	SKPab	22 49 34.5	-1.1
	comp=Z,6.3nm,1.1s,baz=114,slow=4.6,SNR=6.5						
TSUM	Tsumeb	130.54	239	IAMs_20	IAMs_20	23 38 45.0	
	comp=Z,1µm,21.0s						
LPAZ	La Paz	132.79	118	PKP	PKiKP	22 46 21.1	0.0
	comp=Z,0.9nm,0.5s,baz=231,slow=2.5,SNR=5.4						
LPAZ	La Paz	132.79	118	PKIKP	PKPdf	22 46 18.6	-1.4
LPAZ	La Paz	132.79	118		PKPdf	22 46 18.6	-1.4
SDDR	Presa de Saban	133.88	69	IAMs_20	IAMs_20	23 40 44.1	
	comp=Z,899nm,19.0s						
SC01	Santiago de lo	134.31	69	IAMs_20	IAMs_20	23 41 06.5	
	comp=Z,1µm,19.0s						
CPUP	Villa Florida	135.85	138	PKP	PKPdf	22 46 24.9	+0.2
	comp=Z,1.6nm,0.7s,baz=353,slow=2.1,SNR=3.0						
SJG	San Juan	138.83	69	IAMs_20	IAMs_20	23 42 52.2	
	comp=Z,788nm,22.0s						
ESDC	Sonseca Array	140.90	333	PKP	PKPdf	22 46 34.1	+0.4
	comp=Z,0.9nm,0.7s,baz=7.5,slow=2.3,SNR=6.4						
ESDC				PP	PP	22 49 35.3	+1.7
	comp=Z,2.1nm,0.8s,baz=33,slow=7.8,SNR=4.9						
MVO	Moncorvo	140.94	337	*e*LR	LR	23 38 43.2	
	comp=Z,299nm,20.0s						
SMRT	St. Maarten	141.69	68	IAMs_20	IAMs_20	23 37 32.9	
	comp=Z,870nm,20.0s						
MTE	Manteigas	141.80	337	IAMs_20	IAMs_20	00 03 31.0	
	comp=Z,532nm,19.0s						
MTE	Manteigas	141.80	337	*e*LR	LR	23 39 36.3	
	comp=Z,308nm,20.0s						
COI	Coimbra	142.29	338	IAMs_20	IAMs_20	23 48 59.1	
	comp=Z,862nm,22.0s						
PCAS	Casmilo, Conde	142.46	338	*e*PKPdf	PKPdf	22 46 37.4	+1.0
PMRV	Marv??o	142.57	336	*e*PKPdf	PKiKP	22 46 40.9	+1.2
PMRV	Marv??o	142.57	336	*e*LR	LR	23 38 59.3	
	comp=Z,242nm,20.0s						
PMTG	Montargil	143.21	337	*e*PKPdf	PKPdf	22 46 37.7	0.0
PMAFR	Mafra	143.72	338	*e*PKPdf	PKPbc	22 46 36.2	0.0
FDF	Fort de France	144.20	73	IAMs_20	IAMs_20	23 45 23.1	
	comp=Z,658nm,21.0s						
MESJ	Messejana	144.26	336	*e*PKP	PKPdf	22 46 39.8	+0.2
MESJ				AMS	AMS	23 53 54.5	
	comp=Z,358nm,19.8s						
MESJ	Messejana	144.26	336	*e*PKIKP	PKPdf	22 46 39.8	+0.2
PCVE	Castro Verde	144.37	335	*e*PKPdf	PKiKP	22 46 43.5	+0.1
PVAQ	Vaqueiros	144.43	335	*e*PKPdf	PKPbc	22 46 38.5	+0.1
PVAQ	Vaqueiros	144.43	335	*e*LR	LR	23 43 06.3	
	comp=Z,279nm,20.0s						
MCLT	Moule a Chique	144.58	75	IAMs_20	IAMs_20	23 59 58.5	
	comp=Z,951nm,20.0s						
PTEO	Sao Teotonio	144.72	336	*e*PKPdf	PKPab	22 46 34.3	-4.9
MORF	Marmelete	144.90	336	*e*PKP	PKPdf	22 46 40.9	0.0
MORF				AMS	AMS	23 55 34.2	
	comp=Z,430nm,19.9s						
MORF	Marmelete	144.90	336	*e*PKIKP	PKPdf	22 46 40.8	0.0
MORF	Marmelete	144.90	336	*e*PKPdf	PKPdf	22 46 41.8	+1.0
TOSP	Speyside	145.30	79	IAMs_20	IAMs_20	23 48 28.5	
	comp=Z,951nm,21.0s						
TAM	Tamanrasset	145.32	302	PKP2	PKPbc	22 46 40.4	-1.5
TAM	Tamanrasset	145.32	302		PKPbc	22 46 40.4	-1.5
PTGA	Pitinga	145.34	100		PKPbc	22 46 41.9	-0.2
BDFB	Brasilia	149.44	134	PKPbc	PKPbc	22 46 53.5	0.0
	comp=Z,5.6nm,0.4s,baz=136,slow=0.8,SNR=11						
BDFB	Brasilia	149.44	134	PKHKP	PKPpre	22 46 49.5	
BDFB	Brasilia	149.44	134		PKPdf	22 46 46.5	-2.5
BDFB				PKPbc	PKPbc	22 46 49.5	-4.0
BDFB				IAMs_20	IAMs_20	23 49 21.3	
	comp=Z,646nm,20.0s						
SHEL	Horse Pasture	150.63	222	PKIKP	PKPdf	22 46 49.4	-1.4
SHEL						22 46 53.6	
SHEL	Horse Pasture	150.63	222	PKPdf	PKPdf	22 46 49.4	-1.4
SHEL					PKPbc	22 46 53.6	-2.7
TOC1	Torodi Ar. Sit	151.86	287	IAMs_20	IAMs_20	23 56 14.7	
	comp=Z,657nm,22.0s						
TOA0	Torodi Ar. Sit	151.87	287		PKPdf	22 46 53.9	+1.2
TOA0				PKPbc	PKiKP	22 46 59.6	+0.1
TOA0				PKPab	PKPab	22 47 08.6	+0.3
TORD	Torodi Ar. Bea	151.87	287	PKP	PKPdf	22 46 52.5	-0.2
	comp=Z,1.6nm,1.0s,baz=151,slow=3.4,SNR=6.3						
TORD				PKPbc	PKPbc	22 46 59.1	0.0
	comp=Z,30nm,0.8s,baz=102,slow=2.3,SNR=144						
TORD	Torodi Ar. Bea	151.87	287		PKPdf	22 46 52.9	+0.2
TORD					PKPbc	22 46 58.9	-0.3
TORD				PKPab	pPKPdf	22 47 06.9	+1.6
DBIC	Dimbokro	159.10	274	PKPbc	PKPdf	22 47 13.2	+11
	comp=Z,5.7nm,1.0s,baz=206,slow=6.5,SNR=3.7						
DBIC				PKPab	PKPab	22 47 39.4	+0.1
	comp=Z,6.1nm,0.7s,baz=75,slow=9.4,SNR=6.3						
DBIC	Dimbokro	159.10	274	PKIKP	PKPdf	22 46 58.4	-4.0
DBIC	Dimbokro	159.10	274	PKPdf	PKPdf	22 46 58.4	-4.0
DBIC					PKPab	22 47 40.1	+0.8

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*IDC **05** 22:35:48.7±1.1, 60°.86S×27°.21W, h0^{km}, mb4.3/3, mb1 4.4/4, mb1mx3.9/26, mbtmp4.3/4, ML4.0/1, Error ellipse: s-maj=100.8km s-min=27.5km az=37.0*

*NEIC **05** 22:35:50.7±2.1, 61°.3S±0°.2×28°.1W±0°.3, h13^{km}±3^{km}, mb4.4/8, Error ellipse: s-maj=33.0km s-min=10.4km az=219.0*

ISC 05 22:35:50.2±0.6, **61°.2S**±0°.2×**28°.0W**±0°.2, **h10^{km}, n29, σ1^{s}.27**/30, **mb4.4**/8, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	12.34	148	P	Pn	22 38 47.8	+2.2
VNA3	Neumayer Olymp	12.40	152	P	Pn	22 38 48.9	+2.4
VNA2	Neumayer--Watz	12.73	148	P	Pn	22 38 52.4	+1.4
	baz=310,slow=15						
SNAA	Sanae	14.36	147	P	Pn	22 39 14.2	+1.0
SNAA	Sanae	14.36	147	Pn	Pn	22 39 15.3	+2.0
	0.7nm,0.3s,baz=301,slow=14,SNR=20						
SNAA	Sanae	14.36	147		Pn	22 39 14.1	+0.8
SNAA					Sn	22 41 50.2	-2.1
PLCA	Paso Flores	32.90	289	P	P	22 42 25.4	+1.1
PLCA				IAmb	IAmb	22 42 28.3	
	comp=Z,5.7nm,1.4s						
MAW	Mawson	36.34	140	P	P	22 42 52.8	-0.7
PEL	Peldehue	39.23	296	P	P	22 43 17.9	-0.6
CFA	Coronel Fontan	39.51	300	P	P	22 43 21.8	+0.9
	comp=Z,4.4nm,0.6s,baz=168,slow=6.4,SNR=9.1						
CPUP	Villa Florida	40.13	317	P	P	22 43 26.1	+0.1
	comp=Z,1.5nm,0.4s,baz=152,slow=7.5,SNR=5.9						
CPUP	Villa Florida	40.13	317	P	P	22 43 24.4	-1.5

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	47.75	305	P	P	22 44 26.5	-1.1
LVC				IAmb	IAmb	22 44 36.5	
	comp=Z,4.5nm,0.8s						
GO01	Chusmiza	50.52	306	P	P	22 44 49.7	+0.8
GO01				IAmb	IAmb	22 44 50.6	
	comp=Z,3.9nm,0.6s						
PB11	IPOC Station P	50.61	306	P	P	22 44 48.2	-1.1
LPAZ	La Paz	53.19	309	P	P	22 45 10.0	+1.0
	comp=Z,1.8nm,0.4s,baz=100,slow=6.4,SNR=12						
LPAZ	La Paz	53.19	309	P	P	22 45 09.8	+0.7
LPAZ				IAmb	IAmb	22 45 10.5	
	comp=Z,2.1nm,0.5s						
LPAZ	La Paz	53.19	309		P	22 45 10.1	+1.0
LIC	Lamto	69.59	24	*e*PKP2	P	22 47 00.6	+1.4
	comp=Z,46nm,1.4s						
LIC	Lamto	69.59	24	P	P	22 47 00.6	+1.4
KIC	Kosan Boka	69.78	25	*e*PKP2	P	22 47 01.9	+1.5
	comp=Z,59nm,1.9s						
TIC	Toumodi	70.00	24	*e*PKP2	P	22 47 01.7	-0.1
FINES	FINESS Array B	129.12	30	PKP	PKPdf	22 54 55.4	-1.3
	comp=Z,1.3nm,0.9s,baz=253,slow=3.8,SNR=3.8						
MKAR	Makanchi Array	138.68	77	PKP	PKPdf	22 55 14.0	-1.2
	comp=Z,0.1nm,0.7s,baz=248,slow=1.6,SNR=2.5						
YKA	Yellowknife Ar	139.63	314	PKP	PKPdf	22 55 16.5	+0.2
	comp=Z,0.2nm,0.5s,baz=123,slow=2.6,SNR=4.4						
INK	Inuvik	149.38	315	PKPbc	PKPbc	22 55 37.5	0.0
	comp=Z,1.1nm,0.6s,baz=39,slow=4.3,SNR=6.8						
BCAR	Beaver Creek A	150.23	303		PKiKP	22 55 40.3	-0.3
SONM	Songino Array	151.01	96	PKPbc	PKPbc	22 55 41.6	-0.6
	comp=Z,0.5nm,0.7s,baz=218,slow=1.9,SNR=5.2						
ILAR	Eielson Array	152.99	304	PKPbc	PKPbc	22 55 45.4	-0.7
	comp=Z,0.5nm,0.6s,baz=357,slow=1.6,SNR=8.0						

UCR 05 22:57:26.8±1.3**, 9°.90N×85°.64W, h9^{km}**±4^{km}**, MD4.0, 1C,**
Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUAI	GUAI	0.39	19	*i* P	Pg	22 57 35.0	+0.4
GUAI				*i* S	Sb	22 57 41.7	-0.5
PLVR	Palo Verde	0.53	33	*e*P	Pg	22 57 37.3	+0.1
PLVR				*e*S	Sb	22 57 45.8	-0.5
NY14	Universidad de	0.75	8	*i* P	Pb	22 57 42.0	-0.1
JTS	Las Juntas de	0.78	60	*e*P	Pg	22 57 41.4	-0.5
COLC	Colonia	0.88	29	*i* P	Pg	22 57 43.2	-0.5
COLC				*i* S	Sg	22 57 55.6	+0.4
LIM1	Limonal	0.88	26	*i* P	Pg	22 57 43.3	-0.6
CUI	Cuipilapa	0.89	32	*i* P	Pg	22 57 43.3	-0.6
CUI				*i* S	Sb	22 57 56.2	-0.3
GPS2	Hotel Rincn d	0.90	19	*i* P	Pg	22 57 43.5	-0.6
GUAB	Guayabo de Bag	0.90	27	*i* P	Pg	22 57 43.5	-0.7
GPS1	Guardaparques	0.92	18	*i* P	Pg	22 57 43.9	-0.6
BUEV	Buena Vista	0.93	14	*i* P	Pg	22 57 43.9	-0.7
BUEV				*i* S	Sg	22 57 56.5	-0.2
ACAL	Aguas Claras	0.94	39	⇑*i*P	Pg	22 57 44.2	-0.8
GB1A	Borinquen Arri	0.95	15	*i* P	Pg	22 57 44.2	-0.8
GB1A				*e*S	Sb	22 57 58.6	+0.4
MESS	Mesas	0.95	28	*i* P	Pg	22 57 44.3	-0.8
BUAI	Buenos Aires	1.02	17	*i* P	Pg	22 57 45.4	-1.1
CEDE	Laguna Cedeo	1.09	58	*e*P	Pg	22 57 46.9	-1.0
HDC	Heredia	1.51	86	*e*P	Pn	22 57 53.2	-1.0
LCR2	La Lucha 2	1.62	95	*e*P	Pn	22 57 53.6	-2.3
EDDO	Dominical	1.87	110	*e*P	Pn	22 57 60.0	+1.0
ACON	Acoyapa	2.11	13	*e*P	Pn	22 58 00.9	-1.5

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*IDC **05** 22:58:16.5±0.9, 60°.62S×26°.84W, h0^{km}, mb4.3/5,*
mb1 4.3/6, mb1mx3.9/29, mbtmp4.2/6, ML3.7/1, MS4.2/1,
Ms1 4.2/1, ms1mx3.2/19, Error ellipse: s-maj=35.2km
s-min=22.3km az=58.0
*NEIC **05** 22:58:17.2±0.8, 60°.8S±0°.1×26°.9W±0°.5, h10^{km}±1^{km},*
mb4.2/4, Error ellipse: s-maj=47.0km s-min=11.0km
az=240.0
ISC 05 22:58:17.3±0.7**, 60°.8S**±0°.1×**26°.5W**±0°.2**, h10^{km}, n21,**
σ1^{s}.94/23**, mb4.3**/7**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	12.36	151	P	Pn	23 01 15.4	+2.3
VNA3	Neumayer Olymp	12.47	154	P	Pn	23 01 16.1	+1.5
VNA2	Neumayer--Watz	12.76	151	P	Pn	23 01 20.1	+1.6
	baz=311,slow=14						
SNAA	Sanae	14.37	149	P	Pn	23 01 41.8	+1.3
SNAA	Sanae	14.37	149	Pn	Pn	23 01 42.3	+1.8
	0.3nm,0.3s,baz=69,slow=7.3,SNR=23						
SNAA				Sn	Sn	23 04 14.9	-4.7
	0.1nm,0.3s,baz=3.4,slow=17,SNR=3.5						
SNAA	Sanae	14.37	149		Pn	23 01 41.8	+1.3
SNAA					Sn	23 04 15.6	-4.0
QSPA	South Pole Qui	29.45	180	P	P	23 04 23.4	+2.4
	2.1nm,0.6s,baz=203,slow=0.7,SNR=24						
CFA	Coronel Fontan	39.91	298	P	P	23 05 50.1	-1.2
	7.0nm,0.8s,baz=165,slow=7.7,SNR=14						
CPUP	Villa Florida	40.30	315	P	P	23 05 53.5	-1.0
	1.1nm,0.5s,baz=154,slow=6.9,SNR=3.6						
CPUP	Villa Florida	40.30	315	P	P	23 05 52.9	-1.5
CPUP				IAmb	IAmb	23 05 56.3	
	comp=Z,2.0nm,0.8s						
VNDA	Vanda	41.85	183	LR	LR	23 23 58.0	
	comp=Z,253nm,18.5s,baz=326,slow=37						
LPAZ	La Paz	53.47	308	P	P	23 07 37.0	-1.2
	comp=Z,1.3nm,0.5s,baz=112,slow=6.9,SNR=8.7						
SAML	Samuel	58.42	316	P	P	23 08 11.4	-1.6
SAML				IAmb	IAmb	23 08 20.9	
	comp=Z,2.1nm,0.8s						
TOA0	Torodi Ar. Sit	77.05	28	P	P	23 10 10.1	-0.2
TOA0				IAmb	IAmb	23 10 15.0	
	comp=Z,4.5nm,1.1s						
TORD	Torodi Ar. Bea	77.05	28	P	P	23 10 10.8	+0.5
	comp=Z,2.5nm,0.7s,baz=202,slow=6.4,SNR=15						
TORD	Torodi Ar. Bea	77.05	28	P	P	23 10 10.5	+0.2
YKA	Yellowknife Ar	139.82	314	PKP	PKPdf	23 17 43.5	-0.3
	comp=Z,0.3nm,0.6s,baz=128,slow=2.0,SNR=5.1						
SONM	Songino Array	150.35	94	PKPbc	PKPbc	23 18 08.9	+1.1
	comp=Z,0.8nm,0.9s,baz=149,slow=3.1,SNR=4.6						
DOT	Dot Lake	151.76	303	PKPbc	PKiKP	23 18 12.1	+1.3
DOT					PKPab	23 18 20.9	+1.3
ILAR	Eielson Array	153.32	305	PKPbc	PKPbc	23 18 14.4	+0.6
	comp=Z,0.7nm,0.9s,baz=169,slow=1.4,SNR=7.9						
ILAR	Eielson Array	153.32	305	PKPbc	PKPbc	23 18 14.6	+0.7

IDC 05 23:10:17.2±2.2**, 6°.32S×129°.44E, h0^{km}, mb3.3**/1**,**
mb1 3.6/4**, mb1mx3.3**/50**, mbtmp3.4**/4**, ML3.3**/3**, Error**
ellipse: s-maj=85.1km s-min=29.0km az=76.0, Banda
Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.28	197	Pn	Pn	23 13 15.1	+1.6
	0.1nm,0.3s,baz=37,slow=12,SNR=3.8						
FITZ				Sn	Sn	23 15 21.7	-9.4
	0.1nm,0.3s,baz=336,slow=10.0,SNR=2.3						
WRA	Warramunga Arr	14.35	161	Pn	Pn	23 13 42.6	+0.8
	0.1nm,0.3s,baz=338,slow=12,SNR=3.7						
WRA				Sn	Sn	23 16 06.8	-15
	0.2nm,0.3s,baz=91,slow=4.7,SNR=5.8						
ASAR	Alice Springs	17.77	166	P	Pn	23 14 24.5	-1.7
	0.1nm,0.3s,baz=346,slow=12,SNR=6.7						
MKAR	Makanchi Array	67.36	327	P	P	23 21 14.3	0.0
	0.1nm,0.4s,baz=125,slow=7.5,SNR=4.3						

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*IPEC **05** 23:10:32.1±0.2, 49°.83N×18°.59E, h2^{km}±4^{km}, ML2.6/3,*
Error ellipse: s-maj=1.7km s-min=1.1km az=163.0
ISC 05 23:10:31.4±0.7**, 49°.82N**±0°.03×**18°.55E**±0°.02**, h0^{km}, n53,**
σ0^{s}.89/96**, 9C-14D, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.26	274	*e*PG	Pb	23 10 37.9	-1.1
OKC				*e*SG	Sg	23 10 40.3	+0.6
	comp=Z,260nm,0.6s						
MORC	Moravsky Berou	0.65	266	⇑P	Pb	23 10 45.1	-0.6
MORC				⇓S	Sg	23 10 53.6	+1.3
MORC	Moravsky Berou	0.65	266	*e*Pg	Pb	23 10 45.1	-0.6
	baz=86						
MORC				*e*Sg	Sg	23 10 53.4	+1.1
	127nm,0.5s,baz=86						
MORC	Moravsky Berou	0.65	266	*e*PG	Pb	23 10 45.1	-0.6
MORC				*e*SG	Sg	23 10 53.5	+1.1
OJC	Ojcow	0.90	63	*e*Pg	Pg	23 10 48.6	+0.1
OJC				*e*Sg	Sb	23 11 01.1	-1.3
LANS	Liptovska Anna	0.90	138	*e*PG	Pb	23 10 49.4	-0.5
LANS				*e*SG	Sb	23 11 02.4	0.0
LANS				*e*LG	Lg	23 11 07.2	
JAVC	Velka Javorina	1.12	211	*e*Pg	Pn	23 10 54.1	-0.3
	baz=31						
JAVC	Velka Javorina	1.12	211	*e*PG	Pn	23 10 54.1	-0.3
KRLC	Kraliky	1.17	283	*e*PG	Pg	23 10 53.3	-0.5
KRLC				*e*SG	Sg	23 11 09.5	+0.6
	comp=Z,104nm,0.3s						
NIE	Niedzica	1.21	109	*e*Pg	Pn	23 10 55.1	-0.4
NIE				*e*Sg	Sn	23 11 13.4	+0.8
VYHS	Vyhne	1.34	172	*e*PG	Pn	23 10 57.3	-0.1
VYHS				*e*SG	Sn	23 11 15.6	-0.3
VRAC	Vranov	1.37	249	⇑P	Pg	23 10 57.3	-0.4
VRAC				⇓S	Sb	23 11 16.4	+0.4
VRAC	Vranov	1.37	249	*e*Pg	Pb	23 10 58.0	+0.1
	baz=68						
VRAC				*e*Sg	Sg	23 11 15.6	+0.1
	60nm,0.3s,baz=68						
VRAC	Vranov	1.37	249	*e*PG	Pb	23 10 58.1	+0.1
VRAC				*e*SG	Sg	23 11 15.7	+0.2
SMOL	Smolenice	1.50	210	*e*SG	Sg	23 11 19.5	-0.1
SMOL				*e*LG	Lg	23 11 22.8	
DPC	Dobruska-Polom	1.53	291	*e*PG	Pn	23 10 59.9	-0.1
DPC				*e*SG	Sn	23 11 20.4	-0.2
	comp=Z,48nm,0.3s						
KRUC	Moravsky	1.60	242	*e*Pg	Pb	23 11 01.5	-0.2
	baz=61						
KRUC				*e*Sg	Sg	23 11 22.8	+0.1
	50nm,0.2s,baz=61						
KRUC	Moravsky	1.60	242	*e*PG	Pb	23 11 01.5	-0.2
KRUC				*e*SG	Sg	23 11 22.9	+0.2
OSTC	Ostas	1.67	297	*e*PG	Pb	23 11 02.7	-0.3
OSTC				*e*SG	Sg	23 11 25.2	+0.2
	comp=Z,43nm,0.6s						
MODS	Modra-Piesok	1.67	210	*e*PG	Pn	23 11 01.2	-0.7
MODS				*e*SG	Sn	23 11 23.2	-0.9
MODS				*e*LG	Lg	23 11 26.0	
KSP	Ksiaz	1.77	306	*e*Pb	Pn	23 11 02.9	-0.3
KSP				*e*Pg	Pg	23 11 05.3	0.0
KSP				*e*Sg	Sg	23 11 28.2	-0.1
UPC	Upice	1.77	294	*e*PG	Pb	23 11 04.5	-0.2
UPC				*e*SG	Sb	23 11 27.9	+0.5
	comp=Z,34nm,0.5s						
CHVC	Chvalec	1.78	297	*e*PG	Pn	23 11 03.6	+0.2
CHVC				*e*SG	Sb	23 11 27.5	-0.2
	comp=Z,32nm,0.4s						
STHS	Stebnicka Huta	1.80	102	*e*PN	Pg	23 11 05.4	-0.4
STHS				*e*SN	Sg	23 11 30.9	+1.8
STHS				*e*LG	Lg	23 11 35.2	
KECS	Kecovo	1.85	136	*e*PN	Pn	23 11 04.3	0.0
KECS				*e*SN	Sn	23 11 28.0	-0.3
KECS				*e*LG	Lg	23 11 32.7	
ZST	Bratislava	1.89	211	*e*PN	Pn	23 11 04.1	-0.7
ZST				*e*SN	Sn	23 11 27.8	-1.5
ZST				*e*LG	Lg	23 11 30.6	
TREC	Trest	2.06	256	*e*PG	Pb	23 11 08.9	-0.8
TREC				*e*SG	Sb	23 11 36.7	+0.8
PSZ	Piszkesteto	2.10	155	⇓P	Pn	23 11 07.2	-0.7
PSZ				⇓S	Sn	23 11 33.8	-0.9
CRVS	Cervenica-Dubn	2.11	115	*e*PG	Pg	23 11 11.8	0.0
CONA	Conrad Observa	2.60	224	Pn	Pn	23 11 14.3	-0.3
	1.3nm,0.2s						
CONA				*i* Sn	Sn	23 11 45.4	-1.5
	5.6nm,0.3s						
PRU	Pruhonice	2.60	275	*e*PG	Pb	23 11 18.1	-0.7
PRU				*e*SG	Sb	23 11 52.7	+1.5
	comp=Z,15nm,0.4s						
PVCC	Panska Ves	2.66	287	*e*PG	Pg	23 11 21.2	-1.0
TRPA	Tarpa	3.13	121	⇓P	Pn	23 11 22.2	+0.4
TRPA				⇓S	Sn	23 11 59.9	+0.1
BRG	Berggiesshubel	3.13	291	PG	Pb	23 11 28.8	+0.9
BRG				SG	Sg	23 12 10.0	-1.9
	13nm,0.5s						
KHC	Kasperske Hory	3.31	260	*e*PN	Pn	23 11 24.8	+0.3
KHC				*e*PG	Pb	23 11 32.1	+1.1
KHC				*e*SG	Sg	23 12 15.2	-2.6
	comp=Z,17nm,0.4s						
MOA	Molln	3.45	237	*i* Pn	Pn	23 11 26.1	-0.3
	0.9nm,0.2s						
MOA				Sg	Sb	23 12 18.0	+2.2
	3.2nm,0.3s						
CLL	Collm	3.84	295	*e*Pg	Pg	23 11 45.0	+0.2
CLL				*e*		23 12 24.0	
CLL				*e*Sg	Sg	23 12 35.0	+0.5
	comp=Z,14nm,0.6s						
BMR	Baia Mare	3.92	121	⇓P	Pn	23 11 32.4	-0.3
BMR				⇑S	Sn	23 12 19.0	-0.3
NKC	Novy Kostel	3.96	278	*e*PN	Pn	23 11 34.7	+1.4
NKC				*e*SG	Sg	23 12 36.1	-2.3
DRGR		4.11	136	⇓P	Pn	23 11 35.6	+0.2
DRGR				⇑S	Sn	23 12 23.7	-0.6
KBA	Koelnbreinsper	4.42	234	Pn	Pn	23 11 42.0	+2.2
	comp=Z,0.5nm,0.2s						
KBA				*i* Sn	Sn	23 12 32.1	0.0
	comp=Z,1.1nm,0.2s						
CJR	Cluj-Napoca	4.59	131	⇓P	Pn	23 11 42.4	+0.4
CJR				⇑S	Sn	23 12 35.7	-0.3
BZS	Buzias	4.69	153	⇓P	Pn	23 11 42.8	-0.5
BZS				⇑S	Sn	23 12 38.1	-0.3
BURAR	Bucovina Array	4.93	114	⇓P	Pn	23 11 47.1	+0.3
BURAR				⇑S	Sn	23 12 44.9	+0.3
WTTA	Wattenberg	5.26	243	*i* Sg	Sg	23 13 20.1	-0.1
	comp=Z,5.5nm,0.5s						
GZR	Gura Zlata	5.27	146	⇑P	Pn	23 11 51.6	+0.2
GZR				⇑S	Sn	23 12 51.8	-1.1
MDB	Medias	5.37	131	⇓P	Pn	23 11 52.4	-0.3
MDVR	Moldovita	5.48	156	⇓P	Pn	23 11 53.3	-1.0
MDVR				⇓S	Sn	23 12 57.5	-0.5
SQTA	Sankt Quirin	5.53	245	*i* Sg	Sg	23 13 29.0	+0.1
	comp=Z,2.9nm,0.3s						
RETA	Reutte	5.66	249	*i* Sg	Sg	23 13 35.0	+1.8
	comp=Z,9.2nm,0.7s						
BSD	Bornholm Skovb	5.75	339	*i* P	Pn	23 11 57.0	-0.8
FETA	Feichten	5.91	245	Sg	Sg	23 13 43.9	+2.7
	comp=Z,2.9nm,0.9s						
DAVA	Damuels	6.29	250	Sg	Sg	23 13 54.0	+0.7
	comp=Z,6.8nm,0.6s						

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*IDC **05** 23:43:59.4±0.8, 60°.62S×26°.85W, h0^{km}, mb4.4/4,*
mb1 4.5/5, mb1mx4.0/23, mbtmp4.4/5, ML4.2/1, Error
ellipse: s-maj=37.9km s-min=22.9km az=64.0
*NEIC **05** 23:44:00.2±2.9, 60°.8S±0°.1×27°.0W±0°.2, h10^{km}±1^{km},*
mb4.4/5, Error ellipse: s-maj=22.9km s-min=16.1km
az=163.0
ISC 05 23:44:01.6±0.6**, 60°.7S**±0°.1×**27°.0W**±0°.2**, h19^{km}, n26,**
σ1^{s}.05/31**, mb4.5**/5**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	12.51	150	P	Pn	23 46 58.4	+0.2
VNA3	Neumayer Olymp	12.62	154	P	Pn	23 46 59.5	-0.2
VNA2	Neumayer--Watz	12.91	150	P	Pn	23 47 03.2	-0.6
	baz=314,slow=15						
SNAA	Sanae	14.52	149	P	Pn	23 47 24.7	-1.0
SNAA	Sanae	14.52	149	Pn	Pn	23 47 24.7	-1.0
	1.2nm,0.3s,baz=304,slow=14,SNR=33						
SNAA				Sn	Sn	23 49 54.8	-11
	0.2nm,0.3s,baz=270,slow=20,SNR=3.7						
SNAA	Sanae	14.52	149		Pn	23 47 24.6	-1.2
QSPA	South Pole Qui	29.50	180	P	P	23 50 06.1	+1.9
	2.7nm,0.6s,baz=226,slow=1.3,SNR=30						
QSPA	South Pole Qui	29.50	180	P	P	23 50 03.8	-0.5
CPUP	Villa Florida	40.10	315	P	P	23 51 35.4	-0.3
	1.6nm,0.4s,baz=155,slow=6.4,SNR=9.9						
CPUP	Villa Florida	40.10	315	P	P	23 51 36.1	+0.5
CPUP				IAmb	IAmb	23 51 42.6	
	comp=Z,3.2nm,1.1s						
LVC	Limon Verde	47.86	304	P	P	23 52 36.9	-1.5
LPAZ	La Paz	53.26	308	P	P	23 53 20.5	+1.1
	comp=Z,2.6nm,0.4s,baz=116,slow=6.2,SNR=26						
LPAZ	La Paz	53.26	308	P	P	23 53 19.9	+0.4
LPAZ				IAmb	IAmb	23 53 22.0	
	comp=Z,2.9nm,0.5s						
TOA0	Torodi Ar. Sit	77.12	29	P	P	23 55 53.8	+0.3
TOA0				IAmb	IAmb	23 55 54.3	
	comp=Z,2.8nm,0.5s						
TORD	Torodi Ar. Bea	77.12	29	P	P	23 55 53.5	+0.1
	comp=Z,2.4nm,0.5s,baz=199,slow=6.4,SNR=56						
TORD	Torodi Ar. Bea	77.12	29	P	P	23 55 53.3	-0.2
FINES	FINESS Array B	128.47	29	PKP	PKiKP	00 03 05.8	-0.2
	comp=Z,1.0nm,0.7s,baz=115,slow=2.7,SNR=5.0						
YKA	Yellowknife Ar	139.62	314	PKP	PKiKP	00 03 27.8	-0.7
	comp=Z,0.3nm,0.5s,baz=127,slow=2.4,SNR=9.4						
INK	Inuvik	149.37	316	PKPbc	PKiKP	00 03 47.8	-0.6
	comp=Z,1.7nm,0.6s,baz=92,slow=1.4,SNR=8.7						
INK	Inuvik	149.37	316	PKPdf	PKPdf	00 03 42.4	-0.4
BCAR	Beaver Creek A	150.36	303		PKPdf	00 03 43.4	-1.3
BCAR				PKPbc	sPKPdf	00 03 51.7	-0.2
BCAR				PKPab	pPKPab	00 04 00.1	-1.6
SONM	Songino Array	150.59	95	PKPbc	PKiKP	00 03 52.2	+0.4
	comp=Z,0.4nm,0.6s,baz=200,slow=2.7,SNR=5.2						
SONM	Songino Array	150.59	95	PKPdf	PKPdf	00 03 46.9	+1.3
DOT	Dot Lake	151.54	303		PKiKP	00 03 54.5	+1.4
DOT				PKPab	PKPab	00 04 02.8	+1.4
ILAR	Eielson Array	153.10	305	PKPbc	PKiKP	00 03 57.2	+1.0
	comp=Z,0.6nm,0.5s,baz=270,slow=0.4,SNR=10						
ILAR	Eielson Array	153.10	305	PKPdf	PKPdf	00 03 50.0	+1.3
ILAR					PKiKP	00 03 57.4	+1.1
ILAR				PKPab	PKPab	00 04 05.9	-2.0

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*MEX **06** 00:09:59.1±0.9, 14°.49N×94°.05W, h15^{km}±22^{km}, MD3.8*
*GCG **06** 00:10:05.5±0.5, 14°.51N×93°.74W, h35^{km}±945^{km}, MD4.2*
ISC 06 00:09:55.6±2.2**, 14°.53N**±0°.08×**93°.83W**±0°.08**, h19^{km}**±4^{km}**,**
n8, σ0^{s}.88/16**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.30	27	*e*P	Pg	00 10 21.0	+0.1
PCIG				*i* S	Sg	00 10 38.3	+0.3
THIG		1.56	76	*i* P	Pg	00 10 26.4	+0.8
THIG				*i* S	Sg	00 10 46.2	+0.3
STG3	Santiaguito 3,	2.19	85	*e*P	Pg	00 10 37.0	-0.7
STG3				*e*S	Sg	00 11 05.1	-1.2
TGIG		2.33	17	*e*P	Pb	00 10 36.4	-0.7
TGIG				*i* S	Sb	00 11 04.2	-1.4
CCIG	Comitan	2.38	43	*e*P	Pb	00 10 38.2	+0.2
CCIG				*i* S	Sb	00 11 08.1	+1.0
CMIG	Matias Romero	2.74	338	*e*P	Pn	00 10 39.0	+0.5
CMIG				*i* S	Sn	00 11 11.0	-0.1
FUG	Fuego 3	2.89	91	*e*P	Pg	00 10 50.5	-0.6
FUG				*e*S	Sb	00 11 22.5	+0.7
IXG	Ixpaco	3.30	96	*e*P	Pb	00 10 54.3	+0.7
IXG				*e*S	Sb	00 11 32.3	-1.2

IDC 06 00:22:33.9±15.0**, 0°.23S×123°.36E, h0^{km}, mb3.9**/3**,**
mb1 4.1/4**, mb1mx3.5**/42**, mbtmp3.9**/4**, ML3.4**/1**, Error**
ellipse: s-maj=272.7km s-min=142.2km az=120.0,
Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	17.90	173	P	P	00 26 45.6	+0.4
	0.1nm,0.3s,baz=8.1,slow=7.1,SNR=6.0						
WRA	Warramunga Arr	22.35	152	P	P	00 27 33.4	-0.3
	1.2nm,0.5s,baz=322,slow=11,SNR=3.2						
ASAR	Alice Springs	25.45	157	P	P	00 28 03.0	-0.8
	1.6nm,0.5s,baz=333,slow=9.2,SNR=32						
STKA	Stephens Creek	35.90	153	P	P	00 29 36.7	+0.8
	0.7nm,0.3s,baz=327,slow=12,SNR=4.6						

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*MOS **06** 00:23:18.8±1.2, 0°.01N×122°.74E, h145^{km}, mb4.9/31, Error*
ellipse: s-maj=14.4km s-min=6.5km az=113.0
*BJI **06** 00:23:18.0±0.0, 0°.10S×123°.00E, h142^{km}, mB5.0/44,*
mb5.0/57
*IDC **06** 00:23:19.7±0.6, 0°.10S×122°.89E, h146^{km}±5^{km}, mb4.4/27,*
mb1 4.5/31, mb1mx4.4/41, mbtmp4.9/31, Error ellipse:
s-maj=10.1km s-min=6.0km az=77.0
*NEIC **06** 00:23:19.3±2.5, 0°.18S±0°.05×122°.91E±0°.06, h141^{km},*
mb5.1/102, Error ellipse: s-maj=8.5km s-min=7.8km
az=114.0
*DJA **06** 00:23:19.7±0.1, 0°S±2°×12°3E±°, h136^{km}±2^{km}, M4.9/84,*
mB5.4/44, mb5.2/84, MLv5.2/22, Mw(mB)4.8/44, Mwp5.7/2
*GCMT **06** 00:23:20.3±0.3, 0°.17S±0°.02×122°.80E±0°.03, h143^{km}±3^{km},*
MW4.9/84, Moment Tensor Solution. s19,c21; s84,c107;
Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.41±.10;
M$_{\theta\theta}$-1.82±.13; M$_{\phi\phi}$0.40±.16; M$_{r\theta}$-0.76±.08; M$_{\theta\phi}$-2.50±.13;
M$_{\phi r}$0.90±.11; Best double couple: M$_0$3.18800×10^{16}
NP1:φ$_s$18.00000°, δ63.00000°, λ27.00000°. NP2:
φ$_s$275.00000°, δ66.00000°, λ150.00000°. Principal axes:
T 2.9260, Plg38.0000°, Azm236.0000°; N 0.5160,
Plg52.0000°, Azm60.0000°; P -3.4490, Plg2.0000°,
Azm327.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Triangular
moment-rate function
*KLM **06** 00:23:21.0, 0°.09S×122°.94E, h134^{km}, mb5.1*
ISC 06 00:23:19.5±0.4**, 0°.19S**±0°.03×**122°.88E**±0°.04**, h144^{km}**±3^{km}**,**
h144^{km}:pP-P, n568, σ1^{s}.23/605**, mb5.0**/116**, 13C-19D,**
Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	0.85	187	P	Pn	00 23 42.1	-0.5
LUWI				S	Sn	00 23 58.7	-1.4
LUWI	Luwuk	0.85	187		Pn	00 23 42.5	-0.1
LUWI					Sn	00 23 58.5	-1.6
MRSI	Marisa	1.15	305	P	Pn	00 23 44.0	-1.1
MRSI				S	Sn	00 24 02.3	-2.2
KMSI	Cibinong	1.34	56	P	Pn	00 23 47.3	+0.3
MPSI	Mapaga	3.02	280	P	Pn	00 24 07.6	+0.6
SANI	Sanana	3.62	121	P	Pn	00 24 12.4	-2.3
KDI	Kendari	3.75	184	P	Pn	00 24 16.0	-0.4
TTSI	Tana Toraja	4.17	227	P	Pn	00 24 22.4	+0.5
TNTI	Ternate	4.59	78	P	Pn	00 24 26.4	-1.0
TNTI	Ternate	4.59	78	Pn	Pn	00 24 26.6	-0.8
TNTI					Sn	00 25 18.8	-1.5
LBMI	Labuha	4.65	96	P	Pn	00 24 26.8	-1.4
SPSI	Sidrap Palu	4.87	220	P	Pn	00 24 33.3	+2.1
BNSI	Bone	5.02	213	P	Pn	00 24 35.2	+2.1
	0.9nm3µm155nm,0.6s						
NLAI	Namlea	5.20	126	P	Pn	00 24 36.0	+0.5
	13nm26µm24µm678nm,0.5s						
BBSI	Bau Bau	5.27	183	P	Pn	00 24 37.7	+1.2
	0.3nm1µm68nm,0.9s						
SMKI	Samarinda	5.67	267	P	Pn	00 24 43.3	+1.4
	1.7nm5µm393nm,0.7s						
KAPI	Kappang	5.72	213	P	Pn	00 24 44.8	+2.3
	5.9nm,0.3s,baz=41,slow=7.5,SNR=17						
KAPI				S	Sn	00 25 48.4	+1.1
	11nm,0.3s,baz=221,slow=20,SNR=6.7						
BKSI	Bulukumba	5.79	208	P	Pn	00 24 44.2	+0.7
	0.6nm2µm77nm,0.6s						
BKB	Balikpapan	6.07	260	P	Pn	00 24 48.6	+1.4
	2.4nm6µm676nm,0.9s						
BKB	Balikpapan	6.07	260		Pn	00 24 48.8	+1.6
AAI	Ambon	6.35	123	P	Pn	00 24 52.1	+1.2
	4.4nm7µm613nm,0.4s						
MSAI	Masohi	6.81	117	P	Pn	00 24 58.7	+1.6
	1.2nm1µm96nm,0.6s						
DDMP	Don Marcelino,	6.86	24	*e*P	Pn	00 24 58.3	+0.6
SKMP	Bagumbayan, Su	6.87	14	*e*P	Pn	00 24 56.6	-1.2
KBKI	Kotabaru	7.38	245	P	Pn	00 25 06.7	+1.9
	0.2nm1µm55nm,0.7s						
KCP	Kidapawan	7.48	17	⇑*i*P	Pn	00 25 08.7	+2.5
CTBH	Cotabato--PC H	7.49	10	⇓*i*P	Pn	00 25 06.9	+0.7
DAV	Davao City (W)	7.70	20	P	Pn	00 25 12.0	+3.0
	28nm,0.3s,baz=54,slow=3.0,SNR=11						
DAV				S	Sn	00 26 41.0	+6.2
	37nm,0.3s,baz=107,slow=19,SNR=3.3						
DAV	Davao City (W)	7.70	20		Pn	00 25 11.3	+2.3
PAGZ	Pagadian	8.00	4	*e*P	Pn	00 25 12.2	-0.8
SPMM	Sapulut	8.04	307	P	Pn	00 25 15.0	+1.4
BNDI	Bandanaira	8.24	122	P	Pn	00 25 17.0	+0.8
	12µm2µm,0.8s						
SWI	Sorong	8.41	95	P	Pn	00 25 18.2	-0.3
	2µm291nm,0.7s						
MMRI	Maumere	8.42	184	P	Pn	00 25 19.8	+1.2
	3µm79nm,1.1s						
MMRI	Maumere	8.42	184		Pn	00 25 16.4	-2.2
SIJI	Sorong	8.42	95	P	Pn	00 25 18.8	+0.1
	19nm,0.3s,baz=243,slow=9.9,SNR=16						
SIJI				S	Sn	00 26 50.9	-1.3
	1.9nm,0.3s,baz=252,slow=20,SNR=3.7						
EDFI	Ende, Flores	8.59	188	P	Pn	00 25 21.5	+0.5
	470nm30nm,0.7s						
KKM	Kota Kinabalu	9.09	313		Pn	00 25 30.0	+2.4
KKM					Sn	00 27 05.9	-2.6
SOEI	Soe	9.61	172	P	Pn	00 25 36.0	+1.4
	117nm,1.0s						
FAKI	Fak Fak	9.75	106	P	Pn	00 25 35.0	-1.5

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      2µm91nm,1.1s
FAKI  Fak Fak           9.75 106          Pn      00 25 35.3 -1.1
FAKI                                      Sn      00 27 18.4 -6.1
PLAI  Plampang          9.97 210    P     Pn      00 25 42.6 +3.2
      1µm108nm,0.9s
WBSI  Waikabubak, Su   10.01 200    P     Pn      00 25 42.8 +2.9
      56nm,0.7s
BASI  Baing, Sumba     10.22 193    P     Pn      00 25 45.2 +2.5
      1µm134nm,1.2s
SRBI  Singaraja        10.95 224    P     Pn      00 25 55.1 +2.8
      2µm161nm,1.0s
SBUM  Sibu             10.97 284          Pn      00 25 53.6 +1.0
KMMI  Kalianget        11.20 232    P     P       00 26 09.6 +5.6
DNP   Denpasar         11.38 222    P     P       00 26 11.5 +5.5
IGBI  Denpasar         11.52 222    P     P       00 26 12.3 +4.7
JAGI  Jajag, Banyuwa   11.97 226    P     Pn      00 26 08.0 +2.3
      2µm213nm,0.9s
JAGI  Jajag, Banyuwa   11.97 226          Pn      00 26 08.4 +2.7
GRJI  Gresik           12.34 237    P     Pn      00 26 13.7 +3.2
      36nm,0.5s
GMJI  Gumukmas         12.36 229    P     Pn      00 26 13.4 +2.6
KSM   Kuching          12.68 278    Pn    Pn      00 26 16.9 +2.0
PCJI  Pacitan          14.11 235    P     P       00 26 36.0 -0.4
      239nm,0.9s
WOJI  Wonogiri, Jawa   14.13 237    P     P       00 26 35.6 -1.0
      61nm,1.5s
SMRI  Semarang         14.15 241    P     P       00 26 36.6 -0.3
      146nm,1.1s
SMRI  Semarang         14.15 241          Pn      00 26 32.6 -1.1
MTN   Manton Dam       15.00 147    P     Pn      00 26 45.2 +0.8
KPJI  Karang Pucung    15.61 243    P     P       00 26 55.0 +1.9
      2µm191nm,0.9s
KNRA  Kununurra        16.45 160    P     P       00 27 02.7 +0.4
KNRA                                IAmb  IAmb    00 27 05.8
      comp=Z,76nm,1.0s
LEM   Lembang          16.59 246    P     Pn      00 27 05.9 +1.8
      comp=Z,15nm,0.3s,baz=19,slow=9.9,SNR=24
LEM   Lembang          16.59 246    P     Pn      00 27 05.3 +1.2
      comp=Z,112nm,0.8s
CISI  Cisompet, Garu   16.70 244    P     P       00 27 05.3 +0.1
      comp=Z,5µmcomp=Z,541nm,0.9s
CISI  Cisompet, Garu   16.70 244    P     P       00 27 05.3 +0.1
CBJI  Citeko           17.15 249    P     Pn      00 27 11.3 +0.6
      comp=Z,8µmcomp=Z,819nm,0.7s
CNJI  Cibinong         17.22 245    P     P       00 27 10.7 -0.1
      comp=Z,3µmcomp=Z,380nm,1.1s
DBJI  Dramaga          17.29 248    P     Pn      00 27 12.9 +0.5
      comp=Z,16µmcomp=Z,234nm,0.9s
FITZ  Fitzroy Crossi   18.00 171    P     Pn      00 27 21.4 +0.5
      comp=Z,7.1nm,0.3s,baz=3.9,slow=8.0,SNR=152
FITZ                                S     S       00 30 38.9 +0.3
      comp=Z,0.2nm,0.3s,baz=184,slow=19,SNR=4.7
FITZ  Fitzroy Crossi   18.00 171          Pn      00 27 21.3 +0.5
FITZ                                IAmb  IAmb    00 27 22.5
      comp=Z,40nm,0.6s
TPRI  Tanjung Pinang   18.38 273    P     Pn      00 27 25.8 +0.4
DLV   T  Lat           18.69 311    P     P       00 27 26.6 -0.6
DLV                                 IAmb  IAmb    00 27 36.9
      comp=Z,66nm,0.7s
KASI  Kota Agung       19.10 254    P     P       00 27 32.8 +1.4
      comp=Z,1µmcomp=Z,79nm,0.6s
MYKOM Kota Tinggi      19.12 276    P     P       00 27 32.5 +0.8
MYKOM                               IAmb  IAmb    00 27 34.5
      comp=Z,98nm,0.6s
MYKOM Kota Tinggi      19.12 276    P     Pn      00 27 34.0 -0.1
MDSI  Maura Dua        19.16 257    P     Pn      00 27 33.6 -0.9
      comp=Z,47nm,0.7s
LWLI  Liwa             19.39 255    P     Pn      00 27 37.1 -0.2
      comp=Z,8µmcomp=Z,40nm,0.4s
XMIS  Christmas Isla   19.95 239    P     P       00 27 39.2 -1.4
MNAI  Manna            20.33 258    P     Pn      00 27 46.8 -1.4
      comp=Z,91nm,0.6s
MNAI  Manna            20.33 258    P     Pn      00 27 46.7 -1.5
KSI   Kapahiang        20.56 260    P     Pn      00 27 49.9 -1.1
      comp=Z,16µmcomp=Z,97nm,1.0s
PSAD1 Pilbara Seismi   21.34 188    P     P       00 27 56.4 +1.0
PSAD1                               IAmb  IAmb    00 27 57.1
      comp=Z,48nm,0.8s
PSA00 Pilbara Seismi   21.46 188    P     P       00 27 57.5 +0.9
PSA00 Pilbara Seismi   21.46 188    IAmb  IAmb    00 27 58.3
      comp=Z,52nm,0.9s
SDSI  Sungai Dareh     21.46 268    P     P       00 27 57.9 +1.1
      comp=Z,94nm,1.0s
KRJI  Kerinci          21.49 265    P     P       00 27 58.9 +1.7
      comp=Z,11µmcomp=Z,258nm,1.3s
BKNI  Bangkinang       21.84 271    P     P       00 28 01.4 +0.6
      comp=Z,4µmcomp=Z,376nm,1.0s
BKNI  Bangkinang       21.84 271    P     P       00 28 02.0 +1.2
IPM   Ipoh             22.32 282    P     P       00 28 06.9 +1.3
IPM                                 IAmb  IAmb    00 28 08.9
      comp=Z,143nm,1.3s
PDSI  Padang           22.43 268    P     P       00 28 06.9 +0.2
      comp=Z,3µmcomp=Z,181nm,1.2s
WB0   Warramunga Arr   22.49 151    P     P       00 28 07.7 +0.4
WB0                                 IAmb  IAmb    00 28 48.5
      comp=Z,34nm,0.7s
WRAB  Tennant Creek    22.61 151 d iP     P       00 28 09.4 +1.0
WRAB                                pmax  pmax
      comp=Z,44nm,1.2s
WRAB  Tennant Creek    22.61 151    P     P       00 28 08.6 +0.3
WRAB                                IAmb  IAmb    00 28 49.7
      comp=Z,32nm,0.7s
WRA   Warramunga Arr   22.62 151    P     P       00 28 09.0 +0.6
      comp=Z,10nm,0.4s,baz=330,slow=10,SNR=21
WRA                                 S     S       00 32 03.7 -1.8
      comp=Z,7.5nm,1.1s,baz=336,slow=17,SNR=7.5
WRA                                 ScP   ScP     00 35 21.6 +0.7
      comp=Z,5.2nm,0.6s,baz=336,slow=2.7,SNR=21
WRA   Warramunga Arr   22.62 151  i P     P       00 28 09.6 +1.2
WRA                                 pmax  pmax
      comp=Z,12nm,0.4s
WRA   Warramunga Arr   22.62 151    P     P       00 28 07.9 -0.5
WR0   Warramunga Arr   22.73 151    P     P       00 28 10.1 +0.6
WR0                                 IAmb  IAmb    00 28 50.8
      comp=Z,35nm,0.8s
KULM  Kulim            22.85 284    IAmb  IAmb    00 28 13.0
      comp=Z,182nm,1.9s
PPSI  Pulau Pagai      23.00 263    P     P       00 28 11.5 -0.5
      comp=Z,2µmcomp=Z,228nm,0.6s
TPUB  Ta-pu            23.45 355    P     P       00 28 16.9 +0.8
TPUB                                IAmb  IAmb    00 28 34.5
      comp=Z,137nm,1.4s
YULB  Yu-li            23.49 356    P     P       00 28 15.8 -0.6
SISI  Saibi            23.81 267    P     P       00 28 18.5 -1.0
      comp=Z,1µmcomp=Z,153nm,1.0s
GIRL  Giralia          23.85 200    P     P       00 28 21.7 +2.0
SSLB  Suanglung        23.91 356    P     P       00 28 19.8 -0.4
SSLB                                IAmb  IAmb    00 28 24.1
      comp=Z,73nm,1.0s
RPSI  Rantau Prapat    24.11 277    P     P       00 28 23.6 +1.4
RPSI                                IAmb  IAmb    00 28 24.3
      comp=Z,31nm,0.7s
PSI   Prapat           24.13 277    P     P       00 28 22.8 +0.3
      comp=Z,33nm,0.8s,baz=90,slow=3.4,SNR=29
PSI   Prapat           24.13 277    P     P       00 28 23.6 +1.1
PSI                                 pmax  pmax
      comp=Z,31nm,0.7s
PBSI  Pulau Batu       24.60 270    P     P       00 28 26.3 -0.3
      comp=Z,2µmcomp=Z,193nm,1.1s
ASAR  Alice Springs    25.68 156    P     P       00 28 37.2 +0.9
      comp=Z,4.0nm,0.4s,baz=346,slow=15,SNR=48
ASAR                                pP    pP      00 29 06.7 +0.1
      comp=Z,3.9nm,0.8s,baz=331,slow=8.7,SNR=6.8
ASAR                                PcP   PcP     00 32 03.9 +0.8
      comp=Z,4.1nm,0.4s,baz=346,slow=2.2,SNR=14
ASAR                                S     S       00 32 55.4 +1.1
      comp=Z,2.9nm,1.0s,baz=345,slow=22,SNR=4.6
ASAR                                ScP   ScP     00 35 29.9 +0.5
      comp=Z,4.9nm,0.5s,baz=341,slow=2.7,SNR=24
ASAR  Alice Springs    25.68 156    P     P       00 28 38.1 +1.8
ASAR  Alice Springs    25.68 156    P     P       00 28 38.0 +1.8
ASAR                                      PcP     00 32 03.7 +0.6
ASAR                                      ScP     00 35 29.5 +0.2
MLSI  Meulaboh, Aceh   26.82 280    P     P       00 28 47.0 +0.4
      comp=Z,140nm,0.6s
PBKT  Sadao Pong       27.27 309    P     P       00 28 52.0 +1.3
PBKT                                IAmb  IAmb    00 28 56.8
      comp=Z,19nm,0.5s
PBKT                                PcP   PcP     00 32 07.3 +0.4
SLVN  Son La           28.30 320    P     P       00 29 00.6 +0.7
MORW  Morawa           29.45 192    P     P       00 29 08.6 -1.2
MORW                                IAmb  IAmb    00 29 11.0
      comp=Z,22nm,0.5s
CM31  Chiang Mai Arr   29.94 310    P     P       00 29 16.0 +1.7
CM31                                IAmb  IAmb    00 29 17.3
      comp=Z,34nm,0.7s
CMAR  Chiang Mai Arr   29.94 310    P     P       00 29 16.4 +2.1
      comp=Z,26nm,0.6s,baz=132,slow=7.2,SNR=176
CMAR                                PcP   PcP     00 32 14.4 +0.8
      comp=Z,2.6nm,0.6s,baz=166,slow=1.9,SNR=7.2
CMAR                                PKiKP PKiKP   00 39 46.1 +0.1
      comp=Z,0.9nm,0.4s,baz=260,slow=0.5,SNR=5.6
CMAR  Chiang Mai Arr   29.94 310    P     P       00 29 15.8 +1.5
CMAR                                      PcP     00 32 14.2 +0.6
CHTO  Chiang Mai       30.15 310    P     P       00 29 17.5 +1.4
CHTO                                pmax  pmax
      comp=Z,59nm,0.7s
CHTO  Chiang Mai       30.15 310    P     P       00 29 17.5 +1.4
GYA   Guiyang          30.76 331 ⇓iP      P       00 29 23.3 +1.8
GYA                                 pP    pP      00 29 51.0 -1.4
GYA                                 PP    PnPn    00 30 27.0 -1.2
GYA                                 S     S       00 34 20.1 +5.8
GYA                                 sS    sS      00 35 08.0  0.0
GYA                                 SS    SnSn    00 36 07.4 -3.2
GYA                                 pmax  pmax
      comp=Z,30nm,0.8s
GYA                                 pmax  pmax
      comp=Z,150nm,4.8s
GYA                                 LR    LR
      comp=Z,200nm,16.4s
GYA                                 LR    LR
      comp=Z,240nm,16.8s
GYA                                 LR    LR
      comp=Z,160nm,16.6s
FORT  Forrest          30.82 171    P     P       00 29 22.4 +0.5
WHN   Wuhan            31.62 346    P     P       00 29 32.1 +3.2
KMI   Kunming          31.82 324    P     P       00 29 33.5 +2.5
KMI                                 pmax  pmax
      comp=Z,35nm,0.7s
NJ2   Nanjing          32.29 354   eP     P       00 29 37.5 +2.8
NJ2                                 pmax  pmax
      comp=Z,13nm,0.5s
JCJ   Chichijima       32.88  33    P     P       00 29 39.3 -0.6
      comp=Z,72nm,0.3s,baz=294,slow=23,SNR=9.4
NWAO  Narrogin (SRO)   33.00 189    P     P       00 29 41.5 +0.6
      comp=Z,13nm,0.4s,baz=26,slow=7.8,SNR=17
NWAO  Narrogin (SRO)   33.00 189    IAmb  IAmb    00 29 42.3
      comp=Z,16nm,0.6s
BBOO  Buckleboo        34.75 160    P     P       00 29 57.0 +1.0
BBOO                                IAmb  IAmb    00 29 57.9
      comp=Z,19nm,0.8s
CD2   Chengdu          35.86 331 ⇓iP      P       00 30 06.9 +1.2
CD2                                 S     S       00 35 30.7 -2.3
CD2                                 pmax  pmax
      comp=Z,70nm,0.6s
CD2                                 pmax  pmax
      comp=Z,190nm,5.6s
STKA  Stephens Creek   36.15 152    P     P       00 30 09.5 +1.4
      comp=Z,11nm,0.4s,baz=330,slow=10,SNR=28
STKA                                pP    pP      00 30 38.8 -0.6
      comp=Z,4.3nm,0.5s,baz=323,slow=13,SNR=2.1
STKA                                PcP   PcP     00 32 31.2 +0.5
      comp=Z,4.8nm,0.4s,baz=339,slow=6.5,SNR=4.4
STKA                                ScP   ScP     00 36 04.6 +0.8
      comp=Z,1.9nm,0.8s,baz=342,slow=3.2,SNR=4.5
XAN   Xi'an            36.48 340    P     P       00 30 12.0 +1.1
XAN                                 pmax  pmax
      comp=Z,28nm,0.8s
XAN   Xi'an            36.48 340    IAmb  IAmb    00 30 12.9
      comp=Z,21nm,0.7s
KSRS  Korea Array      37.74   7    P     P       00 30 21.5 +0.1
      comp=Z,1.0nm,0.4s,baz=189,slow=8.6,SNR=4.5
BRDH  Bariadhala       37.96 309    P     P       00 30 23.9 +0.5
      comp=Z,195nm,0.4s,baz=274,slow=14,SNR=5.0
MAJO  Matsushiro       39.22  20⇑eP     P       00 30 33.4 -0.4
MAJO                                pmax  pmax
      comp=Z,14nm,1.0s
MAT   Matsushiro       39.22  20    P     P       00 30 32.3 -1.5
MJAR  Matsushiro Arr   39.22  20    P     P       00 30 32.5 -1.3
      comp=Z,8.0nm,0.8s,baz=192,slow=8.9,SNR=13
MJAR                                pP    pP      00 31 03.2 -2.6
      comp=Z,8.1nm,0.8s,baz=189,slow=6.9,SNR=4.1
LZH   Lanzhou          40.20 336  ⇑P      P       00 30 44.6 +2.5
LZH                                 pP    pP      00 31 14.3 +0.4
LZH                                 sP    sP      00 31 29.6 -0.7
LZH                                 PP    PnPn    00 32 23.8 +1.1
LZH                                 pmax  pmax
      comp=Z,28nm,1.1s
LZH                                 pmax  pmax
      comp=Z,120nm,5.4s
LZH                                 LR    LR
      comp=Z,270nm,15.2s
LZH                                 LR    LR
      comp=Z,280nm,15.5s
LZH                                 LR    LR
      comp=Z,490nm,17.8s
BJI   Beijing          40.50 352   eP     P       00 30 44.5 +0.2
BJI                                 pmax  pmax
      comp=Z,9.0nm,0.6s
ARMA  Armidale         40.63 140    P     P       00 30 48.4 +2.7
HHC   Hu-ho-hao-te     42.12 347   eP     P       00 30 58.2 +0.5
HHC                                 pmax  pmax
      comp=Z,77nm,0.9s
HHC                                 pmax  pmax
      comp=Z,330nm,4.8s
LSA   Lhasa            42.40 317    P     P       00 31 02.7 +2.1
LSA   Lhasa            42.40 317    P     P       00 31 02.7 +2.1
LSA                                 pmax  pmax
      comp=Z,53nm,0.6s
LSA   Lhasa            42.40 317    P     P       00 31 02.7 +2.1
LSA                                 IAmb  IAmb    00 31 03.5
      comp=Z,53nm,0.6s
CAN   Canberra         42.60 148    P     P       00 31 04.3 +2.7
CAN                                 pmax  pmax
      comp=Z,31nm,0.7s
CAN   Canberra         42.60 148    P     P       00 31 04.3 +2.7
CAN                                 IAmb  IAmb    00 31 45.2
      comp=Z,31nm,0.7s
TOO   Toolangi         42.66 153    P     P       00 31 04.8 +2.8
TOO                                 pmax  pmax
      comp=Z,26nm,0.7s
TOO   Toolangi         42.66 153    P     P       00 31 04.8 +2.8
TOO                                 IAmb  IAmb    00 31 05.2
      comp=Z,26nm,0.7s
PALK  Pallekele        42.71 281    P     P       00 31 02.9 +0.1
      comp=Z,5.2nm,0.6s,baz=111,slow=4.3,SNR=5.7
ODAN  Odare            43.45 311   eP     P       00 31 09.9 +1.1
      comp=Z,120nm,0.5s
TAPN  Taplejung        43.48 312   eP     P       00 31 10.1 +1.0
      comp=Z,120nm,0.4s
RAMN  Ramite           44.10 311   eP     P       00 31 15.2 +1.2
      comp=Z,281nm,0.6s
GTA   Gaotai           44.71 334   eP     P       00 31 19.8 +1.3
GTA                                 pP    pP      00 31 51.3 +0.4
GTA                                 sP    sP      00 32 07.7 +0.6
GTA                                 PcP   PcP     00 32 58.3 -0.1
GTA                                 ScP   ScP     00 36 36.6 -0.8
GTA                                 pmax  pmax
      comp=Z,13nm,1.0s
GTA                                 pmax  pmax
      comp=Z,130nm,6.8s
GTA                                 LR    LR
      comp=Z,110nm,18.7s
GTA                                 LR    LR
      comp=Z,140nm,18.1s
GTA                                 LR    LR
      comp=Z,130nm,18.1s
JIRN  Jiri             44.78 311   eP     P       00 31 20.6 +1.1
      comp=Z,271nm,0.3s
USRK  Ussuriysk Ar.    44.94   9    P     P       00 31 19.4 -0.6
      comp=Z,8.5nm,0.6s,baz=196,slow=6.0,SNR=15
MDJ   Mudanjiang       45.01   7    P     P       00 31 20.7 +0.1
MDJ                                 pP    pP      00 31 50.3 -2.8
MDJ                                 sP    sP      00 32 07.2 -2.1
MDJ                                 PcP   PcP     00 32 57.2 -2.0
MDJ                                 PP    PP      00 33 09.1 +0.3
MDJ                                 ScP   ScP     00 36 38.9 +0.6
MDJ                                 PcS   PcS     00 36 52.8 -0.1
MDJ                                 S     S       00 37 52.8 +4.5
MDJ                                 sS    sS      00 38 45.1 +0.9
MDJ                                 ScS   ScS     00 41 02.9 +0.2
MDJ                                 pmax  pmax
      comp=Z,17nm,0.9s
MDJ                                 pmax  pmax
      comp=Z,130nm,4.4s
GUN   Gumba            45.15 311   eP     P       00 31 23.4 +1.0
      comp=Z,268nm,0.3s
PKI   Pulchoki         45.33 311   eP     P       00 31 24.4 +0.6
      comp=Z,65nm,0.3s
PKIN  Phulchoki        45.34 311   eP     P       00 31 24.3 +0.5
      comp=Z,65nm,0.3s
KKN   Kakani           45.54 311   eP     P       00 31 26.1 +0.8
      comp=Z,71nm,0.3s
DMN   Daman            45.58 310   eP     P       00 31 26.5 +0.8
      comp=Z,139nm,0.6s
GKN   Gorkha           46.13 311   eP     P       00 31 30.7 +0.8
      comp=Z,190nm,0.3s
DANN  Dangsing         46.98 310   eP     P       00 31 37.3 +0.6
      comp=Z,192nm,0.4s
HYB   Hyderabad        47.00 294  i P     P       00 31 37.0 +0.3
HYB                                epP    pP      00 32 09.5 +0.7
ULN   Ulaanbaatar      49.80 346    P     P       00 31 58.9 +1.1
ULN                                 ScP   ScP     00 36 57.4 -1.3
KLR   Kul'dur          49.82   8⇑eP     P       00 31 57.2 -0.5
KLR                                 pmax  pmax
      comp=Z,4.0nm,1.0s
SONM  Songino Array    49.94 346    P     P       00 31 58.8  0.0
      comp=Z,6.5nm,0.5s,baz=161,slow=9.9,SNR=76
SONM                                pP    pP      00 32 32.4 +0.5
      comp=Z,8.1nm,0.8s,baz=165,slow=7.6,SNR=3.5
SONM                                PcP   PcP     00 33 16.1 -0.8
      comp=Z,3.2nm,0.5s,baz=160,slow=5.1,SNR=11
SONM                                ScP   ScP     00 36 57.6 -1.6
      comp=Z,3.1nm,0.9s,baz=157,slow=3.9,SNR=12
SONM  Songino Array    49.94 346          ScP     00 36 58.3 -0.9
SONM  Songino Array    49.94 346    P     P       00 31 59.0 +0.2
ZAK   Zakamensk        53.09 344   eP     P       00 32 21.6 -0.5
ZAK                                e              00 33 24.0
ZAK                                 pmax  pmax
      comp=Z,3.0nm,1.1s
ZAK                                 pmax  pmax
      comp=Z,4.0nm,1.1s
WMQ   Urumqi           53.89 329   eP     P       00 32 29.2 +1.2
WMQ                                 pmax  pmax
      comp=Z,16nm,1.3s
WMQ                                 pmax  pmax
      comp=Z,61nm,4.9s
WMQ                                 LR    LR
      comp=Z,470nm,29.2s
WMQ                                 LR    LR
      comp=Z,940nm,29.0s
WMQ                                 LR    LR
      comp=Z,58nm,24.9s
WMQ   Urumqi           53.89 329    IAmb  IAmb    00 32 29.9
      comp=Z,16nm,0.6s
TLY   Talaya           54.18 345deP     P       00 32 30.6 +0.7
TLY                                 pmax  pmax
      comp=Z,11nm,1.6s
MOY   Mondy            54.88 344   eP     P       00 32 35.6 +0.5
MOY                                 pmax  pmax
      comp=Z,22nm,1.6s
NIL   Nilore           57.41 311    P     P       00 32 53.3 -0.1
NIL                                 pmax  pmax
      comp=Z,28nm,0.6s
NIL   Nilore           57.41 311    P     P       00 32 53.3 -0.1
KSH   Kashi            58.23 318    P     P       00 33 00.2 +1.1
KSH                                 sP    PcP     00 33 49.6 +0.7
KSH                                 PcS   PcS     00 37 49.5 -1.1
KSH                                 S     S       00 40 48.0 -2.0
KSH                                 pmax  pmax
      comp=Z,16nm,0.8s
KSH                                 pmax  pmax
      comp=Z,300nm,8.0s
KSH                                 LR    LR
      comp=Z,200nm,12.3s
KSH                                 LR    LR
      comp=Z,370nm,15.5s
KSH                                 LR    LR
      comp=Z,140nm,16.3s
BOD   Bodaibo          58.26 354   eP     P       00 32 56.7 -2.0
BOD                                 pmax  pmax
      comp=Z,7.0nm,1.0s
MK31  Makanchi Array   58.71 328   eP     P       00 33 02.0 -0.1
MK31  Makanchi Array   58.71 328    IAmb  IAmb    00 33 03.2
      comp=Z,12nm,0.7s
MKAR  Makanchi Array   58.71 328    P     P       00 33 02.1  0.0
      comp=Z,18nm,0.4s,baz=126,slow=8.2,SNR=224
MKAR                                pP    pP      00 33 37.3 +1.2
      comp=Z,2.8nm,0.6s,baz=116,slow=7.9,SNR=1.9
MKAR                                PcP   PcP     00 33 49.5 -0.9
      comp=Z,5.5nm,0.5s,baz=154,slow=3.8,SNR=9.0
MKAR                                ScP   ScP     00 37 35.0 -2.5
      comp=Z,1.2nm,0.8s,baz=113,slow=5.1,SNR=5.3
MKAR  Makanchi Array   58.71 328    P     P       00 33 02.0 -0.1
MAKZ  Makanchi         58.88 328    P     P       00 33 03.1 -0.2
MAKZ  Makanchi         58.88 328    P     P       00 33 02.8 -0.5
MAKZ                                IAmb  IAmb    00 33 05.1
      comp=Z,15nm,0.5s
ULHL  Ulahol           59.49 321    P     P       00 33 08.6 +0.8
      SNR=5.9
KZA   Kyzart           60.03 321    P     P       00 33 12.8 +1.0
      SNR=8.8
PEA0B Petropavlovsk-   60.51  23⇑eP     P       00 33 14.5 +0.2
PETK  Petropavlovsk-   60.51  23    P     P       00 33 14.9 +0.6
      comp=Z,7.0nm,0.7s,baz=180,slow=3.0,SNR=15
KBK   Karagaybulak     60.52 321    P     P       00 33 15.8 +1.0
      SNR=11
UCH   Uchtor           60.58 320    P     P       00 33 16.5 +1.0
      SNR=9.6
AAK   Ala-Archa        60.80 321    P     P       00 33 17.5 +0.8
      SNR=6.9
AAK   Ala-Archa        60.80 321ceP     P       00 33 17.1 +0.4
AAK                                 pmax  pmax
      comp=Z,12nm,1.5s
AAK   Ala-Archa        60.80 321    P     P       00 33 16.6  0.0
PET   Petropavlovsk    60.83  24⇓eP     P       00 33 16.8 +0.4
PET                                 pmax  pmax
      comp=Z,70nm,2.6s
RPZ   Rata Peaks       60.94 142    P     P       00 33 18.7 +1.3
KBL   Kabul            60.97 310    P     P       00 33 17.6 -0.4
KBL                                 pmax  pmax
      comp=Z,46nm,1.1s
KBL   Kabul            60.97 310    P     P       00 33 17.6 -0.4
KBL                                 IAmb  IAmb    00 33 19.7
      comp=Z,46nm,1.1s
AML   Almayashu        61.05 320    P     P       00 33 19.5 +0.8
      SNR=15
ARSB  Arslanbob        61.12 319    IAmb  IAmb    00 33 20.7
      comp=Z,12nm,0.8s
USP   Ospenovka        61.12 321    P     P       00 33 18.9 +0.2
      SNR=11
EKS2  Erkin-Say        61.27 321    P     P       00 33 20.7 +0.9
      SNR=12
YAK   Yakutsk          62.27   4⇓eP     P       00 33 25.3 -0.6
YAK                                 pmax  pmax
      comp=Z,13nm,0.5s
ZALV  Zalesovo Beam    62.43 336    P     P       00 33 25.8 -1.4
      comp=Z,5.1nm,0.5s,baz=123,slow=5.5,SNR=38
ZALV                                PKPPKP P'P'df 01 02 31.7 +1.2
      comp=Z,0.4nm,0.5s,baz=318,slow=1.9,SNR=2.6
ZALV  Zalesovo Beam    62.43 336  i P     P       00 33 26.1 -1.0
ZALV                                pmax  pmax
      comp=Z,5.0nm,0.5s
ZALV  Zalesovo Beam    62.43 336    P     P       00 33 26.1 -1.0
KURBB Kurchatov Arra   63.06 330    P     P       00 33 30.5 -0.9
KURK  Kurchatov        63.08 330c iP      P       00 33 31.1 -0.4
KURK                                pmax  pmax
      comp=Z,29nm,0.7s
KURK  Kurchatov        63.08 330    P     P       00 33 30.9 -0.6
KURK                                IAmb  IAmb    00 33 32.0
      comp=Z,29nm,0.7s
MA2   Magadan          63.45  15ceP     P       00 33 34.2 +0.4
MA2                                 pmax  pmax
      comp=Z,39nm,1.0s
MA2   Magadan          63.45  15    P     P       00 33 34.2 +0.4
MA2                                 IAmb  IAmb    00 33 35.7
      comp=Z,29nm,0.8s
KK31  Karatay Array    63.58 320  i P     P       00 33 34.4 -0.6
KKAR  Karatay Array    63.58 320    P     P       00 33 34.1 -0.9
KKAR  Karatay Array    63.58 320    P     P       00 33 34.1 -0.9
KKAR  Karatay Array    63.58 320    IAmb  IAmb    00 33 36.3
      comp=Z,6.3nm,0.8s
SEY   Seymchan         66.72  14⇓eP     P       00 33 55.5 +0.7
BRVK  Borovoye         68.65 329ceP     P       00 34 06.7 -0.4
BRVK                                pmax  pmax
      comp=Z,13nm,1.1s
BRVK  Borovoye         68.65 329    P     P       00 34 05.6 -1.5
SOCY  Socotra          69.42 283    IAmb  IAmb    00 34 13.0
      comp=Z,27nm,0.7s
GEYT  Alibeck          70.42 311    P     P       00 34 17.9 -0.4
      comp=Z,6.0nm,0.7s,baz=145,slow=5.4,SNR=14
GEYT  Alibeck          70.42 311    P     P       00 34 17.1 -1.3
AB31  Akbulak array    72.80 322  i P     P       00 34 31.0 -1.3
ABKAR Akbulak array    72.80 322    P     P       00 34 30.9 -1.4
ABKAR Akbulak array    72.80 322    IAmb  IAmb    00 34 33.1
      comp=Z,6.1nm,0.8s
NRIK  Noril'sk         73.35 348    P     P       00 34 34.3 -0.9
      comp=Z,12nm,0.7s,baz=137,slow=5.6,SNR=28
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BILL	Bilibino	74.32	16 ⇑	*i*P	P	00 34 38.4	-2.4
BILL				*i*		00 34 50.4	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
AKTO	Aktyubinsk	74.39	323	P	P	00 34 40.7	-0.9
SVE	Sverdlovsk	75.33	330	*e*P	P	00 34 45.7	-1.1
SVE				pmax	pmax		
	comp=Z,15nm,0.7s						
ARU	Arti	76.23	329*c*	*i*P	P	00 34 50.5	-1.4
ARU				*PP	pP	00 35 28.1	+1.0
ARU				S	S	00 44 23.2	-1.1
ARU				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ABPO	Ambohimpanom	76.38	251	P	P	00 34 53.4	-0.4
ABPO				pmax	pmax		
	comp=Z,55nm,1.9s						
ABPO	Ambohimpanom	76.38	251	P	P	00 34 53.4	-0.4
ABPO				IAmb	IAmb	00 36 55.7	
	comp=Z,55nm,1.9s						
MAW	Mawson	78.78	200	P	P	00 35 07.2	+1.3
	comp=Z,16nm,0.9s,baz=66,slow=5.9,SNR=15						
AKT	Akhty	79.02	312	*e*P	P	00 35 07.2	-0.7
AKT				*e*		00 35 14.7	
AKT				*e**PP	pP	00 35 43.0	-0.3
AKT				pmax	pmax		
	comp=Z,17nm,0.8s						
VNDA	Vanda	80.08	172	P	P	00 35 14.0	+1.3
	comp=Z,14nm,0.7s,baz=318,slow=6.6,SNR=43						
VNDA	Vanda	80.08	172	P	P	00 35 14.1	+1.3
VNDA				pmax	pmax		
	comp=Z,13nm,0.8s						
VNDA	Vanda	80.08	172	P	P	00 35 14.1	+1.3
GNI	Garni	81.05	311 ⇓	*e*P	P	00 35 19.7	+0.7
GNI				pmax	pmax		
	comp=Z,41nm,2.4s						
ZEI	Tsey	82.03	313	*e*P	P	00 35 22.8	-1.3
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KBZ	Khabaz	82.88	314	P	P	00 35 26.6	-1.6
	comp=Z,4.9nm,0.9s,baz=198,slow=4.9,SNR=15						
NEY	Neytrino	82.95	313 ⇓	*e*P	P	00 35 29.6	+0.8
PRGR	Permogore	84.11	332	*e*P	P	00 35 31.4	-2.7
PRGR				pmax	pmax		
	comp=Z,16nm,0.6s						
RDOG	Red Dog Mine	84.31	21	IAmb	IAmb	00 38 04.9	
	comp=Z,20nm,0.8s						
VRH	Novokhopyorsk	84.59	321	*e*P	P	00 35 34.4	-2.3
VRH				pmax	pmax		
	comp=Z,20nm,1.5s						
KMBO	Kilima Mbogo	85.62	269	P	P	00 35 42.2	-0.8
	comp=Z,4.7nm,0.9s,baz=67,slow=8.8,SNR=15						
VSR	Storozhevoye	86.19	321 ⇓	*e*P	P	00 35 42.9	-1.8
VSR				pmax	pmax		
	comp=Z,37nm,0.6s						
LPSR	Galich'ya Gora	86.46	323	*e*P	P	00 35 45.4	-0.5
LPSR				pmax	pmax		
	comp=Z,30nm,0.7s						
OHAK	Old Harbor	86.81	33	IAmb	IAmb	00 35 49.7	
	comp=Z,21nm,0.8s						
KLMR	Klimovskoe	86.92	331	*e*P	P	00 35 44.1	-3.9
KLMR				pmax	pmax		
	comp=Z,25nm,1.4s						
KLMR	Klimovskoe	86.92	331	*e*P	P	00 35 44.1	-3.9
KLMR				AMP		00 35 49.2	
	comp=Z,25nm,1.4s						
KDAK	Kodiak Island	87.24	32	P	P	00 35 49.9	+0.3
KDAK				pmax	pmax		
	comp=Z,82nm,2.0s						
KDAK	Kodiak Island	87.24	32	P	P	00 35 49.9	+0.3
KDAK				IAmb	IAmb	00 36 11.8	
	comp=Z,82nm,2.0s						
SYO	Syowa Base	87.41	201 ⇑	*e*P	P	00 35 49.0	-1.2
SYO	Syowa Base	87.41	201 ⇓	*i*PcP	P	00 35 51.0	+0.8
IMAR	Indian Mountai	87.46	24	P	P	00 35 50.4	-0.1
MMAI	Mount Meron Ar	87.98	303	P	P	00 35 52.8	-1.0
	comp=Z,1.5nm,0.6s,baz=81,slow=5.5,SNR=5.6						
OBN	Obninsk	88.03	325 ⇓	*e*P	P	00 35 53.6	+0.2
OBN				*e**PP	pwP	00 36 32.1	+0.5
OBN				*e*		00 39 19.7	
OBN				*e*S	SKSac	00 46 05.6	-2.7
OBN				*e*SS	SS	00 52 20.8	+4.7
OBN				pmax	pmax		
	comp=Z,18nm,1.8s						
BRLK	Bradley Lake	88.26	30	IAmb	IAmb	00 35 57.5	
	comp=Z,11nm,0.8s						
MLY	Manley	88.64	25	IAmb	IAmb	00 35 57.3	
	comp=Z,14nm,1.0s						
TOLK	Toolik Lake Re	89.28	21	P	P	00 35 59.6	+0.5
	baz=268						
MCK	McKinley	89.36	26	IAmb	IAmb	00 35 59.8	
	comp=Z,11nm,0.8s						
RND	Reindeer	89.39	27	IAmb	IAmb	00 35 59.3	
	comp=Z,12nm,0.8s						
KNK	Knik Glacier	89.52	29	IAmb	IAmb	00 36 03.3	
	comp=Z,20nm,1.0s						
BRTR	Keskin Array B	89.53	310	P	P	00 35 58.9	-2.1
	comp=Z,3.2nm,0.9s,baz=129,slow=5.3,SNR=14						
BRTR	Keskin Array B	89.53	310	*i* P	P	00 35 59.0	-2.1
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRTR	Keskin Array B	89.53	310	P	P	00 35 58.6	-2.4
QSPA	South Pole Qui	89.75	180	P	P	00 36 02.7	+1.3
QSPA				IAmb	IAmb	00 36 03.6	
	comp=Z,53nm,1.6s						
WRH	Wood River Hil	89.75	26	IAmb	IAmb	00 36 12.7	
	comp=Z,11nm,0.4s						
CCB	Clear Creek Bu	89.88	26	IAmb	IAmb	00 36 15.8	
	comp=Z,11nm,0.6s						
DHY	Denali Highway	90.05	27	IAmb	IAmb	00 36 03.6	
	comp=Z,9.3nm,0.7s						
ILAR	Eielson Array	90.27	25	P	P	00 36 01.4	-2.3
	comp=Z,1.9nm,0.6s,baz=242,slow=5.4,SNR=45						
ILAR				PKKPbc	PKKPdf	00 53 32.6	+2.0
	comp=Z,1.0nm,0.8s,baz=94,slow=1.7,SNR=12						
ILAR	Eielson Array	90.27	25	P	P	00 36 01.8	-1.9
ILAR	Eielson Array	90.27	25	P	P	00 36 01.8	-1.9
BMAR	Burnt Mountain	91.15	23	P	P	00 36 07.7	-0.2
TGL	Tana Glacier	92.27	29	IAmb	IAmb	00 36 14.2	
	comp=Z,13nm,0.7s						
AKASG	Malin Array Be	92.47	321	P	P	00 36 11.9	-2.3
	comp=Z,0.8nm,0.4s,baz=74,slow=4.6,SNR=7.0						
AKASG	Malin Array Be	92.47	321	P	P	00 36 11.9	-2.3
AKASG				pmax	pmax		
	comp=Z,2.0nm,1.1s						
AKASG	Malin Array Be	92.47	321	IAmb	IAmb	00 36 14.3	
	comp=Z,1.8nm,1.1s						
BCAR	Beaver Creek A	92.59	27	P	P	00 36 14.8	+0.2
ARCES	ARCESS Array B	92.76	340	P	P	00 36 12.8	-2.4
	comp=Z,1.7nm,0.6s,baz=88,slow=5.5,SNR=14						
ARCES				PKKPbc	PKKPdf	00 53 26.0	-0.3
	comp=Z,3.1nm,0.9s,baz=266,slow=3.4,SNR=6.8						
CTGM	Chitina Glacie	92.98	29	IAmb	IAmb	00 36 18.1	
	comp=Z,19nm,0.8s						
VSU	Vasula	93.38	328 ⇓	*e*P	P	00 36 19.2	+1.0
VSU				pmax	pmax		
	comp=Z,64nm,1.7s						
FINES	FINESS Array B	93.42	331	P	P	00 36 16.0	-2.3
	comp=Z,1.6nm,0.6s,baz=85,slow=4.1,SNR=15						
FINES				PKiKP	PKiKP	00 41 03.0	-0.7
	comp=Z,1.2nm,0.7s,baz=80,slow=1.7,SNR=4.7						
DAWY	Dawson	93.56	26	IAmb	IAmb	00 36 20.0	
	comp=Z,8.1nm,0.8s						
MATP	Matopo	94.04	250	P	P	00 36 18.3	-4.0
	comp=Z,5.7nm,0.4s,baz=129,slow=3.2,SNR=45						
EPYK	Eagle Plains	94.35	23	P	P	00 36 22.2	-0.4
	baz=280						
VRI	Vrincioaia	94.43	316 ⇑	P	P	00 36 24.4	+1.1
LSZ	Lusaka	94.47	255	P	P	00 36 24.5	+0.2
	comp=Z,7.0nm,0.6s,baz=94,slow=4.5,SNR=28						
LSZ	Lusaka	94.47	255	P	P	00 36 24.2	-0.2
LSZ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LSZ	Lusaka	94.47	255	P	P	00 36 24.2	-0.2
LSZ				IAmb	IAmb	00 36 25.6	
	comp=Z,9.0nm,0.8s						
PLOR	Plostina	94.48	316 ⇓	P	P	00 36 36.0	+12
INK	Inuvik	95.19	21	IAmb	IAmb	00 36 26.3	
	comp=Z,4.7nm,0.7s						
BURAR	Bucovina Array	95.31	318 ⇓	P	P	00 36 26.6	-0.9
BURAR	Bucovina Array	95.31	318	P	P	00 36 25.9	-1.6
ARCR	ARCALIA	95.95	317 ⇓	P	P	00 36 28.1	-2.2
BOSA	Boshof	96.61	241	P	P	00 36 33.4	-0.4
	comp=Z,6.3nm,1.1s,baz=110,slow=6.4,SNR=4.1						
DRGR		97.10	317 ⇓	P	P	00 36 24.7	-11
KOLS	Kolonicke sedl	97.11	319	*e*P	Pdif	00 36 36.6	+1.0
KOLS	Kolonicke sedl	97.11	319	*e*PDIFF	Pdif	00 36 36.6	+1.0
C36M	Paulatuk	98.16	19	Pdiff	P	00 36 39.2	-0.5
	baz=292						
VYHS	Vyhne	99.43	319	*e*P	Pdif	00 36 45.7	-0.2
VYHS	Vyhne	99.43	319	*e*PDIFF	Pdif	00 36 45.7	-0.2
NOA	NORSAR Array B	100.52	333	P	Pdif	00 36 48.0	-2.5
	comp=Z,0.4nm,0.5s,baz=68,slow=7.3,SNR=2.8						
CLL	Collm	102.47	323	*e*PKiKP	PKiKP	00 41 19.0	-1.0
GERES	GERESS Array B	102.67	320	Pdiff	Pdif	00 36 59.3	-1.2
	comp=Z,0.1nm,0.2s,baz=108,slow=3.2,SNR=2.2						
GERES				PKiKP	PKiKP	00 41 19.8	-0.8
	comp=Z,0.3nm,0.5s,baz=44,slow=4.4,SNR=3.0						
YKA	Yellowknife Ar	104.62	24	Pdiff	Pdif	00 37 09.4	+0.8
	comp=Z,0.6nm,0.7s,baz=298,slow=4.0,SNR=10						
YKA				PKiKP	PKiKP	00 41 22.9	-0.7
	comp=Z,0.8nm,0.7s,baz=310,slow=1.7,SNR=9.5						
YKA				PKKPbc	PKKPbc	00 52 51.6	-4.1
	comp=Z,1.7nm,0.7s,baz=116,slow=2.9,SNR=28						
NVAR	Mina Array Bea	112.37	48	PKiKP	PKiKP	00 41 40.5	+1.4
	comp=Z,2.3nm,0.6s,baz=248,slow=2.4,SNR=14						
CWC	Cottonwood Cre	113.17	50	PKiKP	PKiKP	00 41 41.7	+1.0
	baz=288						
EDW2	Edwards Air Fo	113.71	52	P	PKiKP	00 41 42.8	+1.2
	baz=288						
MPMC	Manual Prospec	113.74	50	P	PKiKP	00 41 43.0	+1.2
	baz=288						
FURC	Furnace Creek,	114.09	50	P	PKiKP	00 41 43.8	+1.7
	baz=289						
EGMT	Eagleton	114.20	36	P	PKiKP	00 41 42.6	+0.5
	baz=300						
TPNV	Topopah Spring	114.40	49	P	PKiKP	00 41 43.9	+0.9
	baz=290						
R11A	Troy Canyon, C	114.41	47	P	PKiKP	00 41 44.1	+1.1
	baz=291						
GSC	Goldstone, Bar	114.50	51	P	PKiKP	00 41 44.7	+1.5
	baz=289						
HEC	Hector,Ludlow	115.02	51	P	PKPdf	00 41 45.7	+1.5
	baz=289						
BELC	Belle Mtn. Jos	115.55	52	P	PKPdf	00 41 47.2	+1.9
	baz=289						
GMRC	Granite Mounta	115.56	51	P	PKPdf	00 41 47.1	+1.8
	baz=289						
DUG	Dugway, Tooele	115.71	45	P	PKPdf	00 41 46.6	+1.2
	baz=294						
Y12C	Blythe	116.79	52	P	PKiKP	00 41 48.8	+1.3
	baz=290						
PDAR	Pinedale Array	116.82	41	PKP	PKPdf	00 41 47.6	0.0
	comp=Z,1.2nm,0.6s,baz=189,slow=1.6,SNR=10						
PDAR				PKKPbc	PKKPbc	00 52 13.4	-2.2
	comp=Z,0.8nm,0.7s,baz=114,slow=6.0,SNR=10						
PDAR	Pinedale Array	116.82	41		PKPdf	00 41 47.4	-0.2
ESDC	Sonseca Array	117.70	316	PKP	PKPdf	00 41 48.7	-0.4
	comp=Z,1.1nm,0.7s,baz=27,slow=4.1,SNR=6.7						
WUAZ	Wupatki	118.59	49	P	PKiKP	00 41 52.5	+1.3
	baz=293,SNR=11						
214A	Organ Pipe Nat	118.74	53	P	PKiKP	00 41 52.6	+1.2
	baz=290						
K22A	Casper	118.84	40	P	PKPdf	00 41 51.3	-0.1
	baz=300						
O20A	White River Ci	118.90	43	P	PKiKP	00 41 52.5	+0.8
	baz=297						
RSSD	Black Hills	119.62	37	PKIKP	PKPdf	00 41 52.9	0.0
RSSD	Black Hills	119.62	37		PKPdf	00 41 52.9	0.0
RSSD	Black Hills	119.62	37	P	PKPdf	00 41 52.8	-0.2
	baz=303						
W18A	Petrified Fore	119.98	49	P	PKiKP	00 41 55.2	+1.3
	baz=294,SNR=6.4						
MVCO	Mesa Verde	120.02	46	P	PKiKP	00 41 55.3	+1.3
	baz=296,SNR=5.8						
N23A	Red Feather La	120.08	41	P	PKiKP	00 41 54.5	+0.4
	baz=300						
ULM	Lac du Bonnet	120.21	28	PKP	PKPdf	00 41 52.9	-0.6
	comp=Z,9.6nm,0.7s,baz=323,slow=1.9,SNR=30						
ULM				PKKPbc	PKKPbc	00 52 01.4	-2.0
	comp=Z,1.5nm,0.7s,baz=162,slow=4.2,SNR=3.6						
TUC	Tucson	120.23	52	PKIKP	PKiKP	00 41 55.7	+1.3
TUC	Tucson	120.23	52		PKiKP	00 41 55.7	+1.3
TUC	Tucson	120.23	52	P	PKiKP	00 41 55.6	+1.3
	baz=291						
TOA0	Torodi Ar. Sit	120.34	285		PKPdf	00 41 54.2	-0.6
TORD	Torodi Ar. Bea	120.34	285	PKP	PKPdf	00 41 54.1	-0.6
	comp=Z,13nm,0.6s,baz=89,slow=1.8,SNR=61						
TORD				PKKPbc	PKKPab	00 52 03.1	-0.6
	comp=Z,0.7nm,0.7s,baz=259,slow=2.6,SNR=4.4						
TORD	Torodi Ar. Bea	120.34	285		PKPdf	00 41 53.5	-1.3
MDT	Midelt	120.94	309	PKP	PKPdf	00 41 55.8	+0.1
	comp=Z,2.9nm,0.5s,baz=265,slow=0.1,SNR=14						
S22A	4UR Ranch, Cre	120.97	45	P	PKiKP	00 41 57.4	+1.5
	baz=297,SNR=8.6						
ANMO	Albuquerque	122.49	48 ⇓	*i*PKIKP	PKiKP	00 42 00.2	+1.3
ANMO	Albuquerque	122.49	48		PKiKP	00 42 00.0	+1.2
ANMO	Albuquerque	122.49	48	P	PKiKP	00 42 00.1	+1.3
	baz=296						
121A	Cookes Peak, D	122.49	51	P	PKiKP	00 42 00.4	+1.4
	baz=294						
T25A	Trinidad	122.96	44	P	PKiKP	00 42 00.7	+1.0
	baz=299,SNR=7.4						
EYMN	Ely	123.87	27	P	PKPdf	00 42 00.7	0.0
	baz=317						
ECSD	EROS Data Cent	124.17	34	P	PKPdf	00 42 01.4	-0.1
	baz=310						
MNTX	Cornudas Mount	124.69	51		PKiKP	00 42 04.1	+1.0
BGNE	Belgrade	124.72	37	P	PKPdf	00 42 02.5	0.0
	baz=307						
SCHQ	Schefferville	124.95	7	PKP	PKPdf	00 42 02.4	-0.2
	comp=Z,9.1nm,0.7s,baz=29,slow=2.3,SNR=16						
SPMN	Marine on St.	125.19	30	P	PKiKP	00 42 03.8	+0.2
	baz=315						
MSTX	Muleshoe	125.65	47	P	PKiKP	00 42 05.6	+0.6
	baz=298						
TXAR	Lajitas Array	127.03	53	PKP	PKiKP	00 42 08.5	+0.6
	comp=Z,2.2nm,0.8s,baz=163,slow=1.3,SNR=10						
KSU1	Kansas State U	127.05	38	P	PKPdf	00 42 07.3	+0.2
	baz=307						
E44A	Grand Marais A	127.33	25	P	PKiKP	00 42 08.2	+0.3
	baz=323						
KIC	Kosan Boka	127.38	278	*e*PKIKP	PKPdf	00 42 08.5	+0.2
	comp=Z,16nm,0.7s						
KIC	Kosan Boka	127.38	278		PKPdf	00 42 08.5	+0.2
DBIC	Dimbokro	127.46	278	PKP	PKPdf	00 42 08.7	+0.2
	comp=Z,6.8nm,0.6s,baz=65,slow=3.3,SNR=13						
MATQ	Matagami	127.58	17	P	PKPdf	00 42 07.4	-0.3
	baz=334						
TIC	Toumodi	127.63	278	*e*PKIKP	PKPdf	00 42 08.8	0.0
	comp=Z,5.3nm,0.4s						
TIC	Toumodi	127.63	278	PKIKP	PKPdf	00 42 08.8	0.0
TIC	Toumodi	127.63	278		PKPdf	00 42 08.8	0.0
LIC	Lamto	127.67	278	*e*PKIKP	PKPdf	00 42 09.0	+0.1
	comp=Z,26nm,0.6s						
LIC	Lamto	127.67	278		PKPdf	00 42 09.0	+0.1
D46A	Sault St. Mari	127.87	23	P	PKiKP	00 42 09.0	0.0
	baz=325						
D47A	Chapleau	128.10	22	P	PKPdf	00 42 08.9	+0.1
	baz=326						
WMOK	Wichita Mounta	128.11	44	P	PKiKP	00 42 10.2	+0.3
	baz=302,SNR=6.5						
JFWS	Jewell Farm	128.13	31	P	PKPdf	00 42 09.0	0.0
	baz=316						
F45A	CMU Biological	128.24	25	P	PKiKP	00 42 09.9	+0.2
	baz=323						
LSQQ	Lebel-sur-Quev	128.40	17	P	PKPdf	00 42 09.2	-0.1
	baz=334						
D48A	Paudash Townsh	128.48	21	P	PKPdf	00 42 09.7	+0.2
	baz=328						
E47A	Iron Bridge	128.53	23	P	PKPdf	00 42 09.8	+0.2
	baz=326						
G46A	Petoskey	128.81	25	P	PKiKP	00 42 10.8	-0.1
	baz=323						
H45A	Beulah	128.85	26	P	PKiKP	00 42 10.8	-0.2
	baz=322						
E48A	Lockeyer	128.93	22	P	PKPdf	00 42 10.7	+0.2
	baz=327						
D50A	G1974 Best Tow	129.18	20	P	PKPdf	00 42 10.6	-0.2
	baz=330,SNR=5.1						
F48A	Evansville	129.31	23	P	PKPdf	00 42 11.3	+0.2
	baz=326						
G47A	Hillman	129.35	24	P	PKiKP	00 42 11.8	-0.1
	baz=324						
D51A	Lot 18 Range I	129.41	20	P	PKPdf	00 42 11.3	+0.1
	baz=331						
JCT	Junction City	129.52	49	P	PKiKP	00 42 13.1	+0.3
	baz=299						
F49A	Sandfield	129.58	23	P	PKPdf	00 42 11.7	0.0
	baz=327						
E51A	G1948 Merrick	129.85	20	P	PKPdf	00 42 11.9	-0.3
	baz=330,SNR=6.6						
H48A	Harrisville	129.95	24	P	PKiKP	00 42 12.9	-0.3
	baz=325						
D53A	Lac Vacive, Po	129.96	18	P	PKPdf	00 42 12.4	0.0
	baz=333						
J46A	Howard City	130.03	27	P	PKiKP	00 42 13.6	+0.2
	baz=322						
D54A	Lac Fusel, La	130.21	17	P	PKPdf	00 42 12.6	-0.2
	baz=334						
I48A	Sherman Twp	130.21	25	P	PKiKP	00 42 14.0	+0.3
	baz=324						
F51A	Arnstein	130.23	21	P	PKPdf	00 42 12.8	0.0
	baz=330						
E52A	Mattawa	130.35	20	P	PKPdf	00 42 12.8	-0.2
	baz=331						
K46A	Dorr	130.48	28	P	PKPdf	00 42 13.9	+0.4
	baz=321,SNR=5.3						
J47A	Sunmer	130.49	27	P	PKPdf	00 42 13.8	+0.3
	baz=322,SNR=6.2						
F52A	Sundridge	130.55	20	P	PKPdf	00 42 13.7	+0.2
	baz=330,SNR=5.5						
E53A	Dumoine, Ponti	130.59	19	P	PKPdf	00 42 13.4	-0.1
	baz=333,SNR=6.0						
D55A	Sainte-Anne-du	130.68	16	P	PKPdf	00 42 13.6	-0.1
	baz=336						
E54A	Lac Daplat, Po	130.69	18	P	PKPdf	00 42 13.1	-0.6
	baz=333						
I49A	Point Hope	130.78	24	P	PKPdf	00 42 13.6	-0.3
	baz=325						
833A	Chaparral WMA,	130.84	52	P	PKiKP	00 42 16.3	+0.8
	baz=297						
ALGO	Algonquin Park	130.84	19	P	PKPdf	00 42 13.5	-0.6
	baz=332						
D56A	ZEC Mazanza, M	130.85	16	P	PKPdf	00 42 13.7	-0.3
	baz=336,SNR=7.1						
K47A	Vermontville	130.85	27	P	PKPdf	00 42 14.0	-0.2
	baz=322,SNR=9.1						
J48A	Bridge Port	130.90	26	P	PKPdf	00 42 14.1	-0.1
	baz=324,SNR=9.1						
CCM	Cathedral Cave	130.96	36	PKIKP	PKPdf	00 42 14.4	-0.1
CCM	Cathedral Cave	130.96	36		PKPdf	00 42 14.4	-0.1
CCM	Cathedral Cave	130.96	36	P	PKPdf	00 42 14.9	+0.4
	baz=312						
LATQ	La Tuque	131.05	14	P	PKPdf	00 42 14.9	+0.5
	baz=339						
U40A	Yellville	131.09	39	P	PKPdf	00 42 14.9	+0.1
	baz=309,SNR=17						
D57A	Chemin Vers le	131.11	15	P	PKPdf	00 42 14.2	-0.4
	baz=338						
J49A	Marlette	131.12	25	P	PKPdf	00 42 14.8	+0.1
	baz=324						
K48A	Perry	131.15	26	P	PKPdf	00 42 14.7	0.0
	baz=323,SNR=8.2						
W39A	Magazine	131.21	41	P	PKPdf	00 42 15.4	+0.4
	baz=308,SNR=6.2						
E56A	St. Veronique	131.23	16	P	PKPdf	00 42 15.0	+0.2
	baz=336						
D58A	Chemin du LacG	131.29	14	P	PKPdf	00 42 15.2	+0.3
	baz=339						
L47A	Sherwood	131.31	28	P	PKPdf	00 42 15.2	+0.2
	baz=321						
G54A	Lake Saint Pet	131.32	20	P	PKPdf	00 42 14.6	-0.4
	baz=332						
G53A	Haliburton	131.38	20	P	PKPdf	00 42 15.1	0.0
	baz=331,SNR=5.6						
M47A	Cromwell	131.58	29	P	PKPdf	00 42 16.1	+0.5
	baz=320						
E57A	Chemin Saint G	131.60	16	P	PKPdf	00 42 15.5	0.0
	baz=337,SNR=5.5						
I51A	Listowel	131.62	23	P	PKPdf	00 42 15.7	+0.1
	baz=327,SNR=7.2						
L48A	N Adams	131.69	27	P	PKPdf	00 42 15.7	-0.1
	baz=322,SNR=17						
MIAR	Mount Ida	131.74	41	P	PKiKP	00 42 17.1	0.0
	baz=307,SNR=14						
L49A	Milan	131.86	27	P	PKPdf	00 42 16.4	+0.4
	baz=323,SNR=7.5						
E58A	La Victoria	131.87	15	P	PKPdf	00 42 16.4	+0.5
	baz=338						
H53A	Bobcaygeon	131.87	21	P	PKPdf	00 42 16.1	+0.1
	baz=331						
G55A	Calabogie	131.89	19	P	PKPdf	00 42 15.9	-0.2
	baz=333						
N47A	Urbana	131.92	29	P	PKPdf	00 42 16.0	-0.2
	baz=320						
D62A	Allapoint, All	132.15	11	P	PKPdf	00 42 16.7	+0.3
	baz=344						
M49A	Liberty Center	132.27	27	P	PKPdf	00 42 17.0	+0.1
	baz=322						
J52A	Paris	132.31	23	P	PKPdf	00 42 16.7	-0.2
	baz=328						
L50A	Kingsville	132.33	26	P	PKPdf	00 42 16.6	-0.4
	baz=324						
H55A	Tweed	132.37	19	P	PKPdf	00 42 17.0	+0.1
	baz=332						
E61A	Lac Etchemin	132.47	13	P	PKPdf	00 42 17.5	+0.3
	baz=342						
I55A	Frankford	132.50	20	P	PKPdf	00 42 16.8	-0.4
	baz=332						
G57A	Newington	132.56	17	P	PKiKP	00 42 18.0	-0.4
	baz=336						
F60A	Warwick	132.58	14	P	PKPdf	00 42 17.2	-0.1
	baz=340						
N49A	Columbus Grove	132.61	28	P	PKPdf	00 42 17.8	+0.3
	baz=322						
H56A	Elgin	132.63	19	P	PKiKP	00 42 18.1	-0.5
	baz=334						
O48A	Farmland	132.66	29	P	PKPdf	00 42 16.9	-0.8
	baz=320						
H57A	Richville	133.02	18	P	PKiKP	00 42 19.1	-0.2
	baz=335						
O49A	Covington	133.11	29	P	PKPdf	00 42 18.9	+0.4
	baz=321						
LONY	Lake Ozonia	133.12	17	P	PKPdf	00 42 18.9	+0.5
	baz=336						
P48A	Milroy	133.13	30	P	PKPdf	00 42 19.0	+0.5
	baz=320						
N50A	Nevada	133.20	27	P	PKPdf	00 42 19.0	+0.4
	baz=323,SNR=7.3						
J55A	Hilton	133.28	21	P	PKPdf	00 42 18.6	-0.1
	baz=331,SNR=5.4						
Q48A	North Vernon	133.38	31	P	PKPdf	00 42 19.6	+0.6
	baz=319						
I57A	Carthage	133.41	18	P	PKPdf	00 42 19.3	+0.4
	baz=334						
H58A	Gabriels	133.42	17	P	PKPdf	00 42 19.0	0.0
	baz=336						
P49A	Miami Univ. Ec	133.43	30	P	PKPdf	00 42 19.1	0.0
	baz=320						
F64A	Sherman	133.45	11	P	PKPdf	00 42 19.1	+0.1
	baz=344						
L53A	Girard	133.48	24	P	PKPdf	00 42 19.7	+0.6
	baz=327						
O50A	Cable	133.48	28	P	PKPdf	00 42 19.5	+0.2
	baz=322						
K54A	Basiliko Farm,	133.53	22	P	PKPdf	00 42 19.2	0.0
	baz=330						
J56A	Wolcott	133.60	20	P	PKPdf	00 42 19.0	-0.3
	baz=332						
WCI	Wyandotte Cave	133.60	32	PKIKP	PKiKP	00 42 21.0	+0.2
WCI	Wyandotte Cave	133.60	32		PKiKP	00 42 21.0	+0.2
WCI	Wyandotte Cave	133.60	32	P	PKiKP	00 42 20.7	-0.1
	baz=318						
L54A	Sinclairville	133.62	23	P	PKPdf	00 42 19.5	+0.1
	baz=329,SNR=5.5						
K55A	Perry	133.66	21	P	PKPdf	00 42 19.4	-0.1
	baz=330						
ACSO	Alum Creek Sta	133.71	28	P	PKPdf	00 42 19.8	+0.2
	baz=323,SNR=5.2						
M53A	WI Miller and	133.74	25	P	PKPdf	00 42 19.5	-0.1
	baz=326,SNR=6.0						
J57A	Williamstown	133.77	19	P	PKPdf	00 42 19.7	+0.1
	baz=334						
P50A	Jamestown	133.82	29	P	PKPdf	00 42 19.7	-0.1
	baz=322						
N52A	McGinn’s Farm,	133.82	26	P	PKPdf	00 42 20.1	+0.2
	baz=325						
I58A	Old Forge	133.85	18	P	PKPdf	00 42 19.4	-0.4
	baz=335						
H61A	Lyndonville	133.93	15	P	PKiKP	00 42 21.4	+0.2
	baz=339						
O51A	Pataskala	133.95	27	P	PKPdf	00 42 20.1	0.0
	baz=323,SNR=5.7						
K56A	Middlesex	133.95	21	P	PKPdf	00 42 19.7	-0.4
	baz=331						
L55A	Hinsdale	133.99	22	P	PKPdf	00 42 20.1	-0.1
	baz=330,SNR=5.5						
J58A	Remsen	134.05	18	P	PKPdf	00 42 20.5	+0.3
	baz=334						
I59A	Olmsteadville	134.08	17	P	PKiKP	00 42 21.4	-0.1

	baz=336						
M54A	Oil Creek Stat	134.09	24	P	PKPdf	00 42 20.2	-0.1
	baz=328,SNR=7.6						
J59A	Piesco	134.19	18	P	PKPdf	00 42 21.0	+0.5
	baz=335						
N53A	Lisbon	134.20	25	P	PKPdf	00 42 20.4	-0.1
	baz=326						
I60A	Shoreham	134.20	16	P	PKiKP	00 42 21.2	-0.6
	baz=337						
K57A	Scipio Center	134.20	20	P	PKPdf	00 42 20.1	-0.4
	baz=332						
WVT	Waverly	134.26	35	PKIKP	PKPdf	00 42 21.4	+0.6
WVT	Waverly	134.26	35		PKPdf	00 42 21.4	+0.6
WVT	Waverly	134.26	35	P	PKPdf	00 42 21.3	+0.5
	baz=315						
P51A	Williamsport	134.27	28	P	PKPdf	00 42 21.3	+0.6
	baz=322						
O52A	Adamsville	134.32	27	P	PKiKP	00 42 22.3	+0.1
	baz=324						
L56A	Greenwood	134.36	21	P	PKPdf	00 42 20.7	-0.2
	baz=331						
N54A	Moraine State	134.42	24	P	PKPdf	00 42 20.9	-0.1
	baz=327						
K58A	Earlville	134.47	19	P	PKPdf	00 42 21.4	+0.4
	baz=334						
S49A	Springfield	134.47	32	P	PKiKP	00 42 22.3	-0.2
	baz=319						
M55A	Ridgway	134.48	23	P	PKPdf	00 42 20.9	-0.2
	baz=329						
O53A	New Philadelph	134.49	26	P	PKiKP	00 42 22.3	-0.2
	baz=325						
Q51A	Peebles	134.49	29	P	PKPdf	00 42 21.0	-0.2
	baz=322						
P52A	Corning	134.58	27	P	PKPdf	00 42 21.2	-0.1
	baz=324						
M56A	Emporium	134.69	22	P	PKPdf	00 42 21.6	+0.2
	baz=330						
L57A	Andrews Acres	134.73	21	P	PKPdf	00 42 21.5	-0.1
	baz=332						
T49A	Edmonton	134.84	32	P	PKiKP	00 42 23.2	-0.2
	baz=318						
O54A	Avella	134.91	25	P	PKPdf	00 42 22.5	+0.6
	baz=326						
N55A	Marion Center	134.98	24	P	PKPdf	00 42 22.0	0.0
	baz=328						
S50A	Richmond	135.01	31	P	PKiKP	00 42 23.1	-0.5
	baz=320						
P53A	Whipple	135.04	27	P	PKPdf	00 42 22.4	+0.2
	baz=325,SNR=6.1						
Q52A	Bidwell	135.06	28	P	PKPdf	00 42 22.2	+0.1
	baz=323						
N56A	West Decatur	135.14	23	P	PKPdf	00 42 22.5	+0.1
	baz=329						
M57A	Sunshine Farm,	135.21	21	P	PKPdf	00 42 22.3	-0.1
	baz=331						
T50A	Nancy	135.28	32	P	PKiKP	00 42 23.9	-0.3
	baz=319,SNR=7.8						
K61A	Williamstown	135.29	17	P	PKiKP	00 42 24.6	+0.5
	baz=337						
O55A	Ligonier	135.34	24	P	PKiKP	00 42 24.2	-0.1
	baz=328						
P54A	Burton	135.34	26	P	PKPdf	00 42 23.1	+0.3
	baz=326						
S51A	Beattyville	135.45	30	P	PKPdf	00 42 23.2	+0.2
	baz=321						
Q53A	Leroy	135.48	27	P	PKiKP	00 42 24.1	-0.5
	baz=324						
SSPA	Standing Stone	135.54	23		PKPdf	00 42 23.4	+0.4
SSPA	Standing Stone	135.54	23	P	PKPdf	00 42 23.0	0.0
	baz=330						
O56A	Blue Knob Stat	135.59	24	P	PKPdf	00 42 23.3	+0.1
	baz=329						
M59A	Waymart	135.63	20	P	PKPdf	00 42 23.2	0.0
	baz=333						
Q54A	Coxs Mills	135.70	27	P	PKPdf	00 42 23.8	+0.4
	baz=325						
P55A	Reedsville	135.71	25	P	PKPdf	00 42 23.5	+0.1
	baz=327						
R53A	Hurricane	135.71	28	P	PKPdf	00 42 23.6	+0.2
	baz=323						
T51A	Gray	135.78	31	P	PKiKP	00 42 24.9	-0.3
	baz=320						
N58A	Sunbury	135.80	21	P	PKPdf	00 42 23.1	-0.4
	baz=331						
Q55A	Buckhannon	136.02	26	P	PKPdf	00 42 24.1	0.0
	baz=326						
N59A	State Game Lan	136.07	20	P	PKPdf	00 42 24.0	0.0
	baz=333						
P56A	Dayton Farm, R	136.12	24	P	PKPdf	00 42 24.3	+0.2
	baz=328						
R54A	Victor	136.28	27	P	PKPdf	00 42 24.2	-0.3
	baz=324						
N60A	Cedar Hill Far	136.34	20	P	PKPdf	00 42 24.2	-0.3
	baz=334						
O58A	Lewisberry	136.35	22	P	PKPdf	00 42 24.5	0.0
	baz=331						
W50A	Signal Mountai	136.36	34	P	PKiKP	00 42 26.4	-0.2
	baz=317						
M61A	Granite Spring	136.38	18	P	PKPdf	00 42 25.0	+0.4
	baz=336						
S54A	Dingess, Beckl	136.44	28	P	PKiKP	00 42 26.4	-0.2
	baz=324						
V51A	Loudon	136.44	33	P	PKiKP	00 42 26.3	-0.4
	baz=319						
P57A	Homestead Farm	136.48	24	P	PKiKP	00 42 26.2	-0.4
	baz=329						
O60A	Telford	136.73	20	P	PKPdf	00 42 25.4	+0.2
	baz=333						
P58A	Pank, Wackersv	136.75	23	P	PKPdf	00 42 25.4	+0.1
	baz=330						
R56A	Bull Pasture M	136.80	26	P	PKPdf	00 42 26.0	+0.4
	baz=326						
V52A	Sevierville	136.82	32	P	PKPdf	00 42 26.4	+0.8
	baz=320						
U53A	Fall Branch	136.95	31	P	PKPdf	00 42 26.1	+0.3
	baz=321						
Q58A	Fox Den Farm,	137.07	24	P	PKPdf	00 42 26.4	+0.5
	baz=329						
W52A	Murphy	137.20	33	P	PKiKP	00 42 27.8	-0.4
	baz=319						
R57A	Stanardsville	137.27	25	P	PKPdf	00 42 26.9	+0.6
	baz=328						
V53A	Saluda	137.36	31	P	PKPdf	00 42 27.4	+0.8
	baz=320						
Z50A	Ashland	137.40	37	P	PKPdf	00 42 27.0	+0.3
	baz=315						
U55A	TA2, Sparta	137.60	29	P	PKPdf	00 42 27.4	+0.3
	baz=323						
T56A	Rocky Mt	137.66	28	P	PKiKP	00 42 28.8	-0.3
	baz=325						
V54A	Nebo	137.72	30	P	PKiKP	00 42 29.5	+0.3
	baz=322						
R58B	Mineral	137.82	25	P	PKiKP	00 42 29.1	-0.2
	baz=328						
X53A	Estanollee	137.99	33	P	PKiKP	00 42 30.0	+0.2
	baz=319						
V55A	Taylorsville	138.03	30	P	PKiKP	00 42 29.8	0.0
	baz=322						
T57A	Hurt	138.04	27	P	PKiKP	00 42 29.6	-0.2
	baz=326						
Y52A	Lilburn	138.04	34	P	PKiKP	00 42 29.1	-0.8
	baz=318						
W54A	Cherokee Point	138.14	31	P	PKiKP	00 42 30.2	+0.2
	baz=321						
T58A	Grand View Acr	138.40	26	P	PKiKP	00 42 30.5	0.0
	baz=327						
V56A	Mocksville	138.42	29	P	PKiKP	00 42 30.3	-0.3
	baz=323						
X54A	Belton	138.45	32	P	PKiKP	00 42 30.5	-0.2
	baz=320						
U57A	Blanch	138.46	27	P	PKiKP	00 42 30.5	-0.2
	baz=325						
KMSC	Kings Mountain	138.53	30	P	PKiKP	00 42 30.5	-0.4
	baz=322						
V57A	Coltrane Farms	138.70	28	P	PKiKP	00 42 31.1	-0.2
	baz=324						
X55A	Gracelyn & Ava	138.90	31	P	PKiKP	00 42 31.9	+0.2
	baz=321						
W57A	Gilead	139.19	29	P	PKiKP	00 42 31.7	-0.5
	baz=324						
X56A	White Oak	139.19	31	P	PKiKP	00 42 32.1	-0.1
	baz=322						
Z57A	Bowman	140.30	32	P	PKiKP	00 42 35.1	+0.5
	baz=321						
PEL	Peldehue	144.47	160	PKIKP	PKPbc	00 42 38.8	+0.5
PEL	Peldehue	144.47	160		PKPbc	00 42 38.8	+0.5
CBCY	The Bluff, Cay	150.52	47		PKPbc	00 42 55.3	+0.1
JTS	Las Juntas de	150.56	69	PKIKP	PKPbc	00 42 54.5	-1.0
JTS	Las Juntas de	150.56	69		PKPbc	00 42 54.5	-1.0
CPUP	Villa Florida	153.63	180	PKP	PKPdf	00 42 55.0	+0.8
	comp=Z,5.7nm,1.1s,baz=198,slow=3.2,SNR=6.0						
CPUP				PKPbc	PKiKP	00 43 03.0	+0.9
	comp=Z,5.8nm,0.8s,baz=53,slow=1.4,SNR=8.0						
CPUP				PKPab	PKPab	00 43 16.4	+1.4
	comp=Z,7.5nm,0.7s,baz=169,slow=5.0,SNR=12						
MNMC	Minye Minye	157.23	148	PKPdf	PKPdf	00 42 58.0	-1.6
MNMC					PKPab	00 43 30.6	-0.4
LPAZ	La Paz	160.35	147	PKP	PKPdf	00 43 04.8	+1.0
	comp=Z,5.3nm,1.2s,baz=182,slow=1.6,SNR=8.0						
LPAZ				PKPab	PKPab	00 43 46.9	+1.9
	comp=Z,2.5nm,0.6s,baz=180,slow=4.8,SNR=6.1						
BDFB	Brasilia	161.88	209	PKP	PKPdf	00 43 05.2	+0.5
	comp=Z,2.7nm,0.9s,baz=24,slow=1.3,SNR=3.9						
BDFB				PKPab	PKPab	00 43 51.7	+0.6
	comp=Z,15nm,1.1s,baz=122,slow=3.7,SNR=10						
BDFB	Brasilia	161.88	209	PKIKP	PKPdf	00 43 03.6	-1.2
BDFB						00 43 50.6	
BDFB	Brasilia	161.88	209		PKPdf	00 43 03.6	-1.2
BDFB					PKPab	00 43 50.6	-0.4
SIV	San Ignacio	163.46	167	PKP	PKPdf	00 43 07.0	+0.8
	comp=Z,3.3nm,1.0s,baz=180,slow=3.0,SNR=5.7						
SIV				PKPab	sPKPdf	00 43 59.0	-0.4
	comp=Z,3.9nm,0.8s,baz=189,slow=5.3,SNR=12						
SDV	Santo Domingo	164.01	57		PKPdf	00 43 05.9	-1.1
SDV					PKPab	00 44 00.8	+0.1
SAML	Samuel	169.10	147	PKIKP	PKPdf	00 43 10.3	-0.3
SAML	Samuel	169.10	147		PKPdf	00 43 10.3	-0.3

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*VAO **06** 00:26:30.8±0.4, 22°.49S×70°.09W, h10km, mb4.6*

*NEIC **06** 00:26:35.0±2.9, 22°.43S±0°.03×70°.05W±0°.05, h57km±4km, Error ellipse: s-maj=7.0km s-min=2.6km az=118.0*

*SJA **06** 00:26:35.3±1.1, 22°.46S×69°.99W, h48km±5km, ML4.7, MW4.7*

*GUC **06** 00:26:35.9±0.7, 22°.46S×69°.98W, h56km±2km, ML4.7*

*IDC **06** 00:26:36.0±0.5, 22°.40S×70°.01W, h50km±4km, mb4.0/12, mb1 4.2/15, mb1mx4.0/33, mbtmp4.3/15, MS3.7/4, Ms1 3.7/4, ms1mx3.3/24, Error ellipse: s-maj=16.6km s-min=6.3km az=17.0*

ISC 06 00:26:34.9±0.4, **22°.45S**±0°.02×**70°.02W**±0°.03, **h51**km±3km, **n149**, σ1s.**59**/174, **mb4.5**/19, **5C-11D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB04	IPOC Station P	0.17	314	⇓iP	Pn	00 26 44.6	+1.2
PB04				i S	Sn	00 26 50.6	+1.3
PB04				IAML		00 26 51.6	
	comp=N,138µm,0.1s						
PB04	IPOC Station P	0.17	314		Pn	00 26 43.5	+0.2
PB04					Sn	00 26 50.5	+1.3
PB04	IPOC Station P	0.17	314	i P	Pn	00 26 44.6	+1.2
PB04				eS	Sn	00 26 50.7	+1.3
PB05	IPOC Station P	0.43	203	⇑iP	Pn	00 26 46.6	+1.1
PB05				i S	Sn	00 26 54.7	+1.5
PB05				IAML		00 26 55.7	
	comp=E,60µm,0.4s						
PB05	IPOC Station P	0.43	203	i P	Pn	00 26 46.8	+1.2
PB05				eS	Sn	00 26 54.7	+1.5
PB05				IAML		00 26 59.4	
	comp=Z,22µm,0.4s						
PB03	IPOC Station P	0.47	31	⇓iP	Pn	00 26 47.1	+1.1
PB03				i S	Sn	00 26 55.0	+1.1
PB03				IAML		00 26 55.8	
	comp=E,121µm,0.5s						
PB03	IPOC Station P	0.47	31	i P	Pn	00 26 47.3	+1.2
PB03				eS	Sn	00 26 55.3	+1.3
PB03				IAML		00 26 56.3	
	comp=Z,75µm,0.4s						
PB06	IPOC Station P	0.48	122	⇑iP	Pn	00 26 46.8	+0.7
PB06				i S	Sn	00 26 54.8	+0.6
PB06				IAML		00 26 55.5	
	comp=N,120µm,0.2s						
PB06	IPOC Station P	0.48	122	i P	Pn	00 26 47.0	+0.8
PB06				eS	Sn	00 26 55.0	+0.8
PB06				IAML		00 26 55.5	
	comp=Z,52µm,0.2s						
PB07	IPOC Station P	0.73	10	⇓iP	Pn	00 26 50.6	+1.3
PB07				i S	Sn	00 27 01.0	+1.3
PB07				IAML		00 27 01.6	
	comp=N,37µm,0.1s						
PB07	IPOC Station P	0.73	10	i P	Pn	00 26 50.7	+1.3
PB07				eS	Sn	00 27 00.9	+1.2
PB07				IAML		00 27 02.2	
	comp=Z,37µm,0.1s						
PB15	IPOC Station P	0.91	146	⇓iP	Pn	00 26 52.4	+0.8
PB15				i S	Sn	00 27 05.0	+1.2
PB15	IPOC Station P	0.91	146	i P	Pn	00 26 52.5	+0.8
PB15				eS	Sn	00 27 04.3	+0.5
PB09	IPOC Station P	0.97	48	⇑iP	Pn	00 26 54.1	+1.7
PB09				i S	Sn	00 27 07.3	+2.0
PB09				IAML		00 27 07.9	
	comp=E,30µm,0.5s						
PB09	IPOC Station P	0.97	48	i P	Pn	00 26 54.2	+1.7
PB09				eS	Sn	00 27 07.3	+2.0
PB09				IAML		00 27 07.5	
	comp=Z,34µm,0.4s						
LVC	Limon Verde	1.03	99	P	Pn	00 26 55.0	+1.5
	comp=Z,2µm,0.3s,baz=317,slow=5.6						
LVC				S	Sn	00 27 08.7	+1.6
	comp=Z,3µm,0.3s,baz=158,slow=19,SNR=88						
LVC	Limon Verde	1.03	99	i P	Pn	00 26 55.3	+1.8
LVC				eS	Sn	00 27 09.0	+1.9
LVC				IAML		00 27 10.1	
	comp=Z,7µm,0.2s						
PB02	IPOC Station P	1.13	6	⇓iP	Pn	00 26 55.8	+1.2
PB02				i S	Sn	00 27 10.7	+1.6
PB02				IAML		00 27 16.7	
	comp=E,47µm,0.2s						
PB02	IPOC Station P	1.13	6	i P	Pn	00 26 56.0	+1.4
PB02				IAML		00 27 24.9	
	comp=Z,10µm,0.2s						
PB10	IPOC Station P	1.17	205	⇑iP	Pn	00 26 56.1	+1.2
PB10				i S	Sn	00 27 11.7	+2.0
PB10				IAML		00 27 16.1	
	comp=E,21µm,0.3s						
PB10	IPOC Station P	1.17	205		Pn	00 26 56.2	+1.2
PB01	IPOC Station P	1.49	19	⇓iP	Pn	00 27 00.9	+1.6
PB01				i S	Sn	00 27 19.6	+1.9
PB01				IAML		00 27 23.0	
	comp=E,20µm,0.2s						
PB01	IPOC Station P	1.49	19		Pn	00 27 01.0	+1.6
PB01	IPOC Station P	1.49	19	i P	Pn	00 27 01.1	+1.7
PB01				IAML		00 27 33.7	
	comp=Z,4µm,0.2s						
PATCX	Punta Patache	1.63	356	⇓iP	Pn	00 27 02.5	+1.3
PATCX				i S	Sn	00 27 23.1	+1.9
PATCX				IAML		00 27 29.8	
	comp=E,11µm,0.3s						
PATCX	Punta Patache	1.63	356	i P	Pn	00 27 02.8	+1.5
PATCX				eS	Sn	00 27 26.0	+4.8
PATCX				IAML		00 27 30.0	
	comp=Z,7µm,1.0s						
TA01	Diego Aracena	1.88	355	⇓iP	Pn	00 27 05.7	+1.0
TA01				i S	Sn	00 27 29.5	+2.2
TA01				IAML		00 27 34.5	
	comp=E,8µm,0.2s						
PB08	IPOC Station P	2.44	19	⇓iP	Pn	00 27 15.2	+2.6
PB08				i S	Sn	00 27 44.7	+3.3
PB08	IPOC Station P	2.44	19	i P	Pn	00 27 15.5	+2.9
PB08				IAML		00 27 59.8	
	comp=Z,4µm,0.9s						
PB11	IPOC Station P	2.70	7	i P	Pn	00 27 17.2	+1.2
PB11	IPOC Station P	2.70	7		Pn	00 27 17.4	+1.5
PB11	IPOC Station P	2.70	7	i P	Pn	00 27 17.5	+1.5
PB11				IAML		00 28 08.8	
	comp=Z,4µm,0.9s						
GO02	Mina Guanaco	2.73	172	⇓iP	Pn	00 27 18.8	+2.3
GO02				i S	Sn	00 27 51.3	+2.9
GO02	Mina Guanaco	2.73	172		Pn	00 27 18.6	+2.2
PSGC	Pisagua	2.84	358	⇑iP	Pn	00 27 18.8	+0.8
PSGCX	Pisagua	2.84	358	i P	Pn	00 27 18.8	+0.8
PSGCX				IAML		00 28 13.5	
	comp=Z,2µm,0.4s						
GO01	Chusmiza	2.88	16		Pn	00 27 21.0	+2.3
MNMC	Minye Minye	3.33	7	⇓iP	Pn	00 27 26.4	+1.6
MNMC	Minye Minye	3.33	7		Pn	00 27 26.0	+1.3
GO03	Copiap	5.12	182		Pn	00 27 48.9	-0.3
LPAZ	La Paz	6.39	17	P	Pn	00 28 11.2	+4.2
	comp=Z,4.4nm,0.3s,baz=232,slow=3.3,SNR=162						
LPAZ				S	Sn	00 29 28.8	+10
	baz=17,slow=19,SNR=1.3						
LPAZ				LR	LR	00 30 53.6	
	comp=Z,440nm,20.6s,baz=234,slow=41						
LCO	Las Campanas	6.56	185	Pn	Pn	00 28 09.8	+0.8
GO04	Tololo Observa	7.72	185		Pn	00 28 23.8	-1.1
SIV	San Ignacio	10.61	54	P	Pn	00 29 04.5	+0.1
	comp=Z,4.8nm,0.3s,baz=252,slow=12,SNR=219						
SIV				S	Sn	00 31 00.4	-1.5
	comp=Z,0.4nm,0.3s,baz=322,slow=19,SNR=3.5						
PEL	Peldehue	10.67	183		Pn	00 29 02.4	-2.7
CPUP	Villa Florida	12.19	111	P	Pn	00 29 26.7	+0.9
	comp=Z,0.7nm,0.3s,baz=284,slow=11,SNR=13						
CPUP	Villa Florida	12.19	111		Pn	00 29 25.4	-0.4
CPUP	Villa Florida	12.19	111	eP	Pn	00 29 25.8	-0.1
AQDB	Aquidauana	13.47	84	eP	Pn	00 29 43.6	+0.2
ITQB	Itaqui	14.01	124	eP	Pn	00 29 50.7	0.0
SAML	Samuel	14.95	27		Pn	00 29 59.8	-3.3
SAML					Sn	00 32 41.9	-5.7
SAML	Samuel	14.95	27	eP	Pn	00 30 03.5	+0.4
SALV	Santo Antonio	15.01	67	eP	Pn	00 30 03.4	-0.6
PP1B	Ponte de Pedra	15.02	74	eP	Pn	00 30 04.3	+0.2
TRCB	Terra Rica	16.05	95	eP	Pn	00 30 18.7	+1.3
C2SB	Chapadao do Su	16.49	80	eP	Pn	00 30 24.0	+1.1
PTGB	Pitanga	16.61	101	eP	Pn	00 30 25.2	+0.7
CPSB	Cacapava Do Su	16.82	122	eP	Pn	00 30 25.5	-1.4
ITAB	Concordia	16.91	110	eP	Pn	00 30 27.5	-0.6
TRQA	Tornquist	17.02	158	eP	Pn	00 30 29.4	0.0
PLTB	Pedras Altas	17.29	126	eP	Pn	00 30 30.4	-2.4
PCMB	Pacaembu	17.41	91	eP	Pn	00 30 35.0	+0.7
PLCA	Paso Flores	18.23	181	P	P	00 30 45.0	+0.9
	comp=Z,0.4nm,0.3s,baz=27,slow=14,SNR=7.8						
PLCA				LR	LR	00 37 53.4	
	comp=Z,215nm,21.6s,baz=55,slow=37						
PLCA	Paso Flores	18.23	181	P	P	00 30 43.0	-1.0
PLCA	Paso Flores	18.23	181	eP	P	00 30 44.5	+0.5
ARAG	Araguaiana, MT	18.46	72	eP	Pn	00 30 48.7	+1.6
CNLB	Canela	18.54	116	eP	P	00 30 46.6	-0.8
ITRB	Iturama	18.55	85	eP	P	00 30 48.5	+0.9
FRTB	Fartura	18.87	97	eP	P	00 30 51.1	0.0
BB19B	Bebedouro	20.01	90	eP	Pn	00 31 06.2	+0.5
RCLB	Rio Claro- Sao	20.78	94	eP	P	00 31 13.4	+1.4
SPB	Sao Paulo	20.82	98	P	P	00 31 11.7	-0.6
SPB				IAmb	IAmb	00 31 28.2	
	comp=Z,28nm,1.2s						
SPB	Sao Paulo	20.82	98	eP	P	00 31 14.4	+2.2
IPMB	Ipameri, GO	20.93	82	eP	P	00 31 14.3	+0.7
VAO	Valinhos	21.27	96	eP	P	00 31 18.2	+1.0
BDFB	Brasilia	21.86	76	P	P	00 31 24.8	+1.2
	comp=Z,2.9nm,0.6s,baz=166,slow=17,SNR=5.8						
BDFB				LR	LR	00 40 51.3	
	comp=Z,182nm,19.7s,baz=220,slow=39						
BDFB	Brasilia	21.86	76	P	P	00 31 22.8	-0.8
PARB	Paraibuna	22.49	97	eP	P	00 31 30.9	+0.6
PTGA	Pitinga	23.70	26	P	P	00 31 42.4	0.0
	comp=Z,3.4nm,0.4s,baz=218,slow=14,SNR=12						
PTGA	Pitinga	23.70	26	P	P	00 31 42.0	-0.3
PTGA				IAmb	IAmb	00 32 01.5	
	comp=Z,12nm,0.7s						
PTGA	Pitinga	23.70	26	eP	P	00 31 43.6	+1.3
OTAV	Otavalo	24.00	339	P	P	00 31 44.4	-1.2
OTAV	Otavalo	24.00	339	eP	P	00 31 45.5	-0.1
FLOC	Florencia	24.51	346	P	P	00 31 45.8	-4.0
FLOC				PcP	PcP	00 35 26.9	-0.5
JANB	Januaria	25.40	78	eP	P	00 31 57.8	-0.1
SMTB	Santa Maria do	25.42	61	eP	P	00 31 59.5	+1.4
RUSC	La Rusia	28.33	354	P	P	00 32 22.9	-1.7
MDP	Montagnes des	32.23	34	LR	LR	00 46 50.7	
	comp=Z,272nm,18.6s,baz=233,slow=38						
USHA	Ushuaia	32.35	178	P	P	00 33 00.7	+1.4
	comp=Z,8.2nm,0.9s,baz=176,slow=16,SNR=3.6						
GCPR	Guaynabo City	40.69	6	P	P	00 34 09.7	-0.9
PMSA	Palmer Station	42.49	176	eP	P	00 34 26.4	+1.5
H06E1	SOCORRO T-PHAS	57.26	312	T	T	01 38 07.0	
	SNR=34						
VNA3	Neumayer Olymp	59.51	161	P	P	00 36 34.3	+1.7
VNA2	Neumayer--Watz	60.10	160	P	P	00 36 38.5	+1.9
	baz=291,slow=7.6						
TXAR	Lajitas Array	60.84	326	P	P	00 36 44.4	+2.1
	comp=Z,0.2nm,0.3s,baz=125,slow=7.8,SNR=3.5						
TXAR	Lajitas Array	60.84	326	P	P	00 36 42.5	+0.2
SNAA	Sanae	61.72	161	P	P	00 36 49.3	+1.6
SNAA	Sanae	61.72	161	P	P	00 36 48.8	+1.1
	comp=Z,8.3nm,0.9s,baz=266,slow=8.8,SNR=6.4						
SNAA	Sanae	61.72	161	P	P	00 36 48.0	+0.3
SDCO	Great Sand Dun	68.55	330	P	P	00 37 29.0	-3.6
SDCO				IAmb	IAmb	00 37 37.0	
	comp=Z,4.3nm,1.4s						
Y14A	Wickenburg	69.42	323	P	P	00 37 36.9	-0.9
Y14A				IAmb	IAmb	00 37 55.5	
	comp=Z,4.5nm,1.1s						
DBIC	Dimbokro	69.99	74	P	P	00 37 42.1	+0.4
	comp=Z,5.5nm,0.9s,baz=226,slow=8.5,SNR=7.5						
DBIC	Dimbokro	69.99	74	IAmb	IAmb	00 37 42.9	
	comp=Z,11nm,1.1s						
MPU	Maple Canyon	73.27	328	P	P	00 38 01.7	+0.6
JLU	Jordanelle	73.63	328	P	P	00 38 03.8	+0.6
PDAR	Pinedale Array	74.43	331	P	P	00 38 10.3	+2.4
	comp=Z,0.2nm,0.6s,baz=200,slow=4.8,SNR=3.0						
PDAR				pP	PcP	00 38 22.9	+0.6
	comp=Z,0.6nm,0.7s,baz=132,slow=7.4,SNR=5.3						
PDAR	Pinedale Array	74.43	331	P	P	00 38 09.9	+2.0
NVAR	Mina Array Bea	75.62	323	pP	pP	00 38 31.4	+1.7
	comp=Z,1.1nm,0.7s,baz=156,slow=6.9,SNR=5.0						
NVAR	Mina Array Bea	75.62	323	P	P	00 38 14.0	-0.8
RLMT	Red Lodge	76.17	333	P	P	00 38 15.5	-2.3
RLMT				IAmb	IAmb	00 38 34.5	
	comp=Z,2.6nm,1.0s						
YMR	Madison River	76.56	331	P	P	00 38 19.3	-0.7
YHH	Holmes Hill	76.60	331	P	P	00 38 19.3	-1.0
YHL	Hebgen Lake	76.79	331	P	P	00 38 20.4	-1.0
PAHR	Pah Rah Range	77.11	323	P	P	00 38 22.0	-1.1
DLMT	Dillon	77.82	331	P	P	00 38 25.5	-1.5
DLMT				IAmb	IAmb	00 38 44.7	
	comp=Z,7.3nm,1.3s						
MFID	Camas Ranch	77.89	328	P	P	00 38 26.6	-0.8
MFID				IAmb	IAmb	00 38 45.3	
	comp=Z,4.8nm,1.1s						
TORD	Torodi Ar. Bea	78.64	71	P	P	00 38 32.3	+0.3
	comp=Z,3.4nm,0.4s,baz=254,slow=5.1,SNR=105						
TORD				pP	pP	00 38 47.2	+0.1
	comp=Z,8.3nm,0.8s,baz=255,slow=4.6,SNR=12						
TORD	Torodi Ar. Bea	78.64	71	P	P	00 38 30.0	-2.0
TSUM	Tsumeb	80.75	107	P	P	00 38 45.1	+1.4
	comp=Z,5.2nm,0.9s,baz=229,slow=5.0,SNR=7.0						
TSUM				pP	pP	00 38 59.5	+0.7
	comp=Z,6.6nm,0.8s,baz=237,slow=7.4,SNR=8.4						
TSUM	Tsumeb	80.75	107	P	P	00 38 41.9	-1.8
TSUM				IAmb	IAmb	00 39 01.0	
	comp=Z,8.7nm,0.9s						
MAW	Mawson	83.71	164	P	P	00 38 59.4	+1.3
	comp=Z,5.4nm,1.0s,baz=261,slow=6.2,SNR=3.6						
MAW	Mawson	83.71	164	P	P	00 38 58.4	+0.4
BOSA	Boshof	83.91	118	P	P	00 39 01.1	+1.1
	comp=Z,6.3nm,0.8s,baz=261,slow=4.5,SNR=9.1						
BOSA				pP	pP	00 39 15.6	+0.4
	comp=Z,5.4nm,0.8s,baz=263,slow=5.9,SNR=5.6						
BOSA	Boshof	83.91	118	P	P	00 39 00.1	+0.1
BOSA				IAmb	IAmb	00 39 01.8	
	comp=Z,7.0nm,0.9s						
MATP	Matopo	89.81	112	P	P	00 39 26.9	-2.0
	comp=Z,2.2nm,0.9s,baz=238,slow=5.5,SNR=4.1						
MATP				pP	pP	00 39 42.0	-2.1
	comp=Z,2.2nm,0.8s,baz=252,slow=7.2,SNR=4.6						
YKA	Yellowknife Ar	91.74	341	P	P	00 39 38.1	+1.5
	comp=Z,0.7nm,0.8s,baz=136,slow=4.9,SNR=12						
YKA				pP	pP	00 39 52.1	+0.2
	comp=Z,1.2nm,0.6s,baz=137,slow=4.6,SNR=12						
H11S2	WAKE ISLAND Hy	126.97	277	T	T	03 05 18.1	
	baz=105,slow=75,SNR=648						
H11S1	WAKE ISLAND Hy	126.98	277	T	T	03 05 19.5	
	baz=105,slow=75,SNR=845						
H11S3	WAKE ISLAND Hy	126.99	277	T	T	03 05 19.5	
	baz=105,slow=75,SNR=778						
H11N3	WAKE ISLAND Hy	127.08	278	T	T	03 05 31.2	
	baz=104,slow=75,SNR=439						
H11N2	WAKE ISLAND Hy	127.10	278	T	T	03 05 27.9	
	baz=104,slow=75,SNR=302						
H11N1	WAKE ISLAND Hy	127.10	278	T	T	03 05 32.0	
	baz=104,slow=75,SNR=422						
ASAR	Alice Springs	128.59	208	PKP	PKPdf	00 45 38.0	+0.9
	comp=Z,1.3nm,0.8s,baz=120,slow=1.6,SNR=10.0						
ASAR				pPKP	pPKPdf	00 45 53.7	+0.7
	comp=Z,1.5nm,1.0s,baz=142,slow=1.9,SNR=5.3						
WRA	Warramunga Arr	131.61	211	PKP	PKPdf	00 45 43.8	+0.9

	comp=Z,0.5nm,0.5s,baz=150,slow=1.8,SNR=4.8						
WRA				pPKP	pPKPdf	00 45 59.9	+1.1
	comp=Z,1.4nm,1.1s,baz=148,slow=1.8,SNR=3.5						
ZALV	Zalesovo Beam	143.25	25	PKP	PKPdf	00 46 04.7	+1.6
	comp=Z,2.0nm,0.8s,baz=339,slow=1.5,SNR=8.2						
ZALV				pPKP	pPKPdf	00 46 18.8	-0.3
	comp=Z,2.1nm,0.8s,baz=319,slow=3.7,SNR=4.3						
ZALV	Zalesovo Beam	143.25	25	PKPdf	PKPdf	00 46 04.9	+1.7
AAK	Ala-Archa	144.30	47		PKPab	00 46 03.7	0.0
KSH	Kashi	146.50	52	PKPbc	PKPdf	00 46 09.8	+0.4
KSH				pPKP	pPKPdf	00 46 21.0	-4.4
KSH				SKS	SKSdf	00 53 11.8	-2.5
MAKZ	Makanchi	146.82	36		PKPdf	00 46 11.1	+1.4
MK31	Makanchi Array	147.00	36		PKPdf	00 46 11.8	+1.8
MKAR	Makanchi Array	147.00	36	PKPbc	PKPdf	00 46 11.5	+1.5
	comp=Z,3.2nm,0.8s,baz=333,slow=1.4,SNR=28						
MKAR				pPKPbc	pPKPdf	00 46 26.6	+0.9
	comp=Z,4.3nm,0.9s,baz=314,slow=2.4,SNR=12						
MKAR	Makanchi Array	147.00	36		PKPdf	00 46 11.0	+1.1
USRK	Ussuriysk Ar.	151.73	325	pPKPbc	pPKPbc	00 46 39.8	+0.1
	comp=Z,9.0nm,1.0s,baz=25,slow=2.3,SNR=6.1						
USRK	Ussuriysk Ar.	151.73	325	PKPdf	PKPdf	00 46 17.1	-0.4
MJAR	Matsushiro Arr	151.83	306	pPKPbc	pPKPbc	00 46 41.2	+1.0
	comp=Z,6.5nm,0.8s,baz=61,slow=1.2,SNR=6.9						
MJAR	Matsushiro Arr	151.83	306		PKPdf	00 46 15.2	-2.8
SONM	Songino Array	154.51	6	pPKP	pPKPdf	00 46 37.6	+0.1
	comp=Z,1.6nm,1.1s,baz=344,slow=2.7,SNR=6.7						
SONM	Songino Array	154.51	6		PKPdf	00 46 19.2	-2.5
LZH	Lanzhou	165.40	20	*e*PKP	PKPdf	00 46 33.1	-1.2
LZH				pPKP	pPKPdf	00 46 44.5	-5.6
LZH				sPKP		00 46 50.0	

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*ANF **06** 00:55:54.2±1.4, 35°.68N×121°.15W, h17^{km}±11^{km}, ML3.1/9, Error ellipse: s-maj=7.9km s-min=6.6km az=73.0*
*NEIC **06** 00:55:55.3±1.4, 35°.71N±0°.05×121°.06W±0°.04, h16^{km}±4^{km}, Error ellipse: s-maj=7.4km s-min=3.0km az=207.0*
*NCEDC **06** 00:55:55.4±1.6, 35°.71N±0°.02×121°.06W±0°.02, h10^{km}±5^{km}, ML3.1/25, Error ellipse: s-maj=2.5km s-min=2.1km az=141.0*
ISC 06 00:55:55.0±0.9**, 35°.70N**±0°.02×**121°.10W**±0°.02**, h17**^{km}±5^{km}**, n177, σ0^{s}.95**/184**, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHSB	Hesperia Broad	0.13	16		Pg	00 55 58.3	-0.5
PHSB					Sg	00 56 00.7	-0.7
PANM	San Antonio Re	0.17	63		Pg	00 55 58.9	-0.6
PCBM	Cambria	0.19	171		Pg	00 55 59.5	-0.1
RAMR	Ramage Ranch	0.20	110		Pg	00 55 59.4	-0.4
BLDC	Black Mountain	0.23	137		Pg	00 56 00.3	+0.1
BLDC	Black Mountain	0.23	137		Pg	00 56 00.3	+0.1
ARDC	Alexander Ranc	0.26	158		Pg	00 56 00.6	-0.1
ARDC					Sg	00 56 04.7	+0.1
PAPM	Alder Peak	0.30	314		Pg	00 56 01.6	0.0
PSAM	San Ardo	0.36	28		Pg	00 56 02.4	-0.1
PCCM	Crazy Canyon	0.39	352		Pg	00 56 03.3	+0.2
PPO	Portuguese Can	0.42	67		Pg	00 56 03.6	0.0
PTAM	Tassajara Cree	0.44	134		Pg	00 56 04.1	+0.2
LSDC	Los Osos Digit	0.45	153		Pg	00 56 04.4	+0.3
EFD	Emergency Oper	0.49	141		Pg	00 56 04.7	-0.1
PWKM	Work Ranch	0.49	77		Pg	00 56 04.8	0.0
VPDC	Valencia Peak	0.50	158		Pg	00 56 05.4	+0.5
PVCM	Vineyard Canyo	0.51	64		Pg	00 56 04.8	-0.4
PKD	Bear Valley Ra	0.51	62		Pg	00 56 04.7	-0.5
PSTM	Stockdale Moun	0.53	64		Pg	00 56 05.0	-0.6
DCD	Diablo Creek	0.53	157		Pg	00 56 05.6	0.0
DPD	Davis Peak	0.53	151		Pg	00 56 06.0	+0.3
LRC	Lone Oak Road	0.55	4		Pg	00 56 05.7	-0.2
PMPB	Monarch Peak	0.56	25	Pg	Pg	00 56 06.2	0.0
PMPB				Sg	Sg	00 56 14.1	+0.3
TCHL	Shandon	0.56	91		Pg	00 56 06.2	0.0
PCMM	Cholame Hills	0.57	79		Pg	00 56 06.1	-0.2
PHAM	Harlan Ranch	0.58	77		Pg	00 56 06.5	-0.1
PMCM	McMillan Canyo	0.59	88		Pg	00 56 06.5	-0.2
GHC	Gold Hill	0.62	78		Pg	00 56 06.7	-0.5
PKLM	Kerr Lake	0.62	83		Pg	00 56 06.9	-0.3
TSCN	Private Proper	0.63	104		Pg	00 56 07.3	-0.1
BAPM	Anderson Peak	0.65	317		Pg	00 56 07.7	-0.1
PSNM	Stone Corral	0.66	82		Pg	00 56 07.4	-0.5
CTM	Castle Mountai	0.66	69		Pg	00 56 08.0	0.0
TRAM	Private Proper	0.67	92		Pg	00 56 07.9	-0.4
PSRM	Scobie Ranch	0.68	77		Pg	00 56 07.9	-0.5
PAGB	Antelope Grade	0.69	87		Pg	00 56 08.1	-0.5
PAGB	Antelope Grade	0.69	87	Sg	Sb	00 56 17.7	-0.1
PMRM	Maxey Ranch	0.70	83		Pg	00 56 08.3	-0.5
PHRM	Hernandez Vall	0.71	18		Pg	00 56 08.8	0.0
THIS	South End of C	0.71	88		Pg	00 56 08.5	-0.4
BCWM	Chews Ridge	0.71	328		Pg	00 56 09.0	-0.1
BSGM	Shirttail Gulc	0.72	350		Pg	00 56 08.7	-0.4
PTRM	Twissleman Ran	0.72	94		Pg	00 56 08.7	-0.5
LRV	Little Rabbit	0.72	5		Pg	00 56 09.2	0.0
BSMM	Soledad Missio	0.73	338		Pg	00 56 09.2	-0.2
BPOM	Post Ranch	0.76	314		Pg	00 56 09.9	+0.1
HAST	Hastings Reser	0.78	332		Pg	00 56 10.0	-0.2
BPIM	Pinnacles	0.79	356		Pg	00 56 09.9	-0.5
BBNM	San Benito	0.81	1		Pg	00 56 10.7	0.0
PARM	Anticline Ridg	0.82	48		Pb	00 56 11.4	+0.5
BVL	Bear Valley	0.87	355		Pg	00 56 11.6	-0.4
BBGB	Big Mountain B	0.88	3		Pg	00 56 12.3	+0.3
BJCM	Johnson Can.	0.88	344		Pg	00 56 11.6	-0.5
PKEM	Kettleman Hill	0.88	66		Pb	00 56 12.8	+1.0
SCZ	Santa Cruz	0.93	345		Pg	00 56 12.6	-0.5
BJOM	Mount Johnson	0.94	349		Pg	00 56 12.4	-0.9
BAVM	Antelope Valle	0.94	3		Pg	00 56 13.3	0.0
BEMM	Emmet	0.96	360		Pg	00 56 13.8	+0.2
BEHM	Elkhorn Ranch	0.96	356		Pg	00 56 13.9	+0.2
BPCNC	Pine Canyon	0.97	334		Pg	00 56 13.4	-0.4
BLRM	Lewis Ranch	0.97	352		Pg	00 56 13.4	-0.5
SMMC	Simmler	0.98	113		Pg	00 56 13.4	-0.5
SMMC	Simmler	0.98	113	P	Pg	00 56 13.4	-0.5
	baz=295						
SMMC				S	Sb	00 56 26.9	+0.8
	baz=295						
BMSM	Mercy Hot Spri	0.98	14		Pb	00 56 14.6	+0.9
BSRM	Salinas Radio	1.02	341		Pg	00 56 14.1	-0.7
PWMM	Westland Maint	1.02	44		Pb	00 56 14.8	+0.6
BCGM	Cienega Road	1.02	349		Pg	00 56 14.2	-0.7
BHRM	Hodges Ranch	1.03	352		Pg	00 56 15.2	+0.2
BVYM	Vineyard	1.08	346		Pg	00 56 14.8	-1.0
BSLM	Silva Ranch	1.09	349		Pg	00 56 16.3	+0.2
CARC	Carrizo Plain	1.09	111		Pg	00 56 15.2	-1.0
FRP	Fremont Peak	1.10	343		Pg	00 56 16.1	-0.2
SAO	San Andreas Ge	1.10	345	Pn	Pg	00 56 15.2	-1.0
HMOM	Monterey	1.12	324		Pb	00 56 16.0	+0.1
HJSM	John Smith Roa	1.12	352		Pb	00 56 16.4	+0.4
BRMM	Rolling Bench	1.15	11		Pn	00 56 17.5	+1.1
HJGM	San Juan Grade	1.16	341		Pb	00 56 15.9	-0.7
HLTM	Lone Tree Road	1.19	352		Pb	00 56 17.0	-0.1
HERM	Elkhorn Road	1.20	336		Pb	00 56 17.1	-0.2
HBTM	San Juan Bauti	1.20	342		Pb	00 56 18.1	+0.8
HTUM	Tustin Road	1.21	339		Pn	00 56 16.1	-1.1
ANZ	Anzar Road	1.25	341		Pn	00 56 17.9	+0.3
GATR	Gnd/Air Tx Cnt	1.25	157		Pg	00 56 19.4	+0.4
OCR	O’Connell Ranc	1.26	345		Pn	00 56 19.0	+1.2
HFEM	San Felipe	1.30	349		Pn	00 56 18.5	+0.1
PACP	Pacheco Peak	1.31	353		Pn	00 56 19.1	+0.5
MOBB	Monterey Bay O	1.31	319		Pn	00 56 19.8	+1.3
CSR	Chase Ranch	1.31	343		Pn	00 56 18.5	-0.1
PKM	Mcpherson Peak	1.33	127		Pn	00 56 18.5	-0.4
PKM	Mcpherson Peak	1.33	127	P	Pn	00 56 18.5	-0.4
	baz=309						
FIGC	Figueroa Mtn.	1.33	137		Pn	00 56 18.5	-0.4
SFJWR	San Luis Fatjo	1.35	357		Pn	00 56 19.4	+0.4
CDC	Canada Road	1.36	347		Pn	00 56 19.8	+0.6
HPCM	Pacheco Lake	1.36	354		Pn	00 56 19.6	+0.2
SLD	San Luis Dam	1.37	356		Pn	00 56 19.7	+0.2
HLPM	Lions Peak	1.41	342		Pn	00 56 19.9	+0.1
HSPM	Sheep	1.45	347		Pn	00 56 20.7	+0.2
JTGM	Trout Gulch Ro	1.47	335		Pn	00 56 20.6	-0.1
JRGM	Rodeo Gulch Ro	1.51	332		Pn	00 56 20.8	-0.4
VOG	Valley Oaks Go	1.52	66	S	Sb	00 56 42.0	+0.3
	baz=246						
JHLM	Holstrom Ranch	1.52	337		Pn	00 56 21.5	-0.1
JLAB	Laurel Hill	1.54	341		Pn	00 56 21.6	-0.1
BCW	Bitter Crk WRg	1.57	118		Pn	00 56 22.5	+0.2
AMC	Almaden	1.57	338		Pn	00 56 21.9	-0.3
JSTM	Santa Teresa H	1.60	340		Pn	00 56 22.6	0.0
CCOB	Coe Ranch Numb	1.62	343		Pn	00 56 23.5	+0.6
VES	Vestal, Richgr	1.64	85		Pn	00 56 22.3	-0.8
VES	Vestal, Richgr	1.64	85	P	Pn	00 56 22.3	-0.8
	baz=266						
VES				S	Sn	00 56 42.6	-1.2
	baz=266						
JBNB	Ben Lomond Mou	1.66	329		Pn	00 56 22.9	-0.5
ARN	Arnold Ranch	1.68	348		Pn	00 56 23.9	+0.2
MHC	Mount Hamilton	1.69	345		Pn	00 56 24.1	+0.2
FRI	Friant	1.71	41		Pn	00 56 23.9	-0.1
MHDM	Hidden Dam	1.71	34		Pn	00 56 24.2	+0.1
MRHM	Rocky Hill	1.73	70		Pn	00 56 23.7	-0.7
MYLM	Yosemite Lake	1.76	18		Pn	00 56 25.0	+0.3
CMMM	Mount Mocho	1.78	350		Pn	00 56 25.3	+0.2
CMLM	Mount Lewis	1.83	346		Pn	00 56 26.1	+0.3
JJRM	Joaquin Road	1.87	332		Pn	00 56 26.0	-0.2
JFP	Foothills Park	1.88	332		Pn	00 56 25.9	-0.4
JRSC	Jasper Ridge	1.93	332		Pn	00 56 26.4	-0.7
HELL	Mitchell Peak,	1.94	59		Pn	00 56 27.0	-0.3
WOFM	Oak Flat	1.95	94		Pn	00 56 26.4	-1.0
TEJ	El Tejon	2.02	103		Pn	00 56 27.2	-1.2
CNIC	Niles Canyon	2.03	340		Pn	00 56 28.2	-0.2
MMIM	Miami Mountain	2.03	32		Pn	00 56 29.3	+0.7
WASM	Alta Sierra Ca	2.07	88		Pn	00 56 28.8	-0.4
ISA	Isabella, Lake	2.13	90		Pn	00 56 29.5	-0.4
ISA	Isabella, Lake	2.13	90		Pn	00 56 29.7	-0.2
ISA	Isabella, Lake	2.13	90	P	Pn	00 56 29.6	-0.4
	baz=272						
KCC	Kaiser Creek	2.16	41		Pn	00 56 30.9	+0.6
OSI	Osito Audit: C	2.23	118		Pn	00 56 31.7	+0.5
PYR	Pyramid	2.24	120		Pn	00 56 31.8	+0.4
MCUB	Copperopolis B	2.30	9		Pn	00 56 32.4	+0.2
BLG	Laguna Peak, P	2.31	133	P	Pn	00 56 31.7	-0.6
	baz=315						
BKS	Berkeley--Byer	2.35	337		Pn	00 56 32.7	-0.2
BRIB	Briones	2.37	339		Pn	00 56 33.2	+0.1
CMB	Columbia Colle	2.40	14	Pn	Pn	00 56 34.2	+0.7
OAT	Oat Mountain	2.45	123		Pn	00 56 34.8	+0.5
MNHB	New Hogan Dam	2.45	5		Pn	00 56 34.7	+0.4
WCHM	Chimney Peak	2.46	85		Pn	00 56 35.3	+0.7
MRDM	Red Cones	2.50	40		Pn	00 56 37.1	+1.8
MDPB	Devils Postpil	2.52	39		Pn	00 56 37.0	+1.6
MINS	Minaret Summit	2.54	39		Pn	00 56 37.6	+1.8
OMMB	Old Mammoth Mi	2.54	41		Pn	00 56 37.5	+1.7
SCHCA	Scheelite	2.55	49		Pn	00 56 37.4	+1.5
CWC	Cottonwood Cre	2.55	72		Pn	00 56 37.2	+1.4
CWC	Cottonwood Cre	2.55	72	P	Pn	00 56 37.1	+1.4
	baz=254						
MDYM	Dry Creek	2.57	40		Pn	00 56 38.5	+2.3
MLCM	Laurel Creek C	2.59	42		Pn	00 56 38.3	+1.9
MDCM	Deadman Creek	2.60	39		Pn	00 56 38.4	+1.8
MGPM	Gravel Pit	2.61	42		Pn	00 56 38.7	+2.1
MCMM	Convict Lake	2.61	43		Pn	00 56 38.6	+1.9
RCCR	Rock Creek Can	2.61	46		Pn	00 56 38.5	+1.8
MEMM	East Mammoth H	2.62	41		Pn	00 56 38.9	+2.1
MCVM	Convict Lake	2.62	43		Pn	00 56 38.7	+1.8
MTUM	Tungsten Hills	2.62	50		Pn	00 56 38.5	+1.8
MCBM	Casa Benchmark	2.62	42		Pn	00 56 39.0	+2.2
MCSM	Casa Diablo Ho	2.63	41		Pn	00 56 39.0	+2.1
MDRNC	Doe Ridge	2.65	43		Pn	00 56 39.5	+2.3
LMCR	Lookout Mounta	2.66	40		Pn	00 56 40.1	+2.8
VPEM	Volcano Peak E	2.68	84		Pn	00 56 38.8	+1.3
MLHM	Little Hot Cre	2.69	42		Pn	00 56 40.4	+2.6
PASC	Pasadena Art C	2.84	122		Pn	00 56 39.2	-0.3
DAC	Darwin (Calif)	2.90	78		Pn	00 56 42.6	+2.1
MWC	Mount Wilson	2.90	120		Pn	00 56 40.4	-0.1
MPMC	Manual Prospec	2.95	82	P	Pn	00 56 41.5	+0.2
	baz=264						
WAKR	Walker	3.10	25		Pn	00 56 45.8	+2.5
SSK	Sunset Peak	3.17	117		Pn	00 56 44.8	+0.5
AFDM	Forest Hills D	3.24	2		Pn	00 56 47.3	+2.2
AFDM				Sn	Sn	00 57 22.3	-1.1
NVAR	Mina Array Bea	3.52	39		Pn	00 56 50.3	+1.1
GSC	Goldstone, Bar	3.52	95		Pn	00 56 48.3	-0.7
GSC	Goldstone, Bar	3.52	95	P	Pn	00 56 48.5	-0.5
	baz=278						
HOPS	Hopland Field	3.64	335	Pn	Pn	00 56 51.7	+1.0
ORV	Oroville	3.86	355		Pn	00 56 55.2	+1.6
TPNV	Topopah Spring	4.11	71		Pn	00 56 58.7	+1.6
KVN	Kaiserville	4.11	35		Pn	00 57 00.3	+3.1
KVN				Pg	Pg	00 57 10.7	-2.9
PAHR	Pah Rah Range	4.22	18		Pn	00 56 59.4	+0.6

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*IDC **06** 01:15:12.3±3.1, 17°.40S×178°.65W, h513^{km}±32^{km}, mb3.4/13, mb1 3.6/13, mb1mx3.4/32, mbtmp4.2/13, Error ellipse: s-maj=22.4km s-min=17.7km az=141.0*
*NEIC **06** 01:15:15.0±1.4, 17°.5S±0°.1×178°.7W±0°.1, h554^{km}±8^{km}, mb4.4/30, Error ellipse: s-maj=23.5km s-min=11.0km az=147.0*
ISC 06 01:15:15.1±0.5**, 17°.5S**±0°.1×**178°.8W**±0°.1**, h547**^{km}**, n77, σ0^{s}.94**/74**, mb4.3**/27**, 7C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.06	265	P	P	01 16 32.1	+1.7
TUWZ	Tuamarina	24.69	193	P	P	01 19 52.8	-0.3
LTZ	Lake Taylor	26.36	195	P	P	01 20 06.4	-1.5
RPZ	Rata Peaks	27.55	196	P	P	01 20 17.1	-1.1
RPZ				IAmb	IAmb	01 20 34.7	
	comp=Z,8.3nm,1.1s						
FOZ	Fox Glacier	27.73	198	P	P	01 20 19.1	-0.6
FOZ				IAmb	IAmb	01 20 19.9	
	comp=Z,8.2nm,0.6s						
WKZ	Wanaka	29.14	198	P	P	01 20 30.4	-1.7
WKZ				IAmb	IAmb	01 20 43.7	
	comp=Z,17nm,1.2s						
ARMA	Armidale	29.88	239	P	P	01 20 39.4	+0.5
ARMA				IAmb	IAmb	01 20 41.2	
	comp=Z,7.6nm,0.8s						
MLZ	Mavora Lakes	29.90	199	P	P	01 20 38.4	-0.3
CTA	Charters Tower	33.20	260	P	P	01 21 07.0	-0.2
	comp=Z,5.2nm,0.7s,baz=90,slow=14,SNR=3.3						
COEN	Coen	36.78	270	P	P	01 21 36.8	-0.2
COEN				IAmb	IAmb	01 21 39.1	
	comp=Z,7.6nm,0.8s						
TOO	Toolangi	37.20	230	P	P	01 21 40.5	+0.3
TAU	Tasmania Unive	38.35	221	P	P	01 21 49.8	+0.3
TAU				IAmb	IAmb	01 21 51.0	
	comp=Z,14nm,1.0s						
STKA	Stephens Creek	38.56	241	P	P	01 21 52.4	+1.0
	comp=Z,3.6nm,0.3s,baz=82,slow=9.1,SNR=14						
STKA	Stephens Creek	38.56	241	P	P	01 21 52.0	+0.7
BBOO	Buckleboo	43.34	241	P	P	01 22 29.8	+0.5
WB0	Warramunga Arr	44.36	259	P	P	01 22 37.0	-0.4
WB2	Warramunga Arr	44.38	259	P	P	01 22 37.3	-0.3
WB2				IAmb	IAmb	01 22 38.2	
	comp=Z,6.4nm,0.8s						
WRA	Warramunga Arr	44.40	259	P	P	01 22 36.8	-0.8
	comp=Z,1.8nm,0.2s,baz=83,slow=7.1,SNR=110						
WRA				PcP	PcP	01 24 10.1	+0.4
	comp=Z,1.6nm,0.8s,baz=83,slow=3.7,SNR=5.6						
WRA	Warramunga Arr	44.40	259	P	P	01 22 36.9	-0.8
WRA					PcP	01 24 07.8	-1.8
AS31	Alice Springs	44.60	254	P	P	01 22 38.3	-0.9
AS31				IAmb	IAmb	01 22 40.5	
	comp=Z,7.4nm,0.7s						
ASAR	Alice Springs	44.60	254	P	P	01 22 39.5	+0.3
	comp=Z,31nm,0.7s,baz=87,slow=8.2,SNR=239						
ASAR				PcP	PcP	01 24 10.4	+0.1
	comp=Z,1.8nm,0.7s,baz=99,slow=3.9,SNR=6.2						
ASAR				ScP	ScP	01 27 14.2	+3.6
	comp=Z,0.4nm,0.6s,baz=101,slow=4.8,SNR=4.2						
ASAR				S	S	01 28 34.7	-1.1
	comp=Z,1.1nm,0.8s,baz=85,slow=15,SNR=7.3						
ASAR	Alice Springs	44.60	254	P	P	01 22 38.3	-0.9
ASAR					PcP	01 24 09.6	-0.7
MTN	Manton Dam	48.49	268	P	P	01 23 08.7	0.0
MTN				IAmb	IAmb	01 23 09.5	
	comp=Z,15nm,0.9s						
FORT	Forrest	49.90	244	P	P	01 23 18.7	-0.2
KNRA	Kununurra	50.21	264	P	P	01 23 20.6	-0.7
KNRA				IAmb	IAmb	01 23 22.4	
	comp=Z,16nm,0.8s						
FITZ	Fitzroy Crossi	52.78	260	P	P	01 23 40.6	+0.7
	comp=Z,2.8nm,0.6s,baz=100,slow=5.6,SNR=24						
FITZ	Fitzroy Crossi	52.78	260	P	P	01 23 40.1	+0.2
SOEI	Soe	55.75	270	P	P	01 24 01.7	+0.7
PSAD2	Pilbara Seismi	57.59	255	P	P	01 24 11.8	-1.6
PSAC2	Pilbara Seismi	57.66	255	P	P	01 24 13.7	-0.2
PSAC2				IAmb	IAmb	01 24 15.0	
	comp=Z,11nm,0.8s						
PSAB2	Pilbara Seismi	57.70	255	P	P	01 24 13.6	-0.5
PSAB2				IAmb	IAmb	01 24 14.9	
	comp=Z,11nm,0.7s						
PSAB3	Pilbara Seismi	57.70	255	P	P	01 24 13.6	-0.5
PSAB3				IAmb	IAmb	01 24 15.0	
	comp=Z,12nm,0.7s						
PSAC3	Pilbara Seismi	57.72	255	P	P	01 24 14.3	0.0
PSAC3				IAmb	IAmb	01 24 15.2	
	comp=Z,15nm,0.7s						
MORW	Morawa	60.36	246	P	P	01 24 30.8	-1.1
UGM	Wanagama	69.34	268	P	P	01 25 27.2	-1.5
QSPA	South Pole Qui	72.58	180	P	P	01 25 47.4	+0.6
	comp=Z,2.1nm,0.5s,baz=282,slow=1.5,SNR=14						
QSPA	South Pole Qui	72.58	180	P	P	01 25 47.4	+0.6
MAW	Mawson	84.16	200	P	P	01 26 49.1	+0.6
	comp=Z,1.4nm,0.6s,baz=122,slow=9.5,SNR=3.9						
MAW	Mawson	84.16	200	P	P	01 26 48.8	+0.3
ILAR	Eielson Array	85.54	13	P	P	01 26 54.1	-0.9
	comp=Z,0.4nm,0.4s,baz=224,slow=5.0,SNR=7.8						
ILAR	Eielson Array	85.54	13	P	P	01 26 53.7	-1.4
TXAR	Lajitas Array	86.04	58	P	P	01 26 59.7	+1.2
	comp=Z,0.3nm,0.6s,baz=224,slow=6.3,SNR=2.5						
TXAR	Lajitas Array	86.04	58	P	P	01 26 57.5	-1.0
PDAR	Pinedale Array	87.26	44	P	P	01 27 04.4	+0.3
	comp=Z,0.2nm,0.6s,baz=226,slow=6.2,SNR=3.1						
CMAR	Chiang Mai Arr	88.43	290	P	P	01 27 12.1	+2.2
	comp=Z,1.0nm,0.4s,baz=112,slow=3.2,SNR=8.9						
CMAR	Chiang Mai Arr	88.43	290	P	P	01 27 09.4	-0.4
SONM	Songino Array	93.01	319	P	P	01 27 30.4	-0.1
	comp=Z,0.9nm,1.1s,baz=108,slow=4.7,SNR=3.1						
SONM	Songino Array	93.01	319	P	P	01 27 30.1	-0.4
YKA	Yellowknife Ar	94.07	25	P	P	01 27 33.5	-1.3
	comp=Z,0.1nm,0.3s,baz=238,slow=5.3,SNR=4.5						
ARCES	ARCESS Array B	125.83	350	PKP	PKPdf	01 33 14.2	-0.1
	comp=Z,4.6nm,1.1s,baz=48,slow=1.3,SNR=3.6						
ARCES	ARCESS Array B	125.83	350		PKPdf	01 33 14.0	-0.3
VASR	Vaslui	143.57	329	⇓P	PKPbc	01 33 47.4	+0.8
BUR08	Bucovina Ar. S	144.06	332		PKPbc	01 33 47.5	-0.8
BURAR	Bucovina Array	144.08	332		PKPbc	01 33 48.6	+0.3
GHRR		144.16	328	⇑P	PKPdf	01 33 50.1	+1.2
TESR	Tescani	144.22	330	⇑P	PKPbc	01 33 49.2	+0.6
BR131	Keskin Array S	144.25	315		PKPbc	01 33 48.1	-1.1
BRTR	Keskin Array B	144.25	315	PKP	PKPbc	01 33 49.1	-0.1
	comp=Z,1.7nm,0.7s,baz=123,slow=4.6,SNR=13						
BRTR	Keskin Array B	144.25	315		PKPbc	01 33 48.7	-0.4
ARCR	ARCALIA	144.86	332	⇑P	PKPab	01 33 51.8	+0.4
OSTC	Ostas	144.88	343	*e*PKP	PKPbc	01 33 51.2	+0.6
CHVC	Chvalec	144.90	344	*e*PKP	PKPbc	01 33 51.4	+0.8
CLL	Collm	144.97	347	*i* PKPbc	PKPab	01 33 51.8	+0.2
	comp=Z,8.0nm,1.1s						
UPC	Upice	144.98	344	*e*PKP	PKPbc	01 33 51.4	+0.5
DPC	Dobruska-Polom	145.04	343	*e*PKP	PKPbc	01 33 51.6	+0.5
KRLC	Kraliky	145.16	342	*e*PKP	PKPdf	01 33 51.3	+0.8
MLR	Muntele Rosu	145.29	329	⇑P	PKPbc	01 33 52.4	+0.3
PVCC	Panska Ves	145.34	345	*e*PKP	PKPbc	01 33 52.8	+0.9
DRGR		145.81	333	⇑P	PKPbc	01 33 53.9	+0.4
PRU	Pruhonice	145.84	345	*e*PKP	PKPbc	01 33 53.9	+0.5
MBAR	Mbarara	145.86	241		PKPdf	01 33 53.8	+0.8
ARR	Arges	146.02	330	⇑P	PKPbc	01 33 55.4	+1.3
SIRR	Siria	146.66	334	⇑P	PKPbc	01 33 56.1	+0.3
KHC	Kasperske Hory	146.87	345	*e*PKP	PKPbc	01 33 55.6	-0.7
GERES	GERESS Array B	147.11	345	PKPbc	PKPbc	01 33 57.4	+0.4
	comp=Z,1.6nm,0.7s,baz=46,slow=3.9,SNR=11						
GERES	GERESS Array B	147.11	345		PKPbc	01 33 57.0	0.0
TORD	Torodi Ar. Bea	175.68	186	PKP	PKPdf	01 34 22.5	-0.9
	comp=Z,0.7nm,0.8s,baz=270,slow=1.4,SNR=3.5						
TORD				PKPab	PKPab	01 36 05.1	0.0
	comp=Z,0.3nm,0.6s,baz=227,slow=3.7,SNR=1.9						

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*ATH **06** 01:35:49.1, 38°.20N×20°.38E, h17^{km}, ML2.7/12, Error ellipse: s-maj=1.5km s-min=0.9km az=241.0*
*THE **06** 01:35:49.5, 38°.22N×20°.40E, h15^{km}, ML2.8/5, Error ellipse: s-maj=0.8km s-min=0.3km az=241.0*
ISC 06 01:35:49.1±1.1**, 38°.21N**±0°.03×**20°.37E**±0°.05**, h16**^{km}±5^{km}**, n41, σ0^{s}.33**/68**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.02	258	P	Pg	01 35 52.2	+0.2
KEF3				S	Sg	01 35 53.7	-0.2
CHV1	Chavriata, Kef	0.03	166	P	Pg	01 35 52.2	+0.2
LXRA	Lixouri, Kepha	0.05	98	P	Pg	01 35 52.3	+0.2
LXRA				S	Sg	01 35 54.4	+0.3
LXR1	Lixouri, Cepha	0.05	97	P	Pg	01 35 52.3	+0.2
KEF4	Livadi, Kephal	0.06	38	P	Pg	01 35 52.4	+0.1
KEF4				S	Sg	01 35 53.9	-0.5
ARGA	Argostoli. Kep	0.09	110	P	Pg	01 35 52.4	0.0
ARGA				S	Sg	01 35 54.5	-0.2
ARG2	Argostoli	0.09	108	P	Pg	01 35 52.5	0.0
ARG2				S	Sg	01 35 54.6	-0.1
KEF2	Argostoli. Kep	0.10	115	P	Pg	01 35 52.6	0.0
KEF2				S	Sg	01 35 54.7	-0.2
KEF1	Kardakata, Kep	0.10	47	P	Pg	01 35 52.6	0.0
KEF1				S	Sg	01 35 54.8	-0.1
VLS	Valsamata	0.17	100	P	Pg	01 35 53.3	-0.2
VLS				S	Sg	01 35 56.3	-0.2
VLS	Valsamata	0.17	100	P	Pg	01 35 53.3	-0.2
VLS				S	Sg	01 35 56.3	-0.2
VLS				AML	AML	01 35 56.4	
	comp=E,21476µm,0.1s						
VLS				AML	AML	01 35 56.4	
	comp=N,30700µm,0.3s						
KONA	Konidatara, Ke	0.27	35	P	Pg	01 35 54.9	-0.1
KONA				S	Sg	01 35 59.2	+0.2
KONA				AML	AML	01 35 59.9	
	comp=N,9639µm,0.1s						
KONA				AML	AML	01 36 01.0	
	comp=E,6080µm,0.1s						
FSK	Fiskardo	0.29	30	P	Pg	01 35 55.4	0.0
FSK				S	Sg	01 36 00.0	+0.3
	comp=E,4µm,0.2s						
FSK	Fiskardo	0.29	30	P	Pg	01 35 55.3	-0.1
FSK				S	Sg	01 35 59.5	-0.2
FSK				AML	AML	01 36 00.1	
	comp=N,3432µm,0.2s						
FSK				AML	AML	01 36 00.3	
	comp=E,13203µm,0.2s						
KFL	Anninata	0.34	107	P	Pg	01 35 56.0	-0.2
KFL				S	Sg	01 36 01.4	+0.3
	comp=E,4µm,0.4s						
KFL	Anninata	0.34	107	P	Pg	01 35 56.0	-0.2
KFL				S	Sg	01 36 00.7	-0.3
KFL				AML	AML	01 36 01.9	
	comp=N,9084µm,0.2s						
KFL				AML	AML	01 36 04.4	
	comp=E,5910µm,0.4s						
EVGI	Lefkada island	0.47	28	P	Pg	01 35 58.4	-0.2
EVGI				S	Sb	01 36 05.6	-0.1
MGNA	Meganis	0.56	36	P	Pg	01 35 59.8	-0.4
MGNA				S	Sg	01 36 07.9	+0.3
MGNA				AML	AML	01 36 09.1	
	comp=E,2281µm,0.1s						
MGNA				AML	AML	01 36 09.1	
	comp=N,1702µm,0.1s						
LKD2	Lefkada island	0.62	21	P	Pg	01 36 00.9	-0.5
LKD2				S	Sg	01 36 09.9	+0.2
	comp=N,410nm,0.2s						
LKD2	Lefkada island	0.62	21	P	Pg	01 36 01.0	-0.5
LKD2				S	Sb	01 36 10.5	+0.4
LKD2				AML	AML	01 36 17.4	
	comp=E,922µm,0.2s						
LKD2				AML	AML	01 36 18.0	
	comp=N,724µm,0.2s						
TSLK	Tsoukalades, L	0.66	20	P	Pg	01 36 01.6	-0.4
TSLK				S	Sb	01 36 11.6	+0.6
VTN	Vitineika	0.70	114	P	Pb	01 36 03.0	0.0
PDO	Prodromos	0.75	58	P	Pb	01 36 03.2	-0.5
PDO	Prodromos	0.75	58	P	Pb	01 36 03.3	-0.5
PDO				S	Sg	01 36 13.5	-0.1
PDO				AML	AML	01 36 20.9	
	comp=E,868µm,0.3s						
PDO				AML	AML	01 36 21.7	
	comp=N,1172µm,0.5s						
RLS	Riolos of Patr	0.87	99	P	Pb	01 36 05.6	-0.3
RLS				S	Sg	01 36 18.2	+0.6
RLS				AML	AML	01 36 23.6	
	comp=N,312µm,0.4s						
RLS				AML	AML	01 36 23.6	
	comp=E,390µm,0.3s						
PVO	Paravola	0.99	65	P	Pb	01 36 08.0	+0.1
PVO				S	Sn	01 36 21.7	-0.3
	comp=E,430nm,0.3s						
PVO	Paravola	0.99	65	P	Pb	01 36 08.0	+0.1
PVO				S	Sn	01 36 21.9	-0.2

PVO				AML	AML	01 36 29.3	
	comp=N,774µm,0.3s						
PVO				AML	AML	01 36 30.8	
	comp=E,946µm,0.4s						
DRO	Drossia	1.08	103	P	Pb	01 36 09.5	0.0
DRO				S	Sg	01 36 25.0	+0.7
	comp=E,445nm,0.6s						
DRO	Drossia	1.08	103	P	Pb	01 36 09.5	0.0
DRO				S	Sn	01 36 24.0	-0.4
DRO				AML	AML	01 36 33.3	
	comp=N,789µm,0.6s						
DRO				AML	AML	01 36 35.3	
	comp=E,947µm,0.6s						
EVR	Evrytania	1.33	57	P	Pn	01 36 13.3	+0.2
EVR	Evrytania	1.33	57	P	Pb	01 36 13.4	-0.3
EVR				S	Sg	01 36 32.5	+0.4
EVR				AML	AML	01 36 39.2	
	comp=N,138µm,0.5s						
EVR				AML	AML	01 36 42.7	
	comp=E,127µm,0.5s						
TRIZ	Trizonia	1.35	83	P	Pn	01 36 12.7	-0.5
TRIZ	Trizonia	1.35	83	P	Pn	01 36 13.3	+0.1
KALE	Kalithea	1.40	82	P	Pn	01 36 13.8	-0.2
KALE	Kalithea	1.40	82	P	Pn	01 36 14.0	0.0
KLV	Kalavryta, Ach	1.41	96	P	Pn	01 36 14.5	+0.3
KLV	Kalavryta, Ach	1.41	96	P	Pb	01 36 14.8	-0.3
JAN	Janina	1.49	14	P	Pg	01 36 18.1	+0.2
JAN				S	Sg	01 36 37.9	+0.6
JAN				AML	AML	01 36 41.2	
	comp=N,193µm,0.3s						
JAN				AML	AML	01 36 42.9	
	comp=E,272µm,0.6s						
KEK	Kerkira	1.57	344	P	Pb	01 36 17.5	-0.3
MAKR	Makrakomi, Fth	1.59	59	P	Pb	01 36 18.7	+0.5
AXAR	Agios Charalam	1.88	72	P	Pb	01 36 24.1	+1.0

IDC 06 01:48:25.2±2.2, 6°.00S×130°.51E, h0km, mb3.8/2, mb1 3.6/4, mb1mx3.5/22, mbtmp3.5/4, ML3.6/2, Error ellipse: s-maj=201.3km s-min=28.7km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.35	165	Pn	Pn	01 51 49.3	-0.6
	0.4nm,0.3s,baz=350,slow=13,SNR=5.9						
WRA				Sn	Sn	01 54 16.4	-13
	0.7nm,0.3s,baz=348,slow=24,SNR=6.9						
ASAR	Alice Springs	17.86	170	P	P	01 52 36.0	-0.2
	0.1nm,0.3s,baz=353,slow=12,SNR=5.1						
ASAR				S	Sn	01 55 41.1	-14
	0.1nm,0.3s,baz=354,slow=26,SNR=4.0						
SONM	Songino Array	57.66	341	P	P	01 58 18.4	+0.8
	0.2nm,0.4s,baz=163,slow=5.4,SNR=2.7						
MKAR	Makanchi Array	67.68	326	P	P	01 59 23.7	-0.6
	0.8nm,0.4s,baz=114,slow=8.0,SNR=17						

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*RSNC **06** 01:56:29.3±1.1, 5°.61N×77°.92W, h21km±4km, ML2.9*
*UPA **06** 01:56:29.4±0.8, 5°.49N×78°.04W, h43km±22km, MW3.9*
ISC 06 01:56:25.4±1.4, 5°.73N±0°.03×77°.91W±0°.03, h9km±11km, n22, σ1s.54/43, 4C-1D, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOLC	Bahia Solano	0.70	46	*e*P	Pn	01 56 43.9	+2.4
SOLC				*e*S	Sn	01 56 54.3	+1.8
SOLC				*i*		01 56 58.0	
	comp=Z,237nm,0.7s						
PIZC	Pizarro, Choco	0.94	144	⇑*e*P	Pb	01 56 44.6	+0.7
PIZC				*e*S	Sg	01 56 56.1	+0.3
PIZC				*i*		01 57 01.8	
	comp=Z,343nm,0.7s						
PTAC	Punta Ardita,	1.41	4	*e*P	Pg	01 56 53.6	+1.1
PTAC				*e*S	Sn	01 57 10.6	+0.6
PTAC				*i*		01 57 12.1	
	comp=Z,1µm,0.3s						
MALC	Bahia Malaga	1.80	161	⇑*e*P	Pn	01 56 57.0	+0.3
MALC				*e*S	Sn	01 57 17.7	-2.0
MALC				*i*		01 57 19.0	
	comp=Z,87nm,0.3s						
PLMC	San Jos del P	1.82	117	*e*P	Pn	01 56 57.7	+0.7
PLMC				*e*S	Sn	01 57 19.3	-0.9
PLMC				*i*		01 57 21.5	
	comp=Z,348nm,0.3s						
CBOC	Ciudad Bolivar	1.90	86	⇓*e*P	Pb	01 57 00.1	-0.2
CBOC				*e*S	Sn	01 57 22.2	0.0
CBOC				*i*		01 57 26.9	
	comp=Z,49nm,0.3s						
DBBC	Dabeiba	2.12	53	*e*P	Pg	01 57 05.5	-0.6
DBBC				*e*S	Sg	01 57 33.0	-0.6
DBBC				*i*		01 57 37.7	
	comp=Z,50nm,0.4s						
YOTC	Yotoco, Valle	2.34	138	⇑*i*P	Pn	01 57 04.5	+0.3
YOTC				*e*S	Sn	01 57 30.5	-2.6
YOTC				*i*		01 57 43.4	
	comp=Z,28nm,0.6s						
HELC	Santa Helena	2.41	79	*e*P	Pb	01 57 08.9	-0.4
HELC				*e*S	Sb	01 57 37.8	-1.5
HELC				*i*		01 57 42.6	
	comp=Z,17nm,0.3s						
HELC	Santa Helena	2.41	79	⇑*e*P	Pb	01 57 08.7	-0.6
HELC				*e*S	Sb	01 57 38.2	-1.1
GUY2C	Guyana, Caldas	2.59	101	*e*P	Pb	01 57 11.0	-1.2
GUY2C				*e*S	Sn	01 57 40.9	+1.2
GUY2C				*i*		01 57 44.2	
	comp=Z,79nm,0.8s						
UPD2	Meteti	2.80	358	*e*P	Pb	01 57 14.4	-1.2
UPD2				*e*S	Sb	01 57 47.8	-2.2
UREC	San Jos de Ur	3.10	50	*e*P	Pb	01 57 19.9	-0.9
UREC				*e*S	Sb	01 57 57.9	-0.9
UREC				*i*		01 58 01.9	
	comp=Z,16nm,0.3s						
AZU	Azuero	3.11	311	*e*P	Pn	01 57 15.6	+0.9
AZU				*e*S	Sn	01 57 51.8	-0.2
ORTC	Ortega, Tolima	3.22	124	*e*P	Pn	01 57 19.2	+3.0
ORTC				*e*S	Sn	01 57 54.1	-0.6
ORTC				*i*		01 57 58.8	
	comp=Z,67nm,0.6s						
CACAO	El Cacao, Vera	3.34	299	*e*P	Pn	01 57 18.4	+0.6
CACAO				*e*S	Sn	01 57 55.5	-2.1
ZARC	Zaragoza, Cauc	3.50	60	*e*P	Pb	01 57 25.4	-2.3
ZARC				*e*S	Sb	01 58 08.4	-1.9
ZARC				*i*		01 58 10.8	
	comp=Z,16nm,0.3s						
UPA	Univ. de Panam	3.61	334	*e*S	Sn	01 58 06.3	+2.1
PCON	Cinco Dias	3.71	156	*e*P	Pn	01 57 25.2	+1.8
PCON				*i*		01 57 54.6	
	comp=Z,12nm,0.4s						
PCON				*e*S	Sn	01 58 07.7	+0.3
GMAL	Guarumal, Vera	3.87	302	*e*P	Pn	01 57 26.7	+1.6
GMAL				*e*S	Sn	01 58 12.1	+1.4
GARC	Garzon, Huila	4.27	145	*e*P	Pn	01 57 33.9	+3.1
GARC				*e*S	Sn	01 58 22.3	+1.3
MACC	Macarena, Meta	5.40	131	*e*P	Pn	01 57 48.9	+2.7
MACC				*e*S	Sn	01 58 48.0	-0.5
MACC				*i*		01 58 58.7	
	comp=Z,13nm,0.8s						

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*DRS **06** 02:07:10.9±0.0, 43°.20N×44°.53E, h12km*
*TIF **06** 02:07:19.3, 43°.26N×45°.14E, h21km±1km*
ISC 06 02:07:20.4±1.3, 43°.27N±0°.06×44°.98E±0°.03, h31km±13km, n21, σ1s.80/40, 4C, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUDG	Gudauri	0.89	205	P	Pb	02 07 35.0	-2.5
GUDG				S	Sb	02 07 48.2	-0.9
BTLR	Botlikh	1.09	123	*e*Pg	Pn	02 07 39.4	-0.3
	131nm,0.6s						
BTLR				*e*Sg	Sn	02 07 54.0	+0.2
	338nm,0.4s						
DLMR	Dylym	1.22	99	*e*Pg	Pb	02 07 43.0	+0.1
	86nm,0.2s						
DLMR				*i* Sg	Sn	02 08 03.0	+6.2
	606nm,0.3s						
ONI	Oni	1.31	239	P	Pb	02 07 45.2	+0.7
ONI				S	Sb	02 08 04.4	+3.4
DBC	Dubki	1.38	100	*i* Pg	Pb	02 07 45.4	-0.2
	78nm,0.3s						
DBC				*e*Sg	Sb	02 08 04.1	+1.3
	208nm,0.6s						
UNCR	Uncukul	1.44	112	*i* Pg	Pb	02 07 46.0	-0.7
	127nm,0.0s						
UNCR				*e*Sg	Sb	02 08 02.0	-2.6
	980nm,0.0s						
KRNR	Karanay	1.48	107	*i* Pg	Pb	02 07 46.5	-0.8
	29nm,0.3s						
KRNR				*i* Sg	Sb	02 08 06.0	+0.2
	59nm,0.4s						
TBLG	Delisi	1.55	187	P	Pb	02 07 48.0	-0.5
TBLG				S	Sb	02 08 08.6	+0.8
BTNK	Botanikuri	1.59	185	P	Pb	02 07 48.1	-1.1
BTNK				S	Sb	02 08 09.3	+0.3
ARKR	Arakani	1.62	114	*e*Pg	Pb	02 07 50.0	+0.3
	74nm,0.6s						
ARKR				*e*Sg	Sb	02 08 10.0	+0.2
	147nm,0.8s						
BUJR	Buynaksk	1.62	105	*e*Pg	Pb	02 07 50.5	+0.9
BUJR				*e*Sg	Sb	02 08 13.1	+3.4
GNBR	Gunib	1.70	121	*e*Pg	Pb	02 07 50.0	-1.2
	73nm,0.4s						
GNBR				*e*Sg	Sb	02 08 11.9	-0.2
	194nm,0.6s						
LGD	Lagodekhi	1.71	147	P	Pb	02 07 50.7	-0.5
LGD				S	Sb	02 08 14.2	+1.8
TKB	Tkibuli	1.73	239	P	Pb	02 07 51.8	+0.3
BKRG	Bakuriani	1.86	216	P	Pb	02 07 53.2	-0.6
BKRG				S	Sb	02 08 18.4	+1.8
KMKR	Kumukh	1.93	125	*i* Pg	Pb	02 07 55.0	-0.1
	47nm,0.2s						
KMKR				*i* Sg	Sb	02 08 19.5	+0.6
	116nm,0.5s						
KZRT	Kazreti	1.93	193	P	Pb	02 07 53.9	-1.1
KZRT				S	Sb	02 08 18.7	0.0
DDFL	Dedoflistskaro	2.01	155	P	Pb	02 07 58.0	+1.6
BGD	Bogdanovka	2.25	208	P	Pb	02 07 59.2	-1.3
BGD				S	Sb	02 08 29.3	+1.2
AKTO	Aktyubinsk	11.43	47	⇑Pn	Pn	02 10 00.0	-1.4
	0.8nm,0.6s						
AKTO				⇑Sn	Sn	02 12 04.3	-3.7
	0.8nm,0.9s						
AB31	Akbulak array	11.95	55	⇑Pn	Pn	02 10 08.7	+0.2
	0.2nm,0.4s,baz=241,slow=9.9,SNR=12						
AB31				⇑Sn	Sn	02 12 18.8	-1.8
	0.5nm,0.6s,baz=242,slow=21,SNR=4.4						

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*MEX **06** 02:14:25.8±0.4, 28°.14N×112°.46W, h5km, MD3.9*
*ECX **06** 02:14:26.2±0.4, 28°.15N×112°.28W, h10km, MD3.0, ML3.0*
ISC 06 02:14:24.9±1.6, 28°.11N±0°.06×112°.3W±0°.1, h10km, n10, σ0s.70/16, 2C-3D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRIG	Santa Rosalia	0.79	177	⇓*e*P	Pb	02 14 40.5	-0.2
SRIG				*e*S	Sb	02 14 51.9	+0.5
SRIG	Santa Rosalia	0.79	177	*i* P	Pb	02 14 40.1	-0.6
SRIG				*i* S	Sb	02 14 51.8	+0.3
GUYB	Guaymas	1.27	99	⇓*e*P	Pn	02 14 48.6	-0.1
GUYB				*e*S	Sb	02 15 04.8	-0.5
GUYB	Guaymas	1.27	99	*e*P	Pn	02 14 48.3	-0.4
GUYB				*i* S	Sn	02 15 06.1	+0.3
HSIG		1.48	52	⇓*e*P	Pn	02 14 51.2	-0.6
HSIG				*e*S	Sn	02 15 10.8	-0.4
HSIG		1.48	52	*i* P	Pn	02 14 51.0	-0.7
HSIG				*i* S	Sn	02 15 10.8	-0.4
BAHB	Baha de los	2.14	329	*e*P	Pn	02 14 50.0	-11
BAHB				*e*S	Sn	02 15 08.5	-19
NZIG	Nacozari, Sono	3.29	46	*i* P	Pn	02 15 16.4	-0.2
NZIG				*i* S	Sn	02 15 56.8	+1.0
SQX	San Quintin	3.98	309	IAML		02 16 32.2	
	comp=N,23nm,0.7s						
SQX				⇑*e*		02 16 32.2	
SQX				⇑*e*		02 16 36.2	
SQX				IAML		02 16 36.2	
	comp=E,21nm,1.5s						
CGIG		4.38	58	*i* P	Pn	02 15 32.8	+1.0
CGIG				*i* S	Sn	02 16 24.4	+1.4

UCR 06 02:29:45.0±1.4, 9°.68N×84°.84W, h23km±4km, MD3.7, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTS	Las Juntas de	0.61	349	*e*P	Pb	02 29 56.1	-1.0
JTS				*e*S	Sb	02 30 04.5	-0.9
LCR2	La Lucha 2	0.82	86	*e*P	Pb	02 30 00.3	-0.5
LCR2				*e*S	Sn	02 30 12.3	-0.7
PLVR	Palo Verde	0.83	323	*e*P	Pb	02 30 00.1	-0.8
PLVR				*e*S	Sb	02 30 11.5	-0.3
GUAI	GUAI	0.88	311	*i* P	Pb	02 30 00.6	-1.1
GUAI				*i* S	Sb	02 30 13.3	+0.2
ACAL	Aguas Claras	0.96	348	*i* P	Pb	02 30 02.3	-0.8
ACAL				*i* S	Sn	02 30 17.5	+1.2
CUI	Cuipilapa	1.02	342	*i* P	Pn	02 30 03.0	-1.0
CUI				*e*P	Pb	02 30 04.0	-0.1
CUI				*e*S	Sn	02 30 18.2	+0.6
MESS	Mesas	1.11	341	*i* P	Pn	02 30 04.7	-0.5
NY14	Universidad de	1.18	324	*i* P	Pn	02 30 06.0	-0.1
NY14				*i* S	Sb	02 30 22.4	+0.8
GBS3	Finca Las Img	1.25	331	*i* P	Pn	02 30 06.8	-0.3
GB1A	Borinquen Arri	1.26	334	*e*P	Pn	02 30 07.4	+0.2
GB1A				*e*S	Sb	02 30 23.8	-0.1
EDBA	Buenos Aires	1.62	108	*e*S	Sb	02 30 34.4	0.0

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*ARE **06** 02:31:21±1.1, 4°.50S±0°.08×79°.74W±0°.07, h65km±9km, ML4.2, mb3.6/3(NEIC), Error ellipse: s-maj=12.5km s-min=8.7km az=149.0*
NEIC 06 02:31:19.8±1.3, 4°.5S±0°.1×79°.9W±0°.2, h94km±16km, Error ellipse: s-maj=29.1km s-min=14.2km az=77.0, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OTAV	Otavalo	4.87	17	Pn	Pn	02 32 31.5	+0.4
OTAV				Sn	Sn	02 33 25.2	-1.3
FLOC	Florencia	7.32	35	Pn	Pn	02 33 04.4	+0.3
FLOC				Sn	Sn	02 34 25.6	0.0
NNA	Nana	8.05	159	Pn	Pn	02 33 13.9	-0.2
NNA				Sn	Sn	02 34 43.2	-0.4
LPAZ	La Paz	16.45	136	Pn	Pn	02 35 05.8	+0.1
LPAZ				IAmb	IAmb	02 35 22.5	
	comp=Z,2.0nm,1.1s						
SAML	Samuel	17.14	106	Pn	P	02 35 14.2	+0.4
SAML				IAmb	IAmb	02 35 15.4	
	comp=Z,3.8nm,0.8s						
PTGA	Pitinga	20.20	80	P	P	02 35 48.3	+1.1
PTGA				IAmb	IAmb	02 35 48.6	
	comp=Z,3.4nm,0.6s						

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*IDC **06** 02:51:17.1±3.9, 35°.92N×74°.76E, h71km±35km, mb3.5/12, mb1 3.6/17, mb1mx3.5/41, mbtmp3.7/17, ML3.1/5, MS3.1/7, Ms1 3.1/7, ms1mx2.9/35, Error ellipse: s-maj=25.9km s-min=13.6km az=26.0*
ISC 06 02:51:12.5±0.7, 35°.70N±0°.08×74°.83E±0°.10, h35km, n28, σ1s.67/27, mb3.7/12, MS3.3/3, Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	6.93	358	P	Pn	02 52 53.7	+2.0
	0.2nm,0.3s,baz=166,slow=15,SNR=5.5						
AAK				S	Sn	02 54 10.2	+0.8
	0.1nm,0.3s,baz=203,slow=18,SNR=2.4						
AAK				LR	LR	02 55 46.3	
	comp=Z,68nm,19.6s,baz=168,slow=40						
KKN	Kakani	11.88	129	*e*P	Pn	02 53 58.6	-1.0
	16nm,0.4s						
DMN	Daman	11.90	130	*e*P	Pn	02 53 59.5	-0.4
PKIN	Phulchoki	12.10	129	*e*P	Pn	02 54 02.2	-0.5
	21nm,0.5s						
PKI	Pulchoki	12.12	129	*e*P	Pn	02 54 01.4	-1.5
	33nm,0.6s						
GUN	Gumba	12.19	127	*e*P	Pn	02 54 02.8	-1.1
	32nm,0.7s						
MKAR	Makanchi Array	12.41	25	P	Pn	02 54 06.8	+0.2
	0.0nm,0.3s,baz=231,slow=12,SNR=6.0						
MKAR				LR	LR	02 59 16.0	
	comp=Z,59nm,21.1s,baz=179,slow=39						
JIRN	Jiri	12.56	127	*e*P	Pn	02 54 07.9	-1.1
	85nm,0.6s						
RAMN	Ramite	13.31	128	*e*P	Pn	02 54 15.7	-3.4
	19nm,0.5s						
GEYT	Alibeck	13.58	284	LR	LR	03 01 06.2	
	comp=Z,108nm,18.9s,baz=90,slow=44						
TAPN	Taplejung	13.77	124	*e*P	Pn	02 54 22.9	-2.6
KURBB	Kurchatov Arra	15.15	9	P	Pn	02 54 41.5	-2.2
	0.1nm,0.3s,baz=198,slow=12,SNR=6.7						
BVAR	Borovoye Array	17.60	351	P	Pn	02 55 13.3	-1.5
	0.2nm,0.3s,baz=159,slow=9.3,SNR=9.4						
AKTO	Aktyubinsk	19.11	326	P	P	02 55 30.9	-1.3
	0.4nm,0.3s,baz=116,slow=10,SNR=14						
ZALV	Zalesovo Beam	19.54	18	P	P	02 55 35.4	-1.4
	0.2nm,0.3s,baz=213,slow=11,SNR=8.0						
ZALV				LR	LR	03 03 54.5	
	comp=Z,47nm,18.5s,baz=157,slow=39						
KBZ	Khabaz	25.72	298	P	P	02 56 39.8	+0.4
	1.7nm,1.0s,baz=108,slow=10,SNR=3.8						
SONM	Songino Array	26.29	53	P	P	02 56 45.2	+0.5
	1.0nm,0.8s,baz=249,slow=9.0,SNR=7.8						
SONM				LR	LR	03 08 33.6	
	comp=Z,87nm,18.2s,baz=193,slow=40						
CMAR	Chiang Mai Arr	27.38	123	P	P	02 56 58.9	+4.3
	1.5nm,0.4s,baz=311,slow=11,SNR=10.0						
BRTR	Keskin Array B	32.63	290	P	P	02 57 42.5	+1.5
	0.5nm,0.8s,baz=91,slow=11,SNR=3.7						
AKASG	Malin Array Be	35.86	309	P	P	02 58 08.3	-0.4
	0.5nm,0.5s,baz=83,slow=7.6,SNR=4.7						
AKASG				LR	LR	03 16 13.7	
	comp=Z,17nm,19.0s,baz=280,slow=42						
FINES	FINESS Array B	39.88	326	P	P	02 58 42.3	-0.2
	1.4nm,0.8s,baz=118,slow=8.0,SNR=2.4						
GERES	GERESS Array B	45.91	306	LR	LR	03 20 53.6	
	comp=Z,54nm,20.6s,baz=79,slow=39						
NOA	NORSAR Array B	46.88	323	P	P	02 59 38.0	-0.9
	1.3nm,0.9s,baz=93,slow=7.6,SNR=3.2						
ESDC	Sonseca Array	60.56	300	P	P	03 01 19.6	+0.1
	0.4nm,0.6s,baz=58,slow=8.4,SNR=3.5						
TORD	Torodi Ar. Bea	68.82	271	P	P	03 02 12.0	-1.6
	0.3nm,0.6s,baz=42,slow=5.6,SNR=5.5						
WRA	Warramunga Arr	78.96	124	P	P	03 03 13.6	+0.9
	1.1nm,0.3s,baz=322,slow=5.4,SNR=9.0						
ASAR	Alice Springs	81.28	127	P	P	03 03 26.5	+1.3
	0.5nm,0.9s,baz=324,slow=6.0,SNR=3.2						
YKA	Yellowknife Ar	81.85	4	P	P	03 03 27.8	+0.1
	0.6nm,0.5s,baz=349,slow=5.3,SNR=19						

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*ATH **06** 02:52:56.6, 38°.13N×20°.39E, h17km±1km, ML2.7/7, Error ellipse: s-maj=2.4km s-min=1.1km az=65.0*
*THE **06** 02:52:57.7, 38°.16N×20°.44E, h13km, ML2.4/5, Error ellipse: s-maj=0.7km s-min=0.4km az=228.0*
ISC 06 02:52:57.5±1.1, 38°.16N±0°.04×20°.43E±0°.05, h14km±4km, n40, σ0s.34/61, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARGA	Argostoli. Kep	0.04	60	P	Pg	02 52 60.0	-0.2
ARGA				S	Sg	02 53 01.6	-0.3
LXRA	Lixouri, Kepha	0.04	6	P	Pg	02 53 00.1	-0.1
LXRA				S	Sg	02 53 02.3	+0.3
KEF2	Argostoli. Kep	0.05	77	P	Pg	02 52 59.9	-0.2
KEF2				S	Sg	02 53 01.7	-0.2
LXR1	Lixouri, Cepha	0.05	7	P	Pg	02 53 00.1	0.0
LXR1				S	Sg	02 53 02.2	+0.3
CHV1	Chavriata, Kef	0.05	306	P	Pg	02 53 00.0	-0.2
CHV1				S	Sg	02 53 02.1	+0.2
ARG2	Argostoli	0.05	62	S	Sg	02 53 01.8	-0.2
AGT1	Agia Thekli	0.10	339	P	Pg	02 53 00.6	-0.1
KEF4	Livadi, Kephal	0.10	357	P	Pg	02 53 00.7	0.0
KEF4				S	Sb	02 53 03.4	-0.5
KEF1	Kardakata, Kep	0.13	14	P	Pg	02 53 00.9	-0.1
KEF1				S	Sg	02 53 03.7	+0.3
VLS	Valsamata	0.13	80	P	Pg	02 53 00.8	-0.3
VLS				S	Sg	02 53 03.3	-0.1
VLS	Valsamata	0.13	80	P	Pg	02 53 00.7	-0.3
VLS				S	Sg	02 53 03.4	0.0
VLS				AML	AML	02 53 03.5	
	comp=N,32833µm,0.2s						
VLS				AML	AML	02 53 03.6	
	comp=E,43341µm,0.1s						
KFL	Anninata	0.28	99	P	Pg	02 53 03.3	-0.2
KFL				S	Sg	02 53 08.0	+0.4
	comp=E,4µm,0.3s						
KFL	Anninata	0.28	99	P	Pg	02 53 03.3	-0.2
KFL				S	Sg	02 53 08.2	+0.6
KFL				AML	AML	02 53 08.6	
	comp=E,6617µm,0.4s						
KFL				AML	AML	02 53 08.7	
	comp=N,8901µm,0.3s						
KONA	Konidatara, Ke	0.29	22	P	Pg	02 53 03.5	-0.1
KONA				S	Sg	02 53 08.5	+0.7
KONA				AML	AML	02 53 09.2	
	comp=N,4669µm,0.2s						
KONA				AML	AML	02 53 10.2	
	comp=E,3454µm,0.3s						
FSK	Fiskardo	0.32	19	P	Pg	02 53 03.9	-0.2
FSK				S	Sg	02 53 08.8	+0.2
	comp=E,1µm,0.3s						
FSK	Fiskardo	0.32	19	P	Pg	02 53 04.0	-0.1
FSK				S	Sg	02 53 08.9	+0.3
FSK				AML	AML	02 53 09.7	
	comp=E,3425µm,0.3s						
FSK				AML	AML	02 53 12.7	
	comp=N,1754µm,0.3s						
EVGI	Lefkada island	0.50	21	P	Pg	02 53 07.0	-0.4
EVGI				S	Sg	02 53 14.6	+0.6
MGNA	Meganis	0.57	29	P	Pg	02 53 08.4	-0.4
MGNA				S	Sb	02 53 17.3	-0.1
MGNA				AML	AML	02 53 17.8	
	comp=E,943µm,0.1s						
MGNA				AML	AML	02 53 18.0	
	comp=N,1236µm,0.1s						
VTN	Vitineika	0.64	112	P	Pg	02 53 09.9	-0.2
VTN				S	Sb	02 53 19.7	+0.5
LKD2	Lefkada island	0.66	16	P	Pg	02 53 10.0	-0.4
LKD2				S	Sb	02 53 19.9	+0.1
	comp=N,198nm,0.4s						
LKD2	Lefkada island	0.66	16	P	Pg	02 53 09.9	-0.5
LKD2				S	Sb	02 53 19.7	-0.1
TSLK	Tsoukalades, L	0.69	15	P	Pg	02 53 10.8	-0.2
PDO	Prodromos	0.74	53	P	Pg	02 53 11.3	-0.5
PDO	Prodromos	0.74	53	P	Pg	02 53 11.4	-0.5
PDO				AML	AML	02 53 29.1	
	comp=E,472µm,0.5s						
PDO				AML	AML	02 53 32.5	
	comp=N,390µm,0.6s						
RLS	Riolos of Patr	0.82	96	P	Pg	02 53 13.2	-0.3
RLS	Riolos of Patr	0.82	96	P	Pg	02 53 12.9	-0.5
PVO	Paravola	0.98	61	P	Pb	02 53 16.0	-0.2
PVO				S	Sn	02 53 30.0	-0.4
	comp=N,130nm,0.4s						
PVO	Paravola	0.98	61	P	Pb	02 53 16.0	-0.2
DRO	Drossia	1.03	101	P	Pb	02 53 16.7	-0.4
DRO				S	Sn	02 53 32.1	+0.3
	comp=N,212nm,0.3s						
DRO	Drossia	1.03	101	P	Pb	02 53 17.0	-0.1
DRO				AML	AML	02 53 36.8	
	comp=N,337µm,0.4s						
DRO				AML	AML	02 53 37.2	
	comp=E,437µm,0.3s						
EVR	Evrytania	1.32	54	P	Pb	02 53 22.4	+0.3
KLV	Kalavryta, Ach	1.36	94	P	Pn	02 53 21.8	-0.3
KLV	Kalavryta, Ach	1.36	94	P	Pn	02 53 22.3	+0.1
KALE	Kalithea	1.37	80	P	Pn	02 53 21.9	-0.3
ITM	Ithomi	1.54	129	P	Pn	02 53 24.7	+0.2
JAN	Janina	1.54	12	P	Pg	02 53 26.8	-0.2
MAKR	Makrakomi, Fth	1.58	57	P	Pg	02 53 28.1	+0.1
KEK	Kerkira	1.63	343	P	Pn	02 53 25.7	-0.1
AGG	Agios Georgios	1.72	59	P	Pb	02 53 29.6	+0.6
PROD	Prodromos	1.95	86	P	Pn	02 53 30.9	+0.7

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*IDC **06** 03:02:36.3±6.5, 39°.23N×145°.45E, h0km, mb3.7/4, mb1 3.6/6, mb1mx3.4/45, mbtmp3.6/6, ML3.5/3, Error ellipse: s-maj=120.2km s-min=29.3km az=100.0*
*JMA **06** 03:02:56.4±0.1, 40°.12N×142°.91E, h15km±2km, M3.7*
ISC 06 03:02:55.9±1.4, 40°.09N±0°.05×142°.90E±0°.07, h10km, n17, σ0s.86/27, mb3.5/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	0.81	260	P	Pg	03 03 12.2	+0.8
JTH				*e*S	Sb	03 03 23.5	+0.5
JKEN	Kujiedanarisaw	0.92	278	P	Pg	03 03 13.6	+0.1
JKEN				*e*S	Sg	03 03 26.2	+0.7
MIYJ	Miyakonagasawa	0.97	239	P	Pg	03 03 14.6	0.0
MIYJ				*e*S	Sg	03 03 27.9	+0.6

JANG	Nango	1.10	285	P	Pb	03 03 16.3	-0.6
JANG				eS	Sg	03 03 29.9	-1.3
JKZ	Kuzumaki	1.21	266	P	Pn	03 03 19.4	+0.5
JKZ				S	Sg	03 03 35.8	+1.0
JOM	Ohasama	1.38	244	eS	Sn	03 03 39.1	-0.4
OFUJ	Ofunato	1.38	224	P	Pn	03 03 21.6	+0.4
OFUJ				eS	Sn	03 03 40.1	+0.5
JARK	Aomorirokkasho	1.48	309	P	Pn	03 03 22.7	+0.1
JARK				eS	Sn	03 03 41.5	-0.5
JTM	Tenmabayashi	1.56	297	P	Pn	03 03 24.1	+0.4
JTM				eS	Sn	03 03 44.0	+0.1
JMK	Ichinoseki	1.72	229	P	Pn	03 03 26.8	+0.9
JAH	Hinai	1.74	274	P	Pn	03 03 26.9	+0.8
JAH				eS	Sn	03 03 48.6	+0.3
ASAJ	Asahikawa	4.03	357	Pn	Pn	03 03 58.5	+0.9
	1.1nm,0.3s,baz=252,slow=20,SNR=4.6						
ASAJ				Sn	Sb	03 04 57.8	+2.1
	1.3nm,0.3s,baz=165,slow=31,SNR=3.6						
MJAR	Matsushiro Arr	5.11	228	Pn	Pn	03 04 12.6	+0.1
	0.2nm,0.3s,baz=42,slow=12,SNR=6.0						
SONM	Songino Array	27.19	299	P	P	03 08 39.2	-0.5
	0.2nm,0.4s,baz=91,slow=9.3,SNR=3.4						
ZALV	Zalesovo Beam	40.78	310	P	P	03 10 35.1	-1.9
	0.8nm,0.4s,baz=100,slow=9.7,SNR=4.0						
MKAR	Makanchi Array	43.55	300	P	P	03 10 59.0	-0.7
	0.3nm,0.7s,baz=86,slow=9.4,SNR=3.1						
KURBB	Kurchatov Arra	45.10	306	P	P	03 11 11.2	-0.8
	1.2nm,0.5s,baz=81,slow=8.7,SNR=8.0						

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*AEIC **06** 03:24:15.0±3.7, 51°.31N±0°.09×175°.85E±0°.08, h39^{km}±3^{km}, Error ellipse: s-maj=13.0km s-min=6.5km az=191.0*

*MOS **06** 03:24:16.4±1.1, 51°.68N×176°.22E, h36^{km}, mb5.2/50, MS4.8/11, Error ellipse: s-maj=6.2km s-min=3.6km az=128.4*

*BJI **06** 03:24:18.6±0.0, 52°.13N×175°.91E, h44^{km}, mB5.2/50, mb4.9/62, Ms4.9/44, Ms7 4.6/45*

*IDC **06** 03:24:18.2±1.5, 51°.79N×176°.32E, h33^{km}±9^{km}, mb4.5/36, mb1 4.7/40, mb1mx4.7/50, mbtmp4.8/40, ML5.5/2, MS4.4/38, Ms1 4.4/38, ms1mx4.4/47, Error ellipse: s-maj=14.0km s-min=8.5km az=168.0*

*NEIC **06** 03:24:19.4±1.5, 51°.80N±0°.09×176°.14E±0°.08, h44^{km}±4^{km}, mb5.0/383, ML5.2/22(AEIC), Error ellipse: s-maj=13.6km s-min=6.3km az=191.0*

*GCMT **06** 03:24:20.4±0.2, 51°.75N±0°.01×176°.23E±0°.02, h52^{km}±2^{km}, MW5.1/126, Moment Tensor Solution. s75,c108; s126,c190; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.89±.15; $M_{\theta\theta}$-1.67±.14; $M_{\phi\phi}$2.56±.12; $M_{r\theta}$3.77±.14; $M_{\theta\phi}$-0.73±.10; $M_{\phi r}$2.86±.12; Best double couple: $M_0$5.17000×10^{16} NP1:ϕ_s319.00000°, δ26.00000°, λ-171.00000°. NP2:ϕ_s222.00000°, δ86.00000°, λ-64.00000°. Principal axes: T 4.5200, Plg36.0000°, Azm290.0000°; N 1.3010, Plg26.0000°, Azm40.0000°; P -5.8190, Plg43.0000°, Azm157.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 03:24:19.0±0.4, **51°.72N**±0°.05×**176°.12E**±0°.03, **h40**^{km}±2^{km}, **h41**^{km}**:pP-P, n956,** σ1^{s}.**35**/870, **mb5.0**/267, **MS4.7**/67, **26C-29D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SMY	Shemya	1.60	310	P	Pn	03 24 44.9	+0.1
SMY						03 25 05.0	
SMY	Shemya	1.60	310		Pn	03 24 44.9	+0.1
SMY				Sn	Sn	03 25 05.0	+0.7
TASE	Tanaga Southea	3.63	86		Pn	03 25 12.8	+0.1
TAFP	Tanaga Falls P	3.66	85		Pn	03 25 13.2	+0.1
TAFP					Sn	03 25 56.9	+1.8
TAPA	Tanaga Point A	3.77	86		Pn	03 25 14.4	-0.2
KIMD	Kanaga Island	4.13	87		Pn	03 25 19.4	-0.1
KICM	Kanaga Island	4.15	85		Pn	03 25 21.0	+1.2
KIKV	Kanaga Island	4.17	85		Pn	03 25 21.0	+0.9
KIKV					Sn	03 26 11.6	+4.1
KINC	Kanaga Island	4.19	84		Pn	03 25 22.3	+1.9
ADK	Adak	4.47	85		Pn	03 25 24.0	-0.1
ADK				Sn	Sn	03 26 16.1	+1.3
GSTD	Great Sitkin T	4.80	83		Pn	03 25 30.0	+1.2
GSTD					Sn	03 26 27.1	+3.9
GSTR	Great Sitkin T	4.86	83		Pn	03 25 30.7	+1.2
GSTR				Sn	Sn	03 26 23.3	-1.2
GSMY	Great Sitkin M	4.86	83		Pn	03 25 30.9	+1.3
GSMY					Sn	03 26 28.3	+3.8
ATKA	Atka Island	6.01	82		Pn	03 25 46.1	+0.8
ATKA				Sn	Sn	03 26 54.8	+2.1
KOFP	Korovin Flat P	6.07	81		Pn	03 25 48.1	+2.0
BKI	Bering	6.99	304	P	Pn	03 26 00.8	+2.1
BKI				S	Sn	03 27 18.9	+2.1
KBTR	Krutoberegovo	9.03	305	P	Pn	03 26 27.3	+0.6
KBTR				S	Sn	03 28 08.4	+1.4
MKZ	Mys Kozlova	9.10	294	P	Pn	03 26 28.2	+0.5
MKZ				S	Sn	03 28 06.5	-2.2
KBG	Krutoberegovo	9.11	305	P	Pn	03 26 30.9	+3.1
NIKH	Nikolski High	9.28	76		Pn	03 26 31.9	+1.8
SPIA	Saint Paul Isl	9.63	50		Pn	03 26 35.6	+0.7
OKSP	Okmok Steeple	9.64	75		Pn	03 26 38.2	+3.2
SPN	Mys Shipunski	9.94	284	P	Pn	03 26 39.2	+0.1
SPN				S	Sn	03 28 23.7	-5.4
BDR	Baidarnaya	10.00	305	P	Pn	03 26 42.1	+2.1
ZLN	Zelenaya	10.01	301	P	Pn	03 26 43.4	+3.2
ZLN				S	Sn	03 28 29.2	-2.0
KZV	Kizimen	10.04	296	P	Pn	03 26 42.1	+1.5
KZV				S	Sn	03 28 30.2	-1.7
SRKR	Sorokina	10.05	305	P	Pn	03 26 42.6	+1.9
CIRR	Tsirk	10.07	302	P	Pn	03 26 44.5	+3.4
LGNR	Loginova	10.09	302	P	Pn	03 26 43.9	+2.4
TUMR	Tumrok	10.16	297	P	Pn	03 26 41.5	-0.8
KLY	Klyuchi	10.19	303	P	Pn	03 26 43.5	+0.9
KRSR	Krestovskiy	10.20	302	P	Pn	03 26 44.7	+1.9
KRSR				S	Sn	03 28 34.3	-1.6
KMNR	Kamenistaya	10.24	299	P	Pn	03 26 45.0	+1.7
KMNR				S	Sn	03 28 34.3	-2.3
KIRR	Kirishev	10.24	301	P	Pn	03 26 46.0	+2.7
KPT	Kopyto	10.31	301	P	Pn	03 26 46.1	+1.9
NLC	Nalytchevo	10.35	285	P	Pn	03 26 46.1	+1.4
NLC				S	Sn	03 28 34.6	-4.6
TILK	Tilichiki	10.36	331	P	Pn	03 26 47.2	+2.4
TILK				S	Sn	03 28 40.7	+1.3
KOZ	Kozyrevsk	10.52	301	P	Pn	03 26 49.2	+2.1
OSSR	Ossora	10.56	321	P	Pn	03 26 50.4	+2.9
UGLR	Uglovaya	10.66	285	P	Pn	03 26 50.2	+1.1
UGLR				S	Sn	03 28 43.4	-3.7
SMAR	Somma	10.68	285	P	Pn	03 26 50.3	+0.9
SRDR	Sredinnyy	10.68	302	P	Pn	03 26 52.4	+3.0
SRDR				S	Sn	03 28 45.4	-2.2
DALK	Dalny	10.70	284	P	Pn	03 26 50.9	+1.4
DALK				S	Sn	03 28 43.3	-4.5
AVH	Avacha	10.71	285	P	Pn	03 26 49.6	-0.2
UNV	Unalaska Valle	10.74	72		Pn	03 26 51.3	+1.2
PET	Petropavlovsk	10.76	284	eP	Pn	03 26 52.1	+1.7
PET				eS	Sn	03 28 52.4	+3.1
PET				pmax	pmax		
	comp=Z,18nm,0.6s						
PET				MLR	MLR		
	comp=Z,1µm,16.0s						
PET				MLR	MLR		
	comp=Z,2µm,16.0s						
PET	Petropavlovsk	10.76	284	Pn	Pn	03 26 50.7	+0.3
PET					Sn	03 28 47.0	-2.3
KRX	Arik	10.77	286	P	Pn	03 26 51.6	+1.0
KOK	Koryaka	10.78	285	P	Pn	03 26 51.3	+0.6
KOK				S	Sn	03 28 45.0	-4.8
MTVR	Mutnovka	11.06	281	P	Pn	03 26 55.4	+0.8
MTVR				S	Sn	03 28 51.3	-5.6
KRMR	Karymshinskiy	11.08	283	P	Pn	03 26 56.2	+1.5
KRMR				S	Sn	03 28 52.9	-4.3
ESO	Esso	11.12	299	P	Pn	03 26 56.8	+1.6
GRL	Gorelyy	11.12	281	P	Pn	03 26 57.2	+1.7
GRL				S	Sn	03 28 54.7	-3.8
KDTR	Khodutka, Kamc	11.19	278	P	Pn	03 26 55.6	-0.5
KDTR				S	Sn	03 28 53.3	-6.4
AKUT	Akutan	11.19	70		Pn	03 26 57.3	+1.1
AKUT				Sn	Sn	03 29 00.5	+0.6
ASAK	Asacha	11.24	281	P	Pn	03 26 57.4	+0.4
PEA0B	Petropavlovsk-	11.34	284	⇑eP	Pn	03 26 59.0	+0.7
PEA0B	Petropavlovsk-	11.34	284		Pn	03 26 59.4	+1.1
PETK	Petropavlovsk-	11.34	284	Pn	Pn	03 26 59.0	+0.7
	comp=Z,2.0nm,0.3s,baz=97,slow=18,SNR=26						
PETK				LR	LR	03 31 23.6	
	comp=Z,2µm,21.6s,baz=81,slow=37						
APC	Apacha	11.67	283	P	Pn	03 27 03.8	+1.1
APC				S	Sn	03 29 07.3	-4.2
PALN	Palana	11.76	315	P	Pn	03 27 06.9	+3.0
MIPR	Malaya Ipel'ka	11.95	280	P	Pn	03 27 06.8	+0.2
PAU	Pauzhetka	12.01	276	P	Pn	03 27 07.1	-0.4
KMSK	Kamenskaya	12.03	337	P	Pn	03 27 10.3	+2.7
SKR	Severo-Kuril's	12.59	273	eP	Pn	03 27 15.1	-0.2
SKR				eS	Sn	03 29 29.2	-4.8
SKR				pmax	pmax		
	comp=Z,47nm,1.1s						
SKR				pmax	pmax		
	comp=Z,300nm,7.1s						
SKR				MLR	MLR		
	comp=Z,400nm,15.0s						
SKR				MLR	MLR		
	comp=Z,600nm,14.0s						
FALS	False Pass	12.63	68		Pn	03 27 16.0	+0.2
ALID	Alaid	12.90	274	P	Pn	03 27 19.9	+0.2
GAMB	Gambell	13.69	23		Pn	03 27 30.9	+0.7
SDPT	Sand Point	14.36	66		Pn	03 27 38.1	-1.3
CNBA	Chernabura Isl	14.84	68	P	Pn	03 27 43.1	-2.7
CHGN	Chignik	15.61	63	P	Pn	03 27 55.2	-0.7
CHGN				IAmb	IAmb	03 28 18.4	
	comp=Z,48nm,0.6s						
ANM	Nome	16.07	30	P	P	03 28 01.5	-3.1
ANM				pmax	pmax		
	comp=Z,153nm,1.8s						
ANM	Nome	16.07	30	P	P	03 28 01.5	-3.1
ANM				IAmb	IAmb	03 28 10.3	
	comp=Z,153nm,1.8s						
MA2	Magadan	16.24	309	Pn	P	03 28 05.5	-1.0
	comp=Z,1.7nm,0.3s,baz=93,slow=7.9,SNR=18						
MA2				LR	LR	03 34 26.1	
	comp=Z,3µm,18.4s,baz=114,slow=37						
MA2	Magadan	16.24	309	⇓eP	P	03 28 07.5	+0.9
MA2				pmax	pmax		
	comp=Z,57nm,1.0s						
MA2	Magadan	16.24	309	P	P	03 28 04.8	-1.8
SEY	Seymchan	16.92	321	Pn	P	03 28 13.1	-0.9
	comp=Z,0.7nm,0.3s,baz=121,slow=10,SNR=22						
SEY				LR	LR	03 34 20.6	
	comp=Z,3µm,19.3s,baz=123,slow=36						
SEY				ScP	ScP	03 36 28.3	+0.1
	comp=Z,0.2nm,0.3s,baz=142,slow=4.8,SNR=5.8						
SEY	Seymchan	16.92	321	⇓eP	P	03 28 15.0	+1.0
BILL	Bilibino	17.06	347	deP	P	03 28 17.4	+1.9
BILL				pmax	pmax		
	comp=Z,95nm,2.5s						
BILL	Bilibino	17.06	347	P	P	03 28 15.1	-0.4
CHIR	Chirikof Islan	17.14	65	IAmb	IAmb	03 28 15.0	
	comp=Z,100nm,0.8s						
SII	Sitkinak Islan	17.98	63	IAmb	IAmb	03 28 36.8	
	comp=Z,74nm,0.7s						
OHAK	Old Harbor	18.51	61	IAmb	IAmb	03 28 33.0	
	comp=Z,59nm,0.6s						
TTA	Tatalina	18.59	42	P	Pn	03 28 32.5	-0.6
TTA				pmax	pmax		
	comp=Z,37nm,1.1s						
TTA	Tatalina	18.59	42	P	Pn	03 28 32.5	-0.6
KDAK	Kodiak Island	18.93	59	P	P	03 28 34.1	-2.1
	comp=Z,10nm,0.3s,baz=243,slow=7.0,SNR=145						
KDAK				ScP	ScP	03 36 33.3	+0.6
	comp=Z,0.1nm,0.3s,baz=86,slow=6.6,SNR=3.7						
KDAK	Kodiak Island	18.93	59	P	P	03 28 34.2	-1.9
KDAK				IAmb	IAmb	03 28 47.4	
	comp=Z,117nm,0.8s						
KDAK					ScP	03 36 32.6	-0.1
RDOG	Red Dog Mine	19.29	24	P	Pn	03 28 39.6	-1.6
RDOG				IAmb	IAmb	03 28 43.6	
	comp=Z,97nm,0.6s						
PPLA	Purkeypile	20.21	44	IAmb	IAmb	03 29 18.7	
	comp=Z,75nm,0.8s						
SEW	Seward	20.82	53	IAmb	IAmb	03 28 59.6	
	comp=Z,89nm,0.7s						
IMAR	Indian Mountai	20.84	35	P	P	03 28 56.4	-0.5
TYV	Tymovskoe	20.85	281	eP	Pn	03 28 59.8	+0.1
TYV				eS	Sn	03 32 52.9	-1.1
TYV				pmax	pmax		
	comp=Z,500nm,2.4s						
TYV				pmax	pmax		
	comp=Z,76nm,1.1s						
TYV				smax	smax		
	comp=E,500nm,8.4s						
RC01	Rabbit Creek A	20.85	50	IAmb	IAmb	03 29 18.6	
	comp=Z,77nm,0.8s						
KTH	Kantishna Hill	20.96	43	IAmb	IAmb	03 29 11.9	
	comp=Z,135nm,1.3s						
BPAW	Bear Paw Mtn.	21.12	41	IAmb	IAmb	03 29 15.2	
	comp=Z,44nm,0.7s						
TRF	Thorofare Moun	21.20	43	IAmb	IAmb	03 29 14.8	
	comp=Z,56nm,0.9s						
PMR	Palmer	21.24	49	P	P	03 29 00.1	-1.1
PMR				pmax	pmax		
	comp=Z,24nm,0.7s						
PMR	Palmer	21.24	49	P	P	03 29 00.1	-1.1
GHO	Glory Hole Cre	21.38	48	P	P	03 29 02.2	-0.6
GHO				IAmb	IAmb	03 29 17.4	
	comp=Z,64nm,0.8s						
KNK	Knik Glacier	21.52	49	IAmb	IAmb	03 29 18.0	
	comp=Z,86nm,0.8s						
NKL	Nikolayevsk	21.52	288	eP	P	03 29 06.4	+2.1
NKL				pmax	pmax		
	comp=Z,50nm,1.0s						
NKL				pmax	pmax		
	comp=N,8.0nm,0.7s						
NKL				pmax	pmax		
	comp=E,10.0nm,1.0s						
MLY	Manley	21.56	39	IAmb	IAmb	03 29 19.8	
	comp=Z,156nm,1.6s						
SML	Sawmill	21.66	48	P	P	03 29 04.8	-0.9
MCK	McKinley	21.86	43	IAmb	IAmb	03 29 34.2	
	comp=Z,45nm,1.0s						
NEA	Nenana	22.07	41	IAmb	IAmb	03 29 25.8	
	comp=Z,63nm,1.0s						
YSS	Yuzh-Sakhalins	22.14	271	⇑eP	P	03 29 14.1	+3.2
YSS				e		03 29 22.2	
YSS				e		03 29 29.8	
YSS				e		03 33 13.0	
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
YSS				MLR	MLR		
	comp=Z,900nm,17.0s						
HIN	Hinchinbrook I	22.32	53	IAmb	IAmb	03 29 29.9	
	comp=Z,63nm,0.6s						
DHY	Denali Highway	22.37	45	IAmb	IAmb	03 29 15.6	
	comp=Z,41nm,0.6s						
MDM	Murphy Dome	22.53	40	IAmb	IAmb	03 29 33.2	
	comp=Z,34nm,0.6s						
TCOL	CIGO, UAF Yank	22.66	41	P	P	03 29 17.0	+0.7
	baz=252						
COLA	College	22.66	41	P	P	03 29 16.2	-0.1
COLA				pmax	pmax		
	comp=Z,38nm,0.9s						
COLA	College	22.66	41	P	P	03 29 16.2	-0.1
COLA				IAmb	IAmb	03 29 48.1	
	comp=Z,38nm,0.9s						
COLD	Coldfoot	22.67	34	P	P	03 29 16.2	-0.3
EYAK	Cordova Ski Ar	22.71	52	IAmb	IAmb	03 29 36.3	
	comp=Z,45nm,0.8s						
HDA	Harding Lake	22.89	42	P	P	03 29 17.0	-1.8
HDA	Harding Lake	22.89	42	P	P	03 29 17.9	-1.0
	baz=254						
POKR	Poker Plat Res	22.91	40	P	P	03 29 18.7	-0.2
	baz=252						
IL31		23.02	41	P	P	03 29 18.0	-2.1
ILAR	Eielson Array	23.02	41	P	P	03 29 17.7	-2.4
	comp=Z,8.6nm,0.7s,baz=241,slow=9.3,SNR=72						
ILAR				PcP	PcP	03 33 07.5	-0.7
	comp=Z,1.5nm,0.7s,baz=280,slow=3.2,SNR=4.4						
ILAR				LR	LR	03 38 32.9	
	comp=Z,949nm,20.2s,baz=254,slow=37						
ILAR	Eielson Array	23.02	41	P	P	03 29 18.1	-2.0
ILAR					PcP	03 33 07.1	-1.1
PAX	Paxson	23.19	46	IAmb	IAmb	03 29 33.3	
	comp=Z,39nm,0.8s						
TOLK	Toolik Lake Re	23.54	31	P	P	03 29 24.9	-0.4
TOLK				IAmb	IAmb	03 29 38.7	
	comp=Z,52nm,0.6s						
TOLK	Toolik Lake Re	23.54	31	P	P	03 29 26.0	+0.7
	baz=241						
ASAJ	Asahikawa	23.56	264	P	P	03 29 26.9	+1.4
	comp=Z,36nm,0.8s,baz=85,slow=5.4,SNR=10						
ASAJ				LR	LR	03 36 59.5	
	comp=Z,646nm,21.6s,baz=139,slow=32						
RIDG	Independent Ri	23.63	44	IAmb	IAmb	03 29 57.3	
	comp=Z,29nm,0.6s						
PRP	Porcupine Dome	23.79	40	IAmb	IAmb	03 29 40.7	
	comp=Z,57nm,1.4s						
VRDI	Verde Repeater	23.89	51	IAmb	IAmb	03 29 53.2	
	comp=Z,49nm,0.7s						
MENT	Mentasta	23.98	47	IAmb	IAmb	03 29 43.0	
	comp=Z,50nm,0.7s						
SCRK	Sand Creek	24.05	44	P	P	03 29 28.1	-2.0
SCRK				IAmb	IAmb	03 29 41.4	
	comp=Z,154nm,1.7s						
MCARA	McCarthy VSAT	24.11	50	P	P	03 29 29.5	-1.1
ERM	Erimo	24.35	260	⇑eP	P	03 29 35.7	+2.8
ERM				pmax	pmax		
	comp=Z,136nm,1.4s						
BALM	Baldy	24.41	51	IAmb	IAmb	03 29 46.5	
	comp=Z,63nm,0.9s						
GRNR	Gornyy	24.66	284	⇑iP	P	03 29 36.7	+1.0
GRNR				eS	S	03 33 56.8	+2.5
GRNR				pmax	pmax		
	comp=Z,20nm,0.9s						
GRNR				smax	smax		
	comp=E,3.0nm,0.5s						
GRNR				MLR	MLR		
	comp=Z,320nm,14.0s						
BMAR	Burnt Mountain	24.75	36	P	P	03 29 35.2	-1.2
BCAR	Beaver Creek A	24.87	47	P	P	03 29 36.8	-0.7
EGAK	Eagle	25.41	43	IAmb	IAmb	03 29 56.8	
	comp=Z,65nm,0.8s						
DAWY	Dawson	26.06	45	IAmb	IAmb	03 30 10.1	
	comp=Z,62nm,0.8s						
YAK	Yakutsk	26.80	311	P	P	03 29 54.4	-0.5
	comp=Z,33nm,0.6s,baz=257,slow=1.4,SNR=13						
YAK				LR	LR	03 40 50.5	
	comp=Z,1µm,18.1s,baz=96,slow=37						
YAK	Yakutsk	26.80	311	i P	P	03 29 54.2	-0.6
YAK				pmax	pmax		
	comp=Z,98nm,1.0s						
YAK	Yakutsk	26.80	311	P	P	03 29 53.7	-1.1
EPYK	Eagle Plains	27.50	40	IAmb	IAmb	03 30 14.3	
	comp=Z,20nm,0.8s						
EPYK	Eagle Plains	27.50	40	P	P	03 30 00.8	-0.3
	baz=261						
KLR	Kul'dur	28.02	283	P	P	03 30 06.7	+0.7
	comp=Z,15nm,0.8s,baz=64,slow=8.4,SNR=40						
KLR				LR	LR	03 40 56.4	
	comp=Z,362nm,20.5s,baz=60,slow=36						
KLR	Kul'dur	28.02	283	c iP	P	03 30 07.4	+1.4
KLR				pmax	pmax		
	comp=Z,19nm,0.9s						
TIXI	Tiksi	28.79	331	P	P	03 30 11.7	-0.8
	comp=Z,6.8nm,0.7s,baz=126,slow=11,SNR=18						
TIXI				PcP	PcP	03 33 21.6	+0.4
	comp=Z,6.4nm,0.5s,baz=111,slow=2.6,SNR=9.2						
TIXI				ScP	ScP	03 36 58.6	-0.5
	comp=Z,7.3nm,1.0s,baz=220,slow=1.4,SNR=7.8						
TIXI				LR	LR	03 42 23.2	
	comp=Z,2µm,18.3s,baz=82,slow=38						
TIXI	Tiksi	28.79	331	⇑eP	P	03 30 11.5	-1.1
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TIXI	Tiksi	28.79	331	P	P	03 30 11.4	-1.1
TIXI					PcP	03 33 20.6	-0.7
TIXI				ScP	ScP	03 36 58.8	-0.3
INK	Inuvik	29.02	36	P	P	03 30 13.3	-1.3
	comp=Z,3.0nm,0.4s,baz=249,slow=8.1,SNR=21						
INK				ScP	ScP	03 36 59.0	-0.9
	comp=Z,4.4nm,1.1s,baz=221,slow=3.3,SNR=4.6						
INK				LR	LR	03 43 28.6	
	comp=Z,577nm,18.9s,baz=243,slow=40						
INK	Inuvik	29.02	36	P	P	03 30 13.6	-1.0
INK					ScP	03 36 59.7	-0.2
ZEA	Zeya	29.20	293	eP	P	03 30 15.9	-0.5
ZEA				pmax	pmax		
	comp=Z,32nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,900nm,19.0s						
ZEA				MLR	MLR		
	comp=N,500nm,16.0s						
ZEA				MLR	MLR		
	comp=E,800nm,16.0s						
USRK	Ussuriysk Ar.	30.11	273	P	P	03 30 24.9	+0.5
	comp=E,7.1nm,0.8s,baz=36,slow=6.9,SNR=8.6						
USRK				LR	LR	03 41 24.9	
	comp=E,710nm,22.0s,baz=53,slow=34						
USRK	Ussuriysk Ar.	30.11	273	P	P	03 30 24.8	+0.3
USRK	Ussuriysk Ar.	30.11	273	P	P	03 30 24.8	+0.3
MJAR	Matsushiro Arr	30.75	255	P	P	03 30 31.1	+0.8
	comp=E,3.4nm,0.9s,baz=44,slow=7.7,SNR=4.8						
MJAR				LR	LR	03 40 31.0	
	comp=E,320nm,21.7s,baz=60,slow=32						
MJAR	Matsushiro Arr	30.75	255	P	P	03 30 30.7	+0.4
MJAR				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MJAR	Matsushiro Arr	30.75	255	P	P	03 30 30.7	+0.4
MAJO	Matsushiro	30.75	255	⇑eP	P	03 30 30.1	-0.2
MAJO				pmax	pmax		
	comp=Z,37nm,2.6s						
MDJ	Mudanjiang	31.38	276	P	P	03 30 36.0	+0.2
MDJ				pmax	pmax		
	comp=Z,16nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,440nm,5.3s						
JHJ	Hachijo jima 2	32.19	249	LR	LR	03 42 49.4	
	comp=Z,226nm,18.9s,baz=206,slow=34						
C36M	Paulatuk	32.54	35	IAmb	IAmb	03 31 00.9	
	comp=Z,18nm,1.1s						
C36M	Paulatuk	32.54	35	P	P	03 30 45.7	+0.1
	baz=268						
H11N2	WAKE ISLAND Hy	32.74	196	T	T	04 05 25.3	
	baz=10,slow=76,SNR=1189						
H11N3	WAKE ISLAND Hy	32.75	196	T	T	04 05 26.2	
	baz=10,slow=76,SNR=1183						
H11N1	WAKE ISLAND Hy	32.75	196	T	T	04 05 26.7	
	baz=10,slow=76,SNR=1073						
H11S1	WAKE ISLAND Hy	33.97	196	T	T	04 06 57.8	
	baz=10,slow=76,SNR=719						
H11S3	WAKE ISLAND Hy	33.98	196	T	T	04 06 58.8	
	baz=10,slow=76,SNR=618						
H11S2	WAKE ISLAND Hy	33.98	196	T	T	04 07 11.4	
	baz=10,slow=76,SNR=398						
HIA	Hailar	35.19	289	P	P	03 31 08.7	-0.2
HIA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HIA	Hailar	35.19	289	P	P	03 31 08.7	-0.2
HIA				IAmb	IAmb	03 31 10.3	
	comp=Z,9.7nm,0.6s						
BOD	Bodaibo	35.20	305	eP	P	03 31 07.9	-1.0
BOD				e		03 36 39.3	
BOD				pmax	pmax		
	comp=Z,37nm,0.8s						
JCJ	Chichijima	35.43	239	LR	LR	03 41 53.2	
	comp=Z,183nm,21.0s,baz=20,slow=30						
KSRS	Korea Array	36.48	266	P	P	03 31 21.4	+1.4
	comp=Z,2.3nm,0.6s,baz=50,slow=7.8,SNR=8.2						
KSRS				LR	LR	03 45 08.6	
	comp=Z,314nm,21.5s,baz=58,slow=34						
KSAR	Wonju Array Be	36.51	266	P	P	03 31 19.8	-0.4
KSAR				*PP	sP	03 31 35.9	-0.3
KSAR	Wonju Array Be	36.51	266	P	P	03 31 19.8	-0.4
KSAR					sP	03 31 35.9	-0.3
YKA	Yellowknife Ar	37.28	46	P	P	03 31 26.2	-0.3
	comp=Z,12nm,0.6s,baz=284,slow=7.8,SNR=131						
YKA				PcP	PcP	03 33 45.7	+0.6
	comp=Z,1.7nm,0.7s,baz=290,slow=3.2,SNR=3.6						
YKA				ScP	ScP	03 37 29.0	+0.3
	comp=Z,1.6nm,0.8s,baz=299,slow=2.9,SNR=7.7						
YKA				LR	LR	03 47 43.6	
	comp=Z,958nm,20.1s,baz=0.0,slow=38						
JNU	Nakatsue	37.50	258	P	P	03 31 30.9	+2.1
	comp=Z,14nm,0.9s,baz=59,slow=8.4,SNR=3.6						
JNU				LR	LR	03 46 16.7	
	comp=Z,280nm,20.5s,baz=56,slow=35						
JNU	Nakatsue	37.50	258	IAmb	IAmb	03 31 39.7	
	comp=Z,52nm,1.3s						
D03D	Eldon	38.60	71	P	P	03 31 37.4	-0.4
	baz=300						
E04D	Cinebar	39.40	73	P	P	03 31 45.8	+1.3
	baz=301						
LON	Longmire	39.75	72	IAmb	IAmb	03 32 25.2	
	comp=Z,42nm,1.9s						
H04D	Lebanon	40.37	75	P	P	03 31 55.0	+2.4
	baz=303						
I03D	Drain, OR	40.45	77	P	P	03 31 55.9	+2.6
	baz=304						
RES	Resolute Bay	40.73	24	P	P	03 31 53.9	-1.4
	comp=Z,3.4nm,0.5s,baz=283,slow=10,SNR=45						

I04A	**Tendick Farm,**	**40.96**	**76**	P	**P**	**03 31 59.1**	**+1.5**
	baz=304						
I05D	**Terrebonne, OR**	**41.31**	**75**	P	**P**	**03 32 02.0**	**+1.6**
	baz=303						
NEW	**Newport**	**41.71**	**67**	P	**P**	**03 32 02.0**	**-1.7**
	baz=301						
L04D	**Klamath Falls**	**41.91**	**78**	P	**P**	**03 32 05.8**	**+0.3**
	baz=305						
YBH	**Yreka Blue Hor**	**41.95**	**79**	P	**P**	**03 32 04.5**	**-1.3**
	comp=Z,15nm,0.9s,baz=328,slow=4.2,SNR=7.6						
J05D	**Fort Rock, OR**	**41.96**	**76**	P	**P**	**03 32 08.1**	**+2.3**
	baz=304						
K04D	**Chiloquin, OR**	**42.02**	**77**	P	**P**	**03 32 07.9**	**+1.6**
	baz=305						
BJI	**Beijing**	**42.19**	**278**	*e*P	**P**	**03 32 09.6**	**+2.0**
BJI				pP	**pP**	**03 32 19.5**	**+0.6**
BJI				S	**S**	**03 38 28.6**	**+3.9**
BJI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BJI				LR	LR		
	comp=Z,370nm,13.3s						
BJI				LR	LR		
	comp=Z,400nm,16.1s						
BJI				LR	LR		
	comp=Z,480nm,24.6s						
M04C	**Macdoel**	**42.45**	**78**	P	**P**	**03 32 10.6**	**+0.7**
	baz=306						
NRIK	**Noril'sk**	**42.48**	**328**	P	**P**	**03 32 10.7**	**+1.2**
	comp=Z,18nm,0.6s,baz=74,slow=9.5,SNR=23						
NRIK				LR	LR	03 50 09.8	
	comp=Z,449nm,21.8s,baz=68,slow=36						
O02D	**Mt. Diablo Mer**	**42.81**	**81**	P	**P**	**03 32 14.0**	**+1.2**
	baz=307						
TLY	**Talaya**	**43.17**	**300**	LR	LR	03 51 28.9	
	comp=Z,2µm,20.1s,baz=49,slow=38						
TLY	**Talaya**	**43.17**	**300**	*c i*P	**P**	**03 32 15.9**	**+0.5**
TLY	**Talaya**	**43.17**	**300**	P	**P**	**03 32 15.1**	**-0.3**
ULN	**Ulaanbaatar**	**43.24**	**293**	P	**P**	**03 32 15.5**	**-0.7**
ULN				pmax	pmax		
	comp=Z,14nm,1.0s						
ULN	**Ulaanbaatar**	**43.24**	**293**	P	**P**	**03 32 15.5**	**-0.7**
O03E	**Paynes Creek**	**43.35**	**80**	P	**P**	**03 32 17.5**	**+0.4**
	baz=307						
SONM	**Songino Array**	**43.63**	**294**	P	**P**	**03 32 20.2**	**+0.9**
	comp=Z,11nm,0.7s,baz=60,slow=8.8,SNR=80						
SONM				PcP	**PcP**	**03 34 07.3**	**+1.3**
	comp=Z,3.3nm,0.7s,baz=50,slow=3.6,SNR=4.0						
SONM				ScP	**ScP**	**03 37 54.6**	**+0.5**
	comp=Z,2.8nm,1.0s,baz=64,slow=2.5,SNR=8.3						
SONM				LR	LR	03 51 23.4	
	comp=Z,800nm,19.3s,baz=42,slow=37						
SONM	**Songino Array**	**43.63**	**294**	P	**P**	**03 32 19.2**	**-0.1**
SONM					**PcP**	**03 34 06.5**	**+0.5**
SONM					**ScP**	**03 37 54.1**	**0.0**
ZAK	**Zakamensk**	**44.03**	**298**	*e*P	**P**	**03 32 22.4**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MSO	**Missoula**	**44.30**	**67**	P	**P**	**03 32 23.6**	**-1.0**
HHC	**Hu-ho-hao-te**	**44.53**	**282**	*e*P	**P**	**03 32 29.5**	**+2.9**
HHC				pP	pP	03 32 37.7	-0.3
HHC				pmax	pmax		
	comp=Z,90nm,1.0s						
HHC				pmax	pmax		
	comp=Z,310nm,5.0s						
HHC				LR	LR		
	comp=Z,890nm,14.6s						
HHC				LR	LR		
	comp=Z,750nm,15.1s						
HHC				LR	LR		
	comp=Z,850nm,15.8s						
MOY	**Mondy**	**44.60**	**301**	*e*P	**P**	**03 32 27.6**	**+0.6**
PNTR	**Pine Nut**	**45.43**	**80**	IAmb	IAmb	03 32 54.4	
	comp=Z,30nm,0.9s						
GUMO	**Guam**	**45.58**	**225**	LR	LR	03 50 15.0	
	comp=Z,150nm,18.3s,baz=128,slow=34						
TULEG	**Thule**	**45.62**	**17**	IAmb	IAmb	03 32 35.7	
	comp=Z,10nm,0.7s						
NJ2	**Nanjing**	**45.64**	**268**	*e*P	**P**	**03 32 35.2**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
WAKR	**Walker**	**45.89**	**80**	IAmb	IAmb	03 32 40.3	
	comp=Z,11nm,0.6s						
EGMT	**Eagleton**	**46.01**	**64**	P	**P**	**03 32 36.8**	**-1.4**
	baz=304						
FFC	**Flin Flon**	**46.48**	**52**	P	**P**	**03 32 40.6**	**-1.1**
FFC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
FFC	**Flin Flon**	**46.48**	**52**	P	**P**	**03 32 40.5**	**-1.1**
PMPB	**Monarch Peak**	**46.50**	**84**	IAmb	IAmb	03 32 45.1	
	comp=Z,20nm,0.6s						
NVAR	**Mina Array Bea**	**46.63**	**80**	P	**P**	**03 32 42.3**	**-1.1**
	comp=Z,7.6nm,0.7s,baz=294,slow=7.3,SNR=62						
NVAR				ScP	**ScP**	**03 38 06.9**	**+0.2**
	comp=Z,1.7nm,0.9s,baz=281,slow=4.6,SNR=5.4						
NVAR				LR	LR	03 49 00.2	
	comp=Z,716nm,21.2s,baz=312,slow=32						
NVAR	**Mina Array Bea**	**46.63**	**80**	P	**P**	**03 32 42.9**	**-0.5**
NVAR					**ScP**	**03 38 06.5**	**-0.3**
MDPB	**Devils Postpil**	**46.66**	**81**	IAmb	IAmb	03 32 45.3	
	comp=Z,17nm,0.7s						
OMMB	**Old Mammoth Mi**	**46.72**	**81**	IAmb	IAmb	03 32 46.1	
	comp=Z,22nm,1.5s						
NOR	**Nord**	**46.74**	**3**	*i* P	**P**	**03 32 43.3**	**-0.1**
	comp=Z,2.3nm,0.7s						
NOR	**Nord**	**46.74**	**3**	*i* P	**P**	**03 32 43.3**	**-0.1**
NOR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MLAC	**Mammoth, Mammo**	**46.81**	**81**	P	**P**	**03 32 46.7**	**+1.9**
	baz=310						
ELK	**Elko**	**47.06**	**75**	IAmb	IAmb	03 32 49.0	
	comp=Z,8.8nm,0.7s						
PAGB	**Antelope Grade**	**47.16**	**84**	IAmb	IAmb	03 32 49.1	
	comp=Z,12nm,0.6s						
TIN	**Tinemaha, Big**	**47.55**	**81**	P	**P**	**03 32 50.6**	**+0.2**
	baz=310						
SMMC	**Simmler**	**47.58**	**84**	P	**P**	**03 32 51.1**	**+0.5**
	baz=311						
H17A	**Grant Village**	**47.62**	**68**	P	**P**	**03 32 50.8**	**-0.3**
	baz=306						
VES	**Vestal, Richgr**	**47.80**	**83**	P	**P**	**03 32 51.5**	**-0.7**
	baz=311,SNR=9.7						
PKM	**Mcpherson Peak**	**47.97**	**84**	P	**P**	**03 32 54.3**	**+0.5**
	baz=311,SNR=7.0						
CWC	**Cottonwood Cre**	**48.03**	**82**	P	**P**	**03 32 54.1**	**-0.2**
	baz=310						
GRAC	**Grapevine Rang**	**48.12**	**80**	P	**P**	**03 32 55.0**	**+0.2**
	baz=310						
ISA	**Isabella, Lake**	**48.30**	**83**	P	**P**	**03 32 55.6**	**-0.6**
	baz=311,SNR=5.4						
R11A	**Troy Canyon, C**	**48.34**	**78**	IAmb	IAmb	03 32 57.6	
	comp=Z,8.1nm,0.8s						
R11A	**Troy Canyon, C**	**48.34**	**78**	P	**P**	**03 32 56.1**	**-0.5**
	baz=310,SNR=22						
MPMC	**Manual Prospec**	**48.65**	**82**	P	**P**	**03 32 58.6**	**-0.4**
	baz=311,SNR=17						
LAO	**LASA Array**	**48.74**	**63**	IAmb	IAmb	03 34 26.7	
	comp=Z,52nm,1.9s						
FURC	**Furnace Creek,**	**48.77**	**81**	P	**P**	**03 32 59.7**	**+0.1**
	baz=311,SNR=15						
TPNV	**Topopah Spring**	**48.83**	**80**	IAmb	IAmb	03 33 15.7	
	comp=Z,23nm,0.8s						
TPNV	**Topopah Spring**	**48.83**	**80**	P	**P**	**03 32 59.8**	**-0.6**
	baz=310,SNR=30						
DUG	**Dugway, Tooele**	**48.86**	**74**	IAmb	IAmb	03 33 02.9	
	comp=Z,9.7nm,0.7s						
DUG	**Dugway, Tooele**	**48.86**	**74**	P	**P**	**03 33 00.3**	**-0.2**
	baz=309						
LRMC	**Laurel Mtn Rad**	**48.90**	**82**	P	**P**	**03 33 00.6**	**-0.3**
	baz=311,SNR=5.6						
BLG	**Laguna Peak, P**	**48.95**	**85**	P	**P**	**03 33 01.0**	**-0.1**
	baz=312						
KULLO	**Kullorsuaq**	**49.08**	**17**	*i* P	**P**	**03 33 02.0**	**+0.5**
	comp=Z,14nm,0.7s						
KULLO	**Kullorsuaq**	**49.08**	**17**	*i* P	**P**	**03 33 02.0**	**+0.5**
KULLO				pmax	pmax		
	comp=Z,15nm,0.7s						
EDW2	**Edwards Air Fo**	**49.10**	**83**	P	**P**	**03 33 02.3**	**0.0**
	baz=312,SNR=5.4						
TCUT	**Toone Canyon**	**49.12**	**72**	P	**P**	**03 33 01.9**	**-0.7**
PDAR	**Pinedale Array**	**49.19**	**70**	P	**P**	**03 33 01.2**	**-1.9**
	comp=Z,3.6nm,0.6s,baz=324,slow=3.6,SNR=49						
PDAR				LR	LR	03 54 55.9	
	comp=Z,231nm,18.4s,baz=306,slow=38						
PDAR	**Pinedale Array**	**49.19**	**70**	P	**P**	**03 33 01.5**	**-1.7**
WHN	**Wuhan**	**49.48**	**270**	P	**P**	**03 33 06.1**	**+1.0**
WHN				S	**S**	**03 40 10.3**	**+0.7**
WHN				LR	LR		
	comp=Z,810nm,16.0s						
SHOC	**Shoshone, Teco**	**49.49**	**81**	P	**P**	**03 33 05.3**	**0.0**
	baz=311,SNR=6.0						
MWC	**Mount Wilson**	**49.50**	**84**	IAmb	IAmb	03 33 06.2	
	comp=Z,23nm,0.8s						
GSC	**Goldstone, Bar**	**49.56**	**82**	P	**P**	**03 33 05.2**	**-0.7**
	baz=311,SNR=39						
BFSC	**Mount Baldy Ra**	**49.74**	**83**	P	**P**	**03 33 07.1**	**-0.2**
	baz=312,SNR=8.7						
SPA0	**Spitsbergen Ar**	**49.77**	**355**	P	**P**	**03 33 06.2**	**-0.6**
SHPR	**Sheep Range**	**49.78**	**79**	IAmb	IAmb	03 33 13.9	
	comp=Z,21nm,1.8s						
TUQ	**Turquoise Moun**	**50.02**	**81**	P	**P**	**03 33 09.2**	**-0.2**
	baz=311,SNR=10						
TCU	**Taichung**	**50.15**	**259**	P	P	03 33 01.9	-8.4
TCU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HEC	**Hector,Ludlow**	**50.16**	**82**	P	**P**	**03 33 10.3**	**-0.1**
	baz=312,SNR=6.6						
BBRC	**Big Bear Solar**	**50.18**	**83**	P	**P**	**03 33 10.9**	**+0.1**
	baz=312						
MURC	**Murrieta**	**50.45**	**84**	P	**P**	**03 33 12.6**	**+0.1**
	baz=312,SNR=8.3						
GMRC	**Granite Mounta**	**50.61**	**82**	P	**P**	**03 33 13.1**	**-0.7**
	baz=312,SNR=22						
PFO	**Pinyon Flats O**	**50.90**	**83**	LR	LR	03 50 38.5	
	comp=Z,687nm,21.7s,baz=296,slow=31						
PFO	**Pinyon Flats O**	**50.90**	**83**	P	**P**	**03 33 16.0**	**-0.1**
PFO				pmax	pmax		
	comp=Z,12nm,1.0s						
PFO	**Pinyon Flats O**	**50.90**	**83**	P	**P**	**03 33 15.9**	**-0.1**
PFO				IAmb	IAmb	03 33 37.0	
	comp=Z,12nm,1.0s						
PFO	**Pinyon Flats O**	**50.90**	**83**	P	**P**	**03 33 15.0**	**-1.1**
	baz=312						
XPFO	**Pion Flat**	**50.90**	**83**	P	**P**	**03 33 15.9**	**-0.2**
XPFO				IAmb	IAmb	03 33 37.0	
	comp=Z,11nm,0.9s						
TPFO	**Pinon Flats**	**50.90**	**83**	P	**P**	**03 33 15.8**	**-0.3**
	baz=312						
BELC	**Belle Mtn. Jos**	**50.92**	**82**	P	**P**	**03 33 15.1**	**-1.2**
	baz=312,SNR=16						
109C	**Camp Elliot, M**	**50.98**	**84**	P	**P**	**03 33 16.7**	**+0.2**
	baz=313						
K22A	**Casper**	**51.02**	**68**	P	**P**	**03 33 15.4**	**-1.6**
	baz=309						
IRM	**Iron Mountain**	**51.34**	**82**	P	**P**	**03 33 18.7**	**-0.5**
	baz=312,SNR=10						
MONP2	**Monument Peak**	**51.40**	**84**	P	**P**	**03 33 19.9**	**-0.1**
	baz=313,SNR=6.3						
ZALV	**Zalesovo Beam**	**51.45**	**311**	P	**P**	**03 33 19.1**	**-0.7**
	comp=Z,3.8nm,0.7s,baz=29,slow=1.8,SNR=12						
ZALV				LR	LR	03 57 22.2	
	comp=Z,709nm,18.9s,baz=55,slow=38						
BC3	**Big Chuckawall**	**51.49**	**82**	P	**P**	**03 33 19.9**	**-0.6**
	baz=312,SNR=7.5						
RSSD	**Black Hills**	**51.52**	**65**	P	**P**	**03 33 18.6**	**-2.1**
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.7s						
RSSD	**Black Hills**	**51.52**	**65**	P	**P**	**03 33 18.6**	**-2.1**
RSSD					**PcP**	**03 34 34.0**	**-0.4**
U15A	**North Rim**	**51.58**	**78**	IAmb	IAmb	03 33 46.0	
	comp=Z,11nm,0.8s						
O20A	**White River Ci**	**51.61**	**71**	IAmb	IAmb	03 34 14.2	
	comp=Z,12nm,0.8s						
O20A	**White River Ci**	**51.61**	**71**	P	**P**	**03 33 20.6**	**-0.8**
	baz=310,SNR=7.4						
MDND	**Maddock**	**51.65**	**59**	P	**P**	**03 33 21.3**	**-0.1**
	baz=308						
IKP	**In-Ko-Pah, Jac**	**51.76**	**84**	P	**P**	**03 33 22.4**	**0.0**
	baz=313,SNR=5.9						
PDMCI	**Parker Dam,Lak**	**51.86**	**81**	P	**P**	**03 33 23.0**	**-0.1**
	baz=312,SNR=5.8						
Y12C	**Blythe**	**52.00**	**82**	IAmb	IAmb	03 33 25.4	
	comp=Z,18nm,0.8s						
Y12C	**Blythe**	**52.00**	**82**	P	**P**	**03 33 24.0**	**-0.1**
	baz=313,SNR=14						
ULM	**Lac du Bonnet**	**52.10**	**54**	P	**P**	**03 33 23.4**	**-1.2**
	comp=Z,5.2nm,0.4s,baz=307,slow=8.1,SNR=19						
ULM				PcP	**PcP**	**03 34 34.9**	**-1.2**
	comp=Z,2.9nm,0.4s,baz=309,slow=6.5,SNR=4.3						
ULM	**Lac du Bonnet**	**52.10**	**54**	P	**P**	**03 33 23.1**	**-1.6**
ULM				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ULM	**Lac du Bonnet**	**52.10**	**54**	P	**P**	**03 33 23.1**	**-1.6**
ULM					**PcP**	**03 34 34.6**	**-1.5**
LZH	**Lanzhou**	**52.23**	**283**	⇑P	**P**	**03 33 27.3**	**+1.3**
LZH				pP	pP	03 33 39.2	+1.6
LZH				sP	sP	03 33 45.0	+2.7
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
LZH				pmax	pmax		
	comp=Z,68nm,4.9s						
LZH				LR	LR		
	comp=Z,670nm,17.9s						
LZH				LR	LR		
	comp=Z,750nm,16.8s						
LZH				LR	LR		
	comp=Z,580nm,16.3s						
GLA	**Glamis**	**52.28**	**83**	P	**P**	**03 33 26.0**	**-0.3**
	baz=313,SNR=9.6						
GTA	**Gaotai**	**52.47**	**288**	⇑P	**P**	**03 33 28.5**	**+0.8**
GTA				pP	pP	03 33 39.5	+0.2
GTA				sP	sP	03 33 44.4	+0.4
GTA				S	**S**	**03 40 53.6**	**+2.5**
GTA				sS	sS	03 41 12.9	+2.8
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,130nm,6.7s						
GTA				LR	LR		
	comp=Z,530nm,18.4s						
GTA				LR	LR		
	comp=Z,680nm,20.0s						
GTA				LR	LR		
	comp=Z,800nm,20.3s						
N23A	**Red Feather La**	**52.47**	**69**	P	**P**	**03 33 27.5**	**-0.3**
	baz=310						
WUAZ	**Wupatki**	**52.74**	**78**	IAmb	IAmb	03 33 44.6	
	comp=Z,9.2nm,0.7s						
WUAZ	**Wupatki**	**52.74**	**78**	P	**P**	**03 33 29.3**	**-0.6**
	baz=312,SNR=6.0						
AGMN	**Agassiz Nation**	**53.33**	**56**	P	**P**	**03 33 32.6**	**-1.2**
	baz=309						
MVCO	**Mesa Verde**	**53.36**	**74**	P	**P**	**03 33 33.9**	**-0.5**
	baz=312,SNR=7.8						
ISCO	**Idaho Springs**	**53.37**	**70**	P	**P**	**03 33 33.8**	**-0.8**
	baz=311						
SUMG	**Summit**	**53.68**	**12**	*i* P	**P**	**03 33 36.3**	**-0.2**
	comp=Z,38nm,0.7s						
SUMG	**Summit**	**53.68**	**12**	P	**P**	**03 33 36.0**	**-0.4**
SUMG				pmax	pmax		
	comp=Z,16nm,0.7s						
SUMG	**Summit**	**53.68**	**12**	P	**P**	**03 33 36.0**	**-0.4**
SUMG				IAmb	IAmb	03 33 38.0	
	comp=Z,16nm,0.7s						
S22A	**4UR Ranch, Cre**	**54.00**	**73**	P	**P**	**03 33 38.6**	**-0.6**
	baz=312,SNR=7.2						
214A	**Organ Pipe Nat**	**54.27**	**82**	IAmb	IAmb	03 33 42.2	
	comp=Z,17nm,1.2s						
214A	**Organ Pipe Nat**	**54.27**	**82**	P	**P**	**03 33 40.8**	**-0.1**
	baz=314,SNR=9.2						
X18A	**Snowflake**	**54.27**	**78**	IAmb	IAmb	03 33 43.4	
	comp=Z,11nm,0.6s						
FRB	**Frobisher Bay**	**54.34**	**30**	P	**P**	**03 33 39.8**	**-1.1**
	comp=Z,19nm,0.4s,baz=315,slow=7.6,SNR=126						
ILULI	**Ilulissat**	**54.51**	**19**	*i* P	**P**	**03 33 40.5**	**-1.5**
	comp=Z,19nm,0.7s						
ILULI	**Ilulissat**	**54.51**	**19**	*i* P	**P**	**03 33 40.5**	**-1.5**
ILULI				pmax	pmax		
	comp=Z,19nm,0.7s						
ILULI	**Ilulissat**	**54.51**	**19**	P	**P**	**03 33 41.3**	**-0.7**
ILULI				IAmb	IAmb	03 33 44.0	
	comp=Z,19nm,0.8s						
TUC	**Tucson**	**55.27**	**80**	P	**P**	**03 33 47.3**	**-0.9**
TUC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TUC	**Tucson**	**55.27**	**80**	P	**P**	**03 33 47.3**	**-0.9**
TUC	**Tucson**	**55.27**	**80**	P	**P**	**03 33 48.1**	**-0.2**
	baz=314						
KSCO	**Kaye Shedlock'**	**55.63**	**69**	IAmb	IAmb	03 33 52.8	
	comp=Z,9.9nm,0.7s						
CD2	**Chengdu**	**55.79**	**278**	P	**P**	**03 33 51.0**	**-0.9**
CD2				S	**S**	**03 41 35.2**	**-0.8**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,150nm,4.5s						
CD2				LR	LR		
	comp=Z,470nm,21.8s						
CD2				LR	LR		
	comp=Z,580nm,17.7s						
CD2				LR	LR		
	comp=Z,560nm,17.1s						
EYMN	**Ely**	**55.79**	**54**	IAmb	IAmb	03 33 51.9	
	comp=Z,12nm,0.7s						
EYMN	**Ely**	**55.79**	**54**	P	**P**	**03 33 50.6**	**-1.1**
	baz=311						
T25A	**Trinidad**	**55.84**	**72**	P	**P**	**03 33 52.2**	**-0.2**
	baz=312						
ECSD	**EROS Data Cent**	**55.88**	**61**	IAmb	IAmb	03 34 51.2	
	comp=Z,7.4nm,0.7s						
ECSD	**EROS Data Cent**	**55.88**	**61**	P	**P**	**03 33 50.4**	**-1.9**
	baz=312						
ANMO	**Albuquerque**	**56.10**	**75**	⇓*e*P	**P**	**03 33 53.0**	**-1.3**
ANMO				pmax	pmax		
	comp=Z,13nm,4.2s						
ANMO	**Albuquerque**	**56.10**	**75**	P	**P**	**03 33 53.8**	**-0.4**
ANMO	**Albuquerque**	**56.10**	**75**	P	**P**	**03 33 53.4**	**-0.9**
	baz=313						
KURK	**Kurchatov**	**56.44**	**311**	*c i*P	**P**	**03 33 56.1**	**-0.1**
KURK				pmax	pmax		
	comp=Z,69nm,0.8s						
KURK	**Kurchatov**	**56.44**	**311**	P	**P**	**03 33 56.3**	**+0.1**
WMQ	**Urumqi**	**56.45**	**300**	*e*P	**P**	**03 33 57.9**	**+1.4**
WMQ				sP	sP	03 34 16.8	+3.9
WMQ				pmax	pmax		
	comp=Z,24nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,69nm,3.7s						
WMQ				LR	LR		
	comp=Z,670nm,17.9s						
WMQ				LR	LR		
	comp=Z,630nm,19.1s						
WMQ				LR	LR		
	comp=Z,1µm,29.1s						
WMQ	**Urumqi**	**56.45**	**300**	IAmb	IAmb	03 33 59.0	
	comp=Z,19nm,0.7s						
SFJD	**Kangerlussuaq**	**56.47**	**20**	*i* P	**P**	**03 33 56.0**	**-0.1**
SFJD	**Kangerlussuaq**	**56.47**	**20**	*i* P	**P**	**03 33 56.0**	**-0.1**
E38A	**The Farm, Brul**	**56.65**	**56**	IAmb	IAmb	03 33 57.4	
	comp=Z,13nm,0.7s						
319A	**Douglas**	**56.84**	**80**	IAmb	IAmb	03 34 17.1	
	comp=Z,15nm,0.8s						
SPMN	**Marine on St.**	**56.93**	**57**	IAmb	IAmb	03 34 11.2	
	comp=Z,8.0nm,0.6s						
SPMN	**Marine on St.**	**56.93**	**57**	P	**P**	**03 33 58.8**	**-1.0**
	baz=312						
121A	**Cookes Peak, D**	**56.95**	**78**	P	**P**	**03 34 00.7**	**+0.3**
	baz=314						
GYA	**Guiyang**	**57.13**	**272**	⇓*i*P	**P**	**03 34 02.6**	**+1.0**
GYA				pP	pP	03 34 12.7	-0.5
GYA				PP	**PP**	**03 36 11.2**	**+2.6**
GYA				S	**S**	**03 41 49.5**	**-4.5**
GYA				sS	sS	03 42 14.8	+2.2
GYA				SS	**SS**	**03 45 44.6**	**+1.7**
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,130nm,4.9s						
GYA				LR	LR		
	comp=Z,210nm,17.1s						
GYA				LR	LR		
	comp=Z,260nm,17.8s						
GYA				LR	LR		
	comp=Z,280nm,17.0s						
ARCES	**ARCESS Array B**	**57.16**	**348**	P	**P**	**03 34 00.2**	**-0.9**
	comp=Z,20nm,0.9s,baz=24,slow=7.6,SNR=63						
ARCES				LR	LR	03 59 11.5	
	comp=Z,553nm,21.0s,baz=356,slow=37						
ARCES	**ARCESS Array B**	**57.16**	**348**	P	**P**	**03 34 00.4**	**-0.7**
ARE0	**ARCESS Array S**	**57.16**	**348**	*e*P	**P**	**03 34 00.9**	**-0.1**
LVZ	**Lovozero**	**57.28**	**344**	*de*P	**P**	**03 34 01.2**	**-0.7**
LVZ				pmax	pmax		
	comp=Z,31nm,0.8s						
LVZ	**Lovozero**	**57.28**	**344**	P	**P**	**03 34 00.9**	**-1.0**
MK31	**Makanchi Array**	**57.29**	**305**	*i* P	**P**	**03 34 01.6**	**-0.7**
MK31	**Makanchi Array**	**57.29**	**305**	IAmb	IAmb	03 34 03.6	
	comp=Z,8.2nm,0.8s						
MKAR	**Makanchi Array**	**57.29**	**305**	P	**P**	**03 34 01.8**	**-0.5**
	comp=Z,10nm,0.8s,baz=56,slow=6.8,SNR=86						
MKAR				LR	LR	03 59 37.6	
	comp=Z,1µm,20.9s,baz=38,slow=37						
CBKS	**Cedar Bluff**	**57.43**	**67**	IAmb	IAmb	03 34 30.4	
	comp=Z,16nm,0.9s						
MAKZ	**Makanchi**	**57.44**	**306**	P	**P**	**03 34 02.3**	**-1.1**
MAKZ	**Makanchi**	**57.44**	**306**	P	**P**	**03 34 03.0**	**-0.3**
MAKZ				IAmb	IAmb	03 34 04.6	
	comp=Z,15nm,0.8s						
HSIG		**57.47**	**83**	IAmb	IAmb	03 34 05.0	
	comp=Z,10nm,0.6s						
JMIC	**Jan Mayen**	**57.55**	**2**	LR	LR	03 58 21.9	
	comp=Z,129nm,21.5s,baz=56,slow=36						
APA	**Apatity**	**57.79**	**344**	⇓*i*P	**P**	**03 34 05.4**	**0.0**
APA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TRO	**Tromso**	**57.81**	**351**	*e*P	**P**	**03 34 05.4**	**-0.2**
D41A	**Chassel**	**57.86**	**54**	IAmb	IAmb	03 34 08.1	
	comp=Z,10nm,0.8s						
KTK1	**Kautokeino**	**57.93**	**349**	*e*P	**P**	**03 34 05.7**	**-0.8**
COWI	**Conover**	**58.23**	**55**	IAmb	IAmb	03 34 09.1	
	comp=Z,14nm,0.6s						
G40A	**Rib Lake**	**58.25**	**56**	IAmb	IAmb	03 34 10.8	
	comp=Z,7.0nm,0.7s						
BRVK	**Borovoye**	**58.55**	**317**	*c i*P	**P**	**03 34 11.2**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,37nm,0.8s						
BRVK	**Borovoye**	**58.55**	**317**	P	**P**	**03 34 11.0**	**0.0**
SCIA	**State Center**	**58.96**	**61**	P	**P**	**03 34 13.1**	**-1.0**
	baz=314						
MSTX	**Muleshoe**	**58.98**	**73**	IAmb	IAmb	03 35 00.9	
	comp=Z,14nm,1.2s						
MSTX	**Muleshoe**	**58.98**	**73**	P	**P**	**03 34 13.9**	**-0.5**
	baz=314						
I40A	**Norwalk**	**58.98**	**57**	IAmb	IAmb	03 34 13.9	
	comp=Z,13nm,0.6s						
AMTX	**Amarillo**	**58.99**	**72**	P	**P**	**03 34 13.0**	**-1.5**
AMTX				IAmb	IAmb	03 34 51.4	
	comp=Z,12nm,1.1s						
E44A	**Grand Marais A**	**59.48**	**52**	P	**P**	**03 34 17.4**	**-0.1**
	baz=314,SNR=8.8						
U32A	**Winter Ranch,**	**59.52**	**69**	IAmb	IAmb	03 34 58.1	
	comp=Z,14nm,0.8s						
SVE	**Sverdlovsk**	**59.54**	**325**	*e*P	**P**	**03 34 19.1**	**+1.3**
SVE				pmax	pmax		
	comp=Z,25nm,0.8s						
STEI	**Steigen**	**59.81**	**352**	*e*P	**P**	**03 34 19.1**	**-0.4**
JFWS	**Jewell Farm**	**59.85**	**58**	IAmb	IAmb	03 34 21.3	
	comp=Z,10nm,0.8s						
JFWS	**Jewell Farm**	**59.85**	**58**	P	**P**	**03 34 18.5**	**-1.6**
	baz=314,SNR=7.5						
L40A	**Anamosa**	**59.93**	**59**	IAmb	IAmb	03 34 21.8	
	comp=Z,14nm,0.7s						
TMCR	**Tamitsa**	**59.94**	**340**	*e*P	**P**	**03 34 20.1**	**-0.3**
TMCR				pmax	pmax		
	comp=Z,22nm,0.9s						
D46A	**Sault St. Mari**	**60.21**	**51**	P	**P**	**03 34 21.7**	**-0.9**
	baz=315						
PRGR	**Permogore**	**60.33**	**335**	*e*P	**P**	**03 34 23.3**	**+0.2**
PRGR				pmax	pmax		
	comp=Z,42nm,0.8s						
F45A	**CMU Biological**	**60.33**	**53**	P	**P**	**03 34 22.7**	**-0.7**
	baz=315,SNR=6.7						
D47A	**Chapleau**	**60.54**	**50**	P	**P**	**03 34 23.8**	**-1.0**
	baz=316,SNR=12						
ARU	**Arti**	**60.58**	**326**	*c i*P	**P**	**03 34 25.6**	**+0.7**
ARU				*PP	**pP**	**03 34 38.9**	**+2.2**
ARU				S	**S**	**03 42 38.5**	**+0.8**
ARU				SS	**SS**	**03 46 36.0**	**+0.6**
ARU				pmax	pmax		
	comp=Z,36nm,0.9s						
ARU				MLR	MLR		
	comp=Z,981nm,17.0s						
ARU	**Arti**	**60.58**	**326**	P	**P**	**03 34 25.2**	**+0.2**
G45A	**Suttons Bay**	**60.72**	**54**	P	**P**	**03 34 24.9**	**-1.1**
	baz=315,SNR=14						
L42A	**Oliver, Polo**	**60.79**	**58**	IAmb	IAmb	03 34 25.7	
	comp=Z,9.7nm,0.7s						
WMOK	**Wichita Mounta**	**60.80**	**70**	IAmb	IAmb	03 34 29.1	
	comp=Z,6.7nm,0.6s						
WMOK	**Wichita Mounta**	**60.80**	**70**	P	**P**	**03 34 25.9**	**-0.9**

	baz=315,SNR=11						
H45A	Beulah	60.82	54	P	P	03 34 25.7	-1.0
	baz=315,SNR=6.2						
E47A	Iron Bridge	60.88	51	P	P	03 34 26.3	-0.9
	baz=316,SNR=14						
G46A	Petoskey	60.92	53	P	P	03 34 27.0	-0.4
	baz=316,SNR=14						
D48A	Paudash Townsh	61.07	50	P	P	03 34 27.1	-1.3
	baz=316,SNR=8.6						
MATQ	Matagami	61.11	45	P	P	03 34 27.0	-1.6
	baz=317,SNR=9.1						
D49A	Beulah Townshi	61.22	49	P	P	03 34 28.2	-1.2
	baz=316						
GLMI	Grayling	61.39	53	P	P	03 34 30.4	-0.2
	baz=316						
E48A	Lockeyer	61.40	50	P	P	03 34 29.5	-1.1
	baz=316,SNR=12						
G47A	Hillman	61.52	52	P	P	03 34 30.7	-0.8
	baz=316						
L44A	Lake County Fo	61.59	57	P	P	03 34 30.9	-1.1
	baz=315						
I46A	Reed City	61.61	54	P	P	03 34 31.5	-0.5
	baz=316,SNR=7.3						
MOR8	Moi Rana	61.61	352	*e*P	P	03 34 30.6	-1.2
W35A	Tecumseh	61.61	68	P	P	03 34 31.6	-0.7
SCHQ	Schefferville	61.64	36	P	P	03 34 31.6	-0.6
	comp=Z,5.3nm,0.5s,baz=348,slow=7.4,SNR=21						
SCHQ	Schefferville	61.64	36	P	P	03 34 31.9	-0.3
SCHQ				IAmb	IAmb	03 35 00.6	
	comp=Z,16nm,1.0s						
F48A	Evansville	61.65	51	P	P	03 34 31.7	-0.7
	baz=316,SNR=9.4						
TUL1	Leonard	61.70	67	P	P	03 34 32.2	-0.7
TUL1				IAmb	IAmb	03 35 27.0	
	comp=Z,11nm,1.1s						
TUL1	Leonard	61.70	67	P	P	03 34 33.1	+0.3
	baz=315						
TX31	Lajitas Ar. Si	61.71	78	IAmb	IAmb	03 34 35.7	
	comp=Z,7.9nm,0.7s						
TX32	Lajitas Array	61.71	78	IAmb	IAmb	03 34 35.7	
	comp=Z,8.2nm,0.7s						
TXAR	Lajitas Array	61.71	78	P	P	03 34 32.5	-0.6
	comp=Z,7.0nm,0.4s,baz=304,slow=5.5,SNR=80						
TXAR	Lajitas Array	61.71	78	P	P	03 34 32.7	-0.4
H47A	Mio	61.76	53	P	P	03 34 32.4	-0.7
	baz=316						
ABTX	Abilene, Hawle	61.78	72	IAmb	IAmb	03 34 59.8	
	comp=Z,24nm,1.2s						
ABTX	Abilene, Hawle	61.78	72	P	P	03 34 33.3	-0.2
	baz=316,SNR=5.4						
S39A	Bolivar	61.84	64	P	P	03 34 32.0	-1.8
S39A					PcP	03 35 14.0	-0.5
LSQQ	Lebel-sur-Quev	61.92	46	P	P	03 34 33.0	-1.1
	baz=318						
J46A	Howard City	61.93	55	P	P	03 34 33.7	-0.6
	baz=316						
F49A	Sandfield	61.98	51	P	P	03 34 33.7	-0.9
	baz=316,SNR=14						
D50A	G1974 Best Tow	62.00	49	P	P	03 34 33.2	-1.5
	baz=317,SNR=13						
HDIL	Hopedale	62.02	59	P	P	03 34 33.8	-1.1
	baz=316						
I47A	Gladwin	62.02	54	P	P	03 34 35.3	+0.4
	baz=316						
H48A	Harrisville	62.12	52	P	P	03 34 35.0	-0.5
	baz=316,SNR=5.3						
HPIG		62.21	81	P	P	03 34 36.5	-0.2
HPIG				IAmb	IAmb	03 34 38.2	
	comp=Z,9.6nm,0.7s						
D51A	Lot 18 Range I	62.28	48	P	P	03 34 35.2	-1.3
	baz=317,SNR=5.9						
I48A	Sherman Twp	62.30	53	P	P	03 34 37.4	+0.6
	baz=316						
K46A	Dorr	62.33	56	P	P	03 34 35.5	-1.4
	baz=316,SNR=7.4						
VLDQ	Val d'Or	62.40	46	IAmb	IAmb	03 34 35.7	
	comp=Z,13nm,0.6s						
J47A	Sunmer	62.43	55	P	P	03 34 37.0	-0.6
	baz=316,SNR=7.2						
HHAR	Hobbs	62.49	66	IAmb	IAmb	03 35 01.4	
	comp=Z,6.0nm,0.7s						
KLMR	Klimovskoe	62.52	338	*e*P	P	03 34 37.2	-0.6
KLMR				pmax	pmax		
	comp=Z,27nm,1.0s						
KLMR				MLR	MLR		
	comp=Z,797nm,17.0s						
KLMR	Klimovskoe	62.52	338	*e*P	P	03 34 37.3	-0.6
KLMR				AMP		03 34 39.4	
	comp=Z,27nm,1.0s						
KLMR				LQ	LQ	03 53 19.0	
KLMR				LQ	LQ	03 53 19.0	
KLMR				LR	LR	03 56 17.4	
KLMR				AMP		04 06 16.3	
	comp=Z,797nm,16.8s						
P43A	Skaggs, Pawnee	62.55	60	IAmb	IAmb	03 34 40.9	
	comp=Z,12nm,0.6s						
L46A	Eue Claire	62.55	56	P	P	03 34 37.5	-1.0
	baz=316						
E51A	G1948 Merrick	62.63	49	P	P	03 34 37.3	-1.6
	baz=317,SNR=10						
K47A	Vermontville	62.75	55	P	P	03 34 38.9	-0.9
	baz=316,SNR=7.8						
F51A	Arnstein	62.88	50	P	P	03 34 39.2	-1.4
	baz=317						
J48A	Bridge Port	62.91	54	IAmb	IAmb	03 34 42.1	
	comp=Z,9.0nm,0.7s						
J48A	Bridge Port	62.91	54	P	P	03 34 40.0	-0.8
	baz=317						
I49A	Point Hope	62.92	53	P	P	03 34 40.4	-0.4
	baz=317,SNR=6.3						
U40A	Yellville	63.05	65	IAmb	IAmb	03 35 31.6	
	comp=Z,8.0nm,0.8s						
U40A	Yellville	63.05	65	P	P	03 34 40.5	-1.4
	baz=316						
D53A	Lac Vacive, Po	63.06	47	IAmb	IAmb	03 34 41.1	
	comp=Z,9.0nm,0.7s						
D53A	Lac Vacive, Po	63.06	47	P	P	03 34 40.3	-1.4
	baz=318,SNR=7.6						
L47A	Sherwood	63.15	56	P	P	03 34 41.2	-1.2
	baz=317,SNR=7.8						
KDJ	Kajisay	63.17	305	IAmb	IAmb	03 34 45.0	
	comp=Z,9.2nm,0.7s						
J49A	Marlette	63.19	53	P	P	03 34 41.9	-0.7
	baz=317						
E52A	Mattawa	63.20	49	P	P	03 34 41.1	-1.6
	baz=318,SNR=7.7						
JCT	Junction City	63.22	74	IAmb	IAmb	03 34 49.5	
	comp=Z,9.6nm,0.7s						
JCT	Junction City	63.22	74	P	P	03 34 42.6	-0.5
	baz=316						
F52A	Sundridge	63.25	49	P	P	03 34 41.8	-1.3
	baz=318,SNR=11						
SFIN	Lafayette	63.31	58	P	P	03 34 42.6	-0.9
	baz=316,SNR=11						
W39A	Magazine	63.36	66	IAmb	IAmb	03 35 38.7	
	comp=Z,34nm,1.8s						
W39A	Magazine	63.36	66	P	P	03 34 42.5	-1.4
	baz=316						
K49A	Clarkson	63.45	54	P	P	03 34 43.9	-0.5
	baz=317,SNR=12						
D54A	Lac Fusel, La	63.48	47	P	P	03 34 42.6	-2.0
	baz=318,SNR=7.2						
BOOM	Boomskoye usch	63.54	306	IAmb	IAmb	03 34 47.8	
	comp=Z,9.3nm,0.8s						
L48A	N Adams	63.56	55	P	P	03 34 44.0	-1.2
	baz=317,SNR=7.3						
ULHL	Ulahol	63.56	305	P	P	03 34 46.3	+0.9
	SNR=14						
E53A	Dumoine, Ponti	63.59	48	P	P	03 34 43.4	-1.9
	baz=318,SNR=7.1						
N47A	Urbana	63.69	57	IAmb	IAmb	03 34 45.4	
	comp=Z,9.5nm,0.6s						
N47A	Urbana	63.69	57	P	P	03 34 44.3	-1.7
	baz=317						
USP	Ospenovka	63.69	307	P	P	03 34 46.9	+0.8
	SNR=19						
ALGO	Algonquin Park	63.73	48	P	P	03 34 44.4	-1.8
	baz=318						
M48A	Edgerton	63.75	56	P	P	03 34 45.6	-0.8
	baz=317						
E54A	Lac Daplat, Po	63.77	48	P	P	03 34 44.6	-1.9
	baz=318,SNR=7.6						
L49A	Milan	63.78	55	P	P	03 34 46.1	-0.5
	baz=317						
FCAR	Ozark Folk Cen	63.80	65	IAmb	IAmb	03 35 06.2	
	comp=Z,16nm,0.9s						
P46A	Rosedale	63.80	59	IAmb	IAmb	03 34 48.5	
	comp=Z,17nm,0.9s						
H52A	Wyevale	63.84	51	P	P	03 34 46.1	-0.8
	baz=318						
I51A	Listowel	63.91	52	P	P	03 34 47.2	-0.2
	baz=318,SNR=15						
KBK	Karagaybulak	63.92	306	P	P	03 34 48.3	+0.6
	SNR=8.9						
MIAR	Mount Ida	63.94	67	IAmb	IAmb	03 35 24.3	
	comp=Z,9.7nm,0.7s						
MIAR	Mount Ida	63.94	67	P	P	03 34 46.8	-1.0
	baz=316						
OLIL	Olney	63.97	60	IAmb	IAmb	03 34 47.8	
	comp=Z,13nm,0.7s						
N48A	Decatur	64.05	56	P	P	03 34 46.7	-1.7
	baz=317						
G53A	Haliburton	64.08	49	P	P	03 34 47.3	-1.2
	baz=318,SNR=27						
S44A	Carbondale	64.09	62	IAmb	IAmb	03 34 48.4	
	comp=Z,10nm,0.8s						
PBMO	Poplar Bluff	64.11	63	IAmb	IAmb	03 34 50.2	
	comp=Z,9.8nm,0.7s						
D55A	Sainte-Anne-du	64.11	46	P	P	03 34 47.0	-1.7
	baz=319,SNR=33						
G54A	Lake Saint Pet	64.13	49	P	P	03 34 47.3	-1.6
	baz=318						
M49A	Liberty Center	64.14	55	P	P	03 34 47.7	-1.2
	baz=317						
AAK	Ala-Archa	64.16	307	P	P	03 34 49.9	+0.6
	SNR=9.8						
AAK	Ala-Archa	64.16	307	P	P	03 34 48.5	-0.8
AAK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
AAK	Ala-Archa	64.16	307	P	P	03 34 48.5	-0.8
AAK				IAmb	IAmb	03 34 51.6	
	comp=Z,9.9nm,0.7s						
KZA	Kyzart	64.19	306	P	P	03 34 50.5	+0.8
	SNR=8.9						
W41B	Gary Mavity, V	64.25	65	IAmb	IAmb	03 35 09.5	
	comp=Z,8.7nm,0.9s						
W41B	Gary Mavity, V	64.25	65	P	P	03 34 47.9	-1.8
	baz=316						
LSA	Lhasa	64.31	286	IAmb	IAmb	03 34 54.2	
	comp=Z,9.9nm,0.8s						
D56A	ZEC Mazanza, M	64.41	46	P	P	03 34 49.2	-1.5
	baz=319,SNR=8.6						
O48A	Farmland	64.42	57	P	P	03 34 48.9	-1.9
	baz=317,SNR=8.3						
N49A	Columbus Grove	64.44	56	P	P	03 34 49.6	-1.3
	baz=317,SNR=7.5						
UCH	Uchtor	64.45	306	P	P	03 34 53.6	+2.0
	SNR=8.6						
BLO	Bloomington	64.49	59	IAmb	IAmb	03 34 50.9	
	comp=Z,12nm,0.6s						
EKS2	Erkin-Say	64.50	307	P	P	03 34 52.1	+0.6
	SNR=25						
H53A	Bobcaygeon	64.51	50	P	P	03 34 50.3	-1.0
	baz=318						
J52A	Paris	64.59	52	P	P	03 34 51.3	-0.6
	baz=318,SNR=8.4						
F55A	Otter Lake	64.61	48	P	P	03 34 50.4	-1.5
	baz=319						
M50A	Fremont	64.67	55	P	P	03 34 51.6	-0.8
	baz=318						
E56A	St. Veronique	64.67	46	P	P	03 34 50.5	-1.8
	baz=320,SNR=12						
FIA1	FINESS Array S	64.68	345	IAmb	IAmb	03 34 51.9	
	comp=Z,16nm,1.1s						
FINES	FINESS Array B	64.68	345	P	P	03 34 51.5	-0.6
	comp=Z,5.7nm,0.5s,baz=13,slow=8.6,SNR=26						
FINES				LR	LR	04 07 42.2	
	comp=Z,225nm,18.5s,baz=18,slow=40						
K52A	Tillsonburg	64.81	52	P	P	03 34 53.0	-0.3
	baz=318						
D57A	Chemin Vers le	64.82	45	P	P	03 34 51.5	-1.8
	baz=320,SNR=7.3						
TBLU	Trondheim	64.83	353	*e*P	P	03 34 51.9	-1.2
P48A	Milroy	64.86	58	P	P	03 34 52.0	-1.7
	baz=317,SNR=15						
PLVO	Plevna	64.87	49	IAmb	IAmb	03 34 53.7	
	comp=Z,8.7nm,0.6s						
G55A	Calabogie	64.88	48	P	P	03 34 52.0	-1.7
	baz=319,SNR=16						
O49A	Covington	64.90	57	IAmb	IAmb	03 34 54.2	
	comp=Z,14nm,0.6s						
O49A	Covington	64.90	57	P	P	03 34 52.6	-1.3
	baz=318,SNR=5.8						
AML	Almayashu	64.93	307	P	P	03 34 55.5	+0.8
	SNR=18						
DELO	Deloro Mine	65.01	49	IAmb	IAmb	03 34 54.5	
	comp=Z,6.7nm,0.6s						
LATQ	La Tuque	65.02	44	IAmb	IAmb	03 34 54.6	
	comp=Z,14nm,0.6s						
LATQ	La Tuque	65.02	44	P	P	03 34 53.3	-1.3
	baz=320,SNR=19						
N50A	Nevada	65.08	55	P	P	03 34 54.2	-0.9
	baz=318,SNR=6.3						
M51A	Elyria	65.16	54	P	P	03 34 55.0	-0.6
	baz=318						
E57A	Chemin Saint G	65.17	46	P	P	03 34 53.7	-1.9
	baz=320,SNR=13						
P49A	Miami Univ. Ec	65.18	57	P	P	03 34 54.2	-1.6
	baz=318,SNR=8.5						
H55A	Tweed	65.19	49	P	P	03 34 54.4	-1.3
	baz=319						
D58A	Chemin du LacG	65.20	45	P	P	03 34 54.3	-1.5
	baz=320,SNR=11						
I55A	Frankford	65.21	50	P	P	03 34 54.5	-1.3
	baz=319,SNR=6.0						
O50A	Cable	65.30	56	P	P	03 34 55.5	-1.1
	baz=318,SNR=24						
WCI	Wyandotte Cave	65.30	59	P	P	03 34 56.0	-0.6
WCI				pmax	pmax		
	comp=Z,13nm,0.8s						
WCI	Wyandotte Cave	65.30	59	P	P	03 34 56.0	-0.6
WCI				IAmb	IAmb	03 34 57.9	
	comp=Z,13nm,0.8s						
WCI	Wyandotte Cave	65.30	59	P	P	03 34 55.7	-0.9
	baz=317						
N51A	Ashland	65.36	55	P	P	03 34 55.9	-1.0
	baz=318						
AKTO	Aktyubinsk	65.51	322	P	P	03 34 58.0	+0.3
ACSO	Alum Creek Sta	65.56	56	IAmb	IAmb	03 34 58.3	
	comp=Z,12nm,0.7s						
ACSO	Alum Creek Sta	65.56	56	P	P	03 34 57.2	-1.1
	baz=318						
E58A	La Victoria	65.58	45	P	P	03 34 56.6	-1.6
	baz=320,SNR=8.3						
H56A	Elgin	65.59	48	P	P	03 34 57.0	-1.3
	baz=320,SNR=5.6						
P50A	Jamestown	65.60	57	P	P	03 34 57.4	-1.1
	baz=318,SNR=9.5						
L53A	Girard	65.66	53	P	P	03 34 58.0	-0.8
	baz=319						
ERPA	Erie	65.67	52	P	P	03 34 58.1	-0.8
AB31	Akbulak array	65.69	320	*i* P	P	03 34 59.3	+0.4
ABKAR	Akbulak array	65.69	320	P	P	03 34 59.1	+0.2
ABKAR				IAmb	IAmb	03 35 01.4	
	comp=Z,16nm,0.8s						
MOL	Molde	65.70	354	*e*P	P	03 34 59.1	+0.4
KSH	Kashi	65.70	303	P	P	03 35 03.6	+4.3
KSH				sP	sP	03 35 21.0	+5.3
KSH				S	S	03 43 44.9	+2.5
KSH				ScS	ScS	03 44 52.4	+0.6
KSH				pmax	pmax		
	comp=Z,42nm,1.0s						
KSH				pmax	pmax		
	comp=Z,280nm,6.3s						
KSH				LR	LR		
	comp=Z,1μm,17.0s						
KSH				LR	LR		
	comp=Z,1μm,17.0s						
KSH				LR	LR		
	comp=Z,820nm,19.2s						
PECO	Prince Edward	65.74	49	IAmb	IAmb	03 34 58.6	
	comp=Z,8.7nm,0.8s						
KK31	Karatay Array	65.76	309	*i* P	P	03 34 59.6	+0.1
KK31	Karatay Array	65.76	309	IAmb	IAmb	03 35 01.5	
	comp=Z,16nm,0.8s						
KKAR	Karatay Array	65.76	309	P	P	03 34 59.7	+0.2
KKAR				pmax	pmax		
	comp=Z,16nm,0.8s						
KKAR	Karatay Array	65.76	309	P	P	03 34 59.7	+0.2
KKAR				IAmb	IAmb	03 35 01.5	
	comp=Z,16nm,0.8s						
G57A	Newington	65.79	47	P	P	03 34 57.6	-1.9
	baz=320,SNR=6.4						
N52A	McGinn's Farm,	65.79	54	P	P	03 34 58.6	-1.1
	baz=318						
O51A	Pataskala	65.82	55	P	P	03 34 58.7	-1.2
	baz=318,SNR=8.8						
M53A	WI Miller and	65.83	53	P	P	03 34 59.2	-0.7
	baz=319,SNR=9.1						
J55A	Hilton	65.86	50	P	P	03 34 59.2	-0.8
	baz=319						
L54A	Sinclairville	65.91	52	P	P	03 35 00.0	-0.4
	baz=319,SNR=16						
K54A	Basiliko Farm,	65.93	51	P	P	03 35 00.1	-0.5
	baz=319,SNR=8.8						
WVT	Waverly	66.01	62	P	P	03 35 00.2	-1.0
WVT				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WVT	Waverly	66.01	62	P	P	03 35 00.2	-1.0
WVT				IAmb	IAmb	03 35 12.4	
	comp=Z,7.5nm,0.7s						
WVT	Waverly	66.01	62	P	P	03 35 00.1	-1.0
	baz=318						
Q50A	Georgetown	66.07	57	P	P	03 35 00.6	-0.9
	baz=318						
P51A	Williamsport	66.08	56	IAmb	IAmb	03 35 32.3	
	comp=Z,14nm,0.6s						
P51A	Williamsport	66.08	56	P	P	03 35 00.4	-1.2
	baz=318						
H57A	Richville	66.09	48	P	P	03 35 00.0	-1.5
	baz=320						
DOMB	Dombas	66.12	353	*e*P	P	03 35 00.7	-0.8
K55A	Perry	66.14	51	P	P	03 35 01.0	-1.0
	baz=319,SNR=8.1						
S49A	Springfield	66.17	59	P	P	03 35 00.9	-1.2
	baz=318						
G58A	Ormstown	66.18	47	P	P	03 35 00.1	-1.9
	baz=320						
D60A	Saint Jean D'O	66.19	44	P	P	03 35 00.6	-1.6
	baz=321,SNR=12						
F59A	Saint Guilaume	66.20	45	P	P	03 35 00.8	-1.4
	baz=321,SNR=6.6						
N53A	Lisbon	66.22	54	P	P	03 35 02.0	-0.5
	baz=319						
O52A	Adamsville	66.24	55	P	P	03 35 01.5	-1.1
	baz=318,SNR=8.2						
Q51A	Peebles	66.27	57	P	P	03 35 02.2	-0.6
	baz=318,SNR=19						
D61A	St Aubert, Com	66.28	43	P	P	03 35 01.6	-1.1
	baz=322,SNR=7.2						
M54A	Oil Creek Stat	66.28	53	IAmb	IAmb	03 35 32.8	
	comp=Z,12nm,0.8s						
M54A	Oil Creek Stat	66.28	53	P	P	03 35 01.8	-1.1
	baz=319						
J56A	Wolcott	66.31	50	P	P	03 35 01.8	-1.2
	baz=320,SNR=6.4						
LONY	Lake Ozonia	66.34	47	IAmb	IAmb	03 35 02.2	
	comp=Z,8.1nm,0.5s						
LONY	Lake Ozonia	66.34	47	P	P	03 35 01.3	-1.9
	baz=320,SNR=5.2						
I57A	Carthage	66.37	49	P	P	03 35 01.8	-1.5
	baz=320						
L55A	Hinsdale	66.38	51	P	P	03 35 02.8	-0.7
	baz=319,SNR=8.6						
E60A	Ste Agathe de	66.39	44	P	P	03 35 02.1	-1.3
	baz=321						
P52A	Corning	66.44	56	P	P	03 35 02.9	-1.0
	baz=318						
O53A	New Philadelph	66.45	55	P	P	03 35 02.7	-1.3
	baz=319						
F60A	Warwick	66.48	45	P	P	03 35 02.4	-1.6
	baz=321						
K56A	Middlesex	66.52	50	P	P	03 35 03.7	-0.7
	baz=320,SNR=11						
N54A	Moraine State	66.53	53	P	P	03 35 03.6	-0.9
	baz=319,SNR=6.4						
T49A	Edmonton	66.54	60	IAmb	IAmb	03 35 07.7	
	comp=Z,10nm,0.6s						
T49A	Edmonton	66.54	60	P	P	03 35 03.5	-1.0
	baz=318						
J57A	Williamstown	66.61	49	P	P	03 35 03.4	-1.5
	baz=320						
G59A	Clarenceville	66.62	46	P	P	03 35 03.3	-1.6
	baz=321,SNR=6.5						
H58A	Gabriels	66.68	47	P	P	03 35 03.7	-1.7
	baz=320						
R51A	Hillsboro	66.69	57	P	P	03 35 04.9	-0.6
	baz=318,SNR=11						
S50A	Richmond	66.72	58	P	P	03 35 05.6	-0.1
	baz=318						
PLAL	Pickwick Lake	66.72	63	IAmb	IAmb	03 35 22.8	
	comp=Z,8.0nm,0.7s						
H59A	Cadyville	66.73	47	P	P	03 35 04.4	-1.3
	baz=321						
NC303	NORSAR Array S	66.75	352	*e*P	P	03 35 05.1	-0.4
E61A	Lac Etchemin	66.75	44	P	P	03 35 04.6	-1.2
	baz=322						
M55A	Ridgway	66.76	52	P	P	03 35 05.2	-0.7
	baz=319,SNR=11						
L56A	Greenwood	66.84	51	P	P	03 35 05.8	-0.7
	baz=320,SNR=9.4						
U49A	Red Boiling Sp	66.84	60	IAmb	IAmb	03 35 06.6	
	comp=Z,8.2nm,0.6s						
D62A	Allapoint, All	66.85	42	IAmb	IAmb	03 35 06.6	
	comp=Z,11nm,0.6s						
D62A	Allapoint, All	66.85	42	P	P	03 35 05.4	-1.0
	baz=322,SNR=5.7						
CLTN	Cedars of Leba	66.86	61	IAmb	IAmb	03 35 07.1	
	comp=Z,14nm,0.7s						
I58A	Old Forge	66.88	48	P	P	03 35 05.0	-1.7
	baz=320						
Q52A	Bidwell	66.88	56	P	P	03 35 06.0	-0.7
	baz=319,SNR=5.9						
K57A	Scipio Center	66.89	50	P	P	03 35 05.5	-1.2
	baz=320,SNR=6.5						
SHL	Shillong	66.89	282	IAmb	IAmb	03 35 08.9	
	comp=Z,26nm,1.0s						
F61A	St Evariste	66.89	44	P	P	03 35 05.6	-1.1
	baz=322						
NB201	NORSAR Array S	66.92	352	P	P	03 35 06.5	-0.1
O54A	Avella	66.92	54	P	P	03 35 06.0	-1.0
O54A					PcP	03 35 35.6	+0.3
O54A				IAmb	IAmb	03 35 36.1	
	comp=Z,16nm,0.8s						
O54A	Avella	66.92	54	P	P	03 35 05.9	-1.0
	baz=319						
P53A	Whipple	66.93	55	P	P	03 35 05.9	-1.2
	baz=319						
NB2	NORSAR Subarra	66.94	352	P	P	03 35 06.6	-0.2
	comp=Z,21nm,0.8s,baz=10.0,slow=6.5						
NB2	NORSAR Subarra	66.94	352	P	P	03 35 06.6	-0.2
	baz=10.0,slow=6.5						
NOA	NORSAR Array B	66.94	352	P	P	03 35 06.6	-0.2
	comp=Z,14nm,0.7s,baz=11,slow=6.4,SNR=46						
NOA				LR	LR	04 04 40.5	
	comp=Z,275nm,20.3s,baz=5.0,slow=36						
T50A	Nancy	66.97	59	P	P	03 35 06.3	-1.0
	baz=318,SNR=8.9						
J58A	Remsen	66.98	49	IAmb	IAmb	03 35 25.1	
	comp=Z,37nm,1.6s						
J58A	Remsen	66.98	49	P	P	03 35 05.8	-1.5
	baz=320						
NCB	Newcomb	67.01	48	IAmb	IAmb	03 36 03.7	
	comp=Z,52nm,1.9s						
M56A	Emporium	67.03	52	P	P	03 35 06.8	-0.9
	baz=320,SNR=12						
R52A	Catlettsburg	67.15	57	P	P	03 35 07.5	-0.9
	baz=319						
N55A	Marion Center	67.17	53	P	P	03 35 07.7	-0.8
	baz=319,SNR=7.2						
ZAIG	Zacatecas	67.17	82	P	P	03 35 09.2	0.0
ZAIG				IAmb	IAmb	03 35 11.2	
	comp=Z,12nm,0.9s						
S51A	Beattyville	67.17	58	IAmb	IAmb	03 35 08.3	
	comp=Z,11nm,0.7s						
S51A	Beattyville	67.17	58	P	P	03 35 07.7	-0.9
	baz=318						
G61A	St-Isidore-de-	67.20	45	P	P	03 35 07.1	-1.6
	baz=322						
J59A	Piesco	67.27	48	P	P	03 35 07.6	-1.5
	baz=321,SNR=9.1						
K58A	Earlville	67.27	49	P	P	03 35 08.2	-0.9
	baz=320						
D63A	Stockholm	67.28	42	P	P	03 35 08.2	-0.9
	baz=323						
L57A	Andrews Acres	67.28	51	P	P	03 35 08.3	-1.0
	baz=320,SNR=5.8						
P54A	Burton	67.31	55	P	P	03 35 08.1	-1.4
	baz=319						
Q53A	Leroy	67.34	56	P	P	03 35 08.6	-1.0
	baz=319,SNR=8.3						
VSU	Vasula	67.38	343	⇑*e*P	P	03 35 09.8	+0.3
VSU				pmax	pmax		

	comp=Z,33nm,0.8s						
N56A	West Decatur	67.41	52	P	P	03 35 09.4	-0.6
	baz=320						
O55A	Ligonier	67.44	53	P	P	03 35 08.9	-1.4
	baz=320						
T51A	Gray	67.49	59	P	P	03 35 09.5	-1.1
	baz=319						
R53A	Hurricane	67.51	56	P	P	03 35 09.9	-0.8
	baz=319,SNR=12						
SKAR	Skarslia	67.52	354	*e*P	P	03 35 09.9	-0.6
BINY	Binghamton	67.54	50	IAmb	IAmb	03 35 44.2	
	comp=Z,44nm,1.6s						
CHTO	Chiang Mai	67.56	272	P	P	03 35 11.3	+0.1
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CHTO	Chiang Mai	67.56	272	P	P	03 35 11.3	+0.1
MCWV	Mont Chateau	67.59	54	P	P	03 35 10.6	-0.6
MCWV					PcP	03 35 38.2	+0.1
MCWV				IAmb	IAmb	03 35 39.4	
	comp=Z,8.3nm,0.6s						
Q54A	Coxs Mills	67.60	55	P	P	03 35 10.9	-0.4
	baz=319						
H61A	Lyndonville	67.61	46	P	P	03 35 09.9	-1.3
	baz=322						
K59A	Cooperstown	67.64	49	P	P	03 35 10.3	-1.2
	baz=321						
E63A	Oxbow	67.64	42	P	P	03 35 09.9	-1.5
	baz=323						
M57A	Sunshine Farm,	67.66	51	P	P	03 35 10.9	-0.7
	baz=320,SNR=7.3						
G62A	West of Eustis	67.69	45	IAmb	IAmb	03 35 20.4	
	comp=Z,24nm,1.3s						
G62A	West of Eustis	67.69	45	P	P	03 35 10.6	-1.2
	baz=322						
P55A	Reedsville	67.71	54	P	P	03 35 11.3	-0.7
	baz=319,SNR=5.4						
ACCN	Adirondack Com	67.72	48	IAmb	IAmb	03 35 11.7	
	comp=Z,15nm,0.6s						
SWET	Sewanee	67.72	61	IAmb	IAmb	03 35 11.4	
	comp=Z,9.4nm,0.8s						
L58A	Harry Jones Me	67.73	50	P	P	03 35 10.7	-1.4
	baz=320						
O56A	Blue Knob Stat	67.77	53	IAmb	IAmb	03 35 12.3	
	comp=Z,12nm,0.7s						
O56A	Blue Knob Stat	67.77	53	P	P	03 35 11.1	-1.2
	baz=320						
SSPA	Standing Stone	67.82	52	P	P	03 35 11.7	-0.9
SSPA	Standing Stone	67.82	52	P	P	03 35 12.0	-0.6
	baz=320						
CMAR	Chiang Mai Arr	67.83	272	P	P	03 35 14.6	+1.6
	comp=Z,3.7nm,0.5s,baz=33,slow=7.2,SNR=12						
CMAR				LR	LR	04 07 45.7	
	comp=Z,133nm,19.3s,baz=102,slow=38						
CMAR	Chiang Mai Arr	67.83	272	P	P	03 35 13.0	+0.1
CMAR					pP	03 35 25.7	+0.9
E64A	Bridgewater	67.89	42	P	P	03 35 11.7	-1.3
	baz=323,SNR=9.7						
T52A	Hallie	67.89	58	IAmb	IAmb	03 35 51.8	
	comp=Z,16nm,0.7s						
T52A	Hallie	67.89	58	P	P	03 35 13.2	0.0
	baz=319						
H62A	Milan	67.92	45	P	P	03 35 12.3	-0.9
	baz=322,SNR=6.8						
F63A	Nahmakanta, Br	67.92	43	P	P	03 35 12.0	-1.2
	baz=323						
J60A	Lant Hill Farm	67.94	48	P	P	03 35 12.2	-1.1
	baz=321						
M58A	Price's Panora	67.95	51	P	P	03 35 12.5	-1.0
	baz=320						
Q55A	Buckhannon	67.97	55	P	P	03 35 12.7	-1.0
	baz=320						
PBKT	Sadao Pong	67.99	269	P	P	03 35 13.3	-0.6
L59A	Walton	68.00	49	P	P	03 35 12.8	-0.9
	baz=321						
OSL	Oslo	68.07	352	*e*P	P	03 35 14.7	+0.9
W50A	Signal Mountai	68.07	61	P	P	03 35 13.3	-1.0
	baz=319						
TAPN	Taplejung	68.09	287	*e*P	P	03 35 15.7	+0.8
	comp=Z,66nm,0.9s						
F64A	Sherman	68.11	43	IAmb	IAmb	03 35 14.7	
	comp=Z,18nm,0.7s						
F64A	Sherman	68.11	43	P	P	03 35 13.2	-1.2
	baz=323						
R54A	Victor	68.12	56	P	P	03 35 14.0	-0.6
	baz=319						
V51A	Loudon	68.14	60	P	P	03 35 13.8	-0.9
	baz=319						
G63A	Kingsbury	68.17	44	P	P	03 35 13.8	-0.9
	baz=322						
P56A	Dayton Farm, R	68.21	54	P	P	03 35 14.4	-0.7
	baz=320						
T53A	Wise	68.22	58	P	P	03 35 14.7	-0.6
	baz=319						
N58A	Sunbury	68.24	51	P	P	03 35 14.5	-0.8
	baz=320,SNR=5.7						
S54A	Dingess, Beckl	68.25	56	P	P	03 35 15.0	-0.4
	baz=319						
J61A	Chester	68.25	47	P	P	03 35 14.3	-1.0
	baz=322						
O57A	Amberson	68.27	52	P	P	03 35 15.0	-0.5
	baz=320,SNR=15						
M59A	Waymart	68.31	50	P	P	03 35 14.7	-1.1
	baz=321						
H63A	New Sharon	68.34	45	P	P	03 35 14.9	-0.9
	baz=322						
OBN	Obninsk	68.35	336	⇓*i*P	P	03 35 16.0	+0.3
OBN				*e*		03 37 46.5	
OBN				*i* S	S	03 44 15.4	+1.9
OBN				pmax	pmax		
	comp=Z,26nm,1.0s						
OBN				MLR	MLR		
	comp=Z,1µm,18.0s						
Q56A	Snyder Ridge,	68.39	54	P	P	03 35 15.2	-1.0
	baz=320						
ODD1	Odda	68.40	354	*e*P	P	03 35 17.0	+1.0
G64A	Maxfield	68.43	43	P	P	03 35 15.4	-0.9
	baz=323						
KONO	Kongsberg	68.45	353	*e*P	P	03 35 16.1	-0.1
K61A	Williamstown	68.45	48	P	P	03 35 15.3	-1.3
	baz=321						
R55A	Marlinton	68.49	55	IAmb	IAmb	03 35 43.4	
	comp=Z,12nm,0.6s						
R55A	Marlinton	68.49	55	P	P	03 35 16.4	-0.6
	baz=320						
V52A	Sevierville	68.52	59	P	P	03 35 15.9	-1.2
	baz=319						
I63A	Otisfield	68.59	45	P	P	03 35 16.2	-1.1
	baz=322						
N59A	State Game Lan	68.63	51	IAmb	IAmb	03 35 18.1	
	comp=Z,17nm,0.6s						
N59A	State Game Lan	68.63	51	P	P	03 35 16.4	-1.3
	baz=321						
P57A	Homestead Farm	68.64	53	P	P	03 35 16.7	-1.0
	baz=320						
ODAN	Odare	68.64	286	*e*P	P	03 35 19.1	+0.8
T54A	Tazewell	68.67	57	P	P	03 35 17.4	-0.6
	baz=319,SNR=10						
U53A	Fall Branch	68.67	58	P	P	03 35 17.9	-0.1
	baz=319						
S55A	Lewisburg	68.68	56	P	P	03 35 17.2	-0.9
	baz=320						
J62A	Henniker	68.68	47	P	P	03 35 17.0	-1.0
	baz=322						
O58A	Lewisberry	68.69	52	P	P	03 35 17.0	-1.1
	baz=320						
L61A	Hillsdale 1, H	68.69	48	P	P	03 35 16.9	-1.1
	baz=321						
GUN	Gumba	68.76	288	*e*P	P	03 35 19.9	+0.8
	comp=Z,140nm,0.9s						
R56A	Bull Pasture M	68.76	55	P	P	03 35 17.4	-1.2
	baz=320						
JIRN	Jiri	68.76	288	*e*P	P	03 35 20.1	+0.9
	comp=Z,141nm,0.8s						
LRAL	Lakeview Retre	68.76	63	IAmb	IAmb	03 35 20.1	
	comp=Z,38nm,1.8s						
BLS5	Blasjo	68.90	354	*e*P	P	03 35 20.2	+1.2
L61B	Northampton	68.90	48	P	P	03 35 17.9	-1.4
	baz=322						
O59A	Robesonia	68.90	51	P	P	03 35 18.8	-0.6
	baz=321						
U54A	Nelsons Funny	68.95	58	IAmb	IAmb	03 35 20.4	
	comp=Z,17nm,0.6s						
U54A	Nelsons Funny	68.95	58	P	P	03 35 19.2	-0.7
	baz=320,SNR=6.3						
G65A	Princeton	68.98	43	P	P	03 35 18.9	-0.8
	baz=323						
N60A	Cedar Hill Far	68.99	50	P	P	03 35 18.9	-1.0
	baz=321						
T55A	Pulaski	69.03	56	P	P	03 35 19.6	-0.7
	baz=320						
RAMN	Ramite	69.05	287	*e*P	P	03 35 21.4	+0.6
	comp=Z,123nm,0.7s						
V53A	Saluda	69.06	59	P	P	03 35 19.7	-0.9
	baz=319						
H65A	Eastbrook	69.09	44	P	P	03 35 18.7	-1.8
	baz=323						
BLA	Blacksburg	69.15	56	IAmb	IAmb	03 35 21.0	
	comp=Z,14nm,0.8s						
BLA	Blacksburg	69.15	56	P	P	03 35 20.3	-0.7
	baz=320						
Z50A	Ashland	69.20	63	IAmb	IAmb	03 35 31.9	
	comp=Z,9.1nm,0.7s						
Z50A	Ashland	69.20	63	P	P	03 35 19.9	-1.4
	baz=319						
KKN	Kakani	69.20	289	*e*P	P	03 35 23.8	+2.1
Q58A	Fox Den Farm,	69.22	53	P	P	03 35 20.6	-0.8
	baz=320						
S56A	Natural Bridge	69.24	55	P	P	03 35 20.6	-0.9
	baz=320,SNR=6.8						
O60A	Telford	69.27	51	P	P	03 35 21.4	-0.3
	baz=321						
M61A	Granite Spring	69.28	49	P	P	03 35 21.1	-0.7
	baz=322						
PKI	Pulchoki	69.29	288	*e*P	P	03 35 22.8	+0.4
	comp=Z,40nm,0.5s						
R57A	Stanardsville	69.29	54	P	P	03 35 21.0	-0.8
	baz=320,SNR=7.6						
PKIN	Phulchoki	69.29	288	*e*P	P	03 35 22.9	+0.6
	comp=Z,33nm,0.5s						
P59A	Jarrettsville	69.32	52	P	P	03 35 21.4	-0.6
	baz=321,SNR=6.1						
U55A	TA2, Sparta	69.36	57	P	P	03 35 21.8	-0.6
	baz=320,SNR=6.1						
H66A	Whiting	69.42	43	P	P	03 35 21.5	-1.0
	baz=324						
GKN	Gorkha	69.42	289	*e*P	P	03 35 23.8	+0.8
DMN	Daman	69.44	289	*e*P	P	03 35 24.0	+0.8
	comp=Z,18nm,0.5s						
V54A	Nebo	69.44	58	P	P	03 35 22.1	-0.8
	baz=320,SNR=7.4						
S57A	Dark Hollow, R	69.48	55	P	P	03 35 22.9	-0.2
	baz=320						
T56A	Rocky Mt	69.49	56	P	P	03 35 22.5	-0.6
	baz=320						
R58A	Rapidan	69.55	54	P	P	03 35 22.3	-1.1
	baz=320						
DANN	Dangsing	69.68	290	*e*P	P	03 35 25.4	+0.7
	comp=Z,83nm,0.8s						
X53A	Estanollee	69.69	60	P	P	03 35 23.4	-0.9
	baz=320						
Y52A	Lilburn	69.76	61	IAmb	IAmb	03 35 24.8	
	comp=Z,13nm,0.7s						
Y52A	Lilburn	69.76	61	P	P	03 35 23.9	-0.9
	baz=319						
V55A	Taylorsville	69.77	58	P	P	03 35 24.0	-0.9
	baz=320						
U56A	King	69.83	57	P	P	03 35 25.1	-0.1
	baz=320						
W54A	Cherokee Point	69.84	59	P	P	03 35 24.4	-0.8
	baz=320						
O61A	Allentown	69.86	50	P	P	03 35 24.9	-0.4
	baz=321						
R58B	Mineral	69.87	54	P	P	03 35 24.7	-0.7
	baz=321						
T57A	Hurt	69.92	56	IAmb	IAmb	03 35 25.7	
	comp=Z,14nm,0.6s						
T57A	Hurt	69.92	56	P	P	03 35 24.4	-1.3
	baz=320						
LPSR	Galich'ya Gora	69.99	334	*e*P	P	03 35 26.0	+0.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
M63A	Gales Ferry	70.01	48	P	P	03 35 24.9	-1.3
	baz=322						
S58A	Poland Farm, P	70.06	54	P	P	03 35 25.7	-0.9
	baz=321						
X54A	Belton	70.15	59	P	P	03 35 26.7	-0.5
	baz=320						
V56A	Mocksville	70.18	57	P	P	03 35 26.6	-0.7
	baz=320						
PAULI	Pauline	70.24	59	IAmb	IAmb	03 35 30.1	
	comp=Z,64nm,2.0s						
KMSC	Kings Mountain	70.25	58	IAmb	IAmb	03 35 28.0	
	comp=Z,19nm,0.6s						
KMSC	Kings Mountain	70.25	58	P	P	03 35 26.7	-1.1
	baz=320,SNR=7.3						
U57A	Blanch	70.31	56	P	P	03 35 28.1	0.0
	baz=320						
T58A	Grand View Acr	70.32	55	P	P	03 35 27.0	-1.2
	baz=321						
GOGA	Godfrey	70.42	61	P	P	03 35 28.0	-0.8
	baz=320						
VRH	Novokhopyorsk	70.44	332	*e*P	P	03 35 27.8	-0.8
VRH				pmax	pmax		
	comp=Z,20nm,0.7s						
HODGE	Hodges	70.45	59	IAmb	IAmb	03 35 29.3	
	comp=Z,18nm,0.6s						
X55A	Gracelyn & Ava	70.60	59	P	P	03 35 29.1	-0.9
	baz=320,SNR=11						
W56A	Indian Trail	70.65	58	P	P	03 35 29.1	-1.1
	baz=320						
T59A	Double "B" Far	70.80	54	P	P	03 35 30.4	-0.7
	baz=321						
Y55A	Saluda	70.89	59	P	P	03 35 30.9	-0.8
	baz=320						
X56A	White Oak	70.91	58	P	P	03 35 31.1	-0.7
	baz=320						
V58A	Windy Hill, Pi	70.91	56	P	P	03 35 30.8	-1.0
	baz=321						
W57A	Gilead	70.95	57	P	P	03 35 31.1	-0.9
W57A				IAmb	IAmb	03 35 32.0	
	comp=Z,12nm,0.6s						
W57A	Gilead	70.95	57	P	P	03 35 30.8	-1.2
	baz=320						
TAOE	Nuku Hiva Isla	71.07	134	*e*S	S	03 44 53.3	+6.9
	comp=Z,205nm,27.5s						
TAOE	Nuku Hiva Isla	71.07	134	*e*LR	LR	03 57 24.5	
	comp=Z,1µm,22.7s						
TAOE	Nuku Hiva Isla	71.07	134	*e*T	T	04 53 09.3	
	comp=Z,77nm,0.4s						
BIRD	Birdtown, Kers	71.09	58	IAmb	IAmb	03 35 33.0	
	comp=Z,9.1nm,0.6s						
U59A	Littleton	71.16	55	P	P	03 35 32.8	-0.5
	baz=321						
VSR	Storozhevoye	71.17	333	*e*P	P	03 35 32.8	-0.3
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
V59A	Middlesex	71.39	56	P	P	03 35 33.9	-0.7
	baz=321,SNR=5.3						
X57A	Johnson Farm,	71.42	58	P	P	03 35 34.2	-0.7
	baz=321						
W58A	Raeford	71.44	57	P	P	03 35 34.3	-0.7
	baz=321						
NIL	Nilore	71.56	301	P	P	03 35 35.9	+0.1
NIL				pmax	pmax		
	comp=Z,20nm,0.6s						
NIL	Nilore	71.56	301	P	P	03 35 35.9	+0.1
NIL				IAmb	IAmb	03 35 38.5	
	comp=Z,20nm,0.6s						
Z56A	Williston	71.62	59	P	P	03 35 35.5	-0.6
	baz=320						
W59A	Clinton	71.74	56	P	P	03 35 36.9	+0.1
	baz=321						
Z57A	Bowman	72.00	59	P	P	03 35 37.7	-0.7
	baz=321						
Y58A	Scranton	72.08	58	P	P	03 35 38.3	-0.5
	baz=321						
KLNR	Kaliningrad	72.16	346	⇓*e*P	P	03 35 40.0	+1.1
KLNR				pmax	pmax		
	comp=Z,21nm,0.7s						
W60A	Pink Hill	72.21	56	P	P	03 35 39.5	-0.1
	baz=321						
SUW	Suwalki	72.23	344	IAmb	IAmb	03 35 58.6	
	comp=Z,31nm,1.1s						
BSD	Bornholm Skovb	72.39	349	*i* P	P	03 35 38.3	-2.0
	comp=Z,8.7nm,1.1s						
BSD	Bornholm Skovb	72.39	349	*i* P	P	03 35 38.3	-2.0
BSD				pmax	pmax		
	comp=Z,9.0nm,1.1s						
X60A	Albert Glenn T	72.44	56	P	P	03 35 40.4	-0.6
	baz=321						
KBL	Kabul	73.08	304	P	P	03 35 44.2	-0.8
KBL				pmax	pmax		
	comp=Z,23nm,0.8s						
KBL	Kabul	73.08	304	P	P	03 35 44.2	-0.8
KBL				IAmb	IAmb	03 35 46.2	
	comp=Z,23nm,0.8s						
PMOR	Pomariorio Ree	73.44	144	*e*T	T	04 56 05.8	
	comp=Z,243nm,0.2s						
TLIG	Tlapa	73.54	82	P	P	03 35 47.1	-0.8
TLIG				IAmb	IAmb	03 35 50.5	
	comp=Z,16nm,0.8s						
DZM	Mont Dzumac	73.96	189	*e*LR	LR	03 58 44.8	
	comp=Z,1µm,23.9s,baz=12						
AKASG	Malin Array Be	74.16	339	P	P	03 35 50.6	-0.3
	comp=Z,4.5nm,0.4s,baz=24,slow=6.2,SNR=30						
AKASG				LR	LR	04 12 09.1	
	comp=Z,360nm,19.4s,baz=10.0,slow=39						
AKASG	Malin Array Be	74.16	339	P	P	03 35 50.5	-0.4
AKBB	Malin Array Si	74.16	339	IAmb	IAmb	03 35 52.5	
	comp=Z,11nm,0.7s						
MTN	Manton Dam	75.16	226	P	P	03 35 57.1	+0.1
MTN				IAmb	IAmb	03 35 58.5	
	comp=Z,18nm,0.7s						
PPT	Papeete	75.21	146	LR	LR	04 03 34.0	
	comp=Z,780nm,19.4s,baz=319,slow=31						
PPT2	Papeete2	75.23	146	*e*S	S	03 45 38.8	+5.4
	comp=Z,158nm,23.2s						
PPT2	Papeete2	75.23	146	*e*LR	LR	03 59 12.8	
	comp=Z,1µm,22.5s,baz=340						
PPT2	Papeete2	75.23	146	*e*T	T	04 58 19.9	
	comp=Z,9.5nm,0.3s						
PAE	Paea	75.29	146	*e*T	T	04 58 24.1	
	comp=Z,4.0nm,0.3s						
GOF	Gofitskoye	75.45	328	⇑*e*P	P	03 35 59.3	+0.9
GOF				pmax	pmax		
	comp=Z,39nm,0.6s						
GEYT	Alibeck	75.62	314	P	P	03 36 00.6	+1.0
	comp=Z,17nm,0.8s,baz=352,slow=4.5,SNR=26						
GEYT				LR	LR	04 12 10.8	
	comp=Z,1µm,20.7s,baz=55,slow=38						
GEYT	Alibeck	75.62	314	P	P	03 35 58.8	-0.8
GYA0B	ALIBECK ARRAY	75.62	314	IAmb	IAmb	03 36 02.5	
	comp=Z,19nm,0.8s						
GROC	Groznyy	76.13	325	*e*P	P	03 35 58.2	-4.1
GROC				*e*		03 36 09.2	
GROC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
CLL	Collm	76.36	349	*e*(P)	P	03 36 09.0	+5.5
	comp=Z,4.0nm,0.9s						
CLL				*e*sP	sP	03 36 21.0	+0.8
CLL				*e*S	S	03 45 43.0	-2.1
CLL				*e*PS	PnS	03 46 21.0	-5.1
CLL				*e*SS	SS	03 50 48.0	+10
CLL				LmV		04 11 00.0	
	comp=Z,400nm,19.5s						
CLL	Collm	76.36	349	*e*P	P	03 36 09.0	+5.5
CLL				*e**PP	sP	03 36 21.0	+0.8
CLL				*e*S	S	03 45 43.0	-2.1
CLL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CLL				MLR	MLR		
	comp=Z,400nm,19.5s						
OJC	Ojcow	76.46	345	*e*P	P	03 36 05.8	+1.7
OJC	Ojcow	76.46	345	*e*P	P	03 36 05.8	+1.7
OJC	Ojcow	76.46	345	IAmb	IAmb	03 36 06.4	
	comp=Z,12nm,0.9s						
KWP	Kalwaria Pacla	76.52	343	*e*P	P	03 36 05.4	+1.0
KWP	Kalwaria Pacla	76.52	343	*e*P	P	03 36 05.4	+1.0
KIV	Kislovodsk	76.54	327	P	P	03 36 04.2	-0.6
KIV				pmax	pmax		
	comp=Z,11nm,0.8s						
KIV	Kislovodsk	76.54	327	P	P	03 36 04.2	-0.6
KIV				IAmb	IAmb	03 36 36.1	
	comp=Z,11nm,0.8s						
HRA	Herat	76.59	309	IAmb	IAmb	03 36 08.4	
	comp=Z,15nm,0.8s						
NCK	Nalchik	76.64	327	⇓*e*P	P	03 36 07.0	+1.7
NCK				pmax	pmax		
	comp=Z,18nm,0.5s						
BRG	Berggiesshubel	76.67	349	*e*P	P	03 36 04.9	-0.4
	comp=Z,4.1nm,1.1s						
BRG	Berggiesshubel	76.67	349	*e*P	P	03 36 04.9	-0.4
BRG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BRG				MLR	MLR		
	comp=N,374nm,18.7s						
BRG				MLR	MLR		
	comp=E,263nm,18.2s						
BRG				MLR	MLR		
	comp=Z,439nm,21.2s						
CHVC	Chvalec	76.67	347	*e*P	P	03 36 04.7	-0.6
CHVC				AMS	AMS	04 10 30.0	
	comp=Z,500nm,19.5s						
KBZ	Khabaz	76.67	327	P	P	03 36 05.4	+0.1
	comp=Z,10nm,0.8s,baz=27,slow=1.0,SNR=34						
KBZ				LR	LR	04 16 40.1	
	comp=Z,416nm,18.1s,baz=5.0,slow=41						
OSTC	Ostas	76.68	347	*e*P	P	03 36 05.2	-0.2
OSTC				AMS	AMS	04 10 30.0	
	comp=Z,600nm,17.7s						
UPC	Upice	76.76	347	AMS	AMS	04 10 30.0	
	comp=Z,600nm,22.2s						
SORM	Soroca	76.77	338	⇓P	P	03 36 06.2	+0.3
DPC	Dobruska-Polom	76.87	347	*e*P	P	03 36 07.3	+0.8
DPC				AMS	AMS	04 10 30.0	
	comp=Z,600nm,19.6s						
DPC	Dobruska-Polom	76.87	347	*e*P	P	03 36 07.3	+0.8
DPC				MLR	MLR		
	comp=Z,600nm,19.6s						
AKT	Akhty	76.92	323	*e*P	P	03 36 07.9	+0.9
AKT				*e*		03 36 18.4	
AKT				pmax	pmax		
	comp=Z,20nm,0.7s						
PVCC	Panska Ves	76.93	348	AMS	AMS	04 09 40.0	
	comp=Z,500nm,18.0s						
KRLC	Kraliky	77.07	347	*e*P	P	03 36 08.2	+0.6
KRLC				*e*pP	sP	03 36 21.6	-2.7
KRLC				*e*sP	pP	03 36 24.4	+4.7
KRLC				AMS	AMS	04 09 10.0	
	comp=Z,500nm,25.9s						
KRLC	Kraliky	77.07	347	*e*P	P	03 36 08.2	+0.6
KRLC				*e*		03 36 21.6	
KRLC				*e*		03 36 24.4	
KRLC				MLR	MLR		
	comp=Z,500nm,25.9s						
OKC	Ostrava-Krasne	77.10	346	*e*P	P	03 36 08.4	+0.7
OKC				AMS	AMS	04 10 20.0	
	comp=Z,700nm,23.7s						
OKC	Ostrava-Krasne	77.10	346	*e*P	P	03 36 08.4	+0.7
OKC				MLR	MLR		
	comp=Z,700nm,23.7s						
NEY	Neytrino	77.16	327	⇓*e*P	P	03 36 11.0	+2.6
ZEI	Tsey	77.16	326	*e*P	P	03 36 08.2	-0.2
ZEI				pmax	pmax		
	comp=Z,15nm,0.6s						
MORC	Moravsky Berou	77.25	346	*e*P	P	03 36 08.9	+0.3
KOLS	Kolonicke sedl	77.27	343	*e*P	P	03 36 09.5	+0.8
KOLS	Kolonicke sedl	77.27	343	*e*P	P	03 36 09.5	+0.8
PRA	Prague	77.40	348	AMS	AMS	04 08 30.0	
	comp=Z,500nm,19.3s						
CRVS	Cervenica-Dubn	77.45	343	*e*P	P	03 36 11.0	+1.3
CRVS	Cervenica-Dubn	77.45	343	*e*P	P	03 36 11.0	+1.3
ANN	Anapa	77.46	331	*e*P	P	03 36 08.1	-1.6
ANN				*e**PP	sP	03 36 25.1	-0.8
ANN				*e*		03 46 16.1	
ANN				pmax	pmax		
	comp=Z,31nm,1.1s						
ANN				MLR	MLR		
	comp=Z,683nm,22.0s						
PRU	Pruhonice	77.46	348	*e*P	P	03 36 10.4	+0.7
PRU				AMS	AMS	04 08 30.0	
	comp=Z,500nm,17.7s						
PRU	Pruhonice	77.46	348	*e*P	P	03 36 10.4	+0.7
PRU				MLR	MLR		
	comp=Z,500nm,17.7s						
LANS	Liptovska Anna	77.55	345	*e*P	P	03 36 12.4	+2.1
LANS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LANS	Liptovska Anna	77.55	345	*e*P	P	03 36 12.4	+2.1
UZH	Uzhgorod	77.56	343	d *i*P	P	03 36 10.5	+0.3
UZH				*e*		03 36 23.9	
UZH				*e*		03 36 26.6	
MEM	Membach	77.70	354	P	P	03 36 12.3	+1.3
VRAC	Vranov	77.84	346	⇑P	P	03 36 13.1	+1.2
VRAC	Vranov	77.84	346	*e*P	P	03 36 12.2	+0.3
BUR08	Bucovina Ar. S	77.92	340	IAmb	IAmb	03 36 39.5	
	comp=Z,14nm,0.8s						
BCLA	Clavier	77.94	354	P	P	03 36 13.3	+1.0
	comp=Z,3.1nm,0.7s						
BURAR	Bucovina Array	77.95	340	⇑P	P	03 36 13.2	+0.5
BURAR	Bucovina Array	77.95	340	P	P	03 36 12.9	+0.2

BHOU	Houvegnez	77.96	354	P	P	03 36 15.1	+2.6
TRPA	Tarpa	77.99	342	⇑P	P	03 36 13.8	+1.1
TREC	Trest	78.02	347	eP	P	03 36 13.8	+0.9
TREC				AMS	AMS	04 09 10.0	
	comp=Z,600nm,18.9s						
TREC	Trest	78.02	347	eP	P	03 36 13.8	+0.9
TREC				MLR	MLR		
	comp=Z,600nm,18.9s						
BMRD	Maredsous	78.09	354	P	P	03 36 14.3	+1.1
KRUC	Moravsky	78.11	347	eP	P	03 36 13.5	+0.1
JAVC	Velka Javorina	78.12	346	eP	P	03 36 15.0	+1.5
VYHS	Vyhne	78.29	345	eP	P	03 36 14.3	-0.1
VYHS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
VYHS	Vyhne	78.29	345	eP	P	03 36 14.3	-0.1
DOU	Dourbes	78.30	354	P	P	03 36 15.4	+1.0
KHC	Kasperske Hory	78.43	348	eP	P	03 36 15.0	-0.2
KHC				epP	pP	03 36 25.7	-1.6
KHC				esP	sP	03 36 32.6	+0.7
KHC				AMS	AMS	04 08 20.0	
	comp=Z,600nm,7.4s						
KHC	Kasperske Hory	78.43	348	eP	P	03 36 15.0	-0.2
KHC				e		03 36 25.7	
KHC				e		03 36 32.6	
KHC				MLR	MLR		
	comp=Z,600nm,7.4s						
CCIG	Comitan	78.46	78	IAmb	IAmb	03 36 18.1	
	comp=Z,13nm,0.8s						
AKH	Akhalkalaki	78.52	326	⇓P	P	03 36 17.9	+1.9
ARCR	ARCALIA	78.63	341	⇑P	P	03 36 16.6	+0.3
WLF	Walferdange	78.63	353	P	P	03 36 17.1	+0.8
MODS	Modra-Piesok	78.66	346	eP	P	03 36 17.1	+0.7
MODS				pmax	pmax		
	comp=Z,17nm,1.3s						
MODS	Modra-Piesok	78.66	346	eP	P	03 36 17.1	+0.7
TESR	Tescani	78.69	339	⇓P	P	03 36 17.7	+1.1
GERES	GERESS Array B	78.69	348	P	P	03 36 16.3	-0.4
	comp=Z,2.2nm,0.9s,baz=29,slow=3.0,SNR=9.8						
GERES				LR	LR	04 13 56.9	
	comp=Z,241nm,20.9s,baz=1.0,slow=38						
GERES	GERESS Array B	78.69	348	P	P	03 36 16.2	-0.5
GERES	GERESS Array B	78.69	348	P	P	03 36 16.2	-0.5
BCA	Borcka	79.13	327	⇑P	P	03 36 20.0	+0.8
VRI	Vrincioaia	79.28	339	⇑P	P	03 36 21.1	+1.2
CONA	Conrad Observa	79.30	347	i P	P	03 36 20.7	+0.7
	comp=Z,5.5nm,0.7s,SNR=6.4						
TLCR		79.43	337	⇓P	P	03 36 21.3	+0.6
DOPR	Dopca	79.48	340	⇑P	P	03 36 21.4	+0.4
MOA	Molln	79.60	348	i PcP	P	03 36 23.4	+1.9
	comp=Z,1.3nm,0.5s						
CFR	Carcaliu	79.60	338	⇓P	P	03 36 22.1	+0.5
MLR	Muntele Rosu	79.81	339	⇓P	P	03 36 24.3	+1.4
MLR	Muntele Rosu	79.81	339	IAmb	IAmb	03 36 39.0	
	comp=Z,9.4nm,0.7s						
SIRR	Siria	79.95	342	⇓P	P	03 36 24.2	+0.7
ARSA	Arzberg	80.01	347	i PcP	P	03 36 26.0	+2.2
	comp=Z,4.8nm,0.7s						
VOIR		80.06	340	⇑P	P	03 36 25.4	+1.2
WRAB	Tennant Creek	80.15	220	⇓eP	P	03 36 24.3	-0.4
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WRA	Warramunga Arr	80.16	220	P	P	03 36 24.8	0.0
	comp=Z,5.4nm,0.6s,baz=32,slow=6.2,SNR=12						
WRA	Warramunga Arr	80.16	220	P	P	03 36 24.9	+0.1
ARR	Arges	80.21	340	⇓P	P	03 36 26.6	+1.6
RETA	Reutte	80.38	350	i P	P	03 36 26.3	+0.4
	comp=Z,4.0nm,1.0s						
WATA	Walderalm	80.44	349	i PcP	P	03 36 27.6	+1.3
	comp=Z,7.4nm,0.6s,SNR=7.2						
KBA	Koelnbreinsper	80.47	348	i PcP	P	03 36 27.7	+1.2
	comp=Z,22nm,0.6s						
MOTA	Moosalm	80.48	350	i PcP	P	03 36 27.5	+1.0
	comp=Z,12nm,1.1s						
WTTA	Wattenberg	80.50	349	i P	P	03 36 27.4	+0.8
	comp=Z,12nm,0.6s,SNR=12						
GZR	Gura Zlata	80.57	341	⇓P	P	03 36 27.1	+0.2
BZS	Buzias	80.58	342	⇓P	P	03 36 27.9	+1.0
SQTA	Sankt Quirin	80.59	350	i P	P	03 36 27.5	+0.5
	comp=Z,8.2nm,0.8s						
TBI	Tubuai	80.61	148	eLR	LR	04 01 47.7	
	comp=Z,1µm,24.8s,baz=332						
TBI	Tubuai	80.61	148	eT	T	05 05 02.8	
	comp=Z,8.4nm,0.2s						
SOKA	Soboth	80.64	347	i PcP	P	03 36 28.4	+1.1
	comp=Z,7.2nm,0.5s,SNR=11						
PERS	Pernice	80.67	347	eP	P	03 36 28.1	+0.7
GROS	Grobnik	80.79	347	eP	P	03 36 28.4	+0.3
FETA	Feichten	80.84	350	i P	P	03 36 28.9	+0.5
	comp=Z,4.9nm,0.6s						
OBKA	Obir	80.87	347	i PcP	P	03 36 29.6	+1.0
	comp=Z,12nm,0.6s,SNR=12						
MYKA	Terra Mystica	80.88	348	i PcP	PcP	03 36 34.6	-0.5
	comp=Z,1.1nm,0.4s						
ABTA	Abfaltersbach	80.90	349	i P	P	03 36 29.2	+0.5
	comp=Z,16nm,1.2s						
HUMR	Humele	80.94	340	⇑P	P	03 36 30.5	+1.7
DIKM	Dikmen	80.98	331	⇓P	P	03 36 29.3	+0.2
HYB	Hyderabad	81.10	287	i P	P	03 36 30.0	-0.1
HERR	Herculane	81.13	341	⇓P	P	03 36 30.0	+0.2
MDVR	Moldovita	81.37	342	⇓P	P	03 36 31.8	+0.6
PUNG	Punghina	81.61	341	⇓P	P	03 36 32.5	+0.2
PLVB	Pleven	82.10	339	⇓P	P	03 36 35.4	+0.4
BLY	Banja Luka	82.20	345	⇓P	P	03 36 36.1	+0.6
BLY	Banja Luka	82.20	345	IAmb	IAmb	03 36 38.2	
	comp=Z,41nm,1.7s						
FITZ	Fitzroy Crossi	82.26	228	P	P	03 36 36.8	+0.9
POO	Poona	83.00	291	eP	P	03 36 36.0	-4.1
VTS	Vitosha	83.14	340	⇑P	P	03 36 40.9	+0.3
BNI	Bardonecchia	83.18	352	IAmb	IAmb	03 37 08.1	
	comp=Z,12nm,0.9s						
BRTR	Keskin Array B	83.23	332	P	P	03 36 41.7	+0.6
	comp=Z,3.4nm,0.6s,baz=27,slow=2.3,SNR=29						
BRTR				PP	PP	03 39 54.4	+2.4
	comp=Z,1.3nm,0.8s,baz=16,slow=5.2,SNR=3.8						
BRTR				LR	LR	04 17 05.2	
	comp=Z,111nm,21.6s,baz=346,slow=38						
BRTR	Keskin Array B	83.23	332	P	P	03 36 41.1	0.0
BRTR	Keskin Array B	83.23	332	P	P	03 36 41.0	0.0
AS31	Alice Springs	83.69	218	P	P	03 36 43.9	+0.6
ASAR	Alice Springs	83.69	218	P	P	03 36 43.5	+0.2
	comp=Z,5.5nm,0.7s,baz=18,slow=5.6,SNR=57						
ASAR				LR	LR	04 12 12.3	
	comp=Z,66nm,19.3s,baz=34,slow=34						
ASAR	Alice Springs	83.69	218	P	P	03 36 43.8	+0.5
PDG	Podgorica	84.10	343	⇑P	P	03 36 45.8	+0.5
PDG	Podgorica	84.10	343	P	P	03 36 44.9	-0.3
PDG				IAmb	IAmb	03 36 59.2	
	comp=Z,13nm,0.8s						
SKO	Skopje	84.12	341	i P	P	03 36 46.4	+0.9
STIP	Stip	84.24	341	i P	P	03 36 45.8	-0.3
GAZ	Gaziantep	84.46	328	P	P	03 36 46.8	-0.6
GAZ				IAmb	IAmb	03 36 50.5	
	comp=Z,19nm,0.9s						
VAY	Valandovo	84.52	340	i P	P	03 36 47.3	-0.2
OHR	Ohrid	85.08	342	i P	P	03 36 47.2	-3.2
UOSS	Minazif	87.32	308	P	P	03 37 00.6	-1.0
UOSS				IAmb	IAmb	03 37 26.8	
	comp=Z,8.1nm,0.8s						
STKA	Stephens Creek	88.59	209	P	P	03 37 07.5	+0.4
	comp=Z,1.5nm,0.6s,baz=336,slow=7.1,SNR=5.9						
STKA				LR	LR	04 15 11.1	
	comp=Z,204nm,18.9s,baz=24,slow=34						
ESDC	Sonseca Array	88.98	0	P	P	03 37 08.6	-0.7
	comp=Z,0.9nm,0.6s,baz=359,slow=3.9,SNR=3.8						
TORD	Torodi Ar. Bea	115.22	354	PKP	PKPdf	03 42 55.3	-0.8
	comp=Z,1.4nm,0.6s,baz=353,slow=2.3,SNR=39						
TORD				PKKPbc	PKKPbc	03 53 30.1	+1.2
	comp=Z,1.8nm,0.7s,baz=170,slow=3.7,SNR=5.4						
LPAZ	La Paz	118.54	80	PKP	PKiKP	03 43 02.7	-0.5
	comp=Z,0.6nm,0.6s,baz=242,slow=4.7,SNR=6.0						
LPAZ	La Paz	118.54	80	PKIKP	PKPdf	03 43 00.9	-2.2
LPAZ	La Paz	118.54	80		PKPdf	03 43 00.9	-2.2
DBIC	Dimbokro	121.83	1	PKP	PKiKP	03 43 08.5	-0.5
	comp=Z,3.7nm,0.5s,baz=355,slow=3.2,SNR=17						
TIC	Toumodi	121.86	1	ePKIKP	PKiKP	03 43 09.0	-0.1
TIC	Toumodi	121.86	1	PKIKP	PKiKP	03 43 09.0	-0.1
TIC	Toumodi	121.86	1		PKiKP	03 43 09.0	-0.1
KIC	Kosan Boka	122.14	1	ePKIKP	PKiKP	03 43 09.4	-0.2
	comp=Z,12nm,0.8s						
KIC	Kosan Boka	122.14	1		PKiKP	03 43 09.4	-0.2
LIC	Lamto	122.28	1	ePKIKP	PKiKP	03 43 09.5	-0.4
	comp=Z,33nm,0.8s						
LIC	Lamto	122.28	1		PKiKP	03 43 09.5	-0.4
BDFB	Brasilia	129.79	61	PKP	PKiKP	03 43 24.0	-0.8
	comp=Z,2.1nm,0.6s,baz=142,slow=5.3,SNR=4.1						
BDFB	Brasilia	129.79	61	PKIKP	PKiKP	03 43 24.0	-0.8
CPUP	Villa Florida	132.68	79	PKP	PKiKP	03 43 29.4	-0.8
	comp=Z,1.3nm,0.5s,baz=350,slow=2.0,SNR=7.5						
CPUP				SKPbc	SKPab	03 46 52.4	-2.0
	comp=Z,5.7nm,1.1s,baz=359,slow=4.0,SNR=6.6						
CPUP	Villa Florida	132.68	79		PKiKP	03 43 29.8	-0.4
PLCA	Paso Flores	134.12	104	PKP	PKiKP	03 43 32.0	-0.8
	comp=Z,6.7nm,0.6s,baz=270,slow=2.2,SNR=45						
PLCA				SKPbc	SKPab	03 46 57.6	-2.7
	comp=Z,1.1nm,0.7s,baz=66,slow=2.7,SNR=3.6						
PLCA	Paso Flores	134.12	104		PKiKP	03 43 32.1	-0.7
QSPA	South Pole Qui	141.47	180	PKhKP	PKPpre	03 43 40.0	
	comp=Z,4.1nm,0.7s,baz=144,slow=4.0,SNR=6.7						
QSPA	South Pole Qui	141.47	180	PKPpre	PKPpre	03 43 37.1	
QSPA				PKPdf	PKiKP	03 43 46.5	-0.4
MAW	Mawson	144.81	218	PKP	PKPdf	03 43 49.2	-0.7
	comp=Z,32nm,0.7s,baz=88,slow=3.3,SNR=41						
MAW	Mawson	144.81	218		PKPdf	03 43 49.6	-0.2
LBTB	Lobatse	145.14	309	PKIKP	PKPdf	03 43 52.1	+0.1
LBTB	Lobatse	145.14	309		PKPdf	03 43 52.1	+0.1
EFI	East Falkland	147.07	112	PKP2	PKPbc	03 43 55.1	-1.3
EFI	East Falkland	147.07	112		PKPbc	03 43 55.1	-1.3
BOSA	Boshof	148.29	305	PKPbc	PKiKP	03 44 01.2	-1.0
	comp=Z,5.1nm,0.6s,baz=39,slow=2.5,SNR=25						
SNAA	Sanae	159.97	181	PKPab	PKPab	03 44 51.4	-0.6
VNA3	Neumayer Olymp	160.23	174	PKPab	PKPab	03 44 52.6	-0.5
VNA2	Neumayer--Watz	160.66	177	PKPab	PKPab	03 44 54.7	-0.2
	baz=195,slow=2.6						
VNA1	Neumayer--Stat	160.90	176	PKPab	PKPab	03 44 55.5	-0.4

IDC ***06*** *03:24:35.2±0.8, 57°.51S×23°.38W, h0^{km}, mb4.1/5, mb1 4.3/6, mb1mx4.0/26, mbtmp4.2/6, ML4.4/1, MS3.3/3, Ms1 3.3/3, ms1mx3.0/20, Error ellipse: s-maj=31.4km s-min=23.0km az=56.0*

NEIC ***06*** *03:24:39.5±1.2, 57°.6S±0°.2×23°.5W±0°.3, h31^{km}±5^{km}, mb4.4/11, Error ellipse: s-maj=26.0km s-min=15.9km az=222.0*

ISC 06 03:24:36.3±0.7**, 57°.6S**±0°.1×**23°.4W**±0°.2**, h10**^{km}**, n33, σ1ˢ.66**/33**, mb4.2**/8**, MS3.2**/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	14.55	160	P	Pn	03 28 05.1	+3.1
VNA3	Neumayer Olymp	14.82	163	P	Pn	03 28 07.9	+2.3
VNA2	Neumayer--Watz	14.95	159	P	Pn	03 28 09.7	+2.3
	baz=322,slow=14						
SNAA	Sanae	16.45	157	P	P	03 28 30.1	+0.4
SNAA	Sanae	16.45	157	Pn	P	03 28 30.0	+0.4
	1.4nm,0.3s,baz=328,slow=16,SNR=57						
SNAA				Sn	Sn	03 31 22.3	-6.9
	0.1nm,0.3s,baz=350,slow=19,SNR=2.9						
SNAA	Sanae	16.45	157		Pn	03 28 28.6	+1.7
SNAA				IAmb	IAmb	03 28 35.0	
	comp=Z,14nm,0.6s						
EFI	East Falkland	20.75	272	P	P	03 29 16.8	-0.1
USHA	Ushuaia	24.83	257	LR	LR	03 37 29.9	
	comp=Z,85nm,20.5s,baz=126,slow=31						
QSPA	South Pole Qui	32.60	180	P	P	03 31 09.2	+1.4
	comp=Z,1.3nm,0.5s,baz=48,slow=2.0,SNR=16						
QSPA	South Pole Qui	32.60	180	P	P	03 31 07.7	-0.1
PLCA	Paso Flores	34.31	279	P	P	03 31 22.6	-0.1
	comp=Z,1.2nm,0.9s,baz=201,slow=9.9,SNR=3.0						
PLCA				LR	LR	03 44 12.7	
	comp=Z,35nm,19.9s,baz=171,slow=34						
PLCA	Paso Flores	34.31	279	P	P	03 31 22.3	-0.5
CPUP	Villa Florida	39.43	308	P	P	03 32 06.0	-0.3
	comp=Z,2.1nm,0.7s,baz=154,slow=7.4,SNR=6.6						
CPUP				LR	LR	03 49 06.4	
	comp=Z,41nm,18.9s,baz=162,slow=37						
CPUP	Villa Florida	39.43	308	P	P	03 32 05.9	-0.4
CPUP				IAmb	IAmb	03 32 06.4	
	comp=Z,5.0nm,1.1s						
LVC	Limon Verde	47.89	297	P	P	03 33 14.9	0.0
LVC				IAmb	IAmb	03 33 30.0	
	comp=Z,5.4nm,0.8s						
GO01	Chusmiza	50.55	299	P	P	03 33 33.5	-1.8
GO01				IAmb	IAmb	03 33 52.7	
	comp=Z,3.5nm,1.0s						
LPAZ	La Paz	52.99	302	P	P	03 33 54.4	+0.5
	comp=Z,2.9nm,0.5s,baz=106,slow=5.5,SNR=16						
LPAZ	La Paz	52.99	302	P	P	03 33 52.8	-1.0
LPAZ				IAmb	IAmb	03 33 54.8	
	comp=Z,3.6nm,0.6s						
SAML	Samuel	57.41	311	P	P	03 34 24.5	-0.4
TOA0	Torodi Ar. Sit	73.51	26	P	P	03 36 08.4	-0.6
TOA0				IAmb	IAmb	03 36 10.6	
	comp=Z,2.8nm,0.9s						
TORD	Torodi Ar. Bea	73.51	26	P	P	03 36 08.9	0.0
	comp=Z,1.5nm,0.7s,baz=208,slow=6.7,SNR=12						
TORD	Torodi Ar. Bea	73.51	26	P	P	03 36 09.0	0.0
NVAR	Mina Array Bea	123.91	289	PKP	PKPdf	03 43 34.3	+0.2
	comp=Z,0.3nm,0.6s,baz=114,slow=3.7,SNR=3.5						
NVAR	Mina Array Bea	123.91	289		PKPdf	03 43 34.0	-0.2
FINES	FINESS Array B	124.86	26	PKP	PKPdf	03 43 33.8	-1.1
	comp=Z,0.7nm,0.6s,baz=48,slow=2.1,SNR=3.7						
YKA	Yellowknife Ar	138.76	315	PKP	PKPdf	03 44 00.3	-0.7
	comp=Z,0.9nm,0.7s,baz=125,slow=2.4,SNR=11						
INK	Inuvik	148.37	318	PKPbc	PKPbc	03 44 20.8	-0.4
	baz=67,slow=2.5						
INK	Inuvik	148.37	318	PKPdf	PKPdf	03 44 18.7	+1.1
SONM	Songino Array	148.75	86	PKPbc	PKPbc	03 44 23.3	+0.2
	comp=Z,1.7nm,0.7s,baz=219,slow=2.8,SNR=12						
BCAR	Beaver Creek A	150.11	306	PKPbc	PKPbc	03 44 26.1	+0.3
SCRK	Sand Creek	151.32	308		PKiKP	03 44 29.7	+0.5
ILAR	Eielson Array	152.73	309	PKPbc	PKPbc	03 44 31.8	0.0
	comp=Z,3.0nm,0.9s,baz=132,slow=1.8,SNR=25						
ILAR	Eielson Array	152.73	309		PKiKP	03 44 32.2	+0.3

IDC ***06*** *03:38:03.9±48.0, 23°.28S×176°.63W, h0^{km}, mb4.7/3, mb1 4.8/3, mb1mx4.0/36, mbtmp4.7/3, Error ellipse: s-maj=892.1km s-min=156.2km az=87.0*

NEIC ***06*** *03:38:21.5±1.2, 24°.0S±0°.1×177°.1W±0°.2, h120^{km}±9^{km}, mb4.5/17, Error ellipse: s-maj=28.6km s-min=17.5km az=108.0*

ISC 06 03:38:19.9±2.1**, 24°.0S**±0°.2×**176°.9W**±0°.3**, h120**^{km}**, n24, σ1ˢ.07**/24**, mb4.5**/11**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	5.36	190		Pn	03 39 38.0	+0.4
URZ	Urewera	15.15	198	Pn	P	03 41 47.6	-2.2
LHI	Lord Howe Isla	22.56	245	P	P	03 43 11.9	+1.8
ARMA	Armidale	28.68	250	P	P	03 44 06.7	+0.9
ARMA				IAmb	IAmb	03 44 08.0	
	comp=Z,8.0nm,0.6s						
EIDS	Eidsvold	29.12	261	P	P	03 44 09.2	-0.4
EIDS				IAmb	IAmb	03 44 11.7	
	comp=Z,7.5nm,0.7s						
CAN	Canberra	31.60	241	P	P	03 44 30.9	-0.5
CAN				IAmb	IAmb	03 44 43.5	
	comp=Z,8.3nm,1.1s						
TOO	Toolangi	34.83	238	P	P	03 45 00.1	+0.6
TOO				IAmb	IAmb	03 45 03.8	
	comp=Z,8.1nm,1.1s						
STKA	Stephens Creek	37.36	248	P	P	03 45 21.5	+0.5
	comp=Z,3.1nm,0.4s,baz=96,slow=12,SNR=12						
STKA	Stephens Creek	37.36	248	P	P	03 45 21.1	0.0
COEN	Coen	38.95	277	P	P	03 45 35.0	+0.4
BBOO	Buckleboo	42.05	247	P	P	03 45 58.8	-1.1
AS31	Alice Springs	44.84	260	P	P	03 46 22.5	+0.1
AS31				IAmb	IAmb	03 46 23.6	
	comp=Z,3.8nm,0.5s						
ASAR	Alice Springs	44.84	260	P	P	03 46 22.8	+0.3
	comp=Z,5.4nm,0.4s,baz=89,slow=7.4,SNR=83						
ASAR	Alice Springs	44.84	260	P	P	03 46 22.2	-0.2
WB2	Warramunga Arr	45.24	265	P	P	03 46 26.2	+0.6
WB2				IAmb	IAmb	03 46 27.6	
	comp=Z,9.7nm,0.8s						
WB0	Warramunga Arr	45.25	265	P	P	03 46 25.9	+0.3
WB0				IAmb	IAmb	03 46 27.6	
	comp=Z,9.1nm,0.8s						
WRA	Warramunga Arr	45.25	265	P	P	03 46 26.2	+0.6
	comp=Z,3.6nm,0.3s,baz=102,slow=7.9,SNR=12						
FORT	Forrest	48.97	249	P	P	03 46 52.8	-1.6
MTN	Manton Dam	50.31	273	P	P	03 47 06.0	+1.3
MTN				IAmb	IAmb	03 47 13.6	
	comp=Z,4.5nm,0.8s						
KNRA	Kununurra	51.55	269	P	P	03 47 14.0	+0.1
FITZ	Fitzroy Crossi	53.67	265	P	P	03 47 30.1	+0.5
VNDA	Vanda	54.58	186	P	P	03 47 37.2	+1.9
KSAR	Wonju Array Be	80.17	318	P	P	03 50 15.6	-1.3
SONM	Songino Array	99.03	318	P	Pdif	03 51 48.6	+1.5

IDC ***06*** *03:48:30.2±2.4, 36°.30N×139°.08E, h139^{km}±9^{km}, mb3.0/2, mb1 3.3/2, mb1mx2.8/39, mbtmp3.4/2, Error ellipse: s-maj=68.3km s-min=28.4km az=62.0*

JMA ***06*** *03:48:31.6±0.1, 36°.25N×139°.00E, h138^{km}±1^{km}, M3.1*

ISC 06 03:48:31.1±1.1**, 36°.25N**±0°.07×**138°.96E**±0°.08**, h142**^{km}±7^{km}**, n13, σ0ˢ.57**/21**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JRY	Ryogami san	0.24	192	P	Pn	03 48 50.9	+0.4
JRY				S	Sn	03 49 05.4	+0.2
JAG	Ashikaga	0.43	66	P	Pn	03 48 51.2	+0.1
JAG				S	Sn	03 49 05.8	-0.6
JKT	Katashina	0.56	24	P	Pn	03 48 52.2	+0.3
JKT				S	Sn	03 49 07.7	-0.1
MJAR	Matsushiro Arr	0.67	296	P	Pn	03 48 52.3	-0.2
	11nm,0.3s,baz=98,slow=5.7,SNR=514						
MJAR				S	Sn	03 49 08.8	0.0
	3.1nm,0.3s,baz=132,slow=19,SNR=14						
MAT	Matsushiro	0.67	296	P	Pn	03 48 52.6	+0.1
MAT				S	Sn	03 49 08.8	0.0
MAT	Matsushiro	0.67	296	P	Pn	03 48 52.6	+0.1
MAT				S	Sn	03 49 08.8	0.0
JYN	Shimob	0.83	204	P	Pn	03 48 53.9	+0.2
JYN				S	Sn	03 49 11.4	+0.5
JOD2	Odawara 2	0.99	174	P	Pn	03 48 54.8	-0.2
JOD2				S	Sn	03 49 12.6	-0.6
JFNN	Fujinakano	1.08	192	P	Pn	03 48 57.2	+1.4
JFT	Otama	1.68	41	P	Pn	03 49 03.1	+1.1
JYTA	Yamagatataniai	1.92	251	P	Pn	03 49 05.5	+0.7
MKAR	Makanchi Array	42.87	302	P	P	03 56 15.1	-0.2
	0.3nm,0.5s,baz=85,slow=7.9,SNR=5.8						
WRA	Warramunga Arr	56.06	185	P	P	03 57 54.9	-0.5
	0.2nm,0.5s,baz=360,slow=7.5,SNR=3.1						

IDC ***06*** *03:48:47.1±0.6, 26°.66N×44°.45W, h0^{km}, mb4.1/16, mb1 4.3/16, mb1mx4.0/42, mbtmp4.1/16, MS4.1/14, Ms1 4.1/14, ms1mx3.8/37, Error ellipse: s-maj=18.9km s-min=15.5km az=129.0*

NEIC ***06*** *03:48:47.7±1.8, 26°.4N±0°.1×44°.46W±0°.09, h10^{km}±1^{km}, mb4.6/28, Error ellipse: s-maj=23.8km s-min=3.7km az=145.0*

GCMT ***06*** *03:48:49.7±0.2, 26°.85N±0°.03×44°.41W±0°.02, h12^{km}±1^{km}, MW4.9/108, Moment Tensor Solution. s25,c27; s108,c144; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.45±.14; M$_{\theta\theta}$0.28±.09; M$_{\phi\phi}$2.17±.10; M$_{r\theta}$0.32±.28; M$_{\theta\phi}$0.88±.05; M$_{\phi r}$-0.96±.23; Best double couple: M$_0$2.67900×10^{16} NP1:φ$_s$215.00000°,δ38.00000°, λ-68.00000°. NP2:φ$_s$8.00000°,δ55.00000°,λ-106.00000°. Principal axes: T 2.6360, Plg9.0000°, Azm109.0000°; N 0.0850, Plg13.0000°, Azm17.0000°; P -2.7230, Plg74.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 03:48:48.3±0.5**, 26°.57N**±0°.09×**44°.5W**±0°.1**, h11**^{km}**, n64, σ0ˢ.97**/48**, mb4.4**/25**, MS4.1**/14**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDPR	Patillas Dam,	21.65	251	P	P	03 53 38.8	0.0
PDPR				IAmb	IAmb	03 53 46.0	
	comp=Z,36nm,1.1s						
SJG	San Juan	21.71	252	P	P	03 53 40.1	+0.6
	comp=Z,6.2nm,0.6s,baz=56,slow=7.3,SNR=3.1						
SJG				LR	LR	04 00 12.1	
	comp=Z,400nm,21.5s,baz=83,slow=32						
SJG	San Juan	21.71	252	P	P	03 53 39.9	+0.4
SJG				IAmb	IAmb	03 53 47.0	
	comp=Z,38nm,1.2s						
LGNH	Logne	27.14	259	P	P	03 54 31.2	-0.4
PTGA	Pitinga	30.98	211	P	P	03 55 05.7	-0.1
PTGA				IAmb	IAmb	03 55 08.9	
	comp=Z,9.3nm,1.1s						
SCHQ	Schefferville	32.64	336	LR	LR	04 07 50.0	
	comp=Z,325nm,19.7s,baz=338,slow=35						
ESDC	Sonseca Array	36.07	58	LR	LR	04 07 34.7	
	comp=Z,141nm,19.1s,baz=120,slow=31						
SAML	Samuel	39.70	210	P	P	03 56 19.5	-1.2
BDFB	Brasilia	42.10	185	P	P	03 56 41.9	+1.3
	comp=Z,4.0nm,0.9s,baz=354,slow=16,SNR=6.0						
BDFB				LR	LR	04 12 12.7	
	comp=Z,190nm,19.6s,baz=4.3,slow=33						
DBIC	Dimbokro	42.57	111	LR	LR	04 11 37.8	
	comp=Z,489nm,20.3s,baz=302,slow=32						
H10N2	ASCENSION HYDR	44.90	135	T	T	04 44 59.6	
	baz=320,slow=75,SNR=167						
H10N3	ASCENSION HYDR	44.91	135	T	T	04 44 59.6	
	baz=320,slow=75,SNR=224						
H10N1	ASCENSION HYDR	44.92	135	T	T	04 45 00.9	
	baz=320,slow=75,SNR=195						
TORD	Torodi Ar. Bea	45.20	98	P	P	03 57 06.2	+0.5
	comp=Z,1.2nm,1.0s,baz=294,slow=6.0,SNR=4.3						
TORD				LR	LR	04 15 13.7	
	comp=Z,584nm,18.4s,baz=315,slow=35						
ULM	Lac du Bonnet	45.58	315	P	P	03 57 08.2	-0.1
	comp=Z,1.3nm,0.7s,baz=71,slow=6.3,SNR=3.0						
ULM				LR	LR	04 13 42.8	
	comp=Z,281nm,20.8s,baz=100,slow=33						
ULM	Lac du Bonnet	45.58	315	P	P	03 57 07.6	-0.6
ULM				IAmb	IAmb	03 57 21.7	
	comp=Z,11nm,1.2s						
H10S3	ASCENSION HYDR	45.66	137	T	T	04 45 53.4	
	baz=320,slow=74,SNR=159						
H10S2	ASCENSION HYDR	45.68	137	T	T	04 45 54.7	
	baz=260,slow=74,SNR=250						
WMOK	Wichita Mounta	46.94	294	P	P	03 57 19.3	+0.1
WMOK				IAmb	IAmb	03 57 33.6	
	comp=Z,7.5nm,1.2s						
LPAZ	La Paz	48.41	211	P	P	03 57 32.5	+1.1
	comp=Z,6.5nm,0.9s,baz=37,slow=10,SNR=14						
LPAZ	La Paz	48.41	211	P	P	03 57 30.3	-1.0
LPAZ				IAmb	IAmb	03 57 35.8	
	comp=Z,7.1nm,0.9s						
CLL	Collm	49.57	44	eP	P	03 57 40.0	+0.8
CLL				e		03 57 48.0	
KHC	Kasperske Hory	49.71	47	eP	P	03 57 44.0	+3.6
GERES	GERESS Array B	49.77	47	P	P	03 57 39.9	-1.0
	comp=Z,0.5nm,0.6s,baz=260,slow=6.6,SNR=4.2						
GERES	GERESS Array B	49.77	47	P	P	03 57 40.9	0.0
FFC	Flin Flon	50.09	320	P	P	03 57 43.9	+0.8
NOA	NORSAR Array B	50.63	31	LR	LR	04 15 39.6	
	comp=Z,139nm,19.4s,baz=40,slow=32						
GO01	Chusmiza	51.84	210	P	P	03 57 55.2	-2.0
TXAR	Lajitas Array	51.87	288	LR	LR	04 20 52.2	
	comp=Z,28nm,18.7s,baz=0.0,slow=37						
PB11	IPOC Station P	52.13	210	P	P	03 57 57.9	-1.0
RES	Resolute Bay	54.51	345	P	P	03 58 15.8	+0.1
	comp=Z,2.7nm,1.0s,baz=75,slow=5.2,SNR=7.7						
RES	Resolute Bay	54.51	345	P	P	03 58 16.1	+0.5
PD31	Pinedale Array	54.62	305	P	P	03 58 16.9	-0.4
PDAR	Pinedale Array	54.62	305	P	P	03 58 18.2	+0.9
	comp=Z,1.1nm,0.8s,baz=112,slow=5.2,SNR=9.7						
PDAR				LR	LR	04 19 11.6	
	comp=Z,266nm,21.7s,baz=92,slow=33						
YKA	Yellowknife Ar	57.63	329	P	P	03 58 38.1	0.0
	comp=Z,2.3nm,0.9s,baz=93,slow=7.8,SNR=20						
YKA				LR	LR	04 22 01.9	
	comp=Z,598nm,21.2s,baz=0.0,slow=35						
FINES	FINESS Array B	57.77	32	P	P	03 58 38.7	-0.4
	comp=Z,1.9nm,0.8s,baz=308,slow=6.8,SNR=3.7						
ARCES	ARCESS Array B	58.38	23	P	P	03 58 43.6	+0.3
	comp=Z,4.9nm,1.0s,baz=246,slow=9.1,SNR=6.7						
ARCES				LR	LR	04 18 09.0	
	comp=Z,81nm,19.7s,baz=169,slow=30						
MFID	Camas Ranch	59.11	306	P	P	03 58 48.2	-0.8
MFID				IAmb	IAmb	03 59 04.4	
	comp=Z,4.3nm,1.0s						
NEW	Newport	59.36	312	IAmb	IAmb	03 59 03.0	
	comp=Z,6.1nm,1.1s						
AKASG	Malin Array Be	59.79	45	P	P	03 58 52.9	-0.5
	comp=Z,0.7nm,0.4s,baz=275,slow=5.9,SNR=9.5						
AKASG	Malin Array Be	59.79	45	P	P	03 58 52.6	-0.7
BR131	Keskin Array S	64.83	57	P	P	03 59 26.6	-1.0
BR131				IAmb	IAmb	03 59 36.8	
	comp=Z,3.5nm,0.9s						

BRTR	Keskin Array B	64.83	57	P	P	03 59 27.9	+0.3
	comp=Z,1.4nm,0.8s,baz=297,slow=5.4,SNR=6.7						
BRTR	Keskin Array B	64.83	57	P	P	03 59 26.5	-1.0
INK	Inuvik	65.25	336	P	P	03 59 29.7	+0.2
INK				IAmb	IAmb	03 59 32.8	
	comp=Z,4.6nm,1.1s						
BMAR	Burnt Mountain	69.52	336	P	P	03 59 57.3	+0.6
BCAR	Beaver Creek A	69.86	331	P	P	03 59 58.4	-0.5
KBZ	Khabaz	70.36	50	P	P	04 00 03.1	+0.9
	comp=Z,0.9nm,0.8s,baz=270,slow=7.1,SNR=2.8						
PLCA	Paso Flores	71.21	201	P	P	04 00 08.6	+1.4
	comp=Z,1.8nm,0.9s,baz=30,slow=11,SNR=5.0						
PLCA	Paso Flores	71.21	201	P	P	04 00 07.0	-0.2
PLCA				IAmb	IAmb	04 00 21.2	
	comp=Z,6.7nm,1.1s						
IL31		71.36	334	IAmb	IAmb	04 00 14.9	
	comp=Z,6.3nm,1.0s						
ILAR	Eielson Array	71.36	334	P	P	04 00 08.1	+0.2
	comp=Z,2.8nm,0.8s,baz=78,slow=4.4,SNR=28						
ILAR	Eielson Array	71.36	334	P	P	04 00 07.9	0.0
CCB	Clear Creek Bu	71.78	334	P	P	04 00 10.6	+0.2
CCB				IAmb	IAmb	04 00 17.4	
	comp=Z,6.0nm,1.1s						
WRH	Wood River Hil	71.96	334	P	P	04 00 11.7	+0.2
IMAR	Indian Mountai	73.44	336	P	P	04 00 20.9	+0.6
KTH	Kantishna Hill	73.48	333	P	P	04 00 20.5	-0.2
KTH				IAmb	IAmb	04 00 24.7	
	comp=Z,7.3nm,1.0s						
RDOG	Red Dog Mine	75.40	340	P	P	04 00 32.1	+0.4
TIXI	Tiksi	81.94	2	P	P	04 01 07.8	+0.2
RPN	Rapa Nui	82.10	235	LR	LR	04 37 27.0	
	comp=Z,274nm,19.0s,baz=168,slow=36						
KSH	Kashi	93.97	42	P	P	04 02 04.1	-2.5
KSH				pP	pP	04 02 09.6	+0.3
KSH	Kashi	93.97	42	S	S	04 13 06.6	-11
KSH	Kashi	93.97	42	SS	SS	04 19 31.0	-4.4
PETK	Petropavlovsk-	98.34	347	LR	LR	04 49 07.6	
	comp=Z,80nm,19.8s,baz=61,slow=37						

IDC 06 03:50:53.0±11.0, 25°.51N×44°.80W, h0^{km}, mb3.7/4, mb1 3.9/4, mb1mx3.5/42, mbtmp3.7/4, Error ellipse: s-maj=319.9km s-min=36.9km az=11.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YKA	Yellowknife Ar	58.38	329	P	P	04 00 49.4	-0.5
	0.6nm,0.9s,baz=96,slow=7.1,SNR=4.4						
AKASG	Malin Array Be	60.74	44	P	P	04 01 06.3	-0.1
	0.3nm,0.4s,baz=262,slow=7.0,SNR=5.1						
BRTR	Keskin Array B	65.65	56	P	P	04 01 39.5	+0.1
	0.7nm,0.8s,baz=286,slow=6.8,SNR=3.0						
ILAR	Eielson Array	72.19	334	P	P	04 02 20.1	+0.6
	0.8nm,0.9s,baz=69,slow=4.8,SNR=4.3						

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*UPA **06** 03:56:31.7±1.4, 7°.11N×79°.55W, h24^{km}±14^{km}, MW3.8*
*RSNC **06** 03:56:35.6±1.0, 6°.92N×79°.12W, h0^{km}±9^{km}, ML2.9*
ISC 06 03:56:29.8±1.5, 7°.00N±0°.05×79°.59W±0°.04, h25^{km}±17^{km}, n27, σ1^{s}93/53, 10C-1D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AZU	Azuero	1.04	320	⇑*i*P	Pn	03 56 48.6	-0.2
AZU				*e*S	Sb	03 57 01.0	-1.3
AZU				*i*		03 57 04.3	
	comp=Z,2µm,0.3s						
AZU	Azuero	1.04	320	⇑*i*P	Pn	03 56 48.6	-0.2
AZU				*e*S	Sb	03 57 01.1	-1.3
CACAO	El Cacao, Vera	1.30	285	*e*P	Pn	03 56 53.9	+1.5
CACAO				*e*S	Sn	03 57 10.0	+0.9
VTON	El Valle, Cocl	1.68	342	⇑*i*P	Pn	03 56 57.7	-0.1
VTON				*e*S	Sn	03 57 17.2	-1.4
PTAC	Punta Ardita,	1.78	85	*e*P	Pn	03 56 58.7	-0.3
PTAC				*e*S	Sn	03 57 17.1	-3.6
PTAC				*i*		03 57 20.8	
	comp=Z,425nm,0.3s						
PTAC	Punta Ardita,	1.78	85	*e*P	Pn	03 56 58.7	-0.3
PTAC				*e*S	Sn	03 57 17.1	-3.6
GMAL	Guarumal, Vera	1.79	295	*e*P	Pb	03 57 01.9	-0.1
GMAL				*e*S	Sb	03 57 24.7	+0.6
CHOR3	La Chorrera	1.90	355	⇓*i*P	Pn	03 57 01.2	+0.6
CHOR3				*e*S	Sn	03 57 22.9	-0.8
FLAM	Flamenco Islan	1.90	2	*e*P	Pn	03 57 00.8	0.0
FLAM				*e*S	Sn	03 57 21.3	-2.6
ZANG	Zanguenga, Cho	1.96	352	*e*P	Pn	03 57 02.2	+0.6
ZANG				*e*S	Sn	03 57 24.5	-0.9
UPA	Univ. de Panam	1.97	2	⇑*i*P	Pn	03 57 01.8	+0.1
UPA				*e*S	Sn	03 57 23.5	-2.1
BCIP	Isla Barro Col	2.17	354	⇑*i*P	Pn	03 57 05.6	+1.2
BCIP				*e*S	Sn	03 57 30.8	+0.3
UPD2	Meteti	2.19	45	*e*P	Pn	03 57 05.7	+1.0
UPD2				*e*S	Sn	03 57 30.9	-0.2
UPD2				*i*		03 57 39.6	
	comp=Z,164nm,0.4s						
UPD2	Meteti	2.19	45	*e*P	Pn	03 57 05.8	+1.1
UPD2				*e*S	Sn	03 57 31.9	+0.9
CHPO	Chepo, Panama	2.21	12	⇑*i*P	Pn	03 57 05.3	+0.4
CHPO				*e*S	Sn	03 57 28.6	-2.8
FRIJ	El Hiral	2.21	357	⇑*i*P	Pn	03 57 06.1	+1.1
MLIR	Monte Lirio	2.24	353	⇑*i*P	Pn	03 57 06.9	+1.5
MLIR				*e*S	Sn	03 57 33.7	+1.4
SOLC	Bahia Solano	2.30	109	⇑*e*P	Pn	03 57 07.1	+1.0
SOLC				*e*S	Sn	03 57 31.9	-1.8
SOLC	Bahia Solano	2.30	109	⇑*e*P	Pn	03 57 07.1	+1.0
SOLC				*e*S	Sn	03 57 31.9	-1.8
CAPC	Capurgana	2.75	54	*e*P	Pn	03 57 14.9	+2.5
CAPC				*e*S	Sn	03 57 47.8	+2.9
CAPC				*i*		03 57 51.5	
	comp=Z,51nm,0.3s						
CAP2	Capurgana	2.76	53	*e*P	Pn	03 57 15.1	+2.7
CAP2				*e*S	Sn	03 57 46.1	+1.1
CBOC	Ciudad Bolivar	3.73	107	*e*P	Pn	03 57 27.8	+1.8
CBOC				*e*S	Sn	03 58 06.9	-2.4
CBOC				*i*		03 58 17.8	
	comp=Z,6.8nm,0.4s						
UREC	San Jos de Ur	4.10	79	*e*P	Pn	03 57 33.7	+2.8
UREC				*e*S	Sn	03 58 17.6	-0.5
UREC				*i*		03 58 22.6	
	comp=Z,9.7nm,0.3s						
ZARC	Zaragoza, Cauc	4.72	84	*e*P	Pn	03 57 42.4	+2.8
ZARC				*e*S	Sn	03 58 31.4	-2.1
ZARC				*i*		03 58 37.4	
	comp=Z,11nm,0.4s						
PTBC	PUERTO BERRIO,	5.12	95	*e*P	Pn	03 57 48.4	+3.4
PTBC				*e*S	Sn	03 58 41.5	-1.9
SJCC	San Jacinto, C	5.23	56	*e*P	Pn	03 57 49.8	+3.3
SJCC				*e*S	Sn	03 58 43.1	-3.0
SJCC				*i*		03 59 05.5	
	comp=Z,2.1nm,0.5s						
SJCC	San Jacinto, C	5.23	56	*e*P	Pn	03 57 49.8	+3.3
SJCC				*e*S	Sn	03 58 43.1	-3.0

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*CNRM **06** 04:01:06.3±0.7, 32°.66N×7°.65W, h10^{km}±6^{km}, Error ellipse: s-maj=8.0km s-min=3.4km az=134.0*
*INMG **06** 04:01:08.8±1.9, 32°.76N×7°.61W, h8^{km}±10^{km}, MD2.3, ML2.2, Error ellipse: s-maj=8.5km s-min=4.9km az=124.0*
*MDD **06** 04:01:08.4±2.7, 32°.83N×7°.26W, h0^{km}, mb3.3/5, Error ellipse: s-maj=32.6km s-min=21.7km az=76.0, PRXIMO SOLUCIN POBRE*
*SFS **06** 04:01:08.0, 32°.84N×7°.34W, ML2.6, SETTAT (MARRUECOS)*
*IGIL **06** 04:01:10.0, 32°.84N×7°.38W, h0^{km}, ML2.1*
ISC 06 04:01:07.8±1.1, 32°.76N±0°.02×7°.58W±0°.03, h25^{km}±11^{km}, n37, σ1^{s}54/68, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRHM	Skhour des Reh	0.39	223	P	Pb	04 01 16.2	0.0
SRHM				S	Sb	04 01 22.8	+0.7
AVE	Averroes	0.56	15	P	Pb	04 01 19.5	+0.5
AVE				S	Sn	04 01 30.0	+1.3
AVE	Averroes	0.56	15	*e*P	Pb	04 01 19.6	+0.6
AVE				*e*S	Sb	04 01 25.4	-1.2
OUK	Oukaimeden	1.56	189	P	Pn	04 01 33.9	-0.4
OUK				S	Sn	04 01 54.9	+0.9
EAH	EAH	2.03	237	P	Pn	04 01 39.2	-1.2
EAH				S	Sn	04 02 03.4	-1.5
CZD	Col de Zad	2.15	82	P	Pn	04 01 43.7	+1.4
CZD				S	Sb	04 02 10.6	-2.1
TTIG	Tnine Tigouga,	2.32	199	P	Pn	04 01 44.4	-0.1
TTIG				S	Sn	04 02 11.9	-0.5
MD31	MD31	2.38	87	P	Pn	04 01 45.0	-0.2
MD31				S	Sb	04 02 16.5	-2.5
MDT	Midelt	2.51	88	P	Pn	04 01 47.0	0.0
MDT				S	Sn	04 02 17.8	+0.9
TZRR	Tazzarine	2.61	138	P	Pn	04 01 49.6	+1.2
TZRR				S	Sn	04 02 20.4	+1.0
ZGR	Zagora	3.12	147	P	Pn	04 01 54.9	-0.6
ZGR				S	Sn	04 02 33.5	+1.5
ARF	Arif	3.14	114	P	Pn	04 01 58.8	+3.0
ARF				S	Sn	04 02 34.8	+2.2
PFVI	Vila Bisbo	4.48	347	Sn	Sn	04 03 06.2	+0.7
	2.1nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	4.48	347	*e*Sn	Sn	04 03 06.1	+0.7
PFVI				A	A	04 03 09.0	
	2.8nm,0.3s						
PBDV	Barranco-do-Ve	4.49	356	Pn	Pn	04 02 16.2	+2.0
PBDV				Sn	Sn	04 03 05.5	0.0
	2.1nm,0.7s						
PBDV	Barranco-do-Ve	4.49	356	*e*Pn	Pn	04 02 16.2	+2.0
PBDV				*e*Sn	Sn	04 03 05.5	0.0
PBDV				A	A	04 03 09.6	
	2.1nm,0.7s						
MORF	Marmelete	4.62	349	*e*P	Pn	04 02 18.3	+2.2
MORF				*e*S	Sn	04 03 08.5	-0.4
MORF				AML	AML	04 03 13.0	
	comp=N,4.4nm,0.3s						
MORF	Marmelete	4.62	349	Pn	Pn	04 02 18.4	+2.3
MORF				Sn	Sn	04 03 10.3	+1.3
	comp=N,3.8nm,0.2s						
MORF	Marmelete	4.62	349	*e*Pn	Pn	04 02 18.4	+2.3
MORF				*e*Sn	Sn	04 03 10.3	+1.3
MORF				A	A	04 03 13.1	
	comp=N,3.8nm,0.2s						
PVAQ	Vaqueiros	4.64	359	Pn	Pn	04 02 17.9	+1.7
PVAQ				Sn	Sn	04 03 08.1	-1.2
	comp=N,2.2nm,0.5s						
PVAQ	Vaqueiros	4.64	359	*e*Pn	Pn	04 02 17.9	+1.7
PVAQ				*e*Sn	Sn	04 03 08.1	-1.2
PVAQ				A	A	04 03 10.5	
	comp=N,2.2nm,0.5s						
TDRA	Tendrara	4.68	85	P	Pn	04 02 16.5	-0.5
TDRA				S	Sn	04 03 11.5	+0.9
EGRO	El Granado	4.77	1	Pn	Pn	04 02 19.5	+1.5
	comp=N,0.6nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	04 03 11.6	-0.8
	comp=N,0.2nm,0.2s,SNR=7.9						
PTEO	Sao Teotonio	4.87	349	Pn	Pn	04 02 21.2	+1.8
PTEO				Sn	Sn	04 03 16.0	+1.1
PTEO	Sao Teotonio	4.87	349	*e*Pn	Pn	04 02 21.2	+1.8
PTEO				*e*Sn	Sn	04 03 16.0	+1.1
PCVE	Castro Verde	4.88	356	Pn	Pn	04 02 21.4	+1.8
PCVE				Sn	Sn	04 03 14.8	-0.4
	comp=N,3.4nm,0.6s						
PCVE	Castro Verde	4.88	356	*e*Pn	Pn	04 02 21.4	+1.8
PCVE				*e*Sn	Sn	04 03 14.8	-0.4
PCVE				A	A	04 03 16.2	
	comp=N,3.4nm,0.6s						
EMIN	Mina Concepcio	5.05	8	Pn	Pn	04 02 23.2	+1.3
	comp=N,0.2nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	04 03 17.6	-2.0
	comp=N,0.6nm,0.1s,SNR=7.9						
MESJ	Messejana	5.10	354	*e*P	Pn	04 02 24.5	+2.0
MESJ				*e*S	Sn	04 03 19.2	-1.4
MESJ				AML	AML	04 03 23.5	
	comp=E,2.5nm,0.3s						
MESJ	Messejana	5.10	354	Pn	Pn	04 02 24.5	+2.0
MESJ				Sn	Sn	04 03 19.2	-1.4
	comp=E,2.5nm,0.3s						
PNCL	Nicolau / Gran	5.40	352	Sn	Sn	04 03 27.6	-0.4
	comp=E,1.9nm,0.8s						
PNCL	Nicolau / Gran	5.40	352	*e*Sn	Sn	04 03 27.6	-0.4
PNCL				A	A	04 03 30.0	
	comp=E,1.9nm,0.8s						
ECAB	El Cabril	5.59	18	Pn	Pn	04 02 29.1	-0.3
	comp=E,0.1nm,0.2s,SNR=7.9						
ECAB				Sn	Sn	04 03 28.8	-4.1
	comp=E,0.3nm,0.1s,SNR=7.9						
EADA	Adamuz	5.93	24	Pn	Pn	04 02 34.7	+0.7
	comp=E,0.1nm,0.1s,SNR=7.9						
EADA				Sn	Sn	04 03 37.4	-3.8
	comp=E,0.1nm,0.2s,SNR=7.9						
EBAD	Badajoz	6.00	4	Pn	Pn	04 02 35.0	0.0
	comp=E,0.8nm,0.3s,SNR=7.9						
EBAD				Sn	Sn	04 03 40.9	-2.0
	comp=E,0.0nm,0.3s,SNR=7.9						
PMTG	Montargil	6.32	355	Sn	Sn	04 03 50.2	-0.5
	comp=E,1.4nm,0.7s						
PMTG	Montargil	6.32	355	*e*Sn	Sn	04 03 50.2	-0.5
PMTG				A	A	04 03 53.5	
	comp=E,1.4nm,0.7s						

UCR 06 04:11:12.8±0.9, 9°.87N×85°.64W, h10^{km}, MD3.6, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUAI	GUAI	0.42	18	*i* P	Pg	04 11 21.3	+0.2
GUAI				*i* S	Sb	04 11 28.0	-0.9
PLVR	Palo Verde	0.56	31	*e*P	Pg	04 11 23.6	-0.2
PLVR				*e*S	Sb	04 11 32.3	-0.6
NY14	Universidad de	0.79	8	*i* P	Pg	04 11 28.0	0.0
JTS	Las Juntas de	0.80	58	*e*P	Pg	04 11 27.1	-1.2
JTS				*e*S	Sg	04 11 38.9	+0.2
LIM1	Limonal	0.91	25	*i* S	Sb	04 11 42.8	-0.2
CUI	Cuipilapa	0.92	31	*e*P	Pg	04 11 29.7	-0.8
CUI				*e*S	Sb	04 11 43.4	+0.2
ACAL	Aguas Claras	0.97	38	*i* P	Pg	04 11 30.5	-1.0
ACAL				*i* S	Sb	04 11 44.6	0.0
MESS	Mesas	0.97	27	*i* P	Pg	04 11 30.2	-1.4
GB1A	Borinquen Arri	0.98	14	*e*P	Pg	04 11 30.6	-1.0

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*JMA **06** 04:17:17.3±0.1, 38°.60N×142°.17E, h37^{km}±1^{km}, M3.3*
*IDC **06** 04:17:30.7±14.0, 38°.90N×140°.57E, h81^{km}±58^{km}, mb3.2/2, mb1 3.2/4, mb1mx2.9/48, mbtmp3.4/4, ML2.1/2, Error ellipse: s-maj=222.0km s-min=40.4km az=82.0*
ISC 06 04:17:15.4±2.8, 38°.64N±0°.06×142°.3E±0°.1, h28^{km}±13^{km}, n15, σ1^{s}23/24, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.64	314	P	Pn	04 17 29.7	+1.1
OFUJ				S	Sn	04 17 38.1	+0.2
JKMT	Kesennumamotoy	0.64	286	P	Pn	04 17 29.1	+0.5
JKMT				*e*S	Sb	04 17 37.3	+0.5
JIKH	Ishinomakikobu	0.71	243	P	Pn	04 17 29.5	0.0
JIKH				S	Sb	04 17 37.9	-0.7
JIO	Ouri	0.74	256	P	Pb	04 17 30.0	+0.2
JIO				S	Sb	04 17 38.9	-0.6
JMK	Ichinoseki	0.88	291	P	Pn	04 17 32.6	+0.8
JMK				*e*S	Sb	04 17 43.5	+0.2
JOU	Okura	1.29	258	P	Pn	04 17 38.3	+0.8
JOU				S	Sn	04 17 53.5	-0.3
JMM	Marumori	1.39	237	P	Pn	04 17 39.0	+0.1
JMM				*e*S	Sn	04 17 55.7	-0.7
JRG	Rokugo	1.48	301	P	Pb	04 17 41.9	-0.3
JYK	Kaneyama	1.52	281	P	Pb	04 17 42.2	-0.7
JYK				*e*S	Sn	04 18 00.0	+0.6
JFK	Kawauchi	1.68	221	P	Pn	04 17 42.9	0.0
JFK				*e*S	Sn	04 18 02.8	-0.7
MJAR	Matsushiro Arr	3.84	238	P	Pn	04 18 16.3	+3.6
	0.5nm,0.3s,baz=43,slow=11,SNR=16						
MAT	Matsushiro	3.84	238	P	Pn	04 18 14.9	+2.2
USRK	Ussuriysk Ar.	9.51	309	P	Pn	04 19 28.3	-2.0
	baz=130,slow=14,SNR=3.2						
MKAR	Makanchi Array	43.86	301	P	P	04 25 17.7	-1.3
	0.2nm,0.5s,baz=88,slow=9.8,SNR=3.6						
KURBB	Kurchatov Arra	45.56	307	P	P	04 25 32.9	+0.4
	1.1nm,0.6s,baz=80,slow=8.3,SNR=8.7						

IDC 06 04:21:01.3±1.2, 14°.64S×166°.72E, h0^{km}, mb3.7/5, mb1 3.9/5, mb1mx3.6/31, mbtmp3.7/5, MS3.4/2, Ms1 3.4/2, ms1mx2.8/36, Error ellipse: s-maj=45.7km s-min=30.3km az=136.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.39	182	LR	LR	04 25 17.0	
	comp=Z,154nm,19.2s,baz=28,slow=35						
WRA	Warramunga Arr	31.33	256	P	P	04 27 23.5	-0.2
	0.5nm,0.9s,baz=83,slow=8.6,SNR=3.8						
ASAR	Alice Springs	32.20	249	P	P	04 27 31.1	-0.4
	0.3nm,0.7s,baz=69,slow=10,SNR=3.8						
QSPA	South Pole Qui	75.38	180	P	P	04 32 46.7	0.0
	1.0nm,0.8s,baz=267,slow=1.1,SNR=5.3						
YBH	Yreka Blue Hor	85.73	45	LR	LR	05 02 58.2	
	comp=Z,46nm,21.4s,baz=336,slow=29						
ILAR	Eielson Array	86.61	18	P	P	04 33 45.5	-0.7
	0.5nm,0.7s,baz=238,slow=5.5,SNR=11						
MKAR	Makanchi Array	96.77	316	P	P	04 34 35.0	+1.0
	0.2nm,0.5s,baz=93,slow=4.9,SNR=2.9						
ARCES	ARCESS Array B	120.03	345	PKP	PKiKP	04 39 53.7	+0.1
	2.5nm,0.9s,baz=77,slow=1.9,SNR=5.2						

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*VAO **06** 04:36:59.9±0.4, 33°.27S×71°.16W, h10^{km}, mb5.7*
*SJA **06** 04:37:02.2±0.8, 33°.23S×71°.77W, h55^{km}±10^{km}, ML5.1, MW4.9*
*NEIC **06** 04:37:04.9±1.8, 33°.31S±0°.05×71°.32W±0°.08, h63^{km}±4^{km}, Error ellipse: s-maj=10.7km s-min=6.6km az=112.0*
*GUC **06** 04:37:05.5±0.6, 33°.33S×71°.28W, h60^{km}±3^{km}, ML5.3*
*MOS **06** 04:37:05.5±1.3, 33°.26S×71°.15W, h65^{km}, mb5.5/16, Error ellipse: s-maj=16.0km s-min=7.9km az=94.1*
*IDC **06** 04:37:06.2±0.3, 33°.35S×71°.02W, h60^{km}±2^{km}, mb4.9/17, mb1 5.1/20, mb1mx5.0/21, mbtmp5.3/20, MS4.3/19, Ms1 4.3/19, ms1mx4.3/22, Error ellipse: s-maj=14.4km s-min=9.9km az=89.0*
*BJI **06** 04:37:07.0±0.0, 33°.30S×71°.20W, h59^{km}, mB5.3/11, Ms5.4/9, Ms7 5.3/12*
*GCMT **06** 04:37:08.0±0.2, 33°.31S±0°.01×71°.42W±0°.01, h85^{km}±1^{km}, MW5.4/102, Moment Tensor Solution. s102,c151; s102,c138; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}0.45±.03; $M_{\theta\theta}$-0.99±.03; $M_{\phi\phi}$0.53±.04; $M_{r\theta}$-0.21±.03; $M_{\theta\phi}$1.20±.03; $M_{\phi r}$0.66±.02; Best double couple: $M_0$1.60400×10^{17} NP1:ϕ_s75.00000°, δ61.00000°, λ11.00000°. NP2:ϕ_s340.00000°, δ81.00000°, λ150.00000°. Principal axes: T 1.4420, Plg27.0000°, Azm294.0000°; N 0.3240, Plg59.0000°, Azm144.0000°; P -1.7660, Plg13.0000°, Azm31.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 06 04:37:05.2±0.3, 33°.32S±0°.03×71°.29W±0°.04, h59^{km}±2^{km}, h59^{km}:pP-P, n865, σ1^{s}58/764, mb5.3/185, MS4.5/22, 30C-35D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MT02	Curacav	0.14	65	⇑*i*P	Pn	04 37 15.3	+1.1
MT02				*i* S	Sn	04 37 22.3	+1.5
MT02				IAML		04 37 24.1	
	comp=E,205µm,0.4s						
ROC1	El Roble	0.41	34		Pn	04 37 16.9	+0.4
ROC1				Sn	Sn	04 37 26.6	+2.0
ROC1	El Roble	0.41	34	*i* P	Pn	04 37 17.5	+1.0
ROC1				*e*S	Sn	04 37 28.0	+3.4
ROCH	El Roble	0.41	34	⇓*i*P	Pn	04 37 17.9	+1.4
ROCH				*i* S	Sn	04 37 27.2	+2.7
ROCH				IAML		04 37 32.3	
	comp=E,283µm,0.5s						
RCDM	Rinconada Maip	0.44	113	⇑*i*P	Pn	04 37 17.8	+1.3
RCDM				*i* S	Sn	04 37 26.4	+1.8
PEL	Peldehue	0.53	71	⇓*i*P	Pn	04 37 18.2	+0.7
PEL				*i* S	Sn	04 37 29.0	+2.6
PEL				IAML		04 37 30.7	
	comp=E,272µm,0.6s						
PEL	Peldehue	0.53	71	P	Pn	04 37 18.6	+1.1
PEL						04 37 27.1	
PEL	Peldehue	0.53	71		Pn	04 37 18.6	+1.1
PEL				Sn	Sn	04 37 27.1	+0.7
STL	Santa Lucia	0.55	103	⇑*i*P	Pn	04 37 18.8	+1.1
STL				*i* S	Sn	04 37 28.8	+1.9
STL				IAML		04 37 30.1	
	comp=N,305µm,0.3s						
ANTU	Antumapu	0.60	115	⇑*i*P	Pn	04 37 20.5	+2.2
ANTU				*i* S	Sn	04 37 31.1	+3.3
ANTU				IAML		04 37 31.7	
	comp=N,457µm,0.6s						
CLCH	Cerro Calan	0.63	97	⇑*i*P	Pn	04 37 20.0	+1.3
CLCH				*i* S	Sn	04 37 30.9	+2.5
CLCH				IAML		04 37 34.2	
	comp=N,346µm,0.5s						
FSR	Penalolen	0.66	105	⇑*i*P	Pn	04 37 21.2	+2.3
FSR				*i* S	Sn	04 37 32.2	+3.2
MT03	Universidad Ad	0.67	105	⇑*i*P	Pn	04 37 20.3	+1.1
MT03				*i* S	Sn	04 37 31.6	+2.2
FCH	Farellones	0.83	91	⇑*i*P	Pn	04 37 22.5	+1.1
FCH				*i* S	Sn	04 37 35.6	+2.4
FCH				IAML		04 37 36.4	
	comp=E,166µm,0.5s						
LMEL	Las Melosas	1.05	121	⇑*i*P	Pn	04 37 25.3	+1.3
LMEL				*i* S	Sn	04 37 40.3	+2.4
LMEL				IAML		04 37 41.1	
	comp=N,281µm,0.2s						
CO04	Los Peladeros	1.30	12	IAML		04 37 49.6	
	comp=N,58µm,0.3s						
GO05	Huala	1.77	197		Pn	04 37 33.1	-0.5
ARCO	CERRO ARCO	2.03	77	*i* P	Pn	04 37 41.4	+4.1
ARCO				IAML		04 38 00.8	
	comp=Z,11µm,0.4s						
ARCO				*e*S	Sn	04 38 10.8	+9.2
AAGR	Agrelo	2.07	84	*i* P	Pn	04 37 41.5	+3.8
ASAL	Salagasta	2.18	71	*i* P	Pn	04 37 43.0	+3.7
ZON	Zonda	2.82	52	*i* P	Pn	04 37 51.1	+3.1
ZON				IAML		04 38 56.3	
	comp=Z,4µm,0.5s						
EDS3	Malargue	2.90	148	*i* P	Pn	04 37 52.4	+3.3
CFA	Coronel Fontan	3.09	57	P	Pn	04 37 54.2	+2.6
	baz=234,slow=15						
CFA				LR	LR	04 39 20.1	
	comp=Z,15µm,21.1s,baz=256,slow=46						
GO04	Tololo Observa	3.16	8		Pn	04 37 53.8	+1.0
GO04				Sn	Sn	04 38 29.1	-0.2
ACCO	Cerro Coronel	3.31	35	*i* P	Pn	04 37 57.7	+2.8
CCHI	Chillan	3.34	191	*i* P	Pn	04 37 55.1	+0.1
AROD	Rodeo	3.50	27	*i* P	Pn	04 37 59.0	+1.5
CANA	Caviahue	4.56	178	*i* P	Pn	04 38 13.4	+1.5
GO03	Copiap	5.78	9		Pn	04 38 28.0	-0.4
GO03				Sn	Sn	04 39 34.5	+1.1
I14CL	ROBINSON CRUSO	6.28	265	*i*		05 16 50.0	
	baz=96,slow=321,SNR=0.4						
PLCA	Paso Flores	7.43	176	P	Pn	04 38 51.0	0.0
	comp=Z,8.9nm,0.3s,baz=23,slow=12,SNR=290						
PLCA				LR	LR	04 41 46.5	
	comp=Z,4µm,20.9s,baz=20,slow=38						
PLCA	Paso Flores	7.43	176		Pn	04 38 49.7	-1.3
PLCA	Paso Flores	7.43	176	*e*P	Pn	04 38 49.7	-1.3
GO02	Mina Guanaco	8.26	11		Pn	04 39 00.2	-2.4
GO07	Milladeo Hill,	9.96	190		Pn	04 39 21.2	-4.3
LVC	Limon Verde	10.87	12	P	Pn	04 39 33.9	-4.4
	comp=Z,5.1nm,0.3s,baz=169,slow=10,SNR=55						
LVC				LR	LR	04 43 59.2	
	comp=Z,3µm,18.3s,baz=212,slow=38						
LVC	Limon Verde	10.87	12	P	Pn	04 39 34.2	-4.2
LVC	Limon Verde	10.87	12		Pn	04 39 34.2	-4.2
LVC	Limon Verde	10.87	12	*e*P	Pn	04 39 34.0	-4.4
PB04	IPOC Station P	10.99	6		Pn	04 39 38.1	-1.7
LPA	La Plata	11.18	102	*e*P	Pn	04 39 39.6	-2.7
LPA				sP		04 39 56.7	
LPA				S	Sn	04 41 39.4	-6.3
LPA				PCP	PcP	04 45 31.6	-2.7
LPA				SCS	ScS	04 52 35.4	-1.8
LPA				PKIKP	PKiKP	04 53 32.1	-0.7
LPA				SKIKP		04 56 59.2	
LPA				PKIKS		04 57 07.3	
PB01	IPOC Station P	12.33	8		Pn	04 39 57.6	-0.4
PB01				Sn	Sn	04 42 09.6	-4.3
PB11	IPOC Station P	13.58	7		Pn	04 40 13.6	-1.6
GO01	Chusmiza	13.72	8		Pn	04 40 17.6	+0.2
GO01				Sn	Sn	04 42 44.7	-3.7
CPUP	Villa Florida	13.96	64	P	Pn	04 40 15.2	-5.0
	comp=Z,0.5nm,0.3s,baz=242,slow=13,SNR=22						
CPUP				LR	LR	04 46 17.5	
	comp=Z,3µm,19.0s,baz=242,slow=40						
MNMC	Minye Minye	14.21	7		Pn	04 40 24.0	+0.3
PLTB	Pedras Altas	15.00	89	*e*P	Pn	04 40 29.9	-3.7
LPAZ	La Paz	17.19	10	P	P	04 41 02.5	-0.4
	comp=Z,4.3nm,0.3s,baz=188,slow=7.4,SNR=160						
LPAZ	La Paz	17.19	10	P	Pn	04 40 60.0	-2.0
LPAZ	La Paz	17.19	10	*e*P	Pn	04 41 00.1	-2.0
ITAB	Concordia	17.61	75	*e*P	Pn	04 41 03.8	-2.8

PTGB	Pitanga	18.85	68	eP	P	04 41 18.9	-1.7
TRCB	Terra Rica	19.48	62	eP	P	04 41 26.1	-1.4
SIV	San Ignacio	19.57	31	P	P	04 41 27.9	-0.5
	comp=Z,13nm,0.3s,baz=223,slow=7.8,SNR=921						
EFI	East Falkland	20.72	156	deP	P	04 41 41.1	+0.5
EFI				pmax	pmax		
	comp=Z,131nm,0.8s						
EFI	East Falkland	20.72	156	P	P	04 41 39.9	-0.6
EFI				IAmb	IAmb	04 41 56.3	
	comp=Z,172nm,0.7s						
PCMB	Pacaembu	21.21	62	eP	P	04 41 44.0	-2.1
PP1B	Ponte de Pedra	21.50	47	eP	P	04 41 48.4	-0.9
FRTB	Fartura	21.51	68	eP	P	04 41 48.7	-0.7
USHA	Ushuaia	21.61	176	P	P	04 41 51.4	+1.4
	comp=Z,158nm,0.9s,baz=4.6,slow=3.5,SNR=53						
NNA	Nana	21.83	345	P	P	04 41 54.8	+2.0
	comp=Z,22nm,0.9s,baz=164,slow=13,SNR=6.4						
NNA	Nana	21.83	345	deP	P	04 41 54.0	+1.2
NNA				pmax	pmax		
	comp=Z,187nm,1.7s						
NNA	Nana	21.83	345	P	P	04 41 53.2	+0.3
C2SB	Chapadao do Su	21.96	53	eP	P	04 41 53.6	-0.6
SALV	Santo Antonio	22.35	43	eP	P	04 41 56.8	-1.5
SPB	Sao Paulo	23.06	71	P	P	04 42 04.6	-1.1
SPB	Sao Paulo	23.06	71	eP	P	04 42 04.5	-1.2
RCLB	Rio Claro- Sao	23.59	69	eP	P	04 42 09.3	-1.5
VAO	Valinhos	23.72	71	eP	P	04 42 11.3	-0.8
PARB	Paraibuna	24.62	73	eP	P	04 42 19.6	-0.7
ARAG	Araguaiana, MT	24.85	50	eP	P	04 42 21.4	-0.9
SAML	Samuel	25.38	19	P	P	04 42 26.7	-0.4
SAML				pmax	pmax		
	comp=Z,212nm,0.9s						
SAML	Samuel	25.38	19	P	P	04 42 26.7	-0.4
IPMB	Ipameri, GO	25.72	59	eP	P	04 42 28.9	-1.3
CLDB	Colider	26.48	36	eP	P	04 42 35.4	-1.7
BSCB	Bom Sucesso	26.51	69	eP	P	04 42 37.0	-0.4
ATAH	Atahualpa	26.87	344	P	P	04 42 43.4	+2.3
	comp=Z,7.5nm,0.7s,baz=192,slow=6.4,SNR=6.7						
BDFB	Brasilia	27.43	56	P	P	04 42 45.0	-0.8
	comp=Z,105nm,0.9s,baz=220,slow=6.0,SNR=113						
BDFB				LR	LR	04 55 11.9	
	comp=Z,2µm,18.9s,baz=230,slow=40						
BDFB	Brasilia	27.43	56	P	P	04 42 45.0	-0.8
BDFB	Brasilia	27.43	56	P	P	04 42 44.6	-1.1
JANB	Januaria	30.45	60	eP	P	04 43 11.5	-0.9
SJMB	Sao Joao De Ma	30.58	69	eP	P	04 43 13.1	-0.5
BSFB	Barra de Sao F	30.78	70	eP	P	04 43 14.8	-0.5
PMSA	Palmer Station	31.80	174	LR	LR	04 57 04.2	
	comp=Z,487nm,18.1s,baz=305,slow=38						
SMTB	Santa Maria do	32.72	47	eP	P	04 43 31.9	-0.4
PTLC	Puerto Leguiza	33.47	354	eP	P	04 43 38.4	-0.5
OTAV	Otavalo	34.05	347	eP	P	04 43 47.5	+3.0
OTAV	Otavalo	34.05	347	P	P	04 43 43.7	-0.8
OTAV				pmax	pmax		
	comp=Z,20nm,1.3s						
OTAV	Otavalo	34.05	347	P	P	04 43 43.7	-0.8
OTAV	Otavalo	34.05	347	eP	P	04 43 44.6	+0.2
PTGA	Pitinga	34.12	20	P	P	04 43 43.9	-0.6
PTGA	Pitinga	34.12	20	eP	P	04 43 44.5	0.0
FLOC	Florencia	34.95	352	eP	P	04 43 53.1	+1.3
CRUC	La Cruz	35.11	350	eP	P	04 43 56.5	+3.1
MACC	Macarena, Meta	35.35	356	eP	P	04 43 56.5	+1.4
BBAC	Balboa, Cauca	35.59	350	eP	P	04 43 59.4	+1.9
SOTA	Rioblanco	35.62	351	eP	P	04 44 02.1	+4.1
PCON	Cinco Dias	35.78	351	eP	P	04 44 02.1	+2.7
GR1C	Gorgona, Isla	36.70	348	eP	P	04 44 24.5	+18
PAYG	Puerto Ayora	37.05	327	P	P	04 44 08.9	-0.8
ORTC	Ortega, Tolima	37.21	353	eP	P	04 44 12.6	+1.6
YOTC	Yotoco, Valle	37.41	352	eP	P	04 44 13.3	+0.5
CHIC	Chingaza	37.81	356	eP	P	04 44 16.8	+0.3
ROSC	El Rosal	38.06	355	P	P	04 44 21.7	+3.1
	comp=Z,66nm,0.6s,baz=170,slow=4.9,SNR=39						
ROSC	El Rosal	38.06	355	eP	P	04 44 22.4	+3.8
ROSC	El Rosal	38.06	355	P	P	04 44 17.3	-1.3
PLMC	San Jos del P	38.31	352	eP	P	04 44 22.4	+2.1
NORC	Norcasia	38.81	354	eP	P	04 44 26.6	+2.0
SPBC	San Pablo de B	38.84	356	eP	P	04 44 24.5	-0.4
RUSC	La Rusia	39.03	357	eP	P	04 44 27.3	+0.4
RUSC	La Rusia	39.03	357	P	P	04 44 26.1	-0.7
CBOC	Ciudad Bolivar	39.22	353	eP	P	04 44 29.4	+1.3
HELC	Santa Helena	39.49	353	eP	P	04 44 31.5	+0.9
TAMC	Tame, Arauca	39.53	359	eP	P	04 44 31.5	+0.9
BARC	Barichara	39.73	357	eP	P	04 44 31.5	-0.9
PTBC	PUERTO BERRIO,	39.75	355	eP	P	04 44 31.5	-0.8
SOLC	Bahia Solano	39.75	350	eP	P	04 44 36.4	+4.1
DBBC	Dabeiba	40.38	352	eP	P	04 44 39.9	+2.2
PAMC	Pamplona, Colo	40.45	358	eP	P	04 44 38.5	-0.2
UREC	San Jos de Ur	41.04	354	eP	P	04 44 44.1	+1.1
OCAC	Ocana	41.37	357	eP	P	04 44 44.1	-1.8
SMLC	San Martn de	41.97	356	eP	P	04 44 49.0	-1.6
SDV	Santo Domingo	41.97	1	eP	P	04 44 49.0	-1.9
SDV	Santo Domingo	41.97	1	P	P	04 44 49.8	-1.0
SDV	Santo Domingo	41.97	1	eP	P	04 44 50.9	0.0
RCBR	Riachuelo	42.75	58	P	P	04 44 55.7	-1.4
RCBR				pmax	pmax		
	comp=Z,171nm,1.5s						
RCBR	Riachuelo	42.75	58	P	P	04 44 55.7	-1.4
RCBR	Riachuelo	42.75	58	eP	P	04 44 57.0	0.0
ARGC	Ariguani, Magd	43.02	356	eP	P	04 45 00.1	+1.0
CODC	Agustn Codazz	43.06	357	eP	P	04 44 58.0	-1.4
SJCC	San Jacinto, C	43.13	354	eP	P	04 45 01.5	+1.5
SMRC	Santa Marta, M	44.32	356	eP	P	04 45 05.0	-4.5
JTS	Las Juntas de	45.28	341	c iP	P	04 45 18.9	+1.7
JTS				pmax	pmax		
	comp=Z,43nm,1.8s						
JTS	Las Juntas de	45.28	341	P	P	04 45 16.0	-1.2
VNA3	Neumayer Olymp	49.76	158	P	P	04 45 52.4	+1.1
VNA1	Neumayer--Stat	50.06	157	P	P	04 45 54.9	+1.4
VNA2	Neumayer--Watz	50.40	157	P	P	04 45 57.3	+1.1
	baz=286,slow=8.5						
CRPR	Cabo Rojo, PR	51.19	5	P	P	04 46 02.2	-0.4
CRPR					pP	04 46 17.1	-1.0
SABA	Saba	51.23	10	P	P	04 46 01.7	-1.3
PDPR	Patillas Dam,	51.29	6	P	P	04 46 01.1	-2.3
PDPR				IAmb	IAmb	04 46 03.7	
	comp=Z,57nm,1.4s						
SJG	San Juan	51.37	6	LR	LR	05 11 48.7	
	comp=Z,295nm,19.6s,baz=169,slow=40						
SJG	San Juan	51.37	6	P	P	04 46 03.2	-0.8
SJG				pmax	pmax		
	comp=Z,27nm,0.9s						
SJG	San Juan	51.37	6	P	P	04 46 03.2	-0.8
SJG				IAmb	IAmb	04 46 04.3	
	comp=Z,27nm,0.9s						
AOPR	Arecibo Observ	51.55	5	P	P	04 46 03.6	-1.8
GCPR	Guaynabo City	51.57	6	P	P	04 46 04.3	-1.2
GCPR				IAmb	IAmb	04 46 05.3	
	comp=Z,20nm,0.7s						
GCPR					pP	04 46 21.4	+0.3
SNAA	Sanae	51.98	158	P	P	04 46 09.0	+0.9
SNAA	Sanae	51.98	158	LR	LR	05 05 56.0	
	comp=Z,568nm,21.8s,baz=325,slow=33						
SNAA	Sanae	51.98	158	c iP	P	04 46 09.0	+0.9
SNAA	Sanae	51.98	158	P	P	04 46 07.9	-0.2
SC01	Santiago de lo	52.45	1	P	P	04 46 11.0	-1.0
CCIG	Comitan	53.19	335	P	P	04 46 17.0	-0.8
TEIG	Tepich	55.66	341	eP	P	04 46 35.8	+0.5
TEIG	Tepich	55.66	341	P	P	04 46 34.9	-0.5
NVL	N'lazarevskaya	56.70	157	⇓iP	P	04 46 43.4	+1.2
NVL				e*PP	sP	04 47 07.5	+2.9
NVL				pmax	pmax		
	comp=Z,94nm,1.2s						
TLIG	Tlapa	56.91	329	P	P	04 46 42.8	-1.7
TLIG				IAmb	IAmb	04 46 47.7	
	comp=Z,43nm,1.1s						
QSPA	South Pole Qui	56.92	180	P	P	04 46 45.3	+1.2
	comp=Z,41nm,0.9s,baz=150,slow=2.3,SNR=70						
QSPA				pP	pP	04 47 01.0	+1.2
	comp=Z,144nm,0.9s,baz=142,slow=2.1,SNR=36						
QSPA	South Pole Qui	56.92	180	P	P	04 46 43.7	-0.4
QSPA					pP	04 46 59.6	-0.3
ZAIG	Zacatecas	63.25	328	IAmb	IAmb	04 47 31.7	
	comp=Z,26nm,1.2s						
VNDA	Vanda	64.89	191	P	P	04 47 38.9	+1.1
	comp=Z,8.0nm,0.9s,baz=8.2,slow=5.1,SNR=11						
VNDA				pP	pP	04 47 55.6	+1.8
	comp=Z,17nm,0.9s,baz=158,slow=8.4,SNR=13						
VNDA				LR	LR	05 12 25.3	
	comp=Z,101nm,20.3s,baz=146,slow=33						
VNDA	Vanda	64.89	191	P	P	04 47 38.1	+0.3
VNDA				pP	pP	04 47 53.6	-0.2
VNDA				IAmb	IAmb	04 47 56.4	
	comp=Z,25nm,0.9s						
SYO	Syowa Base	66.27	158	⇓iP	P	04 47 44.0	-2.8
SYO	Syowa Base	66.27	158	⇑isP	sP	04 48 07.6	-1.8
SYO	Syowa Base	66.27	158	⇓iPcP	PcP	04 48 12.4	-4.0
250A	Grady	66.47	346	IAmb	IAmb	04 47 49.7	
	comp=Z,56nm,1.2s						
346A	Big Creek Wild	66.61	343	P	P	04 47 49.2	-0.1
152A	Waverly Hall	66.84	348	IAmb	IAmb	04 47 51.9	
	comp=Z,38nm,1.3s						
833A	Chaparral WMA,	66.85	333	P	P	04 47 52.8	+1.9
	baz=155,SNR=14						
HKT	Hockley	67.08	337	P	P	04 47 51.9	-0.4
HKT				pmax	pmax		
	comp=Z,42nm,1.5s						
HKT	Hockley	67.08	337	P	P	04 47 51.9	-0.4
HKT				IAmb	IAmb	04 47 55.2	
	comp=Z,42nm,1.4s						
Y60A	Bolivia	67.28	354	P	P	04 47 56.0	+2.5
	baz=174						
GOGA	Godfrey	67.36	349	P	P	04 47 53.4	-0.6
GOGA				*PP	pP	04 48 09.0	-1.2
GOGA				pmax	pmax		
	comp=Z,14nm,0.8s						
GOGA	Godfrey	67.36	349	P	P	04 47 53.4	-0.6
GOGA					pP	04 48 09.0	-1.2
GOGA	Godfrey	67.36	349	P	P	04 47 54.2	+0.2
	baz=169						
Y57A	Sumter	67.52	352	P	P	04 47 56.2	+1.1
	baz=172						
TAOE	Nuku Hiva Isla	67.54	274	eLR	LR	05 08 19.7	
	comp=Z,604nm,23.2s						
Z51A	Franklin	67.56	347	IAmb	IAmb	04 47 56.8	
	comp=Z,39nm,1.5s						
Y55A	Saluda	67.63	351	P	P	04 47 56.6	+0.9
	baz=171						
Z50A	Ashland	67.64	347	IAmb	IAmb	04 47 57.1	
	comp=Z,29nm,1.1s						
Z50A	Ashland	67.64	347	P	P	04 47 56.1	+0.3
	baz=167,SNR=9.5						
LRAL	Lakeview Retre	67.64	346	P	P	04 47 55.5	-0.3
LRAL					pP	04 48 11.6	-0.3
Y52A	Lilburn	67.90	349	P	P	04 47 56.9	-0.6
Y52A					pP	04 48 12.8	-0.9
Y52A				IAmb	IAmb	04 48 16.0	
	comp=Z,18nm,0.7s						
Y52A	Lilburn	67.90	349	P	P	04 47 58.0	+0.6
	baz=169						
X58A	Rowland	67.94	353	P	P	04 47 58.2	+0.5
	baz=173						
X56A	White Oak	68.07	351	P	P	04 47 59.4	+0.9
	baz=171						
TBI	Tubuai	68.09	256	eP	P	04 48 00.5	+1.4
	comp=Z,199nm,1.0s						
TBI				eS	S	04 56 54.7	+0.2
	comp=Z,156nm,29.5s						
TBI	Tubuai	68.09	256	eLR	LR	05 08 32.5	
	comp=Z,2µm,28.2s,baz=120						
TBI	Tubuai	68.09	256	eT	T	06 01 57.6	
	comp=Z,22nm,0.2s						
X55A	Gracelyn & Ava	68.13	351	P	P	04 47 59.9	+1.1
	baz=171						
HPIG		68.25	327	IAmb	IAmb	04 48 02.7	
	comp=Z,51nm,1.1s						
X54A	Belton	68.31	350	P	P	04 48 00.7	+0.7
	baz=170						
W58A	Raeford	68.39	353	P	P	04 48 02.7	+2.3
	baz=173						
X53A	Estanollee	68.40	349	P	P	04 48 01.4	+0.8
	baz=169,SNR=5.3						
435B	Jarrell	68.43	336	IAmb	IAmb	04 48 03.4	
	comp=Z,58nm,1.4s						
435B	Jarrell	68.43	336	P	P	04 48 02.9	+2.0
	baz=157						
PAULI	Pauline	68.50	351	IAmb	IAmb	04 48 20.1	
	comp=Z,33nm,1.2s						
W57A	Gilead	68.60	352	P	P	04 48 02.3	+0.5
	baz=172						
W56A	Indian Trail	68.65	352	P	P	04 48 03.4	+1.3
	baz=172						
X51A	Calhoun	68.72	348	IAmb	IAmb	04 48 21.6	
	comp=Z,50nm,0.8s						
X51A	Calhoun	68.72	348	P	P	04 48 03.5	+0.9
	baz=168,SNR=8.5						
KMSC	Kings Mountain	68.75	351	P	P	04 48 03.4	+0.7
	baz=171						
W54A	Cherokee Point	68.81	350	P	P	04 48 04.1	+1.0
	baz=170						
BG3	Lake Jocassee	68.82	350	IAmb	IAmb	04 48 22.2	
	comp=Z,47nm,1.5s						
JCT	Junction City	68.94	334	P	P	04 48 05.5	+1.3
	baz=155,SNR=33						
V60A	Jim Taylor Roa	68.95	355	P	P	04 48 08.5	+4.6
	baz=175						
X48A	Hartselle	69.02	346	IAmb	IAmb	04 48 23.4	
	comp=Z,29nm,0.8s						
W52A	Murphy	69.08	349	P	P	04 48 05.7	+0.9
	baz=169						
V58A	Windy Hill, Pi	69.14	353	IAmb	IAmb	04 48 23.8	
	comp=Z,67nm,1.5s						
V58A	Windy Hill, Pi	69.14	353	P	P	04 48 06.1	+0.9
	baz=173						
Z41A	Richland Creek	69.25	341	P	P	04 48 07.4	+1.6
	baz=161,SNR=8.1						
V57A	Coltrane Farms	69.30	353	P	P	04 48 06.7	+0.6
	baz=172						
V56A	Mocksville	69.31	352	P	P	04 48 07.1	+0.9
	baz=172,SNR=6.3						
W50A	Signal Mountai	69.42	348	P	P	04 48 07.9	+0.9
	baz=168,SNR=7.7						
V55A	Taylorsville	69.43	351	IAmb	IAmb	04 48 25.9	
	comp=Z,54nm,1.4s						
V55A	Taylorsville	69.43	351	P	P	04 48 06.6	-0.4
	baz=171						
TXAR	Lajitas Array	69.45	330	P	P	04 48 08.6	+1.3
	comp=Z,15nm,0.7s,baz=152,slow=8.5,SNR=131						
TXAR				pP	pP	04 48 25.5	+1.9
	comp=Z,9.2nm,0.5s,baz=155,slow=7.6,SNR=10						
TXAR				LR	LR	05 13 42.8	
	comp=Z,97nm,19.8s,baz=0.0,slow=32						
TXAR	Lajitas Array	69.45	330	P	P	04 48 07.0	-0.3
V54A	Nebo	69.45	351	P	P	04 48 07.6	+0.5
	baz=171,SNR=5.1						
V53A	Saluda	69.47	350	P	P	04 48 07.5	+0.2
	baz=170						
WHTX	Lake Whitney,	69.49	336	IAmb	IAmb	04 48 09.5	
	comp=Z,46nm,0.8s						
WHTX	Lake Whitney,	69.49	336	P	P	04 48 08.4	+0.9
	baz=157,SNR=16						
SWET	Sewanee	69.54	347	IAmb	IAmb	04 48 26.5	
	comp=Z,31nm,0.7s						
MEH	Mehetia	69.56	262	eT	T	06 03 46.2	
	comp=Z,36nm,0.2s						
U59A	Littleton	69.58	354	P	P	04 48 09.4	+1.6
	baz=174						
TKL	Tuckaleechee C	69.61	349	IAmb	IAmb	04 48 26.0	
	comp=Z,25nm,0.8s						
U58A	Oxford	69.68	354	P	P	04 48 09.4	+0.9
	baz=174						
V52A	Sevierville	69.76	349	P	P	04 48 09.2	+0.2
	baz=169						
U57A	Blanch	69.80	353	P	P	04 48 09.7	+0.5
	baz=173						
U56A	King	69.82	352	IAmb	IAmb	04 48 28.0	
	comp=Z,27nm,0.8s						
U56A	King	69.82	352	P	P	04 48 10.7	+1.4
	baz=172						
V51A	Loudon	69.84	349	P	P	04 48 10.2	+0.8
	baz=168						
X43A	Marvell	69.94	343	P	P	04 48 11.9	+1.8
	baz=163						
U55A	TA2, Sparta	70.06	352	P	P	04 48 11.8	+0.9
	baz=171						
U53A	Fall Branch	70.12	350	P	P	04 48 11.4	+0.1
	baz=170						
T59A	Double "B" Far	70.17	355	P	P	04 48 11.4	-0.1
T59A					pP	04 48 27.3	-0.4
T59A	Double "B" Far	70.17	355	P	P	04 48 12.7	+1.2
	baz=174						
U54A	Nelsons Funny	70.17	351	IAmb	IAmb	04 48 30.2	
	comp=Z,45nm,0.9s						
U54A	Nelsons Funny	70.17	351	P	P	04 48 12.2	+0.6
	baz=171						
T58A	Grand View Acr	70.23	354	P	P	04 48 12.7	+0.9
	baz=174						
T57A	Hurt	70.35	353	P	P	04 48 13.2	+0.6
	baz=173						
X40A	Basin Creek Fa	70.42	341	P	P	04 48 13.8	+0.8
	baz=161						
T56A	Rocky Mt	70.46	353	P	P	04 48 14.2	+1.0
	baz=172						
VAH	Vaihoa	70.51	264	eP	P	04 48 15.5	+1.4
	comp=Z,216nm,1.1s						
UALR	University of	70.56	342	P	P	04 48 12.8	-1.1
UALR					PcP	04 48 34.5	-0.2
TVO	Taravao	70.59	261	eP	P	04 48 16.3	+1.6
	comp=Z,46nm,1.3s						
T55A	Pulaski	70.63	352	P	P	04 48 15.8	+1.5
	baz=172						
T54A	Tazewell	70.67	351	P	P	04 48 15.3	+0.7
	baz=171						
MIAR	Mount Ida	70.67	341	P	P	04 48 15.5	+0.9
	baz=160,SNR=15						
TIAR	Tiarei	70.78	261	eP	P	04 48 17.5	+1.7
	comp=Z,28nm,1.0s						
WVT	Waverly	70.80	346	P	P	04 48 15.1	-0.2
WVT				pmax	pmax		
	comp=Z,86nm,1.0s						
WVT	Waverly	70.80	346	P	P	04 48 15.1	-0.2
WVT	Waverly	70.80	346	P	P	04 48 15.9	+0.6
	baz=166						
ABTX	Abilene, Hawle	70.82	335	P	P	04 48 16.7	+1.1
	baz=155,SNR=35						
S58A	Poland Farm, P	70.85	354	P	P	04 48 15.1	-0.5
S58A	Poland Farm, P	70.85	354	P	P	04 48 16.7	+1.2
	baz=174						
W41B	Gary Mavity, V	70.91	342	IAmb	IAmb	04 48 17.7	
	comp=Z,48nm,1.4s						
W41B	Gary Mavity, V	70.91	342	P	P	04 48 16.7	+0.7
	baz=162,SNR=10						
T51A	Gray	70.91	349	P	P	04 48 16.6	+0.6
	baz=169						
PAE	Paea	70.92	261	eP	P	04 48 18.2	+1.6
	comp=Z,22nm,1.0s						
S59A	Mechanicsville	70.94	355	P	P	04 48 18.1	+2.0
	baz=175						
PPT2	Papeete2	70.96	261	eP	P	04 48 18.7	+1.8
	comp=Z,233nm,1.2s						
PPT2				eS	S	04 57 29.9	+1.3
	comp=Z,312nm,23.0s						
PPT2	Papeete2	70.96	261	eLR	LR	05 09 55.4	
	comp=Z,1µm,29.0s						
PPT	Papeete	70.97	261	P	P	04 48 19.3	+2.4
	comp=Z,131nm,0.8s,baz=132,slow=6.9,SNR=7.2						
PPT				LR	LR	05 12 11.0	
	comp=Z,188nm,18.1s,baz=130,slow=30						
WHAR	Wooly Hollow	71.03	342	IAmb	IAmb	04 48 18.6	
	comp=Z,54nm,1.3s						
S56A	Natural Bridge	71.05	353	P	P	04 48 18.2	+1.3
	baz=173						
S57A	Dark Hollow, R	71.07	354	IAmb	IAmb	04 48 36.2	
	comp=Z,71nm,1.3s						
S57A	Dark Hollow, R	71.07	354	P	P	04 48 18.4	+1.5
	baz=173						
T50A	Nancy	71.11	349	P	P	04 48 17.2	0.0
	baz=168						
R58B	Mineral	71.18	354	IAmb	IAmb	04 48 37.5	
	comp=Z,33nm,1.1s						
R58B	Mineral	71.18	354	P	P	04 48 19.4	+1.8
	baz=174						
S55A	Lewisburg	71.25	352	P	P	04 48 19.2	+1.2
	baz=172						
T49A	Edmonton	71.31	348	P	P	04 48 19.0	+0.6
	baz=168,SNR=6.5						
W39A	Magazine	71.34	341	P	P	04 48 20.0	+1.4
	baz=160,SNR=34						
S53A	Williamson	71.35	351	P	P	04 48 18.8	+0.1
	baz=171						
S54A	Dingess, Beckl	71.37	352	P	P	04 48 19.0	+0.2
	baz=171						
T47A	Sharon Grove	71.48	347	IAmb	IAmb	04 48 37.6	
	comp=Z,24nm,0.7s						
LCAR	Lake Charles	71.48	343	IAmb	IAmb	04 48 20.8	
	comp=Z,31nm,0.8s						
S51A	Beattyville	71.52	350	IAmb	IAmb	04 48 37.9	
	comp=Z,23nm,0.8s						
S51A	Beattyville	71.52	350	P	P	04 48 19.6	0.0
	baz=169						
R58A	Rapidan	71.53	354	P	P	04 48 21.3	+1.7
	baz=174						
R57A	Stanardsville	71.57	354	P	P	04 48 21.6	+1.7
	baz=174,SNR=5.1						
S50A	Richmond	71.68	349	P	P	04 48 21.1	+0.5
	baz=169,SNR=6.5						
R54A	Victor	71.70	352	P	P	04 48 21.2	+0.4
	baz=172						
R55A	Marlinton	71.71	353	IAmb	IAmb	04 48 40.4	
	comp=Z,36nm,0.9s						
R55A	Marlinton	71.71	353	P	P	04 48 22.1	+1.2
	baz=172,SNR=5.7						
R56A	Bull Pasture M	71.76	353	P	P	04 48 21.6	+0.5
	baz=173						
S49A	Springfield	71.93	348	P	P	04 48 22.4	+0.3
	baz=168						
PBMO	Poplar Bluff	71.99	344	IAmb	IAmb	04 48 42.4	
	comp=Z,24nm,0.6s						
X34A	Smith Ranch, M	72.01	337	IAmb	IAmb	04 48 24.6	
	comp=Z,59nm,1.0s						
R52A	Catlettsburg	72.07	351	P	P	04 48 23.5	+0.6
	baz=170						
R51A	Hillsboro	72.17	350	P	P	04 48 24.0	+0.5
	baz=169						
U40A	Yellville	72.19	342	IAmb	IAmb	04 48 25.2	
	comp=Z,50nm,1.1s						
U40A	Yellville	72.19	342	P	P	04 48 24.3	+0.6
	baz=161,SNR=22						
MNTX	Cornudas Mount	72.23	330	IAmb	IAmb	04 48 25.2	
	comp=Z,29nm,0.8s						
R50A	Paris	72.26	349	P	P	04 48 24.5	+0.5
	baz=169						
Q57A	Strasburg	72.29	354	P	P	04 48 25.7	+1.5
	baz=174						
HHAR	Hobbs	72.41	341	IAmb	IAmb	04 48 26.5	
	comp=Z,28nm,1.0s						
R49A	Shelbyville	72.41	349	P	P	04 48 25.5	+0.6
	baz=168						
Q55A	Buckhannon	72.41	353	P	P	04 48 26.4	+1.4
	baz=172						
Q53A	Leroy	72.44	352	P	P	04 48 26.0	+0.9
	baz=171						
WMOK	Wichita Mounta	72.45	336	IAmb	IAmb	04 48 26.8	
	comp=Z,41nm,1.4s						
WMOK	Wichita Mounta	72.45	336	P	P	04 48 25.8	+0.5
	baz=156,SNR=18						
HSIG		72.50	324	P	P	04 48 24.7	-1.0
HSIG				IAmb	IAmb	04 48 28.0	
	comp=Z,27nm,0.9s						
WCI	Wyandotte Cave	72.54	348	P	P	04 48 25.3	-0.4
WCI				pmax	pmax		
	comp=Z,16nm,0.9s						
WCI	Wyandotte Cave	72.54	348	P	P	04 48 25.3	-0.4
WCI	Wyandotte Cave	72.54	348	P	P	04 48 26.0	+0.3
	baz=167						
USIN	University of	72.54	346	IAmb	IAmb	04 48 26.5	
	comp=Z,51nm,1.1s						
TUL1	Leonard	72.58	339	IAmb	IAmb	04 48 27.5	
	comp=Z,33nm,0.8s						
TUL1	Leonard	72.58	339	P	P	04 48 26.7	+0.7
	baz=159,SNR=11						
S44A	Carbondale	72.60	345	IAmb	IAmb	04 48 43.7	
	comp=Z,23nm,0.7s						
Q52A	Bidwell	72.63	351	P	P	04 48 27.1	+0.8
	baz=170						
OKCFA	Oklahoma City	72.63	338	P	P	04 48 25.9	-0.5
OKCFA				IAmb	IAmb	04 48 27.9	
	comp=Z,46nm,1.0s						
OKCFA					pP	04 48 41.4	-1.2
P57A	Homestead Farm	72.70	355	IAmb	IAmb	04 48 46.7	
	comp=Z,29nm,1.0s						
P57A	Homestead Farm	72.70	355	P	P	04 48 28.6	+2.0
	baz=174						
P59A	Jarrettsville	72.72	356	P	P	04 48 28.5	+1.7
	baz=176						
Q50A	Georgetown	72.76	350	P	P	04 48 27.7	+0.7
	baz=169						
MGMO	Mountain Grove	72.79	343	IAmb	IAmb	04 48 28.9	
	comp=Z,34nm,1.1s						
P56A	Dayton Farm, R	72.79	354	P	P	04 48 28.9	+1.7
	baz=174						
Q51A	Peebles	72.84	350	IAmb	IAmb	04 48 47.3	
	comp=Z,24nm,0.8s						
Q51A	Peebles	72.84	350	P	P	04 48 28.0	+0.5
	baz=170						
P53A	Whipple	73.04	352	P	P	04 48 29.0	+0.4
	baz=171						
P54A	Burton	73.05	353	P	P	04 48 29.6	+0.8
	baz=172						

Q49A	Aurora	73.06	349	P	P	04 48 29.1	+0.3
	baz=168,SNR=6.5						
Q48A	North Vernon	73.12	348	P	P	04 48 29.5	+0.4
	baz=168,SNR=5.5						
FVM	French Village	73.14	344	IAmb	IAmb	04 48 30.8	
	comp=Z,60nm,1.1s						
MSTX	Muleshoe	73.18	333	IAmb	IAmb	04 48 31.6	
	comp=Z,53nm,0.9s						
MSTX	Muleshoe	73.18	333	P	P	04 48 30.8	+1.0
	baz=153,SNR=26						
P51A	Williamsport	73.25	351	IAmb	IAmb	04 48 48.5	
	comp=Z,81nm,1.4s						
P51A	Williamsport	73.25	351	P	P	04 48 30.3	+0.4
	baz=170						
O58A	Lewisberry	73.26	355	P	P	04 48 31.6	+1.6
	baz=175						
P52A	Corning	73.28	351	P	P	04 48 30.5	+0.4
	baz=171						
O60A	Telford	73.37	357	P	P	04 48 35.6	+5.1
	baz=176						
CCM	Cathedral Cave	73.40	344	P	P	04 48 30.4	-0.4
CCM				pmax	pmax		
	comp=Z,52nm,1.0s						
CCM	Cathedral Cave	73.40	344	P	P	04 48 30.4	-0.4
CCM				IAmb	IAmb	04 48 32.4	
	comp=Z,52nm,0.9s						
CCM	Cathedral Cave	73.40	344	P	P	04 48 31.5	+0.7
	baz=163						
P50A	Jamestown	73.48	350	P	P	04 48 32.0	+0.7
	baz=169						
P49A	Miami Univ. Ec	73.55	349	P	P	04 48 31.9	+0.3
	baz=168						
S39A	Bolivar	73.57	342	IAmb	IAmb	04 48 33.5	
	comp=Z,69nm,1.4s						
P48A	Milroy	73.59	349	IAmb	IAmb	04 48 50.8	
	comp=Z,32nm,0.8s						
P48A	Milroy	73.59	349	P	P	04 48 32.0	+0.1
	baz=168,SNR=8.8						
MAW	Mawson	73.66	163	P	P	04 48 31.7	-0.4
	comp=Z,10nm,0.9s,baz=216,slow=7.6,SNR=7.7						
MAW				LR	LR	05 21 21.6	
	comp=Z,469nm,20.5s,baz=229,slow=36						
319A	Douglas	73.67	327	IAmb	IAmb	04 48 35.8	
	comp=Z,60nm,1.1s						
SLM	Saint Louis	73.72	345	IAmb	IAmb	04 48 50.4	
	comp=Z,36nm,0.7s						
T35A	Sooner Cattle	73.73	339	IAmb	IAmb	04 48 34.7	
	comp=Z,52nm,1.1s						
O51A	Pataskala	73.84	351	P	P	04 48 33.6	+0.2
	baz=170,SNR=5.7						
N60A	Cedar Hill Far	73.90	357	P	P	04 48 38.9	+5.2
	baz=177						
LIC	Lamto	73.96	71	⇓ *i*P	P	04 48 35.0	+0.3
	comp=Z,151nm,0.9s						
ACSO	Alum Creek Sta	73.98	351	P	P	04 48 34.8	+0.6
	baz=170,SNR=6.9						
121A	Cookes Peak, D	73.98	328	IAmb	IAmb	04 48 37.7	
	comp=Z,59nm,0.9s						
121A	Cookes Peak, D	73.98	328	P	P	04 48 37.0	+2.4
	baz=149,SNR=32						
N59A	State Game Lan	73.98	356	P	P	04 48 38.5	+4.3
	baz=176						
O50A	Cable	73.98	350	P	P	04 48 34.6	+0.4
	baz=169,SNR=5.2						
P46A	Rosedale	74.05	347	IAmb	IAmb	04 48 52.8	
	comp=Z,39nm,0.8s						
N55A	Marion Center	74.07	354	P	P	04 48 35.7	+1.0
	baz=173						
O49A	Covington	74.13	350	IAmb	IAmb	04 48 53.6	
	comp=Z,56nm,1.1s						
O49A	Covington	74.13	350	P	P	04 48 35.2	+0.2
	baz=169,SNR=8.8						
TIC	Toumodi	74.22	71	⇓ *i*P	P	04 48 36.5	+0.3
	comp=Z,92nm,1.1s						
KIC	Kosan Boka	74.27	71	⇓ *i*P	P	04 48 36.9	+0.4
	comp=Z,162nm,0.9s						
O48A	Farmland	74.32	349	P	P	04 48 36.3	+0.2
	baz=168						
N54A	Moraine State	74.35	353	IAmb	IAmb	04 48 54.9	
	comp=Z,25nm,0.8s						
N54A	Moraine State	74.35	353	P	P	04 48 37.3	+1.0
	baz=172						
DBIC	Dimbokro	74.36	71	P	P	04 48 37.5	+0.5
	comp=Z,54nm,0.9s,baz=211,slow=6.1,SNR=55						
DBIC				pP	pP	04 48 53.5	-0.2
	comp=Z,42nm,0.9s,baz=197,slow=7.1,SNR=8.6						
DBIC				LR	LR	05 20 09.9	
	comp=Z,217nm,18.6s,baz=212,slow=35						
DBIC	Dimbokro	74.36	71	P	P	04 48 35.4	-1.7
DBIC					pP	04 48 53.3	-0.4
N50A	Nevada	74.53	351	P	P	04 48 37.9	+0.6
	baz=170,SNR=6.6						
P43A	Skaggs, Pawnee	74.53	345	IAmb	IAmb	04 48 54.9	
	comp=Z,31nm,0.7s						
N51A	Ashland	74.57	351	IAmb	IAmb	04 48 55.7	
	comp=Z,29nm,0.7s						
N51A	Ashland	74.57	351	P	P	04 48 38.0	+0.4
	baz=170						
SUR	Sutherland	74.61	119	P	P	04 48 37.3	-1.2
SUR				IAmb	IAmb	04 48 56.7	
	comp=Z,39nm,0.8s						
M56A	Emporium	74.70	355	P	P	04 48 39.3	+1.0
	baz=174						
M55A	Ridgway	74.73	354	IAmb	IAmb	04 48 57.8	
	comp=Z,52nm,1.1s						
M55A	Ridgway	74.73	354	P	P	04 48 39.6	+1.0
	baz=174						
SFIN	Lafayette	74.77	348	P	P	04 48 38.5	-0.2
	baz=166						
O44A	Mansfield	74.81	346	IAmb	IAmb	04 48 58.5	
	comp=Z,23nm,0.7s						
N49A	Columbus Grove	74.82	350	P	P	04 48 39.4	+0.3
	baz=169,SNR=8.2						
M54A	Oil Creek Stat	74.86	353	P	P	04 48 40.1	+0.9
	baz=173						
M53A	WI Miller and	74.89	353	P	P	04 48 40.0	+0.5
	baz=172						
N48A	Decatur	74.89	349	P	P	04 48 39.8	+0.3
	baz=168						
M51A	Elyria	74.96	352	P	P	04 48 40.7	+0.9
	baz=171						
N47A	Urbana	75.02	349	IAmb	IAmb	04 48 57.1	
	comp=Z,31nm,0.7s						
N47A	Urbana	75.02	349	P	P	04 48 40.2	0.0
	baz=168,SNR=8.1						
M52A	Chesterland	75.06	352	IAmb	IAmb	04 48 58.9	
	comp=Z,33nm,0.8s						
M52A	Chesterland	75.06	352	P	P	04 48 40.9	+0.5
	baz=171						
M50A	Fremont	75.14	351	IAmb	IAmb	04 48 59.0	
	comp=Z,29nm,0.7s						
M50A	Fremont	75.14	351	P	P	04 48 41.6	+0.7
	baz=170						
TUC	Tucson	75.15	326	P	P	04 48 40.3	-1.0
TUC				pmax	pmax		
	comp=Z,33nm,1.3s						
TUC	Tucson	75.15	326	P	P	04 48 40.2	-1.0
TUC	Tucson	75.15	326	P	P	04 48 43.1	+1.9
	baz=147						
L56A	Greenwood	75.31	355	P	P	04 48 43.3	+1.4
	baz=175						
M49A	Liberty Center	75.33	350	P	P	04 48 42.3	+0.3
	baz=169,SNR=6.8						
L53A	Girard	75.36	353	P	P	04 48 42.9	+0.8
	baz=172						
HDIL	Hopedale	75.36	346	IAmb	IAmb	04 48 43.4	
	comp=Z,71nm,1.4s						
HDIL	Hopedale	75.36	346	P	P	04 48 42.8	+0.7
	baz=165						
L61B	Northampton	75.41	359	P	P	04 48 44.0	+1.6
	baz=179						
L55A	Hinsdale	75.42	355	P	P	04 48 43.6	+1.1
	baz=174,SNR=6.4						
M48A	Edgerton	75.45	350	IAmb	IAmb	04 49 01.6	
	comp=Z,32nm,0.7s						
M48A	Edgerton	75.45	350	P	P	04 48 42.8	+0.2
	baz=168						
ANMO	Albuquerque	75.49	331	*c i*P	P	04 48 45.0	+1.8
ANMO				pmax	pmax		
	comp=Z,48nm,1.7s						
ANMO	Albuquerque	75.49	331	P	P	04 48 42.3	-1.0
ANMO	Albuquerque	75.49	331	P	P	04 48 45.1	+1.8
	baz=150						
L54A	Sinclairville	75.54	354	P	P	04 48 44.1	+0.9
	baz=173,SNR=6.3						
WVNY	West Valley, N	75.65	354	IAmb	IAmb	04 49 02.9	
	comp=Z,27nm,0.8s						
L50A	Kingsville	75.74	351	P	P	04 48 43.5	-0.7
	baz=170,SNR=5.9						
KSU1	Kansas State U	75.79	340	P	P	04 48 45.0	+0.4
	baz=158						
K58A	Earlville	75.82	357	P	P	04 48 46.2	+1.4
	baz=176						
214A	Organ Pipe Nat	75.82	324	IAmb	IAmb	04 48 48.2	
	comp=Z,48nm,1.2s						
214A	Organ Pipe Nat	75.82	324	P	P	04 48 47.2	+2.1
	baz=145,SNR=26						
N41A	Harden Midland	75.84	345	IAmb	IAmb	04 48 46.0	
	comp=Z,47nm,0.9s						
K54A	Basiliko Farm,	75.86	354	P	P	04 48 45.8	+0.8
	baz=174						
L48A	N Adams	75.86	350	P	P	04 48 44.8	-0.2
	baz=169,SNR=5.9						
M44A	Midewin, Midew	75.92	347	IAmb	IAmb	04 48 46.3	
	comp=Z,45nm,1.0s						
L49A	Milan	75.93	350	P	P	04 48 46.0	+0.6
	baz=169						
K55A	Perry	75.93	355	P	P	04 48 46.5	+1.1
	baz=174						
L47A	Sherwood	76.01	349	P	P	04 48 45.8	0.0
	baz=168,SNR=7.2						
K52A	Tillsonburg	76.22	353	P	P	04 48 47.8	+0.8
	baz=172						
L46A	Eue Claire	76.22	349	P	P	04 48 46.9	-0.1
	baz=167						
J56A	Wolcott	76.39	356		pP	04 49 05.2	+0.8
J56A	Wolcott	76.39	356	P	P	04 48 48.8	+0.9
	baz=175						
K50A	Casco	76.43	351	P	P	04 48 48.5	+0.3
	baz=170						
J59A	Piesco	76.47	358	P	P	04 48 48.5	+0.1
J59A	Piesco	76.47	358	P	P	04 48 50.2	+1.8
	baz=177						
J57A	Williamstown	76.48	356	IAmb	IAmb	04 49 07.8	
	comp=Z,27nm,0.9s						
J57A	Williamstown	76.48	356	P	P	04 48 49.2	+0.7
	baz=176						
T25A	Trinidad	76.60	333	P	P	04 48 51.7	+2.1
	baz=152,SNR=42						
X18A	Snowflake	76.62	328	IAmb	IAmb	04 49 10.6	
	comp=Z,52nm,1.5s						
J52A	Paris	76.65	353	P	P	04 48 49.6	+0.2
	baz=172						
K47A	Vermontville	76.66	350	P	P	04 48 49.4	-0.1
	baz=168,SNR=5.5						
K48A	Perry	76.66	350	P	P	04 48 49.6	+0.1
	baz=169,SNR=7.6						
L44A	Lake County Fo	76.66	347	P	P	04 48 50.4	+0.9
	baz=166						
I58A	Old Forge	76.71	357	P	P	04 48 51.1	+1.2
	baz=177						
K46A	Dorr	76.79	349	P	P	04 48 50.1	-0.1
	baz=168						
I60A	Shoreham	76.81	359	P	P	04 48 52.7	+2.4
	baz=178						
L42A	Oliver, Polo	76.83	346	IAmb	IAmb	04 48 51.6	
	comp=Z,38nm,1.1s						
I63A	Otisfield	77.00	1	P	P	04 48 54.6	+3.2
	baz=181						
W18A	Petrified Fore	77.03	328	IAmb	IAmb	04 48 54.9	
	comp=Z,67nm,1.2s						
W18A	Petrified Fore	77.03	328	P	P	04 48 53.8	+1.8
	baz=148,SNR=19						
J49A	Marlette	77.07	351	P	P	04 48 51.7	-0.1
	baz=170						
J48A	Bridge Port	77.10	351	P	P	04 48 52.3	+0.3
	baz=169,SNR=9.1						
J47A	Sunmer	77.19	350	IAmb	IAmb	04 49 10.3	
	comp=Z,33nm,0.7s						
J47A	Sunmer	77.19	350	P	P	04 48 52.5	0.0
	baz=168						
X16A	Lo Mia Camp, P	77.20	327	IAmb	IAmb	04 48 56.1	
	comp=Z,47nm,1.1s						
K43A	Burlington	77.25	347	IAmb	IAmb	04 48 54.0	
	comp=Z,34nm,1.3s						
I51A	Listowel	77.27	353	P	P	04 48 53.4	+0.5
	baz=172,SNR=7.1						
I55A	Frankford	77.38	355	P	P	04 48 54.3	+0.8
	baz=175						
H58A	Gabriels	77.41	358	P	P	04 48 55.0	+1.3
	baz=178						
H61A	Lyndonville	77.48	360	P	P	04 48 55.9	+1.8
	baz=180						
H57A	Richville	77.50	357	P	P	04 48 54.9	+0.7
	baz=177						
H60A	Morristown	77.52	359	P	P	04 48 56.3	+2.0
	baz=179						
SCIA	State Center	77.52	343	IAmb	IAmb	04 48 56.0	
	comp=Z,39nm,1.0s						
SCIA	State Center	77.52	343	P	P	04 48 55.2	+0.8
	baz=162						
Y14A	Wickenburg	77.54	325	IAmb	IAmb	04 48 57.6	
	comp=Z,37nm,1.1s						
I49A	Point Hope	77.61	351	IAmb	IAmb	04 49 12.7	
	comp=Z,21nm,0.8s						
I49A	Point Hope	77.61	351	P	P	04 48 55.0	+0.3
	baz=170						
KSCO	Kaye Shedlock’	77.62	335	IAmb	IAmb	04 48 57.9	
	comp=Z,51nm,1.1s						
KSCO	Kaye Shedlock’	77.62	335	P	P	04 48 57.0	+1.8
	baz=154,SNR=6.4						
H56A	Elgin	77.67	356	P	P	04 48 56.1	+1.0
	baz=176						
DELO	Deloro Mine	77.68	355	P	P	04 48 53.4	-1.8
H55A	Tweed	77.68	356	P	P	04 48 55.8	+0.6
	baz=175						
GLA	Glamis	77.70	324	P	P	04 48 57.6	+1.9
	baz=144,SNR=7.9						
H53A	Bobcaygeon	77.81	355	P	P	04 48 56.4	+0.5
	baz=174						
FRNY	Flat Rock	77.81	358	P	P	04 48 55.8	-0.1
FRNY					pP	04 49 11.7	-0.7
JFWS	Jewell Farm	77.83	346	IAmb	IAmb	04 48 57.4	
	comp=Z,56nm,1.3s						
JFWS	Jewell Farm	77.83	346	P	P	04 48 56.3	+0.3
	baz=164,SNR=11						
I47A	Gladwin	77.91	350	IAmb	IAmb	04 49 15.8	
	comp=Z,26nm,0.7s						
I47A	Gladwin	77.91	350	P	P	04 48 56.6	+0.1
	baz=169,SNR=7.2						
I48A	Sherman Twp	77.96	351	P	P	04 48 56.9	+0.2
	baz=170,SNR=6.8						
H52A	Wyevale	77.98	354	P	P	04 48 57.6	+0.8
	baz=173						
IKP	In-Ko-Pah, Jac	78.02	323	P	P	04 48 59.6	+2.1
	baz=143						
S22A	4UR Ranch, Cre	78.06	332	P	P	04 48 59.6	+1.7
	baz=150,SNR=15						
WUAZ	Wupatki	78.09	328	IAmb	IAmb	04 49 01.0	
	comp=Z,41nm,1.1s						
WUAZ	Wupatki	78.09	328	P	P	04 48 60.0	+2.1
	baz=147,SNR=24						
SWSC	Sam W. Stewart	78.10	323	P	P	04 49 00.0	+2.2
	baz=143,SNR=8.2						
Y12C	Blythe	78.11	324	IAmb	IAmb	04 49 01.1	
	comp=Z,42nm,0.9s						
Y12C	Blythe	78.11	324	P	P	04 49 00.3	+2.4
	baz=144,SNR=18						
G57A	Newington	78.12	357	P	P	04 48 58.8	+1.2
	baz=177						
G58A	Ormstown	78.14	358	P	P	04 48 59.0	+1.3
	baz=178						
G62A	West of Eustis	78.17	1	P	P	04 48 57.7	-0.2
G62A				IAmb	IAmb	04 49 17.0	
	comp=Z,29nm,0.8s						
G62A	West of Eustis	78.17	1	P	P	04 48 60.0	+2.1
	baz=181						
PKME	Peaks-Kenny Pk	78.23	1	P	P	04 49 03.5	+5.3
	baz=182						
MVCO	Mesa Verde	78.28	330	IAmb	IAmb	04 49 01.6	
	comp=Z,37nm,1.1s						
MVCO	Mesa Verde	78.28	330	P	P	04 49 00.7	+1.7
	baz=149,SNR=23						
BAR	Barrett	78.34	322	IAmb	IAmb	04 49 02.1	
	comp=Z,28nm,1.0s						
G53A	Haliburton	78.35	355	P	P	04 48 59.8	+0.9
	baz=174,SNR=6.9						
G55A	Calabogie	78.36	356	P	P	04 48 59.8	+1.0
	baz=175						
BGNE	Belgrade	78.37	340	P	P	04 49 00.6	+1.5
	baz=157						
MONP2	Monument Peak	78.38	322	P	P	04 49 01.7	+2.1
	baz=143,SNR=5.2						
PDMCI	Parker Dam,Lak	78.38	325	P	P	04 49 01.4	+2.1
	baz=145,SNR=5.1						
H48A	Harrisville	78.42	351	IAmb	IAmb	04 49 18.2	
	comp=Z,51nm,1.1s						
H48A	Harrisville	78.42	351	P	P	04 48 59.8	+0.5
	baz=170						
Q24A	Divide	78.48	334	P	P	04 49 02.0	+1.8
	baz=152,SNR=23						
BC3	Big Chuckawall	78.50	324	P	P	04 49 02.2	+2.1
	baz=144,SNR=28						
I42A	Draeger Farm,	78.50	347	IAmb	IAmb	04 49 01.1	
	comp=Z,31nm,1.1s						
G54A	Lake Saint Pet	78.59	355	P	P	04 49 00.5	+0.3
	baz=174						
F63A	Nahmakanta, Br	78.67	2	P	P	04 49 05.1	+4.5
	baz=182						
IRM	Iron Mountain	78.75	324	P	P	04 49 03.4	+2.1
	baz=144,SNR=24						
TSUM	Tsumeb	78.79	106	P	P	04 49 01.0	-1.3
F64A	Sherman	78.86	2	P	P	04 49 06.3	+4.7
	baz=183						
H43A	Windswept, Lux	78.86	348	IAmb	IAmb	04 49 03.0	
	comp=Z,46nm,1.3s						
F55A	Otter Lake	78.92	356	P	P	04 49 03.1	+1.1
	baz=176						
F60A	Warwick	78.92	360	P	P	04 49 02.9	+0.9
	baz=180						
G47A	Hillman	78.95	351	P	P	04 49 02.6	+0.5
	baz=169,SNR=5.2						
XPFO	Pion Flat	78.96	323	P	P	04 49 02.2	-0.5
XPFO				IAmb	IAmb	04 49 06.1	
	comp=Z,43nm,0.9s						
PFO	Pinyon Flats O	78.97	323	*c i*P	P	04 49 05.0	+2.3
PFO				pmax	pmax		
	comp=Z,80nm,1.0s						
PFO	Pinyon Flats O	78.97	323	P	P	04 49 02.3	-0.4
PFO				IAmb	IAmb	04 49 06.1	
	comp=Z,43nm,0.9s						
PFO	Pinyon Flats O	78.97	323	P	P	04 49 05.0	+2.3
	baz=143,SNR=22						
NEE2	Needles Airpor	78.98	325	P	P	04 49 04.7	+2.1
	baz=144						
BELC	Belle Mtn. Jos	79.04	323	P	P	04 49 05.5	+2.3
	baz=143,SNR=12						
F52A	Sundridge	79.08	354	P	P	04 49 03.5	+0.6
	baz=173						
ALGO	Algonquin Park	79.14	355	P	P	04 49 03.5	+0.3
	baz=174						
TRQ	Mont Tremblant	79.22	358	P	P	04 49 03.0	-0.8
TRQ					pP	04 49 20.8	+0.5
F51A	Arnstein	79.26	354	P	P	04 49 04.7	+0.8
	baz=173						
F49A	Sandfield	79.31	352	P	P	04 49 04.4	+0.3
	baz=171,SNR=7.0						
E60A	Ste Agathe de	79.32	360	P	P	04 49 05.7	+1.6
	baz=180						
MURC	Murrieta	79.33	322	P	P	04 49 06.9	+2.3
	baz=142,SNR=14						
E58A	La Victoria	79.34	359	P	P	04 49 05.7	+1.4
	baz=178						
SMCO	Snowmass	79.36	333	IAmb	IAmb	04 49 08.1	
	comp=Z,38nm,0.9s						
E61A	Lac Etchemin	79.38	1	P	P	04 49 08.9	+4.4
	baz=181						
ISCO	Idaho Springs	79.39	334	P	P	04 49 06.5	+1.4
	baz=152,SNR=18						
E57A	Chemin Saint G	79.40	358	P	P	04 49 05.8	+1.2
	baz=178						
E63A	Oxbow	79.41	2	P	P	04 49 09.9	+5.2
	baz=182						
E64A	Bridgewater	79.43	2	P	P	04 49 09.3	+4.6
	baz=183						
F48A	Evansville	79.44	352	P	P	04 49 05.2	+0.4
	baz=170,SNR=9.2						
GMRC	Granite Mounta	79.50	324	P	P	04 49 07.8	+2.2
	baz=144,SNR=32						
E52A	Mattawa	79.51	355	P	P	04 49 05.4	+0.2
	baz=174						
E55A	Montcerf-Lytto	79.52	357	P	P	04 49 07.1	+1.9
	baz=176						
E53A	Dumoine, Ponti	79.53	356	P	P	04 49 06.4	+1.1
	baz=175						
E54A	Lac Daplat, Po	79.56	356	P	P	04 49 06.0	+0.6
	baz=175						
E56A	St. Veronique	79.56	357	P	P	04 49 06.2	+0.7
	baz=177						
F45A	CMU Biological	79.68	350	P	P	04 49 06.5	+0.4
	baz=168						
BBRC	Big Bear Solar	79.71	323	P	P	04 49 09.6	+2.7
	baz=143,SNR=7.4						
CIS	Catalina Islan	79.80	321	P	P	04 49 09.3	+2.1
	baz=142						
E51A	G1948 Merrick	79.83	354	P	P	04 49 07.2	+0.3
	baz=173						
BOSA	Boshof	79.83	117	P	P	04 49 08.6	+0.9
	comp=Z,14nm,0.9s,baz=246,slow=3.7,SNR=18						
BOSA				LR	LR	05 21 23.6	
	comp=Z,101nm,18.8s,baz=220,slow=33						
D60A	Saint Jean D’O	79.86	0	P	P	04 49 11.7	+4.7
	baz=180						
HEC	Hector,Ludlow	79.87	324	P	P	04 49 09.9	+2.4
	baz=143,SNR=33						
D57A	Chemin Vers le	80.00	358	P	P	04 49 09.4	+1.5
	baz=178,SNR=6.0						
E48A	Lockeyer	80.03	352	P	P	04 49 08.6	+0.6
	baz=171,SNR=12						
D62A	Allapoint, All	80.06	2	P	P	04 49 08.2	+0.1
D62A					pP	04 49 24.4	-0.2
D62A	Allapoint, All	80.06	2	P	P	04 49 09.7	+1.6
	baz=182						
D55A	Sainte-Anne-du	80.06	357	P	P	04 49 08.8	+0.6
	baz=176						
D58A	Chemin du LacG	80.06	359	P	P	04 49 08.8	+0.7
	baz=179,SNR=7.5						
D56A	ZEC Mazanza, M	80.06	358	P	P	04 49 09.3	+1.2
	baz=177						
BFSC	Mount Baldy Ra	80.07	322	P	P	04 49 10.7	+1.9
	baz=142,SNR=14						
ECSD	EROS Data Cent	80.09	342	IAmb	IAmb	04 49 10.1	
	comp=Z,48nm,0.9s						
ECSD	EROS Data Cent	80.09	342	P	P	04 49 09.3	+0.8
	baz=159,SNR=42						
E47A	Iron Bridge	80.14	352	P	P	04 49 09.2	+0.6
	baz=170,SNR=9.8						
TUQ	Turquoise Moun	80.15	324	P	P	04 49 11.4	+2.2
	baz=144,SNR=24						
E46A	Sault Ste Mari	80.18	351	IAmb	IAmb	04 49 10.1	
	comp=Z,60nm,1.4s						
D53A	Lac Vacive, Po	80.23	356	P	P	04 49 09.8	+0.7
	baz=175,SNR=9.1						
RRX	Edison Barstow	80.24	323	P	P	04 49 12.3	+2.8
	baz=143						
D54A	Lac Fusel, La	80.25	356	P	P	04 49 09.3	+0.1
	baz=176,SNR=6.1						
MWC	Mount Wilson	80.26	322	IAmb	IAmb	04 49 12.8	
	comp=Z,50nm,1.2s						
PASC	Pasadena Art C	80.29	322	IAmb	IAmb	04 49 12.9	
	comp=Z,52nm,1.1s						
LATQ	La Tuque	80.34	359	P	P	04 49 11.1	+1.5
	baz=179						
BATG	Bathurst New B	80.36	4	P	P	04 49 10.0	+0.2
D51A	Lot 18 Range I	80.37	354	P	P	04 49 10.4	+0.6
	baz=173						
N23A	Red Feather La	80.47	334	IAmb	IAmb	04 49 13.5	
	comp=Z,39nm,1.2s						
N23A	Red Feather La	80.47	334	P	P	04 49 12.3	+1.5
	baz=151,SNR=12						
GSC	Goldstone, Bar	80.48	324	IAmb	IAmb	04 49 13.9	
	comp=Z,25nm,0.8s						
GSC	Goldstone, Bar	80.48	324	P	P	04 49 13.0	+2.1
	baz=143,SNR=18						
D50A	G1974 Best Tow	80.48	354	P	P	04 49 11.0	+0.6
	baz=173,SNR=9.7						
SPMN	Marine on St.	80.58	345	P	P	04 49 11.2	+0.2
	baz=162,SNR=8.3						
SHPR	Sheep Range	80.65	326	IAmb	IAmb	04 49 14.9	
	comp=Z,42nm,1.1s						
E44A	Grand Marais A	80.66	350	IAmb	IAmb	04 49 13.5	
	comp=Z,56nm,1.4s						
E44A	Grand Marais A	80.66	350	P	P	04 49 12.6	+1.2
	baz=168						
D46A	Sault St. Mari	80.66	351	P	P	04 49 11.6	+0.2
	baz=169,SNR=7.5						
O20A	White River Ci	80.68	332	P	P	04 49 13.5	+1.5
	baz=150,SNR=11						
D48A	Paudash Townsh	80.68	353	P	P	04 49 11.6	+0.1
	baz=171,SNR=6.7						
SHOC	Shoshone, Teco	80.70	324	P	P	04 49 13.9	+2.0
	baz=143,SNR=9.4						
D47A	Chapleau	80.71	352	P	P	04 49 11.7	0.0
	baz=170,SNR=6.3						

D49A	Beulah Townshi	80.73	353	P	P	04 49 12.3	+0.5
	baz=172						
EDW2	Edwards Air Fo	80.75	323	P	P	04 49 14.0	+1.8
	baz=142,SNR=16						
SCZ2	Santa Cruz Isl	80.90	321	P	P	04 49 14.8	+1.8
	baz=141						
LRMC	Laurel Mtn Rad	81.06	323	P	P	04 49 16.1	+2.1
	baz=142,SNR=11						
VLDQ	Val d'Or	81.25	356	IAmb	IAmb	04 49 34.1	
	comp=Z,30nm,0.9s						
ARVC	Arvin	81.36	322	P	P	04 49 17.7	+2.3
	baz=142						
MPMC	Manual Prospec	81.42	324	P	P	04 49 17.9	+1.9
	baz=142,SNR=17						
FURC	Furnace Creek,	81.44	324	P	P	04 49 18.1	+2.4
	baz=143,SNR=19						
D41A	Chassel	81.51	348	IAmb	IAmb	04 49 17.7	
	comp=Z,54nm,0.9s						
TPNV	Topopah Spring	81.52	325	IAmb	IAmb	04 49 19.6	
	comp=Z,36nm,0.9s						
TPNV	Topopah Spring	81.52	325	P	P	04 49 18.6	+2.2
	baz=143,SNR=25						
ISA	Isabella, Lake	81.60	323	IAmb	IAmb	04 49 20.0	
	comp=Z,30nm,0.8s						
ISA	Isabella, Lake	81.60	323	P	P	04 49 19.1	+2.4
	baz=142,SNR=30						
RWWY	Rawlins	81.63	334	IAmb	IAmb	04 49 19.3	
	comp=Z,41nm,1.1s						
PKM	Mcpherson Peak	81.69	322	P	P	04 49 19.8	+2.4
	baz=141,SNR=27						
CWC	Cottonwood Cre	82.01	324	P	P	04 49 21.1	+2.0
	baz=142						
LBTB	Lobatse	82.02	115	IAmb	IAmb	04 49 37.9	
	comp=Z,30nm,0.8s						
VES	Vestal, Richgr	82.05	323	P	P	04 49 21.1	+2.0
	baz=141,SNR=27						
GRAC	Grapevine Rang	82.10	324	P	P	04 49 21.8	+2.5
	baz=143,SNR=11						
SMMC	Simmler	82.11	322	P	P	04 49 22.0	+2.6
	baz=141,SNR=8.4						
LSQQ	Lebel-sur-Quev	82.16	356	P	P	04 49 19.7	+0.4
	baz=175						
K22A	Casper	82.21	335	P	P	04 49 19.8	-0.1
K22A					pP	04 49 35.8	-0.7
K22A	Casper	82.21	335	P	P	04 49 21.5	+1.6
	baz=151,SNR=14						
R11A	Troy Canyon, C	82.33	326	IAmb	IAmb	04 49 23.8	
	comp=Z,44nm,1.1s						
R11A	Troy Canyon, C	82.33	326	P	P	04 49 22.7	+2.0
	baz=144,SNR=55						
TIN	Tinemaha, Big	82.57	324	P	P	04 49 24.3	+2.4
	baz=142,SNR=6.9						
DUG	Dugway, Tooele	82.60	329	IAmb	IAmb	04 49 25.4	
	comp=Z,28nm,1.1s						
DUG	Dugway, Tooele	82.60	329	P	P	04 49 23.6	+1.5
	baz=146,SNR=25						
RSSD	Black Hills	82.65	337	P	P	04 49 21.7	-0.6
RSSD				pmax	pmax		
	comp=Z,29nm,1.1s						
RSSD	Black Hills	82.65	337	P	P	04 49 21.7	-0.6
RSSD				IAmb	IAmb	04 49 24.2	
	comp=Z,29nm,1.1s						
RSSD	Black Hills	82.65	337	P	P	04 49 23.4	+1.1
	baz=153						
EYMN	Ely	82.90	346	P	P	04 49 23.4	+0.2
	baz=163,SNR=17						
MATQ	Matagami	82.90	356	P	P	04 49 23.5	+0.4
	baz=175,SNR=5.4						
DRLN	Deer Lake	83.12	9	IAmb	IAmb	04 49 43.5	
	comp=Z,35nm,0.8s						
HWUT	Hardware Ranch	83.26	331	IAmb	IAmb	04 49 27.4	
	comp=Z,32nm,0.9s						
MLAC	Mammoth, Mammo	83.32	324	P	P	04 49 28.2	+2.3
	baz=142,SNR=13						
TORD	Torodi Ar. Bea	83.39	70	P	P	04 49 26.9	+0.5
	comp=Z,31nm,0.7s,baz=264,slow=4.5,SNR=147						
TORD				pP	pP	04 49 43.2	-0.1
	comp=Z,32nm,0.9s,baz=260,slow=3.5,SNR=10						
TORD				LR	LR	05 24 15.6	
	comp=Z,328nm,19.9s,baz=245,slow=34						
OMMB	Old Mammoth Mi	83.39	324	IAmb	IAmb	04 49 29.1	
	comp=Z,32nm,1.0s						
PDAR	Pinedale Array	83.44	333	P	P	04 49 26.6	+0.3
	comp=Z,10nm,1.0s,baz=141,slow=4.7,SNR=52						
PDAR				PKKPbc	PKKPbc	05 07 44.6	-2.1
	comp=Z,0.5nm,0.7s,baz=343,slow=0.5,SNR=4.1						
PDAR				LR	LR	05 22 10.1	
	comp=Z,105nm,21.6s,baz=149,slow=32						
PDAR	Pinedale Array	83.44	333	P	P	04 49 25.8	-0.6
NVAR	Mina Array Bea	83.69	325	P	P	04 49 29.4	+1.7
	comp=Z,23nm,0.9s,baz=155,slow=5.9,SNR=116						
NVAR				PKKPbc	PKKPbc	05 08 00.4	+15
	comp=Z,0.9nm,0.8s,baz=262,slow=1.3,SNR=4.3						
NVAR				LR	LR	05 22 35.3	
	comp=Z,30nm,21.4s,baz=171,slow=33						
NVAR	Mina Array Bea	83.69	325	P	P	04 49 26.4	-1.3
ODZ	Otahua Downs	83.90	219	IAmb	IAmb	04 49 31.1	
	comp=Z,46nm,1.1s						
RYN	Ryan	83.95	325	IAmb	IAmb	04 49 31.8	
	comp=Z,33nm,1.0s						
AHID	Auburn Hatcher	84.04	332	IAmb	IAmb	04 49 31.2	
	comp=Z,50nm,1.4s						
KVN	Kaiserville	84.08	325	IAmb	IAmb	04 49 32.1	
	comp=Z,35nm,0.9s						
ELK	Elko	84.11	328	IAmb	IAmb	04 49 32.1	
	comp=Z,32nm,0.9s						
AGMN	Agassiz Nation	84.17	344	IAmb	IAmb	04 49 49.0	
	comp=Z,50nm,1.4s						
AGMN	Agassiz Nation	84.17	344	P	P	04 49 30.3	+0.6
	baz=160,SNR=6.6						
OXZ	Oxford	84.29	221	IAmb	IAmb	04 49 33.1	
	comp=Z,50nm,1.2s						
WAKR	Walker	84.30	324	IAmb	IAmb	04 49 34.2	
	comp=Z,43nm,1.2s						
BKZ	Black Stump Fm	84.39	226	P	P	04 49 30.5	-0.9
BKZ				IAmb	IAmb	04 49 34.1	
	comp=Z,38nm,1.2s						
REDW	Red Top Meadow	84.45	332	IAmb	IAmb	04 49 33.4	
	comp=Z,40nm,1.3s						
LTZ	Lake Taylor	84.52	221	P	P	04 49 31.6	-0.4
RPZ	Rata Peaks	84.57	220	P	P	04 49 32.2	+0.1
RPZ					pP	04 49 47.9	-0.9
YERR	Yerington	84.58	324	IAmb	IAmb	04 49 35.2	
	comp=Z,42nm,1.1s						
LBZ	Lake Benmore	84.59	219	P	P	04 49 31.3	-1.0
LBZ				IAmb	IAmb	04 49 34.0	
	comp=Z,27nm,0.9s						
MDND	Maddock	84.69	341	P	P	04 49 33.5	+1.2
	baz=157						
PNTR	Pine Nut	84.83	324	IAmb	IAmb	04 49 36.6	
	comp=Z,37nm,0.9s						
PAHR	Pah Rah Range	85.21	325	IAmb	IAmb	04 49 37.7	
	comp=Z,22nm,1.0s						
H17A	Grant Village	85.21	333	P	P	04 49 37.1	+1.8
	baz=148,SNR=8.0						
RLMT	Red Lodge	85.34	334	IAmb	IAmb	04 49 38.7	
	comp=Z,18nm,0.8s						
AFDM	Forest Hills D	85.40	323	IAmb	IAmb	04 49 39.4	
	comp=Z,37nm,1.2s						
ULM	Lac du Bonnet	86.01	344	P	P	04 49 39.0	+0.3
	comp=Z,16nm,0.9s,baz=162,slow=3.3,SNR=29						
ULM	Lac du Bonnet	86.01	344	IAmb	IAmb	04 49 39.8	
	comp=Z,27nm,1.0s						
MFID	Camas Ranch	86.53	329	IAmb	IAmb	04 49 44.0	
	comp=Z,28nm,1.0s						
DGMT	Dagmar	86.57	339	P	P	04 49 42.9	+1.3
	baz=153,SNR=24						
WVOR	Wild Horse Val	86.99	327	IAmb	IAmb	04 49 46.5	
	comp=Z,36nm,1.2s						
O02D	Mt. Diablo Mer	87.25	323	P	P	04 49 46.8	+1.6
	baz=139,SNR=6.3						
MOD	Modoc Plateau	87.35	326	IAmb	IAmb	04 49 48.3	
	comp=Z,24nm,0.9s						
N02D	Trinity Center	87.81	324	P	P	04 49 49.1	+1.2
	baz=139						
SCHQ	Schefferville	87.87	3	P	P	04 49 47.8	0.0
	comp=Z,11nm,1.1s,baz=163,slow=2.7,SNR=6.5						
SCHQ				LR	LR	05 29 50.9	
	comp=Z,86nm,21.7s,baz=336,slow=36						
SCHQ	Schefferville	87.87	3	IAmb	IAmb	04 50 05.8	
	comp=Z,20nm,1.1s						
M04C	Macdoel	88.00	325	P	P	04 49 50.6	+1.7
	baz=140,SNR=9.8						
EGMT	Eagleton	88.00	335	IAmb	IAmb	04 49 50.0	
	comp=Z,33nm,1.1s						
EGMT	Eagleton	88.00	335	P	P	04 49 49.3	+0.6
	baz=149,SNR=16						
M02C	Callahan	88.19	324	P	P	04 49 51.2	+1.5
	baz=139,SNR=5.0						
BMO	Blue Mountains	88.32	329	IAmb	IAmb	04 49 52.2	
	comp=Z,18nm,1.0s						
YBH	Yreka Blue Hor	88.38	324	IAmb	IAmb	04 49 52.2	
	comp=Z,28nm,0.9s						
MSO	Missoula	88.55	332	IAmb	IAmb	04 49 53.8	
	comp=Z,24nm,1.4s						
L04D	Klamath Falls	88.55	325	P	P	04 49 52.6	+1.1
	baz=140						
K04D	Chiloquin, OR	88.59	325	P	P	04 49 53.5	+1.9
	baz=140						
J05D	Fort Rock, OR	88.86	326	P	P	04 49 54.6	+1.8
	baz=140,SNR=7.0						
PINE	Pine Mountain	89.11	326	IAmb	IAmb	04 49 56.4	
	comp=Z,24nm,0.9s						
F10A	Beach Ranch, E	89.18	330	IAmb	IAmb	04 50 02.9	
	comp=Z,15nm,1.0s						
LSZ	Lusaka	89.42	108	P	P	04 49 55.7	-0.5
LSZ				pmax	pmax		
	comp=Z,15nm,1.4s						
LSZ	Lusaka	89.42	108	P	P	04 49 55.7	-0.5
JTMT	Jette	89.43	333	IAmb	IAmb	04 49 57.5	
	comp=Z,17nm,1.0s						
K02D	Willamette Mer	89.57	324	P	P	04 49 57.9	+1.7
	baz=139						
I05D	Terrebonne, OR	89.71	327	P	P	04 49 58.4	+1.7
	baz=140						
F07A	Phinny Hill Vi	90.28	328	IAmb	IAmb	04 50 02.0	
	comp=Z,12nm,0.8s						
E08A	Dider Farm, El	90.37	329	IAmb	IAmb	04 50 01.6	
	comp=Z,22nm,1.2s						
HAWA	Hanford	90.50	329	P	P	04 49 58.9	-1.4
HAWA					pP	04 50 18.5	+1.4
D08A	Wollman Farm,	90.75	330	P	P	04 50 00.0	-1.5
D08A				IAmb	IAmb	04 50 02.9	
	comp=Z,13nm,1.0s						
D08A					pP	04 50 18.8	+0.5
E07A	Sunnyside	90.76	329	IAmb	IAmb	04 50 04.0	
	comp=Z,18nm,1.1s						
F05D	White Salmon	90.95	328	P	P	04 50 04.0	+1.6
	baz=140						
NEW	Newport	90.97	331	P	P	04 50 02.9	+0.4
	baz=143,SNR=6.1						
LON	Longmire	91.77	328	IAmb	IAmb	04 50 10.3	
	comp=Z,24nm,1.4s						
TAM	Tamanrasset	91.96	64	P	P	04 50 06.4	-1.5
TAM				*PP	pP	04 50 22.1	-2.7
TAM				pmax	pmax		
	comp=Z,7.0nm,1.3s						
TAM	Tamanrasset	91.96	64	P	P	04 50 06.3	-1.5
TAM					pP	04 50 22.1	-2.7
ESDC	Sonseca Array	95.65	46	P	P	04 50 23.6	-0.8
	comp=Z,0.3nm,0.7s,baz=264,slow=4.7,SNR=2.8						
ESDC				pP	pP	04 50 41.8	+0.5
	comp=Z,3.7nm,0.9s,baz=243,slow=3.6,SNR=11						
ESDC				LR	LR	05 32 44.0	
	comp=Z,123nm,19.3s,baz=235,slow=35						
YKA	Yellowknife Ar	101.61	341	P	Pdif	04 50 50.4	0.0
	comp=Z,1.5nm,0.7s,baz=140,slow=4.6,SNR=35						
YKA				PP	PP	04 55 03.4	+1.7
	comp=Z,0.7nm,0.9s,baz=138,slow=7.7,SNR=4.6						
YKA				PKKPbc	PKKPdf	05 07 11.3	+5.2
	comp=Z,0.3nm,0.7s,baz=331,slow=2.4,SNR=7.4						
DZM	Mont Dzumac	102.15	233	eLR	LR	05 24 19.9	
	comp=Z,714nm,30.6s						
RES	Resolute Bay	108.85	354	PKKPbc	PKKPbc	05 06 34.6	-2.5
	comp=Z,0.5nm,0.5s,baz=288,slow=8.4,SNR=5.6						
MOTA	Moosalm	108.99	45	i PKiKP	PKiKP	04 55 28.1	+0.2
	comp=Z,11nm,1.7s						
SQTA	Sankt Quirin	108.99	46	i sPKiKP	PKiKP	04 55 50.8	+23
	comp=Z,9.7nm,1.6s						
KBA	Koelnbreinsper	110.21	46	i sPKiKP	PKiKP	04 55 53.3	+23
	comp=Z,12nm,1.8s						
SOKA	Soboth	111.06	47	i sPKiKP	PKiKP	04 55 54.6	+23
	comp=Z,3.2nm,0.9s						
MOA	Molln	111.12	46	i sPKiKP	PKiKP	04 55 54.1	+22
	comp=Z,3.5nm,0.9s						
GERES	GERESS Array B	111.23	45	pPKiKP	PKiKP	04 55 50.5	+18
	comp=Z,1.9nm,0.6s,baz=190,slow=1.5,SNR=10						
GERES				PKKPbc	PKKPbc	05 06 29.7	+0.8
	comp=Z,0.7nm,0.8s,baz=48,slow=2.0,SNR=4.7						
INK	Inuvik	111.25	339	PKKPbc	PKKPbc	05 06 27.6	-1.5
	comp=Z,2.8nm,1.1s,baz=57,slow=5.0,SNR=5.3						
ARSA	Arzberg	111.62	47	i pPKiKP	PKiKP	04 55 51.8	+19
	comp=Z,4.0nm,0.9s						
CLL	Collm	111.92	42	ePKiKP	PKiKP	04 55 34.0	+0.9
CLL				epPKiKP	pPKiKP	04 55 50.0	-0.6
CLL				esPKiKP	sPKiKP	04 55 57.0	0.0
CLL				eSKKSac	SKKSac	05 03 06.0	-8.0
CLL				ePS	PS	05 05 47.0	-3.8
CLL				eSS	SS	05 11 54.0	+3.5
CLL				eSSS	SSS	05 15 54.0	
CLL				eSSSS		05 19 30.0	
CLL				Lm	MLR	05 38 00.0	
	comp=N,100nm,21.4s						
CLL				Lm	MLR	05 38 00.0	
	comp=E,200nm,21.3s						
CLL				Lm	MLR	05 38 00.0	
	comp=Z,300nm,20.4s						
CLL	Collm	111.92	42	ePKIKP	PKiKP	04 55 34.0	+0.9
CLL				e		04 55 50.0	
CLL				MLR	MLR		
	comp=Z,300nm,20.4s						
CONA	Conrad Observa	112.12	46	i pPKiKP	PKiKP	04 55 52.3	+19
	comp=Z,3.2nm,0.7s						
ILAR	Eielson Array	113.87	333	PKP	PKiKP	04 55 36.8	+0.3
	comp=Z,1.9nm,0.9s,baz=203,slow=1.1,SNR=16						
ILAR				pPKP	pPKiKP	04 55 55.4	+1.4
	comp=Z,1.6nm,0.7s,baz=152,slow=1.5,SNR=7.0						
ILAR	Eielson Array	113.87	333		PKiKP	04 55 36.1	-0.3
MORC	Moravsky Berou	113.90	45	⇓P	PKiKP	04 55 56.7	+20
MDVR	Moldovita	114.52	51	⇓P	PKiKP	04 55 55.0	+17
BZS	Buzias	114.78	51	⇑P	PKiKP	04 55 57.8	+19
HERR	Herculane	115.02	52	⇑P	PKiKP	04 55 58.2	+19
SIRR	Siria	115.06	50	⇑P	PKiKP	04 55 58.1	+19
NB2	NORSAR Subarra	115.11	32	PKPdf	PKiKP	04 55 56.5	+17
	comp=Z,4.0nm,1.4s,baz=248,slow=1.9						
NOA	NORSAR Array B	115.11	32	PKKPbc	PKKPbc	05 06 18.9	+2.9
	comp=Z,1.7nm,0.8s,baz=68,slow=4.4,SNR=4.4						
DRGR		115.93	50	⇓P	PKiKP	04 55 59.9	+19
TRPA	Tarpa	116.31	48	⇑P	PKiKP	04 56 00.5	+19
TOLK	Toolik Lake Re	116.51	336		PKiKP	04 55 42.1	+0.6
TOLK	Toolik Lake Re	116.51	336	P	PKiKP	04 55 42.5	+0.9
	baz=114						
ARR	Arges	116.66	52	⇑P	PKiKP	04 56 01.0	+18
VOIR		116.95	52	⇓P	PKiKP	04 56 01.6	+18
IMAR	Indian Mountai	116.99	333		PKPdf	04 55 42.3	-0.2
IMAR				pPKPdf	pPKPdf	04 56 01.0	+1.1
DOPR	Dopca	117.36	51	⇑P	PKiKP	04 56 04.2	+20
MLR	Muntele Rosu	117.56	52	⇑P	PKiKP	04 56 03.6	+19
BURAR	Bucovina Array	117.82	49	⇓P	PKiKP	04 56 04.1	+19
BURAR	Bucovina Array	117.82	49		PKiKP	04 55 44.8	0.0
ISR	Istrita	117.83	52	⇓P	PKiKP	04 56 10.7	+26
PLOR	Plostina	118.15	52	⇓P	PKiKP	04 56 03.4	+18
VRI	Vrincioaia	118.21	52	⇓P	PKiKP	04 56 03.7	+18
TESR	Tescani	118.37	51	⇓P	PKiKP	04 56 04.3	+19
ASAR	Alice Springs	118.46	206	PKP	PKPdf	04 55 45.8	-1.0
	comp=Z,2.7nm,0.7s,baz=146,slow=2.1,SNR=28						
ASAR				pPKP	pPKPdf	04 56 03.5	-0.8
	comp=Z,1.8nm,0.6s,baz=133,slow=1.6,SNR=7.7						
ASAR				PKKPbc	PKKPab	05 06 17.1	+7.6
	comp=Z,2.3nm,0.9s,baz=344,slow=3.6,SNR=9.7						
ASAR	Alice Springs	118.46	206		PKPdf	04 55 45.6	-1.1
CFR	Carcaliu	118.91	53	⇓P	PKiKP	04 56 02.7	+16
TLCR		119.36	53	⇓P	PKiKP	04 56 06.5	+19
SORM	Soroca	119.99	50	⇓P	PKiKP	04 56 05.7	+17
BRTR	Keskin Array B	120.95	60	PKP	PKPdf	04 55 50.1	-0.9
	comp=Z,1.1nm,0.9s,baz=197,slow=3.9,SNR=4.7						
BRTR				pPKP	pPKPdf	04 56 08.6	0.0
	comp=Z,5.0nm,0.8s,baz=252,slow=2.0,SNR=17						
BRTR	Keskin Array B	120.95	60		PKPdf	04 55 49.9	-1.1
AKASG	Malin Array Be	121.27	47	PKP	PKPdf	04 55 50.0	-1.0
	comp=Z,1.6nm,0.7s,baz=266,slow=2.5,SNR=5.3						
AKASG				pPKP	pPKPdf	04 56 07.8	-0.7
	comp=Z,10nm,0.7s,baz=259,slow=2.5,SNR=22						
AKASG				PKKPbc	PKKPbc	05 05 54.5	+1.1
	comp=Z,0.7nm,0.6s,baz=58,slow=4.2,SNR=5.4						
WRA	Warramunga Arr	121.66	209	PKP	PKPdf	04 55 52.5	-0.5
	comp=Z,9.3nm,0.7s,baz=162,slow=1.6,SNR=31						
WRA				pPKP	pPKPdf	04 56 09.9	-0.5
	comp=Z,6.0nm,0.5s,baz=158,slow=1.7,SNR=13						
WRA	Warramunga Arr	121.66	209		PKPdf	04 55 51.0	-2.0
WRAB	Tennant Creek	121.67	209	c iPKIKP	PKPdf	04 55 52.5	-0.5
VSU	Vasula	121.77	38	⇑ePKIKP	PKPdf	04 55 51.2	-0.6
WB0	Warramunga Arr	121.80	209		PKPdf	04 55 51.8	-1.4
FINES	FINESS Array B	122.07	34	PKP	PKiKP	04 55 53.2	+0.8
	comp=Z,2.3nm,0.9s,baz=15,slow=7.9,SNR=5.2						
FINES				pPKP	pPKPdf	04 56 10.3	+0.5
	comp=Z,6.1nm,0.8s,baz=191,slow=1.9,SNR=7.5						
FINES				PKKPbc	PKKPbc	05 05 49.9	-0.6
	comp=Z,2.7nm,0.7s,baz=48,slow=2.8,SNR=6.3						
FINES	FINESS Array B	122.07	34		PKPdf	04 55 52.2	-0.1
DIKM	Dikmen	122.73	59	⇓P	PKiKP	04 56 12.2	+18
ARCES	ARCESS Array B	123.13	25	PKP	PKiKP	04 55 55.4	+1.0
	comp=Z,3.5nm,1.1s,baz=234,slow=3.9,SNR=6.7						
ARCES	ARCESS Array B	123.13	25		PKiKP	04 55 54.6	+0.2
PMG	Port Moresby	123.94	228	⇑iPKIKP	PKPdf	04 55 56.5	-0.9
RAYN	Ar Rayn	124.29	83	PKIKP	PKPdf	04 55 55.9	-1.9
RAYN	Ar Rayn	124.29	83		PKPdf	04 55 55.9	-1.9
FITZ	Fitzroy Crossi	126.38	200	PKP	PKPdf	04 56 02.1	+0.1
	comp=Z,11nm,0.8s,baz=194,slow=6.0,SNR=18						
FITZ	Fitzroy Crossi	126.38	200		PKPdf	04 56 01.1	-0.9
H11S2	WAKE ISLAND Hy	126.41	269	T	T	07 15 02.3	
	baz=118,slow=75,SNR=823						
H11S1	WAKE ISLAND Hy	126.42	269	T	T	07 15 03.2	
	baz=118,slow=75,SNR=512						
H11S3	WAKE ISLAND Hy	126.43	269	T	T	07 15 03.6	
	baz=118,slow=75,SNR=490						
OBN	Obninsk	126.51	43	⇓iPKIKP	PKiKP	04 56 01.3	-0.1
OBN				e		04 57 56.6	
OBN				ePPP	PPP	05 00 39.2	
OBN				e		05 03 03.8	
OBN				pmax	pmax		
	comp=Z,11nm,0.4s						
OBN				MLR	MLR		
	comp=Z,216nm,21.0s						
H11N3	WAKE ISLAND Hy	126.80	271	T	T	07 15 32.8	
	baz=118,slow=75,SNR=67						
H11N1	WAKE ISLAND Hy	126.82	271	T	T	07 15 35.0	
	baz=118,slow=75,SNR=53						
H11N2	WAKE ISLAND Hy	126.82	271	T	T	07 15 33.8	
	baz=118,slow=75,SNR=226						
BCA	Borcka	127.27	60	⇓P	PKiKP	04 56 21.3	+18
KLMR	Klimovskoe	128.48	36	ePKIKP	PKPdf	04 56 01.1	-3.5
KLMR				pmax	pmax		
	comp=Z,32nm,1.2s						
KLMR	Klimovskoe	128.48	36	ePKPdf	PKPdf	04 56 01.2	-3.4
KLMR				AMP		04 56 06.7	
	comp=Z,32nm,1.2s						
KIV	Kislovodsk	128.60	58	⇓iPKIKP	PKiKP	04 56 06.2	0.0
KIV				pmax	pmax		
	comp=Z,9.0nm,1.3s						
AKH	Akhalkalaki	128.62	61	⇑P	PKiKP	04 56 25.9	+19
KBZ	Khabaz	128.70	58	PKP	PKPdf	04 56 05.6	+0.1
	comp=Z,2.6nm,0.9s,baz=34,slow=5.1,SNR=5.1						
KBZ				pPKP	pPKPdf	04 56 24.8	+1.8
	comp=Z,7.6nm,0.9s,baz=218,slow=4.7,SNR=10						
GNI	Garni	129.25	63	PKP	PKiKP	04 56 07.6	-0.1
	comp=Z,3.3nm,0.5s,baz=203,slow=5.6,SNR=5.4						
GNI	Garni	129.25	63		PKPdf	04 56 05.8	-1.2
MTN	Manton Dam	129.36	209		PKPdf	04 56 06.5	-1.2
GROC	Groznyy	130.67	59	i PKIKP	PKiKP	04 56 09.9	-0.3
GROC				e		05 03 14.4	
GROC				pmax	pmax		
	comp=Z,5.0nm,0.4s						
PRGR	Permogore	131.40	35	ePKIKP	PKPdf	04 56 10.1	0.0
PRGR				e		04 56 29.1	
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
BILL	Bilibino	132.49	335	d iPKIKP	PKiKP	04 56 12.8	-0.3
BILL	Bilibino	132.49	335		PKPdf	04 56 11.2	-0.8
WSAR	Wadi Sarin	135.13	90	PKP	PKPdf	04 56 18.5	+0.1
	baz=219,slow=5.6						
EDFI	Ende, Flores	136.38	199	PKP	PKPdf	04 56 20.0	-1.2
ARU	Arti	138.82	40	PKP	PKPdf	04 56 24.1	0.0
	comp=Z,0.7nm,0.3s,baz=248,slow=6.2,SNR=5.2						
ARU				pPKP	pPKPdf	04 56 43.0	+1.4
	comp=Z,4.8nm,0.6s,baz=235,slow=2.6,SNR=5.8						
ARU	Arti	138.82	40	i PKIKP	PKPdf	04 56 25.2	+1.1
ARU						04 59 19.1	
ARU				SS	SS	05 17 28.4	+0.9
ARU	Arti	138.82	40		PKPdf	04 56 24.7	+0.6
GEYT	Alibeck	139.02	69	PKP	PKPdf	04 56 26.3	+1.1
	comp=Z,1.6nm,0.5s,baz=224,slow=8.1,SNR=5.0						
AKTO	Aktyubinsk	139.42	50	PKP	PKiKP	04 56 26.9	-0.9
	comp=Z,2.7nm,1.0s,baz=311,slow=2.7,SNR=5.8						
AKTO				pPKP	pPKPdf	04 56 44.6	+1.7
	comp=Z,5.1nm,0.7s,baz=119,slow=5.0,SNR=16						
PET	Petropavlovsk	139.57	315	⇓ePKIKP	PKPdf	04 56 23.9	-1.7
SEY	Seymchan	139.75	331	PKP	PKiKP	04 56 27.0	-1.0
	comp=Z,27nm,0.9s,baz=127,slow=3.8,SNR=38						
SEY	Seymchan	139.75	331	⇓iPKIKP	PKPdf	04 56 26.5	+0.9
PEA0B	Petropavlovsk-	140.13	315	⇓ePKIKP	PKPdf	04 56 27.5	+0.9
PETK	Petropavlovsk-	140.13	315	PKhKP	PKPpre	04 56 18.4	
	comp=Z,5.3nm,0.9s,baz=94,slow=6.1,SNR=5.4						
PETK				PKP	PKiKP	04 56 28.2	-0.9
	comp=Z,8.0nm,0.8s,baz=124,slow=6.3,SNR=11						
PETK	Petropavlovsk-	140.13	315		PKPdf	04 56 27.3	+0.7
TIXI	Tiksi	140.13	350	PKhKP	PKPpre	04 56 17.3	
	comp=Z,2.1nm,0.7s,baz=303,slow=3.8,SNR=5.4						
TIXI	Tiksi	140.13	350	⇑ePKIKP	PKPdf	04 56 25.0	-1.1
KAPI	Kappang	140.47	197	PKP	PKiKP	04 56 30.3	-0.8
	comp=Z,4.9nm,0.6s,baz=180,slow=4.4,SNR=3.6						
ABKAR	Akbulak array	140.77	51		PKPpre	04 56 21.5	
ABKAR				PKPdf	PKPdf	04 56 28.2	+0.3
NRIK	Noril'sk	142.02	12	PKP	PKPdf	04 56 30.9	+1.3
	comp=Z,1.6nm,0.4s,baz=7.8,slow=2.8,SNR=4.3						
MDSI	Maura Dua	142.16	173	PKP	PKPdf	04 56 26.4	-5.1
KSI	Kapahiang	142.78	170	PKP	PKPdf	04 56 29.3	-3.4
KRJI	Kerinci	144.12	168	PKP	PKPbc	04 56 33.7	+0.5
KAD	Karad	145.15	109	i P	PKPbc	04 56 36.1	-0.2
POO	Poona	145.54	107	eP	PKPdf	04 56 34.8	-2.5
BRVK	Borovoye	146.28	43	d ePKP2	PKPbc	04 56 38.8	+0.1
BRVK	Borovoye	146.28	43		PKPbc	04 56 38.4	-0.3
BVAR	Borovoye Array	146.35	43	PKPbc	PKPbc	04 56 38.9	0.0
	comp=Z,3.6nm,0.6s,baz=276,slow=2.8,SNR=19						
BVAR				pPKPbc	pPKPab	04 56 56.7	-0.4
	comp=Z,16nm,0.7s,baz=306,slow=2.2,SNR=14						
CHM	Chimkent	148.06	62	PKP2	PKPab	04 56 53.0	+6.0
KSM	Kuching	148.29	183		PKPdf	04 56 40.9	-1.2
KSM					PKPab	04 56 50.4	+1.8
YAK	Yakutsk	148.29	341	PKPbc	PKPbc	04 56 44.4	+0.4
	comp=Z,34nm,0.8s,baz=84,slow=1.0,SNR=14						
YAK				pPKPbc	pPKPbc	04 57 02.6	+1.3
	comp=Z,47nm,0.7s,baz=144,slow=1.2,SNR=4.0						
YAK	Yakutsk	148.29	341	i PKP2	PKPbc	04 56 43.8	-0.2
YAK				pmax	pmax		
	comp=Z,86nm,1.0s						
YAK				pmax	pmax		
	comp=N,14nm,1.2s						
YAK				pmax	pmax		
	comp=E,12nm,1.1s						
YAK	Yakutsk	148.29	341	PKPdf	PKPdf	04 56 40.9	+0.4
YAK					PKPbc	04 56 44.3	+0.3
HYB	Hyderabad	148.63	113	i PKP	PKPdf	04 56 43.0	+0.5
HYB				e		04 56 46.5	
HYB				epPKP	pPKPbc	04 57 03.5	-0.1
HYB				e		04 57 21.5	
HYB	Hyderabad	148.63	113	ex	PKPbc	04 56 47.7	+1.4
KK31	Karatay Array	148.66	61	i PKP2	PKPbc	04 56 45.3	-0.3
KKAR	Karatay Array	148.66	61	PKIKP	PKPdf	04 56 41.5	-0.3
KKAR	Karatay Array	148.66	61		PKPdf	04 56 41.5	-0.3
SBUM	Sibu	149.12	187	PKPdf	PKPdf	04 56 41.5	-1.9
KCP	Kidapawan	149.74	214	⇓eP	PKPdf	04 56 45.2	+0.8
KCP				i S	pPKP	04 57 07.3	
LHMI	Lhok Sumawe	149.98	156	PKPdf	PKPdf	04 56 41.1	-3.7
NIL	Nilore	150.51	79	PKIKP	PKPdf	04 56 44.1	-0.9
NIL	Nilore	150.51	79		PKPdf	04 56 44.1	-0.9
YSS	Yuzh-Sakhalins	150.88	308	⇓iPKIKP	PKiKP	04 56 51.4	0.0
YSS				e		04 56 59.6	
YSS				e		04 57 10.0	
YSS				pmax	pmax		
	comp=Z,60nm,0.8s						
YSS	Yuzh-Sakhalins	150.88	308	PKPdf	PKPdf	04 56 44.0	-1.1
AML	Almayashu	151.10	62	P	PKPdf	04 56 47.3	+1.1
	SNR=7.1						
EKS2	Erkin-Say	151.10	61	P	PKPdf	04 56 47.4	+1.5
	SNR=8.9						
ERM	Erimo	151.54	298	⇓iPKIKP	PKPbc	04 56 52.7	+0.2
USP	Ospenovka	151.54	60	P	PKiKP	04 56 53.5	+0.5
	SNR=6.2						
AAK	Ala-Archa	151.63	61	PKP	PKPdf	04 56 48.2	+1.5
	comp=Z,4.3nm,0.9s,baz=230,slow=3.1,SNR=7.9						
AAK				PKPbc	PKiKP	04 56 54.1	+0.7
	comp=Z,23nm,1.0s,baz=180,slow=3.0,SNR=25						
AAK	Ala-Archa	151.63	61	P	PKiKP	04 56 54.2	+0.8
	SNR=8.5						
AAK	Ala-Archa	151.63	61	c ePKIKP	PKPdf	04 56 47.6	+0.9
AAK	Ala-Archa	151.63	61		PKPdf	04 56 44.7	-2.0
ASAJ	Asahikawa	151.63	302	PKPbc	PKiKP	04 56 53.5	+0.4

	comp=Z,43nm,0.8s,baz=268,slow=17,SNR=9.4						
UCH	Uchtor	151.69	62	P	PKPdf	04 56 48.9	+1.8
	SNR=8.7						
CHMS	Chumysh	151.76	60	P	PKiKP	04 56 54.0	+0.6
	SNR=5.0						
KURBB	Kurchatov Arra	151.94	43	PKPbc	PKiKP	04 56 53.4	-0.1
	comp=Z,12nm,1.0s,baz=296,slow=2.6,SNR=12						
KURBB				pPKPbc	sPKPdf	04 57 10.5	0.0
	comp=Z,46nm,0.7s,baz=298,slow=2.9,SNR=29						
KURK	Kurchatov	151.95	43	cePKIKP	PKPdf	04 56 49.4	+2.8
KURK	Kurchatov	151.95	43		PKPdf	04 56 43.3	-3.3
KURK					PKiKP	04 56 54.0	+0.5
KZA	Kyzart	152.25	62	P	PKiKP	04 56 55.5	+0.5
	SNR=5.2						
DHRM	DHARAMSHALA	152.78	83	eP	PKiKP	04 56 57.1	+0.9
ULHL	Ulahol	152.96	61	P	PKPdf	04 56 50.3	+1.6
	SNR=6.2						
KSH	Kashi	153.03	67	PKPbc	PKPdf	04 56 50.4	+1.6
KSH				PP	PP	05 00 42.3	+0.5
KSH				LR	LR		
	comp=Z,170nm,10.7s						
SMLA	Simla	153.27	86	eP	PKPdf	04 56 50.0	+0.8
ZAA0	Zalesovo Array	153.31	32		PKPdf	04 56 48.4	-0.1
ZALV	Zalesovo Beam	153.31	32	PKP	PKPdf	04 56 48.7	+0.2
	comp=Z,4.3nm,0.9s,baz=298,slow=3.2,SNR=18						
ZALV				PKPbc	PKiKP	04 56 56.5	+0.3
	comp=Z,25nm,0.9s,baz=291,slow=3.6,SNR=43						
ZALV				pPKPbc	pPKPbc	04 57 14.1	+0.6
	comp=Z,83nm,0.7s,baz=299,slow=3.2,SNR=34						
ZALV				PP	PP	05 00 51.9	+10
	comp=Z,1.2nm,0.3s,baz=292,slow=7.5,SNR=4.4						
ZALV	Zalesovo Beam	153.31	32		PKPdf	04 56 48.4	-0.1
ZALV					PKPbc	04 56 56.0	-0.1
BOD	Bodaibo	155.23	353	ePKP2	PKPab	04 57 15.9	-0.4
BOD				pmax	pmax		
	comp=Z,20nm,1.1s						
TEY	Ternei	155.54	307	⇓ePKP2	PKPab	04 57 18.5	+0.4
TEY				pmax	pmax		
	comp=Z,30nm,1.1s						
MAKZ	Makanchi	155.64	49	PKIKP	PKPdf	04 56 51.5	-0.5
MAKZ	Makanchi	155.64	49		PKPdf	04 56 51.5	-0.5
MJAR	Matsushiro Arr	155.65	286	PKPbc	PKPdf	04 57 02.6	+10
	comp=Z,3.9nm,0.9s,baz=85,slow=2.9,SNR=4.9						
MJAR				PKPab	pPKPbc	04 57 19.4	+0.3
	comp=Z,11nm,1.0s,baz=104,slow=2.3,SNR=7.7						
ZEA	Zeya	155.70	333	ePKIKP	PKPab	04 57 05.2	-13
ZEA				pmax	pmax		
	comp=Z,48nm,1.6s						
MK31	Makanchi Array	155.84	48	i PKIKP	PKPdf	04 56 52.2	-0.1
MKAR	Makanchi Array	155.84	48	PKP	PKPdf	04 56 52.6	+0.3
	comp=Z,3.5nm,1.0s,baz=299,slow=2.5,SNR=18						
MKAR				PKPab	pPKPbc	04 57 19.0	-0.3
	comp=Z,9.6nm,0.8s,baz=297,slow=1.9,SNR=14						
MKAR	Makanchi Array	155.84	48		PKPdf	04 56 51.5	-0.9
KLR	Kul'dur	156.63	320	PKP	PKPdf	04 56 52.6	-0.6
	comp=Z,5.5nm,1.0s,baz=42,slow=1.6,SNR=8.8						
KLR	Kul'dur	156.63	320	i PKIKP	PKPdf	04 56 52.7	-0.5
DANN	Dangsing	158.03	96	eP	PKPdf	04 56 56.5	+0.4
	comp=Z,61nm,0.9s						
DMN	Daman	158.89	99	eP	PKPdf	04 56 58.1	+1.0
	comp=Z,6.9nm,0.3s						
USRK	Ussuriysk Ar.	158.92	308	PKPab	PKPab	04 57 33.0	+0.3
	comp=Z,5.3nm,0.8s,baz=82,slow=5.1,SNR=5.6						
USRK	Ussuriysk Ar.	158.92	308		PKPab	04 57 31.4	-1.3
PKIN	Phulchoki	159.12	100	eP	PKPdf	04 56 57.4	+0.1
PKI	Pulchoki	159.12	100	eP	PKPdf	04 56 57.4	0.0
GUN	Gumba	159.64	99	eP	PKPdf	04 56 58.4	+0.4
JIRN	Jiri	159.80	100	eP	PKPdf	04 56 58.3	0.0
	comp=Z,25nm,0.9s						
RAMN	Ramite	159.87	103	eP	PKPdf	04 56 58.7	+0.5
ODAN	Odare	160.47	104	eP	PKPdf	04 56 59.2	+0.3
WMQ	Urumqi	160.56	51	ePKP	PKPdf	04 56 58.7	+0.5
MOY	Mondy	160.82	15	ePKIKP	PKPdf	04 56 59.0	+0.7
TAPN	Taplejung	160.93	103	eP	PKPdf	04 56 59.4	0.0
TLY	Talaya	161.28	10	⇑ePKIKP	PKPdf	04 57 00.1	+1.4
PBKT	Sadao Pong	161.92	155		PKPdf	04 56 58.3	-2.0
ZAK	Zakamensk	162.48	12	ePKIKP	PKPdf	04 56 59.6	-0.4
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
CMAR	Chiang Mai Arr	162.81	147	PKP	PKPdf	04 57 01.9	+0.8
	comp=Z,2.5nm,0.4s,baz=245,slow=2.6,SNR=32						
CMAR				pPKP	pPKPdf	04 57 19.2	+0.5
	comp=Z,8.1nm,0.9s,baz=242,slow=2.8,SNR=5.9						
CMAR	Chiang Mai Arr	162.81	147		PKPdf	04 56 58.9	-2.3
CHTO	Chiang Mai	163.12	146	PKIKP	PKPdf	04 56 58.5	-3.0
CHTO	Chiang Mai	163.12	146		PKPdf	04 56 58.5	-3.0
KSRS	Korea Array	163.80	290	PKP	PKPdf	04 57 01.5	0.0
	comp=Z,6.0nm,1.1s,baz=111,slow=0.7,SNR=9.4						
KSRS				pPKP	pPKPdf	04 57 19.8	+0.6
	comp=Z,3.9nm,0.8s,baz=166,slow=0.7,SNR=5.3						
KSRS				PKPab	PKPab	04 57 56.2	+2.0
	comp=Z,12nm,1.0s,baz=94,slow=4.6,SNR=18						
KSAR	Wonju Array Be	163.84	290	PKIKP	PKPdf	04 57 00.6	-1.0
KSAR						04 57 53.8	
KSAR	Wonju Array Be	163.84	290		PKPdf	04 57 00.6	-1.0
KSAR					PKPab	04 57 53.8	-0.6
LSA	Lhasa	164.59	99	PKIKP	PKPdf	04 57 01.6	-1.6
LSA	Lhasa	164.59	99		PKPdf	04 57 01.6	-1.6
SONM	Songino Array	165.39	6	PKP	PKPdf	04 57 02.8	0.0
	comp=Z,1.0nm,0.9s,baz=301,slow=1.2,SNR=6.3						
SONM				pPKP	pPKPdf	04 57 21.2	+0.8
	comp=Z,2.7nm,0.9s,baz=238,slow=0.1,SNR=7.7						
SONM				PKPab	PKPab	04 58 02.8	+1.9
	comp=Z,3.1nm,1.1s,baz=337,slow=3.8,SNR=5.5						
SONM				PP	PP	05 01 49.4	+2.0
	comp=Z,1.4nm,1.0s,baz=29,slow=3.3,SNR=3.8						
SONM	Songino Array	165.39	6		PKPdf	04 57 01.5	-1.3
SONM					PKPab	04 58 02.0	+1.1
ULN	Ulaanbaatar	165.41	4	PKP2	PKPab	04 58 00.5	-0.6
ULN	Ulaanbaatar	165.41	4		PKPab	04 58 00.5	-0.6
GTA	Gaotai	170.60	47	⇑PKP	PKPdf	04 57 07.2	+0.5
GTA				pPKP	pPKPdf	04 57 20.5	-3.7
GTA				PKPab	PKPab	04 58 29.0	+4.6
GTA				PP	PP	05 02 18.2	+3.4
GTA				SKKS		05 08 57.0	
GTA				SS	SS	05 23 16.0	+3.4
GTA				AMB	AMB		
	comp=Z,90nm,7.5s						
GTA				LR	LR		
	comp=Z,500nm,20.6s						
GTA				LR	LR		
	comp=Z,620nm,22.5s						
BJI	Beijing	171.01	320	ePKP	PKPdf	04 57 06.7	+0.1
BJI				LR	LR		
	comp=Z,230nm,15.2s						
BJI				LR	LR		
	comp=Z,370nm,32.2s						
HHC	Hu-ho-hao-te	172.14	344	ePKP	PKPdf	04 57 07.8	+0.4
HHC				LR	LR		
	comp=Z,530nm,21.3s						
HHC				LR	LR		
	comp=Z,510nm,21.1s						
GYA	Guiyang	172.94	165	PKPbc	PKPdf	04 57 26.4	+18
GYA				PKPab	pPKPab	04 58 54.9	+3.2
GYA				PKS	PKSdf	05 00 56.4	+16
GYA				PP	PP	05 02 30.8	+5.3
WHN	Wuhan	174.47	242	PKP	PKPdf	04 57 09.1	+0.7
LZH	Lanzhou	175.13	54	ePKP	PKPdf	04 57 10.0	+1.3
LZH				pPKP	pPKPdf	04 57 22.8	-3.4
LZH				LR	LR		
	comp=Z,78nm,17.8s						
LZH				LR	LR		
	comp=Z,82nm,18.0s						
LZH				LR	LR		
	comp=Z,95nm,20.1s						
CD2	Chengdu	175.16	118	PKP	PKPdf	04 57 08.7	0.0
XAN	Xi'an	179.26	347	PKP	PKPdf	04 57 09.1	-0.2
XAN	Xi'an	179.26	347	PKIKP	PKPdf	04 57 07.9	-1.4
XAN	Xi'an	179.26	347		PKPdf	04 57 07.9	-1.4

*SNET **06** 04:58:24.4±0.8, 13°.44N×90°.46W, h15^{km}±56^{km}, ML3.2*

*GCG **06** 04:58:26.5±0.3, 13°.57N×90°.54W, h42^{km}±33^{km}, MD3.5*

ISC 06 04:58:24.3±3.2**, 13°.5N**±0°.2×**90°.49W**±0°.08**, h27**^{km}±18^{km}**, n7, σ0^{s}38**/13**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IXG	Ixpaco	0.72	4	eP	Pb	04 58 38.3	0.0
IXG	Ixpaco	0.72	4	eP	Pn	04 58 39.1	+0.2
IXG				eS	Sn	04 58 49.1	0.0
CEVE	Cerro Verde	0.92	66	eP	Pn	04 58 41.4	-0.3
CEVE				eS	Sn	04 58 54.4	+0.1
CEVE				IAML		04 58 55.3	
	comp=Z,681nm,0.2s						
SBLS	San Blas	0.93	65	eP	Pn	04 58 41.6	-0.2
SBLS				eS	Sn	04 58 54.4	0.0
RTR	El Retiro	0.94	62	eP	Pn	04 58 41.8	-0.1
RTR				eS	Sn	04 58 55.1	+0.7
FUG	Fuego 3	1.05	341	eP	Pn	04 58 43.4	0.0
FUG				eS	Sn	04 58 56.7	-0.5
STG3	Santiaguito 3,	1.63	320	eP	Pn	04 58 51.9	+0.4
STG3				eS	Sn	04 59 11.4	-0.3

IDC 06 05:04:41.1±1.6**, 32°.01N×40°.32W, h0**^{km}**, mb3.7**/7**, mb1 3.9**/7**, mb1mx3.6**/54**, mbtmp3.7**/7**, Error ellipse: s-maj=51.7km s-min=22.1km az=12.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TORD	Torodi Ar. Bea	42.77	106	P	P	05 12 40.4	-0.2
	3.2nm,1.0s,baz=297,slow=5.9,SNR=9.6						
H10N2	ASCENSION HYDR	46.66	144	T	T	06 02 54.4	
	baz=329,slow=75,SNR=44						
H10N3	ASCENSION HYDR	46.67	144	T	T	06 03 09.3	
	baz=329,slow=75,SNR=43						
H10N1	ASCENSION HYDR	46.68	144	T	T	06 03 09.7	
	baz=329,slow=75,SNR=39						
H10S3	ASCENSION HYDR	47.54	145	T	T	06 04 08.2	
	baz=329,slow=74,SNR=86						
H10S2	ASCENSION HYDR	47.56	145	T	T	06 04 13.2	
	baz=251,slow=74,SNR=102						
FINES	FINESS Array B	51.24	34	P	P	05 13 46.2	0.0
	3.1nm,0.9s,baz=300,slow=3.1,SNR=3.8						
AKASG	Malin Array Be	53.42	48	P	P	05 14 02.7	+0.1
	2.1nm,0.8s,baz=272,slow=6.8,SNR=11						
PDAR	Pinedale Array	54.65	302	P	P	05 14 11.6	-0.4
	1.8nm,1.0s,baz=74,slow=5.3,SNR=7.9						
YKA	Yellowknife Ar	54.97	327	P	P	05 14 13.3	-0.4
	0.2nm,0.5s,baz=90,slow=6.9,SNR=3.4						
NVAR	Mina Array Bea	62.26	300	P	P	05 15 05.7	+0.5
	0.3nm,0.6s,baz=66,slow=5.0,SNR=2.9						
KURBB	Kurchatov Arra	81.63	34	P	P	05 17 00.7	-0.2
	0.6nm,0.7s,baz=317,slow=5.4,SNR=5.3						

ISC 06 05:10:38.7±1.0**, 50°.22N**±0°.05×**18°.76E**±0°.03**, h0**^{km}**, n12, σ0^{s}64**/21**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	Ojcow	0.67	90	ePg	Pg	05 10 51.1	-0.4
OJC				eSg	Sg	05 10 59.2	-0.9
MORC	Moravsky Berou	0.90	241	ePG	Pb	05 10 57.0	-0.3
MORC				eSG	Sb	05 11 09.4	-0.5
LANS	Liptovska Anna	1.17	157	ePG	Pg	05 11 01.6	+0.5
LANS				eSG	Sb	05 11 17.6	+0.2
LANS				eLG	Lg	05 11 19.9	
NIE	Niedzica	1.28	128	ePg	Pg	05 11 03.0	-0.3
NIE				eSg	Sb	05 11 21.2	+0.4
VRAC	Vranov	1.68	238	ePN	Pn	05 11 09.7	+0.4
VRAC				eSG	Sg	05 11 32.1	-0.4
KSP	Ksiaz	1.69	292	ePg	Pg	05 11 11.2	0.0
KSP				eSg	Sg	05 11 33.3	+0.2
VYHS	Vyhne	1.73	178	ePN	Pn	05 11 09.6	-0.5
VYHS				eSN	Sn	05 11 33.0	+0.2
STHS	Stebnicka Huta	1.80	116	ePN	Pn	05 11 11.8	+0.8
KRUC	Moravsky	1.93	234	ePN	Pn	05 11 12.4	-0.3
KRUC				eSG	Sb	05 11 39.4	+0.1
CRVS	Cervenica-Dubn	2.20	126	ePN	Pb	05 11 19.4	0.0
BRG	Berggiesshubel	3.14	284	PG	Pg	05 11 38.2	-0.7
BRG				SG	Sg	05 12 19.4	-0.2
	5.1nm,0.9s						
CLL	Collm	3.81	289	eSg	Sg	05 12 43.0	+1.9
	comp=Z,10.0nm,1.0s						

*IDC **06** 05:14:41.2±2.5, 65°.11N×112°.88E, h0^{km}, mb3.2/5, mb1 3.4/7, mb1mx3.3/38, mbtmp3.3/7, ML2.1/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/24, Error ellipse: s-maj=120.1km s-min=17.0km az=142.0*

ISC 06 05:14:43.1±2.3**, 65°.4N**±0°.6×**112°.5E**±0°.5**, h10**^{km}**, n8, σ2^{s}22**/7**, mb3.2**/5**, Northern and central Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIXI	Tiksi	8.62	36	Pn	Pn	05 16 45.4	-2.3
	0.5nm,0.3s,baz=264,slow=9.2,SNR=3.8						
TIXI				Lg	Lg	05 19 05.7	
	0.5nm,0.3s,baz=270,slow=8.1,SNR=3.7						
ZALV	Zalesovo Beam	17.91	243	P	P	05 18 51.4	-1.1
	0.0nm,0.3s,baz=41,slow=9.5,SNR=3.8						
KURBB	Kurchatov Arra	22.91	246	P	P	05 19 44.6	-2.2
	1.2nm,0.7s,baz=37,slow=11,SNR=9.7						
BVAR	Borovoye Array	24.32	260	P	P	05 20 02.5	+2.0
	0.4nm,0.6s,baz=33,slow=8.6,SNR=3.3						
MKAR	Makanchi Array	24.73	236	P	P	05 20 03.4	-1.0
	0.2nm,0.7s,baz=39,slow=8.5,SNR=3.5						
KSRS	Korea Array	29.44	155	LR	LR	05 32 18.3	
	comp=Z,30nm,18.4s,baz=202,slow=36						
ILAR	Eielson Array	38.02	43	P	P	05 22 02.2	+1.4
	0.4nm,0.7s,baz=309,slow=6.8,SNR=6.9						
YKA	Yellowknife Ar	47.75	27	P	P	05 23 20.8	+1.3
	0.1nm,0.8s,baz=340,slow=8.6,SNR=4.1						

*TAP **06** 05:22:34.7, 24°.49N×122°.63E, h100^{km}, ML3.3, D*

*JMA **06** 05:22:35.0±0.1, 24°.42N×122°.66E, h92^{km}±2^{km}, M2.0*

ISC 06 05:22:35.5±1.5**, 24°.48N**±0°.05×**122°.68E**±0°.03**, h89**^{km}±10^{km}**, n57, σ0^{s}53**/94**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.25	97	P	Pn	05 22 48.6	+0.1
JYNG				S	Sn	05 22 58.6	+0.4
YOJ	Yonaguni jima	0.30	94	P	Pn	05 22 48.9	+0.1
YOJ				S	Sn	05 22 58.6	-0.1
EOS1	EOS1	0.51	278	i P	Pn	05 22 50.5	+0.4
	baz=278						
EOS1				i S	Sn	05 23 02.0	+1.0
	baz=278						
TWC	Suao	0.77	280	eP	Pn	05 22 52.3	-0.3
	baz=280						
TWC				eS	Sn	05 23 04.8	-0.5
	baz=280						
ENA	Nanau	0.85	267	i P	Pn	05 22 53.5	0.0
	baz=265						
ENA				eS	Sn	05 23 07.6	+0.6
	baz=265						
NTC	Toucheng	0.86	296	eP	Pn	05 22 53.3	-0.2
	baz=296						
NTC				eS	Sn	05 23 06.3	-0.7
	baz=296						
TIPB	Shuangxi	0.92	302	P	Pn	05 22 53.8	-0.4
	baz=303						
TIPB				eS	Sn	05 23 07.3	-0.9
	baz=303						
TWE	Neicheng	0.95	285	eP	Pn	05 22 54.7	+0.2
	baz=285						
IRIF	Iriomote-Funau	0.97	98	P	Pn	05 22 54.7	-0.1
IRIF				S	Sn	05 23 09.6	+0.4
NWF	Wu-fen Shan	1.00	306	P	Pn	05 22 55.4	+0.1
	baz=307						
NWF				i S	Sn	05 23 10.2	+0.2
	baz=307						
WFSB	Wu-fen Shan	1.00	306	P	Pn	05 22 55.3	+0.2
	baz=307						
WFSB				i S	Sn	05 23 10.2	+0.3
	baz=307						
ENTT	Nioudou	1.02	279	P	Pn	05 22 55.9	+0.5
	baz=279						
ENTT				eS	Sn	05 23 10.8	+0.4
	baz=279						
NACB	Ninganchiao	1.03	253	eP	Pn	05 22 55.0	-0.5
	baz=251						
NACB				eS	Sn	05 23 09.9	-0.6
	baz=251						
TWD	Chiawan	1.06	248	P	Pn	05 22 55.5	-0.4
	baz=246						
TWD				eS	Sn	05 23 10.7	-0.4
	baz=246						
NDT	Datong Townshi	1.07	277	eP	Pn	05 22 56.1	+0.2
	baz=276						
NDT				eS	Sn	05 23 11.6	+0.4
	baz=276						
NWLT	Wulai	1.11	286	eP	Pn	05 22 56.6	+0.2
	baz=285						
NWLT				S	Sn	05 23 12.2	+0.1
	baz=285						
TWA	Mucha	1.11	297	eP	Pn	05 22 56.2	-0.3
	baz=297						
HATJ	Hateruma jima	1.11	112	eS	Sn	05 23 12.5	+0.4
ETLH	Xiulin Townshi	1.12	256	i P	Pn	05 22 56.4	-0.3
	baz=255						
ETLH				S	Sn	05 23 12.3	-0.3
	baz=255						
NNSB	Datong	1.18	268	i P	Pn	05 22 57.2	-0.2
	baz=267						
NNSB				i S	Sn	05 23 13.5	-0.3
	baz=267						
NNSH	Datong	1.18	268	i P	Pn	05 22 57.2	-0.2
	baz=267						
NNSH				i S	Sn	05 23 13.6	-0.2
	baz=267						
YHNB	Yeheng	1.20	279	eP	Pn	05 22 57.7	+0.1
	baz=279						
YHNB				i S	Sn	05 23 13.9	-0.3
	baz=279						
YM01	YM01	1.21	304	eP	Pn	05 22 57.5	-0.1
	baz=304						
YM01				S	Sn	05 23 14.0	-0.2
	baz=304						
YM11	YM11	1.21	304	eP	Pn	05 22 57.5	-0.2
	baz=305						
YM10	YM10	1.22	304	i P	Pn	05 22 57.6	-0.2
	baz=304						
YM10				eS	Sn	05 23 14.1	-0.3
	baz=304						
NSK	Sanguang	1.22	279	eP	Pn	05 22 57.8	+0.1
	baz=279						
NSK				i S	Sn	05 23 14.0	-0.5
	baz=279						
YM04	YM04	1.23	303	P	Pn	05 22 57.7	-0.2
	baz=303						
YM04				eS	Sn	05 23 14.2	-0.6
	baz=303						
JKRS	Kuro-shima	1.24	101	P	Pn	05 22 58.5	+0.6
JKRS				S	Sn	05 23 15.4	+0.6
ESL	Shilin	1.32	240	eP	Pn	05 22 58.5	-0.4
	baz=238						
ESL				i S	Sn	05 23 16.4	-0.2
	baz=238						
WHF	Hehuan Shan	1.33	256	i P	Pn	05 22 58.9	-0.7
	baz=254						
WHF				S	Sn	05 23 16.7	-0.9
	baz=254						
JIJ	Ishigaki jima	1.34	95	P	Pn	05 22 59.1	-0.1
JIJ				S	Sn	05 23 16.4	-0.7
TWT	Tachien	1.39	261	eP	Pn	05 23 00.6	+0.6
	baz=260						
TWT				eS	Sn	05 23 18.4	0.0
	baz=260						
EGFH	Guangfu	1.40	235	eP	Pn	05 22 59.6	-0.4
	baz=233						
EGFH				i S	Sn	05 23 18.3	-0.1
	baz=233						
TDCB	Techi	1.40	261	eP	Pn	05 23 00.6	+0.4
	baz=260						
TDCB				S	Sn	05 23 18.4	-0.4
	baz=260						
CHGB	Renai	1.44	253	eP	Pn	05 23 00.8	+0.1
	baz=252						
CHGB				i S	Sn	05 23 18.8	-0.7
	baz=252						
OWD	Renai	1.47	249	i P	Pn	05 23 00.7	-0.2
	baz=248						
OWD				eS	Sn	05 23 19.2	-0.9
	baz=248						
JISG	Ishigakijimahi	1.49	86	P	Pn	05 23 00.7	-0.4
JISG				eS	Sn	05 23 19.4	-1.0
HGSD	Ruisui	1.51	230	eP	Pn	05 23 00.9	-0.5
	baz=228						
HGSD				i S	Sn	05 23 20.8	-0.1
	baz=228						
LIOB	Emei	1.52	277	eP	Pn	05 23 02.0	+0.5
	baz=276						
LIOB				eS	Sn	05 23 21.7	+0.5
	baz=276						
EHY	Hungye	1.57	232	eP	Pn	05 23 01.5	-0.7
	baz=230						
VWDT	VWDT	1.58	243	eP	Pn	05 23 02.5	+0.2
	baz=241						
VWDT				eS	Sn	05 23 22.3	-0.1
	baz=241						
WHP	Taichung City	1.59	263	eP	Pn	05 23 03.4	+1.0
	baz=262						
YULB	Yu-li	1.66	230	eP	Pn	05 23 02.7	-0.7
	baz=228						
TWF1	Yuli	1.69	229	P	Pn	05 23 03.2	-0.5
	baz=226						
SSLB	Suanglung	1.72	247	eP	Pn	05 23 04.1	0.0
	baz=245						
SSLB				S	Sn	05 23 25.3	-0.5
	baz=245						
SMLT	Sun Moon Lake	1.73	250	eP	Pn	05 23 05.4	+1.1
	baz=249						
TYC	Yuchr	1.76	251	eP	Pn	05 23 05.5	+1.0
	baz=250						
FULB	Fuli	1.80	225	eP	Pn	05 23 04.7	-0.4
	baz=223						
WHYT	Xinyi Township	1.84	245	eP	Pn	05 23 06.5	+0.9
	baz=244						
JTJ	Tarama	1.85	85	eS	Sn	05 23 28.6	-0.1
YUS	Yu-Shan	1.86	238	eP	Pn	05 23 06.6	+0.2
	baz=236						
ALS	Alishan	1.97	241	eP	Pn	05 23 08.2	+0.7
	baz=239						
ELDTW	Lidau	1.99	230	P	Pn	05 23 07.3	-0.4
	baz=228						
CHN5	Tsauling	2.03	245	eP	Pn	05 23 09.3	+1.1
	baz=243						
TPUB	Ta-pu	2.21	238	eP	Pn	05 23 11.6	+1.0
	baz=237						
CHN4	Tsaushan	2.21	240	eP	Pn	05 23 11.7	+1.2
	baz=238						
TWK	Hsinying	2.34	239	eP	Pn	05 23 13.6	+1.3
	baz=238						

*BJI **06** 05:42:34.6±0.0, 18°.98N×146°.00E, h202^{km}, mB5.1/59, mb5.1/85*

*MOS **06** 05:42:35.3±0.9, 18°.67N×145°.47E, h201^{km}, mb5.2/109, Error ellipse: s-maj=6.5km s-min=3.9km az=106.5*

*IDC **06** 05:42:36.0±0.6, 18°.64N×145°.59E, h198^{km}±5^{km}, mb4.9/35, mb1 5.0/41, mb1mx4.9/47, mbtmp5.5/41, MS4.2/22, Ms1 4.3/22, ms1mx4.0/47, Error ellipse: s-maj=9.8km s-min=6.4km az=81.0*

*NEIC **06** 05:42:37.8±1.7, 18°.58N±0°.06×145°.56E±0°.08, h210^{km}±4^{km}, mb5.3/382, Error ellipse: s-maj=11.3km s-min=7.9km az=68.0*

*GCMT **06** 05:42:37.8±0.1, 18°.66N±0°.01×145°.78E±0°.01, h183^{km}, MW5.5/146, Moment Tensor Solution. s126,c181; s146,c268; Duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M_{rr}0.31±.02; $M_{\theta\theta}$0.60±.03; $M_{\phi\phi}$-0.91±.03; $M_{r\theta}$-0.94±.02; $M_{\theta\phi}$1.77±.02; $M_{\phi r}$0.00±.02; Best double couple: $M_0$2.16000×10^{17} NP1:ϕ_s190.00000°, δ64.00000°, λ171.00000°. NP2:ϕ_s284.00000°, δ82.00000°, λ27.00000°. Principal axes: T 2.1240, Plg24.0000°, Azm150.0000°; N 0.0710, Plg62.0000°, Azm299.0000°; P -2.1950, Plg12.0000°, Azm54.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 05:42:36.3±0.3**, 18°.65N**±0°.03×**145°.58E**±0°.04**, h200**^{km}±2^{km}**, h201**^{km}**:pP-P, n998, σ1^{s}49**/1117**, mb5.3**/359**, 25C-19D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	5.08	188	P	Pn	05 43 50.1	-1.6
	303nm,0.3s,baz=125,slow=3.5,SNR=28						
GUMO				S	S	05 44 49.5	-1.2
	220nm,0.3s,baz=9.6,slow=21,SNR=7.6						
GUMO	Guam	5.08	188	P	Pn	05 43 51.1	-0.6
GUMO						05 44 51.2	
GUMO	Guam	5.08	188		Pn	05 43 51.0	-0.6
GUMO				Sn	S	05 44 51.2	+0.5
JCJ	Chichijima	8.97	340	P	Pn	05 44 40.8	-1.3
	168nm,0.3s,baz=204,slow=5.3,SNR=22						
JCJ				S	S	05 46 15.8	-7.0
	348nm,0.3s,baz=254,slow=22,SNR=11						
JHJ2	Mitsune	15.30	341	P	P	05 46 03.5	+1.1
JHJ2				S	S	05 48 55.4	+3.4

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JHJ   Hachijo jima 2    15.32 341   P      P       05 46 03.5 +0.9
        64nm,0.3s,baz=55,slow=20,SNR=10.0
JHJ                                 S      S       05 48 53.0 +0.6
        58nm,0.3s,baz=91,slow=19,SNR=6.6
PATS  Pohnpei           17.07 132   P      P       05 46 22.0  0.0
PATS                                S      S       05 49 26.7 -3.1
JOW   Kunigami          17.91 300   P      Pn      05 46 32.9 -0.3
        39nm,0.3s,baz=137,slow=13,SNR=176
JOW   Kunigami          17.91 300   P      Pn      05 46 35.0 +1.8
INU   Inuyama           18.29 337   P      P       05 46 35.6 +0.5
MJAR  Matsushiro Arr    18.97 341   P      P       05 46 42.2 -0.4
        2.3nm,0.3s,baz=161,slow=9.6,SNR=92
MJAR                                S      S       05 50 04.8 -2.5
        0.4nm,0.3s,baz=175,slow=17,SNR=4.8
MJAR  Matsushiro Arr    18.97 341   P      P       05 46 41.1 -1.5
MAJO  Matsushiro        18.98 341c iP      P       05 46 42.3 -0.3
MAJO  Matsushiro        18.98 341   P      P       05 46 42.1 -0.5
MAJO                                S      S       05 50 08.4 +1.1
MAT   Matsushiro        18.98 341   P      P       05 46 42.4 -0.2
MAT                                 S      S       05 50 01.5 -5.8
MJB9  Matsu-Tunnel      18.98 341   P      P       05 46 42.1 -0.5
MJB9                                S      S       05 50 08.4 +1.0
JNU   Nakatsue          19.53 320   P      P       05 46 48.9 +0.2
        1.3nm,0.3s,baz=81,slow=6.0,SNR=10
JNU   Nakatsue          19.53 320   P      P       05 46 48.9 +0.2
JNU                                 IAmb   IAmb    05 47 03.5
        comp=Z,88nm,0.9s
WAKE  Wake Island       19.94  85   P      P       05 46 53.2 +0.1
H11S3 WAKE ISLAND Hy    20.01  87   T      T       06 08 09.2
        baz=275,slow=75,SNR=4.3
H11S1 WAKE ISLAND Hy    20.02  87   T      T       06 07 44.9
        baz=275,slow=75,SNR=6.2
H11S2 WAKE ISLAND Hy    20.03  87   T      T       06 08 08.6
        baz=275,slow=75,SNR=4.9
H11N1 WAKE ISLAND Hy    20.16  84   T      T       06 08 27.8
        SNR=6.6
MANU  Manus Island      20.64 175   P      P       05 47 00.2 -0.3
PVCP  Virac             21.18 259  eP      P       05 47 08.4 +2.1
SMPI  Sarmi             21.59 199   P      P       05 47 11.4 +0.9
        comp=Z,8µmcomp=Z,507nm,1.3s
BUTP  Butuan            21.62 246  eP      P       05 47 11.7 +0.9
YOJ   Yonaguni jima     21.76 289   P      P       05 47 13.3 +1.1
YOJ                                 pmax   pmax
        comp=Z,271nm,0.8s
YOJ   Yonaguni jima     21.76 289   P      P       05 47 13.3 +1.1
MSLP  Maasin            21.76 250  eP      P       05 47 13.8 +1.5
GENI  Genyem            21.77 195   P      P       05 47 12.6 +0.3
        comp=Z,13µmcomp=Z,1µm,1.3s
MATI  Mati              22.11 241  eP      P       05 47 16.0 +0.3
BBP   Basco             22.32 278  eP      P       05 47 16.8 -0.8
SGCP  Mt. Cagua         22.33 273  eP      P       05 47 19.2 +1.6
BUKP  Musuan            22.63 244  eP      P       05 47 20.0 -0.5
NACB  Ninganchiao       22.98 288   P      P       05 47 24.6 +1.1
DDMP  Don Marcelino,    23.03 240  eP      P       05 47 23.3 -0.7
BALP  Baler             23.11 267  eP      P       05 47 26.6 +1.9
APYP  Conner            23.12 272  eP      P       05 47 25.5 +0.7
RCP   Roxas             23.13 256⇓eP      P       05 47 26.7 +1.8
YULB  Yu-li             23.14 286   P      P       05 47 26.7 +1.7
YULB                                IAmb   IAmb    05 47 33.1
        comp=Z,96nm,0.7s
YHNB  Yeheng            23.26 289   P      P       05 47 25.8 -0.3
TWG   Pinlang           23.28 284   P      P       05 47 26.9 +0.6
ERM   Erimo             23.39 355⇑eP      P       05 47 31.4 +4.5
ERM                                 pmax   pmax
        comp=Z,180nm,1.1s
ERM   Erimo             23.39 355   P      P       05 47 27.8 +0.9
WAMI  Wamena            23.39 197   P      P       05 47 31.0 +3.8
LQP   Lukban            23.49 263  eP      P       05 47 30.8 +2.3
SSLB  Suanglung         23.51 287   P      P       05 47 29.9 +1.6
OTRP  Odiongan          23.53 258  eP      P       05 47 30.3 +1.7
PCPH  Palayan           23.60 266⇓ep      P       05 47 31.2 +2.1
RABL  Rabaul            23.60 163   P      P       05 47 28.2 -1.0
GUIM  Jordan            23.61 253  eP      P       05 47 30.2 +1.0
KRVT  Keravat (AS076    23.68 164   P      P       05 47 29.5 -0.4
        comp=Z,229nm,0.8s,baz=158,slow=11,SNR=6.6
KRVT                                LR     LR      05 56 09.3
        comp=Z,558nm,21.8s,baz=75,slow=34
TPUB  Ta-pu             23.74 286   P      P       05 47 31.7 +1.3
TPUB                                IAmb   IAmb    05 47 33.8
        comp=Z,126nm,1.1s
TJN   Taejon            23.86 321⇓eP      P       05 47 31.5 +0.1
SMPP  San Manuel, Pa    23.89 268  eP      P       05 47 32.0 +0.2
SZP   Santa             23.90 271   P      P       05 47 31.0 -1.0
SZP                                 IAmb   IAmb    05 47 38.3
        comp=Z,118nm,0.9s
SIJI  Sorong            23.96 217   P      P       05 47 32.6 +0.1
        comp=Z,135nm,0.8s,baz=22,slow=9.5,SNR=28
TGY   Tagaytay City     24.06 263   P      P       05 47 35.0 +1.5
        comp=Z,355nm,0.5s,baz=166,slow=6.2,SNR=7.6
TGY   Tagaytay City     24.06 263   P      P       05 47 35.0 +1.5
PAGZ  Pagadian          24.09 246  eP      P       05 47 35.4 +1.7
PGP   Puerto Galera     24.20 261⇓eP      P       05 47 35.5 +0.9
KSRS  Korea Array       24.29 324   P      P       05 47 35.2  0.0
        comp=Z,37nm,0.7s,baz=143,slow=9.1,SNR=105
KSRS                                pP     pP      05 48 13.8 +1.2
        comp=Z,83nm,1.0s,baz=146,slow=9.1,SNR=3.4
KSRS                                ScP    ScP     05 54 27.8 -1.5
        comp=Z,2.5nm,0.7s,baz=143,slow=3.7,SNR=5.2
KSRS                                LR     LR      05 57 38.8
        comp=Z,447nm,18.6s,baz=120,slow=37
KSAR  Wonju Array Be    24.31 324   P      P       05 47 35.3 -0.1
KSAR  Wonju Array Be    24.31 324   P      P       05 47 35.3 -0.1
KS19  Wonju Array Si    24.36 324   P      P       05 47 35.7 -0.2
KS19                                IAmb   IAmb    05 47 38.8
        comp=Z,64nm,0.9s
NMR   Nemuro--Hokkai    24.65   0  eP      P       05 47 37.7 -0.7
LUBP  Lubang            24.80 262  eP      P       05 47 41.3 +1.2
INCN  Inchon            25.05 322   P      P       05 47 42.6 +0.5
INCN                                pmax   pmax
        comp=Z,71nm,1.2s
INCN  Inchon            25.05 322   P      P       05 47 42.6 +0.5
INCN                                IAmb   IAmb    05 47 49.7
        comp=Z,71nm,1.1s
FAKI  Fak Fak           25.13 213   P      P       05 47 42.9 -0.2
        comp=Z,164nm,1.0s
FAKI  Fak Fak           25.13 213   P      P       05 47 41.9 -1.2
SHO   Shikotan          25.17   2  eP      P       05 47 43.9 +0.8
SHO                                 pmax   pmax
        comp=Z,223nm,0.9s
SHO                                 pmax   pmax
        comp=N,68nm,0.7s
SHO                                 pmax   pmax
        comp=E,41nm,0.6s
GRPR  Tuman             25.27   0  eP      P       05 47 43.4 -0.6
SSE   Sheshan           25.30 304   P      P       05 47 45.8 +1.3
ASAJ  Asahikawa         25.52 355   P      P       05 47 47.2 +0.9
        comp=E,130nm,0.7s,baz=207,slow=8.8,SNR=59
JKA   Kamikawa-asahi    25.52 355   P      P       05 47 47.2 +0.9
QZH   Quanzhou          25.80 289⇑iP      P       05 47 51.6 +2.5
QZH                                 S      S       05 52 05.4 +1.9
QZH                                 sS     sS      05 53 13.4 -0.8
QZH                                 pmax   pmax
        comp=E,73nm,0.5s
ENPP  El Nido           26.31 257  eP      P       05 47 54.1 +0.4
MSHR  Mys Shultsa       26.81 336⇓eP      P       05 47 59.1 +1.2
MSAI  Masohi            27.32 219   P      P       05 48 04.4 +1.7
        comp=E,29nm,0.8s
TEY   Ternei            27.36 346⇑eP      P       05 48 03.2 +0.5
TEY                                e               05 48 53.7
TEY                                 pmax   pmax
        comp=E,20nm,0.8s
TEY                                 pmax   pmax
        comp=N,30nm,0.7s
TEY                                 pmax   pmax
        comp=Z,80nm,0.6s
TEY                                 pmax   pmax
        comp=E,40nm,1.2s
TEY                                 pmax   pmax
        comp=N,70nm,1.4s
TEY                                 pmax   pmax
        comp=Z,120nm,1.1s
NJ2   Nanjing           27.51 304  eP      P       05 48 06.3 +2.1
NJ2                                 pmax   pmax
        comp=Z,36nm,0.7s
NJ2                                 LR     LR
        comp=Z,2µm,16.4s
NJ2                                 LR     LR
        comp=Z,1µm,13.3s
NJ2                                 LR     LR
        comp=Z,1µm,14.5s
USA0B Ussuriysk Arra    27.91 339   P      P       05 48 08.7 +1.0
USA0B                               pmax   pmax
        comp=Z,33nm,0.8s
USA0B Ussuriysk Arra    27.91 339   P      P       05 48 08.7 +1.0
USA0B                               IAmb   IAmb    05 48 13.6
        comp=Z,33nm,0.8s
USRK  Ussuriysk Ar.     27.91 339   P      P       05 48 08.0 +0.4
        comp=Z,29nm,0.7s,baz=150,slow=8.5,SNR=32
USRK                                pP     pP      05 48 48.1 +0.8
        comp=Z,20nm,0.9s,baz=148,slow=11,SNR=2.0
USRK  Ussuriysk Ar.     27.91 339   P      P       05 48 08.7 +1.1
PMG   Port Moresby      27.92 177   P      P       05 48 07.3 -0.6
        comp=Z,244nm,1.0s,baz=357,slow=7.5,SNR=19
PMG   Port Moresby      27.92 177c iP      P       05 48 06.7 -1.2
PMG                                 pmax   pmax
        comp=Z,2µm,1.3s
PMG   Port Moresby      27.92 177   P      P       05 48 07.0 -0.9
AAI   Ambon             28.03 219   P      P       05 48 09.1 +0.1
        comp=Z,4µmcomp=Z,2µmcomp=Z,150nm,0.9s
SANI  Sanana            28.19 225   P      P       05 48 08.7 -1.7
        comp=Z,1µmcomp=Z,45nm,0.7s
YSS   Yuzh-Sakhalins    28.33 356⇑iP      P       05 48 12.1 +0.9
YSS                                eS      S       05 52 41.9 -0.8
YSS                                eSS     ScP     05 53 51.2  -50
YSS                                 pmax   pmax
        comp=Z,110nm,1.0s
YSS                                 smax   smax
        comp=N,50nm,1.8s
YSS                                 MLR    MLR
        comp=Z,200nm,16.0s
YSS   Yuzh-Sakhalins    28.33 356   P      P       05 48 12.3 +1.1
NLAI  Namlea            28.36 222   P      P       05 48 12.3 +0.4
        comp=Z,1µmcomp=Z,71nm,1.1s
NLAI                                pP     pP      05 48 47.9 -3.5
        comp=Z,1µmcomp=Z,71nm,1.1s
MDJ   Mudanjiang        29.14 336   P      P       05 48 19.3 +0.8
MDJ                                 pP     pwP     05 49 02.0 -0.3
MDJ                                 PP     PnPn    05 49 24.6 +2.5
MDJ                                 sP     PP      05 49 25.8 -2.7
MDJ                                 PcP    PcP     05 51 19.0 -2.0
MDJ                                 S      S       05 52 58.6 +3.0
MDJ                                 ScP    ScP     05 54 40.9 -2.7
MDJ                                 PcS    PcS     05 55 02.0 -1.9
MDJ                                 pmax   pmax
        comp=Z,19nm,1.0s
MDJ                                 pmax   pmax
        comp=Z,140nm,5.6s
MDJ   Mudanjiang        29.14 336   P      P       05 48 20.0 +1.5
MRSI  Marisa            29.40 235   P      P       05 48 22.8 +1.6
        comp=Z,2µmcomp=Z,232nm,1.0s
SNY   Shenyang          29.75 326 ⇓P      P       05 48 23.4 -0.5
SNY                                 pP     pP      05 49 05.9 +2.2
SNY                                 S      S       05 53 11.2 +6.0
SNY                                 pmax   pmax
        comp=Z,15nm,1.3s
SNY                                 pmax   pmax
        comp=Z,280nm,4.1s
SNY                                 LR     LR
        comp=Z,990nm,16.0s
SNY                                 LR     LR
        comp=Z,620nm,5.8s
SNY                                 LR     LR
        comp=Z,820nm,11.2s
LUWI  Luwuk             29.76 231   P      P       05 48 23.6 -0.7
        comp=Z,5µmcomp=Z,201nm,1.0s
LUWI  Luwuk             29.76 231   P      P       05 48 24.1 -0.2
CN2   Changchun         30.26 330  eP      P       05 48 29.6 +1.2
CN2                                eS      S       05 53 11.5 -1.5
CN2                                 ScS    ScS     05 58 37.3 -6.0
CN2                                 pmax   pmax
        comp=Z,10.0nm,0.6s
CN2                                 pmax   pmax
        comp=Z,110nm,4.0s
APSI  Ampana            30.51 233   P      P       05 48 31.4 +0.5
        comp=Z,1µmcomp=Z,128nm,1.2s
TIA   Tai'an            30.56 311   P      P       05 48 31.8 +0.6
TIA                                 S      S       05 53 17.0 -1.0
TIA                                 pmax   pmax
        comp=Z,9.0nm,0.7s
TIA                                 LR     LR
        comp=Z,480nm,9.8s
TIA                                 LR     LR
        comp=Z,560nm,19.6s
TIA                                 LR     LR
        comp=Z,680nm,24.1s
WHN   Wuhan             30.66 299   P      P       05 48 35.5 +3.4
WHN                                 pP     pwP     05 49 16.7  0.0
WHN                                 sP     PP      05 49 42.8 -2.8
WHN                                 LR     LR
        comp=Z,1µm,6.9s
WHN                                 LR     LR
        comp=Z,1µm,11.9s
WHN                                 LR     LR
        comp=Z,2µm,8.7s
MPSI  Mapaga            31.09 237   P      P       05 48 38.0 +2.0
        comp=Z,105nm,1.1s
KKM   Kota Kinabalu     31.24 250   P      P       05 48 39.7 +2.2
HNR   Honiara           31.29 152   LR     LR      06 02 10.2
        comp=Z,351nm,18.0s,baz=328,slow=38
SPMM  Sapulut           31.62 248   P      P       05 48 43.0 +2.2
TYV   Tymovskoe         32.23 357  eP      P       05 48 46.8 +1.3
TYV                                eS      S       05 53 46.3 +2.8
TYV                                 pmax   pmax
        comp=Z,103nm,1.3s
TYV                                 pmax   pmax
        comp=Z,300nm,2.2s
TYV                                 smax   smax
        comp=E,31nm,1.5s
TYV                                 smax   smax
        comp=E,1µm,9.5s
COEN  Coen              32.48 184   P      P       05 48 48.0 -0.1
COEN                                IAmb   IAmb    05 48 48.8
        comp=Z,96nm,0.9s
KLR   Kul'dur           32.49 343   P      P       05 48 48.1 +0.3
        comp=Z,71nm,0.5s,baz=154,slow=9.1,SNR=8.3
KLR   Kul'dur           32.49 343c iP      P       05 48 47.8  0.0
KLR                                 pmax   pmax
        comp=Z,89nm,0.6s
GRNR  Gornyy            32.87 349⇑iP      P       05 48 52.3 +1.2
GRNR                               eS      S       05 53 58.4 +4.9
GRNR                                pmax   pmax
        comp=Z,150nm,0.6s
GRNR                                smax   smax
        comp=N,10.0nm,1.3s
GRNR                                MLR    MLR
        comp=Z,300nm,18.0s
SKR   Severo-Kuril's    33.05  12  eP      P       05 48 52.8 +0.2
SKR                                e*PP    pwP     05 49 36.7 -0.3
SKR                                eS      S       05 53 59.3 +3.1
SKR                                e*SS    sS      05 55 10.1 +2.2
SKR                                 pmax   pmax
        comp=Z,101nm,0.9s
SKR                                 pmax   pmax
        comp=Z,300nm,4.6s
SKR                                 pmax   pmax
        comp=Z,100nm,3.8s
BJT   Baijiatuau        33.09 316   P      P       05 48 53.6 +0.5
BJT                                 pmax   pmax
        comp=Z,33nm,0.8s
BJT   Baijiatuau        33.09 316   P      P       05 48 53.6 +0.5
BJI   Beijing           33.09 316 ⇑P      P       05 48 53.1 -0.1
BJI                                 PP     PnPn    05 50 11.0 -0.2
BJI                                 S      S       05 53 55.3 -1.9
BJI                                 sS     sS      05 55 07.1 -1.8
BJI                                 pmax   pmax
        comp=Z,37nm,0.8s
BJI                                 LR     LR
        comp=Z,420nm,16.1s
BJI                                 LR     LR
        comp=Z,790nm,15.1s
BJI                                 LR     LR
        comp=Z,360nm,18.6s
TTSI  Tana Toraja       33.28 232   P      P       05 48 57.4 +2.3
        comp=Z,5µmcomp=Z,645nm,0.8s
SMKI  Samarinda         33.72 239   P      P       05 49 02.8 +3.9
        comp=Z,535nm,1.3s
SPSI  Sidrap Palu       33.93 231   P      P       05 49 02.0 +1.3
        comp=Z,3µmcomp=Z,322nm,1.0s
BNSI  Bone              33.98 230   P      P       05 49 03.0 +1.9
        comp=Z,3µmcomp=Z,279nm,0.8s
MTN   Manton Dam        34.38 206   P      P       05 49 04.6 +0.1
BKB   Balikpapan        34.45 238   P      P       05 49 07.2 +2.1
        comp=Z,3µmcomp=Z,370nm,1.1s
BKB   Balikpapan        34.45 238   P      P       05 49 04.4 -0.7
BKSI  Bulukumba         34.60 229   P      P       05 49 08.0 +1.6
        comp=Z,2µmcomp=Z,166nm,0.8s
ENH   Enshi             34.69 296   P      P       05 49 08.1 +0.9
ENH                                 IAmb   IAmb    05 49 13.6
        comp=Z,52nm,0.9s
MIDW  Midway            35.19  67   P      P       05 49 10.4 -1.0
SOEI  Soe               35.19 218   P      P       05 49 11.1 -0.5
        comp=Z,2µmcomp=Z,287nm,1.0s
SOEI  Soe               35.19 218   P      P       05 49 10.3 -1.4
MMRI  Maumere           35.57 222   P      P       05 49 14.8 +0.1
        comp=Z,180nm,1.2s
MMRI  Maumere           35.57 222   P      P       05 49 14.6 -0.1
PEA0B Petropavlovsk-    35.66  13d iP      P       05 49 16.6 +1.5
PEA0B Petropavlovsk-    35.66  13   P      P       05 49 15.0  0.0
PEA0B                               IAmb   IAmb    05 49 17.6
        comp=Z,63nm,0.7s
PETK  Petropavlovsk-    35.66  13   P      P       05 49 15.8 +0.7
        comp=Z,56nm,0.7s,baz=188,slow=10,SNR=96
PETK                                ScP    ScP     05 55 03.8 -2.1
        comp=Z,2.6nm,0.4s,baz=241,slow=27,SNR=5.0
PETK                                LR     LR      06 02 25.1
        comp=Z,378nm,20.5s,baz=202,slow=33
PETK  Petropavlovsk-    35.66  13   P      P       05 49 16.5 +1.4
PET   Petropavlovsk     35.79  14  eP      P       05 49 17.5 +1.4
PET                                e               05 51 39.8
PET                                eS      S       05 54 38.2  0.0
PET                                 pmax   pmax
        comp=Z,125nm,0.7s
PET   Petropavlovsk     35.79  14   P      P       05 49 17.7 +1.6
PET                                 IAmb   IAmb    05 49 18.5
        comp=Z,78nm,0.7s
EDFI  Ende, Flores      36.01 223   P      P       05 49 18.4 -0.2
        comp=Z,606nmcomp=Z,44nm,0.8s
XAN   Xi'an             36.03 303   P      P       05 49 20.0 +1.4
XAN                                 S      S       05 54 46.6 +4.0
XAN                                 pmax   pmax
        comp=Z,10.0nm,0.9s
XAN                                 LR     LR
        comp=Z,1µm,15.2s
XAN                                 LR     LR
        comp=Z,550nm,16.3s
XAN                                 LR     LR
        comp=Z,540nm,17.1s
XAN   Xi'an             36.03 303   P      P       05 49 20.5 +1.9
XAN                                 pmax   pmax
        comp=Z,14nm,0.9s
XAN   Xi'an             36.03 303   P      P       05 49 20.5 +1.9
KBKI  Kotabaru          36.25 236   P      P       05 49 21.5 +1.0
        comp=Z,2µmcomp=Z,60nm,0.7s
DLV   T  Lat            36.34 265   P      P       05 49 24.5 +2.9
DLV                                 IAmb   IAmb    05 49 27.4
        comp=Z,58nm,0.9s
SBUM  Sibu              36.42 248   P      P       05 49 22.2 +0.3
SBUM                                IAmb   IAmb    05 49 26.7
        comp=Z,116nm,1.1s
SBUM  Sibu              36.42 248   P      P       05 49 25.0 +3.0
HHC   Hu-ho-hao-te      36.56 315  eP      P       05 49 23.3 +0.3
HHC                                 pP     pP      05 50 02.4 -1.2
HHC                                 sP     sP      05 50 26.2  0.0
HHC                                 PP     PP      05 50 49.4 -1.2
HHC                                 sS     sS      05 56 09.6 +6.7
HHC                                 ScS    ScS     05 59 16.3 -0.4
HHC                                 pmax   pmax
        comp=Z,210nm,0.8s
HHC                                 pmax   pmax
        comp=Z,920nm,4.3s
GYA   Guiyang           36.66 289⇓iP      P       05 49 26.7 +2.6
GYA                                 pP     pwP     05 50 09.8 -0.2
GYA                                 PP     PnPn    05 50 58.8 +4.2
GYA                                 SS     SS      05 57 35.7 -6.0
GYA                                 pmax   pmax
        comp=Z,40nm,0.8s
GYA                                 pmax   pmax
        comp=Z,190nm,4.8s
GYA                                 LR     LR
        comp=Z,290nm,16.0s
GYA                                 LR     LR
        comp=Z,220nm,17.7s
GYA                                 LR     LR
        comp=Z,200nm,17.3s
HIA   Hailar            36.95 332   P      P       05 49 26.4 +0.3
HIA                                 pmax   pmax
        comp=Z,37nm,0.8s
HIA   Hailar            36.95 332   P      P       05 49 26.4 +0.3
HIA                                 IAmb   IAmb    05 49 34.7
        comp=Z,37nm,0.8s
BTO   Baotou            37.50 313  eP      P       05 49 32.3 +1.4
ZEA   Zeya              37.78 342  eP      P       05 49 32.2 -0.7
ZEA                                 pmax   pmax
        comp=N,59nm,1.0s
ZEA                                 pmax   pmax
        comp=Z,72nm,0.8s
ZEA                                 MLR    MLR
        comp=E,200nm,14.0s
ZEA                                 MLR    MLR
        comp=Z,600nm,14.0s
ZEA                                 MLR    MLR
        comp=N,200nm,15.0s
KNRA  Kununurra         37.91 207   P      P       05 49 34.7 +0.2
WBSI  Waikabubak, Su    38.18 225   P      P       05 49 35.8 -1.0
        comp=N,3µmcomp=N,409nm,0.7s
STKI  Sintang           38.24 245   P      P       05 49 38.9 +1.6
        comp=N,137nm,0.8s
UBPT  Khong Chiam       38.46 271   P      P       05 49 42.4 +3.3
KSM   Kuching           38.56 248   P      P       05 49 40.7 +0.7
KSM                                 IAmb   IAmb    05 49 42.7
        comp=Z,136nm,1.1s
KSM   Kuching           38.56 248   P      P       05 49 42.0 +2.0
PLAI  Plampang          38.70 228   P      P       05 49 42.4 +1.3
        comp=Z,2µmcomp=Z,222nm,1.0s
SLVN  Son La            39.18 281   P      P       05 49 42.8 -2.3
SLVN                                IAmb   IAmb    05 49 52.9
        comp=Z,46nm,0.8s
PBKI  Pangkalan Bun     39.55 241   P      P       05 49 50.1 +2.0
CD2   Chengdu           39.67 296⇓iP      P       05 49 50.5 +1.5
CD2                                 sP     sP      05 50 54.7 +1.9
CD2                                 S      S       05 55 35.9 -1.5
CD2                                 SS     SS      05 58 36.4 -5.0
CD2                                 pmax   pmax
        comp=Z,30nm,0.9s
CD2                                 pmax   pmax
        comp=Z,320nm,5.2s
CD2                                 LR     LR
        comp=Z,1µm,23.0s
CD2                                 LR     LR
        comp=Z,790nm,16.2s
CD2                                 LR     LR
        comp=Z,780nm,17.7s
WB0   Warramunga Arr    39.72 197   P      P       05 49 49.5  0.0
WRAB  Tennant Creek     39.89 197c iP      P       05 49 51.1 +0.3
WRAB                                pmax   pmax
        comp=Z,681nm,1.0s
WRAB  Tennant Creek     39.89 197   P      P       05 49 51.1 +0.3
WB2   Warramunga Arr    39.90 197   P      P       05 49 51.0 +0.1
WRA   Warramunga Arr    39.90 197   P      P       05 49 51.1 +0.2
        comp=Z,406nm,1.0s,baz=13,slow=8.7,SNR=112
WRA                                 ScP    ScP     05 55 20.9 -1.6
        comp=Z,22nm,0.9s,baz=12,slow=4.0,SNR=13
WRA                                 S      S       05 55 42.5 +1.6
        comp=Z,9.2nm,0.9s,baz=17,slow=14,SNR=5.9
WRA   Warramunga Arr    39.90 197   P      P       05 49 50.1 -0.9
SRBI  Singaraja         40.04 231   P      P       05 49 54.0 +1.9
        comp=Z,2µmcomp=Z,274nm,0.9s
KMI   Kunming           40.15 287   P      P       05 49 58.8 +5.6
KMI                                 pmax   pmax
        comp=Z,21nm,0.7s
KMI                                 LR     LR
        comp=Z,1µm,24.9s
KMI                                 LR     LR
        comp=Z,250nm,10.9s
KMI                                 LR     LR
        comp=Z,420nm,13.0s
KMMI  Kalianget         40.30 234   P      P       05 49 58.2 +3.9
        comp=Z,177nm,1.2s
DNP   Denpasar          40.43 230   P      P       05 49 56.8 +1.4
        comp=Z,990nm,0.8s
IGBI  Denpasar          40.57 230   P      P       05 49 56.9 +0.4
        comp=Z,274nm,0.7s
LZH   Lanzhou           40.58 304 ⇑P      P       05 49 57.6 +1.0
LZH                                 pP     pP      05 50 37.2 -0.7
LZH                                 sP     sP      05 51 03.1 +2.9
LZH                                 PP     PnPn    05 51 37.7 -2.7
LZH                                 pmax   pmax
        comp=Z,31nm,1.1s
LZH                                 pmax   pmax
        comp=Z,140nm,5.4s
LZH                                 LR     LR
        comp=Z,1µm,16.8s
LZH                                 LR     LR
        comp=Z,590nm,15.7s
LZH                                 LR     LR
        comp=Z,770nm,15.7s
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MA2	**Magadan**	**41.05**	**4**	LR	LR	06 03 57.1	
	comp=Z,252nm,21.5s,baz=153,slow=31						
MA2	**Magadan**	**41.05**	**4**	*d i*P	**P**	**05 50 00.6**	**+0.8**
MA2				pmax	pmax		
	comp=Z,100nm,1.4s						
MA2	**Magadan**	**41.05**	**4**	P	**P**	**05 50 01.2**	**+1.4**
MA2				IAmb	IAmb	05 50 02.4	
	comp=Z,58nm,0.9s						
JAGI	**Jajag, Banyuwa**	**41.08**	**232**	P	**P**	**05 50 00.9**	**+0.3**
	comp=Z,2µmcomp=Z,256nm,1.1s						
JAGI	**Jajag, Banyuwa**	**41.08**	**232**	P	**P**	**05 50 00.4**	**-0.3**
GRJI	**Gresik**	**41.36**	**235**	P	**P**	**05 50 05.4**	**+2.5**
	comp=Z,4µmcomp=Z,470nm,0.7s						
FITZ	**Fitzroy Crossi**	**41.44**	**209**	ScP	**ScP**	**05 55 27.3**	**-1.2**
	comp=Z,5.2nm,0.8s,baz=156,slow=2.2,SNR=3.8						
FITZ				S	**S**	**05 56 03.0**	**-0.6**
	comp=Z,13nm,1.0s,baz=265,slow=19,SNR=3.9						
FITZ	**Fitzroy Crossi**	**41.44**	**209**	P	**P**	**05 50 04.3**	**+0.8**
FITZ				IAmb	IAmb	05 50 08.2	
	comp=Z,115nm,0.8s						
GMJI	**Gumukmas**	**41.48**	**233**	P	**P**	**05 50 04.9**	**+1.0**
	comp=Z,137nm,1.0s						
UWJI	**Ujung Watu**	**42.27**	**237**	P	**P**	**05 50 12.4**	**+2.1**
	comp=Z,7µmcomp=Z,239nm,0.9s						
PBKT	**Sadao Pong**	**42.49**	**274**	P	**P**	**05 50 14.7**	**+2.6**
PBKT				IAmb	IAmb	05 50 24.4	
	comp=Z,60nm,1.1s						
PWJI	**Pagerwojo**	**42.57**	**234**	P	**P**	**05 50 13.3**	**+0.6**
	comp=Z,4µmcomp=Z,448nm,1.0s						
ULN	**Ulaanbaatar**	**42.74**	**322**	P	**P**	**05 50 14.3**	**+0.4**
ULN				pmax	pmax		
	comp=Z,26nm,0.6s						
ULN	**Ulaanbaatar**	**42.74**	**322**	P	**P**	**05 50 14.3**	**+0.4**
SMRI	**Semarang**	**43.04**	**237**	P	**P**	**05 50 18.5**	**+2.0**
	comp=Z,266nm,0.9s						
SMRI	**Semarang**	**43.04**	**237**	P	**P**	**05 50 18.6**	**+2.0**
SONM	**Songino Array**	**43.11**	**321**	P	**P**	**05 50 17.1**	**+0.2**
	comp=Z,31nm,0.6s,baz=137,slow=8.8,SNR=181						
SONM				ScP	**ScP**	**05 55 33.2**	**-1.8**
	comp=Z,5.3nm,0.8s,baz=125,slow=4.2,SNR=7.7						
SONM	**Songino Array**	**43.11**	**321**	P	**P**	**05 50 16.3**	**-0.5**
WOJI	**Wonogiri, Jawa**	**43.14**	**235**	P	**P**	**05 50 18.7**	**+1.4**
	comp=Z,127nm,1.4s						
PCJI	**Pacitan**	**43.16**	**235**	P	**P**	**05 50 18.7**	**+1.2**
	comp=Z,4µmcomp=Z,404nm,0.6s						
UGM	**Wanagama**	**43.50**	**236**	P	**P**	**05 50 21.6**	**+1.4**
	comp=Z,5µmcomp=Z,587nm,1.2s						
UGM	**Wanagama**	**43.50**	**236**	P	**P**	**05 50 21.3**	**+1.0**
AS31	**Alice Springs**	**43.57**	**196**	P	**P**	**05 50 20.6**	**0.0**
ASAR	**Alice Springs**	**43.57**	**196**	P	**P**	**05 50 20.6**	**-0.1**
	comp=Z,51nm,0.7s,baz=17,slow=7.4,SNR=279						
ASAR				PP	**PP**	**05 52 07.9**	**+1.4**
	comp=Z,16nm,1.0s,baz=34,slow=10,SNR=5.0						
ASAR				ScP	**ScP**	**05 55 36.0**	**-1.0**
	comp=Z,11nm,0.9s,baz=15,slow=3.8,SNR=9.7						
ASAR				S	**S**	**05 56 36.0**	**+1.3**
	comp=Z,16nm,0.9s,baz=20,slow=20,SNR=16						
ASAR				LR	LR	06 07 39.9	
	comp=Z,330nm,21.8s,baz=19,slow=34						
ASAR	**Alice Springs**	**43.57**	**196**	P	**P**	**05 50 18.8**	**-1.9**
TPRI	**Tanjung Pinang**	**43.95**	**251**	P	**P**	**05 50 26.8**	**+3.0**
PPBI	**Pangkal Pinang**	**43.96**	**246**	P	**P**	**05 50 24.9**	**+1.0**
CHTO	**Chiang Mai**	**44.06**	**278**	P	**P**	**05 50 26.6**	**+1.9**
CHTO				pmax	pmax		
	comp=Z,25nm,1.1s						
CHTO	**Chiang Mai**	**44.06**	**278**	P	**P**	**05 50 26.6**	**+1.9**
EIDS	**Eidsvold**	**44.08**	**173**	P	**P**	**05 50 23.7**	**-0.8**
CM31	**Chiang Mai Arr**	**44.11**	**278**	P	**P**	**05 50 27.7**	**+2.6**
	SNR=18						
CM31	**Chiang Mai Arr**	**44.11**	**278**	P	**P**	**05 50 29.1**	**+4.0**
CMAR	**Chiang Mai Arr**	**44.11**	**278**	P	**P**	**05 50 26.8**	**+1.6**
	comp=Z,21nm,0.5s,baz=69,slow=6.3,SNR=52						
CMAR				LR	LR	06 08 51.4	
	comp=Z,110nm,20.2s,baz=255,slow=36						
CMAR	**Chiang Mai Arr**	**44.11**	**278**	P	**P**	**05 50 26.6**	**+1.5**
CMAR	**Chiang Mai Arr**	**44.11**	**278**	P	**P**	**05 50 26.6**	**+1.5**
MYKOM	**Kota Tinggi**	**44.18**	**253**	P	**P**	**05 50 27.6**	**+1.9**
MYKOM				IAmb	IAmb	05 50 29.6	
	comp=Z,141nm,0.9s						
MYKOM	**Kota Tinggi**	**44.18**	**253**	P	**P**	**05 50 29.0**	**+3.3**
KPJI	**Karang Pucung**	**44.42**	**238**	P	**P**	**05 50 28.3**	**+0.8**
	comp=Z,3µmcomp=Z,356nm,1.1s						
ADK	**Adak**	**44.42**	**33**	P	**P**	**05 50 28.8**	**+1.8**
ADK				pmax	pmax		
	comp=Z,253nm,1.0s						
ADK	**Adak**	**44.42**	**33**	P	**P**	**05 50 28.8**	**+1.8**
GTA	**Gaotai**	**44.49**	**308**	⇑P	**P**	**05 50 28.5**	**+0.5**
GTA				pP	pP	05 51 10.7	+0.8
GTA				sP	sP	05 51 35.6	+3.4
GTA				PcP	**PcP**	**05 52 09.2**	**+1.4**
GTA				ScP	**ScP**	**05 55 41.2**	**+0.3**
GTA				PcS	**PcS**	**05 55 59.8**	**-1.7**
GTA				S	**S**	**05 56 47.7**	**-0.3**
GTA				sS	sS	05 58 06.6	+4.2
GTA				ScS	**ScS**	**06 00 04.7**	**+0.1**
GTA				SS	**SS**	**06 00 11.0**	**-1.7**
GTA				pmax	pmax		
	comp=Z,13nm,1.3s						
GTA				pmax	pmax		
	comp=Z,200nm,7.5s						
GTA				LR	LR		
	comp=Z,960nm,20.0s						
GTA				LR	LR		
	comp=Z,490nm,19.7s						
GTA				LR	LR		
	comp=Z,620nm,16.5s						
SEY	**Seymchan**	**44.50**	**4**	P	**P**	**05 50 28.4**	**+1.0**
	baz=174,slow=9.2						
SEY	**Seymchan**	**44.50**	**4**	⇓*e*P	**P**	**05 50 28.7**	**+1.3**
YAK	**Yakutsk**	**44.75**	**349**	P	**P**	**05 50 29.8**	**+0.4**
	comp=Z,262nm,0.6s,baz=172,slow=0.3,SNR=83						
YAK	**Yakutsk**	**44.75**	**349**	*c i*P	**P**	**05 50 29.3**	**-0.1**
YAK				*e**PP	**pP**	**05 51 08.2**	**-4.1**
YAK				*e*		05 52 08.8	
YAK				*e*		05 52 17.5	
YAK				*e*S	**S**	**05 56 48.9**	**-1.8**
YAK				*e*		06 00 07.8	
YAK				pmax	pmax		
	comp=Z,350nm,0.8s						
YAK				pmax	pmax		
	comp=E,30nm,0.7s						
YAK				pmax	pmax		
	comp=N,111nm,0.9s						
YAK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
YAK				smax	smax		
	comp=N,130nm,2.0s						
YAK				smax	smax		
	comp=E,98nm,1.5s						
YAK	**Yakutsk**	**44.75**	**349**	P	**P**	**05 50 28.6**	**-0.8**
DZM	**Mont Dzumac**	**45.32**	**152**	LR	LR	06 06 21.1	
	comp=E,401nm,20.1s,baz=12,slow=31						
DZM	**Mont Dzumac**	**45.32**	**152**	*e*P	**P**	**05 50 34.6**	**0.0**
	comp=E,880nm,1.1s						
DZM	**Mont Dzumac**	**45.32**	**152**	*e*LR	LR	06 03 30.9	
	comp=E,675nm,23.9s						
DZM	**Mont Dzumac**	**45.32**	**152**	P	**P**	**05 50 34.9**	**+0.3**
CISI	**Cisompet, Garu**	**45.44**	**238**	P	**P**	**05 50 34.7**	**-1.0**
	comp=E,3µmcomp=E,352nm,0.6s						
CISI	**Cisompet, Garu**	**45.44**	**238**	P	**P**	**05 50 33.9**	**-1.8**
BOD	**Bodaibo**	**45.51**	**337**	*e*P	**P**	**05 50 34.8**	**-0.7**
BOD				pmax	pmax		
	comp=Z,18nm,1.3s						
CBJI	**Citeko**	**45.59**	**241**	P	**P**	**05 50 37.0**	**+0.3**
	comp=Z,13µmcomp=Z,216nm,0.7s						
IPM	**Ipoh**	**45.71**	**258**	P	**P**	**05 50 40.5**	**+2.7**
IPM				IAmb	IAmb	05 50 43.2	
	comp=Z,92nm,1.0s						
IPM	**Ipoh**	**45.71**	**258**	P	**P**	**05 50 41.0**	**+3.2**
DBJI	**Dramaga**	**45.75**	**240**	P	**P**	**05 50 35.3**	**-2.7**
	comp=Z,20µmcomp=Z,8µmcomp=Z,153nm,1.2s						
KULM	**Kulim**	**45.77**	**259**	P	**P**	**05 50 41.5**	**+3.3**
KULM				IAmb	IAmb	05 50 42.9	
	comp=Z,82nm,0.8s						
KULM	**Kulim**	**45.77**	**259**	P	**P**	**05 50 42.0**	**+3.8**
CNJI	**Cibinong**	**45.86**	**239**	P	**P**	**05 50 39.0**	**+0.2**
	comp=Z,132nm,1.0s						
ATKA	**Atka Island**	**45.89**	**34**	P	**P**	**05 50 39.9**	**+1.3**
ATKA				IAmb	IAmb	05 50 40.9	
	comp=Z,185nm,0.9s						
SBJI	**Serang**	**46.02**	**241**	P	**P**	**05 50 41.9**	**+1.8**
	comp=Z,238nm,0.8s						
ZAK	**Zakamensk**	**46.12**	**323**	*e*P	**P**	**05 50 40.2**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,12nm,1.1s						
LKP	**Lekhapani**	**46.34**	**290**	*e*P	**P**	**05 50 43.9**	**+1.4**
LKP				IAmb	IAmb	05 50 48.6	
	comp=Z,113nm,1.0s						
TLY	**Talaya**	**46.54**	**325**	P	**P**	**05 50 43.6**	**-0.1**
	comp=Z,9.0nm,0.5s,baz=171,slow=6.6,SNR=11						
TLY				ScP	**ScP**	**05 55 48.1**	**-0.9**
	comp=Z,8.9nm,1.0s,baz=183,slow=4.3,SNR=5.9						
TLY				LR	LR	06 10 29.9	
	comp=Z,375nm,19.6s,baz=121,slow=36						
TLY	**Talaya**	**46.54**	**325**	*d i*P	**P**	**05 50 44.2**	**+0.5**
TLY				pmax	pmax		
	comp=Z,9.0nm,0.6s						
TLY	**Talaya**	**46.54**	**325**	P	**P**	**05 50 44.2**	**+0.5**
MDSI	**Maura Dua**	**46.81**	**245**	P	**P**	**05 50 46.6**	**+0.3**
	comp=Z,8µmcomp=Z,1µmcomp=Z,67nm,1.0s						
KASI	**Kota Agung**	**47.08**	**243**	P	**P**	**05 50 48.1**	**-0.2**
	comp=Z,4µmcomp=Z,431nm,1.0s						
KNTN	**Kanton**	**47.10**	**112**	P	**P**	**05 50 49.1**	**+0.6**
LWLI	**Liwa**	**47.19**	**244**	P	**P**	**05 50 50.2**	**+0.9**
	comp=Z,7µmcomp=Z,73nm,0.8s						
PSA00	**Pilbara Seismi**	**47.25**	**213**	P	**P**	**05 50 50.3**	**+0.9**
PSA00				IAmb	IAmb	05 50 53.1	
	comp=Z,118nm,1.0s						
PSA00	**Pilbara Seismi**	**47.25**	**213**	P	**P**	**05 50 46.6**	**-2.9**
PSA00				IAmb	IAmb	05 50 52.9	
	comp=Z,68nm,1.1s						
SDSI	**Sungai Dareh**	**47.54**	**251**	P	**P**	**05 50 53.4**	**+1.5**
	comp=Z,35nm,0.8s						
KSI	**Kapahiang**	**47.77**	**247**	P	**P**	**05 50 54.2**	**+0.4**
	comp=Z,8µmcomp=Z,429nm,1.0s						
MNAI	**Manna**	**47.80**	**246**	P	**P**	**05 50 54.5**	**+0.6**
	comp=Z,3µmcomp=Z,288nm,1.1s						
MNAI	**Manna**	**47.80**	**246**	P	**P**	**05 50 54.1**	**+0.2**
MOY	**Mondy**	**47.99**	**324**	*e*P	**P**	**05 50 54.7**	**-0.3**
MOY				pmax	pmax		
	comp=Z,32nm,2.6s						
KRJI	**Kerinci**	**48.03**	**249**	P	**P**	**05 50 58.1**	**+2.3**
	comp=Z,728nm,0.8s						
MSVF	**Nonsavu**	**48.23**	**137**	P	**P**	**05 50 58.0**	**+0.9**
MSVF				pmax	pmax		
	comp=Z,149nm,1.1s						
MSVF	**Nonsavu**	**48.23**	**137**	P	**P**	**05 50 58.0**	**+0.9**
MSVF				IAmb	IAmb	05 51 00.0	
	comp=Z,149nm,1.1s						
ITAN	**ITANAGAR**	**48.24**	**290**	*e*P	**P**	**05 50 59.3**	**+2.2**
ITAN				IAmb	IAmb	05 51 04.7	
	comp=Z,90nm,0.5s						
PSI	**Prapat**	**48.28**	**257**	P	**P**	**05 51 00.2**	**+2.4**
PSI				pmax	pmax		
	comp=Z,102nm,1.0s						
RPSI	**Rantau Prapat**	**48.32**	**257**	P	**P**	**05 51 00.2**	**+2.2**
RPSI				IAmb	IAmb	05 51 01.9	
	comp=Z,102nm,1.0s						
PDSI	**Padang**	**48.40**	**251**	P	**P**	**05 50 59.1**	**+0.6**
	comp=Z,29nm,0.7s						
KCSI	**Kotacane, Aceh**	**49.08**	**258**	P	**P**	**05 51 05.8**	**+2.1**
	comp=Z,787nmcomp=Z,93nm,1.1s						
ARMA	**Armidale**	**49.13**	**173**	P	**P**	**05 51 03.3**	**-0.6**
SAIH	**SAIHA**	**49.19**	**284**	*e*P	**P**	**05 51 05.2**	**+0.6**
SAIH				IAmb	IAmb	05 51 09.4	
	comp=Z,111nm,0.6s						
LHMI	**Lhok Sumawe**	**49.25**	**261**	P	**P**	**05 51 05.8**	**+0.9**
	comp=Z,222nm,0.8s						
PPSI	**Pulau Pagai**	**49.63**	**249**	P	**P**	**05 51 08.7**	**+0.9**
	comp=Z,221nm,0.8s						
TPTI		**49.73**	**258**	P	**P**	**05 51 12.6**	**+4.0**
	comp=Z,6.8nm,0.9s						
SISI	**Saibi**	**49.81**	**252**	P	**P**	**05 51 10.0**	**+0.8**
	comp=Z,1µmcomp=Z,162nm,1.0s						
SHL	**Shillong**	**49.95**	**288**	P	**P**	**05 51 12.6**	**+2.2**
	SNR=5.0						
SHL	**Shillong**	**49.95**	**288**	P	**P**	**05 51 12.1**	**+1.7**
SHL				pmax	pmax		
	comp=Z,46nm,0.8s						
SHL	**Shillong**	**49.95**	**288**	P	**P**	**05 51 12.1**	**+1.7**
SHL				IAmb	IAmb	05 51 13.5	
	comp=Z,46nm,0.8s						
PBSI	**Pulau Batu**	**50.01**	**254**	P	**P**	**05 51 07.0**	**-3.7**
	comp=Z,83nm,0.9s						
STKA	**Stephens Creek**	**50.38**	**184**	P	**P**	**05 51 12.2**	**-0.9**
	comp=Z,43nm,1.0s,baz=349,slow=8.5,SNR=56						
STKA	**Stephens Creek**	**50.38**	**184**	P	**P**	**05 51 12.2**	**-0.9**
LSA	**Lhasa**	**50.47**	**293**	P	**P**	**05 51 17.8**	**+3.3**
LSA				pmax	pmax		
	comp=Z,160nm,0.8s						
LSA	**Lhasa**	**50.47**	**293**	P	**P**	**05 51 16.7**	**+2.3**
LSA	**Lhasa**	**50.47**	**293**	P	**P**	**05 51 16.8**	**+2.3**
LSA				pmax	pmax		
	comp=Z,46nm,0.9s						
LSA	**Lhasa**	**50.47**	**293**	P	**P**	**05 51 16.8**	**+2.3**
UNV	**Unalaska Valle**	**50.76**	**35**	P	**P**	**05 51 16.6**	**+0.9**
BILL	**Bilibino**	**51.09**	**10**	*d i*P	**P**	**05 51 19.0**	**+1.1**
BILL				pmax	pmax		
	comp=Z,232nm,1.0s						
BILL	**Bilibino**	**51.09**	**10**	P	**P**	**05 51 19.1**	**+1.1**
GIRL	**Giralia**	**51.21**	**218**	P	**P**	**05 51 21.8**	**+2.4**
AKUT	**Akutan**	**51.27**	**34**	P	**P**	**05 51 20.6**	**+1.1**
LHI	**Lord Howe Isla**	**51.53**	**165**	P	**P**	**05 51 22.4**	**+0.8**
LHI				IAmb	IAmb	05 51 23.4	
	comp=Z,63nm,1.1s						
FORT	**Forrest**	**51.95**	**199**	P	**P**	**05 51 25.5**	**+0.7**
BBOO	**Buckleboo**	**51.97**	**190**	P	**P**	**05 51 24.8**	**-0.1**
BBOO				IAmb	IAmb	05 51 27.1	
	comp=Z,74nm,0.8s						
GTK	**Tadong**	**52.78**	**290**	*e*P	**P**	**05 51 31.9**	**+0.5**
GTK				IAmb	IAmb	05 51 36.2	
	comp=Z,77nm,1.1s						
FALS	**False Pass**	**52.82**	**34**	P	**P**	**05 51 31.9**	**+1.0**
GAMB	**Gambell**	**53.54**	**22**	P	**P**	**05 51 37.6**	**+1.6**
GAMB				IAmb	IAmb	05 51 38.5	
	comp=Z,88nm,0.9s						
TAPN	**Taplejung**	**53.58**	**291**	*e*P	**P**	**05 51 39.1**	**+1.8**
CAN	**Canberra**	**53.77**	**177**	P	**P**	**05 51 38.0**	**-0.1**
CAN				pmax	pmax		
	comp=Z,28nm,0.7s						
CAN	**Canberra**	**53.77**	**177**	P	**P**	**05 51 38.0**	**-0.1**
ODAN	**Odare**	**53.89**	**290**	*e*P	**P**	**05 51 41.3**	**+1.8**
	comp=Z,152nm,1.0s						
TIXI	**Tiksi**	**53.91**	**354**	P	**P**	**05 51 38.3**	**-0.2**
	comp=Z,37nm,0.7s,baz=148,slow=5.4,SNR=62						
TIXI				PKKP	**PKKPdf**	**06 13 31.2**	**-1.3**
	comp=Z,1.9nm,0.3s,baz=109,slow=1.3,SNR=6.3						
TIXI	**Tiksi**	**53.91**	**354**	⇑*i*P	**P**	**05 51 37.2**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,39nm,1.0s						
TIXI	**Tiksi**	**53.91**	**354**	P	**P**	**05 51 38.0**	**-0.5**
TIXI				IAmb	IAmb	05 51 42.2	
	comp=Z,32nm,0.7s						
WMQ	**Urumqi**	**54.26**	**311**	*e*P	**P**	**05 51 43.6**	**+1.9**
WMQ	**Urumqi**	**54.26**	**311**	P	**P**	**05 51 42.8**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,67nm,0.7s						
WMQ	**Urumqi**	**54.26**	**311**	P	**P**	**05 51 42.8**	**+1.1**
WMQ				IAmb	IAmb	05 51 44.6	
	comp=Z,67nm,0.7s						
SDPT	**Sand Point**	**54.58**	**35**	P	**P**	**05 51 44.3**	**+0.7**
RAMN	**Ramite**	**54.59**	**290**	*e*P	**P**	**05 51 45.6**	**+1.0**
	comp=Z,77nm,0.9s						
CNBA	**Chernabura Isl**	**54.88**	**35**	P	**P**	**05 51 47.1**	**+1.2**
JIRN	**Jiri**	**54.90**	**291**	*e*P	**P**	**05 51 48.7**	**+1.8**
	comp=Z,157nm,0.7s						
KHLU	**Kahalu`u**	**55.06**	**79**	P	**P**	**05 51 50.1**	**+2.2**
KHLU				IAmb	IAmb	05 51 53.0	
	comp=Z,82nm,0.9s						
GUN	**Gumba**	**55.16**	**291**	*e*P	**P**	**05 51 50.9**	**+2.2**
HPAH	**Hawaii Prepara**	**55.18**	**78**	P	**P**	**05 51 50.3**	**+1.7**
HPAH				IAmb	IAmb	05 51 51.0	
	comp=Z,72nm,0.8s						
MORW	**Morawa**	**55.35**	**212**	P	**P**	**05 51 50.2**	**+0.6**
MORW				IAmb	IAmb	05 51 51.8	
	comp=Z,92nm,1.1s						
POHA	**Pohakuloa**	**55.37**	**79**	P	**P**	**05 51 52.0**	**+1.8**
POHA				IAmb	IAmb	05 51 52.3	
	comp=Z,138nm,1.1s						
BOK	**Bokaro**	**55.55**	**286**	*e*P	**P**	**05 51 52.4**	**+1.2**
BOK				IAmb	IAmb	05 51 55.9	
	comp=Z,37nm,0.3s						
BOK				*i* pP	**pwP**	**05 52 41.4**	**+1.3**
PKI	**Pulchoki**	**55.60**	**291**	*e*P	**P**	**05 51 53.0**	**+1.1**
PKIN	**Phulchoki**	**55.61**	**291**	*e*P	**P**	**05 51 52.8**	**+0.9**
	comp=Z,47nm,0.8s						
KKN	**Kakani**	**55.70**	**291**	*e*P	**P**	**05 51 53.9**	**+1.5**
	comp=Z,53nm,0.7s						
DMN	**Daman**	**55.86**	**291**	*e*P	**P**	**05 51 55.3**	**+1.6**
TOO	**Toolangi**	**55.92**	**180**	P	**P**	**05 51 53.9**	**+0.5**
TOO				pmax	pmax		
	comp=Z,48nm,0.9s						
TOO	**Toolangi**	**55.92**	**180**	P	**P**	**05 51 53.9**	**+0.5**
TOO				IAmb	IAmb	05 51 54.7	
	comp=Z,48nm,0.9s						
CHGN	**Chignik**	**55.99**	**34**	P	**P**	**05 51 54.0**	**+0.3**
BWNR	**Bhubaneshwar**	**56.11**	**282**	*e*P	**P**	**05 51 57.2**	**+2.1**
BWNR				IAmb	IAmb	05 52 01.9	
	comp=Z,17nm,0.5s						
GKN	**Gorkha**	**56.25**	**292**	*e*P	**P**	**05 51 58.1**	**+1.8**
ANM	**Nome**	**56.29**	**23**	P	**P**	**05 51 57.3**	**+1.6**
ANM				pmax	pmax		
	comp=Z,64nm,0.8s						
ANM	**Nome**	**56.29**	**23**	P	**P**	**05 51 57.3**	**+1.6**
ANM				IAmb	IAmb	05 51 58.2	
	comp=Z,64nm,0.8s						
DANN	**Dangsing**	**56.99**	**292**	*e*P	**P**	**05 52 02.4**	**+0.7**
	comp=Z,183nm,0.5s						
CHIR	**Chirikof Islan**	**57.35**	**35**	P	**P**	**05 52 05.2**	**+1.9**
ZAA0	**Zalesovo Array**	**57.99**	**323**	P	**P**	**05 52 07.1**	**-0.7**
ZALV	**Zalesovo Beam**	**57.99**	**323**	P	**P**	**05 52 07.1**	**-0.7**
	comp=Z,24nm,0.6s,baz=110,slow=7.7,SNR=93						
ZALV				ScP	**ScP**	**05 56 39.7**	**+1.2**
	comp=Z,2.7nm,0.7s,baz=103,slow=5.7,SNR=4.6						
ZALV				LR	LR	06 17 38.9	
	comp=Z,130nm,19.2s,baz=98,slow=36						
ZALV				PKPPKP	**P'P'df**	**06 21 46.0**	**-3.2**
	comp=Z,1.0nm,0.7s,baz=256,slow=3.8,SNR=4.7						
ZALV	**Zalesovo Beam**	**57.99**	**323**	P	**P**	**05 52 06.7**	**-1.1**
NWAO	**Narrogin (SRO)**	**58.00**	**208**	P	**P**	**05 52 08.4**	**+0.3**
NWAO				pmax	pmax		
	comp=Z,174nm,1.0s						
NWAO	**Narrogin (SRO)**	**58.00**	**208**	P	**P**	**05 52 08.4**	**+0.3**
SII	**Sitkinak Islan**	**58.31**	**34**	P	**P**	**05 52 11.6**	**+1.6**
MK31	**Makanchi Array**	**58.42**	**314**	P	**P**	**05 52 11.3**	**+0.3**
MK31				pmax	pmax		
	comp=Z,22nm,0.6s						
MK31	**Makanchi Array**	**58.42**	**314**	P	**P**	**05 52 11.3**	**+0.3**
MK31				IAmb	IAmb	05 52 12.6	
	comp=Z,22nm,0.6s						
MKAR	**Makanchi Array**	**58.42**	**314**	P	**P**	**05 52 11.2**	**+0.3**
	comp=Z,34nm,0.6s,baz=89,slow=8.7,SNR=380						
MKAR				ScP	**ScP**	**05 56 41.9**	**+1.3**
	comp=Z,3.5nm,0.7s,baz=89,slow=5.9,SNR=4.3						
MKAR				S	**S**	**05 59 59.4**	**+1.4**
	comp=Z,2.0nm,0.8s,baz=94,slow=20,SNR=6.6						
MKAR				PKP2bc		06 21 57.8	
	comp=Z,2.7nm,1.1s,baz=321,slow=1.7,SNR=9.8						
MKAR	**Makanchi Array**	**58.42**	**314**	P	**P**	**05 52 10.8**	**-0.1**
MAKZ	**Makanchi**	**58.63**	**314**	P	**P**	**05 52 12.9**	**+0.5**
MAKZ				pmax	pmax		
	comp=Z,49nm,0.7s						
MAKZ	**Makanchi**	**58.63**	**314**	P	**P**	**05 52 12.9**	**+0.5**
MAKZ				IAmb	IAmb	05 52 14.2	
	comp=Z,49nm,0.7s						
RDOG	**Red Dog Mine**	**58.91**	**20**	P	**P**	**05 52 15.3**	**+1.3**
RDOG				IAmb	IAmb	05 52 16.9	
	comp=Z,76nm,0.9s						
SVW2	**Sparrevohn**	**58.93**	**29**	P	**P**	**05 52 15.5**	**+1.3**
SVW2				IAmb	IAmb	05 52 16.8	
	comp=Z,76nm,0.8s						
OHAK	**Old Harbor**	**58.96**	**34**	P	**P**	**05 52 15.4**	**+1.0**
TTA	**Tatalina**	**59.35**	**27**	P	**P**	**05 52 18.2**	**+1.1**
TTA	**Tatalina**	**59.35**	**27**	P	**P**	**05 52 18.2**	**+1.1**
KDAK	**Kodiak Island**	**59.46**	**33**	S	**S**	**06 00 10.8**	**-0.2**
	comp=Z,16nm,1.1s,baz=21,slow=21,SNR=12						
KDAK	**Kodiak Island**	**59.46**	**33**	P	**P**	**05 52 18.8**	**+1.0**
KDAK				pmax	pmax		
	comp=Z,95nm,0.7s						
KDAK	**Kodiak Island**	**59.46**	**33**	P	**P**	**05 52 18.8**	**+1.0**
OUZ	**Omahuta**	**59.81**	**154**	P	**P**	**05 52 22.3**	**+1.9**
OUZ				IAmb	IAmb	05 52 23.1	
	comp=Z,71nm,1.0s						
RSO	**Redoubt South**	**60.06**	**30**	P	**P**	**05 52 20.6**	**-1.6**
SEM	**Semipalatinsk**	**60.17**	**318**	*e*P	**P**	**05 52 21.0**	**-2.1**
	comp=Z,12nm,0.7s						
SEM				*e*pP	**pP**	**05 53 07.6**	**-0.3**
SEM	**Semipalatinsk**	**60.17**	**318**	*e*P	**P**	**05 52 21.0**	**-2.1**
SEM				*e**PP	**pP**	**05 53 07.6**	**-0.3**
SEM				pmax	pmax		
	comp=Z,12nm,0.7s						
HOM	**Homer**	**60.40**	**31**	P	**P**	**05 52 25.2**	**+1.0**
UZB	**Uzynbulak**	**60.49**	**310**	⇑*e*P	**P**	**05 52 25.5**	**+0.2**
UZB				*e*pP	**PcP**	**05 53 08.6**	**+0.6**
UZB	**Uzynbulak**	**60.49**	**310**	*ce*P	**P**	**05 52 25.5**	**+0.2**
UZB				*e**PP	**PcP**	**05 53 08.5**	**+0.6**
CNPM	**China Poot**	**60.56**	**31**	P	**P**	**05 52 25.8**	**+0.4**
KPKS	**Kokpek**	**60.74**	**310**	*e*P	**P**	**05 52 26.9**	**-0.1**
	comp=Z,12nm,0.4s						
KPKS				*e*pP	**PcP**	**05 53 09.2**	**+0.3**
KPKS	**Kokpek**	**60.74**	**310**	*e*P	**P**	**05 52 26.8**	**-0.1**
KPKS				*e**PP	**PcP**	**05 53 09.2**	**+0.3**
KPKS				pmax	pmax		
	comp=Z,13nm,0.4s						
BRLK	**Bradley Lake**	**60.79**	**31**	P	**P**	**05 52 27.0**	**+0.1**
PRZ	**Przheval'sk**	**60.93**	**309**	P	**P**	**05 52 30.4**	**+2.0**
PRZ				pmax	pmax		
	comp=Z,75nm,0.6s						
PRZ	**Przheval'sk**	**60.93**	**309**	P	**P**	**05 52 30.4**	**+2.0**
PPLA	**Purkeypile**	**61.00**	**28**	P	**P**	**05 52 29.6**	**+1.2**
PPLA				IAmb	IAmb	05 52 30.7	
	comp=Z,50nm,1.0s						
SKT	**Skwentna**	**61.04**	**29**	P	**P**	**05 52 28.7**	**+0.1**
SKT				IAmb	IAmb	05 52 29.7	
	comp=Z,93nm,1.0s						
KURK	**Kurchatov**	**61.23**	**318**	*c i*P	**P**	**05 52 29.6**	**-0.4**
KURK				pmax	pmax		
	comp=Z,55nm,0.9s						
KURK	**Kurchatov**	**61.23**	**318**	P	**P**	**05 52 29.8**	**-0.2**
KURK				IAmb	IAmb	05 52 40.9	
	comp=Z,50nm,0.9s						
TAU	**Tasmania Unive**	**61.27**	**179**	P	**P**	**05 52 30.1**	**0.0**
TAU				pmax	pmax		
	comp=Z,31nm,0.8s						
TAU	**Tasmania Unive**	**61.27**	**179**	P	**P**	**05 52 30.1**	**0.0**
TAU				IAmb	IAmb	05 52 30.9	
	comp=Z,31nm,0.8s						
SUA	**Susitna One**	**61.27**	**29**	P	**P**	**05 52 30.9**	**+0.7**
SUA				IAmb	IAmb	05 52 32.2	
	comp=Z,59nm,0.7s						
SUA					**S**	**06 00 38.4**	**+4.2**
KURBB	**Kurchatov Arra**	**61.28**	**318**	P	**P**	**05 52 30.1**	**-0.3**
	comp=Z,60nm,0.6s,baz=96,slow=7.4,SNR=508						
KURBB				pP	**pP**	**05 53 14.1**	**-1.1**
	comp=Z,24nm,0.9s,baz=91,slow=7.2,SNR=1.6						
KURBB				S	**S**	**06 00 33.0**	**-1.4**
	comp=Z,3.8nm,0.9s,baz=97,slow=14,SNR=9.3						
IMAR	**Indian Mountai**	**61.31**	**24**	P	**P**	**05 52 30.7**	**+0.4**
SEW	**Seward**	**61.57**	**31**	P	**P**	**05 52 32.7**	**+0.6**
NRIK	**Noril'sk**	**61.62**	**340**	P	**P**	**05 52 32.2**	**-0.1**
	comp=Z,57nm,0.6s,baz=110,slow=8.3,SNR=95						
NRIK				S	**S**	**06 00 37.9**	**-0.2**
	comp=Z,3.3nm,0.5s,baz=177,slow=23,SNR=15						
NRIK				LR	LR	06 18 59.8	
	comp=Z,219nm,19.0s,baz=112,slow=35						
RC01	**Rabbit Creek A**	**61.66**	**30**	P	**P**	**05 52 32.9**	**+0.2**
KTH	**Kantishna Hill**	**61.73**	**27**	P	**P**	**05 52 33.8**	**+0.6**
BPAW	**Bear Paw Mtn.**	**61.85**	**26**	P	**P**	**05 52 35.1**	**+1.1**
MDOK	**Medeo**	**61.93**	**309**	*e*P	**P**	**05 52 35.5**	**+0.4**
MDOK				*e*pP	**pP**	**05 53 19.1**	**-0.9**
MDOK	**Medeo**	**61.93**	**309**	*e*P	**P**	**05 52 35.4**	**+0.4**
MDOK				*e**PP	**pP**	**05 53 19.1**	**-0.9**
TRF	**Thorofare Moun**	**61.98**	**27**	P	**P**	**05 52 35.2**	**+0.3**
CHKK	**Chushkaly**	**61.98**	**310**	*e*P	**P**	**05 52 35.6**	**+0.5**
CHKK	**Chushkaly**	**61.98**	**310**	*e*P	**P**	**05 52 35.6**	**+0.5**
TNSS	**Tian-Shan**	**62.01**	**309**	*e*P	**P**	**05 52 36.4**	**+0.6**
TNSS				*e*pP	**pP**	**05 53 20.7**	**-0.1**
TNSS	**Tian-Shan**	**62.01**	**309**	*e*P	**P**	**05 52 36.4**	**+0.6**
TNSS				*e**PP	**pP**	**05 53 20.7**	**-0.1**
AAA	**Alma-Ata**	**62.03**	**310**	*e*P	**P**	**05 52 35.9**	**+0.3**
	comp=Z,35nm,0.9s						
AAA				*e*pP	**pP**	**05 53 23.0**	**+2.4**
AAA	**Alma-Ata**	**62.03**	**310**	*e*P	**P**	**05 52 35.8**	**+0.3**
AAA				*e**PP	**pP**	**05 53 23.0**	**+2.4**
AAA				pmax	pmax		
	comp=Z,35nm,0.9s						
PMR	**Palmer**	**62.05**	**29**	P	**P**	**05 52 35.3**	**0.0**
PMR				pmax	pmax		
	comp=Z,81nm,0.8s						
PMR	**Palmer**	**62.05**	**29**	P	**P**	**05 52 35.3**	**0.0**
PMR				IAmb	IAmb	05 52 36.4	
	comp=Z,81nm,0.8s						
GHO	**Glory Hole Cre**	**62.19**	**29**	P	**P**	**05 52 36.7**	**+0.4**
NGP	**Nagpur**	**62.19**	**285**	*e*P	**P**	**05 52 38.2**	**+1.3**

NGP				IAmb	IAmb	05 52 41.9	
	comp=Z,9.9nm,0.7s						
MLY	Manley	62.21	25	P	P	05 52 37.0	+0.6
KNK	Knik Glacier	62.33	30	P	P	05 52 37.8	+0.7
MTBS	Maitube	62.38	309	*e*P	P	05 52 38.3	+0.4
MTBS	Maitube	62.38	309	*e*P	P	05 52 38.3	+0.4
SMLA	Simla	62.44	296	*e*P	P	05 52 39.2	+0.8
SMLA				IAmb	IAmb	05 52 46.5	
	comp=Z,25nm,0.4s						
KUU	Kurty	62.45	310	*e*P	P	05 52 38.6	+0.3
	comp=Z,44nm,0.5s						
KUU				*e*pP	pP	05 53 21.8	-1.6
KUU	Kurty	62.45	310	*e*P	P	05 52 38.6	+0.3
KUU				*e**PP	pP	05 53 21.7	-1.6
KUU				pmax	pmax		
	comp=Z,44nm,0.5s						
SML	Sawmill	62.47	29	P	P	05 52 38.8	+0.7
BWN	Browne	62.52	27	P	P	05 52 39.6	+1.3
ULHL	Ulahol	62.53	308	P	P	05 52 39.8	+0.7
	SNR=27						
RND	Reindeer	62.59	27	P	P	05 52 38.8	-0.1
RND				pmax	pmax		
	comp=Z,57nm,0.8s						
RND	Reindeer	62.59	27	P	P	05 52 38.8	-0.1
RND				IAmb	IAmb	05 52 40.6	
	comp=Z,57nm,0.8s						
MCK	McKinley	62.63	27	P	P	05 52 39.1	0.0
MCK				pmax	pmax		
	comp=Z,49nm,1.0s						
MCK	McKinley	62.63	27	P	P	05 52 39.1	0.0
MCK				IAmb	IAmb	05 52 40.9	
	comp=Z,49nm,1.0s						
NRN	Naryn	62.73	308	P	P	05 52 41.2	+0.7
NRN				pmax	pmax		
	comp=Z,23nm,1.2s						
NRN	Naryn	62.73	308	P	P	05 52 41.2	+0.7
BOOM	Boomskoye usch	62.75	309	P	P	05 52 41.3	+0.8
BOOM				pmax	pmax		
	comp=Z,40nm,0.6s						
BOOM	Boomskoye usch	62.75	309	P	P	05 52 41.3	+0.8
BOOM				IAmb	IAmb	05 52 42.8	
	comp=Z,40nm,0.6s						
NEA	Nenana	62.78	26	P	P	05 52 41.0	+1.0
NEA				IAmb	IAmb	05 52 42.5	
	comp=Z,67nm,1.0s						
KSH	Kashi	62.81	305	P	P	05 52 44.6	+3.7
KSH				pP	pwP	05 53 32.4	+1.4
KSH				S	S	06 00 55.2	+1.0
KSH				ScS	SKSac	06 02 13.2	-0.8
KSH				pmax	pmax		
	comp=Z,83nm,1.3s						
KSH				pmax	pmax		
	comp=Z,240nm,5.8s						
KSH				LR	LR		
	comp=Z,2µm,20.1s						
KSH				LR	LR		
	comp=Z,490nm,15.3s						
KSH				LR	LR		
	comp=Z,410nm,16.1s						
GLI	Glacier Island	62.87	30	P	P	05 52 41.9	+1.2
GLI				IAmb	IAmb	05 52 43.1	
	comp=Z,74nm,1.0s						
SCM	Sheep Creek Mo	62.94	29	P	P	05 52 42.2	+0.9
SCM				pmax	pmax		
	comp=Z,204nm,0.8s						
SCM	Sheep Creek Mo	62.94	29	P	P	05 52 42.2	+0.9
MID	Middleton Isla	62.99	32	P	P	05 52 44.0	+2.5
MID				pmax	pmax		
	comp=Z,260nm,0.9s						
MID	Middleton Isla	62.99	32	P	P	05 52 44.0	+2.5
COLD	Coldfoot	63.05	23	P	P	05 52 43.3	+1.5
DHRM	DHARAMSHALA	63.06	297	*e*P	P	05 52 42.9	+0.1
DHRM				IAmb	IAmb	05 52 45.9	
	comp=Z,16nm,0.8s						
HIN	Hinchinbrook I	63.07	31	P	P	05 52 43.6	+1.5
HIZ	Hauiti	63.14	155	P	P	05 52 44.3	+1.6
FID	Port Fidalgo	63.15	31	P	P	05 52 43.4	+0.9
WRH	Wood River Hil	63.17	26	P	P	05 52 42.4	-0.2
WRH				IAmb	IAmb	05 52 43.6	
	comp=Z,47nm,0.7s						
DHY	Denali Highway	63.17	28	P	P	05 52 43.0	+0.2
DHY				IAmb	IAmb	05 52 46.3	
	comp=Z,25nm,0.6s						
MDM	Murphy Dome	63.23	26	P	P	05 52 43.7	+0.7
KZA	Kyzart	63.27	308	P	P	05 52 45.8	+1.5
	SNR=82						
BHPL	Bhopal	63.31	287	*e*P	P	05 52 45.4	+1.1
BHPL				IAmb	IAmb	05 52 51.8	
CCB	Clear Creek Bu	63.33	26	P	P	05 52 43.6	0.0
TCOL	CIGO, UAF Yank	63.36	26	P	P	05 52 44.4	+0.6
	baz=257,SNR=18						
COLA	College	63.36	26	P	P	05 52 44.4	+0.6
COLA				pmax	pmax		
	comp=Z,68nm,0.8s						
COLA	College	63.36	26	P	P	05 52 44.4	+0.6
COLA				IAmb	IAmb	05 52 47.1	
	comp=Z,68nm,0.8s						
HYB	Hyderabad	63.39	281	*i* P	P	05 52 46.0	+1.1
HYB				*e*PcP	PcP	05 53 20.5	+0.4
HYB				*e*pP	pwP	05 53 37.0	+1.8
HYB	Hyderabad	63.39	281	*e*P	P	05 52 46.0	+1.1
HYB				IAmb	IAmb	05 52 50.4	
	comp=Z,22nm,1.1s						
EYAK	Cordova Ski Ar	63.47	31	P	P	05 52 45.9	+1.3
EYAK				IAmb	IAmb	05 52 46.8	
	comp=Z,79nm,0.8s						
KBK	Karagaybulak	63.48	309	P	P	05 52 45.9	+0.6
	SNR=19						
POKR	Poker Plat Res	63.59	26	P	P	05 52 45.5	+0.1
	baz=257,SNR=18						
CHMS	Chumysh	63.62	309	P	P	05 52 47.0	+1.0
	SNR=7.1						
HDA	Harding Lake	63.64	27	P	P	05 52 45.2	-0.5
HDA				IAmb	IAmb	05 52 46.2	
	comp=Z,48nm,0.7s						
HDA	Harding Lake	63.64	27	P	P	05 52 45.2	-0.5
	baz=258,SNR=54						
TOLK	Toolik Lake Re	63.68	22	P	P	05 52 47.5	+1.6
TOLK	Toolik Lake Re	63.68	22	P	P	05 52 47.6	+1.6
	baz=253						
SGDS	Sogindy	63.69	310	*e*P	P	05 52 46.2	-0.3
IL31		63.74	26	P	P	05 52 45.8	-0.5
IL31				IAmb	IAmb	05 52 46.8	
	comp=Z,69nm,0.8s						
ILAR	Eielson Array	63.74	26	P	P	05 52 45.8	-0.6
	comp=Z,52nm,0.8s,baz=256,slow=4.9,SNR=437						
ILAR				S	S	06 01 14.9	+10
	comp=Z,0.4nm,0.9s,baz=280,slow=17,SNR=4.2						
ILAR				LR	LR	06 19 35.6	
	comp=Z,176nm,19.9s,baz=272,slow=35						
ILAR				PKPPKP	P'P'df	06 21 41.8	+2.2
	comp=Z,1.4nm,1.1s,baz=14,slow=1.9,SNR=6.2						
ILAR	Eielson Array	63.74	26	P	P	05 52 45.2	-1.2
USP	Ospenovka	63.79	310	P	P	05 52 47.6	+0.4
	SNR=26						
UCH	Uchtor	63.81	308	P	P	05 52 49.0	+1.2
	SNR=53						
AAK	Ala-Archa	63.81	309	P	P	05 52 47.7	+0.3
	comp=Z,10nm,0.5s,baz=105,slow=5.8,SNR=29						
AAK	Ala-Archa	63.81	309	P	P	05 52 48.2	+0.7
	SNR=12						
AAK	Ala-Archa	63.81	309	*i* P	P	05 52 48.2	+0.7
	SNR=14						
AAK	Ala-Archa	63.81	309	*c i*P	P	05 52 47.6	+0.1
AAK				pmax	pmax		
	comp=Z,11nm,0.6s						
AAK	Ala-Archa	63.81	309	P	P	05 52 48.2	+0.7
URZ	Urewera	63.88	153	P	P	05 52 46.6	-0.9
URZ				IAmb	IAmb	05 52 47.4	
	comp=Z,98nm,1.0s						
RAGM	Ragged Mountai	63.97	31	P	P	05 52 49.3	+1.3
RAGM				IAmb	IAmb	05 52 51.9	
	comp=Z,73nm,0.9s						
PAX	Paxson	64.00	28	P	P	05 52 48.9	+0.7
PAX				pmax	pmax		
	comp=Z,57nm,0.6s						
PAX	Paxson	64.00	28	P	P	05 52 48.9	+0.7
PAX				IAmb	IAmb	05 52 49.9	
	comp=Z,57nm,0.6s						
BTLS	Baital	64.08	312	⇑*i*P	P	05 52 49.0	0.0
	comp=Z,10nm,0.4s						
BTLS				*e*pP	pP	05 53 32.9	-1.3
BTLS				*e*S	S	06 01 09.1	-0.4
BTLS	Baital	64.08	312	*c i*P	P	05 52 49.0	0.0
BTLS				*e**PP	pP	05 53 32.9	-1.3
BTLS				*e*S	S	06 01 09.0	-0.4
BTLS				pmax	pmax		
	comp=Z,11nm,0.4s						
QRZ	Quartz Range	64.25	158	P	P	05 52 50.4	+0.5
QRZ	Quartz Range	64.25	158	P	P	05 52 50.1	+0.2
EKS2	Erkin-Say	64.34	309	P	P	05 52 52.1	+1.3
	SNR=17						
BKZ	Black Stump Fm	64.37	154	P	P	05 52 50.2	-0.7
BKZ				IAmb	IAmb	05 52 50.9	
	comp=Z,71nm,0.9s						
RIDG	Independent Ri	64.42	28	P	P	05 52 51.3	+0.4
AML	Almayashu	64.43	308	P	P	05 52 52.9	+1.1
	SNR=7.3						
PRP	Porcupine Dome	64.46	26	P	P	05 52 50.4	-0.8
GLB	Gilahina Butte	64.53	30	P	P	05 52 52.7	+1.0
GLB				IAmb	IAmb	05 52 54.4	
	comp=Z,89nm,0.9s						
VRDI	Verde Repeater	64.68	30	P	P	05 52 53.7	+1.0
VRDI				IAmb	IAmb	05 52 54.6	
	comp=Z,70nm,0.8s						
DUWZ	D’Urville Isla	64.75	157	P	P	05 52 53.1	0.0
DOT	Dot Lake	64.75	28	P	P	05 52 53.4	+0.5
CRQM	Cirque	64.77	31	P	P	05 52 54.6	+1.3
MENT	Mentasta	64.79	28	P	P	05 52 54.3	+1.1
MENT				IAmb	IAmb	05 53 00.6	
	comp=Z,20nm,0.7s						
DSZ	Denniston Nort	64.81	159	P	P	05 52 53.0	-0.5
MCARA	McCarthy VSAT	64.90	30	P	P	05 52 54.9	+0.9
NNZ	Nelson	64.90	157	P	P	05 52 54.1	0.0
NNZ				IAmb	IAmb	05 52 56.9	
	comp=Z,37nm,0.8s						
NNZ	Nelson	64.90	157	P	P	05 52 54.0	-0.1
TGL	Tana Glacier	64.92	31	P	P	05 52 55.3	+1.1
TGL				IAmb	IAmb	05 52 56.3	
	comp=Z,86nm,1.0s						
BRZS	Berezniki	65.00	317	*e*P	P	05 52 54.3	-0.6
	comp=Z,23nm,1.0s						
BRZS				*e*pP	pP	05 53 37.8	-2.4
BRZS	Berezniki	65.00	317	*e*P	P	05 52 54.2	-0.6
BRZS				*e**PP	pP	05 53 37.8	-2.4
BRZS				pmax	pmax		
	comp=Z,23nm,1.0s						
ARSB	Arslanbob	65.00	308	P	P	05 52 55.7	+0.6
ARSB				pmax	pmax		
	comp=Z,37nm,0.6s						
ARSB	Arslanbob	65.00	308	P	P	05 52 55.7	+0.6
ARSB				IAmb	IAmb	05 52 57.0	
	comp=Z,37nm,0.6s						
KIW	Kapiti Island	65.17	156	P	P	05 52 56.3	+0.4
BALM	Baldy	65.19	31	P	P	05 52 56.8	+0.9
BALM				IAmb	IAmb	05 52 57.8	
	comp=Z,65nm,0.8s						
BMAR	Burnt Mountain	65.21	24	P	P	05 52 56.0	+0.1
THZ	Tophouse	65.21	158	P	P	05 52 55.8	-0.4
THZ				IAmb	IAmb	05 53 00.4	
	comp=Z,31nm,0.7s						
THZ	Tophouse	65.21	158	P	P	05 52 56.3	+0.1
TCW	Tory Channel	65.23	156	P	P	05 52 56.5	+0.2
TUWZ	Tuamarina	65.30	157	P	P	05 52 55.5	-1.1
TUWZ	Tuamarina	65.30	157	P	P	05 52 56.0	-0.6
HOWZ	Holdsworth Sta	65.44	155	P	P	05 52 58.0	+0.3
CAW	Cannon Point	65.45	156	P	P	05 52 57.6	0.0
NIL	Nilore	65.46	299	P	P	05 52 59.5	+1.4
NIL				pmax	pmax		
	comp=Z,88nm,1.1s						
NIL	Nilore	65.46	299	P	P	05 52 59.5	+1.4
NIL				IAmb	IAmb	05 53 00.7	
	comp=Z,88nm,1.1s						
SNZO	South Karori	65.48	156	P	P	05 52 55.2	-2.6
BARN	Barnard Glacie	65.52	31	P	P	05 52 59.4	+1.2
BARN				IAmb	IAmb	05 53 00.3	
	comp=Z,41nm,0.8s						
BSWZ	Blackbirch Sta	65.52	157	P	P	05 52 57.4	-0.7
BFZ	Birch Farm	65.55	155	P	P	05 52 57.6	-0.7
BFZ	Birch Farm	65.55	155	P	P	05 52 58.3	0.0
BHW	Baring Head	65.63	156	P	P	05 52 57.7	-1.1
MTW	Mount Morrison	65.66	156	P	P	05 52 58.6	-0.4
CTGM	Chitina Glacie	65.67	31	P	P	05 53 00.3	+1.2
CTGM				IAmb	IAmb	05 53 01.8	
	comp=Z,88nm,0.8s						
BCAR	Beaver Creek A	65.68	28	P	P	05 52 59.0	0.0
FOZ	Fox Glacier	65.75	161	P	P	05 52 58.9	-0.6
FOZ				IAmb	IAmb	05 53 01.5	
	comp=Z,70nm,1.1s						
MSWZ	Moikau Station	65.78	156	P	P	05 52 58.7	-1.1
MSWZ	Moikau Station	65.78	156	P	P	05 52 59.7	-0.1
PAWZ	Paruwai Farm	65.82	156	P	P	05 52 59.3	-0.8
LTZ	Lake Taylor	65.88	159	P	P	05 52 59.3	-1.2
LTZ				IAmb	IAmb	05 53 00.9	
	comp=Z,37nm,0.8s						
LTZ	Lake Taylor	65.88	159	P	P	05 52 59.4	-1.0
PLWZ	Palliser	65.92	156	P	P	05 52 59.7	-1.0
PLWZ	Palliser	65.92	156	P	P	05 53 00.2	-0.5
KHZ	Kahutara	66.01	158	P	P	05 52 59.9	-1.3
KHZ				IAmb	IAmb	05 53 03.0	
	comp=Z,42nm,0.7s						
KHZ	Kahutara	66.01	158	P	P	05 52 59.6	-1.5
PCA	Pinnacle	66.13	32	P	P	05 53 03.3	+1.4
PCA				IAmb	IAmb	05 53 04.1	
	comp=Z,68nm,0.7s						
EGAK	Eagle	66.16	27	P	P	05 53 02.4	+0.5
EGAK				IAmb	IAmb	05 53 08.2	
	comp=Z,28nm,0.8s						
OXZ	Oxford	66.29	159	P	P	05 53 01.5	-1.5
OXZ				IAmb	IAmb	05 53 02.1	
	comp=Z,57nm,0.9s						
OXZ	Oxford	66.29	159	P	P	05 53 01.1	-1.8
RPZ	Rata Peaks	66.31	160	P	P	05 53 01.7	-1.4
RPZ				IAmb	IAmb	05 53 02.9	
	comp=Z,66nm,0.9s						
BVAR	Borovoye Array	66.44	320	P	P	05 53 03.8	-0.2
	comp=Z,82nm,0.6s,baz=92,slow=7.6,SNR=426						
BVAR				pP	pP	05 53 50.5	+0.9
	comp=Z,50nm,0.9s,baz=96,slow=7.4,SNR=2.5						
BVAR				S	S	06 01 36.6	-1.3
	comp=Z,3.3nm,0.9s,baz=90,slow=10,SNR=7.6						
BRVK	Borovoye	66.51	320	*c i*P	P	05 53 04.1	-0.3
BRVK				pmax	pmax		
	comp=Z,68nm,0.8s						
BRVK	Borovoye	66.51	320	P	P	05 53 04.3	-0.1
BRVK				IAmb	IAmb	05 53 07.4	
	comp=Z,66nm,0.8s						
LBZ	Lake Benmore	66.64	161	P	P	05 53 04.2	-0.9
LBZ				IAmb	IAmb	05 53 04.9	
	comp=Z,52nm,1.1s						
KK31	Karatay Array	66.72	310	P	P	05 53 06.2	+0.3
KK31				pmax	pmax		
	comp=Z,47nm,0.8s						
KK31	Karatay Array	66.72	310	P	P	05 53 06.2	+0.3
KK31				IAmb	IAmb	05 53 07.8	
	comp=Z,47nm,0.8s						
KKAR	Karatay Array	66.72	310	P	P	05 53 06.2	+0.3
KKAR				pmax	pmax		
	comp=Z,47nm,0.8s						
KKAR	Karatay Array	66.72	310	P	P	05 53 06.2	+0.3
KKAR				IAmb	IAmb	05 53 07.8	
	comp=Z,47nm,0.8s						
KKAR	Karatay Array	66.72	310	P	P	05 53 05.0	-0.9
BTK	Batken	66.73	306	P	P	05 53 06.3	+0.1
BTK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BTK	Batken	66.73	306	P	P	05 53 06.2	+0.1
JBG	Jabagly	66.74	309	*e*P	P	05 53 07.1	+0.9
JBG				*e**PP	pP	05 53 51.0	-0.9
JBG				pmax	pmax		
	comp=Z,27nm,1.3s						
DCZ	Deep Cove	66.75	164	P	P	05 53 05.0	-0.8
DCZ				IAmb	IAmb	05 53 08.8	
	comp=Z,45nm,0.8s						
MQZ	McQueen’s Vall	66.83	159	P	P	05 53 05.5	-0.8
MQZ				IAmb	IAmb	05 53 09.2	
	comp=Z,93nm,1.2s						
MQZ	McQueen’s Vall	66.83	159	P	P	05 53 07.4	+1.1
DAWY	Dawson	66.85	28	P	P	05 53 07.3	+1.0
DAWY				IAmb	IAmb	05 53 08.5	
	comp=Z,42nm,0.8s						
DHAK	Deception Hill	67.11	33	P	P	05 53 09.7	+1.5
DHAK				IAmb	IAmb	05 53 12.4	
	comp=Z,121nm,1.1s						
IUG	Iuzhnay	67.14	309	*e*P	P	05 53 09.6	+0.8
IUG				*e*pP	pP	05 53 56.6	+2.2
IUG	Iuzhnay	67.14	309	*e*P	P	05 53 09.5	+0.8
IUG				*e**PP	pP	05 53 56.6	+2.2
GAR	Garm	67.22	305	P	P	05 53 09.6	+0.3
GAR				IAmb	IAmb	05 53 10.7	
	comp=Z,48nm,0.6s						
WHZ	Wether Hill Ro	67.36	163	P	P	05 53 08.8	-0.8
CHM	Chimkent	67.44	309	*e*P	P	05 53 10.5	0.0
	comp=Z,12nm,0.7s						
CHM				*e*pP	pwP	05 53 58.9	-2.2
CHM	Chimkent	67.44	309	*e*P	P	05 53 10.5	0.0
CHM				*e**PP	pwP	05 53 58.8	-2.2
CHM				pmax	pmax		
	comp=Z,12nm,0.7s						
HYT	Haines Junctio	67.53	31	P	P	05 53 12.5	+1.7
EPYK	Eagle Plains	68.14	25	P	P	05 53 15.4	+1.0
EPYK				IAmb	IAmb	05 53 16.4	
	comp=Z,64nm,0.7s						
EPYK	Eagle Plains	68.14	25	P	P	05 53 15.4	+1.0
	baz=266						
CHGR	Chuyangaron	68.16	305	P	P	05 53 15.7	+0.6
CHGR				IAmb	IAmb	05 53 16.9	
	comp=Z,88nm,0.8s						
SKAG	Skagway	68.60	33	P	P	05 53 19.0	+1.7
SKAG				IAmb	IAmb	05 53 19.9	
	comp=Z,47nm,0.7s						
SIT	Sitka	68.64	35	P	P	05 53 19.3	+1.7
SIT				pmax	pmax		
	comp=Z,26nm,1.0s						
SIT	Sitka	68.64	35	P	P	05 53 19.2	+1.7
KBL	Kabul	68.80	301	P	P	05 53 19.9	+0.6
KBL				pmax	pmax		
	comp=Z,34nm,0.8s						
KBL	Kabul	68.80	301	P	P	05 53 19.9	+0.6
KBL				IAmb	IAmb	05 53 23.9	
	comp=Z,34nm,0.8s						
WHY	Whitehorse	68.82	31	P	P	05 53 20.2	+1.5
WHY				IAmb	IAmb	05 53 21.4	
	comp=Z,47nm,0.9s						
BESE	Bessie Mountai	68.86	34	P	P	05 53 20.4	+1.4
BESE				IAmb	IAmb	05 53 21.6	
	comp=Z,69nm,0.8s						
JIS	Juneau Island	69.11	34	P	P	05 53 22.2	+1.8
JIS				IAmb	IAmb	05 53 23.0	
	comp=Z,57nm,0.8s						
INK	Inuvik	69.46	23	S	S	06 02 12.9	-0.2
	comp=Z,5.0nm,1.3s,baz=64,slow=29,SNR=13						
INK	Inuvik	69.46	23	P	P	05 53 22.9	+0.4
INK				pmax	pmax		
	comp=Z,70nm,0.8s						
INK	Inuvik	69.46	23	P	P	05 53 22.9	+0.4
INK				IAmb	IAmb	05 53 24.3	
	comp=Z,70nm,0.8s						
WRAK	Wrangell Islan	70.31	36	P	P	05 53 29.6	+1.8
WRAK				IAmb	IAmb	05 53 30.3	
	comp=Z,40nm,0.9s						
DIB	Dawson Inlet,	70.50	39	P	P	05 53 30.5	+1.5
DIB				IAmb	IAmb	05 53 32.9	
	comp=Z,73nm,1.2s						
DLBC	Dease Lake	71.40	34	P	P	05 53 36.1	+1.7
DLBC				IAmb	IAmb	05 53 37.1	
	comp=Z,57nm,0.8s						
SVE	Sverdlovsk	71.86	325	*e*P	P	05 53 37.0	-0.1
SVE				pmax	pmax		
	comp=Z,44nm,0.9s						
C36M	Paulatuk	72.84	22	P	P	05 53 43.0	+0.4
C36M				IAmb	IAmb	05 53 43.9	
	comp=Z,77nm,0.8s						
C36M	Paulatuk	72.84	22	P	P	05 53 43.0	+0.4
	baz=277,SNR=94						
ARU	Arti	73.04	325	S	S	06 02 53.3	-1.3
	comp=Z,0.6nm,0.3s,baz=193,slow=23,SNR=7.5						
ARU	Arti	73.04	325	*c i*P	P	05 53 43.4	-0.7
ARU				*PP	pP	05 54 32.1	+1.5
ARU				S	SKiKP	06 02 55.9	+0.2
ARU				pmax	pmax		
	comp=Z,35nm,0.6s						
ARU	Arti	73.04	325	P	P	05 53 43.6	-0.5
ARU				IAmb	IAmb	05 53 48.0	
	comp=Z,45nm,0.8s						
PPT	Papeete	73.19	116	LR	LR	06 19 38.7	
	comp=Z,312nm,19.3s,baz=280,slow=30						
PPT2	Papeete2	73.20	116	*e*LR	LR	06 16 28.8	
	comp=Z,543nm,24.5s						
AB31	Akbulak array	73.30	317	*i* P	P	05 53 45.6	-0.2
ABKAR	Akbulak array	73.30	317	P	P	05 53 44.7	-1.1
ABKAR	Akbulak array	73.30	317	P	P	05 53 46.1	+0.3
ABKAR				IAmb	IAmb	05 53 48.3	
	comp=Z,69nm,0.4s						
HRA	Herat	74.36	301	P	P	05 53 53.3	+0.8
TBI	Tubuai	75.90	121	*e*LR	LR	06 17 51.7	
	comp=Z,229nm,24.5s						
GEYT	Alibeck	76.84	306	P	P	05 54 07.2	+0.9
	comp=Z,22nm,1.0s,baz=112,slow=1.6,SNR=25						
GEYT				LR	LR	06 28 56.8	
	comp=Z,108nm,21.7s,baz=85,slow=36						
PGC	Sidney	76.86	43	P	P	05 54 08.0	+1.8
PGC				IAmb	IAmb	05 54 08.6	
	comp=Z,40nm,0.8s						
NLWA	Neilton Lookou	76.88	44	P	P	05 54 08.7	+2.3
NLWA				IAmb	IAmb	05 54 09.3	
	comp=Z,69nm,1.1s						
E03A	Lebam	77.28	45	P	P	05 54 10.6	+2.1
D03D	Eldon	77.36	44	P	P	05 54 11.0	+2.0
	baz=284,SNR=21						
LLLB	Lillooet	77.40	41	P	P	05 54 10.6	+1.4
LLLB				IAmb	IAmb	05 54 11.6	
	comp=Z,32nm,0.8s						
D04E	Lakebay	77.66	44	P	P	05 54 13.3	+2.7
	baz=284						
I02D	Swisshome	77.67	48	P	P	05 54 12.8	+2.1
	baz=284						
G03D	McMinnville, O	77.80	46	P	P	05 54 13.4	+2.0
	baz=284						
B05A	Bryant	77.83	43	P	P	05 54 13.2	+1.6
	baz=284,SNR=12						
J01E	Myrtle Point	77.84	48	P	P	05 54 13.6	+2.0
	baz=284						
E04D	Cinebar	77.94	45	P	P	05 54 14.3	+2.1
	baz=284,SNR=7.4						
YKA	Yellowknife Ar	78.09	28	P	P	05 54 12.8	+0.2
	comp=Z,53nm,0.7s,baz=290,slow=5.2,SNR=726						
YKA				PKPPKP	P'P'df	06 21 12.9	-1.9
	comp=Z,1.9nm,1.3s,baz=94,slow=2.1,SNR=5.1						
YKA				LR	LR	06 27 31.7	
	comp=Z,193nm,20.5s,baz=0.0,slow=34						
I03D	Drain, OR	78.12	48	P	P	05 54 15.1	+1.9
	baz=284						
K02D	Willamette Mer	78.14	49	P	P	05 54 15.1	+1.6
	baz=284						
B06A	Marblemount	78.17	43	P	P	05 54 14.8	+1.4
B06A				IAmb	IAmb	05 54 15.4	
	comp=Z,34nm,1.0s						
D05A	Enumclaw	78.17	44	P	P	05 54 15.7	+2.3
D05A				IAmb	IAmb	05 54 16.3	
	comp=Z,77nm,0.9s						
F04A	Amboy	78.20	45	P	P	05 54 15.2	+1.6
F04A				IAmb	IAmb	05 54 17.4	
	comp=Z,72nm,0.9s						
L02E	Cave Junction	78.32	49	P	P	05 54 16.3	+2.0
	baz=284						
H04D	Lebanon	78.34	47	P	P	05 54 16.2	+1.8
	baz=285						
LON	Longmire	78.40	45	P	P	05 54 15.6	+0.8
LON				pmax	pmax		
	comp=Z,31nm,0.9s						
LON	Longmire	78.40	45	P	P	05 54 15.6	+0.8
LON				IAmb	IAmb	05 54 19.4	
	comp=Z,31nm,0.9s						
PRGR	Permogore	78.41	331	*e*P	P	05 54 13.0	-1.4
PRGR				*e*S	S	06 03 53.1	0.0
PRGR				pmax	pmax		
	comp=Z,42nm,0.8s						
KHMM	Horse Mountain	78.55	51	P	P	05 54 18.3	+2.5
KHMM				IAmb	IAmb	05 54 18.7	
	comp=Z,38nm,0.7s						
HUMO	Hull Mountain	78.67	49	P	P	05 54 18.2	+1.9
HUMO				IAmb	IAmb	05 54 20.6	
	comp=Z,25nm,0.7s						
C06D	Leavenworth	78.70	43	P	P	05 54 17.9	+1.6
	baz=285,SNR=8.7						
I04A	Tendick Farm,	78.75	48	P	P	05 54 18.1	+1.3
	baz=285,SNR=6.9						
F05D	White Salmon	78.86	45	P	P	05 54 18.8	+1.6
	baz=285,SNR=6.1						
KCPM	Cahto Peak	78.96	52	P	P	05 54 20.2	+2.1
KCPM				IAmb	IAmb	05 54 20.6	
	comp=Z,66nm,0.7s						
LTY	Liberty	79.02	44	P	P	05 54 19.1	+0.9
LTY				IAmb	IAmb	05 54 20.1	

	comp=Z,46nm,0.8s						
M02C	Callahan	79.06	50	P	P	05 54 20.4	+1.9
	baz=285,SNR=5.6						
YBH	Yreka Blue Hor	79.07	50	P	P	05 54 20.4	+1.8
YBH				pmax	pmax		
	comp=Z,28nm,0.9s						
YBH	Yreka Blue Hor	79.07	50	P	P	05 54 20.4	+1.8
YBH				IAmb	IAmb	05 54 21.1	
	comp=Z,28nm,0.8s						
G05D	Wamic, OR	79.13	46	P	P	05 54 20.3	+1.5
	baz=285						
SPA0	Spitsbergen Ar	79.20	351	*e*P	P	05 54 19.4	+0.9
L04D	Klamath Falls	79.24	49	P	P	05 54 21.0	+1.5
	baz=285,SNR=7.4						
N02D	Trinity Center	79.27	50	P	P	05 54 21.8	+2.1
	baz=285						
KBS	Kingsbay	79.32	352	*e*P	P	05 54 20.3	+1.2
I05D	Terrebonne, OR	79.35	47	P	P	05 54 21.5	+1.5
	baz=286						
O02D	Mt. Diablo Mer	79.42	51	P	P	05 54 22.6	+2.0
	baz=285						
WDC	Whiskeytown Da	79.50	51	P	P	05 54 22.5	+1.7
WDC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WDC	Whiskeytown Da	79.50	51	P	P	05 54 22.5	+1.7
RES	Resolute Bay	79.50	14	P	P	05 54 20.5	+0.4
RES				pmax	pmax		
	comp=Z,39nm,0.9s						
RES	Resolute Bay	79.50	14	P	P	05 54 20.5	+0.4
RES				IAmb	IAmb	05 54 23.1	
	comp=Z,39nm,0.9s						
K04D	Chiloquin, OR	79.52	49	P	P	05 54 22.8	+1.7
	baz=286,SNR=9.5						
NOR	Nord	79.54	357	*i* P	P	05 54 20.0	-0.3
	comp=Z,7.9nm,1.0s						
NOR	Nord	79.54	357	*i* P	P	05 54 20.0	-0.3
NOR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
B08A	Colville Reser	79.59	42	P	P	05 54 22.0	+0.8
B08A				IAmb	IAmb	05 54 23.1	
	comp=Z,62nm,0.8s						
M04C	Macdoel	79.69	49	P	P	05 54 23.6	+1.7
	baz=286,SNR=16						
J05D	Fort Rock, OR	79.71	48	P	P	05 54 23.7	+1.6
	baz=286,SNR=38						
E07A	Sunnyside	79.75	44	P	P	05 54 23.4	+1.3
E07A				IAmb	IAmb	05 54 24.4	
	comp=Z,56nm,0.8s						
PINE	Pine Mountain	79.78	47	P	P	05 54 24.1	+1.6
GDXM	Geysers	79.78	53	P	P	05 54 24.9	+2.4
F07A	Phinny Hill Vi	79.89	45	P	P	05 54 24.6	+1.8
HAWA	Hanford	80.01	44	P	P	05 54 24.6	+1.2
HAWA				IAmb	IAmb	05 54 25.6	
	comp=Z,45nm,0.8s						
WBK	Wadi Bani Khal	80.02	291	P	P	05 54 25.9	+1.9
	SNR=5.5						
D08A	Wollman Farm,	80.22	44	P	P	05 54 25.6	+1.0
D08A				IAmb	IAmb	05 54 26.6	
	comp=Z,55nm,0.9s						
E08A	Dider Farm, El	80.30	44	P	P	05 54 26.2	+1.2
E08A				IAmb	IAmb	05 54 27.1	
	comp=Z,29nm,0.8s						
C09A	Chrisman Ranch	80.43	43	P	P	05 54 26.6	+1.0
C09A				IAmb	IAmb	05 54 27.5	
	comp=Z,46nm,0.8s						
LVZ	Lovozero	80.44	339⇑	*e*P	P	05 54 25.4	0.0
LVZ				pmax	pmax		
	comp=Z,57nm,2.1s						
BIDO	Bidbid	80.52	292	P	P	05 54 28.6	+2.0
	SNR=10						
ORV	Oroville	80.55	52	P	P	05 54 27.1	+0.6
ORV				pmax	pmax		
	comp=Z,33nm,0.9s						
ORV	Oroville	80.55	52	P	P	05 54 27.1	+0.6
ORV				IAmb	IAmb	05 54 28.2	
	comp=Z,33nm,0.8s						
I07A	Izee	80.69	47	P	P	05 54 28.6	+1.4
SMDO	Samad	80.71	291	P	P	05 54 29.6	+1.8
	SNR=6.7						
E09A	Wood Farm, Sta	80.89	44	P	P	05 54 29.3	+1.1
E09A				IAmb	IAmb	05 54 30.2	
	comp=Z,54nm,0.8s						
APA	Apatity	81.02	339⇓	*i*P	P	05 54 23.3	-5.0
APA				pmax	pmax		
	comp=Z,12nm,0.7s						
APA				MLR	MLR		
	comp=Z,1.0nm,25.0s						
NEW	Newport	81.03	42	P	P	05 54 29.7	+0.8
NEW				pmax	pmax		
	comp=Z,43nm,0.8s						
NEW	Newport	81.03	42	P	P	05 54 29.6	+0.8
NEW				IAmb	IAmb	05 54 30.7	
	comp=Z,42nm,0.8s						
NEW	Newport	81.03	42	P	P	05 54 30.0	+1.1
	baz=288						
AFDM	Forest Hills D	81.11	52	P	P	05 54 30.4	+0.9
AFDM				IAmb	IAmb	05 54 31.4	
	comp=Z,26nm,0.8s						
HOQ	Hoqain	81.22	292	P	P	05 54 32.2	+1.9
	SNR=15						
BEKR	Beckworth	81.30	51	P	P	05 54 31.4	+0.8
BEKR				IAmb	IAmb	05 54 32.9	
	comp=Z,69nm,0.8s						
MHTO	MHTO	81.37	289	P	P	05 54 33.1	+2.0
	SNR=9.1						
SAO	San Andreas Ge	81.38	54	P	P	05 54 31.7	+0.8
SAO				pmax	pmax		
	comp=Z,21nm,1.1s						
SAO	San Andreas Ge	81.38	54	P	P	05 54 31.7	+0.8
BANOM	Banah	81.44	294	P	P	05 54 33.4	+1.9
BANOM	Banah	81.44	294	P	P	05 54 33.3	+1.9
	SNR=7.6						
KLMR	Klimovskoe	81.45	332	*e*P	P	05 54 27.0	-3.7
KLMR				pmax	pmax		
	comp=Z,43nm,1.5s						
KLMR	Klimovskoe	81.45	332	*e*P	P	05 54 27.0	-3.7
KLMR				AMP		05 54 32.4	
	comp=Z,43nm,1.5s						
SHME	Shamm	81.54	295	P	P	05 54 33.7	+1.7
BSY	Bisya	81.55	291	P	P	05 54 33.9	+1.8
	SNR=7.4						
J08A	Circle Bar Ran	81.62	47	P	P	05 54 33.6	+1.5
J08A				IAmb	IAmb	05 54 34.2	
	comp=Z,39nm,0.8s						
F10A	Beach Ranch, E	81.66	44	P	P	05 54 33.4	+1.1
MSFE	Esma-Masafi	81.72	294	P	P	05 54 34.4	+1.4
SOHO	SOHO	81.74	293	P	P	05 54 35.0	+2.0
	SNR=23						
WVOR	Wild Horse Val	81.78	48	P	P	05 54 34.1	+1.0
WVOR				pmax	pmax		
	comp=Z,38nm,0.9s						
WVOR	Wild Horse Val	81.78	48	P	P	05 54 34.0	+1.0
WVOR				IAmb	IAmb	05 54 35.1	
	comp=Z,38nm,0.8s						
UOSS	Minazif	81.80	293	P	P	05 54 33.8	+0.5
UOSS	Minazif	81.80	293	P	P	05 54 33.9	+0.5
UOSS				IAmb	IAmb	05 54 36.1	
	comp=Z,47nm,0.9s						
CMB	Columbia Colle	81.82	53	P	P	05 54 34.1	+0.9
CMB				pmax	pmax		
	comp=Z,40nm,0.8s						
CMB	Columbia Colle	81.82	53	P	P	05 54 34.1	+0.9
CMB				IAmb	IAmb	05 54 35.2	
	comp=Z,40nm,0.8s						
HATD	Hatta, Dubai	81.89	293	P	P	05 54 34.9	+1.1
HATD	Hatta, Dubai	81.89	293	P	P	05 54 36.0	+2.1
	SNR=9.5						
BMO	Blue Mountains	81.96	45	P	P	05 54 34.7	+0.8
BMO				pmax	pmax		
	comp=Z,34nm,0.9s						
BMO	Blue Mountains	81.96	45	P	P	05 54 34.6	+0.8
BMO				IAmb	IAmb	05 54 35.8	
	comp=Z,34nm,0.8s						
ARQ	Araqi	81.98	292	P	P	05 54 36.2	+1.9
	SNR=12						
VCNR	Virginia City	81.99	51	P	P	05 54 35.5	+1.2
VCNR				IAmb	IAmb	05 54 36.9	
	comp=Z,38nm,0.8s						
ASHO	Ashiyiah	82.00	293	P	P	05 54 35.3	+0.9
ASHO	Ashiyiah	82.00	293	P	P	05 54 36.2	+1.8
	SNR=17						
PMPB	Monarch Peak	82.04	55	P	P	05 54 36.4	+1.9
DQM	DQM	82.06	288	P	P	05 54 36.6	+1.9
	SNR=6.2						
PAHR	Pah Rah Range	82.07	51	P	P	05 54 35.5	+0.9
PAHR				IAmb	IAmb	05 54 36.5	
	comp=Z,37nm,0.9s						
PNTR	Pine Nut	82.09	52	P	P	05 54 36.6	+1.7
NAZ	Nazwa, Dubai	82.26	294	P	P	05 54 36.4	+0.7
NAZ	Nazwa, Dubai	82.26	294	P	P	05 54 37.6	+1.9
	SNR=6.7						
HAMF	Hammerfest	82.38	343	*e*P	P	05 54 35.3	-0.1
WAKR	Walker	82.39	52	P	P	05 54 37.8	+1.4
WAKR				IAmb	IAmb	05 54 38.7	
	comp=Z,39nm,0.7s						
ARCES	ARCESS Array B	82.51	342	P	P	05 54 35.4	-0.8
	comp=Z,8.2nm,0.5s,baz=94,slow=11,SNR=33						
ARCES				LR	LR	06 33 07.7	
	comp=Z,197nm,21.5s,baz=344,slow=37						
ARCES	ARCESS Array B	82.51	342	P	P	05 54 35.9	-0.2
ARCES	ARCESS Array B	82.51	342	P	P	05 54 35.9	-0.2
ARE0	ARCESS Array S	82.51	342	*e*P	P	05 54 35.7	-0.4
ARE0	ARCESS Array S	82.51	342	P	P	05 54 37.0	+0.8
PAGB	Antelope Grade	82.61	55	P	P	05 54 38.8	+1.4
TULEG	Thule	82.78	8	P	P	05 54 38.1	+0.7
TULEG				IAmb	IAmb	05 54 40.6	
	comp=Z,42nm,0.8s						
WALA	Waterton Lakes	82.78	41	P	P	05 54 39.4	+1.2
MDPB	Devils Postpil	82.92	53	P	P	05 54 40.5	+1.2
SMMC	Simmler	82.93	55	P	P	05 54 40.5	+1.4
	baz=288,SNR=5.4						
OMMB	Old Mammoth Mi	82.99	53	P	P	05 54 41.0	+1.3
JTMT	Jette	83.00	42	P	P	05 54 39.9	+0.6
RYN	Ryan	83.03	52	P	P	05 54 40.8	+1.1
RYN				IAmb	IAmb	05 54 42.2	
	comp=Z,53nm,0.8s						
VOG	Valley Oaks Go	83.10	54	P	P	05 54 40.9	+1.1
	baz=288						
MLAC	Mammoth, Mammo	83.11	53	P	P	05 54 42.1	+1.9
	baz=288						
PKM	Mcpherson Peak	83.20	56	P	P	05 54 42.2	+1.6
	baz=288,SNR=9.4						
KVN	Kaiserville	83.22	51	P	P	05 54 41.5	+0.9
KVN				pmax	pmax		
	comp=Z,56nm,0.7s						
KVN	Kaiserville	83.22	51	P	P	05 54 41.5	+0.9
KVN				IAmb	IAmb	05 54 42.6	
	comp=Z,56nm,0.7s						
NVAR	Mina Array Bea	83.26	52	P	P	05 54 42.0	+1.1
	comp=Z,63nm,0.7s,baz=265,slow=6.0,SNR=390						
NVAR				pP	pP	05 55 27.4	-1.3
	comp=Z,20nm,0.9s,baz=272,slow=6.1,SNR=2.7						
NVAR				LR	LR	06 27 10.0	
	comp=Z,199nm,19.2s,baz=296,slow=32						
NVAR	Mina Array Bea	83.26	52	P	P	05 54 41.7	+0.8
NV11	Mina Array Sit	83.37	52	P	P	05 54 42.4	+1.0
NV11				IAmb	IAmb	05 54 43.4	
	comp=Z,45nm,0.8s						
MFID	Camas Ranch	83.43	46	P	P	05 54 42.3	+0.8
MFID				IAmb	IAmb	05 54 43.6	
	comp=Z,56nm,0.9s						
KTK1	Kautokeino	83.47	342	*e*P	P	05 54 41.3	+0.2
VES	Vestal, Richgr	83.47	55	P	P	05 54 42.4	+0.7
	baz=288,SNR=7.4						
MSO	Missoula	83.53	43	P	P	05 54 42.2	+0.2
AKT	Akhty	83.55	311	*e*P	P	05 54 41.6	-0.6
AKT				*e**PP	pP	05 55 30.7	+0.9
AKT				*e**SP	sP	05 55 52.7	+2.2
AKT				pmax	pmax		
	comp=Z,54nm,0.8s						
TIN	Tinemaha, Big	83.75	53	P	P	05 54 44.7	+1.5
	baz=288						
ARVC	Arvin	83.90	55	P	P	05 54 45.0	+1.1
	baz=288						
ISA	Isabella, Lake	84.00	55	P	P	05 54 44.7	+0.2
ISA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ISA	Isabella, Lake	84.00	55	P	P	05 54 44.7	+0.2
ISA	Isabella, Lake	84.00	55	P	P	05 54 45.0	+0.4
	baz=288,SNR=7.7						
VRH	Novokhopyorsk	84.02	322	*e*P	P	05 54 43.4	-0.8
VRH				*e**PP	pP	05 55 29.4	-2.4
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BLG	Laguna Peak, P	84.03	56	P	P	05 54 45.9	+1.2
	baz=288						
CWC	Cottonwood Cre	84.06	54	P	P	05 54 45.7	+0.8
	baz=289						
TRO	Tromso	84.29	344	*e*P	P	05 54 44.5	-0.7
GROC	Groznyy	84.32	314	*e*P	P	05 54 45.6	-0.3
GROC				*e**SP	sP	05 55 52.8	-1.5
GROC				*e*S	S	06 04 48.6	-6.0
GROC				pmax	pmax		
	comp=Z,61nm,1.1s						
GRAC	Grapevine Rang	84.42	53	P	P	05 54 47.8	+1.2
	baz=289,SNR=22						
MOS	Moscow	84.45	327	*e*P	P	05 54 44.2	-2.0
MOS				*e*		05 55 35.1	
DAC	Darwin (Calif)	84.48	54	P	P	05 54 47.8	+0.7
DAC				pmax	pmax		
	comp=Z,16nm,1.0s						
DAC	Darwin (Calif)	84.48	54	P	P	05 54 47.8	+0.7
EDW2	Edwards Air Fo	84.62	55	P	P	05 54 48.8	+1.1
	baz=289,SNR=6.1						
MPMC	Manual Prospec	84.63	54	P	P	05 54 48.7	+0.9
	baz=289,SNR=36						
LRMC	Laurel Mtn Rad	84.67	54	P	P	05 54 49.1	+1.1
	baz=289,SNR=10						
PASC	Pasadena Art C	84.70	56	P	P	05 54 48.6	+0.6
ELK	Elko	84.74	49	P	P	05 54 49.5	+1.1
ELK				pmax	pmax		
	comp=Z,46nm,0.9s						
ELK	Elko	84.74	49	P	P	05 54 49.5	+1.1
ELK				IAmb	IAmb	05 54 50.9	
	comp=Z,46nm,0.8s						
MZR	Muzera	84.75	292	*i* P	P	05 54 50.1	+1.7
	SNR=14						
MZR	Muzera	84.75	292	P	P	05 54 50.2	+1.7
	SNR=18						
CIS	Catalina Islan	84.77	57	P	P	05 54 48.1	-0.3
	baz=289						
MWC	Mount Wilson	84.79	56	P	P	05 54 49.4	+0.8
MWC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MWC	Mount Wilson	84.79	56	P	P	05 54 49.4	+0.8
LRM	Limekiln Ridge	84.86	43	P	P	05 54 49.4	+0.6
DLMT	Dillon	84.93	44	P	P	05 54 49.7	+0.7
MCMT	McKenzie Canyo	84.95	44	P	P	05 54 50.0	+0.7
FURC	Furnace Creek,	84.98	53	P	P	05 54 50.5	+1.3
	baz=289,SNR=20						
LPSR	Galich'ya Gora	85.06	324	*e*P	P	05 54 47.8	-1.5
LPSR				*e**PP	pP	05 55 33.1	-4.0
LPSR				pmax	pmax		
	comp=Z,20nm,0.7s						
BFSC	Mount Baldy Ra	85.09	56	P	P	05 54 50.9	+0.8
	baz=289						
OBN	Obninsk	85.26	327⇓	*e*P	P	05 54 51.1	+0.9
OBN				*e**PP	pwP	05 55 41.9	-1.0
OBN				*e*S	S	06 04 55.3	-8.0
OBN				pmax	pmax		
	comp=Z,20nm,0.4s						
TPNV	Topopah Spring	85.28	53	P	P	05 54 51.8	+0.8
TPNV				pmax	pmax		
	comp=Z,51nm,0.7s						
TPNV	Topopah Spring	85.28	53	P	P	05 54 51.8	+0.8
TPNV				IAmb	IAmb	05 54 52.9	
	comp=Z,51nm,0.7s						
TPNV	Topopah Spring	85.28	53	P	P	05 54 52.2	+1.1
	baz=290,SNR=48						
R11A	Troy Canyon, C	85.30	51	P	P	05 54 51.9	+0.8
R11A	Troy Canyon, C	85.30	51	P	P	05 54 52.0	+0.8
	baz=290,SNR=30						
GSC	Goldstone, Bar	85.41	54	P	P	05 54 52.4	+0.8
GSC				pmax	pmax		
	comp=Z,19nm,1.0s						
GSC	Goldstone, Bar	85.41	54	P	P	05 54 52.4	+0.8
GSC	Goldstone, Bar	85.41	54	P	P	05 54 52.4	+0.8
	baz=290,SNR=16						
VSR	Storozhevoye	85.49	323	*e*P	P	05 54 49.9	-1.6
VSR				*e**PP	pP	05 55 38.6	-0.8
VSR				pmax	pmax		
	comp=Z,20nm,0.6s						
SHOC	Shoshone, Teco	85.61	54	P	P	05 54 53.2	+0.7
	baz=290,SNR=8.8						
BBRC	Big Bear Solar	85.66	55	P	P	05 54 53.3	+0.2
	baz=290						
MURC	Murrieta	85.67	56	P	P	05 54 53.1	+0.3
	baz=289						
NCK	Nalchik	85.72	314⇑	*e*P	P	05 54 53.2	+0.4
NCK				pmax	pmax		
	comp=Z,15nm,0.3s						
EGMT	Eagleton	85.73	41	P	P	05 54 53.6	+0.7
EGMT				IAmb	IAmb	05 54 54.4	
	comp=Z,34nm,1.0s						
EGMT	Eagleton	85.73	41	P	P	05 54 53.6	+0.7
	baz=293						
ZEI	Tsey	85.77	314	*e*P	P	05 54 50.7	-2.7
ZEI				pmax	pmax		
	comp=Z,12nm,0.8s						
KULLO	Kullorsuaq	85.85	6	*i* P	P	05 54 53.8	+1.0
	comp=Z,21nm,1.0s						
KULLO	Kullorsuaq	85.85	6	*i* P	P	05 54 53.8	+1.0
KULLO				pmax	pmax		
	comp=Z,21nm,1.0s						
QLMT	Earthquake Lak	85.89	44	P	P	05 54 55.3	+1.4
HEC	Hector,Ludlow	85.93	55	P	P	05 54 55.2	+1.0
	baz=290,SNR=7.2						
109C	Camp Elliot, M	85.97	57	P	P	05 54 55.2	+0.9
109C	Camp Elliot, M	85.97	57	P	P	05 54 55.4	+1.1
	baz=290						
TUQ	Turquoise Moun	86.04	54	P	P	05 54 55.8	+1.1
	baz=290,SNR=10						
YHL	Hebgen Lake	86.05	44	P	P	05 54 56.4	+1.6
YHB	Horse Butte	86.08	44	P	P	05 54 56.7	+1.9
KBZ	Khabaz	86.10	315	P	P	05 54 54.4	-0.3
	comp=Z,17nm,0.9s,baz=142,slow=1.8,SNR=25						
HVU	Hansel Valley	86.11	47	P	P	05 54 56.6	+1.6
HVU				pmax	pmax		
	comp=Z,30nm,0.8s						
HVU	Hansel Valley	86.11	47	P	P	05 54 56.6	+1.6
KIV	Kislovodsk	86.16	315	P	P	05 54 56.4	+1.3
KIV				pmax	pmax		
	comp=Z,21nm,1.0s						
KIV	Kislovodsk	86.16	315	P	P	05 54 56.4	+1.3
PFO	Pinyon Flats O	86.24	56*d*	*i*P	P	05 54 56.0	+0.2
PFO				pmax	pmax		
	comp=Z,34nm,1.0s						
PFO	Pinyon Flats O	86.24	56	P	P	05 54 56.5	+0.8
PFO	Pinyon Flats O	86.24	56	P	P	05 54 56.5	+0.8
	baz=290,SNR=10						
BGU	Big Grassy Mou	86.24	48	P	P	05 54 56.4	+0.7
XPFO	Pion Flat	86.25	56	P	P	05 54 56.5	+0.7
SHPR	Sheep Range	86.25	53	P	P	05 54 57.2	+1.3
SHPR				IAmb	IAmb	05 54 58.1	
	comp=Z,25nm,0.8s						
YMR	Madison River	86.26	44	P	P	05 54 57.8	+2.0
YHH	Holmes Hill	86.29	44	P	P	05 54 57.8	+1.8
NEY	Neytrino	86.40	314⇓	*e*P	P	05 54 56.3	-0.1
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YNM	Yellowstone No	86.41	44	P	P	05 54 59.6	+3.1
STEI	Steigen	86.43	343	*e*P	P	05 54 55.9	+0.1
YNR	Norris Junctio	86.43	44	P	P	05 54 59.2	+2.6
GMRC	Granite Mounta	86.47	55	P	P	05 54 57.8	+0.9
	baz=290,SNR=14						
BELC	Belle Mtn. Jos	86.47	55	P	P	05 54 57.5	+0.6
	baz=290,SNR=12						
SPUT	South Promonto	86.51	48	P	P	05 54 58.0	+1.0
PSUT	Pine Spring	86.51	51	P	P	05 54 58.0	+0.9
MONP2	Monument Peak	86.52	57	P	P	05 54 58.1	+0.8
	baz=290						
YPP	Pitchstone Pla	86.52	44	P	P	05 54 59.5	+2.4
YUF	Upper Falls	86.54	44	P	P	05 54 59.4	+2.3
AKH	Akhalkalaki	86.56	313	P	P	05 54 58.1	+0.9
AKH				pmax	pmax		
	comp=Z,19nm,1.0s						
AKH	Akhalkalaki	86.56	313	P	P	05 54 58.1	+0.9
FXWY	Fox Creek	86.61	45	P	P	05 54 58.6	+1.1
H17A	Grant Village	86.62	44	P	P	05 55 00.2	+2.6
H17A	Grant Village	86.62	44	P	P	05 55 00.2	+2.6
	baz=293						
FLWY	Flagg Ranch	86.66	45	P	P	05 54 59.7	+2.0
FLWY				IAmb	IAmb	05 55 00.3	
	comp=Z,28nm,0.7s						
DUG	Dugway, Tooele	86.66	49	P	P	05 54 58.6	+0.9
DUG				pmax	pmax		
	comp=Z,38nm,0.8s						
DUG	Dugway, Tooele	86.66	49	P	P	05 54 58.6	+0.9
DUG				IAmb	IAmb	05 54 59.6	
	comp=Z,38nm,0.8s						
DUG	Dugway, Tooele	86.66	49	P	P	05 54 58.7	+1.0
	baz=292						
ABTO	Aybut	86.67	287	P	P	05 54 59.6	+1.6
	SNR=9.7						
GCMT	Greycliff	86.67	43	P	P	05 54 58.8	+1.2
LKWY	Lake	86.67	44	P	P	05 55 00.9	+3.1
LKWY				pmax	pmax		
	comp=Z,15nm,0.8s						
LKWY	Lake	86.67	44	P	P	05 55 00.8	+3.1
YNE	Yellowstone No	86.76	43	P	P	05 54 59.7	+1.5
YMP	Mirror Lake Pl	86.76	44	P	P	05 55 01.1	+2.8
REDW	Red Top Meadow	86.83	45	P	P	05 54 58.8	+0.2
IKP	In-Ko-Pah, Jac	86.84	57	P	P	05 54 59.5	+0.9
	baz=290						
SNOW	Snow King Moun	86.86	45	P	P	05 55 00.2	+1.4
FIA1	FINESS Array S	86.88	335	P	P	05 54 56.4	-1.7
FIA1				IAmb	IAmb	05 54 57.9	
	comp=Z,18nm,0.5s						
FINES	FINESS Array B	86.89	335	P	P	05 54 56.4	-1.7
	comp=Z,18nm,0.5s,baz=67,slow=4.8,SNR=95						
FINES				LR	LR	06 35 49.3	
	comp=Z,167nm,19.1s,baz=53,slow=37						
FINES	FINESS Array B	86.89	335	P	P	05 54 55.9	-2.2
AHID	Auburn Hatcher	86.90	46	P	P	05 55 00.0	+1.2
BC3	Big Chuckawall	87.02	56	P	P	05 55 00.5	+1.0
	baz=290,SNR=12						
HWUT	Hardware Ranch	87.02	47	P	P	05 54 59.7	+0.3
HWUT				IAmb	IAmb	05 55 01.7	
	comp=Z,45nm,1.0s						
IRM	Iron Mountain	87.08	55	P	P	05 55 00.7	+1.0
	baz=290,SNR=13						
RLMT	Red Lodge	87.19	43	P	P	05 54 59.0	-1.3
RLMT				IAmb	IAmb	05 55 03.6	
	comp=Z,22nm,0.8s						
FFC	Flin Flon	87.20	32	P	P	05 55 00.3	+0.5
FFC				pmax	pmax		
	comp=Z,69nm,1.0s						
FFC	Flin Flon	87.20	32	P	P	05 55 00.3	+0.5
FFC				IAmb	IAmb	05 55 01.8	
	comp=Z,69nm,0.9s						
CCUT	Cedar City	87.23	51	P	P	05 55 01.9	+1.3
CTU	Camp Tracy	87.23	48	P	P	05 55 01.2	+0.7
NEE2	Needles Airpor	87.28	54	P	P	05 55 01.9	+1.3
	baz=291						
NLU	North Lily Min	87.28	49	P	P	05 55 01.9	+1.2
TCUT	Toone Canyon	87.31	47	P	P	05 55 02.0	+1.0
SZCU	Shurtz Canyon	87.42	51	P	P	05 55 02.9	+1.4
JLU	Jordanelle	87.48	48	P	P	05 55 02.7	+0.9
LCMT	Little Creek M	87.51	52	P	P	05 55 03.0	+1.2
TCRU	Three Creeks R	87.51	50	P	P	05 55 03.5	+1.6
MPU	Maple Canyon	87.57	49	P	P	05 55 03.3	+1.1
Y12C	Blythe	87.71	55	P	P	05 55 03.9	+1.2
Y12C	Blythe	87.71	55	P	P	05 55 03.8	+1.2
	baz=291,SNR=11						
GLA	Glamis	87.72	56	P	P	05 55 04.1	+1.3
GLA				pmax	pmax		
	comp=Z,24nm,0.8s						
GLA	Glamis	87.72	56	P	P	05 55 04.1	+1.3
GLA				IAmb	IAmb	05 55 04.7	
	comp=Z,24nm,0.8s						
GLA	Glamis	87.72	56	P	P	05 55 04.1	+1.3
	baz=291,SNR=8.3						
W13A	Hualapai Mount	87.72	54	P	P	05 55 04.0	+1.1
W13A				IAmb	IAmb	05 55 04.9	
	comp=Z,23nm,0.8s						
MSU	Marysvale	87.75	50	P	P	05 55 04.3	+1.3
MSU	Marysvale	87.75	50	P	P	05 55 04.2	+1.3
PDMCI	Parker Dam,Lak	87.81	55	P	P	05 55 04.5	+1.4
	baz=291,SNR=16						
KNB	Kanab	87.83	52	P	P	05 55 04.9	+1.5
KNB				pmax	pmax		
	comp=Z,80nm,0.9s						
KNB	Kanab	87.83	52	P	P	05 55 04.9	+1.5
MOR8	Moi Rana	87.88	342	*e*P	P	05 55 00.8	-2.0
MTPU	Mount Pierson	87.92	51	P	P	05 55 05.5	+1.5
BW06	Boulder Array	87.94	45	P	P	05 55 04.2	+0.3
PD31	Pinedale Array	87.94	45	P	P	05 55 04.2	+0.3
PDAR	Pinedale Array	87.94	45	P	P	05 55 03.9	0.0
	comp=Z,2.0nm,0.4s,baz=183,slow=1.5,SNR=34						
PDAR				PP	PP	05 58 32.1	-0.6
	comp=Z,1.4nm,0.8s,baz=270,slow=3.0,SNR=4.6						
PDAR				LR	LR	06 29 19.9	
	comp=Z,141nm,19.9s,baz=316,slow=32						
PDAR	Pinedale Array	87.94	45	P	P	05 55 03.1	-0.7
PKCU	Pink Cliffs	88.05	51	P	P	05 55 06.8	+2.2

TMUT	Trail Mountain	88.15	49	P	P	05 55 06.2	+1.2
VSU	Vasula	88.28	333⇓	eP	P	05 55 05.6	+0.8
VSU				pmax	pmax		
	comp=Z,61nm,1.3s						
P17A	Butcher Ranch,	88.42	49	P	P	05 55 07.2	+1.1
U15A	North Rim	88.44	52	P	P	05 55 07.6	+1.2
U15A				IAmb	IAmb	05 55 09.2	
	comp=Z,42nm,1.0s						
LAO	LASA Array	88.47	41	P	P	05 55 07.1	+1.0
LAO				IAmb	IAmb	05 55 07.7	
	comp=Z,19nm,0.8s						
113A	Mohawk Valley,	88.65	56	P	P	05 55 08.3	+1.3
SRU	San Rafael Swe	88.71	49	P	P	05 55 08.5	+1.0
SRU				pmax	pmax		
	comp=Z,27nm,0.7s						
SRU	San Rafael Swe	88.71	49	P	P	05 55 08.5	+1.0
FCC	Fort Churchill	88.76	27	P	P	05 55 07.1	+0.1
FCC				pmax	pmax		
	comp=Z,65nm,1.1s						
FCC	Fort Churchill	88.76	27	P	P	05 55 07.1	+0.1
FCC				IAmb	IAmb	05 55 09.5	
	comp=Z,65nm,1.1s						
RDMU	Red Mountain	88.81	47	P	P	05 55 09.1	+1.1
Y14A	Wickenburg	88.82	55	P	P	05 55 08.9	+0.9
Y14A				IAmb	IAmb	05 55 10.0	
	comp=Z,46nm,0.7s						
DGMT	Dagmar	88.91	39	P	P	05 55 08.3	+0.2
DGMT	Dagmar	88.91	39	P	P	05 55 08.2	+0.2
	baz=297						
SUMG	Summit	88.96	1	i P	P	05 55 08.8	+0.6
	comp=Z,21nm,0.8s						
SUMG	Summit	88.96	1	i P	P	05 55 08.8	+0.6
SUMG				pmax	pmax		
	comp=Z,21nm,0.8s						
SUMG	Summit	88.96	1	P	P	05 55 09.0	+0.7
WUAZ	Wupatki	89.47	53	P	P	05 55 12.0	+0.9
WUAZ				IAmb	IAmb	05 55 14.1	
	comp=Z,53nm,0.9s						
WUAZ	Wupatki	89.47	53	P	P	05 55 12.6	+1.5
	baz=293,SNR=51						
214A	Organ Pipe Nat	89.70	56	P	P	05 55 13.2	+1.2
214A				IAmb	IAmb	05 55 14.4	
	comp=Z,32nm,0.9s						
214A	Organ Pipe Nat	89.70	56	P	P	05 55 13.6	+1.5
	baz=292						
NSS	Namsos	89.78	342	eP	P	05 55 11.2	-0.5
X16A	Lo Mia Camp, P	89.84	54	P	P	05 55 14.4	+1.5
O20A	White River Ci	89.91	47	P	P	05 55 13.9	+0.8
O20A	White River Ci	89.91	47	P	P	05 55 13.9	+0.8
	baz=294						
RWWY	Rawlins	89.97	46	P	P	05 55 14.3	+0.8
K22A	Casper	90.02	45	P	P	05 55 14.3	+0.7
K22A	Casper	90.02	45	P	P	05 55 14.2	+0.7
	baz=296						
IZAR	Zarasai	90.03	330	eP	P	05 55 13.8	+0.8
ISAL	Salakas	90.19	330	eP	P	05 55 13.7	-0.1
SLIT	Slitere, Latvi	90.69	333	eP	P	05 55 14.4	-1.7
W18A	Petrified Fore	90.86	52	P	P	05 55 19.5	+1.9
W18A				IAmb	IAmb	05 55 22.8	
	comp=Z,17nm,1.0s						
W18A	Petrified Fore	90.86	52	P	P	05 55 19.4	+1.9
	baz=294						
MVCO	Mesa Verde	90.93	50	P	P	05 55 18.7	+0.7
MVCO	Mesa Verde	90.93	50	P	P	05 55 18.9	+0.9
	baz=294,SNR=10						
X18A	Snowflake	90.93	53	P	P	05 55 19.2	+1.2
X18A				IAmb	IAmb	05 55 20.2	
	comp=Z,16nm,0.9s						
RSSD	Black Hills	91.00	42	P	P	05 55 18.4	+0.3
RSSD				pmax	pmax		
	comp=Z,10.0nm,0.6s						
RSSD	Black Hills	91.00	42	P	P	05 55 18.4	+0.3
RSSD	Black Hills	91.00	42	P	P	05 55 18.4	+0.3
	baz=297						
TUC	Tucson	91.16	55	P	P	05 55 20.3	+1.4
TUC				pmax	pmax		
	comp=Z,15nm,1.0s						
TUC	Tucson	91.16	55	P	P	05 55 20.3	+1.4
TUC	Tucson	91.16	55	P	P	05 55 20.6	+1.7
	baz=293						
N23A	Red Feather La	91.18	46	P	P	05 55 20.7	+1.7
N23A				IAmb	IAmb	05 55 21.5	
	comp=Z,42nm,1.1s						
N23A	Red Feather La	91.18	46	P	P	05 55 20.7	+1.7
	baz=296						
SMCO	Snowmass	91.20	48	P	P	05 55 20.2	+0.9
SMCO				IAmb	IAmb	05 55 21.2	
	comp=Z,18nm,0.9s						
PABE	Paberze	91.22	331	eP	P	05 55 18.8	+0.2
AKASG	Malin Array Be	91.28	325	P	P	05 55 17.2	-1.7
	comp=Z,1.5nm,0.5s,baz=52,slow=5.0,SNR=11						
AKASG				LR	LR	06 37 08.0	
	comp=Z,143nm,20.5s,baz=35,slow=36						
AKASG	Malin Array Be	91.28	325	i P	P	05 55 17.7	-1.2
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	Malin Array Be	91.28	325	P	P	05 55 17.2	-1.7
AKBB	Malin Array Si	91.28	325	P	P	05 55 18.6	-0.3
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKBB	Malin Array Si	91.28	325	P	P	05 55 18.6	-0.3
PHWY	Pilot Hill	91.33	45	P	P	05 55 21.4	+1.6
RAYN	Ar Rayn	91.50	295	P	P	05 55 19.9	-0.7
RAYN				pmax	pmax		
	comp=Z,19nm,1.1s						
RAYN	Ar Rayn	91.50	295	P	P	05 55 19.9	-0.7
RAYN				IAmb	IAmb	05 55 22.3	
	comp=Z,19nm,1.1s						
ISCO	Idaho Springs	91.88	47	P	P	05 55 23.7	+1.3
ISCO				pmax	pmax		
	comp=Z,14nm,1.2s						
ISCO	Idaho Springs	91.88	47	P	P	05 55 23.7	+1.3
ISCO	Idaho Springs	91.88	47	P	P	05 55 23.7	+1.3
	baz=296,SNR=14						
MDND	Maddock	91.90	38	P	P	05 55 22.2	+0.3
MDND				IAmb	IAmb	05 55 23.0	
	comp=Z,37nm,1.0s						
MDND	Maddock	91.90	38	P	P	05 55 22.5	+0.6
	baz=301						
S22A	4UR Ranch, Cre	91.92	49	P	P	05 55 23.6	+1.1
S22A				IAmb	IAmb	05 55 24.6	
	comp=Z,16nm,0.9s						
S22A	4UR Ranch, Cre	91.92	49	P	P	05 55 23.9	+1.3
	baz=295,SNR=24						
HSIG		92.30	58	P	P	05 55 25.4	+1.3
HSIG				IAmb	IAmb	05 55 30.6	
	comp=Z,17nm,1.0s						
SUW	Suwalki	92.48	330	P	P	05 55 23.3	-1.1
SUW				pmax	pmax		
	comp=Z,60nm,0.9s						
SUW	Suwalki	92.48	330	P	P	05 55 23.2	-1.1
NC204	NORSAR Array S	92.56	340	eP	P	05 55 24.3	-0.4
Q24A	Divide	92.58	47	P	P	05 55 27.9	+2.3
Q24A	Divide	92.58	47	P	P	05 55 27.6	+2.0
	baz=296						
NB2	NORSAR Subarra	92.58	340	P	P	05 55 23.2	-1.6
	comp=Z,5.2nm,0.8s,baz=46,slow=4.6						
NB2	NORSAR Subarra	92.58	340	P	P	05 55 23.2	-1.6
	baz=46,slow=4.6						
NOA	NORSAR Array B	92.58	340	P	P	05 55 23.6	-1.2
	comp=Z,1.9nm,0.7s,baz=36,slow=4.5,SNR=7.1						
NOA				PP	PP	05 59 08.8	+0.4
	comp=Z,3.7nm,0.8s,baz=38,slow=7.7,SNR=5.5						
NOA				LR	LR	06 39 54.0	
	comp=Z,166nm,21.3s,baz=45,slow=37						
319A	Douglas	92.70	56	P	P	05 55 27.9	+1.8
ULM	Lac du Bonnet	92.70	34	P	P	05 55 24.8	-0.8
	comp=Z,18nm,0.9s,baz=301,slow=4.9,SNR=46						
ULM				LR	LR	06 34 43.3	
	comp=Z,153nm,20.4s,baz=314,slow=34						
ULM	Lac du Bonnet	92.70	34	P	P	05 55 25.6	+0.1
ULM				pmax	pmax		
	comp=Z,21nm,1.0s						
ULM	Lac du Bonnet	92.70	34	P	P	05 55 25.6	+0.1
ULM				IAmb	IAmb	05 55 26.7	
	comp=Z,21nm,0.9s						
SDCO	Great Sand Dun	92.86	49	P	P	05 55 27.6	+0.7
ANMO	Albuquerque	93.38	52⇓	eP	P	05 55 30.1	+0.8
ANMO				pmax	pmax		
	comp=Z,14nm,1.1s						
ANMO	Albuquerque	93.38	52	P	P	05 55 30.5	+1.2
ANMO	Albuquerque	93.38	52	P	P	05 55 30.4	+1.1
	baz=295						
121A	Cookes Peak, D	93.39	54	P	P	05 55 31.3	+1.9
121A				IAmb	IAmb	05 55 32.6	
	comp=Z,16nm,1.1s						
121A	Cookes Peak, D	93.39	54	P	P	05 55 31.2	+1.9
	baz=294						
AGMN	Agassiz Nation	93.79	36	P	P	05 55 30.5	-0.1
AGMN				IAmb	IAmb	05 55 31.8	
	comp=Z,14nm,1.1s						
AGMN	Agassiz Nation	93.79	36	P	P	05 55 30.4	-0.2
	baz=304,SNR=5.7						
T25A	Trinidad	93.91	49	P	P	05 55 32.8	+1.1
T25A	Trinidad	93.91	49	P	P	05 55 32.9	+1.1
	baz=297,SNR=8.3						
BR131	Keskin Array S	94.07	314	P	P	05 55 31.5	-0.7
BR131				pmax	pmax		
	comp=Z,15nm,1.2s						
BR131	Keskin Array S	94.07	314	P	P	05 55 31.5	-0.7
BR131				IAmb	IAmb	05 55 33.3	
	comp=Z,15nm,1.1s						
BRTR	Keskin Array B	94.07	314	P	P	05 55 30.6	-1.7
	comp=Z,8.4nm,0.9s,baz=95,slow=3.3,SNR=30						
BRTR	Keskin Array B	94.07	314	i P	P	05 55 31.5	-0.7
BRTR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BRTR	Keskin Array B	94.07	314	P	P	05 55 29.3	-2.9
BUR08	Bucovina Ar. S	95.17	324	P	P	05 55 37.7	+0.7
BURAR	Bucovina Array	95.18	324	P	P	05 55 35.8	-1.3
KWP	Kalwaria Pacla	95.35	327	P	P	05 55 37.3	-0.4
KWP				pmax	pmax		
	comp=Z,14nm,1.1s						
KWP	Kalwaria Pacla	95.35	327	P	P	05 55 37.3	-0.4
KWP				IAmb	IAmb	05 55 42.2	
	comp=Z,14nm,1.1s						
MNTX	Cornudas Mount	95.59	54	P	P	05 55 40.4	+1.2
ECSD	EROS Data Cent	95.84	40	P	P	05 55 39.6	-0.4
ECSD	EROS Data Cent	95.84	40	P	P	05 55 39.7	-0.4
	baz=303,SNR=8.6						
EYMN	Ely	96.39	35	P	P	05 55 41.0	-1.4
EYMN	Ely	96.39	35	P	P	05 55 41.2	-1.2
	baz=307						
AMTX	Amarillo	96.91	50	P	P	05 55 46.2	+1.0
AMTX				IAmb	IAmb	05 55 46.7	
	comp=Z,10nm,1.1s						
E38A	The Farm, Brul	97.16	36	P	P	05 55 45.6	-0.3
SPMN	Marine on St.	97.26	37	P	P	05 55 46.5	0.0
SPMN	Marine on St.	97.26	37	P	P	05 55 46.0	-0.4
	baz=306						
TX31	Lajitas Ar. Si	97.96	56	P	Pdif	05 55 51.4	+1.3
TX32	Lajitas Array	97.96	56	P	Pdif	05 55 52.0	+1.9
TXAR	Lajitas Array	97.96	56	P	Pdif	05 55 50.1	+0.1
	comp=Z,0.5nm,0.5s,baz=274,slow=4.6,SNR=5.9						
TXAR				PP	PP	05 59 49.8	-1.3
	comp=Z,1.9nm,1.0s,baz=266,slow=3.8,SNR=4.1						
TXAR				PKKPbc	PKKPbc	06 12 23.8	+0.7
	comp=Z,1.4nm,1.0s,baz=123,slow=4.6,SNR=6.0						
TXAR	Lajitas Array	97.96	56	P	Pdif	05 55 50.9	+0.8
TXAR	Lajitas Array	97.96	56	P	Pdif	05 55 50.9	+0.9
VYHS	Vyhne	98.05	327	eP	P	05 55 49.2	-0.7
VYHS	Vyhne	98.05	327	ePDIFF	P	05 55 49.1	-0.8
KSU1	Kansas State U	98.31	44	P	P	05 55 51.1	-0.2
	baz=302						
CLL	Collm	98.93	332	ePdif	P	05 55 53.0	-0.7
	comp=Z,8.0nm,1.4s						
CLL				ePP	PP	05 59 56.0	-1.4
CLL				ePKiKP	PKiKP	06 00 21.0	-2.4
CLL				e		06 00 56.0	
CLL				ePS	PS	06 08 54.0	-4.2
CLL				ePPS	PPS	06 09 42.0	
CLL				eSS	SS	06 14 00.0	+3.0
CLL				esSS		06 15 06.0	
CLL				e		06 22 12.0	
CLL				LmH		06 38 00.0	
	comp=N,400nm,19.4s						
CLL				LmH		06 38 00.0	
	comp=E,300nm,21.6s						
CLL				LmV		06 44 00.0	
	comp=Z,200nm,18.1s						
CLL	Collm	98.93	332	eP	P	05 55 53.0	-0.7
CLL				e		05 59 56.0	
CLL				pmax	pmax		
	comp=Z,8.0nm,1.4s						
WMOK	Wichita Mounta	99.07	49	Pdiff	Pdif	05 55 55.1	+0.3
	baz=300						
ABTX	Abilene, Hawle	99.48	51	Pdiff	Pdif	05 55 57.7	+1.0
	baz=299						
JFWS	Jewell Farm	100.11	38	Pdiff	Pdif	05 55 59.5	+0.3
	baz=307						
KHC	Kasperske Hory	100.20	330	ePP	PP	06 00 08.5	+1.3
KHC	Kasperske Hory	100.20	330⇑	eP	Pdif	05 55 59.1	-0.4
GERES	GERESS Array B	100.34	330	P	Pdif	05 56 00.3	0.0
	comp=Z,0.8nm,0.8s,baz=36,slow=5.4,SNR=4.2						
GERES				PP	PP	06 00 09.6	+1.3
	comp=Z,0.5nm,0.5s,baz=72,slow=6.4,SNR=3.1						
SCHQ	Schefferville	101.76	18	P	Pdif	05 56 06.3	0.0
	comp=Z,4.2nm,0.9s,baz=348,slow=2.9,SNR=5.0						
SCHQ				PP	PP	06 00 20.9	+2.3
	comp=Z,4.1nm,0.9s,baz=355,slow=12,SNR=3.7						
MIAR	Mount Ida	102.82	47	Pdiff	Pdif	05 56 14.5	+3.0
	baz=304						
MAW	Mawson	104.33	203	PP	PP	06 00 39.4	+1.1
	comp=Z,16nm,1.1s,baz=77,slow=8.9,SNR=6.4						
QSPA	South Pole Qui	108.46	180	PP	PP	06 01 04.0	-4.7
	comp=Z,16nm,1.0s,baz=343,slow=4.2,SNR=7.3						
ESDC	Sonseca Array	115.39	334	PP	PP	06 01 52.6	-4.9
	comp=Z,1.2nm,0.7s,baz=21,slow=5.6,SNR=4.4						
ESDC				PKKPbc	PKKPab	06 11 35.8	-1.4
	comp=Z,4.0nm,1.0s,baz=213,slow=3.9,SNR=14						
LSZ	Lusaka	120.28	263	PKIKP	PKiKP	06 01 04.8	+0.2
LSZ	Lusaka	120.28	263		PKiKP	06 01 04.8	+0.2
JTS	Las Juntas de	122.46	64	PKP	PKPdf	06 01 08.5	-0.2
	comp=Z,4.8nm,0.6s,baz=48,slow=18,SNR=3.6						
SNAA	Sanae	123.85	192	PKPdf	PKPdf	06 01 09.1	-0.6
SNAA	Sanae	123.85	192	PKP	PKPdf	06 01 09.2	-0.6
	comp=Z,3.3nm,0.8s,baz=186,slow=3.5,SNR=14						
SNAA				PP	PP	06 02 52.8	-2.8
	comp=Z,6.0nm,1.0s,baz=153,slow=5.7,SNR=4.0						
SNAA	Sanae	123.85	192		PKPdf	06 01 09.0	-0.6
LBTB	Lobatse	124.30	252	PKIKP	PKiKP	06 01 13.6	+1.3
LBTB	Lobatse	124.30	252		PKiKP	06 01 13.6	+1.3
VNA2	Neumayer--Watz	125.30	191	PKPdf	PKPdf	06 01 12.3	-0.1
VNA3	Neumayer Olymp	125.40	190	PKPdf	PKPdf	06 01 12.3	-0.3
TORD	Torodi Ar. Bea	132.40	309	PKP	PKiKP	06 01 28.6	-0.1
	comp=Z,1.9nm,0.7s,baz=21,slow=1.9,SNR=11						
TORD				SKPbc	SKPbc	06 04 33.4	-2.3
	comp=Z,7.3nm,0.8s,baz=39,slow=3.2,SNR=11						
ROSC	El Rosal	134.28	63	PKP	PKPdf	06 01 32.0	+0.4
	comp=Z,6.8nm,0.5s,baz=139,slow=13,SNR=4.9						
FLOC	Florencia	134.75	68		PKPdf	06 01 32.6	+0.5
SDV	Santo Domingo	135.00	56	PKhKP	PKPpre	06 01 22.9	
	comp=Z,3.6nm,0.6s,baz=331,slow=2.3,SNR=3.8						
SDV				PKP	PKPdf	06 01 32.7	0.0
	comp=Z,13nm,0.9s,baz=223,slow=1.9,SNR=6.6						
SDV				SKPbc	SKPbc	06 04 43.5	-1.0
	comp=Z,17nm,0.8s,baz=302,slow=2.9,SNR=14						
DBIC	Dimbokro	141.49	308	PKhKP	PKPpre	06 01 38.3	
	comp=Z,2.2nm,0.4s,baz=32,slow=3.5,SNR=11						
DBIC				SKPbc	SKPbc	06 05 00.2	-2.4
	comp=Z,9.2nm,0.9s,baz=20,slow=3.3,SNR=4.6						
KIC	Kosan Boka	141.61	308	ePKIKP	PKPdf	06 01 39.0	-5.6
	comp=Z,45nm,1.4s						
TIC	Toumodi	141.63	308	ePKIKP	PKPdf	06 01 39.1	-5.6
LIC	Lamto	141.91	308	ePKIKP	PKPdf	06 01 39.2	-6.0
	comp=Z,57nm,1.6s						
PLCA	Paso Flores	142.05	133	PKhKP	PKPpre	06 01 40.4	
	comp=Z,11nm,1.0s,baz=264,slow=3.8,SNR=13						
PLCA				SKPbc	SKPbc	06 05 03.2	-0.2
	comp=Z,4.6nm,0.8s,baz=235,slow=8.0,SNR=3.8						
ROC1	El Roble	144.29	121		PKPbc	06 01 48.5	+0.5
HOPE	Hope Point	144.39	178	PKIKP	PKPab	06 01 46.8	-0.1
HOPE	Hope Point	144.39	178		PKPab	06 01 46.8	-0.1
PEL	Peldehue	144.52	121	PKIKP	PKPbc	06 01 48.8	+0.4
PEL	Peldehue	144.52	121		PKPbc	06 01 48.8	+0.4
SACV	Santiago Islan	144.94	342		PKPdf	06 01 51.3	+0.8
GO04	Tololo Observa	145.08	116		PKPbc	06 01 50.5	0.0
GO03	Copiap	145.98	112		PKPdf	06 01 51.5	-0.4
GO03				PKPbc	PKPab	06 01 54.1	+0.2
PB04	IPOC Station P	146.38	102		PKPab	06 01 55.8	0.0
PB11	IPOC Station P	146.74	98		PKPdf	06 01 54.4	+0.8
MNMC	Minye Minye	146.75	97		PKPdf	06 01 54.1	+0.4
GO02	Mina Guanaco	146.80	108		PKPdf	06 01 52.0	-1.7
PB01	IPOC Station P	146.97	100		PKPdf	06 01 52.8	-1.0
GO01	Chusmiza	147.17	98		PKPdf	06 01 54.4	-0.3
GO01				PKPab	PKPab	06 01 59.3	0.0
LVC	Limon Verde	147.53	103	PKPbc	PKPbc	06 01 58.7	+0.8
	comp=Z,45nm,0.8s,baz=264,slow=2.9,SNR=7.3						
LVC	Limon Verde	147.53	103		PKPdf	06 01 54.3	-0.8
LPAZ	La Paz	147.78	91	PKP	PKPdf	06 01 56.9	+1.0
	comp=Z,66nm,1.0s,baz=300,slow=1.6,SNR=30						
LPAZ				PKPbc	PKiKP	06 02 00.3	-0.6
	comp=Z,50nm,0.8s,baz=29,slow=9.1,SNR=63						
PTGA	Pitinga	149.25	58		PKPdf	06 01 56.9	-0.8
PTGA				PKPbc	PKPbc	06 02 02.5	+0.3
SAML	Samuel	150.49	75	PKIKP	PKPdf	06 01 58.0	-1.6
SAML	Samuel	150.49	75		PKPdf	06 01 58.0	-1.6
SAML				PKPbc	PKiKP	06 02 05.7	-0.1
SIV	San Ignacio	154.43	88	PKP	PKPdf	06 02 05.0	-0.3
	comp=Z,7.6nm,1.1s,baz=198,slow=0.4,SNR=20						
SIV				PKPab	PKPab	06 02 29.0	0.0
	comp=Z,4.4nm,0.8s,baz=297,slow=6.0,SNR=6.3						
CPUP	Villa Florida	157.52	114	PKP	PKPdf	06 02 08.9	-0.1
	comp=Z,4.5nm,1.1s,baz=214,slow=4.2,SNR=4.5						
CPUP				PKPab	PKPab	06 02 42.1	+0.2
	comp=Z,23nm,1.1s,baz=263,slow=5.4,SNR=12						
CPUP	Villa Florida	157.52	114	PKIKP	PKPdf	06 02 08.6	-0.5
CPUP						06 02 42.2	
CPUP	Villa Florida	157.52	114		PKPdf	06 02 08.6	-0.5
CPUP					PKPab	06 02 42.2	+0.2
BDFB	Brasilia	166.67	79	PKP	PKPdf	06 02 19.1	+0.4
	comp=Z,7.2nm,1.1s,baz=93,slow=6.0,SNR=5.6						
BDFB				PKPab	PKPab	06 03 22.3	-0.2
	comp=Z,4.0nm,0.8s,baz=243,slow=2.3,SNR=3.7						
BDFB	Brasilia	166.67	79	PKIKP	PKPdf	06 02 17.4	-1.3
BDFB	Brasilia	166.67	79		PKPdf	06 02 17.4	-1.3

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*JMA **06** 05:53:13.1±0.1, 36°.62N×140°.98E, h47^{km}±1^{km}, M4.0*
JMA Felt II J1.
*IDC **06** 05:53:14.3±0.9, 36°.43N×141°.09E, h54^{km}±7^{km}, mb3.6/7, mb1 3.9/12, mb1mx3.6/63, mbtmp4.0/12, Error ellipse: s-maj=15.5km s-min=10.9km az=4.0*
*NEIC **06** 05:53:14.3±1.7, 36°.42N±0°.06×141°.09E±0°.02, h46^{km}±11^{km}, mb4.5/7, Error ellipse: s-maj=9.0km s-min=2.7km az=172.0*
ISC 06 05:53:13.3±0.8**, 36°.52N**±0°.04×**141°.21E**±0°.06**, h46**^{km}±7^{km}**, n41,** σ2^{s}.**74**/60**, mb4.3**/11**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.53	281	P	Pn	05 53 22.3	-2.3
JHO				S	Sn	05 53 28.6	-4.1
JHYU	Hitachinakayam	0.53	251	P	Pn	05 53 23.3	-1.4
JHYU				S	Sn	05 53 30.3	-2.5
ONAJ	Iwakimizuishiy	0.67	331	P	Pn	05 53 24.0	-2.6
ONAJ				S	Sn	05 53 31.5	-4.7
JFFD	Fukushimafurud	0.78	318	P	Pn	05 53 25.2	-2.7
JFFD				S	Sn	05 53 33.4	-5.2
JYT	Yasato	0.87	251	P	Pn	05 53 27.1	-2.1
JYT				S	Sn	05 53 36.7	-4.0
JFK	Kawauchi	0.89	343	P	Pn	05 53 27.0	-2.5
JFK				S	Sn	05 53 36.8	-4.6
JFT	Otama	1.22	325	P	Pn	05 53 32.1	-1.9
JFT				S	Sn	05 53 45.7	-3.7
JMM	Marumori	1.39	346	P	Pn	05 53 34.2	-2.1
JMM				S	Sn	05 53 49.6	-3.8
JAG	Ashikaga	1.42	267	P	Pn	05 53 34.3	-2.4
JAG				S	Sn	05 53 49.8	-4.4
JFY	Yanaizu	1.50	307	P	Pn	05 53 35.2	-2.6
JKT	Katashina	1.60	280	P	Pn	05 53 37.3	-1.9
JKT				S	Sn	05 53 54.4	-4.3
MJAR	Matsushiro Arr	2.42	272	P	Pn	05 53 49.2	-1.2
	6.1nm,0.3s,baz=115,slow=10,SNR=89						
MJAR				S	Sn	05 54 16.5	-2.2
	8.4nm,0.3s,baz=92,slow=27,SNR=12						
MJAR	Matsushiro Arr	2.42	272		Pn	05 53 48.7	-1.7
MJAR					Sn	05 54 18.1	-0.6
MAJO	Matsushiro	2.42	272		Pn	05 53 49.9	-0.5
MAJO				Sn	Sn	05 54 17.2	-1.6
MAT	Matsushiro	2.42	272	P	Pn	05 53 49.4	-1.0
MAT				S	Sn	05 54 16.6	-2.2
MJB9	Matsu-Tunnel	2.42	272		Pn	05 53 49.7	-0.7
MJB9				Sn	Sn	05 54 17.5	-1.4
JHJ	Hachijo jima 2	3.59	200	P	Pn	05 54 06.3	-0.1
	29nm,0.3s,baz=134,slow=22,SNR=16						
JHJ				S	Sn	05 54 49.1	+1.6
	68nm,0.3s,baz=250,slow=23,SNR=8.8						
INU	Inuyama	3.60	252		Pn	05 54 08.3	+1.8
INU				Sn	Sn	05 54 48.3	+0.5
ASAJ	Asahikawa	7.67	8	S	Sn	05 56 33.4	+5.6
	1.3nm,0.3s,baz=230,slow=29,SNR=4.2						
JKA	Kamikawa-asahi	7.67	8		Sn	05 56 33.4	+5.6
JCJ	Chichijima	9.43	175	P	Pn	05 55 26.2	-0.4
	6.5nm,0.3s,baz=329,slow=19,SNR=5.2						
JCJ				S	Sn	05 57 03.4	-7.8
	5.9nm,0.3s,baz=260,slow=17,SNR=2.8						
USRK	Ussuriysk Ar.	10.41	320	P	Pn	05 55 40.9	+1.1
	baz=145,slow=12,SNR=7.6						
USRK	Ussuriysk Ar.	10.41	320		Pn	05 55 40.8	+1.0
KSRS	Korea Array	10.67	279	P	Pn	05 55 45.6	+2.1
	0.3nm,0.3s,baz=94,slow=14,SNR=3.4						
ULN	Ulaanbaatar	27.51	305	P	P	05 58 56.2	+0.6
SONM	Songino Array	27.94	305	P	P	05 59 00.2	+0.8
	2.0nm,0.7s,baz=109,slow=9.0,SNR=7.8						
SONM				pP	pP	05 59 13.9	+2.5
	1.5nm,0.7s,baz=105,slow=8.7,SNR=5.2						
SONM	Songino Array	27.94	305	P	P	05 59 00.6	+1.2
H11N2	WAKE ISLAND Hy	28.03	120	T	T	06 29 02.0	
	baz=313,slow=75,SNR=81						
H11N1	WAKE ISLAND Hy	28.04	120	T	T	06 29 01.9	
	baz=313,slow=75,SNR=76						
H11N3	WAKE ISLAND Hy	28.05	120	T	T	06 29 03.4	
	baz=313,slow=75,SNR=79						
MKAR	Makanchi Array	44.26	303	P	P	06 01 18.6	+0.4
	0.6nm,0.7s,baz=88,slow=10,SNR=2.7						
MKAR				pP	pP	06 01 32.9	+2.2
	1.1nm,0.8s,baz=83,slow=12,SNR=3.3						
KURK	Kurchatov	46.12	308	P	P	06 01 31.8	-1.1
KURBB	Kurchatov Arra	46.19	308	P	P	06 01 32.8	-0.7
	1.1nm,0.5s,baz=81,slow=7.5,SNR=5.1						
KURBB				pP	pP	06 01 48.5	+2.5
	4.7nm,0.8s,baz=82,slow=7.9,SNR=7.4						
ILAR	Eielson Array	50.02	32	P	P	06 02 01.8	-1.0
	0.6nm,0.9s,baz=269,slow=8.6,SNR=3.1						
ILAR				pP	pP	06 02 17.1	+1.8
	1.4nm,0.7s,baz=267,slow=6.2,SNR=7.1						
FITZ	Fitzroy Crossi	56.28	198	P	P	06 02 50.5	+1.3
FITZ				IAmb	IAmb	06 03 00.5	
	comp=Z,8.4nm,1.4s						
WB0	Warramunga Arr	56.35	188	P	P	06 02 50.1	+0.4
WB0				IAmb	IAmb	06 02 56.1	
	comp=Z,3.3nm,1.0s						
WR0	Warramunga Arr	56.52	188	P	P	06 02 51.4	+0.4
WR0				IAmb	IAmb	06 03 00.8	
	comp=Z,5.8nm,1.1s						
WB2	Warramunga Arr	56.52	188	P	P	06 02 51.0	0.0
WB2				IAmb	IAmb	06 03 03.6	
	comp=Z,6.8nm,1.4s						
WRA	Warramunga Arr	56.53	188	P	P	06 02 50.1	-0.9
	comp=Z,1.7nm,0.6s,baz=1.1,slow=7.4,SNR=13						
AKTO	Aktyubinsk	58.90	312	P	P	06 03 09.1	+1.6
	comp=Z,0.6nm,0.4s,baz=7.1,slow=8.1,SNR=3.6						
ASAR	Alice Springs	60.25	188	P	P	06 03 16.4	-0.5
	comp=Z,1.2nm,0.8s,baz=10,slow=6.4,SNR=7.8						

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*ECX **06** 05:56:38.5±0.4, 28°.20N×112°.37W, h5^{km}±4^{km}, MD3.0, ML3.0*
*MEX **06** 05:56:41.4±0.5, 28°.06N×112°.31W, h7^{km}±5^{km}, MD3.8*
ISC 06 05:56:39.9±1.5**, 28°.10N**±0°.07×**112°.2W**±0°.1**, h10**^{km}**, n27,** σ1^{s}.**83**/24**, 1C, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRIG	Santa Rosalia	0.78	181⇑	eP	Pg	05 56 54.0	-0.9
SRIG				eS	Sb	05 57 05.8	-0.3
SRIG	Santa Rosalia	0.78	181	eP	Pg	05 56 54.0	-0.9
SRIG				i S	Sg	05 57 04.4	-0.6
GUYB	Guaymas	1.22	99	eP	Pb	05 57 02.0	-0.9
GUYB				eS	Sn	05 57 20.0	+0.6
GUYB	Guaymas	1.22	99	eP	Pb	05 57 02.1	-0.9
GUYB				i S	Sb	05 57 18.3	-0.5
HSIG		1.45	51	eP	Pn	05 57 04.3	-1.9
HSIG				eS	Sn	05 57 24.3	-1.0
HSIG		1.45	51	eP	Pn	05 57 05.8	-0.4
HSIG				eS	Sn	05 57 24.3	-1.0
NZIG	Nacozari, Sono	3.25	45	i P	Pn	05 57 30.7	-0.4
NZIG				i S	Sn	05 58 09.7	-0.3
CGIG		4.35	58	i P	Pn	05 57 47.6	+1.4
CGIG				i S	Sn	05 58 37.6	+0.6
SOLC	Bahia Solano	39.51	117	eP	P	06 04 17.7	+6.7

SOLC	**Bahia Solano**	**39.51**	**117**	*e*P	P	06 04 17.7	+6.7
UREC	**San Jos de Ur**	**40.12**	**113**	*e*P	P	06 04 31.7	+16
CODC	**Agustn Codazz**	**40.65**	**109**	*e*P	P	06 04 32.4	+12
SMLC	**San Martn de**	**40.73**	**111**	*e*P	P	06 04 35.9	+15
CBOC	**Ciudad Bolivar**	**40.83**	**116**	*e*P	P	06 04 35.9	+14
PTBC	**PUERTO BERRIO,**	**41.68**	**114**	*e*P	P	06 04 37.3	+8.3
NORC	**Norcasia**	**41.92**	**115**	*e*P	P	06 04 37.3	+6.2
OTAV	**Otavalo**	**42.59**	**125**	*e*P	**P**	**06 04 37.3**	**+0.4**
ORTC	**Ortega, Tolima**	**42.62**	**118**	*e*P	**P**	**06 04 38.7**	**+1.9**
PAMC	**Pamplona, Colo**	**42.66**	**111**	*e*P	**P**	**06 04 42.2**	**+4.6**
BARC	**Barichara**	**42.69**	**113**	*e*P	**P**	**06 04 41.5**	**+4.0**
CRUC	**La Cruz**	**42.80**	**122**	*e*P	**P**	**06 04 40.8**	**+2.2**
RUSC	**La Rusia**	**43.17**	**113**	*e*P	**P**	**06 04 43.6**	**+1.9**
SJG	**San Juan**	**43.31**	**93**	*e*P	P	06 04 31.7	-11
CHIC	**Chingaza**	**43.38**	**115**	*e*P	**P**	**06 04 45.0**	**+1.6**
SDV	**Santo Domingo**	**43.55**	**108**	*e*P	**P**	**06 04 42.2**	**-2.3**
FLOC	**Florencia**	**43.78**	**121**	*e*P	P	06 04 39.4	-6.7
MACC	**Macarena, Meta**	**44.81**	**118**	*e*P	P	06 04 45.0	-9.3

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*JMA **06** 06:01:47.8, 24.°00N×122.°25E, h28^{km}±2^{km}, M2.7*
*TAP **06** 06:01:48.1, 24.°15N×122.°24E, h16^{km}±1^{km}, ML3.1, C*
ISC 06 06:01:47.5±0.8**, 24.°07N**±0.°03×**122.°24E**±0.°02**, h17^{km}, n57,** σ**0^{s}43**/84**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1** baz=345	**0.49**	**347**	P	**Pg**	**06 01 57.3**	**+0.1**
EOS1	baz=345			S	**Sg**	**06 02 04.1**	**+0.2**
ENA	**Nanau** baz=301	**0.58**	**308**	*e*P	**Pg**	**06 01 58.9**	**-0.2**
ENA	baz=301			*e*S	**Sb**	**06 02 08.1**	**+1.0**
TWD	**Chiawan** baz=263	**0.59**	**271**	*e*P	**Pn**	**06 02 00.8**	**-0.4**
NACB	**Ninganchiao** baz=272	**0.60**	**280**	*i* P	**Pb**	**06 02 00.2**	**+0.6**
NACB	baz=272			*e*S	**Sn**	**06 02 09.9**	**-0.7**
TWC	**Suao** baz=322	**0.64**	**326**	*i* P	**Pg**	**06 01 59.5**	**-0.7**
TWC	baz=322			*i* S	**Sg**	**06 02 08.1**	**-0.7**
ETLH	**Xiulin Townshi** baz=275	**0.71**	**281**	*e*P	**Pb**	**06 02 01.8**	**+0.3**
JYNG	**Yonagunijimaku**	**0.74**	**59**	P	**Pg**	**06 02 02.0**	**0.0**
JYNG				*e*S	**Sg**	**06 02 12.6**	**+0.7**
YOJ	**Yonaguni jima** baz=65	**0.80**	**61**	P	**Pg**	**06 02 03.4**	**+0.3**
YOJ	baz=65			*e*S	**Sg**	**06 02 13.7**	**0.0**
YOJ	**Yonaguni jima**	**0.80**	**61**	P	**Pg**	**06 02 03.1**	**0.0**
YOJ				S	**Sg**	**06 02 14.5**	**+0.8**
TWE	**Neicheng** baz=318	**0.83**	**321**	*e*P	**Pg**	**06 02 04.0**	**+0.2**
ENTT	**Nioudou** baz=308	**0.84**	**313**	P	**Pg**	**06 02 03.9**	**0.0**
ENTT	baz=308			*e*S	**Sg**	**06 02 14.9**	**0.0**
NDT	**Datong Townshi** baz=304	**0.85**	**308**	*e*P	**Pn**	**06 02 04.4**	**-0.3**
NDT	baz=304			*e*S	**Sg**	**06 02 15.9**	**+0.5**
NNSB	**Datong** baz=289	**0.86**	**294**	*e*P	**Pg**	**06 02 04.4**	**+0.1**
NNSH	**Datong** baz=289	**0.86**	**294**	*e*P	**Pg**	**06 02 04.3**	**-0.1**
NTC	**Toucheng** baz=331	**0.86**	**334**	*e*P	**Pb**	**06 02 04.1**	**0.0**
NTC	baz=331			*i* S	**Sb**	**06 02 15.3**	**0.0**
NNS	**Nan Shan** baz=290	**0.88**	**295**	*e*P	**Pg**	**06 02 04.8**	**+0.2**
SLBB	**Yuanshan** baz=317	**0.88**	**321**	*e*P	**Pb**	**06 02 04.1**	**-0.2**
WHF	**Hehuan Shan** baz=269	**0.90**	**275**	*e*P	**Pg**	**06 02 05.1**	**0.0**
HGSD	**Ruisui** baz=229	**0.95**	**233**	*e*P	**Pg**	**06 02 05.9**	**-0.1**
TWB1	**Santiao Chiao** baz=345	**0.96**	**346**	*e*P	**Pb**	**06 02 05.2**	**-0.5**
TIPB	**Shuangxi** baz=335	**0.97**	**337**	*e*P	**Pb**	**06 02 05.7**	**-0.2**
TIPB	baz=335			*e*S	**Sb**	**06 02 17.7**	**-0.8**
NWLT	**Wulai** baz=313	**0.97**	**316**	*e*P	**Pg**	**06 02 06.2**	**-0.3**
CHGB	**Renai** baz=265	**0.98**	**269**	*e*P	**Pb**	**06 02 06.0**	**-0.2**
OWD	**Renai** baz=259	**0.98**	**263**	*e*P	**Pb**	**06 02 06.3**	**+0.1**
YHNB	**Yeheng** baz=303	**0.99**	**307**	P	**Pb**	**06 02 06.4**	**+0.1**
YHNB	baz=303			*e*S	**Sg**	**06 02 20.0**	**+0.2**
NSK	**Sanguang** baz=303	**1.01**	**307**	P	**Pb**	**06 02 06.6**	**0.0**
NSK	baz=303			*e*S	**Sg**	**06 02 20.4**	**+0.1**
TDCB	**Techi** baz=276	**1.01**	**280**	*e*P	**Pb**	**06 02 06.5**	**-0.1**
EHY	**Hungye** baz=232	**1.02**	**236**	*e*P	**Pb**	**06 02 05.9**	**-0.8**
VWDT	**VWDT** baz=248	**1.06**	**253**	*e*P	**Pb**	**06 02 07.3**	**-0.1**
NWF	**Wu-fen Shan** baz=335	**1.08**	**337**	*e*P	**Pb**	**06 02 07.5**	**-0.3**
NWF	baz=335			S	**Sb**	**06 02 21.9**	**+0.2**
WFSB	**Wu-fen Shan** baz=335	**1.08**	**337**	*e*P	**Pb**	**06 02 07.3**	**-0.5**
WFSB	baz=335			*e*S	**Sb**	**06 02 21.3**	**-0.2**
YULB	**Yu-li** baz=229	**1.10**	**232**	*e*P	**Pb**	**06 02 07.1**	**-1.0**
TWF1	**Yuli** baz=227	**1.13**	**231**	*e*P	**Pn**	**06 02 07.6**	**-0.9**
TATO	**Taipei** baz=320	**1.13**	**323**	*e*P	**Pb**	**06 02 08.9**	**+0.3**
TATO	baz=320			*e*S	**Sb**	**06 02 23.1**	**0.0**
WHP	**Taichung City** baz=276	**1.20**	**280**	*e*P	**Pg**	**06 02 10.7**	**-0.1**
WHP	baz=276			*e*S	**Sg**	**06 02 27.0**	**+0.4**
SSLB	**Suanglung** baz=253	**1.21**	**257**	*e*P	**Pn**	**06 02 09.5**	**-0.3**
YM01	**YM01** baz=328	**1.23**	**330**	*e*P	**Pg**	**06 02 11.6**	**+0.3**
SMLT	**Sun Moon Lake** baz=257	**1.24**	**262**	*e*P	**Pb**	**06 02 10.5**	**-0.1**
SMLT	baz=257			*e*S	**Sn**	**06 02 27.2**	**+0.5**
YM10	**YM10** baz=328	**1.24**	**330**	*e*P	**Pb**	**06 02 10.7**	**+0.1**
YM11	**YM11** baz=329	**1.25**	**331**	*e*P	**Pg**	**06 02 11.8**	**+0.2**
YM04	**YM04** baz=327	**1.25**	**329**	*e*P	**Pb**	**06 02 11.0**	**+0.3**
LIOB	**Emei** baz=294	**1.26**	**297**	*e*P	**Pb**	**06 02 10.9**	**+0.2**
YM08	**YM08** baz=330	**1.26**	**332**	*e*P	**Pg**	**06 02 11.9**	**+0.1**
TYC	**Yuchr** baz=259	**1.28**	**263**	*e*P	**Pg**	**06 02 13.0**	**+0.8**
WHYT	**Xinyi Township** baz=250	**1.33**	**254**	*e*P	**Pb**	**06 02 12.3**	**+0.4**
IRIF	**Iriomote-Funau**	**1.38**	**79**	P	**Pn**	**06 02 12.1**	**+0.1**
IRIF				*e*S	**Sn**	**06 02 29.5**	**-0.4**
HATJ	**Hateruma jima**	**1.43**	**90**	P	**Pn**	**06 02 12.6**	**0.0**
ALS	**Alishan** baz=244	**1.43**	**247**	*e*P	**Pn**	**06 02 13.3**	**+0.3**
CHN5	**Tsauling** baz=249	**1.51**	**252**	*e*P	**Pb**	**06 02 15.1**	**0.0**
CHN5	baz=249			S	**Sb**	**06 02 34.9**	**+0.9**
JKRS	**Kuro-shima**	**1.62**	**84**	P	**Pn**	**06 02 15.8**	**+0.5**
JKRS				S	**Sn**	**06 02 35.8**	**0.0**
TPUB	**Ta-pu** baz=240	**1.67**	**243**	P	**Pb**	**06 02 17.1**	**-0.7**
TPUB	baz=240			S	**Sb**	**06 02 39.1**	**+0.6**
CHN4	**Tsaushan** baz=242	**1.68**	**245**	P	**Pb**	**06 02 17.8**	**-0.1**
CHN4	baz=242			*e*S	**Sb**	**06 02 39.9**	**+1.1**
WTP	**Ta-pu** baz=238	**1.71**	**241**	*e*P	**Pb**	**06 02 17.9**	**-0.5**
WTP	baz=238			S	**Sb**	**06 02 40.0**	**+0.3**
JIJ	**Ishigaki jima**	**1.76**	**80**	P	**Pn**	**06 02 16.7**	**-0.5**
JIJ				*e*S	**Sn**	**06 02 38.5**	**-0.7**
TWK	**Hsinying** baz=241	**1.80**	**244**	*e*P	**Pb**	**06 02 19.4**	**-0.6**
TWK	baz=241			*e*S	**Sb**	**06 02 42.4**	**0.0**
SLGT	**Liugui** baz=231	**1.82**	**234**	S	**Sb**	**06 02 43.0**	**+0.1**
JISG	**Ishigakijimahi**	**1.95**	**74**	P	**Pn**	**06 02 19.9**	**0.0**
JISG				*e*S	**Sn**	**06 02 44.0**	**0.0**

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*ECX **06** 06:04:59.6±0.5, 28.°16N×112.°29W, h10^{km}, MD2.7, ML2.9*
*MEX **06** 06:04:59.5±0.7, 28.°09N×112.°46W, h73^{km}±14^{km}, MD3.6*
ISC 06 06:04:58.3±1.1**, 28.°13N**±0.°05×**112.°28W**±0.°05**, h10^{km}, n9,** σ**0^{s}49**/14**, 1C-3D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**0.81**	**177**	⇓*e*P	**Pb**	**06 05 13.9**	**-0.5**
SRIG				*e*S	**Sb**	**06 05 25.9**	**+0.5**
SRIG	**Santa Rosalia**	**0.81**	**177**	*e*P	**Pb**	**06 05 14.0**	**-0.5**
SRIG				*i* S	**Sb**	**06 05 26.0**	**+0.6**
GUYB	**Guaymas**	**1.27**	**100**	*e*P	**Pn**	**06 05 21.7**	**-0.4**
GUYB				*e*S	**Sn**	**06 05 39.3**	**+0.2**
GUYB	**Guaymas**	**1.27**	**100**	*i* P	**Pn**	**06 05 21.7**	**-0.4**
GUYB				*e*P	**Pb**	**06 05 21.9**	**-0.4**
GUYB				*i* S	**Sg**	**06 05 39.8**	**+0.7**
HSIG		**1.47**	**53**	*e*P	**Pn**	**06 05 24.4**	**-0.5**
HSIG				*e*S	**Sn**	**06 05 43.9**	**-0.2**
HSIG		**1.47**	**53**	*e*P	**Pn**	**06 05 24.8**	**0.0**
HSIG				*i* S	**Sn**	**06 05 44.4**	**+0.3**
BAHB	**Baha de los**	**2.12**	**329**	⇓*e*P	Pn	06 05 23.1	-11
BAHB				*e*S	Sn	06 05 41.2	-19
SQX	**San Quintin**	**3.97**	**309**	*e*	**Sg**	**06 07 06.4**	**+0.6**
SQX	comp=E,17nm,1.5s			IAML		06 07 06.4	
SQX	comp=N,22nm,1.7s			IAML		06 07 16.8	
SQX				⇑*e*		06 07 16.8	
SPX	**San Pedro Mart** comp=N,10.0nm,1.4s	**4.01**	**317**	IAML		06 07 13.9	
SPX				⇓*e*		06 07 13.9	

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*GUC **06** 06:12:52.3±0.6, 20.°99S×67.°70W, h201^{km}±6^{km}, ML3.7*
*IDC **06** 06:12:55.4±3.8, 20.°54S×67.°00W, h210^{km}±23^{km}, mb3.2/2, mb1 3.3/4, mb1mx3.0/19, mbtmp3.6/4, MS3.3/1, Ms1 3.3/1, ms1mx3.0/6, Error ellipse: s-maj=75.2km s-min=22.2km az=52.0*
ISC 06 06:12:51.3±0.9**, 20.°97S**±0.°05×**67.°7W**±0.°1**, h204^{km}**±10^{km}**, n20,** σ**0^{s}93**/33**, 9C-2D, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**1.59**	**301**	⇓*e*P	**Pn**	**06 13 27.0**	**+0.5**
PB08				*e*S	**S**	**06 13 54.0**	**+0.5**
PB09	**IPOC Station P**	**1.66**	**240**	⇑*i*P	**Pn**	**06 13 27.7**	**+0.8**
PB09				*e*S	**S**	**06 13 54.6**	**+0.4**
PB01	**IPOC Station P**	**1.67**	**267**	⇑*i*P	**Pn**	**06 13 26.7**	**-0.2**
PB01				*e*S	**S**	**06 13 53.6**	**-0.6**
GO01	**Chusmiza**	**1.90**	**312**	⇓*i*P	**Pn**	**06 13 30.0**	**+0.3**
LVC	**Limon Verde**	**1.98**	**214**	*e*P	**Pn**	**06 13 30.5**	**+0.2**
LVC				*e*S	**S**	**06 13 59.6**	**-0.7**
PB02	**IPOC Station P**	**2.08**	**260**	⇑*i*P	**Pn**	**06 13 31.0**	**0.0**
PB02				*e*S	**S**	**06 14 00.3**	**-1.0**
PB02	comp=N,347nm,0.5s			IAML		06 14 02.0	
PB07	**IPOC Station P**	**2.17**	**249**	⇑*i*P	**Pn**	**06 13 32.2**	**+0.2**
PB07				*e*S	**S**	**06 14 02.6**	**-0.6**
PB07	comp=N,213nm,0.5s			IAML		06 14 03.2	
PB11	**IPOC Station P**	**2.19**	**303**	⇑*i*P	**Pn**	**06 13 32.4**	**+0.1**
PB11				*e*S	**S**	**06 14 03.4**	**-0.2**
PB11	comp=N,645nm,0.4s			IAML		06 14 06.2	
PB03	**IPOC Station P**	**2.19**	**240**	⇑*i*P	**Pn**	**06 13 32.5**	**+0.3**
PB03				*e*S	**S**	**06 14 03.1**	**-0.5**
PB03	comp=N,179nm,0.3s			IAML		06 14 03.7	
PB06	**IPOC Station P**	**2.45**	**225**	⇑*i*P	**Pn**	**06 13 35.7**	**+0.7**
PB06				*i* S	**S**	**06 14 08.3**	**-0.4**
PB06	comp=E,127nm,0.5s			IAML		06 14 09.2	
MNMC	**Minye Minye**	**2.55**	**315**	⇑*i*P	**Pn**	**06 13 37.0**	**+0.7**
MNMC				*e*S	**S**	**06 14 11.2**	**+0.5**
MNMC	comp=E,266nm,0.2s			IAML		06 14 15.9	
PSGC	**Pisagua**	**2.65**	**300**	⇑*i*P	**Pn**	**06 13 36.9**	**-0.3**
PSGC				*e*S	**S**	**06 14 11.5**	**-0.9**
PSGC	comp=N,141nm,0.2s			IAML		06 14 13.2	
PB04	**IPOC Station P**	**2.65**	**239**	*e*P	**Pn**	**06 13 37.1**	**-0.1**
PB04				*i* S	**S**	**06 14 11.7**	**-1.0**
PB15	**IPOC Station P**	**2.77**	**216**	*e*P	**Pn**	**06 13 39.4**	**+0.8**
PB15				*i* S	**S**	**06 14 15.3**	**+0.2**
LPAZ	**La Paz** comp=N,2.1nm,0.3s,baz=154,slow=7.1,SNR=61	**4.67**	**355**	P	**Pn**	**06 14 02.7**	**+0.4**
LPAZ	baz=229,slow=20,SNR=2.6			S	**S**	**06 14 56.2**	**-1.3**
CPUP	**Villa Florida** comp=N,0.1nm,0.3s,baz=292,slow=13,SNR=3.2	**10.90**	**121**	P	**Pn**	**06 15 22.0**	**-0.1**
PLCA	**Paso Flores** comp=N,90nm,20.1s,baz=196,slow=36	**19.86**	**186**	LR	LR	06 25 08.4	
TORD	**Torodi Ar. Bea** comp=N,0.4nm,0.4s,baz=244,slow=5.6,SNR=6.7	**76.12**	**70**	P	**P**	**06 24 16.4**	**-0.8**
YKA	**Yellowknife Ar** comp=N,0.2nm,0.7s,baz=133,slow=5.3,SNR=3.6	**91.06**	**340**	P	**P**	**06 25 34.8**	**+2.7**
MKAR	**Makanchi Array** comp=N,0.2nm,0.3s,baz=288,slow=1.4,SNR=2.8	**144.54**	**36**	PKP	**PKiKP**	**06 32 04.5**	**-2.7**

PGC 06 06:40:02.2±0.0**, 64.°42N**×**134.°93W, h1^{km}, ML3.6**/12**, 220km east of Dawson, Yt Southern Yukon Territory, Canada, Southern Yukon Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAWY	**Dawson**	**1.98**	**262**	Pn	Pn	06 40 36.1	-0.8
DAWY				Sg	Sb	06 41 04.0	-0.2
BVCY	**Beaver Creek**	**3.34**	**236**	Pn	Pn	06 40 54.8	-0.8
BVCY				Sg	Sb	06 41 45.7	+2.4
YUK1	**Sand Pete Hill**	**3.40**	**231**	Pn	Pn	06 40 55.3	-1.2
YUK1				Sn	Sn	06 41 36.2	-1.2
YUK1				Sg	Sb	06 41 46.5	+1.4
YUK4	**Talbot Arm**	**3.52**	**211**	Pn	Pn	06 40 55.8	-2.4
YUK4				Sg	Sb	06 41 47.8	-0.9
YUK5	**Granite Creek**	**3.56**	**204**	Pn	Pn	06 40 57.7	-1.0
YUK5				Sn	Sn	06 41 40.1	-1.4
YUK5				Sg	Sb	06 41 50.6	+0.8
YUK3	**Moose Creek**	**3.65**	**226**	Pn	Pn	06 40 58.9	-1.1
YUK3				Sg	Sb	06 41 53.7	+1.2
YUK2	**White River**	**3.77**	**228**	Pn	Pn	06 41 00.4	-1.1
YUK2				Sn	Sn	06 41 43.7	-2.8
YUK2				Sg	Sb	06 41 58.3	+2.6
WHY	**Whitehorse**	**3.77**	**180**	Pn	Pn	06 41 00.5	-1.0
WHY				Sg	Sg	06 41 59.6	-3.7
HYT	**Haines Junctio**	**3.80**	**199**	Pn	Pn	06 41 01.4	-0.5
HYT				Sn	Sn	06 41 43.9	-3.3
HYT				Sg	Sb	06 41 59.8	+3.2
YUK6	**Outpost Mounta**	**3.83**	**206**	Pn	Pn	06 41 01.6	-0.8
YUK6				Sg	Sb	06 42 00.6	+3.0
INK	**Inuvik**	**3.95**	**8**	Pn	Pn	06 41 03.0	-0.8
INK				Sn	Sn	06 41 46.9	-3.7
DOT	**Dot Lake**	**4.09**	**263**	Pn	Pn	06 41 05.1	-0.8
DOT				Sg	Sb	06 42 08.9	+4.1
YUK7	**Dusty Glacier**	**4.18**	**202**	Pn	Pn	06 41 06.6	-0.6
YUK7				Sg	Sb	06 42 11.9	+4.4
CTGM	**Chitina Glacie**	**4.55**	**223**	Pn	Pn	06 41 12.1	-0.1
CTGM				Sn	Sn	06 42 03.2	-2.5
CTGM				Sg	Sg	06 42 23.6	-4.6
PTPK	**Patty Peak**	**4.74**	**230**	Pn	Pn	06 41 14.7	-0.2
PTPK				Sn	Sn	06 42 07.7	-2.8
PTPK				Sg	Sb	06 42 27.7	+4.1
BALM	**Baldy**	**4.81**	**229**	Pn	Pn	06 41 15.5	-0.3
BALM				Sn	Sn	06 42 09.7	-2.4
BALM				Sg	Sb	06 42 30.0	+4.4
GRNC	**Granite Creek**	**4.86**	**224**	Pn	Pn	06 41 15.6	-1.0
GRNC				Sg	Sg	06 42 33.0	-5.2
KIAG	**Kiagna River**	**4.90**	**228**	Pn	Pn	06 41 16.6	-0.4
KIAG				Sn	Sn	06 42 11.8	-2.6
KIAG				Sg	Sg	06 42 34.7	-4.8
PAX	**Paxson**	**4.91**	**258**	Pn	Pn	06 41 16.7	-0.4
PCA	**Pinnacle**	**5.00**	**212**	Pn	Pn	06 41 16.9	-1.5
PCA				Sg	Sg	06 42 39.1	-3.6
PNL	**Peninsula**	**5.21**	**206**	Pn	Pn	06 41 20.6	-0.6
DLBC	**Dease Lake**	**6.45**	**156**	Pn	Pn	06 41 36.2	-2.0
DLBC				Sn	Sn	06 42 48.2	-4.2
DLBC				Sg	Sg	06 43 21.9	-7.1
COLD	**Coldfoot**	**6.87**	**301**	Pn	Pn	06 41 44.1	+0.2
COLD				Sn	Sn	06 43 00.2	-2.4
DHRN	**Dharma Camp**	**6.87**	**61**	Pn	Pn	06 41 42.8	-1.2
DHRN				Sn	Sn	06 42 56.3	-6.3
FNBB	**Fort Nelson**	**7.92**	**129**	Pn	Pn	06 42 01.6	+3.2
FNBB				Sn	Sn	06 43 22.1	-6.5
FNBB				Sg	Sg	06 44 09.0	-7.3
KUKN	**Kugluktuk,NWT**	**8.72**	**58**	Pn	Pn	06 42 07.3	-2.0
KUKN				Sn	Sn	06 43 40.1	-8.0
NBC6	**NorthernBC 6**	**8.73**	**126**	Sg	Sg	06 44 32.4	-10
NBC5	**NorthernBC 5**	**9.11**	**134**	Pn	Pn	06 42 13.7	-1.1
YKW3	**Yellowknife Ar**	**9.26**	**92**	Pn	Pn	06 42 14.6	-2.1
YKW3				Sn	Sn	06 43 54.5	-6.9
YKW1	**Yellowknife Ar**	**9.33**	**93**	Pn	Pn	06 42 15.8	-1.8

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*ECX **06** 06:50:29.4±0.7, 28.°23N×112.°29W, h10^{km}, MD3.7, ML3.9*
*IDC **06** 06:50:30.1±1.3, 28.°09N×112.°23W, h0^{km}, mb3.7/6, mb1 3.8/11, mb1mx3.7/57, mbtmp3.6/11, ML3.4/5, MS3.4/12, Ms1 3.4/12, ms1mx3.2/43, Error ellipse: s-maj=21.2km s-min=11.5km az=26.0*
*NEIC **06** 06:50:31.0±2.2, 28.°12N±0.°04×112.°21W±0.°08, h10^{km}±2^{km}, Error ellipse: s-maj=12.5km s-min=6.6km az=272.0*
*MEX **06** 06:50:31.3±0.3, 28.°15N×112.°45W, h5^{km}, MD4.1*
ISC 06 06:50:31.0±0.6**, 28.°15N**±0.°03×**112.°21W**±0.°05**, h10^{km}, n79,** σ**1^{s}27**/82**, mb3.7**/5**, MS3.2**/7**, 4C, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**0.82**	**182**	⇑*e*P	**Pg**	**06 50 45.8**	**-1.1**
SRIG				*e*S	**Sg**	**06 50 57.2**	**-0.5**
SRIG	**Santa Rosalia**	**0.82**	**182**	*e*P	**Pg**	**06 50 45.8**	**-1.1**
SRIG				*e*S	**Sg**	**06 50 57.2**	**-0.5**
SRIG	**Santa Rosalia**	**0.82**	**182**		**Pg**	**06 50 45.8**	**-1.1**
SRIG				Sg	**Sb**	**06 50 57.7**	**-0.9**
SRIG	**Santa Rosalia**	**0.82**	**182**		**Pg**	**06 50 45.8**	**-1.1**
SRIG					**Sg**	**06 50 57.2**	**-0.5**
GUYB	**Guaymas**	**1.20**	**102**	⇑*e*P	**Pn**	**06 50 52.1**	**-1.8**
GUYB				*e*S	**Sb**	**06 51 08.7**	**-0.8**
GUYB	**Guaymas**	**1.20**	**102**	*e*P	**Pg**	**06 50 53.3**	**-0.9**
GUYB				*e*S	**Sn**	**06 51 12.0**	**+1.7**
HSIG		**1.41**	**51**	⇑*e*P	**Pn**	**06 50 54.4**	**-2.4**
HSIG				*e*S	**Sn**	**06 51 12.3**	**-3.1**
HSIG		**1.41**	**51**	*e*P	**Pb**	**06 50 56.0**	**-1.4**
HSIG				*i* S	**Sg**	**06 51 15.6**	**-0.7**
HSIG		**1.41**	**51**		**Pb**	**06 50 56.2**	**-1.2**
HSIG				Sn	**Sg**	**06 51 16.1**	**-0.2**
HSIG		**1.41**	**51**		**Pb**	**06 50 56.0**	**-1.4**
HSIG					**Sg**	**06 51 15.6**	**-0.7**
NZIG	**Nacozari, Sono**	**3.21**	**46**	*i* P	**Pn**	**06 51 22.2**	**+0.5**
NZIG				*i* S	**Sn**	**06 52 01.8**	**+1.7**
PIX	**Pinacate**	**3.57**	**343**	*e*P	**Pn**	**06 51 23.2**	**-3.3**
TSIG	**Topolobambo**	**3.80**	**131**	*i* P	**Pn**	**06 51 29.8**	**+0.1**
TSIG				*i* S	**Sn**	**06 52 15.9**	**+1.5**
214A	**Organ Pipe Nat**	**3.83**	**352**		**Pn**	**06 51 28.7**	**-1.5**
SPX	**San Pedro Mart** comp=E,92nm,1.1s	**4.04**	**316**	IAML		06 52 55.2	
SPX				⇑*e*		06 52 55.2	
319A	**Douglas**	**4.10**	**38**		**Pn**	**06 51 32.8**	**-1.1**
CGIG		**4.30**	**58**	*i* P	**Pn**	**06 51 36.8**	**0.0**
CGIG				*i* S	**Sn**	**06 52 29.0**	**+1.8**
CGIG		**4.30**	**58**		**Pn**	**06 51 36.8**	**0.0**
CGIG					Lg	06 52 29.0	
TUC	**Tucson**	**4.33**	**16**		**Pn**	**06 51 36.0**	**-1.0**
TUC				Sn	**Sn**	**06 52 27.6**	**0.0**
LPIG	**La Paz** comp=E,1.4nm,0.3s,baz=280,slow=19,SNR=3.6	**4.37**	**157**	Lg	Lg	06 52 51.8	
LPIG	comp=E,422nm,19.1s,baz=264,slow=39			LR	LR	06 53 19.0	
113A	**Mohawk Valley,**	**4.80**	**344**		**Pn**	**06 51 42.0**	**-1.4**
GLA	**Glamis**	**5.39**	**336**		**Pn**	**06 51 50.6**	**-0.9**
121A	**Cookes Peak, D**	**5.80**	**40**	Pn	**Pn**	**06 51 59.5**	**+2.1**
Y14A	**Wickenburg**	**5.81**	**353**		**Pn**	**06 51 57.0**	**-0.4**
HPIG		**5.93**	**100**		**Pn**	**06 51 59.3**	**+0.2**
Y12C	**Blythe**	**5.93**	**341**	Pn	**Pn**	**06 51 57.6**	**-1.3**
X16A	**Lo Mia Camp, P**	**6.29**	**6**		**Pn**	**06 52 03.7**	**-0.4**
PFO	**Pinyon Flats O** comp=E,0.2nm,0.3s,baz=142,slow=6.7,SNR=13	**6.56**	**327**	Lg	Lg	06 54 03.5	
X18A	**Snowflake**	**6.65**	**16**		**Pn**	**06 52 09.6**	**+0.6**
MNTX	**Cornudas Mount**	**6.90**	**57**		**Pn**	**06 52 13.1**	**+0.8**
W13A	**Hualapai Mount**	**7.08**	**349**		**Pn**	**06 52 11.4**	**-3.6**
W18A	**Petrified Fore**	**7.26**	**16**		Pn	06 52 12.2	-5.3
WUAZ	**Wupatki**	**7.38**	**5**		**Pn**	**06 52 20.3**	**+1.3**
Y22D	**IRIS PASSCAL I**	**7.44**	**36**	Pn	**Pn**	**06 52 18.9**	**-1.0**
TX31	**Lajitas Ar. Si**	**7.59**	**79**		**Pn**	**06 52 22.2**	**+0.4**
TX32	**Lajitas Array**	**7.59**	**79**		**Pn**	**06 52 22.0**	**+0.2**
TXAR	**Lajitas Array** comp=E,0.3nm,0.3s,baz=249,slow=13,SNR=11	**7.59**	**79**	Pn	**Pn**	**06 52 23.1**	**+1.3**
TXAR	comp=E,0.1nm,0.3s,baz=261,slow=12,SNR=2.4			Sn	**Sn**	**06 53 48.3**	**+0.3**
TXAR	comp=E,1.7nm,0.3s,baz=260,slow=28,SNR=7.2			Lg	Lg	06 54 32.4	
TXAR	**Lajitas Array**	**7.59**	**79**		**Pn**	**06 52 21.8**	**0.0**
U15A	**North Rim**	**8.26**	**360**		**Pn**	**06 52 31.7**	**+0.5**
ANMO	**Albuquerque** comp=E,0.1nm,0.3s,baz=193,slow=12,SNR=4.9	**8.37**	**34**	Pn	**Pn**	**06 52 34.5**	**+2.0**
ANMO	comp=E,1.1nm,0.3s,baz=352,slow=9.2,SNR=12			Lg	Lg	06 54 55.4	
ANMO	**Albuquerque**	**8.37**	**34**	Pn	**Pn**	**06 52 32.9**	**+0.3**
LCMT	**Little Creek M**	**8.88**	**355**		**Pn**	**06 52 40.7**	**+1.1**
CCUT	**Cedar City**	**9.43**	**354**	Pn	**Pn**	**06 52 48.3**	**+1.1**
SZCU	**Shurtz Canyon**	**9.45**	**356**	Pn	**Pn**	**06 52 47.4**	**-0.1**
MVCO	**Mesa Verde**	**9.56**	**18**		**Pn**	**06 52 50.8**	**+1.8**
MSTX	**Muleshoe**	**9.95**	**52**	Pn	**Pn**	**06 52 54.6**	**+0.3**
MSU	**Marysvale**	**10.34**	**0**	Pn	**Pn**	**06 53 00.3**	**+0.7**
SRU	**San Rafael Swe**	**11.03**	**7**	Pn	**Pn**	**06 53 09.5**	**+0.5**
JCT	**Junction City**	**11.07**	**75**	Pn	**Pn**	**06 53 08.4**	**-1.2**
MDPB	**Devils Postpil**	**11.08**	**330**	Pn	**Pn**	**06 53 11.5**	**+1.7**
SDCO	**Great Sand Dun**	**11.10**	**29**	Pn	**Pn**	**06 53 09.6**	**-0.6**
T25A	**Trinidad**	**11.11**	**34**	Pn	**Pn**	**06 53 10.7**	**+0.5**
AMTX	**Amarillo**	**11.21**	**51**		**Pn**	**06 53 12.6**	**+1.1**
P17A	**Butcher Ranch,**	**11.36**	**6**	Pn	**Pn**	**06 53 14.5**	**+0.9**
NVAR	**Mina Array Bea** comp=E,0.1nm,0.3s,baz=135,slow=13,SNR=3.0	**11.45**	**335**	Pn	**Pn**	**06 53 17.4**	**+2.6**
NVAR	comp=E,141nm,19.8s,baz=102,slow=36			LR	LR	06 57 28.1	
DUG	**Dugway, Tooele**	**12.03**	**358**	Pn	**Pn**	**06 53 21.9**	**-0.8**
BGU	**Big Grassy Mou**	**12.77**	**357**	Pn	**Pn**	**06 53 33.1**	**+0.3**
ELK	**Elko** comp=E,0.1nm,0.3s,baz=177,slow=13,SNR=4.2	**12.81**	**350**	Pn	**Pn**	**06 53 35.7**	**+2.2**
ELK	comp=E,146nm,21.6s,baz=164,slow=35			LR	LR	06 57 59.4	
ELK	**Elko**	**12.81**	**350**	Pn	**Pn**	**06 53 34.6**	**+1.1**
HWUT	**Hardware Ranch**	**13.44**	**2**		**Pn**	**06 53 43.6**	**+1.6**
PD31	**Pinedale Array**	**14.75**	**8**		**Pn**	**06 54 00.0**	**+0.1**
PDAR	**Pinedale Array** comp=E,0.1nm,0.3s,baz=185,slow=10,SNR=17	**14.75**	**8**	Pn	**P**	**06 54 05.5**	**-0.5**
PDAR	comp=E,0.1nm,0.3s,baz=158,slow=32,SNR=3.8			Lg	Lg	06 58 26.8	
PDAR	comp=E,76nm,19.6s,baz=198,slow=35			LR	LR	06 59 09.6	
PDAR	**Pinedale Array**	**14.75**	**8**	Pn	**Pn**	**06 54 01.0**	**+1.1**
FXWY	**Fox Creek**	**15.49**	**3**	Pn	**Pn**	**06 54 10.0**	**+0.3**
FXWY	comp=Z,5.3nm,1.2s			IAmb	IAmb	06 54 17.9	
MFID	**Camas Ranch**	**15.52**	**350**		**Pn**	**06 54 10.6**	**+0.6**
MFID	comp=Z,6.6nm,1.1s			IAmb	IAmb	06 54 23.5	
NATX	**Nacogdoches**	**15.63**	**72**	Pn	**Pn**	**06 54 10.8**	**-0.6**
NATX	comp=Z,9.9nm,0.8s			IAmb	IAmb	06 54 16.7	
YBH	**Yreka Blue Hor** comp=Z,195nm,18.4s,baz=201,slow=36	**16.04**	**330**	LR	LR	07 00 17.2	
CMIG	**Matias Romero** comp=Z,101nm,21.1s,baz=226,slow=39	**19.38**	**121**	LR	LR	07 03 11.7	
NEW	**Newport** comp=Z,2.8nm,0.9s,baz=168,slow=9.7,SNR=5.8	**20.45**	**351**	P	Pn	06 55 10.3	-0.4
NEW	comp=Z,107nm,18.9s,baz=198,slow=37			LR	LR	07 03 16.7	

APG	El Apazote	24.02	118	LR	LR	07 04 12.2	
	comp=Z,91nm,21.8s,baz=296,slow=34						
TKL	Tuckaleechee C	25.21	66	LR	LR	07 06 32.4	
	comp=Z,124nm,19.9s,baz=252,slow=38						
ULM	Lac du Bonnet	25.33	25	P	P	06 55 58.9	+0.9
	comp=Z,1.0nm,0.7s,baz=224,slow=6.4,SNR=3.2						
ULM				LR	LR	07 05 32.5	
	comp=Z,70nm,20.4s,baz=250,slow=36						
BBB	Bella Bella	26.79	338	LR	LR	07 08 09.8	
	comp=Z,64nm,19.0s,baz=184,slow=40						
YKA	Yellowknife Ar	34.39	358	P	P	06 57 19.1	+1.0
	comp=Z,0.3nm,0.8s,baz=172,slow=8.6,SNR=5.9						
ILAR	Eielson Array	42.68	339	P	P	06 58 28.5	+0.8
	comp=Z,1.4nm,0.9s,baz=149,slow=7.2,SNR=13						
RPN	Rapa Nui	55.03	177	LR	LR	07 19 31.9	
	comp=Z,49nm,18.9s,baz=222,slow=32						
SIV	San Ignacio	66.14	125	P	P	07 01 19.5	+0.5
	comp=Z,1.2nm,0.9s,baz=290,slow=6.2,SNR=5.1						
CPUP	Villa Florida	75.58	131	P	P	07 02 16.9	+0.7
	comp=Z,1.7nm,0.9s,baz=19,slow=5.4,SNR=3.0						
JHJ	Hachijo jima 2	88.51	307	LR	LR	07 32 19.7	
	comp=Z,299nm,21.7s,baz=79,slow=28						

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*SOME **06** 07:14:45.5, 39°.98N×72°.22E, h5^{km}*
*KRNET **06** 07:14:46.1±0.1, 39°.95N×71°.93E, h16^{km}, mb2.6*
*NNC **06** 07:14:49.6±2.5, 40°.09N×72°.08E, h0^{km}, mb3.3, mpv3.0, Error ellipse: s-maj=18.2km s-min=8.6km az=1.0*
ISC 06 07:14:43.1±2.4**, 39°.7N**±0°.1×**71°.91E**±0°.04**, h1^{km}**±14^{km}**, n21, σ1^{s}.40**/34**, 14C-8D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	0.90	292	⇑*i*P	Pn	07 15 02.6	-0.4
	baz=78						
BTK				⇑*i*S	Sn	07 15 14.4	-2.4
	baz=78						
ARSB	Arslanbob	1.80	27	⇑*e*P	Pn	07 15 15.5	+0.1
	baz=30						
ARSB				⇑*i*S	Sn	07 15 36.8	-2.2
	baz=30						
ARK	Arkit	2.07	1	⇓*i*P	Pn	07 15 19.9	+0.7
	baz=1.0						
ARK				⇓*i*S	Sn	07 15 44.4	-1.3
	baz=1.0						
AML	Almayashu	2.76	29	⇓*i*P	Pn	07 15 30.2	+1.3
	baz=31						
AML				⇓*i*S	Sn	07 16 02.2	-0.9
	baz=31						
IUG	Iuzhnay	2.81	330	*e*P	Pb	07 15 35.6	+1.5
	7.0nm,0.3s						
IUG				*e*S	Sb	07 16 11.6	+2.6
	20nm,0.3s						
IUG	Iuzhnay	2.81	330	Pg	Pg	07 15 36.6	-0.4
	3.4nm,0.2s						
IUG				Lg	Lg	07 16 12.2	
	20nm,0.3s						
ARLS	Aral	2.82	40	⇑*i*P	Pn	07 15 31.2	+1.8
	baz=43						
ARLS				⇑*i*S	Sn	07 16 04.0	-0.1
	baz=43						
JBG	Jabagly	2.89	340	Pg	Pb	07 15 37.2	+1.6
	6.6nm,0.3s						
JBG				Lg	Lg	07 16 13.2	
	27nm,0.4s						
MRKS	Merke	3.18	18	*e*P	Pb	07 15 39.0	-1.5
	1.0nm,0.1s						
MRKS				*e*S	Sb	07 16 17.5	-2.2
	7.5nm,0.3s						
MRKS	Merke	3.18	18	Pg	Pb	07 15 40.9	+0.5
	4.6nm,0.4s						
MRKS				Lg	Lg	07 16 19.6	
	7.5nm,0.3s						
UCH	Uchtor	3.19	37	⇑*i*P	Pn	07 15 36.2	+1.4
	baz=40						
UCH				⇑*i*S	Sn	07 16 12.9	-0.8
	baz=40						
EKS2	Erkin-Say	3.26	25	⇓*i*P	Pn	07 15 36.8	+1.3
	baz=27						
EKS2				⇓*i*S	Sn	07 16 13.8	-1.2
	baz=27						
KZA	Kyzart	3.46	46	⇑*i*P	Pn	07 15 40.5	+2.0
	baz=49						
KZA				⇑*i*S	Sn	07 16 20.0	-0.3
	baz=49						
AAK	Ala-Archa	3.51	33	⇓*i*P	Pn	07 15 40.5	+1.6
	baz=35						
AAK				⇓*i*S	Sn	07 16 20.0	-1.1
	baz=35						
AAK	Ala-Archa	3.51	33	Pg	Pb	07 15 45.0	-1.1
	2.1nm,0.6s						
AAK				Lg	Lg	07 16 28.6	
	5.1nm,0.6s						
KK31	Karatay Array	3.54	343	⇑Pg	Pb	07 15 47.4	+0.9
	1.1nm,0.5s,baz=147,slow=14,SNR=10						
KK31				⇑Lg	Lg	07 16 31.1	
	1.8nm,0.4s,baz=153,slow=28,SNR=5.4						
BRLS	Borolday	3.65	335	*e*P	Pb	07 15 48.4	-0.1
	0.2nm,0.1s						
BRLS				*e*S	Sb	07 16 33.8	+0.5
	3.4nm,0.2s						
BRLS	Borolday	3.65	335	Pg	Pb	07 15 48.5	-0.1
	0.5nm,0.2s						
BRLS				Lg	Lg	07 16 32.5	
	3.2nm,0.3s						
CHMS	Chumysh	3.91	32	⇑Pg	Pg	07 15 56.7	-1.4
	1.6nm,0.5s						
CHMS				⇑Lg	Lg	07 16 40.2	
	4.8nm,0.6s						
SGDS	Sogindy	4.25	28	Pg	Pb	07 16 00.3	+1.6
	4.1nm,1.1s						
SGDS				Lg	Lg	07 16 51.8	
	4.9nm,0.8s						
KST	Kastek	4.51	41	*e*P	Pb	07 16 03.2	+0.1
	0.4nm,0.1s						
KST				*e*S	Sb	07 16 59.2	+1.2
	3.3nm,0.4s						

IDC 06 07:17:57.2±1.6**, 49°.59S×115°.61E, h0^{km}, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.7**/37**, mbtmp3.8**/4**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.9**/17**, Error ellipse: s-maj=114.9km s-min=25.7km az=122.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	14.72	355	T	T	07 36 42.2	
	baz=182,slow=71,SNR=10						
H01W1	Cape Leeuwin H	14.73	355	T	T	07 36 40.5	
	baz=182,slow=71,SNR=12						
H01W3	Cape Leeuwin H	14.74	355	T	T	07 36 41.2	
	baz=182,slow=71,SNR=13						
NWAO	Narrogin (SRO)	16.69	5	LR	LR	07 26 43.0	
	comp=Z,116nm,19.0s,baz=204,slow=32						
STKA	Stephens Creek	26.27	57	P	P	07 23 33.2	-0.9
	1.3nm,0.5s,baz=224,slow=8.9,SNR=5.6						
ASAR	Alice Springs	29.59	36	P	P	07 24 04.3	+0.5
	0.5nm,0.8s,baz=215,slow=7.9,SNR=4.7						
WRA	Warramunga Arr	33.15	34	P	P	07 24 35.1	-0.1
	1.3nm,1.0s,baz=207,slow=8.5,SNR=3.4						
SNAA	Sanae	51.52	201	P	P	07 27 03.9	-0.3
	1.4nm,0.7s,baz=137,slow=7.6,SNR=5.3						
YKA	Yellowknife Ar	149.98	45	PKPbc	PKPbc	07 37 48.2	0.0
	1.4nm,0.7s,baz=276,slow=2.0,SNR=22						

SOME 06 07:21:04.2, 40°.90N×70°.50E, h10^{km}, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	1.29	344	*e*P	Pg	07 21 29.1	+0.1
	1.2nm,0.2s						
IUG				*e*S	Sn	07 21 47.0	+1.1
	6.3nm,0.1s						
BRLS	Borolday	2.19	347	*e*P	Pn	07 21 40.9	+0.2
	0.2nm,0.0s						
BRLS				*e*S	Sn	07 22 07.3	-0.5
	1.1nm,0.1s						
MRKS	Merke	2.75	47	*e*P	Pb	07 21 54.8	+1.3
	1.3nm,0.1s						
MRKS				*e*S	Sg	07 22 31.3	-1.2
	2.2nm,0.2s						

KRNET 06 07:21:06.8±0.1**, 39°.39N×72°.10E, mb2.5, 10C-4D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	1.19	305	⇓*i*P	Pg	07 21 28.9	-0.7
	baz=5.0						
BTK				⇓*i*S	Sg	07 21 44.8	-0.3
	baz=5.0						
ARSB	Arslanbob	2.05	19	⇑*i*P	Pn	07 21 41.4	-1.2
	baz=19						
ARSB				⇑*i*S	Sn	07 22 06.9	-2.1
	baz=19						
ARK	Arkit	2.41	358	⇑*i*P	Pn	07 21 46.1	-1.5
	baz=58						
ARK				⇑*i*S	Sn	07 22 15.1	-2.8
	baz=58						
ARLS	Aral	3.00	34	⇓*i*P	Pn	07 21 54.7	-1.0
	baz=34						
ARLS				⇓*i*S	Sn	07 22 29.5	-2.9
	baz=34						
AML	Almayashu	3.00	23	⇑*i*P	Pn	07 21 54.5	-1.4
	baz=23						
AML				⇑*i*S	Sn	07 22 29.9	-2.9
	baz=23						
UCH	Uchtor	3.38	32	⇑*e*P	Pn	07 21 59.8	-1.4
	baz=32						
UCH				⇑*e*S	Sn	07 22 39.0	-3.2
	baz=32						
EKS2	Erkin-Say	3.51	21	⇑*e*P	Pn	07 22 01.5	-1.2
	baz=21						
EKS2				⇑*e*S	Sn	07 22 41.6	-3.4
	baz=21						

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*IDC **06** 07:22:47.0±2.0, 34°.22N×139°.46E, h0^{km}, mb3.4/1, mb1 3.6/3, mb1mx3.2/42, mbtmp3.4/3, ML3.0/2, MS3.1/2, Ms1 3.1/2, ms1mx2.6/28, Error ellipse: s-maj=67.7km s-min=16.6km az=67.0*
*JMA **06** 07:22:47.2±0.1, 34°.42N×140°.19E, h40^{km}±2^{km}, M3.5*
ISC 06 07:22:46.9±1.4**, 34°.40N**±0°.04×**140°.19E**±0°.05**, h51^{km}**±18^{km}**, n21, σ0^{s}.92**/29**, 5C-2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO3	Boso 3	0.48	33	⇓P	Pn	07 22 57.7	0.0
BSO3				X		07 23 06.1	
BSO4	Boso 4	0.60	12	⇓P	Pn	07 22 59.6	+0.3
BSO4				X		07 23 10.0	
TATJ	Tateyama 2	0.68	339	P	Pn	07 23 00.8	+0.4
TATJ				S	Sn	07 23 11.3	+1.2
BSO1	Boso 1	0.70	68	⇑P	Pn	07 22 59.6	-0.5
BSO1				X		07 23 09.4	
JIM2	Oshima 3	0.70	297	⇑P	Pn	07 23 00.5	-0.2
JIM2				S	Sn	07 23 10.0	-0.8
JMKN	Mikurajimanish	0.71	225	P	Pn	07 23 00.8	0.0
JMKN				S	Sn	07 23 10.8	0.0
JTHY	Toshimahigashi	0.76	280	P	Pn	07 23 01.7	+0.3
JTHY				S	Sn	07 23 12.6	+0.7
JKO	Kozu shima	0.90	257	S	Sn	07 23 15.7	+0.5
KTJ3	Kamata3	1.07	300	⇑P	Pn	07 23 05.2	-0.3
KTJ3				S	Sn	07 23 18.1	-1.2
JIZS	Izushimoda	1.13	287	⇑P	Pn	07 23 06.5	+0.2
JIZS				S	Sn	07 23 20.8	0.0
JOD2	Odawara 2	1.25	314	⇑P	Pn	07 23 07.9	-0.1
JOD2				S	Sn	07 23 23.4	-0.4
JSMT	Sammumatsuo	1.26	10	S	Sn	07 23 23.9	0.0
JHJ	Hachijo jima 2	1.32	195	Pn	Pn	07 23 09.2	+0.3
	121nm,0.3s,baz=254,slow=23,SNR=18						
JHJ				Sn	Sn	07 23 25.6	+0.1
	91nm,0.3s,baz=186,slow=23,SNR=14						
JHJ2	Mitsune	1.32	194	P	Pn	07 23 09.4	+0.5
JHJ2				S	Sn	07 23 26.0	+0.6
JFNN	Fujinakano	1.47	303	P	Pn	07 23 11.8	+0.8
MJAR	Matsushiro Arr	2.68	323	Pn	Pn	07 23 28.5	+1.0
	1.6nm,0.3s,baz=160,slow=13,SNR=31						
MJAR				Sn	Sn	07 23 59.4	+0.6
	3.0nm,0.3s,baz=142,slow=22,SNR=7.5						
MAT	Matsushiro	2.68	323	P	Pn	07 23 29.2	+1.6
MAT				S	Sn	07 24 00.3	+1.4
ASAJ	Asahikawa	9.88	10	LR	LR	07 29 31.2	
	comp=Z,47nm,19.5s,baz=139,slow=40						
KSRS	Korea Array	10.40	291	Pn	Pn	07 25 10.3	-3.0
	0.3nm,0.3s,baz=108,slow=16,SNR=3.1						
WRA	Warramunga Arr	54.33	187	P	P	07 32 14.9	+6.7
	0.4nm,0.8s,baz=1.4,slow=6.9,SNR=4.7						
SPITS	Spitsbergen Ar	62.91	349	LR	LR	08 01 41.8	
	comp=Z,35nm,18.2s,baz=95,slow=37						

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*NEIC **06** 07:25:51.2±2.9, 32°.13N±0°.07×40°.2W±0°.1, h10^{km}±1^{km}, mb4.4/11, Error ellipse: s-maj=23.9km s-min=5.3km az=118.0*
*IDC **06** 07:25:51.8±1.0, 32°.57N×40°.24W, h0^{km}, mb3.8/10, mb1 4.0/10, mb1mx3.7/40, mbtmp3.8/10, MS3.6/17, Ms1 3.6/17, ms1mx3.3/54, Error ellipse: s-maj=29.0km s-min=22.0km az=165.0*
ISC 06 07:25:52.5±0.7**, 32°.3N**±0°.1×**40°.2W**±0°.1**, h13^{km}, n46, σ1^{s}.61**/27**, mb4.1**/17**, MS3.7**/17**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRLN	Deer Lake	21.34	328	P	P	07 30 39.5	+0.3
DRLN				IAmb	IAmb	07 30 40.4	
	comp=Z,11nm,0.9s						
SCHQ	Schefferville	29.35	328	LR	LR	07 42 30.0	
	comp=Z,139nm,21.1s,baz=335,slow=34						
DBIC	Dimbokro	41.61	120	LR	LR	07 49 09.7	
	comp=Z,80nm,18.1s,baz=302,slow=34						
TORD	Torodi Ar. Bea	42.75	107	P	P	07 33 51.8	+2.0
	comp=Z,0.6nm,0.7s,baz=297,slow=6.3,SNR=2.4						
TORD				LR	LR	07 51 52.8	
	comp=Z,25nm,18.6s,baz=285,slow=36						
GERES	GERESS Array B	43.22	51	P	P	07 33 52.6	-0.7
	comp=Z,0.3nm,0.5s,baz=269,slow=9.2,SNR=3.6						
ULM	Lac du Bonnet	44.43	311	LR	LR	07 52 43.2	
	comp=Z,45nm,19.0s,baz=38,slow=36						
H10N2	ASCENSION HYDR	46.83	144	T	T	08 24 00.6	
	baz=329,slow=75,SNR=110						
H10N3	ASCENSION HYDR	46.83	144	T	T	08 24 01.0	
	baz=329,slow=75,SNR=106						
H10N1	ASCENSION HYDR	46.84	144	T	T	08 24 02.4	
	baz=329,slow=75,SNR=148						
H10S3	ASCENSION HYDR	47.71	145	T	T	08 25 06.7	
	baz=329,slow=74,SNR=192						
H10S2	ASCENSION HYDR	47.72	145	T	T	08 25 08.1	
	baz=251,slow=74,SNR=162						
FFC	Flin Flon	48.29	317	P	P	07 34 32.9	-0.4
FINES	FINESS Array B	50.95	34	P	P	07 34 53.5	+0.1
	comp=Z,2.4nm,0.8s,baz=241,slow=3.9,SNR=4.6						
FINES	FINESS Array B	50.95	34	P	P	07 34 52.9	-0.5
BURAR	Bucovina Array	50.96	52	P	P	07 34 55.2	+1.4
CMIG	Matias Romero	51.43	267	LR	LR	07 53 26.9	
	comp=Z,30nm,21.0s,baz=34,slow=32						
AKASG	Malin Array Be	53.16	48	P	P	07 35 09.7	-0.3
	comp=Z,2.0nm,0.7s,baz=275,slow=6.5,SNR=7.3						
TXAR	Lajitas Array	53.88	285	LR	LR	07 56 35.6	
	comp=Z,22nm,19.8s,baz=0.0,slow=34						
ANMO	Albuquerque	54.32	292	LR	LR	07 55 53.6	
	comp=Z,77nm,18.5s,baz=90,slow=33						
PD31	Pinedale Array	54.59	302	P	P	07 35 20.5	-0.3
PDAR	Pinedale Array	54.59	302	P	P	07 35 19.4	-1.5
	comp=Z,0.8nm,0.9s,baz=90,slow=8.9,SNR=5.5						
PDAR				LR	LR	07 57 12.9	
	comp=Z,97nm,20.1s,baz=90,slow=35						
PDAR	Pinedale Array	54.59	302	P	P	07 35 19.1	-1.8
YKA	Yellowknife Ar	54.80	327	P	P	07 35 22.0	+0.3
	comp=Z,0.3nm,0.8s,baz=87,slow=7.6,SNR=5.9						
YKA				LR	LR	07 58 31.9	
	comp=Z,80nm,18.6s,baz=0.0,slow=36						
LPAZ	La Paz	55.22	213	P	P	07 35 29.2	+3.2
	comp=Z,1.4nm,0.8s,baz=359,slow=7.2,SNR=6.0						
LPAZ	La Paz	55.22	213	P	P	07 35 26.6	+0.5
NEW	Newport	58.43	310	LR	LR	07 59 06.1	
	comp=Z,69nm,21.2s,baz=98,slow=34						
BRTR	Keskin Array B	58.65	60	P	P	07 35 50.2	+0.5
	comp=Z,0.8nm,0.9s,baz=305,slow=5.1,SNR=3.2						
PB11	IPOC Station P	58.94	213	P	P	07 35 50.9	-1.0
ELK	Elko	59.22	301	LR	LR	07 59 23.5	
	comp=Z,72nm,20.4s,baz=74,slow=34						
INK	Inuvik	61.63	335	LR	LR	08 01 15.5	
	comp=Z,60nm,20.8s,baz=356,slow=35						
NVAR	Mina Array Bea	62.22	300	LR	LR	08 02 01.8	
	comp=Z,92nm,19.2s,baz=169,slow=35						
PFO	Pinyon Flats O	62.57	294	LR	LR	08 01 42.6	
	comp=Z,60nm,21.9s,baz=81,slow=34						
KBZ	Khabaz	63.90	53	P	P	07 36 25.4	+0.4
	comp=Z,0.7nm,0.5s,baz=300,slow=5.0,SNR=3.5						
YBH	Yreka Blue Hor	64.21	304	LR	LR	08 04 25.3	
	comp=Z,65nm,19.1s,baz=140,slow=36						
DOT	Dot Lake	67.35	332	P	P	07 36 46.6	-0.3
DOT				IAmb	IAmb	07 36 57.1	
	comp=Z,2.7nm,1.0s						
CTGM	Chitina Glacie	67.40	329	P	P	07 36 49.4	+1.9
CTGM				IAmb	IAmb	07 36 52.6	
	comp=Z,3.6nm,1.2s						
ILAR	Eielson Array	67.91	334	LR	LR	08 04 36.4	
	comp=Z,69nm,19.3s,baz=170,slow=34						
ABKAR	Akbulak array	72.31	43	P	P	07 37 20.0	+2.3
ABKAR	Akbulak array	72.31	43	P	P	07 37 17.9	+0.2
KDAK	Kodiak Island	73.97	329	LR	LR	08 10 32.8	
	comp=Z,80nm,18.7s,baz=81,slow=36						
MBAR	Mbarara	74.27	101	P	P	07 37 26.1	-3.9
MBAR				IAmb	IAmb	07 37 26.8	
	comp=Z,14nm,1.5s						
KK31	Karatay Array	81.80	44	P	P	07 38 09.2	-2.1
KK31				IAmb	IAmb	07 38 24.1	
	comp=Z,2.9nm,1.5s						
KKAR	Karatay Array	81.80	44	P	P	07 38 09.7	-1.6
KKAR	Karatay Array	81.80	44	P	P	07 38 09.2	-2.1
KKAR				IAmb	IAmb	07 38 24.1	
	comp=Z,2.9nm,1.5s						
ZALV	Zalesovo Beam	81.86	29	P	P	07 38 12.7	+1.4
	comp=Z,0.8nm,0.3s,baz=280,slow=8.2,SNR=3.0						
UOSS	Minazif	82.11	66	P	P	07 38 13.3	+0.1
UOSS				IAmb	IAmb	07 38 13.4	
	comp=Z,6.1nm,0.8s						

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*IDC **06** 07:30:33.4±3.1, 3°.70S×129°.22E, h0^{km}, mb3.7/2, mb1 4.0/3, mb1mx3.6/28, mbtmp3.8/3, ML3.6/1, Error ellipse: s-maj=264.5km s-min=28.0km az=69.0*
*DJA **06** 07:30:35.0±0.9, 4°S±9°×12°9E±°, h10^{km}, M3.7/7, MLv3.7/7*
ISC 06 07:30:35.4±1.0**, 3°.94S**±0°.09×**128°.83E**±0°.06**, h10^{km}, n7, σ1^{s}.15**/8**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.60	9	P	Pg	07 30 47.7	+0.7
AAI	Ambon	0.69	292	P	Pg	07 30 48.9	+0.3
AAI				S	Sb	07 30 57.9	-1.1
NLAI	Namlea	1.86	292	P	Pn	07 31 07.6	+0.2
FAKI	Fak Fak	3.56	74	P	Pn	07 31 30.0	-0.7
WRA	Warramunga Arr	16.79	162	Pn	Pn	07 34 29.8	-1.0
	0.2nm,0.3s,baz=342,slow=10,SNR=3.1						
ASAR	Alice Springs	20.21	166	P	P	07 35 12.5	+1.8
	3.0nm,0.7s,baz=347,slow=9.4,SNR=56						
MKAR	Makanchi Array	65.05	327	P	P	07 41 15.7	-0.3
	0.6nm,0.7s,baz=122,slow=7.7,SNR=6.8						

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*IDC **06** 07:59:52.0±1.1, 5°.77S×154°.45E, h0^{km}, mb4.0/10, mb1 4.1/12, mb1mx3.9/46, mbtmp4.0/12, ML2.9/2, MS3.2/7, Ms1 3.2/7, ms1mx3.0/43, Error ellipse: s-maj=34.9km s-min=19.9km az=107.0*
*NEIC **06** 07:59:57.0±1.8, 5°.87S±0°.09×154°.42E±0°.09, h35^{km}±2^{km}, mb4.5/14, Error ellipse: s-maj=16.2km s-min=14.4km az=45.0*
ISC 06 07:59:59.7±0.6**, 5°.80S**±0°.07×**154°.39E**±0°.09**, h61^{km}, n46, σ1^{s}.57**/42**, mb4.1**/17**, 1C, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	2.73	306		Pn	08 00 39.8	-1.5
RABL				Sn	Sn	08 01 14.1	+0.9
KRVT	Keravat (AS076	2.79	302	Pn	Pn	08 00 40.0	-2.0
	8.3nm,0.3s,baz=166,slow=4.2,SNR=2.2						
KRVT				Sn	Sn	08 01 18.8	+4.4
	341nm,0.3s,baz=27,slow=19,SNR=13						
KRVT				LR	LR	08 02 03.2	
	comp=Z,341nm,18.2s,baz=114,slow=47						
HNR	Honiara	6.58	124	LR	LR	08 04 05.2	
	comp=Z,186nm,20.1s,baz=268,slow=39						
PMG	Port Moresby	8.02	243	Pn	Pn	08 01 51.5	-2.1
	2.7nm,0.3s,baz=67,slow=9.1,SNR=8.7						
PMG				LR	LR	08 04 44.5	
	comp=Z,152nm,20.4s,baz=180,slow=36						
PMG	Port Moresby	8.02	243		Pn	08 01 51.1	-2.5
PATS	Pohnpei	13.15	17	Pn	Pn	08 03 02.0	-1.7
GUMO	Guam	21.46	334	LR	LR	08 11 28.3	
	comp=Z,52nm,20.4s,baz=121,slow=32						
SIJI	Sorong	23.59	281	LR	LR	08 14 35.2	
	comp=Z,73nm,18.6s,baz=106,slow=37						
WB0	Warramunga Arr	23.90	233	P	P	08 05 08.5	+0.4
WB2	Warramunga Arr	24.02	232	P	P	08 05 08.9	-0.3
WB2				IAmb	IAmb	08 05 17.7	
	comp=Z,6.3nm,0.8s						
WRA	Warramunga Arr	24.03	232	P	P	08 05 07.7	-1.6
	comp=Z,1.2nm,0.6s,baz=56,slow=9.9,SNR=2.8						
WRA				LR	LR	08 14 27.4	
	comp=Z,66nm,18.8s,baz=125,slow=36						
ASAR	Alice Springs	26.54	226	P	P	08 05 31.8	-0.3
	comp=Z,1.2nm,0.7s,baz=58,slow=8.9,SNR=11						
ASAR				PcP	PcP	08 08 57.5	+2.0
	comp=Z,2.1nm,0.6s,baz=63,slow=2.5,SNR=19						
ASAR	Alice Springs	26.54	226	P	P	08 05 29.8	-2.3
H11S3	WAKE ISLAND Hy	27.02	26	T	T	08 34 02.2	
	baz=208,slow=74,SNR=24						
H11S2	WAKE ISLAND Hy	27.02	26	T	T	08 34 02.5	
	baz=208,slow=74,SNR=19						
H11S1	WAKE ISLAND Hy	27.03	26	T	T	08 33 59.2	
	baz=208,slow=74,SNR=19						
STKA	Stephens Creek	28.57	203	P	P	08 05 51.7	+1.6
	comp=Z,0.9nm,0.8s,baz=6.0,slow=19,SNR=1.8						
FITZ	Fitzroy Crossi	30.61	244	P	P	08 06 06.4	-1.8
FITZ				IAmb	IAmb	08 06 22.5	
	comp=Z,12nm,1.4s						
BKZ	Black Stump Fm	38.76	152	P	P	08 07 20.0	+1.6
TUWZ	Tuamarina	39.54	157	P	P	08 07 24.5	-0.2
MJAR	Matsushiro Arr	44.76	341	LR	LR	08 24 05.3	
	comp=Z,23nm,21.8s,baz=245,slow=32						
CISI	Cisompet, Garu	46.28	265	P	P	08 08 17.7	-2.1
XAN	Xi'an	58.44	316	P	P	08 09 49.7	+0.2
CMAR	Chiang Mai Arr	59.73	295	P	P	08 10 00.1	+1.4
	comp=Z,2.1nm,0.3s,baz=97,slow=5.0,SNR=13						
CMAR	Chiang Mai Arr	59.73	295	P	P	08 09 58.6	-0.2
SONM	Songino Array	68.01	327	P	P	08 10 53.4	+0.7
	comp=Z,0.7nm,0.5s,baz=141,slow=6.3,SNR=5.3						
SONM	Songino Array	68.01	327	P	P	08 10 53.7	+1.0
PPLA	Purkeypile	79.49	22	P	P	08 12 00.0	+0.3
PPLA				IAmb	IAmb	08 12 15.3	
	comp=Z,12nm,1.2s						
BPAW	Bear Paw Mtn.	80.63	21	P	P	08 12 06.8	+1.1
IMAR	Indian Mountai	80.80	19	P	P	08 12 08.8	+2.3
RND	Reindeer	81.03	22	P	P	08 12 07.8	-0.1
RND				IAmb	IAmb	08 12 20.9	
	comp=Z,9.4nm,1.4s						
MLY	Manley	81.25	21	P	P	08 12 08.7	-0.3
MLY				IAmb	IAmb	08 12 16.4	
	comp=Z,3.6nm,1.4s						
MK31	Makanchi Array	82.12	319	P	P	08 12 14.8	+0.8
MKAR	Makanchi Array	82.12	319	P	P	08 12 15.0	+1.1
	comp=Z,0.6nm,0.5s,baz=93,slow=7.5,SNR=8.5						
MKAR	Makanchi Array	82.12	319	P	P	08 12 14.3	+0.4
ILAR	Eielson Array	82.49	22	P	P	08 12 16.3	+0.9
	comp=Z,0.4nm,0.6s,baz=240,slow=5.8,SNR=6.0						
ILAR	Eielson Array	82.49	22	P	P	08 12 16.4	+1.0
ZALV	Zalesovo Beam	82.86	326	P	P	08 12 17.9	+0.3
	comp=Z,0.9nm,0.5s,baz=120,slow=5.5,SNR=3.7						
ZALV	Zalesovo Beam	82.86	326	P	P	08 12 17.1	-0.4
QSPA	South Pole Qui	84.17	180	P	P	08 12 26.7	+2.5
QSPA				IAmb	IAmb	08 12 29.7	
	comp=Z,5.2nm,1.1s						
KDJ	Kajisay	84.45	313	P	P	08 12 26.7	+0.5
KDJ				IAmb	IAmb	08 12 28.4	
	comp=Z,5.3nm,0.9s						
KURBB	Kurchatov Arra	85.56	322	P	P	08 12 31.1	-0.2
	comp=Z,0.5nm,0.6s,baz=99,slow=5.8,SNR=3.4						
AAK	Ala-Archa	86.50	313	P	P	08 12 37.3	+0.9
	comp=Z,1.6nm,0.8s,baz=115,slow=2.5,SNR=4.5						
SYO	Syowa Base	93.25	199	⇑*e*P	P	08 13 07.6	+0.3
LRM	Limekiln Ridge	96.32	45	P	P	08 13 19.2	-3.0
TORD	Torodi Ar. Bea	152.12	287	PKPbc	PKiKP	08 19 50.1	+0.3
	comp=Z,2.6nm,0.8s,baz=66,slow=2.2,SNR=12						

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*IDC **06** 08:16:02.8±4.0, 19°.06S×177°.02W, h0^{km}, mb4.0/4, mb1 4.2/4, mb1mx3.7/32, mbtmp4.0/4, Error ellipse:*

s-maj=176.0km s-min=32.7km az=140.0
NEIC ***06*** *08:17:06.8±2.8, 20°.3S±0°.1×177°.78W±0°.10, h638^{km}±9^{km}, mb4.3/25, Error ellipse: s-maj=19.5km s-min=8.4km az=143.0*
ISC 06 08:17:04.1±0.7, **20°.2S**±0°.1×**177°.8W**±0°.1, **h600**^{km}, **n35**, σ**1^s.45**/34, **mb4.2**/13, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.63	301	P	P	08 18 40.2	+5.9
OUZ	Omahuta	16.81	205	P	P	08 20 30.3	+1.6
OUZ				IAmb	IAmb	08 20 36.4	
	comp=Z,18nm,1.3s						
URZ	Urewera	18.56	193	P	P	08 20 42.9	-1.8
URZ				IAmb	IAmb	08 20 57.4	
	comp=Z,35nm,1.4s						
BKZ	Black Stump Fm	19.56	193	P	P	08 20 52.4	-1.4
BKZ				IAmb	IAmb	08 20 55.0	
	comp=Z,22nm,1.3s						
SNZO	South Karori	22.02	195	P	P	08 21 14.4	-1.3
BHW	Baring Head	22.07	195	P	P	08 21 14.9	-1.3
QRZ	Quartz Range	22.19	200	P	P	08 21 17.1	-0.1
NNZ	Nelson	22.29	198	P	P	08 21 18.0	-0.1
TUWZ	Tuamarina	22.33	197	P	P	08 21 17.1	-1.4
THZ	Tophouse	22.93	198	P	P	08 21 23.8	-0.1
THZ				IAmb	IAmb	08 21 25.9	
	comp=Z,16nm,1.3s						
WHZ	Wether Hill Ro	28.21	201	P	P	08 22 07.8	-2.4
WHZ				IAmb	IAmb	08 22 16.9	
	comp=Z,21nm,1.4s						
STKA	Stephens Creek	38.12	244	P	P	08 23 33.2	-0.3
	comp=Z,1.1nm,0.9s,baz=80,slow=12,SNR=2.8						
STKA	Stephens Creek	38.12	244	P	P	08 23 32.2	-1.3
PTCN	Pitcairn Islan	44.11	106	P	P	08 24 21.5	+0.6
AS31	Alice Springs	44.80	256	P	P	08 24 26.5	+0.3
ASAR	Alice Springs	44.80	256	P	P	08 24 26.0	-0.2
	comp=Z,1.4nm,0.5s,baz=92,slow=7.8,SNR=30						
ASAR	Alice Springs	44.80	256	P	P	08 24 26.1	-0.1
WB0	Warramunga Arr	44.83	262	P	P	08 24 27.0	+0.5
WB0				IAmb	IAmb	08 24 27.3	
	comp=Z,3.8nm,0.4s						
WB2	Warramunga Arr	44.84	262	P	P	08 24 22.1	-4.4
WB2				IAmb	IAmb	08 24 23.1	
	comp=Z,9.6nm,0.8s						
WRAB	Tennant Creek	44.84	262	P	P	08 24 26.4	-0.2
WRAB				IAmb	IAmb	08 24 31.4	
	comp=Z,5.0nm,0.9s						
WRA	Warramunga Arr	44.85	262	P	P	08 24 26.4	-0.2
	comp=Z,1.4nm,0.3s,baz=96,slow=7.8,SNR=44						
WRA	Warramunga Arr	44.85	262	P	P	08 24 26.6	-0.1
MTN	Manton Dam	49.37	270	P	P	08 24 59.3	-1.2
MTN				IAmb	IAmb	08 25 00.4	
	comp=Z,7.9nm,1.1s						
KNRA	Kununurra	50.89	266	P	P	08 25 11.8	+0.3
KNRA				IAmb	IAmb	08 25 12.2	
	comp=Z,24nm,1.4s						
FITZ	Fitzroy Crossi	53.28	262	P	P	08 25 27.3	-1.3
FITZ				IAmb	IAmb	08 25 33.1	
	comp=Z,11nm,1.4s						
SOEI	Soe	56.70	271	P	P	08 25 53.6	+1.1
VNDA	Vanda	58.25	185	P	P	08 26 02.8	+0.9
QSPA	South Pole Qui	69.89	180	P	P	08 27 16.9	+1.1
NACB	Ninganchiao	73.67	304	P	P	08 27 38.1	0.0
NACB				IAmb	IAmb	08 27 45.0	
	comp=Z,34nm,1.0s						
PETK	Petropavlovsk-	76.01	345	P	P	08 27 53.1	+2.5
HSIG		80.89	55	P	P	08 28 17.9	+0.8
W13A	Hualapai Mount	81.79	48	P	P	08 28 20.5	-1.4
Y14A	Wickenburg	81.82	49	P	P	08 28 20.0	-1.8
ILAR	Eielson Array	87.95	13	P	P	08 28 48.3	-2.4
	comp=Z,0.4nm,0.8s,baz=220,slow=5.4,SNR=3.0						
AKASG	Malin Array Be	142.83	331	PKP	PKiKP	08 35 34.1	+0.6
	comp=Z,0.5nm,0.4s,baz=43,slow=4.5,SNR=8.1						

MEX ***06*** *09:05:22.0±1.1, 27°.87N×104°.84W, h16^{km}±52^{km}, MD4.0*
NEIC ***06*** *09:05:25.7±3.0, 27°.70N±0°.03×106°.04W±0°.05, h19^{km}±5^{km}, ML3.6/10, Md4.0/6(MEX), Error ellipse: s-maj=7.5km s-min=3.3km az=57.0*
ISC 06 09:05:25.0±0.8, **27°.72N**±0°.04×**106°.00W**±0°.05, **h10**^{km}, **n21**, σ**1^s.29**/29, **Chihuahua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HPIG		0.84	159	*e*P	Pg	09 05 40.9	-0.4
HPIG				*i* S	Sb	09 05 53.9	+0.6
HPIG		0.84	159		Pg	09 05 40.7	-0.6
HPIG				Sg	Sg	09 05 52.2	0.0
HPIG				IAML		09 05 57.9	
	comp=E,1µm,0.5s						
HPIG		0.84	159		Pg	09 05 40.9	-0.4
HPIG					Sb	09 05 53.9	+0.6
TX31	Lajitas Ar. Si	2.60	51	Pn	Pn	09 06 07.1	-0.2
TX31				Sn	Sn	09 06 38.3	-0.8
TX32	Lajitas Array	2.60	51	Pn	Pn	09 06 07.0	-0.3
TX32				Sn	Sn	09 06 38.7	-0.4
TXAR	Lajitas Array	2.61	51	Pn	Pn	09 06 06.3	-1.0
CGIG		3.15	327	*e*P	Pn	09 06 15.5	+0.6
CGIG				*i* S	Sb	09 06 59.2	-0.6
CGIG		3.15	327		Pn	09 06 15.5	+0.6
CGIG					Sb	09 06 59.2	-0.6
TSIG	Topolobambo	3.44	233	*e*P	Pb	09 06 25.8	-0.3
TSIG				*i* S	Sg	09 07 16.1	+0.4
MNTX	Cornudas Mount	4.00	8	Pn	Pn	09 06 24.4	-2.0
MNTX				IAML		09 07 30.0	
	comp=E,61nm,0.5s						
HSIG		4.55	288	Pn	Pn	09 06 33.8	-0.2
HSIG				IAML		09 07 53.8	
	comp=N,84nm,0.8s						
HSIG				IAML		09 07 57.1	
	comp=E,37nm,0.9s						
319A	Douglas	4.63	323		Pn	09 06 36.5	+1.4
121A	Cookes Peak, D	5.04	343		Pn	09 06 40.7	-0.1
121A				IAML		09 08 07.6	
	comp=N,52nm,0.5s						
121A				IAML		09 08 09.8	
	comp=E,49nm,0.5s						
833A	Chaparral WMA,	5.87	83	Pn	Pn	09 06 50.6	-1.5
JCT	Junction City	6.08	62		Pn	09 06 58.2	+3.1
TUC	Tucson	6.17	319		Pn	09 06 57.3	+1.0
Y22D	IRIS PASSCAL I	6.38	353	Pn	Pn	09 06 59.7	+0.5
MSTX	Muleshoe	6.82	23	Pn	Pn	09 07 07.3	+2.0
ANMO	Albuquerque	7.21	357		Pn	09 07 12.6	+1.9
ABTX	Abilene, Hawle	7.36	47	Pn	Pn	09 07 15.8	+3.3
Y14A	Wickenburg	8.64	318		Pn	09 07 30.9	+0.7

IDC ***06*** *09:12:23.8±1.2, 16°.67S×69°.52W, h182^{km}±10^{km}, mb3.2/4, mb1 3.4/6, mb1mx3.2/27, mbtmp3.6/6, Error ellipse: s-maj=24.8km s-min=19.6km az=108.0*
ISC 06 09:12:21.8±1.2, **16°.74S**±0°.08×**69°.7W**±0°.1, **h167**^{km}±12^{km}, **n16**, σ**2^s.00**/27, **mb3.4**/4, **5C-2D**, **Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	1.60	74	P	Pn	09 12 56.1	+1.8
	9.9nm,0.3s,baz=272,slow=8.5,SNR=234						
LPAZ				S	Sn	09 13 20.1	+0.8
	3.6nm,0.3s,baz=205,slow=19,SNR=21						
MNMC	Minye Minye	2.38	177	⇓*e*P	Pn	09 13 04.2	+1.6
MNMC				*e*S	Sn	09 13 35.1	+0.7
MNMC				IAML		09 13 38.6	
	comp=N,184nm,0.3s						
PSGC	Pisagua	2.87	187	⇑*i*P	Pn	09 13 08.2	-0.1
PSGC				*e*S	Sn	09 13 42.5	-2.0
PSGC				IAML		09 13 45.2	
	comp=N,40nm,0.3s						
GO01	Chusmiza	2.96	170	⇑*i*P	Pn	09 13 11.9	+2.1
GO01				*e*S	Sn	09 13 49.1	+2.0
GO01				IAML		09 13 54.6	
	comp=N,62nm,0.2s						
PB11	IPOC Station P	3.00	179	*e*P	Pn	09 13 11.1	+1.1
PB11				*e*S	Sn	09 13 47.6	-0.1
PB11				IAML		09 13 49.5	
	comp=E,81nm,0.4s						
PB08	IPOC Station P	3.43	171	⇓*e*P	Pn	09 13 17.3	+1.7
PB08				*e*S	Sn	09 13 58.4	+0.9
PB08				IAML		09 14 01.1	
	comp=N,51nm,0.3s						
PB01	IPOC Station P	4.29	177	⇑*i*P	Pn	09 13 26.6	+0.3
PB01				*e*S	Sn	09 14 13.9	-2.8
PB02	IPOC Station P	4.56	182	⇑*i*P	Pn	09 13 30.4	+0.5
PB02				*e*S	Sn	09 14 20.7	-2.3
PB07	IPOC Station P	4.96	182	⇑*i*P	Pn	09 13 35.4	+0.2
PB07				*e*S	Sn	09 14 28.5	-4.1
PB07				IAML		09 14 35.1	
	comp=E,38nm,0.4s						
LVC	Limon Verde	5.89	173	P	Pn	09 13 48.6	+1.1
	comp=E,2.2nm,0.3s,baz=353,slow=9.6,SNR=31						
LVC				S	Sn	09 14 51.8	-3.0
	comp=E,2.8nm,0.3s,baz=37,slow=20,SNR=14						
SIV	San Ignacio	8.35	86	P	Pn	09 14 17.1	-2.6
	comp=E,0.1nm,0.3s,baz=285,slow=12,SNR=3.7						
SIV				S	Sn	09 15 49.6	-3.4
	comp=E,0.1nm,0.3s,baz=325,slow=17,SNR=4.1						
PLCA	Paso Flores	23.92	182	P	P	09 17 22.9	+2.5
	comp=E,1.9nm,1.1s,baz=23,slow=12,SNR=3.1						
TXAR	Lajitas Array	56.32	324	P	P	09 21 45.0	-0.4
	comp=E,0.3nm,0.8s,baz=144,slow=9.8,SNR=3.6						
TORD	Torodi Ar. Bea	76.55	72	P	P	09 23 53.2	-0.9
	comp=E,1.1nm,0.6s,baz=256,slow=5.3,SNR=5.4						
YKA	Yellowknife Ar	86.46	341	P	P	09 24 45.0	-0.1
	comp=E,0.3nm,0.7s,baz=133,slow=5.1,SNR=6.9						
SONM	Songino Array	148.83	5	PKPbc	PKiKP	09 31 50.7	-0.3
	comp=E,0.4nm,0.6s,baz=296,slow=2.1,SNR=3.4						

TRN 06 09:54:47.6, 18°.60N×63°.29W, h5^{km}, MD3.7, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMRT	St. Maarten	0.58	160	*e*P	Pn	09 55 02.8	+0.2
SMRT				*e*S	Sn	09 55 11.9	-0.7
SABA	Saba	0.97	177	*e*P	Pn	09 55 10.0	+2.0
SABA				*e*S	Sn	09 55 26.0	+3.8
SEUS	St. Eustatius	1.14	165	*e*P	Pn	09 55 12.0	+1.7
SEUS				*e*S	Sn	09 55 30.2	+4.0
SKI	Saint Kitts	1.36	157	*e*P	Pg	09 55 15.4	+1.6
SKI				*e*S	Sn	09 55 35.9	+4.1
NVDO	Nevis, Disaste	1.60	157	*e*P	Pg	09 55 18.6	+0.2
NVDO				*e*S	Sg	09 55 41.4	+2.2
NVBH	Bath Hotel, Ne	1.61	156	*e*P	Pg	09 55 19.7	+1.3
NVBH				*e*S	Sg	09 55 41.5	+2.2
ANWB	Willy Bob	1.70	123	*e*P	Pb	09 55 19.3	-0.1
ANWB				*e*S	Sg	09 55 44.1	+1.7
MLYT	Lee's Yard	2.14	151	*e*P	Pb	09 55 26.5	-0.4
MLYT				*e*S	Sg	09 55 55.2	-1.3

MAN 06 10:04:18.2, 10°.84N×122°.13E, h7^{km}, mb4.1, ML2.9, MS2.6, 1C, Panay

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCP	Roxas	0.94	40	⇑*e*P	Pb	10 04 36.7	-0.1
RCP				*e*S	Sn	10 04 51.9	+0.4
LLP	Lapu-Lapu	1.88	106	*e*P	Pn	10 04 50.7	-0.1
LLP				*e*S	Sn	10 05 15.5	+0.7

JMA ***06*** *10:18:12.7±0.2, 30°.76N×140°.96E, h36^{km}, M4.0*
IDC ***06*** *10:18:13.7±1.7, 30°.73N×141°.18E, h54^{km}±16^{km}, mb3.4/9, mb1 3.6/13, mb1mx3.4/55, mbtmp3.7/13, ML3.2/4, Error ellipse: s-maj=24.3km s-min=11.0km az=75.0*
ISC 06 10:18:12.1±0.6, **30°.82N**±0°.05×**141°.3E**±0°.1, **h35**^{km}, **n32**, σ**2^s.48**/33, **mb3.7**/9, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	2.59	332	P	Pn	10 18 52.8	+1.2
JHJ2				*e*S	Sn	10 19 22.2	+0.3
JHJ	Hachijo jima 2	2.62	331	P	Pn	10 18 53.0	+1.1
	18nm,0.3s,baz=99,slow=14,SNR=3.8						
JHJ				S	Sn	10 19 21.8	-0.7
	33nm,0.3s,baz=74,slow=20,SNR=3.6						
CBIJ	Chichi jima	3.80	168	P	Pn	10 19 10.7	+2.5
CBIJ				*e*S	Sn	10 19 53.6	+1.9
JCJ	Chichijima	3.80	168	P	Pn	10 19 08.8	+0.6
	5.8nm,0.3s,baz=285,slow=20,SNR=2.5						
JCJ				S	Sn	10 19 51.6	-0.1
	9.9nm,0.3s,baz=270,slow=20,SNR=3.2						
BSO1	Boso 1	3.83	356	P	Pn	10 19 12.1	+4.0
BSO3	Boso 3	4.02	351	P	Pn	10 19 15.3	+4.4
BSO4	Boso 4	4.23	350	P	Pn	10 19 17.4	+3.4
JHU	Hanno	5.28	342	P	Pn	10 19 32.6	+4.0
JRY	Ryogami san	5.55	340	P	Pn	10 19 36.5	+4.3
JAG	Ashikaga	5.79	345	P	Pn	10 19 39.2	+3.7
JHO	Hitachi	5.80	354	P	Pn	10 19 38.2	+2.5
JHO				*e*S	Sn	10 20 39.2	-1.8
MJAR	Matsushiro Arr	6.25	337	P	Pn	10 19 44.9	+3.1
	0.2nm,0.3s,baz=155,slow=14,SNR=6.3						
JFK	Kawauchi	6.54	357	*e*S	Sn	10 20 55.7	-3.4
JMK	Ichinoseki	8.11	360	P	Pn	10 20 10.1	+2.8
JMK				*e*S	Sn	10 21 34.5	-3.3
JCH	Churui	11.89	8	P	Pn	10 21 01.7	+2.6
JCH				*e*S	Sn	10 23 04.1	-6.3
KSRS	Korea Array	12.88	304	P	Pn	10 21 15.2	+2.6
	0.1nm,0.3s,baz=116,slow=15,SNR=2.8						
H11N2	WAKE ISLAND Hy	25.61	110	T	T	10 50 27.4	
	baz=295						
H11N1	WAKE ISLAND Hy	25.61	110	T	T	10 50 31.1	
	baz=295						
H11N3	WAKE ISLAND Hy	25.63	110	T	T	10 50 30.0	
	baz=295						
H11S3	WAKE ISLAND Hy	26.09	112	T	T	10 51 07.7	
	baz=300						
H11S1	WAKE ISLAND Hy	26.09	112	T	T	10 51 09.3	
	baz=300,slow=74,SNR=5.5						
H11S2	WAKE ISLAND Hy	26.10	112	T	T	10 51 07.2	
	baz=300,slow=74,SNR=5.1						
CMAR	Chiang Mai Arr	40.17	262	P	P	10 25 44.8	-0.4
	0.5nm,0.3s,baz=53,slow=9.2,SNR=3.4						
ZALV	Zalesovo Beam	46.19	317	PcP	PcP	10 28 08.0	-0.7
	0.6nm,0.4s,baz=67,slow=1.7,SNR=4.1						
MKAR	Makanchi Array	47.54	307	P	P	10 26 42.0	-2.0
	0.3nm,0.6s,baz=86,slow=9.3,SNR=4.7						
MKAR				PcP	PcP	10 28 12.6	-1.1
	0.3nm,0.6s,baz=167,slow=2.5,SNR=2.9						
WRA	Warramunga Arr	50.91	188	P	P	10 27 08.7	-1.3
	0.3nm,0.3s,baz=1.2,slow=7.5,SNR=5.8						
ASAR	Alice Springs	54.64	188	P	P	10 27 36.2	-1.3
	0.3nm,0.5s,baz=354,slow=5.3,SNR=8.7						
ILAR	Eielson Array	54.86	30	P	P	10 27 40.0	+1.4
	0.3nm,0.7s,baz=263,slow=7.2,SNR=4.6						
YKA	Yellowknife Ar	69.26	29	P	P	10 29 15.1	-0.1
	0.2nm,0.7s,baz=298,slow=6.0,SNR=3.6						
FINES	FINESS Array B	74.27	333	P	P	10 29 43.9	-1.5
	0.9nm,0.6s,baz=83,slow=6.5,SNR=6.4						
AKASG	Malin Array Be	79.16	323	P	P	10 30 12.8	-0.4
	0.3nm,0.3s,baz=50,slow=6.0,SNR=4.2						
BRTR	Keskin Array B	82.90	312	P	P	10 30 33.6	+0.1
	0.6nm,0.6s,baz=88,slow=2.8,SNR=3.3						

GCMT ***06*** *10:23:57.9±0.5, 7°.87S±0°.06×116°.75E±0°.05, h321^{km}±3^{km}, MW5.1/50, Moment Tensor Solution. s50,c66; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.72±.33; $M_{\theta\theta}$-1.16±.42; $M_{\phi\phi}$-3.56±.49; $M_{r\theta}$2.73±.50; $M_{\theta\phi}$-2.48±.58; $M_{\phi r}$1.09±.52; Best double couple: $M_0$5.73900×10^{16} NP1:ϕ_s195.00000°, δ35.00000°, λ61.00000°. NP2: ϕ_s49.00000°, δ60.00000°, λ109.00000°. Principal axes: T 5.7930, Plg69.0000°, Azm358.0000°; N -0.1100, Plg16.0000°, Azm220.0000°; P -5.6840, Plg13.0000°, Azm126.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*
BJI ***06*** *10:23:59.0±0.0, 7°.70S×117°.10E, h297^{km}, mB4.8/48, mb5.1/78*
NEIC ***06*** *10:23:59.9±1.7, 7°.64S±0°.07×117°.13E±0°.06, h299^{km}±3^{km}, mb5.1/108, Error ellipse: s-maj=10.1km s-min=8.5km az=169.0*
MOS ***06*** *10:24:00.4±0.9, 7°.53S×117°.10E, h315^{km}, mb5.2/48, Error ellipse: s-maj=8.4km s-min=5.2km az=107.8*
IDC ***06*** *10:24:01.0±0.8, 7°.61S×117°.11E, h307^{km}±7^{km}, mb4.7/46, mb1 4.8/50, mb1mx4.7/57, mbtmp5.4/50, Error ellipse: s-maj=8.0km s-min=5.2km az=68.0*
DJA ***06*** *10:24:00.1±0.1, 8°S±2°×11°7E±°, h292^{km}±1^{km}, M5.1/93, mb5.2/93, mB5.5/57, MLv5.6/29, Mw(mB)5.0/57, Mwp5.7/3*
KLM ***06*** *10:24:00.0, 8°.04S×117°.15E, h301^{km}, mb5.4*
ISC 06 10:23:59.7±0.4, **7°.69S**±0°.03×**117°.07E**±0°.04, **h299**^{km}±3^{km}, **n814**, σ**1^s.13**/706, **mb5.1**/143, **23C-4D**, **Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	1.33	148	P	Pn	10 24 39.3	-2.4
SRBI	Singaraja	1.88	258	P	Pn	10 24 45.7	+0.3
DNP	Denpasar	2.08	242	P	Pn	10 24 47.5	+0.5
IGBI	Denpasar	2.21	239	P	Pn	10 24 47.9	-0.2
JAGI	Jajag, Banyuwa	2.99	255	P	Pn	10 24 55.5	+0.2
JAGI	Jajag, Banyuwa	2.99	255		Pn	10 24 55.4	+0.1
JAGI				S	S	10 25 36.4	-3.3
WBSI	Waikabubak, Su	3.01	130	P	Pn	10 24 52.4	-3.1
KMMI	Kalianget	3.14	281	P	Pn	10 24 59.8	+3.0
WSI	Waingapu	3.75	122	P	Pn	10 25 00.6	-2.6
KAPI	Kappang	3.76	45	P	Pn	10 25 03.5	+0.2
	21nm,0.3s,baz=216,slow=5.8,SNR=119						
KAPI				S	S	10 25 51.7	-2.5
	15nm,0.3s,baz=207,slow=11,SNR=2.8						
BKSI	Bulukumba	3.84	52	P	Pn	10 25 04.5	+0.4
BNSI	Bone	4.45	43	P	Pn	10 25 12.3	+1.4
SPSI	Sidrap Palu	4.57	36	P	Pn	10 25 12.7	+0.4
GRJI	Gresik	4.62	279	P	Pn	10 25 15.3	+2.5
EDFI	Ende, Flores	4.70	103	P	Pn	10 25 11.0	-2.8
MMRI	Maumere	5.21	101	P	Pn	10 25 18.0	-1.6
	6.3nm12µm1µm,0.7s						
MMRI	Maumere	5.21	101		Pn	10 25 17.6	-2.0
PWJI	Pagerwojo	5.22	266	P	Pn	10 25 20.1	+0.3
	16nm44µm3µm,0.6s						
TTSI	Tana Toraja	5.36	31	P	Pn	10 25 23.4	+1.9
	0.5nm1µm151nm,0.9s						
PCJI	Pacitan	5.86	265	P	Pn	10 25 27.7	+0.4
	56nm173µm12µm,0.7s						
WOJI	Wonogiri, Jawa	6.09	268	P	Pn	10 25 31.2	+1.1
	11nm36µm4µm,0.7s						
UWJI	Ujung Watu	6.20	281	P	Pn	10 25 33.2	+1.7
	1.1nm5µm275nm,0.6s						
BKB	Balikpapan	6.39	358	P	Pn	10 25 38.9	+5.2
	1.6nm5µm401nm,1.1s						
BKB	Balikpapan	6.39	358		Pn	10 25 37.8	+4.1
UGM	Wanagama	6.49	268	P	Pn	10 25 35.6	+0.7
	15nm29µm2µm,0.6s						
UGM	Wanagama	6.49	268		Pn	10 25 36.1	+1.2
UGM					S	10 26 46.0	-5.8
SMRI	Semarang	6.60	275	P	Pn	10 25 38.8	+2.5
	4.5nm15µm999nm,0.5s						
SMRI	Semarang	6.60	275		Pn	10 25 38.3	+2.0
SMKI	Samarinda	7.19	1	P	Pn	10 25 46.9	+3.4
	3.0nm16µm769nm,1.1s						
PBKI	Pangkalan Bun	7.31	312	P	Pn	10 25 46.8	+2.0
	2.9nm7µm748nm,0.8s						
SOEI	Soe	7.41	107	P	Pn	10 25 43.8	-2.4
	8.2nm3µm13µm2µm,0.7s						
SOEI	Soe	7.41	107		Pn	10 25 44.0	-2.2
SOEI				S	S	10 27 02.1	-10
KPJI	Karang Pucung	8.07	272	P	Pn	10 25 55.2	+1.0
	9µm877nm,0.6s						
APSI	Ampana	8.13	34	P	Pn	10 25 56.4	+1.4
	62nm,0.9s						
MPSI	Mapaga	8.46	20	P	Pn	10 26 00.9	+2.0
	68nm,1.2s						
LUWI	Luwuk	8.71	41	P	Pn	10 26 03.4	+1.3
	103nm,1.0s						
LUWI	Luwuk	8.71	41		Pn	10 26 02.2	+0.1
CISI	Cisompet, Garu	9.17	270	P	Pn	10 26 07.4	-0.4
	34µm1µm,0.7s						
CISI	Cisompet, Garu	9.17	270		Pn	10 26 07.5	-0.4
LEM	Lembang	9.41	275	P	Pn	10 26 12.4	+1.5
	41nm,0.3s,baz=60,slow=8.4,SNR=19						
LEM				S	S	10 27 56.1	-1.6
	21nm,0.3s,baz=66,slow=19,SNR=2.5						
MRSI	Marisa	9.45	31	P	Pn	10 26 12.7	+1.5
	38nm,0.6s						
STKI	Sintang	9.51	324	P	P	10 26 14.5	-1.5
	179nm,0.8s						
CNJI	Cibinong	9.86	272	P	Pn	10 26 16.1	-0.1
	16µm1µm,0.9s						
CBJI	Citeko	10.22	276	P	Pn	10 26 20.7	+0.1
	29µm2µm,0.5s						
DBJI	Dramaga	10.30	276	P	Pn	10 26 22.7	+1.1
	344nm,1.1s						
SKJI	Sukabumi	10.45	273	P	Pn	10 26 20.9	-2.5
	14µm1µm,0.6s						
SANI	Sanana	10.50	58	P	Pn	10 26 25.2	+1.1
	2µm186nm,0.9s						
KMSI	Cibinong	10.72	40	P	P	10 26 28.6	-0.9
	5µm143nm,0.7s						
NLAI	Namlea	10.92	67	P	P	10 26 30.9	-0.8
	3µm397nm,0.7s						
SBJI	Serang	10.97	277	P	Pn	10 26 30.6	+0.8
	11µm317nm,0.9s						
SBUM	Sibu	11.17	334		Pn	10 26 33.4	+1.1
SBUM	Sibu	11.17	334	P	P	10 26 35.0	+0.5
KSM	Kuching	11.32	323		P	10 26 36.7	+0.5
KSM	Kuching	11.32	323	P	P	10 26 37.0	+0.7
AAI	Ambon	11.76	71	P	P	10 26 40.5	-0.6
	3µm315nm,0.8s						
MSAI	Masohi	12.57	71	P	Pn	10 26 48.7	-0.5
	904nm92nm,0.6s						
KASI	Kota Agung	12.67	279	P	P	10 26 52.2	+1.0
	9µm687nm,0.5s						
BNDI	Bandanaira	13.14	77	P	P	10 26 56.9	+0.4
	15µm1µm,1.1s						
LWLI	Liwa	13.20	281	P	P	10 26 59.0	+1.8
	13µm273nm,0.6s						
MDSI	Maura Dua	13.20	283	P	P	10 26 58.5	+1.4
	1µm90nm,1.0s						
FITZ	Fitzroy Crossi	13.29	142	P	P	10 26 58.3	+0.3
	38nm,0.3s,baz=323,slow=7.2,SNR=227						
FITZ				S	S	10 29 27.9	+2.9
	3.8nm,0.3s,baz=336,slow=2.6,SNR=4.0						
KKM	Kota Kinabalu	13.67	356		Pn	10 27 04.0	+1.4
KNRA	Kununurra	13.93	126	P	P	10 27 04.8	-0.3
	baz=14,SNR=237						
KNRA	Kununurra	13.93	126	P	P	10 27 04.8	-0.3
PSA00	Pilbara Seismi	14.06	169	P	Pn	10 27 07.1	0.0
PSA00	Pilbara Seismi	14.06	169	P	P	10 27 06.4	-0.2
SAUI	Saumlaki	14.10	92	P	P	10 27 05.3	-1.8
	9µm786nm,0.7s						
SAUI	Saumlaki	14.10	92		P	10 27 05.9	-1.1
MNAI	Manna	14.42	282	P	Pn	10 27 13.6	+2.2
	9µm813nm,0.6s						
MNAI	Manna	14.42	282	P	P	10 27 10.7	+0.2
MTN	Manton Dam	14.76	111	P	P	10 27 14.5	+0.3
	baz=15,SNR=404						
MTN	Manton Dam	14.76	111	P	P	10 27 14.6	+0.3
KSI	Kapahiang	14.95	285	P	Pn	10 27 17.2	-0.5
	278nm,0.7s						
GIRL	Giralia	15.12	190	P	Pn	10 27 19.4	-0.2
	baz=15,SNR=16						
GIRL	Giralia	15.12	190	P	Pn	10 27 20.7	+1.1
SWI	Sorong	15.69	65	P	Pn	10 27 25.3	-1.0
	8µm821nm,0.9s						
SIJI	Sorong	15.69	65	P	P	10 27 24.8	+0.2
	14nm,0.3s,baz=269,slow=6.1,SNR=42						
SIJI				S	S	10 30 12.4	-2.2
	1.9nm,0.3s,baz=225,slow=22,SNR=6.7						
FAKI	Fak Fak	15.84	73	P	P	10 27 26.2	+0.1
	3µm361nm,0.8s						
FAKI	Fak Fak	15.84	73	P	P	10 27 25.3	-0.9
KDU	Kakadu	15.95	109	P	P	10 27 26.7	-0.6
	baz=16,SNR=34						
KRJI	Kerinci	16.51	289	P	Pn	10 27 35.2	-0.8
	8µm442nm,0.7s						
KCP	Kidapawan	16.65	29	⇓*i*P	Pn	10 27 37.3	-0.3
SDSI	Sungai Dareh	16.97	293	P	P	10 27 39.1	+0.7
	2µm48nm,0.8s						
PDSI	Padang	17.87	291	P	P	10 27 46.8	-1.4
	3µm24nm,0.8s						
MEEK	Meekatharra	18.91	176	P	P	10 27 59.9	+0.8
	baz=19,SNR=48						
IPM	Ipoh	20.06	307	IAmb	IAmb	10 28 13.6	
	comp=Z,54nm,0.6s						
IPM	Ipoh	20.06	307	P	P	10 28 13.0	+1.6
WRKA	Warakurna	20.32	149	P	P	10 28 14.5	+0.5
	baz=20,SNR=239						
WB0	Warramunga Arr	20.65	127	P	P	10 28 16.9	-0.5
WB0				IAmb	IAmb	10 28 18.4	
	comp=Z,131nm,0.9s						
WRA	Warramunga Arr	20.70	128	P	P	10 28 17.4	-0.5
	comp=Z,113nm,0.7s,baz=298,slow=12,SNR=156						
WRA				S	S	10 31 47.0	-2.9
	comp=Z,34nm,0.9s,baz=293,slow=19,SNR=8.3						
WRA				ScP	ScP	10 35 20.4	-2.0
	comp=Z,4.4nm,0.6s,baz=305,slow=2.1,SNR=4.9						
WRA				PKiKP	PKiKP	10 40 00.8	-1.5
	comp=Z,0.6nm,0.5s,baz=285,slow=1.3,SNR=4.6						
WRAB	Tennant Creek	20.71	128	*ce*P	P	10 28 17.4	-0.5
WRAB				pmax	pmax		
	comp=Z,160nm,0.8s						
WRAB	Tennant Creek	20.71	128	P	P	10 28 17.6	-0.3

WB2	**Warramunga Arr**	**20.71**	**128**	P	**P**	**10 28 17.6**	**-0.3**
RPSI	**Rantau Prapat**	**20.83**	**299**	P	**P**	**10 28 20.2**	**+1.0**
KULM	**Kulim**	**20.84**	**308**	IAmb	IAmb	10 28 22.5	
	comp=Z,54nm,1.0s						
KULM	**Kulim**	**20.84**	**308**	P	**P**	**10 28 20.0**	**+0.7**
PSI	**Prapat**	**20.89**	**299**	P	**P**	**10 28 20.1**	**+0.3**
	comp=Z,113nm,0.5s,baz=145,slow=7.9,SNR=75						
MORW	**Morawa**	**21.29**	**182**	P	**P**	**10 28 25.0**	**+1.6**
	baz=22,SNR=4.0						
MORW	**Morawa**	**21.29**	**182**	P	**P**	**10 28 24.2**	**+0.9**
TGY	**Tagaytay City**	**21.98**	**10**	P	**P**	**10 28 29.1**	**-0.8**
	comp=Z,263nm,0.5s,baz=153,slow=6.8,SNR=6.4						
KCSI	**Kotacane, Aceh**	**22.24**	**299**	P	P	10 28 24.1	-8.1
SMPI	**Sarmi**	**22.29**	**76**	P	**P**	**10 28 35.1**	**+2.5**
	comp=Z,55nm,1.2s						
TPTI		**22.63**	**298**	P	**P**	**10 28 34.6**	**-1.1**
	comp=Z,94nm,0.7s						
ASAR	**Alice Springs**	**22.66**	**136**	P	**P**	**10 28 36.6**	**+0.7**
	comp=Z,149nm,0.6s,baz=312,slow=8.8,SNR=1148						
ASAR				PcP	**PcP**	**10 32 18.6**	**+0.2**
	comp=Z,20nm,0.7s,baz=313,slow=1.5,SNR=11						
ASAR				S	**S**	**10 32 21.0**	**-0.5**
	comp=Z,9.0nm,0.7s,baz=310,slow=16,SNR=4.8						
ASAR				ScP	**ScP**	**10 35 25.9**	**-1.4**
	comp=Z,10nm,0.6s,baz=323,slow=2.2,SNR=7.3						
ASAR				P3KPbc		11 02 04.2	
	comp=Z,0.1nm,0.2s,baz=134,slow=5.0,SNR=5.5						
ASAR	**Alice Springs**	**22.66**	**136**	P	**P**	**10 28 36.3**	**+0.4**
AS31	**Alice Springs**	**22.66**	**136**	P	**P**	**10 28 36.7**	**+0.8**
AS31				IAmb	IAmb	10 28 38.3	
	comp=Z,59nm,0.8s						
BLDU	**Ballidu**	**22.81**	**181**	P	**P**	**10 28 37.9**	**+0.7**
	baz=23,SNR=20						
SNSI	**Sinabang, Aceh**	**22.99**	**295**	P	**P**	**10 28 42.4**	**+3.4**
	comp=Z,184nm,0.9s						
MLSI	**Meulaboh, Aceh**	**23.79**	**299**	P	**P**	**10 28 46.5**	**+0.2**
	comp=Z,202nm,0.7s						
KLBR	**Kellerberrin**	**23.79**	**179**	P	**P**	**10 28 47.0**	**+1.0**
	baz=24,SNR=9.2						
KMBL	**Kambalda**	**23.99**	**170**	P	**P**	**10 28 48.5**	**+0.7**
	baz=24,SNR=22						
NWAO	**Narrogin (SRO)**	**25.12**	**180**	P	**P**	**10 28 59.1**	**+1.1**
	comp=Z,18nm,0.8s,baz=358,slow=8.1,SNR=14						
NWAO				PcP	**PcP**	**10 32 23.9**	**+0.4**
	comp=Z,20nm,0.6s,baz=22,slow=5.4,SNR=4.3						
NWAO	**Narrogin (SRO)**	**25.12**	**180**	P	**P**	**10 28 59.0**	**+1.1**
FORT	**Forrest**	**25.17**	**157**	P	**P**	**10 28 59.3**	**+0.8**
	baz=25,SNR=30						
QIS	**Mount Isa**	**25.28**	**123**	P	**P**	**10 29 00.1**	**+0.5**
	baz=25,SNR=20						
COEN	**Coen**	**26.37**	**106**	P	**P**	**10 29 09.0**	**-0.4**
	baz=26,SNR=142						
COEN	**Coen**	**26.37**	**106**	P	**P**	**10 29 09.0**	**-0.4**
RKGY	**Rocky Gully**	**26.79**	**180**	P	**P**	**10 29 15.6**	**+2.7**
	baz=27,SNR=5.9						
MTSU	**Mount Surprise**	**28.48**	**114**	P	**P**	**10 29 28.9**	**+0.8**
	baz=28,SNR=68						
PBKT	**Sadao Pong**	**28.89**	**327**	IAmb	IAmb	10 29 34.6	
	comp=Z,77nm,0.7s						
BBOO	**Buckleboo**	**30.59**	**147**	P	**P**	**10 29 46.9**	**+0.5**
	baz=31,SNR=30						
BBOO	**Buckleboo**	**30.59**	**147**	IAmb	IAmb	10 29 47.9	
	comp=Z,64nm,0.9s						
CTA	**Charters Tower**	**30.83**	**117**	P	**P**	**10 29 49.8**	**+1.1**
	comp=Z,48nm,0.8s,baz=284,slow=11,SNR=37						
TPUB	**Ta-pu**	**30.99**	**6**	P	**P**	**10 29 50.1**	**+0.1**
TPUB				IAmb	IAmb	10 29 52.0	
	comp=Z,106nm,1.5s						
YULB	**Yu-li**	**31.16**	**8**	P	**P**	**10 29 50.9**	**-0.7**
YULB				IAmb	IAmb	10 29 55.3	
	comp=Z,122nm,1.9s						
SSLB	**Suanglung**	**31.51**	**7**	P	**P**	**10 29 54.8**	**+0.2**
SSLB				IAmb	IAmb	10 29 57.7	
	comp=Z,145nm,2.0s						
CM31	**Chiang Mai Arr**	**31.54**	**326**	P	**P**	**10 29 55.6**	**+0.7**
CM31				IAmb	IAmb	10 29 57.6	
	comp=Z,44nm,0.6s						
CMAR	**Chiang Mai Arr**	**31.54**	**326**	P	**P**	**10 29 56.9**	**+2.0**
	comp=Z,37nm,0.6s,baz=152,slow=6.7,SNR=131						
CMAR				PcP	**PcP**	**10 32 39.8**	**0.0**
	comp=Z,4.6nm,0.6s,baz=192,slow=2.3,SNR=6.6						
CMAR				ScP	**ScP**	**10 35 54.3**	**+0.1**
	comp=Z,2.9nm,0.7s,baz=175,slow=3.0,SNR=9.8						
CMAR	**Chiang Mai Arr**	**31.54**	**326**	P	**P**	**10 29 55.8**	**+0.9**
CMAR					**PcP**	**10 32 40.5**	**+0.7**
CMAR					**ScP**	**10 35 54.5**	**+0.3**
CHTO	**Chiang Mai**	**31.82**	**326**	P	**P**	**10 29 58.6**	**+1.3**
CHTO				pmax	pmax		
	comp=Z,27nm,0.7s						
CHTO	**Chiang Mai**	**31.82**	**326**	P	**P**	**10 29 58.6**	**+1.3**
CHTO				IAmb	IAmb	10 29 59.8	
	comp=Z,27nm,0.7s						
QLP	**Quilpie**	**31.92**	**129**	P	**P**	**10 29 58.9**	**+0.7**
	baz=32,SNR=61						
NACB	**Ninganchiao**	**31.97**	**8**	P	**P**	**10 29 58.5**	**-0.1**
NACB				IAmb	IAmb	10 30 13.3	
	comp=Z,138nm,1.9s						
YHNB	**Yeheng**	**32.43**	**7**	P	**P**	**10 30 02.9**	**+0.3**
HTT	**Hallett**	**32.63**	**145**	P	**P**	**10 30 05.6**	**+1.3**
	baz=33,SNR=42						
STKA	**Stephens Creek**	**33.18**	**140**	P	**P**	**10 30 10.1**	**+1.1**
	baz=33,SNR=86						
STKA	**Stephens Creek**	**33.18**	**140**	P	**P**	**10 30 10.1**	**+1.1**
	comp=Z,58nm,0.6s,baz=315,slow=9.1,SNR=180						
STKA				PcP	**PcP**	**10 32 44.1**	**0.0**
	comp=Z,10nm,0.5s,baz=324,slow=11,SNR=2.7						
STKA				S	**S**	**10 35 05.5**	**-0.6**
	comp=Z,6.1nm,0.6s,baz=84,slow=18,SNR=3.7						
STKA				ScP	**ScP**	**10 35 58.7**	**-1.0**
	comp=Z,16nm,0.9s,baz=333,slow=6.0,SNR=4.4						
GYA	**Guiyang**	**35.41**	**344**	⇓*i*P	**P**	**10 30 29.3**	**+1.1**
GYA				pP	pP	10 31 32.0	+5.1
GYA				PP	**sP**	**10 32 02.0**	**+0.6**
GYA				S	**S**	**10 35 42.1**	**+1.6**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,130nm,5.3s						
GYA				LR	LR		
	comp=Z,300nm,16.0s						
GYA				LR	LR		
	comp=Z,250nm,15.8s						
GYA				LR	LR		
	comp=Z,130nm,16.8s						
RMQ	**Roma**	**35.43**	**126**	P	**P**	**10 30 28.3**	**0.0**
	baz=36,SNR=18						
KMI	**Kunming**	**35.47**	**337**	P	**P**	**10 30 32.0**	**+3.2**
KMI				pmax	pmax		
	comp=Z,94nm,1.0s						
CMSA	**Cobar Meteorol**	**35.71**	**136**	P	**P**	**10 30 31.2**	**+0.7**
	baz=36,SNR=84						
EIDS	**Eidsvold**	**36.88**	**123**	P	**P**	**10 30 41.5**	**+1.0**
	baz=37,SNR=3.6						
EIDS	**Eidsvold**	**36.88**	**123**	P	**P**	**10 30 40.4**	**-0.1**
WHN	**Wuhan**	**38.10**	**356**	P	**P**	**10 30 52.5**	**+2.0**
WHN				pmax	pmax		
	comp=Z,100nm,0.7s						
SAIH	**SAIHA**	**38.16**	**322**	*e*x	**P**	**10 30 52.1**	**+0.9**
SAIH				IAmb	IAmb	10 30 54.5	
	comp=Z,61nm,0.4s						
ENH	**Enshi**	**38.44**	**349**	IAmb	IAmb	10 30 55.9	
	comp=Z,65nm,0.8s						
YNG	**Young**	**39.16**	**137**	P	**P**	**10 30 59.9**	**+0.7**
	baz=39,SNR=42						
PALK	**Pallekele**	**39.19**	**291**	PcP	**PcP**	**10 33 02.9**	**+0.3**
	comp=Z,3.4nm,0.6s,baz=36,slow=4.1,SNR=4.0						
TOO	**Toolangi**	**39.35**	**143**	P	**P**	**10 31 01.9**	**+1.0**
	baz=40,SNR=22						
TOO	**Toolangi**	**39.35**	**143**	P	**P**	**10 31 03.1**	**+2.2**
TOO				pmax	pmax		
	comp=Z,50nm,1.1s						
TOO	**Toolangi**	**39.35**	**143**	P	**P**	**10 31 03.0**	**+2.2**
ARMA	**Armidale**	**39.47**	**130**	P	**P**	**10 31 02.6**	**+0.6**
	baz=40,SNR=23						
NJ2	**Nanjing**	**39.55**	**2**	⇑P	**P**	**10 31 04.0**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,120nm,0.7s						
CNB	**Canberra Magne**	**40.39**	**138**	P	**P**	**10 31 11.0**	**+1.5**
	baz=40,SNR=13						
CD2	**Chengdu**	**40.44**	**342**	⇑*i*P	**P**	**10 31 10.7**	**+0.9**
CD2				S	**S**	**10 36 59.6**	**+4.1**
CD2				pmax	pmax		
	comp=Z,160nm,0.8s						
CD2				pmax	pmax		
	comp=Z,130nm,3.2s						
RIV	**Riverview**	**40.81**	**134**	P	**P**	**10 31 13.7**	**+1.0**
	baz=41,SNR=4.9						
SHL	**Shillong**	**41.14**	**324**	*e*x	**P**	**10 31 16.4**	**+0.7**
SHL				IAmb	IAmb	10 31 17.8	
	comp=Z,64nm,0.4s						
SHL	**Shillong**	**41.14**	**324**	P	**P**	**10 31 16.6**	**+0.9**
	SNR=17						
SHL	**Shillong**	**41.14**	**324**	P	**P**	**10 31 16.4**	**+0.7**
SHL				pmax	pmax		
	comp=Z,90nm,0.7s						
SHL	**Shillong**	**41.14**	**324**	P	**P**	**10 31 16.4**	**+0.7**
SHL				IAmb	IAmb	10 31 17.2	
	comp=Z,90nm,0.7s						
XAN	**Xi'an**	**42.21**	**350**	P	**P**	**10 31 24.4**	**+0.4**
XAN				pmax	pmax		
	comp=Z,41nm,1.0s						
JCJ	**Chichijima**	**42.28**	**34**	P	**P**	**10 31 23.8**	**-0.9**
	comp=Z,221nm,0.6s,baz=126,slow=3.4,SNR=8.8						
JNU	**Nakatsue**	**42.66**	**17**	P	**P**	**10 31 27.8**	**+0.1**
	comp=Z,48nm,0.9s,baz=237,slow=2.4,SNR=28						
JNU	**Nakatsue**	**42.66**	**17**	P	**P**	**10 31 27.7**	**+0.1**
MOO	**Moorlands**	**43.62**	**147**	P	**P**	**10 31 36.3**	**+1.1**
	baz=44,SNR=3.1						
TIA	**Tai'an**	**43.66**	**0**	P	**P**	**10 31 35.6**	**+0.1**
TIA				pmax	pmax		
	comp=Z,68nm,0.6s						
TAU	**Tasmania Unive**	**44.02**	**148**	P	**P**	**10 31 38.2**	**-0.1**
TAU				pmax	pmax		
	comp=Z,28nm,1.1s						
TAU	**Tasmania Unive**	**44.02**	**148**	P	**P**	**10 31 38.2**	**-0.1**
DGAR	**Diego Garcia**	**44.21**	**267**	P	**P**	**10 31 40.9**	**+0.7**
DGAR				pmax	pmax		
	comp=Z,145nm,0.9s						
DGAR	**Diego Garcia**	**44.21**	**267**	P	**P**	**10 31 40.9**	**+0.7**
DGAR				IAmb	IAmb	10 31 42.4	
	comp=Z,144nm,0.9s						
LSA	**Lhasa**	**44.76**	**327**	P	**P**	**10 31 46.4**	**+1.6**
LSA				pmax	pmax		
	comp=Z,210nm,0.6s						
LSA	**Lhasa**	**44.76**	**327**	P	**P**	**10 31 46.6**	**+1.8**
LSA	**Lhasa**	**44.76**	**327**	IAmb	IAmb	10 31 47.0	
	comp=Z,38nm,0.6s						
ODAN	**Odare**	**44.80**	**321**	*e*P	**P**	**10 31 45.3**	**+0.4**
TAPN	**Taplejung**	**44.96**	**322**	*e*P	**P**	**10 31 47.0**	**+0.8**
	comp=Z,259nm,0.9s						
LZH	**Lanzhou**	**45.28**	**345**	⇑P	**P**	**10 31 50.0**	**+1.5**
LZH				sP	sP	10 33 24.2	+0.5
LZH				PP	**PP**	**10 33 40.0**	**0.0**
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
LZH				pmax	pmax		
	comp=Z,130nm,6.0s						
RAMN	**Ramite**	**45.36**	**320**	*e*P	**P**	**10 31 49.8**	**+0.5**
	comp=Z,104nm,0.6s						
TIY	**Taiyuan**	**45.37**	**355**	*e*P	**P**	**10 31 50.1**	**+1.1**
HYB	**Hyderabad**	**45.50**	**304**	*i* P	**P**	**10 31 49.0**	**-1.3**
HYB	**Hyderabad**	**45.50**	**304**	*e*x	**P**	**10 31 49.0**	**-1.3**
HYB				IAmb	IAmb	10 31 51.0	
	comp=Z,14nm,0.6s						
KSAR	**Wonju Array Be**	**46.02**	**12**	P	**P**	**10 31 54.8**	**+0.9**
KSAR	**Wonju Array Be**	**46.02**	**12**	P	**P**	**10 31 54.8**	**+0.9**
KSRS	**Korea Array**	**46.04**	**12**	P	**P**	**10 31 55.3**	**+1.3**
	comp=Z,53nm,0.8s,baz=190,slow=8.0,SNR=129						
KSRS				PcP	**PcP**	**10 33 25.5**	**+0.4**
	comp=Z,5.3nm,0.7s,baz=193,slow=2.9,SNR=6.1						
KSRS				ScP	**ScP**	**10 36 46.7**	**-2.6**
	comp=Z,2.2nm,0.9s,baz=149,slow=2.2,SNR=3.7						
KS19	**Wonju Array Si**	**46.07**	**12**	IAmb	IAmb	10 31 56.2	
	comp=Z,77nm,1.1s						
JIRN	**Jiri**	**46.12**	**321**	*e*P	**P**	**10 31 55.8**	**+0.4**
	comp=Z,294nm,0.5s						
GUN	**Gumba**	**46.49**	**321**	*e*P	**P**	**10 31 58.5**	**+0.3**
	comp=Z,224nm,0.7s						
DL2	**Dalian**	**46.55**	**5**	P	**P**	**10 31 58.6**	**+0.6**
DL2				pmax	pmax		
	comp=Z,130nm,0.6s						
PKI	**Pulchoki**	**46.55**	**320**	*e*P	**P**	**10 31 58.4**	**-0.2**
	comp=Z,71nm,0.4s						
PKIN	**Phulchoki**	**46.56**	**320**	*e*P	**P**	**10 31 58.4**	**-0.3**
	comp=Z,72nm,0.5s						
DMN	**Daman**	**46.77**	**320**	*e*P	**P**	**10 32 00.3**	**+0.1**
	comp=Z,70nm,0.4s						
GKN	**Gorkha**	**47.34**	**320**	*e*P	**P**	**10 32 04.5**	**0.0**
	comp=Z,129nm,0.4s						
BJT	**Baijiatuau**	**47.47**	**359**	IAmb	IAmb	10 32 06.7	
	comp=Z,82nm,0.6s						
BJI	**Beijing**	**47.49**	**359**	⇑*i*P	**P**	**10 32 05.6**	**+0.4**
BJI				PcP	**PcP**	**10 33 30.7**	**+0.5**
BJI				ScP	**ScP**	**10 36 55.6**	**+0.2**
BJI				S	**S**	**10 38 41.0**	**+4.4**
BJI				ScS	**ScS**	**10 41 29.6**	**+3.2**
BJI				pmax	pmax		
	comp=Z,100nm,0.5s						
DANN	**Dangsing**	**48.14**	**319**	*e*P	**P**	**10 32 10.6**	**-0.2**
	comp=Z,285nm,0.5s						
MAJO	**Matsushiro**	**48.26**	**23**	*i* P	**P**	**10 32 10.4**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,61nm,0.7s						
MAJO	**Matsushiro**	**48.26**	**23**	P	**P**	**10 32 09.6**	**-1.7**
MAJO				IAmb	IAmb	10 32 11.5	
	comp=Z,62nm,0.7s						
MAT	**Matsushiro**	**48.26**	**23**	P	**P**	**10 32 10.3**	**-0.9**
MJAR	**Matsushiro Arr**	**48.26**	**23**	P	**P**	**10 32 10.6**	**-0.7**
	comp=Z,67nm,0.8s,baz=201,slow=8.2,SNR=124						
MJAR				PcP	**PcP**	**10 33 33.2**	**+0.1**
	comp=Z,6.2nm,0.8s,baz=201,slow=4.4,SNR=3.3						
MJAR	**Matsushiro Arr**	**48.26**	**23**	P	**P**	**10 32 10.4**	**-0.8**
MJB9	**Matsu-Tunnel**	**48.27**	**23**	IAmb	IAmb	10 32 11.5	
	comp=Z,64nm,0.7s						
BTO	**Baotou**	**48.49**	**353**	*e*P	**P**	**10 32 14.4**	**+1.4**
HHC	**Hu-ho-hao-te**	**48.56**	**354**	*e*P	**P**	**10 32 14.1**	**+0.6**
HHC				pP	pP	10 33 22.2	+6.3
HHC				pmax	pmax		
	comp=Z,95nm,1.0s						
HHC				pmax	pmax		
	comp=Z,310nm,4.9s						
BHPL	**Bhopal**	**49.47**	**309**	*e*x	**P**	**10 32 19.2**	**-1.4**
BHPL				IAmb	IAmb	10 32 21.7	
	comp=Z,15nm,0.8s						
GTA	**Gaotai**	**49.51**	**342**	⇑P	**P**	**10 32 22.3**	**+1.5**
GTA				pP	pP	10 33 24.7	+1.1
GTA				PcP	**PcP**	**10 33 38.7**	**+0.9**
GTA				sP	sP	10 33 55.6	-1.3
GTA				S	**S**	**10 39 08.1**	**+3.0**
GTA				SS	**SS**	**10 42 41.4**	**-0.2**
GTA				pmax	pmax		
	comp=Z,73nm,0.9s						
GTA				pmax	pmax		
	comp=Z,190nm,7.5s						
GTA				LR	LR		
	comp=Z,100nm,19.0s						
GTA				LR	LR		
	comp=Z,180nm,19.0s						
GTA				LR	LR		
	comp=Z,140nm,16.2s						
DZM	**Mont Dzumac**	**49.59**	**112**	P	**P**	**10 32 22.6**	**+0.9**
	comp=Z,11nm,0.8s,baz=260,slow=14,SNR=4.0						
MSHR	**Mys Shultsa**	**51.65**	**13**	*i* P	**P**	**10 32 36.1**	**-0.3**
CN2	**Changchun**	**51.81**	**8**	*e*P	**P**	**10 32 37.1**	**-0.4**
CN2				pmax	pmax		
	comp=Z,40nm,1.0s						
VLA	**Vladivostok**	**52.33**	**14**	*i* P	**P**	**10 32 41.3**	**0.0**
VLA				pmax	pmax		
	comp=Z,50nm,0.9s						
MDJ	**Mudanjiang**	**53.27**	**11**	P	**P**	**10 32 48.6**	**+0.4**
MDJ				pP	PcP	10 33 51.2	-0.4
MDJ				sP	sP	10 34 23.7	-1.3
MDJ				PP	**PP**	**10 34 53.0**	**+1.0**
MDJ				ScP	**ScP**	**10 37 18.6**	**-1.6**
MDJ				PcS	**PcS**	**10 37 49.4**	**-1.4**
MDJ				S	**S**	**10 39 59.9**	**+4.1**
MDJ				sS	sS	10 41 52.0	+3.3
MDJ				ScS	**ScS**	**10 42 07.4**	**+1.3**
MDJ				pmax	pmax		
	comp=Z,250nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,220nm,5.1s						
USA0B	**Ussuriysk Arra**	**53.38**	**13***c*	*i*P	**P**	**10 32 48.7**	**-0.2**
USRK	**Ussuriysk Ar.**	**53.38**	**13**	P	**P**	**10 32 49.6**	**+0.7**
	comp=Z,93nm,0.6s,baz=190,slow=6.8,SNR=156						
USRK	**Ussuriysk Ar.**	**53.38**	**13**	P	**P**	**10 32 49.2**	**+0.3**
SMLA	**Simla**	**54.29**	**317**	*e*x	**P**	**10 32 54.6**	**-1.1**
SMLA				*i* x	x	10 33 56.0	
TEY	**Ternei**	**55.35**	**17**	⇑*i*P	**P**	**10 33 03.6**	**+0.6**
TEY				pmax	pmax		
	comp=N,120nm,0.8s						
TEY				pmax	pmax		
	comp=Z,300nm,0.7s						
DHRM	**DHARAMSHALA**	**55.56**	**318**	*e*x	**P**	**10 33 04.1**	**-1.0**
DHRM				IAmb	IAmb	10 33 05.5	
	comp=Z,360nm,0.2s						
ULN	**Ulaanbaatar**	**56.02**	**352**	P	**P**	**10 33 08.7**	**+0.8**
ULN				pmax	pmax		
	comp=Z,84nm,0.7s						
ULN	**Ulaanbaatar**	**56.02**	**352**	P	**P**	**10 33 08.7**	**+0.8**
ULN				IAmb	IAmb	10 33 09.5	
	comp=Z,84nm,0.7s						
SONM	**Songino Array**	**56.08**	**351**	P	**P**	**10 33 09.3**	**+0.9**
	comp=Z,139nm,0.7s,baz=170,slow=8.8,SNR=837						
SONM				PcP	**PcP**	**10 34 02.4**	**-0.2**
	comp=Z,11nm,0.7s,baz=165,slow=4.1,SNR=4.0						
SONM				ScP	**ScP**	**10 37 30.9**	**-1.7**
	comp=Z,1.4nm,0.9s,baz=197,slow=2.3,SNR=3.9						
SONM	**Songino Array**	**56.08**	**351**	P	**P**	**10 33 09.3**	**+0.9**
HIA	**Hailar**	**56.76**	**2**	IAmb	IAmb	10 33 14.1	
	comp=Z,36nm,0.8s						
WMQ	**Urumqi**	**57.76**	**335**	*e*P	**P**	**10 33 21.3**	**+1.3**
WMQ				PcP	**PcP**	**10 34 10.4**	**+1.2**
WMQ				pP	pP	10 34 22.1	-2.9
WMQ				pmax	pmax		
	comp=Z,62nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,150nm,3.7s						
WMQ				LR	LR		
	comp=Z,250nm,29.0s						
WMQ				LR	LR		
	comp=Z,300nm,29.5s						
WMQ				LR	LR		
	comp=Z,77nm,29.2s						
WMQ	**Urumqi**	**57.76**	**335**	P	**P**	**10 33 19.7**	**-0.4**
WMQ				pmax	pmax		
	comp=Z,82nm,0.6s						
WMQ	**Urumqi**	**57.76**	**335**	P	**P**	**10 33 19.7**	**-0.4**
MLZ	**Mavora Lakes**	**57.76**	**140**	P	**P**	**10 33 21.2**	**+1.1**
MLZ				IAmb	IAmb	10 34 34.5	
	comp=Z,117nm,1.9s						
WHZ	**Wether Hill Ro**	**57.87**	**140**	P	**P**	**10 33 21.7**	**+0.9**
WHZ				IAmb	IAmb	10 34 30.7	
	comp=Z,83nm,1.7s						
KLR	**Kul'dur**	**58.12**	**11**	P	**P**	**10 33 22.2**	**-0.1**
	comp=Z,23nm,0.5s,baz=195,slow=5.2,SNR=112						
KLR	**Kul'dur**	**58.12**	**11**	*i* P	**P**	**10 33 22.0**	**-0.3**
KLR				pmax	pmax		
	comp=Z,31nm,0.7s						
WKZ	**Wanaka**	**58.13**	**139**	P	**P**	**10 33 22.2**	**-0.4**
WKZ				IAmb	IAmb	10 34 34.6	
	comp=Z,146nm,1.9s						
NIL	**Nilore**	**58.45**	**317**	P	**P**	**10 33 23.8**	**-1.2**
NIL				pmax	pmax		
	comp=Z,26nm,0.6s						
NIL	**Nilore**	**58.45**	**317**	P	**P**	**10 33 23.8**	**-1.2**
NIL				IAmb	IAmb	10 33 24.4	
	comp=Z,26nm,0.6s						
LBZ	**Lake Benmore**	**58.73**	**138**	P	**P**	**10 33 26.4**	**-0.3**
LBZ				IAmb	IAmb	10 35 17.3	
	comp=Z,65nm,1.7s						
YSS	**Yuzh-Sakhalins**	**59.00**	**20**	⇑*i*P	**P**	**10 33 28.6**	**+0.2**
YSS				pmax	pmax		
	comp=Z,110nm,0.6s						
YSS				MLR	MLR		
	comp=Z,100nm,12.0s						
YSS	**Yuzh-Sakhalins**	**59.00**	**20**	P	**P**	**10 33 28.7**	**+0.3**
ZAK	**Zakamensk**	**59.06**	**350**	*e*P	**P**	**10 33 29.1**	**+0.2**
ZAK				*e*		10 34 12.0	
ZAK				pmax	pmax		
	comp=Z,29nm,1.0s						
ZAK				pmax	pmax		
	comp=Z,12nm,0.9s						
RPZ	**Rata Peaks**	**59.06**	**137**	P	**P**	**10 33 29.9**	**+0.8**
	comp=Z,22nm,0.9s,baz=300,slow=1.3,SNR=12						
RPZ	**Rata Peaks**	**59.06**	**137**	P	**P**	**10 33 28.8**	**-0.2**
QRZ	**Quartz Range**	**59.14**	**133**	P	**P**	**10 33 30.5**	**+0.9**
QRZ				IAmb	IAmb	10 34 24.0	
	comp=Z,174nm,1.9s						
CIT	**Chita**	**59.55**	**357**	*e*P	**P**	**10 33 30.1**	**-2.0**
CIT				pmax	pmax		
	comp=Z,147nm,1.4s						
LTZ	**Lake Taylor**	**59.58**	**135**	P	**P**	**10 33 32.0**	**-0.6**
LTZ				IAmb	IAmb	10 34 03.0	
	comp=Z,99nm,2.0s						
THZ	**Tophouse**	**59.70**	**134**	P	**P**	**10 33 34.0**	**+0.5**
MSVF	**Nonsavu**	**60.10**	**106**	P	**P**	**10 33 36.8**	**+0.2**
MSVF				pmax	pmax		
	comp=Z,13nm,0.9s						
MSVF	**Nonsavu**	**60.10**	**106**	P	**P**	**10 33 36.8**	**+0.2**
TLY	**Talaya**	**60.25**	**350**	P	**P**	**10 33 37.6**	**+0.8**
	comp=Z,26nm,0.6s,baz=189,slow=5.8,SNR=21						
TLY	**Talaya**	**60.25**	**350**	*i* P	**P**	**10 33 36.9**	**+0.1**
TLY				pmax	pmax		
	comp=Z,56nm,1.1s						
TLY	**Talaya**	**60.25**	**350**	P	**P**	**10 33 37.7**	**+0.8**
TLY				IAmb	IAmb	10 33 38.6	
	comp=Z,50nm,1.0s						
TUWZ	**Tuamarina**	**60.34**	**134**	P	**P**	**10 33 37.8**	**+0.2**
KSH	**Kashi**	**60.42**	**324**	P	**P**	**10 33 38.0**	**-0.4**
KSH				S	**S**	**10 41 23.5**	**-6.0**
KSH				pmax	pmax		
	comp=Z,59nm,0.6s						
KSH				pmax	pmax		
	comp=Z,97nm,4.0s						
KSH				LR	LR		
	comp=Z,630nm,15.2s						
KSH				LR	LR		
	comp=Z,440nm,17.6s						
KSH				LR	LR		
	comp=Z,270nm,11.0s						
RER	**Riviere de l'E**	**60.55**	**250**	P	**P**	**10 33 40.7**	**+1.1**
GRNR	**Gornyy**	**60.58**	**14**	⇑*i*P	**P**	**10 33 39.9**	**+0.8**
GRNR				*e*S	**S**	**10 41 33.5**	**+2.7**
GRNR				pmax	pmax		
	comp=Z,40nm,1.1s						
GRNR				smax	smax		
	comp=E,2.0nm,1.2s						
GRNR				MLR	MLR		
	comp=Z,70nm,16.0s						
IRK	**Irkutsk**	**60.69**	**351**	*e*P	**P**	**10 33 39.1**	**-0.7**
IRK				pmax	pmax		
	comp=Z,61nm,1.2s						
MOY	**Mondy**	**60.71**	**349**	*e*P	**P**	**10 33 40.6**	**+0.5**
MOY				pmax	pmax		
	comp=Z,58nm,1.6s						
SNZO	**South Karori**	**60.85**	**133**	P	**P**	**10 33 41.1**	**0.0**
MSEY	**Mahe Island**	**61.26**	**269**	P	**P**	**10 33 44.8**	**+0.4**
MSEY	**Mahe Island**	**61.26**	**269**	P	**P**	**10 33 44.7**	**+0.2**
MSEY				pmax	pmax		
	comp=Z,87nm,1.4s						
MSEY	**Mahe Island**	**61.26**	**269**	P	**P**	**10 33 44.6**	**+0.2**
MSEY				IAmb	IAmb	10 35 10.8	
	comp=Z,87nm,1.4s						
MSWZ	**Moikau Station**	**61.28**	**133**	P	**P**	**10 33 44.2**	**+0.2**
KDJ	**Kajisay**	**61.52**	**327**	P	**P**	**10 33 45.4**	**-0.4**
KDJ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KDJ	**Kajisay**	**61.52**	**327**	P	**P**	**10 33 45.4**	**-0.4**
BKZ	**Black Stump Fm**	**61.61**	**130**	P	**P**	**10 33 46.8**	**+0.5**
BKZ				IAmb	IAmb	10 35 39.6	
	comp=Z,92nm,1.8s						
NRN	**Naryn**	**61.69**	**326**		**PcP**	**10 34 25.9**	**+0.5**
ZEA	**Zeya**	**61.80**	**7**	*e*P	**P**	**10 33 47.2**	**+0.1**
ZEA				pmax	pmax		
	comp=N,83nm,0.8s						
ZEA				pmax	pmax		
	comp=E,42nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,150nm,0.8s						
BFZ	**Birch Farm**	**61.80**	**132**	P	**P**	**10 33 48.8**	**+1.2**
BFZ				IAmb	IAmb	10 34 31.1	
	comp=Z,82nm,1.2s						
KBL	**Kabul**	**61.82**	**316**	P	**P**	**10 33 46.8**	**-1.1**
KBL				pmax	pmax		
	comp=Z,76nm,0.6s						
KBL	**Kabul**	**61.82**	**316**	P	**P**	**10 33 46.8**	**-1.1**
URZ	**Urewera**	**61.87**	**129**	P	**P**	**10 33 48.1**	**+0.2**
URZ				IAmb	IAmb	10 33 50.8	
	comp=Z,45nm,1.4s						
ULHL	**Ulahol**	**62.10**	**327**	P	**P**	**10 33 50.0**	**+0.3**
	SNR=5.7						
TYV	**Tymovskoe**	**62.37**	**18**	*e*P	**P**	**10 33 52.0**	**+1.1**
TYV				*e*S	**S**	**10 41 54.7**	**+1.6**
TYV				pmax	pmax		
	comp=Z,33nm,0.9s						
TYV				pmax	pmax		

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       comp=Z,400nm,5.0s
TYV                                 smax      smax
       comp=N,1µm,7.2s
MK31   Makanchi Array   62.43 334  i P        P         10 33 51.6 +0.1
MK31   Makanchi Array   62.43 334    P        P         10 33 51.5 +0.1
MK31                                 IAmb     IAmb      10 33 52.6
       comp=Z,28nm,0.8s
MKAR   Makanchi Array   62.43 334    P        P         10 33 51.6 +0.1
       comp=Z,21nm,0.4s,baz=150,slow=5.9,SNR=315
MKAR                                 PcP      PcP       10 34 27.9 +0.1
       comp=Z,11nm,0.7s,baz=126,slow=6.2,SNR=8.3
MKAR                                 PKP2bc             11 02 59.9
       comp=Z,1.8nm,0.9s,baz=346,slow=2.5,SNR=9.2
MKAR   Makanchi Array   62.43 334    P        P         10 33 51.3 -0.2
BOOM   Boomskoye usch   62.43 327    IAmb     IAmb      10 33 52.9
       comp=Z,65nm,1.4s
KZA    Kyzart           62.54 326    P        P         10 33 53.3 +0.5
       SNR=17
MAKZ   Makanchi         62.58 334    P        P         10 33 52.3 -0.2
MAKZ                                 pmax     pmax
       comp=Z,13nm,0.7s
MAKZ   Makanchi         62.58 334    P        P         10 33 52.3 -0.2
UCH    Uchtor           63.05 326    P        P         10 33 56.4 +0.2
       SNR=16
KBK    Karagaybulak     63.09 326    P        P         10 33 56.6 +0.5
       SNR=23
AAK    Ala-Archa        63.33 326    P        P         10 33 57.6  0.0
       comp=Z,21nm,0.8s,baz=134,slow=5.5,SNR=48
AAK                                  PcP      PcP       10 34 32.2 +0.4
       comp=Z,13nm,0.8s,baz=114,slow=5.0,SNR=7.1
AAK    Ala-Archa        63.33 326    P        P         10 33 58.1 +0.5
       SNR=24
AAK    Ala-Archa        63.33 326  i P        P         10 33 57.9 +0.3
       SNR=38
AAK    Ala-Archa        63.33 326ceP          P         10 33 57.8 +0.2
AAK                                  pmax     pmax
       comp=Z,35nm,1.0s
AAK    Ala-Archa        63.33 326    P        P         10 33 57.6  0.0
AAK                                  IAmb     IAmb      10 33 59.0
       comp=Z,28nm,0.9s
AML    Almayashu        63.44 325    P        P         10 33 58.9 +0.2
       SNR=11
EKS2   Erkin-Say        63.74 326    P        P         10 34 00.7 +0.4
       SNR=36
USP    Ospenovka        63.74 327    P        P         10 34 00.0 -0.1
       SNR=20
BTK    Batken           63.84 322    P        P         10 34 01.2 +0.3
BTK                                  pmax     pmax
       comp=Z,33nm,0.7s
BTK    Batken           63.84 322    P        P         10 34 01.2 +0.3
BTK                                  IAmb     IAmb      10 34 01.9
       comp=Z,33nm,0.7s
MHTO   MHTO             64.64 297    P        P         10 34 05.0 -1.3
       SNR=11
MHTO                                 P        P         10 34 05.0 -1.3
       SNR=5.7
WSAR   Wadi Sarin       64.84 300    P        P         10 34 06.8 -0.8
       comp=Z,21nm,0.5s,baz=142,slow=5.6,SNR=22
SMDO   Samad            65.28 300    P        P         10 34 10.0 -0.6
       SNR=5.0
BOD    Bodaibo          65.33 358  eP         P         10 34 09.9 -0.1
BOD                                  pmax     pmax
       comp=Z,83nm,0.8s
BIDO   Bidbid           65.38 300    P        P         10 34 10.2 -0.8
       SNR=6.5
SOCY   Socotra          65.74 287    P        P         10 34 12.9 -0.7
SHAO   Shalim           65.80 294  i P        P         10 34 12.9 -0.9
       SNR=6.8
KK31   Karatay Array    65.88 324  i P        P         10 34 12.8 -1.0
KKAR   Karatay Array    65.88 324    P        P         10 34 13.1 -0.7
KKAR   Karatay Array    65.88 324    P        P         10 34 13.1 -0.7
KKAR   Karatay Array    65.88 324    IAmb     IAmb      10 34 14.7
       comp=Z,14nm,0.8s
DMTO   DMTO             66.32 293    P        P         10 34 16.0 -1.1
       SNR=12
KURBB  Kurchatov Arra   66.96 334    P        P         10 34 20.2 -0.3
       comp=Z,18nm,0.9s,baz=149,slow=5.3,SNR=117
KURBB                                PcP      PcP       10 34 46.0 -0.5
       comp=Z,10.0nm,0.7s,baz=141,slow=3.6,SNR=14
KURK   Kurchatov        66.99 335ceP          P         10 34 20.5 -0.1
KURK                                 pmax     pmax
       comp=Z,56nm,1.1s
KURK   Kurchatov        66.99 335    P        P         10 34 20.5 -0.1
KURK                                 IAmb     IAmb      10 34 21.6
       comp=Z,51nm,1.1s
KURK   Kurchatov        66.99 335             PcP       10 34 46.0 -0.6
ZAA0   Zalesovo Array   67.15 340    P        P         10 34 21.0 -0.6
ZAA0                                 IAmb     IAmb      10 34 21.7
       comp=Z,37nm,0.7s
ZALV   Zalesovo Beam    67.15 340    P        P         10 34 20.9 -0.6
       comp=Z,29nm,0.5s,baz=147,slow=4.6,SNR=177
ZALV                                 PKP2bc             11 02 47.7
       comp=Z,2.0nm,0.7s,baz=305,slow=5.2,SNR=7.2
ZALV   Zalesovo Beam    67.15 340    P        P         10 34 21.0 -0.6
ZALV   Zalesovo Beam    67.15 340    P        P         10 34 21.0 -0.5
UOSS   Minazif          67.52 301  i P        P         10 34 23.2 -1.4
       SNR=6.5
UOSS   Minazif          67.52 301    P        P         10 34 23.3 -1.2
HATD   Hatta, Dubai     67.54 301  i P        P         10 34 23.7 -0.9
       SNR=11
ASHO   Ashiyiah         67.55 301  i P        P         10 34 23.7 -1.1
       SNR=9.9
BANOM  Banah            67.78 302    P        P         10 34 25.4 -0.7
SHME   Shamm            67.96 302  i P        P         10 34 26.3 -1.0
       SNR=5.7
FAQ    Al Faqa, Dubai   67.97 300    P        P         10 34 26.2 -1.2
ABPO   Ambohimpanom     68.52 253    P        P         10 34 32.2 +1.1
ABPO                                 pmax     pmax
       comp=Z,121nm,1.7s
ABPO   Ambohimpanom     68.52 253    P        P         10 34 32.1 +1.1
OPO    Ambohidratompo   68.56 253    P        P         10 34 32.5 +1.2
       comp=Z,37nm,0.6s,baz=88,slow=5.9,SNR=69
MZR    Muzera           69.23 298  i P        P         10 34 34.4 -0.8
       SNR=8.5
PEA0B  Petropavlovsk-   69.67  25    P        P         10 34 37.7 +0.6
PEA0B                                pmax     pmax
       comp=Z,40nm,0.8s
PEA0B  Petropavlovsk-   69.67  25    P        P         10 34 37.7 +0.6
PEA0B                                IAmb     IAmb      10 34 38.8
       comp=Z,40nm,0.8s
PETK   Petropavlovsk-   69.67  25    P        P         10 34 37.6 +0.5
       comp=Z,39nm,0.8s,baz=197,slow=7.0,SNR=44
PETK   Petropavlovsk-   69.67  25    P        P         10 34 37.4 +0.3
MAW    Mawson           69.82 199    P        P         10 34 38.9 +1.1
       baz=70,SNR=11
MAW    Mawson           69.82 199    P        P         10 34 39.9 +2.1
       comp=Z,36nm,0.9s,baz=64,slow=6.6,SNR=13
MAW    Mawson           69.82 199    P        P         10 34 39.4 +1.6
PET    Petropavlovsk    70.01  25⇑eP          P         10 34 40.2 +1.1
PET                                  pmax     pmax
       comp=Z,40nm,1.7s
YAK    Yakutsk          70.19   6    P        P         10 34 39.9 -0.2
       comp=Z,29nm,0.5s,baz=260,slow=0.5,SNR=25
YAK    Yakutsk          70.19   6  eP         P         10 34 39.5 -0.6
YAK                                  pmax     pmax
       comp=Z,86nm,0.9s
YAK                                  pmax     pmax
       comp=N,29nm,1.0s
YAK    Yakutsk          70.19   6    P        P         10 34 39.9 -0.2
GEYT   Alibeck          71.16 314    P        P         10 34 46.5  0.0
       comp=N,7.3nm,0.5s,baz=143,slow=5.2,SNR=23
GEYT   Alibeck          71.16 314    P        P         10 34 46.5  0.0
MA2    Magadan          72.22  17    P        P         10 34 53.1 +0.9
       comp=N,68nm,0.8s,baz=200,slow=6.9,SNR=65
MA2    Magadan          72.22  17ceP          P         10 34 52.8 +0.6
MA2                                  pmax     pmax
       comp=Z,84nm,0.8s
MA2    Magadan          72.22  17    P        P         10 34 52.9 +0.6
BVAR   Borovoye Array   72.25 333    P        P         10 34 52.5 -0.1
       comp=Z,31nm,0.7s,baz=136,slow=7.2,SNR=161
BRVK   Borovoye         72.32 333    P        P         10 34 52.7 -0.2
BRVK                                 pmax     pmax
       comp=Z,56nm,1.3s
BRVK   Borovoye         72.32 333    P        P         10 34 52.7 -0.2
BRVK                                 IAmb     IAmb      10 34 53.8
       comp=Z,56nm,1.2s
VNDA   Vanda            73.58 171    P        P         10 35 01.4 +1.5
       comp=Z,6.3nm,0.5s,baz=313,slow=7.1,SNR=44
VNDA   Vanda            73.58 171    IAmb     IAmb      10 35 36.1
       comp=Z,45nm,1.7s
ABKAR  Akbulak array    75.40 325    P        P         10 35 10.4 -0.4
SEY    Seymchan         75.42  16    P        P         10 35 11.3 +0.7
       comp=Z,56nm,0.9s,baz=222,slow=5.1,SNR=147
SEY    Seymchan         75.42  16c iP         P         10 35 10.9 +0.3
RAYN   Ar Rayn          76.41 296  i P        P         10 35 16.3 -0.9
       SNR=36
RAYN   Ar Rayn          76.41 296    P        P         10 35 16.2 -0.9
RAYN                                 pmax     pmax
       comp=Z,28nm,0.8s
RAYN   Ar Rayn          76.41 296    P        P         10 35 16.2 -0.9
RAYN                                 IAmb     IAmb      10 35 17.1
       comp=Z,28nm,0.8s
SYO    Syowa Base       78.38 201⇓iP          P         10 35 26.0 -1.0
SYO    Syowa Base       78.38 201⇑eX          P         10 35 32.0 +5.0
SVE    Sverdlovsk       79.03 332  eP         P         10 35 30.1 -0.6
SVE                                  pmax     pmax
       comp=Z,33nm,0.7s
NRIK   Noril'sk         79.52 350    P        P         10 35 32.8 -0.3
       comp=Z,9.3nm,0.7s,baz=157,slow=6.5,SNR=11
TIXI   Tiksi            79.56   4    P        P         10 35 32.2 -1.0
       comp=Z,30nm,0.7s,baz=152,slow=4.3,SNR=93
TIXI   Tiksi            79.56   4c iP         P         10 35 32.1 -1.1
TIXI                                 pmax     pmax
       comp=Z,40nm,0.8s
TIXI   Tiksi            79.56   4    P        P         10 35 31.9 -1.3
TIXI                                 IAmb     IAmb      10 35 33.1
       comp=Z,36nm,0.7s
KMBO   Kilima Mbogo     79.76 270  i P        P         10 35 37.2 +1.3
KMBO   Kilima Mbogo     79.76 270    P        P         10 35 36.9 +1.0
       comp=Z,22nm,0.7s,baz=67,slow=7.6,SNR=73
KMBO   Kilima Mbogo     79.76 270  i P        P         10 35 37.2 +1.3
KMBO   Kilima Mbogo     79.76 270  i P        P         10 35 37.0 +1.0
       SNR=26
KMBO   Kilima Mbogo     79.76 270    P        P         10 35 36.9 +1.0
KMBO                                 IAmb     IAmb      10 35 37.8
       comp=Z,28nm,0.8s
ARU    Arti             79.80 331    P        P         10 35 33.7 -1.1
       comp=Z,3.8nm,0.6s,baz=138,slow=2.8,SNR=11
ARU    Arti             79.80 331c iP         P         10 35 33.7 -1.1
ARU                                  S        S         10 45 11.5 -0.6
ARU                                  SS       SS        10 50 23.5 -5.3
ARU                                  pmax     pmax
       comp=Z,40nm,1.6s
ARU    Arti             79.80 331    P        P         10 35 33.7 -1.1
ARU                                  IAmb     IAmb      10 35 34.8
       comp=Z,32nm,1.2s
GNI    Garni            81.64 312ceP          P         10 35 45.5 +0.3
GNI                                  pmax     pmax
       comp=Z,44nm,1.0s
QSPA   South Pole Qui   82.30 180    P        P         10 35 49.1 +1.1
       comp=Z,15nm,0.6s,baz=306,slow=1.1,SNR=138
QSPA   South Pole Qui   82.30 180    P        P         10 35 48.9 +0.9
QSPA                                 IAmb     IAmb      10 35 49.4
       comp=Z,20nm,0.7s
ZEI    Tsey             83.03 315  eP         P         10 35 50.8 -1.5
ZEI                                  pmax     pmax
       comp=Z,35nm,1.1s
BILL   Bilibino         83.08  17ceP          P         10 35 51.4 -0.3
BILL                                 pmax     pmax
       comp=Z,12nm,1.9s
KBZ    Khabaz           84.00 315    P        P         10 35 57.1 +0.2
       comp=Z,16nm,0.9s,baz=121,slow=3.3,SNR=37
KBZ                                  PKKPbc   PKKPbc    10 54 10.9 -0.9
       comp=Z,2.1nm,0.8s,baz=243,slow=4.8,SNR=6.9
KBZ    Khabaz           84.00 315c iP         P         10 35 56.4 -0.5
KBZ                                  pmax     pmax
       comp=Z,24nm,0.9s
SHA1   Shidzhatmaz      84.17 315  i P        P         10 35 57.8 -0.3
KIV    Kislovodsk       84.21 316⇑eP          P         10 35 58.5 +0.4
KIV                                  pmax     pmax
       comp=Z,10.0nm,0.8s
KIRV   Kirov            85.17 331    P        P         10 36 01.5 -0.8
       comp=Z,12nm,0.6s,baz=34,slow=4.4,SNR=5.6
SOC    Sochi            86.19 315  eP         P         10 36 05.7 -2.0
SOC                                e                    10 39 30.9
SOC                                eS         S         10 46 03.1  -14
SOC                                eSSS       SSS       10 55 41.4
SOC                                  pmax     pmax
       comp=Z,18nm,0.8s
MBAR   Mbarara          86.28 270    P        P         10 36 10.0 +0.9
MBAR                                 pmax     pmax
       comp=Z,83nm,0.8s
MBAR   Mbarara          86.28 270    P        P         10 36 10.0 +0.9
VRH    Novokhopyorsk    86.88 322  eP         P         10 36 09.7 -1.1
VRH                                  pmax     pmax
       comp=Z,120nm,0.7s
LSZ    Lusaka           86.93 255    P        P         10 36 12.9 +0.8
LSZ                                  pmax     pmax
       comp=Z,57nm,0.6s
LSZ    Lusaka           86.93 255    P        P         10 36 12.9 +0.8
NVL    N'lazarevskaya   87.76 199  eP         P         10 36 16.8 +2.1
NVL                                  pmax     pmax
       comp=Z,28nm,0.8s
BOSA   Boshof           87.95 242  i P        P         10 36 18.3 +1.6
BOSA   Boshof           87.95 242    P        P         10 36 17.6 +1.0
       comp=Z,14nm,0.6s,baz=112,slow=3.6,SNR=38
BOSA   Boshof           87.95 242  i P        P         10 36 18.3 +1.6
BOSA   Boshof           87.95 242    IAmb     IAmb      10 36 18.6
       comp=Z,22nm,0.7s
PRGR   Permogore        88.06 333  eP         P         10 36 12.6 -3.5
PRGR                                 pmax     pmax
       comp=Z,12nm,0.6s
LBTB   Lobatse          88.12 245  i P        P         10 36 18.8 +1.3
LBTB   Lobatse          88.12 245  i P        P         10 36 18.8 +1.3
VSR    Storozhevoye     88.43 322  eP         P         10 36 16.0 -2.2
VSR                                  pmax     pmax
       comp=Z,50nm,1.4s
LPSR   Galich'ya Gora   88.91 323  eP         P         10 36 19.0 -1.4
LPSR                                 pmax     pmax
       comp=Z,20nm,0.8s
BRTR   Keskin Array B   89.83 310    P        P         10 36 24.1 -1.1
       comp=Z,3.0nm,0.7s,baz=132,slow=5.2,SNR=15
BRTR                                 PKKPbc   PKKPbc    10 53 57.0 -0.8
       comp=Z,0.3nm,0.7s,baz=289,slow=3.8,SNR=3.6
BRTR   Keskin Array B   89.83 310    P        P         10 36 24.0 -1.2
KLMR   Klimovskoe       90.64 331  eP         P         10 36 25.3 -2.9
KLMR                                 pmax     pmax
       comp=Z,11nm,0.6s
KLMR   Klimovskoe       90.64 331  eP         P         10 36 25.4 -2.8
KLMR                                 AMP                10 36 27.0
       comp=Z,11nm,0.6s
OBN    Obninsk          90.85 325⇓eP          P         10 36 28.2 -1.1
OBN                                e                    10 40 07.7
OBN                                eS         SKSac     10 46 27.1 -4.7
OBN                                  pmax     pmax
       comp=Z,23nm,1.3s
SNAA   Sanae            91.74 196    P        P         10 36 34.9 +1.6
SNAA   Sanae            91.74 196    IAmb     IAmb      10 36 35.7
       comp=Z,23nm,0.8s
VNA2   Neumayer--Watz   93.38 196    P        P         10 36 42.4 +1.7
       baz=114,slow=3.8
VNA1   Neumayer--Stat   93.77 196    P        P         10 36 44.1 +1.6
VNA3   Neumayer Olymp   93.79 195    P        P         10 36 44.0 +1.3
AKASG  Malin Array Be   94.52 320    P        P         10 36 44.5 -1.8
       comp=Z,3.3nm,0.7s,baz=84,slow=4.4,SNR=16
AKASG                                PKKPbc   PKKPbc    10 53 46.5 +0.5
       comp=Z,1.4nm,0.5s,baz=347,slow=2.9,SNR=8.4
TSUM   Tsumeb           96.37 250    P        P         10 36 56.5 +0.8
TSUM                                 IAmb     IAmb      10 36 57.4
       comp=Z,11nm,0.8s
KDAK   Kodiak Island    96.63  33    P        P         10 36 55.1 -0.6
       comp=Z,4.5nm,0.9s,baz=215,slow=4.1,SNR=3.2
VSU    Vasula           96.67 328ceP          P         10 36 55.7 -0.2
VSU                                  pmax     pmax
       comp=Z,21nm,0.8s
BURAR  Bucovina Array   96.86 317    P        P         10 36 56.5 -0.7
BUR08  Bucovina Ar. S   96.88 317    IAmb     IAmb      10 36 58.3
       comp=Z,6.9nm,0.9s
FINES  FINESS Array B   97.17 331    P        P         10 36 57.0 -1.1
       comp=Z,7.9nm,0.7s,baz=92,slow=6.1,SNR=21
FINES                                PKiKP    PKiKP     10 41 31.5 -0.3
       comp=Z,1.7nm,0.4s,baz=66,slow=4.6,SNR=11
FINES  FINESS Array B   97.17 331  i P        P         10 36 57.0 -1.1
FINES                                pmax     pmax
       comp=Z,8.0nm,0.7s
ARCES  ARCESS Array B   97.69 339    P        P         10 36 58.7 -1.6
       comp=Z,5.9nm,0.9s,baz=90,slow=6.1,SNR=6.8
ARCES                                PKiKP    PKiKP     10 41 31.9 -0.7
       comp=Z,2.8nm,0.8s,baz=35,slow=3.3,SNR=4.6
MLY    Manley           97.84  25    IAmb     IAmb      10 37 02.1
       comp=Z,7.5nm,1.2s
MLY                                           pP        10 38 14.8 +2.2
TOLK   Toolik Lake Re   98.33  22    Pdiff    P         10 37 04.1 +0.8
       baz=270
KOLS   Kolonicke sedl   98.89 318  eP         P         10 37 06.5 +0.4
KOLS   Kolonicke sedl   98.89 318  ePDIFF     P         10 37 06.5 +0.4
ILAR   Eielson Array    99.48  26    P        Pdif      10 37 06.5 -1.9
       comp=Z,0.4nm,0.7s,baz=243,slow=4.4,SNR=6.4
ILAR                                 PP       PP        10 41 11.2 -4.9
       comp=Z,1.8nm,1.0s,baz=286,slow=6.6,SNR=5.0
ILAR                                 PKiKP    PKiKP     10 41 34.4 -1.5
       comp=Z,0.6nm,0.8s,baz=260,slow=2.7,SNR=3.7
ILAR                                 PKKPbc   PKKPbc    10 53 30.3 -2.9
       comp=Z,1.6nm,0.5s,baz=116,slow=1.4,SNR=21
SPITS  Spitsbergen Ar   99.67 348    P        Pdif      10 37 06.9 -2.0
       comp=Z,9.3nm,0.7s,baz=118,slow=12,SNR=6.8
INK    Inuvik          104.23  21    PKiKP    PKiKP     10 41 43.1 -1.3
       comp=Z,1.3nm,0.9s,baz=243,slow=4.4,SNR=4.1
GERES  GERESS Array B  104.54 318    PKiKP    PKiKP     10 41 44.0 -1.8
       comp=Z,0.5nm,0.4s,baz=110,slow=3.1,SNR=4.6
DAVOX  Davos/Dischmat  107.33 317    PKKPbc   PKKPbc    10 53 08.1 -1.2
       comp=Z,3.0nm,0.6s,baz=350,slow=23,SNR=6.0
RES    Resolute Bay    110.58   9    PKiKP    PKiKP     10 41 55.7 -0.4
       comp=Z,1.3nm,0.6s,baz=253,slow=4.1,SNR=11
EKA    Eskdalemuir Ar  113.21 328    PKiKP    PKiKP     10 42 01.4 -0.3
       comp=Z,0.7nm,0.4s,baz=47,slow=3.5,SNR=4.9
YKA    Yellowknife Ar  113.77  23    PKiKP    PKiKP     10 42 01.7 -0.8
       comp=Z,4.1nm,0.6s,baz=312,slow=1.7,SNR=58
YKA                                  PP       PP        10 42 59.0 -1.0
       comp=Z,0.8nm,0.8s,baz=305,slow=5.8,SNR=3.1
YKA                                  SKP      SKPdf     10 45 07.5 -1.7
       comp=Z,0.9nm,0.7s,baz=306,slow=1.7,SNR=6.3
YKA                                  PKKPbc   PKKPbc    10 52 40.1 -8.7
       comp=Z,0.9nm,0.6s,baz=106,slow=3.6,SNR=17
B05A   Bryant          116.00  40    P        PKiKP     10 42 07.7 +0.5
       baz=289
TORD   Torodi Ar. Bea  116.34 281    PKP      PKPdf     10 42 08.1 -0.7
       comp=Z,12nm,0.5s,baz=57,slow=1.9,SNR=86
TORD   Torodi Ar. Bea  116.34 281             PKPdf     10 42 07.4 -1.4
L04D   Klamath Falls   117.65  46    P        PKiKP     10 42 10.8  0.0
       baz=286
J05D   Fort Rock, OR   118.10  45    P        PKiKP     10 42 11.9 +0.2
       baz=287
ESDC   Sonseca Array   118.61 311    PKP      PKPdf     10 42 12.2 -0.4
       comp=Z,1.2nm,0.4s,baz=20,slow=2.9,SNR=6.4
NEW    Newport         119.10  38    P        PKiKP     10 42 13.4 +0.1
       baz=293
PKM    Mcpherson Peak  121.39  54    P        PKiKP     10 42 19.3 +0.9
       baz=284
NVAR   Mina Array Bea  121.64  49    PKP      PKiKP     10 42 19.4 +0.5
       comp=Z,4.7nm,0.6s,baz=260,slow=1.5,SNR=40
NVAR                                 PKKPbc   PKKPab    10 52 20.1  0.0
       comp=Z,3.7nm,0.7s,baz=130,slow=4.6,SNR=22
NVAR   Mina Array Bea  121.64  49             PKiKP     10 42 19.1 +0.3
VES    Vestal, Richgr  121.74  53    P        PKPdf     10 42 18.4 -0.2
       baz=285
ARVC   Arvin           122.11  53    P        PKiKP     10 42 19.5 -0.1
       baz=284
ISA    Isabella, Lake  122.26  53    P        PKiKP     10 42 20.1 +0.1
       baz=285
KIC    Kosan Boka      122.27 273  ePKP1      PKPdf     10 42 19.3 -1.0
       comp=Z,25nm,0.9s
CWC    Cottonwood Cre  122.36  52    P        PKiKP     10 42 20.6 +0.3
       baz=286
DBIC   Dimbokro        122.41 273    PKP      PKPdf     10 42 20.1 -0.4
       comp=Z,10nm,0.6s,baz=84,slow=3.3,SNR=14
DBIC   Dimbokro        122.41 273    PKIKP    PKPdf     10 42 20.4 -0.1
DBIC   Dimbokro        122.41 273             PKPdf     10 42 20.4 -0.1
LIC    Lamto           122.54 272  ePKP1      PKPdf     10 42 19.9 -0.9
       comp=Z,34nm,0.5s
TIC    Toumodi         122.57 273  ePKP1      PKPdf     10 42 20.0 -0.9
GRAC   Grapevine Rang  122.76  51    P        PKiKP     10 42 21.3 +0.4
       baz=287
EDW2   Edwards Air Fo  122.84  53    P        PKiKP     10 42 21.6 +0.5
       baz=285,SNR=11
CIS    Catalina Islan  122.86  55    P        PKiKP     10 42 21.4 +0.3
       baz=284
MPMC   Manual Prospec  122.93  52    P        PKiKP     10 42 21.9 +0.5
       baz=286
BFSC   Mount Baldy Ra  123.27  54    P        PKiKP     10 42 22.2 +0.1
       baz=285
FURC   Furnace Creek,  123.30  51    P        PKiKP     10 42 22.5 +0.6
       baz=287
EGMT   Eagleton        123.62  36    P        PKiKP     10 42 22.2 -0.1
       baz=300
TPNV   Topopah Spring  123.63  50    P        PKiKP     10 42 23.3 +0.5
       baz=287
GSC    Goldstone, Bar  123.67  53    P        PKiKP     10 42 23.4 +0.6
       baz=286,SNR=6.5
FFC    Flin Flon       123.69  26    PKIKP    PKPdf     10 42 21.8  0.0
FFC    Flin Flon       123.69  26             PKPdf     10 42 21.8  0.0
R11A   Troy Canyon, C  123.70  49    P        PKiKP     10 42 23.4 +0.5
       baz=289,SNR=6.2
MURC   Murrieta        123.80  55    P        PKiKP     10 42 23.4 +0.4
       baz=284
BBRC   Big Bear Solar  123.86  54    P        PKiKP     10 42 24.1 +0.7
       baz=285
SHOC   Shoshone, Teco  123.92  52    P        PKiKP     10 42 24.0 +0.8
       baz=287
HEC    Hector,Ludlow   124.17  53    P        PKiKP     10 42 24.4 +0.6
       baz=286
PFO    Pinyon Flats O  124.39  54    P        PKiKP     10 42 25.0 +0.7
       baz=285
XPFO   Pion Flat       124.40  54             PKiKP     10 42 24.9 +0.6
MONP2  Monument Peak   124.61  55    P        PKiKP     10 42 25.9 +1.1
       baz=285
BELC   Belle Mtn. Jos  124.66  54    P        PKiKP     10 42 25.6 +0.8
       baz=286,SNR=8.0
GMRC   Granite Mounta  124.72  53    P        PKiKP     10 42 26.0 +1.1
       baz=286,SNR=15
H17A   Grant Village   124.84  40    P        PKiKP     10 42 26.4 +1.4
       baz=297
IKP    In-Ko-Pah, Jac  124.92  55    P        PKiKP     10 42 26.4 +1.1
       baz=285
DUG    Dugway, Tooele  125.07  46    P        PKiKP     10 42 26.0 +0.5
       baz=292
SWSC   Sam W. Stewart  125.10  55    P        PKiKP     10 42 26.2 +0.6
       baz=285
BC3    Big Chuckawall  125.19  54    P        PKiKP     10 42 26.7 +0.8
       baz=286,SNR=6.2
IRM    Iron Mountain   125.30  53    P        PKiKP     10 42 26.9 +0.9
       baz=286,SNR=6.0
GLA    Glamis          125.86  55    P        PKiKP     10 42 28.0 +0.9
       baz=286
Y12C   Blythe          125.91  54    P        PKiKP     10 42 27.9 +0.7
       baz=286
PDMCI  Parker Dam,Lak  126.06  53    P        PKiKP     10 42 28.2 +0.8
       baz=287
PDAR   Pinedale Array  126.24  42    PKP      PKPdf     10 42 27.1 -0.2
       comp=Z,1.3nm,0.5s,baz=156,slow=1.3,SNR=16
PDAR                                 PKKPbc   PKKPab    10 52 00.8 +0.4
       comp=Z,0.8nm,0.5s,baz=120,slow=6.4,SNR=10
PDAR   Pinedale Array  126.24  42             PKPdf     10 42 26.6 -0.8
DGMT   Dagmar          126.51  33    P        PKiKP     10 42 28.2 +0.2
       baz=306
214A   Organ Pipe Nat  127.80  55    P        PKiKP     10 42 30.8 -0.2
       baz=286
WUAZ   Wupatki         127.82  51    P        PKiKP     10 42 32.2 +1.1
       baz=290
K22A   Casper          128.26  40    P        PKiKP     10 42 31.6 -0.3
       baz=300
O20A   White River Ci  128.29  44    P        PKiKP     10 42 32.2 +0.2
       baz=296
RSSD   Black Hills     129.06  38    PKIKP    PKPdf     10 42 31.8 -0.9
RSSD   Black Hills     129.06  38             PKPdf     10 42 31.8 -0.9
RSSD   Black Hills     129.06  38    P        PKPdf     10 42 32.6 -0.1
       baz=303
W18A   Petrified Fore  129.22  50    P        PKiKP     10 42 34.9 +1.0
       baz=291
TUC    Tucson          129.34  54    PKIKP    PKiKP     10 42 34.1 -0.1
TUC    Tucson          129.34  54             PKiKP     10 42 34.1 -0.1
TUC    Tucson          129.34  54    P        PKiKP     10 42 34.5 +0.3
       baz=288
MVCO   Mesa Verde      129.34  47    P        PKiKP     10 42 34.7 +0.4
       baz=294
ULM    Lac du Bonnet   129.48  27    PKP      PKPdf     10 42 32.5 -0.5
       comp=Z,2.5nm,0.6s,baz=293,slow=2.6,SNR=7.2
ULM                                  SKPbc    SKPab     10 45 24.4 -1.6
       comp=Z,3.6nm,0.7s,baz=322,slow=4.8,SNR=7.1
N23A   Red Feather La  129.50  42    P        PKiKP     10 42 34.4 -0.1
       baz=299
ISCO   Idaho Springs   130.24  43    P        PKPdf     10 42 34.6 -0.6
       baz=298
S22A   4UR Ranch, Cre  130.33  46    P        PKiKP     10 42 36.5 +0.2
       baz=296
PLCA   Paso Flores     131.31 172    PKP      PKiKP     10 42 37.8 -0.1
       comp=Z,4.4nm,0.8s,baz=206,slow=3.1,SNR=15
PLCA                                 SKPbc    SKPab     10 45 34.7 +0.6
       comp=Z,13nm,0.9s,baz=236,slow=1.8,SNR=19
121A   Cookes Peak, D  131.66  53    P        PKiKP     10 42 39.2 +0.2
       baz=291
ANMO   Albuquerque     131.77  49    PKIKP    PKiKP     10 42 39.5 +0.3
ANMO   Albuquerque     131.77  49             PKiKP     10 42 39.5 +0.3
ANMO   Albuquerque     131.77  49    P        PKiKP     10 42 39.5 +0.3
       baz=294
T25A   Trinidad        132.32  46    P        PKiKP     10 42 40.0 -0.2
       baz=297
SCHQ   Schefferville   132.88   3    PKP      PKiKP     10 42 39.9 -0.7
       comp=Z,5.9nm,0.7s,baz=335,slow=0.7,SNR=15
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SCHQ				PP	PP	10 45 05.8	-1.7
	comp=Z,2.1nm,0.7s,baz=14,slow=4.9,SNR=4.5						
SCHQ				SKPbc	SKPbc	10 45 37.3	-1.1
	comp=Z,6.1nm,0.8s,baz=31,slow=4.9,SNR=5.6						
EYMN	Ely	133.13	26	P	PKPdf	10 42 39.8	-0.2
	baz=320						
ECSD	EROS Data Cent	133.58	34	P	PKPdf	10 42 41.0	0.0
	baz=311						
BGNE	Belgrade	134.16	37	P	PKPdf	10 42 42.2	0.0
	baz=307						
SPMN	Marine on St.	134.54	30	P	PKiKP	10 42 43.6	-0.6
	baz=316						
MSTX	Muleshoe	134.94	49	P	PKPdf	10 42 44.2	+0.2
	baz=296						
TXAR	Lajitas Array	136.10	55	PKhKP	PKPpre	10 42 35.2	
	comp=Z,0.8nm,0.7s,baz=272,slow=2.4,SNR=5.5						
TXAR				PKP	PKPdf	10 42 46.8	+0.6
	comp=Z,2.1nm,0.7s,baz=305,slow=1.4,SNR=11						
TXAR				SKPbc	SKPbc	10 45 48.5	-1.2
	comp=Z,3.1nm,0.7s,baz=232,slow=2.0,SNR=14						
MATQ	Matagami	136.29	14	P	PKPdf	10 42 46.4	+0.5
	baz=339						
D46A	Sault St. Mari	136.96	21	P	PKPpre	10 42 42.1	
	baz=328						
D47A	Chapleau	137.14	20	P	PKPpre	10 42 39.9	
	baz=330						
F45A	CMU Biological	137.42	23	P	PKPpre	10 42 42.9	
	baz=326						
D48A	Paudash Townsh	137.47	19	P	PKPpre	10 42 44.5	
	baz=332						
WMOK	Wichita Mounta	137.48	46	P	PKPpre	10 42 41.5	
	baz=301						
E47A	Iron Bridge	137.60	21	P	PKPpre	10 42 37.2	
	baz=329						
G45A	Suttons Bay	137.89	24	P	PKPpre	10 42 40.2	
	baz=325						
E48A	Lockeyer	137.96	20	P	PKPpre	10 42 40.6	
	baz=331						
D50A	G1974 Best Tow	138.09	17	P	PKPpre	10 42 38.7	
	baz=334						
F48A	Evansville	138.38	21	P	PKPpre	10 42 39.4	
	baz=330						
G47A	Hillman	138.48	22	P	PKPpre	10 42 41.3	
	baz=328						
F49A	Sandfield	138.63	20	P	PKPpre	10 42 43.2	
	baz=331						
JCT	Junction City	138.73	52	P	PKPpre	10 42 44.1	
	baz=296						
E51A	G1948 Merrick	138.76	17	P	PKPpre	10 42 40.8	
	baz=335						
D53A	Lac Vacive, Po	138.76	15	P	PKPpre	10 42 40.4	
	baz=337						
ROC1	El Roble	138.84	170		PKPpre	10 42 42.6	
D54A	Lac Fusel, La	138.96	14	P	PKPpre	10 42 41.6	
	baz=339						
F51A	Arnstein	139.18	18	P	PKPpre	10 42 41.7	
	baz=334						
D55A	Sainte-Anne-du	139.36	13	P	PKPpre	10 42 45.2	
	baz=341						
F52A	Sundridge	139.48	18	P	PKPpre	10 42 44.9	
	baz=334						
D56A	ZEC Mazanza, M	139.49	12	P	PKPpre	10 42 42.9	
	baz=342						
E54A	Lac Daplat, Po	139.50	15	P	PKPpre	10 42 42.3	
	baz=338						
D57A	Chemin Vers le	139.70	12	P	PKPpre	10 42 43.3	
	baz=343						
J47A	Sunmer	139.71	25	P	PKPpre	10 42 45.8	
	baz=325						
E56A	St. Veronique	139.91	13	P	PKPpre	10 42 44.1	
	baz=341						
I49A	Point Hope	139.92	22	P	PKPpre	10 42 45.2	
	baz=328						
J48A	Bridge Port	140.09	24	P	PKPpre	10 42 46.0	
	baz=327						
K47A	Vermontville	140.10	26	P	PKPpre	10 42 45.9	
	baz=324						
D61A	St Aubert, Com	140.14	8	P	PKPpre	10 42 45.8	
	baz=349						
E57A	Chemin Saint G	140.23	12	P	PKPpre	10 42 45.9	
	baz=342						
J49A	Marlette	140.29	23	P	PKPpre	10 42 46.0	
	baz=328						
D60A	Saint Jean D'O	140.32	9	P	PKPpre	10 42 45.6	
	baz=348						
K48A	Perry	140.36	25	P	PKPpre	10 42 46.5	
	baz=326						
CCM	Cathedral Cave	140.39	36	PKHKP	PKPpre	10 42 46.2	
CCM	Cathedral Cave	140.39	36		PKPpre	10 42 46.2	
CCM	Cathedral Cave	140.39	36	P	PKPpre	10 42 46.3	
	baz=313						
D62A	Allapoint, All	140.40	7	P	PKPpre	10 42 46.0	
	baz=350						
E58A	La Victoria	140.44	11	P	PKPpre	10 42 46.3	
	baz=344						
U40A	Yellville	140.52	39	P	PKPpre	10 42 47.0	
	baz=309						
D63A	Stockholm	140.54	6	P	PKPpre	10 42 45.8	
	baz=352						
L47A	Sherwood	140.57	26	P	PKPpre	10 42 46.5	
	baz=324						
CFA	Coronel Fontan	140.60	173	SKPbc	SKPbc	10 46 01.6	-0.6
	comp=Z,5.9nm,0.7s,baz=233,slow=5.1,SNR=7.5						
W39A	Magazine	140.63	41	P	PKPpre	10 42 47.3	
	baz=307						
I51A	Listowel	140.70	21	P	PKPpre	10 42 47.2	
	baz=331						
G55A	Calabogie	140.71	15	P	PKPpre	10 42 47.1	
	baz=338						
E60A	Ste Agathe de	140.77	9	P	PKPpre	10 42 47.0	
	baz=346						
H53A	Bobcaygeon	140.81	18	P	PKPpre	10 42 47.4	
	baz=335						
E61A	Lac Etchemin	140.85	8	P	PKPpre	10 42 48.1	
	baz=348						
L48A	N Adams	140.94	26	P	PKPpre	10 42 47.8	
	baz=325						
SFIN	Lafayette	140.94	30	P	PKPpre	10 42 47.7	
	baz=320						
F60A	Warwick	141.07	10	P	PKPpre	10 42 48.9	
	baz=346						
L49A	Milan	141.08	25	P	PKPpre	10 42 49.0	
	baz=326						
MIAR	Mount Ida	141.16	42	P	PKPpre	10 42 49.9	
	baz=306						
E64A	Bridgewater	141.18	5	P	PKPpre	10 42 48.7	
	baz=352						
F61A	St Evariste	141.22	9	P	PKPpre	10 42 49.5	
	baz=347						
N47A	Urbana	141.23	28	P	PKPpre	10 42 48.7	
	baz=322						
H55A	Tweed	141.24	16	P	PKPpre	10 42 49.0	
	baz=337						
G57A	Newington	141.28	14	P	PKPpre	10 42 49.9	
	baz=341						
H56A	Elgin	141.45	15	P	PKPpre	10 42 49.8	
	baz=338						
M49A	Liberty Center	141.52	26	P	PKPpre	10 42 51.6	
	baz=325						
L50A	Kingsville	141.53	24	P	PKPpre	10 42 51.3	
	baz=327						
N48A	Decatur	141.55	27	P	PKPpre	10 42 49.8	
	baz=323						
W41B	Gary Mavity, V	141.65	40	P	PKPpre	10 42 50.4	
	baz=309						
F64A	Sherman	141.68	6	P	PKPpre	10 42 50.8	
	baz=351						
K52A	Tillsonburg	141.70	21	P	PKPpre	10 42 51.5	
	baz=331						
G59A	Clarenceville	141.70	12	P	PKPpre	10 42 50.5	
	baz=343						
F63A	Nahmakanta, Br	141.75	7	P	PKPpre	10 42 51.1	
	baz=350						
G61A	St-Isidore-de-	141.81	10	P	PKPpre	10 42 50.8	
	baz=346						
N49A	Columbus Grove	141.88	26	P	PKPpre	10 42 51.1	
	baz=324						
M50A	Fremont	141.97	25	P	PKPpre	10 42 50.6	
	baz=326						
O48A	Farmland	141.97	28	P	PKPpre	10 42 51.2	
	baz=322						
H59A	Cadyville	142.01	13	P	PKPpre	10 42 51.9	
	baz=342						
H58A	Gabriels	142.12	13	P	PKPpre	10 42 51.6	
	baz=342						
I57A	Carthage	142.21	15	P	PKPpre	10 42 52.2	
	baz=339						
J55A	Hilton	142.23	18	P	PKPpre	10 42 50.1	
	baz=335						
G64A	Maxfield	142.24	7	P	PKPpre	10 42 52.6	
	baz=350						
G63A	Kingsbury	142.26	8	P	PKPpre	10 42 53.2	
	baz=349						
H60A	Morristown	142.29	11	P	PKPpre	10 42 53.3	
	baz=344						
O49A	Covington	142.40	27	P	PKPpre	10 42 53.2	
	baz=324						
Z41A	Richland Creek	142.44	43	P	PKPpre	10 42 53.8	
	baz=306						
N50A	Nevada	142.45	26	P	PKPpre	10 42 53.4	
	baz=326						
H61A	Lyndonville	142.47	11	P	PKPpre	10 42 53.8	
	baz=345						
P48A	Milroy	142.47	29	P	PKPpre	10 42 52.6	
	baz=322						
J56A	Wolcott	142.50	17	P	PKPpre	10 42 52.8	
	baz=337						
M52A	Chesterland	142.53	23	P	PKPpre	10 42 53.9	
	baz=329						
K54A	Basiliko Farm,	142.54	19	P	PKPpre	10 42 52.9	
	baz=334						
L53A	Girard	142.58	21	P	PKPpre	10 42 53.6	
	baz=331						
J57A	Williamstown	142.62	16	P	PKPpre	10 42 53.4	
	baz=338						
I58A	Old Forge	142.62	14	P	PKPpre	10 42 53.7	
	baz=340						
K55A	Perry	142.64	18	P	PKPpre	10 42 53.6	
	baz=335						
H63A	New Sharon	142.65	8	P	PKPpre	10 42 54.2	
	baz=348						
L54A	Sinclairville	142.67	20	P	PKPpre	10 42 53.8	
	baz=332						
Q48A	North Vernon	142.73	30	P	PKPpre	10 42 54.0	
	baz=321						
P49A	Miami Univ. Ec	142.75	28	P	PKPpre	10 42 53.9	
	baz=323						
O50A	Cable	142.76	27	P	PKPpre	10 42 54.0	
	baz=325						
H64A	Troy	142.78	7	P	PKPpre	10 42 54.1	
	baz=350						
H66A	Whiting	142.85	5	P	PKPpre	10 42 54.9	
	baz=353						
J58A	Remsen	142.85	15	P	PKPpre	10 42 54.9	
	baz=339						
I60A	Shoreham	142.86	12	P	PKPpre	10 42 54.7	
	baz=343						
M53A	WI Miller and	142.88	22	P	PKPpre	10 42 54.2	
	baz=330						
K56A	Middlesex	142.89	18	P	PKPpre	10 42 54.4	
	baz=336						
J59A	Piesco	142.94	14	P	PKPpre	10 42 54.6	
	baz=341						
ACSO	Alum Creek Sta	142.97	26	P	PKPpre	10 42 54.7	
	baz=326						
WCI	Wyandotte Cave	142.98	31	PKIKP	PKPdf	10 42 54.8	-3.5
WCI	Wyandotte Cave	142.98	31		PKPpre	10 42 54.8	
WCI	Wyandotte Cave	142.98	31	P	PKPdf	10 42 54.8	-3.5
	baz=319						
I61A	Oroboro, Fairl	143.00	11	P	P	10 42 55.7	
	baz=344						
L55A	Hinsdale	143.01	19	P	PKPab	10 42 55.1	+0.7
	baz=334						
Q49A	Aurora	143.08	29	P	PKPab	10 42 55.2	+0.5
	baz=322,SNR=9.4						
K57A	Scipio Center	143.10	17	P	PKPab	10 42 55.2	+0.6
	baz=337						
P50A	Jamestown	143.11	27	P	PKPab	10 42 55.1	+0.3
	baz=324						
I63A	Otisfield	143.16	9	P	PKPbc	10 42 55.9	-0.4
	baz=347						
M54A	Oil Creek Stat	143.19	21	P	PKPab	10 42 55.5	+0.5
	baz=332						
O51A	Pataskala	143.20	26	P	PKPab	10 42 55.5	+0.4
	baz=326						
I62A	Tamworth	143.21	10	P	PKPbc	10 42 55.7	-0.7
	baz=346						
K58A	Earlville	143.31	16	P	PKPbc	10 42 56.1	-0.7
	baz=338,SNR=5.3						
L56A	Greenwood	143.33	18	P	PKPab	10 42 55.8	+0.2
	baz=335,SNR=8.1						
N53A	Lisbon	143.36	23	P	PKPab	10 42 56.1	+0.4
	baz=329						
J60A	Lant Hill Farm	143.40	13	P	PKPab	10 42 56.2	+0.4
	baz=342						
I64A	Boothbay	143.44	8	P	PKPbc	10 42 56.3	-0.7
	baz=349						
J61A	Chester	143.49	12	P	PKPbc	10 42 57.1	-0.1
	baz=344						
R49A	Shelbyville	143.50	30	P	PKPbc	10 42 57.1	-0.3
	baz=321,SNR=28						
K59A	Cooperstown	143.51	15	P	PKPab	10 42 56.6	+0.3
	baz=340						
M55A	Ridgway	143.54	20	P	PKPab	10 42 56.8	+0.3
	baz=333,SNR=6.1						
O52A	Adamsville	143.55	25	P	PKPab	10 42 56.7	+0.1
	baz=327,SNR=5.9						
P51A	Williamsport	143.55	27	P	PKPab	10 42 56.3	-0.2
	baz=325,SNR=11						
N54A	Moraine State	143.55	22	P	PKPab	10 42 56.7	+0.2
	baz=331,SNR=6.2						
Q50A	Georgetown	143.64	28	P	PKPab	10 42 57.0	+0.1
	baz=323,SNR=8.3						
L57A	Andrews Acres	143.67	18	P	PKPab	10 42 57.1	+0.1
	baz=336,SNR=6.2						
WVT	Waverly	143.69	35	P	PKPab	10 42 57.3	+0.1
	baz=315						
O53A	New Philadelph	143.69	24	P	PKPab	10 42 57.3	+0.2
	baz=328						
143A	Socs Landing,	143.71	43		PKPbc	10 42 58.6	+0.4
M56A	Emporium	143.72	20	P	PKPab	10 42 57.3	+0.1
	baz=334,SNR=10						
J62A	Henniker	143.75	11	P	PKPbc	10 42 58.1	+0.2
	baz=345						
Q51A	Peebles	143.79	27	P	PKPab	10 42 57.6	0.0
	baz=324,SNR=43						
P52A	Corning	143.83	25	P	PKPab	10 42 57.5	-0.1
	baz=326,SNR=15						
J63A	Strafford	143.83	10	P	PKPbc	10 42 58.3	+0.1
	baz=346						
S49A	Springfield	143.84	31	P	PKPab	10 42 57.9	+0.2
	baz=320,SNR=79						
K60A	Five Rivers En	143.89	14	P	PKPbc	10 42 58.4	0.0
	baz=341,SNR=8.2						
L58A	Harry Jones Me	143.92	16	P	PKPbc	10 42 58.1	-0.4
	baz=338,SNR=10						
R50A	Paris	143.92	29	P	PKPab	10 42 57.9	-0.1
	baz=322,SNR=44						
K61A	Williamstown	143.99	13	P	PKPbc	10 42 58.6	-0.1
	baz=342						
L59A	Walton	144.01	15	P	PKPab	10 42 58.4	+0.1
	baz=339,SNR=10.0						
N55A	Marion Center	144.07	21	P	PKPab	10 42 58.4	-0.2
	baz=332,SNR=14						
O54A	Avella	144.08	23	P	PKPbc	10 42 58.8	-0.2
	baz=330,SNR=14						
N56A	West Decatur	144.19	20	P	PKPab	10 42 59.0	0.0
	baz=333,SNR=9.5						
M57A	Sunshine Farm,	144.19	18	P	PKPbc	10 42 59.2	-0.1
	baz=335,SNR=19						
K62A	Royalston	144.21	12	P	PKPbc	10 42 59.7	+0.4
	baz=344,SNR=6.1						
T49A	Edmonton	144.23	32	P	PKPbc	10 42 59.4	-0.2
	baz=319,SNR=84						
P53A	Whipple	144.26	25		PKPab	10 42 58.9	-0.4
P53A	Whipple	144.26	25	P	PKPbc	10 42 59.4	-0.2
	baz=328,SNR=57						
R51A	Hillsboro	144.26	28	P	PKPab	10 42 58.8	-0.5
	baz=323,SNR=26						
K63A	Dunstable	144.32	11	P	PKPbc	10 42 59.8	+0.2
	baz=345,SNR=8.4						
L61B	Northampton	144.32	12	P	PKPbc	10 42 59.5	-0.1
	baz=343,SNR=7.2						
Q52A	Bidwell	144.32	26	P	PKPab	10 42 59.1	-0.4
	baz=326,SNR=28						
S50A	Richmond	144.36	30	P	PKPab	10 42 59.3	-0.4
	baz=322,SNR=41						
M58A	Price's Panora	144.37	18	P	PKPbc	10 42 59.7	-0.2
	baz=336,SNR=16						
L61A	Hillsdale 1, H	144.37	14	P	PKPbc	10 42 59.9	0.0
	baz=342,SNR=9.9						
L60A	Shokan	144.41	15	P	PKPbc	10 42 59.9	-0.1
	baz=340						
O55A	Ligonier	144.46	22	P	PKPab	10 42 59.8	-0.3
	baz=331,SNR=18						
HRV	Adam Dziewonsk	144.50	11	PKIKP	PKPbc	10 43 00.2	0.0
HRV	Adam Dziewonsk	144.50	11		PKPbc	10 43 00.2	+0.1
HRV	Adam Dziewonsk	144.50	11	P	PKPdf	10 43 00.4	-0.4
	baz=345						
M59A	Waymart	144.51	16	P	PKPbc	10 43 00.1	-0.2
	baz=338,SNR=11						
P54A	Burton	144.53	24	P	PKPbc	10 43 00.5	+0.1
	baz=329,SNR=94						
V48A	Smith Brothers	144.54	35		PKPab	10 42 59.8	-0.7
SSPA	Standing Stone	144.58	20		PKPab	10 43 00.2	-0.2
SSPA	Standing Stone	144.58	20	P	PKPab	10 43 00.3	-0.2
	baz=334						
T50A	Nancy	144.65	31	P	PKPbc	10 43 00.5	-0.3
	baz=320,SNR=116						
R52A	Catlettsburg	144.67	27	P	PKPbc	10 43 00.3	-0.6
	baz=325,SNR=19						
O56A	Blue Knob Stat	144.67	21	P	PKPbc	10 43 00.7	-0.2
	baz=332,SNR=28						
Q53A	Leroy	144.73	26	P	PKPbc	10 43 00.9	-0.2
	baz=327,SNR=20						
N58A	Sunbury	144.77	18	P	PKPbc	10 43 00.9	-0.2
	baz=336,SNR=19						
S51A	Beattyville	144.79	29	P	PKPbc	10 43 00.7	-0.5
	baz=323,SNR=43						
P55A	Reedsville	144.87	23	P	PKPbc	10 43 01.3	-0.2
	baz=330,SNR=13						
Q54A	Coxs Mills	144.92	25	P	PKPbc	10 43 01.5	-0.1
	baz=328,SNR=30						
M60A	Port Jervis	144.93	15	P	PKPbc	10 43 01.4	-0.1
	baz=340,SNR=14						
R53A	Hurricane	144.99	27	P	PKPbc	10 43 01.5	-0.3
	baz=326,SNR=20						
N59A	State Game Lan	144.99	17	P	PKPab	10 43 01.9	-0.1
	baz=337,SNR=41						
S52A	Salyersville	145.00	28	P	PKPbc	10 43 01.8	-0.1
	baz=324,SNR=5.7						
O57A	Amberson	145.05	20	P	PKPdf	10 43 01.6	-0.3
	baz=334,SNR=9.6						
L63A	North Scituate	145.11	11	P	PKPab	10 43 02.3	-0.1
	baz=345						
T51A	Gray	145.15	30	P	PKPdf	10 43 01.9	-0.2
	baz=322,SNR=26						
M61A	Granite Spring	145.16	14	P	PKPbc	10 43 02.2	0.0
	baz=341,SNR=12						
L64A	Middleborough	145.18	10	P	PKPbc	10 43 02.3	0.0
	baz=346						
Q55A	Buckhannon	145.21	24	P	PKPbc	10 43 02.5	-0.1
	baz=329,SNR=21						
N60A	Cedar Hill Far	145.22	16	P	PKPbc	10 43 02.3	-0.1
	baz=338,SNR=12						
P56A	Dayton Farm, R	145.25	22	P	PKPbc	10 43 02.5	-0.1
	baz=332,SNR=23						
O58A	Lewisberry	145.36	19	P	PKPdf	10 43 02.5	+0.1
	baz=335,SNR=14						
PAL	Palisades	145.41	15	P	PKPab	10 43 03.2	-0.4
	baz=340,SNR=9.2						
O59A	Robesonia	145.42	18	P	PKPbc	10 43 02.9	-0.2
	baz=336,SNR=8.2						
S53A	Williamson	145.44	27	P	PKPbc	10 43 02.9	-0.4
	baz=325,SNR=15						
M63A	Gales Ferry	145.46	12	P	PKPab	10 43 03.6	-0.1
	baz=344						
T52A	Hallie	145.50	29	P	PKPbc	10 43 03.1	-0.4
	baz=323,SNR=13						
Q56A	Snyder Ridge,	145.52	23	P	PKPbc	10 43 03.2	-0.2
	baz=331,SNR=31						
R54A	Victor	145.53	26	P	PKPdf	10 43 03.0	+0.2
	baz=327,SNR=11						
N61A	South Mountain	145.55	15	P	PKPbc	10 43 03.5	+0.1
	baz=340						
P57A	Homestead Farm	145.56	21	P	PKPbc	10 43 03.2	-0.3
	baz=333,SNR=18						
O60A	Telford	145.65	17	P	PKPbc	10 43 03.5	-0.3
	baz=338						
S54A	Dingess, Beckl	145.71	26	P	PKPbc	10 43 03.9	-0.2
	baz=326,SNR=18						
CPUP	Villa Florida	145.75	189	PKPbc	PKPbc	10 43 04.4	-0.1
	comp=Z,100nm,0.8s,baz=157,slow=2.1,SNR=156						
CPUP	Villa Florida	145.75	189	PKP2	PKPbc	10 43 04.5	0.0
W50A	Signal Mountai	145.77	34	P	PKPbc	10 43 03.9	-0.5
	baz=318,SNR=23						
P58A	Pank, Wackersv	145.81	20	P	PKPbc	10 43 04.1	-0.2
	baz=334,SNR=11						
R55A	Marlinton	145.81	24	P	PKPbc	10 43 04.1	-0.3
	baz=329,SNR=10						
T53A	Wise	145.82	29	P	PKPbc	10 43 04.3	-0.2
	baz=324,SNR=16						
Q57A	Strasburg	145.82	22	P	PKPbc	10 43 04.1	-0.3
	baz=332,SNR=11						
V51A	Loudon	145.84	32	P	PKPbc	10 43 04.2	-0.3
	baz=320,SNR=20						
P59A	Jarrettsville	145.98	19	P	PKPbc	10 43 04.5	-0.3
	baz=336,SNR=8.3						
R56A	Bull Pasture M	145.99	23	P	PKPbc	10 43 04.8	-0.2
	baz=330,SNR=6.6						
PSUB	Penn St. - Bra	145.99	17		PKPdf	10 43 03.9	+0.5
CPCT	Cooper Cave	146.01	33		PKPbc	10 43 04.5	-0.5
P60A	Greenville	146.05	18	P	PKPbc	10 43 04.5	-0.4
	baz=337,SNR=5.3						
S55A	Lewisburg	146.08	25	P	PKPbc	10 43 04.6	-0.6
	baz=328,SNR=5.6						
O61A	Allentown	146.10	16	P	PKPbc	10 43 05.3	+0.2
	baz=339						
Y49A	Blount Mountai	146.12	36		PKPbc	10 43 04.8	-0.6
Q58A	Fox Den Farm,	146.16	21	P	PKPbc	10 43 05.0	-0.3
	baz=333,SNR=17						
V52A	Sevierville	146.20	31	P	PKPbc	10 43 05.6	+0.1
	baz=321,SNR=25						
T54A	Tazewell	146.20	27	P	PKPbc	10 43 05.4	-0.2
	baz=325,SNR=25						
U53A	Fall Branch	146.29	29	P	PKPbc	10 43 05.3	-0.5
	baz=323,SNR=7.4						
R57A	Stanardsville	146.43	22	P	PKPbc	10 43 06.1	0.0
	baz=331,SNR=10						
X51A	Calhoun	146.49	34	P	PKPbc	10 43 06.1	-0.3
	baz=318,SNR=10						
T55A	Pulaski	146.51	26	P	PKPbc	10 43 06.2	-0.2
	baz=327,SNR=14						
U54A	Nelsons Funny	146.53	28		PKPbc	10 43 06.1	-0.4
U54A	Nelsons Funny	146.53	28	P	PKPbc	10 43 06.2	-0.4
	baz=324,SNR=15						
S56A	Natural Bridge	146.55	24	P	PKPbc	10 43 05.9	-0.6
	baz=329,SNR=6.5						
BLA	Blacksburg	146.59	26	PKP2	PKPbc	10 43 06.3	-0.4
BLA	Blacksburg	146.59	26		PKPbc	10 43 06.3	-0.4
BLA	Blacksburg	146.59	26	P	PKPbc	10 43 06.3	-0.4
	baz=327						
W52A	Murphy	146.60	32	P	PKPbc	10 43 06.6	-0.1
	baz=320,SNR=12						
R58A	Rapidan	146.62	22	P	PKPbc	10 43 06.4	-0.3
	baz=332,SNR=10						
S57A	Dark Hollow, R	146.72	23		PKPbc	10 43 06.8	-0.2
V53A	Saluda	146.73	30	P	PKPbc	10 43 07.2	0.0
	baz=322,SNR=35						
Z50A	Ashland	146.83	37	P	PKPbc	10 43 06.9	-0.5
	baz=315,SNR=30						
U55A	TA2, Sparta	146.90	27	P	PKPbc	10 43 07.2	-0.4
	baz=326,SNR=17						
T56A	Rocky Mt	146.91	26	P	PKPbc	10 43 06.9	-0.6
	baz=328,SNR=11						
R58B	Mineral	146.96	22	P	PKPbc	10 43 07.2	-0.4
	baz=332,SNR=6.9						
V54A	Nebo	147.07	29	P	PKPbc	10 43 07.8	-0.2
	baz=324,SNR=18						
R60A	Leonardtown, M	147.15	20	P	PKPbc	10 43 08.3	+0.2
	baz=334						
BG3	Lake Jocassee	147.20	31		PKPbc	10 43 08.6	+0.2
S58A	Poland Farm, P	147.20	22	P	PKPbc	10 43 07.9	-0.4
	baz=332						
T57A	Hurt	147.26	25	P	PKPbc	10 43 08.0	-0.4
	baz=329,SNR=6.2						
U56A	King	147.33	27	P	PKPbc	10 43 08.4	-0.3
	baz=327,SNR=5.9						
S59A	Mechanicsville	147.35	21	P	PKPbc	10 43 08.8	+0.1
	baz=333,SNR=8.0						
V55A	Taylorsville	147.35	28	P	PKPbc	10 43 08.6	-0.2
	baz=325,SNR=11						
X53A	Estanollee	147.38	32	P	PKPbc	10 43 09.2	+0.3
	baz=320,SNR=17						
Y52A	Lilburn	147.45	34	P	PKPbc	10 43 09.4	+0.3
	baz=318,SNR=26						
W54A	Cherokee Point	147.50	30	P	PKPbc	10 43 09.1	-0.1
	baz=323,SNR=8.0						
250A	Grady	147.50	39		PKPbc	10 43 09.2	-0.1
BRAL	Brewton	147.55	41	P	PKPbc	10 43 10.1	+0.7
	baz=311						
T58A	Grand View Acr	147.60	24	P	PKPbc	10 43 09.1	-0.3
	baz=330,SNR=9.9						
U57A	Blanch	147.71	25	P	PKPbc	10 43 09.2	-0.5

	baz=328,SNR=7.1						
V56A	Mocksville	147.72	27	P	PKPbc	10 43 09.4	-0.3
	baz=326,SNR=11						
X54A	Belton	147.83	31	P	PKPbc	10 43 10.2	+0.1
	baz=322,SNR=14						
KMSC	Kings Mountain	147.87	29		PKPbc	10 43 09.8	-0.3
KMSC	Kings Mountain	147.87	29	P	PKPbc	10 43 09.9	-0.3
	baz=324,SNR=12						
T59A	Double "B" Far	147.96	22		PKPbc	10 43 10.2	0.0
T59A	Double "B" Far	147.96	22	P	PKPbc	10 43 10.3	0.0
	baz=332,SNR=16						
152A	Waverly Hall	147.96	36	PKPbc	PKPbc	10 43 10.4	-0.1
V57A	Coltrane Farms	147.98	26	P	PKPbc	10 43 10.1	-0.3
	baz=327,SNR=11						
U58A	Oxford	148.07	24	P	PKPbc	10 43 10.5	-0.1
	baz=330,SNR=12						
GOGA	Godfrey	148.12	34	PKP2	PKPbc	10 43 10.8	0.0
GOGA	Godfrey	148.12	34		PKPbc	10 43 10.8	0.0
GOGA	Godfrey	148.12	34	P	PKPbc	10 43 10.9	0.0
	baz=319,SNR=9.8						
W56A	Indian Trail	148.24	28	P	PKPbc	10 43 10.6	-0.4
	baz=325						
X55A	Gracelyn & Ava	148.26	30	P	PKPbc	10 43 11.2	0.0
	baz=323,SNR=6.9						
V58A	Windy Hill, Pi	148.34	26	PKPdf	PKPdf	10 43 07.4	-0.1
V58A					PKPbc	10 43 10.9	-0.4
V58A	Windy Hill, Pi	148.34	26	P	PKPbc	10 43 11.1	-0.3
	baz=328,SNR=6.6						
U59A	Littleton	148.41	23	P	PKPbc	10 43 11.3	-0.2
	baz=331						
W57A	Gilead	148.49	27	P	PKPbc	10 43 11.5	-0.2
	baz=326,SNR=6.8						
U60A	Pendleton	148.54	22	P	PKPbc	10 43 11.5	-0.3
	baz=332,SNR=7.9						
X56A	White Oak	148.54	29	P	PKPbc	10 43 11.4	-0.4
	baz=324,SNR=6.0						
Y55A	Saluda	148.57	31	P	PKPbc	10 43 12.2	+0.2
	baz=322						
V59A	Middlesex	148.74	24	P	PKPbc	10 43 12.3	0.0
	baz=330,SNR=7.2						
U61A	Possum Corner	148.93	21	P	PKPbc	10 43 13.1	+0.4
	baz=333						
W58A	Raeford	148.95	27	P	PKPbc	10 43 12.7	-0.2
	baz=327,SNR=8.1						
Y56A	Pelion	148.97	31	P	PKPbc	10 43 13.2	+0.3
	baz=323						
X57A	Johnson Farm,	149.02	28	P	PKPbc	10 43 12.4	-0.6
	baz=325						
V60A	Jim Taylor Roa	149.13	23	P	PKPbc	10 43 13.3	+0.1
	baz=331,SNR=5.2						
W59A	Clinton	149.16	25	P	PKPbc	10 43 13.5	+0.1
	baz=329						
Y57A	Sumter	149.24	29	P	PKPbc	10 43 13.8	+0.2
	baz=324						
X58A	Rowland	149.29	27	P	PKPbc	10 43 13.7	0.0
	baz=327						
Z56A	Williston	149.31	31	P	PKiKP	10 43 14.3	-0.5
	baz=322						
PB04	IPOC Station P	149.34	167		PKiKP	10 43 15.4	0.0
V61A	Roper	149.36	22	P	PKiKP	10 43 14.3	-0.5
	baz=333						
TIGA	Tifton	149.50	36	P	PKPbc	10 43 14.6	+0.3
	baz=316						
W60A	Pink Hill	149.57	24	P	PKPbc	10 43 14.5	+0.2
	baz=330						
X59A	McDuffie Farm,	149.60	26	P	PKPbc	10 43 14.3	-0.2
	baz=328						
Z57A	Bowman	149.66	30	P	PKPbc	10 43 15.0	+0.3
	baz=323						
Y58A	Scranton	149.68	28	P	PKPbc	10 43 14.8	+0.1
	baz=326						
X60A	Albert Glenn T	149.87	25	P	PKPbc	10 43 15.2	+0.1
	baz=329						
RCBR	Riachuelo	149.88	244	PKP	PKPdf	10 43 10.5	-0.1
	comp=Z,6.2nm,0.7s,baz=211,slow=0.9,SNR=2.9						
RCBR				PKPbc	PKiKP	10 43 16.6	0.0
	comp=Z,17nm,0.7s,baz=92,slow=3.7,SNR=8.0						
RCBR				PKPab	PKPab	10 43 23.7	+1.3
	comp=Z,47nm,1.0s,baz=112,slow=6.0,SNR=9.2						
RCBR	Riachuelo	149.88	244		PKiKP	10 43 16.9	+0.3
Y59A	Loris	149.97	27	P	PKPbc	10 43 15.3	-0.1
	baz=327						
157A	Early Branch	150.01	32	P	PKiKP	10 43 16.2	0.0
	baz=322						
Z58A	St. Stephen	150.07	29	P	PKPbc	10 43 15.8	+0.2
	baz=325						
456A	Hilliard	150.94	35		PKiKP	10 43 18.1	-0.2
PAYG	Puerto Ayora	151.49	106	*e*P	PKiKP	10 43 21.1	+1.2
PAYG	Puerto Ayora	151.49	106		PKiKP	10 43 20.9	+1.0
PB11	IPOC Station P	151.93	166	PKPbc	PKiKP	10 43 21.4	+0.5
BDFB	Brasilia	152.51	213	PKP	PKPdf	10 43 14.7	0.0
	comp=Z,4.8nm,0.8s,baz=72,slow=3.8,SNR=6.6						
BDFB				PKPbc	PKiKP	10 43 22.5	+0.5
	comp=Z,31nm,0.5s,baz=177,slow=1.0,SNR=35						
BDFB				PKPab	PKPab	10 43 33.9	+0.6
	comp=Z,26nm,0.7s,baz=152,slow=4.6,SNR=14						
BDFB	Brasilia	152.51	213		PKPdf	10 43 15.4	+0.8
LPAZ	La Paz	155.63	168	PKP	PKPdf	10 43 19.9	+0.2
	comp=Z,4.6nm,0.9s,baz=108,slow=1.8,SNR=15						
LPAZ				PKPbc	PKPab	10 43 29.1	-18
	comp=Z,4.5nm,0.7s,baz=60,slow=3.6,SNR=13						
LPAZ				PKPab	PKPab	10 43 48.8	+1.8
	comp=Z,7.4nm,0.5s,baz=94,slow=1.4,SNR=13						
LPAZ	La Paz	155.63	168	PKPdf	PKPdf	10 43 20.6	+1.0
SIV	San Ignacio	156.40	184	PKP	PKPdf	10 43 20.8	+0.9
	comp=Z,7.0nm,0.9s,baz=180,slow=2.3,SNR=27						
SIV				PKPbc	PKPab	10 43 30.5	-19
	comp=Z,5.4nm,0.8s,baz=197,slow=3.9,SNR=11						
SIV				PKPab	PKPab	10 43 49.7	+0.1
	comp=Z,11nm,0.7s,baz=169,slow=4.1,SNR=17						
OTAV	Otavalo	162.85	115	*e*P	PKPdf	10 43 28.4	+0.5
SAML	Samuel	163.47	179	*e*P	PKPdf	10 43 27.7	-0.1
SAML	Samuel	163.47	179	PKP2	PKPab	10 44 21.4	+1.0
SAML						11 43 28.2	
SAML	Samuel	163.47	179		PKPdf	10 43 28.2	+0.4
SAML					PKPab	10 44 21.4	+1.0
CBOC	Ciudad Bolivar	166.89	97	*e*P	PKPdf	10 43 29.9	-1.0
ORTC	Ortega, Tolima	167.19	106	*e*P	PKPdf	10 43 29.9	-1.1
GUY2C	Guyana, Caldas	167.41	100	*e*P	PKPdf	10 43 30.9	-0.8
RUSC	La Rusia	169.76	99	*e*P	PKPdf	10 43 31.2	-2.0
PTGA	Pitinga	171.13	200	PKP	PKPdf	10 43 33.8	+0.5
	comp=Z,1.0nm,0.3s,baz=135,slow=19,SNR=2.2						
PTGA				PKPab	PKPab	10 44 54.6	+0.2
	comp=Z,2.5nm,0.5s,baz=311,slow=23,SNR=7.1						

KEA 06 10:31:26.6±0.0**, 40°.65N**×**122°.71E, h0**^{km}**, ML2.6**/1**,**
Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUJ	Sinuiju	1.47	111	Pg	Pg	10 31 54.7	0.0
SUJ				Sg	Sg	10 32 13.8	0.0
PYS	Pyongsong	2.79	119	Pg	Pg	10 32 19.2	-0.9
PYS				Sg	Sg	10 32 54.6	-1.7
PYAG	Pyongyang	2.84	123	Sg	Sg	10 32 55.8	-2.0

IDC ***06*** *11:06:36.8±9.1, 33°.96S×179°.22W, h80*^{km}*±87*^{km}*, mb3.3/2, mb1 3.6/3, mb1mx3.4/36, mbtmp3.7/3, ML3.6/1, Error ellipse: s-maj=83.4km s-min=59.5km az=155.0*

ISC 06 11:06:33.6±2.4**, 33°.7S**±0°.2×**179°.2W**±0°.4**, h50**^{km}**, n15,**
σ0^{s}91/14**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	4.51	205	P	Pn	11 07 40.6	+1.2
PKGZ	Pakihiroa	4.70	207	P	Pn	11 07 42.3	+0.2
HAZ	Te Kaha	4.71	211	P	Pn	11 07 43.1	+1.1
PUZ	Puketiti	4.79	205	P	Pn	11 07 43.5	+0.2
RUGZ	Raukumara Rang	4.93	210	P	Pn	11 07 46.2	+1.0
TWGZ	Tauwhareparae	4.99	207	P	Pn	11 07 46.4	+0.4
TKGZ	Te Karaka	5.27	206	P	Pn	11 07 52.0	+2.2
OPRZ	Ohinepanea	5.36	219	P	Pn	11 07 53.6	+2.6
URZ	Urewera	5.42	213	P	Pn	11 07 52.3	+0.4
	2.1nm,0.3s,baz=349,slow=4.7,SNR=18						
URZ				S	Sn	11 08 51.6	-1.3
	1.7nm,0.3s,baz=343,slow=19,SNR=2.0						
URZ	Urewera	5.42	213	P	Pn	11 07 53.3	+1.5
RAGZ	Rawiri	5.49	209	P	Pn	11 07 53.7	+0.9
RIGZ	Rimuhau	5.54	206	P	Pn	11 07 53.9	+0.4
ASAR	Alice Springs	42.04	271	P	P	11 14 20.3	-0.3
	0.5nm,0.7s,baz=115,slow=7.7,SNR=3.2						
WRA	Warramunga Arr	43.33	276	P	P	11 14 31.1	+0.1
	0.3nm,0.3s,baz=117,slow=7.6,SNR=8.7						
FINES	FINESS Array B	147.88	337	PKPbc	PKPbc	11 26 11.7	-0.7
	2.2nm,0.8s,baz=53,slow=5.4,SNR=3.5						

IDC 06 11:13:38.4±3.9**, 5°.34S**×**130°.37E, h250**^{km}±62^{km}**, mb2.9**/1**,**
mb1 3.5/4**, mb1mx3.1**/35**, mbtmp4.0**/4**, Error ellipse:**
s-maj=142.3km s-min=17.5km az=79.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.53	11	P	Pn	11 14 49.5	+1.0
	8.6nm,0.3s,baz=286,slow=23,SNR=78						
SIJI				S	S	11 15 44.5	+0.1
	5.2nm,0.3s,baz=237,slow=23,SNR=20						
WRA	Warramunga Arr	15.02	165	P	P	11 16 57.0	-1.4
	0.6nm,0.3s,baz=349,slow=12,SNR=16						
ASAR	Alice Springs	18.54	170	P	P	11 17 37.5	+0.7
	1.3nm,0.3s,baz=348,slow=11,SNR=98						
MKAR	Makanchi Array	67.05	326	P	P	11 24 04.7	-0.2
	0.3nm,0.5s,baz=137,slow=7.9,SNR=3.8						

IDC ***06*** *11:17:18.0±0.4, 86°.07N×26°.91E, h0*^{km}*, mb4.0/25, mb1 4.2/30, mb1mx4.1/53, mbtmp4.1/30, ML4.4/4, MS3.5/33, Ms1 3.5/33, ms1mx3.5/48, Error ellipse: s-maj=12.8km s-min=10.2km az=57.0*

MOS ***06*** *11:17:17.7±1.5, 85°.92N×25°.73E, h10*^{km}*, mb4.7/17, Error ellipse: s-maj=99.9km s-min=7.0km az=90.1*

GCMT ***06*** *11:17:19.1±0.3, 85°.98N±0°.02×27°.4E±0°.5, h18*^{km}*±1*^{km}*, MW4.8/85, Moment Tensor Solution.   s22,c22;   s85,c113; Duration: 0   Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*-1.93±.14;* $M_{\theta\theta}$*1.65±.09;* $M_{\phi\phi}$*0.27±.08;* $M_{r\theta}$*-0.24±.20;* $M_{\theta\phi}$*0.60±.06;* $M_{\phi r}$*-0.35±.26;   Best double couple:* M_0*1.95000×10*^{16} *NP1:*ϕ_s*256.00000°, δ40.00000°, λ-79.00000°.   NP2:* ϕ_s*62.00000°, δ51.00000°, λ-99.00000°.   Principal axes: T 1.9080, Plg5.0000°, Azm159.0000°; N 0.0830, Plg7.0000°, Azm68.0000°; P -1.9910, Plg81.0000°, Azm286.0000°;   nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***06*** *11:17:20.1±2.4, 85°.86N±0°.08×2°5E±°, h14*^{km}*±5*^{km}*, mb4.5/19 Error ellipse: s-maj=15.7km s-min=11.5km az=71.0*

IEPN ***06*** *11:17:28.0, 85°.29N×28°.52E, h15*^{km}

ISC 06 11:17:19.4±0.3**, 85°.87N**±0°.04×**24°.82E**±0°.05**, h10**^{km}**, n149,**
σ**2**^{s}**32**/160**, mb4.3**/50**, MS3.5**/30**, 5C-3D, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZFI2	Zemlya Franca-	5.65	141	⇓*i*P	Pn	11 18 42.0	-1.2
ZFI2				*e*S	Sn	11 19 37.6	-10
	25nm,0.6s						
NOR	Nord	6.00	249	Pn	Pn	11 18 52.1	+4.0
NOR	Nord	6.00	249	*i* P	Pn	11 18 52.4	+4.3
	3.6nm,0.8s						
NOR	Nord	6.00	249	*e*P	Pn	11 18 44.5	-3.6
NOR	Nord	6.00	249	*i* P	Pn	11 18 52.4	+4.3
NOR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBS	Kingsbay	7.15	200	Pn	Pn	11 19 03.2	-0.6
KBS				Sn	Sn	11 20 20.6	-4.3
KBS	Kingsbay	7.15	200	*e*P	Pn	11 19 03.1	-0.6
KBS				*e*S	Sn	11 20 20.3	-4.6
KBS				IAML		11 20 33.8	
	comp=Z,12nm,0.5s						
KBS	Kingsbay	7.15	200	*e*P	Pn	11 19 03.2	-0.6
KBS				*e*S	Sn	11 20 16.3	-8.6
KBS	Kingsbay	7.15	200	P	Pn	11 19 04.3	+0.5
KBS	Kingsbay	7.15	200		Pn	11 19 04.3	+0.5
SPA0	Spitsbergen Ar	7.81	193	Pn	Pn	11 19 12.6	-0.2
	baz=21,slow=11						
SPA0	Spitsbergen Ar	7.81	193	Pn	Pn	11 19 12.6	-0.2
	baz=21,slow=11						
SPA0				*e*S	Sn	11 20 34.5	-6.6
SPA0				IAML		11 21 00.3	
	comp=Z,10nm,0.8s						
SPA0	Spitsbergen Ar	7.81	193	⇓*i*P	Pn	11 19 12.7	-0.2
SPA0				*e*S	Sn	11 20 31.6	-10
SPA0	Spitsbergen Ar	7.81	193		Pn	11 19 13.1	+0.2
SPITS	Spitsbergen Ar	7.81	193	Pn	Pn	11 19 12.9	0.0
	baz=42,slow=10,SNR=363						
SPITS				Sn	Sn	11 20 37.6	-3.5
	baz=30,slow=31,SNR=1.1						
SPITS				LR	LR	11 21 40.4	
	comp=Z,548nm,20.6s,baz=15,slow=33						
BRBB	Barentsburg B	7.93	196	Pn	Pn	11 19 14.8	+0.3
BRBB				Sn	Sn	11 20 41.2	-2.9
BRBB	Barentsburg B	7.93	196	Pn	Pn	11 19 14.8	+0.3
BRBB				Sn	Sn	11 20 41.2	-2.9
BRBA	Barentsburg A	7.96	196	Pn	Pn	11 19 15.7	+0.7
BRBA	Barentsburg A	7.96	196	Pn	Pn	11 19 15.7	+0.7
HSPB	Hornsund (broa	9.00	194	Pn	Pn	11 19 30.8	+1.6
HSPB	Hornsund (broa	9.00	194	*e*P	Pn	11 19 27.9	-1.2
HSPB				*e*S	Sn	11 21 02.1	-8.2
HSPB				IAML		11 21 42.0	
	comp=Z,11nm,0.9s						
HSPB				IAML		11 21 42.2	
	comp=Z,8.4nm,0.8s						
HSPB	Hornsund (broa	9.00	194	*e*P	Pn	11 19 30.3	+1.2
HSPB				*e*S	Sn	11 21 00.7	-10
HOPEN	Hopen	9.41	180	Pn	Pn	11 19 35.5	+0.7
HOPEN	Hopen	9.41	180	*e*P	Pn	11 19 34.0	-0.8
HOPEN				*e*S	Sn	11 21 13.1	-7.4
HOPEN				IAML		11 21 23.3	
	comp=Z,15nm,0.6s						
HOPEN				IAML		11 22 06.9	
	comp=Z,15nm,0.9s						
HOPEN	Hopen	9.41	180	*e*P	Pn	11 19 35.0	+0.1
HOPEN				*e*S	Sn	11 21 08.2	-12
BJO1	Bjornoya	11.46	188	Pn	Pn	11 20 02.4	-0.4
BJO1	Bjornoya	11.46	188	Pn	Pn	11 20 02.4	-0.4
BJO1				*e*S	Sn	11 21 58.2	-13
BJO1				IAML		11 22 00.8	
	comp=Z,120nm,0.6s						
BJO1	Bjornoya	11.46	188	*e*P	Pn	11 20 02.7	-0.1
BJO1				*e*S	Sn	11 22 04.3	-6.3
TULEG	Thule	14.41	290		Pn	11 20 39.1	-4.0
HAMF	Hammerfest	15.32	181	Pn	Pn	11 20 55.7	+0.4
HAMF	Hammerfest	15.32	181	*e*P	Pn	11 20 51.0	-4.2
SUMG	Summit	16.08	256	*i* P	Pn	11 21 05.0	-0.6
SUMG	Summit	16.08	256	P	Pn	11 21 05.8	+0.2
SUMG				pmax	pmax		
	comp=Z,19nm,1.2s						
SUMG	Summit	16.08	256		Pn	11 21 05.8	+0.2
KEV	Kevo	16.21	177	P	Pn	11 21 06.6	-0.2
KEV				pmax	pmax		
	comp=Z,60nm,1.2s						
KEV	Kevo	16.21	177	Pn	Pn	11 21 06.6	-0.2
KEV				IAmb	IAmb	11 21 12.7	
	comp=Z,60nm,1.2s						
TRO	Tromso	16.36	187	*e*P	Pn	11 21 05.4	-3.3
ARA0	ARCESS Array S	16.43	179	P	Pn	11 21 07.8	-1.9
	baz=2.5,slow=11						
ARA0	ARCESS Array S	16.43	179	P	Pn	11 21 07.8	-1.9
	baz=2.5,slow=11						
ARCES	ARCESS Array B	16.43	179	Pn	Pn	11 21 09.6	-0.1
	comp=Z,1.9nm,0.3s,baz=5.4,slow=11,SNR=64						
ARCES				Sn	Sn	11 23 59.6	-12
	comp=Z,0.2nm,0.3s,baz=8.9,slow=15,SNR=3.2						
ARCES				LR	LR	11 27 19.3	
	comp=Z,178nm,18.6s,baz=1.0,slow=36						
ARCES	ARCESS Array B	16.43	179		Pn	11 21 08.9	-0.7
ARE0	ARCESS Array S	16.43	179	Pn	Pn	11 21 09.1	-0.6
KTK1	Kautokeino	16.96	182	*e*P	Pn	11 21 13.4	-2.9
KIF	Kilpisjarvi	16.98	185	*e*P	Pn	11 21 12.7	-3.8
AMDE	Amderma	17.21	135	*e*P	Pn	11 21 17.2	-2.2
HEF	Hetta	17.56	181	*e*P	Pn	11 21 17.5	-6.4
RES	Resolute Bay	17.84	311	P	Pn	11 21 25.5	-1.7
	comp=Z,0.6nm,0.3s,baz=18,slow=12,SNR=51						
RES				LR	LR	11 27 49.7	
	comp=Z,178nm,18.7s,baz=44,slow=36						
RES	Resolute Bay	17.84	311	P	Pn	11 21 26.0	-1.2
RES				pmax	pmax		
	comp=Z,17nm,0.9s						
RES	Resolute Bay	17.84	311	P	Pn	11 21 26.0	-1.2
RES				IAmb	IAmb	11 21 28.2	
	comp=Z,17nm,0.8s						
LVZ	Lovozero	18.15	168	*i* P	Pn	11 21 30.6	-0.5
LVZ				pmax	pmax		
	comp=Z,21nm,1.0s						
LVZ	Lovozero	18.15	168	P	Pn	11 21 30.6	-0.5
APA0	Apatity Array	18.42	170	P	P	11 21 32.6	-1.8
	baz=21,slow=10						
APA0	Apatity Array	18.42	170	P	P	11 21 32.6	-1.8
	baz=21,slow=10						
APA	Apatity	18.46	170	⇓*i*P	P	11 21 33.1	-1.7
APA				*i*		11 24 56.0	
APA				pmax	pmax		
	comp=Z,22nm,0.7s						
APA				MLR	MLR		
	comp=Z,700nm,14.0s						
NRIK	Noril'sk	19.22	107	P	P	11 21 41.9	-1.3
	comp=Z,0.8nm,0.3s,baz=0.0,slow=9.3,SNR=21						
NRIK				LR	LR	11 28 32.8	
	comp=Z,132nm,21.9s,baz=354,slow=35						
TIXI	Tiksi	19.88	65	P	P	11 21 47.9	-2.3
	comp=Z,0.1nm,0.3s,baz=13,slow=4.7,SNR=3.0						
TIXI				LR	LR	11 28 10.9	
	comp=Z,117nm,21.3s,baz=356,slow=33						
TIXI	Tiksi	19.88	65	*i* P	Pn	11 21 51.6	-0.2
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.4s						
SLVR	Solovky	21.05	167	*e*P	P	11 22 05.3	+2.4
	comp=Z,43nm,1.5s						
LSH	Leshukonskoye	21.43	155	*e*P	P	11 22 07.5	+0.5
	comp=Z,73nm,1.4s						
TMCR	Tamitsa	21.95	164	*e*P	P	11 22 13.4	+0.7
	comp=Z,16nm,0.7s						
TMCR				*e*S	S	11 26 15.4	+0.8
TMCR	Tamitsa	21.95	164	*e*P	P	11 22 13.4	+0.7
TMCR				*e*S	S	11 26 16.0	+1.4
TMCR				pmax	pmax		
	comp=Z,22nm,0.9s						
C36M	Paulatuk	24.43	334	P	P	11 22 37.2	-0.4
FIA0	FINESS Array S	24.56	179	P	P	11 22 42.5	+3.7
	baz=360,slow=10						
FIA0	FINESS Array S	24.56	179	P	P	11 22 42.5	+3.7
	baz=360,slow=10						
FINES	FINESS Array B	24.56	179	P	P	11 22 41.4	+2.6
	comp=Z,5.2nm,0.9s,baz=26,slow=9.3,SNR=7.7						
FINES				LR	LR	11 32 01.0	
	comp=Z,160nm,18.3s,baz=24,slow=36						
FINES	FINESS Array B	24.56	179	P	P	11 22 41.0	+2.2
FINES	FINESS Array B	24.56	179	P	P	11 22 41.0	+2.2
PRGR	Permogore	24.68	156	*e*P	P	11 22 40.8	+0.9
	comp=Z,23nm,1.0s						
PRGR	Permogore	24.68	156	*e*P	P	11 22 40.7	+0.9
PRGR				pmax	pmax		
	comp=Z,23nm,1.0s						
NOA	NORSAR Array B	25.10	196	P	P	11 22 47.5	+3.7
	comp=Z,1.0nm,0.8s,baz=1.5,slow=8.6,SNR=2.6						
KLMR	Klimovskoe	25.30	163	*e*P	P	11 22 43.5	-2.0
	comp=Z,215nm,1.4s						
KLMR	Klimovskoe	25.30	163	*e*P	P	11 22 45.5	0.0
KLMR				pmax	pmax		
	comp=Z,39nm,1.6s						
KLMR	Klimovskoe	25.30	163	*e*P	P	11 22 45.5	0.0
KLMR				AMP		11 23 04.8	
	comp=Z,39nm,1.6s						
BILL	Bilibino	25.48	33	*i* P	P	11 22 46.4	-0.7
BILL				pmax	pmax		
	comp=Z,11nm,1.3s						
TOLK	Toolik Lake Re	25.64	355	P	P	11 22 49.5	+1.0
INK	Inuvik	25.74	342	P	P	11 22 49.0	-0.4
	comp=Z,9.5nm,0.9s,baz=4.1,slow=13,SNR=30						
INK				PcP	PcP	11 26 17.0	-1.7
	comp=Z,1.4nm,0.9s,baz=313,slow=3.9,SNR=3.3						
INK	Inuvik	25.74	342	P	P	11 22 48.5	-0.9
INK				IAmb	IAmb	11 22 50.8	
	comp=Z,13nm,0.9s						
HFS	Hagfors	25.96	193	LR	LR	11 34 38.3	
	comp=Z,83nm,18.2s,baz=357,slow=40						
BMAR	Burnt Mountain	26.81	351	P	P	11 22 59.5	+0.3
FRB	Frobisher Bay	26.95	282	P	P	11 23 01.5	+1.1
	comp=Z,4.0nm,1.1s,baz=21,slow=12,SNR=3.9						
FRB				LR	LR	11 33 24.5	
	comp=Z,66nm,19.4s,baz=29,slow=36						
FYU	Fort Yukon	27.68	351	P	P	11 23 07.2	+0.3
FYU				IAmb	IAmb	11 23 18.1	
	comp=Z,16nm,1.2s						
EPYK	Eagle Plains	27.75	344	P	P	11 23 09.5	+1.8
EPYK				IAmb	IAmb	11 23 13.1	
	comp=Z,18nm,1.4s						
YAK	Yakutsk	29.45	68	P	P	11 23 21.0	-1.7
	comp=Z,5.4nm,0.3s,baz=263,slow=1.6,SNR=7.6						
YAK				LR	LR	11 35 06.9	
	comp=Z,78nm,18.2s,baz=302,slow=37						
YAK	Yakutsk	29.45	68	*e*P	P	11 23 20.8	-1.9
YAK				pmax	pmax		
	comp=Z,21nm,0.9s						
YAK				pmax	pmax		
	comp=N,13nm,1.3s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
ILAR	Eielson Array	29.50	353	P	P	11 23 22.6	-0.6
	comp=E,0.7nm,0.7s,baz=3.7,slow=6.8,SNR=7.8						
ILAR				PcP	PcP	11 26 27.0	-0.9
	comp=E,0.6nm,0.8s,baz=341,slow=3.4,SNR=4.4						
SEY	Seymchan	29.93	47	P	P	11 23 26.4	-0.6
	comp=E,0.5nm,0.3s,baz=345,slow=19,SNR=4.3						
SEY				PcP	PcP	11 26 28.8	-0.2
	comp=E,0.4nm,0.3s,baz=263,slow=0.5,SNR=5.6						
DAWY	Dawson	30.11	346	P	P	11 23 27.8	-0.8
DAWY				IAmb	IAmb	11 23 39.8	
	comp=Z,6.3nm,1.3s						
YKA	Yellowknife Ar	30.94	324	P	P	11 23 35.6	-0.2
	comp=Z,0.6nm,0.7s,baz=3.4,slow=8.1,SNR=18						
YKA				PcP	PcP	11 26 31.6	0.0
	comp=Z,1.4nm,0.8s,baz=354,slow=2.8,SNR=13						
YKA				LR	LR	11 36 18.4	
	comp=Z,117nm,18.8s,baz=0.0,slow=37						
OBN	Obninsk	31.00	167	⇑*e*P	P	11 23 37.7	+1.3
OBN				*i*		11 24 42.7	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,139nm,18.0s						
BCAR	Beaver Creek A	31.15	348	P	P	11 23 38.5	+0.7
MA2	Magadan	33.19	49	*i* P	P	11 23 53.5	-2.1
MA2				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BRVK	Borovoye	34.32	130	*i* P	P	11 24 08.5	+3.0
BRVK				pmax	pmax		
	comp=Z,18nm,2.8s						
ZALV	Zalesovo Beam	34.32	115	P	P	11 24 05.7	+0.3
	comp=Z,2.2nm,0.6s,baz=354,slow=7.2,SNR=9.6						
ZALV				PcP	PcP	11 26 41.0	-0.1
	comp=Z,2.2nm,0.7s,baz=316,slow=4.1,SNR=6.0						
ZALV				LR	LR	11 40 17.1	
	comp=Z,73nm,18.6s,baz=3.0,slow=40						
VSR	Storozhevoye	34.95	164	*i* P	P	11 24 12.7	+1.7
VSR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AKASG	Malin Array Be	35.34	175	P	P	11 24 15.9	+1.6
	comp=Z,0.3nm,0.3s,baz=357,slow=8.9,SNR=4.2						
AKASG				LR	LR	11 38 39.3	
	comp=Z,134nm,19.2s,baz=345,slow=36						
AKTO	Aktyubinsk	36.33	144	LR	LR	11 42 35.8	
	comp=Z,90nm,18.6s,baz=356,slow=42						
KURK	Kurchatov	37.14	122	*ce*P	P	11 24 31.4	+1.7
KURK				pmax	pmax		
	comp=Z,21nm,1.0s						
GERES	GERESS Array B	37.27	192	P	P	11 24 32.2	+1.2
	comp=Z,0.3nm,0.5s,baz=352,slow=5.5,SNR=3.7						
GERES				LR	LR	11 38 36.2	
	comp=Z,59nm,20.4s,baz=24,slow=34						
ZEA	Zeya	37.53	72	*e*P	P	11 24 32.9	-0.1
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
ABKAR	Akbulak array	37.59	142	P	P	11 24 35.2	+1.7
ABKAR	Akbulak array	37.59	142	P	P	11 24 35.4	+1.8
MOY	Mondy	37.71	99	*e*P	P	11 24 34.9	+0.2
MOY				pmax	pmax		
	comp=Z,17nm,1.3s						
TLY	Talaya	37.89	96	LR	LR	11 41 35.0	
	comp=Z,131nm,18.1s,baz=347,slow=39						
TLY	Talaya	37.89	96	*ce*P	P	11 24 35.9	-0.1
TLY				pmax	pmax		
	comp=Z,12nm,1.7s						
PETK	Petropavlovsk-	40.01	43	LR	LR	11 40 29.1	
	comp=Z,52nm,19.1s,baz=61,slow=35						
MK31	Makanchi Array	41.28	119	P	P	11 25 04.0	-0.4
MK31				pmax	pmax		
	comp=Z,4.0nm,1.4s						
MK31	Makanchi Array	41.28	119	P	P	11 25 04.0	-0.4
MKAR	Makanchi Array	41.28	119	P	P	11 25 04.0	-0.4
	comp=Z,0.7nm,0.7s,baz=338,slow=9.2,SNR=7.0						
MKAR				PP	PnPn	11 26 41.4	-2.5
	comp=Z,0.9nm,0.9s,baz=350,slow=6.3,SNR=3.6						

MKAR				PcP	**PcP**	**11 27 00.8**	**-1.9**
	comp=Z,0.9nm,0.8s,baz=356,slow=3.6,SNR=4.1						
MKAR				LR	LR	11 44 50.6	
	comp=Z,88nm,19.3s,baz=345,slow=40						
MKAR	**Makanchi Array**	**41.28**	**119**	P	**P**	**11 25 04.2**	**-0.2**
MKAR	**Makanchi Array**	**41.28**	**119**	P	**P**	**11 25 04.2**	**-0.2**
SONM	**Songino Array**	**41.91**	**94**	P	**P**	**11 25 09.9**	**+0.3**
	comp=Z,4.6nm,0.9s,baz=340,slow=8.7,SNR=22						
SONM				PcP	**PcP**	**11 27 03.3**	**-1.6**
	comp=Z,1.5nm,0.9s,baz=318,slow=2.0,SNR=4.7						
SONM				LR	LR	11 44 50.5	
	comp=Z,56nm,18.8s,baz=356,slow=40						
ULN	**Ulaanbaatar**	**41.93**	**93**	P	**P**	**11 25 09.5**	**-0.3**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ULN	**Ulaanbaatar**	**41.93**	**93**	P	**P**	**11 25 09.5**	**-0.3**
ULN				IAmb	IAmb	11 25 11.1	
	comp=Z,9.4nm,0.9s						
ULM	**Lac du Bonnet**	**42.19**	**305**	P	**P**	**11 25 11.5**	**-0.2**
	comp=Z,1.6nm,0.7s,baz=11,slow=8.4,SNR=6.6						
ULM				PcP	**PcP**	**11 27 03.6**	**-1.9**
	comp=Z,0.7nm,0.5s,baz=327,slow=7.2,SNR=3.3						
ULM				LR	LR	11 41 41.8	
	comp=Z,79nm,21.9s,baz=338,slow=35						
KIV	**Kislovodsk**	**42.29**	**161**	*e*P	**P**	**11 25 13.5**	**+0.8**
KIV				pmax	pmax		
	comp=Z,24nm,1.1s						
KIV				MLR	MLR		
	comp=Z,175nm,16.0s						
KLR	**Kul'dur**	**42.33**	**69**	*i* P	**P**	**11 25 11.8**	**-1.0**
KLR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KBZ	**Khabaz**	**42.52**	**161**	P	**P**	**11 25 16.9**	**+2.4**
	comp=Z,2.6nm,1.0s,baz=346,slow=9.6,SNR=6.2						
KBZ				LR	LR	11 46 16.1	
	comp=Z,73nm,18.4s,baz=10,slow=41						
NEY	**Neytrino**	**43.00**	**161**	*ce*P	**P**	**11 25 21.0**	**+2.4**
NEY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KKAR	**Karatay Array**	**44.26**	**131**	P	**P**	**11 25 29.9**	**+1.4**
KKAR	**Karatay Array**	**44.26**	**131**	P	**P**	**11 25 29.9**	**+1.4**
AAK	**Ala-Archa**	**44.95**	**127**	*ce*P	**P**	**11 25 36.6**	**+2.4**
AAK				pmax	pmax		
	comp=Z,16nm,1.7s						
AAK	**Ala-Archa**	**44.95**	**127**	P	**P**	**11 25 35.4**	**+1.1**
AAK				IAmb	IAmb	11 25 45.3	
	comp=Z,9.2nm,1.4s						
B08A	**Colville Reser**	**45.26**	**327**	P	**P**	**11 25 37.4**	**+0.9**
JTMT	**Jette**	**45.66**	**322**	P	**P**	**11 25 44.5**	**+4.7**
JTMT				IAmb	IAmb	11 25 51.8	
	comp=Z,10nm,1.3s						
GNI	**Garni**	**46.14**	**159**	LR	LR	11 48 14.6	
	comp=Z,66nm,19.7s,baz=346,slow=40						
BRTR	**Keskin Array B**	**46.35**	**171**	P	**P**	**11 25 47.6**	**+2.3**
	comp=Z,2.3nm,1.1s,baz=322,slow=3.8,SNR=5.9						
BRTR				LR	LR	11 45 04.5	
	comp=Z,64nm,20.4s,baz=346,slow=36						
BRTR	**Keskin Array B**	**46.35**	**171**	P	**P**	**11 25 47.4**	**+2.1**
BRTR	**Keskin Array B**	**46.35**	**171**	P	**P**	**11 25 47.4**	**+2.1**
MSO	**Missoula**	**46.56**	**321**	P	**P**	**11 25 50.3**	**+3.5**
MSO				IAmb	IAmb	11 25 58.0	
	comp=Z,8.4nm,1.4s						
USRK	**Ussuriysk Ar.**	**47.35**	**69**	P	**P**	**11 25 51.1**	**-1.8**
	comp=Z,3.6nm,0.9s,baz=341,slow=11,SNR=4.7						
KSH	**Kashi**	**48.14**	**126**	P	P	11 26 04.3	+5.1
KSH				PP	**PP**	**11 27 56.9**	**+5.8**
KSH				S	**S**	**11 33 05.6**	**+7.9**
GEYT	**Alibeck**	**48.82**	**145**	LR	LR	11 50 42.0	
	comp=Z,52nm,19.3s,baz=50,slow=41						
YPP	**Pitchstone Pla**	**48.96**	**318**	P	P	11 26 10.8	+5.1
GTA	**Gaotai**	**49.82**	**102**	*e*P	**P**	**11 26 12.3**	**+0.2**
GTA				pP	pwP	11 26 17.4	-2.0
GTA				sP	sP	11 26 20.4	+5.7
PDAR	**Pinedale Array**	**50.40**	**317**	P	**P**	**11 26 16.9**	**+0.2**
	comp=Z,1.4nm,0.9s,baz=19,slow=5.0,SNR=6.6						
PDAR				LR	LR	11 46 36.8	
	comp=Z,56nm,21.5s,baz=1.5,slow=35						
KEST	**Kesra**	**50.45**	**196**	LR	LR	11 48 20.9	
	comp=Z,49nm,18.9s,baz=300,slow=37						
LZH	**Lanzhou**	**53.41**	**98**	*e*P	**P**	**11 26 40.0**	**+1.0**
LZH				pP	pwP	11 26 49.5	+3.2
LZH				sP	sP	11 26 54.9	+13
KSRS	**Korea Array**	**53.78**	**74**	P	**P**	**11 26 39.5**	**-2.0**
	comp=Z,2.4nm,0.9s,baz=345,slow=7.6,SNR=5.3						
KSRS				LR	LR	11 51 54.1	
	comp=Z,22nm,18.1s,baz=340,slow=39						
NVAR	**Mina Array Bea**	**55.13**	**325**	P	**P**	**11 26 51.8**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=12,slow=3.6,SNR=5.1						
NVAR				LR	LR	11 50 02.3	
	comp=Z,95nm,20.8s,baz=340,slow=36						
MJAR	**Matsushiro Arr**	**55.38**	**64**	P	**P**	**11 26 50.0**	**-3.2**
	comp=Z,3.1nm,0.8s,baz=3.6,slow=7.6,SNR=6.3						
MJAR				LR	LR	11 50 08.4	
	comp=Z,31nm,20.0s,baz=160,slow=36						
MJAR	**Matsushiro Arr**	**55.38**	**64**	P	**P**	**11 26 50.0**	**-3.2**
ANMO	**Albuquerque**	**58.04**	**313**	P	**P**	**11 27 11.1**	**-1.1**
	comp=Z,0.7nm,0.8s,baz=18,slow=5.5,SNR=3.7						
WHN	**Wuhan**	**59.68**	**88**	P	**P**	**11 27 26.6**	**+3.2**
TXAR	**Lajitas Array**	**63.47**	**310**	P	**P**	**11 27 49.4**	**+0.2**
	comp=Z,0.7nm,0.9s,baz=345,slow=7.8,SNR=3.5						
TXAR				LR	LR	11 56 06.6	
	comp=Z,31nm,18.1s,baz=0.0,slow=37						
CMAR	**Chiang Mai Arr**	**70.57**	**105**	P	**P**	**11 28 33.5**	**-0.8**
	comp=Z,4.2nm,0.9s,baz=348,slow=7.3,SNR=29						
CMAR				LR	LR	12 03 31.7	
	comp=Z,71nm,18.1s,baz=192,slow=39						
CMAR	**Chiang Mai Arr**	**70.57**	**105**	*i* P	**P**	**11 28 33.7**	**-0.6**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**73.12**	**204**	P	**P**	**11 28 50.1**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=359,slow=7.0,SNR=7.8						
TORD				LR	LR	12 01 07.3	
	comp=Z,27nm,18.2s,baz=85,slow=36						
GUMO	**Guam**	**78.61**	**59**	LR	LR	12 01 08.9	
	comp=Z,22nm,21.5s,baz=98,slow=34						
DBIC	**Dimbokro**	**79.76**	**210**	LR	LR	12 04 15.1	
	comp=Z,22nm,19.0s,baz=135,slow=35						

*IDC **06** 11:32:18.9±2.0, 36°.93N×71°.12E, h0^{km}, mb3.6/6, mb1 3.8/13, mb1mx3.6/52, mbtmp3.6/13, ML3.3/7, Error ellipse: s-maj=36.8km s-min=18.8km az=154.0*

*NNC **06** 11:32:23.6±4.8, 37°.21N×70°.62E, h0^{km}, mb4.3, mpv4.0, Error ellipse: s-maj=37.7km s-min=25.7km az=168.0*

ISC 06 11:32:26.5±0.7**, 37°.21N**±0°.05×**70°.77E**±0°.07**, h35^{km}, n22, σ2^{s}.46**/29**, mb3.5**/6**, 5C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**3.50**	**164**	P	**Pn**	**11 33 17.2**	**-1.5**
CEP				S	**Sn**	**11 34 05.0**	**+6.0**
CHCP	**Chirah Chowk**	**4.09**	**149**	P	**Pn**	**11 33 27.3**	**+0.7**
THW	**Thamme Wali**	**4.48**	**169**	P	**Pn**	**11 33 29.9**	**-2.0**
KK31	**Karatay Array**	**5.89**	**358**	⇓P	**Pn**	**11 33 53.3**	**+2.0**
	4.1nm,0.4s,baz=176,slow=13,SNR=103						
KK31				⇓S	**Sn**	**11 35 02.5**	**+4.9**
	5.1nm,0.3s,baz=185,slow=22,SNR=4.4						
AAK	**Ala-Archa**	**6.13**	**27**	Pn	**Pn**	**11 33 55.2**	**+0.5**
	1.6nm,0.3s,baz=177,slow=7.9,SNR=14						
AAK				Sn	**Sn**	**11 35 02.9**	**-0.8**
	0.5nm,0.3s,baz=285,slow=12,SNR=2.1						
AAK	**Ala-Archa**	**6.13**	**27**	⇑P	**Pn**	**11 33 55.2**	**+0.5**
	12nm,0.9s						
AAK				⇑S	**Sn**	**11 35 07.3**	**+3.5**
	12nm,0.7s						
THN	**Thein Dam**	**6.27**	**138**	*e*P	Pn	11 34 12.0	+16
CHMS	**Chumysh**	**6.54**	**27**	⇑P	**Pn**	**11 34 01.0**	**+0.8**
	12nm,0.7s						
CHMS				⇑S	**Sn**	**11 35 19.3**	**+5.8**
	7.6nm,0.6s						
GEYT	**Alibeck**	**10.07**	**278**	Pn	**Pn**	**11 34 47.4**	**-1.3**
	0.5nm,0.3s,baz=99,slow=15,SNR=2.9						
MKAR	**Makanchi Array**	**12.84**	**38**	Pn	**Pn**	**11 35 24.4**	**-2.1**
	0.1nm,0.3s,baz=219,slow=13,SNR=21						
AB31	**Akbulak array**	**14.37**	**330**	P	**Pn**	**11 35 46.9**	**-0.4**
	0.8nm,0.5s,baz=147,slow=11,SNR=18						
AB31				⇓S	**Sn**	**11 38 25.6**	**+0.2**
	4.1nm,0.6s,baz=153,slow=22,SNR=12						
KURBB	**Kurchatov Arra**	**14.52**	**20**	Pn	Pn	11 35 45.1	-4.2
	0.1nm,0.3s,baz=208,slow=11,SNR=3.1						
BVAR	**Borovoye Array**	**15.82**	**359**	Pn	**Pn**	**11 36 03.6**	**-2.8**
	0.1nm,0.3s,baz=161,slow=13,SNR=2.2						
BVAR				Sn	**Sn**	**11 38 58.0**	**-2.5**
	0.1nm,0.3s,baz=168,slow=21,SNR=3.6						
AKTO	**Aktyubinsk**	**16.07**	**329**	Pn	**Pn**	**11 36 09.8**	**+0.1**
	0.5nm,0.3s,baz=141,slow=9.2,SNR=18						
AKTO				Sn	**Sn**	**11 39 07.1**	**+0.4**
	0.2nm,0.3s,baz=30,slow=20,SNR=4.4						
AKTO	**Aktyubinsk**	**16.07**	**329**	⇓P	**P**	**11 36 13.1**	**+0.4**
	6.1nm,0.7s						
AKTO				⇑S	**Sn**	**11 39 08.7**	**+2.0**
	7.8nm,1.2s						
ZALV	**Zalesovo Beam**	**19.35**	**26**	P	**P**	**11 36 45.9**	**-2.9**
	0.4nm,0.3s,baz=217,slow=13,SNR=8.7						
KBZ	**Khabaz**	**22.12**	**296**	P	**P**	**11 37 19.1**	**+0.3**
	0.7nm,0.5s,baz=101,slow=5.2,SNR=2.6						
SONM	**Songino Array**	**28.09**	**56**	P	**P**	**11 38 13.3**	**-1.7**
	0.4nm,0.9s,baz=260,slow=8.6,SNR=2.3						
ARCES	**ARCESS Array B**	**40.42**	**337**	P	**P**	**11 40 01.3**	**+0.4**
	4.6nm,1.1s,baz=110,slow=11,SNR=2.8						
NOA	**NORSAR Array B**	**43.70**	**323**	P	**P**	**11 40 28.5**	**+0.6**
	0.7nm,0.6s,baz=94,slow=7.8,SNR=3.2						
TORD	**Torodi Ar. Bea**	**65.55**	**268**	P	**P**	**11 43 06.8**	**-0.1**
	0.6nm,0.8s,baz=74,slow=6.7,SNR=2.5						
YKA	**Yellowknife Ar**	**80.55**	**3**	P	**P**	**11 44 33.5**	**-1.2**
	0.2nm,0.6s,baz=350,slow=5.4,SNR=6.5						

IDC 06 11:43:01.1±2.7**, 6°.26S**×**130°.63E, h113^{km}**±36^{km}**, mb3.2**/1**, mb1 3.3**/5**, mb1mx3.1**/37**, mbtmp3.6**/5**, Error ellipse: s-maj=75.0km s-min=21.5km az=87.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.39**	**7**	P	Pn	11 44 19.6	+0.2
	2.7nm,0.3s,baz=217,slow=20,SNR=15						
SIJI				S	Sn	11 45 16.4	-3.9
	4.3nm,0.3s,baz=221,slow=22,SNR=19						
FITZ	**Fitzroy Crossi**	**12.73**	**202**	P	Pn	11 45 58.0	-0.2
	0.1nm,0.3s,baz=19,slow=11,SNR=5.0						
FITZ				S	Sn	11 48 06.0	-12
	0.2nm,0.3s,baz=45,slow=17,SNR=4.0						
WRA	**Warramunga Arr**	**14.07**	**166**	P	Pn	11 46 14.3	-1.3
	0.3nm,0.3s,baz=350,slow=13,SNR=6.5						
WRA				S	Sn	11 48 39.6	-11
	0.2nm,0.3s,baz=345,slow=21,SNR=3.7						
ASAR	**Alice Springs**	**17.59**	**170**	P	Pn	11 46 59.8	+0.5
	0.1nm,0.3s,baz=346,slow=10,SNR=18						
ASAR				S	Sn	11 50 07.6	-8.0
	0.1nm,0.3s,baz=356,slow=27,SNR=4.5						
MKAR	**Makanchi Array**	**67.96**	**326**	P	P	11 53 47.9	-0.1
	0.3nm,0.4s,baz=119,slow=7.5,SNR=5.2						

IDC 06 11:49:30.2±1.3**, 2°.81S**×**129°.99E, h0^{km}, mb3.7**/3**, mb1 3.9**/5**, mb1mx3.6**/38**, mbtmp3.8**/5**, ML3.7**/2**, Error ellipse: s-maj=42.2km s-min=20.1km az=94.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**2.31**	**34**	Pn	Pn	11 50 10.8	+1.2
	14nm,0.3s,baz=198,slow=20,SNR=61						
SIJI				Sn	Sn	11 50 38.1	-0.7
	5.1nm,0.3s,baz=198,slow=20,SNR=5.8						
WRA	**Warramunga Arr**	**17.55**	**166**	P	Pn	11 53 35.1	-1.4
	0.3nm,0.3s,baz=348,slow=11,SNR=9.4						
ASAR	**Alice Springs**	**21.08**	**170**	P	P	11 54 16.8	+0.5
	5.9nm,0.8s,baz=346,slow=11,SNR=41						
ASAR				PcP	PcP	11 58 23.5	+0.2
	0.2nm,0.7s,baz=344,slow=1.8,SNR=4.1						
STKA	**Stephens Creek**	**30.91**	**161**	P	P	11 55 48.6	-0.2
	1.2nm,0.8s,baz=345,slow=6.5,SNR=2.5						
MKAR	**Makanchi Array**	**64.75**	**326**	P	P	12 00 10.0	-0.6
	0.3nm,0.6s,baz=134,slow=6.9,SNR=3.5						

IDC 06 11:50:49.5±2.1**, 2°.17N**×**99°.09E, h123^{km}**±5^{km}**, mb3.4**/4**, mb1 3.5**/5**, mb1mx3.2**/44**, mbtmp3.8**/5**, Error ellipse: s-maj=106.7km s-min=17.6km az=58.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**0.65**	**346**	P	Pn	11 51 09.6	+0.6
	8.9nm,0.3s,baz=197,slow=14,SNR=29						
PSI				S	Sn	11 51 23.9	+0.2
	2.6nm,0.3s,baz=90,slow=20,SNR=13						
CMAR	**Chiang Mai Arr**	**16.19**	**360**	P	P	11 54 31.3	+0.4
	0.2nm,0.3s,baz=189,slow=11,SNR=6.6						
WRA	**Warramunga Arr**	**40.98**	**124**	P	P	11 58 20.8	+0.1
	1.2nm,0.4s,baz=303,slow=9.0,SNR=13						
ASAR	**Alice Springs**	**42.51**	**129**	P	P	11 58 32.3	-0.8
	0.2nm,0.5s,baz=296,slow=7.5,SNR=5.0						
MKAR	**Makanchi Array**	**46.80**	**344**	P	P	11 59 06.5	-0.2
	0.6nm,0.4s,baz=158,slow=8.7,SNR=17						
ZALV	**Zalesovo Beam**	**52.93**	**349**	P	P	11 59 52.5	-0.4
	1.0nm,0.3s,baz=170,slow=6.2,SNR=6.3						

*IDC **06** 12:40:53.1±0.9, 21°.59S×174°.24W, h0^{km}, mb4.2/13, mb1 4.4/15, mb1mx4.2/37, mbtmp4.2/15, ML4.1/2, MS3.4/2, Ms1 3.4/2, ms1mx2.9/29, Error ellipse: s-maj=40.6km s-min=16.4km az=143.0*

ISC 06 12:40:55.3±0.8**, 21°.5S**±0°.2×**174°.3W**±0°.2**, h10^{km}, n23, σ1^{s}.35**/21**, mb4.2**/13**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.92**	**18**	Pn	**Pn**	**12 42 49.5**	**-1.1**
	2.9nm,0.3s,baz=191,slow=16,SNR=3.9						
AFI				Sn	Sn	12 44 09.6	-11
	2.1nm,0.3s,baz=267,slow=17,SNR=2.9						
AFI				LR	LR	12 45 37.2	
	comp=Z,132nm,20.9s,baz=184,slow=36						
URZ	**Urewera**	**18.28**	**202**	P	**Pn**	**12 45 09.1**	**+0.1**
	0.5nm,0.3s,baz=355,slow=12,SNR=5.0						
URZ				S	Sn	12 48 13.1	-20
	0.3nm,0.3s,baz=13,slow=18,SNR=2.6						
CTA	**Charters Tower**	**36.84**	**265**	P	**P**	**12 48 03.8**	**-0.2**
	1.7nm,0.3s,baz=103,slow=16,SNR=3.6						
STKA	**Stephens Creek**	**40.50**	**246**	P	**P**	**12 48 34.0**	**-0.6**
	2.9nm,0.6s,baz=100,slow=6.1,SNR=6.2						
ASAR	**Alice Springs**	**47.66**	**257**	P	**P**	**12 49 31.2**	**-1.1**
	2.2nm,0.8s,baz=101,slow=7.6,SNR=24						
WRA	**Warramunga Arr**	**47.89**	**262**	P	**P**	**12 49 32.9**	**-1.2**
	2.6nm,0.6s,baz=90,slow=5.7,SNR=131						
RPN	**Rapa Nui**	**58.90**	**109**	LR	LR	13 12 57.0	
	comp=Z,50nm,18.5s,baz=246,slow=33						
NWAO	**Narrogin (SRO)**	**61.02**	**243**	P	**P**	**12 51 08.9**	**-0.5**
	7.0nm,0.7s,baz=108,slow=6.4,SNR=3.0						
MJAR	**Matsushiro Arr**	**73.09**	**322**	P	**P**	**12 52 27.1**	**+1.1**
	1.5nm,0.7s,baz=143,slow=6.0,SNR=3.1						
PETK	**Petropavlovsk-**	**78.17**	**343**	P	**P**	**12 52 55.1**	**+0.5**
	4.8nm,0.9s,baz=134,slow=7.6,SNR=6.0						
NVAR	**Mina Array Bea**	**79.42**	**41**	P	**P**	**12 53 01.9**	**-0.3**
	1.2nm,0.7s,baz=224,slow=7.9,SNR=8.6						
TXAR	**Lajitas Array**	**84.71**	**56**	P	**P**	**12 53 30.0**	**0.0**
	0.6nm,1.0s,baz=247,slow=2.6,SNR=3.5						
PDAR	**Pinedale Array**	**87.35**	**42**	P	**P**	**12 53 41.9**	**-1.0**
	0.9nm,0.9s,baz=247,slow=4.7,SNR=7.5						
ILAR	**Eielson Array**	**88.56**	**11**	P	**P**	**12 53 48.3**	**+0.5**
	0.7nm,0.8s,baz=209,slow=6.7,SNR=5.2						
CMAR	**Chiang Mai Arr**	**93.71**	**288**	P	**P**	**12 54 14.2**	**+1.4**
	0.4nm,0.3s,baz=123,slow=3.3,SNR=3.4						
YKA	**Yellowknife Ar**	**96.00**	**24**	P	**P**	**12 54 21.6**	**-0.6**
	0.4nm,0.8s,baz=233,slow=4.0,SNR=8.5						
MKAR	**Makanchi Array**	**114.40**	**313**	PKP	PKPdf	12 59 34.0	-1.4
	0.2nm,0.5s,baz=55,slow=2.6,SNR=5.9						
BVAR	**Borovoye Array**	**122.06**	**320**	PKP	**PKPdf**	**12 59 48.8**	**-1.1**
	0.8nm,0.4s,baz=178,slow=1.0,SNR=9.3						
AKASG	**Malin Array Be**	**145.50**	**333**	PKPbc	**PKPdf**	**13 00 32.8**	**-0.8**
	1.4nm,0.5s,baz=40,slow=4.0,SNR=6.6						
CLL	**Collm**	**149.70**	**351**	*i* PKP	**PKPbc**	**13 00 46.3**	**+1.1**
	comp=Z,9.0nm,0.8s						
CLL				*i*		13 00 51.1	
BRG	**Berggiesshubel**	**149.97**	**350**	*e*PKP	**PKPbc**	**13 00 46.2**	**+0.4**
	comp=Z,5.1nm,1.0s						
BRTR	**Keskin Array B**	**150.05**	**314**	PKPbc	**PKPdf**	**13 00 46.0**	**+4.3**
	comp=Z,0.8nm,0.6s,baz=101,slow=1.3,SNR=7.2						
GERES	**GERESS Array B**	**151.97**	**349**	PKPbc	**PKPbc**	**13 00 49.8**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=69,slow=3.3,SNR=3.8						

*IDC **06** 12:42:59.8±2.9, 20°.29S×177°.92W, h553^{km}±35^{km}, mb3.1/9, mb1 3.4/10, mb1mx3.2/36, mbtmp4.1/10, Error ellipse: s-maj=29.2km s-min=14.0km az=153.0*

ISC 06 12:42:59.2±0.9**, 20°.3S**±0°.2×**177°.9W**±0°.1**, h550^{km}, n14, σ0^{s}.90**/15**, mb3.6**/9**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**18.46**	**192**	P	**P**	**12 46 40.6**	**-0.5**
	1.9nm,0.3s,baz=288,slow=3.8,SNR=12						
CTA	**Charters Tower**	**33.61**	**264**	P	**P**	**12 48 54.9**	**+0.3**
	5.2nm,0.8s,baz=94,slow=10,SNR=3.7						
ASAR	**Alice Springs**	**44.67**	**256**	P	**P**	**12 50 24.2**	**+0.6**
	3.0nm,0.8s,baz=83,slow=8.4,SNR=7.7						
ASAR				PcP	**PcP**	**12 51 54.6**	**+0.2**
	0.3nm,0.7s,baz=108,slow=3.1,SNR=2.6						
ASAR				S	**S**	**12 56 20.5**	**+0.1**
	0.3nm,0.7s,baz=90,slow=16,SNR=4.2						
WRA	**Warramunga Arr**	**44.73**	**262**	P	**P**	**12 50 24.0**	**-0.1**
	1.7nm,0.5s,baz=99,slow=8.4,SNR=8.3						
MJAR	**Matsushiro Arr**	**70.07**	**324**	P	**P**	**12 53 15.5**	**-0.8**
	1.5nm,0.5s,baz=149,slow=6.7,SNR=5.1						
USRK	**Ussuriysk Ar.**	**78.81**	**326**	P	**P**	**12 54 06.7**	**+1.4**
	1.8nm,0.7s,baz=151,slow=3.3,SNR=4.1						
NVAR	**Mina Array Bea**	**80.78**	**43**	P	**P**	**12 54 17.4**	**+1.3**
	0.3nm,0.5s,baz=215,slow=7.7,SNR=2.6						
TXAR	**Lajitas Array**	**86.85**	**57**	P	**P**	**12 54 46.7**	**+0.7**
	0.3nm,0.7s,baz=224,slow=6.3,SNR=3.4						
ILAR	**Eielson Array**	**88.06**	**13**	P	**P**	**12 54 49.7**	**-1.1**
	0.5nm,0.5s,baz=210,slow=5.6,SNR=7.4						
PDAR	**Pinedale Array**	**88.72**	**43**	P	**P**	**12 54 55.0**	**+0.4**
	0.4nm,0.6s,baz=210,slow=5.8,SNR=3.9						
AKASG	**Malin Array Be**	**142.84**	**331**	PKhKP	PKPpre	13 01 26.4	
	0.8nm,0.3s,baz=44,slow=4.4,SNR=4.8						
EKA	**Eskdalemuir Ar**	**144.75**	**5**	PKP	**PKPab**	**13 01 33.1**	**-1.3**
	1.2nm,0.7s,baz=344,slow=2.4,SNR=2.9						
BRTR	**Keskin Array B**	**146.74**	**313**	PKPbc	**PKPbc**	**13 01 39.6**	**-0.5**
	1.0nm,0.8s,baz=115,slow=3.3,SNR=2.4						
GERES	**GERESS Array B**	**149.99**	**345**	PKPbc	**PKiKP**	**13 01 47.5**	**-1.0**
	0.5nm,0.4s,baz=352,slow=2.7,SNR=4.5						

IDC 06 12:53:41.6±2.3**, 7°.27S**×**130°.59E, h0^{km}, mb3.7**/1**, mb1 3.7**/3**, mb1mx3.4**/36**, mbtmp3.5**/3**, ML3.5**/2**, Error ellipse: s-maj=133.6km s-min=31.7km az=70.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.11**	**164**	Pn	Pn	12 56 48.3	-1.0
	0.2nm,0.3s,baz=347,slow=14,SNR=17						
WRA				Sn	Sn	12 59 08.9	-7.1
	0.2nm,0.3s,baz=348,slow=26,SNR=4.5						
ASAR	**Alice Springs**	**16.61**	**169**	Pn	Pn	12 57 37.1	+1.0
	0.2nm,0.3s,baz=349,slow=9.3,SNR=14						
ASAR				Sn	Sn	13 00 31.3	-10
	0.0nm,0.3s,baz=336,slow=14,SNR=4.5						
MKAR	**Makanchi Array**	**68.77**	**327**	P	P	13 04 47.6	0.0
	0.4nm,0.6s,baz=122,slow=7.6,SNR=7.3						

IDC 06 13:00:52.5±7.7**, 17°.42S**×**174°.81W, h0^{km}, mb3.8**/3**, mb1 4.2**/3**, mb1mx3.7**/31**, mbtmp3.8**/3**, MS3.5**/3**, Ms1 3.5**/3**, ms1mx3.0**/29**, Error ellipse: s-maj=335.3km s-min=37.9km az=141.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**21.93**	**197**	LR	LR	13 12 08.7	
	comp=Z,100nm,18.9s,baz=207,slow=31						
WRA	**Warramunga Arr**	**48.09**	**259**	P	P	13 09 33.4	-1.0
	0.5nm,0.3s,baz=96,slow=8.4,SNR=44						
ASAR	**Alice Springs**	**48.22**	**254**	P	P	13 09 36.1	+0.7
	2.1nm,0.6s,baz=87,slow=8.1,SNR=55						
ILAR	**Eielson Array**	**84.68**	**12**	P	P	13 13 27.8	0.0
	0.3nm,0.7s,baz=202,slow=6.8,SNR=4.9						
CMAR	**Chiang Mai Arr**	**91.96**	**289**	LR	LR	13 55 44.4	
	comp=Z,15nm,19.2s,baz=225,slow=36						
TLY	**Talaya**	**98.36**	**322**	LR	LR	13 58 19.8	
	comp=Z,30nm,18.9s,baz=194,slow=35						

*ATH **06** 13:06:40.1, 38°.22N×20°.38E, h13^{km}±1^{km}, ML2.7/10, Error ellipse: s-maj=1.7km s-min=0.8km az=244.0*

*THE **06** 13:06:40.2, 38°.22N×20°.38E, h13^{km}, ML3.0/10, Error ellipse: s-maj=0.9km s-min=0.4km az=256.0*

ISC 06 13:06:39.8±1.3**, 38°.22N**±0°.03×**20°.37E**±0°.05**, h15^{km}**±5^{km}**, n37, σ0^{s}.25**/64**, 6C-6D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF3	**Kipouria, Keph**	**0.02**	**227**	⇑Pc0	**Pg**	**13 06 42.6**	**+0.2**
KEF3				S	**Sg**	**13 06 44.1**	**0.0**
CHV1	**Chavriata, Kef**	**0.04**	**160**	P	**Pg**	**13 06 42.6**	**+0.1**
CHV1				S	**Sg**	**13 06 44.2**	**0.0**
	68µm,0.1s						
AGT1	**Agia Thekli**	**0.04**	**22**	P	**Pg**	**13 06 42.5**	**0.0**
AGT1				S	**Sg**	**13 06 44.2**	**-0.1**
	50µm,0.1s						
LXRA	**Lixouri, Kepha**	**0.06**	**106**	⇑Pc0	**Pg**	**13 06 42.7**	**+0.1**
LXRA				S	**Sg**	**13 06 44.5**	**0.0**
LXR1	**Lixouri, Cepha**	**0.06**	**105**	P	**Pg**	**13 06 42.7**	**+0.1**
LXR1				S	**Sg**	**13 06 44.5**	**0.0**
KEF4	**Livadi, Kephal**	**0.06**	**48**	⇑Pc0	**Pg**	**13 06 42.7**	**0.0**
KEF4				S	**Sg**	**13 06 44.5**	**-0.1**
ARGA	**Argostoli. Kep**	**0.10**	**114**	⇓Pd0	**Pg**	**13 06 43.0**	**0.0**
ARGA				S	**Sg**	**13 06 44.7**	**-0.4**
ARG2	**Argostoli**	**0.10**	**112**	P	**Pg**	**13 06 43.0**	**-0.1**
ARG2				S	**Sg**	**13 06 44.9**	**-0.3**
	35µm,0.2s						
KEF1	**Kardakata, Kep**	**0.10**	**53**	⇓Pd0	**Pg**	**13 06 43.0**	**-0.1**
KEF1				S	**Sg**	**13 06 44.8**	**-0.4**
KEF2	**Argostoli. Kep**	**0.11**	**118**	⇓Pd0	**Pg**	**13 06 43.1**	**0.0**
KEF2				S	**Sg**	**13 06 44.9**	**-0.4**
VLS	**Valsamata**	**0.18**	**102**	P	**Pg**	**13 06 44.0**	**-0.2**
VLS				S	**Sg**	**13 06 46.6**	**-0.4**
	8µm,0.1s						
VLS	**Valsamata**	**0.18**	**102**	⇓Pd0	**Pg**	**13 06 44.0**	**-0.2**
VLS				S	**Sg**	**13 06 46.6**	**-0.4**
VLS				AML	AML	13 06 47.0	
	comp=N,14509µm,0.2s						
VLS				AML	AML	13 06 47.3	
	comp=E,14891µm,0.1s						
VSK1	**VASILIKIADES**	**0.25**	**39**	P	**Pg**	**13 06 45.4**	**+0.2**
KONA	**Konidatara, Ke**	**0.26**	**38**	⇓Pd0	**Pg**	**13 06 45.5**	**+0.1**
KONA				S	**Sg**	**13 06 49.4**	**0.0**
KONA				AML	AML	13 06 50.5	
	comp=N,10640µm,0.4s						
KONA				AML	AML	13 06 51.6	
	comp=E,7261µm,0.4s						
FSK	**Fiskardo**	**0.29**	**32**	P	**Pg**	**13 06 45.9**	**0.0**
FSK				S	**Sg**	**13 06 50.1**	**+0.1**
	comp=E,4µm,0.4s						
FSK	**Fiskardo**	**0.29**	**32**	⇑Pc0	**Pg**	**13 06 45.9**	**0.0**
FSK				S	**Sg**	**13 06 50.4**	**+0.3**
FSK				AML	AML	13 06 50.7	
	comp=N,7376µm,0.3s						
FSK				AML	AML	13 06 50.8	
	comp=E,9161µm,0.4s						
KFL	**Anninata**	**0.35**	**108**	P	**Pg**	**13 06 46.9**	**0.0**
KFL				S	**Sg**	**13 06 52.3**	**+0.5**
	comp=E,6µm,0.4s						
KFL	**Anninata**	**0.35**	**108**	⇓Pd0	**Pg**	**13 06 46.9**	**0.0**
KFL				S	**Sg**	**13 06 52.1**	**+0.3**
EVGI	**Lefkada island**	**0.46**	**29**	P	**Pg**	**13 06 49.0**	**-0.1**
EVGI				S	**Sb**	**13 06 56.3**	**-0.1**
	comp=E,510nm,0.2s						
EVGI	**Lefkada island**	**0.46**	**29**	⇑Pc2	**Pg**	**13 06 49.0**	**-0.1**
EVGI				S	**Sb**	**13 06 56.4**	**-0.1**
MGNA	**Meganis**	**0.55**	**37**	P	**Pg**	**13 06 50.4**	**-0.3**
MGNA				S	**Sb**	**13 06 58.7**	**-0.2**
MGNA				AML	AML	13 06 59.5	
	comp=N,1203µm,0.2s						
MGNA				AML	AML	13 07 02.0	
	comp=E,1397µm,0.3s						
LKD2	**Lefkada island**	**0.62**	**22**	P	**Pg**	**13 06 51.6**	**-0.3**
LKD2				S	**Sb**	**13 07 00.7**	**-0.1**
	comp=E,410nm,0.5s						
LKD2	**Lefkada island**	**0.62**	**22**	P	**Pg**	**13 06 51.7**	**-0.3**
LKD2				S	**Sg**	**13 06 59.8**	**-0.3**
LKD2				AML	AML	13 07 08.5	
	comp=N,874µm,0.6s						
LKD2				AML	AML	13 07 10.0	
	comp=E,738µm,0.4s						
TSLK	**Tsoukalades, L**	**0.65**	**20**	P	**Pg**	**13 06 52.3**	**-0.2**
TSLK				S	**Sb**	**13 07 01.5**	**-0.2**
	comp=E,392nm,0.3s						
TSLK	**Tsoukalades, L**	**0.65**	**20**	P	**Pg**	**13 06 52.3**	**-0.2**
TSLK				AML	AML	13 07 10.3	
	comp=E,759µm,0.3s						
TSLK				AML	AML	13 07 10.9	
	comp=N,826µm,0.4s						
AST1	**Astakos**	**0.66**	**60**	P	**Pg**	**13 06 52.5**	**-0.1**
AST1				S	**Sb**	**13 07 02.5**	**+0.7**

	comp=N,1µm,0.3s						
KRI1	**kERI**	**0.66**	**147**	P	**Pg**	**13 06 52.2**	**-0.5**
KRI1				S	**Sb**	**13 07 02.5**	**+0.6**
VTN	**Vitineika**	**0.71**	**115**	P	**Pg**	**13 06 53.5**	**-0.2**
PDO	**Prodromos**	**0.75**	**59**	P	**Pg**	**13 06 54.1**	**-0.2**
PDO	**Prodromos**	**0.75**	**59**	⇑Pc0		13 06 54.1	
PDO				S	**Sb**	**13 07 04.9**	**+0.4**
PDO				AML	AML	13 07 06.0	
	comp=E,1230µm,0.3s						
PDO				AML	AML	13 07 08.7	
	comp=N,1541µm,0.3s						
RLS	**Riolos of Patr**	**0.88**	**100**	P	**Pb**	**13 06 56.5**	**-0.3**
PVO	**Paravola**	**0.99**	**66**	P	**Pb**	**13 06 58.9**	**+0.2**
PVO	**Paravola**	**0.99**	**66**	P	**Pb**	**13 06 58.9**	**+0.2**
PVO				S	**Sg**	**13 07 12.1**	**+0.1**
PVO				AML	AML	13 07 15.8	
	comp=E,1225µm,0.4s						
PVO				AML	AML	13 07 19.6	
	comp=N,1126µm,0.4s						
DRO	**Drossia**	**1.09**	**104**	P	**Pb**	**13 07 00.2**	**-0.2**
DRO				S	**Sn**	**13 07 15.8**	**+0.4**
DRO				AML	AML	13 07 23.9	
	comp=N,859µm,0.7s						
DRO				AML	AML	13 07 24.6	
	comp=E,866µm,0.4s						
EVR	**Evrytania**	**1.33**	**58**	P	**Pg**	**13 07 05.4**	**0.0**
KALE	**Kalithea**	**1.41**	**82**	P	**Pb**	**13 07 05.8**	**0.0**
KLV	**Kalavryta, Ach**	**1.42**	**96**	P	**Pb**	**13 07 05.9**	**-0.1**
KLV				AML	AML	13 07 30.5	
	comp=E,145µm,0.4s						
KLV				AML	AML	13 07 36.6	
	comp=N,146µm,0.5s						

*NEIC **06** 13:11:34.1±2.5, 16°.27N±0°.05×98°.07W±0°.05, h1km±1km, Error ellipse: s-maj=8.3km s-min=5.5km az=215.0*
*MEX **06** 13:11:37.9±0.6, 16°.23N×97°.99W, h10km±7km, MD4.1*
*IDC **06** 13:11:42.7±4.7, 16°.75N×97°.82W, h35km±36km, mb3.7/9, mb1 3.9/14, mb1mx3.8/34, mbtmp3.9/14, ML3.6/4, MS3.3/4, Ms1 3.3/4, ms1mx2.9/33, Error ellipse: s-maj=37.3km s-min=15.1km az=48.0*
ISC 06 13:11:36.9±1.4, **16°.24N**±0°.05×**98°.01W**±0°.04, **h24**km±12km, **n66**, σ1§**37**/82, **mb4.1**/19, **MS3.3**/3, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOIG	**Yosondua**	**0.76**	**36**	*e*P	**Pb**	**13 11 50.3**	**-1.3**
YOIG				*e*S	**Sb**	**13 12 00.5**	**-1.1**
PEIG	**Puerto Escondi**	**0.86**	**106**	*e*P	**Pb**	**13 11 51.9**	**-1.4**
PEIG				*e*S	**Sb**	**13 12 02.7**	**-1.7**
TLIG	**Tlapa**	**1.42**	**338**	*e*P	**Pn**	**13 12 00.2**	**-1.1**
TLIG				*e*S	**Sn**	**13 12 18.1**	**-1.3**
TLIG	**Tlapa**	**1.42**	**338**		**Pn**	**13 12 00.6**	**-0.8**
TLIG				Sn	**Sn**	**13 12 19.6**	**+0.2**
TLIG	**Tlapa**	**1.42**	**338**		**Pn**	**13 12 00.2**	**-1.1**
TLIG					**Sn**	**13 12 18.1**	**-1.3**
VHO	**Vista Hermosa**	**1.48**	**56**	*e*P	**Pn**	**13 12 01.6**	**-0.7**
VHO				*i* S	**Sn**	**13 12 19.5**	**-1.4**
HLIG	**Huajuapan de L**	**1.59**	**7**	*e*P	**Pn**	**13 12 03.2**	**-0.7**
HLIG				*i* S	**Sn**	**13 12 22.9**	**-0.9**
FTIG	**Fresnillo de T**	**1.66**	**356**	*e*P	**Pn**	**13 12 04.1**	**-0.7**
FTIG				*i* S	**Sn**	**13 12 24.7**	**-0.6**
CAIG	**El Cayaco**	**2.31**	**291**	*i* P	**Pn**	**13 12 12.2**	**-1.3**
CAIG				*i* S	**Sn**	**13 12 40.4**	**-0.7**
CAIG	**El Cayaco**	**2.31**	**291**		**Pn**	**13 12 12.2**	**-1.3**
CAIG					**Sn**	**13 12 40.4**	**-0.7**
PLIG	**Platanillo**	**2.57**	**327**	*i* P	**Pn**	**13 12 16.9**	**-0.3**
PLIG				*i* S	**Sn**	**13 12 48.4**	**+0.6**
PLIG	**Platanillo**	**2.57**	**327**		**Pn**	**13 12 16.9**	**-0.3**
PLIG					**Sn**	**13 12 48.4**	**+0.6**
ARIG	**Puente Sto Nin**	**3.02**	**313**	*e*P	**Pn**	**13 12 23.6**	**+0.3**
ARIG				*i* S	**Sn**	**13 12 58.3**	**-0.4**
ARIG	**Puente Sto Nin**	**3.02**	**313**		**Pn**	**13 12 23.6**	**+0.3**
ARIG					**Sn**	**13 12 58.3**	**-0.4**
MAVM	**Malinalco, Edo**	**3.05**	**333**	*i* P	**Pn**	**13 12 23.6**	**-0.3**
MAVM				*i* S	**Sn**	**13 12 59.5**	**-0.3**
MAVM	**Malinalco, Edo**	**3.05**	**333**		**Pn**	**13 12 23.6**	**-0.3**
MAVM					**Sn**	**13 12 59.5**	**-0.3**
CMIG	**Matias Romero**	**3.11**	**74**	Pn	**Pn**	**13 12 23.8**	**-0.8**
	13nm,0.3s,baz=257,slow=12,SNR=100						
CMIG				Pg	**Pb**	**13 12 35.7**	**+4.1**
	22nm,0.3s,baz=258,slow=16,SNR=38						
CMIG				Sn	**Sn**	**13 13 00.2**	**-0.8**
	32nm,0.3s,baz=236,slow=24,SNR=6.1						
CMIG				Lg	Lg	13 13 13.2	
	94nm,0.3s,baz=187,slow=22,SNR=15						
UNM	**Universidad Na**	**3.27**	**340**	Pn	**Pn**	**13 12 27.9**	**+0.9**
APG	**El Apazote**	**7.37**	**99**	Pn	**Pn**	**13 13 25.9**	**+2.6**
	3.0nm,0.3s,baz=92,slow=14,SNR=2.0						
APG				Lg	Lg	13 15 32.1	
	4.9nm,0.3s,baz=232,slow=24,SNR=3.8						
APG				LR	LR	13 15 40.0	
	comp=Z,70nm,19.9s,baz=270,slow=33						
TEIG	**Tepich**	**10.06**	**65**	Pn	**Pn**	**13 14 00.1**	**+0.1**
735A	**Kenedy**	**12.55**	**1**	Pn	**Pn**	**13 14 34.5**	**+0.3**
ACON	**Acoyapa**	**13.15**	**107**	Pn	**Pn**	**13 14 41.6**	**-0.8**
ESPN	**Las Esperanzas**	**13.88**	**105**	Pn	**Pn**	**13 14 52.0**	**-0.3**
LPIG	**La Paz**	**13.94**	**306**	Pn	**P**	**13 15 00.5**	**-0.4**
	8.1nm,0.3s,baz=327,slow=4.4,SNR=3.7						
JTS	**Las Juntas de**	**14.01**	**113**	Pn	**P**	**13 15 00.9**	**-0.9**
	baz=204,slow=14,SNR=2.2						
JTS	**Las Juntas de**	**14.01**	**113**	Pn	**Pn**	**13 14 54.0**	**-0.1**
TX31	**Lajitas Ar. Si**	**14.03**	**339**	P	**P**	**13 15 03.5**	**+1.4**
TXAR	**Lajitas Array**	**14.03**	**339**	Pn	**Pn**	**13 14 55.0**	**+0.6**
	0.0nm,0.3s,baz=159,slow=13,SNR=4.5						
TXAR				Sn	**Sn**	**13 17 23.7**	**-5.8**
	0.1nm,0.3s,baz=144,slow=34,SNR=3.2						
TXAR				Lg	Lg	13 19 04.5	
	0.0nm,0.3s,baz=138,slow=17,SNR=3.5						
TXAR	**Lajitas Array**	**14.03**	**339**	Pn	**Pn**	**13 14 53.7**	**-0.7**
ABTX	**Abilene, Hawle**	**16.38**	**355**	P	**P**	**13 15 27.9**	**-0.2**
ABTX				IAmb	IAmb	13 15 30.0	
	comp=Z,24nm,0.9s						
344A	**Westbrook Farm**	**16.53**	**22**	Pn	**Pn**	**13 15 27.9**	**+0.7**
MNTX	**Cornudas Mount**	**16.79**	**338**		**P**	**13 15 32.8**	**+0.2**
SRIG	**Santa Rosalia**	**17.19**	**312**	P	**P**	**13 15 39.7**	**+2.7**
SRIG				IAmb	IAmb	13 15 43.9	
	comp=Z,22nm,1.3s						
WLAR	**White Oak Lake**	**17.92**	**13**	Pn	**Pn**	**13 15 44.0**	**-0.6**
MSTX	**Muleshoe**	**18.17**	**347**	Pn	**Pn**	**13 15 47.6**	**-0.2**
319A	**Douglas**	**18.24**	**328**	Pn	**P**	**13 15 49.5**	**+0.8**
WMOK	**Wichita Mounta**	**18.43**	**358**	P	**P**	**13 15 49.1**	**-1.6**
ANMO	**Albuquerque**	**20.11**	**339**	P	Pn	13 16 10.7	-0.4
	comp=Z,0.2nm,0.3s,baz=163,slow=11,SNR=7.5						
GOGA	**Godfrey**	**21.55**	**35**	P	**P**	**13 16 22.1**	**-2.6**
GOGA				IAmb	IAmb	13 16 32.0	
	comp=Z,11nm,0.7s						
T25A	**Trinidad**	**21.57**	**346**	P	**P**	**13 16 23.6**	**-1.5**
Y52A	**Lilburn**	**21.58**	**33**	P	**P**	**13 16 23.5**	**-1.5**
X16A	**Lo Mia Camp, P**	**21.75**	**329**	P	**P**	**13 16 26.1**	**-1.0**
X16A				IAmb	IAmb	13 16 32.6	
	comp=Z,9.0nm,0.8s						
SWET	**Sewanee**	**21.77**	**28**	P	**P**	**13 16 26.6**	**-0.4**
SDCO	**Great Sand Dun**	**22.42**	**344**	P	**P**	**13 16 35.0**	**+0.7**
CCM	**Cathedral Cave**	**22.53**	**14**	P	**P**	**13 16 34.7**	**-0.4**
CCM				IAmb	IAmb	13 16 50.1	
	comp=Z,8.8nm,0.9s						
WUAZ	**Wupatki**	**22.61**	**331**	P	**P**	**13 16 38.5**	**+2.3**
WUAZ				IAmb	IAmb	13 16 41.0	
	comp=Z,9.2nm,0.9s						
S22A	**4UR Ranch, Cre**	**22.79**	**342**	P	**P**	**13 16 39.4**	**+1.2**
S22A				IAmb	IAmb	13 16 41.7	
	comp=Z,6.1nm,1.0s						
MVCO	**Mesa Verde**	**22.86**	**338**	P	**P**	**13 16 41.4**	**+2.6**
MVCO				IAmb	IAmb	13 16 50.3	
	comp=Z,10nm,0.8s						
U49A	**Red Boiling Sp**	**22.93**	**26**	P	**P**	**13 16 39.2**	**-0.1**
U49A				IAmb	IAmb	13 16 46.6	
	comp=Z,12nm,1.1s						
SMCO	**Snowmass**	**24.16**	**343**	P	**P**	**13 16 53.5**	**+1.8**
SMCO				IAmb	IAmb	13 16 57.5	
	comp=Z,13nm,1.3s						
ISCO	**Idaho Springs**	**24.39**	**346**	P	**P**	**13 16 54.3**	**+0.5**
ISCO				IAmb	IAmb	13 16 56.0	
	comp=Z,8.5nm,0.8s						
Q16A	**Castle Valley**	**25.37**	**336**	P	**P**	**13 17 04.0**	**+1.5**
O20A	**White River Ci**	**25.42**	**341**	P	**P**	**13 17 02.9**	**0.0**
TMUT	**Trail Mountain**	**25.71**	**336**	P	**P**	**13 17 06.4**	**+0.7**
PDAR	**Pinedale Array**	**28.22**	**342**	P	**P**	**13 17 29.9**	**+1.7**
	comp=Z,1.0nm,0.9s,baz=150,slow=11,SNR=7.6						
PDAR				LR	LR	13 29 36.8	
	comp=Z,87nm,21.4s,baz=174,slow=39						
NVAR	**Mina Array Bea**	**28.40**	**325**	P	**P**	**13 17 31.7**	**+1.9**
	comp=Z,1.8nm,0.9s,baz=142,slow=9.7,SNR=10.0						
NVAR				LR	LR	13 29 18.0	
	comp=Z,82nm,19.4s,baz=326,slow=38						
ELK	**Elko**	**28.62**	**332**	P	**P**	**13 17 33.6**	**+1.7**
	comp=Z,0.9nm,0.8s,baz=164,slow=6.3,SNR=4.2						
ELK				LR	LR	13 28 55.6	
	comp=Z,76nm,20.4s,baz=192,slow=36						
DLMT	**Dillon**	**31.51**	**340**	P	**P**	**13 17 58.4**	**+1.2**
DLMT				IAmb	IAmb	13 18 07.9	
	comp=Z,3.4nm,0.7s						
ULM	**Lac du Bonnet**	**33.97**	**2**	P	**P**	**13 18 18.2**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=196,slow=7.6,SNR=4.3						
LPAZ	**La Paz**	**43.74**	**136**	P	P	13 19 47.8	+6.4
	comp=Z,1.2nm,0.7s,baz=272,slow=7.0,SNR=3.9						
SCHQ	**Schefferville**	**45.39**	**25**	P	**P**	**13 19 53.2**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=242,slow=15,SNR=3.6						
YKA	**Yellowknife Ar**	**47.65**	**350**	P	**P**	**13 20 10.1**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=155,slow=7.4,SNR=12						
SIV	**San Ignacio**	**48.52**	**130**	P	P	13 20 24.1	+5.7
	comp=Z,0.3nm,0.3s,baz=315,slow=7.1,SNR=3.4						
BCAR	**Beaver Creek A**	**55.71**	**338**	P	**P**	**13 21 12.0**	**+0.7**
INK	**Inuvik**	**56.72**	**345**	P	**P**	**13 21 18.7**	**+0.4**
ILAR	**Eielson Array**	**58.54**	**338**	P	**P**	**13 21 31.9**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=140,slow=4.8,SNR=9.0						

*IDC **06** 13:28:58.2±0.8, 30°.15N×132°.64E, h0km, mb3.7/10, mb1 3.9/14, mb1mx3.8/32, mbtmp3.7/14, ML3.1/5, MS2.8/2, Ms1 2.8/2, ms1mx2.5/44, Error ellipse: s-maj=22.4km s-min=16.3km az=93.0*
*JMA **06** 13:29:00.2±0.2, 30°.12N×132°.55E, h67km, M3.6*
*NIED **06** 13:29:00, 30°.10N×132°.50E, h5km, Mw4.1 Best double couple: M₀1.43000×10¹⁵ NP1:φₛ206.00000°, δ61.00000°, λ-95.00000°. NP2:φₛ35.00000°, δ30.00000°, λ-82.00000°.*
ISC 06 13:29:03.2±0.7, **30°.18N**±0°.05×**132°.54E**±0°.06, **h35**km, **n29**, σ1§**63**/42, **mb3.7**/10, **Southeast of Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTN	**Tanegashima 3**	**1.43**	**290**	P	**Pn**	**13 29 24.6**	**-2.0**
JTN				*e*S	**Sn**	**13 29 43.9**	**-0.3**
JMTN	**Minamitane**	**1.43**	**279**	P	**Pn**	**13 29 24.9**	**-1.8**
JMTN				*e*S	**Sn**	**13 29 43.7**	**-0.6**
JTSR	**Tashiro 2**	**1.71**	**306**	P	**Pn**	**13 29 28.4**	**-2.1**
JTSR				*e*S	**Sn**	**13 29 50.1**	**-1.0**
JNAR	**Kushima--Naru**	**1.73**	**321**	P	**Pn**	**13 29 29.7**	**-1.1**
JNAR				S	**Sn**	**13 29 51.3**	**-0.4**
JYAK	**Yakushimahirau**	**1.76**	**273**	P	**Pn**	**13 29 29.0**	**-2.1**
JYAK				S	**Sn**	**13 29 50.7**	**-1.6**
JNKG	**Nichinankitago**	**1.79**	**326**	P	**Pn**	**13 29 30.4**	**-1.2**
JNKG				*e*S	**Sn**	**13 29 52.4**	**-0.6**
JTZ	**Takazaki**	**2.12**	**324**	P	**Pn**	**13 29 35.1**	**-1.1**
JTZ				S	**Sn**	**13 30 00.3**	**-1.0**
JNN	**Nakanoshima**	**2.33**	**262**	P	**Pn**	**13 29 37.4**	**-1.7**
JNN				S	**Sn**	**13 30 06.1**	**-0.5**
JTO	**Tosashimizu**	**2.69**	**5**	P	**Pn**	**13 29 41.8**	**-2.1**
JTO				*e*S	**Sn**	**13 30 09.7**	**-5.5**
JSJ	**Shimokoshiki**	**2.85**	**302**	P	**Pn**	**13 29 43.6**	**-2.6**
JSJ				*e*S	**Sn**	**13 30 17.2**	**-2.1**
JNU	**Nakatsue**	**3.26**	**335**	Pn	**Pn**	**13 29 51.6**	**-0.2**
	6.2nm,0.3s,baz=122,slow=4.1,SNR=151						
JNU				Sn	**Sn**	**13 30 28.5**	**-0.9**
	15nm,0.3s,baz=236,slow=21,SNR=13						
JNA	**Nagahama**	**3.37**	**359**	P	**Pn**	**13 29 52.1**	**-1.3**
JAMN	**Amaminishikomi**	**3.51**	**238**	P	**Pn**	**13 29 53.6**	**-1.7**
JAMN				S	**Sn**	**13 30 34.3**	**-1.4**
JMN	**Monobe**	**3.72**	**18**	P	**Pn**	**13 29 57.2**	**-1.0**
JAI	**Aioi**	**3.96**	**24**	P	**Pn**	**13 30 00.0**	**-1.4**
JOW	**Kunigami**	**5.02**	**229**	Pn	**Pn**	**13 30 14.7**	**-1.3**
	0.5nm,0.3s,baz=88,slow=21,SNR=5.3						
JOW				Sn	**Sn**	**13 31 09.8**	**-2.9**
	1.2nm,0.3s,baz=104,slow=17,SNR=7.4						
MJAR	**Matsushiro Arr**	**7.92**	**35**	Pn	**Pn**	**13 30 55.3**	**-0.6**
	0.2nm,0.3s,baz=224,slow=13,SNR=7.3						
KSRS	**Korea Array**	**8.21**	**333**	Pn	**Pn**	**13 30 60.0**	**+0.2**
	0.2nm,0.3s,baz=145,slow=23,SNR=4.2						
KSRS				LR	LR	13 33 23.5	
	comp=Z,24nm,19.1s,baz=198,slow=32						
KLR	**Kul'dur**	**19.04**	**358**	P	**Pn**	**13 33 23.5**	**+0.4**
	0.1nm,0.3s,baz=167,slow=10,SNR=4.4						
SONM	**Songino Array**	**26.70**	**319**	P	**P**	**13 34 39.2**	**0.0**
	0.4nm,0.6s,baz=133,slow=10,SNR=4.5						
SONM				LR	LR	13 44 39.6	
	comp=Z,54nm,18.3s,baz=208,slow=35						
CMAR	**Chiang Mai Arr**	**32.64**	**257**	P	**P**	**13 35 34.3**	**+2.3**
	0.4nm,0.3s,baz=48,slow=9.8,SNR=3.1						
MKAR	**Makanchi Array**	**41.94**	**308**	P	**P**	**13 36 51.8**	**+1.3**
	0.9nm,0.9s,baz=96,slow=9.1,SNR=7.4						
WRA	**Warramunga Arr**	**49.86**	**178**	P	**P**	**13 37 52.8**	**-0.3**
	1.0nm,0.7s,baz=355,slow=8.4,SNR=8.1						
ASAR	**Alice Springs**	**53.55**	**178**	P	**P**	**13 38 20.8**	**+0.2**
	0.8nm,0.7s,baz=10,slow=14,SNR=16						
ILAR	**Eielson Array**	**59.16**	**30**	P	**P**	**13 39 00.1**	**0.0**
	0.5nm,0.9s,baz=267,slow=7.1,SNR=5.5						
KBZ	**Khabaz**	**69.61**	**309**	P	**P**	**13 40 08.8**	**0.0**
	1.5nm,0.9s,baz=101,slow=4.9,SNR=2.4						
YKA	**Yellowknife Ar**	**73.33**	**27**	P	**P**	**13 40 31.2**	**+0.3**
	0.7nm,0.8s,baz=296,slow=5.5,SNR=10						
AKASG	**Malin Array Be**	**74.98**	**320**	P	**P**	**13 40 41.5**	**+0.7**
	0.1nm,0.3s,baz=65,slow=6.8,SNR=4.1						
NVAR	**Mina Array Bea**	**85.05**	**48**	P	**P**	**13 41 36.2**	**+0.6**
	0.9nm,0.8s,baz=300,slow=4.7,SNR=6.1						

*SOME **06** 13:37:23.4, 39°.63N×73°.78E, h0km*
*KRNET **06** 13:37:26.9±0.1, 39°.58N×74°.02E, mb3.6*
*NNC **06** 13:37:32.2±2.4, 39°.85N×73°.92E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=19.0km s-min=12.5km az=3.0*
ISC 06 13:37:30.7±1.6, **39°.74N**±0°.08×**73°.92E**±0°.04, **h10**km, **n39**, σ1§**91**/66, **27C-20D**, **Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARLS	**Aral**	**2.14**	**8**	⇓*i*P	**Pb**	**13 38 08.2**	**-1.5**
	baz=6.0						
ARLS				⇓*i*S	**Sb**	**13 38 38.1**	**+1.7**
	baz=6.0						
NRN	**Naryn**	**2.32**	**43**	⇑*e*P	**Pn**	**13 38 09.2**	**-0.1**
	baz=38						
NRN				⇑*e*S	**Sb**	**13 38 40.0**	**-1.7**
	baz=38						
AML	**Almayashu**	**2.39**	**356**	⇑*i*P	**Pn**	**13 38 11.7**	**+1.3**
	baz=55						
AML				⇑*i*S	**Sb**	**13 38 44.7**	**+0.8**
	baz=55						
AML	**Almayashu**	**2.39**	**356**	P	**Pn**	**13 38 11.1**	**+0.7**
	SNR=68						
BTK	**Batken**	**2.40**	**279**	⇑*e*P	**Pn**	**13 38 11.0**	**+0.8**
	baz=82						
BTK				⇑*e*S	**Sb**	**13 38 43.4**	**-0.5**
	baz=82						
UCH	**Uchtor**	**2.52**	**10**	⇓*i*P	**Pn**	**13 38 13.5**	**+1.3**
	baz=8.0						
UCH				⇓*i*S	**Sb**	**13 38 47.6**	**-0.2**
	baz=8.0						
UCH	**Uchtor**	**2.52**	**10**	P	**Pn**	**13 38 13.6**	**+1.3**
	SNR=20						
ARK	**Arkit**	**2.53**	**325**	⇑*i*P	**Pn**	**13 38 13.4**	**+1.3**
	baz=25						
ARK				⇑*i*S	**Sb**	**13 38 47.6**	**-0.1**
	baz=25						
KZA	**Kyzart**	**2.54**	**23**	⇓*e*P	**Pn**	**13 38 13.5**	**+1.1**
	baz=20						
KZA				⇓*i*S	**Sb**	**13 38 47.1**	**-1.2**
	baz=20						
KZA	**Kyzart**	**2.54**	**23**	P	**Pn**	**13 38 13.6**	**+1.1**
	SNR=35						
EKS2	**Erkin-Say**	**2.92**	**358**	⇑*i*P	**Pn**	**13 38 19.1**	**+1.7**
	baz=57						
EKS2				⇑*i*S	**Sb**	**13 38 56.9**	**-1.9**
	baz=57						
EKS2	**Erkin-Say**	**2.92**	**358**	P	**Pn**	**13 38 17.8**	**+0.4**
	SNR=16						
AAK	**Ala-Archa**	**2.93**	**8**	⇓*i*P	**Pn**	**13 38 19.0**	**+1.5**
	baz=6.0						
AAK				⇓*i*S	**Sb**	**13 38 57.1**	**-1.9**
	baz=6.0						
AAK	**Ala-Archa**	**2.93**	**8**	P	**Pb**	**13 38 20.5**	**-2.6**
	SNR=16						
AAK	**Ala-Archa**	**2.93**	**8**	⇑Pn	**Pb**	**13 38 20.3**	**-2.8**
	20nm,0.6s						
AAK				⇓Lg	Lg	13 39 02.0	
	50nm,0.8s						
KBK	**Karagaybulak**	**3.02**	**15**	⇓*i*P	**Pn**	**13 38 19.9**	**+1.2**
	baz=12						
KBK				⇓*i*S	**Sb**	**13 38 58.8**	**-2.8**
	baz=12						
KBK	**Karagaybulak**	**3.02**	**15**	P	**Pn**	**13 38 20.7**	**+2.0**
	SNR=19						
MRKS	**Merke**	**3.05**	**350**	*e*P	**Pb**	**13 38 22.1**	**-3.0**
	26nm,0.3s						
MRKS				*e*S	**Sb**	**13 39 04.2**	**+1.8**
	31nm,0.6s						
MRKS	**Merke**	**3.05**	**350**	Pg	**Pb**	**13 38 23.9**	**-1.2**
	26nm,0.3s						
MRKS				Lg	Lg	13 39 05.1	
	31nm,0.6s						
ULHL	**Ulahol**	**3.06**	**34**	⇓*i*P	**Pn**	**13 38 19.9**	**+0.5**
	baz=32						
ULHL				⇓*i*S	**Sn**	**13 38 58.8**	**+2.7**
	baz=32						
FRU1	**Bishkek**	**3.11**	**10**	⇑*i*P	**Pn**	**13 38 21.4**	**+1.4**
	baz=8.0						
FRU1				⇑*i*S	**Sb**	**13 39 01.0**	**-3.3**
	baz=8.0						
BOOM	**Boomskoye usch**	**3.14**	**28**	⇓*e*P	**Pn**	**13 38 21.5**	**+1.0**
	baz=26						
BOOM				⇓*i*S	**Sn**	**13 39 01.0**	**+2.8**
	baz=26						
CHMS	**Chumysh**	**3.31**	**11**	⇑*i*P	**Pn**	**13 38 24.2**	**+1.5**
	baz=9.0						
CHMS				⇑*i*S	**Sb**	**13 39 06.2**	**-3.9**
	baz=9.0						
CHMS	**Chumysh**	**3.31**	**11**	⇓Pn	**Pn**	**13 38 24.9**	**+2.2**
	8.5nm,0.7s						
CHMS				⇑Lg	Lg	13 39 14.6	
	25nm,0.8s						
TKM2	**Tokmak 2**	**3.42**	**21**	⇓*e*P	**Pn**	**13 38 25.4**	**+1.1**
	baz=19						
TKM2				⇓*i*S	**Sn**	**13 39 08.1**	**+3.1**
	baz=19						
TKM2	**Tokmak 2**	**3.42**	**21**	P	**Pn**	**13 38 25.8**	**+1.5**
	SNR=6.7						
KDJ	**Kajisay**	**3.44**	**45**	⇑*i*P	**Pn**	**13 38 25.0**	**+0.5**
	baz=42						
KDJ				⇑*i*S	**Sn**	**13 39 07.1**	**+1.7**
	baz=42						
USP	**Ospenovka**	**3.55**	**7**	⇑*e*P	**Pn**	**13 38 27.4**	**+1.4**
	baz=5.0						
USP				⇑*i*S	**Sn**	**13 39 11.8**	**+3.8**
	baz=5.0						
USP	**Ospenovka**	**3.55**	**7**	P	**Pn**	**13 38 28.5**	**+2.6**
	SNR=9.0						
KST	**Kastek**	**3.64**	**24**	*e*P	**Pb**	**13 38 35.1**	**-0.2**
	2.6nm,0.1s						
KST				*e*S	**Sg**	**13 39 26.8**	**-0.9**
	28nm,0.4s						
SGDS	**Sogindy**	**3.75**	**8**	Pg	**Pb**	**13 38 36.6**	**-0.4**
	22nm,0.3s						
SGDS				Lg	Lg	13 39 27.0	
	21nm,0.4s						
DGS	**Degeres**	**3.77**	**21**	*e*P	**Pb**	**13 38 37.2**	**-0.2**
	5.1nm,0.3s						
DGS				*e*S	**Sg**	**13 39 30.2**	**-1.5**
	15nm,0.6s						
IUG	**Iuzhnay**	**3.80**	**310**	*e*P	**Pb**	**13 38 33.4**	**-4.6**
	1.9nm,0.1s						
IUG				*e*S	**Sb**	**13 39 23.7**	**-0.4**
	30nm,0.4s						
ANVS	**Anan'yevo**	**4.15**	**42**	⇑*e*P	**Pn**	**13 38 34.7**	**+0.4**
	baz=39						
ANVS				⇑*i*S	**Sn**	**13 39 23.9**	**+0.9**
	baz=39						
MDOK	**Medeo**	**4.15**	**34**	*e*P	**Pb**	**13 38 43.8**	**-0.2**
	7.1nm,0.3s						
MDOK				*e*S	**Sg**	**13 39 41.2**	**-2.8**
	16nm,0.4s						
MDOK	**Medeo**	**4.15**	**34**	⇑Pn	**Pn**	**13 38 36.0**	**+1.7**
	5.7nm,0.7s						
MDOK				⇑Pg	**Pb**	**13 38 44.7**	**+0.7**
	17nm,0.8s						
MDOK				⇓Lg	Lg	13 39 42.0	
	31nm,1.0s						
MDOK	**Medeo**	**4.15**	**34**	Pg	**Pb**	**13 38 45.7**	**+1.7**
	8.2nm,0.2s						
MDOK				Lg	Lg	13 39 42.1	
	16nm,0.4s						
KRBS	**Karabastau**	**4.17**	**18**	*e*P	**Pb**	**13 38 44.0**	**-0.2**
	2.0nm,0.3s						
KRBS				*e*S	**Sg**	**13 39 41.8**	**-2.7**
	8.0nm,0.7s						
KK31	**Karatay Array**	**4.22**	**324**	⇑Pn	**Pn**	**13 38 34.5**	**-0.7**
	1.1nm,0.4s,baz=133,slow=13,SNR=14						
KK31				⇑Pg	**Pb**	**13 38 46.8**	**+1.7**
	8.0nm,0.7s,baz=137,slow=14,SNR=14						
KK31				⇑Sn	**Sn**	**13 39 28.5**	**+4.0**
	8.5nm,0.6s,baz=37,slow=38,SNR=4.4						
KK31				⇓Lg	Lg	13 39 42.1	
	5.8nm,0.5s,baz=131,slow=29,SNR=3.6						

*AEIC **06** 13:51:32.8±2.5, 61°.62N±0°.08×160°.41W±0°.09, h20km±8km, ML3.9/56, Error ellipse: s-maj=11.9km s-min=5.6km az=192.0*
*NEIC **06** 13:51:39.7±2.1, 61°.59N±0°.07×159°.56W±0°.09, h21km±11km, Error ellipse: s-maj=10.9km s-min=5.4km az=197.0*
*IDC **06** 13:51:40.6±3.2, 61°.54N×159°.25W, h0km, mb3.6/4, mb1 3.9/7, mb1mx3.5/55, mbtmp3.6/7, ML3.5/3, MS2.6/2, Ms1 2.7/2, ms1mx2.5/43, Error ellipse: s-maj=43.0km s-min=17.6km az=93.0*
ISC 06 13:51:34.8±1.2, **61°.66N**±0°.06×**160°.42W**±0°.09, **h10**km, **n81**, σ1§**53**/81, **mb3.6**/4, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVW2	**Sparrevohn**	**2.40**	**102**		**Pn**	**13 52 12.0**	**-2.0**
TT01	**Tatalina**	**2.40**	**57**		**Pn**	**13 52 13.6**	**-0.5**
ANM	**Nome**	**3.68**	**324**		**Pb**	**13 52 38.5**	**-1.3**
SPWE	**Spurr West**	**3.79**	**92**		**Pn**	**13 52 31.9**	**-1.4**
RDJH	**Redoubt Jeurge**	**3.84**	**103**		**Pn**	**13 52 32.0**	**-2.0**
RDWB	**Redoubt West**	**3.86**	**104**		**Pn**	**13 52 32.0**	**-2.3**
BGL	**Barrier Glacie**	**3.87**	**92**		**Pn**	**13 52 33.1**	**-1.3**
SPBG	**Spurr Blockage**	**3.88**	**92**		**Pn**	**13 52 33.0**	**-1.5**
DFR	**Drift River**	**3.90**	**103**		**Pn**	**13 52 32.7**	**-2.1**
DFR					**Sn**	**13 53 22.2**	**+1.6**
ILW	**Iliamna West**	**3.91**	**111**		**Pn**	**13 52 32.8**	**-2.1**
RSO	**Redoubt South**	**3.91**	**105**		**Pn**	**13 52 33.0**	**-2.1**
RED	**Redoubt Volcan**	**3.92**	**105**		**Pn**	**13 52 32.6**	**-2.5**
RED					**Sn**	**13 53 22.1**	**+1.0**
ILS	**Iliamna Low So**	**3.98**	**112**		**Pn**	**13 52 33.6**	**-2.3**
KELA	**Mount Kelaz**	**3.99**	**142**		**Pn**	**13 52 34.9**	**-1.1**
PPLA	**Purkeypile**	**4.04**	**69**		**Pn**	**13 52 35.4**	**-1.4**
KAHC	**Katmai Hardscr**	**4.05**	**136**		**Pn**	**13 52 35.3**	**-1.6**
SKT	**Skwentna**	**4.23**	**82**		**Pn**	**13 52 38.1**	**-1.0**
KCG	**Knife Ck. Glac**	**4.29**	**139**		**Pn**	**13 52 39.0**	**-1.1**
PLK1	**Peulik 1**	**4.32**	**152**		**Pn**	**13 52 39.9**	**-0.6**
CHUM	**Lake Minchumin**	**4.34**	**56**		**Pn**	**13 52 40.4**	**-0.3**
PLK3	**Peulik 3**	**4.50**	**150**		**Pn**	**13 52 42.1**	**-0.9**
SUA	**Susitna One**	**4.63**	**88**		**Pn**	**13 52 43.7**	**-1.1**
KTH	**Kantishna Hill**	**4.78**	**62**		**Pn**	**13 52 45.2**	**-1.6**
BPAW	**Bear Paw Mtn.**	**4.96**	**56**		**Pn**	**13 52 48.1**	**-1.1**
CNPM	**China Poot**	**5.00**	**111**		**Pn**	**13 52 48.0**	**-1.9**
TRF	**Thorofare Moun**	**5.02**	**65**		**Pn**	**13 52 48.9**	**-1.2**
BRLK	**Bradley Lake**	**5.05**	**108**		**Pn**	**13 52 48.3**	**-2.2**
BRSE	**Bradley Lake S**	**5.13**	**108**		**Pn**	**13 52 50.7**	**-0.8**
RC01	**Rabbit Creek A**	**5.17**	**92**		**Pn**	**13 52 52.0**	**-0.1**
IM03		**5.25**	**31**		**Pn**	**13 52 54.4**	**+1.3**
IMAR	**Indian Mountai**	**5.25**	**31**		**Pn**	**13 52 54.9**	**+1.7**
PMR	**Palmer**	**5.38**	**86**		**Pn**	**13 52 55.0**	**0.0**
GHO	**Glory Hole Cre**	**5.47**	**84**		**Pn**	**13 52 56.0**	**-0.3**
CHGN	**Chignik**	**5.47**	**168**	Pn	**Pn**	**13 52 56.9**	**+0.6**
MLY	**Manley**	**5.51**	**48**		**Pn**	**13 52 56.5**	**-0.3**
KDAK	**Kodiak Island**	**5.55**	**131**	Pn	**Pn**	**13 52 57.5**	**+0.2**
	3.0nm,0.3s,baz=344,slow=5.9,SNR=30						
KDAK				Lg	Lg	13 54 19.3	
	2.5nm,0.3s,baz=152,slow=16,SNR=9.8						
KDAK				LR	LR	13 55 21.4	
	comp=Z,59nm,18.8s,baz=280,slow=44						
KDAK	**Kodiak Island**	**5.55**	**131**		**Pn**	**13 52 57.1**	**-0.3**
SEW	**Seward**	**5.58**	**101**		**Pn**	**13 52 56.6**	**-1.0**
BWN	**Browne**	**5.60**	**59**	Pn	**Pn**	**13 52 57.8**	**-0.2**
GAMB	**Gambell**	**5.61**	**297**	Pn	Pn	13 53 06.4	+8.3
RND	**Reindeer**	**5.63**	**67**		**Pn**	**13 52 58.1**	**-0.4**
WAT1	**Susitna Watana**	**5.67**	**73**		**Pn**	**13 52 57.8**	**-1.2**
WAT2	**Susitna Watana**	**5.67**	**72**		**Pn**	**13 52 57.8**	**-1.2**
MCK	**McKinley**	**5.68**	**64**	Pn	**Pn**	**13 52 58.3**	**-0.8**
KNK	**Knik Glacier**	**5.72**	**87**	Pn	**Pn**	**13 52 59.7**	**-0.1**
SML	**Sawmill**	**5.75**	**83**	Pn	**Pn**	**13 53 00.6**	**+0.5**

OHAK	Old Harbor	5.75	138	Pn	Pn	13 53 00.9	+0.9
PWL	Port Wells	5.88	93		Pn	13 53 00.8	-1.1
NEA	Nenana	5.92	55	Pn	Pn	13 53 03.2	+0.8
WAT6	Susitna Watana	6.02	76		Pn	13 53 02.4	-1.5
SII	Sitkinak Islan	6.04	145	Pn	Pn	13 53 05.8	+1.7
SCM	Sheep Creek Mo	6.22	83	Pn	Pn	13 53 06.6	0.0
DHY	Denali Highway	6.23	71	Pn	Pn	13 53 06.5	-0.3
WRH	Wood River Hil	6.27	58	Pn	Pn	13 53 05.3	-1.8
MDM	Murphy Dome	6.41	54	Pn	Pn	13 53 08.7	-0.3
CCB	Clear Creek Bu	6.45	57	Pn	Pn	13 53 08.0	-1.6
GLI	Glacier Island	6.47	91	Pn	Pn	13 53 06.4	-3.6
HDA	Harding Lake	6.71	60	Pn	Pn	13 53 12.2	-1.1
POKR	Poker Plat Res	6.78	54		Pn	13 53 13.4	-0.8
IL31		6.86	57	Pn	Pn	13 53 13.9	-1.3
ILAR	Eielson Array	6.86	57	Pn	Pn	13 53 13.5	-1.8
	0.3nm,0.3s,baz=252,slow=13,SNR=16						
ILAR				Lg	Lg	13 55 06.0	
	1.9nm,0.3s,baz=245,slow=27,SNR=5.7						
ILAR				LR	LR	13 55 20.0	
	comp=Z,46nm,18.6s,baz=184,slow=34						
ILAR	Eielson Array	6.86	57	Pn	Pn	13 53 16.0	+0.7
COLD	Coldfoot	7.11	34		Pn	13 53 22.0	+3.2
EYAK	Cordova Ski Ar	7.19	92	Pn	Pn	13 53 17.8	-2.1
RIDG	Independent Ri	7.45	67	Pn	Pn	13 53 25.1	+1.7
FYU	Fort Yukon	8.25	47	Pn	Pn	13 53 34.4	0.0
PTPK	Patty Peak	8.62	85		Pn	13 53 40.6	+1.1
KIAG	Kiagna River	8.72	87		Pn	13 53 41.5	+0.5
BC03		8.77	73		Pn	13 53 40.8	-0.6
BCAR	Beaver Creek A	8.77	73		Pn	13 53 40.3	-1.2
BM03	Burnt Mountain	8.91	43		Pn	13 53 44.2	+0.8
BMAR	Burnt Mountain	8.92	43		Pn	13 53 43.7	+0.1
DAWY	Dawson	9.89	67	Pn	Pn	13 53 56.3	-0.5
SKAG	Skagway	12.51	89	Pn	Pn	13 54 23.2	-9.3
INK	Inuvik	13.08	48	Pn	Pn	13 54 41.2	+0.9
	0.2nm,0.3s,baz=252,slow=9.9,SNR=10						
INK				Sn	Sn	13 57 00.3	-5.3
	0.0nm,0.3s,baz=169,slow=18,SNR=2.5						
INK	Inuvik	13.08	48		Pn	13 54 38.7	-1.6
SIT	Sitka	13.55	99	Pn	Pn	13 54 40.3	-6.5
YKA	Yellowknife Ar	21.13	67	P	P	13 56 20.2	+0.9
	1.3nm,0.5s,baz=285,slow=9.2,SNR=18						
NVAR	Mina Array Bea	34.72	112	P	P	13 58 27.1	+2.3
	0.6nm,0.7s,baz=310,slow=7.3,SNR=5.1						
PDAR	Pinedale Array	35.28	99	P	P	13 58 31.6	+1.9
	0.3nm,0.4s,baz=343,slow=4.2,SNR=8.6						
ULM	Lac du Bonnet	36.34	78	P	P	13 58 39.4	+0.9
	1.0nm,0.6s,baz=325,slow=10,SNR=3.5						

IDC 06 13:53:01.1±4.2,**56°.18S**×**142°.87W,h0^{km},mb3.6**/3, **mb1 3.8**/3,**mb1mx3.6**/24,**mbtmp3.6**/3,**Error ellipse: s-maj=123.7km s-min=41.8km az=54.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QSPA	South Pole Qui	33.97	180	P	P	13 59 46.0	0.0
	0.7nm,0.6s,baz=108,slow=7.4,SNR=7.3						
ASAR	Alice Springs	66.96	262	P	P	14 03 55.0	-0.5
	0.4nm,0.7s,baz=146,slow=6.9,SNR=8.3						
H01W1	Cape Leeuwin H	68.35	240	T	T	15 19 16.4	
	baz=144,slow=76,SNR=9.2						
H01W2	Cape Leeuwin H	68.36	240	T	T	15 19 31.9	
	baz=144,slow=76,SNR=8.1						
H01W3	Cape Leeuwin H	68.37	240	T	T	15 19 30.3	
	baz=144,slow=76,SNR=7.9						
WRA	Warramunga Arr	69.69	264	P	P	14 04 13.4	+0.8
	0.4nm,0.8s,baz=141,slow=5.7,SNR=3.0						
H02S1	DAWSON INLET T	109.36	7	T	T	16 15 14.8	
	SNR=16						
H02N1	VAN INLET T-PH	109.40	7	T	T	16 15 15.8	
	SNR=6.9						
MKAR	Makanchi Array	150.84	271	PKPbc	PKPbc	14 12 54.1	-0.4
	0.4nm,0.9s,baz=114,slow=3.5,SNR=3.3						

IDC 06 14:10:12.3±9.1,**3°.83S**×**128°.27E,h0^{km},mb3.6**/2, **mb1 3.7**/4,**mb1mx3.4**/44,**mbtmp3.6**/4,**ML3.0**/2,**MS3.8**/2, **Ms1 3.8**/2,**ms1mx2.8**/39,**Error ellipse: s-maj=206.7km s-min=33.6km az=109.0,Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.20	46	Pn	Pn	14 11 17.4	-0.3
	3.6nm,0.3s,baz=245,slow=17,SNR=8.9						
WRA	Warramunga Arr	17.07	160	P	Pn	14 14 13.2	+0.5
	0.0nm,0.3s,baz=342,slow=13,SNR=3.8						
TGY	Tagaytay City	19.24	338	LR	LR	14 22 21.7	
	comp=Z,249nm,21.4s,baz=62,slow=38						
ASAR	Alice Springs	20.46	165	P	P	14 14 50.3	-1.4
	0.8nm,0.9s,baz=344,slow=12,SNR=12						
PSI	Prapat	30.06	282	LR	LR	14 29 35.9	
	comp=Z,205nm,18.8s,baz=174,slow=39						
STKA	Stephens Creek	30.58	157	P	P	14 16 29.1	+1.1
	2.3nm,1.0s,baz=338,slow=5.4,SNR=3.1						

IDC 06 14:26:32.2±1.5,**7°.24S**×**120°.57E,h512^{km}**±18^{km},**mb2.5**/2, **mb1 2.7**/5,**mb1mx2.5**/40,**mbtmp3.4**/5,**Error ellipse: s-maj=128.9km s-min=17.3km az=58.0,Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	Kappang	2.35	340	P	P	14 27 40.4	+0.1
	3.5nm,0.3s,baz=138,slow=6.3,SNR=11						
FITZ	Fitzroy Crossi	11.87	156	P	P	14 29 09.3	-0.2
	0.1nm,0.3s,baz=349,slow=10,SNR=2.8						
WRA	Warramunga Arr	18.38	135	P	P	14 30 15.5	-0.1
	0.1nm,0.3s,baz=313,slow=11,SNR=10						
ASAR	Alice Springs	20.76	143	P	P	14 30 37.3	+0.1
	0.3nm,0.4s,baz=320,slow=8.6,SNR=22						
MKAR	Makanchi Array	63.63	332	P	P	14 36 12.7	0.0
	0.4nm,0.6s,baz=127,slow=7.8,SNR=5.5						

BJI ***06*** *14:31:41.8±0.0,21°.71S×178°.18W,h562^{km},mB5.1/29, mb5.0/45*

NEIC ***06*** *14:31:44.4±1.9,21°.44S±0°.09×178°.82W±0°.10, h548^{km}±5^{km},mb5.0/140,Error ellipse: s-maj=14.6km s-min=11.9km az=139.0*

IDC ***06*** *14:31:45.4±0.9,21°.42S×178°.89W,h551^{km}±9^{km},mb4.3/27, mb1 4.3/30,mb1mx4.3/31,mbtmp5.1/30,Error ellipse: s-maj=9.9km s-min=8.5km az=144.0*

MOS ***06*** *14:31:49.6±2.5,20°.58S×179°.67W,h554^{km},mb5.0/20, Error ellipse: s-maj=14.1km s-min=10.2km az=119.7*

GCMT ***06*** *14:31:49.4±0.3,21°.34S±0°.03×179°.08W±0°.03, h577^{km}±2^{km},MW5.2/82,Moment Tensor Solution. s82,c106; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.67±.02; $M_{\theta\theta}$0.38±.05; $M_{\phi\phi}$0.28±.04; $M_{r\theta}$-0.47±.04; $M_{\theta\phi}$0.30±.04; $M_{\phi r}$-0.51±.04; Best double couple: $M_0$0.95100×10^{17} NP1:ϕ_s234.00000°,δ22.00000°, λ-82.00000°. NP2:ϕ_s45.00000°,δ68.00000°,λ-93.00000°. Principal axes: T 0.9360, Plg23.0000°, Azm137.0000°; N 0.0290, Plg3.0000°, Azm46.0000°; P -0.9660, Plg66.0000°, Azm309.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

BGR ***06*** *14:32:27.7±0.0,22°.55S×178°.56W,h550^{km}*

ISC 06 14:31:48.7±0.2,**21°.58S**±0°.05×**178°.88W**±0°.05,**h602^{km}, n624,**σ**1^{s}46**/627,**mb4.9**/132,**59C-30D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.79	322	c iP	P	14 33 16.3	-4.1
MSVF				pmax	pmax		
	comp=Z,306nm,0.4s						
MSVF	Nonsavu	4.79	322	P	P	14 33 16.3	-4.1
RAO	Raoul Island	7.69	174	S	S	14 35 14.0	-6.5
	comp=Z,174nm,0.3s,baz=100,slow=23,SNR=6.5						
GLKZ	Green Lake	7.70	174	P	P	14 33 42.0	-3.2
GLKZ				S	S	14 35 09.9	-11
AFI	Afiamalu	10.19	43	P	P	14 34 03.4	-6.2
	comp=Z,5.3nm,0.3s,baz=152,slow=2.9,SNR=5.7						
AFI				S	S	14 35 52.3	-13
	comp=Z,5.2nm,0.3s,baz=49,slow=21,SNR=5.0						
DZM	Mont Dzumac	13.64	265	P	P	14 34 41.7	-2.5
	comp=Z,2.8nm,0.3s,baz=82,slow=20,SNR=19						
DZM				S	S	14 37 06.4	-1.5
	baz=340,slow=13,SNR=4.3						
DZM	Mont Dzumac	13.64	265	P	P	14 34 41.9	-2.3
OUZ	Omahuta	15.11	204	P	P	14 34 58.4	+0.8
OUZ	Omahuta	15.11	204	P	P	14 34 58.2	+0.5
KUZ	Kuaotunu	15.83	196	P	P	14 35 04.9	+0.7
WIAZ	Waiheke Island	16.03	198	P	P	14 35 07.8	+1.7
MXZ	Matakaoa Point	16.12	188	P	P	14 35 04.5	-2.4
HBAZ	Herne Bay Bore	16.20	199	P	P	14 35 10.0	+2.4
EPAZ	Eden Park BICE	16.22	199	P	P	14 35 09.9	+2.1
ETAZ	East Tamaki Re	16.24	198	P	P	14 35 09.7	+1.7
WTAZ	Waiatarua	16.32	199	P	P	14 35 10.3	+1.5
WMGZ	Waiomatatini S	16.36	188	P	P	14 35 08.7	-0.4
WMGZ				S	S	14 37 49.1	-3.1
KBAZ	Karaka Road Bo	16.38	198	P	P	14 35 11.5	+2.3
AWAZ	Awhitu Peninsu	16.43	199	P	P	14 35 10.9	+1.2
PKGZ	Pakihiroa	16.47	189	P	P	14 35 08.3	-1.9
PKGZ				S	S	14 37 51.6	-2.5
RUGZ	Raukumara Rang	16.60	190	P	P	14 35 10.0	-1.5
RUGZ				S	S	14 37 53.3	-3.2
TWGZ	Tauwhareparae	16.77	189	P	P	14 35 16.2	+3.3
TWGZ				S	S	14 37 55.8	-3.2
URZ	Urewera	16.98	191	P	P	14 35 12.7	-2.1
	comp=Z,20nm,0.3s,baz=271,slow=2.8,SNR=91						
URZ				S	S	14 38 00.1	-2.3
	comp=Z,2.1nm,0.3s,baz=282,slow=23,SNR=9.7						
URZ	Urewera	16.98	191	P	P	14 35 13.1	-1.7
MWZ	Matawai	16.99	190	P	P	14 35 14.9	+0.1
MWZ				S	S	14 37 57.0	-5.6
RAGZ	Rawiri	17.16	190	P	P	14 35 14.9	-1.6
RAGZ				S	S	14 38 05.8	+0.3
RIGZ	Rimuhau	17.32	189	P	P	14 35 17.5	-0.4
RIGZ				S	S	14 38 05.4	-2.5
SNGZ	Shannon Statio	17.45	190	P	P	14 35 17.5	-1.7
SNGZ				S	S	14 38 08.7	-1.4
HIZ	Hauiti	17.72	196	P	P	14 35 23.2	+1.6
RAR	Rarotonga	17.80	92	P	P	14 35 21.5	-1.0
	comp=Z,3.3nm,0.3s,baz=269,slow=4.7,SNR=5.9						
RAR	Rarotonga	17.80	92	P	P	14 35 21.6	-1.0
RAR				pmax	pmax		
	comp=Z,74nm,1.1s						
RAR	Rarotonga	17.80	92	P	P	14 35 21.6	-1.0
BKZ	Black Stump Fm	17.98	192	P	P	14 35 21.1	-2.8
BKZ				IAmb	IAmb	14 35 28.5	
	comp=Z,26nm,0.9s						
BHHZ	Black Hill Sta	18.37	192	P	P	14 35 26.3	-1.2
BHHZ				S	S	14 38 21.0	-4.1
BFZ	Birch Farm	19.49	191	P	P	14 35 35.4	-2.2
BFZ				IAmb	IAmb	14 35 39.2	
	comp=Z,35nm,0.6s						
KNTN	Kanton	19.95	21	P	P	14 35 39.4	-2.7
MSWZ	Moikau Station	20.39	193	P	P	14 35 44.7	-1.0
SNZO	South Karori	20.41	194	P	P	14 35 44.6	-1.3
SNZO				IAmb	IAmb	14 35 46.0	
	comp=Z,32nm,0.7s						
BHW	Baring Head	20.46	194	P	P	14 35 45.2	-1.2
QRZ	Quartz Range	20.53	199	P	P	14 35 46.7	-0.2
QRZ				IAmb	IAmb	14 35 51.1	
	comp=Z,35nm,0.6s						
PLWZ	Palliser	20.54	193	P	P	14 35 45.3	-1.8
NNZ	Nelson	20.65	197	P	P	14 35 46.5	-1.5
NNZ				IAmb	IAmb	14 35 50.9	
	comp=Z,22nm,0.5s						
TUWZ	Tuamarina	20.70	195	P	P	14 35 46.9	-1.6
THZ	Tophouse	21.28	197	P	P	14 35 52.9	-0.9
THZ				IAmb	IAmb	14 35 56.0	
	comp=Z,27nm,0.6s						
LTZ	Lake Taylor	22.41	197	P	P	14 36 01.9	-1.8
LTZ				IAmb	IAmb	14 36 06.2	
	comp=Z,29nm,0.7s						
OXZ	Oxford	22.97	197	P	P	14 36 07.2	-1.6
OXZ				IAmb	IAmb	14 36 14.1	
	comp=Z,27nm,0.6s						
RPZ	Rata Peaks	23.61	198	P	P	14 36 13.0	-1.4
	comp=Z,11nm,0.5s,baz=50,slow=3.3,SNR=24						
RPZ				S	S	14 39 46.8	-0.9
	comp=Z,10.0nm,0.8s,baz=39,slow=15,SNR=4.5						
RPZ	Rata Peaks	23.61	198	P	P	14 36 12.9	-1.5
RPZ				IAmb	IAmb	14 36 21.5	
	comp=Z,67nm,1.6s						
HNR	Honiara	23.67	297	P	P	14 36 12.8	-2.5
	comp=Z,68nm,0.5s,baz=177,slow=18,SNR=4.4						
HNR	Honiara	23.67	297	P	P	14 36 12.1	-3.2
HNR				pmax	pmax		
	comp=Z,92nm,0.6s						
HNR	Honiara	23.67	297	P	P	14 36 12.1	-3.2
FOZ	Fox Glacier	23.83	201	P	P	14 36 14.5	-1.8
FOZ				IAmb	IAmb	14 36 18.6	
	comp=Z,37nm,0.7s						
TARA	Tarawa	24.16	340	P	P	14 36 17.2	-2.4
WKZ	Wanaka	25.25	200	P	P	14 36 27.6	-1.2
WKZ				IAmb	IAmb	14 37 14.7	
	comp=Z,93nm,1.9s						
DCZ	Deep Cove	26.44	202	P	P	14 36 39.2	-0.1
DCZ				IAmb	IAmb	14 36 41.1	
	comp=Z,26nm,0.8s						
WHZ	Wether Hill Ro	26.54	201	P	P	14 36 40.1	-0.1
EIDS	Eidsvold	27.78	256	P	P	14 36 51.1	-0.2
ARMA	Armidale	27.87	245	P	P	14 36 53.1	+1.0
ARMA				IAmb	IAmb	14 36 54.0	
	comp=Z,29nm,0.7s						
PPT	Papeete	27.88	87	P	P	14 36 52.2	-0.1
	comp=Z,60nm,0.7s,baz=82,slow=18,SNR=4.4						
CAN	Canberra	31.23	237	P	P	14 37 20.4	-0.5
CAN				pmax	pmax		
	comp=Z,58nm,1.3s						
CAN	Canberra	31.23	237	P	P	14 37 20.4	-0.5
CAN				IAmb	IAmb	14 37 22.8	
	comp=Z,58nm,1.3s						
CTA	Charters Tower	32.58	266	P	P	14 37 32.5	0.0
	comp=Z,52nm,0.5s,baz=93,slow=10,SNR=89						
CTA				PcP	PcP	14 40 01.8	+1.5
	comp=Z,4.7nm,0.5s,baz=62,slow=3.9,SNR=4.8						
CTA				ScP	ScP	14 42 54.5	+6.5
	comp=Z,5.2nm,0.8s,baz=141,slow=6.2,SNR=4.1						
TOO	Toolangi	34.60	235	P	P	14 37 49.6	+0.4
TOO				pmax	pmax		
	comp=Z,86nm,1.6s						
TOO	Toolangi	34.60	235	P	P	14 37 49.6	+0.4
TOO				IAmb	IAmb	14 37 50.8	
	comp=Z,86nm,1.6s						
PMG	Port Moresby	34.80	285	P	P	14 37 50.7	-0.4
	comp=Z,74nm,0.8s,baz=98,slow=5.8,SNR=34						
PMG	Port Moresby	34.80	285	deP	P	14 37 50.4	-0.7
PMG				pmax	pmax		
	comp=Z,292nm,0.7s						
PMG	Port Moresby	34.80	285	P	P	14 37 50.5	-0.7
STKA	Stephens Creek	36.59	245	P	P	14 38 06.2	+0.7
	comp=Z,22nm,0.5s,baz=92,slow=11,SNR=54						
STKA				ScP	S	14 43 08.2	+1.4
	comp=Z,1.4nm,0.3s,baz=146,slow=3.6,SNR=4.1						
STKA	Stephens Creek	36.59	245	P	P	14 38 06.1	+0.5
COEN	Coen	36.85	275	P	P	14 38 07.9	-0.1
COEN				IAmb	IAmb	14 38 09.0	
	comp=Z,34nm,0.7s						
BBOO	Buckleboo	41.34	244	P	P	14 38 43.6	-0.1
BBOO				IAmb	IAmb	14 38 44.1	
	comp=Z,42nm,0.7s						
AS31	Alice Springs	43.48	258	P	P	14 39 00.5	-0.1
AS31				IAmb	IAmb	14 39 01.3	
	comp=Z,21nm,0.7s						
ASAR	Alice Springs	43.48	258	P	P	14 39 00.6	-0.1
	comp=Z,75nm,0.6s,baz=94,slow=7.9,SNR=1614						
ASAR				PcP	PcP	14 40 35.8	+0.9
	comp=Z,12nm,0.7s,baz=101,slow=3.7,SNR=12						
ASAR				ScP	ScP	14 43 35.8	+6.1
	comp=Z,2.8nm,0.7s,baz=106,slow=4.5,SNR=5.1						
ASAR				S	S	14 44 46.2	-0.7
	comp=Z,15nm,1.0s,baz=94,slow=15,SNR=40						
ASAR				PKiKP	PKiKP	14 47 34.3	-0.6
	comp=Z,0.4nm,0.6s,baz=77,slow=1.6,SNR=5.6						
ASAR	Alice Springs	43.48	258	P	P	14 39 00.2	-0.4
ASAR	Alice Springs	43.48	258	P	P	14 39 00.1	-0.4
ASAR	Alice Springs	43.48	258		ScP	14 43 35.6	+5.9
WB0	Warramunga Arr	43.63	264	P	P	14 39 00.9	-0.9
WB2	Warramunga Arr	43.64	263	P	P	14 39 01.0	-0.8
WRAB	Tennant Creek	43.64	263	deP	P	14 39 01.2	-0.6
WRAB				pmax	pmax		
	comp=Z,57nm,0.8s						
WRAB	Tennant Creek	43.64	263	P	P	14 39 01.0	-0.8
WRAB				IAmb	IAmb	14 39 02.0	
	comp=Z,56nm,0.8s						
WRA	Warramunga Arr	43.65	263	P	P	14 39 01.1	-0.8
	comp=Z,39nm,0.5s,baz=95,slow=7.8,SNR=1170						
WRA				PcP	PcP	14 40 37.1	+1.7
	comp=Z,4.8nm,0.8s,baz=98,slow=3.9,SNR=4.7						
WRA				ScP	ScP	14 43 36.9	+6.4
	comp=Z,4.3nm,0.9s,baz=95,slow=4.4,SNR=5.9						
WRA				S	S	14 44 47.1	-2.3
	comp=Z,6.9nm,0.9s,baz=103,slow=17,SNR=9.8						
WRA				PKiKP	PKiKP	14 47 34.4	-0.8
	comp=Z,0.4nm,0.4s,baz=70,slow=0.4,SNR=6.3						
WRA	Warramunga Arr	43.65	263	P	P	14 39 01.1	-0.8
HMH	Humu‘ula Sheep	46.89	31	P	P	14 39 26.3	-0.5
HPAH	Hawaii Prepara	47.16	30	P	P	14 39 28.1	-0.4
FORT	Forrest	48.12	248	P	P	14 39 35.3	-0.3
MTN	Manton Dam	48.36	272	P	P	14 39 36.7	-0.9
KNRA	Kununurra	49.78	267	P	P	14 39 47.8	-0.2
FITZ	Fitzroy Crossi	52.08	263	P	P	14 40 04.6	+0.1
SWI	Sorong	52.74	286	P	P	14 40 09.3	0.0
	comp=Z,3μmcomp=Z,407nm,0.8s						
MSAI	Masohi	53.78	282	P	P	14 40 16.3	-0.4
	comp=Z,33nm,0.6s						
AAI	Ambon	54.31	281	P	P	14 40 19.7	-0.7
	comp=Z,1μmcomp=Z,66nm,0.5s						
SOEI	Soe	55.72	273	P	P	14 40 30.5	+0.2
	comp=Z,2μmcomp=Z,195nm,0.6s						
SOEI	Soe	55.72	273	P	P	14 40 31.4	+1.1
PSA00	Pilbara Seismi	56.63	258	P	P	14 40 36.2	-0.1
PSA00	Pilbara Seismi	56.63	258	P	P	14 40 35.1	-1.2
PSA00				IAmb	IAmb	14 40 35.7	
	comp=Z,15nm,0.6s						
VNDA	Vanda	56.77	185	P	P	14 40 38.7	+2.4
	comp=Z,3.9nm,0.6s,baz=354,slow=7.0,SNR=14						
TNTI	Ternate	56.95	286	P	P	14 40 39.6	+1.0
	comp=Z,60nm,0.8s						
TNTI	Ternate	56.95	286	P	P	14 40 37.4	-1.1
TNTI				IAmb	IAmb	14 40 39.5	
	comp=Z,52nm,0.9s						
SANI	Sanana	56.99	282	P	P	14 40 37.7	-1.2
	comp=Z,60nm,0.9s						
NWAO	Narrogin (SRO)	57.16	244	P	P	14 40 40.2	+0.5
	comp=Z,6.7nm,0.5s,baz=133,slow=6.8,SNR=12						
MMRI	Maumere	57.98	273	P	P	14 40 44.7	-0.9
	comp=Z,75nm,1.0s						
MMRI	Maumere	57.98	273	P	P	14 40 44.5	-1.1
MMRI				IAmb	IAmb	14 40 46.2	
	comp=Z,81nm,1.1s						
EDFI	Ende, Flores	58.45	273	P	P	14 40 47.7	-1.2
	comp=Z,429nmcomp=Z,32nm,0.7s						
MORW	Morawa	58.66	248	P	P	14 40 49.9	-0.1
BASI	Baing, Sumba	59.00	271	P	P	14 40 53.0	+0.6
	comp=Z,1μmcomp=Z,95nm,1.4s						
WSI	Waingapu	59.44	271	P	P	14 40 55.0	-0.3
	comp=Z,4μmcomp=Z,332nm,0.7s						
WBSI	Waikabubak, Su	60.30	271	P	P	14 41 13.6	+13
LUWI	Luwuk	60.33	282	P	P	14 41 01.6	+0.4
	comp=Z,2μmcomp=Z,90nm,1.0s						
LUWI	Luwuk	60.33	282	P	P	14 41 01.5	+0.2
LUWI				IAmb	IAmb	14 41 02.1	
	comp=Z,53nm,0.8s						
BKSI	Bulukumba	61.12	276	P	P	14 41 06.7	+0.3
	comp=Z,33nm,0.7s						
BNSI	Bone	61.47	277	P	P	14 41 09.3	+0.6
	comp=Z,36nm,0.7s						
PLAI	Plampang	62.07	271	P	P	14 41 12.4	-0.1
	comp=Z,1μmcomp=Z,93nm,0.8s						
CTBH	Cotabato--PC H	62.68	291	⇓iP	P	14 41 16.6	+0.2
SRBI	Singaraja	64.70	271	P	P	14 41 29.2	-0.1
	comp=Z,65nm,0.8s						
JAGI	Jajag, Banyuwa	65.56	270	P	P	14 41 34.2	-0.5
	comp=Z,72nm,0.8s						
JAGI	Jajag, Banyuwa	65.56	270	P	P	14 41 33.4	-1.3
JAGI				IAmb	IAmb	14 41 34.6	
	comp=Z,48nm,0.9s						
PWJI	Pagerwojo	67.90	270	P	P	14 41 49.3	+0.3
	comp=Z,73nm,0.7s						
PCJI	Pacitan	68.42	270	P	P	14 41 52.8	+0.6
	comp=Z,235nm,0.6s						
QSPA	South Pole Qui	68.50	180	P	P	14 41 54.0	+2.1
	comp=Z,19nm,0.7s,baz=12,slow=1.1,SNR=124						
QSPA	South Pole Qui	68.50	180	P	P	14 41 53.9	+2.0
UGM	Wanagama	69.13	270	P	P	14 41 56.6	+0.1
KKM	Kota Kinabalu	69.25	286	P	P	14 41 57.7	+0.5
KKM				IAmb	IAmb	14 41 58.3	
	comp=Z,22nm,0.6s						
MJAR	Matsushiro Arr	70.59	324	P	P	14 42 04.5	-0.1
	comp=Z,19nm,0.6s,baz=137,slow=5.6,SNR=45						
MJAR	Matsushiro Arr	70.59	324	P	P	14 42 04.2	-0.5
MJAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MJAR	Matsushiro Arr	70.59	324	P	P	14 42 04.2	-0.5
MAJO	Matsushiro	70.60	324	iP	P	14 42 04.1	-0.6
MAJO				pmax	pmax		
	comp=Z,40nm,1.0s						
MAJO	Matsushiro	70.60	324	P	P	14 42 04.3	-0.4
MAJO				IAmb	IAmb	14 42 05.3	
	comp=Z,39nm,1.0s						
MAT	Matsushiro	70.60	324	P	P	14 42 04.2	-0.5
MJB9	Matsu-Tunnel	70.60	324	P	P	14 42 04.0	-0.7
MJB9				IAmb	IAmb	14 42 05.3	
	comp=Z,38nm,1.0s						
KPJI	Karang Pucung	70.81	270	P	P	14 42 06.8	+0.4
	comp=Z,52nm,0.7s						
SBUM	Sibu	71.38	280	P	P	14 42 11.0	+1.3
JNU	Nakatsue	72.50	317	P	P	14 42 16.0	+0.2
KSM	Kuching	72.75	279	P	P	14 42 17.3	-0.4
KSM				IAmb	IAmb	14 42 19.3	
	comp=Z,32nm,0.7s						
KSM	Kuching	72.75	279	P	P	14 42 19.0	+1.3
ADK	Adak	73.17	1	P	P	14 42 18.8	-0.3
ADK				pmax	pmax		
	comp=Z,81nm,0.5s						
ADK	Adak	73.17	1	P	P	14 42 18.8	-0.3
TWG	Pinlang	73.28	303	P	P	14 42 19.0	-1.4
YULB	Yu-li	73.41	304	P	P	14 42 19.8	-1.4
ATKA	Atka Island	73.58	3	P	P	14 42 20.6	-0.7
NACB	Ninganchiao	73.61	305	P	P	14 42 21.3	-0.9
NACB				IAmb	IAmb	14 42 22.8	
	comp=Z,42nm,0.9s						
TPUB	Ta-pu	73.88	304	P	P	14 42 22.7	-1.2
SSLB	Suanglung	73.89	304	IAmb	IAmb	14 42 24.6	
	comp=Z,42nm,0.8s						
NIKH	Nikolski High	74.74	6	P	P	14 42 27.2	-0.7
LWLI	Liwa	76.15	270	P	P	14 42 29.0	-7.8
MDSI	Maura Dua	76.23	271	P	P	14 42 36.1	-1.0
	comp=Z,21nm,0.8s						
PEA0B	Petropavlovsk-	77.10	346	P	P	14 42 40.6	-0.4
PEA0B				pmax	pmax		
	comp=Z,111nm,1.4s						
PEA0B	Petropavlovsk-	77.10	346	P	P	14 42 40.6	-0.4
PEA0B				IAmb	IAmb	14 42 42.0	
	comp=Z,111nm,1.4s						
PETK	Petropavlovsk-	77.10	346	P	P	14 42 41.0	0.0
	comp=Z,28nm,0.7s,baz=144,slow=5.3,SNR=68						
PETK	Petropavlovsk-	77.10	346	P	P	14 42 40.6	-0.4
PETK	Petropavlovsk-	77.10	346	P	P	14 42 40.6	-0.4
KSRS	Korea Array	77.15	319	P	P	14 42 42.5	+0.9
	comp=Z,5.2nm,0.9s,baz=146,slow=6.0,SNR=10						
KSAR	Wonju Array Be	77.17	319	P	P	14 42 41.3	-0.4
KSAR	Wonju Array Be	77.17	319	P	P	14 42 41.3	-0.4
KSI	Kapahiang	78.00	271	P	P	14 42 49.4	+2.6
	comp=Z,105nm,0.5s						
SDPT	Sand Point	78.21	11	P	P	14 42 46.0	-0.8
DLV	T Lat	78.66	288	P	P	14 42 51.5	+1.2
MSHR	Mys Shultsa	78.71	325	iP	P	14 42 49.4	-0.4
MYKOM	Kota Tinggi	78.83	276	P	P	14 42 52.0	+0.8
USA0B	Ussuriysk Arra	79.39	326	P	P	14 42 54.9	+1.5
USA0B				pmax	pmax		
	comp=Z,29nm,0.9s						
USA0B	Ussuriysk Arra	79.39	326	P	P	14 42 54.9	+1.5
USRK	Ussuriysk Ar.	79.39	326	P	P	14 42 54.9	+1.5
	comp=Z,26nm,0.8s,baz=131,slow=3.4,SNR=28						
USRK	Ussuriysk Ar.	79.39	326	P	P	14 42 54.6	+1.2
USRK	Ussuriysk Ar.	79.39	326	P	P	14 42 54.6	+1.2
CHGN	Chignik	79.48	11	P	P	14 42 53.2	-0.3
CHGN				IAmb	IAmb	14 42 54.6	
	comp=Z,94nm,1.3s						
NJ2	Nanjing	79.94	310	eP	P	14 42 57.6	+1.1
NJ2				pmax	pmax		
	comp=Z,18nm,0.6s						
SDSI	Sungai Dareh	80.07	273	P	P	14 42 57.3	-0.3
	comp=Z,19μmcomp=Z,12nm,0.8s						
KMRM	Mail Ridge	80.10	40	P	P	14 42 55.8	-1.5
KMRM				IAmb	IAmb	14 43 01.8	
	comp=Z,43nm,1.0s						
MAW	Mawson	80.28	200	P	P	14 43 01.7	+4.1
	comp=Z,9.3nm,0.3s,baz=92,slow=4.5,SNR=24						
LPIG	La Paz	80.66	60	P	P	14 43 03.0	+2.5
	comp=Z,42nm,0.4s,baz=129,slow=6.5,SNR=3.2						
MDJ	Mudanjiang	80.93	326	P	P	14 43 02.5	+1.1
MDJ				pmax	pmax		
	comp=Z,25nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,190nm,7.8s						

PDSI	Padang	80.98	273	P	P	14 43 02.2	-0.2
	comp=Z,12nm,0.5s						
HUMO	Hull Mountain	82.04	38	P	P	14 43 09.0	+1.8
HUMO				IAmb	IAmb	14 43 09.7	
	comp=Z,39nm,1.4s						
KDAK	Kodiak Island	82.05	14	P	P	14 43 07.3	+0.6
	comp=Z,17nm,1.0s,baz=222,slow=4.0,SNR=14						
KDAK	Kodiak Island	82.05	14	P	P	14 43 07.0	+0.3
KDAK				pmax	pmax		
	comp=Z,31nm,1.3s						
KDAK	Kodiak Island	82.05	14	P	P	14 43 07.0	+0.3
GRNR	Gornyy	82.09	333	⇓iP	P	14 43 08.4	+1.3
GRNR				pmax	pmax		
	comp=Z,20nm,0.9s						
GRNR				MLR	MLR		
	comp=Z,90nm,14.0s						
NVAR	Mina Array Bea	82.37	44	P	P	14 43 10.2	+1.1
	comp=Z,3.2nm,0.6s,baz=224,slow=7.5,SNR=19						
NVAR				PKKPbc	PKKPbc	15 01 33.6	+1.5
	comp=Z,0.1nm,0.4s,baz=64,slow=3.5,SNR=4.1						
IPM	Ipoh	82.46	278	P	P	14 43 10.6	+0.8
IPM				IAmb	IAmb	14 43 11.8	
	comp=Z,56nm,0.8s						
IPM	Ipoh	82.46	278	P	P	14 43 11.0	+1.1
CN2	Changchun	82.65	323	eP	P	14 43 10.4	+0.3
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
KVN	Kaiserville	82.85	43	P	P	14 43 12.6	+1.1
KVN				pmax	pmax		
	comp=Z,11nm,1.2s						
KVN	Kaiserville	82.85	43	P	P	14 43 12.6	+1.1
KLR	Kul'dur	83.04	330	d iP	P	14 43 12.9	+1.0
KLR				pmax	pmax		
	comp=Z,16nm,0.9s						
KULM	Kulim	83.11	278	P	P	14 43 13.8	+0.7
KULM				IAmb	IAmb	14 43 14.9	
	comp=Z,25nm,0.7s						
KULM	Kulim	83.11	278	P	P	14 43 15.0	+1.9
RPSI	Rantau Prapat	83.73	275	P	P	14 43 16.3	+0.1
RPSI				IAmb	IAmb	14 43 17.3	
	comp=Z,20nm,0.8s						
PSI	Prapat	83.77	275	P	P	14 43 16.3	-0.2
PSI				pmax	pmax		
	comp=Z,20nm,0.8s						
CNPM	China Poot	83.93	14	IAmb	IAmb	14 43 17.2	
	comp=Z,29nm,0.9s						
BRLK	Bradley Lake	84.23	14	IAmb	IAmb	14 43 18.5	
	comp=Z,29nm,0.9s						
SVW2	Sparrevohn	84.51	11	P	P	14 43 17.7	-1.2
MA2	Magadan	84.60	345	P	P	14 43 19.2	-0.1
	comp=Z,16nm,0.8s,baz=147,slow=6.8,SNR=6.4						
MA2	Magadan	84.60	345	ceP	P	14 43 18.9	-0.5
MA2				pmax	pmax		
	comp=Z,14nm,0.8s						
MA2	Magadan	84.60	345	P	P	14 43 18.5	-0.8
SEW	Seward	84.86	14	IAmb	IAmb	14 43 22.2	
	comp=Z,24nm,1.0s						
319A	Douglas	84.95	54	P	P	14 43 20.0	-1.9
KCSI	Kotacane, Aceh	85.11	276	P	P	14 43 23.1	+0.2
	comp=Z,597nmcomp=Z,24nm,0.7s						
TPTI		85.56	275	P	P	14 43 26.1	+1.0
	comp=Z,10nm,0.8s						
RC01	Rabbit Creek A	85.67	14	IAmb	IAmb	14 43 26.5	
	comp=Z,40nm,1.2s						
SUA	Susitna One	85.79	13	IAmb	IAmb	14 43 25.8	
	comp=Z,27nm,0.6s						
HIN	Hinchinbrook I	85.82	15	IAmb	IAmb	14 43 27.3	
	comp=Z,41nm,1.2s						
ENH	Enshi	85.97	305	IAmb	IAmb	14 43 28.9	
	comp=Z,33nm,0.8s						
FID	Port Fidalgo	86.13	15	IAmb	IAmb	14 43 27.5	
	comp=Z,20nm,1.0s						
EYAK	Cordova Ski Ar	86.14	16	IAmb	IAmb	14 43 28.3	
	comp=Z,15nm,0.8s						
KNK	Knik Glacier	86.24	14	IAmb	IAmb	14 43 28.2	
	comp=Z,20nm,0.7s						
PMR	Palmer	86.25	14	IAmb	IAmb	14 43 29.1	
	comp=Z,27nm,1.1s						
SML	Sawmill	86.62	14	IAmb	IAmb	14 43 44.4	
	comp=Z,27nm,1.2s						
SCM	Sheep Creek Mo	86.87	14	P	P	14 43 30.4	+0.2
SCM				pmax	pmax		
	comp=Z,57nm,0.6s						
SCM	Sheep Creek Mo	86.87	14	P	P	14 43 30.4	+0.2
SNAA	Sanae	86.96	179	P	P	14 43 31.6	+0.9
CRQM	Cirque	86.99	17	P	P	14 43 31.2	+0.3
CRQM				IAmb	IAmb	14 43 33.0	
	comp=Z,19nm,0.7s						
TGL	Tana Glacier	87.08	17	IAmb	IAmb	14 43 32.7	
	comp=Z,30nm,1.2s						
VNA3	Neumayer Olymp	87.12	177	P	P	14 43 32.7	+1.3
SEY	Seymchan	87.23	347	iP	P	14 43 31.2	-0.6
PCA	Pinnacle	87.25	18	IAmb	IAmb	14 43 34.5	
	comp=Z,20nm,0.8s						
GLB	Gilahina Butte	87.40	16	P	P	14 43 33.0	+0.3
GLB				IAmb	IAmb	14 43 33.5	
	comp=Z,18nm,0.6s						
BALM	Baldy	87.44	17	P	P	14 43 33.5	+0.6
BALM				IAmb	IAmb	14 43 34.3	
	comp=Z,24nm,0.6s						
MCARA	McCarthy VSAT	87.55	16	P	P	14 43 33.7	+0.4
MCARA				IAmb	IAmb	14 43 36.5	
	comp=Z,27nm,0.9s						
VNA2	Neumayer--Watz	87.56	177	P	P	14 43 35.1	+1.8
	baz=178,slow=4.8						
B08A	Colville Reser	87.58	35	P	P	14 43 33.7	-0.1
KTH	Kantishna Hill	87.64	12	P	P	14 43 32.7	-1.0
KTH				IAmb	IAmb	14 43 34.6	
	comp=Z,25nm,0.8s						
BARN	Barnard Glacie	87.65	17	IAmb	IAmb	14 43 35.6	
	comp=Z,29nm,0.8s						
CTGM	Chitina Glacie	87.66	17	IAmb	IAmb	14 43 35.5	
	comp=Z,25nm,0.8s						
XAN	Xi'an	88.13	308	P	P	14 43 38.0	+1.2
XAN				pmax	pmax		
	comp=Z,25nm,0.8s						
ZEA	Zeya	88.17	331	eP	P	14 43 37.0	+0.6
ZEA				pmax	pmax		
	comp=N,24nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,24nm,0.9s						
TXAR	Lajitas Array	88.33	58	P	P	14 43 39.7	+1.8
	comp=Z,4.0nm,1.0s,baz=224,slow=5.2,SNR=22						
TXAR				pP	pP	14 45 42.0	-4.6
	comp=Z,1.0nm,1.0s,baz=211,slow=6.3,SNR=4.3						
TXAR	Lajitas Array	88.33	58	P	P	14 43 39.9	+2.1
TXAR	Lajitas Array	88.33	58	P	P	14 43 39.9	+2.1
MLY	Manley	89.01	12	P	P	14 43 39.2	-0.9
MLY				IAmb	IAmb	14 43 40.1	
	comp=Z,28nm,1.3s						
RIDG	Independent Ri	89.10	14	P	P	14 43 40.6	0.0
RIDG				IAmb	IAmb	14 43 41.6	
	comp=Z,15nm,1.0s						
KMI	Kunming	89.11	297	P	P	14 43 40.7	-1.0
KMI				pmax	pmax		
	comp=Z,17nm,0.5s						
PLCA	Paso Flores	89.13	134	P	P	14 43 43.2	+1.8
	comp=Z,3.3nm,0.8s,baz=273,slow=4.0,SNR=9.7						
PLCA	Paso Flores	89.13	134	P	P	14 43 43.2	+1.8
PLCA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PLCA	Paso Flores	89.13	134	IAmb	IAmb	14 43 44.4	
	comp=Z,4.2nm,0.9s						
DOT	Dot Lake	89.21	15	IAmb	IAmb	14 43 42.1	
	comp=Z,15nm,0.8s						
HDA	Harding Lake	89.21	13	IAmb	IAmb	14 43 41.5	
	comp=Z,15nm,0.6s						
BCAR	Beaver Creek A	89.28	16	P	P	14 43 41.9	+0.5
WHY	Whitehorse	89.34	20	IAmb	IAmb	14 43 44.6	
	comp=Z,14nm,1.1s						
IMAR	Indian Mountai	89.35	10	P	P	14 43 42.0	+0.4
MDM	Murphy Dome	89.43	13	IAmb	IAmb	14 43 43.3	
	comp=Z,22nm,1.0s						
COLA	College	89.43	13	P	P	14 43 41.4	-0.5
COLA				pmax	pmax		
	comp=Z,23nm,0.7s						
COLA	College	89.43	13	P	P	14 43 41.4	-0.5
HHC	Hu-ho-hao-te	89.52	315	eP	P	14 43 42.6	-0.5
HHC				pmax	pmax		
	comp=Z,78nm,1.2s						
HHC				pmax	pmax		
	comp=Z,340nm,5.8s						
IL31		89.54	13	P	P	14 43 42.2	-0.2
IL31				IAmb	IAmb	14 43 44.0	
	comp=Z,17nm,1.1s						
ILAR	Eielson Array	89.54	13	P	P	14 43 41.9	-0.6
	comp=Z,6.5nm,0.5s,baz=218,slow=5.3,SNR=96						
ILAR				PKiKP	PKiKP	14 48 35.1	-0.3
	comp=Z,0.2nm,0.4s,baz=276,slow=2.9,SNR=4.3						
ILAR	Eielson Array	89.54	13	P	P	14 43 41.8	-0.7
CMAR	Chiang Mai Arr	89.70	290	P	P	14 43 46.5	+2.2
	comp=Z,17nm,0.8s,baz=134,slow=3.2,SNR=117						
CMAR	Chiang Mai Arr	89.70	290	P	P	14 43 46.7	+2.4
CMAR	Chiang Mai Arr	89.70	290	P	P	14 43 46.7	+2.4
CHTO	Chiang Mai	89.84	290	P	P	14 43 45.2	+0.2
CHTO				pmax	pmax		
	comp=Z,19nm,0.8s						
CHTO	Chiang Mai	89.84	290	P	P	14 43 45.2	+0.2
CHTO				IAmb	IAmb	14 43 47.7	
	comp=Z,19nm,0.8s						
BILL	Bilibino	90.02	354	deP	P	14 43 44.6	0.0
BILL				pmax	pmax		
	comp=Z,19nm,1.1s						
BILL	Bilibino	90.02	354	P	P	14 43 45.2	+0.6
BILL				IAmb	IAmb	14 43 46.4	
	comp=Z,12nm,0.7s						
PDAR	Pinedale Array	90.31	44	P	P	14 43 47.5	+0.7
	comp=Z,5.9nm,1.0s,baz=213,slow=3.5,SNR=22						
PDAR	Pinedale Array	90.31	44	P	P	14 43 46.4	-0.4
CD2	Chengdu	90.68	303	P	P	14 43 48.1	-0.5
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
DAWY	Dawson	90.72	16	IAmb	IAmb	14 43 50.4	
	comp=Z,12nm,0.8s						
EGAK	Eagle	90.85	15	IAmb	IAmb	14 43 49.7	
	comp=Z,10nm,0.8s						
BMAR	Burnt Mountain	92.32	13	P	P	14 43 55.4	+0.1
LZH	Lanzhou	92.77	308	eP	P	14 44 03.3	+5.0
LZH				pP	pP	14 45 57.6	-10
LZH				sP	sP	14 46 57.8	-9.0
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH				pmax	pmax		
	comp=Z,78nm,6.0s						
YAK	Yakutsk	92.80	338	eP	P	14 43 56.8	-0.7
YAK				pmax	pmax		
	comp=Z,23nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
INK	Inuvik	95.52	15	P	P	14 44 09.3	-0.5
	comp=N,4.2nm,0.9s,baz=190,slow=3.2,SNR=10						
INK				PP	PP	14 48 14.7	+3.0
	comp=N,1.7nm,1.1s,baz=211,slow=4.5,SNR=3.7						
SONM	Songino Array	96.03	319	P	P	14 44 12.5	-0.2
	comp=N,0.8nm,0.4s,baz=130,slow=3.5,SNR=8.3						
SONM				PP	PP	14 48 20.6	+4.4
	comp=N,1.3nm,1.0s,baz=112,slow=6.6,SNR=3.8						
SONM	Songino Array	96.03	319	P	P	14 44 12.5	-0.2
SONM				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SONM	Songino Array	96.03	319	P	P	14 44 12.5	-0.2
GTA	Gaotai	97.02	310	eP	P	14 44 18.3	+0.9
GTA				pP	pP	14 46 27.2	+0.2
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
YKA	Yellowknife Ar	97.83	25	P	P	14 44 20.3	+0.1
	comp=Z,1.0nm,0.8s,baz=240,slow=4.0,SNR=13						
YKA				PP	PP	14 48 25.7	-3.6
	comp=Z,0.7nm,0.7s,baz=240,slow=7.2,SNR=7.3						
TLY	Talaya	99.23	322	iP	Pdif	14 44 26.2	-0.6
TLY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TIXI	Tiksi	99.57	345	iP	Pdif	14 44 25.9	-1.8
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.4s						
TAPN	Taplejung	102.49	295	eP	PKiKP	14 49 01.0	+1.3
	comp=Z,4.1nm,0.4s						
RAMN	Ramite	103.31	294	eP	PKiKP	14 49 01.5	+0.4
	comp=Z,7.9nm,0.5s						
JIRN	Jiri	103.87	294	eP	PKiKP	14 49 02.3	0.0
	comp=Z,12nm,0.5s						
GUN	Gumba	104.21	295	eP	PKiKP	14 49 03.3	+0.4
PKI	Pulchoki	104.51	294	eP	PKiKP	14 49 03.1	-0.3
PKIN	Phulchoki	104.52	294	eP	PKiKP	14 49 02.9	-0.5
	comp=Z,6.3nm,0.5s						
KKN	Kakani	104.68	294	eP	PKiKP	14 49 03.2	-0.4
DMN	Daman	104.78	294	eP	PKiKP	14 49 03.7	-0.1
GKN	Gorkha	105.29	294	eP	PKiKP	14 49 05.1	+0.5
DANN	Dangsing	106.13	295	eP	PKiKP	14 49 06.2	-0.2
	comp=Z,15nm,0.6s						
RES	Resolute Bay	109.06	16	PKiKP	PKiKP	14 49 09.7	-0.4
	comp=Z,0.2nm,0.3s,baz=229,slow=1.4,SNR=5.5						
ZALV	Zalesovo Beam	110.81	321	PKiKP	PKiKP	14 49 13.3	-0.7
	comp=Z,2.9nm,0.6s,baz=188,slow=1.4,SNR=15						
NRIK	Noril'sk	111.24	338	PKiKP	PKiKP	14 49 13.6	-0.7
	comp=Z,1.5nm,0.3s,baz=8.7,slow=4.3,SNR=4.5						
MKAR	Makanchi Array	111.33	313	Pdiff	Pdif	14 45 24.3	+3.6
	comp=Z,0.8nm,0.8s,baz=92,slow=6.1,SNR=6.8						
MKAR				PKiKP	PKiKP	14 49 14.7	-0.5
	comp=Z,1.9nm,0.4s,baz=202,slow=0.8,SNR=48						
MKAR				PKKPab	PKKPab	15 00 23.1	-0.3
	comp=Z,0.5nm,0.8s,baz=336,slow=2.7,SNR=4.0						
KURK	Kurchatov	114.22	317	c iPKIKP	PKiKP	14 49 20.6	0.0
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KSH	Kashi	114.82	305	PKP	PKPdf	14 49 19.0	-3.3
KSH				PP	PP	14 50 37.1	+4.4
KSH				SKKS		14 56 28.0	
KBK	Karagaybulak	115.98	308	P	PKPdf	14 49 24.5	0.0
	SNR=5.0						
UCH	Uchtor	116.26	307	P	PKiKP	14 49 25.8	+0.4
	SNR=8.0						
AAK	Ala-Archa	116.31	308	c iPKIKP	PKPdf	14 49 24.9	-0.2
AAK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
AAK	Ala-Archa	116.31	308		PKPdf	14 49 24.9	-0.2
USP	Ospenovka	116.37	309	P	PKPdf	14 49 25.0	0.0
	SNR=7.1						
EKS2	Erkin-Say	116.84	308	P	PKiKP	14 49 26.2	+0.1
	SNR=6.1						
AML	Almayashu	116.85	307	P	PKiKP	14 49 26.9	+0.4
	SNR=12						
KKAR	Karatay Array	119.27	308	PKIKP	PKPdf	14 49 30.5	-0.1
KKAR	Karatay Array	119.27	308		PKPdf	14 49 30.5	-0.1
BRVK	Borovoye	119.43	320	c iPKIKP	PKiKP	14 49 30.6	0.0
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BRVK	Borovoye	119.43	320		PKiKP	14 49 30.7	0.0
NOR	Nord	119.47	3	iP	PKPdf	14 49 29.5	-0.4
NOR	Nord	119.47	3	iPKIKP	PKPdf	14 49 29.5	-0.4
KBL	Kabul	119.68	298	PKIKP	PKiKP	14 49 32.9	+0.9
KBL	Kabul	119.68	298		PKiKP	14 49 32.9	+0.9
OPO	Ambohidratompo	119.79	232	PKP	PKiKP	14 49 33.3	+0.7
	comp=Z,4.6nm,0.8s						
SCHQ	Schefferville	120.02	38	PKP	PKPdf	14 49 31.5	-0.2
	comp=Z,0.9nm,0.5s,baz=324,slow=4.6,SNR=3.0						
SCHQ	Schefferville	120.02	38		PKPdf	14 49 31.0	-0.6
SPA0	Spitsbergen Ar	122.88	356	ePKPdf	PKiKP	14 49 36.9	0.0
DAG	Danmarks Havn	123.88	5	iP	PKPdf	14 49 37.0	-1.5
DAG	Danmarks Havn	123.88	5	ePKIKP	PKPdf	14 49 37.0	-1.5
SUMG	Summit	124.39	13	iP	PKPdf	14 49 40.2	+0.2
	comp=Z,35nm,1.1s						
SUMG	Summit	124.39	13	iPKIKP	PKPdf	14 49 40.2	+0.2
SUMG				pmax	pmax		
	comp=Z,35nm,1.1s						
SVE	Sverdlovsk	124.40	325	ePKIKP	PKiKP	14 49 40.5	+0.2
SVE				pmax	pmax		
	comp=Z,15nm,0.9s						
BOSA	Boshof	124.93	206	PKP	PKiKP	14 49 43.6	+1.0
	comp=Z,1.3nm,0.4s,baz=35,slow=0.9,SNR=4.0						
ARU	Arti	125.61	325	iPKIKP	PKiKP	14 49 42.8	+0.1
ARU						14 51 44.6	
ARU						14 55 59.1	
ARU				SS	SS	15 07 56.5	-1.7
ARU	Arti	125.61	325		PKiKP	14 49 42.6	-0.1
ABKAR	Akbulak array	126.29	316		PKiKP	14 49 44.5	+0.1
GEYT	Alibeck	128.66	302	PKP	PKiKP	14 49 50.1	+0.6
	comp=Z,8.1nm,0.8s,baz=208,slow=2.9,SNR=16						
GEYT				SKPbc	SKiKP	14 52 18.6	-10
	comp=Z,4.1nm,0.8s,baz=76,slow=0.6,SNR=9.4						
HAMF	Hammerfest	129.15	351	ePKPdf	PKPdf	14 49 46.5	-2.1
PRGR	Permogore	129.66	334	ePKIKP	PKPdf	14 49 49.6	-0.2
PRGR				pmax	pmax		
	comp=Z,11nm,0.9s						
ARCES	ARCESS Array B	129.82	349	PKhKP	PKPpre	14 49 39.4	
	comp=Z,1.6nm,0.7s,baz=111,slow=1.3,SNR=9.5						
ARCES				PKP	PKPdf	14 49 50.0	0.0
	comp=Z,7.8nm,0.4s,baz=31,slow=1.5,SNR=50						
ARCES				SKPbc	SKPab	14 52 21.4	+4.1
	comp=Z,12nm,0.9s,baz=20,slow=4.0,SNR=9.3						
ARE0	ARCESS Array S	129.82	349	ePKPdf	PKPdf	14 49 50.2	+0.3
MATP	Matopo	130.42	215	SKPbc	SKPab	14 52 22.7	+1.3
	comp=Z,3.9nm,0.7s,baz=168,slow=4.2,SNR=11						
KTK1	Kautokeino	130.67	350	ePKPdf	PKPdf	14 49 51.2	-0.3
TRO	Tromso	130.75	352	ePKPdf	PKPdf	14 49 51.5	-0.1
KLMR	Klimovskoe	132.52	336	ePKHKP	PKPpre	14 49 40.9	
KLMR				pmax	pmax		
	comp=Z,38nm,2.3s						
KLMR	Klimovskoe	132.52	336	ePKPdf	PKPdf	14 49 40.9	-14
KLMR				AMP		14 49 47.5	
	comp=Z,38nm,2.3s						
LOF	Lofoten	132.81	354	ePKPdf	PKPdf	14 49 55.8	+0.2
STEI	Steigen	132.81	353	ePKPdf	PKPdf	14 49 55.7	+0.1
LSZ	Lusaka	134.76	218	SKPbc	SKiKP	14 52 41.9	-0.5
	comp=Z,1.2nm,0.4s,baz=107,slow=1.2,SNR=3.4						
NSS	Namsos	136.46	353	ePKPdf	PKPdf	14 50 00.6	-1.9
FINES	FINESS Array B	136.56	343	PKhKP	PKPpre	14 49 50.6	
	comp=Z,1.4nm,0.5s,baz=29,slow=3.2,SNR=11						
FINES				PKP	PKiKP	14 50 04.7	0.0
	comp=Z,6.9nm,0.5s,baz=66,slow=2.0,SNR=17						
FINES				SKPbc	SKiKP	14 52 43.9	-0.5
	comp=Z,7.1nm,0.9s,baz=48,slow=2.1,SNR=10						
VRH	Novokhopyorsk	136.78	323	ePKIKP	PKPdf	14 50 03.1	-0.4
VRH				pmax	pmax		
	comp=Z,6.0nm,0.5s						
OBN	Obninsk	137.30	331	⇑iPKIKP	PKiKP	14 50 05.5	-0.9
OBN				e		14 52 15.1	
OBN				e		14 52 59.0	
OBN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KMBO	Kilima Mbogo	138.11	242	PKhKP	PKPpre	14 49 60.0	
	comp=Z,2.1nm,0.8s,baz=65,slow=5.2,SNR=5.7						
KMBO				PKP	PKiKP	14 50 10.1	+0.4
	comp=Z,0.8nm,0.3s,baz=47,slow=5.1,SNR=5.0						
KMBO				SKPbc	SKiKP	14 52 51.0	+1.5
	comp=Z,2.5nm,0.9s,baz=57,slow=11,SNR=4.2						
VSR	Storozhevoye	138.18	324	ePKIKP	PKPdf	14 50 05.7	-0.4
VSR				pmax	pmax		
	comp=Z,8.0nm,0.4s						
ZEI	Tsey	138.62	311	iPKIKP	PKiKP	14 50 10.2	+0.4
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
VSU	Vasula	138.78	340	iPKHKP	PKPpre	14 50 03.3	
MOL	Molde	138.80	355	ePKPdf	PKPdf	14 50 05.1	-1.7
KBZ	Khabaz	139.03	313	PKhKP	PKPpre	14 50 03.0	
	comp=Z,1.5nm,0.7s,baz=254,slow=1.1,SNR=5.1						
KBZ				PKP	PKiKP	14 50 10.8	+0.6
	comp=Z,2.8nm,0.9s,baz=286,slow=4.7,SNR=5.9						
KBZ				SKPbc	SKiKP	14 52 50.5	+0.5
	comp=Z,1.6nm,0.9s,baz=289,slow=2.7,SNR=3.9						
KIV	Kislovodsk	139.10	313	ePKIKP	PKiKP	14 50 09.9	-0.7
KIV				pmax	pmax		
	comp=Z,16nm,1.0s						
DOMB	Dombas	139.19	354	e	PKPdf	14 50 01.1	-6.6
NB2	NORSAR Subarra	139.94	352	PKP	PKPdf	14 50 02.2	-6.9
	comp=Z,1.7nm,0.5s,baz=16,slow=3.2						
NOA	NORSAR Array B	139.94	352	PKhKP	PKPpre	14 50 01.9	
	comp=Z,2.0nm,0.5s,baz=50,slow=1.7,SNR=28						
NOA				PKP	PKiKP	14 50 10.8	-0.9
	comp=Z,0.3nm,0.3s,baz=27,slow=4.9,SNR=3.5						
NOA				SKPbc	SKiKP	14 52 54.0	+2.6
	comp=Z,1.5nm,0.8s,baz=6.3,slow=4.0,SNR=5.9						
NC602	NORSAR Array S	140.19	352	e	PKPdf	14 50 04.2	-5.3
SKAR	Skarslia	140.60	354	e	PKPdf	14 50 04.7	-5.6
BCA	Borcka	140.64	310	⇑P	PKPdf	14 50 06.6	-4.4
SOC	Sochi	141.24	314	ePKHKP	PKPpre	14 50 11.0	
SOC				i		14 50 14.2	
SOC				e		14 53 24.8	
SOC				eSS	SS	15 11 05.0	+0.3
SOC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SOC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KONO	Kongsberg	141.49	353	ePKPdf	PKPdf	14 50 07.7	-4.1
ODD1	Odda	141.50	356	ePKPdf	PKPdf	14 50 07.9	-4.0
BLS5	Blasjo	142.00	356	ePKPdf	PKPdf	14 50 08.9	-3.9
ANN	Anapa	142.25	316	ePKHKP	PKPpre	14 50 11.1	
ANN				pmax	pmax		
	comp=Z,25nm,0.7s						
KMY	Karmoy	142.29	357	ePKPdf	PKPdf	14 50 10.3	-2.9
HOMB	Homborsund	142.96	354	ePKPdf	PKPdf	14 50 12.7	-1.7
SNART	Snartemo	143.01	355	ePKPdf	PKPbc	14 50 12.9	+0.1
SUW	Suwalki	143.54	338	ePKP	PKPbc	14 50 14.6	0.0
SUW	Suwalki	143.54	338	ePKHKP	PKPpre	14 50 14.6	
AKASG	Malin Array Be	143.54	330	PKhKP	PKPpre	14 50 14.2	
	comp=Z,45nm,0.5s,baz=43,slow=4.4,SNR=271						
AKASG				SKPbc	SKiKP	14 53 02.2	+3.1
	comp=Z,5.7nm,0.8s,baz=41,slow=3.0,SNR=6.7						
AKASG	Malin Array Be	143.54	330	PKHKP	PKPpre	14 50 14.5	
AKASG	Malin Array Be	143.54	330		PKPab	14 50 14.5	-0.1
AKBB	Malin Array Si	143.54	330	PKHKP	PKPpre	14 50 14.3	
AKBB	Malin Array Si	143.54	330		PKPab	14 50 14.3	-0.3
MBAR	Mbarara	143.64	236	PKHKP	PKPpre	14 50 17.8	
MBAR	Mbarara	143.64	236		PKPdf	14 50 17.8	+0.6
KAC	Achnashellach	143.81	6	eP	PKPbc	14 50 15.3	0.0
MCD	Coleburn Disti	143.89	4	eP	PKPbc	14 50 15.6	+0.1
KPL	Plockton	143.94	6	eP	PKPbc	14 50 15.4	-0.2
SIM	Simferopol'	144.27	319	d iPKHKP	PKPpre	14 50 18.1	
SIM				pmax	pmax		
	comp=Z,177nm,0.3s						
COP	Copenhagen	144.91	349	iP	PKPbc	14 50 18.5	-0.1
COP	Copenhagen	144.91	349	iPKHKP	PKPpre	14 50 18.5	
EDU	Dundee	144.94	4	eP	PKPbc	14 50 18.7	-0.1
BSD	Bornholm Skovb	144.94	346	iP	PKPbc	14 50 18.5	-0.3
	comp=Z,64nm,0.6s						
BSD	Bornholm Skovb	144.94	346	iPKHKP	PKPpre	14 50 18.5	
BSD				pmax	pmax		
	comp=Z,64nm,0.6s						
DIKM	Dikmen	145.03	313	⇓P	PKPab	14 50 21.2	+0.5
GAZ	Gaziantep	145.16	305		PKPab	14 50 21.1	-0.4
EAB	Aberfoyle	145.20	5	eP	PKPbc	14 50 19.2	-0.3
PGBU	Glenifferbraes	145.56	6	eP	PKPbc	14 50 19.9	-0.6
ESY	Stoneypath	145.59	4	eP	PKPbc	14 50 20.8	+0.1
SORM	Soroca	145.67	327	⇓P	PKPbc	14 50 21.3	+0.2
SORM	Soroca	145.67	327	⇓PKIKP	PKPbc	14 50 21.3	+0.2
EBL	Broad Law	145.71	4	eP	PKPbc	14 50 21.2	+0.2
BZK	Bozkurt	145.74	314	⇑P	PKPab	14 50 22.9	-0.6
GKP	Gorka Klasztor	146.04	343	ePKP	PKPbc	14 50 22.7	+0.7
GKP	Gorka Klasztor	146.04	343	ePKIKP	PKPbc	14 50 22.7	+0.7
ESK	Eskdalemuir	146.15	4	eP	PKPbc	14 50 22.0	-0.3
BEL	Belsk	146.16	338	ePKP	PKPbc	14 50 23.4	+1.1
BEL	Belsk	146.16	338	ePKIKP	PKPbc	14 50 23.4	+1.1
BEL	Belsk	146.16	338	Pn	PKPbc	14 50 23.4	+1.1
ILGA	Ilgaz	146.33	313		PKiKP	14 50 25.1	-0.7
GAL1	Galloway	146.47	6	eP	PKPbc	14 50 23.3	+0.2
LVV	L'vov	146.50	333	ePKIKP	PKPbc	14 50 23.5	+0.1
EDMD	Edmundbyers	146.71	3	eP	PKPbc	14 50 23.9	+0.1
LEOM	Leova	146.80	325	⇑P	PKiKP	14 50 25.3	-0.9
LEOM	Leova	146.80	325	⇑PKIKP	PKiKP	14 50 25.3	-0.9
BR131	Keskin Array S	146.93	311	PKIKP	PKPbc	14 50 25.7	+0.6
BR131	Keskin Array S	146.93	311	PKPbc	PKPbc	14 50 25.7	+0.6
BRTR	Keskin Array B	146.93	311	PKPbc	PKPbc	14 50 25.5	+0.4
	comp=Z,16nm,0.6s,baz=101,slow=2.3,SNR=83						
BRTR	Keskin Array B	146.93	311	PKIKP	PKPbc	14 50 25.7	+0.6
BRTR	Keskin Array B	146.93	311		PKPbc	14 50 25.7	+0.6
BSEG	Bad Segeberg	146.94	350	ePKPbc	PKPbc	14 50 25.2	+0.8
	baz=18,slow=2.3						
GDLE	Glaisdale, N Y	147.17	2	eP	PKPbc	14 50 25.4	+0.4
WIM	Isle of Man	147.18	6	eP	PKPbc	14 50 25.7	+0.6
KWP	Kalwaria Pacla	147.20	334	ePKP	PKPbc	14 50 26.0	+0.7
KWP	Kalwaria Pacla	147.20	334	ePKIKP	PKPbc	14 50 26.0	+0.7
KWP	Kalwaria Pacla	147.20	334		PKiKP	14 50 26.2	-0.7
TLCR		147.28	323	⇑P	PKiKP	14 50 26.5	-0.7
TLCR		147.28	323	⇑PKIKP	PKiKP	14 50 26.5	-0.7
ANTO	Ankara	147.47	311	PKIKP	PKiKP	14 50 27.4	-0.5
ANTO	Ankara	147.47	311		PKiKP	14 50 27.4	-0.5
JURR	Jurilovca	147.49	322	⇑P	PKiKP	14 50 27.2	-0.4
GHRR		147.51	325	⇑P	PKiKP	14 50 28.0	+0.3
BUR08	Bucovina Ar. S	147.56	329		PKiKP	14 50 27.9	0.0
BURAR	Bucovina Array	147.57	329	⇑P	PKiKP	14 50 27.9	0.0
BURAR	Bucovina Array	147.57	329	⇑PKIKP	PKiKP	14 50 27.9	0.0
BURAR	Bucovina Array	147.57	329	Pg	PKiKP	14 50 27.9	0.0
BURAR	Bucovina Array	147.57	329		PKiKP	14 50 27.9	0.0
HPK	Haverah Park	147.60	3	eP	PKPbc	14 50 26.7	+0.6
TESR	Tescani	147.62	326	⇓P	PKPbc	14 50 27.1	+0.7
TESR	Tescani	147.62	326	Pn	PKPbc	14 50 27.1	+0.7
CFR	Carcaliu	147.66	323	⇓P	PKPbc	14 50 27.2	+0.7
CFR	Carcaliu	147.66	323	⇓PKIKP	PKPbc	14 50 27.2	+0.7
TOPG	Topolog	147.71	322	⇓P	PKiKP	14 50 27.8	-0.3
KDZE	Karadeniz Ereo	147.75	315	⇓P	PKPdf	14 50 23.3	+0.1
OJC	Ojcow	147.84	337	ePKP	PKiKP	14 50 27.6	-0.6
OJC	Ojcow	147.84	337	ePKIKP	PKiKP	14 50 27.6	-0.6

OJC	Ojcow	147.84	337		PKiKP	14 50 27.9	-0.4
KOLS	Kolonicke sedl	147.92	333	ePKIKP	PKiKP	14 50 28.8	+0.4
KOLS				e		14 50 33.0	
KOLS	Kolonicke sedl	147.92	333	ePKP	PKiKP	14 50 28.8	+0.4
KOLS				e		14 50 33.0	
TIRR	Tirgusor	147.94	322	⇑P	PKiKP	14 50 28.2	-0.4
TIRR	Tirgusor	147.94	322	⇑PKIKP	PKiKP	14 50 28.2	-0.4
WME	Myndd Eilian	147.96	6	eP	PKPbc	14 50 27.4	+0.3
VRI	Vrincioaia	148.00	325	⇑P	PKiKP	14 50 28.1	-0.6
VRI	Vrincioaia	148.00	325	⇑PKIKP	PKiKP	14 50 28.1	-0.6
VRI	Vrincioaia	148.00	325	Pn	PKiKP	14 50 29.0	+0.3
PLOR	Plostina	148.05	325	⇑P	PKPbc	14 50 28.2	+0.6
PLOR	Plostina	148.05	325	⇑PKIKP	PKPbc	14 50 28.2	+0.6
PLOR	Plostina	148.05	325	Pn	PKPbc	14 50 28.2	+0.6
WLF1	Llynfaes	148.06	6	eP	PKPbc	14 50 27.5	+0.2
MFTR	Murfatlar	148.10	321	⇑P	PKiKP	14 50 28.9	0.0
UZH	Uzhgorod	148.14	333	ePKIKP	PKPbc	14 50 27.1	-0.6
UZH				i		14 50 28.9	
UZH				e		14 50 37.2	
UZH				e		14 52 34.4	
MANR	Mangalia	148.22	321	⇑P	PKiKP	14 50 29.4	+0.2
CRVS	Cervenica-Dubn	148.28	334	ePKIKP	PKiKP	14 50 29.3	+0.1
CRVS	Cervenica-Dubn	148.28	334	ePKP	PKiKP	14 50 29.3	+0.1
NIE	Niedzica	148.32	336	ePKP	PKiKP	14 50 29.4	+0.1
NIE	Niedzica	148.32	336	ePKIKP	PKiKP	14 50 29.4	+0.1
BMR	Baia Mare	148.34	331	⇑P	PKiKP	14 50 30.0	+0.7
BMR	Baia Mare	148.34	331	⇑PKIKP	PKiKP	14 50 30.0	+0.7
ARCR	ARCALIA	148.36	329	⇓P	PKiKP	14 50 29.5	+0.1
NRDL	Niedersach Rie	148.37	350	ePKPbc	PKiKP	14 50 28.7	-0.4
	baz=18,slow=2.3						
TRPA	Tarpa	148.42	332	⇑P	PKiKP	14 50 29.2	-0.2
KSP	Ksiaz	148.46	342	ePKP	PKiKP	14 50 29.5	0.0
KSP	Ksiaz	148.46	342	ePKIKP	PKiKP	14 50 29.5	0.0
KSP	Ksiaz	148.46	342	Pg	PKiKP	14 50 29.5	0.0
FOEL	Foel Wylfa	148.56	5	eP	PKPbc	14 50 28.7	+0.1
ASSE	Asse, Remlinge	148.62	349	ePKPbc	PKiKP	14 50 29.5	-0.1
	baz=18,slow=2.3						
DOPR	Dopca	148.63	327	⇓P	PKiKP	14 50 30.2	+0.2
DOPR	Dopca	148.63	327	Pn	PKiKP	14 50 30.2	+0.2
MLR	Muntele Rosu	148.66	325	⇑P	PKiKP	14 50 29.8	-0.4
MLR	Muntele Rosu	148.66	325	⇑PKIKP	PKiKP	14 50 29.8	-0.4
MLR	Muntele Rosu	148.66	325	Pn	PKiKP	14 50 29.8	-0.4
OSTC	Ostas	148.74	341	⇑ePKP	PKiKP	14 50 29.8	-0.3
OSTC				ePKPAB	PKPab	14 50 36.8	+1.5
OKC	Ostrava-Krasne	148.75	339	ePKPDF	PKPdf	14 50 26.7	+2.3
OKC				⇑ePKP	PKiKP	14 50 30.3	+0.2
OKC				ePKPAB	PKPab	14 50 36.2	+0.8
OKC	Ostrava-Krasne	148.75	339	ePKHKP	PKPpre	14 50 26.7	
OKC				e		14 50 30.3	
OKC				e		14 50 36.2	
CHVC	Chvalec	148.76	342	⇑ePKP	PKiKP	14 50 29.8	-0.3
CSS	Mathiatis	148.80	302		PKiKP	14 50 30.5	-0.2
UPC	Upice	148.84	342	⇑ePKP	PKiKP	14 50 30.3	0.0
UPC				ePKPAB	PKPab	14 50 36.6	+0.8
UPC	Upice	148.84	342	ePKIKP	PKiKP	14 50 30.3	0.0
UPC				e		14 50 36.6	
LANS	Liptovska Anna	148.85	336	ePKIKP	PKiKP	14 50 31.5	+1.1
LANS				e		14 50 37.5	
LANS	Liptovska Anna	148.85	336	ePKP	PKiKP	14 50 31.5	+1.1
LANS				e		14 50 37.5	
ORH	Orhaniye	148.87	315	P	PKPab	14 50 35.2	-1.0
DPC	Dobruska-Polom	148.89	341	⇑ePKP	PKiKP	14 50 30.5	+0.1
DPC				ePKPAB	PKPab	14 50 37.2	+1.2
DPC	Dobruska-Polom	148.89	341	ePKHKP	PKPpre	14 50 30.5	
DPC				e		14 50 37.2	
CLL	Collm	148.91	346	ePKPdf	PKPdf	14 50 27.0	+2.3
CLL				⇓iPKPbc	PKiKP	14 50 31.2	+0.8
	comp=Z,57nm,1.0s						
CLL				i PKPab	PKPab	14 50 37.1	+1.1
	comp=Z,20nm,1.0s						
CLL				epPKPab	pPKPdf	14 52 39.0	-4.5
CLL				i SKPbc	SKiKP	14 53 15.3	+5.2
	comp=Z,7.0nm,1.0s						
CLL	Collm	148.91	346	⇓ePKIKP	PKPdf	14 50 27.0	+2.3
CLL				i		14 50 31.2	
CLL				i		14 50 37.1	
CLL				pmax	pmax		
	comp=Z,57nm,1.0s						
CLL				pmax	pmax		
	comp=Z,20nm,1.0s						
CLZ	Clausthal	148.95	349	ePKPbc	PKiKP	14 50 30.6	+0.1
	baz=18,slow=2.3						
HLM1	Long Mynd	148.96	5	eP	PKPbc	14 50 29.2	-0.4
KRLC	Kraliky	148.99	340	⇑ePKP	PKiKP	14 50 30.7	0.0
KRLC				ePKPAB	PKPab	14 50 36.7	+0.3
KRLC	Kraliky	148.99	340	ePKHKP	PKPpre	14 50 30.7	
KRLC				e		14 50 36.7	
CJR	Cluj-Napoca	148.99	329	⇑P	PKiKP	14 50 31.2	+0.4
CJR	Cluj-Napoca	148.99	329	⇑PKHKP	PKPpre	14 50 31.2	
MORC	Moravsky Berou	149.00	339	⇑P	PKiKP	14 50 31.2	+0.5
MORC	Moravsky Berou	149.00	339	⇑PKHKP	PKPpre	14 50 31.2	
MORC	Moravsky Berou	149.00	339	ePKP	PKiKP	14 50 30.6	-0.1
KECS	Kecovo	149.00	335	ePKHKP	PKPpre	14 50 31.4	
KECS				e		14 50 37.6	
KECS	Kecovo	149.00	335	ePKP	PKiKP	14 50 31.4	+0.7
KECS				e		14 50 37.6	
BRG	Berggiesshubel	149.08	344	i	PKPab	14 50 36.7	0.0
	comp=Z,12nm,0.7s						
BRG	Berggiesshubel	149.08	344	ePKPbc	PKiKP	14 50 30.7	0.0
	baz=18,slow=2.3						
BRG	Berggiesshubel	149.08	344	ePKHKP	PKPpre	14 50 30.5	
BRG				i		14 50 36.7	
BRG				pmax	pmax		
	comp=Z,30nm,0.7s						
BRG				pmax	pmax		
	comp=Z,12nm,0.7s						
BRG	Berggiesshubel	149.08	344	x	x	14 50 36.7	
	comp=Z,12nm,0.7s						
BRG	Berggiesshubel	149.08	344	ePKP	PKiKP	14 50 30.4	-0.3
	comp=Z,30nm,0.7s						
BRG	Berggiesshubel	149.08	344	Pn	PKiKP	14 50 30.4	-0.3
	comp=Z,30nm,0.7s						
LEF	Lefka	149.10	303	⇑P	PKPbc	14 50 30.7	+0.2
VOIR		149.16	326	⇑P	PKiKP	14 50 31.1	-0.2
VOIR		149.16	326	⇑PKHKP	PKPpre	14 50 31.1	
VOIR		149.16	326	Pn	PKiKP	14 50 31.5	+0.3
FBE	Freiberg	149.18	345	ePKPbc	PKiKP	14 50 31.4	+0.4
	baz=18,slow=2.3						
PVCC	Panska Ves	149.23	343	⇑ePKP	PKiKP	14 50 31.4	+0.3
PVCC				ePKPAB	PKPab	14 50 37.5	+0.2
PVCC	Panska Ves	149.23	343	ePKHKP	PKPpre	14 50 31.4	
PVCC				e		14 50 37.5	
NEF	NEVSHA	149.31	321	eP	PKiKP	14 50 31.6	+0.1
ARR	Arges	149.43	326	⇓P	PKiKP	14 50 33.0	+1.2
ARR	Arges	149.43	326	Pg	PKiKP	14 50 33.0	+1.2
MCH1	Michaelchurch	149.47	5	eP	PKPbc	14 50 30.5	-0.2
VYHS	Vyhne	149.63	336	ePKHKP	PKPpre	14 50 32.3	
VYHS	Vyhne	149.63	336	ePKP	PKiKP	14 50 32.3	+0.3
MONM	Monmouth	149.64	5	eP	PKPbc	14 50 29.6	-1.5
PRA	Prague	149.68	343	⇑ePKP	PKiKP	14 50 32.3	+0.3
PRA	Prague	149.68	343	ePKHKP	PKPpre	14 50 32.3	
VRAC	Vranov	149.72	340	⇑P	PKiKP	14 50 32.8	+0.6
VRAC	Vranov	149.72	340	⇑PKHKP	PKPpre	14 50 32.8	
VRAC	Vranov	149.72	340	ePKP	PKiKP	14 50 32.3	+0.2
GOPC	GO Pecny, Ondr	149.72	342	⇑ePKP	PKiKP	14 50 32.1	-0.1
GOPC				ePKPAB	PKPab	14 50 40.3	+0.8
GOPC	GO Pecny, Ondr	149.72	342	ePKHKP	PKPpre	14 50 32.1	
GOPC				e		14 50 40.3	
PRU	Pruhonice	149.73	343	⇑ePKP	PKPbc	14 50 31.7	+0.2
PRU				ePKPAB	PKPab	14 50 38.6	-0.8
PRU	Pruhonice	149.73	343	ePKHKP	PKPpre	14 50 31.7	
PRU				e		14 50 38.6	
JAVC	Velka Javorina	149.74	338	ePKP	PKiKP	14 50 33.6	+1.3
HUMR	Humele	149.81	325	⇑P	PKiKP	14 50 32.2	-0.3
HUMR	Humele	149.81	325	Pn	PKiKP	14 50 32.2	-0.3
MOX	Moxa	149.84	347	ePKPbc	PKiKP	14 50 32.5	+0.1
	baz=18,slow=2.3						
TANN	Tannenbergstha	149.86	345	ePKPbc	PKiKP	14 50 32.8	+0.3
	baz=18,slow=2.3						
PLN	Plauen	149.87	346	ePKPbc	PKiKP	14 50 32.6	+0.2
	baz=18,slow=2.3						
DEV	Deva	149.92	329	⇓P	PKiKP	14 50 32.8	+0.2
DEV	Deva	149.92	329	⇓PKHKP	PKPpre	14 50 32.8	
GUNZ	Gunzen	149.94	346	ePKPbc	PKiKP	14 50 33.0	+0.4
	baz=18,slow=2.3						
UBBA	Unterbreizbach	149.99	349	ePKPbc	PKiKP	14 50 32.5	0.0
	baz=18,slow=2.3						
KRUC	Moravsky	149.99	340	ePKP	PKiKP	14 50 32.8	+0.1
WERN	Wernitzgruen	150.00	345	ePKPbc	PKiKP	14 50 33.2	+0.4
	baz=18,slow=2.3						
NKC	Novy Kostel	150.04	345	⇑ePKP	PKiKP	14 50 32.9	+0.1
NKC				ePKPAB	PKPab	14 50 40.5	-0.3
NKC	Novy Kostel	150.04	345	ePKHKP	PKPpre	14 50 32.9	
NKC				e		14 50 40.5	
TREC	Trest	150.07	341	⇑ePKP	PKiKP	14 50 33.3	+0.4
TREC	Trest	150.07	341	ePKHKP	PKPpre	14 50 33.3	
SZH	Strazhica	150.09	322	eP	PKiKP	14 50 32.9	-0.2
PBCC	Pribram	150.15	343	⇑ePKP	PKiKP	14 50 33.4	+0.4
JMB	Yambol	150.20	320	eP	PKiKP	14 50 33.4	+0.1
SIRR	Siria	150.22	331	⇓P	PKiKP	14 50 33.9	+0.7
MODS	Modra-Piesok	150.29	338	ePKHKP	PKPpre	14 50 33.2	
MODS				e		14 50 42.7	
MODS	Modra-Piesok	150.29	338	ePKP	PKiKP	14 50 33.2	-0.2
MODS				e		14 50 42.7	
GZR	Gura Zlata	150.34	328	⇑P	PKiKP	14 50 33.4	-0.2
GZR	Gura Zlata	150.34	328	⇑PKIKP	PKiKP	14 50 33.4	-0.2
MANZ	Manzenberg	150.35	346	ePKPbc	PKiKP	14 50 33.9	+0.4
	baz=18,slow=2.3						
PVL	Pavlikeni	150.46	323	eP	PKiKP	14 50 34.5	+0.7
VLAD	Vladila	150.47	325	⇓P	PKPbc	14 50 32.6	-0.8
VLAD	Vladila	150.47	325	Pn	PKPbc	14 50 32.6	-0.8
ZST	Bratislava	150.50	338	ePKHKP	PKPpre	14 50 33.7	
ZST	Bratislava	150.50	338	ePKP	PKiKP	14 50 33.7	-0.1
ROTZ	Rotzenmuhle	150.53	345	ePKPbc	PKiKP	14 50 34.1	+0.3
	baz=18,slow=2.3						
SRE	Strehaia	150.65	327	⇑P	PKiKP	14 50 35.0	+0.8
SRE	Strehaia	150.65	327	⇑PKHKP	PKPpre	14 50 35.0	
SRE	Strehaia	150.65	327	Pg	PKiKP	14 50 35.0	+0.8
AHRW	Bad Neuenahr-A	150.72	352	ePKPbc	PKiKP	14 50 35.1	+1.0
	baz=18,slow=2.3						
BZS	Buzias	150.73	330	⇓P	PKiKP	14 50 34.7	+0.4
BZS	Buzias	150.73	330	⇓PKHKP	PKPpre	14 50 34.7	
PLVB	Pleven	150.75	323	⇑P	PKiKP	14 50 34.8	+0.3
PLVB	Pleven	150.75	323	Pn	PKiKP	14 50 34.8	+0.3
KHC	Kasperske Hory	150.77	343	ePKPDF	PKPdf	14 50 28.5	+0.8
KHC				⇑ePKP	PKiKP	14 50 34.9	+0.5
KHC				ePKPAB	PKPab	14 50 44.6	+0.7
KHC	Kasperske Hory	150.77	343	ePKIKP	PKPdf	14 50 28.5	+0.8
KHC				e		14 50 34.9	
KHC				e		14 50 44.6	
MEM	Membach	150.77	354	PKiKP	PKiKP	14 50 34.4	+0.1
ELL	Elmali	150.81	308	PKHKP	PKPpre	14 50 35.2	
ELL	Elmali	150.81	308		PKiKP	14 50 35.2	+0.3
GRF	Grafenberg Arr	150.82	346	ePKPbc	PKiKP	14 50 35.0	+0.6
	baz=18,slow=2.3						
TNS	Taunus Mts	150.83	350	ePKPbc	PKiKP	14 50 34.7	+0.3
	baz=18,slow=2.3						
BSTI	Sart Tilman	150.84	354	PKiKP	PKiKP	14 50 34.9	+0.5
HERR	Herculane	150.89	328	⇓P	PKiKP	14 50 34.6	-0.1
HERR	Herculane	150.89	328	Pg	PKiKP	14 50 34.6	-0.1
GEC2	GERESS Array S	151.00	343	ePKPbc	PKiKP	14 50 35.0	+0.1
	baz=18,slow=2.3						
GEC2	GERESS Array S	151.00	343		PKiKP	14 50 35.4	+0.5
GERES	GERESS Array B	151.00	343	PKP	PKPdf	14 50 28.8	+0.7
	comp=Z,1.0nm,0.6s,baz=13,slow=1.8,SNR=6.7						
GERES				PKPbc	PKiKP	14 50 35.1	+0.2
	comp=Z,20nm,0.8s,baz=45,slow=2.1,SNR=68						
GERES				PKPab	PKPab	14 50 45.2	+0.3
	comp=Z,2.6nm,0.5s,baz=28,slow=6.0,SNR=8.1						
DIM	Dimitrovgrad	151.07	320	eP	PKiKP	14 50 35.6	+0.5
BGES	Gesves	151.08	355	PKiKP	PKiKP	14 50 34.9	0.0
CONA	Conrad Observa	151.16	339	i PKiKP	PKiKP	14 50 35.9	+0.7
	comp=Z,48nm,1.1s,SNR=14						
CONA				i PKPab	PKPab	14 50 47.0	+1.3
	comp=Z,23nm,0.9s						
BMRD	Maredsous	151.19	355	PKiKP	PKiKP	14 50 35.5	+0.4
BMRD				PKPab	PKPab	14 50 45.1	-0.4
MDVR	Moldovita	151.30	329	⇓P	PKiKP	14 50 35.8	+0.2
KDZ	Kurdzhali	151.38	320	eP	PKiKP	14 50 35.8	0.0
DOU	Dourbes	151.41	355	PKiKP	PKiKP	14 50 35.8	+0.3
WLF	Walferdange	151.69	353	PKiKP	PKiKP	14 50 37.0	+0.9
WLF				PKPab	PKPab	14 50 48.2	+0.5
WLF	Walferdange	151.69	353	ePKPbc	PKiKP	14 50 37.2	+1.0
	baz=18,slow=2.3						
MOA	Molln	151.73	341	i PKiKP	PKiKP	14 50 36.7	+0.3
	comp=Z,7.9nm,0.6s						
MOA				i PKPab	PKPab	14 50 49.0	+1.0
	comp=Z,6.2nm,0.6s						
RZN	Rozhen	151.78	321	eP	PKPbc	14 50 36.7	0.0
ARSA	Arzberg	151.86	339	i PKiKP	PKiKP	14 50 36.8	+0.1
	comp=Z,3.9nm,0.5s						
ARSA				i PKPab	PKPab	14 50 48.1	-0.4
	comp=Z,8.1nm,0.8s						
VTS	Vitosha	152.03	324	⇓P	PKiKP	14 50 37.8	+0.5
VTS	Vitosha	152.03	324	eP	PKiKP	14 50 37.6	+0.3
VTS	Vitosha	152.03	324	⇓PKIKP	PKiKP	14 50 37.8	+0.5
VTS	Vitosha	152.03	324	Pb	PKiKP	14 50 37.8	+0.5
VTS	Vitosha	152.03	324	Pn	PKiKP	14 50 37.6	+0.3
MMB	Musomiste	152.41	321	eP	PKPbc	14 50 37.8	-0.1
SOKA	Soboth	152.52	339	i PKPbc	PKiKP	14 50 38.1	-0.1
	comp=Z,16nm,0.9s,SNR=5.3						
PERS	Pernice	152.53	339	i PKPab	PKPab	14 50 51.7	+0.3
PERS	Pernice	152.53	339	Pb	PKPab	14 50 51.7	+0.3
PERS	Pernice	152.53	339	Pg	PKPbc	14 50 37.9	-0.1
PERS	Pernice	152.53	339	i PKPbc	PKPbc	14 50 37.9	-0.1
BFO	Black Forest	152.69	349	ePKPbc	PKiKP	14 50 38.8	+0.4
	baz=18,slow=2.3						
KBA	Koelnbreinsper	152.70	342	i PKPbc	PKPbc	14 50 38.3	-0.2
	comp=Z,17nm,1.0s,SNR=5.2						
OBKA	Obir	152.83	339	ePKiKP	PKiKP	14 50 39.2	+0.4
	comp=Z,6.3nm,0.7s						
PTJ	Puntijarka	152.86	337	ePg	PKPbc	14 50 38.7	-0.1
PTJ				Sg		14 50 52.3	
WATA	Walderalm	152.94	344	i PKiKP	PKiKP	14 50 39.2	+0.1
	comp=Z,7.1nm,0.4s						
WATA				ePKPab	PKPab	14 50 54.3	+1.0
	comp=Z,19nm,1.2s						
UBR	Ueberruh	152.97	347	ePKPbc	PKiKP	14 50 39.5	+0.5
	baz=18,slow=2.3						
WTTA	Wattenberg	153.00	344	i PKPdf	PKPdf	14 50 31.2	0.0
	comp=Z,4.9nm,0.6s						
WTTA				i PKiKP	PKiKP	14 50 39.6	+0.4
	comp=Z,9.3nm,0.4s,SNR=6.3						
WTTA				i PKPab	PKPab	14 50 54.4	+0.8
	comp=Z,16nm,0.6s						
RETA	Reutte	153.00	346	i PKiKP	PKiKP	14 50 39.7	+0.6
	comp=Z,3.1nm,0.5s						
RETA				i PKPab	PKPab	14 50 53.9	+0.4
	comp=Z,10.0nm,0.5s						
MYKA	Terra Mystica	153.01	341	ePKPbc	PKPbc	14 50 38.9	-0.1
	comp=Z,6.1nm,0.4s						
MYKA				i PKPab	PKPab	14 50 53.5	-0.1
	comp=Z,9.7nm,0.6s						
MOTA	Moosalm	153.05	345	i PKPdf	PKPdf	14 50 30.5	-0.8
	comp=Z,5.0nm,0.8s						
MOTA				i PKiKP	PKiKP	14 50 39.7	+0.4
	comp=Z,17nm,0.9s,SNR=5.1						
MOTA				i PKPab	PKPab	14 50 54.2	+0.4
	comp=Z,9.3nm,0.5s						
PDKS	Podkum	153.07	338	ePKPab	PKPab	14 50 53.6	-0.2
PDKS	Podkum	153.07	338	Pb	PKPab	14 50 53.6	-0.2
PDKS	Podkum	153.07	338	Pg	PKiKP	14 50 39.4	+0.2
PDKS	Podkum	153.07	338	i PKPbc	PKiKP	14 50 39.4	+0.2
SQTA	Sankt Quirin	153.14	345	i PKPdf	PKPdf	14 50 31.7	+0.4
	comp=Z,2.7nm,0.7s						
SQTA				i PKiKP	PKiKP	14 50 40.0	+0.6
	comp=Z,12nm,0.7s						
SQTA				i PKPab	PKPab	14 50 55.1	+0.9
	comp=Z,9.0nm,0.8s						
STIP	Stip	153.22	323	i P	PKPbc	14 50 38.8	-0.7
ABTA	Abfaltersbach	153.24	342	i PKPdf	PKPdf	14 50 31.5	0.0
	comp=Z,3.9nm,0.6s						
ABTA				i PKPbc	PKPbc	14 50 39.5	-0.1
	comp=Z,23nm,0.9s,SNR=5.4						
ABTA				i PKPab	PKPab	14 50 54.5	0.0
	comp=Z,9.2nm,0.6s						
LJU	Ljubljana	153.25	339	i PKPbc	PKiKP	14 50 39.9	+0.3
LJU	Ljubljana	153.25	339	Pg	PKiKP	14 50 39.9	+0.3
VAY	Valandovo	153.25	322	i P	PKPbc	14 50 39.1	-0.5
CRNS	Crni Vrh	153.30	339	i PKPbc	PKiKP	14 50 39.7	0.0
CRNS	Crni Vrh	153.30	339	Pg	PKiKP	14 50 39.7	0.0
BLY	Banja Luka	153.36	334	⇑P	PKiKP	14 50 40.2	+0.4
BLY	Banja Luka	153.36	334	Pg	PKiKP	14 50 40.2	+0.4
DAVA	Damuels	153.39	347	ePKPdf	PKPdf	14 50 32.7	+1.0
	comp=Z,4.1nm,0.9s						
DAVA				i PKiKP	PKiKP	14 50 40.7	+0.7
	comp=Z,8.5nm,0.8s						
DAVA				i PKPab	PKPab	14 50 55.5	+0.3
	comp=Z,16nm,0.8s						
FETA	Feichten	153.45	345	i PKPdf	PKPdf	14 50 32.0	+0.1
	comp=Z,10nm,1.0s						
FETA				i PKiKP	PKiKP	14 50 40.9	+0.7
	comp=Z,13nm,1.1s						
FETA				i PKPab	PKPab	14 50 56.1	+0.6
	comp=Z,8.6nm,1.0s						
BOJS	Bojanci	153.47	337	ePKPab	PKPab	14 50 55.2	-0.2
BOJS	Bojanci	153.47	337	Pb	PKPab	14 50 55.2	-0.2
BOJS	Bojanci	153.47	337	Pg	PKiKP	14 50 40.6	+0.6
BOJS	Bojanci	153.47	337	i PKPbc	PKiKP	14 50 40.6	+0.6
FNA	Florina	154.28	323	PKIKP	PKPbc	14 50 42.0	+0.1
FNA	Florina	154.28	323		PKPbc	14 50 42.0	+0.1
OHR	Ohrid	154.38	324	i P	PKPdf	14 50 35.7	+2.5
NRCA	Norcia	156.55	337		PKPab	14 51 09.9	+1.1
ESDC	Sonseca Array	161.44	12	PKPab	PKPab	14 51 30.4	+0.2
	comp=Z,4.0nm,0.8s,baz=343,slow=3.9,SNR=16						
DBIC	Dimbokro	164.09	158	PKP	PKPdf	14 50 45.4	+0.4
	comp=Z,2.0nm,0.6s,baz=195,slow=4.1,SNR=4.3						
DBIC				PKPab	PKPab	14 51 45.3	+2.9
	comp=Z,1.1nm,0.5s,baz=148,slow=3.1,SNR=2.5						
KEST	Kesra	164.17	335	PKPab	PKPab	14 51 43.1	+0.7
	comp=Z,14nm,0.8s,baz=260,slow=0.1,SNR=10						
KEST	Kesra	164.17	335		PKPab	14 51 43.3	+0.9
TORD	Torodi Ar. Bea	171.60	184	PKP	PKPdf	14 50 49.7	-0.3
	comp=Z,2.6nm,0.9s,baz=331,slow=0.8,SNR=11						
TORD				PKPab	PKPab	14 52 17.8	+2.3
	comp=Z,1.1nm,0.7s,baz=178,slow=3.2,SNR=4.5						
TORD	Torodi Ar. Bea	171.60	184		PKPdf	14 50 50.1	+0.1

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*ATH **06** 14:33:22.8, 38°.14N×20°.39E, h14^{km}±1^{km}, ML2.5/4, Error ellipse: s-maj=1.8km s-min=1.0km az=46.0*

*THE **06** 14:33:23.1, 38°.15N×20°.42E, h16^{km}, ML2.2/6, Error ellipse: s-maj=1.0km s-min=0.6km az=243.0*

ISC 06 14:33:23.1±1.1**, 38°.15N**±0°.04×**20°.42E**±0°.05**, h14**^{km}±5^{km}**, n33, σ0^{s}.35**/51**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.05	317	P	Pg	14 33 25.9	+0.1
ARGA	Argostoli. Kep	0.05	57	P	Pg	14 33 25.9	+0.1
ARGA				S	Sg	14 33 27.6	0.0
KEF2	Argostoli. Kep	0.05	71	P	Pg	14 33 25.8	0.0
KEF2				S	Sg	14 33 27.2	-0.5
LXRA	Lixouri, Kepha	0.05	12	P	Pg	14 33 25.7	-0.1
LXRA				S	Sg	14 33 28.0	+0.4
KEF3	Kipouria, Keph	0.08	313	P	Pg	14 33 26.0	0.0
KEF3				S	Sg	14 33 27.8	-0.2
AGT1	Agia Thekli	0.11	343	P	Pb	14 33 26.9	-0.1
KEF4	Livadi, Kephal	0.11	1	P	Pg	14 33 26.5	+0.1
KEF4				S	Sg	14 33 28.9	+0.3
KEF1	Kardakata, Kep	0.14	16	P	Pg	14 33 26.8	+0.1
KEF1				S	Sg	14 33 28.9	-0.2
VLS	Valsamata	0.14	78	P	Pg	14 33 26.7	0.0
VLS				S	Sg	14 33 29.5	+0.3
	6µm,0.1s						
VLS	Valsamata	0.14	78	P	Pg	14 33 26.8	0.0
VLS				S	Sg	14 33 29.0	-0.2
VLS				AML	AML	14 33 29.6	
	comp=N,11158µm,0.2s						
VLS				AML	AML	14 33 29.6	
	comp=E,12028µm,0.1s						
KFL	Anninata	0.29	98	P	Pg	14 33 29.3	+0.1
KFL				S	Sb	14 33 34.4	-0.4
	comp=E,1µm,0.3s						
KFL	Anninata	0.29	98	P	Pg	14 33 29.3	+0.1
KFL				S	Sg	14 33 34.1	+0.8
KFL				AML	AML	14 33 34.9	
	comp=N,2757µm,0.3s						
KFL				AML	AML	14 33 35.9	
	comp=E,1976µm,0.3s						
KONA	Konidatara, Ke	0.30	23	P	Pg	14 33 29.4	0.0
KONA				AML	AML	14 33 34.8	
	comp=E,1504µm,0.3s						
KONA				AML	AML	14 33 35.1	
	comp=N,2180µm,0.1s						
FSK	Fiskardo	0.33	19	P	Pg	14 33 29.8	-0.1
FSK				S	Sg	14 33 35.1	+0.6
	comp=N,490nm,0.2s						
FSK	Fiskardo	0.33	19	P	Pg	14 33 29.8	-0.1
FSK				S	Sg	14 33 34.9	+0.4
FSK				AML	AML	14 33 36.7	
	comp=E,1462µm,0.1s						
FSK				AML	AML	14 33 38.8	
	comp=N,498µm,0.2s						
EVGI	Lefkada island	0.51	21	P	Pg	14 33 32.8	-0.3
EVGI				S	Sb	14 33 41.0	-0.1
	comp=N,210nm,0.1s						
EVGI	Lefkada island	0.51	21	P	Pg	14 33 32.8	-0.3
EVGI				S	Sb	14 33 41.0	-0.1
MGNA	Meganis	0.58	30	P	Pg	14 33 34.3	-0.3
LKD2	Lefkada island	0.67	16	P	Pg	14 33 36.0	-0.2
LKD2				S	Sb	14 33 46.1	+0.4
	comp=N,70nm,0.4s						
LKD2	Lefkada island	0.67	16	P	Pg	14 33 35.9	-0.2
TSLK	Tsoukalades, L	0.70	15	P	Pg	14 33 36.8	0.0
TSLK				S	Sb	14 33 46.8	+0.2
	comp=N,100nm,0.4s						
TSLK	Tsoukalades, L	0.70	15	P	Pg	14 33 36.7	0.0
RLS	Riolos of Patr	0.83	96	P	Pb	14 33 38.6	-0.7
RLS	Riolos of Patr	0.83	96	P	Pb	14 33 38.5	-0.7
RLS				S	Sn	14 33 51.6	-0.8
PVO	Paravola	0.98	61	P	Pb	14 33 42.0	0.0
DRO	Drossia	1.03	100	P	Pb	14 33 42.3	-0.6
DRO				S	Sn	14 33 58.3	+0.8
AMT	Artemida-Makis	1.19	121	P	Pg	14 33 46.3	+0.2
TRIZ	Trizonia	1.32	80	P	Pn	14 33 47.0	-0.1
KLV	Kalavryta, Ach	1.37	94	P	Pb	14 33 48.5	0.0
KALE	Kalithea	1.37	79	P	Pn	14 33 48.2	+0.3
ITM	Ithomi	1.54	129	P	Pb	14 33 51.6	+0.2
PYL	PYLOS	1.63	140	P	Pb	14 33 52.7	-0.3
AGG	Agios Georgios	1.73	59	P	Pb	14 33 55.0	+0.3

DJA 06 14:46:44.7±0.5**, 7°S**±12°×**10°7E**±°**, h123**^{km}±4^{km}**, M4.0**/13**, mB5.4**/1**, mb4.6**/2**, MLv3.7**/13**, Mw(mB)4.9**/1**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNJI	Cibinong	0.18	60	P	Pn	14 47 02.6	+1.0
CNJI				S	Sn	14 47 16.3	+1.9
SKJI	Sukabumi	0.57	314	P	Pn	14 47 04.9	+1.5
SKJI				S	Sn	14 47 19.7	+2.2
CISI	Cisompet, Garu	0.85	101	P	Pn	14 47 06.4	+0.7
CISI				S	Sn	14 47 22.5	+1.0
LEM	Lembang	0.86	48	P	Pn	14 47 06.5	+0.6
LEM				S	Sn	14 47 23.0	+1.2
DBJI	Dramaga	0.87	345	P	Pn	14 47 06.5	+0.7
DBJI				S	Sn	14 47 22.7	+0.9
KPJI	Karang Pucung	1.95	88	P	Pn	14 47 17.6	0.0
KASI	Kota Agung	3.08	307	P	Pn	14 47 32.7	+0.5
UGM	Wanagama	3.56	98	P	Pn	14 47 38.1	-0.4
MDSI	Maura Dua	4.01	316	P	Pn	14 47 44.5	0.0
PCJI	Pacitan	4.24	101	P	Pn	14 47 47.0	-0.6
PWJI	Pagerwojo	4.83	98	P	Pn	14 47 55.0	-0.4
MNAI	Manna	5.01	307	P	Pn	14 47 57.1	-0.7
	0.6nm112nm,1.5s						

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*BUD **06** 14:49:19.0, 48°.00N×20°.14E, h0^{km}±6^{km}, ML1.4/1*

KRSZO 06 14:49:19.0±1.2**, 47°.99N×20°.13E, h2**^{km}±10^{km}**, ML1.4, 2D, Error ellipse: s-maj=5.5km s-min=4.2km az=153.0, Hungary**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSZ	Piszkesteto	0.17	246	⇓ePg	Pg	14 49 22.5	+0.3
PSZ				⇓eSg	Sg	14 49 25.9	+1.5
PSZ	Piszkesteto	0.17	246	ePg	Pg	14 49 22.5	+0.3
PSZ				Pg	Pg	14 49 22.5	+0.3
PSZ				eSg	Sg	14 49 25.9	+1.5
PSZ				Sg	Sg	14 49 25.9	+1.5
KECS	Kecovo	0.55	26	ePg	Pg	14 49 29.3	-0.2
KECS				eSg	Sg	14 49 37.4	+0.7
KECS	Kecovo	0.55	26	ePg	Pg	14 49 29.3	-0.2
KECS				Pg	Pg	14 49 29.3	-0.2
KECS				eLg	Lg	14 49 37.4	
KECS				Lg	Lg	14 49 37.4	
KECS	Kecovo	0.55	26	ePG	Pg	14 49 29.3	-0.2
KECS				eSG	Sg	14 49 37.4	+0.7
KECS				eLG	Lg	14 49 38.9	
VYHS	Vyhne	1.00	301	ePg	Pn	14 49 40.1	0.0
VYHS				eSg	Sb	14 49 52.4	-0.3
VYHS	Vyhne	1.00	301	ePn	Pn	14 49 40.1	0.0
VYHS				Pn	Pn	14 49 40.1	0.0
VYHS				eSb	Sb	14 49 52.4	-0.3
VYHS				Sb	Sb	14 49 52.4	-0.3
VYHS	Vyhne	1.00	301	ePG	Pn	14 49 40.1	0.0
VYHS				eSG	Sb	14 49 52.4	-0.3

LANS	**Liptovska Anna**	1.24	340	eSn	Sn	14 50 01.8	+0.9
LANS	**Liptovska Anna**	1.24	340	eLg	Lg	14 50 01.8	
LANS				Lg	Lg	14 50 01.8	
LANS	**Liptovska Anna**	1.24	340	eSG	Sn	14 50 01.8	+0.9

MAN 06 14:49:44.8, 14°.49N×119°.60E, h33^{km}, mb4.5, ML3.4, MS3.2, 2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	0.98	140	eP	Pn	14 50 02.5	+0.3
LUBP				eS	Sn	14 50 14.9	-0.1
SCZP	**Santa Cruz**	1.32	13	eP	Pn	14 50 06.8	-0.1
SCZP				eS	Sn	14 50 22.9	-0.4
PGP	**Puerto Galera**	1.64	127	⇓eP	Pn	14 50 11.9	+0.5
PGP				eS	Sn	14 50 27.2	-4.2
PCPH	**Palayan**	1.80	53	⇓ep	Pn	14 50 13.9	+0.4
PCPH				es	Sn	14 50 36.1	+0.9
BOLP	**Bolinao**	1.91	9	eP	Pn	14 50 14.0	-1.1
BOLP				eS	Sn	14 50 37.8	-0.1
SMPP	**San Manuel, Pa**	1.96	32	eP	Pn	14 50 16.4	+0.7
SMPP				eS	Sn	14 50 35.7	-3.4
POLP	**Polilio Island**	2.28	84	eP	Pn	14 50 21.8	+1.7
POLP				eS	Sn	14 50 47.8	+0.7
BALP	**Baler**	2.28	57	eP	Pn	14 50 20.9	+0.8
BALP				eS	Sn	14 50 49.9	+2.8
BOAC	**Boac**	2.41	115	eP	Pn	14 50 21.1	-0.8
BOAC				eS	Sn	14 50 44.3	-6.0
CAUP	**Cauayan**	3.25	41	eP	Pn	14 50 34.5	+1.0
CAUP				eS	Sn	14 51 11.5	+0.4
ENPP	**El Nido**	3.27	183	eP	Pn	14 50 34.6	+0.9
ENPP				eS	Sn	14 51 08.6	-2.9
APYP	**Conner**	3.71	25	eP	Pn	14 50 41.9	+2.1
APYP				eS	Sn	14 51 23.7	+1.3

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*ISK **06** 15:15:19.6, 35°.97N×31°.30E, h14^{km}, ML4.3/33*

*HLW **06** 15:15:20.2, 36°.05N×31°.19E, h11^{km}±17^{km}, Md4.3, Ml4.6*

*DDA **06** 15:15:20.1, 35°.98N×31°.37E, h40^{km}±1^{km}, MW4.3*

*NIC **06** 15:15:20.0±0.0, 35°.76N×31°.27E, h12^{km}±1^{km}, Ml4.7/9*

*MOS **06** 15:15:21.5±0.9, 35°.97N×31°.28E, h71^{km}, mb4.6/28, Error ellipse: s-maj=5.5km s-min=3.6km az=81.4*

*THE **06** 15:15:21.1, 35°.99N×31°.38E, h11^{km}±1^{km}, ML4.0/3, Error ellipse: s-maj=2.7km s-min=0.7km az=26.0*

*MED_RC **06** 15:15:22.0±0.6, 35°.78N×31°.18E, h40^{km}±2^{km}, MW4.5/15, Moment Tensor Solution.Mantle waves: s15,c18; Duration: 1.0 Moment tensor: Scale 10^{15}Nm; M_{rr}5.01±.71; $M_{\theta\theta}$-0.68±.51; $M_{\phi\phi}$-4.34±.46; $M_{r\theta}$-0.33±.28; $M_{\theta\phi}$2.24±.49; $M_{\phi r}$-3.03±.30; Best double couple: $M_0$6.04000×10^{15} NP1:ϕ_s319.00000°, δ34.00000°, λ64.00000°. NP2:ϕ_s170.00000°, δ60.00000°, λ106.00000°. Principal axes: T 6.0500, Plg70.0000°, Azm116.0000°; N -0.0200, Plg14.0000°, Azm342.0000°; P -6.0300, Plg14.0000°, Azm248.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*

*NEIC **06** 15:15:22.2±1.6, 35°.99N±0°.05×31°.27E±0°.06, h62^{km}±5^{km}, mb4.5/87, ML4.3(ISK) Error ellipse: s-maj=8.3km s-min=6.4km az=211.0*

*IDC **06** 15:15:23.4±1.1, 36°.03N×31°.31E, h67^{km}±8^{km}, mb4.0/32, mb1 4.1/44, mb1mx4.0/60, mbtmp4.3/44, MS3.5/13, Ms1 3.5/13, ms1mx3.2/39, Error ellipse: s-maj=9.9km s-min=8.7km az=143.0*

*GII **06** 15:15:24.0±0.0, 35°.78N×31°.36E, h30^{km}±1^{km}, mb4.4/7, MD4.3/7, Mm3.8/15*

ISC 06 15:15:22.2±0.6, 35°.93N±0°.03×31°.33E±0°.02, h62^{km}±5^{km}, n553, σ1.39/640, mb4.4/80, 28C-18D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALAN	**Alanya-ANTALYA**	0.84	42	PG	Pn	15 15 36.5	-1.8
GAZI	**Gazipasa**	0.85	69	PG	Pn	15 15 37.2	-1.3
GAZI				SG	Sn	15 15 48.8	-1.6
GAZI	**Gazipasa**	0.85	69	iP	Pn	15 15 36.7	-1.8
GAZI				iS	Sn	15 15 46.8	-3.6
GAZI				IAML		15 15 49.0	
	comp=Z,9µm,0.3s						
AKUM	**Antalya-Kumluc**	0.89	296	iP	Pn	15 15 38.1	-0.7
AKUM				IAML		15 15 58.0	
	comp=Z,10µm,0.7s						
KEMT	**Kemer-ANTALYA**	0.92	317	PG	Pn	15 15 37.2	-2.0
KEPZ	**Antalya-Kepez**	0.99	13	iP	Pn	15 15 38.5	-1.7
KEPZ				iS	Sn	15 15 49.9	-3.7
KEPZ				IAML		15 15 52.0	
	comp=Z,4µm,0.4s						
ANTB	**Antalya**	1.11	331	PG	Pn	15 15 39.8	-1.9
AKMS	**Akamas**	1.23	138	⇓eP	Pn	15 15 42.7	-0.7
AKMS				S	Sn	15 15 58.1	-1.0
AKMS				AML	AML	15 16 08.6	
	comp=Z,45nm,0.9s						
AKMS				AML	AML	15 16 08.6	
	comp=Z,45nm,0.9s						
AKMS				AML	AML	15 16 11.0	
	comp=Z,55nm,0.4s						
AKMS				AML	AML	15 16 11.0	
	comp=Z,55nm,0.4s						
ALFC	**Alefka**	1.29	127	⇓iP	Pn	15 15 43.2	-1.0
ALFC				S	Sn	15 16 00.8	+0.1
ALFC				AML	AML	15 16 05.4	
	comp=Z,38nm,0.4s						
ALFC				AML	AML	15 16 05.4	
	comp=Z,38nm,0.4s						
ALFC				AML	AML	15 16 15.4	
	comp=Z,41nm,0.6s						
ALFC				AML	AML	15 16 15.4	
	comp=Z,41nm,0.6s						
KORT	**Korkueli**	1.32	324	PN	Pn	15 15 43.9	-0.8
KORT	**Korkueli**	1.32	324	iP	Pn	15 15 43.7	-1.0
KORT				IAML		15 16 14.0	
	comp=Z,2µm,0.6s						
HDMB	**Hadim**	1.39	42	PN	Pn	15 15 45.1	-0.5
ELL	**Elmali**	1.41	306	PN	Pn	15 15 45.0	-0.8
ELL	**Elmali**	1.41	306	P	Pn	15 15 45.9	+0.1
ELL	**Elmali**	1.41	306		Pn	15 15 45.9	+0.1
ELL	**Elmali**	1.41	306	⇓iP	Pn	15 15 45.8	+0.1
ELL				S	Sn	15 16 06.7	+3.2
AKAS	**Kas**	1.43	283	PN	Pn	15 15 45.4	-0.7
AKAS	**Kas**	1.43	283	iP	Pn	15 15 45.4	-0.7
AKAS				iS	Sn	15 16 12.8	+8.8
AKAS				IAML		15 16 21.0	
	comp=Z,767nm,0.9s						
KSL	**Kastellorizon**	1.43	279	P	Pn	15 15 45.6	-0.4
KSL				S	Sn	15 16 05.0	+1.1
	comp=Z,3µm,1.1s						
KSL	**Kastellorizon**	1.43	279	P	Pn	15 15 45.5	-0.4
KSL				S	Sn	15 16 05.4	+1.5
KSL				AML	AML	15 16 21.2	
	comp=Z,4.6nm,0.9s						
KSL				AML	AML	15 16 21.2	
	comp=Z,4.6nm,0.9s						
KSL				AML	AML	15 16 22.8	
	comp=Z,7.4nm,0.9s						
KSL				AML	AML	15 16 22.8	
	comp=Z,7.4nm,0.9s						
TEKE	**Tekeli-Mersin**	1.46	81	PN	Pn	15 15 46.0	-0.4
TEKE				SN	Sn	15 16 06.1	+1.5
AKDN	**Akdeniz- Kıbrı**	1.48	115	PN	Pn	15 15 46.9	+0.3
LEF	**Lefka**	1.51	122	⇓P	Pn	15 15 46.1	-0.9
LEF				⇑S	Sn	15 16 07.0	+1.2
LEF	**Lefka**	1.51	122	PN	Pn	15 15 45.9	-1.2
LEF	**Lefka**	1.51	122	iP	Pn	15 15 45.8	-1.2
LEF				iS	Sn	15 16 03.0	-2.8
LEF				IAML		15 16 23.0	
	comp=Z,3µm,1.0s						
SEYD	**Seydisehir-KON**	1.52	15	PN	Pn	15 15 46.9	-0.5
SEYD				SN	Sn	15 16 06.6	+0.3
NATA	**Nata**	1.54	138	P	Pn	15 15 48.3	+0.9
NATA				S	Sn	15 16 05.6	-0.8
NATA				AML	AML	15 16 26.5	
	comp=Z,123nm,0.6s						
NATA				AML	AML	15 16 26.5	
	comp=Z,123nm,0.6s						
NATA				AML	AML	15 16 26.8	
	comp=Z,137nm,0.8s						
NATA				AML	AML	15 16 26.8	
	comp=Z,137nm,0.8s						
BERE	**Bereket-Mersin**	1.59	74	PN	Pn	15 15 48.3	+0.1
BERE				SN	Sn	15 16 09.0	+1.1
BCK	**Bucak**	1.64	339	PN	Pn	15 15 48.0	-0.8
BCK				SN	Sn	15 16 08.6	-0.3
YORU	**Yoruktepe-Mers**	1.70	82	PN	Pn	15 15 49.8	+0.2
SZAC	**Souni**	1.73	132	P	Pn	15 15 51.0	+0.9
SZAC				S	Sn	15 16 11.6	+0.4
SZAC				AML	AML	15 16 25.3	
	comp=Z,33nm,0.6s						
SZAC				AML	AML	15 16 25.3	
	comp=Z,33nm,0.6s						
SZAC				AML	AML	15 16 27.4	
	comp=Z,34nm,0.7s						
SZAC				AML	AML	15 16 27.4	
	comp=Z,34nm,0.7s						
OREN	**Orenkoy-Mersin**	1.75	80	PN	Pn	15 15 50.3	+0.1
TEVE	**Tevekalti-Mers**	1.78	73	PN	Pn	15 15 51.1	+0.3
AKK1	**Akkuyu-Mersin**	1.80	83	PN	Pn	15 15 51.4	+0.4
AKK2	**Akkuyu-Mersin**	1.81	83	PN	Pn	15 15 51.5	+0.4
GULN	**MERSIN_Gulnar**	1.81	81	iP	Pn	15 15 51.5	+0.3
GULN				iS	Sn	15 16 13.8	+0.8
GULN				IAML		15 16 21.0	
	comp=Z,2µm,0.6s						
AKKU	**Akkuyu-Mersin**	1.81	82	PN	Pn	15 15 51.6	+0.4
TEPK	**Tepekoy-MERSIN**	1.82	80	PN	Pn	15 15 51.6	+0.3
ATHAL	**Athalassa**	1.86	115	P	Pn	15 15 51.0	-0.8
ATHAL				S	Sn	15 16 15.7	+1.4
ATHAL				AML	AML	15 16 26.0	
	comp=Z,41nm,0.7s						
ATHAL				AML	AML	15 16 26.0	
	comp=Z,41nm,0.7s						
ATHAL				AML	AML	15 16 39.3	
	comp=Z,52nm,1.2s						
ATHAL				AML	AML	15 16 39.3	
	comp=Z,52nm,1.2s						
YESI	**Yesilovacik-Me**	1.89	81	PN	Pn	15 15 52.7	+0.5
CSS	**Mathiatis**	1.90	120	P	Pn	15 15 51.3	-1.1
CSS				S	Sn	15 16 15.4	+0.2
CSS	**Mathiatis**	1.90	120	PN	Pn	15 15 51.5	-0.9
CSS	**Mathiatis**	1.90	120	Pn	Pn	15 15 51.3	-1.1
CSS	**Mathiatis**	1.90	120		Pn	15 15 50.9	-1.5
CSS	**Mathiatis**	1.90	120	⇓iP	Pn	15 15 51.3	-1.1
CSS				S	Sn	15 16 20.8	+5.5
TISA	**Tisan-Mersin**	1.92	83	PN	Pn	15 15 53.2	+0.7
GOLH	**Golhisar**	1.93	313	iP	Pn	15 15 54.6	+1.8
GOLH				IAML		15 16 30.0	
	comp=Z,2µm,0.7s						
IKL	**Isikli**	1.93	80	PN	Pn	15 15 53.6	+0.9
ASGA	**Asgata**	1.94	126	P	Pn	15 15 52.8	-0.1
ASGA				S	Sn	15 16 16.5	+0.2
ASGA				AML	AML	15 16 27.3	
	comp=Z,22nm,0.8s						
ASGA				AML	AML	15 16 27.3	
	comp=Z,22nm,0.8s						
ASGA				AML	AML	15 16 31.1	
	comp=Z,29nm,1.2s						
ASGA				AML	AML	15 16 31.1	
	comp=Z,29nm,1.2s						
FETY	**Fethiye**	1.94	292	P	Pn	15 15 53.0	0.0
FETY				S	Sn	15 16 17.8	+1.4
FETY	**Fethiye**	1.94	292	PN	Pn	15 15 52.8	-0.2
FETY	**Fethiye**	1.94	292	iP	Pn	15 15 53.2	+0.2
FETY				IAML		15 16 32.0	
	comp=Z,389nm,0.7s						
KARG	**Kargicak-Mersi**	1.95	81	PN	Pn	15 15 53.8	+0.8
AKIN	**Akıncılar- Kıb**	1.97	117	PN	Pn	15 15 52.7	-0.6
KRMN	**Karaman**	1.99	51	PN	Pn	15 15 54.9	+1.3
ISP	**Isparta**	1.99	341	PN	Pn	15 15 53.7	0.0
ISP	**Isparta**	1.99	341	P	Pn	15 15 53.6	-0.1
ISP	**Isparta**	1.99	341	Pn	Pn	15 15 54.2	+0.5
ISP	**Isparta**	1.99	341		Pn	15 15 53.6	-0.1
KEBE	**Keben-Mersin**	2.00	74	PN	Pn	15 15 54.4	+0.7
KMER	**Konya-Meram**	2.01	24	iP	Pn	15 15 54.4	+0.5
KMER				iS	Sn	15 16 17.9	-0.2
KMER				IAML		15 16 27.0	
	comp=Z,1µm,0.9s						
BRDR	**BURDUR-Merkez**	2.03	330	iP	Pn	15 15 55.0	+0.8
BRDR				iS	Sn	15 16 18.2	-0.4
BRDR				IAML		15 16 33.0	
	comp=Z,507nm,1.0s						
MVOU	**Mavrovouni**	2.09	115	⇓iP	Pn	15 15 53.6	-1.3
MVOU				S	Sn	15 16 18.3	-1.5
MVOU				AML	AML	15 16 33.7	
	comp=Z,30nm,0.8s						
MVOU				AML	AML	15 16 33.7	
	comp=Z,30nm,0.8s						
MVOU				AML	AML	15 16 43.4	
	comp=Z,15nm,0.9s						
MVOU				AML	AML	15 16 43.4	
	comp=Z,15nm,0.9s						
BAGO	**Egridir - ISPA**	2.10	348	iS	Sn	15 16 14.4	-5.8
BAGO				IAML		15 16 28.0	
	comp=Z,326nm,0.7s						
SILI	**Silifke-Mersin**	2.14	78	PN	Pn	15 15 56.7	+1.1
KONT	**Konya--Tatoy**	2.17	22	PN	Pn	15 15 56.4	+0.3
KONT	**Konya--Tatoy**	2.17	22	iP	Pn	15 15 56.1	+0.1
KONT				iS	Sn	15 16 23.2	+1.3
KONT				IAML		15 16 30.0	
	comp=Z,985nm,0.5s						
DOGA	**KONYA_Doganhis**	2.18	7	iP	Pn	15 15 56.7	+0.4
DOGA				iS	Sn	15 16 22.1	-0.3
DOGA				IAML		15 16 26.0	
	comp=Z,1µm,0.4s						
BASM	**Basmaki-Afyon**	2.23	333	PN	Pn	15 15 57.1	+0.2
DALY	**Dalyan (Mula)**	2.33	293	PN	Pn	15 15 58.3	+0.1
DALY	**Dalyan (Mula)**	2.33	293	iP	Pn	15 15 58.2	+0.1
DALY				IAML		15 16 47.0	
	comp=Z,542nm,0.6s						
KIZK	**Mersin**	2.34	76	PN	Pn	15 15 59.3	+1.0
KIZK	**Mersin**	2.34	76	iP	Pn	15 15 59.7	+1.4
KIZK				iS	Sn	15 16 26.7	+0.8
KIZK				IAML		15 16 31.0	
	comp=Z,1µm,0.3s						
EREN	**Erenkoy**	2.35	99	PN	Pn	15 15 59.5	+1.1
EREN	**Erenkoy**	2.35	99	iP	Pn	15 15 58.5	+0.2
EREN				IAML		15 16 35.0	
	comp=Z,3µm,0.5s						
TURN	**Turunc**	2.39	294	PN	Pn	15 16 02.3	+3.3
TURN	**Turunc**	2.39	294	iP	Pn	15 16 02.3	+3.3
TURN				iS	Sn	15 16 31.5	+4.4
TURN				IAML		15 16 51.0	
	comp=Z,367nm,0.6s						
PARAL	**Paralimni**	2.40	112	P	Pn	15 15 59.6	+0.4
PARAL				S	Sn	15 16 25.3	-2.1
PARAL				AML	AML	15 16 45.0	
	comp=Z,33nm,0.8s						
PARAL				AML	AML	15 16 45.0	
	comp=Z,33nm,0.8s						
PARAL				AML	AML	15 16 45.4	
	comp=Z,40nm,0.7s						
PARAL				AML	AML	15 16 45.4	
	comp=Z,40nm,0.7s						
LADK	**Ladik-KONYA**	2.41	20	PN	Pn	15 15 59.4	0.0
OSC1	**CSNet OBS 1**	2.43	181	P	Pn	15 15 55.9	-3.7
OSC1				S	Sn	15 16 25.8	-2.2
TAVA	**DENIZLI_Tavas**	2.47	309	iP	Pn	15 16 00.7	+0.5
TAVA				IAML		15 16 45.0	
	comp=Z,661nm,0.4s						
KZIL	**AFYON_Kizioren**	2.51	338	iP	Pn	15 16 00.6	-0.1
KZIL				iS	Sn	15 16 30.4	+0.2
KZIL				IAML		15 16 35.0	
	comp=Z,432nm,0.6s						
DENT	**Denizli**	2.59	315	PN	Pn	15 16 01.5	-0.2
ARG	**Arkhangelos**	2.61	277	P	Pn	15 16 01.5	-0.5
ARG				S	Sn	15 16 32.9	+0.4
	comp=Z,790nm,0.5s						
MRSB	**Marmaris-Mugla**	2.65	288	PN	Pn	15 16 02.7	+0.2
KDHN	**Kadinhani**	2.66	13	iP	Pn	15 16 02.3	-0.4
KDHN				iS	Sn	15 16 32.9	-1.0
KDHN				IAML		15 16 41.0	
	comp=Z,364nm,0.6s						
YESY	**Yesilyurt**	2.67	46	PN	Pn	15 16 03.9	+0.9
SHUT	**Suhut-Afyon**	2.69	347	PN	Pn	15 16 03.0	-0.2
KERG	**Konya-Eregli**	2.69	56	iP	Pn	15 16 04.7	+1.5
KERG				IAML		15 16 43.0	
	comp=Z,1µm,0.5s						
YER	**Yerkesik**	2.73	297	P	Pn	15 16 03.8	+0.1
YER	**Yerkesik**	2.73	297	PN	Pn	15 16 03.4	-0.3
MERS	**Mersin**	2.74	69	PN	Pn	15 16 05.2	+1.4
BOLV	**Bolvadin**	2.80	354	iP	Pn	15 16 05.3	+0.7
BOLV				IAML		15 16 42.0	
	comp=Z,412nm,0.4s						
KHAL	**Karahalli**	2.84	329	iP	Pn	15 16 05.0	-0.2
KHAL				IAML		15 16 39.0	
	comp=Z,309nm,0.9s						
CHBY	**Cihanbeyli**	2.92	25	PN	Pn	15 16 06.9	+0.6
OSC2	**CSNet OBS 4**	2.96	165	P	Pn	15 16 08.4	+1.7
OSC2				S	Sn	15 16 42.9	+2.0
AFYO	**Afyonkarahisar**	2.96	344	iP	Pn	15 16 07.0	+0.1
AFYO				IAML		15 16 58.0	
	comp=Z,410nm,0.9s						
KIZT	**Kizilcal**	2.97	8	PN	Pn	15 16 07.4	+0.3
DAT	**Datca**	3.13	286	P	Pn	15 16 08.6	-0.6
DAT	**Datca**	3.13	286	iP	Pn	15 16 08.8	-0.4
KARA	**Karaisali**	3.28	65	PN	Pn	15 16 12.7	+1.6
BDRM	**Kayabasi**	3.33	291	iP	Pn	15 16 11.9	0.0
BDRM				IAML		15 17 27.0	
	comp=Z,277nm,0.9s						
KRTS	**Karatas**	3.33	78	PN	Pn	15 16 13.3	+1.5
USAK	**Uak-Merkez**	3.33	327	iP	Pn	15 16 12.0	+0.1
USAK				iS	Sn	15 16 49.0	-1.3
USAK				IAML		15 16 54.0	
	comp=Z,166nm,0.5s						
AKSY	**AKSARAY - Alti**	3.33	35	iP	Pn	15 16 12.9	+0.9
AKSY				IAML		15 17 12.0	
	comp=Z,112nm,1.4s						
KULA	**Kula-Manisa**	3.34	321	P	Pn	15 16 11.4	-0.7
KULA				S	Sn	15 16 49.0	-1.6
GULA	**Gulagac**	3.34	43	PN	Pn	15 16 13.3	+1.2
MANT	**Manisa**	3.38	320	iP	Pn	15 16 12.2	-0.5
MANT				iS	Sn	15 16 48.9	-2.8
MANT				IAML		15 16 57.0	
	comp=Z,288nm,0.4s						
MANT	**Manisa**	3.38	320		Pn	15 16 12.1	-0.6
CMRD	**Camardi-Nigde**	3.41	59	PN	Pn	15 16 14.4	+1.4
KARP	**Karpathos**	3.41	265	P	Pn	15 16 12.9	-0.1
KARP				S	Sn	15 16 52.9	+0.6
	comp=Z,1µm,0.2s						
KARP	**Karpathos**	3.41	265		Pn	15 16 13.0	-0.1
BODT	**Bodrum**	3.43	290	P	Pn	15 16 12.9	-0.3
BODT				S	Sn	15 16 52.7	+0.1
CIFT	**Cifteler, Eski**	3.43	357	PN	Pn	15 16 13.7	+0.5
CIFT	**Cifteler, Eski**	3.43	357	iP	Pn	15 16 13.0	-0.2
CIFT				IAML		15 16 57.0	
	comp=Z,280nm,0.5s						
KKUL	**Konya-Kulu**	3.47	21	iP	Pn	15 16 14.1	+0.3
KKUL				IAML		15 17 08.0	
	comp=Z,213nm,0.7s						
SERE	**Sereflikochisa**	3.49	30	PN	Pn	15 16 15.0	+0.8
AUSIV	**SIVRIHISAR**	3.50	3	PN	Pn	15 16 14.7	+0.4
AUSIV	**SIVRIHISAR**	3.50	3	IAML			
	comp=Z,90nm,0.4s						
SVRH	**Sivrihisar-ESK**	3.51	2	PN	Pn	15 16 14.9	+0.5
YAYX	**Yaylak**	3.59	33	PN	Pn	15 16 16.1	+0.6
ESKT	**Eskisehir**	3.60	354	PN	Pn	15 16 16.4	+0.8
CEYT	**Ceyhan**	3.72	72	PN	Pn	15 16 18.2	+1.1
GCAM	**G?zelcaml?**	3.73	299	iP	Pn	15 16 16.6	-0.7
GCAM				IAML		15 17 29.0	
	comp=Z,130nm,1.5s						
AFSR	**Afar-Bala (An**	3.77	21	PN	Pn	15 16 19.0	+1.1
KIRS	**Kırehir-Merke**	3.80	32	iP	Pn	15 16 18.6	+0.3
YAYL	**Yayladag**	3.88	87	iP	Pn	15 16 21.0	+1.6
YAYL				IAML		15 17 14.0	
	comp=Z,690nm,0.4s						
YAHY	**KAYSERI_Yahyal**	3.88	55	iP	Pn	15 16 21.3	+1.8
YAHY				IAML		15 17 18.0	
	comp=Z,200nm,0.9s						
BORA	**Eskisehir**	4.00	350	iP	Pn	15 16 20.5	-0.6
AVNS	**Nevsehir-Avano**	4.01	43	iP	Pn	15 16 23.2	+2.0
AVNS				IAML		15 17 54.0	
	comp=Z,244nm,0.6s						
SMG	**Samos**	4.02	297	P	Pn	15 16 20.2	-1.0
AKHS	**Akhisar**	4.06	317	iP	Pn	15 16 20.3	-1.5
BR231	**Keskin MP Arra**	4.07	16		Pn	15 16 21.2	-0.8
BHL	**Bhannes**	4.09	118	eP	Pn	15 16 23.1	+0.7
ANTO	**Ankara**	4.09	16	⇑P	Pn	15 16 23.5	+1.2
ANTO	**Ankara**	4.09	16	⇑P	Pn	15 16 23.5	+1.2
ANTO	**Ankara**	4.09	16		Pn	15 16 20.4	-1.9
HWQ	**Hawqa**	4.13	112	eP	Pn	15 16 24.0	+1.1
DQRL	**Deir Qamar**	4.14	121	eP	Pn	15 16 24.1	+1.1
SRCK	**Saricakaya, Es**	4.14	352	iP	Pn	15 16 23.0	+0.1
SRCK				IAML		15 17 16.0	
	comp=Z,79nm,0.5s						
BR131	**Keskin Array S**	4.20	25	iP	Pn	15 16 23.7	-0.2
BR131	**Keskin Array S**	4.20	25		Pn	15 16 23.6	-0.3
BRTR	**Keskin Array B**	4.20	25	P	Pn	15 16 23.6	-0.3
	comp=Z,11nm,0.3s,baz=198,slow=15,SNR=216						
BRTR				S	Sn	15 17 12.7	+0.9
	comp=Z,36nm,0.3s,baz=203,slow=25,SNR=23						
BRTR				LR	LR	15 18 27.6	
	comp=Z,349nm,20.5s,baz=256,slow=45						
BRTR	**Keskin Array B**	4.20	25	iP	Pn	15 16 23.6	-0.3
BRTR				pmax	pmax		
	comp=Z,55nm,0.6s						
BRTR	**Keskin Array B**	4.20	25		Pn	15 16 23.2	-0.7
ZKR	**Zakros**	4.25	260	P	Pn	15 16 24.0	-0.4
HNTI	**Hanita**	4.26	131	Pn	Pn	15 16 25.9	+1.3
HNTI				Sn	Sn	15 17 13.3	+0.2
QRWL	**Qaraoun**	4.30	122	eP	Pn	15 16 26.2	+1.0
DURS	**Dursunbey**	4.30	329	iP	Pn	15 16 25.2	0.0
DURS				IAML		15 17 19.0	
	comp=Z,94nm,0.3s						
STIA	**Sitia Lasithi**	4.33	262	P	Pn	15 16 25.9	+0.4
ANDN	**Andirin**	4.35	66	iP	Pn	15 16 26.7	+0.9
ANDN				IAML		15 17 27.0	
	comp=Z,246nm,0.6s						
CDAG	**Cicekdag**	4.40	32	iP	Pn	15 16 27.4	+0.8
CDAG				IAML		15 17 31.0	
	comp=Z,78nm,0.8s						
RCY	**Rachaya**	4.44	122	eP	Pn	15 16 28.0	+0.8
MMA0B	**Mount Meron ar**	4.45	130	Pn	Pn	15 16 28.1	+0.9
MMA0B				Sn	Sn	15 17 17.8	0.0
MMAI	**Mount Meron Ar**	4.45	130	P	Pn	15 16 28.3	+1.1
	comp=Z,57nm,0.3s,baz=315,slow=13,SNR=55						
MMAI				S	Sn	15 17 18.0	+0.2
	comp=Z,68nm,0.3s,baz=310,slow=23,SNR=7.2						
SHBL	**Chebaa**	4.46	124	eP	Pn	15 16 28.6	+1.1
STEP	**BALIKESIR_Sava**	4.47	321	iP	Pn	15 16 26.4	-1.1
STEP				IAML		15 17 23.0	
	comp=Z,211nm,0.6s						
AMGA	**Amorgos Island**	4.48	283	P	Pn	15 16 26.9	-0.6
OFRI	**`Ofer**	4.48	136	Pn	Pn	15 16 28.4	+0.8
OFRI				Sn	Sn	15 17 18.1	-0.4
URLA	**Izmir**	4.49	304	iP	Pn	15 16 26.1	-1.7
URLA				IAML		15 18 11.0	
	comp=Z,52nm,1.2s						
KIBS	**BOLU**	4.50	5	iP	Pn	15 16 27.4	-0.5
KIBS				IAML		15 17 30.0	
	comp=Z,114nm,0.9s						
KSDI	**Kefar Szold**	4.50	126	Pn	Pn	15 16 29.1	+1.3
KSDI				Sn	Sn	15 17 19.4	+0.5
NATI	**Neve Ativ**	4.51	125	Pn	Pn	15 16 28.7	+0.8
NATI				Sn	Sn	15 17 19.4	+0.4
BLGI	**Bet Lehem HaGe**	4.52	134	Pn	Pn	15 16 29.2	+1.1
BLGI				Sn	Sn	15 17 18.9	-0.4
MDUB	**Mudurnu**	4.53	359		Pn	15 16 28.1	-0.2
ZEDA	**zmir-Bergama**	4.54	313	iP	Pn	15 16 27.4	-0.9
ZEDA				IAML		15 17 28.0	
	comp=Z,72nm,0.9s						
DELI	**KIRIKKALE**	4.54	26	iP	Pn	15 16 28.2	-0.3
DELI				IAML		15 17 25.0	
	comp=Z,63nm,0.9s						
ULDT	**Uludag**	4.54	338	iP	Pn	15 16 28.2	-0.4
ULDT				IAML		15 17 26.0	
	comp=Z,156nm,0.5s						
SIRC	**Yozgat**	4.55	41	iP	Pn	15 16 30.5	+1.9
SIRC				IAML		15 17 58.0	
	comp=Z,42nm,1.2s						
GEYV	**SAKARYA_Geyve**	4.62	350	iP	Pn	15 16 30.2	+0.8
GEYV				IAML		15 17 30.0	
	comp=Z,72nm,0.5s						
BTAS	**Taskesti**	4.64	357	iP	Pn	15 16 30.0	+0.3
BTAS				IAML		15 17 23.0	
	comp=Z,65nm,0.6s						
CMDR	**Camlidere-ANKA**	4.64	11	iP	Pn	15 16 29.5	-0.4
CMDR				IAML		15 17 27.0	
	comp=Z,146nm,1.0s						
NPS	**Neapolis**	4.71	263	P	Pn	15 16 30.9	+0.2
KUZU	**Kuzuini**	4.71	78	iP	Pn	15 16 31.6	+0.9
KUZU				IAML		15 17 30.0	
	comp=Z,471nm,0.7s						
KSHT	**Keshet**	4.73	127	Pn	Pn	15 16 32.9	+1.8
SANT	**Santorini**	4.77	277	P	Pn	15 16 30.9	-0.7
SANT	**Santorini**	4.77	277	⇑P	Pn	15 16 31.2	-0.4
SANT				⇑S	Sn	15 17 24.2	-1.4
SANT	**Santorini**	4.77	277		Pn	15 16 30.6	-0.9
SLTI	**Sal'it**	4.80	139	Pn	Pn	15 16 32.6	+0.6
SLTI				Sn	Sn	15 17 25.4	-0.9
APE	**Apeiranthos**	4.81	285	⇓P	Pn	15 16 31.3	-0.8
APE				⇑S	Sn	15 17 25.4	-1.1

APE	Apeiranthos	4.81	285	⇓P	Pn	15 16 31.3	-0.8
STAX	Taxiarchis Har	4.82	277	P	Pn	15 16 31.7	-0.4
THR6	Thira Island,	4.82	277	P	Pn	15 16 31.7	-0.5
THR3	Thira Island,	4.82	277	P	Pn	15 16 31.6	-0.6
CMBO	Columbo, Santo	4.82	278	P	Pn	15 16 31.6	-0.6
LAST	Lasithi	4.83	263	P	Pn	15 16 32.5	0.0
ELDT	Eldivan	4.84	19	*i* P	Pn	15 16 32.1	-0.5
ELDT				IAML		15 17 33.0	
	comp=Z,53nm,1.3s						
MMLI	Mount Malkishu	4.86	135	Pn	Pn	15 16 33.8	+0.9
MMLI				Sn	Sn	15 17 27.9	0.0
CHOS	Chios island	4.87	302	P	Pn	15 16 32.5	-0.5
GAZ	Gaziantep	4.89	74		Pn	15 16 34.0	+0.7
BCAM	Yenicaga	4.91	7	*i* P	Pn	15 16 32.9	-0.6
BCAM				IAML		15 17 29.0	
	comp=Z,94nm,0.7s						
SAHE	Sakarya_HENDEK	4.92	356	*i* P	Pn	15 16 33.9	+0.3
SAHE				IAML		15 17 36.0	
	comp=Z,32nm,0.5s						
YIGI	Dzce	5.02	1	*i* P	Pn	15 16 35.4	+0.4
YIGI				IAML		15 17 46.0	
	comp=Z,34nm,0.6s						
QRNJ	Al-Qirein	5.03	134	Pn	Pn	15 16 36.0	+1.0
HMDT	Nahal Hemdat	5.06	135	Pn	Pn	15 16 36.6	+1.1
HMDT				Sn	Sn	15 17 33.4	+0.8
COAL	Corum-Alaca	5.19	33	*i* P	Pn	15 16 38.7	+1.4
COAL				IAML		15 18 18.0	
	comp=Z,75nm,1.1s						
GZT	Gaziantep	5.21	72	*i* P	Pn	15 16 38.9	+1.2
GZT				IAML		15 17 55.0	
	comp=Z,147nm,0.4s						
ELBS	KAHRAMANMARAS	5.21	61	*i* P	Pn	15 16 39.0	+1.3
ELBS				IAML		15 18 09.0	
	comp=Z,134nm,1.2s						
CUSAR	Sarkisla-SIVAS	5.22	47	*i* P	Pn	15 16 40.4	+2.5
CUSAR				IAML		15 18 34.0	
	comp=Z,30nm,1.0s						
KAND	Kocaeli-Kandir	5.23	351	*i* P	Pn	15 16 37.9	+0.1
KAND				IAML		15 17 37.0	
	comp=Z,38nm,1.0s						
IDI	Anoyia	5.29	265	P	Pn	15 16 38.2	-0.5
	comp=Z,30nm,0.3s,baz=26,slow=4.4,SNR=190						
IDI				S	Sn	15 17 35.8	-2.4
	comp=Z,16nm,0.3s,baz=113,slow=20,SNR=5.0						
AMAZ	Amatzia	5.31	145	Pn	Pn	15 16 39.7	+0.7
RSH		5.35	157	P	Pn	15 16 40.2	+0.7
	baz=156						
BAYC	CANAKKALE_Bayr	5.36	317	*i* P	Pn	15 16 39.0	-0.7
BAYC				IAML		15 17 45.0	
	comp=Z,64nm,0.7s						
ILGA	Ilgaz	5.44	19	*i* P	Pn	15 16 40.8	-0.2
ILGA				IAML		15 17 48.0	
	comp=Z,27nm,1.0s						
ILGA	Ilgaz	5.44	19		Pn	15 16 39.7	-1.2
HBRG	Burj al `Arab	5.49	194	P	Pn	15 16 43.2	+1.8
	baz=193						
HBRG				S	Sn	15 17 40.4	-2.8
	baz=193						
DSI	Dead Sea	5.51	141	Pn	Pn	15 16 43.1	+1.5
YTIR	Yattir	5.54	144	Pn	Pn	15 16 43.3	+1.0
YTIR				Sn	Sn	15 17 44.4	-0.3
PELI	Kastamonı-Ara	5.58	16	*i* P	Pn	15 16 42.6	-0.1
KZIT	Kziot	5.63	152	Pn	Pn	15 16 44.0	+0.6
KZIT				Sn	Sn	15 17 45.4	-1.3
AKCD	Akcadag	5.77	64	*i* P	Pn	15 16 46.6	+1.2
AKCD				IAML		15 18 39.0	
	comp=Z,99nm,1.1s						
GHAJ	Ghor Haditha	5.81	141	Pn	Pn	15 16 47.3	+1.5
ASF	Jabal al Asfar	5.95	127	P	Pn	15 16 49.5	+1.7
	comp=Z,5.4nm,0.3s,baz=275,slow=14,SNR=30						
ASF				S	Sn	15 18 00.7	+6.0
	comp=Z,9.0nm,0.3s,baz=166,slow=23,SNR=4.9						
HHAG	Hagoal	6.00	174	P	Pn	15 16 49.2	+0.7
	baz=172						
HHAG				S	Sn	15 17 51.6	-4.2
	baz=172						
HHAG				AMP		15 18 00.0	
	baz=172						
KOT	Kottamia	6.00	176	P	Pn	15 16 49.3	+0.8
	baz=174						
KOT				S	Sn	15 17 53.1	-2.8
	baz=174						
KARJ	KARJ	6.01	142	Pn	Pn	15 16 39.0	-9.5
SUZ	Suez	6.21	168	P	Pn	15 16 52.6	+1.3
	baz=167						
HSAF	As Saff	6.30	178	P	Pn	15 16 53.5	+1.0
	baz=177						
HNAT	Natroun	6.31	186	P	Pn	15 16 54.0	+1.3
	baz=185						
GLL	Jalalah	6.35	177	P	Pn	15 16 54.2	+1.0
	baz=176						
PRNI	Paran	6.36	150	Pn	Pn	15 16 53.9	+0.5
PRNI				Sn	Sn	15 18 03.6	-1.1
BZK	Bozkurt	6.37	18	⇑P	Pn	15 16 55.2	+1.9
ALN	Alexandroupoli	6.46	322	P	Pn	15 16 54.2	-0.5
ALN	Alexandroupoli	6.46	322		Pn	15 16 54.2	-0.5
DIKM	Dikmen	6.48	27	⇑P	Pn	15 16 58.8	+3.9
HRFI	Mount Harif	6.65	151	Pn	Pn	15 16 57.8	+0.4
HRFI				Sn	Sn	15 18 11.9	+0.1
ZNM	Zenema	6.67	168	S	Sn	15 18 09.9	-2.2
	baz=167						
SLUM	Salum	6.75	231	P	Pn	15 16 57.8	-0.9
	baz=230						
MBRI	Mt Berech	6.82	153	Pn	Pn	15 17 00.3	+0.5
MBRI				Sn	Sn	15 18 16.5	+0.4
EIL	Elat	6.95	153	P	Pn	15 17 02.4	+0.9
	comp=Z,2.1nm,0.3s,baz=338,slow=10,SNR=29						
EIL				S	Sn	15 18 19.6	+0.5
	comp=Z,6.2nm,0.3s,baz=232,slow=16,SNR=6.1						
EIL	Elat	6.95	153	Pn	Pn	15 17 01.7	+0.3
EIL				Sn	Sn	15 18 18.4	-0.7
HBST	Basata	7.29	156	P	Pn	15 17 07.8	+1.7
	baz=155						
NBNS	Bani Suef	7.29	180	P	Pn	15 17 06.3	+0.3
	baz=179						
NBNS				S	Sn	15 18 23.4	-4.0
	baz=179						
ITM	Ithomi	7.67	282		Pn	15 17 11.4	+0.1
HDHB	Dhahab	7.71	158	P	Pn	15 17 11.7	-0.1
	baz=157						
HKAT	Jabal Katrina	7.73	162	P	Pn	15 17 12.3	+0.1
	baz=161						
HKAT				AMP		15 19 00.0	
	baz=161						
AGG	Agios Georgios	7.79	296	P	Pn	15 17 08.8	-4.1
AGG	Agios Georgios	7.79	296		Pn	15 17 08.8	-4.1
LIT	Litokhoron	8.12	303	P	Pn	15 17 18.2	+0.8
LIT	Litokhoron	8.12	303		Pn	15 17 18.2	+0.8
ELND	Elena	8.16	331	⇑P	Pn	15 17 18.7	+0.8
TR1	Tor 1	8.21	164	P	Pn	15 17 19.0	+0.3
	baz=163						
TAMRE	El Minia	8.23	183	P	Pn	15 17 19.8	+0.8
	baz=182						
SWA2		8.31	218	P	Pn	15 17 18.9	-1.1
	baz=217						
ASUT		8.51	179	P	Pn	15 17 24.0	+1.1
	baz=177						
SEV	Sevastopol'	8.78	11	*e*P	Pn	15 17 25.9	-0.5
SEV				*e*S	Sn	15 19 03.3	-0.5
TIRR	Tirgusor	8.80	346	P	Pn	15 17 24.8	-1.8
TIRR	Tirgusor	8.80	346	Pn	Pn	15 17 24.8	-1.8
HFRF	Wahat Farafira	9.13	197	P	Pn	15 17 31.2	0.0
	baz=197						
HFRF				AMP		15 19 00.0	
	baz=197						
VTS	Vitosha	9.16	319	⇑P	Pn	15 17 31.8	+0.1
VTS	Vitosha	9.16	319	⇑P	Pn	15 17 31.8	+0.1
VTS	Vitosha	9.16	319		Pn	15 17 30.4	-1.3
FNA	Florina	9.19	305	P	Pn	15 17 27.2	-4.9
FNA	Florina	9.19	305		Pn	15 17 27.2	-4.9
SIM	Simferopol'	9.25	12	*e*P	Pn	15 17 34.9	+2.1
SIM				S	Sn	15 19 19.0	+3.7
SIM				pmax	pmax		
	comp=Z,28nm,0.9s						
SUDU	Sudak	9.37	16	*e*P	Pn	15 17 35.3	+0.9
SUDU				*e*S	Sn	15 19 18.0	-0.2
CFR	Carcaliu	9.55	346	⇓P	Pn	15 17 38.8	+2.0
CFR	Carcaliu	9.55	346	⇓P	Pn	15 17 38.8	+2.0
BCA	Borcka	9.74	53	⇑P	Pn	15 17 42.2	+2.6
SOC	Sochi	10.00	38	*e*P	Pn	15 17 43.0	0.0
SOC				*e*		15 19 36.1	
SOC				pmax	pmax		
	comp=Z,15nm,0.7s						
SOC				MLR	MLR		
	comp=Z,125nm,11.0s						
MLR	Muntele Rosu	10.38	339	P	Pn	15 17 51.3	+2.9
	comp=Z,0.5nm,0.3s,baz=42,slow=5.9,SNR=4.7						
MLR				S	Sn	15 19 44.6	+1.4
	comp=Z,0.2nm,0.3s,baz=106,slow=21,SNR=1.8						
MLR	Muntele Rosu	10.38	339	⇓P	Pn	15 17 51.1	+2.7
MLR	Muntele Rosu	10.38	339	⇓P	Pn	15 17 51.1	+2.7
MLR	Muntele Rosu	10.38	339		Pn	15 17 46.4	-2.0
GTR	Jabal at Tayr	10.41	184	P	Pn	15 17 49.2	+0.5
	baz=184						
VRI	Vrincioaia	10.51	342	⇑P	Pn	15 17 52.0	+1.9
VRI	Vrincioaia	10.51	342	⇑P	Pn	15 17 52.0	+1.9
PLOR	Plostina	10.52	342	⇓P	Pn	15 17 53.0	+2.8
PLOR	Plostina	10.52	342	⇓P	Pn	15 17 53.0	+2.8
VOIR		10.62	335	⇓P	Pn	15 17 54.4	+2.9
VOIR		10.62	335	⇓P	Pn	15 17 54.4	+2.9
ARR	Arges	10.70	334	⇑P	Pn	15 17 55.1	+2.4
AKH	Akhalkalaki	10.96	56	P	Pn	15 17 53.9	-2.5
AKH	Akhalkalaki	10.96	56		Pn	15 17 53.9	-2.5
DOPR	Dopca	10.98	338	⇑P	Pn	15 17 57.9	+1.5
HERR	Herculane	11.22	326	⇑P	Pn	15 18 00.7	+1.0
GNI	Garni	11.38	64	P	Pn	15 18 06.1	+4.0
	comp=Z,0.6nm,0.3s,baz=282,slow=8.0,SNR=3.7						
GNI				LR	LR	15 23 11.2	
	comp=Z,212nm,18.4s,baz=248,slow=41						
GNI	Garni	11.38	64	*ce*P	Pn	15 18 03.4	+1.3
GNI				pmax	pmax		
	comp=Z,44nm,1.7s						
GNI	Garni	11.38	64	Pn	Pn	15 18 02.1	0.0
NEY	Neytrino	11.42	47	*i* P	Pn	15 18 04.7	+2.1
GZR	Gura Zlata	11.46	328	⇓P	Pn	15 18 03.8	+0.8
MDVR	Moldovita	11.48	323	⇑P	Pn	15 18 03.9	+0.7
SHA1	Shidzhatmaz	11.68	45	*i* P	Pn	15 18 08.4	+2.2
KBZ	Khabaz	11.81	45	P	Pn	15 18 09.8	+2.1
	comp=Z,0.2nm,0.3s,baz=232,slow=9.9,SNR=13						
KBZ	Khabaz	11.81	45	*i* P	Pn	15 18 10.0	+2.3
KIV	Kislovodsk	11.83	44	*i* P	Pn	15 18 12.3	+4.2
	SNR=5.3						
KIV	Kislovodsk	11.83	44	*e*P	Pn	15 18 11.1	+3.0
KIV				pmax	pmax		
	comp=Z,84nm,1.0s						
KIV				MLR	MLR		
	comp=Z,90nm,11.0s						
KIV	Kislovodsk	11.83	44		Pn	15 18 07.8	-0.3
KVAR	Kislovodsk Arr	11.83	44	P	Pn	15 18 10.4	+2.2
	baz=266,slow=21,SNR=15						
ZEI	Tsey	11.89	51	*e*P	Pn	15 18 11.1	+2.1
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
TBLG	Delisi	11.95	57	P	Pn	15 18 11.2	+1.5
TBLG	Delisi	11.95	57	Pn	Pn	15 18 11.2	+1.5
TIP	Timpagrande	12.01	290	Pn	Pn	15 18 07.7	-2.9
BURAR	Bucovina Array	12.53	341	⇑P	P	15 18 29.6	+2.4
BURAR	Bucovina Array	12.53	341		Pn	15 18 17.0	-0.6
BUR08	Bucovina Ar. S	12.56	341		Pn	15 18 16.2	-1.8
GOF	Gofitskoye	12.74	41	⇑*e*P	Pn	15 18 21.1	+0.7
GOF				pmax	pmax		
	comp=Z,21nm,0.9s						
ACER	Acerenza	13.01	296	Pn	Pn	15 18 22.4	-1.7
WDD	Wied Dalam	13.63	275	Pn	Pn	15 18 28.1	-4.4
BLY	Banja Luka	13.91	314	Pn	Pn	15 18 38.1	+1.9
PAOL	Paolisi	14.08	296	Pn	Pn	15 18 38.9	+0.3
CORL	Corleone	14.56	283		Pn	15 18 42.3	-2.6
KOLS	Kolonicke sedl	14.60	336	*e*P	P	15 18 51.6	+1.5
KOLS	Kolonicke sedl	14.60	336	*e*	P	15 18 51.6	+1.5
CLTB	Caltabellotta	14.62	282	Pn	Pn	15 18 44.6	-1.1
AKASG	Malin Array Be	14.84	355	P	Pn	15 18 49.7	+1.3
	comp=Z,2.1nm,0.3s,baz=176,slow=9.5,SNR=27						
AKASG				S	Sn	15 21 36.4	+5.0
	comp=Z,1.0nm,0.3s,baz=185,slow=25,SNR=5.3						
AKASG	Malin Array Be	14.84	355	P	P	15 18 52.0	-0.8
AKASG	Malin Array Be	14.84	355	P	P	15 18 52.0	-0.8
AKBB	Malin Array Si	14.84	355	P	Pn	15 18 47.6	-0.7
AKBB	Malin Array Si	14.84	355		Pn	15 18 47.6	-0.7
KWP	Kalwaria Pacla	15.07	338	P	Pn	15 18 51.5	+0.2
KWP	Kalwaria Pacla	15.07	338	P	Pn	15 18 51.5	+0.2
AQU	L'Aquila	15.30	300	P	Pn	15 18 53.7	-0.8
AQU				pmax	pmax		
	comp=Z,58nm,1.4s						
AQU	L'Aquila	15.30	300	Pn	Pn	15 18 53.7	-0.8
AQU				IAmb	IAmb	15 19 02.7	
	comp=Z,58nm,1.4s						
VYHS	Vyhne	15.57	328	*e*P	P	15 19 02.2	+1.3
VYHS	Vyhne	15.57	328	*e*P	P	15 19 02.2	+1.3
NRCA	Norcia	15.66	302	Pn	Pn	15 18 58.4	-0.7
NRCA				IAmb	IAmb	15 19 04.0	
	comp=Z,54nm,1.6s						
LANS	Liptovska Anna	15.81	330	*e*P	P	15 19 04.6	+1.0
LANS	Liptovska Anna	15.81	330	*e*P	P	15 19 04.6	+1.0
VSR	Storozhevoye	16.28	18	*e*P	Pn	15 19 06.7	0.0
VSR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
VRH	Novokhopyorsk	16.99	23	*e*P	Pn	15 19 15.4	-0.1
VRH				pmax	pmax		
	comp=Z,10.0nm,0.4s						
RAYN	Ar Rayn	17.43	131	P	Pn	15 19 18.1	-3.1
RAYN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
RAYN	Ar Rayn	17.43	131		Pn	15 19 18.1	-3.1
LPSR	Galich'ya Gora	17.51	16	*e*P	Pn	15 19 21.5	-0.4
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TEOL	Teolo	17.60	308	Pn	Pn	15 19 21.0	-2.2
ZCCA	Zocca	17.65	305		Pn	15 19 22.9	-0.9
ZCCA				IAmb	IAmb	15 19 29.7	
	comp=Z,28nm,1.2s						
KEST	Kesra	17.83	276	P	Pn	15 19 27.5	+1.4
	comp=Z,0.7nm,0.3s,baz=317,slow=1.8,SNR=16						
KEST	Kesra	17.83	276	P	P	15 19 24.2	-1.9
KEST				IAmb	IAmb	15 19 30.1	
	comp=Z,45nm,1.0s						
CTI	Castel Tesino	17.92	310	P	P	15 19 25.7	-1.3
CTI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CTI	Castel Tesino	17.92	310		P	15 19 25.7	-1.3
VLC	Villacollemand	17.98	304		P	15 19 25.2	-2.5
GEC2	GERESS Array S	18.27	320	P	P	15 19 30.8	0.0
GERES	GERESS Array B	18.27	320	P	Pn	15 19 31.8	+0.4
	comp=Z,0.5nm,0.3s,baz=123,slow=9.7,SNR=7.4						
GERES				ScP	ScP	15 27 29.1	-1.5
	comp=Z,0.2nm,0.3s,baz=146,slow=2.6,SNR=8.0						
GERES	GERESS Array B	18.27	320	P	P	15 19 29.2	-1.7
GERES					ScP	15 27 28.5	-2.1
KHC	Kasperske Hory	18.52	321	*e*P	P	15 19 33.1	-0.4
KHC	Kasperske Hory	18.52	321	*i* P	P	15 19 33.4	-0.1
KHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KHC	Kasperske Hory	18.52	321	P	P	15 19 32.7	-0.8
WATA	Walderalm	18.59	314	*e*P	Pn	15 19 42.6	+7.4
	comp=Z,9.0nm,1.0s						
MSSA	Maissana	18.62	303	P	P	15 19 33.9	-0.9
SQTA	Sankt Quirin	18.75	313	*e*Pn	Pn	15 19 38.1	+0.9
	comp=Z,11nm,1.3s						
FETA	Feichten	18.94	312	*i* Pn	Pn	15 19 39.8	+0.4
	comp=Z,9.8nm,1.3s						
RETA	Reutte	19.15	313	*i* Pn	P	15 19 40.9	+0.5
	comp=Z,2.2nm,0.4s						
DAVOX	Davos/Dischmat	19.35	311	P	Pn	15 19 44.0	-0.3
	comp=Z,0.5nm,0.3s,baz=131,slow=10.0,SNR=6.9						
DAVOX				LR	LR	15 27 45.9	
	comp=Z,204nm,21.8s,baz=86,slow=38						
BRG	Berggiesshubel	19.48	325	*e*P	Pn	15 19 46.4	+0.7
	comp=Z,5.2nm,1.2s						
BRG	Berggiesshubel	19.48	325	*e*P	Pn	15 19 46.4	+0.7
BRG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
OBN	Obninsk	19.52	9	P	P	15 19 44.1	-0.2
	comp=Z,0.7nm,0.3s,baz=171,slow=19,SNR=3.9						
OBN	Obninsk	19.52	9	⇑*e*P	P	15 19 43.9	-0.4
OBN				*e*S	S	15 23 17.5	-3.8
OBN				pmax	pmax		
	comp=Z,48nm,1.7s						
OBN				MLR	MLR		
	comp=Z,143nm,16.0s						
OBN	Obninsk	19.52	9	P	P	15 19 43.3	-1.0
OBN				IAmb	IAmb	15 19 48.9	
	comp=Z,20nm,0.6s						
TUE	Stuetta	19.54	309	P	P	15 19 42.7	-2.2
DAVA	Damuels	19.58	312	*e*P	P	15 19 42.3	-2.9
	comp=Z,4.0nm,0.4s						
KLNR	Kaliningrad	20.20	341	*i* P	Pn	15 19 53.3	-0.7
KLNR				pmax	pmax		
	comp=Z,146nm,3.2s						
CLL	Collm	20.21	325	*e*(P)	Pn	15 19 55.0	+0.7
CLL				*i* (sP)	sP	15 20 15.6	+3.5
	comp=Z,10.0nm,1.0s						
CLL	Collm	20.21	325	*e*P	Pn	15 19 55.0	+0.7
CLL				*i*		15 20 15.6	
CLL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BNI	Bardonecchia	20.78	304	P	P	15 19 57.1	-1.1
BNI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BNI	Bardonecchia	20.78	304	P	P	15 19 57.0	-1.1
SENIN	Lac Senin/Sane	20.80	307	P	P	15 19 57.4	-1.2
SENIN				IAmb	IAmb	15 20 02.7	
	comp=Z,10nm,0.6s						
BFO	Black Forest	20.99	313	P	P	15 19 59.5	-0.8
BFO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BFO	Black Forest	20.99	313	P	P	15 19 59.5	-0.8
GEYT	Alibeck	21.48	77	P	P	15 20 07.9	+2.2
	comp=Z,8.6nm,0.5s,baz=283,slow=7.4,SNR=20						
ECH	Echery	21.63	312	P	P	15 20 06.2	-1.0
ECH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ECH	Echery	21.63	312	P	P	15 20 06.2	-1.0
WLF	Walferdange	22.88	315	P	P	15 20 19.9	-0.5
WLF				pmax	pmax		
	comp=Z,23nm,1.4s						
WLF	Walferdange	22.88	315	P	P	15 20 19.9	-0.5
WLF				IAmb	IAmb	15 20 31.2	
	comp=Z,23nm,1.4s						
SHME	Shamm	23.39	108	*i* P	P	15 20 27.0	+1.4
	SNR=8.6						
BANOM	Banah	23.57	108	*i* P	P	15 20 29.3	+1.9
	SNR=8.4						
NAZ	Nazwa, Dubai	23.58	111	*i* P	P	15 20 29.6	+2.2
	SNR=15						
FAQ	Al Faqa, Dubai	23.66	111	P	P	15 20 30.4	+2.2
MSFE	Esma-Masafi	23.76	109	*i* P	P	15 20 31.1	+2.0
	SNR=9.9						
MDH	Madha	23.90	109	*i* P	P	15 20 32.1	+1.9
	SNR=8.6						
UOSS	Minazif	24.02	110	*i* P	P	15 20 33.0	+1.6
	SNR=10						
UOSS	Minazif	24.02	110	P	P	15 20 31.1	-0.3
HATD	Hatta, Dubai	24.02	111	*i* P	P	15 20 33.4	+1.9
	SNR=15						
ASHO	Ashiyiah	24.05	111	*i* P	P	15 20 33.5	+1.8
	SNR=9.7						
AKTO	Aktyubinsk	24.09	45	P	P	15 20 31.4	-0.4
	comp=Z,12nm,0.8s,baz=244,slow=9.4,SNR=33						
AKTO				ScP	ScP	15 27 44.4	-0.3
	comp=Z,1.8nm,0.9s,baz=219,slow=5.1,SNR=5.1						
AKTO				LR	LR	15 30 17.8	
	comp=Z,60nm,20.9s,baz=183,slow=37						
ALNE	Al Ain	24.17	113	*i* P	P	15 20 34.7	+1.9
	SNR=7.8						
AB31	Akbulak array	24.74	49	*i* P	P	15 20 37.7	-0.1
ABKAR	Akbulak array	24.74	49	P	P	15 20 37.3	-0.4
HRA	Herat	25.27	84	P	P	15 20 42.9	-0.1
HRA				IAmb	IAmb	15 20 46.8	
	comp=Z,11nm,0.6s						
KLMR	Klimovskoe	25.48	9	*e*P	P	15 20 42.1	-2.2
KLMR				pmax	pmax		
	comp=Z,49nm,1.4s						
KLMR	Klimovskoe	25.48	9	*e*P	P	15 20 42.1	-2.2
KLMR				AMP		15 20 46.2	
	comp=Z,49nm,1.4s						
KIRV	Kirov	25.61	22	P	P	15 20 44.4	-1.1
	comp=Z,21nm,0.6s,baz=208,slow=3.7,SNR=9.3						
FINES	FINESS Array B	25.75	354	P	P	15 20 45.5	-1.2
	comp=Z,4.5nm,0.5s,baz=156,slow=10,SNR=33						
FINES				PcP	PcP	15 24 14.6	-0.4
	comp=Z,1.6nm,0.8s,baz=151,slow=3.2,SNR=2.9						
TAM	Tamanrasset	25.93	247	P	P	15 20 51.4	+2.4
TAM				pmax	pmax		
	comp=Z,15nm,1.2s						
TAM	Tamanrasset	25.93	247	P	P	15 20 51.4	+2.4
TAM				IAmb	IAmb	15 20 55.9	
	comp=Z,14nm,1.2s						
HFS	Hagfors	26.76	340	P	P	15 20 54.9	-1.0
	comp=Z,3.0nm,0.8s,baz=127,slow=9.4,SNR=4.8						
WSAR	Wadi Sarin	26.80	111	P	P	15 20 58.2	+1.5
	comp=Z,3.5nm,0.7s,baz=306,slow=12,SNR=4.6						
ARU	Arti	27.54	33	P	P	15 21 02.7	-0.2
	comp=Z,1.5nm,0.4s,baz=225,slow=12,SNR=8.4						
ARU	Arti	27.54	33	*d i*P	P	15 21 02.7	-0.2
ARU						15 21 47.3	
ARU				S	S	15 25 41.6	+2.1
ARU				pmax	pmax		
	comp=Z,33nm,3.8s						
ARU	Arti	27.54	33	P	P	15 21 02.4	-0.5
ARU				IAmb	IAmb	15 21 03.4	
	comp=Z,6.3nm,0.8s						
ESBB	Sonseca Array	28.02	288	P	P	15 21 06.6	-0.9
ESBB				IAmb	IAmb	15 21 24.6	
	comp=Z,16nm,1.4s						
ESDC	Sonseca Array	28.02	288	P	P	15 21 08.5	+1.0
	comp=Z,3.3nm,0.7s,baz=81,slow=9.3,SNR=9.9						
ESDC				ScP	ScP	15 27 57.2	+0.7
	comp=Z,0.7nm,0.6s,baz=54,slow=1.8,SNR=5.0						
ESDC	Sonseca Array	28.02	288	P	P	15 21 07.8	+0.3
ESDC					ScP	15 27 57.7	+1.2
NAO01	NORSAR Array S	28.14	339	P	P	15 21 07.1	-1.1
NB201	NORSAR Array S	28.19	339	P	P	15 21 08.3	-0.3
NOA	NORSAR Array B	28.20	339	P	P	15 21 08.0	-0.8
	comp=Z,0.3nm,0.4s,baz=141,slow=9.3,SNR=2.8						
NC303	NORSAR Array S	28.31	340	P	P	15 21 08.0	-1.7
PAB	San Pablo	28.33	288	P	P	15 21 09.9	-0.4
PAB				pmax	pmax		
	comp=Z,21nm,1.7s						
PAB	San Pablo	28.33	288	P	P	15 21 09.9	-0.4
PAB				IAmb	IAmb	15 21 22.9	
	comp=Z,21nm,1.6s						
SVE	Sverdlovsk	28.70	34	*e*P	P	15 21 12.9	-0.4
MDT	Midelt	29.72	275	P	P	15 21 23.5	+0.8
	comp=Z,1.6nm,0.8s,baz=40,slow=7.9,SNR=2.7						
CHGR	Chuyangaron	30.08	73	P	P	15 21 26.1	+0.3
CHGR				IAmb	IAmb	15 21 27.9	
	comp=Z,8.6nm,0.8s						
KBL	Kabul	30.71	81	P	P	15 21 32.4	+0.8
KBL				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KBL	Kabul	30.71	81	P	P	15 21 32.4	+0.8
KK31	Karatay Array	30.85	64	*i* P	P	15 21 33.4	+1.0
KK31	Karatay Array	30.85	64	P	P	15 21 33.3	+0.8
KK31				IAmb	IAmb	15 21 34.2	
	comp=Z,6.6nm,0.7s						
KKAR	Karatay Array	30.85	64	P	P	15 21 32.9	+0.5
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KKAR	Karatay Array	30.85	64	P	P	15 21 32.9	+0.5
KKAR				IAmb	IAmb	15 21 34.2	
	comp=Z,6.6nm,0.7s						
KKAR	Karatay Array	30.85	64	P	P	15 21 32.6	+0.2
GAR	Garm	30.94	72	P	P	15 21 35.0	+1.6
PVAQ	Vaqueiros	31.21	284	P	P	15 21 34.7	-0.9
PVAQ				IAmb	IAmb	15 22 08.0	
	comp=Z,18nm,1.2s						
SOCY	Socotra	31.26	133	P	P	15 21 35.6	-0.7
SOCY				IAmb	IAmb	15 22 11.8	
	comp=Z,16nm,1.0s						
LVZ	Lovozero	32.07	2	P	P	15 21 42.5	-0.4
LVZ				pmax	pmax		
	comp=Z,35nm,1.3s						
LVZ	Lovozero	32.07	2		P	15 21 42.5	-0.4
BRVK	Borovoye	32.14	46	*ce*P	P	15 21 44.6	+1.0
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BRVK	Borovoye	32.14	46	P	P	15 21 43.8	+0.2
BVAR	Borovoye Array	32.19	46	P	P	15 21 44.3	+0.2
	comp=Z,1.7nm,0.7s,baz=242,slow=5.9,SNR=13						
ARSB	Arslanbob	32.75	68	P	P	15 21 49.5	+0.2
ARSB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ARSB	Arslanbob	32.75	68	P	P	15 21 49.5	+0.2
ARSB				IAmb	IAmb	15 22 18.8	
	comp=Z,4.7nm,0.8s						
AAK	Ala-Archa	33.78	65	ScP	ScP	15 28 16.0	+0.4
	comp=Z,1.1nm,0.7s,baz=242,slow=3.0,SNR=7.1						
AAK				LR	LR	15 37 10.4	
	comp=Z,64nm,20.8s,baz=238,slow=39						
AAK	Ala-Archa	33.78	65	*i* P	P	15 21 59.9	+1.6
	SNR=14						
AAK	Ala-Archa	33.78	65	*ce*P	P	15 21 59.7	+1.4
AAK				pmax	pmax		
	comp=Z,3.0nm,0.6s						

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AAK   Ala-Archa          33.78  65  P      P      15 21 59.9 +1.6
AAK                                 IAmb   IAmb   15 22 00.4
      comp=Z,4.9nm,0.6s
AAK                                        ScP    15 28 16.6 +0.9
ARCES ARCESS Array B     33.81 356  P      P      15 21 56.9 -1.1
      comp=Z,2.5nm,0.7s,baz=165,slow=8.5,SNR=12
ARCES                               PcP    PcP    15 24 35.2 -0.4
      comp=Z,5.8nm,1.0s,baz=149,slow=4.2,SNR=3.5
ARCES ARCESS Array B     33.81 356  P      P      15 21 57.3 -0.7
ARCES                                             15 24 35.3
ARCES ARCESS Array B     33.81 356  P      P      15 21 57.3 -0.7
ARCES                                      PcP    15 24 35.3 -0.4
ARE0  ARCESS Array S     33.81 356  P      P      15 21 58.9 +0.8
FRU1  Bishkek            33.88  65  P      P      15 21 59.4 +0.4
FRU1                                pmax   pmax
      comp=Z,15nm,0.6s
FRU1  Bishkek            33.88  65  P      P      15 21 59.4 +0.4
NIL   Nilore             34.32  81  P      P      15 22 03.9 +1.0
NIL                                 pmax   pmax
      comp=Z,9.0nm,0.9s
NIL   Nilore             34.32  81  P      P      15 22 03.9 +1.0
NIL                                 IAmb   IAmb   15 22 05.1
      comp=Z,8.8nm,0.8s
TOA0  Torodi Ar. Sit     34.99 237  P      P      15 22 10.0 +1.1
TOA0                                IAmb   IAmb   15 22 11.3
      comp=Z,4.2nm,0.9s
TORD  Torodi Ar. Bea     34.99 237  P      P      15 22 10.5 +1.7
      comp=Z,3.3nm,0.9s,baz=35,slow=8.5,SNR=14
TORD                                ScP    ScP    15 28 20.9 +0.8
      comp=Z,0.4nm,0.6s,baz=40,slow=2.2,SNR=2.2
TORD                                LR     LR     15 39 03.7
      comp=Z,61nm,19.0s,baz=350,slow=40
TORD  Torodi Ar. Bea     34.99 237  P      P      15 22 09.6 +0.8
NRN   Naryn              35.00  67  P      P      15 22 10.4 +1.4
NRN                                 pmax   pmax
      comp=Z,8.0nm,1.0s
NRN   Naryn              35.00  67  P      P      15 22 10.4 +1.4
NRN                                 IAmb   IAmb   15 22 11.8
      comp=Z,7.7nm,0.9s
KSH   Kashi              35.22  70  P      P      15 22 10.8 +0.1
KSH                                 pP     pP     15 22 22.7 -2.5
KSH                                 S      S      15 27 37.4 -2.5
KSH                                 PcS    PcS    15 28 26.6 -0.9
KDJ   Kajisay            35.81  66  P      P      15 22 16.1 +0.3
KDJ                                 pmax   pmax
      comp=Z,7.0nm,0.9s
KDJ   Kajisay            35.81  66  P      P      15 22 16.1 +0.3
KDJ                                 IAmb   IAmb   15 22 18.7
      comp=Z,7.5nm,0.9s
PRZ   Przheval'sk        36.67  65  P      P      15 22 23.9 +0.7
PRZ                                 pmax   pmax
      comp=Z,7.0nm,0.8s
PRZ   Przheval'sk        36.67  65  P      P      15 22 23.9 +0.7
PRZ                                 IAmb   IAmb   15 22 26.3
      comp=Z,7.2nm,0.8s
KURBB Kurchatov Arra     36.71  51  P      P      15 22 23.4 +0.3
      comp=Z,4.0nm,0.6s,baz=270,slow=8.9,SNR=46
KURBB                               PcP    PcP    15 24 45.1 +0.6
      comp=Z,2.4nm,0.8s,baz=266,slow=3.8,SNR=10
KURBB                               ScP    ScP    15 28 25.6 -0.2
      baz=266,slow=4.0
KURK  Kurchatov          36.78  51ceP      P      15 22 24.7 +1.0
KURK                                pmax   pmax
      comp=Z,8.0nm,1.3s
KURK  Kurchatov          36.78  51  P      P      15 22 23.5 -0.2
KURK                                IAmb   IAmb   15 22 25.0
      comp=Z,4.9nm,0.8s
MAKZ  Makanchi           38.91  58  P      P      15 22 41.7 -0.1
MAKZ                                pmax   pmax
      comp=Z,4.0nm,1.1s
MAKZ  Makanchi           38.91  58  P      P      15 22 41.7 -0.1
MK31  Makanchi Array     39.13  58 eP      P      15 22 43.5 -0.1
MK31  Makanchi Array     39.13  58  P      P      15 22 43.3 -0.3
MK31                                       ScP    15 28 35.0 -0.2
MKAR  Makanchi Array     39.13  58  P      P      15 22 44.0 +0.3
      comp=Z,3.2nm,0.7s,baz=276,slow=6.5,SNR=38
MKAR                                PcP    PcP    15 24 52.7 +0.6
      comp=Z,1.0nm,0.7s,baz=275,slow=4.6,SNR=4.0
MKAR                                ScP    ScP    15 28 34.9 -0.3
      comp=Z,0.8nm,0.5s,baz=260,slow=3.6,SNR=13
MKAR  Makanchi Array     39.13  58  P      P      15 22 43.1 -0.6
MKAR                                       ScP    15 28 34.4 -0.8
ZAA0  Zalesovo Array     40.83  47  P      P      15 22 56.7 -0.8
ZAA0                                IAmb   IAmb   15 22 58.7
      comp=Z,4.8nm,0.6s
ZALV  Zalesovo Beam      40.83  47  P      P      15 22 57.0 -0.5
      comp=Z,4.9nm,0.6s,baz=263,slow=9.7,SNR=28
ZALV                                LR     LR     15 40 51.6
      comp=Z,34nm,18.8s,baz=262,slow=38
ZALV  Zalesovo Beam      40.83  47  P      P      15 22 56.5 -1.1
WMQ   Urumqi             43.24  62 eP      P      15 23 18.8 +1.4
WMQ                                 pP     pP     15 23 34.5 +2.2
WMQ                                 sP     sP     15 23 38.8 -0.3
WMQ   Urumqi             43.24  62  P      P      15 23 17.7 +0.3
WMQ                                 pmax   pmax
      comp=Z,10.0nm,1.0s
WMQ   Urumqi             43.24  62  P      P      15 23 17.7 +0.3
WMQ                                 IAmb   IAmb   15 23 19.9
      comp=Z,10nm,1.0s
DBIC  Dimbokro           44.11 237  P      P      15 23 25.7 +1.1
      comp=Z,3.9nm,0.7s,baz=47,slow=8.8,SNR=5.4
DBIC                                LR     LR     15 46 56.8
      comp=Z,48nm,18.4s,baz=62,slow=43
DBIC  Dimbokro           44.11 237  P      P      15 23 24.6  0.0
TIC   Toumodi            44.24 238 eP      P      15 23 26.7 +1.0
KIC   Kosan Boka         44.25 237 eP      P      15 23 26.8 +1.0
      comp=Z,13nm,0.8s
LIC   Lamto              44.55 237 eP      P      15 23 29.0 +0.9
      comp=Z,30nm,0.9s
DANN  Dangsing           44.59  84 eP      P      15 23 30.1 +1.4
      comp=Z,60nm,0.7s
NRIK  Noril'sk           45.06  25  P      P      15 23 31.9 +0.4
      comp=Z,5.7nm,0.5s,baz=226,slow=4.7,SNR=16
GKN   Gorkha             45.44  84 eP      P      15 23 36.2 +0.9
      comp=Z,35nm,0.8s
DMN   Daman              45.98  85 eP      P      15 23 40.7 +1.0
KKN   Kakani             46.05  84 eP      P      15 23 40.8 +0.6
PKIN  Phulchoki          46.23  84 eP      P      15 23 42.4 +0.8
      comp=Z,9.1nm,0.5s
PKI   Pulchoki           46.24  84 eP      P      15 23 42.5 +0.7
GUN   Gumba              46.48  84 eP      P      15 23 44.3 +0.6
JIRN  Jiri               46.83  84 eP      P      15 23 47.1 +0.6
      comp=Z,15nm,0.4s
RAMN  Ramite             47.46  85 eP      P      15 23 51.3  0.0
      comp=Z,12nm,0.6s
TAPN  Taplejung          48.19  84 eP      P      15 23 57.4 +0.4
LSA   Lhasa              49.98  79  P      P      15 24 10.8 -0.1
LSA                                 pmax   pmax
      comp=Z,3.0nm,0.9s
LSA   Lhasa              49.98  79  P      P      15 24 10.8 -0.1
LSA                                 IAmb   IAmb   15 24 17.4
      comp=Z,2.9nm,0.9s
TLY   Talaya             52.36  49  P      P      15 24 28.6 +0.8
      comp=Z,0.9nm,0.6s,baz=266,slow=7.3,SNR=4.3
TLY   Talaya             52.36  49 i P     P      15 24 28.7 +0.9
TLY                                 pmax   pmax
      comp=Z,11nm,3.6s
TLY   Talaya             52.36  49  P      P      15 24 28.4 +0.6
TLY                                 IAmb   IAmb   15 24 46.0
      comp=Z,5.7nm,1.4s
ZAK   Zakamensk          52.42  50 eP      P      15 24 28.1 -0.3
ZAK                                 pmax   pmax
      comp=Z,2.0nm,1.2s
GTA   Gaotai             53.13  64 ⇑P      P      15 24 34.7 +0.9
GTA                                 pP     pP     15 24 47.7 -1.4
GTA                                 sP     pwP    15 24 52.9 +0.4
GTA                                 S      S      15 31 58.3 -1.5
SONM  Songino Array      55.06  53  P      P      15 24 48.4 +0.7
      comp=Z,1.8nm,0.6s,baz=290,slow=7.7,SNR=15
SONM                                PcP    PcP    15 25 49.1 +0.5
      comp=Z,0.7nm,0.6s,baz=270,slow=2.6,SNR=3.3
SONM                                LR     LR     15 51 28.2
      comp=Z,84nm,18.3s,baz=218,slow=39
SONM  Songino Array      55.06  53  P      P      15 24 47.9 +0.2
SONM                                       PcP    15 25 48.8 +0.2
ULN   Ulaanbaatar        55.48  52  P      P      15 24 51.0 +0.2
ULN                                 pmax   pmax
      comp=Z,2.0nm,0.7s
ULN   Ulaanbaatar        55.48  52  P      P      15 24 51.0 +0.2
ULN                                 IAmb   IAmb   15 24 51.9
      comp=Z,2.1nm,0.7s
OPO   Ambohidratompo     56.25 162  P      P      15 24 57.9 +1.4
      comp=Z,3.0nm,0.6s,baz=313,slow=11,SNR=4.0
LZH   Lanzhou            57.31  67 eP      P      15 25 05.3 +1.3
LZH                                 pP     pP     15 25 18.1 -1.3
LZH                                 sP     sP     15 25 25.3 -0.7
LZH                                 PP     PP     15 27 08.2 -3.3
DGAR  Diego Garcia       57.90 130  P      P      15 25 07.1 -1.0
DGAR                                pmax   pmax
      comp=Z,165nm,1.1s
DGAR  Diego Garcia       57.90 130  P      P      15 25 07.1 -1.0
TIXI  Tiksi              58.64  22ceP      P      15 25 12.2 -0.3
TIXI                                pmax   pmax
      comp=Z,5.0nm,0.7s
TIXI  Tiksi              58.64  22  P      P      15 25 12.0 -0.5
CD2   Chengdu            59.39  72  P      P      15 25 17.1 -1.3
HHC   Hu-ho-hao-te       60.98  59 eP      P      15 25 29.8 +0.6
CHTO  Chiang Mai         61.31  87  P      P      15 25 31.5 -0.1
CHTO                                pmax   pmax
      comp=Z,3.0nm,1.1s
CHTO  Chiang Mai         61.31  87  P      P      15 25 31.5 -0.1
CHTO                                IAmb   IAmb   15 25 32.7
      comp=Z,3.4nm,1.1s
CM31  Chiang Mai Arr     61.49  87  P      P      15 25 32.9  0.0
CM31                                IAmb   IAmb   15 25 34.0
      comp=Z,4.3nm,0.8s
CMAR  Chiang Mai Arr     61.49  87  P      P      15 25 32.7 -0.2
      comp=Z,3.7nm,0.6s,baz=295,slow=8.5,SNR=36
CMAR                                PP     PP     15 27 46.1 -2.6
      comp=Z,0.4nm,0.5s,baz=305,slow=6.5,SNR=4.6
CMAR                                LR     LR     15 56 06.9
      comp=Z,23nm,18.5s,baz=210,slow=40
CMAR  Chiang Mai Arr     61.49  87  P      P      15 25 32.6 -0.3
XAN   Xi'an              61.94  67  P      P      15 25 36.4 +0.7
XAN                                 pP     pP     15 25 43.7 -7.6
XAN   Xi'an              61.94  67  P      P      15 25 35.8  0.0
XAN                                 pmax   pmax
      comp=Z,13nm,0.8s
XAN   Xi'an              61.94  67  P      P      15 25 35.8  0.0
ENH   Enshi              64.08  70  P      P      15 25 49.9  0.0
PBKT  Sadao Pong         64.13  88  P      P      15 25 50.9 +0.5
PBKT                                IAmb   IAmb   15 25 52.2
      comp=Z,3.0nm,0.9s
RES   Resolute Bay       64.16 346  P      P      15 25 50.3 +0.6
RES                                 pmax   pmax
      comp=Z,2.0nm,1.2s
RES   Resolute Bay       64.16 346  P      P      15 25 50.3 +0.6
BOSA  Boshof             64.46 186  P      P      15 25 54.5 +2.2
      comp=Z,1.5nm,0.8s,baz=354,slow=3.5,SNR=2.8
BJI   Beijing            64.51  58 eP      P      15 25 52.6 +0.1
SCHQ  Schefferville      65.80 321  P      P      15 25 59.8 -1.0
      comp=Z,3.4nm,0.8s,baz=104,slow=1.5,SNR=5.3
SCHQ  Schefferville      65.80 321  P      P      15 25 59.6 -1.1
SCHQ                                IAmb   IAmb   15 26 36.4
      comp=Z,14nm,1.6s
GBN   Guysborough        67.27 310  P      P      15 26 10.1 -0.1
WHN   Wuhan              67.63  68  P      P      15 26 20.1 +7.4
SUR   Sutherland         68.67 190  P      P      15 26 19.9 +0.7
LMN   Caledonia Moun     69.07 312  P      P      15 26 20.6 -0.9
BATG  Bathurst New B     69.09 314  P      P      15 26 21.7 +0.1
KLR   Kul'dur            69.82  43  P      P      15 26 25.4 -0.6
      comp=Z,1.8nm,0.6s,baz=310,slow=3.5,SNR=7.5
KLR   Kul'dur            69.82  43 i P     P      15 26 26.6 +0.6
KLR                                 pmax   pmax
      comp=Z,2.0nm,0.9s
KULM  Kulim              70.19  98  P      P      15 26 28.6 -0.3
KULM                                IAmb   IAmb   15 26 29.4
      comp=Z,6.8nm,0.7s
NJ2   Nanjing            70.22  64 eP      P      15 26 29.0 +0.2
PSI   Prapat             70.29 101  P      P      15 26 30.0 +0.5
      comp=Z,9.6nm,0.6s,baz=3.3,slow=4.0,SNR=5.7
RPSI  Rantau Prapat      70.35 101  P      P      15 26 29.0 -0.8
RPSI  Rantau Prapat      70.35 101  P      P      15 26 30.0 +0.2
SEY   Seymchan           70.85  25 i P     P      15 26 33.8 +1.7
E63A  Oxbow              70.92 314  P      P      15 26 33.0 +0.2
IPM   Ipoh               70.97  98  P      P      15 26 33.0 -0.6
IPM                                 IAmb   IAmb   15 26 44.7
      comp=Z,5.7nm,1.0s
BILL  Bilibino           70.99  16ceP      P      15 26 33.1 +0.3
BILL                                pmax   pmax
      comp=Z,5.0nm,1.1s
BILL  Bilibino           70.99  16  P      P      15 26 33.3 +0.4
BILL                                IAmb   IAmb   15 26 33.9
      comp=Z,5.0nm,1.1s
USA0B Ussuriysk Arra     72.67  48  P      P      15 26 43.0 -0.3
USA0B                               pmax   pmax
      comp=Z,17nm,1.5s
USA0B Ussuriysk Arra     72.67  48  P      P      15 26 43.0 -0.3
USRK  Ussuriysk Ar.      72.67  48  P      P      15 26 42.9 -0.4
      comp=Z,2.7nm,0.5s,baz=306,slow=5.4,SNR=10.0
USRK                                LR     LR     16 03 45.2
      comp=Z,69nm,18.4s,baz=218,slow=40
USRK  Ussuriysk Ar.      72.67  48  P      P      15 26 43.0 -0.3
C36M  Paulatuk           73.47 351  P      P      15 26 47.5 -0.1
C36M                                IAmb   IAmb   15 26 47.9
      comp=Z,3.8nm,0.6s
I63A  Otisfield          73.50 313  P      P      15 26 47.5 -0.7
KS19  Wonju Array Si     73.70  55  P      P      15 26 50.1 +0.5
KSAR  Wonju Array Be     73.74  55  P      P      15 26 49.5 -0.3
KSAR  Wonju Array Be     73.74  55  P      P      15 26 49.5 -0.3
KSRS  Korea Array        73.76  55  P      P      15 26 49.9  0.0
      comp=Z,2.7nm,0.6s,baz=308,slow=4.1,SNR=12
KSRS                                LR     LR     16 00 53.9
      comp=Z,24nm,19.2s,baz=110,slow=37
BMAR  Burnt Mountain     76.91 358  P      P      15 27 08.3 +0.9
COLD  Coldfoot           77.15   1  P      P      15 27 08.9 +0.1
YKA   Yellowknife Ar     78.15 345  P      P      15 27 14.2 -0.2
      comp=Z,1.6nm,0.7s,baz=33,slow=5.5,SNR=31
IMAR  Indian Mountai     78.33   2  P      P      15 27 16.1 +0.7
ANM   Nome               78.97   7  P      P      15 27 19.5 +0.6
ANM                                 pmax   pmax
      comp=Z,3.0nm,1.1s
ANM   Nome               78.97   7  P      P      15 27 19.5 +0.6
MLY   Manley             79.35   1  P      P      15 27 21.2 +0.2
EGAK  Eagle              79.45 357  P      P      15 27 22.8 +1.3
EGAK                                IAmb   IAmb   15 27 24.5
      comp=Z,3.1nm,0.9s
ILAR  Eielson Array      79.62 359  P      P      15 27 22.7 +0.3
      comp=Z,0.4nm,0.6s,baz=339,slow=4.8,SNR=7.8
ILAR  Eielson Array      79.62 359  P      P      15 27 22.6 +0.2
CCB   Clear Creek Bu     79.75 360  P      P      15 27 23.1  0.0
WRH   Wood River Hil     79.93 360  P      P      15 27 24.3 +0.3
WRH                                 IAmb   IAmb   15 27 26.2
      comp=Z,3.1nm,0.7s
DAWY  Dawson             80.06 356  P      P      15 27 25.4 +0.5
DAWY                                IAmb   IAmb   15 28 03.7
      comp=Z,7.2nm,1.5s
MJAR  Matsushiro Arr     80.99  51  LR     LR     16 07 30.9
      comp=Z,53nm,18.1s,baz=230,slow=39
BCAR  Beaver Creek A     81.18 357  P      P      15 27 30.9  0.0
ULM   Lac du Bonnet      82.36 329  P      P      15 27 35.8 -1.4
      comp=Z,1.3nm,0.6s,baz=71,slow=6.6,SNR=4.3
ULM   Lac du Bonnet      82.36 329  P      P      15 27 36.2 -1.1
ULM                                 IAmb   IAmb   15 28 12.7
      comp=Z,12nm,1.6s
PDAR  Pinedale Array     93.92 332  P      P      15 28 32.9 -0.6
      comp=Z,0.3nm,0.7s,baz=22,slow=2.9,SNR=3.0
PDAR  Pinedale Array     93.92 332  P      P      15 28 32.3 -1.1
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*ISK **06** 15:25:43.7, 36°.05N×31°.45E, h14km, ML2.6/15*
*NIC **06** 15:25:44.4±0.0, 36°.24N×31°.79E, h32km±19km, Ml2.6/2*
ISC 06 15:25:44.7±1.4, **36°.06N**±0°.04×**31°.53E**±0°.04, **h30**km±15km, **n21**, σ**1s.09**/29, **Turkey**

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Code  Station Name        Δ°   AZ°  Phase ID        Time      Res
                                    Op     ISC     h  m  s    ISC
ALAN  Alanya-ANTALYA      0.64  39  PG     Pn     15 25 57.4 -0.4
ALAN                                SG     Sn     15 26 07.6 +0.7
GAZI  Gazipasa            0.66  74  PG     Pn     15 25 58.3 +0.3
GAZI                                SG     Sn     15 26 08.7 +1.4
HDMB  Hadim               1.18  40  PN     Pb     15 26 07.6 +0.9
AKMS  Akamas              1.23 148  P      Pn     15 26 06.4 +0.6
AKMS                                S      Sn     15 26 23.0 +1.5
AKMS                                AML    AML    15 26 29.7
      0.5nm,0.4s
AKMS                                AML    AML    15 26 29.7
      0.5nm,0.4s
AKMS                                AML    AML    15 26 30.9
      0.6nm,0.4s
AKMS                                AML    AML    15 26 30.9
      0.6nm,0.4s
ALFC  Alefka              1.25 136  P      Pn     15 26 05.6 -0.6
ALFC                                S      Sn     15 26 22.5 +0.4
ALFC                                AML    AML    15 26 23.7
      0.3nm,0.2s
ALFC                                AML    AML    15 26 23.7
      0.3nm,0.2s
ALFC                                AML    AML    15 26 28.6
      0.3nm,0.3s
ALFC                                AML    AML    15 26 28.6
      0.3nm,0.3s
TEKE  Tekeli-Mersin       1.28  86  PN     Pb     15 26 08.1 -0.2
TEKE                                SN     Sb     15 26 26.6 +2.2
KORT  Korkueli            1.34 315  PN     Pn     15 26 08.2 +0.7
SEYD  Seydisehir-KON      1.36  10  PN     Pb     15 26 08.3 -1.4
BERE  Bereket-Mersin      1.40  78  PN     Pb     15 26 10.4 +0.1
ELL   Elmali              1.48 298  PN     Pn     15 26 09.4  0.0
ELL   Elmali              1.48 298  P      Pn     15 26 10.2 +0.8
ELL                                 S      Sn     15 26 28.4 +0.5
AKAS  Kas                 1.57 277  PN     Pn     15 26 10.9 +0.2
TEVE  Tevekalti-Mers      1.59  76  PN     Pb     15 26 13.5  0.0
AKKU  Akkuyu-Mersin       1.64  86  PN     Pb     15 26 13.7 -0.5
IKL   Isikli              1.75  84  PN     Pb     15 26 15.4 -0.8
IKL                                 SN     Sb     15 26 38.6 +0.8
KEBE  Keben-Mersin        1.80  77  PN     Pb     15 26 16.5 -0.6
CSS   Mathiatis           1.83 126  PN     Pb     15 26 16.4 -1.2
CSS   Mathiatis           1.83 126  P      Pn     15 26 12.8 -1.3
ASGA  Asgata              1.89 132  P      Pn     15 26 14.7 -0.2
ASGA                                S      Sn     15 26 37.6 -0.2
MVOU  Mavrovouni          2.00 121  P      Pn     15 26 15.2 -1.3
MVOU                                S      Sn     15 26 38.9 -1.7
LADK  Ladik-KONYA         2.24  17  PN     Pb     15 26 22.1 -2.4
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*IDC **06** 15:39:05.5±3.2, 6°.67S×151°.83E, h44km±25km, mb3.5/6, mb1 3.8/8, mb1mx3.5/32, mbtmp3.8/8, ML1.8/1, MS2.4/1, Ms1 2.4/1, ms1mx2.3/20, Error ellipse: s-maj=49.8km s-min=9.4km az=120.0*
ISC 06 15:39:04.2±1.3, **6°.7S**±0°.1×**152°.0E**±0°.2, **h37**km, **n9**, σ**0s.94**/11, **mb3.6**/6, **New Britain region**

```
Code  Station Name        Δ°   AZ°  Phase ID        Time      Res
                                    Op     ISC     h  m  s    ISC
KRVT  Keravat (AS076      2.41   1  P      Pn     15 39 41.4 +0.3
      92nm,0.3s,baz=113,slow=1.5,SNR=26
KRVT                                S      Sn     15 40 09.8 +0.4
      220nm,0.3s,baz=190,slow=22,SNR=18
KRVT                                LR     LR     15 40 12.9
      comp=Z,84nm,19.0s,baz=219,slow=29
PMG   Port Moresby        5.47 241  P      Pn     15 40 24.8 +1.6
      2.2nm,0.3s,baz=51,slow=7.8,SNR=9.9
PMG                                 S      Sn     15 41 24.0 -0.9
      6.5nm,0.3s,baz=178,slow=16,SNR=13
WRA   Warramunga Arr     21.58 231  P      P      15 43 50.6 -0.4
      0.9nm,0.6s,baz=56,slow=10,SNR=9.6
ASAR  Alice Springs      24.19 224  P      P      15 44 18.4 +0.9
      1.6nm,0.6s,baz=55,slow=10.0,SNR=35
STKA  Stephens Creek     26.83 200  P      P      15 44 40.6 -0.7
      1.2nm,0.7s,baz=342,slow=13,SNR=3.0
FITZ  Fitzroy Crossi     28.05 244  P      P      15 44 51.3 -1.0
      1.7nm,0.4s,baz=57,slow=8.2,SNR=13
MKAR  Makanchi Array     81.24 319  P      P      15 51 15.7 -0.8
      0.1nm,0.4s,baz=105,slow=6.1,SNR=2.4
ILAR  Eielson Array      84.24  22  P      P      15 51 32.2 +0.6
      0.4nm,0.8s,baz=251,slow=5.6,SNR=3.6
TORD  Torodi Ar. Bea    150.07 285  PKPbc  PKPbc  15 58 52.2 +0.1
      1.4nm,0.6s,baz=76,slow=3.0,SNR=8.7
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*MDD **06** 15:49:60.0±2.1, 36°.59N×11°.90W, h0km, mb4.1/1, Error ellipse: s-maj=18.9km s-min=16.9km az=112.0, PRXIMO*
*IGIL **06** 15:50:00.8, 36°.45N×12°.05W, h30km, ML2.2*
*INMG **06** 15:50:01.2±1.5, 36°.44N×12°.09W, h31km, ML2.2, Error ellipse: s-maj=13.0km s-min=6.6km az=97.0*
ISC 06 15:50:00.4±4.1, **36°.7N**±0°.1×**11°.9W**±0°.2, **h10**km, **n36**, σ**0s.90**/57, **Azores-Cape St. Vincent Ridge**

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Code  Station Name        Δ°   AZ°  Phase ID        Time      Res
                                    Op     ISC     h  m  s    ISC
PFVI  Vila Bisbo          2.47  78  Pn     Pn     15 50 40.3 -0.5
      2.6nm,0.1s,SNR=7.9
PFVI                                Sn     Sn     15 51 10.4 -0.6
      SNR=7.9
PFVI  Vila Bisbo          2.47  78 ePn     Pn     15 50 40.2 -0.5
PFVI                               eSn     Sn     15 51 10.6 -0.4
PFVI                                A      A      15 51 11.9
      3.4nm,0.1s
MORF  Marmelete           2.64  75 eP      Pn     15 50 43.1  0.0
MORF                               eS      Sn     15 51 14.0 -1.3
MORF                                AML    AML    15 51 16.6
      comp=N,8.9nm,0.3s
MORF  Marmelete           2.64  75  Pn     Pn     15 50 43.3 +0.1
MORF                                Sn     Sn     15 51 16.3 +1.0
      comp=N,4.5nm,0.1s
MORF  Marmelete           2.64  75 ePn     Pn     15 50 43.3 +0.1
MORF                               eSn     Sn     15 51 16.3 +1.0
MORF                                A      A      15 51 16.8
      comp=N,4.5nm,0.1s
PTEO  Sao Teotonio        2.65  70  Sn     Sn     15 51 16.7 +1.3
      comp=N,0.9nm,0.1s
PTEO  Sao Teotonio        2.65  70 eSn     Sn     15 51 16.7 +1.3
PTEO                                A      A      15 51 18.0
      comp=N,1.8nm,0.1s
PNCL  Nicolau / Gran      3.01  60  Pn     Pn     15 50 49.5 +1.3
PNCL                                Sn     Sn     15 51 24.6 +0.2
      comp=N,2.5nm,0.1s
PNCL  Nicolau / Gran      3.01  60 ePn     Pn     15 50 49.5 +1.3
PNCL                               eSn     Sn     15 51 24.6 +0.2
PNCL                                A      A      15 51 27.8
      comp=N,2.5nm,0.1s
PMAFR Mafra               3.06  41  Sn     Sn     15 51 26.1 +0.6
      SNR=7.9
PMAFR Mafra               3.06  41 eSn     Sn     15 51 25.3 -0.2
PMAFR                               A      A      15 51 27.7
      comp=N,21nm,0.2s
PBDV  Barranco-do-Ve      3.19  79  Pn     Pn     15 50 50.6 -0.1
PBDV                                Sn     Sn     15 51 28.7 -0.2
      comp=N,1.9nm,0.2s
PBDV  Barranco-do-Ve      3.19  79 ePn     Pn     15 50 50.6 -0.1
PBDV                               eSn     Sn     15 51 28.7 -0.2
PBDV                                A      A      15 51 33.3
      comp=N,1.9nm,0.2s
PCVE  Castro Verde        3.19  71  Pn     Pn     15 50 51.2 +0.5
PCVE  Castro Verde        3.19  71 ePn     Pn     15 50 51.2 +0.5
PVAQ  Vaqueiros           3.39  76  Pn     Pn     15 50 53.4  0.0
PVAQ                                Sn     Sn     15 51 32.8 -0.9
      comp=N,2.3nm,0.2s
PVAQ  Vaqueiros           3.39  76 ePn     Pn     15 50 53.4  0.0
PVAQ                               eSn     Sn     15 51 32.8 -0.9
PVAQ                                A      A      15 51 36.0
      comp=N,2.3nm,0.2s
EGRO  El Granado          3.60  75  Pn     Pn     15 50 56.2 -0.1
      comp=N,0.1nm,0.1s,SNR=7.9
EGRO                                Sn     Sn     15 51 38.6 -0.2
      SNR=7.9
PMTG  Montargil           3.74  49  Pn     Pn     15 50 59.4 +1.2
PMTG                                Sn     Sn     15 51 41.7 -0.6
      comp=N,3.6nm,0.2s
PMTG  Montargil           3.74  49 ePn     Pn     15 50 59.4 +1.2
PMTG                               eSn     Sn     15 51 41.7 -0.6
PMTG                                A      A      15 51 42.4
      comp=N,3.6nm,0.2s
PTOM  Tomar               4.00  42  Sn     Sn     15 51 49.0 +0.2
      comp=N,3.5nm,0.2s
PTOM  Tomar               4.00  42 eSn     Sn     15 51 49.0 +0.2
PTOM                                A      A      15 51 49.9
      comp=N,7.0nm,0.2s
PESTR Estremoz            4.03  56 eSn     Sn     15 51 49.2 -0.2
EMIN  Mina Concepcio      4.28  74  Pn     Pn     15 51 06.1 +0.5
      comp=N,0.2nm,0.1s,SNR=4.0
EMIN                                Sn     Sn     15 51 54.5 -1.1
      SNR=7.9
PCAS  Casmilo, Conde      4.28  37  Pn     Pn     15 51 06.4 +0.7
PCAS                                Sn     Sn     15 51 55.1 -0.6
      comp=N,2.7nm,0.1s
PCAS  Casmilo, Conde      4.28  37 ePn     Pn     15 51 06.4 +0.7
PCAS                               eSn     Sn     15 51 55.1 -0.6
PCAS                                A      A      15 51 58.3
      comp=N,2.7nm,0.1s
EBAD  Badajoz             4.37  60  Pn     Pn     15 51 07.5 +0.7
      comp=N,0.2nm,0.1s,SNR=7.9
EBAD                                Sn     Sn     15 51 57.2 -0.5
      SNR=7.9
PMRV  Marv??o             4.47  51  Pn     Pn     15 51 09.2 +0.9
PMRV                                Sn     Sn     15 51 58.9 -1.4
      comp=N,3.0nm,0.2s
PMRV  Marv??o             4.47  51 ePn     Pn     15 51 09.2 +0.9
PMRV                               eSn     Sn     15 51 58.9 -1.4
PMRV                                A      A      15 52 01.4
      comp=N,3.0nm,0.2s
PCBR  Castelo Branco      4.68  46  Sn     Sn     15 52 04.4 -1.0
      comp=N,1.0nm,0.4s
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PCBR	**Castelo Branco**	**4.68**	**46**	*e*Sn	**Sn**	**15 52 04.4**	**-1.0**
PCBR				A	A	15 52 08.7	
	comp=N,2.0nm,0.4s						
MTE	**Manteigas**	**5.03**	**41**	Sn	**Sn**	**15 52 13.6**	**-0.5**
	comp=N,1.9nm,0.4s						
MTE	**Manteigas**	**5.03**	**41**	*e*Sn	**Sn**	**15 52 13.6**	**-0.5**
MTE				A	A	15 52 18.4	
	comp=N,3.9nm,0.4s						
MVO	**Moncorvo**	**5.86**	**39**	*e*Sn	**Sn**	**15 52 32.6**	**-1.9**
MVO				A	A	15 52 34.3	
	comp=N,2.5nm,0.1s						
ELOB	**Lobios**	**5.96**	**28**	Sn	**Sn**	**15 52 34.3**	**-2.9**
	SNR=7.9						
EADA	**Adamuz**	**5.98**	**73**	Pn	**Pn**	**15 51 29.8**	**+0.8**
	comp=N,0.1nm,0.1s,SNR=4.0						
EADA				Sn	**Sn**	**15 52 37.0**	**-0.7**
	SNR=7.9						

WEL 06 15:51:48.7±0.8, 32.°S±5.°×18.°0E±2.°3, h33^{km}, M4.1/18, mB4.6/7, ML4.5/18, MLv4.3/18, Mw(mB)3.8/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WIZ	**White Island**	**5.61**	**199**	P	Pn	15 53 04.0	-5.7
WMGZ	**Waiomatatini S**	**5.64**	**189**	P	Pn	15 53 11.7	+1.5
WMGZ				S	Sn	15 54 14.9	+1.1
HAZ	**Te Kaha**	**5.68**	**194**	P	Pn	15 53 12.8	+2.1
HAZ				S	Sn	15 54 17.1	+2.3
PKGZ	**Pakihiroa**	**5.76**	**191**	P	Pn	15 53 12.8	+0.9
PKGZ				S	Sn	15 54 19.2	+2.4
RUGZ	**Raukumara Rang**	**5.91**	**194**	P	Pn	15 53 15.8	+1.8
RUGZ				S	Sn	15 54 20.9	+0.4
PUZ	**Puketiti**	**5.91**	**190**	P	Pn	15 53 13.7	-0.2
PUZ				S	Sn	15 54 20.7	+0.3
TWGZ	**Tauwhareparae**	**6.05**	**192**	P	Pn	15 53 18.7	+2.7
TWGZ				S	Sn	15 54 25.7	+1.6
EDRZ	**Edgecumbe**	**6.28**	**200**	P	Pn	15 53 18.7	-0.3
MWZ	**Matawai**	**6.29**	**194**	P	Pn	15 53 18.9	-0.3
MWZ				S	Sn	15 54 29.4	-0.5
URZ	**Urewera**	**6.32**	**197**	P	Pn	15 53 20.3	+0.8
TKGZ	**Te Karaka**	**6.33**	**192**	P	Pn	15 53 18.8	-0.8
TKGZ				S	Sn	15 54 29.3	-1.5
RAGZ	**Rawiri**	**6.47**	**195**	P	Pn	15 53 20.5	-1.2
RIGZ	**Rimuhau**	**6.61**	**192**	P	Pn	15 53 23.7	+0.2
MUGZ	**Murupara**	**6.61**	**199**	P	Pn	15 53 24.6	+1.0
RTZ	**Ruatahuna**	**6.69**	**197**	P	Pn	15 53 24.7	+0.1
SNGZ	**Shannon Statio**	**6.76**	**195**	P	Pn	15 53 25.9	+0.3
TLZ	**Tolley Road**	**6.89**	**207**	P	Pn	15 53 30.2	+2.8
MTHZ	**Maungataniwha**	**6.95**	**197**	P	Pn	15 53 27.9	-0.3
RAHZ	**Arahi**	**6.95**	**196**	P	Pn	15 53 28.2	0.0
NMHZ	**Naumai**	**7.19**	**197**	P	Pn	15 53 30.6	-0.9
ARHZ	**Aropaoanui**	**7.30**	**196**	P	Pn	15 53 30.8	-2.2
BKZ	**Black Stump Fm**	**7.33**	**199**	P	Pn	15 53 31.8	-1.6
MCHZ	**McNeill Hill**	**7.54**	**197**	P	Pn	15 53 34.7	-1.6
KWHZ	**Kaweka Forest**	**7.59**	**198**	P	Pn	15 53 35.0	-2.1

MAN 06 16:02:01.6, 10.°59N×123.°82E, h15^{km}, mb3.7, ML2.4, MS1.9, Cebu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.31**	**153**	*e*P	Pb	16 02 09.3	+0.4
LLP				*i* S	Sn	16 02 18.8	+0.9

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*NEIC **06** 16:22:11.7±1.1, 18.°1S±0.°2×178.°3W±0.°2, h536^{km}±7^{km}, mb4.4/17, Error ellipse: s-maj=30.5km s-min=21.6km az=137.0*

*IDC **06** 16:22:17.2±16.0, 17.°90S×178.°68W, h579^{km}±159^{km}, mb3.4/4, mb1 3.6/4, mb1mx3.0/30, mbtmp4.4/4, Error ellipse: s-maj=122.9km s-min=42.6km az=101.0*

ISC 06 16:22:12.2±0.9, 18.°1S±0.°2×178.°2W±0.°1, h550^{km}, n31, σ0.^{s}70/33, mb4.3/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.58**	**275**	P	**P**	**16 23 28.7**	**-2.4**
AFI	**Afiamalu**	**7.44**	**57**	P	**P**	**16 24 04.3**	**-0.3**
FOZ	**Fox Glacier**	**27.33**	**199**	P	**P**	**16 27 12.8**	**-0.4**
ARMA	**Armidale**	**30.03**	**240**	P	**P**	**16 27 37.5**	**+0.4**
ARMA				IAmb	IAmb	16 27 38.0	
	comp=Z,10nm,1.2s						
PMG	**Port Moresby**	**34.67**	**280**	P	**P**	**16 28 16.3**	**-0.2**
TOO	**Toolangi**	**37.22**	**231**	P	**P**	**16 28 37.3**	**0.0**
TOO				IAmb	IAmb	16 28 43.6	
	comp=Z,22nm,1.6s						
COEN	**Coen**	**37.30**	**271**	P	**P**	**16 28 38.8**	**+0.6**
STKA	**Stephens Creek**	**38.72**	**241**	P	**P**	**16 28 50.2**	**+0.7**
	comp=Z,2.5nm,0.5s,baz=76,slow=9.5,SNR=9.7						
STKA	**Stephens Creek**	**38.72**	**241**	P	**P**	**16 28 49.9**	**+0.4**
BBOO	**Buckleboo**	**43.50**	**241**	P	**P**	**16 29 27.7**	**+0.3**
BBOO				IAmb	IAmb	16 29 46.9	
	comp=Z,37nm,1.4s						
WR0	**Warramunga Arr**	**44.60**	**260**	P	**P**	**16 29 35.7**	**-0.4**
WR0				IAmb	IAmb	16 29 39.3	
	comp=Z,16nm,1.6s						
WB0	**Warramunga Arr**	**44.76**	**260**	P	**P**	**16 29 36.8**	**-0.5**
WB0				IAmb	IAmb	16 29 52.5	
	comp=Z,9.9nm,1.4s						
WB2	**Warramunga Arr**	**44.78**	**260**	P	**P**	**16 29 36.7**	**-0.8**
WB2				IAmb	IAmb	16 29 49.6	
	comp=Z,8.6nm,1.3s						
WRA	**Warramunga Arr**	**44.79**	**260**	P	**P**	**16 29 37.1**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=98,slow=7.1,SNR=49						
WRA	**Warramunga Arr**	**44.79**	**260**	P	**P**	**16 29 36.7**	**-0.9**
AS31	**Alice Springs**	**44.93**	**254**	P	**P**	**16 29 38.6**	**-0.1**
ASAR	**Alice Springs**	**44.93**	**254**	P	**P**	**16 29 38.7**	**+0.1**
	comp=Z,11nm,0.6s,baz=89,slow=8.2,SNR=209						
ASAR				PcP	**PcP**	**16 31 09.1**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=98,slow=3.5,SNR=4.2						
ASAR	**Alice Springs**	**44.93**	**254**	P	**P**	**16 29 38.1**	**-0.5**
ASAR					**PcP**	**16 31 08.6**	**+0.3**
FORT	**Forrest**	**50.11**	**245**	P	**P**	**16 30 17.2**	**-0.1**
FORT				IAmb	IAmb	16 30 21.4	
	comp=Z,16nm,0.9s						
KNRA	**Kununurra**	**50.66**	**264**	P	**P**	**16 30 21.1**	**-0.4**
KNRA				IAmb	IAmb	16 30 21.8	
	comp=Z,22nm,1.4s						
FITZ	**Fitzroy Crossi**	**53.19**	**261**	P	**P**	**16 30 40.3**	**+0.7**
SOEI	**Soe**	**56.26**	**270**	P	**P**	**16 31 03.2**	**+1.8**
SOEI				IAmb	IAmb	16 31 06.1	
	comp=Z,24nm,1.3s						
MJAR	**Matsushiro Arr**	**68.15**	**323**	P	**P**	**16 32 18.0**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=145,slow=7.6,SNR=4.3						
MJAR	**Matsushiro Arr**	**68.15**	**323**	P	**P**	**16 32 17.7**	**-0.1**
ARCES	**ARCESS Array B**	**126.50**	**350**	PKP	**PKiKP**	**16 40 13.0**	**+0.1**
	comp=Z,4.9nm,1.1s,baz=357,slow=1.8,SNR=2.4						
BRTR	**Keskin Array B**	**145.03**	**315**	PKP	**PKPbc**	**16 40 48.5**	**+0.3**
	comp=Z,1.4nm,0.9s,baz=134,slow=5.3,SNR=6.5						
BRTR	**Keskin Array B**	**145.03**	**315**		**PKPab**	**16 40 49.6**	**+0.3**
CLL	**Collm**	**145.66**	**348**	*i* PKPbc	**PKPab**	**16 40 51.3**	**+0.2**
	comp=Z,6.0nm,1.0s						
KHC	**Kasperske Hory**	**147.58**	**346**	*e*PKP	**PKPbc**	**16 40 55.5**	**+0.6**
GERES	**GERESS Array B**	**147.81**	**345**	PKPbc	**PKiKP**	**16 40 56.8**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=16,slow=3.8,SNR=9.4						
GERES	**GERESS Array B**	**147.81**	**345**		**PKiKP**	**16 40 56.6**	**-0.4**

KEA 06 16:31:03.5±0.0, 40.°61N×122.°73E, h0^{km}, ML2.5/1, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUJ	**Sinuiju**	**1.44**	**110**	Pg	Pn	16 31 30.7	-0.1
SUJ				Sg	Sg	16 31 49.2	-0.6
PYS	**Pyongsong**	**2.76**	**118**	Sg	Sg	16 32 30.9	-1.3
KGE	**Kanggye**	**2.97**	**82**	Sg	Sb	16 32 36.5	+2.4

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*TAP **06** 16:38:49.0, 23.°51N×122.°10E, h56^{km}, ML2.9, D*

*JMA **06** 16:38:48.2, 23.°53N×122.°09E, h49^{km}, M2.5*

ISC 06 16:38:47.1±1.1, 23.°47N±0.°02×122.°17E±0.°02, h25^{km}±12^{km}, n72, σ0.^{s}60/131, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENLB	**Shoufeng**	**0.68**	**310**	*e*P	**Pn**	**16 39 01.3**	**+0.2**
	baz=316						
HGSD	**Ruisui**	**0.69**	**272**	*e*P	**Pb**	**16 39 00.7**	**+0.2**
	baz=274						
HGSD				*e*S	**Sb**	**16 39 09.3**	**-0.2**
	baz=274						
EGFH	**Guangfu**	**0.71**	**286**	*e*P	**Pb**	**16 39 01.1**	**+0.2**
	baz=288						
EGFH				S	**Sn**	**16 39 11.6**	**-0.1**
	baz=288						
HWA	**Hwalien**	**0.72**	**314**	*e*S	**Sn**	**16 39 12.3**	**+0.3**
	baz=319						
ESL	**Shilin**	**0.76**	**297**	*e*P	**Pb**	**16 39 01.4**	**-0.3**
	baz=295						
ESL				*e*S	**Sb**	**16 39 11.8**	**+0.2**
	baz=295						
EHY	**Hungye**	**0.78**	**273**	P	**Pb**	**16 39 02.5**	**+0.4**
	baz=270						
EHY				S	**Sn**	**16 39 13.6**	**+0.1**
	baz=270						
TWD	**Chiawan**	**0.80**	**319**	*e*P	**Pn**	**16 39 02.3**	**-0.5**
	baz=322						
TWD				*e*S	**Sb**	**16 39 12.6**	**-0.2**
	baz=322						
YULB	**Yu-li**	**0.81**	**265**	*i* P	**Pb**	**16 39 03.0**	**+0.5**
	baz=261						
YULB				S	**Sn**	**16 39 13.9**	**-0.1**
	baz=261						
TWF1	**Yuli**	**0.81**	**262**	P	**Pb**	**16 39 02.9**	**+0.3**
	baz=252						
TWF1				S	**Sn**	**16 39 14.4**	**+0.1**
	baz=252						
CHKT	**Chengkung**	**0.83**	**244**	*e*S	**Sb**	**16 39 13.2**	**-0.3**
	baz=235						
FULB	**Fuli**	**0.85**	**252**	*e*P	**Pn**	**16 39 03.3**	**-0.2**
	baz=242						
FULB				*e*S	**Sb**	**16 39 13.3**	**-0.9**
	baz=242						
NACB	**Ninganchiao**	**0.88**	**323**	*e*P	**Pn**	**16 39 03.3**	**-0.5**
	baz=324						
NACB				S	**Sb**	**16 39 13.8**	**-1.2**
	baz=324						
ETLH	**Xiulin Townshi**	**0.97**	**319**	P	**Pn**	**16 39 04.7**	**-0.5**
	baz=321						
ETLH				*e*S	**Sn**	**16 39 17.5**	**-0.7**
	baz=321						
VWDT	**VWDT**	**0.98**	**287**	*i* P	**Pb**	**16 39 05.7**	**+0.1**
	baz=281						
VWDT				*e*S	**Sn**	**16 39 17.4**	**-1.1**
	baz=281						
TWH	**Lutao**	**0.99**	**220**	*e*P	**Pb**	**16 39 05.7**	**+0.1**
	baz=214						
TWH				*e*S	**Sn**	**16 39 18.0**	**-0.6**
	baz=214						
ENA	**Nanau**	**1.03**	**338**	P	**Pb**	**16 39 06.7**	**+0.4**
	baz=333						
ENA				*e*S	**Sn**	**16 39 19.6**	**0.0**
	baz=333						
OWD	**Renai**	**1.03**	**298**	*i* P	**Pn**	**16 39 05.9**	**-0.3**
	baz=307						
OWD				S	**Sn**	**16 39 18.2**	**-1.6**
	baz=307						
WHF	**Hehuan Shan**	**1.07**	**309**	P	**Pn**	**16 39 06.5**	**-0.3**
	baz=310						
WHF				*e*S	**Sn**	**16 39 20.4**	**-0.7**
	baz=310						
EOS1	**EOS1**	**1.07**	**358**	P	**Pb**	**16 39 07.3**	**+0.3**
	baz=2.0						
EOS1				S	**Sb**	**16 39 21.3**	**+0.6**
	baz=2.0						
CHGB	**Renai**	**1.08**	**303**	P	**Pn**	**16 39 07.1**	**+0.2**
	baz=312						
CHGB				*e*S	**Sn**	**16 39 20.1**	**-1.2**
	baz=312						
ELDTW	**Lidau**	**1.10**	**255**	*e*P	**Pn**	**16 39 06.8**	**-0.2**
	baz=252						
ELDTW				*e*S	**Sn**	**16 39 20.1**	**-1.3**
	baz=252						
YUS	**Yu-Shan**	**1.12**	**271**	P	**Pn**	**16 39 07.8**	**+0.2**
	baz=276						
YUS				*e*S	**Sn**	**16 39 21.3**	**-1.2**
	baz=276						
SSLB	**Suanglung**	**1.16**	**286**	P	**Pn**	**16 39 08.1**	**+0.3**
	baz=291						
SSLB				*e*S	**Sn**	**16 39 22.2**	**-0.6**
	baz=291						
TWC	**Suao**	**1.17**	**346**	P	**Pb**	**16 39 08.5**	**-0.2**
	baz=349						
TWC				S	**Sn**	**16 39 22.8**	**-0.3**
	baz=349						
TTN	**Taitung**	**1.18**	**233**	*e*S	**Sn**	**16 39 23.4**	**+0.1**
	baz=229						
NNSB	**Datong**	**1.20**	**323**	*e*P	**Pn**	**16 39 08.5**	**+0.1**
	baz=317						
NNSB				*e*S	**Sn**	**16 39 22.9**	**-0.9**
	baz=317						
NNSH	**Datong**	**1.20**	**323**	P	**Pn**	**16 39 08.7**	**+0.3**
	baz=317						
NNSH				S	**Sn**	**16 39 22.2**	**-1.6**
	baz=317						
TWGBT	**Beinan**	**1.20**	**237**	P	**Pn**	**16 39 08.6**	**+0.4**
	baz=244						
TWGBT				S	**Sn**	**16 39 22.9**	**-0.8**
	baz=244						
TWT	**Tachien**	**1.20**	**311**	P	**Pb**	**16 39 09.9**	**+0.7**
	baz=311						
TWT				S	**Sn**	**16 39 22.9**	**-1.1**
	baz=311						
TWG	**Pinlang**	**1.20**	**238**	P	**Pn**	**16 39 08.5**	**+0.2**
	baz=244						
TWG				*e*S	**Sn**	**16 39 23.4**	**-0.4**
	baz=244						
NNS	**Nan Shan**	**1.21**	**323**	P	**Pn**	**16 39 08.9**	**+0.3**
	baz=318						
NNS				S	**Sn**	**16 39 23.3**	**-0.9**
	baz=318						
TDCB	**Techi**	**1.21**	**310**	P	**Pn**	**16 39 09.1**	**+0.5**
	baz=311						
TDCB				S	**Sn**	**16 39 22.9**	**-1.4**
	baz=311						
WHYT	**Xinyi Township**	**1.23**	**281**	*e*P	**Pn**	**16 39 09.3**	**+0.6**
	baz=277						
WHYT				*e*S	**Sn**	**16 39 24.6**	**0.0**
	baz=277						
SMLT	**Sun Moon Lake**	**1.23**	**290**	P	**Pn**	**16 39 09.3**	**+0.4**
	baz=293						
SMLT				*e*S	**Sn**	**16 39 24.7**	**-0.1**
	baz=293						
ALS	**Alishan**	**1.25**	**272**	P	**Pb**	**16 39 10.4**	**+0.1**
	baz=270						
ALS				S	**Sn**	**16 39 25.9**	**+0.3**
	baz=270						
DPDB	**Guoxing**	**1.27**	**296**	P	**Pb**	**16 39 10.2**	**-0.3**
	baz=302						
DPDB				*e*S	**Sn**	**16 39 25.5**	**-0.1**
	baz=302						
NDT	**Datong Townshi**	**1.28**	**332**	*e*P	**Pb**	**16 39 10.5**	**0.0**
	baz=327						
NDT				S	**Sn**	**16 39 24.9**	**-0.8**
	baz=327						
TYC	**Yuchr**	**1.28**	**290**	*e*P	**Pb**	**16 39 10.4**	**-0.1**
	baz=295						
ENTT	**Nioudou**	**1.29**	**335**	P	**Pn**	**16 39 09.7**	**+0.1**
	baz=330						
ENTT				S	**Sn**	**16 39 26.0**	**0.0**
	baz=330						
TWE	**Neicheng**	**1.33**	**340**	*e*P	**Pn**	**16 39 10.5**	**+0.5**
	baz=343						
TWE				S	**Sn**	**16 39 27.5**	**+0.6**
	baz=343						
STYT	**Tauyuan**	**1.33**	**257**	P	**Pb**	**16 39 11.1**	**-0.4**
	baz=251						
STYT				*e*S	**Sb**	**16 39 28.1**	**-0.1**
	baz=251						
SLBB	**Yuanshan**	**1.37**	**339**	*e*P	**Pn**	**16 39 11.2**	**+0.6**
	baz=341						
SLBB				*e*S	**Sn**	**16 39 27.8**	**-0.2**
	baz=341						
WJS	**Zhushan**	**1.37**	**285**	*e*P	**Pb**	**16 39 12.6**	**+0.6**
	baz=276						
WJS				*e*S	**Sb**	**16 39 30.0**	**+0.9**
	baz=276						
CHN5	**Tsauling**	**1.38**	**276**	P	**Pb**	**16 39 13.0**	**+0.8**
	baz=274						
CHN5				S	**Sb**	**16 39 30.1**	**+0.7**
	baz=274						
WHP	**Taichung City**	**1.38**	**306**	P	**Pb**	**16 39 12.5**	**+0.2**
	baz=312						
WHP				S	**Sn**	**16 39 28.4**	**0.0**
	baz=312						
NSK	**Sanguang**	**1.41**	**328**	*e*P	**Pn**	**16 39 11.6**	**+0.3**
	baz=330						
NSK				S	**Sn**	**16 39 28.8**	**-0.4**
	baz=330						
ECL	**Taimali**	**1.42**	**232**	*e*P	**Pn**	**16 39 11.9**	**+0.6**
	baz=236						
ECL				*e*S	**Sn**	**16 39 28.1**	**-1.0**
	baz=236						
WNT	**Mingjian**	**1.42**	**287**	*e*S	**Sb**	**16 39 30.6**	**0.0**
	baz=286						
TPUB	**Ta-pu**	**1.43**	**263**	*e*P	**Pb**	**16 39 13.1**	**+0.1**
	baz=262						
TPUB				*e*S	**Sn**	**16 39 30.0**	**+0.6**
	baz=262						
NWLT	**Wulai**	**1.44**	**335**	*e*P	**Pb**	**16 39 12.9**	**-0.4**
	baz=329						
NWLT				*e*S	**Sn**	**16 39 29.4**	**-0.3**
	baz=329						
WTP	**Ta-pu**	**1.45**	**261**	P	**Pb**	**16 39 13.6**	**+0.2**
	baz=259						
WTP				S	**Sb**	**16 39 32.1**	**+0.7**
	baz=259						
CHN4	**Tsaushan**	**1.45**	**266**	*e*P	**Pb**	**16 39 13.7**	**+0.2**
	baz=259						
CHN4				*e*S	**Sn**	**16 39 30.7**	**+0.6**
	baz=259						
SLGT	**Liugui**	**1.48**	**252**	P	**Pb**	**16 39 14.1**	**+0.1**
	baz=249						
SLGT				S	**Sb**	**16 39 31.8**	**-0.6**
	baz=249						
WGK	**Gukeng**	**1.49**	**279**	*e*P	**Pb**	**16 39 13.9**	**-0.2**
	baz=278						
SGST	**Jiashian**	**1.51**	**255**	*e*P	**Pb**	**16 39 15.0**	**+0.5**
	baz=253						
SGST				*e*S	**Sb**	**16 39 33.6**	**+0.4**
	baz=253						
WDLH	**Douliu**	**1.51**	**279**	*e*P	**Pb**	**16 39 14.7**	**+0.1**
	baz=278						
WDLH				*e*S	**Sb**	**16 39 32.9**	**-0.4**
	baz=278						
TCU	**Taichung**	**1.52**	**297**	*e*P	**Pb**	**16 39 15.4**	**+0.6**
	baz=297						
TCU				*e*S	**Sn**	**16 39 32.9**	**+1.0**
	baz=297						
TIPB	**Shuangxi**	**1.53**	**348**	*e*P	**Pb**	**16 39 14.4**	**-0.4**
	baz=360						
TIPB				S	**Sn**	**16 39 32.6**	**+0.7**
	baz=360						
CHN1	**Nanshi**	**1.54**	**260**	P	**Pb**	**16 39 15.7**	**+0.8**
	baz=258						
CHN1				*e*S	**Sb**	**16 39 33.9**	**0.0**
	baz=258						
TWB1	**Santiao Chiao**	**1.54**	**354**	*e*S	**Sb**	**16 39 33.3**	**-0.7**
	baz=357						
TWQ1	**Liyutan**	**1.55**	**305**	*e*P	**Pn**	**16 39 13.8**	**+0.7**
	baz=305						
TWQ1				*e*S	**Sn**	**16 39 33.0**	**+0.6**
	baz=305						
TWK	**Hsinying**	**1.56**	**263**	*e*P	**Pb**	**16 39 15.2**	**-0.1**
	baz=261						
TWK				S	**Sb**	**16 39 34.9**	**+0.2**
	baz=261						
NSTT	**Nanjuang**	**1.57**	**317**	P	**Pb**	**16 39 15.1**	**-0.4**
	baz=307						
NSTT				S	**Sn**	**16 39 33.8**	**+0.8**
	baz=307						
LIOB	**Emei**	**1.57**	**318**	*e*P	**Pb**	**16 39 15.5**	**-0.1**
	baz=307						
LIOB				*e*S	**Sn**	**16 39 34.2**	**+1.1**
	baz=307						
SSD	**Sandimen**	**1.59**	**243**	*e*S	**Sn**	**16 39 33.5**	**0.0**
	baz=240						
WLTB	**Daxi**	**1.61**	**329**	*e*S	**Sn**	**16 39 34.2**	**+0.2**
	baz=330						
EAST	**Anshuo**	**1.63**	**229**	*e*P	**Pn**	**16 39 14.1**	**-0.2**
	baz=230						
EAST				*e*S	**Sn**	**16 39 33.2**	**-1.3**
	baz=230						
IRIF	**Iriomote-Funau**	**1.67**	**59**	P	**Pb**	**16 39 16.3**	**-0.8**
IRIF				*e*S	**Sb**	**16 39 36.5**	**-1.2**
JKRS	**Kuro-shima**	**1.85**	**65**	*e*S	**Sn**	**16 39 40.7**	**+0.9**
JIJ	**Ishigaki jima**	**2.01**	**63**	P	**Pn**	**16 39 20.6**	**+1.1**
JIJ				S	**Sn**	**16 39 43.6**	**-0.2**
JISG	**Ishigakijimahi**	**2.25**	**60**	*e*S	**Sn**	**16 39 49.8**	**+0.1**
JTJ	**Tarama**	**2.59**	**63**	S	**Sn**	**16 39 58.8**	**+0.7**

EAF 06 16:43:56.4±1.6, 25.°75S×28.°61E, h10^{km}, MD3.5, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	**Lobatse**	**2.82**	**284**	*i* P	Pn	16 44 42.7	+1.1
LBTB				*i* S	Sn	16 45 13.8	-1.9
LBTB	**Lobatse**	**2.82**	**284**	*i* P	Pn	16 44 42.7	+1.1
LBTB				*i* S	Sn	16 45 13.8	-1.9
BOSA	**Boshof**	**4.12**	**226**	*i* P	Pn	16 45 00.0	+0.4
BOSA				*i* S	Sn	16 45 43.7	-4.3
BOSA	**Boshof**	**4.12**	**226**	*i* P	Pn	16 45 00.0	+0.4
BOSA				*i* S	Sn	16 45 43.7	-4.3
MATP	**Matopo**	**5.30**	**359**	*i* P	Pn	16 45 14.9	-0.9
MATP				*i* S	Sn	16 46 12.0	-5.1
MATP	**Matopo**	**5.30**	**359**	*i* P	Pn	16 45 14.9	-0.9
MATP				*i* S	Sn	16 46 12.0	-5.1

IDC 06 16:51:08.6±2.8, 27.°63N×141.°77E, h0^{km}, mb3.6/4, mb1 3.7/4, mb1mx3.3/44, mbtmp3.6/4, Error ellipse: s-maj=117.6km s-min=29.4km az=75.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**47.83**	**189**	P	P	16 59 48.0	-0.2
	0.2nm,0.5s,baz=0.8,slow=7.5,SNR=4.2						
MKAR	**Makanchi Array**	**49.85**	**309**	P	P	17 00 03.9	+0.3
	0.1nm,0.4s,baz=91,slow=10,SNR=2.8						
KURBB	**Kurchatov Arra**	**52.41**	**314**	P	P	17 00 23.2	+0.5
	0.6nm,0.4s,baz=89,slow=8.0,SNR=6.6						
FINES	**FINESS Array B**	**77.31**	**334**	P	P	17 03 04.1	-0.6
	0.6nm,0.4s,baz=54,slow=7.1,SNR=8.3						

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*IDC **06** 16:58:20.6±0.6, 10.°42N×126.°49E, h0^{km}, mb3.8/14, mb1 4.0/14, mb1mx3.8/35, mbtmp3.8/14, MS3.7/1, Ms1 3.7/1, ms1mx2.7/40, Error ellipse: s-maj=28.8km s-min=13.9km az=71.0*

*NEIC **06** 16:58:23.6±2.2, 10.°5N±0.°1×126.°4E±0.°2, h19^{km}±2^{km}, mb4.6/16, Error ellipse: s-maj=24.2km s-min=13.9km az=77.0*

*MAN **06** 16:58:24.3, 10.°41N×126.°61E, h29^{km}, mb4.8, ML3.8, MS3.7*

ISC 06 16:58:26.4±0.5, 10.°39N±0.°04×126.°59E±0.°07, h44^{km}, n52, σ1.^{s}56/60, mb4.3/22, 2C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**1.70**	**214**	*e*P	**Pn**	**16 58 52.2**	**-1.4**
BUTP				*e*S	**Sn**	**16 59 13.8**	**-0.4**
MSLP	**Maasin**	**1.72**	**262**	*e*P	**Pn**	**16 58 52.8**	**-1.1**
MSLP				*e*S	**Sn**	**16 59 15.0**	**+0.3**
OCLP	**Ormoc**	**2.06**	**289**	*e*P	**Pn**	**16 58 58.4**	**-0.1**
LLP	**Lapu-Lapu**	**2.58**	**269⇑**	*e*P	**Pn**	**16 59 07.2**	**+1.5**
LLP				*e*S	**Sn**	**16 59 41.9**	**+6.0**
CNP	**Catarman**	**2.83**	**318**	*e*P	**Pn**	**16 59 08.5**	**-0.7**
CNP				*e*S	**Sn**	**16 59 41.6**	**-0.5**
BUKP	**Musuan**	**2.91**	**211**	*e*P	**Pn**	**16 59 10.3**	**-0.1**
BUKP				*e*S	**Sn**	**16 59 38.1**	**-6.1**
KCP	**Kidapawan**	**3.67**	**204⇑**	*e*P	**Pn**	**16 59 21.1**	**+0.4**
GUIM	**Jordan**	**3.94**	**274**	*e*P	**Pn**	**16 59 23.9**	**-0.5**
RCP	**Roxas**	**3.95**	**288⇓**	*e*P	**Pn**	**16 59 24.4**	**-0.1**
YOJ	**Yonaguni jima**	**14.41**	**347**	Pn	**Pn**	**17 01 44.0**	**-3.7**
SOEI	**Soe**	**20.14**	**187**	P	**P**	**17 02 57.4**	**+0.2**
SOEI				IAmb	IAmb	17 03 25.6	
	comp=Z,13nm,0.8s						
LEM	**Lembang**	**25.48**	**229**	LR	LR	17 14 24.5	
	comp=Z,152nm,18.6s,baz=30,slow=38						
PBKT	**Sadao Pong**	**25.65**	**287**	P	**P**	**17 03 51.8**	**-0.3**
KNRA	**Kununurra**	**25.99**	**175**	P	**P**	**17 03 56.8**	**+1.6**
KNRA				IAmb	IAmb	17 04 36.0	
	comp=Z,20nm,1.2s						
CMAR	**Chiang Mai Arr**	**27.92**	**290**	P	**P**	**17 04 11.6**	**-1.1**
	comp=Z,0.7nm,0.8s,baz=106,slow=6.7,SNR=7.8						
CMAR	**Chiang Mai Arr**	**27.92**	**290**	P	**P**	**17 04 11.8**	**-1.0**
FITZ	**Fitzroy Crossi**	**28.32**	**182**	P	**P**	**17 04 16.2**	**0.0**
	comp=Z,1.5nm,0.8s,baz=13,slow=14,SNR=3.0						
FITZ	**Fitzroy Crossi**	**28.32**	**182**	P	**P**	**17 04 16.4**	**+0.3**
FITZ				IAmb	IAmb	17 05 15.7	
	comp=Z,43nm,1.9s						

KRVT	Keravat (AS076	29.23	119	P	P	17 04 25.4	+1.0
	comp=Z,244nm,0.9s,baz=252,slow=13,SNR=3.0						
WB0	Warramunga Arr	30.93	166	P	P	17 04 40.5	+1.2
WB0				IAmb	IAmb	17 05 09.4	
	comp=Z,24nm,1.6s						
WRA	Warramunga Arr	31.09	166	P	P	17 04 41.8	+1.1
	comp=Z,0.2nm,0.3s,baz=346,slow=9.4,SNR=7.9						
ASAR	Alice Springs	34.59	168	P	P	17 05 11.8	+0.5
	comp=Z,0.3nm,0.6s,baz=356,slow=7.3,SNR=6.9						
ASAR				PcP	PcP	17 07 45.8	+0.5
	comp=Z,0.3nm,0.7s,baz=328,slow=2.7,SNR=4.1						
ASAR	Alice Springs	34.59	168	P	P	17 05 11.5	+0.2
ASAR					PcP	17 07 46.3	+1.0
KLR	Kul'dur	38.96	5	P	P	17 05 48.6	+0.4
	comp=Z,0.7nm,0.6s,baz=180,slow=17,SNR=3.8						
FORT	Forrest	40.95	178	P	P	17 06 04.9	0.0
FORT				IAmb	IAmb	17 06 24.0	
	comp=Z,16nm,0.8s						
SONM	Songino Array	41.02	339	P	P	17 06 05.6	+0.2
	comp=Z,0.3nm,0.6s,baz=140,slow=7.6,SNR=2.6						
SONM	Songino Array	41.02	339	P	P	17 06 05.3	-0.2
BBOO	Buckleboo	43.90	168	P	P	17 06 28.7	-0.1
NWAO	Narrogin (SRO)	43.99	191	P	P	17 06 30.4	+0.9
STKA	Stephens Creek	44.41	162	P	P	17 06 33.4	+0.5
	comp=Z,1.5nm,0.6s,baz=332,slow=9.3,SNR=4.5						
STKA	Stephens Creek	44.41	162	P	P	17 06 33.6	+0.6
PETK	Petropavlovsk-	49.40	24	P	P	17 07 13.0	+1.3
	comp=Z,2.1nm,0.8s,baz=188,slow=4.4,SNR=2.6						
PETK	Petropavlovsk-	49.40	24	P	P	17 07 14.3	+2.7
TOO	Toolangi	50.89	161	P	P	17 07 25.8	+2.6
MK31	Makanchi Array	52.12	323	P	P	17 07 31.3	-1.0
MKAR	Makanchi Array	52.12	323	P	P	17 07 32.6	+0.2
	comp=Z,0.4nm,0.3s,baz=124,slow=6.9,SNR=10						
MKAR				PcP	PcP	17 08 44.0	+0.3
	comp=Z,1.2nm,0.7s,baz=113,slow=4.4,SNR=8.1						
MKAR	Makanchi Array	52.12	323	P	P	17 07 31.9	-0.5
MKAR					PcP	17 08 43.8	0.0
MAKZ	Makanchi	52.32	322	P	P	17 07 34.1	+0.4
MAKZ				IAmb	IAmb	17 08 26.1	
	comp=Z,7.3nm,1.8s						
ZAA0	Zalesovo Array	54.67	331	P	P	17 07 50.1	-0.8
ZAA0				IAmb	IAmb	17 07 52.6	
	comp=Z,2.6nm,0.8s						
ZALV	Zalesovo Beam	54.67	331	P	P	17 07 50.5	-0.4
	comp=Z,2.5nm,0.6s,baz=117,slow=6.3,SNR=11						
ZALV	Zalesovo Beam	54.67	331	P	P	17 07 49.1	-1.7
KURK	Kurchatov	56.15	325	P	P	17 08 01.8	+0.3
KURK				IAmb	IAmb	17 08 18.4	
	comp=Z,4.2nm,1.1s						
KKAR	Karatay Array	58.39	314	P	P	17 08 15.6	-2.0
ABKAR	Akbulak array	66.99	319	P	P	17 09 13.1	-1.6
SUA	Susitna One	77.44	29	P	P	17 10 15.9	-1.1
SUA				IAmb	IAmb	17 10 27.5	
	comp=Z,7.0nm,0.6s						
ILAR	Eielson Array	79.20	26	P	P	17 10 26.1	-0.4
	comp=Z,0.4nm,0.8s,baz=244,slow=5.9,SNR=5.5						
ARCES	ARCESS Array B	84.19	340	P	P	17 10 52.8	0.0
	comp=Z,5.4nm,1.1s,baz=82,slow=6.5,SNR=3.3						
FINES	FINESS Array B	85.94	332	P	P	17 11 02.2	+0.6
	comp=Z,2.5nm,0.9s,baz=67,slow=6.4,SNR=5.1						
FINES	FINESS Array B	85.94	332	P	P	17 10 59.8	-1.8
YKA	Yellowknife Ar	93.52	24	P	P	17 11 38.0	+0.7
	comp=Z,0.1nm,0.5s,baz=297,slow=4.0,SNR=3.1						
TORD	Torodi Ar. Bea	120.52	292	PKP	PKiKP	17 17 14.9	+0.6
	comp=Z,0.4nm,0.6s,baz=70,slow=2.5,SNR=2.9						
PLCA	Paso Flores	146.19	156	PKPbc	PKPab	17 18 03.6	+0.6
	comp=Z,1.7nm,0.8s,baz=38,slow=2.9,SNR=5.0						

IDC 06 17:03:00.1±6.9, 72°.74N×5°.84E, h0^{km}, mb1 3.6/3, mb1mx3.1/38, mbtmp3.5/3, ML2.7/3, Error ellipse: s-maj=77.2km s-min=35.9km az=152.0, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARCES	ARCESS Array B	7.12	107	Pn	Pn	17 04 45.4	+0.1
	0.2nm,0.3s,baz=319,slow=12,SNR=12						
ARCES				Sn	Sn	17 06 04.3	-2.4
	0.2nm,0.3s,baz=312,slow=19,SNR=3.5						
NOA	NORSAR Array B	11.94	167	Pn	Pn	17 05 52.0	+0.7
	0.0nm,0.3s,baz=356,slow=14,SNR=2.5						
FINES	FINESS Array B	13.69	135	Pn	Pn	17 06 15.3	+0.1
	0.2nm,0.3s,baz=337,slow=13,SNR=6.1						

IDC 06 17:16:23.6±9.2, 31°.96S×179°.43W, h303^{km}±100^{km}, mb3.1/2, mb1 3.3/3, mb1mx3.1/39, mbtmp3.8/3, Error ellipse: s-maj=106.3km s-min=44.2km az=180.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.90	203	P	Pn	17 18 04.8	+1.1
	0.3nm,0.3s,baz=241,slow=6.4,SNR=6.4						
URZ				S	S	17 19 23.6	-1.0
	0.4nm,0.3s,baz=186,slow=19,SNR=4.4						
ASAR	Alice Springs	41.84	269	P	P	17 23 45.0	+0.3
	0.7nm,0.6s,baz=104,slow=7.6,SNR=16						
WRA	Warramunga Arr	42.97	275	P	P	17 23 53.2	-0.6
	1.2nm,0.5s,baz=113,slow=7.5,SNR=8.5						
FINES	FINESS Array B	146.16	338	PKPbc	PKPdf	17 35 26.6	+0.6
	2.9nm,0.8s,baz=54,slow=3.6,SNR=6.1						

NEIC 06 17:17:04.9±2.0, 24°.00S±0°.07×66°.8W±0°.1, h195^{km}±4^{km}, mb4.3/5, Error ellipse: s-maj=15.4km s-min=10.0km az=103.0

IDC 06 17:17:05.5±1.0, 23°.93S×66°.76W, h190^{km}±9^{km}, mb3.4/8, mb1 3.5/15, mb1mx3.4/44, mbtmp3.9/15, Error ellipse: s-maj=16.3km s-min=12.8km az=57.0

SJA 06 17:17:05.1±0.8, 23°.97S×66°.90W, h212^{km}±8^{km}, ML3.6, MW3.7

GUC 06 17:17:07.4±0.4, 23°.96S×67°.29W, h239^{km}±11^{km}, ML4.1

ISC 06 17:17:05.6±0.7, 23°.99S±0°.04×66°.94W±0°.04, h197^{km}±6^{km}, n70, $\sigma 1^{s}30$/89, mb3.6/8, 12C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	San Lorenzo	1.50	119	*i* P	Pn	17 17 40.6	+1.4
SLA				IAML		17 17 42.1	
	comp=Z,106nm,0.7s						
SLA				*e*S	Sn	17 18 06.3	+1.0
AZAP	Zapla	1.73	98	*i* P	Pn	17 17 42.2	+0.8
AZAP				IAML		17 17 42.6	
	comp=Z,213nm,0.6s						
AZAP				*e*S	Sn	17 18 10.2	+1.0
YJA	Yavi	2.23	36	*i* P	Pn	17 17 47.6	+0.8
YJA				*e*S	Sn	17 18 20.2	+1.3
LVC	Limon Verde	2.27	307	P	Pn	17 17 48.7	+1.5
	comp=Z,32nm,0.3s,baz=107,slow=8.2,SNR=242						
LVC				S	Sn	17 18 20.6	+1.0
	comp=Z,16nm,0.3s,baz=98,slow=21,SNR=19						
PB15	IPOC Station P	2.45	288	⇑*i*P	Pn	17 17 50.6	+1.6
PB15				*i* S	Sn	17 18 23.2	+0.5
PB15	IPOC Station P	2.45	288	*i* P	Pn	17 17 50.7	+1.6
GO02	Mina Guanaco	2.68	244	⇓*i*P	Pn	17 17 53.3	+1.6
GO02				*i* S	Sn	17 18 28.8	+1.2
GO02	Mina Guanaco	2.68	244		Pn	17 17 53.2	+1.6
GO02				Sn	Sn	17 18 28.9	+1.2
PB06	IPOC Station P	2.74	297	⇑*i*P	Pn	17 17 53.6	+1.4
PB06				*i* S	Sn	17 18 28.3	-0.2
PB06				IAML		17 18 30.3	
	comp=N,478nm,0.3s						
PB06	IPOC Station P	2.74	297	*i* P	Pn	17 17 53.6	+1.4
PB09	IPOC Station P	3.05	315	⇑*i*P	Pn	17 17 57.2	+1.4
PB09				*i* S	Sn	17 18 35.7	+0.6
PB09				IAML		17 18 39.2	
	comp=E,88nm,0.4s						
PB09	IPOC Station P	3.05	315	*i* P	Pn	17 17 57.3	+1.4
AHML	Horco Molle	3.14	153	*i* P	Pn	17 17 57.9	+1.1
PB05	IPOC Station P	3.21	290	⇑*i*P	Pn	17 17 58.7	+1.0
PB05				*i* S	Sn	17 18 36.8	-1.6
PB05				IAML		17 18 40.6	
	comp=N,182nm,0.7s						
PB05	IPOC Station P	3.21	290	*i* P	Pn	17 17 58.6	+0.9
PB14	IPOC Station P	3.23	258	*e*P	Pn	17 17 59.2	+1.1
PB14				*i* S	Sn	17 18 38.1	-1.0
PB14				IAML		17 18 42.1	
	comp=E,209nm,0.4s						
PB14	IPOC Station P	3.23	258	*i* P	Pn	17 17 59.2	+1.1
PB14				IAML		17 18 44.2	
	comp=Z,188nm,0.4s						
PB03	IPOC Station P	3.23	306	⇑*i*P	Pn	17 17 58.9	+0.8
PB03				*i* S	Sn	17 18 37.9	-1.2
PB03	IPOC Station P	3.23	306	*i* P	Pn	17 17 58.9	+0.8
PB10	IPOC Station P	3.35	277		Pn	17 18 00.4	+1.1
PB04	IPOC Station P	3.38	298	⇑*i*P	Pn	17 18 00.6	+0.7
PB04				*i* S	Sn	17 18 41.1	-1.2
PB04				IAML		17 18 43.4	
	comp=N,343nm,0.5s						
PB04	IPOC Station P	3.38	298		Pn	17 18 00.6	+0.7
PB04	IPOC Station P	3.38	298	*i* P	Pn	17 18 00.6	+0.7
PB04				IAML		17 18 47.3	
	comp=Z,126nm,0.1s						
PB07	IPOC Station P	3.53	309	⇑*i*P	Pn	17 18 02.3	+0.6
PB07				*i* S	Sn	17 18 43.9	-1.7
PB07	IPOC Station P	3.53	309	*i* P	Pn	17 18 02.3	+0.6
PB01	IPOC Station P	3.76	321	⇑*i*P	Pn	17 18 04.6	+0.1
PB01	IPOC Station P	3.76	321		Pn	17 18 04.5	+0.1
PB02	IPOC Station P	3.81	314	⇑*i*P	Pn	17 18 05.2	+0.1
PB08	IPOC Station P	4.35	331	⇑*i*P	Pn	17 18 12.7	+0.6
PB08				*i* S	Sn	17 19 03.3	-0.9
CYA	Choya	4.55	167	*i* P	Pn	17 18 15.2	+1.0
GO03	Copiap	4.66	219	⇑*i*P	Pn	17 18 15.5	-0.2
GO03				*i* S	Sn	17 19 08.9	-1.9
GO03	Copiap	4.66	219		Pn	17 18 15.5	-0.2
GO03					Sn	17 19 09.9	-0.9
GO01	Chusmiza	4.78	334		Pn	17 18 17.5	-0.2
VCA	Vinchina	4.86	193	*i* P	Pn	17 18 19.3	+1.0
PB11	IPOC Station P	4.91	329	⇑*i*P	Pn	17 18 17.9	-1.0
PB11	IPOC Station P	4.91	329		Pn	17 18 17.8	-1.1
MNMC	Minye Minye	5.43	332		Pn	17 18 25.0	-0.8
AROD	Rodeo	6.56	200	*i* P	Pn	17 18 41.8	+1.5
ACCO	Cerro Coronel	6.84	196	*i* P	Pn	17 18 45.0	+1.0
GO04	Tololo Observa	7.05	208	Pn	Pn	17 18 45.4	-1.3
AMOG	MOGNA	7.06	191	*i* P	Pn	17 18 46.4	-0.2
CFA	Coronel Fontan	7.67	188	P	Pn	17 18 54.0	-0.5
	comp=Z,1.8nm,0.3s,baz=325,slow=7.7,SNR=39						
CFA				S	Sn	17 20 15.1	-6.2
	comp=Z,5.6nm,0.3s,baz=279,slow=15,SNR=20						
LPAZ	La Paz	7.74	351	P	Pn	17 18 56.3	+0.1
	comp=Z,1.0nm,0.3s,baz=120,slow=4.6,SNR=30						
LPAZ				S	Sn	17 20 20.7	-3.2
	comp=Z,0.3nm,0.3s,baz=285,slow=17,SNR=3.8						
LPAZ	La Paz	7.74	351		Pn	17 18 56.1	-0.1
LPAZ	La Paz	7.74	351	Pn	Pn	17 18 55.8	-0.4
ACAN	Cantantal	8.26	181	*i* P	Pn	17 19 01.6	-0.6
CPUP	Villa Florida	9.01	107	P	Pn	17 19 09.7	-2.3
	comp=Z,0.2nm,0.3s,baz=280,slow=5.9,SNR=3.1						
SIV	San Ignacio	9.68	36	P	Pn	17 19 18.5	-2.4
	comp=Z,0.5nm,0.3s,baz=215,slow=9.0,SNR=8.7						
SAML	Samuel	15.38	14	P	Pn	17 20 31.5	-1.2
PLCA	Paso Flores	16.97	189	P	Pn	17 20 52.3	+0.7
	comp=Z,0.2nm,0.3s,baz=32,slow=8.6,SNR=6.1						
PLCA	Paso Flores	16.97	189	P	P	17 20 50.7	+0.4
PLCA				IAmb	IAmb	17 21 00.4	
	comp=Z,10.0nm,1.6s						
BDFB	Brasilia	19.63	68	P	P	17 21 18.5	-1.0
	comp=Z,1.2nm,0.3s,baz=235,slow=13,SNR=8.6						
BDFB	Brasilia	19.63	68	P	P	17 21 18.2	-1.2
BDFB				IAmb	IAmb	17 21 19.8	
	comp=Z,9.1nm,0.7s						
SNAA	Sanae	59.34	161	P	P	17 26 47.0	+0.5
	comp=Z,1.5nm,1.0s,baz=271,slow=14,SNR=3.7						
TXAR	Lajitas Array	63.70	324	P	P	17 27 16.8	+0.5
	comp=Z,0.1nm,0.4s,baz=138,slow=6.8,SNR=2.7						
QSPA	South Pole Qui	66.22	180	P	P	17 27 33.7	+1.6
	comp=Z,0.7nm,0.7s,baz=220,slow=7.9,SNR=4.3						
QSPA	South Pole Qui	66.22	180	P	P	17 27 33.5	+1.4
TORD	Torodi Ar. Bea	76.51	69	P	P	17 28 33.5	-0.9
	comp=Z,0.4nm,0.5s,baz=235,slow=5.1,SNR=2.9						
PDAR	Pinedale Array	77.17	329	P	P	17 28 38.1	+0.4
	comp=Z,0.2nm,0.5s,baz=108,slow=5.8,SNR=2.8						
PDAR	Pinedale Array	77.17	329	P	P	17 28 36.8	-0.9
ULM	Lac du Bonnet	78.23	342	P	P	17 28 42.7	-0.5
	comp=Z,1.2nm,0.8s,baz=140,slow=9.8,SNR=4.0						
ULM	Lac du Bonnet	78.23	342	P	P	17 28 42.6	-0.5
ULM				IAmb	IAmb	17 31 08.7	
	comp=Z,15nm,1.8s						
YBH	Yreka Blue Hor	83.28	321	P	P	17 29 12.1	+1.9
	comp=Z,1.3nm,0.6s,baz=151,slow=10,SNR=2.5						
YKA	Yellowknife Ar	94.13	340	P	P	17 30 01.6	+0.4
	comp=Z,0.4nm,0.5s,baz=134,slow=4.8,SNR=12						
ASAR	Alice Springs	128.49	205	PKP	PKPdf	17 35 49.8	+0.2
	comp=Z,0.1nm,0.5s,baz=117,slow=1.4,SNR=2.4						
ASAR	Alice Springs	128.49	205		PKPdf	17 35 48.6	-1.1
WRA	Warramunga Arr	131.66	207	PKP	PKiKP	17 35 56.7	0.0
	comp=Z,0.2nm,0.6s,baz=155,slow=1.7,SNR=4.6						
MK31	Makanchi Array	146.48	40		PKPbc	17 36 23.2	-0.2
MKAR	Makanchi Array	146.48	40	PKPbc	PKPbc	17 36 23.7	+0.3
	comp=Z,1.2nm,0.6s,baz=309,slow=3.6,SNR=9.2						
MKAR	Makanchi Array	146.48	40		PKPdf	17 36 22.0	+0.3

WEL 06 17:31:20.8±0.9, 31°S±21°×18°0E±4°4, h429^{km}±39^{km}, M4.4/8, mB4.3/3, ML4.5/6, MLv4.5/8, Mw(mB)3.5/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	6.53	188	P	P	17 33 00.4	+0.4
WMGZ				S	S	17 34 21.5	+0.6
HAZ	Te Kaha	6.57	193	P	P	17 32 59.7	-0.7
HAZ				S	S	17 34 21.7	+0.1
PKGZ	Pakihiroa	6.65	191	P	P	17 33 01.1	-0.3
PKGZ				S	S	17 34 23.0	-0.3
RUGZ	Raukumara Rang	6.79	193	P	P	17 33 02.7	-0.2
RUGZ				S	S	17 34 27.2	+1.0
MWZ	Matawai	7.18	193	P	P	17 33 07.5	+0.5
MWZ				S	S	17 34 33.3	-0.5
URZ	Urewera	7.20	196	P	P	17 33 06.6	-0.6
URZ				S	S	17 34 35.4	+1.4
RIGZ	Rimuhau	7.50	191	P	P	17 33 10.3	-0.2
NMHZ	Naumai	8.07	196	P	P	17 33 17.0	+0.3
BKZ	Black Stump Fm	8.21	197	P	P	17 33 18.2	+0.1
KWHZ	Kaweka Forest	8.47	197	P	P	17 33 21.1	0.0

IDC 06 17:37:30.9±3.8, 5°.71S×154°.16E, h33^{km}±28^{km}, mb4.0/16, mb1 4.2/19, mb1mx4.1/31, mbtmp4.2/19, ML3.6/3, MS3.5/8, Ms1 3.6/8, ms1mx3.3/24, Error ellipse: s-maj=20.4km s-min=12.5km az=70.0

NEIC 06 17:37:34.8±1.1, 5°.75S±0°.05×153°.96E±0°.06, h67^{km}±7^{km}, mb4.6/19, Error ellipse: s-maj=11.2km s-min=3.2km az=128.0

ISC 06 17:37:35.7±0.5, 5°.72S±0°.06×153°.90E±0°.06, h74^{km}, n54, $\sigma 1^{s}29$/56, mb4.4/23, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	2.30	311		Pn	17 38 11.3	-0.4
KRVT	Keravat (AS076	2.34	307	Pn	Pn	17 38 11.4	-0.6
	22nm,0.3s,baz=205,slow=3.7,SNR=21						
KRVT				Sn	Sn	17 38 40.3	+0.4
	170nm,0.3s,baz=102,slow=19,SNR=8.5						
KRVT				Lg	Lg	17 38 52.6	
	224nm,0.3s,baz=39,slow=19,SNR=6.5						
KRVT				LR	LR	17 39 26.8	
	comp=Z,551nm,19.4s,baz=136,slow=46						
HNR	Honiara	7.04	122	Pn	Pn	17 39 14.8	-1.3
	5.3nm,0.3s,baz=228,slow=4.2,SNR=7.7						
HNR				Sn	Sn	17 40 40.5	+5.8
	3.3nm,0.3s,baz=253,slow=20,SNR=8.2						
HNR				LR	LR	17 42 15.6	
	comp=Z,331nm,18.1s,baz=269,slow=42						
HNR	Honiara	7.04	122	P	Pn	17 39 17.0	+0.9
HNR	Honiara	7.04	122		Pn	17 39 14.9	-1.2
PMG	Port Moresby	7.62	241	Pn	Pn	17 39 23.3	-0.8
	21nm,0.3s,baz=52,slow=14,SNR=47						
PMG				Sn	Sn	17 40 51.4	+2.3
	2.6nm,0.3s,baz=298,slow=18,SNR=3.1						
PMG				LR	LR	17 42 16.1	
	comp=Z,313nm,20.8s,baz=116,slow=36						
PMG	Port Moresby	7.62	241		Pn	17 39 23.2	-1.0
CTA	Charters Tower	16.10	207	Pn	Pn	17 41 17.4	-0.3
	0.2nm,0.3s,baz=65,slow=19,SNR=3.0						
DZM	Mont Dzumac	20.28	144	P	P	17 42 02.2	-3.4
	9.8nm,0.7s,baz=186,slow=21,SNR=11						
DZM				LR	LR	17 48 48.5	
	comp=Z,143nm,21.5s,baz=296,slow=34						
DZM	Mont Dzumac	20.28	144	P	P	17 42 03.7	-1.9
DZM				IAmb	IAmb	17 42 13.7	
	comp=Z,103nm,1.8s						
SIJI	Sorong	23.10	281	P	P	17 42 36.0	+0.4
	comp=Z,5.5nm,0.6s,baz=76,slow=17,SNR=3.0						
WRA	Warramunga Arr	23.70	232	P	P	17 42 41.1	0.0
	comp=Z,2.5nm,0.7s,baz=54,slow=9.7,SNR=17						
WRA				PcP	PcP	17 46 24.2	+0.6
	comp=Z,2.4nm,0.6s,baz=56,slow=2.4,SNR=12						
WRA	Warramunga Arr	23.70	232	P	P	17 42 40.8	-0.4
AS31	Alice Springs	26.25	225	P	P	17 43 03.9	-0.3
ASAR	Alice Springs	26.25	225	P	P	17 43 04.5	+0.3
	comp=Z,4.0nm,0.8s,baz=59,slow=9.1,SNR=36						
ASAR				PcP	PcP	17 46 29.7	+0.4
	comp=Z,3.4nm,0.6s,baz=60,slow=2.4,SNR=27						
ASAR				LR	LR	17 53 35.0	
	comp=Z,122nm,19.4s,baz=115,slow=36						
ASAR	Alice Springs	26.25	225	P	P	17 43 04.4	+0.2
ASAR					PcP	17 46 29.2	-0.1
H11S3	WAKE ISLAND Hy	27.16	27	T	T	18 11 32.1	
	baz=208,slow=76,SNR=52						
H11S2	WAKE ISLAND Hy	27.17	27	T	T	18 11 32.6	
	baz=208,slow=76,SNR=48						
H11S1	WAKE ISLAND Hy	27.18	27	T	T	18 11 35.0	
	baz=208,slow=76,SNR=63						
STKA	Stephens Creek	28.46	202	P	P	17 43 23.8	0.0
	comp=Z,1.4nm,0.7s,baz=254,slow=19,SNR=2.5						
URZ	Urewera	38.65	150	P	P	17 44 50.9	-1.2
	comp=Z,5.0nm,0.7s,baz=43,slow=19,SNR=4.5						
RPZ	Rata Peaks	40.74	161	P	P	17 45 08.5	-0.9
	comp=Z,4.8nm,0.6s,baz=348,slow=3.7,SNR=5.9						
RPZ	Rata Peaks	40.74	161	P	P	17 45 08.1	-1.3
KSRS	Korea Array	49.31	333	P	P	17 46 17.6	+0.3
	comp=Z,2.0nm,0.8s,baz=146,slow=7.1,SNR=6.6						
ENH	Enshi	55.58	313	P	P	17 47 04.6	+0.6
PBKT	Sadao Pong	56.83	294	P	P	17 47 13.7	+0.6
PBKT				IAmb	IAmb	17 47 16.7	
	comp=Z,3.4nm,0.9s						
XAN	Xi'an	58.04	316	P	P	17 47 21.2	-0.2
PETK	Petropavlovsk-	58.69	3	P	P	17 47 25.3	-0.1
	comp=Z,2.9nm,0.9s,baz=203,slow=9.4,SNR=2.5						
CM31	Chiang Mai Arr	59.26	295	P	P	17 47 31.6	+1.6
CM31				IAmb	IAmb	17 47 33.3	
	comp=Z,6.4nm,0.8s						
CMAR	Chiang Mai Arr	59.26	295	P	P	17 47 32.3	+2.2
	comp=Z,3.9nm,0.8s,baz=113,slow=5.2,SNR=42						
CMAR				LR	LR	18 11 59.3	
	comp=Z,20nm,20.2s,baz=105,slow=35						
CMAR	Chiang Mai Arr	59.26	295	P	P	17 47 30.5	+0.4
CHTO	Chiang Mai	59.37	296	P	P	17 47 30.2	-0.6
CHTO				IAmb	IAmb	17 47 33.7	
	comp=Z,5.0nm,1.1s						
SONM	Songino Array	67.68	328	P	P	17 48 26.0	+0.8
	comp=Z,1.2nm,0.5s,baz=136,slow=5.5,SNR=12						
SONM	Songino Array	67.68	328	P	P	17 48 25.8	+0.6
LSA	Lhasa	69.66	304	P	P	17 48 39.9	+1.5
LSA				IAmb	IAmb	17 48 41.2	
	comp=Z,4.2nm,0.8s						
MK31	Makanchi Array	81.74	319	P	P	17 49 46.5	+0.1
MKAR	Makanchi Array	81.74	319	P	P	17 49 47.2	+0.8
	comp=Z,1.2nm,0.5s,baz=93,slow=7.9,SNR=24						
MKAR	Makanchi Array	81.74	319	P	P	17 49 46.6	+0.2
MAKZ	Makanchi	81.95	319	P	P	17 49 47.6	+0.1
ZALV	Zalesovo Beam	82.52	326	P	P	17 49 49.8	-0.5
	comp=Z,1.2nm,0.5s,baz=110,slow=5.9,SNR=6.1						
ZALV	Zalesovo Beam	82.52	326	P	P	17 49 49.4	-0.9
ILAR	Eielson Array	82.59	22	P	P	17 49 48.5	-2.0
	comp=Z,0.6nm,0.6s,baz=243,slow=4.6,SNR=7.5						
ILAR				LR	LR	18 25 01.8	
	comp=Z,67nm,18.4s,baz=182,slow=35						
ILAR	Eielson Array	82.59	22	P	P	17 49 49.0	-1.5
KDJ	Kajisay	84.04	313	P	P	17 49 58.6	0.0
KDJ				IAmb	IAmb	17 50 01.0	
	comp=Z,6.9nm,0.8s						
QSPA	South Pole Qui	84.25	180	P	P	17 49 59.2	0.0
QSPA				IAmb	IAmb	17 50 00.0	
	comp=Z,5.8nm,0.8s						
NRN	Naryn	84.75	312	P	P	17 50 01.3	-1.1
NRN				IAmb	IAmb	17 50 04.6	
	comp=Z,5.1nm,1.4s						
NIL	Nilore	85.40	304	P	P	17 50 06.0	+0.5
AAK	Ala-Archa	86.09	313	P	P	17 50 09.4	+0.5
KKAR	Karatay Array	89.06	313	P	P	17 50 23.0	+0.1
CHGR	Chuyangaron	89.44	309	P	P	17 50 24.5	-0.4
CHGR				IAmb	IAmb	17 50 27.2	
	comp=Z,9.8nm,1.2s						
NVAR	Mina Array Bea	91.78	52	P	P	17 50 35.8	-0.2
	comp=Z,0.2nm,0.3s,baz=243,slow=6.0,SNR=2.6						
YKA	Yellowknife Ar	95.72	28	P	P	17 50 53.9	+0.7
	comp=Z,0.2nm,0.7s,baz=268,slow=4.8,SNR=3.5						
PDAR	Pinedale Array	98.65	48	LR	LR	18 28 22.3	
	comp=Z,49nm,20.6s,baz=280,slow=31						
TORD	Torodi Ar. Bea	151.63	287	PKPbc	PKPbc	17 57 22.5	-0.2
	comp=Z,4.5nm,0.7s,baz=72,slow=2.3,SNR=23						

UCR 06 17:52:59.6±1.3, 12°.49N×87°.82W, h68^{km}±32^{km}, ML3.8, MW3.7

INET 06 17:52:59.2, 12°.45N×87°.78W, h72^{km}, ML4.1

SNET 06 17:53:00.4±0.8, 12°.56N×87°.84W, h67^{km}±94^{km}, ML3.8

ISC 06 17:52:59.8±2.2, 12°.7N±0°.3×87°.7W±0°.2, h89^{km}±32^{km}, n18, $\sigma 0^{s}60$/31, 6D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	Cosiguina Volc	0.30	19	⇓*e*P	Pn	17 53 13.0	-0.3
CSGN				*e*S	Sn	17 53 23.9	+0.7
CRIN	San Cristobal	0.59	89	⇓*e*P	Pn	17 53 15.5	+0.2
CRIN				*e*S	Sn	17 53 27.5	+0.6
CNCH	Conchagua	0.61	344	⇓*i*P	Pn	17 53 15.2	-0.4
CNCH				*e*S	Sn	17 53 27.7	+0.5
CNCH				IAML		17 53 31.9	
	comp=Z,4μm,0.3s						
CNCH	Conchagua	0.61	344	⇓*i*P	Pn	17 53 15.2	-0.4
CNCH				*e*S	Sn	17 53 27.7	+0.5
CNCH				IAML		17 53 31.9	
	comp=Z,4μm,0.3s						
LCND	La Caada	0.66	340	*e*P	Pn	17 53 15.7	-0.1
LCND				*e*S	Sn	17 53 28.1	+0.2
LCND				IAML		17 53 29.7	
	comp=Z,2μm,0.5s						
LCND	La Caada	0.66	340	*e*P	Pn	17 53 15.7	-0.1
LCND				*e*S	Sn	17 53 28.1	+0.2
LCND				IAML		17 53 29.7	
	comp=Z,2μm,0.5s						
BLLM	Bellamira	0.94	323	⇓*i*P	Pn	17 53 18.8	0.0
BLLM				*e*S	Sn	17 53 32.6	-0.5
BLLM	Bellamira	0.94	323	⇓*i*P	Pn	17 53 18.8	0.0
BLLM				*e*S	Sn	17 53 32.6	-0.5
PACA	Pacayal	1.01	320	*e*P	Pn	17 53 19.5	-0.2
PACA				*e*S	Sn	17 53 34.4	-0.2
PACA	Pacayal	1.01	320	*e*P	Pn	17 53 19.5	-0.2
PACA				*e*S	Sn	17 53 34.4	-0.2
TECA	Tecapa	1.15	314	*e*P	Pn	17 53 21.3	-0.1
TECA				*e*S	Sn	17 53 36.9	-0.7
TECA	Tecapa	1.15	314	*e*P	Pn	17 53 21.3	-0.1
TECA				*e*S	Sn	17 53 36.9	-0.7
MASN	Masaya	1.63	115	*e*S	Sn	17 53 47.4	-0.6
LFRS	El Faro	1.65	304	*e*P	Pn	17 53 27.2	-0.4
LFRS				*e*S	Sn	17 53 48.1	-0.6
CEVE	Cerro Verde	2.22	301	*e*P	Pn	17 53 36.3	+1.2
CEVE	Cerro Verde	2.22	301	*e*P	Pn	17 53 36.3	+1.2
PLVR	Palo Verde	3.24	136	*e*P	Pn	17 53 49.5	+0.8
PLVR				*e*S	Sn	17 54 25.0	-1.5
JTS	Las Juntas de	3.56	132	*e*P	Pn	17 53 59.8	+6.9

LSZ 06 18:01:41.6±0.3, 15°.89S×26°.34E, h10^{km}, MD0.9, Zambia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ITZ	Itezhi-Tezhi	0.34	294	*i* P	Pg	18 01 47.7	-0.8
ITZ				*i*		18 01 47.8	
	baz=111,slow=16						
ITZ				*i* S	Sg	18 01 52.0	-1.0
ITZ	Itezhi-Tezhi	0.34	294	*i* P	Pg	18 01 47.7	-0.8
ITZ				*i*		18 01 47.7	
	baz=152,slow=22						
ITZ				*i* S	Sg	18 01 52.1	-0.9
ITZ	Itezhi-Tezhi	0.34	294	*i* P	Pg	18 01 47.7	-0.8
ITZ				*i*		18 01 47.8	
	baz=111,slow=16						
ITZ				*i* S	Sg	18 01 52.0	-1.0

IDC 06 18:43:56.3±0.6, 0°.25N×126°.18E, h0^{km}, mb4.2/12, mb1 4.3/15, mb1mx4.2/37, mbtmp4.2/15, ML3.6/3, MS3.7/6, Ms1 3.7/6, ms1mx3.2/32, Error ellipse: s-maj=23.5km s-min=11.2km az=74.0

DJA 06 18:44:00.1±0.3, 0°N±3°×12°6E±°, h10^{km}, M4.3/14, mB5.3/1, mb4.5/5, MLv4.2/14, Mw(mB)4.7/1, Mwp6.1/1

*BJI **06** 18:44:00.3±0.0, 0°.79N×126°.76E, h21km, mB4.6/2, mb4.3/13, Ms4.9/1, Ms7 4.8/1*

*NEIC **06** 18:44:01.8±1.5, 0°.18N±0°.07×126°.25E±0°.06, h45km±6km, mb4.5/27, Error ellipse: s-maj=10.2km s-min=8.2km az=183.0*

ISC 06 18:44:01.8±0.4**, 0°.23N**±0°.05×**126°.26E**±0°.06**, h35km, n75, σ1s.71**/75**, mb4.5**/25**, 1C-2D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.23	64	P	Pn	18 44 21.6	-0.9
TNTI	Ternate	1.23	64		Pn	18 44 21.8	-0.7
SANI	Sanana	2.28	187	P	Pn	18 44 35.3	-1.7
KMSI	Cibinong	2.31	279	P	Pn	18 44 39.3	+1.9
NLAI	Namlea	3.54	166	P	Pn	18 44 54.3	-0.1
LUWI	Luwuk	3.71	250	P	Pn	18 45 00.8	+4.1
LUWI	Luwuk	3.71	250	Pn	Pn	18 44 57.9	+1.1
MRSI	Marisa	4.33	273	P	Pn	18 45 05.3	+0.1
AAI	Ambon	4.34	154	P	Pn	18 45 07.0	+1.6
MSAI	Masohi	4.44	143	P	Pn	18 45 09.5	+2.8
APSI	Ampana	4.75	256	P	Pn	18 45 13.2	+2.2
SWI	Sorong	5.11	102	P	Pn	18 45 17.8	+1.8
	0.2nm38nm,0.7s						
SIJI	Sorong	5.12	102	Pn	Pn	18 45 16.8	+0.7
	2.8nm,0.3s,baz=178,slow=23,SNR=9.8						
SIJI				Sn	Sn	18 46 17.6	+3.5
	baz=210,slow=20,SNR=2.0						
FAKI	Fak Fak	6.75	118	Pn	Pn	18 45 38.4	-0.1
KCP	Kidapawan	6.83	350	⇓*e*P	Pn	18 45 42.1	+2.4
TTSI	Tana Toraja	7.21	243	P	Pn	18 45 44.5	-0.4
	0.1nm34nm,0.8s						
CTBH	Cotabato--PC H	7.23	344	⇓*i*P	Pn	18 45 49.0	+4.0
BNSI	Bone	7.68	233	P	Pn	18 45 52.4	+1.1
	0.1nm98µm2µm25nm,1.0s						
SPSI	Sidrap Palu	7.71	237	P	Pn	18 45 52.5	+0.8
	0.2nm42nm,0.9s						
BKSI	Bulukumba	8.25	228	P	Pn	18 46 00.8	+1.8
KAPI	Kappang	8.33	231	Pn	Pn	18 45 58.9	-1.3
	0.7nm,0.3s,baz=40,slow=11,SNR=5.1						
MTN	Manton Dam	13.86	160	Pn	Pn	18 47 15.3	-0.6
KNRA	Kununurra	16.00	171	Pn	Pn	18 47 43.3	-1.0
FITZ	Fitzroy Crossi	18.22	182	P	P	18 48 11.2	-0.9
	0.2nm,0.3s,baz=0.8,slow=8.6,SNR=6.3						
FITZ	Fitzroy Crossi	18.22	182	P	P	18 48 10.9	-1.2
CISI	Cisompet, Garu	19.95	247	P	P	18 48 30.0	-1.2
CISI				IAmb	IAmb	18 48 41.2	
	comp=Z,24nm,0.8s						
DLV	T Lat	21.14	304	P	P	18 48 44.3	+0.2
DLV				IAmb	IAmb	18 49 17.2	
	comp=Z,19nm,1.3s						
WB0	Warramunga Arr	21.41	159	P	P	18 48 45.8	-1.1
WB0				IAmb	IAmb	18 49 03.5	
	comp=Z,23nm,0.9s						
WRAB	Tennant Creek	21.55	159	P	P	18 48 44.1	-4.2
WRAB				IAmb	IAmb	18 49 06.5	
	comp=Z,16nm,0.8s						
WRA	Warramunga Arr	21.55	159	P	P	18 48 46.9	-1.5
	comp=Z,13nm,0.6s,baz=335,slow=11,SNR=151						
WRA				S	Sn	18 52 52.7	-2.2
	comp=Z,1.1nm,1.0s,baz=339,slow=16,SNR=5.2						
WRA	Warramunga Arr	21.55	159	P	P	18 48 46.3	-2.0
WB2	Warramunga Arr	21.56	159	P	P	18 48 47.2	-1.2
WB2				IAmb	IAmb	18 48 53.7	
	comp=Z,18nm,0.8s						
WR0	Warramunga Arr	21.64	158	P	P	18 48 48.0	-1.3
WR0				IAmb	IAmb	18 49 09.1	
	comp=Z,18nm,1.1s						
COEN	Coen	21.89	131	P	P	18 48 52.0	0.0
PMG	Port Moresby	22.90	115	LR	LR	19 00 11.4	
	comp=Z,149nm,21.7s,baz=350,slow=42						
AS31	Alice Springs	24.89	163	P	P	18 49 20.9	-0.7
ASAR	Alice Springs	24.89	163	P	P	18 49 20.9	-0.6
	comp=Z,7.0nm,0.5s,baz=342,slow=10,SNR=219						
ASAR				S	S	18 53 48.2	+5.7
	comp=Z,1.7nm,1.1s,baz=342,slow=18,SNR=4.6						
ASAR	Alice Springs	24.89	163	P	P	18 49 21.1	-0.4
CMAR	Chiang Mai Arr	32.37	306	P	P	18 50 28.7	+0.3
	comp=Z,0.3nm,0.3s,baz=111,slow=7.1,SNR=4.1						
CMAR				LR	LR	19 05 14.6	
	comp=Z,46nm,19.3s,baz=206,slow=40						
STKA	Stephens Creek	35.08	157	P	P	18 50 51.3	-0.4
	comp=Z,4.8nm,0.8s,baz=335,slow=7.1,SNR=9.5						
STKA	Stephens Creek	35.08	157	P	P	18 50 51.8	+0.1
KSRS	Korea Array	37.07	2	P	P	18 51 08.9	+0.2
	comp=Z,3.3nm,0.9s,baz=177,slow=10,SNR=7.9						
MJAR	Matsushiro Arr	37.79	16	P	P	18 51 12.4	-2.4
	comp=Z,4.0nm,1.0s,baz=194,slow=10,SNR=4.7						
USRK	Ussuriysk Ar.	44.08	6	P	P	18 52 06.6	+0.1
	comp=Z,7.4nm,0.8s,baz=183,slow=8.5,SNR=9.0						
USRK	Ussuriysk Ar.	44.08	6	P	P	18 52 06.4	-0.1
GTA	Gaotai	45.88	331	*e*P	P	18 52 23.2	+2.1
GTA				pP	pP	18 52 26.7	-4.0
GTA				sP	pwP	18 52 29.9	-4.2
GTA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ULN	Ulaanbaatar	50.30	343	P	P	18 52 54.3	-0.8
ULN				IAmb	IAmb	18 52 57.1	
	comp=Z,6.3nm,1.2s						
SONM	Songino Array	50.46	343	P	P	18 52 55.5	-0.8
	comp=Z,1.8nm,0.7s,baz=162,slow=8.0,SNR=13						
SONM				LR	LR	19 14 53.4	
	comp=Z,57nm,21.7s,baz=183,slow=37						
SONM	Songino Array	50.46	343	P	P	18 52 55.6	-0.8
PETK	Petropavlovsk-	58.83	22	P	P	18 53 56.8	0.0
	comp=Z,7.2nm,0.9s,baz=176,slow=6.6,SNR=6.5						
PETK	Petropavlovsk-	58.83	22	P	P	18 53 56.6	-0.2
MK31	Makanchi Array	60.17	327	P	P	18 54 04.9	-1.3
MK31				IAmb	IAmb	18 54 18.5	
	comp=Z,2.5nm,0.9s						
MKAR	Makanchi Array	60.17	327	P	P	18 54 04.5	-1.7
	comp=Z,2.6nm,0.6s,baz=121,slow=8.3,SNR=20						
KSH	Kashi	60.22	317	P	P	18 54 10.1	+3.3
KSH				PcS	PcS	18 58 56.6	+2.1
KSH				S	S	19 02 19.5	+1.0
KSH				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KSH				LR	LR		
	comp=Z,240nm,11.0s						
KSH				LR	LR		
	comp=Z,310nm,14.1s						
KSH				LR	LR		
	comp=Z,350nm,10.6s						
BKZ	Black Stump Fm	60.34	137	P	P	18 54 06.0	-1.6
MAKZ	Makanchi	60.36	327	P	P	18 54 06.5	-1.0
MAKZ				IAmb	IAmb	18 54 19.6	
	comp=Z,4.0nm,1.0s						
KDJ	Kajisay	60.67	320	P	P	18 54 10.9	+1.1
KDJ				IAmb	IAmb	18 54 43.3	
	comp=Z,2.7nm,0.9s						
MA2	Magadan	62.19	14	P	P	18 54 20.4	+0.9
ZALV	Zalesovo Beam	63.49	334	P	P	18 54 27.5	-0.9
	comp=Z,1.2nm,0.6s,baz=146,slow=8.0,SNR=6.3						
ZALV	Zalesovo Beam	63.49	334	P	P	18 54 27.1	-1.2
KURK	Kurchatov	64.44	329	P	P	18 54 33.1	-1.5
KK31	Karatay Array	65.49	318	P	P	18 54 40.3	-1.3
KKAR	Karatay Array	65.49	318	P	P	18 54 40.2	-1.4
KKAR	Karatay Array	65.49	318	P	P	18 54 40.3	-1.4
KKAR				IAmb	IAmb	18 54 53.6	
	comp=Z,1.8nm,0.8s						
BRVK	Borovoye	70.07	328	P	P	18 55 09.7	-0.6
BRVK				IAmb	IAmb	18 55 16.7	
	comp=Z,5.6nm,1.0s						
TIXI	Tiksi	71.33	1	P	P	18 55 16.7	-0.9
NRIK	Noril'sk	73.70	347	LR	LR	19 29 24.2	
	comp=Z,68nm,19.1s,baz=182,slow=37						
ABKAR	Akbulak array	74.56	322	P	P	18 55 35.5	-1.6
ARU	Arti	77.64	328	P	P	18 55 53.5	-1.0
MAW	Mawson	80.33	200	LR	LR	19 31 56.4	
	comp=Z,169nm,19.9s,baz=246,slow=36						
RAYN	Ar Rayn	81.43	294	P	P	18 56 14.7	-1.3
RAYN				IAmb	IAmb	18 56 17.3	
	comp=Z,6.3nm,1.0s						
KBZ	Khabaz	85.04	314	LR	LR	19 39 12.0	
	comp=Z,32nm,18.1s,baz=354,slow=39						
ILAR	Eielson Array	88.44	25	P	P	18 56 51.8	+1.5
	comp=Z,0.4nm,0.8s,baz=242,slow=5.3,SNR=5.2						
SYO	Syowa Base	89.01	201	⇑*e*PcP	PcP	18 56 55.0	+0.8
TORD	Torodi Ar. Bea	123.49	286	PKP	PKPdf	19 02 55.9	-0.7
	comp=Z,0.6nm,0.9s,baz=164,slow=2.7,SNR=3.6						

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*IDC **06** 18:54:42.7±4.0, 5°.70S×154°.19E, h33km±28km, mb3.7/14, mb1 3.9/16, mb1mx3.7/44, mbtmp4.0/16, ML3.1/2, MS3.0/2, Ms1 3.0/2, ms1mx2.8/26, Error ellipse: s-maj=25.1km s-min=13.6km az=65.0*

*NEIC **06** 18:54:45.0±1.1, 5°.8S±0°.1×154°.1E±0°.1, h59km±10km, mb4.4/8, Error ellipse: s-maj=19.1km s-min=16.4km az=108.0*

ISC 06 18:54:44.3±0.7**, 5°.78S**±0°.07×**154°.14E**±0°.09**, h48km, n36, σ0s.76**/35**, mb4.0**/17**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	2.52	309		Pn	18 55 24.1	+1.3
KRVT	Keravat (AS076	2.56	305	Pn	Pn	18 55 23.6	+0.2
	11nm,0.3s,baz=200,slow=2.4,SNR=11						
KRVT				Sn	Sn	18 55 53.3	0.0
	48nm,0.3s,baz=295,slow=18,SNR=8.1						
KRVT				Lg	Lg	18 56 04.8	
	158nm,0.3s,baz=61,slow=21,SNR=14						
KRVT				LR	LR	18 56 38.0	
	comp=Z,243nm,21.4s,baz=161,slow=45						
HNR	Honiara	6.80	123	LR	LR	18 59 03.3	
	comp=Z,190nm,19.9s,baz=264,slow=38						
PMG	Port Moresby	7.80	242	Pn	Pn	18 56 35.0	-0.3
	8.1nm,0.3s,baz=55,slow=14,SNR=20						
PMG				Sn	Sn	18 58 02.7	+0.4
	6.8nm,0.3s,baz=258,slow=12,SNR=6.2						
PMG	Port Moresby	7.80	242		Pn	18 56 35.8	+0.5
PATS	Pohnpei	13.21	18	Pn	Pn	18 57 49.8	+0.5
DZM	Mont Dzumac	20.10	145	P	Pn	18 59 15.2	-1.2
	4.5nm,0.5s,baz=299,slow=8.3,SNR=9.3						
DZM	Mont Dzumac	20.10	145	P	P	18 59 14.3	+0.1
DZM				IAmb	IAmb	18 59 57.7	
	comp=Z,41nm,1.4s						
WR0	Warramunga Arr	23.70	232	P	P	18 59 51.9	-0.1
WR0				IAmb	IAmb	19 00 10.2	
	comp=Z,8.3nm,1.2s						
WB0	Warramunga Arr	23.71	232	P	P	18 59 51.9	-0.2
WB0				IAmb	IAmb	19 00 13.7	
	comp=Z,35nm,1.9s						
WB2	Warramunga Arr	23.84	232	P	P	18 59 52.6	-0.6
WB2				IAmb	IAmb	19 00 14.5	
	comp=Z,19nm,1.6s						
WRA	Warramunga Arr	23.85	232	P	P	18 59 53.2	-0.2
	comp=Z,1.4nm,0.6s,baz=57,slow=9.8,SNR=16						
WRA				PcP	PcP	19 03 36.3	+0.6
	comp=Z,1.4nm,0.5s,baz=53,slow=2.5,SNR=15						
AS31	Alice Springs	26.37	226	P	P	19 00 15.6	-0.8
ASAR	Alice Springs	26.37	226	P	P	19 00 15.9	-0.4
	comp=Z,0.7nm,0.5s,baz=57,slow=9.2,SNR=17						
ASAR				PcP	PcP	19 03 42.0	+0.7
	comp=Z,1.7nm,0.5s,baz=60,slow=2.5,SNR=24						
ASAR	Alice Springs	26.37	226	P	P	19 00 15.2	-1.1
H11S3	WAKE ISLAND Hy	27.11	27	T	T	19 28 42.5	
	baz=208,slow=76,SNR=35						
H11S2	WAKE ISLAND Hy	27.11	27	T	T	19 28 44.3	
	baz=208,slow=76,SNR=48						
H11S1	WAKE ISLAND Hy	27.13	27	T	T	19 28 45.3	
	baz=208,slow=76,SNR=24						
STKA	Stephens Creek	28.49	203	P	P	19 00 35.8	+0.7
	comp=Z,1.1nm,0.9s,baz=338,slow=19,SNR=2.1						
FITZ	Fitzroy Crossi	30.39	244	P	P	19 00 51.2	-1.0
URZ	Urewera	38.48	150	P	P	19 02 02.8	+1.0
	comp=Z,3.5nm,0.6s,baz=263,slow=8.1,SNR=2.5						
RPZ	Rata Peaks	40.61	161	P	P	19 02 20.4	+0.9
	comp=Z,3.1nm,0.7s,baz=277,slow=8.1,SNR=2.7						
CMAR	Chiang Mai Arr	59.50	295	P	P	19 04 43.7	+0.7
	comp=Z,1.7nm,0.7s,baz=112,slow=5.0,SNR=16						
CMAR	Chiang Mai Arr	59.50	295	P	P	19 04 43.5	+0.4
SONM	Songino Array	67.86	327	P	P	19 05 38.3	+0.5
	comp=Z,0.6nm,0.5s,baz=139,slow=4.6,SNR=7.8						
SONM	Songino Array	67.86	327	P	P	19 05 37.9	+0.1
MK31	Makanchi Array	81.94	319	P	P	19 06 59.6	+0.6
MK31				IAmb	IAmb	19 07 37.9	
	comp=Z,5.6nm,1.9s						
MKAR	Makanchi Array	81.94	319	P	P	19 06 59.1	+0.1
	comp=Z,0.5nm,0.4s,baz=94,slow=7.5,SNR=13						
MKAR	Makanchi Array	81.94	319	P	P	19 06 59.0	0.0
ILAR	Eielson Array	82.56	22	P	P	19 06 59.8	-2.0
	comp=Z,0.2nm,0.6s,baz=248,slow=4.8,SNR=3.3						
ZALV	Zalesovo Beam	82.70	326	P	P	19 07 02.0	-0.8
	comp=Z,0.5nm,0.3s,baz=93,slow=4.6,SNR=3.8						
ZALV	Zalesovo Beam	82.70	326	P	P	19 07 02.0	-0.8
KURBB	Kurchatov Arra	85.39	322	P	P	19 07 16.3	-0.2
	comp=Z,0.2nm,0.5s,baz=102,slow=3.9,SNR=2.7						
AAK	Ala-Archa	86.30	313	P	P	19 07 21.7	+0.2
	comp=Z,0.7nm,0.5s,baz=179,slow=7.2,SNR=5.4						
BVAR	Borovoye Array	90.82	323	P	P	19 07 41.0	-1.5
	comp=Z,0.3nm,0.4s,baz=71,slow=9.6,SNR=2.7						
TORD	Torodi Ar. Bea	151.87	287	PKPbc	PKPbc	19 14 34.4	-0.6
	comp=Z,1.7nm,0.6s,baz=95,slow=2.0,SNR=12						

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*INET **06** 19:40:48.4, 12°.49N×87°.84W, h59km, ML3.8*

SNET 06 19:40:50.5±1.0**, 12°.57N×87°.93W, h31km**±5km**, ML3.4, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.71	7	*e*P	Pn	19 41 04.0	-0.6
CNCH				*e*S	Sn	19 41 15.2	+0.7
LCND	La Caada	0.74	3	*e*P	Pn	19 41 04.5	-0.3
LCND				*e*S	Sn	19 41 16.1	+1.1
LCND				IAML		19 41 18.4	
	comp=Z,2µm,0.2s						
JUCU	Jucuar¡n	0.75	336	*e*P	Pn	19 41 04.8	-0.3
JUCU				*e*S	Sn	19 41 16.2	+0.9
JUCU				IAML		19 41 19.0	
	comp=Z,2µm,0.2s						
BLLM	Bellamira	0.92	341	*e*P	Pn	19 41 07.4	+0.1
PACA	Pacayal	0.97	337	*e*P	Pn	19 41 08.4	+0.3
PACA				*e*S	Sb	19 41 22.5	+0.9
ALJI	Alcalda de J	0.98	320	*e*P	Pn	19 41 08.3	+0.2
ALJI				IAML		19 41 15.3	
	comp=Z,486nm,0.2s						
ALJI				*e*S	Sb	19 41 22.0	+0.4
ALJI				*e*		19 41 23.2	
TECA	Tecapa	1.08	329	*e*P	Pn	19 41 10.2	+0.5
TECA				*e*S	Sb	19 41 24.5	-0.1
COEG	Centro de Oper	1.40	319	*e*S	Sb	19 41 32.8	-0.9

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*NEIC **06** 19:50:32.5±1.8, 52°.5N±0°.3×172°.51E±0°.10, h40km±12km, mb4.0/20, Error ellipse: s-maj=42.4km s-min=3.5km az=169.0*

*IDC **06** 19:50:33.9±4.2, 52°.60N×172°.56E, h48km±41km, mb3.3/11, mb1 3.6/12, mb1mx3.3/58, mbtmp3.6/12, ML2.8/1, Error ellipse: s-maj=34.3km s-min=16.1km az=171.0*

ISC 06 19:50:31.2±1.0**, 52°.5N**±0°.2×**172°.54E**±0°.07**, h24km, n44, σ1s.01**/39**, mb3.9**/18**, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	0.97	77		Pb	19 50 50.2	+0.9
SMY				Sn	Sn	19 51 03.3	+1.0
PETK	Petropavlovsk-	9.01	280	P	Pn	19 52 41.7	+2.0
	0.5nm,0.3s,baz=86,slow=16,SNR=5.9						
PETK	Petropavlovsk-	9.01	280		Pn	19 52 40.6	+0.8
OHAK	Old Harbor	20.07	63	P	P	19 55 01.0	-1.5
KDAK	Kodiak Island	20.45	61	P	P	19 55 05.3	-1.2
	3.4nm,0.6s,baz=211,slow=5.9,SNR=6.2						
KDAK	Kodiak Island	20.45	61	P	P	19 55 05.0	-1.6
KDAK				IAmb	IAmb	19 55 07.9	
	comp=Z,19nm,1.3s						
CNPM	China Poot	21.20	56	P	P	19 55 15.7	+1.0
SKT	Skwentna	21.34	50	P	P	19 55 18.1	+1.9
BRLK	Bradley Lake	21.39	56		P	19 55 17.0	+0.2
IMAR	Indian Mountai	21.52	38	P	P	19 55 17.9	-0.1
SUA	Susitna One	21.63	51	P	P	19 55 19.2	-0.2
TRF	Thorofare Moun	22.18	46	P	P	19 55 24.7	-0.7
TRF				IAmb	IAmb	19 55 26.7	
	comp=Z,6.2nm,1.4s						
KNK	Knik Glacier	22.71	52	P	P	19 55 29.7	-1.2
KNK				IAmb	IAmb	19 55 32.8	
	comp=Z,4.7nm,0.9s						
RND	Reindeer	22.80	46	P	P	19 55 31.8	-0.2
RND				IAmb	IAmb	19 55 33.0	
	comp=Z,8.6nm,1.5s						
SML	Sawmill	22.81	51	P	P	19 55 32.2	+0.2
SML				IAmb	IAmb	19 55 48.5	
	comp=Z,7.9nm,1.1s						
SCM	Sheep Creek Mo	23.29	51	P	P	19 55 35.0	-1.9
SCM				IAmb	IAmb	19 55 45.0	
	comp=Z,5.3nm,0.8s						
CCB	Clear Creek Bu	23.50	44	P	P	19 55 38.7	-0.1
HIN	Hinchinbrook I	23.61	54	P	P	19 55 38.0	-2.0
IL31		23.91	43	P	P	19 55 41.5	-1.2
ILAR	Eielson Array	23.91	43	P	P	19 55 42.0	-0.8
	comp=Z,1.2nm,0.8s,baz=239,slow=8.6,SNR=11						
GLB	Gilahina Butte	24.95	52	P	P	19 55 51.2	-1.1
GLB				IAmb	IAmb	19 55 54.5	
	comp=Z,3.9nm,0.8s						
SCRK	Sand Creek	25.04	46	P	P	19 55 52.1	-1.1
SCRK				IAmb	IAmb	19 55 54.2	
	comp=Z,3.3nm,0.8s						
VRDI	Verde Repeater	25.12	52	P	P	19 55 54.4	+0.3
VRDI				IAmb	IAmb	19 55 56.6	
	comp=Z,4.0nm,1.2s						
CRQM	Cirque	25.27	53	P	P	19 55 55.3	-0.2
BMAR	Burnt Mountain	25.43	38	P	P	19 55 57.0	+0.4
BARN	Barnard Glacie	25.99	53	P	P	19 56 02.4	+0.5
TIXI	Tiksi	27.02	331	P	P	19 56 10.3	-0.6
	comp=Z,1.4nm,0.3s,baz=108,slow=2.3,SNR=6.5						
INK	Inuvik	29.70	37	P	P	19 56 34.5	-0.3
	comp=Z,0.5nm,0.3s,baz=272,slow=7.0,SNR=7.2						
INK	Inuvik	29.70	37	P	P	19 56 34.4	-0.3
INK				IAmb	IAmb	19 56 45.8	
	comp=Z,3.8nm,1.4s						
H11N2	WAKE ISLAND Hy	33.02	190	T	T	20 32 28.9	
	baz=6.3,slow=76,SNR=111						
H11N3	WAKE ISLAND Hy	33.04	190	T	T	20 32 29.8	
	baz=6.3,slow=76,SNR=123						
H11N1	WAKE ISLAND Hy	33.04	190	T	T	20 32 34.0	
	baz=6.3,slow=76,SNR=111						
H11S1	WAKE ISLAND Hy	34.25	190	T	T	20 34 08.8	
	baz=6.3,slow=76,SNR=114						
H11S3	WAKE ISLAND Hy	34.27	190	T	T	20 34 01.6	
	baz=6.3,slow=76,SNR=100						
H11S2	WAKE ISLAND Hy	34.27	190	T	T	20 34 01.8	
	baz=6.3,slow=76,SNR=79						
YKA	Yellowknife Ar	38.30	46	P	P	19 57 49.5	+0.1
	comp=Z,0.3nm,0.3s,baz=288,slow=7.6,SNR=4.3						
SONM	Songino Array	41.28	291	P	P	19 58 15.0	+0.5
	comp=Z,0.2nm,0.5s,baz=77,slow=9.4,SNR=2.1						
PDAR	Pinedale Array	50.96	68	P	P	19 59 30.5	-0.2
	comp=Z,0.2nm,0.5s,baz=328,slow=3.2,SNR=3.6						
KURBB	Kurchatov Arra	54.34	309	P	P	19 59 54.5	-0.9
	comp=Z,0.5nm,0.7s,baz=51,slow=7.2,SNR=3.0						
MKAR	Makanchi Array	55.02	303	P	P	19 59 59.4	-1.0
	comp=Z,0.2nm,0.5s,baz=54,slow=6.7,SNR=3.3						
MKAR	Makanchi Array	55.02	303	P	P	19 59 59.2	-1.2
TXAR	Lajitas Array	63.67	76	P	P	20 01 00.2	-0.2
	comp=Z,0.3nm,0.4s,baz=312,slow=4.7,SNR=6.9						
TXAR	Lajitas Array	63.67	76	P	P	20 00 59.8	-0.7
ASAR	Alice Springs	83.02	215	P	P	20 02 54.0	-0.2
	comp=Z,0.4nm,0.9s,baz=11,slow=5.2,SNR=4.8						

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*NIC **06** 19:57:32.5±0.0, 37°.09N×28°.11E, h1km±1km, Ml3.6/3*

*THE **06** 19:57:33.7, 36°.98N×28°.28E, h0km±1km, ML3.2/9, Error ellipse: s-maj=4.2km s-min=1.0km az=53.0*

*IDC **06** 19:57:33.6±1.0, 36°.93N×28°.29E, h0km, mb3.3/4, mb1 3.6/11, mb1mx3.4/55, mbtmp3.4/11, ML3.5/7, MS3.2/1, Ms1 3.2/1, ms1mx2.5/34, Error ellipse: s-maj=17.8km s-min=16.3km az=162.0*

*DDA **06** 19:57:33.6, 37°.02N×28°.23E, h11km±3km, MW3.6*

*ISK **06** 19:57:33.2, 37°.02N×28°.19E, h5km, ML3.5/26*

*ATH **06** 19:57:34.7, 37°.00N×28°.17E, h30km±1km, ML3.2/7, Error ellipse: s-maj=2.6km s-min=1.3km az=225.0*

*GII **06** 19:57:37.0±0.0, 36°.64N×28°.27E, h10km*

ISC 06 19:57:33.5±1.1**, 36°.99N**±0°.02×**28°.22E**±0°.01**, h3km**±8km**, n108, σ1s.43**/160**, mb3.2**/4**, 4C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.15	19	PG	Pg	19 57 36.5	0.0
YER				SG	Sg	19 57 39.0	+0.5
TURN	Turunc	0.33	111	PG	Pg	19 57 38.9	-1.0
TURN				SG	Sg	19 57 43.5	-0.6
TURN	Turunc	0.33	111	*i* P	Pg	19 57 38.7	-1.1
TURN				*i* S	Sg	19 57 42.6	-1.5
TURN				IAML		19 57 43.0	
	comp=E,6µm,0.5s						
TURN				IAML		19 57 43.0	
	comp=N,10µm,0.6s						
DALY	Dalyan (Mula)	0.39	117	PG	Pb	19 57 42.5	-0.6
DALY				SG	Sb	19 57 49.1	-0.3
DALY	Dalyan (Mula)	0.39	117	*i* P	Pg	19 57 41.9	+0.9
DALY				*i* S	Sb	19 57 48.5	-1.0
DALY				IAML		19 57 50.0	
	comp=N,2µm,0.4s						
DALY				IAML		19 57 52.0	
	comp=E,884nm,0.6s						
DATC	Datca-Mugla	0.51	243	PG	Pg	19 57 43.6	+0.3
DATC				SG	Sb	19 57 52.2	-0.7
DAT	Datca	0.58	243	PG	Pg	19 57 45.5	+0.8
DAT				SG	Sb	19 57 54.3	-0.8
DAT	Datca	0.58	243	*i* P	Pg	19 57 45.0	+0.3
DAT				*i* S	Sb	19 57 55.2	+0.1
DAT				IAML		19 57 59.0	
	comp=E,355nm,0.3s						
BDRM	Kayabasi	0.63	277	*i* P	Pg	19 57 46.2	+0.7
BDRM				*i* S	Sb	19 57 55.4	-1.0
BDRM				IAML		19 57 56.0	
	comp=E,998nm,0.3s						
TAVA	DENIZLI_Tavas	0.73	49	*i* P	Pg	19 57 47.8	+0.3
TAVA				*i* S	Sg	19 57 56.8	-0.1
TAVA				IAML		19 58 03.0	
	comp=N,453nm,0.6s						
TAVA				IAML		19 58 08.0	
	comp=E,354nm,0.6s						
BODT	Bodrum	0.73	276	PG	Pg	19 57 47.9	+0.3
BODT				SG	Sb	19 57 58.8	-0.6
YKAV	Yalikavak-Bodr	0.77	280	PG	Pg	19 57 48.7	+0.5
YKAV				SG	Sb	19 57 59.8	-0.5
FETY	Fethiye	0.78	117	PG	Pb	19 57 49.9	+0.2
FETY	Fethiye	0.78	117	*i* P	Pg	19 57 48.6	+0.1
FETY				*i* S	Sb	19 58 00.3	-0.4
ARG	Arkhangelos	0.78	186	P	Pg	19 57 49.2	+0.7
ARG				S	Sb	19 58 01.7	+1.0
	comp=E,1µm,0.3s						
ARG	Arkhangelos	0.78	186	P	Pb	19 57 49.6	-0.1
ARG				S	Sn	19 58 02.1	-1.5
ARG				AML	AML	19 58 06.5	
	comp=E,3466µm,0.3s						
ARG				AML	AML	19 58 08.1	
	comp=N,1972µm,0.3s						
ARG	Arkhangelos	0.78	186	PG	Pb	19 57 49.7	0.0
ARG				SG	Sn	19 58 02.3	-1.3
ARG	Arkhangelos	0.78	186	⇑P	Pb	19 57 49.4	-0.4
ARG				S	Sn	19 58 04.2	+0.5
NISR	Nisiros	0.96	247	P	Pg	19 57 52.4	+0.5
NISR				S	Sn	19 58 07.9	-0.1
	comp=N,2µm,0.4s						
NISR	Nisiros	0.96	247	P	Pg	19 57 52.4	+0.5
NISR				S	Sb	19 58 06.2	+0.4
NISR				AML	AML	19 58 10.8	
	comp=E,4061µm,0.6s						
NISR				AML	AML	19 58 11.1	
	comp=N,2624µm,0.3s						
AYDB	Zeytinkoy-Aydi	0.99	345	PG	Pg	19 57 52.8	+0.3
AYDB				SG	Sb	19 58 07.1	+0.2
DENT	Denizli	1.00	40	PG	Pg	19 57 52.6	-0.1
KOSK	Kos Island	1.03	257	P	Pn	19 57 54.8	0.0
KOSK				S	Sn	19 58 10.7	+1.0
	comp=N,1µm,0.4s						
KOSK	Kos Island	1.03	257	PG	Pb	19 57 53.8	-0.1
GCAM	G?zelcaml?	1.06	312	PG	Pg	19 57 54.1	+0.3
GCAM				SG	Sb	19 58 09.3	+0.6
SMG	Samos	1.31	303	P	Pn	19 57 58.0	-0.8
SMG				S	Sn	19 58 17.6	+0.7
	comp=N,1µm,0.4s						
SMG	Samos	1.31	303	P	Pn	19 57 58.1	-0.7
SMG				S	Sg	19 58 15.6	-0.2
SMG				AML	AML	19 58 19.6	
	comp=E,1852µm,0.4s						
SMG				AML	AML	19 58 21.0	
	comp=N,2982µm,0.4s						
AKAS	Kas	1.35	124	PN	Pg	19 58 01.0	+1.6
AKAS	Kas	1.35	124	*i* P	Pg	19 58 00.7	+1.3
AKAS				*i* S	Sn	19 58 23.1	+5.2
AKAS				IAML		19 58 28.0	
	comp=N,512nm,0.7s						
AKAS				IAML		19 58 28.0	
	comp=E,184nm,0.4s						
ELL	Elmali	1.38	100	PN	Pg	19 58 01.3	+1.4
ELL	Elmali	1.38	100	P	Pg	19 58 00.8	+0.9
ELL				S	Sn	19 58 23.0	+4.5
KSL	Kastellorizon	1.38	127	P	Pb	19 57 59.8	-0.2

KSL				S	Sg	19 58 18.0	+0.1
	comp=E,320nm,0.6s						
KSL	Kastellorizon	1.38	127	P	Pg	19 58 01.1	+1.1
KSL				S	Sn	19 58 18.7	+0.2
KSL				AML	AML	19 58 29.6	
	comp=N,470µm,0.6s						
KSL				AML	AML	19 58 30.9	
	comp=E,778µm,0.6s						
KSL	Kastellorizon	1.38	127	⇑P	Pg	19 58 01.5	+1.4
KSL				S	Sn	19 58 22.5	+4.0
MANT	Manisa	1.52	10	*i* P	Pn	19 58 01.4	-0.4
MANT				*i* S	Sn	19 58 20.9	-1.3
MANT				IAML		19 58 27.0	
	comp=E,135nm,0.4s						
MANT				IAML		19 58 30.0	
	comp=N,110nm,0.6s						
KULA	Kula-Manisa	1.56	13	PN	Pb	19 58 02.8	-0.3
KULA				SN	Sg	19 58 24.7	+1.1
BRDR	BURDUR-Merkez	1.62	64	*i* P	Pg	19 58 04.8	+0.1
BRDR				*i* S	Sg	19 58 28.4	+2.7
BRDR				IAML		19 58 35.0	
	comp=N,138nm,1.1s						
BRDR				IAML		19 58 45.0	
	comp=E,127nm,0.9s						
BLCB	Balcova	1.68	326	PN	Pb	19 58 04.4	-0.6
BLCB				SN	Sg	19 58 27.1	-0.3
KARP	Karpathos	1.68	211	P	Pn	19 58 04.0	+0.2
KARP				S	Sn	19 58 26.0	+0.1
	comp=E,700nm,0.6s						
KARP	Karpathos	1.68	211	P	Pn	19 58 04.0	+0.2
KARP				S	Sn	19 58 25.1	-0.7
KARP				AML	AML	19 58 30.6	
	comp=N,1361µm,0.5s						
KARP				AML	AML	19 58 36.5	
	comp=E,1503µm,0.7s						
KARP	Karpathos	1.68	211	PN	Pb	19 58 04.7	-0.4
KARP	Karpathos	1.68	211	⇑P	Pn	19 58 03.8	0.0
KARP				S	Sg	19 58 27.5	0.0
KARP				AML	AML	19 58 30.2	
	comp=E,1.4nm,0.6s						
KARP				AML	AML	19 58 30.2	
	comp=E,1.4nm,0.6s						
KARP				AML	AML	19 58 36.1	
	comp=E,1.5nm,0.7s						
KARP				AML	AML	19 58 36.1	
	comp=E,1.5nm,0.7s						
KHAL	Karahalli	1.70	36	*i* P	Pn	19 58 04.4	+0.2
KHAL				*i* S	Sb	19 58 26.8	-0.7
KHAL				IAML		19 58 28.0	
	comp=E,154nm,0.6s						
KHAL				IAML		19 58 33.0	
	comp=N,130nm,0.6s						
BASM	Basmaki-Afyon	1.72	57	PN	Pb	19 58 05.8	-0.1
USAK	Uak-Merkez	1.83	20	*i* P	Pn	19 58 05.6	-0.3
USAK				*i* S	Sn	19 58 27.1	-2.6
USAK				IAML		19 58 38.0	
	comp=E,102nm,0.5s						
AKUM	Antalya-Kumluc	1.83	111	*i* P	Pg	19 58 09.3	+0.6
AKUM				IAML		19 58 41.0	
	comp=E,182nm,0.6s						
AKUM				IAML		19 58 43.0	
	comp=N,127nm,1.2s						
AMGA	Amorgos Island	1.87	266	P	Pn	19 58 05.8	-0.7
AMGA				S	Sb	19 58 32.0	-0.2
	comp=N,242nm,0.7s						
AMGA	Amorgos Island	1.87	266	P	Pn	19 58 05.8	-0.7
URLA	Izmir	1.88	317	PN	Pb	19 58 07.9	-0.6
AKHS	Akhisar	1.91	350	*i* P	Pn	19 58 06.2	-0.8
AKHS				IAML		19 58 38.0	
	comp=E,106nm,0.5s						
BCK	Bucak	1.95	75	PN	Pb	19 58 09.5	-0.2
ANTB	Antalya	1.95	92	PN	Pb	19 58 09.3	-0.4
KZIL	AFYON_Kizioren	1.98	50	*i* P	Pb	19 58 09.7	-0.6
KZIL				IAML		19 58 45.0	
	comp=N,111nm,0.7s						
KZIL				IAML		19 58 57.0	
	comp=E,78nm,0.8s						
ISP	Isparta	2.01	65	PN	Pb	19 58 09.9	-0.9
APE	Apeiranthos	2.15	273	P	Pn	19 58 09.9	-0.5
APE	Apeiranthos	2.15	273	PN	Pn	19 58 11.3	+0.9
APE	Apeiranthos	2.15	273	P	Pn	19 58 09.8	-0.6
APE				S	Sn	19 58 36.6	-1.0
ZEDA	zmir-Bergama	2.17	336	*i* P	Pn	19 58 10.1	-0.5
ZEDA				IAML		19 58 50.0	
	comp=N,95nm,0.9s						
ZEDA				IAML		19 58 51.0	
	comp=E,95nm,1.2s						
SIMA	Simav-Kutahya	2.17	16	PN	Pn	19 58 11.8	+1.1
CHOS	Chios island	2.21	310	P	Pn	19 58 10.8	-0.4
CHOS				S	Sn	19 58 39.9	+0.8
	comp=E,218nm,0.6s						
CHOS	Chios island	2.21	310	P	Pn	19 58 11.5	+0.3
CHOS				AML	AML	19 58 53.7	
	comp=N,330µm,0.5s						
CHOS				AML	AML	19 58 55.5	
	comp=E,532µm,0.6s						
CHOS	Chios island	2.21	310	PN	Pn	19 58 12.1	+0.9
GEDZ	Gediz	2.25	24	PN	Pb	19 58 13.2	-1.7
BAGO	Egridir - ISPA	2.27	63	*i* P	Pb	19 58 13.6	-1.6
SANT	Santorini	2.31	255	PN	Pn	19 58 13.7	+1.2
DKL	Dikili	2.32	334	PN	Pn	19 58 13.5	+0.9
STEP	BALIKESIR_Sava	2.41	351	*i* P	Pn	19 58 13.0	-1.0
STEP				IAML		19 58 58.0	
	comp=E,190nm,0.8s						
STEP				IAML		19 59 02.0	
	comp=N,189nm,0.7s						
SHUT	Suhut-Afyon	2.41	49	PN	Pn	19 58 15.4	+1.3
ZKR	Zakros	2.48	221	P	Pn	19 58 15.7	+0.8
ZKR	Zakros	2.48	221	PN	Pn	19 58 16.5	+1.7
ZKR	Zakros	2.48	221	S	Sn	19 58 47.4	+1.8
DURS	Dursunbey	2.61	4	*i* P	Pn	19 58 16.2	-0.5
DURS				IAML		19 59 05.0	
	comp=E,44nm,0.8s						
DURS				IAML		19 59 11.0	
	comp=N,44nm,0.7s						
BALB	Balikesir	2.66	354	PN	Pn	19 58 17.5	+0.3
KEPZ	Antalya-Kepez	2.71	91	*i* P	Pb	19 58 21.5	-1.2
KEPZ				IAML		19 59 02.0	
	comp=E,52nm,0.7s						
KEPZ				IAML		19 59 05.0	
	comp=N,48nm,0.6s						
PRK	Paraskevi	2.72	326	P	Pn	19 58 19.2	+1.0
PRK				S	Sn	19 58 52.7	+1.1
	comp=N,302nm,0.8s						
PRK	Paraskevi	2.72	326	P	Pn	19 58 19.0	+0.8
PRK				AML	AML	19 59 10.1	
	comp=E,621µm,0.9s						
PRK				AML	AML	19 59 14.8	
	comp=N,571µm,0.8s						
SIGR	SIGRI	2.90	321	P	Pn	19 58 20.9	+0.4
BAYC	CANAKKALE_Bayr	3.04	335	*i* P	Pn	19 58 22.3	-0.3
BAYC				IAML		19 59 20.0	
	comp=E,34nm,0.6s						
BAYC				IAML		19 59 28.0	
	comp=N,24nm,0.8s						
IDI	Anoyia	3.19	239	Pn	Pn	19 58 26.4	+1.8
	comp=N,2.7nm,0.3s,baz=64,slow=17,SNR=24						
IDI				Sn	Sn	19 59 05.9	+2.7
	comp=N,4.2nm,0.3s,baz=282,slow=13,SNR=13						
ULDT	Uludag	3.22	13	*i* P	Pb	19 58 32.3	+0.8
KONT	Konya--Tatoy	3.43	73	*i* P	Pb	19 58 31.2	-3.7
AKMS	Akamas	3.87	119	P	Pn	19 58 35.3	+1.3
AKMS				AML	AML	19 59 23.4	
	comp=N,0.3nm,0.5s						
AKMS				AML	AML	19 59 25.4	
	comp=N,0.3nm,0.9s						
ALFC	Alefka	3.99	116	P	Pn	19 58 36.8	+1.1
NATA	Nata	4.17	121	P	Pn	19 58 39.3	+1.3
SZAC	Souni	4.39	119	⇑P	Pn	19 58 42.0	+0.8
SZAC				AML	AML	19 59 37.6	
	comp=N,0.2nm,0.5s						
CSS	Mathiatis	4.61	115	Pn	Pn	19 58 45.0	+0.8
CSS	Mathiatis	4.61	115	P	Pn	19 58 45.7	+1.5
MVOU	Mavrovouni	4.81	113	P	Pn	19 58 48.7	+1.9
BRTR	Keskin Array B	5.06	56	Pn	Pn	19 58 52.5	+2.1
	comp=N,0.8nm,0.3s,baz=239,slow=17,SNR=23						
BRTR				Sn	Sn	19 59 50.9	+1.5
	comp=N,0.5nm,0.3s,baz=233,slow=28,SNR=7.9						
OSC2	CSNet OBS 4	5.13	138	P	Pn	19 58 53.5	+2.3
HNTI	Hanita	6.91	122	Pn	Pn	19 59 15.3	-0.4
HNTI				Sn	Sn	20 00 31.6	-3.2
MMA0B	Mount Meron ar	7.10	122	Pn	Pn	19 59 18.4	-0.1
MMA0B				Sn	Sn	20 00 37.6	-2.1
MMAI	Mount Meron Ar	7.10	122	Pn	Pn	19 59 18.1	-0.4
	comp=N,3.8nm,0.3s,baz=306,slow=11,SNR=17						
MMAI				Sn	Sn	20 00 36.4	-3.3
	comp=N,1.7nm,0.3s,baz=306,slow=24,SNR=3.7						
SHMJ	Saham	7.52	122	Pn	Pn	19 59 23.7	-0.4
HMDT	Nahal Hemdat	7.65	126	Pn	Pn	19 59 24.8	-1.1
KZIT	Kziot	7.95	138	Pn	Pn	19 59 30.0	0.0
KZIT				Sn	Sn	20 00 56.6	-3.8
ASF	Jabal al Asfar	8.62	121	Pn	Pn	19 59 39.3	0.0
	comp=N,0.3nm,0.3s,baz=198,slow=20,SNR=2.7						
ASF				Sn	Sn	20 01 16.2	-0.8
	comp=N,0.2nm,0.3s,baz=319,slow=19,SNR=2.3						
MLR	Muntele Rosu	8.66	349	Pn	Pn	19 59 42.3	+2.5
	comp=N,0.1nm,0.3s,baz=215,slow=14,SNR=3.9						
MLR				LR	LR	20 03 47.9	
	comp=N,131nm,18.7s,baz=142,slow=43						
PRNI	Paran	8.71	138	Pn	Pn	19 59 39.4	-1.0
HRFI	Mount Harif	8.97	139	Pn	Pn	19 59 43.3	-0.7
HRFI				Sn	Sn	20 01 20.4	-5.2
MBRI	Mt Berech	9.10	140	Pn	Pn	19 59 44.9	-0.9
MBRI				Sn	Sn	20 01 23.4	-5.5
EIL	Elat	9.22	140	Pn	Pn	19 59 47.0	-0.4
	comp=N,0.9nm,0.3s,baz=322,slow=4.2,SNR=8.4						
EIL				Sn	Sn	20 01 28.0	-3.7
	comp=N,0.7nm,0.3s,baz=126,slow=8.7,SNR=4.3						
EIL	Elat	9.22	140	Pn	Pn	19 59 46.5	-0.9
GERES	GERESS Array B	15.88	323	Pn	P	20 01 22.4	+0.5
	comp=N,0.1nm,0.3s,baz=137,slow=11,SNR=5.8						
FINES	FINESS Array B	24.51	358	P	P	20 02 53.7	-0.2
	comp=N,1.6nm,0.7s,baz=139,slow=13,SNR=3.6						
TORD	Torodi Ar. Bea	33.57	232	P	P	20 04 14.2	-0.7
	comp=N,0.3nm,0.5s,baz=35,slow=8.1,SNR=3.8						
KURBB	Kurchatov Arra	38.04	53	P	P	20 04 53.5	+0.6
	comp=N,0.1nm,0.4s,baz=268,slow=9.5,SNR=2.4						
MKAR	Makanchi Array	40.70	59	P	P	20 05 16.7	+1.4
	comp=N,0.1nm,0.5s,baz=277,slow=5.8,SNR=2.3						

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*UCR **06** 20:01:12.4±1.8, 12°.45N×87°.85W, h36^{km}±707^{km}, MD4.2, ML4.2*
*INET **06** 20:01:13.6, 12°.53N×87°.67W, h62^{km}, ML4.6*
*SNET **06** 20:01:13.7±1.6, 12°.52N×87°.99W, h22^{km}±8^{km}, ML4.2*
ISC 06 20:01:11.3±1.1**, 12°.43N**±0°.06×**87°.87W**±0°.06**, h20**^{km}±9^{km}**,**
n33, σ0^{s}86/55**, 2C-4D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.84	2	⇓*i*P	Pb	20 01 27.8	+0.4
CNCH				*e*S	Sn	20 01 40.0	-0.1
CNCH				IAML		20 01 42.9	
	comp=Z,16µm,0.2s						
CNCH	Conchagua	0.84	2	⇓*i*P	Pb	20 01 27.8	+0.4
CNCH				*e*S	Sn	20 01 40.0	-0.1
CNCH				IAML		20 01 42.9	
	comp=Z,16µm,0.2s						
LCND	La Caada	0.88	358	⇓*i*P	Pb	20 01 28.1	+0.3
LCND				*e*S	Sn	20 01 40.5	-0.1
LCND				IAML		20 01 42.6	
	comp=Z,7µm,0.4s						
LCND	La Caada	0.88	358	⇓*i*P	Pb	20 01 28.1	+0.3
LCND				*e*S	Sn	20 01 40.5	-0.1
LCND				IAML		20 01 42.6	
	comp=Z,7µm,0.4s						
JUCU	Jucuar¡n	0.90	336	*e*P	Pb	20 01 28.6	+0.3
JUCU				*e*S	Sb	20 01 40.6	+0.7
JUCU				IAML		20 01 44.6	
	comp=Z,6µm,0.3s						
JUCU	Jucuar¡n	0.90	336	*e*P	Pb	20 01 28.6	+0.3
JUCU				*e*S	Sb	20 01 40.6	+0.7
JUCU				IAML		20 01 44.6	
	comp=Z,6µm,0.3s						
VSM	San Miguel	1.07	338	*e*P	Pb	20 01 31.6	+0.3
VSM	San Miguel	1.07	338	*e*P	Pb	20 01 31.6	+0.3
BLLM	Bellamira	1.07	340	⇑*i*P	Pb	20 01 31.2	0.0
BLLM	Bellamira	1.07	340	⇑*i*P	Pb	20 01 31.2	0.0
LCY	Lacayo	1.07	337	*e*P	Pb	20 01 31.5	+0.2
LCY	Lacayo	1.07	337	*e*P	Pb	20 01 31.5	+0.2
ALJI	Alcalda de J	1.13	323	*e*P	Pn	20 01 32.0	+0.1
ALJI				*e*S	Sb	20 01 45.0	-1.4
ALJI				IAML		20 01 47.4	
	comp=Z,2µm,0.1s						
ALJI	Alcalda de J	1.13	323	*e*P	Pn	20 01 32.0	+0.1
ALJI				*e*S	Sb	20 01 45.0	-1.4
ALJI				IAML		20 01 47.4	
	comp=Z,2µm,0.1s						
PACA	Pacayal	1.13	337	*e*P	Pn	20 01 32.0	0.0
PACA				*e*S	Sb	20 01 46.9	+0.4
PACA				IAML		20 01 48.1	
	comp=Z,11µm,0.2s						
PACA	Pacayal	1.13	337	*e*P	Pn	20 01 32.0	0.0
PACA				*e*S	Sb	20 01 46.9	+0.4
PACA				IAML		20 01 48.1	
	comp=Z,11µm,0.2s						
TECA	Tecapa	1.23	330	*e*P	Pn	20 01 33.5	0.0
TECA				*e*S	Sb	20 01 48.0	-1.5
TECA	Tecapa	1.23	330	*e*P	Pn	20 01 33.5	0.0
TECA				*e*S	Sb	20 01 48.0	-1.5
COEB	Comit de Eme	1.25	329	*e*P	Pn	20 01 34.1	+0.4
COEB				*e*S	Sb	20 01 49.4	-0.4
COEB	Comit de Eme	1.25	329	*e*P	Pn	20 01 34.1	+0.4
COEB				*e*S	Sb	20 01 49.4	-0.4
FAGO	Alcalda de S	1.28	349	*e*P	Pn	20 01 33.4	-0.6
FAGO				*e*S	Sn	20 01 49.8	-0.9
FAGO	Alcalda de S	1.28	349	*e*P	Pn	20 01 33.4	-0.6
FAGO				*e*S	Sn	20 01 49.8	-0.9
COEG	Centro de Oper	1.54	320	*e*P	Pn	20 01 37.8	+0.1
COEG				*e*S	Sn	20 01 57.1	-0.1
COEG	Centro de Oper	1.54	320	*e*P	Pn	20 01 37.8	+0.1
COEG				*e*S	Sn	20 01 57.1	-0.1
LFRS	El Faro	1.67	316	*e*P	Pn	20 01 39.7	+0.3
LBRS	Las Brisas	1.74	319	*e*P	Pn	20 01 41.4	+1.0
LOMA	Loma Larga	1.76	314	*e*P	Pn	20 01 41.0	+0.3
LOMA				*e*S	Sn	20 02 02.2	-0.4
LOMA	Loma Larga	1.76	314	*e*P	Pn	20 01 41.0	+0.3
LOMA				*e*S	Sn	20 02 02.2	-0.4
CEVE	Cerro Verde	2.21	309	*e*P	Pn	20 01 47.9	+0.8
CEVE	Cerro Verde	2.21	309	*e*P	Pn	20 01 47.9	+0.8
NY14	Universidad de	2.89	127	*i* P	Pn	20 01 58.8	+2.6
GB1A	Borinquen Arri	2.90	123	*i* P	Pn	20 01 57.1	+0.7
GB1A				*i* S	Sn	20 02 29.1	-1.6
GUAI	GUAI	3.15	133	*i* P	Pn	20 02 00.5	+0.7
GUAI				*i* S	Sn	20 02 33.6	-3.2

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*IDC **06** 20:09:43.9±3.3, 34°.80N×22°.24E, h0^{km}, mb3.6/8, mb1 3.6/9, mb1mx3.4/36, mbtmp3.6/9, ML2.8/1, Error ellipse: s-maj=69.2km s-min=26.9km az=7.0*
*ATH **06** 20:09:53.7, 35°.73N×22°.41E, h16^{km}±1^{km}, ML3.1/7, Error ellipse: s-maj=2.7km s-min=1.1km az=50.0*
*THE **06** 20:09:54.3, 35°.76N×22°.43E, h1^{km}±3^{km}, ML3.1/11, Error ellipse: s-maj=3.8km s-min=0.6km az=239.0*
ISC 06 20:09:53.0±1.7**, 35°.70N**±0°.04×**22°.37E**±0°.05**, h8**^{km}±9^{km}**,**
n79, σ1^{s}54/93**, mb3.7**/8**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTHR	Kythira	0.76	42	P	Pg	20 10 06.8	-0.9
KTHR				S	Sg	20 10 17.3	-0.3
	2µm,0.5s						
ANKY	Antikythira Is	0.77	77	P	Pg	20 10 07.9	0.0
ANKY				S	Sg	20 10 18.5	+0.5
	2µm,0.6s						
ANKY	Antikythira Is	0.77	77	P	Pg	20 10 07.7	-0.2
ANKY				S	Sg	20 10 18.5	+0.5
ANKY				AML	AML	20 10 19.6	
	comp=N,3221µm,0.5s						
ANKY				AML	AML	20 10 21.3	
	comp=E,2525µm,0.6s						
KTHA	Kythira Island	0.79	45	P	Pg	20 10 08.2	0.0
KTHA				S	Sg	20 10 18.4	-0.1
	comp=E,2µm,0.4s						
KTHA	Kythira Island	0.79	45	P	Pg	20 10 07.9	-0.4
KTHA				S	Sg	20 10 18.5	0.0
KTHA				AML	AML	20 10 19.2	
	comp=E,4706µm,0.6s						
KTHA				AML	AML	20 10 20.7	
	comp=N,3003µm,0.3s						
VLI	Veliai	1.11	24	P	Pg	20 10 13.7	-0.7
VLI				S	Sb	20 10 29.3	0.0
	comp=N,895nm,0.6s						
VLI	Veliai	1.11	24	P	Pg	20 10 13.8	-0.6
VLI				S	Sg	20 10 28.7	-0.2
VLI				AML	AML	20 10 38.2	
	comp=E,1736µm,0.7s						
VLI				AML	AML	20 10 38.7	
	comp=N,1769µm,0.6s						
MNVA	Monemvasia	1.12	28	P	Pg	20 10 14.7	+0.1
RODP	Rodopos	1.14	97	P	Pg	20 10 15.2	+0.3
KNDR	Palaiochora Ch	1.17	113	P	Pg	20 10 15.2	-0.3
PYL	PYLOS	1.30	337	P	Pg	20 10 16.7	-1.2
PYL				S	Sn	20 10 36.7	+1.7
	comp=N,395nm,0.4s						
IMMV	Iera Moni Meta	1.33	100	P	Pg	20 10 18.3	-0.3
IMMV				S	Sn	20 10 37.2	+1.3
	comp=N,868nm,0.6s						
IMMV	Iera Moni Meta	1.33	100	P	Pg	20 10 17.7	-0.9
IMMV				S	Sn	20 10 37.4	+1.5
IMMV				AML	AML	20 10 45.1	
	comp=E,1634µm,0.7s						
IMMV				AML	AML	20 10 50.1	
	comp=N,1730µm,0.5s						
CHAN	Chania	1.37	97	P	Pg	20 10 19.3	-0.1
CHAN				S	Sn	20 10 39.6	+2.8
	comp=N,258nm,0.6s						
VAM	Vamos	1.52	101	P	Pn	20 10 21.7	+1.2
VAM				S	Sn	20 10 42.6	+2.1
	comp=N,518nm,0.5s						
VAM	Vamos	1.52	101	P	Pb	20 10 22.0	+0.5
VAM				AML	AML	20 10 43.1	
	comp=N,1108µm,0.6s						
VAM				AML	AML	20 10 54.8	
	comp=E,1095µm,0.6s						
ITM	Ithomi	1.52	346	P	Pn	20 10 21.0	+0.4
ITM				S	Sn	20 10 42.3	+1.7
	comp=E,348nm,0.6s						
ITM	Ithomi	1.52	346	P	Pn	20 10 21.1	+0.5
ITM				AML	AML	20 10 52.5	
	comp=E,727µm,0.4s						
ITM				AML	AML	20 10 52.9	
	comp=N,715µm,0.6s						
GVD	Gavdhos	1.65	121	P	Pn	20 10 23.4	+1.1
VLX	Vlachokerasia	1.67	0	P	Pn	20 10 23.4	+0.7
VLX				S	Sb	20 10 46.3	+1.0
	comp=N,545nm,0.8s						
VLX	Vlachokerasia	1.67	0	P	Pn	20 10 23.4	+0.7
KRND	KRANIDI	1.79	20	P	Pn	20 10 25.2	+0.9
KRND				S	Sb	20 10 49.1	+0.3
	comp=N,428nm,0.7s						
KRND	KRANIDI	1.79	20	P	Pn	20 10 25.7	+1.4
YDRA	Hydra	1.87	28	P	Pb	20 10 27.8	+0.4
AMT	Artemida-Makis	1.91	344	P	Pn	20 10 27.6	+1.7
MHLO	Agia Marina, M	1.92	58	P	Pn	20 10 26.9	+0.9
MHLO				S	Sb	20 10 52.3	-0.1
MHLO				AML	AML	20 10 56.3	
	comp=N,2486µm,0.6s						
MHLO				AML	AML	20 11 02.4	
	comp=E,2209µm,0.7s						
DID	Didima	1.93	21	P	Pn	20 10 27.1	+0.8
DID	Didima	1.93	21	P	Pn	20 10 28.0	+1.7
MHLA	Plaka, Milos I	1.96	57	P	Pn	20 10 27.6	+1.0
IDI	Anoyia	2.10	101	P	Pn	20 10 29.7	+1.2
IDI	Anoyia	2.10	101	P	Pn	20 10 29.8	+1.2
SIVA	Sivas	2.11	108	P	Pb	20 10 31.5	0.0
SERI	Serifos	2.24	49	P	Pn	20 10 30.6	+0.1
DRO	Drossia	2.31	347	P	Pn	20 10 33.4	+2.0
LOUT	Loutraki	2.33	12	P	Pn	20 10 33.6	+1.8
KLV	Kalavryta, Ach	2.35	356	P	Pn	20 10 34.5	+2.5
LTK	Loutraki	2.37	11	P	Pn	20 10 34.6	+2.4
VLY	Voula,Athens	2.43	28	P	Pn	20 10 34.0	+0.9
RLS	Riolos of Patr	2.46	343	P	Pn	20 10 36.3	+2.8
SAP3	Santorini-Thir	2.52	72	P	Pn	20 10 34.7	+0.4
ATHU	Athens Univers	2.53	26	P	Pn	20 10 36.3	+1.9
SAP1	Santorini-Akro	2.54	74	P	Pn	20 10 35.5	+0.9
THR3	Thira Island,	2.55	73	P	Pn	20 10 35.4	+0.7
IOSP	Ios island	2.57	66	P	Pn	20 10 35.4	+0.4
CMBO	Columbo, Santo	2.58	72	P	Pn	20 10 37.3	+2.3
PROD	Prodromos	2.59	9	P	Pn	20 10 37.6	+2.4
SANT	Santorini	2.59	74	P	Pn	20 10 36.6	+1.3
LAST	Lasithi	2.59	101	P	Pn	20 10 37.1	+1.7
VIL2	Platees	2.61	16	P	Pn	20 10 37.5	+2.0
PTL	Penteli	2.63	27	P	Pn	20 10 37.7	+1.8
TRIZ	Trizonia	2.67	355	P	Pn	20 10 38.3	+1.9
DION	Dionisos Attik	2.68	27	P	Pn	20 10 37.8	+1.2
KALE	Kalithea	2.69	356	P	Pn	20 10 38.9	+2.2
KARY	Karystos	2.86	35	P	Pn	20 10 40.3	+1.3
APE	Apeiranthos	2.89	61	P	Pn	20 10 40.0	+0.5
LKR	Lokris	2.99	9	P	Pn	20 10 41.9	+1.2
PVO	Paravola	2.99	347	P	Pn	20 10 43.8	+3.1
PDO	Prodromos	3.05	342	P	Pn	20 10 43.9	+2.4
AMGA	Amorgos Island	3.06	67	P	Pn	20 10 42.5	+0.8
AXAR	Agios Charalam	3.07	4	P	Pn	20 10 43.8	+1.9
MRKA	Markates	3.15	18	P	Pn	20 10 45.9	+2.9
ZKR	Zakros	3.19	99	P	Pn	20 10 45.9	+2.4
MAKR	Makrakomi, Fth	3.31	357	P	Pn	20 10 48.1	+2.8
AGG	Agios Georgios	3.32	359	P	Pn	20 10 47.6	+2.4
LKD2	Lefkada island	3.37	337	P	Pn	20 10 47.8	+1.8
AOS	Alonnisos	3.67	19	P	Pn	20 10 52.2	+2.1
THL	Klokotos Trika	3.87	356	P	Pn	20 10 54.2	+1.4
KARP	Karpathos	3.90	91	P	Pn	20 10 54.4	+1.0
CHOS	Chios island	3.98	47	P	Pn	20 10 55.3	+0.8
NEST	Nestorio	4.82	348	P	Pn	20 11 08.3	+2.2
BRTR	Keskin Array B	9.79	62	Pn	Pn	20 12 16.9	+2.7
	comp=E,0.1nm,0.3s,baz=219,slow=12,SNR=4.8						
ESDC	Sonseca Array	21.19	289	P	P	20 14 33.0	-5.9
	comp=E,0.2nm,0.6s,baz=106,slow=14,SNR=2.7						
FINES	FINESS Array B	25.87	4	P	P	20 15 24.2	-0.8
	comp=E,1.0nm,0.7s,baz=168,slow=14,SNR=2.7						
NOA	NORSAR Array B	26.34	348	P	P	20 15 30.9	+1.6
	comp=E,0.3nm,0.6s,baz=157,slow=8.7,SNR=2.7						
AKTO	Aktyubinsk	29.59	49	P	P	20 15 55.7	-2.7
	comp=E,0.4nm,0.3s,baz=260,slow=6.1,SNR=3.6						
ARCES	ARCESS Array B	33.94	2	P	P	20 16 35.8	-0.5
	comp=E,3.8nm,0.9s,baz=196,slow=9.4,SNR=5.6						
MKAR	Makanchi Array	45.38	57	P	P	20 18 09.4	-2.5
	comp=E,0.6nm,0.3s,baz=268,slow=7.9,SNR=29						
ZALV	Zalesovo Beam	46.28	46	P	P	20 18 16.2	-2.6
	comp=E,0.6nm,0.4s,baz=257,slow=9.3,SNR=4.0						
SONM	Songino Array	60.90	50	P	P	20 20 02.0	-4.3
	comp=E,0.1nm,0.5s,baz=297,slow=6.3,SNR=2.3						

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*JMA **06** 20:44:57.4±0.1, 23°.85N×121°.67E, h45^{km}±3^{km}, M3.0*
*TAP **06** 20:44:58.5, 23°.89N×121°.68E, h41^{km}, ML3.5, B*
ISC 06 20:44:58.8±1.0**, 23°.88N**±0°.02×**121°.70E**±0°.02**, h34**^{km}±2^{km}**,**
n128, σ0^{s}78/226**, 7C-19D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENLB	Shoufeng	0.09	285	*e*P	Pb	20 45 04.6	0.0
	baz=279						
ENLB				*e*S	Sb	20 45 10.4	+1.8
	baz=279						
HWA	Hwalien	0.13	319	P	Pb	20 45 05.8	+1.0
	baz=326						
HWA				*e*S	Sb	20 45 12.2	+3.2
	baz=326						
TWD	Chiawan	0.22	335	⇑*i*P	Pb	20 45 06.0	+0.4
	baz=348						
TWD				S	Sb	20 45 11.5	+1.1
	baz=348						
ESL	Shilin	0.25	255	*e*P	Pn	20 45 06.2	+0.6
	baz=259						
ESL				*e*S	Sb	20 45 11.5	+0.6
	baz=259						
NACB	Ninganchiao	0.31	343	⇑P	Pb	20 45 06.8	0.0
	baz=334						
NACB				S	Sb	20 45 12.6	+0.5
	baz=334						
EGFH	Guangfu	0.32	230	*e*P	Pb	20 45 07.0	+0.1
	baz=236						
EGFH				*e*S	Sb	20 45 13.5	+1.0
	baz=236						
ETLH	Xiulin Townshi	0.38	329	⇓*e*P	Pb	20 45 07.7	-0.1
	baz=321						
ETLH				*e*S	Sn	20 45 14.4	+0.5
	baz=321						
HGSD	Ruisui	0.46	213	*e*P	Pb	20 45 09.4	+0.6
	baz=221						
HGSD				*e*S	Sn	20 45 17.4	+1.4
	baz=221						
WHF	Hehuan Shan	0.47	304	⇓*i*P	Pb	20 45 09.0	-0.4
	baz=298						
WHF				S	Sb	20 45 16.3	-0.4
	baz=298						
OWD	Renai	0.48	279	⇓*e*P	Pb	20 45 09.1	-0.1
	baz=278						
OWD				*e*S	Sb	20 45 16.4	-0.1
	baz=278						

EHY	Hungye baz=227	0.51	223	eP	Pb	20 45 08.7	-0.8
CHGB	Renai baz=293	0.51	291	⇓P	Pb	20 45 09.7	-0.1
CHGB	baz=293			eS	Sb	20 45 16.2	-1.1
VWDT	VWDT baz=248	0.52	256	P	Pn	20 45 09.8	0.0
VWDT	baz=248			eS	Sb	20 45 17.0	-0.4
ENA	Nanau baz=15	0.55	4	eP	Pn	20 45 09.7	-0.4
ENA	baz=15			eS	Sb	20 45 18.3	+0.3
TWT	Tachien baz=312	0.60	308	P	Pn	20 45 11.1	+0.1
TWT	baz=312			eS	Sb	20 45 19.5	-0.2
YULB	Yu-li baz=223	0.61	217	P	Pn	20 45 09.9	-1.1
YULB	baz=223			eS	Sn	20 45 18.5	-1.2
NNSB	Datong baz=328	0.62	332	⇓P	Pn	20 45 10.8	-0.4
NNSB	baz=328			eS	Sn	20 45 19.2	-0.8
NNSH	Datong baz=330	0.62	332	⇓eP	Pn	20 45 10.8	-0.4
NNSH	baz=330			eS	Sn	20 45 19.3	-0.7
TDCB	Techi baz=312	0.62	307	⇓P	Pn	20 45 11.2	-0.1
TDCB	baz=312			S	Sn	20 45 19.2	-0.8
NNS	Nan Shan baz=329	0.63	332	⇓iP	Pn	20 45 11.0	-0.4
NNS	baz=329			eS	Sn	20 45 19.7	-0.6
TWF1	Yuli baz=221	0.64	215	P	Pn	20 45 10.5	-0.9
TWF1	baz=221			S	Sn	20 45 19.4	-1.0
SSLB	Suanglung baz=266	0.69	262	⇓eP	Pn	20 45 11.8	-0.3
SSLB	baz=266			eS	Sn	20 45 20.9	-0.7
DPDB	Guoxing baz=277	0.72	282	⇓iP	Pn	20 45 12.6	0.0
DPDB	baz=277			eS	Sn	20 45 22.2	-0.3
SMLT	Sun Moon Lake baz=269	0.73	270	⇓P	Pn	20 45 12.5	-0.2
SMLT	baz=269			eS	Sn	20 45 22.1	-0.7
NDT	Datong Townshi baz=338	0.74	347	⇓P	Pn	20 45 12.5	-0.3
NDT	baz=338			eS	Sn	20 45 23.3	+0.4
TWC	Suao baz=20	0.74	11	eP	Pn	20 45 13.0	+0.1
TWC	baz=20			eS	Sn	20 45 23.3	+0.4
ENTT	Nioudou baz=353	0.77	351	⇓P	Pn	20 45 12.9	-0.3
ENTT	baz=353			eS	Sn	20 45 23.7	+0.1
TYC	Yuchr baz=275	0.77	272	P	Pn	20 45 13.1	-0.1
TYC	baz=275			eS	Sn	20 45 24.0	+0.4
FULB	Fuli baz=216	0.77	209	P	Pn	20 45 13.1	-0.2
FULB	baz=216			eS	Sb	20 45 25.1	+0.9
EOS1	EOS1 baz=48	0.78	31	eP	Pn	20 45 13.6	+0.3
EOS1	baz=48			eS	Sb	20 45 25.0	+0.9
YUS	Yu-Shan baz=239	0.79	240	eP	Pn	20 45 13.9	0.0
YUS	baz=239			eS	Sn	20 45 24.1	-0.6
WHP	Taichung City baz=304	0.79	300	eP	Pn	20 45 13.9	+0.3
WHP	baz=304			eS	Sn	20 45 24.4	+0.1
WHYT	Xinyi Township baz=252	0.79	257	eP	Pn	20 45 13.9	+0.3
WHYT	baz=252			eS	Sn	20 45 24.9	+0.7
CHKT	Chengkung baz=187	0.83	201	eP	Pn	20 45 13.5	-0.6
CHKT	baz=187			eS	Sb	20 45 26.4	+0.6
TWE	Neicheng baz=352	0.84	358	⇓P	Pn	20 45 13.9	-0.2
TWE	baz=352			eS	Sn	20 45 24.9	-0.4
NSK	Sanguang baz=339	0.85	339	⇓iP	Pn	20 45 14.2	-0.2
NSK	baz=339			S	Sn	20 45 25.1	-0.6
SLBB	Yuanshan baz=358	0.87	356	P	Pn	20 45 13.5	-1.2
SLBB	baz=358			eS	Sn	20 45 25.9	-0.3
WJS	Zhushan baz=266	0.89	266	eP	Pn	20 45 15.8	+0.9
WJS	baz=266			eS	Sb	20 45 27.8	+0.4
ALS	Alishan baz=238	0.90	246	⇓eP	Pn	20 45 15.4	+0.2
ALS	baz=238			eS	Sn	20 45 26.8	-0.3
NWLT	Wulai baz=342	0.91	349	eP	Pn	20 45 14.8	-0.5
NWLT	baz=342			eS	Sn	20 45 27.4	+0.2
WNT	Mingjian baz=270	0.93	270	P	Pn	20 45 16.4	+1.0
WNT	baz=270			S	Sb	20 45 29.0	+0.5
ELDTW	Lidau baz=214	0.93	222	eP	Pn	20 45 14.7	-0.9
ELDTW	baz=214			eS	Sn	20 45 26.6	-1.1
TWQ1	Liyutan baz=298	0.96	299	⇓iP	Pn	20 45 16.7	+0.7
TWQ1	baz=298			S	Sb	20 45 29.7	+0.2
CHN5	Tsauling baz=253	0.97	253	⇑eP	Pn	20 45 16.4	+0.2
CHN5	baz=253			S	Sn	20 45 29.9	+1.1
NTC	Toucheng baz=18	0.98	7	eP	Pb	20 45 17.4	+0.1
NSTT	Nanjuang baz=306	0.98	320	⇓P	Pn	20 45 17.1	+0.9
NSTT	baz=306			S	Sn	20 45 29.4	+0.5
LIOB	Emei baz=307	0.98	321	⇓P	Pn	20 45 17.2	+1.0
LIOB	baz=307			eS	Sn	20 45 29.8	+0.8
NSY	Sanyi baz=301	1.01	302	⇑P	Pn	20 45 17.4	+0.9
NSY	baz=301			eS	Sn	20 45 30.6	+1.1
WLTB	Daxi baz=344	1.05	337	eP	Pn	20 45 17.8	+0.7
WLTB	baz=344			eS	Sb	20 45 32.6	+0.6
NMLH	Miaoli baz=307	1.05	309	eP	Pn	20 45 17.8	+0.6
NMLH	baz=307			eS	Sb	20 45 32.1	0.0
WGK	Gukeng baz=260	1.06	260	eP	Pn	20 45 18.0	+0.8
WGK	baz=260			eS	Sb	20 45 32.2	0.0
WCHH	Zhanghua baz=292	1.06	281	eP	Pn	20 45 18.2	+1.0
WCHH	baz=292			eS	Sb	20 45 32.9	+0.7
PTSB	Yuanli baz=301	1.07	302	eP	Pn	20 45 18.4	+1.0
PTSB	baz=301			eS	Sn	20 45 31.8	+0.8
WDJ	Dajia District baz=295	1.07	296	⇑P	Pn	20 45 18.1	+0.7
WDJ	baz=295			eS	Sb	20 45 32.9	+0.3
WDLH	Douliu baz=260	1.08	260	eP	Pn	20 45 18.6	+1.1
WDLH	baz=260			eS	Sb	20 45 33.5	+0.8
NHDH	Xindian Distri baz=351	1.09	352	eP	Pn	20 45 17.9	+0.2
NHDH	baz=351			eS	Sn	20 45 32.1	+0.6
TIPB	Shuangxi baz=358	1.09	6	eP	Pn	20 45 18.1	+0.4
TIPB	baz=358			eS	Sn	20 45 32.4	+0.7
TWA	Mucha baz=348	1.10	355	eP	Pn	20 45 18.1	+0.3
TWA	baz=348			eS	Sn	20 45 32.7	+0.8
SBCB	Hsinchu baz=323	1.12	325	P	Pn	20 45 19.0	+1.0
SBCB	baz=323			S	Sb	20 45 34.4	+0.6
STYT	Tauyuan baz=227	1.12	231	P	Pn	20 45 18.7	+0.6
STYT	baz=227			eS	Sn	20 45 33.3	+0.9
TPUB	Ta-pu baz=239	1.14	240	P	Pn	20 45 18.9	+0.6
TPUB	baz=239			eS	Sb	20 45 34.4	-0.1
CHN4	Tsaushan baz=242	1.14	243	eP	Pn	20 45 19.2	+0.8
CHN4	baz=242			eS	Sb	20 45 34.5	-0.1
TWB1	Santiao Chiao baz=18	1.16	13	eP	Pn	20 45 19.4	+0.8
TWB1	baz=18			eS	Sn	20 45 33.8	+0.7
TAP1	Taipei baz=351	1.17	352	eP	Pn	20 45 18.7	0.0
TAP1	baz=351			eS	Sn	20 45 34.4	+1.0
TAP	Taipei baz=352	1.17	352	eP	Pn	20 45 19.2	+0.5
WTP	Ta-pu baz=237	1.18	238	⇑P	Pn	20 45 19.6	+0.7
WTP	baz=237			eS	Sn	20 45 35.2	+1.5
NCUH	Zhongli baz=334	1.18	337	eP	Pn	20 45 19.4	+0.5
NCUH	baz=334			eS	Sb	20 45 35.8	+0.1
NCU	National Centr baz=334	1.18	337	eP	Pn	20 45 19.6	+0.7
NCU	baz=334			eS	Sb	20 45 35.2	-0.5
TWH	Lutao baz=178	1.18	190	eP	Pn	20 45 17.8	-1.2
TWH	baz=178			eS	Sn	20 45 34.1	+0.3
NWF	Wu-fen Shan baz=352	1.19	4	eP	Pn	20 45 19.3	+0.2
NWF	baz=352			eS	Sb	20 45 35.7	-0.3
WFSB	Wu-fen Shan baz=352	1.19	4	eP	Pn	20 45 19.4	+0.4
WFSB	baz=352			eS	Sb	20 45 36.0	+0.1
TWGBT	Beinan baz=193	1.20	208	eP	Pn	20 45 17.9	-1.3
TWGBT	baz=193			eS	Sn	20 45 32.7	-1.6
TWG	Pinlang baz=193	1.20	209	eP	Pn	20 45 18.2	-1.0
TWG	baz=193			eS	Sn	20 45 33.6	-0.7
RLNB	Erlin baz=282	1.22	271	P	Pn	20 45 20.4	+0.9
RLNB	baz=282			eS	Sb	20 45 37.0	+0.1
CHY	Chiayi baz=253	1.23	252	eP	Pn	20 45 20.5	+1.0
CHY	baz=253			eS	Sn	20 45 36.6	+1.6
TTN	Taitung baz=201	1.23	204	eP	Pn	20 45 19.8	+0.2
TWS1	Kuangyinshan baz=347	1.24	348	eP	Pn	20 45 20.3	+0.6
TWS1	baz=347			eS	Sb	20 45 37.0	-0.4
TWK	Hsinying baz=241	1.27	241	eP	Pn	20 45 20.6	+0.5
TWK	baz=241			eS	Sn	20 45 37.6	+1.6
YM01	YM01 baz=354	1.27	355	eP	Pn	20 45 19.8	-0.3
YM01	baz=354			eS	Sn	20 45 36.3	+0.3
CHN1	Nanshi baz=237	1.27	237	eP	Pn	20 45 20.8	+0.6
CHN1	baz=237			eS	Sb	20 45 38.0	-0.5
YM10	YM10 baz=353	1.28	355	eP	Pn	20 45 20.0	-0.3
YM10	baz=353			eS	Sn	20 45 36.5	+0.2
SNST	Tainan City baz=239	1.28	239	eP	Pn	20 45 21.3	+1.0
SNST	baz=239			eS	Sb	20 45 38.2	-0.3
YM11	YM11 baz=355	1.28	355	eP	Pn	20 45 20.1	-0.3
SGST	Jiashian baz=232	1.29	232	⇑P	Pn	20 45 20.5	0.0
SGST	baz=232			eS	Sn	20 45 37.9	+1.2
WTCT	Ta-ch'eng baz=270	1.29	270	eP	Pn	20 45 21.2	+0.8
WTCT	baz=270			eS	Sb	20 45 38.8	-0.1
NTST	Danshui baz=349	1.30	350	eP	Pn	20 45 21.4	+0.8
NTST	baz=349			eS	Sn	20 45 37.9	+1.2
YM03	YM03 baz=353	1.30	354	eP	Pn	20 45 20.3	-0.3
YM03	baz=353			eS	Sn	20 45 37.5	+0.6
YM08	YM08 baz=355	1.31	356	eP	Pn	20 45 20.1	-0.6
YM08	baz=355			eS	Sn	20 45 36.7	-0.3
SLGT	Liugui baz=227	1.31	228	eP	Pn	20 45 22.0	+1.4
ANP	Anpu baz=352	1.31	353	eP	Pn	20 45 20.6	-0.2
ANP	baz=352			eS	Sn	20 45 36.3	-0.8
YOJ	Yonaguni jima	1.33	64	P	Pn	20 45 21.2	+0.2
YOJ				eS	Sn	20 45 37.5	-0.1
WSF	Szhu baz=261	1.37	260	eP	Pn	20 45 22.4	+0.9
WSF	baz=261			eS	Sb	20 45 40.5	-0.6
TWY	Chenhua baz=356	1.39	356	eP	Pn	20 45 22.6	+0.7
ECL	Taimali baz=197	1.45	208	eP	Pn	20 45 21.5	-1.1
CHN8	Yiju baz=251	1.46	249	eP	Pn	20 45 23.4	+0.6
CHN8	baz=251			eS	Sn	20 45 42.1	+1.4
SSD	Sandimen baz=221	1.49	221	eP	Pn	20 45 24.1	+0.8
SSD	baz=221			eS	Sb	20 45 43.9	-0.7
TWM1	Shoushan baz=228	1.57	228	eP	Pb	20 45 26.6	-0.7
MASBT	Mashibuluo baz=199	1.60	218	eP	Pn	20 45 25.2	+0.5
MASBT	baz=199			eS	Sn	20 45 45.6	+1.5
EAST	Anshuo baz=198	1.68	208	eP	Pn	20 45 25.5	-0.3
SSPT	Xinbi baz=202	1.73	217	eP	Pn	20 45 28.7	+2.2
SCZT	Fangliau baz=212	1.80	214	eP	Pn	20 45 28.1	+0.7
WSSB	Gushan baz=227	1.81	227	eP	Pb	20 45 30.3	-0.9
IRIF	Iriomote-Funau	1.91	76	P	Pn	20 45 29.3	+0.3
IRIF				S	Sn	20 45 51.9	0.0
HATJ	Hateruma jima	1.94	84	P	Pn	20 45 28.8	-0.5
HATJ				eS	Sn	20 45 52.6	+0.1
WDGT	Dungji baz=252	1.97	252	eP	Pn	20 45 30.2	+0.4
PHUB	P'eng-hu baz=260	1.98	260	eP	Pn	20 45 29.9	0.0
PNG	Penghu baz=263	1.99	261	eP	Pn	20 45 29.8	-0.2
PNG	baz=263			eS	Sn	20 45 53.5	-0.2
HEN	Hengchun baz=197	2.06	206	eP	Pn	20 45 32.6	+1.5
TWK1	Hengchun baz=191	2.10	203	eP	Pn	20 45 32.0	+0.5
TWKBT	Hengchun baz=196	2.10	203	eP	Pn	20 45 31.3	-0.2
TWKBT	baz=196			eS	Sn	20 45 57.4	+1.0
JKRS	Kuro-shima	2.15	80	P	Pn	20 45 33.0	+0.8
JKRS				S	Sn	20 45 58.8	+1.2
VCHM	Qimei baz=253	2.18	253	eP	Pn	20 45 31.8	-0.9
JIJ	Ishigaki jima	2.29	77	P	Pn	20 45 33.9	-0.2
JIJ				eS	Sn	20 45 59.8	-1.3
VWUC	VWUC baz=297	2.33	299	eP	Pn	20 45 33.9	-0.8
PTTC	Pingtan baz=311	2.38	313	eP	Pn	20 45 34.4	-1.0
JISG	Ishigakijimahi	2.49	73	P	Pn	20 45 36.7	-0.2
JISG				S	Sn	20 46 04.8	-1.3
PTMZ	Houxiangcun baz=295	2.62	297	eP	Pn	20 45 38.1	-0.5
MATB	Ma-tsu baz=322	2.76	325	eP	Pn	20 45 39.7	-1.0
JTJ	Tarama	2.85	74	P	Pn	20 45 42.2	+0.4
JTJ				S	Sn	20 46 15.3	+0.4
KNM	Kinmen baz=279	3.03	281	eP	Pn	20 45 45.4	+1.1
KNMB	Chin-men Tao baz=281	3.08	282	eP	Pn	20 45 43.9	-1.0
LYJJ	Jianjiangzhen baz=324	3.19	327	eP	Pn	20 45 45.8	-0.6
MHZQ	Yeshan baz=310	3.28	313	eP	Pn	20 45 46.6	-1.2
JIRB	Irabujima	3.31	73	S	Sn	20 46 26.5	+0.2
XPSS	Dashiqiu baz=339	3.33	336	eP	Pn	20 45 47.3	-1.1
XPSS	baz=339			eS	Sn	20 46 24.1	-2.7
JIKM	Ikemajima	3.40	71	eS	Sn	20 46 28.4	-0.2
JMJ2	Miyako jima3	3.42	75	eS	Sn	20 46 29.8	+0.6
ZPLA	Ao Xicun baz=271	3.61	272	eP	Pn	20 45 51.7	-0.7

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*IDC **06** 21:56:42.5±0.4, 19°.11N×67°.90W, h0^{km}, mb4.3/29, mb1 4.5/31, mb1mx4.4/44, mbtmp4.3/31, ML4.1/2, MS4.1/28, Ms1 4.1/28, ms1mx4.0/39, Error ellipse: s-maj=13.4km s-min=9.0km az=43.0*

*RSPR **06** 21:56:45.9, 19°.47N×67°.93W, h52^{km}±12^{km}, MD4.4/16*

*OSPL **06** 21:56:47.1±3.1, 19°.30N×67°.81W, h0^{km}±29^{km}, ML4.8*

*BJI **06** 21:56:47.0±0.0, 19°.00N×67°.80W, h48^{km}, Ms7 4.6/2*

*GCMT **06** 21:56:48.9±0.3, 19°.43N±0°.02×67°.84W±0°.03, h20^{km}±1^{km}, MW4.9/88, Moment Tensor Solution. s24,c27; s88,c114; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.18±.15; M$_{\theta\theta}$-2.02±.10; M$_{\phi\phi}$-0.15±.08; M$_{r\theta}$-1.34±.15; M$_{\theta\phi}$0.59±.05; M$_{\phi r}$1.15±.17; Best double couple: M$_0$2.80600×10^{16} NP1:ϕ_s93.00000°,δ28.00000°,λ65.00000°. NP2: ϕ_s301.00000°,δ65.00000°,λ103.00000°. Principal axes: T 2.8770, Plg68.0000°, Azm235.0000°; N -0.1360, Plg11.0000°, Azm115.0000°; P -2.7350, Plg19.0000°, Azm21.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **06** 21:56:50.3±2.0, 19°.14N±0°.06×67°.83W±0°.05, h55^{km}±6^{km} Error ellipse: s-maj=8.8km s-min=6.0km az=200.0*

ISC 06 21:56:49.5±0.8**, 19°.17N**±0°.04×**67°.82W**±0°.04**, h50**^{km}±7^{km}**, n466, σ1^{s}.81**/449**, mb4.5**/122**, MS4.2**/27**, 19C-7D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.84	219	iP	Pn	21 57 02.9	-2.2
PCDR				eS	Sn	21 57 16.6	0.0
PCDR	comp=Z,30μm,0.5s			IAML		21 57 21.4	
PCDR	Punta Cana, DR	0.84	219	⇓eP	Pn	21 57 03.0	-2.1
PCDR	Punta Cana, DR	0.84	219		Pn	21 57 03.0	-2.1
AGPR	Aguadilla, PR	0.97	136	iP	Pn	21 57 05.3	-1.5
AGPR				eS	Sn	21 57 20.6	+1.0
AGPR	comp=Z,33μm,0.5s			IAML		21 57 22.6	
AGPR	Aguadilla, PR	0.97	136	eS	Sn	21 57 21.6	+2.1
AGPR	Aguadilla, PR	0.97	136	⇓eP	Pn	21 57 05.5	-1.3
AGPR	Aguadilla, PR	0.97	136		Pn	21 57 05.5	-1.3
AGPR					Sn	21 57 21.6	+2.1
MPR	Mayaguez	1.15	146	iP	Pn	21 57 08.3	-0.9
MPR				eS	Sn	21 57 27.8	+3.9
MPR	comp=Z,7μm,0.3s			IAML		21 57 33.3	
MPR	Mayaguez	1.15	146	⇑eP	Pn	21 57 08.7	-0.5
MPR	Mayaguez	1.15	146		Pn	21 57 08.7	-0.5
LSP	Las Mesas	1.21	145	⇑eP	Pn	21 57 09.9	-0.2
LSP	Las Mesas	1.21	145		Pn	21 57 09.9	-0.2
AOPR	Arecibo Observ	1.30	129	⇑eP	Pn	21 57 10.6	-0.7
AOPR	Arecibo Observ	1.30	129	⇑eP	Pn	21 57 10.8	-0.5
AOPR				eS	Sn	21 57 30.1	+2.5
AOPR	Arecibo Observ	1.30	129	eS	Sn	21 57 29.0	+1.4
AOPR	Arecibo Observ	1.30	129		Pn	21 57 10.8	-0.5
AOPR					Sn	21 57 29.0	+1.4
CRPR	Cabo Rojo, PR	1.34	150	⇑eP	Pn	21 57 11.4	-0.5
CRPR	Cabo Rojo, PR	1.34	150	eS	Sn	21 57 31.9	+3.4
CRPR	Cabo Rojo, PR	1.34	150		Sn	21 57 31.9	+3.4
CRPR	Cabo Rojo, PR	1.34	150		Pn	21 57 13.1	+1.3
EMPR	Esperanza - Ma	1.40	119	⇑eP	Pn	21 57 12.4	-0.3
EMPR	Esperanza - Ma	1.40	119	eS	Sn	21 57 32.7	+2.6
EMPR	Esperanza - Ma	1.40	119		Pn	21 57 12.4	-0.3
EMPR					Sn	21 57 32.7	+2.6
MLPR	Magueyes Islan	1.40	148	⇑eP	Pn	21 57 12.3	-0.4
MLPR	Magueyes Islan	1.40	148	eS	Sn	21 57 33.8	+3.7
MLPR	Magueyes Islan	1.40	148		Pn	21 57 12.3	-0.4
MLPR					Sn	21 57 33.8	+3.7
GBPR	Guanica, Bosqu	1.49	143	⇑eP	Pn	21 57 13.8	0.0
GBPR	Guanica, Bosqu	1.49	143	eS	Sn	21 57 37.2	+5.1
GBPR	Guanica, Bosqu	1.49	143		Pn	21 57 13.8	0.0
GBPR					Sn	21 57 37.2	+5.1
DR12	Loma Pena Alta	1.53	256		Pn	21 57 12.5	-2.0
OBIP	Obispado Ponce	1.61	134	⇑eP	Pn	21 57 14.6	-0.9
OBIP				eS	Sn	21 57 37.3	+2.2
OBIP	Obispado Ponce	1.61	134		Pn	21 57 14.6	-0.9
OBIP					Sn	21 57 37.3	+2.2
ICMP	Isla Caja de M	1.77	136	⇑eP	Pn	21 57 19.8	+2.0
ICMP	Isla Caja de M	1.77	136	eS	Sn	21 57 43.4	+4.4
ICMP	Isla Caja de M	1.77	136		Pn	21 57 19.8	+2.0
ICMP					Sn	21 57 43.4	+4.4
GCPR	Guaynabo City	1.85	117	⇑eP	Pn	21 57 17.9	-1.0
GCPR	Guaynabo City	1.85	117	eS	Sn	21 57 42.4	+1.2
GCPR	Guaynabo City	1.85	117		Pn	21 57 17.9	-1.0
GCPR					Sn	21 57 42.4	+1.2
SJG	San Juan comp=Z,249nm,0.3s,baz=311,slow=9.8,SNR=94	1.90	123	Pn	Pn	21 57 17.9	-1.6
SJG	comp=Z,3μm,0.3s,baz=325,slow=18,SNR=33			Lg	Lg	21 57 43.6	
SJG	comp=Z,3μm,19.6s,baz=300,slow=46			LR	LR	21 58 10.1	
SJG	San Juan	1.90	123		Pn	21 57 18.5	-1.0
IGPR	InterUniversit	2.02	126	⇓eP	Pn	21 57 20.7	-0.3
IGPR	InterUniversit	2.02	126	eS	Sn	21 57 47.4	+2.2
IGPR	InterUniversit	2.02	126		Pn	21 57 20.2	-0.9
PDPR	Patillas Dam,	2.06	124	⇓eP	Pn	21 57 21.0	-0.6
PDPR	Patillas Dam,	2.06	124	eS	Sn	21 57 47.5	+1.4
PDPR	Patillas Dam,	2.06	124		Pn	21 57 21.0	-0.6
PDPR					Sn	21 57 47.5	+1.4
SDD	Santo Domingo	2.11	251	iP	Pn	21 57 22.2	-0.1

SDD				*e*SG	Sn	21 57 51.2	+3.9
SDD				IAML		21 57 54.7	
	comp=Z,2µm,0.5s						
SDD	Santo Domingo	2.11	251		Pn	21 57 22.2	-0.1
BON1	Bonao	2.45	265	*e*P	Pn	21 57 26.4	-0.6
BON1				*e*S	Sn	21 57 57.7	+2.0
BON1				IAML		21 58 09.2	
	comp=Z,7µm,0.7s						
BANI	BANI	2.53	253		Pn	21 57 28.1	-0.1
CUPR	Culebra, Puert	2.55	109⇑	*e*P	Pn	21 57 26.9	-1.5
CUPR	Culebra, Puert	2.55	109	*e*S	Sn	21 57 58.7	+0.4
CUPR	Culebra, Puert	2.55	109		Pn	21 57 26.9	-1.5
CUPR					Sn	21 57 58.7	+0.4
SC01	Santiago de lo	2.76	276	*e*P	Pn	21 57 32.2	+1.0
SC01				*e*SG	Sn	21 58 14.2	+11
SC01				IAML		21 58 24.9	
	comp=Z,4µm,0.6s						
SC01	Santiago de lo	2.76	276	Pn	Pn	21 57 31.6	+0.4
STVI	Saint Thomas	2.83	106⇑	*e*P	Pn	21 57 30.7	-1.6
STVI	Saint Thomas	2.83	106	*e*S	Sn	21 58 05.6	+0.4
STVI	Saint Thomas	2.83	106		Pn	21 57 30.7	-1.6
STVI					Sn	21 58 05.6	+0.4
SJM1	San Juan de la	3.24	264	*e*P	Pn	21 57 38.5	+0.6
SDDR	Presa de Saban	3.29	267	*e*P	Pn	21 57 38.2	-0.3
SDDR				*e*SG	Sn	21 58 29.1	+13
SDDR				IAML		21 58 36.3	
	comp=Z,3µm,0.6s						
SDDR	Presa de Saban	3.29	267		Pn	21 57 37.9	-0.6
GRTK	Grand Turk	3.88	307		Pn	21 57 45.1	-1.6
LGNH	Logne	4.58	263		Pn	21 57 56.8	+0.5
SABA	Saba	4.61	109	*e*P	Pn	21 57 55.6	-1.1
SABA	Saba	4.61	109	*e*	Sn	21 58 49.6	+0.6
SABA	Saba	4.61	109	Pn	Pn	21 57 56.0	-0.7
SMRT	St. Maarten	4.63	103	*e*P	Pn	21 57 53.5	-3.6
SMRT	St. Maarten	4.63	103	*e*	Sn	21 58 45.8	-3.8
SMRT	St. Maarten	4.63	103	Pn	Pn	21 57 55.5	-1.5
SEUS	St. Eustatius	4.89	109	*e*P	Pn	21 57 57.9	-2.5
SEUS	St. Eustatius	4.89	109	*e*	Sn	21 58 54.9	-0.8
SEUS	St. Eustatius	4.89	109	Pn	Pn	21 58 01.2	+0.7
SKI	Saint Kitts	5.16	110	*e*P	Pn	21 58 03.3	-0.9
SKI	Saint Kitts	5.16	110	*e*	Sn	21 58 59.9	-2.7
SKI	Saint Kitts	5.16	110		Pn	21 58 03.3	-0.9
MLYT	Lee's Yard	5.88	114	*e*P	Pn	21 58 14.7	+0.5
MLYT	Lee's Yard	5.88	114	*e*		21 59 22.7	
ANWB	Willy Bob	5.92	104	*e*P	Pn	21 58 12.9	-1.7
ANWB	Willy Bob	5.92	104	*e*		21 59 17.1	
ANWB	Willy Bob	5.92	104	Pn	Pn	21 58 15.3	+0.7
ABD	La Joyeuse, An	6.60	113	*e*P	Pn	21 58 26.4	+2.5
CBE	Ff, Capester	6.68	117	*e*P	Pn	21 58 28.2	+3.1
TDBA	Terre de Bas,	6.76	118	*e*P	Pn	21 58 31.4	+5.2
GTBY	Guantanamo Bay	6.92	277	*e*P	Pn	21 58 25.3	-3.0
GTBY	Guantanamo Bay	6.92	277		Pn	21 58 28.2	-0.1
H05N1	Guadeloupe/Mar	7.04	113	Pn	Pn	21 58 30.0	0.0
H05N1				Sn	Sn	21 59 49.6	+0.8
	SNR=54						
MDPO	Dominica; Chan	7.05	119	*e*P	Pn	21 58 30.5	+0.4
MDPO	Dominica; Chan	7.05	119	*e*	Sn	21 59 48.6	-0.4
DWS	Wesley	7.17	119	*e*P	Sn	22 00 02.4	+10
DLPL	La Plaine	7.35	120	*e*P	Sn	21 59 49.9	-6.5
DLPL	La Plaine	7.35	120	Pn	Pn	21 58 34.5	+0.3
PCM	Pelee Case Pet	7.66	123	*e*P	Pn	21 58 43.8	+5.2
SVN	Savane Anatole	7.68	123	*e*P	Pn	21 58 43.2	+4.3
CXM	Morne La Croix	7.70	123	*e*P	Pn	21 58 47.9	+8.7
PML	Morne Lenard	7.70	124	*e*P	Pn	21 58 47.1	+8.0
GBMF	Grand Be	7.71	123	*e*P	Pn	21 58 46.1	+6.8
BAMF	Morne Balai	7.71	123	*e*P	Pn	21 58 42.3	+3.0
FDF	Fort de France	7.76	124	*e*P	Pn	21 58 50.0	+10
FDF	Fort de France	7.76	124	*e*P	Sn	22 00 09.0	+2.5
FDF	Fort de France	7.76	124	Pn	Pn	21 58 37.3	-2.6
BIM	Bigot	7.95	125	*e*P	Pn	21 58 45.4	+2.9
ZAM	Aeronautique	7.95	124	*e*P	Pn	21 58 44.8	+2.4
LPMF	Morne Lapointe	8.00	124	*e*P	Pn	21 58 49.7	+6.6
MPOM	Morne Pois Mar	8.15	124	*e*P	Pn	21 58 49.0	+3.8
URIC	Uribia, Colomb	8.45	209	*e*P	Pn	21 58 47.9	-1.4
URIC	Uribia, Colomb	8.45	209		Pn	21 58 47.8	-1.5
SLAC	Saint Lucia, A	8.46	127	*e*P	Sn	22 00 26.9	+3.3
MCLT	Moule a Chique	8.54	128	*e*P	Sn	22 00 13.0	-13
MCLT	Moule a Chique	8.54	128	Pn	Pn	21 58 53.3	+2.7
SVB	Belmont	8.61	132		Pn	21 58 50.4	-1.2
GRGR	Grenville	9.18	139	Pn	Pn	21 58 57.2	-2.1
MTDJ	Mount Denham	9.26	266	Pn	Pn	21 59 00.5	0.0
PCRV	Puerto La Cruz	9.46	161	Pn	Pn	21 59 01.7	-1.5
	comp=Z,1.1nm,0.3s,baz=0.0,slow=1.0,SNR=3.3						
PCRV				Sn	Sn	22 00 41.8	-6.4
	comp=Z,4.5nm,0.3s,baz=301,slow=12,SNR=2.7						
PLCV	Puerto La Cruz	9.48	160		Pn	21 59 01.7	-1.8
PLCV					Sn	22 00 41.8	-7.0
BBGH	Gun Hill	9.94	126	*e*P	Pn	21 59 24.9	+15
TOSP	Speyside	10.52	137	*e*P	Pn	21 59 23.9	+6.2
TOSP	Speyside	10.52	137	Pn	Pn	21 59 18.1	+0.4
SDV	Santo Domingo	10.58	195	Pn	Pn	21 59 18.4	-0.3
	comp=Z,11nm,0.3s,baz=47,slow=6.6,SNR=33						
SDV				Sn	Sn	22 01 13.1	-2.9
	comp=Z,2.1nm,0.3s,baz=342,slow=16,SNR=2.1						
SDV				LR	LR	22 03 50.3	
	comp=Z,849nm,19.1s,baz=13,slow=41						
SDV	Santo Domingo	10.58	195	*e*P	Pn	21 59 19.7	+1.0
SDV	Santo Domingo	10.58	195		Pn	21 59 19.8	+1.1
SDV	Santo Domingo	10.58	195	*e*P	Pn	21 59 20.2	+1.5
CODC	Agustn Codazz	10.67	211	*e*P	Pn	21 59 17.4	-2.4
CBCY	The Bluff, Cay	11.28	275	Pn	Pn	21 59 27.1	-0.9
SMLC	San Martn de	11.96	211	*e*P	Pn	21 59 34.0	-3.4
OCAC	Ocana	12.11	207	*e*P	Pn	21 59 37.7	-1.9
PAMC	Pamplona, Colo	12.68	203	*e*P	Pn	21 59 46.8	-0.9
BRRC	Barranca, Sant	13.29	206	*e*P	Pn	21 59 54.1	-1.4
ZARC	Zaragoza, Cauc	13.47	211	*e*P	Pn	21 59 56.6	-1.5
BARC	Barichara	13.55	203	*e*P	Pn	21 59 58.9	-0.5
UREC	San Jos de Ur	13.60	214	*e*P	Pn	22 00 00.3	+0.5
060A	Indiantown	13.94	306		Pn	22 00 05.5	+1.2
CAPC	Capurgana	13.97	223	*e*P	Pn	22 00 02.5	-2.4
PTBC	PUERTO BERRIO,	14.12	208	*e*P	Pn	22 00 07.1	+0.3
RUSC	La Rusia	14.16	202	*e*P	Pn	22 00 07.0	-0.7
RUSC	La Rusia	14.16	202		Pn	22 00 07.1	-0.7
DBBC	Dabeiba	14.58	215	*e*P	Pn	22 00 11.6	-1.4
SPBC	San Pablo de B	14.76	205	*e*P	Pn	22 00 14.8	-0.5
HELC	Santa Helena	14.93	211	*e*P	Pn	22 00 19.2	+1.4
NORC	Norcasia	15.17	208	*e*P	Pn	22 00 20.5	-0.2
BCIP	Isla Barro Col	15.31	231	IAmb	IAmb	22 00 24.6	
	comp=Z,30nm,0.8s						
CBOC	Ciudad Bolivar	15.45	212	*e*P	P	22 00 26.2	-1.9
CHIC	Chingaza	15.56	203	*e*P	Pn	22 00 26.6	+0.5
ROSC	El Rosal	15.59	205	Pn	Pn	22 00 26.3	-0.2
	comp=Z,1.9nm,0.3s,baz=21,slow=8.8,SNR=14						
ROSC				LR	LR	22 06 59.0	
	comp=Z,1µm,19.4s,baz=6.0,slow=40						
ROSC	El Rosal	15.59	205	*e*P	Pn	22 00 26.3	-0.2
ROSC	El Rosal	15.59	205		Pn	22 00 24.1	-2.4
GUY2C	Guyana, Caldas	15.70	209	*e*P	Pn	22 00 28.1	+0.3
PLMC	San Jos del P	16.41	211	*e*P	P	22 00 39.0	+0.3
656A	Willston	16.81	310	Pn	Pn	22 00 41.4	0.0
656A				IAmb	IAmb	22 00 52.7	
	comp=Z,58nm,1.1s						
ORTC	Ortega, Tolima	16.82	206	*e*P	P	22 00 42.6	-0.5
YOTC	Yotoco, Valle	17.24	210	*e*P	P	22 00 48.3	+0.4
456A	Hilliard	17.25	315	Pn	Pn	22 00 47.3	+0.5
ESPN	Las Esperanzas	17.31	249		Pn	22 00 46.8	-0.9
Y60A	Bolivia	17.44	330	Pn	Pn	22 00 48.3	-0.9
CSU	Charleston Sou	17.59	324	Pn	Pn	22 00 51.3	+0.3
RGRS	Roger Stewart	17.61	323	Pn	P	22 00 51.9	+0.2
NHSC	New Hope	17.74	324	P	P	22 00 54.0	+0.8
V62A	Hyde County Ai	17.84	338		P	22 00 54.6	+0.4
MACC	Macarena, Meta	17.92	200	*e*P	Pn	22 00 54.8	-0.5
V61A	Roper	18.27	337		P	22 00 58.7	-0.2
255A	Hazlehurst	18.31	317	P	Pn	22 01 00.8	+0.9
255A				IAmb	IAmb	22 01 14.6	
	comp=Z,28nm,0.9s						
X58A	Rowland	18.43	329	P	Pn	22 01 02.7	+1.5
X58A				IAmb	IAmb	22 01 17.7	
	comp=Z,20nm,0.7s						
V60A	Jim Taylor Roa	18.51	335	P	Pn	22 01 03.1	+0.9
V60A				IAmb	IAmb	22 01 22.0	
	comp=Z,42nm,0.7s						
Y57A	Sumter	18.55	325	P	Pn	22 01 02.6	0.0
Y57A				IAmb	IAmb	22 01 17.4	
	comp=Z,27nm,0.5s						
Z56A	Williston	18.58	322	P	P	22 01 02.2	-0.3
POPC	Popayan, Colom	18.66	209	*e*P	Pn	22 01 04.7	+0.2
U61A	Possum Corner	18.70	338	P	Pn	22 01 05.4	+0.9
U61A				IAmb	IAmb	22 01 07.5	
	comp=Z,43nm,0.8s						
PCON	Cinco Dias	18.73	208	*e*P	Pn	22 01 07.0	+1.4
JTS	Las Juntas de	18.76	244	P	P	22 01 03.6	-1.0
	comp=Z,0.9nm,0.3s,baz=102,slow=14,SNR=3.7						
JTS				LR	LR	22 08 09.5	
	comp=Z,351nm,20.7s,baz=124,slow=37						
JTS	Las Juntas de	18.76	244	P	P	22 01 03.9	-0.7
SOTA	Rioblanco	18.99	208	*e*P	Pn	22 01 11.4	+2.7
SOTA				*e*P	P	22 01 11.6	+4.0
BIRD	Birdtown, Kers	19.07	326	P	Pn	22 01 10.1	+1.2
BIRD				IAmb	IAmb	22 01 14.6	
	comp=Z,18nm,0.5s						
FLOC	Florencia	19.09	205	*e*P	Pn	22 01 08.9	-0.5
JSC	Jenkinsville	19.22	324	P	Pn	22 01 11.2	+0.5
W57A	Gilead	19.23	328	P	Pn	22 01 12.1	+1.3
W57A				IAmb	IAmb	22 01 28.0	
	comp=Z,18nm,0.7s						
U59A	Littleton	19.23	335	P	P	22 01 09.7	+0.1
U59A				IAmb	IAmb	22 01 20.2	
	comp=Z,25nm,1.1s						
TEIG	Tepich	19.29	277	P	Pn	22 01 11.6	-0.1
BBAC	Balboa, Cauca	19.39	210	*e*P	Pn	22 01 12.1	-0.9
CRUC	La Cruz	19.65	208	*e*P	Pn	22 01 18.0	+1.7
T59A	Double "B" Far	19.68	336		Pn	22 01 16.2	0.0
T59A				IAmb	IAmb	22 01 32.9	
	comp=Z,34nm,1.1s						
HODGE	Hodges	19.75	322	P	P	22 01 16.1	+0.9
KMSC	Kings Mountain	19.91	326	P	Pn	22 01 18.2	-0.7
GOGA	Godfrey	19.91	319	P	P	22 01 17.9	+0.9
PAULI	Pauline	19.93	324	P	Pn	22 01 20.6	+1.4
CSGN	Cosiguina Volc	19.93	255	P	P	22 01 17.1	-0.4
MDP	Montagnes des	20.36	131	P	P	22 01 22.6	+0.6
	comp=Z,10nm,0.9s,baz=336,slow=12,SNR=3.1						
MDP				LR	LR	22 10 45.8	
	comp=Z,416nm,20.9s,baz=325,slow=41						
S58A	Poland Farm, P	20.43	336	P	P	22 01 23.0	+0.4
S58A				IAmb	IAmb	22 01 33.2	
	comp=Z,19nm,0.8s						
Y52A	Lilburn	20.58	319	P	P	22 01 25.3	+1.0
R58B	Mineral	20.68	337	IAmb	IAmb	22 01 31.1	
	comp=Z,41nm,1.1s						
S57A	Dark Hollow, R	20.92	335	IAmb	IAmb	22 01 46.9	
	comp=Z,18nm,0.8s						
Q60A	Greensboro	20.95	342	P	P	22 01 28.2	+0.1
Z51A	Franklin	20.95	316	P	P	22 01 29.4	+1.1
Z51A				IAmb	IAmb	22 01 45.6	
	comp=Z,32nm,1.1s						
BLA	Blacksburg	21.09	331	P	P	22 01 30.7	+1.0
BLA				IAmb	IAmb	22 01 48.8	
	comp=Z,28nm,0.8s						
V53A	Saluda	21.10	324	P	P	22 01 31.6	+1.7
V53A				IAmb	IAmb	22 01 46.7	
	comp=Z,31nm,1.1s						
U54A	Nelsons Funny	21.22	327	P	P	22 01 33.5	+2.4
U54A				IAmb	IAmb	22 01 49.3	
	comp=Z,26nm,1.0s						
PTGA	Pitinga	21.23	158	P	P	22 01 30.4	-0.9
	comp=Z,7.0nm,0.4s,baz=327,slow=14,SNR=17						
PTGA				LR	LR	22 10 55.0	
	comp=Z,306nm,18.1s,baz=340,slow=40						
PTGA	Pitinga	21.23	158	P	P	22 01 30.8	-0.6
PTGA				IAmb	IAmb	22 01 41.8	
	comp=Z,34nm,0.9s						
PTGA	Pitinga	21.23	158	*e*P	P	22 01 30.4	-0.9
Z50A	Ashland	21.41	314	P	P	22 01 33.2	+0.1
Z50A				IAmb	IAmb	22 01 45.5	
	comp=Z,28nm,1.1s						
OTAV	Otavalo	21.52	210	*e*P	P	22 01 36.0	+1.1
OTAV	Otavalo	21.52	210	P	P	22 01 33.5	-1.4
OTAV	Otavalo	21.52	210	*e*P	P	22 01 34.9	0.0
X51A	Calhoun	21.54	319	P	P	22 01 35.6	+1.0
X51A				IAmb	IAmb	22 01 44.8	
	comp=Z,24nm,1.1s						
SDMD	Soldier's Deli	21.62	341	P	P	22 01 36.1	+0.7
TKL	Tuckaleechee C	21.64	323	P	P	22 01 36.0	+0.5
	comp=Z,10nm,1.2s,baz=157,slow=7.7,SNR=2.8						
TKL				S	S	22 05 31.0	-1.5
	comp=Z,7.0nm,0.4s,baz=197,slow=13,SNR=4.2						
TKL				LR	LR	22 11 43.4	
	comp=Z,341nm,18.1s,baz=147,slow=42						
TKL	Tuckaleechee C	21.64	323	P	P	22 01 37.3	+1.8
TKL				IAmb	IAmb	22 01 55.0	
	comp=Z,16nm,0.8s						
P60A	Greenville	21.64	343	P	P	22 01 37.1	+1.5
V52A	Sevierville	21.66	323	P	P	22 01 37.8	+1.9
V52A				IAmb	IAmb	22 01 53.9	
	comp=Z,14nm,0.8s						
PSUB	Penn St. - Bra	21.70	344	P	P	22 01 36.1	-0.1
PSUB				IAmb	IAmb	22 01 46.9	
	comp=Z,18nm,1.0s						
R55A	Marlinton	21.84	333	P	P	22 01 40.7	+2.9
R55A				IAmb	IAmb	22 01 52.8	
	comp=Z,28nm,0.8s						
CPCT	Cooper Cave	21.93	321	P	P	22 01 41.0	+2.3
CPCT				IAmb	IAmb	22 01 57.7	
	comp=Z,14nm,0.9s						
S54A	Dingess, Beckl	21.98	330		P	22 01 40.8	+1.5
LRAL	Lakeview Retre	22.02	313	P	P	22 01 39.8	+0.1
APG	El Apazote	22.03	263	P	P	22 01 39.7	-0.5
	comp=Z,16nm,0.8s,baz=90,slow=15,SNR=10						
APG				LR	LR	22 11 15.7	
	comp=Z,744nm,18.6s,baz=82,slow=40						
V51A	Loudon	22.07	322	P	P	22 01 41.4	+1.2
V51A				IAmb	IAmb	22 01 51.5	
	comp=Z,21nm,1.1s						
P57A	Homestead Farm	22.07	339	P	P	22 01 42.1	+1.9
Y49A	Blount Mountai	22.10	315	P	P	22 01 41.1	+0.5
Y49A				IAmb	IAmb	22 01 56.3	
	comp=Z,16nm,0.8s						
Q56A	Snyder Ridge,	22.11	336	P	P	22 01 43.5	+2.8
Q56A				IAmb	IAmb	22 01 51.4	
	comp=Z,16nm,0.8s						
TZTN	Tazewell	22.15	325	P	P	22 01 43.8	+2.7
TZTN				IAmb	IAmb	22 01 56.8	
	comp=Z,20nm,0.8s						
CPNY	Central Park	22.18	348	P	P	22 01 42.2	+0.9
CPNY				IAmb	IAmb	22 01 57.5	
	comp=Z,29nm,0.8s						
BRNJ	Basking Ridge	22.21	346	P	P	22 01 43.0	+1.5
W50A	Signal Mountai	22.24	319	P	P	22 01 43.9	+1.8
W50A				IAmb	IAmb	22 01 47.4	
	comp=Z,26nm,1.1s						
T52A	Hallie	22.27	326	P	P	22 01 43.8	+1.5
T52A				IAmb	IAmb	22 01 52.9	
	comp=Z,18nm,1.0s						
LUPA	Lehigh Univers	22.32	345	P	P	22 01 44.2	+1.4
PAL	Palisades	22.38	348	P	P	22 01 44.4	+1.0
PAL				IAmb	IAmb	22 02 00.2	
	comp=Z,23nm,0.7s						
M65A	Busby, Falmout	22.45	354	P	P	22 01 45.4	+1.2
ODNJ	Ogdensburg	22.60	347	P	P	22 01 47.8	+1.9
ODNJ				IAmb	IAmb	22 02 03.5	
	comp=Z,19nm,0.6s						
SWET	Sewanee	22.63	319	P	P	22 01 48.5	+2.2
R53A	Hurricane	22.70	330		P	22 01 48.1	+1.1
N59A	State Game Lan	22.72	344		P	22 01 49.3	+2.2
Q54A	Coxs Mills	22.74	333	P	P	22 01 47.8	+0.5
Q54A				IAmb	IAmb	22 01 50.4	
	comp=Z,24nm,1.1s						
X48A	Hartselle	22.87	316	P	P	22 01 49.3	+0.6
BRYW	Bryant College	22.89	353	P	P	22 01 50.2	+1.3
MCWV	Mont Chateau	22.90	336	P	P	22 01 49.5	+0.5
N58A	Sunbury	22.90	342	P	P	22 01 49.0	0.0
O56A	Blue Knob Stat	22.97	339	P	P	22 01 51.2	+1.5
S51A	Beattyville	22.98	326	P	P	22 01 51.3	+1.4
S51A				IAmb	IAmb	22 02 00.5	
	comp=Z,20nm,1.1s						
346A	Big Creek Wild	22.99	306	P	P	22 01 48.9	-1.2
SSPA	Standing Stone	23.07	340		P	22 01 53.5	+2.8
WES	Weston	23.33	353	P	P	22 01 55.1	+2.0
WES				IAmb	IAmb	22 02 08.6	
	comp=Z,30nm,1.0s						
CCIG	Comitan	23.34	267	P	P	22 01 54.7	+1.0
CCIG				IAmb	IAmb	22 02 06.0	
	comp=Z,22nm,0.8s						
QUA2	Belchertown	23.35	351	P	P	22 01 54.1	+0.7
QUA2				IAmb	IAmb	22 02 12.3	
	comp=Z,33nm,1.1s						
P53A	Whipple	23.39	333	P	P	22 01 55.5	+1.6
HRV	Adam Dziewonsk	23.48	353	P	P	22 01 55.4	+0.8
HRV				IAmb	IAmb	22 02 13.9	
	comp=Z,28nm,0.9s						
M57A	Sunshine Farm,	23.48	342	P	P	22 01 56.3	+1.7
O54A	Avella	23.56	335	P	P	22 01 56.4	+0.9
O54A				IAmb	IAmb	22 02 12.1	
	comp=Z,19nm,0.9s						
K62A	Royalston	23.72	352	P	P	22 01 56.4	-0.4
K62A				IAmb	IAmb	22 02 07.6	
	comp=Z,23nm,1.1s						
L59A	Walton	23.75	347	P	P	22 01 57.5	+0.2
R50A	Paris	23.85	326	P	P	22 01 58.8	+0.7
R50A				IAmb	IAmb	22 02 02.6	
	comp=Z,22nm,1.1s						
PLAL	Pickwick Lake	23.87	315	P	P	22 01 58.3	-0.1
PLAL				IAmb	IAmb	22 02 13.6	
	comp=Z,9.2nm,0.7s						
Q51A	Peebles	23.92	329	P	P	22 02 00.5	+1.7
Q51A				IAmb	IAmb	22 02 16.9	
	comp=Z,16nm,0.7s						
M56A	Emporium	23.93	341	P	P	22 02 00.1	+1.2
BINY	Binghamton	23.98	345	P	P	22 02 01.5	+2.2
344A	Westbrook Farm	24.00	305	P	P	22 02 00.2	+0.7
344A				IAmb	IAmb	22 02 14.5	
	comp=Z,19nm,0.9s						
N54A	Moraine State	24.09	337	P	P	22 02 03.6	+3.3
O52A	Adamsville	24.11	333	P	P	22 02 02.0	+1.6
O52A				IAmb	IAmb	22 02 15.8	
	comp=Z,16nm,1.0s						
M55A	Ridgway	24.11	340	P	P	22 02 01.9	+1.4
M55A				IAmb	IAmb	22 02 04.9	
	comp=Z,16nm,1.1s						
P51A	Williamsport	24.14	330	P	P	22 02 02.5	+1.7
P51A				IAmb	IAmb	22 02 18.2	
	comp=Z,14nm,0.8s						
WVT	Waverly	24.41	318	P	P	22 02 04.1	+0.9
WVT				IAmb	IAmb	22 02 18.3	
	comp=Z,7.3nm,0.7s						
K58A	Earlville	24.43	346	P	P	22 02 04.5	+1.1
K58A				IAmb	IAmb	22 02 23.8	
	comp=Z,16nm,1.0s						
M54A	Oil Creek Stat	24.45	338	P	P	22 02 03.8	+0.2
OXF	Oxford	24.51	313	P	P	22 02 04.2	+0.1
J57A	Williamstown	25.13	346	P	P	22 02 11.0	+1.3
J57A				IAmb	IAmb	22 02 27.3	
	comp=Z,15nm,1.1s						
342A	Flagon Creek P	25.21	304	P	P	22 02 10.3	-0.3
J56A	Wolcott	25.21	344	P	P	22 02 10.7	+0.3
P48A	Milroy	25.30	327	P	P	22 02 11.2	-0.1
P48A				IAmb	IAmb	22 02 29.5	
	comp=Z,18nm,1.1s						
WVL	Waterville	25.37	357	P	P	22 02 13.7	+1.9
WVL				IAmb	IAmb	22 02 15.4	
	comp=Z,18nm,1.1s						
CMIG	Matias Romero	25.80	270	P	P	22 02 15.8	-0.2
	comp=Z,2.3nm,0.8s,baz=58,slow=9.5,SNR=2.6						
S44A	Carbondale	26.27	319	P	P	22 02 19.9	-0.2
Z41A	Richland Creek	26.35	307	P	P	22 02 22.6	+1.7
P46A	Rosedale	26.36	325	P	P	22 02 21.9	+1.0
P46A				IAmb	IAmb	22 02 27.1	
	comp=Z,13nm,0.9s						
M48A	Edgerton	26.50	331	P	P	22 02 22.9	+0.7
N47A	Urbana	26.50	329	P	P	22 02 23.2	+1.0
LCAR	Lake Charles	26.55	314	P	P	22 02 23.1	+0.4
W41B	Gary Mavity, V	26.84	311	IAmb	IAmb	22 02 38.6	
	comp=Z,12nm,1.1s						
WHAR	Wooly Hollow	26.93	312	P	P	22 02 29.1	+2.9
WHAR				IAmb	IAmb	22 02 39.5	
	comp=Z,23nm,1.2s						
X40A	Basin Creek Fa	26.93	310	P	P	22 02 26.4	+0.2
SADO	Sadowa	27.21	342	P	P	22 02 28.4	-0.1
	comp=Z,1.3nm,0.4s,baz=90,slow=20,SNR=3.0						
SADO				LR	LR	22 14 58.4	
	comp=Z,424nm,18.1s,baz=172,slow=40						
O44A	Mansfield	27.43	324	P	P	22 02 31.5	+1.0
P43A	Skaggs, Pawnee	27.68	322		P	22 02 36.0	+3.2
CCM	Cathedral Cave	27.74	318		P	22 02 35.2	+1.8
CCM	Cathedral Cave	27.74	318	P	P	22 02 33.6	+0.2
CCM				IAmb	IAmb	22 02 41.4	
	comp=Z,13nm,1.1s						
U40A	Yellville	27.87	313	P	P	22 02 34.8	+0.3
MGMO	Mountain Grove	27.90	315	IAmb	IAmb	22 02 50.9	
	comp=Z,12nm,0.7s						
ATAH	Atahualpa	28.14	203	LR	LR	22 16 02.2	
	comp=Z,627nm,18.9s,baz=355,slow=41						
SAML	Samuel	28.32	170	P	P	22 02 37.3	-1.3
SAML				IAmb	IAmb	22 02 39.6	
	comp=Z,11nm,0.6s						
SAML	Samuel	28.32	170	*e*P	P	22 02 37.6	-1.0
I47A	Gladwin	28.45	334		PcP	22 05 51.5	+0.8
HHAR	Hobbs	28.59	312	P	P	22 02 41.2	+0.3
L40A	Anamosa	30.25	324	P	P	22 02 57.4	+1.8
L40A				IAmb	IAmb	22 03 12.1	
	comp=Z,8.2nm,0.8s						
JFWS	Jewell Farm	30.30	326	P	P	22 02 57.2	+1.2
I42A	Draeger Farm,	30.33	329	IAmb	IAmb	22 03 13.3	
	comp=Z,10.0nm,0.7s						
JCT	Junction City	31.03	297	IAmb	IAmb	22 03 04.5	
	comp=Z,9.5nm,0.8s						
ABTX	Abilene, Hawle	31.47	302	IAmb	IAmb	22 03 25.2	
	comp=Z,13nm,1.1s						
WMOK	Wichita Mounta	31.50	306	IAmb	IAmb	22 03 20.5	
	comp=Z,4.6nm,0.7s						
G40A	Rib Lake	31.97	329	IAmb	IAmb	22 03 26.9	
	comp=Z,10.0nm,0.7s						
BGNE	Belgrade	34.03	317	P	P	22 03 28.6	-0.1
TXAR	Lajitas Array	34.09	294	P	P	22 03 29.1	-0.5
	comp=Z,1.3nm,0.6s,baz=115,slow=9.3,SNR=16						
TXAR				PcP	PcP	22 06 07.7	+1.5
	comp=Z,0.9nm,0.8s,baz=125,slow=4.6,SNR=3.4						
TXAR				ScP	ScP	22 09 52.2	+5.1
	comp=Z,0.4nm,0.7s,baz=99,slow=4.2,SNR=4.1						
TXAR	Lajitas Array	34.09	294	P	P	22 03 29.6	0.0
TX31	Lajitas Ar. Si	34.10	294	P	P	22 03 30.0	+0.4
TX31				IAmb	IAmb	22 03 44.9	
	comp=Z,6.7nm,1.1s						
TX32	Lajitas Array	34.10	294	IAmb	IAmb	22 03 49.8	
	comp=Z,4.8nm,0.8s						
MSTX	Muleshoe	34.37	303	P	P	22 03 31.2	-0.8
EYMN	Ely	34.55	332	IAmb	IAmb	22 03 52.5	
	comp=Z,5.4nm,0.8s						
LPAZ	La Paz	35.24	181	P	P	22 03 38.6	-1.4
	comp=Z,1.5nm,0.5s,baz=18,slow=3.8,SNR=11						
LPAZ				LR	LR	22 19 11.2	
	comp=Z,368nm,18.0s,baz=316,slow=38						
LPAZ	La Paz	35.24	181	IAmb	IAmb	22 03 52.1	
	comp=Z,11nm,1.1s						
LPAZ	La Paz	35.24	181	*e*P	P	22 03 38.4	-1.6
HPIG		35.57	290	P	P	22 03 42.1	-0.3
HPIG				IAmb	IAmb	22 03 53.6	
	comp=Z,4.0nm,0.6s						
SCHQ	Schefferville	35.60	1	P	P	22 03 41.7	-0.4
	comp=Z,3.5nm,0.5s,baz=212,slow=7.5,SNR=8.2						
SCHQ				LR	LR	22 18 05.1	
	comp=Z,266nm,19.0s,baz=204,slow=36						
SCHQ	Schefferville	35.60	1	P	P	22 03 42.8	+0.6
SCHQ				IAmb	IAmb	22 03 43.1	
	comp=Z,6.8nm,1.0s						
MNTX	Cornudas Mount	35.97	298	P	P	22 03 45.6	0.0
MNTX				IAmb	IAmb	22 03 56.9	
	comp=Z,6.3nm,0.9s						
KSCO	Kaye Shedlock'	35.97	311	P	P	22 03 45.2	-0.4
T25A	Trinidad	36.61	307	P	P	22 03 51.4	+0.2
SALV	Santo Antonio	36.84	160	*e*P	P	22 03 52.1	-0.9
ANMO	Albuquerque	37.56	303	P	P	22 03 59.0	-0.3
SDCO	Great Sand Dun	37.63	307	P	P	22 03 59.8	-0.1
SDCO				IAmb	IAmb	22 04 13.9	
	comp=Z,7.9nm,0.9s						
ARAG	Araguaiana, MT	38.07	154	*e*P	P	22 04 03.5	+0.1
MNMC	Minye Minye	38.11	183	P	P	22 04 01.0	-3.0
ULM	Lac du Bonnet	38.21	331	P	P	22 04 03.8	-0.5
	comp=Z,1.6nm,0.5s,baz=123,slow=11,SNR=4.4						
ULM				LR	LR	22 20 27.5	
	comp=Z,189nm,19.2s,baz=147,slow=37						
ULM	Lac du Bonnet	38.21	331	IAmb	IAmb	22 04 18.9	
	comp=Z,3.1nm,0.7s						
ISCO	Idaho Springs	38.41	311	IAmb	IAmb	22 04 20.4	
	comp=Z,5.9nm,0.9s						
MDND	Maddock	38.51	325	P	P	22 04 08.0	+1.1
MDND				IAmb	IAmb	22 04 11.4	
	comp=Z,7.7nm,0.7s						
S22A	4UR Ranch, Cre	38.63	307	P	P	22 04 07.6	-0.8
S22A				IAmb	IAmb	22 04 11.9	
	comp=Z,5.1nm,0.8s						
PP1B	Ponte de Pedra	38.69	160	*e*P	P	22 04 08.3	-0.3
PB11	IPOC Station P	38.73	183	P	P	22 04 06.8	-2.3
PHWY	Pilot Hill	38.87	313	P	P	22 04 09.5	-0.8
PHWY				IAmb	IAmb	22 04 13.7	
	comp=Z,7.8nm,1.1s						
N23A	Red Feather La	39.05	312	P	P	22 04 11.9	0.0
RSSD	Black Hills	39.13	318	P	P	22 04 13.1	+0.7
SMCO	Snowmass	39.19	309	P	P	22 04 13.1	0.0

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SMCO                                   IAmb     IAmb       22 04 31.8
          comp=Z,6.8nm,1.1s
BDFB  Brasilia           39.71 149   P        P          22 04 15.1  -2.2
          comp=Z,3.1nm,0.5s,baz=260,slow=5.4,SNR=2.9
BDFB                                   LR       LR         22 21 03.4
          comp=Z,408nm,19.7s,baz=323,slow=37
RCBR  Riachuelo          40.07 125  eP        P          22 04 28.4  +8.1
AQDB  Aquidauana         41.15 163  eP        P          22 04 29.2  +0.1
RDMU  Red Mountain       41.52 310   P        P          22 04 32.5  +0.2
LVC   Limon Verde        41.54 182   P        P          22 04 30.5  -2.1
LVC                                    IAmb     IAmb       22 04 37.0
          comp=Z,8.6nm,0.7s
LVC   Limon Verde        41.54 182  eP        P          22 04 30.7  -1.9
WUAZ  Wupatki            41.62 302   P        P          22 04 34.3  +1.2
WUAZ                                   IAmb     IAmb       22 04 52.1
          comp=Z,14nm,1.1s
IPMB  Ipameri, GO        41.65 151  eP        P          22 04 35.5  +2.2
LAO   LASA Array         41.70 320   P        P          22 04 34.2  +0.8
BW06  Boulder Array      42.25 313   P        P          22 04 38.5  +0.3
PD31  Pinedale Array     42.25 313   P        P          22 04 38.4  +0.2
PDAR  Pinedale Array     42.25 313   P        P          22 04 36.3  -1.9
          comp=Z,0.7nm,0.5s,baz=129,slow=8.4,SNR=5.9
PDAR  Pinedale Array     42.25 313   P        P          22 04 37.5  -0.7
ITRB  Iturama            42.26 155  eP        P          22 04 38.1  -0.1
TMUT  Trail Mountain     42.36 308   P        P          22 04 39.0  -0.2
RLMT  Red Lodge          42.93 317   IAmb     IAmb       22 04 45.4
          comp=Z,9.9nm,0.9s
REDW  Red Top Meadow     43.34 314   IAmb     IAmb       22 04 51.6
          comp=Z,8.8nm,1.0s
YMP   Mirror Lake Pl     43.37 316   P        P          22 04 47.6  +0.3
YNE   Yellowstone No     43.37 316   P        P          22 04 48.4  +1.1
LCMT  Little Creek M     43.39 304            PcP        22 06 30.6  -4.6
FLWY  Flagg Ranch        43.49 315   P        P          22 04 47.9  -0.3
FLWY                                   IAmb     IAmb       22 04 58.7
          comp=Z,11nm,0.9s
W13A  Hualapai Mount     43.56 301   P        P          22 04 50.0  +1.1
CCUT  Cedar City         43.59 305   P        P          22 04 50.0  +0.9
YUF   Upper Falls        43.59 315   P        P          22 04 49.2  +0.1
YPP   Pitchstone Pla     43.63 315   P        P          22 04 49.2  -0.2
YNR   Norris Junctio     43.71 315   P        P          22 04 51.2  +1.2
SPUT  South Promonto     43.83 310   P        P          22 04 51.0  +0.2
YMR   Madison River      43.88 315   P        P          22 04 51.3   0.0
YHB   Horse Butte        44.06 315            P          22 04 56.3  +3.5
YHL   Hebgen Lake        44.09 315            P          22 04 56.1  +3.0
GO02  Mina Guanaco       44.10 182   P        P          22 04 51.5  -1.8
GO02                                   IAmb     IAmb       22 04 54.5
          comp=Z,8.6nm,0.8s
PSUT  Pine Spring        44.18 306   P        P          22 04 54.6  +0.8
BB19B Bebedouro          44.23 154  eP        P          22 04 54.4  +0.4
QLMT  Earthquake Lak     44.25 315   P        P          22 04 55.9  +1.6
EGMT  Eagleton           44.44 320   P        P          22 04 56.7  +1.1
EGMT                                   IAmb     IAmb       22 04 59.1
          comp=Z,16nm,1.1s
SHPR  Sheep Range        44.81 303   P        P          22 05 00.4  +1.5
MCMT  McKenzie Canyo     45.19 315   P        P          22 05 02.0  +0.2
DLMT  Dillon             45.21 316   P        P          22 05 02.2  +0.4
DLMT                                   IAmb     IAmb       22 05 04.9
          comp=Z,10nm,1.1s
LRM   Limekiln Ridge     45.27 316   P        P          22 05 03.6  +1.2
R11A  Troy Canyon, C     45.47 305   P        P          22 05 04.6  +0.5
XPFO  Pion Flat          45.48 299   P        P          22 05 01.7  -2.4
PFO   Pinyon Flats O     45.49 299   P        P          22 05 00.9  -3.3
TPNV  Topopah Spring     45.75 303   P        P          22 05 07.2  +1.0
TPNV                                   IAmb     IAmb       22 05 22.8
          comp=Z,6.6nm,0.9s
GSC   Goldstone, Bar     45.96 301   P        P          22 05 08.6  +0.7
GSC                                    IAmb     IAmb       22 05 23.0
          comp=Z,7.3nm,1.1s
BSFB  Barra de Sao F     46.12 143  eP        P          22 05 12.8  +3.7
CPUP  Villa Florida      46.36 167   P        P          22 05 08.4  -2.5
          comp=Z,1.4nm,0.6s,baz=337,slow=7.1,SNR=3.7
CPUP                                   LR       LR         22 27 05.7
          comp=Z,260nm,18.0s,baz=353,slow=39
CPUP  Villa Florida      46.36 167   IAmb     IAmb       22 05 16.7
          comp=Z,7.1nm,1.0s
MSO   Missoula           46.59 317   P        P          22 05 13.1  +0.4
DAC   Darwin (Calif)     46.72 302   P        P          22 05 15.2  +1.2
DAC                                    IAmb     IAmb       22 05 31.3
          comp=Z,8.0nm,0.9s
JTMT  Jette              47.13 318   P        P          22 05 18.0  +1.1
JTMT                                   IAmb     IAmb       22 05 22.1
          comp=Z,10nm,1.2s
NVAR  Mina Array Bea     47.59 305   LR       LR         22 29 58.7
          comp=Z,242nm,18.2s,baz=72,slow=42
NEW   Newport            49.10 318   P        P          22 05 31.3  -0.7
          comp=Z,7.7nm,0.9s,baz=136,slow=6.2,SNR=10.0
NEW   Newport            49.10 318   P        P          22 05 33.0  +1.1
ITQB  Itaqui             49.74 167  eP        P          22 05 37.2  +0.4
YKA   Yellowknife Ar     53.87 335   P        P          22 06 06.4  -0.9
          comp=Z,1.0nm,0.5s,baz=111,slow=7.8,SNR=14
YKA                                    LR       LR         22 29 29.4
          comp=Z,221nm,19.8s,baz=0.0,slow=36
SUMG  Summit             55.98  10  i P       P          22 06 24.0  +1.1
SUMG  Summit             55.98  10   P        P          22 06 23.8  +1.0
MDT   Midelt             57.67  63   P        P          22 06 36.9  +1.7
          comp=Z,6.8nm,1.2s,baz=256,slow=8.3,SNR=3.5
ESDC  Sonseca Array      58.06  55   P        P          22 06 39.0  +1.3
          comp=Z,3.4nm,0.7s,baz=273,slow=7.0,SNR=21
ESDC                                   LR       LR         22 26 18.4
          comp=Z,162nm,21.8s,baz=350,slow=30
ESDC  Sonseca Array      58.06  55   P        P          22 06 38.3  +0.6
ESBB  Sonseca Array      58.06  55   P        P          22 06 38.1  +0.4
DLBC  Dease Lake         59.37 327   P        P          22 06 47.0  +0.4
          comp=Z,5.7nm,0.6s,baz=98,slow=3.2,SNR=6.8
PLCA  Paso Flores        59.65 182   P        P          22 06 47.1  -1.5
          comp=Z,2.5nm,0.7s,baz=31,slow=8.6,SNR=9.2
PLCA  Paso Flores        59.65 182   IAmb     IAmb       22 06 47.5
          comp=Z,4.3nm,0.8s
PLCA  Paso Flores        59.65 182  eP        P          22 06 49.3  +0.8
TIC   Toumodi            62.18  93  eP        P          22 07 08.0  +1.7
LIC   Lamto              62.30  93  eP        P          22 07 10.6  +3.5
          comp=Z,21nm,1.2s
DBIC  Dimbokro           62.32  92   P        P          22 07 07.4  +0.2
          comp=Z,2.6nm,0.5s,baz=284,slow=6.8,SNR=8.2
KIC   Kosan Boka         62.53  93  eP        P          22 07 08.1  -0.5
          comp=Z,6.7nm,0.7s
CLF   Chambon-Foret      62.73  45   P        P          22 07 09.9  +0.5
INK   Inuvik             63.41 338   IAmb     IAmb       22 07 20.0
          comp=Z,5.8nm,0.9s
DAWY  Dawson             64.88 333   IAmb     IAmb       22 07 29.4
          comp=Z,4.2nm,0.6s
EGAK  Eagle              65.73 333   IAmb     IAmb       22 07 34.4
          comp=Z,6.3nm,0.8s
BCAR  Beaver Creek A     65.83 331   P        P          22 07 30.3  +0.8
BNI   Bardonecchia       65.84  48   P        P          22 07 29.6  -0.3
BNI                                    IAmb     IAmb       22 07 41.5
          comp=Z,5.6nm,1.1s
GLB   Gilahina Butte     66.66 329   P        P          22 07 36.0  +1.2
GLB                                    IAmb     IAmb       22 07 53.1
          comp=Z,6.2nm,1.1s
TORD  Torodi Ar. Bea     66.67  84   P        P          22 07 36.0  +0.4
          comp=Z,5.9nm,0.8s,baz=276,slow=6.4,SNR=16
TORD                                   LR       LR         22 36 21.2
          comp=Z,176nm,19.0s,baz=310,slow=36
TORD  Torodi Ar. Bea     66.67  84   P        P          22 07 36.3  +0.7
DOT   Dot Lake           66.89 332   P        P          22 07 37.6  +1.4
DOT                                    IAmb     IAmb       22 07 52.8
          comp=Z,6.9nm,1.0s
RIDG  Independent Ri     67.25 332   P        P          22 07 38.4  -0.2
BMAR  Burnt Mountain     67.38 336   P        P          22 07 39.7  +0.5
PAX   Paxson             67.50 331   P        P          22 07 41.5  +1.4
PAX                                    IAmb     IAmb       22 07 55.5
          comp=Z,4.4nm,1.0s
TAM   Tamanrasset        67.93  73   P        P          22 07 44.7  +1.0
FID   Port Fidalgo       67.94 329   P        P          22 07 43.6  +0.7
HIN   Hinchinbrook I     67.95 328   P        P          22 07 44.5  +1.6
NOA   NORSAR Array B     68.12  31   P        P          22 07 44.6  +0.6
          comp=Z,0.3nm,0.3s,baz=274,slow=6.3,SNR=2.9
NOA                                    LR       LR         22 32 45.1
          comp=Z,58nm,21.6s,baz=265,slow=32
IL31                     68.17 333   IAmb     IAmb       22 07 59.0
          comp=Z,4.0nm,0.9s
ILAR  Eielson Array      68.17 333   P        P          22 07 44.1  -0.1
          comp=Z,3.4nm,0.9s,baz=104,slow=4.0,SNR=20
ILAR                                   LR       LR         22 38 43.6
          comp=Z,272nm,18.2s,baz=101,slow=37
HDA   Harding Lake       68.19 333   P        P          22 07 45.2  +0.8
HDA                                    IAmb     IAmb       22 07 59.8
          comp=Z,7.1nm,1.2s
NC602 NORSAR Array S     68.28  31   P        P          22 07 44.8  -0.2
NC405 NORSAR Array S     68.36  31   P        P          22 07 44.5  -1.0
DHY   Denali Highway     68.37 331   P        P          22 07 46.7  +1.0
DHY                                    IAmb     IAmb       22 08 04.7
          comp=Z,5.1nm,1.2s
PRMA  PARMA              68.43  49   P        P          22 07 46.3  +0.1
RETA  Reutte             68.48  46  i P       P          22 07 48.3  +1.7
          comp=Z,11nm,1.2s
FETA  Feichten           68.50  46  i P       P          22 07 48.6  +1.8
          comp=Z,14nm,1.2s
CCB   Clear Creek Bu     68.57 333   P        P          22 07 47.6  +0.9
MOTA  Moosalm            68.72  46   P        P          22 07 50.4  +2.2
          comp=Z,9.2nm,1.8s
SQTA  Sankt Quirin       68.81  46  i P       P          22 07 50.1  +1.4
          comp=Z,2.5nm,0.5s
KEST  Kesra              68.86  58   LR       LR         22 31 49.3
          comp=Z,36nm,20.9s,baz=302,slow=31
CLL   Collm              69.59  41  eP        P          22 07 46.0  -7.3
CLL                                 esP       pP         22 08 07.0  +1.0
TRF   Thorofare Moun     69.68 332   IAmb     IAmb       22 08 09.2
          comp=Z,9.4nm,0.9s
ABTA  Abfaltersbach      69.75  46  eP        P          22 07 58.3  +3.8
          comp=Z,9.0nm,1.2s
BPAW  Bear Paw Mtn.      69.96 332   P        P          22 07 55.8  +0.4
BPAW                                   IAmb     IAmb       22 07 59.5
          comp=Z,7.3nm,0.9s
KHC   Kasperske Hory     70.18  44  eP        P          22 07 56.8  -0.3
KHC                                 ex        x          22 08 16.1
BRG   Berggiesshubel     70.22  42  eP        P          22 08 00.9  +3.7
          comp=Z,4.7nm,1.1s
KBA   Koelnbreinsper     70.27  46  eP        P          22 08 01.7  +3.9
          comp=Z,9.6nm,1.1s
GERES GERESS Array B     70.30  44   P        P          22 07 57.5  -0.3
          comp=Z,1.4nm,1.0s,baz=228,slow=2.5,SNR=4.3
GERES                                  LR       LR         22 33 45.5
          comp=Z,120nm,21.5s,baz=281,slow=32
IMAR  Indian Mountai     71.02 334   P        P          22 08 02.7  +1.0
DPC   Dobruska-Polom     71.79  42  eP        P          22 08 10.5  +3.7
MODS  Modra-Piesok       72.71  44  eP        P          22 08 15.7  +3.4
ARCES ARCESS Array B     73.36  21   P        P          22 08 15.7   0.0
          comp=Z,4.5nm,1.0s,baz=289,slow=4.8,SNR=9.3
ARCES                                  LR       LR         22 37 41.4
          comp=Z,61nm,18.6s,baz=240,slow=34
VYHS  Vyhne              73.71  44  eP        P          22 08 22.7  +4.5
FINES FINESS Array B     75.20  30   P        P          22 08 27.7  +1.2
          comp=Z,2.1nm,0.8s,baz=336,slow=3.0,SNR=3.4
FINES                                  LR       LR         22 36 58.3
          comp=Z,123nm,21.6s,baz=256,slow=32
TRPA  Tarpa              76.21  44  ⇓P        P          22 08 35.0  +2.4
DRGR                     76.63  45  ⇓P        P          22 08 36.6  +1.5
HERR  Herculane          76.89  47  ⇑P        P          22 08 41.1  +4.6
VTS   Vitosha            78.03  49  ⇓P        P          22 08 36.9  -6.2
BUR08 Bucovina Ar. S     78.06  44   P        P          22 08 43.7  +0.6
BURAR Bucovina Array     78.08  44  ⇑P        P          22 08 45.0  +1.8
BURAR Bucovina Array     78.08  44   P        P          22 08 44.7  +1.4
ARR   Arges              78.29  46  ⇑P        P          22 08 47.9  +3.5
VOIR                     78.55  46  ⇑P        P          22 08 50.1  +4.3
MLR   Muntele Rosu       79.14  46  ⇑P        P          22 08 51.9  +2.8
MLR   Muntele Rosu       79.14  46   P        P          22 08 49.3  +0.2
AKASG Malin Array Be     79.73  40   P        P          22 08 52.7  +0.7
          comp=Z,3.6nm,1.1s,baz=275,slow=4.5,SNR=10
AKASG                                  LR       LR         22 40 20.8
          comp=Z,197nm,21.9s,baz=330,slow=33
AKASG Malin Array Be     79.73  40   P        P          22 08 52.0  -0.1
SORM  Soroca             79.96  43  ⇑P        P          22 08 54.6  +1.2
BRTR  Keskin Array B     86.39  49   P        P          22 09 28.4  +1.5
          comp=Z,2.6nm,0.9s,baz=270,slow=3.7,SNR=11
BRTR                                   LR       LR         22 44 22.5
          comp=Z,45nm,21.5s,baz=292,slow=33
BRTR  Keskin Array B     86.39  49   P        P          22 09 28.7  +1.9
TIXI  Tiksi              88.69 355   P        P          22 09 38.2  +1.2
NRIK  Noril'sk           89.99   9   LR       LR         22 52 57.5
          comp=Z,105nm,18.4s,baz=334,slow=38
KBZ   Khabaz             91.00  43   P        P          22 09 51.1  +2.7
          comp=Z,3.1nm,1.0s,baz=11,slow=3.1,SNR=5.8
KBZ                                    LR       LR         22 47 15.1
          comp=Z,94nm,21.9s,baz=310,slow=33
KSH   Kashi             112.52  30   PKP      PKiKP      22 15 16.7  -4.0
KSH                                    PP       PP         22 16 06.6  +0.1
KSH                                    LR       LR
          comp=Z,220nm,11.9s
WMQ   Urumqi            113.42  19  ePKP      PKiKP      22 15 17.7  -4.5
WMQ                                    LR       LR
          comp=Z,100nm,29.1s
HHC   Hu-ho-hao-te      120.28   1  ePKP      PKPdf      22 15 30.1  -5.4
LZH   Lanzhou           124.48   8  ePKP      PKPdf      22 15 39.8  -4.0
NJ2   Nanjing           128.67 353  ePKP      PKPdf      22 15 51.7   0.0
CD2   Chengdu           129.55   9   PKP      PKPdf      22 15 46.6  -6.9
STKA  Stephens Creek    150.70 239   PKPbc    PKPbc      22 16 36.3  -0.3
          comp=Z,5.4nm,0.8s,baz=45,slow=2.9,SNR=4.8
```

IDC 06 22:03:28.8±1.7**, 32°.34N**×**39°.83W, h0**km**, mb3.5**/5**, mb1 3.7**/5**, mb1mx3.4**/52**, mbtmp3.5**/5**, Error ellipse: s-maj=64.3km s-min=26.3km az=14.0, Northern Mid-Atlantic Ridge**

```
Code  Station Name         Δ°  AZ°    Phase ID             Time     Res
                                     Op       ISC        h  m  s    ISC
TORD  Torodi Ar. Bea     42.46 107   P        P          22 11 26.1  +0.3
          1.2nm,0.9s,baz=296,slow=7.6,SNR=3.9
H10N2 ASCENSION HYDR46.68 144   T        T          23 01 51.2
          baz=329,slow=76,SNR=18
H10N3 ASCENSION HYDR46.69 144   T        T          23 01 54.1
          baz=329,slow=76,SNR=17
H10N1 ASCENSION HYDR46.70 144   T        T          23 01 53.5
          baz=329,slow=76,SNR=15
AKASG Malin Array Be     52.90  48   P        P          22 12 45.6  -0.8
          0.2nm,0.3s,baz=272,slow=6.6,SNR=4.7
TXAR  Lajitas Array      54.17 285   P        P          22 12 55.4  -0.8
          0.4nm,0.9s,baz=104,slow=7.5,SNR=3.4
PDAR  Pinedale Array     54.82 302   P        P          22 13 00.8  -0.1
          1.1nm,1.0s,baz=76,slow=7.6,SNR=4.1
YKA   Yellowknife Ar     54.92 327   P        P          22 13 01.8  +0.8
          0.1nm,0.4s,baz=88,slow=8.1,SNR=3.5
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*IDC **06** 22:08:25.6±2.7, 6°.39S×130°.11E, h122km±28km, mb3.9/5, mb1 4.0/8, mb1mx3.7/32, mbtmp4.3/8, Error ellipse: s-maj=42.4km s-min=21.9km az=94.0*

*DJA **06** 22:08:26.9±0.4, 6°S±3°×13°1E±°, h178km±8km, M4.5/9, mB5.0/4, mb4.4/7, MLv4.6/9, Mw(mB)4.3/4*

*NEIC **06** 22:08:27.1±2.6, 6°.38S±0°.05×130°.36E±0°.10, h147km±8km, mb4.4/18, Error ellipse: s-maj=13.7km s-min=7.9km az=90.0*

ISC 06 22:08:27.3±0.6**, 6°.34S**±0°.04×**130°.41E**±0°.07**, h146**km**, n51,** σ1ˢ74/52**, mb4.2**/9**, Banda Sea**

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Code  Station Name         Δ°  AZ°    Phase ID             Time     Res
                                     Op       ISC        h  m  s    ISC
SAUI  Saumlaki            1.85 152   P        Pn         22 09 02.7  +2.2
SAUI  Saumlaki            1.85 152   Pn       Pn         22 09 00.5   0.0
SAUI                                   Sn       Sn         22 09 24.2  -1.8
BNDI  Bandanaira          1.88 344   P        Pn         22 09 03.2  +2.5
BNDI                                   S        Sn         22 09 32.2  +5.8
MSAI  Masohi              3.32 334   P        Pn         22 09 20.1  +1.5
MSAI                                   S        Sn         22 09 59.7  +1.3
FAKI  Fak Fak             3.86  28   P        Pn         22 09 25.9  +0.2
FAKI                                   S        Sn         22 10 09.3  -1.7
FAKI  Fak Fak             3.86  28            Pn         22 09 25.9  +0.2
FAKI                                   Sn       Sn         22 10 09.9  -1.0
SIJI  Sorong              5.50   9   P        Pn         22 09 47.0  -0.4
          21nm,0.3s,baz=190,slow=19,SNR=44
SIJI                                   S        Sn         22 10 45.1  -4.8
          16nm,0.3s,baz=163,slow=19,SNR=15
SWI   Sorong              5.51   9   P        Pn         22 09 45.9  -1.5
          0.9nm2µm51nm,0.6s
RKPI  Ransiki, Papua      6.09  38   P        Pn         22 09 56.7  +1.5
          1.2nm3µm222nm,0.6s
MTN   Manton Dam          6.50 174            Pn         22 10 00.9  +0.3
SOEI  Soe                 6.96 240   P        Pn         22 10 06.7  -0.3
          0.3nm955nm49nm,1.0s
SOEI  Soe                 6.96 240            Pn         22 10 06.7  -0.3
EDFI  Ende, Flores        8.97 254   P        Pn         22 10 36.4  +2.6
          6.8nm,0.8s
KNRA  Kununurra           9.42 190            Pn         22 10 37.8  -1.9
FITZ  Fitzroy Crossi     12.58 201   P        Pn         22 11 16.8  -4.5
          1.9nm,0.3s,baz=29,slow=12,SNR=24
FITZ                                   S        Sn         22 13 25.3   -15
          1.4nm,0.3s,baz=56,slow=14,SNR=7.1
FITZ  Fitzroy Crossi     12.58 201            Pn         22 11 18.2  -3.0
FITZ                                            Sn         22 13 27.8   -13
WRAB  Tennant Creek      14.04 165   P        Pn         22 11 39.1  -0.8
WRA   Warramunga Arr     14.05 165   S        Sn         22 14 06.2   -10
WR0   Warramunga Arr     14.12 164   Pn       Pn         22 11 40.6  -0.3
COEN  Coen               14.66 122            Pn         22 11 49.1  +1.4
JAGI  Jajag, Banyuwa     16.26 262            P          22 12 06.5  -1.3
JAGI                                   IAmb     IAmb       22 12 11.0
          comp=Z,34nm,1.4s
AS31  Alice Springs      17.55 169   P        P          22 12 24.1  +2.1
ASAR  Alice Springs      17.55 169   P        P          22 12 23.9  +1.8
          comp=Z,0.8nm,0.3s,baz=346,slow=10.0,SNR=39
ASAR                                   S        S          22 15 27.9  -9.3
          comp=Z,0.7nm,0.3s,baz=349,slow=25,SNR=14
ASAR  Alice Springs      17.55 169   P        P          22 12 23.6  +1.6
PSA00 Pilbara Seismi     18.27 213            Pn         22 12 30.8  -0.8
PSAA1 Pilbara Seismi     18.28 213   P        Pn         22 12 30.4  -1.3
PSAB1 Pilbara Seismi     18.28 213   P        P          22 12 28.5  -1.4
PSAB3 Pilbara Seismi     18.28 213   P        P          22 12 29.0  -1.0
PSAB3                                  IAmb     IAmb       22 12 31.4
          comp=Z,18nm,0.6s
PSAC3 Pilbara Seismi     18.32 213   P        P          22 12 29.6  -0.7
PSAC3                                  IAmb     IAmb       22 12 31.8
          comp=Z,15nm,0.6s
PSAD3 Pilbara Seismi     18.36 213   P        P          22 12 30.0  -0.9
PSAD3                                  IAmb     IAmb       22 12 32.2
          comp=Z,14nm,0.7s
KKM   Kota Kinabalu      18.77 311   P        P          22 12 34.4  -1.0
KKM                                    IAmb     IAmb       22 12 50.2
          comp=Z,14nm,1.0s
CISI  Cisompet, Garu     22.46 266   P        P          22 13 13.3  -1.3
CMAR  Chiang Mai Arr     39.63 309   P        P          22 15 44.2  -0.7
          comp=Z,1.1nm,0.5s,baz=140,slow=7.7,SNR=8.5
CHTO  Chiang Mai         39.84 309   P        P          22 15 46.6  -0.1
CHTO                                   IAmb     IAmb       22 15 47.7
          comp=Z,3.5nm,0.9s
ODAN  Odare              53.14 310  eP        P          22 17 30.4  -0.2
TAPN  Taplejung          53.16 311  eP        P          22 17 30.4  -0.4
          comp=Z,3.6nm,0.4s
RAMN  Ramite             53.79 310  eP        P          22 17 35.2  -0.1
          comp=Z,12nm,0.6s
GUN   Gumba              54.83 311  eP        P          22 17 42.6  -0.4
GKN   Gorkha             55.82 310  eP        P          22 17 49.5  -0.4
ULN   Ulaanbaatar        57.77 342   P        P          22 18 04.5  +1.3
ULN                                    IAmb     IAmb       22 18 05.3
          comp=Z,2.9nm,0.7s
SONM  Songino Array      57.95 341   P        P          22 18 05.4  +1.0
          comp=Z,0.8nm,0.6s,baz=163,slow=6.6,SNR=13
SONM  Songino Array      57.95 341   IAmb     IAmb       22 18 06.5
          comp=Z,2.1nm,1.4s
MKAR  Makanchi Array     67.90 326   P        P          22 19 10.9  +0.7
          comp=Z,2.1nm,0.4s,baz=120,slow=6.7,SNR=55
MKAR  Makanchi Array     67.90 326   P        P          22 19 10.7  +0.6
MAKZ  Makanchi           68.08 326   P        P          22 19 11.9  +0.7
MAKZ                                   IAmb     IAmb       22 19 12.9
          comp=Z,6.8nm,1.3s
SEY   Seymchan           71.09  10   P        P          22 19 30.6  +1.3
          comp=Z,1.1nm,0.3s,baz=233,slow=20,SNR=6.2
ZALV  Zalesovo Beam      71.18 334   P        P          22 19 29.1  -0.9
          comp=Z,0.8nm,0.4s,baz=128,slow=4.3,SNR=5.3
GAR   Garm               71.50 315   P        P          22 19 32.9  +0.4
GAR                                    IAmb     IAmb       22 19 33.7
          comp=Z,11nm,1.5s
BTK   Batken             71.59 316   P        P          22 19 32.6  -0.3
KURK  Kurchatov          72.17 328   P        P          22 19 35.4  -0.6
PPT   Papeete            78.62 107   P        P          22 20 11.5  -2.0
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*IDC **06** 22:22:06.9±2.2, 23°.30S×177°.16W, h0km, mb4.0/2, mb1 4.2/3, mb1mx3.8/21, mbtmp4.2/3, ML4.5/1, Error ellipse: s-maj=72.1km s-min=39.8km az=135.0*

*NEIC **06** 22:22:27.3±1.0, 24°.2S±0°.1×177°.3W±0°.2, h168km±10km, mb4.0/10, Error ellipse: s-maj=26.0km s-min=13.2km az=47.0*

ISC 06 22:22:25.5±0.9**, 24°.2S**±0°.1×**177°.3W**±0°.2**, h150**km**, n19,** σ0ˢ79/21**, mb4.0**/7**, South of Fiji Islands**

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Code  Station Name         Δ°  AZ°    Phase ID             Time     Res
                                     Op       ISC        h  m  s    ISC
URZ   Urewera            14.79 198   Pn       P          22 25 49.4  +0.1
          2.0nm,0.3s,baz=306,slow=2.6,SNR=9.6
URZ                                    Sn       Sn         22 28 31.1  -0.3
          0.8nm,0.3s,baz=229,slow=19,SNR=5.4
BFZ   Birch Farm         17.29 197            Pn         22 26 17.6  -0.2
BFZ                                    IAmb     IAmb       22 26 25.5
          comp=Z,18nm,1.1s
RPZ   Rata Peaks         21.68 203   P        P          22 27 04.2  -0.1
RPZ                                    IAmb     IAmb       22 27 05.6
          comp=Z,7.0nm,1.2s
FOZ   Fox Glacier        22.00 206   P        P          22 27 08.3  +0.8
FOZ                                    IAmb     IAmb       22 27 10.9
          comp=Z,7.9nm,0.9s
STKA  Stephens Creek     36.94 249   P        P          22 29 22.4  +2.3
          comp=Z,1.0nm,0.4s,baz=78,slow=9.3,SNR=7.1
STKA  Stephens Creek     36.94 249   P        P          22 29 20.6  +0.5
BBOO  Buckleboo          41.63 247   P        P          22 29 58.4  -0.6
BBOO                                   IAmb     IAmb       22 30 10.0
          comp=Z,4.1nm,0.9s
AS31  Alice Springs      44.45 260   P        P          22 30 21.8  -0.1
ASAR  Alice Springs      44.46 260   P        P          22 30 21.3  -0.6
          comp=Z,1.1nm,0.6s,baz=94,slow=7.3,SNR=23
ASAR                                   PcP      PcP        22 32 02.9   0.0
          comp=Z,0.4nm,0.6s,baz=90,slow=2.8,SNR=3.4
WR0   Warramunga Arr     44.70 266   P        P          22 30 22.9  -1.0
WR0                                    IAmb     IAmb       22 30 39.1
          comp=Z,4.1nm,1.1s
WRAB  Tennant Creek      44.88 266   P        P          22 30 24.3  -0.9
WRAB                                   IAmb     IAmb       22 30 26.8
          comp=Z,3.6nm,1.1s
WRA   Warramunga Arr     44.89 266   P        P          22 30 24.7  -0.6
S22A  4UR Ranch, Cre     90.36  48   P        P          22 35 10.5  +0.4
SDCO  Great Sand Dun     91.27  49   P        P          22 35 13.6  -0.7
AKASG Malin Array Be    146.57 329   PKPbc    PKPdf      22 41 47.7  +0.4
          comp=Z,1.4nm,0.5s,baz=43,slow=3.8,SNR=13
AKASG Malin Array Be    146.57 329            PKPdf      22 41 47.1  -0.2
BRTR  Keskin Array B    149.76 308   PKPbc    PKPbc      22 41 57.4  -0.6
          comp=Z,0.6nm,0.7s,baz=90,slow=2.9,SNR=4.3
CLL   Collm             151.83 346  i PKPbc   PKiKP      22 42 03.1  +0.5
          comp=Z,6.0nm,0.9s
BRG   Berggiesshubel    152.02 345  ePKP      PKPbc      22 42 02.9  +0.3
          comp=Z,3.9nm,0.7s
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*ATH **06** 22:26:01.0, 36°.10N×21°.99E, h26km±1km, ML3.1/6, Error ellipse: s-maj=2.9km s-min=1.0km az=47.0*

*THE **06** 22:26:02.8, 36°.17N×22°.01E, h16km±3km, ML3.1/9, Error ellipse: s-maj=3.4km s-min=0.6km az=222.0*

*IDC **06** 22:26:19.3±9.7, 38°.56N×24°.77E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.3/32, mbtmp3.6/5, ML3.8/1, MS3.9/1, Ms1 3.9/1, ms1mx2.8/40, Error ellipse: s-maj=185.8km s-min=30.4km az=28.0*

ISC 06 22:26:01.5±1.5**, 36°.11N**±0°.05×**21°.94E**±0°.06**, h31**km±11km**, n44,** σ1ˢ61/56**, mb3.8**/4**, Southern Greece**

```
Code  Station Name         Δ°  AZ°    Phase ID             Time     Res
                                     Op       ISC        h  m  s    ISC
PYL   PYLOS               0.81 349   P        Pn         22 26 17.1  +0.4
PYL                                    S        Sn         22 26 28.4  +0.8
          2µm,0.5s
PYL   PYLOS               0.81 349   P        Pn         22 26 17.1  +0.4
PYL                                    S        Sn         22 26 28.9  +1.4
PYL                                    AML      AML        22 26 32.4
          comp=N,2247µm,0.4s
PYL                                    AML      AML        22 26 32.4
          comp=E,3311µm,0.4s
KTHR  Kythira             0.88  79   P        Pn         22 26 18.1  +0.5
KTHR                                   S        Sn         22 26 29.9  +0.6
          comp=E,1µm,0.4s
KTHA  Kythira Island      0.92  80   P        Pn         22 26 18.9  +0.7
KTHA                                   S        Sn         22 26 31.6  +1.2
          comp=E,1µm,0.8s
KTHA  Kythira Island      0.92  80   P        Pb         22 26 18.3  -0.6
KTHA                                   S        Sb         22 26 30.2  -0.7
KTHA                                   AML      AML        22 26 33.4
          comp=N,1283µm,0.5s
KTHA                                   AML      AML        22 26 35.5
          comp=E,2594µm,0.9s
VLI   Veliai              1.01  52   P        Pb         22 26 19.6  -0.9
VLI                                    S        Sb         22 26 32.9  -0.5
          comp=E,1µm,0.6s
VLI   Veliai              1.01  52   P        Pb         22 26 19.6  -0.9
VLI                                    S        Sn         22 26 34.2  +1.5
VLI                                    AML      AML        22 26 36.6
          comp=N,1097µm,0.6s
VLI                                    AML      AML        22 26 38.2
          comp=E,2657µm,0.6s
MNVA  Monemvasia          1.06  56   P        Pb         22 26 20.6  -0.7
ITM   Ithomi              1.07 359   P        Pn         22 26 20.8  +0.4
ITM                                    S        Sn         22 26 36.4  +2.2
          comp=E,1µm,0.4s
ITM   Ithomi              1.07 359   P        Pb         22 26 21.3  -0.2
ITM                                    S        Sn         22 26 36.7  +2.5
ITM                                    AML      AML        22 26 40.9
```

	comp=E,2976µm,0.4s						
ITM				AML	AML	22 26 42.0	
	comp=N,2334µm,0.4s						
ANKY	**Antikythira Is**	1.13	102	P	**Pb**	**22 26 22.3**	**-0.2**
ANKY				S	**Sn**	**22 26 38.0**	**+2.5**
	comp=N,832nm,0.4s						
ANKY	**Antikythira Is**	1.13	102	P	**Pb**	**22 26 22.3**	**-0.2**
ANKY				S	**Sn**	**22 26 37.7**	**+2.1**
ANKY				AML	AML	22 26 43.3	
	comp=N,1283µm,0.4s						
ANKY				AML	AML	22 26 45.4	
	comp=E,2033µm,0.5s						
VLX	**Vlachokerasia**	1.31	15	P	**Pn**	**22 26 24.9**	**+1.2**
VLX				S	**Sb**	**22 26 41.8**	**-0.3**
	comp=E,1µm,0.6s						
VLX	**Vlachokerasia**	1.31	15	P	**Pb**	**22 26 25.7**	**+0.1**
VLX				AML	AML	22 26 46.9	
	comp=E,1857µm,0.6s						
VLX				AML	AML	22 26 48.2	
	comp=N,1216µm,0.5s						
AMT	**Artemida-Makis**	1.44	353	P	**Pb**	**22 26 27.2**	**-0.5**
AMT				S	**Sb**	**22 26 45.7**	**+0.1**
	comp=N,2µm,0.4s						
AMT	**Artemida-Makis**	1.44	353	P	**Pb**	**22 26 27.3**	**-0.3**
RODP	**Rodopos**	1.57	110	P	**Pn**	**22 26 28.4**	**+1.2**
RODP				S	**Sb**	**22 26 50.6**	**+1.1**
	comp=N,95nm,0.6s						
KRND	**KRANIDI**	1.60	37	P	**Pn**	**22 26 29.1**	**+1.5**
DID	**Didima**	1.74	36	P	**Pn**	**22 26 31.0**	**+1.4**
DID	**Didima**	1.74	36	P	**Pn**	**22 26 31.0**	**+1.4**
YDRA	**Hydra**	1.75	44	P	**Pn**	**22 26 31.2**	**+1.7**
IMMV	**Iera Moni Meta**	1.78	111	P	**Pn**	**22 26 30.9**	**+0.8**
DRO	**Drossia**	1.85	354	P	**Pn**	**22 26 33.0**	**+1.9**
KLV	**Kalavryta, Ach**	1.94	5	P	**Pb**	**22 26 34.7**	**-1.6**
VAM	**Vamos**	1.97	110	P	**Pn**	**22 26 33.4**	**+0.7**
RLS	**Riolos of Patr**	1.98	349	P	**Pn**	**22 26 35.0**	**+2.2**
LOUT	**Loutraki**	2.05	23	P	**Pn**	**22 26 35.9**	**+2.1**
GVD	**Gavdhos**	2.16	125	P	**Pn**	**22 26 37.4**	**+2.1**
TRIZ	**Trizonia**	2.26	3	P	**Pn**	**22 26 39.1**	**+2.5**
PROD	**Prodromos**	2.28	19	P	**Pb**	**22 26 39.8**	**-2.2**
KALE	**Kalithea**	2.29	4	P	**Pn**	**22 26 39.4**	**+2.3**
SERI	**Serifos**	2.30	62	P	**Pn**	**22 26 39.2**	**+1.9**
VIL2	**Platees**	2.35	26	P	**Pn**	**22 26 40.2**	**+2.3**
ATHU	**Athens Univers**	2.37	38	P	**Pn**	**22 26 40.8**	**+2.6**
AXAR	**Agios Charalam**	2.72	12	P	**Pn**	**22 26 45.5**	**+2.5**
EVR	**Evrytania**	2.81	358	P	**Pn**	**22 26 46.9**	**+2.6**
MRKA	**Markates**	2.91	26	P	**Pn**	**22 26 48.2**	**+2.6**
APE	**Apeiranthos**	3.05	71	P	**Pn**	**22 26 49.2**	**+1.7**
GERES	**GERESS Array B**	14.10	337	Pn	**P**	**22 29 26.8**	**+0.6**
	comp=N,0.2nm,0.3s,baz=164,slow=12,SNR=3.8						
FINES	**FINESS Array B**	25.50	5	P	**P**	**22 31 25.0**	**-1.6**
	comp=N,4.5nm,1.0s,baz=166,slow=13,SNR=4.2						
ARCES	**ARCESS Array B**	33.54	2	P	**P**	**22 32 37.1**	**-0.9**
	comp=N,1.4nm,0.8s,baz=192,slow=9.2,SNR=4.8						
MKAR	**Makanchi Array**	45.45	57	P	**P**	**22 34 14.2**	**-3.2**
	comp=N,0.2nm,0.3s,baz=270,slow=8.1,SNR=9.1						
ZALV	**Zalesovo Beam**	46.26	47	P	P	22 34 19.8	-3.8
	comp=N,0.2nm,0.3s,baz=282,slow=8.5,SNR=2.7						
TLY	**Talaya**	57.87	47	LR	LR	23 02 17.1	
	comp=N,104nm,18.5s,baz=355,slow=40						

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*BJI **06** 22:57:54.6±0.0, 35°.89N×82°.35E, h9^{km}, ML3.6/6*
*IDC **06** 22:57:57.0±5.2, 36°.31N×82°.40E, h0^{km}, mb3.2/1, mb1 3.6/6, mb1mx3.3/52, mbtmp3.6/6, ML3.1/5, Error ellipse: s-maj=68.1km s-min=32.1km az=23.0*
ISC 06 22:58:02.1±2.2**, 36°.3N**±0°.2×**82°.5E**±0°.1**, h35^{km}, n8,** $\sigma 1^{s}$**78**/9**, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	**Urumqi**	8.51	27	*e*P	**Pn**	**23 00 05.3**	**+2.5**
WMQ				smax	smax		
	comp=N,8.0nm,0.7s						
WMQ				smax	smax		
	comp=E,9.0nm,0.7s						
AAK	**Ala-Archa**	8.81	318	Pn	**Pn**	**23 00 08.1**	**+1.1**
	0.1nm,0.3s,baz=136,slow=9.4,SNR=8.0						
AAK				Lg	Lg	23 02 35.4	
	0.1nm,0.3s,baz=162,slow=19,SNR=2.5						
MKAR	**Makanchi Array**	10.47	359	Pn	**Pn**	**23 00 30.1**	**+0.5**
	1.1nm,0.3s,baz=182,slow=13,SNR=105						
MKAR				Sn	**Sn**	**23 02 25.1**	**-0.5**
	0.1nm,0.3s,baz=172,slow=23,SNR=2.2						
KURBB	**Kurchatov Arra**	14.58	350	Pn	**Pn**	**23 01 23.2**	**-2.4**
	0.0nm,0.3s,baz=173,slow=12,SNR=10						
ZALV	**Zalesovo Beam**	17.71	5	P	**Pn**	**23 02 04.3**	**-1.4**
	0.2nm,0.3s,baz=192,slow=14,SNR=7.5						
BVAR	**Borovoye Array**	18.73	337	P	**P**	**23 02 16.3**	**-1.3**
	0.1nm,0.3s,baz=132,slow=10,SNR=6.6						
SONM	**Songino Array**	21.09	49	P	**P**	**23 02 43.2**	**-0.2**
	1.7nm,1.2s,baz=240,slow=10.0,SNR=3.9						
BJI	**Beijing**	26.68	72	*e*P	**P**	**23 03 36.6**	**-1.1**

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*IDC **06** 23:01:36.3±4.8, 5°.82S×154°.08E, h35^{km}±34^{km}, mb3.9/8, mb1 4.2/11, mb1mx3.9/40, mbtmp4.2/11, ML3.6/3, MS3.1/3, Ms1 3.1/3, ms1mx2.9/33, Error ellipse: s-maj=29.8km s-min=16.7km az=82.0*
*NEIC **06** 23:01:43.6±2.0, 6°.00S±0°.10×153°.90E±0°.10, h98^{km}±6^{km}, mb4.3/14, Error ellipse: s-maj=16.1km s-min=11.9km az=46.0*
ISC 06 23:01:37.9±0.7**, 5°.82S**±0°.08×**154°.09E**±0°.10**, h48^{km}, n43,** $\sigma 1^{s}$**06**/35**, mb4.3**/13**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	2.51	310		Pn	23 02 22.8	+6.5
KRVT	**Keravat (AS076**	2.55	306	Pn	**Pn**	**23 02 16.9**	**+0.2**
	18nm,0.3s,baz=200,slow=4.2,SNR=8.5						
KRVT				Sn	**Sn**	**23 02 45.8**	**-0.7**
	46nm,0.3s,baz=156,slow=20,SNR=6.3						
KRVT				Lg	Lg	23 02 57.6	
	102nm,0.3s,baz=48,slow=23,SNR=5.9						
KRVT				LR	LR	23 03 30.6	
	comp=Z,363nm,20.7s,baz=138,slow=45						
HNR	**Honiara**	6.83	122	Pn	Pn	23 03 20.2	+4.8
	12nm,0.3s,baz=243,slow=9.0,SNR=2.7						
HNR				Sn	Sn	23 04 45.8	+14
	6.8nm,0.3s,baz=301,slow=12,SNR=7.5						
HNR				LR	LR	23 05 53.3	
	comp=Z,167nm,20.4s,baz=306,slow=38						
HNR	**Honiara**	6.83	122		Pn	23 03 22.0	+6.5
PMG	**Port Moresby**	7.74	242	Pn	**Pn**	**23 03 27.4**	**-0.6**
	13nm,0.3s,baz=22,slow=5.7,SNR=17						
PMG				Sn	**Sn**	**23 04 55.6**	**+1.3**
	1.2nm,0.3s,baz=108,slow=19,SNR=3.5						
PMG				LR	LR	23 06 31.5	
	comp=Z,155nm,21.4s,baz=90,slow=38						
PMG	**Port Moresby**	7.74	242		**Pn**	**23 03 29.6**	**+1.6**
CTA	**Charters Tower**	16.10	208	Pn	**Pn**	**23 05 20.4**	**-0.7**
	0.4nm,0.3s,baz=37,slow=15,SNR=3.0						
DZM	**Mont Dzumac**	20.09	145	P	Pn	23 06 09.2	-0.7
DZM				IAmb	IAmb	23 06 15.0	
	comp=Z,14nm,0.7s						
WR0	**Warramunga Arr**	23.64	232	P	**P**	**23 06 44.2**	**-0.8**
MTN	**Manton Dam**	23.69	251	P	**P**	**23 06 45.8**	**+0.3**
WRAB	**Tennant Creek**	23.77	232	P	**P**	**23 06 45.8**	**-0.5**
WRAB				IAmb	IAmb	23 06 46.9	
	comp=Z,8.3nm,0.8s						
WRA	**Warramunga Arr**	23.79	232	P	**P**	**23 06 46.6**	**+0.2**
WRA				PcP	**PcP**	**23 10 29.5**	**+0.4**
AS31	**Alice Springs**	26.31	226	P	**P**	**23 07 09.5**	**+0.2**
ASAR	**Alice Springs**	26.31	226	P	**P**	**23 07 08.9**	**-0.5**
	comp=Z,4.2nm,0.8s,baz=56,slow=9.3,SNR=26						
ASAR				PcP	**PcP**	**23 10 35.0**	**+0.3**
	comp=Z,2.1nm,0.6s,baz=58,slow=2.4,SNR=16						
ASAR	**Alice Springs**	26.31	226	P	**P**	**23 07 09.4**	**+0.1**
ASAR					**PcP**	**23 10 34.5**	**-0.3**
KNRA	**Kununurra**	26.71	246	P	**P**	**23 07 12.9**	**0.0**
KNRA				IAmb	IAmb	23 07 32.2	
	comp=Z,12nm,0.9s						
H11S3	**WAKE ISLAND Hy**	27.17	27	T	T	23 35 43.3	
	baz=208,slow=73,SNR=54						
H11S2	**WAKE ISLAND Hy**	27.17	27	T	T	23 35 41.3	
	baz=208,slow=73,SNR=45						
H11S1	**WAKE ISLAND Hy**	27.18	27	T	T	23 35 31.2	
	baz=208,slow=73,SNR=52						
H11N1	**WAKE ISLAND Hy**	28.33	26	T	T	23 37 05.4	
	baz=185,slow=77						
H11N3	**WAKE ISLAND Hy**	28.34	26	T	T	23 37 07.4	
	baz=185,slow=77						
H11N2	**WAKE ISLAND Hy**	28.34	26	T	T	23 37 06.3	
	baz=185,slow=77						
FITZ	**Fitzroy Crossi**	30.33	244	P	**P**	**23 07 43.2**	**-1.9**
	comp=Z,3.7nm,0.7s,baz=96,slow=6.7,SNR=7.6						
FITZ	**Fitzroy Crossi**	30.33	244	IAmb	IAmb	23 07 59.0	
	comp=Z,6.1nm,1.0s						
BBOO	**Buckleboo**	31.68	210	P	**P**	**23 07 55.3**	**-1.6**
BBOO				IAmb	IAmb	23 08 12.5	
	comp=Z,4.9nm,1.0s						
URZ	**Urewera**	38.47	150	P	**P**	**23 08 55.2**	**-0.1**
	comp=Z,8.6nm,0.9s,baz=315,slow=5.7,SNR=4.0						
URZ	**Urewera**	38.47	150	IAmb	IAmb	23 08 57.6	
	comp=Z,8.8nm,0.8s						
QRZ	**Quartz Range**	38.57	157	P	**P**	**23 08 56.4**	**+0.3**
QRZ				IAmb	IAmb	23 09 13.1	
	comp=Z,5.0nm,1.0s						
BKZ	**Black Stump Fm**	38.88	152	P	**P**	**23 08 58.8**	**-0.1**
THZ	**Tophouse**	39.52	158	P	**P**	**23 09 04.7**	**+0.6**
THZ				IAmb	IAmb	23 09 09.3	
	comp=Z,4.8nm,0.8s						
MSWZ	**Moikau Station**	40.16	155	P	**P**	**23 09 09.3**	**-0.1**
PLWZ	**Palliser**	40.29	155	P	**P**	**23 09 10.2**	**-0.3**
CMAR	**Chiang Mai Arr**	59.47	295	P	**P**	**23 11 37.4**	**+0.9**
	comp=Z,1.0nm,0.3s,baz=117,slow=4.8,SNR=7.8						
CMAR	**Chiang Mai Arr**	59.47	295		**PcP**	**23 12 27.6**	**+3.9**
SONM	**Songino Array**	67.87	327	P	**P**	**23 12 31.3**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=140,slow=5.1,SNR=7.0						
SONM	**Songino Array**	67.87	327	IAmb	IAmb	23 12 37.7	
	comp=Z,0.9nm,0.6s						
MK31	**Makanchi Array**	81.93	319	P	**P**	**23 13 52.3**	**-0.3**
MKAR	**Makanchi Array**	81.93	319	P	**P**	**23 13 51.4**	**-1.2**
	comp=Z,1.5nm,0.9s,baz=100,slow=6.6,SNR=11						
MKAR	**Makanchi Array**	81.93	319	P	**P**	**23 13 52.0**	**-0.6**
ILAR	**Eielson Array**	82.62	22	P	**P**	**23 13 56.6**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=242,slow=5.0,SNR=8.5						
ZALV	**Zalesovo Beam**	82.71	326	P	**P**	**23 13 55.3**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=123,slow=5.3,SNR=3.2						
QSPA	**South Pole Qui**	84.15	180	P	**P**	**23 14 04.4**	**+0.6**
TORD	**Torodi Ar. Bea**	151.84	287	PKPbc	**PKiKP**	**23 21 27.5**	**-1.4**
	comp=Z,2.4nm,0.6s,baz=77,slow=2.4,SNR=13						

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*PAS **06** 23:04:25.2±0.8, 33°.76N±0°.02×120°.21W±0°.02, h15^{km}±3^{km}, ML2.8/14, Error ellipse: s-maj=3.5km s-min=2.3km az=46.0*
NEIC 06 23:04:25.3±1.1**, 33°.82N**±0°.03×**120°.20W**±0°.04**, h15**^{km}±3^{km}**, Error ellipse: s-maj=5.9km s-min=1.9km az=223.0, Off coast of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCZ2	**Santa Cruz Isl**	0.50	69		Pg	23 04 32.7	-2.5
SBC	**Santa Barbara**	0.74	33		Pg	23 04 39.4	-0.3
GATR	**Gnd/Air Tx Cnt**	0.78	341		Pb	23 04 40.5	0.0
SNCC	**San Nicolas Is**	0.80	135	Pg	Pb	23 04 41.2	+0.4
FIGC	**Figueroa Mtn.**	0.93	11		Pb	23 04 43.1	0.0
FIGC					Sg	23 04 55.7	+0.3
PKM	**Mcpherson Peak**	1.12	16		Pn	23 04 46.5	-0.1
PKM					Sg	23 05 01.4	-0.1
OSI	**Osito Audit: C**	1.46	57	Pn	Pn	23 04 49.6	-1.5
DCD	**Diablo Creek**	1.49	339		Pn	23 04 51.2	-0.3
PASC	**Pasadena Art C**	1.71	77	Pn	Pn	23 04 54.1	-0.4
PASC				Sg	Sb	23 05 17.8	+0.1
BLDC	**Black Mountain**	1.81	341		Pn	23 04 55.7	-0.2
MWC	**Mount Wilson**	1.82	77		Pn	23 04 56.0	-0.3
MWC					Sb	23 05 22.1	+0.9
PAGB	**Antelope Grade**	1.91	359	Pn	Pn	23 04 57.0	-0.3
ISA	**Isabella, Lake**	2.33	37	Pn	Pn	23 05 03.9	+0.9
PMPB	**Monarch Peak**	2.44	348	Pn	Pn	23 05 04.8	+0.1
SAO	**San Andreas Ge**	3.11	341	Pn	Pn	23 05 13.4	-0.4
PFO	**Pinyon Flats O**	3.12	93	Pn	Pn	23 05 14.7	+0.6
XPFO	**Pion Flat**	3.13	93	Pn	Pn	23 05 14.8	+0.7
BAR	**Barrett**	3.17	110	Pn	Pn	23 05 12.9	-1.6
CMB	**Columbia Colle**	4.21	358	Pn	Pn	23 05 28.9	0.0
TPNV	**Topopah Spring**	4.49	45	Pn	Pn	23 05 32.6	-0.3
GLA	**Glamis**	4.55	98	Pn	Pn	23 05 34.4	+0.7

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*BJI **06** 23:24:50.8±0.0, 6°.30S×151°.00E, h34^{km}, mB5.1/24, mb4.7/37, Ms4.7/6, Ms7 4.4/6*
*DJA **06** 23:24:51.6±2.6, 6°S±6°×15°1E±°, h25^{km}±21^{km}, M5.0/10, mb4.8/10, mB4.6/1, MLv5.0/2, Mw(mB)3.8/1*
*IDC **06** 23:24:52.7±0.8, 6°.22S×150°.97E, h36^{km}±5^{km}, mb4.4/21, mb1 4.5/23, mb1mx4.3/44, mbtmp4.6/23, ML2.0/1, MS3.6/11, Ms1 3.6/11, ms1mx3.4/35, Error ellipse: s-maj=20.5km s-min=11.8km az=114.0*
*NEIC **06** 23:24:53.1±1.8, 6°.29S±0°.08×150°.99E±0°.07, h41^{km}±5^{km}, mb4.8/91, Error ellipse: s-maj=12.1km s-min=10.2km az=156.0*
*GCMT **06** 23:24:55.1±0.4, 6°.59S±0°.02×150°.84E±0°.05, h22^{km}±1^{km}, MW4.8/65, Moment Tensor Solution. s21,c26; s65,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.39±.19; $M_{\theta\theta}$-1.84±.11; $M_{\phi\phi}$-0.54±.11; $M_{r\theta}$0.61±.14; $M_{\theta\phi}$-0.18±.08; $M_{\phi r}$-0.61±.22; Best double couple: $M_0$2.26900×10^{16} NP1:ϕ_s252.00000°,δ39.00000°,λ71.00000°. NP2: ϕ_s96.00000°,δ54.00000°,λ105.00000°. Principal axes: T 2.6050, Plg76.0000°, Azm54.0000°; N -0.6660, Plg12.0000°, Azm267.0000°; P -1.9340, Plg7.0000°, Azm176.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 06 23:24:53.4±0.7**, 6°.32S**±0°.05×**151°.04E**±0°.06**, h45**^{km}±6^{km}**, n151,** $\sigma 1^{s}$**40**/152**, mb4.8**/75**, MS3.8**/14**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	2.23	26	Pn	**Pn**	**23 25 27.4**	**-0.5**
	134nm,0.3s,baz=289,slow=5.1,SNR=34						
KRVT				Sn	**Sn**	**23 25 56.6**	**+2.5**
	181nm,0.3s,baz=152,slow=23,SNR=10						
RABL	**Rabaul**	2.39	28		**Pn**	**23 25 29.3**	**-0.8**
PMG	**Port Moresby**	4.92	231	Pn	**Pn**	**23 26 03.8**	**-1.1**
	4.0nm,0.3s,baz=72,slow=5.5,SNR=7.0						
PMG				Sn	**Sn**	**23 26 59.4**	**-1.1**
	4.1nm,0.3s,baz=50,slow=17,SNR=3.0						
PMG				LR	LR	23 27 53.2	
	comp=Z,410nm,19.0s,baz=52,slow=37						
PMG	**Port Moresby**	4.92	231		**Pn**	**23 26 05.1**	**+0.2**
MANU	**Manus Island**	5.61	319		**Pn**	**23 26 13.7**	**-0.6**
HNR	**Honiara**	9.35	110	LR	LR	23 30 15.6	
	comp=Z,265nm,20.4s,baz=267,slow=34						
HNR	**Honiara**	9.35	110	Pn	**Pn**	**23 27 06.2**	**+0.6**
COEN	**Coen**	10.84	225	Pn	**Pn**	**23 27 25.3**	**-0.8**
EIDS	**Eidsvold**	18.94	180	P	**P**	**23 29 10.0**	**-0.8**
MTN	**Manton Dam**	20.66	250	P	**P**	**23 29 29.8**	**+0.2**
MTN				IAmb	IAmb	23 29 43.3	
	comp=Z,31nm,0.8s						
GUMO	**Guam**	20.71	343	LR	LR	23 36 33.5	
	comp=Z,63nm,18.9s,baz=152,slow=34						
WRAB	**Tennant Creek**	21.12	229	P	**P**	**23 29 34.3**	**-0.3**
WRAB				IAmb	IAmb	23 29 39.0	
	comp=Z,44nm,0.7s						
WRA	**Warramunga Arr**	21.14	229	P	**P**	**23 29 34.3**	**-0.4**
DZM	**Mont Dzumac**	21.60	138	P	**P**	**23 29 40.2**	**+0.4**
KNRA	**Kununurra**	23.74	245	P	**P**	**23 30 01.7**	**-0.1**
KNRA				IAmb	IAmb	23 30 03.1	
	comp=Z,22nm,0.8s						
AS31	**Alice Springs**	23.86	222	P	**P**	**23 30 02.9**	**+0.1**
ASAR	**Alice Springs**	23.86	222	P	**P**	**23 30 02.9**	**+0.1**
	comp=Z,17nm,0.7s,baz=56,slow=8.1,SNR=123						
ASAR				pP	**pP**	**23 30 13.0**	**+0.4**
	comp=Z,21nm,0.8s,baz=57,slow=9.1,SNR=10						
ASAR				S	**S**	**23 34 20.4**	**+4.4**
	comp=Z,5.5nm,1.0s,baz=35,slow=22,SNR=6.5						
ASAR				LR	LR	23 40 18.3	
	comp=Z,174nm,18.6s,baz=76,slow=39						
ASAR	**Alice Springs**	23.86	222	P	**P**	**23 30 01.9**	**-0.9**
STKA	**Stephens Creek**	26.92	198	P	**P**	**23 30 31.6**	**+1.2**
	comp=Z,16nm,0.8s,baz=357,slow=9.2,SNR=27						
STKA				pP	**pP**	**23 30 41.4**	**+1.0**
	comp=Z,12nm,0.8s,baz=9.5,slow=11,SNR=4.7						
STKA				LR	LR	23 40 59.0	
	comp=Z,255nm,18.6s,baz=22,slow=36						
STKA	**Stephens Creek**	26.92	198	P	**P**	**23 30 31.8**	**+1.3**
FITZ	**Fitzroy Crossi**	27.40	242	P	**P**	**23 30 34.8**	**-0.2**
	comp=Z,16nm,0.7s,baz=68,slow=7.3,SNR=34						
FITZ				LR	LR	23 41 05.7	
	comp=Z,149nm,18.9s,baz=307,slow=36						
FITZ	**Fitzroy Crossi**	27.40	242	IAmb	IAmb	23 30 37.0	
	comp=Z,17nm,0.8s						
EDFI	**Ende, Flores**	29.20	263	P	**P**	**23 30 51.6**	**+0.5**
	comp=Z,14nm,1.5s						
FORT	**Forrest**	32.52	219	P	**P**	**23 31 20.4**	**+0.3**
FORT				IAmb	IAmb	23 31 36.4	
	comp=Z,14nm,0.7s						
PLAI	**Plampang**	33.06	264	P	**P**	**23 31 24.4**	**-0.7**
	comp=Z,38nm,0.9s						
PSA00	**Pilbara Seismi**	33.76	240	P	**P**	**23 31 29.9**	**-1.2**
PSA00				IAmb	IAmb	23 31 43.5	
	comp=Z,14nm,1.1s						
JCJ	**Chichijima**	34.31	346	LR	LR	23 42 13.6	
	comp=Z,75nm,19.9s,baz=149,slow=30						
TAU	**Tasmania Unive**	36.59	185	P	**P**	**23 31 54.8**	**-0.3**
TAU				IAmb	IAmb	23 32 12.4	
	comp=Z,11nm,0.9s						
MORW	**Morawa**	40.04	231	P	**P**	**23 32 24.2**	**-0.1**
MSWZ	**Moikau Station**	41.07	152	P	**P**	**23 32 31.9**	**-0.8**
PLWZ	**Palliser**	41.19	152	P	**P**	**23 32 34.0**	**+0.3**
YULB	**Yu-li**	41.43	316	P	**P**	**23 32 34.8**	**-1.1**
YULB				IAmb	IAmb	23 32 41.2	
	comp=Z,14nm,1.0s						
DCZ	**Deep Cove**	41.43	163	P	**P**	**23 32 36.5**	**+0.9**
DCZ				IAmb	IAmb	23 32 46.0	
	comp=Z,20nm,1.2s						
KPJI	**Karang Pucung**	41.81	266	P	**P**	**23 32 40.2**	**+1.0**
CISI	**Cisompet, Garu**	42.92	266	P	**P**	**23 32 47.5**	**-0.7**
LEM	**Lembang**	43.13	267	P	**P**	**23 32 50.4**	**+0.3**
	comp=Z,14nm,0.3s,baz=69,slow=12,SNR=5.4						
JNU	**Nakatsue**	43.65	335	P	**P**	**23 32 53.2**	**-0.5**
	comp=Z,28nm,1.0s,baz=151,slow=4.7,SNR=7.7						
JNU	**Nakatsue**	43.65	335	P	**P**	**23 32 54.1**	**+0.4**
MJAR	**Matsushiro Arr**	44.30	345	LR	LR	23 48 39.9	
	comp=Z,44nm,21.2s,baz=175,slow=32						
KSRS	**Korea Array**	48.60	335	P	**P**	**23 33 32.9**	**+0.3**
	comp=Z,3.5nm,0.8s,baz=154,slow=9.5,SNR=8.5						
KSRS				LR	LR	23 51 48.8	
	comp=Z,51nm,21.8s,baz=108,slow=33						
NJ2	**Nanjing**	48.96	323	*e*P	**P**	**23 33 36.3**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,24nm,0.5s						
WHN	**Wuhan**	50.78	318	P	P	23 34 04.1	+15
BJI	**Beijing**	56.22	328	*e*P	**P**	**23 34 29.8**	**+0.8**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CMAR	**Chiang Mai Arr**	56.96	297	P	**P**	**23 34 34.6**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=108,slow=4.9,SNR=8.9						
CD2	**Chengdu**	58.42	312	P	**P**	**23 34 46.8**	**+2.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	**Hu-ho-hao-te**	59.28	326	*e*P	**P**	**23 34 54.4**	**+3.7**
HHC				pmax	pmax		
	comp=Z,75nm,1.1s						
HHC				pmax	pmax		
	comp=Z,300nm,5.6s						
HHC				LR	LR		
	comp=Z,640nm,16.7s						
HHC				LR	LR		
	comp=Z,720nm,17.0s						
PETK	**Petropavlovsk-**	59.47	5	P	**P**	**23 34 50.3**	**-1.3**
	comp=Z,4.6nm,1.0s,baz=109,slow=6.2,SNR=2.8						
LZH	**Lanzhou**	61.12	317	*e*P	**P**	**23 35 04.9**	**+1.4**
LZH				pP	pP	23 35 14.2	-1.1
LZH				sP	sP	23 35 18.5	-1.6
LZH				PP	**PP**	**23 37 24.6**	**+6.0**
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
LZH				pmax	pmax		
	comp=Z,78nm,5.4s						
LZH				LR	LR		
	comp=Z,170nm,15.9s						
LZH				LR	LR		
	comp=Z,170nm,16.1s						
LZH				LR	LR		
	comp=Z,240nm,17.9s						
GTA	**Gaotai**	65.60	318	*e*P	**P**	**23 35 34.0**	**+1.0**
GTA				pP	pP	23 35 44.8	-0.2
GTA				sP	sP	23 35 48.1	-1.6
GTA				S	**S**	**23 44 16.4**	**+0.9**
GTA				sS	pS	23 44 31.3	0.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,76nm,7.3s						
GTA				LR	LR		
	comp=Z,140nm,20.3s						
GTA				LR	LR		
	comp=Z,160nm,18.4s						
GTA				LR	LR		
	comp=Z,160nm,19.4s						
SONM	**Songino Array**	66.69	329	P	**P**	**23 35 39.6**	**-0.1**
	comp=Z,3.7nm,1.0s,baz=150,slow=4.3,SNR=19						
SONM				LR	LR	00 06 55.6	
	comp=Z,67nm,18.2s,baz=256,slow=38						
SONM	**Songino Array**	66.69	329	P	**P**	**23 35 39.7**	**-0.1**
UNV	**Unalaska Valle**	69.73	25	P	**P**	**23 35 58.4**	**-0.1**
UNV				IAmb	IAmb	23 36 06.2	
	comp=Z,13nm,0.9s						
VNDA	**Vanda**	71.39	178	P	**P**	**23 36 08.8**	**+0.5**
	comp=Z,3.5nm,0.9s,baz=341,slow=4.9,SNR=4.0						
VNDA	**Vanda**	71.39	178	P	**P**	**23 36 08.6**	**+0.3**
GAMB	**Gambell**	75.31	16	P	**P**	**23 36 31.0**	**-0.5**
WMQ	**Urumqi**	75.68	318	*e*P	**P**	**23 36 34.4**	**+0.2**
WMQ				pmax	pmax		
	comp=Z,7.0nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,170nm,5.9s						
WMQ				LR	LR		
	comp=Z,480nm,29.2s						
OHAK	**Old Harbor**	77.69	27	P	**P**	**23 36 45.1**	**0.0**
KDAK	**Kodiak Island**	78.31	27	P	**P**	**23 36 49.1**	**+0.6**
SVW2	**Sparrevohn**	78.90	23	P	**P**	**23 36 52.4**	**+0.6**
SVW2				IAmb	IAmb	23 36 54.5	
	comp=Z,10nm,0.9s						
TIXI	**Tiksi**	79.17	353	P	**P**	**23 36 51.3**	**-1.7**
	comp=Z,1.7nm,0.3s,baz=145,slow=5.7,SNR=3.1						
TIXI	**Tiksi**	79.17	353	IAmb	IAmb	23 36 55.4	
	comp=Z,5.1nm,1.1s						
RSO	**Redoubt South**	79.69	25	P	**P**	**23 36 57.1**	**+0.7**
CNPM	**China Poot**	79.83	26	P	**P**	**23 36 57.6**	**+0.7**
BRLK	**Bradley Lake**	80.11	26	P	**P**	**23 36 59.1**	**+0.7**
BRLK				IAmb	IAmb	23 37 12.1	
	comp=Z,14nm,1.0s						
MKAR	**Makanchi Array**	80.33	319	P	**P**	**23 36 59.0**	**-0.9**
	comp=Z,3.1nm,0.9s,baz=111,slow=5.8,SNR=24						
MKAR	**Makanchi Array**	80.33	319	P	**P**	**23 36 59.1**	**-0.8**
MAKZ	**Makanchi**	80.53	319	P	**P**	**23 37 00.6**	**-0.3**
SEW	**Seward**	80.91	26	P	**P**	**23 37 02.9**	**+0.4**
SEW				IAmb	IAmb	23 37 04.3	
	comp=Z,11nm,0.9s						
RDOG	**Red Dog Mine**	80.91	16	IAmb	IAmb	23 37 04.6	
	comp=Z,7.3nm,0.9s						
SKT	**Skwentna**	81.00	24	P	**P**	**23 37 01.7**	**-1.4**
SUA	**Susitna One**	81.05	24	P	**P**	**23 37 03.7**	**+0.2**
SUA				IAmb	IAmb	23 37 04.3	
	comp=Z,7.8nm,1.0s						
PPLA	**Purkeypile**	81.24	23	P	**P**	**23 37 05.2**	**+0.7**
RC01	**Rabbit Creek A**	81.28	25	P	**P**	**23 37 04.4**	**-0.2**
RC01				IAmb	IAmb	23 37 06.0	
	comp=Z,14nm,1.1s						
ZAA0	**Zalesovo Array**	81.45	327	P	**P**	**23 37 02.8**	**-2.8**
ZALV	**Zalesovo Beam**	81.45	327	P	**P**	**23 37 03.9**	**-1.8**
	comp=Z,2.0nm,0.7s,baz=104,slow=4.8,SNR=9.5						
PRZ	**Przheval'sk**	81.62	314	P	**P**	**23 37 06.0**	**-1.1**
GHO	**Glory Hole Cre**	81.96	25	P	**P**	**23 37 07.8**	**-0.5**
GHO				IAmb	IAmb	23 37 09.6	
	comp=Z,5.5nm,0.8s						
KNK	**Knik Glacier**	81.98	25	P	**P**	**23 37 09.2**	**+0.9**
KNK					**PcP**	**23 37 09.6**	**-4.1**
KNK				IAmb	IAmb	23 37 12.8	
	comp=Z,7.4nm,1.0s						
KTH	**Kantishna Hill**	82.08	23		**P**	**23 37 08.7**	**-0.1**
SML	**Sawmill**	82.22	25	P	**P**	**23 37 10.3**	**+0.7**
TRF	**Thorofare Moun**	82.26	23	P	**P**	**23 37 09.8**	**-0.1**
TRF					**PcP**	**23 37 10.3**	**-4.9**
GLI	**Glacier Island**	82.30	26	P	**P**	**23 37 08.8**	**-1.2**
HIN	**Hinchinbrook I**	82.34	26	P	**P**	**23 37 10.7**	**+0.4**
HIN				IAmb	IAmb	23 37 15.3	
	comp=Z,15nm,1.1s						
KDJ	**Kajisay**	82.39	314	P	**P**	**23 37 09.8**	**-1.3**
IMAR	**Indian Mountai**	82.39	20	P	**P**	**23 37 10.7**	**+0.3**
FID	**Port Fidalgo**	82.51	26	P	**P**	**23 37 11.5**	**+0.4**
FID				IAmb	IAmb	23 37 12.1	
	comp=Z,14nm,1.2s						
KSH	**Kashi**	82.60	311	P	**P**	**23 37 14.0**	**+1.8**
KSH				sP	sP	23 37 29.1	-0.2
KSH				S	**S**	**23 47 27.8**	**+1.4**
KSH				sS	ScS	23 47 47.0	+5.7

KSH				pmax	pmax		
	comp=Z,20nm,1.2s						
KSH				pmax	pmax		
	comp=Z,300nm,5.8s						
KSH				LR	LR		
	comp=Z,360nm,11.7s						
SCM	Sheep Creek Mo	82.65	25	P	P	23 37 12.5	+0.6
SCM				IAmb	IAmb	23 37 13.7	
	comp=Z,14nm,1.0s						
RND	Reindeer	82.80	23	P	P	23 37 12.3	-0.3
RND					PcP	23 37 12.4	-4.9
RND				IAmb	IAmb	23 37 13.5	
	comp=Z,13nm,0.9s						
MLY	Manley	82.92	21		P	23 37 13.8	+0.6
MLY				IAmb	IAmb	23 37 14.8	
	comp=Z,10nm,1.0s						
MCK	McKinley	82.93	23		P	23 37 13.4	+0.2
RAGM	Ragged Mountai	83.15	27	P	P	23 37 14.8	+0.4
RAGM				IAmb	IAmb	23 37 29.5	
	comp=Z,14nm,1.1s						
DHY	Denali Highway	83.22	24	P	P	23 37 15.6	+0.8
DHY					P	23 37 15.7	+0.8
DHY				IAmb	IAmb	23 37 16.1	
	comp=Z,9.2nm,1.1s						
NIL	Nilore	83.39	305	P	P	23 37 16.1	-0.2
NIL				IAmb	IAmb	23 37 18.6	
	comp=Z,9.1nm,0.9s						
WRH	Wood River Hil	83.62	22		P	23 37 16.7	0.0
WRH				IAmb	IAmb	23 37 18.6	
	comp=Z,11nm,1.0s						
QSPA	South Pole Qui	83.65	180	P	P	23 37 17.9	+0.8
QSPA				IAmb	IAmb	23 37 18.2	
	comp=Z,9.1nm,1.1s						
CCB	Clear Creek Bu	83.81	22	P	P	23 37 17.7	0.0
CCB				IAmb	IAmb	23 37 18.2	
	comp=Z,7.3nm,0.9s						
KURK	Kurchatov	83.89	322	IAmb	IAmb	23 37 19.2	
	comp=Z,8.1nm,1.0s						
KURK	Kurchatov	83.89	322	P	P	23 37 17.6	-0.8
KURK					PcP	23 37 17.9	-4.5
KURBB	Kurchatov Arra	83.92	322	P	P	23 37 17.6	-0.9
	comp=Z,4.0nm,0.9s,baz=108,slow=4.1,SNR=20						
PAX	Paxson	83.94	24	P	P	23 37 19.9	+1.4
GLB	Gilahina Butte	83.98	26	P	P	23 37 20.2	+1.5
GLB				IAmb	IAmb	23 37 20.6	
	comp=Z,9.3nm,0.9s						
CRQM	Cirque	83.99	27	P	P	23 37 20.4	+1.4
CRQM				IAmb	IAmb	23 37 28.6	
	comp=Z,12nm,1.2s						
HDA	Harding Lake	84.02	23		P	23 37 18.9	+0.1
VRDI	Verde Repeater	84.05	26	P	P	23 37 20.0	+0.8
VRDI					PcP	23 37 20.4	-2.7
VRDI				IAmb	IAmb	23 37 21.1	
	comp=Z,8.0nm,0.9s						
TGL	Tana Glacier	84.13	27	P	P	23 37 20.2	+0.6
TGL				IAmb	IAmb	23 37 23.7	
	comp=Z,9.8nm,1.2s						
IL31		84.22	22	IAmb	IAmb	23 37 20.0	
	comp=Z,9.9nm,0.9s						
ILAR	Eielson Array	84.22	22	P	P	23 37 18.9	-0.9
	comp=Z,5.5nm,0.8s,baz=253,slow=5.3,SNR=43						
ILAR				LR	LR	00 16 22.2	
	comp=Z,33nm,18.1s,baz=217,slow=37						
ILAR	Eielson Array	84.22	22	P	P	23 37 18.2	-1.5
COLD	Coldfoot	84.26	20	P	P	23 37 21.3	+1.4
MCARA	McCarthy VSAT	84.30	26	P	P	23 37 21.2	+0.9
MCARA				IAmb	IAmb	23 37 22.9	
	comp=Z,7.9nm,0.8s						
AAK	Ala-Archa	84.44	314	P	P	23 37 21.7	+0.1
	comp=Z,1.8nm,0.7s,baz=122,slow=4.7,SNR=12						
AAK	Ala-Archa	84.44	314	P	P	23 37 22.4	+0.7
BALM	Baldy	84.46	27	P	P	23 37 22.8	+1.6
BALM					PcP	23 37 23.0	-1.7
BALM				IAmb	IAmb	23 37 23.2	
	comp=Z,6.7nm,0.6s						
RIDG	Independent Ri	84.54	24		P	23 37 22.4	+0.9
RIDG				IAmb	IAmb	23 37 23.0	
	comp=Z,6.0nm,0.8s						
MENT	Mentasta	84.65	25	P	P	23 37 23.4	+1.3
MENT				IAmb	IAmb	23 37 24.0	
	comp=Z,6.4nm,0.8s						
BARN	Barnard Glacie	84.78	27	P	P	23 37 24.4	+1.5
DOT	Dot Lake	84.81	24	IAmb	IAmb	23 37 24.5	
	comp=Z,10nm,0.9s						
CTGM	Chitina Glacie	84.89	27	P	P	23 37 25.1	+1.7
TOLK	Toolik Lake Re	85.20	18	IAmb	IAmb	23 37 27.3	
	comp=Z,8.2nm,0.9s						
BCAR	Beaver Creek A	85.51	25	P	P	23 37 27.1	+0.7
BMAR	Burnt Mountain	86.27	20	P	P	23 37 31.4	+1.3
EGAK	Eagle	86.44	23	P	P	23 37 31.6	+0.7
HYT	Haines Junctio	86.58	28	P	P	23 37 31.9	+0.1
NRIK	Noril'sk	86.83	341	P	P	23 37 32.3	-0.4
	comp=Z,2.4nm,0.7s,baz=100,slow=4.6,SNR=8.0						
DAWY	Dawson	86.88	24	P	P	23 37 33.5	+0.4
KK31	Karatay Array	87.40	314	IAmb	IAmb	23 37 36.5	
	comp=Z,4.6nm,0.9s						
KKAR	Karatay Array	87.40	314	P	P	23 37 34.9	-1.2
KKAR	Karatay Array	87.40	314	P	P	23 37 35.1	-1.0
KKAR				IAmb	IAmb	23 37 36.5	
	comp=Z,4.6nm,0.9s						
CHGR	Chuyangaron	87.60	309	P	P	23 37 34.8	-2.4
CHGR				IAmb	IAmb	23 37 40.5	
	comp=Z,7.6nm,1.2s						
WHY	Whitehorse	87.76	28	P	P	23 37 37.7	+0.2
WRAK	Wrangell Islan	87.88	33	P	P	23 37 37.4	-0.6
EPYK	Eagle Plains	88.73	23	P	P	23 37 41.8	-0.1
BVAR	Borovoye Array	89.41	323	P	P	23 37 43.6	-1.7
	comp=Z,1.8nm,0.9s,baz=104,slow=6.3,SNR=12						
INK	Inuvik	90.49	21	P	P	23 37 50.1	+0.1
	comp=Z,8.0nm,1.0s,baz=227,slow=6.4,SNR=14						
HRA	Herat	92.53	304	IAmb	IAmb	23 38 01.3	
	comp=Z,3.1nm,0.9s						
C36M	Paulatuk	94.06	21	P	P	23 38 06.0	-0.5
NVAR	Mina Array Bea	94.39	52	P	P	23 38 10.3	+1.3
	comp=Z,3.4nm,1.0s,baz=258,slow=5.1,SNR=10						
NVAR	Mina Array Bea	94.39	52	P	P	23 38 10.2	+1.2
WVOR	Wild Horse Val	94.45	48	P	P	23 38 10.5	+1.4
NV11	Mina Array Sit	94.51	52	P	P	23 38 08.2	-1.3
NV11				IAmb	IAmb	23 38 12.3	
	comp=Z,5.9nm,1.1s						
DAC	Darwin (Calif)	94.79	54	P	P	23 38 11.4	+0.5
YKA	Yellowknife Ar	97.58	28	P	Pdif	23 38 23.0	+0.3
	comp=Z,1.9nm,0.8s,baz=270,slow=4.5,SNR=24						
YKA				pP	pP	23 38 33.4	-1.3
	comp=Z,0.4nm,0.6s,baz=270,slow=4.6,SNR=3.4						
SCHQ	Schefferville	122.90	25	PKP	PKiKP	23 43 45.4	+0.6
	comp=Z,1.6nm,0.7s,baz=333,slow=0.9,SNR=3.6						
KHC	Kasperske Hory	124.30	327	*e*PKPDF	PKPdf	23 43 46.5	-1.0
GERES	GERESS Array B	124.40	327	PKP	PKiKP	23 43 49.1	+1.0
	comp=Z,0.7nm,0.5s,baz=68,slow=1.7,SNR=8.6						
PTGA	Pitinga	148.26	102		PKPbc	23 44 36.3	+0.5
TOA0	Torodi Ar. Sit	149.06	285		PKPbc	23 44 37.9	+0.2
TORD	Torodi Ar. Bea	149.06	285	PKPbc	PKPbc	23 44 37.4	-0.3
	comp=Z,7.1nm,0.7s,baz=41,slow=2.3,SNR=49						
TORD				pPKPbc	pPKPbc	23 44 49.4	-1.1
	comp=Z,4.1nm,0.7s,baz=79,slow=3.0,SNR=4.8						
BDFB	Brasilia	151.15	139	PKPbc	PKPbc	23 44 42.9	0.0
	comp=Z,4.3nm,0.7s,baz=229,slow=0.8,SNR=7.3						
DBIC	Dimbokro	156.05	272	PKPab	PKPab	23 45 12.4	+1.0
	comp=Z,3.0nm,0.6s,baz=44,slow=2.9,SNR=4.5						

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*NEIC **06** 23:31:41.7±1.2, 6°.2S±0°.1×151°.0E±0°.2, h40^{km}±4^{km}, mb4.2/8, Error ellipse: s-maj=31.6km s-min=8.8km az=124.0*

*IDC **06** 23:31:41.2±0.8, 6°.16S×150°.95E, h32^{km}±5^{km}, mb3.9/9, mb1 4.1/11, mb1mx3.8/36, mbtmp4.1/11, ML2.0/1, Error ellipse: s-maj=37.7km s-min=13.9km az=123.0*

ISC 06 23:31:41.9±0.7**, 6°.2S**±0°.1×**151°.0E**±0°.1**, h43**^{km}**, n26, σ1^{s}24**/29**, mb4.1**/11**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.15	30	Pn	Pn	23 32 15.7	+0.4
	46nm,0.3s,baz=258,slow=6.4,SNR=11						
RABL	Rabaul	2.32	31	Pn	Pn	23 32 18.2	+0.6
PMG	Port Moresby	4.94	229	Pn	Pn	23 32 54.4	+0.8
	4.0nm,0.3s,baz=65,slow=9.7,SNR=8.2						
PMG				Sn	Sn	23 33 48.0	-1.6
	8.6nm,0.3s,baz=38,slow=17,SNR=4.8						
PMG	Port Moresby	4.94	229		Pn	23 32 54.0	+0.3
PMG					Sn	23 33 49.3	-0.3
EIDS	Eidsvold	19.07	180	P	P	23 35 59.5	-1.4
EIDS				IAmb	IAmb	23 36 12.2	
	comp=Z,15nm,1.1s						
MTN	Manton Dam	20.63	250	P	P	23 36 18.5	+0.5
MTN				IAmb	IAmb	23 36 32.1	
	comp=Z,19nm,1.1s						
AS31	Alice Springs	23.90	222	P	P	23 36 52.5	+0.6
AS31				IAmb	IAmb	23 37 06.5	
	comp=Z,2.3nm,0.8s						
ASAR	Alice Springs	23.90	222	P	P	23 36 52.0	+0.1
	comp=Z,5.7nm,0.6s,baz=58,slow=7.9,SNR=33						
ASAR				pP	pP	23 37 02.6	+0.5
	comp=Z,7.5nm,0.8s,baz=56,slow=8.9,SNR=11						
ASAR	Alice Springs	23.90	222	P	P	23 36 52.0	+0.1
STKA	Stephens Creek	27.02	198	P	P	23 37 20.3	+0.3
	comp=Z,7.4nm,0.8s,baz=4.1,slow=9.9,SNR=12						
STKA	Stephens Creek	27.02	198	P	P	23 37 21.2	+1.2
FITZ	Fitzroy Crossi	27.39	242	P	P	23 37 23.9	+0.3
	comp=Z,3.2nm,0.5s,baz=62,slow=8.1,SNR=13						
FITZ	Fitzroy Crossi	27.39	242	IAmb	IAmb	23 37 37.7	
	comp=Z,8.3nm,0.9s						
SONM	Songino Array	66.54	329	P	P	23 42 29.0	+1.4
	comp=Z,0.8nm,0.8s,baz=149,slow=4.1,SNR=5.6						
SONM	Songino Array	66.54	329	P	P	23 42 27.7	+0.1
MKAR	Makanchi Array	80.17	319	P	P	23 43 48.0	+0.1
	comp=Z,0.7nm,0.8s,baz=104,slow=5.8,SNR=6.4						
ZALV	Zalesovo Beam	81.30	327	P	P	23 43 53.4	-0.2
	comp=Z,0.3nm,0.3s,baz=120,slow=10,SNR=2.5						
ILAR	Eielson Array	84.13	22	P	P	23 44 07.3	-0.8
	comp=Z,1.4nm,0.7s,baz=250,slow=5.1,SNR=12						
ILAR				pP	pP	23 44 18.1	-2.8
	comp=Z,1.1nm,0.7s,baz=247,slow=5.4,SNR=5.9						
ILAR	Eielson Array	84.13	22	P	P	23 44 07.1	-0.9
DAWY	Dawson	86.80	24	P	P	23 44 21.7	+0.2
DAWY				IAmb	IAmb	23 44 34.2	
	comp=Z,1.7nm,0.8s						
BESE	Bessie Mountai	87.09	30	P	P	23 44 20.4	-2.6
KKAR	Karatay Array	87.25	314	P	P	23 44 22.6	-1.6
NVAR	Mina Array Bea	94.38	52	P	P	23 44 59.9	+2.2
	comp=Z,0.2nm,0.3s,baz=264,slow=4.5,SNR=2.8						
YKA	Yellowknife Ar	97.50	28	P	Pdif	23 45 11.7	+0.6
	comp=Z,0.4nm,0.7s,baz=271,slow=4.4,SNR=6.4						
YKA				pP	pP	23 45 21.9	-0.9
	comp=Z,0.2nm,0.5s,baz=270,slow=5.0,SNR=4.3						
TORD	Torodi Ar. Bea	148.95	285	PKPbc	PKPbc	23 51 26.4	+0.1
	comp=Z,1.6nm,0.6s,baz=84,slow=2.6,SNR=14						
TORD				pPKPbc	pPKPdf	23 51 36.9	+2.4
	comp=Z,1.7nm,0.7s,baz=59,slow=3.4,SNR=7.0						
TORD	Torodi Ar. Bea	148.95	285		PKPbc	23 51 26.8	+0.6

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*IDC **06** 23:47:00.6±0.5, 60°.48S×26°.83W, h0^{km}, mb4.5/11, mb1 4.5/11, mb1mx4.4/21, mbtmp4.5/11, MS4.0/11, Ms1 4.0/11, ms1mx3.9/18, Error ellipse: s-maj=20.5km s-min=16.6km az=60.0*

*NEIC **06** 23:47:01.6±2.9, 60°.72S±0°.07×27°.0W±0°.2, h10^{km}±1^{km}, mb5.1/38, Error ellipse: s-maj=20.2km s-min=4.2km az=234.0*

*GCMT **06** 23:47:07.6±0.3, 60°.87S±0°.04×25°.83W±0°.08, h20^{km}±1^{km}, MW4.8/73, Moment Tensor Solution. s16,c19; s73,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.13±.22; M$_{\theta\theta}$-0.63±.15; M$_{\phi\phi}$-1.51±.14; M$_{r\theta}$-0.04±.32; M$_{\theta\phi}$-1.15±.08; M$_{\phi r}$0.76±.32; Best double couple: M$_0$2.34500×10^{16} NP1:φ$_s$226.00000°, δ39.00000°, λ109.00000°. NP2: φ$_s$23.00000°, δ54.00000°, λ75.00000°. Principal axes: T 2.3070, Plg76.0000°, Azm246.0000°; N 0.0690, Plg12.0000°, Azm31.0000°; P -2.3820, Plg8.0000°, Azm123.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 23:47:02.9±0.4**, 60°.68S**±0°.08×**26°.90W**±0°.09**, h19**^{km}**, n104, σ1^{s}66**/96**, mb5.0**/25**, MS4.0**/13**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	8.23	317	Pn	Pn	23 49 00.4	-0.6
VNA1	Neumayer--Stat	12.54	151	P	Pn	23 49 59.0	-0.9
VNA3	Neumayer Olymp	12.64	154	P	Pn	23 50 00.1	-1.3
VNA2	Neumayer--Watz	12.94	151	P	Pn	23 50 04.5	-0.9
	baz=310,slow=15						
SNAA	Sanae	14.54	149	P	Pn	23 50 25.3	-2.1
SNAA	Sanae	14.54	149	Pn	Pn	23 50 25.3	-2.1
	1.5nm,0.3s,baz=271,slow=12,SNR=31						
SNAA				Sn	Sn	23 52 56.2	-12
	0.2nm,0.3s,baz=340,slow=16,SNR=3.1						
SNAA				LR	LR	23 54 38.1	
	comp=Z,829nm,21.8s,baz=316,slow=31						
SNAA	Sanae	14.54	149		Pn	23 50 26.7	-0.7
USHA	Ushuaia	22.61	266	LR	LR	23 58 53.9	
	comp=Z,372nm,20.3s,baz=108,slow=32						
QSPA	South Pole Qui	29.56	180	P	P	23 53 08.5	+2.4
	16nm,1.0s,baz=246,slow=1.3,SNR=27						
QSPA				LR	LR	00 05 45.3	
	comp=Z,188nm,18.5s,baz=239,slow=38						
QSPA	South Pole Qui	29.56	180	P	P	23 53 06.8	+0.7
QSPA				IAmb	IAmb	23 53 25.7	
	comp=Z,24nm,1.1s						
PLCA	Paso Flores	33.23	287	P	P	23 53 38.8	+0.3
	comp=Z,1.8nm,0.7s,baz=135,slow=9.7,SNR=4.2						
PLCA				LR	LR	00 06 16.5	
	comp=Z,270nm,18.2s,baz=159,slow=35						
PLCA	Paso Flores	33.23	287	P	P	23 53 39.0	+0.5
PLTB	Pedras Altas	33.84	317	*e*P	P	23 53 46.0	+2.2
CPSB	Cacapava Do Su	35.03	318	*e*P	P	23 53 56.2	+2.1
ITQB	Itaqui	36.80	314	*e*P	P	23 54 10.0	+0.7
PEL	Peldehue	39.48	294	P	P	23 54 31.4	-0.5
PEL				IAmb	IAmb	23 54 35.2	
	comp=Z,70nm,1.1s						
ROC1	El Roble	39.77	294	P	P	23 54 35.5	+1.0
CPUP	Villa Florida	40.10	315	P	P	23 54 37.0	0.0
	comp=Z,11nm,0.8s,baz=163,slow=7.6,SNR=18						
CPUP				LR	LR	00 09 19.2	
	comp=Z,162nm,22.0s,baz=170,slow=34						
CPUP	Villa Florida	40.10	315	P	P	23 54 38.1	+1.1
CPUP				IAmb	IAmb	23 54 47.4	
	comp=Z,20nm,0.9s						
CPUP	Villa Florida	40.10	315	*e*P	P	23 54 38.0	+1.0
TRCB	Terra Rica	41.88	323	*e*P	P	23 54 56.7	+4.9
VNDA	Vanda	41.94	183	P	P	23 54 54.6	+3.0
	comp=Z,5.7nm,0.8s,baz=186,slow=6.9,SNR=7.7						
VNDA				LR	LR	00 10 20.3	
	comp=Z,174nm,19.2s,baz=216,slow=33						
GO04	Tololo Observa	42.06	296	P	P	23 54 54.8	+1.4
GO04				IAmb	IAmb	23 55 02.8	
	comp=Z,49nm,1.1s						
PCMB	Pacaembu	42.61	325	*e*P	P	23 55 03.4	+5.7
GO03	Copiap	44.04	299	P	P	23 55 07.9	-1.4
GO03				IAmb	IAmb	23 55 19.0	
	comp=Z,23nm,0.8s						
ITRB	Iturama	44.18	327	*e*P	P	23 55 16.5	+6.2
AQDB	Aquidauana	45.00	320	*e*P	P	23 55 21.3	+4.5
IPMB	Ipameri, GO	45.29	331	*e*P	P	23 55 25.7	+6.4
C2SB	Chapadao do Su	45.75	325	*e*P	P	23 55 28.4	+5.6
GO02	Mina Guanaco	45.90	301	P	P	23 55 25.4	+1.1
BOSA	Boshof	47.14	71	P	P	23 55 33.0	-0.8
	comp=Z,2.5nm,0.7s,baz=208,slow=7.3,SNR=8.6						
BOSA				LR	LR	00 12 39.1	
	comp=Z,128nm,18.7s,baz=196,slow=33						
BOSA	Boshof	47.14	71	P	P	23 55 34.3	+0.5
PP1B	Ponte de Pedra	47.45	323	*e*P	P	23 55 39.6	+3.4
BDFB	Brasilia	47.50	332	P	P	23 55 35.0	-1.7
	comp=Z,2.5nm,0.8s,baz=149,slow=18,SNR=1.7						
BDFB				LR	LR	00 12 35.6	
	comp=Z,142nm,22.0s,baz=130,slow=32						
BDFB	Brasilia	47.50	332	P	P	23 55 38.0	+1.3
BDFB				IAmb	IAmb	23 55 48.5	
	comp=Z,11nm,0.9s						
PB10	IPOC Station P	47.76	301	P	P	23 55 39.4	+0.8
PB10				IAmb	IAmb	23 55 42.8	
	comp=Z,23nm,0.8s						
LVC	Limon Verde	47.88	304	P	P	23 55 40.4	+0.5
LVC				IAmb	IAmb	23 55 45.5	
	comp=Z,12nm,0.8s						
LVC	Limon Verde	47.88	304	*e*P	P	23 55 40.0	+0.1
ARAG	Araguaiana, MT	48.38	327	*e*P	P	23 55 49.4	+6.0
PB04	IPOC Station P	48.64	302	P	P	23 55 46.0	+0.5
SALV	Santo Antonio	49.30	322	*e*P	P	23 55 53.0	+2.6
PB01	IPOC Station P	49.51	304	P	P	23 55 53.2	+1.0
PB01				IAmb	IAmb	23 55 54.3	
	comp=Z,29nm,1.0s						
LBTB	Lobatse	50.36	69	P	P	23 55 58.9	+0.3
	comp=Z,4.8nm,1.1s,baz=163,slow=9.7,SNR=2.6						
LBTB	Lobatse	50.36	69	IAmb	IAmb	23 56 07.1	
	comp=Z,6.3nm,1.1s						
GO01	Chusmiza	50.63	305	P	P	23 56 02.2	+1.2
GO01				IAmb	IAmb	23 56 08.4	
	comp=Z,26nm,1.1s						
PB11	IPOC Station P	50.73	304	IAmb	IAmb	23 56 17.1	
	comp=Z,21nm,0.9s						
MNMC	Minye Minye	51.27	305	P	P	23 56 06.7	+1.1
TSUM	Tsumeb	51.94	57	P	P	23 56 11.4	+0.9
LPAZ	La Paz	53.26	308	P	P	23 56 21.2	+0.4
	comp=Z,5.0nm,0.4s,baz=135,slow=4.8,SNR=27						
LPAZ				LR	LR	00 20 27.9	
	comp=Z,50nm,19.8s,baz=146,slow=38						
LPAZ	La Paz	53.26	308	IAmb	IAmb	23 56 23.6	
	comp=Z,9.4nm,0.8s						
LPAZ	La Paz	53.26	308	*e*P	P	23 56 21.7	+0.8
CLDB	Colider	54.09	324	*e*P	P	23 56 30.5	+4.3
SAML	Samuel	58.23	317	P	P	23 56 55.8	0.0
SAML				IAmb	IAmb	23 57 06.0	
	comp=Z,12nm,0.9s						
LSZ	Lusaka	60.02	66	P	P	23 57 08.9	+0.6
DBIC	Dimbokro	69.35	23	P	P	23 58 08.0	-0.9
	comp=Z,3.3nm,0.9s,baz=159,slow=7.7,SNR=3.5						
DBIC	Dimbokro	69.35	23	P	P	23 58 09.3	+0.4
OTAV	Otavalo	72.39	305	P	P	23 58 27.7	-0.4
OTAV	Otavalo	72.39	305	*e*P	P	23 58 29.8	+1.7
FLOC	Florencia	72.51	308	P	P	23 58 28.3	0.0
DCZ	Deep Cove	73.59	190	P	P	23 58 33.0	-1.3
DCZ				IAmb	IAmb	23 58 47.8	
	comp=Z,9.7nm,1.1s						
ROSC	El Rosal	74.99	311	LR	LR	00 31 19.2	
	comp=Z,95nm,22.0s,baz=191,slow=36						
SACV	Santiago Islan	75.44	3	P	P	23 58 44.4	-0.8
SACV				IAmb	IAmb	23 58 50.0	
	comp=Z,28nm,1.1s						
KHZ	Kahutara	75.91	195	P	P	23 58 45.9	-1.8
KHZ				IAmb	IAmb	23 58 47.4	
	comp=Z,30nm,1.1s						
THZ	Tophouse	76.63	195	P	P	23 58 50.2	-1.8
MSWZ	Moikau Station	76.66	197	P	P	23 58 51.3	-0.7
TOA0	Torodi Ar. Sit	77.04	29	P	P	23 58 55.0	+0.7
TOA0				IAmb	IAmb	23 58 58.2	
	comp=Z,26nm,1.1s						
TORD	Torodi Ar. Bea	77.04	29	P	P	23 58 54.8	+0.4
	comp=Z,19nm,0.8s,baz=200,slow=6.2,SNR=219						
TORD	Torodi Ar. Bea	77.04	29	P	P	23 58 54.1	-0.2
TORD					pP	23 58 54.5	-5.1
SDV	Santo Domingo	77.42	316	P	P	23 58 56.8	+0.1
SDV				IAmb	IAmb	23 59 07.2	
	comp=Z,7.6nm,0.8s						
GRTK	Grand Turk	89.37	319	P	P	23 59 56.4	-1.3
PPTF	Pamatai, Papee	89.54	233	P	P	23 59 56.7	-2.2
PPT	Papeete	89.56	233	P	P	23 59 55.4	-3.5
CBCY	The Bluff, Cay	90.70	311	P	P	00 00 00.3	-3.7
FSCY	Frank Sound, G	90.85	310	P	P	00 00 00.3	-4.4
ASAR	Alice Springs	94.52	162	P	P	00 00 22.1	+0.2
	comp=Z,0.4nm,0.6s,baz=198,slow=4.4,SNR=5.0						
ASAR				LR	LR	00 40 18.2	
	comp=Z,240nm,19.9s,baz=195,slow=34						
WRA	Warramunga Arr	98.24	162	P	Pdif	00 00 38.4	-0.4
PDAR	Pinedale Array	122.86	300	PKP	PKiKP	00 05 56.8	-0.3
	comp=Z,0.2nm,0.6s,baz=114,slow=6.3,SNR=2.8						
CMAR	Chiang Mai Arr	123.20	113	PKP	PKiKP	00 05 58.8	+0.6
	comp=Z,0.4nm,0.3s,baz=238,slow=3.1,SNR=4.4						
FRB	Frobisher Bay	128.03	338	PKP	PKiKP	00 06 06.9	+0.6
	comp=Z,1.3nm,0.5s,baz=181,slow=4.5,SNR=2.5						
FINES	FINESS Array B	128.39	29	PKP	PKiKP	00 06 07.5	+0.4
	comp=Z,3.3nm,0.8s,baz=144,slow=3.5,SNR=5.9						
KSH	Kashi	129.53	78	PKP	PKiKP	00 06 11.8	+1.4
KSH				PP	PP	00 08 24.1	+3.7
KSH				SS	SS	00 25 42.5	+0.6
KSH				LR	LR		
	comp=Z,270nm,13.1s						
ABKAR	Akbulak array	129.78	58		PKiKP	00 06 10.5	+0.2
ARCES	ARCESS Array B	135.18	23	PKP	PKiKP	00 06 19.9	-0.7
	comp=Z,4.7nm,1.1s,baz=238,slow=3.1,SNR=3.5						
CD2	Chengdu	136.10	110	Pdif	Pdif	00 03 26.6	-0.2
MKAR	Makanchi Array	138.04	76	PKP	PKiKP	00 06 27.1	-0.1
	comp=Z,0.9nm,0.9s,baz=254,slow=4.5,SNR=5.1						
WMQ	Urumqi	138.50	83	*e*PKP	PKiKP	00 06 28.2	-0.1
WMQ				LR	LR		
	comp=Z,590nm,28.9s						
YKA	Yellowknife Ar	139.62	314	PKhKP	PKPpre	00 06 22.4	
	comp=Z,0.1nm,0.7s,baz=153,slow=26,SNR=3.1						
YKA				PKP	PKiKP	00 06 28.7	-1.2
	comp=Z,1.2nm,0.7s,baz=125,slow=2.3,SNR=16						
LZH	Lanzhou	140.42	106	*e*PKP	PKPdf	00 06 28.2	-1.9
ZALV	Zalesovo Beam	144.08	69	PKP	PKPdf	00 06 34.4	-1.3
	comp=Z,0.6nm,0.4s,baz=236,slow=5.0,SNR=4.3						
ZALV	Zalesovo Beam	144.08	69	pPKPdf	pPKPdf	00 06 40.2	-0.6
HHC	Hu-ho-hao-te	147.85	109	*e*PKPbc	PKPdf	00 06 41.8	-1.0
HHC				LR	LR		
	comp=Z,450nm,20.7s						
HHC				LR	LR		
	comp=Z,520nm,19.5s						
INK	Inuvik	149.37	316	PKPbc	PKPbc	00 06 48.7	+0.1
	comp=Z,9.4nm,0.9s,baz=78,slow=3.4,SNR=13						
EPYK	Eagle Plains	149.76	311		PKiKP	00 06 50.6	0.0
DAWY	Dawson	149.84	306		PKiKP	00 06 51.0	+0.1
VRDI	Verde Repeater	150.26	299		PKiKP	00 06 53.0	+1.0
BCAR	Beaver Creek A	150.38	303		PKiKP	00 06 53.2	+1.2
SONM	Songino Array	150.54	94	PKPbc	PKiKP	00 06 53.3	+0.3
	comp=Z,4.0nm,1.0s,baz=217,slow=2.1,SNR=21						
SONM	Songino Array	150.54	94		PKiKP	00 06 53.1	+0.1
DOT	Dot Lake	151.55	304		PKiKP	00 06 56.2	+1.7
RIDG	Independent Ri	151.91	303		PKiKP	00 06 57.1	+1.8
NRIK	Noril'sk	152.39	44	PKPbc	PKiKP	00 06 56.8	+0.9
	comp=Z,0.4nm,0.3s,baz=21,slow=2.2,SNR=4.3						
NRIK				PKPab	PKPab	00 07 05.0	-1.1
	comp=Z,0.8nm,0.3s,baz=168,slow=2.6,SNR=5.1						
ILAR	Eielson Array	153.11	305	PKPbc	PKiKP	00 06 58.3	+0.7
	comp=Z,1.0nm,0.7s,baz=65,slow=0.2,SNR=13						
ILAR				PKPab	PKPab	00 07 07.8	-1.5
	comp=Z,4.1nm,0.9s,baz=133,slow=1.5,SNR=14						
CCB	Clear Creek Bu	153.44	304		PKPab	00 07 10.4	-0.2
MJAR	Matsushiro Arr	154.04	152	PKPbc	PKiKP	00 07 03.3	+2.8
	comp=Z,2.2nm,0.4s,baz=78,slow=35,SNR=4.9						
MJAR				PKPab	PKPab	00 07 15.4	+1.5
	comp=Z,0.8nm,0.3s,baz=233,slow=26,SNR=3.3						

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*NEIC **06** 23:51:51.8±2.4, 60°.9S±0°.1×27°.1W±0°.3, h14^{km}±6^{km}, mb4.6/10, Error ellipse: s-maj=24.5km s-min=15.9km az=79.0*

*IDC **06** 23:51:51.1±1.9, 60°.47S×26°.93W, h0^{km}, mb4.2/2, mb1 4.3/2, mb1mx3.8/21, mbtmp4.2/2, Error ellipse: s-maj=75.4km s-min=45.2km az=7.0*

ISC 06 23:51:51.9±0.7**, 60°.8S**±0°.1×**27°.1W**±0°.1**, h10**^{km}**, n19, σ1^{s}02**/19**, mb4.7**/5**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	Sanae	14.48	149	Pn	Pn	23 55 15.3	-1.3
	0.4nm,0.3s,baz=98,slow=11,SNR=9.6						
PMSA	Palmer Station	17.18	241		Pn	23 55 51.3	-0.3
PMSA				IAmb	IAmb	23 56 05.7	
	comp=Z,56nm,1.1s						
EFI	East Falkland	19.31	284	P	P	23 56 16.0	-0.8
EFI				IAmb	IAmb	23 56 18.4	
	comp=Z,28nm,0.9s						
QSPA	South Pole Qui	29.42	180	P	P	23 57 56.5	+1.1
MAW	Mawson	36.37	140	P	P	23 58 56.0	+0.4
GO05	Huala	38.45	291	P	P	23 59 13.6	0.0
GO02	Mina Guanaco	45.89	301	P	P	00 00 14.8	+0.1
GO02				IAmb	IAmb	00 00 15.8	
	comp=Z,6.5nm,0.7s						
PB01	IPOC Station P	49.51	304	P	P	00 00 42.6	0.0
PB01				IAmb	IAmb	00 00 51.7	
	comp=Z,8.7nm,1.1s						
LPAZ	La Paz	53.27	308	P	P	00 01 11.1	-0.3
	comp=Z,1.0nm,0.5s,baz=166,slow=5.7,SNR=6.7						
LPAZ	La Paz	53.27	308	P	P	00 01 10.2	-1.1
LPAZ	La Paz	53.27	308		P	00 01 10.5	-0.9
ASCN	Ascension	53.62	16	P	P	00 01 14.1	+0.8
RCBR	Riachuelo	55.26	349	P	P	00 01 25.4	+0.2
RCBR				IAmb	IAmb	00 01 35.1	
	comp=Z,7.2nm,1.0s						
TOA0	Torodi Ar. Sit	77.20	29	P	P	00 03 44.8	-1.0
TORD	Torodi Ar. Bea	77.20	29	P	P	00 03 44.7	-1.1
	comp=Z,1.9nm,0.5s,baz=199,slow=6.3,SNR=24						
TORD	Torodi Ar. Bea	77.20	29	P	P	00 03 44.1	-1.7
YKA	Yellowknife Ar	139.65	314	PKP	PKPdf	00 11 20.3	+2.2
	comp=Z,0.1nm,0.4s,baz=127,slow=2.1,SNR=2.9						
SONM	Songino Array	150.62	95	PKPbc	PKPbc	00 11 43.6	+0.5
	comp=Z,0.8nm,1.0s,baz=232,slow=1.6,SNR=4.7						
ILAR	Eielson Array	153.11	305	PKPbc	PKPbc	00 11 47.9	-0.1

comp=Z,0.2nm,0.5s,baz=90,slow=2.7,SNR=4.3

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*IDC **07** 00:10:31.4±4.9, 7°.05S×155°.30E, h84^{km}±39^{km}, mb3.7/7, mb1 3.9/8, mb1mx3.7/30, mbtmp4.0/8, MS3.1/3, Ms1 3.1/3, ms1mx2.9/25, Error ellipse: s-maj=43.6km s-min=21.4km az=103.0*

*NEIC **07** 00:10:37.6±1.1, 6°.9S±0°.1×154°.9E±0°.1, h137^{km}±6^{km}, mb4.1/16, Error ellipse: s-maj=17.6km s-min=12.3km az=47.0*

ISC 07 00:10:34.6±0.7**, 7°.0S**±0°.1×**155°.04E**±0°.09**, h100**^{km}**, n36, σ1^{s}.88**/32**, mb4.1**/16**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	4.02	315	Pn	Pn	00 11 34.6	+0.5
KRVT	Keravat (AS076	4.04	312	P	Pn	00 11 33.9	-0.5
	16nm,0.3s,baz=177,slow=18,SNR=5.4						
KRVT				S	Sn	00 12 27.1	+6.3
	19nm,0.3s,baz=55,slow=19,SNR=3.3						
KRVT				LR	LR	00 12 51.0	
	comp=Z,98nm,19.1s,baz=120,slow=33						
HNR	Honiara	5.41	116	LR	LR	00 14 04.9	
	comp=Z,291nm,20.1s,baz=300,slow=41						
HNR	Honiara	5.41	116	Pn	Pn	00 11 57.4	+4.4
PMG	Port Moresby	8.14	253	LR	LR	00 15 33.6	
	comp=Z,222nm,18.6s,baz=68,slow=36						
PMG	Port Moresby	8.14	253	Pn	Pn	00 12 29.6	-0.5
COEN	Coen	13.54	238	Pn	Pn	00 13 43.4	+0.7
ASAR	Alice Springs	26.18	229	P	P	00 15 59.7	-0.3
	1.9nm,0.7s,baz=58,slow=8.9,SNR=20						
ASAR	Alice Springs	26.18	229	P	P	00 15 59.2	-0.8
STKA	Stephens Creek	27.72	205	P	P	00 16 12.7	-1.0
	2.3nm,0.6s,baz=36,slow=14,SNR=2.8						
STKA	Stephens Creek	27.72	205	P	P	00 16 13.8	+0.2
CMAR	Chiang Mai Arr	60.84	296	P	P	00 20 37.5	+0.5
	2.8nm,0.8s,baz=119,slow=5.3,SNR=11						
SONM	Songino Array	69.39	327	P	P	00 21 31.0	-0.9
	0.5nm,0.7s,baz=125,slow=5.8,SNR=3.9						
SONM	Songino Array	69.39	327	P	P	00 21 30.0	-1.9
CNPM	China Poot	78.78	25	P	P	00 22 25.2	-0.9
BRLK	Bradley Lake	79.06	25	P	P	00 22 26.0	-1.7
BRLK				IAmb	IAmb	00 22 27.1	
	comp=Z,5.7nm,1.0s						
TRF	Thorofare Moun	81.42	22	P	P	00 22 39.2	-1.2
IMAR	Indian Mountai	81.75	19	P	P	00 22 41.1	-0.9
RND	Reindeer	81.93	22	P	P	00 22 41.7	-1.3
RND				IAmb	IAmb	00 22 50.0	
	comp=Z,3.0nm,1.1s						
MCK	McKinley	82.08	22	P	P	00 22 41.8	-1.9
MCK				IAmb	IAmb	00 22 42.7	
	comp=Z,3.5nm,0.9s						
BWN	Browne	82.13	21	P	P	00 22 43.1	-0.8
DHY	Denali Highway	82.31	23	P	P	00 22 43.6	-1.5
GLB	Gilahina Butte	82.91	25	P	P	00 22 46.9	-1.2
GLB				IAmb	IAmb	00 22 48.1	
	comp=Z,2.6nm,0.9s						
VRDI	Verde Repeater	82.96	25	P	P	00 22 46.9	-1.7
VRDI				IAmb	IAmb	00 22 57.0	
	comp=Z,2.5nm,1.0s						
ILAR	Eielson Array	83.40	21	P	P	00 22 48.0	-2.4
	comp=Z,0.5nm,0.7s,baz=251,slow=5.4,SNR=4.8						
ILAR	Eielson Array	83.40	21	P	P	00 22 48.9	-1.6
MKAR	Makanchi Array	83.46	319	P	P	00 22 50.3	-1.0
	comp=Z,0.5nm,0.8s,baz=111,slow=5.3,SNR=6.4						
MKAR	Makanchi Array	83.46	319	P	P	00 22 49.5	-1.8
CTGM	Chitina Glacie	83.75	26	P	P	00 22 51.9	-0.7
CTGM				IAmb	IAmb	00 22 52.4	
	comp=Z,4.7nm,1.0s						
FYU	Fort Yukon	84.92	20	P	P	00 22 57.2	-0.9
FYU				IAmb	IAmb	00 22 59.6	
	comp=Z,5.7nm,1.1s						
HYT	Haines Junctio	85.39	27	P	P	00 22 58.4	-2.4
HYT				IAmb	IAmb	00 23 01.8	
	comp=Z,1.9nm,0.8s						
EGAK	Eagle	85.54	23	P	P	00 22 59.4	-1.9
EGAK				IAmb	IAmb	00 23 02.3	
	comp=Z,2.9nm,1.1s						
BMAR	Burnt Mountain	85.58	20	P	P	00 22 58.0	-3.5
BESE	Bessie Mountai	85.80	30	P	P	00 23 01.0	-1.8
YKA	Yellowknife Ar	96.35	28	P	P	00 23 50.8	-1.1
	comp=Z,0.7nm,0.8s,baz=266,slow=4.5,SNR=8.4						
TORD	Torodi Ar. Bea	153.07	285	PKPbc	PKPbc	00 30 21.2	-0.4
	comp=Z,0.5nm,0.7s,baz=78,slow=2.0,SNR=5.9						

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*IDC **07** 00:28:25.7±1.4, 38°.19N×20°.59E, h0^{km}, mb3.6/4, mb1 3.6/5, mb1mx3.3/48, mbtmp3.5/5, ML3.6/1, Error ellipse: s-maj=32.0km s-min=24.1km az=112.0*

*ATH **07** 00:28:27.6, 38°.19N×20°.38E, h14^{km}, ML3.1/5, Error ellipse: s-maj=1.7km s-min=1.0km az=229.0*

*THE **07** 00:28:28.9, 38°.16N×20°.39E, h7^{km}±1^{km}, ML3.4/5, Error ellipse: s-maj=1.9km s-min=0.9km az=230.0*

ISC 07 00:28:27.7±0.7**, 38°.19N**±0°.03×**20°.43E**±0°.04**, h15**^{km}±4^{km}**, n45, σ0^{s}.67**/64**, mb3.7**/4**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LXRA	Lixouri, Kepha	0.01	26	P	Pg	00 28 30.3	-0.1
LXRA				S	Sg	00 28 32.0	-0.1
LXR1	Lixouri, Cepha	0.02	27	P	Pg	00 28 30.3	0.0
LXR1				S	Sg	00 28 32.1	0.0
CHV1	Chavriata, Kef	0.04	265	P	Pg	00 28 30.1	-0.3
CHV1				S	Sg	00 28 31.7	-0.5
	179µm,0.3s						
ARGA	Argostoli. Kep	0.04	103	P	Pg	00 28 30.5	+0.1
ARGA				S	Sg	00 28 32.2	0.0
ARG2	Argostoli	0.05	100	P	Pg	00 28 30.7	+0.2
ARG2				S	Sg	00 28 32.2	-0.1
KEF2	Argostoli. Kep	0.05	114	P	Pg	00 28 30.6	+0.1
KEF2				S	Sg	00 28 32.4	0.0
KEF3	Kipouria, Keph	0.07	285	P	Pg	00 28 30.3	-0.3
KEF3				S	Sg	00 28 32.2	-0.4
KEF4	Livadi, Kephal	0.07	357	P	Pg	00 28 30.6	-0.1
KEF4				S	Sg	00 28 32.4	-0.2
AGT1	Agia Thekli	0.07	331	P	Pg	00 28 30.1	-0.6
AGT1				S	Sg	00 28 32.1	-0.6
	140µm,0.3s						
VLS	Valsamata	0.13	94	P	Pg	00 28 31.6	+0.2
VLS				S	Sg	00 28 34.1	+0.4
VLS	Valsamata	0.13	94	P	Pg	00 28 31.5	+0.2
VLS				S	Sg	00 28 34.1	+0.4
VLS				AML	AML	00 28 34.3	
	comp=N,25126µm,0.3s						
VLS				AML	AML	00 28 34.6	
	comp=E,15717µm,0.2s						
KONA	Konidatara, Ke	0.26	25	P	Pb	00 28 33.4	-0.7
KONA				S	Sb	00 28 37.9	-0.7
KONA				AML	AML	00 28 38.3	
	comp=N,30189µm,0.4s						
KONA				AML	AML	00 28 42.0	
	comp=E,15192µm,0.6s						
KFL	Anninata	0.29	105	P	Pn	00 28 35.5	-2.0
KFL				S	Sb	00 28 39.6	+0.3
	comp=E,7µm,0.5s						
KFL	Anninata	0.29	105	P	Pb	00 28 34.5	-0.2
KFL				S	Sb	00 28 39.7	+0.3
EVGI	Lefkada island	0.47	22	P	Pn	00 28 39.3	-0.6
EVGI				S	Sb	00 28 44.9	+0.4
EVGI	Lefkada island	0.47	22	P	Pb	00 28 37.1	-0.6
EVGI				S	Sb	00 28 44.7	+0.2
MGNA	Meganis	0.55	31	P	Pb	00 28 38.4	-0.6
MGNA				AML	AML	00 28 50.3	
	comp=E,4704µm,0.5s						
MGNA				AML	AML	00 28 50.5	
	comp=N,3942µm,0.6s						
LKD2	Lefkada island	0.63	17	P	Pn	00 28 41.4	-0.7
LKD2				S	Sn	00 28 51.3	-0.6
	comp=N,1µm,0.7s						
LKD2	Lefkada island	0.63	17	P	Pb	00 28 40.1	-0.3
VTN	Vitineika	0.66	114	P	Pn	00 28 41.5	-0.9
VTN				S	Sn	00 28 50.7	-1.8
TSLK	Tsoukalades, L	0.66	16	P	Pn	00 28 42.7	+0.1
TSLK				S	Sn	00 28 52.9	+0.2
	comp=N,2µm,0.5s						
TSLK	Tsoukalades, L	0.66	16	P	Pb	00 28 40.5	-0.5
PDO	Prodromos	0.72	55	P	Pb	00 28 41.8	-0.2
PDO				AML	AML	00 28 59.0	
	comp=N,3706µm,0.9s						
PDO				AML	AML	00 29 01.0	
	comp=E,3374µm,0.5s						
RLS	Riolos of Patr	0.83	99	P	Pn	00 28 45.1	+0.3
RLS	Riolos of Patr	0.83	99	P	Pn	00 28 44.0	-0.8
RLS				AML	AML	00 29 08.0	
	comp=N,1086µm,0.6s						
RLS				AML	AML	00 29 09.7	
	comp=E,1031µm,0.7s						
PVO	Paravola	0.96	63	P	Pn	00 28 46.8	+0.1
PVO	Paravola	0.96	63	P	Pn	00 28 46.9	+0.2
DRO	Drossia	1.04	103	P	Pn	00 28 48.7	+1.0
DRO	Drossia	1.04	103	P	Pn	00 28 48.9	+1.2
AMT	Artemida-Makis	1.21	122	P	Pg	00 28 51.9	+0.9
LAKA	Lakka	1.22	87	P	Pg	00 28 51.1	-0.2
EVR	Evrytania	1.30	56	P	Pg	00 28 53.1	+0.2
TRIZ	Trizonia	1.31	82	P	Pg	00 28 52.4	-0.5
KALE	Kalithea	1.36	81	P	Pg	00 28 52.9	-1.0
KLV	Kalavryta, Ach	1.36	95	P	Pg	00 28 52.9	-1.1
JAN	Janina	1.50	13	P	Pb	00 28 55.5	+0.1
ITM	Ithomi	1.56	130	P	Pg	00 28 56.9	-0.7
MAKR	Makrakomi, Fth	1.57	58	P	Pg	00 28 58.0	+0.2
KEK	Kerkira	1.60	342	P	Pb	00 28 56.8	-0.2
KPRO	Kipourio	1.91	22	P	Pb	00 29 02.2	-0.1
GERES	GERESS Array B	11.71	338	Pn	Pn	00 31 16.4	+2.1
	comp=E,0.1nm,0.3s,baz=154,slow=14,SNR=3.1						
FINES	FINESS Array B	23.55	7	P	P	00 33 36.5	-0.7
	comp=E,3.1nm,0.9s,baz=190,slow=9.7,SNR=4.6						
TORD	Torodi Ar. Bea	29.99	219	P	P	00 34 36.7	+1.0
	comp=E,0.3nm,0.7s,baz=32,slow=9.8,SNR=3.1						
MKAR	Makanchi Array	45.36	58	P	P	00 36 44.7	-0.6
	comp=E,0.3nm,0.5s,baz=282,slow=6.2,SNR=6.9						
ZALV	Zalesovo Beam	45.74	48	P	P	00 36 47.7	-0.4
	comp=E,1.0nm,0.6s,baz=269,slow=9.0,SNR=6.4						

ROM 07 00:31:32.5±0.1**, 38°.485N**±0°.010×**15°.50E**±0°.01**, h129**^{km}±1^{km}**, ML2.7**/13**, 5C-2D, Error ellipse: s-maj=1.1km s-min=0.5km az=144.0, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSRU	Castanea	0.22	178	P	Pn	00 31 50.1	-0.2
MSRU				S	Sn	00 32 03.5	-0.1
MSRU				AML	AML		
	comp=N,268µm,0.7s						
MSRU				AML	AML		
	comp=E,320µm,0.3s						
JOPP	Joppolo	0.33	68	P	Pn	00 31 50.7	+0.1
JOPP				S	Sn	00 32 04.2	-0.2
JOPP				AML	AML		
	comp=E,306µm,0.4s						
JOPP				AML	AML		
	comp=N,235µm,1.4s						
MSCL	Scilla	0.34	138	P	Pn	00 31 50.7	-0.1
MSCL				S	Sn	00 32 04.4	-0.1
MSCL				AML	AML		
	comp=E,533µm,0.8s						
MSCL				AML	AML		
	comp=N,499µm,0.7s						
MPNC	Port Mandanici	0.36	199	P	Pn	00 31 50.6	-0.2
MPNC				S	Sn	00 32 04.4	-0.1
MPNC				AML	AML		
	comp=E,197µm,1.0s						
MPNC				AML	AML		
	comp=N,206µm,0.9s						
VPL	Vulcano Piano	0.42	256	P	Pn	00 31 51.5	+0.4
MCSR	Castroreale	0.46	205	P	Pn	00 31 51.7	+0.3
MCSR				S	Sn	00 32 05.3	-0.2
MCSR				AML	AML		
	comp=E,205µm,0.3s						
MCSR				AML	AML		
	comp=N,294µm,1.0s						
MTTG	Motta San Giov	0.51	162	P	Pn	00 31 51.9	+0.4
MTTG				AML	AML		
	comp=E,122µm,0.5s						
MTTG				AML	AML		
	comp=N,170µm,0.8s						
AIO	Antillo	0.55	202	P	Pn	00 31 52.5	+0.7
SOI	Samo	0.60	133	⇑P	Pn	00 31 52.3	+0.2
SOI				AML	AML		
	comp=E,131µm,0.4s						
SOI				AML	AML		
	comp=N,132µm,1.1s						
SOI				AML	AML		
	comp=N,156µm,1.2s						
SOI				AML	AML		
	comp=E,170µm,0.4s						
MUCR	Ucria	0.66	228	P	Pn	00 31 52.7	+0.1
MPAZ	Palizzi	0.67	143	P	Pn	00 31 52.6	+0.1
MPAZ				AML	AML		
	comp=E,150µm,1.2s						
MPAZ				AML	AML		
	comp=N,330µm,0.4s						
IFIL	Filicudi I Eol	0.74	276	P	Pn	00 31 53.1	+0.1
PLAC	Placanica	0.74	92	P	Pn	00 31 53.3	+0.3
PLAC				S	Sn	00 32 08.7	0.0
PLAC				AML	AML		
	comp=N,194µm,1.2s						
PLAC				AML	AML		
	comp=E,202µm,1.3s						
GRI	Girifalco	0.80	65	P	Pn	00 31 54.0	+0.4
CAR1	CAROLEI	0.95	36	⇑P	Pn	00 31 55.0	+0.1
CAR1				AML	AML		
	comp=E,253µm,0.5s						
CAR1				AML	AML		
	comp=N,186µm,0.2s						
SERS	Sersale	1.08	59	⇑P	Pn	00 31 56.7	+0.5
CET2	Cetraro	1.10	19	⇓P	Pn	00 31 56.9	+0.6
CET2				AML	AML		
	comp=E,426µm,0.4s						
CET2				AML	AML		
	comp=N,637µm,0.5s						
TIP	Timpagrande	1.20	54	⇑P	Pn	00 31 57.8	+0.5
CELI	Celico	1.21	40	P	Pn	00 31 58.2	+0.7
HAGA	Augusta	1.23	193	⇑P	Pn	00 31 57.5	0.0
HAGA				AML	AML		
	comp=E,107µm,1.3s						
HAGA				AML	AML		
	comp=N,150µm,1.6s						
T0702	Acquaformosa (	1.31	20	P	Pn	00 31 58.9	+0.3
T0702				S	Sn	00 32 18.2	-0.2
CUC	Castrocucco	1.53	9	⇓P	Pn	00 32 01.5	+0.6
CUC				S	Sn	00 32 24.0	+1.5
MGR	Morigerati	1.65	1	P	Pn	00 32 03.0	+0.8
CAFE	Carife	2.55	356	P	Pn	00 32 18.3	+5.0
AMUR	Altamura	2.56	19	S	Sn	00 32 44.0	-1.0
PTRJ	Pietraroja	2.97	346	S	Sn	00 33 04.0	+10

ATH 07 00:32:29.7, 38°.31N×20°.40E, h10^{km}±2^{km}**, ML1.9**/3**, 1D, Error ellipse: s-maj=2.2km s-min=0.7km az=229.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.05	160	P	Pg	00 32 31.7	-0.1
KEF4				S	Sg	00 32 33.2	0.0
KEF1	Kardakata, Kep	0.06	118	P	Pg	00 32 31.6	-0.3
KEF1				S	Sg	00 32 33.0	-0.5
LXRA	Lixouri, Kepha	0.11	165	P	Pg	00 32 32.7	+0.2
LXRA				S	Sg	00 32 35.0	+0.6
KEF3	Kipouria, Keph	0.11	202	P	Pg	00 32 32.7	+0.2
KEF3				S	Sg	00 32 35.0	+0.5
ARGA	Argostoli. Kep	0.14	155	P	Pg	00 32 33.0	0.0
ARGA				S	Sg	00 32 35.4	+0.2
KEF2	Argostoli. Kep	0.16	155	P	Pg	00 32 33.2	0.0
KEF2				S	Sg	00 32 35.9	+0.3
KONA	Konidatara, Ke	0.18	48	P	Pg	00 32 33.6	0.0
KONA				S	Sg	00 32 36.1	-0.1
KONA				AML	AML	00 32 39.0	
	comp=N,794µm,0.2s						
KONA				AML	AML	00 32 40.0	
	comp=E,896µm,0.4s						
VLS	Valsamata	0.20	131	P	Pg	00 32 33.6	-0.3
VLS				S	Sg	00 32 36.7	-0.1
VLS				AML	AML	00 32 37.3	
	comp=N,1847µm,0.1s						
VLS				AML	AML	00 32 37.3	
	comp=E,2301µm,0.1s						
VLS	Valsamata	0.20	131	⇓P	Pg	00 32 33.6	-0.3
VLS				AML	AML		
	comp=E,564µm,0.2s						
VLS				AML	AML		
	comp=N,485µm,0.5s						
VLS				AML	AML		
	comp=E,564µm,0.2s						
VLS				AML	AML		
	comp=N,485µm,0.5s						
VLS				AML	AML		
	comp=E,564µm,0.2s						
VLS				AML	AML		
	comp=N,485µm,0.5s						
KFL	Anninata	0.36	123	P	Pg	00 32 36.7	-0.2
KFL				S	Sg	00 32 42.4	+0.6
EVGI	Lefkada island	0.37	32	P	Pg	00 32 37.1	0.0
EVGI				S	Sb	00 32 43.2	-1.1
MGNA	Meganis	0.46	41	P	Pg	00 32 38.6	-0.2
MGNA				S	Sg	00 32 45.7	+0.7
TSLK	Tsoukalades, L	0.55	21	P	Pg	00 32 40.4	-0.2
TSLK				S	Sg	00 32 47.9	+0.1
PDO	Prodromos	0.68	64	P	Pg	00 32 42.4	-0.4
PDO				AML	AML	00 32 53.9	
	comp=N,171µm,0.3s						
PDO				AML	AML	00 32 55.1	
	comp=E,155µm,0.5s						
RLS	Riolos of Patr	0.88	106	P	Pg	00 32 45.8	-0.8
PVO	Paravola	0.94	70	P	Pg	00 32 47.0	-0.7
DRO	Drossia	1.09	109	P	Pb	00 32 50.1	-0.6

UCR 07 00:39:23.1±1.0**, 9°.86N×85°.66W, h5**^{km}**, MD3.9, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUAI	GUAI	0.43	20	*i* P	Pg	00 39 32.3	+0.8
PLVR	Palo Verde	0.57	32	*e*P	Pg	00 39 34.6	+0.4
PLVR				*e*S	Sb	00 39 43.4	-0.9
NY14	Universidad de	0.79	9	*i* P	Pb	00 39 39.2	-0.2
JTS	Las Juntas de	0.82	58	*e*P	Pg	00 39 38.5	-0.3
JTS				*e*S	Sn	00 39 53.0	-0.8
COLC	Colonia	0.92	29	*i* P	Pg	00 39 40.4	-0.3
COLC				*i* S	Sb	00 39 53.6	-0.5
LIM1	Limonal	0.93	26	*i* P	Pg	00 39 40.6	-0.3
LIM1				*i* S	Sb	00 39 53.7	-0.6
CUI	Cuipilapa	0.93	32	*i* P	Pg	00 39 40.6	-0.4
GBS3	Finca Las Img	0.94	12	*i* P	Pg	00 39 40.9	-0.2
GPS1	Guardaparques	0.96	19	*i* P	Pg	00 39 41.3	-0.2
BUEV	Buena Vista	0.96	15	*i* P	Pg	00 39 41.5	-0.1
ACAL	Aguas Claras	0.98	39	*i* P	Pg	00 39 41.7	-0.3
ACAL				*i* S	Sg	00 39 55.3	+0.5
GB1A	Borinquen Arri	0.99	15	*i* P	Pg	00 39 41.6	-0.5
CEDE	Laguna Cedeo	1.13	56	*e*P	Pg	00 39 44.1	-0.6
CEDE				*e*S	Sn	00 40 00.9	-0.7
LCR2	La Lucha 2	1.64	94	*e*P	Pn	00 39 51.8	-0.9

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*HEL **07** 00:41:46.9, 67°.85N×20°.68E, h0^{km}, ML1.7, Explosion*

UPP 07 00:41:45.2±0.1**, 67°.83N×20°.19E, h0**^{km}**, ML2.4, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.14	24	P	Pg	00 41 48.1	+0.3
KUA				S	Sg	00 41 49.9	+0.3
KUA	Kurravaara	0.14	24	*i* P	Pg	00 41 48.1	+0.3
KUA				*i* S	Sg	00 41 49.9	+0.3
KOVU	Salmi	0.40	358	P	Pg	00 41 52.8	+0.1
KOVU	Salmi	0.40	358	*i* P	Pg	00 41 52.8	+0.1
LANU	Lannavaara	0.71	71	P	Pg	00 41 58.6	-0.3
LANU	Lannavaara	0.71	71	*e*P	Pg	00 41 58.5	-0.4
DUNU	Dundret	0.73	168	P	Pg	00 41 58.8	-0.3
DUNU	Dundret	0.73	168	*i* P	Pg	00 41 58.8	-0.3
MASU	Masugnsbyn	0.79	118	P	Pg	00 42 00.1	-0.1
MASU	Masugnsbyn	0.79	118	*i* P	Pg	00 42 00.1	-0.1
KIF	Kilpisjarvi	1.20	11	*e*P	Pb	00 42 08.7	-0.1
KIF	Kilpisjarvi	1.20	11	*e*PB	Pg	00 42 08.2	0.0
	baz=183						
KIF				MSG		00 42 23.2	
	comp=Z,9.3nm,0.2s						
KIF				*e*SB	Sg	00 42 24.1	+0.4
PAJU	Pajala	1.39	124	P	Pg	00 42 10.5	-1.2
PAJU	Pajala	1.39	124	*e*P	Pg	00 42 10.5	-1.2
HEF	Hetta	1.43	64	*e*P	Pn	00 42 11.2	-1.1
HEF	Hetta	1.43	64	*e*PG	Pn	00 42 11.4	-0.9
	baz=244						
HEF				MSG		00 42 24.8	
	comp=Z,2.8nm,0.2s						
ERTU	Ertsjaerv	1.50	148	P	Pn	00 42 13.2	-0.1
ERTU	Ertsjaerv	1.50	148	*e*P	Pn	00 42 12.5	-0.8
TOF	Tornio	2.39	135	*e*PB	Pn	00 42 27.0	+1.4
	baz=315						
TOF				MSG		00 42 54.5	
	comp=Z,3.3nm,0.2s						
SGF	Sodankyl	2.46	96	*e*PG	Pb	00 42 29.2	-0.9
RNF	Rovaniemi	2.58	116	*e*PB	Pn	00 42 29.9	+1.9
RNF				*e*SG	Sb	00 43 05.7	+1.4
KEV	Kevo	3.14	49	*e*PG	Pg	00 42 44.5	-0.9
KEV				MSG		00 43 14.7	
	comp=Z,3.0nm,0.2s						
KEV				*e*SB	Sb	00 43 19.3	-1.3
BURU	Burvik	3.29	171	*e*PG	Pb	00 42 45.2	+0.8
MSF	Maaselka	3.99	115	*e*PB	Pb	00 42 53.9	-2.3
	baz=297						

UPP 07 00:41:50.5±0.1**, 67°.85N×20°.19E, h0**^{km}**, ML2.0, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOVU	Salmi	0.37	358	P	Pg	00 41 57.7	0.0
KOVU				S	Sg	00 42 03.0	+0.6
LANU	Lannavaara	0.71	73	P	Pg	00 42 03.7	-0.3
LANU				S	Sg	00 42 13.5	+0.4
DUNU	Dundret	0.75	169	P	Pg	00 42 04.5	-0.3
MASU	Masugnsbyn	0.80	119	P	Pg	00 42 05.5	-0.2
PAJU	Pajala	1.40	125	P	Pn	00 42 16.1	-1.2
ERTU	Ertsjaerv	1.52	148	P	Pn	00 42 18.1	-0.8
HARU	Harads	1.72	169	P	Pn	00 42 21.8	+0.2

UCR 07 00:49:36.5±1.7**, 8°.96N×84°.16W, h5**^{km}**, MD3.9, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDDO	Dominical	0.41	45	*i* P	Pg	00 49 44.9	+0.4
EDLM	Las Mercedes	0.65	61	*e*P	Pg	00 49 49.1	+0.2
EDLM				*e*S	Sb	00 49 59.2	-0.5
EDPN	Palmar Norte	0.69	90	*e*P	Pg	00 49 49.9	0.0
EDPN				*e*S	Sb	00 50 01.8	+0.8
LCR2	La Lucha 2	0.79	11	*e*P	Pg	00 49 51.3	-0.4
EDBA	Buenos Aires	0.90	77	*e*P	Pg	00 49 53.3	-0.4
EDBA				*e*S	Sb	00 50 06.3	-0.5
PTJ1	Puerto Jimnez	0.95	116	*e*P	Pb	00 49 55.1	-0.3
PTJ1				*e*S	Sn	00 50 10.0	-0.4
HDC	Heredia	1.03	3	*e*P	Pg	00 49 55.5	-0.9
BRU2	Volcan	1.46	96	*e*P	Pn	00 50 02.8	-0.9
JTS	Las Juntas de	1.54	329	*e*P	Pn	00 50 02.4	-2.2
CEDE	Laguna Cedeo	1.61	341	*i* P	Pn	00 50 04.9	-0.7
CEDE				*i* S	Sg	00 50 30.8	+2.6
PLVR	Palo Verde	1.81	320	*e*P	Pn	00 50 06.7	-1.8
GUAI	GUAI	1.86	314	*i* P	Pn	00 50 09.5	+0.4
PTEN	Parque Tenorio	1.92	335	*i* P	Pb	00 50 11.1	-1.0
LIM1	Limonal	2.03	328	*i* P	Pn	00 50 10.1	-1.4
GPS3	Bodega del ICE	2.14	326	*i* P	Pn	00 50 13.5	+0.5
NY14	Universidad de	2.15	321	*i* P	Pn	00 50 14.3	+1.2

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*IASPEI **07** 00:58:35.0±0.8, 32°.88N±0°.02×116°.24W±0°.02, h14^{km}±6^{km}, Error ellipse: s-maj=2.5km s-min=2.5km az=74.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ANF **07** 00:58:35.0±0.2, 32°.90N×116°.23W, h13^{km}±2^{km}, ML2.6/18, Error ellipse: s-maj=1.9km s-min=1.5km az=20.0*

*PAS **07** 00:58:35.8±1.6, 32°.87N±0°.05×116°.23W±0°.05, h5^{km}±7^{km}, ML2.8/127, Error ellipse: s-maj=8.8km s-min=1.7km az=222.0*

*NEIC **07** 00:58:35.5±2.0, 32°.87N±0°.04×116°.21W±0°.06, h1^{km}±8^{km}, Error ellipse: s-maj=7.3km s-min=6.2km az=65.0*

*MEX **07** 00:58:37.6±0.5, 32°.99N×116°.66W, h16^{km}±801^{km}, MD3.6*

ISC 07 00:58:35.4±0.8**, 32°.89N**±0°.02×**116°.24W**±0°.02**, h11**^{km}±6^{km}**, n102, σ0^{s}.84**/140**, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBKC	**Canebrake**	0.01	309		Pg	00 58 37.0	-0.4
MONP2	**Monument Peak**	0.15	270		Pg	00 58 39.3	+0.2
MONP2	**Monument Peak**	0.15	270	P	Pg	00 58 39.3	+0.2
	baz=86,SNR=280						
MONP2				S	Sg	00 58 41.9	+0.2
	baz=86						
CRR	**Carrizo Plain**	0.23	91		Pg	00 58 40.2	0.0
IKP	**In-Ko-Pah, Jac**	0.26	155		Pg	00 58 40.6	-0.2
IKP					Sg	00 58 44.3	-0.2
IKP	**In-Ko-Pah, Jac**	0.26	155	P	Pg	00 58 40.6	-0.2
	baz=338,SNR=964						
IKP				S	Sg	00 58 44.2	-0.2
	baz=338						
RMX	**La Rumorosa**	0.32	155		Pg	00 58 42.7	+0.8
RMX					Sg	00 58 47.7	+1.5
SUP	**Superstition M**	0.36	80		Pg	00 58 42.6	+0.1
SWSC	**Sam W. Stewart**	0.37	82		Pg	00 58 42.9	+0.1
SWSC					Sg	00 58 48.1	+0.2
SWSC	**Sam W. Stewart**	0.37	82	P	Pg	00 58 42.9	+0.1
	baz=264,SNR=132						
SWSC				S	Sg	00 58 48.1	+0.2
	baz=264						
BORC	**Borrego Spring**	0.40	338		Pg	00 58 43.7	+0.2
BORC					Sg	00 58 49.2	+0.3
ERRC	**Elmore Ranch**	0.42	57		Pg	00 58 44.3	+0.7
BAR	**Barrett**	0.42	240		Pg	00 58 43.7	0.0
BAR				Sg	Sg	00 58 49.1	-0.2
SALN	**Salton City**	0.44	29		Pg	00 58 44.5	+0.4
TKX	**Tecate**	0.45	224		Pg	00 58 43.2	-1.0
TKX					Sg	00 58 49.1	-1.0
ERPC	**Ernies Place**	0.51	107		Pg	00 58 46.0	+0.7
EML	**El Monte Cty P**	0.51	270		Pg	00 58 45.4	0.0
TJIG	**Tijuana**	0.58	219	*e*P	Pg	00 58 46.6	-0.2
TJIG				*i* S	Sg	00 58 54.2	-0.4
DPP	**Dos Picos Cty**	0.60	280		Pg	00 58 47.1	0.0
DPP					Sg	00 58 55.1	+0.1
SDRC	**San Diego Road**	0.61	256		Sg	00 58 55.3	-0.1
HWB	**Hans Werner Br**	0.62	283		Sg	00 58 55.8	+0.1
OLP	**Otay Lakes Par**	0.65	244		Pg	00 58 47.8	-0.2
OLP					Sg	00 58 56.2	-0.3
CLIC	**Calipatria**	0.65	67		Pb	00 58 48.7	-0.1
BATC	**Bat Cave Butte**	0.66	30		Pb	00 58 48.7	-0.2
DREC	**Desert Rsrch C**	0.67	97		Pb	00 58 49.4	+0.3
FRD	**Ford Ranch, An**	0.67	333		Sg	00 58 57.4	0.0
FRD	**Ford Ranch, An**	0.67	333		Sg	00 58 57.9	+0.4
SNR	**Schaffner Ranc**	0.68	92		Pg	00 58 49.1	+0.6
CBX	**Cerro Bola**	0.68	212	*e*P	Pg	00 58 48.4	-0.2
CBX				*i* S	Sg	00 58 57.2	-0.3
CBX	**Cerro Bola**	0.68	212		Pg	00 58 48.4	-0.2
CBX					Sg	00 58 57.2	-0.3
PLM	**Palomar**	0.70	312		Pg	00 58 49.3	+0.4
FRK	**Frink**	0.72	45		Pg	00 58 49.0	-0.3
109C	**Camp Elliot, M**	0.73	270		Pg	00 58 49.2	-0.3
109C	**Camp Elliot, M**	0.73	270	P	Pg	00 58 49.2	-0.3
	baz=89,SNR=26						
109C				S	Sg	00 58 59.1	0.0
	baz=89						
CPE	**Camp Elliot**	0.73	270		Sg	00 58 58.7	-0.3
SNDA	**J Saunders Pla**	0.73	335		Sg	00 58 59.9	+0.7
TPFO	**Pinon Flats**	0.73	346	P	Pg	00 58 49.7	+0.1
	baz=165,SNR=28						
TPFO				S	Sg	00 58 59.4	+0.1
	baz=165						
XPFO	**Pion Flat**	0.74	346		Pg	00 58 49.7	0.0
XPFO				Sg	Sg	00 58 60.0	+0.5
PFO	**Pinyon Flats O**	0.74	346		Pg	00 58 49.8	0.0
PFO	**Pinyon Flats O**	0.74	346		Pg	00 58 49.9	0.0
PFO					Sg	00 58 59.9	+0.3
PFO	**Pinyon Flats O**	0.74	346	P	Pg	00 58 49.9	0.0
	baz=165,SNR=19						
PFO				S	Sg	00 58 59.8	+0.3
	baz=165						
DNR	**Dunn Ranch,Anz**	0.75	334		Pg	00 58 50.4	+0.4
CTCC	**Cactus City**	0.79	15		Pg	00 58 50.8	+0.1
CRY	**Cary Ranch**	0.79	328		Sb	00 59 01.8	-0.3
GORC	**Green Oak Ranc**	0.87	288		Pg	00 58 51.6	-0.6
GORC					Sg	00 59 03.1	-0.5
ESJX	**Sierra Juarez**	0.92	164		Pg	00 58 51.4	-1.7
HAY	**Hayfield**	0.94	30		Pg	00 58 53.4	-0.1
POB	**Polly Butte**	0.98	324		Pb	00 58 54.4	-0.1
BACC	**Bachelor Mtn.**	0.98	317		Pb	00 58 54.2	-0.3
BACC					Sg	00 59 07.1	-0.1
BC3	**Big Chuckawall**	1.01	41	P	Pb	00 58 53.9	-1.0
	baz=221,SNR=43						
BC3				S	Sg	00 59 06.8	-1.2
	baz=221						
HMTC	**Hemet**	1.04	322		Pb	00 58 55.2	-0.2
EW2	**E Wide Canyon**	1.06	352		Pb	00 58 55.4	-0.4
EW2					Sg	00 59 09.8	+0.3
MURC	**Murrieta**	1.07	312		Pb	00 58 55.7	-0.3
MURC					Sb	00 59 10.1	+0.1
MURC	**Murrieta**	1.07	312	P	Pb	00 58 55.7	-0.3
	baz=131,SNR=30						
MURC				S	Sb	00 59 10.0	+0.1
	baz=131						
BELC	**Belle Mtn. Jos**	1.12	10		Pb	00 58 56.0	-1.0
BELC	**Belle Mtn. Jos**	1.12	10	P	Pb	00 58 56.0	-1.0
	baz=190,SNR=70						
BELC				S	Sb	00 59 10.6	-1.2
	baz=190						
BLAC	**Blackrock camp**	1.18	354		Pb	00 58 57.3	-0.7
BLAC					Sg	00 59 13.8	+0.2
GLA	**Glamis**	1.20	82		Pn	00 58 56.3	-1.9
GLA	**Glamis**	1.20	82	P	Pn	00 58 56.5	-1.7
	baz=263,SNR=11						
TPC	**Twentynine Pal**	1.22	7		Pn	00 58 57.5	-1.1
BBRC	**Big Bear Solar**	1.48	338	Pb	Pn	00 59 02.5	+0.3
	baz=157						
BBRC				Sg	Sg	00 59 23.7	+0.5
	baz=157						
IRM	**Iron Mountain**	1.56	36	Pg	Pb	00 59 04.8	+0.4
	baz=216,SNR=18						
Y12C	**Blythe**	1.67	59		Pn	00 59 05.1	+0.5
BFSC	**Mount Baldy Ra**	1.79	319	Pb	Pb	00 59 08.2	-0.1
	baz=138,SNR=17						
BFSC				Sb	Sb	00 59 31.4	+0.5
	baz=138						
CIS	**Catalina Islan**	1.90	286	P	Pn	00 59 07.7	0.0
	baz=105						
CIS				S	Sn	00 59 31.9	+0.2
	baz=105						
GMRC	**Granite Mounta**	1.95	14	Pn	Pn	00 59 07.8	-0.8
	baz=194,SNR=17						
GMRC				Pg	Pg	00 59 12.5	-0.4
	baz=194						
GMRC				Sb	Sg	00 59 36.9	-1.2
	baz=194						
SPIG	**San Pedro Mart**	1.95	160	*e*P	Pb	00 59 10.8	-0.5
SPIG				*i* S	Sb	00 59 35.9	+0.2
SPX	**San Pedro Mart**	1.96	160		Pn	00 59 10.5	+1.5
MWC	**Mount Wilson**	2.02	312		Pb	00 59 11.7	-0.6
PASC	**Pasadena Art C**	2.07	309	Pn	Pb	00 59 11.8	-1.2
113A	**Mohawk Valley,**	2.09	93	Pn	Pn	00 59 10.6	+0.3
NEE2	**Needles Airpor**	2.31	35	Sb	Sb	00 59 46.9	+1.3
	baz=216						
GSC	**Goldstone, Bar**	2.45	349		Pb	00 59 18.8	-0.7
GSC	**Goldstone, Bar**	2.45	349	Pg	Pg	00 59 21.2	-1.2
	baz=169,SNR=15						
EDW2	**Edwards Air Fo**	2.46	324	Sb	Sb	00 59 52.2	+2.0
	baz=143						
SNCC	**San Nicolas Is**	2.78	278	Pn	Pn	00 59 20.9	+1.0
Y14A	**Wickenburg**	2.90	68		Pn	00 59 23.8	+2.1
W13A	**Hualapai Mount**	2.94	41		Pb	00 59 25.3	-2.8
214A	**Organ Pipe Nat**	3.05	107		Pn	00 59 24.7	+1.1
MPMC	**Manual Prospec**	3.32	342	Pg	Pg	00 59 37.3	-1.8
	baz=162,SNR=6.9						
MPMC				Sg	Sg	01 00 22.6	+0.4
	baz=162						
ISA	**Isabella, Lake**	3.33	327	Pn	Pn	00 59 27.5	0.0
ISA					Pg	00 59 39.3	+0.1
DAC	**Darwin (Calif)**	3.56	342	Pn	Pn	00 59 33.6	+2.8
SHPR	**Sheep Range**	3.71	14	Pn	Pn	00 59 35.1	+2.2
SHPR					Pg	00 59 45.8	-0.8
TPNV	**Topopah Spring**	4.05	360	Pn	Pn	00 59 38.6	+1.1
TPNV					Pg	00 59 51.4	-1.6
X16A	**Lo Mia Camp, P**	4.28	68	Pn	Pn	00 59 41.8	+1.1
TUC	**Tucson**	4.64	96	Pn	Pn	00 59 46.2	+0.6
LCMT	**Little Creek M**	4.79	30		Pn	00 59 49.1	+1.4
U15A	**North Rim**	4.80	42		Pn	00 59 48.5	+0.5
WUAZ	**Wupatki**	4.81	56	Pn	Pn	00 59 47.0	-0.9
CCUT	**Cedar City**	5.21	26	Pn	Pn	00 59 53.3	-0.2
OMMB	**Old Mammoth Mi**	5.22	335	Pn	Pn	00 59 55.4	+1.6
MDPB	**Devils Postpil**	5.27	335	Pn	Pn	00 59 55.5	+1.1
SZCU	**Shurtz Canyon**	5.36	28	Pn	Pn	00 59 56.6	+1.1
R11A	**Troy Canyon, C**	5.47	5	Pn	Pn	00 59 58.2	+1.1
R11A					Pg	01 00 20.0	-0.3
X18A	**Snowflake**	5.49	71	Pn	Pn	00 59 57.8	+0.4
NVAR	**Mina Array Bea**	5.78	344	Pn	Pn	01 00 02.6	+1.3
W18A	**Petrified Fore**	5.84	66	Pn	Pn	01 00 02.7	+0.5
PSUT	**Pine Spring**	5.96	18		Pn	01 00 02.5	-1.2
HSIG		5.96	129	Pn	Pn	01 00 04.5	+0.9
RYN	**Ryan**	6.02	343	Pn	Pn	01 00 04.7	+0.1
319A	**Douglas**	6.09	102	Pn	Pn	01 00 06.9	+1.3
MTPU	**Mount Pierson**	6.11	32	Pn	Pn	01 00 06.2	+0.2

SJA ***07*** *01:14:08.1±0.8, 31°.20S×70°.11W, h10km±7km, ML3.0, MW3.1*

GUC ***07*** *01:14:09.0±0.7, 31°.21S×70°.66W, h32km±4km, ML3.0*

ISC 07 01:14:05.9±1.4**, 31°.22S**±0°.03×**70°.25W**±0°.03**, h5**km±13km**, n18, σ0ˢ.51**/31**, 4C-3D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO03	**El Pedregal**	0.54	315	⇑*i*P	Pb	01 14 18.2	+0.3
CO03				*e*S	Sb	01 14 25.7	-0.3
CO03				IAML		01 14 26.1	
	comp=N,2μm,0.2s						
RTLS	**Leoncito**	0.99	125	*i* P	Pb	01 14 25.9	+0.1
RTLS				IAML		01 14 39.0	
	comp=Z,824nm,0.3s						
CO04	**Los Peladeros**	1.02	217	⇓*e*P	Pb	01 14 26.2	-0.1
CO04				*e*S	Sb	01 14 40.2	+0.1
CO04				IAML		01 14 40.9	
	comp=N,398nm,0.2s						
GO04	**Tololo Observa**	1.15	335	*i* P	Pn	01 14 29.0	+0.2
GO04				*e*S	Sn	01 14 44.6	-0.5
GO04				IAML		01 14 54.0	
	comp=N,1μm,0.5s						
ACCO	**Cerro Coronel**	1.20	58	*i* P	Pn	01 14 29.7	+0.1
ACCO				*e*S	Sn	01 14 45.6	-0.8
AROD	**Rodeo**	1.25	33	*i* P	Pn	01 14 30.6	+0.3
AROD				*e*S	Sn	01 14 47.4	-0.2
ZON	**Zonda**	1.38	104	*i* P	Pb	01 14 32.1	-0.1
ZON				*e*S	Sb	01 14 49.9	-0.3
ZON				IAML		01 14 52.1	
	comp=Z,143nm,0.6s						
ACDV	**Cuesta del Vie**	1.43	43	*i* P	Pb	01 14 33.6	+0.5
ACDV				*e*S	Sn	01 14 52.4	+0.5
ACDV				IAML		01 14 53.9	
	comp=Z,124nm,0.3s						
AMOG	**MOGNA**	1.53	80	*i* P	Pg	01 14 35.3	0.0
RTCV	**Cerro Valdivia**	1.59	114	*i* P	Pg	01 14 36.1	-0.3
RTCV				*e*S	Sg	01 14 56.5	-0.5
CFA	**Coronel Fontan**	1.76	103	*e*P	Pg	01 14 38.9	-0.7
ASAL	**Salagasta**	1.82	139	*i* P	Pg	01 14 41.3	+0.6
ROCH	**El Roble**	1.86	200	⇑*i*P	Pb	01 14 40.6	+0.1
ROCH				*i* S	Sg	01 15 05.4	-0.3
ROCH				IAML		01 15 06.2	
	comp=E,266nm,0.2s						
PEL	**Peldehue**	1.95	191	⇓*i*P	Pg	01 14 42.5	-0.7
PEL				*e*S	Sg	01 15 08.2	-0.4
PEL				IAML		01 15 13.9	
	comp=E,252nm,0.2s						
ARCO	**CERRO ARCO**	1.96	146	*i* P	Pg	01 14 43.3	-0.2
ARCO				IAML		01 14 48.4	
	comp=Z,174nm,0.5s						
FCH	**Farellones**	2.10	181	⇑*i*P	Pg	01 14 46.0	-0.2
FCH				*i* S	Sg	01 15 14.3	+1.0
FCH				IAML		01 15 21.6	
	comp=E,215nm,0.2s						
MT02	**Curacav**	2.17	200	⇓*i*P	Pb	01 14 45.3	-0.3
MT02				*i* S	Sb	01 15 13.6	+0.8
LMEL	**Las Melosas**	2.62	179	⇑*i*P	Pg	01 14 55.7	-0.4
LMEL				*i* S	Sg	01 15 31.2	+1.2

IDC ***07*** *01:32:42.6±0.8, 60°.30S×26°.72W, h0km, mb4.3/7, mb1 4.3/7, mb1mx4.0/29, mbtmp4.3/7, MS3.5/1, Ms1 3.5/1, ms1mx3.0/20, Error ellipse: s-maj=29.2km s-min=22.3km az=30.0*

NEIC ***07*** *01:32:45.1±0.7, 60°.6S±0°.1×26°.7W±0°.3, h23km±4km, mb4.7/13, Error ellipse: s-maj=24.3km s-min=15.0km az=49.0*

ISC 07 01:32:44.4±0.6**, 60°.7S**±0°.1×**26°.6W**±0°.1**, h20**km**, n37, σ1ˢ.07**/36**, mb4.4**/7**, 1C-1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	12.48	151	P	Pn	01 35 41.0	+0.5
VNA3	**Neumayer Olymp**	12.59	154	P	Pn	01 35 42.0	-0.1
VNA2	**Neumayer--Watz**	12.88	151	P	Pn	01 35 46.1	+0.1
	baz=309,slow=14						
SNAA	**Sanae**	14.48	149	P	Pn	01 36 07.3	-0.6
SNAA	**Sanae**	14.48	149	Pn	Pn	01 36 07.0	-0.9
	1.1nm,0.3s,baz=77,slow=6.1,SNR=19						
SNAA				Sn	Sn	01 38 38.1	-10
	0.2nm,0.3s,baz=73,slow=19,SNR=2.9						
SNAA	**Sanae**	14.48	149		Pn	01 36 07.4	-0.6
SYO	**Syowa Base**	27.94	135	⇑*i*P	P	01 38 28.1	-4.7
SYO	**Syowa Base**	27.94	135	⇓*e*P	P	01 38 34.2	+1.4
QSPA	**South Pole Qui**	29.56	180	P	P	01 38 52.4	+4.9
	2.0nm,0.8s,baz=185,slow=2.3,SNR=9.4						
QSPA	**South Pole Qui**	29.56	180	P	P	01 38 48.5	+1.0
QSPA				IAmb	IAmb	01 39 37.8	
	comp=Z,28nm,1.9s						
PLCA	**Paso Flores**	33.35	287	P	P	01 39 20.9	0.0
	comp=Z,0.8nm,0.7s,baz=135,slow=8.0,SNR=3.5						
PLCA				LR	LR	01 52 08.4	
	comp=Z,76nm,18.7s,baz=186,slow=35						
PLCA	**Paso Flores**	33.35	287	IAmb	IAmb	01 40 26.9	
	comp=Z,22nm,1.9s						
CPUP	**Villa Florida**	40.19	315	P	P	01 40 18.1	-1.0
	comp=Z,3.1nm,0.4s,baz=162,slow=7.1,SNR=16						
CPUP	**Villa Florida**	40.19	315	P	P	01 40 18.2	-0.9
CPUP				IAmb	IAmb	01 40 35.4	
	comp=Z,16nm,1.4s						
GO02	**Mina Guanaco**	46.01	301	P	P	01 41 06.4	-0.1
BOSA	**Boshof**	47.02	71	P	P	01 41 14.6	+0.4
	comp=Z,2.8nm,0.9s,baz=213,slow=7.8,SNR=4.5						
LVC	**Limon Verde**	47.98	303	P	P	01 41 22.2	+0.2
PB01	**IPOC Station P**	49.62	303	P	P	01 41 34.0	-0.2
GO01	**Chusmiza**	50.73	305	P	P	01 41 43.3	+0.1
MNMC	**Minye Minye**	51.38	304	P	P	01 41 47.7	-0.1
LPAZ	**La Paz**	53.36	308	P	P	01 42 02.6	-0.3
	comp=Z,1.7nm,0.4s,baz=101,slow=4.8,SNR=17						
LPAZ	**La Paz**	53.36	308	P	P	01 42 02.9	-0.1
TOA0	**Torodi Ar. Sit**	76.97	28	P	P	01 44 36.0	+0.8
TORD	**Torodi Ar. Bea**	76.97	28	P	P	01 44 35.5	+0.2
	comp=Z,3.7nm,0.7s,baz=200,slow=6.4,SNR=28						
TORD	**Torodi Ar. Bea**	76.97	28	P	P	01 44 35.5	+0.2
SDV	**Santo Domingo**	77.50	315	P	P	01 44 37.6	-0.9
	comp=Z,1.6nm,0.3s,baz=164,slow=2.4,SNR=3.8						
SDV	**Santo Domingo**	77.50	315	P	P	01 44 37.4	-1.2
SDV				IAmb	IAmb	01 44 47.4	
	comp=Z,5.3nm,0.8s						
FINES	**FINESS Array B**	128.32	29	PKP	PKiKP	01 51 48.3	0.0
	comp=Z,3.5nm,0.8s,baz=202,slow=2.1,SNR=4.9						
YKA	**Yellowknife Ar**	139.71	314	PKP	PKPdf	01 52 09.5	+0.5
	comp=Z,0.7nm,0.8s,baz=125,slow=2.3,SNR=10						
ZALV	**Zalesovo Beam**	143.95	69	PKP	PKPdf	01 52 17.4	+0.5
	comp=Z,0.4nm,0.4s,baz=265,slow=2.2,SNR=2.4						
INK	**Inuvik**	149.45	316	PKPbc	PKPbc	01 52 30.4	+0.2
	comp=Z,1.7nm,0.7s,baz=90,slow=3.6,SNR=10						
INK	**Inuvik**	149.45	316		PKPbc	01 52 30.0	-0.1
VRDI	**Verde Repeater**	150.37	299		PKiKP	01 52 33.6	0.0
SONM	**Songino Array**	150.41	94	PKPbc	PKiKP	01 52 34.6	+0.5
	comp=Z,1.1nm,0.9s,baz=224,slow=3.3,SNR=6.1						
BCAR	**Beaver Creek A**	150.48	303		PKiKP	01 52 33.3	-0.3
BCAR				PKPab	PKPab	01 52 41.9	+2.2
RIDG	**Independent Ri**	152.01	303		PKiKP	01 52 36.7	-0.1
ILAR	**Eielson Array**	153.22	305	PKPbc	PKiKP	01 52 39.7	+0.5
	comp=Z,0.9nm,0.6s,baz=188,slow=1.8,SNR=13						

MOS ***07*** *01:46:06.9±0.8, 49°.76N×157°.01E, h85km, mb4.1/7, Error ellipse: s-maj=18.4km s-min=4.4km az=84.3*

KRSC ***07*** *01:46:07.5±1.3, 49°.88N×157°.27E, h65km±26km, ML4.5*

NEIC ***07*** *01:46:11.3±1.4, 50°.0N±0°.1×156°.9E±0°.2, h90km±9km, mb4.2/5, Error ellipse: s-maj=20.3km s-min=14.8km az=140.0*

IDC ***07*** *01:46:12.1±5.9, 50°.08N×156°.76E, h95km±40km, mb3.6/11, mb1 3.8/12, mb1mx3.5/44, mbtmp3.9/12, Error ellipse: s-maj=48.2km s-min=19.6km az=178.0*

ISC 07 01:46:09.3±2.0**, 49°.9N**±0°.1×**157°.05E**±0°.08**, h79**km±12km**, n78, σ1ˢ.06**/104**, mb3.9**/14**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	1.01	324	P	Pn	01 46 27.6	-0.8
SKR				S	Sn	01 46 41.9	-0.7
SKR	**Severo-Kuril's**	1.01	324	*e*PN	Pn	01 46 27.7	-0.7
SKR				*e*S	Sn	01 46 42.0	-0.7
SKR				pmax	pmax		
	comp=Z,861nm,0.4s						
SKR				smax	smax		
	comp=N,3μm,0.2s						
SKR				smax	smax		
	comp=E,2μm,0.2s						
ALID	**Alaid**	1.39	317	P	Pn	01 46 33.4	+0.2
ALID				S	Sn	01 46 52.1	+0.9
ALID	**Alaid**	1.39	317	PN	Pn	01 46 33.4	+0.2
ALID				S	Sn	01 46 52.1	+0.9
PAU	**Pauzhetka**	1.61	355	P	Pn	01 46 36.1	+0.2
PAU				S	Sn	01 46 56.3	+0.2
PAU	**Pauzhetka**	1.61	355	PN	Pn	01 46 36.1	+0.2
PAU				S	Sn	01 46 56.3	+0.2
MIPR	**Malaya Ipel'ka**	2.42	356	P	Pn	01 46 47.4	+0.7
MIPR				S	Sn	01 47 15.9	+0.5
MIPR	**Malaya Ipel'ka**	2.42	356	PN	Pn	01 46 47.4	+0.7
MIPR				S	Sn	01 47 15.9	+0.5
ASAK	**Asacha**	2.57	12	P	Pn	01 46 49.0	+0.1
ASAK				S	Sn	01 47 19.0	-0.3
ASAK	**Asacha**	2.57	12	PN	Pn	01 46 49.0	+0.1
ASAK				S	Sn	01 47 19.0	-0.3
MTVR	**Mutnovka**	2.71	15	P	Pn	01 46 51.0	+0.2
MTVR				S	Sn	01 47 22.0	-0.7
MTVR	**Mutnovka**	2.71	15	PN	Pn	01 46 51.0	+0.2
MTVR				S	Sn	01 47 22.0	-0.7
GRL	**Gorelyy**	2.76	13	P	Pn	01 46 52.0	+0.5
GRL				S	Sn	01 47 24.0	+0.1
GRL	**Gorelyy**	2.76	13	PN	Pn	01 46 52.0	+0.5
GRL				S	Sn	01 47 24.0	+0.1
KRMR	**Karymshinskiy**	3.04	12	P	Pn	01 46 55.4	+0.3
KRMR				S	Sn	01 47 31.6	+1.2
KRMR	**Karymshinskiy**	3.04	12	PN	Pn	01 46 55.4	+0.3
KRMR				S	Sn	01 47 31.6	+1.2
APC	**Apacha**	3.06	1	P	Pn	01 46 56.2	+0.8
APC				S	Sn	01 47 31.6	+0.7
APC	**Apacha**	3.06	1	PN	Pn	01 46 56.2	+0.8
APC				S	Sn	01 47 31.6	+0.7
PEA0B	**Petropavlovsk-**	3.27	7	PN	Pn	01 46 58.9	+0.7
PEA0B	**Petropavlovsk-**	3.27	7		Pn	01 46 58.9	+0.7
PETK	**Petropavlovsk-**	3.27	7	P	Pn	01 46 59.1	+0.9
	comp=E,6.2nm,0.3s,baz=181,slow=16,SNR=43						
PETK				S	Sn	01 47 35.5	-0.4
	comp=E,3.7nm,0.3s,baz=149,slow=18,SNR=5.2						
PET	**Petropavlovsk**	3.31	17	PN	Pn	01 46 58.7	-0.1
PET				S	Sn	01 47 36.3	-0.7
PET	**Petropavlovsk**	3.31	17		Pn	01 46 58.9	+0.1
DALK	**Dalny**	3.34	18	P	Pn	01 46 59.2	0.0
DALK				S	Sn	01 47 36.8	-0.9
DALK	**Dalny**	3.34	18	PN	Pn	01 46 59.2	0.0
DALK				S	Sn	01 47 36.8	-0.9
AVH	**Avacha**	3.56	17	P	Pn	01 47 03.2	+1.0
AVH				S	Sn	01 47 44.5	+1.3
AVH	**Avacha**	3.56	17	PN	Pn	01 47 03.2	+1.0
AVH				S	Sn	01 47 44.5	+1.3
KOK	**Koryaka**	3.57	16	P	Pn	01 47 04.0	+1.6
KOK				S	Sn	01 47 43.5	+0.1
KOK	**Koryaka**	3.57	16	PN	Pn	01 47 04.0	+1.6
KOK				S	Sn	01 47 43.5	+0.1
KRER	**Koryakskii**	3.60	16	P	Pn	01 47 03.8	+0.9
KRER				S	Sn	01 47 44.3	0.0
KRER	**Koryakskii**	3.60	16	PN	Pn	01 47 03.8	+0.9
KRER				S	Sn	01 47 44.3	0.0
NLC	**Nalytchevo**	3.60	23	P	Pn	01 47 01.3	-1.4
NLC	**Nalytchevo**	3.60	23	PN	Pn	01 47 01.3	-1.4
KRX	**Arik**	3.63	15	P	Pn	01 47 04.4	+1.1
KRX				S	Sn	01 47 45.9	+0.8
KRX	**Arik**	3.63	15	PN	Pn	01 47 04.4	+1.1
KRX				S	Sn	01 47 45.9	+0.8
SPN	**Mys Shipunski**	3.73	29	P	Pn	01 47 04.4	-0.1
SPN	**Mys Shipunski**	3.73	29	PN	Pn	01 47 04.4	-0.1
KZV	**Kizimen**	5.61	19	P	Pn	01 47 30.1	-0.2
KZV				S	Sn	01 48 32.0	-1.4
KZV	**Kizimen**	5.61	19	PN	Pn	01 47 30.1	-0.2
KZV				S	Sn	01 48 32.0	-1.4
TUMR	**Tumrok**	5.74	18	P	Pn	01 47 33.0	+1.0
TUMR	**Tumrok**	5.74	18	PN	Pn	01 47 33.0	+1.0
KMNR	**Kamenistaya**	6.20	17	P	Pn	01 47 39.6	+1.3
KMNR	**Kamenistaya**	6.20	17	PN	Pn	01 47 39.6	+1.3
ZLN	**Zelenaya**	6.56	19	P	Pn	01 47 44.5	+1.4
ZLN	**Zelenaya**	6.56	19	PN	Pn	01 47 44.5	+1.4
KBTR	**Krutoberegovo**	7.24	26	P	Pn	01 47 51.2	-1.0
KBTR	**Krutoberegovo**	7.24	26	PN	Pn	01 47 51.2	-1.0
KLR	**Kul'dur**	16.41	277	P	P	01 49 60.0	+4.0
	comp=E,0.1nm,0.3s,baz=75,slow=6.4,SNR=4.1						
KLR	**Kul'dur**	16.41	277	P	P	01 50 00.0	+4.0
BILL	**Bilibino**	18.79	11	*e*P	Pn	01 50 23.2	-0.1
BILL				pmax	pmax		
	comp=Z,2.0nm,0.3s						
YAK	**Yakutsk**	19.39	319	*i* P	P	01 50 26.0	-2.5
YAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
H11N2	**WAKE ISLAND Hy**	31.08	162	T	T	02 25 34.1	
	baz=347						
H11N1	**WAKE ISLAND Hy**	31.10	162	T	T	02 25 30.1	
	baz=347						
H11N3	**WAKE ISLAND Hy**	31.10	162	T	T	02 25 35.2	
	baz=347						
H11S1	**WAKE ISLAND Hy**	32.23	163	T	T	02 26 56.6	
	baz=347,slow=76,SNR=32						
H11S3	**WAKE ISLAND Hy**	32.24	163	T	T	02 26 54.7	
	baz=347,slow=76,SNR=31						
H11S2	**WAKE ISLAND Hy**	32.25	163	T	T	02 26 58.0	
	baz=347,slow=76,SNR=27						
ILAR	**Eielson Array**	32.47	41	P	P	01 52 32.6	+0.9
	comp=Z,0.8nm,0.7s,baz=248,slow=6.9,SNR=9.1						
ZALV	**Zalesovo Beam**	42.97	304	P	P	01 53 58.9	-1.3
	comp=Z,1.0nm,0.4s,baz=52,slow=7.2,SNR=5.0						
YKA	**Yellowknife Ar**	46.85	40	P	P	01 54 31.7	+0.9
	comp=Z,0.8nm,0.7s,baz=298,slow=7.4,SNR=10						
KURK	**Kurchatov**	47.85	303	P	P	01 54 37.7	-1.1
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURK	**Kurchatov**	47.85	303	P	P	01 54 37.7	-1.1
KURK				IAmb	IAmb	01 54 38.6	
	comp=Z,2.9nm,0.8s						
MK31	**Makanchi Array**	47.87	297	P	P	01 54 38.1	-0.9
MK31				pmax	pmax		
	comp=Z,7.0nm,2.0s						
MK31	**Makanchi Array**	47.87	297	P	P	01 54 38.0	-0.9
MK31				IAmb	IAmb	01 55 11.2	
	comp=Z,7.2nm,2.0s						
MKAR	**Makanchi Array**	47.87	297	P	P	01 54 38.0	-1.0
	comp=Z,0.8nm,0.5s,baz=52,slow=6.5,SNR=18						
MKAR	**Makanchi Array**	47.87	297	P	P	01 54 37.7	-1.3
ARU	**Arti**	54.48	318	*i* P	P	01 55 25.7	-2.6
ARU				pmax	pmax		
	comp=Z,3.0nm,1.1s						
J08A	**Circle Bar Ran**	55.46	62	P	P	01 55 36.6	+1.0
ARCES	**ARCESS Array B**	55.75	341	P	P	01 55 36.2	-1.0
	comp=Z,4.7nm,0.9s,baz=43,slow=6.6,SNR=6.0						
CHGR	**Chuyangaron**	60.46	296	P	P	01 56 10.3	-0.3
FINES	**FINESS Array B**	62.30	336	P	P	01 56 21.9	-0.7
	comp=Z,4.5nm,1.1s,baz=23,slow=6.2,SNR=5.7						
FINES	**FINESS Array B**	62.30	336	*e*P	P	01 56 22.6	0.0
FINES				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NOA	**NORSAR Array B**	66.08	343	P	P	01 56 47.0	-0.3
	comp=Z,0.7nm,0.8s,baz=26,slow=6.1,SNR=2.7						
AKASG	**Malin Array Be**	70.36	328	P	P	01 57 13.7	-0.5
	comp=Z,0.3nm,0.2s,baz=31,slow=6.8,SNR=4.0						
TXAR	**Lajitas Array**	73.71	64	P	P	01 57 36.2	+1.5
	comp=Z,0.4nm,0.5s,baz=297,slow=4.7,SNR=9.1						
GERES	**GERESS Array B**	76.73	336	P	P	01 57 51.5	-0.3
	comp=Z,0.4nm,0.4s,baz=36,slow=7.1,SNR=5.7						
BRTR	**Keskin Array B**	77.84	319	P	P	01 57 58.0	-0.1
	comp=Z,0.7nm,0.8s,baz=27,slow=3.4,SNR=4.5						
BRTR	**Keskin Array B**	77.84	319	*e*P	P	01 57 58.4	+0.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						

IDC ***07*** *01:46:12.9±1.3, 12°.01N×86°.68W, h0km, mb3.6/5, mb1 3.9/6, mb1mx3.6/41, mbtmp3.6/6, ML3.1/2, MS2.2/1, Ms1 2.2/1, ms1mx2.1/32, Error ellipse: s-maj=78.0km s-min=16.2km az=51.0*
UCR ***07*** *01:46:13.5±1.8, 11°.33N×87°.34W, h15km, ML3.2, mb4.1(NEIC)*
NEIC ***07*** *01:46:17.8±1.0, 11°.6N±0°.1×87°.07W±0°.06, h52km±13km, mb4.1/3, Error ellipse: s-maj=17.7km s-min=3.2km az=209.0*
INET ***07*** *01:46:17.9, 11°.51N×87°.15W, h21km, ML3.4*
SNET ***07*** *01:46:20.1±0.6, 11°.77N×87°.57W, h15km±11km, ML3.1*
ISC 07 01:46:15.0±1.7**, 11°.45N**±0°.06×**87°.29W**±0°.06**, h28**km±13km**, n38, σ1s.36**/45**, mb4.1**/7**, 2C-1D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNGN	**Cerro Negro**	**1.20**	**29**	⇑*e*P	**Pb**	**01 46 36.6**	**-0.6**
CNGN				*e*S	**Sn**	**01 46 54.2**	**+2.8**
CRIN	**San Cristobal**	**1.27**	**11**	⇑*e*P	**Pb**	**01 46 38.2**	**-0.1**
CSGN	**Cosiguina Volc**	**1.54**	**350**	⇓*e*P	**Pb**	**01 46 42.0**	**-1.0**
CSGN				*e*S	**Sb**	**01 47 03.3**	**+1.1**
CSGN	**Cosiguina Volc**	**1.54**	**350**		**Pb**	**01 46 42.4**	**-0.7**
ESTN	**Estel**	**1.88**	**29**	*e*P	**Pb**	**01 46 46.3**	**-2.4**
ESTN	**Estel**	**1.88**	**29**	Pn	**Pn**	**01 46 43.9**	**-1.5**
CNCH	**Conchagua**	**1.90**	**344**	*e*P	**Pn**	**01 46 46.5**	**+0.9**
CNCH				*e*S	**Sn**	**01 47 07.8**	**-0.9**
CNCH	**Conchagua**	**1.90**	**344**	*e*P	**Pn**	**01 46 46.5**	**+0.9**
CNCH				*e*S	**Sn**	**01 47 07.8**	**-0.9**
LCND	**La Caada**	**1.94**	**343**	*e*P	**Pn**	**01 46 47.0**	**+0.9**
LCND				IAML		01 47 20.0	
	comp=Z,212nm,0.3s						
LCND	**La Caada**	**1.94**	**343**	*e*P	**Pn**	**01 46 47.0**	**+0.9**
LCND				IAML		01 47 20.0	
	comp=Z,212nm,0.3s						
MATN	**Matagalpa**	**1.99**	**42**	*e*P	**Pn**	**01 46 47.2**	**+0.2**
MATN				*e*S	**Sb**	**01 47 16.1**	**+1.0**
JUCU	**Jucuar¡n**	**2.02**	**333**	*e*P	**Pn**	**01 46 47.8**	**+0.4**
JUCU				*e*S	**Sn**	**01 47 09.3**	**-2.5**
JUCU				IAML		01 47 16.3	
	comp=Z,133nm,0.3s						
JUCU	**Jucuar¡n**	**2.02**	**333**	*e*P	**Pn**	**01 46 47.8**	**+0.4**
JUCU				*e*S	**Sn**	**01 47 09.3**	**-2.5**
JUCU				IAML		01 47 16.3	
	comp=Z,133nm,0.3s						
ACON	**Acoyapa**	**2.14**	**76**	*e*P	**Pn**	**01 46 48.3**	**-0.6**
ACON	**Acoyapa**	**2.14**	**76**	Pn	**Pn**	**01 46 47.8**	**-1.1**
PLVR	**Palo Verde**	**2.20**	**120**	*e*P	**Pn**	**01 46 49.4**	**-0.4**
JTS	**Las Juntas de**	**2.57**	**116**	Pn	**Pn**	**01 46 54.3**	**-0.5**
	comp=Z,1.8nm,0.3s,baz=356,slow=15,SNR=8.3						
JTS				Sn	**Sn**	**01 47 24.4**	**-0.8**
	comp=Z,7.6nm,0.3s,baz=328,slow=23,SNR=6.2						
JTS				LR	LR	01 47 37.2	
	comp=Z,48nm,18.5s,baz=360,slow=35						
JTS	**Las Juntas de**	**2.57**	**116**	*e*P	**Pn**	**01 46 55.2**	**+0.3**
TGUH	**Tegucigalpa,Un**	**2.60**	**0**	*e*P	**Pn**	**01 46 56.9**	**+1.6**
TGUH	**Tegucigalpa,Un**	**2.60**	**0**	*e*P	**Pn**	**01 46 56.9**	**+1.6**
TGUH	**Tegucigalpa,Un**	**2.60**	**0**	Pn	**Pn**	**01 46 55.4**	**+0.1**
CEDE	**Laguna Cedeo**	**2.72**	**110**	*e*P	**Pn**	**01 46 58.5**	**+1.6**
LFRS	**El Faro**	**2.77**	**322**	*e*P	**Pn**	**01 46 58.4**	**+0.8**
ESPN	**Las Esperanzas**	**3.02**	**75**	*e*P	**Pn**	**01 47 02.0**	**+1.0**
ESPN	**Las Esperanzas**	**3.02**	**75**	Pn	**Pn**	**01 46 60.0**	**-1.1**
CEVE	**Cerro Verde**	**3.28**	**316**	*e*P	**Pn**	**01 47 06.0**	**+1.2**
CEVE				IAML		01 47 57.2	
	comp=Z,126nm,0.4s						
CEVE	**Cerro Verde**	**3.28**	**316**	*e*P	**Pn**	**01 47 06.0**	**+1.2**
CEVE				IAML		01 47 57.2	
	comp=Z,126nm,0.4s						
LCR2	**La Lucha 2**	**3.65**	**117**	*e*P	**Pn**	**01 47 07.7**	**-2.2**
CMIG	**Matias Romero**	**9.25**	**308**	Pn	**Pn**	**01 48 29.4**	**+2.8**
	comp=Z,0.5nm,0.3s,baz=112,slow=6.7,SNR=5.5						
TX31	**Lajitas Ar. Si**	**23.45**	**322**	P	**P**	**01 51 23.0**	**+0.7**
TX31				IAmb	IAmb	01 51 42.0	
	comp=Z,11nm,1.9s						
TX32	**Lajitas Array**	**23.45**	**322**	P	**P**	**01 51 21.9**	**-0.4**
TX32				IAmb	IAmb	01 51 42.0	
	comp=Z,11nm,1.9s						
TXAR	**Lajitas Array**	**23.45**	**322**	P	**P**	**01 51 23.7**	**+1.4**
	comp=Z,0.5nm,0.5s,baz=135,slow=10,SNR=9.9						
TXAR	**Lajitas Array**	**23.45**	**322**	P	**P**	**01 51 22.7**	**+0.4**
PDAR	**Pinedale Array**	**36.73**	**332**	P	**P**	**01 53 20.5**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=127,slow=9.5,SNR=3.6						
SIV	**San Ignacio**	**37.64**	**136**	P	**P**	**01 53 29.6**	**+1.7**
	comp=Z,1.5nm,0.5s,baz=309,slow=6.6,SNR=11						
ULM	**Lac du Bonnet**	**39.33**	**351**	P	**P**	**01 53 39.9**	**-1.8**
	comp=Z,1.2nm,0.5s,baz=169,slow=8.1,SNR=3.6						
ULM	**Lac du Bonnet**	**39.33**	**351**	IAmb	IAmb	01 54 30.5	
	comp=Z,18nm,1.8s						
YKA	**Yellowknife Ar**	**54.62**	**345**	P	**P**	**01 55 40.1**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=140,slow=7.5,SNR=6.8						

GCG ***07*** *02:31:32.0±0.7, 13°.37N×90°.42W, h50km±5km, MD3.8*
UCR ***07*** *02:31:32.4±0.9, 13°.46N×90°.32W, h27km±3km, ML4.0*
SNET ***07*** *02:31:32.4±0.8, 13°.47N×90°.32W, h28km±2km, ML4.0*
ISC 07 02:31:32.3±1.9**, 13°.41N**±0°.09×**90°.33W**±0°.06**, h28**km±14km**, n43, σ0s.47**/62**, 2C-1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.77**	**352**	⇓*i*P	**Pn**	**02 31 47.2**	**-0.3**
CEVE	**Cerro Verde**	**0.81**	**59**	⇑*e*P	**Pn**	**02 31 47.8**	**-0.3**
CEVE				*e*S	**Sn**	**02 31 58.9**	**-0.4**
CEVE				IAML		02 32 01.4	
	comp=Z,13µm,0.3s						
CEVE	**Cerro Verde**	**0.81**	**59**	⇑*e*P	**Pn**	**02 31 47.8**	**-0.3**
CEVE				*e*S	**Sn**	**02 31 58.9**	**-0.4**
CEVE				IAML		02 32 01.4	
	comp=Z,13µm,0.3s						
SBLS	**San Blas**	**0.81**	**58**	*e*P	**Pn**	**02 31 47.7**	**-0.4**
SBLS				*e*S	**Sn**	**02 31 59.2**	**-0.2**
SBLS	**San Blas**	**0.81**	**58**	*e*P	**Pn**	**02 31 47.7**	**-0.4**
SBLS				*e*S	**Sn**	**02 31 59.2**	**-0.2**
SNJE	**San Jose**	**0.84**	**57**	*e*P	**Pn**	**02 31 48.1**	**-0.5**
SNJE	**San Jose**	**0.84**	**57**	*e*P	**Pn**	**02 31 48.1**	**-0.5**
LALI	**Alcalda de L**	**0.99**	**85**	*e*P	**Pn**	**02 31 50.1**	**-0.2**
LALI				*e*S	**Sn**	**02 32 03.4**	**+0.1**
LALI	**Alcalda de L**	**0.99**	**85**	*e*P	**Pn**	**02 31 50.1**	**-0.2**
LALI				*e*S	**Sn**	**02 32 03.4**	**+0.1**
PCG	**Pacaya**	**1.02**	**345**	*e*P	**Pb**	**02 31 51.0**	**-0.5**
BOQS	**Boqueron**	**1.07**	**72**	*e*P	**Pn**	**02 31 51.5**	**-0.2**
BOQS				*e*S	**Sb**	**02 32 06.8**	**+0.6**
SNET	**Serv Nac Est T**	**1.11**	**75**	*e*P	**Pn**	**02 31 51.6**	**-0.4**
SNET				*e*S	**Sb**	**02 32 06.7**	**-0.3**
SNET				IAML		02 32 11.0	
	comp=Z,2µm,0.2s						
SNET	**Serv Nac Est T**	**1.11**	**75**	*e*P	**Pn**	**02 31 51.6**	**-0.4**
SNET				*e*S	**Sb**	**02 32 06.7**	**-0.3**
SNET				IAML		02 32 11.0	
	comp=Z,2µm,0.2s						
UEES	**Universidad Ev**	**1.11**	**74**	*e*P	**Pn**	**02 31 51.5**	**-0.6**
UEES				*e*S	**Sb**	**02 32 06.5**	**-0.5**
UEES	**Universidad Ev**	**1.11**	**74**	*e*P	**Pn**	**02 31 51.5**	**-0.6**
UEES				*e*S	**Sb**	**02 32 06.5**	**-0.5**
OPAM	**Oficina de Pla**	**1.15**	**74**	*e*P	**Pn**	**02 31 52.5**	**0.0**
OPAM				*e*S	**Sb**	**02 32 08.5**	**+0.4**
OPAM				IAML		02 32 10.1	
	comp=Z,2µm,0.2s						
OPAM	**Oficina de Pla**	**1.15**	**74**	*e*P	**Pn**	**02 31 52.5**	**0.0**
OPAM				*e*S	**Sb**	**02 32 08.5**	**+0.4**
OPAM				IAML		02 32 10.1	
	comp=Z,2µm,0.2s						
FUG	**Fuego 3**	**1.15**	**335**	*e*P	**Pn**	**02 31 52.1**	**-0.6**
FUG				*e*S	**Sb**	**02 32 09.3**	**+1.1**
LOMA	**Loma Larga**	**1.15**	**78**	*e*P	**Pn**	**02 31 52.3**	**-0.4**
LOMA				*e*S	**Sb**	**02 32 08.8**	**+0.5**
LOMA				IAML		02 32 11.0	
	comp=Z,4µm,0.2s						
LOMA	**Loma Larga**	**1.15**	**78**	*e*P	**Pn**	**02 31 52.3**	**-0.4**
LOMA				*e*S	**Sb**	**02 32 08.8**	**+0.5**
LOMA				IAML		02 32 11.0	
	comp=Z,4µm,0.2s						
NBG	**Las Nubes**	**1.18**	**359**	*e*P	**Pb**	**02 31 54.0**	**-0.2**
NBG				*e*S	**Sb**	**02 32 10.3**	**+1.2**
LFU	**La Fuente**	**1.23**	**74**	*e*P	**Pn**	**02 31 53.8**	**0.0**
LFU	**La Fuente**	**1.23**	**74**	*e*P	**Pn**	**02 31 53.8**	**0.0**
LFRS	**El Faro**	**1.25**	**80**	*e*P	**Pn**	**02 31 53.9**	**-0.2**
LBRS	**Las Brisas**	**1.30**	**75**	*e*P	**Pn**	**02 31 54.9**	**+0.2**
MTO3	**Montecristo**	**1.37**	**44**	*e*P	**Pn**	**02 31 55.2**	**-0.6**
MTO3	**Montecristo**	**1.37**	**44**	*e*P	**Pn**	**02 31 55.2**	**-0.6**
COEG	**Centro de Oper**	**1.43**	**81**	*e*P	**Pn**	**02 31 56.5**	**+0.1**
COEG	**Centro de Oper**	**1.43**	**81**	*e*P	**Pn**	**02 31 56.5**	**+0.1**
COEB	**Comit de Eme**	**1.76**	**87**	*e*P	**Pn**	**02 32 01.0**	**0.0**
COEB	**Comit de Eme**	**1.76**	**87**	*e*P	**Pn**	**02 32 01.0**	**0.0**
STG3	**Santiaguito 3,**	**1.77**	**317**	*e*P	**Pn**	**02 32 00.7**	**-0.5**
MRL	**Marmol**	**1.78**	**21**	*e*P	**Pn**	**02 32 02.1**	**+0.6**
TECA	**Tecapa**	**1.78**	**87**	*e*P	**Pn**	**02 32 01.6**	**+0.2**
TECA	**Tecapa**	**1.78**	**87**	*e*P	**Pn**	**02 32 01.6**	**+0.2**
JUCU	**Jucuar¡n**	**2.03**	**94**	*e*P	**Pn**	**02 32 04.6**	**-0.2**
JUCU	**Jucuar¡n**	**2.03**	**94**	*e*P	**Pn**	**02 32 04.6**	**-0.2**
FAGO	**Alcalda de S**	**2.18**	**82**	*e*P	**Pn**	**02 32 06.9**	**+0.1**
FAGO	**Alcalda de S**	**2.18**	**82**	*e*P	**Pn**	**02 32 06.9**	**+0.1**
LCND	**La Caada**	**2.38**	**92**	*e*P	**Pn**	**02 32 09.0**	**-0.5**
LCND	**La Caada**	**2.38**	**92**	*e*P	**Pn**	**02 32 09.0**	**-0.5**
CNCH	**Conchagua**	**2.44**	**93**	*e*P	**Pn**	**02 32 10.1**	**-0.2**
CNCH				*e*S	**Sn**	**02 32 40.5**	**+1.2**
CNCH	**Conchagua**	**2.44**	**93**	*e*P	**Pn**	**02 32 10.1**	**-0.2**
CNCH				*e*S	**Sn**	**02 32 40.5**	**+1.2**

IDC ***07*** *02:51:07.5±2.5, 23°.70S×179°.86W, h491km±24km, mb3.7/6, mb1 3.9/7, mb1mx3.4/39, mbtmp4.5/7, Error ellipse: s-maj=24.4km s-min=20.8km az=18.0*
NEIC ***07*** *02:51:09.1±1.9, 23°.85S±0°.08×179°.9W±0°.2, h512km±9km, mb4.2/10, Error ellipse: s-maj=26.4km s-min=5.0km az=114.0*
ISC 07 02:51:09.8±0.8**, 23°.76S**±0°.09×**179°.9W**±0°.2**, h518**km**, n39, σ1s.65**/42**, mb4.3**/8**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.28**	**342**	P	**P**	**02 52 49.2**	**-0.6**
HAZ	**Te Kaha**	**14.09**	**187**	P	**P**	**02 54 10.6**	**+0.6**
PKGZ	**Pakihiroa**	**14.19**	**186**	P	**P**	**02 54 13.0**	**+1.9**
RUGZ	**Raukumara Rang**	**14.31**	**188**	P	**P**	**02 54 14.0**	**+1.5**
PUZ	**Puketiti**	**14.35**	**186**	P	**P**	**02 54 15.6**	**+2.8**
TWGZ	**Tauwhareparae**	**14.49**	**187**	P	**P**	**02 54 15.5**	**+1.2**
URZ	**Urewera**	**14.68**	**189**	P	**P**	**02 54 14.7**	**-1.4**
	3.4nm,0.3s,baz=296,slow=4.0,SNR=15						
URZ				S	**S**	**02 56 47.8**	**-2.1**
	1.4nm,0.3s,baz=188,slow=23,SNR=9.3						
URZ	**Urewera**	**14.68**	**189**	P	**P**	**02 54 15.6**	**-0.5**
URZ	**Urewera**	**14.68**	**189**	P	**P**	**02 54 13.4**	**-2.8**
MWZ	**Matawai**	**14.69**	**188**	P	**P**	**02 54 16.6**	**+0.2**
MTHZ	**Maungataniwha**	**15.30**	**190**	P	**P**	**02 54 22.8**	**+0.1**
HIZ	**Hauiti**	**15.37**	**196**	P	**P**	**02 54 27.0**	**+3.6**
BKZ	**Black Stump Fm**	**15.66**	**190**	P	**P**	**02 54 24.2**	**-2.3**
BKZ	**Black Stump Fm**	**15.66**	**190**	P	**P**	**02 54 25.3**	**-1.2**
TWVZ	**Taurewa**	**15.77**	**193**	P	**P**	**02 54 28.3**	**+0.7**
BHHZ	**Black Hill Sta**	**16.05**	**191**	P	**P**	**02 54 28.1**	**-2.3**
MSWZ	**Moikau Station**	**18.07**	**192**	P	**P**	**02 54 45.1**	**-4.6**
BHW	**Baring Head**	**18.13**	**193**	P	**P**	**02 54 48.6**	**-1.6**
QRZ	**Quartz Range**	**18.16**	**199**	P	**P**	**02 54 49.9**	**-0.7**
RAR	**Rarotonga**	**18.80**	**86**		P	02 54 42.0	-15
OXZ	**Oxford**	**20.61**	**197**	P	**P**	**02 55 11.2**	**-1.6**
RPZ	**Rata Peaks**	**21.25**	**198**	P	**P**	**02 55 18.3**	**-0.3**
	10nm,0.5s,baz=62,slow=1.1,SNR=20						
ARMA	**Armidale**	**26.13**	**249**	P	**P**	**02 56 03.8**	**+1.4**
ARMA				IAmb	IAmb	02 56 04.6	
	comp=Z,9.1nm,0.7s						
CAN	**Canberra**	**29.27**	**240**	P	**P**	**02 56 30.5**	**+0.7**
STKA	**Stephens Creek**	**34.83**	**248**	P	**P**	**02 57 17.8**	**+0.6**
	comp=Z,3.8nm,0.5s,baz=92,slow=12,SNR=11						
STKA	**Stephens Creek**	**34.83**	**248**	P	**P**	**02 57 17.9**	**+0.7**
AS31	**Alice Springs**	**42.12**	**260**	P	**P**	**02 58 16.1**	**-0.4**
AS31				IAmb	IAmb	02 58 17.7	
	comp=Z,3.0nm,0.6s						
ASAR	**Alice Springs**	**42.12**	**260**	P	**P**	**02 58 16.6**	**0.0**
	comp=Z,11nm,0.8s,baz=95,slow=8.0,SNR=80						
ASAR				ScP	**ScP**	**03 03 02.7**	**+2.3**
	comp=Z,1.8nm,0.8s,baz=107,slow=4.2,SNR=11						
ASAR	**Alice Springs**	**42.12**	**260**	P	**P**	**02 58 16.1**	**-0.5**
ASAR					**ScP**	**03 03 02.3**	**+1.9**
WRAB	**Tennant Creek**	**42.47**	**266**	P	**P**	**02 58 18.3**	**-1.0**
WRA	**Warramunga Arr**	**42.48**	**266**	P	**P**	**02 58 19.0**	**-0.4**
	comp=Z,12nm,0.6s,baz=103,slow=8.1,SNR=37						
WRA				ScP	**ScP**	**03 03 04.4**	**+2.5**
	comp=Z,1.8nm,1.0s,baz=118,slow=3.4,SNR=2.7						
FORT	**Forrest**	**46.42**	**249**	P	**P**	**02 58 48.5**	**-1.2**
QSPA	**South Pole Qui**	**66.33**	**180**	P	**P**	**03 01 07.2**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=310,slow=2.6,SNR=4.7						
TXAR	**Lajitas Array**	**90.30**	**58**	P	**P**	**03 03 15.5**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=210,slow=7.0,SNR=13						
TXAR	**Lajitas Array**	**90.30**	**58**	P	**P**	**03 03 15.8**	**+0.1**
AKASG	**Malin Array Be**	**144.88**	**327**	PKP	**PKPdf**	**03 09 46.5**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=48,slow=4.2,SNR=5.6						
BRTR	**Keskin Array B**	**147.54**	**307**	PKPbc	**PKPbc**	**03 09 54.9**	**-1.0**
	comp=Z,0.5nm,0.7s,baz=106,slow=2.5,SNR=2.7						
MMAI	**Mount Meron Ar**	**147.70**	**295**	PKPbc	**PKPbc**	**03 09 56.9**	**+0.4**
	comp=Z,1.0nm,0.4s,baz=74,slow=5.1,SNR=4.9						
CLL	**Collm**	**150.74**	**343**	*e*PKPbc	**PKPbc**	**03 10 03.0**	**0.0**

IDC ***07*** *02:59:55.2±1.1, 11°.89S×72°.94W, h0km, mb3.7/5, mb1 3.9/9, mb1mx3.7/35, mbtmp3.8/9, ML3.5/4, MS2.9/3, Ms1 2.9/3, ms1mx2.7/34, Error ellipse: s-maj=31.6km s-min=16.1km az=22.0*
NEIC ***07*** *03:00:00.5±1.7, 12°.0S±0°.1×73°.08W±0°.06, h41km±9km, mb4.2/4, Error ellipse: s-maj=18.2km s-min=3.9km az=205.0*
ISC 07 03:00:00.1±0.7**, 11°.92S**±0°.10×**72°.95W**±0°.07**, h35**km**, n19, σ2s.19**/16**, mb3.7**/4**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**3.81**	**269**	Pn	**Pn**	**03 00 55.5**	**-0.9**
	6.6nm,0.3s,baz=91,slow=12,SNR=14						
NNA				Sn	**Sn**	**03 01 42.7**	**+2.6**
	12nm,0.3s,baz=170,slow=17,SNR=4.9						
NNA				LR	LR	03 02 33.7	
	comp=Z,223nm,20.4s,baz=83,slow=42						
NNA	**Nana**	**3.81**	**269**		**Pn**	**03 00 54.4**	**-2.0**
LPAZ	**La Paz**	**6.38**	**133**	Pn	Pn	03 01 35.0	+2.8
	0.3nm,0.3s,baz=320,slow=12,SNR=15						
LPAZ				Lg	Lg	03 03 18.5	
	3.2nm,0.3s,baz=199,slow=18,SNR=13						
LPAZ	**La Paz**	**6.38**	**133**		**Pn**	**03 01 34.2**	**+2.0**
ATAH	**Atahualpa**	**7.17**	**311**	Pn	**Pn**	**03 01 42.8**	**-0.1**
	0.8nm,0.3s,baz=136,slow=13,SNR=6.3						
ATAH				Sn	**Sn**	**03 03 07.0**	**+3.6**
	0.1nm,0.3s,baz=36,slow=19,SNR=1.8						
MNMC	**Minye Minye**	**7.87**	**156**	Pn	**Pn**	**03 01 52.0**	**-0.3**
SAML	**Samuel**	**10.05**	**74**		Pn	03 02 23.7	+1.7
LVC	**Limon Verde**	**11.31**	**161**	LR	LR	03 06 46.4	
	comp=Z,29nm,18.2s,baz=335,slow=36						
SIV	**San Ignacio**	**12.22**	**111**	Pn	**Pn**	**03 02 52.2**	**+0.4**
	0.1nm,0.3s,baz=307,slow=15,SNR=2.7						
SIV				Sn	**Sn**	**03 05 09.5**	**+2.7**
	0.3nm,0.3s,baz=45,slow=19,SNR=3.2						
SIV				Lg	Lg	03 06 24.0	
	0.6nm,0.3s,baz=25,slow=20,SNR=5.0						
PTGA	**Pitinga**	**17.01**	**50**	Pn	**P**	**03 03 54.2**	**-2.9**
	0.4nm,0.3s,baz=218,slow=13,SNR=7.6						
PTGA				Lg	Lg	03 08 56.0	
	0.2nm,0.3s,baz=309,slow=17,SNR=2.4						
PTGA	**Pitinga**	**17.01**	**50**		**P**	**03 03 55.3**	**-1.8**
PTGA				IAmb	IAmb	03 04 06.4	
	comp=Z,30nm,1.6s						
CPUP	**Villa Florida**	**20.54**	**136**	P	Pn	03 04 35.2	-2.9
	comp=Z,2.6nm,0.8s,baz=314,slow=10,SNR=7.2						
CPUP	**Villa Florida**	**20.54**	**136**	IAmb	IAmb	03 04 38.7	
	comp=Z,18nm,1.6s						
JTS	**Las Juntas de**	**25.08**	**331**	LR	LR	03 14 38.1	
	comp=Z,45nm,19.1s,baz=199,slow=35						
TXAR	**Lajitas Array**	**50.60**	**325**	P	**P**	**03 08 55.7**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=144,slow=8.8,SNR=6.4						
ULM	**Lac du Bonnet**	**65.08**	**344**	P	**P**	**03 10 36.8**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=152,slow=3.0,SNR=4.4						
TORD	**Torodi Ar. Bea**	**78.10**	**74**	P	**P**	**03 11 56.7**	**+0.6**
	comp=Z,0.7nm,0.9s,baz=263,slow=5.6,SNR=3.7						
YKA	**Yellowknife Ar**	**80.92**	**342**	P	**P**	**03 12 10.9**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=138,slow=6.0,SNR=4.8						
SONM	**Songino Array**	**144.19**	**1**	PKP	**PKiKP**	**03 19 32.3**	**-3.8**
	comp=Z,0.4nm,0.7s,baz=354,slow=1.4,SNR=3.3						

IDC ***07*** *03:05:28.9±5.0, 5°.12N×89°.15W, h0km, mb3.7/6, mb1 4.1/8, mb1mx3.8/34, mbtmp3.8/8, ML3.5/2, MS3.1/1, Ms1 3.1/1, ms1mx2.6/36, Error ellipse: s-maj=92.6km s-min=39.0km az=153.0*
ISC 07 03:05:33.5±2.6**, 5°.1N**±0°.3×**89°.1W**±0°.2**, h35**km**, n9, σ0s.87**/9**,** **mb3.6**/6**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	**Las Juntas de**	**6.64**	**38**	Pn	**Pn**	**03 07 07.6**	**-1.0**
	0.7nm,0.3s,baz=184,slow=16,SNR=6.1						
JTS				Sn	**Sn**	**03 08 24.2**	**+1.1**
	1.4nm,0.3s,baz=285,slow=16,SNR=3.6						
APG	**El Apazote**	**9.97**	**352**	Pn	**Pn**	**03 07 53.9**	**-0.6**
	0.8nm,0.3s,baz=180,slow=8.1,SNR=4.2						
SJG	**San Juan**	**25.93**	**58**	LR	LR	03 22 10.8	
	comp=Z,37nm,18.4s,baz=76,slow=39						
TXAR	**Lajitas Array**	**27.79**	**332**	P	**P**	**03 11 18.9**	**-0.6**
	0.7nm,0.9s,baz=152,slow=9.9,SNR=6.7						
PDAR	**Pinedale Array**	**41.70**	**337**	P	**P**	**03 13 19.1**	**-0.1**
	0.6nm,0.7s,baz=128,slow=10,SNR=4.2						
NVAR	**Mina Array Bea**	**42.49**	**325**	P	**P**	**03 13 25.9**	**0.0**
	1.1nm,0.6s,baz=124,slow=9.0,SNR=4.5						
ULM	**Lac du Bonnet**	**45.39**	**354**	P	**P**	**03 13 48.5**	**0.0**
	1.3nm,0.8s,baz=175,slow=8.8,SNR=3.9						
YKA	**Yellowknife Ar**	**60.32**	**347**	P	**P**	**03 15 38.3**	**-0.2**
	0.2nm,0.7s,baz=145,slow=7.2,SNR=5.4						
ILAR	**Eielson Array**	**72.13**	**338**	P	**P**	**03 16 55.5**	**+1.2**
	1.1nm,0.8s,baz=149,slow=4.2,SNR=3.3						

DJA 07 03:21:53.0±0.6**, 1°N**±3°×**12°2E**±°**, h54**km±6km**, M3.8**/7**, mb4.1**/1**, MLv3.7**/7**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.40**	**225**	P	Pn	03 22 04.3	+0.9
MRSI				S	Sn	03 22 13.9	+3.0
APSI	**Ampana**	**1.75**	**199**	P	Pn	03 22 22.1	+1.0
APSI				S	Sn	03 22 46.2	+3.9
LUWI	**Luwuk**	**1.87**	**163**	P	Pn	03 22 22.2	-0.5
LUWI				S	Sn	03 22 45.6	+0.4
MPSI	**Mapaga**	**2.36**	**260**	P	Pn	03 22 28.9	-0.4
MPSI				S	Sn	03 22 58.0	+0.9
TTSI	**Tana Toraja**	**4.48**	**212**	P	Pn	03 23 07.4	+9.0
SPSI	**Sidrap Palu**	**5.29**	**208**	P	Pn	03 23 10.0	+0.4

NNC ***07*** *03:37:24.1±2.4, 38°.83N×70°.90E, h0km, mb4.5, mpv4.0, Error ellipse: s-maj=18.5km s-min=12.7km az=1.0*
ISC 07 03:37:25.1±3.1**, 38°.6N**±0°.2×**70°.79E**±0°.09**, h47**km**, n14, σ0s.84**/19**, 4C-7D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.17**	**31**	P	**Pn**	**03 38 26.2**	**-0.3**
	SNR=31						
KK31	**Karatay Array**	**4.51**	**357**	⇑Pn	**Pn**	**03 38 31.3**	**+0.5**
	5.8nm,0.4s,baz=170,slow=12,SNR=163						
KK31				⇑Sn	**Sn**	**03 39 23.2**	**+1.2**
	5.2nm,0.3s,baz=181,slow=26,SNR=5.2						
KK31				⇓Lg	Lg	03 39 39.3	
	28nm,0.6s,baz=174,slow=31,SNR=12						
UCH	**Uchtor**	**4.61**	**37**	P	**Pn**	**03 38 32.4**	**-0.2**
	SNR=29						
EKS2	**Erkin-Say**	**4.66**	**28**	P	**Pn**	**03 38 33.5**	**+0.5**
	SNR=13						
KZA	**Kyzart**	**4.87**	**43**	P	**Pn**	**03 38 36.5**	**+0.4**
	SNR=60						
AAK	**Ala-Archa**	**4.92**	**34**	P	**Pn**	**03 38 36.8**	**+0.1**
	SNR=34						
AAK	**Ala-Archa**	**4.92**	**34**	⇓Pn	**Pn**	**03 38 36.6**	**-0.1**
	16nm,0.5s						
AAK				⇓Sn	**Sn**	**03 39 32.3**	**-0.2**
	21nm,0.7s						
KBK	**Karagaybulak**	**5.14**	**37**	P	**Pn**	**03 38 41.6**	**+1.8**
	SNR=16						
CHMS	**Chumysh**	**5.33**	**33**	P	**Pn**	**03 38 43.4**	**+1.3**
	SNR=8.1						
CHMS	**Chumysh**	**5.33**	**33**	⇓Pn	**Pn**	**03 38 41.8**	**-0.3**
	17nm,0.6s						
CHMS				⇑Sn	**Sn**	**03 39 41.0**	**-1.1**
	42nm,1.1s						
USP	**Ospenovka**	**5.45**	**30**	P	**Pn**	**03 38 43.3**	**-0.5**
	SNR=12						
ULHL	**Ulahol**	**5.53**	**47**	P	**Pn**	**03 38 46.3**	**+1.2**
	SNR=12						
AB31	**Akbulak array**	**13.20**	**327**	⇑P	**Pn**	**03 40 29.1**	**-0.7**
	8.1nm,0.2s,baz=144,slow=13,SNR=32						
AB31				⇓S	**Sn**	**03 42 55.2**	**+0.2**
	1.3nm,0.6s						
AKTO	**Aktyubinsk**	**14.91**	**327**	⇓P	**Pn**	**03 40 52.3**	**-0.5**
	4.5nm,1.4s						
AKTO				⇓S	**Sn**	**03 43 36.8**	**+0.1**
	1.7nm,0.8s						

IDC ***07*** *04:21:34.1±1.4, 0°.52S×121°.20E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/24, mbtmp3.5/4, Error ellipse: s-maj=384.2km s-min=24.3km az=60.0*
DJA ***07*** *04:21:34.6±0.4, 1°S±3°×12°0E±°, h10km, M3.9/10, MLv3.9/10*
ISC 07 04:21:34.6±1.1**, 1°.01S**±0°.06×**120°.07E**±0°.07**, h10**km**, n13, σ1s.21**/14**, mb3.5**/4**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPSI	**Mapaga**	**1.35**	**353**	P	**Pn**	**04 21 58.0**	**-1.4**
APSI	**Ampana**	**1.58**	**87**	P	**Pn**	**04 22 01.7**	**-1.0**
APSI				S	**Sn**	**04 22 22.9**	**-0.4**
TTSI	**Tana Toraja**	**2.04**	**187**	P	**Pn**	**04 22 08.3**	**-0.7**
MRSI	**Marisa**	**2.38**	**52**	P	**Pn**	**04 22 14.5**	**+0.8**
LUWI	**Luwuk**	**2.71**	**91**	P	**Pn**	**04 22 18.9**	**+0.8**
SPSI	**Sidrap Palu**	**2.95**	**186**	P	**Pn**	**04 22 21.3**	**-0.2**
BNSI	**Bone**	**3.37**	**179**	P	**Pn**	**04 22 28.1**	**+0.8**
KMSI	**Cibinong**	**4.22**	**68**	P	**Pn**	**04 22 38.1**	**-0.8**
BKSI	**Bulukumba**	**4.29**	**179**	P	**Pn**	**04 22 39.1**	**-0.8**
WRA	**Warramunga Arr**	**23.43**	**144**	P	**P**	**04 26 42.5**	**-1.7**
	0.9nm,0.9s,baz=315,slow=8.2,SNR=2.3						
ASAR	**Alice Springs**	**26.22**	**150**	P	**P**	**04 27 10.8**	**+0.9**
	0.3nm,0.6s,baz=342,slow=15,SNR=4.8						
STKA	**Stephens Creek**	**36.83**	**149**	P	**P**	**04 28 42.0**	**-0.9**
	1.5nm,0.9s,baz=318,slow=12,SNR=2.8						
MKAR	**Makanchi Array**	**57.98**	**330**	P	**P**	**04 31 29.5**	**+2.1**
	0.4nm,0.6s,baz=130,slow=8.0,SNR=5.7						

JMA 07 04:23:47.5, 38°.53N×141°.72E, h53km±1km**, M3.6, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.30**	**222**	P	Pn	04 23 56.9	0.0
JIKH				S	Sn	04 24 03.3	-0.3
JIO	**Ouri**	**0.30**	**256**	P	Pn	04 23 56.9	0.0
JIO				S	Sn	04 24 03.3	-0.3
JKMT	**Kesennumamotoy**	**0.34**	**326**	P	Pn	04 23 57.3	0.0
JKMT				*i* S	Sn	04 24 04.0	-0.3
OFUJ	**Ofunato**	**0.55**	**356**	P	Pn	04 23 59.4	-0.2
OFUJ				S	Sn	04 24 07.7	-0.6
JMK	**Ichinoseki**	**0.57**	**317**	P	Pn	04 24 00.0	+0.2
JMK				S	Sn	04 24 08.7	0.0
JOU	**Okura**	**0.84**	**259**	P	Pn	04 24 03.1	-0.2
JOU				S	Sn	04 24 14.9	+0.1
JMM	**Marumori**	**0.99**	**228**	P	Pn	04 24 04.5	-0.6
JMM				S	Sn	04 24 17.4	-0.7
JOM	**Ohasama**	**1.00**	**341**	P	Pn	04 24 05.4	+0.1
JOM				*e*S	Sn	04 24 18.5	+0.1
JYK	**Kaneyama**	**1.13**	**290**	P	Pn	04 24 07.2	+0.1
JRG	**Rokugo**	**1.21**	**316**	P	Pn	04 24 08.2	+0.1
JYS	**Shirataka**	**1.34**	**257**	P	Pn	04 24 10.1	+0.3
JYS				S	Sn	04 24 27.2	+0.7
JFK	**Kawauchi**	**1.34**	**210**	P	Pn	04 24 09.6	-0.3
JFK				S	Sn	04 24 25.8	-0.9
JFT	**Otama**	**1.49**	**228**	P	Pn	04 24 12.2	+0.3
MAT	**Matsushiro**	**3.42**	**236**	P	Pn	04 24 38.5	+0.1
MAT				S	Sn	04 25 14.1	-3.7

IDC ***07*** *04:36:20.7±1.8, 36°.12N×141°.80E, h0km, mb3.7/4, mb1 3.8/6, mb1mx3.5/44, mbtmp3.7/6, ML3.1/2, MS2.8/1, Ms1 2.8/1, ms1mx2.2/44, Error ellipse: s-maj=38.1km s-min=23.4km az=129.0*
JMA ***07*** *04:36:21.5±0.2, 36°.27N×141°.91E, h66km, M3.2*
ISC 07 04:36:21.2±2.0**, 36°.25N**±0°.04×**141°.83E**±0°.07**, h5**km±12km**, n28, σ1s.19**/28**, mb3.5**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.96**	**236**	P	**Pg**	**04 36 40.3**	**+0.7**
CHOJ				*e*S	**Sn**	**04 36 55.5**	**+0.3**
JHYU	**Hitachinakayam**	**1.01**	**276**	P	**Pg**	**04 36 41.0**	**+0.5**

JHYU				*e*S	Sb	04 36 55.6	+1.0
JHO	Hitachi	1.08	290	P	Pg	04 36 41.2	-0.7
JIHU	Itakohorinouch	1.09	255	S	Sb	04 36 58.7	+1.6
ONAJ	Iwakimizuishiy	1.19	316	P	Pg	04 36 43.0	-1.0
JFK	Kawauchi	1.35	326	P	Pn	04 36 45.2	-1.5
BSO1	Boso 1	1.74	204	P	Pn	04 36 50.7	-0.8
BSO1				S	Sn	04 37 13.2	-0.5
JFT	Otama	1.74	317	P	Pn	04 36 51.9	-0.2
BSO3	Boso 3	1.80	217	P	Pn	04 36 52.0	-0.6
JMM	Marumori	1.81	333	P	Pn	04 36 52.1	-0.9
JAG	Ashikaga	1.93	276	P	Pn	04 36 53.8	-0.8
JFY	Yanaizu	2.06	305	P	Pn	04 36 56.6	+0.2
JKT	Katashina	2.14	285	P	Pn	04 36 57.8	+0.2
JKT				S	Sn	04 37 25.1	+0.5
JOU	Okura	2.31	337	P	Pn	04 37 00.5	+0.7
MJAR	Matsushiro Arr	2.94	277	Pn	Pn	04 37 09.2	+0.7
	1.1nm,0.3s,baz=92,slow=11,SNR=20						
MJAR				Sn	Sb	04 37 48.5	-1.7
	0.3nm,0.3s,baz=90,slow=9.7,SNR=4.4						
MAT	Matsushiro	2.94	277	P	Pn	04 37 08.8	+0.3
MAT				S	Sn	04 37 41.2	-3.0
JHJ	Hachijo jima 2	3.55	209	Pn	Pn	04 37 15.6	-1.3
	15nm,0.3s,baz=29,slow=19,SNR=6.5						
JHJ				Sn	Sn	04 37 57.0	-2.2
	23nm,0.3s,baz=68,slow=19,SNR=5.9						
JNU	Nakatsue	9.54	254	LR	LR	04 42 48.0	
	comp=Z,66nm,21.6s,baz=168,slow=41						
H11N2	WAKE ISLAND Hy	27.46	120	T	T	05 10 42.3	
	baz=313,slow=75,SNR=4.9						
H11N1	WAKE ISLAND Hy	27.47	120	T	T	05 10 45.9	
	baz=313,slow=75,SNR=4.1						
H11N3	WAKE ISLAND Hy	27.48	120	T	T	05 10 43.4	
	baz=313,slow=75,SNR=4.6						
H11S1	WAKE ISLAND Hy	28.16	122	T	T	05 11 38.8	
H11S3	WAKE ISLAND Hy	28.16	122	T	T	05 11 35.2	
H11S2	WAKE ISLAND Hy	28.17	122	T	T	05 11 36.9	
SONM	Songino Array	28.50	305	P	P	04 42 17.7	+0.2
	0.4nm,0.4s,baz=103,slow=8.1,SNR=4.4						
CMAR	Chiang Mai Arr	41.63	257	P	P	04 44 09.7	-0.8
	1.7nm,0.4s,baz=39,slow=7.9,SNR=3.9						
MKAR	Makanchi Array	44.82	303	P	P	04 44 37.1	+1.1
	0.4nm,0.7s,baz=87,slow=8.6,SNR=3.0						
ILAR	Eielson Array	49.98	32	P	P	04 45 17.2	+1.3
	0.5nm,1.0s,baz=249,slow=7.6,SNR=3.2						

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*IDC **07** 05:03:47.4±0.7, 32.°11N×40.°17W, h0^{km}, mb3.9/15, mb1 4.0/15, mb1mx3.8/53, mbtmp3.9/15, MS3.5/4, Ms1 3.4/4, ms1mx3.1/40, Error ellipse: s-maj=20.9km s-min=17.9km az=178.0*

*NEIC **07** 05:03:49.1±2.2, 32.°03N±0.°07×40.°1W±0.°1, h10^{km}±1^{km}, mb4.5/12, Error ellipse: s-maj=21.3km s-min=8.7km az=115.0*

ISC 07 05:03:49.0±0.6**, 32.°1N**±0.°1×**40.°1W**±0.°1**, h10**^{km}**, n43, σ1^{s}.23**/35**, mb4.1**/17**, MS3.5**/4**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRLN	Deer Lake	21.60	328	P	P	05 08 40.7	+1.7
DRLN				IAmb	IAmb	05 08 42.0	
	comp=Z,16nm,0.9s						
SCHQ	Schefferville	29.61	328	LR	LR	05 20 16.2	
	comp=Z,100nm,21.9s,baz=342,slow=34						
DBIC	Dimbokro	41.41	120	LR	LR	05 27 18.7	
	comp=Z,64nm,18.0s,baz=212,slow=34						
TOA0	Torodi Ar. Sit	42.58	106	P	P	05 11 46.1	+0.7
TORD	Torodi Ar. Bea	42.58	106	P	P	05 11 46.4	+1.0
	comp=Z,4.0nm,1.0s,baz=294,slow=6.6,SNR=15						
TORD	Torodi Ar. Bea	42.58	106	P	P	05 11 45.8	+0.4
ULM	Lac du Bonnet	44.66	311	P	P	05 12 01.9	+0.2
	comp=Z,2.7nm,1.0s,baz=70,slow=8.8,SNR=4.5						
ULM				LR	LR	05 29 23.0	
	comp=Z,51nm,19.8s,baz=76,slow=34						
ULM	Lac du Bonnet	44.66	311	P	P	05 12 02.7	+0.9
H10N2	ASCENSION HYDR	46.57	144	T	T	06 02 09.7	
	baz=329,slow=75,SNR=54						
H10N3	ASCENSION HYDR	46.58	144	T	T	06 02 09.8	
	baz=329,slow=75,SNR=46						
H10N1	ASCENSION HYDR	46.59	144	T	T	06 02 10.9	
	baz=329,slow=75,SNR=41						
H10S3	ASCENSION HYDR	47.45	145	T	T	06 03 13.7	
	baz=329,slow=74,SNR=60						
H10S2	ASCENSION HYDR	47.47	145	T	T	06 03 14.8	
	baz=251,slow=74,SNR=69						
RES	Resolute Bay	50.28	344	P	P	05 12 44.0	-1.2
	comp=Z,0.7nm,0.9s,baz=151,slow=6.5,SNR=3.7						
BURAR	Bucovina Array	51.03	52	P	P	05 12 49.4	-1.9
FINES	FINESS Array B	51.09	34	P	P	05 12 50.7	-0.7
	comp=Z,5.5nm,0.9s,baz=256,slow=3.9,SNR=4.9						
FINES	FINESS Array B	51.09	34	P	P	05 12 51.2	-0.2
MLR	Muntele Rosu	51.83	55	P	P	05 12 57.6	+0.2
AKASG	Malin Array Be	53.25	48	P	P	05 13 07.2	-0.4
	comp=Z,1.6nm,0.7s,baz=272,slow=6.6,SNR=9.4						
AKASG	Malin Array Be	53.25	48	P	P	05 13 06.8	-0.8
EGMT	Eagleton	53.89	309	P	P	05 13 12.2	-0.3
EGMT				IAmb	IAmb	05 13 15.9	
	comp=Z,5.3nm,1.1s						
TXAR	Lajitas Array	54.04	285	P	P	05 13 14.6	+0.6
	comp=Z,0.8nm,1.0s,baz=83,slow=5.9,SNR=5.8						
TXAR	Lajitas Array	54.04	285	P	P	05 13 14.7	+0.8
YNE	Yellowstone No	54.63	305	P	P	05 13 19.9	+1.8
PD31	Pinedale Array	54.80	302	P	P	05 13 17.7	-1.7
PD31				IAmb	IAmb	05 13 22.4	
	comp=Z,5.3nm,1.1s						
PDAR	Pinedale Array	54.80	302	P	P	05 13 18.1	-1.3
	comp=Z,2.1nm,1.0s,baz=72,slow=4.8,SNR=10						
PDAR				LR	LR	05 35 57.1	
	comp=Z,36nm,19.0s,baz=85,slow=35						
PDAR	Pinedale Array	54.80	302	P	P	05 13 17.1	-2.3
YKA	Yellowknife Ar	55.05	327	P	P	05 13 19.0	-1.6
	comp=Z,0.7nm,0.9s,baz=90,slow=8.0,SNR=3.7						
LPAZ	La Paz	55.07	213	P	P	05 13 21.3	-0.7
	comp=Z,1.0nm,0.9s,baz=53,slow=4.6,SNR=4.0						
LPAZ	La Paz	55.07	213	P	P	05 13 22.2	+0.2
BRTR	Keskin Array B	58.68	60	P	P	05 13 47.3	+0.3
	comp=Z,0.8nm,0.9s,baz=322,slow=4.4,SNR=4.6						
PSUT	Pine Spring	59.09	299	P	P	05 13 48.8	-1.2
CPUP	Villa Florida	60.34	198	P	P	05 13 57.9	-0.2
	comp=Z,0.7nm,0.3s,baz=279,slow=1.7,SNR=6.0						
CPUP	Villa Florida	60.34	198	P	P	05 13 58.0	-0.1
CPUP				IAmb	IAmb	05 14 06.6	
	comp=Z,5.2nm,1.3s						
R11A	Troy Canyon, C	60.44	299	P	P	05 13 57.2	-2.0
ILAR	Eielson Array	68.17	334	P	P	05 14 48.1	-1.1
	comp=Z,0.3nm,0.9s,baz=97,slow=7.4,SNR=2.7						
ILAR	Eielson Array	68.17	334	P	P	05 14 52.7	+3.5
AKTO	Aktyubinsk	70.76	42	P	P	05 15 06.2	+0.8
	comp=Z,0.9nm,0.5s,baz=276,slow=8.1,SNR=3.6						
ABKAR	Akbulak array	72.42	43	P	P	05 15 15.5	+0.1
H09N1	TRISTAN DA CUN	73.49	157	T	T	06 34 49.5	
	SNR=32						
ZALV	Zalesovo Beam	82.03	29	P	P	05 16 09.4	+0.2
	comp=Z,0.5nm,0.4s,baz=292,slow=7.8,SNR=3.8						
ZALV	Zalesovo Beam	82.03	29	P	P	05 16 08.7	-0.5
MKAR	Makanchi Array	85.91	36	P	P	05 16 29.2	-0.1
	comp=Z,0.7nm,0.9s,baz=318,slow=1.6,SNR=4.1						

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*PGC **07** 05:07:33.2±0.0, 65.°60N×144.°77W, h1^{km}, ML3.0/7, ML2.7, 161km Ene of Fairbanks, Ak Northern Alaska*

*AEIC **07** 05:07:34.1±2.2, 65.°60N±0.°02×144.°78W±0.°06, h11^{km}±5^{km}, ML2.6/35, Error ellipse: s-maj=3.6km s-min=2.3km az=96.0*

*ANF **07** 05:07:34.5±1.1, 65.°57N×144.°92W, h5^{km}±4^{km}, ML3.0/4, Error ellipse: s-maj=8.7km s-min=4.0km az=114.0*

*NEIC **07** 05:07:34.1±2.3, 65.°63N±0.°02×144.°85W±0.°05, h14^{km}±5^{km}, Error ellipse: s-maj=3.8km s-min=2.8km az=224.0*

ISC 07 05:07:34.7±1.2**, 65.°62N**±0.°02×**144.°89W**±0.°03**, h12**^{km}±10^{km}**, n86, σ2^{s}.02**/124**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRP	Porcupine Dome	0.28	249		Pg	05 07 40.7	+0.1
FYU	Fort Yukon	0.96	352		Pb	05 07 52.9	-0.3
FYU					Sn	05 08 06.4	-1.1
POKR	Poker Plat Res	1.18	246		Pb	05 07 56.1	-0.8
POKR					Sg	05 08 12.5	-0.1
POKR	Poker Plat Res	1.18	246	P	Pb	05 07 56.2	-0.8
	baz=66						
POKR				S	Sg	05 08 12.5	-0.1
	baz=66						
IL31		1.20	226		Pn	05 07 56.2	-1.0
ILAR	Eielson Array	1.20	226		Pn	05 07 55.6	-1.7
PS08	TAPS Pump Stn8	1.36	218		Pn	05 07 59.1	-0.2
PS08					Sb	05 08 16.8	-0.4
PS07	TAPS Pump Stn7	1.45	259		Pb	05 08 01.2	-0.3
PS07					Sn	05 08 19.6	0.0
COLA	College	1.45	240		Pn	05 07 60.0	-0.7
TCOL	CIGO, UAF Yank	1.46	240		Pn	05 07 59.9	-0.9
TCOL	CIGO, UAF Yank	1.46	240	P	Pb	05 08 01.5	-0.2
	baz=60						
TCOL				S	Sg	05 08 21.3	-0.2
	baz=60						
HDA	Harding Lake	1.50	217		Pn	05 08 01.3	-0.1
HDA					Sn	05 08 20.8	0.0
HDA	Harding Lake	1.50	217	P	Pn	05 08 01.6	+0.3
	baz=37						
HDA				S	Sn	05 08 20.8	0.0
	baz=37						
HDA				S	Sn	05 08 20.8	0.0
	baz=37						
MDM	Murphy Dome	1.55	246		Pn	05 08 00.9	-1.3
CCB	Clear Creek Bu	1.57	233		Pn	05 08 01.0	-1.4
CCB					Sb	05 08 23.9	+0.5
SCRK	Sand Creek	1.69	166		Pn	05 08 02.8	-1.4
SCRK					Sn	05 08 25.5	-0.3
WRH	Wood River Hil	1.78	231		Pn	05 08 03.9	-1.4
EGAK	Eagle	1.79	117		Pn	05 08 02.9	-2.4
EGAK					Sn	05 08 27.4	-0.6
BM03	Burnt Mountain	1.81	3		Pn	05 08 04.7	-1.0
BMAR	Burnt Mountain	1.82	4		Pn	05 08 04.6	-1.3
RIDG	Independent Ri	1.89	179		Pn	05 08 05.4	-1.3
DOT	Dot Lake	2.01	169	Pn	Pn	05 08 07.1	-1.4
DOT				Sg	Sb	05 08 34.8	-1.4
DOT	Dot Lake	2.01	169		Pn	05 08 07.1	-1.4
NEA	Nenana	2.06	241		Pn	05 08 07.4	-1.7
BWN	Browne	2.43	235	Pn	Pn	05 08 12.0	-2.2
BWN					Pb	05 08 18.4	+0.1
MLY	Manley	2.52	259		Pn	05 08 13.3	-2.2
MLY					Pb	05 08 20.7	+0.8
MCK	McKinley	2.57	224		Pn	05 08 14.6	-1.6
MCK					Pb	05 08 21.4	+0.7
PAX	Paxson	2.67	186	Pn	Pn	05 08 16.4	-1.2
PAX				Sn	Sn	05 08 49.0	-0.9
PAX				Sg	Sb	05 08 55.2	0.0
PAX	Paxson	2.67	186		Pn	05 08 16.5	-1.1
COLD	Coldfoot	2.68	310	Pn	Pn	05 08 17.6	+0.1
COLD				Sg	Sb	05 08 57.0	+1.8
COLD	Coldfoot	2.68	310		Pn	05 08 17.2	-0.3
COLD	Coldfoot	2.68	310	Pn	Pn	05 08 17.6	+0.1
COLD				Sg	Sb	05 08 57.0	+1.8
MENT	Mentasta	2.74	169		Pn	05 08 17.2	-1.3
DHY	Denali Highway	2.77	204		Pn	05 08 18.6	-0.4
RND	Reindeer	2.81	219		Pn	05 08 18.6	-0.8
DAWY	Dawson	2.82	121	Pn	Pn	05 08 17.4	-2.2
DAWY	Dawson	2.82	121		Pn	05 08 17.5	-2.1
BC03		2.90	151		Pn	05 08 18.6	-1.9
BCAR	Beaver Creek A	2.90	151		Pn	05 08 18.3	-2.4
BPAW	Bear Paw Mtn.	3.02	242		Pn	05 08 21.0	-1.2
BPAW				Pg	Pg	05 08 30.6	-1.8
TRF	Thorofare Moun	3.19	229	Pn	Pn	05 08 24.1	-0.7
TRF					Pb	05 08 32.6	+1.3
KTH	Kantishna Hill	3.33	234		Pn	05 08 25.7	-0.8
KTH				Pg	Pb	05 08 35.6	+2.0
EPYK	Eagle Plains	3.42	74		Pn	05 08 24.9	-3.0
TOLK	Toolik Lake Re	3.54	331		Pn	05 08 30.5	+1.0
TOLK	Toolik Lake Re	3.54	331	P	Pn	05 08 30.4	+1.0
	baz=147						
TOLK				S	Sn	05 09 13.2	+2.0
	baz=147						
IMAR	Indian Mountai	3.67	280	Pn	Pn	05 08 30.7	-0.4
BVCY	Beaver Creek	3.67	149	Pn	Pn	05 08 30.0	-1.3
BVCY				Sg	Sb	05 09 25.5	+1.6
BVCY	Beaver Creek	3.67	149	Pn	Pn	05 08 30.0	-1.3
BVCY				Sg	Sb	05 09 25.5	+1.6
SCM	Sheep Creek Mo	3.95	197	Pn	Pn	05 08 36.1	+1.0
YUK1	Sand Pete Hill	3.98	149	Pn	Pn	05 08 33.7	-1.9
YUK1				Sg	Sb	05 09 35.4	+2.6
YUK1	Sand Pete Hill	3.98	149	Pn	Pn	05 08 33.7	-1.9
YUK1				Sg	Sb	05 09 35.4	+2.6
PPLA	Purkeypile	4.20	233		Pn	05 08 38.1	-0.5
GLB	Gilahina Butte	4.22	173	Pn	Pn	05 08 39.2	+0.4
YUK2	White River	4.25	153	Pn	Pn	05 08 38.2	-1.1
YUK2				Sn	Sn	05 09 25.9	-2.8
YUK2				Sg	Sb	05 09 43.1	+2.5
YUK2	White River	4.25	153	Pn	Pn	05 08 38.2	-1.1
YUK2				Sn	Sn	05 09 25.9	-2.8
YUK2				Sg	Sb	05 09 43.1	+2.5
GHO	Glory Hole Cre	4.26	207	Pn	Pn	05 08 39.1	-0.3
YUK3	Moose Creek	4.33	151	Pn	Pn	05 08 39.2	-1.3
YUK3				Sn	Sn	05 09 27.7	-3.3
YUK3	Moose Creek	4.33	151	Pn	Pn	05 08 39.2	-1.3
YUK3				Sn	Sn	05 09 27.7	-3.3
MCARA	McCarthy VSAT	4.33	168	Pn	Pn	05 08 40.2	-0.2
VRDI	Verde Repeater	4.46	171	Pn	Pn	05 08 42.5	+0.4
KNK	Knik Glacier	4.51	202	Pn	Pn	05 08 39.2	-3.6
BALM	Baldy	4.74	165	Pn	Pn	05 08 45.3	-0.7
BALM	Baldy	4.74	165	Pn	Pn	05 08 45.1	-1.0
BARN	Barnard Glacie	4.80	161	Pn	Pn	05 08 46.4	-0.5
KIAG	Kiagna River	4.85	165	Pn	Pn	05 08 46.6	-1.0
KIAG	Kiagna River	4.85	165	Pn	Pn	05 08 46.6	-1.0
SUA	Susitna One	4.92	215	Pn	Pn	05 08 48.8	+0.3
CTGM	Chitina Glacie	4.94	159	Pn	Pn	05 08 48.1	-0.6
CRQM	Cirque	4.95	170	Pn	Pn	05 08 47.3	-1.6
TGL	Tana Glacier	4.97	168	Pn	Pn	05 08 49.2	0.0
YUK4	Talbot Arm	5.12	144	Pn	Pn	05 08 49.2	-2.1
YUK4				Sg	Sb	05 10 07.8	+2.1
YUK4	Talbot Arm	5.12	144	Pn	Pn	05 08 49.2	-2.1
YUK4				Sg	Sb	05 10 07.8	+2.1
INK	Inuvik	5.21	54	Pn	Pn	05 08 50.8	-1.5
INK	Inuvik	5.21	54	Pn	Pn	05 08 50.1	-2.2
RAGM	Ragged Mountai	5.25	179	Pn	Pn	05 08 53.6	+0.6
YUK5	Granite Creek	5.50	142	Pn	Pn	05 08 55.1	-1.3
YUK5				Sg	Sb	05 10 22.2	+5.6
YUK5	Granite Creek	5.50	142	Pn	Pn	05 08 55.1	-1.3
YUK5				Sg	Sb	05 10 22.2	+5.6
YUK6	Outpost Mounta	5.54	145	Pn	Pn	05 08 55.8	-1.3
YUK6				Sg	Sb	05 10 24.0	+6.3
YUK6	Outpost Mounta	5.54	145	Pn	Pn	05 08 55.8	-1.3
YUK6				Sg	Sb	05 10 24.0	+6.3
TTA	Tatalina	5.54	246	Pn	Pn	05 08 54.5	-2.4
HYT	Haines Junctio	5.85	142	Sg	Sb	05 10 33.3	+6.6
HYT	Haines Junctio	5.85	142	Sg	Sb	05 10 33.3	+6.6
RSO	Redoubt South	6.29	218	Pn	Pn	05 09 08.8	+1.6
WHY	Whitehorse	6.73	133	Sg	Sg	05 11 00.6	-10
WHY	Whitehorse	6.73	133	Pn	Pn	05 09 10.5	-2.8
WHY	Whitehorse	6.73	133	Sg	Sg	05 11 00.6	-10

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*BJI **07** 05:17:21.7±0.0, 6.°54S×151.°59E, h20^{km}, mB5.1/30, mb4.6/40, Ms4.9/14, Ms7 4.7/13*

*IDC **07** 05:17:24.5±0.6, 6.°23S×150.°94E, h0^{km}, mb4.6/16, mb1 4.8/18, mb1mx4.5/37, mbtmp4.6/18, ML2.2/1, MS3.9/9, Ms1 3.9/9, ms1mx3.5/34, Error ellipse: s-maj=21.8km s-min=11.2km az=117.0*

*MOS **07** 05:17:26.4±1.2, 6.°20S×150.°86E, h24^{km}, mb5.1/21, Error ellipse: s-maj=13.4km s-min=9.0km az=77.9*

*NEIC **07** 05:17:28.6±2.5, 6.°27S±0.°08×151.°05E±0.°10, h31^{km}±4^{km}, mb5.0/69, Error ellipse: s-maj=15.7km s-min=9.2km az=123.0*

*DJA **07** 05:17:29.4±0.5, 6°S±4°×15°1E±°, h46^{km}±5^{km}, M5.0/23, mb4.9/23, mB5.3/5, MLv5.2/2, Mw(mB)4.7/5*

*GCMT **07** 05:17:29.6±0.3, 6.°63S±0.°02×151.°24E±0.°04, h20^{km}±1^{km}, MW4.9/85, Moment Tensor Solution. s21,c26; s85,c110; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.56±.19; $M_{\theta\theta}$-2.04±.11; $M_{\phi\phi}$-0.52±.10; $M_{r\theta}$1.12±.17; $M_{\theta\phi}$-0.11±.06; $M_{\phi r}$1.25±.24; Best double couple: $M_0$2.79800×10^{16} NP1:ϕ_s276.00000°, δ32.00000°, λ117.00000°. NP2: ϕ_s64.00000°, δ62.00000°, λ74.00000°. Principal axes: T 3.2040, Plg69.0000°, Azm302.0000°; N -0.8120, Plg14.0000°, Azm72.0000°; P -2.3920, Plg16.0000°, Azm166.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 05:17:29.8±0.4**, 6.°30S**±0.°05×**151.°03E**±0.°07**, h36**^{km}**, n194, σ1^{s}.29**/200**, mb5.0**/72**, MS4.4**/11**, 4C-1D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.21	27	Pn	Pn	05 18 04.3	+0.3
	66nm,0.3s,baz=41,slow=1.6,SNR=31						
KRVT				Sn	Sn	05 18 40.7	+11
	206nm,0.3s,baz=224,slow=20,SNR=7.8						
RABL	Rabaul	2.38	28		Pn	05 18 06.0	-0.3
PMG	Port Moresby	4.92	231	Pn	Pn	05 18 41.0	-0.2
	6.7nm,0.3s,baz=51,slow=9.3,SNR=18						
PMG				Sn	Sn	05 19 38.2	+1.2
	16nm,0.3s,baz=198,slow=24,SNR=6.5						
PMG				LR	LR	05 20 29.5	
	comp=Z,966nm,19.9s,baz=36,slow=38						
PMG	Port Moresby	4.92	231	*ce*P	Pn	05 18 42.1	+0.8
PMG				pmax	pmax		
	comp=Z,1μm,1.7s						
PMG	Port Moresby	4.92	231		Pn	05 18 42.4	+1.1
HNR	Honiara	9.36	110	LR	LR	05 22 36.4	
	comp=Z,352nm,21.6s,baz=312,slow=33						
COEN	Coen	10.85	225	Pn	Pn	05 20 01.4	-1.3
MTSU	Mount Surprise	13.46	209	P	Pn	05 20 38.1	-0.4
	baz=14,SNR=4.1						
CTA	Charters Tower	14.47	198	Pn	P	05 20 58.5	+0.1
	comp=Z,0.2nm,0.3s,baz=16,slow=15,SNR=5.2						
CTA				LR	LR	05 25 42.2	
	comp=Z,429nm,21.0s,baz=24,slow=34						
QIS	Mount Isa	17.99	217	P	Pn	05 21 35.6	-1.6
	baz=18,SNR=10.0						
EIDS	Eidsvold	18.96	180	P	P	05 21 47.8	-0.2
	baz=19,SNR=4.2						
EIDS	Eidsvold	18.96	180	P	P	05 21 47.8	-0.2
KDU	Kakadu	19.37	250	P	P	05 21 52.0	-0.5
	baz=19,SNR=6.5						
RMQ	Roma	20.19	186	P	P	05 22 01.7	+0.3
	baz=20,SNR=15						
MTN	Manton Dam	20.66	250	P	P	05 22 06.6	0.0
	baz=21,SNR=5.4						
MTN	Manton Dam	20.66	250	P	P	05 22 06.7	0.0
MTN				IAmb	IAmb	05 22 20.7	
	comp=Z,105nm,1.2s						
WB0	Warramunga Arr	20.99	229	P	P	05 22 09.2	-1.1
WRAB	Tennant Creek	21.12	229	*ce*P	P	05 22 11.1	-0.6
WRAB				pmax	pmax		
	comp=Z,120nm,1.7s						
WRAB	Tennant Creek	21.12	229	P	P	05 22 10.1	-1.5
WRAB				IAmb	IAmb	05 22 28.2	
	comp=Z,46nm,0.8s						
WB2	Warramunga Arr	21.13	229	P	P	05 22 10.1	-1.6
WB2				IAmb	IAmb	05 22 28.4	
	comp=Z,51nm,0.8s						
WRA	Warramunga Arr	21.14	229	P	P	05 22 10.8	-1.0
	comp=Z,18nm,0.6s,baz=52,slow=10,SNR=31						
WRA				S	S	05 26 03.2	-2.0
	comp=Z,1.1nm,1.0s,baz=48,slow=12,SNR=5.6						
WRA				LR	LR	05 30 51.5	
	comp=Z,292nm,18.3s,baz=60,slow=38						
WRA	Warramunga Arr	21.14	229	P	P	05 22 09.9	-1.9
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	Warramunga Arr	21.14	229	P	P	05 22 09.9	-1.9
QLP	Quilpie	21.18	197	P	P	05 22 11.7	-0.5
	baz=21,SNR=5.0						
DZM	Mont Dzumac	21.62	138	P	P	05 22 15.8	-1.3
KNRA	Kununurra	23.74	245	P	P	05 22 38.8	-0.1
	baz=24,SNR=10						
KNRA	Kununurra	23.74	245	P	P	05 22 39.0	+0.1
KNRA				IAmb	IAmb	05 22 52.1	
	comp=Z,46nm,1.0s						
AS31	Alice Springs	23.86	222	P	P	05 22 39.1	-1.0
ASAR	Alice Springs	23.86	222	P	P	05 22 39.4	-0.7
	comp=Z,21nm,0.9s,baz=55,slow=9.1,SNR=85						
ASAR				S	S	05 26 57.5	+3.5
	comp=Z,1.7nm,0.9s,baz=46,slow=21,SNR=6.0						
ASAR				ScP	ScP	05 30 04.4	+5.9
	comp=Z,1.4nm,0.9s,baz=76,slow=2.4,SNR=5.8						
ASAR				LR	LR	05 31 32.4	
	comp=Z,119nm,19.0s,baz=57,slow=36						
ASAR	Alice Springs	23.86	222	P	P	05 22 38.8	-1.3
ASAR	Alice Springs	23.86	222	P	P	05 22 38.8	-1.3
ARMA	Armidale	24.00	179	P	P	05 22 41.0	-0.3
	baz=24,SNR=3.9						
ARMA	Armidale	24.00	179	P	P	05 22 40.1	-1.2
CMSA	Cobar Meteorol	25.60	191	P	P	05 22 55.6	-0.2
	baz=26,SNR=5.2						
SOEI	Soe	26.72	261	P	P	05 23 20.0	+14
SOEI	Soe	26.72	261	P	P	05 23 07.8	+1.6
STKA	Stephens Creek	26.93	198	P	P	05 23 08.5	+0.7
	baz=27,SNR=33						
STKA	Stephens Creek	26.93	198	P	P	05 23 08.5	+0.7
	comp=Z,29nm,0.9s,baz=355,slow=8.8,SNR=40						
STKA				LR	LR	05 34 05.1	
	comp=Z,288nm,18.1s,baz=33,slow=37						
STKA	Stephens Creek	26.93	198	P	P	05 23 07.7	-0.1
STKA				pmax	pmax		
	comp=Z,18nm,1.6s						
STKA	Stephens Creek	26.93	198	P	P	05 23 07.7	-0.1
FITZ	Fitzroy Crossi	27.40	242	P	P	05 23 11.3	-0.9
	baz=28,SNR=20						
FITZ	Fitzroy Crossi	27.40	242	P	P	05 23 11.6	-0.6
	comp=Z,11nm,0.7s,baz=62,slow=7.8,SNR=26						
FITZ				LR	LR	05 33 43.9	
	comp=Z,183nm,20.1s,baz=62,slow=36						
FITZ	Fitzroy Crossi	27.40	242	P	P	05 23 12.1	-0.1
FITZ				IAmb	IAmb	05 23 25.4	
	comp=Z,31nm,0.8s						
WRKA	Warakurna	28.66	227	P	P	05 23 22.4	-1.0
	baz=29,SNR=4.6						
EDFI	Ende, Flores	29.19	263	P	P	05 23 27.2	-1.1
	comp=Z,15nm,1.0s						
JAGI	Jajag, Banyuwa	36.63	264	P	P	05 24 31.1	-2.0
	comp=Z,59nm,1.1s						
MEEK	Meekatharra	36.90	233	P	P	05 24 35.1	-0.2
	baz=37,SNR=4.1						
PWJI	Pagerwojo	38.95	265	P	P	05 24 52.0	-0.7
	comp=Z,28nm,1.4s						
URZ	Urewera	39.64	147	P	P	05 24 58.2	+0.1
URZ				IAmb	IAmb	05 25 09.9	
	comp=Z,41nm,1.6s						
WOJI	Wonogiri, Jawa	39.82	265	P	P	05 25 16.2	+16
MORW	Morawa	40.04	231	P	P	05 25 01.9	+0.2
	baz=40,SNR=5.2						
MORW	Morawa	40.04	231	P	P	05 25 02.6	+1.0
MORW				IAmb	IAmb	05 25 14.6	
	comp=Z,38nm,1.1s						
KPJI	Karang Pucung	41.81	266	P	P	05 25 16.7	+0.3
	comp=Z,48nm,0.9s						
CISI	Cisompet, Garu	42.91	266	P	P	05 25 23.3	-2.1
	comp=Z,79nm,1.4s						
CISI	Cisompet, Garu	42.91	266	P	P	05 25 24.7	-0.7
CNJI	Cibinong	43.59	266	P	P	05 25 30.8	-0.1
	comp=Z,1μmcomp=Z,144nm,1.3s						
JNU	Nakatsue	43.63	335	P	P	05 25 31.4	+0.5
	comp=Z,17nm,0.9s,baz=143,slow=5.1,SNR=3.8						
JNU	Nakatsue	43.63	335	P	P	05 25 30.8	-0.1
MDSI	Maura Dua	46.67	270	P	P	05 25 54.8	-0.6
	comp=Z,10nm,1.4s						
KSRS	Korea Array	48.58	335	P	P	05 26 09.0	-0.7
	comp=Z,3.2nm,0.9s,baz=153,slow=9.1,SNR=8.7						
KSAR	Wonju Array Be	48.59	335	P	P	05 26 10.4	+0.6
KSAR	Wonju Array Be	48.59	335	P	P	05 26 10.4	+0.6
NJ2	Nanjing	48.94	323	*e*P	P	05 26 14.1	+1.5
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
BJI	Beijing	56.20	328	*e*P	P	05 27 05.6	-0.6
BJI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BJI				LR	LR		
	comp=Z,160nm,5.9s						
BJI				LR	LR		
	comp=Z,170nm,6.9s						
KMI	Kunming	56.39	306	P	P	05 27 09.9	+1.7
KMI				pP	pP	05 27 15.3	-3.1
KMI				sP	pwP	05 27 18.7	-2.4
KMI				PP	PP	05 29 13.5	-0.6
KMI				S	S	05 34 56.2	-0.7
KMI				sS	sS	05 35 14.5	-0.3
KMI				pmax	pmax		
	comp=Z,13nm,0.8s						
KMI				pmax	pmax		
	comp=Z,180nm,4.8s						
KMI				LR	LR		
	comp=Z,170nm,5.3s						
KMI				LR	LR		
	comp=Z,190nm,5.8s						
CMAR	Chiang Mai Arr	56.95	297	P	P	05 27 12.1	+0.1
	comp=Z,1.2nm,0.3s,baz=124,slow=5.0,SNR=10						
CMAR	Chiang Mai Arr	56.95	297	P	P	05 27 13.3	+1.3
CMAR	Chiang Mai Arr	56.95	297	P	P	05 27 13.3	+1.3

CD2	Chengdu	58.40	312	P	P	05 27 21.6	-0.5
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
HHC	Hu-ho-hao-te	59.26	326	eP	P	05 27 28.2	+0.3
HHC				pmax	pmax		
	comp=Z,86nm,1.0s						
HHC				pmax	pmax		
	comp=Z,280nm,5.8s						
HHC				LR	LR		
	comp=Z,780nm,16.1s						
HHC				LR	LR		
	comp=Z,850nm,15.9s						
PETK	Petropavlovsk-	59.45	5	P	P	05 27 28.5	-0.3
	comp=Z,2.3nm,0.8s,baz=175,slow=8.1,SNR=3.2						
LZH	Lanzhou	61.10	317	eP	P	05 27 41.7	+1.0
LZH				pP	pP	05 27 47.0	-3.6
LZH				sP	pwP	05 27 51.6	-3.2
LZH				PP	PP	05 29 58.6	+2.9
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
LZH				pmax	pmax		
	comp=Z,67nm,4.9s						
LZH				LR	LR		
	comp=Z,170nm,15.0s						
LZH				LR	LR		
	comp=Z,170nm,15.3s						
LZH				LR	LR		
	comp=Z,250nm,17.6s						
ZEA	Zeya	63.09	344	eP	P	05 27 52.8	-0.6
ZEA				pmax	pmax		
	comp=Z,21nm,1.2s						
GTA	Gaotai	65.58	318	eP	P	05 28 09.8	-0.5
GTA				pP	pP	05 28 15.4	-4.9
GTA				sP	pwP	05 28 18.6	-5.7
GTA				S	S	05 36 53.5	+0.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,61nm,6.5s						
GTA				LR	LR		
	comp=Z,120nm,20.0s						
GTA				LR	LR		
	comp=Z,360nm,20.3s						
GTA				LR	LR		
	comp=Z,160nm,16.5s						
ULN	Ulaanbaatar	66.36	329	P	P	05 28 14.4	-0.7
ULN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ULN	Ulaanbaatar	66.36	329	P	P	05 28 14.4	-0.7
SONM	Songino Array	66.67	329	P	P	05 28 17.1	0.0
	comp=Z,3.7nm,1.0s,baz=140,slow=4.8,SNR=17						
SONM	Songino Array	66.67	329	P	P	05 28 16.3	-0.8
SONM				pmax	pmax		
	comp=Z,6.0nm,1.2s						
SONM	Songino Array	66.67	329	P	P	05 28 16.2	-0.8
ZAK	Zakamensk	69.87	330	eP	P	05 28 35.5	-1.5
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
YAK	Yakutsk	70.10	349	i P	P	05 28 39.9	+1.9
YAK				pmax	pmax		
	comp=Z,12nm,0.8s						
VNDA	Vanda	71.41	178	P	P	05 28 48.0	+2.2
	comp=Z,8.2nm,1.1s,baz=28,slow=5.4,SNR=3.8						
VNDA	Vanda	71.41	178	P	P	05 28 48.1	+2.2
VNDA				pmax	pmax		
	comp=Z,90nm,1.9s						
VNDA	Vanda	71.41	178	P	P	05 28 48.1	+2.2
BILL	Bilibino	74.95	6	⇓eP	P	05 29 06.6	-0.2
BILL				e		05 31 54.7	
BILL				pmax	pmax		
	comp=Z,11nm,1.3s						
BILL	Bilibino	74.95	6	P	P	05 29 05.8	-0.9
WMQ	Urumqi	75.66	318	eP	P	05 29 12.5	+1.0
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,160nm,5.7s						
WMQ				LR	LR		
	comp=Z,470nm,28.9s						
WMQ				LR	LR		
	comp=Z,470nm,29.0s						
WMQ				LR	LR		
	comp=Z,100nm,29.5s						
ANM	Nome	77.73	18	P	P	05 29 23.2	+0.6
ANM				pmax	pmax		
	comp=Z,33nm,1.7s						
ANM	Nome	77.73	18	P	P	05 29 23.2	+0.6
ANM				IAmb	IAmb	05 29 25.6	
	comp=Z,33nm,1.7s						
SVW2	Sparrevohn	78.89	23	P	P	05 29 30.4	+1.3
TIXI	Tiksi	79.15	353	ceP	P	05 29 32.1	+1.8
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
TIXI	Tiksi	79.15	353	P	P	05 29 31.5	+1.1
TIXI				IAmb	IAmb	05 29 39.5	
	comp=Z,6.7nm,0.4s						
TTA	Tatalina	79.80	22	P	P	05 29 34.1	-0.1
TTA	Tatalina	79.80	22	P	P	05 29 34.1	-0.1
CNPM	China Poot	79.82	26	P	P	05 29 34.6	+0.4
MK31	Makanchi Array	80.31	319	P	P	05 29 35.3	-1.9
MK31				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MK31	Makanchi Array	80.31	319	P	P	05 29 35.3	-1.9
MKAR	Makanchi Array	80.31	319	P	P	05 29 36.2	-1.0
	comp=Z,2.1nm,0.9s,baz=111,slow=5.7,SNR=19						
MAKZ	Makanchi	80.51	319	P	P	05 29 37.1	-1.2
MAKZ				pmax	pmax		
	comp=Z,12nm,1.4s						
MAKZ	Makanchi	80.51	319	P	P	05 29 37.1	-1.2
RDOG	Red Dog Mine	80.89	16	P	P	05 29 39.3	-0.6
SEW	Seward	80.89	26	P	P	05 29 38.9	-1.1
SEW				IAmb	IAmb	05 29 41.3	
	comp=Z,25nm,1.2s						
RC01	Rabbit Creek A	81.27	25	P	P	05 29 40.5	-1.5
RC01				IAmb	IAmb	05 29 43.0	
	comp=Z,21nm,1.3s						
ZAA0	Zalesovo Array	81.43	327	P	P	05 29 40.2	-2.8
ZALV	Zalesovo Beam	81.43	327	P	P	05 29 41.2	-1.7
	comp=Z,1.6nm,0.7s,baz=120,slow=5.3,SNR=6.7						
ZALV	Zalesovo Beam	81.43	327	P	P	05 29 40.2	-2.8
ZALV	Zalesovo Beam	81.43	327	P	P	05 29 40.2	-2.8
PMR	Palmer	81.77	25	P	P	05 29 44.1	-0.5
PMR				pmax	pmax		
	comp=Z,24nm,1.6s						
PMR	Palmer	81.77	25	P	P	05 29 44.1	-0.5
PMR				IAmb	IAmb	05 29 45.5	
	comp=Z,24nm,1.6s						
KTH	Kantishna Hill	82.06	23	P	P	05 29 45.2	-1.0
KTH				IAmb	IAmb	05 29 48.5	
	comp=Z,18nm,1.3s						
SML	Sawmill	82.21	25	P	P	05 29 46.3	-0.7
SML				IAmb	IAmb	05 29 48.1	
	comp=Z,12nm,0.8s						
BPAW	Bear Paw Mtn.	82.33	22	P	P	05 29 46.9	-0.7
BPAW				IAmb	IAmb	05 31 05.8	
	comp=Z,34nm,1.9s						
IMAR	Indian Mountai	82.38	20	P	P	05 29 46.9	-0.9
KSH	Kashi	82.58	311	P	P	05 29 50.8	+1.3
KSH				pP	pP	05 29 57.7	-2.3
KSH				S	S	05 40 04.6	+0.2
KSH				SS	SS	05 45 30.3	+3.5
KSH				pmax	pmax		
	comp=Z,14nm,0.6s						
KSH				pmax	pmax		
	comp=Z,260nm,7.5s						
KSH				LR	LR		
	comp=Z,280nm,10.5s						
KSH				LR	LR		
	comp=Z,230nm,10.3s						
KSH				LR	LR		
	comp=Z,270nm,12.5s						
RND	Reindeer	82.79	23	P	P	05 29 49.1	-0.9
RND				pmax	pmax		
	comp=Z,18nm,1.1s						
RND	Reindeer	82.79	23	P	P	05 29 49.1	-0.9
RND				IAmb	IAmb	05 29 50.3	
	comp=Z,18nm,1.1s						
MLY	Manley	82.91	21	P	P	05 29 50.0	-0.6
MCK	McKinley	82.92	23	P	P	05 29 49.8	-0.8
MCK				pmax	pmax		
	comp=Z,23nm,1.0s						
MCK	McKinley	82.92	23	P	P	05 29 49.8	-0.8
DHY	Denali Highway	83.21	24	P	P	05 29 52.1	-0.2
DHY				IAmb	IAmb	05 29 53.5	
	comp=Z,12nm,1.0s						
NIL	Nilore	83.38	305	P	P	05 29 52.2	-1.5
NIL				pmax	pmax		
	comp=Z,35nm,1.6s						
NIL	Nilore	83.38	305	P	P	05 29 52.2	-1.5
MAW	Mawson	83.52	203	LR	LR	06 04 08.2	
	comp=Z,221nm,19.6s,baz=250,slow=34						
WRH	Wood River Hil	83.61	22	P	P	05 29 52.8	-1.3
WRH				IAmb	IAmb	05 29 55.0	
	comp=Z,17nm,1.1s						
QSPA	South Pole Qui	83.67	180	P	P	05 29 55.2	+0.6
CCB	Clear Creek Bu	83.80	22	P	P	05 29 53.7	-1.4
CCB				IAmb	IAmb	05 29 55.2	
	comp=Z,25nm,1.5s						
KURK	Kurchatov	83.87	322	i P	P	05 29 54.2	-1.5
KURK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KURK	Kurchatov	83.87	322	P	P	05 29 54.4	-1.3
TCOL	CIGO, UAF Yank	83.89	22	P	P	05 29 54.9	-0.6
	baz=241						
COLA	College	83.89	22	P	P	05 29 53.3	-2.2
COLA				pmax	pmax		
	comp=Z,18nm,1.1s						
COLA	College	83.89	22	P	P	05 29 53.3	-2.2
COLA				IAmb	IAmb	05 29 55.6	
	comp=Z,18nm,1.1s						
GLB	Gilahina Butte	83.97	26	P	P	05 29 56.2	+0.1
HDA	Harding Lake	84.01	23	P	P	05 29 54.9	-1.3
HDA	Harding Lake	84.01	23	P	P	05 29 55.4	-0.8
	baz=242						
VRDI	Verde Repeater	84.04	26	P	P	05 29 57.2	+0.6
POKR	Poker Plat Res	84.16	22	P	P	05 29 56.1	-0.9
	baz=241						
IL31		84.20	22	P	P	05 29 55.0	-2.1
IL31				IAmb	IAmb	05 29 57.7	
	comp=Z,8.0nm,0.9s						
ILAR	Eielson Array	84.20	22	P	P	05 29 55.8	-1.4
	comp=Z,4.5nm,0.7s,baz=247,slow=5.2,SNR=49						
ILAR	Eielson Array	84.20	22	P	P	05 29 55.3	-1.9
ILAR	Eielson Array	84.20	22	P	P	05 29 55.3	-1.9
COLD	Coldfoot	84.25	20	P	P	05 29 58.8	+1.5
MCARA	McCarthy VSAT	84.29	26	P	P	05 29 58.8	+1.1
MCARA				IAmb	IAmb	05 30 31.1	
	comp=Z,16nm,1.0s						
AAK	Ala-Archa	84.42	314	ceP	P	05 29 58.6	-0.4
AAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
AAK	Ala-Archa	84.42	314	P	P	05 29 58.0	-1.0
BALM	Baldy	84.45	27	P	P	05 29 57.5	-1.1
BALM				IAmb	IAmb	05 30 00.0	
	comp=Z,16nm,1.3s						
RIDG	Independent Ri	84.53	24	P	P	05 29 58.2	-0.7
BARN	Barnard Glacie	84.76	27	P	P	05 29 58.6	-1.7
BARN				IAmb	IAmb	05 30 02.0	
	comp=Z,11nm,0.8s						
DOT	Dot Lake	84.80	24	P	P	05 29 60.0	-0.3
DOT				IAmb	IAmb	05 30 01.4	
	comp=Z,14nm,1.1s						
CTGM	Chitina Glacie	84.87	27	P	P	05 30 01.2	+0.4
CTGM				IAmb	IAmb	05 30 06.2	
	comp=Z,17nm,1.1s						
TOLK	Toolik Lake Re	85.18	18	P	P	05 30 01.3	-0.7
TOLK				IAmb	IAmb	05 30 03.8	
	comp=Z,11nm,1.1s						
TOLK	Toolik Lake Re	85.18	18	P	P	05 30 02.1	0.0
	baz=239						
BCAR	Beaver Creek A	85.50	25	P	P	05 30 04.2	+0.4
BMAR	Burnt Mountain	86.25	20	P	P	05 30 07.6	+0.2
EGAK	Eagle	86.42	23	P	P	05 30 08.6	+0.4
HYT	Haines Junctio	86.57	28	P	P	05 30 10.6	+1.4
DAWY	Dawson	86.87	24	P	P	05 30 11.1	+0.6
KK31	Karatay Array	87.38	314	P	P	05 30 11.7	-1.7
KK31				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KK31	Karatay Array	87.38	314	P	P	05 30 11.7	-1.7
KK31				IAmb	IAmb	05 30 39.7	
	comp=Z,8.8nm,1.3s						
KKAR	Karatay Array	87.38	314	P	P	05 30 11.6	-1.8
KKAR	Karatay Array	87.38	314	P	P	05 30 11.6	-1.8
KKAR	Karatay Array	87.38	314	P	P	05 30 11.7	-1.7
KKAR				IAmb	IAmb	05 30 39.7	
	comp=Z,8.8nm,1.3s						
WHY	Whitehorse	87.75	28	P	P	05 30 15.6	+0.7
EPYK	Eagle Plains	88.72	23	P	P	05 30 19.5	+0.2
EPYK	Eagle Plains	88.72	23	P	P	05 30 20.1	+0.9
	baz=251						
INK	Inuvik	90.48	21	LR	LR	06 13 45.9	
	comp=Z,72nm,18.0s,baz=310,slow=37						
INK	Inuvik	90.48	21	P	P	05 30 26.6	-0.8
INK				pmax	pmax		
	comp=Z,14nm,1.2s						
INK	Inuvik	90.48	21	P	P	05 30 26.6	-0.8
INK				IAmb	IAmb	05 30 28.8	
	comp=Z,14nm,1.2s						
C36M	Paulatuk	94.05	21	P	P	05 30 43.5	-0.4
	baz=263						
NVAR	Mina Array Bea	94.39	52	P	P	05 30 47.3	+0.8
	comp=Z,3.0nm,0.9s,baz=255,slow=7.6,SNR=7.6						
NVAR	Mina Array Bea	94.39	52	P	P	05 30 47.6	+1.1
NV11	Mina Array Sit	94.50	52	P	P	05 30 47.5	+0.6
KVN	Kaiserville	94.59	51	P	P	05 30 47.8	+0.4
KVN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KVN	Kaiserville	94.59	51	P	P	05 30 47.8	+0.4
LRMC	Laurel Mtn Rad	94.66	55	P	P	05 30 49.1	+1.5
	baz=266						
DAC	Darwin (Calif)	94.79	54	P	P	05 30 50.9	+2.6
DAC				pmax	pmax		
	comp=Z,14nm,1.5s						
DAC	Darwin (Calif)	94.79	54	P	P	05 30 50.9	+2.6
GEYT	Alibeck	96.13	307	P	P	05 30 53.8	-0.4
	comp=Z,0.7nm,0.4s,baz=33,slow=8.6,SNR=3.5						
GEYT	Alibeck	96.13	307	P	P	05 30 51.4	-2.8
GMRC	Granite Mounta	96.26	56	P	P	05 30 56.8	+1.8
	baz=267						
YKA	Yellowknife Ar	97.57	28	P	Pdif	05 31 00.2	+0.1
	comp=Z,1.4nm,0.8s,baz=269,slow=4.4,SNR=22						
SNAA	Sanae	100.31	188	i P	Pdif	05 31 11.4	-0.9
PDAR	Pinedale Array	101.15	48	P	Pdif	05 31 16.9	+0.1
	comp=Z,0.4nm,0.8s,baz=350,slow=1.1,SNR=3.1						
PDAR	Pinedale Array	101.15	48		Pdif	05 31 15.4	-1.5
GERES	GERESS Array B	124.38	327	PKP	PKPdf	05 36 24.9	-0.4
	comp=Z,0.6nm,0.6s,baz=92,slow=2.5,SNR=5.2						
GERES	GERESS Array B	124.38	327	PKIKP	PKPdf	05 36 24.8	-0.5
GERES	GERESS Array B	124.38	327		PKPdf	05 36 24.8	-0.5
PTGA	Pitinga	148.28	102		PKPbc	05 37 11.6	-1.7
TOA0	Torodi Ar. Sit	149.05	285		PKPbc	05 37 14.3	-0.9
TORD	Torodi Ar. Bea	149.05	285	PKPbc	PKPbc	05 37 14.5	-0.7
	comp=Z,4.5nm,0.6s,baz=50,slow=2.8,SNR=31						
TORD	Torodi Ar. Bea	149.05	285		PKPbc	05 37 13.2	-2.0
BDFB	Brasilia	151.17	139	PKPbc	PKPbc	05 37 20.5	+0.1
	comp=Z,3.0nm,0.6s,baz=257,slow=3.9,SNR=4.8						
BDFB				PKPab	PKPab	05 37 28.4	+0.2
	comp=Z,6.0nm,0.9s,baz=201,slow=6.1,SNR=4.7						
BDFB	Brasilia	151.17	139	PKIKP	PKPbc	05 37 20.3	-0.2
BDFB						05 37 33.2	
BDFB	Brasilia	151.17	139		PKPbc	05 37 20.3	-0.2
BDFB					sPKPbc	05 37 33.2	+0.1
DBIC	Dimbokro	156.04	272	PKPab	PKPab	05 37 49.0	+0.2
	comp=Z,3.0nm,1.0s,baz=80,slow=1.3,SNR=3.6						

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*NEIC **07** 05:24:24.8±2.2, 21°.1S±0°.1×178°.8W±0°.1, h588^{km}±4^{km}, mb4.5/67, Error ellipse: s-maj=16.3km s-min=14.4km az=142.0*

*IDC **07** 05:24:24.3±1.4, 21°.02S×178°.87W, h575^{km}±15^{km}, mb3.6/23, mb1 3.8/25, mb1mx3.7/40, mbtmp4.5/25, Error ellipse: s-maj=13.9km s-min=11.2km az=135.0*

ISC 07 05:24:25.2±0.4**, 21°.20S**±0°.06×**178°.69W**±0°.07**, h600**^{km}**,**
n173, σ1^{s}**.54**/181**, mb4.4**/53**, 14C-5D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.62	318	P	P	05 25 54.1	-1.2
GLKZ	Green Lake	8.06	175	P	P	05 26 21.7	-3.3
GLKZ				S	S	05 27 59.0	-4.1
AFI	Afiamalu	9.80	43	P	P	05 26 39.7	-2.5
	7.7nm,0.3s,baz=334,slow=1.6,SNR=8.2						
AFI				S	S	05 28 28.1	-6.5
	2.4nm,0.3s,baz=188,slow=10,SNR=4.0						
DZM	Mont Dzumac	13.85	264	P	P	05 27 24.8	+2.0
OUZ	Omahuta	15.52	204	P	P	05 27 41.0	+3.0
OUZ				IAmb	IAmb	05 27 42.2	
	comp=Z,18nm,0.8s						
KUZ	Kuaotunu	16.23	196	P	P	05 27 47.2	+2.6
ETAZ	East Tamaki Re	16.65	198	P	P	05 27 51.7	+3.3
MKAZ	Moumakai	16.72	197	P	P	05 27 51.8	+2.8
WMGZ	Waiomatatini S	16.75	188	P	P	05 27 50.5	+1.3
HAZ	Te Kaha	16.78	190	P	P	05 27 50.2	+0.7
PKGZ	Pakihiroa	16.86	189	P	P	05 27 52.5	+2.1
RUGZ	Raukumara Rang	17.00	190	P	P	05 27 51.6	0.0
RUGZ				S	S	05 30 35.7	-3.9
PUZ	Puketiti	17.02	188	P	P	05 27 52.4	+0.7
TGRZ	Tauranga	17.04	194	P	P	05 27 54.8	+2.9
TWGZ	Tauwhareparae	17.16	189	P	P	05 27 54.7	+1.6
TWGZ				S	S	05 30 38.4	-3.7
TOZ	Tahuroa Road	17.22	196	P	P	05 27 56.2	+2.6
KMRZ	Kaimai	17.22	194	P	P	05 27 56.6	+3.0
URZ	Urewera	17.38	191	P	P	05 27 54.8	-0.2
	comp=Z,8.5nm,0.3s,baz=268,slow=2.3,SNR=45						
URZ				S	S	05 30 43.3	-2.2
	comp=Z,0.3nm,0.3s,baz=218,slow=22,SNR=7.5						
URZ	Urewera	17.38	191	P	P	05 27 53.5	-1.5
URZ				IAmb	IAmb	05 27 55.7	
	comp=Z,17nm,0.7s						
URZ	Urewera	17.38	191	P	P	05 27 53.7	-1.3
MWZ	Matawai	17.38	190	P	P	05 27 55.0	-0.1
CNGZ	Carnagh Statio	17.43	188	P	P	05 27 56.7	+1.3
RAGZ	Rawiri	17.56	190	P	P	05 27 57.3	+0.5
SNGZ	Shannon Statio	17.85	190	P	P	05 27 59.7	+0.4
MTHZ	Maungataniwha	18.01	191	P	P	05 28 01.1	+0.3
HIZ	Hauiti	18.13	196	P	P	05 28 05.8	+3.9
NMHZ	Naumai	18.25	191	P	P	05 28 03.6	+0.6
BKZ	Black Stump Fm	18.38	192	P	P	05 28 03.0	-1.2
BKZ				IAmb	IAmb	05 28 21.5	
	comp=Z,26nm,1.4s						
BKZ	Black Stump Fm	18.38	192	P	P	05 28 04.0	-0.2
TWVZ	Taurewa	18.51	195	P	P	05 28 06.1	+0.6
NGZ	Ngauruhoe	18.57	194	P	P	05 28 07.4	+1.3
MCHZ	McNeill Hill	18.61	191	P	P	05 28 05.3	-0.8
KWHZ	Kaweka Forest	18.64	192	P	P	05 28 06.1	-0.5
TUVZ	Tukino	18.65	194	P	P	05 28 06.7	-0.1
BHHZ	Black Hill Sta	18.77	193	P	P	05 28 07.0	-0.8
KRHZ	Kereru	18.86	192	P	P	05 28 08.8	+0.2
PNHZ	Pukenui	19.16	192	P	P	05 28 11.4	+0.2
BFZ	Birch Farm	19.89	191	P	P	05 28 17.4	-0.4
MSWZ	Moikau Station	20.79	193	P	P	05 28 26.8	+0.9
SNZO	South Karori	20.81	194	P	P	05 28 26.4	+0.3
BHW	Baring Head	20.87	194	P	P	05 28 26.9	+0.4
QRZ	Quartz Range	20.94	199	P	P	05 28 28.4	+1.2
PLWZ	Palliser	20.94	193	P	P	05 28 27.8	+0.5
NNZ	Nelson	21.05	197	P	P	05 28 28.9	+0.7
BSWZ	Blackbirch Sta	21.39	195	P	P	05 28 32.5	+1.3
THZ	Tophouse	21.69	197	P	P	05 28 33.4	-0.6
THZ				IAmb	IAmb	05 28 36.7	
	comp=Z,12nm,0.9s						
KHZ	Kahutara	22.14	195	P	P	05 28 37.6	-0.2
LTZ	Lake Taylor	22.81	197	P	P	05 28 43.4	-0.6
LTZ				IAmb	IAmb	05 28 46.4	
	comp=Z,13nm,0.8s						
MQZ	McQueen's Vall	23.57	196	P	P	05 28 50.3	-0.3
RPZ	Rata Peaks	24.02	198	P	P	05 28 55.2	+0.6
	comp=Z,6.6nm,0.5s,baz=0.6,slow=4.0,SNR=10						
RPZ	Rata Peaks	24.02	198	P	P	05 28 55.8	+1.2
RPZ				IAmb	IAmb	05 29 11.6	
	comp=Z,8.2nm,1.2s						
FOZ	Fox Glacier	24.24	201	P	P	05 28 56.3	-0.2
FOZ				IAmb	IAmb	05 28 59.1	
	comp=Z,12nm,0.8s						
LBZ	Lake Benmore	24.89	199	P	P	05 29 01.9	-0.4
LBZ				IAmb	IAmb	05 29 19.1	
	comp=Z,26nm,1.5s						
WKZ	Wanaka	25.66	200	P	P	05 29 09.6	+0.6
MLZ	Mavora Lakes	26.43	201	P	P	05 29 17.3	+1.4
MLZ				IAmb	IAmb	05 29 19.7	
	comp=Z,11nm,0.7s						
DCZ	Deep Cove	26.85	202	P	P	05 29 20.3	+0.9
DCZ				IAmb	IAmb	05 29 21.4	
	comp=Z,26nm,1.2s						
ARMA	Armidale	28.18	245	P	P	05 29 32.2	+0.8
ARMA				IAmb	IAmb	05 29 50.4	
	comp=Z,10.0nm,1.4s						
CTA	Charters Tower	32.78	266	P	P	05 30 10.2	-0.6
	comp=Z,3.4nm,0.4s,baz=77,slow=10,SNR=8.2						
PMG	Port Moresby	34.88	284	P	P	05 30 27.4	-0.9
	comp=Z,6.0nm,0.4s,baz=132,slow=12,SNR=3.7						
PMG	Port Moresby	34.88	284	P	P	05 30 27.8	-0.5
TOO	Toolangi	34.96	234	P	P	05 30 29.5	+0.7
TOO				IAmb	IAmb	05 30 32.7	
	comp=Z,10nm,1.1s						
STKA	Stephens Creek	36.90	245	P	P	05 30 45.0	+0.2
	comp=Z,3.1nm,0.5s,baz=96,slow=11,SNR=16						
STKA	Stephens Creek	36.90	245	P	P	05 30 45.1	+0.3
BBOO	Buckleboo	41.66	244	P	P	05 31 22.4	-0.4
BBOO				IAmb	IAmb	05 31 39.4	
	comp=Z,22nm,1.5s						
ASAR	Alice Springs	43.73	258	P	P	05 31 38.6	-0.6
	comp=Z,1.9nm,0.6s,baz=99,slow=7.6,SNR=30						
ASAR				ScP	ScP	05 36 09.6	+1.9
	comp=Z,0.5nm,0.6s,baz=111,slow=4.6,SNR=4.8						
ASAR				S	S	05 37 24.1	-3.1
	comp=Z,1.0nm,0.8s,baz=90,slow=18,SNR=5.7						
ASAR	Alice Springs	43.73	258	P	P	05 31 38.3	-0.9
WB0	Warramunga Arr	43.85	263	P	P	05 31 38.8	-1.3
WB2	Warramunga Arr	43.85	263	P	P	05 31 38.8	-1.4
WRA	Warramunga Arr	43.87	263	P	P	05 31 39.2	-1.0
	comp=Z,1.3nm,0.3s,baz=59,slow=22,SNR=7.3						
PTCN	Pitcairn Islan	44.67	105	P	P	05 31 46.2	-0.1
HMH	Humu'ula Sheep	46.48	31	P	P	05 32 01.4	+1.0
FORT	Forrest	48.42	247	P	P	05 32 13.8	-0.7
MTN	Manton Dam	48.52	271	P	P	05 32 14.2	-1.2
FITZ	Fitzroy Crossi	52.30	263	P	P	05 32 42.8	0.0
	comp=Z,2.2nm,1.0s,baz=117,slow=4.5,SNR=4.4						
FITZ	Fitzroy Crossi	52.30	263	P	P	05 32 42.1	-0.6
SIJI	Sorong	52.80	286	P	P	05 32 45.6	-0.7
	comp=Z,14nm,0.7s,baz=144,slow=19,SNR=4.3						
VNDA	Vanda	57.16	185	P	P	05 33 19.1	+3.5
	comp=Z,2.3nm,0.7s,baz=1.2,slow=7.9,SNR=6.9						
VNDA	Vanda	57.16	185	P	P	05 33 18.9	+3.3
QSPA	South Pole Qui	68.87	180	P	P	05 34 33.6	+2.8
QSPA				IAmb	IAmb	05 34 34.2	
	comp=Z,9.7nm,0.8s						
MJAR	Matsushiro Arr	70.39	324	P	P	05 34 39.5	-0.6
	comp=Z,4.3nm,0.7s,baz=143,slow=5.7,SNR=6.0						
MJAR	Matsushiro Arr	70.39	324	P	P	05 34 40.5	+0.4
ADK	Adak	72.79	1	P	P	05 34 53.1	-0.6
TPUB	Ta-pu	73.81	303	P	P	05 34 58.6	-1.5
TPUB				IAmb	IAmb	05 34 59.4	
	comp=Z,20nm,0.8s						
UNV	Unalaska Valle	75.47	7	P	P	05 35 08.1	-0.6
PEA0B	Petropavlovsk-	76.78	346	P	P	05 35 16.1	+0.2
PETK	Petropavlovsk-	76.78	346	P	P	05 35 15.7	-0.2
	comp=Z,6.5nm,0.7s,baz=147,slow=7.0,SNR=6.9						
PETK	Petropavlovsk-	76.78	346	P	P	05 35 15.4	-0.5
KSRS	Korea Array	76.98	319	P	P	05 35 17.0	-0.3
	comp=Z,1.1nm,0.6s,baz=157,slow=6.0,SNR=3.1						
USRK	Ussuriysk Ar.	79.18	326	P	P	05 35 29.8	+0.9
	comp=Z,2.6nm,0.6s,baz=132,slow=2.1,SNR=3.8						
USRK	Ussuriysk Ar.	79.18	326	P	P	05 35 29.4	+0.5
HOPS	Hopland Field	79.32	41	P	P	05 35 32.5	+2.6
HOPS				IAmb	IAmb	05 35 43.1	
	comp=Z,34nm,1.3s						
KMRM	Mail Ridge	79.71	40	P	P	05 35 35.0	+3.0
KMRM				IAmb	IAmb	05 35 45.1	
	comp=Z,35nm,1.3s						
KHMM	Horse Mountain	80.11	39	P	P	05 35 36.8	+2.7
KHMM				IAmb	IAmb	05 35 49.1	
	comp=Z,40nm,1.4s						
MDPB	Devils Postpil	81.02	44	P	P	05 35 40.4	+1.4
YBH	Yreka Blue Hor	81.24	39	P	P	05 35 42.6	+2.8
PNTR	Pine Nut	81.53	42	P	P	05 35 43.8	+2.2
PNTR				IAmb	IAmb	05 35 44.6	
	comp=Z,11nm,0.9s						
HUMO	Hull Mountain	81.64	38	P	P	05 35 44.6	+2.8
YERR	Yerington	81.70	43	P	P	05 35 44.6	+2.2
YERR				IAmb	IAmb	05 35 45.1	
	comp=Z,11nm,1.2s						
RYN	Ryan	81.95	43	P	P	05 35 46.0	+2.3
NVAR	Mina Array Bea	81.98	44	P	P	05 35 46.0	+2.1
	comp=Z,2.1nm,0.6s,baz=223,slow=7.6,SNR=9.4						
PAHR	Pah Rah Range	82.03	42	P	P	05 35 45.4	+1.4
KVN	Kaiserville	82.46	43	P	P	05 35 48.2	+2.0
MOD	Modoc Plateau	82.77	40	P	P	05 35 50.0	+2.3
KLR	Kul'dur	82.80	330	P	P	05 35 48.7	+1.3
	comp=Z,1.8nm,0.7s,baz=146,slow=7.3,SNR=4.1						
BRLK	Bradley Lake	83.82	14	P	P	05 35 52.4	+0.2
BRLK				IAmb	IAmb	05 36 05.7	
	comp=Z,14nm,1.2s						

SVW2	Sparrevohn	84.11	11	P	P	05 35 53.4	-0.2
I07A	Izee	84.54	38	P	P	05 35 58.5	+2.2
U15A	North Rim	84.91	48	P	P	05 36 01.1	+2.6
U15A				IAmb	IAmb	05 36 01.7	
	comp=Z,4.7nm,0.7s						
SUA	Susitna One	85.39	13	P	P	05 36 00.3	+0.3
SUA				IAmb	IAmb	05 36 00.5	
	comp=Z,8.0nm,0.8s						
GHO	Glory Hole Cre	86.06	14	P	P	05 36 03.4	+0.3
GHO				IAmb	IAmb	05 36 04.4	
	comp=Z,13nm,0.9s						
SEY	Seymchan	86.91	347	P	P	05 36 07.0	+0.1
	comp=Z,5.4nm,0.8s,baz=170,slow=4.9,SNR=5.8						
F10A	Beach Ranch, E	86.95	38	P	P	05 36 09.1	+1.4
F10A				IAmb	IAmb	05 36 09.9	
	comp=Z,8.1nm,0.9s						
KTH	Kantishna Hill	87.24	12	P	P	05 36 08.0	-0.6
KTH				IAmb	IAmb	05 36 09.3	
	comp=Z,5.6nm,0.8s						
TRF	Thorofare Moun	87.27	12	P	P	05 36 08.3	-0.6
TRF				IAmb	IAmb	05 36 09.1	
	comp=Z,11nm,0.7s						
RND	Reindeer	87.52	13	P	P	05 36 10.2	+0.3
MCK	McKinley	87.80	13	P	P	05 36 10.8	-0.4
MCK				IAmb	IAmb	05 36 12.7	
	comp=Z,6.3nm,0.8s						
TXAR	Lajitas Array	87.98	58	P	P	05 36 15.4	+2.5
	comp=Z,1.8nm,0.8s,baz=223,slow=5.8,SNR=20						
TXAR	Lajitas Array	87.98	58	P	P	05 36 15.6	+2.7
MLY	Manley	88.61	11	P	P	05 36 14.2	-0.7
MLY				IAmb	IAmb	05 36 16.1	
	comp=Z,8.5nm,1.4s						
WRH	Wood River Hil	88.63	13	P	P	05 36 14.8	-0.2
WRH				IAmb	IAmb	05 36 15.4	
	comp=Z,8.6nm,0.8s						
HDA	Harding Lake	88.81	13	P	P	05 36 15.9	+0.2
HDA				IAmb	IAmb	05 36 16.3	
	comp=Z,4.5nm,0.7s						
CCB	Clear Creek Bu	88.84	13	P	P	05 36 15.6	-0.3
CCB				IAmb	IAmb	05 36 16.2	
	comp=Z,6.8nm,0.8s						
BCAR	Beaver Creek A	88.87	16	P	P	05 36 17.1	+0.9
IMAR	Indian Mountai	88.95	10	P	P	05 36 16.8	+0.4
IL31		89.14	13	P	P	05 36 16.9	-0.3
IL31				IAmb	IAmb	05 36 17.3	
	comp=Z,2.0nm,0.6s						
ILAR	Eielson Array	89.14	13	P	P	05 36 16.7	-0.6
	comp=Z,1.8nm,0.6s,baz=217,slow=5.1,SNR=25						
ILAR	Eielson Array	89.14	13	P	P	05 36 17.2	-0.1
PLCA	Paso Flores	89.26	134	P	P	05 36 21.9	+3.2
	comp=Z,1.2nm,0.8s,baz=269,slow=6.2,SNR=4.3						
CMAR	Chiang Mai Arr	89.74	290	P	P	05 36 22.3	+1.1
	comp=Z,1.1nm,0.3s,baz=94,slow=2.7,SNR=5.1						
CMAR	Chiang Mai Arr	89.74	290	P	P	05 36 22.4	+1.2
PD31	Pinedale Array	89.92	43	P	P	05 36 22.6	+0.8
PDAR	Pinedale Array	89.92	43	P	P	05 36 23.1	+1.3
	comp=Z,1.5nm,0.7s,baz=209,slow=4.0,SNR=16						
DAWY	Dawson	90.31	16	P	P	05 36 23.6	+0.7
DAWY				IAmb	IAmb	05 36 24.2	
	comp=Z,5.1nm,1.1s						
INK	Inuvik	95.12	15	P	P	05 36 44.3	-0.3
	comp=Z,2.0nm,1.0s,baz=199,slow=4.1,SNR=4.4						
YKA	Yellowknife Ar	97.42	25	P	P	05 36 54.8	-0.3
	comp=Z,0.4nm,0.7s,baz=242,slow=4.3,SNR=6.2						
MKAR	Makanchi Array	111.20	313	PKiKP	PKiKP	05 41 52.2	+0.5
	comp=Z,0.1nm,0.4s,baz=96,slow=4.3,SNR=4.0						
BVAR	Borovoye Array	119.19	320	PKP	PKiKP	05 42 06.3	-0.6
	comp=Z,1.0nm,0.4s,baz=105,slow=2.2,SNR=6.8						
ARCES	ARCESS Array B	129.49	349	PKP	PKiKP	05 42 25.9	-1.0
	comp=Z,1.6nm,0.5s,baz=360,slow=1.0,SNR=7.4						
FINES	FINESS Array B	136.26	343	PKP	PKiKP	05 42 40.8	0.0
	comp=Z,1.4nm,0.7s,baz=54,slow=2.4,SNR=4.5						
FINES				SKPbc	SKPbc	05 45 17.0	+1.5
	comp=Z,1.3nm,0.5s,baz=31,slow=4.4,SNR=8.7						
FINES	FINESS Array B	136.26	343		PKPdf	05 42 37.7	-1.2
AKASG	Malin Array Be	143.30	330	PKP	PKPbc	05 42 50.5	-0.1
	comp=Z,0.4nm,0.2s,baz=44,slow=4.2,SNR=52						
AKASG	Malin Array Be	143.30	330		PKPab	05 42 49.6	-0.7
AKBB	Malin Array Si	143.30	330		PKPab	05 42 49.4	-1.0
SORM	Soroca	145.45	328	⇑P	PKPab	05 42 57.1	-1.7
BRTR	Keskin Array B	146.82	311	PKPbc	PKPbc	05 43 01.2	-0.2
	comp=Z,1.1nm,0.6s,baz=101,slow=1.2,SNR=5.1						
BRTR	Keskin Array B	146.82	311		PKPbc	05 43 01.0	-0.4
TLCR		147.09	323	⇓P	PKPbc	05 43 01.8	0.0
BUR08	Bucovina Ar. S	147.33	330		PKiKP	05 43 03.2	-0.9
BURAR	Bucovina Array	147.34	329	⇓P	PKiKP	05 43 03.3	-0.8
CFR	Carcaliu	147.47	324	⇑P	PKiKP	05 43 03.0	-1.3
VRI	Vrincioaia	147.79	326	⇓P	PKiKP	05 43 03.7	-1.3
PLOR	Plostina	147.84	326	⇑P	PKPab	05 43 08.7	+0.1
TRPA	Tarpa	148.17	333	⇑P	PKiKP	05 43 04.8	-0.9
DOPR	Dopca	148.41	327	⇑P	PKiKP	05 43 05.9	-0.4
MLR	Muntele Rosu	148.45	326	⇑P	PKiKP	05 43 06.6	+0.1
CLL	Collm	148.59	346	i PKPbc	PKiKP	05 43 06.5	+0.1
	comp=Z,4.0nm,0.6s						
CLL				i PKPab	PKPab	05 43 11.8	+0.5
CLL				Lm	MLR	07 20 00.0	
	comp=N,300nm,20.4s						
CLL				Lm	MLR	07 20 00.0	
	comp=E,200nm,19.3s						
CLL				Lm	MLR	07 20 00.0	
	comp=Z,300nm,20.3s						
DPC	Dobruska-Polom	148.59	341	ePKP	PKiKP	05 43 06.4	-0.1
KRLC	Kraliky	148.69	341	ePKP	PKiKP	05 43 06.5	-0.3
MORC	Moravsky Berou	148.71	340	⇑P	PKPab	05 43 12.0	0.0
VOIR		148.95	327	⇑P	PKiKP	05 43 06.9	-0.6
DRGR		149.11	331	⇓P	PKiKP	05 43 06.9	-0.8
ARR	Arges	149.21	327	⇑P	PKiKP	05 43 08.6	+0.6
SIRR	Siria	149.98	331	⇑P	PKiKP	05 43 09.5	0.0
GZR	Gura Zlata	150.11	329	⇑P	PKPbc	05 43 08.8	-0.5
ELND	Elena	150.15	322	⇓P	PKPab	05 43 18.8	+0.6
KHC	Kasperske Hory	150.46	344	ePKP	PKiKP	05 43 10.5	+0.1
KHC				ex	x	05 43 19.0	
KHC	Kasperske Hory	150.46	344		PKiKP	05 43 10.3	-0.1
BZS	Buzias	150.50	330	⇑P	PKiKP	05 43 10.3	-0.3
HERR	Herculane	150.66	328	⇑P	PKiKP	05 43 10.7	-0.2
GERES	GERESS Array B	150.69	343	PKPbc	PKiKP	05 43 10.9	-0.1
	comp=Z,1.7nm,0.6s,baz=19,slow=3.0,SNR=11						
GERES				PKPab	PKPab	05 43 21.2	+0.9
	comp=Z,0.4nm,0.4s,baz=24,slow=7.5,SNR=3.1						
GERES	GERESS Array B	150.69	343		PKiKP	05 43 10.8	-0.1
GERES					PKPab	05 43 19.8	-0.5
MDVR	Moldovita	151.07	329	⇑P	PKiKP	05 43 11.4	-0.4
ESDC	Sonseca Array	161.04	13		PKPab	05 44 05.1	-0.1

BJI ***07*** *05:28:00.5±0.0, 30°93N×142°57E, h6^{km}, mB5.0/42, mb4.9/60, Ms4.5/24, Ms7 4.2/22*

JMA ***07*** *05:28:01.2±0.2, 30°96N×142°92E, h50^{km}, M4.9*

IDC ***07*** *05:28:01.3±0.5, 30°89N×142°66E, h0^{km}, mb4.6/30, mb1 4.7/36, mb1mx4.7/43, mbtmp4.6/36, ML4.1/6, MS3.5/11, Ms1 3.5/11, ms1mx3.2/54, Error ellipse: s-maj=14.0km s-min=12.0km az=74.0*

MOS ***07*** *05:28:04.4±0.9, 30°92N×142°64E, h31^{km}, mb5.0/49, Error ellipse: s-maj=8.8km s-min=4.7km az=117.8*

NEIC ***07*** *05:28:06.3±1.5, 30°90N±0°05×142°62E±0°10, h32^{km}±3^{km}, mb4.8/127, Error ellipse: s-maj=12.3km s-min=7.5km az=77.0*

ISC 07 05:28:02.4±1.3**, 30°89N**±0°04×**142°68E**±0°05**, h9**^{km}±8^{km}**, n354,** σ1^{s}**33**/371**, mb4.8**/126**, MS3.8**/11**, 12C-2D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	2.94	303	P	Pn	05 28 48.9	-0.5
JHCJ	Hachijojimakas	3.28	312	S	Sn	05 29 31.6	-1.5
JHJ2	Mitsune	3.29	313	P	Pn	05 28 53.0	-1.2
JHJ2				eS	Sn	05 29 31.6	-1.8
JHJ2	Mitsune	3.29	313	Pn	Pn	05 28 53.5	-0.6
JHJ	Hachijo jima 2	3.32	313	Pn	Pn	05 28 52.8	-1.7
	55nm,0.3s,baz=101,slow=23,SNR=14						
JHJ				Sn	Sn	05 29 28.5	-5.6
	186nm,0.3s,baz=283,slow=21,SNR=11						
JHJ				LR	LR	05 30 14.7	
	comp=Z,802nm,21.1s,baz=156,slow=41						
CBIJ	Chichi jima	3.81	187	P	Pn	05 29 00.1	-1.2
JCJ	Chichijima	3.81	187	Pn	Pn	05 29 00.6	-0.7
	60nm,0.3s,baz=84,slow=22,SNR=25						
JCJ				Sn	Sn	05 29 40.5	-5.7
	60nm,0.3s,baz=270,slow=22,SNR=5.6						
JMKN	Mikurajimanish	3.98	320	eS	Sn	05 29 46.6	-3.7
BSO1	Boso 1	4.02	340	P	Pn	05 29 02.3	-1.4
BSO1				eS	Sn	05 29 47.7	-2.9
BSO3	Boso 3	4.31	335	P	Pn	05 29 06.6	-1.3
JOD2	Odawara 2	5.30	326	P	Pn	05 29 20.7	-1.1
JOD2				eS	Sn	05 30 17.7	-5.4
TTO1	TONANKAI O.B.S	5.69	300	P	Pn	05 29 28.3	+1.4
JRY	Ryogami san	6.01	329	P	Pn	05 29 30.6	-1.0
JRY				eS	Sn	05 30 36.0	-4.5
JIE	Ise	6.13	306	P	Pn	05 29 33.9	+0.7
INU	Inuyama	6.51	315		Pn	05 29 39.0	+0.6
JTNC	Tanabenakahech	6.66	298	P	Pn	05 29 41.0	+0.5
MJAR	Matsushiro Arr	6.76	328	Pn	Pn	05 29 41.2	-0.6
	1.6nm,0.3s,baz=148,slow=10,SNR=44						
MJAR				Sn	Sn	05 30 54.9	-4.0
	1.3nm,0.3s,baz=81,slow=40,SNR=6.2						
MJAR				LR	LR	05 32 09.1	
	comp=Z,316nm,21.2s,baz=115,slow=37						
MJAR	Matsushiro Arr	6.76	328		Pn	05 29 44.9	+3.1
MAJO	Matsushiro	6.76	328	P	Pn	05 29 42.0	+0.2
MAJO	Matsushiro	6.76	328		Pn	05 29 42.0	+0.2
MAT	Matsushiro	6.76	328	P	Pn	05 29 41.8	0.0
MAT				eS	Sn	05 30 53.7	-5.2
MJB9	Matsu-Tunnel	6.76	328		Pn	05 29 42.4	+0.5
JMK	Ichinoseki	8.13	352	P	Pn	05 29 57.9	-2.7
JMK				eS	Sn	05 31 21.3	-11
JTO	Tosashimizu	8.63	286	P	Pn	05 30 09.0	+1.5
JHS	Saijyo	9.02	300	P	Pn	05 30 13.8	+0.9
JNU	Nakatsue	10.27	286	Pn	Pn	05 30 32.1	+2.1
	0.7nm,0.3s,baz=44,slow=7.6,SNR=3.8						
JNU				LR	LR	05 34 06.9	
	comp=Z,254nm,20.8s,baz=80,slow=36						
JNU	Nakatsue	10.27	286	Pn	Pn	05 30 34.5	+4.5
ERM	Erimo	11.11	2	P	Pn	05 30 37.5	-3.9
ERM	Erimo	11.11	2	Pn	Pn	05 30 37.5	-3.9
JCH	Churui	11.71	2	P	Pn	05 30 45.7	-4.0
JCH				eS	Sn	05 32 43.1	-17
NMR	Nemuro--Hokkai	12.69	10	eP	Pn	05 30 58.7	-4.3
JKA	Kamikawa-asahi	13.20	360		Pn	05 31 10.0	0.0
ASAJ	Asahikawa	13.20	360	Pn	Pn	05 31 10.0	0.0
	3.2nm,0.3s,baz=195,slow=18,SNR=6.4						
SHO	Shikotan	13.37	13	P	Pn	05 31 08.3	-4.0
SHO				pmax	pmax		
	comp=Z,19nm,0.5s						
KSRS	Korea Array	13.86	302	Pn	Pn	05 31 20.4	+1.4
	comp=Z,1.1nm,0.3s,baz=112,slow=13,SNR=21						
KSRS				LR	LR	05 36 45.8	
	comp=Z,185nm,18.1s,baz=89,slow=38						
KSAR	Wonju Array Be	13.88	302	P	Pn	05 31 20.1	+0.8
KSAR	Wonju Array Be	13.88	302		Pn	05 31 20.1	+0.8
KS19	Wonju Array Si	13.92	302	P	Pn	05 31 22.6	+2.8
INCN	Inchon	14.81	301	P	P	05 31 36.3	-1.8
INCN	Inchon	14.81	301	P	P	05 31 36.3	-1.8
USRK	Ussuriysk Ar.	15.74	331	Pn	Pn	05 31 44.8	+0.5
	baz=145,slow=10,SNR=12						
USRK				LR	LR	05 37 41.7	
	comp=Z,144nm,18.9s,baz=126,slow=37						
USRK	Ussuriysk Ar.	15.74	331	P	P	05 31 50.0	+1.7
YSS	Yuzh-Sakhalins	16.04	0	eP	Pn	05 31 48.1	0.0
YSS				MLR	MLR		
	comp=Z,800nm,16.0s						
YSS	Yuzh-Sakhalins	16.04	0	Pn	Pn	05 31 49.1	+1.0
YSS				IAmb	IAmb	05 32 05.3	
	comp=Z,49nm,1.0s						
MDJ	Mudanjiang	17.14	327	P	Pn	05 32 00.6	-1.6
MDJ				pP	sP	05 32 05.6	+1.0
MDJ				sP	pP	05 32 08.9	+4.6
MDJ				pmax	pmax		
	comp=Z,13nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,150nm,3.3s						
MDJ	Mudanjiang	17.14	327		Pn	05 32 01.0	-1.1
GUMO	Guam	17.34	173	LR	LR	05 36 36.7	
	comp=Z,62nm,21.4s,baz=357,slow=30						
SSE	Sheshan	18.43	276	P	P	05 32 16.6	-1.5
SSE				IAmb	IAmb	05 32 18.1	
	comp=Z,55nm,0.7s						
YHNB	Yeheng	19.83	257	P	P	05 32 33.4	-0.3
YHNB				IAmb	IAmb	05 32 37.1	
	comp=Z,41nm,0.8s						
KLR	Kul'dur	20.10	339	P	P	05 32 36.9	+0.5
	comp=Z,6.7nm,0.6s,baz=148,slow=6.9,SNR=13						
KLR				LR	LR	05 41 03.1	
	comp=Z,71nm,18.4s,baz=196,slow=39						
KLR	Kul'dur	20.10	339	i P	P	05 32 37.1	+0.8
KLR				pmax	pmax		
	comp=Z,16nm,0.9s						
NJ2	Nanjing	20.35	279	eP	P	05 32 39.2	0.0
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
GRNR	Gornyy	20.40	349	eP	P	05 32 38.6	-1.0
GRNR				MLR	MLR		
	comp=Z,130nm,15.0s						
TWG	Pinlang	20.86	253	P	Pn	05 32 47.3	0.0
TPUB	Ta-pu	21.02	254	P	P	05 32 47.1	+0.6
BJI	Beijing	23.37	300	⇓iP	P	05 33 10.8	-0.5
BJI				pmax	pmax		
	comp=Z,22nm,0.5s						
BJT	Baijiatuau	23.37	300	P	P	05 33 10.5	-0.8
BJT				pmax	pmax		
	comp=Z,18nm,0.5s						
BJT	Baijiatuau	23.37	300	P	P	05 33 10.5	-0.8
BJT				IAmb	IAmb	05 33 11.2	
	comp=Z,18nm,0.5s						
H11S3	WAKE ISLAND Hy	25.00	114	T	T	05 59 25.8	
	baz=304,slow=75,SNR=6.3						
H11S1	WAKE ISLAND Hy	25.00	114	T	T	05 59 34.2	
	baz=304,slow=75,SNR=5.9						
H11S2	WAKE ISLAND Hy	25.01	114	T	T	05 59 37.8	
	baz=304,slow=75,SNR=6.0						
HIA	Hailar	25.23	323	P	P	05 33 29.6	+1.0
HIA				pmax	pmax		
	comp=Z,15nm,0.7s						
HIA	Hailar	25.23	323	P	P	05 33 29.6	+1.0
HIA				IAmb	IAmb	05 33 43.7	
	comp=Z,15nm,0.7s						
ZEA	Zeya	25.41	338	eP	P	05 33 30.2	+0.1
ZEA				pmax	pmax		
	comp=N,42nm,0.8s						
ZEA				pmax	pmax		
	comp=E,21nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,67nm,0.8s						
TIY	Taiyuan	25.82	293	eP	P	05 33 34.6	+0.4
HHC	Hu-ho-hao-te	26.98	300	eP	P	05 33 44.1	-0.5
HHC				sP	pwP	05 33 53.2	-1.3
HHC				PP	PnPn	05 34 31.7	+4.9
HHC				S	S	05 38 20.8	-1.4
HHC				pmax	pmax		
	comp=Z,96nm,0.7s						
HHC				pmax	pmax		
	comp=Z,310nm,4.0s						
HHC				LR	LR		
	comp=Z,910nm,10.7s						
HHC				LR	LR		
	comp=Z,860nm,11.7s						
HHC				LR	LR		
	comp=Z,1µm,11.6s						
BTO	Baotou	28.09	299	eP	P	05 33 55.0	+0.4
XAN	Xi'an	28.59	285	P	P	05 33 58.4	-0.6
XAN				pmax	pmax		
	comp=Z,15nm,0.7s						
XAN	Xi'an	28.59	285	P	P	05 33 58.4	-0.6
XAN				IAmb	IAmb	05 33 59.8	
	comp=Z,15nm,0.7s						
ULN	Ulaanbaatar	31.99	312	P	P	05 34 31.8	+2.8
ULN				pmax	pmax		
	comp=Z,65nm,1.5s						
ULN	Ulaanbaatar	31.99	312	P	P	05 34 31.8	+2.8
YAK	Yakutsk	32.28	349	i P	P	05 34 32.2	+1.0
YAK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SONM	Songino Array	32.40	312	P	P	05 34 34.0	+1.4
	comp=Z,6.7nm,0.6s,baz=125,slow=8.9,SNR=70						
SONM				PcP	PcP	05 37 20.4	+0.5
	comp=Z,0.7nm,0.4s,baz=110,slow=2.9,SNR=5.3						
SONM	Songino Array	32.40	312	P	P	05 34 34.3	+1.7
SONM					PcP	05 37 19.7	-0.3
LZH	Lanzhou	32.65	290	eP	P	05 34 34.0	-1.0
LZH				pP	sP	05 34 40.9	+5.1
LZH				sP	pwP	05 34 45.9	+1.0
LZH				PP	PnPn	05 35 40.1	-2.6
LZH				pmax	pmax		
	comp=Z,17nm,1.4s						
LZH				pmax	pmax		
	comp=Z,59nm,4.8s						
LZH				LR	LR		
	comp=Z,260nm,13.6s						
LZH				LR	LR		
	comp=Z,290nm,13.0s						
LZH				LR	LR		
	comp=Z,320nm,14.3s						
SEY	Seymchan	32.66	8	P	P	05 34 35.0	+0.5
	comp=Z,2.7nm,0.5s,baz=185,slow=7.8,SNR=14						
SEY	Seymchan	32.66	8	i P	P	05 34 35.1	+0.6
CD2	Chengdu	33.29	280	P	P	05 34 39.0	-1.5
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
BOD	Bodaibo	33.37	332	eP	P	05 34 39.8	-1.0
BOD				pmax	pmax		
	comp=Z,9.0nm,1.0s						
FAKI	Fak Fak	35.06	198	P	P	05 34 50.7	-5.2
ZAK	Zakamensk	35.14	315	eP	P	05 34 57.4	+1.0
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
TLY	Talaya	35.36	317	LR	LR	05 49 28.3	
	comp=Z,82nm,19.9s,baz=114,slow=36						
TLY	Talaya	35.36	317	i P	P	05 34 58.6	+0.4
TLY				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TLY	Talaya	35.36	317	P	P	05 34 59.4	+1.2
TLY				IAmb	IAmb	05 35 02.0	
	comp=Z,7.8nm,0.7s						
KMI	Kunming	35.59	271	P	P	05 35 01.4	+0.7
KMI				pP	sP	05 35 05.4	+3.9
KMI				sP	pwP	05 35 10.6	0.0
KMI				PP	PP	05 36 22.3	+0.8
KMI				S	S	05 40 34.3	-2.8
KMI				pmax	pmax		
	comp=Z,22nm,0.8s						
KMI				pmax	pmax		
	comp=Z,130nm,4.9s						
KMI				LR	LR		
	comp=Z,150nm,4.6s						
KMI				LR	LR		
	comp=Z,180nm,5.7s						
GTA	Gaotai	35.79	296	⇑P	P	05 35 01.8	-0.4
GTA				pP	pwP	05 35 09.3	-2.7
GTA				sP	sP	05 35 12.3	+9.3
GTA				PcP	PcP	05 37 31.0	+1.2
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,71nm,7.0s						
GTA				LR	LR		
	comp=Z,190nm,14.3s						
GTA				LR	LR		
	comp=Z,200nm,16.2s						
GTA				LR	LR		
	comp=Z,150nm,18.1s						
SLVN	Son La	35.95	264	P	P	05 35 02.7	-0.9
SLVN				IAmb	IAmb	05 35 04.5	
	comp=Z,6.0nm,0.7s						
MRSI	Marisa	36.09	217	P	P	05 35 04.5	-0.2
	comp=Z,39nm,0.7s						
SANI	Sanana	36.41	209	P	P	05 35 06.5	-1.0
	comp=Z,53nm,0.7s						
BILL	Bilibino	39.67	14	⇑iP	P	05 35 34.9	+0.4
BILL				i		05 35 45.7	
BILL				e		05 37 07.1	
BILL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PBKT	Sadao Pong	40.52	259	P	P	05 35 41.5	-0.6
CHTO	Chiang Mai	41.23	264	P	P	05 35 46.7	-1.2
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CHTO	Chiang Mai	41.23	264	P	P	05 35 46.7	-1.2
CMAR	Chiang Mai Arr	41.38	263	P	P	05 35 48.3	-0.9
	comp=Z,1.0nm,0.4s,baz=48,slow=8.3,SNR=8.9						
CMAR	Chiang Mai Arr	41.38	263	P	P	05 35 48.0	-1.2
CMAR	Chiang Mai Arr	41.38	263	P	P	05 35 48.0	-1.2
TIXI	Tiksi	41.50	353	ceP	P	05 35 49.4	-0.1
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TIXI	Tiksi	41.50	353	P	P	05 35 48.9	-0.5
COEN	Coen	44.59	179	P	P	05 36 15.3	+0.3
SHL	Shillong	44.77	276	P	P	05 36 16.3	-0.5
SHL				pmax	pmax		
	comp=Z,9.0nm,0.3s						
SHL	Shillong	44.77	276	P	P	05 36 16.3	-0.5
WMQ	Urumqi	44.81	303	eP	P	05 36 18.3	+1.6
WMQ				pP	pwP	05 36 23.6	-3.0
WMQ				pmax	pmax		
	comp=Z,31nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,130nm,3.8s						
WMQ				LR	LR		
	comp=Z,490nm,29.3s						
WMQ				LR	LR		
	comp=Z,110nm,20.9s						
WMQ	Urumqi	44.81	303	P	P	05 36 17.4	+0.7
WMQ				pmax	pmax		
	comp=Z,30nm,0.9s						
WMQ	Urumqi	44.81	303	P	P	05 36 17.4	+0.7
MTN	Manton Dam	44.88	196	P	P	05 36 17.2	-0.1
ANM	Nome	46.40	28	P	P	05 36 30.3	+1.4
ANM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ANM	Nome	46.40	28	P	P	05 36 30.3	+1.4
ANM				IAmb	IAmb	05 36 31.4	
	comp=Z,8.4nm,0.8s						
ZAA0	Zalesovo Array	46.97	317	P	P	05 36 33.2	-0.4
ZAA0				IAmb	IAmb	05 36 36.7	
	comp=Z,12nm,1.3s						
ZALV	Zalesovo Beam	46.97	317	P	P	05 36 33.4	-0.1
	comp=Z,4.8nm,0.7s,baz=106,slow=7.5,SNR=22						
ZALV				PcP	PcP	05 38 05.7	-0.1
	comp=Z,9.3nm,0.5s,baz=105,slow=2.8,SNR=17						
ZALV	Zalesovo Beam	46.97	317	P	P	05 36 33.6	+0.1
ZALV					PcP	05 38 05.4	-0.5
ODAN	Odare	48.18	280	eP	P	05 36 43.1	-0.5
	comp=Z,11nm,0.4s						
MK31	Makanchi Array	48.47	307	i P	P	05 36 45.4	0.0
MK31	Makanchi Array	48.47	307	P	P	05 36 45.6	+0.2
MK31				IAmb	IAmb	05 36 49.0	
	comp=Z,17nm,1.1s						
MKAR	Makanchi Array	48.47	307	P	P	05 36 45.9	+0.6
	comp=Z,17nm,0.9s,baz=87,slow=8.9,SNR=72						
MKAR				PcP	PcP	05 38 11.4	0.0
	comp=Z,1.3nm,0.5s,baz=88,slow=6.6,SNR=2.8						
MKAR				LR	LR	05 57 47.2	
	comp=Z,63nm,18.1s,baz=50,slow=37						
MKAR	Makanchi Array	48.47	307	P	P	05 36 45.3	-0.1
MKAR						05 38 10.8	
MKAR	Makanchi Array	48.47	307	P	P	05 36 45.3	-0.1
MKAR					PcP	05 38 10.8	-0.7
RDOG	Red Dog Mine	48.59	24	P	P	05 36 47.2	+1.3
RDOG				IAmb	IAmb	05 36 48.2	
	comp=Z,7.9nm,0.9s						
MAKZ	Makanchi	48.69	307	P	P	05 36 46.9	-0.1
MAKZ	Makanchi	48.69	307	P	P	05 36 47.2	+0.2
MAKZ				IAmb	IAmb	05 36 49.8	
	comp=Z,7.6nm,0.6s						
RAMN	Ramite	48.82	280	eP	P	05 36 47.9	-0.7
	comp=Z,13nm,0.5s						
JIRN	Jiri	48.94	281	eP	P	05 36 49.5	-0.1
	comp=Z,76nm,0.7s						
GUN	Gumba	49.12	282	eP	P	05 36 50.8	-0.2
	comp=Z,18nm,0.5s						
NRIK	Noril'sk	49.30	337	P	P	05 36 51.9	+0.5
	comp=Z,14nm,1.0s,baz=105,slow=8.8,SNR=11						
NRIK				PP	PP	05 38 47.4	+2.4
	comp=Z,5.4nm,0.6s,baz=129,slow=5.1,SNR=4.2						
PKI	Pulchoki	49.63	281	eP	P	05 36 54.1	-0.8
	comp=Z,6.1nm,0.5s						
PKIN	Phulchoki	49.63	281	eP	P	05 36 54.2	-0.6
KKN	Kakani	49.67	282	eP	P	05 36 54.9	-0.1
	comp=Z,10nm,0.5s						
PSI	Prapat	49.84	245	P	P	05 36 57.2	+0.9
	comp=Z,7.0nm,0.9s,baz=101,slow=5.2,SNR=4.0						
KPJI	Karang Pucung	49.89	226	P	P	05 36 56.0	-0.5
	comp=Z,23nm,0.8s						
RPSI	Rantau Prapat	49.90	245	P	P	05 36 57.2	+0.6
KURK	Kurchatov	50.70	312	ceP	P	05 37 02.5	+0.3
KURK				pmax	pmax		
	comp=Z,26nm,1.0s						
KURK	Kurchatov	50.70	312	P	P	05 37 01.7	-0.5
KURBB	Kurchatov Arra	50.76	312	P	P	05 37 02.7	0.0
	comp=Z,6.1nm,0.4s,baz=90,slow=7.6,SNR=76						
KURBB	Kurchatov Arra	50.76	312	P	P	05 37 02.3	-0.4
DANN	Dangsing	50.77	283	eP	P	05 37 03.6	+0.1
	comp=Z,27nm,0.6s						
MDSI	Maura Dua	50.88	233	P	P	05 37 03.5	-0.5

	comp=Z,26nm,0.8s						
WB0	Warramunga Arr	50.99	190	P	P	05 37 04.7	0.0
WRAB	Tennant Creek	51.16	190	*i* P	P	05 37 06.3	+0.3
WRAB				pmax	pmax		
	comp=Z,18nm,0.8s						
WRAB	Tennant Creek	51.16	190	P	P	05 37 06.5	+0.5
WB2	Warramunga Arr	51.17	190	P	P	05 37 05.9	-0.2
WRA	Warramunga Arr	51.17	190	P	P	05 37 06.2	+0.1
	comp=Z,11nm,0.8s,baz=8.5,slow=7.9,SNR=11						
WRA	Warramunga Arr	51.17	190	P	P	05 37 06.1	+0.1
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	Warramunga Arr	51.17	190	P	P	05 37 06.1	+0.1
FITZ	Fitzroy Crossi	51.39	201	P	P	05 37 08.2	+0.6
FITZ				IAmb	IAmb	05 37 23.5	
	comp=Z,6.1nm,0.8s						
IMAR	Indian Mountai	51.48	28	P	P	05 37 08.3	+0.4
PPLA	Purkeypile	51.70	32	P	P	05 37 11.2	+1.4
PPLA				IAmb	IAmb	05 37 26.4	
	comp=Z,16nm,1.4s						
PRZ	Przheval'sk	51.71	302	P	P	05 37 11.8	+1.6
PRZ				pmax	pmax		
	comp=Z,60nm,0.8s						
PRZ	Przheval'sk	51.71	302	P	P	05 37 11.8	+1.6
CNPM	China Poot	51.89	36	P	P	05 37 11.3	+0.2
CNPM				IAmb	IAmb	05 37 23.3	
	comp=Z,27nm,1.4s						
SKT	Skwentna	51.91	33	P	P	05 37 12.1	+0.8
SKT				IAmb	IAmb	05 37 27.1	
	comp=Z,7.0nm,0.9s						
BRLK	Bradley Lake	52.08	36	P	P	05 37 12.4	0.0
BRLK				IAmb	IAmb	05 37 20.5	
	comp=Z,20nm,1.3s						
SUA	Susitna One	52.25	34	P	P	05 37 13.9	+0.1
SUA				IAmb	IAmb	05 37 15.1	
	comp=Z,6.6nm,0.7s						
KTH	Kantishna Hill	52.34	31	P	P	05 37 16.2	+1.8
MLY	Manley	52.58	29	P	P	05 37 17.4	+1.3
MLY				IAmb	IAmb	05 37 18.4	
	comp=Z,8.8nm,1.1s						
TRF	Thorofare Moun	52.62	31	P	P	05 37 17.6	+1.0
KDJ	Kajisay	52.66	302	P	P	05 37 18.0	+0.7
KDJ				pmax	pmax		
	comp=Z,16nm,0.8s						
KDJ	Kajisay	52.66	302	P	P	05 37 18.0	+0.7
RC01	Rabbit Creek A	52.71	34	P	P	05 37 17.7	+0.6
SEW	Seward	52.81	36	P	P	05 37 17.9	0.0
SEW				IAmb	IAmb	05 37 37.3	
	comp=Z,11nm,0.9s						
PMR	Palmer	53.03	34	P	P	05 37 19.6	+0.2
PMR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PMR	Palmer	53.03	34	P	P	05 37 19.6	+0.2
PMR				IAmb	IAmb	05 37 20.1	
	comp=Z,10nm,1.2s						
COLD	Coldfoot	53.08	27	P	P	05 37 21.5	+1.8
GHO	Glory Hole Cre	53.13	34	P	P	05 37 20.3	0.0
RND	Reindeer	53.26	31	P	P	05 37 21.2	0.0
RND				pmax	pmax		
	comp=Z,14nm,1.4s						
RND	Reindeer	53.26	31	P	P	05 37 21.2	0.0
RND				IAmb	IAmb	05 37 22.0	
	comp=Z,14nm,1.4s						
ULHL	Ulahol	53.32	302	P	P	05 37 23.0	+0.8
	SNR=21						
KNK	Knik Glacier	53.34	34	P	P	05 37 22.2	+0.4
KNK				IAmb	IAmb	05 37 22.8	
	comp=Z,7.0nm,0.7s						
SML	Sawmill	53.42	34	P	P	05 37 22.5	+0.1
SML				IAmb	IAmb	05 37 23.5	
	comp=Z,6.6nm,0.8s						
BOOM	Boomskoye usch	53.50	302	P	P	05 37 24.6	+1.1
BOOM				pmax	pmax		
	comp=Z,13nm,0.8s						
BOOM	Boomskoye usch	53.50	302	P	P	05 37 24.6	+1.1
BOOM				IAmb	IAmb	05 37 25.5	
	comp=Z,13nm,0.8s						
TOLK	Toolik Lake Re	53.51	25	P	P	05 37 24.1	+1.1
TOLK				IAmb	IAmb	05 37 25.2	
	comp=Z,9.7nm,1.1s						
NRN	Naryn	53.66	301	P	P	05 37 25.4	+0.6
NRN				pmax	pmax		
	comp=Z,12nm,1.0s						
NRN	Naryn	53.66	301	P	P	05 37 25.4	+0.6
NRN				IAmb	IAmb	05 37 26.8	
	comp=Z,12nm,1.0s						
WRH	Wood River Hil	53.66	30	P	P	05 37 24.3	+0.2
CCB	Clear Creek Bu	53.80	30	P	P	05 37 25.8	+0.7
SCM	Sheep Creek Mo	53.89	33	P	P	05 37 26.6	+0.7
SCM				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SCM	Sheep Creek Mo	53.89	33	P	P	05 37 26.6	+0.7
SCM				IAmb	IAmb	05 37 27.4	
	comp=Z,8.6nm,0.7s						
GLI	Glacier Island	53.99	35	P	P	05 37 27.2	+0.7
GLI				IAmb	IAmb	05 37 33.0	
	comp=Z,17nm,1.0s						
KSH	Kashi	54.08	299	P	P	05 37 32.5	+4.8
KSH				pP	pwP	05 37 38.6	+1.0
KSH				S	S	05 45 06.3	+2.0
KSH				SS	SS	05 48 51.1	+5.5
KSH				pmax	pmax		
	comp=Z,52nm,0.8s						
KSH				pmax	pmax		
	comp=Z,290nm,6.2s						
KSH				LR	LR		
	comp=Z,350nm,11.0s						
KSH				LR	LR		
	comp=Z,420nm,11.2s						
KSH				LR	LR		
	comp=Z,350nm,10.5s						
KZA	Kyzart	54.08	302	P	P	05 37 30.0	+2.0
	SNR=15						
HDA	Harding Lake	54.15	30	P	P	05 37 27.4	-0.3
HDA				IAmb	IAmb	05 37 28.2	
	comp=Z,6.8nm,0.7s						
KBK	Karagaybulak	54.18	303	P	P	05 37 29.7	+1.2
	SNR=30						
IL31		54.20	30	P	P	05 37 28.0	+0.1
ILAR	Eielson Array	54.20	30	P	P	05 37 27.9	0.0
	comp=Z,4.1nm,0.6s,baz=258,slow=6.1,SNR=45						
ILAR	Eielson Array	54.20	30	P	P	05 37 28.0	0.0
HIN	Hinchinbrook I	54.29	35	P	P	05 37 29.4	+0.7
FID	Port Fidalgo	54.30	35	P	P	05 37 29.2	+0.4
FRU1	Bishkek	54.38	303	P	P	05 37 30.7	+0.9
FRU1				pmax	pmax		
	comp=Z,29nm,0.6s						
FRU1	Bishkek	54.38	303	P	P	05 37 30.7	+0.9
USP	Ospenovka	54.39	303	P	P	05 37 30.7	+0.9
	SNR=11						
AAK	Ala-Archa	54.52	303	P	P	05 37 30.6	-0.3
	comp=Z,6.0nm,0.3s,baz=110,slow=4.8,SNR=30						
AAK	Ala-Archa	54.52	303	P	P	05 37 31.9	+1.0
	SNR=6.6						
AAK	Ala-Archa	54.52	303	*i* P	P	05 37 31.9	+1.0
	SNR=7.6						
AAK	Ala-Archa	54.52	303	*ce*P	P	05 37 31.8	+1.0
AAK				pmax	pmax		
	comp=Z,11nm,0.7s						
AAK	Ala-Archa	54.52	303	P	P	05 37 31.3	+0.4
AAK				IAmb	IAmb	05 37 32.7	
	comp=Z,11nm,0.8s						
UCH	Uchtor	54.59	302	P	P	05 37 33.3	+1.6
	SNR=8.3						
EYAK	Cordova Ski Ar	54.66	35	P	P	05 37 32.4	+1.0
EYAK				IAmb	IAmb	05 37 38.9	
	comp=Z,9.5nm,1.2s						
PAX	Paxson	54.77	32	P	P	05 37 33.4	+1.1
PAX				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PAX	Paxson	54.77	32	P	P	05 37 33.4	+1.1
AS31	Alice Springs	54.90	190	P	P	05 37 33.8	+0.3
AS31				IAmb	IAmb	05 37 37.0	
	comp=Z,3.0nm,0.4s						
ASAR	Alice Springs	54.90	190	P	P	05 37 33.5	-0.1
	comp=Z,2.3nm,0.4s,baz=4.0,slow=6.8,SNR=30						
FYU	Fort Yukon	54.97	28	P	P	05 37 35.6	+2.1
FYU				IAmb	IAmb	05 37 36.3	
	comp=Z,12nm,0.8s						
EKS2	Erkin-Say	55.03	303	P	P	05 37 35.2	+0.7
	SNR=12						
RAGM	Ragged Mountai	55.20	35	P	P	05 37 36.5	+1.2
RAGM				IAmb	IAmb	05 37 53.3	
	comp=Z,17nm,1.2s						
AML	Almayashu	55.20	302	P	P	05 37 37.7	+1.6
	SNR=56						
BMAR	Burnt Mountain	55.27	27	P	P	05 37 37.0	+1.2
DOT	Dot Lake	55.41	31	P	P	05 37 35.0	-1.9
SCRK	Sand Creek	55.44	31	P	P	05 37 37.7	+0.5
SCRK				IAmb	IAmb	05 37 52.6	
	comp=Z,6.6nm,0.9s						
BVAR	Borovoye Array	55.59	316	P	P	05 37 38.7	+0.4
	comp=Z,3.0nm,0.5s,baz=95,slow=7.4,SNR=20						
BVAR				PcP	PcP	05 38 38.3	+0.3
	comp=Z,2.7nm,0.7s,baz=80,slow=3.5,SNR=4.3						
BRVK	Borovoye	55.65	316	*ce*P	P	05 37 39.5	+0.8
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRVK	Borovoye	55.65	316	P	P	05 37 39.3	+0.6
BRVK				IAmb	IAmb	05 37 39.9	
	comp=Z,6.2nm,0.8s						
CRQM	Cirque	55.94	35	P	P	05 37 41.5	+0.7
BALM	Baldy	56.31	34	P	P	05 37 44.0	+0.6
BCAR	Beaver Creek A	56.45	32	P	P	05 37 45.5	+1.2
PSA00	Pilbara Seismi	56.59	206	P	P	05 37 46.0	+0.3
PSA00				IAmb	IAmb	05 37 47.0	
	comp=Z,17nm,1.1s						
BARN	Barnard Glacie	56.64	34	P	P	05 37 46.5	+0.6
CTGM	Chitina Glacie	56.80	34	P	P	05 37 48.4	+1.4
CTGM				IAmb	IAmb	05 37 50.2	
	comp=Z,8.7nm,1.4s						
KK31	Karatay Array	57.28	304	*i* P	P	05 37 51.2	+0.7
KK31	Karatay Array	57.28	304	P	P	05 37 51.6	+1.2
KKAR	Karatay Array	57.28	304	P	P	05 37 51.4	+0.9
KKAR				pmax	pmax		
	comp=Z,28nm,0.8s						
KKAR	Karatay Array	57.28	304	P	P	05 37 51.6	+1.2
KKAR	Karatay Array	57.28	304	P	P	05 37 51.4	+0.9
DAWY	Dawson	57.46	31	P	P	05 37 52.8	+1.4
DAWY				IAmb	IAmb	05 37 53.5	
	comp=Z,5.7nm,0.9s						
NIL	Nilore	57.74	293	P	P	05 37 55.9	+2.0
NIL				pmax	pmax		
	comp=Z,38nm,0.7s						
NIL	Nilore	57.74	293	P	P	05 37 55.9	+2.0
BTK	Batken	57.80	300	P	P	05 37 54.4	+0.1
BTK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BTK	Batken	57.80	300	P	P	05 37 54.4	+0.1
BTK				IAmb	IAmb	05 37 56.0	
	comp=Z,9.4nm,0.9s						
EPYK	Eagle Plains	58.39	28	P	P	05 37 59.2	+1.3
INK	Inuvik	59.41	25	P	P	05 38 05.5	+0.6
	comp=Z,4.2nm,0.4s,baz=279,slow=4.8,SNR=33						
INK	Inuvik	59.41	25	P	P	05 38 05.3	+0.4
INK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
INK	Inuvik	59.41	25	P	P	05 38 05.2	+0.4
INK				IAmb	IAmb	05 38 06.3	
	comp=Z,10nm,1.1s						
CHGR	Chuyangaron	59.42	299	P	P	05 38 05.6	0.0
SVE	Sverdlovsk	60.52	321	*e*P	P	05 38 13.6	+0.9
KBL	Kabul	60.78	295	P	P	05 38 15.4	+0.3
KBL				pmax	pmax		
	comp=Z,22nm,0.9s						
KBL	Kabul	60.78	295	P	P	05 38 15.4	+0.3
ARU	Arti	61.73	321	*ce*P	P	05 38 21.1	+0.2
ARU				pmax	pmax		
	comp=Z,16nm,1.0s						
ARU	Arti	61.73	321	P	P	05 38 20.4	-0.5
STKA	Stephens Creek	62.44	181	P	P	05 38 25.7	-0.1
	comp=Z,1.9nm,0.7s,baz=340,slow=5.4,SNR=4.5						
STKA	Stephens Creek	62.44	181	P	P	05 38 25.1	-0.7
STKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
STKA	Stephens Creek	62.44	181	P	P	05 38 25.1	-0.7
C36M	Paulatuk	62.59	24	P	P	05 38 26.4	-0.1
C36M				IAmb	IAmb	05 38 27.5	
	comp=Z,9.4nm,0.8s						
AB31	Akbulak array	62.80	313	*i* P	P	05 38 28.3	+0.1
ABKAR	Akbulak array	62.80	313	P	P	05 38 27.9	-0.4
ABKAR	Akbulak array	62.80	313	P	P	05 38 27.7	-0.5
ABKAR				IAmb	IAmb	05 38 33.5	
	comp=Z,9.2nm,0.5s						
FORT	Forrest	62.88	194	P	P	05 38 29.2	+0.3
AKTO	Aktyubinsk	63.65	315	P	P	05 38 33.7	-0.1
	comp=Z,3.2nm,0.6s,baz=73,slow=7.1,SNR=9.0						
MORW	Morawa	64.80	206	P	P	05 38 42.4	+0.8
MORW				IAmb	IAmb	05 38 54.4	
	comp=Z,15nm,1.1s						
HRA	Herat	66.09	297	P	P	05 38 51.5	+1.1
HRA				IAmb	IAmb	05 38 53.9	
	comp=Z,7.4nm,0.7s						
PRGR	Permogore	66.52	329	*e*P	P	05 38 51.5	-0.8
PRGR				pmax	pmax		
	comp=Z,20nm,0.9s						
GEYT	Alibeck	67.85	302	P	P	05 39 01.8	+0.7
	comp=Z,6.0nm,0.7s,baz=44,slow=6.6,SNR=7.9						
GEYT	Alibeck	67.85	302	P	P	05 39 01.9	+0.7
RES	Resolute Bay	68.28	14	P	P	05 39 03.3	+0.1
RES				pmax	pmax		
	comp=Z,7.0nm,0.9s						
RES	Resolute Bay	68.28	14	P	P	05 39 03.3	+0.1
RES				IAmb	IAmb	05 39 04.3	
	comp=Z,7.1nm,0.9s						
YKA	Yellowknife Ar	68.61	29	P	P	05 39 05.4	-0.1
	comp=Z,4.9nm,0.6s,baz=294,slow=6.2,SNR=73						
ARCES	ARCESS Array B	70.11	341	P	P	05 39 13.7	-1.0
	comp=Z,5.3nm,0.7s,baz=53,slow=6.2,SNR=7.7						
ARCES	ARCESS Array B	70.11	341	P	P	05 39 15.1	+0.4
VRH	Novokhopyorsk	72.89	320	*e*P	P	05 39 31.0	-0.7
VRH				pmax	pmax		
	comp=Z,9.0nm,0.7s						
OBN	Obninsk	73.68	325	⇑*e*P	P	05 39 35.8	-0.5
OBN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LPSR	Galich'ya Gora	73.73	322	*e*P	P	05 39 36.0	-0.7
LPSR				pmax	pmax		
	comp=Z,40nm,2.3s						
E09A	Wood Farm, Sta	74.05	45	P	P	05 39 36.8	-1.9
E09A				IAmb	IAmb	05 39 37.8	
	comp=Z,13nm,0.8s						
BANOM	Banah	74.28	291	P	P	05 39 41.8	+1.3
VSR	Storozhevoye	74.29	321	*e*P	P	05 39 38.0	-2.0
VSR				pmax	pmax		
	comp=Z,30nm,2.6s						
SHME	Shamm	74.35	291	*i* P	P	05 39 42.0	+1.2
	SNR=9.0						
FINES	FINESS Array B	74.75	334	P	P	05 39 42.4	-0.1
	comp=Z,3.8nm,0.5s,baz=64,slow=4.6,SNR=25						
UOSS	Minazif	74.80	290	P	P	05 39 44.1	+0.7
UOSS	Minazif	74.80	290	P	P	05 39 44.1	+0.7
UOSS				IAmb	IAmb	05 39 44.9	
	comp=Z,16nm,1.1s						
HATD	Hatta, Dubai	74.91	290	*i* P	P	05 39 45.2	+1.1
	SNR=9.4						
ASHO	Ashiyiah	75.04	290	*i* P	P	05 39 45.4	+0.5
	SNR=6.4						
ORV	Oroville	75.13	53	P	P	05 39 45.4	+0.3
ORV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ORV	Oroville	75.13	53	P	P	05 39 45.4	+0.3
WALA	Waterton Lakes	75.30	41	P	P	05 39 47.0	+0.9
ZEI	Tsey	75.57	311	*e*P	P	05 39 46.9	-0.9
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
JTMT	Jette	75.75	43	P	P	05 39 49.6	+0.9
BEKR	Beckworth	75.76	52	P	P	05 39 49.2	+0.3
KBZ	Khabaz	75.76	313	P	P	05 39 49.9	+1.3
	comp=Z,11nm,0.9s,baz=79,slow=2.4,SNR=21						
KBZ	Khabaz	75.76	313	*d i*P	P	05 39 48.7	+0.1
KBZ				pmax	pmax		
	comp=Z,17nm,0.9s						
KIV	Kislovodsk	75.78	313	*e*P	P	05 39 50.4	+1.5
KIV				pmax	pmax		
	comp=Z,41nm,1.0s						
KIV	Kislovodsk	75.78	313	P	P	05 39 50.2	+1.3
GNI	Garni	76.29	309	*ce*P	P	05 39 52.0	+0.1
GNI				pmax	pmax		
	comp=Z,30nm,1.0s						
CMB	Columbia Colle	76.61	54	P	P	05 39 53.8	+0.1
CMB				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CMB	Columbia Colle	76.61	54	P	P	05 39 53.8	+0.1
SUMG	Summit	76.81	0	*i* P	P	05 39 56.0	+1.4
	comp=Z,5.3nm,0.5s						
SUMG	Summit	76.81	0	P	P	05 39 54.5	-0.1
SUMG				pmax	pmax		
	comp=Z,14nm,0.8s						
SUMG	Summit	76.81	0	P	P	05 39 54.5	-0.1
SUMG				IAmb	IAmb	05 39 56.2	
	comp=Z,14nm,0.8s						
YERR	Yerington	76.94	52	P	P	05 39 56.3	+0.6
KVN	Kaiserville	77.68	52	P	P	05 40 00.6	+0.8
NVAR	Mina Array Bea	77.85	53	P	P	05 40 01.5	+0.6
	comp=Z,3.6nm,0.6s,baz=292,slow=5.2,SNR=13						
FFC	Flin Flon	78.31	32	P	P	05 40 02.9	+0.2
FFC				pmax	pmax		
	comp=Z,10.0nm,1.3s						
FFC	Flin Flon	78.31	32	P	P	05 40 02.9	+0.2
FFC				IAmb	IAmb	05 40 04.0	
	comp=Z,10nm,1.3s						
QLMT	Earthquake Lak	78.96	44	P	P	05 40 07.8	+0.9
H17A	Grant Village	79.71	44	P	P	05 40 13.5	+2.5
AKASG	Malin Array Be	79.83	324	P	P	05 40 10.9	-0.2
	comp=Z,1.5nm,0.4s,baz=50,slow=6.0,SNR=21						
AKASG	Malin Array Be	79.83	324	*ce*P	P	05 40 10.3	-0.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	79.83	324	P	P	05 40 10.5	-0.6
AKBB	Malin Array Si	79.83	324	P	P	05 40 10.9	-0.2
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AKBB	Malin Array Si	79.83	324	P	P	05 40 10.9	-0.2
AKBB				IAmb	IAmb	05 40 11.4	
	comp=Z,5.3nm,0.8s						
NC405	NORSAR Array S	80.04	338	P	P	05 40 12.4	+0.3
RLMT	Red Lodge	80.08	43	P	P	05 40 14.3	+1.3
NC204	NORSAR Array S	80.22	339	P	P	05 40 13.3	+0.1
NB2	NORSAR Subarra	80.26	338	P	P	05 40 12.8	-0.5
	comp=Z,2.0nm,0.5s,baz=40,slow=5.3						
NOA	NORSAR Array B	80.26	338	P	P	05 40 12.9	-0.4
	comp=Z,4.1nm,0.8s,baz=40,slow=5.3,SNR=11						
NOA				LR	LR	06 20 05.4	
	comp=Z,33nm,20.6s,baz=25,slow=39						
NOA	NORSAR Array B	80.26	338	P	P	05 40 13.0	-0.4
DUG	Dugway, Tooele	80.59	49	P	P	05 40 16.7	+1.0
DUG				pmax	pmax		
	comp=Z,10.0nm,1.5s						
DUG	Dugway, Tooele	80.59	49	P	P	05 40 16.7	+1.0
DUG				IAmb	IAmb	05 40 17.2	
	comp=Z,9.7nm,1.4s						
HWUT	Hardware Ranch	80.62	47	P	P	05 40 16.9	+1.0
PDAR	Pinedale Array	81.23	45	P	P	05 40 19.2	+0.1
	comp=Z,1.0nm,0.7s,baz=269,slow=2.0,SNR=11						
PDAR	Pinedale Array	81.23	45	P	P	05 40 19.4	+0.2
KNB	Kanab	82.30	51	P	P	05 40 25.1	+0.3
KNB				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KNB	Kanab	82.30	51	P	P	05 40 25.1	+0.3
ILGA	Ilgaz	82.94	314	P	P	05 40 29.6	+1.5
ILGA				IAmb	IAmb	05 40 30.4	
	comp=Z,16nm,1.2s						
LVV	L'vov	82.98	325	*e*P	P	05 40 26.6	-1.3
BR131	Keskin Array S	83.75	313	P	P	05 40 32.6	+0.3
BR131				pmax	pmax		
	comp=Z,11nm,0.9s						
BR131	Keskin Array S	83.75	313	P	P	05 40 32.6	+0.3
BR131				IAmb	IAmb	05 40 33.7	
	comp=Z,10nm,0.8s						
BRTR	Keskin Array B	83.75	313	P	P	05 40 32.5	+0.3
	comp=Z,8.0nm,0.8s,baz=106,slow=4.0,SNR=39						
KWP	Kalwaria Pacla	83.75	325	P	P	05 40 31.5	-0.4
KWP				pmax	pmax		
	comp=Z,35nm,1.2s						
KWP	Kalwaria Pacla	83.75	325	P	P	05 40 31.5	-0.4
BUR08	Bucovina Ar. S	83.79	323	P	P	05 40 32.4	+0.1
BUR08				IAmb	IAmb	05 40 33.5	
	comp=Z,5.1nm,0.9s						
BURAR	Bucovina Array	83.80	323	P	P	05 40 32.3	0.0
RAYN	Ar Rayn	84.02	294	*i* P	P	05 40 34.7	+0.9
	SNR=24						
RAYN	Ar Rayn	84.02	294	P	P	05 40 34.5	+0.7
RAYN				pmax	pmax		
	comp=Z,12nm,0.7s						
RAYN	Ar Rayn	84.02	294	P	P	05 40 34.5	+0.7
KOLS	Kolonicke sedl	84.43	325	*e*P	P	05 40 35.7	+0.3
KOLS	Kolonicke sedl	84.43	325	*e*P	P	05 40 35.7	+0.3
N23A	Red Feather La	84.51	45	P	P	05 40 37.5	+1.2
N23A				IAmb	IAmb	05 40 38.4	
	comp=Z,6.4nm,0.8s						
MDUB	Mudurnu	84.83	315	P	P	05 40 37.4	-0.3
SMCO	Snowmass	84.89	47	P	P	05 40 38.7	+0.3
ISCO	Idaho Springs	85.37	46	P	P	05 40 41.5	+0.8
ISCO				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ISCO	Idaho Springs	85.37	46	P	P	05 40 41.5	+0.8
VYHS	Vyhne	86.39	326	*e*P	P	05 40 45.7	+0.5
VYHS	Vyhne	86.39	326	*e*P	P	05 40 45.7	+0.5
CLL	Collm	86.95	331	⇑*i*P	P	05 40 48.5	+0.7
	comp=Z,10.0nm,1.4s						
CLL	Collm	86.95	331	⇑*i*P	P	05 40 48.5	+0.7
CLL				pmax	pmax		
	comp=Z,10.0nm,1.4s						
GERES	GERESS Array B	88.49	329	P	P	05 40 55.9	+0.5
	comp=Z,0.4nm,0.7s,baz=0.0,slow=2.7,SNR=3.6						
GERES	GERESS Array B	88.49	329	P	P	05 40 55.2	-0.2
GERES	GERESS Array B	88.49	329	P	P	05 40 55.1	-0.2
SCHQ	Schefferville	90.92	17	P	P	05 41 05.9	-0.6
	comp=Z,2.6nm,0.9s,baz=5.8,slow=4.4,SNR=3.9						
SCHQ	Schefferville	90.92	17	P	P	05 41 05.7	-0.9
SCHQ				IAmb	IAmb	05 41 23.4	
	comp=Z,6.7nm,1.1s						
TX31	Lajitas Ar. Si	92.99	53	P	P	05 41 17.3	+0.6
TX32	Lajitas Array	92.99	53	P	P	05 41 16.9	+0.2
TX32				IAmb	IAmb	05 41 18.4	
	comp=Z,2.2nm,0.8s						
TXAR	Lajitas Array	92.99	53	P	P	05 41 17.6	+0.8
	comp=Z,1.5nm,0.8s,baz=308,slow=2.2,SNR=20						
TXAR	Lajitas Array	92.99	53	P	P	05 41 17.0	+0.3
TXAR	Lajitas Array	92.99	53	P	P	05 41 17.0	+0.3
SADO	Sadowa	95.61	29	LR	LR	06 25 46.2	
	comp=Z,34nm,19.7s,baz=194,slow=36						
ABPO	Ambohimpanom	104.05	256	P	Pdif	05 42 05.9	-0.8
ABPO	Ambohimpanom	104.05	256		Pdif	05 42 05.8	-0.8
TORD	Torodi Ar. Bea	122.36	313	PKP	PKPdf	05 46 58.5	-0.2
	comp=Z,0.7nm,0.5s,baz=16,slow=1.6,SNR=8.8						
TORD	Torodi Ar. Bea	122.36	313		PKPdf	05 46 58.2	-0.6
SAML	Samuel	147.48	53	PKP2	PKPbc	05 47 47.2	-0.4
SAML	Samuel	147.48	53		PKPbc	05 47 47.2	-0.4
LPAZ	La Paz	148.37	70	PKPbc	PKPbc	05 47 50.9	+0.2
	comp=Z,3.2nm,0.5s,baz=334,slow=1.2,SNR=21						
LPAZ	La Paz	148.37	70		PKPbc	05 47 51.2	+0.5
MNMC	Minye Minye	148.60	76		PKPbc	05 47 51.6	+0.8
PLCA	Paso Flores	151.46	119	PKPbc	PKiKP	05 47 58.1	+0.8
	comp=Z,2.4nm,1.1s,baz=4.5,slow=12,SNR=3.1						
PLCA				PKPab	pPKPab	05 48 06.5	+0.6
	comp=Z,1.8nm,0.9s,baz=256,slow=8.3,SNR=3.5						
PLCA	Paso Flores	151.46	119	PKIKP	PKPab	05 48 06.2	+0.9
PLCA	Paso Flores	151.46	119		PKiKP	05 47 57.4	+0.1
PLCA					PKPab	05 48 06.2	+0.9

TAP 07 05:32:05.3, 25°.02N×122°.78E, h145^{km}±1^{km}, ML3.1, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	EOS1	0.75	232	P	Pn	05 32 27.2	-0.3
	baz=224						
TIPB	Shuangxi	0.86	267	P	Pn	05 32 28.9	+0.4
	baz=267						
TWC	Suao	0.94	245	*e*S	Sn	05 32 45.9	-1.1
	baz=238						
ENA	Nanau	1.11	238	*e*P	Pn	05 32 31.2	+0.7
	baz=233						
ENA				S	Sn	05 32 49.2	-0.6
	baz=233						
ENTT	Nioudou	1.16	252	P	Pn	05 32 32.0	+0.9
	baz=251						
ENTT				S	Sn	05 32 50.6	0.0
	baz=251						
NACB	Ninganchiao	1.36	232	*e*P	Pn	05 32 32.7	-0.3
	baz=228						
NACB	Ninganchiao	1.36	232	P	Pn	05 32 32.6	-0.4
NACB				IAmb	IAmb	05 32 40.3	
	comp=Z,30nm,0.8s						
ETLH	Xiulin Townshi	1.43	236	P	Pn	05 32 33.6	-0.2
	baz=236						
WHF	Hehuan Shan	1.63	238	*e*P	Pn	05 32 36.0	-0.3
	baz=238						
CHGB	Renai	1.74	237	*e*P	Pn	05 32 37.1	-0.3
	baz=232						
OWD	Renai	1.80	234	P	Pn	05 32 37.6	-0.3
	baz=234						

VWDT	VWDT	1.95	230	*e*P	Pn	05 32 39.7	+0.2
	baz=225						
HGSD	Ruisui	1.96	219	*e*P	Pn	05 32 39.5	-0.1
	baz=219						
EHY	Hungye	2.01	222	*e*P	Pn	05 32 39.3	-0.9
	baz=229						
SMLT	Sun Moon Lake	2.05	237	P	Pn	05 32 41.7	+0.9
	baz=237						
SSLB	Suanglung	2.06	234	*e*P	Pn	05 32 41.7	+0.8
	baz=229						
SSLB	Suanglung	2.06	234	P	Pn	05 32 41.5	+0.6
SSLB				IAmb	IAmb	05 32 42.8	
	comp=Z,42nm,0.9s						
TYC	Yuchr	2.07	238	*e*P	Pn	05 32 40.9	0.0
	baz=245						
YULB	Yu-li	2.11	220	P	Pn	05 32 39.8	-1.6
	baz=227						
YULB	Yu-li	2.11	220	P	Pn	05 32 39.9	-1.5
YULB				IAmb	IAmb	05 32 51.4	
	comp=Z,28nm,0.8s						
TWF1	Yuli	2.14	220	P	Pn	05 32 40.8	-1.0
	baz=226						

JMA 07 05:43:10.2±0.2,35.°63N×140.°97E,h15^{km}±1^{km},M3.5, 3C-1D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.12	309	⇓P	Pg	05 43 13.6	-0.1
CHOJ				S	Sg	05 43 16.1	+0.2
JSMT	Sammumatsuo	0.42	272	⇑P	Pg	05 43 18.9	+0.2
JSMT				S	Sb	05 43 25.7	+0.1
JIHU	Itakohorinouch	0.49	313	P	Pb	05 43 20.4	-0.2
JIHU				S	Sb	05 43 27.7	+0.1
JCN	Nagara	0.66	252	⇑P	Pb	05 43 23.7	+0.3
JCN				S	Sn	05 43 34.1	-1.0
KTR	Katsuura	0.72	228	P	Pg	05 43 23.9	-0.3
KTR				S	Sb	05 43 34.6	+0.5
BSO4	Boso 4	0.82	219	⇑P	Pg	05 43 26.5	+0.4
JYT	Yasato	0.87	314	P	Pb	05 43 26.0	-1.0
JYT				S	Sb	05 43 37.2	-1.2
BSO3	Boso 3	0.91	205	P	Pb	05 43 27.1	-0.4
BSO1	Boso 1	0.97	180	P	Pb	05 43 27.3	-1.1
MAT	Matsushiro	2.42	293	P	Pn	05 43 49.3	+0.1
MAT				S	Sn	05 44 17.2	-1.3

IDC 07 05:53:51.5±5.9,7.°07S×149.°09E,h136^{km}±36^{km},mb2.8/1, mb1 3.1/3,mb1mx2.9/35,mbtmp3.4/3,Error ellipse: s-maj=187.2km s-min=48.5km az=124.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.01	219	P	Pn	05 54 38.4	0.0
	15nm,0.3s,baz=45,slow=5.7,SNR=23						
PMG				S	Sn	05 55 15.5	+0.8
	25nm,0.3s,baz=216,slow=23,SNR=9.6						
WRA	Warramunga Arr	19.20	227	P	P	05 58 03.3	-1.6
	0.2nm,0.3s,baz=41,slow=12,SNR=2.8						
ASAR	Alice Springs	22.02	220	P	P	05 58 34.8	-0.4
	0.4nm,0.4s,baz=54,slow=8.6,SNR=9.9						
TORD	Torodi Ar. Bea	147.37	283	PKPbc	PKPbc	06 13 20.6	+0.4
	0.7nm,0.5s,baz=71,slow=4.5,SNR=7.8						

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*IDC **07** 05:57:47.9±0.7, 15.°76S×177.°20W, h0^{km}, mb4.4/16, mb1 4.7/17, mb1mx4.6/32, mbtmp4.5/17, ML3.5/1, MS4.7/37, Ms1 4.7/37, ms1mx4.7/38, Error ellipse: s-maj=25.9km s-min=16.1km az=143.0*

*BJI **07** 05:57:49.3±0.0, 15.°14S×177.°12W, h12^{km}, mB5.4/9, mb4.9/31, Ms5.2/17, Ms7 5.0/17*

*NEIC **07** 05:57:50.1±2.1, 15.°6S±0.°1×177.°28W±0.°09, h12^{km}±3^{km}, mb4.9/102, Ms_20 5.2/254, Mwc5.4(GCMT), Error ellipse: s-maj=17.7km s-min=10.6km az=150.0*

*NEIC **07** 05:57:54, 15.°42S×177.°15W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.01; $M_{\theta\theta}$-0.48; $M_{\phi\phi}$0.47; $M_{r\theta}$0.05; $M_{\theta\phi}$1.14; $M_{\phi r}$-0.02; Fault plane solution: $M_0$1.24000×10^{17} NP1:ϕ_s259.00000°, δ89.00000°, λ-2.00000°. NP2:ϕ_s349.00000°, δ88.00000°, λ-179.00000°. Principal axes: T 1.2302, Plg0.0000°, Azm304.0000°; N 0.0143, Plg88.0000°, Azm43.0000°; P -1.2446, Plg2.0000°, Azm214.0000°;*

*GCMT **07** 05:57:54.1±0.1, 15.°38S±0.°01×177.°20W±0.°01, h17^{km}, MW5.3/143, Moment Tensor Solution. s78,c131; s143,c251; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.07±.02; $M_{\theta\theta}$-0.47±.02; $M_{\phi\phi}$0.40±.02; $M_{r\theta}$0.16±.05; $M_{\theta\phi}$1.23±.02; $M_{\phi r}$-0.01±.05; Best double couple: $M_0$1.31600×10^{17} NP1:ϕ_s350.00000°, δ83.00000°, λ-179.00000°. NP2:ϕ_s260.00000°, δ89.00000°, λ-7.00000°. Principal axes: T 1.2800, Plg4.0000°, Azm305.0000°; N 0.0720, Plg83.0000°, Azm71.0000°; P -1.3520, Plg5.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 05:57:49.7±0.3,15.°65S±0.°08×177.°18W±0.°05,h10^{km}, n339,σ1^{s}52/201,mb4.9/70,MS5.2/165,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.02	245		Pn	05 59 04.6	-0.6
AFI	Afiamalu	5.51	72	Pn	Pn	05 59 08.2	-3.7
	4.8nm,0.3s,baz=47,slow=9.4,SNR=13						
AFI				Sn	Sn	06 00 11.3	-4.1
	1.9nm,0.3s,baz=76,slow=20,SNR=2.8						
AFI				LR	LR	06 01 13.7	
	comp=Z,988nm,21.7s,baz=246,slow=37						
AFI	Afiamalu	5.51	72		Pn	05 59 07.0	-4.9
NIUE	Niue	7.72	117	P	Pn	05 59 42.1	-0.1
	baz=7.8,SNR=3.8						
KNTN	Kanton	13.88	23		Pn	06 01 00.7	-6.0
DZM	Mont Dzumac	16.75	245	*e*P	Pn	06 01 45.2	+0.5
	370nm,1.5s						
DZM				*e*LR	LR	06 05 43.2	
	comp=Z,6μm,24.4s						
DZM	Mont Dzumac	16.75	245	P	P	06 01 45.9	-1.1
RAR	Rarotonga	17.42	111	P	Pn	06 01 54.2	+1.3
	1.8nm,0.3s,baz=68,slow=13,SNR=4.4						
RAR				LR	LR	06 07 03.1	
	comp=Z,2μm,19.1s,baz=278,slow=32						
RAR	Rarotonga	17.42	111	P	P	06 01 56.8	+2.6
OUZ	Omahuta	21.17	201	P	P	06 02 37.3	+2.1
URZ	Urewera	23.08	192	P	P	06 02 54.2	-1.3
	15nm,0.9s,baz=2.4,slow=7.4,SNR=7.4						
URZ				LR	LR	06 10 30.0	
	comp=Z,4μm,19.4s,baz=34,slow=33						
URZ	Urewera	23.08	192	P	P	06 02 55.6	+0.1
URZ				IAmb	IAmb	06 03 09.3	
	comp=Z,36nm,1.2s						
HNR	Honiara	23.15	283	LR	LR	06 10 27.1	
	comp=Z,10μm,19.7s,baz=123,slow=33						
HNR	Honiara	23.15	283	IAMs_20	IAMs_20	06 10 05.7	
	comp=Z,10μm,20.0s						
HIZ	Hauiti	23.83	196	P	P	06 03 04.7	+1.7
MSWZ	Moikau Station	26.50	193	P	P	06 03 26.6	-0.6
PAE	Paea	26.51	98	*e*T	T	06 30 52.9	
	comp=Z,2.7nm,0.4s						
PPT	Papeete	26.52	98	LR	LR	06 11 22.0	
	comp=Z,1μm,20.7s,baz=256,slow=31						
PPT2	Papeete2	26.52	98	*e*S	S	06 07 51.5	-11
	comp=Z,207nm,24.0s						
PPT2				*e*LQ	LQ	06 08 53.0	
	comp=Z,5μm,27.2s						
PPT2				*e*LR	LR	06 10 03.4	
	comp=Z,4μm,25.8s,baz=269						
QRZ	Quartz Range	26.63	198	P	P	06 03 31.3	+2.9
TBI	Tubuai	27.20	111	*e*S	S	06 08 05.6	-7.1
	comp=Z,449nm,26.2s						
TBI				*e*LQ	LQ	06 09 14.9	
	comp=Z,2μm,33.8s						
TBI				*e*LR	LR	06 10 27.3	
	comp=Z,6μm,28.2s,baz=288						
TBI	Tubuai	27.20	111	*e*T	T	06 31 43.0	
	comp=Z,12nm,0.2s						
THZ	Tophouse	27.39	196	P	P	06 03 36.0	+0.6
THZ				IAmb	IAmb	06 03 38.4	
	comp=Z,36nm,1.3s						
THZ				IAMs_20	IAMs_20	06 13 00.9	
	comp=Z,6μm,19.0s						
LTZ	Lake Taylor	28.51	196	P	P	06 03 46.2	+0.8
LTZ				IAmb	IAmb	06 04 04.9	
	comp=Z,22nm,1.1s						
LTZ				IAMs_20	IAMs_20	06 13 47.5	
	comp=Z,5μm,21.0s						
OXZ	Oxford	29.08	196	P	P	06 03 49.2	-1.2
OXZ				IAmb	IAmb	06 03 57.0	
	comp=Z,35nm,1.2s						
OXZ				IAMs_20	IAMs_20	06 14 15.6	
	comp=Z,5μm,19.0s						
RPZ	Rata Peaks	29.71	197	P	P	06 03 58.2	+2.2
	comp=Z,4.8nm,0.7s,baz=358,slow=10.0,SNR=4.8						
RPZ				LR	LR	06 15 58.2	
	comp=Z,3μm,18.1s,baz=24,slow=37						
RPZ	Rata Peaks	29.71	197	P	P	06 03 56.8	+0.8
RPZ				IAmb	IAmb	06 04 01.4	
	comp=Z,38nm,1.4s						
FOZ	Fox Glacier	29.92	199	P	P	06 03 57.8	0.0
FOZ				IAmb	IAmb	06 04 04.2	
	comp=Z,30nm,1.2s						
ARMA	Armidale	32.11	237	P	P	06 04 17.4	0.0
	baz=32,SNR=5.5						
ARMA	Armidale	32.11	237	P	P	06 04 17.5	+0.1
WHZ	Wether Hill Ro	32.63	199	P	P	06 04 22.0	+0.4
CNB	Canberra Magne	35.74	231	P	P	06 04 49.0	0.0
	baz=36,SNR=11						
CAN	Canberra	36.02	231	P	P	06 04 51.5	+0.2
YNG	Young	36.07	233	P	P	06 04 52.7	+1.0
	baz=36,SNR=5.4						
TAOE	Nuku Hiva Isla	36.77	84	*e*LR	LR	06 14 51.4	
	comp=Z,952nm,24.5s						
TAOE	Nuku Hiva Isla	36.77	84	*e*T	T	06 43 27.0	
	comp=Z,15nm,0.2s						
CMSA	Cobar Meteorol	37.31	238	P	P	06 05 01.5	-0.7
	baz=38,SNR=14						
H11S2	WAKE ISLAND Hy	37.45	334	T	T	06 44 26.9	
	baz=154,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	37.46	334	T	T	06 44 25.5	
	baz=154,slow=76,SNR=11						
QLP	Quilpie	37.47	247	P	P	06 05 03.6	0.0
	baz=38,SNR=7.3						
H11S1	WAKE ISLAND Hy	37.47	334	T	T	06 44 27.6	
	baz=154,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	38.47	335	T	T	06 45 40.4	
	baz=154,slow=77,SNR=7.5						
H11N1	WAKE ISLAND Hy	38.47	335	T	T	06 45 41.7	
	baz=154,slow=77,SNR=37						
H11N2	WAKE ISLAND Hy	38.49	335	T	T	06 45 43.0	
	baz=154,slow=77,SNR=7.6						
TOO	Toolangi	39.51	229	P	P	06 05 20.5	-0.2
	baz=40,SNR=10.0						
TOO	Toolangi	39.51	229	P	P	06 05 20.6	-0.2
STKA	Stephens Creek	40.77	239	P	P	06 05 30.7	-0.5
	baz=41,SNR=13						
STKA	Stephens Creek	40.77	239	P	P	06 05 30.7	-0.5
	comp=Z,45nm,1.0s,baz=63,slow=7.5,SNR=40						
STKA				LR	LR	06 20 52.5	
	comp=Z,1μm,20.0s,baz=68,slow=34						
STKA	Stephens Creek	40.77	239	P	P	06 05 30.0	-1.2
HTT	Hallett	43.32	238	P	P	06 05 51.2	-0.9
	baz=44,SNR=6.4						
BBOO	Buckleboo	45.54	239	P	P	06 06 08.4	-1.4
	baz=46,SNR=8.6						
BBOO	Buckleboo	45.54	239	P	P	06 06 08.6	-1.2
WB0	Warramunga Arr	46.19	257	P	P	06 06 14.6	-0.6
WB0				IAmb	IAmb	06 06 25.4	
	comp=Z,19nm,1.3s						
WC2	Warramunga Arr	46.21	257	P	P	06 06 14.4	-0.9
	baz=46						
WRA	Warramunga Arr	46.23	257	P	P	06 06 13.9	-1.6
	comp=Z,4.6nm,1.1s,baz=91,slow=7.2,SNR=9.8						
WRA				LR	LR	06 25 48.2	
	comp=Z,741nm,18.1s,baz=135,slow=36						
WRA	Warramunga Arr	46.23	257	P	P	06 06 13.9	-1.6
AS17	Alice Springs	46.48	252	P	P	06 06 16.3	-1.2
	baz=47						
AS31	Alice Springs	46.56	252	P	P	06 06 16.0	-2.1
ASAR	Alice Springs	46.56	252	P	P	06 06 15.8	-2.2
	comp=Z,10nm,0.8s,baz=85,slow=8.3,SNR=63						
ASAR				LR	LR	06 24 31.5	
	comp=Z,900nm,18.9s,baz=93,slow=34						
ASAR	Alice Springs	46.56	252	P	P	06 06 15.3	-2.8
MTN	Manton Dam	50.08	266	P	P	06 06 44.6	-0.6
WRKA	Warakurna	51.68	250	P	P	06 06 56.1	-1.2
	baz=52,SNR=3.5						
KNRA	Kununurra	51.92	262	P	P	06 06 59.5	+0.4
SIJI	Sorong	52.91	281	LR	LR	06 28 21.8	
	comp=Z,615nm,19.6s,baz=122,slow=35						
FITZ	Fitzroy Crossi	54.59	259	P	P	06 07 18.0	-0.8
	baz=55,SNR=5.6						
FITZ	Fitzroy Crossi	54.59	259	LR	LR	06 28 28.3	
	comp=Z,907nm,20.2s,baz=94,slow=34						
FITZ	Fitzroy Crossi	54.59	259	P	P	06 07 19.6	+0.8
FITZ				IAmb	IAmb	06 07 23.6	
	comp=Z,22nm,1.3s						
SOEI	Soe	57.27	268	P	P	06 07 35.1	-3.1
	comp=Z,2μmcomp=Z,149nm,1.1s						
SOEI	Soe	57.27	268	P	P	06 07 39.2	+1.0
PSA00	Pilbara Seismi	59.63	254	P	P	06 07 52.3	-2.2
PSAD3	Pilbara Seismi	59.69	254	IAMs_20	IAMs_20	06 35 24.7	
	comp=Z,1μm,18.0s						
KLBR	Kellerberrin	60.90	242	P	P	06 08 02.1	-0.9
	baz=61,SNR=4.9						
DAV	Davao City (W)	61.01	287	LR	LR	06 32 43.0	
	comp=Z,283nm,19.1s,baz=25,slow=34						
NWAO	Narrogin (SRO)	61.32	241	LR	LR	06 33 20.4	
	comp=Z,803nm,20.6s,baz=103,slow=35						
KAPI	Kappang	62.74	272	LR	LR	06 33 08.4	
	comp=Z,199nm,21.2s,baz=97,slow=34						
VNDA	Vanda	62.78	185	LR	LR	06 32 11.1	
	comp=Z,285nm,18.1s,baz=46,slow=33						
RPN	Rapa Nui	63.56	113	LR	LR	06 28 37.3	
	comp=Z,684nm,21.7s,baz=269,slow=29						
MJAR	Matsushiro Arr	66.83	322	LR	LR	06 32 09.6	
	comp=Z,296nm,22.0s,baz=140,slow=31						
JOW	Kunigami	67.73	308	IAMs_20	IAMs_20	06 28 42.7	
	comp=Z,1μm,19.0s						
TGY	Tagaytay City	67.94	293	LR	LR	06 34 45.1	
	comp=Z,1μm,20.8s,baz=124,slow=33						
PETK	Petropavlovsk-	71.82	344	P	P	06 09 14.7	+2.4
	comp=Z,7.5nm,1.0s,baz=146,slow=10,SNR=3.1						
PETK				LR	LR	06 37 47.9	
	comp=Z,447nm,18.8s,baz=198,slow=33						
PETK	Petropavlovsk-	71.82	344	P	P	06 09 13.4	+1.0
KSRS	Korea Array	73.82	317	P	P	06 09 24.6	0.0
	comp=Z,5.1nm,1.1s,baz=124,slow=6.7,SNR=4.8						
KSRS				LR	LR	06 36 07.0	
	comp=Z,500nm,22.0s,baz=127,slow=31						
LEM	Lembang	73.98	267	LR	LR	06 42 57.2	
	comp=Z,187nm,18.2s,baz=110,slow=37						
QSPA	South Pole Qui	74.39	180	P	P	06 09 28.8	+1.1
QSPA				IAmb	IAmb	06 09 31.5	
	comp=Z,20nm,1.1s						
OSI	Osito Audit: C	74.69	47	IAMs_20	IAMs_20	06 34 09.4	
	comp=Z,1μm,21.0s						
CMB	Columbia Colle	75.40	43	P	P	06 09 34.6	+0.7
USRK	Ussuriysk Ar.	75.44	325	P	P	06 09 33.2	-0.7
	comp=Z,3.3nm,0.9s,baz=91,slow=12,SNR=3.9						
USRK				LR	LR	06 37 13.6	
	comp=Z,432nm,21.8s,baz=127,slow=31						
USRK	Ussuriysk Ar.	75.44	325	P	P	06 09 32.8	-1.0
AFDM	Forest Hills D	75.53	42	IAMs_20	IAMs_20	06 34 48.2	
	comp=Z,1μm,20.0s						
ORV	Oroville	75.53	41	IAMs_20	IAMs_20	06 34 29.2	
	comp=Z,1μm,20.0s						
PFO	Pinyon Flats O	75.79	49	IAMs_20	IAMs_20	06 35 38.9	
	comp=Z,1μm,19.0s						
XPFO	Pion Flat	75.79	49	IAMs_20	IAMs_20	06 35 30.9	
	comp=Z,1μm,20.0s						
YBH	Yreka Blue Hor	76.04	39	P	P	06 09 38.2	+0.7
	comp=Z,5.5nm,1.1s,baz=235,slow=16,SNR=4.8						
YBH	Yreka Blue Hor	76.04	39	P	P	06 09 37.8	+0.3
YBH				IAmb	IAmb	06 09 56.8	
	comp=Z,21nm,1.4s						
MDPB	Devils Postpil	76.05	44	P	P	06 09 39.4	+1.6
OMMB	Old Mammoth Mi	76.09	44	P	P	06 09 39.8	+1.7
BEKR	Beckworth	76.43	42	P	P	06 09 41.4	+1.5
PNTR	Pine Nut	76.49	43	P	P	06 09 40.4	+0.2
PNTR				IAmb	IAmb	06 09 49.5	
	comp=Z,10nm,0.9s						
PNTR				IAMs_20	IAMs_20	06 35 07.8	
	comp=Z,915nm,20.0s						
VCNR	Virginia City	76.57	42	P	P	06 09 42.3	+1.6
VCNR				IAmb	IAmb	06 10 00.1	
	comp=Z,15nm,1.4s						
YERR	Yerington	76.67	43	P	P	06 09 42.1	+0.9
YERR				IAmb	IAmb	06 10 00.6	
	comp=Z,18nm,1.4s						
GLA	Glamis	76.71	50	IAMs_20	IAMs_20	06 36 00.2	
	comp=Z,1μm,18.0s						
NVAR	Mina Array Bea	76.99	44	P	P	06 09 42.0	-1.1
	comp=Z,2.1nm,0.8s,baz=228,slow=8.4,SNR=6.3						
NVAR				LR	LR	06 35 39.8	
	comp=Z,455nm,20.2s,baz=210,slow=29						
NVAR	Mina Array Bea	76.99	44	P	P	06 09 41.7	-1.4
NV11	Mina Array Sit	77.09	44	P	P	06 09 43.0	-0.6
NV11				IAmb	IAmb	06 09 53.6	
	comp=Z,14nm,1.2s						
Y12C	Blythe	77.27	49	IAMs_20	IAMs_20	06 34 51.9	
	comp=Z,1μm,19.0s						
113A	Mohawk Valley,	77.36	51	P	P	06 09 45.8	+0.8
113A				IAMs_20	IAMs_20	06 35 17.5	
	comp=Z,951nm,21.0s						
NJ2	Nanjing	77.44	309	*e*P	P	06 09 45.4	0.0
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KVN	Kaiserville	77.45	43	P	P	06 09 46.7	+1.0
KVN				IAmb	IAmb	06 10 04.2	
	comp=Z,13nm,1.3s						
MOD	Modoc Plateau	77.61	40	P	P	06 09 46.7	+0.3
TPNV	Topopah Spring	77.61	46	IAMs_20	IAMs_20	06 38 40.8	
	comp=Z,1μm,19.0s						
214A	Organ Pipe Nat	77.70	52	IAMs_20	IAMs_20	06 35 29.6	
	comp=Z,996nm,20.0s						
HSIG		77.84	55	IAMs_20	IAMs_20	06 34 48.5	
	comp=Z,1μm,22.0s						
BRLK	Bradley Lake	78.12	13	P	P	06 09 49.0	+0.4
PINE	Pine Mountain	78.30	38	P	P	06 09 51.6	+1.4
PINE				IAmb	IAmb	06 10 09.9	
	comp=Z,20nm,1.2s						
W13A	Hualapai Mount	78.37	48	IAMs_20	IAMs_20	06 36 02.1	
	comp=Z,964nm,20.0s						
Y14A	Wickenburg	78.47	50	P	P	06 09 52.9	+1.6
R11A	Troy Canyon, C	78.78	45	P	P	06 09 52.2	-0.8
CN2	Changchun	78.97	322	*e*P	P	06 09 54.9	+1.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TUC	Tucson	79.40	52	P	P	06 09 57.6	+1.2
TUC	Tucson	79.40	52	IAMs_20	IAMs_20	06 36 00.5	
	comp=Z,1μm,21.0s						
J08A	Circle Bar Ran	79.54	39	IAMs_20	IAMs_20	06 36 14.2	
	comp=Z,1μm,19.0s						
QIZ	Qiongzhong	79.63	293	P	P	06 09 56.1	-1.7
QIZ				S	S	06 19 59.5	-1.0
QIZ				LR	LR		
	comp=Z,240nm,14.1s						
QIZ				LR	LR		
	comp=Z,490nm,17.1s						
QIZ				LR	LR		
	comp=Z,540nm,17.6s						
SUA	Susitna One	79.68	13	P	P	06 09 56.4	-0.9
SUA				IAmb	IAmb	06 10 05.4	
	comp=Z,12nm,0.8s						
SUA				IAMs_20	IAMs_20	06 37 36.8	
	comp=Z,1μm,20.0s						
X16A	Lo Mia Camp, P	79.84	50	P	P	06 10 00.5	+1.5
X16A				IAMs_20	IAMs_20	06 36 58.1	
	comp=Z,1μm,19.0s						
PSUT	Pine Spring	80.05	45	P	P	06 10 00.3	+0.3
U15A	North Rim	80.14	48	P	P	06 10 01.5	+0.9
PMR	Palmer	80.14	13	P	P	06 09 59.8	+0.1
ELK	Elko	80.21	43	P	P	06 10 00.8	0.0
ELK				IAMs_20	IAMs_20	06 38 09.3	
	comp=Z,795nm,19.0s						
G08A	Pilot Rock	80.31	38	P	P	06 10 01.4	+0.3
G08A				IAmb	IAmb	06 10 19.7	
	comp=Z,18nm,1.3s						
GHO	Glory Hole Cre	80.35	13	P	P	06 10 01.0	+0.1
GHO				IAmb	IAmb	06 10 08.9	
	comp=Z,12nm,1.0s						
WUAZ	Wupatki	80.39	49	IAMs_20	IAMs_20	06 38 17.5	
	comp=Z,830nm,20.0s						
PPLA	Purkeypile	80.70	11	IAMs_20	IAMs_20	06 38 15.5	
	comp=Z,829nm,19.0s						
DHAK	Deception Hill	80.96	19	IAMs_20	IAMs_20	06 36 38.1	
	comp=Z,1μm,22.0s						
TGL	Tana Glacier	80.97	16	IAMs_20	IAMs_20	06 38 58.9	
	comp=Z,999nm,19.0s						
X18A	Snowflake	80.99	50	IAMs_20	IAMs_20	06 38 24.7	
	comp=Z,941nm,20.0s						
BMO	Blue Mountains	81.06	39	P	P	06 10 05.7	+0.6
BMO				IAmb	IAmb	06 10 23.6	
	comp=Z,14nm,1.2s						
VRDI	Verde Repeater	81.20	16	P	P	06 10 04.9	-0.7
VRDI				IAmb	IAmb	06 10 08.3	
	comp=Z,15nm,1.3s						
MFID	Camas Ranch	81.20	40	P	P	06 10 05.0	-1.0
MFID				IAMs_20	IAMs_20	06 38 56.3	
	comp=Z,1μm,20.0s						
GLB	Gilahina Butte	81.28	16	P	P	06 10 05.6	-0.3
GLB				IAmb	IAmb	06 10 13.9	
	comp=Z,13nm,1.3s						
W18A	Petrified Fore	81.41	50	IAMs_20	IAMs_20	06 37 56.6	
	comp=Z,878nm,20.0s						
SDSI	Sungai Dareh	81.46	271	P	P	06 10 06.7	-1.1
	comp=Z,2μmcomp=Z,7.0nm,1.0s						
BARN	Barnard Glacie	81.54	17	P	P	06 10 08.3	+0.9
BARN				IAmb	IAmb	06 10 11.4	
	comp=Z,9.6nm,0.9s						
CTGM	Chitina Glacie	81.55	17	P	P	06 10 07.4	0.0
DUG	Dugway, Tooele	81.55	44	P	P	06 10 08.5	+0.6
TRF	Thorofare Moun	81.57	12	P	P	06 10 07.5	+0.1
TRF				IAmb	IAmb	06 10 15.5	
	comp=Z,8.6nm,0.9s						
F10A	Beach Ranch, E	81.70	38	P	P	06 10 08.7	+0.2
F10A				IAmb	IAmb	06 10 15.2	
	comp=Z,8.4nm,0.9s						
121A	Cookes Peak, D	81.79	53	IAMs_20	IAMs_20	06 39 08.9	
	comp=Z,881nm,20.0s						
RND	Reindeer	81.82	12	P	P	06 10 09.0	+0.3
RND				IAmb	IAmb	06 10 17.2	
	comp=Z,13nm,1.0s						
RND				IAMs_20	IAMs_20	06 41 56.2	
	comp=Z,965nm,19.0s						
MCK	McKinley	82.09	12	P	P	06 10 10.3	+0.2
MCK				IAmb	IAmb	06 10 17.8	
	comp=Z,14nm,1.0s						
MCK				IAMs_20	IAMs_20	06 40 27.5	
	comp=Z,1μm,20.0s						
SKAG	Skagway	82.19	20	IAMs_20	IAMs_20	06 38 21.5	
	comp=Z,1μm,20.0s						
TMUT	Trail Mountain	82.23	46	P	P	06 10 11.2	-0.4
EPT	El Paso	82.47	54	IAMs_20	IAMs_20	06 39 01.1	
	comp=Z,1μm,19.0s						
NEA	Nenana	82.82	12	IAMs_20	IAMs_20	06 41 21.0	
	comp=Z,900nm,20.0s						
MLY	Manley	82.91	11	P	P	06 10 13.7	-0.7
MLY				IAmb	IAmb	06 10 21.8	
	comp=Z,8.3nm,1.1s						
WRH	Wood River Hil	82.92	12	P	P	06 10 14.6	+0.3
WRH				IAMs_20	IAMs_20	06 40 52.4	
	comp=Z,827nm,20.0s						
TCUT	Toone Canyon	82.93	44	P	P	06 10 14.8	-0.5
RIDG	Independent Ri	82.99	14	P	P	06 10 15.0	+0.2
RIDG				IAmb	IAmb	06 10 22.3	
	comp=Z,8.1nm,1.1s						
NEW	Newport	83.00	36	IAMs_20	IAMs_20	06 37 51.5	
	comp=Z,848nm,20.0s						
BJI	Beijing	83.02	315	*e*P	P	06 10 14.2	-1.2
BJI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BJI				LR	LR		
	comp=Z,310nm,15.2s						
BJI				LR	LR		
	comp=Z,340nm,18.0s						
BJI				LR	LR		
	comp=Z,520nm,22.6s						
DOT	Dot Lake	83.10	14	P	P	06 10 15.0	-0.3
DOT				IAmb	IAmb	06 10 22.7	
	comp=Z,9.9nm,1.2s						
HDA	Harding Lake	83.11	13	P	P	06 10 14.7	-0.6
HDA				IAmb	IAmb	06 10 22.6	
	comp=Z,9.1nm,1.0s						
CCB	Clear Creek Bu	83.14	12	P	P	06 10 14.5	-0.9
CCB				IAmb	IAmb	06 10 23.0	
	comp=Z,11nm,1.1s						
BCAR	Beaver Creek A	83.17	15	P	P	06 10 15.4	-0.3
MVCO	Mesa Verde	83.21	49	IAMs_20	IAMs_20	06 39 39.3	
	comp=Z,875nm,20.0s						
WHY	Whitehorse	83.25	19	IAMs_20	IAMs_20	06 38 35.5	
	comp=Z,1μm,22.0s						
IMAR	Indian Mountai	83.27	9	P	P	06 10 16.1	0.0
IPM	Ipoh	83.32	277	P	P	06 10 15.6	-2.0
MNTX	Cornudas Mount	83.32	55	P	P	06 10 15.2	-2.0
MNTX				IAmb	IAmb	06 10 27.8	

	comp=Z,7.9nm,1.2s						
MNTX				IAMs_20	IAMs_20	06 39 16.7	
	comp=Z,870nm,20.0s						
MDM	Murphy Dome	83.33	12	IAMs_20	IAMs_20	06 41 44.1	
	comp=Z,1µm,20.0s						
COLA	College	83.33	12	P	P	06 10 16.4	0.0
COLA	College	83.33	12	IAMs_20	IAMs_20	06 42 35.1	
	comp=Z,785nm,19.0s						
IL31		83.44	13	P	P	06 10 15.4	-1.5
IL31				IAmb	IAmb	06 10 24.7	
	comp=Z,15nm,1.4s						
ILAR	Eielson Array	83.44	13	P	P	06 10 16.8	-0.2
	comp=Z,2.5nm,0.9s,baz=228,slow=6.2,SNR=15						
ILAR				LR	LR	06 41 18.4	
	comp=Z,332nm,20.4s,baz=222,slow=31						
ILAR	Eielson Array	83.44	13	P	P	06 10 16.5	-0.5
MCMT	McKenzie Canyo	83.77	40	P	P	06 10 18.5	-1.0
ANMO	Albuquerque	83.78	51	P	P	06 10 18.8	-0.9
ANMO				IAmb	IAmb	06 10 30.6	
	comp=Z,7.3nm,1.1s						
ANMO	Albuquerque	83.78	51	IAMs_20	IAMs_20	06 39 24.5	
	comp=Z,1µm,20.0s						
TX31	Lajitas Ar. Si	83.80	57	P	P	06 10 19.4	-0.4
TX31				IAmb	IAmb	06 10 31.6	
	comp=Z,8.3nm,1.2s						
TX32	Lajitas Array	83.80	57	P	P	06 10 19.1	-0.7
TX32				IAmb	IAmb	06 10 31.6	
	comp=Z,8.3nm,1.2s						
TXAR	Lajitas Array	83.80	57	P	P	06 10 20.1	+0.4
	comp=Z,3.7nm,1.1s,baz=238,slow=5.3,SNR=19						
TXAR				LR	LR	06 40 15.8	
	comp=Z,482nm,19.8s,baz=0.0,slow=30						
TXAR	Lajitas Array	83.80	57	P	P	06 10 19.4	-0.4
DLMT	Dillon	84.18	40	P	P	06 10 21.2	-0.3
DLMT				IAmb	IAmb	06 10 32.7	
	comp=Z,11nm,1.1s						
BILL	Bilibino	84.32	354	P	P	06 10 21.7	+0.3
BILL				IAmb	IAmb	06 10 25.3	
	comp=Z,8.0nm,1.3s						
REDW	Red Top Meadow	84.34	42	P	P	06 10 22.6	+0.2
FXWY	Fox Creek	84.35	42	P	P	06 10 22.1	-0.4
FXWY				IAmb	IAmb	06 10 40.9	
	comp=Z,11nm,1.2s						
SNOW	Snow King Moun	84.45	42	P	P	06 10 21.9	-1.1
SNOW				IAmb	IAmb	06 10 33.8	
	comp=Z,12nm,1.1s						
DAWY	Dawson	84.61	16	P	P	06 10 23.4	+0.4
DAWY				IAmb	IAmb	06 10 31.5	
	comp=Z,7.6nm,1.0s						
DAWY				IAMs_20	IAMs_20	06 40 48.1	
	comp=Z,783nm,20.0s						
S22A	4UR Ranch, Cre	84.64	49	P	P	06 10 23.6	-0.6
S22A				IAmb	IAmb	06 10 30.1	
	comp=Z,7.0nm,1.1s						
QLMT	Earthquake Lak	84.66	41	P	P	06 10 23.3	-0.6
EGAK	Eagle	84.74	15	P	P	06 10 24.0	+0.4
YHB	Horse Butte	84.77	41	P	P	06 10 25.5	+1.0
FLWY	Flagg Ranch	84.77	42	P	P	06 10 24.2	-0.4
YPP	Pitchstone Pla	84.79	41	P	P	06 10 24.5	-0.2
YHL	Hebgen Lake	84.82	41	P	P	06 10 24.1	-0.8
RPSI	Rantau Prapat	84.84	274	P	P	06 10 23.2	-2.1
YMR	Madison River	84.87	41	P	P	06 10 24.7	-0.4
BW06	Boulder Array	84.91	43	P	P	06 10 25.9	+0.5
PD31	Pinedale Array	84.91	43	P	P	06 10 24.9	-0.4
PDAR	Pinedale Array	84.91	43	P	P	06 10 23.9	-1.4
	comp=Z,1.3nm,0.9s,baz=211,slow=2.7,SNR=8.2						
PDAR				LR	LR	06 40 51.8	
	comp=Z,449nm,21.0s,baz=258,slow=30						
PDAR	Pinedale Array	84.91	43	P	P	06 10 23.5	-1.8
H17A	Grant Village	84.99	41	P	P	06 10 25.7	0.0
H17A				IAmb	IAmb	06 10 37.5	
	comp=Z,7.1nm,1.1s						
COLD	Coldfoot	84.99	10	P	P	06 10 26.4	+1.5
YHH	Holmes Hill	85.00	41	P	P	06 10 26.3	+0.5
LKWY	Lake	85.18	41	P	P	06 10 26.9	+0.3
LKWY				IAmb	IAmb	06 10 39.2	
	comp=Z,11nm,1.2s						
LKWY				IAMs_20	IAMs_20	06 43 55.7	
	comp=Z,813nm,18.0s						
SDCO	Great Sand Dun	85.61	49	IAMs_20	IAMs_20	06 41 26.7	
	comp=Z,840nm,20.0s						
YNE	Yellowstone No	85.63	41	P	P	06 10 26.8	-2.0
RWWY	Rawlins	86.02	45	IAMs_20	IAMs_20	06 46 02.1	
	comp=Z,1µm,18.0s						
RLMT	Red Lodge	86.15	41	P	P	06 10 32.7	+1.3
RLMT				IAmb	IAmb	06 10 51.2	
	comp=Z,14nm,1.2s						
MSTX	Muleshoe	86.21	53	IAMs_20	IAMs_20	06 41 13.1	
	comp=Z,1µm,20.0s						
BMAR	Burnt Mountain	86.22	12	P	P	06 10 31.9	+0.9
Q24A	Divide	86.34	48	IAMs_20	IAMs_20	06 42 05.1	
	comp=Z,1µm,20.0s						
MAW	Mawson	86.37	199	LR	LR	06 46 32.7	
	comp=Z,700nm,19.4s,baz=92,slow=34						
HHC	Hu-ho-hao-te	86.55	314	*e*P	P	06 10 37.6	+4.3
HHC				S	S	06 21 10.3	+0.1
HHC				pmax	pmax		
	comp=Z,86nm,1.2s						
HHC				LR	LR		
	comp=Z,720nm,17.3s						
HHC				LR	LR		
	comp=Z,620nm,16.8s						
HHC				LR	LR		
	comp=Z,770nm,17.4s						
AMTX	Amarillo	87.38	53	IAMs_20	IAMs_20	06 41 51.1	
	comp=Z,942nm,19.0s						
USHA	Ushuaia	87.74	147	LR	LR	06 40 21.3	
	comp=Z,353nm,21.5s,baz=255,slow=29						
KMI	Kunming	87.86	297	P	P	06 10 40.2	0.0
KMI				pP	pP	06 10 43.0	+0.2
KMI				sP	pwP	06 10 45.5	-0.3
KMI				PP	PP	06 14 07.6	+1.2
KMI				S	S	06 21 17.5	-6.2
KMI				SS	SS	06 27 10.6	-0.7
KMI				pmax	pmax		
	comp=Z,12nm,0.6s						
KMI				pmax	pmax		
	comp=Z,130nm,4.6s						
KMI				LR	LR		
	comp=Z,230nm,10.6s						
KMI				LR	LR		
	comp=Z,400nm,16.4s						
KMI				LR	LR		
	comp=Z,560nm,20.3s						
KSCO	Kaye Shedlock'	88.18	49	IAMs_20	IAMs_20	06 42 31.7	
	comp=Z,934nm,20.0s						
ABTX	Abilene, Hawle	88.19	56	IAMs_20	IAMs_20	06 42 35.7	
	comp=Z,924nm,19.0s						
LAO	LASA Array	88.74	41	IAMs_20	IAMs_20	06 42 24.9	
	comp=Z,840nm,20.0s						
CD2	Chengdu	88.85	302	P	P	06 10 43.6	-0.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
RSSD	Black Hills	89.13	44	IAMs_20	IAMs_20	06 45 59.4	
	comp=Z,710nm,18.0s						
CMAR	Chiang Mai Arr	89.24	289	P	P	06 10 48.0	+1.4
	comp=Z,1.3nm,0.3s,baz=145,slow=5.2,SNR=8.9						
CMAR				LR	LR	06 46 33.9	
	comp=Z,270nm,21.2s,baz=115,slow=33						
CMAR	Chiang Mai Arr	89.24	289	P	P	06 10 46.8	+0.2
435B	Jarrell	89.25	58	IAMs_20	IAMs_20	06 44 03.8	
	comp=Z,765nm,20.0s						
INK	Inuvik	89.41	15	P	P	06 10 48.1	+1.9
	comp=Z,1.1nm,0.9s,baz=211,slow=5.9,SNR=3.2						
INK	Inuvik	89.41	15	P	P	06 10 47.9	+1.7
WMOK	Wichita Mounta	89.57	54	IAMs_20	IAMs_20	06 42 47.2	
	comp=Z,840nm,20.0s						
WHTX	Lake Whitney,	89.73	57	IAMs_20	IAMs_20	06 43 23.7	
	comp=Z,983nm,20.0s						
U32A	Winter Ranch,	89.95	52	IAMs_20	IAMs_20	06 42 53.9	
	comp=Z,931nm,21.0s						
LZH	Lanzhou	90.45	307	*e*P	P	06 10 53.8	+1.7
LZH				pP	pwP	06 10 58.1	+0.4
LZH				sP	sP	06 11 01.4	+5.8
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH				pmax	pmax		
	comp=Z,63nm,5.0s						
LZH				LR	LR		
	comp=Z,320nm,17.2s						
LZH				LR	LR		
	comp=Z,350nm,16.8s						
LZH				LR	LR		
	comp=Z,370nm,18.3s						
OKCFA	Oklahoma City	90.82	53	IAMs_20	IAMs_20	06 43 14.2	
	comp=Z,908nm,21.0s						
R32A	Long Quarter,	90.84	50	IAMs_20	IAMs_20	06 43 39.4	
	comp=Z,793nm,20.0s						
237A	Washetta, Mont	91.07	57	IAMs_20	IAMs_20	06 43 45.0	
	comp=Z,773nm,19.0s						
YKA	Yellowknife Ar	91.80	24	P	P	06 10 57.7	+0.2
	comp=Z,0.9nm,0.9s,baz=242,slow=4.3,SNR=9.7						
YKA				LR	LR	06 45 51.5	
	comp=Z,1µm,20.1s,baz=0.0,slow=31						
NATX	Nacogdoches	91.93	58	IAMs_20	IAMs_20	06 45 12.8	
	comp=Z,658nm,20.0s						
T35A	Sooner Cattle	92.02	52	IAMs_20	IAMs_20	06 45 28.7	
	comp=Z,1µm,20.0s						
PLCA	Paso Flores	92.02	133	LR	LR	06 43 57.8	
	comp=Z,193nm,20.9s,baz=251,slow=30						
BGNE	Belgrade	92.22	48	IAMs_20	IAMs_20	06 48 45.6	
	comp=Z,850nm,18.0s						
TUL1	Leonard	92.26	53	IAMs_20	IAMs_20	06 45 13.3	
	comp=Z,834nm,20.0s						
SONM	Songino Array	92.62	319	P	P	06 11 03.9	+2.1
	comp=Z,1.3nm,1.0s,baz=127,slow=3.6,SNR=7.5						
SONM				LR	LR	06 48 05.1	
	comp=Z,192nm,22.0s,baz=96,slow=33						
SONM	Songino Array	92.62	319	P	P	06 10 59.3	-2.5
SUSD	Miller	92.65	45	IAMs_20	IAMs_20	06 45 12.7	
	comp=Z,663nm,20.0s						
VNA3	Neumayer Olymp	92.90	176	P	P	06 11 05.7	+3.1
VNA2	Neumayer--Watz	93.36	177	P	P	06 11 08.4	+3.7
	baz=170,slow=3.6						
MDND	Maddock	93.36	41	IAMs_20	IAMs_20	06 46 08.0	
	comp=Z,704nm,21.0s						
U38A	Gravette	93.50	53	IAMs_20	IAMs_20	06 48 24.2	
	comp=Z,774nm,19.0s						
MIAR	Mount Ida	93.60	55	IAMs_20	IAMs_20	06 44 30.9	
	comp=Z,788nm,22.0s						
W39A	Magazine	93.62	55	IAMs_20	IAMs_20	06 44 33.3	
	comp=Z,838nm,20.0s						
ECSD	EROS Data Cent	94.03	46	IAMs_20	IAMs_20	06 45 22.2	
	comp=Z,813nm,22.0s						
TIXI	Tiksi	94.28	345	LR	LR	06 54 03.4	
	comp=Z,272nm,18.1s,baz=64,slow=36						
GTA	Gaotai	94.51	310	*e*P	P	06 11 12.6	+1.9
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
UALR	University of	94.64	55	IAMs_20	IAMs_20	06 45 24.4	
	comp=Z,821nm,20.0s						
U40A	Yellville	94.67	54	IAMs_20	IAMs_20	06 48 14.0	
	comp=Z,698nm,20.0s						
S39A	Bolivar	94.67	52	IAMs_20	IAMs_20	06 46 51.0	
	comp=Z,942nm,20.0s						
FCAR	Ozark Folk Cen	95.11	54	IAMs_20	IAMs_20	06 49 00.8	
	comp=Z,617nm,18.0s						
TLY	Talaya	95.57	322	LR	LR	06 50 01.4	
	comp=Z,253nm,20.9s,baz=116,slow=33						
AGMN	Agassiz Nation	95.88	42	IAMs_20	IAMs_20	06 48 54.8	
	comp=Z,717nm,18.0s						
LCAR	Lake Charles	95.92	54	IAMs_20	IAMs_20	06 46 49.2	
	comp=Z,760nm,20.0s						
CCM	Cathedral Cave	96.36	52	IAMs_20	IAMs_20	06 47 42.6	
	comp=Z,823nm,18.0s						
ULM	Lac du Bonnet	96.44	40	LR	LR	06 47 32.5	
	comp=Z,906nm,21.7s,baz=252,slow=31						
LPAR	Lepanto	96.47	55	IAMs_20	IAMs_20	06 48 04.9	
	comp=Z,942nm,20.0s						
ATAH	Atahualpa	96.49	99	LR	LR	06 45 00.4	
	comp=Z,581nm,20.8s,baz=261,slow=29						
NNA	Nana	96.54	104	LR	LR	06 47 37.5	
	comp=Z,82nm,18.1s,baz=252,slow=31						
OXF	Oxford	96.91	56	IAMs_20	IAMs_20	06 50 10.6	
	comp=Z,632nm,19.0s						
LNXT	Lenox	97.23	55	IAMs_20	IAMs_20	06 48 46.9	
	comp=Z,784nm,19.0s						
W45A	Hickory Valley	97.24	56	IAMs_20	IAMs_20	06 48 31.4	
	comp=Z,683nm,20.0s						
HALT	Halls	97.30	55	IAMs_20	IAMs_20	06 49 19.9	
	comp=Z,786nm,20.0s						
N41A	Harden Midland	97.31	50	IAMs_20	IAMs_20	06 50 32.6	
	comp=Z,798nm,19.0s						
L40A	Anamosa	97.38	49	IAMs_20	IAMs_20	06 48 01.2	
	comp=Z,954nm,20.0s						
T45A	Paducah	98.11	54	IAMs_20	IAMs_20	06 48 06.1	
	comp=Z,719nm,20.0s						
I40A	Norwalk	98.25	47	IAMs_20	IAMs_20	06 49 24.1	
	comp=Z,650nm,20.0s						
WVT	Waverly	98.54	55	IAMs_20	IAMs_20	06 47 32.8	
	comp=Z,894nm,21.0s						
EYMN	Ely	98.61	43	IAMs_20	IAMs_20	06 49 04.2	
	comp=Z,834nm,21.0s						
V48A	Smith Brothers	99.25	56	IAMs_20	IAMs_20	06 49 41.7	
	comp=Z,912nm,20.0s						
T47A	Sharon Grove	99.30	54	IAMs_20	IAMs_20	06 48 30.8	
	comp=Z,636nm,20.0s						
K43A	Burlington	99.61	48	IAMs_20	IAMs_20	06 50 10.2	
	comp=Z,970nm,21.0s						
CLTN	Cedars of Leba	99.72	55	IAMs_20	IAMs_20	06 48 32.9	
	comp=Z,794nm,20.0s						
COWI	Conover	99.77	45	IAMs_20	IAMs_20	06 53 01.0	
	comp=Z,692nm,19.0s						
P46A	Rosedale	99.78	52	IAMs_20	IAMs_20	06 49 30.3	
	comp=Z,904nm,20.0s						
D41A	Chassel	100.36	44	IAMs_20	IAMs_20	06 50 25.4	
	comp=Z,609nm,19.0s						
MNMC	Minye Minye	100.83	113	IAMs_20	IAMs_20	06 46 20.1	
	comp=Z,771nm,21.0s						
E43A	Lone Tree Farm	101.28	45	IAMs_20	IAMs_20	06 54 24.0	
	comp=Z,626nm,19.0s						
I45A	Fountain	101.37	47	IAMs_20	IAMs_20	06 51 24.8	
	comp=Z,849nm,19.0s						
AAM	Ann Arbor	102.93	49	IAMs_20	IAMs_20	06 55 39.2	
	comp=Z,716nm,19.0s						
ERPA	Erie	105.60	50	IAMs_20	IAMs_20	06 57 11.9	
	comp=Z,625nm,20.0s						
SADO	Sadowa	106.51	47	IAMs_20	IAMs_20	06 54 50.7	
	comp=Z,526nm,20.0s						
SSPA	Standing Stone	107.00	52	IAMs_20	IAMs_20	06 54 12.2	
	comp=Z,750nm,20.0s						
CBN	Corbin Frederi	107.12	54	IAMs_20	IAMs_20	06 55 34.8	
	comp=Z,812nm,20.0s						
J55A	Hilton	107.31	49	IAMs_20	IAMs_20	06 58 50.2	
	comp=Z,564nm,19.0s						
DELO	Deloro Mine	107.57	48	IAMs_20	IAMs_20	06 57 20.7	
	comp=Z,652nm,18.0s						
PECO	Prince Edward	107.97	48	IAMs_20	IAMs_20	06 54 53.4	
	comp=Z,784nm,20.0s						
MVL	Millersville	108.10	53	IAMs_20	IAMs_20	06 54 27.5	
	comp=Z,641nm,20.0s						
K58A	Earlville	108.86	50	IAMs_20	IAMs_20	06 54 22.2	
	comp=Z,769nm,22.0s						
L59A	Walton	109.27	50	IAMs_20	IAMs_20	06 54 12.0	
	comp=Z,818nm,22.0s						
NCB	Newcomb	109.97	48	IAMs_20	IAMs_20	06 56 33.3	
	comp=Z,647nm,20.0s						
KSCT	Kent School, K	110.40	51	IAMs_20	IAMs_20	06 56 39.1	
	comp=Z,673nm,20.0s						
FRNY	Flat Rock	110.46	48	IAMs_20	IAMs_20	06 59 33.2	
	comp=Z,687nm,18.0s						
LBNH	Lisbon	111.63	48	IAMs_20	IAMs_20	06 59 17.3	
	comp=Z,663nm,19.0s						
FFD	Franklin Falls	111.81	49	IAMs_20	IAMs_20	07 00 35.2	
	comp=Z,618nm,18.0s						
BRYW	Bryant College	111.86	51	IAMs_20	IAMs_20	06 58 19.7	
	comp=Z,650nm,20.0s						
M65A	Busby, Falmout	112.52	51	IAMs_20	IAMs_20	06 59 24.2	
	comp=Z,651nm,19.0s						
KSH	Kashi	112.69	307	PKP	PKiKP	06 16 28.6	+1.6
KSH				PP	PP	06 17 21.7	+7.2
KSH				PKS		06 20 04.1	
KSH				SS	SS	06 33 01.5	+4.6
KSH				LR	LR		
	comp=Z,490nm,11.3s						
KSH				LR	LR		
	comp=Z,1µm,14.9s						
KSH				LR	LR		
	comp=Z,970nm,18.5s						
WVL	Waterville	113.26	48	IAMs_20	IAMs_20	06 57 32.2	
	comp=Z,749nm,21.0s						
G65A	Princeton	114.73	47	IAMs_20	IAMs_20	07 01 24.1	
	comp=Z,672nm,19.0s						
EMMW	East Machias	114.82	48	IAMs_20	IAMs_20	06 59 48.7	
	comp=Z,675nm,20.0s						
BRG	Berggiesshubel	143.74	348	*e*PKP	PKiKP	06 17 29.2	+0.8
	comp=Z,3.9nm,1.1s						
BR131	Keskin Array S	143.97	318		PKPdf	06 17 26.9	+0.9
BRTR	Keskin Array B	143.97	318	PKP	PKPbc	06 17 24.7	+0.9
	comp=Z,3.3nm,0.9s,baz=117,slow=1.3,SNR=12						
BRTR	Keskin Array B	143.97	318		PKPab	06 17 22.6	-0.6
VRAC	Vranov	144.60	344	*e*PKP	PKPbc	06 17 25.4	+0.1
VYHS	Vyhne	144.70	341	*e*PKP	PKPdf	06 17 27.5	+0.7
JAVC	Velka Javorina	144.71	343	*e*PKP	PKPab	06 17 25.7	+0.1
KRUC	Moravsky	144.87	344	*e*PKP	PKPab	06 17 24.8	-1.3
MODS	Modra-Piesok	145.26	343	*e*PKP	PKPdf	06 17 28.8	+1.0
GRF	Grafenberg Arr	145.36	350	*e*PKPbc	PKPbc	06 17 26.9	-0.8
	baz=14,slow=3.0						
KHC	Kasperske Hory	145.47	348	*e*PKP	PKPbc	06 17 26.5	-1.6
KHC				*e*x	x	06 17 43.0	
KHC	Kasperske Hory	145.47	348		PKPbc	06 17 26.7	-1.4
GEC2	GERESS Array S	145.71	347		PKPdf	06 17 27.4	-1.2
GERES	GERESS Array B	145.71	347	PKPbc	PKPdf	06 17 28.3	-0.3
	comp=Z,2.0nm,0.8s,baz=7.8,slow=3.0,SNR=9.1						
GERES	GERESS Array B	145.71	347		PKPdf	06 17 27.0	-1.6
CONA	Conrad Observa	146.06	344	*i* PKPab	PKPdf	06 17 28.9	-0.3
	comp=Z,15nm,1.5s						
MOA	Molln	146.53	346	*i* PKPbc	PKPdf	06 17 29.4	-0.6
	comp=Z,36nm,1.5s						
ARSA	Arzberg	146.77	344	*i* PKPdf	PKPdf	06 17 28.4	-2.0
	comp=Z,4.1nm,0.8s						
SOKA	Soboth	147.43	344	*i* PKPdf	PKPdf	06 17 30.6	-1.0
	comp=Z,7.1nm,1.0s						
KBA	Koelnbreinsper	147.46	347	*i* PKPab	PKPbc	06 17 35.1	+0.8
	comp=Z,4.9nm,0.9s						
RETA	Reutte	147.58	350	*i* PKPdf	PKPdf	06 17 29.0	-2.8
	comp=Z,14nm,1.4s						
WATA	Walderalm	147.58	349	*i* pPKPbc	PKPab	06 17 37.2	+0.5
	comp=Z,3.9nm,0.4s						
WTTA	Wattenberg	147.64	349	*i* sPKPdf	PKPab	06 17 36.1	-0.8
	comp=Z,7.5nm,1.0s						
MOTA	Moosalm	147.66	349	*i* pPKPdf	PKPbc	06 17 34.4	-0.4
	comp=Z,16nm,1.3s						
SQTA	Sankt Quirin	147.76	349	*i* pPKPdf	PKPbc	06 17 34.5	-0.5
	comp=Z,9.1nm,1.2s						
MYKA	Terra Mystica	147.82	346	*i* PKPdf	PKPdf	06 17 29.3	-3.0
	comp=Z,23nm,1.7s						
DAVA	Damuels	147.91	351	*i* pPKPbc	PKPab	06 17 38.2	+0.3
	comp=Z,13nm,1.3s						
ABTA	Abfaltersbach	147.96	347	*i* PKPdf	PKPdf	06 17 31.0	-1.5
	comp=Z,2.7nm,0.6s						
FETA	Feichten	148.03	350	*i* PKPbc	PKPdf	06 17 33.6	+0.9
	comp=Z,11nm,1.5s						
BNI	Bardonecchia	150.51	354		PKiKP	06 17 43.7	+0.9
TOA0	Torodi Ar. Sit	177.29	156		PKPab	06 19 45.8	+0.1
TORD	Torodi Ar. Bea	177.29	156	PKP	PKPdf	06 18 03.3	+1.9
	comp=Z,1.2nm,1.0s,baz=29,slow=3.3,SNR=3.3						
TORD	Torodi Ar. Bea	177.29	156		PKPdf	06 18 02.4	+1.0

*NEIC **07** 06:16:20.8±2.1, 19°.34N±0°.03×67°.81W±0°.04, h8^{km}±5^{km},*
Error ellipse: s-maj=6.4km s-min=3.3km az=55.0
*IDC **07** 06:16:20.2±1.0, 19°.45N×67°.84W, h0^{km}, mb3.5/6,*
mb1 3.9/9, mb1mx3.6/51, mbtmp3.8/9, ML3.4/3, MS2.9/1,
Ms1 2.9/1, ms1mx2.5/33, Error ellipse: s-maj=33.7km
s-min=18.6km az=68.0
*RSPR **07** 06:16:21.8, 19°.54N×67°.95W, h30^{km}±22^{km}, MD3.9/13*
*OSPL **07** 06:16:22.0±1.1, 19°.44N×67°.68W, h6^{km}±15^{km}, ML4.0*
ISC 07 06:16:22.2±1.7**, 19°.31N**±0°.05×**67°.81W**±0°.03**, h17**^{km}±11^{km}**,**
n103, σ**1^{s}16**/122**, mb3.6**/7**, 20C, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.96	214	⇑*e*P	Pb	06 16 39.3	-1.1
PCDR	Punta Cana, DR	0.96	214	⇑*e*P	Pb	06 16 39.4	-1.1
PCDR				*e*S	Sb	06 16 53.6	+0.7
PCDR	Punta Cana, DR	0.96	214	*e*S	Sb	06 16 53.0	+0.1
PCDR	Punta Cana, DR	0.96	214		Pb	06 16 38.8	-1.6
PCDR					Sb	06 16 52.1	-0.8
AGPR	Aguadilla, PR	1.07	142	*i* P	Pb	06 16 41.5	-0.8
AGPR				*e*S	Sb	06 16 56.4	+0.3
AGPR				IAML		06 16 58.4	
	comp=Z,3µm,0.3s						
AGPR	Aguadilla, PR	1.07	142	⇑*e*P	Pn	06 16 42.5	0.0
AGPR	Aguadilla, PR	1.07	142	*e*S	Sg	06 16 58.6	+1.5
AGPR	Aguadilla, PR	1.07	142		Pb	06 16 41.3	-1.1
AGPR					Sg	06 16 57.8	+0.7
AGPR	Aguadilla, PR	1.07	142		Pb	06 16 42.1	-0.2
MPR	Mayaguez	1.27	150	*i* P	Pn	06 16 44.6	-0.6
MPR				*e*S	Sb	06 17 02.3	+0.5
MPR				IAML		06 17 07.0	
	comp=Z,941nm,0.6s						
MPR	Mayaguez	1.27	150	⇑*e*P	Pb	06 16 45.6	-0.1
MPR	Mayaguez	1.27	150	⇑*e*P	Pb	06 16 45.7	0.0
MPR	Mayaguez	1.27	150	*e*S	Sg	06 17 03.8	+0.4
MPR	Mayaguez	1.27	150		Pn	06 16 44.3	-0.8
MPR					Sg	06 17 03.5	+0.2
LSP	Las Mesas	1.32	149	⇑*e*P	Pb	06 16 46.7	0.0
LSP	Las Mesas	1.32	149	*e*S	Sg	06 17 05.5	+0.4
LSP	Las Mesas	1.32	149		Pb	06 16 46.7	0.0
LSP					Sg	06 17 05.5	+0.4
AOPR	Arecibo Observ	1.39	134	⇑*e*P	Pn	06 16 46.8	-0.1
AOPR	Arecibo Observ	1.39	134	*e*S	Sb	06 17 06.2	+1.0
AOPR	Arecibo Observ	1.39	134		Pn	06 16 46.7	-0.2
AOPR					Sb	06 17 05.4	+0.1
CRPR	Cabo Rojo, PR	1.46	153	⇑*e*P	Pb	06 16 48.5	-0.4
CRPR	Cabo Rojo, PR	1.46	153	*e*S	Sb	06 17 08.8	+1.5
CRPR	Cabo Rojo, PR	1.46	153		Pn	06 16 47.1	-0.7
CRPR					Sg	06 17 10.3	+0.9
EMPR	Esperanza - Ma	1.47	124	⇑*e*P	Pb	06 16 48.7	-0.5
EMPR	Esperanza - Ma	1.47	124	*e*S	Sg	06 17 08.7	-1.1
EMPR	Esperanza - Ma	1.47	124		Pb	06 16 49.0	-0.2
EMPR					Sb	06 17 08.3	+0.7
UUPR	Utuado, UPR, P	1.48	135		Pb	06 16 48.9	-0.4
UUPR					Sg	06 17 09.4	-0.6
MLPR	Magueyes Islan	1.52	151	⇑*e*P	Pb	06 16 49.5	-0.6
MLPR	Magueyes Islan	1.52	151	*e*S	Sb	06 17 10.3	+1.2
MLPR	Magueyes Islan	1.52	151		Pn	06 16 48.2	-0.5
MLPR					Sb	06 17 09.8	+0.7
DR12	Loma Pena Alta	1.57	251		Pn	06 16 48.7	-0.7
GBPR	Guanica, Bosqu	1.60	146	⇑*e*P	Pb	06 16 50.6	-0.7
GBPR	Guanica, Bosqu	1.60	146	*e*S	Sb	06 17 12.7	+1.4
GBPR	Guanica, Bosqu	1.60	146		Pb	06 16 50.6	-0.7
GBPR					Sb	06 17 12.7	+1.4
OBIP	Obispado Ponce	1.71	138	⇑*e*P	Pn	06 16 51.6	+0.4
OBIP	Obispado Ponce	1.71	138	*e*S	Sb	06 17 14.2	-0.1
OBIP	Obispado Ponce	1.71	138		Pn	06 16 50.7	-0.5
OBIP					Sb	06 17 13.6	-0.7
ICMP	Isla Caja de M	1.87	139	⇑*e*P	Pn	06 16 54.1	+0.6
ICMP	Isla Caja de M	1.87	139	*e*S	Sb	06 17 19.3	+0.2
ICMP	Isla Caja de M	1.87	139		Pn	06 16 52.8	-0.7
ICMP					Sb	06 17 18.9	-0.2
GCPR	Guaynabo City	1.92	121	⇑*e*P	Pn	06 16 54.5	+0.4
GCPR	Guaynabo City	1.92	121		Pn	06 16 54.6	+0.5
SJG	San Juan	1.98	127	*e*P	Pb	06 16 58.5	+0.7
SJG	San Juan	1.98	127		Pn	06 16 54.9	0.0
IGPR	InterUniversit	2.10	129	⇑*e*P	Pn	06 16 57.5	+0.9
IGPR				*e*S	Sb	06 17 24.0	-1.7
IGPR	InterUniversit	2.10	129	⇑*e*P	Pn	06 16 56.9	+0.2
IGPR	InterUniversit	2.10	129		Pn	06 16 57.6	+0.9
CBYP	Canovanas	2.12	119		Pn	06 16 56.9	-0.1
PDPR	Patillas Dam,	2.13	127		Pn	06 16 56.9	-0.2
SDD	Santo Domingo	2.16	247	*i* P	Pn	06 16 59.0	+1.5
SDD				IAML		06 17 27.4	
	comp=Z,265nm,0.5s						
SDD	Santo Domingo	2.16	247		Pn	06 16 58.2	+0.7
BON1	Bonao	2.47	262	*i* P	Pn	06 17 02.4	+0.6
BON1				*e*S	Sn	06 17 33.3	+1.8
BON1				IAML		06 17 45.4	
	comp=Z,1µm,0.6s						
BANI	BANI	2.58	250		Pn	06 17 04.8	+1.5
CUPR	Culebra, Puert	2.60	112	⇑*e*P	Pn	06 17 03.1	-0.4
CUPR	Culebra, Puert	2.60	112		Pn	06 17 02.9	-0.6
SC01	Santiago de lo	2.75	273	*i* P	Pn	06 17 07.5	+1.9
SC01				IAML		06 18 00.5	
	comp=Z,616nm,0.8s						
SC01	Santiago de lo	2.75	273		Pn	06 17 07.3	+1.6
STVI	Saint Thomas	2.87	109	⇑*e*P	Pn	06 17 06.9	-0.3
STVI	Saint Thomas	2.87	109	⇑*e*P	Pn	06 17 07.0	-0.3
STVI	Saint Thomas	2.87	109		Pn	06 17 06.5	-0.8
TBVI	Tortola	3.15	106	⇑*e*P	Pn	06 17 10.6	-0.6
TBVI	Tortola	3.15	106		Pn	06 17 10.6	-0.6
CDVI	St. Croix	3.28	118		Pn	06 17 14.6	+1.7
SDDR	Presa de Saban	3.30	265	*i* P	Pn	06 17 14.4	+1.1
SDDR				IAML		06 18 11.9	
	comp=Z,408nm,0.6s						
SDDR	Presa de Saban	3.30	265		Pn	06 17 13.8	+0.5
GRTK	Grand Turk	3.81	306	Pn	Pn	06 17 20.7	+0.6
SMRT	St. Maarten	4.66	105	Pn	Pn	06 17 30.8	-1.1
SKI	Saint Kitts	5.21	111	Pn	Pn	06 17 39.4	0.0
URIC	Uribia, Colomb	8.57	209	Pn	Pn	06 18 24.9	-0.7
PCRV	Puerto La Cruz	9.59	161	Pn	Pn	06 18 42.4	+2.8
	comp=Z,1.7nm,0.3s,baz=339,slow=8.8,SNR=7.4						
PCRV				Sn	Sn	06 20 25.9	-1.2
	comp=Z,0.6nm,0.3s,baz=164,slow=19,SNR=3.5						
PLCV	Puerto La Cruz	9.62	161		Pn	06 18 42.4	+2.4

PLCV					Sn	06 20 25.9	-1.8
SDV	Santo Domingo	10.72	195	Pn	Pn	06 18 56.3	+1.1
	comp=Z,2.4nm,0.3s,baz=337,slow=15,SNR=34						
SDV				LR	LR	06 23 45.3	
	comp=Z,62nm,18.5s,baz=60,slow=41						
SDV	Santo Domingo	10.72	195	eP	Pn	06 18 56.2	+0.9
SDV	Santo Domingo	10.72	195		Pn	06 18 55.9	+0.6
CODC	Agustn Codazz	10.80	211	eP	Pn	06 18 53.4	-2.7
SMLC	San Martn de	12.08	211	eP	Pn	06 19 10.8	-2.9
PAMC	Pamplona, Colo	12.81	202	eP	Pn	06 19 21.3	-2.9
BBSR	BB Station	13.30	12	Pn	Pn	06 19 29.4	-0.9
ZARC	Zaragoza, Cauc	13.60	211	eP	Pn	06 19 31.7	-2.7
UREC	San Jos de Ur	13.72	214	eP	Pn	06 19 36.6	+0.4
PTBC	PUERTO BERRIO,	14.25	208	eP	Pn	06 19 44.3	+0.9
RUSC	La Rusia	14.29	202	eP	Pn	06 19 40.8	-3.7
RUSC	La Rusia	14.29	202		Pn	06 19 42.9	-1.6
HELC	Santa Helena	15.05	211	eP	Pn	06 19 54.7	+0.1
CBOC	Ciudad Bolivar	15.57	212	eP	Pn	06 20 01.0	-0.3
ROSC	El Rosal	15.72	205	Pn	P	06 20 06.6	-0.8
	comp=Z,1.1nm,0.3s,baz=51,slow=13,SNR=11						
ROSC	El Rosal	15.72	205	eP	Pn	06 20 04.5	+1.0
ROSC	El Rosal	15.72	205	P	P	06 20 07.1	-0.3
ROSC				IAmb	IAmb	06 20 08.9	
	comp=Z,12nm,0.8s						
SOLC	Bahia Solano	16.01	217	eP	P	06 20 12.8	+2.6
PLMC	San Jos del P	16.53	211	eP	Pn	06 20 12.8	-0.7
ORTC	Ortega, Tolima	16.95	206	eP	Pn	06 20 17.7	-1.0
YOTC	Yotoco, Valle	17.37	210	eP	Pn	06 20 22.6	-1.5
FLOC	Florencia	19.22	204	P	P	06 20 45.5	-0.2
PTGA	Pitinga	21.36	158	P	P	06 21 11.6	+2.7
	comp=Z,2.3nm,0.5s,baz=308,slow=19,SNR=6.8						
PTGA	Pitinga	21.36	158	P	P	06 21 11.4	+2.5
PTGA				IAmb	IAmb	06 21 26.4	
	comp=Z,7.0nm,1.2s						
OTAV	Otavalo	21.64	210	P	P	06 21 11.6	-0.8
OTAV				IAmb	IAmb	06 21 24.7	
	comp=Z,5.1nm,1.1s						
TXAR	Lajitas Array	34.04	294	P	P	06 23 05.2	-0.6
	comp=Z,0.3nm,0.7s,baz=109,slow=8.4,SNR=5.0						
TXAR	Lajitas Array	34.04	294	P	P	06 23 04.8	-1.0
SIV	San Ignacio	35.70	169	P	P	06 23 20.7	+0.7
	comp=Z,0.7nm,0.8s,baz=343,slow=8.1,SNR=3.9						
YKA	Yellowknife Ar	53.74	335	P	P	06 25 42.6	-0.6
	comp=Z,0.2nm,0.5s,baz=112,slow=7.9,SNR=4.2						
TORD	Torodi Ar. Bea	66.65	84	P	P	06 27 13.1	+0.6
	comp=Z,0.9nm,0.8s,baz=280,slow=6.5,SNR=4.6						
ILAR	Eielson Array	68.05	333	P	P	06 27 21.3	+0.7
	comp=Z,0.3nm,0.8s,baz=108,slow=4.2,SNR=5.1						
ILAR	Eielson Array	68.05	333	P	P	06 27 19.8	-0.7

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*INET **07** 06:18:07.6, 12°.39N×87°.82W, h64^{km}, MD2.9, ML2.8*
*SNET **07** 06:18:09.1±0.8, 12°.54N×87°.82W, h57^{km}±10^{km}, ML3.2*
ISC 07 06:18:10.0±1.8**, 12°.58N**±0°.09×**87°.80W**±0°.07**, h61**^{km}±24^{km}**,**
n14, σ0^{s}.67/26**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	0.69	357	eP	Pn	06 18 23.8	-0.5
CNCH				eS	Sn	06 18 35.5	+0.7
LCND	La Caada	0.73	353	eP	Pn	06 18 24.2	-0.4
LCND				eS	Sn	06 18 36.2	+0.8
LCND				IAML		06 18 42.1	
	comp=Z,438nm,0.3s						
JUCU	Jucuar¡n	0.80	327	eP	Pn	06 18 24.6	-1.0
JUCU				eS	Sn	06 18 37.0	-0.1
BLLM	Bellamira	0.96	333	eP	Pn	06 18 27.0	-0.6
BLLM				eS	Sn	06 18 41.3	+0.7
LCY	Lacayo	0.97	330	eP	Pn	06 18 27.1	-0.7
LCY				eS	Sn	06 18 41.6	+0.7
PACA	Pacayal	1.02	330	eP	Pn	06 18 28.2	-0.3
PACA				eS	Sn	06 18 43.2	+1.0
PACA				IAML		06 18 48.6	
	comp=Z,2μm,0.1s						
ALJI	Alcalda de J	1.06	315	eP	Pn	06 18 28.1	-0.7
ALJI				eS	Sn	06 18 42.9	+0.1
TECA	Tecapa	1.14	323	eP	Pn	06 18 29.6	-0.4
TECA				eS	Sn	06 18 45.6	+0.6
FAGO	Alcalda de S	1.15	345	eP	Pn	06 18 29.4	-0.7
FAGO				eS	Sn	06 18 45.4	+0.4
COEB	Comit de Eme	1.16	322	eP	Pn	06 18 29.9	-0.4
COEB				eS	Sn	06 18 45.9	+0.5
COEG	Centro de Oper	1.48	314	eP	Pn	06 18 34.1	-0.3
COEG				eS	Sn	06 18 53.9	+1.0
COEG				IAML		06 18 56.7	
	comp=Z,125nm,0.3s						
TGUH	Tegucigalpa,Un	1.55	19	eP	Pn	06 18 34.6	-1.0
TGUH	Tegucigalpa,Un	1.55	19	eP	Pn	06 18 35.6	0.0
TGUH				eS	Sn	06 18 55.0	+0.2
JTS	Las Juntas de	3.60	129	eP	Pn	06 19 03.2	-0.2

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*IDC **07** 06:19:37.5±2.0, 20°.30S×177°.62W, h508^{km}±28^{km}, mb3.3/6, mb1 3.5/8, mb1mx3.3/41, mbtmp4.2/8, Error ellipse: s-maj=35.3km s-min=16.1km az=141.0*
*NEIC **07** 06:19:39.2±1.5, 20°.3S±0°.1×177°.6W±0°.1, h529^{km}±9^{km}, mb4.2/16, Error ellipse: s-maj=22.5km s-min=17.1km az=150.0*
ISC 07 06:19:40.1±0.6**, 20°.2S**±0°.1×**177°.54W**±0°.10**, h550**^{km}**, n31,**
σ1^{s}.56/34**, mb4.1**/13**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.84	300	P	P	06 21 07.6	-1.2
NIUE	Niue	7.26	82	P	P	06 21 29.8	-0.8
AFI	Afiamalu	8.34	42	P	P	06 21 40.5	-0.8
	2.4nm,0.3s,baz=187,slow=8.1,SNR=2.6						
AFI				S	S	06 23 17.0	-3.7
	7.9nm,0.3s,baz=310,slow=17,SNR=6.3						
AFI	Afiamalu	8.34	42	P	P	06 21 39.9	-1.4
DZM	Mont Dzumac	15.06	260		P	06 22 50.3	0.0
KNTN	Kanton	18.23	19	P	P	06 23 22.2	+2.1
URZ	Urewera	18.59	193	P	P	06 23 20.9	-2.3
	1.3nm,0.3s,baz=292,slow=2.6,SNR=10						
URZ	Urewera	18.59	193	P	P	06 23 20.4	-2.7
URZ				IAmb	IAmb	06 23 23.1	
	comp=Z,6.5nm,1.0s						
BKZ	Black Stump Fm	19.59	194	P	P	06 23 30.0	-2.4
EIDS	Eidsvold	29.34	254	P	P	06 24 58.9	-0.1
EIDS				IAmb	IAmb	06 25 16.8	
	comp=Z,9.0nm,1.2s						
COEN	Coen	37.99	273	P	P	06 26 11.9	+0.1
COEN				IAmb	IAmb	06 26 20.2	
	comp=Z,13nm,1.3s						
STKA	Stephens Creek	38.30	244	P	P	06 26 12.6	-1.6
	comp=Z,0.9nm,0.4s,baz=63,slow=9.0,SNR=3.8						
STKA	Stephens Creek	38.30	244	P	P	06 26 13.7	-0.4
BBOO	Buckleboo	43.06	243	P	P	06 26 50.6	-1.3
BBOO				IAmb	IAmb	06 27 04.5	
	comp=Z,14nm,1.1s						
AS31	Alice Springs	45.00	256	P	P	06 27 06.9	-0.2
AS31				PcP	PcP	06 28 36.5	0.0
ASAR	Alice Springs	45.01	256	P	P	06 27 06.8	-0.4
	comp=Z,4.3nm,0.5s,baz=95,slow=7.6,SNR=89						
ASAR	Alice Springs	45.01	256	P	P	06 27 06.9	-0.2
ASAR				PcP	PcP	06 28 37.2	+0.8
WB0	Warramunga Arr	45.04	262	P	P	06 27 07.0	-0.5
WB0				IAmb	IAmb	06 27 07.3	
	comp=Z,4.3nm,0.6s						
WB2	Warramunga Arr	45.06	262	P	P	06 27 07.0	-0.5
WB2				IAmb	IAmb	06 27 08.2	
	comp=Z,7.0nm,1.1s						
WRA	Warramunga Arr	45.07	262	P	P	06 27 07.0	-0.6
	comp=Z,1.7nm,0.3s,baz=96,slow=7.6,SNR=66						
WRA	Warramunga Arr	45.07	262	P	P	06 27 07.1	-0.6
FORT	Forrest	49.81	246	P	P	06 27 42.7	-0.2
FORT				IAmb	IAmb	06 28 00.6	
	comp=Z,17nm,0.9s						
KNRA	Kununurra	51.11	266	P	P	06 27 52.9	+0.3
KNRA				IAmb	IAmb	06 28 00.5	
	comp=Z,7.6nm,1.1s						
FITZ	Fitzroy Crossi	53.49	262	P	P	06 28 10.4	+0.7
	comp=Z,4.1nm,1.2s,baz=80,slow=6.1,SNR=4.7						
FITZ	Fitzroy Crossi	53.49	262	P	P	06 28 10.2	+0.5
FITZ				IAmb	IAmb	06 28 13.2	
	comp=Z,12nm,1.4s						
QSPA	South Pole Qui	69.87	180	P	P	06 29 57.4	+1.7
COCO	West Island	81.83	260	P	P	06 31 03.9	+1.3
TXAR	Lajitas Array	86.53	57	P	P	06 31 29.1	+3.6
	comp=Z,0.2nm,0.7s,baz=224,slow=3.8,SNR=3.5						
TXAR	Lajitas Array	86.53	57	P	P	06 31 28.5	+3.0
ILAR	Eielson Array	87.92	13	P	P	06 31 31.1	+0.1
	comp=Z,0.3nm,0.7s,baz=198,slow=5.3,SNR=3.0						
BFO	Black Forest	151.53	352	PKPbc	PKiKP	06 38 31.9	-0.6

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*RSNC **07** 06:20:46.5±0.7, 7°.87N×72°.06W, h1^{km}±3^{km}, ML3.1, Mw3.4*
*IDC **07** 06:20:48.2±2.4, 7°.84N×72°.05W, h35^{km}±20^{km}, mb3.3/5, mb1 3.6/7, mb1mx3.4/32, mbtmp3.5/7, ML1.9/1, Error ellipse: s-maj=21.0km s-min=13.5km az=136.0*
ISC 07 06:20:44.2±1.4**, 7°.86N**±0°.03×**72°.06W**±0°.03**, h1**^{km}±10^{km}**,**
n26, σ1^{s}.66/46**, mb3.6**/5**, 1C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAMC	Pamplona, Colo	0.82	231⇓	eP	Pg	06 20 59.9	0.0
PAMC				eS	Sg	06 21 09.8	-0.7
PAMC				i		06 21 10.9	
	comp=Z,372nm,0.3s						
OCAC	Ocana	1.30	287	eP	Pg	06 21 08.9	-0.3
OCAC				eS	Sn	06 21 27.9	0.0
OCAC				i		06 21 32.3	
	comp=Z,530nm,0.3s						
TAMC	Tame, Arauca	1.44	169⇑	eP	Pn	06 21 11.9	+0.5
TAMC				eS	Sn	06 21 31.9	+1.0
TAMC				i		06 21 33.9	
	comp=Z,338nm,0.3s						
BARC	Barichara	1.68	222	eP	Pn	06 21 15.9	+1.0
BARC				eS	Sb	06 21 38.8	+1.0
BARC				i		06 21 42.2	
	comp=Z,443nm,0.4s						
SDV	Santo Domingo	1.74	54	Pn	Pb	06 21 17.3	+0.3
	comp=Z,47nm,0.3s,baz=223,slow=7.6,SNR=112						
SDV				Sn	Sb	06 21 39.5	-0.1
	comp=Z,59nm,0.3s,baz=40,slow=15,SNR=8.5						
SDV	Santo Domingo	1.74	54	eP	Pb	06 21 17.1	0.0
SDV				eS	Sb	06 21 40.0	+0.5
SDV				i		06 21 48.5	
	comp=Z,306nm,0.5s						
RUSC	La Rusia	2.20	208	eP	Pn	06 21 23.3	+1.0
RUSC				eS	Sb	06 21 52.8	-0.3
RUSC				i		06 21 58.3	
	comp=Z,72nm,0.4s						
SMLC	San Martn de	2.20	295	eP	Pn	06 21 22.6	+0.7
SMLC				eS	Sb	06 21 51.3	-1.3
SMLC				i		06 21 54.9	
	comp=Z,129nm,0.2s						
CODC	Agustn Codazz	2.48	327	eP	Pn	06 21 26.8	+1.1
CODC				eS	Sn	06 21 57.5	+0.8
CODC				i		06 22 05.1	
	comp=Z,57nm,0.6s						
PTBC	PUERTO BERRIO,	2.71	241	eP	Pn	06 21 29.1	+0.1
PTBC				eS	Sn	06 22 04.4	+1.9
PTBC				i		06 22 09.1	
	comp=Z,152nm,0.4s						
ZARC	Zaragoza, Cauc	2.80	263	eP	Pn	06 21 31.9	+1.8
ZARC				eS	Sn	06 22 05.6	+1.1
ZARC				i		06 22 19.8	
	comp=Z,75nm,0.8s						
SPBC	San Pablo de B	2.97	223	eP	Pn	06 21 33.8	+1.3
SPBC				eS	Sn	06 22 09.9	+1.2
SPBC				i		06 22 21.4	
	comp=Z,39nm,0.7s						
UREC	San Jos de Ur	3.44	269	eP	Pn	06 21 41.4	+2.4
UREC				eS	Sb	06 22 25.2	-3.2
UREC				i		06 22 35.2	
	comp=Z,38nm,0.7s						
CHIC	Chingaza	3.61	208	eP	Pn	06 21 42.3	+0.6
CHIC				eS	Sb	06 22 30.6	-3.0
CHIC				i		06 22 52.9	
	comp=Z,17nm,0.4s						
SJCC	San Jacinto, C	3.69	304	eP	Pn	06 21 45.0	+2.5
SJCC				eS	Sn	06 22 30.0	+3.3
SJCC				i		06 22 35.2	
	comp=Z,21nm,0.5s						
ROSC	El Rosal	3.75	217	Pn	Pn	06 21 45.4	+1.9
	comp=Z,2.1nm,0.3s,baz=52,slow=19,SNR=5.1						
ROSC				Pg	Pg	06 21 55.9	-0.1
	comp=Z,3.5nm,0.3s,baz=38,slow=22,SNR=6.9						
ROSC				Lg	Lg	06 22 48.4	
	comp=Z,6.0nm,0.3s,baz=55,slow=21,SNR=4.0						
ROSC	El Rosal	3.75	217	eP	Pn	06 21 45.3	+1.8
ROSC				eS	Sb	06 22 41.6	+4.1
ROSC				i		06 23 05.7	
	comp=Z,18nm,0.5s						
HELC	Santa Helena	3.82	245	eP	Pn	06 21 45.7	+1.2
HELC				eS	Sn	06 22 32.1	+1.8
HELC				i		06 22 45.9	
	comp=Z,56nm,0.4s						
PCRV	Puerto La Cruz	7.69	72	Pn	Pn	06 22 39.8	+2.5
	comp=Z,0.9nm,0.3s,baz=254,slow=7.4,SNR=4.9						
PCRV				Sn	Sn	06 24 04.8	-0.3
	comp=Z,1.6nm,0.3s,baz=313,slow=22,SNR=7.0						
LPAZ	La Paz	24.30	171	P	P	06 26 03.8	-0.3
	comp=Z,0.8nm,0.6s,baz=322,slow=6.7,SNR=3.7						
SIV	San Ignacio	26.07	155	P	P	06 26 18.8	-0.7
	comp=Z,1.7nm,0.9s,baz=18,slow=8.5,SNR=6.5						
TXAR	Lajitas Array	36.59	310	P	P	06 27 52.0	-0.2
	comp=Z,0.2nm,0.7s,baz=133,slow=10.0,SNR=2.4						
YKA	Yellowknife Ar	62.67	339	P	P	06 31 09.3	-1.0
	comp=Z,0.4nm,0.7s,baz=127,slow=7.1,SNR=7.2						
TORD	Torodi Ar. Bea	72.50	79	P	P	06 32 11.0	-2.3
	comp=Z,0.3nm,0.8s,baz=224,slow=6.0,SNR=2.4						
ASAR	Alice Springs	150.57	235	PKPbc	PKPdf	06 40 35.6	+2.2
	comp=Z,0.4nm,0.7s,baz=108,slow=3.0,SNR=3.0						
WRA	Warramunga Arr	151.75	242	PKPbc	PKPbc	06 40 39.3	-2.3
	comp=Z,1.6nm,0.7s,baz=110,slow=2.6,SNR=5.0						
WRA				PKPab	PKPab	06 40 49.5	-1.0
	comp=Z,0.4nm,0.3s,baz=293,slow=18,SNR=5.4						

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*IDC **07** 06:27:54.4±2.6, 7°.16S×129°.13E, h131^{km}±29^{km}, mb3.6/5, mb1 4.0/9, mb1mx3.7/37, mbtmp4.2/9, Error ellipse: s-maj=41.4km s-min=15.5km az=77.0*
*NEIC **07** 06:27:56.1±1.8, 7°.03S±0°.07×129°.30E±0°.06, h152^{km}±10^{km}, mb4.5/12, Error ellipse: s-maj=11.2km s-min=6.9km az=151.0*
ISC 07 06:27:55.3±0.5**, 7°.12S**±0°.05×**129°.29E**±0°.06**, h150**^{km}**, n44,**
σ2^{s}.07/50**, mb4.0**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	2.17	113		Pn	06 28 35.5	+3.0
SAUI				Sn	Sn	06 29 04.1	+3.1
FAKI	Fak Fak	5.11	35		Pn	06 29 10.0	-0.2
FAKI				Sn	Sn	06 30 05.8	-2.8
SOEI	Soe	5.62	242	Pn	Pn	06 29 18.7	+1.6
SOEI					Sn	06 30 19.3	-1.7
MTN	Manton Dam	5.97	162	Pn	Pn	06 29 22.9	+1.2
SIJI	Sorong	6.51	18	P	Pn	06 29 29.3	+0.4
	4.0nm,0.3s,baz=220,slow=23,SNR=23						
SIJI				S	Sn	06 30 37.5	-4.8
	6.0nm,0.3s,baz=236,slow=23,SNR=8.3						
KNRA	Kununurra	8.52	183		Pn	06 29 55.8	0.0
FITZ	Fitzroy Crossi	11.48	198	P	Pn	06 30 33.1	-1.8
	2.6nm,0.3s,baz=28,slow=11,SNR=50						
FITZ				S	Sn	06 32 32.8	-9.1
	1.7nm,0.3s,baz=72,slow=19,SNR=5.1						
FITZ	Fitzroy Crossi	11.48	198		Pn	06 30 33.3	-1.6
WB0	Warramunga Arr	13.52	159		Pn	06 30 59.2	-2.0
WRAB	Tennant Creek	13.65	159	P	Pn	06 31 02.1	-0.8
WRA	Warramunga Arr	13.66	159	P	Pn	06 31 01.1	-1.9
	3.4nm,0.3s,baz=336,slow=13,SNR=85						
WRA				S	Sn	06 33 27.2	-7.1
	4.9nm,0.3s,baz=334,slow=23,SNR=11						
WRA	Warramunga Arr	13.66	159	P	Pn	06 31 00.6	-2.4
WB2	Warramunga Arr	13.66	159		Pn	06 31 01.3	-1.7
COEN	Coen	15.24	118	P	P	06 31 24.9	+0.5
COEN				IAmb	IAmb	06 31 37.7	
	comp=Z,92nm,1.9s						
PSA00	Pilbara Seismi	17.02	211	P	Pn	06 31 46.1	+1.5
PSA00				IAmb	IAmb	06 32 06.5	
	comp=Z,36nm,1.4s						
AS31	Alice Springs	17.04	165	P	Pn	06 31 45.8	+1.0
AS31				IAmb	IAmb	06 31 49.3	
	comp=Z,5.8nm,0.6s						
ASAR	Alice Springs	17.04	165	P	P	06 31 45.6	+1.4
	comp=Z,2.3nm,0.3s,baz=344,slow=9.2,SNR=140						
ASAR				S	S	06 34 47.5	-6.8
	comp=Z,0.7nm,0.3s,baz=344,slow=18,SNR=7.2						
ASAR	Alice Springs	17.04	165	P	Pn	06 31 46.3	+1.5
SBUM	Sibu	19.51	299	P	Pn	06 32 14.7	+0.8
CISI	Cisompet, Garu	21.30	267	P	P	06 32 31.1	+0.6
CISI				IAmb	IAmb	06 32 31.4	
	comp=Z,28nm,0.6s						
FORT	Forrest	23.57	183	P	P	06 32 54.0	+1.7
FORT				IAmb	IAmb	06 32 56.0	
	comp=Z,26nm,0.9s						
BBOO	Buckleboo	26.33	167	P	P	06 33 17.8	+0.5
STKA	Stephens Creek	27.18	157	P	P	06 33 26.4	+1.5
	comp=Z,1.4nm,0.4s,baz=324,slow=8.9,SNR=8.9						
STKA	Stephens Creek	27.18	157	P	P	06 33 26.5	+1.5
CMAR	Chiang Mai Arr	39.27	311	P	P	06 35 10.4	+0.8
	comp=Z,1.6nm,0.6s,baz=131,slow=5.1,SNR=7.9						
INCN	Inchon	44.44	357	P	P	06 35 51.2	-0.2
ODAN	Odare	52.80	312	eP	P	06 36 56.2	+0.4
	comp=Z,16nm,0.5s						
TAPN	Taplejung	52.84	312	eP	P	06 36 56.2	+0.1
	comp=Z,13nm,0.4s						
RAMN	Ramite	53.44	311	eP	P	06 37 00.9	+0.4
	comp=Z,26nm,0.6s						
JIRN	Jiri	54.13	312	eP	P	06 37 05.7	+0.1
	comp=Z,20nm,0.7s						
GUN	Gumba	54.50	312	eP	P	06 37 08.4	+0.2
	comp=Z,15nm,0.6s						
PKI	Pulchoki	54.67	311	eP	P	06 37 09.5	+0.1
	comp=Z,10nm,0.5s						
PKIN	Phulchoki	54.68	311	eP	P	06 37 09.7	+0.2
	comp=Z,8.1nm,0.5s						
DMN	Daman	54.92	311	eP	P	06 37 11.3	+0.2
	comp=Z,12nm,0.8s						
GKN	Gorkha	55.48	311	eP	P	06 37 14.9	-0.1
	comp=Z,15nm,0.3s						
DANN	Dangsing	56.32	311	eP	P	06 37 21.2	0.0
	comp=Z,11nm,0.6s						
SONM	Songino Array	58.33	342	P	P	06 37 36.6	+1.9
	comp=Z,0.5nm,0.6s,baz=153,slow=5.1,SNR=5.1						
SONM	Songino Array	58.33	342	P	P	06 37 36.1	+1.4
MK31	Makanchi Array	67.94	327	P	P	06 38 39.1	+1.1
MK31				IAmb	IAmb	06 39 23.8	
	comp=Z,5.5nm,1.8s						
MKAR	Makanchi Array	67.94	327	P	P	06 38 38.5	+0.6
	comp=Z,0.7nm,0.3s,baz=115,slow=8.2,SNR=24						
MKAR	Makanchi Array	67.94	327	P	P	06 38 38.4	+0.4
MAKZ	Makanchi	68.12	327	P	P	06 38 38.9	-0.2
MAKZ				IAmb	IAmb	06 40 03.8	
	comp=Z,11nm,2.0s						
ZALV	Zalesovo Beam	71.38	334	P	P	06 38 58.9	0.0
	comp=Z,0.7nm,0.3s,baz=124,slow=5.4,SNR=4.5						
ABKAR	Akbulak array	82.16	322	P	P	06 39 59.2	-0.2

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*SJA **07** 06:36:29.3±0.8, 31°.95S×70°.19W, h118^{km}±6^{km}, ML3.7, MW3.5*
*IDC **07** 06:36:29.4±2.4, 31°.92S×70°.28W, h97^{km}±22^{km}, mb3.1/1, mb1 3.4/4, mb1mx3.2/20, mbtmp3.5/4, MS3.7/1, Ms1 3.8/1, ms1mx3.0/9, Error ellipse: s-maj=26.1km s-min=20.4km az=91.0*
*GUC **07** 06:36:30.7±0.7, 32°.00S×70°.39W, h132^{km}±4^{km}, ML4.1*
ISC 07 06:36:30.1±0.8**, 31°.97S**±0°.03×**70°.18W**±0°.04**, h118**^{km}±7^{km}**,**
n36, σ1^{s}.41/62**, 8C-7D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO04	Los Peladeros	0.68	263⇓	eP	Pn	06 36 49.6	+0.2
CO04				eS	Sn	06 37 04.1	+0.1
CO04				IAML		06 37 05.7	
	comp=E,6μm,0.4s						
RTLS	Leoncito	0.77	78	iP	Pn	06 36 50.5	+0.2
RTLS				IAML	Sn	06 37 06.1	+0.7
	comp=Z,2μm,0.3s						
RTLS				eS	Sn	06 37 06.1	+0.7
VA03	San Esteban	0.85	201⇓	eP	Pn	06 36 50.9	+0.2
VA03				eS	Sn	06 37 06.5	+0.1
VA03				IAML		06 37 08.0	
	comp=E,8μm,0.6s						
CO03	El Pedregal	1.21	339⇑	iP	Pn	06 36 55.3	+1.0
CO03				eS	Sn	06 37 13.6	+1.1
CO03				IAML		06 37 15.3	
	comp=N,2μm,0.2s						
ROCH	El Roble	1.22	215⇓	eP	Pn	06 36 54.4	-0.1
ROCH				eS	Sn	06 37 12.8	-0.3
ROCH				IAML		06 37 15.0	
	comp=E,3μm,0.4s						
ROC1	El Roble	1.23	215	iP	Pn	06 36 54.3	-0.3
ROC1				eS	Sn	06 37 14.0	+0.7
PEL	Peldehue	1.25	200⇓	eP	Pn	06 36 54.6	-0.1
PEL				eS	Sn	06 37 13.0	-0.3
PEL				IAML		06 37 14.2	
	comp=E,3μm,0.4s						
PEL	Peldehue	1.25	200	iP	Pn	06 36 54.4	-0.3
PEL				eS	Sn	06 37 13.4	+0.1
ASAL	Salagasta	1.30	119	iP	Pn	06 36 55.5	+0.3
ASAL				eS	Sn	06 37 15.0	+0.7
ZON	Zonda	1.35	72	iP	Pn	06 36 55.7	-0.1
ZON				eS	Sn	06 37 14.9	-0.3
ZON				IAML		06 37 16.7	
	comp=Z,521nm,0.2s						
FCH	Farellones	1.36	184⇑	iP	Pn	06 36 56.9	+0.7
FCH				eS	Sn	06 37 17.4	+1.4
FCH				IAML		06 37 20.2	
	comp=E,3μm,0.2s						
RTCV	Cerro Valdivia	1.40	86	iP	Pn	06 36 56.3	-0.1
RTCV				eS	Sn	06 37 16.1	-0.2
CLCH	Cerro Calan	1.46	192⇓	eP	Pn	06 36 57.4	+0.4
CLCH				eS	Sn	06 37 17.5	+0.1
CLCH				IAML		06 37 19.9	
	comp=E,3μm,0.4s						
UTNM	Universidad Te	1.46	130	iP	Pn	06 36 58.1	+1.1
MT02	Curacav	1.52	212⇑	iP	Pn	06 36 57.4	-0.3
MT02				eS	Sn	06 37 17.7	-1.0
MT03	Universidad Ad	1.55	190⇑	iP	Pn	06 36 58.5	+0.4
MT03				eS	Sn	06 37 20.1	+0.6
AAGR	Agrelo	1.60	135	iP	Pn	06 36 59.6	+0.9
AAGR				eS	Sn	06 37 21.3	+0.8
ANTU	Antumapu	1.64	193⇑	iP	Pn	06 37 00.4	+1.2
ANTU				eS	Sn	06 37 21.1	-0.2
ANTU				IAML		06 37 23.6	
	comp=E,2μm,0.2s						
ACCO	Cerro Coronel	1.68	35	iP	Pn	06 37 00.6	+0.7
ACCO				eS	Sn	06 37 23.6	+1.1
CFA	Coronel Fontan	1.70	78	P	Pn	06 36 59.6	-0.2
	comp=E,122nm,0.3s,baz=260,slow=12,SNR=2972						
CFA				S	Sn	06 37 21.7	-0.7
	comp=E,196nm,0.3s,baz=242,slow=24,SNR=68						
CFA	Coronel Fontan	1.70	78	iP	Pn	06 36 59.7	-0.2
CFA				eS	Sn	06 37 22.9	+0.4
AMOG	MOGNA	1.77	55	iP	Pn	06 37 01.1	+0.3
GO04	Tololo Observa	1.87	343⇑	iP	Pn	06 37 02.9	+0.7
GO04				eS	Sn	06 37 27.7	+1.2
GO04				IAML		06 37 30.8	
	comp=N,3μm,0.4s						
LMEL	Las Melosas	1.87	181⇓	eP	Pn	06 37 02.7	+0.5
LMEL				eS	Sn	06 37 27.2	+0.7
LMEL				IAML		06 37 31.9	
	comp=N,2μm,0.2s						
CO01	Juntas del Tor	1.99	2⇓	iP	Pn	06 37 05.4	+1.8
CO01				iS	Sn	06 37 31.1	+1.9
MT01	Popeta	2.09	205⇑	iP	Pn	06 37 03.9	-0.8
MT01				iS	Sn	06 37 29.5	-1.6
MT01				IAML		06 37 31.1	
	comp=N,942nm,0.6s						
ACAN	Cantantal	2.56	98	iP	Pn	06 37 10.6	-0.1
AC05	El Transito	3.12	359⇑	iP	Pn	06 37 19.2	+1.1
AC05				eS	Sn	06 37 55.4	+0.2
PLCA	Paso Flores	8.75	182	P	Pn	06 38 32.9	-0.9
	comp=N,0.2nm,0.3s,baz=14,slow=12,SNR=14						
LVC	Limon Verde	9.39	7	P	Pn	06 38 42.2	-0.6
	comp=N,0.3nm,0.3s,baz=170,slow=11,SNR=4.2						
LVC				S	Sn	06 40 20.5	-6.3
	comp=N,0.3nm,0.3s,baz=290,slow=22,SNR=2.8						
CPUP	Villa Florida	12.56	67	P	Pn	06 39 20.2	-4.5
	comp=N,0.1nm,0.3s,baz=240,slow=12,SNR=3.1						
LPAZ	La Paz	15.72	7	P	Pn	06 39 59.6	-6.1
	comp=N,0.1nm,0.3s,baz=211,slow=12,SNR=3.4						
LPAZ				LR	LR	06 47 54.6	
	comp=N,280nm,20.8s,baz=235,slow=44						
SIV	San Ignacio	17.94	30	P	Pn	06 40 31.6	-0.6
	comp=N,0.1nm,0.3s,baz=218,slow=15,SNR=3.6						
TXAR	Lajitas Array	68.77	329	P	P	06 47 23.4	+2.0
	comp=N,0.2nm,0.5s,baz=152,slow=8.3,SNR=4.4						
ZALV	Zalesovo Beam	151.68	32	PKPbc	PKiKP	06 56 11.5	+1.1
	comp=N,1.1nm,0.6s,baz=299,slow=3.2,SNR=6.3						
MKAR	Makanchi Array	154.25	47	PKPbc	PKiKP	06 56 17.9	+1.8
	comp=N,0.1nm,0.3s,baz=315,slow=0.2,SNR=4.0						

IDC 07 07:07:36.2±3.9**, 7°.55S×148°.15E, h0**^{km}**, mb3.3**/2**,**
mb1 3.8/3**, mb1mx3.5**/38**, mbtmp3.6**/3**, ML4.0**/1**, Error**
ellipse: s-maj=133.5km s-min=34.6km az=110.0,

Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.20	226	P	Pn	07 11 49.5	-1.0
	0.5nm,0.3s,baz=52,slow=11,SNR=5.9						
ASAR	Alice Springs	21.07	219	P	P	07 12 21.9	-0.3
	0.6nm,0.6s,baz=46,slow=9.5,SNR=9.8						
MKAR	Makanchi Array	79.41	320	P	P	07 19 44.5	0.0
	0.2nm,0.3s,baz=112,slow=6.1,SNR=5.8						
TORD	Torodi Ar. Bea	146.56	282	PKPbc	PKPbc	07 27 20.4	-0.4
	1.1nm,0.5s,baz=64,slow=4.5,SNR=9.3						

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*IDC **07** 07:20:51.8±1.8, 20°.22S×66°.30E, h0^{km}, mb3.8/8, mb1 4.0/8, mb1mx3.8/36, mbtmp3.8/8, Error ellipse: s-maj=60.1km s-min=25.1km az=41.0*

ISC 07 07:20:53.5±1.7**, 20°.2S**±0°.3×**66°.3E**±0°.3**, h10^{km}, n13, σ1^{s}.12**/10**, mb4.0**/8**, Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	13.85	26	T	T	07 38 15.7	
	baz=205,slow=75,SNR=49						
H08S2	Diego Garcia H	13.86	26	T	T	07 38 10.9	
	baz=205,slow=75,SNR=27						
H08S3	Diego Garcia H	13.87	26	T	T	07 38 11.5	
	baz=205,slow=75,SNR=54						
CMAR	Chiang Mai Arr	50.01	42	P	P	07 29 48.1	-0.3
	0.8nm,0.4s,baz=219,slow=7.0,SNR=4.4						
ASAR	Alice Springs	62.25	107	P	P	07 31 14.5	-1.6
	0.9nm,0.9s,baz=245,slow=6.4,SNR=6.7						
WRA	Warramunga Arr	63.43	103	P	P	07 31 25.6	+1.7
	1.3nm,1.0s,baz=263,slow=5.8,SNR=3.5						
BRTR	Keskin Array B	67.00	333	P	P	07 31 47.2	+0.5
	0.2nm,0.3s,baz=149,slow=9.4,SNR=3.0						
MKAR	Makanchi Array	68.25	12	P	P	07 31 53.6	-0.8
	1.1nm,0.9s,baz=190,slow=6.2,SNR=5.6						
ZALV	Zalesovo Beam	75.57	11	P	P	07 32 37.9	-0.2
	0.6nm,0.3s,baz=216,slow=7.1,SNR=4.2						
SONM	Songino Array	76.69	26	P	P	07 32 45.7	+0.9
	0.7nm,0.9s,baz=235,slow=5.2,SNR=4.0						
AKASG	Malin Array Be	77.82	337	P	P	07 32 50.3	-0.6
	0.1nm,0.2s,baz=147,slow=4.5,SNR=5.3						
YKA	Yellowknife Ar	137.76	1	PKP	PKPdf	07 40 16.8	-0.8
	0.1nm,0.8s,baz=92,slow=36,SNR=3.0						
ULM	Lac du Bonnet	146.88	339	PKPbc	PKPdf	07 40 35.0	+0.8
	1.1nm,0.7s,baz=278,slow=4.6,SNR=3.2						

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*IDC **07** 07:40:36.9±0.5, 2°.28N×66°.71E, h0^{km}, mb4.3/26, mb1 4.4/27, mb1mx4.3/46, mbtmp4.3/27, ML4.1/1, MS4.3/37, Ms1 4.3/37, ms1mx4.2/41, Error ellipse: s-maj=13.8km s-min=13.0km az=25.0*

*MOS **07** 07:40:37.3±1.2, 2°.41N×66°.73E, h10^{km}, mb5.0/41, Error ellipse: s-maj=8.2km s-min=5.2km az=104.4*

*NEIC **07** 07:40:39.0±2.1, 2°.3N±0°.1×66°.84E±0°.05, h10^{km}±1^{km}, mb4.9/61, Error ellipse: s-maj=17.5km s-min=8.6km az=186.0*

*GCMT **07** 07:40:39.0±0.2, 2°.24N±0°.01×66°.73E±0°.01, h12^{km}, MW5.1/142, Moment Tensor Solution. s53,c68; s142,c223; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.97±.08; $M_{\theta\theta}$2.67±.08; $M_{\phi\phi}$2.30±.09; $M_{r\theta}$0.89±.33; $M_{\theta\phi}$-2.49±.07; $M_{\phi r}$-0.28±.30; Best double couple: $M_0$5.06300×10^{16} NP1:ϕ_s137.00000°, δ40.00000°, λ-83.00000°. NP2:ϕ_s308.00000°, δ50.00000°, λ-96.00000°. Principal axes: T 5.0530, Plg5.0000°, Azm42.0000°; N 0.0200, Plg4.0000°, Azm312.0000°; P -5.0730, Plg83.0000°, Azm179.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 07:40:39.5±1.0**, 2°.31N**±0°.06×**66°.88E**±0°.05**, h15^{km}**±5^{km}**, n328, σ1^{s}.66**/323**, mb4.8**/104**, MS4.4**/48**, 30C-13D, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAAM	Kaadhehdhoo	6.37	106	P	Pn	07 42 11.6	-1.3
	SNR=6.7						
KAAM				S	Sn	07 43 21.3	-4.2
KAAM	Kaadhehdhoo	6.37	106		Pn	07 42 11.4	-1.5
TRD	Trivandrum	11.77	58	eP	Pn	07 43 20.2	-6.7
MSEY	Mahe Island	13.34	239	P	Pn	07 43 49.5	+1.0
MSEY	Mahe Island	13.34	239	P	Pn	07 43 49.9	+1.4
MSEY	Mahe Island	13.34	239	Pn	Pn	07 43 49.9	+1.4
PALK	Pallekele	14.62	70	Pn	Pn	07 44 06.0	0.0
	0.9nm,0.3s,baz=227,slow=13,SNR=5.2						
PALK				LR	LR	07 48 38.4	
	comp=Z,3µm,20.0s,baz=253,slow=32						
PALK	Pallekele	14.62	70	P	Pn	07 44 06.7	+0.6
PALK	Pallekele	14.62	70	P	Pn	07 44 06.8	+0.7
PALK	Pallekele	14.62	70	Pn	Pn	07 44 06.8	+0.7
GOA	Goa	14.78	27	eP	Pn	07 44 08.5	+0.4
GOA				eP	Pn	07 44 09.1	+1.0
GOA				i x	x	07 47 14.6	
GOA				IAMs_20	IAMs_20	07 48 22.7	
	comp=Z,2µm,17.0s						
SOCY	Socotra	16.11	308	P	P	07 44 32.9	+3.9
URV	Uravakonda	16.20	39	eP	Pn	07 44 24.4	-2.4
URV				IAmb	IAmb	07 44 33.2	
	comp=Z,55nm,1.3s						
URV				IVMs_BB	IVMs_BB	07 49 04.8	
	comp=Z,920nm,20.6s						
MDRS	Chennai	17.00	50	eP	Pn	07 44 33.7	-3.2
MDRS				eP	Pn	07 44 34.1	-2.9
MDRS				IAMs_20	IAMs_20	07 49 54.2	
	comp=Z,4µm,17.6s						
MDRS				IAMs_20	IAMs_20	07 49 54.9	
	comp=Z,4µm,18.5s						
SKHT	Srikalahasti	17.02	47	eP	Pn	07 44 36.3	-0.9
SKHT				IAmb	IAmb	07 44 42.6	
	comp=Z,26nm,1.6s						
SKHT				IVMs_BB	IVMs_BB	07 49 33.3	
	comp=Z,419nm,21.4s						
POO	Poona	17.50	22	ex	Pn	07 44 42.0	-1.2
POO				eP	Pn	07 44 43.6	+0.4
POO				eP	pP	07 44 45.9	-2.0
POO				IAmb	IAmb	07 44 48.8	
	comp=Z,24nm,0.8s						
POO				IAMs_20	IAMs_20	07 49 42.5	
	comp=Z,1µm,19.0s						
SRLM	Srisailam	18.10	40	eP	Pn	07 44 50.8	+0.2
SRLM				IAmb	IAmb	07 44 54.3	
	comp=Z,46nm,1.6s						
SRLM				IVMs_BB	IVMs_BB	07 50 31.9	
	comp=Z,473nm,16.3s						
KLRI	Killari	18.33	31	eP	Pn	07 44 51.8	-1.7
KLRI				IAmb	IAmb	07 44 56.7	
	comp=Z,59nm,1.9s						
KLRI				IVMs_BB	IVMs_BB	07 50 37.9	
	comp=Z,577nm,18.6s						
ADKI	Addanki	18.63	43	eP	P	07 44 54.9	-1.8
ADKI				IAmb	IAmb	07 45 00.2	
	comp=Z,22nm,1.4s						
ADKI				IVMs_BB	IVMs_BB	07 50 39.5	
	comp=Z,428nm,23.0s						
NJS	Nagarjunasagar	18.70	40	eP	P	07 44 55.6	-1.9
NJS				IAmb	IAmb	07 45 13.4	
	comp=Z,15nm,1.3s						
NJS				IVMs_BB	IVMs_BB	07 50 58.2	
	comp=Z,500nm,17.9s						
HYB	Hyderabad	18.89	37	i P	P	07 44 59.5	-0.1
HYB	Hyderabad	18.89	37	eP	P	07 44 58.0	-1.6
HYB				eP	P	07 44 58.6	-1.0
HYB				i x	x	07 49 49.1	
HYB				IAMs_20	IAMs_20	07 50 49.1	
	comp=Z,2µm,16.7s						
HYB				IAMs_20	IAMs_20	07 50 50.2	
	comp=Z,2µm,18.8s						
HYBB	Hyderabad (bro	18.89	37	eP	P	07 44 58.6	-1.0
HYBB				IAmb	IAmb	07 45 03.3	
	comp=Z,45nm,1.7s						
HYBB				IVMs_BB	IVMs_BB	07 51 29.9	
	comp=Z,318nm,11.1s						
SHAO	Shalim	19.12	325	P	Pn	07 45 05.8	+2.7
DMTO	DMTO	19.28	323	P	Pn	07 45 08.4	+3.5
RBK	Rabkut	19.57	321	P	Pn	07 45 09.4	+1.0
	SNR=5.2						
MYLAV	Mylavaram	19.72	42	eP	P	07 45 08.3	-0.4
MYLAV				IAmb	IAmb	07 45 23.5	
	comp=Z,10nm,1.1s						
MYLAV				IVMsBB		07 51 31.9	
	comp=Z,496nm,14.7s						
SRSP	Sriramsagar	19.97	33	eP	P	07 45 12.0	+0.7
SRSP				IAmb	IAmb	07 45 14.5	
	comp=Z,30nm,1.6s						
SRSP				IVMsBB		07 51 44.7	
	comp=Z,289nm,9.5s						
ABTO	Aybut	20.04	319	P	Pn	07 45 14.5	+0.5
	SNR=12						
GGR	Gangavaram	20.21	39	eP	P	07 45 14.9	+0.8
GGR				IAmb	IAmb	07 45 24.2	
	comp=Z,19nm,1.3s						
GGR				IVMs_BB	IVMs_BB	07 51 54.2	
	comp=Z,445nm,15.8s						
RPR	Rampur	20.45	36	eP	P	07 45 16.3	-0.3
RPR				IAmb	IAmb	07 45 22.4	
	comp=Z,43nm,1.9s						
MHTO	MHTO	20.49	336	P	Pn	07 45 19.0	-0.3
	SNR=6.0						
MHTO				S	Sn	07 49 21.5	+11
PVM	Polavaram	20.74	43	eP	Pn	07 45 21.4	-0.8
PVM				IAmb	IAmb	07 45 31.7	
	comp=Z,18nm,1.4s						
PVM				IVMs_BB	IVMs_BB	07 51 56.4	
	comp=Z,395nm,14.3s						
BHUJ	Bhuj	20.99	7	eP	P	07 45 22.4	-0.1
WBK	Wadi Bani Khal	21.59	340	P	P	07 45 33.6	+4.7
WBK				P	P	07 45 33.6	+4.7
JMDO	Jabal Madar	21.68	338	P	P	07 45 32.5	+2.5
	SNR=7.4						
NGP	Nagpur	22.16	31	eP	P	07 45 35.7	+0.6
NGP				eS	S	07 49 40.1	+1.2
WSAR	Wadi Sarin	22.29	340	P	P	07 45 36.7	+0.3
	comp=Z,7.2nm,1.1s,baz=158,slow=11,SNR=4.6						
WSAR				LR	LR	07 52 35.7	
	comp=Z,372nm,21.6s,baz=163,slow=32						
BSY	Bisya	22.38	336	P	P	07 45 40.1	+2.7
	SNR=7.6						
BSY				P	P	07 45 40.1	+2.7
	SNR=7.6						
BIDO	Bidbid	22.72	339	P	P	07 45 44.3	+3.2
	SNR=6.4						
HOQ	Hoqain	23.09	337	P	P	07 45 48.1	+3.3
	SNR=12						
HOQ				P	P	07 45 48.1	+3.3
	SNR=12						
BHPL	Bhopal	23.18	25	eP	P	07 45 44.8	-1.0
BHPL				⇑iP	P	07 45 46.6	+0.8
BHPL				IAmb	IAmb	07 45 55.0	
	comp=Z,36nm,1.0s						
BHPL				IAMs_20	IAMs_20	07 53 19.3	
	comp=Z,1µm,18.4s						
ARQ	Araqi	23.18	335	P	P	07 45 49.2	+3.4
	SNR=12						
ARQ				P	P	07 45 49.2	+3.4
	SNR=12						
CHLP	Challavanipeta	23.29	45	eP	P	07 45 45.5	-1.4
CHLP				IAmb	IAmb	07 45 57.0	
	comp=Z,5.5nm,1.0s						
CHLP				IVMs_BB	IVMs_BB	07 53 16.8	
	comp=Z,341nm,16.1s						
SOHO	SOHO	23.89	336	P	P	07 45 55.0	+2.2
	SNR=11						
SOHO				P	P	07 45 55.0	+2.2
	SNR=11						
HATD	Hatta, Dubai	24.67	336	P	P	07 46 04.0	+4.0
	SNR=5.2						
HATD				P	P	07 46 04.0	+4.0
	SNR=5.2						
UOSS	Minazif	24.75	336	P	P	07 46 01.7	+1.1
ATD	Arta Tunnel	25.53	292	P	P	07 46 06.7	-1.3
ATD				IAmb	IAmb	07 46 18.4	
	comp=Z,34nm,1.2s						
BOK	Bokaro	28.18	39	IAMs_20	IAMs_20	07 57 03.2	
	comp=Z,2µm,14.2s						
OPO	Ambohidratompo	28.40	222	LR	LR	07 55 05.1	
	comp=Z,964nm,19.2s,baz=197,slow=31						
RAYN	Ar Rayn	29.55	317	P	P	07 46 43.7	-0.2
RAYN				pmax	pmax		
	comp=Z,11nm,1.5s						
RAYN	Ar Rayn	29.55	317	P	P	07 46 43.6	-0.2
KMBO	Kilima Mbogo	29.82	264	LR	LR	07 56 36.4	
	comp=Z,771nm,21.6s,baz=97,slow=32						
NIL	Nilore	31.74	10	P	P	07 47 05.4	+2.3
NIL				pmax	pmax		
	comp=Z,18nm,1.2s						
NIL	Nilore	31.74	10	P	P	07 47 05.4	+2.3
NIL				IAmb	IAmb	07 47 07.7	
	comp=Z,18nm,1.2s						
PSI	Prapat	32.01	88	P	P	07 47 07.1	+1.3
	comp=Z,2.1nm,0.5s,baz=306,slow=7.8,SNR=2.5						
RPSI	Rantau Prapat	32.01	89	P	P	07 47 07.1	+1.4
KBL	Kabul	32.13	3	P	P	07 47 08.8	+2.1
KBL				pmax	pmax		
	comp=Z,13nm,1.3s						
KBL	Kabul	32.13	3	P	P	07 47 08.8	+2.1
KBL				IAmb	IAmb	07 47 16.6	
	comp=Z,13nm,1.2s						
HRA	Herat	32.20	353	P	P	07 47 07.9	+0.6
GTK	Tadong	32.41	38	ex	P	07 47 09.4	+0.1
GTK				IAMs_20	IAMs_20	07 59 55.7	
	comp=Z,1µm,14.4s						
SDSI	Sungai Dareh	34.69	95	P	P	07 47 31.4	+2.3
	comp=Z,15nm,2.1s						
CM31	Chiang Mai Arr	35.27	61	P	P	07 47 36.5	+2.5
CM31				IAmb	IAmb	07 47 43.6	
	comp=Z,15nm,1.3s						
CMAR	Chiang Mai Arr	35.27	61	P	P	07 47 36.2	+2.2
	comp=Z,0.8nm,0.3s,baz=250,slow=10,SNR=6.6						
CMAR				LR	LR	08 01 37.7	
	comp=Z,384nm,19.4s,baz=248,slow=36						
CMAR	Chiang Mai Arr	35.27	61	P	P	07 47 36.0	+2.0
CMAR	Chiang Mai Arr	35.27	61	P	P	07 47 36.0	+2.0
CHTO	Chiang Mai	35.42	60	P	P	07 47 37.3	+2.0
CHTO				pmax	pmax		
	comp=Z,19nm,1.4s						
CHTO	Chiang Mai	35.42	60	P	P	07 47 37.3	+2.0
CHTO				IAmb	IAmb	07 47 39.9	
	comp=Z,19nm,1.4s						
CHGR	Chuyangaron	36.23	3	P	P	07 47 42.6	+0.5
CHGR				IAmb	IAmb	07 47 50.2	
	comp=Z,23nm,1.3s						
GEYT	Alibeck	36.35	348	P	P	07 47 43.9	+0.9
	comp=Z,2.9nm,1.0s,baz=165,slow=12,SNR=6.0						
GEYT				LR	LR	08 02 01.4	
	comp=Z,421nm,21.6s,baz=305,slow=35						
PBKT	Sadao Pong	36.40	65	P	P	07 47 45.6	+1.9
PBKT				IAmb	IAmb	07 47 48.5	
	comp=Z,19nm,1.5s						
GAR	Garm	36.65	4	P	P	07 47 46.0	+0.3
BTK	Batken	37.74	5	P	P	07 47 56.0	+1.1
BTK				pmax	pmax		
	comp=Z,17nm,1.2s						
BTK	Batken	37.74	5	P	P	07 47 56.0	+1.1
BTK				IAmb	IAmb	07 48 03.7	
	comp=Z,17nm,1.1s						
MDSI	Maura Dua	37.88	100	P	P	07 47 59.4	+3.1
	comp=Z,15nm,1.4s						
KSH	Kashi	37.94	11	P	P	07 47 54.6	-2.1
KSH				sP	pwP	07 48 02.1	-1.6
KSH				S	S	07 53 43.5	-4.7
KSH				ScS	ScS	07 58 05.5	-3.5
KSH				pmax	pmax		
	comp=Z,17nm,1.0s						
KSH				pmax	pmax		
	comp=Z,620nm,6.1s						
KSH				LR	LR		
	comp=Z,1µm,17.1s						
KSH				LR	LR		
	comp=Z,1µm,16.2s						
KSH				LR	LR		
	comp=Z,520nm,12.6s						
TAS	Tashkent	38.90	3	P	P	07 48 06.4	+1.9
TAS				pmax	pmax		
	comp=Z,99nm,0.3s						
TAS	Tashkent	38.90	3	P	P	07 48 06.4	+1.9
NRN	Naryn	39.80	11	P	P	07 48 14.2	+1.7
NRN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
NRN	Naryn	39.80	11	P	P	07 48 14.2	+1.7
AAK	Ala-Archa	40.72	9	LR	LR	08 04 50.0	
	comp=Z,419nm,21.0s,baz=184,slow=36						
AAK	Ala-Archa	40.72	9	ceP	P	07 48 20.7	+0.8
AAK				pmax	pmax		
	comp=Z,24nm,2.5s						
AAK	Ala-Archa	40.72	9	P	P	07 48 21.0	+1.1
KK31	Karatay Array	40.74	4	P	P	07 48 21.5	+1.6
KK31				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KK31	Karatay Array	40.74	4	P	P	07 48 21.5	+1.6
KKAR	Karatay Array	40.74	4	P	P	07 48 20.1	+0.2
KKAR	Karatay Array	40.74	4	P	P	07 48 20.1	+0.2
KKAR	Karatay Array	40.74	4	P	P	07 48 20.4	+0.5
KKAR				IAmb	IAmb	07 48 37.8	
	comp=Z,3.2nm,1.2s						
KMI	Kunming	41.32	54	P	P	07 48 27.5	+2.3
KMI				pP	sP	07 48 28.9	-1.7
KMI				sP	pwP	07 48 31.6	-0.7
KMI				PP	PnPn	07 50 04.8	-0.5
KMI				S	S	07 54 41.1	+1.6
KMI				pmax	pmax		
	comp=Z,19nm,1.0s						
KMI				pmax	pmax		
	comp=Z,160nm,4.0s						
KMI				LR	LR		
	comp=Z,460nm,16.6s						
KMI				LR	LR		
	comp=Z,500nm,18.6s						
KMI				LR	LR		
	comp=Z,500nm,17.6s						
LSZ	Lusaka	42.08	244	P	P	07 48 30.3	-1.1
	comp=Z,5.7nm,0.9s,baz=65,slow=9.6,SNR=6.6						
LSZ				PcP	PcP	07 50 26.6	+0.4
	comp=Z,1.8nm,0.7s,baz=56,slow=3.6,SNR=3.5						
LSZ	Lusaka	42.08	244	P	P	07 48 31.9	+0.5
LSZ				pmax	pmax		
	comp=Z,18nm,1.4s						
LSZ	Lusaka	42.08	244	P	P	07 48 31.9	+0.5
AKT	Akhty	42.63	339	eP	P	07 48 36.1	+0.6
AKT				e		07 50 25.0	
AKT				pmax	pmax		
	comp=Z,26nm,1.3s						
GNI	Garni	42.68	335	ceP	P	07 48 34.4	-1.6
GNI				pmax	pmax		
	comp=Z,330nm,2.5s						
GNI	Garni	42.68	335	P	P	07 48 37.5	+1.5
MATP	Matopo	43.89	237	P	P	07 48 42.6	-3.3
	comp=Z,3.9nm,1.0s,baz=54,slow=11,SNR=7.0						
TBLG	Delisi	44.00	336	P	P	07 48 46.1	-0.3
TBLG				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TBLG	Delisi	44.00	336	P	P	07 48 46.1	-0.3
AKH	Akhalkalaki	44.25	335	P	P	07 48 49.7	+1.0
AKH				pmax	pmax		
	comp=Z,20nm,1.2s						
AKH	Akhalkalaki	44.25	335	P	P	07 48 49.7	+1.0
AKH				IAmb	IAmb	07 48 50.8	
	comp=Z,20nm,1.2s						
GROC	Groznyy	44.84	338	eP	P	07 48 51.4	-1.7
GROC				e		07 50 36.3	
GROC				eS	S	07 55 25.4	-4.7
GROC				pmax	pmax		
	comp=Z,41nm,1.2s						
CD2	Chengdu	44.97	47	P	P	07 48 54.7	+0.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
QIZ	Qiongzhong	45.19	65	P	P	07 48 56.5	+0.2
QIZ				S	S	07 55 37.1	+1.2
QIZ				LR	LR		
	comp=Z,140nm,8.8s						
QIZ				LR	LR		
	comp=Z,520nm,17.7s						
QIZ				LR	LR		
	comp=Z,520nm,23.9s						
ZEI	Tsey	45.23	336	eP	P	07 48 56.5	+0.1
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WMQ	Urumqi	45.27	21	eP	P	07 48 58.8	+2.2
WMQ				pP	sP	07 49 00.1	-2.1
WMQ				sP	pwP	07 49 09.7	+6.0
WMQ				pmax	pmax		
	comp=Z,5.0nm,1.3s						
WMQ				LR	LR		
	comp=Z,500nm,25.1s						
WMQ				LR	LR		
	comp=Z,1µm,29.3s						
WMQ				LR	LR		
	comp=Z,440nm,29.7s						
NEY	Neytrino	46.09	335	i P	P	07 49 01.4	-1.8
NEY				pmax	pmax		
	comp=Z,1.0nm,1.2s						
MAKZ	Makanchi	46.23	14	P	P	07 49 04.5	+0.5
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.5s						
MAKZ	Makanchi	46.23	14	P	P	07 49 04.5	+0.5
MK31	Makanchi Array	46.29	15	i P	P	07 49 04.1	-0.5
MKAR	Makanchi Array	46.29	15	P	P	07 49 05.2	+0.6
	comp=Z,1.7nm,1.0s,baz=137,slow=9.4,SNR=7.1						
MKAR				PcP	PcP	07 50 40.4	+0.5
	comp=Z,0.7nm,0.8s,baz=213,slow=6.7,SNR=4.0						
MKAR				LR	LR	08 09 01.8	
	comp=Z,325nm,19.3s,baz=206,slow=37						
MKAR	Makanchi Array	46.29	15	P	P	07 49 04.9	+0.3
MKAR	Makanchi Array	46.29	15	P	P	07 49 04.9	+0.3
KBZ	Khabaz	46.41	336	P	P	07 49 06.6	+1.1
	comp=Z,12nm,1.1s,baz=186,slow=2.8,SNR=15						
KBZ				LR	LR	08 09 02.7	
	comp=Z,123nm,18.7s,baz=145,slow=37						
KBZ	Khabaz	46.41	336	d iP	P	07 49 05.5	0.0
KBZ				pmax	pmax		
	comp=Z,16nm,1.1s						
SHA1	Shidzhatmaz	46.52	336	i P	P	07 49 06.5	-0.2
KIV	Kislovodsk	46.69	336	eP	P	07 49 07.6	-0.2
KIV				pmax	pmax		
	comp=Z,40nm,1.1s						
KIV				MLR	MLR		
	comp=Z,246nm,16.0s						
KIV	Kislovodsk	46.69	336	P	P	07 49 07.7	-0.1
KIV				IAmb	IAmb	07 49 11.0	
	comp=Z,19nm,1.2s						
ABKAR	Akbulak array	47.14	354	P	P	07 49 10.7	-0.4
GTA	Gaotai	47.54	35	eP	P	07 49 16.1	+1.5
GTA				pP	pwP	07 49 21.5	-0.2
GTA				sP	sP	07 49 24.7	+4.5
GTA				sS	sS	07 56 17.6	+1.7
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,140nm,6.5s						
GTA				LR	LR		
	comp=Z,450nm,16.8s						
GTA				LR	LR		
	comp=Z,470nm,16.8s						
GTA				LR	LR		
	comp=Z,630nm,14.9s						
BRTR	Keskin Array B	47.93	325	P	P	07 49 17.4	-0.2
	comp=Z,1.8nm,1.0s,baz=145,slow=8.9,SNR=8.3						
BRTR				PcP	PcP	07 50 44.3	-1.6
	comp=Z,0.3nm,0.4s,baz=134,slow=4.2,SNR=3.3						
BRTR				LR	LR	08 09 56.3	
	comp=Z,125nm,18.3s,baz=132,slow=37						
BRTR	Keskin Array B	47.93	325	P	P	07 49 16.9	-0.7
BR131	Keskin Array S	47.93	325	i P	P	07 49 16.4	-1.2
BR131	Keskin Array S	47.93	325	P	P	07 49 16.6	-1.0
LBTB	Lobatse	48.37	233	P	P	07 49 20.8	-0.4
	comp=Z,4.8nm,0.9s,baz=67,slow=3.7,SNR=6.2						
LBTB	Lobatse	48.37	233	P	P	07 49 21.7	+0.5
LBTB				pmax	pmax		
	comp=Z,19nm,1.3s						
LBTB	Lobatse	48.37	233	P	P	07 49 21.7	+0.5
LBTB				IAmb	IAmb	07 49 28.7	
	comp=Z,19nm,1.3s						
AKTO	Aktyubinsk	48.53	352	LR	LR	08 11 03.7	
	comp=Z,146nm,19.3s,baz=166,slow=38						
ILGA	Ilgaz	48.79	327	P	P	07 49 24.5	+0.1
ILGA				IAmb	IAmb	07 49 29.1	
	comp=Z,20nm,1.3s						
KURK	Kurchatov	49.24	10	i P	P	07 49 26.2	-1.1
KURK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KURK	Kurchatov	49.24	10	P	P	07 49 26.7	-0.6
KURK				IAmb	IAmb	07 49 31.1	
	comp=Z,30nm,1.9s						
MDUB	Mudurnu	49.83	324	P	P	07 49 31.7	-0.4
XAN	Xi'an	50.32	46	P	P	07 49 35.7	-0.2
XAN				pP	pwP	07 49 42.8	-0.3
XAN				S	S	07 56 46.3	-2.1
XAN				pmax	pmax		
	comp=Z,11nm,1.2s						
XAN				pmax	pmax		
	comp=Z,50nm,3.5s						
XAN				LR	LR		
	comp=Z,200nm,6.4s						

XAN				LR	LR		
	comp=Z,270nm,13.2s						
XAN				LR	LR		
	comp=Z,500nm,28.2s						
XAN	Xi'an	50.32	46	P	P	07 49 36.1	+0.2
XAN				pmax	pmax		
	comp=Z,21nm,1.2s						
XAN	Xi'an	50.32	46	P	P	07 49 36.1	+0.2
XAN				IAmb	IAmb	07 49 43.6	
	comp=Z,21nm,1.2s						
BOSA	Boshof	50.39	229	P	P	07 49 37.0	+0.3
	comp=Z,7.3nm,1.0s,baz=87,slow=5.2,SNR=6.4						
BOSA				LR	LR	08 08 35.5	
	comp=Z,835nm,19.6s,baz=50,slow=33						
BOSA	Boshof	50.39	229	P	P	07 49 37.3	+0.7
BOSA				pmax	pmax		
	comp=Z,15nm,1.2s						
BOSA	Boshof	50.39	229	P	P	07 49 37.3	+0.7
BOSA				IAmb	IAmb	07 49 38.1	
	comp=Z,15nm,1.1s						
BRVK	Borovoye	50.65	3	*ce*P	P	07 49 37.6	-0.4
BRVK				pmax	pmax		
	comp=Z,13nm,2.5s						
BRVK	Borovoye	50.65	3	P	P	07 49 38.4	+0.3
WHN	Wuhan	52.91	53	P	P	07 49 56.3	+1.0
TSUM	Tsumeb	52.94	244	P	P	07 49 57.7	+1.9
TSUM				IAmb	IAmb	07 50 03.6	
	comp=Z,20nm,1.4s						
ZAA0	Zalesovo Array	53.54	13	IAmb	IAmb	07 50 06.6	
	comp=Z,16nm,1.4s						
ZALV	Zalesovo Beam	53.54	13	P	P	07 49 59.7	+0.2
	comp=Z,2.6nm,0.6s,baz=219,slow=7.0,SNR=9.8						
ZALV				LR	LR	08 13 49.8	
	comp=Z,368nm,19.1s,baz=206,slow=37						
ZALV	Zalesovo Beam	53.54	13	P	P	07 49 58.8	-0.7
ZALV	Zalesovo Beam	53.54	13	P	P	07 49 58.8	-0.7
TIRR	Tirgusor	53.97	327	⇑P	P	07 50 02.5	-0.3
TIRR	Tirgusor	53.97	327	⇑P	P	07 50 02.5	-0.3
VSR	Storozhevoye	54.02	339	*i* P	P	07 50 01.3	-1.8
VSR				pmax	pmax		
	comp=Z,23nm,1.1s						
ARU	Arti	54.37	354	LR	LR	08 15 25.6	
	comp=Z,217nm,18.7s,baz=173,slow=38						
ARU	Arti	54.37	354	*i* P	P	07 50 05.4	-0.1
ARU				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ARU	Arti	54.37	354	P	P	07 50 04.8	-0.7
ARU				IAmb	IAmb	07 50 06.1	
	comp=Z,11nm,1.1s						
HARR	Harsova	54.38	327	⇑P	P	07 50 05.8	0.0
HARR	Harsova	54.38	327	⇑P	P	07 50 05.8	0.0
CFR	Carcaliu	54.58	327	⇓P	P	07 50 06.7	-0.6
CFR	Carcaliu	54.58	327	⇓P	P	07 50 06.7	-0.6
KIS	Kishinev	55.41	329	*e*P	P	07 50 12.0	-1.2
KIS	Kishinev	55.41	329	*e*P	P	07 50 12.0	-1.2
HHC	Hu-ho-hao-te	55.59	40	*e*P	P	07 50 17.6	+2.8
HHC				S	S	07 58 07.0	+6.7
HHC				pmax	pmax		
	comp=Z,85nm,1.0s						
HHC				pmax	pmax		
	comp=Z,300nm,5.4s						
HHC				LR	LR		
	comp=Z,890nm,15.9s						
HHC				LR	LR		
	comp=Z,660nm,16.8s						
HHC				LR	LR		
	comp=Z,750nm,15.7s						
VRI	Vrincioaia	55.78	327	⇑P	P	07 50 14.8	-1.2
VRI	Vrincioaia	55.78	327	⇑P	P	07 50 14.8	-1.2
PLOR	Plostina	55.82	327	⇑P	P	07 50 15.8	-0.5
PLOR	Plostina	55.82	327	⇑P	P	07 50 15.8	-0.5
VTS	Vitosha	55.89	322	⇑P	P	07 50 16.5	-0.5
VTS	Vitosha	55.89	322	P	P	07 50 16.2	-0.8
VTS				pmax	pmax		
	comp=Z,34nm,1.5s						
VTS	Vitosha	55.89	322	P	P	07 50 16.2	-0.8
VTS				IAmb	IAmb	07 50 17.7	
	comp=Z,34nm,1.5s						
MLR	Muntele Rosu	55.98	326	⇓P	P	07 50 17.1	-0.5
MLR	Muntele Rosu	55.98	326	⇓P	P	07 50 17.1	-0.5
MLR	Muntele Rosu	55.98	326	P	P	07 50 17.8	+0.2
TESR	Tescani	56.23	328	⇓P	P	07 50 18.8	-0.4
SORM	Soroca	56.40	330	⇑P	P	07 50 19.5	-0.8
SORM	Soroca	56.40	330	⇑P	P	07 50 19.5	-0.8
MORW	Morawa	56.45	127	P	P	07 50 22.5	+1.5
VOIR		56.45	326	⇓P	P	07 50 20.0	-0.8
VOIR		56.45	326	⇓P	P	07 50 20.0	-0.8
ARR	Arges	56.64	325	⇑P	P	07 50 21.4	-0.8
SONM	Songino Array	56.70	31	P	P	07 50 24.0	+1.3
	comp=Z,3.9nm,1.1s,baz=227,slow=7.2,SNR=18						
SONM				LR	LR	08 14 43.9	
	comp=Z,798nm,21.9s,baz=252,slow=36						
SONM	Songino Array	56.70	31	P	P	07 50 23.3	+0.6
SONM				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SONM	Songino Array	56.70	31	P	P	07 50 23.3	+0.6
PSA00	Pilbara Seismi	56.94	118	P	P	07 50 26.1	+1.4
NJ2	Nanjing	57.05	53	*e*P	P	07 50 26.3	+1.1
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
HERR	Herculane	57.65	324	⇑P	P	07 50 28.5	-0.7
H01W3	Cape Leeuwin H	57.67	134	T	T	08 52 46.8	
	baz=300,slow=75,SNR=16						
H01W2	Cape Leeuwin H	57.68	134	T	T	08 52 49.7	
	baz=300,slow=75,SNR=15						
BURAR	Bucovina Array	57.69	328	⇑P	P	07 50 28.7	-0.9
BURAR	Bucovina Array	57.69	328	P	P	07 50 28.1	-1.5
H01W1	Cape Leeuwin H	57.69	134	T	T	08 52 48.1	
	baz=300,slow=75,SNR=16						
BUR08	Bucovina Ar. S	57.71	328	P	P	07 50 28.7	-1.1
BUR08				IAmb	IAmb	07 50 34.5	
	comp=Z,12nm,1.4s						
GZR	Gura Zlata	57.72	325	⇓P	P	07 50 29.2	-0.7
GZR	Gura Zlata	57.72	325	⇓P	P	07 50 29.2	-0.7
AKASG	Malin Array Be	57.73	333	P	P	07 50 28.2	-1.4
	comp=Z,0.2nm,0.2s,baz=128,slow=5.9,SNR=16						
AKASG				PcP	PcP	07 51 22.5	+0.1
	comp=Z,0.2nm,0.3s,baz=116,slow=3.2,SNR=2.8						
AKASG				LR	LR	08 17 49.6	
	comp=Z,79nm,20.1s,baz=105,slow=39						
AKASG	Malin Array Be	57.73	333	P	P	07 50 27.6	-2.0
AKBB	Malin Array Si	57.73	333	IAmb	IAmb	07 50 29.9	
	comp=Z,11nm,1.3s						
KIRV	Kirov	57.77	349	LR	LR	08 16 32.3	
	comp=Z,196nm,18.5s,baz=145,slow=37						
MDVR	Moldovita	58.01	323	⇑P	P	07 50 30.8	-1.1
TLY	Talaya	58.01	26	LR	LR	08 15 41.8	
	comp=Z,374nm,21.7s,baz=203,slow=36						
TLY	Talaya	58.01	26	*i* P	P	07 50 31.8	+0.1
TLY				pmax	pmax		
	comp=Z,3.0nm,1.3s						
OBN	Obninsk	58.10	340	⇓*e*P	P	07 50 30.8	-1.4
OBN				*e*		07 52 39.9	
OBN				pmax	pmax		
	comp=Z,12nm,1.5s						
MOS	Moscow	58.26	341	*e*P	P	07 50 30.0	-3.3
MOS				*e*		07 52 50.5	
MOS				pmax	pmax		
	comp=Z,52nm,1.0s						
TIP	Timpagrande	58.46	316	⇑P	P	07 50 33.7	-1.4
BZS	Buzias	58.52	324	⇑P	P	07 50 34.1	-1.2
BZS	Buzias	58.52	324	⇑P	P	07 50 34.1	-1.2
DRGR		58.56	326	⇓P	P	07 50 34.9	-0.8
DRGR		58.56	326	⇓P	P	07 50 34.9	-0.8
TRPA	Tarpa	59.44	327	⇑P	P	07 50 41.2	-0.4
UZH	Uzhgorod	59.86	327	*e*P	P	07 50 43.9	-0.7
UZH				*e*		07 50 47.5	
KOLS	Kolonicke sedl	60.05	328	*e*P	P	07 50 45.5	-0.4
KOLS				pmax	pmax		
	comp=Z,26nm,1.4s						
KOLS	Kolonicke sedl	60.05	328	*e*P	P	07 50 45.5	-0.4
FITZ	Fitzroy Crossi	61.28	112	P	P	07 50 56.0	+1.2
DL2	Dalian	61.64	46	P	P	07 50 52.5	-4.3
VYHS	Vyhne	61.69	326	*e*P	P	07 50 55.4	-1.6
VYHS				pmax	pmax		
	comp=Z,19nm,1.6s						
VYHS	Vyhne	61.69	326	*e*P	P	07 50 55.4	-1.6
LANS	Liptovska Anna	61.69	327	*e*P	P	07 50 56.3	-0.8
LANS				pmax	pmax		
	comp=Z,9.0nm,1.4s						
LANS	Liptovska Anna	61.69	327	*e*P	P	07 50 56.3	-0.8
KLMR	Klimovskoe	62.01	345	*e*P	P	07 50 54.3	-4.6
KLMR				pmax	pmax		
	comp=Z,58nm,1.4s						
KLMR	Klimovskoe	62.01	345	*e*P	P	07 50 54.3	-4.6
KLMR				AMP		07 50 59.4	
	comp=Z,58nm,1.4s						
MODS	Modra-Piesok	62.51	325	*e*P	P	07 51 00.0	-2.5
MODS				pmax	pmax		
	comp=Z,24nm,1.5s						
MODS	Modra-Piesok	62.51	325	*e*P	P	07 51 00.0	-2.5
JAVC	Velka Javorina	62.54	326	*e*P	P	07 51 02.2	-0.6
KEST	Kesra	62.63	309	LR	LR	08 18 23.8	
	comp=Z,142nm,18.1s,baz=262,slow=36						
TAM	Tamanrasset	62.78	294	P	P	07 51 03.8	-1.2
TAM				pmax	pmax		
	comp=Z,11nm,1.5s						
TAM	Tamanrasset	62.78	294	P	P	07 51 03.8	-1.2
TAM				IAmb	IAmb	07 51 05.2	
	comp=Z,11nm,1.5s						
SOKA	Soboth	62.99	323	*i* P	P	07 51 05.1	-0.8
	comp=Z,11nm,1.3s						
MORC	Moravsky Berou	63.09	327	⇑P	P	07 51 04.9	-1.5
MORC	Moravsky Berou	63.09	327	⇑P	P	07 51 04.9	-1.5
MORC	Moravsky Berou	63.09	327	*e*P	P	07 51 05.0	-1.5
MORC	Moravsky Berou	63.09	327	P	P	07 51 04.4	-2.0
MORC				IAmb	IAmb	07 51 05.9	
	comp=Z,16nm,1.3s						
CONA	Conrad Observa	63.10	324	*i* P	P	07 51 05.0	-1.6
	comp=Z,22nm,1.4s						
KRUC	Moravsky	63.36	325	*e*P	P	07 51 06.9	-1.3
VRAC	Vranov	63.38	326	P	P	07 51 06.9	-1.4
	comp=Z,2.5nm,0.4s,baz=99,slow=5.6,SNR=10.0						
VRAC	Vranov	63.38	326	⇑P	P	07 51 07.2	-1.1
VRAC	Vranov	63.38	326	⇑P	P	07 51 07.2	-1.1
VRAC	Vranov	63.38	326	*e*P	P	07 51 07.1	-1.2
MYKA	Terra Mystica	63.82	322	*i* P	P	07 51 10.4	-1.0
	comp=Z,13nm,1.3s						
MOA	Molln	64.01	323	*i* P	P	07 51 11.2	-1.3
	comp=Z,12nm,1.1s						
KBA	Koelnbreinsper	64.21	322	*i* P	P	07 51 12.5	-1.5
	comp=Z,5.7nm,1.2s						
KLNR	Kaliningrad	64.44	332	*i* P	P	07 51 13.7	-1.4
KLNR				pmax	pmax		
	comp=Z,41nm,1.0s						
ABTA	Abfaltersbach	64.57	322	*i* P	P	07 51 14.7	-1.6
	comp=Z,13nm,1.2s						
GERES	GERESS Array B	64.81	324	P	P	07 51 15.7	-2.1
	comp=Z,0.2nm,0.4s,baz=110,slow=3.1,SNR=4.1						
GERES				LR	LR	08 21 20.6	
	comp=Z,56nm,18.0s,baz=100,slow=38						
GERES	GERESS Array B	64.81	324	P	P	07 51 15.3	-2.5
GERES	GERESS Array B	64.81	324	P	P	07 51 15.3	-2.5
KHC	Kasperske Hory	65.01	324	*i* P	P	07 51 16.4	-2.7
KHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TOA0	Torodi Ar. Sit	65.32	283	IAmb	IAmb	07 51 21.1	
	comp=Z,10nm,1.4s						
TORD	Torodi Ar. Bea	65.32	283	P	P	07 51 20.4	-1.3
	comp=Z,2.3nm,1.1s,baz=88,slow=6.1,SNR=8.6						
TORD				LR	LR	08 19 56.4	
	comp=Z,327nm,18.8s,baz=75,slow=36						
TORD	Torodi Ar. Bea	65.32	283	P	P	07 51 20.7	-1.0
BRG	Berggiesshubel	65.64	326	*e*P	P	07 51 18.8	-4.2
	comp=Z,28nm,1.9s						
BRG	Berggiesshubel	65.64	326	*e*P	P	07 51 18.8	-4.2
BRG				pmax	pmax		
	comp=Z,28nm,1.9s						
MOTA	Moosalm	65.70	322	*i* P	P	07 51 22.2	-1.5
	comp=Z,3.2nm,0.6s						
FETA	Feichten	65.80	321	*i* P	P	07 51 22.7	-1.7
	comp=Z,7.3nm,1.2s						
KSRS	Korea Array	65.84	50	LR	LR	08 24 07.0	
	comp=Z,265nm,18.2s,baz=248,slow=40						
CN2	Changchun	66.11	43	*e*P	P	07 51 28.4	+2.2
CN2				*e*sP	pwP	07 51 35.0	+1.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
DAVOX	Davos/Dischmat	66.23	321	P	P	07 51 25.8	-1.3
	comp=Z,6.3nm,0.8s,baz=137,slow=3.8,SNR=6.5						
CLL	Collm	66.36	326	*i* P	P	07 51 27.6	-0.1
	comp=Z,41nm,1.7s						
CLL	Collm	66.36	326	P	P	07 51 27.5	-0.1
CLL				pmax	pmax		
	comp=Z,30nm,1.5s						
CLL	Collm	66.36	326	P	P	07 51 27.5	-0.2
DAVA	Damuels	66.43	321	*i* P	P	07 51 26.6	-1.9
	comp=Z,13nm,1.1s						
FINES	FINESS Array B	66.51	340	P	P	07 51 28.1	-0.3
	comp=Z,4.3nm,1.0s,baz=153,slow=16,SNR=4.3						
FINES				LR	LR	08 21 32.7	
	comp=Z,103nm,20.5s,baz=96,slow=37						
FINES	FINESS Array B	66.51	340	P	P	07 51 27.7	-0.7
FINES	FINESS Array B	66.51	340	P	P	07 51 27.7	-0.7
SENIN	Lac Senin/Sane	67.71	320	IAmb	IAmb	07 51 46.7	
	comp=Z,13nm,1.1s						
BFO	Black Forest	67.81	322	P	P	07 51 35.3	-1.7
BFO				pmax	pmax		
	comp=Z,42nm,1.5s						
BFO	Black Forest	67.81	322	P	P	07 51 35.3	-1.7
NRIK	Noril'sk	68.33	8	P	P	07 51 40.4	+0.6
	comp=Z,0.8nm,0.3s,baz=179,slow=5.1,SNR=4.7						
NRIK				LR	LR	08 24 48.2	
	comp=Z,293nm,18.3s,baz=198,slow=39						
WRA	Warramunga Arr	69.71	112	P	P	07 51 50.3	+0.9
	comp=Z,8.8nm,0.9s,baz=289,slow=5.9,SNR=24						
WRA				LR	LR	08 19 27.1	
	comp=Z,67nm,19.9s,baz=210,slow=33						
WRA	Warramunga Arr	69.71	112	P	P	07 51 49.8	+0.4
WRA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
WRA	Warramunga Arr	69.71	112	P	P	07 51 49.8	+0.4
WRAB	Tennant Creek	69.72	112	*ce*P	P	07 51 49.8	+0.4
WRAB				pmax	pmax		
	comp=Z,19nm,1.3s						
WRAB	Tennant Creek	69.72	112	P	P	07 51 50.6	+1.1
WB0	Warramunga Arr	69.73	112	IAmb	IAmb	07 51 51.8	
	comp=Z,9.4nm,0.9s						
MAW	Mawson	69.82	182	LR	LR	08 17 15.1	
	comp=Z,314nm,19.7s,baz=263,slow=32						
ASAR	Alice Springs	70.02	116	P	P	07 51 51.3	0.0
	comp=Z,5.3nm,0.9s,baz=284,slow=6.0,SNR=39						
ASAR				LR	LR	08 22 30.8	
	comp=Z,82nm,18.4s,baz=272,slow=36						
MEM	Membach	70.08	324	P	P	07 51 51.0	0.0
HFS	Hagfors	70.47	335	P	P	07 51 52.4	-0.8
	comp=Z,7.2nm,0.8s,baz=125,slow=7.4,SNR=10.0						
USRK	Ussuriysk Ar.	70.71	44	LR	LR	08 25 10.3	
	comp=Z,262nm,18.6s,baz=258,slow=38						
DBIC	Dimbokro	71.60	276	LR	LR	08 21 40.3	
	comp=Z,211nm,22.0s,baz=79,slow=34						
NOA	NORSAR Array B	71.98	335	P	P	07 52 00.7	-1.7
	comp=Z,2.8nm,1.1s,baz=115,slow=6.9,SNR=3.0						
NOA				LR	LR	08 23 51.4	
	comp=Z,110nm,19.6s,baz=110,slow=36						
KLR	Kul'dur	72.03	39	LR	LR	08 24 14.8	
	comp=Z,152nm,20.1s,baz=237,slow=36						
KLR	Kul'dur	72.03	39	*i* P	P	07 52 02.7	-0.2
KLR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ARCES	ARCESS Array B	72.47	346	LR	LR	08 24 47.8	
	comp=Z,136nm,20.6s,baz=154,slow=37						
MJAR	Matsushiro Arr	73.66	53	LR	LR	08 28 29.4	
	comp=Z,157nm,18.6s,baz=265,slow=39						
ESBB	Sonseca Array	73.83	311	P	P	07 52 12.9	-0.9
ESBB				IAmb	IAmb	07 52 14.1	
	comp=Z,19nm,1.4s						
ESDC	Sonseca Array	73.83	311	P	P	07 52 13.1	-0.8
	comp=Z,9.7nm,1.1s,baz=84,slow=5.5,SNR=16						
ESDC	Sonseca Array	73.83	311	P	P	07 52 12.1	-1.8
YAK	Yakutsk	75.48	26	*i* P	P	07 52 23.6	+0.8
YAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
STKA	Stephens Creek	78.28	123	P	P	07 52 38.6	-0.7
	comp=Z,3.7nm,0.9s,baz=304,slow=18,SNR=4.9						
STKA	Stephens Creek	78.28	123	P	P	07 52 39.2	-0.1
STKA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
STKA	Stephens Creek	78.28	123	P	P	07 52 39.2	-0.1
YSS	Yuzh-Sakhalins	78.68	43	*e*P	P	07 52 42.0	+0.8
YSS				pmax	pmax		
	comp=Z,32nm,1.7s						
TIXI	Tiksi	79.24	17	LR	LR	08 28 39.4	
	comp=Z,404nm,21.9s,baz=224,slow=36						
TIXI	Tiksi	79.24	17	*ce*P	P	07 52 42.6	-1.1
TIXI				pmax	pmax		
	comp=Z,24nm,2.5s						
TIXI	Tiksi	79.24	17	P	P	07 52 43.6	-0.1
TIXI				IAmb	IAmb	07 52 47.6	
	comp=Z,36nm,1.8s						
SEY	Seymchan	85.90	27	*i* P	P	07 53 18.5	-0.1
PETK	Petropavlovsk-	88.66	37	LR	LR	08 35 51.3	
	comp=Z,334nm,18.4s,baz=241,slow=37						
BILL	Bilibino	91.39	22	*ce*P	P	07 53 44.7	+0.1
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,226nm,19.0s						
VNDA	Vanda	93.32	167	LR	LR	08 30 01.1	
	comp=Z,222nm,19.2s,baz=228,slow=32						
HNR	Honiara	93.40	99	LR	LR	08 34 36.6	
	comp=Z,48nm,20.1s,baz=272,slow=35						
YKA	Yellowknife Ar	115.36	1	PKP	PKPdf	07 59 21.3	+0.9
	comp=Z,0.7nm,0.9s,baz=3.5,slow=1.9,SNR=7.6						
CPUP	Villa Florida	121.46	240	PKP	PKiKP	07 59 34.3	+1.0
	comp=Z,0.5nm,0.4s,baz=135,slow=4.3,SNR=2.4						
CPUP	Villa Florida	121.46	240	PKIKP	PKiKP	07 59 33.7	+0.4
CPUP	Villa Florida	121.46	240		PKiKP	07 59 33.7	+0.4
ULM	Lac du Bonnet	125.58	346	PKP	PKPdf	07 59 40.1	-0.3
	comp=Z,3.3nm,1.1s,baz=102,slow=2.4,SNR=4.2						
COWI	Conover	127.33	339		PKPdf	07 59 44.0	+0.1
EGMT	Eagleton	129.78	357		PKPdf	07 59 48.4	-0.3
MSO	Missoula	131.06	1		PKPdf	07 59 51.0	-0.1
LPAZ	La Paz	133.62	250	PKP	PKPdf	07 59 54.4	-3.0
	comp=Z,0.9nm,0.6s,baz=225,slow=4.3,SNR=5.7						
LPAZ	La Paz	133.62	250	PKIKP	PKPdf	07 59 55.8	-1.6
LPAZ	La Paz	133.62	250		PKPdf	07 59 55.8	-1.6
PDAR	Pinedale Array	135.01	356	PKhKP	PKPpre	07 59 52.7	
	comp=Z,0.2nm,0.5s,baz=48,slow=2.9,SNR=2.1						
PDAR				PKP	PKPdf	07 59 58.8	-0.1
	comp=Z,1.2nm,0.9s,baz=207,slow=0.4,SNR=6.8						
PDAR	Pinedale Array	135.01	356		PKPdf	07 59 57.4	-1.4
NVAR	Mina Array Bea	139.18	6	PKP	PKPdf	08 00 07.3	+0.6
	comp=Z,2.1nm,1.1s,baz=229,slow=1.6,SNR=6.6						
NVAR	Mina Array Bea	139.18	6		PKPdf	08 00 06.5	-0.2
PSUT	Pine Spring	139.35	1		PKPdf	08 00 07.0	0.0
LCMT	Little Creek M	140.88	0		PKPdf	08 00 07.1	-2.6
ANMO	Albuquerque	142.41	351	*i* PKIKP	PKPdf	08 00 09.1	-3.5
ANMO	Albuquerque	142.41	351		PKPdf	08 00 09.1	-3.5
HKT	Hockley	143.91	334	PKIKP	PKPdf	08 00 14.3	-0.7
HKT	Hockley	143.91	334		PKPdf	08 00 14.3	-0.7
Y12C	Blythe	144.10	2		PKPbc	08 00 14.5	+1.3
GLA	Glamis	144.79	2	PKIKP	PKPdf	08 00 16.8	+0.2
GLA	Glamis	144.79	2		PKPdf	08 00 16.8	+0.2
OTAV	Otavalo	145.25	274	PKIKP	PKPdf	08 00 18.7	+0.2
OTAV	Otavalo	145.25	274		PKPdf	08 00 18.7	+0.2
TUC	Tucson	145.50	357	PKIKP	PKPab	08 00 18.9	+0.8
TUC	Tucson	145.50	357		PKPab	08 00 18.9	+0.8
TXAR	Lajitas Array	147.26	345	PKPbc	PKPbc	08 00 22.5	-0.7
	comp=Z,14nm,0.9s,baz=96,slow=1.3,SNR=56						
TXAR	Lajitas Array	147.26	345	PKP2	PKPdf	08 00 21.3	+0.3
TXAR	Lajitas Array	147.26	345		PKPdf	08 00 21.3	+0.3
TXAR				PKPbc	pPKPdf	08 00 23.7	-1.5
ESPN	Las Esperanzas	147.94	297		PKPbc	08 00 24.6	-0.8
TGUH	Tegucigalpa,Un	149.65	303		PKPdf	08 00 26.0	+0.7

IDC 07 07:49:02.9±10.0, 56°.15S×127°.02W, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.7/27, mbtmp3.9/3, MS3.9/7, Ms1 3.9/7, ms1mx3.6/23, Error ellipse: s-maj=418.8km s-min=146.6km az=125.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
VNDA	Vanda	31.97	203	LR	LR	08 05 24.2	
	comp=Z,185nm,18.4s,baz=243,slow=31						
PPT	Papeete	42.13	327	LR	LR	08 08 42.4	
	comp=Z,160nm,20.8s,baz=155,slow=28						
NNA	Nana	58.56	62	LR	LR	08 15 48.6	
	comp=Z,49nm,20.8s,baz=193,slow=27						
ATAH	Atahualpa	62.01	57	LR	LR	08 20 27.7	
	comp=Z,78nm,20.4s,baz=90,slow=30						
STKA	Stephens Creek	64.91	250	P	P	07 59 44.5	+0.6
	0.8nm,0.4s,baz=135,slow=8.6,SNR=3.0						
ASAR	Alice Springs	75.53	249	P	P	08 00 49.1	-0.1
	0.8nm,0.8s,baz=141,slow=7.0,SNR=6.4						
WRA	Warramunga Arr	78.35	252	P	P	08 01 04.9	-0.2
	0.7nm,0.7s,baz=144,slow=5.5,SNR=5.1						
WRA				LR	LR	08 30 16.3	
	comp=Z,81nm,20.4s,baz=320,slow=32						
PMG	Port Moresby	79.93	268	LR	LR	08 29 41.0	
	comp=Z,79nm,21.5s,baz=262,slow=30						
BOSA	Boshof	92.33	156	LR	LR	08 39 19.7	
	comp=Z,88nm,18.8s,baz=176,slow=33						
MKAR	Makanchi Array	159.62	255	PKPab	PKPab	08 09 40.5	-0.6
	0.5nm,0.8s,baz=101,slow=2.9,SNR=3.8						
ZALV	Zalesovo Beam	161.71	276	PKPab	PKPab	08 09 49.9	-0.2
	0.7nm,0.6s,baz=122,slow=5.6,SNR=3.5						

BUL 07 07:58:10.5±1.4, 25°.63S×28°.96E, h6^{km}±29^{km}, MD3.6, 2C, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LBTB	Lobatse	3.10	281	*i* P	Pn	07 58 59.0	-1.1
LBTB				*i* S	Sn	07 59 33.1	-4.4
LBTB	Lobatse	3.10	281	*i* P	Pn	07 58 59.0	-1.1
LBTB				*i* S	Sn	07 59 33.1	-4.4
BOSA	Boshof	4.44	227	*i* P	Pn	07 59 16.6	-2.0
BOSA	Boshof	4.44	227	*i* P	Pn	07 59 16.6	-2.0
MATP	Matopo	5.20	355	⇑*i*P	Pn	07 59 25.9	-3.0
MATP				*i* S	Sn	08 00 23.6	-5.6
MATP	Matopo	5.20	355	⇑*i*P	Pn	07 59 25.9	-3.0
MATP				*i* S	Sn	08 00 23.6	-5.6

IDC ***07*** *08:13:07.4±5.6, 14°.68N×92°.98W, h0^{km}, mb3.3/2, mb1 3.6/5, mb1mx3.4/36, mbtmp3.2/5, ML3.1/3, Error ellipse: s-maj=112.1km s-min=17.4km az=10.0*

MEX ***07*** *08:13:07.0±0.8, 14°.16N×93°.21W, h10^{km}, MD4.0*

ISC 07 08:13:09.6±1.7, 14°.3N±0°.1×93°.17W±0°.07, h37^{km}, n10, σ1^{s}.92/16, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
THIG		1.05	56	*e*P	Pn	08 13 26.1	-1.7
THIG				*e*S	Sn	08 13 40.2	-1.1
PCIG		1.39	358	*e*P	Pn	08 13 30.6	-1.8
PCIG				*e*S	Sn	08 13 49.7	+0.2
CCIG	Comitan	2.20	27	*e*P	Pn	08 13 43.5	-0.2
CCIG				*i* S	Sn	08 14 10.5	+0.7
TGIG		2.46	1	*e*P	Pn	08 13 47.0	-0.1
TGIG				*i* S	Sn	08 14 16.6	+0.6
APG	El Apazote	2.70	75	Pn	Pn	08 13 49.9	-0.8
	3.8nm,0.3s,baz=225,slow=7.1,SNR=29						
APG				Lg	Lg	08 14 25.5	
	3.5nm,0.3s,baz=288,slow=17,SNR=3.0						
CMIG	Matias Romero	3.22	329	Pn	Pn	08 13 56.9	-0.8
	2.7nm,0.3s,baz=152,slow=12,SNR=41						
CMIG				Sn	Sn	08 14 29.4	-5.5
	3.9nm,0.3s,baz=130,slow=16,SNR=4.6						
CMIG	Matias Romero	3.22	329	*e*P	Pn	08 13 56.7	-1.0
CMIG				*i* S	Sn	08 14 36.3	+1.4
TXAR	Lajitas Array	17.83	329	P	Pn	08 17 16.1	+1.2
	0.0nm,0.3s,baz=153,slow=14,SNR=2.6						
NVAR	Mina Array Bea	32.73	322	P	P	08 19 41.0	+2.0
	0.1nm,0.4s,baz=135,slow=9.0,SNR=2.9						
YKA	Yellowknife Ar	50.47	347	P	P	08 22 03.1	-0.4
	0.6nm,0.7s,baz=150,slow=7.7,SNR=8.3						

THE ***07*** *08:19:30.9, 38°.18N×20°.27E, h7^{km}±2^{km}, ML2.7/4, Error ellipse: s-maj=2.4km s-min=0.4km az=78.0*

ATH ***07*** *08:19:30.9, 38°.17N×20°.28E, h9^{km}±1^{km}, ML2.9/4, Error ellipse: s-maj=2.5km s-min=1.3km az=78.0*

ISC 07 08:19:30.7±1.9, 38°.17N±0°.04×20°.27E±0°.09, h9^{km}±6^{km}, n28, σ0^{s}.38/47, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.07	63	P	Pg	08 19 32.9	+0.1
KEF3				S	Sg	08 19 33.8	-0.5
AGT1	Agia Thekli	0.12	48	P	Pg	08 19 33.6	+0.1
AGT1				S	Sg	08 19 35.3	-0.2
LXRA	Lixouri, Kepha	0.13	78	P	Pg	08 19 33.9	+0.2
LXRA				S	Sg	08 19 35.9	+0.1
KEF4	Livadi, Kephal	0.15	54	P	Pg	08 19 34.0	+0.1
KEF4				S	Sg	08 19 35.7	-0.5
ARGA	Argostoli. Kep	0.16	88	P	Pg	08 19 34.5	+0.2
ARGA				S	Sg	08 19 36.7	+0.1
KEF2	Argostoli. Kep	0.17	92	P	Pg	08 19 34.6	+0.3
KEF2				S	Sg	08 19 37.0	+0.1
KEF1	Kardakata, Kep	0.19	56	P	Pg	08 19 34.7	0.0

KEF1				S	**Sg**	**08 19 37.3**	**-0.1**
VLS	**Valsamata**	**0.25**	**89**	P	**Pg**	**08 19 35.7**	**-0.1**
VLS	**Valsamata**	**0.25**	**89**	P	**Pg**	**08 19 35.7**	**-0.1**
VLS				S	**Sg**	**08 19 39.2**	**0.0**
VLS				AML	AML	08 19 39.3	
	comp=N,27218μm,0.2s						
VLS				AML	AML	08 19 39.4	
	comp=E,14303μm,0.1s						
KONA	**Konidatara, Ke**	**0.34**	**43**	P	**Pg**	**08 19 37.5**	**-0.1**
KONA				S	**Sg**	**08 19 42.5**	**+0.3**
KONA				AML	AML	08 19 42.9	
	comp=E,3051μm,0.2s						
KONA				AML	AML	08 19 43.4	
	comp=N,6456μm,0.5s						
FSK	**Fiskardo**	**0.37**	**38**	P	**Pg**	**08 19 37.9**	**-0.1**
FSK				S	**Sg**	**08 19 43.1**	**+0.3**
	comp=N,3μm,0.3s						
FSK	**Fiskardo**	**0.37**	**38**	P	**Pg**	**08 19 37.9**	**-0.1**
FSK				S	**Sg**	**08 19 43.2**	**+0.4**
FSK				AML	AML	08 19 43.9	
	comp=N,4285μm,0.3s						
FSK				AML	AML	08 19 44.0	
	comp=E,7584μm,0.2s						
KFL	**Anninata**	**0.41**	**99**	P	**Pg**	**08 19 38.7**	**-0.1**
KFL				S	**Sg**	**08 19 44.9**	**+0.7**
	comp=E,2μm,0.3s						
KFL	**Anninata**	**0.41**	**99**	P	**Pg**	**08 19 38.7**	**-0.1**
KFL				S	**Sg**	**08 19 44.7**	**+0.4**
KFL				AML	AML	08 19 47.5	
	comp=N,3903μm,0.3s						
KFL				AML	AML	08 19 48.2	
	comp=E,4430μm,0.4s						
EVGI	**Lefkada island**	**0.54**	**34**	P	**Pg**	**08 19 40.9**	**-0.3**
EVGI				S	**Sg**	**08 19 49.3**	**+0.9**
EVGI	**Lefkada island**	**0.54**	**34**	P	**Pg**	**08 19 41.0**	**-0.2**
EVGI				S	**Sg**	**08 19 49.3**	**+0.9**
MGNA	**Meganis**	**0.63**	**40**	P	**Pg**	**08 19 42.7**	**-0.3**
KRI1	**kERI**	**0.67**	**140**	P	**Pg**	**08 19 43.5**	**-0.1**
KRI1				S	**Sb**	**08 19 53.7**	**-0.1**
	comp=E,948nm,0.3s						
LKD2	**Lefkada island**	**0.69**	**26**	P	**Pg**	**08 19 43.5**	**-0.5**
LKD2				S	**Sb**	**08 19 53.9**	**-0.6**
	comp=E,222nm,0.6s						
LKD2	**Lefkada island**	**0.69**	**26**	P	**Pg**	**08 19 43.8**	**-0.2**
TSLK	**Tsoukalades, L**	**0.72**	**25**	P	**Pg**	**08 19 44.5**	**-0.1**
TSLK				S	**Sb**	**08 19 55.1**	**-0.2**
TSLK	**Tsoukalades, L**	**0.72**	**25**	P	**Pg**	**08 19 44.5**	**-0.1**
PDO	**Prodromos**	**0.83**	**59**	P	**Pg**	**08 19 46.2**	**-0.5**
PDO				S	**Sb**	**08 19 58.8**	**+0.2**
PDO	**Prodromos**	**0.83**	**59**	P	**Pg**	**08 19 46.3**	**-0.5**
RLS	**Riolos of Patr**	**0.95**	**97**	P	**Pg**	**08 19 48.6**	**-0.3**
PVO	**Paravola**	**1.08**	**65**	P	**Pg**	**08 19 51.0**	**-0.4**
DRO	**Drossia**	**1.16**	**101**	P	**Pg**	**08 19 52.1**	**-0.8**
KLV	**Kalavryta, Ach**	**1.49**	**94**	P	**Pn**	**08 19 57.9**	**+0.3**

IDC ***07*** *08:41:53.6±0.6, 31°.54N×91°.13E, h0^{km}, mb4.4/26, mb1 4.5/29, mb1mx4.3/71, mbtmp4.4/29, ML4.1/3, MS3.7/28, Ms1 3.8/28, ms1mx3.6/49, Error ellipse: s-maj=18.0km s-min=12.5km az=39.0*

BJI ***07*** *08:41:56.4±0.0, 31°.50N×91°.18E, h5^{km}, mB4.8/29, mb4.6/38, Ms4.3/37, Ms7 4.1/36*

NDI ***07*** *08:41:56.5±2.7, 31°.86N×90°.75E, h10^{km}, mb4.7, mb4.7(NEIC)*

MOS ***07*** *08:41:57.1±1.2, 31°.64N×91°.23E, h31^{km}, mb4.9/30, Error ellipse: s-maj=8.0km s-min=4.8km az=116.9*

NEIC ***07*** *08:41:57.1±2.0, 31°.68N±0°.06×91°.13E±0°.10, h15^{km}±3^{km}, mb4.7/92, Error ellipse: s-maj=11.8km s-min=9.3km az=84.0*

GCMT ***07*** *08:41:58.1±0.4, 31°.55N±0°.04×91°.20E±0°.03, h24^{km}±1^{km}, MW4.8/65, Moment Tensor Solution. s18,c19; s65,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.96±.18; $M_{\theta\theta}$0.35±.10; $M_{\phi\phi}$1.61±.11; $M_{r\theta}$0.36±.17; $M_{\theta\phi}$0.39±.06; $M_{\phi r}$0.20±.13; Best double couple: $M_0$1.88300×10^{16} NP1:ϕ_s9.00000°, δ41.00000°, λ-101.00000°. NP2: ϕ_s203.00000°, δ50.00000°, λ-80.00000°. Principal axes: T 1.7440, Plg5.0000°, Azm287.0000°; N 0.2790, Plg7.0000°, Azm17.0000°; P -2.0210, Plg81.0000°, Azm165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 08:41:55.8±0.3, **31°.56N**±0°.03×**91°.16E**±0°.04, **h10**^{km}**, n269,** σ**1^s.84**/271, **mb4.7**/80, **MS3.8**/25, **23C-12D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	**Lhasa**	**1.86**	**180**	Pn	**Pg**	**08 42 31.3**	**-0.1**
LSA				Sn	**Sg**	**08 42 59.2**	**+3.7**
LSA	**Lhasa**	**1.86**	**180**	P	**Pg**	**08 42 30.4**	**-1.0**
LSA	**Lhasa**	**1.86**	**180**		**Pg**	**08 42 30.4**	**-1.0**
ZIRO	**ZIRO**	**4.65**	**149**	*e*P	**Pb**	**08 43 13.4**	**-4.2**
ZIRO				*e*S	**Sb**	**08 44 08.9**	**-4.9**
GTK	**Tadong**	**4.78**	**208**	*e*x	**Pn**	**08 43 12.0**	**+4.0**
ITAN	**ITANAGAR**	**4.94**	**152**	*e*P	Pb	08 43 16.5	-5.8
ITAN				*e*S	**Sb**	**08 44 15.2**	**-6.6**
TEZP	**TEZPUR**	**5.13**	**163**	*e*P	**Pn**	**08 43 16.7**	**+4.0**
TEZP				*e*S	**Sb**	**08 44 19.0**	**-8.4**
GUWA	**GUWAHATI**	**5.37**	**175**	*e*x	**Pb**	**08 43 25.2**	**-4.4**
GUWA				*e*P	**Pb**	**08 43 26.3**	**-3.4**
GUWA				*i* x	x	08 43 36.5	
GUWA				*e*S	**Sn**	**08 44 22.1**	**+4.3**
BRDH	**Bariadhala**	**8.86**	**177**	LR	LR	08 48 03.1	
	comp=Z,190nm,18.7s,baz=126,slow=42						
BOK	**Bokaro**	**9.04**	**212**	*e*P	**Pn**	**08 44 08.0**	**+1.7**
GTA	**Gaotai**	**10.53**	**40**	⇑P	**Pn**	**08 44 28.1**	**+1.2**
GTA				pP		08 44 33.1	
GTA				sP		08 44 36.1	
GTA				S	**Sn**	**08 46 26.8**	**+1.8**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,160nm,7.3s						
GTA				LR	LR		
	comp=N,1μm,14.9s						
GTA				LR	LR		
	comp=E,1μm,14.9s						
CD2	**Chengdu**	**10.80**	**90**	P	**Pn**	**08 44 32.2**	**+1.6**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
LZH	**Lanzhou**	**11.47**	**63**	*e*P	**Pn**	**08 44 41.8**	**+2.0**
LZH				pP		08 44 46.4	
LZH				sP		08 44 49.4	
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
LZH				pmax	pmax		
	comp=Z,53nm,4.8s						
LZH				LR	LR		
	comp=E,990nm,10.2s						
LZH				LR	LR		
	comp=Z,710nm,11.2s						
KMI	**Kunming**	**12.04**	**119**	P	**Pn**	**08 44 52.3**	**+4.6**
KMI				pP		08 44 54.5	
KMI				sP		08 44 58.3	
KMI				PP		08 45 01.8	
KMI				S	**Sn**	**08 47 09.3**	**+7.1**
KMI				sS		08 47 14.0	
KMI				pmax	pmax		
	comp=Z,22nm,0.5s						
KMI				pmax	pmax		
	comp=Z,200nm,4.8s						
KMI				LR	LR		
	comp=E,630nm,8.3s						
KMI				LR	LR		
	comp=Z,670nm,8.0s						
WMQ	**Urumqi**	**12.54**	**348**	*e*P	**Pn**	**08 44 55.4**	**+1.1**
GYA	**Guiyang**	**14.48**	**107**	⇓*i*P	**Pn**	**08 45 22.4**	**+1.4**
GYA				PP	**PnPn**	**08 45 33.9**	**+5.0**
GYA				S	**Sn**	**08 48 00.9**	**-0.8**
GYA				SS	**S**	**08 48 20.3**	**-1.2**
GYA				pmax	pmax		
	comp=Z,30nm,0.6s						
GYA				pmax	pmax		
	comp=Z,170nm,4.6s						
GYA				LR	LR		
	comp=N,440nm,12.7s						
GYA				LR	LR		
	comp=E,700nm,10.2s						
GYA				LR	LR		
	comp=Z,950nm,11.8s						
CHTO	**Chiang Mai**	**14.51**	**149**	P	**Pn**	**08 45 24.4**	**+3.2**
CHTO	**Chiang Mai**	**14.51**	**149**		**Pn**	**08 45 24.4**	**+3.2**
KSH	**Kashi**	**14.68**	**307**	P	**Pn**	**08 45 24.3**	**+0.7**
KSH				S	**Sn**	**08 48 07.6**	**+1.2**
KSH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,690nm,8.1s						
KSH				LR	LR		
	comp=N,1μm,14.6s						
KSH				LR	LR		
	comp=Z,470nm,11.3s						
BHPL	**Bhopal**	**14.74**	**239**	*e*x	**Pn**	**08 45 21.7**	**-2.7**
BHPL				IAmb	IAmb	08 45 37.5	
	comp=Z,17nm,0.8s						
CM31	**Chiang Mai Arr**	**14.82**	**150**	P	**P**	**08 45 33.0**	**+1.6**
CMAR	**Chiang Mai Arr**	**14.82**	**150**	Pn	**Pn**	**08 45 25.2**	**-0.3**
	comp=Z,1.2nm,0.3s,baz=324,slow=13,SNR=6.8						
CMAR				LR	LR	08 51 47.9	
	comp=Z,298nm,20.6s,baz=344,slow=40						
CMAR	**Chiang Mai Arr**	**14.82**	**150**		**Pn**	**08 45 27.6**	**+2.1**
PRZ	**Przheval'sk**	**14.90**	**321**	P	**Pn**	**08 45 28.9**	**+2.2**
PRZ	**Przheval'sk**	**14.90**	**321**	P	**Pn**	**08 45 28.9**	**+2.2**
XAN	**Xi'an**	**15.14**	**76**	P	**Pn**	**08 45 27.6**	**-2.2**
XAN				pP	P	08 45 35.7	+0.8
XAN				S	**Sn**	**08 48 07.5**	**-10**
XAN	**Xi'an**	**15.14**	**76**	P	**Pn**	**08 45 27.3**	**-2.5**
XAN				pmax	pmax		
	comp=Z,18nm,0.9s						
XAN	**Xi'an**	**15.14**	**76**		**Pn**	**08 45 27.3**	**-2.5**
NIL	**Nilore**	**15.24**	**283**	P	**Pn**	**08 45 29.0**	**-2.0**
NIL				pmax	pmax		
	comp=Z,65nm,1.1s						
NIL	**Nilore**	**15.24**	**283**		**Pn**	**08 45 29.0**	**-2.0**
NIL				IAmb	IAmb	08 45 40.2	
	comp=Z,65nm,1.1s						
SLVN	**Son La**	**15.28**	**129**	P	**P**	**08 45 35.5**	**-1.1**
SLVN				IAmb	IAmb	08 45 41.8	
	comp=Z,42nm,1.5s						
KDJ	**Kajisay**	**15.36**	**317**	P	**Pn**	**08 45 35.0**	**+2.3**
KDJ				pmax	pmax		
	comp=Z,18nm,1.1s						
KDJ	**Kajisay**	**15.36**	**317**	P	**Pn**	**08 45 35.0**	**+2.3**
NRN	**Naryn**	**15.65**	**313**	P	**Pn**	**08 45 39.9**	**+3.2**
NRN				pmax	pmax		
	comp=Z,18nm,1.5s						
NRN	**Naryn**	**15.65**	**313**	P	**Pn**	**08 45 39.9**	**+3.2**
ENH	**Enshi**	**15.78**	**90**	P	**Pn**	**08 45 39.9**	**+1.7**
ENH				IAmb	IAmb	08 45 46.9	
	comp=Z,30nm,0.7s						
ULHL	**Ulahol**	**15.98**	**316**	P	**P**	**08 45 48.6**	**+4.2**
	SNR=6.6						
BOOM	**Boomskoye usch**	**16.30**	**316**	P	**P**	**08 45 48.9**	**+0.9**
BOOM				pmax	pmax		
	comp=Z,33nm,1.2s						
BOOM	**Boomskoye usch**	**16.30**	**316**	P	**P**	**08 45 48.9**	**+0.9**
MK31	**Makanchi Array**	**16.67**	**338**	P	**Pn**	**08 45 47.3**	**-2.2**
MK31				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MK31	**Makanchi Array**	**16.67**	**338**		**Pn**	**08 45 47.3**	**-2.2**
MKAR	**Makanchi Array**	**16.67**	**338**	Pn	**Pn**	**08 45 47.0**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=148,slow=13,SNR=23						
MKAR				LR	LR	08 53 08.9	
	comp=Z,118nm,19.8s,baz=161,slow=40						
MKAR	**Makanchi Array**	**16.67**	**338**	P	**Pn**	**08 45 47.2**	**-2.3**
MKAR	**Makanchi Array**	**16.67**	**338**	P	**Pn**	**08 45 47.2**	**-2.3**
MAKZ	**Makanchi**	**16.79**	**338**	P	**Pn**	**08 45 48.9**	**-2.0**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MAKZ	**Makanchi**	**16.79**	**338**		**Pn**	**08 45 48.9**	**-2.0**
UCH	**Uchtor**	**17.02**	**313**	P	**P**	**08 45 58.9**	**+2.7**
	SNR=18						
AAK	**Ala-Archa**	**17.26**	**314**	P	**Pn**	**08 45 58.1**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=124,slow=8.8,SNR=18						
AAK				LR	LR	08 53 15.4	
	comp=Z,206nm,20.1s,baz=108,slow=40						
AAK	**Ala-Archa**	**17.26**	**314**	P	**P**	**08 46 00.8**	**+2.3**
	SNR=17						
AAK	**Ala-Archa**	**17.26**	**314**	⇓*e*P	**P**	**08 45 59.5**	**+1.0**
AAK				pmax	pmax		
	comp=Z,27nm,1.0s						
AAK	**Ala-Archa**	**17.26**	**314**	P	**P**	**08 45 59.3**	**+0.8**
PBKT	**Sadao Pong**	**17.39**	**147**	P	**P**	**08 46 01.9**	**+2.0**
AML	**Almayashu**	**17.48**	**312**	P	**P**	**08 46 02.6**	**+1.4**
	SNR=18						
USP	**Ospenovka**	**17.62**	**316**	P	**P**	**08 46 03.9**	**+1.5**
	SNR=12						
EKS2	**Erkin-Say**	**17.71**	**314**	P	**P**	**08 46 06.8**	**+3.3**
	SNR=10.0						
HYB	**Hyderabad**	**18.14**	**222**	*i* P	**Pn**	**08 46 06.0**	**-1.9**
BTK	**Batken**	**18.52**	**303**	P	**P**	**08 46 13.0**	**+0.6**
BTK				pmax	pmax		
	comp=Z,77nm,1.2s						
BTK	**Batken**	**18.52**	**303**	P	**P**	**08 46 13.0**	**+0.6**
BTK				IAmb	IAmb	08 46 18.5	
	comp=Z,77nm,1.2s						
GAR	**Garm**	**18.54**	**299**	P	**P**	**08 46 12.9**	**+0.2**
KBL	**Kabul**	**18.77**	**285**	P	**P**	**08 46 15.9**	**+0.6**
KBL				pmax	pmax		
	comp=Z,93nm,1.2s						
KBL	**Kabul**	**18.77**	**285**	P	**P**	**08 46 15.9**	**+0.6**
KBL				IAmb	IAmb	08 46 20.2	
	comp=Z,93nm,1.2s						
HHC	**Hu-ho-hao-te**	**18.86**	**55**	*e*P	**P**	**08 46 16.3**	**+0.2**
HHC				pP	pP	08 46 21.5	+1.2
HHC				sP	sP	08 46 26.6	+4.4
HHC				S	Sn	08 49 37.9	-10
HHC				pmax	pmax		
	comp=Z,89nm,0.8s						
HHC				pmax	pmax		
	comp=Z,310nm,3.7s						
HHC				LR	LR		
	comp=Z,880nm,10.3s						
HHC				LR	LR		
	comp=Z,780nm,11.7s						
HHC				LR	LR		
	comp=Z,920nm,10.3s						
CHGR	**Chuyangaron**	**19.32**	**298**	P	**P**	**08 46 20.6**	**-0.5**
CHGR				IAmb	IAmb	08 46 26.5	
	comp=Z,58nm,1.2s						
WHN	**Wuhan**	**19.89**	**87**	⇑P	**Pn**	**08 46 29.8**	**+0.9**
WHN				S	**Sn**	**08 50 15.1**	**+2.5**
WHN				LR	LR		
	comp=Z,1μm,19.2s						
SONM	**Songino Array**	**19.98**	**31**	P	**P**	**08 46 28.9**	**+0.6**
	comp=Z,11nm,0.8s,baz=216,slow=9.8,SNR=19						
SONM				PcP	**PcP**	**08 50 44.0**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=184,slow=2.2,SNR=3.9						
SONM				LR	LR	08 55 03.3	
	comp=Z,128nm,21.3s,baz=214,slow=40						
SONM	**Songino Array**	**19.98**	**31**	P	**P**	**08 46 27.6**	**-0.7**
SONM				pmax	pmax		
	comp=Z,11nm,0.9s						
SONM	**Songino Array**	**19.98**	**31**	P	**P**	**08 46 27.6**	**-0.7**
KK31	**Karatay Array**	**20.00**	**311**	P	**P**	**08 46 30.3**	**+1.8**
KK31				pmax	pmax		
	comp=Z,33nm,1.3s						
KK31	**Karatay Array**	**20.00**	**311**	P	**P**	**08 46 30.3**	**+1.8**
KKAR	**Karatay Array**	**20.00**	**311**	P	**P**	**08 46 29.5**	**+1.0**
KKAR	**Karatay Array**	**20.00**	**311**	P	**P**	**08 46 29.5**	**+1.0**
KKAR	**Karatay Array**	**20.00**	**311**	P	Pn	08 46 31.1	+0.9
KKAR				IAmb	IAmb	08 46 35.1	
	comp=Z,32nm,1.3s						
TAS	**Tashkent**	**20.06**	**305**	P	Pn	08 46 32.2	+1.3
TAS				pmax	pmax		
	comp=Z,68nm,0.4s						
TAS	**Tashkent**	**20.06**	**305**	P	Pn	08 46 32.2	+1.2
ULN	**Ulaanbaatar**	**20.30**	**32**	P	**P**	**08 46 31.3**	**-0.5**
ULN				pmax	pmax		
	comp=Z,27nm,1.1s						
ULN	**Ulaanbaatar**	**20.30**	**32**		**P**	**08 46 31.9**	**+0.1**
ULN	**Ulaanbaatar**	**20.30**	**32**	P	**P**	**08 46 31.3**	**-0.5**
ULN				IAmb	IAmb	08 46 38.2	
	comp=Z,25nm,1.1s						
UBPT	**Khong Chiam**	**20.82**	**138**	P	**P**	**08 46 37.6**	**0.0**
UBPT				IAmb	IAmb	08 46 44.7	
	comp=Z,35nm,0.8s						
ZAK	**Zakamensk**	**20.86**	**22**	*e*P	**P**	**08 46 36.9**	**-0.9**
QIZ	**Qiongzhong**	**20.96**	**122**	P	**P**	**08 46 40.1**	**+1.1**
QIZ				S	Sn	08 50 35.6	-2.9
QIZ				LR	LR		
	comp=Z,250nm,11.4s						
KURBB	**Kurchatov Arra**	**21.23**	**337**	P	**P**	**08 46 41.4**	**-0.4**
	comp=Z,14nm,0.9s,baz=148,slow=9.8,SNR=46						
KURBB				PcP	**PcP**	**08 50 45.4**	**-1.2**
	comp=Z,1.0nm,0.7s,baz=172,slow=1.7,SNR=8.3						
KURK	**Kurchatov**	**21.28**	**338**	⇓*e*P	**P**	**08 46 41.5**	**-0.7**
KURK				pmax	pmax		
	comp=Z,33nm,1.3s						
KURK	**Kurchatov**	**21.28**	**338**	P	**P**	**08 46 41.6**	**-0.7**
KURK				IAmb	IAmb	08 46 46.5	
	comp=Z,27nm,1.1s						
MOY	**Mondy**	**21.35**	**17**	*e*P	**P**	**08 46 48.9**	**+5.8**
BJT	**Baijiatuau**	**21.92**	**60**	P	**P**	**08 46 51.2**	**+2.0**
BJT				pmax	pmax		
	comp=Z,31nm,1.5s						
BJT	**Baijiatuau**	**21.92**	**60**	P	**P**	**08 46 51.2**	**+2.0**
BJI	**Beijing**	**21.93**	**60**	*e*P	**P**	**08 46 52.2**	**+2.9**
BJI				S	**S**	**08 50 50.5**	**-0.9**
BJI				pmax	pmax		
	comp=Z,11nm,1.0s						
BJI				pmax	pmax		
	comp=Z,120nm,4.3s						
BJI				LR	LR		
	comp=Z,540nm,12.2s						
BJI				LR	LR		
	comp=Z,310nm,15.2s						
BJI				LR	LR		
	comp=Z,260nm,20.6s						
TLY	**Talaya**	**22.10**	**21**	⇑*e*P	**P**	**08 46 50.6**	**-0.5**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZAA0	**Zalesovo Array**	**22.84**	**350**	P	**P**	**08 46 57.3**	**-1.5**
ZALV	**Zalesovo Beam**	**22.84**	**350**	P	**P**	**08 46 57.8**	**-1.0**
	comp=Z,6.1nm,0.8s,baz=176,slow=11,SNR=18						
ZALV				LR	LR	08 56 11.5	
	comp=Z,114nm,18.7s,baz=205,slow=38						
ZALV	**Zalesovo Beam**	**22.84**	**350**	P	**P**	**08 46 56.9**	**-1.9**
ZALV	**Zalesovo Beam**	**22.84**	**350**	P	**P**	**08 46 56.9**	**-1.9**
NJ2	**Nanjing**	**23.52**	**81**	*e*P	**P**	**08 47 05.8**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HRA	**Herat**	**24.39**	**284**	P	**P**	**08 47 13.8**	**-0.7**
DLV	**T Lat**	**25.23**	**137**	P	**P**	**08 47 24.6**	**+2.4**
DLV				IAmb	IAmb	08 47 29.6	
	comp=Z,43nm,1.5s						
PALK	**Pallekele**	**26.07**	**204**	⇑*e*P	**P**	**08 47 29.6**	**0.0**
PALK				pmax	pmax		
	comp=Z,16nm,1.0s						
BVAR	**Borovoye Array**	**26.20**	**331**	P	**P**	**08 47 30.5**	**0.0**
	comp=Z,3.8nm,0.8s,baz=123,slow=11,SNR=14						
BVAR				PcP	**PcP**	**08 50 57.2**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=129,slow=2.0,SNR=4.3						
BRVK	**Borovoye**	**26.27**	**331**	⇓*e*P	**P**	**08 47 30.8**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,14nm,1.7s						
BRVK	**Borovoye**	**26.27**	**331**	P	**P**	**08 47 30.8**	**-0.3**
GEYT	**Alibeck**	**27.79**	**292**	P	**P**	**08 47 45.2**	**+0.2**
	comp=Z,1.9nm,0.6s,baz=81,slow=11,SNR=6.1						
GEYT				LR	LR	09 00 40.6	
	comp=Z,332nm,21.8s,baz=55,slow=41						
GEYT	**Alibeck**	**27.79**	**292**	P	**P**	**08 47 45.8**	**+0.9**
GYA0B	**ALIBECK ARRAY**	**27.79**	**292**	P	**P**	**08 47 46.0**	**+1.0**
ABKAR	**Akbulak array**	**29.33**	**316**	P	**P**	**08 47 58.0**	**-0.5**
WSAR	**Wadi Sarin**	**29.96**	**262**	LR	LR	09 00 51.2	
	comp=Z,150nm,20.7s,baz=105,slow=38						
KSRS	**Korea Array**	**30.72**	**69**	P	**P**	**08 48 10.2**	**-0.7**
	comp=Z,4.0nm,0.7s,baz=272,slow=8.9,SNR=12						
KSRS				LR	LR	09 01 26.3	
	comp=Z,214nm,18.4s,baz=274,slow=38						
AKTO	**Aktyubinsk**	**30.96**	**317**	LR	LR	09 02 06.6	
	comp=Z,194nm,20.4s,baz=118,slow=39						
JNU	**Nakatsue**	**33.46**	**77**	LR	LR	09 03 12.9	
	comp=Z,211nm,18.9s,baz=296,slow=38						
ARU	**Arti**	**33.63**	**327**	P	**P**	**08 48 35.6**	**-0.6**
	comp=Z,2.0nm,0.2s,baz=145,slow=6.3,SNR=5.5						
ARU				LR	LR	09 04 21.3	
	comp=Z,104nm,20.7s,baz=123,slow=40						
ARU	**Arti**	**33.63**	**327**	⇑*e*P	**P**	**08 48 36.3**	**0.0**
ARU				pmax	pmax		
	comp=Z,21nm,1.7s						
ARU	**Arti**	**33.63**	**327**	P	**P**	**08 48 36.0**	**-0.3**
ARU				IAmb	IAmb	08 48 38.9	
	comp=Z,9.9nm,1.1s						
USRK	**Ussuriysk Ar.**	**34.26**	**57**	LR	LR	09 03 35.0	
	comp=Z,65nm,20.3s,baz=249,slow=38						
KLR	**Kul'dur**	**35.09**	**48**	LR	LR	09 04 59.7	
	comp=Z,114nm,19.6s,baz=260,slow=40						
KLR	**Kul'dur**	**35.09**	**48**	⇓*e*P	**P**	**08 48 48.3**	**-0.7**
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NRIK	**Noril'sk**	**37.88**	**358**	⇑*e*P	**P**	**08 49 12.8**	**+0.3**
GNI	**Garni**	**38.23**	**296**	LR	LR	09 09 06.9	
	comp=Z,76nm,19.1s,baz=103,slow=43						
GNI	**Garni**	**38.23**	**296**	⇓*e*P	**P**	**08 49 17.1**	**+1.1**
GNI				pmax	pmax		
	comp=Z,36nm,0.9s						
GNI	**Garni**	**38.23**	**296**	P	**P**	**08 49 20.4**	**+4.3**
GNI				IAmb	IAmb	08 49 21.7	
	comp=Z,10nm,0.8s						
KIRV	**Kirov**	**38.98**	**326**	P	**P**	**08 49 21.3**	**-0.6**
	comp=Z,17nm,0.5s,baz=56,slow=22,SNR=3.6						
KIRV				LR	LR	09 06 47.9	
	comp=Z,194nm,18.2s,baz=41,slow=38						
MJAR	**Matsushiro Arr**	**38.99**	**70**	P	**P**	**08 49 21.5**	**-0.8**
	comp=Z,1.8nm,0.8s,baz=298,slow=7.7,SNR=3.1						
MJAR				LR	LR	09 06 23.7	
	comp=Z,66nm,18.8s,baz=235,slow=38						
MJAR	**Matsushiro Arr**	**38.99**	**70**	P	**P**	**08 49 22.1**	**-0.3**
NCK	**Nalchik**	**39.07**	**302**	⇑*e*P	**P**	**08 49 21.6**	**-1.3**
NCK				pmax	pmax		
	comp=Z,15nm,0.7s						
AKH	**Akhalkalaki**	**39.14**	**298**	P	**P**	**08 49 25.4**	**+1.7**
AKH				pmax	pmax		
	comp=Z,23nm,1.5s						
AKH	**Akhalkalaki**	**39.14**	**298**	P	**P**	**08 49 25.4**	**+1.7**
AKH				IAmb	IAmb	08 49 31.1	
	comp=Z,23nm,1.5s						
KBZ	**Khabaz**	**39.58**	**302**	LR	LR	09 08 45.4	
	comp=Z,161nm,18.6s,baz=72,slow=41						
RAYN	**Ar Rayn**	**41.03**	**270**	P	**P**	**08 49 39.3**	**-0.2**
RAYN				pmax	pmax		
	comp=Z,13nm,1.2s						
RAYN	**Ar Rayn**	**41.03**	**270**	P	**P**	**08 49 39.3**	**-0.2**
RAYN				IAmb	IAmb	08 49 42.9	
	comp=Z,13nm,1.1s						
VRH	**Novokhopyorsk**	**41.05**	**313**	*e*P	**P**	**08 49 39.9**	**+0.7**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PRGR	**Permogore**	**42.00**	**329**	*e*P	**P**	**08 49 45.2**	**-1.6**
PRGR				pmax	pmax		
	comp=Z,19nm,1.3s						
YSS	**Yuzh-Sakhalins**	**42.03**	**53**	⇑*e*P	**P**	**08 49 47.6**	**+0.3**
YSS				pmax	pmax		
	comp=Z,23nm,1.1s						
SMRI	**Semarang**	**42.59**	**151**	P	**P**	**08 49 54.4**	**+2.3**
VSR	**Storozhevoye**	**42.65**	**313**	*e*P	**P**	**08 49 50.8**	**-1.5**
VSR				pmax	pmax		
	comp=Z,9.0nm,1.5s						
KLMR	**Klimovskoe**	**44.48**	**327**	*e*P	**P**	**08 50 04.8**	**-2.1**
KLMR				pmax	pmax		
	comp=Z,42nm,1.4s						
KLMR	**Klimovskoe**	**44.48**	**327**	*e*P	**P**	**08 50 04.8**	**-2.1**
KLMR				AMP		08 50 08.2	
	comp=Z,42nm,1.4s						
OBN	**Obninsk**	**44.73**	**318**	LR	LR	09 10 40.5	
	comp=Z,72nm,19.6s,baz=236,slow=39						
OBN	**Obninsk**	**44.73**	**318**	⇓*e*P	**P**	**08 50 07.4**	**-1.5**
OBN				*e*		08 51 52.3	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TIXI	**Tiksi**	**44.93**	**16**	P	**P**	**08 50 09.4**	**-1.0**
	comp=Z,3.3nm,0.7s,baz=162,slow=2.7,SNR=9.0						
TIXI	**Tiksi**	**44.93**	**16**	⇑*e*P	**P**	**08 50 09.7**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TIXI	**Tiksi**	**44.93**	**16**	P	**P**	**08 50 09.2**	**-1.2**
BR131	**Keskin Array S**	**46.76**	**297**	⇑*e*P	**P**	**08 50 22.8**	**-2.6**
BRTR	**Keskin Array B**	**46.76**	**297**	P	**P**	**08 50 24.4**	**-1.0**
	comp=Z,0.8nm,0.6s,baz=122,slow=7.1,SNR=4.7						
BRTR				LR	LR	09 13 52.5	
	comp=Z,86nm,18.1s,baz=20,slow=41						
BRTR	**Keskin Array B**	**46.76**	**297**	*ce*P	**P**	**08 50 27.1**	**+1.7**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	**Keskin Array B**	**46.76**	**297**	P	**P**	**08 50 24.7**	**-0.7**
LVZ	**Lovozero**	**48.67**	**335**	⇑*e*P	**P**	**08 50 40.5**	**+0.8**
LVZ				pmax	pmax		
	comp=Z,23nm,1.1s						
AKASG	**Malin Array Be**	**48.90**	**312**	P	**P**	**08 50 40.5**	**-1.1**
	comp=Z,1.6nm,0.5s,baz=81,slow=6.7,SNR=10.0						
AKASG				LR	LR	09 13 39.5	

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       comp=Z,116nm,19.8s,baz=315,slow=39
AKASG Malin Array Be    48.90 312 ceP     P        08 50 41.2  -0.5
AKASG                             pmax    pmax
       comp=Z,2.0nm,0.5s
AKASG Malin Array Be    48.90 312   P     P        08 50 40.4  -1.3
AKBB  Malin Array Si    48.90 312 ⇓eP     P        08 50 41.4  -0.3
AKBB  Malin Array Si    48.90 312   P     P        08 50 41.3  -0.4
AKBB                              IAmb    IAmb     08 50 44.9
       comp=Z,17nm,1.4s
ELL   Elmali            50.20 294   P     P        08 50 51.4  -0.6
ELL                               pmax    pmax
       comp=Z,40nm,0.8s
ELL   Elmali            50.20 294   P     P        08 50 51.4  -0.6
ICOR  Ion Corvin        50.43 303  ⇓P     P        08 50 51.8  -1.6
FINES FINESS Array B    50.98 326   P     P        08 50 56.9  -0.5
       comp=Z,3.1nm,0.6s,baz=105,slow=6.5,SNR=8.6
FINES                             LR      LR       09 16 44.3
       comp=Z,218nm,18.7s,baz=69,slow=41
FINES FINESS Array B    50.98 326   P     P        08 50 57.3   0.0
PLOR  Plostina          51.00 306  ⇑P     P        08 50 57.4  -0.4
PLOR  Plostina          51.00 306  ⇑P     P        08 50 57.4  -0.4
MLR   Muntele Rosu      51.54 305   P     P        08 51 01.9   0.0
       comp=Z,9.3nm,0.9s,baz=282,slow=21,SNR=12
MLR   Muntele Rosu      51.54 305  ⇓P     P        08 51 02.0   0.0
MLR   Muntele Rosu      51.54 305   P     P        08 51 02.2  +0.3
MLR                               IAmb    IAmb     08 51 05.9
       comp=Z,14nm,1.0s
VOIR                    52.17 305  ⇓P     P        08 51 06.6   0.0
VOIR                    52.17 305  ⇓P     P        08 51 06.6   0.0
ARR   Arges             52.47 305  ⇑P     P        08 51 09.0  +0.2
KWP   Kalwaria Pacla    53.16 311   P     P        08 51 13.4  -0.4
KWP                               pmax    pmax
       comp=Z,22nm,1.2s
KWP   Kalwaria Pacla    53.16 311   P     P        08 51 13.4  -0.4
TRPA  Tarpa             53.48 309  ⇑P     P        08 51 16.5  +0.4
DRGR                    53.57 307  ⇑P     P        08 51 16.1  -0.8
DRGR                    53.57 307  ⇑P     P        08 51 16.1  -0.8
MDVR  Moldovita         54.62 305  ⇑P     P        08 51 23.1  -1.5
BILL  Bilibino          55.59  26 ⇑iP     P        08 51 32.0  +0.9
BILL                              pmax    pmax
       comp=Z,10.0nm,0.8s
BILL  Bilibino          55.59  26   P     P        08 51 31.8  +0.6
BILL                              IAmb    IAmb     08 51 32.8
       comp=Z,10.0nm,0.9s
MORC  Moravsky Berou    56.45 312  ⇑P     P        08 51 37.9  +0.2
MORC  Moravsky Berou    56.45 312   P     P        08 51 37.6  -0.1
MORC                              pmax    pmax
       comp=Z,6.0nm,1.1s
MORC  Moravsky Berou    56.45 312   P     P        08 51 37.5  -0.1
MORC                              IAmb    IAmb     08 51 41.0
       comp=Z,6.4nm,1.1s
HFS   Hagfors           57.07 324   P     P        08 51 41.1  -0.7
       comp=Z,4.0nm,0.8s,baz=59,slow=12,SNR=3.1
NB2   NORSAR Subarra    58.16 326   P     P        08 51 48.9  -0.6
       comp=Z,24nm,1.7s,baz=83,slow=7.4
NOA   NORSAR Array B    58.16 326   P     P        08 51 47.7  -1.9
       comp=Z,5.7nm,1.1s,baz=82,slow=7.1,SNR=6.8
NOA                               LR      LR       09 18 54.9
       comp=Z,115nm,20.1s,baz=95,slow=38
BRG   Berggiesshubel    58.49 314  eP     P        08 51 54.0  +2.1
       comp=Z,8.4nm,1.2s
BRG   Berggiesshubel    58.49 314  eP     P        08 51 54.0  +2.1
BRG                               pmax    pmax
       comp=Z,8.0nm,1.2s
CLL   Collm             58.97 314  eP     P        08 51 57.0  +1.7
       comp=Z,17nm,1.4s
CLL   Collm             58.97 314  eP     P        08 51 57.0  +1.7
CLL                               pmax    pmax
       comp=Z,17nm,1.4s
GEC2  GERESS Array S    59.10 311   P     P        08 51 56.2  -0.1
GERES GERESS Array B    59.10 311   P     P        08 51 56.4   0.0
       comp=Z,2.4nm,0.8s,baz=74,slow=7.2,SNR=12
GERES                             LR      LR       09 20 51.9
       comp=Z,144nm,20.6s,baz=52,slow=40
GERES GERESS Array B    59.10 311   P     P        08 51 56.3  -0.1
GERES GERESS Array B    59.10 311   P     P        08 51 56.2  -0.1
WB0   Warramunga Arr    65.75 135   P     P        08 52 41.7  +0.6
WB0                               IAmb    IAmb     08 52 43.7
       comp=Z,7.4nm,1.1s
WRAB  Tennant Creek     65.86 135 ⇑eP     P        08 52 39.9  -1.8
WRAB                              pmax    pmax
       comp=Z,42nm,4.4s
WRAB  Tennant Creek     65.86 135   P     P        08 52 41.6  -0.1
WRAB                              IAmb    IAmb     08 52 48.0
       comp=Z,13nm,1.4s
WRA   Warramunga Arr    65.86 135   P     P        08 52 41.7  -0.1
       comp=Z,2.4nm,0.9s,baz=325,slow=7.1,SNR=4.5
WRA   Warramunga Arr    65.86 135   P     P        08 52 42.3  +0.5
ANM   Nome              67.42  27   P     P        08 52 52.0  +0.8
ANM                               pmax    pmax
       comp=Z,7.0nm,1.2s
ANM   Nome              67.42  27   P     P        08 52 52.0  +0.8
ANM                               IAmb    IAmb     08 52 52.5
       comp=Z,7.0nm,1.2s
KRVT  Keravat (AS076    67.94 110   LR    LR       09 19 53.6
       comp=Z,58nm,21.6s,baz=131,slow=34
ASAR  Alice Springs     68.47 138   P     P        08 52 58.2  -0.1
       comp=Z,1.6nm,0.6s,baz=323,slow=6.5,SNR=6.4
ASAR                              LR      LR       09 28 06.0
       comp=Z,86nm,18.1s,baz=204,slow=40
ASAR  Alice Springs     68.47 138   P     P        08 52 58.4  +0.1
TOLK  Toolik Lake Re    70.62  20   P     P        08 53 11.6  +0.6
COLD  Coldfoot          71.31  21   P     P        08 53 16.1  +0.9
COLD                              IAmb    IAmb     08 53 17.5
       comp=Z,8.3nm,1.0s
MLY   Manley            72.48  23   P     P        08 53 22.9  +0.6
MLY                               IAmb    IAmb     08 53 24.0
       comp=Z,8.6nm,1.0s
BMAR  Burnt Mountain    72.84  20   P     P        08 53 24.3  -0.1
BPAW  Bear Paw Mtn.     72.97  24   P     P        08 53 25.8  +0.6
BPAW                              IAmb    IAmb     08 53 27.3
       comp=Z,10.0nm,1.1s
FYU   Fort Yukon        73.24  20   P     P        08 53 28.3  +1.7
PPLA  Purkeypile        73.28  25   P     P        08 53 27.9  +0.7
KTH   Kantishna Hill    73.33  24   P     P        08 53 27.9  +0.5
COLA  College           73.54  22   P     P        08 53 28.8  +0.4
COLA                              pmax    pmax
       comp=Z,28nm,1.0s
COLA  College           73.54  22   P     P        08 53 28.8  +0.4
CCB   Clear Creek Bu    73.70  23   P     P        08 53 29.3  -0.1
CCB                               IAmb    IAmb     08 53 30.2
       comp=Z,5.3nm,0.9s
WRH   Wood River Hil    73.72  23   P     P        08 53 30.2  +0.7
WRH                               IAmb    IAmb     08 53 30.3
       comp=Z,6.9nm,1.1s
PRP   Porcupine Dome    73.85  21   P     P        08 53 31.7  +1.2
IL31                    73.92  22   P     P        08 53 30.1  -0.5
ILAR  Eielson Array     73.92  22   P     P        08 53 30.1  -0.6
       comp=Z,8.8nm,0.9s,baz=296,slow=5.1,SNR=78
ILAR  Eielson Array     73.92  22   P     P        08 53 29.9  -0.8
ILAR  Eielson Array     73.92  22   P     P        08 53 29.9  -0.8
SKT   Skwentna          74.09  26   P     P        08 53 31.6  -0.2
SKT                               IAmb    IAmb     08 53 35.1
       comp=Z,9.6nm,0.8s
RND   Reindeer          74.15  24   P     P        08 53 31.9  -0.3
RND                               pmax    pmax
       comp=Z,8.0nm,1.1s
RND   Reindeer          74.15  24   P     P        08 53 31.9  -0.3
RND                               IAmb    IAmb     08 53 38.4
       comp=Z,7.8nm,1.1s
ESDC  Sonseca Array     74.19 307   P     P        08 53 31.9  -1.0
       comp=Z,1.5nm,0.8s,baz=54,slow=6.3,SNR=4.9
ESDC  Sonseca Array     74.19 307   P     P        08 53 31.7  -1.2
SUA   Susitna One       74.70  26   P     P        08 53 35.5  +0.1
SUA                               IAmb    IAmb     08 53 39.9
       comp=Z,9.4nm,0.8s
DHY   Denali Highway    74.88  24   P     P        08 53 36.4  -0.1
DHY                               IAmb    IAmb     08 53 37.9
       comp=Z,8.4nm,1.1s
TAM   Tamanrasset       74.90 288   P     P        08 53 38.2  +0.8
TAM                               pmax    pmax
       comp=Z,5.0nm,1.2s
TAM   Tamanrasset       74.90 288   P     P        08 53 38.2  +0.8
INK   Inuvik            75.06  16   P     P        08 53 36.9  -0.3
INK                               pmax    pmax
       comp=Z,9.0nm,1.0s
INK   Inuvik            75.06  16   P     P        08 53 36.9  -0.3
INK                               IAmb    IAmb     08 53 38.8
       comp=Z,8.6nm,1.0s
GHO   Glory Hole Cre    75.18  25   P     P        08 53 38.7  +0.5
GHO                               IAmb    IAmb     08 53 43.2
       comp=Z,8.0nm,0.8s
PMR   Palmer            75.22  25   P     P        08 53 38.2  -0.1
PMR                               pmax    pmax
       comp=Z,17nm,1.1s
PMR   Palmer            75.22  25   P     P        08 53 38.2  -0.1
RIDG  Independent Ri    75.27  22   P     P        08 53 38.1  -0.5
RC01  Rabbit Creek A    75.32  26   P     P        08 53 39.1  +0.2
RC01                              IAmb    IAmb     08 53 40.0
       comp=Z,9.9nm,0.9s
SML   Sawmill           75.37  25   P     P        08 53 39.7  +0.4
SCRK  Sand Creek        75.39  22   P     P        08 53 39.5  +0.1
PAX   Paxson            75.59  23   P     P        08 53 40.5  -0.1
PAX                               pmax    pmax
       comp=Z,4.0nm,0.8s
PAX   Paxson            75.59  23   P     P        08 53 40.5  -0.1
PAX                               IAmb    IAmb     08 53 44.4
       comp=Z,4.2nm,0.8s
EGAK  Eagle             75.70  20   P     P        08 53 41.6  +0.6
EGAK                              IAmb    IAmb     08 53 42.8
       comp=Z,5.6nm,0.9s
SCM   Sheep Creek Mo    75.71  25   P     P        08 53 41.0  -0.3
SCM                               pmax    pmax
       comp=Z,18nm,1.0s
SCM   Sheep Creek Mo    75.71  25   P     P        08 53 41.0  -0.3
EPYK  Eagle Plains      75.77  18   P     P        08 53 41.2  -0.2
EPYK                              IAmb    IAmb     08 53 42.5
       comp=Z,9.7nm,1.0s
C36M  Paulatuk          76.14  12   P     P        08 53 42.7  -0.7
C36M                              IAmb    IAmb     08 53 44.5
       comp=Z,9.5nm,1.0s
LSZ   Lusaka            76.23 242   P     P        08 53 45.6  +0.7
LSZ                               pmax    pmax
       comp=Z,4.0nm,0.6s
LSZ   Lusaka            76.23 242   P     P        08 53 45.6  +0.7
LSZ                               IAmb    IAmb     08 53 47.7
       comp=Z,4.0nm,0.6s
BCAR  Beaver Creek A    76.73  22   P     P        08 53 47.9  +0.9
DAWY  Dawson            76.74  20   P     P        08 53 47.4  +0.3
GLB   Gilahina Butte    77.21  24   P     P        08 53 50.2  +0.4
GLB                               IAmb    IAmb     08 53 51.6
       comp=Z,7.3nm,1.0s
HNR   Honiara           77.29 109   LR    LR       09 27 58.1
       comp=Z,60nm,18.5s,baz=294,slow=36
MCARA McCarthy VSAT     77.52  24   P     P        08 53 52.5  +1.1
TGL   Tana Glacier      78.03  24   P     P        08 53 55.3  +0.9
BARN  Barnard Glacie    78.22  23   P     P        08 53 56.8  +1.2
CTGM  Chitina Glacie    78.40  23   P     P        08 53 58.0  +1.5
CTGM                              IAmb    IAmb     08 53 58.9
       comp=Z,12nm,1.0s
STKA  Stephens Creek    79.11 138   P     P        08 54 00.1  -0.4
       comp=Z,2.6nm,0.4s,baz=324,slow=5.8,SNR=4.6
STKA  Stephens Creek    79.11 138   P     P        08 54 00.5   0.0
HYT   Haines Junctio    79.76  22   P     P        08 54 03.8  -0.1
HYT                               IAmb    IAmb     08 54 06.3
       comp=Z,7.7nm,1.2s
SKAG  Skagway           81.51  22   P     P        08 54 14.2  +1.1
TOA0  Torodi Ar. Sit    82.79 281   P     P        08 54 19.8  -0.8
TOA0                              IAmb    IAmb     08 54 21.0
       comp=Z,4.5nm,0.7s
TORD  Torodi Ar. Bea    82.79 281   P     P        08 54 19.9  -0.8
       comp=Z,3.7nm,0.6s,baz=47,slow=4.6,SNR=19
DLBC  Dease Lake        83.97  20   P     P        08 54 27.4  +1.3
       comp=Z,4.3nm,1.0s,baz=300,slow=4.8,SNR=3.8
DLBC  Dease Lake        83.97  20   P     P        08 54 26.5  +0.5
DLBC                              IAmb    IAmb     08 54 28.2
       comp=Z,4.9nm,1.0s
YKA   Yellowknife Ar    84.01  12   P     P        08 54 25.6  -0.5
       comp=Z,2.7nm,0.8s,baz=333,slow=4.9,SNR=43
BOSA  Boshof            86.66 234   P     P        08 54 39.0  -0.9
       comp=Z,4.2nm,0.9s,baz=49,slow=8.3,SNR=5.1
BOSA  Boshof            86.66 234   P     P        08 54 39.0  -0.9
BOSA  Boshof            86.66 234   P     P        08 54 39.1  -0.9
BOSA                              IAmb    IAmb     08 54 40.1
       comp=Z,8.0nm,1.1s
DBIC  Dimbokro          91.65 279   LR    LR       09 39 38.2
       comp=Z,58nm,18.1s,baz=80,slow=38
FFC   Flin Flon         93.32   8   P     P        08 55 08.5  -2.2
FFC                               pmax    pmax
       comp=Z,4.0nm,0.9s
FFC   Flin Flon         93.32   8   P     P        08 55 08.5  -2.2
FFC                               IAmb    IAmb     08 55 11.2
       comp=Z,4.0nm,0.9s
TX31  Lajitas Ar. Si   117.82  15   PKPdf PKPdf    09 00 43.0  +0.1
TX32  Lajitas Array    117.82  15   PKPdf PKPdf    09 00 42.8  -0.1
TXAR  Lajitas Array    117.82  15   PKP   PKPdf    09 00 42.0  -1.0
       comp=Z,0.5nm,0.7s,baz=40,slow=1.3,SNR=6.9
TXAR  Lajitas Array    117.82  15   PKPdf PKPdf    09 00 42.4  -0.5
QSPA  South Pole Qui   121.35 180   PKPdf PKPdf    09 00 47.7  -0.7
OTAV  Otavalo          146.88 341   PKP2  PKPbc    09 01 39.8  +0.2
OTAV  Otavalo          146.88 341         PKPbc    09 01 39.8  +0.2
CPUP  Villa Florida    152.00 273   PKPbc PKPbc    09 01 49.8  -1.8
       comp=Z,1.7nm,0.7s,baz=92,slow=3.4,SNR=4.9
CPUP  Villa Florida    152.00 273   PKPbc PKPbc    09 01 50.2  -1.4
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*NEIC **07** 08:45:09.0±1.9, 2°.45N±0°.09×128°.49E±0°.09, h237^{km}±6^{km}, mb4.3/43, Error ellipse: s-maj=14.5km s-min=12.3km az=224.0*

*IDC **07** 08:45:09.3±1.4, 2°.41N×128°.57E, h242^{km}±13^{km}, mb3.8/20, mb1 3.9/21, mb1mx3.6/60, mbtmp4.4/21, Error ellipse: s-maj=19.9km s-min=8.4km az=75.0*

ISC 07 08:45:08.7±0.9, **2°.46N**±0°.06×**128°.58E**±0°.08, **h235**^{km}±8^{km}, **n103**, σ**1^{s}40**/117, **mb4.2**/36, **1C, Halmahera**

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Code  Station Name         Δ°   AZ°    Phase ID          Time      Res
                                      Op      ISC      h  m  s    ISC
TNTI  Ternate             2.07 216            Pn       08 45 50.3  -0.3
SIJI  Sorong              4.26 141    P       Pn       08 46 16.1  +1.1
       6.7nm,0.3s,baz=339,slow=16,SNR=11
DDMP  Don Marcelino,      4.62 322   eP       Pn       08 46 18.2  -1.2
SKMP  Bagumbayan, Su      5.70 315   eP       Pn       08 46 31.3  -1.5
KCP   Kidapawan           5.70 323  ⇑eP       Pn       08 46 33.4  +0.5
BUKP  Musuan              6.42 327   eP       Pn       08 46 41.1  -0.9
FAKI  Fak Fak             6.48 146    Pn      Pn       08 46 43.7  +0.9
LUWI  Luwuk               6.77 239    Pn      Pn       08 46 45.0  -1.3
PAGZ  Pagadian            7.45 316   eP       Pn       08 46 53.8  -1.2
SOEI  Soe                12.87 199    P       P        08 48 08.5  +2.3
MTN   Manton Dam         15.41 171    P       P        08 48 33.0  -1.1
SBUM  Sibu               16.35 270    P       Pn       08 48 46.4  +0.6
SBUM                                  IAmb    IAmb     08 48 48.7
       comp=Z,6.9nm,0.8s
KNRA  Kununurra          18.02 179    P       P        08 49 02.9  +0.3
FITZ  Fitzroy Crossi     20.63 188    P       P        08 49 29.2  -1.4
       comp=Z,2.6nm,0.5s,baz=34,slow=8.9,SNR=16
FITZ  Fitzroy Crossi     20.63 188    P       P        08 49 29.5  -1.1
FITZ                                  IAmb    IAmb     08 49 34.0
       comp=Z,16nm,1.5s
COEN  Coen               21.80 139    P       P        08 49 41.0  -1.4
COEN                                  IAmb    IAmb     08 49 56.8
       comp=Z,12nm,1.2s
WB0   Warramunga Arr     22.81 166    P       P        08 49 50.9  -0.6
WRAB  Tennant Creek      22.96 166    P       P        08 49 53.6  +0.7
WRA   Warramunga Arr     22.97 166    P       P        08 49 52.6  -0.4
       comp=Z,13nm,0.8s,baz=343,slow=10,SNR=75
WRA                                   ScP     ScP      08 56 50.2  -0.8
       comp=Z,0.7nm,0.3s,baz=344,slow=2.8,SNR=7.8
WRA   Warramunga Arr     22.97 166    P       P        08 49 52.2  -0.8
WB2   Warramunga Arr     22.97 166    P       P        08 49 52.2  -0.8
WB2                                   IAmb    IAmb     08 49 54.6
       comp=Z,16nm,0.8s
CISI  Cisompet, Garu     22.98 244    P       P        08 49 54.5  +1.2
YHNB  Yeheng             23.15 343    P       P        08 49 54.6   0.0
AS31  Alice Springs      26.48 169    P       P        08 50 24.2  -0.4
AS31                                  IAmb    IAmb     08 50 24.9
       comp=Z,2.9nm,0.6s
AS31                                  PcP     PcP      08 53 43.7  +0.3
ASAR  Alice Springs      26.48 169    P       P        08 50 24.4  -0.3
       comp=Z,5.6nm,0.5s,baz=355,slow=8.0,SNR=151
ASAR                                  PcP     PcP      08 53 43.0  -0.3
       comp=Z,0.7nm,0.6s,baz=336,slow=2.0,SNR=3.7
ASAR                                  ScP     ScP      08 56 60.0  -1.0
       comp=Z,1.3nm,0.6s,baz=346,slow=2.4,SNR=11
ASAR  Alice Springs      26.48 169    P       P        08 50 23.6  -1.1
ASAR                                  PcP     PcP      08 53 43.5  +0.2
ASAR                                          ScP      08 56 59.9  -1.0
PBKT  Sadao Pong         30.56 299    P       P        08 51 01.3  +0.5
PBKT                                  IAmb    IAmb     08 51 02.9
       comp=Z,5.6nm,0.9s
CM31  Chiang Mai Arr     33.10 301    P       P        08 51 24.7  +1.7
CM31                                  IAmb    IAmb     08 51 25.4
       comp=Z,13nm,1.2s
CMAR  Chiang Mai Arr     33.10 301    P       P        08 51 24.5  +1.5
       comp=Z,3.6nm,0.7s,baz=119,slow=6.9,SNR=21
CMAR  Chiang Mai Arr     33.10 301    P       P        08 51 24.2  +1.2
CHTO  Chiang Mai         33.26 301    P       P        08 51 24.8  +0.5
CHTO                                  IAmb    IAmb     08 51 26.5
       comp=Z,7.2nm,0.7s
KSRS  Korea Array        34.83 359    P       P        08 51 38.2  +0.7
       comp=Z,1.8nm,0.5s,baz=176,slow=9.7,SNR=8.2
MJAR  Matsushiro Arr     35.06  14    P       P        08 51 39.1  -0.5
       comp=Z,1.5nm,0.7s,baz=186,slow=12,SNR=4.8
MJAR  Matsushiro Arr     35.06  14    P       P        08 51 38.5  -1.0
EIDS  Eidsvold           35.23 143    P       P        08 51 40.9  -0.2
EIDS                                  IAmb    IAmb     08 51 41.8
       comp=Z,12nm,1.4s
BBOO  Buckleboo          35.79 169    P       P        08 51 45.4  -0.3
STKA  Stephens Creek     36.32 161    P       P        08 51 49.8  -0.4
       comp=Z,6.1nm,0.6s,baz=332,slow=8.4,SNR=11
STKA  Stephens Creek     36.32 161    P       P        08 51 50.2   0.0
ARMA  Armidale           39.41 148    P       P        08 52 16.5  +0.3
LZH   Lanzhou            40.53 329   eP       P        08 52 27.4  +1.9
LZH                                   pP      pP       08 53 15.2  +1.0
LZH                                   sP      sP       08 53 38.9  -1.9
LZH                                   PP      PnPn     08 54 08.2  -2.4
HHC   Hu-ho-hao-te       41.19 340   eP       P        08 52 34.6  +3.9
LSA   Lhasa              44.66 311    Pn      P        08 52 54.9  -4.2
LSA   Lhasa              44.66 311    P       P        08 52 55.5  -3.5
LSA                                   IAmb    IAmb     08 53 02.3
       comp=Z,14nm,0.6s
GTA   Gaotai             45.13 328   eP       P        08 53 03.3  +1.1
GTA                                   pP      pP       08 53 21.0   -31
TAPN  Taplejung          46.25 306   eP       P        08 53 11.9  +0.5
       comp=Z,6.8nm,0.2s
ODAN  Odare              46.31 306   eP       P        08 53 12.4  +0.7
       comp=Z,32nm,0.6s
RAMN  Ramite             46.99 305   eP       P        08 53 17.7  +0.7
       comp=Z,51nm,0.6s
JIRN  Jiri               47.61 306   eP       P        08 53 22.6  +0.7
       comp=Z,30nm,0.4s
GUN   Gumba              47.96 306   eP       P        08 53 25.1  +0.5
       comp=Z,28nm,0.5s
PKI   Pulchoki           48.21 305   eP       P        08 53 26.5   0.0
       comp=Z,3.0nm,0.2s
DMN   Daman              48.47 305   eP       P        08 53 28.8  +0.4
ULN   Ulaanbaatar        48.90 341    P       P        08 53 31.8  +0.6
SONM  Songino Array      49.09 340    P       P        08 53 32.9  +0.3
       comp=Z,1.5nm,0.6s,baz=152,slow=8.1,SNR=11
SONM                                  PcP     PcP      08 54 52.8  +0.3
       comp=Z,0.4nm,0.6s,baz=165,slow=4.5,SNR=2.9
SONM  Songino Array      49.09 340    P       P        08 53 33.1  +0.5
SONM                                  PcP     PcP      08 54 53.3  +0.9
DANN  Dangsing           49.85 306   eP       P        08 53 39.2  +0.3
       comp=Z,55nm,0.5s
WMQ   Urumqi             54.82 325   eP       P        08 54 16.3  +1.5
PETK  Petropavlovsk-     55.93  21    P       P        08 54 23.1  +0.7
       comp=Z,5.7nm,0.9s,baz=187,slow=5.7,SNR=2.8
PETK  Petropavlovsk-     55.93  21    P       P        08 54 23.8  +1.4
MK31  Makanchi Array     59.65 325    P       P        08 54 48.5  +0.1
MKAR  Makanchi Array     59.65 325    P       P        08 54 48.6  +0.3
       comp=Z,4.5nm,0.4s,baz=116,slow=8.2,SNR=86
MKAR                                  ScP     ScP      08 59 10.1  -1.0
       comp=Z,0.4nm,0.8s,baz=124,slow=4.2,SNR=3.0
MKAR  Makanchi Array     59.65 325    P       P        08 54 48.5  +0.1
MKAR                                  PcP     PcP      08 55 32.8  -0.1
MKAR                                          ScP      08 59 10.7  -0.4
MAKZ  Makanchi           59.84 325    P       P        08 54 49.3  -0.3
MAKZ                                  IAmb    IAmb     08 54 50.2
       comp=Z,5.7nm,0.5s
KSH   Kashi              60.24 315    P       P        08 54 57.1  +4.4
KSH                                   pP      pwP      08 55 48.4  +0.5
KSH                                   S       S        09 02 52.0  +4.0
KSH   Kashi              60.24 315    SS      SS       09 06 54.7  +5.0
NRN   Naryn              61.01 317    P       P        08 54 58.3  +0.2
NRN                                   PcP     PcP      08 55 33.7  -5.2
BOOM  Boomskoye usch     61.50 318    P       P        08 55 02.2  +1.1
BOOM                                  IAmb    IAmb     08 55 03.5
       comp=Z,6.1nm,0.6s
BOOM                                  PcP     PcP      08 55 36.5  -4.1
ZALV  Zalesovo Beam      62.55 333    P       P        08 55 06.9  -0.8
       comp=Z,1.6nm,0.3s,baz=121,slow=8.0,SNR=3.6
ZALV  Zalesovo Beam      62.55 333    P       P        08 55 06.7  -1.0
SEY   Seymchan           62.87  12    P       P        08 55 10.8  +1.3
       comp=Z,1.4nm,0.6s,baz=270,slow=24,SNR=4.5
KURBB Kurchatov Arra     63.80 327    P       P        08 55 15.8  -0.1
       comp=Z,12nm,0.6s,baz=127,slow=6.0,SNR=89
KURK  Kurchatov          63.80 327    P       P        08 55 15.8  -0.1
GAR   Garm               64.14 313    P       P        08 55 17.9  -0.6
KK31  Karatay Array      65.42 317    P       P        08 55 26.3  -0.3
KK31                                  IAmb    IAmb     08 55 27.1
       comp=Z,2.6nm,0.7s
KKAR  Karatay Array      65.42 317    P       P        08 55 26.2  -0.3
KKAR                                  IAmb    IAmb     08 55 27.1
       comp=Z,2.6nm,0.7s
TIXI  Tiksi              69.09   0    P       P        08 55 47.7  -1.2
       comp=Z,2.3nm,0.4s,baz=352,slow=2.3,SNR=6.2
TIXI  Tiksi              69.09   0    P       P        08 55 47.9  -1.0
BVAR  Borovoye Array     69.39 327    P       P        08 55 50.5  -0.6
       comp=Z,4.1nm,0.8s,baz=117,slow=8.5,SNR=15
BRVK  Borovoye           69.46 327    P       P        08 55 51.0  -0.6
BRVK                                  IAmb    IAmb     08 55 52.2
       comp=Z,4.7nm,0.9s
GEYT  Alibeck            73.12 309    P       P        08 56 13.9   0.0
       comp=Z,2.2nm,0.6s,baz=150,slow=6.8,SNR=4.3
ABKAR Akbulak array      74.30 321    P       P        08 56 19.8  -0.6
AKTO  Aktyubinsk         75.80 322    P       P        08 56 28.4  -0.6
       comp=Z,1.0nm,0.4s,baz=112,slow=9.8,SNR=5.1
ARU   Arti               76.99 328    P       P        08 56 34.6  -0.8
       comp=Z,0.6nm,0.3s,baz=339,slow=8.0,SNR=3.4
ARU   Arti               76.99 328    P       P        08 56 34.2  -1.3
ARU                                   IAmb    IAmb     08 56 35.8
       comp=Z,12nm,1.4s
RAYN  Ar Rayn            82.68 293    P       P        08 57 06.1  -0.6
IMAR  Indian Mountai     82.75  24    P       P        08 57 08.0  +1.9
PPLA  Purkeypile         82.91  27    P       P        08 57 09.0  +1.8
PPLA                                  IAmb    IAmb     08 57 25.6
       comp=Z,9.2nm,1.4s
SKT   Skwentna           83.08  28    P       P        08 57 08.2  +0.3
SKT                                   IAmb    IAmb     08 57 16.1
       comp=Z,5.8nm,1.4s
RC01  Rabbit Creek A     83.83  29    P       P        08 57 12.7  +1.0
RC01                                  IAmb    IAmb     08 57 13.3
       comp=Z,13nm,1.4s
MLY   Manley             83.84  25    P       P        08 57 12.9  +1.1
COLD  Coldfoot           84.34  23    P       P        08 57 15.2  +1.0
RND   Reindeer           84.48  27    P       P        08 57 15.5  +0.5
SML   Sawmill            84.57  28    P       P        08 57 16.6  +1.1
SML                                   IAmb    IAmb     08 57 17.1
       comp=Z,8.7nm,1.2s
ILAR  Eielson Array      85.45  25    P       P        08 57 20.2  +0.5
       comp=Z,0.3nm,0.5s,baz=247,slow=5.3,SNR=7.4
ILAR  Eielson Array      85.45  25    P       P        08 57 20.4  +0.7
ARCES ARCESS Array B     92.27 340    P       P        08 57 50.5  -1.3
       comp=Z,8.0nm,1.1s,baz=67,slow=6.8,SNR=5.6
ARCES ARCESS Array B     92.27 340    P       P        08 57 51.0  -0.8
FIA1  FINESS Array S     93.81 332    P       P        08 57 58.3  -0.7
FINES FINESS Array B     93.82 332    P       P        08 57 58.2  -0.8
PMSA  Palmer Station    117.15 174    PKPdf   PKiKP    09 03 28.3  +2.8
MTE   Manteigas         121.50 322    PKPdf   PKiKP    09 03 35.7  +0.8
S39A  Bolivar           124.33  40    PKPdf   PKPdf    09 03 39.6  -0.6
TORD  Torodi Ar. Bea    125.07 288    PKP     PKPdf    09 03 41.4  -0.7
       comp=Z,0.6nm,0.6s,baz=80,slow=1.8,SNR=3.4
TORD  Torodi Ar. Bea    125.07 288            PKPdf    09 03 41.7  -0.4
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*KRNET **07** 08:54:17.4±0.1, 41°.58N×79°.25E, mb2.6*

*NNC **07** 08:54:17.8±1.4, 41°.47N×78°.88E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=9.2km s-min=6.5km az=149.0*

*SOME **07** 08:54:17.2, 41°.50N×78°.95E, h10^{km}*

ISC 07 08:54:18.7±2.0, **41°.53N**±0°.07×**78°.82E**±0°.05, **h14**^{km}±12^{km}, **n45**, σ**1^{s}44**/73, **16C-6D, Kyrgyzstan-Xinjiang border region**

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Code  Station Name         Δ°   AZ°    Phase ID          Time      Res
                                      Op      ISC      h  m  s    ISC
PRZ   Przheval'sk         1.00 342  ⇑iP       Pb       08 54 37.9  -0.1
       baz=26
PRZ                                 ⇑iS       Sn       08 54 52.3  -0.4
       baz=26
ANVS  Anan'yevo           1.52 326  ⇑iP       Pg       08 54 48.0  +0.1
       baz=16
ANVS                                ⇑iS       Sg       08 55 10.9  +3.2
       baz=16
SATY  Saty                1.56 349   eP       Pg       08 54 48.1  -0.6
       18nm,0.2s
SATY                                 eS       Sg       08 55 09.7  +0.7
       16nm,0.3s
SATY  Saty                1.56 349    P       Pg       08 54 48.1  -0.6
       16nm,0.2s
SATY                                  S       Sg       08 55 10.0  +1.0
       14nm,0.3s
UZB   Uzynbulak           1.62   5  ⇓iP       Pn       08 54 48.3  +1.2
       5.2nm,0.3s
```

UZB	10nm,0.3s			⇓*i*S	Sg	08 55 10.3	-0.8
UZB	**Uzynbulak** 5.2nm,0.3s	1.62	5	P	Pn	08 54 48.0	+0.9
UZB	10nm,0.3s			S	Sg	08 55 09.8	-1.3
ZHN	**Zhinishke** 11nm,0.3s	1.66	350	*e*P	Pb	08 54 49.8	+0.5
ZHN	8.1nm,0.3s			*e*S	Sg	08 55 12.7	+0.4
ZHN	**Zhinishke** 11nm,0.3s	1.66	350	P	Pg	08 54 50.2	-0.5
ZHN	8.1nm,0.3s			S	Sg	08 55 13.5	+1.1
SHLS	**Shalkode** 13nm,0.3s	1.70	16	*e*P	Pb	08 54 51.3	+1.5
SHLS	36nm,0.5s			*e*S	Sg	08 55 15.9	+2.5
KURS	**Kuram** 11nm,0.5s	2.02	346	*e*P	Pb	08 54 55.8	+0.6
KURS	11nm,0.5s			*e*S	Sg	08 55 23.6	0.0
KURS	**Kuram** 11nm,0.5s	2.02	346	Pg	Pg	08 54 56.6	-0.8
KURS	16nm,0.6s			Lg	Lg	08 55 24.7	
TNSS	**Tian-Shan** 15nm,0.2s	2.05	318	*e*P	Pg	08 54 57.6	-0.5
TNSS	18nm,0.6s			*e*S	Sg	08 55 26.5	+1.8
TNSS	**Tian-Shan** 18nm,0.5s	2.05	318	Pg	Pg	08 54 57.4	-0.7
TNSS	18nm,0.6s			Lg	Lg	08 55 26.4	
ULHL	**Ulahol** baz=87	2.05	291	⇑*i*P	Pg	08 54 57.6	-0.5
ULHL	baz=87			⇑*i*S	Sg	08 55 26.8	+2.0
MDOK	**Medeo** 9.9nm,0.5s	2.10	322	*e*P	Pg	08 54 58.1	-0.8
MDOK	15nm,0.5s			*e*S	Sg	08 55 27.6	+1.4
MDOK	**Medeo** 6.4nm,0.5s	2.10	322	⇑Pg	Pg	08 54 58.0	-1.0
MDOK	12nm,0.5s			⇑Lg	Lg	08 55 27.7	
MDOK	**Medeo** 9.9nm,0.5s	2.10	322	Pg	Pg	08 54 58.2	-0.8
MDOK	14nm,0.3s			Lg	Lg	08 55 27.6	
NRN	**Naryn** baz=67	2.12	268	⇑*i*P	Pg	08 54 59.0	-0.4
NRN	baz=67			⇑*i*S	Sg	08 55 29.8	+2.9
KOTS	**Kotyrbulak** 29nm,0.3s	2.12	324	*e*P	Pg	08 54 58.8	-0.7
KOTS	17nm,0.3s			*e*S	Sg	08 55 29.0	+2.0
KOTS	**Kotyrbulak** 29nm,0.3s	2.12	324	Pg	Pg	08 54 58.8	-0.7
KOTS	17nm,0.3s			Lg	Lg	08 55 29.0	
IZV	**Izvestkoviy** 8.3nm,0.5s	2.22	313	*e*P	Pg	08 55 00.4	-1.0
IZV	14nm,0.2s			*e*S	Sg	08 55 31.7	+1.4
IZV	**Izvestkoviy** 8.3nm,0.5s	2.22	313	Pg	Pg	08 55 00.4	-1.0
IZV	14nm,0.2s			Lg	Lg	08 55 31.7	
BOOM	**Boomskoye usch** baz=91	2.35	295	⇑*i*P	Pb	08 55 01.5	+0.5
BOOM	baz=91			⇑*i*S	Sg	08 55 34.1	-0.2
MTBS	**Maitube** 7.2nm,0.2s	2.39	313	*e*P	Pg	08 55 03.3	-1.2
MTBS	13nm,0.2s			*e*S	Sg	08 55 36.0	+0.5
MTBS	**Maitube** 7.2nm,0.2s	2.39	313	Pg	Pg	08 55 03.3	-1.2
MTBS	13nm,0.2s			Lg	Lg	08 55 36.0	
KST	**Kastek** 3.4nm,0.3s	2.60	306	*e*P	Pg	08 55 07.5	-1.1
KST	15nm,0.4s			*e*S	Sg	08 55 43.4	+1.0
KST	**Kastek** 3.4nm,0.3s	2.60	306	Pg	Pg	08 55 07.5	-1.1
KST	15nm,0.4s			Lg	Lg	08 55 43.4	
CHKK	**Chushkaly** 3.3nm,0.3s	2.69	330	*e*P	Pg	08 55 08.0	-2.2
CHKK	34nm,0.3s			*e*S	Sg	08 55 44.2	-0.9
CHKK	**Chushkaly** 3.3nm,0.3s	2.69	330	Pg	Pg	08 55 08.0	-2.2
CHKK	34nm,0.3s			Lg	Lg	08 55 44.2	
KTBS	**Karatobe** 3.3nm,0.3s	2.69	325	*e*P	Pg	08 55 08.6	-1.8
KTBS	28nm,0.3s			*e*S	Sg	08 55 45.0	-0.2
KTBS	**Karatobe** 3.3nm,0.3s	2.69	325	Pg	Pb	08 55 07.8	+1.1
KTBS	28nm,0.3s			Lg	Lg	08 55 43.8	
KZA	**Kyzart** baz=81	2.72	283	⇑*e*P	Pb	08 55 07.0	-0.5
KZA	baz=81			⇑*i*S	Sg	08 55 44.0	-2.3
ARXS	**Arharly** 2.3nm,0.2s	2.78	345	*e*P	Pg	08 55 10.0	-2.0
ARXS	11nm,0.4s			*e*S	Sg	08 55 47.4	-0.7
ARXS	**Arharly** 2.3nm,0.2s	2.78	345	Pg	Pg	08 55 10.0	-2.0
ARXS	11nm,0.4s			Lg	Lg	08 55 47.3	
DGS	**Degeres** 3.1nm,0.5s	2.83	308	*e*P	Pg	08 55 11.5	-1.5
DGS	9.5nm,0.5s			*e*S	Sg	08 55 50.5	+0.7
DGS	**Degeres** 3.0nm,0.5s	2.83	308	Pg	Pb	08 55 09.8	+0.7
DGS	7.5nm,0.4s			Lg	Lg	08 55 47.3	
DJR	**Jarkent** 0.5nm,0.1s	2.89	14	*e*P	Pb	08 55 10.7	+0.5
DJR	13nm,0.3s			*e*S	Sg	08 55 48.7	-2.9
DJR	**Jarkent** 0.5nm,0.1s	2.89	14	Pg	Pb	08 55 10.6	+0.5
DJR	13nm,0.3s			Lg	Lg	08 55 48.7	
KRBS	**Karabastau** 2.0nm,0.3s	3.17	314	*e*P	Pg	08 55 17.2	-2.3
KRBS	3.0nm,0.4s			*e*S	Sg	08 56 00.1	-0.6
UCH	**Uchtor** baz=82	3.29	284	⇑*i*P	Pb	08 55 15.0	-2.1
UCH	baz=82			⇑*i*S	Sb	08 55 57.4	+0.2
CHMS	**Chumysh** 2.0nm,0.8s	3.36	297	⇓Pg	Pb	08 55 17.2	-0.8
CHMS	3.5nm,0.7s			⇓Lg	Lg	08 56 04.5	
AAK	**Ala-Archa** 4.8nm,1.5s	3.40	290	⇓Pg	Pb	08 55 18.7	-0.3
AAK	3.4nm,0.7s			⇓Lg	Lg	08 56 08.0	
SGDS	**Sogindy** 3.2nm,0.5s	3.65	303	Pg	Pg	08 55 25.9	-2.7
SGDS	4.5nm,0.6s			Lg	Lg	08 56 14.7	
KAPS	**Kapalarasan** 1.1nm,0.5s	3.77	6	*e*P	Pb	08 55 27.0	+1.8
KAPS	2.2nm,0.3s			*e*S	Sg	08 56 16.8	-3.2
KAPS	**Kapalarasan** 1.1nm,0.5s	3.77	6	Pg	Pb	08 55 27.0	+1.8
KAPS	2.2nm,0.3s			Lg	Lg	08 56 16.8	

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*UUSS **07** 08:54:30.6±2.9, 38.°97N±0.°04×111.°41W±0.°05, h-3^{km}±1^{km}, Error ellipse: s-maj=6.1km s-min=4.8km az=133.0*

*IDC **07** 08:54:31.9±1.2, 38.°95N×111.°17W, h0^{km}, mb2.9/1, mb1 3.0/5, mb1mx3.0/54, mbtmp2.7/5, ML2.7/4, Error ellipse: s-maj=13.4km s-min=9.7km az=147.0*

*NEIC **07** 08:54:32.8±2.6, 39.°00N±0.°04×111.°42W±0.°05, h5^{km}±2^{km}, ML2.6/15(UUSS), Error ellipse: s-maj=7.3km s-min=5.9km az=137.0*

ISC 07 08:54:32.2±0.8**, 39.°01N**±0.°02×**111.°44W**±0.°02**, h7**^{km}**, n51,** σ**1^{s}.78**/60**, Utah**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
Q16A	**Castle Valley**	0.23	113		Pg	08 54 35.1	-1.6
TMUT	**Trail Mountain**	0.34	32		Pg	08 54 38.7	-0.2
P17A	**Butcher Ranch,**	0.71	49		Pg	08 54 44.7	-1.2
P17A				Sg	Sg	08 54 55.0	-0.3
SRU	**San Rafael Swe**	0.72	81		Pg	08 54 44.6	-1.4
SRU				Sg	Sg	08 54 54.7	-0.7
MSU	**Marysvale**	0.76	230		Pg	08 54 45.6	-1.2
TCRU	**Three Creeks R**	0.88	244		Pg	08 54 48.5	-0.6
MPU	**Maple Canyon**	1.02	352		Pg	08 54 51.1	-0.6
NLU	**North Lily Min**	1.07	333		Pb	08 54 52.8	-0.3
MTPU	**Mount Pierson**	1.13	212		Pg	08 54 52.2	-1.6
DUG	**Dugway, Tooele**	1.59	319		Pn	08 55 00.7	-0.3
JLU	**Jordanelle**	1.59	360		Pg	08 55 01.9	-0.8
CTU	**Camp Tracy**	1.70	352		Pb	08 55 02.8	-1.1
PKCU	**Pink Cliffs**	1.71	204		Pb	08 55 02.8	-1.3
PSUT	**Pine Spring**	1.95	257		Pn	08 55 06.3	+0.4
TCUT	**Toone Canyon**	2.11	1		Pb	08 55 09.1	-1.7
RDMU	**Red Mountain**	2.12	42		Pb	08 55 10.0	-1.1
KNB	**Kanab**	2.27	209		Pb	08 55 11.7	-1.9
BGU	**Big Grassy Mou**	2.27	328		Pn	08 55 10.1	-0.2
SPUT	**South Promonto**	2.43	342		Pn	08 55 12.5	+0.1
LCMT	**Little Creek M**	2.45	216		Pn	08 55 13.4	+0.7
HWUT	**Hardware Ranch**	2.60	358		Pn	08 55 16.0	+1.2
U15A	**North Rim**	2.66	195		Pn	08 55 17.2	+1.5
O20A	**White River Ci**	2.71	64		Pb	08 55 19.1	-2.1
MVCO	**Mesa Verde**	2.93	127		Pn	08 55 20.5	+1.1
ELK	**Elko** 0.1nm,0.3s,baz=113,slow=13,SNR=3.4	3.40	302	Pn	Pb	08 55 30.5	-2.4
ELK	0.2nm,0.3s,baz=124,slow=11,SNR=10			Pg	Pg	08 55 36.2	-1.1
ELK	0.3nm,0.3s,baz=20,slow=23,SNR=6.8			Lg	Lg	08 56 19.6	
ELK	**Elko**	3.40	302	Pg	Pg	08 55 35.8	-1.5
SMCO	**Snowmass**	3.48	86		Pn	08 55 28.9	+1.9
WUAZ	**Wupatki**	3.48	179		Pn	08 55 29.2	+2.3
S22A	**4UR Ranch, Cre**	3.83	108		Pn	08 55 32.5	+0.7
SHPR	**Sheep Range**	3.87	231		Pb	08 55 41.6	+0.9
BW06	**Boulder Array**	4.02	20		Pg	08 55 46.9	-2.2
PD31	**Pinedale Array**	4.02	20		Pn	08 55 35.2	+0.8
PDAR	**Pinedale Array** 0.2nm,0.3s,baz=188,slow=12,SNR=10	4.02	20	Pn	Pn	08 55 36.2	+1.9
PDAR	0.5nm,0.3s,baz=188,slow=13,SNR=8.7			Pg	Pb	08 55 44.2	+0.8
PDAR	0.3nm,0.3s,baz=180,slow=20,SNR=6.5			Lg	Lg	08 56 37.8	
PDAR	**Pinedale Array**	4.02	20		Pn	08 55 35.8	+1.5
PDAR					Pb	08 55 44.7	+1.3
W18A	**Petrified Fore**	4.11	160	Pg	Pb	08 55 46.1	+1.1
REDW	**Red Top Meadow**	4.37	6		Pg	08 55 53.7	-2.2
SNOW	**Snow King Moun**	4.48	6		Pb	08 55 53.4	+2.1
ISCO	**Idaho Springs**	4.58	78		Pg	08 55 56.5	-3.4
N23A	**Red Feather La**	4.62	64		Pn	08 55 44.1	+1.4
X18A	**Snowflake**	4.63	165		Pn	08 55 43.3	+0.7
SDCO	**Great Sand Dun**	4.83	103		Pn	08 55 46.2	+0.7
Q24A	**Divide**	4.90	89		Pg	08 56 02.0	-4.0
KVN	**Kaiserville**	5.19	273		Pg	08 56 10.2	-1.4
K22A	**Casper**	5.21	44		Pn	08 55 52.7	+2.0
Y14A	**Wickenburg**	5.21	194		Pg	08 56 08.1	-3.9
NVAR	**Mina Array Bea** 0.1nm,0.3s,baz=69,slow=16,SNR=3.2	5.40	266	Pn	Pn	08 55 56.5	+3.2
NVAR	0.1nm,0.3s,baz=82,slow=15,SNR=6.5			Pg	Pb	08 56 09.9	+3.0
NVAR	0.1nm,0.3s,baz=86,slow=16,SNR=2.6			Lg	Lg	08 57 20.8	
NVAR	**Mina Array Bea**	5.40	266		Pn	08 55 55.2	+1.9
NVAR					Pg	08 56 13.1	-2.5
RYN	**Ryan**	5.55	268		Pn	08 55 58.1	+2.8
ANMO	**Albuquerque** 0.3nm,0.3s,baz=324,slow=12,SNR=15	5.68	134	Pn	Pn	08 55 57.0	-0.2
ANMO	0.3nm,0.3s,baz=314,slow=16,SNR=14			Pg	Pb	08 56 12.8	+1.1
ANMO	0.1nm,0.3s,baz=231,slow=14,SNR=2.8			Lg	Lg	08 57 24.9	
ANMO	**Albuquerque**	5.68	134		Pn	08 55 56.7	-0.5
ANMO					Pb	08 56 15.1	+3.3
YKA	**Yellowknife Ar** 0.3nm,1.0s,baz=172,slow=9.5,SNR=7.7	23.60	356	P	P	08 59 44.8	+1.5

KRAR 07 09:02:00.1±0.2**, 54.°13N×86.°69E, M2.5, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia**

ASRS 07 09:02:59.0, 54.°12N×87.°07E, M1.6, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

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*SOME **07** 09:12:43.6, 41.°45N×78.°92E, h10^{km}*

*KRNET **07** 09:12:44.2±0.1, 41.°55N×79.°22E, mb3.0*

*NNC **07** 09:12:46.8±1.4, 41.°58N×78.°88E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=10.0km s-min=6.6km az=159.0*

ISC 07 09:12:47.8±2.0**, 41.°62N**±0.°07×**78.°80E**±0.°05**, h8**^{km}±12^{km}**, n48,** σ**1^{s}.24**/79**, 21C-8D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk** baz=28	0.92	341	⇑*i*P	Pg	09 13 04.7	-0.7
PRZ	baz=28			⇑*i*S	Sn	09 13 19.5	-1.2
ANVS	**Anan'yevo** baz=17	1.44	325	⇑*i*P	Pb	09 13 14.8	-0.2
ANVS	baz=17			⇑*i*S	Sg	09 13 37.5	+3.4
SATY	**Saty** 49nm,0.3s	1.47	349	*e*P	Pb	09 13 14.9	-0.6
SATY	65nm,0.1s			*e*S	Sg	09 13 37.0	+1.9
SATY	**Saty** 49nm,0.5s	1.47	349	P	Pn	09 13 14.6	-0.1
SATY	65nm,0.1s			S	Sg	09 13 36.9	+1.8
UZB	**Uzynbulak** 15nm,0.3s	1.54	6	⇓*i*P	Pn	09 13 14.9	-0.9
UZB	24nm,0.3s			⇑*i*S	Sg	09 13 37.3	0.0
UZB	**Uzynbulak** 15nm,0.3s	1.54	6	P	Pn	09 13 14.8	-0.9
UZB	24nm,0.3s			S	Sg	09 13 37.3	0.0
ZHN	**Zhinishke** 33nm,0.3s	1.57	350	⇑*i*P	Pb	09 13 16.6	-0.7
ZHN	44nm,0.2s			⇑*i*S	Sg	09 13 40.4	+2.0
SHLS	**Shalkode** 31nm,0.3s	1.61	17	*e*P	Pb	09 13 17.8	-0.2
SHLS	105nm,0.4s			*e*S	Sg	09 13 42.8	+3.0
KURS	**Kuram** 27nm,0.6s	1.93	346	*e*P	Pb	09 13 22.4	-0.8
KURS	34nm,0.5s			*e*S	Sg	09 13 50.4	+0.6
KURS	**Kuram** 27nm,0.6s	1.93	346	Pg	Pb	09 13 22.4	-0.8
KURS	34nm,0.4s			Lg	Lg	09 13 50.4	
TNSS	**Tian-Shan** 54nm,0.4s	1.98	317	*e*P	Pb	09 13 24.0	-0.3
TNSS	43nm,0.4s			*e*S	Sg	09 13 52.9	+1.6
TNSS	**Tian-Shan** 54nm,0.4s	1.98	317	Pg	Pb	09 13 24.0	-0.3
TNSS	43nm,0.4s			Lg	Lg	09 13 52.9	
ULHL	**Ulahol** baz=88	2.01	289	⇑*i*P	Pb	09 13 24.1	-0.6
ULHL	baz=88			⇑*i*S	Sg	09 13 53.3	+0.9
MDOK	**Medeo** 22nm,0.5s	2.02	321	*e*P	Pb	09 13 24.7	-0.2
MDOK	38nm,0.4s			*e*S	Sg	09 13 54.1	+1.4
MDOK	**Medeo** 16nm,0.5s	2.02	321	Pn	Pb	09 13 24.5	-0.4
MDOK	30nm,0.4s			⇑Lg	Lg	09 13 54.1	
MDOK	**Medeo** 22nm,0.5s	2.02	321	Pg	Pb	09 13 24.0	-0.9
MDOK	44nm,0.4s			Lg	Lg	09 13 53.0	
KOTS	**Kotyrbulak** 58nm,0.3s	2.04	323	*e*P	Pb	09 13 25.3	0.0
KOTS	41nm,0.3s			*e*S	Sg	09 13 56.0	+2.5
KOTS	**Kotyrbulak** 58nm,0.2s	2.04	323	Pg	Pb	09 13 25.1	-0.2
KOTS	41nm,0.3s			Lg	Lg	09 13 55.3	
NRN	**Naryn** baz=68	2.11	266	⇑*i*P	Pb	09 13 25.6	-0.9
NRN	baz=68			⇑*i*S	Sg	09 13 56.2	+0.5
IZV	**Izvestkoviy** 20nm,0.3s	2.15	312	*e*P	Pb	09 13 27.0	-0.2
IZV	65nm,0.3s			*e*S	Sg	09 13 58.6	+1.5
IZV	**Izvestkoviy** 20nm,0.4s	2.15	312	Pg	Pb	09 13 27.0	-0.2
IZV	54nm,0.2s			Lg	Lg	09 13 58.6	
BOOM	**Boomskoye usch** baz=92	2.30	293	⇑*i*P	Pb	09 13 28.3	-1.4
BOOM	baz=92			⇑*i*S	Sg	09 14 00.4	-1.4
MTBS	**Maitube** 10nm,0.4s	2.32	311	*e*P	Pb	09 13 29.6	-0.4
MTBS	81nm,0.3s			*e*S	Sg	09 14 02.4	+0.1
MTBS	**Maitube** 10.0nm,0.5s	2.32	311	Pg	Pb	09 13 29.5	-0.4
MTBS	81nm,0.3s			Lg	Lg	09 14 02.4	
MNBS	**Baschi** 55nm,0.3s	2.48	353	*e*P	Pb	09 13 32.8	+0.1
MNBS	82nm,0.3s			*e*S	Sg	09 14 07.5	+0.1
MNBS	**Baschi** 54nm,0.4s	2.48	353	Pg	Pb	09 13 32.3	-0.3
MNBS	75nm,0.4s			Lg	Lg	09 14 07.3	
KST	**Kastek** 9.6nm,0.4s	2.54	305	*e*P	Pb	09 13 33.4	-0.3
KST	56nm,0.6s			*e*S	Sg	09 14 09.3	-0.2
KST	**Kastek** 9.6nm,0.4s	2.54	305	Pg	Pb	09 13 33.4	-0.3
KST	56nm,0.5s			Lg	Lg	09 14 09.3	
CHKK	**Chushkaly** 14nm,0.4s	2.60	330	*e*P	Pb	09 13 34.3	-0.4
CHKK	76nm,0.2s			*e*S	Sg	09 14 11.2	-0.3
CHKK	**Chushkaly** 14nm,0.4s	2.60	330	Pg	Pb	09 13 34.3	-0.4
CHKK	76nm,0.2s			Lg	Lg	09 14 11.2	
KTBS	**Karatobe** 10nm,0.5s	2.61	324	*e*P	Pb	09 13 34.5	-0.4
KTBS	95nm,0.5s			*e*S	Sg	09 14 11.2	-0.6
KTBS	**Karatobe** 10nm,0.5s	2.61	324	Pg	Pb	09 13 34.6	-0.4
KTBS	95nm,0.5s			Lg	Lg	09 14 11.2	
ARXS	**Arharly** 12nm,0.4s	2.69	345	*e*P	Pb	09 13 36.7	+0.4
ARXS	37nm,0.5s			*e*S	Sg	09 14 14.2	-0.1
KZA	**Kyzart** baz=81	2.69	281	⇑*i*P	Pn	09 13 33.9	+2.1
KZA	baz=81			⇑*i*S	Sb	09 14 10.1	+0.3
DGS	**Degeres** 7.0nm,0.6s	2.77	307	*e*P	Pb	09 13 37.1	-0.5
DGS	30nm,0.5s			*e*S	Sg	09 14 16.0	-0.8
DGS	**Degeres** 7.0nm,0.5s	2.77	307	Pg	Pb	09 13 36.1	-1.5
DGS	30nm,0.6s			Lg	Lg	09 14 14.6	
DJR	**Jarkent** 1.1nm,0.2s	2.81	15	*e*P	Pb	09 13 36.8	-1.5
DJR	49nm,0.4s			*e*S	Sg	09 14 15.5	-2.5
DJR	**Jarkent** 1.1nm,0.2s	2.81	15	Pg	Pb	09 13 36.3	-2.0
DJR	49nm,0.4s			Lg	Lg	09 14 14.6	
KUU	**Kurty** 5.6nm,0.3s	2.91	322	*e*P	Pb	09 13 39.6	-0.4
KUU	23nm,0.5s			*e*S	Sg	09 14 20.4	-0.9
KUU	**Kurty** 5.6nm,0.3s	2.91	322	Pg	Pb	09 13 39.2	-0.7
KUU	23nm,0.5s			Lg	Lg	09 14 19.2	
KRBS	**Karabastau** 4.8nm,0.3s	3.10	313	*e*P	Pb	09 13 43.0	-0.3
KRBS	8.1nm,0.4s			*e*S	Sg	09 14 25.7	-1.8
CHMS	**Chumysh** 3.6nm,0.9s	3.31	296	⇑Pg	Pg	09 13 51.1	0.0
CHMS	6.7nm,0.6s			⇓Lg	Lg	09 14 31.9	
ARLS	**Aral** baz=77	3.36	276	⇓*i*P	Pn	09 13 43.0	+2.2
ARLS	baz=77			⇓*i*S	Sb	09 14 25.5	-3.3
AAK	**Ala-Archa** 3.8nm,0.7s	3.36	289	⇑Pg	Pg	09 13 51.9	-0.3
AAK	14nm,0.9s			⇓Lg	Lg	09 14 35.0	
KAPS	**Kapalarasan** 2.7nm,0.3s	3.69	6	*e*P	Pb	09 13 54.3	+1.1
KAPS	7.4nm,0.3s			*e*S	Sg	09 14 44.8	-1.5
KAPS	**Kapalarasan** 1.6nm,0.3s	3.69	6	Pg	Pb	09 13 52.5	-0.8
KAPS	7.4nm,0.4s			Lg	Lg	09 14 42.0	
MAKZ	**Makanchi** 2.0nm,1.1s	5.67	23	⇑Pn	Pn	09 14 14.6	+2.2
MAKZ	0.6nm,0.5s			⇓Sn	Sn	09 15 18.3	+0.6
MAKZ	2.0nm,0.7s			⇓Lg	Lg	09 15 45.4	
MK31	**Makanchi Array** 0.3nm,0.3s,baz=212,slow=15,SNR=5.8	5.75	25	⇓Pn	Pn	09 14 14.5	+1.1
MK31	0.3nm,0.3s			⇑Sn	Sn	09 15 21.8	+2.2
MK31	1.7nm,0.6s,baz=211,slow=29,SNR=3.7			⇑Lg	Lg	09 15 50.5	

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*ATH **07** 09:13:43.6, 38.°18N×20.°44E, h16^{km}±1^{km}, ML2.8/4, Error ellipse: s-maj=1.9km s-min=1.0km az=238.0*

*THE **07** 09:13:44.0, 38.°19N×20.°45E, h14^{km}, ML2.7/6, Error ellipse: s-maj=0.9km s-min=0.4km az=226.0*

ISC 07 09:13:43.7±1.1**, 38.°19N**±0.°04×**20.°45E**±0.°04**, h16**^{km}±6^{km}**, n35,** σ**0^{s}.32**/52**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LXR1	**Lixouri, Cepha**	0.02	323	P	Pg	09 13 46.4	-0.1
LXR1	56µm,0.2s			S	Sg	09 13 48.5	+0.2
LXRA	**Lixouri, Kepha**	0.02	320	P	Pg	09 13 46.5	0.0
LXRA				S	Sg	09 13 48.3	0.0
ARGA	**Argostoli. Kep**	0.02	111	P	Pg	09 13 46.3	-0.1
ARGA				S	Sg	09 13 48.0	-0.2
KEF2	**Argostoli. Kep**	0.03	126	P	Pg	09 13 46.4	-0.1
KEF2				S	Sg	09 13 47.9	-0.4
CHV1	**Chavriata, Kef**	0.06	269	P	Pg	09 13 46.7	+0.1
KEF4	**Livadi, Kephal**	0.08	343	P	Pg	09 13 46.7	-0.1
KEF4				S	Sg	09 13 48.9	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AGT1	Agia Thekli	0.09	320	P	Pg	09 13 46.8	-0.1
KEF3	Kipouria, Keph	0.09	282	P	Pg	09 13 46.9	0.0
KEF3				S	Sg	09 13 49.0	0.0
VLS	Valsamata	0.11	94	P	Pg	09 13 47.0	-0.2
VLS				S	Sg	09 13 49.4	-0.1
	11µm,0.2s						
VLS	Valsamata	0.11	94	P	Pg	09 13 47.0	-0.2
VLS				S	Sg	09 13 49.3	-0.2
VLS				AML	AML	09 13 49.4	
	comp=N,13051µm,0.2s						
VLS				AML	AML	09 13 49.6	
	comp=E,21642µm,0.1s						
KONA	Konidatara, Ke	0.26	21	P	Pg	09 13 49.3	-0.1
KONA				S	Sg	09 13 53.2	+0.1
KFL	Anninata	0.27	106	P	Pg	09 13 49.7	+0.1
KFL				S	Sb	09 13 54.5	-0.2
	comp=E,3µm,0.3s						
KFL	Anninata	0.27	106	P	Pg	09 13 49.8	+0.1
KFL				S	Sg	09 13 54.1	+0.5
KFL				AML	AML	09 13 54.9	
	comp=E,9738µm,0.3s						
KFL				AML	AML	09 13 55.0	
	comp=N,3921µm,0.2s						
FSK	Fiskardo	0.29	17	P	Pg	09 13 49.6	-0.2
FSK				S	Sg	09 13 54.3	+0.3
	comp=N,1µm,0.2s						
FSK	Fiskardo	0.29	17	P	Pg	09 13 49.7	-0.2
FSK				S	Sg	09 13 54.1	0.0
FSK				AML	AML	09 13 54.5	
	comp=N,2009µm,0.3s						
FSK				AML	AML	09 13 54.7	
	comp=E,3680µm,0.1s						
EVGI	Lefkada island	0.46	20	P	Pg	09 13 52.7	-0.3
EVGI	Lefkada island	0.46	20	P	Pg	09 13 52.7	-0.3
EVGI				S	Sg	09 13 59.6	+0.3
MGNA	Meganis	0.54	29	P	Pg	09 13 54.1	-0.3
LKD2	Lefkada island	0.62	15	P	Pg	09 13 55.8	-0.2
LKD2				S	Sb	09 14 04.8	-0.1
	comp=E,162nm,0.5s						
LKD2	Lefkada island	0.62	15	P	Pg	09 13 55.4	-0.6
VTN	Vitineika	0.64	115	P	Pb	09 13 56.7	+0.2
TSLK	Tsoukalades, L	0.66	14	P	Pg	09 13 56.4	-0.2
TSLK	Tsoukalades, L	0.66	14	P	Pg	09 13 56.3	-0.4
PDO	Prodromos	0.71	54	P	Pg	09 13 57.2	-0.3
PDO				S	Sb	09 14 08.2	+1.0
PDO	Prodromos	0.71	54	P	Pg	09 13 57.3	-0.3
RLS	Riolos of Patr	0.81	99	P	Pb	09 13 58.3	-1.1
PVO	Paravola	0.95	63	P	Pg	09 14 02.0	0.0
PVO	Paravola	0.95	63	P	Pg	09 14 02.0	0.0
PVO				AML	AML	09 14 17.7	
	comp=N,800µm,0.3s						
PVO				AML	AML	09 14 17.9	
	comp=E,1352µm,0.3s						
DRO	Drossia	1.02	103	P	Pb	09 14 02.9	-0.1
SERG	Sergoula	1.28	79	P	Pn	09 14 06.8	-0.2
SERG				S	Sg	09 14 24.9	-0.2
	comp=E,110nm,0.5s						
SERG	Sergoula	1.28	79	P	Pg	09 14 08.3	-0.1
TRIZ	Trizonia	1.29	81	P	Pn	09 14 07.2	+0.2
KALE	Kalithea	1.34	81	P	Pb	09 14 08.5	-0.1
KLV	Kalavryta, Ach	1.35	95	P	Pb	09 14 08.6	0.0
AGG	Agios Georgios	1.69	60	P	Pb	09 14 15.2	+0.8

IDC 07 09:14:16.6±1.7**, 19°.03S**×**167°.58E, h0**^{km}**, mb3.7**/4**, mb1 3.9**/5**, mb1mx3.7**/34**, mbtmp3.7**/5**, ML3.5**/1**, Error ellipse: s-maj=45.9km s-min=26.9km az=120.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.21	199	Pn	Pn	09 15 09.0	+0.5
	5.4nm,0.3s,baz=77,slow=9.3,SNR=242						
DZM				Sn	Sn	09 15 46.8	-0.7
	7.3nm,0.3s,baz=109,slow=23,SNR=13						
WRA	Warramunga Arr	31.32	263	P	P	09 20 38.7	-0.3
	0.5nm,0.8s,baz=82,slow=6.1,SNR=2.5						
ASAR	Alice Springs	31.66	256	P	P	09 20 42.1	+0.2
	0.8nm,0.7s,baz=82,slow=8.9,SNR=10						
SONM	Songino Array	86.12	324	P	P	09 26 59.6	0.0
	0.6nm,0.9s,baz=136,slow=4.5,SNR=3.0						
NVAR	Mina Array Bea	89.84	49	P	P	09 27 17.6	-0.1
	0.4nm,0.7s,baz=233,slow=4.4,SNR=3.7						

WEL 07 09:21:28.1, 43°.6S±1°.0×**17°2E**±°**, h9**^{km}±1^{km}**, M3.6**/9**, ML4.0**/4**, MLv3.6**/9**, Error ellipse: s-maj=0.0km s-min=0.0km az=125.7, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	McQueen's Vall	0.16	128	P	Pg	09 21 33.5	+2.1
MQZ				S	Sg	09 21 36.1	+2.4
AKCZ	Akaroa Harbour	0.41	130	P	Pb	09 21 38.1	+0.6
AKCZ				S	Sb	09 21 44.6	+0.8
OXZ	Oxford	0.43	311	P	Pb	09 21 37.8	-0.1
OKCZ	Okains Bay	0.43	105	P	Pb	09 21 39.0	+1.0
OKCZ				S	Sb	09 21 45.6	+1.0
GVZ	Greta Valley S	0.76	32	P	Pn	09 21 44.5	-0.5
LTZ	Lake Taylor	0.84	349	P	Pn	09 21 45.8	-0.3
RPZ	Rata Peaks	1.04	264	P	Pb	09 21 48.6	+0.3
INZ	Inchbonnie	1.17	319	P	Pg	09 21 50.5	0.0
WVZ	Waitaha Valley	1.38	292	P	Pb	09 21 53.8	-0.2
KHZ	Kahutara	1.42	33	P	Pn	09 21 54.0	-0.1
LBZ	Lake Benmore	1.83	244	P	Pn	09 22 00.2	+0.4
THZ	Tophouse	1.87	10	P	Pn	09 22 00.3	-0.1
DSZ	Denniston Nort	1.93	345	P	Pn	09 22 01.3	+0.2
FOZ	Fox Glacier	1.94	271	P	Pn	09 22 02.3	+1.1
ODZ	Otahua Downs	1.95	222	P	Pn	09 22 01.1	-0.2
BSWZ	Blackbirch Sta	2.15	29	P	Pn	09 22 04.5	+0.3
TUWZ	Tuamarina	2.43	27	P	Pn	09 22 08.1	+0.1
NNZ	Nelson	2.48	16	P	Pn	09 22 09.2	+0.6
HHSZ	Highcliff Hill	2.64	210	P	Pb	09 22 15.7	+0.1
JCZ	Jackson Bay	2.71	259	P	Pn	09 22 12.3	+0.3
TCW	Tory Channel	2.74	30	P	Pn	09 22 11.2	-1.1
WKZ	Wanaka	2.77	243	P	Pn	09 22 12.8	+0.1
QRZ	Quartz Range	2.78	1	P	Pn	09 22 12.8	0.0
EAZ	Earnscleugh	2.79	233	P	Pn	09 22 12.9	-0.1
PLWZ	Palliser	2.89	46	P	Pn	09 22 13.4	-0.9
MSWZ	Moikau Station	3.00	44	P	Pn	09 22 14.9	-0.9
DUWZ	D'Urville Isla	3.00	21	P	Pn	09 22 16.5	+0.7
TUZ	Tuapeka	3.10	220	P	Pn	09 22 17.9	+0.7
CAW	Cannon Point	3.15	38	P	Pn	09 22 17.0	-0.9
KIW	Kapiti Island	3.29	34	P	Pn	09 22 19.3	-0.4
MTW	Mount Morrison	3.32	43	P	Pn	09 22 19.1	-1.1
OGWZ	Otaki Gorge	3.43	36	P	Pn	09 22 20.9	-0.9
MSZ	Milford Sound	3.45	250	P	Pn	09 22 23.2	+1.2
MLZ	Mavora Lakes	3.58	239	P	Pn	09 22 23.8	-0.1
MRZ	Mangatainoka R	3.74	39	P	Pn	09 22 24.5	-1.5
SYZ	Scrubby Hill	3.77	218	P	Pn	09 22 26.6	+0.3
TIWZ	Tintock	3.80	43	P	Pn	09 22 26.8	0.0
WHZ	Wether Hill Ro	3.96	233	P	Pn	09 22 28.0	-1.0
PRWZ	Pori Road	4.01	42	P	Pn	09 22 29.3	-0.4
BFZ	Birch Farm	4.05	45	P	Pn	09 22 29.3	-0.9
ANWZ	Angora Road	4.33	45	P	Pn	09 22 33.3	-0.7
PREZ	Palmer Road	4.45	17	P	Pn	09 22 37.4	+1.7
NBEZ	Newall Road No	4.46	14	P	Pn	09 22 37.7	+1.8
KHEZ	Kahui Hut	4.46	15	P	Pn	09 22 38.0	+2.1
APZ	The Paps	4.52	223	P	Pn	09 22 36.9	+0.2
PKE	Pukeiti	4.55	15	P	Pn	09 22 39.1	+1.9
DREZ	Durham Road	4.60	17	P	Pn	09 22 38.0	+0.2
VRZ	Vera Road	4.80	22	P	Pn	09 22 41.5	+1.0
KRHZ	Kereru	4.92	38	P	Pn	09 22 41.3	-0.9
TUVZ	Tukino	4.95	30	P	Pn	09 22 43.9	+1.1
KAHZ	Kahuranaki	5.03	42	P	Pn	09 22 43.1	-0.7
HIZ	Hauiti	5.40	20	P	Pn	09 22 48.9	+0.1
TLZ	Tolley Road	5.76	25	P	Pn	09 22 54.7	+0.9

ROM 07 09:37:40.5±0.3**, 40°.43N**±0°.01×**15°.39E**±0°.02**, h11**^{km}±4^{km}**, ML1.1**/2**, 2C-1D, Error ellipse: s-maj=2.1km s-min=0.9km az=311.0, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDRU	Civita di Ruta	0.09	312	P	Pg	09 37 43.5	+0.3
CDRU				S	Sg	09 37 45.6	+0.3
CDRU				AML	AML		
	comp=E,388µm,0.2s						
CDRU				AML	AML		
	comp=N,232µm,0.1s						
CDRU				AML	AML		
	comp=E,388µm,0.2s						
CMPR	Campora	0.13	212	P	Pg	09 37 44.3	+0.6
CMPR				S	Sg	09 37 47.0	+1.1
CMPR				AML	AML		
	comp=E,86µm,0.4s						
CMPR				AML	AML		
	comp=N,39µm,1.0s						
CMPR				AML	AML		
	comp=E,86µm,0.4s						
CMPR				AML	AML		
	comp=N,39µm,1.0s						
SLCN	Sala Consilina	0.19	102	P	Pg	09 37 44.9	+0.3
SLCN				S	Sg	09 37 48.5	+1.1
SLCN				AML	AML		
	comp=E,11602µm,1.6s						
SLCN				AML	AML		
	comp=N,10956µm,1.6s						
SLCN				AML	AML		
	comp=E,11581µm,1.6s						
SLCN				AML	AML		
	comp=E,11582µm,1.6s						
SLCN				AML	AML		
	comp=N,10951µm,1.6s						
MGR	Morigerati	0.32	157	P	Pg	09 37 46.8	0.0
MGR				S	Sg	09 37 51.9	+0.8
MTSN	Montesano sull	0.32	120	P	Pb	09 37 47.7	-0.6
MTSN				S	Sb	09 37 52.7	-0.8
MCEL	Monticello	0.33	108	⇑P	Pn	09 37 51.5	+0.2
T0721	Laino Castello	0.66	137	S	Sg	09 38 02.0	-0.1
PAOL	Paolisi	0.87	314	P	Pg	09 37 49.2	-8.1
VVLD	Villa Vallelon	1.97	318	P	Pn	09 38 11.7	-2.2
GIUL	Giuliano Di Ro	1.97	306	S	Sn	09 38 31.0	-7.6
STON	Ston	2.99	35	S	Sb	09 39 12.0	+1.7
ATFO	Monte Foce - G	3.61	325	P	Pn	09 38 29.5	-7.0
COR1	Corinaldo	3.66	332	S	Sb	09 39 25.0	-4.7
PE3	Peglio	3.91	328	P	Pn	09 38 34.3	-6.2
VLS	Valsamata	4.62	117	⇑P	Pn	09 38 42.0	-8.2
RDO	Rodhopi	7.73	81	⇓P	Pn	09 39 31.4	-1.5

BUC 07 09:39:44.0±0.2**, 45°.95N**×**25°.31E, h2**^{km}**, ml2.1**/11**, 16C-30D, Error ellipse: s-maj=2.0km s-min=1.2km az=167.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOPR	Dopca	0.06	75	⇓S	Sg	09 39 44.5	-1.4
DOPR	Dopca	0.06	75	⇓S	Sg	09 39 44.5	-1.4
VOIR		0.55	200	⇓P	Pg	09 39 53.7	-0.8
VOIR				⇑S	Sg	09 40 02.2	+0.6
VOIR		0.55	200	⇓P	Pg	09 39 53.7	-0.8
VOIR				⇑S	Sg	09 40 02.2	+0.6
MLR	Muntele Rosu	0.64	136	⇓P	Pg	09 39 56.7	+0.4
MLR				⇓S	Sg	09 40 05.7	+1.2
MLR	Muntele Rosu	0.64	136	⇓P	Pg	09 39 56.7	+0.4
MLR				⇓S	Sg	09 40 05.7	+1.2
ARR	Arges	0.76	219	⇓P	Pg	09 39 58.5	+0.1
ARR				⇓S	Sb	09 40 09.5	-1.1
ARR	Arges	0.76	219	⇓P	Pg	09 39 58.5	+0.1
ARR				⇓S	Sb	09 40 09.5	-1.1
PLOR	Plostina	0.94	96	⇓P	Pg	09 40 02.5	+0.5
PLOR				⇓S	Sb	09 40 15.3	-0.6
PLOR	Plostina	0.94	96	⇓P	Pg	09 40 02.5	+0.5
PLOR				⇓S	Sb	09 40 15.3	-0.6
VRI	Vrincioaia	0.99	95	⇑P	Pb	09 40 03.5	-0.4
VRI				⇓S	Sg	09 40 16.4	+0.6
VRI	Vrincioaia	0.99	95	⇑P	Pb	09 40 03.5	-0.4
VRI				⇓S	Sg	09 40 16.4	+0.6
BISRR	Bisoca	1.06	112	⇑S	Sb	09 40 19.4	0.0
BISRR	Bisoca	1.06	112	⇑S	Sb	09 40 19.4	0.0
TESR	Tescani	1.08	58	⇑P	Pb	09 40 05.2	-0.3
TESR				⇓S	Sb	09 40 19.5	-0.6
TESR	Tescani	1.08	58	⇑P	Pb	09 40 05.2	-0.3
TESR				⇓S	Sb	09 40 19.5	-0.6
LOT	Lotru	1.19	246	⇑P	Pg	09 40 06.7	-0.2
LOT				⇓S	Sb	09 40 23.3	0.0
LOT	Lotru	1.19	246	⇑P	Pg	09 40 06.7	-0.2
LOT				⇓S	Sb	09 40 23.3	0.0
BURAR	Bucovina Array	1.66	358	⇑P	Pb	09 40 15.1	-0.3
BURAR				⇑S	Sg	09 40 38.5	+1.0
BURAR	Bucovina Array	1.66	358	⇑P	Pb	09 40 15.1	-0.3
BURAR				⇑S	Sg	09 40 38.5	+1.0
GZR	Gura Zlata	1.86	253	⇓P	Pn	09 40 17.4	+0.4
GZR				⇑S	Sn	09 40 41.8	+0.7
GZR	Gura Zlata	1.86	253	⇓P	Pn	09 40 17.4	+0.4
GZR				⇑S	Sn	09 40 41.8	+0.7
DRGR		1.99	296	⇓P	Pn	09 40 19.3	+0.7
DRGR				⇓S	Sn	09 40 44.5	+0.3
DRGR		1.99	296	⇓P	Pn	09 40 19.3	+0.7
DRGR				⇓S	Sn	09 40 44.5	+0.3
BZS	Buzias	2.61	264	⇓S	Sn	09 41 00.2	+0.8
BZS	Buzias	2.61	264	⇓S	Sn	09 41 00.2	+0.8

TIR ***07*** *10:03:44.6, 40°.09N×19°.83E, h9*^{km}*, Md3.5/7*
BEO ***07*** *10:03:45.0±1.4, 39°.97N×19°.63E, h18*^{km}*±7*^{km}*, ML3.0/6*
ATH ***07*** *10:03:46.2, 40°.15N×19°.81E, h13*^{km}*±2*^{km}*, ML2.7/13, Error ellipse: s-maj=2.1km s-min=1.3km az=208.0*
THE ***07*** *10:03:46.6, 40°.16N×19°.81E, h0*^{km}*±2*^{km}*, ML2.8/8, Error ellipse: s-maj=2.8km s-min=0.9km az=276.0*
ISC 07 10:03:46.3±1.1**, 40°.16N**±0°.02×**19°.81E**±0°.02**, h1**^{km}±10^{km}**, n63, σ0**^{s}**.87**/84**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	Tepelena	0.20	49	P	Pg	10 03 50.0	-0.2
TPE				S	Sg	10 03 54.0	+1.1
	13µm,0.5s						
TPE	Tepelena	0.20	49	*i* PG	Pg	10 03 49.8	-0.4
TPE				*i* SG	Sg	10 03 53.9	+1.1
VLO	Vlora	0.39	322	P	Pg	10 03 53.6	-0.1
VLO				S	Sb	10 04 01.2	-1.2
	4µm,0.4s						
VLO	Vlora	0.39	322	*i* PG	Pg	10 03 53.8	+0.1
VLO				*i* SG	Sb	10 04 01.2	-1.2
KASA	Kassiopi	0.43	167	P	Pg	10 03 53.6	-0.8
KASA				S	Sg	10 04 00.6	+0.7
KASA				AML	AML	10 04 02.8	
	comp=E,3513µm,0.4s						
KASA				AML	AML	10 04 03.2	
	comp=N,1842µm,0.4s						
KEK	Kerkira	0.45	181	P	Pg	10 03 54.2	-0.6
KEK				S	Sg	10 04 02.0	+1.4
	comp=N,1µm,0.3s						
KEK	Kerkira	0.45	181	P	Pg	10 03 54.5	-0.3
KEK				S	Sg	10 04 01.5	+0.9
KEK				AML	AML	10 04 03.6	
	comp=E,3384µm,0.4s						
KEK				AML	AML	10 04 04.3	
	comp=N,2170µm,0.3s						
JAN	Janina	0.95	122	P	Pg	10 04 04.3	-0.1
JAN				S	Sb	10 04 18.6	+0.1
	comp=N,542nm,0.4s						
JAN	Janina	0.95	122	P	Pb	10 04 05.1	-0.3
JAN				AML	AML	10 04 23.2	
	comp=N,1378µm,0.4s						
JAN				AML	AML	10 04 26.6	
	comp=E,953µm,0.3s						
NEST	Nestorio	0.98	75	P	Pg	10 04 04.5	-0.6
NEST				S	Sb	10 04 19.4	-0.2
	comp=E,208nm,0.5s						
NEST	Nestorio	0.98	75	P	Pg	10 04 04.8	-0.3
NEST				AML	AML	10 04 22.4	
	comp=N,384µm,0.5s						
NEST				AML	AML	10 04 24.4	
	comp=E,498µm,0.5s						
SCTE	Santa Cesarea	1.03	265	*i* PG	Pg	10 04 05.5	-0.5
SCTE				*i* SG	Sb	10 04 20.9	0.0
SCTE	Santa Cesarea	1.03	265	P	Pg	10 04 06.1	+0.1
SCTE				S	Sg	10 04 20.3	+0.9
SCTE				AML	AML	10 04 21.9	
	comp=N,728µm,0.4s						
SCTE				AML	AML	10 04 22.6	
	comp=E,867µm,0.6s						
MEV	Metsovon	1.16	109	P	Pg	10 04 07.8	-0.6
TIR	Tirane	1.19	2	*e*Pg	Pn	10 04 10.3	+0.4
TIR				*e*Sg	Sn	10 04 28.8	+2.1
TIR	Tirane	1.19	2	*i* PG	Pg	10 04 09.1	+0.1
TIR				*i* SG	Sn	10 04 27.3	+0.6
TIR	Tirane	1.19	2	P	Pg	10 04 08.1	-0.9
KPRO	Kipourio	1.21	99	P	Pg	10 04 08.8	-0.7
KPRO				S	Sn	10 04 28.0	+0.6
	comp=E,248nm,0.5s						
KPRO	Kipourio	1.21	99	P	Pg	10 04 08.4	-1.1
KPRO				AML	AML	10 04 38.5	
	comp=N,621µm,0.7s						
KPRO				AML	AML	10 04 38.7	
	comp=E,438µm,0.5s						
FNA	Florina	1.35	62	P	Pn	10 04 11.3	-0.9
FNA				S	Sn	10 04 31.9	+1.1
	comp=E,425nm,0.6s						
FNA	Florina	1.35	62	*i* PN	Pn	10 04 11.4	-0.9
FNA				*i* SN	Sn	10 04 31.0	+0.2
FNA	Florina	1.35	62	P	Pn	10 04 11.5	-0.7
FNA				AML	AML	10 04 34.8	
	comp=N,1084µm,0.7s						
FNA				AML	AML	10 04 40.8	
	comp=E,808µm,0.6s						
TSLK	Tsoukalades, L	1.49	154	P	Pb	10 04 14.3	-0.3
TSLK				S	Sg	10 04 35.7	+1.7
	comp=E,305nm,0.4s						
TSLK	Tsoukalades, L	1.49	154	P	Pb	10 04 14.4	-0.2
TSLK				AML	AML	10 04 41.2	
	comp=N,640µm,0.4s						
TSLK				AML	AML	10 04 42.0	
	comp=E,525µm,0.8s						
KZN	Kozani	1.51	84	P	Pb	10 04 14.7	-0.4
KZN				AML	AML	10 04 43.5	
	comp=E,767µm,0.5s						
KZN				AML	AML	10 04 44.2	
	comp=N,463µm,0.6s						
LKD2	Lefkada island	1.52	154	P	Pn	10 04 13.7	-0.8
LKD2	Lefkada island	1.52	154	P	Pb	10 04 14.6	-0.6
LKD2				AML	AML	10 04 43.0	
	comp=N,466µm,0.4s						
LKD2				AML	AML	10 04 46.1	
	comp=E,366µm,0.6s						
PHP	Peshkopia	1.60	17	P	Pn	10 04 15.6	0.0
PHP				S	Sg	10 04 38.6	+1.1
PHP	Peshkopia	1.60	17	*i* PG	Pn	10 04 15.8	+0.1
PHP				*i* SN	Sg	10 04 40.1	+2.6
EVGI	Lefkada island	1.67	157	P	Pb	10 04 17.5	-0.3
FSK	Fiskardo	1.80	161	P	Pn	10 04 17.8	-0.5
THL	Klokotos Trika	1.80	109	P	Pn	10 04 18.7	+0.4
THL	Klokotos Trika	1.80	109	P	Pb	10 04 19.2	-0.8
THL				AML	AML	10 04 53.5	
	comp=N,170µm,0.6s						
THL				AML	AML	10 04 53.7	
	comp=E,184µm,0.5s						
PDO	Prodromos	1.89	145	P	Pn	10 04 18.9	-0.7
PDO	Prodromos	1.89	145	P	Pn	10 04 19.3	-0.3
PDO				AML	AML	10 05 02.3	
	comp=E,300µm,0.5s						
PDO				AML	AML	10 05 02.3	
	comp=N,329µm,0.5s						
EVR	Evrytania	1.98	128	P	Pb	10 04 22.2	-1.0
EVR	Evrytania	1.98	128	P	Pb	10 04 22.3	-0.9
PVO	Paravola	2.04	139	P	Pn	10 04 22.1	+0.5
LIT	Litokhoron	2.06	91	P	Pb	10 04 24.0	-0.4
VLS	Valsamata	2.07	163	P	Pn	10 04 22.4	+0.2
GRG	Griva	2.13	67	P	Pb	10 04 24.1	-1.5
MAKR	Makrakomi, Fth	2.13	122	P	Pb	10 04 24.4	-1.2
NOCI	Noci	2.19	288	P	Pn	10 04 24.6	+0.9
NOCI				AML	AML	10 05 01.5	
	comp=N,426µm,0.4s						
NOCI				AML	AML	10 05 02.8	
	comp=E,530µm,0.3s						
KFL	Anninata	2.19	159	P	Pb	10 04 25.2	-1.3
BCI	Bajram Curri	2.21	5	*i* PN	Pb	10 04 25.8	-1.3
BCI				*i* SN	Sg	10 04 57.7	+0.3
AGG	Agios Georgios	2.26	119	P	Pn	10 04 25.7	+1.1
ANX	Ano Chora	2.27	133	P	Pb	10 04 26.0	-1.9
PDG	Podgorica	2.31	350	*e*Pn	Pn	10 04 24.7	-0.6
PDG				*e*Sn	Sn	10 04 54.8	+0.5
STIP	Stip	2.37	49	*e*PKP	Pg	10 04 30.9	-0.6
VAY	Valandovo	2.40	60	*e*PKP	Pb	10 04 30.5	+0.3
SERG	Sergoula	2.47	134	P	Pn	10 04 28.4	+0.8
TRIZ	Trizonia	2.51	135	P	Pn	10 04 29.0	+0.9
KALE	Kalithea	2.53	134	P	Pn	10 04 29.3	+0.8
TIP	Timpagrande	2.55	248	P	Pn	10 04 28.4	-0.3
BARS	Barje	3.05	29	*e*Pn	Pn	10 04 35.7	+0.1
BOSS	Bosilegrad	3.08	40	*e*Pn	Pn	10 04 36.2	+0.2
SJES	Sjenica	3.10	2	*e*Pn	Pn	10 04 35.4	-1.0
IVAS	Ivanjica	3.42	4	*e*Pn	Pn	10 04 39.4	-1.3
BBLS	Lazići	3.71	355	*e*Pn	Pn	10 04 43.8	-1.0
BOVS	Bovan	3.75	22	*e*Pn	Pn	10 04 45.1	-0.1
ZAPS	Zavoj	3.76	33	*e*Pn	Pn	10 04 46.0	+0.6
GRUS	Gruza	3.79	10	*e*Pn	Pn	10 04 44.7	-1.0
HAPS	Han Pijesak,Bl	3.97	351	*e*Pn	Pn	10 04 48.4	0.0

NEIC ***07*** *10:04:51.8, 28°.07S×176°.92W, h22*^{km}*, Moment Tensor Solution. Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*-0.75;* $M_{\theta\theta}$*1.03;* $M_{\phi\phi}$*-0.28;* $M_{r\theta}$*-1.15;* $M_{\theta\phi}$*-0.39;* $M_{\phi r}$*1.73; Fault plane solution:* M_0*2.30000×*10^{17} *NP1:*ϕ_s*141.10000°, δ80.67000°, λ-71.18000°. NP2:*ϕ_s*256.55000°, δ20.93000°, λ-153.00000°. Principal axes: T 2.2211, Plg33.0000°, Azm215.0000°; N 0.1529, Plg19.0000°, Azm318.0000°; P -2.3740, Plg51.0000°, Azm72.0000°;*
NEIC ***07*** *10:04:52.7±2.8, 28°.15S±0°.07×176°.64W±0°.08, h27*^{km}*±1*^{km}*, mb5.5/276, Ms_20 5.5/528, Mwb5.5/41, Mww5.7, Mwc5.7(GCMT) Error ellipse: s-maj=14.0km s-min=8.7km az=129.0*
MOS ***07*** *10:04:53.4±1.4, 27°.93S×176°.94W, h33*^{km}*, mb5.6/54, MS5.3/12, Error ellipse: s-maj=9.6km s-min=7.0km az=70.7*
IDC ***07*** *10:04:55.6±1.5, 27°.97S×177°.03W, h35*^{km}*±10*^{km}*, mb4.9/25, mb1 5.0/25, mb1mx5.0/31, mbtmp5.1/25, MS4.9/28, Ms1 4.9/28, ms1mx4.8/32, Error ellipse: s-maj=17.1km s-min=12.2km az=132.0*
NEIC ***07*** *10:04:56, 27°.83S×176°.66W, h30*^{km}*, Moment Tensor Solution. Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*0.66;* $M_{\theta\theta}$*1.00;* $M_{\phi\phi}$*-1.66;* $M_{r\theta}$*-2.93;* $M_{\theta\phi}$*0.20;* $M_{\phi r}$*3.06; Fault plane solution:* M_0*4.48000×*10^{17} *NP1:*ϕ_s*318.00000°, δ86.00000°, λ73.00000°. NP2:*ϕ_s*213.00000°, δ17.00000°, λ165.00000°. Principal axes: T 4.4819, Plg47.0000°, Azm210.0000°; N -0.0078, Plg17.0000°, Azm319.0000°; P -4.4741, Plg38.0000°, Azm63.0000°;*
NEIC ***07*** *10:04:58, 27°.94S×176°.75W, h27*^{km}*, Moment Tensor Solution. Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*0.35;* $M_{\theta\theta}$*1.42;* $M_{\phi\phi}$*-1.76;* $M_{r\theta}$*-2.75;* $M_{\theta\phi}$*0.81;* $M_{\phi r}$*3.29; Fault plane solution:* M_0*4.65000×*10^{17} *NP1:*ϕ_s*316.00000°, δ86.00000°, λ71.00000°. NP2:*ϕ_s*215.00000°, δ20.00000°, λ168.00000°. Principal axes: T 4.1702, Plg46.0000°, Azm207.0000°; N 0.8511, Plg19.0000°, Azm318.0000°; P -5.0213, Plg38.0000°, Azm64.0000°;*
GCMT ***07*** *10:04:58.7±0.1, 27°.97S±0°.01×176°.76W±0°.01, h27*^{km}*, MW5.7/153, Moment Tensor Solution. s120,c213; s153,c291; Duration: 1*^{s}*.7 Moment tensor: Scale* 10^{17} *Nm;* M_{rr}*0.43±.03;* $M_{\theta\theta}$*1.35±.03;* $M_{\phi\phi}$*-1.78±.03;* $M_{r\theta}$*-2.80±.10;* $M_{\theta\phi}$*0.77±.02;* $M_{\phi r}$*3.22±.11; Best double couple:* M_0*4.58100×*10^{17} *NP1:*ϕ_s*213.00000°, δ20.00000°, λ167.00000°. NP2:*ϕ_s*316.00000°, δ86.00000°, λ71.00000°. Principal axes: T 4.2180, Plg46.0000°, Azm206.0000°; N 0.7280, Plg19.0000°, Azm318.0000°; P -4.9450, Plg38.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 07 10:04:54.2±0.2**, 28°.19S**±0°.04×**176°.75W**±0°.04**, h37**^{km}**, n1160, σ1**^{s}**.90**/893**, mb5.5**/201**, MS5.5**/313**, 29C-28D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.48	224	Pn	Pn	10 05 20.8	+2.7
	16µm,0.3s,baz=94,slow=4.2,SNR=350						
RAO				Sn	Sn	10 05 41.6	+5.3
	44µm,0.3s,baz=64,slow=23,SNR=16						
RAO				LR	LR	10 06 03.4	
	comp=Z,67µm,21.3s,baz=251,slow=45						
RAO	Raoul Island	1.48	224	P	Pn	10 05 20.9	+2.7
RAO						10 05 38.5	
RAO	Raoul Island	1.48	224	Sn	Sn	10 05 38.5	+2.3
RIZ	Raoul Island	1.48	224	P	Pn	10 05 20.8	+2.6
RIZ				S	Sn	10 05 42.1	+5.8
GLKZ	Green Lake	1.48	224	P	Pn	10 05 20.8	+2.5
GLKZ				S	Sn	10 05 40.8	+4.3
MXZ	Matakaoa Point	10.23	203	Pn	Pn	10 07 15.6	-2.7
MXZ	Matakaoa Point	10.23	203	P	Pn	10 07 11.8	-6.6
MXZ				S	Sn	10 09 04.4	-7.3

WMGZ	**Waiomatatini S**	**10.42**	**202**	P	Pn	10 07 16.3	-4.8
WMGZ				S	**Sn**	**10 09 16.2**	**-0.3**
HAZ	**Te Kaha**	**10.59**	**204**	P	Pn	10 07 18.3	-4.9
PKGZ	**Pakihiroa**	**10.60**	**203**	P	Pn	10 07 17.9	-5.6
PKGZ				S	**Sn**	**10 09 15.3**	**-5.6**
PUZ	**Puketiti**	**10.71**	**202**	P	Pn	10 07 19.0	-6.0
OUZ	**Omahuta**	**10.80**	**227**		**Pn**	**10 07 29.6**	**+3.4**
RUGZ	**Raukumara Rang**	**10.81**	**204**	P	Pn	10 07 20.5	-6.0
TWGZ	**Tauwhareparae**	**10.89**	**203**	P	Pn	10 07 22.6	-4.9
WHRZ	**Whale Island**	**10.98**	**207**	P	**Pn**	**10 07 25.5**	**-3.2**
NIUE	**Niue**	**11.01**	**36**	P	Pn	10 07 23.5	-5.6
	baz=11,SNR=18						
NIUE	**Niue**	**11.01**	**36**	Pn	Pn	10 07 23.6	-5.6
NIUE					Sn	10 09 16.2	-15
CNGZ	**Carnagh Statio**	**11.10**	**201**	P	Pn	10 07 25.1	-5.1
OPRZ	**Ohinepanea**	**11.14**	**209**	P	**Pn**	**10 07 27.9**	**-3.0**
TKGZ	**Te Karaka**	**11.17**	**202**	P	Pn	10 07 25.1	-6.2
MWZ	**Matawai**	**11.19**	**204**	P	Pn	10 07 24.9	-6.6
URZ	**Urewera**	**11.28**	**206**	Pn	Pn	10 07 26.6	-6.2
	2.7nm,0.3s,baz=31,slow=2.4,SNR=26						
URZ				Sn	**Sn**	**10 09 32.3**	**-5.2**
	7.7nm,0.3s,baz=14,slow=6.1,SNR=3.1						
URZ	**Urewera**	**11.28**	**206**		Pn	10 07 27.1	-5.7
URZ	**Urewera**	**11.28**	**206**	P	Pn	10 07 26.9	-5.8
EDRZ	**Edgecumbe**	**11.29**	**207**	P	**Pn**	**10 07 32.2**	**-0.7**
RAGZ	**Rawiri**	**11.38**	**204**	P	**Pn**	**10 07 31.5**	**-2.6**
KMRZ	**Kaimai**	**11.41**	**211**	P	**Pn**	**10 07 34.9**	**+0.2**
KARZ	**Kaharoa**	**11.43**	**209**	P	**Pn**	**10 07 35.8**	**+1.1**
AWAZ	**Awhitu Peninsu**	**11.44**	**217**	P	**Pn**	**10 07 36.9**	**+2.0**
OMRZ	**Omania**	**11.44**	**208**	P	**Pn**	**10 07 35.9**	**+0.9**
RIGZ	**Rimuhau**	**11.44**	**202**	P	Pn	10 07 29.2	-5.8
MSVF	**Nonsavu**	**11.45**	**334**	P	**Pn**	**10 07 36.0**	**+0.7**
MSVF	**Nonsavu**	**11.45**	**334**		**Pn**	**10 07 36.0**	**+0.7**
TARZ	**Mount Tarawera**	**11.50**	**208**	P	**Pn**	**10 07 35.2**	**-0.6**
TOZ	**Tahuroa Road**	**11.52**	**212**	P	**Pn**	**10 07 36.7**	**+0.7**
RRRZ	**Republican Roa**	**11.58**	**207**	P	**Pn**	**10 07 35.1**	**-1.9**
PRGZ	**Paritu Road**	**11.60**	**201**	P	Pn	10 07 32.2	-4.9
RTZ	**Ruatahuna**	**11.64**	**205**	P	Pn	10 07 31.2	-6.5
SNGZ	**Shannon Statio**	**11.66**	**203**	P	Pn	10 07 31.6	-6.3
HSRZ	**Hossack Road**	**11.67**	**208**	P	**Pn**	**10 07 39.9**	**+1.8**
HRRZ	**Handcock Road**	**11.72**	**208**	P	**Pn**	**10 07 38.4**	**-0.4**
KNZ	**Kokohu**	**11.76**	**202**	P	**Pn**	**10 07 36.6**	**-2.6**
PRRZ	**Plateau Road**	**11.77**	**207**	P	**Pn**	**10 07 36.2**	**-3.3**
MHGZ	**Mahia Peninsul**	**11.80**	**201**	P	Pn	10 07 34.0	-5.9
ALRZ	**Allen Road**	**11.84**	**207**	P	**Pn**	**10 07 37.1**	**-3.4**
RAHZ	**Arahi**	**11.87**	**204**	P	Pn	10 07 34.7	-6.1
MTHZ	**Maungataniwha**	**11.90**	**205**	P	Pn	10 07 35.3	-6.0
WHHZ	**Waihua**	**11.96**	**203**	P	**Pn**	**10 07 42.0**	**-0.1**
TLZ	**Tolley Road**	**11.99**	**211**	P	**Pn**	**10 07 40.1**	**-2.5**
MRHZ	**Matea Rd**	**12.05**	**206**	P	Pn	10 07 38.3	-5.0
NMHZ	**Naumai**	**12.13**	**205**	P	Pn	10 07 38.2	-6.2
ARHZ	**Aropaoanui**	**12.21**	**204**	P	**Pn**	**10 07 42.1**	**-3.4**
WATZ	**Wairara**	**12.22**	**209**	P	**Pn**	**10 07 44.3**	**-1.3**
BKZ	**Black Stump Fm**	**12.30**	**205**	P	Pn	10 07 40.2	-6.6
RATZ	**Rangitukua**	**12.34**	**208**	P	**Pn**	**10 07 45.4**	**-1.8**
RITZ	**Rihia Road**	**12.39**	**208**	P	**Pn**	**10 07 44.8**	**-3.3**
HIZ	**Hauiti**	**12.45**	**212**		**Pn**	**10 07 45.8**	**-3.0**
MCHZ	**McNeill Hill**	**12.47**	**204**	P	Pn	10 07 43.2	-5.8
KWHZ	**Kaweka Forest**	**12.56**	**205**	P	Pn	10 07 43.2	-7.0
KRVZ	**Karewarewa**	**12.58**	**208**	P	**Pn**	**10 07 49.3**	**-1.3**
WTVZ	**West Tongariro**	**12.62**	**208**	P	**Pn**	**10 07 49.0**	**-2.2**
TWVZ	**Taurewa**	**12.65**	**209**	P	**Pn**	**10 07 50.0**	**-1.5**
NGZ	**Ngauruhoe**	**12.67**	**208**	P	**Pn**	**10 07 48.2**	**-3.6**
KAHZ	**Kahuranaki**	**12.72**	**203**	P	Pn	10 07 45.8	-6.7
TUVZ	**Tukino**	**12.72**	**208**	P	**Pn**	**10 07 49.2**	**-3.4**
BHHZ	**Black Hill Sta**	**12.75**	**206**	P	Pn	10 07 46.0	-6.9
FWVZ	**Far West T-bar**	**12.76**	**208**	P	**Pn**	**10 07 52.6**	**-0.5**
KRHZ	**Kereru**	**12.77**	**205**	P	Pn	10 07 45.6	-7.5
MOVZ	**Moawhango**	**12.80**	**207**	P	Pn	10 07 49.1	-4.5
MTVZ	**Mangateitei**	**12.90**	**208**	P	**Pn**	**10 07 53.2**	**-1.8**
PXZ	**Pawanui**	**12.94**	**202**	P	Pn	10 07 50.8	-4.6
VRZ	**Vera Road**	**12.99**	**211**	P	**Pn**	**10 07 54.7**	**-1.5**
PNHZ	**Pukenui**	**13.07**	**205**	P	Pn	10 07 50.2	-7.1
WPHZ	**Waipukurau**	**13.11**	**204**	P	**Pn**	**10 07 54.1**	**-3.7**
PRHZ	**Porangahau**	**13.23**	**203**	P	Pn	10 07 51.2	-8.1
TSZ	**Takapari Road**	**13.28**	**205**	P	Pn	10 07 52.6	-7.5
PKE	**Pukeiti**	**13.40**	**213**	P	**Pn**	**10 08 03.7**	**+1.8**
WAZ	**Wanganui**	**13.41**	**209**	P	**Pn**	**10 07 59.2**	**-2.8**
DVHZ	**Dannevirke**	**13.42**	**204**	P	Pn	10 07 56.6	-5.4
LREZ	**Lake Rotokare**	**13.43**	**211**	P	**Pn**	**10 08 03.6**	**+1.6**
PREZ	**Palmer Road**	**13.44**	**212**	P	**Pn**	**10 08 03.1**	**+0.8**
ANWZ	**Angora Road**	**13.45**	**203**	P	**Pn**	**10 07 59.4**	**-3.0**
KHEZ	**Kahui Hut**	**13.47**	**212**	P	**Pn**	**10 08 03.2**	**+0.4**
NMEZ	**Namu Road**	**13.63**	**212**	P	**Pn**	**10 08 06.8**	**+1.9**
POWZ	**Post Office Ro**	**13.65**	**205**	P	Pn	10 08 00.4	-4.7
OHWZ	**Ohakea**	**13.66**	**207**	P	**Pn**	**10 08 04.8**	**-0.4**
PRWZ	**Pori Road**	**13.71**	**204**	P	Pn	10 07 59.6	-6.4
TIWZ	**Tintock**	**13.94**	**204**	P	Pn	10 08 03.5	-5.7
TMWZ	**Te Maipa**	**14.23**	**203**	P	Pn	10 08 04.7	-8.4
TRWZ	**Traveller**	**14.56**	**203**	P	**Pn**	**10 08 13.2**	**-4.3**
PAWZ	**Paruwai Farm**	**14.64**	**204**	P	Pn	10 08 10.8	-7.8
MSWZ	**Moikau Station**	**14.73**	**204**	P	Pn	10 08 13.1	-6.8
DUWZ	**D'Urville Isla**	**14.73**	**209**	P	Pn	10 08 14.2	-5.7
SNZO	**South Karori**	**14.84**	**206**	Pn	Pn	10 08 11.5	-10
PLWZ	**Palliser**	**14.86**	**204**	Pn	Pn	10 08 13.7	-8.0
BHW	**Baring Head**	**14.87**	**205**	Pn	Pn	10 08 13.8	-7.8
BHW	**Baring Head**	**14.87**	**205**	P	Pn	10 08 14.1	-7.5
AFI	**Afiamalu**	**14.94**	**19**	Pn	Pn	10 08 14.7	-8.1
	51nm,0.3s,baz=52,slow=3.1,SNR=36						
AFI				Sn	Sn	10 10 48.1	-19
	16nm,0.3s,baz=198,slow=20,SNR=4.6						
TUWZ	**Tuamarina**	**15.25**	**208**	Pn	Pn	10 08 18.1	-8.5
NNZ	**Nelson**	**15.31**	**209**	Pn	**Pn**	**10 08 20.8**	**-6.6**
QRZ	**Quartz Range**	**15.38**	**212**	Pn	**Pn**	**10 08 25.3**	**-3.1**
CMWZ	**Cape Campbell**	**15.41**	**206**	Pn	**Pn**	**10 08 26.7**	**-2.1**
BSWZ	**Blackbirch Sta**	**15.52**	**207**	Pn	Pn	10 08 22.7	-7.4
BSWZ	**Blackbirch Sta**	**15.52**	**207**	P	**Pn**	**10 08 23.5**	**-6.6**
THZ	**Tophouse**	**15.96**	**209**	Pn	**Pn**	**10 08 29.4**	**-6.5**
THZ				IAmb	IAmb	10 08 41.8	
	comp=Z,157nm,0.5s						
KHZ	**Kahutara**	**16.24**	**207**	Pn	Pn	10 08 30.7	-8.7
KHZ				IAmb	IAmb	10 08 45.1	
	comp=Z,320nm,0.7s						
DZM	**Mont Dzumac**	**16.39**	**288**	Pn	**P**	**10 08 45.2**	**+1.2**
	comp=Z,1.6nm,0.3s,baz=87,slow=13,SNR=18						
DZM				LR	LR	10 13 49.7	
	comp=Z,8µm,18.2s,baz=118,slow=33						
DZM	**Mont Dzumac**	**16.39**	**288**	*e*P	**P**	**10 08 45.2**	**+1.2**
	comp=Z,561nm,1.2s						
DZM				*e*LQ	LQ	10 11 54.4	
	comp=Z,13µm,26.4s						
DZM				*e*LR	LR	10 12 35.1	
	comp=Z,15µm,25.4s						
DZM	**Mont Dzumac**	**16.39**	**288**	Pn	**Pn**	**10 08 40.9**	**-0.6**
RAR	**Rarotonga**	**16.91**	**70**	P	**Pn**	**10 08 45.1**	**-2.8**
	comp=Z,24nm,0.3s,baz=214,slow=3.6,SNR=26						
RAR				S	Sn	10 11 38.1	-17
	comp=Z,7.6nm,0.3s,baz=80,slow=19,SNR=4.8						
RAR				LR	LR	10 16 28.8	
	comp=Z,4µm,18.4s,baz=249,slow=41						
RAR	**Rarotonga**	**16.91**	**70**	P	**Pn**	**10 08 45.2**	**-2.8**
RAR				pmax	pmax		
	comp=Z,660nm,0.9s						
RAR	**Rarotonga**	**16.91**	**70**		**Pn**	**10 08 45.1**	**-2.8**
LTZ	**Lake Taylor**	**17.06**	**209**	Pn	Pn	10 08 42.4	-7.5
AMCZ	**Amberley**	**17.23**	**207**	P	**Pn**	**10 08 51.2**	**-0.7**
OKCZ	**Okains Bay**	**17.54**	**205**	P	**Pn**	**10 08 52.6**	**-3.1**
OXZ	**Oxford**	**17.61**	**208**	Pn	Pn	10 08 47.4	-9.1
OXZ				IAmb	IAmb	10 08 58.5	
	comp=Z,202nm,0.5s						
MQZ	**McQueen's Vall**	**17.68**	**206**	Pn	Pn	10 08 48.1	-9.3
RPZ	**Rata Peaks**	**18.34**	**209**	P	**P**	**10 09 00.8**	**-4.6**
	comp=Z,11nm,0.3s,baz=18,slow=2.5,SNR=26						
RPZ				S	Sn	10 12 11.7	-18
	comp=Z,3.2nm,0.3s,baz=245,slow=17,SNR=5.6						
RPZ	**Rata Peaks**	**18.34**	**209**	P	P	10 08 57.0	-8.3
FOZ	**Fox Glacier**	**18.75**	**212**	P	**P**	**10 09 04.0**	**-5.8**
LBZ	**Lake Benmore**	**19.25**	**209**	P	**P**	**10 09 11.8**	**-3.6**
ODZ	**Otahua Downs**	**19.59**	**207**	P	**P**	**10 09 16.7**	**-2.3**
WKZ	**Wanaka**	**20.11**	**211**	P	**P**	**10 09 20.2**	**-4.6**
MLZ	**Mavora Lakes**	**20.94**	**211**	P	**P**	**10 09 30.7**	**-3.0**
MLZ				IAMs_20	IAMs_20	10 18 29.6	
	comp=Z,15µm,19.0s						
LHI	**Lord Howe Isla**	**21.23**	**255**	P	**P**	**10 09 37.1**	**+0.2**
	baz=21,SNR=11						
LHI	**Lord Howe Isla**	**21.23**	**255**	P	**P**	**10 09 39.2**	**+2.3**
WHZ	**Wether Hill Ro**	**21.42**	**210**	P	**P**	**10 09 35.0**	**-3.7**
WHZ				IAMs_20	IAMs_20	10 18 53.0	
	comp=Z,13µm,19.0s						
DCZ	**Deep Cove**	**21.46**	**212**	P	**P**	**10 09 33.9**	**-5.3**
DCZ				IAMs_20	IAMs_20	10 17 40.9	
	comp=Z,13µm,20.0s						
PYZ	**Puysegur Point**	**22.20**	**212**	IAMs_20	IAMs_20	10 19 06.6	
	comp=Z,13µm,20.0s						
TBI	**Tubuai**	**25.02**	**85**	*e*LQ	LQ	10 15 20.5	
	comp=Z,5µm,25.5s						
TBI				*e*LR	LR	10 16 30.3	
	comp=Z,14µm,27.5s,baz=252						
TBI	**Tubuai**	**25.02**	**85**	*e*T	T	10 35 56.7	
	comp=Z,162nm,0.4s						
KNTN	**Kanton**	**25.73**	**12**	P	**P**	**10 10 19.4**	**-1.8**
PAE	**Paea**	**27.07**	**73**	*e*T	T	10 38 19.9	
	comp=Z,80nm,0.4s						
PPT2	**Papeete2**	**27.10**	**73**	*e*P	**P**	**10 10 35.3**	**+1.5**
	comp=Z,154nm,1.3s						
PPT2				*e*LQ	LQ	10 16 13.2	
	comp=Z,4µm,26.0s						
PPT2				*e*LR	LR	10 17 21.7	
	comp=Z,19µm,26.8s,baz=239						
PPT2	**Papeete2**	**27.10**	**73**	*e*T	T	10 38 23.6	
	comp=Z,49nm,0.4s						
PPTF	**Pamatai, Papee**	**27.11**	**73**	P	**P**	**10 10 35.0**	**+1.1**
PPTF				IAmb	IAmb	10 10 40.0	
	comp=Z,97nm,0.8s						
PPT	**Papeete**	**27.11**	**73**	LR	LR	10 18 29.6	
	comp=Z,4µm,21.7s,baz=243,slow=30						
PPT	**Papeete**	**27.11**	**73**	P	**P**	**10 10 35.1**	**+1.3**
PPT	**Papeete**	**27.11**	**73**	P	**P**	**10 10 35.1**	**+1.3**
TVO	**Taravao**	**27.29**	**74**	*e*P	**P**	**10 10 37.3**	**+1.9**
	comp=Z,29nm,0.8s						
TVO	**Taravao**	**27.29**	**74**	*e*T	T	10 38 37.0	
	comp=Z,12nm,0.3s						
TIAR	**Tiarei**	**27.31**	**73**	*e*P	**P**	**10 10 37.1**	**+1.5**
	comp=Z,62nm,0.8s						
TIAR	**Tiarei**	**27.31**	**73**	*e*T	T	10 38 39.2	
	comp=Z,10.0nm,0.3s						
ARMA	**Armidale**	**27.62**	**258**	P	**P**	**10 10 38.0**	**-0.4**
	baz=28,SNR=16						
ARMA	**Armidale**	**27.62**	**258**	P	**P**	**10 10 37.6**	**-0.8**
ARMA				IAMs_20	IAMs_20	10 19 20.8	
	comp=Z,9µm,21.0s						
HNR	**Honiara**	**28.79**	**306**	LR	LR	10 20 18.4	
	comp=Z,1µm,19.4s,baz=137,slow=32						
EIDS	**Eidsvold**	**28.81**	**268**	P	**P**	**10 10 48.2**	**-0.7**
	baz=29,SNR=8.1						
EIDS	**Eidsvold**	**28.81**	**268**	P	**P**	**10 10 47.2**	**-1.7**
CNB	**Canberra Magne**	**29.58**	**247**	P	**P**	**10 10 56.5**	**+0.8**
	baz=30,SNR=22						
CAN	**Canberra**	**29.88**	**248**	P	**P**	**10 10 59.8**	**+1.5**
CAN				pmax	pmax		
	comp=Z,64nm,1.1s						
CAN	**Canberra**	**29.88**	**248**	P	**P**	**10 10 59.8**	**+1.5**
CAN				IAmb	IAmb	10 11 01.6	
	comp=Z,64nm,1.1s						
VAH	**Vaihoa**	**29.88**	**71**	*e*T	T	10 41 48.5	
	comp=Z,63nm,0.2s						
MILA	**Mila**	**29.92**	**244**	P	**P**	**10 10 59.4**	**+0.7**
	baz=30,SNR=6.0						
YNG	**Young**	**30.32**	**250**	P	**P**	**10 11 02.6**	**+0.4**
	baz=30,SNR=11						
RMQ	**Roma**	**30.63**	**265**	P	**P**	**10 11 04.7**	**-0.3**
	baz=31,SNR=20						
MCQ	**Macquarie Isla**	**31.68**	**207**	IAMs_20	IAMs_20	10 22 07.3	
	comp=Z,8µm,20.0s						
MOO	**Moorlands**	**32.42**	**234**	P	**P**	**10 11 22.7**	**+2.1**
	baz=32,SNR=5.8						
TAU	**Tasmania Unive**	**32.45**	**233**	P	**P**	**10 11 21.4**	**+0.6**
TAU				pmax	pmax		
	comp=Z,43nm,0.7s						
TAU	**Tasmania Unive**	**32.45**	**233**	P	**P**	**10 11 21.4**	**+0.6**
TAU				IAmb	IAmb	10 11 23.3	
	comp=Z,43nm,0.7s						
CMSA	**Cobar Meteorol**	**32.64**	**255**	P	**P**	**10 11 22.3**	**-0.3**
	baz=33,SNR=23						
TOO	**Toolangi**	**32.88**	**244**	P	**P**	**10 11 24.9**	**+0.2**
	baz=33,SNR=8.6						
TOO	**Toolangi**	**32.88**	**244**	P	**P**	**10 11 24.9**	**+0.2**
TOO				pmax	pmax		
	comp=Z,27nm,1.0s						
TOO	**Toolangi**	**32.88**	**244**	P	**P**	**10 11 24.9**	**+0.2**
QLP	**Quilpie**	**34.58**	**263**	P	**P**	**10 11 39.5**	**-0.1**
	baz=35,SNR=14						
XMAS	**Kiritimati**	**35.32**	**35**	P	**P**	**10 11 45.2**	**-0.8**
STKA	**Stephens Creek**	**36.09**	**254**	P	**P**	**10 11 52.2**	**-0.4**
	comp=Z,21nm,0.7s,baz=92,slow=11,SNR=15						
STKA				ScP	**ScP**	**10 18 02.9**	**+1.3**
	comp=Z,12nm,1.1s,baz=101,slow=5.2,SNR=5.5						
STKA				LR	LR	10 24 33.8	
	comp=Z,5µm,21.2s,baz=87,slow=33						
STKA	**Stephens Creek**	**36.09**	**254**	P	**P**	**10 11 50.7**	**-1.9**
MTSU	**Mount Surprise**	**37.03**	**277**	P	**P**	**10 12 01.3**	**+0.7**
	baz=37,SNR=20						
HTT	**Hallett**	**38.21**	**251**	P	**P**	**10 12 09.9**	**-0.7**
	baz=38,SNR=39						
PMG	**Port Moresby**	**38.73**	**292**	LR	LR	10 26 41.7	
	comp=Z,1µm,18.3s,baz=106,slow=34						
PMG	**Port Moresby**	**38.73**	**292**	*i* P	**P**	**10 12 16.3**	**+1.3**
PMG				pmax	pmax		
	comp=Z,82nm,0.9s						
PMG	**Port Moresby**	**38.73**	**292**	P	**P**	**10 12 13.8**	**-1.2**
PMG				IAmb	IAmb	10 12 31.3	
	comp=Z,47nm,0.8s						
TAOE	**Nuku Hiva Isla**	**39.45**	**68**	*e*P	**P**	**10 12 22.7**	**+1.6**
	comp=Z,192nm,1.1s						
TAOE	**Nuku Hiva Isla**	**39.45**	**68**	*e*LR	LR	10 23 02.0	
	comp=Z,10µm,26.0s,baz=244						
TAOE	**Nuku Hiva Isla**	**39.45**	**68**	*e*T	T	10 53 44.0	
	comp=Z,35nm,0.3s						
COEN	**Coen**	**39.79**	**282**	P	**P**	**10 12 24.4**	**+0.4**
	baz=40,SNR=6.8						
COEN	**Coen**	**39.79**	**282**	P	**P**	**10 12 24.3**	**+0.4**
QIS	**Mount Isa**	**40.31**	**271**	P	**P**	**10 12 28.6**	**+0.4**
	baz=40,SNR=9.9						
BBOO	**Buckleboo**	**40.66**	**251**	P	**P**	**10 12 30.4**	**-0.6**
	baz=41,SNR=6.8						
BBOO	**Buckleboo**	**40.66**	**251**	P	**P**	**10 12 29.9**	**-1.1**
PATS	**Pohnpei**	**42.34**	**322**	P	**P**	**10 12 44.1**	**-0.7**
	baz=42,SNR=3.5						
PATS	**Pohnpei**	**42.34**	**322**	P	**P**	**10 12 45.3**	**+0.5**
PATS				IAmb	IAmb	10 12 58.6	
	comp=Z,142nm,1.5s						
AS31	**Alice Springs**	**44.37**	**264**	P	**P**	**10 13 00.8**	**-0.4**
ASAR	**Alice Springs**	**44.37**	**264**	P	**P**	**10 13 00.6**	**-0.7**
	comp=Z,17nm,0.5s,baz=96,slow=7.3,SNR=174						
ASAR				PcP	**PP**	**10 14 45.4**	**+0.2**
	comp=Z,8.9nm,0.7s,baz=112,slow=3.9,SNR=4.5						
ASAR				ScP	**ScP**	**10 18 33.9**	**-0.2**
	comp=Z,5.9nm,0.9s,baz=105,slow=4.3,SNR=6.2						
ASAR				S	**S**	**10 19 26.2**	**-7.2**
	comp=Z,7.6nm,1.2s,baz=108,slow=15,SNR=6.6						
ASAR				LR	LR	10 30 22.2	
	comp=Z,4µm,20.4s,baz=110,slow=35						
ASAR	**Alice Springs**	**44.37**	**264**	P	**P**	**10 13 00.4**	**-0.9**
WB2	**Warramunga Arr**	**45.15**	**269**	P	**P**	**10 13 06.9**	**-0.6**
WB2				IAmb	IAmb	10 13 10.7	
	comp=Z,45nm,0.8s						
WRAB	**Tennant Creek**	**45.16**	**269**	P	**P**	**10 13 07.1**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,57nm,1.1s						
WRAB	**Tennant Creek**	**45.16**	**269**	P	**P**	**10 13 07.1**	**-0.4**
WRAB				IAmb	IAmb	10 13 23.9	
	comp=Z,57nm,1.1s						
WRA	**Warramunga Arr**	**45.16**	**269**	P	**P**	**10 13 06.7**	**-0.9**
	comp=Z,32nm,0.6s,baz=109,slow=7.4,SNR=116						
WRA				PcP	**PcP**	**10 14 48.8**	**+1.2**
	comp=Z,20nm,0.8s,baz=100,slow=3.7,SNR=6.5						
WRA				ScP	**ScP**	**10 18 37.1**	**-0.3**
	comp=Z,5.1nm,1.0s,baz=114,slow=4.1,SNR=4.4						
WRA				S	S	10 19 28.9	-16
	comp=Z,2.0nm,0.4s,baz=151,slow=12,SNR=2.8						
WRA				LR	LR	10 30 14.7	
	comp=Z,2µm,19.5s,baz=110,slow=34						
WRA	**Warramunga Arr**	**45.16**	**269**	P	**P**	**10 13 05.6**	**-2.0**
WB0	**Warramunga Arr**	**45.18**	**270**	P	**P**	**10 13 06.8**	**-0.9**
WB0				IAmb	IAmb	10 13 10.8	
	comp=Z,48nm,0.8s						
FORT	**Forrest**	**47.71**	**253**	P	**P**	**10 13 25.6**	**-1.8**
	baz=48,SNR=15						
FORT	**Forrest**	**47.71**	**253**	P	**P**	**10 13 25.9**	**-1.5**
FORT				IAMs_20	IAMs_20	10 31 08.8	
	comp=Z,4µm,21.0s						
WRKA	**Warakurna**	**48.89**	**260**	P	**P**	**10 13 34.6**	**-2.0**
	baz=49,SNR=24						
KDU	**Kakadu**	**49.67**	**277**	P	**P**	**10 13 40.9**	**-1.7**
	baz=50,SNR=6.4						
VNDA	**Vanda**	**50.40**	**186**	P	**P**	**10 13 51.2**	**+3.9**
	comp=Z,13nm,0.6s,baz=9.0,slow=6.0,SNR=34						
VNDA				LR	LR	10 33 26.0	
	comp=Z,688nm,19.2s,baz=14,slow=34						
VNDA	**Vanda**	**50.40**	**186**	P	**P**	**10 13 51.8**	**+4.5**
VNDA				pmax	pmax		
	comp=Z,49nm,1.2s						
VNDA	**Vanda**	**50.40**	**186**	P	**P**	**10 13 51.8**	**+4.5**
VNDA				IAmb	IAmb	10 14 02.9	
	comp=Z,49nm,1.1s						
MTN	**Manton Dam**	**50.77**	**276**	P	**P**	**10 13 50.0**	**-1.0**
KHLU	**Kahalu`u**	**51.61**	**25**	P	**P**	**10 13 58.3**	**+1.2**
RIM	**Rim**	**51.66**	**26**	P	**P**	**10 13 58.6**	**+1.0**
WRMHI	**West Rim**	**51.66**	**26**	P	**P**	**10 13 56.5**	**-1.2**
PUH	**Pauahi**	**51.67**	**26**	P	**P**	**10 13 57.6**	**0.0**
KKO	**Keanakako`i**	**51.67**	**26**	P	**P**	**10 13 56.9**	**-0.7**
MLOA	**Mauna Loa Obse**	**51.67**	**26**	P	**P**	**10 13 57.6**	**-0.5**
KNRA	**Kununurra**	**51.68**	**272**	P	**P**	**10 13 57.1**	**-0.6**
	baz=52,SNR=9.9						
KNRA	**Kununurra**	**51.68**	**272**	P	**P**	**10 13 56.5**	**-1.2**
KNRA				IAmb	IAmb	10 14 16.1	
	comp=Z,54nm,1.1s						
KNRA				IAMs_20	IAMs_20	10 35 20.7	
	comp=Z,3µm,19.0s						
MLH	**Mauna Loa**	**51.71**	**26**	P	**P**	**10 14 00.0**	**+1.9**
HMH	**Humu'ula Sheep**	**51.77**	**26**	P	**P**	**10 14 00.1**	**+1.5**
POHA	**Pohakuloa**	**51.89**	**26**	P	**P**	**10 13 59.0**	**-0.5**
HPAH	**Hawaii Prepara**	**52.08**	**25**	P	**P**	**10 13 58.1**	**-2.6**
HON	**Honolulu**	**52.45**	**22**	P	**P**	**10 14 02.7**	**-0.6**
HON				pmax	pmax		
	comp=Z,256nm,1.0s						
HON	**Honolulu**	**52.45**	**22**	P	**P**	**10 14 02.7**	**-0.6**
KEKH	**Kekaha**	**52.52**	**20**	P	**P**	**10 14 02.5**	**-1.3**
KIP	**Kipapa**	**52.54**	**22**	P	**P**	**10 14 03.8**	**-0.1**
KIP				pmax	pmax		
	comp=Z,379nm,1.3s						
KIP	**Kipapa**	**52.54**	**22**	P	**P**	**10 14 03.8**	**-0.1**
HLK	**Haleakala**	**52.54**	**24**	P	**P**	**10 14 03.2**	**-1.1**
KHLH	**Kahului Airpor**	**52.60**	**24**	P	**P**	**10 14 06.2**	**+1.8**
KMBL	**Kambalda**	**52.76**	**251**	P	**P**	**10 14 03.9**	**-1.7**
	baz=53,SNR=7.3						
FITZ	**Fitzroy Crossi**	**53.50**	**268**	P	**P**	**10 14 10.3**	**-1.0**
	baz=54,SNR=25						
FITZ	**Fitzroy Crossi**	**53.50**	**268**	P	**P**	**10 14 10.2**	**-1.1**
FITZ				IAmb	IAmb	10 14 24.6	
	comp=Z,50nm,1.1s						
FAKI	**Fak Fak**	**54.65**	**288**	P	**P**	**10 14 19.1**	**-0.6**
FAKI				IAmb	IAmb	10 14 23.9	
	comp=Z,53nm,1.0s						
KLBR	**Kellerberrin**	**56.12**	**249**	P	**P**	**10 14 28.3**	**-1.8**
	baz=56,SNR=11						
NWAO	**Narrogin (SRO)**	**56.22**	**248**	P	**P**	**10 14 29.5**	**-1.3**
NWAO				pmax	pmax		
	comp=Z,18nm,1.1s						
NWAO	**Narrogin (SRO)**	**56.22**	**248**	P	**P**	**10 14 29.5**	**-1.3**
NWAO	**Narrogin (SRO)**	**56.22**	**248**	P	**P**	**10 14 28.9**	**-1.9**
NWAO				IAmb	IAmb	10 14 46.8	
	comp=Z,14nm,1.1s						
NWAO				IAMs_20	IAMs_20	10 36 36.4	
	comp=Z,2µm,19.0s						
MEEK	**Meekatharra**	**56.77**	**255**	P	**P**	**10 14 32.8**	**-2.0**
	baz=57,SNR=12						
PSAD2	**Pilbara Seismi**	**57.23**	**261**	P	**P**	**10 14 35.3**	**-2.8**
BLDU	**Ballidu**	**57.25**	**250**	P	**P**	**10 14 36.2**	**-1.9**
	baz=57,SNR=11						
MUN	**Mundaring**	**57.30**	**248**	P	**P**	**10 14 36.6**	**-1.8**
	baz=57,SNR=3.6						
PSAC2	**Pilbara Seismi**	**57.30**	**261**	P	**P**	**10 14 37.1**	**-1.5**
PSAC2				IAmb	IAmb	10 14 48.0	
	comp=Z,28nm,0.8s						
PSAB3	**Pilbara Seismi**	**57.33**	**261**	P	**P**	**10 14 36.7**	**-2.1**
PSAB3				IAmb	IAmb	10 14 48.3	
	comp=Z,27nm,0.8s						
PSAA3	**Pilbara Seismi**	**57.34**	**261**	P	**P**	**10 14 37.1**	**-1.7**
PSAA3				IAmb	IAmb	10 14 51.3	
	comp=Z,48nm,1.3s						
PSAB2	**Pilbara Seismi**	**57.34**	**261**	P	**P**	**10 14 37.4**	**-1.4**
PSAB2				IAmb	IAmb	10 14 48.3	
	comp=Z,28nm,0.8s						
PSAC3	**Pilbara Seismi**	**57.34**	**261**	P	**P**	**10 14 37.8**	**-1.1**
PSAC3				IAmb	IAmb	10 14 56.5	
	comp=Z,34nm,1.1s						
PSA00	**Pilbara Seismi**	**57.34**	**261**	P	**P**	**10 14 36.9**	**-2.1**
PSA00				IAmb	IAmb	10 14 48.4	
	comp=Z,29nm,0.8s						
PSAA2	**Pilbara Seismi**	**57.35**	**261**	P	**P**	**10 14 37.7**	**-1.2**
PSAA2				IAmb	IAmb	10 14 48.5	
	comp=Z,31nm,0.8s						
PSAA1	**Pilbara Seismi**	**57.35**	**261**	P	**P**	**10 14 37.7**	**-1.3**
PSAA1				IAmb	IAmb	10 14 51.4	
	comp=Z,38nm,1.0s						
PSAB1	**Pilbara Seismi**	**57.37**	**261**	P	**P**	**10 14 36.8**	**-2.3**
PSAB1				IAmb	IAmb	10 14 48.6	
	comp=Z,31nm,0.8s						
PSAD3	**Pilbara Seismi**	**57.38**	**261**	P	**P**	**10 14 35.5**	**-3.7**
PSAD3				IAmb	IAmb	10 14 51.7	
	comp=Z,45nm,1.1s						
PSAC1	**Pilbara Seismi**	**57.39**	**261**	P	**P**	**10 14 37.1**	**-2.1**
PSAC1				IAmb	IAmb	10 14 48.7	
	comp=Z,27nm,0.8s						
PSAD1	**Pilbara Seismi**	**57.40**	**261**	P	**P**	**10 14 37.9**	**-1.4**
PSAD1				IAmb	IAmb	10 14 48.8	
	comp=Z,31nm,0.8s						
CASY	**Casey**	**57.60**	**207**	P	**P**	**10 14 41.1**	**+1.1**
SOEI	**Soe**	**58.17**	**276**	P	**P**	**10 14 46.5**	**+1.6**
	comp=Z,78nm,1.0s						
SOEI	**Soe**	**58.17**	**276**	P	**P**	**10 14 43.1**	**-1.8**
MORW	**Morawa**	**58.23**	**252**	P	**P**	**10 14 43.4**	**-1.6**
	baz=58,SNR=5.7						
MORW	**Morawa**	**58.23**	**252**	P	**P**	**10 14 43.3**	**-1.8**
MORW				IAMs_20	IAMs_20	10 36 59.7	
	comp=Z,4µm,22.0s						
RPN	**Rapa Nui**	**58.98**	**106**	LR	LR	10 33 52.6	
	comp=Z,867nm,21.1s,baz=256,slow=29						
SANI	**Sanana**	**60.41**	**285**	P	P	10 15 16.6	+16
EDFI	**Ende, Flores**	**60.89**	**276**	P	**P**	**10 15 05.5**	**+1.9**
	comp=Z,17nm,0.8s						
GIRL	**Giralia**	**61.84**	**258**	P	**P**	**10 15 08.3**	**-1.6**
QSPA	**South Pole Qui**	**61.91**	**180**	P	**P**	**10 15 13.2**	**+3.3**
BKSI	**Bulukumba**	**63.86**	**278**	P	P	10 15 39.5	+16
PLAI	**Plampang**	**64.29**	**274**	P	**P**	**10 15 28.2**	**+1.9**
	comp=Z,68nm,0.8s						
BNSI	**Bone**	**64.32**	**279**	P	P	10 15 40.0	+14
KAPI	**Kappang**	**64.33**	**278**	LR	LR	10 45 00.5	
	comp=Z,1µm,19.2s,baz=145,slow=38						
APSI	**Ampana**	**64.71**	**283**	P	P	10 15 38.3	+9.3
SPSI	**Sidrap Palu**	**64.82**	**279**	P	P	10 15 43.6	+14
DAV	**Davao City (W)**	**65.73**	**293**	LR	LR	10 42 54.0	
	comp=Z,218nm,19.0s,baz=143,slow=35						
MPSI	**Mapaga**	**66.85**	**284**	P	P	10 15 54.6	+12
SRBI	**Singaraja**	**66.89**	**273**	P	P	10 15 56.8	+14
JAGI	**Jajag, Banyuwa**	**67.65**	**272**	P	**P**	**10 15 49.9**	**+2.0**
	comp=Z,59nm,1.0s						
GMJI	**Gumukmas**	**68.36**	**272**	P	**P**	**10 15 55.3**	**+3.0**
	comp=Z,45nm,0.9s						
PWJI	**Pagerwojo**	**69.92**	**272**	P	**P**	**10 16 00.2**	**-1.8**
	comp=Z,41nm,0.7s						
PCJI	**Pacitan**	**70.40**	**271**	P	**P**	**10 16 04.5**	**-0.4**
	comp=Z,73nm,0.7s						
WOJI	**Wonogiri, Jawa**	**70.78**	**271**	P	**P**	**10 16 06.3**	**-0.9**
	comp=Z,34nm,0.9s						
UGM	**Wanagama**	**71.10**	**271**	P	**P**	**10 16 08.5**	**-0.7**
SPMM	**Sapulut**	**72.03**	**286**	P	**P**	**10 16 13.0**	**-1.8**
KPJI	**Karang Pucung**	**72.77**	**271**	P	**P**	**10 16 18.5**	**-0.7**
	comp=Z,49nm,0.7s						
KKM	**Kota Kinabalu**	**72.94**	**287**	P	**P**	**10 16 19.3**	**-1.1**
KKM				IAmb	IAmb	10 16 34.0	
	comp=Z,50nm,0.9s						
JHJ	**Hachijo jima 2**	**73.62**	**323**	LR	LR	10 49 12.6	
	comp=Z,258nm,18.0s,baz=20,slow=36						
CISI	**Cisompet, Garu**	**73.65**	**270**	P	**P**	**10 16 23.5**	**-1.0**
CISI				IAmb	IAmb	10 16 30.0	
	comp=Z,63nm,1.0s						
STKI	**Sintang**	**74.01**	**279**	P	**P**	**10 16 25.6**	**-0.9**
	comp=Z,105nm,0.9s						
LEM	**Lembang**	**74.16**	**271**	LR	LR	10 49 03.8	
	comp=Z,2µm,20.1s,baz=122,slow=36						
SBUM	**Sibu**	**74.53**	**281**	P	**P**	**10 16 29.1**	**-0.5**
SBUM	**Sibu**	**74.53**	**281**	P	**P**	**10 16 30.0**	**+0.5**
MAW	**Mawson**	**74.75**	**200**	P	**P**	**10 16 31.8**	**+1.9**
	baz=75,SNR=23						
MAW	**Mawson**	**74.75**	**200**	P	**P**	**10 16 32.6**	**+2.7**
	comp=Z,79nm,0.7s,baz=136,slow=7.2,SNR=30						
MAW				LR	LR	10 48 04.7	
	comp=Z,2µm,19.8s,baz=114,slow=35						
MAW	**Mawson**	**74.75**	**200**	P	**P**	**10 16 32.2**	**+2.3**
DBJI	**Dramaga**	**75.05**	**271**	P	P	10 16 46.1	+14
KSM	**Kuching**	**75.71**	**280**	P	**P**	**10 16 35.9**	**-0.5**
KSM				IAmb	IAmb	10 16 51.0	

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      comp=Z,52nm,0.8s
KSM   Kuching            75.71 280   P        P        10 16 35.0 -1.3
INU   Inuyama            76.79 323   P        P        10 16 42.1 +0.1
INU                                  IAmb     IAmb     10 16 57.2
      comp=Z,37nm,1.0s
MJAR  Matsushiro Arr     77.07 324   P        P        10 16 42.9 -0.7
      comp=Z,30nm,0.8s,baz=143,slow=5.9,SNR=18
MJAR                                 LR       LR       10 47 25.2
      comp=Z,208nm,20.8s,baz=130,slow=33
MJAR  Matsushiro Arr     77.07 324   P        P        10 16 41.9 -1.6
MAJO  Matsushiro         77.08 324   P        P        10 16 43.3 -0.2
MAJO                                 pmax     pmax
      comp=Z,52nm,0.9s
MAJO  Matsushiro         77.08 324   P        P        10 16 43.3 -0.2
MAJO                                 IAmb     IAmb     10 16 58.6
      comp=Z,52nm,0.9s
MAT   Matsushiro         77.08 324   P        P        10 16 43.1 -0.4
MAT                                  S        S        10 26 32.6 +2.9
MJB9  Matsu-Tunnel       77.08 324   P        P        10 16 43.3 -0.3
MJB9                                 IAmb     IAmb     10 16 58.6
      comp=Z,53nm,0.9s
PPBI  Pangkal Pinang     77.63 274   P        P        10 16 46.1 -1.1
      comp=Z,26µmcomp=Z,33nm,1.1s
LWLI  Liwa               78.13 271   P        P        10 16 48.7 -1.4
      comp=Z,9µmcomp=Z,60nm,0.7s
MDSI  Maura Dua          78.27 271   P        P        10 16 48.9 -1.8
      comp=Z,1µmcomp=Z,83nm,0.8s
TWG   Pinlang            78.53 304   P        P        10 16 49.4 -2.6
JNU   Nakatsue           78.66 317   LR       LR       10 48 27.3
      comp=Z,391nm,19.8s,baz=118,slow=33
JNU   Nakatsue           78.66 317   P        P        10 16 53.7 +1.2
JNU                                  IAmb     IAmb     10 16 57.9
      comp=Z,60nm,1.1s
YULB  Yu-li              78.71 304   P        P        10 16 52.1 -0.8
NACB  Ninganchiao        78.97 305   P        P        10 16 53.3 -1.0
NACB                                 IAmb     IAmb     10 17 07.8
      comp=Z,37nm,1.0s
TPUB  Ta-pu              79.14 304   P        P        10 16 54.9 -0.4
TPUB                                 IAmb     IAmb     10 17 08.2
      comp=Z,26nm,0.7s
SSLB  Suanglung          79.20 304   P        P        10 16 55.6  0.0
MNAI  Manna              79.41 271   P        P        10 16 56.1 -0.9
SYO   Syowa Base         79.50 193⇓iP       P        10 16 57.2 +0.7
YUK   Yuzh-Kuril'sk      79.61 334d iP       P        10 16 54.2 -3.1
YUK                                 e                  10 20 03.6
YUK                                 i S      S        10 26 52.7 -3.8
YUK                                 e*SS     SKSac    10 27 10.0 -0.8
YUK                                  pmax     pmax
      comp=Z,198nm,1.3s
YUK                                  pmax     pmax
      comp=Z,287nm,1.6s
YUK                                  MLR      MLR
      comp=Z,737nm,16.0s
YUK                                  MLR      MLR
      comp=N,949nm,17.0s
ADK   Adak               79.73   0   P        P        10 16 57.4 -0.3
ADK                                  pmax     pmax
      comp=Z,211nm,1.5s
ADK   Adak               79.73   0   P        P        10 16 57.4 -0.3
KSI   Kapahiang          80.06 271   P        P        10 16 59.4 -1.2
      comp=Z,147nm,0.8s
ATKA  Atka Island        80.08   2   P        P        10 16 59.8 +0.1
ATKA                                 IAmb     IAmb     10 17 11.0
      comp=Z,76nm,1.0s
SNAA  Sanae              80.32 178   P        P        10 17 03.1 +2.0
SNAA  Sanae              80.32 178   P        P        10 17 03.2 +2.1
SNAA                                 pmax     pmax
      comp=Z,33nm,0.9s
SNAA  Sanae              80.32 178   P        P        10 17 03.2 +2.1
SNAA                                 IAmb     IAmb     10 17 10.6
      comp=Z,33nm,0.9s
VNA3  Neumayer Olymp     80.43 176   P        P        10 17 03.3 +1.8
VNA2  Neumayer--Watz     80.88 176   P        P        10 17 06.2 +2.3
      baz=183,slow=4.0
ASAJ  Asahikawa          81.01 332   LR       LR       10 46 36.2
      comp=Z,1µm,21.9s,baz=140,slow=31
VNA1  Neumayer--Stat     81.10 176   P        P        10 17 07.2 +2.1
NIKH  Nikolski High      81.11   5   P        P        10 17 04.6 -0.6
NVL   N'lazarevskaya     81.13 183  eP        P        10 17 07.6 +2.3
NVL                                 eS        S        10 27 04.6 -7.4
NVL                                  pmax     pmax
      comp=Z,12nm,0.6s
COCO  West Island        81.23 261   IAMs_20  IAMs_20  10 50 41.8
      comp=Z,2µm,20.0s
MYKOM Kota Tinggi        81.51 277   P        P        10 17 07.0 -1.3
UNV   Unalaska Valle     82.17   6   P        P        10 17 10.2 -0.5
UNV                                  IAmb     IAmb     10 17 23.7
      comp=Z,41nm,1.0s
SDSI  Sungai Dareh       82.35 273   P        P        10 17 09.9 -2.8
      comp=Z,1µmcomp=Z,26nm,0.8s
DLV   T  Lat             82.51 288   P        P        10 17 15.3 +1.6
DLV                                  IAmb     IAmb     10 17 29.5
      comp=Z,44nm,0.8s
AKUT  Akutan             82.53   6   P        P        10 17 12.5 -0.1
PKM   Mcpherson Peak     82.63  44   P        P        10 17 16.1 +2.3
      baz=228
SMMC  Simmler            82.80  44   P        P        10 17 17.8 +3.3
      baz=228
SRIG  Santa Rosalia      82.91  54   P        P        10 17 15.3 +0.1
SRIG                                 IAMs_20  IAMs_20  10 51 56.7
      comp=Z,2µm,19.0s
SAO   San Andreas Ge     82.91  42   P        P        10 17 13.5 -1.5
SAO                                  pmax     pmax
      comp=Z,32nm,1.2s
SAO   San Andreas Ge     82.91  42   P        P        10 17 13.5 -1.5
SAO                                  IAmb     IAmb     10 17 19.0
      comp=Z,32nm,1.1s
TJN   Taejon             82.99 318  i P       P        10 17 15.4  0.0
109C  Camp Elliot, M     83.03  47   IAMs_20  IAMs_20  10 44 51.1
      comp=Z,2µm,22.0s
109C  Camp Elliot, M     83.03  47   P        P        10 17 18.2 +2.4
      baz=230
MCCM  Marconi Confer     83.03  40   IAMs_20  IAMs_20  10 56 18.6
      comp=Z,2µm,18.0s
OSI   Osito Audit: C     83.12  45   IAMs_20  IAMs_20  10 44 52.1
      comp=Z,2µm,21.0s
OSI   Osito Audit: C     83.12  45   P        P        10 17 19.1 +2.8
      baz=229
DECC  Green Verdugo      83.13  45   P        P        10 17 18.6 +2.3
      baz=229
PASC  Pasadena Art C     83.17  45   P        P        10 17 15.9 -0.5
PASC                                 IAmb     IAmb     10 17 20.0
      comp=Z,50nm,1.4s
PASC  Pasadena Art C     83.17  45   IAMs_20  IAMs_20  10 45 16.3
      comp=Z,2µm,21.0s
BAR   Barrett            83.17  47   P        P        10 17 16.1 -0.4
BAR                                  IAmb     IAmb     10 17 20.3
      comp=Z,33nm,1.4s
BAR                                  IAMs_20  IAMs_20  10 44 55.0
      comp=Z,2µm,22.0s
PLCA  Paso Flores        83.20 133   P        P        10 17 20.0 +3.2
      comp=Z,2.7nm,0.6s,baz=252,slow=7.0,SNR=17
PLCA                                 LR       LR       10 47 08.8
      comp=Z,312nm,19.7s,baz=270,slow=30
PLCA  Paso Flores        83.20 133   P        P        10 17 18.4 +1.6
PDSI  Padang             83.21 273   P        P        10 17 15.1 -2.1
      comp=Z,46nm,0.8s
YSS   Yuzh-Sakhalins     83.25 333⇑eP       P        10 17 17.7 +1.2
YSS                                 e                  10 17 24.3
YSS                                 e*SP      pwP      10 17 31.8 +0.4
YSS                                 e                  10 20 31.7
YSS                                 eS        S        10 27 38.4 +4.3
YSS                                  pmax     pmax
      comp=Z,70nm,1.0s
YSS                                  MLR      MLR
      comp=N,900nm,13.0s
YSS                                  MLR      MLR
      comp=Z,1µm,13.0s
YSS   Yuzh-Sakhalins     83.25 333   P        P        10 17 17.3 +0.8
MWC   Mount Wilson       83.28  45   P        P        10 17 18.0 +0.7
MWC                                  pmax     pmax
      comp=Z,44nm,1.3s
MWC   Mount Wilson       83.28  45   P        P        10 17 18.0 +0.7
MWC                                  IAmb     IAmb     10 17 20.2
      comp=Z,44nm,1.2s
MWC                                  IAMs_20  IAMs_20  10 44 47.3
      comp=Z,2µm,22.0s
BKNI  Bangkinang         83.28 274   P        P        10 17 17.1 -0.5
ARVC  Arvin              83.39  44   P        P        10 17 20.0 +2.5
      baz=229,SNR=5.1
KSRS  Korea Array        83.39 319   P        P        10 17 18.8 +1.3
      comp=Z,7.3nm,1.0s,baz=140,slow=5.7,SNR=13
KSRS                                 LR       LR       10 52 09.6
      comp=Z,265nm,18.9s,baz=136,slow=34
KSAR  Wonju Array Be     83.41 319   P        P        10 17 18.1 +0.5
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KSAR  Wonju Array Be     83.41 319   P        P        10 17 18.1 +0.5
MURC  Murrieta           83.42  46   P        P        10 17 20.3 +2.5
      baz=230,SNR=10
MONP2 Monument Peak      83.47  47   P        P        10 17 20.7 +2.4
      baz=231,SNR=10
HOPS  Hopland Field      83.51  39   P        P        10 17 20.1 +2.0
IKP   In-Ko-Pah, Jac     83.52  48   P        P        10 17 20.7 +2.3
      baz=231,SNR=6.5
BFSC  Mount Baldy Ra     83.54  46   P        P        10 17 20.7 +2.1
      baz=230,SNR=10
VES   Vestal, Richgr     83.70  44   P        P        10 17 21.4 +2.2
      baz=229,SNR=17
EDW2  Edwards Air Fo     83.75  45   P        P        10 17 22.1 +2.6
      baz=230,SNR=12
VOG   Valley Oaks Go     83.84  43   P        P        10 17 22.1 +2.3
      baz=228
TPFO  Pinon Flats        83.90  47   P        P        10 17 22.8 +2.4
      baz=230,SNR=8.0
PFO   Pinyon Flats O     83.91  47   P        P        10 17 22.2 +1.8
      comp=Z,17nm,1.1s,baz=251,slow=8.3,SNR=9.6
PFO   Pinyon Flats O     83.91  47   P        P        10 17 21.9 +1.5
PFO                                  IAmb     IAmb     10 17 24.3
      comp=Z,43nm,1.2s
PFO   Pinyon Flats O     83.91  47   IAMs_20  IAMs_20  10 46 00.4
      comp=Z,2µm,20.0s
PFO   Pinyon Flats O     83.91  47   P        P        10 17 22.9 +2.5
      baz=230,SNR=8.5
XPFO  Pion Flat          83.91  47   P        P        10 17 21.2 +0.8
XPFO                                 IAmb     IAmb     10 17 24.3
      comp=Z,47nm,1.3s
SWSC  Sam W. Stewart     83.91  48   P        P        10 17 23.3 +3.0
      baz=231,SNR=5.1
ISA   Isabella, Lake     83.96  44   P        P        10 17 21.9 +1.3
ISA                                  pmax     pmax
      comp=Z,72nm,1.4s
ISA   Isabella, Lake     83.96  44   P        P        10 17 21.9 +1.3
ISA                                  IAmb     IAmb     10 17 24.6
      comp=Z,72nm,1.4s
ISA                                  IAMs_20  IAMs_20  10 45 54.3
      comp=Z,2µm,22.0s
ISA   Isabella, Lake     83.96  44   P        P        10 17 23.3 +2.7
      baz=229,SNR=21
PEA0B Petropavlovsk-     83.96 345   P        P        10 17 20.9 +0.9
PEA0B                                pmax     pmax
      comp=Z,79nm,1.1s
PEA0B Petropavlovsk-     83.96 345   P        P        10 17 20.9 +0.9
PETK  Petropavlovsk-     83.96 345   P        P        10 17 20.7 +0.6
      comp=Z,42nm,0.9s,baz=137,slow=7.3,SNR=22
PETK                                 LR       LR       10 48 25.4
      comp=Z,936nm,21.0s,baz=179,slow=31
KMRM  Mail Ridge         84.02  38   P        P        10 17 19.6 -1.2
BBRC  Big Bear Solar     84.02  46   P        P        10 17 24.1 +2.9
      baz=230
LRMC  Laurel Mtn Rad     84.33  45   P        P        10 17 25.4 +2.8
      baz=230
CMB   Columbia Colle     84.39  41   P        P        10 17 24.2 +1.5
CMB                                  pmax     pmax
      comp=Z,36nm,1.1s
CMB   Columbia Colle     84.39  41   P        P        10 17 24.2 +1.5
CMB                                  IAmb     IAmb     10 17 26.1
      comp=Z,36nm,1.1s
CMB                                  IAMs_20  IAMs_20  10 45 54.6
      comp=Z,2µm,22.0s
BELC  Belle Mtn. Jos     84.45  47   P        P        10 17 26.1 +2.9
      baz=231,SNR=10
KHMM  Horse Mountain     84.47  37   P        P        10 17 24.8 +1.7
KHMM                                 IAmb     IAmb     10 17 27.3
      comp=Z,58nm,1.3s
O02D  Mt. Diablo Mer     84.49  38   P        P        10 17 26.5 +3.3
      baz=226,SNR=26
BC3   Big Chuckawall     84.58  47   P        P        10 17 26.8 +3.0
      baz=231,SNR=21
GLA   Glamis             84.61  48   P        P        10 17 23.2 -0.7
GLA                                  pmax     pmax
      comp=Z,102nm,1.5s
GLA   Glamis             84.61  48   P        P        10 17 23.2 -0.7
GLA                                  IAMs_20  IAMs_20  10 46 03.1
      comp=Z,2µm,21.0s
GLA   Glamis             84.61  48   P        P        10 17 27.2 +3.2
      baz=232,SNR=7.8
AFDM  Forest Hills D     84.67  40   P        P        10 17 24.3 +0.2
AFDM                                 IAmb     IAmb     10 17 27.4
      comp=Z,26nm,1.1s
AFDM                                 IAMs_20  IAMs_20  10 45 40.0
      comp=Z,2µm,22.0s
CWC   Cottonwood Cre     84.71  44   P        P        10 17 26.9 +2.4
      baz=229
HEC   Hector,Ludlow      84.76  46   P        P        10 17 27.2 +2.6
      baz=230,SNR=16
GSC   Goldstone, Bar     84.76  45   P        P        10 17 26.3 +1.6
GSC                                  pmax     pmax
      comp=Z,90nm,1.5s
GSC   Goldstone, Bar     84.76  45   P        P        10 17 26.3 +1.6
GSC   Goldstone, Bar     84.76  45   P        P        10 17 27.3 +2.6
      baz=230,SNR=21
ORV   Oroville           84.78  40   P        P        10 17 23.6 -0.9
ORV                                  pmax     pmax
      comp=Z,33nm,1.2s
ORV   Oroville           84.78  40   P        P        10 17 23.6 -0.9
ORV                                  IAmb     IAmb     10 17 27.9
      comp=Z,33nm,1.2s
MPMC  Manual Prospec     84.82  44   P        P        10 17 27.8 +2.7
      baz=230,SNR=21
HSIG                     84.83  53   P        P        10 17 26.0 +0.9
HSIG                                 IAmb     IAmb     10 17 27.9
      comp=Z,45nm,0.9s
MDPB  Devils Postpil     84.89  42   P        P        10 17 25.9 +0.5
MDPB                                 IAmb     IAmb     10 17 29.1
      comp=Z,23nm,1.1s
DAC   Darwin (Calif)     84.90  44   P        P        10 17 23.4 -2.1
DAC                                  pmax     pmax
      comp=Z,21nm,1.1s
DAC   Darwin (Calif)     84.90  44   P        P        10 17 23.4 -2.1
WDC   Whiskeytown Da     84.91  38   P        P        10 17 24.7 -0.5
WDC                                  pmax     pmax
      comp=Z,71nm,1.2s
WDC   Whiskeytown Da     84.91  38   P        P        10 17 24.7 -0.5
OMMB  Old Mammoth Mi     84.92  42   P        P        10 17 25.4 -0.3
TIN   Tinemaha, Big      85.02  43   P        P        10 17 28.7 +2.7
      baz=229
MLAC  Mammoth, Mammo85.03  42   P        P        10 17 29.3 +3.2
      baz=229
QIZ   Qiongzhong         85.06 294   P        P        10 17 27.6 +1.2
QIZ                                  S        S        10 27 57.2 +3.8
N02D  Trinity Center     85.09  38   P        P        10 17 29.2 +3.0
      baz=226,SNR=13
IRM   Iron Mountain      85.10  47   P        P        10 17 29.8 +3.4
      baz=231,SNR=5.6
O03E  Paynes Creek       85.12  39   P        P        10 17 28.7 +2.4
      baz=227,SNR=22
113A  Mohawk Valley,     85.14  49   P        P        10 17 25.9 -0.6
113A                                 IAmb     IAmb     10 17 30.6
      comp=Z,55nm,1.4s
113A                                 IAMs_20  IAMs_20  10 45 57.1
      comp=Z,2µm,22.0s
GMRC  Granite Mounta     85.16  46   P        P        10 17 29.5 +2.7
      baz=231,SNR=16
MSHR  Mys Shultsa        85.20 324  i P       P        10 17 25.0 -1.5
RUBR  Rubicon Trail      85.21  41   P        P        10 17 27.1 +0.1
Y12C  Blythe             85.25  48   P        P        10 17 26.1 -0.9
Y12C                                 IAmb     IAmb     10 17 30.5
      comp=Z,32nm,1.1s
Y12C  Blythe             85.25  48   P        P        10 17 29.9 +2.9
      baz=232,SNR=11
IPM   Ipoh               85.26 278   P        P        10 17 26.3 -1.4
IPM                                  IAmb     IAmb     10 17 42.5
      comp=Z,44nm,1.0s
IPM   Ipoh               85.26 278   P        P        10 17 26.0 -1.6
214A  Organ Pipe Nat     85.29  50   P        P        10 17 27.4 +0.1
214A                                 IAmb     IAmb     10 17 31.6
      comp=Z,31nm,1.1s
214A                                 IAMs_20  IAMs_20  10 50 48.6
      comp=Z,1µm,18.0s
214A  Organ Pipe Nat     85.29  50   P        P        10 17 30.2 +2.9
      baz=233,SNR=15
M02C  Callahan           85.31  38   P        P        10 17 30.3 +3.1
      baz=226,SNR=10
TUQ   Turquoise Moun     85.40  46   P        P        10 17 30.8 +2.9
      baz=231
FURC  Furnace Creek,     85.47  44   P        P        10 17 30.7 +2.7
      baz=230,SNR=8.4
SHOC  Shoshone, Teco     85.48  45   P        P        10 17 30.9 +2.8
      baz=230
GRAC  Grapevine Rang     85.50  44   P        P        10 17 31.3 +3.0
      baz=230,SNR=8.6
PNTR  Pine Nut           85.55  41   P        P        10 17 27.6 -1.1
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YBH   Yreka Blue Hor     85.62  37   P        P        10 17 31.1 +2.3
      comp=Z,21nm,1.0s,baz=212,slow=1.6,SNR=20
YBH   Yreka Blue Hor     85.62  37   P        P        10 17 28.8  0.0
YBH                                  IAmb     IAmb     10 17 32.7
      comp=Z,31nm,1.1s
BEKR  Beckworth          85.64  40   IAMs_20  IAMs_20  10 47 06.6
      comp=Z,2µm,20.0s
NJ2   Nanjing            85.66 310  eP        P        10 17 31.9 +2.8
NJ2                                  pmax     pmax
      comp=Z,20nm,0.6s
VCNR  Virginia City      85.66  41   P        P        10 17 30.0 +0.8
VCNR                                 IAmb     IAmb     10 17 35.0
      comp=Z,22nm,1.0s
YERR  Yerington          85.69  41   P        P        10 17 30.6 +1.2
YERR                                 IAmb     IAmb     10 17 32.7
      comp=Z,40nm,1.2s
NEE2  Needles Airpor     85.82  47   P        P        10 17 32.9 +3.1
      baz=232,SNR=5.3
PDMCI Parker Dam,Lak     85.84  47   P        P        10 17 33.0 +3.1
      baz=232,SNR=16
NVAR  Mina Array Bea     85.88  42   P        P        10 17 32.5 +2.2
      comp=Z,34nm,1.0s,baz=220,slow=6.9,SNR=109
NVAR                                 PKPPKP   P'P'df   10 43 38.1 +3.1
      comp=Z,0.3nm,0.7s,baz=59,slow=5.9,SNR=2.6
NVAR                                 LR       LR       10 47 28.9
      comp=Z,3µm,21.8s,baz=219,slow=30
NVAR  Mina Array Bea     85.88  42   P        P        10 17 32.1 +1.8
RYN   Ryan               85.88  42   P        P        10 17 30.9 +0.7
RYN                                  IAmb     IAmb     10 17 35.3
      comp=Z,28nm,1.1s
USRK  Ussuriysk Ar.      85.94 326   P        P        10 17 31.1 +0.9
      comp=Z,18nm,1.0s,baz=146,slow=3.8,SNR=10
USRK                                 LR       LR       10 53 13.3
      comp=Z,642nm,19.5s,baz=130,slow=34
USRK  Ussuriysk Ar.      85.94 326   P        P        10 17 30.6 +0.5
USA0B Ussuriysk Arra     85.94 326  i P       P        10 17 27.8 -2.4
USA0B Ussuriysk Arra     85.94 326   P        P        10 17 27.5 -2.7
USA0B                                IAmb     IAmb     10 17 46.7
      comp=Z,46nm,0.9s
NV11  Mina Array Sit     85.96  42   P        P        10 17 30.0 -0.7
NV11                                 IAmb     IAmb     10 17 34.1
      comp=Z,36nm,1.1s
KULM  Kulim              85.98 278   P        P        10 17 30.7 -0.5
KULM  Kulim              85.98 278   P        P        10 17 46.0  +15
PAHR  Pah Rah Range      86.09  41   P        P        10 17 30.2 -1.0
PAHR                                 IAmb     IAmb     10 17 34.6
      comp=Z,29nm,1.1s
HUMO  Hull Mountain      86.10  37   P        P        10 17 28.8 -2.3
HUMO                                 IAmb     IAmb     10 17 34.6
      comp=Z,51nm,1.4s
TPNV  Topopah Spring     86.16  44   P        P        10 17 31.5 -0.2
TPNV                                 pmax     pmax
      comp=Z,37nm,1.1s
TPNV  Topopah Spring     86.16  44   P        P        10 17 31.5 -0.2
TPNV                                 IAmb     IAmb     10 17 34.9
      comp=Z,37nm,1.1s
TPNV  Topopah Spring     86.16  44   P        P        10 17 34.4 +2.7
      baz=230,SNR=13
L04D  Klamath Falls      86.17  37   P        P        10 17 34.2 +2.6
      baz=226,SNR=5.5
RPSI  Rantau Prapat      86.26 275   P        P        10 17 30.9 -1.7
RPSI                                 IAMs_20  IAMs_20  11 01 09.2
      comp=Z,2µm,18.0s
PSI   Prapat             86.31 275   LR       LR       10 55 06.0
      comp=Z,433nm,21.8s,baz=127,slow=35
PSI   Prapat             86.31 275   P        P        10 17 30.9 -2.1
PSI                                  pmax     pmax
      comp=Z,112nm,1.3s
Y14A  Wickenburg         86.36  48   P        P        10 17 34.0 +1.4
Y14A                                 IAmb     IAmb     10 17 36.7
      comp=Z,61nm,1.2s
Y14A                                 IAMs_20  IAMs_20  10 46 55.3
      comp=Z,2µm,22.0s
KVN   Kaiserville        86.40  42   P        P        10 17 31.9 -1.0
KVN                                  pmax     pmax
      comp=Z,49nm,1.3s
KVN   Kaiserville        86.40  42   P        P        10 17 31.9 -1.0
KVN                                  IAmb     IAmb     10 17 36.1
      comp=Z,49nm,1.3s
W13A  Hualapai Mount     86.49  47   P        P        10 17 35.0 +1.5
W13A                                 IAmb     IAmb     10 17 37.6
      comp=Z,36nm,1.2s
W13A                                 IAMs_20  IAMs_20  10 46 58.9
      comp=Z,2µm,22.0s
SHPR  Sheep Range        86.56  45   P        P        10 17 32.7 -1.0
SHPR                                 IAmb     IAmb     10 17 37.9
      comp=Z,27nm,1.1s
SHPR                                 IAMs_20  IAMs_20  10 55 54.1
      comp=Z,2µm,18.0s
PAYG  Puerto Ayora       86.56  89   P        P        10 17 33.6 -0.5
PAYG                                 IAmb     IAmb     10 17 39.9
      comp=Z,41nm,1.1s
UBPT  Khong Chiam        86.72 289   P        P        10 17 34.2 -0.5
UBPT                                 IAmb     IAmb     10 17 50.8
      comp=Z,36nm,0.8s
TUC   Tucson             86.88  51   P        P        10 17 38.1 +2.9
TUC                                  pmax     pmax
      comp=Z,99nm,1.4s
TUC   Tucson             86.88  51   P        P        10 17 38.1 +2.9
TUC   Tucson             86.88  51   IAMs_20  IAMs_20  10 47 02.7
      comp=Z,2µm,22.0s
TUC   Tucson             86.88  51   P        P        10 17 38.6 +3.4
      baz=234
J04D  Umpqua Nationa     86.99  37   P        P        10 17 38.0 +2.4
      baz=226,SNR=6.2
MOD   Modoc Plateau      87.05  39   P        P        10 17 34.9 -1.0
319A  Douglas            87.37  52   P        P        10 17 37.2 -0.5
319A                                 IAMs_20  IAMs_20  10 54 43.9
      comp=Z,2µm,18.0s
MDJ   Mudanjiang         87.44 325   P        P        10 17 38.4 +0.9
MDJ                                  pP       pP       10 17 44.6 -3.4
MDJ                                  S        S        10 28 25.7  +10
MDJ                                  pmax     pmax
      comp=Z,22nm,0.9s
MDJ                                  pmax     pmax
      comp=Z,370nm,5.8s
MDJ                                  LR       LR
      comp=Z,870nm,17.7s
MDJ                                  LR       LR
      comp=Z,640nm,17.6s
MDJ                                  LR       LR
      comp=Z,1µm,20.4s
MDJ   Mudanjiang         87.44 325   P        P        10 17 37.3 -0.2
R11A  Troy Canyon, C     87.45  44   P        P        10 17 34.3 -3.7
R11A                                 IAMs_20  IAMs_20  10 47 44.8
      comp=Z,2µm,22.0s
R11A  Troy Canyon, C     87.45  44   P        P        10 17 39.9 +1.9
      baz=231
J05D  Fort Rock, OR      87.48  37   P        P        10 17 40.1 +2.2
      baz=227,SNR=8.3
HPIG                     87.49  58   P        P        10 17 38.0 -0.5
HPIG                                 IAmb     IAmb     10 17 41.3
      comp=Z,22nm,1.0s
ZAIG  Zacatecas          87.64  63   P        P        10 17 38.5 -0.8
ZAIG                                 IAmb     IAmb     10 17 43.1
      comp=Z,25nm,0.9s
ZAIG                                 IAMs_20  IAMs_20  10 57 52.2
      comp=Z,1µm,18.0s
KCSI  Kotacane, Aceh     87.67 275   P        P        10 17 38.1 -1.3
      comp=Z,37nm,0.9s
X16A  Lo Mia Camp, P     87.68  49   P        P        10 17 40.5 +1.3
X16A                                 IAmb     IAmb     10 17 43.7
      comp=Z,51nm,1.2s
X16A                                 IAMs_20  IAMs_20  10 47 25.4
      comp=Z,2µm,22.0s
PINE  Pine Mountain      87.98  37   P        P        10 17 41.9 +1.5
PINE                                 IAmb     IAmb     10 17 44.2
      comp=Z,34nm,1.1s
KDAK  Kodiak Island      88.02  13   P        P        10 17 41.6 +1.7
      comp=Z,14nm,1.1s,baz=87,slow=1.4,SNR=4.1
KDAK  Kodiak Island      88.02  13   P        P        10 17 40.6 +0.7
TPTI                     88.06 275   P        P        10 17 40.4 -0.9
      comp=Z,188nmcomp=Z,26nm,1.0s
LCMT  Little Creek M     88.08  46   P        P        10 17 40.7 -0.2
I05D  Terrebonne, OR     88.15  36   P        P        10 17 42.8 +1.8
      baz=227,SNR=6.7
TLIG  Tlapa              88.19  69   P        P        10 17 41.3 -0.6
TLIG                                 IAmb     IAmb     10 17 46.5
      comp=Z,40nm,1.2s
TLIG                                 IAMs_20  IAMs_20  10 53 27.2
      comp=Z,1µm,20.0s
WVOR  Wild Horse Val     88.32  39   P        P        10 17 41.5 -0.5
WVOR                                 pmax     pmax
      comp=Z,19nm,1.1s
WVOR  Wild Horse Val     88.32  39   P        P        10 17 41.5 -0.5
WVOR                                 IAmb     IAmb     10 17 45.3
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      comp=Z,19nm,1.1s
WVOR                             IAMs_20  IAMs_20  10 49 28.6
      comp=Z,1µm,20.0s
U15A  North Rim          88.33  47  P        P        10 17 41.8  -0.6
U15A                             IAMs_20  IAMs_20  10 48 07.5
      comp=Z,2µm,21.0s
WUAZ  Wupatki            88.38  48  P        P        10 17 42.1  -0.4
WUAZ  Wupatki            88.38  48  P        P        10 17 45.3  +2.8
      baz=234
UNM   Universidad Na     88.58  67  IAMs_20  IAMs_20  10 47 15.4
      comp=Z,1µm,22.0s
PSUT  Pine Spring        88.63  44  P        P        10 17 41.4  -2.2
F04A  Amboy              88.70  35  P        P        10 17 41.3  -2.1
X18A  Snowflake          88.74  49  IAMs_20  IAMs_20  10 48 20.5
      comp=Z,2µm,21.0s
SNY   Shenyang           88.80 320 ⇑P        P        10 17 58.5  +14
GRNR  Gornyy             88.83 332⇓iP        P        10 17 45.4  +1.4
GRNR                             pmax     pmax
      comp=Z,20nm,0.8s
GRNR                             MLR      MLR
      comp=Z,410nm,18.0s
I07A  Izee               88.94  37  P        P        10 17 46.0  +1.2
I07A                             IAmb     IAmb     10 17 47.7
      comp=Z,23nm,1.2s
J08A  Circle Bar Ran     89.02  38  P        P        10 17 43.5  -1.7
J08A                             IAmb     IAmb     10 17 48.6
      comp=Z,29nm,1.2s
J08A                             IAMs_20  IAMs_20  10 50 34.1
      comp=Z,2µm,20.0s
CN2   Changchun          89.06 322  eP       P        10 17 47.5  +2.3
CN2                              esP      pP       10 17 54.5  -1.2
CN2                              eS       S        10 28 34.1  +3.1
CN2                              pmax     pmax
      comp=Z,10.0nm,0.9s
CN2                              pmax     pmax
      comp=Z,200nm,4.0s
121A  Cookes Peak, D     89.07  52  P        P        10 17 44.3  -1.5
121A                             IAmb     IAmb     10 17 50.4
      comp=Z,53nm,1.4s
121A                             IAMs_20  IAMs_20  10 56 06.0
      comp=Z,2µm,18.0s
121A  Cookes Peak, D     89.07  52  P        P        10 17 49.0  +3.2
      baz=236
G06A  Carlson Farm,      89.13  36  P        P        10 17 44.6  -1.0
G06A                             IAmb     IAmb     10 17 48.2
      comp=Z,38nm,1.1s
ELK   Elko               89.17  42  P        P        10 17 48.0  +1.9
      comp=Z,4.9nm,0.9s,baz=250,slow=4.2,SNR=13
ELK   Elko               89.17  42  P        P        10 17 45.2  -1.0
W18A  Petrified Fore     89.23  49  P        P        10 17 49.6  +3.1
      baz=234
TIA   Tai'an             89.28 312  P        P        10 17 47.5  +1.0
TIA                              pmax     pmax
      comp=Z,12nm,0.8s
TIA                              LR       LR
      comp=Z,440nm,19.4s
TIA                              LR       LR
      comp=Z,430nm,20.2s
TIA                              LR       LR
      comp=Z,98nm,4.6s
LON   Longmire           89.57  34  P        P        10 17 46.9  -0.7
LON                              pmax     pmax
      comp=Z,13nm,1.1s
LON   Longmire           89.57  34  P        P        10 17 46.9  -0.7
KLR   Kul'dur            89.69 329  P        P        10 17 49.0  +0.9
      comp=Z,16nm,1.0s,baz=95,slow=3.1,SNR=31
KLR   Kul'dur            89.69 329 iP        P        10 17 45.6  -2.5
KLR                              MLR      MLR
      comp=Z,728nm,18.0s
D05A  Enumclaw           89.79  34  P        P        10 17 47.7  -0.9
G08A  Pilot Rock         90.04  37  P        P        10 17 50.0   0.0
BRLK  Bradley Lake       90.19  13  P        P        10 17 49.5  -0.6
BRLK                             IAmb     IAmb     10 18 08.3
      comp=Z,34nm,1.1s
TX31  Lajitas Ar. Si     90.27  57  P        P        10 17 51.6  +0.2
TX31                             IAmb     IAmb     10 17 55.4
      comp=Z,46nm,1.2s
TX32  Lajitas Array      90.27  57  P        P        10 17 51.6  +0.2
TX32                             IAmb     IAmb     10 17 55.4
      comp=Z,47nm,1.2s
TXAR  Lajitas Array      90.27  57  P        P        10 17 53.8  +2.4
      comp=Z,18nm,1.0s,baz=215,slow=6.1,SNR=89
TXAR                             LR       LR       10 48 38.3
      comp=Z,528nm,22.0s,baz=0.0,slow=29
TXAR  Lajitas Array      90.27  57  P        P        10 17 51.9  +0.5
DUG   Dugway, Tooele     90.29  43  P        P        10 17 50.8  -0.5
DUG                              pmax     pmax
      comp=Z,12nm,1.4s
DUG   Dugway, Tooele     90.29  43  P        P        10 17 50.8  -0.5
DUG                              IAMs_20  IAMs_20  10 49 47.8
      comp=Z,2µm,22.0s
DUG   Dugway, Tooele     90.29  43  P        P        10 17 52.9  +1.6
      baz=233
MNTX  Cornudas Mount     90.30  54  P        P        10 17 50.9  -0.5
MNTX                             IAmb     IAmb     10 17 55.1
      comp=Z,37nm,1.3s
E07A  Sunnyside          90.42  35  P        P        10 17 52.3  +0.7
E07A                             IAMs_20  IAMs_20  10 49 45.4
      comp=Z,2µm,22.0s
HAWA  Hanford            90.48  36  P        P        10 17 51.2  -0.6
B05A  Bryant             90.48  33  P        P        10 17 54.0  +2.3
      baz=226
LTY   Liberty            90.49  34  P        P        10 17 51.1  -0.8
LTY                              IAmb     IAmb     10 18 09.6
      comp=Z,46nm,1.4s
LTY                              IAMs_20  IAMs_20  10 49 21.0
      comp=Z,2µm,22.0s
A04D  Lummi Island       90.51  32  P        P        10 17 55.3  +3.5
      baz=226
MFID  Camas Ranch        90.53  40  P        P        10 17 52.5  +0.2
MFID                             IAmb     IAmb     10 17 55.5
      comp=Z,25nm,1.1s
MFID                             IAMs_20  IAMs_20  10 52 09.0
      comp=Z,1µm,19.0s
Q16A  Castle Valley      90.53  45  P        P        10 17 53.7  +1.2
Y22D  IRIS PASSCAL I     90.54  51  IAMs_20  IAMs_20  10 56 54.1
      comp=Z,1µm,18.0s
NLU   North Lily Min     90.59  44  P        P        10 17 53.2  +0.4
BGU   Big Grassy Mou     90.60  43  P        P        10 17 52.4  -0.3
SVW2  Sparrevohn         90.62  10  IAMs_20  IAMs_20  10 53 50.3
      comp=Z,1µm,20.0s
BMO   Blue Mountains     90.64  38  P        P        10 17 52.5  -0.2
BMO                              pmax     pmax
      comp=Z,31nm,1.5s
BMO                              MLR      MLR
      comp=Z,1µm,18.0s
BMO   Blue Mountains     90.64  38  P        P        10 17 52.5  -0.2
BMO                              IAmb     IAmb     10 17 55.7
      comp=Z,31nm,1.5s
BMO                              IAMs_20  IAMs_20  11 01 29.8
      comp=Z,1µm,18.0s
BBB   Bella Bella        90.64  28  P        P        10 17 53.8  +1.5
      comp=Z,20nm,0.9s,baz=237,slow=9.4,SNR=3.3
TMUT  Trail Mountain     90.73  45  P        P        10 17 52.5  -1.1
E08A  Dider Farm, El     90.79  36  P        P        10 17 54.1  +0.8
E08A                             IAmb     IAmb     10 17 56.4
      comp=Z,36nm,1.2s
SEW   Seward             90.79  13  IAMs_20  IAMs_20  10 54 04.1
      comp=Z,2µm,20.0s
C06D  Leavenworth        90.83  34  P        P        10 17 55.4  +2.0
      baz=227
MPU   Maple Canyon       90.90  44  P        P        10 17 54.2   0.0
SRU   San Rafael Swe     91.05  45  P        P        10 17 53.2  -1.7
SRU                              pmax     pmax
      comp=Z,37nm,1.3s
SRU   San Rafael Swe     91.05  45  P        P        10 17 53.2  -1.7
PBKT  Sadao Pong         91.12 288  P        P        10 17 54.5  -1.0
PBKT                             IAmb     IAmb     10 18 13.4
      comp=Z,38nm,1.3s
P17A  Butcher Ranch,     91.13  45  P        P        10 17 53.5  -1.7
SPUT  South Promonto     91.18  43  P        P        10 17 52.8  -2.6
D08A  Wollman Farm,      91.23  35  P        P        10 17 54.6  -0.7
D08A                             IAMs_20  IAMs_20  10 50 21.9
      comp=Z,2µm,21.0s
MVCO  Mesa Verde         91.25  48  P        P        10 17 53.4  -2.5
E09A  Wood Farm, Sta     91.28  36  P        P        10 17 55.0  -0.5
ANMO  Albuquerque        91.34  51  P        P        10 17 58.5  +2.1
      comp=Z,19nm,1.1s,baz=214,slow=5.3,SNR=39
ANMO  Albuquerque        91.34  51  P        P        10 17 55.7  -0.6
ANMO                             IAmb     IAmb     10 18 00.2
      comp=Z,34nm,1.2s
ANMO  Albuquerque        91.34  51  IAMs_20  IAMs_20  10 49 57.9
      comp=Z,2µm,22.0s
ANMO  Albuquerque        91.34  51  P        P        10 17 58.8  +2.4
      baz=236
JLU   Jordanelle         91.36  44  P        P        10 17 54.6  -1.8
F10A  Beach Ranch, E     91.41  37  P        P        10 17 56.6  +0.3
MA2   Magadan            91.46 344 iP        P        10 17 53.0  -3.0
MA2                              pmax     pmax
      comp=Z,10.0nm,1.0s
RC01  Rabbit Creek A     91.64  13  P        P        10 17 57.3  +0.5
RC01                             IAMs_20  IAMs_20  10 54 25.2
      comp=Z,1µm,20.0s
HIN   Hinchinbrook I     91.68  14  IAMs_20  IAMs_20  10 50 59.5
      comp=Z,2µm,22.0s
TCUT  Toone Canyon       91.69  43  P        P        10 17 56.7  -1.2
GAMB  Gambell            91.74   2  P        P        10 17 57.0  -0.1
GAMB                             IAmb     IAmb     10 17 59.9
      comp=Z,24nm,1.1s
SUA   Susitna One        91.79  12  P        P        10 17 58.1  +0.5
SUA                              IAmb     IAmb     10 18 15.9
      comp=Z,20nm,0.9s
HWUT  Hardware Ranch     91.89  43  P        P        10 17 58.1  -0.6
HWUT                             IAMs_20  IAMs_20  10 50 48.2
      comp=Z,2µm,22.0s
B08A  Colville Reser     91.89  34  P        P        10 17 59.5  +1.1
B08A                             IAmb     IAmb     10 18 00.8
      comp=Z,22nm,1.4s
EYAK  Cordova Ski Ar     91.98  15  P        P        10 17 57.4  -1.0
EYAK                             IAmb     IAmb     10 18 00.7
      comp=Z,37nm,1.2s
EYAK                             IAMs_20  IAMs_20  10 51 30.6
      comp=Z,2µm,22.0s
GLI   Glacier Island     91.98  14  P        P        10 17 58.0  -0.5
GLI                              IAMs_20  IAMs_20  10 51 32.5
      comp=Z,2µm,21.0s
FID   Port Fidalgo       92.00  14  IAMs_20  IAMs_20  10 51 31.8
      comp=Z,2µm,21.0s
C09A  Chrisman Ranch     92.06  35  P        P        10 17 59.9  +0.8
C09A                             IAmb     IAmb     10 18 02.1
      comp=Z,31nm,1.4s
C09A                             IAMs_20  IAMs_20  10 50 55.6
      comp=Z,2µm,21.0s
RAGM  Ragged Mountai     92.08  15  IAMs_20  IAMs_20  10 50 58.3
      comp=Z,2µm,22.0s
BJT   Baijiatuau         92.12 315  P        P        10 17 59.3  -0.3
BJT                              pmax     pmax
      comp=Z,36nm,1.3s
BJT   Baijiatuau         92.12 315  P        P        10 17 59.3  -0.3
BJT                              IAmb     IAmb     10 18 15.7
      comp=Z,36nm,1.3s
BJI   Beijing            92.13 315  P        P        10 18 00.5  +0.9
BJI                              SKS      SKSac    10 28 29.2  -0.6
BJI                              S        ScS      10 29 04.1  +2.5
BJI                              pmax     pmax
      comp=Z,11nm,0.9s
BJI                              LR       LR
      comp=Z,290nm,18.1s
BJI                              LR       LR
      comp=Z,250nm,16.2s
KNK   Knik Glacier       92.19  13  P        P        10 18 00.2  +0.8
KNK                              IAmb     IAmb     10 18 18.2
      comp=Z,24nm,1.0s
KNK                              IAMs_20  IAMs_20  10 54 51.8
      comp=Z,1µm,21.0s
LLLB  Lillooet           92.21  31  P        P        10 18 00.4  +0.6
LLLB                             IAmb     IAmb     10 18 17.4
      comp=Z,25nm,1.4s
PMR   Palmer             92.22  13  P        P        10 17 59.4   0.0
PMR                              pmax     pmax
      comp=Z,11nm,0.9s
PMR   Palmer             92.22  13  P        P        10 17 59.4   0.0
PMR                              IAmb     IAmb     10 18 18.0
      comp=Z,11nm,0.9s
TTA   Tatalina           92.30   9  P        P        10 18 01.0  +1.1
TTA   Tatalina           92.30   9  P        P        10 18 01.0  +1.1
GHO   Glory Hole Cre     92.42  13  P        P        10 18 00.8  +0.2
GHO                              IAmb     IAmb     10 18 19.2
      comp=Z,36nm,1.2s
GHO                              IAMs_20  IAMs_20  10 54 48.1
      comp=Z,1µm,21.0s
RDMU  Red Mountain       92.50  45  P        P        10 17 57.7  -3.9
SML   Sawmill            92.57  13  IAMs_20  IAMs_20  10 55 01.0
      comp=Z,1µm,20.0s
S22A  4UR Ranch, Cre     92.65  48  P        P        10 18 04.9  +2.4
      baz=236
CRQM  Cirque             92.77  16  P        P        10 18 03.8  +1.5
CRQM                             IAmb     IAmb     10 18 04.9
      comp=Z,30nm,1.5s
SCM   Sheep Creek Mo     92.80  13  P        P        10 18 02.6  +0.3
SCM                              pmax     pmax
      comp=Z,20nm,1.0s
SCM   Sheep Creek Mo     92.80  13  P        P        10 18 02.6  +0.3
SCM                              IAmb     IAmb     10 18 20.5
      comp=Z,20nm,1.0s
SCM                              IAMs_20  IAMs_20  10 55 05.0
      comp=Z,1µm,21.0s
TGL   Tana Glacier       92.85  16  P        P        10 18 03.9  +1.4
TGL                              IAmb     IAmb     10 18 05.1
      comp=Z,19nm,1.1s
AHID  Auburn Hatcher     92.86  42  IAMs_20  IAMs_20  10 51 05.8
      comp=Z,2µm,22.0s
PPLA  Purkeypile         92.87  11  IAMs_20  IAMs_20  10 55 23.6
      comp=Z,2µm,20.0s
ANM   Nome               92.87   5  P        P        10 18 03.2  +0.7
ANM                              pmax     pmax
      comp=Z,9.0nm,1.2s
ANM   Nome               92.87   5  P        P        10 18 03.1  +0.7
PCA   Pinnacle           92.93  17  IAMs_20  IAMs_20  10 51 33.2
      comp=Z,2µm,22.0s
NEW   Newport            92.94  35  P        P        10 18 04.3  +1.0
      comp=Z,2.2nm,0.7s,baz=156,slow=3.9,SNR=6.0
NEW   Newport            92.94  35  P        P        10 18 03.7  +0.4
NEW   Newport            92.94  35  IAMs_20  IAMs_20  10 50 36.1
      comp=Z,2µm,22.0s
833A  Chaparral WMA,     92.95  59  P        P        10 18 02.4  -1.3
833A                             IAmb     IAmb     10 18 06.9
      comp=Z,34nm,1.4s
833A  Chaparral WMA,     92.95  59  P        P        10 18 06.1  +2.4
      baz=240,SNR=7.1
O20A  White River Ci     93.08  46  P        P        10 18 05.1  +0.8
O20A  White River Ci     93.08  46  P        P        10 18 06.1  +1.8
      baz=235
VRDI  Verde Repeater     93.11  15  P        P        10 18 05.3  +1.4
VRDI                             IAmb     IAmb     10 18 23.6
      comp=Z,23nm,1.3s
VRDI                             IAMs_20  IAMs_20  10 51 19.1
      comp=Z,2µm,22.0s
BALM  Baldy              93.21  16  P        P        10 18 05.6  +1.4
BALM                             IAMs_20  IAMs_20  10 51 43.7
      comp=Z,2µm,22.0s
GLB   Gilahina Butte     93.22  15  P        P        10 18 05.5  +1.3
MCARA McCarthy VSAT      93.35  16  P        P        10 18 06.3  +1.5
MCARA                            IAmb     IAmb     10 18 08.3
      comp=Z,16nm,1.0s
MCARA                            IAMs_20  IAMs_20  10 51 49.4
      comp=Z,2µm,22.0s
SMCO  Snowmass           93.35  47  P        P        10 18 06.8  +1.0
SMCO                             IAmb     IAmb     10 18 09.1
      comp=Z,22nm,1.2s
SMCO                             IAMs_20  IAMs_20  10 51 10.4
      comp=Z,2µm,22.0s
REDW  Red Top Meadow     93.36  42  P        P        10 18 07.2  +1.7
REDW                             IAMs_20  IAMs_20  10 51 43.0
      comp=Z,2µm,21.0s
MSTX  Muleshoe           93.37  53  P        P        10 18 06.9  +1.2
MSTX                             IAmb     IAmb     10 18 24.5
      comp=Z,22nm,0.8s
MSTX  Muleshoe           93.37  53  P        P        10 18 07.5  +1.9
      baz=238
BARN  Barnard Glacie     93.40  16  P        P        10 18 06.2  +1.0
BARN                             IAmb     IAmb     10 18 07.7
      comp=Z,16nm,1.0s
CTGM  Chitina Glacie     93.40  16  P        P        10 18 06.2  +1.0
CTGM                             IAmb     IAmb     10 18 08.4
      comp=Z,12nm,0.9s
FXWY  Fox Creek          93.42  42  P        P        10 18 07.6  +1.8
FXWY                             IAmb     IAmb     10 18 09.3
      comp=Z,16nm,0.9s
FXWY                             IAMs_20  IAMs_20  10 51 55.8
      comp=Z,2µm,20.0s
SNOW  Snow King Moun     93.47  42  P        P        10 18 07.1  +1.0
SNOW                             IAMs_20  IAMs_20  10 51 58.1
      comp=Z,2µm,21.0s
SDCO  Great Sand Dun     93.53  49  P        P        10 18 06.1  -0.4
SDCO                             IAMs_20  IAMs_20  10 51 03.1
      comp=Z,2µm,21.0s
DLMT  Dillon             93.55  39  P        P        10 18 05.4  -0.9
DLMT                             IAmb     IAmb     10 18 09.6
      comp=Z,25nm,1.4s
DLMT                             IAMs_20  IAMs_20  10 51 10.0
      comp=Z,1µm,22.0s
XAN   Xi'an              93.66 307  P        P        10 18 06.1  -0.8
XAN                              pP       pP       10 18 16.0  -1.5
XAN                              pmax     pmax
      comp=Z,6.0nm,0.8s
XAN                              LR       LR
      comp=Z,390nm,9.2s
XAN                              LR       LR
      comp=Z,310nm,7.6s
XAN                              LR       LR
      comp=Z,150nm,6.0s
XAN   Xi'an              93.66 307  P        P        10 18 05.0  -1.9
XAN                              pmax     pmax
      comp=Z,12nm,1.0s
XAN   Xi'an              93.66 307  P        P        10 18 05.0  -1.9
XAN                              IAmb     IAmb     10 18 22.4
      comp=Z,12nm,1.0s
KTH   Kantishna Hill     93.69  11  P        P        10 18 05.7  -0.7
KTH                              IAmb     IAmb     10 18 23.6
      comp=Z,11nm,0.9s
MSO   Missoula           93.71  38  P        P        10 18 06.1  -0.8
MSO                              IAMs_20  IAMs_20  10 52 10.1
      comp=Z,1µm,19.0s
TRF   Thorofare Moun     93.71  12  P        P        10 18 06.6   0.0
TRF                              IAmb     IAmb     10 18 25.5
      comp=Z,20nm,0.8s
CMAR  Chiang Mai Arr     93.72 289  P        P        10 18 08.9  +1.4
      comp=Z,3.1nm,0.7s,baz=144,slow=3.3,SNR=18
CMAR  Chiang Mai Arr     93.72 289  P        P        10 18 08.2  +0.8
JCT   Junction City      93.73  57  IAMs_20  IAMs_20  10 56 41.4
      comp=Z,2µm,18.0s
JCT   Junction City      93.73  57  P        P        10 18 09.0  +1.7
      baz=240
BW06  Boulder Array      93.78  43  P        P        10 18 05.6  -1.9
BW06                             IAmb     IAmb     10 18 10.0
      comp=Z,12nm,1.1s
PD31  Pinedale Array     93.78  43  P        P        10 18 05.9  -1.6
PDAR  Pinedale Array     93.78  43  P        P        10 18 08.8  +1.3
      comp=Z,8.8nm,0.9s,baz=204,slow=3.3,SNR=44
PDAR                             PKKPbc   PKKPdf   10 35 11.8  -0.3
      comp=Z,0.6nm,0.6s,baz=84,slow=2.8,SNR=5.6
PDAR                             LR       LR       10 52 33.5
      comp=Z,2µm,21.4s,baz=234,slow=30
PDAR  Pinedale Array     93.78  43  P        P        10 18 08.2  +0.7
KMI   Kunming            93.81 296  P        P        10 18 09.2  +1.1
KMI                              pP       pP       10 18 14.3  -4.3
KMI                              sP       sP       10 18 17.3  -5.3
KMI                              S        S        10 29 14.0  -1.4
KMI                              SS       SS       10 35 31.2  -4.0
KMI                              pmax     pmax
      comp=Z,11nm,0.6s
KMI                              pmax     pmax
      comp=Z,190nm,5.0s
KMI                              LR       LR
      comp=Z,280nm,15.9s
KMI                              LR       LR
      comp=Z,270nm,16.9s
FLWY  Flagg Ranch        93.87  41  P        P        10 18 09.3  +1.4
FLWY                             IAMs_20  IAMs_20  10 51 50.6
      comp=Z,2µm,21.0s
CHTO  Chiang Mai         93.88 289  P        P        10 18 07.3  -0.9
CHTO                             pmax     pmax
      comp=Z,14nm,1.1s
CHTO  Chiang Mai         93.88 289  P        P        10 18 07.3  -0.9
CHTO                             IAmb     IAmb     10 18 26.6
      comp=Z,14nm,1.1s
QLMT  Earthquake Lak     93.89  40  P        P        10 18 08.6  +0.7
DHY   Denali Highway     93.91  13  P        P        10 18 08.3  +0.9
YPP   Pitchstone Pla     93.92  41  P        P        10 18 05.2  -3.0
T25A  Trinidad           93.93  50  P        P        10 18 09.0  +0.8
RND   Reindeer           93.93  12  P        P        10 18 08.0  +0.5
RND                              pmax     pmax
      comp=Z,21nm,1.0s
RND   Reindeer           93.93  12  P        P        10 18 08.0  +0.5
RND                              IAmb     IAmb     10 18 27.4
      comp=Z,21nm,1.0s
YHB   Horse Butte        93.98  41  P        P        10 18 07.4  -1.0
YHL   Hebgen Lake        94.05  40  P        P        10 18 10.8  +2.1
YMR   Madison River      94.06  41  P        P        10 18 10.6  +1.9
SEY   Seymchan           94.09 346  P        P        10 18 08.5  +0.4
      comp=Z,11nm,0.9s,baz=150,slow=3.9,SNR=19
SEY   Seymchan           94.09 346 iP        P        10 18 04.9  -3.2
JTMT  Jette              94.09  37  IAMs_20  IAMs_20  10 54 22.3
      comp=Z,1µm,21.0s
H17A  Grant Village      94.13  41  P        P        10 18 08.0  -1.0
H17A                             IAmb     IAmb     10 18 14.5
      comp=Z,11nm,0.8s
H17A  Grant Village      94.13  41  P        P        10 18 12.3  +3.2
      baz=234,SNR=15
BPAW  Bear Paw Mtn.      94.19  11  IAMs_20  IAMs_20  10 56 16.6
      comp=Z,1µm,21.0s
YHH   Holmes Hill        94.20  41  P        P        10 18 09.7  +0.3
PAX   Paxson             94.20  14  P        P        10 18 06.9  -1.8
PAX                              pmax     pmax
      comp=Z,16nm,1.4s
PAX   Paxson             94.20  14  P        P        10 18 06.9  -1.8
MCK   McKinley           94.21  12  P        P        10 18 08.5  -0.2
MCK                              pmax     pmax
      comp=Z,11nm,0.9s
MCK   McKinley           94.21  12  P        P        10 18 08.5  -0.2
HYT   Haines Junctio     94.28  18  IAMs_20  IAMs_20  10 52 15.0
      comp=Z,1µm,22.0s
LKWY  Lake               94.33  41  P        P        10 18 11.8  +1.8
LKWY                             pmax     pmax
      comp=Z,26nm,1.3s
LKWY  Lake               94.33  41  P        P        10 18 11.8  +1.8
LKWY                             IAmb     IAmb     10 18 14.5
      comp=Z,26nm,1.3s
LKWY                             IAMs_20  IAMs_20  10 53 50.7
      comp=Z,2µm,21.0s
735A  Kenedy             94.42  60  IAMs_20  IAMs_20  10 51 32.8
      comp=Z,1µm,22.0s
Q24A  Divide             94.42  48  P        P        10 18 13.6  +2.9
      baz=237
MENT  Mentasta           94.55  14  P        P        10 18 11.4  +1.1
ISCO  Idaho Springs      94.57  47  IAMs_20  IAMs_20  10 52 02.7
      comp=Z,2µm,22.0s
RWWY  Rawlins            94.60  45  P        P        10 18 12.5  +1.2
RWWY                             IAmb     IAmb     10 18 14.1
      comp=Z,17nm,1.0s
AMTX  Amarillo           94.62  53  P        P        10 18 11.4  +0.1
AMTX                             IAmb     IAmb     10 18 14.1
      comp=Z,20nm,1.3s
AMTX                             IAMs_20  IAMs_20  10 59 07.8
      comp=Z,1µm,18.0s
DLBC  Dease Lake         94.67  23  P        P        10 18 11.7  +0.7
      comp=Z,2.9nm,1.0s,baz=136,slow=11,SNR=3.2
DLBC  Dease Lake         94.67  23  P        P        10 18 11.1  +0.1
YNE   Yellowstone No     94.81  41  P        P        10 18 14.6  +2.4
ZEA   Zeya               94.86 330  eP       P        10 18 11.8  -0.1
ZEA                              pmax     pmax
      comp=Z,10.0nm,0.8s
ABTX  Abilene, Hawle     94.93  56  P        P        10 18 13.4  +0.6
ABTX                             IAmb     IAmb     10 18 15.6
      comp=Z,38nm,1.5s
ABTX                             IAMs_20  IAMs_20  10 53 02.1
      comp=Z,2µm,20.0s
ABTX  Abilene, Hawle     94.93  56  P        P        10 18 14.8  +2.0
      baz=240
N23A  Red Feather La     94.96  46  IAMs_20  IAMs_20  10 51 52.5
      comp=Z,1µm,22.0s
RIDG  Independent Ri     95.02  14  P        P        10 18 12.8  +0.4
RIDG                             IAMs_20  IAMs_20  10 53 20.8
      comp=Z,2µm,22.0s
WRH   Wood River Hil     95.04  12  P        P        10 18 12.9  +0.5
WRH                              IAmb     IAmb     10 18 30.4
      comp=Z,22nm,1.0s
WRH                              IAMs_20  IAMs_20  10 56 29.2
      comp=Z,2µm,22.0s
MLY   Manley             95.09  11  P        P        10 18 11.9  -0.8
WALA  Waterton Lakes     95.10  36  P        P        10 18 13.6  +0.3
BCAR  Beaver Creek A     95.10  15  P        P        10 18 12.7  -0.1
DOT   Dot Lake           95.11  14  P        P        10 18 13.4  +0.6
DOT                              IAMs_20  IAMs_20  10 56 28.0
      comp=Z,1µm,20.0s
HDA   Harding Lake       95.20  13  P        P        10 18 12.0  -1.1
HDA   Harding Lake       95.20  13  P        P        10 18 13.7  +0.6
      baz=206
CCB   Clear Creek Bu     95.25  12  P        P        10 18 13.2  -0.1
CCB                              IAMs_20  IAMs_20  10 56 36.8
      comp=Z,1µm,21.0s
RLMT  Red Lodge          95.31  41  P        P        10 18 14.1  -0.3
RLMT                             IAMs_20  IAMs_20  10 54 01.6
      comp=Z,1µm,20.0s
SCRK  Sand Creek         95.41  14  P        P        10 18 13.7  -0.6
SCRK                             IAMs_20  IAMs_20  10 53 33.1
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	comp=Z,1µm,22.0s						
TCOL	CIGO, UAF Yank	95.45	12	P	P	10 18 14.8	+0.5
	baz=206						
COLA	College	95.45	12	P	P	10 18 13.9	-0.4
COLA				pmax	pmax		
	comp=Z,15nm,1.0s						
COLA	College	95.45	12	P	P	10 18 13.8	-0.4
COLA				IAmb	IAmb	10 18 32.0	
	comp=Z,15nm,0.9s						
COLA	College	95.45	12	IAMs_20	IAMs_20	10 56 51.9	
	comp=Z,2µm,21.0s						
HHC	Hu-ho-hao-te	95.50	314	*e*P	P	10 18 14.4	-0.8
HHC				S	S	10 29 29.1	0.0
HHC				LR	LR		
	comp=Z,3µm,18.0s						
IMAR	Indian Mountai	95.52	9	P	P	10 18 13.9	-0.7
435B	Jarrell	95.54	58	IAMs_20	IAMs_20	10 52 58.3	
	comp=Z,1µm,19.0s						
IL31		95.54	12	P	P	10 18 14.0	-0.6
ILAR	Eielson Array	95.54	12	P	P	10 18 14.8	+0.1
	comp=Z,2.5nm,0.6s,baz=222,slow=5.3,SNR=41						
ILAR				LR	LR	10 56 20.5	
	comp=Z,342nm,19.9s,baz=214,slow=32						
ILAR	Eielson Array	95.54	12	P	P	10 18 14.5	-0.2
K22A	Casper	95.56	44	P	P	10 18 15.7	+0.1
K22A				IAmb	IAmb	10 18 18.3	
	comp=Z,34nm,1.4s						
K22A	Casper	95.56	44	P	P	10 18 17.2	+1.6
	baz=237,SNR=9.6						
CD2	Chengdu	95.85	302	P	P	10 18 14.6	-2.4
CD2	Chengdu	95.85	302	P	P	10 18 17.8	+0.8
CD2				S	S	10 29 34.9	+2.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,480nm,25.3s						
CD2				LR	LR		
	comp=Z,320nm,17.2s						
CD2				LR	LR		
	comp=Z,530nm,20.7s						
WHTX	Lake Whitney,	96.22	57	IAMs_20	IAMs_20	10 58 01.5	
	comp=Z,1µm,19.0s						
JTS	Las Juntas de	96.35	82	IAMs_20	IAMs_20	10 55 55.7	
	comp=Z,1µm,18.0s						
HKT	Hockley	96.46	60	IAMs_20	IAMs_20	10 53 08.8	
	comp=Z,1µm,20.0s						
DAWY	Dawson	96.52	16	P	P	10 18 20.8	+1.5
DAWY				IAMs_20	IAMs_20	10 53 52.5	
	comp=Z,2µm,22.0s						
WMOK	Wichita Mounta	96.60	54	P	P	10 18 21.8	+1.4
	baz=240						
EGMT	Eagleton	96.70	38	IAMs_20	IAMs_20	10 55 15.3	
	comp=Z,1µm,20.0s						
EGAK	Eagle	96.72	15	IAMs_20	IAMs_20	10 54 23.8	
	comp=Z,2µm,22.0s						
BILL	Bilibino	96.77	354	⇑*i*P	P	10 18 20.3	+0.1
BILL				*e*		10 22 16.2	
BILL				*e*S	S	10 29 34.3	-4.3
BILL				*e*SS	SS	10 36 10.3	-4.8
BILL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,1µm,20.0s						
HDC	Heredia	96.95	82	IAMs_20	IAMs_20	10 51 32.7	
	comp=Z,1µm,20.0s						
X34A	Smith Ranch, M	97.22	55	IAMs_20	IAMs_20	10 54 16.7	
	comp=Z,1µm,20.0s						
U32A	Winter Ranch,	97.26	53	IAMs_20	IAMs_20	11 00 10.6	
	comp=Z,1µm,19.0s						
237A	Washetta, Mont	97.45	58	IAMs_20	IAMs_20	10 58 48.1	
	comp=Z,1µm,18.0s						
RSSD	Black Hills	97.88	44	P	P	10 18 24.7	-1.4
RSSD				pmax	pmax		
	comp=Z,34nm,1.2s						
RSSD	Black Hills	97.88	44	P	P	10 18 24.7	-1.4
RSSD	Black Hills	97.88	44	P	Pdif	10 18 27.8	+1.6
	baz=238						
OKCFA	Oklahoma City	97.89	54	IAMs_20	IAMs_20	10 53 13.3	
	comp=Z,1µm,22.0s						
LAO	LASA Array	97.95	41	IAMs_20	IAMs_20	10 55 42.4	
	comp=Z,1µm,21.0s						
LPAZ	La Paz	98.03	113	LR	LR	10 53 51.1	
	comp=Z,354nm,21.8s,baz=254,slow=30						
NATX	Nacogdoches	98.20	58	IAMs_20	IAMs_20	10 59 22.9	
	comp=Z,1µm,18.0s						
LZH	Lanzhou	98.29	306	*e*P	Pdif	10 18 29.3	+1.2
LZH				pP	pP	10 18 36.5	-2.1
LZH				sP	sP	10 18 40.9	-1.9
LZH				PP	PP	10 22 35.4	+6.9
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,110nm,5.4s						
LZH				LR	LR		
	comp=Z,360nm,16.8s						
LZH				LR	LR		
	comp=Z,450nm,15.2s						
LZH				LR	LR		
	comp=Z,430nm,19.1s						
BMAR	Burnt Mountain	98.34	12	P	Pdif	10 18 28.8	+1.3
R32A	Long Quarter,	98.46	51	IAMs_20	IAMs_20	10 58 41.4	
	comp=Z,1µm,19.0s						
EPYK	Eagle Plains	99.07	15	IAMs_20	IAMs_20	10 55 22.9	
	comp=Z,1µm,22.0s						
T35A	Sooner Cattle	99.27	53	IAMs_20	IAMs_20	11 01 48.9	
	comp=Z,1µm,18.0s						
DGMT	Dagmar	100.06	40	IAMs_20	IAMs_20	10 56 42.1	
	comp=Z,1µm,20.0s						
KSU1	Kansas State U	100.23	51	IAMs_20	IAMs_20	11 05 39.2	
	comp=Z,1µm,18.0s						
WLAR	White Oak Lake	100.25	57	IAMs_20	IAMs_20	11 01 15.0	
	comp=Z,1µm,19.0s						
MIAR	Mount Ida	100.29	56	IAMs_20	IAMs_20	10 55 08.1	
	comp=Z,1µm,22.0s						
U38A	Gravette	100.56	54	IAMs_20	IAMs_20	10 56 39.2	
	comp=Z,1µm,21.0s						
X40A	Basin Creek Fa	100.81	57	IAMs_20	IAMs_20	10 56 55.9	
	comp=Z,1µm,21.0s						
143A	Socs Landing,	101.08	59	IAMs_20	IAMs_20	11 05 50.3	
	comp=Z,1µm,18.0s						
SUSD	Miller	101.20	46	IAMs_20	IAMs_20	10 56 34.6	
	comp=Z,1µm,22.0s						
INK	Inuvik	101.37	15	P	Pdif	10 18 41.5	+0.8
	comp=Z,1.3nm,0.7s,baz=229,slow=5.0,SNR=6.2						
INK	Inuvik	101.37	15	P	Pdif	10 18 41.8	+1.1
INK	Inuvik	101.37	15	Pdif	Pdif	10 18 41.8	+1.1
INK				IAMs_20	IAMs_20	10 57 07.7	
	comp=Z,2µm,22.0s						
WHAR	Wooly Hollow	101.57	56	IAMs_20	IAMs_20	10 57 05.0	
	comp=Z,2µm,20.0s						
S39A	Bolivar	101.88	54	IAMs_20	IAMs_20	11 00 01.6	
	comp=Z,1µm,21.0s						
FCAR	Ozark Folk Cen	101.95	56	IAMs_20	IAMs_20	10 57 05.1	
	comp=Z,2µm,21.0s						
SONM	Songino Array	102.24	318	P	Pdif	10 18 48.4	+3.0
	comp=Z,0.7nm,0.6s,baz=149,slow=5.6,SNR=4.8						
X43A	Marvell	102.27	57	IAMs_20	IAMs_20	10 57 42.6	
	comp=Z,2µm,19.0s						
ECSD	EROS Data Cent	102.36	47	IAMs_20	IAMs_20	10 57 10.9	
	comp=Z,1µm,21.0s						
MDND	Maddock	102.42	42	IAMs_20	IAMs_20	10 58 14.7	
	comp=Z,1µm,21.0s						
GTA	Gaotai	102.65	308	*e*P	Pdif	10 18 50.4	+3.0
GTA				pP	pPdif	10 18 54.8	-3.1
GTA				sP	sPdif	10 18 57.6	-4.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,64nm,7.0s						
GTA				LR	LR		
	comp=Z,240nm,19.4s						
GTA				LR	LR		
	comp=Z,360nm,19.4s						
GTA				LR	LR		
	comp=Z,510nm,20.0s						
YKA	Yellowknife Ar	102.98	25	P	Pdif	10 18 48.9	+0.8
	comp=Z,0.5nm,0.8s,baz=232,slow=4.0,SNR=8.7						
YKA				PP	PP	10 22 56.6	-6.6
	comp=Z,1.2nm,1.0s,baz=228,slow=7.5,SNR=6.7						
YKA				PKKPbc	PKKPbc	10 34 46.2	-0.8
	comp=Z,0.9nm,0.6s,baz=41,slow=3.0,SNR=12						
LPAR	Lepanto	103.17	57	IAMs_20	IAMs_20	10 57 21.3	
	comp=Z,1µm,21.0s						
MET	Memphis--Engin	103.23	57	IAMs_20	IAMs_20	11 01 18.1	
	comp=Z,924nm,18.0s						
OXF	Oxford	103.37	58	IAMs_20	IAMs_20	10 57 54.7	
	comp=Z,1µm,20.0s						
CCM	Cathedral Cave	103.52	54	IAMs_20	IAMs_20	11 04 31.6	
	comp=Z,1µm,18.0s						
GNAR	Gosnell	103.53	56	IAMs_20	IAMs_20	10 57 41.8	
	comp=Z,2µm,22.0s						
SCIA	State Center	103.80	50	IAMs_20	IAMs_20	11 01 51.0	
	comp=Z,1µm,20.0s						
W45A	Hickory Valley	103.80	57	IAMs_20	IAMs_20	11 07 57.2	
	comp=Z,871nm,18.0s						
PVMO	Portageville	103.95	56	IAMs_20	IAMs_20	10 58 36.0	
	comp=Z,2µm,21.0s						
HALT	Halls	104.00	57	IAMs_20	IAMs_20	10 57 55.5	
	comp=Z,1µm,21.0s						
PARMO	Parma	104.02	56	IAMs_20	IAMs_20	10 58 58.7	
	comp=Z,2µm,22.0s						
HENM	Henderson Moun	104.24	56	IAMs_20	IAMs_20	11 02 54.7	
	comp=Z,1µm,19.0s						
HICK	Hickman	104.35	56	IAMs_20	IAMs_20	11 03 33.5	
	comp=Z,1µm,19.0s						
FFC	Flin Flon	104.38	35	IAMs_20	IAMs_20	10 58 49.4	
	comp=Z,1µm,19.0s						
C36M	Paulatuk	104.45	17	IAMs_20	IAMs_20	10 58 10.6	
	comp=Z,1µm,22.0s						
PLAL	Pickwick Lake	104.56	58	IAMs_20	IAMs_20	11 10 37.3	
	comp=Z,1µm,18.0s						
LRAL	Lakeview Retre	104.58	60	IAMs_20	IAMs_20	10 59 00.9	
	comp=Z,2µm,22.0s						
S44A	Carbondale	104.80	55	IAMs_20	IAMs_20	11 03 50.5	
	comp=Z,1µm,20.0s						
AGMN	Agassiz Nation	104.86	43	IAMs_20	IAMs_20	11 06 33.3	
	comp=Z,1µm,18.0s						
N41A	Harden Midland	104.91	52	IAMs_20	IAMs_20	11 05 48.5	
	comp=Z,1µm,18.0s						
X48A	Hartselle	105.12	59	IAMs_20	IAMs_20	10 58 09.1	
	comp=Z,1µm,21.0s						
WVT	Waverly	105.21	57	IAMs_20	IAMs_20	10 58 31.4	
	comp=Z,1µm,22.0s						
L40A	Anamosa	105.21	50	IAMs_20	IAMs_20	11 02 43.1	
	comp=Z,1µm,19.0s						
SPMN	Marine on St.	105.47	47	IAMs_20	IAMs_20	11 00 19.6	
	comp=Z,1µm,21.0s						
Z50A	Ashland	105.49	60	IAMs_20	IAMs_20	10 59 18.1	
	comp=Z,1µm,22.0s						
ULM	Lac du Bonnet	105.69	41	PKKPab	PKKPab	10 34 53.2	+1.1
	comp=Z,2.2nm,0.7s,baz=58,slow=6.2,SNR=5.5						
V48A	Smith Brothers	105.80	58	IAMs_20	IAMs_20	11 07 03.2	
	comp=Z,1µm,18.0s						
HDIL	Hopedale	105.93	52	IAMs_20	IAMs_20	11 04 16.2	
	comp=Z,1µm,19.0s						
SAML	Samuel	106.02	110	IAMs_20	IAMs_20	10 58 25.9	
	comp=Z,1µm,20.0s						
T47A	Sharon Grove	106.09	56	IAMs_20	IAMs_20	11 04 45.6	
	comp=Z,1µm,19.0s						
JFWS	Jewell Farm	106.21	50	IAMs_20	IAMs_20	11 03 24.6	
	comp=Z,946nm,20.0s						
L42A	Oliver, Polo	106.25	51	IAMs_20	IAMs_20	10 59 24.5	
	comp=Z,2µm,22.0s						
SWET	Sewanee	106.26	59	IAMs_20	IAMs_20	10 59 44.4	
	comp=Z,1µm,22.0s						
CLTN	Cedars of Leba	106.31	58	IAMs_20	IAMs_20	11 10 18.5	
	comp=Z,1µm,18.0s						
O44A	Mansfield	106.35	53	IAMs_20	IAMs_20	11 07 10.4	
	comp=Z,979nm,19.0s						
W50A	Signal Mountai	106.72	59	IAMs_20	IAMs_20	11 00 19.6	
	comp=Z,1µm,22.0s						
U49A	Red Boiling Sp	106.88	57	IAMs_20	IAMs_20	10 58 01.7	
	comp=Z,1µm,22.0s						
P46A	Rosedale	107.04	54	IAMs_20	IAMs_20	11 06 22.6	
	comp=Z,1µm,19.0s						
M44A	Midewin, Midew	107.13	52	IAMs_20	IAMs_20	11 06 49.3	
	comp=Z,1µm,18.0s						
WCI	Wyandotte Cave	107.16	56	IAMs_20	IAMs_20	11 05 03.0	
	comp=Z,1µm,19.0s						
G40A	Rib Lake	107.17	48	IAMs_20	IAMs_20	11 01 03.1	
	comp=Z,1µm,21.0s						
T49A	Edmonton	107.29	57	IAMs_20	IAMs_20	11 04 58.5	
	comp=Z,1µm,19.0s						
BLO	Bloomington	107.36	55	IAMs_20	IAMs_20	11 09 23.1	
	comp=Z,1µm,18.0s						
EYMN	Ely	107.38	45	IAMs_20	IAMs_20	11 01 02.2	
	comp=Z,1µm,20.0s						
SFIN	Lafayette	107.41	53	IAMs_20	IAMs_20	11 00 40.3	
	comp=Z,1µm,21.0s						
CPCT	Cooper Cave	107.42	59	IAMs_20	IAMs_20	10 58 28.9	
	comp=Z,1µm,21.0s						
K43A	Burlington	107.43	51	IAMs_20	IAMs_20	11 00 41.3	
	comp=Z,1µm,20.0s						
GOGA	Godfrey	107.45	61	IAMs_20	IAMs_20	11 01 24.8	
	comp=Z,1µm,22.0s						
L44A	Lake County Fo	107.52	51	IAMs_20	IAMs_20	11 02 36.6	
	comp=Z,1µm,20.0s						
V51A	Loudon	107.68	58	IAMs_20	IAMs_20	11 05 18.9	
	comp=Z,1µm,19.0s						
W52A	Murphy	107.73	59	IAMs_20	IAMs_20	10 59 48.8	
	comp=Z,1µm,22.0s						
TKL	Tuckaleechee C	108.06	59	IAMs_20	IAMs_20	11 09 11.0	
	comp=Z,1µm,18.0s						
COWI	Conover	108.17	47	IAMs_20	IAMs_20	11 02 01.7	
	comp=Z,1µm,21.0s						
P48A	Milroy	108.25	55	IAMs_20	IAMs_20	11 01 41.8	
	comp=Z,1µm,21.0s						
V52A	Sevierville	108.26	59	IAMs_20	IAMs_20	11 05 19.3	
	comp=Z,1µm,20.0s						
N47A	Urbana	108.58	53	IAMs_20	IAMs_20	11 07 20.5	
	comp=Z,1µm,18.0s						
R50A	Paris	108.62	56	IAMs_20	IAMs_20	11 05 40.6	
	comp=Z,1µm,19.0s						
F42A	Maple Grove Fa	108.70	48	IAMs_20	IAMs_20	11 01 59.6	
	comp=Z,1µm,20.0s						
J45A	Montague	109.02	50	IAMs_20	IAMs_20	11 01 18.4	
	comp=Z,997nm,19.0s						
O49A	Covington	109.30	54	IAMs_20	IAMs_20	11 08 46.5	
	comp=Z,1µm,18.0s						
I45A	Fountain	109.34	50	IAMs_20	IAMs_20	11 13 30.8	
	comp=Z,1µm,18.0s						
M48A	Edgerton	109.49	53	IAMs_20	IAMs_20	11 11 00.4	
	comp=Z,1µm,18.0s						
Q51A	Peebles	109.60	56	IAMs_20	IAMs_20	11 00 14.6	
	comp=Z,1µm,22.0s						
E43A	Lone Tree Farm	109.66	47	IAMs_20	IAMs_20	11 03 18.0	
	comp=Z,1µm,21.0s						
N49A	Columbus Grove	109.67	54	IAMs_20	IAMs_20	11 01 35.2	
	comp=Z,936nm,21.0s						
U54A	Nelsons Funny	109.85	59	IAMs_20	IAMs_20	11 13 26.3	
	comp=Z,1µm,18.0s						
P51A	Williamsport	109.97	55	IAMs_20	IAMs_20	11 01 11.3	
	comp=Z,1µm,22.0s						
ACSO	Alum Creek Sta	110.29	55	IAMs_20	IAMs_20	11 09 00.6	
	comp=Z,1µm,18.0s						
E44A	Grand Marais A	110.44	47	IAMs_20	IAMs_20	11 01 21.7	
	comp=Z,1µm,22.0s						
I47A	Gladwin	110.50	50	IAMs_20	IAMs_20	11 09 37.6	
	comp=Z,1µm,18.0s						
AAM	Ann Arbor	110.51	52	IAMs_20	IAMs_20	11 09 03.5	
	comp=Z,1µm,19.0s						
M50A	Fremont	110.64	53	IAMs_20	IAMs_20	11 06 56.0	
	comp=Z,974nm,19.0s						
GLMI	Grayling	110.70	49	IAMs_20	IAMs_20	11 01 21.7	
	comp=Z,1µm,22.0s						
J48A	Bridge Port	110.76	51	IAMs_20	IAMs_20	11 09 02.4	
	comp=Z,1µm,18.0s						
N51A	Ashland	110.95	54	IAMs_20	IAMs_20	11 10 39.3	
	comp=Z,1µm,19.0s						
K50A	Casco	111.39	52	IAMs_20	IAMs_20	11 02 36.1	
	comp=Z,1µm,22.0s						
H48A	Harrisville	111.53	50	IAMs_20	IAMs_20	11 03 29.7	
	comp=Z,1µm,22.0s						
M52A	Chesterland	111.88	54	IAMs_20	IAMs_20	11 07 31.8	
	comp=Z,837nm,20.0s						
T57A	Hurt	111.95	59	IAMs_20	IAMs_20	11 02 22.9	
	comp=Z,1µm,22.0s						
N53A	Lisbon	112.02	55	IAMs_20	IAMs_20	11 03 26.5	
	comp=Z,1µm,20.0s						
S57A	Dark Hollow, R	112.42	58	IAMs_20	IAMs_20	11 10 57.4	
	comp=Z,1µm,18.0s						
N54A	Moraine State	112.68	55	IAMs_20	IAMs_20	11 03 46.9	
	comp=Z,1µm,22.0s						
WMQ	Urumqi	112.71	309	*e*PKP	PKiKP	10 23 28.2	+1.4
WMQ				AMB	AMB		
	comp=Z,56nm,5.7s						
WMQ				LR	LR		
	comp=Z,460nm,29.2s						
WMQ				LR	LR		
	comp=Z,510nm,29.1s						
WMQ				LR	LR		
	comp=Z,240nm,19.3s						
U59A	Littleton	112.85	60	IAMs_20	IAMs_20	11 08 42.7	
	comp=Z,1µm,19.0s						
ERPA	Erie	113.03	53	IAMs_20	IAMs_20	11 08 27.3	
	comp=Z,834nm,19.0s						
M54A	Oil Creek Stat	113.08	54	IAMs_20	IAMs_20	11 10 28.5	
	comp=Z,1µm,18.0s						
R58B	Mineral	113.29	58	IAMs_20	IAMs_20	11 02 53.5	
	comp=Z,1µm,22.0s						
P57A	Homestead Farm	113.66	57	IAMs_20	IAMs_20	11 08 56.1	
	comp=Z,1µm,19.0s						
M55A	Ridgway	113.71	54	IAMs_20	IAMs_20	11 11 06.3	
	comp=Z,1µm,18.0s						
CBN	Corbin Frederi	113.75	58	IAMs_20	IAMs_20	11 02 54.5	
	comp=Z,1µm,22.0s						
WVNY	West Valley, N	114.10	53	IAMs_20	IAMs_20	11 09 09.5	
	comp=Z,875nm,19.0s						
M56A	Emporium	114.13	55	IAMs_20	IAMs_20	11 05 03.5	
	comp=Z,1µm,22.0s						
SADO	Sadowa	114.40	51	IAMs_20	IAMs_20	11 11 29.6	
	comp=Z,1µm,18.0s						
L56A	Greenwood	114.77	54	IAMs_20	IAMs_20	11 14 34.2	
	comp=Z,1µm,18.0s						
RES	Resolute Bay	114.82	17	IAMs_20	IAMs_20	11 05 13.7	
	comp=Z,1µm,22.0s						
J55A	Hilton	114.90	53	IAMs_20	IAMs_20	11 09 34.6	
	comp=Z,1µm,19.0s						
MVL	Millersville	115.04	57	IAMs_20	IAMs_20	11 09 57.0	
	comp=Z,1µm,19.0s						
DELO	Deloro Mine	115.38	51	IAMs_20	IAMs_20	11 12 35.5	
	comp=Z,1µm,18.0s						
J56A	Wolcott	115.58	53	IAMs_20	IAMs_20	11 10 12.5	
	comp=Z,1µm,20.0s						
PECO	Prince Edward	115.66	52	IAMs_20	IAMs_20	11 07 29.6	
	comp=Z,1µm,21.0s						
PSUB	Penn St. - Bra	115.68	57	IAMs_20	IAMs_20	11 10 17.6	
	comp=Z,1µm,20.0s						
PLVO	Plevna	115.88	51	IAMs_20	IAMs_20	11 12 08.0	
	comp=Z,874nm,19.0s						
BINY	Binghamton	115.91	54	IAMs_20	IAMs_20	11 05 01.5	
	comp=Z,1µm,22.0s						
P61A	Hammonton	116.10	57	IAMs_20	IAMs_20	11 10 02.7	
	comp=Z,885nm,20.0s						
J57A	Williamstown	116.22	53	IAMs_20	IAMs_20	11 17 20.5	
	comp=Z,1µm,18.0s						
K58A	Earlville	116.30	54	IAMs_20	IAMs_20	11 12 27.7	
	comp=Z,940nm,18.0s						
VLDQ	Val d'Or	116.38	48	IAMs_20	IAMs_20	11 13 19.1	
	comp=Z,1µm,19.0s						
L59A	Walton	116.58	54	IAMs_20	IAMs_20	11 12 55.3	
	comp=Z,1µm,18.0s						
J58A	Remsen	116.71	53	IAMs_20	IAMs_20	11 10 56.5	
	comp=Z,946nm,19.0s						
ZALV	Zalesovo Beam	117.10	319	PKP	PKPdf	10 23 34.1	-0.6
	comp=Z,3.0nm,0.8s,baz=96,slow=1.4,SNR=6.8						
ZALV	Zalesovo Beam	117.10	319		PKPdf	10 23 34.0	-0.7
MK31	Makanchi Array	117.18	311	PKIKP	PKPdf	10 23 34.3	-0.9
MK31	Makanchi Array	117.18	311		PKPdf	10 23 34.3	-0.9
MKAR	Makanchi Array	117.18	311	PKP	PKPdf	10 23 34.8	-0.4
	comp=Z,2.8nm,0.7s,baz=80,slow=2.1,SNR=26						
MKAR	Makanchi Array	117.18	311		PKPdf	10 23 34.4	-0.8
J59A	Piesco	117.28	53	IAMs_20	IAMs_20	11 10 37.8	
	comp=Z,786nm,20.0s						
MAKZ	Makanchi	117.39	311	PKIKP	PKPdf	10 23 35.0	-0.6
MAKZ	Makanchi	117.39	311		PKPdf	10 23 35.0	-0.6
KSCT	Kent School, K	117.59	55	IAMs_20	IAMs_20	11 06 51.1	
	comp=Z,1µm,21.0s						
NRIK	Noril'sk	118.06	336	PKP	PKiKP	10 23 36.9	+0.7
	comp=Z,6.5nm,0.8s,baz=150,slow=0.9,SNR=5.6						
FRNY	Flat Rock	118.24	52	IAMs_20	IAMs_20	11 07 21.4	
	comp=Z,1µm,21.0s						
SABA	Saba	118.50	84	IAMs_20	IAMs_20	11 04 28.7	
	comp=Z,811nm,20.0s						
QUA2	Belchertown	118.54	55	IAMs_20	IAMs_20	11 13 48.2	
	comp=Z,1µm,18.0s						
VT1	Waterbury	118.71	53	IAMs_20	IAMs_20	11 06 55.5	
	comp=Z,927nm,22.0s						
HNH	Hanover	118.91	53	IAMs_20	IAMs_20	11 12 04.7	
	comp=Z,898nm,19.0s						
LBNH	Lisbon	119.28	53	IAMs_20	IAMs_20	11 07 56.4	
	comp=Z,834nm,21.0s						
FFD	Franklin Falls	119.31	54	IAMs_20	IAMs_20	11 06 40.3	
	comp=Z,903nm,22.0s						
I62A	Tamworth	119.62	53	IAMs_20	IAMs_20	11 12 44.9	
	comp=Z,886nm,19.0s						
BOSA	Boshof	119.71	202	PKP	PKiKP	10 23 42.2	+1.2
	comp=Z,3.7nm,0.5s,baz=154,slow=3.2,SNR=12						
BOSA	Boshof	119.71	202		PKPdf	10 23 40.3	-0.6
H62A	Milan	119.88	53	IAMs_20	IAMs_20	11 13 55.5	
	comp=Z,899nm,20.0s						
KSH	Kashi	120.04	301	PKP	PKPdf	10 23 33.1	-8.0
KSH				PP	PP	10 25 02.8	-3.6
KSH				PKS	PKSdf	10 27 08.9	-8.9
KSH				SKKS		10 31 58.4	
KSH	Kashi	120.04	301	PKP	PKPdf	10 23 39.5	-1.6
KSH				SS	SS	10 41 31.7	+0.9
KSH				AMB	AMB		
	comp=Z,180nm,7.7s						
KSH				LR	LR		
	comp=Z,490nm,12.5s						
KSH				LR	LR		
	comp=Z,460nm,14.6s						
KSH				LR	LR		
	comp=Z,430nm,11.6s						
I63A	Otisfield	120.19	53	IAMs_20	IAMs_20	11 12 34.6	
	comp=Z,884nm,20.0s						
KURK	Kurchatov	120.30	315	PKIKP	PKiKP	10 23 41.2	+0.1
KURK	Kurchatov	120.30	315		PKPdf	10 23 40.6	-0.4
KURBB	Kurchatov Arra	120.34	314	PKP	PKiKP	10 23 41.2	0.0
	comp=Z,5.7nm,0.8s,baz=107,slow=2.0,SNR=25						
G62A	West of Eustis	120.44	52	IAMs_20	IAMs_20	11 08 20.6	
	comp=Z,1µm,22.0s						
BOOM	Boomskoye usch	120.70	305	PKIKP	PKPdf	10 23 41.6	-0.7
BOOM				MLR	MLR		
	comp=Z,400nm,22.0s						
BOOM	Boomskoye usch	120.70	305		PKPdf	10 23 41.5	-0.7
WVL	Waterville	120.93	53	IAMs_20	IAMs_20	11 14 37.2	
	comp=Z,836nm,19.0s						
PKME	Peaks-Kenny Pk	121.31	52	IAMs_20	IAMs_20	11 09 06.7	
	comp=Z,1µm,21.0s						
F63A	Nahmakanta, Br	121.52	52	IAMs_20	IAMs_20	11 08 51.0	
	comp=Z,1µm,22.0s						
AAK	Ala-Archa	121.78	305	PKP	PKiKP	10 23 45.0	+0.5
	comp=Z,5.0nm,0.7s,baz=177,slow=2.5,SNR=6.9						
AAK	Ala-Archa	121.78	305	PKIKP	PKiKP	10 23 45.0	+0.5
AAK	Ala-Archa	121.78	305		PKiKP	10 23 44.6	+0.1
G65A	Princeton	122.51	52	IAMs_20	IAMs_20	11 15 26.9	
	comp=Z,979nm,18.0s						
ARSB	Arslanbob	122.65	303	PKIKP	PKPdf	10 23 45.2	-0.8
ARSB	Arslanbob	122.65	303		PKPdf	10 23 45.2	-0.8
FRB	Frobisher Bay	122.92	30	PKKPbc	PKKPbc	10 33 37.4	-1.9
	comp=Z,3.1nm,0.6s,baz=88,slow=4.9,SNR=16						
GGN	Saint George	123.00	53	IAMs_20	IAMs_20	11 20 52.3	
	comp=Z,987nm,19.0s						
SCHQ	Schefferville	123.86	41	PKKPbc	PKKPbc	10 33 36.1	+0.7
	comp=Z,0.9nm,0.6s,baz=73,slow=3.2,SNR=5.0						
SCHQ	Schefferville	123.86	41	IAMs_20	IAMs_20	11 10 53.2	
	comp=Z,918nm,20.0s						
GAR	Garm	124.23	300	PKPdf	PKiKP	10 23 49.9	+0.5
KBL	Kabul	124.33	294	PKIKP	PKPdf	10 23 48.5	-1.1
KBL	Kabul	124.33	294		PKPdf	10 23 48.5	-1.1
KK31	Karatay Array	124.74	305	*i* PKIKP	PKiKP	10 23 49.9	-0.3
KK31	Karatay Array	124.74	305		PKiKP	10 23 49.8	-0.4
KKAR	Karatay Array	124.74	305	PKIKP	PKiKP	10 23 50.0	-0.2
KKAR	Karatay Array	124.74	305		PKiKP	10 23 49.8	-0.4
KKAR	Karatay Array	124.74	305		PKiKP	10 23 50.0	-0.2
CHGR	Chuyangaron	125.06	299		PKiKP	10 23 51.2	+0.1
BVAR	Borovoye Array	125.57	317	PKP	PKiKP	10 23 51.6	+0.2
	comp=Z,5.1nm,0.5s,baz=150,slow=1.8,SNR=23						
BRVK	Borovoye	125.63	317	PKIKP	PKiKP	10 23 51.3	-0.3
BRVK	Borovoye	125.63	317		PKiKP	10 23 51.3	-0.3
SPA0	Spitsbergen Ar	129.57	357	*e*PKPdf	PKiKP	10 23 59.3	+0.5
SPITS	Spitsbergen Ar	129.57	357	PKP	PKiKP	10 23 59.2	+0.4
	comp=Z,9.0nm,0.8s,baz=64,slow=3.9,SNR=15						
HRA	Herat	129.81	293	IAMs_20	IAMs_20	11 22 46.0	
	comp=Z,772nm,20.0s						
SOCY	Socotra	130.15	262	IAMs_20	IAMs_20	11 16 14.4	
	comp=Z,729nm,20.0s						
SUMG	Summit	130.29	15	*i* P	PKiKP	10 24 01.9	+1.0
SUMG	Summit	130.29	15	*e*PKIKP	PKiKP	10 24 01.9	+1.0
SUMG	Summit	130.29	15		PKiKP	10 24 01.1	+0.2
ARU	Arti	132.05	322	PKP	PKiKP	10 24 04.3	0.0
	comp=Z,2.5nm,0.3s,baz=280,slow=0.9,SNR=11						
ARU				SKPbc	SKPbc	10 27 26.6	0.0
	comp=Z,2.9nm,0.2s,baz=73,slow=2.8,SNR=13						
ARU	Arti	132.05	322	PKIKP	PKiKP	10 24 04.1	-0.2
ARU	Arti	132.05	322		PKiKP	10 24 04.1	-0.2
ABKAR	Akbulak array	132.27	312		PKPdf	10 24 02.9	-1.1
UOSS	Minazif	132.83	279		PKPdf	10 24 05.4	-0.4
AKTO	Aktyubinsk	133.39	314	PKP	PKiKP	10 24 07.2	-0.1

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         comp=Z,4.9nm,0.7s,baz=60,slow=1.8,SNR=13
AKTO                                    SKPbc    SKPbc     10 27 31.2 -0.2
         comp=Z,7.2nm,1.0s,baz=84,slow=5.1,SNR=10.0
GEYT     Alibeck            133.58 297  PKP      PKiKP     10 24 08.2 +0.1
         comp=Z,4.4nm,0.7s,baz=211,slow=0.9,SNR=6.8
GEYT                                    SKPbc    SKPbc     10 27 33.4 +0.8
         comp=Z,4.8nm,0.7s,baz=204,slow=3.3,SNR=10
HAMF     Hammerfest         135.96 350 ePKPdf    PKiKP     10 24 11.4 -0.4
KMBO     Kilima Mbogo       136.26 234  SKPbc    SKPbc     10 27 43.6 +1.4
         comp=Z,1.2nm,0.3s,baz=140,slow=1.3,SNR=4.0
KMBO     Kilima Mbogo       136.26 234  IAMs_20  IAMs_20   11 15 37.9
         comp=Z,880nm,22.0s
PRGR     Permogore          136.41 332 ePKIKP    PKPdf     10 24 05.7 -5.6
PRGR                                    pmax     pmax
         comp=Z,7.0nm,0.5s
APA      Apatity            136.62 344⇓iPKIKP    PKPdf     10 24 05.3 -6.2
APA                                     pmax     pmax
         comp=Z,6.0nm,1.2s
ARCES    ARCESS Array B     136.65 349  PKhKP    PKPpre    10 24 04.9
         comp=Z,6.2nm,0.9s,baz=15,slow=2.2,SNR=5.5
ARCES                                   PKP      PKiKP     10 24 13.7 +0.3
         comp=Z,5.1nm,0.5s,baz=8.7,slow=1.2,SNR=27
ARE0     ARCESS Array S     136.65 349 ePKPdf    PKiKP     10 24 12.7 -0.7
KTK1     Kautokeino         137.50 349 ePKPdf    PKiKP     10 24 14.3 -0.8
TRO      Tromso             137.54 352 ePKPdf    PKiKP     10 24 15.3 +0.2
KLMR     Klimovskoe         139.30 334 ePKHKP    PKPpre    10 24 07.0
KLMR                                    pmax     pmax
         comp=Z,42nm,2.1s
KLMR     Klimovskoe         139.30 334 ePKPdf    PKPdf     10 24 07.1  -10
KLMR                                    AMP                10 24 22.0
         comp=Z,42nm,2.1s
LOF      Lofoten            139.56 354 epPKPdf   PKiKP     10 24 21.2 +1.9
DAMY     Dhamar             139.57 259  IAMs_20  IAMs_20   11 19 14.9
         comp=Z,1µm,21.0s
STEI     Steigen            139.59 353 ePKPdf    PKiKP     10 24 18.2 -1.1
STOK     Stokkvaagen        141.36 354 ePKPdf    PKiKP     10 24 21.1 -1.9
MOR8     Moi Rana           141.37 353 ePKPdf    PKPdf     10 24 21.1 +0.8
FURI     Furi               141.53 247  IAMs_20  IAMs_20   11 23 23.6
         comp=Z,915nm,20.0s
RAYN     Ar Rayn            141.83 273  IAMs_20  IAMs_20   11 20 23.8
         comp=Z,954nm,22.0s
GROC     Groznyy            142.76 305  PKIKP    PKiKP     10 24 25.3 -1.3
GROC                                   e                   10 27 32.7
GROC                                    pmax     pmax
         comp=Z,24nm,0.6s
VRH      Novokhopyorsk      143.14 319 ePKHKP    PKPpre    10 24 18.8
VRH                                     pmax     pmax
         comp=Z,10.0nm,0.6s
NSS      Namsos             143.22 354 ePKPdf    PKPdf     10 24 24.3 +0.7
FINES    FINESS Array B     143.42 342  PKhKP    PKPpre    10 24 21.1
         comp=Z,5.9nm,0.3s,baz=55,slow=4.1,SNR=45
OBN      Obninsk            143.94 328⇓iPKIKP    PKPbc     10 24 23.0  0.0
OBN                                    e                   10 27 37.6
OBN                                     pmax     pmax
         comp=Z,24nm,0.7s
GNI      Garni              143.96 300 i PKIKP   PKPab     10 24 23.2  0.0
LPSR     Galich'ya Gora     144.07 323 ePKIKP    PKPbc     10 24 23.3 -0.2
LPSR                                    pmax     pmax
         comp=Z,30nm,0.8s
ZEI      Tsey               144.20 305 i PKIKP   PKPbc     10 24 24.4 -0.1
ZEI                                     pmax     pmax
         comp=Z,13nm,0.6s
NCK      Nalchik            144.28 306 i PKIKP   PKPbc     10 24 24.7 +0.2
GOF      Gofitskoye         144.31 309⇑ePKIKP    PKiKP     10 24 32.8 +3.1
VSR      Storozhevoye       144.59 320 ePKIKP    PKPab     10 24 24.7 -0.3
VSR                                     pmax     pmax
         comp=Z,30nm,0.5s
KBZ      Khabaz             144.73 307  PKP      PKPdf     10 24 26.2 -0.7
         comp=Z,11nm,1.0s,baz=135,slow=2.3,SNR=12
AKH      Akhalkalaki        144.73 303 ⇓P        PKPdf     10 24 27.5 +0.3
AKH      Akhalkalaki        144.73 303  PKIKP    PKPbc     10 24 26.4 +0.2
AKH      Akhalkalaki        144.73 303           PKPdf     10 24 26.4 -0.8
KIV      Kislovodsk         144.83 307 i PKIKP   PKPdf     10 24 26.5 -0.7
KIV                                     pmax     pmax
         comp=Z,68nm,1.0s
KIV      Kislovodsk         144.83 307           PKPdf     10 24 26.7 -0.5
SHA1     Shidzhatmaz        144.90 307 i PKIKP   PKPab     10 24 24.4 -2.3
NEY      Neytrino           144.96 306 i PKHKP   PKPpre    10 24 23.7
MOL      Molde              145.50 356 ePKPbc    PKPab     10 24 28.3 +0.3
VSU      Vasula             145.62 338 eP        PKPab     10 24 29.7 +1.2
VSU      Vasula             145.62 338 i PKIKP   PKPab     10 24 28.0 -0.5
AKN      Aaknes             145.92 357 ePKPab    PKPab     10 24 30.2 +0.6
DOMB     Dombas             145.93 355 ePKPbc    PKPab     10 24 29.6 -0.1
BATM     Batumi             146.03 303 ⇑P        PKPab     10 24 30.7  0.0
BATM     Batumi             146.03 303 ⇑PKP2     PKPab     10 24 30.7  0.0
BCA      Borcka             146.11 303 ⇓P        PKPab     10 24 31.1 +0.1
NC303    NORSAR Array S     146.52 353           PKPbc     10 24 30.1 -0.7
NC204    NORSAR Array S     146.53 353           PKPab     10 24 32.2 +0.2
FOO      Floro              146.57 358 ePKPab    PKiKP     10 24 32.5 -1.3
NC405    NORSAR Array S     146.59 353           PKPab     10 24 31.6 -0.6
NB201    NORSAR Array S     146.70 353  PKPbc    PKPbc     10 24 31.4  0.0
NB2      NORSAR Subarra     146.72 353  PKP      PKPbc     10 24 31.4 -0.1
         comp=Z,61nm,1.2s,baz=13,slow=2.9
NB2      NORSAR Subarra     146.72 353  PKPab    PKPbc     10 24 31.4 -0.1
         baz=13,slow=2.9
NOA      NORSAR Array B     146.72 353  PKPbc    PKPbc     10 24 31.6  0.0
         comp=Z,18nm,0.7s,baz=13,slow=4.5,SNR=45
NBO00    NORSAR Array S     146.77 353  PKPbc    PKPbc     10 24 31.6 -0.1
NAO01    NORSAR Array S     146.94 353           PKPbc     10 24 31.8 -0.3
HYA      Hoyanger           146.97 357 ePKPbc    PKPab     10 24 32.8 -0.8
NC602    NORSAR Array S     146.98 353 ePKPbc    PKPbc     10 24 32.0 -0.1
NC602    NORSAR Array S     146.98 353           PKPbc     10 24 32.1 -0.1
SOC      Sochi              147.00 308 ePKHKP    PKPpre    10 24 24.9
SOC                                    i                   10 24 31.7
SOC                                    e                   10 27 55.3
SOC                                    eSSS      SSS       10 52 27.3
SOC                                     pmax     pmax
         comp=Z,6.0nm,0.7s
SOC                                     pmax     pmax
         comp=Z,29nm,0.7s
SOC                                     MLR      MLR
         comp=Z,515nm,14.0s
SUE      Sulen              147.12 359 ePKPbc    PKPab     10 24 33.0 -1.2
HFS      Hagfors            147.28 350  PKPbc    PKPbc     10 24 32.7 -0.3
         comp=Z,37nm,0.7s,baz=64,slow=3.4,SNR=3.6
SKAR     Skarslia           147.33 355 ePKPbc    PKPab     10 24 34.0 -1.2
SLIT     Slitere, Latvi     147.67 341 eP        PKPbc     10 24 34.5 +0.3
ASK      Askoy              147.69 358 ePKPbc    PKiKP     10 24 35.0 -1.2
BER      Bergen             147.78 358 ePKPbc    PKiKP     10 24 35.1 -1.2
OSL      Oslo               147.85 353 ePKPbc    PKiKP     10 24 35.3 -1.2
IZAR     Zarasai            147.89 335 eP        PKPab     10 24 37.1 -0.3
ISAL     Salakas            148.07 335 eP        PKiKP     10 24 37.0 -0.1
MICGM    Minsk              148.18 333 e         PKPbc     10 24 34.0 -1.7
MNK      Minsk              148.18 333 ePKIKP    PKPbc     10 24 34.0 -1.7
ANN      Anapa              148.20 311 i PKP2    PKPbc     10 24 35.6 -0.4
ANN                                     pmax     pmax
         comp=Z,128nm,1.0s
ODD1     Odda               148.20 357 epPKPdf   PKiKP     10 24 36.5 -0.8
KONO     Kongsberg          148.25 354 epPKPdf   PKiKP     10 24 36.7 -0.7
KONO     Kongsberg          148.25 354  PKP2     PKiKP     10 24 36.4 -0.9
KONO     Kongsberg          148.25 354           PKiKP     10 24 36.4 -0.9
NACGM    Naroch             148.32 334 e         PKPbc     10 24 36.0  0.0
BLS5     Blasjo             148.70 357 epPKPdf   PKiKP     10 24 37.5 -0.8
PABE     Paberze            148.89 337 eP        PKiKP     10 24 38.4 -0.3
KMY      Karmoy             148.96 358 ePKPbc    PKiKP     10 24 38.2 -0.5
PBUR     Paburge            149.13 339 eP        PKiKP     10 24 38.9 -0.3
HOMB     Homborsund         149.71 354 ePKPbc    PKiKP     10 24 40.4  0.0
SNART    Snartemo           149.74 356 ePKPbc    PKiKP     10 24 40.1 -0.3
KAC      Achnashellach      150.09   9 eP        PKiKP     10 24 40.5 -0.7
AKASG    Malin Array Be     150.15 326  PKPbc    PKiKP     10 24 41.0 -0.6
         comp=Z,26nm,0.7s,baz=43,slow=3.1,SNR=25
AKASG    Malin Array Be     150.15 326  PKP2     PKiKP     10 24 40.8 -0.7
AKASG    Malin Array Be     150.15 326  PKPbc    PKiKP     10 24 40.8 -0.7
AKBB     Malin Array Si     150.15 326  PKP2     PKiKP     10 24 40.9 -0.6
AKBB     Malin Array Si     150.15 326           PKiKP     10 24 40.9 -0.6
GAZ      Gaziantep          150.17 296           PKiKP     10 24 41.6 -0.6
GAZ                                     IAMs_20  IAMs_20   11 36 44.8
         comp=Z,731nm,20.0s
KPL      Plockton           150.19  10 eP        PKiKP     10 24 40.7 -0.7
MDO      Dochfour           150.27   8 eP        PKiKP     10 24 40.9 -0.8
SIM      Simferopol'        150.33 313  PKIKP    PKiKP     10 24 42.5 +0.4
SIM                                     pmax     pmax
         comp=Z,80nm,1.0s
SUW      Suwalki            150.36 336 ePKP      PKiKP     10 24 41.9 +0.1
SUW      Suwalki            150.36 336  PKIKP    PKiKP     10 24 41.7 -0.2
SUW      Suwalki            150.36 336           PKiKP     10 24 41.7 -0.2
DIKM     Dikmen             150.70 306 ⇑P        PKiKP     10 24 43.9 +0.9
DRUM     Mains of Drumt     151.00   6 eP        PKiKP     10 24 43.1  0.0
MUD      Monsted U'grnd     151.44 353 i P       PKPab     10 24 49.0 -2.9
MUD      Monsted U'grnd     151.44 353 i PKIKP   PKPab     10 24 49.0 -2.9
EAB      Aberfoyle          151.50   9 eP        PKiKP     10 24 44.6 +0.4
BZK      Bozkurt            151.50 307 ⇑P        PKiKP     10 24 45.7 +1.1
BSD      Bornholm Skovb     151.80 346 i P       PKiKP     10 24 45.7 +0.9
         comp=Z,68nm,1.0s
BSD      Bornholm Skovb     151.80 346 i PKIKP   PKiKP     10 24 45.7 +0.9
BSD                                     pmax     pmax
         comp=Z,68nm,1.0s
ESY      Stoneypath         151.97   7 eP        PKiKP     10 24 46.0 +0.8
ILGA     Ilgaz              151.99 305           PKiKP     10 24 46.3 +0.3
ILGA                                    IAMs_20  IAMs_20   11 39 24.6
         comp=Z,653nm,21.0s
SORM     Soroca             152.17 323 ⇓P        PKiKP     10 24 46.0 +0.2
SORM     Soroca             152.17 323 ⇓PKIKP    PKiKP     10 24 46.0 +0.2
BR131    Keskin Array S     152.42 303  PKIKP    PKPbc     10 24 46.1 -0.5
BR131    Keskin Array S     152.42 303           PKPbc     10 24 46.1 -0.5
BRTR     Keskin Array B     152.42 303  PKPbc    PKiKP     10 24 46.9  0.0
         comp=Z,7.1nm,0.8s,baz=122,slow=3.0,SNR=29
BRTR     Keskin Array B     152.42 303  PKIKP    PKiKP     10 24 46.4 -0.4
BRTR     Keskin Array B     152.42 303           PKiKP     10 24 46.4 -0.4
EKA      Eskdalemuir Ar     152.48   8  PKPbc    PKiKP     10 24 46.6 +0.4
         comp=Z,3.1nm,0.6s,baz=318,slow=1.1,SNR=6.3
EKA                                     PKPab    pPKPbc    10 24 56.9 +0.2
         comp=Z,7.2nm,0.6s,baz=353,slow=2.9,SNR=10
KIS      Kishinev           152.58 320 ePKP      PKPdf     10 24 39.0 -0.4
KIS                                    eL        L         11 25 04.0
KIS                                     LRM      MLR       11 39 08.0
         comp=Z,600nm,20.0s
KIS      Kishinev           152.58 320 ePKIKP    PKPdf     10 24 39.0 -0.4
KIS                                    e                   10 24 54.0
BEL      Belsk              152.97 336 ePKP      PKiKP     10 24 49.2 +1.9
BEL      Belsk              152.97 336 ePKIKP    PKiKP     10 24 49.2 +1.9
ANTO     Ankara             153.01 303 ⇓P        PKPab     10 24 53.6 -5.6
ANTO     Ankara             153.01 303  PKIKP    PKiKP     10 24 48.8 +0.8
ANTO     Ankara             153.01 303           PKiKP     10 24 48.8 +0.8
BR231    Keskin MP Arra     153.03 303           PKiKP     10 24 48.4 +0.3
LVV      L'vov              153.20 329 ePKIKP    PKiKP     10 24 48.4 +0.5
VASR     Vaslui             153.36 320 ⇑P        PKPab     10 25 03.7 +3.3
TLCR                        153.56 317 ⇓P        PKiKP     10 24 50.6 +1.8
TLCR                        153.56 317 ⇓PKIKP    PKiKP     10 24 50.6 +1.8
CSS      Mathiatis          153.56 292           PKiKP     10 24 49.6 +0.4
LEF      Lefka              153.91 293 ⇓P        PKiKP     10 24 50.0 +0.2
KWP      Kalwaria Pacla     153.92 330 ePKP      PKPab     10 25 04.2 +1.6
KWP      Kalwaria Pacla     153.92 330 ePKP2     PKPab     10 25 04.2 +1.6
KWP      Kalwaria Pacla     153.92 330           PKPdf     10 24 42.2 +0.9
KWP                                              PKiKP     10 24 50.1 +0.7
KWP                                     PKPab    PKPab     10 25 01.6 -1.1
CFR      Carcaliu           153.97 317 ⇓P        PKiKP     10 24 49.4 -0.2
CFR      Carcaliu           153.97 317 ⇓PKIKP    PKiKP     10 24 49.4 -0.2
TOPG     Topolog            153.98 317 ⇑P        PKPab     10 25 04.1 +1.1
MDUB     Mudurnu            153.99 305           PKPbc     10 24 49.1 -0.9
TESR     Tescani            154.07 321 ⇑P        PKPab     10 24 56.7 -6.7
BUR08    Bucovina Ar. S     154.14 325           PKiKP     10 24 50.7 +0.7
BURAR    Bucovina Array     154.15 325 ⇑P        PKiKP     10 24 51.6 +1.5
BURAR    Bucovina Array     154.15 325 ⇑PKIKP    PKiKP     10 24 51.6 +1.5
BURAR    Bucovina Array     154.15 325           PKiKP     10 24 50.7 +0.7
HARR     Harsova            154.35 317 ⇓P        PKiKP     10 24 55.9 +5.5
HARR     Harsova            154.35 317 ⇓PKIKP    PKiKP     10 24 55.9 +5.5
VRI      Vrincioaia         154.41 320 ⇑P        PKiKP     10 24 51.1 +0.5
VRI      Vrincioaia         154.41 320 ⇑PKIKP    PKiKP     10 24 51.1 +0.5
PLOR     Plostina           154.46 320 ⇓P        PKPab     10 25 02.8 -2.3
PLOR     Plostina           154.46 320 ⇓PKP2     PKPab     10 25 02.8 -2.3
OJC      Ojcow              154.65 335 ePKP      PKiKP     10 24 57.4 +6.5
OJC      Ojcow              154.65 335  PKIKP    PKPbc     10 24 49.3 -1.5
OJC      Ojcow              154.65 335           PKPbc     10 24 49.3 -1.5
UZH      Uzhgorod           154.85 329 ePKIKP    PKPbc     10 24 47.9 -3.4
UZH                                    e                   10 24 55.5
UZH                                    e                   10 25 06.1
CRVS     Cervenica-Dubn     155.01 331 ePKP2     PKPab     10 25 08.3 +1.0
CRVS     Cervenica-Dubn     155.01 331 ePKP      PKPab     10 25 08.3 +1.0
MLR      Muntele Rosu       155.07 320 ⇑P        PKPab     10 24 59.1 -8.8
NIE      Niedzica           155.09 333 ePKP      PKPab     10 25 00.8 -6.8
DOPR     Dopca              155.10 321 ⇑P        PKPdf     10 24 54.5  +11
TRPA     Tarpa              155.10 328 ⇑P        PKPab     10 24 55.6  -12
ISP      Isparta            155.27 300  IAMs_20  IAMs_20   11 43 26.2
         comp=Z,672nm,21.0s
KSP      Ksiaz              155.31 340 ePKP      PKPdf     10 24 54.0  +11
KSP      Ksiaz              155.31 340 ePKIKP    PKPdf     10 24 54.0  +11
OSTC     Ostas              155.59 340⇑ePKP      PKPdf     10 24 54.8  +11
OSTC                                   ePKPAB    PKPab     10 25 10.7 +1.0
CHVC     Chvalec            155.61 340 ePKPAB    PKPab     10 25 12.0 +2.2
VOIR                        155.61 321 ⇓P        PKPab     10 25 11.6 +1.5
VOIR                        155.61 321 ⇓PKP2     PKPab     10 25 11.6 +1.5
LANS     Liptovska Anna     155.64 334 ePKP2     PKPab     10 25 09.0 -1.0
LANS     Liptovska Anna     155.64 334 ePKP      PKPab     10 25 09.0 -1.0
UPC      Upice              155.69 340 ePKPAB    PKPab     10 25 11.2 +1.1
UPC      Upice              155.69 340 ePKP2     PKPab     10 25 11.2 +1.1
DPC      Dobruska-Polom     155.74 339⇑ePKP      PKPdf     10 24 54.9  +11
DPC                                    ePKPAB    PKPab     10 25 09.9 -0.5
DPC      Dobruska-Polom     155.74 339 ePKIKP    PKPdf     10 24 54.9  +11
DPC                                    e                   10 25 09.9
KECS     Kecovo             155.75 331 ePKP2     PKPab     10 25 11.4 +1.0
KECS     Kecovo             155.75 331 ePKP      PKPab     10 25 11.4 +1.0
CLL      Collm              155.77 345 ePKPdf    PKPdf     10 24 42.0 -1.8
CLL                                    ePKPdiff  pPKPdf    10 24 55.0 +0.3
CLL                                    i PKPab   PKPab     10 25 11.5 +1.1
         comp=Z,20nm,1.1s
CLL                                    e                   10 25 15.0
CLL                                    e                   10 25 24.0
CLL                                    ePP       PP        10 28 48.0 +1.1
CLL                                    eSS       SS        10 48 30.0 -0.8
CLL                                    ePSS      PSS       10 49 36.0
CLL                                    eSSS      SSS       10 54 36.0
CLL                                    eSSSS               10 58 48.0
CLL                                     LmV                11 44 00.0
         comp=Z,700nm,19.8s
CLL      Collm              155.77 345 ePKIKP    PKPdf     10 24 42.0 -1.8
CLL                                    e                   10 24 55.0
CLL                                     pmax     pmax
         comp=Z,20nm,1.1s
CLL                                     MLR      MLR
         comp=Z,700nm,19.8s
KRLC     Kraliky            155.83 338⇑ePKP      PKPdf     10 24 53.1 +9.1
KRLC                                   ePKPAB    PKPab     10 25 11.9 +1.1
KRLC     Kraliky            155.83 338 ePKIKP    PKPdf     10 24 53.1 +9.1
MORC     Moravsky Berou     155.83 337 ⇓P        PKPab     10 24 59.0  -12
MORC     Moravsky Berou     155.83 337  PKP2     PKPab     10 25 11.4 +0.6
MORC     Moravsky Berou     155.83 337 ePKP      PKPab     10 25 11.6 +0.8
MORC     Moravsky Berou     155.83 337  PKPab    PKPab     10 25 11.4 +0.6
ARR      Arges              155.88 321 ⇑P        PKPdf     10 24 55.2  +11
BRG      Berggiesshubel     155.94 343 ePKP      PKPdf     10 24 54.9  +11
         comp=Z,6.7nm,1.0s
BRG                                    e                   10 25 00.5
         comp=Z,12nm,1.3s
BRG                                    i                   10 25 33.4
         comp=Z,30nm,1.2s
BRG      Berggiesshubel     155.94 343 ePKIKP    PKPdf     10 24 54.8  +11
BRG                                    e                   10 25 00.5
BRG                                     pmax     pmax
         comp=Z,7.0nm,1.0s
BRG                                     pmax     pmax
         comp=Z,12nm,1.3s
BRG                                     pmax     pmax
         comp=Z,30nm,1.2s
DRGR                        155.96 326 ⇓P        PKPdf     10 24 57.4  +13
PVCC     Panska Ves         156.09 342  AMS      AMS       11 25 00.0
         comp=Z,1µm,21.2s
VYHS     Vyhne              156.41 333 ePKP2     PKPab     10 25 14.0 +0.7
VYHS     Vyhne              156.41 333 ePKP      PKPab     10 25 14.0 +0.7
PSZ      Piszkesteto        156.44 331 ⇓P        PKPab     10 25 14.5 +1.0
PSZ      Piszkesteto        156.44 331 ⇓PKP2     PKPab     10 25 14.5 +1.0
PSZ      Piszkesteto        156.44 331           PKPab     10 25 13.3 -0.2
VRAC     Vranov             156.55 338  PKPab    PKPab     10 25 14.8 +0.9
         baz=35,slow=4.8
VRAC     Vranov             156.55 338 ⇓P        PKPab     10 25 14.7 +0.8
VRAC     Vranov             156.55 338 ePKP      PKPab     10 25 14.9 +1.0
JAVC     Velka Javorina     156.56 336 ePKP      PKPab     10 25 15.5 +1.5
GOPC     GO Pecny, Ondr     156.58 341 ePKPAB    PKPab     10 25 15.0 +1.0
GOPC                                    AMS      AMS       11 26 00.0
         comp=Z,1µm,21.2s
GOPC     GO Pecny, Ondr     156.58 341 ePKP2     PKPab     10 25 15.0 +1.0
GOPC                                    MLR      MLR
         comp=Z,1µm,21.2s
PRU      Pruhonice          156.59 341 ePKPAB    PKPab     10 25 14.1 +0.2
PRU                                     AMS      AMS       11 25 50.0
         comp=Z,900nm,23.1s
PRU      Pruhonice          156.59 341 ePKP2     PKPab     10 25 14.1 +0.2
PRU                                     MLR      MLR
         comp=Z,900nm,23.1s
LIC      Lamto              156.79 159 ePKP1     PKPdf     10 24 52.4 +6.1
         comp=Z,44nm,1.4s
KRUC     Moravsky           156.83 338 ePKP      PKPab     10 25 15.7 +0.7
SIRR     Siria              156.85 326 ⇑P        PKPdf     10 24 58.0  +13
NKC      Novy Kostel        156.90 345 ePKPAB    PKPab     10 25 14.4 -0.9
NKC      Novy Kostel        156.90 345 ePKP2     PKPab     10 25 14.4 -0.9
SMOL     Smolenice          156.93 335 ePKP2     PKPab     10 25 17.2 +1.7
SMOL     Smolenice          156.93 335 ePKP      PKPab     10 25 17.2 +1.7
KIC      Kosan Boka         157.00 159 ePKP1     PKPdf     10 24 53.1 +6.5
         comp=Z,18nm,1.0s
PLVB     Pleven             157.06 317 ⇑P        PKPab     10 25 10.8 -5.5
MODS     Modra-Piesok       157.11 335 ePKP2     PKPab     10 25 16.9 +0.6
MODS     Modra-Piesok       157.11 335 ePKP      PKPab     10 25 16.9 +0.6
TIC      Toumodi            157.18 158 ePKP1     PKPdf     10 24 53.8 +7.0
KHC      Kasperske Hory     157.63 342⇑ePKP      PKPdf     10 25 00.0  +14
KHC                                    ePKPAB    PKPab     10 25 18.0 -0.5
KHC                                    epPKP     sPKPab    10 25 31.0 -2.0
KHC                                     AMS      AMS       11 32 40.0
         comp=Z,1µm,21.7s
KHC      Kasperske Hory     157.63 342 ePKP2     PKPab     10 25 18.0 -0.5
KHC                                     MLR      MLR
         comp=Z,1µm,21.7s
KHC      Kasperske Hory     157.63 342           PKPab     10 25 18.9 +0.3
GRF      Grafenberg Arr     157.68 346 ePKPab    PKPab     10 25 19.6 +1.0
         baz=19,slow=4.0
MDVR     Moldovita          157.85 323 ⇑P        PKPdf     10 24 58.5  +12
GEC2     GERESS Array S     157.85 341           PKPab     10 25 17.7 -1.9
GERES    GERESS Array B     157.85 341  PKP      PKPdf     10 24 47.7 +1.0
         comp=Z,0.2nm,0.3s,baz=70,slow=1.5,SNR=2.5
GERES                                   PKPab    PKPab     10 25 19.2 -0.4
         comp=Z,2.4nm,0.8s,baz=20,slow=3.1,SNR=5.5
GERES    GERESS Array B     157.85 341  PKPab    PKPab     10 25 19.3 -0.3
CONA     Conrad Observa     157.99 337 i sPKPab  PKPab     10 25 20.3 +0.1
         comp=Z,15nm,0.9s
VTS      Vitosha            158.34 317 ⇓P        PKPab     10 25 23.5 +1.5
VTS      Vitosha            158.34 317 ⇓PKP2     PKPab     10 25 23.5 +1.5
VTS      Vitosha            158.34 317           PKPab     10 25 23.1 +1.1
VTS                                     IAMs_20  IAMs_20   11 43 31.0
         comp=Z,840nm,21.0s
MOA      Molln              158.58 339 i sPKPab  PKPab     10 25 24.2 +1.6
         comp=Z,5.0nm,0.8s
ARSA     Arzberg            158.69 337 i sPKPab  PKPab     10 25 24.4 +1.2
         comp=Z,6.4nm,0.8s
APE      Apeiranthos        159.29 301 ⇑P        PKPdf     10 24 44.7 -4.1
APE      Apeiranthos        159.29 301 ⇑PKIKP    PKPdf     10 24 44.7 -4.1
SOKA     Soboth             159.35 337 i sPKPab  PKPab     10 25 26.7 +0.5
         comp=Z,5.3nm,0.8s
KBA      Koelnbreinsper     159.55 340 i sPKPab  PKPab     10 25 27.4 +0.3
         comp=Z,1.4nm,0.5s
SANT     Santorini          159.56 299 ⇑P        PKPab     10 25 39.6  +12
OBKA     Obir               159.67 337 i pPKPab  PKPab     10 25 27.0 -0.5
         comp=Z,10nm,0.9s
WATA     Walderalm          159.81 343 i sPKPab  PKPab     10 25 28.8 +0.6
         comp=Z,14nm,1.0s
WTTA     Wattenberg         159.86 343 i sPKPab  PKPab     10 25 29.0 +0.5
         comp=Z,6.7nm,0.5s
MYKA     Terra Mystica      159.86 339 i sPKPab  PKPab     10 25 28.6 +0.3
         comp=Z,8.3nm,0.6s
RETA     Reutte             159.86 345 i sPKPab  PKPab     10 25 28.9 +0.6
         comp=Z,10nm,1.0s
MOTA     Moosalm            159.91 344 i sPKPab  PKPab     10 25 28.7 +0.1
         comp=Z,13nm,0.9s
SQTA     Sankt Quirin       160.01 344 i sPKPab  PKPab     10 25 30.2 +1.2
         comp=Z,6.7nm,0.9s
ABTA     Abfaltersbach      160.10 341 i sPKPab  PKPab     10 25 29.8 +0.4
         comp=Z,5.3nm,0.5s
DAVA     Damuels            160.24 347 i sPKPab  PKPab     10 25 30.7 +0.6
         comp=Z,6.2nm,0.7s
FETA     Feichten           160.31 345 i sPKPab  PKPab     10 25 31.3 +1.0
         comp=Z,19nm,0.9s
STAL     STALIGIAL          160.48 340           PKPab     10 25 29.4 -1.6
DAVOX    Davos/Dischmat     160.72 346  PKPab    PKPab     10 25 32.7 +0.5
         comp=Z,9.8nm,0.8s,baz=349,slow=5.8,SNR=5.7
SENIN    Lac Senin/Sane     161.58 351           PKPab     10 25 34.5 -1.5
PBRG     Braganca           164.16  28 ePKPab    PKPab     10 25 48.1 +0.8
PVIS     Viseu              164.50  33 ePKPab    PKPab     10 25 49.5 +0.7
MVO      Moncorvo           164.56  30 ePKPab    PKPab     10 25 50.3 +1.2
MVO      Moncorvo           164.56  30 eLR       LR        11 22 23.7
         comp=Z,674nm,22.0s
MTE      Manteigas          164.92  33 eLR       LR        11 23 35.0
         comp=Z,730nm,20.0s
TOA0     Torodi Ar. Sit     164.96 174           PKPdf     10 24 54.2 -0.9
TOA0                                             PKPab     10 25 50.5 -0.8
TORD     Torodi Ar. Bea     164.96 174  PKP      PKPdf     10 24 56.0 +1.0
         comp=Z,1.6nm,0.7s,baz=228,slow=1.0,SNR=8.0
TORD                                    PKPab    PKPab     10 25 53.4 +2.2
         comp=Z,11nm,0.7s,baz=172,slow=4.4,SNR=8.0
TORD                                    PP       PP        10 29 35.4 -0.9
         comp=Z,4.5nm,1.0s,baz=148,slow=6.8,SNR=4.0
TORD     Torodi Ar. Bea     164.96 174           PKPab     10 25 49.8 -1.4
PMTG     Montargil          165.55  38 ePKPab    PKPab     10 25 54.7 +1.3
PMRV     Marv??o            165.73  35 ePKPab    PKPab     10 25 54.8 +0.5
PMRV     Marv??o            165.73  35 eLR       LR        11 22 27.1
         comp=Z,603nm,22.0s
PNCL     Nicolau / Gran     166.04  42 ePKPab    PKPab     10 25 56.3 +0.7
PVAQ     Vaqueiros          166.99  42 eLR       LR        11 23 18.0
         comp=Z,615nm,20.0s
ESDC     Sonseca Array      167.08  26  PKP      PKPdf     10 24 57.9 +1.8
         comp=Z,0.2nm,0.4s,baz=302,slow=5.1,SNR=3.1
ESDC                                    PKPab    PKPab     10 26 01.0 +0.8
         comp=Z,2.2nm,0.7s,baz=323,slow=4.7,SNR=8.2
ESDC     Sonseca Array      167.08  26           PKPdf     10 24 54.1 -2.0
ESDC                                             PKPab     10 26 00.2 +0.1
MDT      Midelt             171.80  54  PKP      PKPdf     10 25 00.7 +1.5
         comp=Z,2.3nm,0.9s,baz=0.0,slow=2.0,SNR=2.0
MDT                                     PKPab    PKPab     10 26 21.8 +0.3
         comp=Z,7.5nm,1.1s,baz=303,slow=7.9,SNR=3.3
TAM      Tamanrasset        174.25 201  PKP2     PKPab     10 26 34.6 +2.2
TAM      Tamanrasset        174.25 201           PKPab     10 26 34.6 +2.2
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NEIC **07** *10:20:24.8±2.4, 28.°20S±0.°06×177.°0W±0.°1, h5km±2km, mb4.6/42, Error ellipse: s-maj=16.5km s-min=8.1km az=107.0*

IDC **07** *10:20:25.1±0.6, 27.°83S×177.°00W, h0km, mb4.3/12, mb1 4.5/12, mb1mx4.3/38, mbtmp4.3/12, MS4.2/2, Ms1 4.2/2, ms1mx3.6/27, Error ellipse: s-maj=27.0km s-min=18.0km az=143.0*

ISC 07 10:20:31.4±0.4**, 28.°18S**±0.°06×**177.°1W**±0.°1**, h49km, n109, σ2.s28**/111**, mb4.5**/26**, Kermadec Islands region**

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Code     Station Name         Δ°  AZ°   Phase ID            Time      Res
                                        Op       ISC       h  m  s    ISC
RAO      Raoul Island         1.27 213  Pn       Pn        10 20 56.5 +3.7
         2µm,0.3s,baz=71,slow=5.1,SNR=89
RAO                                     Sn       Sn        10 21 15.2 +6.5
         5µm,0.3s,baz=94,slow=22,SNR=18
RAO      Raoul Island         1.27 213           Pn        10 20 49.7 -3.1
RAO      Raoul Island         1.27 213  Sn       Sn        10 21 07.1 -1.6
HAZ      Te Kaha             10.45 203  P        Pn        10 22 56.0 -2.6
PKGZ     Pakihiroa           10.48 201  P        Pn        10 22 54.2 -4.8
OUZ      Omahuta             10.56 226           Pn        10 22 58.4 -1.7
PUZ      Puketiti            10.59 200  P        Pn        10 22 57.5 -3.0
RUGZ     Raukumara Rang      10.68 203  P        Pn        10 22 57.5 -4.3
TWGZ     Tauwhareparae       10.77 201  P        Pn        10 22 60.0 -3.0
OPRZ     Ohinepanea          10.99 207  P        Pn        10 23 04.4 -1.6
MWZ      Matawai             11.06 202  P        Pn        10 23 03.3 -3.7
URZ      Urewera             11.14 204  Pn       Pn        10 23 03.5 -4.5
         0.3nm,0.3s,baz=269,slow=4.9,SNR=8.4
URZ                                     Sn       Sn        10 25 08.3 -2.7
         7.4nm,0.3s,baz=135,slow=19,SNR=9.1
URZ      Urewera             11.14 204           Pn        10 23 04.9 -3.1
URZ                                              Sn        10 25 10.3 -0.7
URZ      Urewera             11.14 204  P        Pn        10 23 03.6 -4.5
MSVF     Nonsavu             11.30 336           Pn        10 23 08.7 -1.7
RIGZ     Rimuhau             11.32 201  P        Pn        10 23 13.6 +3.1
SNGZ     Shannon Statio      11.53 202  P        Pn        10 23 08.8 -4.6
RAHZ     Arahi               11.73 203  P        Pn        10 23 12.7 -3.5
MTHZ     Maungataniwha       11.76 204  P        Pn        10 23 13.1 -3.4
TLZ      Tolley Road         11.82 209  P        Pn        10 23 22.5 +5.1
BKZ      Black Stump Fm      12.17 204  Pn       Pn        10 23 17.9 -4.2
HIZ      Hauiti              12.28 211  Pn       Pn        10 23 20.5 -3.1
BFZ      Birch Farm          13.60 202  Pn       Pn        10 23 36.9 -4.8
MSWZ     Moikau Station      14.60 203  Pn       Pn        10 23 53.6 -1.4
SNZO     South Karori        14.70 205  Pn       Pn        10 23 54.5 -1.8
PLWZ     Palliser            14.73 203  Pn       Pn        10 23 56.4 -0.4
TUWZ     Tuamarina           15.10 207           Pn        10 23 55.9 -5.6
NNZ      Nelson              15.15 208  Pn       Pn        10 23 59.8 -2.4
NNZ                                     IAmb     IAmb      10 24 09.1
         comp=Z,20nm,0.9s
QRZ      Quartz Range        15.20 211  Pn       Pn        10 24 01.1 -1.8
QRZ                                     IAmb     IAmb      10 24 15.9
         comp=Z,50nm,1.4s
BSWZ     Blackbirch Sta      15.37 206  Pn       Pn        10 24 02.3 -2.7
THZ      Tophouse            15.80 208           Pn        10 24 08.8 -1.9
THZ                                     IAmb     IAmb      10 24 15.9
         comp=Z,39nm,1.3s
KHZ      Kahutara            16.09 206  Pn       Pn        10 24 13.5 -0.8
KHZ                                     IAmb     IAmb      10 24 19.8
         comp=Z,31nm,0.6s
LTZ      Lake Taylor         16.91 208  Pn       Pn        10 24 21.1 -3.4
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RAR	Rarotonga	17.23	70	LR	LR	10 30 08.9	
	comp=Z,587nm,20.5s,baz=258,slow=34						
OXZ	Oxford	17.45	207	P	Pn	10 24 28.9	-2.4
MQZ	McQueen's Vall	17.53	205	P	Pn	10 24 29.3	-3.0
RPZ	Rata Peaks	18.18	208	P	P	10 24 38.0	-2.0
	comp=Z,1.6nm,0.3s,baz=29,slow=1.1,SNR=14						
RPZ				S	Sn	10 27 46.1	-16
	comp=Z,0.4nm,0.3s,baz=205,slow=17,SNR=4.7						
RPZ				LR	LR	10 31 17.6	
	comp=Z,1μm,18.1s,baz=51,slow=35						
RPZ	Rata Peaks	18.18	208	P	P	10 24 35.1	-4.9
FOZ	Fox Glacier	18.58	211	P	P	10 24 42.0	-2.3
LBZ	Lake Benmore	19.09	209	P	P	10 24 49.1	-0.9
ODZ	Otahua Downs	19.44	207	P	Pn	10 24 55.0	-0.2
WKZ	Wanaka	19.95	210	P	P	10 24 56.8	-2.5
MLZ	Mavora Lakes	20.77	210	P	P	10 25 06.3	-1.9
MLZ				IAmb	IAmb	10 25 16.1	
	comp=Z,44nm,1.5s						
WHZ	Wether Hill Ro	21.25	210	P	P	10 25 11.4	-1.9
WHZ				IAmb	IAmb	10 25 22.0	
	comp=Z,18nm,1.2s						
STKA	Stephens Creek	35.77	254	P	P	10 27 27.6	+1.7
	comp=Z,1.3nm,0.5s,baz=92,slow=9.9,SNR=4.2						
STKA	Stephens Creek	35.77	254	P	P	10 27 26.6	+0.7
BBOO	Buckleboo	40.34	252	P	P	10 28 06.4	+2.0
BBOO				IAmb	IAmb	10 28 12.0	
	comp=Z,11nm,1.1s						
ASAR	Alice Springs	44.03	264	P	P	10 28 36.5	+1.9
	comp=Z,1.7nm,0.5s,baz=96,slow=7.0,SNR=25						
ASAR				ScP	ScP	10 34 14.3	+7.0
	comp=Z,0.5nm,0.8s,baz=101,slow=3.7,SNR=3.3						
ASAR	Alice Springs	44.03	264	P	P	10 28 35.0	+0.4
WB2	Warramunga Arr	44.81	269	P	P	10 28 41.9	+1.1
WB2				IAmb	IAmb	10 28 54.6	
	comp=Z,18nm,1.4s						
WRA	Warramunga Arr	44.82	269	P	P	10 28 42.0	+1.1
	comp=Z,0.9nm,0.3s,baz=105,slow=7.9,SNR=25						
WRA	Warramunga Arr	44.82	269	P	P	10 28 41.6	+0.7
WB0	Warramunga Arr	44.84	270	P	P	10 28 42.9	+1.9
WB0				IAmb	IAmb	10 28 58.4	
	comp=Z,12nm,1.5s						
FORT	Forrest	47.38	253	P	P	10 29 01.6	+0.6
QSPA	South Pole Qui	61.92	180	P	P	10 30 48.8	+2.9
MJAR	Matsushiro Arr	76.87	324	P	P	10 32 18.7	+0.4
	comp=Z,3.8nm,0.8s,baz=166,slow=5.7,SNR=5.2						
SNAA	Sanae	80.34	178	P	P	10 32 39.0	+2.0
SNAA				IAmb	IAmb	10 32 47.1	
	comp=Z,8.7nm,1.5s						
PLCA	Paso Flores	83.46	133	P	P	10 32 55.0	+1.0
	comp=Z,0.9nm,0.7s,baz=39,slow=6.2,SNR=3.7						
PLCA	Paso Flores	83.46	133	P	P	10 32 53.9	-0.1
PLCA				IAmb	IAmb	10 32 55.6	
	comp=Z,3.3nm,1.1s						
PETK	Petropavlovsk-	83.87	345	P	P	10 32 55.0	-0.5
	comp=Z,7.5nm,0.8s,baz=108,slow=9.5,SNR=5.0						
PETK	Petropavlovsk-	83.87	345	P	P	10 32 54.2	-1.2
CMB	Columbia Colle	84.61	42	P	P	10 32 59.3	-0.4
CMB				IAmb	IAmb	10 33 01.3	
	comp=Z,4.3nm,1.0s						
PNTR	Pine Nut	85.77	41	P	P	10 33 02.9	-2.8
NVAR	Mina Array Bea	86.10	42	P	P	10 33 07.5	+0.2
	comp=Z,3.1nm,0.8s,baz=223,slow=8.5,SNR=20						
NV11	Mina Array Sit	86.19	42	P	P	10 33 08.2	+0.5
NV11				IAmb	IAmb	10 33 08.7	
	comp=Z,6.9nm,1.2s						
PAHR	Pah Rah Range	86.31	41	P	P	10 33 06.9	-1.3
PAHR				IAmb	IAmb	10 33 10.2	
	comp=Z,5.7nm,1.3s						
Y14A	Wickenburg	86.61	49	P	P	10 33 09.6	-0.1
Y14A				IAmb	IAmb	10 33 11.9	
	comp=Z,4.3nm,1.0s						
KVN	Kaiserville	86.63	42	P	P	10 33 10.0	+0.2
KVN				IAmb	IAmb	10 33 11.2	
	comp=Z,4.7nm,1.0s						
TUC	Tucson	87.14	51	P	P	10 33 09.7	-2.7
TUC				IAmb	IAmb	10 33 15.0	
	comp=Z,6.3nm,1.1s						
X16A	Lo Mia Camp, P	87.94	49	P	P	10 33 15.2	-1.1
X16A				IAmb	IAmb	10 33 18.8	
	comp=Z,5.2nm,1.0s						
U15A	North Rim	88.58	47	P	P	10 33 20.7	+1.3
KNB	Kanab	88.59	46	P	P	10 33 19.6	+0.3
W18A	Petrified Fore	89.48	49	P	P	10 33 21.5	-2.0
KLR	Kul'dur	89.52	329	P	P	10 33 23.1	0.0
	comp=Z,1.7nm,0.8s,baz=319,slow=6.1,SNR=4.0						
G08A	Pilot Rock	90.24	37	P	P	10 33 27.6	+0.8
TX31	Lajitas Ar. Si	90.55	57	P	P	10 33 29.5	+0.9
TX31				IAmb	IAmb	10 33 30.9	
	comp=Z,6.6nm,1.4s						
TX32	Lajitas Array	90.55	57	P	P	10 33 29.5	+0.9
TX32				IAmb	IAmb	10 33 30.9	
	comp=Z,6.7nm,1.4s						
TXAR	Lajitas Array	90.55	57	P	P	10 33 29.0	+0.4
	comp=Z,1.3nm,1.0s,baz=213,slow=6.5,SNR=10						
ANMO	Albuquerque	91.60	51	P	P	10 33 33.8	+0.4
F10A	Beach Ranch, E	91.61	37	P	P	10 33 32.6	-0.5
GO02	Mina Guanaco	92.43	120	P	P	10 33 37.5	-0.3
SNOW	Snow King Moun	93.70	42	P	P	10 33 43.8	+0.8
SEY	Seymchan	94.00	347	P	P	10 33 43.8	+0.2
	comp=Z,0.6nm,0.4s,baz=261,slow=22,SNR=4.5						
PDAR	Pinedale Array	94.01	43	P	P	10 33 43.5	-0.9
	comp=Z,1.2nm,0.9s,baz=238,slow=3.1,SNR=7.3						
PDAR	Pinedale Array	94.01	43	P	P	10 33 42.8	-1.6
YHL	Hebgen Lake	94.27	41	P	P	10 33 44.4	-1.2
YNE	Yellowstone No	95.03	41	P	P	10 33 48.1	-1.0
ILAR	Eielson Array	95.61	13	P	P	10 33 49.6	-1.2
	comp=Z,0.5nm,0.7s,baz=225,slow=5.1,SNR=6.4						
ILAR	Eielson Array	95.61	13	P	P	10 33 50.0	-0.8
MKAR	Makanchi Array	116.92	311	PKP	PKPdf	10 39 09.6	-0.9
	comp=Z,0.8nm,0.8s,baz=72,slow=1.4,SNR=4.8						
MKAR	Makanchi Array	116.92	311		PKPdf	10 39 09.4	-1.1
KURK	Kurchatov	120.05	315		PKPdf	10 39 14.2	-2.2
KURBB	Kurchatov Arra	120.09	314	PKP	PKPdf	10 39 16.0	-0.4
	comp=Z,0.6nm,0.3s,baz=96,slow=1.9,SNR=5.2						
FRB	Frobisher Bay	123.09	30	PKP	PKPdf	10 39 21.1	-0.7
	comp=Z,1.0nm,0.9s,baz=47,slow=1.1,SNR=5.3						
KKAR	Karatay Array	124.46	305		PKPdf	10 39 24.8	-0.3
SPITS	Spitsbergen Ar	129.55	356	PKP	PKiKP	10 39 34.6	0.0
	comp=Z,9.7nm,1.0s,baz=86,slow=6.1,SNR=3.3						
ARCES	ARCESS Array B	136.58	349	PKP	PKPdf	10 39 48.0	+0.8
	comp=Z,4.6nm,0.8s,baz=52,slow=1.1,SNR=7.7						
FINES	FINESS Array B	143.31	342	PKhKP	PKPpre	10 39 55.9	
	comp=Z,1.3nm,0.4s,baz=49,slow=5.9,SNR=13						
NC303	NORSAR Array S	146.47	353	PKPbc	PKPbc	10 40 06.4	-0.2
NB2	NORSAR Subarra	146.67	353	PKP	PKPbc	10 40 06.6	-0.6
	comp=Z,1.8nm,0.5s,baz=11,slow=2.9						
NOA	NORSAR Array B	146.67	353	PKPbc	PKPbc	10 40 06.7	-0.5
	comp=Z,2.5nm,0.5s,baz=13,slow=4.5,SNR=9.8						
HFS	Hagfors	147.21	350	PKPbc	PKPbc	10 40 07.9	-0.8
	comp=Z,9.5nm,0.8s,baz=46,slow=4.3,SNR=19						
AKASG	Malin Array Be	149.95	326	PKPbc	PKPbc	10 40 16.1	+0.1
	comp=Z,3.9nm,0.6s,baz=42,slow=3.2,SNR=22						
AKASG	Malin Array Be	149.95	326		PKPbc	10 40 15.7	-0.3
AKBB	Malin Array Si	149.95	326		PKPbc	10 40 16.0	-0.1
BRTR	Keskin Array B	152.13	302	PKPbc	PKiKP	10 40 22.0	0.0
	comp=Z,1.3nm,0.9s,baz=132,slow=1.8,SNR=5.9						
BRTR				PKPab	PKPab	10 40 29.5	-2.0
	comp=Z,0.6nm,0.5s,baz=145,slow=4.5,SNR=4.5						
BRTR	Keskin Array B	152.13	302		PKPbc	10 40 21.9	+0.2
BUR08	Bucovina Ar. S	153.93	324	PKPbc	PKiKP	10 40 26.1	+0.7
BUR08					PKPab	10 40 38.6	-0.2
TORD	Torodi Ar. Bea	165.00	176	PKPab	PKPab	10 41 29.2	+1.9
	comp=Z,0.4nm,0.5s,baz=177,slow=3.3,SNR=3.1						

HEL 07 10:22:04.2±0.1,66°.11N×29°.11E,h0^{km},ML1.1, Explosion,Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSF	Maaselka	0.20	188	PG	Pg	10 22 07.8	-0.3
	baz=6.0						
MSF				SG	Sg	10 22 10.6	-0.1
KU6	Riekki	0.33	105	PG	Pg	10 22 10.0	-0.6
	baz=288						
KU6				SG	Sg	10 22 14.7	-0.1
RNF	Rovaniemi	1.34	293	SG	Sg	10 22 45.7	-1.6
VRF	Varrio	1.65	7	MSG		10 22 53.7	
	comp=Z,1.0nm,0.2s						
VRF				SN	Sg	10 22 58.0	+0.8
SGF	Sodankyl	1.68	324	SN	Sg	10 22 58.0	-0.2
KEF	Keuruu	4.38	207	SG	Sg	10 24 20.1	-4.5

DDA 07 10:22:58.9,38°.01N×36°.44E,h7^{km}±1^{km},ML1.6,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANDN	Andirin	0.43	190	*i* P	Pg	10 23 07.9	+0.5
ANDN				*i* S	Sb	10 23 14.8	-0.9
ANDN				IAML		10 23 27.0	
	comp=E,38nm,0.6s						
ELBS	KAHRAMANMARAS	0.63	60	*i* P	Pg	10 23 11.1	0.0
ELBS				IAML		10 23 19.0	
	comp=N,32nm,1.5s						
ELBS				*i* S	Sb	10 23 21.7	+0.2
GZT	Gaziantep	1.10	126	*i* P	Pg	10 23 19.8	-0.3
GZT				IAML		10 23 34.0	
	comp=N,25nm,0.5s						
GZT				*i* S	Sb	10 23 35.6	+0.6

VIE 07 10:24:15.0±0.6,46°.21N×16°.05E,h14^{km},ml1.4/2,Error ellipse: s-maj=4.2km s-min=2.0km az=77.0 24 km WSW of Varazdin,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KALN	Kalnik	0.29	106	Sg	Sb	10 24 27.3	+0.5
PTJ	Puntijarka	0.31	191	Sg	Sb	10 24 26.7	-0.6
OZLJ	Ozalj	0.72	215	*e*Pg	Pb	10 24 29.2	-0.1
OZLJ				Sg	Sn	10 24 40.8	-0.8
MOSL	Moslavina	0.78	140	*e*Pg	Pn	10 24 32.7	+1.1
MOSL				Sg	Sn	10 24 43.3	+0.3
SOKA	Soboth	0.84	304	*i* Pg	Pb	10 24 31.6	+0.1
	0.2nm,0.1s						
SOKA				*i* Sg	Sb	10 24 43.5	+0.7
	0.5nm,0.1s						
OBKA	Obir	1.08	286	*i* Pg	Pb	10 24 35.2	-0.3
	1.4nm,0.3s						
OBKA				*i* Sg	Sn	10 24 50.9	+0.2
	4.9nm,0.4s						

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*NNC **07** 10:44:12.2±1.8,38°.96N×70°.99E,h0^{km},mb4.2,mpv3.8, Error ellipse: s-maj=13.7km s-min=9.7km az=6.0*

ISC 07 10:44:14.7±3.3,38°.8N±0°.2×70°.92E±0°.10,h33^{km},n13, σ0^{s}.88/17,4C-3D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	3.94	32	P	Pn	10 45 12.2	-1.0
	SNR=18						
KK31	Karatay Array	4.30	356	⇑Pn	Pn	10 45 16.9	-0.9
	2.5nm,0.3s,baz=170,slow=12,SNR=101						
KK31				⇓Sn	Sn	10 46 07.8	+1.0
	3.2nm,0.3s,baz=170,slow=23,SNR=4.9						
KK31				⇓Lg	Lg	10 46 21.5	
	16nm,0.6s,baz=171,slow=26,SNR=13						
UCH	Uchtor	4.38	38	P	Pn	10 45 18.0	-1.3
	SNR=20						
EKS2	Erkin-Say	4.42	29	P	Pn	10 45 19.1	-0.5
	SNR=6.7						
KZA	Kyzart	4.65	44	P	Pn	10 45 23.3	+0.4
	SNR=42						
AAK	Ala-Archa	4.69	34	P	Pn	10 45 22.4	-0.9
	SNR=22						
AAK	Ala-Archa	4.69	34	Pn	Pn	10 45 22.1	-1.2
	12nm,0.5s						
AAK				Sn	Sn	10 46 17.1	+0.4
	14nm,0.7s						
KBK	Karagaybulak	4.91	37	P	Pn	10 45 27.1	+0.8
	SNR=24						
CHMS	Chumysh	5.09	34	P	Pn	10 45 29.0	+0.3
	SNR=7.7						
CHMS	Chumysh	5.09	34	⇓Pn	Pn	10 45 27.4	-1.4
	11nm,0.6s						
CHMS				⇑Sn	Sn	10 46 26.4	-0.1
	18nm,0.8s						
USP	Ospenovka	5.21	30	P	Pn	10 45 29.3	-1.0
	SNR=8.7						
ULHL	Ulahol	5.31	48	P	Pn	10 45 31.9	0.0
	SNR=7.8						
AB31	Akbulak array	13.07	327	⇑Pn	Pn	10 47 18.4	+0.4
	1.2nm,0.2s,baz=131,slow=14,SNR=20						
AB31				⇑Sn	Sn	10 49 42.3	+0.1
	0.9nm,0.3s,baz=133,slow=25,SNR=4.3						

TIR 07 10:50:53.7,40°.39N×19°.53E,h29^{km},Md3.5/7,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLO	Vlora	0.08	341	*i* PG	Pb	10 51 02.5	+3.8
VLO				*i* SG	Sb	10 51 09.1	+6.8
TPE	Tepelena	0.38	104	*i* PG	Pb	10 50 58.9	-3.3
TPE				*i* SG	Sb	10 51 03.0	-5.0
SCTE	Santa Cesarea	0.87	249	*i* PG	Pb	10 51 11.3	+1.1
SCTE				*i* SG	Sn	10 51 23.8	+2.0
TIR	Tirane	0.99	15	*i* PG	Pb	10 51 15.8	+3.6
TIR				*i* SG	Sb	10 51 30.1	+5.2
FNA	Florina	1.46	74	*i* PN	Pb	10 51 22.7	+2.5
FNA				*i* SN	Sb	10 51 43.1	+4.7
PHP	Peshkopia	1.47	28	*i* PN	Pb	10 51 24.0	+3.7
PHP				*i* SN	Sb	10 51 41.5	+2.9
BCI	Bajram Curri	2.02	11	*i* SN	Sb	10 51 52.2	-2.1

ROM 07 10:52:49.1±0.3,37°.99N±0°.02×14°.99E±0°.01,h32^{km}±1^{km}, ML1.8/2,Error ellipse: s-maj=1.8km s-min=0.4km az=354.0,Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MUCR	Ucria	0.10	303	P	Pb	10 52 55.2	+0.3
MUCR				S	Sb	10 52 59.4	+0.5
MUCR				AML	AML		
	comp=E,166μm,0.2s						
MUCR				AML	AML		
	comp=N,251μm,0.3s						
NOV	Novara	0.13	71	P	Pb	10 52 55.0	0.0
NOV				S	Sb	10 52 59.4	+0.3
AIO	Antillo	0.20	94	P	Pb	10 52 55.7	0.0
AIO				S	Sn	10 53 00.3	+0.1
MCSR	Castroreale	0.22	69	P	Pb	10 52 55.7	-0.3
MCSR				S	Sb	10 53 00.5	-0.1
MCSR				AML	AML		
	comp=N,346μm,0.3s						
MCSR				AML	AML		
	comp=E,275μm,1.1s						
MPNC	Port Mandanici	0.33	61	P	Pn	10 52 57.5	-0.2
MPNC				S	Sn	10 53 03.5	+0.1
VPL	Vulcano Piano	0.39	360	P	Pb	10 52 57.9	-0.2
VPL				S	Sb	10 53 04.3	+0.1
MSRU	Castanea	0.50	56	P	Pn	10 52 59.9	-0.1
MSRU				S	Sn	10 53 08.2	+0.7

ISC 07 11:00:30.9±1.0,49°.04N±0°.06×18°.05E±0°.04,h10^{km},n9, σ0^{s}.92/12,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAVC	Velka Javorina	0.31	234	*e*PG	Pg	11 00 36.9	-0.2
JAVC				*e*SG	Sb	11 00 42.9	-0.8
SMOL	Smolenice	0.67	218	*e*SG	Sb	11 00 55.0	+1.0
VYHS	Vyhne	0.76	136	*e*PG	Pg	11 00 43.9	-1.5
VYHS				*e*SG	Sb	11 00 57.6	+1.1
MORC	Moravsky Berou	0.81	336	*e*PG	Pb	11 00 46.8	-0.3
MODS	Modra-Piesok	0.84	218	*e*PG	Pb	11 00 47.5	-0.1
MODS				*e*SG	Sb	11 00 59.8	+0.8
MODS				*e*LG	Lg	11 01 04.5	
LANS	Liptovska Anna	0.94	83	*e*PG		10 52 11.6	
LANS				*e*SG		10 52 23.4	
LANS				*e*LG	Lg	10 52 26.7	
LANS	Liptovska Anna	0.94	83	*e*PG	Pn	11 00 50.4	+0.2
LANS				*e*SG	Sn	11 01 04.8	+1.1
LANS				*e*LG	Lg	11 01 07.6	
VRAC	Vranov	0.99	286	*e*PG	Pb	11 00 50.2	0.0
KRUC	Moravsky	1.09	272	*e*PG	Pb	11 00 51.4	-0.4

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*NEIC **07** 11:07:27.6±1.3,7°.08S±0°.05×129°.00E±0°.06,h188^{km}±5^{km}, mb4.6/42,Error ellipse: s-maj=9.2km s-min=6.7km az=130.0*
*KLM **07** 11:07:28.0,7°.29S×129°.18E,h185^{km},mb4.8*
*DJA **07** 11:07:28.2±0.2,7°S±2°×12°9E±°,h192^{km}±3^{km},M4.7/27, mb4.6/27,mB5.2/13,MLv4.9/13,Mw(mB)4.6/13*
*IDC **07** 11:07:28.1±2.4,7°.07S×128°.96E,h187^{km}±24^{km},mb3.9/13, mb1 4.0/15,mb1mx3.9/37,mbtmp4.5/15,MS3.0/1, Ms1 3.0/1,ms1mx2.5/35,Error ellipse: s-maj=17.2km s-min=9.9km az=66.0*

ISC 07 11:07:28.5±0.3,7°.12S±0°.04×128°.99E±0°.04,h200^{km},n118, σ1^{s}.67/129,mb4.5/29,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.44	111	P	Pn	11 08 11.2	-0.6
SAUI				S	Sn	11 08 45.8	+0.3
SAUI	Saumlaki	2.44	111		Pn	11 08 11.2	-0.6
SAUI				Sn	Sn	11 08 44.7	-0.8
BNDI	Bandanaira	2.74	19	P	Pn	11 08 15.8	+0.7
AAI	Ambon	3.50	347	P	Pn	11 08 25.4	+1.2
MSAI	Masohi	3.75	359	P	Pn	11 08 27.6	+0.3
FAKI	Fak Fak	5.29	38	P	Pn	11 08 43.7	-2.9
	1.9nm10μm217nm,0.7s						
FAKI	Fak Fak	5.29	38		Pn	11 08 43.8	-2.9
FAKI				Sn	Sn	11 09 42.3	-6.0
SOEI	Soe	5.36	240	P	Pn	11 08 47.3	-0.3
	5.2nm7μm347nm,0.7s						
SOEI	Soe	5.36	240		Pn	11 08 47.5	-0.1
SOEI				Sn	Sn	11 09 47.2	-2.8
SANI	Sanana	5.86	329	P	Pn	11 08 54.4	+0.4
	0.2nm56nm,1.5s						
MTN	Manton Dam	6.06	160		Pn	11 08 55.6	-1.0
MTN				Sn	Sn	11 10 00.7	-5.7
BBSI	Bau Bau	6.58	284	P	Pn	11 09 05.4	+2.0
	0.2nm70nm,1.1s						
SIJI	Sorong	6.61	20	P	Pn	11 09 01.9	-1.8
	78nm,0.3s,baz=224,slow=23,SNR=166						
SIJI				S	Sn	11 10 13.1	-6.3
	19nm,0.3s,baz=284,slow=22,SNR=8.6						
MMRI	Maumere	6.86	257	Pn	Pn	11 09 06.8	-0.1
MMRI				Sn	Sn	11 10 23.0	-1.9
EDFI	Ende, Flores	7.41	257	P	Pn	11 09 14.6	+0.4
	0.2nm27nm,0.8s						
RKPI	Ransiki, Papua	7.60	43	P	Pn	11 09 15.3	-1.4
	5.9nm20μm1μm,0.5s						
KNRA	Kununurra	8.50	181		Pn	11 09 26.6	-1.7
LUWI	Luwuk	8.66	314		Pn	11 09 30.4	0.0
BKSI	Bulukumba	9.00	281	P	Pn	11 09 35.8	+1.0
BNSI	Bone	9.24	287	P	Pn	11 09 38.8	+0.8
	29nm,1.2s						
KAPI	Kappang	9.42	282	LR	LR	11 12 45.7	
	comp=Z,93nm,20.6s,baz=274,slow=34						
APSI	Ampana	9.57	310	P	Pn	11 09 44.9	+2.6
	584nm48nm,1.1s						
SPSI	Sidrap Palu	9.70	288	P	Pn	11 09 45.3	+1.4
	22nm,0.7s						
WBSI	Waikabubak, Su	9.82	255	P	Pn	11 09 43.6	-1.9
	66nm,0.9s						
MRSI	Marisa	10.32	317	P	Pn	11 09 53.6	+1.7
	836nm80nm,1.2s						
PLAI	Plampang	11.23	261	P	Pn	11 10 00.8	-2.9
	1μm49nm,0.5s						
FITZ	Fitzroy Crossi	11.39	196	P	Pn	11 10 02.8	-2.8
	8.5nm,0.3s,baz=12,slow=10,SNR=238						
FITZ				S	Sn	11 12 00.5	-12
	2.4nm,0.3s,baz=270,slow=20,SNR=3.2						
FITZ	Fitzroy Crossi	11.39	196		Pn	11 10 02.6	-3.0
WB0	Warramunga Arr	13.62	158		Pn	11 10 31.6	-2.2
WRAB	Tennant Creek	13.76	158		Pn	11 10 34.3	-1.1
WRA	Warramunga Arr	13.76	158	P	Pn	11 10 32.4	-3.2
	2.8nm,0.3s,baz=333,slow=13,SNR=39						
WRA				S	S	11 12 55.8	-13
	4.0nm,0.3s,baz=335,slow=22,SNR=11						
WRA	Warramunga Arr	13.76	158	P	Pn	11 10 32.8	-2.7
WB2	Warramunga Arr	13.76	158		Pn	11 10 32.7	-2.9
JAGI	Jajag, Banyuwa	14.76	264		Pn	11 10 46.8	-1.2
COEN	Coen	15.50	117	P	Pn	11 10 56.1	-0.8
COEN				IAmb	IAmb	11 11 10.4	
	comp=Z,26nm,0.7s						
PSA00	Pilbara Seismi	16.86	211	P	Pn	11 11 12.6	-0.6
AS31	Alice Springs	17.11	165	P	Pn	11 11 15.7	-0.5
ASAR	Alice Springs	17.11	165	P	Pn	11 11 15.9	-0.3
	comp=Z,16nm,0.3s,baz=338,slow=9.8,SNR=683						
ASAR				S	S	11 14 18.7	-4.1
	comp=Z,2.4nm,0.3s,baz=353,slow=25,SNR=8.9						
ASAR	Alice Springs	17.11	165	P	Pn	11 11 15.8	-0.4
PMG	Port Moresby	18.12	98	P	Pn	11 11 26.6	-1.4
	comp=Z,0.7nm,0.3s,baz=170,slow=14,SNR=2.3						
PMG				S	S	11 14 42.2	-0.9
	comp=Z,0.7nm,0.3s,baz=99,slow=19,SNR=2.8						
PMG	Port Moresby	18.12	98	P	Pn	11 11 27.4	-0.7
PMG				IAmb	IAmb	11 11 31.4	
	comp=Z,27nm,0.8s						
KKM	Kota Kinabalu	18.27	315	P	P	11 11 28.3	+0.8
UGM	Wanagama	18.33	266	P	P	11 11 28.4	+0.3
STKI	Sintang	18.87	292	P	Pn	11 11 36.4	-0.5
SBUM	Sibu	19.25	299	P	P	11 11 39.1	+1.1
SBUM				IAmb	IAmb	11 11 42.1	
	comp=Z,15nm,0.8s						
SBUM	Sibu	19.25	299	P	Pn	11 11 41.0	-0.4
KSM	Kuching	20.50	294	P	P	11 11 51.1	-0.3
GIRL	Giralia	20.98	221	P	P	11 11 57.7	+1.3
CISI	Cisompet, Garu	21.01	267	P	P	11 11 56.3	-0.5
CTA	Charters Tower	21.13	129	P	P	11 12 00.5	+2.5
	comp=Z,2.9nm,0.6s,baz=307,slow=9.1,SNR=3.6						
LEM	Lembang	21.22	269	P	P	11 12 00.0	+0.9
	comp=Z,21nm,0.5s,baz=310,slow=5.1,SNR=4.7						
FORT	Forrest	23.55	182	P	P	11 12 21.3	+0.5
MORW	Morawa	25.01	208	P	P	11 12 34.8	+0.6
MORW				IAmb	IAmb	11 12 37.6	
	comp=Z,13nm,0.6s						
BBOO	Buckleboo	26.39	167	P	P	11 12 46.5	0.0
BBOO				IAmb	IAmb	11 12 47.5	
	comp=Z,11nm,0.7s						
STKA	Stephens Creek	27.29	156	P	P	11 12 55.2	+0.6
	comp=Z,11nm,0.9s,baz=326,slow=9.6,SNR=31						
STKA	Stephens Creek	27.29	156	P	P	11 12 55.0	+0.5
NWAO	Narrogin (SRO)	27.90	201	P	P	11 13 00.8	+0.8
	comp=Z,7.1nm,0.4s,baz=30,slow=8.2,SNR=20						
NWAO	Narrogin (SRO)	27.90	201	P	P	11 13 00.2	+0.2
NWAO				IAmb	IAmb	11 13 01.6	
	comp=Z,26nm,1.2s						
KULM	Kulim	30.85	293	P	P	11 13 27.1	+0.8
ARMA	Armidale	31.43	140	P	P	11 13 33.1	+1.9
ARMA				IAmb	IAmb	11 13 35.2	
	comp=Z,3.8nm,0.7s						
RPSI	Rantau Prapat	31.55	287	P	P	11 13 32.3	-0.1
RPSI				IAmb	IAmb	11 13 35.0	
	comp=Z,12nm,0.7s						
PSI	Prapat	31.59	287	P	P	11 13 32.6	-0.2
	comp=Z,9.4nm,0.7s,baz=49,slow=6.0,SNR=6.3						
PATS	Pohnpei	32.37	65	P	P	11 13 39.4	-0.2
CAN	Canberra	33.55	150	P	P	11 13 51.0	+1.5
CAN				IAmb	IAmb	11 13 54.8	
	comp=Z,21nm,1.3s						
TOO	Toolangi	33.81	156	P	P	11 13 53.4	+1.6
TOO				IAmb	IAmb	11 13 55.5	
	comp=Z,23nm,1.4s						
CMAR	Chiang Mai Arr	39.05	311	P	P	11 14 37.0	+0.8
	comp=Z,3.5nm,0.7s,baz=144,slow=7.6,SNR=21						
CMAR	Chiang Mai Arr	39.05	311	P	P	11 14 36.1	-0.2
CHTO	Chiang Mai	39.27	311	P	P	11 14 38.5	+0.5
CHTO				IAmb	IAmb	11 14 40.2	
	comp=Z,9.5nm,0.8s						
NJ2	Nanjing	40.14	347	*e*P	P	11 14 47.4	+2.4
KSRS	Korea Array	44.36	359	P	P	11 15 19.4	+0.5
	comp=Z,1.1nm,0.6s,baz=178,slow=8.7,SNR=5.9						
CD2	Chengdu	44.88	329	P	P	11 15 23.8	+0.5
BJI	Beijing	48.40	347	*e*P	P	11 15 50.2	-0.1
SHL	Shillong	48.55	313	P	P	11 15 51.3	-0.7
SHL				IAmb	IAmb	11 15 53.1	
	comp=Z,14nm,1.0s						
LZH	Lanzhou	49.05	333	*e*P	P	11 15 56.5	+0.9
LZH				pP	pP	11 16 40.3	+2.2
LZH				sP	sP	11 16 59.0	-0.7
LZH				PP	PP	11 17 57.4	+6.1
HHC	Hu-ho-hao-te	50.36	343	*e*P	P	11 16 07.6	+2.3
USRK	Ussuriysk Ar.	51.16	3	P	P	11 16 11.6	+0.5
	comp=Z,2.6nm,0.8s,baz=195,slow=6.0,SNR=4.3						
WHZ	Wether Hill Ro	51.16	146	P	P	11 16 11.8	+0.6
LSA	Lhasa	51.60	317	P	P	11 16 15.7	+0.5
LSA				IAmb	IAmb	11 16 17.9	
	comp=Z,11nm,0.6s						
RPZ	Rata Peaks	51.75	142	P	P	11 16 17.4	+1.8
	comp=Z,4.9nm,0.6s,baz=316,slow=2.8,SNR=6.1						
RPZ	Rata Peaks	51.75	142	P	P	11 16 17.0	+1.4
RPZ				IAmb	IAmb	11 16 18.0	
	comp=Z,7.9nm,0.8s						
ODAN	Odare	52.59	312	*e*P	P	11 16 22.6	+0.4
	comp=Z,15nm,0.4s						
TAPN	Taplejung	52.62	312	*e*P	P	11 16 22.9	+0.3
	comp=Z,21nm,0.4s						

RAMN	Ramite	53.22	311	*e*P	P	11 16 27.5	+0.6
	comp=Z,23nm,0.6s						
GTA	Gaotai	53.60	332	*e*P	P	11 16 29.7	+0.4
GTA				pP	pP	11 16 48.1	-24
GTA				sP	pwP	11 16 59.1	-20
JIRN	Jiri	53.92	312	*e*P	P	11 16 32.4	+0.3
	comp=Z,12nm,0.3s						
GUN	Gumba	54.28	312	*e*P	P	11 16 34.9	+0.2
	comp=Z,18nm,0.4s						
PKI	Pulchoki	54.45	311	*e*P	P	11 16 35.7	-0.2
	comp=Z,5.7nm,0.4s						
PKIN	Phulchoki	54.46	311	*e*P	P	11 16 35.8	-0.1
	comp=Z,8.6nm,0.4s						
DMN	Daman	54.70	311	*e*P	P	11 16 37.8	+0.2
	comp=Z,7.1nm,0.3s						
GKN	Gorkha	55.26	311	*e*P	P	11 16 41.7	+0.2
	comp=Z,38nm,0.2s						
DANN	Dangsing	56.10	311	*e*P	P	11 16 47.8	+0.2
	comp=Z,11nm,0.6s						
SONM	Songino Array	58.25	342	P	P	11 17 02.8	+0.7
	comp=Z,1.3nm,0.8s,baz=155,slow=6.4,SNR=6.9						
SONM	Songino Array	58.25	342	P	P	11 17 02.4	+0.4
WMQ	Urumqi	62.96	328	*e*P	P	11 17 35.4	+1.5
NIL	Nilore	66.54	311	P	P	11 17 57.6	+0.4
NIL				IAmb	IAmb	11 17 58.2	
	comp=Z,7.6nm,0.7s						
KSH	Kashi	67.44	318	P	P	11 18 05.4	+2.5
KSH				sP	sP	11 19 11.3	+2.2
KSH				S	S	11 26 40.6	-2.2
KSH				ScS	SKiKP	11 27 39.9	-0.7
MK31	Makanchi Array	67.78	327	P	P	11 18 04.9	+0.1
MKAR	Makanchi Array	67.78	327	P	P	11 18 05.4	+0.6
	comp=Z,3.6nm,0.5s,baz=115,slow=8.4,SNR=54						
MKAR	Makanchi Array	67.78	327	P	P	11 18 05.2	+0.4
MAKZ	Makanchi	67.96	327	P	P	11 18 05.9	+0.1
MAKZ				IAmb	IAmb	11 18 07.1	
	comp=Z,2.8nm,0.6s						
KDJ	Kajisay	68.03	321	P	P	11 18 07.1	+0.5
KDJ				IAmb	IAmb	11 18 09.4	
	comp=Z,3.3nm,0.7s						
YAK	Yakutsk	68.95	0	P	P	11 18 11.7	+0.1
YAK				IAmb	IAmb	11 18 13.0	
	comp=Z,14nm,0.7s						
AAK	Ala-Archa	69.99	320	P	P	11 18 19.2	+0.6
ZAA0	Zalesovo Array	71.25	334	P	P	11 18 25.9	+0.1
ZALV	Zalesovo Beam	71.25	334	P	P	11 18 25.6	-0.2
	comp=Z,2.0nm,0.4s,baz=123,slow=5.7,SNR=7.5						
CHGR	Chuyangaron	71.71	315	P	P	11 18 29.1	+0.1
CHGR				IAmb	IAmb	11 18 31.1	
	comp=Z,9.0nm,0.8s						
KURK	Kurchatov	72.10	329	P	P	11 18 31.3	+0.4
VNDA	Vanda	72.45	173	P	P	11 18 33.5	+0.9
	comp=Z,4.9nm,1.1s,baz=347,slow=7.0,SNR=3.3						
VNDA	Vanda	72.45	173	P	P	11 18 33.1	+0.6
KK31	Karatay Array	72.78	319	P	P	11 18 35.3	+0.2
KKAR	Karatay Array	72.78	319	P	P	11 18 35.5	+0.4
KKAR	Karatay Array	72.78	319	P	P	11 18 35.5	+0.4
KKAR				IAmb	IAmb	11 18 37.6	
	comp=Z,2.6nm,0.9s						
SOCY	Socotra	76.98	284	P	P	11 19 01.0	+1.1
SOCY				IAmb	IAmb	11 19 04.1	
	comp=Z,13nm,0.9s						
TIXI	Tiksi	78.61	360	P	P	11 19 07.5	0.0
TIXI				IAmb	IAmb	11 19 08.3	
	comp=Z,4.8nm,0.5s						
ABKAR	Akbulak array	81.98	322	P	P	11 19 25.8	-0.2
QSPA	South Pole Qui	82.85	180	P	P	11 19 30.8	+0.4
TORD	Torodi Ar. Bea	127.85	281	PKP	PKiKP	11 26 12.1	+0.2
	comp=Z,0.4nm,0.4s,baz=89,slow=2.0,SNR=4.5						
CPUP	Villa Florida	146.19	170	PKPbc	PKPab	11 26 46.2	-0.8
	comp=Z,1.0nm,0.7s,baz=124,slow=3.6,SNR=2.8						

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*EAF **07** 11:08:20.4, 21°.44S×25°.71E, h9km, MD3.5*

ISC 07 11:08:20.9±2.4, **21°.5S**±0°.1×**25°.8E**±0°.1, **h10**km, **n6**, σ**0ˢ.70**/12, **Botswana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATP	Matopo	2.74	67	*i* P	Pn	11 09 05.8	+0.7
MATP				*i* S	Sn	11 09 37.2	-1.1
MATP	Matopo	2.74	67	*i* P	Pn	11 09 05.8	+0.7
MATP				*i* S	Sn	11 09 37.2	-1.1
LBTB	Lobatse	3.46	183	*i* P	Pn	11 09 14.9	-0.1
LBTB				*i* S	Sn	11 09 56.2	0.0
LBTB	Lobatse	3.46	183	*i* P	Pn	11 09 14.9	-0.1
LBTB				*i* S	Sn	11 09 56.2	0.0
MSNA	Messina	3.98	102	*i* P	Pn	11 09 22.7	+0.6
MSNA				*i* S	Sn	11 10 08.6	-0.3
MSNA	Messina	3.98	102	*i* P	Pn	11 09 22.7	+0.6
MSNA				*i* S	Sn	11 10 08.6	-0.3

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*IDC **07** 11:09:29.4±1.3, 38°.69N×110°.11W, h0km, mb1 2.9/3, mb1mx2.8/48, mbtmp2.4/3, ML2.9/3, Error ellipse: s-maj=21.8km s-min=11.9km az=94.0*

*UUSS **07** 11:09:29.5±2.2, 38°.97N±0°.03×111°.42W±0°.05, h2km±8km, ML2.1/9, Error ellipse: s-maj=6.6km s-min=2.8km az=119.0*

*NEIC **07** 11:09:30.2±1.8, 38°.98N±0°.02×111°.49W±0°.01, h1km±10km, Error ellipse: s-maj=3.0km s-min=1.1km az=176.0*

ISC 07 11:09:29.7±0.9, **38°.99N**±0°.03×**111°.43W**±0°.03, **h7**km, **n35**, σ**1ˢ.41**/37, **Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
Q16A	Castle Valley	0.21	110	Pg	Pg	11 09 33.2	-0.7
TMUT	Trail Mountain	0.35	29		Pg	11 09 36.6	0.0
TMUT				Sg	Sg	11 09 40.1	-1.1
SRU	San Rafael Swe	0.71	80	Pg	Pg	11 09 42.8	-0.6
SRU				Sg	Sg	11 09 52.4	-0.2
P17A	Butcher Ranch,	0.72	48		Pg	11 09 42.8	-0.7
MSU	Marysvale	0.76	231	Pg	Pg	11 09 43.6	-0.6
TCRU	Three Creeks R	0.89	245		Pg	11 09 46.4	-0.3
MPU	Maple Canyon	1.03	351		Pn	11 09 50.4	-0.4
NLU	North Lily Min	1.09	333		Pb	11 09 50.8	-0.1
MTPU	Mount Pierson	1.12	212		Pg	11 09 49.6	-1.5
JLU	Jordanelle	1.61	359		Pb	11 09 59.8	-0.1
DUG	Dugway, Tooele	1.61	319		Pn	11 09 58.9	+0.2
PKCU	Pink Cliffs	1.69	205		Pb	11 10 01.4	0.0
CTU	Camp Tracy	1.72	352		Pb	11 10 01.0	-0.7
PSUT	Pine Spring	1.95	257		Pb	11 10 04.9	-0.8
TCUT	Toone Canyon	2.12	0		Pb	11 10 07.2	-1.5
RDMU	Red Mountain	2.13	42		Pb	11 10 08.5	-0.2
KNB	Kanab	2.26	210		Pn	11 10 08.2	+0.6
BGU	Big Grassy Mou	2.29	328		Pn	11 10 08.0	-0.1
SPUT	South Promonto	2.44	342	Pn	Pn	11 10 10.7	+0.6
HWUT	Hardware Ranch	2.62	358		Pn	11 10 14.3	+1.7
U15A	North Rim	2.65	195		Pb	11 10 15.2	-2.4
O20A	White River Ci	2.71	64		Pb	11 10 17.0	-1.6
MVCO	Mesa Verde	2.91	127		Pn	11 10 18.5	+1.8
R11A	Troy Canyon, C	3.32	260		Pn	11 10 23.6	+1.4
ELK	Elko	3.42	302		Pn	11 10 24.8	+1.1
WUAZ	Wupatki	3.47	179		Pn	11 10 25.6	+1.4
SMCO	Snowmass	3.47	86		Pn	11 10 26.8	+2.4
S22A	4UR Ranch, Cre	3.82	108		Pn	11 10 30.9	+1.7
PD31	Pinedale Array	4.03	20		Pn	11 10 34.4	+2.4
PDAR	Pinedale Array	4.03	20	Pn	Pn	11 10 34.6	+2.7
	0.1nm,0.3s,baz=180,slow=13,SNR=6.4						
PDAR				Pg	Pg	11 10 45.6	-1.3
	0.5nm,0.3s,baz=206,slow=14,SNR=16						
PDAR				Lg	Lg	11 11 39.1	
	0.2nm,0.3s,baz=180,slow=25,SNR=2.6						
PDAR	Pinedale Array	4.03	20		Pn	11 10 34.2	+2.2
W18A	Petrified Fore	4.09	160		Pn	11 10 34.1	+1.3
X18A	Snowflake	4.61	165	Pn	Pn	11 10 41.5	+1.6
NVAR	Mina Array Bea	5.41	266	Pn	Pb	11 11 07.0	+2.4
	0.1nm,0.3s,baz=79,slow=14,SNR=2.3						
TXAR	Lajitas Array	11.57	144	Pn	Pn	11 12 07.4	-8.0
	0.0nm,0.3s,baz=337,slow=16,SNR=2.0						

DJA 07 11:13:06.4±0.5, **8°S**±5°×**10°9E**±°, **h10**km, **M3.9**/10, **MLv3.9**/10, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KPJI	Karang Pucung	1.12	2	P	Pn	11 13 29.2	+1.0
KPJI				S	Sn	11 13 43.6	0.0
CISI	Cisompet, Garu	1.39	310	P	Pb	11 13 32.6	0.0
CISI				S	Sb	11 13 49.2	-1.2
UGM	Wanagama	1.71	72	P	Pn	11 13 36.0	-0.3
UGM				S	Sn	11 13 55.7	-2.5
SMRI	Semarang	2.08	48	P	Pn	11 13 42.6	+1.2
CNJI	Cibinong	2.08	303	P	Pn	11 13 41.9	+0.5
CNJI				S	Sn	11 14 05.0	-2.5
WOJI	Wonogiri, Jawa	2.11	73	P	Pn	11 13 41.3	-0.4
PCJI	Pacitan	2.28	84	P	Pn	11 13 44.3	+0.2
PCJI				S	Sn	11 14 09.7	-2.6
SKJI	Sukabumi	2.73	302	P	Pn	11 13 51.9	+1.6
PWJI	Pagerwojo	2.92	82	P	Pn	11 13 52.7	-0.2

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*SOME **07** 11:20:03.7, 40°.68N×70°.35E, h15km*

*KRNET **07** 11:20:06.8±0.1, 41°.13N×69°.58E, mb2.5*

*NNC **07** 11:20:06.7±6.5, 40°.80N×70°.25E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=47.0km s-min=31.4km az=26.0*

ISC 07 11:20:07.8±1.7, **41°.06N**±0°.06×**69°.76E**±0°.09, **h10**km, **n14**, σ**1ˢ.93**/23, **8C-7D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	1.11	11	*e*P	Pn	11 20 31.3	+1.8
	5.9nm,0.2s						
IUG				*e*S	Sn	11 20 50.4	+5.5
	49nm,0.2s						
IUG	Iuzhnay	1.11	11	P	Pn	11 20 33.1	+3.6
	1.0nm,0.1s						
IUG				S	Sn	11 20 52.3	+7.5
	32nm,0.2s						
BTK	Batken	1.28	141	⇑*i*P	Pn	11 20 32.3	+0.4
	baz=38						
BTK				⇑*i*S	Sn	11 20 51.1	+1.9
	baz=38						
ARK	Arkit	1.82	65	⇓*i*P	Pn	11 20 39.3	+0.1
	baz=69						
ARK				⇓*i*S	Sn	11 21 03.3	+0.9
	baz=69						
BRLS	Borolday	1.97	2	*e*P	Pg	11 20 42.9	-2.7
	0.6nm,0.2s						
BRLS				*e*S	Sg	11 21 09.4	-1.8
	5.0nm,0.2s						
BRLS	Borolday	1.97	2	Pg	Pg	11 20 42.9	-2.7
	0.6nm,0.2s						
BRLS				Lg	Lg	11 21 09.4	
	5.0nm,0.2s						
KK31	Karatay Array	2.12	15	Pn	Pg	11 20 46.9	-1.5
	0.4nm,0.2s,baz=185,slow=15,SNR=25						
KK31				⇓Lg	Lg	11 21 17.0	
	1.3nm,0.5s,baz=191,slow=30,SNR=4.6						
ARSB	Arslanbob	2.45	83	⇑*i*P	Pn	11 20 48.9	+1.0
	baz=85						
ARSB				⇑*i*S	Sn	11 21 19.6	+1.6
	baz=85						
MRKS	Merke	3.09	56	*e*P	Pn	11 20 57.7	+1.0
	3.1nm,0.6s						
MRKS				*e*S	Sn	11 21 35.7	+1.9
	2.4nm,0.3s						
MRKS	Merke	3.09	56	Pg	Pn	11 20 57.1	+0.4
	3.5nm,0.7s						
MRKS				Lg	Lg	11 21 35.9	
	4.5nm,0.6s						
AML	Almayashu	3.14	69	⇑*i*P	Pn	11 20 57.8	+0.1
	baz=71						
AML				⇑*i*S	Sn	11 21 37.0	+1.6
	baz=71						
EKS2	Erkin-Say	3.40	61	⇑*i*P	Pn	11 21 01.1	+0.1
	baz=63						
EKS2				⇑*i*S	Sn	11 21 42.8	+1.3
	baz=63						
ARLS	Aral	3.52	75	⇓*i*P	Pn	11 21 03.8	+1.1
	baz=77						
ARLS				⇓*i*S	Sn	11 21 45.6	+1.1
	baz=77						
UCH	Uchtor	3.75	70	⇓*i*P	Pn	11 21 06.4	+0.3
	baz=72						
UCH				⇓*i*S	Sn	11 21 51.7	+1.1
	baz=72						

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*NEIC **07** 11:25:51.3±1.2, 40°.34N±0°.03×124°.70W±0°.05, h31km±8km, Error ellipse: s-maj=5.9km s-min=3.5km az=102.0*

*NCEDC **07** 11:25:52.5±2.6, 40°.30N±0°.02×124°.65W±0°.08, h24km±7km, Md2.7/28, Error ellipse: s-maj=9.5km s-min=1.7km az=75.0*

*ANF **07** 11:25:54.0±0.9, 40°.49N×124°.49W, h25km, ML2.3/2, Error ellipse: s-maj=8.2km s-min=3.9km az=59.0*

ISC 07 11:25:50.7±1.7, **40°.32N**±0°.04×**124°.73W**±0°.08, **h32**km±9km, **n47**, σ**0ˢ.98**/65, **Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	0.34	62		Pb	11 25 59.7	+0.8
KCTM					Sn	11 26 05.5	+0.2
KMPM	Mount Pierce	0.48	78		Pb	11 26 01.4	+0.4
KMPM					Sb	11 26 07.9	-0.2
KCRM	Chalk Rock	0.71	81		Pb	11 26 04.7	0.0
JCC	Jacoby Creek,	0.73	47		Pb	11 26 04.6	-0.5
JCC				Sn	Sb	11 26 13.4	-1.4
KMRM	Mail Ridge	0.79	97		Pb	11 26 06.7	+0.6
KMRM				Sn	Sb	11 26 16.9	+0.3
KHMM	Horse Mountain	0.94	54		Pb	11 26 08.1	-0.6
KHMM				Sn	Sb	11 26 19.6	-1.3
KCSM	Cold Springs	0.96	76		Pb	11 26 08.4	-0.5
KBSM	Bell Springs	0.96	114		Pb	11 26 08.7	-0.3
KRPM	Rodgers	1.00	33		Pn	11 26 08.8	+0.2
KCPM	Cahto Peak	1.09	125		Pn	11 26 10.1	+0.3
KCPM				Sn	Sb	11 26 23.0	-2.0
KIPM	Iron Peak	1.09	118		Pn	11 26 10.7	+0.9
KFPM	Farley Peak	1.21	124		Pn	11 26 12.2	+0.7
KBNM	Bluenose Ridge	1.25	109		Pn	11 26 13.0	+0.8
GTC	Three Chop Rid	1.29	135		Pn	11 26 13.3	+0.8
KRMB	Red Mountain	1.35	27		Pn	11 26 13.9	+0.4
KRMB				Sn	Sn	11 26 29.1	-1.3
KOMM	Orleans Mounta	1.36	45		Pn	11 26 14.1	+0.4
GNAM	Navarro Ridge	1.41	142		Pn	11 26 15.0	+0.9
LBPM	Beegum Peak	1.42	89		Pn	11 26 14.6	+0.3
O02D	Mt. Diablo Mer	1.50	95	P	Pn	11 26 16.3	+0.9
	baz=276,SNR=38						
O02D				S	Sn	11 26 34.6	+0.7
	baz=276						
LGPM	Granite Peak	1.56	67		Pn	11 26 16.9	+0.5
N02D	Trinity Center	1.68	66		Pn	11 26 18.3	+0.4
N02D	Trinity Center	1.68	66	P	Pn	11 26 18.3	+0.4
	baz=246,SNR=146						
N02D				S	Sn	11 26 37.6	-0.7
	baz=246						
WDC	Whiskeytown Da	1.69	80		Pn	11 26 18.6	+0.6
WDC				Sn	Sn	11 26 37.6	-1.0
LBKM	Bonanza King	1.75	63		Pn	11 26 19.6	+0.7
M02C	Callahan	1.78	52		Pn	11 26 20.1	+0.7
M02C	Callahan	1.78	52	P	Pn	11 26 19.9	+0.5
	baz=232,SNR=113						
M02C				S	Sn	11 26 40.4	-0.6
	baz=232						
GSNM	Snow Mountain	1.82	139		Pn	11 26 20.9	+1.1
HOPS	Hopland Field	1.84	135	Pn	Pn	11 26 20.4	+0.3
HOPS				Sn	Sn	11 26 41.4	-0.9
KTRM	Thompson Ridge	1.89	32		Pn	11 26 21.5	+0.6
KBO	Bosley Butte	1.93	11	Pn	Pn	11 26 21.3	-0.1
LTCM	Tuscan Springs	2.00	92		Pn	11 26 22.1	-0.1
L02E	Cave Junction	2.02	25	P	Pn	11 26 23.9	+1.2
	baz=203,SNR=90						
L02E				S	Sn	11 26 46.4	-0.5
	baz=203						
LAMM	Antelope Mount	2.05	50		Pn	11 26 24.1	+1.0
YBH	Yreka Blue Hor	2.08	47	Pn	Pn	11 26 24.3	+0.8
YBH				Sn	Sn	11 26 48.1	-0.2
LSHM	Sage Hen Hill	2.10	76		Pn	11 26 24.8	+1.1
O03E	Paynes Creek	2.24	90	P	Pn	11 26 26.3	+0.6
	baz=271,SNR=17						
LMPM	Military Pass	2.27	58		Pn	11 26 28.2	+2.0
K02D	Willamette Mer	2.51	18	P	Pn	11 26 30.7	+1.4
	baz=198,SNR=42						
K02D				S	Sn	11 26 57.8	-1.0
	baz=198						
ORV	Oroville	2.60	106	Pn	Pn	11 26 31.4	+0.9
M04C	Macdoel	2.63	55	P	Pn	11 26 32.7	+1.6
	baz=236						
L04D	Klamath Falls	2.64	43	P	Pn	11 26 33.6	+2.5
	baz=223,SNR=12						
L04D				S	Sn	11 27 04.3	+2.2
	baz=223						
HUMO	Hull Mountain	2.65	30	Pn	Pn	11 26 32.1	+0.9
HUMO				Sn	Sn	11 27 02.7	+0.5
J01E	Myrtle Point	2.90	12	S	Sn	11 27 07.7	-0.8
	baz=191						
AFDM	Forest Hills D	3.21	114	Pn	Pn	11 26 39.7	+0.7
BEKR	Beckworth	3.38	96	Pn	Pn	11 26 42.8	+1.3
I03D	Drain, OR	3.53	17	P	Pn	11 26 45.3	+2.1
	baz=196						
I03D				S	Sn	11 27 22.9	-1.0
	baz=196						
J05D	Fort Rock, OR	3.95	40	S	Sn	11 27 34.0	-0.6
	baz=222						

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*IDC **07** 11:26:45.6±2.7, 0°.18N×126°.19E, h47km±29km, mb4.0/10, mb1 4.1/13, mb1mx3.9/36, mbtmp4.2/13, ML3.5/3, MS3.3/2, Ms1 3.3/2, ms1mx2.9/39, Error ellipse: s-maj=27.4km s-min=14.9km az=81.0*

*DJA **07** 11:26:45.6±0.2, 0°N±4°×12°6E±°, h48km±7km, M4.3/12, mB5.1/1, mb4.5/7, MLv4.2/12, Mw(mB)4.4/1*

*NEIC **07** 11:26:46.9±1.3, 0°.26N±0°.07×126°.50E±0°.05, h60km±8km, mb4.4/28, Error ellipse: s-maj=10.6km s-min=6.9km az=154.0*

ISC 07 11:26:45.3±0.4, **0°.15N**±0°.05×**126°.27E**±0°.05, **h44**km, **n78**, σ**1ˢ.40**/79, **mb4.4**/23, **1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.26	61	P	Pn	11 27 05.0	-1.5
TNTI				S	Sn	11 27 25.3	+3.1
TNTI	Ternate	1.26	61		Pn	11 27 04.7	-1.7
TNTI				Sn	Sn	11 27 18.5	-3.7
SANI	Sanana	2.20	187	P	Pn	11 27 18.7	-0.7
KMSI	Cibinong	2.33	280	P	Pn	11 27 19.4	-1.8
LUWI	Luwuk	3.69	251	P	Pn	11 27 43.1	+3.2
LUWI	Luwuk	3.69	251		Pn	11 27 44.4	+4.5
LUWI				Sn	Sn	11 28 32.1	+10
AAI	Ambon	4.27	153	P	Pn	11 27 49.3	+1.5
MRSI	Marisa	4.34	274	P	Pn	11 27 49.2	+0.4
APSI	Ampana	4.74	257	P	Pn	11 27 54.0	-0.3
SIJI	Sorong	5.10	101	P	Pn	11 28 00.4	+1.2
	1.6nm,0.3s,baz=344,slow=19,SNR=3.6						
SIJI				LR	LR	11 30 26.0	
	comp=Z,370nm,18.6s,baz=140,slow=42						
SKMP	Bagumbayan, Su	6.56	345	*e*P	Pn	11 28 19.6	+0.3
FAKI	Fak Fak	6.71	117	Pn	Pn	11 28 20.4	-0.9
FAKI				Sn	Sn	11 29 35.5	-1.0
MATI	Mati	6.75	360	*e*P	Pn	11 28 24.1	+2.2
KCP	Kidapawan	6.92	350	⇑*e*P	Pn	11 28 28.6	+4.3
TTSI	Tana Toraja	7.19	244	P	Pn	11 28 29.4	+1.5
	0.1nm1µm33nm,0.6s						
BNSI	Bone	7.64	234	P	Pn	11 28 33.9	-0.2
	0.1nm28nm,0.9s						
SPSI	Sidrap Palu	7.67	238	P	Pn	11 28 35.2	+0.6
	0.1nm32nm,0.6s						
PAGZ	Pagadian	8.17	339	*e*P	Pn	11 28 44.1	+2.7
KAPI	Kappang	8.29	232	P	Pn	11 28 43.6	+0.6
	0.9nm,0.3s,baz=39,slow=6.1,SNR=3.5						
SOEI	Soe	10.04	191	Pn	Pn	11 29 11.1	+4.0
MTN	Manton Dam	13.78	160	Pn	Pn	11 29 58.7	+0.6
SBUM	Sibu	14.23	279		P	11 30 09.1	-1.6
KNRA	Kununurra	15.92	171	Pn	Pn	11 30 28.1	+1.7
KSM	Kuching	16.02	275	Pn	P	11 30 31.5	+1.0
KSM				IAmb	IAmb	11 30 37.2	
	comp=Z,27nm,1.1s						
FITZ	Fitzroy Crossi	18.14	182	P	P	11 30 53.0	-1.0
	comp=Z,0.1nm,0.3s,baz=355,slow=12,SNR=3.7						
FITZ	Fitzroy Crossi	18.14	182	P	Pn	11 30 54.7	+0.6
KPJI	Karang Pucung	18.82	246	P	P	11 31 01.0	-0.6
	comp=Z,31nm,0.8s						
DBJI	Dramaga	20.59	251	P	P	11 31 17.1	-3.7
WB0	Warramunga Arr	21.33	159	P	P	11 31 29.1	+0.3
WB0				IAmb	IAmb	11 31 34.6	
	comp=Z,15nm,0.8s						
WRAB	Tennant Creek	21.47	159	P	P	11 31 30.2	0.0
WRAB				IAmb	IAmb	11 31 36.2	
	comp=Z,15nm,0.8s						
WRA	Warramunga Arr	21.48	159	P	P	11 31 30.5	+0.2
	comp=Z,11nm,0.6s,baz=335,slow=11,SNR=29						
WRA	Warramunga Arr	21.48	159	P	P	11 31 30.8	+0.5
WB2	Warramunga Arr	21.48	159	P	P	11 31 30.9	+0.5
WB2				IAmb	IAmb	11 31 36.3	
	comp=Z,15nm,0.8s						
COEN	Coen	21.83	131	P	P	11 31 33.7	-0.4
COEN				IAmb	IAmb	11 31 41.2	
	comp=Z,32nm,1.1s						
TPUB	Ta-pu	23.66	347	P	P	11 31 52.9	0.0
AS31	Alice Springs	24.81	163	P	P	11 32 04.4	+1.0
ASAR	Alice Springs	24.81	163	P	P	11 32 04.4	+1.0
	comp=Z,7.5nm,0.6s,baz=354,slow=18,SNR=103						
ASAR	Alice Springs	24.81	163	P	P	11 32 04.7	+1.2
CMAR	Chiang Mai Arr	32.43	306	LR	LR	11 47 17.2	
	comp=Z,30nm,18.4s,baz=160,slow=38						
BBOO	Buckleboo	34.06	165	P	P	11 33 25.9	+0.4
EIDS	Eidsvold	34.91	138	P	P	11 33 33.6	+0.6
STKA	Stephens Creek	35.00	157	P	P	11 33 34.5	+0.8
	comp=Z,3.3nm,0.8s,baz=324,slow=8.6,SNR=4.9						
STKA	Stephens Creek	35.00	157	P	P	11 33 34.4	+0.8
KSRS	Korea Array	37.15	2	P	P	11 33 52.7	+0.7
	comp=Z,2.3nm,0.8s,baz=181,slow=10,SNR=6.4						
MJAR	Matsushiro Arr	37.87	16	P	P	11 33 56.0	-2.1
	comp=Z,1.3nm,0.5s,baz=187,slow=8.5,SNR=4.2						
ARMA	Armidale	38.80	144	P	P	11 34 06.8	+0.6
ARMA				IAmb	IAmb	11 34 24.6	
	comp=Z,15nm,1.4s						
LZH	Lanzhou	41.39	332	*e*P	P	11 34 29.5	+1.9
LZH				pP	pwP	11 34 42.3	0.0
LZH				sP	sP	11 34 45.2	+1.5
LZH				PP	PnPn	11 36 08.4	-0.3
HHC	Hu-ho-hao-te	42.66	343	*e*P	P	11 34 37.4	-0.4
USRK	Ussuriysk Ar.	44.16	6	P	P	11 34 49.7	+0.1
	comp=Z,5.2nm,0.9s,baz=182,slow=5.7,SNR=4.4						
GTA	Gaotai	45.96	331	*e*P	P	11 35 05.2	+0.9
GTA				pP	pP	11 35 16.0	+0.3
GTA				sP	sP	11 35 19.5	-1.0
ULN	Ulaanbaatar	50.38	343	P	P	11 35 38.1	-0.2
ULN				IAmb	IAmb	11 35 40.3	
	comp=Z,4.4nm,1.1s						
SONM	Songino Array	50.54	343	P	P	11 35 39.1	-0.4
	comp=Z,1.2nm,0.8s,baz=156,slow=6.7,SNR=7.9						
SONM	Songino Array	50.54	343	P	P	11 35 38.6	-0.9
TLY	Talaya	54.78	343	P	P	11 36 10.6	0.0
WMQ	Urumqi	55.41	327	*e*P	P	11 36 17.7	+2.3
WMQ				pP	pP	11 36 26.1	-1.0
WMQ				sP	sP	11 36 34.5	+2.7
PEA0B	Petropavlovsk-	58.90	22	P	P	11 36 37.9	-1.9
PETK	Petropavlovsk-	58.90	22	P	P	11 36 40.6	+0.8
	comp=Z,7.0nm,0.8s,baz=227,slow=5.5,SNR=4.1						
PETK	Petropavlovsk-	58.90	22	P	P	11 36 39.0	-0.8
TUWZ	Tuamarina	59.69	140	P	P	11 36 45.4	0.0
MK31	Makanchi Array	60.25	327	P	P	11 36 49.4	+0.2
MK31				IAmb	IAmb	11 37 00.9	
	comp=Z,1.9nm,0.8s						
MKAR	Makanchi Array	60.25	327	P	P	11 36 48.1	-1.1
	comp=Z,1.2nm,0.4s,baz=119,slow=8.3,SNR=19						
MKAR	Makanchi Array	60.25	327	P	P	11 36 48.8	-0.4
KSH	Kashi	60.28	317	P	P	11 36 53.1	+3.4
KSH				sP	sP	11 37 10.7	+4.4
KSH				S	S	11 45 02.7	+1.6
KSH	Kashi	60.28	317	SS	SS	11 49 03.7	+4.5
MAKZ	Makanchi	60.43	327	P	P	11 36 49.8	-0.6
MAKZ				IAmb	IAmb	11 37 02.0	
	comp=Z,3.1nm,0.8s						
KDJ	Kajisay	60.74	320	P	P	11 36 54.3	+1.5
KDJ				IAmb	IAmb	11 36 59.3	
	comp=Z,3.5nm,1.2s						
ZAA0	Zalesovo Array	63.57	334	P	P	11 37 11.5	+0.2
ZALV	Zalesovo Beam	63.57	334	P	P	11 37 10.9	-0.4
	comp=Z,1.8nm,0.8s,baz=147,slow=6.8,SNR=6.3						
GAR	Garm	64.03	314	P	P	11 37 14.9	0.0
KURK	Kurchatov	64.52	329	P	P	11 37 16.5	-1.1
KK31	Karatay Array	65.55	318	P	P	11 37 25.0	+0.4
KK31				IAmb	IAmb	11 37 35.6	
	comp=Z,3.2nm,1.1s						
KKAR	Karatay Array	65.55	318	P	P	11 37 24.8	+0.2
BRVK	Borovoye	70.14	328	P	P	11 37 53.1	-0.1
BRVK				IAmb	IAmb	11 37 59.8	
	comp=Z,4.6nm,1.0s						
ABKAR	Akbulak array	74.63	322	P	P	11 38 19.5	-0.5
RAYN	Ar Rayn	81.47	294	P	P	11 38 58.3	-0.3
RAYN				IAmb	IAmb	11 39 07.2	
	comp=Z,3.8nm,1.0s						
AKH	Akhalkalaki	84.48	311	P	P	11 39 14.2	+0.3
AKH				IAmb	IAmb	11 39 23.6	
	comp=Z,6.5nm,1.2s						
CRVS	Cervenica-Dubn	99.60	320	*e*PDIFF	Pdif	11 40 24.8	+0.6
TORD	Torodi Ar. Bea	123.52	286	PKP	PKPdf	11 45 38.2	-0.7

comp=Z,0.3nm,0.4s,baz=51,slow=1.2,SNR=3.1

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*IDC **07** 11:43:18.5±1.8, 43.°57N×105.°49E, h0^{km}, mb3.5/4, mb1 3.7/8, mb1mx3.5/44, mbtmp3.5/8, ML3.2/4, Error ellipse: s-maj=28.6km s-min=22.2km az=129.0*

ISC 07 11:43:21.1±2.1**, 43.°8N**±0.°2×**105.°4E**±0.°2**, h10**^{km}**, n8, σ1^{s}69**/9**, mb3.6**/4**, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	4.14	9	Pn	Pn	11 44 27.0	+2.5
	2.0nm,0.3s,baz=186,slow=15,SNR=60						
SONM				Pg	Pg	11 44 38.3	-2.0
	6.2nm,0.3s,baz=202,slow=15,SNR=27						
SONM				Lg	Lg	11 45 34.8	
	31nm,0.3s,baz=194,slow=30,SNR=23						
TLY	Talaya	8.02	352	Pn	Pn	11 45 19.9	+2.3
	0.0nm,0.3s,baz=154,slow=11,SNR=5.8						
TLY				Lg	Lg	11 47 37.5	
	0.0nm,0.3s,baz=171,slow=19,SNR=17						
MKAR	Makanchi Array	16.53	289	Pn	P	11 47 14.7	-0.9
	0.0nm,0.3s,baz=90,slow=15,SNR=4.7						
MKAR				Lg	Lg	11 52 08.5	
	0.0nm,0.3s,baz=89,slow=28,SNR=3.0						
KURBB	Kurchatov Arra	19.44	300	P	Pn	11 47 49.0	+0.4
	0.1nm,0.3s,baz=103,slow=11,SNR=6.0						
BVAR	Borovoye Array	24.81	304	P	P	11 48 43.1	+0.1
	0.8nm,0.5s,baz=101,slow=8.9,SNR=6.3						
NOA	NORSAR Array B	54.81	324	P	P	11 52 50.4	-0.5
	0.6nm,0.8s,baz=65,slow=5.4,SNR=2.5						
ILAR	Eielson Array	58.12	29	P	P	11 53 14.3	0.0
	0.4nm,0.6s,baz=297,slow=6.1,SNR=5.5						
YKA	Yellowknife Ar	69.35	19	P	P	11 54 27.9	-0.4
	0.4nm,0.9s,baz=332,slow=5.6,SNR=4.0						

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*IDC **07** 11:48:32.0±2.3, 22.°58S×171.°60E, h0^{km}, mb3.7/4, mb1 3.9/5, mb1mx3.8/23, mbtmp3.7/5, ML3.3/1, Error ellipse: s-maj=101.8km s-min=28.2km az=166.0*

*NEIC **07** 11:48:38.8±2.2, 22.°9S±0.°2×171.°36E±0.°06, h35^{km}±2^{km}, mb4.0/5, Error ellipse: s-maj=26.9km s-min=3.8km az=342.0*

ISC 07 11:48:38.4±0.8**, 22.°9S**±0.°1×**171.°46E**±0.°08**, h35**^{km}**, n21, σ1^{s}29**/19**, mb3.6**/5**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.71	279	Pn	Pn	11 49 47.8	+0.7
	1.3nm,0.3s,baz=124,slow=15,SNR=59						
DZM				Sn	Sn	11 50 41.5	+0.9
	1.5nm,0.3s,baz=180,slow=20,SNR=5.8						
DZM	Mont Dzumac	4.71	279		Pn	11 49 47.6	+0.6
DZM				Sn	Sn	11 50 41.9	+1.3
MSVF	Nonsavu	8.02	52	Pn	Pn	11 50 34.6	+2.1
BSWZ	Blackbirch Sta	18.91	174	P	Pn	11 52 57.3	+0.5
CMWZ	Cape Campbell	18.97	174	P	P	11 52 56.2	-0.5
LTZ	Lake Taylor	19.88	178	P	P	11 53 06.5	-0.2
LTZ				IAmb	IAmb	11 53 11.3	
	comp=Z,12nm,1.5s						
WR0	Warramunga Arr	34.44	268	P	P	11 55 20.8	-2.2
AS31	Alice Springs	34.45	261	P	P	11 55 23.3	+0.3
ASAR	Alice Springs	34.45	261	P	P	11 55 22.9	-0.2
	comp=Z,0.4nm,0.6s,baz=94,slow=10,SNR=5.0						
ASAR	Alice Springs	34.45	261	P	P	11 55 22.2	-0.8
WB0	Warramunga Arr	34.61	268	P	P	11 55 23.3	-1.2
WRA	Warramunga Arr	34.63	268	P	P	11 55 23.5	-1.1
	comp=Z,0.3nm,0.3s,baz=97,slow=8.5,SNR=6.4						
WRA	Warramunga Arr	34.63	268	IAmb	IAmb	11 55 24.5	
	comp=Z,0.3nm,1.4s						
MTN	Manton Dam	39.55	278	P	P	11 56 05.5	-0.9
H11S2	WAKE ISLAND Hy	41.36	353	T	T	12 40 02.7	
	baz=172						
H11S3	WAKE ISLAND Hy	41.37	353	T	T	12 40 08.7	
	baz=172						
H11S1	WAKE ISLAND Hy	41.38	353	T	T	12 40 08.5	
	baz=172						
FITZ	Fitzroy Crossi	43.06	268	P	P	11 56 35.1	-0.1
QSPA	South Pole Qui	67.21	180	P	P	11 59 30.5	+1.6
QSPA				IAmb	IAmb	11 59 37.0	
	comp=Z,1.6nm,1.1s						
NVAR	Mina Array Bea	89.67	48	P	P	12 01 30.8	-2.3
	comp=Z,0.1nm,0.3s,baz=216,slow=6.6,SNR=4.4						
SONM	Songino Array	91.35	322	P	P	12 01 39.4	-1.2
	comp=Z,0.6nm,0.8s,baz=141,slow=4.8,SNR=3.0						

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*ZUR **07** 11:58:20.4, 48.°01N×7.°68E, h0^{km}±3^{km}, MLh1.5/5, Error ellipse: s-maj=7.3km s-min=2.5km az=239.0*

STR 07 11:58:21.1±0.2**, 48°N**±2°×°±°**, h6**^{km}±3^{km}**, MLv1.6**/6**, 6C, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIZ	Kirchzarten	0.17	110	Pg	Pg	11 58 24.3	-0.2
KIZ	Kirchzarten	0.17	110	⇑Pg	Pg	11 58 24.3	-0.2
KIZ				⇑Pg	Pg	11 58 24.3	-0.2
	0.2nm,SNR=3.2						
KIZ				Sg	Sg	11 58 26.9	+0.2
FELD	Feldberg im Sc	0.25	122	⇑Pg	Pg	11 58 25.9	-0.3
	0.1nm,SNR=2.0						
FELD				⇑Pg	Pg	11 58 25.9	-0.3
FELD				Sg	Sg	11 58 29.9	+0.4
BERGE	Lenzkirch (DE)	0.36	113	⇑Pg	Pg	11 58 27.9	-0.2
BERGE				⇑Pg	Pg	11 58 27.9	-0.2
	0.1nm,SNR=1.8						
BERGE				Sg	Sg	11 58 33.4	+0.6
ECH	Echery	0.41	300	Pg	Pg	11 58 28.8	-0.2
ECH				Sg	Sg	11 58 34.4	0.0
WLS	Welschbruch	0.46	331	Pg	Pg	11 58 29.9	-0.1
WLS				Sg	Sg	11 58 36.0	0.0
METMA	Mettma DE	0.49	128	Pg	Pg	11 58 30.1	-0.4
METMA				Pg	Pg	11 58 30.1	-0.4
	0.1nm,SNR=0.9						
METMA				Sg	Sg	11 58 36.9	+0.1
SULZ	Cheisacher	0.56	149	Sg	Sg	11 58 39.6	+0.3
OPP	Oppenau	0.59	34	Pg	Pb	11 58 34.1	+0.2
SLE	Schleitheim	0.60	114	Pg	Pg	11 58 32.3	-0.3
SLE				Sg	Sg	11 58 41.0	+0.6
EMMET	Emmethof	0.62	159	Sg	Sg	11 58 41.8	+0.8
BALST	Balsthal	0.68	179	Pg	Pg	11 58 33.9	-0.2
BALST				Pn	Pb	11 58 35.2	-0.2
BALST				Sg	Sg	11 58 43.4	+0.5
BOURR	Bourrignon	0.69	207	Pn	Pb	11 58 36.0	+0.4
CHMF	Charmoille	1.04	223	Pg	Pg	11 58 41.1	+0.1
CHMF				Sg	Sb	11 58 55.3	-0.1

MAN 07 12:10:00.4, 12.°54N×123.°57E, h9^{km}**, mb4.4, ML3.2, MS3.0, 2C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMPH	Masbate	0.19	164	⇓*i*P	Pg	12 10 05.3	+1.0
MMPH				*i* S	Sg	12 10 09.5	+2.6
CNP	Catarman	1.07	91	*e*P	Pg	12 10 19.6	-1.4
CNP				*e*S	Sn	12 10 36.5	0.0
PVCP	Virac	1.20	28	*e*P	Pb	12 10 19.5	-3.8
PVCP				*e*S	Sb	12 10 36.0	-2.8
RCP	Roxas	1.27	220	⇑*e*P	Pn	12 10 22.9	-1.4
RCP				*e*S	Sn	12 10 41.5	+0.1
OTRP	Odiongan	1.52	264	*e*P	Pn	12 10 27.3	-0.6
OTRP				*e*S	Sn	12 10 40.1	-7.8
GQP	Guinayangan	1.75	321	⇑*e*P	Pn	12 10 28.2	-2.7
GQP				*e*S	Sn	12 10 52.2	-1.1
BOAC	Boac	1.92	299	*e*P	Pn	12 10 34.3	+1.0
BOAC				*e*S	Sn	12 10 57.8	+0.3
GUIM	Jordan	2.13	207	*e*P	Pn	12 10 35.9	-0.3
GUIM				*e*S	Sb	12 11 05.8	0.0
LLP	Lapu-Lapu	2.24	170	*e*P	Pn	12 10 37.4	-0.4
LLP				*e*S	Sb	12 11 07.6	-1.4
LQP	Lukban	2.52	309	*e*P	Pn	12 10 43.3	+1.5
LQP				*i* S	Sn	12 11 13.3	+0.5
POLP	Polilio Island	2.69	324	*e*P	Pn	12 10 45.0	+1.1
POLP				*e*S	Sn	12 11 18.2	+1.5
MSLP	Maasin	2.70	152	*e*P	Pn	12 10 45.9	+1.8
MSLP				*e*S	Sb	12 11 23.5	+1.3
TBP	Tagbilaran	2.84	174	*i* P	Pn	12 10 46.9	+0.8
TBP				*i* S	Sn	12 11 22.7	+2.2

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*NORS **07** 12:32:54.1±0.0, 42.°51N×43.°45E, h11^{km}, MPVA3.2*

*TIF **07** 12:32:54.1, 42.°52N×43.°50E, h15^{km}±1^{km}*

ISC 07 12:32:54.5±0.9**, 42.°52N**±0.°03×**43.°49E**±0.°03**, h14**^{km}±6^{km}**, n13, σ0^{s}90**/26**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONI	Oni	0.08	341	P	Pg	12 32 57.5	+0.1
ONI				S	Sg	12 32 59.5	0.0
DIGR	Digorskoe uzhe	0.39	10	*e*Pg	Pg	12 33 02.4	0.0
DIGR				*e*Sg	Sg	12 33 08.0	+0.2
TKB	Tkibuli	0.40	246	P	Pb	12 33 03.1	-0.3
TKB				S	Sb	12 33 09.3	0.0
ZEI	Tsey	0.41	48	*i* Pg	Pg	12 33 02.8	+0.1
ZEI				*e*Sg	Sb	12 33 08.8	-1.0
LACR	Lac	0.67	62	*e*Pg	Pg	12 33 06.4	-1.2
LACR				*e*Sg	Sg	12 33 15.5	-1.0
KORR	Kora	0.71	37	*e*Pg	Pb	12 33 08.9	+0.2
KORR				*e*Sg	Sn	12 33 20.1	-0.9
BKRG	Bakuriani	0.76	178	P	Pb	12 33 09.5	0.0
BKRG				S	Sb	12 33 20.4	+0.7
ARNR	Ardon	0.89	41	*e*Pg	Pn	12 33 12.5	-0.1
ARNR				*e*Sg	Sn	12 33 25.7	+0.4
NEY	Neytrino	0.93	323	*e*Pg	Pn	12 33 12.7	-0.5
NEY				*e*Sg	Sn	12 33 25.1	-1.3
STDR	Stavd-Durt	0.95	26	*e*Pg	Pn	12 33 15.3	+1.8
STDR				*e*Sg	Sn	12 33 29.5	+2.6
NCK	Nalchik	0.98	5	*e*Pg	Pn	12 33 13.8	-0.1
NCK				*e*Sg	Sn	12 33 27.9	+0.2
TRLG	Trialeti	1.08	155	P	Pg	12 33 15.0	-0.3
TRLG				S	Sg	12 33 29.5	+0.2
SHA1	Shidzhatmaz	1.37	334	*e*Pg	Pg	12 33 21.0	+0.2
SHA1				*e*Sg	Sg	12 33 38.4	-0.2

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*IDC **07** 12:33:31.0±1.0, 9.°08S×119.°91E, h0^{km}, mb3.9/5, mb1 3.9/7, mb1mx3.8/33, mbtmp3.8/7, ML3.4/2, Error ellipse: s-maj=45.0km s-min=15.8km az=75.0*

*DJA **07** 12:33:33.1±0.5, 10°S±7°×11°9E±°, h10^{km}, M4.2/11, mb4.5/3, MLv4.1/11*

ISC 07 12:33:32.7±0.8**, 10.°08S**±0.°07×**119.°06E**±0.°06**, h33**^{km}**, n22, σ2^{s}57**/20**, mb4.0**/5**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.54	36	P	Pb	12 33 41.7	-2.3
WSI	Waingapu	1.28	71	P	Pb	12 33 58.4	+2.1
BASI	Baing, Sumba	1.50	95	P	Pb	12 33 59.1	-0.8
PLAI	Plampang	1.78	314	P	Pn	12 34 00.5	-0.7
EDFI	Ende, Flores	2.91	63	P	Pn	12 34 15.9	-0.9
SRBI	Singaraja	4.29	297	P	Pn	12 34 36.9	+1.2
BKSI	Bulukumba	4.84	13	P	Pn	12 34 43.1	-0.2
KAPI	Kappang	5.08	8	Pg	Pn	12 34 46.1	-0.5
	4.7nm,0.3s,baz=190,slow=10,SNR=7.2						
KAPI				Lg	Lg	12 35 38.2	
	1.3nm,0.3s,baz=232,slow=19,SNR=3.1						
JAGI	Jajag, Banyuwa	5.11	288	P	Pn	12 34 48.0	+1.1
	0.2nm41nm,0.4s						
SOEI	Soe	5.14	87	P	Pn	12 34 51.1	+3.6
	0.2nm24nm,0.7s						
BNSI	Bone	5.74	10	P	Pn	12 34 58.4	+2.8
FITZ	Fitzroy Crossi	10.21	142	Pn	Pn	12 36 00.1	+3.1
	0.3nm,0.3s,baz=334,slow=7.9,SNR=20						
FITZ				Sn	Sn	12 37 47.2	-3.0
	1.1nm,0.3s,baz=204,slow=22,SNR=12						
WRA	Warramunga Arr	17.70	125	P	P	12 37 38.1	+0.6
	0.1nm,0.3s,baz=307,slow=15,SNR=8.3						
WRA				S	Sn	12 40 41.4	-12
	0.2nm,0.3s,baz=308,slow=21,SNR=6.3						
ASAR	Alice Springs	19.57	135	P	Pn	12 38 02.0	+2.4
	0.3nm,0.3s,baz=314,slow=11,SNR=36						
ASAR				S	S	12 41 30.4	-7.0
	0.1nm,0.3s,baz=306,slow=22,SNR=4.3						
NWAO	Narrogin (SRO)	22.80	184	P	P	12 38 46.6	+14
	3.7nm,0.3s,baz=18,slow=12,SNR=11						
CMAR	Chiang Mai Arr	34.62	325	P	P	12 40 18.9	-0.1
	0.7nm,0.5s,baz=158,slow=7.3,SNR=5.0						
H08S2	Diego Garcia H	46.05	269	T	T	13 31 15.5	
	baz=96,slow=76,SNR=30						
H08S3	Diego Garcia H	46.06	269	T	T	13 31 14.4	
	baz=96,slow=76,SNR=31						
H08S1	Diego Carcia H	46.07	269	T	T	13 31 15.2	
	baz=96,slow=76,SNR=18						
SONM	Songino Array	58.75	350	P	P	12 43 26.7	-0.8
	0.7nm,0.7s,baz=162,slow=9.1,SNR=4.3						
MKAR	Makanchi Array	65.44	333	P	P	12 44 12.1	-0.3
	1.0nm,0.7s,baz=144,slow=7.6,SNR=11						
ZALV	Zalesovo Beam	70.07	339	P	P	12 44 40.3	-1.0
	0.6nm,0.4s,baz=142,slow=6.7,SNR=3.5						

WEL 07 12:41:29.1±0.5**, 32°S**±8°×**18°0E**±2°0**, h328**^{km}±11^{km}**, M4.1**/23**, mB4.5**/6**, MLv4.4**/23**, Mw(mB)3.6**/6**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.75	33	S	S	12 43 26.1	-0.5
WMGZ	Waiomatatini S	5.48	191	P	Pn	12 42 55.6	+2.6
WMGZ				S	S	12 44 00.0	-0.8
HAZ	Te Kaha	5.54	196	P	Pn	12 42 54.0	+0.2
HAZ				S	S	12 44 03.6	+1.4
PKGZ	Pakihiroa	5.61	194	P	Pn	12 42 55.9	+1.4
PKGZ				S	S	12 44 03.2	-0.5
PUZ	Puketiti	5.75	192	P	Pn	12 42 57.9	+1.7
PUZ				S	S	12 44 06.7	+0.1
RUGZ	Raukumara Rang	5.77	196	P	Pn	12 42 56.9	+0.4
RUGZ				S	S	12 44 06.8	-0.4
TWGZ	Tauwhareparae	5.91	194	P	Pn	12 43 00.1	+2.1
OPRZ	Ohinepanea	5.99	205	P	Pn	12 43 01.2	+2.2
MWZ	Matawai	6.16	196	P	Pn	12 43 02.2	+1.3
MWZ				S	S	12 44 15.6	+0.3
TKGZ	Te Karaka	6.18	194	P	Pn	12 43 01.5	+0.3
URZ	Urewera	6.19	200	P	Pn	12 43 00.6	-0.7
RAGZ	Rawiri	6.34	197	P	Pn	12 43 04.5	+1.4
RIGZ	Rimuhau	6.46	194	P	Pn	12 43 05.1	+0.6
MUGZ	Murupara	6.50	201	P	Pn	12 43 04.8	-0.1
RTZ	Ruatahuna	6.56	199	P	Pn	12 43 05.5	-0.2
SNGZ	Shannon Statio	6.62	197	P	Pn	12 43 06.6	+0.2
RAHZ	Arahi	6.82	198	P	Pn	12 43 08.5	-0.2
MTHZ	Maungataniwha	6.82	199	P	Pn	12 43 08.7	-0.1
MHGZ	Mahia Peninsul	6.86	192	P	Pn	12 43 10.8	+1.6
MRHZ	Matea Rd	6.93	202	P	Pn	12 43 09.6	-0.5
NMHZ	Naumai	7.06	199	P	Pn	12 43 12.1	+0.4
BKZ	Black Stump Fm	7.21	201	P	Pn	12 43 12.0	-1.5
HIZ	Hauiti	7.25	212	P	Pn	12 43 15.5	+1.6
KWHZ	Kaweka Forest	7.47	200	P	Pn	12 43 15.6	-0.9
BHHZ	Black Hill Sta	7.64	202	P	Pn	12 43 16.7	-1.9
KRHZ	Kereru	7.69	200	P	Pn	12 43 17.4	-1.8
KAHZ	Kahuranaki	7.70	197	P	Pn	12 43 18.4	-0.9
PNHZ	Pukenui	7.99	200	P	Pn	12 43 20.4	-2.3
DREZ	Durham Road	8.10	212	P	Pn	12 43 24.5	+0.5
TSZ	Takapari Road	8.20	201	P	Pn	12 43 22.4	-2.8
MRZ	Mangatainoka R	8.86	201	P	Pn	12 43 29.4	-3.8

WEL 07 12:53:27.1±0.4**, 35°S**±4°×**17°9W**±°**, h188**^{km}±8^{km}**, M3.9**/42**, mB4.5**/20**, MLv4.8**/42**, Mw(mB)3.7**/20**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.38	213	P	Pn	12 54 21.5	+0.8
MXZ				S	Sn	12 54 59.2	-3.4
WMGZ	Waiomatatini S	3.54	210	P	Pn	12 54 24.9	+2.2
PKGZ	Pakihiroa	3.75	213	P	Pn	12 54 26.9	+1.6
PKGZ				S	Sn	12 55 11.7	+0.7
HAZ	Te Kaha	3.78	217	P	Pn	12 54 26.7	+1.0
PUZ	Puketiti	3.82	210	P	Pn	12 54 27.9	+1.6
RUGZ	Raukumara Rang	4.00	216	P	Pn	12 54 29.6	+1.1
TWGZ	Tauwhareparae	4.03	211	P	Pn	12 54 30.8	+1.9
TKGZ	Te Karaka	4.31	211	P	Pn	12 54 33.5	+1.2
MWZ	Matawai	4.36	214	P	Pn	12 54 34.1	+1.1
KUZ	Kuaotunu	4.47	242	P	Pn	12 54 34.4	0.0
URZ	Urewera	4.50	218	P	Pn	12 54 35.3	+0.5
RAGZ	Rawiri	4.54	214	P	Pn	12 54 36.5	+1.1
RIGZ	Rimuhau	4.57	210	P	Pn	12 54 36.8	+1.2
TGRZ	Tauranga	4.62	229	P	Pn	12 54 38.0	+1.7
SNGZ	Shannon Statio	4.81	213	P	Pn	12 54 40.0	+1.2
MUGZ	Murupara	4.84	219	P	Pn	12 54 39.6	+0.4
RTZ	Ruatahuna	4.84	216	P	Pn	12 54 39.9	+0.7
RRRZ	Republican Roa	4.88	222	P	Pn	12 54 40.8	+1.1
WIAZ	Waiheke Island	4.92	244	P	Pn	12 54 40.5	+0.3
RAHZ	Arahi	5.04	214	P	Pn	12 54 42.8	+1.2
PRRZ	Plateau Road	5.06	221	P	Pn	12 54 43.1	+1.2
MBAZ	Motutapu North	5.09	245	P	Pn	12 54 42.8	+0.5
MTHZ	Maungataniwha	5.10	216	P	Pn	12 54 43.5	+1.0
TOZ	Tahuroa Road	5.11	233	P	Pn	12 54 43.8	+1.2
ETAZ	East Tamaki Re	5.13	243	P	Pn	12 54 44.3	+1.4
MRHZ	Matea Rd	5.29	219	P	Pn	12 54 45.3	+0.3
NMHZ	Naumai	5.31	214	P	Pn	12 54 46.2	+1.0
ARHZ	Aropaoanui	5.36	212	P	Pn	12 54 47.4	+1.5
AWAZ	Awhitu Peninsu	5.39	243	P	Pn	12 54 47.9	+1.7
TLZ	Tolley Road	5.44	228	P	Pn	12 54 48.5	+1.6
HATZ	Hinemaiaia	5.51	220	P	Pn	12 54 47.9	+0.1
BKZ	Black Stump Fm	5.51	216	P	Pn	12 54 48.0	+0.1
GLKZ	Green Lake	5.62	13	P	Pn	12 54 46.9	-2.4
GLKZ				S	Sn	12 55 48.7	-5.3
MCHZ	McNeill Hill	5.64	213	P	Pn	12 54 50.5	+1.0
KWHZ	Kaweka Forest	5.75	215	P	Pn	12 54 51.3	+0.4
KAHZ	Kahuranaki	5.85	210	P	Pn	12 54 53.0	+0.7
WTVZ	West Tongariro	5.94	222	P	Pn	12 54 54.1	+0.6
KRHZ	Kereru	5.95	214	P	Pn	12 54 53.2	-0.3
BHHZ	Black Hill Sta	5.97	216	P	Pn	12 54 54.2	+0.3
HIZ	Hauiti	5.97	230	P	Pn	12 54 55.5	+1.7
NGZ	Ngauruhoe	5.98	221	P	Pn	12 54 55.3	+1.2
TUVZ	Tukino	6.01	220	P	Pn	12 54 56.3	+1.8
MOVZ	Moawhango	6.07	219	P	Pn	12 54 54.8	-0.3
PNHZ	Pukenui	6.24	213	P	Pn	12 54 56.9	-0.5
PRHZ	Porangahau	6.35	209	P	Pn	12 54 58.6	-0.1
TSZ	Takapari Road	6.47	214	P	Pn	12 54 59.6	-0.7
DVHZ	Dannevirke	6.57	211	P	Pn	12 55 01.1	-0.6
BFZ	Birch Farm	6.86	209	P	Pn	12 55 05.2	-0.2
PRWZ	Pori Road	6.87	211	P	Pn	12 55 06.1	+0.6
TIWZ	Tintock	7.09	211	P	Pn	12 55 08.3	-0.1
MRZ	Mangatainoka R	7.13	213	P	Pn	12 55 07.6	-1.3
TMWZ	Te Maipa	7.36	209	P	Pn	12 55 11.3	-0.7
OGWZ	Otaki Gorge	7.44	214	P	Pn	12 55 12.0	-1.0
MTW	Mount Morrison	7.57	211	P	Pn	12 55 13.3	-1.3
MTW				S	Sn	12 56 32.4	-7.5
KIW	Kapiti Island	7.59	215	P	Pn	12 55 13.5	-1.5
KIW				S	Sn	12 56 35.3	-5.2
CAW	Cannon Point	7.72	213	P	Pn	12 55 15.2	-1.4
CAW				S	Sn	12 56 37.3	-6.2

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*IDC **07** 13:11:08.2±1.2, 9.°66S×151.°59E, h0^{km}, mb3.9/13, mb1 4.1/15, mb1mx4.0/37, mbtmp3.9/15, ML3.9/1, MS3.5/8, Ms1 3.5/8, ms1mx3.3/32, Error ellipse: s-maj=36.3km s-min=19.2km az=121.0*

*NEIC **07** 13:11:09.0±1.7, 9.°70S±0.°04×151.°66E±0.°09, h10^{km}±1^{km}, mb4.3/17, Error ellipse: s-maj=15.7km s-min=6.5km az=72.0*

ISC 07 13:11:11.4±0.6**, 9.°67S**±0.°08×**151.°53E**±0.°08**, h24**^{km}**, n41, σ1^{s}19**/37**, mb4.0**/15**, MS3.4**/6**, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.32	273	Pn	Pn	13 12 15.4	-0.3
	1.5nm,0.3s,baz=78,slow=9.9,SNR=5.6						
PMG				Sn	Sb	13 13 15.0	-3.5
	3.6nm,0.3s,baz=158,slow=2.5,SNR=3.9						
PMG				LR	LR	13 14 05.9	
	comp=Z,442nm,19.7s,baz=354,slow=41						
PMG	Port Moresby	4.32	273		Pn	13 12 15.2	-0.5
KRVT	Keravat (AS076	5.35	5	LR	LR	13 14 36.0	
	comp=Z,392nm,18.9s,baz=195,slow=39						
RABL	Rabaul	5.48	7	Pn	Pn	13 12 31.0	-0.7
COEN	Coen	9.22	242	Pn	Pn	13 13 21.6	-1.4
EIDS	Eidsvold	15.62	182	P	P	13 14 53.8	-0.3
PATS	Pohnpei	17.74	23	Pn	Pn	13 15 14.6	-2.3
WR0	Warramunga Arr	19.33	236	P	P	13 15 36.0	+0.8
WR0				IAmb	IAmb	13 15 46.9	
	comp=Z,30nm,1.4s						
WB0	Warramunga Arr	19.36	237	P	P	13 15 35.5	0.0
WB0				IAmb	IAmb	13 15 37.8	
	comp=Z,20nm,1.2s						
WRAB	Tennant Creek	19.48	236	P	P	13 15 36.8	0.0
WRAB				IAmb	IAmb	13 15 51.9	
	comp=Z,21nm,1.4s						
WB2	Warramunga Arr	19.48	236	P	Pn	13 15 38.2	+0.1
WB2				IAmb	IAmb	13 15 45.6	
	comp=Z,14nm,1.1s						
WRA	Warramunga Arr	19.49	236	P	P	13 15 37.9	+1.0
	comp=Z,0.3nm,0.3s,baz=60,slow=11,SNR=31						
WRA				LR	LR	13 22 44.6	
	comp=Z,150nm,18.4s,baz=40,slow=36						
WRA	Warramunga Arr	19.49	236	P	P	13 15 36.3	-0.6
MTN	Manton Dam	20.25	259	P	P	13 15 46.4	+1.2
MTN				IAmb	IAmb	13 16 01.8	
	comp=Z,16nm,0.8s						
AS31	Alice Springs	21.84	228	P	P	13 16 03.3	+0.9
ASAR	Alice Springs	21.85	228	P	P	13 16 03.5	+1.1
	comp=Z,1.7nm,0.6s,baz=61,slow=9.9,SNR=21						
ASAR	Alice Springs	21.85	228	P	P	13 16 02.8	+0.3
KNRA	Kununurra	22.99	253	P	P	13 16 16.1	+1.5
STKA	Stephens Creek	23.94	201	P	P	13 16 24.0	+0.2
	comp=Z,2.0nm,0.7s,baz=14,slow=11,SNR=3.8						
STKA	Stephens Creek	23.94	201	P	P	13 16 24.2	+0.4
GUMO	Guam	24.04	344	LR	LR	13 23 45.2	
	comp=Z,103nm,21.4s,baz=98,slow=32						
FITZ	Fitzroy Crossi	26.47	249	P	P	13 16 47.6	+0.7
	comp=Z,1.6nm,0.6s,baz=84,slow=7.5,SNR=9.4						
FITZ				LR	LR	13 27 24.5	
	comp=Z,104nm,20.8s,baz=75,slow=37						
FITZ	Fitzroy Crossi	26.47	249	P	P	13 16 46.8	-0.1
FITZ				IAmb	IAmb	13 16 55.2	
	comp=Z,4.5nm,0.9s						
RAO	Raoul Island	34.60	129	P	P	13 17 56.4	-2.3
AFI	Afiamalu	36.14	100	LR	LR	13 30 45.5	
	comp=Z,1μm,20.3s,baz=218,slow=33						
MJAR	Matsushiro Arr	47.65	345	P	P	13 19 45.9	+0.1
	comp=Z,2.9nm,1.1s,baz=167,slow=7.7,SNR=3.4						
MJAR				LR	LR	13 41 02.3	
	comp=Z,34nm,18.1s,baz=180,slow=38						
KSRS	Korea Array	51.84	336	LR	LR	13 42 41.2	
	comp=Z,20nm,18.4s,baz=58,slow=36						
CMAR	Chiang Mai Arr	58.93	298	P	P	13 21 11.0	+1.8
	comp=Z,0.2nm,0.4s,baz=111,slow=4.9,SNR=3.0						
SONM	Songino Array	69.80	329	P	P	13 22 21.8	+1.8
	comp=Z,2.1nm,0.9s,baz=146,slow=5.5,SNR=12						
SONM	Songino Array	69.80	329	P	P	13 22 20.6	+0.6
MK31	Makanchi Array	83.18	320	P	P	13 23 36.6	+1.0
MK31				IAmb	IAmb	13 23 46.0	
	comp=Z,2.0nm,1.1s						
MKAR	Makanchi Array	83.18	320	P	P	13 23 36.8	+1.2
	comp=Z,0.8nm,0.7s,baz=120,slow=4.3,SNR=8.8						
ZALV	Zalesovo Beam	84.50	327	P	P	13 23 42.5	+0.3
	comp=Z,1.2nm,0.7s,baz=92,slow=4.9,SNR=5.8						
KURK	Kurchatov	86.83	323	P	P	13 23 53.5	-0.3
KURK				IAmb	IAmb	13 24 05.8	
	comp=Z,2.6nm,1.2s						
KURBB	Kurchatov Arra	86.85	322	P	P	13 23 53.1	-0.8
	comp=Z,0.4nm,0.9s,baz=98,slow=2.7,SNR=3.1						
AAK	Ala-Archa	87.10	314	P	P	13 23 54.5	-1.1
	comp=Z,0.4nm,0.4s,baz=301,slow=5.9,SNR=2.1						
ILAR	Eielson Array	87.12	22	P	P	13 23 55.2	+0.3
	comp=Z,0.8nm,1.0s,baz=241,slow=4.5,SNR=5.1						
BVAR	Borovoye Array	92.37	323	P	P	13 24 20.3	+0.4
	comp=Z,0.4nm,0.8s,baz=68,slow=3.9,SNR=3.2						
NVAR	Mina Array Bea	96.06	52	P	P	13 24 38.8	+1.3
	comp=Z,0.3nm,0.7s,baz=244,slow=3.5,SNR=2.5						
ARU	Arti	99.62	326	LR	LR	14 13 18.2	
	comp=Z,65nm,18.2s,baz=329,slow=37						
TORD	Torodi Ar. Bea	150.25	280	PKPbc	PKPbc	13 31 02.2	+0.6
	comp=Z,1.1nm,0.7s,baz=23,slow=1.7,SNR=5.3						

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*BJI **07** 13:22:07.0±0.0, 28.°40S×176.°80W, h10^{km}, mB5.8/15, mb5.2/26, Ms5.5/5, Ms7 5.2/4*

*NEIC **07** 13:22:08.4±2.5, 28.°00S±0.°06×176.°79W±0.°09, h10^{km}±1^{km}, mb5.0/36, Error ellipse: s-maj=16.6km s-min=6.4km az=125.0*

*MOS **07** 13:22:10.6±1.2, 28.°00S×176.°87W, h33^{km}, mb5.1/22, Error ellipse: s-maj=12.7km s-min=10.5km az=91.5*

*IDC **07** 13:22:13.3±2.5, 27.°94S×176.°98W, h36^{km}±19^{km}, mb4.4/22, mb1 4.6/22, mb1mx4.5/36, mbtmp4.6/22, MS4.2/17, Ms1 4.2/17, ms1mx4.1/20, Error ellipse: s-maj=17.9km s-min=13.0km az=149.0*

*GCMT **07** 13:22:14.4±0.3, 27.°97S±0.°02×176.°74W±0.°02, h23^{km}±3^{km}, MW5.0/87, Moment Tensor Solution. s30,c35; s87,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.55±.17; $M_{\theta\theta}$2.21±.15; $M_{\phi\phi}$-1.66±.10; $M_{r\theta}$-2.19±.39; $M_{\theta\phi}$0.06±.08; $M_{\phi r}$3.21±.53; Best double couple: $M_0$4.32100×10^{16}*

NP1:ϕs234.00000°,δ27.00000°,λ-173.00000°. NP2: ϕs138.00000°,δ87.00000°,λ-63.00000°. Principal axes: T 3.9500, Plg36.0000°, Azm204.0000°; N 0.7380, Plg27.0000°, Azm316.0000°; P -4.6910, Plg42.0000°, Azm73.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 07 13:22:10.0±0.3**,28.°44S**±0.°06×**176.°55W**±0.°06**,h29**km**, n392,**σ**1.s98**/366**,mb5.0**/51**,MS4.4**/25**,7C-3D,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.45	236	Pn	Pb	13 22 38.5	+2.2
	8µm,0.3s,baz=102,slow=4.5,SNR=200						
RAO				Sn	Sb	13 22 58.6	+4.2
	23µm,0.3s,baz=107,slow=19,SNR=25						
RAO				LR	LR	13 23 22.5	
	comp=Z,10µm,19.8s,baz=3.0,slow=45						
RAO	Raoul Island	1.45	236	P	Pb	13 22 38.9	+2.6
RAO						13 22 58.7	
RAO	Raoul Island	1.45	236		Pb	13 22 38.9	+2.6
RAO	Raoul Island	1.45	236	Sg	Sb	13 22 58.7	+4.4
GLKZ	Green Lake	1.46	235	P	Pb	13 22 38.8	+2.4
GLKZ				S	Sb	13 22 58.2	+3.7
WMGZ	Waiomatatini S	10.26	203	P	Pn	13 24 34.8	-0.4
WMGZ				S	Sn	13 26 29.1	-0.1
HAZ	Te Kaha	10.43	206	P	Pn	13 24 35.9	-1.7
HAZ				S	Sn	13 26 30.2	-3.2
PKGZ	Pakihiroa	10.44	204	P	Pn	13 24 35.3	-2.4
PKGZ				S	Sn	13 26 29.6	-4.1
PUZ	Puketiti	10.54	203	P	Pn	13 24 36.5	-2.6
PUZ				S	Sn	13 26 35.6	-0.6
RUGZ	Raukumara Rang	10.66	205	P	Pn	13 24 38.3	-2.4
TWGZ	Tauwhareparae	10.73	204	P	Pn	13 24 39.6	-2.2
CNGZ	Carnagh Statio	10.93	202	P	Pn	13 24 42.0	-2.3
OPRZ	Ohinepanea	11.01	210	P	Pn	13 24 45.6	+0.1
TKGZ	Te Karaka	11.01	204	P	Pn	13 24 40.8	-4.7
MWZ	Matawai	11.04	205	P	Pn	13 24 42.9	-3.0
TGRZ	Tauranga	11.05	211	P	Pn	13 24 49.9	+3.9
NIUE	Niue	11.12	34	Pn	Pn	13 24 41.8	-5.2
URZ	Urewera	11.13	207	Pn	Pn	13 24 44.6	-2.5
	1.3nm,0.3s,baz=272,slow=1.9,SNR=19						
URZ				Sn	Sn	13 26 50.0	-0.5
	33nm,0.3s,baz=114,slow=19,SNR=12						
URZ	Urewera	11.13	207		Pn	13 24 44.9	-2.2
URZ	Urewera	11.13	207	P	Pn	13 24 44.7	-2.5
URZ				S	Sn	13 26 49.5	-1.0
RAGZ	Rawiri	11.22	205	P	Pn	13 24 46.8	-1.6
RAGZ				S	Sn	13 26 48.6	-4.3
RIGZ	Rimuhau	11.28	203	P	Pn	13 24 47.7	-1.5
RIGZ				S	Sn	13 26 47.8	-6.5
MUGZ	Murupara	11.46	207	P	Pn	13 24 49.1	-2.5
RTZ	Ruatahuna	11.49	206	P	Pn	13 24 49.5	-2.6
RTZ				S	Sn	13 26 59.7	+0.1
SNGZ	Shannon Statio	11.50	205	P	Pn	13 24 49.7	-2.5
SNGZ				S	Sn	13 26 57.8	-1.9
RAHZ	Arahi	11.71	205	P	Pn	13 24 52.4	-2.7
MTHZ	Maungataniwha	11.75	206	P	Pn	13 24 52.6	-3.0
MSVF	Nonsavu	11.76	334	*i* P	Pn	13 24 52.9	-3.0
MSVF	Nonsavu	11.76	334		Pn	13 24 51.0	-4.9
TLZ	Tolley Road	11.87	212	P	Pn	13 25 00.6	+3.3
NMHZ	Naumai	11.97	206	P	Pn	13 24 59.4	+0.6
BKZ	Black Stump Fm	12.16	207		Pn	13 24 59.8	-1.4
BKZ	Black Stump Fm	12.16	207	P	Pn	13 24 59.4	-1.8
MCHZ	McNeill Hill	12.32	205	P	Pn	13 25 02.0	-1.4
HIZ	Hauiti	12.34	213		Pn	13 25 03.9	+0.3
HIZ	Hauiti	12.34	213	P	Pn	13 25 04.6	+0.9
KWHZ	Kaweka Forest	12.41	206	P	Pn	13 25 05.4	+0.7
WTVZ	West Tongariro	12.49	209	P	Pn	13 25 08.2	+2.3
KAHZ	Kahuranaki	12.56	204	P	Pn	13 25 03.6	-3.2
BHHZ	Black Hill Sta	12.61	207	P	Pn	13 25 05.2	-2.2
KRHZ	Kereru	12.62	206	P	Pn	13 25 04.1	-3.4
MOVZ	Moawhango	12.66	208	P	Pn	13 25 08.8	+0.6
PKVZ	Pokaka	12.74	210	P	P	13 25 14.4	-5.6
PXZ	Pawanui	12.78	203	P	Pn	13 25 07.9	-1.7
VRZ	Vera Road	12.87	212	P	Pn	13 25 14.4	+3.5
PNHZ	Pukenui	12.92	206	P	Pn	13 25 10.1	-1.5
PRHZ	Porangahau	13.06	204	P	Pn	13 25 13.3	-0.3
TSZ	Takapari Road	13.13	206	P	Pn	13 25 12.4	-2.2
DVHZ	Dannevirke	13.26	205	P	Pn	13 25 16.1	-0.2
WAZ	Wanganui	13.28	210	P	Pn	13 25 16.4	-0.1
KHEZ	Kahui Hut	13.36	213	P	P	13 25 22.7	-4.2
POWZ	Post Office Ro	13.49	206	P	Pn	13 25 20.1	+0.7
PRWZ	Pori Road	13.56	205	P	Pn	13 25 20.7	+0.4
BFZ	Birch Farm	13.57	204	P	Pn	13 25 17.2	-3.3
MRZ	Mangatainoka R	13.80	206	P	Pn	13 25 19.4	-4.2
HOWZ	Holdsworth Sta	14.03	206	P	Pn	13 25 23.6	-3.1
TMWZ	Te Maipa	14.07	204	P	Pn	13 25 24.3	-3.0
OGWZ	Otaki Gorge	14.09	207	P	Pn	13 25 25.8	-1.8
KIW	Kapiti Island	14.23	207	P	Pn	13 25 24.8	-4.8
MTW	Mount Morrison	14.26	205	P	Pn	13 25 27.2	-2.7
CAW	Cannon Point	14.38	206	P	Pn	13 25 28.0	-3.6
PAWZ	Paruwai Farm	14.48	205	P	Pn	13 25 31.3	-1.6
MSWZ	Moikau Station	14.58	205	P	Pn	13 25 33.1	-1.2
DUWZ	D'Urville Isla	14.60	210	P	Pn	13 25 32.2	-2.4
PLWZ	Palliser	14.71	205	Pn	Pn	13 25 33.9	-2.1
PLWZ	Palliser	14.71	205	P	Pn	13 25 34.8	-1.3
BHW	Baring Head	14.72	206	P	Pn	13 25 32.6	-3.4
TCW	Tory Channel	14.79	208	P	Pn	13 25 36.1	-1.0
TUWZ	Tuamarina	15.11	208		Pn	13 25 36.2	-5.1
AFI	Afiamalu	15.12	18	Pn	Pn	13 25 30.1	-12
	9.6nm,0.3s,baz=344,slow=1.4,SNR=9.8						
AFI				Sn	Sn	13 28 06.0	-22
	5.8nm,0.3s,baz=19,slow=14,SNR=3.8						
AFI	Afiamalu	15.12	18	P	Pn	13 25 31.2	-11
AFI	Afiamalu	15.12	18		Pn	13 25 31.2	-11
NNZ	Nelson	15.18	210	P	Pn	13 25 41.4	-0.9
BSWZ	Blackbirch Sta	15.37	208	P	Pn	13 25 45.6	+0.8
KHZ	Kahutara	16.10	207	P	Pn	13 25 51.7	-2.4
DZM	Mont Dzumac	16.64	289	LR	LR	13 30 58.6	
	comp=Z,1000nm,20.6s,baz=118,slow=33						
DZM	Mont Dzumac	16.64	289	*e*P	Pn	13 25 56.1	-5.1
	145nm,1.5s						
DZM				*e*LR	LR	13 29 40.1	
	comp=Z,2µm,25.2s						
GVZ	Greta Valley S	16.76	207	P	Pn	13 25 59.8	-2.8
RAR	Rarotonga	16.83	68	P	P	13 26 03.8	-1.7
	5.4nm,0.3s,baz=250,slow=14,SNR=10						
RAR				S	Sn	13 28 55.4	-14
	5.6nm,0.3s,baz=79,slow=16,SNR=5.0						
AMCZ	Amberley	17.09	208	P	Pn	13 26 06.7	0.0
OXZ	Oxford	17.47	209	P	Pn	13 26 09.5	-1.9
MQZ	McQueen's Vall	17.53	207		Pn	13 26 10.6	-1.6
MQZ	McQueen's Vall	17.53	207	P	Pn	13 26 10.5	-1.6
RPZ	Rata Peaks	18.21	210	P	P	13 26 20.0	-0.5
	5.0nm,0.3s,baz=112,slow=0.8,SNR=24						
RPZ				S	Sn	13 29 29.2	-14
	1.1nm,0.3s,baz=180,slow=11,SNR=3.7						
RPZ				LR	LR	13 33 26.6	
	comp=Z,1µm,21.7s,baz=32,slow=36						
RPZ	Rata Peaks	18.21	210	P	P	13 26 21.4	+0.8
RPZ	Rata Peaks	18.21	210	P	P	13 26 20.0	-0.5
TBI	Tubuai	24.86	84	*e*LR	LR	13 33 48.8	
	comp=Z,2µm,27.5s,baz=252						
TBI	Tubuai	24.86	84	*e*T	T	13 53 14.5	
	44nm,0.4s						
KNTN	Kanton	25.94	11	P	P	13 27 38.4	-1.5
PAE	Paea	26.97	72	*e*T	T	13 55 49.0	
	31nm,0.3s						
PPT2	Papeete2	27.01	72	*e*LR	LR	13 34 40.9	
	comp=Z,2µm,26.2s						
PPT2	Papeete2	27.01	72	*e*T	T	13 55 53.5	
	18nm,0.3s						
PPT	Papeete	27.02	72	LR	LR	13 35 45.7	
	comp=Z,424nm,21.2s,baz=214,slow=30						
TVO	Taravao	27.19	73	*e*T	T	13 56 05.8	
	4.1nm,0.3s						
ARMA	Armidale	27.74	258	P	P	13 27 54.9	-1.3
EIDS	Eidsvold	28.98	268	P	P	13 28 07.4	+0.2
HNR	Honiara	29.08	306	LR	LR	13 37 17.0	
	comp=Z,185nm,21.1s,baz=153,slow=32						
VAH	Vaihoa	29.80	70	*e*T	T	13 59 17.0	
	23nm,0.3s						
TAU	Tasmania Unive	32.44	234	P	P	13 28 38.2	+0.7
TAU				pmax	pmax		
	comp=Z,34nm,1.4s						
TAU	Tasmania Unive	32.44	234	P	P	13 28 38.2	+0.7
TAU				IAmb	IAmb	13 28 40.1	
	comp=Z,34nm,1.4s						
TOO	Toolangi	32.93	244	P	P	13 28 42.4	+0.4
TOO				pmax	pmax		
	comp=Z,14nm,1.2s						
TOO	Toolangi	32.93	244	P	P	13 28 42.4	+0.4
CTA	Charters Tower	34.81	275	P	P	13 28 57.9	-0.5
	comp=Z,11nm,0.7s,baz=109,slow=8.5,SNR=10.0						
CTA				LR	LR	13 41 31.2	
	comp=Z,746nm,20.7s,baz=88,slow=34						
STKA	Stephens Creek	36.19	254	P	P	13 29 11.4	+1.2
	comp=Z,3.3nm,0.6s,baz=100,slow=10,SNR=8.6						
STKA				LR	LR	13 42 40.9	
	comp=Z,540nm,19.1s,baz=75,slow=34						
STKA	Stephens Creek	36.19	254	P	P	13 29 10.0	-0.2
STKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
STKA	Stephens Creek	36.19	254	P	P	13 29 09.9	-0.2
PMG	Port Moresby	38.99	292	*i* P	P	13 29 31.7	-2.3
PMG				pmax	pmax		
	comp=Z,80nm,1.2s						
TAOE	Nuku Hiva Isla	39.38	68	*e*S	S	13 35 38.3	+1.0
	comp=Z,1µm,33.6s						
TAOE				*e*LR	LR	13 40 20.7	
	comp=Z,1µm,25.7s						
TAOE	Nuku Hiva Isla	39.38	68	*e*T	T	14 11 11.0	
	comp=Z,13nm,0.2s						
COEN	Coen	40.02	283	P	P	13 29 40.4	-2.2
BBOO	Buckleboo	40.75	252	P	P	13 29 49.0	+0.5
BBOO				IAmb	IAmb	13 29 52.4	
	comp=Z,46nm,1.4s						
AS31	Alice Springs	44.52	264	P	P	13 30 18.7	-0.6
ASAR	Alice Springs	44.52	264	P	P	13 30 18.2	-1.0
	comp=Z,2.6nm,0.4s,baz=101,slow=7.1,SNR=67						
ASAR				PcP	PcP	13 32 02.6	+0.3
	comp=Z,1.9nm,0.7s,baz=101,slow=4.8,SNR=2.5						
ASAR				ScP	ScP	13 35 53.0	+0.5
	comp=Z,0.9nm,0.9s,baz=115,slow=4.2,SNR=3.8						
ASAR				S	S	13 36 45.6	-7.5
	comp=Z,0.6nm,0.9s,baz=94,slow=13,SNR=4.1						
ASAR				LR	LR	13 47 39.8	
	comp=Z,550nm,19.6s,baz=110,slow=34						
ASAR	Alice Springs	44.52	264	P	P	13 30 18.9	-0.4
ASAR	Alice Springs	44.52	264	P	P	13 30 18.9	-0.4
WB2	Warramunga Arr	45.33	269	P	P	13 30 24.5	-1.2
WB2				IAmb	IAmb	13 30 38.9	
	comp=Z,19nm,1.1s						
WRAB	Tennant Creek	45.33	269	*i* P	P	13 30 24.2	-1.6
WRAB				pmax	pmax		
	comp=Z,12nm,0.9s						
WRAB	Tennant Creek	45.33	269	P	P	13 30 24.1	-1.6
WRAB				IAmb	IAmb	13 30 38.4	
	comp=Z,12nm,0.7s						
WRA	Warramunga Arr	45.34	269	P	P	13 30 24.2	-1.6
	comp=Z,2.0nm,0.4s,baz=107,slow=7.1,SNR=62						
WRA				PcP	PcP	13 32 05.5	+0.4
	comp=Z,2.2nm,0.7s,baz=108,slow=3.7,SNR=5.1						
WRA				ScP	ScP	13 35 56.0	+0.2
	comp=Z,1.3nm,0.9s,baz=107,slow=4.2,SNR=4.1						
WRA				S	S	13 36 55.6	-9.4
	comp=Z,0.9nm,0.9s,baz=110,slow=12,SNR=3.3						
WRA				LR	LR	13 47 32.9	
	comp=Z,203nm,19.7s,baz=150,slow=34						
WRA	Warramunga Arr	45.34	269	P	P	13 30 24.6	-1.1
WRA					ScP	13 35 57.0	+1.2
WB0	Warramunga Arr	45.35	270	P	P	13 30 24.9	-1.0
WB0				IAmb	IAmb	13 30 38.5	
	comp=Z,17nm,0.8s						
FORT	Forrest	47.80	253	P	P	13 30 44.1	-0.9
VNDA	Vanda	50.17	186	P	P	13 31 09.5	+7.1
	comp=Z,2.5nm,0.6s,baz=4.7,slow=5.1,SNR=6.9						
VNDA	Vanda	50.17	186	P	P	13 31 08.5	+6.1
VNDA				pmax	pmax		
	comp=Z,21nm,1.3s						
VNDA	Vanda	50.17	186	P	P	13 31 08.5	+6.1
VNDA				IAmb	IAmb	13 31 23.9	
	comp=Z,20nm,1.2s						
FITZ	Fitzroy Crossi	53.67	268	P	P	13 31 28.7	-0.6
	comp=Z,2.0nm,0.6s,baz=77,slow=6.9,SNR=9.5						
SIJI	Sorong	56.84	289	P	P	13 31 50.3	-2.0
	comp=Z,18nm,0.8s,baz=129,slow=12,SNR=5.6						
CASY	Casey	57.46	207	P	P	13 31 58.7	+2.9
MORW	Morawa	58.32	252	P	P	13 32 02.6	0.0
MORW				IAmb	IAmb	13 32 20.2	
	comp=Z,26nm,1.5s						
QSPA	South Pole Qui	61.66	180	P	P	13 32 31.1	+6.1
MAW	Mawson	74.58	200	LR	LR	14 05 22.5	
	comp=Z,271nm,19.7s,baz=96,slow=35						
MJAR	Matsushiro Arr	77.38	324	P	P	13 34 00.7	-1.4
	comp=Z,13nm,0.8s,baz=142,slow=5.8,SNR=14						
MAT	Matsushiro	77.38	324	P	P	13 34 00.9	-1.2
MAT				*e*S	S	13 43 50.6	-0.1
SYO	Syowa Base	79.30	192	⇓*e*P	P	13 34 14.8	+2.5
SYO	Syowa Base	79.30	192	⇑*e*pP	pP	13 34 17.2	-3.0
SYO	Syowa Base	79.30	192	⇑*e*sP	sP	13 34 19.1	-4.0
ERM	Erimo	79.36	331	*ce*P	P	13 34 11.5	-1.4
ERM				pmax	pmax		
	comp=Z,102nm,1.3s						
SNAA	Sanae	80.07	178	P	P	13 34 21.0	+4.4
SNAA	Sanae	80.07	178	P	P	13 34 20.2	+3.6
SNAA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SNAA	Sanae	80.07	178	P	P	13 34 20.2	+3.7
VNA3	Neumayer Olymp	80.16	176	P	P	13 34 21.0	+4.0
VNA2	Neumayer--Watz	80.61	176	P	P	13 34 23.9	+4.5
	baz=185,slow=5.4						
VNA1	Neumayer--Stat	80.84	176	P	P	13 34 24.2	+3.7
NVL	N'lazarevskaya	80.89	183	*e*P	P	13 34 32.8	+12
NVL				*e*S	S	13 44 42.5	+15
NVL				pmax	pmax		
	comp=Z,9.0nm,0.6s						
JKA	Kamikawa-asahi	81.31	332	P	P	13 34 23.3	0.0
ASAJ	Asahikawa	81.31	332	P	P	13 34 23.3	-0.1
	comp=Z,11nm,0.7s,baz=214,slow=11,SNR=6.2						
UNV	Unalaska Valle	82.40	6	P	P	13 34 28.4	-0.5
PLCA	Paso Flores	82.90	133	P	P	13 34 36.4	+4.2
	comp=Z,2.6nm,0.7s,baz=268,slow=7.2,SNR=9.1						
PLCA				LR	LR	14 02 38.5	
	comp=Z,82nm,19.6s,baz=264,slow=29						
PLCA	Paso Flores	82.90	133	P	P	13 34 36.5	+4.3
PLCA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
PLCA	Paso Flores	82.90	133	P	P	13 34 36.5	+4.2
PLCA				IAmb	IAmb	13 34 56.0	
	comp=Z,8.4nm,1.1s						
TJN	Taejon	83.30	318	*ce*P	P	13 34 32.0	-1.9
MURC	Murrieta	83.47	46	P	P	13 34 38.2	+3.2
	baz=230						
MONP2	Monument Peak	83.51	47	P	P	13 34 38.7	+3.3
	baz=230						
YSS	Yuzh-Sakhalins	83.56	333	⇑*e*P	P	13 34 35.7	+0.7
YSS				*e*		13 34 50.4	
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				MLR	MLR		
	comp=Z,500nm,19.0s						
YSS	Yuzh-Sakhalins	83.56	333	P	P	13 34 33.3	-1.7
IKP	In-Ko-Pah, Jac	83.56	48	P	P	13 34 38.7	+3.2
	baz=231						
BFSC	Mount Baldy Ra	83.59	46	P	P	13 34 38.6	+2.9
	baz=230						
KSRS	Korea Array	83.70	319	P	P	13 34 36.1	+0.1
	comp=Z,3.0nm,0.8s,baz=135,slow=5.5,SNR=7.7						
KSRS				LR	LR	14 09 25.3	
	comp=Z,36nm,19.1s,baz=130,slow=34						
VES	Vestal, Richgr	83.76	44	P	P	13 34 39.2	+2.8
	baz=229						
EDW2	Edwards Air Fo	83.80	45	P	P	13 34 39.7	+3.0
	baz=229						
PFO	Pinyon Flats O	83.95	47	P	P	13 34 39.8	+2.3
	comp=Z,4.9nm,0.9s,baz=312,slow=2.0,SNR=4.4						
PFO	Pinyon Flats O	83.95	47	*i* P	P	13 34 36.1	-1.4
PFO				pmax	pmax		
	comp=Z,12nm,1.1s						
PFO	Pinyon Flats O	83.95	47	P	P	13 34 40.8	+3.3
	baz=230						
SWSC	Sam W. Stewart	83.95	48	P	P	13 34 40.4	+3.0
	baz=231						
ISA	Isabella, Lake	84.02	44	P	P	13 34 40.9	+3.1
	baz=229						
PEA0B	Petropavlovsk-	84.25	345	*i* P	P	13 34 37.0	-1.4
PETK	Petropavlovsk-	84.25	345	P	P	13 34 36.5	-1.9
	comp=Z,19nm,0.8s,baz=124,slow=7.5,SNR=13						
PETK				LR	LR	14 05 44.2	
	comp=Z,166nm,20.9s,baz=227,slow=31						
PETK	Petropavlovsk-	84.25	345	P	P	13 34 38.8	+0.4
PETK	Petropavlovsk-	84.25	345	P	P	13 34 38.8	+0.4
O02D	Mt. Diablo Mer	84.58	38	P	P	13 34 44.4	+3.9
	baz=226						
BC3	Big Chuckawall	84.62	47	P	P	13 34 44.6	+3.6
	baz=231						
CWC	Cottonwood Cre	84.77	44	P	P	13 34 44.7	+3.0
	baz=229						
HEC	Hector,Ludlow	84.81	46	P	P	13 34 44.8	+3.0
	baz=230						
GSC	Goldstone, Bar	84.81	45	P	P	13 34 44.9	+3.0
	baz=230						
MPMC	Manual Prospec	84.88	44	P	P	13 34 45.2	+2.9
	baz=230						
IRM	Iron Mountain	85.14	47	P	P	13 34 47.0	+3.6
	baz=231						
N02D	Trinity Center	85.18	38	P	P	13 34 47.2	+3.7
	baz=226						
GMRC	Granite Mounta	85.20	46	P	P	13 34 47.1	+3.2
	baz=231						
O03E	Paynes Creek	85.20	39	P	P	13 34 45.9	+2.2
	baz=226						
Y12C	Blythe	85.28	48	P	P	13 34 47.8	+3.7
	baz=232						
214A	Organ Pipe Nat	85.31	50	P	P	13 34 47.8	+3.5
	baz=233						
M02C	Callahan	85.40	37	P	P	13 34 48.3	+3.7
	baz=226						
MSHR	Mys Shultsa	85.50	324	*i* P	P	13 34 43.0	-1.9
FURC	Furnace Creek,	85.53	44	P	P	13 34 48.0	+2.8
	baz=230						
GRAC	Grapevine Rang	85.56	44	P	P	13 34 48.7	+3.2
	baz=230						
PNTR	Pine Nut	85.63	41	P	P	13 34 47.4	+1.4
YBH	Yreka Blue Hor	85.71	37	P	P	13 34 48.3	+2.1
	comp=Z,8.7nm,1.0s,baz=125,slow=5.0,SNR=8.8						
YBH	Yreka Blue Hor	85.71	37	P	P	13 34 47.9	+1.7
YBH				pmax	pmax		
	comp=Z,19nm,1.3s						
YBH	Yreka Blue Hor	85.71	37	P	P	13 34 47.9	+1.7
YBH				IAmb	IAmb	13 34 49.6	
	comp=Z,19nm,1.2s						
PDMCI	Parker Dam,Lak	85.88	47	P	P	13 34 50.8	+3.8
	baz=232						
NVAR	Mina Array Bea	85.94	42	P	P	13 34 50.2	+2.6
	comp=Z,9.8nm,0.8s,baz=222,slow=8.7,SNR=66						
NVAR				LR	LR	14 04 56.1	
	comp=Z,303nm,21.7s,baz=205,slow=30						
NVAR	Mina Array Bea	85.94	42	P	P	13 34 49.5	+2.0
NJ2	Nanjing	85.95	310	*e*P	P	13 34 49.1	+1.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NV11	Mina Array Sit	86.03	42	P	P	13 34 49.2	+1.3
NV11				IAmb	IAmb	13 34 51.6	
	comp=Z,11nm,1.0s						
TPNV	Topopah Spring	86.22	44	P	P	13 34 52.5	+3.6
	baz=230						
USRK	Ussuriysk Ar.	86.25	326	P	P	13 34 48.9	+0.3
	comp=Z,5.0nm,0.8s,baz=138,slow=4.6,SNR=5.1						
USRK	Ussuriysk Ar.	86.25	326	P	P	13 34 47.5	-1.1
USRK	Ussuriysk Ar.	86.25	326	P	P	13 34 47.5	-1.1
TUC	Tucson	86.90	51	P	P	13 34 56.1	+3.9
	baz=234						
J04D	Umpqua Nationa	87.08	37	P	P	13 34 56.1	+3.1
	baz=226						
MOD	Modoc Plateau	87.13	38	P	P	13 34 54.9	+1.7
MOD				IAmb	IAmb	13 34 56.1	
	comp=Z,6.8nm,0.8s						
R11A	Troy Canyon, C	87.52	43	P	P	13 34 57.8	+2.6
	baz=231						
J05D	Fort Rock, OR	87.58	37	P	P	13 34 58.0	+2.7
	baz=227						
MDJ	Mudanjiang	87.75	325	P	P	13 34 55.5	-0.4
MDJ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,210nm,5.4s						
I05D	Terrebonne, OR	88.25	36	P	P	13 35 01.1	+2.7
	baz=227						
WUAZ	Wupatki	88.42	48	P	P	13 35 03.2	+3.7
	baz=233						
121A	Cookes Peak, D	89.09	52	P	P	13 35 07.0	+4.2
	baz=236						
GRNR	Gornyy	89.13	332	⇓*i*P	P	13 35 03.0	+0.7
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GRNR				MLR	MLR		
	comp=Z,110nm,17.0s						
ELK	Elko	89.24	42	P	P	13 35 05.0	+1.6
	comp=Z,1.7nm,0.8s,baz=248,slow=6.1,SNR=7.2						
W18A	Petrified Fore	89.26	49	P	P	13 35 06.7	+3.1
	baz=234						
CN2	Changchun	89.36	322	*e*P	P	13 35 05.4	+1.8
TIA	Tai'an	89.58	312	P	P	13 35 05.2	+0.4
TIA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KLR	Kul'dur	90.00	329	*i* P	P	13 35 05.0	-1.4
KLR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
G08A	Pilot Rock	90.14	37	P	P	13 35 09.5	+2.2
TX31	Lajitas Ar. Si	90.26	57	P	P	13 35 08.2	0.0
TX31				IAmb	IAmb	13 35 12.9	
	comp=Z,17nm,1.4s						
TXAR	Lajitas Array	90.26	57	P	P	13 35 11.2	+2.9
	comp=Z,4.5nm,1.0s,baz=214,slow=6.0,SNR=30						
TXAR				LR	LR	14 05 54.7	
	comp=Z,64nm,22.0s,baz=0.0,slow=29						
TXAR	Lajitas Array	90.26	57	P	P	13 35 09.4	+1.1
TXAR	Lajitas Array	90.26	57	P	P	13 35 09.3	+1.1
B05A	Bryant	90.59	33	P	P	13 35 12.1	+3.0
	baz=226						
TMUT	Trail Mountain	90.79	45	P	P	13 35 12.0	+1.2
MVCO	Mesa Verde	91.29	48	P	P	13 35 15.9	+2.9
	baz=235						
ANMO	Albuquerque	91.36	51	P	P	13 35 16.3	+2.9
	comp=Z,3.6nm,0.9s,baz=210,slow=7.1,SNR=9.3						
ANMO	Albuquerque	91.36	51	*i* P	P	13 35 12.6	-0.8
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ANMO	Albuquerque	91.36	51	P	P	13 35 16.6	+3.2
	baz=236						
BJI	Beijing	92.43	315	P	P	13 35 18.3	+0.4
BJI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
GHO	Glory Hole Cre	92.63	13	P	P	13 35 19.2	+0.8
GHO				IAmb	IAmb	13 35 19.6	
	comp=Z,9.9nm,1.0s						
S22A	4UR Ranch, Cre	92.68	48	P	P	13 35 21.9	+2.4
S22A				IAmb	IAmb	13 35 23.6	
	comp=Z,5.2nm,1.1s						
S22A	4UR Ranch, Cre	92.68	48	P	P	13 35 22.8	+3.2
	baz=236						
O20A	White River Ci	93.13	46	P	P	13 35 23.9	+2.4
	baz=235						
MSTX	Muleshoe	93.38	53	P	P	13 35 25.3	+2.7
	baz=238						
PDAR	Pinedale Array	93.84	43	P	P	13 35 26.7	+2.0
	comp=Z,3.7nm,0.9s,baz=209,slow=3.4,SNR=26						
PDAR				LR	LR	14 09 39.0	
	comp=Z,219nm,21.6s,baz=239,slow=30						
PDAR	Pinedale Array	93.84	43	P	P	13 35 24.9	+0.2
TRF	Thorofare Moun	93.92	11	P	P	13 35 24.6	+0.2
TRF				IAmb	IAmb	13 35 33.1	
	comp=Z,6.2nm,0.8s						
CMAR	Chiang Mai Arr	93.96	289	P	P	13 35 26.0	+0.4
	comp=Z,0.6nm,0.8s,baz=136,slow=3.0,SNR=5.7						
KMI	Kunming	94.08	296	P	P	13 35 28.5	+2.3
KMI				pP	pP	13 35 31.7	-2.7
KMI				pmax	pmax		
	comp=Z,16nm,0.5s						
KMI				pmax	pmax		
	comp=Z,140nm,4.2s						
RND	Reindeer	94.14	12	P	P	13 35 25.4	+0.1
RND				pmax	pmax		
	comp=Z,7.0nm,1.0s						
RND	Reindeer	94.14	12	P	P	13 35 25.4	+0.1
RND				IAmb	IAmb	13 35 26.7	
	comp=Z,7.1nm,1.0s						
H17A	Grant Village	94.20	41	P	P	13 35 30.4	+4.0
	baz=234						
SEY	Seymchan	94.37	346	*i* P	P	13 35 25.0	-1.3
ISCO	Idaho Springs	94.61	47	P	P	13 35 32.5	+4.0
	baz=237						
N23A	Red Feather La	95.01	46	P	P	13 35 33.1	+2.9
	baz=237						
WRH	Wood River Hil	95.25	12	P	P	13 35 30.3	0.0
WRH				IAmb	IAmb	13 35 31.8	
	comp=Z,4.6nm,0.7s						
HDA	Harding Lake	95.41	12	P	P	13 35 31.0	-0.1
HDA				IAmb	IAmb	13 35 32.1	
	comp=Z,4.9nm,0.6s						
HDA	Harding Lake	95.41	12	P	P	13 35 31.4	+0.3

	baz=206						
ILAR	Eielson Array	95.74	12	P	P	13 35 32.5	-0.1
	comp=Z,1.6nm,0.8s,baz=216,slow=5.2,SNR=21						
ILAR				LR	LR	14 13 46.2	
	comp=Z,55nm,18.5s,baz=196,slow=32						
ILAR	Eielson Array	95.74	12	P	P	13 35 32.1	-0.5
ILAR	Eielson Array	95.74	12	P	P	13 35 32.1	-0.5
HHC	Hu-ho-hao-te	95.80	314	eP	P	13 35 35.0	+1.5
HHC				LR	LR		
	comp=Z,650nm,17.9s						
HHC				LR	LR		
	comp=Z,570nm,17.9s						
HHC				LR	LR		
	comp=Z,620nm,17.2s						
CD2	Chengdu	96.13	302	P	P	13 35 35.5	+0.3
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
BILL	Bilibino	97.04	354⇓	eP	P	13 35 36.6	-1.7
BILL				e		13 39 32.3	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,172nm,20.0s						
LPAZ	La Paz	97.77	113	LR	LR	14 12 43.1	
	comp=Z,35nm,18.9s,baz=248,slow=31						
RSSD	Black Hills	97.94	44	P	Pdif	13 35 45.6	+2.3
	baz=238						
LZH	Lanzhou	98.58	306	eP	P	13 35 45.6	-0.7
LZH				pP	pP	13 35 51.8	-2.7
LZH				sP	sP	13 35 53.6	-3.8
LZH				PP	PP	13 39 50.6	+3.0
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
LZH				pmax	pmax		
	comp=Z,57nm,5.4s						
LZH				LR	LR		
	comp=Z,160nm,16.8s						
LZH				LR	LR		
	comp=Z,250nm,15.2s						
LZH				LR	LR		
	comp=Z,230nm,19.1s						
INK	Inuvik	101.56	15	P	Pdif	13 35 58.1	-0.4
	comp=Z,1.0nm,0.9s,baz=219,slow=3.5,SNR=4.1						
YKA	Yellowknife Ar	103.14	25	P	Pdif	13 36 07.3	+1.7
	comp=Z,0.4nm,0.8s,baz=238,slow=3.7,SNR=3.7						
WMQ	Urumqi	113.01	309	ePKP	PKiKP	13 40 46.5	+2.2
WMQ				AMB	AMB		
	comp=Z,120nm,8.1s						
WMQ				LR	LR		
	comp=Z,640nm,29.3s						
WMQ				LR	LR		
	comp=Z,910nm,29.3s						
ZALV	Zalesovo Beam	117.41	319	PKP	PKPdf	13 40 51.8	-0.5
	comp=Z,0.6nm,0.3s,baz=205,slow=3.1,SNR=5.3						
MK31	Makanchi Array	117.48	311	i PKIKP	PKPdf	13 40 51.8	-0.9
MKAR	Makanchi Array	117.48	311	PKP	PKPdf	13 40 52.5	-0.2
	comp=Z,2.2nm,0.8s,baz=79,slow=2.2,SNR=15						
NRIK	Noril'sk	118.36	336	PKP	PKiKP	13 40 54.4	+0.6
	comp=Z,1.3nm,0.6s,baz=79,slow=4.0,SNR=4.1						
BOSA	Boshof	119.55	202	i P	PKPdf	13 40 50.4	-7.1
BOSA				i		13 40 50.4	
	baz=124,slow=4.3						
BOSA	Boshof	119.55	202	i P	PKPdf	13 40 50.4	-7.1
BOSA				i		13 40 50.4	
	baz=124,slow=4.3						
KSH	Kashi	120.32	301	PKP	PKiKP	13 41 01.3	+2.6
KSH				PP	PP	13 42 27.8	+2.6
KSH				PKS	PKSdf	13 44 37.6	+2.3
KSH				SKKS		13 49 24.4	
KSH				LR	LR		
	comp=Z,380nm,10.6s						
KSH				LR	LR		
	comp=Z,350nm,12.2s						
KSH				LR	LR		
	comp=Z,340nm,12.4s						
KURK	Kurchatov	120.60	314	i PKIKP	PKPdf	13 40 57.6	-0.9
AAK	Ala-Archa	122.06	305	i PKIKP	PKPdf	13 40 59.2	-2.7
MATP	Matopo	125.72	209	i P	PKiKP	13 41 10.1	+0.1
MATP	Matopo	125.72	209	i P	PKiKP	13 41 10.1	+0.1
BRVK	Borovoye	125.94	317c	iPKIKP	PKPdf	13 41 08.2	-0.5
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
HOPEN	Hopen	130.75	353	ePKPdf	PKiKP	13 41 19.7	+1.6
HSPB	Hornsund (broa	131.03	356	ePKPdf	PKiKP	13 41 19.6	+0.9
ARU	Arti	132.36	322	i PKIKP	PKPdf	13 41 20.7	-0.1
GEYT	Alibeck	133.85	297	PKP	PKiKP	13 41 26.1	+0.5
	comp=Z,1.6nm,0.7s,baz=285,slow=2.9,SNR=4.7						
HAMF	Hammerfest	136.24	350	ePKPdf	PKiKP	13 41 29.0	-0.4
ARCES	ARCESS Array B	136.93	349	PKP	PKiKP	13 41 30.4	-0.5
	comp=Z,4.6nm,0.6s,baz=46,slow=1.3,SNR=5.9						
ARE0	ARCESS Array S	136.94	349	ePKPdf	PKiKP	13 41 31.2	+0.4
KTK1	Kautokeino	137.78	350	ePKPdf	PKiKP	13 41 32.4	-0.2
TRO	Tromso	137.81	352	ePKPdf	PKiKP	13 41 32.9	+0.3
H10S3	ASCENSION HYDR	138.91	152	T	T	16 16 38.7	
	baz=16,slow=74,SNR=0.4						
H10S2	ASCENSION HYDR	138.91	152	T	T	16 16 29.3	
	baz=204,slow=74,SNR=5.4						
KLMR	Klimovskoe	139.61	334	ePKIKP	PKPdf	13 41 28.9	-5.2
KLMR				pmax	pmax		
	comp=Z,45nm,2.3s						
KLMR	Klimovskoe	139.61	334	ePKPdf	PKPdf	13 41 29.0	-5.2
KLMR				AMP		13 41 50.4	
	comp=Z,45nm,2.3s						
H10N3	ASCENSION HYDR	139.98	152	T	T	16 19 05.6	
	baz=203,slow=75,SNR=22						
H10N1	ASCENSION HYDR	139.99	152	T	T	16 18 55.7	
	baz=203,slow=75,SNR=20						
H10N2	ASCENSION HYDR	140.00	152	T	T	16 19 02.8	
	baz=203,slow=75,SNR=11						
VRH	Novokhopyorsk	143.44	319	ePKIKP	PKPdf	13 41 42.3	+1.0
VRH				pmax	pmax		
	comp=Z,10.0nm,1.6s						
FINES	FINESS Array B	143.72	342	PKhKP	PKPpre	13 41 38.6	
	comp=Z,4.6nm,0.5s,baz=46,slow=5.3,SNR=35						
FINES	FINESS Array B	143.72	342	PKIKP	PKPbc	13 41 38.9	-0.2
FINES	FINESS Array B	143.72	342		PKPbc	13 41 38.9	-0.1
OBN	Obninsk	144.25	328	PKP	PKPbc	13 41 41.1	+0.2
	comp=Z,5.6nm,0.3s,baz=130,slow=21,SNR=3.2						
OBN	Obninsk	144.25	328	ePKIKP	PKPab	13 41 39.7	-0.8
OBN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LPSR	Galich'ya Gora	144.38	323	ePKIKP	PKPab	13 41 40.3	-0.8
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NCK	Nalchik	144.57	306	i PKIKP	PKPdf	13 41 43.6	0.0
VSR	Storozhevoye	144.89	320	ePKIKP	PKPbc	13 41 41.9	-1.2
VSR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TBLU	Trondheim	144.90	355	ePKPbc	PKPdf	13 41 43.0	-0.5
CLDR	Caldiran	144.97	298	eP	PKPdf	13 41 44.7	0.0
KBZ	Khabaz	145.02	307	PKP	PKPab	13 41 43.8	+0.1
	comp=Z,3.5nm,0.7s,baz=30,slow=7.8,SNR=8.3						
KBZ	Khabaz	145.02	307	i PKIKP	PKPbc	13 41 42.8	-0.9
KIV	Kislovodsk	145.12	307	ePKIKP	PKPbc	13 41 43.6	-0.6
KIV				pmax	pmax		
	comp=Z,26nm,0.9s						
SHA1	Shidzhatmaz	145.19	307	i PKIKP	PKPbc	13 41 44.4	-0.2
NEY	Neytrino	145.25	306	i PKIKP	PKPdf	13 41 43.1	-1.9
CUKT	Cukurca	145.35	295	eP	PKPab	13 41 45.5	+0.1
AGRB	Hanur-Agry	145.64	299	eP	PKPab	13 41 47.2	+0.7
MOL	Molde	145.76	357	ePKPdf	PKPab	13 41 46.1	+0.3
AKDM	Akdamar-Van	145.78	297	eP	PKPab	13 41 46.9	-0.1
VSU	Vasula	145.92	338	eP	PKPab	13 41 46.4	-0.2
VSU	Vasula	145.92	338c	iPKIKP	PKPbc	13 41 46.1	0.0
VSU				pmax	pmax		
	comp=Z,383nm,0.8s						
SENK	Senkaya-Erzuru	146.00	301	eP	PKPab	13 41 48.4	+0.6
AKN	Aaknes	146.18	357	ePKPdf	PKPab	13 41 47.6	+0.1
DOMB	Dombas	146.19	355	ePKPdf	PKPab	13 41 47.1	-0.4
SIRT	Sirnak	146.26	296	eP	PKPab	13 41 49.0	+0.2
BCA	Borcka	146.40	303	eP	PKPbc	13 41 48.1	-0.1
GURO	Guroymak-BITLI	146.50	298	eP	PKPab	13 41 49.8	+0.1
NC303	NORSAR Array S	146.79	353		PKPab	13 41 49.2	-0.7
NC405	NORSAR Array S	146.86	353		PKPab	13 41 49.7	-0.5
NB201	NORSAR Array S	146.97	353		PKPbc	13 41 49.6	+0.4
NB2	NORSAR Subarra	146.99	353	PKP	PKPbc	13 41 49.0	-0.2
	comp=Z,5.9nm,0.5s,baz=11,slow=2.9						
NOA	NORSAR Array B	146.99	353	PKPbc	PKPbc	13 41 49.2	0.0
	comp=Z,8.3nm,0.5s,baz=13,slow=4.4,SNR=27						
NBO00	NORSAR Array S	147.04	353		PKPbc	13 41 49.8	+0.5
HYA	Hoyanger	147.22	358	ePKPdf	PKPbc	13 41 49.2	-0.6
NC602	NORSAR Array S	147.25	353	ePKPdf	PKPbc	13 41 49.5	-0.4
NC602	NORSAR Array S	147.25	353		PKPbc	13 41 50.0	+0.1
SOC	Sochi	147.29	307	ePKHKP	PKPpre	13 41 43.5	
SOC				i		13 41 49.5	
SOC				ePPP	PPP	13 48 28.3	
SOC				eSSS	SSS	14 09 37.9	
SOC				pmax	pmax		
	comp=Z,14nm,0.9s						
SUE	Sulen	147.37	359	ePKPdf	PKPbc	13 41 49.9	-0.3
SUE				ePKPdf	PKPbc	13 41 49.9	-0.3
BNGB	Bingl	147.50	299	eP	PKPbc	13 41 52.1	+0.6
HFS	Hagfors	147.56	350	PKPbc	PKPbc	13 41 50.4	-0.3
	comp=Z,21nm,0.6s,baz=58,slow=3.7,SNR=48						
SKAR	Skarslia	147.60	356	ePKPdf	PKPbc	13 41 50.4	-0.5
MAZI	Mazidag	147.85	296	eP	PKPbc	13 41 52.2	-0.3
ASK	Askoy	147.94	358	ePKPdf	PKPbc	13 41 50.7	-1.0
BER	Bergen	148.04	358	ePKPbc	PKiKP	13 41 53.8	-0.1
IZAR	Zarasai	148.19	335	eP	PKiKP	13 41 54.0	-0.3
ISAL	Salakas	148.37	335	eP	PKiKP	13 41 54.4	-0.3
ANN	Anapa	148.50	310	i PKP2	PKPbc	13 41 54.2	+0.5
ANN				pmax	pmax		
	comp=Z,67nm,1.3s						
KONO	Kongsberg	148.52	354	ePKPdf	PKPbc	13 41 51.5	-1.8
NACGM	Naroch	148.63	334	e	PKPbc	13 41 53.0	-0.7
BLS5	Blasjo	148.96	357	epPKPdf	PKiKP	13 41 55.6	-0.2
PABE	Paberze	149.19	337	eP	PKiKP	13 41 55.9	-0.5
KMY	Karmoy	149.21	358	epPKPdf	PKiKP	13 41 55.9	-0.4
SNART	Snartemo	150.00	356	epPKPdf	PKiKP	13 41 57.5	-0.4
SVSK	Karacayir	150.15	301	eP	PKiKP	13 41 59.5	+0.7
AKASG	Malin Array Be	150.45	326	PKPbc	PKPbc	13 41 58.4	0.0
	comp=Z,22nm,0.8s,baz=44,slow=3.2,SNR=8.7						
AKASG	Malin Array Be	150.45	326	PKP2	PKiKP	13 41 58.8	-0.3
AKASG	Malin Array Be	150.45	326		PKiKP	13 41 58.8	-0.3
AKBB	Malin Array Si	150.45	326	PKP2	PKiKP	13 41 58.7	-0.4
AKBB	Malin Array Si	150.45	326		PKiKP	13 41 58.7	-0.4
SIM	Simferopol'	150.63	312	PKIKP	PKiKP	13 42 00.1	+0.4
SIM				pmax	pmax		
	comp=Z,23nm,1.1s						
KMRS	Kahramanmaras	150.65	297	eP	PKiKP	13 42 00.5	+0.5
ASF	Jabal al Asfar	150.95	286	PKPbc	PKiKP	13 42 00.8	-0.1
	comp=Z,3.3nm,0.8s,baz=298,slow=4.7,SNR=4.8						
MMAI	Mount Meron Ar	152.22	287	PKPbc	PKiKP	13 42 04.2	+0.7
	comp=Z,9.8nm,0.7s,baz=76,slow=6.1,SNR=8.8						
EIL	Elat	152.48	280	PKPbc	PKiKP	13 42 05.3	+1.3
	comp=Z,5.3nm,0.8s,baz=203,slow=22,SNR=5.0						
BRTR	Keskin Array B	152.71	302	PKPbc	PKiKP	13 42 04.4	0.0
	comp=Z,3.2nm,0.8s,baz=101,slow=2.5,SNR=12						
BRTR	Keskin Array B	152.71	302	PKIKP	PKiKP	13 42 05.0	+0.6
BRTR	Keskin Array B	152.71	302		PKiKP	13 42 05.0	+0.6
EKA	Eskdalemuir Ar	152.71	8	PKPbc	PKiKP	13 42 03.6	0.0
	comp=Z,0.8nm,0.4s,baz=337,slow=1.9,SNR=4.4						
EKA				PKPab	sPKPbc	13 42 14.9	+0.3
	comp=Z,3.9nm,0.8s,baz=348,slow=3.7,SNR=5.0						
LVV	L'vov	153.51	329	ePKIKP	PKPab	13 42 12.5	-5.3
CRVS	Cervenica-Dubn	155.31	331	ePKP2	PKPab	13 42 25.1	-0.4
CRVS	Cervenica-Dubn	155.31	331	ePKP	PKPab	13 42 25.1	-0.4
MLR	Muntele Rosu	155.38	320	PKPab	PKPab	13 42 26.7	+0.6
	comp=Z,3.5nm,0.7s,baz=32,slow=13,SNR=2.7						
OSTC	Ostas	155.88	340	ePKPAB	PKPab	13 42 28.8	+0.9
CHVC	Chvalec	155.91	340	ePKPAB	PKPab	13 42 28.3	+0.3
DPC	Dobruska-Polom	156.03	339	ePKPAB	PKPab	13 42 29.4	+0.8
DPC	Dobruska-Polom	156.03	339	ePKP2	PKPab	13 42 29.4	+0.8
CLL	Collm	156.05	345	ePKPdf	PKPdf	13 42 02.0	+0.9
CLL				ePKPdiff	sPKPdf	13 42 12.0	-0.3
CLL				i PKPab	PKPab	13 42 27.9	-0.6
	comp=Z,15nm,1.0s						
CLL				e		13 42 36.0	
CLL	Collm	156.05	345	ePKIKP	PKPdf	13 42 02.0	+0.9
CLL				e		13 42 12.0	
CLL				i		13 42 27.9	
CLL				pmax	pmax		
	comp=Z,15nm,1.0s						
KRLC	Kraliky	156.13	338	ePKPAB	PKPab	13 42 29.0	0.0
KRLC				ex	x	13 42 37.1	
KRLC	Kraliky	156.13	338	ePKP2	PKPab	13 42 29.0	0.0
MORC	Moravsky Berou	156.13	337	ePKP	PKPab	13 42 28.8	-0.2
BRG	Berggiesshubel	156.23	343	ePKP	PKPab	13 42 26.1	-3.2
	comp=Z,15nm,1.1s						
BRG	Berggiesshubel	156.23	343	ePKP2	PKPab	13 42 26.1	-3.2
BRG				pmax	pmax		
	comp=Z,15nm,1.1s						
VYHS	Vyhne	156.72	333	ePKP2	PKPab	13 42 31.6	+0.1
VYHS	Vyhne	156.72	333	ePKP	PKPab	13 42 31.6	+0.1
VRAC	Vranov	156.85	338	PKPab	PKPab	13 42 31.4	-0.7
	comp=Z,6.4nm,0.7s,baz=10,slow=3.7,SNR=5.7						
VRAC	Vranov	156.85	338	ePKP	PKPab	13 42 32.3	+0.2
JAVC	Velka Javorina	156.86	336	ePKP	PKPab	13 42 33.0	+0.8
PRU	Pruhonice	156.88	342	ePKPAB	PKPab	13 42 32.5	+0.4
PRU	Pruhonice	156.88	342	ePKP2	PKPab	13 42 32.5	+0.4
KRUC	Moravsky	157.13	338	ePKP	PKPab	13 42 33.4	+0.1
MODS	Modra-Piesok	157.41	335	ePKP2	PKPab	13 42 34.5	0.0
MODS	Modra-Piesok	157.41	335	ePKP	PKPab	13 42 34.5	0.0
KHC	Kasperske Hory	157.92	342	ePKPAB	PKPab	13 42 36.9	+0.2
KHC	Kasperske Hory	157.92	342	ePKP2	PKPab	13 42 36.9	+0.2
GERES	GERESS Array B	158.15	342	PKPab	PKPab	13 42 37.3	-0.5
	comp=Z,2.1nm,0.9s,baz=32,slow=5.2,SNR=7.7						
CONA	Conrad Observa	158.29	337	epPKPab	PKPab	13 42 38.8	+0.4
	comp=Z,5.8nm,0.8s						
MOA	Molln	158.88	339	i pPKPab	PKPab	13 42 41.2	+0.3
	comp=Z,1.5nm,0.4s						
ARSA	Arzberg	158.99	337	i PKPab	PKPab	13 42 41.4	0.0
	comp=Z,6.4nm,1.0s						
SOKA	Soboth	159.65	337	i PKPab	PKPab	13 42 44.0	-0.3
	comp=Z,6.3nm,0.8s						
RETA	Reutte	160.15	345	ePKPab	PKPab	13 42 45.8	-0.7
	comp=Z,6.3nm,0.8s						
MOTA	Moosalm	160.20	344	ePKPab	PKPab	13 42 46.8	-0.1
	comp=Z,10nm,1.2s						
SQTA	Sankt Quirin	160.30	344	i PKPab	PKPab	13 42 47.2	+0.1
	comp=Z,7.8nm,1.0s						
ABTA	Abfaltersbach	160.39	341	ePKPab	PKPab	13 42 46.8	-0.8
	comp=Z,7.7nm,0.9s						
DAVOX	Davos/Dischmat	161.01	346	PKPab	PKPab	13 42 50.5	+0.1
	comp=Z,2.7nm,0.5s,baz=41,slow=9.3,SNR=3.3						
TORD	Torodi Ar. Bea	164.69	174	PKP	PKPdf	13 42 13.5	+1.7
	comp=Z,1.6nm,0.8s,baz=320,slow=2.1,SNR=7.6						
TORD				PKPab	pPKPab	13 43 11.2	-3.9
	comp=Z,1.0nm,0.5s,baz=176,slow=3.8,SNR=4.3						
ESDC	Sonseca Array	167.23	27	PKP	PKPdf	13 42 15.2	+2.1
	comp=Z,0.1nm,0.3s,baz=27,slow=1.4,SNR=3.3						
ESDC				PKPab	PKPab	13 43 17.8	0.0
	comp=Z,0.3nm,0.3s,baz=323,slow=4.2,SNR=6.5						

DDA **07** *13:32:43.8, 42°.21N×46°.23E, h15^{km}±1^{km}, ML2.8*
NORS **07** *13:32:46.8±0.0, 41°.86N×46°.19E, h12^{km}, MPVA3.6*
TIF **07** *13:32:47.0, 41°.98N×46°.07E, h13^{km}±2^{km}*
NSSP **07** *13:32:46.0, 41°.85N×45°.98E, h10^{km}, Ms2.9*
MOS **07** *13:32:47.9±1.0, 41°.87N×46°.09E, h14^{km}, mb3.6/1, Error ellipse: s-maj=7.1km s-min=6.2km az=70.3*
ISC 07 13:32:48.9±0.8**, 41°.90N**±0°.02×**46°.08E**±0°.02**, h13**^{km}±6^{km}**, n56, σ1^{s}.14**/104**, 5C-1D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LGD	Lagodekhi	0.14	118	P	Pg	13 32 52.3	-0.1
LGD				S	Sg	13 32 55.2	+0.4
LGD	Lagodekhi	0.14	118	ePG	Pg	13 32 52.2	-0.1
LGD				eS	Sg	13 32 55.2	+0.4
DDFL	Dedoflistskaro	0.46	176	P	Pb	13 32 58.6	-0.2
DDFL				S	Sn	13 33 10.2	+0.9
DDFL	Dedoflistskaro	0.46	176	i P	Pb	13 32 58.9	+0.1
DDFL				i S	Sn	13 33 10.4	+1.1
DDFL	Dedoflistskaro	0.46	176	ePG	Pb	13 32 58.6	-0.2
DDFL				eS	Sn	13 33 10.2	+0.9
BTLR	Botlikh	0.77	8	ePg	Pg	13 33 02.9	-1.0
BTLR				eSg	Sg	13 33 14.3	+0.3
BTLR	Botlikh	0.77	8	i PG	Pg	13 33 02.8	-1.0
BTLR				eS	Sg	13 33 14.3	+0.3
BTLR				pmax	pmax		
	comp=Z,91nm,0.4s						
BTLR				smax	smax		
	comp=E,224nm,0.3s						
XNZR	Khunzakh	0.79	36	i Pg	Pg	13 33 03.4	-0.9
XNZR				eSg	Sg	13 33 14.8	+0.1
XNZR	Khunzakh	0.79	36	ePG	Pg	13 33 03.1	-1.2
XNZR				eS	Sg	13 33 14.8	+0.1
KMKR	Kumukh	0.80	73⇓	iPG	Pg	13 33 03.0	-1.3
KMKR				i S	Sb	13 33 16.0	+0.5
KMKR				pmax	pmax		
	comp=Z,59nm,0.2s						
GNBR	Gunib	0.82	53	i Pg	Pg	13 33 03.6	-1.2
GNBR				eSg	Sg	13 33 15.2	-0.3
GNBR	Gunib	0.82	53	i PG	Pg	13 33 03.5	-1.2
GNBR				eS	Sg	13 33 15.5	-0.1
GNBR				pmax	pmax		
	comp=Z,61nm,0.2s						
GNBR				smax	smax		
	comp=N,370nm,0.3s						
SEAG	Tbilisi Sea	0.96	262	P	Pb	13 33 05.5	-2.0
SEAG				S	Sb	13 33 19.7	-0.4
SEAG	Tbilisi Sea	0.96	262	ePG	Pb	13 33 05.5	-2.0
SEAG				eS	Sb	13 33 19.7	-0.4
UNCR	Uncukul	0.97	33⇑	iPG	Pb	13 33 06.0	-1.7
UNCR				eS	Sb	13 33 20.0	-0.5
UNCR				pmax	pmax		
	comp=Z,82nm,0.3s						
ARKR	Arakani	0.98	44	ePG	Pb	13 33 06.5	-1.3
ARKR				eS	Sg	13 33 21.0	+0.5
ARKR				pmax	pmax		
	comp=Z,75nm,0.4s						
TBLG	Delisi	1.01	261	P	Pb	13 33 07.2	-1.3
TBLG				S	Sb	13 33 21.5	-0.2
TBLG	Delisi	1.01	261	i P	Pb	13 33 07.1	-1.3
TBLG				i S	Sb	13 33 21.4	-0.2
TBLG	Delisi	1.01	261	ePG	Pb	13 33 07.1	-1.3
TBLG				eS	Sb	13 33 21.5	-0.2
KRNR	Karanay	1.11	33	ePG	Pb	13 33 09.2	-0.9
KRNR				i S	Sb	13 33 25.0	+0.5
KRNR				pmax	pmax		
	comp=Z,26nm,0.2s						
BUJR	Buynaksk	1.20	39	ePG	Pn	13 33 10.9	-0.6
BUJR				eS	Sn	13 33 27.9	+0.2
DLMR	Dylym	1.24	19	i PG	Pn	13 33 11.0	-1.0
DLMR				i S	Sn	13 33 29.0	+0.4
DLMR				pmax	pmax		
	comp=Z,43nm,0.2s						
AKT	Akhty	1.31	108	ePg	Pn	13 33 11.5	-1.6
AKT				eSg	Sb	13 33 29.2	-1.0
AKT	Akhty	1.31	108	ePG	Pn	13 33 11.6	-1.4
AKT				eS	Sb	13 33 29.1	-1.0
AKT				pmax	pmax		
	comp=Z,30nm,0.6s						
GUDG	Gudauri	1.32	296	P	Pn	13 33 10.7	-2.6
GUDG				S	Sb	13 33 28.6	-1.9
GUDG	Gudauri	1.32	296	ePG	Pn	13 33 10.6	-2.6
GUDG				eS	Sb	13 33 28.6	-1.9
GROC	Groznyy	1.32	351	ePg	Pb	13 33 13.8	+0.2
GROC				eSg	Sg	13 33 33.6	+2.2
GROC	Groznyy	1.32	351	ePG	Pb	13 33 13.7	+0.2
GROC				eS	Sg	13 33 32.9	+1.5
GROC				pmax	pmax		
	comp=Z,23nm,0.6s						
GROC				smax	smax		
	comp=N,85nm,0.6s						
KZRT	Kazreti	1.36	248	P	Pn	13 33 11.5	-2.3
KZRT				S	Sn	13 33 29.7	-1.9
KZRT	Kazreti	1.36	248	i P	Pn	13 33 11.4	-2.3
KZRT				i S	Sn	13 33 29.4	-2.2
KZRT	Kazreti	1.36	248	ePG	Pn	13 33 11.4	-2.3
KZRT				eS	Sn	13 33 29.7	-1.9
TRLG	Trialeti	1.52	257	P	Pn	13 33 14.7	-1.4
TRLG				S	Sn	13 33 35.1	-0.8
TRLG	Trialeti	1.52	257	ePG	Pn	13 33 14.6	-1.4
TRLG				eS	Sn	13 33 35.0	-0.8
STE	Stepanavan	1.57	236	eP	Pn	13 33 12.0	-4.6
LACR	Lac	1.61	306	i Pg	Pn	13 33 17.2	0.0
LACR				eSg	Sn	13 33 38.0	0.0
LACR	Lac	1.61	306	ePN	Pn	13 33 17.2	0.0
LACR				eS	Sn	13 33 38.2	+0.2
LACR				pmax	pmax		
	comp=Z,20nm,0.3s						
LACR				smax	smax		
	comp=E,88nm,0.4s						
ZEI	Tsey	1.84	300	ePg	Pn	13 33 21.1	+0.6
ZEI				eSg	Sb	13 33 45.1	-0.5
ZEI	Tsey	1.84	300	ePN	Pn	13 33 21.4	+0.9
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KAPZ	Kaputan	1.89	214	i P	Pn	13 33 20.6	-0.5
KAPZ				i S	Sn	13 33 45.8	+0.9
KORR	Kora	1.90	309	ePg	Pb	13 33 23.0	-0.5
KORR				eSg	Sb	13 33 47.7	+0.5
BKRG	Bakuriani	1.91	267	P	Pn	13 33 22.7	+1.2
BKRG				S	Sb	13 33 47.8	0.0
BKRG	Bakuriani	1.91	267	ePN	Pn	13 33 22.6	+1.2
BKRG				eS	Sb	13 33 47.7	0.0
GNI	Garni	2.02	210⇑	iP	Pn	13 33 23.2	+0.3
ONI	Oni	2.07	290	P	Pn	13 33 24.2	+0.8
ONI				S	Sb	13 33 52.5	+0.5
ONI	Oni	2.07	290	ePN	Pn	13 33 24.2	+0.8
ONI				eS	Sb	13 33 52.5	+0.5
DIGR	Digorskoe uzhe	2.10	299	ePg	Pn	13 33 25.5	+1.5
DIGR				eSg	Sb	13 33 53.0	-0.1
LSNR	Lesken	2.16	310	ePn	Pn	13 33 25.7	+1.0
LSNR				eSn	Sb	13 33 56.2	+1.6
NRKZ	NAREK	2.18	210	i P	Pn	13 33 26.0	+1.0
NRKZ				i S	Sb	13 33 55.8	+0.5
ARUZ	Aruch	2.21	224	i P	Pn	13 33 25.9	+0.5
ARUZ				i S	Sb	13 33 55.2	-0.9
METS	Metsamor	2.31	221	eP	Pn	13 33 26.1	-0.7
METS				eS	Sn	13 33 55.8	+0.6
DIGO	Kars	2.52	235	i P	Pn	13 33 30.0	+0.1
DIGO				i S	Sb	13 34 06.2	+0.9
DIGO				IAML		13 34 09.0	
	comp=E,16nm,0.9s						
DIGO				IAML		13 34 12.0	
	comp=N,20nm,0.6s						
EPOS	Posof	2.54	262	i P	Pn	13 33 30.6	+0.5
EPOS				i S	Sb	13 34 03.7	-2.0
KBZ	Khabaz	2.97	309⇑	ePN	Pn	13 33 35.6	-0.1
SHA1	Shidzhatmaz	3.12	307⇑	ePN	Pn	13 33 38.4	+0.4
AKASG	Malin Array Be	14.57	313	i P	Pn	13 36 16.3	+1.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	Kurchatov	23.98	57⇑	eP	P	13 38 05.1	+2.1

ANF **07** *13:35:04.0±1.0, 43°.18N×126°.54W, h0^{km}, ML3.4/10, Error ellipse: s-maj=9.6km s-min=7.4km az=133.0*
NEIC **07** *13:35:09.1±2.6, 43°.30N±0°.05×126°.2W±0°.1, h10^{km}±2^{km}, ML3.1/26, Error ellipse: s-maj=16.2km s-min=4.2km az=244.0*
IDC **07** *13:35:11.2±1.8, 43°.58N×125°.50W, h0^{km}, mb3.2/3, mb1 3.6/11, mb1mx3.5/50, mbtmp3.3/11, ML2.9/8, MS2.9/5, Ms1 2.9/5, ms1mx2.7/19, Error ellipse: s-maj=29.7km s-min=10.9km az=59.0*
ISC 07 13:35:08.3±3.2**, 43°.33N**±0°.05×**126°.18W**±0°.09**, h7**^{km}±18^{km}**, n51, σ1^{s}.70**/51**, mb3.3**/3**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KEBM	Edson Butte	1.43	108		Pn	13 35 33.6	-1.1
KEBM				IAML		13 35 57.2	
	comp=E,248nm,0.9s						
KEBM				IAML		13 36 05.9	
	comp=N,172nm,0.7s						
J01E	Myrtle Point	1.65	95	P	Pn	13 35 37.2	-0.6
	baz=274,SNR=17						
J01E				S	Sg	13 36 03.3	+1.8
	baz=274						
I02D	Swisshome	1.86	65	P	Pn	13 35 41.0	+0.4
	baz=244,SNR=17						
I02D				S	Sg	13 36 09.7	+1.5
	baz=244						
K02D	Willamette Mer	1.95	108	P	Pn	13 35 41.0	-1.0
	baz=287,SNR=83						
K02D				S	Sb	13 36 09.2	+0.4
	baz=287						
I03D	Drain, OR	2.10	79	P	Pn	13 35 44.5	+0.7
	baz=258,SNR=54						
I03D				S	Sg	13 36 15.6	0.0
	baz=258						
L02E	Cave Junction	2.23	121	P	Pn	13 35 45.1	-0.7
	baz=301						
COR	Corvallis	2.43	58		Pn	13 35 49.5	+1.1
COR				Sn	Sn	13 36 18.5	+0.2
COR				IAML		13 36 24.6	
	comp=N,70nm,2.0s						
COR				IAML		13 36 56.4	
	comp=N,70nm,1.7s						
HUMO	Hull Mountain	2.48	106		Pn	13 35 49.0	-0.1
H04D	Lebanon	2.76	63	P	Pb	13 35 55.6	-2.4
	baz=244,SNR=10						
I04A	Tendick Farm,	2.78	79	P	Pn	13 35 55.2	+1.9
	baz=260,SNR=19						
G03D	McMinnville, O	2.82	47	P	Pn	13 35 55.0	+1.3
	baz=228,SNR=6.0						
G03D				S	Sb	13 36 32.9	-0.8

	baz=228						
J04D	Umpqua Nationa	2.98	90	P	Pn	13 35 58.5	+2.4
	baz=271,SNR=18						
YBH	Yreka Blue Hor	3.02	121	Pn	Pn	13 35 56.8	+0.1
	comp=N,0.8nm,0.3s,baz=306,slow=11,SNR=17						
YBH				Lg	Lg	13 36 36.9	
	comp=N,0.4nm,0.3s,baz=254,slow=15,SNR=2.2						
YBH				LR	LR	13 36 39.8	
	comp=N,91nm,19.6s,baz=310,slow=32						
YBH	Yreka Blue Hor	3.02	121	Pn	Pn	13 35 56.8	+0.1
YBH				IAML		13 37 42.4	
	comp=E,19nm,4.1s						
L04D	Klamath Falls	3.06	110	P	Pn	13 35 59.1	+1.8
	baz=291,SNR=39						
F03A	Seaside	3.21	35	Pn	Pn	13 35 58.3	-0.7
J05D	Fort Rock, OR	3.61	89	P	Pn	13 36 06.6	+1.8
	baz=271,SNR=18						
I05D	Terrebonne, OR	3.65	72	P	Pn	13 36 07.0	+1.8
	baz=254,SNR=9.7						
F04A	Amboy	3.74	45		Pn	13 36 08.3	+1.9
PINE	Pine Mountain	3.84	81		Pn	13 36 09.8	+1.9
PINE				IAML		13 36 37.4	
	comp=E,28nm,3.5s						
PINE				IAML		13 38 02.9	
	comp=N,31nm,4.9s						
G05D	Wamic, OR	3.98	60	P	Pn	13 36 12.1	+2.3
	baz=242						
F05D	White Salmon	4.23	51	P	Pn	13 36 15.6	+2.4
	baz=234,SNR=22						
F05D				S	Sb	13 37 10.9	-3.5
	baz=234						
G06A	Carlson Farm,	4.42	63		Pn	13 36 17.2	+1.4
G06A				IAML		13 37 57.3	
	comp=E,23nm,4.9s						
LON	Longmire	4.62	41		Pn	13 36 20.7	+2.1
LON				IAML		13 37 33.3	
	comp=N,19nm,3.5s						
LON				IAML		13 39 04.3	
	comp=E,18nm,5.0s						
D05A	Enumclaw	4.86	36		Pn	13 36 21.6	-0.2
I07A	Izee	4.90	79		Pn	13 36 24.6	+2.1
I07A				IAML		13 38 28.7	
	comp=E,14nm,4.9s						
I07A				IAML		13 38 47.4	
	comp=N,14nm,4.9s						
F07A	Phinny Hill Vi	5.15	58		Pn	13 36 25.5	-0.3
LTY	Liberty	5.53	43		Pn	13 36 32.3	+1.2
E07A	Sunnyside	5.53	52		Pn	13 36 31.6	+0.5
G08A	Pilot Rock	5.54	67		Pn	13 36 33.5	+2.2
WVOR	Wild Horse Val	5.62	97	Pn	Pn	13 36 32.6	+0.2
BMO	Blue Mountains	6.57	74		Pn	13 36 47.3	+1.9
NVAR	Mina Array Bea	7.72	127	Pn	Pn	13 37 03.7	+2.4
	comp=N,0.1nm,0.3s,baz=300,slow=12,SNR=3.1						
LLLB	Lillooet	7.85	20	Pn	Pn	13 37 04.8	+1.8
NEW	Newport	8.02	49	Pn	Pn	13 37 02.7	-2.6
	comp=N,0.1nm,0.3s,baz=170,slow=12,SNR=2.4						
NEW				LR	LR	13 39 15.7	
	comp=N,100nm,19.5s,baz=244,slow=33						
NEW	Newport	8.02	49	Pn	Pn	13 37 06.4	+1.1
ELK	Elko	8.54	104	Pn	Pn	13 37 12.5	-0.2
	comp=N,0.1nm,0.3s,baz=187,slow=16,SNR=2.4						
ELK				LR	LR	13 40 47.3	
	comp=N,73nm,21.9s,baz=282,slow=41						
PDAR	Pinedale Array	12.18	87	Pn	Pn	13 38 04.1	+1.7
	comp=N,0.0nm,0.3s,baz=282,slow=14,SNR=5.6						
PDAR				LR	LR	13 42 48.9	
	comp=N,88nm,20.5s,baz=315,slow=39						
DLBC	Dease Lake	15.32	352	Pn	P	13 38 46.8	-2.9
	comp=N,0.0nm,0.3s,baz=150,slow=8.1,SNR=2.6						
ANMO	Albuquerque	17.41	112	Pn	Pn	13 39 11.6	-0.3
	comp=N,0.1nm,0.3s,baz=349,slow=10,SNR=2.5						
YKA	Yellowknife Ar	20.36	16	P	P	13 39 44.1	-1.1
	comp=N,0.1nm,0.3s,baz=206,slow=10,SNR=9.6						
ULM	Lac du Bonnet	21.77	61	P	P	13 39 59.4	-1.0
	comp=N,1.2nm,0.6s,baz=280,slow=11,SNR=4.3						
TXAR	Lajitas Array	22.80	120	P	P	13 40 14.1	+2.4
	comp=N,0.5nm,0.9s,baz=299,slow=8.2,SNR=5.6						
ILAR	Eielson Array	24.45	339	P	P	13 40 30.6	+3.2
	comp=N,0.6nm,0.9s,baz=163,slow=7.4,SNR=6.0						
INK	Inuvik	25.34	354	LR	LR	13 50 26.6	
	comp=N,44nm,18.2s,baz=320,slow=36						
H11N3	WAKE ISLAND Hy	60.07	269	T	T	14 49 37.9	
	baz=51,slow=75,SNR=56						
H11N2	WAKE ISLAND Hy	60.07	269	T	T	14 49 47.5	
	baz=51,slow=75,SNR=39						
H11N1	WAKE ISLAND Hy	60.09	269	T	T	14 49 34.6	
	baz=51,slow=75,SNR=32						
H11S1	WAKE ISLAND Hy	60.99	269	T	T	14 50 53.1	
	baz=50,slow=75,SNR=195						
H11S2	WAKE ISLAND Hy	60.99	269	T	T	14 50 53.3	
	baz=50,slow=75,SNR=141						
H11S3	WAKE ISLAND Hy	61.01	269	T	T	14 50 54.4	
	baz=50,slow=75,SNR=144						

IDC 07 13:39:33.4±5.5**, 5°.70S×133°.69E, h0km, mb3.5**/1**, mb1 3.7**/3**, mb1mx3.4**/25**, mbtmp3.5**/3**, ML3.2**/2**, Error ellipse: s-maj=309.8km s-min=33.1km az=78.0, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.18	178	Pn	Pn	13 42 53.4	-2.2
	0.1nm,0.3s,baz=353,slow=13,SNR=5.8						
WRA				Sn	Sn	13 45 24.4	-9.3
	0.1nm,0.3s,baz=352,slow=24,SNR=3.7						
WRA				Lg	Lg	13 46 58.6	
	0.0nm,0.3s,baz=3.3,slow=30,SNR=3.5						
ASAR	Alice Springs	17.87	179	P	P	13 43 44.8	+0.5
	0.2nm,0.3s,baz=9.5,slow=12,SNR=20						
ASAR				S	Sn	13 46 52.5	-11
	0.0nm,0.3s,baz=359,slow=23,SNR=3.8						
MKAR	Makanchi Array	69.21	325	P	P	13 50 42.1	0.0
	0.4nm,0.7s,baz=123,slow=7.6,SNR=3.9						

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*IDC **07** 13:56:19.6±1.6, 34°.87N×83°.19E, h0km, mb3.2/6, mb1 3.5/9, mb1mx3.3/38, mbtmp3.3/9, ML2.8/3, Error ellipse: s-maj=37.3km s-min=24.8km az=56.0*

ISC 07 13:56:24.9±1.3**, 34°.9N**±0°.2×**83°.2E**±0°.2**, h35km, n9, σ1s.23**/9**, mb3.3**/5**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	11.88	357	Pn	Pn	13 59 11.4	-0.3
	0.2nm,0.3s,baz=177,slow=11,SNR=9.7						
KURBB	Kurchatov Arra	16.05	349	Pn	Pn	14 00 06.0	-1.7
	0.0nm,0.3s,baz=164,slow=11,SNR=5.7						
ZALV	Zalesovo Beam	19.06	3	P	P	14 00 43.0	-0.9
	0.1nm,0.3s,baz=182,slow=10,SNR=2.5						
BVAR	Borovoye Array	20.25	337	P	P	14 00 57.8	+0.9
	0.3nm,0.6s,baz=142,slow=7.3,SNR=2.8						
CMAR	Chiang Mai Arr	21.57	135	P	P	14 01 10.7	-0.7
	0.3nm,0.3s,baz=312,slow=12,SNR=3.9						
SONM	Songino Array	21.57	46	P	P	14 01 13.0	+1.6
	0.3nm,0.8s,baz=252,slow=8.9,SNR=2.3						
BRTR	Keskin Array B	39.29	292	P	P	14 03 50.8	+0.3
	0.3nm,0.3s,baz=79,slow=11,SNR=2.4						
ILAR	Eielson Array	73.21	20	P	P	14 07 51.1	-0.7
	0.8nm,0.8s,baz=318,slow=5.2,SNR=7.8						
YKA	Yellowknife Ar	81.87	8	P	P	14 08 40.9	+0.7
	0.1nm,0.3s,baz=336,slow=4.9,SNR=3.1						

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*THE **07** 14:09:59.2, 38°.17N×20°.28E, h8km±1km, ML2.6/4, Error ellipse: s-maj=1.3km s-min=0.6km az=84.0*
*ATH **07** 14:09:59.5, 38°.20N×20°.29E, h8km±2km, ML2.7/4, Error ellipse: s-maj=2.7km s-min=1.2km az=89.0*

ISC 07 14:09:58.0±2.3**, 38°.17N**±0°.04×**20°.21E**±0°.10**, h9km**±6km**, n31, σ0s.58**/52**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF3	Kipouria, Keph	0.11	73	P	Pg	14 10 01.1	+0.4
KEF3				S	Sg	14 10 02.3	-0.4
CHV1	Chavriata, Kef	0.13	84	P	Pg	14 10 01.5	+0.5
CHV1				S	Sg	14 10 02.8	-0.4
AGT1	Agia Thekli	0.16	59	P	Pg	14 10 01.8	+0.4
AGT1				S	Sg	14 10 03.7	-0.1
LXRA	Lixouri, Kepha	0.18	80	P	Pg	14 10 02.3	+0.5
LXRA				S	Sg	14 10 04.4	0.0
LXR1	Lixouri, Cepha	0.18	80	P	Pg	14 10 02.2	+0.4
LXR1				S	Sg	14 10 04.3	-0.1
KEF4	Livadi, Kephal	0.19	62	P	Pg	14 10 02.3	+0.3
KEF4				S	Sg	14 10 03.8	-0.9
ARGA	Argostoli. Kep	0.21	88	P	Pg	14 10 02.9	+0.5
ARGA				S	Sg	14 10 05.3	0.0
KEF2	Argostoli. Kep	0.22	91	P	Pg	14 10 03.0	+0.5
KEF2				S	Sg	14 10 05.6	+0.1
ARG2	Argostoli	0.22	88	P	Pg	14 10 03.0	+0.5
ARG2				S	Sg	14 10 05.4	-0.1
KEF1	Kardakata, Kep	0.23	62	P	Pg	14 10 03.0	+0.3
KEF1				S	Sg	14 10 05.6	-0.3
VLS	Valsamata	0.30	89	P	Pg	14 10 04.0	+0.1
VLS				S	Sg	14 10 07.6	-0.4
	8μm,0.1s						
VLS	Valsamata	0.30	89	P	Pg	14 10 04.1	+0.1
VLS				S	Sg	14 10 07.5	-0.4
VLS				AML	AML	14 10 07.8	
	comp=N,20906μm,0.2s						
VLS				AML	AML	14 10 07.8	
	comp=E,12237μm,0.1s						
KONA	Konidatara, Ke	0.38	48	P	Pg	14 10 05.7	+0.2
KONA				S	Sg	14 10 10.5	0.0
KONA				AML	AML	14 10 11.5	
	comp=E,1929μm,0.3s						
KONA				AML	AML	14 10 13.3	
	comp=N,2393μm,0.3s						
FSK	Fiskardo	0.40	43	P	Pg	14 10 05.9	0.0
FSK				S	Sg	14 10 11.3	+0.1
FSK	Fiskardo	0.40	43	P	Pg	14 10 06.1	+0.2
FSK				S	Sg	14 10 11.3	+0.1
FSK				AML	AML	14 10 11.7	
	comp=N,1452μm,0.3s						
FSK				AML	AML	14 10 12.2	
	comp=E,2706μm,0.4s						
KFL	Anninata	0.46	97	P	Pg	14 10 07.0	0.0
KFL				S	Sg	14 10 13.1	+0.1
	comp=E,2μm,0.3s						
KFL	Anninata	0.46	97	P	Pg	14 10 07.3	+0.3
KFL				S	Sg	14 10 12.9	-0.1
KFL				AML	AML	14 10 14.3	
	comp=N,3876μm,0.3s						
KFL				AML	AML	14 10 17.6	
	comp=E,2950μm,0.4s						
EVGI	Lefkada island	0.57	38	P	Pg	14 10 09.3	+0.2
EVGI				S	Sb	14 10 17.6	-0.8
EVGI	Lefkada island	0.57	38	P	Pg	14 10 09.4	+0.2
MGNA	Meganis	0.67	43	P	Pg	14 10 10.9	0.0
KRI1	kERI	0.70	137	P	Pg	14 10 11.5	0.0
LKD2	Lefkada island	0.71	29	P	Pg	14 10 12.2	+0.5
LKD2	Lefkada island	0.71	29	P	Pg	14 10 12.4	+0.6
TSLK	Tsoukalades, L	0.74	28	P	Pg	14 10 12.8	+0.5
TSLK	Tsoukalades, L	0.74	28	P	Pg	14 10 12.2	-0.1
PDO	Prodromos	0.88	60	P	Pg	14 10 14.5	-0.3
PDO				S	Sb	14 10 26.6	-0.5
	comp=E,360nm,0.4s						
PDO	Prodromos	0.88	60	P	Pg	14 10 14.6	-0.3
PVO	Paravola	1.12	66	P	Pg	14 10 19.2	-0.4
PVO				S	Sn	14 10 36.0	+0.6
	comp=E,168nm,0.4s						
PVO	Paravola	1.12	66	P	Pg	14 10 19.3	-0.3
DRO	Drossia	1.20	100	P	Pg	14 10 20.8	-0.3
KALE	Kalithea	1.53	81	P	Pn	14 10 25.4	-0.2
KALE				S	Sg	14 10 50.4	+3.1

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*DJA **07** 14:19:51.4±0.6, 5°N±3°×9°7E±°, h10km, M4.2/7, mB6.3/1, mb5.7/1, MLv3.5/7, Mw(mB)6.0/1*
*IDC **07** 14:19:53.0±2.2, 2°.72N×95°.93E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.2/40, mbtmp3.3/4, ML3.1/1, Error ellipse: s-maj=72.8km s-min=27.0km az=50.0*

ISC 07 14:19:51.1±1.2**, 4°.75N**±0°.05×**96°.61E**±0°.08**, h10km, n12, σ1s.26**/13**, mb3.5**/3**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLSI	Meulaboh, Aceh	0.53	203	P	Pg	14 20 01.9	+0.5
MLSI				S	Sb	14 20 10.5	+0.3
LHMI	Lhok Sumawe	0.58	35	P	Pb	14 20 04.0	+0.6
LHMI				S	Sb	14 20 11.3	-0.4
TPTI		1.59	159	P	Pn	14 20 19.5	+0.2
TPTI				S	Sn	14 20 39.7	-0.2
KCSI	Kotacane, Aceh	1.68	137	P	Pn	14 20 21.2	+0.5
KCSI				S	Sb	14 20 43.2	-0.3
PSI	Prapat	3.01	130	Pn	Pn	14 20 41.9	+2.8
	2.3nm,0.3s,baz=309,slow=14,SNR=9.2						
PSI				Sn	Sg	14 21 27.9	-0.2
	3.0nm,0.3s,baz=311,slow=16,SNR=4.8						
KRJI	Kerinci	8.35	144	P	Pn	14 21 52.9	+0.5
H08S2	Diego Garcia H	27.03	243	T	T	14 52 36.6	
	baz=62						
H08S3	Diego Garcia H	27.03	243	T	T	14 52 37.4	
	baz=62						
H08S1	Diego Carcia H	27.05	243	T	T	14 52 39.0	
	baz=62						
MKAR	Makanchi Array	43.68	346	P	P	14 28 13.9	+18
	0.2nm,0.5s,baz=168,slow=9.0,SNR=3.3						
WRA	Warramunga Arr	44.47	125	P	P	14 28 01.3	-1.6
	0.4nm,0.5s,baz=297,slow=8.8,SNR=6.6						
ASAR	Alice Springs	46.04	129	P	P	14 28 13.6	-1.9
	0.4nm,0.6s,baz=305,slow=7.7,SNR=7.1						

IDC 07 14:30:31.1±2.4**, 3°.78N×126°.18E, h0km, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.2**/41**, mbtmp3.3**/3**, Error ellipse: s-maj=213.2km s-min=28.6km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	24.90	162	P	P	14 35 56.2	+0.3
	0.2nm,0.3s,baz=340,slow=10,SNR=4.8						
ASAR	Alice Springs	28.30	165	P	P	14 36 26.2	-0.4
	0.2nm,0.6s,baz=347,slow=8.0,SNR=4.2						
MKAR	Makanchi Array	57.20	325	P	P	14 40 20.1	0.0
	0.2nm,0.5s,baz=121,slow=8.7,SNR=4.0						

IDC 07 14:33:16.2±3.8**, 5°.49S×131°.33E, h0km, mb3.3**/1**, mb1 3.3**/3**, mb1mx3.1**/35**, mbtmp3.1**/3**, ML3.2**/2**, Error ellipse: s-maj=263.0km s-min=32.6km az=73.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.66	169	Pn	Pn	14 36 45.2	+0.1
	0.1nm,0.3s,baz=350,slow=11,SNR=9.4						
WRA				Sn	Sn	14 39 13.7	-15
	0.1nm,0.3s,baz=344,slow=20,SNR=5.9						
ASAR	Alice Springs	18.24	172	P	Pn	14 37 30.7	-0.3
	0.1nm,0.3s,baz=346,slow=10,SNR=6.4						
MKAR	Makanchi Array	67.71	326	P	P	14 44 15.6	+0.1
	0.1nm,0.4s,baz=109,slow=8.1,SNR=3.8						

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*INET **07** 14:40:06.9, 12°.44N×87°.76W, h61km, ML3.7*
*UCR **07** 14:40:06.9±0.6, 12°.52N×87°.83W, h65km±15km, ML3.9*
*SNET **07** 14:40:06.8±0.5, 12°.50N×87°.85W, h58km±16km, ML3.9*

ISC 07 14:40:05.7±4.3**, 12°.4N**±0°.2×**87°.8W**±0°.1**, h50km, n13, σ0s.30**/18**, 2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	0.88	357	⇓ iP	Pn	14 40 21.9	-0.1
CNCH				eS	Sn	14 40 34.5	+0.6
CNCH				IAML		14 40 38.1	
	comp=Z,4μm,0.2s						
CNCH	Conchagua	0.88	357	⇓ iP	Pn	14 40 21.9	-0.1
CNCH				eS	Sn	14 40 34.5	+0.6
CNCH				IAML		14 40 38.1	
	comp=Z,4μm,0.2s						
BLLM	Bellamira	1.13	337	eP	Pn	14 40 24.9	-0.4
BLLM	Bellamira	1.13	337	eP	Pn	14 40 24.9	-0.4
LCY	Lacayo	1.14	335	eP	Pn	14 40 25.4	0.0
LCY	Lacayo	1.14	335	eP	Pn	14 40 25.4	0.0
PACA	Pacayal	1.19	334	eP	Pn	14 40 26.1	0.0
PACA				eS	Sn	14 40 41.1	-0.2
PACA	Pacayal	1.19	334	eP	Pn	14 40 26.1	0.0
PACA				eS	Sn	14 40 41.1	-0.2
TECA	Tecapa	1.30	328	eP	Pn	14 40 27.8	+0.1
TECA	Tecapa	1.30	328	eP	Pn	14 40 27.8	+0.1
TGUH	Tegucigalpa,Un	1.73	17	eP	Pn	14 40 33.4	-0.1
TGUH	Tegucigalpa,Un	1.73	17	eP	Pn	14 40 33.4	-0.1
LFRS	El Faro	1.74	315	eP	Pn	14 40 34.0	+0.3
LFRS				eS	Sn	14 40 54.5	-0.3

IDC 07 14:55:06.5±2.4**, 2°.02N×127°.55E, h0km, mb3.3**/3**, mb1 3.6**/3**, mb1mx3.3**/39**, mbtmp3.4**/3**, Error ellipse: s-maj=181.5km s-min=27.5km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.82	163	P	P	15 00 10.2	-1.1
	0.4nm,0.4s,baz=342,slow=10,SNR=15						
ASAR	Alice Springs	26.27	167	P	P	15 00 44.5	+0.7
	0.7nm,0.4s,baz=344,slow=11,SNR=18						
MKAR	Makanchi Array	59.42	325	P	P	15 05 11.1	0.0
	0.1nm,0.3s,baz=142,slow=6.9,SNR=3.1						

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*TIF **07** 15:18:24.5, 43°.83N×43°.12E, h7km±5km*
*NEIC **07** 15:18:25.9±2.6, 43°.96N±0°.07×43°.09E±0°.06, h6km±4km, mb4.1/5, Error ellipse: s-maj=10.4km s-min=5.1km az=164.0*
*IDC **07** 15:18:25.2±0.6, 43°.75N×43°.12E, h0km, mb3.8/15, mb1 3.9/22, mb1mx3.8/49, mbtmp3.8/22, ML2.9/2, MS3.4/6, Ms1 3.5/6, ms1mx2.9/52, Error ellipse: s-maj=7.9km s-min=4.3km az=172.0*
*MOS **07** 15:18:25.9±1.2, 43°.89N×43°.02E, h11km, mb4.2/2, Error ellipse: s-maj=5.1km s-min=3.2km az=120.2*
MOS Felt (III) at Khabaz, (II-III) at Kislovodsk, Pyatigorsk, Essentuki, Uchkeken, Dzheguta.
*NORS **07** 15:18:27.1±0.0, 43°.72N×43°.00E, h6km, MPVA4.7, Felt I=III MSK at Khabaz; I=II-III MSK at Kislovodsk, Pyatigorsk, Essentuki, Uchkeken, Djeguta*
*NNC **07** 15:18:36.1±3.9, 44°.13N×44°.58E, h0km, mb4.2, Error ellipse: s-maj=28.3km s-min=22.4km az=84.0*

ISC 07 15:18:25.8±0.9**, 43°.85N**±0°.02×**43°.07E**±0°.01**, h9km**±6km**, n202, σ2s.12**/275**, mb4.1**/21**, MS3.2**/3**, 17C-27D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBZ	Khabaz	0.17	227	Pg	Pg	15 18 29.1	-0.3
	10μm,0.3s,baz=60,slow=9.3						
KBZ				Lg	Lg	15 18 31.3	
	21μm,0.3s,baz=156,slow=20,SNR=750						
KBZ				LR	LR	15 18 33.3	
	comp=Z,324nm,20.6s,baz=158,slow=51						
KVAR	Kislovodsk Arr	0.29	292	Pg	Pb	15 18 32.8	-0.5
	baz=127,slow=11,SNR=6560						
KVAR				Lg	Lg	15 18 36.5	
	baz=134,slow=13						
KIV	Kislovodsk	0.30	292	P	Pg	15 18 32.3	+0.5
KIV				S	Sg	15 18 36.2	+0.5
KIV	Kislovodsk	0.30	292	⇑ iPG	Pg	15 18 32.2	+0.5
KIV				eS	Sg	15 18 36.0	+0.3
KIV	Kislovodsk	0.30	292		Pg	15 18 31.9	+0.2
SHA1	Shidzhatmaz	0.32	250	i Pg	Pg	15 18 32.0	-0.2
SHA1				eSg	Sg	15 18 36.1	-0.3
SHA1	Shidzhatmaz	0.32	250	⇑ iPG	Pg	15 18 31.9	-0.3
NCK	Nalchik	0.52	132	i Pg	Pb	15 18 36.6	-0.5
NCK				eSg	Sb	15 18 44.2	-0.6
NCK	Nalchik	0.52	132	⇑ iPG	Pg	15 18 36.5	+0.6
NCK				eS	Sb	15 18 44.1	-0.6
NEY	Neytrino	0.65	203	i Pg	Pg	15 18 37.6	-0.8
NEY				eSg	Sg	15 18 45.0	-1.9
NEY	Neytrino	0.65	203	d iPG	Pg	15 18 37.3	-1.0
LSNR	Lesken	0.79	136	ePg	Pb	15 18 41.8	0.0
LSNR				eSg	Sb	15 18 53.3	+0.7
LSNR	Lesken	0.79	136	ePG	Pb	15 18 41.8	0.0
LSNR				eS	Sb	15 18 53.3	+0.7
STDR	Stavd-Durt	0.87	123	ePg	Pn	15 18 44.0	-0.2
STDR				eSg	Sn	15 18 58.3	+1.2
STDR	Stavd-Durt	0.87	123	⇑ ePG	Pb	15 18 43.6	+0.6
STDR				eS	Sn	15 18 58.2	+1.2
PRTR	Priterechnaya	0.88	96	ePg	Pn	15 18 44.7	+0.2
PRTR				eSg	Sn	15 18 58.8	+1.4
PRTR	Priterechnaya	0.88	96	⇓ iPG	Pn	15 18 44.6	+0.1
PRTR				eS	Sn	15 18 58.7	+1.3
DIGR	Digorskoe uzhe	1.02	158	i Pg	Pg	15 18 44.5	-0.9
DIGR				eSg	Sg	15 18 56.5	-2.1
DIGR	Digorskoe uzhe	1.02	158	⇓ iPG	Pg	15 18 44.5	-0.9
KORR	Kora	1.05	136	i Pg	Pb	15 18 46.5	+0.3
KORR				eSg	Sn	15 19 01.9	+0.3
KORR	Kora	1.05	136	⇑ iPG	Pb	15 18 46.5	+0.3
KORR				eS	Sn	15 19 01.9	+0.3
NVNR	Nevinnomyssk	1.10	314	⇓ iPG	Pn	15 18 47.6	+0.1
NVNR				eS	Sn	15 19 02.5	-0.4
ARNR	Ardon	1.11	127	i Pg	Pn	15 18 48.4	+0.8
ARNR				eSg	Sn	15 19 05.3	+2.3
ARNR	Ardon	1.11	127	⇓ iPG	Pn	15 18 48.3	+0.8
ARNR				eS	Sn	15 19 03.3	+0.3
BTKR	Batakoyurt	1.17	113	ePg	Pn	15 18 49.8	+1.4
BTKR				eSg	Sn	15 19 08.3	+3.7
BTKR	Batakoyurt	1.17	113	⇓ iPG	Pn	15 18 49.7	+1.3
BTKR				eS	Sn	15 19 08.3	+3.7
TRKR	Terskaya	1.21	95	i Pg	Pg	15 18 50.4	+1.4
TRKR				eSg	Sn	15 19 08.6	+3.1
TRKR	Terskaya	1.21	95	⇑ iPG	Pg	15 18 50.4	+1.4
TRKR				eS	Sn	15 19 08.6	+3.1
GOF	Gofitskoye	1.21	359	⇓ iPG	Pg	15 18 50.8	+1.7
GOF				eS	Sn	15 19 08.9	+3.3
ZEI	Tsey	1.22	150	i Pg	Pb	15 18 48.5	-0.7
ZEI				eSg	Sg	15 19 03.5	-1.5
ZEI	Tsey	1.22	150	⇓ iPG	Pb	15 18 48.5	-0.7
ONI	Oni	1.29	167	P	Pn	15 18 49.5	-0.5
ONI				S	Sb	15 19 05.8	-1.0
ONI	Oni	1.29	167	P	Pn	15 18 49.9	-0.1
ONI				S	Sb	15 19 05.9	-1.0
ONI	Oni	1.29	167	ePG	Pn	15 18 49.5	-0.5
ONI				eS	Sb	15 19 05.8	-1.0
ARXR	Arkhyz	1.33	258	⇓ iPG	Pn	15 18 50.0	-0.8
ARXR				i S	Sb	15 19 07.2	-1.1
LACR	Lac	1.36	138	i Pg	Pn	15 18 51.1	0.0
LACR				eSg	Sb	15 19 09.2	+0.2
LACR	Lac	1.36	138	i PG	Pn	15 18 51.1	0.0
LACR				pmax	pmax		
	comp=Z,4μm,0.3s						
VLKR	Vladikavkaz	1.42	124	ePg	Pg	15 18 53.1	+0.1
VLKR				ePg	Pg	15 18 53.1	+0.1
VLKR				eSg	Sg	15 19 13.2	+1.8
VLKR				eSg	Sg	15 19 13.2	+1.8
VLKR	Vladikavkaz	1.42	124	ePG	Pg	15 18 53.2	+0.1
VLKR				eS	Sg	15 19 13.2	+1.8
TKB	Tkibuli	1.50	182	P	Pb	15 18 54.0	+0.1
TKB				S	Sb	15 19 13.3	+0.4
TKB	Tkibuli	1.50	182	ePG	Pb	15 18 53.9	+0.1
TKB				eS	Sb	15 19 13.3	+0.4
KMGR	Komgaron	1.53	120	ePg	Pg	15 18 55.3	+0.2
KMGR				eSg	Sg	15 19 18.4	+3.5
KMGR	Komgaron	1.53	120	ePG	Pg	15 18 55.3	+0.2
KMGR				eS	Sg	15 19 18.4	+3.5
GUDG	Gudauri	1.72	143	P	Pn	15 18 56.2	0.0
GUDG				S	Sn	15 19 19.1	+0.6
GUDG	Gudauri	1.72	143	ePN	Pn	15 18 56.2	0.0
RPOR	Krasnaya Polya	2.04	267	i PN	Pn	15 19 01.3	+1.0
RPOR				eS	Sb	15 19 29.2	+0.8
GROC	Groznyy	2.09	107	i Pg	Pb	15 19 02.6	-1.2
GROC				eSg	Sb	15 19 29.5	-0.3
GROC	Groznyy	2.09	107	⇓ iPN	Pb	15 19 02.6	-1.2
GROC				eS	Sb	15 19 29.5	-0.3
BKRG	Bakuriani	2.11	171	P	Pn	15 19 03.0	+1.4
BKRG				S	Sb	15 19 31.8	+1.0
BKRG	Bakuriani	2.11	171	ePN	Pn	15 19 02.5	+1.0
BKRG				eS	Sb	15 19 31.7	+1.0
GUZR	Guzeripl'	2.14	275	⇓ iPN	Pb	15 19 03.5	-1.2
GUZR				i S	Sb	15 19 31.3	-0.1
TRLG	Trialeti	2.43	161	P	Pb	15 19 08.4	-1.4
TRLG				S	Sg	15 19 42.3	-1.5
TRLG	Trialeti	2.43	161	ePN	Pb	15 19 08.3	-1.4
TRLG				eS	Sg	15 19 42.3	-1.5
SOC	Sochi	2.44	265	ePN	Pn	15 19 08.1	+2.2
SOC				e		15 19 40.4	
SOC				pmax	pmax		
	comp=Z,244nm,0.5s						
SOC				smax	smax		
	comp=E,707nm,0.6s						
SOC				smax	smax		
	comp=N,285nm,0.5s						
TBLG	Delisi	2.44	149	P	Pn	15 19 07.6	+1.6
TBLG	Delisi	2.44	149	P	Pn	15 19 06.7	+0.7
TBLG	Delisi	2.44	149	PN	Pn	15 19 07.5	+1.6
TBLG	Delisi	2.44	149		Pn	15 19 07.5	+1.6
AKH	Akhalkalaki	2.45	173	P	Pb	15 19 10.7	+0.5
AKH				S	Sb	15 19 42.5	+1.9
AKH	Akhalkalaki	2.45	173	P	Pn	15 19 06.9	+0.7

AKH	Akhalkalaki	2.45	173	*e*PN	Pb	15 19 10.7	+0.5
AKH				*e*S	Sb	15 19 42.5	+1.9
AKH	Akhalkalaki	2.45	173		Pb	15 19 08.7	-1.5
BATM	Batumi	2.46	205	P	Pb	15 19 11.3	+1.1
BATM				S	Sg	15 19 43.5	-1.3
BATM	Batumi	2.46	205	P	Pn	15 19 07.1	+1.0
BATM	Batumi	2.46	205	*e*PN	Pb	15 19 08.9	-1.3
BATM				*e*S	Sb	15 19 41.5	+0.9
BTNK	Botanikuri	2.51	149	P	Pn	15 19 08.1	+1.2
BTNK				S	Sg	15 19 45.1	-1.3
BTNK	Botanikuri	2.51	149	*e*PN	Pn	15 19 08.0	+1.2
BTNK				*e*S	Sg	15 19 45.1	-1.3
BTLR	Botlikh	2.59	116	*e*Pn	Pn	15 19 08.8	+0.8
BTLR				*e*Sn	Sb	15 19 42.8	-1.6
BTLR	Botlikh	2.59	116	*e*PN	Pn	15 19 08.8	+0.8
BTLR				*e*S	Sb	15 19 42.8	-1.6
BGD	Bogdanovka	2.61	171	P	Pb	15 19 11.3	-1.6
BGD				S	Sb	15 19 47.0	+1.8
BGD	Bogdanovka	2.61	171	*e*PN	Pb	15 19 11.3	-1.6
BGD				*e*S	Sb	15 19 46.9	+1.8
ERBR	Yeremizino-Bor	2.62	316	⇑*e*PN	Pb	15 19 12.6	-0.4
ERBR				*e*S	Sb	15 19 45.4	+0.1
BCA	Borcka	2.62	204	P	Pn	15 19 09.9	+1.5
KZRT	Kazreti	2.65	158	P	Pn	15 19 09.9	+1.2
KZRT				S	Sb	15 19 47.8	+1.7
KZRT	Kazreti	2.65	158	*e*PN	Pn	15 19 09.9	+1.2
KZRT				*e*S	Sb	15 19 47.7	+1.7
LZRR	Lazarevskoye	2.67	273	⇑*e*PN	Pn	15 19 10.7	+1.7
LZRR				*e*S	Sb	15 19 45.9	-0.7
TPSR	Tuapse	2.88	276	*e*PN	Pn	15 19 14.4	+2.6
TPSR				*e*S	Sn	15 19 49.0	+2.4
XNZR	Khunzakh	2.96	115	*e*Pn	Pn	15 19 14.8	+1.6
XNZR				*e*Sn	Sn	15 19 50.0	+1.0
XNZR	Khunzakh	2.96	115	*e*PN	Pn	15 19 14.8	+1.6
XNZR				*e*S	Sn	15 19 50.0	+1.0
LGD	Lagodekhi	3.08	130	P	Pb	15 19 17.9	-2.9
LGD	Lagodekhi	3.08	130	*e*PN	Pb	15 19 17.9	-2.9
LGD				*e*S	Sb	15 19 56.1	-2.4
KGUR	Krasnodar	3.12	294	*e*PN	Pb	15 19 19.0	-2.5
KGUR				*e*S	Sn	15 19 55.3	+2.7
GNBR	Gunib	3.20	116	*e*Pn	Pn	15 19 18.5	+2.2
GNBR				*e*Sn	Sb	15 19 58.5	-3.5
GNBR	Gunib	3.20	116	*e*PN	Pn	15 19 18.6	+2.2
GNBR				*e*S	Sn	15 19 57.5	+2.8
CHOM	Cayeli-Rize	3.23	213	*e*P	Pn	15 19 16.9	+0.1
DDFL	Dedoflistskaro	3.29	136	P	Pb	15 19 22.7	-1.7
DDFL	Dedoflistskaro	3.29	136	*e*PN	Pb	15 19 22.7	-1.7
SENK	Senkaya-Erzuru	3.33	189	*e*P	Pn	15 19 18.8	+0.6
MAK	Makhachkala	3.35	104	*e*PN	Pn	15 19 21.5	+3.1
MAK				*e*S	Sb	15 20 03.6	-2.7
URKR	Urkarakh	3.75	115	*e*PN	Pn	15 19 26.7	+2.8
URKR				*e*S	Sn	15 20 11.2	+3.0
GNI	Garni	3.90	161	Pn	Pn	15 19 26.6	+0.6
	comp=N,0.7nm,0.3s,baz=66,slow=10.0,SNR=2.1						
GNI				Lg	Lg	15 20 25.4	
	comp=N,9.2nm,0.3s,baz=18,slow=19,SNR=3.7						
GNI	Garni	3.90	161	*e*P	Pn	15 19 27.3	+1.2
GNI	Garni	3.90	161	*i* PN	Pn	15 19 28.0	+1.9
GNI	Garni	3.90	161		Pn	15 19 27.5	+1.5
KOPR	Koprukoy-ERZUR	3.96	194	*e*P	Pn	15 19 27.4	+0.5
GANJ	Ganja	4.01	142	PN	Pb	15 19 32.5	-4.1
SEKA	Sheki	4.03	129	PN	Pn	15 19 30.8	+3.0
BAYT	Aydıntepe-Bayb	4.08	213	*e*P	Pn	15 19 29.2	+0.6
ANN	Anapa	4.16	285	*e*PN	Pb	15 19 35.0	-4.1
ANN				*e*S	Sb	15 20 26.9	-2.4
ANN				pmax	pmax		
	comp=Z,100nm,1.0s						
AKT	Akhty	4.17	123	*e*Pn	Pn	15 19 32.0	+2.2
AKT				*e*Sn	Sn	15 20 21.2	+2.5
AKT	Akhty	4.17	123	*e*PN	Pn	15 19 32.0	+2.2
AKT				*e*S	Sn	15 20 21.2	+2.5
AGRB	Hanur-Agry	4.27	181	*e*P	Pn	15 19 32.5	+1.3
DRN	Derbent	4.27	113	*e*Pn	Pn	15 19 33.9	+2.9
DRN				*e*Sn	Sn	15 20 25.1	+4.2
DRN	Derbent	4.27	113	*e*PN	Pn	15 19 33.9	+2.9
DRN				*e*S	Sn	15 20 25.1	+4.2
ESPY	Espiye-Giresun	4.35	229	*e*P	Pn	15 19 32.7	+0.6
SUDU	Sudak	5.88	283	*e*P	Pn	15 19 55.9	+2.8
SUDU				*e*S	Sn	15 21 04.1	+3.6
SIM	Simferopol'	6.51	283	P	Pn	15 20 03.4	+1.7
SIM				S	Sn	15 21 13.5	-2.6
SIM				pmax	pmax		
	comp=Z,16nm,0.8s						
SIM				smax	smax		
	comp=E,44nm,1.1s						
SEV	Sevastopol'	6.79	279	*e*P	Pn	15 20 07.7	+2.1
SEV				*e*S	Sn	15 21 27.2	+4.1
VRH	Novokhopyorsk	7.42	353	*e*P	Pn	15 20 13.9	-0.3
VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
VSR	Storozhevoye	7.83	342	*e*P	Pn	15 20 19.8	-0.1
VSR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BR131	Keskin Array S	8.16	243	*i* P	Pn	15 20 24.6	+0.1
BRTR	Keskin Array B	8.16	243	Pn	Pn	15 20 26.4	+1.9
	comp=Z,0.1nm,0.3s,baz=50,slow=13,SNR=3.0						
BRTR	Keskin Array B	8.16	243		Pn	15 20 22.8	-1.7
VORR	Voronezh	8.25	343	P	Pn	15 20 27.0	+1.4
VORR				pmax	pmax		
	comp=Z,250nm,0.8s						
LPSR	Galich'ya Gora	9.19	344	*e*P	Pn	15 20 38.2	-0.2
LPSR				pmax	pmax		
	comp=Z,20nm,0.6s						
TOPG	Topolog	10.57	281	⇓P	Pn	15 21 31.9	+34
PETR	Petresti	11.41	285	⇑P	Pn	15 21 43.5	+35
AKASG	Malin Array Be	11.63	311	Pn	Pn	15 21 10.0	-1.8
	comp=Z,1.6nm,0.3s,baz=114,slow=12,SNR=8.1						
AKASG				Sn	Sn	15 23 16.0	-5.7
	comp=Z,1.6nm,0.3s,baz=40,slow=36,SNR=4.1						
AKASG				Lg	Lg	15 24 31.6	
	comp=Z,1.3nm,0.3s,baz=117,slow=29,SNR=4.5						
AKASG	Malin Array Be	11.63	311		Pn	15 21 12.4	+0.6
AKASG					Sn	15 23 18.7	-3.0
AKBB	Malin Array Si	11.63	311	*i* P	Pn	15 21 10.6	-1.2
TESR	Tescani	11.89	289	⇑P	Pn	15 21 16.8	+1.3
OBN	Obninsk	12.04	342	*e*P	Pn	15 21 17.3	-0.1
OBN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AKTO	Aktyubinsk	12.12	52	Pn	Pn	15 21 17.1	-1.5
	comp=Z,2.7nm,0.3s,baz=231,slow=7.8,SNR=38						
AKTO				Sn	Sn	15 23 24.8	-8.9
	comp=Z,0.7nm,0.3s,baz=252,slow=19,SNR=6.8						
AKTO	Aktyubinsk	12.12	52	⇓P	Pn	15 21 16.7	-1.8
	comp=Z,4.8nm,0.5s						
AKTO				⇓S	Sn	15 23 21.7	-12
	comp=Z,13nm,0.6s						
MLR	Muntele Rosu	12.30	284	Pn	Pn	15 21 21.5	+0.2
	comp=Z,0.2nm,0.3s,baz=152,slow=17,SNR=3.0						
DOPR	Dopca	12.71	286	⇑P	Pn	15 21 27.8	+1.0
AB31	Akbulak array	12.80	59	⇓P	Pn	15 21 26.0	-2.0
	comp=Z,1.9nm,0.2s,baz=249,slow=17,SNR=98						
AB31				⇑S	Sn	15 23 36.7	-14
	comp=Z,3.8nm,0.4s,baz=246,slow=26,SNR=7.6						
ABKAR	Akbulak array	12.80	59		Pn	15 21 26.5	-1.5
GEYT	Alibeck	12.82	112	Pn	Pn	15 21 25.8	-2.5
	comp=Z,2.8nm,0.3s,baz=302,slow=16,SNR=21						
GYA0B	ALIBECK ARRAY	12.82	112	⇓P	Pn	15 21 25.0	-3.3
GYA0B				⇑S	Sn	15 23 41.1	-10
MTUR	Matau	12.92	282	⇓P	Pn	15 21 37.6	+7.9
MTUR	Matau	12.92	282	⇓P	Pn	15 21 37.6	+7.9
VOIR		12.93	283	⇓P	Pn	15 21 31.4	+1.6
VOIR		12.93	283	⇓P	Pn	15 21 31.4	+1.6
BURAR	Bucovina Array	13.03	293	⇓P	Pn	15 21 31.1	0.0
BURAR	Bucovina Array	13.03	293	⇓P	Pn	15 21 31.1	0.0
BURAR	Bucovina Array	13.03	293		Pn	15 21 30.6	-0.5
BUR08	Bucovina Ar. S	13.04	293		Pn	15 21 30.4	-0.9
ARR	Arges	13.23	283	⇑P	Pn	15 21 37.3	+3.5
PLVB	Pleven	13.38	274	⇑P	Pn	15 21 36.0	+0.2
GZR	Gura Zlata	14.53	283	⇓P	Pn	15 21 52.2	+0.6
DRGR		14.62	289	⇓P	P	15 22 00.6	+1.3
DRGR		14.62	289	⇓P	P	15 22 00.6	+1.3
APE	Apeiranthos	14.96	249	*i* P	Pn	15 21 57.0	-0.4
KOLS	Kolonicke sedl	15.21	297	*e*S	S	15 25 10.1	+3.9
KIRV	Kirov	15.27	13	LR	LR	15 28 08.1	
	comp=Z,185nm,21.6s,baz=355,slow=38						
CRVS	Cervenica-Dubn	15.73	296	*e*P	P	15 22 14.5	+3.0
CRVS	Cervenica-Dubn	15.73	296	*e*P	P	15 22 14.5	+3.0
ARU	Arti	15.99	33	Pn	Pn	15 22 06.5	-4.3
	comp=Z,0.0nm,0.3s,baz=212,slow=11,SNR=6.7						
ARU				Sn	Sn	15 24 54.4	-14
	comp=Z,0.0nm,0.3s,baz=294,slow=20,SNR=2.8						
ARU				LR	LR	15 30 18.5	
	comp=Z,109nm,18.1s,baz=320,slow=44						
ARU	Arti	15.99	33	*i* P	Pn	15 22 09.9	-0.9
ARU	Arti	15.99	33		Pn	15 22 07.2	-3.6
SVE	Sverdlovsk	17.09	34	*e*P	Pn	15 22 21.5	-3.3
KLMR	Klimovskoe	17.17	354	*e*P	Pn	15 22 20.7	-4.9
KLMR				pmax	pmax		
	comp=Z,14nm,0.8s						
KLMR	Klimovskoe	17.17	354	*e*Pn	Pn	15 22 20.8	-4.9
KLMR				*e*Pn	Pn	15 22 20.8	-4.9
KLMR				*e*Pn	Pn	15 22 20.8	-4.9
KLMR				AMP		15 22 28.1	
	comp=Z,14nm,0.8s						
KLMR				*e*Sn	Sn	15 25 19.7	-17
KLMR				*e*Sn	Sn	15 25 19.7	-17
VYHS	Vyhne	17.39	294	*e*P	Pn	15 22 27.6	-1.0
VYHS	Vyhne	17.39	294	*e*P	Pn	15 22 27.6	-1.0
VSU	Vasula	17.79	331	*i* P	P	15 22 34.2	0.0
VSU				pmax	pmax		
	comp=Z,37nm,1.1s						
PRGR	Permogore	17.89	4	*e*P	Pn	15 22 34.0	-0.6
PRGR				*e*		15 25 57.3	
PRGR				pmax	pmax		
	comp=Z,13nm,0.7s						
VRAC	Vranov	18.95	296	LR	LR	15 31 10.7	
	comp=Z,125nm,21.6s,baz=4.0,slow=40						
CONA	Conrad Observa	19.33	292	*e*P	Pn	15 22 56.0	+3.6
	comp=Z,5.0nm,1.3s						
KK31	Karatay Array	19.90	83	⇓P	P	15 22 58.1	+0.5
	comp=Z,2.2nm,0.6s,baz=302,slow=12,SNR=26						
KK31				⇑S	S	15 26 30.2	-11
	comp=Z,2.1nm,0.5s,baz=262,slow=27,SNR=6.3						
KKAR	Karatay Array	19.90	83	P	P	15 22 56.6	-1.0
KKAR	Karatay Array	19.90	83	P	P	15 22 56.6	-1.0
BRVK	Borovoye	20.16	53	⇓P	P	15 23 00.3	+0.1
	comp=Z,6.7nm,0.8s						
BRVK				⇑S	S	15 26 36.0	-10
	comp=Z,5.8nm,1.0s						
BRVK	Borovoye	20.16	53	P	P	15 23 00.6	+0.3
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BRVK	Borovoye	20.16	53	P	P	15 23 00.6	+0.3
BRVK				IAmb	IAmb	15 23 08.9	
	comp=Z,7.8nm,0.9s						
BVAR	Borovoye Array	20.21	53	P	P	15 23 01.4	+0.5
	comp=Z,2.3nm,0.6s,baz=260,slow=10,SNR=23						
CHGR	Chuyangaron	20.25	96	P	P	15 23 01.6	+0.1
FINES	FINESS Array B	20.30	336	P	Pn	15 23 03.2	-0.5
	comp=Z,2.1nm,0.5s,baz=152,slow=13,SNR=12						
FINES	FINESS Array B	20.30	336	P	P	15 23 01.2	-0.5
MOA	Molln	20.40	291	*e*pP	P	15 23 07.5	+4.5
	comp=Z,3.2nm,1.1s						
GERES	GERESS Array B	20.81	294	P	Pn	15 23 09.3	-0.5
	comp=Z,2.3nm,0.9s,baz=99,slow=6.9,SNR=11						
GERES	GERESS Array B	20.81	294	P	P	15 23 07.1	-0.3
MYKA	Terra Mystica	20.85	288	*e*pP	P	15 23 12.5	+4.6
	comp=Z,10nm,1.0s						
KHC	Kasperske Hory	20.91	295	*e*P	Pn	15 23 13.0	+2.1
KHC	Kasperske Hory	20.91	295	*e*P	Pn	15 23 13.0	+2.1
GAR	Garm	20.95	94	P	P	15 23 09.4	+0.3
GAR				IAmb	IAmb	15 23 21.3	
	comp=Z,11nm,0.8s						
KBA	Koelnbreinsper	21.04	289	*e*pP	P	15 23 14.6	+4.6
	comp=Z,4.4nm,0.7s						
CLL	Collm	21.50	301	*e*P	P	15 23 21.0	+6.3
WTTA	Wattenberg	22.19	290	*e*pP	P	15 23 25.8	+3.4
	comp=Z,9.1nm,1.3s						
WATA	Walderalm	22.23	290	*e*pP	P	15 23 26.4	+3.6
	comp=Z,7.8nm,1.1s						
SQTA	Sankt Quirin	22.49	290	*e*pP	P	15 23 27.9	+2.3
	comp=Z,11nm,1.0s						
MOTA	Moosalm	22.55	290	*e*pP	P	15 23 28.2	+2.0
	comp=Z,14nm,1.2s						
FETA	Feichten	22.83	289	*e*pP	P	15 23 31.5	+2.4
	comp=Z,8.7nm,1.1s						
AAK	Ala-Archa	22.86	82	P	P	15 23 30.5	+0.9
	comp=Z,1.8nm,0.9s,baz=232,slow=5.9,SNR=5.8						
AAK				LR	LR	15 34 13.4	
	comp=Z,71nm,20.5s,baz=312,slow=42						
DAVA	Damuels	23.39	290	*e*pP	P	15 23 36.5	+1.6
	comp=Z,4.3nm,0.7s						
DAVOX	Davos/Dischmat	23.43	289	P	P	15 23 36.8	+1.5
	comp=Z,6.6nm,1.0s,baz=68,slow=16,SNR=4.9						
DAVOX				LR	LR	15 33 44.9	
	comp=Z,88nm,18.5s,baz=78,slow=39						
HFS	Hagfors	24.05	323	P	P	15 23 42.0	+1.0
	comp=Z,3.2nm,0.6s,baz=127,slow=9.4,SNR=9.2						
KURBB	Kurchatov Arra	24.84	62	P	P	15 23 50.1	+1.8
	comp=Z,0.5nm,0.6s,baz=278,slow=9.9,SNR=3.8						
KURK	Kurchatov	24.90	61	P	P	15 23 50.1	+1.3
KURK	Kurchatov	24.90	61	P	P	15 23 49.1	+0.3
KURK				IAmb	IAmb	15 24 24.5	
	comp=Z,4.2nm,1.1s						
NB2	NORSAR Subarra	25.56	323	P	P	15 23 58.3	+3.5
	comp=Z,1.2nm,0.6s,baz=127,slow=8.6						
NOA	NORSAR Array B	25.56	323	P	P	15 23 56.9	+2.1
	comp=Z,2.2nm,0.8s,baz=119,slow=9.1,SNR=4.3						
ARCES	ARCESS Array B	27.28	347	P	P	15 24 12.3	+2.1
	comp=Z,6.1nm,0.9s,baz=150,slow=7.3,SNR=5.4						
MKAR	Makanchi Array	27.54	70	P	P	15 24 14.2	+1.4
	comp=Z,0.5nm,0.6s,baz=267,slow=8.1,SNR=9.0						
MKAR	Makanchi Array	27.54	70	P	P	15 24 13.8	+1.0
ZALV	Zalesovo Beam	28.85	55	P	P	15 24 26.5	+2.1
	comp=Z,0.3nm,0.3s,baz=254,slow=10,SNR=2.3						
NRIK	Noril'sk	34.05	26	P	P	15 25 11.8	+1.9
	comp=Z,2.1nm,0.8s,baz=217,slow=5.1,SNR=2.7						
TORD	Torodi Ar. Bea	46.77	242	P	P	15 26 56.7	+1.0
	comp=Z,1.4nm,0.9s,baz=34,slow=6.1,SNR=5.2						
TIXI	Tiksi	47.81	25	*i* P	P	15 27 03.8	+0.7
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.2s						
CMAR	Chiang Mai Arr	52.95	100	P	P	15 27 43.2	+0.6
	comp=Z,0.3nm,0.5s,baz=300,slow=6.1,SNR=3.2						
CMAR				LR	LR	15 57 38.6	
	comp=Z,64nm,18.0s,baz=252,slow=44						
YKA	Yellowknife Ar	72.50	349	P	P	15 29 53.6	+1.2
	comp=Z,0.3nm,0.7s,baz=15,slow=6.2,SNR=6.4						

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*IDC **07** 15:35:50.8±1.2, 38°.55N×20°.27E, h0^{km}, mb3.6/7, mb1 3.6/10, mb1mx3.4/45, mbtmp3.5/10, ML3.2/3, MS3.2/3, Ms1 3.2/3, ms1mx2.6/53, Error ellipse: s-maj=23.8km s-min=19.0km az=60.0*

*BEO **07** 15:35:51.1±1.0, 38°.39N×20°.14E, h0^{km}, ML3.5/9*

*THE **07** 15:35:52.2, 38°.42N×20°.45E, h12^{km}±1^{km}, ML3.6/8, Error ellipse: s-maj=1.2km s-min=0.3km az=266.0*

*ATH **07** 15:35:52.3, 38°.42N×20°.50E, h12^{km}, ML3.5/21, Error ellipse: s-maj=1.3km s-min=0.6km az=274.0*

ISC 07 15:35:52.1±0.7**, 38°.42N**±0°.02×**20°.44E**±0°.02**, h11**^{km}±4^{km}**, n118,** σ1^{s}.**04**/150**, mb3.5**/7**, 4C-4D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	Fiskardo	0.10	69	P	Pg	15 35 54.6	-0.2
FSK				S	Sg	15 35 56.4	-0.5
	72µm,0.3s						
FSK	Fiskardo	0.10	69	P	Pg	15 35 54.7	-0.2
FSK				S	Sg	15 35 56.4	-0.5
FSK				AML	AML	15 35 56.5	
FSK				AML	AML	15 35 56.7	
KONA	Konidatara, Ke	0.10	89	P	Pg	15 35 54.7	-0.2
KONA				S	Sg	15 35 56.5	-0.4
KONA				AML	AML	15 35 56.5	
KONA				AML	AML	15 35 58.3	
KEF1	Kardakata, Kep	0.15	171	P	Pg	15 35 55.5	0.0
KEF1				S	Sg	15 35 58.3	+0.4
KEF4	Livadi, Kephal	0.17	185	P	Pg	15 35 56.0	+0.2
KEF4				S	Sg	15 35 59.0	+0.7
AGT1	Agia Thekli	0.18	195	P	Pg	15 35 56.2	+0.2
AGT1				S	Sg	15 35 59.4	+0.7
LXR1	Lixouri, Cepha	0.22	181	P	Pg	15 35 57.0	+0.2
LXR1				S	Sg	15 36 01.0	+1.1
LXRA	Lixouri, Kepha	0.22	181	P	Pg	15 35 57.0	+0.2
LXRA				S	Sg	15 36 01.2	+1.3
KEF3	Kipouria, Keph	0.23	199	P	Pg	15 35 57.2	+0.2
KEF3				S	Sg	15 36 01.4	+1.2
CHV1	Chavriata, Kef	0.24	191	P	Pg	15 35 57.3	+0.1
CHV1				S	Sg	15 36 01.6	+1.1
ARG2	Argostoli	0.25	172	P	Pg	15 35 57.2	0.0
ARG2				S	Sg	15 36 00.8	+0.2
ARGA	Argostoli. Kep	0.25	173	P	Pg	15 35 57.2	0.0
ARGA				S	Sg	15 36 01.2	+0.6
EVGI	Lefkada island	0.26	40	P	Pg	15 35 57.5	0.0
EVGI				S	Sg	15 36 01.9	+0.8
EVGI	Lefkada island	0.26	40	P	Pg	15 35 57.5	0.0
EVGI				S	Sg	15 36 01.8	+0.8
KEF2	Argostoli. Kep	0.26	172	P	Pg	15 35 57.4	-0.1
KEF2				S	Sg	15 36 01.3	+0.3
VLS	Valsamata	0.27	155	P	Pg	15 35 57.3	-0.4
VLS				S	Sg	15 36 01.8	+0.4
	12µm,0.3s						
VLS	Valsamata	0.27	155	P	Pg	15 35 57.3	-0.4
VLS				S	Sg	15 36 01.4	0.0
VLS				AML	AML	15 36 04.8	
	comp=N,28989µm,0.5s						
VLS				AML	AML	15 36 06.0	
	comp=E,16989µm,0.2s						
MGNA	Meganis	0.36	50	P	Pg	15 35 59.0	-0.3
MGNA				S	Sg	15 36 04.6	+0.5
MGNA				AML	AML	15 36 04.9	
	comp=N,19439µm,0.2s						
MGNA				AML	AML	15 36 07.2	
	comp=E,10993µm,0.4s						
LKD2	Lefkada island	0.40	25	S	Sg	15 36 06.3	+0.8
LKD2	Lefkada island	0.40	25	P	Pg	15 36 00.1	0.0
LKD2				S	Sg	15 36 05.7	+0.2
LKD2				AML	AML	15 36 07.0	
	comp=N,17067µm,0.8s						
LKD2				AML	AML	15 36 08.0	
	comp=E,14798µm,0.4s						
KFL	Anninata	0.41	139	P	Pg	15 35 59.9	-0.4
KFL				S	Sg	15 36 06.5	+0.7
KFL	Anninata	0.41	139	P	Pg	15 35 59.9	-0.4
KFL				S	Sg	15 36 05.6	-0.3
KFL				AML	AML	15 36 07.2	
	comp=N,33066µm,0.5s						
KFL				AML	AML	15 36 07.2	
	comp=E,49067µm,0.3s						
TSLK	Tsoukalades, L	0.43	23	P	Pg	15 36 00.7	0.0
TSLK				S	Sg	15 36 07.7	+1.2
TSLK	Tsoukalades, L	0.43	23	P	Pg	15 36 00.9	+0.2
TSLK				S	Sg	15 36 07.1	+0.6
TSLK				AML	AML	15 36 08.5	
	comp=N,18773µm,0.5s						
TSLK				AML	AML	15 36 09.7	
	comp=E,19592µm,0.7s						
AST1	Astakos	0.52	77	P	Pg	15 36 02.1	-0.2
AST1				S	Sb	15 36 10.3	-0.5
PDO	Prodromos	0.61	73	P	Pg	15 36 03.2	-0.7
PDO				S	Sb	15 36 13.0	-0.3
	comp=E,8µm,0.6s						
PDO	Prodromos	0.61	73	P	Pg	15 36 03.4	-0.5
PDO				AML	AML	15 36 18.1	
	comp=N,11144µm,0.5s						
PDO				AML	AML	15 36 22.7	
	comp=E,11259µm,0.6s						
ZAK2	Zakynthos	0.73	150	P	Pg	15 36 05.6	-0.6
VTN	Vitineika	0.77	131	P	Pg	15 36 06.9	-0.1
KRI1	kERI	0.81	159	P	Pg	15 36 06.4	-1.5
PVO	Paravola	0.87	77	P	Pg	15 36 08.5	-0.4
PVO				S	Sn	15 36 22.4	-0.6
	comp=E,4µm,0.5s						
PVO	Paravola	0.87	77	P	Pg	15 36 08.9	-0.1
PVO				AML	AML	15 36 29.6	
	comp=E,7864µm,0.4s						
PVO				AML	AML	15 36 31.3	
	comp=N,7547µm,0.6s						
RLS	Riolos of Patr	0.89	114	P	Pg	15 36 08.1	-1.1
RLS				S	Sn	15 36 22.4	-0.9
	comp=N,1µm,0.5s						
RLS	Riolos of Patr	0.89	114	P	Pg	15 36 08.2	-1.0
RLS				S	Sg	15 36 20.3	-0.4
RLS				AML	AML	15 36 23.6	
	comp=N,3028µm,0.6s						
RLS				AML	AML	15 36 30.4	
	comp=E,2020µm,0.5s						
DRO	Drossia	1.10	115	P	Pb	15 36 12.1	-1.2
DRO	Drossia	1.10	115	P	Pb	15 36 12.1	-1.2
DRO				AML	AML	15 36 35.4	
	comp=N,5052µm,0.6s						
DRO				AML	AML	15 36 36.0	
	comp=E,7289µm,0.5s						
ANX	Ano Chora	1.17	81	P	Pb	15 36 13.2	-1.2
ANX	Ano Chora	1.17	81	P	Pb	15 36 13.5	-0.9
ANX				AML	AML	15 36 37.6	
	comp=E,5567µm,0.6s						
ANX				AML	AML	15 36 43.0	
	comp=N,4513µm,0.6s						
EVR	Evrytania	1.18	65	P	Pb	15 36 13.6	-0.9
EVR	Evrytania	1.18	65	P	Pb	15 36 13.7	-0.8
EVR				AML	AML	15 36 36.9	
	comp=E,3071µm,0.7s						
EVR				AML	AML	15 36 40.7	
	comp=N,2640µm,1.0s						
SERG	Sergoula	1.27	90	P	Pn	15 36 14.8	-1.0
SERG				S	Sg	15 36 34.7	+1.7
	comp=N,3µm,0.5s						
SERG	Sergoula	1.27	90	P	Pn	15 36 15.1	-0.7
SERG				AML	AML	15 36 38.5	
	comp=E,5791µm,0.6s						
SERG				AML	AML	15 36 38.8	
	comp=N,6845µm,0.5s						
JAN	Janina	1.27	14	P	Pg	15 36 16.8	+0.2
TRIZ	Trizonia	1.28	92	P	Pn	15 36 14.9	-1.0
TRIZ				S	Sb	15 36 32.4	-0.3
	comp=N,3µm,0.6s						
TRIZ	Trizonia	1.28	92	P	Pn	15 36 15.1	-0.9
ALIK	Aliki, Aigiali	1.32	97	P	Pn	15 36 15.8	-0.7
KALE	Kalithea	1.33	91	P	Pn	15 36 15.8	-0.9
KALE				S	Sg	15 36 39.4	+4.3
	comp=N,2µm,0.6s						
KALE	Kalithea	1.33	91	P	Pn	15 36 16.0	-0.8
KALE				AML	AML	15 36 41.8	
	comp=N,5283µm,0.6s						
KALE				AML	AML	15 36 41.8	
	comp=E,2551µm,0.6s						
AMT	Artemida-Makis	1.34	131	P	Pn	15 36 16.9	+0.1
AMT				AML	AML	15 36 45.6	
	comp=E,2238µm,1.0s						
AMT				AML	AML	15 36 46.8	
	comp=N,3356µm,0.9s						
KASA	Kassiopi	1.38	344	P	Pb	15 36 18.1	+0.2
KASA				AML	AML	15 36 44.1	
	comp=E,2010µm,0.3s						
KASA				AML	AML	15 36 50.9	
	comp=N,1901µm,0.5s						
KEK	Kerkira	1.38	339	P	Pb	15 36 18.0	0.0
KLV	Kalavryta, Ach	1.40	105	P	Pn	15 36 16.8	-0.8
KLV	Kalavryta, Ach	1.40	105	P	Pn	15 36 16.9	-0.8
KLV				AML	AML	15 36 46.0	
	comp=N,947µm,0.6s						
KLV				AML	AML	15 36 53.2	
	comp=E,830µm,0.8s						
MAKR	Makrakomi, Fth	1.45	65	P	Pn	15 36 18.5	+0.2
MAKR				AML	AML	15 36 50.5	
	comp=E,2976µm,0.5s						
MAKR				AML	AML	15 36 51.0	
	comp=N,2254µm,0.4s						
AGG	Agios Georgios	1.59	67	P	Pb	15 36 21.1	-0.5
THL	Klokotos Trika	1.67	47	P	Pn	15 36 22.0	+0.7
KPRO	Kipourio	1.69	25	P	Pg	15 36 24.2	-0.3
ITM	Ithomi	1.71	136	P	Pb	15 36 23.1	-0.5
PYL	PYLOS	1.84	146	P	Pn	15 36 24.2	+0.5
PENT	Pentalofos	1.85	17	P	Pb	15 36 25.9	-0.1
VLX	Vlachokerasia	1.86	124	P	Pb	15 36 25.8	-0.4
LKR	Lokris	2.02	83	P	Pb	15 36 28.4	-0.5
LKR				AML	AML	15 37 05.6	
	comp=E,389µm,0.4s						
LKR				AML	AML	15 37 10.0	
	comp=N,706µm,0.9s						
LTK	Loutraki	2.03	101	P	Pb	15 36 28.5	-0.5
NEST	Nestorio	2.04	13	P	Pb	15 36 29.3	0.0
KZN	Kozani	2.15	28	P	Pb	15 36 30.6	-0.4
VIL2	Platees	2.23	95	P	Pb	15 36 31.9	-0.5
VIL2				AML	AML	15 37 15.7	
	comp=E,913µm,1.0s						
VIL2				AML	AML	15 37 21.8	
	comp=N,974µm,0.8s						
OHR	Ohrid	2.70	6	*i* Pn	Pn	15 36 37.8	+2.3
OHR				*i* Sg	Sb	15 37 11.2	-2.4
TIR	Tirane	2.96	352	*e*Pn	Pn	15 36 40.0	+1.0
TIR				*e*Sn	Sn	15 37 15.9	+1.5
TIR	Tirane	2.96	352	⇑P	Pn	15 36 40.6	+1.6
TIP	Timpagrande	2.98	286	⇑P	Pg	15 36 48.0	-1.1
VAY	Valandovo	3.33	29	*e*Pn	Pn	15 36 45.8	+1.8
STIP	Stip	3.53	22	*i* Pn	Pn	15 36 50.4	+3.5
MATE	Matera	3.65	309	⇓P	Pg	15 37 00.2	-1.7
PDG	Podgorica	4.10	348	*e*Pn	Pn	15 36 55.6	+0.9
PDG				*e*Sn	Sn	15 37 41.6	-1.1

PDG	Podgorica	4.10	348	⇑P	Pn	15 36 55.1	+0.4
PDG	Podgorica	4.10	348	*e*Pn	Pn	15 36 54.5	-0.2
HCY	Herceg Novi	4.29	340	*e*Pn	Pn	15 36 56.1	-1.2
BOSS	Bosilegrad	4.36	20	*e*Pn	Pn	15 36 59.7	+1.5
BARS	Barje	4.51	13	*e*Pn	Pn	15 37 01.2	+0.8
TREB	Trebinje	4.58	340	*e*Pn	Pn	15 37 00.0	-1.2
BRY	Bratogost	4.70	343	*e*Pn	Pn	15 37 02.4	-0.7
IDI	Anoyia	4.74	130	Pn	Pn	15 37 06.7	+3.1
	comp=N,0.2nm,0.3s,baz=293,slow=7.7,SNR=2.8						
IDI				Sn	Sn	15 38 00.2	+1.6
	comp=N,2.9nm,0.3s,baz=306,slow=22,SNR=8.0						
IDI				LR	LR	15 39 27.5	
	comp=N,61nm,18.2s,baz=304,slow=44						
SELS	Selova	4.82	6	*e*Pn	Pn	15 37 04.4	-0.2
SJES	Sjenica	4.85	356	*e*Pn	Pn	15 37 05.3	+0.2
SJES				*e*Sn	Sn	15 38 01.0	-0.2
STON	Ston	4.91	336	*e*Pn	Pn	15 37 04.9	-0.9
STON	Ston	4.91	336	*e*Pn	Pn	15 37 04.8	-1.0
UPM	Unac-Piva	4.92	347	*e*Pn	Pn	15 37 06.4	+0.3
ZAPS	Zavoj	5.12	18	*e*Pn	Pn	15 37 11.3	+2.5
IVAS	Ivanjica	5.15	358	*e*Pn	Pn	15 37 09.1	-0.1
RUDO	Rudo	5.25	351	*e*Pn	Pn	15 37 03.1	-7.5
BOVS	Bovan	5.29	10	*e*Pn	Pn	15 37 11.2	+0.1
GRUS	Gruza	5.46	2	*e*Pn	Pn	15 37 13.7	+0.3
BBLS	Lazići	5.49	352	*e*Pn	Pn	15 37 13.6	-0.3
DIVS	Divibare	5.68	357	*e*Pn	Pn	15 37 16.0	-0.5
DIVS	Divibare	5.68	357	*e*Pn	Pn	15 37 15.5	-1.0
HAPS	Han Pijesak,BI	5.77	349	*e*Pn	Pn	15 37 16.6	-1.1
HAPS	Han Pijesak,BI	5.77	349	*e*Pn	Pn	15 37 16.3	-1.4
TRUS	Trudelj	5.79	360	*e*Pn	Pn	15 37 17.9	-0.1
MDVR	Moldovita	6.42	8	⇓P	Pn	15 37 35.3	+8.6
HERR	Herculane	6.62	12	⇑P	Pn	15 37 34.6	+5.3
GZR	Gura Zlata	7.18	13	⇓P	Pn	15 37 36.1	-0.9
VOIR		7.80	25	⇓P	Pn	15 37 47.2	+1.6
CRES	Cresnjev	8.27	335	*e*Pn	Pn	15 37 51.1	-0.9
CEY	Cerknica	8.57	330	*e*Pn	Pn	15 37 55.5	-0.6
SOKA	Soboth	9.16	336	*e*Pn	Pn	15 38 03.3	-0.9
	comp=N,3.0nm,0.3s						
OBKA	Obir	9.18	334	*e*Pn	Pn	15 38 04.9	+0.4
	comp=N,1.1nm,0.2s						
BRTR	Keskin Array B	10.35	79	Pn	Pn	15 38 24.1	+3.6
	comp=N,0.0nm,0.3s,baz=280,slow=14,SNR=2.5						
MOA	Molln	10.44	336	*e*Pn	Pn	15 38 21.3	-0.4
	comp=N,2.3nm,0.3s						
WTTA	Wattenberg	10.94	327	*e*Pn	Pn	15 38 28.6	-0.1
	comp=N,1.1nm,0.3s						
GERES	GERESS Array B	11.50	337	Pn	Pn	15 38 33.8	-2.5
	comp=N,0.2nm,0.3s,baz=157,slow=14,SNR=5.5						
HFS	Hagfors	22.15	351	P	P	15 40 46.4	-1.2
	comp=N,1.6nm,0.5s,baz=130,slow=14,SNR=10						
EKA	Eskdalemuir Ar	23.19	324	P	P	15 40 58.3	-0.3
	comp=N,0.4nm,0.4s,baz=111,slow=12,SNR=3.3						
FINES	FINESS Array B	23.31	7	P	P	15 40 58.2	-1.6
	comp=N,1.2nm,0.6s,baz=183,slow=12,SNR=7.1						
NOA	NORSAR Array B	23.37	349	P	P	15 40 59.8	-0.6
	comp=N,0.8nm,0.8s,baz=160,slow=9.9,SNR=2.8						
NOA				LR	LR	15 50 47.5	
	comp=N,61nm,18.7s,baz=255,slow=39						
KIRV	Kirov	27.48	33	LR	LR	15 53 09.6	
	comp=N,116nm,18.4s,baz=156,slow=38						
TORD	Torodi Ar. Bea	30.18	219	P	P	15 42 02.5	0.0
	comp=N,0.5nm,0.7s,baz=23,slow=8.9,SNR=3.1						
MKAR	Makanchi Array	45.23	59	P	P	15 44 10.4	+1.1
	comp=N,0.3nm,0.5s,baz=277,slow=7.2,SNR=5.1						
ZALV	Zalesovo Beam	45.57	48	P	P	15 44 12.3	+0.5
	comp=N,1.3nm,0.4s,baz=278,slow=10.0,SNR=4.8						

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*DDA **07** 15:42:36.7, 40°.96N×38°.06E, h7^{km}±1^{km}, ML2.0*

*ISK **07** 15:42:36.8, 40°.94N×38°.03E, h9^{km}, ML2.1/4*

*ATA **07** 15:42:48.5±1.5, 39°.75N×39°.25E, h49^{km}±10^{km}, ML1.5*

ISC 07 15:42:36.9±1.0**, 40°.95N**±0°.06×**38°.05E**±0°.03**, h12**^{km}±9^{km}**, n14, σ0^{s}81**/21**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ORDU	Ordu-Boztepe	0.15	285	*i* P	Pg	15 42 40.5	+0.1
ORDU				*i* S	Sg	15 42 43.3	+0.3
ORDU				IAML		15 42 45.0	
	comp=N,449nm,0.3s						
ESPY	Espiye-Giresun	0.51	94	PG	Pb	15 42 47.5	-0.4
ESPY				SG	Sb	15 42 55.5	+0.1
SUSE	Susehri	0.75	171	*i* P	Pb	15 42 51.7	-0.4
SUSE				*i* S	Sb	15 43 02.8	+0.5
RSDY	Resadiye-TOKAT	0.78	225	PG	Pg	15 42 52.0	0.0
RSDY				SG	Sb	15 43 02.8	-0.2
KELT	Kelkit	1.22	131	*e*P	Pn	15 43 00.2	+0.1
KELT	Kelkit	1.22	131	*i* P	Pn	15 43 00.1	+0.1
KELT				*i* S	Sn	15 43 17.4	+0.9
SVSK	Karacayir	1.31	218	PN	Pb	15 43 01.6	+0.2
SVSK				SN	Sn	15 43 19.7	+1.3
REFA	Refahiye_ERZN	1.65	160	*e*P	Pn	15 42 59.4	-6.4
BAYT	Aydıntepe-Bayb	1.69	109	PN	Pb	15 43 07.7	-0.3
KEMA	Kemaliye	1.71	168	*e*P	Pn	15 43 04.9	-1.8
HAVZ	Havza	1.77	275	*i* P	Pb	15 43 09.5	+0.2
HAVZ				*i* S	Sg	15 43 33.4	-0.4
BAYB	BAYBURT	1.82	112	*e*P	Pn	15 43 06.3	-1.9
BAYB	BAYBURT	1.82	112	*i* P	Pb	15 43 10.1	-0.2
BAYB				*i* S	Sg	15 43 36.0	+0.6
KRIK	Erzurum-spir	2.27	105	*e*P	Pn	15 43 14.9	+0.4

WEL 07 15:58:31.2±1.0**, 38°S**±7°×**17°7E**±1°0**, h76**^{km}±9^{km}**, M3.2**/8**, ML3.5**/8**, MLv3.2**/8**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPRZ	Ohinepanea	0.47	223	P	Pn	15 58 47.4	+3.1
MARZ	Manawahe	0.53	205	P	Pn	15 58 47.6	+2.7
EDRZ	Edgecumbe	0.63	196	P	Pn	15 58 48.0	+2.2
HAZ	Te Kaha	0.70	111	P	Pn	15 58 47.2	+0.7
HAZ	Te Kaha	0.70	111	P	Pn	15 58 47.2	+0.7
HAZ				S	Sn	15 59 00.3	+2.5
RUGZ	Raukumara Rang	0.73	129	P	Pn	15 58 47.0	0.0
RUGZ	Raukumara Rang	0.73	129	P	Pn	15 58 47.6	+0.6
RUGZ				S	Sn	15 59 00.3	+1.6
URZ	Urewera	0.76	171	P	Pn	15 58 48.3	+1.0
URZ	Urewera	0.76	171	P	Pn	15 58 48.2	+1.0
KARZ	Kaharoa	0.77	228	P	Pn	15 58 50.5	+3.2
TARZ	Mount Tarawera	0.81	206	P	Pn	15 58 52.5	+4.6
MWZ	Matawai	0.94	152	P	Pn	15 58 49.6	+0.3
MWZ	Matawai	0.94	152	P	Pn	15 58 49.9	+0.5
PKGZ	Pakihiroa	0.96	114	P	Pn	15 58 49.9	+0.3
PKGZ	Pakihiroa	0.96	114	P	Pn	15 58 50.0	+0.4
MUGZ	Murupara	0.98	189	P	Pn	15 58 51.0	+1.2
TWGZ	Tauwhareparae	1.05	130	P	Pn	15 58 51.2	+0.5
TWGZ	Tauwhareparae	1.05	130	P	Pn	15 58 51.5	+0.9
RAGZ	Rawiri	1.05	160	P	Pn	15 58 51.3	+0.6
MXZ	Matakaoa Point	1.07	94	P	Pn	15 58 52.3	+1.5
RTZ	Ruatahuna	1.11	179	P	Pn	15 58 52.1	+0.7
ALRZ	Allen Road	1.17	205	P	Pn	15 58 55.3	+3.3
TKGZ	Te Karaka	1.17	143	P	Pn	15 58 51.8	-0.2
TKGZ	Te Karaka	1.17	143	P	Pn	15 58 51.6	-0.5
PUZ	Puketiti	1.17	119	P	Pn	15 58 51.8	-0.3
PUZ	Puketiti	1.17	119	P	Pn	15 58 51.8	-0.4
TOZ	Tahuroa Road	1.18	258	P	Pn	15 58 56.0	+3.8
WMGZ	Waiomatatini S	1.20	106	P	Pn	15 58 52.6	+0.2
WMGZ	Waiomatatini S	1.20	106	P	Pn	15 58 52.5	+0.1
KUZ	Kuaotunu	1.25	307	P	Pn	15 58 56.8	+3.7
SNGZ	Shannon Statio	1.31	167	P	Pn	15 58 54.1	+0.2
MTHZ	Maungataniwha	1.35	184	P	Pn	15 58 55.1	+0.7
RIGZ	Rimuhau	1.36	153	P	Pn	15 58 54.2	-0.3
RIGZ	Rimuhau	1.36	153	P	Pn	15 58 54.1	-0.4
RIGZ				S	Sn	15 59 12.8	+0.7
MRHZ	Matea Rd	1.40	198	P	Pn	15 58 56.6	+1.5
TLZ	Tolley Road	1.40	233	P	Pn	15 58 57.8	+2.8
RAHZ	Arahi	1.41	176	P	Pn	15 58 55.9	+0.7
MKAZ	Moumakai	1.49	285	P	Pn	15 59 00.4	+4.3
WATZ	Wairara	1.54	218	P	Pn	15 58 59.1	+2.2
HATZ	Hinemaiaia	1.55	206	P	Pn	15 58 58.7	+1.8
WHHZ	Waihua	1.59	172	P	Pn	15 58 59.0	+1.6
NMHZ	Naumai	1.60	184	P	Pn	15 58 58.7	+1.0
WIAZ	Waiheke Island	1.62	295	P	Pn	15 59 02.2	+4.2
BKZ	Black Stump Fm	1.70	192	P	Pn	15 58 59.6	+0.5
RITZ	Rihia Road	1.71	210	P	Pn	15 59 01.8	+2.7
ETAZ	East Tamaki Re	1.71	288	P	Pn	15 59 03.7	+4.5
MBAZ	Motutapu North	1.81	293	P	Pn	15 59 04.7	+4.3
MHGZ	Mahia Peninsul	1.81	156	P	Pn	15 58 59.3	-1.1
KRVZ	Karewarewa	1.90	213	P	Pn	15 59 04.4	+2.6
WTVZ	West Tongariro	1.94	213	P	Pn	15 59 04.5	+2.2
HIZ	Hauiti	1.94	238	P	Pn	15 59 05.3	+3.1
MCHZ	McNeill Hill	1.95	186	P	Pn	15 59 03.6	+1.4
KWHZ	Kaweka Forest	1.96	192	P	Pn	15 59 02.8	+0.3
TWVZ	Taurewa	1.97	217	P	Pn	15 59 05.0	+2.3
NGZ	Ngauruhoe	1.98	212	P	Pn	15 59 05.3	+2.4
TUVZ	Tukino	2.04	210	P	Pn	15 59 05.3	+1.7
FWVZ	Far West T-bar	2.07	212	P	Pn	15 59 05.9	+1.8
BHHZ	Black Hill Sta	2.10	199	P	Pn	15 59 04.7	+0.3
MOVZ	Moawhango	2.12	206	P	Pn	15 59 05.4	+0.7
KRHZ	Kereru	2.19	192	P	Pn	15 59 04.8	-0.7
PKVZ	Pokaka	2.19	215	P	Pn	15 59 07.7	+2.1
MTVZ	Mangateitei	2.21	211	P	Pn	15 59 07.5	+1.6
KAHZ	Kahuranaki	2.29	182	P	Pn	15 59 06.0	-0.9
VRZ	Vera Road	2.37	226	P	Pn	15 59 10.7	+2.8
PNHZ	Pukenui	2.48	194	P	Pn	15 59 09.3	-0.1
PXZ	Pawanui	2.52	182	P	Pn	15 59 08.7	-1.3
TSZ	Takapari Road	2.67	197	P	Pn	15 59 10.6	-1.4
WAZ	Wanganui	2.73	214	P	Pn	15 59 14.0	+1.2
PRHZ	Porangahau	2.77	185	P	Pn	15 59 11.7	-1.7
LREZ	Lake Rotokare	2.80	225	P	Pn	15 59 16.7	+2.9
PKE	Pukeiti	2.88	233	P	Pn	15 59 19.5	+4.6
KHEZ	Kahui Hut	2.93	231	P	Pn	15 59 20.3	+4.8
BFZ	Birch Farm	3.22	190	P	Pn	15 59 17.6	-1.8
MRZ	Mangatainoka R	3.33	198	P	Pn	15 59 18.6	-2.4
TIWZ	Tintock	3.37	194	P	Pn	15 59 19.7	-1.8
OUZ	Omahuta	3.54	309	P	Pn	15 59 28.1	+4.2
HOWZ	Holdsworth Sta	3.57	198	P	Pn	15 59 21.2	-3.0
OGWZ	Otaki Gorge	3.59	202	P	Pn	15 59 22.2	-2.2
TMWZ	Te Maipa	3.69	193	P	Pn	15 59 22.9	-3.0
KIW	Kapiti Island	3.71	205	P	Pn	15 59 24.3	-1.8
MTW	Mount Morrison	3.82	197	P	Pn	15 59 24.5	-3.1
CAW	Cannon Point	3.89	202	P	Pn	15 59 25.9	-2.6
TUWZ	Tuamarina	4.56	210	P	Pn	15 59 34.5	-3.2
NNZ	Nelson	4.63	216	P	Pn	15 59 36.3	-2.4
QRZ	Quartz Range	4.78	225	P	Pn	15 59 39.3	-1.4
THZ	Tophouse	5.28	215	P	Pn	15 59 44.6	-3.0

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*IDC **07** 15:59:54.4±0.8, 32°.67S×178°.38W, h0^{km}, mb4.3/4, mb1 4.4/6, mb1mx4.1/28, mbtmp4.3/6, ML3.8/2, MS3.5/2, Ms1 3.5/2, ms1mx3.1/38, Error ellipse: s-maj=28.5km s-min=24.4km az=114.0*

*NEIC **07** 16:00:07.3±1.4, 33°.3S±0°.1×178°.5W±0°.2, h102^{km}±9^{km}, mb4.9/12, Error ellipse: s-maj=27.1km s-min=12.3km az=119.0*

ISC 07 15:59:55.5±0.8**, 32°.59S**±0°.10×**178°.4W**±0°.2**, h10**^{km}**, n47, σ1^{s}20**/41**, mb4.8**/11**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.35	8	P	Pn	16 00 45.7	-2.2
RAO	Raoul Island	3.36	8	Pn	Pg	16 01 07.8	+8.0
OPRZ	Ohinepanea	6.65	217	P	Pn	16 01 37.2	+3.9
URZ	Urewera	6.72	211	Pn	Pn	16 01 33.0	-1.2
	1.8nm,0.3s,baz=42,slow=2.1,SNR=10.0						
URZ				Sn	Sn	16 02 50.0	-0.8
	4.4nm,0.3s,baz=36,slow=19,SNR=6.3						
URZ	Urewera	6.72	211		Pn	16 01 35.5	+1.3
URZ					Sn	16 02 37.7	-13
WCZ	Waipu Caves	6.84	239	P	Pb	16 01 51.7	-2.8
SNGZ	Shannon Statio	7.07	208	P	Pn	16 01 39.9	+0.8
OUZ	Omahuta	7.12	246		Pn	16 01 46.5	+6.7
TOZ	Tahuroa Road	7.13	222	P	Pn	16 01 43.9	+4.0
RAHZ	Arahi	7.29	209	P	Pn	16 01 42.9	+0.9
MTHZ	Maungataniwha	7.33	210	P	Pn	16 01 44.3	+1.6
BKZ	Black Stump Fm	7.74	211		Pn	16 01 48.3	0.0
BKZ	Black Stump Fm	7.74	211	P	Pn	16 01 48.4	+0.1
KAHZ	Kahuranaki	8.12	206	P	Pn	16 01 52.4	-1.1
BHHZ	Black Hill Sta	8.20	211	P	Pn	16 01 55.7	+1.1
RPZ	Rata Peaks	13.83	214	Pn	Pn	16 03 09.6	-2.0
	0.6nm,0.3s,baz=90,slow=3.2,SNR=4.8						
RPZ				Sn	Sn	16 05 31.7	-14
	0.4nm,0.3s,baz=3.4,slow=19,SNR=4.5						
RPZ				LR	LR	16 07 55.1	
	comp=Z,54nm,21.6s,baz=310,slow=35						
CTA	Charters Tower	33.84	283	P	P	16 06 40.1	+1.9
	3.7nm,0.5s,baz=117,slow=9.0,SNR=2.9						
AS31	Alice Springs	42.66	270	P	P	16 07 53.8	+1.2
ASAR	Alice Springs	42.66	270	P	P	16 07 53.5	+0.9
	3.4nm,0.7s,baz=105,slow=7.5,SNR=57						
ASAR	Alice Springs	42.66	270	P	P	16 07 54.1	+1.6
WR0	Warramunga Arr	43.67	275	P	P	16 08 01.8	+1.0
WR0				IAmb	IAmb	16 08 15.8	
	comp=Z,10nm,1.0s						
WB2	Warramunga Arr	43.84	275	P	P	16 08 02.9	+0.9
WRAB	Tennant Creek	43.85	275	P	P	16 08 03.2	+1.1
WRAB				IAmb	IAmb	16 08 25.8	
	comp=Z,20nm,1.3s						
WRA	Warramunga Arr	43.85	275	P	P	16 08 02.7	+0.5
	comp=Z,3.1nm,0.5s,baz=115,slow=7.5,SNR=34						
WRA	Warramunga Arr	43.85	275	P	P	16 08 03.0	+0.8
WB0	Warramunga Arr	43.88	275	P	P	16 08 03.6	+1.2
WB0				IAmb	IAmb	16 08 26.2	
	comp=Z,15nm,1.1s						
FORT	Forrest	45.16	257	P	P	16 08 13.9	+1.4
FORT				IAmb	IAmb	16 08 41.4	
	comp=Z,35nm,1.2s						
MTN	Manton Dam	49.99	281	P	P	16 08 52.0	+1.8
MTN				IAmb	IAmb	16 09 07.6	
	comp=Z,42nm,1.6s						
KNRA	Kununurra	50.53	276	P	P	16 08 55.9	+1.6
FITZ	Fitzroy Crossi	52.02	272	LR	LR	16 29 27.7	
	comp=Z,237nm,20.5s,baz=303,slow=34						
FITZ	Fitzroy Crossi	52.02	272	P	P	16 09 06.3	+0.9
FITZ				IAmb	IAmb	16 10 01.3	
	comp=Z,28nm,1.9s						
QSPA	South Pole Qui	57.53	180	P	P	16 09 46.0	+1.2
	comp=Z,1.7nm,1.1s,baz=45,slow=2.9,SNR=2.9						
T25A	Trinidad	97.85	51	P	Pdif	16 13 33.5	+1.9
ISCO	Idaho Springs	98.61	48	P	Pdif	16 13 37.9	+2.9
ISCO				IAmb	IAmb	16 13 39.5	
	comp=Z,7.1nm,0.9s						
MKAR	Makanchi Array	118.88	309	PKP	PKiKP	16 18 44.0	+0.1
	comp=Z,0.5nm,0.8s,baz=90,slow=1.4,SNR=4.0						
KURBB	Kurchatov Arra	122.31	313	PKP	PKiKP	16 18 50.7	+0.2
	comp=Z,1.2nm,0.9s,baz=118,slow=1.9,SNR=7.3						
BVAR	Borovoye Array	127.69	315	PKP	PKiKP	16 19 00.7	-0.4
	comp=Z,1.0nm,0.8s,baz=90,slow=4.3,SNR=6.1						
KBZ	Khabaz	145.97	301	PKPbc	PKPab	16 19 35.3	-0.4
	comp=Z,1.3nm,0.9s,baz=110,slow=15,SNR=2.9						
FINES	FINESS Array B	147.05	338	PKPbc	PKPab	16 19 38.5	-0.8
	comp=Z,7.1nm,0.8s,baz=106,slow=2.8,SNR=10						
NB2	NORSAR Subarra	150.85	350	PKP	PKPbc	16 19 46.8	-0.8
	comp=Z,1.6nm,0.8s,baz=16,slow=4.0						
NOA	NORSAR Array B	150.85	350	PKPbc	PKiKP	16 19 47.4	-0.8
	comp=Z,1.6nm,0.7s,baz=13,slow=4.1,SNR=4.3						
HFS	Hagfors	151.30	347	PKPbc	PKiKP	16 19 49.1	+0.1
	comp=Z,3.4nm,0.7s,baz=188,slow=9.9,SNR=3.7						
EIL	Elat	151.33	273	PKPbc	PKiKP	16 19 51.0	+0.9
	comp=Z,5.2nm,0.7s,baz=5.6,slow=4.6,SNR=8.2						
MMAI	Mount Meron Ar	151.62	280	PKPbc	PKiKP	16 19 50.9	+0.2
	comp=Z,5.3nm,0.8s,baz=48,slow=2.5,SNR=7.3						
AKASG	Malin Array Be	152.77	320	PKPbc	PKiKP	16 19 53.2	+0.8
	comp=Z,0.8nm,0.6s,baz=56,slow=2.7,SNR=5.4						
BRTR	Keskin Array B	153.24	295	PKPbc	PKiKP	16 19 54.1	+0.1
	comp=Z,1.0nm,0.7s,baz=134,slow=3.3,SNR=7.2						
DBIC	Dimbokro	153.53	166	PKPbc	PKiKP	16 19 54.2	-0.9
	comp=Z,7.3nm,1.1s,baz=225,slow=0.1,SNR=3.7						

IDC 07 16:07:52.8±444.0**, 39°.08N**×**117°.53W, h0**^{km}**, Error ellipse: s-maj=168.6km s-min=109.4km az=172.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I57US	PINON FLAT INF	5.53	171	*i*		16 43 10.0	
	baz=349,slow=318,SNR=0.9						
I56US	NEWPORT INFRAS	9.19	2	*i*		17 05 40.0	
	baz=179,slow=324,SNR=1.2						
I10CA	LAC DU BONNET	18.85	47	*i*		18 04 20.0	
	baz=242,slow=337,SNR=1.7						

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*GCMT **07** 16:14:52.9±0.1, 4°.74S±0°.01×103°.70E±0°.01, h119^{km}, MW5.3/129, Moment Tensor Solution. s124,c192; s129,c237; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.95±.01; $M_{\theta\theta}$-0.58±.02; $M_{\phi\phi}$-0.36±.02; $M_{r\theta}$-0.34±.01; $M_{\theta\phi}$-0.78±.02; $M_{\phi r}$0.12±.01; Best double couple: $M_0$1.18300×10^{17} NP1:ϕ_s28.00000°,δ45.00000°, λ58.00000°. NP2:ϕ_s249.00000°,δ53.00000°,λ118.00000°. Principal axes: T 1.0890, Plg68.0000°, Azm219.0000°; N 0.1880, Plg22.0000°, Azm52.0000°; P -1.2770, Plg5.0000°, Azm320.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **07** 16:14:52.8±1.1, 4°.40S×103°.85E, h117^{km}, mb5.3/48 Error ellipse: s-maj=7.8km s-min=4.5km az=119.3*

*NEIC **07** 16:14:53.9±2.0, 4°.56S±0°.06×103°.81E±0°.06, h118^{km}±3^{km}, mb5.3/72, Mwb5.3/26, Error ellipse: s-maj=9.5km s-min=7.5km az=215.0*

*DJA **07** 16:14:53.5±0.1, 5°S±2°×10°4E±°, h107^{km}±1^{km}, M5.1/88, mB5.6/56, mb5.3/88, MLv5.8/27, Mw(mB)5.1/56, Mwp5.3/21*

*NEIC **07** 16:14:54, 4°.58S×103°.80E, h113^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.95; $M_{\theta\theta}$-0.57; $M_{\phi\phi}$-0.37; $M_{r\theta}$-0.20; $M_{\theta\phi}$-0.48; $M_{\phi r}$0.33; Fault plane solution: $M_0$1.03000×10^{17} NP1:ϕ_s249.20000°, δ46.59000°, λ117.19000°. NP2:ϕ_s32.41000°, δ49.75000°, λ64.21000°. Principal axes: T 1.0817, Plg71.0000°, Azm235.0000°; N -0.1208, Plg19.0000°, Azm50.0000°; P -0.9609, Plg2.0000°, Azm140.0000°;*

*IDC **07** 16:14:54.0±0.3, 4°.46S×103°.83E, h116^{km}±2^{km}, mb4.8/59, mb1 4.8/62, mb1mx4.7/70, mbtmp5.1/62, MS4.0/20, Ms1 4.0/20, ms1mx3.7/47 Error ellipse: s-maj=7.5km s-min=5.6km az=50.0*

*KLM **07** 16:14:55.0, 4°.64S×103°.62E, h120^{km}, mb5.3*

ISC 07 16:14:53.7±0.3**, 4°.54S**±0°.03×**103°.77E**±0°.03**, h119**^{km}±2^{km}**, h119**^{km}**:pP-P, n891, σ1^{s}45**/967**, mb5.1**/158**, 50C-35D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDSI	Maura Dua	0.42	82	P	Pn	16 15 09.9	-1.2
MDSI				S	Sn	16 15 22.7	-1.4
LWLI	Liwa	0.56	148	P	Pn	16 15 10.3	-1.8
LWLI				S	Sn	16 15 23.7	-2.2
MNAI	Manna	0.83	283	P	Pn	16 15 14.0	-0.1
MNAI				S	Sn	16 15 29.9	+0.5
MNAI	Manna	0.83	283		Pn	16 15 14.5	+0.4
MNAI				Sn	Sn	16 15 30.2	+0.8
KASI	Kota Agung	1.22	143	P	Pn	16 15 15.9	-2.0
KSI	Kapahiang	1.47	307	P	Pn	16 15 22.1	+1.3
PMBI	Palembang	1.89	32	P	Pn	16 15 27.8	+2.0
PMBI				S	Sn	16 15 52.6	+2.2
PMBI	Palembang	1.89	32		Pn	16 15 28.0	+2.2
TNG	Tangerang	3.29	120	P	Pn	16 15 44.3	+0.4
KRJI	Kerinci	3.35	317	P	Pn	16 15 47.0	+2.3
DBJI	Dramaga	3.58	124	P	Pn	16 15 46.8	-0.9
CBJI	Citeko	3.59	121	P	Pn	16 15 50.7	+2.9
SKJI	Sukabumi	3.70	132	P	Pn	16 15 47.0	-2.3
PPSI	Pulau Pagai	4.14	295	P	Pn	16 15 55.1	-0.1
SDSI	Sungai Dareh	4.28	327	P	Pn	16 15 58.0	+1.0
CNJI	Cibinong	4.33	130	P	Pn	16 15 54.8	-2.9
RGRI	Rengat	4.40	341	P	Pn	16 16 02.1	+3.4
LEM	Lembang	4.46	121	P	Pn	16 16 00.3	+0.8
	100nm,0.3s,baz=346,slow=6.3,SNR=266						
LEM				ScP	ScP	16 26 30.9	-0.5
	3.3nm,0.3s,baz=229,slow=15,SNR=3.5						
PDSI	Padang	4.89	317	P	Pn	16 16 05.7	+0.5
CISI	Cisompet, Garu	5.02	127	P	Pn	16 16 04.6	-2.4
CISI	Cisompet, Garu	5.02	127		Pn	16 16 05.3	-1.7
TPRI	Tanjung Pinang	5.48	8	P	Pn	16 16 16.6	+3.5
	4.4nm13μm866nm,1.0s						
BKNI	Bangkinang	5.55	331	P	Pn	16 16 16.2	+2.1
	7.2nm8μm21μm2μm,1.2s						
BKNI	Bangkinang	5.55	331		Pn	16 16 16.2	+2.1
SISI	Saibi	5.66	304	P	Pn	16 16 15.1	-0.5
	4.5nm8μm18μm1μm,0.9s						
KPJI	Karang Pucung	5.84	119	P	Pn	16 16 17.9	-0.1
	4.5nm20μm13μm1μm,0.9s						
MYKOM	Kota Tinggi	6.29	1		Pn	16 16 27.8	+3.6
SMRI	Semarang	7.09	111	P	Pn	16 16 36.4	+1.4
	6.5nm9μm20μm2μm,1.1s						
SMRI	Semarang	7.09	111		Pn	16 16 36.5	+1.5
UWJI	Ujung Watu	7.39	105	P	Pn	16 16 40.9	+1.9
	1.5nm4μm497nm,0.9s						
UGM	Wanagama	7.51	117	P	Pn	16 16 39.7	-0.9
	4.9nm11μm16μm2μm,1.0s						
UGM	Wanagama	7.51	117		Pn	16 16 40.3	-0.3
WOJI	Wonogiri, Jawa	7.83	115	P	Pn	16 16 44.3	-0.7
	1.9nm6μm9μm512nm,1.0s						
PCJI	Pacitan	8.21	117	P	Pn	16 16 49.0	-1.1
	2.3nm13μm9μm280nm,0.4s						
RPSI	Rantau Prapat	8.66	326		Pn	16 16 55.9	-0.3
RPSI					ScP	16 26 34.2	-0.5
PSI	Prapat	8.75	326	P	Pn	16 16 55.9	-1.6
	3.8nm,0.3s,baz=157,slow=10.0,SNR=74						
PSI				LR	LR	16 20 57.0	
	comp=Z,1μm,20.4s,baz=138,slow=42						
PSI				ScP	ScP	16 26 34.2	-0.7
	0.3nm,0.3s,baz=204,slow=1.0,SNR=7.2						
KSM	Kuching	8.86	48	P	Pn	16 17 03.0	+4.1
GRJI	Gresik	8.98	106	P	Pn	16 17 02.3	+1.7
	392nm4μm393nm,1.0s						
IPM	Ipoh	9.37	343		Pn	16 17 08.9	+3.2
IPM	Ipoh	9.37	343	P	Pn	16 17 09.0	+3.2
KCSI	Kotacane, Aceh	10.00	323	P	Pn	16 17 11.4	-2.9
	2μm112nm,1.3s						
SNSI	Sinabang, Aceh	10.14	313	P	Pn	16 17 14.7	-1.5
	8μm884nm,1.3s						
TPTI		10.17	320	P	Pn	16 17 14.7	-1.8
	612nm22nm,0.9s						
KULM	Kulim	10.25	342		Pn	16 17 19.4	+1.8
KULM	Kulim	10.25	342	P	Pn	16 17 20.0	+2.3
KMMI	Kalianget	10.45	104	P	Pn	16 17 20.6	+0.2
	5μm478nm,1.2s						
SBUM	Sibu	10.94	51		Pn	16 17 30.9	+4.0
SBUM	Sibu	10.94	51	P	Pn	16 17 33.0	+6.1
JAGI	Jajag, Banyuwa	11.03	111	P	Pn	16 17 26.5	-1.7
	4μm22μm2μm,0.8s						
JAGI	Jajag, Banyuwa	11.03	111		Pn	16 17 27.3	-0.9
MLSI	Meulaboh, Aceh	11.43	320	P	Pn	16 17 30.1	-3.4
	5μm404nm,1.3s						
LHMI	Lhok Sumawe	11.86	325	P	Pn	16 17 35.7	-3.4
	5μm3μm182nm,0.8s						
LHMI	Lhok Sumawe	11.86	325		Pn	16 17 35.8	-3.4
SRBI	Singaraja	11.91	108	P	Pn	16 17 38.8	-1.0
	5μm8μm812nm,0.9s						
IGBI	Denpasar	12.07	111	P	Pn	16 17 39.6	-2.4
	7μm385nm,1.2s						
DNP	Denpasar	12.09	110	P	Pn	16 17 40.7	-1.5
	16μm1μm,1.4s						
KBKI	Kotabaru	12.44	85	P	Pn	16 17 46.6	-0.1
	436nm62nm,0.8s						
PLAI	Plampang	14.55	108	P	Pn	16 18 10.6	-3.4
	3μm6μm427nm,1.1s						
KAPI	Kappang	15.94	92	P	P	16 18 32.1	-0.5
	1.9nm,0.3s,baz=263,slow=10,SNR=27						
KAPI				ScP	ScP	16 26 45.7	+0.1
	0.7nm,0.3s,baz=189,slow=5.3,SNR=4.7						
SPSI	Sidrap Palu	15.97	89	P	P	16 18 33.5	+0.5
	1μm69nm,1.0s						
TTSI	Tana Toraja	16.09	85	P	P	16 18 35.9	+1.6
	1μm120nm,1.3s						
KKM	Kota Kinabalu	16.28	50	P	Pn	16 18 35.4	-0.4
BNSI	Bone	16.29	90	P	Pn	16 18 32.9	-2.9
	3μm211nm,1.7s						
WBSI	Waikabubak, Su	16.31	109	P	Pn	16 18 30.0	-6.0
	2μm329nm,0.9s						
BKSI	Bulukumba	16.32	93	P	Pn	16 18 35.8	-0.3
	2μm225nm,1.1s						
MPSI	Mapaga	16.83	74	P	Pn	16 18 42.1	-0.3
	2μm2μm68nm,1.3s						
DLV	T Lat	17.04	16	P	Pn	16 18 45.9	+0.9
WSI	Waingapu	17.17	108	P	P	16 18 40.9	-5.4
	10μm835nm,0.9s						
BASI	Baing, Sumba	17.60	110	P	P	16 18 47.6	-3.3
	9μm462nm,0.9s						
APSI	Ampana	18.22	79	P	Pn	16 18 59.6	+0.5
	2μm102nm,0.9s						
EDFI	Ende, Flores	18.29	104	P	P	16 18 56.1	-2.5
	2μm1μm45nm,0.7s						
BBSI	Bau Bau	18.76	94	P	P	16 19 04.6	+0.9
	286nm21nm,0.9s						
MMRI	Maumere	18.79	103	P	P	16 19 01.8	-2.3
	3μm278nm,0.7s						
MMRI	Maumere	18.79	103	P	P	16 19 01.9	-2.2
KDI	Kendari	18.81	89	P	Pn	16 19 06.4	+0.3
	179nm,1.4s						
MRSI	Marisa	18.83	75	P	Pn	16 19 06.7	+0.4
	1μm1μm106nm,0.7s						
BATP	Bataraza	19.27	47	*e*P	Pn	16 19 12.1	+0.6
LUWI	Luwuk	19.30	80	P	Pn	16 19 17.7	+5.9
UBPT	Khong Chiam	19.77	5	P	Pn	16 19 16.6	-0.6
UBPT				IAmb	IAmb	16 19 45.0	
	comp=Z,347nm,1.6s						

GIRL	Giralia	20.65	152	P	P	16 19 25.4	+1.4
	baz=21,SNR=74						
GIRL	Giralia	20.65	152	P	Pn	16 19 26.0	-1.5
SOEI	Soe	20.98	105	P	P	16 19 24.8	-3.1
	comp=Z,3µmcomp=Z,4µmcomp=Z,322nm,1.0s						
SOEI	Soe	20.98	105	P	P	16 19 26.0	-1.8
PBKT	Sadao Pong	21.16	353	P	P	16 19 30.6	+1.1
ENPP	El Nido	22.08	45	eP	P	16 19 41.2	+1.8
SANI	Sanana	22.32	84	P	P	16 19 41.6	-0.3
	comp=Z,2µmcomp=Z,140nm,1.4s						
CUYO	Cuyo Island	23.00	48	eP	P	16 19 48.1	-0.4
PSA00	Pilbara Seismi	23.02	139	P	P	16 19 48.8	+0.2
PSA00				IAmb	IAmb	16 20 05.2	
	comp=Z,120nm,0.8s						
PAGZ	Pagadian	23.12	58	eP	P	16 19 51.2	+1.6
BUSP	Coron	23.18	45	eP	P	16 19 53.1	+3.0
CM31	Chiang Mai Arr	23.34	348	P	P	16 19 52.0	+0.3
	SNR=33						
CM31	Chiang Mai Arr	23.34	348	P	P	16 19 52.3	+0.7
CM31				IAmb	IAmb	16 20 20.9	
	comp=Z,126nm,1.1s						
CMAR	Chiang Mai Arr	23.34	348	P	P	16 19 51.4	-0.2
	comp=Z,25nm,0.8s,baz=182,slow=9.0,SNR=120						
CMAR				PcP	PcP	16 23 36.5	+1.2
	comp=Z,11nm,0.8s,baz=206,slow=3.2,SNR=14						
CMAR				S	S	16 23 53.8	-1.6
	comp=Z,3.4nm,1.1s,baz=183,slow=9.6,SNR=4.1						
CMAR				ScP	ScP	16 27 02.5	0.0
	comp=Z,26nm,1.1s,baz=206,slow=3.3,SNR=43						
CMAR	Chiang Mai Arr	23.34	348	P	P	16 19 52.7	+1.1
CMAR					PcP	16 23 36.7	+1.4
SKMP	Bagumbayan, Su	23.47	62	eP	P	16 19 54.9	+2.1
CHTO	Chiang Mai	23.69	349	P	P	16 19 55.4	+0.6
CHTO				pmax	pmax		
	comp=Z,82nm,1.4s						
CHTO	Chiang Mai	23.69	349	P	P	16 19 55.4	+0.6
TNTI	Ternate	24.16	78	P	P	16 20 00.2	+1.1
	comp=Z,82nm,1.5s						
DDMP	Don Marcelino,	24.33	64	eP	P	16 20 02.3	+1.7
AAI	Ambon	24.38	89	P	P	16 20 06.5	+5.4
LUBP	Lubang	24.44	42	eP	P	16 20 02.4	+0.9
DAV	Davao City (W)	24.64	62	P	P	16 20 04.5	+1.1
	comp=Z,67nm,0.4s,baz=241,slow=15,SNR=3.2						
DAV	Davao City (W)	24.64	62⇓	eP	P	16 20 15.4	+12
OTRP	Odiongan	24.73	47	eP	P	16 20 06.5	+2.3
TGY	Tagaytay City	25.17	42	P	P	16 20 09.4	+1.2
	comp=Z,152nm,0.3s,baz=267,slow=3.1,SNR=5.8						
TGY				ScP	ScP	16 27 06.9	-0.8
	comp=Z,93nm,0.3s,baz=196,slow=2.0,SNR=4.7						
FITZ	Fitzroy Crossi	25.28	124	P	P	16 20 09.0	-0.3
	baz=25,SNR=44						
FITZ	Fitzroy Crossi	25.28	124	P	P	16 20 09.2	0.0
	comp=Z,36nm,0.6s,baz=308,slow=6.4,SNR=160						
FITZ				pP	pP	16 20 34.0	-1.2
	comp=Z,53nm,0.9s,baz=312,slow=9.9,SNR=6.0						
FITZ				S	S	16 24 22.9	-3.6
	comp=Z,18nm,1.0s,baz=303,slow=20,SNR=3.8						
FITZ	Fitzroy Crossi	25.28	124	IAmb	IAmb	16 20 35.4	
	comp=Z,80nm,1.0s						
LQP	Lukban	25.58	43⇓	eP	P	16 20 13.2	+1.1
BUTP	Butuan	25.59	58	eP	P	16 20 17.2	+5.1
PALK	Pallekele	25.84	297	P	P	16 20 15.0	+0.7
	comp=Z,20nm,0.8s,baz=97,slow=5.4,SNR=8.7						
PALK				pP	pP	16 20 39.2	-1.2
	comp=Z,15nm,0.9s,baz=70,slow=11,SNR=3.1						
PALK				PcP	PcP	16 23 43.0	+2.1
	comp=Z,6.6nm,1.0s,baz=210,slow=8.1,SNR=2.6						
PALK				ScP	ScP	16 27 10.5	+0.8
	comp=Z,9.2nm,0.9s,baz=85,slow=1.6,SNR=4.1						
PALK				LR	LR	16 30 41.0	
	comp=Z,219nm,18.0s,baz=105,slow=37						
PALK	Pallekele	25.84	297	P	P	16 20 18.1	+3.7
MEEK	Meekatharra	26.16	149	P	P	16 20 17.5	+0.4
	baz=26,SNR=18						
SMPP	San Manuel, Pa	26.51	39	eP	P	16 20 18.6	-1.8
KNRA	Kununurra	26.94	116	P	P	16 20 23.1	-1.1
	baz=27,SNR=15						
KNRA	Kununurra	26.94	116	P	P	16 20 23.4	-0.8
MORW	Morawa	27.03	156	P	P	16 20 25.6	+0.7
	baz=27,SNR=8.7						
MORW	Morawa	27.03	156	P	P	16 20 23.8	-1.1
SIJI	Sorong	27.71	83	P	P	16 20 31.7	+0.6
	comp=Z,28nm,0.8s,baz=328,slow=7.4,SNR=6.1						
CAUP	Cauayan	27.82	39	eP	P	16 20 32.8	+0.8
BLDU	Ballidu	28.66	156	P	P	16 20 39.9	+0.5
	baz=29,SNR=12						
KDU	Kakadu	29.49	108	P	P	16 20 44.5	-2.4
	baz=29,SNR=24						
KMI	Kunming	29.50	358	P	P	16 20 51.5	+4.4
KMI				pP	pP	16 21 18.6	+5.4
KMI				sP	sP	16 21 31.6	+4.7
KMI				PP	PnPn	16 21 47.5	0.0
KMI				S	S	16 25 36.3	+3.0
KMI				sS	sS	16 26 19.6	+0.7
KMI				pmax	pmax		
	comp=Z,29nm,0.5s						
KMI				pmax	pmax		
	comp=Z,110nm,5.8s						
KMI				LR	LR		
	comp=Z,670nm,10.5s						
KMI				LR	LR		
	comp=Z,980nm,11.3s						
KMI				LR	LR		
	comp=Z,890nm,11.6s						
BRDH	Bariadhala	29.53	337	ScP	ScP	16 27 21.6	+0.9
	comp=Z,124nm,0.4s,baz=233,slow=20,SNR=9.0						
MUN	Mundaring	29.68	158	P	P	16 20 49.4	+1.0
	baz=30,SNR=8.7						
KLBR	Kellerberrin	29.95	156	P	P	16 20 51.6	+0.9
	baz=30,SNR=13						
NWAO	Narrogin (SRO)	30.92	158	P	P	16 21 00.0	+0.7
	baz=31,SNR=6.0						
NWAO	Narrogin (SRO)	30.92	158	P	P	16 20 58.9	-0.4
	comp=Z,12nm,0.6s,baz=335,slow=7.0,SNR=13						
NWAO				LR	LR	16 32 05.8	
	comp=Z,257nm,20.8s,baz=336,slow=33						
NWAO	Narrogin (SRO)	30.92	158	IAmb	IAmb	16 21 00.8	
	comp=Z,68nm,1.6s						
GYA	Guiyang	30.95	5⇑	iP	P	16 21 02.8	+3.1
GYA				pP	pP	16 21 27.2	+1.4
GYA				PP	PP	16 22 12.4	+0.5
GYA				PcP	PcP	16 23 54.3	+0.9
GYA				S	S	16 25 55.9	+0.3
GYA				sS	sS	16 26 47.3	+6.0
GYA				ScP	ScP	16 27 24.3	-1.1
GYA				SS	SnSn	16 27 49.0	-0.6
GYA				ScS	ScS	16 31 19.6	-3.2
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,290nm,4.8s						
WRKA	Warakurna	31.15	133	P	P	16 21 01.7	+0.2
	baz=31,SNR=59						
DGAR	Diego Garcia	31.27	263⇑	eP	P	16 21 03.5	+0.9
DGAR				pmax	pmax		
	comp=Z,22nm,0.5s						
KMBL	Kambalda	31.66	150	P	P	16 21 06.2	+0.4
	baz=32,SNR=18						
SHL	Shillong	32.08	340	P	P	16 21 08.9	-0.8
	SNR=15						
RKGY	Rocky Gully	32.33	159	P	P	16 21 12.5	+0.8
	baz=32,SNR=4.5						
HYB	Hyderabad	33.10	312	i P	P	16 21 19.0	+0.4
HYB				e		16 21 41.0	
HYB				e		16 22 16.0	
HYB				ePP	PP	16 22 41.0	+5.1
HYB				ePcP	PcP	16 24 00.0	+0.6
HYB				e		16 24 29.0	
HYB				eS	S	16 26 29.0	-0.3
HYB				eScP	ScP	16 27 32.0	-0.9
WB0	Warramunga Arr	33.45	119	P	P	16 21 21.3	-0.4
WB0				IAmb	IAmb	16 21 21.9	
	comp=Z,48nm,0.8s						
WRA	Warramunga Arr	33.47	120	P	P	16 21 21.4	-0.5
	comp=Z,36nm,0.5s,baz=298,slow=9.3,SNR=334						
WRA				PcP	PcP	16 23 59.7	-0.7
	comp=Z,5.4nm,0.9s,baz=301,slow=2.1,SNR=5.1						
WRA				S	S	16 26 29.7	-5.3
	comp=Z,45nm,1.1s,baz=290,slow=17,SNR=20						
WRA				ScP	ScP	16 27 35.1	+1.0
	comp=Z,4.0nm,0.7s,baz=308,slow=2.7,SNR=2.4						
WRA				LR	LR	16 37 20.5	
	comp=Z,143nm,18.6s,baz=350,slow=40						
WRA	Warramunga Arr	33.47	120	P	P	16 21 21.5	-0.4
WRAB	Tennant Creek	33.48	120c	iP	P	16 21 21.1	-0.8
WRAB				pmax	pmax		
	comp=Z,88nm,0.8s						
WRAB	Tennant Creek	33.48	120	P	P	16 21 21.8	-0.1
WB2	Warramunga Arr	33.48	120	P	P	16 21 21.8	-0.2
FORT	Forrest	34.71	142	P	P	16 21 33.3	+0.9
	baz=35,SNR=27						
FORT	Forrest	34.71	142	P	P	16 21 33.5	+1.2
ASAR	Alice Springs	34.73	126	P	P	16 21 32.8	+0.1
	comp=Z,49nm,0.7s,baz=295,slow=7.6,SNR=868						
ASAR				pP	pP	16 21 58.4	-0.9
	comp=Z,22nm,1.0s,baz=305,slow=8.5,SNR=2.8						
ASAR				PcP	PcP	16 24 04.0	+0.1
	comp=Z,13nm,0.8s,baz=313,slow=2.7,SNR=9.5						
ASAR				S	S	16 26 49.9	-4.4
	comp=Z,54nm,1.1s,baz=296,slow=16,SNR=30						
ASAR				ScP	ScP	16 27 41.0	+2.5
	comp=Z,12nm,0.8s,baz=303,slow=3.0,SNR=7.2						
ASAR	Alice Springs	34.73	126	P	P	16 21 33.0	+0.3
AS31	Alice Springs	34.73	126	P	P	16 21 32.9	+0.2
AS31				IAmb	IAmb	16 21 33.4	
	comp=Z,20nm,0.6s						
ODAN	Odare	35.01	334	eP	P	16 21 34.5	-0.7
	comp=Z,124nm,1.2s						
TAPN	Taplejung	35.30	335	eP	P	16 21 37.4	-0.3
	comp=Z,196nm,1.2s						
RAMN	Ramite	35.44	333	eP	P	16 21 38.4	-0.5
	comp=Z,60nm,0.9s						
LSA	Lhasa	36.13	341	P	P	16 21 45.6	+0.5
LSA				pmax	pmax		
	comp=Z,110nm,1.3s						
LSA	Lhasa	36.13	341	i P	P	16 21 45.8	+0.7
	SNR=16						
LSA	Lhasa	36.13	341	P	P	16 21 45.8	+0.7
LSA						16 24 10.3	
LSA				pmax	pmax		
	comp=Z,22nm,0.9s						
LSA	Lhasa	36.13	341	P	P	16 21 45.8	+0.7
LSA					PcP	16 24 10.3	+1.8
JIRN	Jiri	36.23	333	eP	P	16 21 45.2	-0.6
	comp=Z,224nm,1.2s						
WHN	Wuhan	36.33	16	⇓P	P	16 21 50.6	+4.5
WHN				pP	pP	16 22 15.1	+2.4
WHN				S	S	16 27 21.1	+2.7
WHN				LR	LR		
	comp=Z,1µm,16.5s						
PKI	Pulchoki	36.51	332	eP	P	16 21 47.1	-1.1
	comp=Z,60nm,1.3s						
GUN	Gumba	36.59	333	eP	P	16 21 48.3	-0.5
	comp=Z,273nm,1.3s						
DMN	Daman	36.69	332	eP	P	16 21 48.8	-0.8
	comp=Z,67nm,1.2s						
KKN	Kakani	36.76	332	eP	P	16 21 49.1	-1.0
	comp=Z,92nm,1.2s						
GKN	Gorkha	37.24	331	eP	P	16 21 53.4	-0.7
	comp=Z,194nm,1.3s						
POO	Poona	37.35	309	eP	P	16 21 54.0	-1.0
DANN	Dangsing	37.96	331	eP	P	16 21 59.8	-0.5
	comp=Z,180nm,1.1s						
QIS	Mount Isa	38.30	118	P	P	16 22 02.6	-0.4
	baz=38,SNR=24						
XAN	Xi'an	38.68	7	P	P	16 22 06.0	-0.1
XAN				S	S	16 27 52.3	-1.8
XAN				pmax	pmax		
	comp=Z,20nm,0.8s						
XAN				pmax	pmax		
	comp=Z,130nm,4.4s						
XAN				LR	LR		
	comp=Z,530nm,10.8s						
XAN				LR	LR		
	comp=Z,360nm,9.8s						
XAN				LR	LR		
	comp=Z,590nm,10.8s						
XAN	Xi'an	38.68	7	P	P	16 22 05.9	-0.1
XAN				pmax	pmax		
	comp=Z,112nm,1.0s						
XAN	Xi'an	38.68	7	P	P	16 22 05.9	-0.1
NJ2	Nanjing	39.12	21	eP	P	16 22 13.3	+3.7
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
COEN	Coen	39.95	106	P	P	16 22 15.4	-1.4
	baz=40,SNR=16						
COEN	Coen	39.95	106	P	P	16 22 15.6	-1.2
COEN				IAmb	IAmb	16 22 43.3	
	comp=Z,46nm,1.2s						
LZH	Lanzhou	40.42	0	eP	P	16 22 22.8	+2.3
LZH				pP	pP	16 22 50.9	+3.4
LZH				sP	sP	16 23 00.1	-0.9
LZH				PP	PnPn	16 24 02.3	+1.4
LZH				pmax	pmax		
	comp=Z,21nm,1.4s						
LZH				pmax	pmax		
	comp=Z,100nm,5.4s						
LZH				LR	LR		
	comp=Z,440nm,13.6s						
LZH				LR	LR		
	comp=Z,330nm,14.6s						
LZH				LR	LR		
	comp=Z,610nm,15.2s						
BBOO	Buckleboo	41.23	137	P	P	16 22 27.3	+0.2
	baz=41,SNR=32						
BBOO	Buckleboo	41.23	137	P	P	16 22 27.0	-0.1
BBOO				IAmb	IAmb	16 22 28.1	
	comp=Z,62nm,0.8s						
NDI	New Delhi	41.76	324	eP	P	16 22 31.0	-0.4
MTSU	Mount Surprise	41.87	112	P	P	16 22 32.6	0.0
	baz=42,SNR=31						
PMG	Port Moresby	43.32	99	P	P	16 22 43.7	-0.6
	comp=Z,53nm,0.8s,baz=228,slow=2.9,SNR=23						
PMG				PcP	PcP	16 24 32.5	+1.3
	comp=Z,14nm,0.8s,baz=259,slow=10,SNR=2.6						
PMG	Port Moresby	43.32	99d	iP	P	16 22 43.4	-0.9
PMG				pmax	pmax		
	comp=Z,234nm,0.8s						
PMG	Port Moresby	43.32	99	P	P	16 22 43.7	-0.6
PMG				IAmb	IAmb	16 22 47.2	
	comp=Z,60nm,0.8s						
HTT	Hallett	43.55	136	P	P	16 22 46.8	+0.8
	baz=44,SNR=19						
GTA	Gaotai	43.89	356	⇑P	P	16 22 49.7	+1.1
GTA				pP	pP	16 23 13.1	-2.8
GTA				PcP	PP	16 24 33.8	+0.6
GTA				ScP	ScP	16 28 11.8	-1.8
GTA				S	S	16 29 10.0	-1.0
GTA				sS	sS	16 30 02.0	+3.5
GTA				SS	SS	16 32 28.4	-3.8
GTA				ScS	ScS	16 32 30.5	-5.0
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,150nm,8.1s						
GTA				LR	LR		
	comp=Z,290nm,19.7s						
GTA				LR	LR		
	comp=Z,500nm,17.5s						
GTA				LR	LR		
	comp=Z,510nm,15.6s						
CTA	Charters Tower	44.13	114	P	P	16 22 50.9	+0.2
	comp=Z,56nm,0.8s,baz=287,slow=10,SNR=31						
CTA				PcP	PcP	16 24 34.4	+0.5
	comp=Z,15nm,0.8s,baz=239,slow=5.9,SNR=3.8						
CTA				ScP	ScP	16 28 15.4	+0.5
	comp=Z,7.9nm,0.8s,baz=307,slow=20,SNR=3.9						
QLP	Quilpie	44.43	124	P	P	16 22 53.7	+0.7
	baz=44,SNR=30						
STKA	Stephens Creek	44.66	132	P	P	16 22 55.1	+0.3
	baz=45,SNR=245						
STKA	Stephens Creek	44.66	132	P	P	16 22 55.4	+0.6
	comp=Z,123nm,0.7s,baz=306,slow=6.9,SNR=313						
STKA				pP	pP	16 23 21.8	-0.8
	comp=Z,26nm,0.7s,baz=263,slow=7.8,SNR=3.4						
STKA				S	S	16 29 20.0	-2.4
	comp=Z,6.4nm,1.0s,baz=198,slow=23,SNR=9.3						
STKA				LR	LR	16 44 17.1	
	comp=Z,166nm,19.0s,baz=298,slow=40						
STKA	Stephens Creek	44.66	132	P	P	16 22 55.4	+0.6
STKA				IAmb	IAmb	16 22 56.2	
	comp=Z,28nm,0.7s						
BTO	Baotou	45.29	7	eP	P	16 23 02.3	+2.6
JNU	Nakatsue	45.42	32	P	P	16 23 01.5	+0.8
	comp=Z,22nm,0.9s,baz=140,slow=3.4,SNR=8.6						
JNU				pP	pP	16 23 28.4	+0.1
	comp=Z,40nm,1.0s,baz=240,slow=3.1,SNR=7.3						
JNU	Nakatsue	45.42	32	P	P	16 23 01.2	+0.4
JNU				IAmb	IAmb	16 23 30.2	
	comp=Z,76nm,1.1s						
HHC	Hu-ho-hao-te	45.73	8	eP	P	16 23 04.9	+1.7
HHC				pP	pP	16 23 32.9	+2.2
HHC				sP	sP	16 23 45.0	+0.9
HHC				S	S	16 29 34.7	-2.9
HHC				pmax	pmax		
	comp=Z,140nm,1.0s						
HHC				pmax	pmax		
	comp=Z,670nm,4.9s						
BJI	Beijing	45.81	13	eP	P	16 23 05.4	+1.8
BJI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BJI				LR	LR		
	comp=Z,160nm,14.7s						
BJI				LR	LR		
	comp=Z,350nm,15.2s						
BJI				LR	LR		
	comp=Z,180nm,22.7s						
TJN	Taejon	46.31	27⇓	eP	P	16 23 05.9	-1.7
KSAR	Wonju Array Be	47.42	26	P	P	16 23 17.6	+1.3
KSAR	Wonju Array Be	47.42	26	P	P	16 23 17.6	+1.3
KSRS	Korea Array	47.45	26	P	P	16 23 17.9	+1.4
	comp=Z,9.7nm,0.9s,baz=232,slow=7.6,SNR=27						
KSRS				pP	pP	16 23 44.2	+0.1
	comp=Z,33nm,1.1s,baz=232,slow=7.7,SNR=16						
KSRS				ScP	ScP	16 28 26.9	-1.4
	comp=Z,3.6nm,0.9s,baz=217,slow=3.1,SNR=8.2						
CMSA	Cobar Meteorol	47.60	129	P	P	16 23 18.4	+0.6
	baz=48,SNR=61						
NIL	Nilore	47.70	325	P	P	16 23 17.2	-1.3
NIL				pmax	pmax		
	comp=Z,61nm,1.3s						
NIL	Nilore	47.70	325	P	P	16 23 17.2	-1.3
NIL				IAmb	IAmb	16 23 48.6	
	comp=Z,61nm,1.3s						
RMQ	Roma	48.18	122	P	P	16 23 22.1	-0.3
	baz=48,SNR=15						
EIDS	Eidsvold	49.84	120	P	P	16 23 35.6	+0.6
	baz=50,SNR=6.0						
EIDS	Eidsvold	49.84	120	P	P	16 23 35.1	+0.1
EIDS				IAmb	IAmb	16 23 37.0	
	comp=Z,57nm,1.0s						
WMQ	Urumqi	50.27	345	eP	P	16 23 39.4	+1.4
WMQ				pP	pP	16 24 05.9	-0.2
WMQ				sP	sP	16 24 26.1	+6.7
WMQ				PcP	PcP	16 24 56.7	+1.4
WMQ				S	S	16 30 37.5	-4.0
WMQ				pmax	pmax		
	comp=Z,25nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,160nm,3.6s						
WMQ				LR	LR		
	comp=Z,710nm,29.3s						
WMQ				LR	LR		
	comp=Z,640nm,29.0s						
WMQ				LR	LR		
	comp=Z,220nm,29.0s						
TOO	Toolangi	50.29	137	P	P	16 23 40.0	+1.8
	baz=50,SNR=8.5						
TOO	Toolangi	50.29	137	IAmb	IAmb	16 23 40.7	
	comp=Z,25nm,0.9s						
KSH	Kashi	50.78	332	P	P	16 23 40.9	-1.1
KSH				pP	pP	16 24 09.0	-1.1
KSH				S	S	16 30 42.9	-5.9
KSH				pmax	pmax		
	comp=Z,27nm,0.6s						
KSH				pmax	pmax		
	comp=Z,530nm,5.6s						
KSH				LR	LR		
	comp=Z,830nm,17.3s						
KSH				LR	LR		
	comp=Z,400nm,10.6s						
KSH				LR	LR		
	comp=Z,400nm,12.7s						
KBL	Kabul	50.80	323	P	P	16 23 41.8	-0.6
YNG	Young	50.84	131	P	P	16 23 43.1	+0.6
	baz=51,SNR=30						
MHTO	MHTO	51.58	301	P	P	16 23 49.2	+1.2
	SNR=5.7						
CAN	Canberra	51.73	132	P	P	16 23 50.8	+1.7
CAN				pmax	pmax		
	comp=Z,99nm,1.3s						
CAN	Canberra	51.73	132	P	P	16 23 50.8	+1.7
ARMA	Armidale	51.88	125	P	P	16 23 50.0	-0.3
	baz=52,SNR=54						
CN2	Changchun	51.94	20	⇓P	P	16 23 50.4	0.0
CN2				epP	pP	16 24 18.4	-0.1
CN2				eS	S	16 31 03.0	-1.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
WSAR	Wadi Sarin	51.97	304	P	P	16 23 52.6	+1.6
	comp=Z,4.9nm,0.6s,baz=166,slow=6.1,SNR=8.8						
CNB	Canberra Magne	52.00	132	P	P	16 23 52.0	+0.9
	baz=52,SNR=5.5						
MAT	Matsushiro	52.02	35	P	P	16 23 50.3	-0.8
MAT				eS	S	16 31 07.0	+1.4
MJAR	Matsushiro Arr	52.02	35	P	P	16 23 50.4	-0.7
	comp=Z,6.6nm,0.9s,baz=221,slow=6.4,SNR=11						
MJAR				pP	pP	16 24 18.7	-0.5
	comp=Z,19nm,0.9s,baz=220,slow=7.9,SNR=15						
MJAR				ScP	ScP	16 28 46.7	-1.2
	comp=Z,9.8nm,1.1s,baz=226,slow=5.7,SNR=9.6						
MJAR				LR	LR	16 48 40.3	
	comp=Z,63nm,18.3s,baz=230,slow=39						
SOCY	Socotra	52.20	289	P	P	16 23 54.8	+1.9
SONM	Songino Array	52.21	2	P	P	16 23 53.4	+1.0
	comp=Z,20nm,0.8s,baz=180,slow=7.8,SNR=94						
SONM				PcP	PcP	16 25 02.8	+0.3
	comp=Z,7.1nm,0.7s,baz=200,slow=3.9,SNR=7.9						
SONM				ScP	ScP	16 28 47.0	-1.6
	comp=Z,13nm,1.0s,baz=179,slow=3.1,SNR=17						
SONM				S	S	16 31 09.1	+1.0
	comp=Z,2.3nm,1.1s,baz=191,slow=15,SNR=6.3						
SONM				LR	LR	16 48 16.6	
	comp=Z,174nm,18.6s,baz=169,slow=38						
SONM	Songino Array	52.21	2	P	P	16 23 53.9	+1.4
SONM						16 25 03.4	
SONM				pmax	pmax		
	comp=Z,21nm,1.0s						
SONM	Songino Array	52.21	2	P	P	16 23 53.9	+1.4
SONM					PcP	16 25 03.4	+0.9
SONM					ScP	16 28 47.4	-1.3
ULN	Ulaanbaatar	52.27	3	P	P	16 23 54.3	+1.4
ULN				pmax	pmax		
	comp=Z,23nm,1.2s						
ULN	Ulaanbaatar	52.27	3	P	P	16 23 54.3	+1.4
KDJ	Kajisay	52.37	335	IAmb	IAmb	16 24 22.9	
	comp=Z,55nm,1.2s						
ULHL	Ulahol	52.86	335	P	P	16 23 57.3	-0.2
	SNR=11						
BSY	Bisya	52.95	303	P	P	16 24 00.5	+2.2
	SNR=5.2						
BOOM	Boomskoye usch	53.19	334	P	P	16 24 00.4	+0.5
BOOM	Boomskoye usch	53.19	334	P	P	16 24 00.4	+0.5
GAR	Garm	53.21	328	P	P	16 23 59.5	-0.5
GAR				IAmb	IAmb	16 24 29.0	
	comp=Z,56nm,1.4s						
RBK	Rabkut	53.59	296	P	P	16 24 05.7	+2.6
	SNR=14						
CHGR	Chuyangaron	53.60	326	P	P	16 24 02.0	-0.8
UCH	Uchtor	53.61	333	P	P	16 24 03.2	0.0
	SNR=7.0						
ARSB	Arslanbob	53.61	331	P	P	16 24 03.4	+0.5
ARSB				pmax	pmax		
	comp=Z,73nm,1.2s						
ARSB	Arslanbob	53.61	331	P	P	16 24 03.4	+0.5
ARSB				IAmb	IAmb	16 24 31.4	
	comp=Z,73nm,1.2s						
KBK	Karagaybulak	53.76	334	P	P	16 24 04.5	+0.5
	SNR=14						
VLA	Vladivostok	53.83	25⇑	eP	P	16 24 05.6	+1.4
VLA				pmax	pmax		
	comp=Z,36nm,1.0s						
AML	Almayashu	53.90	333	P	P	16 24 05.4	0.0
	SNR=13						
MOO	Moorlands	53.93	141	P	P	16 24 06.8	+1.8
	baz=54,SNR=5.3						
AAK	Ala-Archa	53.94	333	P	P	16 24 05.9	+0.6
	comp=Z,4.8nm,0.9s,baz=152,slow=3.6,SNR=8.4						
AAK				PcP	PcP	16 25 10.4	+1.2
	comp=Z,17nm,0.9s,baz=186,slow=4.8,SNR=8.1						
AAK				ScP	ScP	16 28 55.7	-0.6
	comp=Z,15nm,0.8s,baz=133,slow=3.5,SNR=19						
AAK				S	S	16 31 30.1	-1.8
	comp=Z,2.1nm,1.0s,baz=281,slow=20,SNR=7.4						
AAK	Ala-Archa	53.94	333	i P	P	16 24 05.5	+0.2

	SNR=10.0						
AAK	**Ala-Archa**	53.94	333	⇓eP	P	16 24 04.0	-1.3
AAK				pmax	pmax		
	comp=Z,16nm,1.9s						
AAK	**Ala-Archa**	53.94	333	P	P	16 24 06.1	+0.8
AAK	**Ala-Archa**	53.94	333	IAmb	IAmb	16 25 11.4	
	comp=Z,28nm,1.1s						
WHFO	**Wadi Hawf**	54.12	296	P	P	16 24 08.3	+1.4
	SNR=11						
MDJ	**Mudanjiang**	54.14	23	P	P	16 24 07.9	+1.4
MDJ				pP	pP	16 24 35.7	+0.9
MDJ				sP	sP	16 24 50.7	+2.7
MDJ				PP	PP	16 26 14.7	+5.2
MDJ				pmax	pmax		
	comp=Z,15nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,360nm,6.1s						
EKS2	**Erkin-Say**	54.28	333	P	P	16 24 08.1	+0.3
	SNR=23						
ABTO	**Aybut**	54.36	295	P	P	16 24 11.1	+2.4
	SNR=22						
USP	**Ospenovka**	54.44	334	P	P	16 24 08.5	-0.3
	SNR=7.2						
MK31	**Makanchi Array**	54.53	342	P	P	16 24 09.4	+0.1
MK31				pmax	pmax		
	comp=Z,15nm,1.0s						
MK31	**Makanchi Array**	54.53	342	P	P	16 24 09.4	+0.1
MKAR	**Makanchi Array**	54.53	342	P	P	16 24 09.3	-0.1
	comp=Z,10nm,0.6s,baz=147,slow=7.9,SNR=96						
MKAR				pP	pP	16 24 36.9	-0.9
	comp=Z,12nm,0.8s,baz=144,slow=8.4,SNR=5.2						
MKAR				ScP	ScP	16 28 57.3	-1.4
	comp=Z,2.5nm,0.8s,baz=153,slow=6.2,SNR=6.0						
MKAR				S	S	16 31 36.9	-2.6
	comp=Z,1.6nm,0.9s,baz=146,slow=13,SNR=5.3						
MKAR	**Makanchi Array**	54.53	342	P	P	16 24 09.4	+0.1
MAKZ	**Makanchi**	54.64	342	P	P	16 24 09.7	-0.4
MAKZ				pmax	pmax		
	comp=Z,14nm,1.1s						
MAKZ	**Makanchi**	54.64	342	P	P	16 24 09.7	-0.4
ZAK	**Zakamensk**	54.71	360	eP	P	16 24 11.6	+1.0
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ALNE	**Al Ain**	54.71	304	i P	P	16 24 13.0	+1.9
	SNR=8.8						
ASHO	**Ashiyiah**	54.72	304	P	P	16 24 12.7	+1.5
HATD	**Hatta, Dubai**	54.72	305	P	P	16 24 12.8	+1.7
USA0B	**Ussuriysk Arra**	54.75	25	d iP	P	16 24 10.4	-0.5
USRK	**Ussuriysk Ar.**	54.75	25	P	P	16 24 11.8	+0.8
	comp=Z,23nm,0.9s,baz=209,slow=3.2,SNR=19						
USRK				pP	pP	16 24 39.6	+0.3
	comp=Z,50nm,0.8s,baz=218,slow=6.4,SNR=19						
USRK	**Ussuriysk Ar.**	54.75	25	P	P	16 24 11.4	+0.5
MDH	**Madha**	54.79	305	P	P	16 24 11.3	-0.3
NAZ	**Nazwa, Dubai**	55.17	305	P	P	16 24 17.6	+3.2
	SNR=7.1						
HNR	**Honiara**	55.93	98	P	P	16 24 18.6	-1.3
	comp=Z,65nm,0.6s,baz=285,slow=20,SNR=4.2						
HNR	**Honiara**	55.93	98	IAmb	IAmb	16 24 26.7	
	comp=Z,79nm,0.8s						
TLY	**Talaya**	56.01	360	P	P	16 24 20.8	+1.0
	comp=Z,8.8nm,0.8s,baz=186,slow=5.1,SNR=8.5						
TLY	**Talaya**	56.01	360	deP	P	16 24 21.4	+1.6
TLY				pmax	pmax		
	comp=Z,13nm,0.9s						
MOY	**Mondy**	56.04	358	eP	P	16 24 21.4	+1.2
MOY				pmax	pmax		
	comp=Z,22nm,2.0s						
KK31	**Karatay Array**	56.15	331	i P	P	16 24 20.3	-0.7
IRK	**Irkutsk**	56.57	0	eP	P	16 24 23.9	+0.1
IRK				pmax	pmax		
	comp=Z,38nm,1.8s						
OPO	**Ambohidratompo**	56.92	251	P	P	16 24 29.5	+2.4
	comp=Z,31nm,0.9s,baz=86,slow=7.8,SNR=30						
OPO				PcP	PcP	16 25 22.6	+1.3
	comp=Z,6.7nm,0.9s,baz=74,slow=2.9,SNR=3.9						
VOI	**Vohitsoka**	57.74	247	P	P	16 24 34.6	+1.9
	SNR=6.2						
KLR	**Kul'dur**	58.82	21	P	P	16 24 39.8	+0.2
	comp=Z,14nm,1.0s,baz=232,slow=5.3,SNR=25						
KLR				pP	pP	16 25 06.9	-1.4
	comp=Z,14nm,0.7s,baz=223,slow=7.2,SNR=8.2						
KLR	**Kul'dur**	58.82	21	⇓eP	P	16 24 39.7	+0.1
KLR				i *PP	pP	16 25 07.9	-0.5
KURBB	**Kurchatov Arra**	59.09	342	P	P	16 24 41.2	-0.1
	comp=Z,4.4nm,0.5s,baz=158,slow=6.6,SNR=47						
KURBB				pP	pP	16 25 08.6	-1.6
	comp=Z,7.6nm,0.8s,baz=157,slow=6.1,SNR=6.1						
KURBB				PcP	PcP	16 25 29.3	+0.4
	comp=Z,9.1nm,1.0s,baz=157,slow=4.4,SNR=9.2						
KURBB				ScP	ScP	16 29 17.4	-1.2
	comp=Z,3.5nm,0.8s,baz=152,slow=3.3,SNR=8.7						
KURBB				S	S	16 32 35.1	-3.9
	comp=Z,1.6nm,1.0s,baz=151,slow=14,SNR=4.8						
KURBB				PKP2bc		16 54 23.7	
	comp=Z,2.8nm,0.9s,baz=313,slow=2.4,SNR=13						
KURBB	**Kurchatov Arra**	59.09	342	P	P	16 24 39.8	-1.6
KURK	**Kurchatov**	59.14	342	d iP	P	16 24 41.6	-0.1
KURK				pmax	pmax		
	comp=Z,30nm,1.5s						
KURK	**Kurchatov**	59.14	342	P	P	16 24 41.7	-0.1
KURK				IAmb	IAmb	16 25 10.5	
	comp=Z,20nm,1.1s						
ASAJ	**Asahikawa**	59.69	32	P	P	16 24 46.1	+0.5
	comp=Z,23nm,0.7s,baz=242,slow=8.7,SNR=14						
GEYT	**Alibeck**	59.81	319	P	P	16 24 46.9	+0.2
	comp=Z,11nm,0.7s,baz=142,slow=7.5,SNR=26						
GEYT				LR	LR	16 52 58.7	
	comp=Z,79nm,18.0s,baz=0.0,slow=38						
GEYT				PKP2bc		16 54 23.1	
	comp=Z,1.2nm,0.5s,baz=316,slow=4.1,SNR=3.7						
GEYT	**Alibeck**	59.81	319	P	P	16 24 46.9	+0.2
ZAA0	**Zalesovo Array**	60.40	347	P	P	16 24 50.2	-0.1
ZAA0				IAmb	IAmb	16 24 52.8	
	comp=Z,56nm,1.2s						
ZALV	**Zalesovo Beam**	60.40	347	P	P	16 24 50.0	-0.3
	comp=Z,24nm,0.4s,baz=161,slow=5.0,SNR=95						
ZALV				S	S	16 32 51.9	-4.0
	comp=Z,8.7nm,1.0s,baz=165,slow=12,SNR=16						
ZALV				LR	LR	16 54 04.8	
	comp=Z,234nm,20.7s,baz=148,slow=39						
ZALV	**Zalesovo Beam**	60.40	347	P	P	16 24 50.0	-0.3
ZALV	**Zalesovo Beam**	60.40	347	P	P	16 24 50.2	-0.1
ZEA	**Zeya**	61.32	16	eP	P	16 24 57.2	+0.6
ZEA				pmax	pmax		
	comp=N,35nm,1.0s						
ZEA				pmax	pmax		
	comp=E,21nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,52nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,16.0s						
YSS	**Yuzh-Sakhalins**	61.74	29	eP	P	16 24 59.7	+0.2
YSS				e		16 25 29.0	
YSS				pmax	pmax		
	comp=Z,80nm,0.9s						
YSS				MLR	MLR		
	comp=Z,400nm,19.0s						
YSS	**Yuzh-Sakhalins**	61.74	29	P	P	16 25 00.2	+0.7
DAMY	**Dhamar**	61.83	289	P	P	16 25 04.2	+3.1
	SNR=13						
BOD	**Bodaibo**	62.71	6	eP	P	16 25 05.3	-0.4
DZM	**Mont Dzumac**	63.01	112	P	P	16 25 09.1	+0.5
	comp=Z,18nm,0.8s,baz=294,slow=16,SNR=8.2						
DZM	**Mont Dzumac**	63.01	112	P	P	16 25 08.8	+0.2
DZM				IAmb	IAmb	16 25 09.9	
	comp=Z,33nm,1.0s						
RAYN	**Ar Rayn**	63.25	299	i P	P	16 25 11.0	+0.9
	SNR=28						
BVAR	**Borovoye Array**	63.89	338	P	P	16 25 12.9	-0.7
	comp=Z,7.7nm,0.6s,baz=141,slow=9.0,SNR=85						
BVAR				ScP		16 29 38.5	
	comp=Z,3.8nm,0.9s,baz=149,slow=6.4,SNR=7.6						
BVAR				S	S	16 33 35.9	-3.8
	comp=Z,1.7nm,0.9s,baz=137,slow=16,SNR=6.7						
BRVK	**Borovoye**	63.95	338	⇓eP	P	16 25 13.1	-0.9
BRVK				pmax	pmax		
	comp=Z,13nm,0.8s						
BRVK	**Borovoye**	63.95	338	P	P	16 25 13.8	-0.2
KIBK	**Kibwezi**	65.62	269	P	P	16 25 27.8	+2.0
	SNR=6.0						
AB31	**Akbulak array**	65.68	330	i P	P	16 25 25.1	-0.2
ABKAR	**Akbulak array**	65.68	330	P	P	16 25 25.1	-0.2
ABKAR				IAmb	IAmb	16 25 27.0	
	comp=Z,45nm,1.1s						
ABKAR	**Akbulak array**	65.68	330	P	P	16 25 25.1	-0.2
KMBO	**Kilima Mbogo**	66.50	271	P	P	16 25 33.0	+1.4
	comp=Z,8.3nm,0.5s,baz=56,slow=8.1,SNR=28						
KMBO				pP	pP	16 26 00.8	-0.1
	comp=Z,4.9nm,0.8s,baz=49,slow=19,SNR=2.6						
KMBO	**Kilima Mbogo**	66.50	271	i P	P	16 25 33.7	+2.1
	SNR=12						
AKTO	**Aktyubinsk**	67.39	330	P	P	16 25 35.7	-0.5
	comp=Z,12nm,1.1s,baz=132,slow=8.5,SNR=18						
DCZ	**Deep Cove**	68.28	137	P	P	16 25 42.6	+0.7
DCZ				IAmb	IAmb	16 25 43.9	
	comp=Z,77nm,1.2s						
AKT	**Akhty**	68.50	318	eP	P	16 25 44.0	+0.5
AKT				e		16 26 07.3	
AKT				e*PP	pP	16 26 13.0	-0.3
AKT				e*SP	sP	16 26 24.5	-1.8
AKT				pmax	pmax		
	comp=Z,78nm,0.9s						
LODK	**Lodwar**	68.80	275	P	P	16 25 48.7	+2.8
	SNR=23						
MAW	**Mawson**	68.81	196	P	P	16 25 46.9	+2.2
	baz=69,SNR=6.1						
MAW	**Mawson**	68.81	196	P	P	16 25 46.8	+2.1
	comp=Z,72nm,0.9s,baz=44,slow=5.9,SNR=20						
MAW				LR	LR	16 48 56.7	
	comp=Z,155nm,21.8s,baz=50,slow=30						
MAW	**Mawson**	68.81	196	P	P	16 25 46.6	+1.9
WHZ	**Wether Hill Ro**	68.93	138	P	P	16 25 45.2	-0.8
WHZ				IAmb	IAmb	16 25 47.4	
	comp=Z,37nm,1.0s						
JCZ	**Jackson Bay**	69.03	136	P	P	16 25 48.7	+2.0
YAK	**Yakutsk**	69.31	13	P	P	16 25 47.3	-0.5
	comp=Z,34nm,0.8s,baz=214,slow=1.9,SNR=36						
YAK				S	S	16 34 38.4	-6.2
	comp=Z,4.3nm,0.4s,baz=57,slow=23,SNR=7.1						
YAK	**Yakutsk**	69.31	13	eP	P	16 25 46.8	-1.1
YAK				e*PP	pP	16 26 14.3	-3.2
YAK				eS	S	16 34 45.0	+0.4
YAK				e*SS	SKiKP	16 35 28.7	+3.1
YAK				pmax	pmax		
	comp=Z,66nm,0.9s						
YAK				pmax	pmax		
	comp=N,22nm,1.0s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,152nm,3.4s						
YAK				smax	smax		
	comp=E,219nm,4.9s						
YAK				smax	smax		
	comp=N,189nm,4.1s						
YAK	**Yakutsk**	69.31	13	P	P	16 25 46.7	-1.1
YAK				IAmb	IAmb	16 25 48.4	
	comp=Z,74nm,0.9s						
GNI	**Garni**	69.95	316	P	P	16 25 52.9	+0.4
	comp=Z,7.8nm,0.6s,baz=145,slow=4.1,SNR=8.3						
GNI	**Garni**	69.95	316	deP	P	16 25 53.6	+1.0
GNI				pmax	pmax		
	comp=Z,125nm,1.7s						
LBZ	**Lake Benmore**	70.08	136	IAmb	IAmb	16 25 53.9	
	comp=Z,36nm,0.9s						
SVE	**Sverdlovsk**	70.47	336	⇑eP	P	16 25 55.4	+0.3
SVE				pmax	pmax		
	comp=Z,50nm,1.3s						
RPZ	**Rata Peaks**	70.53	135	P	P	16 25 56.2	+0.3
	comp=Z,55nm,0.9s,baz=198,slow=2.7,SNR=25						
GROC	**Groznyy**	70.55	319	eP	P	16 25 56.2	+0.3
GROC				e		16 26 17.9	
GROC				e*PP	pP	16 26 25.8	0.0
GROC				e*SP	sP	16 26 37.5	-1.3
GROC				e		16 28 33.4	
GROC				eS	S	16 34 58.5	-1.4
GROC				pmax	pmax		
	comp=Z,133nm,1.2s						
ARU	**Arti**	71.05	335	P	P	16 25 58.5	-0.1
	comp=Z,5.5nm,0.7s,baz=149,slow=4.6,SNR=22						
ARU				S	S	16 35 01.6	-3.6
	comp=Z,0.3nm,0.3s,baz=215,slow=22,SNR=14						
ARU	**Arti**	71.05	335	deP	P	16 25 58.4	-0.2
ARU				pmax	pmax		
	comp=Z,39nm,1.0s						
ARU	**Arti**	71.05	335	P	P	16 25 58.5	-0.2
OXZ	**Oxford**	71.15	134	IAmb	IAmb	16 26 01.2	
	comp=Z,64nm,0.9s						
THZ	**Tophouse**	71.47	132	P	P	16 26 01.4	-0.2
ZEI	**Tsey**	71.63	318	eP	P	16 26 02.6	-0.1
ZEI				pmax	pmax		
	comp=Z,56nm,1.6s						
NCK	**Nalchik**	72.13	318	⇑eP	P	16 26 05.7	+0.3
NCK				pmax	pmax		
	comp=Z,27nm,0.9s						
NEY	**Neytrino**	72.61	318	⇓eP	P	16 26 09.5	+1.0
NEY				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KBZ	**Khabaz**	72.68	318	P	P	16 26 09.2	+0.6
	comp=Z,23nm,0.9s,baz=123,slow=5.2,SNR=40						
KBZ				S	S	16 35 22.8	-1.5
	comp=Z,1.7nm,1.0s,baz=11,slow=17,SNR=12						
KBZ	**Khabaz**	72.68	318	c iP	P	16 26 08.9	+0.3
KVAR	**Kislovodsk Arr**	72.91	319	P	P	16 26 10.7	+0.5
	comp=Z,5.3nm,0.6s,baz=140,slow=18,SNR=11						
KIV	**Kislovodsk**	72.92	319	i P	P	16 26 10.9	+0.7
	SNR=7.1						
KIV	**Kislovodsk**	72.92	319	eP	P	16 26 10.3	+0.1
KIV				pmax	pmax		
	comp=Z,86nm,1.1s						
MBAR	**Mbarara**	73.03	271	c iP	P	16 26 13.2	+1.6
MBAR				pmax	pmax		
	comp=Z,61nm,1.0s						
PETK	**Petropavlovsk-**	73.08	31	P	P	16 26 10.6	-0.2
	comp=Z,8.4nm,0.8s,baz=205,slow=6.0,SNR=6.0						
PETK				LR	LR	17 00 29.9	
	comp=Z,70nm,18.7s,baz=242,slow=38						
ASF	**Jabal al Asfar**	73.11	305	P	P	16 26 13.2	+1.6
	comp=Z,17nm,1.0s,baz=74,slow=1.7,SNR=16						
GOF	**Gofitskoye**	73.14	320	⇑eP	P	16 26 11.9	+0.6
GOF				pmax	pmax		
	comp=Z,70nm,1.1s						
HATZ	**Hinemaiaia**	73.42	129	P	P	16 26 13.7	+0.5
MSVF	**Nonsavu**	73.67	107	⇓eP	P	16 26 15.8	+0.7
MSVF				pmax	pmax		
	comp=Z,26nm,1.2s						
MA2	**Magadan**	73.84	23	P	P	16 26 15.7	+0.5
	comp=Z,23nm,0.8s,baz=214,slow=6.5,SNR=15						
MA2	**Magadan**	73.84	23	⇓eP	P	16 26 15.7	+0.5
MA2				pmax	pmax		
	comp=Z,39nm,0.9s						
MTHZ	**Maungataniwha**	73.99	129	P	P	16 26 17.0	+0.4
EIL	**Elat**	74.05	302	P	P	16 26 18.1	+1.0
	comp=Z,45nm,1.1s,baz=102,slow=1.2,SNR=19						
RTZ	**Ruatahuna**	74.07	129	P	P	16 26 17.1	0.0
URZ	**Urewera**	74.13	128	P	P	16 26 17.2	-0.2
	comp=Z,22nm,0.8s,baz=260,slow=4.8,SNR=12						
URZ				LR	LR	16 57 36.1	
	comp=Z,137nm,21.4s,baz=265,slow=35						
URZ	**Urewera**	74.13	128	IAmb	IAmb	16 26 19.6	
	comp=Z,57nm,1.3s						
URZ	**Urewera**	74.13	128	P	P	16 26 18.6	+1.2
KAHZ	**Kahuranaki**	74.14	130	P	P	16 26 18.6	+1.2
PXZ	**Pawanui**	74.16	130	P	P	16 26 16.7	-0.8
SNGZ	**Shannon Statio**	74.37	129	P	P	16 26 19.0	+0.3
MWZ	**Matawai**	74.47	128	P	P	16 26 19.2	-0.2
RUGZ	**Raukumara Rang**	74.54	128	P	P	16 26 19.3	-0.6
MMAI	**Mount Meron Ar**	74.56	306	P	P	16 26 21.6	+1.6
	comp=Z,8.5nm,0.8s,baz=102,slow=12,SNR=12						
MMAI				LR	LR	17 00 56.2	
	comp=Z,108nm,19.1s,baz=140,slow=37						
NRIK	**Noril'sk**	74.56	354	P	P	16 26 18.4	-0.7
	comp=Z,5.1nm,0.3s,baz=146,slow=4.6,SNR=15						
NRIK				LR	LR	17 02 25.0	
	comp=Z,144nm,19.1s,baz=156,slow=38						
HAZ	**Te Kaha**	74.60	128	P	P	16 26 19.5	-0.5
SOC	**Sochi**	74.75	317	eP	P	16 26 18.3	-2.5
SOC				e*PP	pP	16 26 52.8	+1.6
SOC				ePPP	PPP	16 31 03.3	
SOC				eS	S	16 35 42.6	-5.1
SOC				pmax	pmax		
	comp=Z,40nm,1.3s						
TWGZ	**Tauwhareparae**	74.80	128	P	P	16 26 21.9	+0.7
PKGZ	**Pakihiroa**	74.85	128	P	P	16 26 21.1	-0.4
PUZ	**Puketiti**	75.01	128	P	P	16 26 22.3	-0.1
KIRV	**Kirov**	76.27	334	P	P	16 26 29.4	+0.3
	comp=Z,44nm,1.1s,baz=149,slow=1.7,SNR=13						
VRH	**Novokhopyorsk**	76.53	325	eP	P	16 26 29.8	-0.9
VRH				e*PP	pP	16 26 58.6	-2.5
VRH				eS	S	16 36 01.8	-5.1
VRH				pmax	pmax		
	comp=Z,50nm,1.6s						
VRH				smax	smax		
	comp=E,310nm,1.0s						
SEY	**Seymchan**	76.61	21	P	P	16 26 31.6	+0.6
	comp=E,14nm,0.8s,baz=223,slow=5.7,SNR=37						
SEY	**Seymchan**	76.61	21	⇑eP	P	16 26 30.9	0.0
SYO	**Syowa Base**	76.71	199	⇑eP	P	16 26 30.8	-0.6
SYO	**Syowa Base**	76.71	199	⇑iX	PcP	16 26 40.6	-1.7
LBTB	**Lobatse**	77.38	246	IAmb	IAmb	16 26 38.8	
	comp=Z,51nm,1.1s						
BOSA	**Boshof**	77.75	242	P	P	16 26 39.5	+1.3
	comp=Z,22nm,0.8s,baz=97,slow=4.5,SNR=32						
BOSA				pP	pP	16 27 08.6	+0.2
	comp=Z,7.7nm,0.8s,baz=82,slow=2.5,SNR=3.3						
BOSA				LR	LR	16 53 10.6	
	comp=Z,83nm,21.1s,baz=94,slow=30						
BOSA	**Boshof**	77.75	242	P	P	16 26 39.3	+1.0
BOSA				IAmb	IAmb	16 26 40.6	
	comp=Z,50nm,1.1s						
TIXI	**Tiksi**	77.80	8	P	P	16 26 35.9	-1.5
	comp=Z,6.8nm,0.8s,baz=177,slow=2.5,SNR=24						
TIXI	**Tiksi**	77.80	8	⇑eP	P	16 26 35.5	-1.9
TIXI				pmax	pmax		
	comp=Z,15nm,1.1s						
TIXI	**Tiksi**	77.80	8	P	P	16 26 35.8	-1.6
BR131	**Keskin Array S**	77.80	312	P	P	16 26 38.0	-0.3
	SNR=11						
BR131	**Keskin Array S**	77.80	312	c iP	P	16 26 37.7	-0.6
BR131	**Keskin Array S**	77.80	312	P	P	16 26 38.5	+0.2
BRTR	**Keskin Array B**	77.80	312	P	P	16 26 37.9	-0.5
	comp=Z,10.0nm,0.8s,baz=124,slow=6.7,SNR=63						
BRTR				pP	pP	16 27 07.4	-1.5
	comp=Z,14nm,0.9s,baz=132,slow=6.4,SNR=8.2						
BRTR	**Keskin Array B**	77.80	312	P	P	16 26 37.7	-0.6
VSR	**Storozhevoye**	78.01	324	eP	P	16 26 37.1	-1.9
VSR				e*PP	pP	16 27 05.8	-3.7
VSR				eS	S	16 36 17.8	-5.1
VSR				pmax	pmax		
	comp=Z,60nm,1.4s						
VSR				smax	smax		
	comp=E,60nm,1.1s						
BZK	**Bozkurt**	78.18	314	⇓P	P	16 26 40.6	+0.5
LPSR	**Galich'ya Gora**	78.69	326	eP	P	16 26 42.1	-0.5
LPSR				e*PP	pP	16 27 11.5	-1.8
LPSR				eS	S	16 36 26.6	-3.5
LPSR				pmax	pmax		
	comp=Z,40nm,0.9s						
LPSR				smax	smax		
	comp=N,20nm,1.1s						
VNDA	**Vanda**	78.96	169	P	P	16 26 45.0	+1.2
	comp=N,31nm,1.0s,baz=294,slow=6.4,SNR=11						
VNDA				LR	LR	16 58 56.3	
	comp=N,65nm,19.5s,baz=299,slow=33						
VNDA	**Vanda**	78.96	169	P	P	16 26 43.6	-0.2
VNDA				IAmb	IAmb	16 26 45.8	
	comp=Z,79nm,1.2s						
PRGR	**Permogore**	79.50	336	eP	P	16 26 45.2	-1.7
PRGR				eS	S	16 36 32.9	-5.5
PRGR				pmax	pmax		
	comp=Z,47nm,0.9s						
MOS	**Moscow**	80.61	328	eP	P	16 26 51.3	-1.7
MOS				e*PP	pP	16 27 19.7	-4.0
MOS				eS	S	16 36 46.0	-4.2
MOS				pmax	pmax		
	comp=Z,79nm,1.0s						
OBN	**Obninsk**	80.93	328	⇑P	P	16 26 54.9	+0.2
OBN	**Obninsk**	80.93	328	ceP	P	16 26 54.7	0.0
OBN				i *PP	pP	16 27 23.5	-2.0
OBN				eS	S	16 36 53.4	-0.2
OBN				eSS	SS	16 42 10.8	+0.4
OBN				pmax	pmax		
	comp=Z,65nm,1.1s						
SUR	**Sutherland**	81.64	238	P	P	16 27 01.8	+2.5
KLMR	**Klimovskoe**	81.75	334	eP	P	16 26 56.4	-2.5
KLMR				pmax	pmax		
	comp=Z,82nm,1.3s						
KLMR	**Klimovskoe**	81.75	334	eP	P	16 26 56.4	-2.5
KLMR				AMP		16 27 00.8	
	comp=Z,82nm,1.3s						
KIS	**Kishinev**	83.12	318	eP	P	16 27 07.0	+0.7
	comp=Z,110nm,1.5s						
KIS	**Kishinev**	83.12	318	eP	P	16 27 07.0	+0.7
KIS				e		16 27 34.0	
KIS				pmax	pmax		
	comp=Z,110nm,1.5s						
CFR	**Carcaliu**	83.14	316	⇑P	P	16 27 06.2	-0.3
CFR	**Carcaliu**	83.14	316	⇑P	P	16 27 06.2	-0.3
LEOM	**Leova**	83.37	318	⇑P	P	16 27 09.0	+1.4
LEOM	**Leova**	83.37	318	⇑P	P	16 27 09.0	+1.4
AFI	**Afiamalu**	83.55	103	P	P	16 27 11.2	+1.8
	comp=Z,93nm,1.0s,baz=274,slow=2.3,SNR=12						
IDI	**Anoyia**	83.56	306	P	P	16 27 10.3	+1.3
	comp=Z,9.3nm,0.5s,baz=90,slow=5.8,SNR=17						
SORM	**Soroca**	83.70	319	⇑P	P	16 27 09.5	+0.2
SORM	**Soroca**	83.70	319	⇑P	P	16 27 09.5	+0.2
TMCR	**Tamitsa**	83.75	336	eP	P	16 27 07.4	-1.8
TMCR				pmax	pmax		
	comp=Z,26nm,0.9s						
AKASG	**Malin Array Be**	83.78	322	P	P	16 27 09.4	-0.3
	comp=Z,12nm,0.9s,baz=84,slow=4.4,SNR=7.5						
AKASG				pP	pP	16 27 38.6	-2.0
	comp=Z,5.0nm,0.8s,baz=83,slow=4.9,SNR=3.2						
AKASG	**Malin Array Be**	83.78	322	P	P	16 27 09.3	-0.3
ISR	**Istrita**	84.23	316	⇑P	P	16 27 25.0	+13
ISR	**Istrita**	84.23	316	⇑P	P	16 27 25.0	+13
BILL	**Bilibino**	84.25	20	⇑eP	P	16 27 10.7	-1.0
BILL				pmax	pmax		
	comp=Z,16nm,1.2s						
BILL	**Bilibino**	84.25	20	P	P	16 27 11.1	-0.6
ELND	**Elena**	84.25	314	⇑P	P	16 27 12.6	+0.3
VRI	**Vrincioaia**	84.26	317	⇑P	P	16 27 13.4	+1.2
VRI	**Vrincioaia**	84.26	317	⇑P	P	16 27 13.4	+1.2
PLOR	**Plostina**	84.31	317	⇑P	P	16 27 14.3	+1.7
PLOR	**Plostina**	84.31	317	⇑P	P	16 27 14.3	+1.7
TESR	**Tescani**	84.45	317	⇑P	P	16 27 14.2	+1.0
SECR		84.54	316	⇑P	P	16 27 16.6	+2.9
MLR	**Muntele Rosu**	84.72	316	⇓P	P	16 27 15.6	+0.9
MLR	**Muntele Rosu**	84.72	316	⇓P	P	16 27 15.6	+0.9
DOPR	**Dopca**	85.20	317	⇓P	P	16 27 18.0	+1.0
PLVB	**Pleven**	85.24	314	⇓P	P	16 27 14.6	-2.5
QSPA	**South Pole Qui**	85.43	180	P	P	16 27 18.5	+0.6
	comp=Z,17nm,0.9s,baz=130,slow=2.1,SNR=39						
QSPA				PKKPbc	PKKPbc	16 45 21.0	-4.1
	comp=Z,2.8nm,1.1s,baz=184,slow=2.0,SNR=4.6						
QSPA	**South Pole Qui**	85.43	180	P	P	16 27 18.3	+0.5
QSPA				IAmb	IAmb	16 27 19.8	
	comp=Z,63nm,1.2s						
ARR	**Arges**	85.60	316	⇑P	P	16 27 19.3	+0.3
BURAR	**Bucovina Array**	85.64	318	⇓P	P	16 27 21.1	+1.9
BURAR	**Bucovina Array**	85.64	318	⇓P	P	16 27 21.1	+1.9
BURAR	**Bucovina Array**	85.64	318	P	P	16 27 20.4	+1.1
BUR08	**Bucovina Ar. S**	85.66	318	IAmb	IAmb	16 27 21.9	
	comp=Z,25nm,1.0s						
VTS	**Vitosha**	86.10	313	⇑P	P	16 27 22.2	+0.5
VTS	**Vitosha**	86.10	313	⇑P	P	16 27 22.2	+0.5
LOT	**Lotru**	86.21	316	⇓P	P	16 27 22.8	+0.7
NVL	**N'lazarevskaya**	86.38	199	eP	P	16 27 23.9	+1.6
NVL				pmax	pmax		
	comp=Z,41nm,1.1s						
LVZ	**Lovozero**	86.46	339	⇓eP	P	16 27 22.1	-0.6
LVZ				pmax	pmax		
	comp=Z,66nm,1.8s						
CJR	**Cluj-Napoca**	86.56	317	⇓P	P	16 27 25.7	+2.0
CJR	**Cluj-Napoca**	86.56	317	⇓P	P	16 27 25.7	+2.0
APA	**Apatity**	86.79	339	⇑iP	P	16 27 22.8	-1.5
APA				pmax	pmax		
	comp=Z,11nm,1.0s						
APA				MLR	MLR		
	comp=Z,2µm,16.0s						
LVV	**L'vov**	86.84	320	eP	P	16 27 25.4	+0.5
DEV	**Deva**	86.89	316	⇑P	P	16 27 27.1	+1.9
DEV	**Deva**	86.89	316	⇑P	P	16 27 27.1	+1.9
GZR	**Gura Zlata**	86.89	316	⇑P	P	16 27 25.9	+0.5
GZR	**Gura Zlata**	86.89	316	⇑P	P	16 27 25.9	+0.5
HERR	**Herculane**	87.06	315	⇑P	P	16 27 26.7	+0.6
VSU	**Vasula**	87.09	329	⇑eP	P	16 27 26.3	+0.4
VSU				pmax	pmax		
	comp=Z,203nm,1.8s						
DRGR		87.17	317	⇓P	P	16 27 27.9	+1.2
DRGR		87.17	317	⇓P	P	16 27 27.9	+1.2
TRPA	**Tarpa**	87.51	318	⇓P	P	16 27 29.1	+1.0
MDVR	**Moldovita**	87.54	315	⇓P	P	16 27 29.7	+1.2
KWP	**Kalwaria Pacla**	87.65	320	eP	P	16 27 29.7	+0.9

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KWP    Kalwaria Pacla     87.65 320 eP       P        16 27 29.7 +0.9
BZS    Buzias             87.73 316 ⇑P       P        16 27 29.8 +0.5
BZS    Buzias             87.73 316 ⇑P       P        16 27 29.8 +0.5
UZH    Uzhgorod           87.75 319 eP       P        16 27 29.8 +0.5
UZH                                 e                 16 28 12.8
SIRR   Siria              87.80 317 ⇑P       P        16 27 30.9 +1.3
KOLS   Kolonicke sedl     87.81 319 eP       P        16 27 30.9 +1.3
KOLS                                 pmax    pmax
       comp=Z,76nm,1.2s
KOLS   Kolonicke sedl     87.81 319 eP       P        16 27 30.9 +1.3
FINES  FINESS Array B     88.10 332  P       P        16 27 30.8 +0.1
       comp=Z,5.3nm,0.5s,baz=111,slow=4.9,SNR=46
FINES                                PKKPbc  PKKPbc   16 45 15.4 -2.4
       comp=Z,3.3nm,0.9s,baz=260,slow=7.6,SNR=4.0
FINES                                LR      LR       17 14 26.1
       comp=Z,106nm,19.4s,baz=64,slow=41
SUW    Suwalki            88.12 324 eP       P        16 27 31.3 +0.4
SUW    Suwalki            88.12 324 eP       P        16 27 31.3 +0.4
CRVS   Cervenica-Dubn     88.34 319 eP       P        16 27 33.0 +0.9
CRVS                                 pmax    pmax
       comp=Z,16nm,0.9s
CRVS   Cervenica-Dubn     88.34 319 eP       P        16 27 33.0 +0.9
KECS   Kecovo             88.92 319 eP       P        16 27 36.0 +1.2
KECS                                 pmax    pmax
       comp=Z,9.0nm,1.1s
KECS   Kecovo             88.92 319 eP       P        16 27 36.0 +1.2
NIE    Niedzica           89.17 320 eP       P        16 27 37.4 +1.4
NIE                                 epP      pP       16 28 05.8 -1.6
NIE    Niedzica           89.17 320 eP       P        16 27 37.4 +1.4
NIE                                 e*PP     pP       16 28 05.8 -1.6
BEL    Belsk              89.20 322 eP       P        16 27 37.3 +1.3
BEL    Belsk              89.20 322 eP       P        16 27 37.3 +1.3
PSZ    Piszkesteto        89.23 318 ⇑P       P        16 27 35.4 -1.0
PSZ    Piszkesteto        89.23 318 ⇑P       P        16 27 35.4 -1.0
OJC    Ojcow              89.60 320 eP       P        16 27 39.2 +1.2
OJC                                 epP      pP       16 28 07.6 -1.8
OJC    Ojcow              89.60 320 eP       P        16 27 39.2 +1.2
OJC                                 e*PP     pP       16 28 07.6 -1.8
LANS   Liptovska Anna     89.67 319 eP       P        16 27 39.8 +1.4
LANS                                 pmax    pmax
       comp=Z,13nm,1.7s
LANS   Liptovska Anna     89.67 319 eP       P        16 27 39.8 +1.4
KLNR   Kaliningrad        89.94 325deP       P        16 27 39.7 +0.3
KLNR                                 pmax    pmax
       comp=Z,75nm,1.4s
VYHS   Vyhne              90.01 319 eP       P        16 27 41.1 +1.2
VYHS                                 pmax    pmax
       comp=Z,30nm,1.4s
VYHS   Vyhne              90.01 319 eP       P        16 27 41.1 +1.2
ARCES  ARCESS Array B     90.13 340  P       P        16 27 39.3 -0.8
       comp=Z,9.5nm,1.1s,baz=78,slow=3.0,SNR=4.4
ARCES                                LR      LR       17 16 27.5
       comp=Z,226nm,20.6s,baz=152,slow=41
OKC    Ostrava-Krasne     90.61 320 eP       P        16 27 44.0 +1.3
OKC    Ostrava-Krasne     90.61 320 eP       P        16 27 44.0 +1.3
BLY    Banja Luka         90.73 315 ⇑P       P        16 27 44.5 +1.1
JAVC   Velka Javorina     90.81 319 eP       P        16 27 45.1 +1.4
SNAA   Sanae              90.89 198  P       P        16 27 46.1 +2.5
SNAA   Sanae              90.89 198  P       P        16 27 45.9 +2.2
       comp=Z,37nm,1.0s,baz=91,slow=4.4,SNR=38
SNAA   Sanae              90.89 198c iP      P        16 27 45.6 +1.9
SNAA   Sanae              90.89 198  P       P        16 27 46.1 +2.5
MORC   Moravsky Berou     90.99 320 eP       P        16 27 45.2 +0.7
MODS   Modra-Piesok       91.03 318 eP       P        16 27 44.5 -0.2
MODS                                 pmax    pmax
       comp=Z,35nm,1.5s
MODS   Modra-Piesok       91.03 318 eP       P        16 27 44.5 -0.2
ZST    Bratislava         91.12 318 eP       P        16 27 45.0 -0.1
ZST                                  pmax    pmax
       comp=Z,40nm,1.6s
ZST    Bratislava         91.12 318 eP       P        16 27 45.0 -0.1
KRLC   Kraliky            91.51 320 eP       P        16 27 47.8 +0.9
KRLC   Kraliky            91.51 320 eP       P        16 27 47.8 +0.9
DPC    Dobruska-Polom     91.83 320 eP       P        16 27 49.4 +1.0
DPC                                 epP      pP       16 28 18.2 -1.6
DPC    Dobruska-Polom     91.83 320 eP       P        16 27 49.4 +1.0
DPC                                 e*PP     pP       16 28 18.2 -1.6
KSP    Ksiaz              91.89 321 eP       P        16 27 49.8 +1.2
KSP    Ksiaz              91.89 321 eP       P        16 27 49.8 +1.2
OSTC   Ostas              91.91 320 eP       P        16 27 50.3 +1.6
GOLS   Golise             91.94 316 eP       P        16 27 49.9 +1.0
GOLS                                epP      pP       16 28 19.0 -1.4
CHVC   Chvalec            92.02 320 eP       P        16 27 49.9 +0.7
ARSA   Arzberg            92.11 317 ePcP     P        16 27 51.3 +1.6
       comp=Z,15nm,1.4s
SOKA   Soboth             92.40 316 ePcP     P        16 27 52.2 +1.1
       comp=Z,25nm,1.5s
VNA2   Neumayer--Watz     92.52 198  P       P        16 27 53.6 +2.4
       baz=98,slow=4.5
LJU    Ljubljana          92.71 316 i P      P        16 27 53.8 +1.3
VNA1   Neumayer--Stat     92.89 198  P       P        16 27 55.6 +2.7
PRU    Pruhonice          92.94 320 eP       P        16 27 54.6 +1.1
PRU    Pruhonice          92.94 320 eP       P        16 27 54.6 +1.1
MOA    Molln              93.00 318 ePcP     P        16 27 54.8 +1.0
       comp=Z,2.7nm,0.7s
VNA3   Neumayer Olymp     93.08 197  P       P        16 27 56.1 +2.4
MYKA   Terra Mystica      93.35 316 ePcP     P        16 27 56.6 +1.0
       comp=Z,8.7nm,1.2s
BRG    Berggiesshubel     93.38 321 eP       P        16 27 55.9 +0.4
       comp=Z,10nm,1.2s
BRG    Berggiesshubel     93.38 321 eP       P        16 27 55.9 +0.4
BRG                                  pmax    pmax
       comp=Z,10.0nm,1.2s
GERES  GERESS Array B     93.43 319  P       P        16 27 55.5 -0.3
       comp=Z,3.5nm,1.0s,baz=86,slow=4.4,SNR=19
GERES                                pP      pP       16 28 25.5 -1.8
       comp=Z,1.4nm,0.8s,baz=81,slow=3.4,SNR=3.2
GERES                                LR      LR       17 18 36.2
       comp=Z,63nm,18.2s,baz=84,slow=41
GERES  GERESS Array B     93.43 319  P       P        16 27 53.6 -2.3
KHC    Kasperske Hory     93.52 319 eP       P        16 27 56.2  0.0
KHC    Kasperske Hory     93.52 319⇓eP       P        16 27 56.7 +0.5
KHC                                  pmax    pmax
       comp=Z,7.0nm,1.0s
KBA    Koelnbreinsper     93.58 317 ePKiKP   SKSac    16 38 22.1 +1.6
       comp=Z,9.1nm,1.0s
HFS    Hagfors            93.94 330  LR      LR       17 14 34.2
       comp=Z,97nm,18.7s,baz=31,slow=38
CLL    Collm              93.99 321 eP       P        16 27 59.0 +0.8
       comp=Z,8.0nm,1.1s
CLL    Collm              93.99 321 eP       P        16 27 59.0 +0.8
CLL                                  pmax    pmax
       comp=Z,8.0nm,1.1s
ABTA   Abfaltersbach      94.14 316 ePcP     P        16 27 59.5 +0.4
       comp=Z,11nm,1.2s
WTTA   Wattenberg         94.75 317 ePcP     P        16 28 02.2 +0.1
       comp=Z,13nm,1.4s
WTTA   Wattenberg         94.75 317 ePKiKP   SKSac    16 38 25.2 -1.5
       comp=Z,9.9nm,1.0s
WATA   Walderalm          94.79 317 ePcP     P        16 28 02.6 +0.4
       comp=Z,12nm,1.4s
SQTA   Sankt Quirin       95.04 317 ePcP     P        16 28 03.5 +0.1
       comp=Z,8.9nm,1.2s
SQTA   Sankt Quirin       95.04 317 ePKiKP   SKSac    16 38 24.5 -3.7
       comp=Z,15nm,0.8s
MOTA   Moosalm            95.11 317 ePcP     P        16 28 04.2 +0.5
       comp=Z,12nm,1.2s
MOTA   Moosalm            95.11 317 ePKiKP   SKSac    16 38 28.3 -0.4
       comp=Z,12nm,1.5s
RETA   Reutte             95.35 317 ePcP     P        16 28 05.4 +0.7
       comp=Z,6.4nm,0.7s
RETA   Reutte             95.35 317 ePKiKP   SKSac    16 38 26.5 -3.2
       comp=Z,14nm,1.3s
FETA   Feichten           95.36 317 ePcP     P        16 28 04.8 -0.1
       comp=Z,6.5nm,1.2s
FETA   Feichten           95.36 317 ePKiKP   SKSac    16 38 28.6 -1.4
       comp=Z,11nm,1.3s
DAVA   Damuels            95.95 317 i PcP    P        16 28 07.7 +0.2
       comp=Z,14nm,1.3s
TOLK   Toolik Lake Re    100.25  21  Pdiff   Pdif     16 28 26.2  0.0
       baz=284
ILAR   Eielson Array     102.28  24  PKKPbc  PKKPbc   16 44 37.6 -2.3
       comp=Z,2.9nm,0.8s,baz=134,slow=2.2,SNR=25
TORD   Torodi Ar. Bea    102.76 282  P       Pdif     16 28 39.2 +0.7
       comp=Z,1.4nm,1.1s,baz=127,slow=2.2,SNR=5.1
TORD                                 PKiKP   PKiKP    16 32 58.5 -0.2
       comp=Z,2.5nm,0.9s,baz=91,slow=3.9,SNR=7.4
EPYK   Eagle Plains      105.66  21  PKiKP   PKiKP    16 33 03.1 +0.4
       baz=296
INK    Inuvik            105.86  19  PKiKP   PKiKP    16 33 02.5 -0.4
       comp=Z,3.8nm,1.0s,baz=331,slow=1.8,SNR=7.7
C36M   Paulatuk          108.12  16  PKiKP   PKiKP    16 33 06.5 -0.6
       baz=309
YKA    Yellowknife Ar    115.63  19  PKP     PKiKP    16 33 20.9 -0.7
       comp=Z,5.0nm,0.9s,baz=311,slow=1.7,SNR=44
YKA                                  SKP              16 36 45.6
       comp=Z,1.4nm,0.9s,baz=306,slow=1.8,SNR=8.0
YKA                                  PKKPbc  PKKPbc   16 43 55.5 -1.7
       comp=Z,2.8nm,0.9s,baz=134,slow=3.6,SNR=23
D03D   Eldon             121.32  35  P       PKiKP    16 33 34.5 +1.4
       baz=302
B05A   Bryant            121.49  34  P       PKiKP    16 33 34.0 +0.6
       baz=303
E04D   Cinebar           122.14  36  P       PKiKP    16 33 35.7 +0.9
       baz=302
J01E   Myrtle Point      123.00  40  P       PKiKP    16 33 37.4 +0.9
       baz=298
H04D   Lebanon           123.08  38  P       PKiKP    16 33 37.7 +1.0
       baz=300,SNR=7.3
I03D   Drain, OR         123.11  39  P       PKiKP    16 33 37.7 +0.9
       baz=299,SNR=5.0
K02D   Willamette Mer    123.39  41  P       PKiKP    16 33 38.1 +0.6
       baz=298
I04A   Tendick Farm,     123.65  39  P       PKiKP    16 33 38.4 +0.5
       baz=300,SNR=6.9
I05D   Terrebonne, OR    124.03  38  P       PKiKP    16 33 39.4 +0.7
       baz=302
J04D   Umpqua Nationa    124.12  39  P       PKiKP    16 33 39.9 +0.9
       baz=300,SNR=13
NEW    Newport           124.20  32  PKP     PKiKP    16 33 39.1 +0.2
       comp=Z,8.6nm,0.9s,baz=35,slow=1.0,SNR=9.9
NEW    Newport           124.20  32  P       PKiKP    16 33 39.5 +0.6
       baz=308
YBH    Yreka Blue Hor    124.47  41  PKP     PKiKP    16 33 39.7  0.0
       comp=Z,3.1nm,0.8s,baz=117,slow=21,SNR=5.5
L04D   Klamath Falls     124.50  40  P       PKiKP    16 33 40.1 +0.3
       baz=299,SNR=8.8
M02C   Callahan          124.54  42  P       PKiKP    16 33 40.8 +1.0
       baz=298
J05D   Fort Rock, OR     124.65  39  P       PKiKP    16 33 41.1 +1.0
       baz=301,SNR=15
N02D   Trinity Center    124.84  42  P       PKiKP    16 33 41.3 +0.9
       baz=298
M04C   Macdoel           125.02  41  P       PKiKP    16 33 41.5 +0.6
       baz=300
O02D   Mt. Diablo Mer    125.16  43  P       PKiKP    16 33 42.1 +1.1
       baz=298,SNR=7.1
O03E   Paynes Creek      125.77  42  P       PKPdf    16 33 42.0 +0.2
       baz=299
FFC    Flin Flon         125.80  18  PKIKP   PKPdf    16 33 41.1 -0.3
FFC    Flin Flon         125.80  18          PKPdf    16 33 41.1 -0.3
EGMT   Eagleton          128.04  28  P       PKiKP    16 33 46.5  0.0
       baz=316
NVAR   Mina Array Bea    129.04  43  PKP     PKiKP    16 33 49.5 +0.4
       comp=Z,12nm,1.0s,baz=269,slow=1.8,SNR=48
NVAR                                 SKPbc   SKPab    16 36 58.1 +0.4
       comp=Z,9.0nm,0.9s,baz=273,slow=3.7,SNR=21
NVAR   Mina Array Bea    129.04  43          PKiKP    16 33 49.2 +0.1
SCHQ   Schefferville     129.29 353  PKP     PKPdf    16 33 48.4 +0.3
       comp=Z,10nm,0.8s,baz=16,slow=3.0,SNR=16
SCHQ                                 SKPbc   SKPab    16 36 57.0 -0.9
       comp=Z,3.1nm,0.7s,baz=12,slow=5.1,SNR=5.8
PKM    Mcpherson Peak    129.68  47  P       PKiKP    16 33 52.0 +1.6
       baz=297
ELK    Elko              129.77  38  PKP     PKiKP    16 33 51.1 +0.6
       comp=Z,9.2nm,0.9s,baz=353,slow=1.3,SNR=30
ELK                                  SKPbc   SKPab    16 37 00.1 -0.7
       comp=Z,4.2nm,0.8s,baz=306,slow=5.1,SNR=8.7
H17A   Grant Village     130.16  32  P       PKiKP    16 33 53.1 +1.9
       baz=313
CWC    Cottonwood Cre    130.19  45  P       PKiKP    16 33 52.1 +0.7
       baz=300
ISA    Isabella, Lake    130.29  46  P       PKiKP    16 33 51.4 -0.1
       baz=299
MPMC   Manual Prospec    130.80  45  P       PKiKP    16 33 53.3 +0.6
       baz=300,SNR=16
R11A   Troy Canyon, C    130.90  41  P       PKiKP    16 33 53.3 +0.6
       baz=303
LRMC   Laurel Mtn Rad    130.94  46  P       PKiKP    16 33 54.8 +1.9
       baz=299
EDW2   Edwards Air Fo    131.01  47  P       PKiKP    16 33 53.6 +0.7
       baz=298
FURC   Furnace Creek,    131.03  44  P       PKiKP    16 33 53.7 +0.9
       baz=301
TPNV   Topopah Spring    131.20  43  P       PKiKP    16 33 53.6 +0.2
       baz=302
CIS    Catalina Islan    131.38  48  P       PKiKP    16 33 55.0 +1.3
       baz=297
ULM    Lac du Bonnet     131.53  17  PKP     PKPdf    16 33 52.1 -0.3
       comp=Z,14nm,0.8s,baz=333,slow=2.8,SNR=23
ULM                                  SKPbc   SKPbc    16 37 04.3 -2.8
       comp=Z,13nm,0.8s,baz=336,slow=4.4,SNR=20
DUG    Dugway, Tooele    131.59  38  P       PKiKP    16 33 54.8 +0.7
       baz=307,SNR=9.6
GSC    Goldstone, Bar    131.66  45  P       PKiKP    16 33 54.9 +0.7
       baz=300,SNR=8.7
PDAR   Pinedale Array    131.81  33  PKP     PKPdf    16 33 52.9 -0.6
       comp=Z,2.0nm,0.7s,baz=205,slow=1.5,SNR=20
PDAR                                 SKPbc   SKPbc    16 37 07.0 -1.7
       comp=Z,15nm,1.0s,baz=341,slow=0.8,SNR=43
PDAR   Pinedale Array    131.81  33          PKPdf    16 33 53.8 +0.3
SHPR   Sheep Range       132.18  43          PKiKP    16 33 55.3 -0.1
HEC    Hector,Ludlow     132.22  46  P       PKiKP    16 33 55.9 +0.5
       baz=300,SNR=7.7
MDND   Maddock           132.42  21  P       PKiKP    16 33 55.2 -0.1
       baz=328
GMRC   Granite Mounta    132.73  45  P       PKiKP    16 33 57.3 +0.8
       baz=300,SNR=14
PFO    Pinyon Flats O    132.73  47  PKP     PKiKP    16 33 56.1 -0.4
       comp=Z,9.2nm,0.8s,baz=291,slow=2.1,SNR=11
PFO    Pinyon Flats O    132.73  47          PKiKP    16 33 57.4 +0.8
PFO    Pinyon Flats O    132.73  47  P       PKiKP    16 33 56.6 +0.1
       baz=299
TPFO   Pinon Flats       132.74  47  P       PKiKP    16 33 57.1 +0.6
       baz=299
MONP2  Monument Peak     133.10  48  P       PKiKP    16 33 57.6 +0.2
       baz=298
AGMN   Agassiz Nation    133.28  18  P       PKPdf    16 33 55.6 -0.2
       baz=333
IRM    Iron Mountain     133.41  46  P       PKiKP    16 33 58.1 +0.3
       baz=300,SNR=6.4
BC3    Big Chuckawall    133.44  47  P       PKiKP    16 33 58.7 +0.7
       baz=300
IKP    In-Ko-Pah, Jac    133.45  48  P       PKiKP    16 33 58.7 +0.8
       baz=298
K22A   Casper            133.49  31  P       PKPdf    16 33 56.7 +0.1
       baz=316
SWSC   Sam W. Stewart    133.53  48  P       PKiKP    16 33 58.5 +0.5
       baz=299
RSSD   Black Hills       133.60  28  P       PKPdf    16 33 57.0 +0.1
       baz=320
PDMCI  Parker Dam,Lak    134.05  45  P       PKiKP    16 33 59.7 +0.7
       baz=302
Y12C   Blythe            134.06  46  P       PKiKP    16 33 59.2 +0.2
       baz=301
GLA    Glamis            134.19  47  P       PKiKP    16 33 59.7 +0.3
       baz=300
O20A   White River Ci    134.32  35  P       PKPdf    16 33 58.9 +0.7
       baz=312,SNR=17
PLCA   Paso Flores       134.65 186  PKP     PKiKP    16 34 00.0 -0.2
       comp=Z,3.2nm,0.8s,baz=224,slow=4.1,SNR=5.4
PLCA                                 SKPbc   SKPbc    16 37 18.1  0.0
       comp=Z,13nm,1.0s,baz=220,slow=3.0,SNR=17
PLCA   Paso Flores       134.65 186          PKiKP    16 34 00.4 +0.2
PLCA   Paso Flores       134.65 186 eP       PKiKP    16 34 00.2 +0.1
EYMN   Ely               134.82  14  P       PKPdf    16 33 58.4 -0.3
       baz=338
MATQ   Matagami          134.93   1  P       PKPdf    16 33 58.3 -0.5
       baz=358
N23A   Red Feather La    135.05  32  P       PKPdf    16 34 00.3 +0.6
       baz=316
WUAZ   Wupatki           135.28  42  P       PKiKP    16 34 01.9 +0.2
       baz=305
TRQA   Tornquist         135.60 196 eP       PKiKP    16 34 01.8 -0.3
LSQQ   Lebel-sur-Quev    135.64   1  P       PKPdf    16 34 00.1 -0.1
       baz=359
ISCO   Idaho Springs     136.00  33  P       PKPdf    16 34 01.1 -0.5
       baz=315
MVCO   Mesa Verde        136.09  38  P       PKiKP    16 34 02.7 -0.7
       baz=310
214A   Organ Pipe Nat    136.22  47  P       PKPdf    16 34 02.6 +0.7
       baz=301
W18A   Petrified Fore    136.60  41  P       PKiKP    16 34 04.0 -0.4
       baz=307
S22A   4UR Ranch, Cre    136.74  36  P       PKiKP    16 34 04.3 -0.5
       baz=312
ECSD   EROS Data Cent    137.02  22  P       PKPdf    16 34 03.3 +0.3
       baz=329
D62A   Allapoint, All    137.17 353  P       PKPdf    16 34 02.3 -0.8
       baz=10
D61A   St Aubert, Com    137.18 354  P       PKPdf    16 34 02.8 -0.3
       baz=8.9
LATQ   La Tuque          137.22 357  P       PKPdf    16 34 02.9 -0.2
       baz=5.0
D47A   Chapleau          137.23   7  P       PKPdf    16 34 02.8 -0.4
       baz=350
E44A   Grand Marais A    137.25  10  P       PKPdf    16 34 03.8 +0.5
       baz=346
D48A   Paudash Townsh    137.26   6  P       PKPdf    16 34 02.9 -0.4
       baz=352
D46A   Sault St. Mari    137.28   8  P       PKPdf    16 34 03.2 -0.1
       baz=348
D50A   G1974 Best Tow    137.42   4  P       PKPdf    16 34 03.0 -0.6
       baz=355
PQI    Presque Isle      137.43 352          PKPdf    16 34 04.0 +0.4
TUC    Tucson            137.49  45  P       PKiKP    16 34 06.0 -0.1
       baz=303
D58A   Chemin du LacG    137.51 357  P       PKPdf    16 34 03.3 -0.4
       baz=4.9
D51A   Lot 18 Range I    137.53   3  P       PKPdf    16 34 03.4 -0.4
       baz=355
D60A   Saint Jean D'O    137.54 355  P       PKPdf    16 34 03.2 -0.6
       baz=7.8
D54A   Lac Fusel, La     137.55   0  P       PKPdf    16 34 03.2 -0.6
       baz=359
D53A   Lac Vacive, Po    137.61   1  P       PKPdf    16 34 03.4 -0.5
       baz=358
D56A   ZEC Mazanza, M    137.64 358  P       PKPdf    16 34 03.8 -0.1
       baz=2.2
D57A   Chemin Vers le    137.64 358  P       PKPdf    16 34 03.7 -0.3
       baz=3.5
E64A   Bridgewater       137.65 351  P       PKPdf    16 34 03.8 -0.1
       baz=12
D55A   Sainte-Anne-du    137.68 359  P       PKPdf    16 34 04.1  0.0
       baz=1.1
E63A   Oxbow             137.73 352  P       PKPdf    16 34 03.8 -0.3
       baz=12
E47A   Iron Bridge       137.80   7  P       PKPdf    16 34 04.1 -0.2
       baz=350
E48A   Lockeyer          137.91   6  P       PKPdf    16 34 04.4  0.0
       baz=351
E61A   Lac Etchemin      137.98 354  P       PKPdf    16 34 05.1 +0.5
       baz=8.5,SNR=5.7
E51A   G1948 Merrick     138.08   3  P       PKPdf    16 34 04.4 -0.4
       baz=355
E56A   St. Veronique     138.15 359  P       PKPdf    16 34 04.6 -0.3
       baz=1.8
F45A   CMU Biological    138.23  10  P       PKPdf    16 34 05.1 +0.1
       baz=346
E57A   Chemin Saint G    138.25 358  P       PKPdf    16 34 05.0 -0.1
       baz=3.1
E58A   La Victoria       138.25 357  P       PKPdf    16 34 05.1  0.0
       baz=4.4
E54A   Lac Daplat, Po    138.26   1  P       PKPdf    16 34 04.9 -0.2
       baz=359
F64A   Sherman           138.27 352  P       PKPdf    16 34 05.1  0.0
       baz=12
E53A   Dumoine, Ponti    138.31   1  P       PKPdf    16 34 04.9 -0.3
       baz=358
E52A   Mattawa           138.37   3  P       PKPdf    16 34 04.9 -0.5
       baz=356
BGNE   Belgrade          138.38  25  P       PKPdf    16 34 05.7 +0.1
       baz=326
RCBR   Riachuelo         138.43 256 eP       PKiKP    16 34 07.7 -0.8
F61A   St Evariste       138.48 354  P       PKPdf    16 34 05.7 +0.1
       baz=7.9
F48A   Evansville        138.50   7  P       PKPdf    16 34 05.8 +0.3
       baz=350
F63A   Nahmakanta, Br    138.53 352  P       PKPdf    16 34 05.9 +0.3
       baz=11
T25A   Trinidad          138.55  35  P       PKPdf    16 34 07.1 +0.9
       baz=315
F60A   Warwick           138.57 355  P       PKPdf    16 34 05.7  0.0
       baz=6.4
F49A   Sandfield         138.63   6  P       PKPdf    16 34 06.1 +0.3
       baz=351
F51A   Arnstein          138.65   4  P       PKPdf    16 34 05.7 -0.2
       baz=354
ALGO   Algonquin Park    138.72   2  P       PKPdf    16 34 06.1 +0.1
       baz=357
NBIT   Itapeh - BA       138.72 241 eP       PKiKP    16 34 08.7 -0.3
ANMO   Albuquerque       138.81  39  PKP     PKPdf    16 34 07.8 +1.1
       comp=Z,9.7nm,0.9s,baz=202,slow=2.8,SNR=18
ANMO   Albuquerque       138.81  39⇓iPKIKP   PKiKP    16 34 07.9 -1.0
ANMO   Albuquerque       138.81  39  P       PKiKP    16 34 08.2 -0.8
       baz=310
F52A   Sundridge         138.82   3  P       PKPdf    16 34 06.6 +0.4
       baz=355
G64A   Maxfield          138.93 352  P       PKPdf    16 34 06.7 +0.4
       baz=11
CPSB   Cacapava Do Su    138.97 211 eP       PKiKP    16 34 08.7 -0.5
G47A   Hillman           138.99   8  P       PKPdf    16 34 06.9 +0.4
       baz=348
H66A   Whiting           139.16 350  P       PKPdf    16 34 07.0 +0.2
       baz=14
G63A   Kingsbury         139.18 353  P       PKPdf    16 34 07.1 +0.2
       baz=10
G54A   Lake Saint Pet    139.27   2  P       PKPdf    16 34 06.5 -0.5
       baz=357
121A   Cookes Peak, D    139.44  43  P       PKiKP    16 34 09.2 -1.1
       baz=307,SNR=9.1
G55A   Calabogie         139.45   1  P       PKPdf    16 34 07.2 -0.1
       baz=359
NBTA   Tacaratu-PE       139.60 250 eP       PKiKP    16 34 10.5 -0.4
JFWS   Jewell Farm       139.81  16  P       PKPdf    16 34 07.6 -0.5
       baz=338
I48A   Sherman Twp       139.97   8  P       PKPdf    16 34 08.8 +0.6
       baz=348
H61A   Lyndonville       139.99 355  P       PKPdf    16 34 09.1 +0.8
       baz=6.7
H59A   Cadyville         140.00 357  P       PKPdf    16 34 07.8 -0.5
       baz=3.9
LONY   Lake Ozonia       140.06 358  P       PKiKP    16 34 09.8 -1.1
       baz=2.5
H55A   Tweed             140.15   1  P       PKPdf    16 34 08.7 +0.1
       baz=358
H57A   Richville         140.24 359  P       PKPdf    16 34 08.2 -0.6
       baz=1.3
I49A   Point Hope        140.34   7  P       PKPdf    16 34 09.3 +0.3
       baz=350
I63A   Otisfield         140.34 354  P       PKPdf    16 34 09.5 +0.6
       baz=8.8
I51A   Listowel          140.67   5  P       PKPdf    16 34 10.0 +0.4
       baz=352
I57A   Carthage          140.76 359  P       PKPdf    16 34 09.6 -0.2
       baz=0.9
NBCL   Cascavel-CE       141.10 258 eP       PKiKP    16 34 13.2 -0.8
ITQB   Itaqui            141.13 208 eP       PKiKP    16 34 12.6 -0.9
K47A   Vermontville      141.24  10  P       PKPdf    16 34 10.7  0.0
       baz=346
K48A   Perry             141.26   9  P       PKPdf    16 34 09.9 -0.7
       baz=347
J58A   Remsen            141.34 359  P       PKPdf    16 34 10.7 -0.1
       baz=1.5
J55A   Hilton            141.41   2  P       PKPdf    16 34 11.1 +0.2
       baz=358
J56A   Wolcott           141.42   1  P       PKPdf    16 34 11.2 +0.3
       baz=359
MSTX   Muleshoe          141.72  37  P       PKPdf    16 34 12.9 +1.0
       baz=314
K62A   Royalston         141.87 355  P       PKPdf    16 34 12.3 +0.5
       baz=6.4
K58A   Earlville         141.94 359  P       PKPdf    16 34 12.3 +0.4
       baz=0.9
L48A   N Adams           142.05  10  P       PKPdf    16 34 11.8 -0.3
       baz=347
L50A   Kingsville        142.20   8  P       PKPdf    16 34 12.4  0.0
       baz=349
L54A   Sinclairville     142.37   4  P       PKPdf    16 34 13.1 +0.4
       baz=355
L56A   Greenwood         142.55   2  P       PKPdf    16 34 13.1 +0.1
       baz=358
L53A   Girard            142.58   5  P       PKPdf    16 34 13.0 -0.1
       baz=353
L57A   Andrews Acres     142.70   1  P       PKPdf    16 34 10.9 -2.5
       baz=359
BB19B  Bebedouro         142.77 226 eP       PKiKP    16 34 16.5 -0.7
M50A   Fremont           142.79   8  P       PKPdf    16 34 10.4 -3.0
       baz=349
M52A   Chesterland       142.88   6  P       PKPdf    16 34 10.4 -3.2
       baz=352
N48A   Decatur           142.99  11  P       PKPdf    16 34 11.5 -2.3
       baz=345
SFIN   Lafayette         143.00  14  P       PKPbc    16 34 10.8 -0.1
       baz=342
M53A   WI Miller and     143.05   6  P       PKPbc    16 34 11.0  0.0
       baz=353
M54A   Oil Creek Stat    143.07   4  P       PKPbc    16 34 11.1  0.0
       baz=354
N49A   Columbus Grove    143.08  10  P       PKPbc    16 34 10.9 -0.2
       baz=347
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M55A	Ridgway	143.16	3	P	PKPbc	16 34 11.5	+0.2
	baz=356						
M56A	Emporium	143.18	2	P	PKPbc	16 34 11.9	+0.5
	baz=357						
M58A	Price's Panora	143.33	0	P	PKPbc	16 34 12.3	+0.5
	baz=360						
M57A	Sunshine Farm,	143.36	1	P	PKPbc	16 34 12.3	+0.4
	baz=358						
N51A	Ashland	143.37	8	P	PKPbc	16 34 12.0	+0.1
	baz=350						
N50A	Nevada	143.40	9	P	PKPbc	16 34 11.9	-0.1
	baz=348						
WMOK	Wichita Mounta	143.41	32	P	PKPbc	16 34 11.8	-0.4
	baz=320						
O48A	Farmland	143.54	12	P	PKPab	16 34 11.9	+0.5
	baz=345						
N52A	McGinn's Farm,	143.56	7	P	PKPbc	16 34 12.4	-0.1
	baz=351						
N54A	Moraine State	143.58	5	P	PKPbc	16 34 12.9	+0.4
	baz=354						
N53A	Lisbon	143.66	6	P	PKPbc	16 34 13.3	+0.6
	baz=352,SNR=6.0						
N56A	West Decatur	143.74	3	P	PKPbc	16 34 13.1	+0.1
	baz=356						
O49A	Covington	143.77	11	P	PKPbc	16 34 14.0	+0.9
	baz=346						
N59A	State Game Lan	143.78	359	P	PKPbc	16 34 13.2	+0.1
	baz=0.8						
N55A	Marion Center	143.84	4	P	PKPbc	16 34 13.9	+0.6
	baz=355,SNR=5.1						
N58A	Sunbury	143.86	1	P	PKPbc	16 34 13.9	+0.6
	baz=359						
O50A	Cable	143.93	10	P	PKPbc	16 34 13.5	-0.1
	baz=347						
CCM	Cathedral Cave	143.94	20	P	PKPab	16 34 12.5	-0.5
	baz=334						
ACSO	Alum Creek Sta	143.95	9	P	PKPbc	16 34 13.6	0.0
	baz=348,SNR=10.0						
TUL1	Leonard	143.95	28	P	PKPab	16 34 13.2	+0.1
	baz=326						
SSPA	Standing Stone	144.04	2	P	PKPbc	16 34 13.9	+0.1
	baz=357						
O51A	Pataskala	144.09	8	P	PKPbc	16 34 14.0	0.0
	baz=349,SNR=15						
NBPS	Pedro II - PI	144.13	256	*e*P	PKPbc	16 34 15.8	+0.8
O53A	New Philadelph	144.17	7	P	PKPbc	16 34 14.1	-0.1
	baz=352,SNR=12						
TX31	Lajitas Ar. Si	144.19	43		PKPbc	16 34 15.3	+0.5
TXAR	Lajitas Array	144.19	43	PKP	PKPbc	16 34 15.2	+0.4
	comp=Z,8.5nm,0.7s,baz=278,slow=0.9,SNR=57						
TXAR				SKPbc	SKPbc	16 37 44.8	+0.2
	comp=Z,15nm,0.8s,baz=277,slow=0.7,SNR=29						
TXAR	Lajitas Array	144.19	43	PKIKP	PKPbc	16 34 15.6	+0.8
TXAR	Lajitas Array	144.19	43	PKPdf	PKPbc	16 34 15.6	+0.8
TXAR					SKPbc	16 37 44.9	+0.3
O52A	Adamsville	144.23	7	P	PKPab	16 34 14.1	0.0
	baz=350,SNR=7.1						
P48A	Milroy	144.26	12	P	PKPbc	16 34 15.0	+0.5
	baz=344,SNR=5.7						
CPUP	Villa Florida	144.26	210	PKP	PKPdf	16 34 16.0	-0.4
	comp=Z,180nm,0.9s,baz=141,slow=2.7,SNR=227						
CPUP	Villa Florida	144.26	210	*e*P	PKPbc	16 34 15.6	+0.7
PCMB	Pacaembu	144.31	222	*e*P	PKPdf	16 34 17.0	+0.3
O54A	Avella	144.32	5	P	PKPbc	16 34 15.1	+0.3
	baz=353,SNR=6.9						
P49A	Miami Univ. Ec	144.33	11	P	PKPab	16 34 14.1	-0.3
	baz=345,SNR=6.4						
TRCB	Terra Rica	144.36	219	*e*P	PKPdf	16 34 17.4	+0.6
O56A	Blue Knob Stat	144.37	3	P	PKPbc	16 34 15.2	+0.3
	baz=356,SNR=10						
O60A	Telford	144.38	359	P	PKPbc	16 34 15.5	+0.7
	baz=1.4						
O55A	Ligonier	144.39	4	P	PKPbc	16 34 15.0	0.0
	baz=355						
O59A	Robesonia	144.39	360	P	PKPbc	16 34 15.2	+0.2
	baz=0.1,SNR=8.0						
P50A	Jamestown	144.43	10	P	PKPab	16 34 14.5	-0.3
	baz=347,SNR=14						
IPMB	Ipameri, GO	144.43	230	*e*P	PKPdf	16 34 16.7	-0.4
O57A	Amberson	144.47	2	P	PKPbc	16 34 15.3	0.0
	baz=358,SNR=8.7						
ABTX	Abilene, Hawle	144.51	35	P	PKPbc	16 34 16.1	+0.5
	baz=317						
O58A	Lewisberry	144.57	1	P	PKPbc	16 34 15.8	+0.3
	baz=359,SNR=7.4						
P52A	Corning	144.66	8	P	PKPab	16 34 15.0	-0.6
	baz=350,SNR=8.6						
P51A	Williamsport	144.67	9	P	PKPab	16 34 15.0	-0.7
	baz=348,SNR=7.3						
Q48A	North Vernon	144.70	13	P	PKPab	16 34 15.7	-0.2
	baz=344,SNR=15						
Q49A	Aurora	144.81	12	P	PKPab	16 34 15.8	-0.4
	baz=345,SNR=6.8						
U40A	Yellville	144.84	24	P	PKPab	16 34 15.9	-0.6
	baz=330						
P60A	Greenville	144.89	359	P	PKPdf	16 34 16.9	-0.2
	baz=1.0,SNR=10						
P54A	Burton	144.89	6	P	PKPab	16 34 16.4	-0.1
	baz=353,SNR=12						
P53A	Whipple	144.90	7	P	PKPab	16 34 16.2	-0.3
	baz=351,SNR=11						
ITRB	Iturama	144.96	226	*e*P	PKPbc	16 34 17.4	0.0
P61A	Hammonton	145.00	358	P	PKPdf	16 34 17.7	+0.3
	baz=2.5						
P55A	Reedsville	145.04	5	P	PKPbc	16 34 16.8	-0.3
	baz=354,SNR=9.2						
Q51A	Peebles	145.07	10	P	PKPbc	16 34 16.6	-0.6
	baz=348,SNR=7.9						
P59A	Jarrettsville	145.09	0	P	PKPbc	16 34 16.9	-0.3
	baz=360,SNR=8.2						
P56A	Dayton Farm, R	145.12	4	P	PKPbc	16 34 17.1	-0.2
	baz=355,SNR=9.3						
Q50A	Georgetown	145.14	11	P	PKPbc	16 34 16.6	-0.8
	baz=346,SNR=5.9						
P57A	Homestead Farm	145.18	2	P	PKPbc	16 34 17.1	-0.4
	baz=357,SNR=10						
P58A	Pank, Wackersv	145.20	1	P	PKPbc	16 34 17.0	-0.5
	baz=358,SNR=9.8						
WCI	Wyandotte Cave	145.24	14	PKIKP	PKPbc	16 34 17.2	-0.5
WCI	Wyandotte Cave	145.24	14		PKPbc	16 34 17.2	-0.5
WCI	Wyandotte Cave	145.24	14	P	PKPbc	16 34 17.5	-0.2
	baz=342						
Q52A	Bidwell	145.30	8	P	PKPbc	16 34 17.5	-0.3
	baz=349,SNR=11						
R49A	Shelbyville	145.43	12	P	PKPdf	16 34 18.1	-0.1
	baz=344,SNR=12						
W39A	Magazine	145.45	26	P	PKPdf	16 34 18.2	0.0
	baz=328						
Q54A	Coxs Mills	145.46	6	P	PKPdf	16 34 18.2	0.0
	baz=352,SNR=9.3						
Q53A	Leroy	145.50	7	P	PKPdf	16 34 18.3	0.0
	baz=351,SNR=7.2						
Q55A	Buckhannon	145.53	5	P	PKPbc	16 34 18.5	-0.1
	baz=353,SNR=14						
Q56A	Snyder Ridge,	145.56	4	P	PKPdf	16 34 18.4	+0.1
	baz=355,SNR=9.6						
Q57A	Strasburg	145.61	3	P	PKPdf	16 34 18.6	+0.2
	baz=356,SNR=16						
BDFB	Brasilia	145.61	234	PKPbc	PKPab	16 34 20.3	+0.3
	comp=Z,67nm,0.8s,baz=143,slow=2.2,SNR=67						
R50A	Paris	145.62	11	P	PKPdf	16 34 18.3	-0.1
	baz=346,SNR=12						
Q58A	Fox Den Farm,	145.73	2	P	PKPdf	16 34 18.9	+0.2
	baz=357,SNR=9.0						
R51A	Hillsboro	145.74	10	P	PKPdf	16 34 18.3	-0.3
	baz=347,SNR=5.6						
Q59A	Harwood	145.83	1	P	PKPab	16 34 20.2	+0.2
	baz=359						
R52A	Catlettsburg	145.86	9	P	PKPdf	16 34 19.1	+0.2
	baz=349,SNR=6.9						
S49A	Springfield	145.90	13	P	PKPbc	16 34 19.4	-0.3
	baz=344,SNR=5.5						
JCT	Junction City	145.95	38	P	PKPbc	16 34 20.4	+0.2
	baz=315,SNR=24						
R53A	Hurricane	145.97	8	P	PKPbc	16 34 19.7	-0.3
	baz=350,SNR=7.9						
MIAR	Mount Ida	146.09	26	P	PKPab	16 34 21.2	0.0
	baz=328						
W41B	Gary Mavity, V	146.11	24	P	PKPab	16 34 20.9	-0.3
	baz=330						
R56A	Bull Pasture M	146.17	4	P	PKPbc	16 34 20.6	-0.1
	baz=354,SNR=6.0						
S50A	Richmond	146.18	12	P	PKPdf	16 34 19.5	0.0
	baz=345						
WHTX	Lake Whitney,	146.22	34	P	PKPbc	16 34 20.6	-0.3
	baz=320,SNR=6.5						
R55A	Marlinton	146.23	6	P	PKPbc	16 34 20.3	-0.6
	baz=353,SNR=5.2						
R54A	Victor	146.24	7	P	PKPdf	16 34 19.9	+0.3
	baz=351						
R57A	Stanardsville	146.34	3	P	PKPbc	16 34 20.8	-0.2
	baz=356,SNR=10						
R58A	Rapidan	146.36	3	P	PKPbc	16 34 20.7	-0.4
	baz=357,SNR=11						
S51A	Beattyville	146.38	11	P	PKPdf	16 34 19.2	-0.5
	baz=347,SNR=5.9						
S52A	Salyersville	146.43	10	P	PKPbc	16 34 21.1	-0.3
	baz=348						
X40A	Basin Creek Fa	146.46	25	P	PKPbc	16 34 21.4	-0.1
	baz=329						
T49A	Edmonton	146.49	14	P	PKPdf	16 34 20.7	+0.7
	baz=343						
S54A	Dingess, Beckl	146.57	7	P	PKPbc	16 34 21.7	-0.1
	baz=351						
S53A	Williamson	146.58	9	P	PKPbc	16 34 22.1	+0.3
	baz=349						
S55A	Lewisburg	146.70	6	P	PKPbc	16 34 21.9	-0.3
	baz=352						
R58B	Mineral	146.70	2	P	PKPbc	16 34 21.4	-0.7
	baz=357						
T50A	Nancy	146.73	13	P	PKPbc	16 34 21.4	-0.8
	baz=344,SNR=6.6						
WVT	Waverly	146.80	17	PKP2	PKPbc	16 34 22.5	0.0
WVT	Waverly	146.80	17		PKPbc	16 34 22.5	0.0
WVT	Waverly	146.80	17	P	PKPdf	16 34 21.0	+0.5
	baz=339						
S57A	Dark Hollow, R	146.84	4	P	PKPbc	16 34 22.4	-0.2
	baz=355,SNR=7.3						
S56A	Natural Bridge	146.88	5	P	PKPbc	16 34 22.7	+0.1
	baz=354						
S59A	Mechanicsville	146.92	2	P	PKPbc	16 34 21.8	-0.9
	baz=358,SNR=8.7						
T51A	Gray	146.97	11	P	PKPbc	16 34 22.3	-0.6
	baz=346						
T52A	Hallie	147.00	10	P	PKPbc	16 34 23.2	+0.2
	baz=348,SNR=7.0						
S58A	Poland Farm, P	147.04	3	P	PKPdf	16 34 22.0	+1.1
	baz=357,SNR=6.7						
435B	Jarrell	147.05	35	P	PKPbc	16 34 22.5	-0.8
	baz=318						
T54A	Tazewell	147.27	8	P	PKPbc	16 34 23.4	-0.4
	baz=350						
T55A	Pulaski	147.31	7	P	PKPdf	16 34 21.5	+0.1
	baz=352						
C2SB	Chapadao do Su	147.32	224	*e*P	PKPbc	16 34 23.3	-1.1
T56A	Rocky Mt	147.48	6	P	PKPbc	16 34 23.4	-0.9
	baz=353,SNR=5.9						
GO03	Copiap	147.53	190		PKPbc	16 34 25.5	+0.7
T57A	Hurt	147.58	5	P	PKPbc	16 34 24.1	-0.5
	baz=354						
T58A	Grand View Acr	147.68	3	P	PKPbc	16 34 24.9	0.0
	baz=356						
833A	Chaparral WMA,	147.69	40	P	PKPbc	16 34 24.0	-1.2
	baz=313						
T59A	Double "B" Far	147.70	2	P	PKPbc	16 34 25.0	+0.1
	baz=358,SNR=6.1						
U55A	TA2, Sparta	147.89	7	P	PKPbc	16 34 25.0	-0.5
	baz=351,SNR=7.9						
AQDB	Aquidauana	147.99	218	*e*P	PKPbc	16 34 24.6	-1.5
V51A	Loudon	148.00	13	P	PKPbc	16 34 25.1	-0.6
	baz=345						
U56A	King	148.12	6	P	PKPbc	16 34 25.9	-0.2
	baz=352						
V52A	Sevierville	148.12	11	P	PKPdf	16 34 23.5	+0.8
	baz=346						
U57A	Blanch	148.14	5	P	PKPbc	16 34 26.0	-0.1
	baz=354,SNR=5.2						
U58A	Oxford	148.23	4	P	PKPdf	16 34 23.7	+0.8
	baz=356						
U59A	Littleton	148.31	2	P	PKPbc	16 34 26.8	+0.3
	baz=357						
W50A	Signal Mountai	148.36	14	P	PKPdf	16 34 23.6	+0.4
	baz=343						
V53A	Saluda	148.44	10	P	PKPdf	16 34 24.1	+0.8
	baz=347,SNR=12						
V54A	Nebo	148.47	9	P	PKPbc	16 34 26.7	-0.3
	baz=349,SNR=5.7						
SMTB	Santa Maria do	148.49	245	*e*P	PKPdf	16 34 25.7	+1.7
V55A	Taylorsville	148.51	8	P	PKPdf	16 34 24.5	+1.1
	baz=350,SNR=5.9						
ARAG	Araguaiana, MT	148.55	230	*e*P	PKPdf	16 34 25.0	+1.0
V56A	Mocksville	148.64	7	P	PKPdf	16 34 24.4	+0.8
	baz=352,SNR=6.3						
V57A	Coltrane Farms	148.64	6	P	PKPdf	16 34 24.1	+0.6
	baz=353,SNR=8.9						
W52A	Murphy	148.78	12	P	PKPbc	16 34 27.7	-0.1
	baz=345,SNR=6.0						
V58A	Windy Hill, Pi	148.79	5	P	PKPdf	16 34 24.4	+0.6
	baz=354,SNR=5.7						
V59A	Middlesex	148.87	3	P	PKPbc	16 34 28.2	+0.2
	baz=356,SNR=9.1						
V60A	Jim Taylor Roa	148.91	2	P	PKPdf	16 34 24.9	+0.9
	baz=358						
X51A	Calhoun	149.07	14	P	PKPdf	16 34 25.1	+0.8
	baz=343						
W54A	Cherokee Point	149.11	10	P	PKPdf	16 34 25.6	+1.2
	baz=348,SNR=6.0						
KMSC	Kings Mountain	149.19	8	P	PKPdf	16 34 25.2	+0.7
	baz=350,SNR=9.3						
W56A	Indian Trail	149.29	7	P	PKPbc	16 34 28.7	-0.3
	baz=352,SNR=6.1						
W57A	Gilead	149.34	6	P	PKPbc	16 34 28.8	-0.3
	baz=353,SNR=7.1						
W59A	Clinton	149.46	4	P	PKiKP	16 34 30.1	-0.5
	baz=356						
X53A	Estanollee	149.47	12	P	PKPbc	16 34 29.6	+0.1
	baz=346,SNR=11						
PP1B	Ponte de Pedra	149.53	223	*e*P	PKPdf	16 34 27.0	+1.5
W58A	Raeford	149.54	5	P	PKPbc	16 34 29.7	+0.1
	baz=354						
X54A	Belton	149.60	10	P	PKPdf	16 34 26.1	+0.9
	baz=348,SNR=8.8						
W60A	Pink Hill	149.61	2	P	PKPbc	16 34 30.0	+0.2
	baz=357						
X55A	Gracelyn & Ava	149.80	9	P	PKPdf	16 34 25.9	+0.5
	baz=349,SNR=6.8						
X56A	White Oak	149.87	8	P	PKPbc	16 34 30.2	-0.3
	baz=350,SNR=5.5						
Y52A	Lilburn	149.93	13	P	PKPdf	16 34 26.5	+0.8
	baz=344,SNR=8.7						
X58A	Rowland	150.00	5	P	PKPbc	16 34 30.8	+0.1
	baz=354						
Z50A	Ashland	150.04	16	P	PKPdf	16 34 25.9	0.0
	baz=340						
X60A	Albert Glenn T	150.07	3	P	PKPbc	16 34 28.5	-2.5
	baz=356						
Y55A	Saluda	150.29	9	P	PKPdf	16 34 26.9	+0.6
	baz=349,SNR=6.8						
Y57A	Sumter	150.42	7	P	PKPbc	16 34 32.1	+0.3
	baz=352						
GOGA	Godfrey	150.50	12	P	PKPdf	16 34 27.1	+0.5
	baz=345,SNR=9.3						
Y58A	Scranton	150.61	6	P	PKPbc	16 34 32.4	+0.1
	baz=353						
Z57A	Bowman	151.09	8	P	PKPbc	16 34 33.6	+0.2
	baz=351						
Z58A	St. Stephen	151.16	6	P	PKiKP	16 34 34.0	-0.1
	baz=353						
SALV	Santo Antonio	151.26	225	*e*P	PKPdf	16 34 29.4	+1.2
BRAL	Brewton	151.63	20	P	PKiKP	16 34 35.7	+0.6
	baz=337						
157A	Early Branch	151.66	8	P	PKiKP	16 34 35.4	+0.2
	baz=350						
LVC	Limon Verde	152.08	195	PP	PP	16 38 17.6	+0.8
	comp=Z,8.0nm,1.0s,baz=142,slow=6.5,SNR=3.7						
LVC	Limon Verde	152.08	195	*e*P	PKPdf	16 34 30.2	+0.4
TIGA	Tifton	152.37	14	P	PKiKP	16 34 36.9	+0.3
	baz=344						
CLDB	Colider	154.53	233	*e*P	PKPdf	16 34 35.3	+2.2
SIV	San Ignacio	154.67	216	PKPbc	PKiKP	16 34 42.1	+0.3
	baz=119,slow=2.1						
SIV				PKPab	PKPab	16 34 57.9	+1.0
	baz=148,slow=4.8						
MDP	Montagnes des	156.48	272	PKP	PKPdf	16 34 35.9	+0.2
	comp=Z,18nm,0.9s,baz=27,slow=2.3,SNR=3.5						
LPAZ	La Paz	157.81	201	PKP	PKPdf	16 34 38.8	+0.7
	comp=Z,7.0nm,1.1s,baz=127,slow=1.2,SNR=15						
LPAZ				PKPab	PKPab	16 35 13.2	+2.2
	comp=Z,22nm,0.8s,baz=124,slow=4.4,SNR=29						
LPAZ				PP	PP	16 38 52.1	+2.9
	comp=Z,3.0nm,0.9s,baz=175,slow=5.5,SNR=4.1						
SAML	Samuel	161.32	224	PKP2	PKPab	16 35 26.7	+1.0
SAML	Samuel	161.32	224		PKPab	16 35 26.7	+1.0
SAML	Samuel	161.32	224	*e*P	PKPdf	16 34 43.2	+1.9
PTGA	Pitinga	162.92	253	PKP	PKPdf	16 34 43.4	+0.4
	comp=Z,13nm,1.1s,baz=242,slow=1.5,SNR=7.2						
PTGA				PKPab	PKPab	16 35 34.4	+1.4
	comp=Z,19nm,0.9s,baz=112,slow=6.4,SNR=16						
PTGA	Pitinga	162.92	253	*e*P	PKPdf	16 34 44.9	+1.9
ATAH	Atahualpa	168.20	169	PKPab	PKPab	16 35 57.4	+1.1
	comp=Z,14nm,1.0s,baz=288,slow=6.4,SNR=6.1						
URIC	Uribia, Colomb	171.74	330	*e*P	PKPdf	16 34 48.6	-0.7
SDV	Santo Domingo	172.96	308	PKP	PKPdf	16 34 49.1	-1.1
	comp=Z,5.3nm,0.9s,baz=278,slow=3.3,SNR=5.2						
SDV				PKPab	PKPab	16 36 17.9	+0.5
	comp=Z,1.9nm,0.4s,baz=38,slow=3.6,SNR=5.1						
SDV				PP	PP	16 40 11.1	+2.4
	comp=Z,2.6nm,0.7s,baz=352,slow=13,SNR=3.7						
SDV	Santo Domingo	172.96	308	*e*P	PKPdf	16 34 52.1	+1.9
SJCC	San Jacinto, C	174.58	349	*e*P	PKPdf	16 34 50.5	-0.1
OTAV	Otavalo	175.19	153	*e*P	PKPdf	16 34 50.0	-1.3
OTAV	Otavalo	175.19	153	*e*P	PKPdf	16 34 52.5	+1.2
RUSC	La Rusia	176.59	293	*e*P	PKPdf	16 34 50.0	-1.6
PTBC	PUERTO BERRIO,	177.34	318	*e*P	PKPdf	16 34 49.0	-2.1
SOTA	Rioblanco	177.58	171	*e*P	PKPdf	16 34 52.3	+0.5
ROSC	El Rosal	178.07	279	PKP	PKPdf	16 34 51.7	-0.1
	comp=Z,5.4nm,0.4s,baz=121,slow=4.1,SNR=5.5						
NORC	Norcasia	178.30	307	*e*P	PKPdf	16 34 50.0	-1.3
GUY2C	Guyana, Caldas	178.90	308	*e*P	PKPdf	16 34 50.5	-1.5
YOTC	Yotoco, Valle	179.43	169	*e*P	PKPdf	16 34 50.0	-1.5

PRU ***07*** *16:14:57.5±0.0, 50°.35N×12°.48E, h1^{km}, West Bohemia*

WBNET 07 16:14:57.1, 50°.36N×12°.50E, h9^{km}, Ml0.3, 7C-6D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRCW	Kraslice	0.03	143	⇓P	Pg	16 14 58.6	-0.3
KRCW				S	Sg	16 14 59.9	-0.2
KRCW	Kraslice	0.03	143	⇓P	Pg	16 14 58.9	+0.1
KRCW				S	Sg	16 15 00.3	+0.2
POCW	Potky	0.06	232	⇓P	Pg	16 14 58.8	-0.3
POCW				S	Sg	16 15 00.3	-0.3
POCW	Potky	0.06	232	⇑P	Pg	16 14 59.1	0.0
POCW				S	Sg	16 15 00.7	+0.1
STCW	Studenec	0.10	173	⇓P	Pg	16 14 59.3	-0.3
STCW				S	Sg	16 15 01.1	-0.3
STCW	Studenec	0.10	173	S	Sg	16 15 01.4	+0.1
LBCW	Luby	0.11	212	⇑P	Pg	16 14 59.5	-0.2
LBCW				S	Sg	16 15 01.3	-0.2
LBCW	Luby	0.11	212	⇑P	Pg	16 14 59.8	+0.1
LBCW				S	Sg	16 15 01.7	+0.1
NKC	Novy Kostel	0.13	195	*e*SG	Sg	16 15 01.5	-0.5
	comp=Z,7.8nm,0.5s						
NKC	Novy Kostel	0.13	195	⇑P	Pg	16 14 59.7	-0.3
NKC				S	Sg	16 15 01.7	-0.3
NKC	Novy Kostel	0.13	195	⇑P	Pg	16 15 00.1	+0.1
NKC				S	Sg	16 15 02.1	0.0
VAC	Vackov	0.14	213	⇑P	Pg	16 14 59.9	-0.3
VAC				S	Sg	16 15 02.1	-0.4
VAC	Vackov	0.14	213	⇑P	Pg	16 15 00.3	0.0
VAC				S	Sg	16 15 02.4	0.0
KVC	Kvetna	0.15	176	S	Sg	16 15 02.6	0.0
KVC	Kvetna	0.15	176	S	Sg	16 15 02.9	+0.3
TRCW	Trojmez	0.23	257	⇓P	Pg	16 15 01.2	-0.6
TRCW				S	Sg	16 15 04.4	-0.6
TRCW	Trojmez	0.23	257	⇓P	Pg	16 15 01.6	-0.2

IDC ***07*** *16:20:02.3±5.9, 19°.02S×178°.08W, h643^{km}±92^{km}, mb3.5/3, mb1 3.6/5, mb1mx3.0/55, mbtmp4.6/5, Error ellipse: s-maj=154.5km s-min=20.5km az=174.0*

ISC 07 16:20:00.6±1.3**, 19°.1S**±0°.7×**178°.1W**±0°.2**, h600^{km}, n7, σ1^{s}.18**/7**, mb4.3**/3**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.75	256	P	P	16 23 07.5	+0.9
	0.3nm,0.3s,baz=82,slow=18,SNR=5.1						
RAR	Rarotonga	17.37	100	P	P	16 23 30.4	-0.2
	3.8nm,0.3s,baz=343,slow=20,SNR=4.5						
CTA	Charters Tower	33.53	262	P	P	16 25 51.9	-0.6
	7.8nm,0.6s,baz=88,slow=9.7,SNR=6.2						
WRA	Warramunga Arr	44.69	261	P	P	16 27 21.4	-0.6
	4.0nm,0.4s,baz=98,slow=6.8,SNR=8.9						
ASAR	Alice Springs	44.74	255	P	P	16 27 22.1	-0.1
	3.4nm,0.4s,baz=96,slow=7.2,SNR=7.8						
BRTR	Keskin Array B	145.78	314	PKPbc	PKPdf	16 38 31.1	-1.2
	0.4nm,0.6s,baz=40,slow=2.5,SNR=3.0						
GERES	GERESS Array B	148.81	345	PKPbc	PKPdf	16 38 38.5	+1.6
	0.5nm,0.7s,baz=20,slow=3.1,SNR=3.8						

TUL ***07*** *16:20:10.7±1.4, 36°.75N±0°.02×97°.58W±0°.02, h3^{km}±7^{km}, ML2.9, Error ellipse: s-maj=2.8km s-min=2.7km az=183.0*

ANF ***07*** *16:20:12.0±1.2, 36°.83N×97°.57W, h16^{km}±12^{km}, ML3.6/6, Error ellipse: s-maj=17.9km s-min=3.2km az=158.0*

NEIC ***07*** *16:20:11.6±1.4, 36°.686N±0°.010×97°.52W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=3.4km s-min=3.0km az=249.0*

ISC 07 16:20:11.5±0.9**, 36°.74N**±0°.04×**97°.60W**±0°.03**, h10^{km}, n23, σ1^{s}.46**/27**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.89	79		Pg	16 20 27.4	-1.4
U32A	Winter Ranch,	1.18	253	Pg	Pb	16 20 33.5	-0.6
U32A					Sb	16 20 49.5	+0.1
OKCFA	Oklahoma City	1.33	175		Pn	16 20 35.5	-0.7
OKCSW	OKLAHOMA CITY	1.34	174		Pn	16 20 35.8	-0.5
FNO	Franklin	1.49	174		Pn	16 20 38.7	+0.3
TUL1	Leonard	1.68	119		Pn	16 20 40.9	-0.1
TUL1	Leonard	1.68	119	P	Pn	16 20 41.0	-0.1
	baz=301						
TUL1				S	Sb	16 21 03.5	-0.3
	baz=301						
W35A	Tecumseh	1.69	159		Pn	16 20 41.5	+0.3
R32A	Long Quarter,	1.89	333	Pn	Pb	16 20 46.1	-0.1
X34A	Smith Ranch, M	2.15	185		Pn	16 20 48.1	+0.7
WMOK	Wichita Mounta	2.22	206		Pn	16 20 49.1	+0.7
WMOK	Wichita Mounta	2.22	206	P	Pn	16 20 49.0	+0.7
	baz=26						
WMOK				S	Sn	16 21 18.6	+2.7
	baz=26						
U38A	Gravette	2.61	96		Pn	16 20 53.4	-0.4
CBKS	Cedar Bluff	2.67	321		Pn	16 20 56.2	+1.5
W39A	Magazine	3.46	115	S	Sn	16 21 46.7	+0.1
	baz=298						
AMTX	Amarillo	3.80	242		Pn	16 21 12.8	+2.6
U40A	Yellville	3.84	94		Pn	16 21 12.3	+1.6
U40A	Yellville	3.84	94	S	Sn	16 21 55.9	-0.1
	baz=277						
MGMO	Mountain Grove	4.29	83	Pn	Pn	16 21 17.4	+0.5
X40A	Basin Creek Fa	4.49	119	P	Pn	16 21 20.1	+0.5
	baz=302						
W41B	Gary Mavity, V	4.62	108	S	Sn	16 22 14.6	-0.5
	baz=292						
CCM	Cathedral Cave	5.23	74		Pb	16 21 45.5	+2.4
OGNE	Ogallala	5.44	322	Pn	Pn	16 21 35.4	+2.7
OGNE					Pg	16 21 52.0	-3.6

DJA ***07*** *16:50:21.4±0.8, 7°S±10°×12°6E±°, h529^{km}±11^{km}, M3.8/7, mb3.8/3, MLv3.8/7*

IDC ***07*** *16:50:27.8±4.3, 6°.58S×126°.93E, h667^{km}±79^{km}, mb2.7/3, mb1 3.0/6, mb1mx2.7/45, mbtmp3.9/6, Error ellipse: s-maj=136.2km s-min=17.8km az=74.0*

ISC 07 16:50:20.8±0.9**, 7°.0S**±0°.1×**125°.7E**±0°.1**, h550^{km}, n11, σ1^{s}.08**/12**, mb3.5**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	3.09	206	P	S	16 52 40.1	+1.9
SOEI				S	S	16 52 38.5	+0.3
MMRI	Maumere	3.77	244	P	P	16 51 40.9	-0.1
EDFI	Ende, Flores	4.31	246	P	P	16 51 43.3	-1.9
BKSI	Bulukumba	5.75	286	P	P	16 51 57.6	+0.5
	0.0nm12nm,0.9s						
FAKI	Fak Fak	7.70	59	P	P	16 52 14.9	-0.7
	0.2nm47nm,1.3s						
SIJI	Sorong	8.24	43	P	P	16 52 22.1	+1.0
	5.6nm,0.3s,baz=336,slow=19,SNR=20						
WRA	Warramunga Arr	15.40	148	P	P	16 53 34.1	-0.2
	0.8nm,0.3s,baz=335,slow=9.8,SNR=31						
ASAR	Alice Springs	18.39	155	P	P	16 54 02.9	+0.6
	0.5nm,0.3s,baz=336,slow=11,SNR=31						
STKA	Stephens Creek	28.90	151	P	P	16 55 35.8	+0.2
	0.9nm,0.4s,baz=336,slow=7.7,SNR=5.8						
MKAR	Makanchi Array	65.91	329	P	P	17 00 12.3	-0.2

	0.2nm,0.5s,baz=117,slow=7.2,SNR=7.2						
ZALV	Zalesovo Beam	69.72	336	P	P	17 00 34.5	-0.9
	0.5nm,0.3s,baz=144,slow=5.5,SNR=3.1						

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*IDC **07** 16:57:34.5±1.4, 34.°70N×25.°06E, h0^{km}, mb3.6/3, mb1 3.3/7, mb1mx3.2/53, mbtmp3.3/7, ML3.1/3, Error ellipse: s-maj=24.8km s-min=10.8km az=70.0*

*ATH **07** 16:57:36.5, 34.°76N×24.°96E, h18^{km}±1^{km}, ML2.9/8, Error ellipse: s-maj=2.5km s-min=1.0km az=357.0*

*THE **07** 16:57:36.8, 34.°78N×24.°97E, h0^{km}±1^{km}, ML2.7/9, Error ellipse: s-maj=1.9km s-min=0.7km az=176.0*

ISC 07 16:57:36.9±1.2**, 34.°82N**±0.°04×**24.°97E**±0.°02**, h14**^{km}±9^{km}**, n41, σ0.^{s}80**/59**, mb3.5**/3**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	Sivas	0.23	326	P	Pb	16 57 43.0	+0.1
SIVA				S	Sb	16 57 47.3	+0.3
	10µm,0.4s						
SIVA	Sivas	0.23	326	P	Pb	16 57 43.1	+0.1
SIVA				S	Sb	16 57 47.6	+0.5
SIVA				AML	AML	16 57 48.3	
	comp=N,14959µm,0.4s						
SIVA				AML	AML	16 57 50.1	
	comp=E,26577µm,0.4s						
TMBK	Timbaki Herakl	0.30	326	P	Pb	16 57 44.4	+0.3
IDI	Anoyia	0.47	352	P	Pb	16 57 46.7	-0.3
IDI				S	Sb	16 57 54.3	+0.4
	comp=E,995nm,0.5s						
IDI	Anoyia	0.47	352	Pg	Pb	16 57 46.8	-0.2
	comp=E,18nm,0.3s,baz=219,slow=8.7,SNR=142						
IDI				Lg	Lg	16 57 53.6	
	comp=E,83nm,0.3s,baz=238,slow=15,SNR=49						
IDI	Anoyia	0.47	352	P	Pb	16 57 46.9	-0.2
IDI				S	Sb	16 57 54.2	+0.3
IDI				AML	AML	16 57 57.4	
	comp=E,2244µm,0.4s						
IDI				AML	AML	16 57 58.0	
	comp=N,1646µm,0.4s						
KSTL	Kastelli Herak	0.49	10	P	Pb	16 57 47.4	+0.1
KSTL				S	Sb	16 57 55.1	+0.8
IACM	Heraklion	0.49	10	P	Pb	16 57 48.0	+0.7
IACM	Heraklion	0.49	10	P	Pb	16 57 48.0	+0.7
IACM				S	Sn	16 57 56.3	-1.5
LAST	Lasithi	0.54	51	P	Pb	16 57 47.9	-0.3
LAST				S	Sn	16 57 57.1	-2.0
	comp=N,588nm,0.5s						
LAST	Lasithi	0.54	51	P	Pb	16 57 48.2	+0.1
LAST				S	Sb	16 57 56.1	+0.3
LAST				AML	AML	16 57 59.2	
	comp=E,1018µm,0.4s						
LAST				AML	AML	16 58 00.6	
	comp=N,1347µm,0.4s						
FRMA	Ierapetra Chan	0.66	73	P	Pb	16 57 51.3	+1.2
FRMA				S	Sn	16 58 02.1	+0.2
	comp=N,220nm,0.3s						
NPS	Neapolis	0.69	50	P	Pb	16 57 50.6	0.0
NPS				S	Sn	16 58 02.0	-0.7
	comp=N,630nm,0.5s						
NPS	Neapolis	0.69	50	P	Pb	16 57 50.6	0.0
NPS				AML	AML	16 58 04.6	
	comp=N,1005µm,0.5s						
NPS				AML	AML	16 58 07.6	
	comp=E,1600µm,0.5s						
GVD	Gavdhos	0.73	272	P	Pg	16 57 50.5	-0.5
GVD				S	Sb	16 58 02.5	+1.3
	comp=E,2µm,0.3s						
GVD	Gavdhos	0.73	272	P	Pg	16 57 50.7	-0.3
GVD				S	Sg	16 58 00.3	-0.3
GVD				AML	AML	16 58 08.4	
	comp=E,4745µm,0.3s						
GVD				AML	AML	16 58 12.9	
	comp=N,3519µm,0.4s						
VAM	Vamos	0.86	313	P	Pg	16 57 53.6	+0.1
VAM				S	Sn	16 58 08.0	+1.0
	comp=N,885nm,0.3s						
VAM	Vamos	0.86	313	P	Pg	16 57 53.6	+0.1
VAM				S	Sn	16 58 07.0	0.0
VAM				AML	AML	16 58 09.7	
	comp=E,1551µm,0.4s						
VAM				AML	AML	16 58 11.8	
	comp=N,2050µm,0.3s						
STIA	Sitia Lasithi	0.99	67	P	Pg	16 57 56.5	+0.4
IMMV	Iera Moni Meta	1.03	308	P	Pb	16 57 56.3	-0.2
IMMV				S	Sn	16 58 12.2	+1.0
	comp=N,598nm,0.7s						
IMMV	Iera Moni Meta	1.03	308	P	Pb	16 57 56.3	-0.2
IMMV				S	Sn	16 58 11.9	+0.7
IMMV				AML	AML	16 58 21.1	
	comp=N,1269µm,0.7s						
IMMV				AML	AML	16 58 23.9	
	comp=E,1146µm,0.9s						
ZKR	Zakros	1.06	74	P	Pb	16 57 57.3	+0.2
ZKR				S	Sn	16 58 14.0	+2.0
	comp=E,415nm,0.5s						
ZKR	Zakros	1.06	74	P	Pb	16 57 57.2	+0.2
ZKR				S	Sn	16 58 12.8	+0.7
ZKR				AML	AML	16 58 20.9	
	comp=N,441µm,0.5s						
ZKR				AML	AML	16 58 22.7	
	comp=E,1230µm,0.6s						
KNDR	Palaiochora Ch	1.13	292	P	Pn	16 57 59.1	+0.8
SANT	Santorini	1.59	14	P	Pb	16 58 06.4	+0.2
ANKY	Antikythira Is	1.72	308	P	Pb	16 58 09.0	+0.8
IOSP	Ios island	1.91	8	P	Pb	16 58 11.0	-0.6
IOSP	Ios island	1.91	8	P	Pb	16 58 10.9	-0.6
MHLO	Agia Marina, M	1.92	346	P	Pb	16 58 12.0	+0.3
KARP	Karpathos	1.93	67	P	Pb	16 58 12.0	+0.1
KTHA	Kythira Island	2.11	313	P	Pb	16 58 14.6	-0.4
AMGA	Amorgos Island	2.14	20	P	Pn	16 58 13.4	+1.2
APE	Apeiranthos	2.29	11	P	Pb	16 58 16.3	-1.7
VLI	Veliai	2.51	319	P	Pn	16 58 19.4	+2.1
BRTR	Keskin Array B	8.46	52	Pn	Pn	16 59 39.2	0.0
	comp=E,0.0nm,0.3s,baz=228,slow=10,SNR=2.2						
MMAI	Mount Meron Ar	8.86	99	Pn	Pn	16 59 43.8	-0.8
	comp=E,0.2nm,0.3s,baz=260,slow=13,SNR=3.3						
AKASG	Malin Array Be	16.17	10	Pn	Pn	17 01 24.6	+1.0
	comp=E,0.4nm,0.3s,baz=201,slow=11,SNR=4.9						
GERES	GERESS Array B	16.31	333	Pn	P	17 01 28.3	-0.2
	baz=141,slow=10,SNR=4.7						
TORD	Torodi Ar. Bea	30.15	230	P	P	17 03 45.5	-1.1
	comp=E,0.3nm,0.4s,baz=36,slow=7.5,SNR=4.3						
MKAR	Makanchi Array	44.09	56	P	P	17 05 44.2	-0.3
	comp=E,0.4nm,0.5s,baz=276,slow=6.6,SNR=6.1						
ZALV	Zalesovo Beam	45.35	46	P	P	17 05 53.6	-0.8
	comp=E,0.3nm,0.3s,baz=298,slow=6.2,SNR=2.5						

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*IDC **07** 17:06:05.6±0.8, 7.°89N×75.°16W, h48^{km}±8^{km}, mb3.3/2, mb1 3.6/4, mb1mx3.2/37, mbtmp3.7/4, ML2.7/2, Error ellipse: s-maj=15.5km s-min=10.6km az=80.0*

*RSNC **07** 17:06:06.7±1.6, 7.°66N×75.°07W, h31^{km}±4^{km}, ML3.4, Mw3.4*

ISC 07 17:06:05.3±0.8**, 7.°67N**±0.°03×**75.°06W**±0.°03**, h33**^{km}±3^{km}**, n30, σ1.^{s}51**/56**, 5C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZARC	Zaragoza, Cauc	0.26	132	⇓iPg	Pn	17 06 12.7	0.0
ZARC				eSg	Sn	17 06 18.1	+0.9
ZARC				i		17 06 18.5	
	comp=Z,8µm,0.2s						
UREC	San Jos de Ur	0.48	280	⇑iPg	Pb	17 06 16.3	+0.7
UREC				eSg	Sn	17 06 25.1	+1.9
UREC				i		17 06 25.4	
	comp=Z,6µm,0.2s						
PTBC	PUERTO BERRIO,	1.27	152	⇑iP	Pn	17 06 26.3	-0.5
PTBC				eS	Sn	17 06 42.1	-0.7
PTBC				i		17 06 42.3	
	comp=Z,853nm,0.6s						
DBBC	Dabeiba	1.31	241	eP	Pn	17 06 27.8	+0.3
DBBC				eS	Sn	17 06 45.1	+1.2
DBBC				i		17 06 49.5	
	comp=Z,840nm,0.5s						
BRRC	Barranca, Sant	1.45	113	⇑iP	Pn	17 06 30.1	+0.9
BRRC				eS	Sn	17 06 48.6	+1.6
BRRC				i		17 06 52.1	
	comp=Z,441nm,0.2s						
SMLC	San Martn de	1.49	41	eP	Pn	17 06 30.4	+0.7
SMLC				eS	Sn	17 06 49.3	+1.2
SMLC				i		17 06 51.7	
	comp=Z,896nm,0.1s						
HELC	Santa Helena	1.54	198	eP	Pn	17 06 31.2	+0.4
HELC				eS	Sn	17 06 51.3	+1.4
HELC				i		17 06 54.1	
	comp=Z,294nm,0.6s						
LCBC	Los crdobas,	1.75	312	eP	Pb	17 06 36.2	-0.7
LCBC				eS	Sb	17 06 58.1	-0.5
LCBC				i		17 07 08.9	
	comp=Z,180nm,0.3s						
OCAC	Ocana	1.81	72	⇑iP	Pn	17 06 34.7	+0.3
OCAC				eS	Sn	17 06 56.3	0.0
OCAC				i		17 07 01.5	
	comp=Z,289nm,0.4s						
CBOC	Ciudad Bolivar	2.03	208	eP	Pn	17 06 38.1	+0.8
CBOC				eS	Sn	17 07 02.1	+0.4
CBOC				i		17 07 11.2	
	comp=Z,96nm,0.5s						
NORC	Norcasia	2.10	175	⇓iP	Pn	17 06 38.6	+0.3
NORC				eS	Sn	17 07 03.6	+0.3
NORC				i		17 07 12.0	
	comp=Z,217nm,0.2s						
BARC	Barichara	2.15	120	⇓iP	Pn	17 06 40.1	+1.1
BARC				eS	Sn	17 07 06.5	+1.9
SPBC	San Pablo de B	2.23	154	eP	Pn	17 06 40.2	+0.1
SPBC				eS	Sn	17 07 06.4	-0.1
SPBC				i		17 07 10.2	
	comp=Z,188nm,0.2s						
PAMC	Pamplona, Colo	2.36	98	⇑iP	Pn	17 06 43.4	+1.2
PAMC				eS	Sn	17 07 12.0	+1.8
PAMC				i		17 07 14.8	
	comp=Z,414nm,0.4s						
GUY2C	Guyana, Caldas	2.45	187	eP	Pn	17 06 44.3	+0.9
GUY2C				i		17 07 28.8	
	comp=Z,125nm,0.6s						
CAPC	Capurgana	2.47	293	eP	Pn	17 06 43.5	+0.3
CAPC				eS	Sn	17 07 10.7	-1.6
CAPC				i		17 07 16.9	
	comp=Z,119nm,0.2s						
RUSC	La Rusia	2.64	132	eP	Pn	17 06 46.8	+0.8
RUSC				eS	Sn	17 07 19.1	+2.0
RUSC				i		17 07 21.2	
	comp=Z,525nm,0.7s						
CODC	Agustn Codazz	2.76	35	eP	Pn	17 06 48.9	+1.7
CODC				eS	Sn	17 07 21.3	+1.8
CODC				i		17 07 28.1	
	comp=Z,60nm,0.5s						
PTAC	Punta Ardita,	2.78	259	eP	Pn	17 06 48.6	+1.1
PTAC				eS	Sn	17 07 20.9	+1.0
PTAC				i		17 07 23.8	
	comp=Z,306nm,0.2s						
ROSC	El Rosal	2.90	165	P	Pb	17 06 54.6	-2.0
	comp=Z,12nm,0.3s,baz=26,slow=22,SNR=8.3						
ROSC				S	Sb	17 07 30.5	-1.5
	comp=Z,44nm,0.3s,baz=0.2,slow=21,SNR=11						
PLMC	San Jos del P	3.00	204	eP	Pn	17 06 52.3	+1.6
PLMC				i		17 07 39.8	
	comp=Z,147nm,0.1s						
UPD2	Meteti	3.06	287	eP	Pn	17 06 52.5	+1.2
UPD2				eS	Sn	17 07 26.7	-0.1
UPD2				i		17 07 33.6	
	comp=Z,205nm,0.6s						
CHIC	Chingaza	3.29	156	eP	Pn	17 06 56.1	+1.1
CHIC				eS	Sn	17 07 34.5	+1.3
CHIC				i		17 07 50.4	
	comp=Z,51nm,0.4s						
TAMC	Tame, Arauca	3.46	110	eP	Pn	17 06 58.7	+1.7
TAMC				i		17 08 06.7	
	comp=Z,77nm,0.8s						
ORTC	Ortega, Tolima	3.74	183	eP	Pn	17 07 04.0	+3.2
ORTC				eS	Sn	17 07 50.0	+6.2
ORTC				i		17 08 08.1	
	comp=Z,81nm,0.5s						
SDV	Santo Domingo	4.54	74	P	Pn	17 07 13.5	+1.5
	comp=Z,6.6nm,0.3s,baz=248,slow=12,SNR=28						
SDV				S	Sn	17 08 04.4	+0.6
	comp=Z,18nm,0.3s,baz=14,slow=17,SNR=9.4						
SCHQ	Schefferville	47.49	6	P	P	17 14 36.1	-1.0
	comp=Z,0.9nm,0.7s,baz=240,slow=8.1,SNR=1.5						
SCHQ				pP	pP	17 14 47.5	+0.5
	comp=Z,1.6nm,0.8s,baz=277,slow=18,SNR=2.2						
YKA	Yellowknife Ar	61.82	340	P	P	17 16 18.5	-2.2
	comp=Z,0.2nm,0.5s,baz=129,slow=7.3,SNR=3.4						
YKA				pP	pP	17 16 32.3	+1.4
	comp=Z,0.2nm,0.5s,baz=133,slow=7.1,SNR=4.3						
ASAR	Alice Springs	148.00	237	PKPbc	PKPdf	17 25 44.8	-0.4
	comp=Z,0.2nm,0.4s,baz=121,slow=3.5,SNR=12						
ASAR				pPKPbc	pPKPbc	17 25 58.9	-0.3
	comp=Z,0.4nm,1.0s,baz=127,slow=3.8,SNR=1.9						
WRA	Warramunga Arr	149.02	244	PKPbc	PKPdf	17 25 47.6	+0.7
	comp=Z,0.4nm,0.7s,baz=108,slow=3.5,SNR=1.9						

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*IDC **07** 17:11:46.0±0.8, 13.°47N×145.°85E, h0^{km}, mb3.8/13, mb1 4.1/13, mb1mx3.9/45, mbtmp3.8/13, MS3.7/10, Ms1 3.7/10, ms1mx3.4/44, Error ellipse: s-maj=18.4km s-min=15.8km az=128.0*

*NEIC **07** 17:11:49.1±2.3, 13.°4N±0.°1×145.°94E±0.°07, h29^{km}±2^{km}, mb4.7/35, Error ellipse: s-maj=18.2km s-min=9.2km az=187.0*

ISC 07 17:11:50.8±0.5**, 13.°36N**±0.°10×**145.°88E**±0.°07**, h43**^{km}**, n80, σ1.^{s}41**/69**, mb4.5**/28**, MS3.6**/9**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.01	283	Pn	Pn	17 12 07.6	-1.0
	392nm,0.3s,baz=140,slow=8.2,SNR=60						
GUMO				Sn	Sn	17 12 21.5	-0.2
	690nm,0.3s,baz=241,slow=22,SNR=20						
GUMO	Guam	1.01	283		Pn	17 12 07.9	-0.7
GUMO					Sn	17 12 21.8	+0.1
PATS	Pohnpei	13.84	117		Pn	17 15 01.7	-2.9
KRVT	Keravat (AS076	18.58	160	LR	LR	17 22 03.6	
	comp=Z,160nm,19.9s,baz=360,slow=33						
SIJI	Sorong	20.24	227	LR	LR	17 23 57.9	
	comp=Z,176nm,20.6s,baz=137,slow=36						
H11S3	WAKE ISLAND Hy	20.64	73	T	T	17 38 06.1	
	baz=226,slow=76,SNR=6.1						
H11S1	WAKE ISLAND Hy	20.66	73	T	T	17 38 09.3	
	baz=220,slow=76,SNR=5.0						
H11S2	WAKE ISLAND Hy	20.66	73	T	T	17 38 04.6	
DAV	Davao City (W)	20.93	255	LR	LR	17 24 09.2	
	comp=Z,143nm,20.7s,baz=116,slow=36						
H11N1	WAKE ISLAND Hy	21.10	70	T	T	17 38 43.2	
	baz=257,slow=74,SNR=5.5						
H11N2	WAKE ISLAND Hy	21.11	70	T	T	17 38 36.0	
	baz=257,slow=74,SNR=3.8						
H11N3	WAKE ISLAND Hy	21.12	70	T	T	17 38 46.8	
	baz=257,slow=74,SNR=5.5						
INU	Inuyama	23.32	341	P	P	17 16 53.6	-1.5
INU				IAmb	IAmb	17 17 23.4	
	comp=Z,40nm,1.5s						
JNU	Nakatsue	23.97	328	P	P	17 17 01.9	+0.6
JNU				IAmb	IAmb	17 17 31.6	
	comp=Z,38nm,1.4s						
MJAR	Matsushiro Arr	24.09	345	P	P	17 17 02.8	+0.4
	comp=Z,2.4nm,1.0s,baz=162,slow=10.0,SNR=3.4						
MJAR	Matsushiro Arr	24.09	345	P	P	17 17 01.3	-1.2
MAJO	Matsushiro	24.10	345	P	P	17 17 01.4	-1.0
MJB9	Matsu-Tunnel	24.10	345	P	P	17 17 01.2	-1.3
NACB	Ninganchiao	25.35	299	P	P	17 17 09.4	-4.6
NACB				IAmb	IAmb	17 17 35.8	
	comp=Z,39nm,1.3s						
TWG	Pinlang	25.36	295	P	P	17 17 12.1	-2.0
SAUI	Saumlaki	25.67	215	P	P	17 17 14.3	-2.7
MTN	Manton Dam	29.86	210	P	P	17 17 54.6	+0.2
USRK	Ussuriysk Ar.	32.96	341	LR	LR	17 29 46.1	
	comp=Z,88nm,20.5s,baz=137,slow=33						
KNRA	Kununurra	33.45	211	P	P	17 18 25.9	0.0
WB0	Warramunga Arr	34.80	199	P	P	17 18 38.5	+0.9
WB0				IAmb	IAmb	17 19 31.4	
	comp=Z,22nm,1.4s						
WR0	Warramunga Arr	34.94	199	P	P	17 18 38.7	-0.1
WR0				IAmb	IAmb	17 19 27.4	
	comp=Z,14nm,1.4s						
WRAB	Tennant Creek	34.97	199	P	P	17 18 40.1	+1.0
WRAB				IAmb	IAmb	17 18 45.0	
	comp=Z,26nm,1.8s						
WB2	Warramunga Arr	34.98	199	P	P	17 18 39.5	+0.3
WB2				IAmb	IAmb	17 18 49.1	
	comp=Z,19nm,1.5s						
WRA	Warramunga Arr	34.98	199	P	P	17 18 40.7	+1.5
	comp=Z,1.1nm,0.6s,baz=23,slow=9.6,SNR=12						
FITZ	Fitzroy Crossi	37.09	213	P	P	17 18 59.2	+1.9
	comp=Z,3.4nm,0.8s,baz=56,slow=9.7,SNR=7.2						
FITZ	Fitzroy Crossi	37.09	213	P	P	17 18 58.7	+1.4
FITZ				IAmb	IAmb	17 19 51.5	
	comp=Z,23nm,1.6s						
AS31	Alice Springs	38.61	198	P	P	17 19 12.4	+2.3
ASAR	Alice Springs	38.61	198	P	P	17 19 11.8	+1.6
	comp=Z,0.5nm,0.6s,baz=14,slow=11,SNR=10						
ASAR	Alice Springs	38.61	198	P	P	17 19 11.4	+1.3
JOHN	Johnston Islan	43.13	80	P	P	17 19 46.8	-0.6
CMAR	Chiang Mai Arr	45.33	283	P	P	17 20 04.8	-0.3
	comp=Z,1.1nm,0.7s,baz=84,slow=5.9,SNR=11						
CMAR				PcP	PcP	17 21 47.0	+2.7
	comp=Z,1.3nm,0.7s,baz=98,slow=1.6,SNR=11						
CMAR				LR	LR	17 39 22.1	
	comp=Z,60nm,18.4s,baz=110,slow=37						
CMAR	Chiang Mai Arr	45.33	283	P	P	17 20 05.7	+0.6
CMAR					PcP	17 21 47.5	+3.3
SONM	Songino Array	47.49	324	P	P	17 20 22.1	+0.3
	comp=Z,0.4nm,0.8s,baz=130,slow=6.3,SNR=3.1						
SONM	Songino Array	47.49	324	P	P	17 20 21.4	-0.4
MKAR	Makanchi Array	62.34	316	P	P	17 22 09.0	0.0
	comp=Z,0.4nm,0.7s,baz=91,slow=8.1,SNR=9.5						
MKAR	Makanchi Array	62.34	316	P	P	17 22 09.2	+0.1
ZALV	Zalesovo Beam	62.39	324	P	P	17 22 10.7	+1.6
	comp=Z,0.4nm,0.5s,baz=16,slow=25,SNR=2.0						
ZALV	Zalesovo Beam	62.39	324	P	P	17 22 10.4	+1.2
MAKZ	Makanchi	62.56	316	P	P	17 22 09.8	-0.7
MAKZ				IAmb	IAmb	17 22 22.1	
	comp=Z,11nm,1.8s						
KDJ	Kajisay	65.39	310	P	P	17 22 29.8	+0.3
KURK	Kurchatov	65.40	320	P	P	17 22 29.6	+0.7
SKT	Skwentna	65.55	27	P	P	17 22 30.2	+0.4
PPLA	Purkeypile	65.56	26	P	P	17 22 30.2	+0.2
KTH	Kantishna Hill	66.31	26	P	P	17 22 38.2	+3.4
MLY	Manley	66.86	24	P	P	17 22 37.6	-0.6
MLY				IAmb	IAmb	17 23 08.4	
	comp=Z,12nm,1.6s						
RND	Reindeer	67.15	26	P	P	17 22 40.5	+0.4
RND				IAmb	IAmb	17 23 58.6	
	comp=Z,22nm,1.8s						
DHY	Denali Highway	67.71	27	P	P	17 22 44.9	+1.1
WRH	Wood River Hil	67.78	25	P	P	17 22 45.3	+1.4
WRH				IAmb	IAmb	17 23 00.1	
	comp=Z,4.7nm,1.0s						
CCB	Clear Creek Bu	67.94	25	P	P	17 22 45.2	+0.2
CCB				IAmb	IAmb	17 23 39.4	
	comp=Z,7.1nm,1.4s						
IL31		68.36	25	P	P	17 22 48.6	+1.0
IL31				IAmb	IAmb	17 24 23.2	
	comp=Z,3.2nm,0.5s						
ILAR	Eielson Array	68.36	25	P	P	17 22 47.6	0.0
	comp=Z,0.6nm,0.7s,baz=252,slow=5.8,SNR=7.4						
ILAR	Eielson Array	68.36	25	P	P	17 22 46.9	-0.7
BMAR	Burnt Mountain	69.94	23	P	P	17 22 59.6	+2.2
BCAR	Beaver Creek A	70.19	27	P	P	17 22 59.9	+0.9
KK31	Karatay Array	70.35	311	P	P	17 22 59.8	-0.5
KKAR	Karatay Array	70.35	311	P	P	17 22 59.8	-0.5
PPT	Papeete	70.72	114	LR	LR	17 47 13.3	
	comp=Z,98nm,21.2s,baz=194,slow=30						
HYT	Haines Junctio	71.91	30	P	P	17 23 08.0	-1.6
HYT				IAmb	IAmb	17 24 07.8	
	comp=Z,14nm,1.4s						
INK	Inuvik	74.20	22	P	P	17 23 24.0	+1.2
	comp=Z,0.8nm,0.8s,baz=170,slow=10,SNR=1.9						
INK	Inuvik	74.20	22	P	P	17 23 23.6	+0.8
INK				IAmb	IAmb	17 23 32.9	
	comp=Z,11nm,1.6s						
ABKAR	Akbulak array	77.38	318	P	P	17 23 41.4	+0.1
C36M	Paulatuk	77.62	21	P	P	17 23 42.7	+0.4
YKA	Yellowknife Ar	82.61	28	P	P	17 24 10.9	+1.6
	comp=Z,0.5nm,0.5s,baz=285,slow=4.9,SNR=4.0						
YKA				LR	LR	17 58 47.4	
	comp=Z,28nm,21.5s,baz=0.0,slow=34						
NEW	Newport	84.75	42	LR	LR	17 58 32.4	
	comp=Z,32nm,19.8s,baz=320,slow=33						
NVAR	Mina Array Bea	86.29	52	P	P	17 24 31.1	+2.3
	comp=Z,0.4nm,0.2s,baz=272,slow=6.0,SNR=5.1						
ELK	Elko	87.99	49	P	P	17 24 37.1	+0.1
ELK				IAmb	IAmb	17 24 41.1	
	comp=Z,3.4nm,1.1s						
PFO	Pinyon Flats O	88.96	56	LR	LR	18 04 17.5	
	comp=Z,64nm,18.4s,baz=280,slow=35						
FINES	FINESS Array B	91.79	335	P	P	17 24 53.2	-0.7
	comp=Z,2.5nm,0.9s,baz=61,slow=6.5,SNR=1.4						
FINES	FINESS Array B	91.79	335	P	P	17 24 52.8	-1.1
LPIG	La Paz	96.84	63	LR	LR	18 03 31.2	
	comp=Z,53nm,19.1s,baz=10,slow=32						
DBIC	Dimbokro	144.78	303	PKP	PKPdf	17 31 24.6	+0.4
	comp=Z,3.6nm,0.8s,baz=19,slow=5.1,SNR=3.3						
DBIC	Dimbokro	144.78	303		PKPbc	17 31 23.4	+0.3
KIC	Kosan Boka	144.86	302	ePKP1	PKPdf	17 31 24.6	+0.3
	comp=Z,17nm,1.1s						
TIC	Toumodi	144.93	303	ePKP1	PKPdf	17 31 25.4	+1.0
LIC	Lamto	145.17	302	ePKP1	PKPdf	17 31 25.5	+0.7
	comp=Z,42nm,1.2s						

MAN 07 17:25:42.1, 10.°49N×123.°99E, h22^{km}, mb3.8, ML2.5, MS2.0, 1C, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.17	187	⇑eP	Pb	17 25 48.8	+1.3
LLP				eS	Sb	17 25 55.5	+4.2
MSLP	Maasin	0.93	112	eP	Pb	17 25 58.9	-0.6
MSLP				eS	Sn	17 26 13.6	+1.1
GUIM	Jordan	1.38	276	eP	Pn	17 26 05.5	-0.7
GUIM				eS	Sb	17 26 24.6	+0.1

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*KRNET **07** 17:29:21.6±0.1, 42.°70N×78.°91E, h18^{km}, mb3.1*

*NNC **07** 17:29:21.3±0.6, 42.°70N×78.°91E, h0^{km}, mb3.5, mpv3.3, Error ellipse: s-maj=4.9km s-min=2.1km az=165.0*

*SOME **07** 17:29:21.3, 42.°65N×78.°90E, h15^{km}*

ISC 07 17:29:20.4±1.3**, 42.°66N**±0.°04×**78.°92E**±0.°03**, h2**^{km}±10^{km}**, n72, σ1.^{s}11**/132**, 46C-34D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	0.43	245	⇑iP	Pg	17 29 30.3	+1.7
	baz=40						
PRZ				⇑iS	Sb	17 29 36.8	-0.9
	baz=40						
UZB	Uzynbulak	0.49	8	⇓iP	Pg	17 29 30.4	+0.6
	baz=10.0						
UZB				⇑iS	Sg	17 29 37.2	+0.9
	baz=10.0						
UZB	Uzynbulak	0.49	8	⇓iP	Pg	17 29 30.4	+0.6
	37nm,0.1s						
UZB				⇑iS	Sg	17 29 37.1	+0.9
	313nm,0.2s						
UZB	Uzynbulak	0.49	8	P	Pg	17 29 30.3	+0.6
	37nm,0.2s						
UZB				S	Sg	17 29 37.1	+0.9
	236nm,0.2s						
SATY	Saty	0.55	316	⇑iP	Pg	17 29 31.4	+0.5
	37nm,0.2s						
SATY				⇑iS	Sg	17 29 38.7	+0.6
	188nm,0.2s						
SATY	Saty	0.55	316	P	Pg	17 29 31.5	+0.5
	37nm,0.2s						
SATY				S	Sg	17 29 38.7	+0.6
	188nm,0.2s						
ZHN	Zhinishke	0.62	325	⇓iP	Pg	17 29 32.8	+0.5
	baz=24						
ZHN				⇑iS	Sb	17 29 41.2	-2.1
	baz=24						
ZHN	Zhinishke	0.62	325	⇓iP	Pg	17 29 32.8	+0.5
	45nm,0.1s						
ZHN				⇑iS	Sb	17 29 41.1	-2.1
	102nm,0.3s						
SHLS	Shalkode	0.63	38	⇑iP	Pn	17 29 37.5	+1.0
	baz=57						
SHLS				⇑iS	Sn	17 29 49.4	+2.1
	baz=57						
SHLS	Shalkode	0.63	38	⇑iP	Pn	17 29 37.5	+1.0
	44nm,0.2s						
SHLS				⇑iS	Sn	17 29 49.4	+2.1
	89nm,0.2s						
SHLS	Shalkode	0.63	38	P	Pn	17 29 37.6	+1.0
	44nm,0.2s						
SHLS				S	Sn	17 29 49.4	+2.1
	53nm,0.1s						
ANVS	Anan'yevo	0.93	278	⇑iP	Pb	17 29 38.9	-0.5
	baz=76						
ANVS				⇑iS	Sg	17 29 51.2	+0.8
	baz=76						
KURS	Kuram	0.99	326	⇓iP	Pb	17 29 39.6	-0.8
	baz=26						

KURS				⇓*i*S	**Sg**	**17 29 53.1**	**+0.7**
	baz=26						
KURS	**Kuram**	**0.99**	**326**	⇓*i*P	**Pb**	**17 29 39.6**	**-0.8**
	7.0nm,0.2s						
KURS				⇓*i*S	**Sg**	**17 29 53.0**	**+0.7**
	20nm,0.2s						
KURS	**Kuram**	**0.99**	**326**	P	**Pb**	**17 29 39.6**	**-0.8**
	7.0nm,0.2s						
KURS				S	**Sg**	**17 29 53.0**	**+0.7**
	20nm,0.2s						
KTMS	**Ketmen**	**1.31**	**53**	⇑*i*P	**Pn**	**17 29 44.9**	**-1.0**
	6.3nm,0.1s						
KTMS				⇑*i*S	**Sn**	**17 30 02.1**	**-1.9**
	20nm,0.1s						
KTMS	**Ketmen**	**1.31**	**53**	P	**Pn**	**17 29 44.8**	**-1.0**
	6.3nm,0.1s						
KTMS				S	**Sn**	**17 30 02.1**	**-1.9**
	20nm,0.1s						
KDJ	**Kajisay**	**1.40**	**248**	⇑*i*P	**Pb**	**17 29 47.0**	**-0.3**
	baz=46						
KDJ				⇑*i*S	**Sb**	**17 30 05.7**	**0.0**
	baz=46						
KOTS	**Kotyrbulak**	**1.45**	**294**	⇑*i*P	**Pb**	**17 29 47.8**	**-0.4**
	baz=93						
KOTS				⇓*i*S	**Sg**	**17 30 06.8**	**-0.1**
	baz=93						
KOTS	**Kotyrbulak**	**1.45**	**294**	⇑*i*P	**Pb**	**17 29 47.8**	**-0.4**
	10.0nm,0.2s						
KOTS				⇓*i*S	**Sg**	**17 30 06.8**	**-0.1**
	60nm,0.2s						
KOTS	**Kotyrbulak**	**1.45**	**294**	P	**Pb**	**17 29 47.8**	**-0.4**
	10.0nm,0.2s						
KOTS				S	**Sg**	**17 30 07.1**	**+0.2**
	60nm,0.2s						
MDOK	**Medeo**	**1.47**	**291**	⇑*i*P	**Pn**	**17 29 47.2**	**-0.8**
	5.6nm,0.2s						
MDOK				⇑*i*S	**Sb**	**17 30 06.9**	**-0.8**
	83nm,0.5s						
MDOK	**Medeo**	**1.47**	**291**	⇑P	**Pn**	**17 29 47.1**	**-0.8**
	1.4nm,0.2s						
MDOK				S	**Sb**	**17 30 06.9**	**-0.8**
	61nm,0.5s						
MDOK	**Medeo**	**1.47**	**291**	Pg	**Pn**	**17 29 47.4**	**-0.6**
	4.1nm,0.2s						
MDOK				Lg	Lg	17 30 06.9	
	65nm,0.4s						
TNSS	**Tian-Shan**	**1.50**	**285**	⇓*i*P	**Pb**	**17 29 48.9**	**-0.3**
	baz=84						
TNSS				⇓*i*S	**Sg**	**17 30 08.7**	**+0.1**
	baz=84						
TNSS	**Tian-Shan**	**1.50**	**285**	⇓*i*P	**Pb**	**17 29 48.9**	**-0.3**
	6.3nm,0.2s						
TNSS				⇓*i*S	**Sg**	**17 30 08.7**	**+0.1**
	63nm,0.2s						
TNSS	**Tian-Shan**	**1.50**	**285**	P	**Pb**	**17 29 48.8**	**-0.3**
	3.8nm,0.1s						
TNSS				S	**Sg**	**17 30 08.7**	**+0.1**
	63nm,0.2s						
KNDC	**Almaty**	**1.54**	**292**	⇓P	**Pg**	**17 29 51.1**	**+1.1**
	6.5nm,0.3s						
KNDC				⇓S	**Sg**	**17 30 10.1**	**+0.2**
	29nm,0.3s						
IZV	**Izvestkoviy**	**1.74**	**283**	⇓*i*P	**Pb**	**17 29 53.2**	**0.0**
	baz=82						
IZV				⇑*i*S	**Sg**	**17 30 15.8**	**-0.5**
	baz=82						
IZV	**Izvestkoviy**	**1.74**	**283**	⇓*i*P	**Pb**	**17 29 53.2**	**0.0**
	14nm,0.1s						
IZV				⇑*i*S	**Sg**	**17 30 15.8**	**-0.5**
	147nm,0.4s						
IZV	**Izvestkoviy**	**1.74**	**283**	P	**Pb**	**17 29 53.2**	**0.0**
	8.2nm,0.2s						
IZV				S	**Sg**	**17 30 15.8**	**-0.5**
	147nm,0.4s						
ARXS	**Arharly**	**1.75**	**333**	*e*P	**Pb**	**17 29 53.0**	**-0.2**
	10nm,0.2s						
ARXS				*e*S	**Sg**	**17 30 15.8**	**-0.6**
	45nm,0.4s						
ARXS	**Arharly**	**1.75**	**333**	P	**Pb**	**17 29 53.2**	**0.0**
	10nm,0.2s						
ARXS				S	**Sg**	**17 30 16.0**	**-0.4**
	43nm,0.2s						
DJR	**Jarkent**	**1.79**	**20**	⇓*i*P	**Pb**	**17 29 53.6**	**-0.3**
	2.2nm,0.1s						
DJR				⇑*i*S	**Sg**	**17 30 17.2**	**-0.6**
	35nm,0.3s						
DJR	**Jarkent**	**1.79**	**20**	P	**Pb**	**17 29 53.7**	**-0.1**
	2.2nm,0.1s						
DJR				S	**Sg**	**17 30 17.1**	**-0.6**
	35nm,0.3s						
CHKK	**Chushkaly**	**1.85**	**311**	*e*P	**Pb**	**17 29 54.9**	**0.0**
	baz=10.0						
CHKK				*e*S	**Sg**	**17 30 19.1**	**-0.7**
	baz=10.0						
CHKK	**Chushkaly**	**1.85**	**311**	*e*P	**Pb**	**17 29 54.9**	**0.0**
	15nm,0.2s						
CHKK				*e*S	**Sg**	**17 30 19.1**	**-0.7**
	124nm,0.2s						
CHKK	**Chushkaly**	**1.85**	**311**	P	**Pb**	**17 29 54.9**	**0.0**
	15nm,0.2s						
CHKK				S	**Sg**	**17 30 19.1**	**-0.7**
	124nm,0.2s						
MTBS	**Maitube**	**1.89**	**285**	*e*P	**Pb**	**17 29 56.0**	**+0.3**
	baz=84						
MTBS				*e*S	**Sg**	**17 30 20.3**	**-0.9**
	baz=84						
MTBS	**Maitube**	**1.89**	**285**	*e*P	**Pb**	**17 29 56.0**	**+0.3**
	13nm,0.2s						
MTBS				*e*S	**Sg**	**17 30 20.2**	**-0.9**
	80nm,0.4s						
MTBS	**Maitube**	**1.89**	**285**	P	**Pb**	**17 29 56.0**	**+0.3**
	13nm,0.2s						
MTBS				S	**Sg**	**17 30 20.2**	**-0.9**
	80nm,0.4s						
KTBS	**Karatobe**	**1.95**	**303**	*e*P	**Pb**	**17 29 57.0**	**+0.3**
	35nm,0.3s						
KTBS				*e*S	**Sg**	**17 30 22.2**	**-0.7**
	84nm,0.3s						
KTBS	**Karatobe**	**1.95**	**303**	Pg	**Pb**	**17 29 57.0**	**+0.3**
	35nm,0.3s						
KTBS				Lg	Lg	17 30 22.2	
	84nm,0.3s						
ULHL	**Ulahol**	**2.03**	**259**	⇓*i*P	**Pb**	**17 29 57.5**	**-0.6**
	baz=58						
ULHL				⇓*i*S	**Sb**	**17 30 23.9**	**0.0**
	baz=58						
BOOM	**Boomskoye usch**	**2.21**	**267**	⇑*i*P	**Pb**	**17 29 59.9**	**-1.3**
	baz=66						
BOOM				⇑*i*S	**Sb**	**17 30 27.8**	**-1.3**
	baz=66						
KST	**Kastek**	**2.21**	**281**	*e*P	**Pb**	**17 30 01.1**	**-0.1**
	24nm,0.2s						
KST				*e*S	**Sg**	**17 30 30.2**	**-1.1**
	76nm,0.4s						
KST	**Kastek**	**2.21**	**281**	Pg	**Pb**	**17 30 01.1**	**-0.1**
	24nm,0.2s						
KST				Lg	Lg	17 30 30.2	
	76nm,0.4s						
KUU	**Kurty**	**2.25**	**304**	*e*P	**Pb**	**17 30 02.2**	**+0.3**
	5.3nm,0.3s						
KUU				*e*S	**Sg**	**17 30 31.1**	**-1.7**
	112nm,0.3s						
KUU	**Kurty**	**2.25**	**304**	Pg	**Pb**	**17 30 02.2**	**+0.3**
	5.3nm,0.3s						
KUU				Lg	Lg	17 30 31.1	
	112nm,0.3s						
TDK	**Taldyqorghan**	**2.37**	**351**	*e*P	**Pb**	**17 30 04.0**	**+0.2**
	20nm,0.4s						
TDK				*e*S	**Sg**	**17 30 34.7**	**-1.8**
	73nm,0.3s						
TDK	**Taldyqorghan**	**2.37**	**351**	Pg	**Pb**	**17 30 04.0**	**+0.2**
	20nm,0.4s						
TDK				Lg	Lg	17 30 34.7	
	73nm,0.3s						
DGS	**Degeres**	**2.39**	**285**	*e*P	**Pb**	**17 30 04.4**	**+0.2**
	17nm,0.6s						
DGS				*e*S	**Sg**	**17 30 35.7**	**-1.3**
	86nm,0.5s						
DGS	**Degeres**	**2.39**	**285**	Pg	**Pb**	**17 30 04.4**	**+0.2**
	17nm,0.6s						
DGS				Lg	Lg	17 30 35.7	
	86nm,0.5s						
NRN	**Naryn**	**2.50**	**242**	⇑*i*P	**Pb**	**17 30 04.6**	**-1.6**
	baz=41						
NRN				⇑*i*S	**Sb**	**17 30 36.1**	**-1.4**
	baz=41						
KAPS	**Kapalarasan**	**2.64**	**7**	*e*P	**Pb**	**17 30 08.2**	**-0.3**
	3.1nm,0.4s						
KAPS				*e*S	**Sg**	**17 30 42.9**	**-2.4**
	13nm,0.4s						
KAPS	**Kapalarasan**	**2.64**	**7**	Pg	**Pb**	**17 30 08.2**	**-0.3**
	3.1nm,0.4s						
KAPS				Lg	Lg	17 30 42.9	
	13nm,0.4s						
KZA	**Kyzart**	**2.78**	**259**	⇓*i*P	**Pn**	**17 30 08.1**	**+1.7**
	baz=58						
KZA				⇓*i*S	**Sn**	**17 30 41.8**	**+1.0**
	baz=58						
KBK	**Karagaybulak**	**2.93**	**271**	⇑*i*P	**Pn**	**17 30 09.8**	**+1.6**
	baz=71						
KBK				⇑*i*S	**Sn**	**17 30 45.1**	**+1.0**
	baz=71						
CHMS	**Chumysh**	**3.09**	**278**	⇓*i*P	**Pn**	**17 30 11.8**	**+1.6**
	baz=77						
CHMS				⇓*i*S	**Sn**	**17 30 48.5**	**+0.8**
	baz=77						
CHMS	**Chumysh**	**3.09**	**278**	⇓Pg	**Pb**	**17 30 15.7**	**-0.4**
	1.5nm,0.5s						
CHMS				⇑Lg	Lg	17 30 58.1	
	17nm,0.6s						
AAK	**Ala-Archa**	**3.27**	**271**	⇑*i*P	**Pn**	**17 30 14.3**	**+1.5**
	baz=70						
AAK				⇑*i*S	**Sn**	**17 30 53.1**	**+0.7**
	baz=70						
AAK	**Ala-Archa**	**3.27**	**271**	⇑Pg	**Pb**	**17 30 21.0**	**+1.8**
	1.5nm,0.3s						
AAK				⇓Lg	Lg	17 31 03.4	
	9.3nm,0.4s						
UCH	**Uchtor**	**3.29**	**264**	⇑*i*P	**Pn**	**17 30 14.9**	**+1.5**
	baz=63						
UCH				⇑*i*S	**Sn**	**17 30 54.2**	**+0.8**
	baz=63						
USP	**Ospenovka**	**3.30**	**282**	⇑*i*P	**Pn**	**17 30 14.6**	**+1.4**
	baz=81						
USP				⇑*i*S	**Sn**	**17 30 53.7**	**+0.6**
	baz=81						
ARLS	**Aral**	**3.51**	**258**	⇓*i*P	**Pn**	**17 30 17.9**	**+1.8**
	baz=58						
ARLS				⇓*i*S	**Sn**	**17 30 59.4**	**+1.1**
	baz=58						
EKS2	**Erkin-Say**	**3.80**	**272**	⇑*i*P	**Pn**	**17 30 21.7**	**+1.7**
	baz=71						
EKS2				⇑*i*S	**Sn**	**17 31 05.5**	**+0.2**
	baz=71						
AML	**Almayashu**	**3.91**	**264**	⇑*i*P	**Pn**	**17 30 23.6**	**+1.8**
	baz=63						
AML				⇑*i*S	**Sn**	**17 31 08.9**	**+0.4**
	baz=63						
MRKS	**Merke**	**4.20**	**273**	*e*P	**Pb**	**17 30 36.4**	**+1.3**
	2.2nm,0.3s						
MRKS				*e*S	**Sg**	**17 31 31.1**	**-4.2**
	8.0nm,0.2s						
MRKS	**Merke**	**4.20**	**273**	Pg	**Pb**	**17 30 36.4**	**+1.3**
	2.2nm,0.3s						
MRKS				Lg	Lg	17 31 31.1	
	8.0nm,0.2s						
MAKZ	**Makanchi**	**4.68**	**27**	⇓Pn	**Pn**	**17 30 33.4**	**+1.3**
	3.6nm,1.4s						
MAKZ				⇓Lg	Lg	17 31 49.9	
	2.4nm,0.9s						
MK31	**Makanchi Array**	**4.78**	**29**	⇑Pn	**Pn**	**17 30 35.9**	**+2.5**
	0.1nm,0.3s,baz=198,slow=13,SNR=6.0						
MK31				⇓Sn	**Sn**	**17 31 29.8**	**+0.4**
	1.1nm,0.6s						
MK31				⇑Lg	Lg	17 31 52.3	
	0.2nm,0.3s,baz=213,slow=29,SNR=5.0						
KK31	**Karatay Array**	**6.20**	**277**	⇓Pg	**Pg**	**17 31 15.5**	**-3.6**
	0.5nm,0.4s,baz=85,slow=15,SNR=8.8						
KK31				⇓Lg	Lg	17 32 38.0	
	1.1nm,0.4s,baz=86,slow=26,SNR=4.9						

*NEIC **07** 17:31:41.0±0.9, 12°.26N±0°.05×70°.01W±0°.10, h32^{km}±9^{km}, Error ellipse: s-maj=13.9km s-min=7.7km az=96.0*

*CAR **07** 17:31:41.2±1.6, 12°.27N±0°.05×70°.00W±0°.09, h24^{km}±8^{km}, Mwr3.0, Error ellipse: s-maj=13.1km s-min=7.3km az=92.0*

ISC 07 17:31:39.7±1.0**, 12°.25N**±0°.06×**69°.98W**±0°.08**, h25**^{km}**, n31,** σ**1.^{s}57**/37**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URIC	**Uribia, Colomb**	**2.05**	**255**	*e*P	**Pn**	**17 32 12.8**	**+0.3**
URIC				*e*S	**Sn**	**17 32 36.9**	**-0.4**
URIC	**Uribia, Colomb**	**2.05**	**255**		**Pn**	**17 32 13.0**	**+0.4**
SDV	**Santo Domingo**	**3.40**	**191**	*e*P	**Pn**	**17 32 32.2**	**+0.8**
SDV				*e*S	**Sn**	**17 33 09.4**	**-1.7**
SDV	**Santo Domingo**	**3.40**	**191**		**Pn**	**17 32 31.9**	**+0.5**
SDV				Sn	**Sn**	**17 33 11.7**	**+0.6**
CODC	**Agustn Codazz**	**4.11**	**236**	*e*P	**Pn**	**17 32 41.2**	**+0.3**
SMRC	**Santa Marta, M**	**4.30**	**256**	*e*P	**Pn**	**17 32 43.8**	**+0.3**
ARGC	**Ariguani, Magd**	**4.82**	**241**	*e*P	**Pn**	**17 32 50.8**	**+0.1**
OCAC	**Ocana**	**5.17**	**220**	*e*P	**Pn**	**17 32 56.1**	**+0.5**
SMLC	**San Martn de**	**5.29**	**230**	*e*P	**Pn**	**17 32 56.5**	**-0.6**
PAMC	**Pamplona, Colo**	**5.57**	**209**	*e*P	**Pn**	**17 33 02.4**	**+1.0**
PAMC				*e*S	**Sn**	**17 34 00.5**	**-4.3**
SJCC	**San Jacinto, C**	**5.62**	**246**	*e*P	**Pn**	**17 33 03.8**	**+2.0**
BANI	**BANI**	**6.12**	**357**	Pn	**Pn**	**17 33 09.9**	**+1.2**
BRRC	**Barranca, Sant**	**6.30**	**216**	*e*P	**Pn**	**17 33 14.1**	**+3.0**
MLPR	**Magueyes Islan**	**6.35**	**26**	Pn	**Pn**	**17 33 12.7**	**+1.0**
CRPR	**Cabo Rojo, PR**	**6.36**	**25**	Pn	**Pn**	**17 33 13.0**	**+1.1**
PCDR	**Punta Cana, DR**	**6.42**	**14**	Pn	**Pn**	**17 33 11.8**	**-0.8**
BARC	**Barichara**	**6.45**	**210**	*e*P	**Pn**	**17 33 14.6**	**+1.2**
ICMP	**Isla Caja de M**	**6.52**	**30**	Pn	**Pn**	**17 33 15.1**	**+1.1**
DR12	**Loma Pena Alta**	**6.53**	**5**		**Pn**	**17 33 14.4**	**+0.1**
DR12				Sn	**Sn**	**17 34 24.1**	**-3.8**
AOPR	**Arecibo Observ**	**6.81**	**27**	Pn	**Pn**	**17 33 17.5**	**-0.6**
SDDR	**Presa de Saban**	**6.81**	**349**	Pn	**Pn**	**17 33 20.1**	**+1.9**
SDDR					**Sn**	**17 34 35.0**	**0.0**
PDPR	**Patillas Dam,**	**6.89**	**33**	Pn	**Pn**	**17 33 21.4**	**+2.2**
RUSC	**La Rusia**	**7.02**	**206**	*e*P	**Pn**	**17 33 21.9**	**+0.5**
RUSC	**La Rusia**	**7.02**	**206**		**Pn**	**17 33 22.2**	**+0.8**
PTBC	**PUERTO BERRIO,**	**7.19**	**218**	*e*P	**Pn**	**17 33 24.3**	**+1.0**
CUPR	**Culebra, Puert**	**7.54**	**36**	Pn	**Pn**	**17 33 28.9**	**+0.9**
SPBC	**San Pablo de B**	**7.70**	**212**	*e*P	**Pn**	**17 33 30.4**	**0.0**
STVI	**Saint Thomas**	**7.76**	**38**	Pn	**Pn**	**17 33 32.1**	**+0.9**
CHIC	**Chingaza**	**8.43**	**206**	*e*P	**Pn**	**17 33 40.0**	**-0.7**
GUY2C	**Guyana, Caldas**	**8.78**	**218**	*e*P	**Pn**	**17 33 48.8**	**+3.3**
GTBY	**Guantanamo Bay**	**9.09**	**328**	Pn	**Pn**	**17 33 49.5**	**+0.1**

DDA 07 17:38:07.3, 39°.25N×29°.23E, h7^{km}**±1**^{km}**, ML1.7, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GDZ	**Gediz**	**0.25**	**129**	*i* P	Pg	17 38 12.8	+0.5
GDZ				*i* S	Sg	17 38 16.4	+0.7
DEMI	**Demirci**	**0.45**	**243**	*i* P	Pb	17 38 16.8	-0.8
DEMI				*i* S	Sb	17 38 23.3	-1.2

*BJI **07** 17:43:54.0±0.0, 36°.80N×21°.60E, h20^{km}, mB5.1/19, mb4.6/33, Ms4.8/4, Ms7 4.6/4*

*IDC **07** 17:43:54.6±0.6, 36°.89N×21°.77E, h0^{km}, mb4.1/22, mb1 4.1/28, mb1mx4.1/52, mbtmp4.1/28, ML3.2/5, MS2.9/4, Ms1 2.9/4, ms1mx2.7/48, Error ellipse: s-maj=13.7km s-min=11.9km az=165.0*

*MOS **07** 17:43:55.2±1.2, 36°.77N×21°.59E, h20^{km}, mb4.8/11, Error ellipse: s-maj=7.0km s-min=4.2km az=59.7*

*NEIC **07** 17:43:56.2±2.9, 36°.78N±0°.04×21°.65E±0°.05, h15^{km}±1^{km}, mb4.5/56, ML4.0(THE), Error ellipse: s-maj=6.1km s-min=5.7km az=90.0*

*ATH **07** 17:43:56.7, 36°.84N×21°.67E, h16^{km}, ML3.9/15, Error ellipse: s-maj=2.0km s-min=0.9km az=62.0*

*BEO **07** 17:43:56.3±0.9, 36°.80N×21°.45E, h0^{km}, ML3.9/10*

*PDG **07** 17:43:56.4±0.6, 36°.83N×21°.56E, h11^{km}±1^{km}, ML4.1/10, Error ellipse: s-maj=0.9km s-min=0.9km az=0.0*

*THE **07** 17:43:57.0, 36°.83N×21°.63E, h0^{km}±1^{km}, ML4.0/13, Error ellipse: s-maj=1.8km s-min=0.6km az=211.0*

ISC 07 17:43:56.7±0.7**, 36°.82N**±0°.02×**21°.67E**±0°.02**, h20**^{km}±3^{km}**, n407,** σ**1.^{s}63**/456**, mb4.4**/64**, MS4.3**/4**, 28C-15D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.09**	**35**	P	**Pg**	**17 43 59.7**	**-1.0**
PYL				S	**Sg**	**17 44 01.6**	**-1.7**
	237µm,0.2s						
PYL	**PYLOS**	**0.09**	**35**	P	**Pg**	**17 43 59.6**	**-1.0**
PYL				S	**Sg**	**17 44 01.5**	**-1.7**
PYL				AML	AML	17 44 01.7	
PYL				AML	AML	17 44 01.8	
ITM	**Ithomi**	**0.41**	**29**	P	**Pg**	**17 44 04.7**	**-0.8**
ITM				S	**Sb**	**17 44 11.4**	**+0.1**
	56µm,0.6s						
ITM	**Ithomi**	**0.41**	**29**	P	**Pg**	**17 44 04.6**	**-0.8**
ITM				S	**Sg**	**17 44 11.0**	**-0.3**
ITM				AML	AML	17 44 12.0	
	comp=E,99172µm,0.4s						
ITM				AML	AML	17 44 12.6	
ITM	**Ithomi**	**0.41**	**29**	P	**Pg**	**17 44 04.9**	**-0.5**
ITM	**Ithomi**	**0.41**	**29**		**Pg**	**17 44 04.7**	**-0.8**
ITM					**Sb**	**17 44 11.6**	**+0.3**
AMT	**Artemida-Makis**	**0.71**	**2**	P	**Pb**	**17 44 10.5**	**0.0**
AMT				S	**Sg**	**17 44 20.7**	**+0.3**
	comp=E,25µm,0.3s						
AMT	**Artemida-Makis**	**0.71**	**2**	P	**Pb**	**17 44 10.2**	**-0.3**
AMT				S	**Sb**	**17 44 19.9**	**0.0**
VLX	**Vlachokerasia**	**0.79**	**45**	P	**Pb**	**17 44 11.9**	**+0.1**
VLX				S	**Sn**	**17 44 23.4**	**-0.7**
VLX	**Vlachokerasia**	**0.79**	**45**	P	**Pb**	**17 44 12.0**	**+0.1**
VLX				S	**Sg**	**17 44 22.5**	**-0.3**
VLX				AML	AML	17 44 24.1	
	comp=N,65876µm,0.5s						
VLX				AML	AML	17 44 24.5	
	comp=E,67040µm,0.4s						
VLI	**Veliai**	**1.02**	**95**	P	**Pg**	**17 44 16.7**	**+0.1**
VLI				S	**Sg**	**17 44 32.2**	**+2.2**
	comp=E,6µm,0.7s						
VLI	**Veliai**	**1.02**	**95**	P	**Pg**	**17 44 16.8**	**+0.1**
VLI				S	**Sg**	**17 44 30.7**	**+0.6**
VLI				AML	AML	17 44 35.9	
	comp=E,12034µm,0.7s						
VLI				AML	AML	17 44 36.1	
	comp=N,12716µm,0.8s						
KRI1	**kERI**	**1.08**	**321**	P	**Pn**	**17 44 16.6**	**-0.2**
KRI1				S	**Sg**	**17 44 33.0**	**+0.9**
MNVA	**Monemvasia**	**1.10**	**96**	P	**Pg**	**17 44 18.3**	**+0.1**
DRO	**Drossia**	**1.13**	**1**	P	**Pb**	**17 44 17.8**	**+0.1**
DRO				S	**Sg**	**17 44 34.6**	**+1.0**
	comp=N,14µm,0.7s						
DRO	**Drossia**	**1.13**	**1**	P	**Pb**	**17 44 17.7**	**+0.1**
DRO				S	**Sg**	**17 44 33.3**	**-0.3**
VTN	**Vitineika**	**1.16**	**341**	P	**Pg**	**17 44 18.9**	**-0.4**
KTHR	**Kythira**	**1.21**	**117**	P	**Pg**	**17 44 20.0**	**-0.1**
KTHR				S	**Sg**	**17 44 39.4**	**+3.4**
	comp=N,6µm,0.5s						
RLS	**Riolos of Patr**	**1.25**	**352**	P	**Pb**	**17 44 20.1**	**+0.5**
RLS	**Riolos of Patr**	**1.25**	**352**	P	**Pb**	**17 44 19.7**	**+0.1**
RLS				AML	AML	17 44 47.1	
	comp=N,3966µm,0.6s						
RLS				AML	AML	17 44 53.5	
	comp=E,4547µm,0.9s						
KTHA	**Kythira Island**	**1.25**	**116**	P	**Pg**	**17 44 20.9**	**-0.1**
KTHA	**Kythira Island**	**1.25**	**116**	P	**Pg**	**17 44 20.8**	**-0.1**
KTHA				AML	AML	17 44 44.5	
	comp=E,13514µm,0.4s						
KTHA				AML	AML	17 44 52.1	
	comp=N,7424µm,0.4s						
KTHA	**Kythira Island**	**1.25**	**116**	P	**Pg**	**17 44 21.1**	**+0.1**
KLV	**Kalavryta, Ach**	**1.28**	**17**	P	**Pb**	**17 44 20.2**	**0.0**
KLV				S	**Sg**	**17 44 40.5**	**+2.2**
	comp=N,4µm,0.5s						
KLV	**Kalavryta, Ach**	**1.28**	**17**	P	**Pb**	**17 44 20.0**	**-0.2**
KLV				AML	AML	17 44 43.1	
	comp=E,9547µm,0.4s						
KLV				AML	AML	17 44 46.5	
	comp=N,4757µm,0.5s						
KRND	**KRANIDI**	**1.31**	**64**	P	**Pg**	**17 44 21.6**	**-0.4**
KRND				S	**Sg**	**17 44 42.1**	**+2.9**
	comp=N,5µm,0.5s						
KRND	**KRANIDI**	**1.31**	**64**	P	**Pg**	**17 44 21.6**	**-0.4**
DID	**Didima**	**1.43**	**61**	P	**Pg**	**17 44 23.7**	**-0.6**
DID				S	**Sg**	**17 44 45.1**	**+2.2**
	comp=N,5µm,0.5s						
DID	**Didima**	**1.43**	**61**	P	**Pb**	**17 44 23.3**	**+0.7**
LAKA	**Lakka**	**1.44**	**10**	P	**Pb**	**17 44 23.2**	**+0.3**
LAKA				S	**Sg**	**17 44 44.3**	**+0.9**
	comp=N,3µm,0.7s						
LAKA	**Lakka**	**1.44**	**10**	P	**Pb**	**17 44 23.1**	**+0.1**
KFL	**Anninata**	**1.47**	**332**	P	**Pb**	**17 44 23.1**	**-0.3**
ALIK	**Aliki, Aigiali**	**1.48**	**13**	P	**Pb**	**17 44 23.9**	**+0.3**
LOUT	**Loutraki**	**1.56**	**41**	P	**Pb**	**17 44 25.8**	**+0.8**
LOUT	**Loutraki**	**1.56**	**41**	P	**Pg**	**17 44 26.1**	**-0.7**
LOUT				AML	AML	17 44 52.9	
	comp=E,1171µm,0.5s						
LOUT				AML	AML	17 44 55.8	
	comp=N,1487µm,0.8s						
TRIZ	**Trizonia**	**1.58**	**11**	P	**Pb**	**17 44 25.8**	**+0.6**
TRIZ				S	**Sg**	**17 44 48.6**	**+0.9**
	comp=N,4µm,0.4s						
LTK	**Loutraki**	**1.58**	**40**	P	**Pb**	**17 44 26.2**	**+0.9**
LTK	**Loutraki**	**1.58**	**40**	P	**Pb**	**17 44 26.0**	**+0.6**
VLS	**Valsamata**	**1.61**	**328**	P	**Pb**	**17 44 25.1**	**-0.7**
VLS				S	**Sg**	**17 44 48.2**	**-0.5**
	comp=N,1µm,0.4s						
KALE	**Kalithea**	**1.61**	**13**	P	**Pb**	**17 44 26.1**	**+0.2**
KALE				AML	AML	17 44 53.9	
	comp=N,5110µm,0.5s						
KALE				AML	AML	17 44 59.8	
	comp=E,5117µm,0.6s						
ANKY	**Antikythira Is**	**1.62**	**125**	P	**Pg**	**17 44 27.7**	**-0.3**
ANKY	**Antikythira Is**	**1.62**	**125**	P	**Pg**	**17 44 27.4**	**-0.6**
ANKY				AML	AML	17 44 57.8	
	comp=E,7042µm,0.6s						
ANKY				AML	AML	17 44 59.3	
	comp=N,4319µm,0.5s						
VILL	**Villia**	**1.87**	**44**	P	**Pb**	**17 44 30.0**	**-0.3**
VIL2	**Platees**	**1.88**	**42**	P	**Pb**	**17 44 30.0**	**-0.4**
VIL2				AML	AML	17 45 06.2	
	comp=E,8189µm,0.8s						
VIL2				AML	AML	17 45 06.6	
	comp=N,4881µm,0.7s						
VLY	**Voula,Athens**	**1.98**	**58**	P	**Pb**	**17 44 31.6**	**-0.5**
VLY				S	**Sb**	**17 44 58.3**	**+1.9**
	comp=N,2µm,0.6s						
VLY	**Voula,Athens**	**1.98**	**58**	P	**Pb**	**17 44 31.6**	**-0.5**
VLY				AML	AML	17 45 08.0	
	comp=E,3970µm,0.6s						
VLY				AML	AML	17 45 10.9	
	comp=N,3637µm,0.5s						
ATH	**Athens Observa**	**1.99**	**54**	P	**Pb**	**17 44 31.8**	**-0.5**
ATHU	**Athens Univers**	**2.03**	**55**	P	**Pb**	**17 44 32.2**	**-0.8**
ATHU				S	**Sb**	**17 44 58.9**	**+1.0**
ATHU	**Athens Univers**	**2.03**	**55**	P	**Pb**	**17 44 32.4**	**-0.7**
ATHU				AML	AML	17 45 05.1	
	comp=N,1120µm,1.0s						
ATHU				AML	AML	17 45 13.3	
	comp=E,717µm,0.6s						
AXAR	**Agios Charalam**	**2.10**	**22**	P	**Pb**	**17 44 34.0**	**-0.1**
AXAR				AML	AML	17 45 14.9	
	comp=E,9555µm,0.9s						
AXAR				AML	AML	17 45 15.3	
	comp=N,9204µm,1.1s						
RODP	**Rodopos**	**2.10**	**126**	P	**Pb**	**17 44 34.8**	**+0.6**
RODP	**Rodopos**	**2.10**	**126**	P	**Pb**	**17 44 34.7**	**+0.6**
LKR	**Lokris**	**2.11**	**29**	P	**Pb**	**17 44 32.7**	**-1.6**
PTL	**Penteli**	**2.13**	**54**	P	**Pb**	**17 44 33.6**	**-1.1**
PTL	**Penteli**	**2.13**	**54**	P	**Pb**	**17 44 33.7**	**-1.1**
DION	**Dionisos Attik**	**2.19**	**54**	P	**Pb**	**17 44 34.7**	**-1.1**
DION	**Dionisos Attik**	**2.19**	**54**	P	**Pb**	**17 44 34.7**	**-1.1**
MHLO	**Agia Marina, M**	**2.19**	**93**	P	**Pn**	**17 44 33.7**	**+1.6**
MHLO	**Agia Marina, M**	**2.19**	**93**	P	**Pb**	**17 44 34.3**	**-1.5**
MHLA	**Plaka, Milos I**	**2.21**	**91**	P	**Pb**	**17 44 34.7**	**-1.3**
AGG	**Agios Georgios**	**2.26**	**13**	P	**Pb**	**17 44 36.3**	**-0.6**
AGG	**Agios Georgios**	**2.26**	**13**	P	**Pb**	**17 44 36.1**	**-0.8**
AGG	**Agios Georgios**	**2.26**	**13**	P	**Pb**	**17 44 36.6**	**-0.3**
AGG	**Agios Georgios**	**2.26**	**13**		**Pb**	**17 44 36.6**	**-0.3**
KNDR	**Palaiochora Ch**	**2.27**	**134**	P	**Pb**	**17 44 36.9**	**-0.2**
SERI	**Serifos**	**2.28**	**81**	P	**Pb**	**17 44 35.5**	**-1.7**
SERI	**Serifos**	**2.28**	**81**	P	**Pb**	**17 44 35.5**	**-1.7**
IMMV	**Iera Moni Meta**	**2.31**	**125**	P	**Pb**	**17 44 37.1**	**-0.6**
IMMV	**Iera Moni Meta**	**2.31**	**125**	P	**Pb**	**17 44 36.9**	**-0.8**
VAM	**Vamos**	**2.48**	**124**	P	**Pb**	**17 44 39.4**	**-1.3**
VAM	**Vamos**	**2.48**	**124**	P	**Pb**	**17 44 39.1**	**-1.6**
KARY	**Karystos**	**2.51**	**60**	P	**Pb**	**17 44 38.9**	**-2.2**
KARY				AML	AML	17 45 21.9	
	comp=N,1160µm,1.0s						
KARY				AML	AML	17 45 26.0	
	comp=E,1560µm,0.8s						
GVD	**Gavdhos**	**2.78**	**134**	P	**Pn**	**17 44 42.7**	**+2.5**
GVD	**Gavdhos**	**2.78**	**134**	*e*P	**Pb**	**17 44 44.5**	**-1.3**
IOSP	**Ios island**	**2.90**	**91**	P	**Pn**	**17 44 44.2**	**+2.4**
AOS	**Alonnisos**	**2.92**	**36**	P	**Pn**	**17 44 42.4**	**+0.3**

IDI	Anoyia	3.02	119	Pn	Pn	17 44 44.2	+0.7
	comp=E,9.8nm,0.3s,baz=316,slow=16,SNR=30						
IDI				Sn	Sn	17 45 17.8	-1.3
	comp=E,24nm,0.3s,baz=20,slow=8.1,SNR=3.9						
IDI	Anoyia	3.02	119	P	Pn	17 44 46.0	+2.5
IDI	Anoyia	3.02	119	eP	Pn	17 44 46.2	+2.7
THT2	Imerovigli	3.04	96	eP	Pn	17 44 44.9	+1.2
SANT	Santorini	3.08	97	⇑P	Pn	17 44 47.0	+2.7
SANT				⇓S	Sb	17 45 25.9	-2.1
SANT	Santorini	3.08	97	eP	Pn	17 44 46.4	+2.1
SANT	Santorini	3.08	97		Pn	17 44 46.9	+2.7
APE	Apeiranthos	3.10	84	P	Pn	17 44 46.8	+2.2
APE	Apeiranthos	3.10	84	⇑P	Pn	17 44 46.7	+2.2
APE				⇓S	Sn	17 45 24.1	+3.0
APE	Apeiranthos	3.10	84	eP	Pn	17 44 45.2	+0.6
APE	Apeiranthos	3.10	84	ceP	Pn	17 44 46.5	+1.9
HRKL	Herakleio	3.16	117	eP	Pn	17 44 48.3	+3.0
LIT	Litokhoron	3.34	11	P	Pn	17 44 49.9	+2.0
LIT	Litokhoron	3.34	11		Pn	17 44 49.9	+2.0
CHOS	Chios island	3.81	64	eP	Pn	17 44 54.6	+0.2
HORT	Hortiatis	3.94	16	eP	Pn	17 44 57.9	+1.8
OUR	Ouranopolis	3.95	27	eP	Pn	17 44 57.8	+1.6
FNA	Florina	3.97	357	eP	Pn	17 44 58.5	+1.9
FNA	Florina	3.97	357	P	Pn	17 44 58.4	+1.9
FNA						17 45 46.4	
FNA	Florina	3.97	357		Pn	17 44 58.4	+1.9
FNA				Sn	Sn	17 45 46.4	+4.0
ZKR	Zakros	4.06	113	eP	Pn	17 45 00.4	+2.7
SIGR	SIGRI	4.08	53	eP	Pn	17 44 58.4	+0.5
SCTE	Santa Cesarea	4.11	323	Pn	Pn	17 44 59.8	+1.4
SCTE				Sn	Sn	17 45 45.6	-0.3
GRG	Griva	4.17	8	eP	Pn	17 45 01.9	+2.6
URLA	Izmir	4.20	67	eP	Pn	17 45 00.2	+0.5
OHR	Ohrid	4.34	351	ePn	Pn	17 45 04.1	+2.4
KNT	Kendrikon	4.44	12	eP	Pn	17 45 05.3	+2.3
GCAM	G?zelcaml?	4.52	77	eP	Pn	17 45 04.9	+0.8
BODT	Bodrum	4.52	85	eP	Pn	17 45 05.3	+1.2
TIP	Timpagrande	4.54	303	⇑P	Pn	17 45 05.4	+1.0
TIP				⇓S	Sn	17 45 56.8	+0.1
TIP	Timpagrande	4.54	303		Pn	17 45 05.2	+0.8
VAY	Valandovo	4.55	9	ePn	Pn	17 45 07.1	+2.6
VAY	Valandovo	4.55	9	i P	Pn	17 45 06.8	+2.3
VAY	Valandovo	4.55	9	ePn	Pn	17 45 06.9	+2.5
KARP	Karpathos	4.62	104	eP	Pn	17 45 08.1	+2.7
KARP	Karpathos	4.62	104		Pn	17 45 08.2	+2.7
DKL	Dikili	4.71	60	eP	Pn	17 45 07.3	+0.7
EZN	Ezine	4.73	49	eP	Pn	17 45 07.7	+0.8
TIR	Tirane	4.74	343	ePn	Pn	17 45 07.5	+0.5
TIR	Tirane	4.74	343	⇑P	Pn	17 45 06.5	-0.5
TIR	Tirane	4.74	343	P	Pn	17 45 07.5	+0.5
TIR	Tirane	4.74	343	Pn	Pn	17 45 07.5	+0.5
DAT	Datca	4.74	89	eP	Pn	17 45 08.5	+1.3
CEL	Celeste	4.81	289	Pn	Pn	17 45 09.5	+1.4
STIP	Stip	4.88	5	i Pn	Pn	17 45 12.0	+2.9
MMB	Musomiste	5.02	18	i P	Pn	17 45 13.0	+2.0
AYDB	Zeytinkoy-Aydi	5.08	75	eP	Pn	17 45 12.6	+0.8
KKB	Krupnik	5.16	12	eP	Pn	17 45 16.0	+3.2
GELI	Tayfur-Gelibol	5.19	45	eP	Pn	17 45 14.3	+1.1
ARG	Arkhangelos	5.23	95	eP	Pn	17 45 15.9	+2.1
RDO	Rodhopi	5.27	34	eP	Pn	17 45 15.7	+1.4
YER	Yerkesik	5.30	85	eP	Pn	17 45 16.4	+1.6
ALN	Alexandroupoli	5.31	39	eP	Pn	17 45 16.2	+1.3
ALN	Alexandroupoli	5.31	39	P	Pn	17 45 16.7	+1.8
ALN	Alexandroupoli	5.31	39		Pn	17 45 16.7	+1.8
ERIK	Erikli-Kesan	5.39	43	eP	Pn	17 45 17.2	+1.2
RZN	Rozhen	5.41	25	i P	Pn	17 45 18.9	+2.5
MATE	Matera	5.45	316	⇑P	Pn	17 45 17.7	+0.9
MATE				⇑S	Sn	17 46 19.3	+0.4
TURN	Turunc	5.56	87	eP	Pn	17 45 16.2	-2.1
SG1	Sgolgore (BA)	5.60	317	ePn	Pn	17 45 19.8	+0.9
SG1				Sn	Sn	17 46 16.7	-5.9
DALY	Dalyan (Mula)	5.60	88	eP	Pn	17 45 20.9	+2.0
KDZ	Kurdzhali	5.63	30	eP	Pn	17 45 20.5	+1.2
BALB	Balikesir	5.64	58	eP	Pn	17 45 20.5	+1.1
BAI	Bari	5.68	320	ePn	Pn	17 45 21.4	+1.4
BOSS	Bosilegrad	5.70	6	ePn	Pn	17 45 23.3	+3.0
BOSS				eSn	Sn	17 46 24.1	-1.1
MANT	Manisa	5.71	71	Pn	Pn	17 45 23.6	+3.0
UKOP	Uzunkopru-Edir	5.78	40	eP	Pn	17 45 22.9	+1.5
KULA	Kula-Manisa	5.79	71	eP	Pn	17 45 23.0	+1.3
VAE	Valguarnera	5.84	279	Pn	Pn	17 45 26.1	+3.8
	comp=E,4.7nm,0.3s,baz=158,slow=23,SNR=6.4						
VAE				Sn	Sn	17 46 35.0	+6.4
	comp=E,3.0nm,0.3s,baz=337,slow=18,SNR=2.0						
WDD	Wied Dalam	5.86	262	Pn	Pn	17 45 22.6	+0.2
WDD					Pn	17 45 22.9	+0.6
PDG	Podgorica	5.91	342	ePn	Pn	17 45 23.3	+0.2
PDG				eSn	Sn	17 46 31.0	+0.8
PDG	Podgorica	5.91	342	⇓P	Pn	17 45 22.5	-0.6
PDG				⇑S	Sn	17 46 30.2	0.0
PDG	Podgorica	5.91	342	ePn	Pn	17 45 23.8	+0.7
PDG	Podgorica	5.91	342	Pn	Pn	17 45 22.2	-0.9
PDG					Sn	17 46 30.4	+0.2
VTS	Vitosha	5.92	11	ePn	Pn	17 45 26.5	+3.1
VTS				eSn	Sn	17 46 31.2	+0.6
VTS	Vitosha	5.92	11	⇓P	Pn	17 45 22.8	-0.6
VTS				⇑S	Sn	17 46 31.4	+0.8
VTS	Vitosha	5.92	11	i P	Pn	17 45 26.3	+2.9
VTS	Vitosha	5.92	11	P	Pn	17 45 24.6	+1.2
VTS	Vitosha	5.92	11		Pn	17 45 24.6	+1.2
ACER	Acerenza	5.98	313	Pn	Pn	17 45 24.6	+0.5
BARS	Barje	5.99	1	ePn	Pn	17 45 25.8	+1.5
SELS	Selova	6.41	356	ePn	Pn	17 45 30.3	+0.3
TREB	Trebinje	6.42	338	ePn	Pn	17 45 29.8	-0.4
ZAPS	Zavoj	6.49	6	ePn	Pn	17 45 34.3	+3.2
BRY	Bratogost	6.54	339	ePn	Pn	17 45 33.6	+1.7
SJES	Sjenica	6.57	349	ePn	Pn	17 45 33.4	+1.1
SJES				eSn	Sn	17 46 46.9	+0.3
ELL	Elmali	6.61	88	P	Pn	17 45 35.9	+3.0
ELL	Elmali	6.61	88		Pn	17 45 35.9	+3.0
SGRT	San Giovanni R	6.74	319		Pn	17 45 35.0	+0.4
SGRT					Sn	17 46 49.7	-1.1
CORL	Corleone	6.75	282		Pn	17 45 36.6	+1.9
STON	Ston	6.77	334	ePn	Pn	17 45 34.7	-0.2
STON	Ston	6.77	334	ePn	Pn	17 45 34.8	-0.2
CLTB	Caltabellotta	6.79	279		Pn	17 45 36.6	+1.2
BOVS	Bovan	6.81	0	ePn	Pn	17 45 36.1	+0.6
IVAS	Ivanjica	6.85	351	ePn	Pn	17 45 36.1	0.0
ELND	Elena	6.90	27	⇓P	Pn	17 45 36.5	-0.3
PLVB	Pleven	6.94	18	⇑P	Pn	17 45 36.8	-0.5
PAOL	Paolisi	6.96	309		Pn	17 45 38.8	+1.2
ZAGS	Zajecar	7.00	3	ePn	Pn	17 45 39.0	+0.9
RUDO	Rudo	7.02	346	ePn	Pn	17 45 40.3	+2.0
GRUS	Gruza	7.10	354	ePn	Pn	17 45 39.9	+0.4
ISP	Isparta	7.12	79	P	Pn	17 45 41.0	+1.1
ISP	Isparta	7.12	79	Pn	Pn	17 45 41.0	+1.1
BBLS	Lazići	7.25	347	ePn	Pn	17 45 42.5	+0.9
BBLS	Lazići	7.25	347	ePn	Pn	17 45 42.1	+0.5
DIVS	Divibare	7.38	351	ePn	Pn	17 45 43.4	-0.1
DIVS	Divibare	7.38	351	ePn	Pn	17 45 43.1	-0.4
TRUS	Trudelj	7.46	353	ePn	Pn	17 45 44.6	+0.2
HAPS	Han Pijesak,BI	7.55	345	ePn	Pn	17 45 45.1	-0.7
HAPS	Han Pijesak,BI	7.55	345	ePn	Pn	17 45 44.7	-1.1
RAZG	Razgrad	7.69	27	⇓P	Pn	17 45 47.7	+0.2
INTR	Introdacqua	7.94	313		Pn	17 45 53.5	+2.4
MDVR	Moldovita	7.96	0	⇑P	Pn	17 45 51.4	+0.1
HERR	Herculane	8.07	4	⇑P	Pn	17 45 52.1	-0.7
MDUB	Mudurnu	8.29	61		Pn	17 46 00.9	+4.9
FRGS	Fruska Gora	8.45	351	ePn	Pn	17 45 51.9	-6.1
GZR	Gura Zlata	8.61	5	⇑P	Pn	17 45 59.5	-0.7
BLY	Banja Luka	8.62	338	Pn	Pn	17 46 01.3	+1.0
BZS	Buzias	8.79	360	⇑P	Pn	17 46 02.8	+0.1
BZS				⇓S	Sn	17 47 39.0	-2.1
NRCA	Norcia	8.91	315		Pn	17 46 06.9	+2.5
NRCA				Sn	Sn	17 47 46.2	+2.0
VOIR		8.98	15	⇑P	Pn	17 46 05.3	-0.1
MLR	Muntele Rosu	9.24	19	Pn	Pn	17 46 13.0	+4.0
	comp=E,0.3nm,0.3s,baz=164,slow=7.4,SNR=2.5						
MLR				LR	LR	17 49 30.9	
	comp=E,75nm,21.3s,baz=120,slow=37						
MLR	Muntele Rosu	9.24	19	⇑P	Pn	17 46 08.9	-0.1
MLR	Muntele Rosu	9.24	19	P	Pn	17 46 13.0	+4.0
ANTO	Ankara	9.25	67	P	Pn	17 46 11.7	+2.6
ANTO	Ankara	9.25	67	Pn	Pn	17 46 11.7	+2.6
MURB	Monte Urbino	9.52	315	Pn	Pn	17 46 15.6	+2.9
DOPR	Dopca	9.56	16	⇑S	Sn	17 47 59.5	-0.4
CSS	Mathiatis	9.64	98	Pn	Pn	17 46 15.5	+1.2
PLOR	Plostina	9.77	21	⇑P	Pn	17 46 15.4	-0.7
VRI	Vrincioaia	9.80	21	⇑P	Pn	17 46 15.4	-1.1
BR131	Keskin Array S	9.85	69	ceP	Pn	17 46 21.7	+4.4
BR131	Keskin Array S	9.85	69		Pn	17 46 21.5	+4.2
BRTR	Keskin Array B	9.85	69	Pn	Pn	17 46 21.1	+3.9
	comp=E,1.2nm,0.3s,baz=253,slow=14,SNR=37						
BRTR				LR	LR	17 49 51.5	
	comp=E,38nm,18.9s,baz=254,slow=37						
BRTR	Keskin Array B	9.85	69	P	Pn	17 46 21.6	+4.4
BRTR	Keskin Array B	9.85	69		Pn	17 46 21.6	+4.4
KEST	Kesra	10.01	267	Pn	Pn	17 46 19.7	+0.1
	comp=E,0.1nm,0.3s,baz=54,slow=23,SNR=2.5						
KEST	Kesra	10.01	267	Pn	Pn	17 46 21.8	+2.3
CRES	Cresnjev	10.14	335	ePn	Pn	17 46 20.6	-0.5
CEY	Cerknica	10.44	331	ePn	Pn	17 46 26.4	+1.1
SOKA	Soboth	11.02	335	ePn	Pn	17 46 33.3	0.0
	comp=E,1.4nm,0.3s						
SOKA				eSn	Sn	17 48 31.1	-5.0
	comp=E,1.3nm,0.5s						
OBKA	Obir	11.05	333	i Pn	Pn	17 46 36.2	+2.5
	comp=E,0.5nm,0.2s						
OBKA				Sn	Sn	17 48 33.1	-3.5
	comp=E,3.6nm,0.5s						
PSZ	Piszkesteto	11.17	354	P	Pn	17 46 36.0	+0.7
PSZ	Piszkesteto	11.17	354	Pn	Pn	17 46 36.0	+0.7
ARSA	Arzberg	11.38	338	i Pn	Pn	17 46 38.6	+0.5
	comp=E,0.9nm,0.3s						
TEOL	Teolo	11.38	322	Pn	Pn	17 46 36.8	-1.3
STAL	STALIGIAL	11.57	327	Pn	Pn	17 46 40.0	-0.8
VYHS	Vyhne	11.85	351	eSN	Sn	17 48 54.6	-1.6
CTI	Castel Tesino	11.89	324	Pn	Pn	17 46 45.1	-0.1
CTI					Sn	17 48 53.5	-3.8
MMAI	Mount Meron Ar	11.89	105	Pn	Pn	17 46 41.3	-3.9
	comp=E,0.9nm,0.3s,baz=304,slow=13,SNR=12						
MMAI				Sn	Sn	17 48 50.3	-7.0
	comp=E,2.9nm,0.3s,baz=302,slow=22,SNR=7.4						
ABTA	Abfaltersbach	12.04	328	ePn	Pn	17 46 48.0	+0.8
	comp=E,0.5nm,0.2s						
ABTA				eSn	Sn	17 48 54.3	-6.6
	comp=E,3.8nm,0.6s						
MOA	Molln	12.30	336	ePn	Pn	17 46 52.7	+2.0
	comp=E,1.4nm,0.3s						
MOA				eSn	Sn	17 49 06.5	-0.8
	comp=E,1.5nm,0.4s						
WTTA	Wattenberg	12.82	328	ePn	Pn	17 47 01.7	+3.8
	comp=E,2.3nm,0.5s						
WTTA				eSn	Sn	17 49 18.8	-1.2
	comp=E,2.9nm,0.4s						
WATA	Walderalm	12.90	328	ePn	Pn	17 47 02.0	+3.0
	comp=E,1.9nm,0.3s						
SQTA	Sankt Quirin	12.97	327	eSn	Sn	17 49 21.9	-1.8
	comp=E,3.0nm,0.4s						
MOTA	Moosalm	13.11	327	eSn	Sn	17 49 24.7	-2.4
	comp=E,6.3nm,0.8s						
EIL	Elat	13.20	119	Pn	Pn	17 46 59.8	-3.2
	comp=E,0.3nm,0.3s,baz=315,slow=4.3,SNR=6.3						
EIL				Sn	Sn	17 49 19.9	-9.2
	comp=E,1.0nm,0.3s,baz=116,slow=2.7,SNR=6.7						
GERES	GERESS Array B	13.36	337	Pn	Pn	17 47 05.8	+0.7
	baz=159,slow=14,SNR=2.9						
GERES				LR	LR	17 53 51.4	
	comp=E,167nm,18.5s,baz=134,slow=45						
GERES	GERESS Array B	13.36	337		Pn	17 47 05.3	+0.1
KHC	Kasperske Hory	13.65	337	ePN	Pn	17 47 12.7	+3.6
KHC				ex	x	17 47 20.0	
KHC	Kasperske Hory	13.65	337	eP	Pn	17 47 12.7	+3.6
SENIN	Lac Senin/Sane	14.35	316		P	17 47 22.6	-3.3
AKASG	Malin Array Be	14.90	19	Pn	Pn	17 47 24.4	-1.6
	comp=E,0.5nm,0.3s,baz=204,slow=12,SNR=3.2						
AKASG	Malin Array Be	14.90	19	P	P	17 47 30.4	-1.2
AKBB	Malin Array Si	14.90	19	P	P	17 47 31.6	0.0
AKBB	Malin Array Si	14.90	19	P	P	17 47 31.6	0.0
SOC	Sochi	15.34	58	i P	Pn	17 47 32.9	+0.9
SOC				e		17 50 26.4	
SOC				pmax	pmax		
	comp=Z,15nm,1.3s						
CLL	Collm	15.75	340	esP	P	17 47 43.0	+1.9
	comp=Z,5.0nm,1.0s						
CLL	Collm	15.75	340	eP	P	17 47 43.0	+1.9
WLF	Walferdange	17.06	324	P	Pn	17 47 51.7	-2.3
WLF				pmax	pmax		
	comp=Z,19nm,1.2s						
WLF	Walferdange	17.06	324	Pn	Pn	17 47 51.7	-2.3
SUW	Suwalki	17.23	3	P	Pn	17 47 55.5	-0.5
SUW				pmax	pmax		
	comp=Z,32nm,1.0s						
SUW	Suwalki	17.23	3		Pn	17 47 55.5	-0.5
SUW				IAmb	IAmb	17 47 59.1	
	comp=Z,32nm,1.0s						
NEY	Neytrino	17.33	62	⇑eP	P	17 48 01.8	+2.9
SHA1	Shidzhatmaz	17.41	60	ceP	P	17 48 01.1	+1.2
KIV	Kislovodsk	17.50	59	eP	P	17 48 02.8	+2.2
KIV				pmax	pmax		
	comp=Z,17nm,1.1s						
KIV	Kislovodsk	17.50	59		P	17 48 00.1	-0.6
AKH	Akhalkalaki	17.53	68	P	Pn	17 47 59.4	-0.7
AKH				pmax	pmax		
	comp=Z,14nm,1.4s						
AKH	Akhalkalaki	17.53	68	P	Pn	17 47 59.4	-0.7
KBZ	Khabaz	17.58	60	P	P	17 48 02.4	+1.0
	comp=Z,0.2nm,0.3s,baz=285,slow=6.8,SNR=11						
KBZ	Khabaz	17.58	60	⇓eP	P	17 48 03.3	+1.9
ZEI	Tsey	18.07	64	eP	P	17 48 07.8	+0.7
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CART	Cartagena	18.08	279	P	Pn	17 48 03.4	-3.3
GOF	Gofitskoye	18.09	56	⇑eP	P	17 48 08.3	+1.3
GNI	Garni	18.35	73	P	Pn	17 48 10.5	+0.3
	comp=Z,0.4nm,0.3s,baz=143,slow=6.1,SNR=3.6						
GNI	Garni	18.35	73	ceP	Pn	17 48 12.4	+2.2
GNI				pmax	pmax		
	comp=Z,43nm,1.7s						
GNI	Garni	18.35	73	P	P	17 48 09.6	-0.5
VSR	Storozhevoye	19.04	35	eP	Pn	17 48 19.1	+0.8
VSR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
BTLR	Botlikh	19.73	65	⇑eP	Pn	17 48 29.3	+2.7
LPSR	Galich'ya Gora	19.90	32	eP	Pn	17 48 31.2	+2.7
LPSR				pmax	pmax		
	comp=Z,20nm,0.6s						
VRH	Novokhopyorsk	20.27	39	eP	P	17 48 30.7	-0.1
VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
ESDC	Sonseca Array	20.32	286	P	P	17 48 32.2	+0.6
	comp=Z,0.2nm,0.3s,baz=79,slow=11,SNR=6.1						
ESDC	Sonseca Array	20.32	286	P	P	17 48 31.6	+0.1
OBN	Obninsk	20.94	24	⇓eP	Pn	17 48 41.4	+0.7
OBN				pmax	pmax		
	comp=Z,39nm,1.3s						
OBN	Obninsk	20.94	24	P	P	17 48 39.0	+0.9
VSU	Vasula	21.91	7	⇓eP	P	17 48 51.4	+3.0
VSU				pmax	pmax		
	comp=Z,59nm,0.9s						
MDT	Midelt	21.92	267	P	P	17 48 51.1	+2.2
	comp=Z,2.4nm,0.8s,baz=87,slow=2.7,SNR=4.6						
HFS	Hagfors	23.89	350	P	P	17 49 08.1	-0.7
	comp=Z,5.0nm,0.5s,baz=154,slow=11,SNR=17						
RAYN	Ar Rayn	24.41	116	P	P	17 49 14.7	+0.6
RAYN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
RAYN	Ar Rayn	24.41	116	P	P	17 49 14.7	+0.6
NC602	NORSAR Array S	24.79	348	P	P	17 49 17.4	+0.4
FINES	FINESS Array B	24.80	5	P	P	17 49 17.3	+0.2
	comp=Z,2.8nm,0.5s,baz=164,slow=12,SNR=20						
FINES	FINESS Array B	24.80	5	P	P	17 49 17.0	-0.1
FINES	FINESS Array B	24.80	5	P	P	17 49 17.0	-0.1
FIA1	FINESS Array S	24.80	5	P	P	17 49 17.5	+0.4
FIA1				IAmb	IAmb	17 49 44.3	
	comp=Z,44nm,1.6s						
NAO01	NORSAR Array S	25.00	347	P	P	17 49 19.3	+0.3
EKA	Eskdalemuir Ar	25.07	325	P	P	17 49 20.9	+1.4
	comp=Z,1.2nm,0.5s,baz=124,slow=10,SNR=4.9						
NC405	NORSAR Array S	25.12	349	P	P	17 49 19.8	-0.3
NB201	NORSAR Array S	25.13	348	P	P	17 49 20.2	0.0
NB2	NORSAR Subarra	25.13	348	P	P	17 49 20.0	-0.2
	comp=Z,2.1nm,0.6s,baz=156,slow=9.3						
NOA	NORSAR Array B	25.13	348	P	P	17 49 20.3	+0.1
	comp=Z,2.9nm,0.8s,baz=157,slow=9.1,SNR=11						
NBO00	NORSAR Array S	25.20	348	P	P	17 49 21.1	+0.3
NC303	NORSAR Array S	25.28	348	P	P	17 49 21.2	-0.3
NC204	NORSAR Array S	25.43	348	P	P	17 49 23.4	+0.5
KLMR	Klimovskoe	26.59	20	eP	P	17 49 34.7	+1.4
KLMR				pmax	pmax		
	comp=Z,19nm,0.9s						
KLMR	Klimovskoe	26.59	20	eP	P	17 49 34.7	+1.4
KLMR				AMP		17 49 36.6	
	comp=Z,19nm,0.9s						
GEYT	Alibeck	28.87	77	P	P	17 49 54.5	+0.4
	comp=Z,1.6nm,0.4s,baz=282,slow=8.0,SNR=6.7						
GEYT	Alibeck	28.87	77	P	P	17 49 57.5	+3.5
AKTO	Aktyubinsk	29.30	51	P	P	17 49 57.8	+0.1
	comp=Z,2.1nm,0.4s,baz=263,slow=10.0,SNR=8.3						
TOA0	Torodi Ar. Sit	29.60	222	P	P	17 50 02.1	+1.5
TORD	Torodi Ar. Bea	29.60	222	P	P	17 50 01.9	+1.4
	comp=Z,1.6nm,0.6s,baz=32,slow=9.4,SNR=10						
TORD				LR	LR	18 04 50.9	
	comp=Z,17nm,18.2s,baz=45,slow=42						
ABKAR	Akbulak array	30.28	54	P	P	17 50 06.2	-0.2
ABKAR	Akbulak array	30.28	54	P	P	17 50 06.1	-0.2
ABKAR				IAmb	IAmb	17 50 08.9	
	comp=Z,6.2nm,1.3s						
ARU	Arti	31.49	40	⇓eP	P	17 50 16.5	-0.5
ARU				pmax	pmax		
	comp=Z,11nm,1.3s						
ARU	Arti	31.49	40	P	P	17 50 16.9	-0.1
UOSS	Minazif	31.74	102	P	P	17 50 20.1	+0.5
UOSS				IAmb	IAmb	17 50 33.0	
	comp=Z,10nm,1.1s						
SVE	Sverdlovsk	32.70	40	eP	P	17 50 27.6	0.0
SVE				pmax	pmax		
	comp=Z,30nm,0.8s						
ARCES	ARCESS Array B	32.84	2	P	P	17 50 29.1	+0.5
	comp=Z,3.3nm,0.9s,baz=186,slow=10,SNR=5.9						
ARCES	ARCESS Array B	32.84	2	P	P	17 50 29.4	+0.7
ARCES	ARCESS Array B	32.84	2	P	P	17 50 29.4	+0.7
HRA	Herat	32.91	82	P	P	17 50 29.6	-0.3
HRA				IAmb	IAmb	17 50 31.4	
	comp=Z,5.0nm,0.9s						
KEV	Kevo	33.12	3	P	P	17 50 31.6	+0.5
KEV				pmax	pmax		
	comp=Z,36nm,1.2s						
KEV	Kevo	33.12	3	P	P	17 50 31.6	+0.5
BRVK	Borovoye	37.25	48	⇑eP	P	17 51 06.7	-0.1
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BRVK	Borovoye	37.25	48	P	P	17 51 07.0	+0.1
BRVK				IAmb	IAmb	17 51 08.1	
	comp=Z,9.1nm,0.6s						
CHGR	Chuyangaron	37.27	72	P	P	17 51 08.3	+1.0
CHGR				IAmb	IAmb	17 51 08.7	
	comp=Z,12nm,0.8s						
KK31	Karatay Array	37.52	65	P	P	17 51 09.8	+0.5
KK31				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KK31	Karatay Array	37.52	65	P	P	17 51 09.8	+0.5
KK31				IAmb	IAmb	17 51 11.0	
	comp=Z,4.4nm,0.7s						
KKAR	Karatay Array	37.52	65	P	P	17 51 09.3	0.0
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KKAR	Karatay Array	37.52	65	P	P	17 51 09.2	-0.2
KKAR	Karatay Array	37.52	65	P	P	17 51 09.3	0.0
KKAR				IAmb	IAmb	17 51 11.0	
	comp=Z,4.4nm,0.7s						
GAR	Garm	38.08	71	P	P	17 51 14.9	+0.7
GAR				IAmb	IAmb	17 51 16.5	
	comp=Z,22nm,1.0s						
KBL	Kabul	38.24	79	P	P	17 51 16.3	+0.6
KBL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KBL	Kabul	38.24	79	P	P	17 51 16.3	+0.6
BTK	Batken	38.24	70	P	P	17 51 15.3	-0.2
BTK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BTK	Batken	38.24	70	P	P	17 51 15.3	-0.2
BTK				IAmb	IAmb	17 51 16.5	
	comp=Z,6.1nm,1.1s						
DBIC	Dimbokro	38.55	225	P	P	17 51 19.5	+1.3
	comp=Z,2.7nm,0.6s,baz=16,slow=8.9,SNR=4.7						
DBIC	Dimbokro	38.55	225	P	P	17 51 18.5	+0.3
DBIC				IAmb	IAmb	17 51 35.4	
	comp=Z,22nm,1.6s						
ARSB	Arslanbob	39.62	67	P	P	17 51 27.2	+0.1
ARSB				pmax	pmax		
	comp=Z,14nm,1.3s						
ARSB	Arslanbob	39.62	67	P	P	17 51 27.2	+0.1
ARSB				IAmb	IAmb	17 51 33.8	
	comp=Z,14nm,1.2s						
AAK	Ala-Archa	40.49	65	⇑eP	P	17 51 34.8	+0.5
AAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AAK	Ala-Archa	40.49	65	P	P	17 51 34.8	+0.5
FRU1	Bishkek	40.55	65	P	P	17 51 35.7	+0.9
FRU1				pmax	pmax		
	comp=Z,10.0nm,0.6s						
FRU1	Bishkek	40.55	65	P	P	17 51 35.7	+0.9
FRU1				IAmb	IAmb	17 52 03.0	
	comp=Z,9.6nm,0.6s						
SCO	Scoresbysund	40.78	339	P	P	17 51 35.5	-0.6
SCO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SCO	Scoresbysund	40.78	339	P	P	17 51 35.5	-0.6
NRN	Naryn	41.82	66	P	P	17 51 45.9	+0.4
NRN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NRN	Naryn	41.82	66	P	P	17 51 45.9	+0.4
NRN				IAmb	IAmb	17 51 47.8	
	comp=Z,5.0nm,0.9s						
NIL	Nilore	41.83	78	P	P	17 51 46.0	+0.7
NIL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NIL	Nilore	41.83	78	P	P	17 51 46.0	+0.7
NIL				IAmb	IAmb	17 51 47.3	
	comp=Z,6.6nm,0.9s						
KSH	Kashi	42.23	69	P	P	17 51 48.1	-0.6
KSH				S	S	17 58 02.1	-6.0
KSH				SS	SS	18 01 04.3	-12
KSH				pmax	pmax		
	comp=Z,19nm,1.0s						
KSH				LR	LR		
	comp=Z,240nm,10.4s						
KSH				LR	LR		
	comp=Z,500nm,15.1s						
KSH				LR	LR		
	comp=Z,250nm,10.8s						
KURK	Kurchatov	42.37	52	deP	P	17 51 49.3	-0.1
KURK				pmax	pmax		
	comp=Z,11nm,0.8s						
KURK	Kurchatov	42.37	52	P	P	17 51 49.0	-0.4
KURK				IAmb	IAmb	17 51 50.0	
	comp=Z,9.3nm,0.7s						
KDJ	Kajisay	42.54	65	P	P	17 51 50.2	-0.9
KDJ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KDJ	Kajisay	42.54	65	P	P	17 51 50.2	-0.9
PRZ	Przheval'sk	43.35	64	P	P	17 51 58.8	+1.1
PRZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PRZ	Przheval'sk	43.35	64	P	P	17 51 58.8	+1.1
PRZ				IAmb	IAmb	17 52 00.5	
	comp=Z,6.4nm,1.0s						
MAKZ	Makanchi	45.03	57	P	P	17 52 10.1	-0.8
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MAKZ	Makanchi	45.03	57	P	P	17 52 10.1	-0.8
MAKZ				IAmb	IAmb	17 52 11.4	
	comp=Z,4.8nm,1.1s						
MK31	Makanchi Array	45.24	57	P	P	17 52 12.1	-0.6
MK31				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MK31	Makanchi Array	45.24	57	P	P	17 52 12.1	-0.6
MK31				IAmb	IAmb	17 52 13.1	
	comp=Z,4.0nm,0.6s						
MKAR	Makanchi Array	45.24	57	P	P	17 52 12.4	-0.2
	comp=Z,4.1nm,0.4s,baz=270,slow=7.5,SNR=133						
MKAR	Makanchi Array	45.24	57	ceP	P	17 52 12.3	-0.4
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
MKAR	Makanchi Array	45.24	57	P	P	17 52 11.8	-0.8
SACV	Santiago Islan	45.66	254	P	P	17 52 13.9	-2.4
ZAA0	Zalesovo Array	45.93	47	P	P	17 52 17.1	-0.8
ZAA0				IAmb	IAmb	17 52 18.9	
	comp=Z,10nm,0.9s						
ZALV	Zalesovo Beam	45.93	47	P	P	17 52 17.6	-0.3
	comp=Z,6.4nm,0.3s,baz=267,slow=9.2,SNR=35						
ZALV	Zalesovo Beam	45.93	47	P	P	17 52 17.0	-0.9
WMQ	Urumqi	49.63	60	eP	P	17 52 48.3	+1.5
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,88nm,3.7s						
WMQ				LR	LR		
	comp=Z,530nm,28.9s						

WMQ				LR	LR		
	comp=Z,960nm,29.1s						
DANN	Dangsing	52.19	80	eP	P	17 53 07.0	+0.4
	comp=Z,45nm,0.8s						
GKN	Gorkha	53.04	80	eP	P	17 53 12.4	-0.3
	comp=Z,19nm,0.7s						
DMN	Daman	53.59	80	eP	P	17 53 16.9	0.0
	comp=Z,22nm,0.8s						
KKN	Kakani	53.65	80	eP	P	17 53 17.2	-0.1
	comp=Z,8.8nm,0.6s						
PKIN	Phulchoki	53.83	80	eP	P	17 53 18.2	-0.5
	comp=Z,14nm,1.2s						
PKI	Pulchoki	53.85	80	eP	P	17 53 18.6	-0.3
	comp=Z,15nm,1.0s						
GUN	Gumba	54.06	80	eP	P	17 53 20.7	+0.2
	comp=Z,14nm,0.9s						
JIRN	Jiri	54.42	80	eP	P	17 53 22.9	-0.2
RAMN	Ramite	55.07	80	eP	P	17 53 27.1	-0.6
	comp=Z,17nm,0.9s						
ODAN	Odare	55.74	80	eP	P	17 53 32.3	-0.2
	comp=Z,4.4nm,0.5s						
TAPN	Taplejung	55.76	79	eP	P	17 53 32.5	-0.2
	comp=Z,14nm,0.9s						
LSA	Lhasa	57.39	75	P	P	17 53 44.2	-0.3
LSA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LSA	Lhasa	57.39	75	P	P	17 53 44.1	-0.3
LSA				IAmb	IAmb	17 53 45.9	
	comp=Z,3.5nm,0.7s						
TLY	Talaya	57.54	47	⇓eP	P	17 53 45.7	+1.0
TLY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TLY	Talaya	57.54	47	P	P	17 53 43.3	-1.3
ZAK	Zakamensk	57.77	48	eP	P	17 53 46.0	-0.4
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KAAM	Kaadhehdhoo	59.56	115	P	P	17 53 59.0	-0.2
GTA	Gaotai	59.66	61	eP	P	17 53 59.7	-0.1
GTA				pP	pP	17 54 04.1	-2.1
GTA				sP	sP	17 54 06.8	-1.7
GTA				pmax	pmax		
	comp=Z,120nm,5.2s						
GTA				LR	LR		
	comp=Z,110nm,15.9s						
GTA				LR	LR		
	comp=Z,120nm,16.5s						
GTA				LR	LR		
	comp=Z,140nm,17.5s						
SONM	Songino Array	60.61	50	P	P	17 54 06.4	+0.2
	comp=Z,1.6nm,0.6s,baz=282,slow=8.1,SNR=14						
SONM	Songino Array	60.61	50	P	P	17 54 05.8	-0.4
ULN	Ulaanbaatar	61.01	50	P	P	17 54 08.2	-0.7
ULN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ULN	Ulaanbaatar	61.01	50	P	P	17 54 08.2	-0.7
ULN				IAmb	IAmb	17 54 09.7	
	comp=Z,3.5nm,0.7s						
LZH	Lanzhou	63.99	63	eP	P	17 54 28.3	-0.7
LZH				PP	PP	17 56 51.0	+1.4
LZH				pmax	pmax		
	comp=Z,22nm,1.2s						
LZH				pmax	pmax		
	comp=Z,89nm,4.3s						
BOSA	Boshof	65.17	177	P	P	17 54 38.6	+2.1
	comp=Z,0.9nm,0.4s,baz=335,slow=11,SNR=3.8						
BOSA	Boshof	65.17	177	P	P	17 54 38.4	+1.9
BOSA				IAmb	IAmb	17 54 39.1	
	comp=Z,6.7nm,1.2s						
CD2	Chengdu	66.42	68	P	P	17 54 42.7	-2.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	Hu-ho-hao-te	67.05	55	eP	P	17 54 47.9	-0.7
HHC				pmax	pmax		
	comp=Z,55nm,1.1s						
HHC				pmax	pmax		
	comp=Z,230nm,6.3s						
XAN	Xi'an	68.62	63	P	P	17 54 58.1	-0.5
XAN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
XAN	Xi'an	68.62	63	P	P	17 54 58.1	-0.5
XAN				IAmb	IAmb	17 55 00.3	
	comp=Z,3.9nm,0.7s						
CM31	Chiang Mai Arr	69.17	82	P	P	17 55 01.8	-0.3
CM31				IAmb	IAmb	17 55 02.6	
	comp=Z,2.0nm,0.8s						
CMAR	Chiang Mai Arr	69.17	82	P	P	17 55 02.4	+0.2
	comp=Z,1.0nm,0.8s,baz=304,slow=7.0,SNR=10						
CMAR	Chiang Mai Arr	69.17	82	P	P	17 55 01.3	-0.8
ENH	Enshi	70.99	66	P	P	17 55 12.9	-0.3
ENH				IAmb	IAmb	17 55 14.5	
	comp=Z,7.7nm,1.1s						
INK	Inuvik	73.56	351	P	P	17 55 28.4	+0.7
	comp=Z,0.9nm,0.5s,baz=353,slow=9.1,SNR=3.8						
INK	Inuvik	73.56	351	P	P	17 55 28.5	+0.7
KLR	Kul'dur	74.33	40	deP	P	17 55 33.2	+0.5
KLR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YKA	Yellowknife Ar	74.98	341	P	P	17 55 37.3	+1.2
	comp=Z,0.6nm,0.7s,baz=35,slow=5.3,SNR=9.3						
NJ2	Nanjing	76.70	60	eP	P	17 55 45.8	-0.8
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
ULM	Lac du Bonnet	77.34	324	P	P	17 55 51.2	+1.4
	comp=Z,1.4nm,0.6s,baz=146,slow=4.6,SNR=4.2						
ULM	Lac du Bonnet	77.34	324	P	P	17 55 51.5	+1.6
ULM				IAmb	IAmb	17 56 16.6	
	comp=Z,10nm,1.6s						
USRK	Ussuriysk Ar.	77.63	44	P	P	17 55 51.9	+0.3
	comp=Z,4.0nm,0.6s,baz=300,slow=4.0,SNR=8.4						
USRK	Ussuriysk Ar.	77.63	44	P	P	17 55 51.3	-0.3
ILAR	Eielson Array	78.34	355	P	P	17 55 56.7	+1.5
	comp=Z,0.3nm,0.6s,baz=346,slow=2.6,SNR=4.7						
KSAR	Wonju Array Be	79.46	51	P	P	17 56 01.5	-0.3
KSAR	Wonju Array Be	79.46	51	P	P	17 56 01.5	-0.3
KSRS	Korea Array	79.48	51	P	P	17 56 02.4	+0.5
	comp=Z,4.0nm,0.7s,baz=311,slow=4.6,SNR=14						
EGMT	Eagleton	85.08	330	P	P	17 56 28.8	-2.3
N23A	Red Feather La	88.98	323	P	P	17 56 48.0	-2.4
WRA	Warramunga Arr	119.55	94	PKP	PKPdf	18 02 45.2	-0.3
	comp=Z,0.5nm,0.8s,baz=332,slow=1.8,SNR=5.1						
ASAR	Alice Springs	121.10	98	PKP	PKiKP	18 02 49.0	+0.5
	comp=Z,0.5nm,0.6s,baz=310,slow=1.7,SNR=12						
ASAR	Alice Springs	121.10	98	PKIKP	PKiKP	18 02 48.9	+0.5
ASAR	Alice Springs	121.10	98		PKiKP	18 02 48.9	+0.5

IDC 07 17:46:17.5±2.9, 22°.49N×12°.58W, h0^{km}, mb3.6/1, mb1 3.8/3, mb1mx3.3/45, mbtmp3.7/3, ML3.4/2, Error ellipse: s-maj=75.1km s-min=35.2km az=75.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	16.45	122	Pn	Pn	17 50 10.1	+0.2
	0.1nm,0.3s,baz=307,slow=10,SNR=3.6						
TORD				Sn	Sn	17 53 14.9	+1.7
	0.1nm,0.3s,baz=299,slow=23,SNR=3.1						
DBIC	Dimbokro	17.40	153	P	Pn	17 50 19.9	-1.9
	0.2nm,0.3s,baz=326,slow=18,SNR=2.6						
I48TN	KESRA INFRASON	23.21	50	i		20 11 20.0	
	baz=244,slow=311,SNR=1.4						
GERES	GERESS Array B	33.56	32	P	P	17 52 58.3	-0.9
	0.2nm,0.4s,baz=230,slow=8.3,SNR=4.5						
ASAR	Alice Springs	149.18	99	PKPbc	PKPbc	18 06 09.3	+0.6
	0.2nm,0.5s,baz=286,slow=2.7,SNR=5.0						

IDC 07 17:54:17.1±2.9, 9°.25N×93°.48E, h0^{km}, mb3.2/2, mb1 3.4/3, mb1mx3.1/42, mbtmp3.2/3, ML3.5/1, Error ellipse: s-maj=83.5km s-min=35.5km az=66.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.58	30	Pn	Pn	17 56 50.5	+0.4
	0.1nm,0.3s,baz=219,slow=16,SNR=5.1						
MKAR	Makanchi Array	38.61	348	P	P	18 01 41.6	-0.4
	0.1nm,0.4s,baz=171,slow=8.7,SNR=1.9						
WRA	Warramunga Arr	49.59	126	P	P	18 03 10.5	0.0
	0.5nm,0.9s,baz=306,slow=8.5,SNR=2.3						

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*ANF **07** 17:58:30.8±0.1, 35°.95N×117°.31W, h11^{km}±1^{km}, ML3.2/31, Error ellipse: s-maj=1.1km s-min=1.0km az=108.0*

*SCEDC **07** 17:58:31.6, 35°.95N×117°.30W, h6^{km}*

*PAS **07** 17:58:31.5±1.5, 35°.95N±0°.01×117°.303W±0°.008, h7^{km}±4^{km}, ML3.1/136, Error ellipse: s-maj=1.6km s-min=0.8km az=159.0*

*NEIC **07** 17:58:31.0±1.7, 35°.95N±0°.01×117°.30W±0°.01, h3^{km}±3^{km}, Error ellipse: s-maj=1.7km s-min=1.6km az=107.0*

ISC 07 17:58:31.2±0.9, 35°.96N±0°.01×117°.30W±0°.01, h11^{km}±7^{km}, n127, σ0^{s}.93/170, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MPMC	Manual Prospec	0.18	303		Pg	17 58 35.1	-0.2
MPMC					Sg	17 58 37.9	-0.3
MPMC	Manual Prospec	0.18	303	P	Pg	17 58 34.8	-0.6
	baz=125,SNR=1000						
MPMC				S	Sg	17 58 37.9	-0.3
	baz=125						
CLC	China Lake	0.28	240		Pg	17 58 36.6	-0.3
CLC					Sg	17 58 40.5	-0.2
QSM	Queen of Sheba	0.35	89		Pg	17 58 38.1	-0.1
WCSM	Coso Springs S	0.38	280		Pg	17 58 38.7	-0.2
TOW	Tower One	0.40	249		Pg	17 58 39.5	+0.2
JRC2	Joshua Ridge	0.41	274		Pg	17 58 39.2	-0.2
VPEM	Volcano Peak E	0.42	269		Pg	17 58 39.5	-0.1
CCCA	Chr Cany lake	0.43	187		Pg	17 58 39.9	+0.1
CCCA					Sg	17 58 46.3	+0.7
SRTC	Snort	0.45	234		Pg	17 58 40.2	+0.1
MFS	McCloud Flat S	0.48	290		Pg	17 58 40.4	-0.2
LRMC	Laurel Mtn Rad	0.57	213		Pg	17 58 41.9	-0.4
LRMC					Sg	17 58 49.5	-0.4
LRMC	Laurel Mtn Rad	0.57	213	P	Pg	17 58 41.9	-0.4
	baz=33,SNR=59						
LRMC				S	Sg	17 58 49.7	-0.2
	baz=33						
FURC	Furnace Creek,	0.62	35		Pg	17 58 43.6	+0.3
FURC					Sg	17 58 51.9	+0.5
FURC	Furnace Creek,	0.62	35	P	Pg	17 58 43.4	+0.2
	baz=214,SNR=120						
FURC				S	Sg	17 58 52.3	+0.9
	baz=214						
WCHM	Chimney Peak	0.63	263		Pg	17 58 43.1	-0.4
JFS	Joseph F. Stat	0.68	207		Pg	17 58 43.8	-0.6
JFS					Sg	17 58 52.9	-0.4
CGO	Cerro Gordo	0.72	326		Pg	17 58 44.7	-0.5
CGO					Sg	17 58 54.8	+0.1
GSC	Goldstone, Bar	0.77	148		Pg	17 58 45.7	-0.4
GSC	Goldstone, Bar	0.77	148		Sg	17 58 56.1	-0.1
GSC	Goldstone, Bar	0.77	148	P	Pg	17 58 45.7	-0.4
	baz=328,SNR=69						
GSC				S	Sg	17 58 56.1	-0.1
	baz=328						
CWC	Cottonwood Cre	0.79	308		Pg	17 58 46.1	-0.5
CWC	Cottonwood Cre	0.79	308	P	Pg	17 58 46.3	-0.3
	baz=128						
CWC				S	Sg	17 58 57.1	+0.2
	baz=128						
FMT	Funeral Mounta	0.80	32		Pg	17 58 46.3	-0.3
FMT					Sg	17 58 56.9	-0.2
WBSM	Bird Springs	0.80	239		Pg	17 58 46.1	-0.6
WBSM					Sg	17 58 56.9	-0.4
WORM	Onyx Ranch	0.81	251		Pg	17 58 46.2	-0.6
WORM					Sg	17 58 56.7	-0.7
DTP	Desert Tortois	0.82	213		Pg	17 58 46.3	-0.8
SHOC	Shoshone, Teco	0.83	94		Pg	17 58 47.0	-0.3
SHOC					Sg	17 58 58.3	+0.1
SHOC	Shoshone, Teco	0.83	94	P	Pg	17 58 47.6	+0.2
	baz=274,SNR=20						
SHOC				S	Sg	17 58 58.4	+0.2
	baz=274						
TMO	Tin Mountain	0.85	354		Pg	17 58 47.4	-0.3
WHFM	Hanning Flat	0.89	253		Pg	17 58 47.8	-0.6
AMDNV	Amargosa	0.96	59		Pg	17 58 49.3	-0.4
ISA	Isabella, Lake	1.00	253		Pg	17 58 49.8	-0.7
ISA	Isabella, Lake	1.00	253		Sg	17 59 02.7	-0.7
ISA	Isabella, Lake	1.00	253	P	Pg	17 58 49.8	-0.7
	baz=73,SNR=304						
ISA				S	Sg	17 59 03.4	0.0
	baz=73						
GRAC	Grapevine Rang	1.04	357	P	Pg	17 58 50.9	-0.3
	baz=177,SNR=73						
GVN	Grapevine	1.04	358		Pg	17 58 50.9	-0.4
WASM	Alta Sierra Ca	1.04	258		Pg	17 58 50.8	-0.6
RRX	Edison Barstow	1.11	167		Pb	17 58 52.9	+0.4
RRX					Sb	17 59 07.9	+1.0
RRX	Edison Barstow	1.11	167	P	Pb	17 58 52.9	+0.4
	baz=347,SNR=6.9						
RRX				S	Sb	17 59 08.0	+1.1
	baz=347						
HYS	Haystack Butte	1.11	191		Pg	17 58 51.7	-0.9
EDW2	Edwards Air Fo	1.21	208		Pg	17 58 53.2	-1.3
EDW2					Sg	17 59 09.3	-1.0
EDW2	Edwards Air Fo	1.21	208	P	Pg	17 58 53.3	-1.3
	baz=28,SNR=37						
EDW2				S	Sg	17 59 09.5	-0.9
	baz=28						
WOFM	Oak Flat	1.22	250		Pg	17 58 53.7	-1.1
WOFM					Sg	17 59 09.5	-1.2
TUQ	Turquoise Moun	1.24	115		Sn	17 59 11.8	+0.4
TUQ	Turquoise Moun	1.24	115	P	Pg	17 58 54.3	-0.7
	baz=295						
TUQ				S	Sg	17 59 11.2	+0.1
	baz=295						
DSCC	Desert Studies	1.27	129		Pn	17 58 54.7	-0.3
DSCC					Sb	17 59 11.7	+0.1
TPNV	Topopah Spring	1.30	40		Pn	17 58 55.2	-0.4
TPNV	Topopah Spring	1.30	40	P	Pn	17 58 55.2	-0.4
	baz=220,SNR=153						
TPNV				S	Sb	17 59 12.8	+0.1
	baz=220						
TIN	Tinemaha, Big	1.33	326	S	Sb	17 59 14.0	+0.7
	baz=146						
SBB	Saddle Back Bu	1.34	199		Pn	17 58 55.1	-0.9
SBB					Sb	17 59 14.0	+0.4
HEC	Hector,Ludlow	1.38	145		Pn	17 58 56.8	+0.2
HEC					Sg	17 59 15.9	+0.4
HEC	Hector,Ludlow	1.38	145	Pn	Pn	17 58 55.7	-0.8
	baz=325,SNR=68						
HEC				Pb	Pn	17 58 56.7	+0.2
	baz=325						
HEC				S	Sn	17 59 15.4	+0.7
	baz=325						
VES	Vestal, Richgr	1.45	266	Pg	Pb	17 58 58.7	+0.3
	baz=85,SNR=14						
ARVC	Arvin	1.50	237	Pb	Pn	17 58 58.4	+0.3
	baz=56,SNR=8.3						
ARVC				S	Sn	17 59 18.2	+0.5
	baz=56						
THC	Tehachapi Micr	1.53	227		Pn	17 58 59.8	+1.1
LRRC	Littlerock Res	1.55	203		Pg	17 59 00.8	-0.1
BTL	Butler Peak	1.71	172		Pb	17 59 02.8	-0.1
BBRC	Big Bear Solar	1.72	169	Pg	Pb	17 59 03.9	+0.9
	baz=350,SNR=6.8						
BBRC				Sb	Sg	17 59 26.2	-0.4
	baz=350						
CHFC	Chilao Flat St	1.73	200		Pb	17 59 03.6	+0.5
CHFC					Sb	17 59 25.7	+0.9
BFSC	Mount Baldy Ra	1.74	190		Sb	17 59 26.5	+1.3
BFSC	Mount Baldy Ra	1.74	190	Pb	Pb	17 59 03.2	-0.1
	baz=9.7,SNR=9.8						
BFSC				Sb	Sb	17 59 26.6	+1.3
	baz=9.7						
SSK	Sunset Peak	1.77	191		Pb	17 59 04.3	+0.4
OSI	Osito Audit: C	1.77	221		Pn	17 59 03.0	+1.0
OSI	Osito Audit: C	1.77	221	Sb	Sg	17 59 27.7	-0.6
	baz=41						
GMRC	Granite Mounta	1.78	131	P	Pn	17 59 00.8	-1.3
	baz=312,SNR=20						
GMRC				Sb	Sb	17 59 27.8	+1.4
	baz=312						
SHPR	Sheep Range	1.81	72		Pn	17 59 02.6	0.0
MWC	Mount Wilson	1.84	200		Pb	17 59 05.1	+0.1
DECC	Green Verdugo	1.90	207	Pg	Pg	17 59 07.6	0.0
	baz=26						
DECC				Sb	Sg	17 59 31.8	-0.5
	baz=26						
PASC	Pasadena Art C	1.92	202		Pb	17 59 06.6	+0.2
PASC					Sb	17 59 32.0	+1.6
MLAC	Mammoth, Mammo	2.08	324	Pg	Pb	17 59 10.3	+1.2
	baz=143						
SME	Santa Rosa Min	2.13	181		Pb	17 59 10.4	+0.5
OMMB	Old Mammoth Mi	2.14	321		Pb	17 59 10.6	+0.3
CARC	Carrizo Plain	2.17	253		Pb	17 59 11.0	+0.3
MDPB	Devils Postpil	2.20	320		Pb	17 59 11.6	+0.4
BELC	Belle Mtn. Jos	2.23	151	P	Pn	17 59 07.7	-0.5
	baz=332						
BELC				Sb	Sg	17 59 42.0	-0.8
	baz=332						
SMMC	Simmler	2.29	254	Pb	Pb	17 59 12.3	-0.2
	baz=73,SNR=5.7						
BLG	Laguna Peak, P	2.35	219	Sb	Sb	17 59 44.6	+2.1
	baz=38						
MURC	Murrieta	2.35	178	Pb	Pb	17 59 14.5	+0.8
	baz=358,SNR=9.0						
MURC				Sb	Sg	17 59 45.2	-1.7
	baz=358						
PAGB	Antelope Grade	2.41	265		Pb	17 59 13.5	-1.2
PFO	Pinyon Flats O	2.44	163		Pn	17 59 12.9	+1.7
PFO	Pinyon Flats O	2.44	163	P	Pn	17 59 10.7	-0.5
	baz=344,SNR=5.4						
XPFO	Pion Flat	2.44	163		Pn	17 59 12.8	+1.5
MMIM	Miami Mountain	2.45	307		Pb	17 59 15.6	+0.3
NEE2	Needles Airpor	2.49	118	Sb	Sg	17 59 49.9	-1.4
	baz=299						
IRM	Iron Mountain	2.52	135	Sb	Sb	17 59 50.3	+2.7
	baz=316						
NV11	Mina Array Sit	2.56	345		Pn	17 59 13.0	+0.1
NVAR	Mina Array Bea	2.59	342		Pn	17 59 13.2	-0.2
SCZ2	Santa Cruz Isl	2.74	225		Pn	17 59 15.4	+0.2
R11A	Troy Canyon, C	2.75	29		Pb	17 59 19.9	-0.7
R11A	Troy Canyon, C	2.75	29	Pb	Pb	17 59 21.2	+0.6
	baz=210,SNR=35						
R11A				Sb	Sb	17 59 57.2	+2.7
	baz=210						
RYN	Ryan	2.84	340		Pn	17 59 16.2	-0.5
PMPB	Monarch Peak	2.85	276		Pn	17 59 18.5	+1.7
W13A	Hualapai Mount	2.91	106		Pn	17 59 17.7	-0.1
DPP	Dos Picos Cty	2.97	174		Pb	17 59 22.7	-1.4
MONP2	Monument Peak	3.14	166	Pg	Pb	17 59 29.3	+2.0
	baz=347						
MONP2				Sb	Sg	18 00 09.6	-2.7
	baz=347						
KVN	Kaiserville	3.15	349		Pn	17 59 21.5	+0.4
Y12C	Blythe	3.17	133	Pn	Pn	17 59 21.3	+0.2
CMB	Columbia Colle	3.23	311		Pn	17 59 22.9	+1.0
BAR	Barrett	3.31	171		Pn	17 59 23.8	+0.7
YERR	Yerington	3.39	334		Pn	17 59 25.5	+1.1
GLA	Glamis	3.55	144	Pn	Pn	17 59 25.8	-0.5
PNTR	Pine Nut	3.62	330		Pn	17 59 26.7	-0.8
PSUT	Pine Spring	3.76	46	Pn	Pn	17 59 30.8	+1.3
PSUT					Pg	17 59 41.4	-2.0
RUBR	Rubicon Trail	3.83	325	Pn	Pn	17 59 31.2	+0.8
Y14A	Wickenburg	4.06	118		Pn	17 59 34.4	+1.0
U15A	North Rim	4.08	82		Pn	17 59 33.3	-0.6
PAHR	Pah Rah Range	4.09	337	Pn	Pn	17 59 34.3	+0.4
AFDM	Forest Hills D	4.18	317		Pn	17 59 34.2	-0.7
PKCU	Pink Cliffs	4.28	68	Pn	Pn	17 59 35.0	-1.6
113A	Mohawk Valley,	4.32	136	Pn	Pn	17 59 37.2	+0.3
BEKR	Beckworth	4.59	329		Pn	17 59 41.0	+0.2
BEKR					Sn	18 00 32.8	-1.4
MTPU	Mount Pierson	4.59	62	Pn	Pn	17 59 39.9	-1.1
TCRU	Three Creeks R	4.69	54	Pn	Pn	17 59 41.4	-0.8
TCRU					LR	18 01 00.5	
MSU	Marysvale	4.82	57		Pn	17 59 43.7	-0.2
WUAZ	Wupatki	4.84	93		Pn	17 59 42.7	-1.5
ORV	Oroville	4.89	318	Pn	Pn	17 59 42.8	-2.0
MCCM	Marconi Confer	4.97	298	Pn	Pn	17 59 43.8	-1.9
X16A	Lo Mia Camp, P	5.04	106	Pn	Pn	17 59 44.9	-2.1
ELK	Elko	5.05	18		Pn	17 59 48.0	+0.9
214A	Organ Pipe Nat	5.46	136	Pn	Pn	17 59 51.4	-1.3
DUG	Dugway, Tooele	5.51	39		Pn	17 59 51.9	-1.6
NLU	North Lily Min	5.74	44	Pn	Pn	17 59 54.8	-1.8
BGU	Big Grassy Mou	5.99	33	Pn	Pn	17 59 59.1	-0.8
MPU	Maple Canyon	6.04	46	Pn	Pn	17 59 59.3	-1.4
X18A	Snowflake	6.18	101	Pn	Pn	18 00 00.6	-2.1
KCPM	Cahto Peak	6.21	309	Pn	Pn	18 00 01.8	-1.2

KRSC 07 17:58:31.2±1.3, 55°.31N×166°.83E, h27^{km}±11^{km}, ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BKI	Bering	0.50	259	eP	Pn	17 58 42.8	+0.2
BKI				eS	Sb	17 58 48.9	+0.4
KBTR	Krutoberegovo	2.44	293	eP	Pn	17 59 10.3	+1.0
KBG	Krutoberegovo	2.52	294	eP	Pn	17 59 12.0	+1.7
ZLN	Zelenaya	3.49	284	eP	Pn	17 59 27.5	+3.8
ZLN				eS	Sn	18 00 08.3	+4.2
CIRR	Tsirk	3.54	286	eP	Pn	17 59 28.2	+3.8
CIRR				eS	Sn	18 00 09.4	+4.0
LGNR	Loginova	3.56	285	eS	Sn	18 00 09.9	+3.7
KLY	Klyuchi	3.63	289	eP	Pn	17 59 27.8	+2.2
KRSR	Krestovskiy	3.66	287	eP	Pn	17 59 29.3	+3.3
KRSR				eS	Sn	18 00 12.0	+3.7
TUMD	Tumrok D	3.68	271	eP	Pn	17 59 30.1	+3.8
TUMD				eS	Sn	18 00 13.6	+4.8
KZV	Kizimen	3.75	270	eP	Pn	17 59 31.0	+3.6
KZV				eS	Sn	18 00 14.7	+4.0
KMNR	Kamenistaya	3.77	280	eP	Pb	17 59 32.8	-4.3
KMNR				eS	Sb	18 00 17.5	-4.9
TUMR	Tumrok	3.82	272	eP	Pn	17 59 32.4	+4.1
SRDR	Sredinnyy	4.14	287	eP	Pn	17 59 36.6	+4.0
OSSR	Ossora	4.45	334	eP	Pn	17 59 42.4	+5.6
SDLR	Sedlovina	5.08	250	eP	Pn	17 59 49.9	+4.3
AVH	Avacha	5.16	250	eP	Pn	17 59 51.7	+5.0

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*IDC **07** 18:08:17.7±2.1, 21°.54S×179°.64W, h0^{km}, mb4.1/4, mb1 4.4/4, mb1mx3.8/27, mbtmp4.1/4, MS4.0/2, Ms1 4.0/2, ms1mx3.1/32, Error ellipse: s-maj=163.1km s-min=32.9km az=159.0*

*NEIC **07** 18:09:09.4±1.7, 23°.1S±0°.1×179°.6W±0°.1, h556^{km}±14^{km}, mb4.5/21, Error ellipse: s-maj=21.3km s-min=17.4km az=179.0*

ISC 07 18:09:14.2±1.0, 23°.1S±0°.1×180°.0E±0°.2, h600^{km}, n31, σ2^{s}.14/28, mb4.4/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.64	341	P	P	18 10 49.9	-2.7
URZ	Urewera	15.30	189	LR	LR	18 17 11.4	
	comp=Z,246nm,19.9s,baz=62,slow=32						
QRZ	Quartz Range	18.74	198		P	18 12 52.9	-3.4
THZ	Tophouse	19.52	196	P	P	18 12 59.7	-3.6
THZ				IAmb	IAmb	18 13 21.6	
	comp=Z,24nm,1.5s						
LTZ	Lake Taylor	20.63	196	P	P	18 13 09.1	-4.4
ARMA	Armidale	26.28	248	P	P	18 14 05.3	+1.5
ARMA				IAmb	IAmb	18 14 08.3	
	comp=Z,13nm,1.4s						
EIDS	Eidsvold	26.41	259	P	P	18 14 07.1	+2.2
EIDS				IAmb	IAmb	18 14 08.4	
	comp=Z,26nm,1.3s						
RABL	Rabaul	32.80	301	P	P	18 14 58.0	-1.9
TOO	Toolangi	32.86	236	P	P	18 15 00.4	+0.3
TOO				IAmb	IAmb	18 15 18.4	
	comp=Z,25nm,1.4s						
STKA	Stephens Creek	34.99	247	P	P	18 15 18.4	+0.4
	comp=Z,1.2nm,0.5s,baz=73,slow=11,SNR=4.3						
STKA	Stephens Creek	34.99	247	P	P	18 15 18.1	+0.1
BBOO	Buckleboo	39.73	246	P	P	18 15 56.6	+0.1
AS31	Alice Springs	42.14	260	P	P	18 16 17.5	+1.8
ASAR	Alice Springs	42.14	260	P	P	18 16 17.4	+1.7
	comp=Z,2.9nm,0.7s,baz=97,slow=7.2,SNR=51						
ASAR	Alice Springs	42.14	260	P	P	18 16 17.3	+1.6
WR0	Warramunga Arr	42.25	265	P	P	18 16 18.0	+1.5
WR0				IAmb	IAmb	18 16 38.1	
	comp=Z,11nm,1.5s						
WB0	Warramunga Arr	42.42	266	P	P	18 16 19.3	+1.4
WB0				IAmb	IAmb	18 16 21.1	
	comp=Z,22nm,1.6s						
WB2	Warramunga Arr	42.42	265	P	P	18 16 19.4	+1.4
WRAB	Tennant Creek	42.43	265	P	P	18 16 19.5	+1.6
WRA	Warramunga Arr	42.44	265	P	P	18 16 19.7	+1.7
	comp=Z,2.3nm,0.5s,baz=91,slow=8.3,SNR=49						
WRA	Warramunga Arr	42.44	265	P	P	18 16 19.6	+1.6
MTN	Manton Dam	47.37	274	P	P	18 16 57.2	+1.5
MTN				IAmb	IAmb	18 17 02.8	
	comp=Z,27nm,1.4s						
KNRA	Kununurra	48.66	269	P	P	18 17 08.0	+2.7
KNRA				IAmb	IAmb	18 17 12.1	
	comp=Z,21nm,1.5s						
FITZ	Fitzroy Crossi	50.86	265	P	P	18 17 24.3	+3.0
NWAO	Narrogin (SRO)	55.54	245	P	P	18 17 54.8	+0.6
NWAO				IAmb	IAmb	18 18 17.5	
	comp=Z,39nm,1.2s						
NWAO	Narrogin (SRO)	55.54	245	P	P	18 17 55.0	+0.8

NWAO				IAmb	IAmb	18 18 17.5	
	comp=Z,32nm,1.2s						
JCJ	**Chichijima**	**61.84**	**322**	LR	LR	18 41 28.3	
	comp=Z,251nm,19.7s,baz=18,slow=33						
QSPA	**South Pole Qui**	**66.97**	**180**	P	**P**	**18 19 08.8**	**+0.6**
JHJ2	**Mitsune**	**67.76**	**324**	P	**P**	**18 19 12.6**	**-0.7**
TXAR	**Lajitas Array**	**90.04**	**58**	P	**P**	**18 21 14.4**	**+3.0**
	comp=Z,0.3nm,0.7s,baz=222,slow=5.0,SNR=4.1						
HFS	**Hagfors**	**141.77**	**349**	PKhKP	PKPpre	18 27 38.1	
	comp=Z,10nm,1.1s,baz=90,slow=4.4,SNR=7.6						

NIED ***07*** *18:34:00, 35°.70N×140°.80E, h47^{km}, Mw4.8 Best double couple: $M_0$1.81000×10^{16} NP1:ϕ_s13.00000°, δ70.00000°, λ101.00000°. NP2:ϕ_s164.00000°, δ23.00000°, λ63.00000°.*

NEIC ***07*** *18:34:20.9±1.7, 35°.61N±0°.04×140°.55E±0°.08, h24^{km}±4^{km}, mb4.8/117, Error ellipse: s-maj=9.4km s-min=4.9km az=99.0*

MOS ***07*** *18:34:21.4±1.0, 35°.73N×140°.57E, h38^{km}, mb4.9/17, MS4.1/4, Error ellipse: s-maj=8.0km s-min=5.3km az=102.5*

JMA ***07*** *18:34:23.2±0.1, 35°.74N×140°.68E, h51^{km}±2^{km}, M4.5 Broadband fault plane solution: P waves. NP1: ϕ_s170.00000°, δ7.00000°, λ74.00000°. NP2:ϕ_s6.00000°, δ83.00000°, λ92.00000°. Principal axes: T Plg52.0000°, Azm278.0000°; N Plg2.0000°, Azm186.0000°; P Plg38.0000°, Azm94.0000°;*

JMA Felt II J1.

IDC ***07*** *18:34:24.8±1.6, 35°.69N×140°.62E, h54^{km}±15^{km}, mb4.1/32, mb1 4.2/36, mb1mx4.1/54, mbtmp4.4/36, ML3.2/3, MS3.9/32, Ms1 3.9/32, ms1mx3.7/65 Error ellipse: s-maj=13.1km s-min=8.4km az=83.0*

GCMT ***07*** *18:34:26.9±0.4, 35°.75N±0°.02×140°.74E±0°.03, h43^{km}, MW4.9/65, Moment Tensor Solution. s35,c38; s65,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.51±.15; $M_{\theta\theta}$-0.28±.10; $M_{\phi\phi}$-2.23±.08; $M_{r\theta}$0.07±.07; $M_{\theta\phi}$-0.13±.06; $M_{\phi r}$1.07±.06; Best double couple: $M_0$2.60500×10^{16} NP1:ϕ_s184.00000°, δ33.00000°, λ90.00000°. NP2: ϕ_s4.00000°, δ57.00000°, λ90.00000°. Principal axes: T 2.7410, Plg78.0000°, Azm273.0000°; N -0.2750, Plg0.0000°, Azm4.0000°; P -2.4690, Plg12.0000°, Azm94.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 18:34:23.0±0.6**, 35°.71N**±0°.03×**140°.67E**±0°.03**, h43**^{km}±5^{km}**, n344,** σ**1^{s}55**/351**, mb4.6**/114**, MS4.0**/40**, 8C-9D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.16**	**93**	⇑P	**Pn**	**18 34 31.3**	**+1.0**
CHOJ				S	**Sn**	**18 34 37.6**	**+2.2**
JSMT	**Sammumatsuo**	**0.19**	**249**	⇓P	**Pn**	**18 34 32.1**	**+1.6**
JSMT				S	**Sn**	**18 34 38.9**	**+3.1**
JIHU	**Itakohorinouch**	**0.28**	**336**	⇓P	**Pn**	**18 34 32.6**	**+1.3**
JIHU				S	**Sn**	**18 34 38.8**	**+1.7**
JCN	**Nagara**	**0.48**	**233**	⇓P	**Pn**	**18 34 35.4**	**+1.8**
JCN				S	**Sn**	**18 34 44.4**	**+3.4**
JYT	**Yasato**	**0.64**	**324**	⇓P	**Pn**	**18 34 36.0**	**+0.2**
JYT				S	**Sn**	**18 34 45.5**	**+0.6**
BSO4	**Boso 4**	**0.77**	**201**	P	**Pn**	**18 34 38.8**	**+1.4**
JHO	**Hitachi**	**0.90**	**355**	⇓P	**Pn**	**18 34 39.7**	**+0.4**
BSO3	**Boso 3**	**0.92**	**188**	P	**Pn**	**18 34 40.6**	**+1.4**
BSO1	**Boso 1**	**1.08**	**166**	P	**Pn**	**18 34 42.7**	**+1.4**
JAG	**Ashikaga**	**1.21**	**306**	⇓P	**Pn**	**18 34 43.8**	**+0.3**
JOD2	**Odawara 2**	**1.36**	**251**	⇓P	**Pn**	**18 34 46.6**	**+1.0**
JOD2				S	**Sn**	**18 35 03.4**	**+0.9**
MJAR	**Matsushiro Arr**	**2.15**	**293**	P	**Pn**	**18 34 58.1**	**+1.6**
	15nm,0.3s,baz=98,slow=14,SNR=419						
MJAR				S	**Sn**	**18 35 26.2**	**+4.2**
	7.1nm,0.3s,baz=290,slow=29,SNR=4.4						
MJAR	**Matsushiro Arr**	**2.15**	**293**		**Pn**	**18 34 57.6**	**+1.1**
MAJO	**Matsushiro**	**2.16**	**293**	*d i*P	**Pn**	**18 34 58.4**	**+1.9**
MAJO	**Matsushiro**	**2.16**	**293**		**Pn**	**18 34 58.0**	**+1.5**
MAT	**Matsushiro**	**2.16**	**293**	P	**Pn**	**18 34 57.9**	**+1.4**
MAT				S	**Sn**	**18 35 21.9**	**-0.1**
MJB9	**Matsu-Tunnel**	**2.16**	**293**		**Pn**	**18 34 58.2**	**+1.7**
JHJ	**Hachijo jima 2**	**2.69**	**196**	P	**Pn**	**18 35 04.1**	**+0.3**
	208nm,0.3s,baz=330,slow=22,SNR=14						
JHJ				S	**Sn**	**18 35 37.1**	**+2.0**
	198nm,0.3s,baz=233,slow=24,SNR=7.4						
JHJ2	**Mitsune**	**2.69**	**195**		**Pn**	**18 35 04.2**	**+0.4**
INU	**Inuyama**	**3.00**	**264**		**Pn**	**18 35 09.8**	**+1.8**
ERM	**Erimo**	**6.59**	**16**	P	**Pn**	**18 35 58.1**	**+0.8**
ERM						18 37 11.2	
ERM	**Erimo**	**6.59**	**16**	Pn	**Pn**	**18 35 58.1**	**+0.8**
ERM					**Sn**	**18 37 11.2**	**+0.1**
JNU	**Nakatsue**	**8.49**	**255**	P	**Pn**	**18 36 24.4**	**+1.0**
	0.3nm,0.3s,baz=65,slow=10,SNR=3.9						
JNU				LR	LR	18 40 03.5	
	comp=Z,2μm,19.2s,baz=80,slow=40						
JNU	**Nakatsue**	**8.49**	**255**	Pn	**Pn**	**18 36 20.4**	**-3.1**
ASAJ	**Asahikawa**	**8.53**	**9**	P	**Pn**	**18 36 22.8**	**-1.0**
	2.5nm,0.3s,baz=186,slow=33,SNR=12						
ASAJ				S	**Sn**	**18 37 55.1**	**-3.5**
	1.0nm,0.3s,baz=236,slow=33,SNR=1.5						
ASAJ				LR	LR	18 40 31.5	
	comp=Z,346nm,20.8s,baz=74,slow=43						
JKA	**Kamikawa-asahi**	**8.53**	**9**		**Pn**	**18 36 22.8**	**-1.0**
JKA					**Sn**	**18 37 55.1**	**-3.5**
NMR	**Nemuro--Hokkai**	**8.59**	**26**	*e*P	**Pn**	**18 36 21.9**	**-2.8**
JCJ	**Chichijima**	**8.69**	**171**	P	**Pn**	**18 36 24.6**	**-1.5**
	39nm,0.3s,baz=91,slow=23,SNR=13						
JCJ				S	**Sn**	**18 37 56.0**	**-6.7**
	11nm,0.3s,baz=290,slow=22,SNR=1.3						
GRPR	**Tuman**	**9.15**	**24**	*e*P	**Pn**	**18 36 31.0**	**-1.4**
GRPR				pmax	pmax		
	comp=Z,129nm,0.4s						
GRPR				pmax	pmax		
	comp=E,65nm,0.3s						
GRPR				pmax	pmax		
	comp=N,122nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**9.22**	**24**	*e*P	**Pn**	**18 36 31.8**	**-1.5**
YUK				pmax	pmax		
	comp=Z,121μm,0.5s						
YUK				pmax	pmax		
	comp=E,63μm,0.4s						
YUK				pmax	pmax		
	comp=Z,295nm,1.1s						
SHO	**Shikotan**	**9.43**	**28**	*e*P	**Pn**	**18 36 32.7**	**-3.5**
SHO				pmax	pmax		
	comp=Z,29nm,0.6s						
SHO				pmax	pmax		
	comp=N,20nm,0.3s						
SHO				pmax	pmax		
	comp=E,20nm,0.4s						
KSRS	**Korea Array**	**10.39**	**283**	P	Pn	18 36 54.4	+4.9
	comp=E,0.5nm,0.3s,baz=103,slow=14,SNR=16						
KSRS				LR	LR	18 40 56.0	
	comp=E,843nm,20.5s,baz=106,slow=38						
KSAR	**Wonju Array Be**	**10.42**	**283**	P	Pn	18 36 45.7	-4.2
KSAR	**Wonju Array Be**	**10.42**	**283**	Pn	Pn	18 36 45.7	-4.2
KS19	**Wonju Array Si**	**10.44**	**284**	Pn	**Pn**	**18 36 48.7**	**-1.5**
USRK	**Ussuriysk Ar.**	**10.77**	**325**	P	**Pn**	**18 36 56.7**	**+2.1**
	baz=143,slow=12,SNR=7.3						
USRK				LR	LR	18 40 57.5	
	comp=E,584nm,18.2s,baz=133,slow=36						
USRK	**Ussuriysk Ar.**	**10.77**	**325**		**Pn**	**18 36 54.8**	**+0.2**
USA0B	**Ussuriysk Arra**	**10.78**	**325**	*i* P	**Pn**	**18 36 58.8**	**+4.2**
USA0B	**Ussuriysk Arra**	**10.78**	**325**		**Pn**	**18 36 53.8**	**-0.8**
KUR	**Kuril'sk**	**10.97**	**28**	*e*P	**Pn**	**18 36 57.5**	**+0.2**
KUR				pmax	pmax		
	comp=Z,30nm,0.6s						
KUR				pmax	pmax		
	comp=E,24nm,1.1s						
KUR				pmax	pmax		
	comp=N,11nm,0.4s						
YSS	**Yuzh-Sakhalins**	**11.34**	**7**	*e*P	**Pn**	**18 37 02.9**	**+0.6**
YSS				*e*S	**Sn**	**18 39 05.2**	**-2.4**
YSS				pmax	pmax		
	comp=Z,50nm,0.8s						
YSS				MLR	MLR		
	comp=Z,900nm,13.0s						
YSS				MLR	MLR		
	comp=E,600nm,17.0s						
YSS	**Yuzh-Sakhalins**	**11.34**	**7**		**Pn**	**18 37 00.9**	**-1.4**
INCN	**Inchon**	**11.42**	**283**	P	**Pn**	**18 37 02.2**	**-1.3**
INCN	**Inchon**	**11.42**	**283**	Pn	**Pn**	**18 37 02.2**	**-1.3**
MDJ	**Mudanjiang**	**12.27**	**320**	P	**P**	**18 37 22.6**	**-3.9**
MDJ				pP	Pn	18 37 28.6	+14
MDJ				sP		18 37 34.3	
MDJ				S	**Sn**	**18 39 31.8**	**+1.4**
MDJ	**Mudanjiang**	**12.27**	**320**	Pn	**Pn**	**18 37 12.7**	**-2.4**
CN2	**Changchun**	**14.21**	**309**	*e*P	**Pn**	**18 37 41.6**	**+0.1**
CN2				pmax	pmax		
	comp=E,10.0nm,0.5s						
KLR	**Kul'dur**	**15.01**	**337**	P	**Pn**	**18 37 51.0**	**-1.2**
	comp=E,0.2nm,0.3s,baz=156,slow=15,SNR=4.2						
KLR				LR	LR	18 43 22.8	
	comp=E,447nm,20.2s,baz=168,slow=36						
KLR	**Kul'dur**	**15.01**	**337**	*i* P	**P**	**18 37 55.0**	**-1.9**
DL2	**Dalian**	**15.48**	**288**	P	**P**	**18 38 05.3**	**+3.2**
DL2				S	**S**	**18 41 03.9**	**+1.0**
SSE	**Sheshan**	**16.90**	**260**	P	**P**	**18 38 17.9**	**0.0**
SSE				pmax	pmax		
	comp=E,15nm,0.8s						
SSE				pmax	pmax		
	comp=E,100nm,3.2s						
SSE				LR	LR		
	comp=E,250nm,21.4s						
SSE				LR	LR		
	comp=E,270nm,15.7s						
NJ2	**Nanjing**	**18.47**	**265**	*e*P	**P**	**18 38 35.0**	**-0.2**
NJ2				pmax	pmax		
	comp=E,16nm,0.6s						
NJ2				LR	LR		
	comp=E,580nm,15.6s						
NJ2				LR	LR		
	comp=E,590nm,19.9s						
NJ2				LR	LR		
	comp=E,750nm,22.7s						
BJI	**Beijing**	**19.79**	**290**	P	**P**	**18 38 49.6**	**0.0**
BJI				S	**S**	**18 42 28.2**	**-2.0**
BJI				pmax	pmax		
	comp=E,12nm,1.3s						
BJI				LR	LR		
	comp=E,210nm,15.2s						
BJI				LR	LR		
	comp=E,170nm,18.0s						
BJI				LR	LR		
	comp=E,330nm,24.6s						
BJT	**Baijiatuau**	**19.79**	**290**	P	**P**	**18 38 45.8**	**-3.9**
BJT				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BJT	**Baijiatuau**	**19.79**	**290**	P	**P**	**18 38 45.8**	**-3.9**
YHNB	**Yeheng**	**19.94**	**242**	P	**P**	**18 38 47.9**	**-3.5**
YHNB				IAmb	IAmb	18 39 10.5	
	comp=Z,148nm,1.6s						
ZEA	**Zeya**	**20.33**	**337**	*e*P	**P**	**18 38 52.8**	**-2.5**
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
HIA	**Hailar**	**20.44**	**318**	P	**P**	**18 38 54.4**	**-2.3**
HIA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HIA	**Hailar**	**20.44**	**318**	P	**P**	**18 38 54.4**	**-2.3**
SSLB	**Suanglung**	**20.79**	**241**	P	**P**	**18 39 00.3**	**-0.3**
SSLB				IAmb	IAmb	18 39 01.3	
	comp=Z,74nm,1.7s						
YULB	**Yu-li**	**20.80**	**239**	P	**P**	**18 39 00.3**	**-0.4**
YULB				IAmb	IAmb	18 39 14.0	
	comp=Z,67nm,1.8s						
PEA0B	**Petropavlovsk-**	**21.13**	**29**	P	**P**	**18 39 04.8**	**+0.7**
PEA0B				pmax	pmax		
	comp=Z,108nm,1.3s						
PEA0B	**Petropavlovsk-**	**21.13**	**29**	P	**P**	**18 39 04.8**	**+0.7**
PETK	**Petropavlovsk-**	**21.13**	**29**	P	**P**	**18 39 04.4**	**+0.3**
	comp=Z,9.8nm,0.9s,baz=207,slow=9.3,SNR=5.2						
PETK	**Petropavlovsk-**	**21.13**	**29**	P	**P**	**18 39 02.9**	**-1.2**
TPUB	**Ta-pu**	**21.33**	**240**	P	**P**	**18 39 04.3**	**-2.1**
TPUB				IAmb	IAmb	18 39 18.2	
	comp=Z,70nm,1.5s						
TWG	**Pinlang**	**21.33**	**238**	P	**P**	**18 39 04.2**	**-2.2**
TWG				IAmb	IAmb	18 39 40.0	
	comp=Z,66nm,1.0s						
PET	**Petropavlovsk**	**21.46**	**31**	P	**P**	**18 39 06.8**	**-0.7**
PET				pmax	pmax		
	comp=Z,260nm,1.8s						
PET	**Petropavlovsk**	**21.46**	**31**	P	**P**	**18 39 06.8**	**-0.7**
GUMO	**Guam**	**22.35**	**169**	LR	LR	18 47 44.7	
	comp=Z,136nm,18.6s,baz=237,slow=36						
HHC	**Hu-ho-hao-te**	**23.36**	**291**	*e*P	**P**	**18 39 26.1**	**-1.6**
HHC				pmax	pmax		
	comp=Z,83nm,0.8s						
HHC				pmax	pmax		
	comp=Z,320nm,4.1s						
HHC				LR	LR		
	comp=Z,790nm,10.6s						
HHC				LR	LR		
	comp=Z,610nm,11.0s						
HHC				LR	LR		
	comp=Z,810nm,10.8s						
MA2	**Magadan**	**24.77**	**12**	LR	LR	18 50 11.9	
	comp=Z,170nm,21.4s,baz=228,slow=38						
MA2	**Magadan**	**24.77**	**12**	*ce*P	**P**	**18 39 41.0**	**+0.5**
MA2				pmax	pmax		
	comp=Z,27nm,1.3s						
MA2	**Magadan**	**24.77**	**12**	P	**P**	**18 39 41.2**	**+0.8**
MA2				IAmb	IAmb	18 39 43.9	
	comp=Z,14nm,0.8s						
XAN	**Xi'an**	**26.04**	**276**	P	**P**	**18 39 50.9**	**-1.4**
XAN				pmax	pmax		
	comp=Z,18nm,1.3s						
XAN	**Xi'an**	**26.04**	**276**	P	**P**	**18 39 50.9**	**-1.4**
ENH	**Enshi**	**26.64**	**267**	P	**P**	**18 39 56.4**	**-1.4**
ENH				IAmb	IAmb	18 39 57.9	
	comp=Z,48nm,1.2s						
HKPS	**Hong Kong Po S**	**26.68**	**247**	P	**P**	**18 39 56.4**	**-1.8**
YAK	**Yakutsk**	**27.24**	**349**	P	**P**	**18 40 03.3**	**+0.6**
	comp=Z,2.9nm,0.3s,baz=182,slow=5.6,SNR=11						
YAK	**Yakutsk**	**27.24**	**349**	*e*P	**P**	**18 40 02.6**	**-0.1**
YAK				pmax	pmax		
	comp=Z,24nm,1.0s						
YAK				pmax	pmax		
	comp=N,20nm,0.9s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YAK	**Yakutsk**	**27.24**	**349**	P	**P**	**18 40 02.4**	**-0.3**
YAK				IAmb	IAmb	18 40 16.0	
	comp=Z,21nm,0.9s						
ULN	**Ulaanbaatar**	**27.63**	**306**	P	**P**	**18 40 06.5**	**-0.1**
ULN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ULN	**Ulaanbaatar**	**27.63**	**306**	P	**P**	**18 40 06.5**	**-0.1**
H11N2	**WAKE ISLAND Hy**	**28.03**	**118**	T	T	19 09 21.3	
	baz=311,slow=75,SNR=39						
H11N1	**WAKE ISLAND Hy**	**28.04**	**118**	T	T	19 09 21.8	
	baz=311,slow=75,SNR=53						
H11N3	**WAKE ISLAND Hy**	**28.05**	**118**	T	T	19 09 12.5	
	baz=311,slow=75,SNR=48						
SONM	**Songino Array**	**28.05**	**306**	P	**P**	**18 40 10.6**	**+0.3**
	comp=Z,7.1nm,1.1s,baz=107,slow=8.5,SNR=20						
SONM				LR	LR	18 51 48.8	
	comp=Z,293nm,18.4s,baz=126,slow=37						
SONM	**Songino Array**	**28.05**	**306**	P	**P**	**18 40 10.2**	**-0.2**
SEY	**Seymchan**	**28.20**	**11**	P	**P**	**18 40 12.6**	**+1.3**
	comp=Z,4.4nm,0.9s,baz=212,slow=8.7,SNR=4.5						
H11S3	**WAKE ISLAND Hy**	**28.69**	**120**	T	T	19 10 06.7	
	baz=312,slow=75,SNR=101						
H11S1	**WAKE ISLAND Hy**	**28.69**	**120**	T	T	19 10 07.8	
	baz=312,slow=75,SNR=150						
H11S2	**WAKE ISLAND Hy**	**28.70**	**120**	T	T	19 10 08.3	
	baz=312,slow=75,SNR=118						
SMY	**Shemya**	**29.03**	**44**	P	**P**	**18 40 19.0**	**+0.2**
SMY				pmax	pmax		
	comp=Z,170nm,1.2s						
SMY	**Shemya**	**29.03**	**44**	P	**P**	**18 40 19.0**	**+0.2**
LZH	**Lanzhou**	**29.72**	**282**	*e*P	**P**	**18 40 27.3**	**+2.0**
LZH				pP	pP	18 40 35.9	-1.0
LZH				sP	sP	18 40 40.5	-1.5
LZH				PP	**PP**	**18 41 26.1**	**-6.7**
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				pmax	pmax		
	comp=Z,120nm,5.4s						
LZH				LR	LR		
	comp=Z,340nm,14.1s						
LZH				LR	LR		
	comp=Z,410nm,16.8s						
LZH				LR	LR		
	comp=Z,330nm,17.0s						
GYA	**Guiyang**	**30.42**	**262**	*e*P	**P**	**18 40 30.0**	**-1.5**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TLY	**Talaya**	**30.76**	**313**	P	**P**	**18 40 35.4**	**+1.2**
	comp=Z,1.6nm,0.2s,baz=105,slow=8.0,SNR=3.5						
TLY				LR	LR	18 53 51.0	
	comp=Z,257nm,19.9s,baz=100,slow=38						
TLY	**Talaya**	**30.76**	**313**	*i* P	**P**	**18 40 32.9**	**-1.3**
TLY				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TLY	**Talaya**	**30.76**	**313**	P	**P**	**18 40 33.9**	**-0.3**
CD2	**Chengdu**	**31.09**	**272**	P	**P**	**18 40 32.7**	**-4.6**
CD2				S	**S**	**18 45 39.7**	**-0.2**
QIZ	**Qiongzhong**	**31.84**	**247**	P	**P**	**18 40 43.4**	**-0.6**
QIZ				S	**S**	**18 45 52.3**	**+0.6**
QIZ				LR	LR		
	comp=Z,380nm,18.7s						
QIZ				LR	LR		
	comp=Z,270nm,8.7s						
QIZ				LR	LR		
	comp=Z,270nm,15.9s						
GTA	**Gaotai**	**32.40**	**289**	*e*P	**P**	**18 40 49.0**	**+0.2**
GTA				pP	pP	18 40 58.3	-2.1
GTA				sP	sP	18 41 02.2	-3.4
GTA				PcP	**PcP**	**18 43 37.7**	**+2.2**
GTA				S	**S**	**18 46 04.5**	**+4.2**
GTA				SS	**SnSn**	**18 47 55.8**	**+0.3**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,210nm,7.6s						
GTA				LR	LR		
	comp=Z,200nm,18.1s						
GTA				LR	LR		
	comp=Z,190nm,18.1s						
GTA				LR	LR		
	comp=Z,270nm,18.1s						
KMI	**Kunming**	**34.18**	**263**	P	**P**	**18 41 04.8**	**+0.2**
KMI				pP	pP	18 41 13.2	-3.1
KMI				sP	sP	18 41 18.0	-3.4
KMI				pmax	pmax		
	comp=Z,18nm,0.5s						
KMI				pmax	pmax		
	comp=Z,78nm,3.7s						
KMI				LR	LR		
	comp=Z,200nm,6.0s						
KMI				LR	LR		
	comp=Z,200nm,6.9s						
KMI				LR	LR		
	comp=Z,220nm,9.4s						
BILL	**Bilibino**	**35.46**	**16**	*ce*P	**P**	**18 41 15.2**	**+0.3**
BILL				*i*		18 41 27.0	
BILL				*e*		18 43 43.8	
BILL				pmax	pmax		
	comp=Z,11nm,1.7s						
BILL				MLR	MLR		
	comp=Z,183nm,21.0s						
BILL	**Bilibino**	**35.46**	**16**	P	**P**	**18 41 15.4**	**+0.5**
BILL				IAmb	IAmb	18 41 16.8	
	comp=Z,9.1nm,1.2s						
TIXI	**Tiksi**	**36.53**	**354**	P	**P**	**18 41 23.4**	**-0.6**
	comp=Z,2.9nm,0.8s,baz=143,slow=5.7,SNR=14						
TIXI	**Tiksi**	**36.53**	**354**	*ce*P	**P**	**18 41 23.9**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TIXI	**Tiksi**	**36.53**	**354**	P	**P**	**18 41 23.7**	**-0.3**
UBPT	**Khong Chiam**	**37.44**	**246**	P	**P**	**18 41 31.5**	**-0.8**
NIKH	**Nikolski High**	**39.10**	**48**	P	**P**	**18 41 47.0**	**+1.1**
FAKI	**Fak Fak**	**39.23**	**193**	P	**P**	**18 41 47.1**	**-0.2**
PBKT	**Sadao Pong**	**40.07**	**252**	P	**P**	**18 41 53.8**	**-0.6**
CHTO	**Chiang Mai**	**40.39**	**257**	P	**P**	**18 41 55.2**	**-1.8**
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.3s						
CHTO	**Chiang Mai**	**40.39**	**257**	P	**P**	**18 41 55.2**	**-1.8**
UNV	**Unalaska Valle**	**40.58**	**47**	P	**P**	**18 42 01.3**	**+3.1**
CMAR	**Chiang Mai Arr**	**40.59**	**256**	P	**P**	**18 41 58.2**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=44,slow=8.9,SNR=4.1						
CMAR				PcP	**PcP**	**18 44 01.4**	**+1.2**
	comp=Z,1.3nm,1.1s,baz=15,slow=2.6,SNR=4.6						
CMAR	**Chiang Mai Arr**	**40.59**	**256**	P	**P**	**18 41 57.5**	**-1.2**
WMQ	**Urumqi**	**40.91**	**298**	*e*P	**P**	**18 42 03.3**	**+2.1**
WMQ				pP	pP	18 42 09.9	-3.1
WMQ				sP	sP	18 42 17.7	-0.4
WMQ				pmax	pmax		
	comp=Z,15nm,2.3s						
WMQ				pmax	pmax		
	comp=Z,240nm,5.9s						
WMQ				LR	LR		
	comp=Z,230nm,20.9s						
WMQ				LR	LR		
	comp=Z,1μm,23.9s						
WMQ				LR	LR		
	comp=Z,190nm,29.0s						
WMQ	**Urumqi**	**40.91**	**298**	P	**P**	**18 42 01.9**	**+0.7**
WMQ				pmax	pmax		
	comp=Z,31nm,1.3s						
WMQ	**Urumqi**	**40.91**	**298**	P	**P**	**18 42 01.9**	**+0.7**
WMQ				IAmb	IAmb	18 42 06.2	
	comp=Z,31nm,1.3s						
LSA	**Lhasa**	**41.74**	**276**	P	**P**	**18 42 10.5**	**+1.9**
LSA				pmax	pmax		
	comp=Z,38nm,1.1s						
LSA	**Lhasa**	**41.74**	**276**	P	**P**	**18 42 08.4**	**-0.2**
LSA				pmax	pmax		
	comp=Z,17nm,1.2s						
LSA	**Lhasa**	**41.74**	**276**	P	**P**	**18 42 08.3**	**-0.2**
LSA				IAmb	IAmb	18 42 11.8	
	comp=Z,17nm,1.2s						
SBUM	**Sibu**	**42.30**	**225**	P	**P**	**18 42 11.7**	**-1.0**
ZAA0	**Zalesovo Array**	**42.37**	**313**	P	**P**	**18 42 12.9**	**+0.1**
ZALV	**Zalesovo Beam**	**42.37**	**313**	P	**P**	**18 42 13.5**	**+0.7**
	comp=Z,3.0nm,0.5s,baz=90,slow=7.4,SNR=25						
ZALV				LR	LR	18 59 39.5	
	comp=Z,88nm,19.0s,baz=33,slow=36						
ZALV	**Zalesovo Beam**	**42.37**	**313**	P	**P**	**18 42 12.4**	**-0.5**
BKB	**Balikpapan**	**42.95**	**216**	P	**P**	**18 42 15.2**	**-2.8**
ANM	**Nome**	**43.04**	**31**	P	**P**	**18 42 19.6**	**+1.5**
ANM				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ANM	**Nome**	**43.04**	**31**	P	**P**	**18 42 19.6**	**+1.5**
KSM	**Kuching**	**44.20**	**226**	P	**P**	**18 42 27.2**	**-0.9**
KSM				IAmb	IAmb	18 42 47.9	
	comp=Z,26nm,1.5s						
NRIK	**Noril'sk**	**44.22**	**336**	P	**P**	**18 42 28.1**	**+0.5**
	comp=Z,8.4nm,0.9s,baz=117,slow=7.7,SNR=6.0						
NRIK				LR	LR	19 01 17.1	
	comp=Z,190nm,20.8s,baz=122,slow=36						
MK31	**Makanchi Array**	**44.32**	**303**	P	**P**	**18 42 28.7**	**0.0**
MK31				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MK31	**Makanchi Array**	**44.32**	**303**	P	**P**	**18 42 28.7**	**0.0**
MKAR	**Makanchi Array**	**44.32**	**303**	P	**P**	**18 42 29.4**	**+0.6**
	comp=Z,3.4nm,0.6s,baz=87,slow=9.4,SNR=46						
MKAR				LR	LR	19 01 34.4	
	comp=Z,194nm,19.1s,baz=82,slow=37						
MKAR	**Makanchi Array**	**44.32**	**303**	P	**P**	**18 42 28.8**	**+0.1**
SAUI	**Saumlaki**	**44.35**	**193**	P	**P**	**18 42 27.3**	**-1.8**
MAKZ	**Makanchi**	**44.53**	**303**	P	**P**	**18 42 30.9**	**+0.5**
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MAKZ	**Makanchi**	**44.53**	**303**	P	**P**	**18 42 30.9**	**+0.5**
MAKZ				IAmb	IAmb	18 42 32.4	
	comp=Z,10nm,1.1s						
RDOG	**Red Dog Mine**	**44.95**	**26**	P	**P**	**18 42 34.6**	**+1.2**
RDOG				IAmb	IAmb	18 42 50.9	
	comp=Z,12nm,1.0s						
CHGN	**Chignik**	**45.34**	**43**	P	**P**	**18 42 38.0**	**+1.5**
TAPN	**Taplejung**	**45.44**	**275**	*e*P	**P**	**18 42 39.6**	**+1.4**
	comp=Z,8.1nm,0.4s						
ODAN	**Odare**	**45.90**	**274**	*e*P	**P**	**18 42 42.9**	**+1.1**
	comp=Z,7.1nm,0.5s						
KURK	**Kurchatov**	**46.28**	**309**	*ce*P	**P**	**18 42 44.1**	**-0.1**
KURK				pmax	pmax		
	comp=Z,30nm,1.0s						
KURK	**Kurchatov**	**46.28**	**309**	P	**P**	**18 42 44.3**	**+0.1**
KURBB	**Kurchatov Arra**	**46.35**	**309**	P	**P**	**18 42 45.2**	**+0.5**
	comp=Z,28nm,1.1s,baz=83,slow=8.2,SNR=62						
RAMN	**Ramite**	**46.51**	**275**	*e*P	**P**	**18 42 46.7**	**+0.2**
	comp=Z,24nm,0.6s						
JIRN	**Jiri**	**46.55**	**276**	*e*P	**P**	**18 42 47.8**	**+0.8**
	comp=Z,57nm,0.9s						
GUN	**Gumba**	**46.70**	**277**	*e*P	**P**	**18 42 48.6**	**+0.5**
	comp=Z,31nm,1.0s						
CHIR	**Chirikof Islan**	**46.91**	**44**	P	**P**	**18 42 49.6**	**+0.6**
SVW2	**Sparrevohn**	**46.94**	**37**	P	**P**	**18 42 50.2**	**+1.1**
SVW2				IAmb	IAmb	18 43 22.2	
	comp=Z,28nm,1.7s						
PKI	**Pulchoki**	**47.21**	**276**	*e*P	**P**	**18 42 52.4**	**+0.2**
	comp=Z,16nm,0.9s						
PKIN	**Phulchoki**	**47.22**	**276**	*e*P	**P**	**18 42 52.7**	**+0.5**
	comp=Z,9.3nm,0.7s						

KKN	Kakani	47.23	277	eP	P	18 42 52.6	+0.5
	comp=Z,19nm,0.9s						
MMRI	Maumere	47.41	205	P	P	18 42 51.0	-2.2
MMRI				IAmb	IAmb	18 43 11.0	
	comp=Z,16nm,0.9s						
DMN	Daman	47.44	277	eP	P	18 42 54.4	+0.5
	comp=Z,34nm,1.3s						
KULM	Kulim	47.63	240	P	P	18 42 53.1	-2.0
KULM				IAmb	IAmb	18 43 13.5	
	comp=Z,14nm,1.3s						
GKN	Gorkha	47.66	277	eP	P	18 42 55.3	-0.1
	comp=Z,53nm,1.0s						
SOEI	Soe	47.80	202	P	P	18 42 53.0	-3.4
PRZ	Przheval'sk	47.84	298	P	P	18 42 57.7	+1.0
PRZ				pmax	pmax		
	comp=Z,21nm,1.2s						
PRZ	Przheval'sk	47.84	298	P	P	18 42 57.7	+1.0
PRZ				IAmb	IAmb	18 43 17.1	
	comp=Z,21nm,1.1s						
IPM	Ipoh	47.94	239	P	P	18 42 54.8	-2.7
IPM				IAmb	IAmb	18 43 21.4	
	comp=Z,16nm,1.5s						
MYKOM	Kota Tinggi	47.99	234	P	P	18 42 57.3	-0.6
MYKOM				IAmb	IAmb	18 43 29.0	
	comp=Z,22nm,1.3s						
IMAR	Indian Mountai	48.10	30	P	P	18 42 57.4	-0.7
IMAR				PcP	PcP	18 44 26.2	+1.1
DANN	Dangsing	48.23	278	eP	P	18 43 00.4	+0.4
	comp=Z,27nm,0.4s						
RSO	Redoubt South	48.31	38	P	P	18 43 01.6	+1.5
RSO					S	18 49 56.6	-0.4
KDAK	Kodiak Island	48.49	41	P	P	18 43 01.0	-0.2
KDAK				pmax	pmax		
	comp=Z,63nm,1.5s						
KDAK	Kodiak Island	48.49	41	P	P	18 43 01.0	-0.2
KDJ	Kajisay	48.80	298	P	P	18 43 04.5	+0.4
KDJ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KDJ	Kajisay	48.80	298	P	P	18 43 04.5	+0.4
CNPM	China Poot	49.10	39	P	P	18 43 07.2	+1.3
MTN	Manton Dam	49.12	192	P	P	18 43 06.7	+0.2
BRLK	Bradley Lake	49.27	38	P	P	18 43 08.4	+1.1
SUA	Susitna One	49.28	36	P	P	18 43 10.1	+2.7
SUA				IAmb	IAmb	18 43 20.8	
	comp=Z,5.6nm,0.8s						
MLY	Manley	49.29	31	P	P	18 43 09.4	+2.1
MLY				IAmb	IAmb	18 43 26.0	
	comp=Z,8.1nm,1.2s						
COEN	Coen	49.45	177	P	P	18 43 11.5	+2.5
TRF	Thorofare Moun	49.46	34	P	P	18 43 11.1	+2.3
TRF				IAmb	IAmb	18 43 48.6	
	comp=Z,22nm,1.6s						
BOOM	Boomskoye usch	49.60	299	P	P	18 43 11.1	+0.9
BOOM	Boomskoye usch	49.60	299	P	P	18 43 11.1	+0.9
RC01	Rabbit Creek A	49.78	37	P	P	18 43 11.6	+0.6
BWN	Browne	49.83	33	P	P	18 43 13.4	+2.1
NRN	Naryn	49.84	297	P	P	18 43 12.5	+0.3
NRN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NRN	Naryn	49.84	297	P	P	18 43 12.5	+0.3
TOLK	Toolik Lake Re	49.92	27	P	P	18 43 13.9	+1.8
TOLK				IAmb	IAmb	18 43 29.2	
	comp=Z,6.2nm,1.0s						
RND	Reindeer	50.11	34	P	P	18 43 14.8	+1.2
RND				pmax	pmax		
	comp=Z,24nm,1.6s						
RND	Reindeer	50.11	34	P	P	18 43 14.8	+1.2
RND				IAmb	IAmb	18 43 30.4	
	comp=Z,24nm,1.6s						
GHO	Glory Hole Cre	50.14	36	P	P	18 43 15.7	+1.9
GHO				IAmb	IAmb	18 43 21.9	
	comp=Z,7.4nm,0.9s						
KSH	Kashi	50.40	295	P	P	18 43 20.2	+4.0
KSH				sP	sP	18 43 34.3	+0.9
KSH				PcS	PcS	18 48 33.1	+1.6
KSH				S	S	18 50 31.4	+4.7
KSH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,120nm,4.3s						
KSH				LR	LR		
	comp=Z,350nm,10.4s						
KSH				LR	LR		
	comp=Z,340nm,11.2s						
KSH				LR	LR		
	comp=Z,440nm,16.0s						
WRH	Wood River Hil	50.42	32	P	P	18 43 17.7	+1.8
WRH				IAmb	IAmb	18 43 37.5	
	comp=Z,27nm,1.6s						
CCB	Clear Creek Bu	50.54	32	P	P	18 43 17.5	+0.8
AAK	Ala-Archa	50.59	299	LR	LR	19 05 54.6	
	comp=Z,297nm,19.5s,baz=78,slow=37						
AAK	Ala-Archa	50.59	299	ceP	P	18 43 17.1	-0.6
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
AAK	Ala-Archa	50.59	299	P	P	18 43 18.1	+0.4
DHY	Denali Highway	50.79	34	P	P	18 43 20.6	+1.8
DHY				IAmb	IAmb	18 43 35.9	
	comp=Z,11nm,0.8s						
HDA	Harding Lake	50.92	32	P	P	18 43 20.6	+1.0
IL31		50.93	32	P	P	18 43 21.1	+1.5
ILAR	Eielson Array	50.93	32	P	P	18 43 21.6	+1.9
	comp=Z,3.9nm,0.8s,baz=271,slow=6.5,SNR=40						
ILAR				LR	LR	19 05 58.8	
	comp=Z,26nm,21.7s,baz=277,slow=37						
ILAR	Eielson Array	50.93	32	P	P	18 43 20.0	+0.3
BVAR	Borovoye Array	51.02	313	P	P	18 43 21.4	+0.9
	comp=Z,5.8nm,0.9s,baz=79,slow=7.7,SNR=25						
BRVK	Borovoye	51.08	313	ceP	P	18 43 21.2	+0.2
BRVK				pmax	pmax		
	comp=Z,11nm,1.0s						
BRVK	Borovoye	51.08	313	P	P	18 43 20.2	-0.8
BRVK				IAmb	IAmb	18 43 23.5	
	comp=Z,10nm,1.1s						
SDSI	Sungai Dareh	51.62	234	P	P	18 43 27.0	+1.6
BMAR	Burnt Mountain	51.78	28	P	P	18 43 27.1	+1.1
BMAR				PcP	PcP	18 44 41.1	+2.4
ARSB	Arslanbob	52.05	298	P	P	18 43 28.6	0.0
ARSB				pmax	pmax		
	comp=Z,15nm,1.1s						
ARSB	Arslanbob	52.05	298	P	P	18 43 28.6	0.0
ARSB				IAmb	IAmb	18 43 55.9	
	comp=Z,15nm,1.1s						
MDSI	Maura Dua	52.62	228	P	P	18 43 31.3	-1.5
KK31	Karatay Array	53.27	301	P	P	18 43 37.8	+0.4
KK31				pmax	pmax		
	comp=Z,14nm,1.4s						
KK31	Karatay Array	53.27	301	P	P	18 43 37.8	+0.4
KK31				IAmb	IAmb	18 44 04.3	
	comp=Z,14nm,1.4s						
KKAR	Karatay Array	53.27	301	P	P	18 43 37.8	+0.4
KKAR				pmax	pmax		
	comp=Z,14nm,1.4s						
KKAR	Karatay Array	53.27	301	P	P	18 43 37.7	+0.2
KKAR	Karatay Array	53.27	301	P	P	18 43 37.8	+0.4
KKAR				IAmb	IAmb	18 44 04.3	
	comp=Z,14nm,1.4s						
EPYK	Eagle Plains	54.97	29	P	P	18 43 51.4	+1.9
FITZ	Fitzroy Crossi	55.38	197	P	P	18 43 53.2	+0.4
	comp=Z,2.7nm,0.7s,baz=13,slow=6.6,SNR=14						
FITZ	Fitzroy Crossi	55.38	197	P	P	18 43 52.7	-0.1
FITZ				IAmb	IAmb	18 44 08.6	
	comp=Z,26nm,1.7s						
WB0	Warramunga Arr	55.49	187	P	P	18 43 53.2	-0.5
WB0				IAmb	IAmb	18 44 15.5	
	comp=Z,20nm,1.1s						
WRAB	Tennant Creek	55.66	187	P	P	18 43 54.9	0.0
WRAB				pmax	pmax		
	comp=Z,17nm,1.1s						
WRAB	Tennant Creek	55.66	187	P	P	18 43 54.9	0.0
WRAB				IAmb	IAmb	18 44 16.7	
	comp=Z,17nm,1.1s						
WB2	Warramunga Arr	55.67	187	P	P	18 43 54.8	-0.1
WB2				IAmb	IAmb	18 44 14.9	
	comp=Z,13nm,1.0s						
WRA	Warramunga Arr	55.67	187	P	P	18 43 55.1	+0.2
	comp=Z,2.3nm,0.5s,baz=0.2,slow=7.5,SNR=49						
WRA	Warramunga Arr	55.67	187	P	P	18 43 53.9	-1.1
CHGR	Chuyangaron	55.70	296	P	P	18 43 54.8	-0.4
SVE	Sverdlovsk	55.74	319	eP	P	18 43 56.4	+1.3
SVE				pmax	pmax		
	comp=Z,18nm,1.1s						
INK	Inuvik	55.84	27	P	P	18 43 56.0	+0.4
	baz=282,slow=7.9						
INK	Inuvik	55.84	27	P	P	18 43 56.0	+0.4
INK	Inuvik	55.84	27	P	P	18 43 56.0	+0.4
ARU	Arti	56.95	319	LR	LR	19 10 59.6	
	comp=Z,140nm,18.5s,baz=44,slow=38						
ARU	Arti	56.95	319	ceP	P	18 44 04.0	+0.3
ARU				pmax	pmax		
	comp=Z,21nm,1.0s						
ARU	Arti	56.95	319	P	P	18 44 03.4	-0.3
ABKAR	Akbulak array	58.33	311	P	P	18 44 13.3	-0.2
ABKAR	Akbulak array	58.33	311	P	P	18 44 13.8	+0.3
ABKAR				IAmb	IAmb	18 44 15.1	
	comp=Z,11nm,1.1s						
C36M	Paulatuk	58.88	24	P	P	18 44 18.1	+1.1
C36M				IAmb	IAmb	18 44 19.5	
	comp=Z,9.8nm,1.1s						
AKTO	Aktyubinsk	59.11	312	P	P	18 44 19.4	+0.5
	comp=Z,4.5nm,0.9s,baz=80,slow=10.0,SNR=8.6						
AKTO				LR	LR	19 10 40.1	
	comp=Z,80nm,20.0s,baz=86,slow=37						
AS31	Alice Springs	59.40	187	P	P	18 44 20.9	-0.2
ASAR	Alice Springs	59.40	187	P	P	18 44 20.8	-0.4
	comp=Z,1.3nm,0.5s,baz=17,slow=11,SNR=41						
KIRV	Kirov	60.94	323	LR	LR	19 12 10.3	
	comp=Z,119nm,19.2s,baz=67,slow=37						
DZM	Mont Dzumac	62.44	153	eLR	LR	19 03 19.1	
	comp=Z,177nm,23.5s						
HRA	Herat	62.50	294	P	P	18 44 40.8	-1.7
HRA				IAmb	IAmb	18 44 44.7	
	comp=Z,7.0nm,1.4s						
GEYT	Alibeck	63.95	299	P	P	18 44 52.6	+0.8
	comp=Z,2.0nm,0.8s,baz=263,slow=7.3,SNR=5.2						
GEYT				LR	LR	19 13 14.9	
	comp=Z,75nm,20.0s,baz=20,slow=36						
RES	Resolute Bay	64.03	14	LR	LR	19 14 36.0	
	comp=Z,66nm,20.2s,baz=32,slow=38						
RES	Resolute Bay	64.03	14	P	P	18 44 52.3	+0.6
RES				pmax	pmax		
	comp=Z,8.0nm,1.0s						
RES	Resolute Bay	64.03	14	P	P	18 44 52.3	+0.6
RES				IAmb	IAmb	18 44 54.2	
	comp=Z,7.7nm,1.0s						
KLMR	Klimovskoe	64.55	328	eP	P	18 44 53.6	-1.7
KLMR				pmax	pmax		
	comp=Z,35nm,1.5s						
KLMR	Klimovskoe	64.55	328	eP	P	18 44 53.6	-1.7
KLMR				AMP		18 44 57.0	
	comp=Z,35nm,1.5s						
ARCES	ARCESS Array B	65.02	339	P	P	18 44 59.2	+0.9
	comp=Z,5.9nm,0.9s,baz=38,slow=4.6,SNR=3.6						
ARCES	ARCESS Array B	65.02	339	P	P	18 44 58.0	-0.3
YKA	Yellowknife Ar	65.25	30	P	P	18 45 00.5	+0.6
	comp=Z,1.9nm,0.9s,baz=298,slow=6.2,SNR=25						
YKA				LR	LR	19 15 44.1	
	comp=Z,33nm,18.4s,baz=0.0,slow=38						
STKA	Stephens Creek	67.24	179	P	P	18 45 12.9	+0.1
	comp=Z,4.6nm,1.1s,baz=319,slow=13,SNR=3.9						
STKA				LR	LR	19 14 55.0	
	comp=Z,63nm,19.8s,baz=206,slow=36						
STKA	Stephens Creek	67.24	179	P	P	18 45 13.0	+0.1
STKA	Stephens Creek	67.24	179	P	P	18 45 12.2	-0.6
OBN	Obninsk	68.79	323	⇓eP	P	18 45 26.8	+4.4
OBN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
OBN				MLR	MLR		
	comp=Z,196nm,19.0s						
LPSR	Galich'ya Gora	68.93	320	eP	P	18 45 40.8	+17
LPSR				pmax	pmax		
	comp=Z,20nm,1.8s						
VSR	Storozhevoye	69.53	319	eP	P	18 45 26.7	-0.4
VSR				pmax	pmax		
	comp=Z,10.0nm,1.5s						
FINES	FINESS Array B	69.70	332	P	P	18 45 27.1	-0.8
	comp=Z,0.9nm,0.4s,baz=61,slow=5.3,SNR=12						
FINES				LR	LR	19 17 58.0	
	comp=Z,106nm,18.3s,baz=278,slow=38						
FINES	FINESS Array B	69.70	332	i P	P	18 45 28.5	+0.6
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	69.70	332	P	P	18 45 28.2	+0.2
NCK	Nalchik	70.99	310	i P	P	18 45 35.9	-0.3
NCK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KBZ	Khabaz	71.31	311	P	P	18 45 39.3	+1.2
	comp=Z,6.6nm,1.0s,baz=248,slow=2.0,SNR=9.9						
KBZ				LR	LR	19 18 52.8	
	comp=Z,119nm,18.3s,baz=40,slow=37						
KIV	Kislovodsk	71.32	311	eP	P	18 45 38.7	+0.4
KIV				pmax	pmax		
	comp=Z,53nm,1.1s						
KIV				MLR	MLR		
	comp=Z,264nm,18.0s						
KIV	Kislovodsk	71.32	311	P	P	18 45 38.1	-0.1
KIV				IAmb	IAmb	18 45 41.1	
	comp=Z,12nm,0.9s						
SHA1	Shidzhatmaz	71.45	311	i P	P	18 45 37.7	-1.5
YBH	Yreka Blue Hor	71.63	52	LR	LR	19 10 20.8	
	comp=Z,53nm,20.3s,baz=325,slow=30						
NEY	Neytrino	71.67	310	i P	P	18 45 41.1	+0.6
NEY				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GNI	Garni	72.01	307	i P	P	18 45 43.6	+1.0
GNI				pmax	pmax		
	comp=Z,31nm,1.2s						
JTMT	Jette	73.37	43	P	P	18 45 51.6	+1.1
JTMT				IAmb	IAmb	18 46 03.5	
	comp=Z,5.6nm,0.9s						
AKASG	Malin Array Be	74.97	322	P	P	18 45 59.4	-0.2
	comp=Z,2.4nm,0.6s,baz=46,slow=6.2,SNR=16						
AKASG				LR	LR	19 21 46.8	
	comp=Z,171nm,19.1s,baz=75,slow=38						
AKASG	Malin Array Be	74.97	322	i P	P	18 46 00.3	+0.7
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	Malin Array Be	74.97	322	P	P	18 45 59.5	-0.1
AKBB	Malin Array Si	74.97	322	P	P	18 45 59.0	-0.6
AKBB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
AKBB	Malin Array Si	74.97	322	P	P	18 45 59.0	-0.6
AKBB				IAmb	IAmb	18 46 00.9	
	comp=Z,8.2nm,0.9s						
FFC	Flin Flon	75.14	32	P	P	18 46 01.5	+1.0
FFC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
FFC	Flin Flon	75.14	32	P	P	18 46 01.5	+1.0
FFC				IAmb	IAmb	18 46 03.1	
	comp=Z,9.0nm,1.1s						
NB2	NORSAR Subarra	75.17	337	P	P	18 46 01.6	+1.0
	comp=Z,1.1nm,0.6s,baz=41,slow=5.9						
NOA	NORSAR Array B	75.17	337	P	P	18 46 00.9	+0.2
	comp=Z,2.0nm,0.5s,baz=38,slow=5.7,SNR=5.9						
NOA				LR	LR	19 21 35.8	
	comp=Z,73nm,20.6s,baz=45,slow=38						
EGMT	Eagleton	75.66	41	P	P	18 46 03.3	-0.4
EGMT				IAmb	IAmb	18 46 07.0	
	comp=Z,15nm,1.2s						
DLMT	Dillon	75.71	44	P	P	18 46 05.4	+1.3
DLMT				IAmb	IAmb	18 46 07.5	
	comp=Z,9.1nm,1.1s						
KVN	Kaiserville	76.04	52	P	P	18 46 08.3	+2.1
KVN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KVN	Kaiserville	76.04	52	P	P	18 46 08.3	+2.1
NVAR	Mina Array Bea	76.27	53	P	P	18 46 09.0	+1.4
	comp=Z,1.7nm,0.8s,baz=294,slow=5.4,SNR=10						
NVAR				LR	LR	19 11 16.2	
	comp=Z,80nm,21.1s,baz=306,slow=29						
NVAR	Mina Array Bea	76.27	53	P	P	18 46 08.4	+0.9
YHL	Hebgen Lake	76.81	44	P	P	18 46 12.0	+1.4
ELK	Elko	76.86	49	P	P	18 46 12.2	+1.3
ELK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ELK	Elko	76.86	49	P	P	18 46 12.2	+1.3
YHB	Horse Butte	76.87	44	P	P	18 46 12.6	+1.7
LKWY	Lake	77.43	44	P	P	18 46 16.8	+2.8
LKWY				pmax	pmax		
	comp=Z,6.0nm,1.3s						
LKWY	Lake	77.43	44	P	P	18 46 16.8	+2.8
H17A	Grant Village	77.44	44	P	P	18 46 16.6	+2.5
H17A				IAmb	IAmb	18 46 19.3	
	comp=Z,8.4nm,1.0s						
FLWY	Flagg Ranch	77.56	44	P	P	18 46 17.5	+2.8
FLWY				IAmb	IAmb	18 46 19.0	
	comp=Z,8.0nm,1.2s						
R11A	Troy Canyon, C	78.05	51	P	P	18 46 19.4	+1.9
HWUT	Hardware Ranch	78.57	47	P	P	18 46 22.2	+1.9
DUG	Dugway, Tooele	78.68	48	P	P	18 46 22.7	+1.8
DUG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DUG	Dugway, Tooele	78.68	48	P	P	18 46 22.7	+1.8
BURAR	Bucovina Array	78.97	322	P	P	18 46 22.7	+0.4
PDAR	Pinedale Array	79.03	45	P	P	18 46 23.7	+0.8
	comp=Z,1.5nm,0.8s,baz=262,slow=1.7,SNR=11						
PDAR	Pinedale Array	79.03	45	P	P	18 46 22.9	0.0
BR131	Keskin Array S	79.27	311	P	P	18 46 24.4	+0.3
BR131				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BR131	Keskin Array S	79.27	311	P	P	18 46 24.4	+0.3
BRTR	Keskin Array B	79.27	311	P	P	18 46 25.0	+0.8
	comp=Z,3.7nm,1.0s,baz=106,slow=4.4,SNR=11						
BRTR				LR	LR	19 27 08.6	
	comp=Z,45nm,18.2s,baz=356,slow=40						
BRTR	Keskin Array B	79.27	311	P	P	18 46 24.3	+0.1
RAR	Rarotonga	79.88	125	P	P	18 46 28.1	+0.8
	comp=Z,7.2nm,0.5s,baz=313,slow=4.5,SNR=3.5						
RAYN	Ar Rayn	80.60	292	P	P	18 46 31.4	0.0
RAYN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
RAYN	Ar Rayn	80.60	292	P	P	18 46 31.4	0.0
RAYN				IAmb	IAmb	18 46 33.2	
	comp=Z,9.8nm,1.1s						
LANS	Liptovska Anna	80.70	325	eP	P	18 46 30.2	-1.4
LANS	Liptovska Anna	80.70	325	eP	P	18 46 30.2	-1.4
ULM	Lac du Bonnet	80.94	33	P	P	18 46 33.0	+0.2
	comp=Z,0.9nm,0.4s,baz=334,slow=6.5,SNR=4.4						
ULM				LR	LR	19 22 37.1	
	comp=Z,34nm,21.8s,baz=306,slow=36						
ULM	Lac du Bonnet	80.94	33	P	P	18 46 33.6	+0.9
ULM				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ULM	Lac du Bonnet	80.94	33	P	P	18 46 33.6	+0.9
DPC	Dobruska-Polom	81.25	328	eP	P	18 46 35.7	+1.2
DPC	Dobruska-Polom	81.25	328	eP	P	18 46 35.7	+1.2
PSZ	Piszkesteto	81.38	324	P	P	18 46 35.4	+0.2
PSZ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PSZ	Piszkesteto	81.38	324	P	P	18 46 35.4	+0.2
PSZ				IAmb	IAmb	18 46 51.3	
	comp=Z,10nm,1.1s						
VYHS	Vyhne	81.47	325	eP	P	18 46 37.2	+1.6
VYHS	Vyhne	81.47	325	eP	P	18 46 37.2	+1.6
BRG	Berggiesshubel	81.88	329	eP	P	18 46 38.6	+0.9
	comp=Z,11nm,1.7s						
BRG	Berggiesshubel	81.88	329	eP	P	18 46 38.6	+0.9
BRG				pmax	pmax		
	comp=Z,11nm,1.7s						
CLL	Collm	81.94	330	i P	P	18 46 39.4	+1.5
	comp=Z,9.0nm,1.0s						
CLL				i (sP)	pP	18 46 52.4	+1.6
	comp=Z,13nm,1.2s						
CLL	Collm	81.94	330	P	P	18 46 39.5	+1.5
CLL				pmax	pmax		
	comp=Z,11nm,1.1s						
CLL	Collm	81.94	330	P	P	18 46 39.5	+1.5
CLL				IAmb	IAmb	18 46 54.2	
	comp=Z,11nm,1.1s						
PRU	Pruhonice	82.29	328	eP	P	18 46 41.8	+1.9
PRU	Pruhonice	82.29	328	eP	P	18 46 41.8	+1.9
KHC	Kasperske Hory	83.35	328	eP	P	18 46 46.7	+1.3
KHC	Kasperske Hory	83.35	328	eP	P	18 46 46.7	+1.3
KHC	Kasperske Hory	83.35	328	P	P	18 46 45.9	+0.4
KHC				IAmb	IAmb	18 46 48.3	
	comp=Z,6.0nm,1.4s						
VTS	Vitosha	83.38	319	P	P	18 46 44.9	-1.0
VTS				pmax	pmax		
	comp=Z,6.0nm,1.1s						
VTS	Vitosha	83.38	319	P	P	18 46 44.9	-1.0
VTS				IAmb	IAmb	18 46 49.0	
	comp=Z,6.2nm,1.1s						
GERES	GERESS Array B	83.51	328	P	P	18 46 46.9	+0.5
	comp=Z,1.1nm,1.0s,baz=45,slow=5.8,SNR=4.8						
GERES				LR	LR	19 28 07.3	
	comp=Z,109nm,19.1s,baz=26,slow=39						
GERES	GERESS Array B	83.51	328	P	P	18 46 46.0	-0.3
S22A	4UR Ranch, Cre	83.84	47	P	P	18 46 49.7	+1.2
S22A				IAmb	IAmb	18 46 52.2	
	comp=Z,6.7nm,1.2s						
PPT	Papeete	84.59	116	LR	LR	19 15 12.9	
	comp=Z,114nm,21.8s,baz=216,slow=29						
PPT2	Papeete2	84.60	116	eLR	LR	19 13 33.6	
	comp=Z,185nm,24.2s						
ECSD	EROS Data Cent	85.33	38	P	P	18 46 56.0	+0.5
ECSD				IAmb	IAmb	18 46 58.5	
	comp=Z,10nm,1.2s						
ANMO	Albuquerque	85.90	49	P	P	18 47 00.8	+2.0
ANMO				pmax	pmax		
	comp=Z,11nm,1.6s						
ANMO	Albuquerque	85.90	49	P	P	18 47 00.8	+2.0
ANMO				IAmb	IAmb	18 47 18.3	
	comp=Z,11nm,1.6s						
TAOE	Nuku Hiva Isla	86.44	103	eLR	LR	19 14 32.7	
	comp=Z,228nm,29.3s						
COWI	Conover	87.03	32	P	P	18 47 05.0	+1.1
TBI	Tubuai	88.38	120	eLR	LR	19 15 18.6	
	comp=Z,162nm,28.5s						
H43A	Windswept, Lux	88.91	32	P	P	18 47 12.3	-0.5
TXAR	Lajitas Array	91.41	52	P	P	18 47 26.6	+1.7
	comp=Z,1.1nm,0.9s,baz=294,slow=4.0,SNR=9.7						
TXAR				LR	LR	19 23 52.9	
	comp=Z,29nm,20.2s,baz=0.0,slow=32						
TXAR	Lajitas Array	91.41	52	P	P	18 47 25.5	+0.6
P43A	Skaggs, Pawnee	91.90	36	P	P	18 47 28.2	+1.4
SAML	Samuel	145.61	45	PKP2	PKPbc	18 53 56.6	-0.8
SAML	Samuel	145.61	45		PKPbc	18 53 56.6	-0.8
LPAZ	La Paz	147.88	60	PKPbc	PKiKP	18 54 05.0	-1.6
	comp=Z,3.0nm,0.8s,baz=356,slow=5.9,SNR=9.6						
LPAZ	La Paz	147.88	60	PKP2	PKPbc	18 54 03.2	-1.5
LPAZ	La Paz	147.88	60		PKPbc	18 54 03.2	-1.5

KEA 07 18:50:32.3±0.0, 41.°63N×121.°26E, h0^{km}, ML2.9/2, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUJ	Sinuiju	2.89	121	Pg	Pg	18 51 26.7	-1.0
SUJ				Sg	Sg	18 52 03.7	-1.4
PYS	Pyongsong	4.24	123	Pg	Pg	18 51 52.3	-1.2
PYS				Sg	Sg	18 52 46.2	-2.2
PYAG	Pyongyang	4.30	125	Sg	Sg	18 52 50.5	+0.2

IASPEI ***07*** *18:54:36.4±0.8, 43.°74N±0.°02×42.°97E±0.°02, h13^{km}±7^{km}, Error ellipse: s-maj=4.0km s-min=2.9km az=37.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

NORS ***07*** *18:54:36.7±0.0, 43.°70N×42.°96E, h17^{km}, MPVA4.0*

MOS ***07*** *18:54:36.3±1.5, 43.°76N×42.°98E, h12^{km}, mb3.6/1, Error ellipse: s-maj=8.5km s-min=4.9km az=133.0*

ISC 07 18:54:36.5±0.8, 43.°75N±0.°02×42.°97E±0.°02, h12^{km}±6^{km}, n52, σ1.§01/97, 9C-1D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBZ	Khabaz	0.06	244	c iPG	Pg	18 54 38.5	-0.3
SHA1	Shidzhatmaz	0.22	266	i Pg	Pg	18 54 41.5	+0.1
SHA1				eSg	Sg	18 54 45.6	+0.9
SHA1	Shidzhatmaz	0.22	266	⇑iPG	Pg	18 54 41.5	+0.1
SHA1				eS	Sg	18 54 45.6	+0.9
BEYR	Belyy Ugol+	0.28	338	⇑iPG	Pg	18 54 41.3	-1.0
KIV	Kislovodsk	0.29	315	⇑iPG	Pg	18 54 41.8	-0.6
NCK	Nalchik	0.53	119	i Pg	Pg	18 54 46.0	-0.7
NCK				eSg	Sg	18 54 53.5	-0.2
NCK	Nalchik	0.53	119	⇑iPG	Pg	18 54 46.0	-0.7
NCK				eS	Sg	18 54 53.5	-0.2
NEY	Neytrino	0.53	199	i Pg	Pg	18 54 47.0	+0.1
NEY				eSg	Sb	18 54 54.2	-1.4
NEY	Neytrino	0.53	199	i PG	Pg	18 54 46.8	-0.1
NEY				i S	Sg	18 54 54.1	+0.1
LSNR	Lesken	0.79	127	ePg	Pg	18 54 51.0	-0.7
LSNR				eSg	Sb	18 55 02.6	-0.1
LSNR	Lesken	0.79	127	ePG	Pg	18 54 51.0	-0.7
LSNR				eS	Sb	18 55 02.6	-0.1
STDR	Stavd-Durt	0.89	115	ePg	Pg	18 54 53.7	+0.2
STDR				eSg	Sn	18 55 06.6	-0.9
STDR	Stavd-Durt	0.89	115	ePG	Pg	18 54 53.7	+0.2
STDR				eS	Sn	18 55 06.6	-0.9
PRTR	Priterechnaya	0.95	90	i Pg	Pb	18 54 54.4	-0.5

PRTR				*e*Sg	Sn	18 55 10.0	+0.7
PRTR	Priterechnaya	0.95	90	*i* PG	Pb	18 54 54.3	-0.6
PRTR				*e*S	Sn	18 55 09.9	+0.7
DIGR	Digorskoe uzhe	0.96	152	*e*Pg	Pb	18 54 53.9	-1.3
DIGR				*e*Sg	Sb	18 55 05.8	-2.2
DIGR	Digorskoe uzhe	0.96	152	*e*PG	Pb	18 54 53.9	-1.3
DIGR				*e*S	Sb	18 55 05.8	-2.2
KORR	Kora	1.04	129	*e*Pg	Pb	18 54 56.0	-0.5
KORR				*e*Sg	Sn	18 55 11.2	-0.3
KORR	Kora	1.04	129	*e*PG	Pb	18 54 56.0	-0.5
KORR				*e*S	Sn	18 55 11.2	-0.3
ARNR	Ardon	1.12	120	*e*Pg	Pg	18 54 57.7	-0.3
ARNR				*e*Sg	Sn	18 55 14.6	+1.3
ARNR	Ardon	1.12	120	*e*PG	Pg	18 54 57.7	-0.3
ARNR				*e*S	Sn	18 55 14.6	+1.3
NVNR	Nevinnomyssk	1.12	320	⇑*i*PG	Pb	18 54 57.5	-0.3
NVNR				*e*S	Sb	18 55 12.1	-0.3
ZEI	Tsey	1.18	144	*e*Pg	Pb	18 54 57.9	-1.1
ZEI				*e*Sg	Sb	18 55 13.3	-1.0
ZEI	Tsey	1.18	144	*e*PG	Pb	18 54 57.9	-1.1
ZEI				pmax	pmax		
	comp=Z,41nm,0.1s						
BTKR	Batakoyurt	1.21	108	*i* Pg	Pg	18 54 59.6	-0.1
BTKR				*e*Sg	Sg	18 55 17.7	+2.3
BTKR	Batakoyurt	1.21	108	⇑*i*PG	Pg	18 54 59.6	-0.1
BTKR				*e*S	Sg	18 55 17.7	+2.3
ONI	Oni	1.22	163	P	Pb	18 54 59.2	-0.3
ONI				S	Sg	18 55 15.5	-0.2
ARXR	Arkhyz	1.24	262	⇓*i*PG	Pn	18 54 59.6	-0.2
ARXR				*e*S	Sg	18 55 16.5	0.0
TRKR	Terskaya	1.28	91	*e*Pg	Pn	18 54 59.8	-0.4
TRKR				*e*Sg	Sg	18 55 18.8	+1.1
TRKR	Terskaya	1.28	91	*e*PG	Pn	18 54 59.8	-0.4
TRKR				*e*S	Sg	18 55 18.8	+1.1
GOF	Gofitskoye	1.31	2	⇑*e*PG	Pn	18 55 00.6	0.0
GOF				*e*S	Sg	18 55 18.8	+0.2
LACR	Lac	1.34	133	*i* Pg	Pn	18 55 00.6	-0.6
LACR				*e*Sg	Sb	18 55 18.1	-0.7
LACR	Lac	1.34	133	⇑*i*PG	Pn	18 55 00.6	-0.6
LACR				*e*S	Sb	18 55 18.1	-0.7
TKB	Tkibuli	1.40	179	P	Pg	18 55 04.0	+0.6
TKB				S	Sg	18 55 23.4	+1.8
VLKR	Vladikavkaz	1.43	119	*e*Pg	Pg	18 55 03.8	-0.2
VLKR				*e*Sg	Sg	18 55 22.6	0.0
VLKR	Vladikavkaz	1.43	119	*e*PG	Pg	18 55 03.8	-0.2
VLKR				*e*S	Sg	18 55 22.6	0.0
KMGR	Komgaron	1.55	116	*e*Pg	Pb	18 55 05.3	+0.2
KMGR				*e*Sg	Sg	18 55 26.9	+0.6
KMGR	Komgaron	1.55	116	*e*PG	Pb	18 55 05.3	+0.2
KMGR				*e*S	Sg	18 55 26.9	+0.6
GUDG	Gudauri	1.70	139	P	Pn	18 55 06.3	+0.2
GUDG				S	Sb	18 55 28.9	-0.3
RPOR	Krasnaya Polya	1.96	269	*i* PN	Pb	18 55 11.9	-0.2
RPOR				*e*S	Sb	18 55 37.6	+1.2
GUZR	Guzeripl'	2.07	278	*i* PN	Pb	18 55 12.5	-1.6
GUZR				*i* S	Sb	18 55 40.4	+0.6
GROC	Groznyy	2.13	104	*e*PN	Pb	18 55 13.9	-1.1
GROC				*e*S	Sb	18 55 40.6	-0.8
TRLG	Trialeti	2.37	159	P	Pg	18 55 20.7	-1.1
TRLG				S	Sg	18 55 53.0	+0.5
AKH	Akhalkalaki	2.37	170	*e*PN	Pg	18 55 20.5	-1.5
AKH				*e*S	Sb	18 55 46.7	-1.9
LZRR	Lazarevskoye	2.60	275	*e*PN	Pb	18 55 23.0	0.0
LZRR				*e*S	Sb	18 55 54.1	-0.8
BTLR	Botlikh	2.62	113	*e*PN	Pn	18 55 19.3	+0.7
BTLR				*e*S	Sn	18 55 50.3	-0.1
ERBR	Yeremizino-Bor	2.64	319	*e*PN	Pb	18 55 22.3	-1.4
ERBR				*e*S	Sb	18 55 53.9	-2.2
LGD	Lagodekhi	3.08	127	*e*PN	Pn	18 55 27.2	+2.2
LGD				*e*S	Sn	18 56 03.2	+1.5
GNBR	Gunib	3.23	114	*e*PN	Pn	18 55 28.4	+1.3
GNBR				*e*S	Sn	18 56 08.2	+2.7
GNI	Garni	3.84	159	*i* PN	Pn	18 55 37.6	+2.1
AKT	Akhty	4.19	121	*i* PN	Pn	18 55 39.0	-1.2
KURK	Kurchatov	25.01	61	*i* P	P	19 00 01.1	+1.1
KURK				pmax	pmax		
	comp=Z,1.0nm,1.0s						

IDC 07 19:09:02.0±1.6**,5°.69S×134°.02E,h0^{km},mb4.0**/2**, mb1 3.8**/5**,mb1mx3.4**/43**,mbtmp3.7**/5**,ML3.3**/3**,Error ellipse: s-maj=85.7km s-min=26.6km az=91.0,Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.18	179	Pn	Pn	19 12 22.3	-1.9
	0.1nm,0.3s,baz=356,slow=13,SNR=6.0						
WRA				Sn	Sn	19 14 57.2	-5.2
	0.1nm,0.3s,baz=354,slow=24,SNR=1.4						
FITZ	Fitzroy Crossi	14.80	213	Pn	Pn	19 12 32.4	-0.4
	0.2nm,0.3s,baz=31,slow=11,SNR=8.8						
FITZ				Sn	Sn	19 15 07.5	-10
	0.2nm,0.3s,baz=195,slow=15,SNR=1.9						
ASAR	Alice Springs	17.88	180	P	P	19 13 13.6	+0.6
	0.3nm,0.3s,baz=9.0,slow=12,SNR=24						
MKAR	Makanchi Array	69.39	325	P	P	19 20 11.9	+0.1
	0.2nm,0.4s,baz=120,slow=7.8,SNR=5.5						
TIXI	Tiksi	77.26	358	P	P	19 20 57.6	-0.1
	1.0nm,0.2s,baz=95,slow=0.5,SNR=19						

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*IDC **07** 19:09:29.1±1.8,5°.47S×133°.98E,h0^{km},mb3.9/4, mb1 3.9/7,mb1mx3.6/42,mbtmp3.8/7,ML3.5/3,Error ellipse: s-maj=82.5km s-min=26.4km az=87.0*

ISC 07 19:09:35.0±1.1**,5°.74S**±0°.10×**133°.2E**±0°.3**,h35^{km},n7,** σ**1^{s}.85**/8**,mb3.8**/4**,Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.16	176	Pn	Pn	19 12 53.0	-0.2
	0.1nm,0.3s,baz=356,slow=11,SNR=1.5						
FITZ	Fitzroy Crossi	14.35	210	Pn	P	19 13 00.6	-1.8
	0.2nm,0.3s,baz=92,slow=20,SNR=2.0						
FITZ				Sn	Sn	19 15 34.1	+0.3
	0.2nm,0.3s,baz=274,slow=10,SNR=2.3						
ASAR	Alice Springs	17.84	178	P	P	19 13 43.2	+2.2
	0.3nm,0.3s,baz=8.9,slow=11,SNR=10.0						
MKAR	Makanchi Array	68.98	325	P	P	19 20 38.5	+1.7
	0.9nm,0.7s,baz=116,slow=8.2,SNR=10						
KURBB	Kurchatov Arra	73.16	327	P	P	19 21 01.6	-0.5
	0.9nm,0.8s,baz=122,slow=4.7,SNR=7.8						
TIXI	Tiksi	77.28	359	P	P	19 21 23.1	-2.2
	0.7nm,0.6s,baz=150,slow=3.4,SNR=4.0						
BVAR	Borovoye Array	78.74	327	P	P	19 21 34.9	+1.0
	0.8nm,0.7s,baz=113,slow=3.9,SNR=5.9						

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*RSPR **07** 19:11:05.2,19°.15N×67°.20W,h6^{km}±1^{km},MD2.9/12*

*NEIC **07** 19:11:05.4±1.6,19°.13N±0°.05×67°.16W±0°.04,h34^{km}±5^{km}, Error ellipse: s-maj=8.0km s-min=4.9km az=209.0*

ISC 07 19:11:04.8±1.4**,19°.11N**±0°.07×**67°.16W**±0°.04**,h29^{km},n45,** σ**0^{s}.82**/54**,11C-1D,Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.64	176	⇑*e*P	Pn	19 11 17.4	-0.6
AGPR	Aguadilla, PR	0.64	176	*e*S	Sn	19 11 27.7	+0.4
AGPR	Aguadilla, PR	0.64	176		Pn	19 11 17.4	-0.6
AGPR					Sn	19 11 27.7	+0.4
AGPR	Aguadilla, PR	0.64	176		Pn	19 11 18.1	+0.1
IDE	Isla Desecheo	0.78	203	⇑*e*P	Pb	19 11 19.3	-0.6
IDE	Isla Desecheo	0.78	203		Pb	19 11 19.3	-0.6
AOPR	Arecibo Observ	0.85	153	⇑*e*P	Pb	19 11 20.6	-0.5
AOPR	Arecibo Observ	0.85	153	*e*S	Sn	19 11 33.5	+1.1
AOPR	Arecibo Observ	0.85	153		Pb	19 11 20.6	-0.5
AOPR					Sn	19 11 33.5	+1.1
EMPR	Esperanza - Ma	0.87	137	⇑*e*P	Pb	19 11 22.0	+0.6
EMPR	Esperanza - Ma	0.87	137		Pb	19 11 22.0	+0.6
MPR	Mayaguez	0.90	179		Pn	19 11 21.0	-0.5
MPR				Sg	Sb	19 11 33.9	+0.5
LSP	Las Mesas	0.93	176	⇓*e*P	Pb	19 11 22.3	-0.2
LSP	Las Mesas	0.93	176	*e*S	Sb	19 11 35.1	+0.5
LSP	Las Mesas	0.93	176		Pb	19 11 22.3	-0.2
LSP					Sb	19 11 35.1	+0.5
CRPR	Cabo Rojo, PR	1.10	178	⇑*e*P	Pb	19 11 24.2	-1.1
CRPR	Cabo Rojo, PR	1.10	178	*e*S	Sb	19 11 39.5	+0.3
CRPR	Cabo Rojo, PR	1.10	178		Pb	19 11 24.2	-1.1
CRPR					Sb	19 11 39.5	+0.3
MLPR	Magueyes Islan	1.14	175	⇑*e*P	Pb	19 11 25.1	-0.9
MLPR	Magueyes Islan	1.14	175	*e*S	Sb	19 11 41.0	+0.6
MLPR	Magueyes Islan	1.14	175		Pb	19 11 25.1	-0.9
MLPR					Sb	19 11 41.0	+0.6
GBPR	Guanica, Bosqu	1.16	167	⇑*e*P	Pb	19 11 25.4	-0.9
GBPR	Guanica, Bosqu	1.16	167	*e*S	Sb	19 11 41.4	+0.4
GBPR	Guanica, Bosqu	1.16	167		Pb	19 11 25.4	-0.9
GBPR					Sb	19 11 41.4	+0.4
OBIP	Obispado Ponce	1.19	154	⇑*e*P	Pn	19 11 24.9	-0.6
OBIP	Obispado Ponce	1.19	154	*e*S	Sb	19 11 41.4	-0.3
OBIP	Obispado Ponce	1.19	154		Pn	19 11 24.9	-0.6
OBIP					Sb	19 11 41.4	-0.3
GCPR	Guaynabo City	1.29	128	⇑*e*P	Pb	19 11 27.2	-1.3
GCPR	Guaynabo City	1.29	128	*e*S	Sb	19 11 44.3	-0.5
GCPR	Guaynabo City	1.29	128		Pb	19 11 27.2	-1.3
GCPR					Sb	19 11 44.3	-0.5
PCDR	Punta Cana, DR	1.30	243	⇑*e*P	Pn	19 11 26.7	-0.4
PCDR	Punta Cana, DR	1.30	243	*e*S	Sn	19 11 43.0	-0.5
PCDR	Punta Cana, DR	1.30	243		Pn	19 11 26.7	-0.4
ICMP	Isla Caja de M	1.36	154		Pb	19 11 30.4	+0.8
SJG	San Juan	1.38	136		Pb	19 11 29.6	-0.4
CBYP	Canovanas	1.49	124	Pn	Pb	19 11 30.3	-1.6
IGPR	InterUniversit	1.52	139	⇑*e*P	Pb	19 11 30.9	-1.4
IGPR	InterUniversit	1.52	139	*e*S	Sb	19 11 50.2	-0.9
IGPR	InterUniversit	1.52	139		Pb	19 11 35.1	+2.8
PDPR	Patillas Dam,	1.53	135		Pb	19 11 32.4	-0.2
CUPR	Culebra, Puert	1.95	114	Pn	Pn	19 11 36.5	+0.5
DR12	Loma Pena Alta	2.13	262		Pn	19 11 38.3	-0.2
STVI	Saint Thomas	2.22	110	Pn	Pn	19 11 39.8	+0.1
BANI	BANI	3.12	257	Pn	Pn	19 11 53.3	+1.2
SDDR	Presa de Saban	3.91	269		Pn	19 12 03.4	+0.4

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*TAP **07** 19:13:28.8,24°.92N×122°.51E,h5^{km},ML3.6,D*

*JMA **07** 19:13:28.7±0.1,24°.91N×122°.52E,h37^{km}±3^{km},M2.6*

ISC 07 19:13:26.0±1.2**,24°.91N**±0°.03×**122°.57E**±0°.02**,h8^{km}**±10^{km}**, n89,** σ**0^{s}.73**/147**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.54	229	P	Pb	19 13 38.7	+1.0
	baz=223						
EOS1				*e*S	Sb	19 13 46.4	+0.9
	baz=223						
TWB1	Santiao Chiao	0.54	281	*i* P	Pb	19 13 37.7	0.0
	baz=280						
TWB1				S	Sb	19 13 44.8	-0.9
	baz=280						
JYNG	Yonagunijimaku	0.57	143	P	Pn	19 13 40.6	+0.2
JYNG				S	Sn	19 13 48.8	-1.2
YOJ	Yonaguni jima	0.60	138	P	Pn	19 13 41.3	+0.5
	baz=134						
NTC	Toucheng	0.68	266	P	Pb	19 13 40.5	+0.4
	baz=264						
TIPB	Shuangxi	0.68	276	P	Pb	19 13 40.5	+0.3
	baz=274						
TIPB				*e*S	Sb	19 13 49.1	-0.7
	baz=274						
TWC	Suao	0.72	246	*i* P	Pb	19 13 40.5	-0.3
	baz=242						
TWC				S	Sb	19 13 51.5	+0.6
	baz=242						
NWF	Wu-fen Shan	0.74	283	P	Pn	19 13 42.1	-0.7
	baz=282						
NWF				*e*S	Sb	19 13 52.4	+0.9
	baz=282						
WFSB	Wu-fen Shan	0.74	283	*e*P	Pn	19 13 42.0	-0.8
	baz=282						
WFSB				*e*S	Sb	19 13 51.3	-0.1
	baz=282						
ILA	Ilan	0.76	260	*e*P	Pn	19 13 42.5	-0.6
	baz=257						
ILA				*e*S	Sn	19 13 53.5	-1.3
	baz=257						
TWE	Neicheng	0.84	258	*e*P	Pb	19 13 43.0	+0.1
	baz=255						
TWE				*e*S	Sb	19 13 53.9	-0.6
	baz=255						
PCYT	Pengchaiyu	0.85	328	*e*P	Pn	19 13 44.4	0.0
	baz=331						
SLBB	Yuanshan	0.86	260	*e*P	Pb	19 13 43.9	+0.6
	baz=258						
ENA	Nanau	0.89	238	P	Pb	19 13 44.3	+0.5
	baz=234						
ENA				*e*S	Sb	19 13 56.4	+0.5
	baz=234						
TWA	Mucha	0.90	275	P	Pn	19 13 44.6	-0.4
	baz=274						
TWA				S	Sn	19 13 57.3	-0.9
	baz=274						
YM08	YM08	0.94	288	*e*P	Pb	19 13 44.6	+0.1
	baz=287						
YM01	YM01	0.94	285	*e*P	Pb	19 13 45.0	+0.4
	baz=284						
YM11	YM11	0.94	286	*e*P	Pn	19 13 45.6	0.0
	baz=286						
YM05	YM05	0.95	286	P	Pn	19 13 46.1	+0.3
	baz=285						
YM05				*e*S	Sb	19 13 57.9	+0.3
	baz=285						
YM10	YM10	0.95	285	P	Pn	19 13 45.7	0.0
	baz=285						
ENTT	Nioudou	0.95	254	*e*P	Pn	19 13 45.7	-0.1
	baz=251						
ENTT				*e*S	Sn	19 13 59.0	-0.6
	baz=251						
NHDH	Xindian Distri	0.95	274	*e*P	Pn	19 13 45.5	-0.2
	baz=272						
NHDH				*e*S	Sb	19 13 57.5	-0.1
	baz=272						
TAP1	Taipei	0.96	278	*e*P	Pn	19 13 46.9	+1.0
	baz=277						
TAP1				*e*S	Sn	19 13 58.8	-0.9
	baz=277						
YM04	YM04	0.97	285	*e*P	Pb	19 13 45.5	+0.3
	baz=284						
YM03	YM03	0.97	286	P	Pn	19 13 46.5	+0.3
	baz=286						
TAP	Taipei	0.98	278	*e*P	Pn	19 13 45.9	-0.2
	baz=277						
TAP				*e*S	Sb	19 13 58.2	0.0
	baz=277						
NWLT	Wulai	0.98	263	*e*P	Pn	19 13 46.2	0.0
	baz=261						
NWLT				*e*S	Sb	19 13 59.0	+0.6
	baz=261						
ANP	Anpu	0.99	287	P	Pn	19 13 46.7	+0.3
	baz=286						
NDT	Datong Townshi	1.01	253	*e*P	Pn	19 13 46.2	-0.3
	baz=250						
NDT				*e*S	Sn	19 14 00.5	-0.5
	baz=250						
NTST	Danshui	1.05	284	*e*P	Pn	19 13 48.2	+1.1
	baz=284						
TWS1	Kuangyinshan	1.07	281	*e*P	Pn	19 13 48.6	+1.3
	baz=280						
TWS1				S	Sn	19 14 01.8	-0.5
	baz=280						
YHNB	Yeheng	1.11	258	P	Pn	19 13 48.1	+0.1
	baz=256						
YHNB				*e*S	Sg	19 14 01.7	-0.1
	baz=256						
NACB	Ninganchiao	1.15	231	P	Pn	19 13 48.8	+0.4
	baz=228						
NNSB	Datong	1.18	247	P	Pn	19 13 49.3	+0.2
	baz=244						
NNSB				*e*S	Sn	19 14 05.2	-0.2
	baz=244						
NNSH	Datong	1.18	247	P	Pn	19 13 49.1	+0.1
	baz=244						
NNSH				*e*S	Sb	19 14 04.8	+0.5
	baz=244						
NNS	Nan Shan	1.19	247	P	Pn	19 13 49.2	+0.2
	baz=244						
NNS				S	Sb	19 14 04.8	+0.4
	baz=244						
IRIF	Iriomote-Funau	1.20	118	P	Pn	19 13 49.6	+0.5
WLTB	Daxi	1.20	268	*e*P	Pn	19 13 50.4	+1.3
	baz=266						
WLTB				*e*S	Sn	19 14 05.4	-0.3
	baz=266						
TWD	Chiawan	1.21	227	P	Pn	19 13 50.9	+1.6
	baz=224						
TWD				*e*S	Sn	19 14 07.4	+1.5
	baz=224						
ETLH	Xiulin Townshi	1.21	235	P	Pn	19 13 49.9	+0.5
	baz=232						
ETLH				*e*S	Sn	19 14 06.5	+0.4
	baz=232						
NCU	National Centr	1.26	273	*e*P	Pn	19 13 51.1	+1.2
	baz=272						
NCU				*e*S	Sn	19 14 07.2	+0.1
	baz=272						
NCUH	Zhongli	1.26	273	*e*P	Pn	19 13 50.9	+1.0
	baz=272						
NCUH				*e*S	Sn	19 14 07.8	+0.7
	baz=272						
WHF	Hehuan Shan	1.41	238	*e*P	Pg	19 13 53.8	+0.7
	baz=235						
WHF				*e*S	Sn	19 14 12.5	+1.0
	baz=235						
TWT	Tachien	1.43	243	P	Pg	19 13 55.1	+1.7
	baz=241						
TWT				S	Sn	19 14 12.5	+1.0
	baz=241						
LIOB	Emei	1.44	260	*e*P	Pg	19 13 53.4	-0.2
	baz=258						
LIOB				*e*S	Sg	19 14 12.5	+0.2
	baz=258						
TDCB	Techi	1.44	243	P	Pg	19 13 54.2	+0.5
	baz=241						
TDCB				*e*S	Sg	19 14 12.5	+0.1
	baz=241						
SBCB	Hsinchu	1.45	266	*e*P	Pg	19 13 53.3	-0.4
	baz=264						
SBCB				*e*S	Sg	19 14 12.5	0.0
	baz=264						
NSTT	Nanjuang	1.46	259	*e*P	Pg	19 13 53.7	-0.2
	baz=258						
NSTT				*e*S	Sg	19 14 12.5	-0.3
	baz=258						
HSN	Hsinchu	1.46	266	*e*S	Sb	19 14 11.8	-0.4
	baz=266						
JKRS	Kuro-shima	1.47	117	P	Pg	19 13 54.8	+0.6
ESL	Shilin	1.50	224	*e*P	Pg	19 13 55.3	+0.5
	baz=221						
CHGB	Renai	1.53	237	*e*P	Pg	19 13 55.8	+0.4
	baz=234						
CHGB				*e*S	Sg	19 14 15.4	+0.3
	baz=234						
JIJ	Ishigaki jima	1.53	110	P	Pg	19 13 55.4	+0.1
OWD	Renai	1.59	234	*e*P	Pg	19 13 56.6	+0.1
	baz=231						
OWD				*e*S	Sg	19 14 17.8	+0.8
	baz=231						
WHP	Taichung City	1.61	247	*e*P	Pg	19 13 57.0	+0.1
	baz=245						
WHP				*e*S	Sg	19 14 17.8	+0.1
	baz=245						
JISG	Ishigakijimahi	1.61	101	P	Pb	19 13 55.9	-0.1
EGFH	Guangfu	1.61	221	*e*P	Pb	19 13 55.9	-0.2
	baz=218						
EGFH				*e*S	Sg	19 14 17.3	-0.7
	baz=218						
NMLH	Miaoli	1.66	258	*e*P	Pg	19 13 57.3	-0.5
	baz=256						
DPDB	Guoxing	1.73	240	*e*P	Pg	19 13 59.0	-0.3
	baz=238						
VWDT	VWDT	1.74	229	*e*P	Pb	19 13 58.4	+0.2
	baz=227						
VWDT				*e*S	Sb	19 14 20.6	+0.3
	baz=227						
HGSD	Ruisui	1.76	217	*e*P	Pb	19 13 57.9	-0.6
	baz=214						
HGSD				*e*S	Sg	19 14 21.6	-0.8
	baz=214						
PTSB	Yuanli	1.76	255	*e*S	Sb	19 14 20.6	-0.3
	baz=254						
EHY	Hungye	1.80	220	P	Pb	19 13 59.4	+0.1
	baz=217						
EHY				*e*S	Sb	19 14 22.4	+0.3
	baz=217						
SMLT	Sun Moon Lake	1.83	237	*e*P	Pg	19 14 01.4	+0.2
	baz=234						
SMLT				*e*S	Sg	19 14 24.2	-0.8
	baz=234						
WDJ	Dajia District	1.84	253	*e*P	Pb	19 14 00.3	+0.3
	baz=251						
WDJ				*e*S	Sb	19 14 23.1	-0.2
	baz=251						
SSLB	Suanglung	1.85	233	*e*P	Pg	19 14 01.7	+0.3
	baz=231						
SSLB				*e*S	Sb	19 14 23.5	0.0
	baz=231						
TCU	Taichung	1.89	247	*e*P	Pb	19 14 00.8	+0.1
	baz=245						
YULB	Yu-li	1.91	218	*e*P	Pg	19 14 01.9	-0.6
	baz=216						
TWF1	Yuli	1.94	217	*e*P	Pb	19 14 00.6	-1.0
	baz=215						
WHYT	Xinyi Township	1.98	233	P	Pg	19 14 03.0	-0.9
	baz=231						
WHYT				*e*S	Sb	19 14 27.3	+0.1
	baz=231						
WJS	Zhushan	2.00	238	*e*P	Pb	19 14 03.0	+0.3
	baz=236						
WJS				*e*S	Sb	19 14 27.1	-0.6
	baz=236						
WNT	Mingjian	2.00	240	*e*P	Pb	19 14 03.2	+0.5
	baz=237						
WNT				*e*S	Sb	19 14 27.3	-0.5
	baz=237						
FULB	Fuli	2.06	215	*e*P	Pb	19 14 03.7	0.0
	baz=212						
ALS	Alishan	2.13	230	*e*P	Pb	19 14 05.2	+0.1
	baz=227						
CHN5	Tsauling	2.17	233	*e*P	Pb	19 14 05.8	+0.2
	baz=231						
CHN5				*e*S	Sb	19 14 31.5	-1.1
	baz=231						
WGK	Gukeng	2.20	237	*e*P	Pb	19 14 05.8	-0.3
	baz=235						
WGK				*e*S	Sb	19 14 32.6	-0.9
	baz=235						
WDLH	Douliu	2.22	237	*e*P	Pb	19 14 06.3	-0.1
	baz=235						
WDLH				*e*S	Sb	19 14 33.0	-1.0
	baz=235						
ELDTW	Lidau	2.22	220	*e*P	Pb	19 14 06.3	-0.3
	baz=218						
ELDTW				*e*S	Sb	19 14 33.4	-1.0
	baz=218						
RLNB	Erlin	2.26	244	*e*P	Pb	19 14 06.5	-0.6
	baz=242						
RLNB				*e*S	Sn	19 14 33.4	+1.6
	baz=242						
CHN4	Tsaushan	2.38	230	*e*P	Pb	19 14 08.1	-1.0
	baz=228						
CHN4				*e*S	Sb	19 14 37.2	-1.6
	baz=228						
TPUB	Ta-pu	2.39	228	*e*P	Pb	19 14 08.5	-0.8
	baz=226						
TPUB				*e*S	Sb	19 14 39.4	+0.4
	baz=226						
STYT	Tauyuan	2.40	224	*e*P	Pb	19 14 08.5	-1.1
	baz=222						
CHY	Chiayi	2.41	235	*e*S	Sb	19 14 37.7	-1.9
	baz=233						
WTP	Ta-pu	2.44	228	*e*P	Pb	19 14 10.1	0.0
	baz=225						
WTP				*e*S	Sb	19 14 40.3	-0.1
	baz=225						
TWGBT	Beinan	2.49	214	*e*P	Pb	19 14 10.7	-0.3
	baz=212						
TWG	Pinlang	2.49	214	*e*P	Pn	19 14 08.3	+1.4
	baz=212						
CHN1	Nanshi	2.54	228	*e*P	Pb	19 14 10.5	-1.3
	baz=226						
CHN1				*e*S	Sb	19 14 41.4	-1.8
	baz=226						
SGST	Jiashian	2.57	225	*e*P	Pb	19 14 11.4	-1.0
	baz=223						
SGST				*e*S	Sb	19 14 42.1	-2.1
	baz=223						
SLGT	Liugui	2.59	223	*e*P	Pb	19 14 12.2	-0.7
	baz=221						
SLGT				*e*S	Sb	19 14 43.0	-1.9
	baz=221						

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*IGIL **07** 19:21:29.5,32°.98N×12°.60W,h1^{km},ML2.2*

*MDD **07** 19:21:30.5±2.4,33°.19N×12°.66W,h0^{km},mb4.3/1,Error ellipse: s-maj=55.3km s-min=7.9km az=148.0,PRXIMO*

*INMG **07** 19:21:35.9±1.1,32°.97N×12°.61W,h10^{km},ML2.4,Error ellipse: s-maj=4.5km s-min=3.3km az=130.0*

*CNRM **07** 19:21:37.6±1.9,32°.90N×11°.95W,h10^{km},Error ellipse:*

s-maj=15.2km s-min=14.4km az=173.0

ISC 07 19:21:28.6±1.4,**33.°08N**±0.°05×**12.°49W**±0.°07,**h10^{km},n39, σ2.^{s}12**/62,**Madeira Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMPS	Porto Santo	3.23	271	P	Pn	19 22 19.4	+0.1
PMPS	Porto Santo	3.23	271	eP	Pn	19 22 19.6	+0.3
PMPST	Porto Santo, M	3.23	271	eP	Pn	19 22 19.4	+0.1
PMAR	Madeira	3.74	266	P	Pn	19 22 26.1	-0.4
PMAR	Madeira	3.74	266	eP	Pn	19 22 26.1	-0.4
PMAR				A	A	19 23 09.1	
	11nm,0.5s						
SRHM	Skhour des Reh	3.92	98	P	Pn	19 22 31.5	+2.7
SRHM				S	Sn	19 23 12.3	-2.7
PMOZ	Porto Moniz, M	3.96	268	P	Pn	19 22 29.3	-0.2
PMOZ	Porto Moniz, M	3.96	268	eP	Pn	19 22 29.3	-0.2
TTIG	Tnine Tigouga,	4.28	125	P	Pn	19 22 35.2	+1.4
TTIG				S	Sn	19 23 19.6	-4.3
OUK	Oukaimeden	4.35	114	P	Pn	19 22 37.4	+2.4
OUK				S	Sn	19 23 24.6	-1.3
ZHG	ZHG	4.91	84	P	Pn	19 22 44.6	+2.1
ZHG				S	Sn	19 23 37.0	-2.5
PFVI	Vila Bisbo	5.03	36	P	Pn	19 22 45.2	+1.1
	3.7nm,0.2s,SNR=7.9						
PFVI				S	Sn	19 23 41.0	-1.3
	2.2nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	5.03	36	S	Sn	19 23 41.4	-1.0
PFVI				A	A	19 23 44.6	
	7.8nm,0.4s						
MORF	Marmelete	5.26	36	eP	Pn	19 22 49.1	+1.8
MORF				eS	Sn	19 23 47.0	-0.9
MORF				AML	AML	19 23 48.8	
	comp=N,3.4nm,0.1s						
MORF	Marmelete	5.26	36	P	Pn	19 22 49.1	+1.8
MORF				S	Sn	19 23 47.0	-0.9
	comp=N,3.4nm,0.1s						
MORF	Marmelete	5.26	36	eP	Pn	19 22 49.0	+1.8
MORF				S	Sn	19 23 45.8	-2.1
MORF				A	A	19 23 48.6	
	comp=N,4.0nm,0.8s						
OUZM	OUZ	5.33	112	P	Pn	19 22 50.5	+2.2
OUZM				S	Sn	19 23 49.4	-0.5
PTEO	Sao Teotonio	5.41	34	S	Sn	19 23 50.5	-1.2
	comp=N,1.6nm,0.1s						
PTEO	Sao Teotonio	5.41	34	S	Sn	19 23 50.5	-1.2
PTEO				A	A	19 23 54.3	
	comp=N,3.1nm,0.1s						
PBDV	Barranco-do-Ve	5.58	41	P	Pn	19 22 54.0	+2.3
PBDV				S	Sn	19 23 53.7	-2.2
	comp=N,2.7nm,0.1s						
PBDV	Barranco-do-Ve	5.58	41	eP	Pn	19 22 54.0	+2.3
PBDV				S	Sn	19 23 53.7	-2.2
PBDV				A	A	19 23 56.7	
	comp=N,2.7nm,0.1s						
PCVE	Castro Verde	5.82	37	S	Sn	19 24 00.1	-1.5
	comp=N,1.6nm,0.3s						
PCVE	Castro Verde	5.82	37	S	Sn	19 24 00.1	-1.5
PCVE				A	A	19 24 02.3	
	comp=N,1.6nm,0.3s						
PVAQ	Vaqueiros	5.82	41	P	Pn	19 22 57.1	+2.2
PVAQ				S	Sn	19 23 59.2	-2.4
	comp=N,2.3nm,0.3s						
PVAQ	Vaqueiros	5.82	41	eP	Pn	19 22 57.1	+2.2
PVAQ				S	Sn	19 23 59.2	-2.4
PVAQ				A	A	19 24 03.3	
	comp=N,2.3nm,0.3s						
MESJ	Messejana	5.89	35	eP	Pn	19 22 57.3	+1.5
MESJ				eS	Sn	19 24 01.6	-1.8
MESJ				AML	AML	19 24 04.1	
	comp=N,2.1nm,0.1s						
MESJ	Messejana	5.89	35	P	Pn	19 22 57.3	+1.5
MESJ				S	Sn	19 24 01.6	-1.8
	comp=N,2.1nm,0.1s						
PNCL	Nicolau / Gran	5.96	32	P	Pn	19 23 00.0	+3.1
PNCL				S	Sn	19 24 03.5	-1.8
	comp=N,1.9nm,0.2s						
PNCL	Nicolau / Gran	5.96	32	eP	Pn	19 23 00.0	+3.1
PNCL				S	Sn	19 24 03.5	-1.8
PNCL				A	A	19 24 07.6	
	comp=N,1.9nm,0.2s						
EGRO	El Granado	6.04	41	P	Pn	19 23 00.5	+2.6
	comp=N,0.2nm,0.1s,SNR=7.9						
EGRO				S	Sn	19 24 06.2	-0.9
	comp=N,1.1nm,0.1s,SNR=7.9						
CZD	Col de Zad	6.26	88	P	Pn	19 23 04.1	+2.9
CZD				S	Sn	19 24 12.0	-0.9
TZRR	Tazzarine	6.32	109	P	Pn	19 23 02.2	+0.4
TZRR				S	Sn	19 24 10.6	-3.5
MD31	MD31	6.50	90	P	Pn	19 23 06.9	+2.5
MD31				S	Sn	19 24 15.6	-3.0
MDT	Midelt	6.63	90	P	Pn	19 23 08.9	+2.6
MDT				S	Sn	19 24 18.7	-3.3
EMIN	Mina Concepcio	6.66	44	P	Pn	19 23 08.9	+2.4
	comp=N,0.1nm,0.1s,SNR=7.9						
EMIN				S	Sn	19 24 20.1	-2.4
	comp=N,0.8nm,0.1s,SNR=7.9						
PMTG	Montargil	6.90	29	P	Pn	19 23 13.1	+3.4
PMTG				S	Sn	19 24 25.8	-2.5
	comp=N,0.7nm,0.3s						
PMTG	Montargil	6.90	29	eP	Pn	19 23 13.1	+3.4
PMTG				S	Sn	19 24 25.8	-2.5
PMTG				A	A	19 24 27.6	
	comp=N,0.7nm,0.3s						
PMRV	Marv??o	7.55	32	S	Sn	19 24 41.0	-3.4
	comp=N,1.0nm,0.3s						
PMRV	Marv??o	7.55	32	S	Sn	19 24 41.0	-3.4
PMRV				A	A	19 24 43.8	
	comp=N,1.0nm,0.3s						

IDC 07 19:28:11.3±1.9,**3.°25S**×**144.°87E,h0^{km},mb3.4**/2, **mb1 3.8**/3,**mb1mx3.3**/51,**mbtmp3.5**/3,**ML3.7**/1,**MS3.7**/3, **Ms1 3.7**/3,**ms1mx2.9**/29,**Error ellipse: s-maj=128.5km s-min=31.3km az=117.0,Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	19.52	211	P	P	19 32 40.8	+0.4
	0.2nm,0.3s,baz=32,slow=10,SNR=18						
ASAR	Alice Springs	22.90	207	P	P	19 33 16.5	-0.4
	0.5nm,0.6s,baz=26,slow=14,SNR=10.0						
KSRS	Korea Array	43.45	340	LR	LR	19 52 10.8	
	comp=Z,14nm,20.7s,baz=335,slow=33						
PSI	Prapat	46.32	277	LR	LR	20 00 49.1	
	comp=Z,162nm,18.6s,baz=166,slow=42						
RPZ	Rata Peaks	46.50	154	LR	LR	19 56 23.6	
	comp=Z,208nm,18.0s,baz=207,slow=36						
ILAR	Eielson Array	83.81	24	P	P	19 40 42.5	+0.2
	0.5nm,1.0s,baz=240,slow=7.0,SNR=2.3						

IDC ***07*** *19:36:31.4±2.6,5.°67S×133.°85E,h0^{km},mb3.8/3, mb1 4.0/6,mb1mx3.6/42,mbtmp3.9/6,ML3.8/3,Error ellipse: s-maj=91.4km s-min=28.7km az=82.0*

NEIC ***07*** *19:36:35.1±2.8,5.°69S±0.°07×134.°03E±0.°10,h33^{km}±4^{km}, mb4.0/7,Error ellipse: s-maj=15.4km s-min=8.3km az=59.0*

ISC 07 19:36:34.5±0.7,**5.°75S**±0.°06×**133.°87E**±0.°09,**h32^{km},n30, σ2.^{s}53**/36,**mb3.9**/7,**Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	3.24	330		Pn	19 37 22.9	-0.3
SAUI	Saumlaki	3.38	229	Pn	Pn	19 37 27.7	+2.6
SIJI	Sorong	5.50	332	Pn	Pn	19 37 54.5	+0.2
	1.2nm,0.3s,baz=45,slow=3.2,SNR=6.7						
SIJI				Sn	Sn	19 38 50.1	-6.4
	2.2nm,0.3s,baz=246,slow=20,SNR=12						
MTN	Manton Dam	7.55	201		Pn	19 38 24.4	+2.0
SOEI	Soe	10.31	247	Pn	Pn	19 39 02.5	+2.0
SOEI					Sn	19 40 55.2	+0.1
KNRA	Kununurra	11.06	207		Pn	19 39 12.9	+2.2
KNRA					Sn	19 41 12.3	-1.1
COEN	Coen	12.27	132	Pn	Pn	19 39 26.7	-0.5
WB0	Warramunga Arr	13.94	178	Pn	Pn	19 39 50.1	+0.1
WRAB	Tennant Creek	14.11	178	Pn	Pn	19 39 53.8	+1.5
WB2	Warramunga Arr	14.12	178		Pn	19 39 51.3	-1.1
WRA	Warramunga Arr	14.12	178	Pn	Pn	19 39 50.7	-1.7
	0.2nm,0.3s,baz=356,slow=13,SNR=12						
WRA				Sn	Sn	19 42 22.8	-5.3
	0.4nm,0.3s,baz=353,slow=24,SNR=2.7						
WRA	Warramunga Arr	14.12	178		Pn	19 39 52.3	-0.1
WR0	Warramunga Arr	14.14	177	Pn	Pn	19 39 52.8	0.0
FITZ	Fitzroy Crossi	14.67	213	Pn	Pn	19 39 59.0	-0.9
	0.4nm,0.3s,baz=40,slow=9.1,SNR=13						
FITZ				Sn	Sn	19 42 34.4	-7.1
	0.6nm,0.3s,baz=224,slow=18,SNR=3.6						
FITZ	Fitzroy Crossi	14.67	213		Pn	19 39 59.2	-0.7
FITZ					Sn	19 42 36.9	-4.6
AS31	Alice Springs	17.81	180	P	P	19 40 42.2	+1.5
ASAR	Alice Springs	17.82	180	P	P	19 40 43.3	+2.6
	0.9nm,0.3s,baz=8.3,slow=12,SNR=64						
ASAR				S	Sn	19 43 52.1	-5.8
	0.1nm,0.3s,baz=353,slow=26,SNR=1.5						
ASAR	Alice Springs	17.82	180	P	P	19 40 43.7	+3.0
FORT	Forrest	25.49	192	P	P	19 42 03.0	+3.0
STKA	Stephens Creek	26.98	165	P	P	19 42 16.7	+3.2
STKA				IAmb	IAmb	19 42 35.0	
	comp=Z,2.1nm,1.5s						
BBOO	Buckleboo	27.00	176	P	P	19 42 15.5	+1.8
BBOO				IAmb	IAmb	19 42 25.8	
	comp=Z,16nm,1.2s						
CMAR	Chiang Mai Arr	42.00	306	P	P	19 44 24.6	+1.3
	comp=Z,0.3nm,0.4s,baz=133,slow=7.2,SNR=5.1						
OXZ	Oxford	50.29	144	P	P	19 45 26.8	-1.3
TUWZ	Tuamarina	50.35	141	P	P	19 45 26.6	-2.0
MK31	Makanchi Array	69.35	325	P	P	19 47 40.6	+1.5
MK31				IAmb	IAmb	19 47 41.6	
	comp=Z,0.9nm,0.9s						
MKAR	Makanchi Array	69.35	325	P	P	19 47 40.8	+1.6
	comp=Z,1.4nm,0.7s,baz=115,slow=8.0,SNR=13						
MKAR	Makanchi Array	69.35	325	P	P	19 47 40.5	+1.3
MAKZ	Makanchi	69.54	325	P	P	19 47 41.7	+1.4
MAKZ				IAmb	IAmb	19 47 42.2	
	comp=Z,1.3nm,0.7s						
BVAR	Borovoye Array	79.10	327	P	P	19 48 36.7	+0.9
	comp=Z,0.9nm,0.7s,baz=108,slow=9.5,SNR=5.8						
ABKAR	Akbulak array	83.95	321	P	P	19 49 02.5	+1.0

NNC 07 19:36:57.9±3.2,**43.°94N**×**86.°75E,h0^{km},mb3.7,mpv3.5, 4C-4D,Error ellipse: s-maj=23.0km s-min=18.0km az=106.0,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZSN	Zaisan	3.75	340	Pg	Pg	19 38 12.6	+2.8
	18nm,0.8s						
ZSN				Lg	Lg	19 39 06.2	
	13nm,0.7s						
MK31	Makanchi Array	4.25	314	⇑Pn	Pn	19 38 02.7	-1.1
	0.3nm,0.3s,baz=129,slow=14,SNR=35						
MK31				Sn	Sn	19 38 55.2	+1.1
	3.1nm,0.7s,baz=131,slow=20,SNR=3.6						
MK31				⇓Lg	Lg	19 39 10.1	
	20nm,1.0s,baz=120,slow=27,SNR=5.3						
MAKZ	Makanchi	4.42	312	⇓Pn	Pn	19 38 05.1	-1.1
	1.0nm,0.3s						
MAKZ				⇑Sn	Sn	19 38 58.2	-0.2
	2.1nm,0.6s						
MAKZ				⇓Lg	Lg	19 39 17.6	
	7.4nm,0.8s						
DJR	Jarkent	5.02	277	Pg	Pb	19 38 30.2	+3.5
DJR				Lg	Lg	19 39 37.0	
SHLS	Shalkode	5.35	264	Pg	Pb	19 38 29.8	-2.5
	5.9nm,0.5s						
SHLS				Lg	Lg	19 39 36.5	
	12nm,0.6s						
KAPS	Kapalarasan	5.45	287	Pg	Pg	19 38 41.4	-0.8
	1.8nm,0.5s						
KAPS				Lg	Lg	19 39 55.7	
	9.9nm,0.8s						
UZB	Uzynbulak	5.67	265	Pg	Pg	19 38 42.4	-4.1
	2.5nm,0.8s						
UZB				Lg	Lg	19 39 57.1	
	5.7nm,0.9s						
TDK	Taldyqorghan	6.06	283	Pg	Pg	19 38 50.9	-3.2
	9.6nm,0.2s						
TDK				Lg	Lg	19 40 12.5	
	33nm,0.8s						
KURBB	Kurchatov Arra	8.71	323	⇓Pn	Pn	19 39 02.9	-2.1
	3.1nm,0.9s						
KURBB				⇑Lg	Lg	19 41 33.0	
	13nm,0.8s						
KURK	Kurchatov	8.74	324	⇑Lg	Lg	19 41 33.1	
	5.7nm,0.8s						

GII ***07*** *19:36:59.5±0.8,28.°09N×34.°66E,h2^{km}±17^{km},mb4.3/5, MD4.2/5*

HLW ***07*** *19:37:03.2,28.°25N×34.°71E,h10^{km}±31^{km},Md3.0,Ml3.3*

SGS ***07*** *19:37:05,28.°31N×34.°62E,h13^{km},Ml3.6*

ISC 07 19:37:03.4±2.4,**28.°27N**±0.°07×**34.°6E**±0.°1,**h10^{km}**±11^{km}, **n30,σ1.^{s}06**/39,**Egypt**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSHS		0.18	80	S	Sg	19 37 11.1	+1.3
BDAS	Al Bad`	0.47	70	P	Pb	19 37 13.1	-0.7
HAQS	Haql	0.83	20	P	Pg	19 37 19.2	-0.2
HAQS				S	Sg	19 37 30.0	-0.1
JLOS		0.91	59	P	Pg	19 37 20.6	-0.3
JLOS				S	Sg	19 37 32.1	-0.7
HQLS		1.10	22	P	Pb	19 37 23.2	-1.4
DRHJ	Al-Direh	1.13	16	Pg	Pb	19 37 24.0	-1.0
WTBKS	WTBKS	1.17	99	P	Pb	19 37 25.3	-0.5
HHRG	Al Ghardaqah	1.39	221	AMP		19 37 00.5	
	baz=220						
EIL	Elat	1.43	12	Pn	Pn	19 37 27.5	-1.9
EIL				Sn	Sg	19 37 49.7	+0.3
AQBJ	Aqaba	1.50	15	Pn	Pn	19 37 28.6	-1.9
AQBJ				Sn	Sg	19 37 51.8	0.0
MBRI	Mt Berech	1.54	10	Pn	Pn	19 37 29.8	-1.3
MBRI				Sn	Sg	19 37 54.0	+0.9
TBKS	Tabuk	1.71	91	P	Pn	19 37 33.3	0.0
HRFI	Mount Harif	1.80	12	Pn	Pn	19 37 33.1	-1.5
HRFI				Sn	Sb	19 37 58.6	-0.6
KRMI	Paran Flat	1.84	3	Pn	Pn	19 37 34.1	-1.1
KRMI				Sn	Sb	19 38 00.8	+0.4
PRNI	Paran	2.10	10	Pn	Pn	19 37 37.7	-1.1
PRNI				Sn	Sb	19 38 08.1	+0.2
WJHS		2.21	133	P	Pn	19 37 39.5	-0.7
RMNI	Mount Ramon	2.32	3	Pn	Pn	19 37 41.9	+0.1
ZFRI	Zfri	2.33	12	Pn	Pn	19 37 40.8	-1.0
ZFRI				Sn	Sb	19 38 13.9	-0.5
KZIT	Kziot	2.63	356	Pn	Pn	19 37 45.4	-0.6
DAMI2	DAM2	2.98	14	Pn	Pn	19 37 50.2	-0.6
KARJ	KARJ	2.98	18	Pn	Pg	19 38 02.1	+1.5
YTIR	Yattir	3.12	8	Pn	Pn	19 37 52.0	-0.7
YTIR				Sn	Sn	19 38 33.4	+3.3
GHAJ	Ghor Haditha	3.14	15	Pn	Pn	19 37 53.1	+0.2
AMAZ	Amatzia	3.26	5	Pn	Pn	19 37 54.3	-0.4
DSI	Dead Sea	3.36	11	Pn	Pn	19 37 55.3	-0.7
SLTI	Sal'it	3.98	5	Pn	Pn	19 38 03.9	-0.6
HMDT	Nahal Hemdat	4.05	11	Pn	Pn	19 38 05.2	-0.3
QRNJ	Al-Qirein	4.14	12	Pn	Pn	19 38 06.2	-0.4
MMLI	Mount Malkishu	4.21	10	Pn	Pn	19 38 07.5	-0.3
OFRI	`Ofer	4.35	4	Pn	Pn	19 38 09.5	-0.1

ISC 07 19:48:53.0±1.8,**50.°28N**±0.°09×**18.°85E**±0.°04,**h0^{km},n5, σ0.^{s}35**/10,**Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	Ojcow	0.61	95	ePg	Pg	19 49 04.5	-0.2
OJC				eSg	Sg	19 49 13.0	+0.3
MORC	Moravsky Berou	0.98	240	ePG	Pg	19 49 11.3	-0.4
MORC				eSG	Sg	19 49 24.7	+0.4
LANS	Liptovska Anna	1.20	160	ePG	Pg	19 49 15.5	-0.4
LANS				eSG	Sg	19 49 31.5	+0.2
LANS				eLG	Lg	19 49 34.1	
NIE	Niedzica	1.27	132	ePg	Pg	19 49 17.0	-0.4
NIE				eSg	Sn	19 49 35.6	-0.2
VYHS	Vyhne	1.78	180	ePN	Pb	19 49 26.7	+0.2
VYHS				eSN	Sn	19 49 48.6	+0.2

IDC 07 19:51:43.9±1.7,**2.°96S**×**128.°60E,h0^{km},mb3.7**/2, **mb1 4.1**/4,**mb1mx3.6**/39,**mbtmp3.9**/4,**ML3.9**/2,**MS2.5**/1, **Ms1 2.5**/1,**ms1mx2.3**/27,**Error ellipse: s-maj=44.6km s-min=27.1km az=83.0,Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.38	52	Pn	Pn	19 52 36.6	-1.5
	22nm,0.3s,baz=203,slow=15,SNR=52						
SIJI				Sn	Sn	19 53 12.4	-6.6
	9.4nm,0.3s,baz=48,slow=23,SNR=9.6						
KAPI	Kappang	9.05	257	LR	LR	19 57 47.0	
	comp=Z,30nm,20.0s,baz=108,slow=40						
WRA	Warramunga Arr	17.79	162	P	P	19 55 54.5	+0.5
	0.3nm,0.3s,baz=337,slow=12,SNR=30						
ASAR	Alice Springs	21.21	166	P	P	19 56 31.2	-0.3
	4.2nm,0.6s,baz=348,slow=12,SNR=10						
MKAR	Makanchi Array	64.11	326	P	P	20 02 20.3	+0.3
	0.5nm,0.9s,baz=116,slow=5.7,SNR=3.2						

NEIC ***07*** *19:59:17.2±1.0,43.°82N±0.°05×105.°19W±0.°03,h0^{km}±1^{km}, ML3.8/68,Error ellipse: s-maj=9.0km s-min=3.0km az=157.0*

IDC ***07*** *19:59:17.7±0.8,44.°00N×105.°64W,h0^{km},mb3.9/7, mb1 4.0/13,mb1mx3.8/42,mbtmp3.8/13,ML3.6/5,MS2.5/1, Ms1 2.5/1,ms1mx2.2/45,Error ellipse: s-maj=21.2km s-min=6.8km az=144.0*

ISC 07 19:59:16.7±0.6,**43.°81N**±0.°06×**105.°22W**±0.°05,**h0^{km},n102, σ0.^{s}92**/102,**mb3.9**/7,**Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.91	69		Pb	19 59 35.4	0.0
K22A	Casper	1.50	220		Pn	19 59 44.0	-1.0
K22A				IAML		20 00 07.0	
	comp=E,2µm,0.8s						
K22A				IAML		20 00 07.4	
	comp=N,2µm,0.3s						
RWWY	Rawlins	2.58	215		Pn	20 00 00.5	+0.6
RWWY				IAML		20 00 36.4	
	comp=N,432nm,0.9s						
RWWY				IAML		20 00 36.9	
	comp=N,686nm,0.7s						
N23A	Red Feather La	2.96	191		Pn	20 00 06.3	+1.1
N23A				IAML		20 00 49.5	
	comp=N,294nm,0.6s						
LAO	LASA Array	2.97	346		Pn	20 00 05.8	+0.7
LAO				IAML		20 00 50.8	
	comp=N,480nm,0.7s						
LAO				IAML		20 00 58.4	
	comp=N,409nm,0.8s						
RLMT	Red Lodge	3.19	296		Pn	20 00 09.1	+0.9
RLMT				IAML		20 01 00.3	
	comp=N,172nm,0.6s						
RLMT				IAML		20 01 01.5	
	comp=N,177nm,0.3s						
BW06	Boulder Array	3.34	253		Pn	20 00 11.1	+0.7
BW06				IAML		20 00 59.2	
	comp=E,119nm,0.3s						
BW06				IAML		20 01 00.1	
	comp=N,148nm,0.6s						
PD31	Pinedale Array	3.34	253		Pn	20 00 10.8	+0.4
PDAR	Pinedale Array	3.34	253	Pn	Pn	20 00 10.9	+0.6
	comp=N,23nm,0.3s,baz=68,slow=15,SNR=192						
PDAR				Pg	Pb	20 00 16.3	-0.6
	comp=N,58nm,0.3s,baz=69,slow=18,SNR=69						
PDAR				Lg	Lg	20 00 56.1	
	comp=N,30nm,0.3s,baz=58,slow=29,SNR=2.4						
PDAR				LR	LR	20 01 47.3	
	comp=N,72nm,20.9s,baz=348,slow=48						
PDAR	Pinedale Array	3.34	253		Pn	20 00 10.7	+0.4
YNE	Yellowstone No	3.64	291		Pn	20 00 14.9	+0.4
YMP	Mirror Lake Pl	3.67	286		Pn	20 00 15.6	+0.6
OGNE	Ogallala	3.71	139		Pn	20 00 16.1	+0.9
OGNE				IAML		20 01 21.4	
	comp=N,257nm,0.9s						
GCMT	Greycliff	3.74	304		Pn	20 00 16.9	+1.1
LKWY	Lake	3.81	283		Pn	20 00 17.2	+0.4
LKWY				IAML		20 00 42.4	
	comp=N,123nm,0.6s						
H17A	Grant Village	3.91	281		Pn	20 00 19.9	+1.7
H17A				IAML		20 01 24.9	
	comp=N,81nm,0.3s						
YUF	Upper Falls	3.91	285		Pn	20 00 20.2	+1.9
FLWY	Flagg Ranch	3.97	276		Pn	20 00 19.7	+0.7
ISCO	Idaho Springs	4.01	184		Pn	20 00 21.0	+1.3
YNR	Norris Junctio	4.03	285		Pn	20 00 20.6	+0.7
SNOW	Snow King Moun	4.04	267		Pn	20 00 21.5	+1.5
SNOW				IAML		20 01 30.9	
	comp=N,89nm,1.7s						
SNOW				IAML		20 01 32.6	
	comp=N,84nm,0.9s						
YPP	Pitchstone Pla	4.06	278		Pn	20 00 21.0	+0.7
REDW	Red Top Meadow	4.12	266		Pn	20 00 22.0	+1.0
REDW				IAML		20 01 37.7	
	comp=N,122nm,0.7s						
REDW				IAML		20 01 47.6	
	comp=N,125nm,0.8s						
YHH	Holmes Hill	4.16	286		Pn	20 00 22.0	+0.3
FXWY	Fox Creek	4.22	270		Pn	20 00 23.2	+0.8
YMR	Madison River	4.22	284		Pn	20 00 23.0	+0.6
O20A	White River Ci	4.31	213		Pn	20 00 24.7	+1.0
O20A				IAML		20 01 35.8	
	comp=E,111nm,0.8s						
O20A				IAML		20 01 35.9	
	comp=N,116nm,0.8s						
YHB	Horse Butte	4.40	284		Pn	20 00 25.2	+0.3
YHL	Hebgen Lake	4.41	286		Pn	20 00 25.3	+0.2
AHID	Auburn Hatcher	4.42	258		Pn	20 00 26.1	+0.9
SUSD	Miller	4.55	80		Pn	20 00 27.0	+0.2
RDMU	Red Mountain	4.57	226		Pn	20 00 28.1	+0.8
QLMT	Earthquake Lak	4.58	285		Pn	20 00 27.5	+0.2
DGMT	Dagmar	4.72	8		Pn	20 00 30.7	+1.6
SMCO	Snowmass	4.81	197		Pn	20 00 32.4	+1.7
SMCO				IAML		20 01 51.6	
	comp=N,45nm,0.7s						
SMCO				IAML		20 01 55.1	
	comp=N,58nm,1.1s						
HWUT	Hardware Ranch	5.17	247		Pn	20 00 36.1	+0.6
HWUT				IAML		20 02 04.9	
	comp=N,64nm,1.2s						
HWUT				IAML		20 02 22.3	
	comp=N,65nm,0.9s						
KSCO	Kaye Shedlock’	5.17	157		Pn	20 00 36.0	+0.5
EGMT	Eagleton	5.27	325		Pn	20 00 37.0	+0.2
TCUT	Toone Canyon	5.31	242		Pn	20 00 37.7	+0.3
DLMT	Dillon	5.50	289		Pn	20 00 40.9	+1.0
LRM	Limekiln Ridge	5.53	294		Pn	20 00 41.3	+0.8
MCMT	McKenzie Canyo	5.57	283		Pn	20 00 41.6	+0.6
JLU	Jordanelle	5.63	237		Pn	20 00 42.2	+0.3
MDND	Maddock	5.63	42		Pn	20 00 42.4	+0.7
BGNE	Belgrade	5.74	112	Pn	Pn	20 00 43.3	+0.2
CTU	Camp Tracy	5.76	240		Pn	20 00 44.0	+0.3
P17A	Butcher Ranch,	5.99	226		Pn	20 00 47.2	+0.5
MPU	Maple Canyon	6.10	234		Pn	20 00 49.4	+1.0
SRU	San Rafael Swe	6.16	222		Pn	20 00 49.0	-0.1
S22A	4UR Ranch, Cre	6.18	192		Pn	20 00 50.8	+1.3
ECSD	EROS Data Cent	6.23	88		Pn	20 00 51.1	+1.3
TMUT	Trail Mountain	6.36	227		Pn	20 00 53.0	+1.1
NLU	North Lily Min	6.40	235		Pn	20 00 52.0	-0.4
BGU	Big Grassy Mou	6.46	246		Pn	20 00 53.8	+0.6
CBKS	Cedar Bluff	6.47	139	Pn	Pn	20 00 52.9	-0.3
Q16A	Castle Valley	6.63	225		Pn	20 00 56.0	+0.5
T25A	Trinidad	6.69	174		Pn	20 00 57.0	+0.6
DUG	Dugway, Tooele	6.71	240		Pn	20 00 57.0	+0.4
MSO	Missoula	6.85	299		Pn	20 00 58.6	+0.1
MVCO	Mesa Verde	7.05	202		Pn	20 01 02.8	+1.4
MSU	Marysvale	7.45	227		Pn	20 01 07.6	+0.7
JTMT	Jette	7.46	305		Pn	20 01 07.7	+0.8
MTPU	Mount Pierson	7.81	225		Pn	20 01 12.5	+0.6
AGMN	Agassiz Nation	7.90	52		Pn	20 01 12.7	-0.1
WALA	Waterton Lakes	7.98	314		Pn	20 01 13.6	-0.3
ELK	Elko	8.04	251	Pn	Pn	20 01 15.6	+0.7
	comp=N,0.9nm,0.3s,baz=72,slow=11,SNR=12						
ELK				Lg	Lg	20 03 27.0	
	comp=N,0.2nm,0.3s,baz=194,slow=19,SNR=2.0						
PSUT	Pine Spring	8.38	234		Pn	20 01 21.0	+1.4
F10A	Beach Ranch, E	8.80	288		Pn	20 01 26.4	+1.2
KNB	Kanab	8.92	223		Pn	20 01 27.3	+0.3
I10CA	LAC DU BONNET	8.96	41	*i*		20 54 50.0	
	baz=226,slow=332,SNR=3.0						
ULM	Lac du Bonnet	9.06	41	Pn	Pn	20 01 27.8	-0.9
	comp=N,3.0nm,0.3s,baz=233,slow=11,SNR=30						
ULM				Pg		20 02 02.3	
	comp=N,2.4nm,0.3s,baz=246,slow=15,SNR=5.4						
ULM				Lg	Lg	20 04 00.1	
	comp=N,1.0nm,0.3s,baz=322,slow=22,SNR=3.9						
ULM	Lac du Bonnet	9.06	41		Pn	20 01 27.6	-1.1
U15A	North Rim	9.14	219		Pn	20 01 30.2	+0.1
NEW	Newport	9.40	302	Pn	Pn	20 01 33.4	0.0

	comp=N,0.4nm,0.3s,baz=106,slow=12,SNR=3.5						
NEW				Lg	Lg	20 04 01.8	
	comp=N,0.1nm,0.3s,baz=64,slow=19,SNR=1.8						
NEW	**Newport**	**9.40**	**302**		**Pn**	**20 01 33.8**	**+0.3**
WUAZ	**Wupatki**	**9.54**	**212**		**Pn**	**20 01 36.0**	**+0.6**
KVN	**Kaiserville**	**10.78**	**248**		**Pn**	**20 01 53.9**	**+1.5**
FFC	**Flin Flon**	**11.13**	**10**		**Pn**	**20 01 56.2**	**-0.7**
NV11	**Mina Array Sit**	**11.14**	**246**		**Pn**	**20 01 58.9**	**+1.7**
NVAR	**Mina Array Bea**	**11.23**	**246**	Pn	**Pn**	**20 01 59.6**	**+0.9**
	comp=N,0.3nm,0.3s,baz=49,slow=12,SNR=10						
NVAR	**Mina Array Bea**	**11.23**	**246**		**Pn**	**20 01 59.0**	**+0.3**
COWI	**Conover**	**11.62**	**73**		**Pn**	**20 02 03.6**	**-0.2**
D41A	**Chassel**	**12.14**	**69**		**Pn**	**20 02 10.6**	**-0.2**
YBH	**Yreka Blue Hor**	**13.02**	**267**	Pn	**Pn**	**20 02 26.5**	**+3.5**
	comp=N,0.2nm,0.3s,baz=49,slow=6.5,SNR=4.2						
YBH	**Yreka Blue Hor**	**13.02**	**267**		**Pn**	**20 02 23.7**	**+0.7**
CCAR	**Cane Creek**	**14.38**	**129**	P	**P**	**20 02 48.0**	**-0.7**
TXAR	**Lajitas Array**	**14.50**	**175**	Pn	**P**	**20 02 49.8**	**-0.4**
	comp=N,0.2nm,0.3s,baz=63,slow=5.8,SNR=3.6						
TXAR				Pg	Pn	20 03 43.4	+60
	baz=5.2,slow=15,SNR=4.0						
TXAR				Lg	Lg	20 06 53.1	
	comp=N,0.2nm,0.3s,baz=36,slow=17,SNR=5.2						
YKA	**Yellowknife Ar**	**19.51**	**347**	P	**P**	**20 03 43.9**	**-1.3**
	comp=N,0.2nm,0.3s,baz=157,slow=12,SNR=9.9						
H62A	**Milan**	**24.34**	**76**		**P**	**20 04 34.3**	**-1.7**
FRB	**Frobisher Bay**	**28.82**	**33**	P	**P**	**20 05 18.4**	**+2.2**
	comp=N,0.7nm,0.4s,baz=188,slow=3.1,SNR=3.0						
ILAR	**Eielson Array**	**31.24**	**327**	P	**P**	**20 05 37.2**	**-0.3**
	comp=N,0.1nm,0.5s,baz=110,slow=8.0,SNR=2.2						
ILAR	**Eielson Array**	**31.24**	**327**	P	**P**	**20 05 37.1**	**-0.5**
FINES	**FINESS Array B**	**67.95**	**23**	P	**P**	**20 10 17.3**	**+0.4**
	comp=N,1.8nm,0.8s,baz=318,slow=5.4,SNR=3.7						
FINES	**FINESS Array B**	**67.95**	**23**	P	**P**	**20 10 16.7**	**-0.2**
GERES	**GERESS Array B**	**73.35**	**37**	P	**P**	**20 10 50.4**	**+0.3**
	comp=N,0.2nm,0.3s,baz=308,slow=4.8,SNR=1.9						
GERES	**GERESS Array B**	**73.35**	**37**	P	**P**	**20 10 49.9**	**-0.2**
ZALV	**Zalesovo Beam**	**82.24**	**354**	P	**P**	**20 11 39.1**	**-0.3**
	comp=N,1.3nm,0.5s,baz=353,slow=5.4,SNR=5.9						
ZALV	**Zalesovo Beam**	**82.24**	**354**	P	**P**	**20 11 39.0**	**-0.5**
SONM	**Songino Array**	**84.59**	**339**	P	**P**	**20 11 52.7**	**+0.8**
	comp=N,0.4nm,0.5s,baz=6.1,slow=4.2,SNR=4.6						
SONM	**Songino Array**	**84.59**	**339**	P	**P**	**20 11 52.4**	**+0.6**
MKAR	**Makanchi Array**	**89.54**	**355**	P	**P**	**20 12 15.6**	**-0.2**
	comp=N,0.9nm,0.7s,baz=11,slow=4.7,SNR=11						
MKAR	**Makanchi Array**	**89.54**	**355**	P	**P**	**20 12 15.8**	**0.0**

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*KRSC **07** 20:02:45.6±1.6, 50°.46N×156°.89E, h127^{km}±14^{km}, ML3.9*
*IDC **07** 20:02:50.9±3.9, 51°.16N×156°.29E, h187^{km}±68^{km}, mb3.0/2, mb1 3.1/3, mb1mx2.7/37, mbtmp3.3/3, Error ellipse: s-maj=105.4km s-min=57.7km az=68.0*
ISC 07 20:02:44.6±1.8**, 50°.5N**±0°.2×**156°.6E**±0°.2**, h143**^{km}±8^{km}**, n15, σ1^{s}.56**/22**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.40**	**305**	*e*P	**Pn**	**20 03 05.7**	**+1.0**
SKR				*e*S	**Sn**	**20 03 19.8**	**-0.1**
ALID	**Alaid**	**0.80**	**302**	*e*P	**Pn**	**20 03 07.6**	**+0.3**
PAU	**Pauzhetka**	**1.02**	**6**	*e*P	**Pn**	**20 03 09.5**	**+0.6**
PAU				*e*S	**Sn**	**20 03 27.2**	**-0.2**
KDTR	**Khodutka, Kamc**	**1.63**	**33**	*e*P	**Pn**	**20 03 15.3**	**+0.2**
KDTR				*e*S	**Sn**	**20 03 36.7**	**-1.7**
ASAK	**Asacha**	**2.09**	**22**	*e*P	**Pn**	**20 03 21.2**	**+0.8**
MTVR	**Mutnovka**	**2.25**	**25**	*e*P	**Pn**	**20 03 23.3**	**+0.8**
MTVR				*e*S	**Sn**	**20 03 50.7**	**-0.9**
GRL	**Gorelyy**	**2.29**	**23**	*e*P	**Pn**	**20 03 23.8**	**+1.0**
KRMR	**Karymshinskiy**	**2.56**	**21**	*e*P	**Pn**	**20 03 28.6**	**+2.6**
KRMR				*e*S	**Sn**	**20 04 00.0**	**+2.0**
PETK	**Petropavlovsk-**	**2.74**	**14**	P	**Pn**	**20 03 30.4**	**+2.0**
	1.0nm,0.3s,baz=179,slow=12,SNR=14						
PETK				S	**Sn**	**20 04 00.5**	**-1.7**
	1.0nm,0.3s,baz=169,slow=19,SNR=6.2						
DALK	**Dalny**	**2.90**	**26**	*e*P	**Pn**	**20 03 31.0**	**+0.7**
DALK				*e*S	**Sn**	**20 04 03.6**	**-2.1**
UGLR	**Uglovaya**	**3.08**	**25**	*e*P	**Pn**	**20 03 34.4**	**+1.7**
KOK	**Koryaka**	**3.10**	**23**	*e*P	**Pn**	**20 03 32.4**	**-0.6**
KRX	**Arik**	**3.17**	**23**	*e*P	**Pn**	**20 03 36.2**	**+2.3**
MKAR	**Makanchi Array**	**47.36**	**296**	P	**P**	**20 11 01.9**	**-1.9**
	0.3nm,0.3s,baz=61,slow=7.0,SNR=13						
CMAR	**Chiang Mai Arr**	**55.50**	**257**	P	**P**	**20 12 05.9**	**+1.2**
	0.5nm,0.8s,baz=38,slow=8.0,SNR=4.2						

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*KLM **07** 20:17:57.0, 6°.02S×125°.74E, h125^{km}, mb4.6*
*NEIC **07** 20:17:57.1±2.1, 6°.0S±0°.1×125°.6E±0°.1, h555^{km}±9^{km}, mb4.7/39, Error ellipse: s-maj=16.3km s-min=14.1km az=217.0*
*DJA **07** 20:17:57.3±0.3, 6°S±3°×12°6E±°, h561^{km}±5^{km}, M4.2/25, mB4.8/16, mb4.6/22, MLv4.7/25, Mw(mB)4.0/16*
*IDC **07** 20:17:58.6±0.9, 6°.06S×125°.56E, h564^{km}±14^{km}, mb3.6/3, mb1 3.9/9, mb1mx3.3/39, mbtmp4.8/9, Error ellipse: s-maj=19.1km s-min=12.1km az=35.0*
ISC 07 20:17:57.3±0.5**, 6°.07S**±0°.07×**125°.57E**±0°.06**, h550**^{km}**, n97, σ1^{s}.62**/104**, mb4.7**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBSI	**Bau Bau**	**3.04**	**281**	P	**P**	**20 19 15.6**	**+3.0**
BBSI				S	**S**	**20 20 17.5**	**+3.7**
NLAI	**Namlea**	**3.20**	**29**	P	**P**	**20 19 14.6**	**+0.9**
NLAI				S	**S**	**20 20 14.5**	**-1.2**
AAI	**Ambon**	**3.53**	**48**	P	**P**	**20 19 16.2**	**+0.3**
KDI	**Kendari**	**3.61**	**305**	P	**P**	**20 19 18.9**	**+2.5**
SOEI	**Soe**	**3.88**	**199**	P	**P**	**20 19 19.5**	**+1.1**
SOEI				S	**S**	**20 20 22.5**	**-2.0**
SOEI	**Soe**	**3.88**	**199**	P	**P**	**20 19 19.6**	**+1.1**
SANI	**Sanana**	**4.02**	**6**	P	**P**	**20 19 19.8**	**+0.4**
MMRI	**Maumere**	**4.17**	**232**	P	**P**	**20 19 21.3**	**+0.8**
MMRI	**Maumere**	**4.17**	**232**	P	**P**	**20 19 20.9**	**+0.4**
MSAI	**Masohi**	**4.31**	**51**	P	**P**	**20 19 21.2**	**-0.4**
BNDI	**Bandanaira**	**4.58**	**71**	P	**P**	**20 19 24.9**	**+1.1**
EDFI	**Ende, Flores**	**4.68**	**235**	P	**P**	**20 19 25.0**	**+0.4**
BKSI	**Bulukumba**	**5.47**	**278**	P	**P**	**20 19 33.2**	**+2.0**
	0.2nm507nm44nm,0.6s						
LUWI	**Luwuk**	**5.72**	**331**	P	**P**	**20 19 35.9**	**+2.4**
LUWI	**Luwuk**	**5.72**	**331**	P	**P**	**20 19 32.5**	**-0.9**
KAPI	**Kappang**	**5.88**	**280**	P	**P**	**20 19 37.7**	**+2.8**
	48nm,0.3s,baz=117,slow=6.2,SNR=175						
KAPI				S	**S**	**20 20 58.0**	**+3.4**
	baz=241,slow=22,SNR=8.0						
SAUI	**Saumlaki**	**6.00**	**109**	P	**P**	**20 19 38.1**	**+2.2**
	1.2nm132nm,1.1s						
SAUI	**Saumlaki**	**6.00**	**109**		**P**	**20 19 35.9**	**-0.1**
SPSI	**Sidrap Palu**	**6.14**	**290**	P	**P**	**20 19 39.1**	**+1.8**
	0.5nm1µm134nm,0.6s						
WSI	**Waingapu**	**6.33**	**235**	P	**P**	**20 19 38.5**	**-0.4**
	3.9nm5µm203nm,0.5s						
BASI	**Baing, Sumba**	**6.43**	**230**	P	**P**	**20 19 39.6**	**-0.3**
	0.8nm3µm136nm,0.5s						
APSI	**Ampana**	**6.45**	**323**	P	**P**	**20 19 42.5**	**+2.4**
	0.3nm884nm69nm,1.0s						
TTSI	**Tana Toraja**	**6.47**	**297**	P	**P**	**20 19 42.0**	**+1.7**
	0.1nm45nm,0.7s						
KMSI	**Cibinong**	**6.79**	**346**	P	**P**	**20 19 45.2**	**+1.9**
	0.5nm2µm154nm,0.7s						
TNTI	**Ternate**	**7.03**	**15**	P	**P**	**20 19 46.9**	**+1.2**
	0.2nm36nm,0.8s						
TNTI	**Ternate**	**7.03**	**15**	P	**P**	**20 19 46.1**	**+0.4**
WBSI	**Waikabubak, Su**	**7.07**	**240**	P	**P**	**20 19 44.4**	**-1.7**
	1.2nm2µm66nm,0.6s						
FAKI	**Fak Fak**	**7.36**	**65**	P	**P**	**20 19 48.5**	**-0.3**
	1.4nm5µm298nm,0.7s						
FAKI	**Fak Fak**	**7.36**	**65**	P	**P**	**20 19 48.6**	**-0.2**
FAKI					**S**	**20 21 18.0**	**-2.2**
MRSI	**Marisa**	**7.45**	**331**	P	**P**	**20 19 51.0**	**+1.4**
	0.3nm1µm88nm,0.7s						
SIJI	**Sorong**	**7.68**	**48**	P	**P**	**20 19 53.2**	**+1.2**
	22nm,0.3s,baz=239,slow=23,SNR=49						
SIJI				S	**S**	**20 21 29.1**	**+3.1**
	2.5nm,0.3s,baz=128,slow=21,SNR=2.8						
SWI	**Sorong**	**7.68**	**48**	P	**P**	**20 19 52.0**	**0.0**
	0.5nm2µm122nm,0.6s						
PLAI	**Plampang**	**8.20**	**250**	P	**P**	**20 19 56.1**	**-0.9**
	1µm104nm,0.5s						
MPSI	**Mapaga**	**8.52**	**318**	P	**P**	**20 20 02.5**	**+2.2**
	1µm32nm,0.9s						
MTN	**Manton Dam**	**8.68**	**141**	P	**P**	**20 20 02.4**	**+0.5**
KNRA	**Kununurra**	**10.05**	**162**	P	**P**	**20 20 16.2**	**+0.5**
IGBI	**Denpasar**	**10.69**	**255**	P	**P**	**20 20 22.0**	**-0.4**
JAGI	**Jajag, Banyuwa**	**11.57**	**257**	P	**P**	**20 20 30.4**	**-1.1**
	41nm,0.4s						
JAGI	**Jajag, Banyuwa**	**11.57**	**257**	P	**P**	**20 20 30.4**	**-1.1**
FITZ	**Fitzroy Crossi**	**11.95**	**180**	P	**P**	**20 20 35.6**	**+0.3**
	1.4nm,0.3s,baz=7.4,slow=9.1,SNR=53						
FITZ	**Fitzroy Crossi**	**11.95**	**180**	P	**P**	**20 20 35.5**	**+0.2**
GMJI	**Gumukmas**	**12.23**	**259**	P	**P**	**20 20 38.4**	**+0.2**
DAV	**Davao City (W)**	**13.05**	**0**	P	**P**	**20 20 46.1**	**-0.8**
SPMM	**Sapulut**	**14.04**	**319**	P	**P**	**20 20 55.0**	**-2.1**
UGM	**Wanagama**	**15.04**	**262**	P	**P**	**20 21 06.7**	**-0.7**
KKM	**Kota Kinabalu**	**15.23**	**322**	P	**P**	**20 21 08.6**	**-0.8**
SBUM	**Sibu**	**15.79**	**302**	P	**P**	**20 21 11.0**	**-3.9**
WB0	**Warramunga Arr**	**16.09**	**149**	P	**P**	**20 21 17.2**	**-0.6**
WB0				IAmb	IAmb	20 21 19.0	
	comp=Z,30nm,0.7s						
WRAB	**Tennant Creek**	**16.21**	**149**	P	**P**	**20 21 18.5**	**-0.4**
WRA	**Warramunga Arr**	**16.21**	**149**	P	**P**	**20 21 18.1**	**-0.8**
	comp=Z,13nm,0.3s,baz=199,slow=15,SNR=399						
WRA	**Warramunga Arr**	**16.21**	**149**	P	**P**	**20 21 16.9**	**-2.0**
WB2	**Warramunga Arr**	**16.22**	**149**	P	**P**	**20 21 18.6**	**-0.4**
WB2				IAmb	IAmb	20 21 20.4	
	comp=Z,42nm,1.0s						
PSAD1	**Pilbara Seismi**	**16.27**	**199**	P	**P**	**20 21 19.7**	**+0.3**
WR0	**Warramunga Arr**	**16.33**	**149**	P	**P**	**20 21 19.9**	**-0.1**
PSAC2	**Pilbara Seismi**	**16.35**	**199**	P	**P**	**20 21 20.2**	**+0.1**
PSAC2				IAmb	IAmb	20 21 29.8	
	comp=Z,45nm,1.8s						
PSAC1	**Pilbara Seismi**	**16.35**	**199**	P	**P**	**20 21 19.9**	**-0.2**
PSAC1				IAmb	IAmb	20 21 35.3	
	comp=Z,34nm,1.6s						
PSAB2	**Pilbara Seismi**	**16.35**	**199**	P	**P**	**20 21 19.7**	**-0.5**
PSAB2				IAmb	IAmb	20 21 57.4	
	comp=Z,29nm,1.5s						
PSAA2	**Pilbara Seismi**	**16.36**	**199**	P	**P**	**20 21 18.2**	**-2.1**
PSAA2				IAmb	IAmb	20 21 36.2	
	comp=Z,27nm,1.4s						
PSA00	**Pilbara Seismi**	**16.38**	**199**	P	**P**	**20 21 17.9**	**-2.5**
PSA00				IAmb	IAmb	20 21 51.6	
	comp=Z,30nm,1.5s						
PSAA3	**Pilbara Seismi**	**16.38**	**199**	P	**P**	**20 21 17.9**	**-2.5**
PSAA3				IAmb	IAmb	20 21 55.6	
	comp=Z,37nm,1.5s						
PSAB1	**Pilbara Seismi**	**16.38**	**199**	P	**P**	**20 21 17.8**	**-2.6**
PSAD2	**Pilbara Seismi**	**16.38**	**199**	P	**P**	**20 21 18.6**	**-1.9**
PSAA1	**Pilbara Seismi**	**16.38**	**199**	P	**P**	**20 21 18.9**	**-1.6**
PSAA1				IAmb	IAmb	20 21 55.5	
	comp=Z,38nm,1.6s						
PSAB3	**Pilbara Seismi**	**16.39**	**199**	P	**P**	**20 21 19.3**	**-1.2**
PSAB3				IAmb	IAmb	20 21 53.7	
	comp=Z,47nm,1.8s						
PSAC3	**Pilbara Seismi**	**16.43**	**199**	P	**P**	**20 21 18.8**	**-2.0**
PSAC3				IAmb	IAmb	20 21 25.5	
	comp=Z,37nm,1.6s						
PSAD3	**Pilbara Seismi**	**16.46**	**199**	P	**P**	**20 21 20.8**	**-0.4**
PSAD3				IAmb	IAmb	20 21 45.1	
	comp=Z,39nm,1.6s						
KSM	**Kuching**	**16.98**	**296**	P	**P**	**20 21 25.4**	**-0.6**
KSM	**Kuching**	**16.98**	**296**	P	**P**	**20 21 22.0**	**-4.0**
CISI	**Cisompet, Garu**	**17.69**	**264**	P	**P**	**20 21 31.0**	**-1.6**
LEM	**Lembang**	**17.85**	**267**	P	**P**	**20 21 34.7**	**+0.5**
	comp=Z,3.3nm,0.3s,baz=355,slow=8.2,SNR=5.2						
COEN	**Coen**	**19.02**	**116**	P	**P**	**20 21 44.7**	**+0.1**
AS31	**Alice Springs**	**19.25**	**156**	P	**P**	**20 21 47.4**	**+0.8**
AS31				IAmb	IAmb	20 21 49.2	
	comp=Z,9.2nm,0.6s						
ASAR	**Alice Springs**	**19.25**	**156**	P	**P**	**20 21 47.2**	**+0.6**
	comp=Z,7.0nm,0.3s,baz=344,slow=15,SNR=352						
ASAR				ScP	**ScP**	**20 28 25.8**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=351,slow=2.3,SNR=5.4						
ASAR	**Alice Springs**	**19.25**	**156**	P	**P**	**20 21 47.1**	**+0.5**
ASAR					**ScP**	**20 28 25.6**	**-1.2**
GIRL	**Giralia**	**19.77**	**212**	P	**P**	**20 21 53.9**	**+2.5**
XMIS	**Christmas Isla**	**20.18**	**256**	P	**P**	**20 21 55.3**	**+0.1**
MYKOM	**Kota Tinggi**	**23.05**	**289**	P	**P**	**20 22 17.0**	**-3.9**
CTA	**Charters Tower**	**24.45**	**127**	P	**P**	**20 22 34.2**	**+0.9**
	comp=Z,7.3nm,0.7s,baz=317,slow=12,SNR=8.1						
FORT	**Forrest**	**24.69**	**175**	P	**P**	**20 22 35.9**	**+0.6**
FORT				IAmb	IAmb	20 22 36.4	
	comp=Z,22nm,0.6s						
KULM	**Kulim**	**27.32**	**294**	P	**P**	**20 22 54.0**	**-4.7**
RPSI	**Rantau Prapat**	**28.00**	**287**	P	**P**	**20 23 05.0**	**+0.4**
PSI	**Prapat**	**28.03**	**288**	P	**P**	**20 23 05.0**	**-0.1**
	comp=Z,3.3nm,0.4s,baz=242,slow=16,SNR=4.7						
BBOO	**Buckleboo**	**28.34**	**161**	P	**P**	**20 23 07.8**	**+0.4**
STKA	**Stephens Creek**	**29.73**	**152**	P	**P**	**20 23 20.3**	**+0.9**
	comp=Z,8.5nm,0.4s,baz=334,slow=8.4,SNR=54						
STKA	**Stephens Creek**	**29.73**	**152**	P	**P**	**20 23 20.2**	**+0.9**
ARMA	**Armidale**	**34.45**	**138**	P	**P**	**20 24 01.0**	**+1.3**
TOO	**Toolangi**	**36.23**	**153**	P	**P**	**20 24 15.5**	**+1.2**
TOO				IAmb	IAmb	20 24 27.4	
	comp=Z,52nm,1.7s						
CAN	**Canberra**	**36.23**	**147**	P	**P**	**20 24 16.1**	**+1.7**
CAN				IAmb	IAmb	20 24 17.0	
	comp=Z,18nm,0.7s						
TAU	**Tasmania Unive**	**41.42**	**156**	P	**P**	**20 24 57.6**	**+1.6**
TAU				IAmb	IAmb	20 25 20.6	
	comp=Z,42nm,1.6s						
FOZ	**Fox Glacier**	**53.83**	**141**	P	**P**	**20 26 29.2**	**+0.4**
RPZ	**Rata Peaks**	**54.70**	**141**	P	**P**	**20 26 35.7**	**+0.7**
RPZ				IAmb	IAmb	20 26 36.9	
	comp=Z,46nm,1.4s						
NNZ	**Nelson**	**55.05**	**137**	P	**P**	**20 26 38.0**	**+0.5**
NNZ				IAmb	IAmb	20 27 00.4	
	comp=Z,70nm,1.4s						
BKZ	**Black Stump Fm**	**56.40**	**134**	P	**P**	**20 26 47.2**	**+0.3**
BKZ				IAmb	IAmb	20 26 59.0	
	comp=Z,55nm,1.7s						
CASY	**Casey**	**61.01**	**187**		P	20 27 26.3	+9.0
MKAR	**Makanchi Array**	**65.10**	**329**	P	**P**	**20 27 43.8**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=115,slow=5.0,SNR=4.0						
MKAR	**Makanchi Array**	**65.10**	**329**	P	**P**	**20 27 43.0**	**-1.0**
QSPA	**South Pole Qui**	**83.90**	**180**	P	**P**	**20 29 29.4**	**+0.1**

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*SOME **07** 20:34:37.5, 42°.95N×77°.13E, h0^{km}*
*NNC **07** 20:34:37.2±0.4, 43°.05N×77°.17E, h0^{km}, mb2.5, mpv1.7, Error ellipse: s-maj=3.4km s-min=2.0km az=69.0*
ISC 07 20:34:39.7±1.5**, 43°.08N**±0°.05×**77°.04E**±0°.06**, h5**^{km}±8^{km}**, n13, σ1^{s}.20**/24**, 9C-5D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNSS	**Tian-Shan**	**0.08**	**237**	⇑*i*P	**Pg**	**20 34 41.2**	**-0.6**
	3.9nm,0.1s						
TNSS				⇓*i*S	**Sg**	**20 34 43.8**	**+0.6**
	14nm,0.2s						
TNSS	**Tian-Shan**	**0.08**	**237**	P	**Pg**	**20 34 41.2**	**-0.6**
	3.9nm,0.1s						
TNSS				S	**Sg**	**20 34 43.7**	**+0.6**
	14nm,0.2s						
MDOK	**Medeo**	**0.08**	**7**	⇑*i*P	**Pg**	**20 34 42.2**	**+0.5**
	3.6nm,0.2s						
MDOK				⇑*i*S	**Sg**	**20 34 45.5**	**+2.5**
	2.6nm,0.3s						
MDOK	**Medeo**	**0.08**	**7**	⇓P	**Pg**	**20 34 40.2**	**-1.5**
	0.4nm,0.5s						
MDOK				⇓S	**Sg**	**20 34 42.4**	**-0.7**
	1.1nm,0.5s						
MDOK	**Medeo**	**0.08**	**7**	Pg	**Pg**	**20 34 40.2**	**-1.5**
	0.3nm,0.2s						
MDOK				Lg	Lg	20 34 42.0	
	2.4nm,0.2s						
KNDC	**Almaty**	**0.15**	**340**	⇑P	**Pg**	**20 34 41.8**	**-1.0**
	2.6nm,0.4s						
KNDC				⇑S	**Sg**	**20 34 44.8**	**+0.1**
	7.6nm,0.6s						
KOTS	**Kotyrbulak**	**0.17**	**20**	⇓*i*P	**Pg**	**20 34 43.5**	**+0.3**
	6.8nm,0.2s						
KOTS				*e*S	**Sg**	**20 34 47.8**	**+2.5**
	5.9nm,0.3s						
KOTS	**Kotyrbulak**	**0.17**	**20**	P	**Pg**	**20 34 41.0**	**-2.1**
	1.0nm,0.2s						
KOTS				S	**Pg**	**20 34 43.4**	**+0.3**
	3.4nm,0.2s						
IZV	**Izvestkoviy**	**0.31**	**262**	*e*P	**Pg**	**20 34 45.4**	**-0.5**
	0.8nm,0.1s						
IZV				⇑*i*S	**Sg**	**20 34 51.0**	**+1.0**
	4.0nm,0.2s						
IZV	**Izvestkoviy**	**0.31**	**262**	P	**Pg**	**20 34 45.3**	**-0.6**
	0.8nm,0.1s						
IZV				S	**Sg**	**20 34 50.7**	**+0.7**
	3.7nm,0.1s						
KRBS	**Karabastau**	**1.17**	**302**	P	**Pg**	**20 35 01.4**	**-0.8**
	0.2nm,0.1s						
KRBS				S	**Sg**	**20 35 18.3**	**+1.0**
	0.8nm,0.1s						
CHMS	**Chumysh**	**1.68**	**268**	⇑P	**Pn**	**20 35 09.6**	**-0.2**
	0.9nm,0.8s						
CHMS				⇓S	**Sb**	**20 35 33.1**	**+0.7**
	1.2nm,0.6s						
AAK	**Ala-Archa**	**1.92**	**258**	⇑Pg	**Pn**	**20 35 12.6**	**-0.6**
	3.6nm,1.4s						
AAK				⇑Lg	Lg	20 35 39.6	

KRNET 07 20:34:41.4±0.1**, 41°.61N**×**75°.66E, h7**^{km}**, mb1.3, 6C-2D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRN	**Naryn**	**0.31**	**124**	⇑*i*P	Pg	20 34 47.4	-0.2
	baz=28						
NRN				⇑*i*S	Sg	20 34 51.9	+0.2
	baz=28						
KZA	**Kyzart**	**0.56**	**327**	⇓*i*P	Pg	20 34 52.3	0.0
	baz=27						
KZA				⇓*i*S	Sb	20 35 01.0	-1.2
	baz=27						
ULHL	**Ulahol**	**0.77**	**34**	⇑*i*P	Pg	20 34 55.9	-0.4
	baz=34						
ULHL				⇑*i*S	Sb	20 35 07.6	-0.5
	baz=34						
UCH	**Uchtor**	**1.06**	**306**	⇑*i*P	Pg	20 35 01.3	-0.4
	baz=6.0						
UCH				⇑*i*S	Sb	20 35 16.8	+0.3
	baz=6.0						

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*NEIC **07** 20:34:59.5±2.1, 19°.3S±0°.1×173°.2W±0°.1, h5^{km}±5^{km}, mb4.9/8, Error ellipse: s-maj=16.7km s-min=13.9km az=205.0*
*IDC **07** 20:35:00.5±2.3, 18°.97S×173°.39W, h0^{km}, mb3.8/9, mb1 4.1/9, mb1mx3.9/37, mbtmp3.8/9, MS3.4/1, Ms1 3.4/1, ms1mx2.9/31, Error ellipse: s-maj=140.9km s-min=19.7km az=153.0*
ISC 07 20:35:00.0±0.7**, 19°.5S**±0°.2×**173°.0W**±0°.1**, h10**^{km}**, n28, σ1^{s}.17**/25**, mb4.0**/12**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**2.95**	**81**		**Pn**	**20 35 45.1**	**-1.9**
AFI	**Afiamalu**	**5.73**	**12**	Pn	Pn	20 36 17.2	-8.0
RAR	**Rarotonga**	**12.53**	**100**	Pn	Pn	20 37 54.8	-3.7
DZM	**Mont Dzumac**	**19.36**	**259**	P	**Pn**	**20 39 26.3**	**-0.8**
DZM				IAmb	IAmb	20 40 15.1	
	comp=Z,38nm,1.3s						
THZ	**Tophouse**	**25.18**	**205**	P	**P**	**20 40 25.7**	**+0.1**
LTZ	**Lake Taylor**	**26.29**	**205**	P	**P**	**20 40 37.6**	**+1.9**
LTZ				IAmb	IAmb	20 41 10.8	
	comp=Z,56nm,1.7s						
HNR	**Honiara**	**28.00**	**287**	LR	LR	20 50 42.3	
	comp=Z,83nm,20.8s,baz=297,slow=34						
CTA	**Charters Tower**	**38.26**	**262**	P	**P**	**20 42 20.1**	**-0.7**
	comp=Z,2.8nm,0.4s,baz=73,slow=8.6,SNR=5.3						
WR0	**Warramunga Arr**	**49.19**	**260**	P	**P**	**20 43 46.9**	**-1.9**
WR0				IAmb	IAmb	20 44 52.6	
	comp=Z,22nm,1.8s						
AS31	**Alice Springs**	**49.29**	**255**	P	**P**	**20 43 49.3**	**-0.2**
ASAR	**Alice Springs**	**49.30**	**255**	P	**P**	**20 43 49.6**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=88,slow=8.4,SNR=32						
ASAR	**Alice Springs**	**49.30**	**255**	P	**P**	**20 43 49.1**	**-0.4**
WB0	**Warramunga Arr**	**49.35**	**260**	P	**P**	**20 43 49.2**	**-0.8**
WB2	**Warramunga Arr**	**49.37**	**260**	P	**P**	**20 43 49.0**	**-1.1**
WB2				IAmb	IAmb	20 44 00.7	
	comp=Z,22nm,1.7s						
WRA	**Warramunga Arr**	**49.38**	**260**	P	**P**	**20 43 49.8**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=99,slow=5.0,SNR=14						
WRA	**Warramunga Arr**	**49.38**	**260**	P	**P**	**20 43 49.7**	**-0.4**
FITZ	**Fitzroy Crossi**	**57.80**	**261**	P	**P**	**20 44 53.5**	**+1.4**
	comp=Z,2.3nm,1.0s,baz=127,slow=5.1,SNR=2.1						
FITZ	**Fitzroy Crossi**	**57.80**	**261**	P	**P**	**20 44 53.4**	**+1.4**
FITZ				IAmb	IAmb	20 45 15.4	
	comp=Z,28nm,1.8s						
NVAR	**Mina Array Bea**	**77.17**	**41**	P	**P**	**20 46 55.4**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=225,slow=10.0,SNR=5.1						
NVAR	**Mina Array Bea**	**77.17**	**41**	P	**P**	**20 46 55.6**	**+1.2**
TXAR	**Lajitas Array**	**82.62**	**55**	P	**P**	**20 47 26.3**	**+2.3**
	comp=Z,0.3nm,0.8s,baz=221,slow=5.0,SNR=3.5						
TXAR	**Lajitas Array**	**82.62**	**55**	P	**P**	**20 47 25.4**	**+1.5**
PDAR	**Pinedale Array**	**85.10**	**41**	P	**P**	**20 47 37.3**	**+0.8**
	comp=Z,0.4nm,0.8s,baz=192,slow=2.9,SNR=3.9						
PDAR	**Pinedale Array**	**85.10**	**41**	P	**P**	**20 47 36.9**	**+0.4**
ILAR	**Eielson Array**	**86.42**	**11**	P	**P**	**20 47 42.2**	**0.0**
	comp=Z,0.6nm,0.9s,baz=220,slow=6.2,SNR=4.2						
ILAR	**Eielson Array**	**86.42**	**11**	P	**P**	**20 47 42.0**	**-0.2**
YKA	**Yellowknife Ar**	**93.73**	**23**	P	**P**	**20 48 15.7**	**-1.0**
	comp=Z,0.1nm,0.5s,baz=228,slow=3.8,SNR=3.8						
BRTR	**Keskin Array B**	**149.51**	**317**	PKPbc	**PKiKP**	**20 54 51.6**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=23,slow=4.7,SNR=2.6						

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*IDC **07** 20:36:04.8±1.0, 49°.01S×123°.55E, h0^{km}, mb4.0/4, mb1 4.1/4, mb1mx3.8/37, mbtmp4.0/4, MS3.6/6, Ms1 3.7/6, ms1mx3.3/25, Error ellipse: s-maj=67.6km s-min=22.9km az=98.0*
*NEIC **07** 20:36:06.4±1.3, 49°.02S±0°.10×123°.4E±0°.6, h15^{km}±5^{km}, mb4.5/5, Error ellipse: s-maj=61.5km s-min=12.1km az=83.0*
ISC 07 20:36:06.2±0.8**, 49°.0S**±0°.1×**123°.4E**±0°.3**, h13**^{km}**, n20, σ0^{s}.54**/13**, mb4.2**/5**, MS3.6**/5**, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W1	**Cape Leeuwin H**	**15.68**	**331**	T	T	20 55 51.4	
	baz=157,slow=75,SNR=13						
H01W2	**Cape Leeuwin H**	**15.68**	**331**	T	T	20 55 46.0	
	baz=157,slow=75,SNR=11						
H01W3	**Cape Leeuwin H**	**15.69**	**331**	T	T	20 55 57.5	
	baz=157,slow=75,SNR=12						
NWAO	**Narrogin (SRO)**	**16.72**	**342**	LR	LR	20 45 09.9	
	comp=Z,202nm,19.4s,baz=138,slow=32						
NWAO	**Narrogin (SRO)**	**16.72**	**342**	Pn	**Pn**	**20 39 59.6**	**-0.4**
STKA	**Stephens Creek**	**21.89**	**45**	LR	LR	20 48 13.2	
	comp=Z,146nm,18.2s,baz=204,slow=33						
ASAR	**Alice Springs**	**26.60**	**22**	P	**P**	**20 41 44.4**	**+0.2**
	1.0nm,0.9s,baz=185,slow=9.8,SNR=5.9						
ASAR				LR	LR	20 51 21.3	
	comp=Z,188nm,19.9s,baz=170,slow=34						
ASAR	**Alice Springs**	**26.60**	**22**	P	**P**	**20 41 44.9**	**+0.7**
WRA	**Warramunga Arr**	**30.28**	**21**	LR	LR	20 54 56.5	
	comp=Z,157nm,18.5s,baz=195,slow=37						
VNDA	**Vanda**	**32.14**	**165**	LR	LR	20 54 46.3	
	comp=Z,133nm,19.1s,baz=308,slow=35						
QSPA	**South Pole Qui**	**41.12**	**180**	P	**P**	**20 43 49.7**	**0.0**
	3.1nm,1.0s,baz=326,slow=4.9,SNR=4.6						
QSPA	**South Pole Qui**	**41.12**	**180**	P	**P**	**20 43 49.0**	**-0.7**
QSPA				IAmb	IAmb	20 43 51.8	
	comp=Z,10.0nm,1.3s						
SNAA	**Sanae**	**53.80**	**198**	P	**P**	**20 45 28.7**	**+0.7**
	comp=Z,5.2nm,0.9s,baz=111,slow=8.6,SNR=8.2						
SNAA	**Sanae**	**53.80**	**198**	P	**P**	**20 45 28.2**	**+0.2**
SNAA				IAmb	IAmb	20 45 36.6	
	comp=Z,7.3nm,1.0s						
CM31	**Chiang Mai Arr**	**70.61**	**335**	P	**P**	**20 47 21.4**	**+0.3**
CMAR	**Chiang Mai Arr**	**70.61**	**335**	P	**P**	**20 47 21.9**	**+0.8**
	comp=Z,1.4nm,1.0s,baz=179,slow=4.8,SNR=8.9						
CMAR				LR	LR	21 18 17.4	
	comp=Z,22nm,18.1s,baz=315,slow=36						
CMAR	**Chiang Mai Arr**	**70.61**	**335**	P	**P**	**20 47 20.6**	**-0.5**
LSA	**Lhasa**	**83.49**	**332**	P	**P**	**20 48 33.8**	**-0.1**
LSA				IAmb	IAmb	20 48 35.7	
	comp=Z,3.1nm,0.8s						
YKA	**Yellowknife Ar**	**145.92**	**45**	PKPbc	**PKPab**	**20 55 44.4**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=266,slow=3.1,SNR=12						
S39A	**Bolivar**	**151.24**	**99**		**PKPbc**	**20 55 58.6**	**-0.3**

IDC 07 20:42:38.7±2.4**, 2°.49N**×**127°.48E, h0**^{km}**, mb3.2**/4**, mb1 3.5**/4**, mb1mx3.3**/38**, mbtmp3.3**/4**, Error ellipse: s-maj=152.1km s-min=25.5km az=70.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.54**	**185**	P	P	20 47 19.5	+0.5
	0.7nm,0.5s,baz=348,slow=14,SNR=1.1						
WRA	**Warramunga Arr**	**23.29**	**163**	P	P	20 47 47.2	-1.1
	0.7nm,0.5s,baz=337,slow=8.3,SNR=3.8						
ASAR	**Alice Springs**	**26.74**	**167**	P	P	20 48 21.0	+0.7
	0.1nm,0.4s,baz=346,slow=12,SNR=3.1						
MKAR	**Makanchi Array**	**58.99**	**325**	P	P	20 52 40.2	-0.1

0.2nm,0.4s,baz=124,slow=8.5,SNR=6.3

ROM 07 21:12:46.7±0.3**,38°.60N**±0°.01×**15°.45E**±0°.03**,h156**^{km}±2^{km}**,**
ML2.5/1**,1C-9D,Error ellipse: s-maj=2.0km**
s-min=1.4km az=117.0,Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSRU	Castanea	0.34	172	P	Pn	21 13 07.9	-0.3
MSRU	Castanea	0.34	172	P	Pn	21 13 07.9	-0.3
MSRU				S	Sn	21 13 24.5	-0.1
JOPP	Joppolo	0.34	88	P	Pn	21 13 08.2	0.0
JOPP				S	Sn	21 13 24.4	-0.2
JOPP				AML	AML		
	comp=E,53µm,1.1s						
JOPP				AML	AML		
	comp=N,51µm,1.5s						
JOPP	Joppolo	0.34	88	P	Pn	21 13 08.1	-0.1
JOPP				S	Sn	21 13 24.3	-0.3
VPL	Vulcano Piano	0.42	239	P	Pn	21 13 08.8	+0.3
MSCL	Scilla	0.45	143	P	Pn	21 13 09.6	+0.9
MSCL	Scilla	0.45	143	⇓P	Pn	21 13 10.7	+2.0
GMB	Gambarie	0.52	145	S	Sn	21 13 26.0	-0.1
MCSR	Castroreale	0.55	196	⇓P	Pn	21 13 09.6	+0.3
MCSR				S	Sn	21 13 27.7	+1.4
MCSR				AML	AML		
	comp=E,115µm,1.3s						
MCSR				AML	AML		
	comp=N,138µm,0.9s						
MCSR				AML	AML		
	comp=E,115µm,1.3s						
MCSR				AML	AML		
	comp=N,138µm,0.9s						
MCSR				AML	AML		
	comp=E,115µm,1.3s						
MCSR				AML	AML		
	comp=N,138µm,0.9s						
MCSR	Castroreale	0.55	196	P	Pn	21 13 09.5	+0.3
MCSR				AML	AML		
	comp=N,138µm,0.9s						
MCSR				AML	AML		
	comp=E,115µm,1.3s						
NOV	Novara	0.62	203	⇓P	Pn	21 13 10.5	+1.0
NOV				S	Sn	21 13 28.7	+1.8
NOV	Novara	0.62	203	P	Pn	21 13 10.0	+0.5
MTTG	Motta San Giov	0.62	162	P	Pn	21 13 10.1	+0.5
MTTG	Motta San Giov	0.62	162	⇓P	Pn	21 13 10.3	+0.8
AIO	Antillo	0.65	195	P	Pn	21 13 10.3	+0.6
SOI	Samo	0.71	137	P	Pn	21 13 10.2	+0.2
MPAZ	Palizzi	0.78	145	P	Pn	21 13 10.9	+0.4
MPAZ				S	Sn	21 13 28.9	+0.3
MPAZ	Palizzi	0.78	145	P	Pn	21 13 10.8	+0.3
MPAZ				S	Sn	21 13 28.2	-0.4
PLAC	Placanica	0.79	100	⇓P	Pn	21 13 10.9	+0.4
PLAC	Placanica	0.79	100	P	Pn	21 13 10.9	+0.3
PLAC				S	Sn	21 13 28.6	-0.2
CET2	Cetraro	1.01	23	P	Pn	21 13 12.5	+0.2
CELI	Celico	1.16	45	P	Pn	21 13 14.1	+0.6
T0702	Acquaformosa (	1.23	24	P	Pn	21 13 14.2	+0.1
PETRA	Petralia Sopra	1.30	234	S	Sn	21 13 37.0	+0.5
T0721	Laino Castello	1.40	17	⇓P	Pn	21 13 23.6	+7.8
RESU	Resuttano	1.45	230	S	Sn	21 13 43.0	+4.0
SALB	San Lorenzo Be	1.46	28	P	Pn	21 13 17.3	+0.9
MEU	Monte Lauro	1.55	196	⇓P	Pn	21 13 17.2	-0.2
MEU	Monte Lauro	1.55	196	⇓P	Pn	21 13 17.2	-0.2
MTSN	Montesano sull	1.69	8	P	Pn	21 13 18.9	+0.1
MCEL	Monticello	1.75	9	P	Pn	21 13 20.4	+0.9
SLCN	Sala Consilina	1.80	5	⇓P	Pn	21 13 20.4	+0.3
NOCI	Noci	2.52	29	S	Sn	21 13 60.0	-0.7
PTRJ	Pietraroja	2.85	346	P	Pn	21 13 34.1	+1.5
PTRJ				S	Sn	21 14 24.0	+16
PTRJ				AML	AML		
	comp=E,1370µm,0.9s						
PTRJ				AML	AML		
	comp=N,3970µm,0.6s						
MIDA	Miranda	3.18	344	⇑P	Pn	21 13 39.1	+2.5
MIDA				S	Sn	21 14 35.0	+20
FRES	Fresagrandinar	3.43	350	P	Pn	21 13 46.9	+7.2
FRES				S	Sn	21 14 27.0	+6.1

IDC ***07*** *21:17:24.9±4.7, 36°.05N×140°.18E, h75^{km}±35^{km}, mb3.0/3, mb1 3.1/4, mb1mx2.9/59, mbtmp3.5/4, ML3.3/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/20, Error ellipse: s-maj=58.9km s-min=8.8km az=60.0*

JMA ***07*** *21:17:25.4±0.1, 36°.03N×140°.08E, h62^{km}±1^{km}, M3.0*

ISC 07 21:17:25.0±1.1**,36°.03N**±0°.05×**140°.07E**±0°.06**,h66**^{km}±9^{km}**,**
n15,σ**0**^{s}**.94**/22**,mb3.2**/3**,Near east coast of eastern**
Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	Yasato	0.22	28	P	Pn	21 17 35.3	0.0
JYT				S	Sn	21 17 42.5	-0.2
JIHU	Itakohorinouch	0.38	100	P	Pn	21 17 36.7	+0.4
JAG	Ashikaga	0.63	309	P	Pn	21 17 39.3	+0.4
JAG				S	Sn	21 17 49.6	+0.5
JRY	Ryogami san	0.94	270	P	Pn	21 17 43.1	+0.5
JKT	Katashina	0.99	318	P	Pn	21 17 43.7	+0.4
JKT				eS	Sn	21 17 57.6	+0.8
JOD2	Odawara 2	1.10	226	P	Pn	21 17 44.7	0.0
JOD2				S	Sn	21 17 58.4	-0.9
JYN	Shimob	1.35	247	P	Pn	21 17 48.6	+0.7
JFNN	Fujinakano	1.40	234	P	Pn	21 17 48.9	+0.4
JFY	Yanaizu	1.41	348	P	Pn	21 17 49.5	+0.9
MJAR	Matsushiro Arr	1.58	289	P	Pn	21 17 51.9	+0.9
	2.8nm,0.3s,baz=95,slow=9.7,SNR=149						
MJAR				S	Sn	21 18 12.3	+1.6
	0.6nm,0.3s,baz=309,slow=20,SNR=9.1						
MAT	Matsushiro	1.59	289	P	Pn	21 17 52.1	+1.1
MAT				S	Sn	21 18 08.7	-2.0
JHJ	Hachijo jima 2	2.91	185	P	Pn	21 18 10.0	+1.0
	11nm,0.3s,baz=73,slow=19,SNR=2.6						
JHJ				S	Sn	21 18 44.0	+1.1
	14nm,0.3s,baz=73,slow=19,SNR=3.7						
JHJ				LR	LR	21 19 31.8	
	comp=Z,307nm,18.8s,baz=145,slow=43						
SONM	Songino Array	27.47	306	P	P	21 23 04.2	-0.8
	0.2nm,0.5s,baz=94,slow=9.2,SNR=2.3						
MKAR	Makanchi Array	43.74	303	P	P	21 25 23.3	-0.5
	0.3nm,0.7s,baz=85,slow=9.8,SNR=4.1						
KURBB	Kurchatov Arra	45.77	309	P	P	21 25 39.2	-0.6
	0.4nm,0.5s,baz=82,slow=7.7,SNR=5.7						

BJI ***07*** *21:23:18.8±0.0, 6°.39S×148°.12E, h37^{km}, mB5.1/47, mb4.8/59, Ms4.9/34, Ms7 4.6/36*

MOS ***07*** *21:23:20.8±1.2, 6°.22S×147°.80E, h40^{km}, mb5.1/13, Error ellipse: s-maj=9.4km s-min=6.0km az=97.4*

NEIC ***07*** *21:23:22.7±1.9, 6°.28S±0°.06×147°.83E±0°.07, h43^{km}±4^{km}, mb5.1/158, Error ellipse: s-maj=9.6km s-min=7.8km az=115.0*

IDC ***07*** *21:23:22.4±0.4, 6°.29S×147°.87E, h39^{km}±2^{km}, mb4.6/32, mb1 4.6/36, mb1mx4.6/48, mbtmp4.8/36, ML5.0/5, MS4.4/33, Ms1 4.4/33, ms1mx4.3/42, Error ellipse: s-maj=11.9km s-min=8.3km az=81.0*

GCMT ***07*** *21:23:24.7±0.2, 6°.24S±0°.01×148°.13E±0°.02, h50^{km}±1^{km}, MW5.1/100, Moment Tensor Solution. s67,c87; s100,c150; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.87±.16; $M_{\theta\theta}$-3.39±.10; $M_{\phi\phi}$-0.48±.12; $M_{r\theta}$-2.41±.10; $M_{\theta\phi}$2.54±.09; $M_{\phi r}$0.54±.11; Best double couple: $M_0$5.03500×10^{16} NP1:ϕ_s133.00000°, δ32.00000°, λ110.00000°. NP2:ϕ_s290.00000°, δ60.00000°, λ78.00000°. Principal axes: T 4.6080, Plg72.0000°, Azm170.0000°; N 0.8510, Plg11.0000°, Azm296.0000°; P -5.4620, Plg14.0000°, Azm28.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***07*** *21:23:26.0±0.3, 6°S±2°×14°8E±°, h71^{km}±3^{km}, M5.2/65, mB5.7/36, mb5.5/65, MLv5.6/3, Mw(mB)5.2/36, Mwp6.2/2*

ISC 07 21:23:22.4±0.3**,6°.31S**±0°.03×**147°.91E**±0°.04**,h42**^{km}±2^{km}**,**
h42^{km}**:pP-P,n580,**σ**1**^{s}**.40**/597**,mb5.1**/156**,MS4.5**/41**,8C-3D,**
Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.17	194	Pn	Pn	21 24 11.0	+1.3
	246nm,0.3s,baz=17,slow=5.4,SNR=143						
PMG				Sn	Sn	21 24 47.1	+0.9
	137nm,0.3s,baz=311,slow=21,SNR=5.9						
PMG				LR	LR	21 25 53.5	
	comp=Z,14µm,20.5s,baz=54,slow=48						
PMG	Port Moresby	3.17	194		Pn	21 24 11.2	+1.5
PMG				Sn	Sn	21 24 46.1	-0.2
MANU	Manus Island	4.27	353	Pn	Pn	21 24 25.6	+0.7
KRVT	Keravat (AS076	4.55	64	Pn	Pn	21 24 30.2	+1.4
	523nm,0.3s,baz=191,slow=0.7,SNR=98						
KRVT				LR	LR	21 26 21.7	
	comp=Z,10µm,18.9s,baz=235,slow=39						
RABL	Rabaul	4.73	64		Pn	21 24 33.0	+1.7
GENI	Genyem	8.56	295	P	Pn	21 25 32.3	+8.5
	4µm469nm,0.8s						
COEN	Coen	8.91	211	P	Pn	21 25 30.5	+1.8
	baz=8.9,SNR=26						
COEN	Coen	8.91	211		Pn	21 25 29.7	+1.0
SMPI	Sarmi	10.13	295	P	Pn	21 25 53.1	+7.7
	151nm,0.7s						
MTSU	Mount Surprise	12.26	196	P	Pn	21 26 16.7	+2.1
	baz=12,SNR=66						
HNR	Honiara	12.32	105	Pn	Pn	21 26 17.4	+2.1
	7.7nm,0.3s,baz=255,slow=2.2,SNR=9.8						
HNR				LR	LR	21 30 29.2	
	comp=Z,969nm,21.9s,baz=281,slow=34						
HNR	Honiara	12.32	105	P	Pn	21 26 17.0	+1.7
HNR	Honiara	12.32	105	Pn	Pn	21 26 16.7	+1.4
CTA	Charters Tower	13.79	187	Pn	Pn	21 26 36.8	+1.4
	2.0nm,0.3s,baz=6.5,slow=14,SNR=17						
CTA				LR	LR	21 32 02.3	
	comp=Z,4µm,18.5s,baz=6.0,slow=38						
RKPI	Ransiki, Papua	14.50	289	P	P	21 27 00.7	+10
FAKI	Fak Fak	15.97	281	P	P	21 27 12.6	+5.4
FAKI	Fak Fak	15.97	281	Pn	Pn	21 27 01.7	-2.6
QIS	Mount Isa	16.29	209	P	Pn	21 27 09.1	+0.8
	baz=16,SNR=29						
KDU	Kakadu	16.49	246	P	Pn	21 27 11.4	+0.6
	baz=17,SNR=40						
SAUI	Saumlaki	16.57	263	P	P	21 27 14.5	+0.7
	6µm543nm,1.2s						
SAUI	Saumlaki	16.57	263		Pn	21 27 12.1	+0.3
PATS	Pohnpei	16.68	39	P	P	21 27 16.7	+1.6
	baz=17,SNR=14						
SIJI	Sorong	17.46	287	P	P	21 27 24.4	+0.6
	1.5nm,0.3s,baz=90,slow=13,SNR=5.6						
SWI	Sorong	17.47	287	P	P	21 27 30.9	+7.0
MTN	Manton Dam	17.77	247	P	P	21 27 27.5	+0.4
	baz=18,SNR=13						
MTN	Manton Dam	17.77	247	P	P	21 27 27.5	+0.4
WB0	Warramunga Arr	18.75	223	P	P	21 27 38.0	+0.1
WB0					Pn	21 27 38.3	-0.4
WB0				IAmb	IAmb	21 27 40.8	
	comp=Z,185nm,0.9s						
WR0	Warramunga Arr	18.78	223	P	P	21 27 37.7	-0.6
WR0				IAmb	IAmb	21 27 41.8	
	comp=Z,136nm,0.8s						
WRAB	Tennant Creek	18.89	223	ceP	P	21 27 38.6	-0.9
WRAB				pmax	pmax		
	comp=Z,160nm,0.8s						
WRAB	Tennant Creek	18.89	223	P	P	21 27 39.8	+0.3
WRAB				IAmb	IAmb	21 27 44.6	
	comp=Z,132nm,0.7s						
WB2	Warramunga Arr	18.90	223	P	Pn	21 27 40.3	-0.2
WRA	Warramunga Arr	18.91	223	P	P	21 27 39.7	0.0
	comp=Z,12nm,0.3s,baz=48,slow=11,SNR=146						
WRA				S	Sn	21 31 05.6	-5.8
	baz=40,slow=20,SNR=4.8						
WRA				PcP	PcP	21 32 06.2	+1.3
	comp=Z,0.5nm,0.3s,baz=43,slow=2.1,SNR=3.7						
WRA				pPcP		21 32 19.5	
	comp=Z,0.9nm,0.3s,baz=34,slow=1.8,SNR=8.5						
WRA				ScP	ScP	21 35 37.9	+0.5
	comp=Z,0.4nm,0.3s,baz=41,slow=2.3,SNR=9.1						
WRA				LR	LR	21 35 44.8	
	comp=Z,2µm,18.2s,baz=55,slow=39						
WRA				PKiKP	PKiKP	21 39 53.9	-1.6
	comp=Z,0.1nm,0.3s,baz=328,slow=1.2,SNR=4.7						
WRA	Warramunga Arr	18.91	223	i P	P	21 27 39.7	0.0
WRA				pmax	pmax		
	comp=Z,86nm,0.6s						
WRA	Warramunga Arr	18.91	223	P	P	21 27 39.6	-0.1
WRA	Warramunga Arr	18.91	223		ScP	21 35 38.6	+1.1
MSAI	Masohi	19.14	278	P	P	21 27 40.0	-2.3
	comp=Z,13µmcomp=Z,1µmcomp=Z,42nm,1.1s						
EIDS	Eidsvold	19.19	171	P	P	21 27 43.2	+0.4
	baz=19,SNR=30						
EIDS	Eidsvold	19.19	171	P	Pn	21 27 44.1	+0.2
EIDS				IAmb	IAmb	21 27 44.9	
	comp=Z,84nm,0.7s						
AAI	Ambon	19.81	277	P	P	21 27 49.7	+0.1
	comp=Z,297nm,0.8s						
GUMO	Guam	20.00	351	P	Pn	21 27 52.7	-0.8
	comp=Z,15nm,0.3s,baz=205,slow=15,SNR=4.1						
GUMO				LR	LR	21 35 26.9	
	comp=Z,688nm,19.0s,baz=162,slow=36						
RMQ	Roma	20.08	178	P	Pn	21 27 54.2	-0.3
	baz=20,SNR=49						
QLP	Quilpie	20.46	189	P	P	21 27 57.6	+1.1
	baz=20,SNR=94						
KNRA	Kununurra	20.96	242	P	P	21 28 01.8	-0.1
	baz=21,SNR=43						
KNRA	Kununurra	20.96	242	P	P	21 28 02.2	+0.3
NLAI	Namlea	20.96	277	P	Pn	21 28 07.0	+2.1
	comp=Z,1µmcomp=Z,114nm,1.1s						
TNTI	Ternate	21.68	288	P	P	21 28 09.0	-0.8
AS31	Alice Springs	21.89	217	P	P	21 28 13.0	+1.0
AS31				IAmb	IAmb	21 28 19.0	
	comp=Z,67nm,0.7s						
ASAR	Alice Springs	21.89	217	P	P	21 28 12.7	+0.7
	comp=Z,128nm,0.7s,baz=49,slow=9.4,SNR=1599						
ASAR				S	S	21 32 09.6	-2.1
	comp=Z,20nm,0.7s,baz=31,slow=21,SNR=8.0						
ASAR				ScP	ScP	21 35 46.0	+1.5
	comp=Z,4.2nm,0.8s,baz=46,slow=3.5,SNR=6.3						
ASAR				LR	LR	21 37 17.5	
	comp=Z,2µm,19.9s,baz=49,slow=38						
ASAR				PKiKP	PKiKP	21 39 55.0	-1.8
	comp=Z,1.1nm,0.8s,baz=9.0,slow=1.1,SNR=4.4						
ASAR	Alice Springs	21.89	217	P	P	21 28 12.6	+0.6
ASAR					ScP	21 35 46.5	+2.0
SANI	Sanana	22.27	280	P	P	21 28 18.9	+2.8
	comp=Z,1µmcomp=Z,130nm,0.8s						
SOEI	Soe	23.66	260	P	P	21 28 31.6	+1.2
	comp=Z,3µmcomp=Z,137nm,0.7s						
SOEI	Soe	23.66	260	P	P	21 28 30.7	+0.4
DZM	Mont Dzumac	23.79	133	P	P	21 28 31.4	-0.1
	comp=Z,61nm,1.1s,baz=301,slow=9.9,SNR=18						
DZM	Mont Dzumac	23.79	133	eP	P	21 28 30.4	-1.1
	comp=Z,248nm,1.4s						
DZM	Mont Dzumac	23.79	133	P	P	21 28 31.6	+0.1
DZM				IAmb	IAmb	21 28 35.1	
	comp=Z,48nm,0.9s						
ARMA	Armidale	24.23	172	P	P	21 28 35.8	+0.3
	baz=24,SNR=72						
ARMA	Armidale	24.23	172	P	P	21 28 36.4	+0.9
FITZ	Fitzroy Crossi	24.68	240	P	P	21 28 40.1	+0.5
	baz=25,SNR=334						
FITZ	Fitzroy Crossi	24.68	240	P	P	21 28 40.3	+0.7
	comp=Z,201nm,0.6s,baz=59,slow=8.7,SNR=473						
FITZ				S	S	21 33 01.1	+2.4
	comp=Z,16nm,0.8s,baz=250,slow=22,SNR=6.0						
FITZ				ScP	ScP	21 35 53.6	+1.6
	comp=Z,11nm,0.8s,baz=351,slow=10,SNR=3.8						
FITZ				LR	LR	21 40 00.9	
	comp=Z,1µm,18.2s,baz=64,slow=40						
FITZ	Fitzroy Crossi	24.68	240	P	P	21 28 40.9	+1.3
KMSI	Cibinong	24.85	285	P	P	21 28 42.1	+1.0
	comp=Z,2µmcomp=Z,274nm,0.8s						
CMSA	Cobar Meteorol	25.18	184	P	P	21 28 44.1	+0.1
	baz=25,SNR=58						
BBSI	Bau Bau	25.22	271	P	P	21 28 52.0	+7.5
MMRI	Maumere	25.56	263	P	P	21 28 46.5	-1.1
	comp=Z,2µmcomp=Z,245nm,1.0s						
MMRI	Maumere	25.56	263	P	P	21 28 47.3	-0.3
LUWI	Luwuk	25.62	281	P	P	21 28 49.9	+1.7
	comp=Z,2µmcomp=Z,229nm,1.3s						
LUWI	Luwuk	25.62	281	P	P	21 28 48.5	+0.4
DAV	Davao City (W)	25.95	300	LR	LR	21 39 37.7	
	comp=Z,265nm,19.2s,baz=134,slow=38						
EDFI	Ende, Flores	26.11	263	P	P	21 28 51.2	-1.5
	comp=Z,677nmcomp=Z,76nm,1.1s						
TARA	Tarawa	26.11	74	P	P	21 28 50.4	-2.2
STKA	Stephens Creek	26.11	192	P	P	21 28 52.5	+0.1
	baz=26,SNR=99						
STKA	Stephens Creek	26.11	192	P	P	21 28 52.5	+0.1
	comp=Z,116nm,0.6s,baz=352,slow=8.8,SNR=112						
STKA				LR	LR	21 40 13.2	
	comp=Z,2µm,18.1s,baz=9.7,slow=39						
STKA	Stephens Creek	26.11	192	P	P	21 28 52.7	+0.3
STKA				pmax	pmax		
	comp=Z,47nm,1.0s						
STKA	Stephens Creek	26.11	192	P	P	21 28 52.7	+0.3
STKA				IAmb	IAmb	21 28 55.0	
	comp=Z,47nm,1.0s						
KCP	Kidapawan	26.34	300	⇑eP	P	21 29 11.3	+17
WRKA	Warakurna	26.45	223	P	P	21 28 55.8	+0.1
	baz=26,SNR=374						
SKMP	Bagumbayan, Su	26.57	298	eP	P	21 29 00.4	+3.6
APSI	Ampana	26.74	281	P	P	21 29 01.0	+2.7
	comp=Z,820nmcomp=Z,84nm,0.9s						
MRSI	Marisa	26.78	284	P	P	21 29 12.4	+14
BUKP	Musuan	26.80	301	eP	P	21 29 09.2	+10
LHI	Lord Howe Isla	27.17	159	P	P	21 29 01.1	-0.9
LHI				IAmb	IAmb	21 29 06.2	
	comp=Z,36nm,0.8s						
BASI	Baing, Sumba	27.32	260	P	P	21 29 03.6	+0.1
	comp=Z,2µmcomp=Z,245nm,0.8s						
WSI	Waingapu	27.54	261	P	P	21 29 06.7	+1.2
	comp=Z,4µmcomp=Z,575nm,0.7s						
BKSI	Bulukumba	27.66	271	P	P	21 29 13.1	+6.5
BNSI	Bone	27.75	273	P	P	21 29 09.5	+2.2
	comp=Z,44nm,1.0s						
YNG	Young	27.85	179	P	P	21 29 08.8	+0.8
	baz=28,SNR=25						
KAPI	Kappang	28.05	271	P	P	21 29 10.5	+0.5
	comp=Z,9.7nm,0.6s,baz=76,slow=4.6,SNR=8.5						
KAPI				LR	LR	21 42 50.0	
	comp=Z,409nm,19.9s,baz=96,slow=42						
SPSI	Sidrap Palu	28.12	273	P	P	21 29 12.4	+1.7
	comp=Z,21nm,1.0s						
TTSI	Tana Toraja	28.18	275	P	P	21 29 13.2	+2.0
	comp=Z,844nmcomp=Z,69nm,1.1s						
PAGZ	Pagadian	28.22	300	eP	P	21 29 19.8	+8.3
HTT	Hallett	28.25	196	P	P	21 29 11.9	+0.3
	baz=28,SNR=20						
WBSI	Waikabubak, Su	28.43	261	P	P	21 29 18.4	+4.9
	comp=Z,1µmcomp=Z,124nm,0.9s						
BBOO	Buckleboo	28.58	201	P	P	21 29 14.6	0.0
	baz=29,SNR=16						
BBOO	Buckleboo	28.58	201	P	P	21 29 14.6	0.0
BBOO				IAmb	IAmb	21 29 15.6	
	comp=Z,51nm,1.0s						
MPSI	Mapaga	28.73	282	P	P	21 29 29.2	+13
CAN	Canberra	28.89	178	IAmb	IAmb	21 29 18.6	
	comp=Z,54nm,0.9s						
CNB	Canberra Magne	28.90	178	P	P	21 29 18.2	+0.8
	baz=29,SNR=14						
PLAI	Plampang	29.97	263	P	P	21 29 26.5	-0.6
	comp=Z,74nm,0.7s						
MILA	Mila	30.62	178	P	P	21 29 33.2	+0.6
	baz=31,SNR=5.0						
FORT	Forrest	30.65	215	P	P	21 29 33.3	+0.4
	baz=31,SNR=22						
FORT	Forrest	30.65	215	P	P	21 29 33.4	+0.4
PSA00	Pilbara Seismi	31.09	238	P	P	21 29 37.7	+0.7
PSA00	Pilbara Seismi	31.09	238	P	P	21 29 36.7	-0.2
PSA00				IAmb	IAmb	21 29 37.9	
	comp=Z,50nm,0.8s						
TOO	Toolangi	31.20	184	P	P	21 29 38.6	+0.9
	baz=31,SNR=5.2						
TOO	Toolangi	31.20	184	P	P	21 29 38.2	+0.5
TOO				pmax	pmax		
	comp=Z,24nm,1.0s						
TOO	Toolangi	31.20	184	P	P	21 29 38.2	+0.5
TOO				IAmb	IAmb	21 29 39.6	
	comp=Z,24nm,0.9s						
MSVF	Nonsavu	31.53	114	i P	P	21 29 41.5	+0.5
MSVF				pmax	pmax		
	comp=Z,27nm,1.2s						
MSVF	Nonsavu	31.53	114	P	P	21 29 41.5	+0.5
MSVF				IAmb	IAmb	21 29 58.8	
	comp=Z,35nm,1.1s						
JAGI	Jajag, Banyuwa	33.54	264	P	P	21 29 59.7	+1.2
	comp=Z,47nm,0.7s						
JAGI	Jajag, Banyuwa	33.54	264	P	P	21 29 56.8	-1.7
JAGI				IAmb	IAmb	21 30 14.4	
	comp=Z,35nm,0.7s						
JCJ	Chichijima	33.67	351	P	P	21 29 59.0	-0.3
	comp=Z,125nm,0.8s,baz=243,slow=21,SNR=4.1						
JCJ				LR	LR	21 41 49.8	
	comp=Z,263nm,19.0s,baz=136,slow=33						
KKM	Kota Kinabalu	33.93	291	P	P	21 30 01.1	-0.9
MEEK	Meekatharra	34.45	231	P	P	21 30 07.1	+0.8
	baz=34,SNR=91						
MOO	Moorlands	35.99	181	P	P	21 30 20.4	+1.2
	baz=36,SNR=17						
GIRL	Giralia	36.29	240	P	P	21 30 22.8	+0.7
	baz=36,SNR=9.6						
GIRL	Giralia	36.29	240	P	P	21 30 23.3	+1.1
TAU	Tasmania Unive	36.45	181	P	P	21 30 24.0	+0.8
TAU				pmax	pmax		
	comp=Z,51nm,1.0s						
TAU	Tasmania Unive	36.45	181	P	P	21 30 24.0	+0.8
PCJI	Pacitan	36.48	265	P	P	21 30 26.4	+2.6
	comp=Z,90nm,0.7s						
SBUM	Sibu	36.68	283	P	P	21 30 24.9	-0.6
SBUM	Sibu	36.68	283	P	P	21 30 28.0	+2.4
WOJI	Wonogiri, Jawa	36.73	265	P	P	21 30 25.9	-0.1
	comp=Z,100nm,0.7s						
UGM	Wanagama	37.13	265	P	P	21 30 29.7	+0.3
SMRI	Semarang	37.22	267	P	P	21 30 29.7	-0.4
OUZ	Omahuta	37.24	144	P	P	21 30 31.1	+1.1
OUZ				IAmb	IAmb	21 30 31.3	
	comp=Z,21nm,0.9s						
MORW	Morawa	37.65	229	P	P	21 30 34.3	+0.7
	baz=38,SNR=20						
MORW	Morawa	37.65	229	P	P	21 30 34.6	+1.0
KLBR	Kellerberrin	37.78	224	P	P	21 30 34.9	+0.2
	baz=38,SNR=75						
BLDU	Ballidu	37.97	227	P	P	21 30 36.7	+0.4
	baz=38,SNR=27						
JOW	Kunigami	38.05	331	P	P	21 30 36.5	-0.4
JOW				IAmb	IAmb	21 30 37.2	
	comp=Z,21nm,0.7s						
KSM	Kuching	38.33	280	P	P	21 30 38.9	-0.6
KSM	Kuching	38.33	280	P	P	21 30 40.0	+0.5
KPJI	Karang Pucung	38.71	266	P	P	21 30 44.6	+1.9
	comp=Z,129nm,0.8s						
NWAO	Narrogin (SRO)	38.92	223	P	P	21 30 44.6	+0.4
	baz=39,SNR=37						
NWAO	Narrogin (SRO)	38.92	223	P	P	21 30 44.6	+0.4
	comp=Z,56nm,0.7s,baz=54,slow=8.1,SNR=44						
NWAO	Narrogin (SRO)	38.92	223	P	P	21 30 44.6	+0.4
NWAO	Narrogin (SRO)	38.92	223	IAmb	IAmb	21 30 45.5	
	comp=Z,50nm,0.7s						
MUN	Mundaring	39.08	225	P	P	21 30 46.4	+0.8
	baz=39,SNR=19						
YULB	Yu-li	39.34	320	P	P	21 30 47.3	-0.6
NACB	Ninganchiao	39.71	321	P	P	21 30 49.5	-1.3
NACB				IAmb	IAmb	21 30 54.9	
	comp=Z,36nm,1.0s						
TPUB	Ta-pu	39.71	319	P	P	21 30 49.5	-1.4
TPUB				IAmb	IAmb	21 31 07.8	
	comp=Z,23nm,0.7s						
CISI	Cisompet, Garu	39.81	266	P	P	21 30 51.8	-0.2
	comp=Z,2µmcomp=Z,206nm,0.9s						
CISI	Cisompet, Garu	39.81	266	P	P	21 30 52.4	+0.3
SSLB	Suanglung	39.84	320	P	P	21 30 52.3	+0.3
JHJ2	Mitsune	39.95	349	P	P	21 30 52.8	+0.1
JHJ	Hachijo jima 2	39.97	349	LR	LR	21 47 14.0	
	comp=Z,519nm,18.6s,baz=49,slow=36						
RKGY	Rocky Gully	40.09	221	P	P	21 30 55.2	+1.2
	baz=40,SNR=10						
HIZ	Hauiti	40.28	147	P	P	21 30 56.7	+1.2
HIZ				IAmb	IAmb	21 31 00.9	
	comp=Z,44nm,1.2s						
AFI	Afiamalu	40.35	104	P	P	21 30 57.2	+0.7
	comp=Z,46nm,0.8s,baz=103,slow=17,SNR=6.0						
AFI	Afiamalu	40.35	104	P	P	21 30 56.6	+0.2
AFI				IAmb	IAmb	21 30 59.0	
	comp=Z,50nm,0.9s						
TATO	Taipei	40.35	321	P	P	21 30 55.2	-1.0
KNTN	Kanton	40.39	87	P	P	21 30 57.7	+1.0
CNJI	Cibinong	40.50	266	P	P	21 30 57.6	0.0
	comp=Z,2µmcomp=Z,294nm,0.9s						
CBJI	Citeko	40.80	267	P	P	21 31 13.8	+14
DBJI	Dramaga	40.90	267	P	P	21 31 14.6	+14
SKJI	Sukabumi	41.07	267	P	P	21 31 05.3	+2.9
	comp=Z,2µmcomp=Z,208nm,0.7s						
URZ	Urewera	41.37	144	P	P	21 31 03.6	-0.9
	comp=Z,9.0nm,0.7s,baz=3.4,slow=5.5,SNR=3.7						
THZ	Tophouse	41.72	152	P	P	21 31 07.1	-0.2
THZ				IAmb	IAmb	21 31 10.5	

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       comp=Z,20nm,0.7s
FOZ    Fox Glacier      41.78 156   P       P        21 31 07.7  0.0
TUWZ   Tuamarina        41.96 150   P       P        21 31 08.8 -0.4
XMIS   Christmas Isla   41.99 261   P       P        21 31 07.0 -2.9
XMIS                                IAmb    IAmb     21 31 25.6
       comp=Z,44nm,0.8s
BSWZ   Blackbirch Sta   42.14 151   P       P        21 31 10.2 -0.6
LTZ    Lake Taylor      42.22 153   P       P        21 31 11.6 +0.2
LTZ                                 IAmb    IAmb     21 31 24.9
       comp=Z,45nm,1.1s
CMWZ   Cape Campbell    42.33 151   P       P        21 31 11.7 -0.6
JNU    Nakatsue         42.42 339   P       P        21 31 13.3 +0.2
       comp=Z,14nm,0.7s,baz=165,slow=6.8,SNR=12
JNU                                 LR      LR       21 47 51.7
       comp=Z,458nm,20.5s,baz=164,slow=35
JNU    Nakatsue         42.42 339   IAmb    IAmb     21 31 28.3
       comp=Z,30nm,1.0s
DCZ    Deep Cove        42.44 160   P       P        21 31 12.9 -0.1
DCZ                                 IAmb    IAmb     21 31 15.0
       comp=Z,59nm,1.0s
RPZ    Rata Peaks       42.44 155   P       P        21 31 13.2  0.0
RPZ                                 IAmb    IAmb     21 31 26.7
       comp=Z,28nm,0.7s
WKZ    Wanaka           42.56 158   P       P        21 31 14.2 +0.1
WKZ                                 IAmb    IAmb     21 31 15.9
       comp=Z,33nm,1.0s
BFZ    Birch Farm       42.58 148   P       P        21 31 14.8 +0.5
BFZ                                 IAmb    IAmb     21 31 31.5
       comp=Z,48nm,1.0s
MSWZ   Moikau Station   42.60 149   P       P        21 31 13.9 -0.6
LBZ    Lake Benmore     42.64 156   P       P        21 31 14.9 +0.1
LBZ                                 IAmb    IAmb     21 31 15.8
       comp=Z,70nm,1.1s
INU    Inuyama          42.69 347   IAmb    IAmb     21 31 21.5
       comp=Z,29nm,1.0s
PLWZ   Palliser         42.72 149   P       P        21 31 12.6 -2.9
PYZ    Puysegur Point   42.90 161   P       P        21 31 16.4 -0.3
PYZ                                 IAmb    IAmb     21 31 18.3
       comp=Z,62nm,0.9s
WHZ    Wether Hill Ro   43.08 159   P       P        21 31 18.6 +0.3
WHZ                                 IAmb    IAmb     21 31 20.2
       comp=Z,44nm,1.1s
KASI   Kota Agung       43.18 269   P       P        21 31 20.3 +0.7
       comp=Z,104nm,1.1s
ODZ    Otahua Downs     43.37 156   P       P        21 31 19.8 -0.8
ODZ                                 IAmb    IAmb     21 31 38.4
       comp=Z,31nm,1.2s
MDSI   Maura Dua        43.57 270   P       P        21 31 22.8 +0.1
       comp=Z,855nmcomp=Z,69nm,1.3s
MJAR   Matsushiro Arr   43.59 349   P       P        21 31 22.6 +0.2
       comp=Z,46nm,0.9s,baz=160,slow=8.0,SNR=31
MJAR                                LR      LR       21 49 40.9
       comp=Z,300nm,18.1s,baz=180,slow=36
MJAR   Matsushiro Arr   43.59 349   P       P        21 31 22.7 +0.2
MJAR                                pmax    pmax
       comp=Z,20nm,1.0s
MJAR   Matsushiro Arr   43.59 349   P       P        21 31 22.6 +0.2
MAJO   Matsushiro       43.59 349   P       P        21 31 22.8 +0.3
MAJO                                pmax    pmax
       comp=Z,67nm,0.9s
MAJO   Matsushiro       43.59 349   P       P        21 31 22.8 +0.3
MAT    Matsushiro       43.59 349   P       P        21 31 22.8 +0.3
MAT                                eS       S        21 37 50.2 +1.2
LWLI   Liwa             43.65 269   P       P        21 31 24.4 +0.9
       comp=Z,164µmcomp=Z,59nm,1.0s
TPRI   Tanjung Pinang   43.90 278   P       P        21 31 28.9 +3.6
       comp=Z,5µmcomp=Z,66nm,0.8s
QIZ    Qiongzhong       45.17 305   P       P        21 31 36.6 +1.2
QIZ                                 S       S        21 38 13.9 +1.4
QIZ                                 LR      LR
       comp=Z,260nm,8.6s
QIZ                                 LR      LR
       comp=Z,230nm,8.4s
QIZ                                 LR      LR
       comp=Z,270nm,13.7s
KSI    Kapahiang        45.21 271   P       P        21 31 36.3 +0.4
       comp=Z,82µmcomp=Z,4µmcomp=Z,39nm,1.1s
TJN    Taejon           46.63 337 i P       P        21 31 44.3 -2.3
SDSI   Sungai Dareh     46.68 275   P       P        21 31 47.8 +0.4
       comp=Z,731nmcomp=Z,80nm,1.0s
NJ2    Nanjing          47.14 326 eP        P        21 31 52.7 +2.0
NJ2                                 pmax    pmax
       comp=Z,18nm,0.6s
NJ2                                 LR      LR
       comp=Z,480nm,18.9s
NJ2                                 LR      LR
       comp=Z,410nm,18.0s
NJ2                                 LR      LR
       comp=Z,840nm,19.4s
BKNI   Bangkinang       47.24 276   P       P        21 32 05.5  +14
KSRS   Korea Array      47.37 338   P       P        21 31 52.8 +0.5
       comp=Z,6.9nm,0.7s,baz=153,slow=8.4,SNR=16
KSRS                                LR      LR       21 50 39.1
       comp=Z,421nm,21.0s,baz=152,slow=35
KSAR   Wonju Array Be   47.37 338   P       P        21 31 52.5 +0.2
KSAR                                        pP       21 32 02.3 -1.6
PDSI   Padang           47.64 275   P       P        21 31 54.2 -0.7
       comp=Z,17nm,0.7s
IPM    Ipoh             48.02 282   P       P        21 31 58.7 +0.8
IPM                                 IAmb    IAmb     21 32 15.7
       comp=Z,18nm,1.0s
IPM    Ipoh             48.02 282   P       P        21 31 59.0 +1.1
KULM   Kulim            48.57 283   IAmb    IAmb     21 32 19.7
       comp=Z,17nm,1.0s
KULM   Kulim            48.57 283   P       P        21 32 03.0 +0.9
WHN    Wuhan            48.75 321 ⇑P        P        21 32 03.2 +0.1
RPSI   Rantau Prapat    49.72 279   P       P        21 32 10.8 -0.1
RPSI                                IAmb    IAmb     21 32 19.2
       comp=Z,16nm,0.9s
PSI    Prapat           49.74 279   LR      LR       21 58 02.2
       comp=Z,257nm,18.3s,baz=124,slow=42
PSI    Prapat           49.74 279   P       P        21 32 10.8 -0.4
PSI                                 pmax    pmax
       comp=Z,16nm,0.9s
JKA    Kamikawa-asahi   50.42 355   P       P        21 32 15.7 +0.1
ASAJ   Asahikawa        50.42 355   P       P        21 32 15.7 +0.1
       comp=Z,22nm,1.0s,baz=166,slow=4.2,SNR=3.1
ASAJ                                LR      LR       21 50 22.0
       comp=Z,395nm,21.9s,baz=68,slow=32
TIA    Tai'an           51.22 328   P       P        21 32 21.2 -0.6
TIA                                 pmax    pmax
       comp=Z,10.0nm,0.8s
TIA                                 LR      LR
       comp=Z,330nm,17.3s
TIA                                 LR      LR
       comp=Z,320nm,17.3s
TIA                                 LR      LR
       comp=Z,570nm,23.5s
USRK   Ussuriysk Ar.    52.29 346   P       P        21 32 29.7 +0.1
       comp=Z,4.9nm,0.6s,baz=166,slow=7.2,SNR=21
USRK                                LR      LR       21 53 21.5
       comp=Z,184nm,19.6s,baz=151,slow=34
USRK   Ussuriysk Ar.    52.29 346   P       P        21 32 30.2 +0.5
USRK   Ussuriysk Ar.    52.29 346   P       P        21 32 30.1 +0.5
USA0B  Ussuriysk Arra   52.29 346 i P       P        21 32 27.4 -2.2
MLSI   Meulaboh, Aceh   52.49 280   P       P        21 32 38.6 +6.9
YSS    Yuzh-Sakhalins   53.23 356 eP        P        21 32 40.2 +3.7
YSS                               e                  21 32 46.8
YSS                                 pmax    pmax
       comp=Z,20nm,1.2s
CN2    Changchun        53.86 340 eP        P        21 32 43.3 +2.1
CN2                                 pmax    pmax
       comp=Z,10.0nm,0.5s
KMI    Kunming          53.90 307   P       P        21 32 44.4 +2.2
KMI                                 pP      sP       21 32 57.8 -1.0
KMI                                 sP      pP       21 33 02.9 +8.9
KMI                                 pmax    pmax
       comp=Z,8.0nm,0.5s
KMI                                 pmax    pmax
       comp=Z,140nm,5.6s
KMI                                 LR      LR
       comp=Z,220nm,8.4s
KMI                                 LR      LR
       comp=Z,170nm,7.9s
KMI                                 LR      LR
       comp=Z,220nm,12.9s
CMAR   Chiang Mai Arr   54.19 298   P       P        21 32 44.5 +0.3
       comp=Z,2.6nm,0.8s,baz=123,slow=5.8,SNR=15
CMAR                                LR      LR       21 54 08.0
       comp=Z,72nm,20.5s,baz=141,slow=34
CMAR                                PKPPKP  P'P'df   22 02 54.9 -5.4
       comp=Z,0.5nm,0.4s,baz=298,slow=3.2,SNR=5.2
CMAR   Chiang Mai Arr   54.19 298   P       P        21 32 43.5 -0.6
CHTO   Chiang Mai       54.33 298   P       P        21 32 48.2 +3.1
CHTO                                pmax    pmax
       comp=Z,5.0nm,0.9s
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CHTO   Chiang Mai       54.33 298   P       P        21 32 48.2 +3.1
XAN    Xi'an            54.50 320   P       P        21 32 45.5 -0.6
XAN                                 pP      pP       21 32 55.1 -3.0
XAN                                 pmax    pmax
       comp=Z,11nm,1.2s
XAN                                 pmax    pmax
       comp=Z,140nm,4.5s
XAN    Xi'an            54.50 320   IAmb    IAmb     21 32 57.5
       comp=Z,23nm,1.1s
BJI    Beijing          54.62 330   P       P        21 32 49.0 +2.2
BJI                                 pmax    pmax
       comp=Z,8.0nm,0.8s
BJI                                 LR      LR
       comp=Z,400nm,18.9s
BJI                                 LR      LR
       comp=Z,230nm,18.9s
BJI                                 LR      LR
       comp=Z,460nm,18.6s
CD2    Chengdu          56.14 314   P       P        21 33 02.3 +4.3
CD2                                 pmax    pmax
       comp=Z,30nm,0.5s
KLR    Kul'dur          57.08 347   P       P        21 33 04.8 +0.5
       comp=Z,5.5nm,0.7s,baz=202,slow=3.4,SNR=21
KLR                                 LR      LR       21 57 02.5
       comp=Z,145nm,18.5s,baz=194,slow=35
KLR    Kul'dur          57.08 347 i P       P        21 33 02.7 -1.6
KLR                                 pmax    pmax
       comp=Z,7.0nm,0.9s
SKR    Severo-Kuril’s   57.20   6 i P       P        21 33 03.5 -1.6
HHC    Hu-ho-hao-te     57.57 328 eP        P        21 33 10.7 +2.6
HHC                                 pP      pP       21 33 18.4 -1.5
HHC                                 sP      sP       21 33 28.1 +3.4
HHC                                 PP      PP       21 35 14.9 -1.4
HHC                                 pmax    pmax
       comp=Z,140nm,1.0s
HHC                                 pmax    pmax
       comp=Z,700nm,5.3s
HHC                                 LR      LR
       comp=Z,1µm,15.9s
HHC                                 LR      LR
       comp=Z,1µm,16.0s
HHC                                 LR      LR
       comp=Z,1µm,15.9s
LZH    Lanzhou          59.04 319 eP        P        21 33 22.6 +4.1
LZH                                 pP      sP       21 33 35.1 -0.2
LZH                                 sP      pP       21 33 40.2  +10
LZH                                 PP      PP       21 35 34.8 +5.4
LZH                                 pmax    pmax
       comp=Z,25nm,1.0s
LZH                                 pmax    pmax
       comp=Z,94nm,4.9s
LZH                                 LR      LR
       comp=Z,250nm,14.1s
LZH                                 LR      LR
       comp=Z,330nm,15.2s
LZH                                 LR      LR
       comp=Z,420nm,16.5s
PETK   Petropavlovsk-   59.77   7   P       P        21 33 23.8 +0.8
       comp=Z,18nm,0.8s,baz=167,slow=6.9,SNR=19
PETK                                pP      pP       21 33 36.1 +1.3
       comp=Z,72nm,0.8s,baz=173,slow=7.7,SNR=23
PETK                                LR      LR       21 55 27.8
       comp=Z,599nm,21.9s,baz=237,slow=32
PETK   Petropavlovsk-   59.77   7   P       P        21 33 23.8 +0.8
PETK                                        pP       21 33 32.2 -2.6
PET    Petropavlovsk    59.81   7 i P       P        21 33 21.9 -1.3
PET                                 pmax    pmax
       comp=Z,45nm,0.9s
HIA    Hailar           60.56 339           pP       21 33 39.4 -0.9
HIA                                 IAmb    IAmb     21 33 41.5
       comp=Z,21nm,0.9s
ZEA    Zeya             62.31 346 eP        P        21 33 40.2  0.0
ZEA                                 pmax    pmax
       comp=N,47nm,1.0s
ZEA                                 pmax    pmax
       comp=Z,87nm,1.0s
TBI    Tubuai           62.41 113 eLR       LR       21 52 06.0
       comp=Z,179nm,33.8s
PMOR   Pomariorio Ree   63.50 104 eP        P        21 33 50.1 +1.3
       comp=Z,96nm,0.9s
PMOR                              epP       pwP      21 34 03.6 -0.3
       comp=Z,171nm,1.1s
GTA    Gaotai           63.56 320 ⇑P        P        21 33 48.7 -0.3
GTA                                 pP      pP       21 34 01.0 -0.1
GTA                                 sP      sP       21 34 06.1 +0.2
GTA                                 S       S        21 42 18.6 -1.2
GTA                                 sS      sS       21 42 42.3 +2.4
GTA                                 SS      SS       21 46 29.5 +1.5
GTA                                 pmax    pmax
       comp=Z,3.0nm,1.3s
GTA                                 pmax    pmax
       comp=Z,110nm,8.4s
GTA                                 LR      LR
       comp=Z,190nm,18.7s
GTA                                 LR      LR
       comp=Z,240nm,18.4s
GTA                                 LR      LR
       comp=Z,260nm,20.0s
ULN    Ulaanbaatar      64.82 331   P       P        21 33 57.6 +0.5
ULN                                 pmax    pmax
       comp=Z,12nm,0.8s
ULN    Ulaanbaatar      64.82 331   P       P        21 33 57.6 +0.5
ULN                                 IAmb    IAmb     21 34 01.2
       comp=Z,12nm,0.8s
SONM   Songino Array    65.12 331   P       P        21 33 59.3 +0.3
       comp=Z,4.0nm,0.5s,baz=136,slow=6.1,SNR=38
SONM                                LR      LR       22 02 08.0
       comp=Z,440nm,20.7s,baz=156,slow=36
SONM                                PKPPKP           22 02 46.8
       comp=Z,1.8nm,1.0s,baz=306,slow=0.9,SNR=8.1
SONM   Songino Array    65.12 331   P       P        21 33 58.9 -0.1
LSA    Lhasa            65.15 307   P       P        21 34 00.0  0.0
MA2    Magadan          65.72   2   P       P        21 34 03.0 +0.6
       comp=Z,13nm,0.8s,baz=200,slow=6.3,SNR=7.2
MA2                                 pP      pP       21 34 14.9 +0.5
       comp=Z,43nm,0.9s,baz=161,slow=3.9,SNR=15
MA2    Magadan          65.72   2 i P       P        21 34 01.4 -1.0
MA2                                 pmax    pmax
       comp=Z,13nm,0.8s
MA2    Magadan          65.72   2   P       P        21 34 03.2 +0.8
MA2                                         pP       21 34 15.0 +0.6
TAPN   Taplejung        67.08 303 eP        P        21 34 12.7 +0.5
       comp=Z,22nm,1.1s
ODAN   Odare            67.17 302 eP        P        21 34 12.4 -0.4
       comp=Z,16nm,0.9s
RAMN   Ramite           67.87 302 eP        P        21 34 16.2 -1.0
       comp=Z,5.6nm,0.5s
JIRN   Jiri             68.45 303 eP        P        21 34 21.1 +0.1
       comp=Z,16nm,0.6s
GUN    Gumba            68.80 303 eP        P        21 34 23.1  0.0
       comp=Z,23nm,0.6s
TLY    Talaya           69.04 332   P       P        21 34 24.0 +0.3
       comp=Z,3.9nm,0.6s,baz=197,slow=4.9,SNR=3.2
TLY                                 LR      LR       22 03 02.8
       comp=Z,304nm,21.7s,baz=120,slow=34
TLY    Talaya           69.04 332 i P       P        21 34 22.3 -1.4
TLY                                 pmax    pmax
       comp=Z,4.0nm,0.9s
PKI    Pulchoki         69.08 303 eP        P        21 34 23.6 -1.2
       comp=Z,38nm,1.3s
PKIN   Phulchoki        69.09 303 eP        P        21 34 23.7 -1.1
       comp=Z,9.6nm,0.7s
SEY    Seymchan         69.13   2   P       P        21 34 24.1 +0.1
       comp=Z,8.6nm,1.0s,baz=193,slow=6.3,SNR=11
SEY                                 pP      pP       21 34 35.8 -0.2
       comp=Z,29nm,1.1s,baz=183,slow=6.6,SNR=14
KKN    Kakani           69.25 303 eP        P        21 34 25.4 -0.4
DMN    Daman            69.34 302 eP        P        21 34 25.1 -1.3
       comp=Z,29nm,0.8s
YAK    Yakutsk          69.58 351   P       P        21 34 27.0 +0.3
       comp=Z,5.0nm,0.5s,baz=204,slow=2.1,SNR=3.8
YAK    Yakutsk          69.58 351 eP        P        21 34 26.5 -0.3
YAK                               eS        S        21 43 26.0 -5.6
YAK                               e*SS      sS       21 43 50.8 -1.0
YAK                                 pmax    pmax
       comp=Z,38nm,1.1s
YAK                                 pmax    pmax
       comp=N,28nm,1.2s
YAK                                 pmax    pmax
       comp=E,12nm,1.4s
YAK                                 smax    smax
       comp=N,362nm,4.3s
YAK                                 smax    smax
       comp=E,145nm,4.6s
YAK    Yakutsk          69.58 351   IAmb    IAmb     21 34 43.4
       comp=Z,32nm,0.9s
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GKN    Gorkha           69.86 303 eP        P        21 34 29.2 -0.2
       comp=Z,27nm,0.8s
MOY    Mondy            70.28 331 eP        P        21 34 31.6 +0.2
MOY                                 pmax    pmax
       comp=Z,26nm,1.5s
DANN   Dangsing         70.71 303 eP        P        21 34 34.0 -0.8
       comp=Z,19nm,0.7s
VNDA   Vanda            71.55 177   P       P        21 34 37.5 -1.1
       comp=Z,14nm,0.8s,baz=333,slow=6.8,SNR=14
VNDA                                LR      LR       22 04 54.0
       comp=Z,309nm,18.1s,baz=336,slow=35
HYB    Hyderabad        72.42 290 i P       P        21 34 46.0 +1.1
WMQ    Urumqi           73.62 319 eP        P        21 34 54.1 +2.5
WMQ                                 pP      pP       21 35 02.1 -1.8
WMQ                                 pmax    pmax
       comp=Z,100nm,6.5s
WMQ                                 LR      LR
       comp=Z,430nm,29.2s
WMQ                                 LR      LR
       comp=Z,810nm,28.8s
WMQ                                 LR      LR
       comp=Z,150nm,25.3s
BILL   Bilibino         75.30   7 eP        P        21 34 59.7 -1.0
BILL                              i                  21 35 14.4
BILL                                pmax    pmax
       comp=Z,3.0nm,0.9s
BILL                                MLR     MLR
       comp=Z,195nm,20.0s
BILL   Bilibino         75.30   7           pP       21 35 12.5 -0.2
MKAR   Makanchi Array   78.31 320   P       P        21 35 17.5 -0.7
       comp=Z,2.5nm,0.5s,baz=97,slow=7.5,SNR=32
MKAR                                pP      pP       21 35 30.3 -0.3
       comp=Z,5.7nm,0.6s,baz=97,slow=7.8,SNR=17
MKAR                                PKKPbc  PKKPbc   21 54 15.8 -2.3
       comp=Z,0.4nm,0.6s,baz=316,slow=2.2,SNR=4.8
MKAR                                PKPPKP  P'P'df   22 02 20.3 +1.6
       comp=Z,0.5nm,0.9s,baz=318,slow=5.2,SNR=3.8
MKAR                                LR      LR       22 12 09.7
       comp=Z,61nm,18.1s,baz=80,slow=37
MKAR   Makanchi Array   78.31 320   P       P        21 35 17.1 -1.1
MAKZ   Makanchi         78.52 320   P       P        21 35 18.7 -0.7
MAKZ                                pmax    pmax
       comp=Z,9.0nm,0.7s
MAKZ   Makanchi         78.52 320   P       P        21 35 18.7 -0.7
TIXI   Tiksi            78.81 354   P       P        21 35 18.9 -1.4
       comp=Z,7.3nm,0.9s,baz=128,slow=3.6,SNR=12
TIXI   Tiksi            78.81 354 i P       P        21 35 18.6 -1.8
TIXI                                pmax    pmax
       comp=Z,8.0nm,1.1s
TIXI   Tiksi            78.81 354   P       P        21 35 18.6 -1.8
ZALV   Zalesovo Beam    79.76 328   P       P        21 35 24.2 -1.6
       comp=Z,7.4nm,0.7s,baz=113,slow=5.0,SNR=15
ZALV                                PKKPbc  PKKPbc   21 54 13.1 -2.1
       comp=Z,1.8nm,0.6s,baz=309,slow=2.4,SNR=7.9
ZALV                                PKPPKP  P'P'df   22 02 13.0 -2.5
       comp=Z,0.4nm,0.3s,baz=322,slow=4.5,SNR=4.5
ZALV                                LR      LR       22 09 43.2
       comp=Z,265nm,21.9s,baz=122,slow=35
ZALV   Zalesovo Beam    79.76 328   P       P        21 35 23.9 -2.0
SVW2   Sparrevohn       80.15  24           pP       21 35 40.8 +0.7
KSH    Kashi            80.26 312   P       P        21 35 32.0 +2.9
KSH                                 pP      sP       21 35 45.5 -0.7
KSH                                 S       S        21 45 32.0 +0.3
KSH                                 SS      SS       21 50 47.5 +3.8
KSH                                 pmax    pmax
       comp=Z,10.0nm,0.6s
KSH                                 pmax    pmax
       comp=Z,350nm,6.7s
KSH                                 LR      LR
       comp=Z,360nm,11.3s
KSH                                 LR      LR
       comp=Z,350nm,12.1s
KSH                                 LR      LR
       comp=Z,140nm,11.6s
NIL    Nilore           80.84 305   P       P        21 35 32.5 +0.2
NIL                                 pmax    pmax
       comp=Z,13nm,0.8s
NIL    Nilore           80.84 305   P       P        21 35 32.5 +0.2
NIL                                 IAmb    IAmb     21 35 36.5
       comp=Z,13nm,0.8s
RSO    Redoubt South    81.00  26   P       P        21 35 34.2 +1.5
BOOM   Boomskoye usch   81.14 315   P       P        21 35 32.6 -1.2
BOOM   Boomskoye usch   81.14 315   P       P        21 35 32.6 -1.2
CNPM   China Poot       81.21  27   P       P        21 35 34.0 +0.4
BRLK   Bradley Lake     81.48  27   P       P        21 35 34.9 -0.1
BRLK                                IAmb    IAmb     21 35 48.4
       comp=Z,23nm,0.8s
KZA    Kyzart           81.51 314   P       P        21 35 35.5 -0.6
       SNR=11
RDOG   Red Dog Mine     81.78  17   IAmb    IAmb     21 35 50.6
       comp=Z,12nm,0.7s
KURK   Kurchatov        82.00 323ceP        P        21 35 37.6 -0.3
KURK                                pmax    pmax
       comp=Z,3.0nm,0.9s
KURK   Kurchatov        82.00 323   P       P        21 35 38.1 +0.1
KURBB  Kurchatov Arra   82.02 323   P       P        21 35 37.7 -0.3
       comp=Z,1.6nm,0.6s,baz=106,slow=3.9,SNR=16
UCH    Uchtor           82.08 314   P       P        21 35 39.2  0.0
       SNR=6.5
CHMS   Chumysh          82.12 315 i P       P        21 35 36.5 -2.3
CHMS                                pmax    pmax
       comp=Z,9.0nm,0.9s
AAK    Ala-Archa        82.20 314   P       P        21 35 39.5  0.0
AAK                                 pmax    pmax
       comp=Z,8.0nm,0.9s
AAK    Ala-Archa        82.20 314   P       P        21 35 39.5  0.0
SKT    Skwentna         82.27  25   P       P        21 35 40.0 +0.8
SEW    Seward           82.28  27   P       P        21 35 40.1 +1.0
SEW                                 IAmb    IAmb     21 35 52.7
       comp=Z,24nm,0.8s
MAW    Mawson           82.31 203   LR      LR       22 12 43.1
       comp=Z,372nm,18.7s,baz=61,slow=36
MAW    Mawson           82.31 203   P       P        21 35 38.9 -0.4
MAW                                 pmax    pmax
       comp=Z,7.0nm,1.2s
MAW    Mawson           82.31 203   P       P        21 35 38.9 -0.4
SUA    Susitna One      82.35  25   P       P        21 35 39.5 -0.2
SUA                                 IAmb    IAmb     21 35 52.8
       comp=Z,16nm,0.8s
USP    Ospenovka        82.37 315   P       P        21 35 39.4 -0.8
       SNR=5.2
PPLA   Purkeypile       82.46  24   P       P        21 35 39.5 -0.7
RC01   Rabbit Creek A   82.61  26   P       P        21 35 40.9  0.0
RC01                                IAmb    IAmb     21 35 54.2
       comp=Z,18nm,0.8s
AML    Almayashu        82.64 314   P       P        21 35 44.3 +2.3
       SNR=9.7
EKS2   Erkin-Say        82.72 314   P       P        21 35 42.8 +0.7
       SNR=11
ARSB   Arslanbob        82.94 313   P       P        21 35 43.0 -0.3
ARSB                                pmax    pmax
       comp=Z,11nm,1.1s
ARSB   Arslanbob        82.94 313   P       P        21 35 43.0 -0.3
PMR    Palmer           83.09  25   P       P        21 35 44.4 +1.0
PMR                                 pmax    pmax
       comp=Z,18nm,0.9s
PMR    Palmer           83.09  25   P       P        21 35 44.4 +1.0
PMR                                 IAmb    IAmb     21 35 56.4
       comp=Z,18nm,0.9s
GHO    Glory Hole Cre   83.26  25   P       P        21 35 45.4 +1.0
GHO                                 IAmb    IAmb     21 35 58.1
       comp=Z,20nm,0.9s
KTH    Kantishna Hill   83.28  23   IAmb    IAmb     21 35 57.6
       comp=Z,20nm,1.0s
KNK    Knik Glacier     83.30  26   IAmb    IAmb     21 35 58.2
       comp=Z,21nm,0.9s
IMAR   Indian Mountai   83.46  21   P       P        21 35 45.1 -0.1
TRF    Thorofare Moun   83.48  23   P       P        21 35 46.0 +0.4
TRF                                 IAmb    IAmb     21 36 01.5
       comp=Z,13nm,0.8s
BPAW   Bear Paw Mtn.    83.52  23   P       P        21 35 46.3 +0.7
QSPA   South Pole Qui   83.66 180   P       P        21 35 46.5  0.0
GLI    Glacier Island   83.67  26   P       P        21 35 46.4  0.0
RND    Reindeer         84.03  24   IAmb    IAmb     21 36 01.4
       comp=Z,27nm,0.9s
MLY    Manley           84.06  22   IAmb    IAmb     21 36 01.9
       comp=Z,19nm,1.0s
BTK    Batken           84.24 311   P       P        21 35 49.3 -0.6
BTK                                 pmax    pmax
       comp=Z,4.0nm,1.0s
BTK    Batken           84.24 311   P       P        21 35 49.3 -0.6
KBL    Kabul            84.44 306   P       P        21 35 50.5 -0.8
KBL                                 pmax    pmax
       comp=Z,3.0nm,1.0s
KBL    Kabul            84.44 306   P       P        21 35 50.5 -0.8
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NEA	Nenana	84.48	23	P	P	21 35 50.9	+0.5
NEA				IAmb	IAmb	21 36 01.7	
	comp=Z,12nm,0.8s						
DHY	Denali Highway	84.49	24	IAmb	IAmb	21 36 04.2	
	comp=Z,19nm,1.0s						
WRH	Wood River Hil	84.81	23	IAmb	IAmb	21 36 05.2	
	comp=Z,20nm,1.0s						
MDM	Murphy Dome	84.97	23	P	P	21 35 54.4	+1.4
CCB	Clear Creek Bu	85.00	23	IAmb	IAmb	21 36 05.4	
	comp=Z,21nm,1.0s						
COLA	College	85.08	23	P	P	21 35 53.6	+0.2
COLA				pmax	pmax		
	comp=Z,16nm,0.7s						
COLA	College	85.08	23	P	P	21 35 53.6	+0.2
COLA				IAmb	IAmb	21 36 05.8	
	comp=Z,16nm,0.7s						
KKAR	Karatay Array	85.15	314	P	P	21 35 53.1	-1.3
KKAR	Karatay Array	85.15	314	P	P	21 35 53.1	-1.3
CHGR	Chuyangaron	85.19	310	P	P	21 35 53.6	-1.1
CHGR				IAmb	IAmb	21 36 07.2	
	comp=Z,17nm,0.8s						
HDA	Harding Lake	85.23	23	IAmb	IAmb	21 36 07.6	
	comp=Z,8.0nm,0.6s						
HDA	Harding Lake	85.23	23	P	P	21 35 52.4	-1.9
	baz=245						
COLD	Coldfoot	85.31	20	P	P	21 35 54.9	+0.3
GLB	Gilahina Butte	85.35	27	P	P	21 35 54.7	-0.3
GLB				IAmb	IAmb	21 36 08.7	
	comp=Z,19nm,1.1s						
CRQM	Cirque	85.40	27	P	P	21 35 54.6	-0.7
IL31		85.41	23	IAmb	IAmb	21 36 06.7	
	comp=Z,13nm,0.8s						
ILAR	Eielson Array	85.41	23	P	P	21 35 52.6	-2.5
	comp=Z,4.2nm,0.6s,baz=252,slow=4.7,SNR=50						
ILAR				PKKPbc	PKKPbc	21 53 59.6	-2.9
	comp=Z,0.4nm,0.6s,baz=336,slow=1.4,SNR=5.1						
ILAR				LR	LR	22 08 38.4	
	comp=Z,142nm,21.8s,baz=258,slow=32						
ILAR	Eielson Array	85.41	23	P	P	21 35 51.6	-3.5
ILAR	Eielson Array	85.41	23	P	P	21 35 51.6	-3.5
MCARA	McCarthy VSAT	85.68	27	P	P	21 35 56.9	+0.4
MCARA				IAmb	IAmb	21 36 11.2	
	comp=Z,12nm,0.9s						
RIDG	Independent Ri	85.80	24	IAmb	IAmb	21 36 10.5	
	comp=Z,16nm,1.1s						
NRIK	Noril'sk	85.85	342	P	P	21 35 56.0	-1.2
	comp=Z,5.5nm,0.7s,baz=107,slow=4.1,SNR=3.1						
NRIK				LR	LR	22 14 38.9	
	comp=Z,119nm,19.6s,baz=122,slow=36						
NRIK	Noril'sk	85.85	342	P	P	21 35 56.0	-1.2
BALM	Baldy	85.86	27	IAmb	IAmb	21 36 09.4	
	comp=Z,12nm,1.0s						
MENT	Mentasta	85.96	25	P	P	21 35 58.5	+0.6
MENT				IAmb	IAmb	21 36 11.7	
	comp=Z,16nm,1.0s						
DOT	Dot Lake	86.08	25	P	P	21 35 57.5	-1.0
DOT				IAmb	IAmb	21 36 12.1	
	comp=Z,19nm,1.0s						
BARN	Barnard Glacie	86.18	27	P	P	21 35 59.0	-0.3
BARN				IAmb	IAmb	21 36 13.5	
	comp=Z,22nm,1.0s						
TOLK	Toolik Lake Re	86.19	19	IAmb	IAmb	21 36 13.0	
	comp=Z,9.0nm,0.8s						
TOLK	Toolik Lake Re	86.19	19	P	P	21 35 58.7	-0.3
	baz=242						
SCRK	Sand Creek	86.24	24	P	P	21 35 59.8	+0.4
SCRK				IAmb	IAmb	21 36 12.3	
	comp=Z,11nm,1.1s						
CTGM	Chitina Glacie	86.30	27	P	P	21 36 00.7	+0.9
CTGM				IAmb	IAmb	21 36 14.0	
	comp=Z,20nm,0.8s						
FYU	Fort Yukon	86.78	22	IAmb	IAmb	21 36 15.8	
	comp=Z,17nm,1.1s						
BCAR	Beaver Creek A	86.83	25	P	P	21 36 01.4	-0.8
BMAR	Burnt Mountain	87.36	21	P	P	21 36 05.5	+0.8
BVAR	Borovoye Array	87.55	324	P	P	21 36 04.3	-1.6
	comp=Z,2.8nm,0.5s,baz=106,slow=6.1,SNR=16						
BRVK	Borovoye	87.62	324	P	P	21 36 05.3	-0.9
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRVK	Borovoye	87.62	324	P	P	21 36 05.3	-0.9
EGAK	Eagle	87.68	24	IAmb	IAmb	21 36 20.7	
	comp=Z,16nm,0.9s						
SKAG	Skagway	88.72	30	P	P	21 36 11.0	-0.2
MOBC	Moresby Island	89.11	36	P	P	21 36 11.9	-1.3
RER	Riviere de l’E	89.76	249	P	P	21 36 15.9	-1.3
EPYK	Eagle Plains	89.93	23	IAmb	IAmb	21 36 32.8	
	comp=Z,9.9nm,0.8s						
EPYK	Eagle Plains	89.93	23	P	P	21 36 16.2	-0.7
	baz=254						
SYO	Syowa Base	90.61	200⇑	*e*P	P	21 36 18.0	-2.0
SYO	Syowa Base	90.61	200⇑	*e*PcP	PcP	21 36 20.8	-0.2
SYO	Syowa Base	90.61	200⇓	*e*pP	pP	21 36 32.7	+0.1
INK	Inuvik	91.61	21	P	P	21 36 23.9	-0.7
	comp=Z,4.1nm,0.9s,baz=218,slow=5.8,SNR=7.9						
INK	Inuvik	91.61	21	P	P	21 36 25.2	+0.7
INK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
INK	Inuvik	91.61	21	P	P	21 36 25.1	+0.7
ABKAR	Akbulak array	93.41	319	P	P	21 36 31.2	-2.0
ABKAR				pP	pP	21 36 43.5	-2.1
O02D	Mt. Diablo Mer	93.49	50	P	P	21 36 36.0	+2.0
	baz=265						
GEYT	Alibeck	93.67	308	P	P	21 36 33.8	-1.0
	comp=Z,1.4nm,0.7s,baz=277,slow=2.5,SNR=4.4						
GEYT				LR	LR	22 21 45.1	
	comp=Z,44nm,21.5s,baz=5.0,slow=37						
GEYT	Alibeck	93.67	308	P	P	21 36 34.5	-0.3
YBH	Yreka Blue Hor	93.69	49	P	P	21 36 34.7	-0.2
	comp=Z,3.3nm,1.1s,baz=231,slow=6.3,SNR=4.0						
YBH	Yreka Blue Hor	93.69	49	IAmb	IAmb	21 36 49.8	
	comp=Z,5.5nm,1.0s						
ORV	Oroville	94.42	51		pP	21 36 50.9	+0.3
AFDM	Forest Hills D	94.79	51		pP	21 36 54.4	+2.0
ARU	Arti	94.85	326	P	P	21 36 39.7	0.0
	comp=Z,0.5nm,0.5s,baz=78,slow=8.6,SNR=3.3						
ARU	Arti	94.85	326	*i* P	P	21 36 38.6	-1.1
ARU				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ARU	Arti	94.85	326	IAmb	IAmb	21 36 41.0	
	comp=Z,5.6nm,1.1s						
J05D	Fort Rock, OR	94.90	47	P	P	21 36 42.5	+2.0
	baz=266						
G05D	Wamic, OR	94.98	45	P	P	21 36 42.3	+1.7
	baz=266						
C36M	Paulatuk	95.16	21	P	P	21 36 42.5	+1.7
	baz=266						
B08A	Colville Reser	96.50	42		pP	21 37 00.2	+0.3
MWC	Mount Wilson	96.84	56		pP	21 37 04.4	+2.4
NVAR	Mina Array Bea	96.84	52	P	P	21 36 49.4	-0.1
	comp=Z,0.7nm,0.8s,baz=256,slow=5.5,SNR=4.5						
NVAR				LR	LR	22 17 59.4	
	comp=Z,183nm,18.1s,baz=283,slow=34						
NVAR	Mina Array Bea	96.84	52		pP	21 37 03.5	+1.5
NVL	N'lazarevskaya	97.72	193	*e*P	P	21 36 51.6	-0.9
NVL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BMO	Blue Mountains	97.80	46		pP	21 37 06.2	+0.2
F10A	Beach Ranch, E	97.87	45		pP	21 37 07.0	+0.8
YKA	Yellowknife Ar	99.02	28	P	Pdif	21 36 57.8	-0.7
	comp=Z,1.9nm,0.9s,baz=274,slow=4.5,SNR=13						
YKA				PP	PP	21 40 59.5	-1.2
	comp=Z,0.7nm,0.9s,baz=272,slow=7.6,SNR=5.6						
YKA				PKKPbc	PKKPbc	21 53 23.6	-3.4
	comp=Z,1.1nm,0.6s,baz=91,slow=3.2,SNR=16						
YKA				LR	LR	22 19 01.8	
	comp=Z,177nm,20.2s,baz=0.0,slow=34						
SNAA	Sanae	99.83	189	P	Pdif	21 37 01.5	-0.6
SNAA	Sanae	99.83	189	P	Pdif	21 37 01.5	-0.6
SNAA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SNAA	Sanae	99.83	189		Pdif	21 37 01.5	-0.6
SNAA				IAmb	IAmb	21 37 08.7	
	comp=Z,4.9nm,1.0s						
VNA2	Neumayer--Watz	101.17	188	P	Pdif	21 37 08.0	0.0
	baz=155,slow=4.5						
VNA3	Neumayer Olymp	101.18	187	P	Pdif	21 37 07.6	-0.4
RES	Resolute Bay	103.06	14	PKKPbc	PKKPbc	21 53 11.9	-3.7
	comp=Z,1.1nm,0.6s,baz=139,slow=3.6,SNR=7.2						
KLMR	Klimovskoe	104.40	331	*e*P	Pdif	21 37 22.1	-0.3
KLMR				pmax	pmax		
	comp=Z,28nm,2.1s						
KLMR	Klimovskoe	104.40	331	*e*Pdif	Pdif	21 37 22.2	-0.2
KLMR				AMP		21 37 32.0	
	comp=Z,28nm,2.1s						
GOF	Gofitskoye	104.94	315⇑	*e*P	Pdif	21 37 18.9	-6.3
APA	Apatity	105.01	339⇓	*i*P	Pdif	21 37 30.1	+5.1
APA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,2µm,17.0s						
ARCES	ARCESS Array B	106.83	342	Pdiff	Pdif	21 37 35.0	+1.9
	comp=Z,7.9nm,1.1s,baz=61,slow=9.9,SNR=4.3						
ARCES				PKKPbc	PKKPbc	21 53 01.0	-3.1
	comp=Z,4.5nm,1.1s,baz=251,slow=3.7,SNR=5.0						
TXAR	Lajitas Array	109.12	61	PKiKP	PKiKP	21 41 49.3	+0.9
	comp=Z,0.1nm,0.5s,baz=183,slow=2.5,SNR=3.6						
TXAR				PKKP	PKKPab	21 53 08.1	+0.6
	comp=Z,0.9nm,0.8s,baz=118,slow=5.3,SNR=10.0						
FINES	FINESS Array B	110.35	334	Pdiff	Pdif	21 37 49.2	+0.4
	comp=Z,3.1nm,0.8s,baz=89,slow=7.4,SNR=2.9						
BRTR	Keskin Array B	112.62	310	PKKP	PKKPdf	21 53 00.0	-5.0
	comp=Z,0.6nm,0.7s,baz=225,slow=3.1,SNR=3.7						
WMOK	Wichita Mounta	112.70	55	P	PKiKP	21 41 53.2	-1.8
	baz=278						
AKASG	Malin Array Be	112.81	323	PKKPbc	PKKPbc	21 52 42.0	-2.2
	comp=Z,0.4nm,0.4s,baz=262,slow=3.6,SNR=4.3						
BOSA	Boshof	114.81	235	PKP	PKiKP	21 41 58.5	-0.9
	comp=Z,1.8nm,0.6s,baz=131,slow=10,SNR=3.6						
MLR	Muntele Rosu	116.60	318	PKP	PKPdf	21 42 00.4	-1.9
	comp=Z,1.8nm,0.7s,baz=130,slow=15,SNR=3.0						
U40A	Yellville	117.15	52		PKPdf	21 42 03.3	-0.2
U40A	Yellville	117.15	52	P	PKPdf	21 42 02.4	-1.0
	baz=283						
KOLS	Kolonicke sedl	117.65	323	*e*PKIKP	PKiKP	21 42 04.8	+0.7
KOLS	Kolonicke sedl	117.65	323	*e*PKP	PKiKP	21 42 04.8	+0.7
VYHS	Vyhne	119.89	323	*e*PKIKP	PKPdf	21 42 07.5	-0.9
VYHS	Vyhne	119.89	323	*e*PKP	PKPdf	21 42 07.5	-0.9
D46A	Sault St. Mari	119.98	39	P	PKPdf	21 42 07.8	-0.8
	baz=296						
E46A	Sault Ste Mari	120.03	39		PKPdf	21 42 08.3	-0.4
E46A				pPKPdf	pPKPdf	21 42 20.7	-0.6
KRLC	Kraliky	120.32	326	*e*PKP	PKiKP	21 42 10.0	+0.7
KRLC				*e*pPKP	pPKPdf	21 42 21.8	-0.4
KRLC	Kraliky	120.32	326	*e*PKIKP	PKiKP	21 42 10.0	+0.7
KRLC				*e*		21 42 21.8	
OSTC	Ostas	120.39	326	*e*PKP	PKiKP	21 42 10.1	+0.7
OSTC				*e*pPKP	pPKPdf	21 42 22.1	-0.2
D47A	Chapleau	120.48	38	P	PKPdf	21 42 09.4	-0.1
	baz=296						
E47A	Iron Bridge	120.64	39	P	PKPdf	21 42 09.5	-0.3
	baz=296						
MODS	Modra-Piesok	120.86	324	*e*PKIKP	PKPdf	21 42 10.2	0.0
MODS	Modra-Piesok	120.86	324	*e*PKP	PKPdf	21 42 10.2	0.0
E48A	Lockeyer	121.31	38	P	PKPdf	21 42 11.0	-0.1
	baz=297						
F48A	Evansville	121.32	39	P	PKPdf	21 42 11.0	-0.1
	baz=296						
PLCA	Paso Flores	121.37	146	PKP	PKiKP	21 42 12.1	+0.4
	comp=Z,7.3nm,0.7s,baz=257,slow=2.8,SNR=30						
PLCA				pPKP	pPKPdf	21 42 25.0	+0.9
	comp=Z,12nm,0.7s,baz=250,slow=1.2,SNR=18						
PLCA	Paso Flores	121.37	146	*e*P	PKiKP	21 42 13.8	+2.0
BRG	Berggiesshubel	121.45	328	*e*PKP	PKiKP	21 42 12.1	+0.7
	comp=Z,7.8nm,1.1s						
BRG				*e*		21 42 23.4	
	comp=Z,8.1nm,1.2s						
BRG	Berggiesshubel	121.45	328	*e*PKIKP	PKiKP	21 42 12.1	+0.7
BRG				*e*		21 42 23.4	
BRG				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BRG				pmax	pmax		
	comp=Z,8.0nm,1.2s						
K48A	Perry	121.60	43	P	PKPdf	21 42 11.4	-0.4
	baz=293						
PRU	Pruhonice	121.60	327	*e*PKP	PKiKP	21 42 12.1	+0.4
PRU				*e*pPKP	pPKPdf	21 42 23.9	-0.7
PRU	Pruhonice	121.60	327	*e*PKIKP	PKiKP	21 42 12.1	+0.4
PRU				*e*		21 42 23.9	
CLL	Collm	121.70	328	*e*PKiKP	PKPdf	21 42 10.0	-1.7
CLL				*i*		21 42 13.0	
	comp=Z,5.0nm,0.9s						
CLL				*e*pPKiKP	pPKiKP	21 42 25.0	+0.1
CLL				Lm	MLR	22 37 00.0	
	comp=N,200nm,19.7s						
CLL				Lm	MLR	22 37 00.0	
	comp=E,300nm,19.0s						
CLL				Lm	MLR	22 37 00.0	
	comp=Z,400nm,18.8s						
CLL	Collm	121.70	328	*e*PKIKP	PKPdf	21 42 09.0	-2.7
CLL				*e*		21 42 25.0	
CLL				MLR	MLR		
	comp=Z,400nm,18.8s						
L48A	N Adams	121.72	44	P	PKPdf	21 42 11.8	-0.3
	baz=292						
O48A	Farmland	121.83	46	P	PKPdf	21 42 11.5	-0.8
	baz=291						
CONA	Conrad Observa	121.91	324	*e*PKiKP	PKiKP	21 42 12.7	+0.2
	comp=Z,3.2nm,0.9s,SNR=4.1						
D50A	G1974 Best Tow	122.40	37	P	PKiKP	21 42 13.5	+0.1
	baz=300						
ARSA	Arzberg	122.44	323	*e*PKiKP	PKPdf	21 42 13.2	-0.1
	comp=Z,3.7nm,1.2s						
KHC	Kasperske Hory	122.59	326	*e*PKP	PKiKP	21 42 14.0	+0.3
KHC				*e*pPKP	pPKPdf	21 42 25.9	-0.7
KHC	Kasperske Hory	122.59	326	PKIKP	PKiKP	21 42 14.1	+0.3
KHC						21 42 25.9	
KHC	Kasperske Hory	122.59	326		PKiKP	21 42 14.1	+0.3
KHC				pPKPdf	pPKPdf	21 42 25.9	-0.7
NKC	Novy Kostel	122.60	328	*e*PKP	PKiKP	21 42 14.5	+0.8
NKC				*e*pPKP	pPKPdf	21 42 25.5	-1.0
NKC	Novy Kostel	122.60	328	*e*PKIKP	PKiKP	21 42 14.5	+0.8
NKC				*e*		21 42 25.5	
GERES	GERESS Array B	122.67	326	PKP	PKPdf	21 42 12.7	-1.1
	comp=Z,2.3nm,0.7s,baz=74,slow=1.6,SNR=17						
GERES				pPKP	pPKPdf	21 42 26.0	-0.8
	comp=Z,2.0nm,0.8s,baz=75,slow=1.5,SNR=6.8						
GERES				PKKPbc	PKKPab	21 52 06.7	-0.8
	comp=Z,0.4nm,0.6s,baz=222,slow=1.8,SNR=4.9						
GERES	GERESS Array B	122.67	326	PKIKP	PKPdf	21 42 13.1	-0.7
GERES	GERESS Array B	122.67	326		PKPdf	21 42 13.1	-0.7
F51A	Arnstein	122.96	38	P	PKPdf	21 42 14.4	+0.1
	baz=299						
O50A	Cable	122.96	46	P	PKPdf	21 42 14.3	-0.2
	baz=292						
SOKA	Soboth	123.02	323	*e*PKPdf	PKPdf	21 42 12.1	-2.4
	comp=Z,9.8nm,2.0s						
LSQQ	Lebel-sur-Quev	123.06	34	P	PKPdf	21 42 13.5	-0.9
	baz=303						
R50A	Paris	123.12	48	P	PKPdf	21 42 14.6	-0.2
	baz=290						
VLDQ	Val d'Or	123.30	35		PKPdf	21 42 13.7	-1.2
VLDQ				pPKPdf	pPKPdf	21 42 25.6	-1.9
F52A	Sundridge	123.38	38	P	PKPdf	21 42 15.1	-0.1
	baz=299						
KBA	Koelnbreinsper	123.81	324	*e*PKiKP	PKPdf	21 42 15.6	-0.6
	comp=Z,5.6nm,1.0s						
MYKA	Terra Mystica	123.87	324	*e*PKPdf	PKPdf	21 42 14.8	-1.4
	comp=Z,2.9nm,0.5s						
ALGO	Algonquin Park	124.08	37	P	PKPdf	21 42 16.1	-0.4
	baz=301						
G53A	Haliburton	124.14	38	P	PKPdf	21 42 16.6	0.0
	baz=300						
SCHQ	Schefferville	124.17	23	PKP	PKPdf	21 42 15.5	-0.9
	comp=Z,2.5nm,0.9s,baz=243,slow=4.5,SNR=2.9						
SCHQ				pPKP	pPKPdf	21 42 28.4	-0.5
	comp=Z,5.5nm,0.7s,baz=20,slow=2.2,SNR=7.0						
G54A	Lake Saint Pet	124.33	38	P	PKPdf	21 42 16.8	-0.2
	baz=300						
ABTA	Abfaltersbach	124.47	324	*e*PKiKP	PKPdf	21 42 17.4	+0.1
	comp=Z,4.2nm,0.8s						
V52A	Sevierville	124.50	50	P	PKiKP	21 42 18.1	+0.2
	baz=289						
STAL	STALIGIAL	124.61	324	pPKPdf	pPKPdf	21 42 29.3	-1.2
WATA	Walderalm	124.69	325	*i* PKiKP	PKPdf	21 42 18.0	+0.2
	comp=Z,6.6nm,1.1s						
WTTA	Wattenberg	124.69	325	*i* PKiKP	PKiKP	21 42 18.5	+0.3
	comp=Z,10nm,1.1s						
MOTA	Moosalm	124.95	325	*e*PKiKP	PKiKP	21 42 18.7	+0.1
	comp=Z,9.6nm,1.0s,SNR=4.7						
SQTA	Sankt Quirin	124.96	325	*e*PKiKP	PKiKP	21 42 19.0	+0.3
	comp=Z,5.4nm,0.8s,SNR=4.5						
RETA	Reutte	125.06	326	*e*PKiKP	PKiKP	21 42 19.6	+0.8
	comp=Z,7.0nm,1.2s						
FETA	Feichten	125.34	325	*i* PKiKP	PKiKP	21 42 20.0	+0.5
	comp=Z,7.1nm,0.9s						
D56A	ZEC Mazanza, M	125.41	35	P	PKPdf	21 42 18.9	-0.1
	baz=304						
DAVA	Damuels	125.67	326	*e*PKiKP	PKiKP	21 42 20.4	+0.3
	comp=Z,2.3nm,0.6s						
EKA	Eskdalemuir Ar	125.92	340	PKP	PKPdf	21 42 19.4	-0.3
	comp=Z,0.9nm,0.5s,baz=24,slow=3.1,SNR=6.4						
EKA				pPKP	pPKPdf	21 42 31.8	-0.9
	comp=Z,6.1nm,0.8s,baz=36,slow=4.4,SNR=6.3						
DAVOX	Davos/Dischmat	125.96	325	PKP	PKPdf	21 42 20.5	+0.2
	comp=Z,4.2nm,0.8s,baz=79,slow=4.9,SNR=5.4						
E57A	Chemin Saint G	126.12	35	P	PKPdf	21 42 20.1	-0.3
	baz=305						
BMRD	Maredsous	126.43	331	PKPdf	PKPdf	21 42 19.5	-1.3
ZCCA	Zocca	126.66	322		PKiKP	21 42 22.2	+0.2
ZCCA				pPKPdf	pPKPdf	21 42 35.6	+1.0
JTS	Las Juntas de	127.59	82	PKP	PKPdf	21 42 24.2	+0.1
	comp=Z,5.1nm,0.3s,baz=358,slow=5.3,SNR=5.3						
JTS	Las Juntas de	127.59	82		PKiKP	21 42 25.1	+0.5
JTS				pPKPdf	pPKPdf	21 42 36.6	-0.2
TRQA	Tornquist	127.83	150	*e*P	PKiKP	21 42 25.8	+1.3
GO04	Tololo Observa	128.10	137	pPKPdf	pPKPdf	21 42 38.1	+0.6
CFA	Coronel Fontan	128.90	140	PKP	PKiKP	21 42 26.7	-0.2
	comp=Z,12nm,0.7s,baz=247,slow=3.5,SNR=15						
CFA				pPKP	pPKPdf	21 42 39.7	+1.0
	comp=Z,28nm,0.8s,baz=249,slow=3.4,SNR=10						
CFA				SKPbc	SKiKP	21 45 46.9	-13
	comp=Z,6.1nm,0.8s,baz=254,slow=4.3,SNR=6.6						
ATAH	Atahualpa	131.91	105	PKP	PKiKP	21 42 35.1	+1.2
	comp=Z,9.8nm,0.7s,baz=284,slow=6.8,SNR=6.4						
ATAH				SKPbc	SKPab	21 45 58.0	+1.6
	comp=Z,9.4nm,0.7s,baz=180,slow=5.3,SNR=5.6						
OTAV	Otavalo	133.35	96	*e*P	PKiKP	21 42 36.4	-0.5
LVC	Limon Verde	133.91	130	PKP	PKPdf	21 42 36.3	0.0
	comp=Z,3.8nm,0.5s,baz=359,slow=0.7,SNR=6.8						
LVC	Limon Verde	133.91	130	PKIKP	PKPdf	21 42 36.4	0.0
LVC						21 42 49.7	
LVC	Limon Verde	133.91	130	pPKPdf	pPKPdf	21 42 49.7	+0.8
LVC	Limon Verde	133.91	130	*e*P	PKiKP	21 42 37.5	-0.2
BBAC	Balboa, Cauca	134.78	93	*e*P	PKiKP	21 42 38.9	-0.6
MNMC	Minye Minye	135.23	125		PKPdf	21 42 39.6	+0.8
MNMC				pPKPdf	pPKPdf	21 42 52.2	+0.8
GO01	Chusmiza	135.28	126	pPKPdf	pPKPdf	21 42 52.0	+0.3
SOTA	Rioblanco	135.42	93	*e*P	PKPdf	21 42 35.7	-3.8
PCON	Cinco Dias	135.66	93	*e*P	PKiKP	21 42 41.4	-0.3
YOTC	Yotoco, Valle	135.87	91	*e*P	PKPdf	21 42 40.5	+0.5
DBBC	Dabeiba	136.18	86	*e*P	PKiKP	21 42 42.3	+0.2
CBOC	Ciudad Bolivar	136.33	88	*e*P	PKiKP	21 42 43.9	+1.4
HELC	Santa Helena	136.83	88	*e*P	PKPdf	21 42 42.9	+0.9
PLTB	Pedras Altas	136.93	153	*e*P	PKiKP	21 42 43.0	-0.1
GUY2C	Guyana, Caldas	136.94	89	*e*P	PKPdf	21 42 42.7	+0.4
PTLC	Puerto Leguiza	136.95	97	*e*P	PKPdf	21 42 41.3	-0.5
ORTC	Ortega, Tolima	136.96	91	*e*P	PKPdf	21 42 41.9	+0.1
ITQB	Itaqui	137.16	148	*e*P	PKiKP	21 42 43.6	0.0
SJCC	San Jacinto, C	137.21	82	*e*P	PKiKP	21 42 43.6	-0.5
NORC	Norcasia	137.45	89	*e*P	PKPdf	21 42 43.2	+0.5
LPAZ	La Paz	137.86	123	PKhKP	PKPpre	21 42 35.0	
	comp=Z,1.6nm,0.6s,baz=301,slow=2.7,SNR=4.9						
LPAZ				PKP	PKPdf	21 42 44.6	+0.5
	comp=Z,10nm,1.0s,baz=17,slow=1.7,SNR=17						
LPAZ				SKPbc	SKPbc	21 46 16.4	+1.5
	comp=Z,5.4nm,1.0s,baz=348,slow=1.5,SNR=7.8						
LPAZ	La Paz	137.86	123	*e*P	PKPdf	21 42 44.9	+0.8
ROSC	El Rosal	137.95	90	PKP	PKPdf	21 42 44.1	0.0
	comp=Z,14nm,0.3s,baz=30,slow=23,SNR=7.8						
CPSB	Cacapava Do Su	138.15	152	*e*P	PKiKP	21 42 45.4	-0.2
MACC	Macarena, Meta	138.16	94	*e*P	PKPdf	21 42 44.2	+0.2
ESDC	Sonseca Array	138.25	327	PKP	PKPdf	21 42 44.4	+0.9
	comp=Z,0.2nm,0.5s,baz=64,slow=3.0,SNR=2.4						
ESDC				SKPbc	SKPbc	21 46 14.1	-0.5
	comp=Z,0.6nm,0.8s,baz=14,slow=4.3,SNR=4.7						
ESDC	Sonseca Array	138.25	327	pPKPdf	pPKPdf	21 42 56.5	0.0
CHIC	Chingaza	138.52	90	*e*P	PKPdf	21 42 43.0	-2.2
CODC	Agustn Codazz	138.92	82	*e*P	PKPdf	21 42 45.6	+0.3
BARC	Barichara	139.17	87	*e*P	PKPdf	21 42 38.4	-7.8
CPUP	Villa Florida	139.35	144	PKhKP	PKPpre	21 42 40.6	
	comp=Z,1.2nm,0.5s,baz=244,slow=2.6,SNR=3.2						
CPUP				PKP	PKPdf	21 42 46.3	+0.4
	comp=Z,13nm,1.0s,baz=230,slow=1.9,SNR=14						
CPUP				SKPbc	SKPbc	21 46 19.7	+1.6
	comp=Z,4.7nm,1.1s,baz=344,slow=4.0,SNR=3.0						
CPUP	Villa Florida	139.35	144	pPKPdf	pPKPdf	21 42 59.1	+0.7
CPUP	Villa Florida	139.35	144	*e*P	PKPdf	21 42 46.5	+0.6
CNLB	Canela	140.25	154	*e*P	PKiKP	21 42 49.2	-0.8
ITAB	Concordia	141.42	151	*e*P	PKiKP	21 42 51.1	-1.3
SDV	Santo Domingo	141.72	84	PKhKP	PKPpre	21 42 46.3	
	comp=Z,25nm,0.7s,baz=278,slow=4.4,SNR=13						
SDV				PKP	PKPdf	21 42 51.3	+0.7
	comp=Z,53nm,0.8s,baz=243,slow=4.3,SNR=31						
SDV				SKPbc	SKiKP	21 46 25.9	-0.7
	comp=Z,8.8nm,0.9s,baz=34,slow=7.3,SNR=4.8						
SDV	Santo Domingo	141.72	84	*e*P	PKPdf	21 42 46.2	-4.5
SDV	Santo Domingo	141.72	84		PKPpre	21 42 45.1	
SDV				PKPdf	PKPdf	21 42 51.9	+1.2
SDV				pPKPdf	pPKPdf	21 43 02.6	-0.7
SIV	San Ignacio	143.75	128	PKP	PKPbc	21 42 51.4	-0.2
	comp=Z,9.2nm,0.5s,baz=246,slow=5.2,SNR=46						
SIV				pPKP	pPKPdf	21 43 04.8	-1.8
	comp=Z,30nm,0.8s,baz=245,slow=4.3,SNR=18						
SJG	San Juan	144.78	67	PKIKP	PKPab	21 42 54.2	-0.4
SJG	San Juan	144.78	67		PKPab	21 42 54.2	-0.4
SAML	Samuel	145.50	116	PKP2	PKPdf	21 42 57.1	0.0
SAML	Samuel	145.50	116		PKPdf	21 42 57.1	0.0
SAML				pPKPdf	pPKPab	21 43 09.8	-0.1
SAML	Samuel	145.50	116	*e*P	PKPdf	21 42 57.1	0.0
FRTB	Fartura	145.94	150	*e*P	PKPab	21 42 59.4	+0.6
TOA0	Torodi Ar. Sit	146.04	284		PKPdf	21 42 58.1	+0.1
TOA0				pPKPdf	pPKPab	21 43 12.9	+0.4
TORD	Torodi Ar. Bea	146.04	284	PKPbc	PKPbc	21 42 58.6	-0.2
	comp=Z,21nm,0.7s,baz=48,slow=2.6,SNR=72						
TORD				SKPbc	SKiKP	21 46 35.9	+0.7
	comp=Z,2.9nm,0.7s,baz=63,slow=2.4,SNR=4.6						
TORD	Torodi Ar. Bea	146.04	284		PKPab	21 43 00.2	+0.8
PCMB	Pacaembu	146.48	146	*e*P	PKPbc	21 42 59.4	-0.6
SPB	Sao Paulo	146.72	154		PKPbc	21 43 01.0	+0.5
SPB					pPKPab	21 43 14.5	+0.4
SPB	Sao Paulo	146.72	154	*e*P	PKPbc	21 43 00.2	-0.3
PP1B	Ponte de Pedra	147.27	137	*e*P	PKPbc	21 43 01.9	-0.4
VAO	Valinhos	147.44	154	*e*P	PKPbc	21 43 02.9	+0.1
PCRV	Puerto La Cruz	147.57	81	PKPbc	PKPbc	21 43 02.8	-0.5
	comp=Z,39nm,0.7s,baz=331,slow=1.8,SNR=11						
SMRT	St. Maarten	147.60	66		PKPdf	21 43 01.8	+1.3
SMRT				pPKPdf	pPKPbc	21 43 14.5	-1.4
SALV	Santo Antonio	147.85	134	*e*P	PKPbc	21 43 02.7	-1.2
BB19B	Bebedouro	148.37	150	*e*P	PKPdf	21 43 03.5	+1.7
ITRB	Iturama	148.51	146	*e*P	PKPbc	21 43 05.7	+0.1
MDPO	Dominica; Chan	149.77	70	*e*P	PKPbc	21 43 09.0	+0.2
MDPO				*e*S	pPKPdf	21 43 19.2	+2.5
DEG	La Desirade	149.94	68⇓	*e*P	PKPbc	21 43 07.2	-2.1
BSCB	Bom Sucesso	150.14	156	*e*P	PKPdf	21 43 06.2	+1.5
FDF	Fort de France	150.26	71	*e*P	PKiKP	21 43 11.7	+0.9
FDF				*e*S	pPKPbc	21 43 23.9	+1.2
FDF	Fort de France	150.26	71	PKIKP	PKiKP	21 43 10.7	-0.2
FDF	Fort de France	150.26	71	PKPdf	PKPdf	21 43 02.7	-2.2
FDF					PKiKP	21 43 10.7	-0.2
FDF					pPKPbc	21 43 22.8	+0.1
GRGR	Grenville	150.26	77	*e*P	PKPbc	21 43 08.6	-1.5
GRGR				*e*S	pPKPbc	21 43 24.2	+1.5
SVB	Belmont	150.46	74	*e*P	PKPbc	21 43 09.8	-0.7
SVB				*e*S	pPKPbc	21 43 23.6	+0.5
SSV	Crater Summit	150.51	74	*e*P	PKPbc	21 43 09.2	-1.5
SSV				*e*S	pPKPbc	21 43 23.0	-0.4
ARAG	Araguaiana, MT	150.67	138	*e*P	PKPdf	21 43 06.8	+1.3
TPP	Pointe-a-Pierr	150.68	80	*e*P	PKiKP	21 43 13.6	+1.9
TPP				*e*S	pPKPbc	21 43 26.7	+3.0
TRN	Trinidad (W)	150.70	80	*e*P	PKiKP	21 43 12.2	+0.4
TRN				*e*S	pPKPbc	21 43 24.8	+1.1
CLDB	Colider	150.87	126	*e*P	PKPdf	21 43 08.3	+2.4
TBH	Brigand Hill	151.04	80	*e*P	PKiKP	21 43 14.2	+1.7
TBH				*e*S	pPKPbc	21 43 26.6	+2.0
IPMB	Ipameri, GO	151.09	147	*e*P	PKPdf	21 43 08.0	+1.8
PTGA	Pitinga	151.31	103	PKP	PKPdf	21 43 06.6	0.0
	comp=Z,8.9nm,0.8s,baz=294,slow=3.6,SNR=11						
PTGA				PKPbc	PKiKP	21 43 13.0	-0.1
	comp=Z,50nm,0.7s,baz=273,slow=4.0,SNR=78						
PTGA				pPKPbc	pPKPbc	21 43 25.9	+0.7
	comp=Z,124nm,0.9s,baz=249,slow=2.5,SNR=17						
PTGA	Pitinga	151.31	103		PKPdf	21 43 07.1	+0.5
PTGA	Pitinga	151.31	103	*e*P	PKPdf	21 43 07.6	+1.0
TOSP	Speyside	151.47	78	*e*P	PKiKP	21 43 13.4	+0.1
TOSP				*e*S	pPKPbc	21 43 25.9	+0.4
KIC	Kosan Boka	152.82	272	*e*PKIKP	PKiKP	21 43 16.2	0.0
	comp=Z,26nm,0.7s						
DBIC	Dimbokro	152.94	272	PKP	PKPdf	21 43 09.2	+0.2
	comp=Z,5.9nm,1.1s,baz=98,slow=4.7,SNR=3.3						
DBIC				PKPbc	PKiKP	21 43 16.6	+0.1
	comp=Z,15nm,0.8s,baz=77,slow=3.8,SNR=16						
DBIC	Dimbokro	152.94	272		PKPdf	21 43 09.5	+0.5
DBIC				PKPab	PKPab	21 43 27.7	+0.1
BDFB	Brasilia	153.08	144	PKP	PKPdf	21 43 09.4	+0.2

	comp=Z,4.4nm,0.6s,baz=197,slow=2.8,SNR=8.2						
BDFB				PKPbc	PKiKP	21 43 16.9	+0.1
	comp=Z,52nm,0.8s,baz=204,slow=1.3,SNR=46						
BDFB	Brasilia	153.08	144	PKPab	PKPab	21 43 28.8	+0.7
LIC	Lamto	153.10	271	*e*PKIKP	PKiKP	21 43 16.8	0.0
	comp=Z,51nm,0.8s						
TIC	Toumodi	153.10	272	*e*PKIKP	PKPbc	21 43 16.7	+0.1
	comp=Z,12nm,0.5s						
BSFB	Barra de Sao F	153.57	161	*e*P	PKPdf	21 43 10.8	+1.1
SJMB	Sao Joao De Ma	153.58	160	*e*P	PKPdf	21 43 11.2	+1.4
JANB	Januaria	155.56	150	*e*P	PKPdf	21 43 14.0	+1.3
NBIT	Itapeh - BA	157.68	161	*e*P	PKPdf	21 43 16.6	+1.3
NBPN	Ponto Novo - B	161.14	155	*e*P	PKPdf	21 43 21.3	+1.9
NBTA	Tacaratu-PE	163.55	159	*e*P	PKPdf	21 43 23.0	+1.2
NBAN	Anadia - AL	163.59	165	*e*P	PKPdf	21 43 22.8	+1.0
NBRF	Rio Formoso -	164.80	168	*e*P	PKPdf	21 43 24.2	+1.3
NBMA	Muriti-CE	164.87	154	*e*P	PKPdf	21 43 24.6	+1.6

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*JMA **07** 21:34:13.4±0.2, 35°.75N×140°.68E, h50^{km}±2^{km}, M3.0*
JMA Felt I J1.
*IDC **07** 21:34:18.5±5.4, 35°.98N×140°.62E, h73^{km}±34^{km}, mb3.1/3, mb1 3.2/3, mb1mx2.9/62, mbtmp3.4/3, MS3.9/1, Ms1 3.9/1, ms1mx2.8/20, Error ellipse: s-maj=76.7km s-min=31.5km az=175.0*
ISC 07 21:34:14.2±1.1**, 35°.74N**±0°.06×**140°.77E**±0°.08**, h46**^{km}±7^{km}**, n15,** σ**1**^{s}.**13**/18**, mb3.4**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.08	120	P	Pn	21 34 21.3	-0.2
JSMT	Sammumatsuo	0.28	249	P	Pn	21 34 22.2	-0.6
JSMT				S	Sn	21 34 29.0	+0.1
JIHU	Itakohorinouch	0.30	318	P	Pn	21 34 22.6	-0.4
JIHU				S	Sn	21 34 29.5	+0.4
JCN	Nagara	0.57	235	P	Pn	21 34 25.5	-0.6
JYT	Yasato	0.67	316	P	Pn	21 34 26.1	-1.4
BSO4	Boso 4	0.83	205	P	Pn	21 34 28.8	-0.7
JHO	Hitachi	0.88	349	P	Pn	21 34 29.7	-0.6
BSO3	Boso 3	0.96	193	P	Pn	21 34 30.6	-0.5
JAG	Ashikaga	1.27	303	P	Pn	21 34 34.0	-1.5
MJAR	Matsushiro Arr	2.22	292	P	Pn	21 34 48.7	+0.1
	1.7nm,0.3s,baz=98,slow=14,SNR=61						
MJAR				S	Sn	21 35 15.1	+0.2
	0.9nm,0.3s,baz=290,slow=24,SNR=5.5						
MAT	Matsushiro	2.23	292	P	Pn	21 34 48.6	0.0
MAT				S	Sn	21 35 18.0	+3.1
SIJI	Sorong	37.49	196	LR	LR	21 55 43.1	
	comp=Z,168nm,20.1s,baz=148,slow=34						
MKAR	Makanchi Array	44.38	303	P	P	21 42 19.4	-0.6
	0.4nm,0.5s,baz=83,slow=9.8,SNR=6.6						
KURBB	Kurchatov Arra	46.40	309	P	P	21 42 35.0	-0.9
	0.6nm,0.5s,baz=80,slow=7.2,SNR=6.7						
ILAR	Eielson Array	50.86	32	P	P	21 43 11.0	+0.9
	0.2nm,0.7s,baz=280,slow=5.4,SNR=2.8						

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*KOLA **07** 21:36:50.2, 68°.80N×12°.86E, h0^{km}*
*NAO **07** 21:36:51.5±0.8, 66°.95N×13°.59E, ML3.3*
*IEPN **07** 21:36:52.2, 67°.42N×14°.02E, h10^{km}*
*HEL **07** 21:36:52.4±0.2, 66°.93N×13°.50E, h12^{km}, ML2.5, ML2.6(UPP), Confirmed Earthquake*
*BER **07** 21:36:52.9±1.4, 66°.95N×13°.41E, h4^{km}±7^{km}, ML2.7, ML2.6(HEL), Fault plane solution: NP1: ϕ_s201.70000°, δ63.00000°, λ-139.90000°., Confirmed Earthquake*
*IDC **07** 21:36:52.1±1.4, 66°.93N×13°.58E, h0^{km}, mb3.1/1, mb1 3.2/5, mb1mx3.0/70, mbtmp3.2/5, ML2.7/4, MS3.3/1, Ms1 3.3/1, ms1mx2.5/37, Error ellipse: s-maj=17.9km s-min=7.5km az=118.0*
*UPP **07** 21:36:53.1±1.0, 66°.91N×13°.83E, h0^{km}, ML2.6, Suspected explosion*
ISC 07 21:36:50.6±1.1**, 66°.94N**±0°.02×**13°.77E**±0°.04**, h4**^{km}±9^{km}**, n115,** σ**2**^{s}.**28**/200**, 2C, Northern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KONS	Konsvik	0.51	211	Pg	Pg	21 37 01.4	+1.1
KONS				Lg	Lg	21 37 07.3	
KONS	Konsvik	0.51	211	*i* P	Pg	21 37 01.2	+0.9
	comp=Z,286nm,0.4s						
KONS				AMPG		21 37 02.8	
	comp=Z,1μm,0.0s						
KONS				*e*S	Sg	21 37 07.5	+0.6
KONS				IAML		21 37 07.8	
	comp=Z,286nm,0.4s						
KONS				AMSG		21 37 08.6	
	comp=Z,5μm,0.1s						
KONS				AMSG		21 37 10.2	
	comp=E,6μm,0.2s						
STOK	Stokkvaagen	0.68	207	Pg	Pb	21 37 04.6	-0.3
STOK				Lg	Lg	21 37 12.8	
STOK	Stokkvaagen	0.68	207	*e*P	Pb	21 37 04.5	-0.3
STOK				AMPG		21 37 05.0	
	comp=Z,795nm,0.1s						
STOK				*e*S	Sg	21 37 12.7	+0.5
STOK				AMSG		21 37 13.7	
	comp=Z,5μm,0.4s						
STOK				AMSG		21 37 14.2	
	comp=E,5μm,0.1s						
MOR8	Moi Rana	0.81	160	Pg	Pg	21 37 07.6	+1.5
MOR8				Lg	Lg	21 37 19.1	
MOR8	Moi Rana	0.81	160	⇑*i*P	Pg	21 37 07.4	+1.3
MOR8				AMPG		21 37 08.1	
	comp=Z,681nm,0.1s						
MOR8				*e*S	Sb	21 37 19.2	+0.6
MOR8				IAML		21 37 19.6	
	comp=Z,407nm,0.3s						
MOR8				AMSG		21 37 20.0	
	comp=Z,6μm,0.1s						
MOR8				AMSG		21 37 20.3	
	comp=Z,6μm,0.0s						
STEI	Steigen	1.15	29	Pg	Pg	21 37 14.6	+2.0
STEI				Lg	Lg	21 37 30.4	
STEI	Steigen	1.15	29	*e*P	Pg	21 37 14.4	+1.9
STEI				*e*		21 37 16.0	
STEI				*e*S	Sn	21 37 31.4	+1.8
STEI				IAML		21 37 33.6	
	comp=Z,193nm,0.2s						
LOF	Lofoten	1.21	356	Pg	Pn	21 37 12.3	-1.9
LOF	Lofoten	1.21	356	⇑*e*P	Pn	21 37 12.3	-1.9
LOF				*e*S	Sb	21 37 27.1	-2.7
LOF				*e*Sg	Sg	21 37 30.6	+1.4
LOF				IAML		21 37 32.9	
	comp=Z,191nm,0.2s						
NSS	Namsos	2.53	198	*e*P	Pn	21 37 33.9	+1.6
NSS				IAML		21 38 18.9	
	comp=Z,48nm,0.3s						
DUNU	Dundret	2.67	83	P	Pn	21 37 37.1	+2.7
DUNU				S	Sn	21 38 11.0	+3.7
DUNU	Dundret	2.67	83	*e*P	Pn	21 37 37.1	+2.7
DUNU				*e*S	Sn	21 38 11.0	+3.7
KUA	Kurravaara	2.73	65	P	Pn	21 37 38.0	+2.8
KUA				S	Sb	21 38 13.2	-0.5
KUA	Kurravaara	2.73	65	*e*P	Pn	21 37 38.0	+2.8
KOVU	Salmi	2.77	59	P	Pn	21 37 39.0	+3.3
KOVU				S	Sn	21 38 11.9	+2.3
KOVU	Salmi	2.77	59	*e*P	Pn	21 37 39.0	+3.3
KOVU				*e*S	Sn	21 38 11.9	+2.3
LILU	Lilltraesk	2.98	121	P	Pn	21 37 41.1	+2.6
LILU				S	Sn	21 38 17.9	+3.3
LILU	Lilltraesk	2.98	121	*e*P	Pn	21 37 41.1	+2.6
LILU				*e*S	Sn	21 38 17.9	+3.3
HARU	Harads	2.98	102	P	Pn	21 37 41.4	+2.7
HARU	Harads	2.98	102	*e*P	Pn	21 37 41.4	+2.7
MASU	Masugnsbyn	3.25	77	P	Pn	21 37 44.6	+2.4
MASU	Masugnsbyn	3.25	77	*e*P	Pn	21 37 44.6	+2.4
TRO	Tromso	3.32	33	Pn	Pn	21 37 45.0	+1.8
TRO				Sn	Sn	21 38 25.4	+2.4
TRO				Lg	Lg	21 38 37.7	
TRO	Tromso	3.32	33	*e*P	Pn	21 37 45.3	+2.1
TRO				*e*S	Sn	21 38 23.3	+0.3
TRO				*e*S	Sn	21 38 23.6	+0.5
LANU	Lannavaara	3.35	67	P	Pn	21 37 46.5	+2.8
LANU	Lannavaara	3.35	67	*e*P	Pn	21 37 46.8	+3.0
LANU				*e*S	Sn	21 38 26.4	+2.4
LANU	Lannavaara	3.35	67	*e*P	Pn	21 37 46.8	+3.0
LANU				*e*S	Sn	21 38 26.4	+2.4
ERTU	Ertsjaerv	3.36	93	P	Pn	21 37 46.2	+2.4
ERTU	Ertsjaerv	3.36	93	*e*P	Pn	21 37 46.2	+2.4
KIF	Kilpisjarvi	3.37	49	Pn	Pn	21 37 47.0	+3.1
KIF				Pg	Pg	21 37 55.2	+0.2
KIF				Lg	Lg	21 38 40.0	
KIF	Kilpisjarvi	3.37	49	*e*P	Pn	21 37 46.9	+3.1
KIF				*e*		21 38 25.4	
KIF				*e*Sg	Sg	21 38 39.1	+0.6
KIF	Kilpisjarvi	3.37	49	*e*P	Pn	21 37 46.9	+3.0
KIF				*e*S	Sn	21 38 26.4	+2.2
SVAU	Svanoeiden	3.43	133	P	Pn	21 37 47.2	+2.4
SVAU				S	Sn	21 38 27.4	+1.7
SVAU	Svanoeiden	3.43	133	*e*P	Pn	21 37 47.2	+2.4
SVAU				*e*S	Sn	21 38 27.4	+1.7
SJUU	Sjulsmark	3.48	111	P	Pn	21 37 48.0	+2.6
SJUU				S	Sn	21 38 30.7	+3.6
SJUU	Sjulsmark	3.48	111	*e*P	Pn	21 37 48.0	+2.6
SJUU				*e*S	Sn	21 38 30.7	+3.6
NOD	Norderasen	3.54	172	P	Pn	21 37 48.7	+2.5
NOD	Norderasen	3.54	172	*e*P	Pn	21 37 48.7	+2.5
NOD				*e*S	Sn	21 38 28.2	-0.3
NOD				*e*Sg	Sg	21 38 43.0	-1.0
NOD	Norderasen	3.54	172	*e*P	Pn	21 37 48.7	+2.5
PAJU	Pajala	3.67	84	P	Pn	21 37 50.5	+2.4
PAJU	Pajala	3.67	84	*e*P	Pn	21 37 50.5	+2.4
BURU	Burvik	3.92	123	*e*P	Pn	21 37 54.1	+2.6
BURU				*e*S	Sn	21 38 39.2	+1.2
TBLU	Trondheim	3.98	203	*e*P	Pn	21 37 50.6	-1.7
SOLU	Sollefteaa	3.99	157	P	Pn	21 37 54.7	+2.3
SOLU	Sollefteaa	3.99	157	*e*P	Pn	21 37 54.7	+2.3
HEF	Hetta	4.05	64	Pn	Pn	21 37 55.7	+2.4
HEF				Sn	Sn	21 38 42.2	+1.0
HEF				Lg	Lg	21 39 01.8	
HEF	Hetta	4.05	64	*e*P	Pn	21 37 55.9	+2.6
HEF				*e*S	Sn	21 38 43.1	+1.9
HEF				MSG		21 38 47.3	
	comp=Z,7.3nm,0.1s						
HEF	Hetta	4.05	64	*e*P	Pn	21 37 55.6	+2.3
HEF				*e*S	Sn	21 38 43.3	+2.2
HEF				MSG		21 38 47.3	
	comp=Z,7.3nm,0.1s						
KTK1	Kautokeino	4.13	55	Pn	Pn	21 37 56.5	+2.1
KTK1				Sn	Sn	21 38 44.7	+1.6
KTK1				Lg	Lg	21 39 03.0	
KTK1	Kautokeino	4.13	55	*e*P	Pn	21 37 56.8	+2.4
KTK1				*e*S	Sn	21 38 45.6	+2.6
KTK1				IAML		21 39 07.3	
	comp=Z,43nm,0.3s						
UMAU	Umeaa	4.21	134	*e*P	Pn	21 37 58.0	+2.6
UMAU				*e*S	Sn	21 38 45.0	0.0
UMAU	Umeaa	4.21	134	*e*P	Pn	21 37 58.0	+2.6
UMAU				*e*S	Sn	21 38 45.0	0.0
TOF	Tornio	4.31	97	*e*P	Pn	21 37 59.2	+2.3
TOF				*e*S	Sn	21 38 49.6	+2.1
TOF				MSG		21 38 55.1	
	comp=Z,9.4nm,0.1s						
TOF	Tornio	4.31	97	*e*P	Pn	21 37 59.2	+2.3
TOF				*e*S	Sn	21 38 49.6	+2.1
TOF				MSG		21 38 55.1	
	comp=Z,9.4nm,0.1s						
RNF	Rovaniemi	4.86	88	*e*P	Pn	21 38 06.7	+2.3
RNF				*e*S	Sn	21 39 02.7	+1.7
RNF	Rovaniemi	4.86	88	*e*P	Pn	21 38 06.7	+2.3
RNF				*e*S	Sn	21 39 02.7	+1.7
OBF0	Syolatti, Pyha	4.96	115	*e*P	Pn	21 38 07.6	+1.8
OBF0				*e*S	Sn	21 39 03.8	+0.2
OBF0	Syolatti, Pyha	4.96	115	*e*P	Pn	21 38 07.6	+1.8
OBF0				*e*S	Sn	21 39 03.8	+0.2
SGF	Sodankyl	4.99	78	*e*P	Pn	21 38 08.0	+1.8
SGF				*e*S	Sn	21 39 05.1	+0.9
SGF	Sodankyl	4.99	78	*e*P	Pn	21 38 08.0	+1.8
SGF				*e*S	Sn	21 39 05.1	+0.9
ARA0	ARCESS Array S	5.08	54	Pn	Pn	21 38 08.8	+1.3
	baz=240,slow=14						
ARA0				Sn	Sn	21 39 06.6	0.0
	baz=236,slow=22						
ARA0				Lg	Lg	21 39 31.0	
	baz=240,slow=28						
ARA0	ARCESS Array S	5.08	54	Pn	Pn	21 38 08.8	+1.3
	baz=240,slow=14						
ARA0				Sn	Sn	21 39 06.6	0.0
	baz=236,slow=22						
ARA0				Sg	Sg	21 39 31.0	-2.7
	baz=240,slow=28						
ARCES	ARCESS Array B	5.08	54	Pn	Pn	21 38 09.2	+1.7
	comp=Z,0.4nm,0.3s,baz=240,slow=14,SNR=28						
ARCES				Sn	Sn	21 39 06.5	-0.1
	comp=Z,3.5nm,0.3s,baz=238,slow=22,SNR=8.0						
ARCES				Lg	Lg	21 39 33.0	
	comp=Z,6.1nm,0.3s,baz=244,slow=27,SNR=12						
ARE0	ARCESS Array S	5.08	54	*e*P	Pn	21 38 09.1	+1.6
ARE0				IAML		21 39 37.1	
	comp=Z,26nm,0.8s						
ARE0	ARCESS Array S	5.08	54	*e*P	Pn	21 38 08.9	+1.4
ARE0				*e*S	Sn	21 39 06.6	0.0
ARE0	ARCESS Array S	5.08	54	*e*P	Pn	21 38 09.3	+1.8
ARE0				*e*S	Sn	21 39 06.1	-0.5
MOL	Molde	5.13	214	*e*S	Sn	21 39 03.4	-4.2
HAMF	Hammerfest	5.17	40	*e*P	Pn	21 38 10.1	+1.4
HAMF				*e*S	Sn	21 39 06.7	-2.1
HAMF				IAML		21 39 49.0	
	comp=Z,18nm,0.4s						
OUF	Merijarvi	5.21	115	*e*P	Pn	21 38 11.3	+2.0
OUF				*e*S	Sn	21 39 09.6	-0.2
OUF	Merijarvi	5.21	115	*e*P	Pn	21 38 11.3	+2.0
OUF				*e*S	Sn	21 39 09.6	-0.2
OUL	Oulu	5.28	105	*e*P	Pn	21 38 12.5	+2.3
OUL				*e*S	Sn	21 39 11.7	+0.2
OUL				MSG		21 39 14.4	
	comp=Z,5.9nm,0.1s						
OUL	Oulu	5.28	105	*e*P	Pn	21 38 12.5	+2.3
OUL				*e*S	Sn	21 39 11.7	+0.2
OUL				MSG		21 39 14.4	
	comp=Z,5.9nm,0.1s						
DOMB	Dombas	5.32	205	*e*P	Pn	21 38 11.0	+0.3
DOMB				*e*S	Sn	21 39 07.1	-5.3
DOMB				IAML		21 39 40.9	
	comp=Z,15nm,0.6s						
VAF	Ylistaro	5.43	132	*e*P	Pn	21 38 14.2	+2.0
VAF				*e*S	Sn	21 39 14.4	-0.7
VAF				MSG		21 39 18.6	
	comp=Z,7.5nm,0.1s						
VAF	Ylistaro	5.43	132	*e*P	Pn	21 38 14.2	+2.0
VAF				*e*S	Sn	21 39 14.4	-0.7
VAF				MSG		21 39 18.6	
	comp=Z,7.5nm,0.1s						
AKN	Aaknes	5.59	215	Pn	Pn	21 38 13.9	-0.6
AKN				Lg	Lg	21 39 44.0	
AKN	Aaknes	5.59	215	*e*P	Pn	21 38 14.0	-0.5
AKN				*e*S	Sn	21 39 14.7	-4.5
KEV	Kevo	5.66	54	Pn	Pn	21 38 17.5	+2.3
KEV				Sn	Sn	21 39 19.5	-1.1
KEV				Lg	Lg	21 39 48.7	
KEV	Kevo	5.66	54	*e*P	Pn	21 38 17.0	+1.8
KEV				*e*P	Pn	21 38 17.1	+1.8
KEV				*e*S	Sn	21 39 19.8	-0.8
KEV				*e*S	Sn	21 39 20.5	0.0
KEV	Kevo	5.66	54	*e*P	Pn	21 38 17.1	+1.8
KEV				*e*S	Sn	21 39 20.5	0.0
NC303	NORSAR Array S	5.83	192	*e*P	Pn	21 38 19.3	+1.6
NC303				IAML		21 40 03.6	
	comp=Z,10nm,0.5s						
NB2	NORSAR Subarra	6.03	192	Pn	Pn	21 38 21.5	+1.1
	baz=4.8,slow=14						
NB2				Lg	Lg	21 39 55.0	
	baz=19,slow=37						
NB2	NORSAR Subarra	6.03	192	Pn	Pn	21 38 21.5	+1.1
	baz=4.8,slow=14						
NB2				Sg	Sb	21 39 55.0	+6.6
	baz=19,slow=37						
NOA	NORSAR Array B	6.03	192	Pn	Pn	21 38 21.0	+0.6
	comp=Z,0.1nm,0.3s,baz=5.1,slow=12,SNR=7.4						
NOA				Lg	Lg	21 39 56.8	
	comp=Z,0.3nm,0.3s,baz=267,slow=5.8,SNR=6.4						
NOA	NORSAR Array B	6.03	192	P	Pn	21 38 21.0	+0.6
MSF	Maaselka	6.21	92	*e*P	Pn	21 38 24.0	+1.1
MSF				*e*S	Sn	21 39 34.5	+0.1
MSF	Maaselka	6.21	92	*e*P	Pn	21 38 24.0	+1.1
MSF				*e*S	Sn	21 39 34.5	+0.1
NRA0	NORESS Array S	6.30	190	Pn	Pn	21 38 25.5	+1.3
	baz=5.2,slow=14						
NRA0				Sn	Sn	21 39 36.2	-0.3
	baz=17,slow=22						
NRA0				Lg	Lg	21 40 08.2	
	baz=11,slow=37						
NRA0	NORESS Array S	6.30	190	Pn	Pn	21 38 25.5	+1.3
	baz=5.2,slow=14						
NRA0				Sn	Sn	21 39 36.2	-0.3
	baz=17,slow=22						
NRA0				Sg	Sg	21 40 08.2	-4.5
	baz=11,slow=37						
KU6	Riekki	6.51	91	*e*P	Pn	21 38 28.0	+0.9
KU6				*e*S	Sn	21 39 41.5	-0.3
KU6	Riekki	6.51	91	*e*P	Pn	21 38 28.0	+0.9
KU6				*e*S	Sn	21 39 41.5	-0.3
HFS	Hagfors	6.83	180	Pn	Pn	21 38 32.6	+1.2
	baz=6.4,slow=14						
HFS				Sn	Sn	21 39 47.5	-2.1
	baz=9.6,slow=22						
HFS				Lg	Lg	21 40 23.0	
	baz=4.4,slow=28						
HFS	Hagfors	6.83	180	Pn	Pn	21 38 32.7	+1.3
	comp=Z,0.6nm,0.3s,baz=1.4,slow=12,SNR=26						
HFS				Sn	Sn	21 39 47.5	-2.1
	comp=Z,1.3nm,0.3s,baz=11,slow=24,SNR=7.4						
HFS				Lg	Lg	21 40 23.1	
	comp=Z,1.8nm,0.3s,baz=357,slow=23,SNR=5.9						
HFS	Hagfors	6.83	180	Pn	Pn	21 38 32.6	+1.2
	baz=6.4,slow=14						
HFS				Sn	Sn	21 39 47.5	-2.1
	baz=9.6,slow=22						
HFS				Sg	Sg	21 40 23.0	-6.6
	baz=4.4,slow=28						
APA0	Apatity Array	7.47	76	Pn	Pn	21 38 39.7	-0.5
	baz=269,slow=10						
APA0				Sn	Sn	21 40 02.2	-3.0
	baz=276,slow=22						
APA0	Apatity Array	7.47	76	P	Pn	21 38 39.5	-0.7
APA0				S	Sn	21 40 01.6	-3.6
APA0	Apatity Array	7.47	76	Pn	Pn	21 38 39.7	-0.5
	baz=269,slow=10						
APA0				Sn	Sn	21 40 02.2	-3.0
	baz=276,slow=22						
APA	Apatity	7.63	76	S	Sn	21 40 05.9	-3.2
FIA0	FINESS Array S	7.68	130	Pn	Pn	21 38 44.4	+1.3
	baz=320,slow=12						
FIA0				Sn	Sn	21 40 08.7	-1.8
	baz=325,slow=22						
FIA0				Lg	Lg	21 40 53.9	
	baz=316,slow=28						
FIA0	FINESS Array S	7.68	130	Pn	Pn	21 38 44.4	+1.3
	baz=320,slow=12						
FIA0				Sn	Sn	21 40 08.7	-1.8
	baz=325,slow=22						
FIA0				Sg	Sg	21 40 53.9	-3.0
	baz=316,slow=28						
FINES	FINESS Array B	7.68	130	Pn	Pn	21 38 44.8	+1.6
	comp=Z,0.4nm,0.3s,baz=322,slow=12,SNR=20						
FINES				Sn	Sn	21 40 09.2	-1.3
	comp=Z,2.3nm,0.3s,baz=326,slow=22,SNR=9.3						
FINES				Lg	Lg	21 40 55.3	
	comp=Z,4.0nm,0.3s,baz=324,slow=28,SNR=7.9						
STRU	Stroemstad	8.02	190	*e*P	Pn	21 38 47.6	0.0
TJOU	Tjoern	8.99	187	*i* P	Pn	21 39 02.4	+1.4
TJOU				*e*S	Sn	21 40 38.1	-4.4
SLVR	Solovky	9.13	92	*e*P	Pn	21 39 02.7	-0.2
	comp=Z,26nm,1.6s						
SLVR				*e*S	Sn	21 40 39.5	-6.4
BORU	Boraas	9.35	183	*i* P	Pn	21 39 06.0	+0.1
BORU				*e*S	Sn	21 40 44.3	-7.1
ONAU	Onsala	9.61	186	*e*P	Pn	21 39 10.9	+1.4
DEL	Delary	10.50	180	*e*P	Pn	21 39 22.4	+0.7
LUNU	Lund	11.34	181	*i* P	Pn	21 39 32.6	-0.6
BSD	Bornholm Skovb	11.88	177	*i* P	Pn	21 39 39.4	-1.0
BSD	Bornholm Skovb	11.88	177	*i* P	Pn	21 39 39.5	-1.0
KLMR	Klimovskoe	12.79	106	*e*P	Pn	21 39 53.6	+0.6
KLMR				*e*S	Sn	21 42 08.6	-7.1
LSH	Leshukonskoye	13.13	84	*e*P	Pn	21 39 57.5	0.0
	comp=Z,24nm,2.5s						
LSH				*e*S	Sn	21 42 13.7	-10
FRB	Frobisher Bay	32.15	304	LR	LR	21 53 24.0	
	comp=Z,55nm,21.1s,baz=252,slow=31						
MKAR	Makanchi Array	39.92	85	P	P	21 44 27.2	+1.8
	comp=Z,0.3nm,0.8s,baz=340,slow=6.6,SNR=3.5						

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*NCEDC **07** 21:38:23.6±1.4, 37°.60N±0°.03×122°.02W±0°.05, h6^{km}±4^{km}, Md2.8/99, Error ellipse: s-maj=6.5km s-min=3.7km az=53.0*
NEIC 07 21:38:23.6±2.7**, 37°.53N**±0°.04×**122°.06W**±0°.06**, h14**^{km}±3^{km}**, Error ellipse: s-maj=8.1km s-min=5.1km az=52.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CYD1	Coyote D'meter	0.05	316		Pg	21 38 25.8	-0.3
CNIC	Niles Canyon	0.11	43		Pg	21 38 26.1	-0.7
C055	Cottonwood Ave	0.13	341		Pg	21 38 26.0	-1.1
CSU1	Sunol Dilatome	0.15	39		Pg	21 38 26.8	-0.6
JRSC	Jasper Ridge	0.19	229		Pb	21 38 29.4	+0.4
JRSC					Sb	21 38 33.6	+1.1
JFP	Foothills Park	0.20	212		Pb	21 38 29.8	+0.7
CLCB	Lake Chabot	0.21	358		Pb	21 38 29.9	+0.7
JHPM	Huddart Park	0.21	246		Pb	21 38 30.0	+0.7
JJRM	Joaquin Road	0.22	212		Pb	21 38 30.2	+0.8
JCPM	Coyote Point	0.22	286		Pb	21 38 29.1	-0.3
CMCM	Mills College	0.27	339		Pg	21 38 28.5	-0.8
SCCB	Santa Clara Co	0.29	148		Pb	21 38 30.7	+0.2
SAC	San Andreas	0.29	281		Pb	21 38 30.5	-0.2
CMLM	Mount Lewis	0.33	99		Pg	21 38 30.3	0.0
CYBM	Yerba Buena Is	0.37	319		Pg	21 38 30.6	-0.5
BKS	Berkeley--Byer	0.37	338		Pg	21 38 30.6	-0.5
CVPM	Vollmer Peak	0.38	340		Pg	21 38 30.7	-0.6
BL67	Building 67, L	0.38	336		Pg	21 38 30.6	-0.6
MHC	Mount Hamilton	0.38	120		Pg	21 38 31.6	+0.3
VAK	Adit at Lawren	0.38	336		Pg	21 38 30.8	-0.5
VAK					Sg	21 38 36.1	-0.3
BRK	Berkeley--Havi	0.38	335		Pg	21 38 30.6	-0.7
BL88	Building 88, L	0.38	336		Pg	21 38 30.8	-0.5
JUMM	Mount Umunhum	0.39	161		Pb	21 38 32.8	+0.4
BRIB	Briones	0.40	349		Pg	21 38 31.2	-0.4
BRIB					Sg	21 38 36.7	-0.2
J061	Lakeshore Driv	0.40	300		Pg	21 38 31.7	0.0
JPSM		0.40	215		Pb	21 38 33.6	+1.1
CCOB	Coe Ranch Numb	0.41	131		Pb	21 38 32.9	+0.2
JBNB	Ben Lomond Mou	0.41	191		Pb	21 38 33.6	+0.9
JPRM	Presidio of Sa	0.42	309		Pg	21 38 32.0	-0.1
BDM	Black Diamond	0.45	20		Pg	21 38 31.9	-0.6
ARN	Arnold Ranch	0.45	113		Pg	21 38 32.6	0.0
CMMM	Mount Mocho	0.45	99		Pg	21 38 32.5	-0.2
CSPM	San Pablo Ridg	0.47	335		Pg	21 38 32.6	-0.4
CPIM	Pinole Ridge	0.47	345		Pg	21 38 32.8	-0.2
CADM	Anderson Res.	0.50	137		Pb	21 38 34.5	+0.3
CPMM	Point Molate	0.50	326		Pg	21 38 32.8	-0.7
HERB	Hercules	0.51	341		Pg	21 38 33.2	-0.5
JTGM	Trout Gulch Ro	0.52	164		Pb	21 38 35.5	+1.0
HLPM	Lions Peak	0.59	145		Pb	21 38 36.0	+0.2
HSPM	Sheep	0.60	134		Pb	21 38 36.0	+0.1
JELB	Ellicott, Sant	0.63	163		Pn	21 38 37.4	-0.7
GHS	Gilroy Hot Spr	0.65	132		Pb	21 38 37.1	+0.3
CBC	Chamberlain	0.68	152		Pn	21 38 38.0	-0.8
CDC	Canada Road	0.68	138		Pb	21 38 37.7	+0.4
CSR	Chase Ranch	0.68	146		Pb	21 38 37.6	+0.3
HCOM	Corn Cob Canyo	0.70	156		Pn	21 38 38.4	-0.7
SNT	Sears Point	0.72	334		Pg	21 38 37.2	-0.4
ANZ	Anzar Road	0.74	150		Pb	21 38 39.0	+0.7
OCR	O’Connell Ranc	0.75	144		Pb	21 38 38.8	+0.3
HFEM	San Felipe	0.76	136		Pb	21 38 38.7	+0.1
FARB	Farallon Islan	0.77	283		Pb	21 38 38.6	-0.1
NOLM	Olema	0.77	311		Pg	21 38 38.3	-0.4
HTUM	Tustin Road	0.78	155		Pn	21 38 39.5	-0.6
HPCM	Pacheco Lake	0.78	127		Pb	21 38 39.1	+0.1
HERM	Elkhorn Road	0.78	159		Pn	21 38 40.0	-0.3
HBTM	San Juan Bauti	0.79	149		Pn	21 38 40.2	-0.2
PACP	Pacheco Peak	0.81	130		Pb	21 38 39.6	+0.2
SLD	San Luis Dam	0.81	124		Pg	21 38 39.2	0.0
HJGM	San Juan Grade	0.83	152		Pb	21 38 40.0	+0.3
HSFM	Saint Francis	0.84	148		Pn	21 38 40.9	-0.2
SFJWR	San Luis Fatjo	0.85	124		Pb	21 38 40.4	+0.1
CVS	Carmenet Viney	0.87	339		Pg	21 38 39.4	-1.1
HLTM	Lone Tree Road	0.88	137		Pb	21 38 40.9	+0.3
NPRM	Point Reyes	0.89	302		Pg	21 38 40.5	-0.3
MCCM	Marconi Confer	0.90	314		Pg	21 38 40.0	-0.9
MCCM	Marconi Confer	0.90	314		Pg	21 38 40.3	-0.6
SAO	San Andreas Ge	0.91	147		Pb	21 38 41.2	+0.1
SAO	San Andreas Ge	0.91	147		Pn	21 38 41.9	0.0
NAPC	Atlas Peak	0.92	350		Pb	21 38 40.1	-1.3
NADM	Allendale	0.93	4		Pb	21 38 40.5	-1.1

BVYM	Vineyard	0.93	146		Pn	21 38 42.4	+0.1
HJSM	John Smith Roa	0.93	139		Pn	21 38 42.5	+0.2
BSRM	Salinas Radio	0.96	153		Pb	21 38 41.9	-0.2
NTYM	Taylor	0.98	331		Pb	21 38 41.2	-1.2
BPCNC	Pine Canyon	1.01	160		Pn	21 38 43.5	0.0
SCZ	Santa Cruz	1.07	150		Pb	21 38 43.6	-0.2
BJOM	Mount Johnson	1.08	146		Pb	21 38 44.1	0.0
NSHM	Saint Helena R	1.08	336		Pb	21 38 42.6	-1.5
BEHM	Elkhorn Ranch	1.11	140		Pb	21 38 44.6	-0.1
BJCM	Johnson Can.	1.12	151		Pb	21 38 44.3	-0.4
NBPM	Berryessa Peak	1.14	355		Pb	21 38 43.8	-1.3
AASM	Arroyo Seco	1.17	40		Pn	21 38 43.2	-2.4
BVL	Bear Valley	1.18	144		Pn	21 38 45.6	-0.1
BAVM	Antelope Valle	1.21	137		Pn	21 38 45.9	-0.2
NHSM	Mount Saint He	1.21	339		Pn	21 38 45.1	-1.1
HAST	Hastings Reser	1.21	160		Pn	21 38 45.8	-0.4
MCUB	Copperopolis B	1.22	68		Pn	21 38 44.1	-2.2
BSMM	Soledad Missio	1.25	156		Pn	21 38 46.1	-0.7
NMCNC	Mill Creek, So	1.26	328		Pn	21 38 45.1	-1.7
BPIM	Pinnacles	1.26	145		Pn	21 38 46.0	-0.8
BCWM	Chews Ridge	1.28	162		Pb	21 38 47.7	+0.1
MYLM	Yosemite Lake	1.31	96		Pn	21 38 45.4	-2.1
NMTM	Middletown	1.31	347		Pn	21 38 46.0	-1.6
BPOM	Post Ranch	1.32	170		Pn	21 38 47.7	+0.1
FTR	Fort Ross	1.32	319		Pn	21 38 46.5	-1.2
BMSM	Mercy Hot Spri	1.33	130		Pn	21 38 47.7	-0.2
GBGM	Boggs Mountain	1.37	339		Pn	21 38 47.0	-1.5
MNRC	McLaughlin Min	1.38	347		Pn	21 38 47.3	-1.3
BAPM	Anderson Peak	1.39	166		Pn	21 38 48.4	-0.4
GDXM	Geysers	1.40	336		Pb	21 38 49.6	0.0
CMB	Columbia Colle	1.42	69		Pn	21 38 47.6	-1.4
CMB	Columbia Colle	1.42	69		Pn	21 38 47.1	-1.9
GSGM	Seigler Mounta	1.43	339		Pn	21 38 47.1	-2.0
PMPB	Monarch Peak	1.65	142	Pn	Pn	21 38 52.8	+0.5
AFDM	Forest Hills D	1.65	31		Pn	21 38 50.5	-1.7
HOPS	Hopland Field	1.67	332	Pn	Pn	21 38 51.8	-0.7
PAPM	Alder Peak	1.71	161		Pn	21 38 53.3	+0.2
MHDM	Hidden Dam	1.77	103		Pn	21 38 53.2	-0.7
MMIM	Miami Mountain	1.84	93		Pn	21 38 54.3	-0.7
PHSB	Hesperia Broad	1.88	154		Pn	21 38 55.9	+0.5
ORV	Oroville	2.07	12		Pn	21 38 56.7	-1.2
RUBR	Rubicon Trail	2.13	44		Pn	21 38 59.3	+0.2
MGL	Magalia	2.31	10		Pn	21 39 00.8	-0.6
MDPB	Devils Postpil	2.37	87		Pn	21 39 02.8	+0.5
OMMB	Old Mammoth Mi	2.43	87		Pn	21 39 03.8	+0.6
KCPM	Cahto Peak	2.46	331	Pg	Pg	21 39 10.5	-0.4
PNTR	Pine Nut	2.48	50		Pn	21 39 05.1	+1.3
VCNR	Virginia City	2.58	46	Pn	Pn	21 39 05.0	-0.3
YERR	Yerington	2.65	56		Pb	21 39 10.7	-0.3
BEKR	Beckworth	2.69	29	Pn	Pn	21 39 06.9	+0.3
KMRM	Mail Ridge	2.98	335	Pn	Pn	21 39 11.6	+1.0
RYN	Ryan	3.00	67	Pn	Pn	21 39 12.6	+1.7
NVAR	Mina Array Bea	3.10	72		Pg	21 39 23.8	+0.8
KVN	Kaiserville	3.46	63		Pg	21 39 28.7	-1.3
TJR	Tejon Ranch	3.66	132		Pn	21 39 18.9	-1.0
GSC	Goldstone, Bar	4.78	116		Pn	21 39 37.5	+2.1

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*JMA **07** 21:42:45.1±0.2, 36°.27N×141°.83E, h73km, M3.0*
*IDC **07** 21:42:47.3±8.2, 35°.08N×141°.43E, h86km±49km, mb3.0/3, mb1 3.0/4, mb1mx2.8/72, mbtmp3.3/4, ML2.6/1, Error ellipse: s-maj=190.2km s-min=63.7km az=31.0*
ISC 07 21:42:43.1±1.6, **36°.31N**±0°.07×**142°.0E**±0°.1, **h19km, n16,** σ**1.s03**/20, **mb3.3**/3, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	1.11	238	P	Pn	21 43 03.6	-0.1
CHOJ				eS	Sb	21 43 17.6	-0.2
JHYU	Hitachinakayam	1.15	272	P	Pn	21 43 03.8	-0.4
JHYU				eS	Sb	21 43 18.7	-0.3
JHO	Hitachi	1.21	285	P	Pn	21 43 04.4	-0.5
ONAJ	Iwakimizuishiy	1.26	309	P	Pn	21 43 06.0	+0.2
JFK	Kawauchi	1.40	320	P	Pb	21 43 08.4	-0.3
JFT	Otama	1.81	312	P	Pb	21 43 14.8	-0.8
JMM	Marumori	1.84	328	P	Pb	21 43 15.3	-0.8
BSO1	Boso 1	1.85	207	P	Pn	21 43 13.7	+0.4
JAG	Ashikaga	2.07	274	P	Pn	21 43 16.9	+0.1
JKT	Katashina	2.27	282	P	Pn	21 43 20.9	+1.2
JRY	Ryogami san	2.54	264	P	Pn	21 43 23.3	0.0
MJAR	Matsushiro Arr	3.08	276	P	Pn	21 43 32.3	+1.6
	0.9nm,0.3s,baz=111,slow=9.0,SNR=39						
MJAR				S	Sn	21 44 07.3	+0.3
	0.3nm,0.3s,baz=104,slow=8.4,SNR=4.3						
MAT	Matsushiro	3.08	276	P	Pn	21 43 32.4	+1.7
MAT				S	Sn	21 44 07.3	+0.2
SONM	Songino Array	28.59	305	P	P	21 48 39.7	+1.6
	0.5nm,0.8s,baz=102,slow=8.1,SNR=4.2						
MKAR	Makanchi Array	44.92	303	P	P	21 50 54.0	-2.5
	0.2nm,0.7s,baz=71,slow=11,SNR=3.1						
KURBB	Kurchatov Arra	46.83	309	P	P	21 51 12.0	+0.5
	0.2nm,0.4s,baz=74,slow=6.4,SNR=5.0						

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*IDC **07** 21:43:52.4±4.9, 35°.80N×71°.57E, h81km±30km, mb3.7/8, mb1 3.6/14, mb1mx3.3/79, mbtmp3.9/14, Error ellipse: s-maj=56.0km s-min=21.3km az=151.0*
*NNC **07** 21:43:59.0±2.1, 36°.91N×70°.72E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=19.8km s-min=9.3km az=149.0*
ISC 07 21:44:01.4±0.9, **36°.36N**±0°.07×**72°.1E**±0°.1, **h150km, n39,** σ**1.s30**/39, **mb3.8**/7, **5C-6D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMU	Jammu	4.33	146	i x	Sn	21 45 53.5	-2.5
THN	Thein Dam	4.95	141	eP	Pn	21 45 15.0	+0.9
THN				eS	Sn	21 46 12.0	+1.2
DHRM	DHARAMSHALA	5.40	138	eP	Pn	21 45 21.1	+0.8
DHRM				eS	Sn	21 46 22.6	+0.7
DHRM				IAML		21 46 26.2	
	comp=N,218nm,0.7s						
DHRM				IAML		21 46 26.6	
	comp=E,725nm,0.3s						
BHK	Bhakra	6.12	142	ex	Sn	21 46 42.1	+3.4
AAK	Ala-Archa	6.55	16	P	Pn	21 45 35.7	+0.3
	comp=E,1.6nm,0.3s,baz=176,slow=7.3,SNR=15						
AAK				S	Sn	21 46 49.3	+0.1
	comp=E,1.0nm,0.3s,baz=140,slow=23,SNR=7.0						
AAK	Ala-Archa	6.55	16	⇓P	Pn	21 45 35.5	+0.1
	comp=E,4.5nm,0.8s						
AAK				⇓S	Sn	21 46 49.1	-0.1
	comp=E,3.4nm,0.5s						
SMLA	Simla	6.73	139	eP	Pn	21 45 38.4	+0.6
SMLA				eS	Sn	21 46 52.7	-0.7
SMLA				IAML		21 46 56.3	
	comp=N,129nm,0.8s						
SMLA				IAML		21 46 56.8	
	comp=E,97nm,0.5s						
KK31	Karatay Array	6.84	350	⇑P	Pn	21 45 32.7	-6.5
	comp=E,8.7nm,0.5s,baz=182,slow=13,SNR=201						
KK31				⇑S	Sn	21 46 45.4	-11
	comp=E,8.7nm,0.7s,baz=188,slow=24,SNR=5.0						
CHMS	Chumysh	6.95	17	⇓P	Pn	21 45 40.2	-0.5
	comp=E,2.4nm,0.5s						
CHMS				⇓S	Sn	21 46 58.6	0.0
	comp=E,3.8nm,0.7s						
DDI	Dehra Dun	7.84	138	eS	Sn	21 47 17.6	-2.5
DDI				IAML		21 47 24.0	
	comp=N,92nm,0.3s						
DDI				IAML		21 47 24.0	
	comp=E,130nm,0.3s						
JOSI	Joshimath	8.53	131	eP	Pn	21 46 01.0	-1.0
JOSI				eS	Sn	21 47 33.8	-3.2
JOSI				IAML		21 47 40.8	
	comp=N,68nm,0.5s						
JOSI				IAML		21 47 43.0	
	comp=E,104nm,0.7s						
KUDL	Kundal	9.01	154	eP	Pn	21 45 52.0	-16
KUDL				eS	Sn	21 47 25.5	-23
GEYT	Alibeck	11.23	282	P	Pn	21 46 24.7	-13
	comp=E,1.6nm,0.3s,baz=115,slow=8.4,SNR=24						
GEYT				S	Sn	21 48 17.3	-25
	comp=E,2.0nm,0.3s,baz=112,slow=19,SNR=9.7						
GYA0B	ALIBECK ARRAY	11.23	282	⇓P	Pn	21 46 24.9	-13
GYA0B				⇑S	Sn	21 48 18.5	-23
DANN	Dangsing	12.71	126	eP	Pn	21 46 57.3	+0.2
	comp=E,18nm,0.3s						
MKAR	Makanchi Array	12.93	33	P	P	21 47 03.5	-0.9
	comp=E,0.0nm,0.3s,baz=209,slow=11,SNR=2.8						
GKN	Gorkha	13.52	124	eP	Pn	21 47 07.4	+0.1
	comp=E,24nm,0.4s						
KKN	Kakani	14.09	124	eP	Pn	21 47 14.6	0.0
	comp=E,12nm,0.5s						
DMN	Daman	14.09	125	eP	Pn	21 47 15.0	+0.4
	comp=E,10.0nm,0.3s						
PKIN	Phulchoki	14.30	124	eP	Pn	21 47 17.8	+0.5
	comp=E,7.4nm,0.4s						
PKI	Pulchoki	14.31	124	eP	Pn	21 47 17.8	+0.3
	comp=E,6.5nm,0.3s						
GUN	Gumba	14.41	122	eP	Pn	21 47 18.7	-0.1
	comp=E,5.8nm,0.3s						
JIRN	Jiri	14.79	122	eP	Pn	21 47 23.8	+0.3
	comp=E,20nm,0.3s						
KURBB	Kurchatov Arra	15.01	16	P	P	21 47 29.1	+1.7
	comp=E,0.1nm,0.3s,baz=205,slow=11,SNR=7.0						
RAMN	Ramite	15.52	123	eP	Pn	21 47 33.2	+0.7
	comp=E,8.0nm,0.4s						
AB31	Akbulak array	15.63	329	⇑P	Pn	21 47 27.3	-6.0
	comp=E,0.9nm,0.3s,baz=134,slow=13,SNR=76						
AB31				S	Sn	21 50 10.4	-17
	comp=E,1.0nm,0.3s,baz=151,slow=24,SNR=7.8						
TAPN	Taplejung	16.03	120	eP	P	21 47 39.6	+0.3
	comp=E,7.6nm,0.3s						
ODAN	Odare	16.12	122	eP	P	21 47 40.6	+0.4
	comp=E,7.0nm,0.5s						
BVAR	Borovoye Array	16.71	357	P	P	21 47 47.0	+0.8
	comp=E,0.2nm,0.3s,baz=160,slow=9.2,SNR=6.0						
AKTO	Aktyubinsk	17.34	329	P	P	21 47 51.2	-1.9
	comp=E,0.5nm,0.3s,baz=160,slow=9.0,SNR=9.1						
AKTO	Aktyubinsk	17.34	329	⇓P	P	21 47 50.2	-2.9
	comp=E,3.4nm,1.0s						
AKTO				⇑S	S	21 50 51.7	-14
	comp=E,7.0nm,1.5s						
ZALV	Zalesovo Beam	19.71	23	P	Pn	21 48 21.7	-0.2
	comp=E,3.5nm,0.3s,baz=204,slow=10,SNR=29						
GNI	Garni	21.75	288	P	P	21 48 36.6	-4.4
	comp=E,2.1nm,0.5s,baz=42,slow=16,SNR=3.3						
FINES	FINESS Array B	38.08	326	P	P	21 51 05.1	+0.1
	comp=E,3.3nm,0.9s,baz=120,slow=11,SNR=5.6						
ARCES	ARCESS Array B	41.60	337	P	P	21 51 34.9	+0.9
	comp=E,3.1nm,0.9s,baz=69,slow=6.6,SNR=5.0						
HFS	Hagfors	43.70	322	P	P	21 51 50.7	-0.4
	comp=E,2.1nm,0.6s,baz=110,slow=13,SNR=6.7						
NOA	NORSAR Array B	45.01	323	P	P	21 52 01.2	-0.3
	comp=E,0.6nm,0.5s,baz=97,slow=7.7,SNR=3.3						
TORD	Torodi Ar. Bea	66.56	269	P	P	21 54 31.8	-3.8
	comp=E,1.7nm,1.1s,baz=46,slow=6.4,SNR=5.7						
YKA	Yellowknife Ar	81.35	3	P	P	21 56 02.2	+1.5
	comp=E,0.4nm,0.6s,baz=352,slow=5.2,SNR=7.2						

IDC 07 21:48:35.0±22.0, **3°.08N**×**123°.51E, h550km**±342km, **mb2.6**/5, **mb1 2.7**/5, **mb1mx2.5**/57, **mbtmp3.6**/5, **Error ellipse: s-maj=175.5km s-min=42.7km az=81.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.23	156	P	P	21 53 17.6	-0.4
	0.4nm,0.3s,baz=335,slow=9.6,SNR=6.5						
ASAR	Alice Springs	28.45	160	P	P	21 53 46.4	+0.2
	0.3nm,0.4s,baz=336,slow=7.4,SNR=8.2						
SONM	Songino Array	46.97	344	P	P	21 56 16.6	0.0
	0.2nm,0.5s,baz=155,slow=8.7,SNR=3.7						
MKAR	Makanchi Array	56.30	327	P	P	21 57 23.6	-0.2
	0.7nm,0.3s,baz=126,slow=7.7,SNR=25						
ZALV	Zalesovo Beam	59.75	335	P	P	21 57 47.0	0.0
	0.3nm,0.3s,baz=134,slow=6.2,SNR=3.0						

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*IDC **07** 22:17:06.6±1.4, 6°.52N×124°.14E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/45, mbtmp3.5/3, MS2.9/1, Ms1 2.9/1, ms1mx2.5/31, Error ellipse: s-maj=26.3km s-min=15.8km az=150.0*
*MAN **07** 22:17:10.9, 7°.72N×126°.73E, h62km, mb4.7, ML3.6, MS3.5*
ISC 07 22:17:12.1±1.2, **7°.66N**±0°.05×**126°.68E**±0°.09, **h78km**±9km, **n16,** σ**1.s15**/24, **mb3.5**/3, **1C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.61	329	⇓iP	Pn	22 17 26.2	-0.5
BIPH				i S	Sn	22 17 36.6	-0.7
MATI	Mati	0.83	211	eP	Pn	22 17 28.7	-0.2
MATI				eS	Sn	22 17 42.2	+0.7
DAV	Davao City (W)	1.24	242	Pg	Pn	22 17 35.7	+1.7
	52nm,0.3s,baz=259,slow=5.2,SNR=3.0						
DAV				Lg	Lg	22 17 54.4	
	168nm,0.3s,baz=247,slow=21,SNR=8.2						
DMPH	Davao City--Mi	1.30	244	⇑eP	Pn	22 17 35.4	+0.7
DMPH				eS	Sn	22 17 52.6	+0.9
BUKP	Musuan	1.62	278	eP	Pn	22 17 39.6	+0.7
BUKP				eS	Sn	22 17 59.6	+0.4
KCP	Kidapawan	1.71	248	⇓iP	Pn	22 17 40.6	+0.6
KCP				i S	Sn	22 18 02.3	+1.0
DDMP	Don Marcelino,	1.82	212	eP	Pn	22 17 42.1	+0.5
DDMP				eS	Sn	22 18 01.9	-2.1
GSPH	General Santos	2.33	228	eP	Pn	22 17 48.2	-0.2
GSPH				eS	Sn	22 18 15.2	-1.0
SKMP	Bagumbayan, Su	2.41	242	eP	Pn	22 17 49.5	+0.1
SKMP				eS	Sn	22 18 15.6	-2.4
CTBH	Cotabato--PC H	2.46	260	⇓iP	Pn	22 17 50.5	+0.5
PAGZ	Pagadian	3.27	273	eP	Pn	22 18 00.5	-0.6
PAGZ				eS	Sn	22 18 36.6	-2.4
TBP	Tagbilaran	3.44	306	i P	Pn	22 18 04.3	+1.0
KAPI	Kappang	14.37	209	LR	LR	22 25 14.8	
	comp=Z,58nm,19.4s,baz=230,slow=40						
WRA	Warramunga Arr	28.45	165	P	P	22 23 00.0	+0.2
	0.2nm,0.3s,baz=341,slow=8.3,SNR=10						
ASAR	Alice Springs	31.93	167	P	P	22 23 30.8	+0.2
	0.3nm,0.3s,baz=340,slow=7.5,SNR=12						
MKAR	Makanchi Array	54.35	324	P	P	22 26 30.9	+0.1
	0.2nm,0.4s,baz=118,slow=6.6,SNR=5.6						

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*SJA **07** 22:34:21.4±0.9, 21°.78S×68°.59W, h124km±5km, ML3.4, MW3.6*
*GUC **07** 22:34:22.9±0.6, 21°.77S×68°.54W, h114km±3km, ML3.7*
*IDC **07** 22:34:34.1±8.5, 20°.86S×68°.06W, h194km±58km, mb3.3/2, mb1 3.4/3, mb1mx3.0/31, mbtmp3.7/3, Error ellipse: s-maj=91.8km s-min=46.4km az=29.0*
ISC 07 22:34:22.2±1.0, **21°.74S**±0°.03×**68°.60W**±0°.06, **h124km**±7km, **n43,** σ**0.s98**/63, **10C-5D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.59	265	⇑iP	Pn	22 34 41.3	-0.1
PB09				i S	Sn	22 34 55.7	-0.3
PB09	IPOC Station P	0.59	265	i P	Pn	22 34 41.4	-0.1
PB09				eS	Sn	22 34 56.1	+0.2
PB09				IAML		22 34 57.7	
	comp=Z,611nm,0.2s						
LVC	Limon Verde	0.91	198	i P	Pn	22 34 43.6	-0.5
LVC				i S	Sn	22 34 59.7	-1.1
LVC	Limon Verde	0.91	198	i P	Pn	22 34 43.6	-0.5
LVC				eS	Sn	22 35 00.1	-0.7
LVC				IAML		22 35 02.5	
	comp=Z,309nm,0.3s						
PB01	IPOC Station P	1.08	310	⇑iP	Pn	22 34 45.2	-0.2
PB01				i S	Sn	22 35 03.1	0.0
PB01				IAML		22 35 04.3	
	comp=N,2µm,0.3s						
PB03	IPOC Station P	1.11	254	⇑iP	Pn	22 34 45.8	0.0
PB03				i S	Sn	22 35 03.4	-0.3
PB03				IAML		22 35 03.8	
	comp=N,2µm,0.2s						
PB03	IPOC Station P	1.11	254	i P	Pn	22 34 45.8	0.0
PB03				eS	Sn	22 35 03.6	-0.2
PB07	IPOC Station P	1.19	271	⇑iP	Pn	22 34 46.5	-0.2
PB07				i S	Sn	22 35 05.1	-0.2
PB07				IAML		22 35 06.5	
	comp=N,1µm,0.2s						
PB07	IPOC Station P	1.19	271	i P	Pn	22 34 46.9	+0.2
PB02	IPOC Station P	1.27	289	⇑iP	Pn	22 34 47.4	-0.1
PB02				i S	Sn	22 35 06.5	-0.2
PB02				IAML		22 35 08.8	
	comp=N,2µm,0.4s						
PB02	IPOC Station P	1.27	289	i P	Pn	22 34 47.8	+0.3
PB06	IPOC Station P	1.31	223	⇑iP	Pn	22 34 48.0	0.0
PB06				i S	Sn	22 35 07.3	-0.2
PB06				IAML		22 35 08.7	
	comp=N,1µm,0.3s						
PB06	IPOC Station P	1.31	223	i P	Pn	22 34 48.4	+0.4
PB04	IPOC Station P	1.55	247	i P	Pn	22 34 50.5	-0.1
PB04				i S	Sn	22 35 12.6	+0.3
PB04				IAML		22 35 18.1	
	comp=N,844nm,0.1s						
PB04	IPOC Station P	1.55	247	i P	Pn	22 34 50.6	-0.1
PB04				IAML		22 35 16.2	
	comp=Z,536nm,0.1s						
PB15	IPOC Station P	1.67	209	⇑iP	Pn	22 34 52.4	+0.4
PB15				i S	Sn	22 35 15.0	+0.2
PB15	IPOC Station P	1.67	209	i P	Pn	22 34 52.4	+0.4
PB08	IPOC Station P	1.67	342	⇓iP	Pn	22 34 53.2	+0.9
PB08				i S	Sn	22 35 15.9	+0.7
PB08				IAML		22 35 16.9	
	comp=E,810nm,0.3s						
PB08	IPOC Station P	1.67	342	i P	Pn	22 34 53.3	+0.9
PATCX	Punta Patache	1.71	302	⇑iP	Pn	22 34 52.6	+0.2
PATCX				i S	Sn	22 35 15.6	+0.1
PATCX	Punta Patache	1.71	302	i P	Pn	22 34 52.8	+0.3
PB05	IPOC Station P	1.85	233	⇑iP	Pn	22 34 53.8	-0.3
PB05				i S	Sn	22 35 17.6	-0.9
PB05				IAML		22 35 24.5	
	comp=E,452nm,0.2s						
PB05	IPOC Station P	1.85	233	i P	Pn	22 34 54.1	0.0
TA01	Diego Aracena	1.88	308	eP	Pn	22 34 54.4	0.0
TA01				i S	Sn	22 35 18.7	-0.3
TA01				IAML		22 35 20.1	
	comp=E,1µm,0.4s						
GO01	Chusmiza	2.14	345	⇓iP	Pn	22 34 58.5	+0.5
GO01				i S	Sn	22 35 26.3	+0.8
PB11	IPOC Station P	2.20	333	⇓iP	Pn	22 34 58.6	0.0
PB11				i S	Sn	22 35 26.6	+0.1
PB11				IAML		22 35 27.8	
	comp=N,972nm,0.2s						
PB11	IPOC Station P	2.20	333	i P	Pn	22 34 58.7	+0.1
PB10	IPOC Station P	2.52	225	i P	Pn	22 35 04.5	+2.1
PSGC	Pisagua	2.56	326	⇓iP	Pn	22 35 02.0	-1.1
PSGCX	Pisagua	2.56	326	i P	Pn	22 35 02.3	-0.8
MNMC	Minye Minye	2.76	340	⇓iP	Pn	22 35 05.8	0.0
MNMC				i S	Sn	22 35 39.9	+0.6
MNMCX	Minye Minye	2.76	340	i P	Pn	22 35 06.2	+0.4
YJA	Yavi	2.90	99	i P	Pn	22 35 08.4	+0.7
PB14	IPOC Station P	3.31	210	eP	Pn	22 35 13.5	+0.4
PB14	IPOC Station P	3.31	210	i P	Pn	22 35 12.6	-0.5
PB16	IPOC Station P	3.50	346	i P	Pn	22 35 16.8	+1.1
PB12	IPOC Station P	3.51	332	eP	Pn	22 35 13.9	-1.5
PB12	IPOC Station P	3.51	332	i P	Pn	22 35 13.9	-1.5
GO02	Mina Guanaco	3.52	195	⇑iP	Pn	22 35 15.7	-0.1
GO02				i S	Sn	22 35 56.1	-1.1
AZAP	Zapla	4.09	128	i P	Pn	22 35 15.3	-7.9
LPAZ	La Paz	5.44	5	P	Pn	22 35 43.3	+1.5
	comp=N,1.6nm,0.3s,baz=188,slow=7.7,SNR=44						
LPAZ				S	Sn	22 36 38.1	-5.6
	baz=35,slow=16,SNR=2.6						
TORD	Torodi Ar. Bea	77.17	70	P	P	22 46 02.5	-0.2
	comp=N,0.6nm,0.4s,baz=254,slow=5.6,SNR=10						
YKA	Yellowknife Ar	91.51	340	P	P	22 47 14.9	+0.8
	comp=N,0.1nm,0.4s,baz=123,slow=4.5,SNR=4.0						

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*IDC **07** 22:50:04.6±1.6, 54°.32S×140°.66E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.9/25, mbtmp3.8/5, MS3.6/6, Ms1 3.6/6, ms1mx3.3/29, Error ellipse: s-maj=106.7km s-min=22.1km az=88.0*
*NEIC **07** 22:50:07.1±1.8, 54°.36S±0°.09×140°.0E±0°.4, h11km±5km, mb4.2/6, Error ellipse: s-maj=33.1km s-min=9.1km az=105.0*
ISC 07 22:50:07.1±0.8, **54°.3S**±0°.1×**140°.1E**±0°.2, **h10km, n20,** σ**1.s52**/14, **mb4.0**/7, **MS3.5**/6, **West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOO	Toolangi	17.16	15	Pn	Pn	22 54 07.2	+0.4
STKA	Stephens Creek	22.46	3	P	P	22 55 06.2	0.0
	8.2nm,1.1s,baz=163,slow=15,SNR=5.2						
VNDA	Vanda	24.58	169	LR	LR	23 04 13.9	
	comp=Z,84nm,18.1s,baz=314,slow=35						
QRZ	Quartz Range	25.45	71	P	P	22 55 35.1	+0.3
ASAR	Alice Springs	30.96	349	P	P	22 56 23.2	-1.0
	0.5nm,0.7s,baz=160,slow=9.4,SNR=4.2						
ASAR				LR	LR	23 06 57.6	
	comp=Z,90nm,19.8s,baz=163,slow=33						
WB2	Warramunga Arr	34.59	350	P	P	22 56 54.4	-1.7
WB2				IAmb	IAmb	22 57 01.9	
	comp=Z,3.4nm,1.0s						
WRA	Warramunga Arr	34.60	350	P	P	22 56 54.7	-1.3
	comp=Z,1.0nm,0.9s,baz=170,slow=7.7,SNR=3.6						
WRA	Warramunga Arr	34.60	350	P	P	22 56 53.8	-2.2
QSPA	South Pole Qui	35.79	180	P	P	22 57 04.7	-1.4
	comp=Z,1.4nm,0.9s,baz=106,slow=4.2,SNR=2.5						
QSPA	South Pole Qui	35.79	180	IAmb	IAmb	22 57 18.2	
	comp=Z,3.5nm,1.1s						
MAW	Mawson	37.04	218	P	P	22 57 16.3	-0.2
MAW				IAmb	IAmb	22 57 18.4	
	comp=Z,7.2nm,1.1s						
FITZ	Fitzroy Crossi	37.83	337	LR	LR	23 13 47.4	
	comp=Z,56nm,18.2s,baz=159,slow=38						
HNR	Honiara	47.50	27	LR	LR	23 15 20.2	
	comp=Z,57nm,18.1s,baz=296,slow=32						
KAPI	Kappang	51.85	334	LR	LR	23 22 28.2	
	comp=Z,76nm,18.0s,baz=210,slow=37						
LEM	Lembang	54.09	319	LR	LR	23 21 55.7	
	comp=Z,88nm,18.8s,baz=179,slow=35						
CMAR	Chiang Mai Arr	80.57	321	P	P	23 02 19.8	+0.3
	comp=Z,0.3nm,0.3s,baz=160,slow=3.7,SNR=3.5						
GERES	GERESS Array B	146.92	283	PKPbc	PKPdf	23 09 48.7	+1.8
	comp=Z,1.3nm,1.0s,baz=131,slow=5.5,SNR=5.7						
GERES	GERESS Array B	146.92	283		PKPdf	23 09 49.4	+2.5
ESDC	Sonseca Array	151.80	254	PKPbc	PKPbc	23 10 01.8	+0.5
	comp=Z,0.4nm,0.5s,baz=100,slow=1.4,SNR=6.0						
ESDC	Sonseca Array	151.80	254		PKPbc	23 10 03.0	+1.7

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*INET **07** 22:52:08.5, 12°.03N×87°.32W, h60km, ML3.8*
*SNET **07** 22:52:11.9±1.1, 12°.24N×87°.32W, h49km±26km, ML3.5*
*UCR **07** 22:52:11.9±1.1, 12°.25N×87°.30W, h55km±19km, ML3.5*
ISC 07 22:52:11.7±3.5, **12°.2N**±0°.1×**87°.30W**±0°.08, **h62km**±38km, **n12,** σ**0.s51**/24, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	Copaltepe	0.69	94	eP	Pn	22 52 26.2	+0.2
COPN				eS	Sn	22 52 35.8	-0.8
COPN	Copaltepe	0.69	94	eP	Pn	22 52 26.2	+0.2
COPN				eS	Sn	22 52 35.8	-0.8
MOMN	Momotombo	0.76	77	eP	Pn	22 52 27.2	+0.3
MOMN				eS	Sn	22 52 38.4	+0.3
MOMN	Momotombo	0.76	77	eP	Pn	22 52 27.2	+0.3
MOMN				eS	Sn	22 52 38.4	+0.3
CNCH	Conchagua	1.16	333	eP	Pn	22 52 31.4	-0.6
CNCH				eS	Sn	22 52 47.9	+0.7
CNCH				IAML		22 52 53.0	
	comp=Z,996nm,0.3s						
CNCH	Conchagua	1.16	333	eP	Pn	22 52 31.4	-0.6
CNCH				eS	Sn	22 52 47.9	+0.7
CNCH				IAML		22 52 53.0	
	comp=Z,996nm,0.3s						
LCND	La Caada	1.22	332	eP	Pn	22 52 32.0	-0.7
LCND				eS	Sn	22 52 48.7	+0.3
LCND	La Caada	1.22	332	eP	Pn	22 52 32.0	-0.7
LCND				eS	Sn	22 52 48.7	+0.3
PACA	Pacayal	1.58	321	eP	Pn	22 52 37.7	0.0
PACA				eS	Sn	22 52 57.8	+0.5
PACA	Pacayal	1.58	321	eP	Pn	22 52 37.7	0.0
PACA				eS	Sn	22 52 57.8	+0.5
TGUH	Tegucigalpa,Un	1.81	1	eP	Pn	22 52 40.7	-0.1
TGUH				IAML		22 52 41.1	
TGUH				eS	Sn	22 53 02.7	-0.2
TGUH	Tegucigalpa,Un	1.81	1	eP	Pn	22 52 40.7	-0.1
TGUH				IAML		22 52 41.1	
TGUH				eS	Sn	22 53 02.7	-0.2

IDC 07 23:07:54.4±4.4, **20°.37S**×**66°.62E, h0km, mb3.5**/5, **mb1 3.7**/5, **mb1mx3.4**/51, **mbtmp3.5**/5, **MS3.7**/2, **Ms1 3.7**/2, **ms1mx3.1**/30, **Error ellipse: s-maj=128.0km s-min=38.1km az=57.0, Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	30.76	28	LR	LR	23 24 54.5	
	comp=Z,60nm,18.4s,baz=257,slow=33						
CMAR	Chiang Mai Arr	49.93	42	P	P	23 16 50.9	+0.6
	0.7nm,0.3s,baz=235,slow=7.6,SNR=5.0						
ASAR	Alice Springs	61.95	107	P	P	23 18 16.8	+0.2
	0.3nm,0.7s,baz=267,slow=6.1,SNR=4.4						
MKAR	Makanchi Array	68.33	12	P	P	23 18 57.7	+0.3

	0.2nm,0.8s,baz=208,slow=5.9,SNR=2.0						
ZALV	Zalesovo Beam	75.66	11	P	P	23 19 42.2	+1.1
	0.3nm,0.2s,baz=187,slow=11,SNR=3.2						
SONM	Songino Array	76.69	26	P	P	23 19 45.5	-1.9
	0.3nm,0.7s,baz=224,slow=8.1,SNR=3.1						
ESDC	Sonseca Array	88.81	313	LR	LR	00 01 32.7	
	comp=Z,61nm,18.1s,baz=10.0,slow=36						

IDC 07 23:08:29.4±2.0**,3°.78S**×**150°.59E,h0^{km},mb3.6**/2**, mb1 4.0**/2**,mb1mx3.4**/37**,mbtmp3.7**/2**,MS3.2**/1**,Ms1 3.2**/1**, ms1mx2.7**/28**,Error ellipse: s-maj=51.2km s-min=27.0km az=174.0,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.53	110	Pn	Pn	23 08 57.8	-0.2
	10nm,0.3s,baz=72,slow=3.2,SNR=3.9						
KRVT				LR	LR	23 09 00.6	
	comp=Z,79nm,21.5s,baz=316,slow=20						
WRA	Warramunga Arr	22.56	223	P	P	23 13 30.4	-1.1
	2.4nm,0.9s,baz=49,slow=10,SNR=5.3						
DZM	Mont Dzumac	23.82	141	LR	LR	23 20 43.2	
	comp=Z,52nm,18.6s,baz=36,slow=31						
ASAR	Alice Springs	25.50	218	P	P	23 14 00.6	+0.9
	1.0nm,0.7s,baz=50,slow=8.4,SNR=8.9						
TORD	Torodi Ar. Bea	147.89	289	PKPbc	PKPbc	23 28 16.9	-0.8
	1.0nm,0.8s,baz=58,slow=3.3,SNR=4.0						

IDC 07 23:12:53.7±1.3**,28°.86N**×**68°.74E,h0^{km},mb3.4**/4**, mb1 3.6**/5**,mb1mx3.3**/46**,mbtmp3.5**/5**,ML3.2**/1**,Error ellipse: s-maj=39.7km s-min=25.1km az=137.0, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSAR	Wadi Sarin	10.67	241	Pn	Pn	23 15 28.1	+0.2
	0.2nm,0.3s,baz=57,slow=16,SNR=5.0						
MKAR	Makanchi Array	20.81	27	P	P	23 17 35.8	-0.8
	0.8nm,0.6s,baz=209,slow=12,SNR=13						
KURBB	Kurchatov Arra	22.97	16	P	P	23 18 00.3	+0.7
	0.3nm,0.3s,baz=209,slow=8.8						
TORD	Torodi Ar. Bea	63.78	271	P	P	23 23 27.8	-0.2
	0.3nm,0.7s,baz=64,slow=4.9,SNR=3.6						
ASAR	Alice Springs	81.60	123	P	P	23 25 13.9	+0.1
	0.3nm,0.4s,baz=308,slow=5.9,SNR=5.8						

IDC 07 23:27:16.2±2.3**,6°.97S**×**129°.38E,h122^{km}**±33^{km}**,mb3.0**/1**, mb1 3.3**/5**,mb1mx3.1**/31**,mbtmp3.6**/5**,Error ellipse: s-maj=57.1km s-min=14.9km az=97.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	6.35	17	P	Pn	23 28 49.0	+1.5
	1.1nm,0.3s,baz=7.7,slow=24,SNR=6.7						
SIJI				S	Sn	23 29 57.0	-1.7
	0.8nm,0.3s,baz=270,slow=20,SNR=2.2						
FITZ	Fitzroy Crossi	11.64	198	P	Pn	23 29 59.6	+0.9
	0.3nm,0.3s,baz=26,slow=11,SNR=13						
FITZ				S	Sn	23 32 04.3	-2.7
	0.4nm,0.3s,baz=65,slow=19,SNR=5.2						
WRA	Warramunga Arr	13.76	160	P	Pn	23 30 25.5	-0.8
	0.3nm,0.3s,baz=336,slow=12,SNR=11						
WRA				S	Sn	23 32 49.7	-8.6
	0.4nm,0.3s,baz=335,slow=23,SNR=7.1						
ASAR	Alice Springs	17.16	166	P	P	23 31 08.0	-0.4
	0.2nm,0.3s,baz=346,slow=12,SNR=8.9						
MKAR	Makanchi Array	67.87	327	P	P	23 38 01.9	+0.4
	0.2nm,0.4s,baz=116,slow=7.7,SNR=7.1						

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*IDC **07** 23:38:44.4±1.6, 19°.16N×65°.47W, h0^{km}, mb3.5/5, mb1 3.8/6, mb1mx3.5/40, mbtmp3.6/6, ML3.6/1, MS2.8/1, Ms1 2.8/1, ms1mx2.5/28, Error ellipse: s-maj=41.1km s-min=16.6km az=92.0*

*NEIC **07** 23:38:48.6±2.5, 19°.12N±0°.03×65°.33W±0°.03, h33^{km}±7^{km}, Error ellipse: s-maj=5.9km s-min=1.7km az=144.0*

*OSPL **07** 23:38:48.1±0.6, 18°.63N×65°.27W, h0^{km}±92^{km}, ML3.5*

*RSPR **07** 23:38:50.5, 19°.06N×65°.35W, h34^{km}±8^{km}, MD3.7/9*

ISC 07 23:38:48.8±2.0**,19°.10N**±0°.06×**65°.36W**±0°.04**,h32^{km}**±16^{km}, **n72,**σ**1^s.12**/95**,mb3.5**/4**,9C-9D,Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUPR	Culebra, Puert	0.80	175		Pn	23 39 03.5	-0.2
CUPR				Sn	Sn	23 39 14.0	-0.5
STVI	Saint Thomas	0.84	153	⇑eP	Pn	23 39 04.0	-0.4
STVI				eS	Sn	23 39 14.6	-1.0
STVI	Saint Thomas	0.84	153	⇑eP	Pn	23 39 04.0	-0.4
STVI				eS	Sn	23 39 14.9	-0.7
STVI	Saint Thomas	0.84	153	⇑eP	Pn	23 39 04.0	-0.4
STVI	Saint Thomas	0.84	153		Pn	23 39 03.9	-0.4
STVI				Sn	Sn	23 39 14.9	-0.7
GCPR	Guaynabo City	1.05	221	eS	Sn	23 39 20.1	-0.8
GCPR	Guaynabo City	1.05	221	⇓eP	Pn	23 39 06.5	-0.7
GCPR	Guaynabo City	1.05	221		Pn	23 39 06.5	-0.7
GCPR					Sn	23 39 20.1	-0.8
SJG	San Juan	1.24	217	Pn	Pn	23 39 09.4	-0.5
	59nm,0.3s,baz=58,slow=14,SNR=76						
SJG				Sn	Sn	23 39 25.2	-0.3
	274nm,0.3s,baz=252,slow=19,SNR=21						
SJG				LR	LR	23 39 45.5	
	comp=Z,364nm,18.2s,baz=87,slow=50						
EMPR	Esperanza - Ma	1.27	241	⇑eP	Pn	23 39 10.8	+0.4
EMPR	Esperanza - Ma	1.27	241	eS	Sn	23 39 26.1	-0.2
EMPR	Esperanza - Ma	1.27	241		Pn	23 39 10.2	-0.1
EMPR					Sn	23 39 25.9	-0.5
IGPR	InterUniversit	1.34	212	⇑eP	Pn	23 39 10.9	-0.3
IGPR				eS	Sn	23 39 27.1	-0.8
IGPR	InterUniversit	1.34	212	⇓eP	Pn	23 39 10.9	-0.3
IGPR	InterUniversit	1.34	212	Pn	Pn	23 39 11.0	-0.3
IGPR				Sn	Sn	23 39 28.0	+0.1
CDVI	St. Croix	1.46	157		Pb	23 39 14.4	-0.9
AOPR	Arecibo Observ	1.52	241	⇓eP	Pn	23 39 13.7	-0.1
AOPR				eS	Sn	23 39 32.1	-0.5
AOPR	Arecibo Observ	1.52	241	⇓eP	Pn	23 39 13.7	-0.1
AOPR				eS	Sn	23 39 32.2	-0.5
AOPR	Arecibo Observ	1.52	241	⇓eP	Pn	23 39 13.7	-0.1
AOPR	Arecibo Observ	1.52	241		Pn	23 39 13.7	-0.1
AOPR					Sn	23 39 32.1	-0.5
OBIP	Obispado Ponce	1.59	229	⇓eP	Pn	23 39 13.9	-0.8
OBIP				eS	Sn	23 39 33.6	-0.5
OBIP	Obispado Ponce	1.59	229	⇓eP	Pn	23 39 13.9	-0.8
OBIP	Obispado Ponce	1.59	229		Pn	23 39 13.9	-0.8
OBIP					Sn	23 39 33.6	-0.5
ICMP	Isla Caja de M	1.64	223	⇓eP	Pn	23 39 16.0	+0.6
ICMP	Isla Caja de M	1.64	223	eS	Sn	23 39 34.6	-0.8
ICMP	Isla Caja de M	1.64	223		Pn	23 39 15.6	+0.1
ICMP					Sn	23 39 36.8	+1.3
AGPR	Aguadilla, PR	1.78	249	⇑eP	Pn	23 39 17.6	+0.2
AGPR				eS	Sn	23 39 38.7	-0.2
AGPR	Aguadilla, PR	1.78	249	i P	Pn	23 39 17.5	+0.2
AGPR				eS	Sn	23 39 39.6	+0.8
AGPR				IAML		23 39 48.4	
	comp=Z,343nm,0.3s						
AGPR	Aguadilla, PR	1.78	249	⇑eP	Pn	23 39 17.6	+0.2
AGPR	Aguadilla, PR	1.78	249		Pn	23 39 17.6	+0.2
AGPR					Sn	23 39 38.7	-0.2
GBPR	Guanica, Bosqu	1.83	232	⇑eP	Pn	23 39 18.7	+0.7
GBPR				eS	Sn	23 39 40.5	+0.5
GBPR	Guanica, Bosqu	1.83	232	⇑eP	Pn	23 39 18.7	+0.7
GBPR	Guanica, Bosqu	1.83	232		Pn	23 39 18.7	+0.7
GBPR					Sn	23 39 40.5	+0.5
MPR	Mayaguez	1.91	243	i P	Pn	23 39 18.9	-0.1
MPR	Mayaguez	1.91	243		Pn	23 39 19.1	0.0
MLPR	Magueyes Islan	1.96	235	⇓eP	Pn	23 39 20.2	+0.4
MLPR	Magueyes Islan	1.96	235	eS	Sn	23 39 42.0	-1.3
MLPR	Magueyes Islan	1.96	235		Pn	23 39 20.2	+0.4
MLPR					Sn	23 39 42.0	-1.3
CRPR	Cabo Rojo, PR	1.99	237		Pn	23 39 20.4	+0.2
SMRT	St. Maarten	2.40	115	Pn	Pn	23 39 26.9	+1.0
SMRT					Sn	23 39 53.6	-0.7
SABA	Saba	2.49	126	Pn	Pn	23 39 28.7	+1.6
SEUS	St. Eustatius	2.77	125	Pn	Pn	23 39 32.7	+1.8
PCDR	Punta Cana, DR	2.92	259	i P	Pn	23 39 34.5	+1.4
PCDR				IAML		23 40 29.9	
	comp=Z,144nm,1.4s						
PCDR	Punta Cana, DR	2.92	259	Pn	Pn	23 39 35.4	+2.4
SKI	Saint Kitts	3.05	125	Pn	Pn	23 39 35.9	+1.1
ANWB	Willy Bob	3.68	112	Pn	Pn	23 39 43.8	+0.4
DR12	Loma Pena Alta	3.82	266		Pn	23 39 47.6	+2.1
SDD	Santo Domingo	4.37	262	Pn	Pn	23 39 54.3	+1.4
BANI	BANI	4.79	262	Pn	Pn	23 40 00.7	+1.9
SDDR	Presa de Saban	5.61	270	i P	Pn	23 40 11.8	+1.7
SDDR				eS	Sn	23 41 14.1	+0.5
SDDR				IAML		23 41 19.1	
	comp=Z,24nm,0.3s						
SDDR	Presa de Saban	5.61	270		Pn	23 40 12.0	+1.9
FDF	Fort de France	5.92	137	Pn	Pn	23 40 15.6	+1.2
GRTK	Grand Turk	5.93	295	Pn	Pn	23 40 14.3	-0.1
MCLT	Moule a Chique	6.83	141	Pn	Pn	23 40 30.8	+3.9
LGNH	Logne	6.89	266	Pn	Pn	23 40 29.6	+2.0
BBGH	Gun Hill	8.13	136	Pn	Pn	23 40 45.8	+1.1
PCRV	Puerto La Cruz	8.90	175	Pn	Pn	23 40 57.3	+2.0
	comp=Z,0.7nm,0.3s,baz=332,slow=7.0,SNR=4.7						
PLCV	Puerto La Cruz	8.92	175		Pn	23 40 57.3	+1.8
TOSP	Speyside	9.05	148	Pn	Pn	23 40 58.0	+0.7
GTBY	Guantanamo Bay	9.24	277	Pn	Pn	23 40 59.4	-0.4
SDV	Santo Domingo	11.37	207	Pn	Pn	23 41 33.6	+4.4
	comp=Z,0.8nm,0.3s,baz=40,slow=11,SNR=5.7						
SDV				LR	LR	23 47 04.9	
	comp=Z,49nm,18.5s,baz=48,slow=44						
PAMC	Pamplona, Colo	13.70	212	eP	Pn	23 42 00.3	-1.0
RUSC	La Rusia	15.13	211	eP	Pn	23 42 21.0	+0.1
PTBC	PUERTO BERRIO,	15.31	217	eP	P	23 42 25.4	-1.7
NORC	Norcasia	16.34	216	eP	Pn	23 42 36.9	+0.9
CBOC	Ciudad Bolivar	16.76	220	eP	P	23 42 46.0	+2.6
GUY2C	Guyana, Caldas	16.90	217	eP	P	23 42 45.0	-0.2
PTGA	Pitinga	20.41	164	P	P	23 43 23.2	-0.1
	comp=Z,1.0nm,0.3s,baz=317,slow=19,SNR=4.9						
TXAR	Lajitas Array	36.25	294	P	P	23 45 48.8	-0.5
	comp=Z,0.5nm,0.8s,baz=98,slow=9.2,SNR=5.7						
ULM	Lac du Bonnet	39.43	329	P	P	23 46 15.2	-0.6
	comp=Z,0.7nm,0.5s,baz=139,slow=9.3,SNR=3.5						
YKA	Yellowknife Ar	54.92	335	P	P	23 48 15.4	-0.8
	comp=Z,0.4nm,0.6s,baz=112,slow=7.9,SNR=4.6						
ILAR	Eielson Array	69.29	333	P	P	23 49 52.8	+0.1
	comp=Z,0.2nm,0.6s,baz=105,slow=4.1,SNR=5.0						

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*IDC **07** 23:52:15.0±1.7, 9°.48S×108°.56E, h0^{km}, mb3.9/8, mb1 4.0/11, mb1mx3.8/31, mbtmp4.0/11, ML3.7/3, Error ellipse: s-maj=58.7km s-min=15.8km az=50.0*

*NEIC **07** 23:52:18.6±1.9, 9°.67S±0°.07×108°.42E±0°.06, h34^{km}±6^{km}, mb4.1/12, Error ellipse: s-maj=10.9km s-min=9.1km az=167.0*

*DJA **07** 23:52:18.7±0.7, 9°S±7°×10°9E±°, h10^{km}, M4.3/10, mB5.1/1, mb4.7/3, MLv4.1/10, Mw(mB)4.4/1*

ISC 07 23:52:17.6±0.8**,9°.55S**±0°.08×**108°.42E**±0°.05**,h27^{km},n42,** σ**1^s.43**/43**,mb4.0**/12**,South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CISI	Cisompet, Garu	2.07	343	P	Pn	23 52 50.9	+0.2
CISI	Cisompet, Garu	2.07	343		Pn	23 52 51.7	+1.0
KPJI	Karang Pucung	2.26	13	P	Pn	23 52 55.3	+2.0
CNJI	Cibinong	2.57	330	P	Pn	23 52 58.4	+0.9
CNJI				S	Sn	23 53 26.7	-1.1
UGM	Wanagama	2.64	52	P	Pn	23 52 59.6	+1.1
UGM				S	Sn	23 53 27.1	-2.6
UGM	Wanagama	2.64	52		Pn	23 52 58.7	+0.2
LEM	Lembang	2.82	344	Pn	Pn	23 53 03.3	+2.2
	20nm,0.3s,baz=112,slow=7.1,SNR=22						
LEM	Lembang	2.82	344	P	Pn	23 53 04.0	+2.9
XMIS	Christmas Isla	2.88	251	Pn	Pn	23 53 00.1	-1.7
WOJI	Wonogiri, Jawa	3.00	56	P	Pn	23 53 04.0	+0.5
WOJI				S	Sn	23 53 38.8	+0.2
PCJI	Pacitan	3.04	64	P	Pn	23 53 03.2	-0.8
SKJI	Sukabumi	3.13	324	P	Sn	23 53 37.7	-4.1
SMRI	Semarang	3.19	39	Pn	Pn	23 53 05.4	-0.7
JAGI	Jajag, Banyuwa	5.76	80	P	Pn	23 53 42.7	+1.3
	0.3nm43nm,0.6s						
JAGI	Jajag, Banyuwa	5.76	80		Pn	23 53 40.9	-0.6
SRBI	Singaraja	6.87	78	P	Pn	23 53 57.3	+0.7
	0.2nm1µm37nm,0.6s						
MNAI	Manna	7.48	313	Pn	Pn	23 54 06.0	+0.9
PMBI	Palembang	7.51	331	P	Pn	23 54 02.4	-3.1
KAPI	Kappang	12.11	69	Pn	Pn	23 55 06.2	-2.3
	1.2nm,0.3s,baz=158,slow=14,SNR=5.2						
SOEI	Soe	15.62	92	Pn	Pn	23 55 55.3	-1.0
SOEI				IAmb	IAmb	23 55 58.5	
	comp=Z,11nm,0.9s						
KULM	Kulim	16.65	332	Pn	Pn	23 56 09.0	-0.3
KULM				IAmb	IAmb	23 56 16.5	
	comp=Z,7.4nm,1.0s						
FITZ	Fitzroy Crossi	18.74	119	P	P	23 56 34.6	0.0
	comp=Z,0.1nm,0.3s,baz=12,slow=1.8,SNR=5.4						
FITZ				S	Sn	23 59 47.9	-16
	comp=Z,0.2nm,0.3s,baz=19,slow=22,SNR=6.0						
KNRA	Kununurra	20.75	109	P	P	23 56 56.1	-0.4
WRA	Warramunga Arr	27.07	115	P	P	23 57 59.5	+1.3
	comp=Z,0.6nm,0.7s,baz=288,slow=11,SNR=2.7						
WRA	Warramunga Arr	27.07	115	IAmb	IAmb	23 58 06.7	
	comp=Z,0.4nm,1.1s						
WRAB	Tennant Creek	27.08	115	P	P	23 57 58.3	0.0
WB2	Warramunga Arr	27.08	115	P	P	23 57 57.9	-0.4
WB2				IAmb	IAmb	23 58 01.8	
	comp=Z,9.5nm,1.4s						
ASAR	Alice Springs	28.10	123	P	P	23 58 08.6	+1.1
	comp=Z,0.3nm,0.7s,baz=306,slow=8.9,SNR=4.3						
ASAR	Alice Springs	28.10	123	P	P	23 58 07.5	+0.1
CMAR	Chiang Mai Arr	29.36	341	P	P	23 58 19.6	+1.1
	comp=Z,0.4nm,0.3s,baz=175,slow=9.7,SNR=6.7						
STKA	Stephens Creek	37.91	131	P	P	23 59 32.9	+0.1
	comp=Z,1.8nm,0.7s,baz=294,slow=11,SNR=3.4						
SONM	Songino Array	57.16	358	P	P	00 02 03.1	+0.9
	comp=Z,0.9nm,0.6s,baz=178,slow=8.2,SNR=14						
SONM	Songino Array	57.16	358	IAmb	IAmb	00 02 04.5	
	comp=Z,0.7nm,0.6s						
ULN	Ulaanbaatar	57.17	359	P	P	00 02 03.2	+1.0
ULN				IAmb	IAmb	00 02 15.8	
	comp=Z,2.2nm,1.2s						
MK31	Makanchi Array	60.75	340	P	P	00 02 28.4	+1.5
MK31				IAmb	IAmb	00 02 28.6	
	comp=Z,1.5nm,0.7s						
MKAR	Makanchi Array	60.75	340	P	P	00 02 28.2	+1.2
	comp=Z,2.1nm,0.5s,baz=147,slow=8.2,SNR=44						
MKAR	Makanchi Array	60.75	340	P	P	00 02 27.9	+0.9
MAKZ	Makanchi	60.87	340	P	P	00 02 28.9	+1.2
MAKZ				IAmb	IAmb	00 02 29.7	
	comp=Z,1.1nm,0.8s						
ZALV	Zalesovo Beam	66.34	345	P	P	00 03 04.8	+1.2
	comp=Z,0.4nm,0.3s,baz=149,slow=3.1,SNR=5.2						
ZALV	Zalesovo Beam	66.34	345	P	P	00 03 04.4	+0.7
PETK	Petropavlovsk-	75.14	28	P	P	00 03 57.7	+0.4
	comp=Z,8.1nm,1.0s,baz=183,slow=4.2,SNR=3.6						
PETK	Petropavlovsk-	75.14	28	P	P	00 03 57.4	+0.1

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*VAO **08** 00:07:22.2±1.1, 24°.20S×67°.29W, h10^{km}, mb5.0*

*SJA **08** 00:07:36.7±0.7, 24°.41S×67°.20W, h189^{km}±7^{km}, ML4.7, MW4.7*

*NEIC **08** 00:07:36.3±1.7, 24°.38S±0°.06×67°.04W±0°.09, h164^{km}±5^{km}, mb4.5/110, Error ellipse: s-maj=11.5km s-min=8.7km az=83.0*

*IDC **08** 00:07:36.7±1.0, 24°.40S×66°.98W, h158^{km}±8^{km}, mb4.0/10, mb1 4.3/18, mb1mx4.2/28, mbtmp4.7/18, MS3.3/4, Ms1 3.4/4, ms1mx3.0/27, Error ellipse: s-maj=15.4km s-min=10.9km az=34.0*

*GUC **08** 00:07:39.5±0.4, 24°.38S×67°.52W, h204^{km}±7^{km}, ML5.4*

*GCMT **08** 00:07:45.3±0.4, 24°.32S±0°.03×67°.23W±0°.03, h190^{km}±4^{km}, MW5.0/77, Moment Tensor Solution. s17,c18; s77,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.20±.15; M$_{\theta\theta}$-0.55±.19; M$_{\phi\phi}$2.75±.23; M$_{r\theta}$1.56±.10; M$_{\theta\phi}$-1.07±.18; M$_{\phi r}$-1.54±.15; Best double couple: M$_0$3.48400×10^{16} NP1:φ$_s$189.00000°,δ32.00000°,λ-49.00000°. NP2: φ$_s$323.00000°,δ67.00000°,λ-112.00000°. Principal axes: T 3.7170, Plg19.0000°, Azm69.0000°; N -0.4600, Plg20.0000°, Azm332.0000°; P -3.2520, Plg62.0000°, Azm198.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 00:07:36.9±0.6**,24°.41S**±0°.04×**67°.19W**±0°.04**,h169^{km}**±5^{km}**, n209,**σ**1^s.42**/222**,mb4.5**/63**,8C-3D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AZAP	Zapla	1.95	85	i P	Pn	00 08 14.4	+1.5
AZAP				⇓eS	Sn	00 08 43.5	+2.8
AZAP				IAML		00 08 45.8	
	comp=Z,1µm,0.9s						
GO02	Mina Guanaco	2.31	251	⇑iP	Pn	00 08 18.9	+1.9
GO02				i S	Sn	00 08 49.6	+1.5
GO02				IAML		00 08 50.9	
	comp=N,9µm,0.3s						
GO02	Mina Guanaco	2.31	251		Pn	00 08 18.6	+1.6
GO02				Sn	Sn	00 08 50.2	+2.1
LVC	Limon Verde	2.39	318	P	Pn	00 08 20.1	+2.0
	comp=N,277nm,0.3s,baz=164,slow=7.6,SNR=1422						
LVC				S	Sn	00 08 51.2	+1.3
	comp=N,762nm,0.3s,baz=273,slow=22,SNR=125						
LVC				LR	LR	00 09 11.1	
	comp=N,509nm,18.2s,baz=160,slow=38						
LVC	Limon Verde	2.39	318	i P	Pn	00 08 20.2	+2.1
LVC				eS	Sn	00 08 51.4	+1.5
PB15	IPOC Station P	2.41	299	⇑iP	Pn	00 08 19.9	+1.8
PB15				eS	Sn	00 08 50.3	+0.3
PB15	IPOC Station P	2.41	299	i P	Pn	00 08 19.9	+1.8
PB15				eS	Sn	00 08 51.3	+1.3
PB15				IAML		00 08 54.3	
	comp=Z,27µm,0.4s						
YJA	Yavi	2.71	35	i P	Pn	00 08 24.0	+2.0
YJA				eS	Sn	00 08 59.0	+2.2
YJA				IAML		00 09 04.3	
	comp=Z,436nm,1.6s						
PB06	IPOC Station P	2.77	307	⇑iP	Pn	00 08 24.3	+1.8
PB06				eS	Sn	00 08 57.6	-0.1
PB06				IAML		00 09 00.1	
	comp=E,13µm,0.6s						
PB06	IPOC Station P	2.77	307	i P	Pn	00 08 23.9	+1.5
PB06				eS	Sn	00 08 59.0	+1.3
PB06				IAML		00 09 03.1	
	comp=Z,10µm,0.9s						
AHML	Horco Molle	2.90	145	i P	Pn	00 08 25.4	+1.6
AHML				eS	Sn	00 09 01.6	+1.3
AHML				IAML		00 09 01.9	
	comp=Z,254nm,0.8s						
PB14	IPOC Station P	2.94	265	⇑iP	Pn	00 08 25.6	+1.1
PB14				eS	Sn	00 09 01.0	-0.5
PB14	IPOC Station P	2.94	265	eP	Pn	00 08 25.7	+1.1
PB14				eS	Sn	00 09 02.1	+0.6
PB14				IAML		00 09 07.5	
	comp=Z,3µm,0.4s						
PB05	IPOC Station P	3.17	299	⇑iP	Pn	00 08 28.5	+1.2
PB05				i S	Sn	00 09 05.5	-0.9
PB05				IAML		00 09 08.9	
	comp=N,6µm,0.4s						
PB05	IPOC Station P	3.17	299	eP	Pn	00 08 28.7	+1.4
PB05				IAML		00 09 10.2	
	comp=Z,4µm,0.7s						
PB10	IPOC Station P	3.20	286	⇑iP	Pn	00 08 28.7	+1.1
PB10				eS	Sn	00 09 05.5	-1.6
PB10				IAML		00 09 12.5	
	comp=N,5µm,0.5s						
PB10	IPOC Station P	3.20	286		Pn	00 08 28.9	+1.3
PB10				Sn	Sn	00 09 07.2	+0.1
PB10	IPOC Station P	3.20	286	i P	Pn	00 08 29.1	+1.5
PB10				eS	Sn	00 09 07.0	0.0
PB10				IAML		00 09 08.8	
	comp=Z,3µm,0.5s						
PB09	IPOC Station P	3.22	324	⇓eP	Pn	00 08 30.0	+2.1
PB09				eS	Sn	00 09 08.4	+0.8
PB09				IAML		00 09 13.4	
	comp=E,7µm,0.5s						
PB09	IPOC Station P	3.22	324	eS	Sn	00 09 07.9	+0.3
PB09				IAML		00 09 09.3	
	comp=Z,7µm,0.5s						
PB03	IPOC Station P	3.33	314	⇑iP	Pn	00 08 30.7	+1.3
PB03				i S	Sn	00 09 09.4	-0.7
PB04	IPOC Station P	3.42	307		Pn	00 08 31.4	+0.9
PB04				Sn	Sn	00 09 11.2	-0.9
PB04	IPOC Station P	3.42	307	eP	Pn	00 08 31.6	+1.1
PB07	IPOC Station P	3.65	317	⇑iP	Pn	00 08 34.5	+1.1
PB07				i S	Sn	00 09 16.0	-1.4
PB01	IPOC Station P	3.97	327	Pn	Pn	00 08 39.1	+1.7
PB01				Sn	Sn	00 09 23.5	-1.1
GO03	Copiap	4.19	220		Pn	00 08 39.9	-0.3
CYA	Choya	4.20	163	i P	Pn	00 08 41.9	+1.6
CYA				IAML		00 09 32.8	
	comp=Z,89nm,2.2s						
ACLC	CERRO LA CRUZ	5.00	178	i P	Pn	00 08 51.9	+1.1
GO01	Chusmiza	5.07	338	Pn	Pn	00 08 53.5	+1.3
PB11	IPOC Station P	5.16	333	Pn	Pn	00 08 52.5	-0.5
MNMC	Minye Minye	5.71	336	Pn	Pn	00 08 59.4	-0.9
AROD	Rodeo	6.08	199	i P	Pn	00 09 06.2	+1.0
AROD				IAML		00 10 17.6	
	comp=Z,40nm,0.5s						
GO04	Tololo Observa	6.58	208		Pn	00 09 09.9	-1.7
AMOG	MOGNA	6.60	190	eP	Pn	00 09 12.2	+0.3
AMOG				IAML		00 10 27.1	
	comp=Z,158nm,0.4s						
CFA	Coronel Fontan	7.23	187	P	Pn	00 09 19.3	-0.8
	comp=Z,7.9nm,0.3s,baz=5.1,slow=12,SNR=80						
CFA				S	Sn	00 10 36.9	-4.4
	comp=Z,14nm,0.3s,baz=132,slow=23,SNR=9.5						
CFA				LR	LR	00 12 04.9	
	comp=Z,170nm,20.0s,baz=40,slow=37						
LPAZ	La Paz	8.13	354	P	Pn	00 09 33.2	+0.5
	comp=Z,51nm,0.3s,baz=156,slow=6.3,SNR=368						
LPAZ				S	Sn	00 11 00.3	-3.7
	comp=Z,1.4nm,0.3s,baz=217,slow=16,SNR=2.7						
LPAZ				LR	LR	00 13 32.0	
	comp=Z,158nm,20.9s,baz=225,slow=44						
CPUP	Villa Florida	9.12	104	P	Pn	00 09 42.8	-2.3
	comp=Z,0.8nm,0.3s,baz=288,slow=12,SNR=54						
CPUP	Villa Florida	9.12	104		Pn	00 09 43.0	-2.0
PEL	Peldehue	9.22	199	Pn	Pn	00 09 46.6	+0.1
SIV	San Ignacio	10.15	36	P	Pn	00 09 56.7	-2.1
	comp=Z,8.3nm,0.3s,baz=232,slow=14,SNR=451						
SIV				S	Sn	00 11 36.1	-16
	comp=Z,1.5nm,0.3s,baz=234,slow=16,SNR=7.3						
GO05	Huala	11.33	200	Pn	Pn	00 10 14.0	-0.1
PTGB	Pitanga	13.77	94	eP	Pn	00 10 39.7	-5.7
ITAB	Concordia	13.85	105	eP	Pn	00 10 40.2	-6.1
PLTB	Pedras Altas	14.04	124	eP	Pn	00 10 44.3	-4.4
OGAUY	Aigu	14.69	135	eP	Pn	00 10 52.7	-3.9
PCMB	Pacaembu	14.93	82	eP	Pn	00 10 54.0	-5.8
CNLB	Canela	15.37	112	eP	Pn	00 11 01.1	-4.1
NNA	Nana	15.38	322	P	P	00 11 08.5	+2.3
	comp=Z,0.7nm,0.3s,baz=140,slow=8.7,SNR=4.8						
NNA	Nana	15.38	322		Pn	00 11 05.6	+0.3
SAML	Samuel	15.85	15	P	Pn	00 11 09.7	-1.2
SAML				IAmb	IAmb	00 11 12.3	
	comp=Z,43nm,0.9s						
PLCA	Paso Flores	16.52	189	P	Pn	00 11 19.7	+0.7
	comp=Z,0.6nm,0.3s,baz=33,slow=13,SNR=53						
PLCA	Paso Flores	16.52	189	P	P	00 11 18.5	-0.1
SPB	Sao Paulo	18.07	91	P	P	00 11 34.8	-0.9
SPB	Sao Paulo	18.07	91	eP	P	00 11 35.4	-0.4
RCLB	Rio Claro- Sao	18.15	88	eP	P	00 11 35.8	-0.8
VAO	Valinhos	18.57	90	eP	P	00 11 40.6	-0.7
IPMB	Ipameri, GO	18.81	74	eP	P	00 11 43.4	-0.4
PARB	Paraibuna	19.75	91	eP	P	00 11 54.0	0.0
BDFB	Brasilia	20.00	68	P	P	00 11 56.0	-0.8
	comp=Z,2.9nm,0.3s,baz=241,slow=12,SNR=92						
BDFB	Brasilia	20.00	68	P	P	00 11 56.0	-0.8
ESAR	Angra dos Reis	20.87	91	eP	P	00 12 04.2	-1.7
BSCB	Bom Sucesso	20.95	85	eP	P	00 12 05.8	-1.1
SMTB	Santa Maria do	24.27	54	eP	P	00 12 37.6	-1.1
PTGA	Pitinga	24.56	18	P	P	00 12 40.8	-0.4
	comp=Z,12nm,0.6s,baz=203,slow=11,SNR=22						
PTGA	Pitinga	24.56	18	P	P	00 12 40.9	-0.4
PTGA				IAmb	IAmb	00 12 43.0	
	comp=Z,14nm,0.8s						
PTGA	Pitinga	24.56	18	eP	P	00 12 40.7	-0.6
OTAV	Otavalo	26.82	334	P	P	00 13 01.3	-0.9
FLOC	Florencia	27.11	341	P	P	00 13 04.5	+0.1
GO10	Punta Arenas	28.85	185	P	P	00 13 20.1	+0.7
RUSC	La Rusia	30.66	348	P	P	00 13 35.8	-0.4
PAYG	Puerto Ayora	32.51	313	P	P	00 13 51.8	-0.1
PAYG				IAmb	IAmb	00 13 57.4	
	comp=Z,18nm,1.1s						
SDV	Santo Domingo	33.27	354	P	P	00 13 58.8	+0.2
SDV				IAmb	IAmb	00 14 07.6	
	comp=Z,9.4nm,1.1s						
NBCL	Cascavel-CE	34.30	59	eP	P	00 14 08.1	+0.6
RCBR	Riachuelo	35.26	64	P	P	00 14 12.9	-2.8
TOSP	Speyside	36.08	11	P	P	00 14 21.8	-0.8
MCLT	Moule a Chique	38.38	10	P	P	00 14 40.7	-1.2
FDF	Fort de France	39.35	9	P	P	00 14 48.1	-1.9
MLPR	Magueyes Islan	42.12	0	P	P	00 15 11.1	-1.5
CRPR	Cabo Rojo, PR	42.16	0	P	P	00 15 10.9	-2.0
OBIP	Obispado Ponce	42.20	1	P	P	00 15 11.9	-1.4

CUPR	**Culebra, Puert**	**42.50**	**3**	P	**P**	**00 15 13.5**	**-2.2**
CUPR				IAmb	IAmb	00 15 14.9	
	comp=Z,22nm,0.9s						
GTBY	**Guantanamo Bay**	**44.74**	**349**	P	**P**	**00 15 31.5**	**-2.1**
VNA3	**Neumayer Olymp**	**56.82**	**161**	P	**P**	**00 17 04.5**	**+1.2**
VNA1	**Neumayer--Stat**	**57.02**	**160**	P	**P**	**00 17 06.4**	**+1.7**
VNA2	**Neumayer--Watz**	**57.39**	**160**	P	**P**	**00 17 08.6**	**+1.4**
	baz=284,slow=7.3						
SNAA	**Sanae**	**59.02**	**161**	P	**P**	**00 17 19.6**	**+1.0**
SNAA	**Sanae**	**59.02**	**161**	P	**P**	**00 17 18.6**	**-0.1**
Y60A	**Bolivia**	**59.03**	**349**	P	**P**	**00 17 17.7**	**-1.3**
V53A	**Saluda**	**61.56**	**346**	P	**P**	**00 17 36.5**	**+0.2**
W50A	**Signal Mountai**	**61.72**	**343**	P	**P**	**00 17 37.5**	**+0.1**
W50A				IAmb	IAmb	00 17 40.3	
	comp=Z,11nm,1.0s						
CPCT	**Cooper Cave**	**61.76**	**344**	P	**P**	**00 17 36.7**	**-0.8**
CPCT				IAmb	IAmb	00 17 39.0	
	comp=Z,5.1nm,0.8s						
TKL	**Tuckaleechee C**	**61.77**	**345**	P	**P**	**00 17 37.5**	**-0.1**
SWET	**Sewanee**	**61.91**	**343**	P	**P**	**00 17 39.0**	**+0.4**
SWET				IAmb	IAmb	00 17 40.2	
	comp=Z,8.4nm,0.8s						
V48A	**Smith Brothers**	**62.64**	**342**	P	**P**	**00 17 43.6**	**+0.2**
V48A				IAmb	IAmb	00 17 45.1	
	comp=Z,5.3nm,0.7s						
JCT	**Junction City**	**62.90**	**328**	P	**P**	**00 17 45.0**	**-0.2**
JCT				IAmb	IAmb	00 17 47.7	
	comp=Z,5.1nm,0.8s						
WHTX	**Lake Whitney,**	**63.10**	**331**	P	**P**	**00 17 46.5**	**0.0**
WHTX				IAmb	IAmb	00 17 53.4	
	comp=Z,13nm,1.3s						
WVT	**Waverly**	**63.30**	**341**	P	**P**	**00 17 48.4**	**+0.8**
WVT				IAmb	IAmb	00 17 49.8	
	comp=Z,9.3nm,0.8s						
T47A	**Sharon Grove**	**63.89**	**342**	P	**P**	**00 17 51.1**	**-0.5**
T47A				IAmb	IAmb	00 17 53.7	
	comp=Z,7.8nm,0.8s						
TXAR	**Lajitas Array**	**63.91**	**325**	P	**P**	**00 17 53.7**	**+1.7**
	comp=Z,0.9nm,0.8s,baz=150,slow=8.2,SNR=11						
TXAR				pP	**PcP**	**00 18 28.2**	**+2.1**
	comp=Z,0.5nm,0.7s,baz=156,slow=10,SNR=3.2						
TXAR	**Lajitas Array**	**63.91**	**325**	P	**P**	**00 17 52.5**	**+0.5**
TX31	**Lajitas Ar. Si**	**63.91**	**325**	P	**P**	**00 17 53.2**	**+1.2**
TX32	**Lajitas Array**	**63.91**	**325**	P	**P**	**00 17 52.9**	**+0.9**
P61A	**Hammonton**	**64.15**	**353**	P	**P**	**00 17 53.0**	**-0.1**
P60A	**Greenville**	**64.37**	**353**	P	**P**	**00 17 54.4**	**-0.3**
WCI	**Wyandotte Cave**	**64.84**	**343**	P	**P**	**00 17 57.9**	**+0.2**
WCI				IAmb	IAmb	00 17 58.9	
	comp=Z,7.9nm,0.7s						
QSPA	**South Pole Qui**	**65.79**	**180**	P	**P**	**00 18 05.5**	**+1.8**
FNO	**Franklin**	**65.89**	**333**	P	**P**	**00 18 03.2**	**-1.3**
CCM	**Cathedral Cave**	**66.12**	**339**	P	**P**	**00 18 06.8**	**+0.9**
CCM				IAmb	IAmb	00 18 08.6	
	comp=Z,4.8nm,0.8s						
S39A	**Bolivar**	**66.48**	**338**	P	**P**	**00 18 07.8**	**-0.5**
S39A				IAmb	IAmb	00 18 10.4	
	comp=Z,9.1nm,1.2s						
MNTX	**Cornudas Mount**	**66.68**	**325**	IAmb	IAmb	00 18 11.7	
	comp=Z,4.7nm,1.0s						
LIC	**Lamto**	**67.73**	**72**	*e*P	**P**	**00 18 15.5**	**-1.2**
	comp=Z,9.7nm,0.5s						
TIC	**Toumodi**	**67.94**	**71**	*e*P	**P**	**00 18 16.9**	**-1.1**
KIC	**Kosan Boka**	**68.05**	**72**	*e*P	**P**	**00 18 17.7**	**-0.9**
	comp=Z,17nm,0.7s						
DBIC	**Dimbokro**	**68.10**	**71**	P	**P**	**00 18 18.2**	**-0.7**
	comp=Z,5.9nm,0.6s,baz=223,slow=7.3,SNR=11						
DBIC				LR	LR	00 47 18.0	
	comp=Z,48nm,19.1s,baz=161,slow=35						
121A	**Cookes Peak, D**	**68.61**	**324**	P	**P**	**00 18 21.9**	**0.0**
121A				IAmb	IAmb	00 18 25.9	
	comp=Z,8.0nm,1.0s						
K43A	**Burlington**	**69.57**	**344**	IAmb	IAmb	00 18 28.9	
	comp=Z,11nm,0.8s						
PLVO	**Plevna**	**69.70**	**353**	P	**P**	**00 18 28.5**	**+0.4**
PLVO				IAmb	IAmb	00 18 30.2	
	comp=Z,13nm,1.2s						
ANMO	**Albuquerque**	**69.79**	**326**	P	**P**	**00 18 29.9**	**+0.7**
ANMO				IAmb	IAmb	00 18 32.7	
	comp=Z,4.5nm,0.8s						
TUC	**Tucson**	**70.09**	**322**	P	**P**	**00 18 31.1**	**+0.1**
TUC				IAmb	IAmb	00 18 34.7	
	comp=Z,7.5nm,1.3s						
JFWS	**Jewell Farm**	**70.28**	**342**	P	**P**	**00 18 31.6**	**-0.1**
JFWS				IAmb	IAmb	00 18 33.5	
	comp=Z,6.5nm,0.7s						
214A	**Organ Pipe Nat**	**71.00**	**320**	P	**P**	**00 18 36.4**	**0.0**
H43A	**Windswept, Lux**	**71.09**	**345**	P	**P**	**00 18 36.3**	**-0.3**
H43A				IAmb	IAmb	00 18 38.5	
	comp=Z,6.4nm,0.8s						
X18A	**Snowflake**	**71.29**	**324**	P	**P**	**00 18 38.0**	**-0.3**
SDCO	**Great Sand Dun**	**71.55**	**329**	P	**P**	**00 18 40.2**	**+0.3**
X16A	**Lo Mia Camp, P**	**72.03**	**323**	P	**P**	**00 18 41.8**	**-0.8**
X16A					PcP	00 18 46.0	-14
E46A	**Sault Ste Mari**	**72.13**	**348**	IAmb	IAmb	00 18 44.7	
	comp=Z,9.9nm,0.8s						
113A	**Mohawk Valley,**	**72.15**	**320**	P	**P**	**00 18 43.4**	**+0.2**
Y14A	**Wickenburg**	**72.55**	**321**	P	**P**	**00 18 45.1**	**-0.5**
MVCO	**Mesa Verde**	**72.59**	**326**	P	**P**	**00 18 46.5**	**+0.5**
E43A	**Lone Tree Farm**	**72.70**	**346**	P	**P**	**00 18 46.2**	**0.0**
E43A				IAmb	IAmb	00 18 48.3	
	comp=Z,5.5nm,0.8s						
WUAZ	**Wupatki**	**72.81**	**323**	P	**P**	**00 18 46.8**	**-0.4**
WUAZ				IAmb	IAmb	00 18 51.2	
	comp=Z,7.7nm,0.8s						
SYO	**Syowa Base**	**73.23**	**159**⇓	*i*P	**P**	**00 18 49.0**	**0.0**
ISCO	**Idaho Springs**	**73.25**	**330**	P	**P**	**00 18 49.1**	**-0.8**
ISCO				IAmb	IAmb	00 19 08.7	
	comp=Z,3.9nm,0.7s						
Y12C	**Blythe**	**73.29**	**320**	P	**P**	**00 18 50.8**	**+0.9**
Y12C				IAmb	IAmb	00 18 53.9	
	comp=Z,10nm,1.1s						
D41A	**Chassel**	**73.71**	**345**	IAmb	IAmb	00 18 55.3	
	comp=Z,19nm,1.2s						
W13A	**Hualapai Mount**	**73.89**	**322**	P	**P**	**00 18 54.3**	**+0.6**
W13A					PcP	00 18 57.0	-11
U15A	**North Rim**	**73.98**	**324**	IAmb	IAmb	00 18 58.5	
	comp=Z,5.1nm,0.8s						
KNB	**Kanab**	**74.70**	**324**	P	**P**	**00 18 58.5**	**+0.3**
MTPU	**Mount Pierson**	**75.12**	**325**	P	**P**	**00 19 01.6**	**+0.8**
Q16A	**Castle Valley**	**75.25**	**326**	P	**P**	**00 18 57.1**	**-4.3**
MSU	**Marysvale**	**75.47**	**325**	P	**P**	**00 19 02.9**	**+0.2**
PSUT	**Pine Spring**	**76.37**	**324**	P	**P**	**00 19 08.6**	**+0.8**
TPNV	**Topopah Spring**	**76.55**	**322**	P	**P**	**00 19 09.9**	**+1.2**
TPNV				IAmb	IAmb	00 19 12.8	
	comp=Z,5.9nm,0.9s						
DAC	**Darwin (Calif)**	**76.86**	**320**	P	**P**	**00 19 11.1**	**+0.6**
TORD	**Torodi Ar. Bea**	**76.88**	**69**	P	**P**	**00 19 10.4**	**-0.5**
	comp=Z,14nm,0.8s,baz=255,slow=4.8,SNR=86						
ISA	**Isabella, Lake**	**76.95**	**319**	P	**P**	**00 19 10.0**	**-1.0**
ISA				IAmb	IAmb	00 19 14.3	
	comp=Z,8.7nm,1.1s						
DUG	**Dugway, Tooele**	**77.05**	**326**	P	**P**	**00 19 10.8**	**-0.6**
R11A	**Troy Canyon, C**	**77.17**	**323**	P	**P**	**00 19 12.7**	**+0.5**
BGU	**Big Grassy Mou**	**77.70**	**326**	P	**P**	**00 19 14.4**	**-0.6**
TSUM	**Tsumeb**	**77.71**	**106**	P	**P**	**00 19 13.5**	**-2.1**
TSUM				IAmb	IAmb	00 19 17.4	
	comp=Z,18nm,1.5s						
AHID	**Auburn Hatcher**	**78.14**	**329**	P	**P**	**00 19 17.7**	**+0.2**
REDW	**Red Top Meadow**	**78.47**	**329**	P	**P**	**00 19 19.1**	**-0.2**
ULM	**Lac du Bonnet**	**78.56**	**342**	P	**P**	**00 19 20.3**	**+0.9**
	comp=Z,1.4nm,0.4s,baz=141,slow=6.9,SNR=7.1						
OMMB	**Old Mammoth Mi**	**78.59**	**320**	P	**P**	**00 19 20.9**	**+0.7**
OMMB				IAmb	IAmb	00 19 23.7	
	comp=Z,5.0nm,0.7s						
NV11	**Mina Array Sit**	**78.67**	**322**	P	**P**	**00 19 21.2**	**+0.8**
ELK	**Elko**	**78.71**	**325**	P	**P**	**00 19 20.9**	**+0.1**
NVAR	**Mina Array Bea**	**78.75**	**321**	P	**P**	**00 19 22.3**	**+1.4**
	comp=Z,1.2nm,0.7s,baz=144,slow=4.9,SNR=10						
NVAR	**Mina Array Bea**	**78.75**	**321**	P	**P**	**00 19 21.4**	**+0.4**
SCHQ	**Schefferville**	**78.92**	**0**	P	**P**	**00 19 22.3**	**+1.1**
	comp=Z,1.0nm,0.5s,baz=220,slow=5.5,SNR=5.2						
RYN	**Ryan**	**79.01**	**321**	P	**P**	**00 19 21.0**	**-1.3**
KVN	**Kaiserville**	**79.06**	**322**	P	**P**	**00 19 22.8**	**+0.2**
KVN				IAmb	IAmb	00 19 25.9	
	comp=Z,6.3nm,0.8s						
YMR	**Madison River**	**79.53**	**330**	P	**P**	**00 19 23.6**	**-1.4**
YHH	**Holmes Hill**	**79.57**	**330**	P	**P**	**00 19 25.5**	**+0.1**
YHB	**Horse Butte**	**79.70**	**330**	P	**P**	**00 19 25.2**	**-0.8**
YHL	**Hebgen Lake**	**79.77**	**330**	P	**P**	**00 19 25.2**	**-1.3**
PNTR	**Pine Nut**	**79.94**	**321**	IAmb	IAmb	00 19 31.3	
	comp=Z,8.9nm,0.8s						
PAHR	**Pah Rah Range**	**80.24**	**322**	IAmb	IAmb	00 19 32.7	
	comp=Z,8.9nm,1.0s						
BOSA	**Boshof**	**80.70**	**117**	P	**P**	**00 19 32.1**	**+0.3**
	comp=Z,4.0nm,0.7s,baz=273,slow=4.0,SNR=9.3						
BOSA	**Boshof**	**80.70**	**117**	IAmb	IAmb	00 19 32.4	
	comp=Z,13nm,1.4s						
ORV	**Oroville**	**81.34**	**321**	IAmb	IAmb	00 19 38.1	
	comp=Z,10nm,1.2s						
J08A	**Circle Bar Ran**	**82.26**	**325**	IAmb	IAmb	00 19 42.8	
	comp=Z,6.6nm,0.9s						
PBDV	**Barranco-do-Ve**	**82.86**	**44**	*e*P	**P**	**00 19 44.8**	**+2.2**
	comp=Z,88nm,1.6s						
PNCL	**Nicolau / Gran**	**83.03**	**43**	*e*P	**P**	**00 19 46.2**	**+2.9**
PCVE	**Castro Verde**	**83.04**	**43**	*e*P	**P**	**00 19 45.4**	**+2.0**
PBEJ	**Beja**	**83.39**	**43**	*e*P	**P**	**00 19 47.2**	**+2.0**
	comp=Z,34nm,1.9s						
F10A	**Beach Ranch, E**	**83.47**	**327**	IAmb	IAmb	00 19 52.9	
	comp=Z,4.1nm,0.8s						
PMTG	**Montargil**	**83.81**	**42**	*e*P	**P**	**00 19 48.7**	**+1.4**
PINE	**Pine Mountain**	**83.86**	**324**	IAmb	IAmb	00 19 51.2	
	comp=Z,5.7nm,0.8s						
PCAS	**Casmilo, Conde**	**84.25**	**41**	*e*P	**P**	**00 19 51.7**	**+2.2**
COI	**Coimbra**	**84.40**	**41**	P	**P**	**00 19 49.2**	**-1.0**
COI				IAmb	IAmb	00 19 52.8	
	comp=Z,14nm,0.8s						
PMRV	**Marv??o**	**84.54**	**42**	*e*P	**P**	**00 19 53.5**	**+2.5**
	comp=Z,25nm,1.9s						
PCBR	**Castelo Branco**	**84.74**	**42**	*e*P	**P**	**00 19 53.6**	**+1.6**
	comp=Z,18nm,1.7s						
TAM	**Tamanrasset**	**84.74**	**62**	IAmb	IAmb	00 19 54.8	
	comp=Z,16nm,0.9s						
MTE	**Manteigas**	**85.04**	**41**	P	**P**	**00 19 52.4**	**-1.1**
MTE	**Manteigas**	**85.04**	**41**	*e*P	**P**	**00 19 55.0**	**+1.4**
	comp=Z,27nm,1.4s						
C09A	**Chrisman Ranch**	**85.27**	**328**	P	**P**	**00 19 54.1**	**-0.3**
C09A				IAmb	IAmb	00 19 57.3	
	comp=Z,8.0nm,0.8s						
MVO	**Moncorvo**	**85.81**	**41**	*e*P	**P**	**00 19 58.9**	**+1.5**
LON	**Longmire**	**86.30**	**326**	P	**P**	**00 19 59.4**	**-0.2**
LON				IAmb	IAmb	00 20 00.5	
	comp=Z,6.1nm,1.3s						
PBRG	**Braganca**	**86.38**	**41**	*e*P	**P**	**00 20 03.0**	**+2.9**
	comp=Z,20nm,1.6s						
PAB	**San Pablo**	**86.50**	**44**	P	**P**	**00 20 00.3**	**-0.5**
PAB				IAmb	IAmb	00 20 03.5	
	comp=Z,14nm,1.1s						
ESDC	**Sonseca Array**	**86.81**	**44**	P	**P**	**00 20 04.0**	**+1.7**
	comp=Z,4.3nm,1.0s,baz=235,slow=4.6,SNR=15						
YKA	**Yellowknife Ar**	**94.45**	**340**	P	**P**	**00 20 38.3**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=129,slow=4.7,SNR=22						
BRTR	**Keskin Array B**	**113.19**	**55**	PKKPab	PKKPab	00 36 50.4	+3.0
	comp=Z,0.7nm,0.8s,baz=133,slow=6.9,SNR=4.9						
ASAR	**Alice Springs**	**128.01**	**205**	PKP	**PKiKP**	**00 26 24.1**	**0.0**
	comp=Z,3.4nm,0.8s,baz=151,slow=2.4,SNR=26						
WRA	**Warramunga Arr**	**131.18**	**207**	PKP	**PKiKP**	**00 26 30.6**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=159,slow=1.7,SNR=20						
WRA				SKPbc	**SKPab**	**00 29 39.7**	**+0.6**
	comp=Z,2.3nm,0.9s,baz=149,slow=4.2,SNR=7.0						
GEYT	**Alibeck**	**131.93**	**60**	SKPbc	**SKPab**	**00 29 42.6**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=350,slow=1.8,SNR=3.7						
ABKAR	**Akbulak array**	**132.15**	**45**		**PKiKP**	**00 26 32.1**	**+0.6**
ZALV	**Zalesovo Beam**	**143.84**	**28**	PKP	**PKPdf**	**00 26 51.4**	**-0.3**
	comp=Z,2.5nm,0.4s,baz=299,slow=4.5,SNR=17						
ZALV				SKPbc	**SKiKP**	**00 30 16.1**	**+0.6**
	comp=Z,4.4nm,1.0s,baz=298,slow=3.2,SNR=7.8						
ZALV	**Zalesovo Beam**	**143.84**	**28**		**PKPdf**	**00 26 51.1**	**-0.6**
SOEI	**Soe**	**144.25**	**200**		**PKPdf**	**00 26 54.7**	**+0.9**
KSH	**Kashi**	**145.57**	**55**	PKPbc	**PKPab**	**00 26 57.2**	**+0.8**
KSH				sPKP		00 27 55.9	
KSH				PP	**PP**	**00 30 22.3**	**+4.4**
KSH				SKKS		00 36 55.0	
MAKZ	**Makanchi**	**146.76**	**40**		**PKPbc**	**00 26 58.6**	**-0.4**
MKAR	**Makanchi Array**	**146.95**	**40**	PKP	**PKPbc**	**00 26 58.6**	**-0.9**
	comp=Z,5.2nm,0.7s,baz=298,slow=1.3,SNR=52						
MKAR				PKPbc	**PKPab**	**00 27 00.7**	**-0.6**
	comp=Z,5.3nm,0.7s,baz=304,slow=2.9,SNR=49						
MJAR	**Matsushiro Arr**	**155.07**	**305**	PKPab	**PKPab**	**00 27 37.2**	**+1.9**
	comp=Z,4.7nm,0.7s,baz=73,slow=4.1,SNR=6.7						
MJAR	**Matsushiro Arr**	**155.07**	**305**		**PKPab**	**00 27 37.9**	**+2.5**
SONM	**Songino Array**	**156.07**	**11**	PKP	**PKPdf**	**00 27 12.9**	**+1.8**
	comp=Z,0.6nm,0.8s,baz=204,slow=1.5,SNR=4.3						
SONM				PKPab	**PKPab**	**00 27 37.5**	**-1.8**
	comp=Z,0.3nm,0.5s,baz=74,slow=2.1,SNR=3.4						
LZH	**Lanzhou**	**166.03**	**32**	*e*PKP	**PKPdf**	**00 27 24.3**	**+2.2**
LZH				pPKP	pPKPdf	00 28 05.3	-2.8
LZH				sPKP		00 28 22.4	
CD2	**Chengdu**	**169.69**	**49**	PKP	**PKPdf**	**00 27 22.2**	**-2.4**
NJ2	**Nanjing**	**170.71**	**326**	*e*P	**PKPdf**	**00 27 25.1**	**0.0**

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*IDC **08** 00:21:52.9±1.1, 5°.12N×127°.47E, h0^{km}, mb3.5/5, mb1 3.7/5, mb1mx3.5/25, mbtmp3.5/5, Error ellipse: s-maj=73.0km s-min=20.5km az=73.0*

ISC 08 00:22:02.8±1.1**, 4°.6N**±0°.1×**127°.0E**±0°.2**, h81**^{km}**, n9, σ3ˢ.13**/13**, mb3.4**/5**, 1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.92**	**319**	*e*P	**Pn**	**00 22 30.8**	**-2.9**
DDMP				*e*S	**Sn**	**00 22 54.7**	**-2.5**
KCP	**Kidapawan**	**3.01**	**322**⇓	*e*P	**Pn**	**00 22 48.0**	**-0.4**
KCP				*i* S	**Sn**	**00 23 27.6**	**+4.2**
SKMP	**Bagumbayan, Su**	**3.05**	**308**	*e*P	**Pn**	**00 22 48.4**	**-0.5**
SKMP				*e*S	**Sn**	**00 23 25.1**	**+0.7**
BUKP	**Musuan**	**3.73**	**330**	*e*P	**Pn**	**00 23 00.8**	**+2.6**
BUKP				*e*S	**Sn**	**00 23 46.6**	**+5.5**
WRA	**Warramunga Arr**	**25.48**	**164**	P	**P**	**00 27 25.1**	**+1.5**
	0.3nm,0.3s,baz=342,slow=10,SNR=8.5						
ASAR	**Alice Springs**	**28.93**	**167**	P	**P**	**00 27 58.3**	**+3.7**
	0.2nm,0.4s,baz=347,slow=7.9,SNR=2.6						
SONM	**Songino Array**	**46.52**	**341**	P	**P**	**00 30 21.4**	**-0.9**
	0.2nm,0.4s,baz=156,slow=9.4,SNR=3.2						
MKAR	**Makanchi Array**	**56.95**	**325**	P	**P**	**00 31 38.6**	**-1.3**
	0.3nm,0.4s,baz=119,slow=7.1,SNR=8.7						
ILAR	**Eielson Array**	**84.19**	**25**	P	**P**	**00 34 21.8**	**-3.2**
	0.3nm,0.6s,baz=244,slow=6.0,SNR=5.9						

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*MEX **08** 00:22:21.6±0.4, 13°.85N×92°.24W, h27^{km}±23^{km}, MD3.9*
*GCG **08** 00:22:22.9±0.3, 13°.98N×91°.95W, h23^{km}±3^{km}, MD3.7*

ISC 08 00:22:19.1±3.9**, 13°.9N**±0°.1×**92°.17W**±0°.07**, h26**^{km}±25^{km}**, n7, σ0ˢ.91**/14**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG3	**Santiaguito 3,**	**1.01**	**35**	*e*P	**Pn**	**00 22 38.4**	**+0.6**
STG3				*e*S	**Sb**	**00 22 50.6**	**-0.4**
THIG		**1.03**	**355**	*i* P	**Pn**	**00 22 38.4**	**+0.5**
THIG				*i* S	**Sn**	**00 22 49.9**	**-1.6**
FUG	**Fuego 3**	**1.40**	**66**	*e*P	**Pn**	**00 22 44.2**	**+1.0**
FUG				*e*S	**Sn**	**00 23 00.8**	**-0.2**
IXG	**Ixpaco**	**1.70**	**80**	*e*P	**Pn**	**00 22 46.5**	**-0.8**
IXG				*e*S	**Sn**	**00 23 08.6**	**+0.3**
PCIG		**2.08**	**331**	*i* P	**Pn**	**00 22 52.8**	**+0.4**
PCIG				*i* S	**Sn**	**00 23 16.9**	**-0.7**
CCIG	**Comitan**	**2.39**	**1**	*e*P	**Pn**	**00 22 58.2**	**+1.4**
CCIG				*i* S	**Sn**	**00 23 25.3**	**-0.1**
CMIG	**Matias Romero**	**4.13**	**321**	*i* P	**Pn**	**00 23 21.2**	**+0.6**
CMIG				*i* S	**Sn**	**00 24 07.7**	**-0.5**

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*JMA **08** 00:34:36.8±0.1, 39°.34N×143°.66E, h40^{km}, M3.5*
*IDC **08** 00:35:11.1±16.0, 38°.56N×140°.44E, h158^{km}±150^{km}, mb3.1/3, mb1 3.0/4, mb1mx2.8/42, mbtmp3.4/4, ML2.0/1, Error ellipse: s-maj=260.4km s-min=107.3km az=43.0*

ISC 08 00:34:37.2±3.3**, 39°.46N**±0°.06×**143°.53E**±0°.08**, h0**^{km}±18^{km}**, n20, σ2ˢ.50**/28**, mb3.5**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**1.33**	**276**	P	**Pn**	**00 35 01.2**	**-1.8**
MIYJ				S	**Sg**	**00 35 19.4**	**-0.5**
JTH	**Tanohata**	**1.37**	**291**	P	**Pn**	**00 35 02.6**	**-1.0**
JTH				*e*S	**Sg**	**00 35 21.1**	**-0.2**
OFUJ	**Ofunato**	**1.50**	**256**	P	**Pn**	**00 35 03.1**	**-2.1**
OFUJ				*e*S	**Sn**	**00 35 22.2**	**-3.3**
JOM	**Ohasama**	**1.73**	**271**	P	**Pn**	**00 35 07.3**	**-1.2**
JOM				*e*S	**Sn**	**00 35 29.3**	**-2.1**
JANG	**Nango**	**1.80**	**301**	P	**Pn**	**00 35 08.0**	**-1.5**
JANG				*e*S	**Sn**	**00 35 30.5**	**-2.5**
JMK	**Ichinoseki**	**1.87**	**255**	P	**Pn**	**00 35 08.5**	**-1.8**
JMK				*e*S	**Sn**	**00 35 32.1**	**-2.5**
JIO	**Ouri**	**1.98**	**240**	P	**Pn**	**00 35 09.6**	**-2.2**
JIO				*e*S	**Sn**	**00 35 33.0**	**-4.3**
JYK	**Kaneyama**	**2.52**	**259**	P	**Pn**	**00 35 18.3**	**-1.1**
JYK				*e*S	**Sn**	**00 35 49.3**	**-1.6**
JNBK	**Urakawa-nobuka**	**2.88**	**348**	P	**Pn**	**00 35 23.5**	**-0.8**
JNBK				*e*S	**Sn**	**00 35 58.5**	**-1.1**
JCH	**Churui**	**3.15**	**358**	P	**Pn**	**00 35 26.3**	**-1.8**
JCH				*e*S	**Sn**	**00 36 03.7**	**-2.7**
JFT	**Otama**	**3.17**	**233**	*e*S	**Sn**	**00 36 03.5**	**-3.3**
JAK	**Akkeshi**	**3.64**	**14**	P	**Pn**	**00 35 32.1**	**-2.6**
JAK				*e*S	**Sn**	**00 36 13.9**	**-4.5**
MJAR	**Matsushiro Arr**	**5.11**	**237**	P	**Pn**	**00 35 54.7**	**-0.3**
	0.3nm,0.3s,baz=36,slow=15,SNR=9.4						
MAT	**Matsushiro**	**5.12**	**237**	P	**Pn**	**00 35 54.5**	**-0.5**
MAT				S	**Sn**	**00 36 53.3**	**-1.5**
SONM	**Songino Array**	**27.93**	**300**	P	**P**	**00 40 33.5**	**+4.5**
	0.4nm,0.6s,baz=84,slow=10,SNR=3.6						
H11N2	**WAKE ISLAND Hy**	**28.13**	**128**	T	T	01 11 27.6	
	baz=309,slow=75						
H11N1	**WAKE ISLAND Hy**	**28.14**	**128**	T	T	01 11 33.0	
	baz=309						
H11N3	**WAKE ISLAND Hy**	**28.15**	**128**	T	T	01 11 31.4	
	baz=309,slow=75						
ZALV	**Zalesovo Beam**	**41.56**	**310**	P	P	00 42 32.4	+6.1
	0.6nm,0.5s,baz=87,slow=8.8,SNR=4.1						
MKAR	**Makanchi Array**	**44.29**	**300**	P	**P**	**00 42 51.1**	**+2.6**
	0.6nm,0.8s,baz=84,slow=9.7,SNR=6.8						

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*IDC **08** 00:44:04.3±5.0, 39°.55S×92°.28W, h0^{km}, mb3.9/7, mb1 4.2/7, mb1mx3.9/34, mbtmp3.9/7, MS3.7/10, Ms1 3.7/10, ms1mx3.5/22, Error ellipse: s-maj=133.5km s-min=28.4km az=10.0*
*NEIC **08** 00:44:08.4±2.4, 39°.0S±0°.1×91°.9W±0°.2, h10^{km}±2^{km}, mb4.4/8, Error ellipse: s-maj=25.4km s-min=20.6km az=235.0*

ISC 08 00:44:08.0±2.0**, 39°.1S**±0°.3×**92°.0W**±0°.2**, h10**^{km}**, n26, σ1ˢ.57**/15**, mb3.9**/6**, MS3.7**/8**, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO07	**Milladeo Hill,**	**14.37**	**112**	Pn	**Pn**	**00 47 31.1**	**-0.3**
GO05	**Huala**	**16.50**	**82**	Pn	**Pn**	**00 47 59.1**	**-0.4**
GO05				IAmb	IAmb	00 48 16.6	
	comp=Z,47nm,1.5s						
PLCA	**Paso Flores**	**16.51**	**103**	LR	LR	00 51 48.0	
	comp=Z,102nm,20.5s,baz=294,slow=28						
PLCA	**Paso Flores**	**16.51**	**103**		**Pn**	**00 47 59.2**	**-0.5**
ROC1	**El Roble**	**17.99**	**77**	Pn	**Pn**	**00 48 16.0**	**-2.4**
RPN	**Rapa Nui**	**18.78**	**304**	LR	LR	00 53 36.9	
	comp=Z,281nm,19.7s,baz=83,slow=30						
CFA	**Coronel Fontan**	**20.71**	**76**	P	**P**	**00 48 50.3**	**+1.8**
	comp=Z,4.7nm,0.7s,baz=240,slow=12,SNR=7.0						
CFA				LR	LR	00 55 29.3	
	comp=Z,102nm,18.8s,baz=252,slow=32						
USHA	**Ushuaia**	**22.33**	**143**	LR	LR	00 55 57.1	
	comp=Z,347nm,21.1s,baz=256,slow=32						
GO02	**Mina Guanaco**	**23.41**	**60**	P	**P**	**00 49 18.6**	**+1.1**
LVC	**Limon Verde**	**25.61**	**57**	P	**P**	**00 49 41.0**	**+3.1**
	comp=Z,5.0nm,0.7s,baz=241,slow=4.8,SNR=3.8						
LVC				LR	LR	00 57 02.8	
	comp=Z,218nm,21.6s,baz=220,slow=30						
LVC	**Limon Verde**	**25.61**	**57**	IAmb	IAmb	00 49 42.0	
	comp=Z,7.3nm,0.8s						
NNA	**Nana**	**30.15**	**31**	LR	LR	00 59 07.8	
	comp=Z,174nm,21.2s,baz=178,slow=30						
LPAZ	**La Paz**	**30.83**	**49**	P	**P**	**00 50 26.3**	**+1.4**
	comp=Z,2.0nm,0.8s,baz=226,slow=7.7,SNR=7.0						
LPAZ				LR	LR	01 00 17.0	
	comp=Z,85nm,19.5s,baz=234,slow=31						
LPAZ	**La Paz**	**30.83**	**49**	P	**P**	**00 50 26.6**	**+1.7**
LPAZ				IAmb	IAmb	00 50 28.3	
	comp=Z,8.9nm,1.4s						
CPUP	**Villa Florida**	**31.61**	**77**	P	**P**	**00 50 31.4**	**+0.4**
	comp=Z,1.2nm,0.9s,baz=242,slow=6.8,SNR=4.1						
CPUP				LR	LR	01 01 49.3	
	comp=Z,64nm,18.5s,baz=241,slow=33						
CPUP	**Villa Florida**	**31.61**	**77**	IAmb	IAmb	00 50 37.8	
	comp=Z,5.1nm,1.4s						
PAYG	**Puerto Ayora**	**38.26**	**3**	P	**P**	**00 51 27.0**	**-1.4**
SAML	**Samuel**	**39.56**	**48**	P	**P**	**00 51 38.3**	**-1.1**
BDFB	**Brasilia**	**44.92**	**71**	LR	LR	01 10 38.0	
	comp=Z,93nm,18.1s,baz=217,slow=35						
TXAR	**Lajitas Array**	**68.94**	**349**	P	**P**	**00 55 13.6**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=165,slow=7.5,SNR=2.4						
NVAR	**Mina Array Bea**	**80.85**	**339**	P	**P**	**00 56 22.5**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=171,slow=5.9,SNR=4.0						
PDAR	**Pinedale Array**	**83.03**	**347**	P	**P**	**00 56 33.0**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=148,slow=8.7,SNR=4.3						
STKA	**Stephens Creek**	**93.63**	**223**	LR	LR	01 32 59.0	
	comp=Z,141nm,19.3s,baz=206,slow=32						
H11S2	**WAKE ISLAND Hy**	**110.06**	**278**	T	T	03 01 30.7	
	baz=126,slow=75,SNR=15						
H11S1	**WAKE ISLAND Hy**	**110.08**	**278**	T	T	03 01 31.7	
	baz=126,slow=75,SNR=8.2						
H11S3	**WAKE ISLAND Hy**	**110.08**	**278**	T	T	03 01 27.8	
	baz=126,slow=75,SNR=10						

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*RSPR **08** 00:55:19.3, 19°.58N×67°.87W, h7^{km}±5^{km}, MD3.3/8*
*OSPL **08** 00:55:19.3±0.5, 19°.46N×67°.87W, h7^{km}±5^{km}, ML2.7*
*NEIC **08** 00:55:21.1±1.1, 19°.42N±0°.02×67°.79W±0°.04, h28^{km}±11^{km}, Error ellipse: s-maj=6.8km s-min=1.5km az=61.0*

ISC 08 00:55:18.3±2.5**, 19°.44N**±0°.09×**67°.80W**±0°.03**, h9**^{km}±18^{km}**, n40, σ0ˢ.65**/48**, 6C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCDR	**Punta Cana, DR**	**1.07**	**211**	*i* P	**Pb**	**00 55 38.0**	**-1.0**
PCDR				*e*S	**Sb**	**00 55 52.0**	**-1.1**
PCDR				IAML		00 55 58.8	
	comp=Z,182nm,0.6s						
PCDR	**Punta Cana, DR**	**1.07**	**211**⇑	*e*P	**Pb**	**00 55 38.7**	**-0.3**
PCDR	**Punta Cana, DR**	**1.07**	**211**		**Pb**	**00 55 38.7**	**-0.3**
PCDR					**Sb**	**00 55 52.2**	**-1.0**
AGPR	**Aguadilla, PR**	**1.17**	**146**	*i* P	**Pn**	**00 55 40.7**	**-0.2**
AGPR				*e*S	**Sg**	**00 55 56.9**	**+0.9**
AGPR				IAML		00 55 59.4	
	comp=Z,175nm,0.1s						
AGPR	**Aguadilla, PR**	**1.17**	**146**⇑	*e*P	**Pn**	**00 55 40.9**	**+0.1**
AGPR	**Aguadilla, PR**	**1.17**	**146**		**Pn**	**00 55 40.9**	**+0.1**
MPR	**Mayaguez**	**1.37**	**153**	*i* P	**Pn**	**00 55 43.9**	**+0.3**
MPR				*e*S	**Sb**	**00 56 01.5**	**-0.3**
MPR	**Mayaguez**	**1.37**	**153**	Pn	**Pb**	**00 55 44.7**	**+0.5**
LSP	**Las Mesas**	**1.43**	**152**⇓	*e*P	**Pn**	**00 55 44.6**	**+0.2**
LSP	**Las Mesas**	**1.43**	**152**	*e*S	**Sg**	**00 56 04.5**	**+0.1**
LSP	**Las Mesas**	**1.43**	**152**		**Pn**	**00 55 44.6**	**+0.2**
LSP					**Sg**	**00 56 04.5**	**+0.1**
AOPR	**Arecibo Observ**	**1.47**	**137**⇑	*e*P	**Pn**	**00 55 45.2**	**+0.2**
AOPR	**Arecibo Observ**	**1.47**	**137**	*e*S	**Sg**	**00 56 05.3**	**-0.4**
AOPR	**Arecibo Observ**	**1.47**	**137**		**Sg**	**00 56 05.3**	**-0.4**
AOPR	**Arecibo Observ**	**1.47**	**137**		**Pn**	**00 55 45.5**	**+0.5**
EMPR	**Esperanza - Ma**	**1.54**	**128**⇑	*e*P	**Pn**	**00 55 46.1**	**+0.2**
EMPR	**Esperanza - Ma**	**1.54**	**128**	*e*S	**Sg**	**00 56 07.0**	**-0.9**
EMPR	**Esperanza - Ma**	**1.54**	**128**		Pg	00 55 51.0	+3.1
EMPR					**Sg**	**00 56 08.3**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.57**	**155**⇓	*e*P	**Pn**	**00 55 47.1**	**+0.8**
CRPR	**Cabo Rojo, PR**	**1.57**	**155**	*e*S	**Sb**	**00 56 08.1**	**+0.6**
CRPR	**Cabo Rojo, PR**	**1.57**	**155**		**Pn**	**00 55 47.1**	**+0.8**
CRPR					**Sb**	**00 56 08.1**	**+0.6**
DR12	**Loma Pena Alta**	**1.63**	**247**		**Pn**	**00 55 48.0**	**+0.8**
MLPR	**Magueyes Islan**	**1.63**	**154**	*e*S	**Sb**	**00 56 09.9**	**+0.7**
MLPR	**Magueyes Islan**	**1.63**	**154**		**Pb**	**00 55 48.4**	**-0.2**
MLPR	**Magueyes Islan**	**1.63**	**154**		**Sb**	**00 56 09.9**	**+0.7**
GBPR	**Guanica, Bosqu**	**1.70**	**149**⇑	*e*P	**Pb**	**00 55 49.5**	**-0.3**
GBPR	**Guanica, Bosqu**	**1.70**	**149**		**Pb**	**00 55 49.5**	**-0.3**
OBIP	**Obispado Ponce**	**1.79**	**141**⇑	*e*P	**Pn**	**00 55 49.7**	**+0.3**
OBIP	**Obispado Ponce**	**1.79**	**141**	*e*S	**Sb**	**00 56 13.0**	**-0.9**
OBIP	**Obispado Ponce**	**1.79**	**141**		**Pn**	**00 55 49.7**	**+0.3**
OBIP					**Sb**	**00 56 13.0**	**-0.9**
GCPR	**Guaynabo City**	**1.98**	**124**⇓	*e*P	**Pn**	**00 55 51.8**	**-0.2**
GCPR	**Guaynabo City**	**1.98**	**124**	*e*S	**Sb**	**00 56 18.4**	**-0.9**
GCPR	**Guaynabo City**	**1.98**	**124**		**Pn**	**00 55 51.8**	**-0.2**
GCPR					**Sb**	**00 56 18.4**	**-0.9**
SJG	**San Juan**	**2.05**	**130**	Pn	**Pb**	**00 55 56.8**	**+1.1**
IGPR	**InterUniversit**	**2.18**	**132**	Pn	**Pb**	**00 55 57.7**	**-0.2**
SDD	**Santo Domingo**	**2.23**	**244**	Pn	**Pn**	**00 55 56.2**	**+0.8**
BANI	**BANI**	**2.64**	**247**	Pn	**Pn**	**00 56 02.7**	**+1.6**
CUPR	**Culebra, Puert**	**2.64**	**115**	Pn	**Pn**	**00 56 01.3**	**+0.2**
STVI	**Saint Thomas**	**2.91**	**111**	Pn	**Pn**	**00 56 05.3**	**+0.6**
SDDR	**Presa de Saban**	**3.33**	**263**	Pn	**Pn**	**00 56 10.3**	**-0.3**

IDC 08 00:56:53.4±2.2**, 6°.63S**×**129°.61E, h0**^{km}**, mb3.3**/1**, mb1 3.7**/4**, mb1mx3.4**/38**, mbtmp3.5**/4**, ML3.8**/3**, Error ellipse: s-maj=91.1km s-min=28.7km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.04	198	Pn	Pn	00 59 47.5	+1.1
	0.2nm,0.3s,baz=20,slow=13,SNR=20						
FITZ				Sn	Sn	01 01 48.8	-13
	1.0nm,0.3s,baz=69,slow=18,SNR=12						
WRA	Warramunga Arr	14.01	161	Pn	Pn	01 00 12.2	-1.1
	0.7nm,0.3s,baz=342,slow=12,SNR=4.7						
WRA				Sn	Sn	01 02 34.7	-15
	0.5nm,0.3s,baz=344,slow=21,SNR=5.4						
ASAR	Alice Springs	17.44	167	P	Pn	01 00 58.1	-0.2
	0.3nm,0.3s,baz=348,slow=9.4,SNR=9.0						
MKAR	Makanchi Array	67.70	327	P	P	01 07 52.6	0.0
	0.1nm,0.4s,baz=121,slow=7.6,SNR=5.0						

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*NEIC **08** 01:13:09.8±0.3, 2°.39N±0°.10×128°.2E±0°.1, h63^{km}±17^{km}, mb4.1/4, Error ellipse: s-maj=17.3km s-min=14.1km az=96.0*

*IDC **08** 01:13:10.4±4.3, 2°.62N×128°.54E, h80^{km}±47^{km}, mb3.5/5, mb1 3.7/6, mb1mx3.4/34, mbtmp3.9/6, ML4.3/1, MS3.9/1, Ms1 3.9/1, ms1mx2.6/38, Error ellipse: s-maj=65.4km s-min=20.8km az=71.0*

ISC 08 01:13:09.0±0.8**, 2°.33N**±0°.07×**128°.2E**±0°.1**, h35**^{km}**, n19, σ2ˢ.42**/12**, mb3.9**/5**, 1C, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.77	209		Pn	01 13 38.6	+1.4
SIJI	Sorong	4.40	136	P	Pn	01 14 14.9	+1.6
	16nm,0.3s,baz=328,slow=19,SNR=18						
SIJI				S	Sn	01 15 05.6	+2.2
	1.7nm,0.3s,baz=180,slow=20,SNR=2.4						
KCP	Kidapawan	5.60	326	⇑ *i*P	Pn	01 14 30.5	+0.6
KCP				*i* S	Sn	01 15 37.0	+3.8
FITZ	Fitzroy Crossi	20.46	187	P	P	01 17 45.5	+1.8
	1.0nm,0.5s,baz=37,slow=9.7,SNR=4.1						
FITZ	Fitzroy Crossi	20.46	187	IAmb	IAmb	01 17 58.6	
	comp=Z,26nm,1.6s						
WRA	Warramunga Arr	22.93	165	P	P	01 18 09.5	-0.7
	comp=Z,2.5nm,0.4s,baz=344,slow=10,SNR=58						
AS31	Alice Springs	26.42	168	P	P	01 18 40.6	-2.1
AS31				IAmb	IAmb	01 18 44.1	
	comp=Z,6.3nm,1.8s						
ASAR	Alice Springs	26.43	168	P	P	01 18 41.3	-1.4
	comp=Z,0.9nm,0.5s,baz=352,slow=8.2,SNR=9.7						
CTA	Charters Tower	28.45	142	LR	LR	01 31 26.0	
	comp=Z,239nm,19.3s,baz=240,slow=38						
STKA	Stephens Creek	36.31	161	P	P	01 20 08.5	-1.0
	comp=Z,1.0nm,0.3s,baz=344,slow=10,SNR=4.9						
STKA	Stephens Creek	36.31	161	IAmb	IAmb	01 21 05.7	
	comp=Z,4.6nm,1.8s						
H11S3	WAKE ISLAND Hy	40.95	64	T	T	02 04 06.0	
	baz=252,slow=75,SNR=21						
H11S2	WAKE ISLAND Hy	40.97	64	T	T	02 04 06.4	
	baz=252,slow=75,SNR=9.6						
H11S1	WAKE ISLAND Hy	40.97	64	T	T	02 04 07.8	
	baz=252,slow=75,SNR=8.5						
H11N1	WAKE ISLAND Hy	41.53	63	T	T	02 04 39.5	
	baz=250,slow=75,SNR=73						
H11N2	WAKE ISLAND Hy	41.54	63	T	T	02 04 40.9	
	baz=250,slow=75,SNR=18						
H11N3	WAKE ISLAND Hy	41.55	63	T	T	02 04 42.8	
	baz=250,slow=75,SNR=39						
MK31	Makanchi Array	59.55	325	P	P	01 23 07.3	-1.9
MKAR	Makanchi Array	59.55	325	P	P	01 23 05.4	-3.7
	comp=Z,0.4nm,0.6s,baz=114,slow=7.8,SNR=12						

IDC 08 01:29:41.0±4.6**, 5°.87S**×**149°.09E, h163**^{km}±33^{km}**, mb3.1**/4**, mb1 3.3**/5**, mb1mx3.1**/33**, mbtmp3.6**/5**, Error ellipse: s-maj=85.6km s-min=34.2km az=108.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.00	208	P	Pn	01 30 43.4	+1.8
	2.4nm,0.3s,baz=8.9,slow=5.2,SNR=4.8						
PMG				S	Sn	01 31 28.6	-0.3
	16nm,0.3s,baz=36,slow=14,SNR=23						
WRA	Warramunga Arr	20.03	224	P	P	01 34 01.7	+0.1
	2.4nm,0.7s,baz=51,slow=11,SNR=26						
ASAR	Alice Springs	22.95	218	P	P	01 34 32.0	+0.7
	0.9nm,0.4s,baz=52,slow=8.3,SNR=8.3						
FITZ	Fitzroy Crossi	25.91	240	P	P	01 34 58.2	0.0
	1.5nm,0.7s,baz=52,slow=10,SNR=5.5						
MKAR	Makanchi Array	78.73	320	P	P	01 41 25.1	-0.4
	0.1nm,0.4s,baz=94,slow=6.5,SNR=2.6						

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*ANF **08** 01:34:12.0±0.5, 36°.01N×97°.31W, h0^{km}, ML3.7/6, Error ellipse: s-maj=8.0km s-min=3.8km az=170.0*

*TUL **08** 01:34:12.9±2.6, 35°.89N±0°.03×97°.28W±0°.03, h5^{km}±5^{km}, ML3.1, Error ellipse: s-maj=4.6km s-min=3.7km az=177.0*

*NEIC **08** 01:34:14.1±5.6, 35°.81N±0°.03×97°.25W±0°.02, h2^{km}±5^{km}, Error ellipse: s-maj=4.3km s-min=2.7km az=192.0*

ISC 08 01:34:12.1±0.7**, 35°.93N**±0°.03×**97°.19W**±0°.03**, h4**^{km}**, n63, σ1ˢ.75**/84**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK005	Luther M Schoo	0.27	180	Pg	Pg	01 34 17.6	+0.3
ADOK	Arcadia Dam	0.31	208	Pg	Pg	01 34 17.8	-0.3
OK009	Oakdale Elemen	0.39	209	Pg	Pg	01 34 19.7	0.0
OKCFA	Oklahoma City	0.55	203	Pg	Pg	01 34 22.5	-0.2
OKCSW	OKLAHOMA CITY	0.56	201	Pg	Pg	01 34 22.3	-0.5
FNO	Franklin	0.69	194	Pg	Pg	01 34 25.4	0.0
W35A	Tecumseh	0.81	161	Pg	Pg	01 34 27.8	+0.1
T35A	Sooner Cattle	1.13	29	Pg	Pg	01 34 35.2	+1.5
TUL1	Leonard	1.14	90	Pg	Pg	01 34 34.7	+0.8
TUL1	Leonard	1.14	90	P	Pb	01 34 35.0	+0.7
	baz=268						
TUL1				S	Sn	01 34 51.8	+0.9
	baz=268						
X34A	Smith Ranch, M	1.42	202	Pn	Pn	01 34 38.0	-0.8
U32A	Winter Ranch,	1.53	288		Pn	01 34 39.6	-0.6
WMOK	Wichita Mounta	1.76	228		Pn	01 34 43.6	+0.2
WMOK	Wichita Mounta	1.76	228	P	Pn	01 34 43.5	+0.1
	baz=47						
WMOK				S	Sb	01 35 06.2	-1.2
	baz=47						
U38A	Gravette	2.33	76		Pb	01 34 54.0	-0.7
Z35A	Perchaven, San	2.59	181		Pn	01 34 54.7	0.0
HHAR	Hobbs	2.66	81		Pn	01 34 58.1	+2.4
R32A	Long Quarter,	2.77	334		Pn	01 34 58.4	+1.1
W39A	Magazine	2.87	104		Pn	01 35 00.2	+1.5
W39A	Magazine	2.87	104	P	Pn	01 35 00.9	+2.2
	baz=284						
Z38A	Mt. Pleasant	3.22	145	Pn	Pn	01 35 05.8	+2.3
MIAR	Mount Ida	3.26	114		Pn	01 35 06.0	+1.9
MIAR				Pg	Pg	01 35 14.9	+0.2
MIAR					LR	01 35 59.0	
MIAR	Mount Ida	3.26	114	P	Pn	01 35 06.6	+2.6
	baz=294						
CBKS	Cedar Bluff	3.52	326	Pn	Pn	01 35 07.7	0.0
CBKS				Pg	Pb	01 35 17.8	+2.8
CBKS					LR	01 36 04.3	
U40A	Yellville	3.54	82	Pn	Pn	01 35 09.8	+1.9
U40A				Sg	Sg	01 36 05.1	-0.6
S39A	Bolivar	3.57	59	Pn	Pn	01 35 10.5	+2.2
S39A				Sg	Sg	01 36 06.7	0.0
AMTX	Amarillo	3.81	255	Pn	Pn	01 35 10.7	-1.0
AMTX				Sg	Sb	01 36 08.7	+2.2
X40A	Basin Creek Fa	3.85	111	Pn	Pn	01 35 13.9	+1.8
X40A				Pg	Pg	01 35 23.9	-1.9
X40A					LR	01 36 15.3	
X40A	Basin Creek Fa	3.85	111	P	Pn	01 35 14.6	+2.6
	baz=292						
ABTX	Abilene, Hawle	3.87	212	Pn	Pn	01 35 12.5	+0.1
ABTX				Pg	Pb	01 35 22.3	+1.4
WHTX	Lake Whitney,	3.93	183	Pn	Pn	01 35 13.6	+0.4
WHAR	Wooly Hollow	4.04	98		Pn	01 35 17.4	+2.6
WHAR				Sg	Sg	01 36 21.2	-0.8
237A	Washetta, Mont	4.08	163	Pn	Pn	01 35 15.4	+0.2
W41B	Gary Mavity, V	4.10	99		Pn	01 35 17.9	+2.4
W41B				Sg	Sg	01 36 22.8	-1.0
W41B	Gary Mavity, V	4.10	99	P	Pn	01 35 17.7	+2.1
	baz=281						
FCAR	Ozark Folk Cen	4.11	89	Pn	Pn	01 35 17.3	+1.5
FCAR				Pg	Pg	01 35 30.5	-0.4
FCAR				Sg	Sg	01 36 23.7	-0.6
UALR	University of	4.13	105	Pn	Pn	01 35 18.4	+2.5
UALR				Pg	Pg	01 35 30.9	-0.3
UALR					LR	01 36 26.7	
MGMO	Mountain Grove	4.15	71	Pn	Pn	01 35 17.8	+1.6
MGMO				Sg	Sg	01 36 25.1	-0.3
LCAR	Lake Charles	4.90	87	Pn	Pn	01 35 27.7	+1.2
LCAR				Sg	Sg	01 36 48.2	-1.2
MSTX	Muleshoe	4.98	249	Pn	Pn	01 35 27.4	-0.3
MSTX				Pg	Pb	01 35 41.3	+1.4
MSTX					LR	01 36 47.6	
435B	Jarrell	5.14	184	Pn	Pn	01 35 27.6	-2.3
435B				Pg	Pg	01 35 48.2	-2.4
CCM	Cathedral Cave	5.21	64	Pn	Pn	01 35 32.3	+1.4
CCM				Sg	Sg	01 36 57.5	-2.0
KSCO	Kaye Shedlock'	5.31	307	Pg	Pg	01 35 51.3	-2.5
KSCO					LR	01 36 58.5	
HBAR	Harrisburg	5.33	92	Pn	Pn	01 35 34.0	+1.6
HBAR					LR	01 37 02.1	
PBMO	Poplar Bluff	5.52	79		Sg	01 37 07.9	-1.6
BGNE	Belgrade	5.53	352	S	Sn	01 36 37.7	-1.4
	baz=173						
LPAR	Lepanto	5.61	91		Lg	01 37 13.2	
GNAR	Gosnell	5.82	88		Lg	01 37 22.0	
JCT	Junction City	5.86	203	Pn	Pn	01 35 37.9	-1.9
JCT				Pg	Pb	01 35 58.2	+3.4
JCT					LR	01 37 15.8	
T25A	Trinidad	5.94	284	Pn	Pn	01 35 41.0	0.0
T25A				Pg	Pg	01 36 03.0	-2.9
T25A					LR	01 37 19.3	
T25A	Trinidad	5.94	284	P	Pn	01 35 41.0	0.0
	baz=101						
PARMO	Parma	6.05	81	Sg	Sg	01 37 23.9	-2.6
SLM	Saint Louis	6.17	62	Sg	Sg	01 37 27.7	-2.5
HENM	Henderson Moun	6.28	81	Sg	Sg	01 37 31.0	-2.9
OGNE	Ogallala	6.29	324	Pn	Pn	01 35 45.6	-0.1
OGNE					LR	01 37 29.9	
OXF	Oxford	6.53	100	Pn	Pn	01 35 50.5	+1.6
S44A	Carbondale	6.61	72	Pn	Pn	01 35 51.6	+1.6
S44A				Sg	Sg	01 37 40.5	-3.8
N41A	Harden Midland	6.90	44	Pn	Pn	01 35 55.5	+1.5
N41A					LR	01 37 50.9	
SDCO	Great Sand Dun	6.91	288		Pn	01 35 54.6	+0.2
SDCO					LR	01 37 48.6	
P43A	Skaggs, Pawnee	7.12	56	Pn	Pn	01 35 58.3	+1.3
P43A				Sg	Sg	01 37 55.2	-5.3
ISCO	Idaho Springs	7.70	303	Pn	Pn	01 36 03.5	-1.8
MNTX	Cornudas Mount	8.01	241	Pn	Pn	01 36 06.5	-2.9
MNTX				Sg	Sg	01 38 18.9	-10
L42A	Oliver, Polo	8.43	42	Pn	Pn	01 36 15.9	+0.8

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*IPEC **08** 01:43:55.2±1.8, 50°.34N×18°.84E, h0^{km}, ML2.0/4, Error ellipse: s-maj=17.9km s-min=10.8km az=165.0*

*PRU **08** 01:43:56.1±0.0, 50°.28N×18°.79E, h0^{km}*

*VIE **08** 01:43:57.8±1.1, 50°.31N×18°.67E, h0^{km}, mb1.7/2, ml2.5/4, Error ellipse: s-maj=14.8km s-min=7.5km az=130.0 23 km WNW of Katowice Suspected Mining induced.*

ISC 08 01:43:54.9±0.8**, 50°.27N**±0°.04×**18°.92E**±0°.02**, h0**^{km}**, n35, σ0ˢ.82**/62**, 4C-2D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.56	95	*e*Pg	Pb	01 44 07.3	-0.4
OJC				*e*Sg	Sb	01 44 15.4	-0.9
OKC	Ostrava-Krasne	0.66	229	*e*PG	Pg	01 44 07.8	+0.2
OKC				*e*SG	Sg	01 44 16.2	+0.1
	comp=Z,25nm,0.4s						
MORC	Moravsky Berou	1.02	242	⇓P	Pb	01 44 15.2	-0.3
MORC				⇑S	Sg	01 44 28.0	+0.4
MORC	Moravsky Berou	1.02	242	*e*Pg	Pg	01 44 14.7	+0.3
	baz=56						
MORC				*e*Sg	Sg	01 44 26.3	-1.3
	21nm,0.2s,baz=56						
MORC	Moravsky Berou	1.02	242	*e*PG	Pg	01 44 14.8	+0.3
MORC				*e*SG	Sg	01 44 26.4	-1.2
LANS	Liptovska Anna	1.17	162	*e*PG	Pn	01 44 18.6	-0.1
LANS				*e*SG	Sb	01 44 34.7	+0.8
LANS				*e*LG	Lg	01 44 39.4	
NIE	Niedzica	1.23	133	*e*Pg	Pn	01 44 19.8	+0.4
NIE				*e*Sg	Sn	01 44 37.3	+0.5
KRLC	Kraliky	1.39	263	*e*PG	Pg	01 44 20.7	-0.9
KRLC				*e*SG	Sg	01 44 38.4	-1.2
	comp=Z,85nm,0.7s						
JAVC	Velka Javorina	1.63	210	*e*Pn	Pn	01 44 25.5	+0.6
	baz=27						
JAVC				*e*Sg	Sn	01 44 47.3	+0.7
	10nm,0.5s,baz=27						
JAVC	Velka Javorina	1.63	210	*e*PN	Pn	01 44 25.5	+0.6
JAVC				*e*SG	Sn	01 44 47.4	+0.8
DPC	Dobruska-Polom	1.67	274	*e*PG	Pn	01 44 25.7	+0.2
DPC				*e*SG	Sn	01 44 47.7	+0.1
	comp=Z,20nm,0.5s						
STHS	Stebnicka Huta	1.73	119	*e*PN	Pg	01 44 28.2	+0.2
STHS				*e*SN	Sg	01 44 51.2	+0.8
STHS				*e*LG	Lg	01 44 57.8	
OSTC	Ostas	1.76	280	*e*PG	Pn	01 44 26.9	+0.3
OSTC				*e*SG	Sn	01 44 50.0	+0.3
KSP	Ksiaz	1.77	290	*e*Pg	Pg	01 44 29.4	+0.5
KSP				*e*Sg	Sg	01 44 53.0	+1.1
VYHS	Vyhne	1.78	182	*e*PN	Pn	01 44 27.1	+0.2
VYHS				*e*SN	Sn	01 44 50.3	+0.1
VRAC	Vranov	1.79	238	⇑P	Pb	01 44 28.1	-0.5
VRAC				⇓S	Sn	01 44 51.1	+0.6
VRAC	Vranov	1.79	238	*e*Pn	Pn	01 44 27.1	0.0
	baz=54						
VRAC				*e*Sg	Sn	01 44 51.1	+0.6
	15nm,0.3s,baz=54						
VRAC	Vranov	1.79	238	*e*PN	Pn	01 44 27.1	0.0
VRAC				*e*SG	Sn	01 44 51.2	+0.7
CHVC	Chvalec	1.86	281	*e*PG	Pn	01 44 28.3	+0.2
CHVC				*e*SG	Sn	01 44 52.8	+0.5
UPC	Upice	1.88	278	*e*PG	Pn	01 44 28.8	+0.5
UPC				*e*SG	Sb	01 44 54.6	+0.5
SMOL	Smolenice	2.01	210	*e*SN	Sn	01 44 55.8	-0.1
KRUC	Moravsky	2.04	235	*e*Pn	Pn	01 44 30.7	+0.2
	baz=50						
KRUC				*e*Sg	Sb	01 44 58.7	0.0
	8.0nm,0.4s,baz=50						
KRUC	Moravsky	2.04	235	*e*PN	Pn	01 44 30.7	+0.2
KRUC				*e*SG	Sb	01 44 58.7	0.0
CRVS	Cervenica-Dubn	2.15	129	*e*PN	Pg	01 44 35.9	-0.1
MODS	Modra-Piesok	2.18	210	*e*SN	Sn	01 44 58.8	-1.4
TREC	Trest	2.43	248	*e*SG	Sb	01 45 10.5	+0.5
PSZ	Piszkesteto	2.44	164	⇑P	Pg	01 44 42.8	+1.1
GOPC	GO Pecny, Ondr	2.69	264	*e*SG	Sb	01 45 18.1	+0.7
	comp=Z,9.5nm,0.6s						
PRU	Pruhonice	2.83	266	*e*SG	Sb	01 45 22.7	+1.1
CONA	Conrad Observa	3.09	222	*i* Pn	Pn	01 44 47.2	+2.2
	0.1nm,0.1s						
CONA				*e*Sn	Sn	01 45 22.3	-0.4
	1.7nm,0.3s						
TRPA	Tarpa	3.19	131	⇑P	Pg	01 44 55.1	-1.0
BRG	Berggiesshubel	3.23	283	PG	Pg	01 44 57.5	+0.7
BRG				SG	Sg	01 45 37.4	-1.3
	4.1nm,0.6s						
KHC	Kasperske Hory	3.65	254	*e*PN	Pn	01 44 53.0	+0.3
KHC				*e*PG	Pb	01 44 59.1	-1.2
KHC				*e*SG	Sg	01 45 49.1	-3.1
	comp=Z,9.3nm,0.5s						
CLL	Collm	3.90	288	*e*Sg	Sg	01 46 00.0	-0.1
MOA	Molln	3.90	233	Pn	Pn	01 44 56.6	+0.4
	0.1nm,0.1s						
MOA				Sn	Sn	01 45 43.4	+0.8
	0.8nm,0.2s						

GUC 08 01:46:41.9±0.7**, 16°.87S**×**69°.57W, h165**^{km}**, ML3.9, 11C-2D, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	IPOC Station P	1.46	178	⇑ *i*P	Pn	01 47 14.2	+1.3
PB16				*i* S	Sn	01 47 40.0	+3.3
PB12	IPOC Station P	1.88	203	⇑ *i*P	Pn	01 47 15.8	-0.9
PB12				*i* S	Sn	01 47 42.5	-1.2
PB12				IAML		01 47 43.5	
	comp=E,288nm,0.2s						
MNMC	Minye Minye	2.25	181	⇑ *i*P	Pn	01 47 21.2	+0.1
MNMC				*i* S	Sn	01 47 51.4	-0.1
MNMC				IAML		01 47 57.5	
	comp=E,641nm,0.3s						
PSGC	Pisagua	2.76	191	⇑ *i*P	Pn	01 47 25.6	-1.4
PSGC				*i* S	Sn	01 47 59.7	-2.5
GO01	Chusmiza	2.81	173	⇑ *i*P	Pn	01 47 28.2	+0.3
GO01				IAML		01 48 09.0	
	comp=E,486nm,0.1s						
PB11	IPOC Station P	2.88	182	⇑ *i*P	Pn	01 47 27.8	-0.7
PB11				*i* S	Sn	01 48 03.6	-1.2
PB11				IAML		01 48 06.5	
	comp=E,327nm,0.2s						
PB08	IPOC Station P	3.28	173	⇑ *i*P	Pn	01 47 33.6	-0.1
PB08				*i* S	Sn	01 48 13.5	-0.6
PATCX	Punta Patache	3.97	188	⇓ *i*P	Pn	01 47 40.6	-1.7
PATCX				*i* S	Sn	01 48 25.4	-4.0
PB01	IPOC Station P	4.15	179	⇑ *i*P	Pn	01 47 43.1	-1.5
PB01				*i* S	Sn	01 48 30.1	-3.5
PB02	IPOC Station P	4.44	184	⇑ *i*P	Pn	01 47 47.0	-1.3
PB07	IPOC Station P	4.84	183	⇑ *i*P	Pn	01 47 52.1	-1.6
PB03	IPOC Station P	5.15	182	⇓ *i*P	Pn	01 47 55.9	-1.9
PB06	IPOC Station P	5.81	180	⇑ *i*P	Pn	01 48 03.9	-2.4

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*LSZ **08** 02:12:33.8±0.3, 17°.40S×24°.62E, h10^{km}, MD2.5*

*EAF **08** 02:12:35.8±4.5, 17°.78S×27°.08E, h38^{km}±66^{km}, MD3.5*

ISC 08 02:12:28.9±1.9**, 17°.99S**±0°.05×**26°.3E**±0°.2**, h14**^{km}±13^{km}**, n16, σ1ˢ.03**/24**, Zambia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITZ	Itezhi-Tezhi	2.24	354	*i* P	Pg	02 13 15.2	+3.3
ITZ				*i*		02 13 15.4	
	baz=190,slow=6.5						
ITZ				*i* S	Sb	02 13 36.5	-0.5
ITZ	Itezhi-Tezhi	2.24	354	*i* P	Pb	02 13 09.5	+0.2
ITZ				*i*		02 13 09.8	
	baz=220,slow=1.1						
ITZ				*i* S	Sb	02 13 35.6	-1.4
ITZ	Itezhi-Tezhi	2.24	354	*i* P	Pb	02 13 09.4	+0.2
ITZ				*i*		02 13 09.7	
	baz=66,slow=1.1						
ITZ				*i* S	Sn	02 13 33.5	+0.2
ITZ	Itezhi-Tezhi	2.24	354	*i* P	Pg	02 13 10.4	-1.5
ITZ				*i*		02 13 10.5	
	baz=311,slow=7.4						
ITZ				*i* S	Sb	02 13 36.4	-0.5
ITZ	Itezhi-Tezhi	2.24	354	*i* P	Pb	02 13 09.4	+0.2
ITZ				*i*		02 13 10.3	
	baz=54,slow=3.1						
ITZ				*i* S	Sb	02 13 36.9	0.0
ITZ	Itezhi-Tezhi	2.24	354	*i* P	Pb	02 13 09.5	+0.2
ITZ				*i*		02 13 09.8	
	baz=220,slow=1.1						
ITZ				*i* S	Sb	02 13 35.6	-1.4
ITZ	Itezhi-Tezhi	2.24	354	*i* P	Pb	02 13 09.4	+0.1
ITZ				*i*		02 13 09.7	
	baz=66,slow=1.1						
ITZ				*i* S	Sn	02 13 33.5	+0.2
ITZ	Itezhi-Tezhi	2.24	354	*i* P	Pg	02 13 10.4	-1.5
ITZ				*i*		02 13 10.7	
	baz=238,slow=2.8						
ITZ				*i* S	Sn	02 13 34.4	+1.1
MATP	Matopo	3.23	139	*i* P	Pn	02 13 19.1	-0.2
MATP	Matopo	3.23	139	*i* P	Pn	02 13 19.1	-0.2
LSZ	Lusaka	3.28	35	*i* P	Pn	02 13 20.1	+0.1
LSZ	Lusaka	3.28	35	*i* P	Pn	02 13 20.1	+0.1
MSNA	Messina	5.60	141	*i* P	Pn	02 13 51.9	+0.1
MSNA				*i* S	Sn	02 14 45.0	-11
MSNA	Messina	5.60	141	*i* P	Pn	02 13 51.9	+0.1
MSNA				*i* S	Sn	02 14 45.0	-11
BOSA	Boshof	10.61	185	*i* P	Pn	02 15 09.2	+8.5
BOSA				*i* S	Sn	02 16 59.5	0.0
BOSA	Boshof	10.61	185	*i* P	Pn	02 15 09.2	+8.5
BOSA				*i* S	Sn	02 16 59.5	0.0

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*KRSC **08** 02:50:20.0±2.1, 48°.35N×155°.57E, h31^{km}±26^{km}, ML5.0*

*SKHL **08** 02:50:22.0±0.4, 48°.42N×154°.84E, h101^{km}±5^{km}, mb4.9/7, msh5.8/3*

*MOS **08** 02:50:22.7±0.8, 48°.73N×154°.17E, h87^{km}, mb4.4/11, Error ellipse: s-maj=10.0km s-min=3.5km az=70.9*

*IDC **08** 02:50:23.2±0.7, 48°.74N×154°.11E, h75^{km}±5^{km}, mb3.7/24, mb1 3.9/27, mb1mx3.8/43, mbtmp4.1/27, MS3.0/6, Ms1 3.0/6, ms1mx2.8/47, Error ellipse: s-maj=14.9km s-min=10.3km az=148.0*

*NEIC **08** 02:50:24.0±1.3, 48°.80N±0°.10×154°.2E±0°.2, h80^{km}±5^{km}, mb4.4/26, Error ellipse: s-maj=17.3km s-min=10.4km az=134.0*

ISC 08 02:50:24.4±0.5**, 48°.63N**±0°.06×**154°.46E**±0°.05**, h100**^{km}**, n223, σ1ˢ.42**/230**, mb4.1**/46**, 4C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.32	27	*e*P	Pn	02 50 59.8	-1.3
SKR	Severo-Kuril's	2.32	27	*e*P	Pn	02 50 59.7	-1.3
SKR				AMB	AMB	02 51 02.0	
	620nm,0.5s						
SKR				*e*S	Sn	02 51 28.2	-1.0
SKR				A	A	02 51 40.0	
	860nm,0.5s						
SKR				A	A	02 51 40.0	
	580nm,0.5s						
SKR	Severo-Kuril's	2.32	27	*i* PN	Pn	02 50 59.4	-1.7
ALID	Alaid	2.35	17	*e*P	Pn	02 51 00.4	-1.2
ALID	Alaid	2.35	17	PN	Pn	02 51 00.4	-1.2
PAU	Pauzhetka	3.22	27	*e*P	Pn	02 51 12.0	-1.0
PAU				*e*S	Sn	02 51 49.2	-1.3
PAU	Pauzhetka	3.22	27	*e*P	Pn	02 51 12.0	-1.0
PAU				*e*S	Sn	02 51 49.2	-1.3
PAU	Pauzhetka	3.22	27	PN	Pn	02 51 12.0	-1.0
PAU				S	Sn	02 51 49.2	-1.3
MIPR	Malaya Ipel'ka	3.94	21	*e*P	Pn	02 51 23.0	+0.4
MIPR	Malaya Ipel'ka	3.94	21	PN	Pn	02 51 23.0	+0.4
KDTR	Khodutka, Kamc	3.94	35	*e*P	Pn	02 51 20.8	-1.9
KDTR				*e*S	Sn	02 52 05.0	-2.8
KDTR	Khodutka, Kamc	3.94	35	PN	Pn	02 51 20.8	-1.9
KDTR				S	Sn	02 52 05.0	-2.8
ASAK	Asacha	4.35	29	*e*P	Pn	02 51 28.1	-0.2
ASAK	Asacha	4.35	29	PN	Pn	02 51 28.1	-0.2
MTVR	Mutnovka	4.53	30	*e*P	Pn	02 51 30.0	-0.8
MTVR				*e*S	Sn	02 52 21.2	-1.1
MTVR	Mutnovka	4.53	30	PN	Pn	02 51 30.0	-0.8
MTVR				S	Sn	02 52 21.2	-1.1
GRL	Gorelyy	4.55	29	*e*P	Pn	02 51 30.9	-0.2
GRL	Gorelyy	4.55	29	PN	Pn	02 51 30.9	-0.2
RUS	Russkaya	4.60	33	*e*P	Pn	02 51 30.1	-1.5
RUS	Russkaya	4.60	33	*e*P	Pn	02 51 30.1	-1.5
RUS	Russkaya	4.60	33	PN	Pn	02 51 30.1	-1.5
APC	Apacha	4.63	21	*e*P	Pn	02 51 32.6	+0.6
APC	Apacha	4.63	21	PN	Pn	02 51 32.6	+0.6
KRMR	Karymshinskiy	4.81	28	*e*P	Pn	02 51 34.3	-0.1
KRMR	Karymshinskiy	4.81	28	PN	Pn	02 51 34.3	-0.1
PEA0B	Petropavlovsk-	4.93	23	*i* PN	Pn	02 51 35.1	-1.0
PETK	Petropavlovsk-	4.93	23	P	Pn	02 51 36.5	+0.4
	17nm,0.3s,baz=182,slow=13,SNR=165						
PETK				LR	LR	02 53 16.0	
	comp=Z,126nm,18.1s,baz=239,slow=35						
PETK	Petropavlovsk-	4.93	23	PN	Pn	02 51 36.2	+0.1
PETK	Petropavlovsk-	4.93	23		Pn	02 51 36.2	+0.1
PET	Petropavlovsk	5.14	30	*e*P	Pn	02 51 38.4	-0.5
PET	Petropavlovsk	5.14	30	*e*P	Pn	02 51 38.3	-0.6
PET				AMB	AMB	02 51 42.5	
	120nm,0.7s						
PET				*e*S	Sn	02 52 35.5	-1.4
PET				A	A	02 52 52.0	
	250nm,0.7s						
PET				A	A	02 52 52.0	
	280nm,0.7s						
PET	Petropavlovsk	5.14	30	PN	Pn	02 51 38.4	-0.5
PET	Petropavlovsk	5.14	30		Pn	02 51 37.8	-1.1
DALK	Dalny	5.18	30	*e*P	Pn	02 51 38.5	-0.9
DALK	Dalny	5.18	30	PN	Pn	02 51 38.5	-0.9
UGLR	Uglovaya	5.35	29	*e*P	Pn	02 51 41.9	0.0
UGLR	Uglovaya	5.35	29	PN	Pn	02 51 41.9	0.0
KOK	Koryaka	5.36	28	*e*P	Pn	02 51 42.6	+0.6
KOK	Koryaka	5.36	28	*e*P	Pn	02 51 42.6	+0.6
KOK	Koryaka	5.36	28	PN	Pn	02 51 42.6	+0.6
AVH	Avacha	5.37	29	*e*P	Pn	02 51 42.7	+0.6
AVH	Avacha	5.37	29	PN	Pn	02 51 42.7	+0.6
SMAR	Somma	5.39	29	*e*P	Pn	02 51 43.0	+0.5
SMAR	Somma	5.39	29	PN	Pn	02 51 43.0	+0.5
KRER	Koryakskii	5.41	28	*e*P	Pn	02 51 43.1	+0.4
KRER	Koryakskii	5.41	28	PN	Pn	02 51 43.1	+0.4
KRX	Arik	5.42	28	*e*P	Pn	02 51 43.2	+0.3
KRX	Arik	5.42	28	PN	Pn	02 51 43.2	+0.3
NLC	Nalytchevo	5.50	32	*e*P	Pn	02 51 41.6	-2.1

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NLC   Nalytchevo          5.50  32   PN     Pn      02 51 41.6 -2.1
KUR   Kuril'sk            5.65 235  eP      Pn      02 51 45.3 -0.5
KUR                                  AMB    AMB     02 51 49.0
      180nm,0.8s
KUR                                 eS      Sn      02 52 47.5 -1.8
KUR                                  A      A       02 53 10.0
      180nm,0.6s
KUR                                  A      A       02 53 10.0
      270nm,0.6s
KUR   Kuril'sk            5.65 235  ePN     Pn      02 51 46.3 +0.5
KUR                                  pmax   pmax
      comp=Z,178nm,0.8s
KUR                                  pmax   pmax
      comp=E,38nm,0.6s
KUR                                  pmax   pmax
      comp=N,23nm,0.4s
SPN   Mys Shipunski       5.69  36  eP      Pn      02 51 44.5 -1.9
SPN   Mys Shipunski       5.69  36   PN     Pn      02 51 44.5 -1.9
KZV   Kizimen             7.43  27  eP      Pn      02 52 10.2 +0.1
KZV   Kizimen             7.43  27   PN     Pn      02 52 10.2 +0.1
YUK   Yuzh-Kuril'sk       7.52 236  i P     Pn      02 52 10.0 -1.2
YUK                                  AMB    AMB     02 52 12.6
      comp=N,50nm,0.3s
YUK                                 i S     Sn      02 53 32.7 -2.1
YUK   Yuzh-Kuril'sk       7.52 236d iPN     Pn      02 52 10.5 -0.7
YUK                                 i S     Sn      02 53 34.6 -0.2
YUK                                  pmax   pmax
      comp=N,73nm,0.2s
YUK                                  pmax   pmax
      comp=E,125nm,0.2s
YUK                                  pmax   pmax
      comp=Z,509nm,0.2s
YUK                                  pmax   pmax
      comp=Z,259nm,1.1s
GRPR  Tuman               7.59 236  eP      Pn      02 52 11.0 -1.2
GRPR                                 AMB    AMB     02 52 19.0
      comp=Z,20nm,0.3s
GRPR                                i S     Sn      02 53 35.0 -1.6
GRPR  Tuman               7.59 236  ePN     Pn      02 52 11.1 -1.2
GRPR                                i S     Sn      02 53 35.6 -1.0
GRPR                                 pmax   pmax
      comp=N,168nm,0.3s
GRPR                                 pmax   pmax
      comp=Z,223nm,0.3s
GRPR                                 pmax   pmax
      comp=E,70nm,0.1s
ESO   Esso                7.75  18  eP      Pn      02 52 16.7 +2.3
ESO   Esso                7.75  18   PN     Pn      02 52 16.7 +2.3
TYV   Tymovskoe           7.97 291  eP      Pn      02 52 19.4 +2.1
TYV                                  AMB    AMB     02 52 21.8
      comp=E,20nm,0.8s
KMNR  Kamenistaya         7.97  24  eP      Pn      02 52 19.4 +2.0
KMNR  Kamenistaya         7.97  24   PN     Pn      02 52 19.4 +2.0
NMR   Nemuro--Hokkai      8.04 232  i P     Pn      02 52 15.2 -3.1
NMR   Nemuro--Hokkai      8.04 232⇓ iPN     Pn      02 52 14.9 -3.4
YSS   Yuzh-Sakhalins      8.06 262  eP      Pn      02 52 20.0 +1.4
YSS                                  AMB    AMB     02 52 21.0
      comp=E,20nm,0.9s
YSS                                 eS      Sn      02 53 50.0 +2.0
YSS   Yuzh-Sakhalins      8.06 262  ePN     Pn      02 52 20.3 +1.7
YSS                                 eS      Sn      02 53 50.0 +2.0
YSS                                  pmax   pmax
      comp=Z,20nm,0.9s
KIRR  Kirishev            8.17  24  eP      Pn      02 52 21.2 +1.0
KIRR  Kirishev            8.17  24   PN     Pn      02 52 21.2 +1.0
SRDR  Sredinnyy           8.34  21  eP      Pn      02 52 23.3 +0.9
SRDR  Sredinnyy           8.34  21   PN     Pn      02 52 23.3 +0.9
LGNR  Loginova            8.38  25  eP      Pn      02 52 24.5 +1.4
LGNR  Loginova            8.38  25   PN     Pn      02 52 24.5 +1.4
CIRR  Tsirk               8.42  25  eP      Pn      02 52 23.6  0.0
CIRR  Tsirk               8.42  25   PN     Pn      02 52 23.6  0.0
KRSR  Krestovskiy         8.46  24  eP      Pn      02 52 24.5 +0.4
KRSR  Krestovskiy         8.46  24   PN     Pn      02 52 24.5 +0.4
OKH   Okha                8.77 309  eP      Pn      02 52 32.4 +4.3
KBTR  Krutoberegovo       9.14  31  eP      Pn      02 52 32.4 -0.8
KBTR  Krutoberegovo       9.14  31   PN     Pn      02 52 32.4 -0.8
JKA   Kamikawa-asahi      9.36 246  eP      Pn      02 52 37.9 +1.7
JKA   Kamikawa-asahi      9.36 246          Pn      02 52 37.9 +1.7
ASAJ  Asahikawa           9.36 246   P      Pn      02 52 37.9 +1.6
      comp=Z,9.0nm,0.3s,baz=74,slow=14,SNR=63
BKI   Bering              9.68  43  eP      Pn      02 52 38.2 -2.4
BKI   Bering              9.68  43   PN     Pn      02 52 38.2 -2.4
ERM   Erimo              10.34 234   PN     Pn      02 52 49.8 +0.2
ERM   Erimo              10.34 234   Pn     Pn      02 52 49.8 +0.2
MA2   Magadan            11.18 350   P      Pn      02 53 01.0 +0.2
      comp=Z,2.3nm,0.3s,baz=144,slow=23,SNR=8.4
MA2                                  LR     LR      02 57 22.4
      comp=Z,56nm,20.4s,baz=125,slow=38
MA2   Magadan            11.18 350  eP      Pn      02 52 58.3 -2.5
MA2   Magadan            11.18 350  i PN    Pn      02 52 58.3 -2.5
MA2                                  pmax   pmax
      comp=Z,9.0nm,1.1s
MA2   Magadan            11.18 350   Pn     Pn      02 52 58.6 -2.3
EKMR  Ekimchan           14.28 296  eP      P       02 53 43.0 -2.9
EKMR                                 AMB    AMB     02 53 50.8
      comp=Z,60nm,0.9s
SEY   Seymchan           14.38 356   P      P       02 53 45.3 -1.6
      comp=Z,0.4nm,0.3s,baz=158,slow=12,SNR=9.5
SEY   Seymchan           14.38 356  eP      Pn      02 53 41.0 -1.9
SEY   Seymchan           14.38 356  i P     Pn      02 53 41.0 -1.9
KLR   Kul'dur            14.93 281   P      P       02 53 52.7 -0.4
      comp=Z,1.7nm,0.3s,baz=94,slow=13,SNR=34
KLR                                  LR     LR      02 59 31.3
      comp=Z,55nm,18.7s,baz=269,slow=37
KLR   Kul'dur            14.93 281  eP      Pn      02 53 47.3 -2.8
KLR   Kul'dur            14.93 281  i P     Pn      02 53 47.3 -2.8
USRK  Ussuriysk Ar.      16.10 262   P      P       02 54 07.8 +1.7
      baz=66,slow=13,SNR=9.6
BMKR  Bomnak             16.96 301  eP      P       02 54 15.0 -0.5
BMKR                                 AMB    AMB     02 54 20.6
      comp=Z,10.0nm,0.4s
MJAR  Matsushiro Arr     16.96 231   P      Pn      02 54 13.5 -1.9
      comp=Z,0.1nm,0.3s,baz=26,slow=13,SNR=5.3
MJAR                                 LR     LR      03 00 44.7
      comp=Z,35nm,21.0s,baz=185,slow=37
MJAR  Matsushiro Arr     16.96 231   IAmb   IAmb    02 54 18.1
      comp=Z,2.7nm,0.9s
MAJO  Matsushiro         16.96 231  i P     P       02 54 14.1 -1.6
MAT   Matsushiro         16.96 231   P      P       02 54 14.6 -1.1
KROS  Kirovskiy          17.99 299  eP      Pn      02 54 29.2 +1.5
KROS                                 AMB    AMB     02 54 32.8
      comp=Z,7.0nm,0.5s
YAK   Yakutsk            19.29 323   P      Pn      02 54 41.0 -2.0
      comp=Z,0.3nm,0.3s,baz=172,slow=0.6,SNR=8.3
YAK   Yakutsk            19.29 323  eP      Pn      02 54 40.6 -2.4
YAK                                  pmax   pmax
      comp=Z,19nm,0.8s
YAK                                  pmax   pmax
      comp=N,5.0nm,0.9s
YAK                                  pmax   pmax
      comp=E,6.0nm,1.0s
YAK   Yakutsk            19.29 323   P      P       02 54 39.5 -1.5
BILL  Bilibino           20.36  13  eP      Pn      02 54 53.0 -2.4
BILL  Bilibino           20.36  13⇑ eP      Pn      02 54 53.6 -1.8
BILL                                eS      Sn      02 58 38.4 -6.2
BILL                                 pmax   pmax
      comp=Z,4.0nm,1.3s
KSRS  Korea Array        22.27 250   P      P       02 55 13.7 +0.7
      comp=Z,2.8nm,0.6s,baz=47,slow=9.6,SNR=6.6
KSRS                                 LR     LR      03 03 06.4
      comp=Z,59nm,18.8s,baz=17,slow=34
KS19  Wonju Array Si     22.27 250          PcP     02 59 06.5 +1.3
HIA   Hailar             22.70 285  i P     P       02 55 15.1 -2.4
HIA                                  pmax   pmax
      comp=Z,13nm,0.8s
TIXI  Tiksi              25.94 342   P      P       02 55 46.6 -0.3
      comp=Z,0.9nm,0.4s,baz=138,slow=6.9,SNR=5.2
TIXI  Tiksi              25.94 342  eP      P       02 55 47.5 +0.7
TIXI  Tiksi              25.94 342  i P     P       02 55 47.6 +0.7
TIXI                                 pmax   pmax
      comp=Z,1.0nm,0.8s
TIXI  Tiksi              25.94 342   IAmb   IAmb    02 55 51.5
      comp=Z,9.3nm,1.7s
H11N2 WAKE ISLAND Hy     30.53 156   T      T       03 28 41.6
      baz=349,slow=74,SNR=505
H11N1 WAKE ISLAND Hy     30.54 156   T      T       03 29 07.4
      baz=349,slow=74
H11N3 WAKE ISLAND Hy     30.54 156   T      T       03 28 57.7
      baz=349
HHC   Hu-ho-hao-te       31.11 272  eP      P       02 56 33.6 +0.4
SONM  Songino Array      31.61 287   P      P       02 56 37.6  0.0
      comp=Z,0.3nm,0.5s,baz=73,slow=11,SNR=4.3
SONM  Songino Array      31.61 287   P      P       02 56 37.7  0.0
SONM                                 pmax   pmax
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      comp=Z,1.0nm,1.4s
H11S1 WAKE ISLAND Hy     31.64 157   T      T       03 30 28.5
      baz=346
H11S3 WAKE ISLAND Hy     31.66 157   T      T       03 29 44.1
      baz=346,slow=74,SNR=3173
H11S2 WAKE ISLAND Hy     31.66 157   T      T       03 29 43.2
      baz=346,slow=74,SNR=1948
TLY   Talaya             32.17 295  eP      P       02 56 42.3  0.0
TLY   Talaya             32.17 295  i P     P       02 56 42.3  0.0
TLY                                  pmax   pmax
      comp=Z,2.0nm,0.8s
TLY   Talaya             32.17 295   P      P       02 56 41.9 -0.4
TLY                                  IAmb   IAmb    02 56 44.5
      comp=Z,3.3nm,0.7s
TOLK  Toolik Lake Re     33.67  33   P      P       02 56 56.6 +1.3
ILAR  Eielson Array      34.52  40   P      P       02 57 03.9 +1.3
      comp=Z,0.7nm,0.8s,baz=266,slow=9.7,SNR=7.9
ILAR                                 pP     pP      02 57 21.6 -3.4
      comp=Z,0.8nm,0.8s,baz=250,slow=8.3,SNR=5.0
FYU   Fort Yukon         35.19  37   P      P       02 57 10.2 +1.9
BMAR  Burnt Mountain     35.46  36   P      P       02 57 12.3 +1.6
BCAR  Beaver Creek A     36.89  43   P      P       02 57 25.4 +2.4
NRIK  Noril'sk           37.64 328   LR     LR      03 14 28.3
      comp=Z,57nm,20.1s,baz=310,slow=39
LZH   Lanzhou            38.76 270  eP      P       02 57 38.6 -0.5
LZH                                  pP     pwP     02 58 03.8 +0.1
LZH                                  sP     sP      02 58 12.9 +0.2
LZH                                  PP     PP      02 59 06.9 -2.7
INK   Inuvik             39.58  34   P      P       02 57 47.3 +2.0
      comp=Z,3.7nm,0.8s,baz=295,slow=6.6,SNR=13
INK                                  pP     pP      02 58 05.7 -2.5
      comp=Z,1.4nm,0.6s,baz=304,slow=10,SNR=3.0
INK   Inuvik             39.58  34   P      P       02 57 47.0 +1.7
GTA   Gaotai             39.60 278  eP      P       02 57 43.8 -2.2
GTA                                  pP     pP      02 58 02.5 -5.9
GTA                                  sP     pwP     02 58 10.7 -0.2
ZALV  Zalesovo Beam      42.27 305   P      P       02 58 06.4 -1.2
      comp=Z,1.0nm,0.4s,baz=61,slow=6.8,SNR=6.7
ZALV                                 PcP    PcP     03 00 00.9 +1.5
      comp=Z,1.0nm,0.6s,baz=177,slow=2.5,SNR=4.7
ZALV  Zalesovo Beam      42.27 305   P      P       02 58 06.2 -1.3
C36M  Paulatuk           42.74  31   P      P       02 58 12.3 +1.2
WMQ   Urumqi             45.11 290  eP      P       02 58 31.5 +1.0
WMQ                                  sP     sP      02 59 01.7 -2.9
MK31  Makanchi Array     46.90 296   P      P       02 58 43.8 -0.7
MK31                                 pmax   pmax
      comp=Z,5.0nm,0.7s
MK31  Makanchi Array     46.90 296   P      P       02 58 43.8 -0.7
MK31                                 IAmb   IAmb    02 58 45.0
      comp=Z,4.6nm,0.7s
MKAR  Makanchi Array     46.90 296   P      P       02 58 43.3 -1.2
      comp=Z,4.6nm,0.6s,baz=69,slow=7.9,SNR=68
MKAR  Makanchi Array     46.90 296  eP      P       02 58 43.8 -0.7
MKAR  Makanchi Array     46.90 296   P      P       02 58 43.8 -0.7
MKAR  Makanchi Array     46.90 296   P      P       02 58 43.8 -0.7
MAKZ  Makanchi           47.08 297   P      P       02 58 45.2 -0.7
MAKZ                                 pmax   pmax
      comp=Z,3.0nm,0.6s
MAKZ  Makanchi           47.08 297   P      P       02 58 45.2 -0.7
MAKZ                                 IAmb   IAmb    02 58 46.0
      comp=Z,2.9nm,0.6s
KURK  Kurchatov          47.10 303  eP      P       02 58 44.9 -1.0
KURK  Kurchatov          47.10 303ceP       P       02 58 44.9 -1.0
KURK                                 pmax   pmax
      comp=Z,4.0nm,0.8s
KURK  Kurchatov          47.10 303   P      P       02 58 45.5 -0.4
KURK                                 IAmb   IAmb    02 58 46.3
      comp=Z,4.4nm,0.7s
RES   Resolute Bay       48.76  19   P      P       02 58 59.6 +1.2
      comp=Z,1.1nm,0.6s,baz=298,slow=7.3,SNR=10
RES   Resolute Bay       48.76  19   IAmb   IAmb    02 59 28.6
      comp=Z,7.2nm,1.6s
YKA   Yellowknife Ar     48.88  38   P      P       02 59 01.3 +1.9
      comp=Z,1.5nm,0.9s,baz=298,slow=7.2,SNR=13
BRVK  Borovoye           50.42 309ceP       P       02 59 09.9 -1.3
BRVK                                 pmax   pmax
      comp=Z,4.0nm,0.6s
BRVK  Borovoye           50.42 309   P      P       02 59 10.6 -0.6
CHTO  Chiang Mai         53.44 256   P      P       02 59 35.5 +1.4
CHTO                                 pmax   pmax
      comp=Z,6.0nm,0.8s
CHTO  Chiang Mai         53.44 256   P      P       02 59 35.5 +1.4
CM31  Chiang Mai Arr     53.70 256   P      P       02 59 37.2 +1.2
CMAR  Chiang Mai Arr     53.70 256   P      P       02 59 37.7 +1.7
      comp=Z,3.6nm,0.6s,baz=35,slow=6.9,SNR=19
CMAR  Chiang Mai Arr     53.70 256   P      P       02 59 37.4 +1.3
PBKT  Sadao Pong         53.80 253   P      P       02 59 38.3 +1.6
AAK   Ala-Archa          53.82 296  eP      P       02 59 37.1 +0.3
AAK   Ala-Archa          53.82 296   P      P       02 59 37.1 +0.3
AAK                                  pmax   pmax
      comp=Z,2.0nm,0.8s
AAK   Ala-Archa          53.82 296   P      P       02 59 37.1 +0.3
AAK                                  IAmb   IAmb    02 59 37.9
      comp=Z,2.4nm,0.8s
KSH   Kashi              54.79 292   P      P       02 59 47.0 +3.2
KSH                                  pP     pwP     03 00 10.3 +0.7
KSH                                  S      S       03 07 16.9  0.0
KSH   Kashi              54.79 292   SS     SS      03 11 01.0 +0.2
KK31  Karatay Array      55.90 298   IAmb   IAmb    03 00 32.6
      comp=Z,7.4nm,1.9s
KKAR  Karatay Array      55.90 298   P      P       02 59 51.3 -0.3
KKAR  Karatay Array      55.90 298   P      P       02 59 51.2 -0.3
ARCES ARCESS Array B     56.38 341   P      P       02 59 54.6  0.0
      comp=Z,4.2nm,0.9s,baz=37,slow=9.1,SNR=3.6
BTK   Batken             57.59 295   P      P       03 00 04.0 +0.3
BTK                                  pmax   pmax
      comp=Z,11nm,1.5s
BTK   Batken             57.59 295   P      P       03 00 04.0 +0.3
ABKAR Akbulak array      57.92 310   P      P       03 00 04.8 -1.0
NVAR  Mina Array Bea     60.77  64   P      P       03 00 28.9 +3.1
      comp=Z,0.8nm,0.5s,baz=304,slow=7.6,SNR=7.4
NVAR  Mina Array Bea     60.77  64   P      P       03 00 28.6 +2.7
ELK   Elko               61.06  60   P      P       03 00 30.9 +3.1
      comp=Z,0.6nm,0.6s,baz=303,slow=5.1,SNR=4.4
FINES FINESS Array B     62.72 335   P      P       03 00 37.4 -0.9
      comp=Z,2.6nm,0.5s,baz=30,slow=6.8,SNR=20
PDAR  Pinedale Array     62.91  55   P      P       03 00 42.5 +2.4
      comp=Z,1.7nm,1.0s,baz=304,slow=2.4,SNR=8.7
PDAR                                 pP     pP      03 01 02.2 -2.7
      comp=Z,0.4nm,0.5s,baz=320,slow=2.0,SNR=3.6
PDAR  Pinedale Array     62.91  55   P      P       03 00 42.1 +1.9
GEYT  Alibeck            66.42 301   P      P       03 01 03.0 +0.3
      comp=Z,1.0nm,0.6s,baz=346,slow=3.1,SNR=3.6
GEYT  Alibeck            66.42 301   IAmb   IAmb    03 01 04.4
      comp=Z,1.0nm,0.6s
NB2   NORSAR Subarra     66.74 342   P      P       03 01 05.6 +1.2
      comp=Z,0.6nm,0.4s,baz=30,slow=6.5
NOA   NORSAR Array B     66.74 342   P      P       03 01 03.9 -0.4
      comp=Z,0.5nm,0.4s,baz=28,slow=6.6,SNR=6.1
ANMO  Albuquerque        70.08  60ceP       P       03 01 27.6 +1.7
ANMO                                 pmax   pmax
      comp=Z,2.0nm,1.7s
AKASG Malin Array Be     70.48 327   P      P       03 01 27.0 -0.7
      comp=Z,0.7nm,0.5s,baz=33,slow=6.1,SNR=3.9
WRA   Warramunga Arr     70.59 200   P      P       03 01 29.7 +1.1
      comp=Z,1.2nm,0.9s,baz=13,slow=6.0,SNR=4.6
WRA                                  pP     PcP     03 01 48.7 -0.4
      comp=Z,0.7nm,0.5s,baz=14,slow=6.3,SNR=3.6
SCHQ  Schefferville      71.22  24   P      P       03 01 33.4 +1.2
      comp=Z,2.4nm,0.6s,baz=2.4,slow=4.7,SNR=13
SCHQ  Schefferville      71.22  24   IAmb   IAmb    03 01 34.4
      comp=Z,7.0nm,1.1s
ASAR  Alice Springs      74.28 200   P      P       03 01 52.3 +1.8
      comp=Z,0.8nm,0.6s,baz=17,slow=5.3,SNR=13
ASAR  Alice Springs      74.28 200   P      P       03 01 52.8 +2.2
ASAR  Alice Springs      74.28 200   P      P       03 01 52.8 +2.2
TXAR  Lajitas Array      75.79  62   P      P       03 02 02.1 +2.6
      comp=Z,1.0nm,0.6s,baz=300,slow=4.7,SNR=16
TXAR                                 pP     pP      03 02 22.0 -2.9
      comp=Z,0.4nm,0.6s,baz=298,slow=4.0,SNR=3.4
VYHS  Vyhne              75.92 331  eP      P       03 02 00.3 +0.5
VYHS  Vyhne              75.92 331  eP      P       03 02 00.3 +0.5
KHC   Kasperske Hory     76.93 335  eP      P       03 02 06.5 +1.0
KHC                                 ex      x       03 02 10.2
KHC   Kasperske Hory     76.93 335  eP      P       03 02 06.5 +1.0
KHC                                 e               03 02 10.2
GERES GERESS Array B     77.16 335   P      P       03 02 06.9 +0.1
      comp=Z,0.4nm,0.5s,baz=33,slow=7.6,SNR=6.2
BRTR  Keskin Array B     77.63 317   P      P       03 02 10.0 +0.2
      comp=Z,0.7nm,0.6s,baz=10,slow=3.0,SNR=5.7
BRTR  Keskin Array B     77.63 317   P      P       03 02 10.0 +0.2
SOKA  Soboth             78.72 333  i P     P       03 02 16.3 +0.8
      comp=Z,0.5nm,0.3s
KBA   Koelnbreinsper     78.86 334  eP      P       03 02 17.7 +1.4
      comp=Z,4.6nm,0.5s,SNR=8.5
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OBKA  Obir               79.01 333  i P     P       03 02 18.3 +1.2
      comp=Z,1.5nm,0.5s
WATA  Walderalm          79.12 335  eP      P       03 02 18.9 +1.0
      comp=Z,2.3nm,0.4s,SNR=4.7
WTTA  Wattenberg         79.17 335  i P     P       03 02 19.4 +1.3
      comp=Z,5.6nm,0.5s
MYKA  Terra Mystica      79.17 334  i P     P       03 02 18.9 +0.9
      comp=Z,1.3nm,0.4s
RETA  Reutte             79.21 336  i P     P       03 02 19.2 +1.0
      comp=Z,0.8nm,0.4s
MOTA  Moosalm            79.25 336  eP      P       03 02 19.4 +1.0
      comp=Z,1.8nm,0.4s,SNR=4.3
SQTA  Sankt Quirin       79.33 335  i P     P       03 02 20.1 +1.2
      comp=Z,1.8nm,0.4s
ABTA  Abfaltersbach      79.40 334  i P     P       03 02 20.2 +1.0
      comp=Z,1.9nm,0.5s
DAVA  Damuels            79.63 336  eP      P       03 02 22.0 +1.5
      comp=Z,3.0nm,0.6s
FETA  Feichten           79.64 336  eP      P       03 02 21.2 +0.5
      comp=Z,1.5nm,0.5s
RAYN  Ar Rayn            84.31 299   P      P       03 02 46.0 +0.7
RAYN                                 pmax   pmax
      comp=Z,2.0nm,0.8s
RAYN  Ar Rayn            84.31 299   P      P       03 02 46.0 +0.7
TORD  Torodi Ar. Bea    113.92 331   PKiKP  PKiKP   03 08 52.2 +0.4
      comp=Z,0.2nm,0.4s,baz=28,slow=1.7,SNR=8.7
CPUP  Villa Florida     146.74  60   PKPbc  PKiKP   03 09 56.1 -1.0
      comp=Z,0.5nm,0.7s,baz=310,slow=6.0,SNR=4.0
PLCA  Paso Flores       147.44  93   PKPbc  PKPab   03 09 58.0 -0.4
      comp=Z,0.7nm,0.7s,baz=297,slow=4.5,SNR=3.3
PLCA  Paso Flores       147.44  93   PKP2   PKPab   03 09 58.0 -0.4
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*TEH **08** 03:09:14.6, 36°.67N×58°.61E, h10^{km}, ML3.7*
*THR **08** 03:09:15.0±0.3, 36°.69N×58°.65E, h18^{km}±5^{km}, ML3.6*
*IDC **08** 03:09:15.1±2.0, 36°.63N×58°.35E, h0^{km}, mb3.1/3, mb1 3.4/4, mb1mx3.2/40, mbtmp3.3/4, ML3.9/1, Error ellipse: s-maj=21.8km s-min=19.9km az=168.0*
*NNC **08** 03:09:15.7±1.2, 36°.97N×56°.73E, h52^{km}±12^{km}, mb3.4, Error ellipse: s-maj=14.5km s-min=9.4km az=141.0*
ISC 08 03:09:16.2±0.8**, 36°.74N**±0°.03×**58°.72E**±0°.04**, h23**^{km}±7^{km}**, n44,** σ1^{s}**89**/48**, 2C-5D, Northern and central Iran**

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Code  Station Name        Δ°   AZ°   Phase ID         Time       Res
                                     Op     ISC       h  m  s    ISC
IAKL  Akhelmad            0.14 168  ePg     Pb      03 09 18.7 -2.7
IKRD  Kardeh              0.17 282  ePg     Sg      03 09 29.0 +3.7
IKRD                                e               03 09 41.9
IPAY  Payeh               0.37 142  ePg     Pb      03 09 22.6 -1.8
ISFR  Sfrayin             0.66 299  ePg     Pb      03 09 26.9 -2.3
ISFR                                eSg     Sb      03 09 36.1 -2.0
IEMG  Emamgholi           0.68 355  ePg     Pb      03 09 29.4 -0.2
IEMG                                eSg     Sb      03 09 40.3 +1.6
IEMG                                e               03 09 41.9
IMOG  Moghan              0.81 141  ePg     Pb      03 09 30.7 -1.1
IMOG                                e               03 09 45.4
GEYT  Alibeck             1.28 338   Pg     Pn      03 09 39.4 +0.7
      182nm,0.3s,baz=171,slow=17,SNR=346
GEYT                                 Lg     Lg      03 09 57.7
      251nm,0.3s,baz=185,slow=32,SNR=46
GEYT                                 LR     LR      03 10 25.8
      comp=Z,82nm,18.7s,baz=185,slow=54
GYA0B ALIBECK ARRAY       1.28 338  ⇓P      Pb      03 09 39.5 -0.2
GYA0B                               ⇓S      Sb      03 09 57.8 +2.1
BJRD  Bojnurd             1.42 313  ePg     Pb      03 09 41.2 -0.8
BJRD                                eSg     Sb      03 10 00.2 +0.4
BJRD                                 IAML           03 10 04.3
      comp=E,849nm,0.3s
BJRD  Bojnurd             1.42 313  ePg     Pb      03 09 41.3 -0.8
IMND  Minoodasht          2.70 282  ePn     Pn      03 09 59.0 +0.8
IMND                                e               03 10 54.2
TNSJ  Nastanj             3.26 213  e               03 10 57.7
TNSJ                                ePn     Pn      03 10 06.3 +0.2
AFRZ  Afriz               3.32 176  ePn     Pn      03 10 07.8 +0.9
SHRT  Shahrakht           3.35 157  ePn     Pn      03 10 08.2 +1.0
SHRT  Shahrakht           3.35 157  ePn     Pn      03 10 08.2 +1.0
TABS  Tabas               3.35 203  ePn     Pn      03 10 07.6 +0.3
TABS                                eSg     Sb      03 10 57.2 +1.8
TABS  Tabas               3.35 203  ePn     Pn      03 10 07.6 +0.3
TKDS  Koohdasht(Taba      3.38 203  ePn     Pn      03 10 08.5 +0.7
TKDS                                e               03 11 23.3
IMON  Monand              3.62 167  ePn     Pn      03 10 12.3 +1.1
IMON                                e               03 10 24.7
ITEG  Tejag               3.84 180  ePn     Pn      03 10 15.2 +1.2
ITEG                                e               03 10 27.9
IGLO  Ghaloghah           3.94 268  ePn     Pn      03 10 17.2 +1.7
TPRV  Parvadeh(Tabas      4.06 205  ePn     Pn      03 10 17.5 +0.4
TPRV                                e               03 11 28.6
IANJ  Anjilo              4.09 253  ePn     Pn      03 10 18.2 +0.6
IKOO  Kooshah             4.31 177  ePn     Pn      03 10 21.5 +0.8
ISHM  Shahmirzad          4.48 260  ePn     Pn      03 10 23.4 +0.4
ISHM                                e               03 10 53.7
BSRN  Basiran             4.78 176  ePn     Pn      03 10 27.8 +0.9
BSRN  Basiran             4.78 176  ePn     Pn      03 10 27.8 +0.9
IALA  Alasht              4.81 264  ePn     Pn      03 10 28.9 +1.4
ILAS  Lasjerd             4.86 256  ePn     Pn      03 10 29.1 +1.0
ANAR  Anarak              5.42 231  ePn     Pn      03 10 35.0 -0.7
KRSH  Karshahi            6.05 245  ePn     Pn      03 10 44.7 +0.3
ISAD  Sadrabad            6.37 222  ePn     Pn      03 10 49.4 +0.5
IPIR  Pirpir              7.61 240  ePn     Pn      03 11 07.2 +1.2
KK31  Karatay Array      11.06  51   P      Pn      03 12 06.8  +14
      comp=E,0.3nm,0.4s,baz=253,slow=9.6,SNR=4.6
AB31  Akbulak array      12.54   4  ⇓P      Pn      03 12 10.9 -2.3
      comp=E,0.6nm,0.5s,baz=184,slow=14,SNR=16
AB31                                ⇓S      Sn      03 14 29.5 -2.4
      comp=E,2.1nm,0.7s,baz=192,slow=23,SNR=5.8
AKTO  Aktyubinsk         13.70 358   Pn     Pn      03 12 27.4 -1.6
      comp=E,0.4nm,0.3s,baz=168,slow=12,SNR=8.5
AKTO  Aktyubinsk         13.70 358  ⇓P      Pn      03 12 24.6 -4.3
      comp=E,2.8nm,0.9s
AKTO                                ⇑S      Sn      03 14 53.6 -6.7
      comp=E,5.0nm,0.6s
BRVK  Borovoye           18.22  23  ⇑P      Pn      03 13 27.8 +0.5
      comp=E,2.3nm,0.9s
BVAR  Borovoye Array     18.22  23   Pn     P       03 13 27.4 -0.1
      comp=E,0.4nm,0.3s,baz=198,slow=14,SNR=10
KURBB Kurchatov Arra     19.86  39   P      Pn      03 13 50.1 +3.0
      comp=E,0.6nm,0.8s,baz=236,slow=12,SNR=4.7
MK31  Makanchi Array     20.18  53   P      Pn      03 13 58.6 +7.6
      comp=E,0.4nm,0.6s,baz=235,slow=11,SNR=4.9
MKAR  Makanchi Array     20.18  53   P      Pn      03 13 55.5 +4.5
      comp=E,0.3nm,0.6s,baz=245,slow=10,SNR=4.3
FINES FINESS Array B     32.07 331   P      P       03 15 43.7 +2.6
      comp=E,6.6nm,1.1s,baz=141,slow=16,SNR=3.3
ESDC  Sonseca Array      48.45 294   P      P       03 17 57.3 +0.4
      comp=E,0.5nm,0.6s,baz=72,slow=8.1,SNR=4.7
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*BJI **08** 03:37:46.8±0.0, 4°.68S×134°.02E, h10^{km}, mB5.3/52, mb4.9/64, Ms5.1/57, Ms7 4.8/53*
*IDC **08** 03:37:51.5±0.4, 4°.11S×133°.69E, h0^{km}, mb4.8/24, mb1 4.8/25, mb1mx4.7/46, mbtmp4.8/25, ML4.4/1, MS4.7/32, Ms1 4.7/32, ms1mx4.5/52, Error ellipse: s-maj=21.1km s-min=11.3km az=76.0*
*NEIC **08** 03:37:52.5±1.5, 4°.22S±0°.06×133°.70E±0°.08, h10^{km}±2^{km}, mb5.2/91, Error ellipse: s-maj=12.2km s-min=8.1km az=66.0*
*MOS **08** 03:37:53.4±1.0, 4°.23S×133°.79E, h33^{km}, mb5.3/35, Error ellipse: s-maj=13.4km s-min=6.1km az=119.0*
*GCMT **08** 03:37:53.5±0.1, 4°.14S±0°.01×133°.72E±0°.01, h12^{km}, MW5.3/138, Moment Tensor Solution. s112,c178; s138,c248; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.07±.01; M$_{\theta\theta}$-0.16±.01; M$_{\phi\phi}$0.23±.01; M$_{r\theta}$0.08±.04; M$_{\theta\phi}$1.12±.01; M$_{\phi r}$0.10±.03; Best double couple: M$_0$1.14400×10^{17} NP1:φ$_s$85.00000°, δ86.00000°, λ4.00000°. NP2:φ$_s$355.00000°, δ86.00000°, λ176.00000°. Principal axes: T 1.1870, Plg6.0000°, Azm310.0000°; N -0.0860, Plg84.0000°, Azm130.0000°; P -1.1020, Plg0.0000°, Azm40.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **08** 03:37:54.2±1.0, 4°S±3°×13°4E±°, h25^{km}±9^{km}, M5.2/42, mB5.6/31, mb5.3/42, MLv5.6/7, Mw(mB)5.1/31, Mwp5.3/6*
ISC 08 03:37:53.6±0.3**, 4°.34S**±0°.04×**133°.76E**±0°.05**, h21**^{km}**, n333,** σ1^{s}**87**/324**, mb5.1**/95**, MS4.8**/47**, 10C-2D, Irian Jaya region**

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Code  Station Name        Δ°   AZ°   Phase ID         Time       Res
                                     Op     ISC       h  m  s    ISC
FAKI  Fak Fak             2.06 313   P      Pn      03 38 26.0 -1.0
FAKI  Fak Fak             2.06 313          Pn      03 38 25.5 -1.5
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BNDI	Bandanaira	3.84	267	P	Pn	03 38 53.0	+1.4
SIJI	Sorong	4.25	324	Pn	Pn	03 38 55.3	-1.8
	23nm,0.3s,baz=44,slow=22,SNR=27						
SIJI				Sn	Sn	03 39 40.2	-6.0
	63nm,0.3s,baz=160,slow=22,SNR=9.3						
SAUI	Saumlaki	4.37	214		Pn	03 39 01.4	+2.6
AAI	Ambon	5.59	276	P	Pn	03 39 17.0	+1.5
	4.4nm10µm836nm,0.8s						
GENI	Genyem	6.63	75	P	Pn	03 39 31.5	+1.6
	1.8nm7µm289nm,0.7s						
NLAI	Namlea	6.73	279	P	Pn	03 39 33.1	+1.8
	2.7nm5µm302nm,0.6s						
SANI	Sanana	8.08	286	P	Pn	03 39 48.1	-1.7
	3µm365nm,0.5s						
TNTI	Ternate	8.16	308		Pn	03 39 51.3	+0.4
KDU	Kakadu	8.39	189	P	Pn	03 39 55.3	+1.2
	baz=8.5,SNR=119						
MTN	Manton Dam	8.84	197	P	Pn	03 40 00.5	+0.3
	baz=8.9,SNR=376						
MTN	Manton Dam	8.84	197		Pn	03 40 00.5	+0.3
SOEI	Soe	10.85	240	P	Pn	03 40 29.5	+1.7
	5µm4µm577nm,0.8s						
SOEI	Soe	10.85	240		Pn	03 40 29.0	+1.2
KMSI	Cibinong	10.92	296	P	Pn	03 40 31.4	+2.7
BBSI	Bau Bau	11.20	264	P	Pn	03 40 36.4	+3.7
	1µm63nm,1.9s						
LUWI	Luwuk	11.45	286	P	Pn	03 40 33.0	-3.0
	5µm260nm,0.8s						
LUWI	Luwuk	11.45	286		Pn	03 40 34.2	-1.8
MMRI	Maumere	12.21	249	P	Pn	03 40 50.0	+3.5
	3µm19µm201nm,0.9s						
MMRI	Maumere	12.21	249	Pn	Pn	03 40 46.0	-0.5
KNRA	Kununurra	12.29	203	P	Pn	03 40 46.6	-0.9
	baz=12,SNR=449						
KNRA	Kununurra	12.29	203		Pn	03 40 46.5	-1.1
APSI	Ampana	12.56	285	P	Pn	03 40 51.4	+0.1
	2µm176nm,0.9s						
MRSI	Marisa	12.74	292	P	Pn	03 40 52.0	-1.6
	1µm126nm,1.2s						
EDFI	Ende, Flores	12.76	249	P	Pn	03 40 56.5	+2.4
	2µm899nm65nm,0.9s						
COEN	Coen	13.33	136	P	Pn	03 41 00.2	-1.5
	baz=13,SNR=13						
COEN	Coen	13.33	136		Pn	03 41 00.6	-1.1
BNSI	Bone	13.61	269	P	Pn	03 41 06.5	+0.9
	1µm69nm,0.7s						
BKSI	Bulukumba	13.62	265	P	Pn	03 41 07.3	+1.6
	1µm64nm,0.7s						
SPSI	Sidrap Palu	13.96	271	P	Pn	03 41 11.7	+1.4
	1µm73nm,0.7s						
DAV	Davao City (W)	13.96	324	⇑*e*P	Pn	03 41 08.2	-2.2
TTSI	Tana Toraja	13.97	275	P	Pn	03 41 10.9	+0.5
	2µm83nm,1.0s						
KCP	Kidapawan	14.21	322	⇓*e*P	Pn	03 41 12.6	-1.2
PMG	Port Moresby	14.22	111	Pn	Pn	03 41 13.7	-0.2
	4.5nm,0.3s,baz=305,slow=5.6,SNR=11						
PMG				LR	LR	03 48 26.2	
	comp=Z,11µm,18.8s,baz=338,slow=44						
MPSI	Mapaga	14.60	288	P	Pn	03 41 19.6	+0.4
	1µm77nm,0.8s						
WBSI	Waikabubak, Su	15.20	249	P	Pn	03 41 27.1	-0.1
	2µm158nm,0.8s						
WB0	Warramunga Arr	15.35	178		Pn	03 41 26.4	-2.8
WRAB	Tennant Creek	15.51	178	P	Pn	03 41 28.4	-2.8
WRAB				pmax	pmax		
	comp=Z,131nm,0.7s						
WRAB	Tennant Creek	15.51	178	Pn	Pn	03 41 28.4	-2.8
WRAB				IAmb	IAmb	03 41 46.6	
	comp=Z,131nm,0.7s						
WRA	Warramunga Arr	15.52	178	Pn	Pn	03 41 28.5	-2.9
	comp=Z,3.6nm,0.3s,baz=354,slow=13,SNR=66						
WRA				Sn	Sn	03 44 14.4	-8.4
	comp=Z,3.4nm,0.3s,baz=349,slow=24,SNR=5.4						
WRA				LR	LR	03 48 37.9	
	comp=Z,5µm,21.4s,baz=0.0,slow=41						
WRA	Warramunga Arr	15.52	178	P	Pn	03 41 27.5	-3.9
WRA				pmax	pmax		
	comp=Z,12nm,1.1s						
WRA	Warramunga Arr	15.52	178		Pn	03 41 27.4	-3.9
WB2	Warramunga Arr	15.52	178		Pn	03 41 27.9	-3.5
FITZ	Fitzroy Crossi	15.81	210	P	Pn	03 41 31.2	-3.9
	baz=16,SNR=294						
FITZ	Fitzroy Crossi	15.81	210	Pn	Pn	03 41 31.7	-3.4
	comp=Z,11nm,0.3s,baz=40,slow=12,SNR=122						
FITZ				Sn	Sn	03 44 20.5	-9.5
	comp=Z,13nm,0.3s,baz=211,slow=11,SNR=7.9						
FITZ				LR	LR	03 49 13.4	
	comp=Z,4µm,18.4s,baz=29,slow=43						
FITZ	Fitzroy Crossi	15.81	210	Pn	Pn	03 41 33.5	-1.6
FITZ				IAmb	IAmb	03 41 37.1	
	comp=Z,118nm,0.7s						
PLAI	Plampang	16.49	253	P	Pn	03 41 41.3	-2.5
	comp=Z,1µmcomp=Z,112nm,1.3s						
SMKI	Samarinda	16.98	283	P	Pn	03 41 46.6	-3.4
	comp=Z,410nm,0.7s						
QIS	Mount Isa	17.10	161	P	Pn	03 41 51.3	-0.2
	baz=17,SNR=12						
BKB	Balikpapan	17.11	280	Pn	Pn	03 41 51.2	-0.5
BKB				IAmb	IAmb	03 42 11.8	
	comp=Z,262nm,1.1s						
MTSU	Mount Surprise	17.17	144	P	Pn	03 41 52.6	+0.2
	baz=17,SNR=15						
KBKI	Kotabaru	17.58	273	P	Pn	03 41 55.0	-2.5
	comp=Z,1µmcomp=Z,22nm,0.9s						
KRVT	Keravat (AS076	18.22	91	LR	LR	03 49 40.7	
	comp=Z,4µm,19.4s,baz=266,slow=39						
GUIM	Jordan	18.56	323	*e*P	P	03 42 06.0	-3.2
SRBI	Singaraja	18.80	258	P	P	03 42 08.8	-3.2
	comp=Z,2µmcomp=Z,90nm,0.9s						
AS31	Alice Springs	19.22	180	P	P	03 42 17.4	+0.9
ASAR	Alice Springs	19.22	180	P	P	03 42 16.4	-0.1
	comp=Z,4.2nm,0.3s,baz=357,slow=12,SNR=209						
ASAR				S	Sn	03 45 44.0	-8.4
	comp=Z,1.1nm,0.3s,baz=352,slow=26,SNR=6.3						
ASAR				LR	LR	03 50 37.8	
	comp=Z,4µm,20.9s,baz=359,slow=39						
ASAR	Alice Springs	19.22	180	P	P	03 42 16.7	+0.2
ASAR	Alice Springs	19.22	180	P	P	03 42 16.7	+0.2
RCP	Roxas	19.22	325	⇑*e*P	Pn	03 42 19.1	+1.5
SPMM	Sapulut	19.47	297	P	Pn	03 42 22.0	+1.4
CTA	Charters Tower	19.83	143	P	Pn	03 42 25.9	+1.1
	comp=Z,163nm,0.7s,baz=324,slow=13,SNR=52						
CTA				LR	LR	03 51 03.7	
	comp=Z,10µm,20.1s,baz=326,slow=40						
KMMI	Kalianget	19.87	261	P	P	03 42 23.6	-0.1
	comp=Z,3µmcomp=Z,133nm,1.1s						
JAGI	Jajag, Banyuwa	19.91	257	P	P	03 42 25.1	+1.1
	comp=Z,53nm,0.6s						
JAGI	Jajag, Banyuwa	19.91	257	P	P	03 42 24.6	+0.6
JAGI				IAmb	IAmb	03 42 40.8	
	comp=Z,111nm,1.3s						
OTRP	Odiongan	20.28	325	*e*P	Pn	03 42 29.7	-0.4
KKM	Kota Kinabalu	20.33	300	P	P	03 42 28.8	+0.1
KKM				IAmb	IAmb	03 42 37.4	
	comp=Z,145nm,1.0s						
BATP	Bataraza	20.57	309	*e*P	Pn	03 42 32.9	-0.7
GUMO	Guam	20.95	32	LR	LR	03 49 20.9	
	comp=Z,1µm,20.6s,baz=206,slow=33						
ENPP	El Nido	21.02	317	*e*P	P	03 42 36.7	+0.6
WRKA	Warakurna	21.24	194	P	P	03 42 39.5	+1.1
	baz=21,SNR=296						
PGP	Puerto Galera	21.81	325	⇑*e*P	P	03 42 48.5	+3.9
PSA00	Pilbara Seismi	21.81	217	P	P	03 42 45.5	+0.9
PSA00	Pilbara Seismi	21.81	217	P	P	03 42 45.1	+0.5
PSA00				IAmb	IAmb	03 42 57.1	
	comp=Z,104nm,0.8s						
LUBP	Lubang	22.41	323	*e*P	P	03 42 50.0	-1.0
SBUM	Sibu	22.55	287	P	P	03 42 53.7	+1.1
SBUM				IAmb	IAmb	03 43 24.6	
	comp=Z,113nm,1.9s						
SMPP	San Manuel, Pa	24.12	328	*e*P	P	03 43 05.5	-2.6
KSM	Kuching	24.13	283	P	P	03 43 09.3	+1.0
KSM	Kuching	24.13	283	P	P	03 43 10.0	+1.6
CAUP	Cauayan	24.21	331	*e*P	P	03 43 08.8	-0.1
QLP	Quilpie	24.29	157	P	P	03 43 10.5	+0.9
	baz=24,SNR=80						
BOLP	Bolinao	24.72	327	*e*P	P	03 43 21.4	+7.7
KPJI	Karang Pucung	24.87	262	P	P	03 43 15.7	+0.6
	comp=Z,93nm,1.1s						
APYP	Conner	25.28	331	*e*P	P	03 43 19.2	+0.6
CISI	Cisompet, Garu	26.00	262	P	P	03 43 24.0	-1.4
	comp=Z,114nm,0.7s						
CISI	Cisompet, Garu	26.00	262	P	P	03 43 25.2	-0.2
LEM	Lembang	26.13	263	LR	LR	03 55 32.1	
	comp=Z,2µm,21.2s,baz=62,slow=41						
GIRL	Giralia	26.23	224	P	P	03 43 30.2	+2.9
	baz=26,SNR=6.8						
RMQ	Roma	26.29	148	P	P	03 43 29.7	+1.9
	baz=26,SNR=5.1						
HNR	Honiara	26.48	102	LR	LR	03 54 43.6	
	comp=Z,3µm,21.2s,baz=272,slow=38						
HNR	Honiara	26.48	102	P	P	03 43 30.3	+0.6
HNR				pmax	pmax		
	comp=Z,89nm,0.6s						
HNR	Honiara	26.48	102	P	P	03 43 30.3	+0.6
MEEK	Meekatharra	26.49	212	P	P	03 43 30.8	+1.2
	baz=27,SNR=6.5						
FORT	Forrest	26.84	191	P	P	03 43 34.5	+1.8
	baz=27,SNR=13						
FORT	Forrest	26.84	191	P	P	03 43 34.6	+1.8
STKA	Stephens Creek	28.37	166	P	P	03 43 47.9	+1.5
	baz=28,SNR=30						
STKA	Stephens Creek	28.37	166	P	P	03 43 47.9	+1.5
	comp=Z,20nm,0.8s,baz=351,slow=8.4,SNR=26						
STKA				LR	LR	03 55 27.2	
	comp=Z,3µm,18.7s,baz=340,slow=37						
STKA	Stephens Creek	28.37	166	P	P	03 43 47.1	+0.7
STKA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
STKA	Stephens Creek	28.37	166	P	P	03 43 47.1	+0.7
BBOO	Buckleboo	28.41	176	P	P	03 43 47.7	+0.9
	baz=29,SNR=26						
BBOO	Buckleboo	28.41	176	P	P	03 43 47.9	+1.2
BBOO				IAmb	IAmb	03 44 01.5	
	comp=Z,46nm,0.9s						
KMBL	Kambalda	29.11	201	P	P	03 43 55.1	+2.0
	baz=29,SNR=10						
CMSA	Cobar Meteorol	29.29	159	P	P	03 43 56.5	+1.9
	baz=29,SNR=13						
HTT	Hallett	29.34	171	P	P	03 43 57.7	+2.6
	baz=30,SNR=7.8						
MDSI	Maura Dua	29.49	269	P	P	03 43 57.2	+0.6
	comp=Z,24nm,1.6s						
MORW	Morawa	29.79	212	P	P	03 43 59.6	+0.5
	baz=30,SNR=3.7						
MORW	Morawa	29.79	212	P	P	03 44 00.4	+1.4
MORW				IAmb	IAmb	03 44 17.4	
	comp=Z,82nm,1.5s						
BLDU	Ballidu	30.69	210	P	P	03 44 08.5	+1.5
	baz=31,SNR=8.2						
ARMA	Armidale	30.94	149	P	P	03 44 10.8	+1.4
	baz=31,SNR=19						
ARMA	Armidale	30.94	149	P	P	03 44 10.4	+1.0
ARMA				IAmb	IAmb	03 44 15.3	
	comp=Z,17nm,0.7s						
KLBR	Kellerberrin	31.00	207	P	P	03 44 12.5	+2.7
	baz=31,SNR=5.4						
JCJ	Chichijima	32.29	14	LR	LR	03 54 39.4	
	comp=Z,857nm,21.9s,baz=170,slow=31						
NWAO	Narrogin (SRO)	32.36	207	P	P	03 44 24.4	+2.7
	comp=Z,11nm,0.8s,baz=54,slow=7.4,SNR=3.8						
NWAO	Narrogin (SRO)	32.36	207	IAmb	IAmb	03 44 30.7	
	comp=Z,83nm,1.5s						
YNG	Young	32.77	157	P	P	03 44 27.0	+1.8
	baz=33,SNR=5.5						
QIZ	Qiongzhong	33.07	315	P	P	03 44 27.2	-0.9
QIZ				S	S	03 49 47.5	+1.4
QIZ				LR	LR		
	comp=Z,590nm,14.3s						
QIZ				LR	LR		
	comp=Z,1µm,12.5s						
QIZ				LR	LR		
	comp=Z,2µm,14.0s						
IPM	Ipoh	33.85	285	IAmb	IAmb	03 44 37.1	
	comp=Z,17nm,0.8s						
KULM	Kulim	34.42	286	P	P	03 44 40.0	+0.1
TOO	Toolangi	34.78	164	P	P	03 44 45.8	+3.1
	baz=35,SNR=7.8						
TOO	Toolangi	34.78	164	P	P	03 44 44.3	+1.6
TOO				pmax	pmax		
	comp=Z,51nm,1.1s						
TOO	Toolangi	34.78	164	P	P	03 44 44.3	+1.6
TOO				IAmb	IAmb	03 44 55.9	
	comp=Z,51nm,1.1s						
RPSI	Rantau Prapat	35.50	281	P	P	03 44 48.6	-0.6
PSI	Prapat	35.52	281	P	P	03 44 49.1	-0.4
	comp=Z,4.4nm,0.6s,baz=127,slow=2.1,SNR=5.8						
PSI	Prapat	35.52	281	P	P	03 44 48.6	-1.0
PSI				pmax	pmax		
	comp=Z,19nm,1.0s						
DZM	Mont Dzumac	36.24	122	*e*P	P	03 44 55.2	-0.4
	comp=Z,112nm,1.7s						
DZM				*e*S	S	03 50 31.9	-3.3
	comp=Z,1µm,29.4s						
DZM				*e*LR	LR	03 54 44.0	
	comp=Z,4µm,25.4s						
DZM	Mont Dzumac	36.24	122	P	P	03 45 00.8	+5.2
DZM				IAmb	IAmb	03 45 18.9	
	comp=Z,68nm,1.4s						
SSE	Sheshan	37.22	342	P	P	03 45 04.6	+0.9
SSE				S	S	03 50 54.2	+4.6
SSE				pmax	pmax		
	comp=Z,11nm,0.6s						
SSE				pmax	pmax		
	comp=Z,78nm,3.5s						
SSE				LR	LR		
	comp=Z,520nm,14.7s						
SSE				LR	LR		
	comp=Z,850nm,14.8s						
JNU	Nakatsue	37.35	356	P	P	03 45 03.2	-1.6
	comp=Z,11nm,0.8s,baz=74,slow=3.8,SNR=7.4						
JNU				LR	LR	03 58 56.3	
	comp=Z,2µm,20.7s,baz=175,slow=34						
JNU	Nakatsue	37.35	356	P	P	03 45 03.3	-1.5
JHJ	Hachijo jima 2	37.69	8	LR	LR	03 57 38.8	
	comp=Z,1µm,21.7s,baz=148,slow=32						
NJ2	Nanjing	38.87	340	*e*P	P	03 45 20.8	+3.3
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,1µm,16.8s						
NJ2				LR	LR		
	comp=Z,2µm,16.3s						
NJ2				LR	LR		
	comp=Z,1µm,21.3s						
WHN	Wuhan	39.34	333	P	P	03 45 23.0	+1.5
WHN				LR	LR		
	comp=Z,2µm,10.0s						
WHN				LR	LR		
	comp=Z,2µm,13.3s						
WHN				LR	LR		
	comp=Z,3µm,24.0s						
GYA	Guiyang	40.31	321	⇑*i*P	P	03 45 28.8	-1.1
GYA				PP	PnPn	03 47 06.7	+0.1
GYA				S	S	03 51 36.2	-0.5
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA				pmax	pmax		
	comp=Z,140nm,3.5s						
GYA				LR	LR		
	comp=Z,690nm,15.4s						
GYA				LR	LR		
	comp=Z,430nm,14.1s						
GYA				LR	LR		
	comp=Z,830nm,16.3s						
MJAR	Matsushiro Arr	40.88	5	P	P	03 45 32.0	-2.3
	comp=Z,3.2nm,0.7s,baz=185,slow=8.8,SNR=6.5						
MJAR				PcP	PcP	03 47 35.8	+1.0
	comp=Z,2.9nm,0.8s,baz=199,slow=4.9,SNR=4.7						
MJAR				LR	LR	04 03 09.2	
	comp=Z,1µm,18.2s,baz=175,slow=37						
MJAR	Matsushiro Arr	40.88	5	P	P	03 45 32.0	-2.3
MJAR						03 47 35.8	
MJAR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TJN	Taejon	40.94	352	*i* P	P	03 45 32.4	-2.3
CMAR	Chiang Mai Arr	41.11	304	P	P	03 45 36.2	-0.2
	comp=Z,8.5nm,0.7s,baz=131,slow=6.9,SNR=49						
CM31	Chiang Mai Arr	41.11	304	P	P	03 45 37.4	+1.0
	SNR=13						
CM31	Chiang Mai Arr	41.11	304	P	P	03 45 35.7	-0.7
CHTO	Chiang Mai	41.29	305	P	P	03 45 37.5	-0.4
CHTO				pmax	pmax		
	comp=Z,79nm,1.6s						
CHTO	Chiang Mai	41.29	305	P	P	03 45 37.5	-0.4
CHTO				IAmb	IAmb	03 45 45.2	
	comp=Z,78nm,1.6s						
ENH	Enshi	41.52	328	P	P	03 45 39.2	-0.4
ENH				IAmb	IAmb	03 45 59.3	
	comp=Z,27nm,0.9s						
KSRS	Korea Array	41.93	353	P	P	03 45 41.5	-1.3
	comp=Z,1.3nm,0.7s,baz=171,slow=9.9,SNR=5.2						
KSRS				LR	LR	04 03 11.0	
	comp=Z,2µm,19.2s,baz=176,slow=36						
KMI	Kunming	42.02	316	P	P	03 45 45.3	+1.3
KMI				pP	pP	03 45 47.3	-3.0
KMI				sP	sP	03 45 49.8	-3.3
KMI				S	S	03 52 00.8	-1.5
KMI				sS	sS	03 52 16.8	+3.7
KMI				SS	SS	03 55 05.4	-4.4
KMI				pmax	pmax		
	comp=Z,12nm,0.7s						
KMI				pmax	pmax		
	comp=Z,230nm,4.6s						
KMI				LR	LR		
	comp=Z,1µm,18.9s						
KMI				LR	LR		
	comp=Z,800nm,19.7s						
KMI				LR	LR		
	comp=Z,1µm,24.7s						
KMI	Kunming	42.02	316	P	P	03 45 42.9	-1.1
KMI				pmax	pmax		
	comp=Z,58nm,1.5s						
KMI	Kunming	42.02	316	P	P	03 45 42.9	-1.1
KMI				IAmb	IAmb	03 45 50.7	
	comp=Z,58nm,1.5s						
TIA	Tai'an	43.24	340	P	P	03 45 56.9	+3.4
TIA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
XAN	Xi'an	44.80	330	P	P	03 46 05.3	-0.8
XAN				pP	pP	03 46 10.6	-1.9
XAN				S	S	03 52 39.6	-2.8
XAN				pmax	pmax		
	comp=Z,13nm,0.8s						
XAN				LR	LR		
	comp=Z,560nm,13.0s						
XAN				LR	LR		
	comp=Z,310nm,11.9s						
XAN				LR	LR		
	comp=Z,570nm,16.3s						
XAN	Xi'an	44.80	330	P	P	03 46 04.5	-1.6
XAN				pmax	pmax		
	comp=Z,95nm,1.7s						
XAN	Xi'an	44.80	330	P	P	03 46 05.5	-0.6
XAN				IAmb	IAmb	03 46 11.5	
	comp=Z,94nm,1.7s						
XAN	Xi'an	44.80	330	P	P	03 46 04.5	-1.6
XAN				IAmb	IAmb	03 46 11.5	
	comp=Z,94nm,1.7s						
CD2	Chengdu	45.26	323	P	P	03 46 09.3	-0.6
CD2				sP	pP	03 46 15.3	-1.0
CD2				PcP	PcP	03 47 50.2	+0.5
CD2				S	S	03 52 45.6	-3.7
CD2				pmax	pmax		
	comp=Z,40nm,1.2s						
CD2				pmax	pmax		
	comp=Z,410nm,7.3s						
CD2				LR	LR		
	comp=Z,1µm,16.6s						
CD2				LR	LR		
	comp=Z,1µm,22.6s						
CD2				LR	LR		
	comp=Z,2µm,23.8s						
MSVF	Nonsavu	45.33	111	*i* P	P	03 46 05.1	-5.6
MSVF				pmax	pmax		
	comp=Z,11nm,1.2s						
TIY	Taiyuan	46.30	336	*e*P	P	03 46 19.4	+1.4
BJT	Baijiatuau	47.01	342	P	P	03 46 22.9	-0.5
BJT				pmax	pmax		
	comp=Z,35nm,1.3s						
BJT	Baijiatuau	47.01	342	P	P	03 46 22.9	-0.5
BJT				IAmb	IAmb	03 46 36.8	
	comp=Z,35nm,1.3s						
BJI	Beijing	47.03	342	P	P	03 46 22.5	-1.0
BJI				S	S	03 53 11.2	-3.0
BJI				pmax	pmax		
	comp=Z,8.0nm,1.5s						
BJI				pmax	pmax		
	comp=Z,180nm,3.7s						
BJI				LR	LR		
	comp=Z,520nm,23.7s						
BJI				LR	LR		
	comp=Z,1µm,20.8s						
BJI				LR	LR		
	comp=Z,620nm,24.6s						
USRK	Ussuriysk Ar.	48.34	358	P	P	03 46 32.7	-0.9
	comp=Z,7.2nm,0.7s,baz=198,slow=7.4,SNR=11						
USRK				LR	LR	04 04 23.7	
	comp=Z,1µm,21.9s,baz=175,slow=33						
USA0B	Ussuriysk Arra	48.34	358	*i* P	P	03 46 31.1	-2.6
USA0B	Ussuriysk Arra	48.34	358	P	P	03 46 33.0	-0.6
USA0B				IAmb	IAmb	03 47 02.1	
	comp=Z,12nm,0.8s						
MDJ	Mudanjiang	48.88	356	P	P	03 46 38.0	+0.2
MDJ				PP	PP	03 48 26.0	-5.3
MDJ				S	S	03 53 47.2	+6.9
MDJ				pmax	pmax		
	comp=Z,13nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,310nm,5.5s						
MDJ				LR	LR		
	comp=Z,690nm,9.4s						
MDJ				LR	LR		
	comp=Z,1µm,10.2s						
MDJ				LR	LR		
	comp=Z,1µm,16.3s						
MDJ	Mudanjiang	48.88	356	P	P	03 46 37.1	-0.7
MDJ				IAmb	IAmb	03 47 06.3	
	comp=Z,27nm,1.2s						
LZH	Lanzhou	49.00	328	⇑P	P	03 46 38.8	-0.3
LZH				pP	pP	03 46 44.2	-1.3
LZH				S	S	03 53 44.4	+1.7
LZH				sS	pS	03 53 51.4	+0.9
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				pmax	pmax		
	comp=Z,150nm,4.9s						
LZH				LR	LR		
	comp=Z,930nm,16.3s						
LZH				LR	LR		
	comp=Z,580nm,14.6s						
LZH				LR	LR		
	comp=Z,870nm,16.8s						
HHC	Hu-ho-hao-te	49.35	338	*e*P	P	03 46 42.2	+0.6
HHC				S	S	03 53 46.9	-0.4
HHC				pmax	pmax		
	comp=Z,150nm,1.0s						
HHC				pmax	pmax		
	comp=Z,500nm,4.8s						
HHC				LR	LR		
	comp=Z,440nm,15.9s						
HHC				LR	LR		
	comp=Z,370nm,14.6s						
HHC				LR	LR		
	comp=Z,430nm,15.1s						
SHL	Shillong	50.33	308	P	P	03 46 49.5	+0.1
	SNR=16						
SHL	Shillong	50.33	308	P	P	03 46 48.4	-1.0
SHL				pmax	pmax		
	comp=Z,55nm,0.9s						
SHL	Shillong	50.33	308	P	P	03 46 48.4	-1.0
LBZ	Lake Benmore	51.12	147	P	P	03 46 57.0	+2.1
LBZ				IAmb	IAmb	03 46 59.7	
	comp=Z,88nm,1.6s						
LBZ				PcP	PcP	03 48 08.5	-2.0
RPZ	Rata Peaks	51.18	146	LR	LR	04 07 59.4	
	comp=Z,3µm,20.9s,baz=308,slow=35						
LSA	Lhasa	53.02	312	P	P	03 47 10.9	+1.1
LSA				pmax	pmax		
	comp=Z,76nm,0.7s						
LSA	Lhasa	53.02	312	P	P	03 47 09.9	0.0
LSA				pmax	pmax		
	comp=Z,20nm,0.7s						
LSA	Lhasa	53.02	312	P	P	03 47 09.9	0.0
LSA				IAmb	IAmb	03 47 13.7	
	comp=Z,20nm,0.7s						
KLR	Kul'dur	53.38	358	P	P	03 47 11.2	-0.3
	comp=Z,7.7nm,0.7s,baz=194,slow=3.4,SNR=19						
KLR	Kul'dur	53.38	358	*i* P	P	03 47 08.1	-3.4
KLR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GTA	Gaotai	53.60	327	⇑P	P	03 47 13.9	+0.3
GTA				pP	pP	03 47 19.6	-0.4
GTA				sP	sP	03 47 22.2	-0.6
GTA				S	S	03 54 46.7	+0.6
GTA				sS	pS	03 54 55.6	+1.5
GTA				SS	SKiKP	03 58 33.3	+5.2
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						

GTA				pmax	pmax		
	comp=Z,120nm,7.3s						
GTA				LR	LR		
	comp=Z,680nm,17.8s						
GTA				LR	LR		
	comp=Z,600nm,18.1s						
GTA				LR	LR		
	comp=Z,620nm,19.4s						
TAPN	**Taplejung**	**54.46**	**308**	eP	**P**	**03 47 20.1**	**-0.1**
	comp=Z,46nm,0.8s						
ODAN	**Odare**	**54.48**	**307**	eP	**P**	**03 47 20.1**	**-0.2**
	comp=Z,63nm,0.8s						
HIA	**Hailar**	**54.76**	**349**	i P	**P**	**03 47 20.6**	**-1.1**
HIA				pmax	pmax		
	comp=Z,33nm,1.0s						
RAMN	**Ramite**	**55.15**	**307**	eP	**P**	**03 47 25.0**	**-0.2**
	comp=Z,66nm,0.6s						
JIRN	**Jiri**	**55.80**	**308**	eP	**P**	**03 47 29.9**	**-0.1**
	comp=Z,46nm,0.7s						
GUN	**Gumba**	**56.16**	**308**	eP	**P**	**03 47 32.4**	**-0.1**
	comp=Z,59nm,0.7s						
PKI	**Pulchoki**	**56.38**	**307**	eP	**P**	**03 47 33.8**	**-0.3**
	comp=Z,44nm,1.1s						
PKIN	**Phulchoki**	**56.39**	**307**	eP	**P**	**03 47 33.8**	**-0.3**
	comp=Z,13nm,0.6s						
KKN	**Kakani**	**56.58**	**307**	eP	**P**	**03 47 35.1**	**-0.3**
	comp=Z,34nm,0.7s						
DMN	**Daman**	**56.63**	**307**	eP	**P**	**03 47 35.9**	**+0.1**
	comp=Z,85nm,1.1s						
ULN	**Ulaanbaatar**	**57.02**	**339**	P	**P**	**03 47 37.8**	**-0.3**
ULN				pmax	pmax		
	comp=Z,66nm,1.8s						
ULN	**Ulaanbaatar**	**57.02**	**339**	P	**P**	**03 47 37.8**	**-0.3**
ULN				IAmb	IAmb	03 47 52.6	
	comp=Z,66nm,1.8s						
GKN	**Gorkha**	**57.18**	**307**	eP	**P**	**03 47 39.7**	**+0.1**
	comp=Z,71nm,0.6s						
SONM	**Songino Array**	**57.24**	**338**	P	**P**	**03 47 39.5**	**0.0**
	comp=Z,2.1nm,0.6s,baz=156,slow=8.4,SNR=15						
SONM				LR	LR	04 13 56.0	
	comp=Z,634nm,19.4s,baz=152,slow=38						
SONM	**Songino Array**	**57.24**	**338**	P	**P**	**03 47 38.9**	**-0.7**
SONM				pmax	pmax		
	comp=Z,14nm,1.5s						
SONM	**Songino Array**	**57.24**	**338**	P	**P**	**03 47 38.9**	**-0.7**
DANN	**Dangsing**	**58.03**	**307**	eP	**P**	**03 47 45.2**	**-0.5**
	comp=Z,93nm,0.9s						
ZEA	**Zeya**	**58.12**	**355**	eP	**P**	**03 47 45.8**	**+0.3**
ZEA				pmax	pmax		
	comp=Z,28nm,1.2s						
HYB	**Hyderabad**	**58.60**	**293**	i P	**P**	**03 47 49.5**	**-0.1**
ZAK	**Zakamensk**	**60.50**	**338**	eP	**P**	**03 48 02.1**	**0.0**
ZAK				pmax	pmax		
	comp=Z,12nm,1.5s						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
PETK	**Petropavlovsk-**	**60.69**	**16**	P	**P**	**03 48 03.5**	**+0.2**
	comp=Z,6.2nm,0.7s,baz=201,slow=7.3,SNR=5.6						
PETK				LR	LR	04 13 56.2	
	comp=Z,308nm,19.5s,baz=230,slow=36						
TLY	**Talaya**	**61.43**	**339**	LR	LR	04 12 32.4	
	comp=Z,146nm,21.4s,baz=132,slow=34						
TLY	**Talaya**	**61.43**	**339**	i P	**P**	**03 48 07.1**	**-1.2**
TLY				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TLY	**Talaya**	**61.43**	**339**	P	**P**	**03 48 08.5**	**+0.2**
IRK	**Irkutsk**	**61.67**	**340**	eP	**P**	**03 48 10.9**	**+0.9**
IRK				pmax	pmax		
	comp=Z,58nm,2.2s						
MOY	**Mondy**	**62.39**	**338**	eP	**P**	**03 48 15.6**	**+0.7**
MOY				pmax	pmax		
	comp=Z,72nm,3.3s						
WMQ	**Urumqi**	**63.32**	**324**	eP	**P**	**03 48 22.7**	**+1.5**
WMQ				pP	pP	03 48 28.4	+0.6
WMQ				sP	sP	03 48 33.0	+2.5
WMQ				pmax	pmax		
	comp=Z,16nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,190nm,6.9s						
WMQ				LR	LR		
	comp=Z,410nm,21.5s						
WMQ				LR	LR		
	comp=Z,270nm,9.1s						
WMQ				LR	LR		
	comp=Z,510nm,29.3s						
BOD	**Bodaibo**	**63.97**	**348**	eP	**P**	**03 48 25.2**	**+0.1**
BOD				pmax	pmax		
	comp=Z,34nm,1.5s						
YAK	**Yakutsk**	**66.25**	**358**	P	**P**	**03 48 40.0**	**+0.2**
	comp=Z,18nm,0.4s,baz=189,slow=2.0,SNR=12						
YAK	**Yakutsk**	**66.25**	**358**	eP	**P**	**03 48 39.7**	**-0.1**
YAK				e		03 49 05.3	
YAK				eS	**S**	**03 57 29.0**	**+1.3**
YAK				e*SS	**sS**	**03 57 46.5**	**+7.6**
YAK				e		03 58 30.1	
YAK				eSS	**SS**	**04 01 44.9**	**+0.7**
YAK				pmax	pmax		
	comp=Z,38nm,0.8s						
YAK				pmax	pmax		
	comp=N,15nm,1.3s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,121nm,5.2s						
YAK				pmax	pmax		
	comp=N,414nm,5.3s						
YAK				pmax	pmax		
	comp=E,246nm,4.8s						
YAK				smax	smax		
	comp=N,134nm,4.8s						
YAK				smax	smax		
	comp=E,167nm,3.5s						
YAK				MLR	MLR		
	comp=Z,627nm,22.0s						
YAK				MLR	MLR		
	comp=N,463nm,22.0s						
YAK				MLR	MLR		
	comp=E,94nm,15.0s						
YAK	**Yakutsk**	**66.25**	**358**	P	**P**	**03 48 39.0**	**-0.8**
MK31	**Makanchi Array**	**68.15**	**325**	eP	**P**	**03 48 51.8**	**-0.5**
MK31	**Makanchi Array**	**68.15**	**325**	P	**P**	**03 48 52.2**	**-0.1**
MK31				IAmb	IAmb	03 49 00.2	
	comp=Z,23nm,1.4s						
MKAR	**Makanchi Array**	**68.15**	**325**	P	**P**	**03 48 51.9**	**-0.3**
	comp=Z,5.7nm,0.5s,baz=115,slow=7.8,SNR=87						
MKAR				LR	LR	04 21 14.8	
	comp=Z,485nm,18.6s,baz=114,slow=38						
MKAR	**Makanchi Array**	**68.15**	**325**	ceP	**P**	**03 48 52.0**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MAKZ	**Makanchi**	**68.34**	**325**	P	**P**	**03 48 53.3**	**-0.1**
MAKZ	**Makanchi**	**68.34**	**325**	P	**P**	**03 48 53.3**	**-0.1**
MAKZ				IAmb	IAmb	03 49 13.0	
	comp=Z,15nm,0.8s						
NIL	**Nilore**	**68.40**	**309**	P	**P**	**03 48 54.4**	**+0.2**
NIL				pmax	pmax		
	comp=Z,22nm,0.7s						
NIL	**Nilore**	**68.40**	**309**	P	**P**	**03 48 54.4**	**+0.2**
SEY	**Seymchan**	**68.56**	**9**	P	**P**	**03 48 54.8**	**+0.4**
	comp=Z,6.1nm,0.7s,baz=172,slow=4.2,SNR=16						
SEY	**Seymchan**	**68.56**	**9**	eP	**P**	**03 48 51.7**	**-2.8**
KSH	**Kashi**	**68.68**	**315**	P	**P**	**03 48 57.8**	**+1.9**
KSH				sP	sP	03 49 04.8	-0.4
KSH				PcS		03 53 27.3	
KSH				S	**S**	**03 58 00.8**	**+2.7**
KSH				ScS	**SKKSac**	**03 58 55.1**	**+0.7**
KSH				pmax	pmax		
	comp=Z,46nm,1.1s						
KSH				pmax	pmax		
	comp=Z,380nm,6.4s						
KSH				LR	LR		
	comp=Z,930nm,18.3s						
KSH				LR	LR		
	comp=Z,730nm,15.4s						
KSH				LR	LR		
	comp=Z,620nm,14.7s						
KZA	**Kyzart**	**70.27**	**318**	P	**P**	**03 49 07.5**	**+1.5**
	SNR=25						
KBK	**Karagaybulak**	**70.72**	**318**	P	**P**	**03 49 09.8**	**+1.3**
	SNR=9.9						
UCH	**Uchtor**	**70.83**	**317**	P	**P**	**03 49 10.6**	**+1.1**
	SNR=17						
ZALV	**Zalesovo Beam**	**70.94**	**332**	P	**P**	**03 49 08.6**	**-0.7**
	comp=Z,3.3nm,0.7s,baz=109,slow=5.3,SNR=14						
ZALV				LR	LR	04 22 57.5	
	comp=Z,142nm,19.2s,baz=118,slow=38						
ZALV	**Zalesovo Beam**	**70.94**	**332**	i P	**P**	**03 49 08.8**	**-0.5**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CHMS	**Chumysh**	**70.99**	**318**	i P	**P**	**03 49 10.0**	**+0.1**
CHMS				pmax	pmax		
	comp=Z,13nm,1.3s						
AAK	**Ala-Archa**	**71.01**	**318**	P	**P**	**03 49 11.6**	**+1.4**
	SNR=5.7						
AAK	**Ala-Archa**	**71.01**	**318**	P	**P**	**03 49 10.5**	**+0.3**
AAK				pmax	pmax		
	comp=Z,13nm,1.1s						
AAK	**Ala-Archa**	**71.01**	**318**	P	**P**	**03 49 10.5**	**+0.3**
USP	**Ospenovka**	**71.27**	**318**	P	**P**	**03 49 12.7**	**+1.1**
	SNR=29						
AML	**Almayashu**	**71.34**	**317**	P	**P**	**03 49 13.6**	**+1.1**
	SNR=32						
EKS2	**Erkin-Say**	**71.50**	**318**	P	**P**	**03 49 14.6**	**+1.5**
	SNR=20						
KBL	**Kabul**	**71.99**	**308**	P	**P**	**03 49 16.4**	**+0.1**
KBL				pmax	pmax		
	comp=Z,15nm,1.0s						
KBL	**Kabul**	**71.99**	**308**	P	**P**	**03 49 16.4**	**+0.1**
KBL				IAmb	IAmb	03 49 23.0	
	comp=Z,15nm,1.0s						
KURK	**Kurchatov**	**72.28**	**327**	P	**P**	**03 49 17.2**	**-0.2**
KURK	**Kurchatov**	**72.28**	**327**	P	**P**	**03 49 17.8**	**+0.4**
KURK				IAmb	IAmb	03 49 25.0	
	comp=Z,30nm,1.3s						
BTK	**Batken**	**72.54**	**314**	P	**P**	**03 49 19.6**	**+0.2**
BTK				pmax	pmax		
	comp=Z,17nm,1.0s						
BTK	**Batken**	**72.54**	**314**	P	**P**	**03 49 19.6**	**+0.2**
BTK				IAmb	IAmb	03 49 39.8	
	comp=Z,17nm,0.9s						
CHGR	**Chuyangaron**	**73.25**	**312**	IAmb	IAmb	03 49 26.7	
	comp=Z,24nm,0.7s						
KK31	**Karatay Array**	**73.88**	**317**	i P	**P**	**03 49 27.0**	**-0.1**
KK31	**Karatay Array**	**73.88**	**317**	P	**P**	**03 49 27.4**	**+0.3**
KKAR	**Karatay Array**	**73.88**	**317**	P	**P**	**03 49 26.9**	**-0.2**
KKAR	**Karatay Array**	**73.88**	**317**	P	**P**	**03 49 26.9**	**-0.2**
TAS	**Tashkent**	**74.08**	**315**	P	**P**	**03 49 29.6**	**+1.3**
TAS				pmax	pmax		
	comp=Z,62nm,0.4s						
TAS	**Tashkent**	**74.08**	**315**	P	**P**	**03 49 29.6**	**+1.3**
VNDA	**Vanda**	**74.65**	**174**	P	**P**	**03 49 32.7**	**+1.7**
	comp=Z,7.6nm,0.9s,baz=337,slow=7.7,SNR=4.9						
VNDA				LR	LR	04 20 10.3	
	comp=Z,678nm,21.4s,baz=348,slow=34						
BILL	**Bilibino**	**75.72**	**12⇑**	eP	**P**	**03 49 35.3**	**-1.9**
BILL				e*SP	**pP**	**03 49 41.0**	**-2.8**
BILL				i		03 49 52.3	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,471nm,19.0s						
BILL	**Bilibino**	**75.72**	**12**	P	**P**	**03 49 37.8**	**+0.6**
TIXI	**Tiksi**	**75.91**	**358**	P	**P**	**03 49 37.6**	**-0.6**
	comp=Z,11nm,0.7s,baz=173,slow=4.2,SNR=25						
TIXI	**Tiksi**	**75.91**	**358**	ceP	**P**	**03 49 36.1**	**-2.1**
TIXI				pmax	pmax		
	comp=Z,11nm,0.7s						
TIXI	**Tiksi**	**75.91**	**358**	P	**P**	**03 49 37.6**	**-0.6**
TIXI				IAmb	IAmb	03 49 41.0	
	comp=Z,12nm,0.8s						
PPT	**Papeete**	**76.00**	**107**	LR	LR	04 21 09.7	
	comp=Z,306nm,19.5s,baz=268,slow=34						
PPT2	**Papeete2**	**76.00**	**107**	eLR	LR	04 13 08.7	
	comp=Z,2μm,32.5s						
TBI	**Tubuai**	**76.16**	**113**	eS	**S**	**03 59 17.4**	**-6.6**
	comp=Z,298nm,28.8s						
TBI	**Tubuai**	**76.16**	**113**	eLR	LR	04 13 13.6	
	comp=Z,1μm,23.2s,baz=285						
BRVK	**Borovoye**	**77.94**	**326**	P	**P**	**03 49 49.4**	**-0.7**
BRVK	**Borovoye**	**77.94**	**326**	P	**P**	**03 49 49.8**	**-0.3**
BRVK				IAmb	IAmb	03 50 08.2	
	comp=Z,12nm,0.8s						
MHTO	**MHTO**	**78.34**	**292**	P	P	03 49 60.0	+7.0
	SNR=6.8						
MHTO				P	P	03 49 60.0	+7.0
	SNR=6.8						
BIDO	**Bidbid**	**78.62**	**295**	P	P	03 50 02.0	+7.6
	SNR=6.2						
MAW	**Mawson**	**78.78**	**202**	LR	LR	04 23 35.4	
	comp=Z,468nm,18.3s,baz=58,slow=35						
HOQ	**Hoqain**	**79.37**	**295**	P	P	03 50 05.7	+7.1
	SNR=7.3						
HOQ				P	P	03 50 05.7	+7.1
	SNR=7.3						
NRIK	**Noril'sk**	**79.94**	**345**	P	**P**	**03 50 01.2**	**+0.6**
	comp=Z,9.7nm,0.7s,baz=137,slow=6.0,SNR=7.2						
NRIK				LR	LR	04 28 26.7	
	comp=Z,2μm,18.6s,baz=136,slow=38						
NRIK	**Noril'sk**	**79.94**	**345**	i P	**P**	**03 50 00.7**	**0.0**
NRIK				pmax	pmax		
	comp=Z,11nm,0.9s						
SOHO	**SOHO**	**80.16**	**295**	P	P	03 50 08.6	+5.8
	SNR=6.3						
SOHO				P	P	03 50 08.6	+5.8
	SNR=6.3						
GEYT	**Alibeck**	**81.40**	**309**	P	**P**	**03 50 10.3**	**+1.0**
	comp=Z,13nm,0.7s,baz=172,slow=3.0,SNR=26						
GEYT	**Alibeck**	**81.40**	**309**	P	**P**	**03 50 09.9**	**+0.7**
GYA0B	**ALIBECK ARRAY**	**81.40**	**309**	IAmb	IAmb	03 50 16.6	
	comp=Z,24nm,1.1s						
ABKAR	**Akbulak array**	**82.80**	**321**	P	**P**	**03 50 15.7**	**-0.6**
RDOG	**Red Dog Mine**	**84.34**	**20**	IAmb	IAmb	03 50 32.0	
	comp=Z,15nm,1.0s						
SVE	**Sverdlovsk**	**84.47**	**328**	eP	**P**	**03 50 25.2**	**+0.5**
SVE				pmax	pmax		
	comp=Z,32nm,1.5s						
SVW2	**Sparrevohn**	**84.56**	**27**	IAmb	IAmb	03 50 32.5	
	comp=Z,8.8nm,0.8s						
KDAK	**Kodiak Island**	**85.02**	**31**	P	**P**	**03 50 28.2**	**+0.8**
	comp=Z,19nm,0.6s,baz=232,slow=3.6,SNR=12						
KDAK	**Kodiak Island**	**85.02**	**31**	P	**P**	**03 50 28.6**	**+1.2**
KDAK				pmax	pmax		
	comp=Z,205nm,1.8s						
KDAK	**Kodiak Island**	**85.02**	**31**	P	**P**	**03 50 28.6**	**+1.2**
ARU	**Arti**	**85.46**	**327**	i P	**P**	**03 50 28.4**	**-1.3**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ARU	**Arti**	**85.46**	**327**	P	**P**	**03 50 29.2**	**-0.4**
TAOE	**Nuku Hiva Isla**	**85.49**	**99**	eLR	LR	04 17 25.5	
	comp=Z,841nm,22.4s						
QSPA	**South Pole Qui**	**85.62**	**180**	P	**P**	**03 50 31.9**	**+1.4**
	comp=Z,5.5nm,0.8s,baz=330,slow=2.5,SNR=11						
QSPA	**South Pole Qui**	**85.62**	**180**	P	**P**	**03 50 31.7**	**+1.2**
QSPA				IAmb	IAmb	03 50 35.7	
	comp=Z,34nm,1.6s						
IMAR	**Indian Mountai**	**86.89**	**23**	P	**P**	**03 50 37.2**	**+0.7**
RC01	**Rabbit Creek A**	**87.28**	**28**	IAmb	IAmb	03 50 41.1	
	comp=Z,17nm,0.9s						
SYO	**Syowa Base**	**87.48**	**201⇓**	eP	**P**	**03 50 40.4**	**+1.1**
SYO	**Syowa Base**	**87.48**	**201⇑**	ePcP	**PcP**	**03 50 43.2**	**+1.9**
BPAW	**Bear Paw Mtn.**	**87.48**	**25**	IAmb	IAmb	03 50 41.8	
	comp=Z,13nm,1.3s						
TRF	**Thorofare Moun**	**87.61**	**26**	P	**P**	**03 50 41.2**	**+0.9**
TRF				IAmb	IAmb	03 51 03.5	
	comp=Z,12nm,1.1s						
MLY	**Manley**	**87.83**	**24**	IAmb	IAmb	03 50 44.3	
	comp=Z,9.9nm,0.8s						
MCK	**McKinley**	**88.27**	**26**	P	**P**	**03 50 43.6**	**+0.4**
MCK				pmax	pmax		
	comp=Z,79nm,1.9s						
MCK	**McKinley**	**88.27**	**26**	P	**P**	**03 50 43.6**	**+0.4**
WRH	**Wood River Hil**	**88.80**	**25**	IAmb	IAmb	03 50 52.6	
	comp=Z,27nm,1.6s						
DHY	**Denali Highway**	**88.81**	**27**	IAmb	IAmb	03 51 11.8	
	comp=Z,9.6nm,0.9s						
CCB	**Clear Creek Bu**	**88.95**	**25**	IAmb	IAmb	03 50 59.8	
	comp=Z,8.3nm,0.8s						
ILAR	**Eielson Array**	**89.37**	**25**	P	**P**	**03 50 47.0**	**-1.3**
	comp=Z,4.2nm,0.7s,baz=275,slow=3.6,SNR=22						
ILAR				LR	LR	04 30 39.1	
	comp=Z,188nm,18.3s,baz=260,slow=36						
ILAR	**Eielson Array**	**89.37**	**25**	P	**P**	**03 50 47.5**	**-0.9**
ILAR	**Eielson Array**	**89.37**	**25**	P	**P**	**03 50 47.5**	**-0.9**
RAYN	**Ar Rayn**	**90.11**	**293**	P	**P**	**03 50 52.8**	**0.0**
RAYN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
RAYN	**Ar Rayn**	**90.11**	**293**	P	**P**	**03 50 52.8**	**0.0**
GLB	**Gilahina Butte**	**90.16**	**28**	IAmb	IAmb	03 53 50.2	
	comp=Z,41nm,1.8s						
BMAR	**Burnt Mountain**	**90.77**	**22**	P	**P**	**03 50 55.3**	**+0.3**
BCAR	**Beaver Creek A**	**91.32**	**27**	P	**P**	**03 50 58.8**	**+1.2**
GNI	**Garni**	**92.01**	**310**	i P	**P**	**03 50 59.9**	**-1.5**
GNI				pmax	pmax		
	comp=Z,11nm,1.1s						
TBLG	**Delisi**	**92.12**	**312**	P	**P**	**03 51 01.8**	**0.0**
TBLG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TBLG	**Delisi**	**92.12**	**312**	P	**P**	**03 51 01.8**	**0.0**
TBLG				IAmb	IAmb	03 51 14.5	
	comp=Z,7.9nm,0.9s						
PRGR	**Permogore**	**92.89**	**331**	eP	**P**	**03 51 03.1**	**-1.6**
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KBZ	**Khabaz**	**93.59**	**313**	i P	**P**	**03 51 06.6**	**-1.8**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NEY	**Neytrino**	**93.69**	**313**	i P	**P**	**03 51 08.7**	**-0.5**
NEY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KIV	**Kislovodsk**	**93.75**	**314**	eP	**P**	**03 51 06.5**	**-2.8**
KIV				pmax	pmax		
	comp=Z,10.0nm,0.9s						
INK	**Inuvik**	**95.01**	**22**	P	**P**	**03 51 13.7**	**-0.7**
	comp=Z,2.3nm,0.9s,baz=286,slow=3.9,SNR=6.4						
INK				LR	LR	04 26 58.0	
	comp=Z,187nm,21.5s,baz=288,slow=31						
VSR	**Storozhevoye**	**96.23**	**321**	i P	**P**	**03 51 17.5**	**-2.8**
VSR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KMBO	**Kilima Mbogo**	**96.40**	**268**	LR	LR	04 33 35.7	
	comp=Z,325nm,20.4s,baz=94,slow=35						
OBN	**Obninsk**	**97.65**	**325**	LR	LR	04 38 03.1	
	comp=Z,112nm,21.3s,baz=48,slow=37						
MMAI	**Mount Meron Ar**	**99.35**	**303**	LR	LR	04 45 46.6	
	comp=Z,108nm,18.6s,baz=115,slow=41						
EIL	**Elat**	**99.78**	**299**	LR	LR	04 42 05.8	
	comp=Z,174nm,20.0s,baz=97,slow=39						
ARCES	**ARCESS Array B**	**100.38**	**340**	P	**Pdif**	**03 51 39.3**	**+0.7**
	comp=Z,4.4nm,0.7s,baz=64,slow=5.5,SNR=6.7						
YKA	**Yellowknife Ar**	**103.72**	**26**	Pdiff	**Pdif**	**03 51 53.3**	**-0.3**
	comp=Z,0.2nm,0.7s,baz=292,slow=4.6,SNR=4.1						
YKA				PP	**PP**	**03 56 07.6**	**-2.5**
	comp=Z,0.6nm,1.0s,baz=282,slow=5.5,SNR=5.0						
ULM	**Lac du Bonnet**	**118.18**	**34**	PKP	**PKiKP**	**03 56 41.1**	**+1.8**
	comp=Z,1.6nm,0.7s,baz=12,slow=3.2,SNR=2.5						
TXAR	**Lajitas Array**	**120.36**	**59**	PKP	**PKiKP**	**03 56 46.7**	**+2.4**
	comp=Z,0.3nm,0.7s,baz=259,slow=1.3,SNR=4.8						
TXAR				PKKPbc	**PKKPab**	**04 06 54.3**	**+2.1**
	comp=Z,0.1nm,0.5s,baz=114,slow=6.2,SNR=3.6						
S39A	**Bolivar**	**125.76**	**46**		**PKiKP**	**03 56 55.3**	**+0.7**
TORD	**Torodi Ar. Bea**	**131.89**	**284**	PKP	**PKiKP**	**03 57 08.7**	**+1.2**
	comp=Z,0.8nm,0.8s,baz=62,slow=0.9,SNR=4.6						
TORD	**Torodi Ar. Bea**	**131.89**	**284**		**PKiKP**	**03 57 09.3**	**+1.8**
LVC	**Limon Verde**	**145.24**	**141**	PKPbc	**PKiKP**	**03 57 34.0**	**-1.1**
	comp=Z,9.3nm,0.9s,baz=149,slow=3.4,SNR=4.7						
LVC	**Limon Verde**	**145.24**	**141**	PKIKP	**PKiKP**	**03 57 35.9**	**+0.9**
LVC	**Limon Verde**	**145.24**	**141**		**PKiKP**	**03 57 35.9**	**+0.9**
NNA	**Nana**	**145.52**	**118**	PKPbc	**PKiKP**	**03 57 34.8**	**-0.7**
	comp=Z,8.7nm,0.7s,baz=268,slow=6.5,SNR=5.0						
PB11	**IPOC Station P**	**146.78**	**137**	PKPbc	**PKPab**	**03 57 36.8**	**+0.3**
OTAV	**Otavalo**	**147.57**	**96**	PKP2	**PKPbc**	**03 57 38.5**	**+0.4**
OTAV	**Otavalo**	**147.57**	**96**	PKPbc	**PKPbc**	**03 57 38.5**	**+0.4**
CPUP	**Villa Florida**	**147.68**	**161**	PKPbc	**PKPbc**	**03 57 39.1**	**+1.7**
	comp=Z,4.5nm,0.8s,baz=232,slow=3.0,SNR=10						
CPUP	**Villa Florida**	**147.68**	**161**	PKP2	**PKPbc**	**03 57 38.8**	**+1.4**
CPUP	**Villa Florida**	**147.68**	**161**		**PKPbc**	**03 57 38.8**	**+1.4**
LPAZ	**La Paz**	**150.19**	**134**	PKPbc	**PKiKP**	**03 57 47.4**	**+1.7**
	comp=Z,4.1nm,0.7s,baz=262,slow=4.6,SNR=5.2						
LPAZ	**La Paz**	**150.19**	**134**	PKIKP	**PKiKP**	**03 57 46.6**	**+0.9**
LPAZ	**La Paz**	**150.19**	**134**		**PKiKP**	**03 57 46.6**	**+0.9**
FLOC	**Florencia**	**150.51**	**94**		**PKPbc**	**03 57 45.3**	**+0.3**
ROSC	**El Rosal**	**152.01**	**88**	PKPbc	**PKiKP**	**03 57 51.4**	**+2.1**
	comp=Z,26nm,0.6s,baz=258,slow=5.5,SNR=8.1						
SIV	**San Ignacio**	**155.03**	**144**	PKPab	**PKPab**	**03 58 12.4**	**+2.0**
	comp=Z,4.7nm,1.1s,baz=241,slow=3.6,SNR=8.4						

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*IDC **08** 03:39:47.1±1.8, 41.°20S×91.°66W, $h0^{km}$, mb4.1/6, mb1 4.5/6, mb1mx4.1/41, mbtmp4.2/6, MS4.0/17, Ms1 4.0/17, ms1mx3.8/32, Error ellipse: s-maj=59.0km s-min=26.5km az=6.0*

*NEIC **08** 03:39:50.3±1.5, 41.°0S±0.°1×91.°8W±0.°2, $h10^{km}\pm2^{km}$, mb4.7/40, Error ellipse: s-maj=19.9km s-min=18.7km az=167.0*

ISC 08 03:39:50.0±0.6**, 41.°1S**±0.°1×**91.°6W**±0.°1**, $h10^{km}$, n59, σ1^{s}22**/44**, mb4.6**/19**, MS3.9**/16**, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**15.94**	**96**	Pn	**P**	**03 43 39.9**	**+1.8**
	0.1nm,0.3s,baz=298,slow=10,SNR=9.1						
PLCA				LR	LR	03 48 19.3	
	comp=Z,911nm,19.5s,baz=292,slow=32						
PLCA	**Paso Flores**	**15.94**	**96**		**P**	**03 43 38.0**	**-0.1**
RPN	**Rapa Nui**	**20.16**	**308**	LR	LR	03 49 54.7	
	comp=Z,469nm,18.9s,baz=142,slow=30						
USHA	**Ushuaia**	**20.63**	**140**	LR	LR	03 50 52.9	
	comp=Z,386nm,19.1s,baz=275,slow=32						
CFA	**Coronel Fontan**	**21.03**	**71**	P	**P**	**03 44 33.8**	**-0.1**
	7.5nm,1.0s,baz=231,slow=11,SNR=10						
CFA				LR	LR	03 50 55.5	
	comp=Z,618nm,19.5s,baz=250,slow=32						
GO02	**Mina Guanaco**	**24.24**	**56**	P	**P**	**03 45 09.4**	**+2.0**
GO02				IAmb	IAmb	03 45 18.9	
	comp=Z,15nm,0.9s						
LVC	**Limon Verde**	**26.54**	**53**	LR	LR	03 53 22.2	
	comp=Z,310nm,19.6s,baz=224,slow=31						
PMSA	**Palmer Station**	**28.54**	**155**	LR	LR	03 54 01.0	
	comp=Z,165nm,20.3s,baz=304,slow=30						
NNA	**Nana**	**31.75**	**28**	LR	LR	03 55 25.6	
	comp=Z,202nm,21.9s,baz=194,slow=29						
CPUP	**Villa Florida**	**31.87**	**73**	P	**P**	**03 46 14.2**	**-1.1**
	comp=Z,1.1nm,0.7s,baz=239,slow=7.8,SNR=4.0						
CPUP				LR	LR	03 57 52.1	
	comp=Z,236nm,19.9s,baz=222,slow=34						
CPUP	**Villa Florida**	**31.87**	**73**	P	**P**	**03 46 17.2**	**+1.9**
CPUP				IAmb	IAmb	03 46 22.3	
	comp=Z,25nm,1.9s						
LPAZ	**La Paz**	**31.97**	**46**	LR	LR	03 56 25.8	
	comp=Z,138nm,19.1s,baz=204,slow=31						
LPAZ	**La Paz**	**31.97**	**46**	P	**P**	**03 46 18.0**	**+1.0**
ATAH	**Atahualpa**	**35.79**	**23**	LR	LR	03 57 54.8	
	comp=Z,194nm,20.7s,baz=234,slow=30						
SIV	**San Ignacio**	**36.35**	**56**	P	**P**	**03 46 53.0**	**-1.4**
	comp=Z,4.2nm,1.1s,baz=246,slow=6.3,SNR=7.1						
SIV				LR	LR	04 00 55.4	
	comp=Z,181nm,19.4s,baz=230,slow=35						
OTAV	**Otavalo**	**42.82**	**20**	P	**P**	**03 47 49.2**	**+0.5**
BDFB	**Brasilia**	**45.35**	**69**	LR	LR	04 06 24.3	
	comp=Z,356nm,18.5s,baz=272,slow=35						
ROSC	**El Rosal**	**48.36**	**23**	P	**P**	**03 48 33.5**	**+1.1**
ROSC				IAmb	IAmb	03 48 52.1	
	comp=Z,10nm,0.9s						
PTGA	**Pitinga**	**49.32**	**44**	LR	LR	04 07 40.9	
	comp=Z,111nm,18.9s,baz=209,slow=34						
SNAA	**Sanae**	**51.25**	**156**	P	**P**	**03 48 53.0**	**-0.5**
SNAA	**Sanae**	**51.25**	**156**	P	**P**	**03 48 53.9**	**+0.4**
SNAA				IAmb	IAmb	03 49 02.6	
	comp=Z,7.3nm,0.9s						
JTS	**Las Juntas de**	**51.47**	**8**	LR	LR	04 05 42.7	
	comp=Z,82nm,18.3s,baz=266,slow=30						
SDV	**Santo Domingo**	**53.34**	**26**	P	**P**	**03 49 09.5**	**-0.3**
SDV				IAmb	IAmb	03 49 15.9	
	comp=Z,15nm,1.2s						
ESPN	**Las Esperanzas**	**53.43**	**9**	P	**P**	**03 49 10.2**	**+0.1**
APG	**El Apazote**	**55.80**	**1**	LR	LR	04 07 26.4	
	comp=Z,81nm,21.4s,baz=86,slow=30						
CMIG	**Matias Romero**	**57.94**	**356**	LR	LR	04 08 08.5	
	comp=Z,91nm,18.1s,baz=102,slow=29						
MDP	**Montagnes des**	**58.16**	**48**	LR	LR	04 11 41.7	
	comp=Z,202nm,21.7s,baz=248,slow=33						
TXAR	**Lajitas Array**	**70.93**	**349**	P	**P**	**03 51 07.0**	**-0.5**
	comp=Z,1.6nm,0.9s,baz=171,slow=11,SNR=14						
319A	**Douglas**	**73.91**	**344**	P	**P**	**03 51 25.4**	**+0.2**
319A				IAmb	IAmb	03 51 25.8	
	comp=Z,6.3nm,0.9s						
TUC	**Tucson**	**75.13**	**343**	P	**P**	**03 51 32.1**	**-0.2**
TUC				IAmb	IAmb	03 51 33.5	
	comp=Z,12nm,1.3s						
ANMO	**Albuquerque**	**76.87**	**348**	P	**P**	**03 51 42.5**	**+0.2**
ANMO				IAmb	IAmb	03 52 10.8	
	comp=Z,14nm,1.9s						
X18A	**Snowflake**	**77.10**	**345**	P	**P**	**03 51 43.4**	**-0.1**
X18A				IAmb	IAmb	03 51 45.0	
	comp=Z,22nm,1.7s						
X16A	**Lo Mia Camp, P**	**77.30**	**343**	P	**P**	**03 51 45.0**	**+0.4**

MSVF	Nonsavu	78.81	256	P	P	03 51 54.5	+1.1
S22A	4UR Ranch, Cre	79.66	348	IAmb	IAmb	03 51 59.1	
	comp=Z,8.5nm,1.2s						
O20A	White River Ci	82.23	347	IAmb	IAmb	03 52 12.5	
	comp=Z,10nm,1.4s						
NVAR	Mina Array Bea	82.79	339	P	P	03 52 14.3	0.0
	comp=Z,1.7nm,1.0s,baz=155,slow=7.4,SNR=9.8						
NVAR	Mina Array Bea	82.79	339	P	P	03 52 14.1	-0.2
KVN	Kaiserville	83.32	340	IAmb	IAmb	03 52 17.6	
	comp=Z,5.5nm,1.2s						
ELK	Elko	84.21	342	P	P	03 52 20.9	-0.6
PDAR	Pinedale Array	85.01	347	P	P	03 52 24.6	-0.9
	comp=Z,3.8nm,0.9s,baz=165,slow=6.2,SNR=26						
PDAR	Pinedale Array	85.01	347	P	P	03 52 25.0	-0.6
FXWY	Fox Creek	86.12	346	IAmb	IAmb	03 52 31.6	
	comp=Z,6.8nm,1.2s						
QLMT	Earthquake Lak	87.34	346	P	P	03 52 37.7	+0.7
J08A	Circle Bar Ran	87.46	341	IAmb	IAmb	03 52 46.7	
	comp=Z,4.7nm,1.0s						
BOSA	Boshof	89.36	128	P	P	03 52 48.0	+0.9
KLMR	Klimovskoe	144.51	39	ePKPdf	PKPab	03 59 21.4	-2.7
KLMR				AMP		03 59 30.5	
	comp=Z,48nm,1.3s						
KSRS	Korea Array	149.34	276	PKPbc	PKPdf	03 59 36.6	+2.1
	comp=Z,2.1nm,1.0s,baz=131,slow=3.5,SNR=6.0						
KSAR	Wonju Array Be	149.37	276		PKPdf	03 59 36.1	+1.5
NJ2	Nanjing	154.02	260	eP	PKPdf	03 59 42.2	+0.5
GEYT	Alibeck	156.50	88	PKPab	PKPab	04 00 13.1	-0.7
	comp=Z,1.8nm,0.7s,baz=262,slow=10,SNR=4.3						
GEYT	Alibeck	156.50	88	PKPdf	PKPdf	03 59 45.3	+0.3
GEYT					PKPab	04 00 14.2	+0.4
ABKAR	Akbulak array	158.45	58		PKPdf	03 59 47.5	+0.5
ABKAR				PKPab	sPKPab	04 00 27.0	+2.0
CD2	Chengdu	163.96	236	PKP	PKPdf	03 59 52.8	-0.7
LZH	Lanzhou	166.91	253	ePKP	PKPdf	03 59 53.0	-3.0
LZH				pPKP	sPKPdf	04 00 04.2	+5.0
LZH				sPKP		04 00 08.8	
KURK	Kurchatov	168.21	32		PKPab	04 01 03.0	-1.5
KURBB	Kurchatov Arra	168.25	32	PKPab	PKPab	04 01 03.0	-1.7
	comp=Z,0.6nm,0.9s,baz=316,slow=4.8,SNR=5.4						
KSH	Kashi	170.40	95	PKP	PKPdf	03 59 56.1	-2.0
KSH				PP	PP	04 05 04.4	-1.4
KSH				SKS	SKSdf	04 07 01.2	-0.4
KSH	Kashi	170.40	95	SS	SS	04 26 05.2	-2.5

IDC ***08*** *03:40:19.5±1.4, 47°.49N×146°.82E, h407km±18km, mb3.0/12, mb1 3.2/18, mb1mx3.1/63, mbtmp3.9/18, Error ellipse: s-maj=25.8km s-min=11.7km az=168.0*

NEIC ***08*** *03:40:19.1±1.4, 47°.3N±0°.1×146°.9E±0°.2, h408km±11km, mb4.0/5, Error ellipse: s-maj=22.3km s-min=14.7km az=153.0*

ISC 08 03:40:17.3±0.6**, 47°.10N**±0°.08×**147°.00E**±0°.09**, h400**km**, n38,** σ1.68/41**, mb3.5**/12**, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	Yuzh-Sakhalins	2.91	269		Pn	03 41 21.4	+1.7
JRA	Rausu	3.42	203	P	Pn	03 41 26.1	+2.0
JSE	Soyaes	3.74	237	P	Pn	03 41 29.8	+2.8
JTKR	Abashiri--Toko	3.80	216	P	Pn	03 41 30.1	+2.5
NEM2	Nemuro 2	3.83	194	P	Pn	03 41 28.5	+0.6
NEM2				eS	S	03 42 23.7	-1.3
JKA	Kamikawa-asahi	4.29	228		Pn	03 41 35.3	+3.1
ASAJ	Asahikawa	4.29	228	P	Pn	03 41 35.3	+3.1
	1.5nm,0.3s,baz=43,slow=8.8,SNR=12						
JAK	Akkeshi	4.41	203	P	Pn	03 41 34.0	+0.6
JAK				eS	S	03 42 34.1	-1.0
JAR	Ashorobuto	4.43	212	P	Pn	03 41 35.6	+2.0
JRBN	Rebuntou	4.44	250	P	Pn	03 41 35.7	+2.1
JCH	Churui	5.17	211	P	Pn	03 41 41.6	+0.5
JCH				eS	S	03 42 47.1	-2.2
JNBK	Urakawa-nobuka	5.69	214	P	Pn	03 41 46.7	+0.1
JNBK				eS	S	03 42 56.6	-2.6
ERM	Erimo	5.77	210		Pn	03 41 49.8	+2.3
JKB	Kayabe	6.73	221	P	Pn	03 41 59.0	+1.0
JKB				eS	S	03 43 16.9	-3.2
JOT	Ohata	7.13	219	P	Pn	03 42 02.8	+0.3
PETK	Petropavlovsk-	9.13	45	P	Pn	03 42 25.1	0.0
	0.4nm,0.3s,baz=222,slow=8.6,SNR=9.8						
KLR	Kul'dur	10.41	287	P	Pn	03 42 40.4	+0.4
	0.6nm,0.3s,baz=95,slow=7.1,SNR=12						
USRK	Ussuriysk Ar.	10.90	260	P	Pn	03 42 47.1	+1.4
	baz=61,slow=9.4,SNR=4.6						
SEY	Seymchan	16.16	9	P	P	03 43 41.2	-0.7
	0.7nm,0.3s,baz=203,slow=10.0,SNR=14						
KSRS	Korea Array	17.05	242	P	P	03 43 54.8	+3.0
	0.3nm,0.3s,baz=46,slow=9.6,SNR=5.7						
SONM	Songino Array	27.24	287	P	P	03 45 27.0	+0.3
	1.1nm,0.9s,baz=78,slow=9.7,SNR=4.1						
SONM	Songino Array	27.24	287	IAmb	IAmb	03 45 33.1	
	comp=Z,1.2nm,1.0s						
IMAR	Indian Mountai	35.98	37	P	P	03 46 41.2	-0.5
ILAR	Eielson Array	38.90	39	P	P	03 47 05.5	-0.4
	comp=Z,0.6nm,0.6s,baz=251,slow=5.3,SNR=7.1						
MKAR	Makanchi Array	43.02	294	P	P	03 47 38.9	-0.3
	comp=Z,0.3nm,0.5s,baz=75,slow=6.1,SNR=6.6						
INK	Inuvik	43.59	32	P	P	03 47 42.5	-0.8
	comp=Z,0.7nm,0.3s,baz=302,slow=8.5,SNR=9.3						
INK	Inuvik	43.59	32	IAmb	IAmb	03 47 55.7	
	comp=Z,11nm,1.6s						
KURK	Kurchatov	43.64	301	P	P	03 47 44.0	0.0
KURBB	Kurchatov Arra	43.73	301	P	P	03 47 44.0	-0.7
	comp=Z,1.1nm,0.5s,baz=71,slow=8.9,SNR=13						
YKA	Yellowknife Ar	53.10	35	P	P	03 48 54.4	-0.6
	comp=Z,0.4nm,0.6s,baz=302,slow=6.2,SNR=7.6						
ARCES	ARCESS Array B	56.08	339	P	P	03 49 14.2	-1.8
	comp=Z,3.3nm,0.9s,baz=32,slow=6.3,SNR=5.7						
FINES	FINESS Array B	61.86	332	P	P	03 49 53.5	-1.8
	comp=Z,2.1nm,0.6s,baz=39,slow=5.8,SNR=16						
NVAR	Mina Array Bea	65.92	59	P	P	03 50 23.4	+1.3
	comp=Z,0.7nm,0.9s,baz=272,slow=5.8,SNR=3.5						
NOA	NORSAR Array B	66.45	338	P	P	03 50 23.5	-1.3
	comp=Z,0.6nm,0.6s,baz=29,slow=6.6,SNR=3.5						
PD31	Pinedale Array	67.85	51	P	P	03 50 34.4	+0.3
PDAR	Pinedale Array	67.85	51	P	P	03 50 34.9	+0.8
	comp=Z,1.1nm,0.5s,baz=23,slow=0.5,SNR=22						
CLL	Collm	74.30	332	eP	P	03 51 12.0	+0.2
TXAR	Lajitas Array	80.89	57	P	P	03 51 49.6	+1.3
	comp=Z,0.6nm,0.6s,baz=285,slow=3.7,SNR=8.6						

IDC ***08*** *03:49:34.2±7.2, 18°.70S×167°.83E, h79km±73km, mb3.8/5, mb1 4.1/6, mb1mx3.7/42, mbtmp4.1/6, ML3.8/1, Error ellipse: s-maj=59.4km s-min=26.6km az=172.0*

NEIC ***08*** *03:49:34.9±2.2, 18°.8S±0°.2×167°.8E±0°.2, h84km±12km, mb4.1/3, Error ellipse: s-maj=35.6km s-min=13.4km az=140.0*

ISC 08 03:49:29.4±1.0**, 18°.4S**±0°.1×**167°.8E**±0°.2**, h29**km**, n11,** σ1.00/11**, mb4.0**/5**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.82	199	P	Pn	03 50 26.9	+0.4
	7.9nm,0.3s,baz=116,slow=17,SNR=6.5						
DZM				S	Sn	03 51 09.8	-0.6
	37nm,0.3s,baz=122,slow=23,SNR=18						
DZM	Mont Dzumac	3.82	199		Pn	03 50 27.6	+1.2
CTA	Charters Tower	20.38	262	P	Pn	03 54 06.2	0.0
	12nm,0.6s,baz=88,slow=12,SNR=12						
WRA	Warramunga Arr	31.59	262	P	P	03 55 48.6	-1.3
	1.1nm,0.8s,baz=96,slow=9.1,SNR=5.0						
AS31	Alice Springs	31.98	255	P	P	03 55 53.3	-0.1
AS31				IAmb	IAmb	03 55 54.5	
	comp=Z,1.7nm,0.5s						
ASAR	Alice Springs	31.99	255	P	P	03 55 53.1	-0.3
	comp=Z,3.1nm,0.5s,baz=82,slow=8.6,SNR=24						
ERM	Erimo	64.31	340	P	P	04 00 03.7	+1.6
NVAR	Mina Array Bea	89.32	49	P	P	04 02 23.0	-0.5
	comp=Z,0.4nm,0.6s,baz=224,slow=7.6,SNR=5.0						
IL31		89.89	18	P	P	04 02 24.5	-0.7
ILAR	Eielson Array	89.89	18	P	P	04 02 24.3	-0.9
	comp=Z,0.6nm,0.6s,baz=234,slow=5.1,SNR=11						
YKA	Yellowknife Ar	100.60	27	P	Pdif	04 03 14.7	+0.6
	comp=Z,0.2nm,0.6s,baz=254,slow=4.6,SNR=6.0						

NEIC ***08*** *03:50:21.7±2.1, 19°.33N±0°.04×67°.80W±0°.03, h6km±4km, Error ellipse: s-maj=5.2km s-min=3.4km az=183.0*

RSPR ***08*** *03:50:22.8, 19°.60N×67°.83W, h44km±9km, MD3.9/21*

OSPL ***08*** *03:50:24.3±1.3, 19°.25N×67°.80W, h2km±8km, ML4.2*

IDC ***08*** *03:50:26.1±2.6, 19°.26N×67°.81W, h46km±34km, mb3.5/8, mb1 3.9/10, mb1mx3.6/56, mbtmp3.9/10, ML3.8/2, MS3.3/3, Ms1 3.3/3, ms1mx2.9/34, Error ellipse: s-maj=33.7km s-min=14.5km az=7.0*

ISC 08 03:50:21.6±1.4**, 19°.34N**±0°.05×**67°.81W**±0°.02**, h10**km±9km**, n123,** σ1.13/141**, mb3.9**/9**, 15C-4D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.98	213	i P	Pb	03 50 39.8	-0.9
PCDR				eS	Sg	03 50 53.4	+0.1
PCDR				IAML		03 50 56.4	
	comp=Z,5µm,0.5s						
PCDR	Punta Cana, DR	0.98	213	⇓eP	Pb	03 50 39.8	-0.9
PCDR	Punta Cana, DR	0.98	213	⇑eP	Pb	03 50 39.8	-0.9
PCDR				eS	Sn	03 50 57.4	+2.0
PCDR	Punta Cana, DR	0.98	213		Pb	03 50 39.8	-0.9
PCDR					Sg	03 50 53.0	-0.2
PCDR					Sn	03 50 57.4	+2.0
AGPR	Aguadilla, PR	1.09	142	i P	Pb	03 50 42.3	-0.2
AGPR				eS	Sb	03 50 56.0	-0.8
AGPR				IAML		03 50 59.7	
	comp=Z,8µm,0.2s						
AGPR	Aguadilla, PR	1.09	142	⇑eP	Pn	03 50 43.4	+0.5
AGPR	Aguadilla, PR	1.09	142	eS	Sn	03 50 59.4	+1.4
AGPR	Aguadilla, PR	1.09	142		Pb	03 50 42.2	-0.2
AGPR	Aguadilla, PR	1.09	142		Pn	03 50 43.2	+0.3
AGPR					Sg	03 50 57.0	+0.2
AGPR	Aguadilla, PR	1.09	142		Sn	03 50 59.4	+1.4
MPR	Mayaguez	1.29	150	i P	Pn	03 50 45.5	-0.1
MPR				eS	Sb	03 51 02.0	-0.5
MPR	Mayaguez	1.29	150	⇓eP	Pg	03 50 46.6	+0.3
MPR				eS	Sg	03 51 04.8	+1.7
MPR	Mayaguez	1.29	150		Pg	03 50 46.6	+0.3
MPR					Sg	03 51 04.8	+1.7
LSP	Las Mesas	1.34	149	⇑eP	Pg	03 50 47.7	+0.2
LSP	Las Mesas	1.34	149	eS	Sg	03 51 06.6	+1.7
LSP	Las Mesas	1.34	149		Pg	03 50 47.7	+0.2
LSP					Sg	03 51 06.6	+1.7
AOPR	Arecibo Observ	1.41	134	⇓eP	Pn	03 50 47.3	0.0
AOPR	Arecibo Observ	1.41	134	⇓eP	Pb	03 50 47.9	0.0
AOPR				eS	Sg	03 51 07.0	+0.1
AOPR	Arecibo Observ	1.41	134	eS	Sg	03 51 07.5	+0.7
AOPR	Arecibo Observ	1.41	134		Pb	03 50 47.9	0.0
AOPR					Sg	03 51 07.5	+0.7
CRPR	Cabo Rojo, PR	1.48	153	⇑eP	Pb	03 50 48.9	-0.3
CRPR	Cabo Rojo, PR	1.48	153	eS	Sg	03 51 10.1	+0.8
CRPR	Cabo Rojo, PR	1.48	153		Pn	03 50 48.5	+0.2
CRPR	Cabo Rojo, PR	1.48	153		Sg	03 51 10.1	+0.8
EMPR	Esperanza - Ma	1.48	125	⇑eP	Pn	03 50 48.7	+0.4
EMPR	Esperanza - Ma	1.48	125	eS	Sb	03 51 08.4	+0.2
EMPR	Esperanza - Ma	1.48	125		Pn	03 50 48.7	+0.4
EMPR					Sb	03 51 08.4	+0.2
UUPR	Utuado, UPR, P	1.49	136		Pb	03 50 49.3	-0.1
UUPR					Sg	03 51 09.4	-0.3
MLPR	Magueyes Islan	1.54	152	⇑eP	Pb	03 50 50.3	0.0
MLPR	Magueyes Islan	1.54	152	eS	Sg	03 51 11.3	+0.1
MLPR	Magueyes Islan	1.54	152		Pn	03 50 49.2	+0.1
MLPR	Magueyes Islan	1.54	152		Sg	03 51 11.3	+0.1
DR12	Loma Pena Alta	1.58	250		Pn	03 50 49.6	-0.2
GBPR	Guanica, Bosqu	1.62	147	⇑eP	Pb	03 50 51.0	-0.5
GBPR	Guanica, Bosqu	1.62	147	eS	Sg	03 51 13.2	-0.5
GBPR	Guanica, Bosqu	1.62	147		Pb	03 50 51.0	-0.5
GBPR					Sg	03 51 13.2	-0.5
OBIP	Obispado Ponce	1.72	138	⇑eP	Pn	03 50 51.9	+0.3
OBIP	Obispado Ponce	1.72	138	eS	Sb	03 51 15.1	+0.1
OBIP	Obispado Ponce	1.72	138		Pn	03 50 51.9	+0.3
OBIP					Sb	03 51 15.1	+0.1
ICMP	Isla Caja de M	1.89	140	⇑eP	Pn	03 50 54.6	+0.8
ICMP	Isla Caja de M	1.89	140	eS	Sb	03 51 19.8	0.0
ICMP	Isla Caja de M	1.89	140		Pb	03 50 55.1	-1.0
ICMP	Isla Caja de M	1.89	140		Sb	03 51 19.8	0.0
GCPR	Guaynabo City	1.93	122	⇑eP	Pn	03 50 54.2	-0.2
GCPR	Guaynabo City	1.93	122	eS	Sn	03 51 19.2	+0.5
GCPR	Guaynabo City	1.93	122		Pn	03 50 54.2	-0.2
GCPR					Sn	03 51 19.2	+0.5
SJG	San Juan	1.99	128	P	Pn	03 50 55.7	+0.4
	comp=Z,78nm,0.3s,baz=307,slow=15,SNR=70						
SJG				S	Sn	03 51 20.3	0.0
	comp=Z,638nm,0.3s,baz=102,slow=20,SNR=22						
SJG				LR	LR	03 51 47.0	
	comp=Z,211nm,18.5s,baz=279,slow=42						
SJG	San Juan	1.99	128		Pn	03 50 55.8	+0.5
IGPR	InterUniversit	2.12	130	⇑eP	Pn	03 50 57.7	+0.7
IGPR				eS	Sn	03 51 24.6	+1.3
IGPR	InterUniversit	2.12	130	⇑eP	Pn	03 50 57.8	+0.7
IGPR	InterUniversit	2.12	130		Pn	03 50 58.0	+1.0
IGPR	InterUniversit	2.12	130		Sn	03 51 24.6	+1.3
PDPR	Patillas Dam,	2.14	127		Pn	03 50 57.6	+0.2
SDD	Santo Domingo	2.17	247	i P	Pn	03 50 59.2	+1.4
SDD				eS	Sn	03 51 24.4	-0.4
SDD	Santo Domingo	2.17	247		Pn	03 50 59.0	+1.1
BON1	Bonao	2.48	261	i P	Pn	03 51 03.6	+1.7
BON1				IAML		03 51 49.7	
	comp=Z,2µm,0.5s						
BANI	BANI	2.59	249		Pn	03 51 04.9	+1.3
CUPR	Culebra, Puert	2.60	113		Pn	03 51 03.6	-0.1
SC01	Santiago de lo	2.75	272	i P	Pb	03 51 08.7	-2.2
SC01				IAML		03 52 17.9	
	comp=Z,792nm,1.1s						
SC01	Santiago de lo	2.75	272		Pn	03 51 08.3	+2.5
STVI	Saint Thomas	2.88	109	eS	Sn	03 51 41.6	-0.5
STVI	Saint Thomas	2.88	109	⇑eP	Pn	03 51 07.0	-0.5
STVI	Saint Thomas	2.88	109		Pn	03 51 07.0	-0.5
STVI					Sn	03 51 41.6	-0.5
TBVI	Tortola	3.16	106	⇑eP	Pn	03 51 10.9	-0.5
TBVI	Tortola	3.16	106	eS	Sn	03 51 48.4	-0.7
TBVI	Tortola	3.16	106		Pn	03 51 10.9	-0.5
TBVI					Sn	03 51 48.4	-0.7
CDVI	St. Croix	3.29	118		Pn	03 51 14.6	+1.4
SDDR	Presa de Saban	3.31	264	i P	Pn	03 51 15.3	+1.8
SDDR				IAML		03 52 09.0	
	comp=Z,406nm,1.0s						
SDDR	Presa de Saban	3.31	264		Pn	03 51 15.0	+1.5
GRTK	Grand Turk	3.79	305	Pn	Pn	03 51 19.9	-0.1
LGNH	Logne	4.61	261	Pn	Pn	03 51 32.1	+0.8
SKI	Saint Kitts	5.21	112	Pn	Pn	03 51 40.4	+0.7
ANWB	Willy Bob	5.95	105	Pn	Pn	03 51 50.4	+0.6
URIC	Uribia, Colomb	8.60	209	Pn	Pn	03 52 24.7	-1.4
PCRV	Puerto La Cruz	9.61	161	P	Pn	03 52 42.8	+2.8
	comp=Z,2.2nm,0.3s,baz=327,slow=9.9,SNR=9.3						
PLCV	Puerto La Cruz	9.64	161		Pn	03 52 42.9	+2.4
SDV	Santo Domingo	10.74	195	P	Pn	03 52 57.1	+1.4
	comp=Z,3.1nm,0.3s,baz=77,slow=7.6,SNR=14						
SDV				LR	LR	03 57 36.6	
	comp=Z,71nm,18.6s,baz=38,slow=40						
SDV	Santo Domingo	10.74	195	eP	Pn	03 52 56.5	+0.7
SDV	Santo Domingo	10.74	195		Pn	03 52 55.0	-0.8
CODC	Agustn Codazz	10.82	211	eP	Pn	03 52 54.3	-2.3
PAMC	Pamplona, Colo	12.84	202	eP	Pn	03 53 24.8	+0.1
BARC	Barichara	13.70	203	eP	Pn	03 53 35.4	-0.9
UREC	San Jos de Ur	13.74	214	eP	Pn	03 53 34.7	-1.9
PTBC	PUERTO BERRIO,	14.27	208	eP	Pn	03 53 43.2	-0.7
RUSC	La Rusia	14.32	202	eP	Pn	03 53 45.3	+0.4
RUSC	La Rusia	14.32	202		Pn	03 53 43.4	-1.5
DBBC	Dabeiba	14.72	215	eP	Pn	03 53 49.5	-0.5
SPBC	San Pablo de B	14.91	205	eP	Pn	03 53 49.5	-3.1
HELC	Santa Helena	15.07	211	eP	Pn	03 53 53.8	-1.3
NORC	Norcasia	15.32	208	eP	Pn	03 53 58.0	-0.1
CBOC	Ciudad Bolivar	15.59	212	eP	P	03 54 04.4	-1.6
CHIC	Chingaza	15.72	202	eP	Pn	03 54 03.0	-0.6
ROSC	El Rosal	15.75	205	eP	P	03 54 07.2	-0.7
ROSC	El Rosal	15.75	205	P	P	03 54 08.7	+0.7
ROSC				IAmb	IAmb	03 54 30.9	
	comp=Z,16nm,0.7s						
SOLC	Bahia Solano	16.03	217	eP	Pn	03 54 05.8	-1.5
PLMC	San Jos del P	16.55	211	⇑eP	Pn	03 54 14.3	+0.3
ORTC	Ortega, Tolima	16.97	206	eP	Pn	03 54 17.1	-2.1
GUVC	San Jose del G	17.34	196	eP	Pn	03 54 20.7	-3.2
GARC	Garzon, Huila	18.63	205	eP	P	03 54 39.1	-0.7
PCON	Cinco Dias	18.88	207	eP	Pn	03 54 45.4	+2.1
FLOC	Florencia	19.24	204	eP	Pn	03 54 46.8	-0.4
FLOC	Florencia	19.24	204	P	P	03 54 45.9	-0.4
PTGA	Pitinga	21.38	158	P	P	03 55 07.6	-1.8
	comp=Z,1.9nm,0.5s,baz=306,slow=18,SNR=3.8						
PTGA	Pitinga	21.38	158	IAmb	IAmb	03 55 26.5	
	comp=Z,7.9nm,1.0s						
OTAV	Otavalo	21.66	210	eP	P	03 55 13.7	+0.8
APG	El Apazote	22.06	262	P	P	03 55 18.3	+1.3
	comp=Z,7.2nm,0.9s,baz=226,slow=3.3,SNR=6.4						
ATAH	Atahualpa	28.30	203	LR	LR	04 09 10.3	
	comp=Z,101nm,18.1s,baz=8.1,slow=40						
SAML	Samuel	28.48	170	P	P	03 56 14.0	-3.0
SAML				IAmb	IAmb	03 56 14.8	
	comp=Z,4.0nm,0.8s						
JCT	Junction City	30.96	297		pP	03 56 43.0	+2.5
NNA	Nana	32.37	197	LR	LR	04 11 14.6	
	comp=Z,43nm,19.6s,baz=338,slow=39						
TXAR	Lajitas Array	34.03	294	P	P	03 57 05.4	-0.7
	comp=Z,0.5nm,0.7s,baz=105,slow=6.8,SNR=5.9						
MNMC	Minye Minye	38.27	183	P	P	03 57 40.1	-2.4
QLMT	Earthquake Lak	44.13	315	P	P	03 58 32.2	+1.7
NVAR	Mina Array Bea	47.50	305	P	P	03 58 57.8	+0.5
	comp=Z,0.3nm,0.6s,baz=73,slow=6.0,SNR=4.5						
NVAR	Mina Array Bea	47.50	305	P	P	03 58 58.3	+1.0
YKA	Yellowknife Ar	53.72	335	P	P	03 59 42.9	-0.7
	comp=Z,0.4nm,0.5s,baz=112,slow=7.8,SNR=6.7						
ESDC	Sonseca Array	57.96	55	P	P	04 00 14.8	+0.4
	comp=Z,0.3nm,0.5s,baz=275,slow=7.7,SNR=4.0						
BCAR	Beaver Creek A	65.69	331	P	P	04 01 08.0	+2.0
TORD	Torodi Ar. Bea	66.64	84	P	P	04 01 12.9	-0.1
	comp=Z,1.8nm,0.8s,baz=292,slow=6.3,SNR=7.0						
TORD	Torodi Ar. Bea	66.64	84	P	P	04 01 13.7	+0.8
ILAR	Eielson Array	68.03	333	P	P	04 01 21.0	+0.1
	comp=Z,0.9nm,0.8s,baz=94,slow=4.7,SNR=11						
ILAR	Eielson Array	68.03	333	P	P	04 01 22.0	+1.1
GERES	GERESS Array B	70.17	44	P	P	04 01 36.4	+1.8

PRE ***08*** *03:51:19.2±1.1, 26°.43S×27°.73E, h2km, ML2.3*

EAF ***08*** *03:51:19.3±1.0, 26°.69S×27°.92E, h33km±17km, MD3.8*

ISC 08 03:51:15.0±1.2**, 26°.57S**±0°.05×**27°.82E**±0°.07**, h5**km**, n11,** σ1.93/22**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRYS	Parys	0.54	229	eP	Pn	03 51 30.7	+1.2
PRYS				eS	Sn	03 51 39.0	-0.1
PRYS				AML	AML	03 51 43.4	
	comp=Z,98nm,0.5s						
KSR	Koster	1.09	311	eP	Pn	03 51 37.1	0.0
KSR				eS	Sb	03 51 51.1	0.0
KSR				AML	AML	03 51 55.2	
	comp=Z,35nm,0.6s						
SWZ	Schweizer	2.30	254	eP	Pb	03 51 57.8	+0.7
SWZ				eS	Sb	03 52 26.4	+0.5
SWZ				AML	AML	03 52 28.4	
	comp=Z,69nm,0.6s						
LBTB	Lobatse	2.53	307	eP	Pb	03 52 00.7	-0.3
LBTB				eS	Sn	03 52 29.1	+1.1
LBTB				AML	AML	03 52 32.6	
	comp=Z,98nm,0.2s						
BOSA	Boshof	3.05	228	i P	Pn	03 52 04.6	+0.6
BOSA				i S	Sn	03 52 39.0	-2.0
BOSA	Boshof	3.05	228	eP	Pb	03 52 09.5	-0.4
BOSA				eS	Sb	03 52 47.4	-0.2
BOSA				AML	AML	03 52 54.9	
	comp=Z,11nm,0.3s						
BOSA	Boshof	3.05	228	i P	Pn	03 52 04.6	+0.6
BOSA				i S	Sn	03 52 39.0	-2.0
MSNA	Messina	4.66	26	i P	Pn	03 52 28.8	+2.7
MSNA				i S	Sn	03 53 17.8	-2.8
MSNA	Messina	4.66	26	i P	Pn	03 52 28.8	+2.7
MSNA				i S	Sn	03 53 17.8	-2.8
MATP	Matopo	6.14	6	i P	Pn	03 52 48.7	+2.1
MATP				i S	Sn	03 53 54.3	-3.1
MATP	Matopo	6.14	6	i P	Pn	03 52 48.7	+2.1
MATP				i S	Sn	03 53 54.3	-3.1

NNC 08 04:09:13.7±2.4**, 36°.77N**×**70°.66E, h153**km±22km**, mb3.2, mpv3.8, 6C-4D, Error ellipse: s-maj=19.5km s-min=14.2km az=15.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.32	359	⇓P	Pn	04 10 44.4	-0.2
	4.8nm,0.5s,baz=185,slow=13,SNR=62						
KK31				S	Sn	04 11 57.2	+1.3
	23nm,0.7s,baz=179,slow=17,SNR=33						
AAK	Ala-Archa	6.56	26	⇓P	Pn	04 10 47.4	-0.6
	3.7nm,0.6s						
AAK				⇑S	Sn	04 12 02.8	+1.0
	13nm,0.7s						
CHMS	Chumysh	6.97	26	⇑P	Pn	04 10 52.9	-0.3
	3.1nm,0.6s						
CHMS				⇑S	Sn	04 12 10.9	-0.5
	12nm,0.8s						
MDOK	Medeo	8.04	36	P	Pn	04 11 08.7	+0.9
	6.1nm,0.7s						
MAKZ	Makanchi	13.09	37	⇑P	Pn	04 12 13.1	-0.8
	6.0nm,0.8s						
MK31	Makanchi Array	13.23	37	P	Pn	04 12 15.3	-0.4
	2.1nm,0.7s,baz=222,slow=15,SNR=18						
AB31	Akbulak array	14.71	331	P	Pn	04 12 34.6	+0.3
	0.7nm,0.4s,baz=148,slow=11,SNR=54						
AB31				⇑S	Sn	04 15 14.8	-2.7
	0.6nm,0.2s,baz=152,slow=22,SNR=6.0						
KURBB	Kurchatov Arra	14.95	20	⇓P	P	04 12 38.6	-0.3
	3.4nm,0.8s						
AKTO	Aktyubinsk	16.41	330	⇓P	P	04 12 56.6	+1.5
	4.8nm,0.9s						
ZAA0	Zalesovo Array	19.78	25	⇑P	P	04 13 31.7	-0.1
	1.0nm,0.6s						

TAP ***08*** *04:13:18.9, 23°.95N×122°.76E, h35km±1km, ML3.6, D*

JMA ***08*** *04:13:19.5±0.1, 24°.04N×122°.62E, h23km±3km, M2.9*

ISC 08 04:13:17.8±1.1**, 23°.99N**±0°.02×**122°.68E**±0°.02**, h16**km±9km**, n89,** σ0.82/151**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.52	28	P	Pn	04 13 29.5	-1.1
JYNG				eS	Sb	04 13 36.6	+0.7
YOJ	Yonaguni jima	0.56	33	P	Pn	04 13 30.6	-0.6
	baz=23						
YOJ				S	Sn	04 13 38.2	-1.9
	baz=23						
YOJ	Yonaguni jima	0.56	33	P	Pn	04 13 30.3	-0.8
YOJ				eS	Sb	04 13 37.7	+0.7
EOS1	EOS1	0.75	318	P	Pn	04 13 33.4	-0.3
	baz=316						
EOS1				eS	Sn	04 13 45.5	+0.8
	baz=316						
ENA	Nanau	0.96	297	eP	Pn	04 13 36.6	0.0
	baz=297						
ENA				S	Sn	04 13 50.3	+0.4
	baz=297						
TWC	Suao	0.97	309	P	Pg	04 13 36.6	0.0
	baz=308						
TWC				eS	Sn	04 13 51.5	+1.2
	baz=308						
ENLB	Shoufeng	0.99	265	eP	Pb	04 13 36.3	-0.3
	baz=267						
ENLB				S	Sn	04 13 50.7	+0.1
	baz=267						
TWD	Chiawan	0.99	275	P	Pg	04 13 37.0	+0.1
	baz=277						
TWD				eS	Sg	04 13 50.3	+0.3
	baz=277						
NACB	Ninganchiao	1.00	281	P	Pb	04 13 37.2	+0.3
	baz=281						
NACB				S	Sn	04 13 51.3	+0.2
	baz=281						
IRIF	Iriomote-Funau	1.02	70	P	Pn	04 13 38.9	+1.4
IRIF				eS	Sn	04 13 52.5	+1.0
HATJ	Hateruma jima	1.03	86	P	Pn	04 13 39.3	+1.7
HATJ				eS	Sn	04 13 53.5	+1.7
ETLH	Xiulin Townshi	1.11	281	eP	Pb	04 13 38.8	+0.1
	baz=282						
ETLH				eS	Sg	04 13 54.0	+0.1
	baz=282						
ILA	Ilan	1.15	313	eP	Pg	04 13 40.0	+0.1
	baz=311						
ESL	Shilin	1.15	261	eP	Pb	04 13 39.6	+0.3
	baz=263						
ESL				eS	Sb	04 13 54.1	+0.1
	baz=263						
NTC	Toucheng	1.16	318	eP	Pn	04 13 39.3	0.0
	baz=316						
NTC				eS	Sn	04 13 54.9	+0.1
	baz=316						
TWE	Neicheng	1.17	308	eP	Pb	04 13 40.0	+0.3
	baz=307						
TWE				S	Sn	04 13 55.6	+0.4
	baz=307						
EGFH	Guangfu	1.19	255	eP	Pn	04 13 39.9	+0.1

	baz=257						
EGFH	baz=257			S	Sb	04 13 55.4	+0.2
TWB1	Santiao Chiao baz=326	1.19	328	*e*P	Pn	04 13 39.2	-0.6
ENTT	Nioudou baz=302	1.20	303	*e*P	Pb	04 13 40.6	+0.4
ENTT	baz=302			*e*S	Sn	04 13 56.4	+0.5
SLBB	Yuanshan baz=307	1.22	309	*e*P	Pn	04 13 40.2	0.0
SLBB	baz=307			S	Sn	04 13 56.7	+0.3
NDT	Datong Townshi baz=299	1.22	300	*e*P	Pg	04 13 41.1	-0.3
NDT	baz=299			*e*S	Sn	04 13 57.1	+0.6
JKRS	Kuro-shima	1.24	78	P	Pg	04 13 42.8	+1.0
TIPB	Shuangxi baz=320	1.25	322	*e*P	Pn	04 13 40.4	-0.2
TIPB	baz=320			*e*S	Sn	04 13 57.7	+0.6
HGSD	Ruisui baz=249	1.25	247	*e*P	Pn	04 13 40.9	+0.3
HGSD	baz=249			*e*S	Sb	04 13 56.2	-0.7
NNSH	Datong baz=290	1.26	290	P	Pn	04 13 41.0	+0.2
NNSH	baz=290			*e*S	Sb	04 13 57.0	-0.2
NNSB	Datong baz=290	1.26	290	P	Pn	04 13 41.0	+0.2
NNSB	baz=290			*e*S	Sb	04 13 57.5	+0.3
NNS	Nan Shan baz=291	1.27	291	*e*P	Pn	04 13 41.3	+0.3
WHF	Hehuan Shan baz=278	1.30	277	*e*P	Pn	04 13 41.7	0.0
WHF	baz=278			S	Sb	04 13 58.4	-0.3
NWLT	Wulai baz=305	1.33	306	*e*P	Pb	04 13 42.3	-0.1
NWLT	baz=305			*e*S	Sn	04 13 59.9	+0.8
EHY	Hungye baz=251	1.33	249	*e*P	Pn	04 13 42.3	+0.5
EHY	baz=251			*e*S	Sn	04 13 58.6	-0.5
NWF	Wu-fen Shan baz=321	1.35	323	*e*P	Pn	04 13 42.0	-0.1
NWF	baz=321			*e*S	Sn	04 13 59.7	0.0
WFSB	Wu-fen Shan baz=321	1.35	323	*e*P	Pn	04 13 41.9	-0.1
WFSB	baz=321			*e*S	Sn	04 13 59.8	+0.1
YHNB	Yeheng baz=299	1.36	300	*e*P	Pb	04 13 42.9	-0.2
YHNB	baz=299			*e*S	Sn	04 14 00.6	+0.5
OWD	Renai baz=270	1.37	269	*e*P	Pn	04 13 42.7	+0.3
OWD	baz=270			*e*S	Sn	04 13 59.1	-1.3
CHGB	Renai baz=274	1.38	273	P	Pn	04 13 43.0	+0.4
CHGB	baz=274			*e*S	Sn	04 14 00.3	-0.2
NSK	Sanguang baz=299	1.38	300	P	Pn	04 13 43.0	+0.5
NSK	baz=299			*e*S	Sb	04 14 01.5	+0.7
JIJ	Ishigaki jima	1.39	74	P	Pg	04 13 43.9	-0.7
JIJ				*e*S	Sg	04 14 01.9	-0.8
TWT	Tachien baz=281	1.40	281	*e*P	Pb	04 13 43.9	+0.3
YULB	Yu-li baz=247	1.40	245	*e*P	Pn	04 13 43.2	+0.5
YULB	baz=247			S	Sn	04 14 00.4	-0.5
TWA	Mucha baz=313	1.40	315	*e*P	Pb	04 13 43.7	+0.1
TDCB	Techi baz=281	1.41	281	*e*P	Pb	04 13 43.7	-0.1
TWF1	Yuli baz=245	1.42	244	*e*P	Pn	04 13 43.6	+0.7
TWF1	baz=245			*e*S	Sn	04 14 01.4	+0.1
VWDT	VWDT baz=262	1.43	261	*e*P	Pb	04 13 43.8	-0.2
VWDT	baz=262			*e*S	Sn	04 14 01.3	-0.2
NHDH	Xindian Distri baz=311	1.43	313	*e*P	Pb	04 13 44.0	0.0
NHDH	baz=311			*e*S	Sn	04 14 01.8	+0.3
TATO	Taipei baz=311	1.46	312	*e*P	Pb	04 13 44.4	-0.2
FULB	Fuli baz=240	1.49	238	*e*P	Pb	04 13 45.2	0.0
FULB	baz=240			*e*S	Sn	04 14 02.3	-0.9
CHKT	Chengkung baz=236	1.50	234	*e*S	Sn	04 14 01.4	-1.8
YM01	YM01 baz=317	1.53	319	*e*P	Pn	04 13 45.0	+0.5
YM01	baz=317			*e*S	Sn	04 14 04.8	+0.6
YM10	YM10 baz=317	1.54	319	*e*P	Pn	04 13 44.9	+0.2
YM11	YM11 baz=318	1.54	320	*e*P	Pn	04 13 44.8	+0.1
DPDB	Guoxing baz=272	1.60	272	*e*P	Pn	04 13 46.5	+1.0
DPDB	baz=272			*e*S	Sn	04 14 06.3	+0.4
JISG	Ishigakijimahi	1.60	68	P	Pb	04 13 46.6	-0.5
JISG				*e*S	Sn	04 14 04.8	-1.1
WHP	Taichung City baz=281	1.61	281	*e*P	Pb	04 13 46.9	-0.2
WHP	baz=281			*e*S	Sn	04 14 06.3	+0.2
SMLT	Sun Moon Lake baz=267	1.63	267	*e*P	Pn	04 13 47.0	+1.0
LIOB	Emei baz=293	1.65	294	*e*P	Pb	04 13 47.5	-0.3
YUS	Yu-Shan baz=254	1.66	253	*e*P	Pb	04 13 47.9	-0.3
YUS	baz=254			*e*S	Sn	04 14 07.7	-0.2
TWH	Lutao baz=222	1.69	221	*e*S	Sn	04 14 06.8	-1.1
WHYT	Xinyi Township baz=261	1.69	260	*e*P	Pb	04 13 48.3	-0.4
ELDTW	Lidau baz=244	1.72	243	*e*P	Pn	04 13 47.5	+0.3
ELDTW	baz=244			*e*S	Sn	04 14 08.3	-0.6
TWQ1	Liyutan baz=282	1.77	282	*e*P	Pb	04 13 50.0	0.0
ALS	Alishan baz=256	1.78	255	*e*P	Pb	04 13 49.8	-0.4
WJS	Zhushan baz=266	1.79	265	*e*P	Pb	04 13 51.2	+1.0
WJS	baz=266			*e*S	Sg	04 14 15.2	-0.3
WNT	Mingjian baz=267	1.83	267	*e*P	Pb	04 13 50.8	0.0
CHN5	Tsauling baz=259	1.87	258	*e*P	Pb	04 13 52.0	+0.3
TWGBT	Beinan baz=233	1.88	232	*e*P	Pn	04 13 50.5	+1.3
TWGBT	baz=233			*e*S	Sn	04 14 11.7	-0.9
TWG	Pinlang baz=233	1.88	232	*e*P	Pn	04 13 49.8	+0.5
TWG	baz=233			*e*S	Sn	04 14 11.8	-0.9
STYT	Tauyuan baz=246	1.94	245	*e*P	Pb	04 13 52.1	-0.8
STYT	baz=246			*e*S	Sn	04 14 16.1	+1.7
JTJ	Tarama	1.96	70	P	Pn	04 13 51.1	+0.7
JTJ				*e*S	Sb	04 14 16.3	-1.0
WDLH	Douliu baz=262	1.98	262	*e*P	Pb	04 13 52.9	-0.6
WDLH	baz=262			*e*S	Sb	04 14 19.6	+1.7
TPUB	Ta-pu baz=251	2.00	250	*e*P	Pb	04 13 53.4	-0.4
TPUB	baz=251			*e*S	Sb	04 14 18.1	-0.4
CHN4	Tsaushan baz=253	2.01	252	*e*P	Pb	04 13 54.2	+0.2
CHN4	baz=253			*e*S	Sb	04 14 19.0	+0.1
WTP	Ta-pu baz=250	2.03	249	*e*P	Pb	04 13 53.9	-0.5
ECL	Taimali baz=230	2.11	229	*e*P	Pn	04 13 52.9	+0.5
ECL	baz=230			*e*S	Sn	04 14 17.1	-1.2
SLGT	Liugui baz=243	2.11	242	*e*P	Pb	04 13 55.0	-0.7
CHY	Chiayi baz=258	2.12	257	*e*P	Pb	04 13 55.5	-0.4
CHY	baz=258			*e*S	Sb	04 14 21.8	-0.2
RLNB	Erlin baz=268	2.12	268	*e*S	Sb	04 14 21.7	-0.3
SGST	Jiashian baz=246	2.12	245	*e*S	Sn	04 14 21.0	+2.2
CHN1	Nanshi baz=249	2.13	248	*e*P	Pb	04 13 55.1	-0.9
CHN1	baz=249			*e*S	Sb	04 14 22.0	-0.2
TWK	Hsinying baz=251	2.13	251	*e*P	Pb	04 13 55.5	-0.6
TWK	baz=251			*e*S	Sb	04 14 22.0	-0.3
LAY	Lan-yu baz=210	2.20	208	*e*P	Pn	04 13 53.6	-0.2
LAY	baz=210			*e*S	Sn	04 14 18.9	-1.8
SSD	Sandimen baz=238	2.25	237	*e*P	Pb	04 13 57.7	-0.4
SSD	baz=238			*e*S	Sb	04 14 25.9	+0.1
EAST	Anshuo baz=228	2.32	227	*e*P	Pn	04 13 56.0	+0.6
MASBT	Mashibuluo baz=235	2.33	234	*e*P	Pn	04 13 57.2	+1.8
WDGT	Dungji baz=256	2.86	256	*e*P	Pn	04 14 04.6	+1.9
PHUB	P'eng-hu baz=261	2.88	261	*e*P	Pn	04 14 05.0	+1.9
PHUB	baz=261			*e*S	Sn	04 14 37.9	+0.4
PNG	Penghu baz=262	2.89	262	*e*P	Pn	04 14 04.4	+1.2
PNG	baz=262			*e*S	Sn	04 14 38.4	+0.8
VWUC	VWUC baz=288	3.10	289	*e*P	Pn	04 14 05.9	-0.2
VWUC	baz=288			*e*S	Sn	04 14 39.6	-3.3
PTMZ	Houxiangcun baz=288	3.40	289	*e*P	Pn	04 14 10.2	0.0
PTMZ	baz=288			*e*S	Sn	04 14 47.0	-3.3
XPSS	Dashiqiu baz=321	3.69	323	*e*P	Pn	04 14 14.3	+0.1

NEIC ***08*** *04:16:30.9±2.4, 33°.90N±0°.03×118°.45W±0°.03, h8^{km}±5^{km}, Error ellipse: s-maj=6.1km s-min=2.2km az=142.0*

ANF ***08*** *04:16:30.6±0.2, 33°.98N×118°.41W, h16^{km}±1^{km}, ML3.2/29, Error ellipse: s-maj=1.5km s-min=1.3km az=68.0*

PAS ***08*** *04:16:31.4±2.2, 33°.97N±0°.04×118°.43W±0°.04, h10^{km}±3^{km}, ML3.1/236, Error ellipse: s-maj=5.9km s-min=4.8km az=138.0*

SCEDC ***08*** *04:16:31.5, 33°.97N×118°.43W, h10^{km}*

ISC 08 04:16:31.4±0.8**, 33°.96N**±0°.02×**118°.42W**±0°.02**, h16**^{km}±4^{km}**, n108,** σ**1^{s}.01**/144**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCGC	La Cienega, Cu	0.05	46		Pg	04 16 33.6	-0.8
LCGC					Sg	04 16 35.8	-0.6
BHPC	Baldwin Hills	0.06	62		Pg	04 16 33.7	-0.8
BHPC					Sg	04 16 35.8	-0.6
USC	University of	0.13	64		Pg	04 16 34.9	-0.3
USC					Sg	04 16 37.9	+0.3
WTT2	Watts, South G	0.14	96		Pg	04 16 35.1	-0.2
WTT2					Sg	04 16 38.5	+0.6
DJJ	Donna J Jenkin	0.14	350		Pg	04 16 34.4	-1.1
DJJ	Donna J Jenkin	0.14	350		Pg	04 16 34.3	-1.1
DJJ					Sg	04 16 37.0	-1.0
GR2C	Griffith Obs.	0.19	34		Pg	04 16 35.1	-0.8
GR2C					Sg	04 16 38.2	-0.9
HLLC	North Hollywoo	0.22	14		Pg	04 16 35.8	-0.6
RPV	Rancho Palos V	0.22	176		Pg	04 16 36.0	-0.4
GVRC	Garvey Reservo	0.27	71		Pg	04 16 37.2	0.0
FMP	Fort Macarthur	0.27	157		Pg	04 16 36.7	-0.6
FMP	Fort Macarthur baz=336,SNR=13	0.27	157	P	Pg	04 16 36.8	-0.6
FMP	baz=336			S	Sg	04 16 40.7	-0.6
PASC	Pasadena Art C	0.29	44		Pg	04 16 36.7	-0.9
PASC					Sg	04 16 40.8	-1.0
PASC	Pasadena Art C	0.29	44	Pg	Pg	04 16 36.4	-1.2
DECC	Green Verdugo	0.30	14		Pg	04 16 37.0	-0.8
DECC					Sg	04 16 41.3	-0.9
DECC	Green Verdugo baz=196,SNR=74	0.30	14	P	Pg	04 16 37.1	-0.8
DECC	baz=196			S	Sg	04 16 41.5	-0.7
GSA	Caltech--GSA	0.30	55		Pg	04 16 37.2	-0.6
CACC	Caltech Cellar	0.30	55		Pg	04 16 37.3	-0.6
AGOC	Agoura	0.34	303		Pg	04 16 38.1	-0.4
BLCC	Black Canyon	0.35	324		Pg	04 16 38.1	-0.6
BREC	Barre Substati	0.40	113		Pg	04 16 39.8	+0.3
MWC	Mount Wilson	0.40	49	Pg	Pg	04 16 38.8	-0.9
OAT	Oat Mountain	0.41	337		Pg	04 16 39.8	-0.1
IR2C	Iron Canyon	0.42	3		Pg	04 16 39.3	-0.8
CHFC	Chilao Flat St	0.49	42		Pg	04 16 40.4	-1.0
CHFC					Sg	04 16 47.2	-0.9
SANC	Santa Ana	0.52	120		Pg	04 16 42.1	+0.4
BLG	Laguna Peak, P	0.55	285		Pg	04 16 41.4	-1.0
BLG	Laguna Peak, P baz=104,SNR=7.8	0.55	285	P	Pg	04 16 41.3	-1.0
BLG	baz=104			S	Sg	04 16 49.0	-0.8
CIAC	Catalina I. Ai	0.56	179		Pg	04 16 42.0	-0.5
CIS	Catalina Islan baz=359,SNR=25	0.56	179	P	Pg	04 16 42.0	-0.5
CIS	baz=359			S	Sg	04 16 50.8	+0.8
BALC	Balcom Canyon	0.57	307		Pg	04 16 42.4	-0.2
CHNC	Chino	0.62	87		Pg	04 16 42.9	-0.7
LRRC	Littlerock Res	0.65	30		Pg	04 16 43.3	-0.9
SSK	Sunset Peak	0.66	68		Pg	04 16 43.4	-1.0
PYR	Pyramid	0.66	337		Pg	04 16 44.0	-0.3
LEOC	Leona Valley	0.67	8		Pg	04 16 43.5	-1.2
HOLC	Holcomb Ridge	0.69	44		Pg	04 16 43.9	-1.1
BFSC	Mount Baldy Ra	0.69	66		Pg	04 16 43.8	-1.2
BFSC	Mount Baldy Ra baz=248,SNR=39	0.69	66	P	Pg	04 16 43.8	-1.2
OSI	Osito Audit: C	0.69	339		Pg	04 16 43.7	-1.4
OSI	Osito Audit: C baz=159	0.69	339	P	Pg	04 16 44.1	-0.9
OSI	baz=159			S	Sb	04 16 55.1	+0.5
MLSC	Mira Loma	0.72	86		Pg	04 16 44.4	-1.1
STCC	Santa Clara	0.72	298		Pg	04 16 45.1	-0.4
ALPC	Antelope	0.73	8		Pg	04 16 44.5	-1.2
FOXC	Fox Airport	0.80	11		Pg	04 16 45.8	-1.1
SS2	San Sevaine	0.81	72		Pg	04 16 46.2	-0.8
FON	Fontana	0.83	80		Pg	04 16 47.1	-0.4
RSBC	Riverside Bore	0.91	89		Pg	04 16 48.3	-0.8
THC	Tehachapi Micr	0.96	348		Pg	04 16 48.9	-1.2
EDW2	Edwards Air Fo	0.98	21		Pg	04 16 49.0	-1.5
EDW2	Edwards Air Fo baz=202,SNR=62	0.98	21	P	Pg	04 16 49.0	-1.5
EDW2	baz=202			S	Sg	04 17 01.7	-1.7
SCI2	San Clemente I baz=5.5,SNR=5.6	0.99	186	P	Pg	04 16 50.1	-0.4
SCI2	baz=5.5			S	Sb	04 17 04.0	+1.2
SCZ2	Santa Cruz Isl	1.01	272		Pg	04 16 49.8	-1.2
SCZ2	Santa Cruz Isl baz=91,SNR=5.8	1.01	272	P	Pg	04 16 49.7	-1.2
SCZ2	baz=91			S	Sb	04 17 04.8	+1.3
HLNC	Highland	1.01	81		Pg	04 16 50.3	-0.7
MPI	Mount Pinos, F	1.04	325		Pg	04 16 50.2	-1.3
PEC	Perris	1.05	94		Pg	04 16 50.0	-1.8
MURC	Murrieta	1.09	109		Pg	04 16 50.3	-2.1
MURC	Murrieta baz=290,SNR=47	1.09	109	P	Pg	04 16 50.7	-1.7
MURC	baz=290			S	Sg	04 17 05.6	-1.0
CFT	Crafton Hills	1.09	86		Pg	04 16 51.0	-1.6
ABL	Mount Abel	1.10	324		Pg	04 16 51.1	-1.7
HYS	Haystack Butte	1.14	38		Pb	04 16 52.2	-0.7
SNCC	San Nicolas Is	1.16	232		Sb	04 17 07.6	-0.3
SNCC	San Nicolas Is	1.16	232		Pb	04 16 52.3	-0.8
SNCC	San Nicolas Is	1.16	232		Pb	04 16 52.9	-0.2
SNCC	San Nicolas Is baz=51	1.16	232	P	Pb	04 16 52.8	-0.3
SNCC	baz=51			S	Sb	04 17 08.1	+0.1
ARVC	Arvin baz=164,SNR=52	1.21	344	P	Pb	04 16 53.1	-0.8
BBRC	Big Bear Solar baz=257,SNR=32	1.28	76	Pg	Pn	04 16 54.6	-0.3
PKM	Mcpherson Peak baz=128	1.47	309	Pb	Pn	04 16 57.7	+0.2
PKM	baz=128			Sb	Sb	04 17 18.1	+1.0
RRX	Edison Barstow baz=233,SNR=13	1.49	52	Pg	Pb	04 16 58.9	+0.2
RRX	baz=233			Sg	Sg	04 17 19.1	-0.4
109C	Camp Elliot, M	1.54	134		Pn	04 16 57.2	-1.0
109C	Camp Elliot, M baz=315,SNR=12	1.54	134	P	Pn	04 16 56.8	-1.4
PFO	Pinyon Flats O	1.67	102		Pn	04 17 00.1	0.0
PFO	Pinyon Flats O baz=283,SNR=18	1.67	102	P	Pn	04 16 59.5	-0.6
PFO	baz=283			Sb	Sn	04 17 22.8	+1.4
XPFO	Pion Flat	1.68	102		Pn	04 16 59.8	-0.4
ISA	Isabella, Lake	1.70	359		Pn	04 17 00.4	-0.1
EML	El Monte Cty P	1.70	129		Pn	04 16 59.1	-1.3
CARC	Carrizo Plain	1.78	319		Pn	04 17 02.2	+0.6
SMMC	Simmler baz=136,SNR=6.5	1.87	317	Pb	Pn	04 17 03.5	+0.7
SMMC	baz=136			Sb	Sb	04 17 28.6	+0.2
GSC	Goldstone, Bar	1.89	45		Pn	04 17 03.7	+0.6
GSC	Goldstone, Bar baz=226,SNR=45	1.89	45	Pb	Pn	04 17 03.9	+0.8
GSC	baz=226			Sg	Sg	04 17 31.1	-1.1
HEC	Hector,Ludlow baz=244	1.93	63	Pn	Pn	04 17 03.6	-0.1
HEC	baz=244,SNR=51			Pg	Pb	04 17 06.8	+0.5
HEC	baz=244			Sb	Sb	04 17 31.0	+0.8
BAR	Barrett	1.95	131		Pn	04 17 03.6	-0.2
MONP2	Monument Peak baz=303	1.99	122	P	Pn	04 17 04.0	-0.6
MONP2	baz=303			S	Sn	04 17 29.7	+0.5
MPMC	Manual Prospec baz=201,SNR=24	2.23	20	Pn	Pn	04 17 09.0	+1.2
MPMC	baz=201			Pg	Pb	04 17 12.3	+0.9
MPMC	baz=201			Sb	Sb	04 17 40.8	+2.0
PAGB	Antelope Grade	2.32	320	Pn	Pn	04 17 09.3	+0.4
IKP	In-Ko-Pah, Jac baz=305	2.34	123	S	Sn	04 17 39.3	+1.6
DAC	Darwin (Calif)	2.41	16	Pn	Pn	04 17 09.8	-0.5
SWSC	Sam W. Stewart baz=296	2.42	114	Pb	Pb	04 17 14.1	-0.4
SWSC	baz=296			Sb	Sb	04 17 45.8	+1.7
GMRC	Granite Mounta baz=251	2.43	70	Pn	Pn	04 17 09.9	-0.6
GMRC	baz=251,SNR=31			Pg	Pb	04 17 15.1	+0.3
CWC	Cottonwood Cre baz=187	2.49	6	Pg	Pg	04 17 17.9	-1.3
TUQ	Turquoise Moun baz=235	2.53	54	Pg	Pb	04 17 18.1	+1.6
IRM	Iron Mountain baz=267,SNR=24	2.73	85	Pg	Pb	04 17 20.4	+0.6
Y12C	Blythe	3.25	93	Pn	Pn	04 17 21.5	-0.3
Y12C					Pg	04 17 31.8	-2.0
TPNV	Topopah Spring	3.47	30		Pn	04 17 25.4	+0.5
TPNV	Topopah Spring baz=212	3.47	30	P	Pn	04 17 26.5	+1.6
TPNV	baz=212			S	Sn	04 18 05.9	+0.2
OMMB	Old Mammoth Mi	3.67	353	Pn	Pn	04 17 29.5	+1.7
SHPR	Sheep Range	3.68	46		Pn	04 17 28.9	+1.0
MDPB	Devils Postpil	3.70	352	Pn	Pn	04 17 30.1	+1.9
MDPB					Pb	04 17 38.5	+1.9
SAO	San Andreas Ge	3.73	319	Pn	Pn	04 17 27.5	-0.9
NVAR	Mina Array Bea	4.46	1	Pn	Pn	04 17 38.8	+0.2
NVAR					Pb	04 17 52.0	+2.5
Y14A	Wickenburg	4.50	89		Pn	04 17 38.5	-0.5
R11A	Troy Canyon, C	4.94	27	Pn	Pn	04 17 44.5	-0.6
LCMT	Little Creek M	5.21	53	Pn	Pn	04 17 49.5	+0.7
KNB	Kanab	5.49	55	Pn	Pn	04 17 53.1	+0.4
U15A	North Rim	5.59	62	Pn	Pn	04 17 55.0	+0.8
PSUT	Pine Spring	5.87	38	Pn	Pn	04 17 57.6	-0.3
PSUT					Pg	04 18 20.7	-3.0
MSU	Marysvale	6.79	46	Pn	Pn	04 18 11.5	+0.9

IPEC ***08*** *04:30:35.2±0.3, 51°.55N×16°.19E, h0^{km}, ML2.4/4, Error ellipse: s-maj=3.0km s-min=1.2km az=50.0*

IDC ***08*** *04:30:37.0±1.2, 51°.45N×15°.94E, h0^{km}, mb1 3.4/4, mb1mx3.1/44, mbtmp3.2/4, ML2.9/4, Error ellipse: s-maj=16.9km s-min=10.5km az=116.0*

PRU ***08*** *04:30:36.6±0.0, 51°.50N×16°.08E, h0^{km}*

BGR ***08*** *04:30:37.1±0.4, 51°.48N×16°.08E, h1^{km}, ML3.0/14, Error ellipse: s-maj=4.4km s-min=2.2km az=14.0*

VIE ***08*** *04:30:40.0±0.9, 51°.26N×16°.15E, h0^{km}, mb2.5/6, ml2.7/10, Error ellipse: s-maj=7.4km s-min=6.3km az=87.0 63 km WNW of Wroclaw Suspected Mining induced.*

ISC 08 04:30:34.4±0.8**, 51°.59N**±0°.03×**16°.12E**±0°.02**, h0**^{km}**, n68,** σ**0^{s}.93**/134**, 2C-6D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.76	172	*e*Pg	Pg	04 30 49.5	+0.6
KSP				*e*Sg	Sg	04 30 59.0	+0.5
KSP	Ksiaz	0.76	172	*i* Pg	Pg	04 30 49.4	+0.6
KSP				*e*Sg	Sg	04 30 58.7	+0.1
CHVC	Chvalec	1.00	182	*e*PG	Pb	04 30 54.1	-0.5
CHVC	comp=Z,60nm,0.4s			*e*SG	Sg	04 31 06.7	+0.1
OSTC	Ostas	1.04	177	*e*PG	Pb	04 30 54.8	-0.4
OSTC	comp=Z,59nm,0.5s			*e*SG	Sg	04 31 07.5	-0.1
UPC	Upice	1.09	184	*e*PG	Pg	04 30 55.3	+0.2
UPC				*e*SG	Sg	04 31 09.0	-0.2
DPC	Dobruska-Polom	1.25	174	*e*Pg	Pg	04 30 58.3	+0.1
DPC				*e*Sg	Sg	04 31 13.8	-0.6
DPC	Dobruska-Polom	1.25	174	*e*PG	Pg	04 30 58.1	-0.1
DPC	comp=Z,75nm,0.8s			*e*SG	Sg	04 31 13.2	-1.2
PVCC	Panska Ves	1.45	223	*e*PG	Pn	04 31 01.6	-0.2
PVCC	comp=Z,112nm,0.4s			*e*SG	Sg	04 31 20.1	-0.7
BRG	Berggiesshubel	1.55	243	PN	Pn	04 31 02.4	-0.7
BRG				PG	Pg	04 31 04.3	+0.3
BRG	209nm,0.6s			SG	Sn	04 31 24.3	+0.4
BRG	Berggiesshubel	1.55	243	*e*Pn	Pn	04 31 02.7	-0.4
BRG				*e*Pg	Pg	04 31 04.4	+0.5
BRG				*e*Sg	Sn	04 31 24.3	+0.4
KRLC	Kraliky	1.57	164	*e*PG	Pn	04 31 03.4	-0.2
KRLC	comp=Z,178nm,0.6s			*e*SG	Sg	04 31 23.2	-1.6
PRA	Prague	1.86	216	*e*PN	Pn	04 31 07.3	-0.2
PRA				*e*PG	Pg	04 31 10.0	0.0
PRA				*e*SG	Sb	04 31 32.6	-0.4
FBE	Freiberg	1.86	250	*e*Pn	Pb	04 31 08.9	-0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
FBE				*e*Sg	Sg	04 31 34.2	0.0
PRU	Pruhonice	1.89	213	*e*PN	Pn	04 31 07.5	-0.4
PRU				*e*PG	Pb	04 31 09.3	-0.4
PRU				*e*SG	Sb	04 31 33.2	-0.7
	comp=Z,27nm,0.4s						
CLL	Collm	1.97	263	*e*Pn	Pn	04 31 09.8	+0.8
CLL				*e*Sg	Sg	04 31 39.7	+2.0
CLL	Collm	1.97	263	*i* Pn	Pn	04 31 09.8	+0.8
CLL				*e*Pg	Pg	04 31 13.0	+0.9
CLL				*e*		04 31 16.0	
CLL				*i* Sg	Sg	04 31 39.0	+1.3
	comp=Z,50nm,0.6s						
MORC	Moravsky Berou	2.03	153	*e*Pn	Pn	04 31 10.0	+0.2
MORC				*e*Sg	Sg	04 31 39.7	+0.2
MORC	Moravsky Berou	2.03	153	⇓P	Pn	04 31 10.0	+0.2
MORC				⇓S	Sn	04 31 34.1	-1.8
MORC	Moravsky Berou	2.03	153	*e*Pn	Pn	04 31 09.8	0.0
	baz=335						
MORC				*e*Sg	Sb	04 31 36.9	-0.9
	comp=Z,21nm,0.4s,baz=335						
MORC	Moravsky Berou	2.03	153	*e*PN	Pn	04 31 09.8	0.0
MORC				*e*SG	Sb	04 31 37.0	-0.9
OKC	Ostrava-Krasne	2.18	143	*e*Pn	Pn	04 31 11.7	-0.1
OKC				*e*Pg	Pg	04 31 16.0	0.0
OKC				*e*Sg	Sg	04 31 43.7	-0.5
OKC	Ostrava-Krasne	2.18	143	*e*SG	Sb	04 31 42.3	+0.2
VRAC	Vranov	2.30	172	Pn	Pn	04 31 13.8	+0.2
	comp=Z,1.5nm,0.3s,baz=342,slow=16,SNR=16						
VRAC				Lg	Lg	04 31 46.7	
	comp=Z,4.9nm,0.3s,baz=256,slow=3.6,SNR=11						
VRAC	Vranov	2.30	172	⇓P	Pn	04 31 13.8	+0.2
VRAC				⇑S	Sn	04 31 42.6	0.0
VRAC	Vranov	2.30	172	*e*Pn	Pn	04 31 13.5	-0.1
	baz=354						
VRAC				*e*Sg	Sb	04 31 45.9	+0.2
	comp=Z,19nm,0.4s,baz=354						
VRAC	Vranov	2.30	172	*e*PN	Pn	04 31 13.5	-0.1
VRAC				*e*SG	Sb	04 31 46.0	+0.2
TREC	Trest	2.33	190	*e*PN	Pn	04 31 14.4	+0.4
TREC				*e*PG	Pb	04 31 17.8	+0.5
KRUC	Moravsky	2.54	176	*e*Pn	Pn	04 31 17.3	+0.5
	baz=357						
KRUC				*e*Sg	Sb	04 31 53.4	+1.0
	comp=Z,15nm,0.3s,baz=357						
KRUC	Moravsky	2.54	176	*e*PN	Pn	04 31 17.4	+0.6
KRUC				*e*SG	Sb	04 31 53.5	+1.0
TANN	Tannenbergstha	2.59	244	*e*Pn	Pn	04 31 18.0	+0.4
TANN				*e*Pg	Pg	04 31 23.9	-0.2
TANN				*e*Sg	Sg	04 31 56.6	-1.1
NKC	Novy Kostel	2.69	241	*e*PN	Pn	04 31 19.2	+0.2
NKC				*e*PG	Pg	04 31 25.5	-0.5
NKC				*e*SG	Sg	04 32 01.2	+0.4
	comp=Z,56nm,0.5s						
OJC	Ojcow	2.70	119	*e*Pg	Pg	04 31 27.3	+1.2
OJC				*e*Sg	Sg	04 32 02.3	+1.2
OJC	Ojcow	2.70	119	*e*Pg	Pg	04 31 26.9	+0.8
OJC				*e*Sg	Sg	04 32 02.6	+1.5
JAVC	Velka Javorina	2.91	159	*e*Pn	Pn	04 31 22.1	+0.2
	baz=341						
JAVC				*e*Sg	Sb	04 32 04.5	+1.3
	comp=Z,14nm,0.6s,baz=341						
JAVC	Velka Javorina	2.91	159	*e*PN	Pn	04 31 22.2	+0.3
JAVC				*e*SG	Sb	04 32 04.6	+1.3
KHC	Kasperske Hory	2.95	214	*e*PN	Pn	04 31 22.3	-0.2
KHC				*e*PG	Pb	04 31 28.5	+0.7
KHC				*e*SN	Sn	04 31 58.3	-0.4
KHC				*e*SG	Sg	04 32 07.7	-1.4
	comp=Z,17nm,0.5s						
MOX	Moxa	2.99	253	*e*Pn	Pn	04 31 24.3	+1.3
MOX				*e*Pg	Pg	04 31 31.9	+0.2
MOX				*e*Sg	Sg	04 32 10.9	+0.4
MANZ	Manzenberg	3.01	239	*e*Pn	Pn	04 31 24.0	+0.6
MANZ				*e*Pg	Pg	04 31 32.4	+0.3
MANZ				*e*Sg	Sg	04 32 10.7	-0.3
ROTZ	Rotzenmuhle	3.09	235	*e*Pn	Pn	04 31 24.9	+0.6
ROTZ				*e*Pg	Pg	04 31 34.4	+0.9
ROTZ				*e*Sg	Sg	04 32 12.3	-1.2
GEC2	GERESS Array S	3.16	210	*e*Pn	Pn	04 31 26.3	+0.9
GEC2				*e*Sg	Sb	04 32 12.3	+1.8
GERES	GERESS Array B	3.16	210	Pn	Pn	04 31 25.4	0.0
	comp=Z,1.8nm,0.3s,baz=31,slow=13,SNR=58						
GERES				Lg	Lg	04 32 13.0	
	comp=Z,3.6nm,0.3s,baz=33,slow=33,SNR=9.7						
SMOL	Smolenice	3.19	164	*e*PG	Pg	04 31 36.6	+1.1
SMOL				*e*SG	Sg	04 32 19.5	+2.6
SMOL				*e*LG	Lg	04 32 22.4	
WET	Wettzell	3.21	222	*e*Pn	Pn	04 31 26.4	+0.3
WET				*e*Sg	Sg	04 32 15.5	-2.0
LANS	Liptovska Anna	3.25	137	*e*PN	Pn	04 31 23.6	-3.0
LANS				*e*PG	Pg	04 31 36.7	+0.1
LANS				*e*SG	Sg	04 32 18.4	-0.2
LANS				*e*LG	Lg	04 32 28.3	
MODS	Modra-Piesok	3.31	167	*e*PG	Pg	04 31 36.5	-1.2
MODS				*e*SG	Sg	04 32 20.3	-0.2
MODS				*e*LG	Lg	04 32 24.8	
ZST	Bratislava	3.46	169	*e*SG	Sg	04 32 26.3	+1.0
VYHS	Vyhne	3.56	150	*e*PN	Pn	04 31 31.7	+0.9
VYHS				*e*PG	Pg	04 31 43.4	+0.9
VYHS				*e*SG	Sg	04 32 29.1	+0.5
BSD	Bornholm Skovb	3.60	349	*i* P	Pn	04 31 31.9	+0.5
BSD				*i* S	Sn	04 32 11.8	-2.8
CONA	Conrad Observa	3.67	183	*e*Pn	Pn	04 31 33.2	+0.7
	comp=Z,1.6nm,0.3s,SNR=6.3						
CONA				Sg	Sg	04 32 30.7	-1.5
	comp=Z,11nm,0.4s						
MOA	Molln	3.93	199	*e*Pn	Pn	04 31 36.5	+0.6
	comp=Z,3.9nm,0.3s,SNR=13						
MOA				Sg	Sg	04 32 40.6	-0.1
	comp=Z,15nm,0.5s						
ARSA	Arzberg	4.36	185	*e*Pn	Pn	04 31 43.5	+1.6
	comp=Z,1.1nm,0.3s						
ARSA				Sg	Sg	04 32 52.5	-1.9
	comp=Z,11nm,0.7s						
PSZ	Piszkesteto	4.41	145	⇓P	Pn	04 31 42.0	-0.7
KOLS	Kolonicke sedl	4.76	122	*e*PG	Pg	04 32 05.9	+0.4
KBA	Koelnbreinsper	4.87	203	*e*Pn	Pn	04 31 49.7	+0.7
	comp=Z,2.3nm,0.3s,SNR=7.6						
KBA				Sg	Sg	04 33 10.2	-0.4
	comp=Z,11nm,0.7s						
SOKA	Soboth	4.97	189	Sg	Sg	04 33 12.8	-1.1
	comp=Z,3.1nm,0.6s						
WATA	Walderalm	5.19	217	*i* Pn	Pn	04 31 56.1	+2.8
	comp=Z,1.4nm,0.3s						
OBKA	Obir	5.19	192	Sg	Sg	04 33 21.1	+0.1
	comp=Z,6.0nm,0.5s						
WTTA	Wattenberg	5.23	216	Sg	Sg	04 33 22.0	-0.1
	comp=Z,7.8nm,0.6s						
MOTA	Moosalm	5.36	220	*e*Pn	Pn	04 31 55.7	0.0
	comp=Z,1.5nm,0.3s						
RETA	Reutte	5.39	222	*e*Pn	Pn	04 31 56.3	+0.3
	comp=Z,1.0nm,0.3s						
RETA				Sg	Sg	04 33 26.4	-1.0
	comp=Z,5.8nm,0.5s						
ABTA	Abfaltersbach	5.39	207	*e*Pn	Pn	04 31 57.3	+1.2
	comp=Z,2.1nm,0.7s						
ABTA				Sg	Sg	04 33 26.2	-1.3
	comp=Z,5.5nm,0.6s						
TRPA	Tarpa	5.40	127	⇓P	Pn	04 31 54.8	-1.4
SQTA	Sankt Quirin	5.42	218	*i* Pn	Pn	04 31 58.2	+1.6
	comp=Z,1.7nm,0.3s						
SQTA				Sg	Sg	04 33 28.7	+0.2
	comp=Z,4.5nm,0.4s						
DAVA	Damuels	5.93	226	Sg	Sg	04 33 45.3	+0.7
	comp=Z,6.5nm,0.6s						
DRGR		6.46	135	⇑P	Pn	04 32 10.6	-0.1
BURAR	Bucovina Array	7.12	120	⇓P	Pn	04 32 18.9	-0.9
AKASG	Malin Array Be	8.29	91	Pn	Pn	04 32 37.2	+1.5
	comp=Z,0.9nm,0.3s,baz=280,slow=12,SNR=5.2						
FINES	FINESS Array B	11.29	25	Pn	Pn	04 33 16.3	-0.4
	comp=Z,0.2nm,0.3s,baz=214,slow=12,SNR=6.2						

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*GUC **08** 04:53:55.9±0.7, 21°.78S×68°.39W, h133^{km}±4^{km}, ML3.5*
*IDC **08** 04:53:55.2±0.8, 21°.78S×68°.23W, h120^{km}±12^{km}, mb3.5/4, mb1 3.7/6, mb1mx3.4/23, mbtmp3.9/6, Error ellipse: s-maj=26.0km s-min=21.4km az=134.0*
ISC 08 04:53:55.3±0.9**, 21°.71S**±0°.04×**68°.31W**±0°.07**, h125**^{km}±8^{km}**, n25,** σ1^{s}**57**/43**, mb4.0**/4**, 11C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.87	264	⇓*e*P	Pn	04 54 17.3	+0.5
PB09				*e*S	Sn	04 54 34.1	+1.1
LVC	Limon Verde	1.05	212	P	Pn	04 54 18.6	-0.2
	56nm,0.3s,baz=31,slow=8.0,SNR=259						
LVC				S	Sn	04 54 35.5	-0.9
	48nm,0.3s,baz=222,slow=18,SNR=78						
LVC	Limon Verde	1.05	212	*i* P	Pn	04 54 18.6	-0.2
LVC				*e*S	Sn	04 54 36.3	-0.1
PB01	IPOC Station P	1.28	301	⇑*i*P	Pn	04 54 21.1	+0.3
PB01				*e*S	Sn	04 54 40.6	+0.4
PB01				IAML		04 54 42.1	
	comp=E,665nm,0.2s						
PB03	IPOC Station P	1.38	256	⇑*i*P	Pn	04 54 21.5	-0.5
PB03				*e*S	Sn	04 54 41.0	-1.2
PB03				IAML		04 54 42.7	
	comp=E,803nm,0.6s						
PB07	IPOC Station P	1.47	269	⇓*e*P	Pn	04 54 22.7	-0.2
PB07				*e*S	Sn	04 54 43.0	-0.8
PB07				IAML		04 54 44.1	
	comp=N,838nm,0.2s						
PB02	IPOC Station P	1.53	285	⇑*i*P	Pn	04 54 23.2	-0.4
PB02				*i* S	Sn	04 54 44.4	-0.5
PB02				IAML		04 54 46.0	
	comp=E,1µm,0.4s						
PB06	IPOC Station P	1.53	230	⇑*i*P	Pn	04 54 23.6	0.0
PB06				*e*S	Sn	04 54 43.9	-1.2
PB06				IAML		04 54 45.5	
	comp=N,602nm,0.4s						
PB08	IPOC Station P	1.75	333	⇑*i*P	Pn	04 54 27.8	+1.4
PB08				*i* S	Sn	04 54 51.7	+1.5
PB04	IPOC Station P	1.81	250	*i* P	Pn	04 54 26.3	-0.7
PB04				*i* S	Sn	04 54 49.7	-1.4
PB04				IAML		04 54 56.9	
	comp=N,393nm,0.5s						
PB15	IPOC Station P	1.83	216	*e*P	Pn	04 54 27.3	+0.1
PB15				*e*S	Sn	04 54 51.0	-0.6
PATCX	Punta Patache	1.93	297	⇑*i*P	Pn	04 54 28.0	-0.3
PATCX				*i* S	Sn	04 54 52.6	-1.0
PATCX				IAML		04 54 55.3	
	comp=N,835nm,0.4s						
TA01	Diego Aracena	2.08	303	⇑*i*P	Pn	04 54 29.5	-0.6
TA01				*i* S	Sn	04 54 55.5	-1.2
TA01				IAML		04 54 57.1	
	comp=E,355nm,0.5s						
PB05	IPOC Station P	2.09	237	⇑*i*P	Pn	04 54 29.4	-0.8
PB05				*i* S	Sn	04 54 54.8	-2.2
PB05				IAML		04 55 01.6	
	comp=E,225nm,0.5s						
GO01	Chusmiza	2.20	338	*e*P	Pn	04 54 32.7	+0.7
GO01				*i* S	Sn	04 55 01.4	+1.4
PB11	IPOC Station P	2.31	327	⇑*i*P	Pn	04 54 33.2	0.0
PB11				*i* S	Sn	04 55 02.1	0.0
PSGC	Pisagua	2.70	321	⇑*i*P	Pn	04 54 37.0	-1.1
MNMC	Minye Minye	2.84	335	⇑*i*P	Pn	04 54 40.5	+0.5
MNMC				*i* S	Sn	04 55 15.2	+0.9
LPAZ	La Paz	5.40	2	P	Pn	04 55 16.7	+2.3
	comp=E,1.5nm,0.3s,baz=160,slow=6.5,SNR=13						
SIV	San Ignacio	8.91	52	P	Pn	04 55 58.8	-2.4
	comp=E,2.7nm,0.3s,baz=238,slow=10.0,SNR=82						
SIV				S	Sn	04 57 32.4	-7.5
	comp=E,0.4nm,0.3s,baz=138,slow=23,SNR=4.6						
TXAR	Lajitas Array	61.12	325	P	P	05 03 56.7	+0.1
	comp=E,0.1nm,0.6s,baz=144,slow=9.4,SNR=2.4						
DBIC	Dimbokro	68.26	73	P	P	05 04 43.5	+0.3
	comp=E,1.6nm,0.6s,baz=220,slow=6.7,SNR=4.2						
TORD	Torodi Ar. Bea	76.90	70	P	P	05 05 34.1	-0.2
	comp=E,1.7nm,0.7s,baz=256,slow=5.5,SNR=21						
YKA	Yellowknife Ar	91.57	340	P	P	05 06 48.3	+0.8
	comp=E,0.7nm,0.7s,baz=132,slow=4.5,SNR=16						
MKAR	Makanchi Array	145.47	37	PKPbc	PKPdf	05 13 19.8	+1.2
	comp=E,0.3nm,0.5s,baz=332,slow=4.3,SNR=6.0						

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*GCG **08** 05:02:33.4±0.7, 14°.71N×93°.17W, h35^{km}±999^{km}, MD3.4*
*MEX **08** 05:02:35.9±0.8, 15°.15N×92°.67W, h119^{km}±6^{km}, MD3.8*
ISC 08 05:02:36.8±1.6**, 15°.20N**±0°.07×**92°.76W**±0°.06**, h103**^{km}±13^{km}**, n9,** σ1^{s}**23**/17**, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.56	121	*e*P	Pn	05 02 52.6	-0.7
THIG				*e*S	Sn	05 03 05.0	-0.6
PCIG		0.67	319	*e*P	Pn	05 02 54.5	+0.3
PCIG				*e*S	Sn	05 03 09.0	+1.8
CCIG	Comitan	1.24	29	*i* P	Pn	05 02 59.8	-0.5
CCIG				*e*S	Sn	05 03 18.0	+0.1
STG3	Santiaguito 3,	1.25	113	*e*P	Pn	05 02 59.2	-1.2
STG3				*e*S	Sn	05 03 17.7	-0.6
TGIG		1.61	348	*e*P	Pn	05 03 03.6	-1.0
TGIG				*i* S	Sn	05 03 25.6	-0.2
FUG	Fuego 3	2.00	112	*e*P	Pn	05 03 09.5	-0.1
FUG				*e*S	Sn	05 03 36.9	+2.2
IXG	Ixpaco	2.47	114	*e*P	Pn	05 03 14.8	-0.9
IXG				*e*S	Sn	05 03 47.9	+2.3
CMIG	Matias Romero	2.78	313	*e*P	Pn	05 03 19.7	+0.1
CMIG				*e*S	Sn	05 03 53.3	+0.7
HUIG	Huatulco	3.28	280	*e*P	Pn	05 03 25.1	-1.2

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*IDC **08** 05:14:03.7±1.9, 60°.01N×141°.19W, h0^{km}, mb3.4/2, mb1 3.4/5, mb1mx3.2/53, mbtmp3.3/5, ML2.7/3, Error ellipse: s-maj=30.5km s-min=19.9km az=176.0*
*PGC **08** 05:14:05.3±0.9, 59°.96N×141°.47W, h1^{km}, ML3.4/11, 133km Wnw of Yakutat, Ak Southeastern Alaska*
*NEIC **08** 05:14:05.0±1.8, 59°.95N±0°.02×141°.53W±0°.04, h6^{km}±2^{km}, Error ellipse: s-maj=4.1km s-min=2.1km az=219.0*
*AEIC **08** 05:14:06.4±2.4, 60°.01N±0°.02×141°.45W±0°.04, h10^{km}±5^{km}, ML3.3/62, Mwr3.7/22(NEIC), Error ellipse: s-maj=3.7km s-min=2.4km az=213.0*
*NEIC **08** 05:14:07, 60°.10N×141°.51W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$1.14; M$_{\theta\theta}$-1.57; M$_{\phi\phi}$0.43; M$_{r\theta}$4.38; M$_{\theta\phi}$0.33; M$_{\phi r}$-0.85; Fault plane solution: M$_{0}$4.69000×10^{14} NP1:ϕ_s100.99000°, δ81.41000°, λ90.87000°. NP2:ϕ_s275.21000°, δ8.63000°, λ84.29000°. Principal axes: T 4.4309, Plg54.0000°, Azm12.0000°; N 0.4820, Plg1.0000°, Azm281.0000°; P -4.9129, Plg36.0000°, Azm190.0000°;*
ISC 08 05:14:03.8±1.3**, 59°.93N**±0°.03×**141°.54W**±0°.02**, h1**^{km}±9^{km}**, n136,** σ1^{s}**04**/163**, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCA	Pinnacle	0.67	75	P	Pb	05 14 17.5	-0.8
PCA	Pinnacle	0.67	75		Pg	05 14 17.1	+0.6
PCA	Pinnacle	0.67	75		Sb	05 14 27.0	-1.0
GRNC	Granite Creek	0.81	353	P	Pg	05 14 19.9	+0.5
GRNC				S	Sb	05 14 31.4	-1.1
GRNC	Granite Creek	0.81	353		Pg	05 14 19.7	+0.3
GRNC					Sg	05 14 29.9	0.0
YKU2	Yakutat	1.03	113	Pg	Pb	05 14 24.4	-0.1
YKU2					Sb	05 14 38.9	+0.3
CTGM	Chitina Glacie	1.05	6	P	Pg	05 14 23.3	-0.6
CTGM				S	Sg	05 14 37.4	0.0
CTGM	Chitina Glacie	1.05	6		Pg	05 14 23.3	-0.6
CTGM					Sb	05 14 38.2	-0.9
TGL	Tana Glacier	1.05	323		Pg	05 14 24.1	+0.2
TGL					Sb	05 14 39.0	-0.2
KIAG	Kiagna River	1.08	338	P	Pg	05 14 24.2	-0.3
KIAG				S	Sb	05 14 39.3	-0.8
KIAG	Kiagna River	1.08	338		Pg	05 14 24.2	-0.3
PNL	Peninsula	1.11	103	P	Pg	05 14 24.7	-0.4
PNL				S	Sg	05 14 40.1	+0.6
PNL	Peninsula	1.11	103		Pg	05 14 24.7	-0.4
PNL					Sb	05 14 40.7	-0.2
BARN	Barnard Glacie	1.14	357		Pg	05 14 25.2	-0.4
BARN					Sg	05 14 40.7	+0.3
CRQM	Cirque	1.15	317		Pg	05 14 25.6	-0.3
BALM	Baldy	1.18	341	P	Pg	05 14 25.7	-0.7
BALM				S	Sb	05 14 42.1	-0.9
BALM	Baldy	1.18	341		Pg	05 14 25.8	-0.6
PTPK	Patty Peak	1.34	340	P	Pg	05 14 28.5	-1.1
PTPK				S	Sb	05 14 47.5	-0.2
PTPK	Patty Peak	1.34	340		Pg	05 14 28.4	-1.1
PTPK					Sb	05 14 47.3	-0.4
PTPK	Patty Peak	1.34	340		Pg	05 14 28.5	-1.1
PTPK					Sb	05 14 47.5	-0.2
VRDI	Verde Repeater	1.61	325		Pn	05 14 32.7	-0.9
MCARA	McCarthy VSAT	1.63	334		Pn	05 14 33.1	-0.6
MCARA	McCarthy VSAT	1.63	334		Sn	05 14 54.9	-0.5
RAGM	Ragged Mountai	1.64	288		Pn	05 14 34.3	+0.5
GOAT	Goat Mountain	1.72	294		Pn	05 14 35.0	+0.1
YUK7	Dusty Glacier	1.80	69	Pn	Pn	05 14 36.5	+0.2
YUK7				Sg	Sn	05 14 59.4	-0.4
YUK7	Dusty Glacier	1.80	69		Pn	05 14 36.5	+0.2
YUK7					Sn	05 14 59.4	-0.4
YUK6	Outpost Mounta	1.88	56	Pn	Pn	05 14 37.6	+0.3
YUK6				Sg	Sn	05 15 01.9	+0.2
YUK6	Outpost Mounta	1.88	56		Pn	05 14 37.6	+0.3
YUK6					Sn	05 15 01.9	+0.2
GLB	Gilahina Butte	1.89	325		Pn	05 14 37.0	-0.3
DHAK	Deception Hill	1.89	115		Pn	05 14 36.4	-0.9
DHAK	Deception Hill	1.89	115		Sn	05 15 00.3	-1.5
YUK2	White River	1.90	10	Pn	Pn	05 14 38.1	+0.6
YUK2				Sg	Sg	05 15 04.5	-0.2
YUK2	White River	1.90	10		Pn	05 14 38.1	+0.6
YUK2					Sg	05 15 04.5	-0.2
YUK3	Moose Creek	1.93	15	Pn	Pn	05 14 38.3	+0.4
YUK3				Sn	Sb	05 15 03.9	-0.6
YUK3	Moose Creek	1.93	15		Pn	05 14 38.2	+0.2
YUK3	Moose Creek	1.93	15		Pn	05 14 38.3	+0.4
YUK3					Sb	05 15 03.9	-0.6
YUK4	Talbot Arm	2.01	44	Pn	Pb	05 14 41.4	0.0
YUK4				Sg	Sg	05 15 08.8	+0.3
YUK4	Talbot Arm	2.01	44		Pb	05 14 41.4	0.0
YUK4					Sg	05 15 08.8	+0.3
YUK5	Granite Creek	2.18	55	Pn	Pn	05 14 42.1	+0.7
YUK5				Sg	Sb	05 15 10.2	-1.6
YUK5	Granite Creek	2.18	55		Pn	05 14 42.1	+0.7
YUK5					Sb	05 15 10.2	-1.6
EYAK	Cordova Ski Ar	2.19	288		Pn	05 14 41.3	-0.1
HYT	Haines Junctio	2.20	64	Pn	Pn	05 14 41.7	+0.1
HYT				Sg	Sn	05 15 09.2	-0.3
HYT	Haines Junctio	2.20	64		Pn	05 14 41.9	+0.3
YUK1	Sand Pete Hill	2.29	12	Pn	Pn	05 14 43.3	+0.5
YUK1				Sg	Sb	05 15 13.7	-1.1
YUK1	Sand Pete Hill	2.29	12		Pn	05 14 43.4	+0.5
YUK1	Sand Pete Hill	2.29	12		Pn	05 14 43.3	+0.5
YUK1					Sb	05 15 13.7	-1.1
BVCY	Beaver Creek	2.52	7	Pn	Pn	05 14 46.7	+0.8
BVCY	Beaver Creek	2.52	7		Pn	05 14 46.1	+0.2
BVCY	Beaver Creek	2.52	7		Pn	05 14 46.7	+0.8
HIN	Hinchinbrook I	2.53	283		Pn	05 14 46.0	-0.1
FID	Port Fidalgo	2.59	291		Pn	05 14 47.0	+0.1
JPK	Jack Peak	2.75	296		Pn	05 14 50.6	+1.5
PS11	TAPS Pump St11	2.89	320		Pn	05 14 52.6	+1.7
GLI	Glacier Island	2.92	291		Pn	05 14 51.0	-0.4
BC03		3.15	358		Pn	05 14 54.3	-0.3
BCAR	Beaver Creek A	3.15	358		Pn	05 14 53.7	-0.9
SKAG	Skagway	3.18	96		Pb	05 14 59.5	-1.6
MENT	Mentasta	3.20	342		Pn	05 14 56.2	+0.9
WHY	Whitehorse	3.40	75	Pn	Pn	05 14 57.6	-0.4
WHY				Sn	Sn	05 15 36.9	-2.1
WHY	Whitehorse	3.40	75		Pn	05 14 57.9	-0.2
SCM	Sheep Creek Mo	3.42	307		Pn	05 14 58.4	+0.1
PAX	Paxson	3.59	330	Pn	Pn	05 15 00.9	+0.2
PAX				Sn	Sb	05 15 53.0	+0.9
PAX	Paxson	3.59	330		Pn	05 15 01.2	+0.5
BESE	Bessie Mountai	3.69	109	Pn	Pn	05 15 02.0	0.0
BESE				Sn	Sb	05 15 53.9	-1.1
BESE	Bessie Mountai	3.69	109		Pn	05 15 02.0	0.0
BESE					Sb	05 15 53.9	-1.1
KNK	Knik Glacier	3.72	297		Pn	05 15 02.9	+0.6
SML	Sawmill	3.82	303		Pn	05 15 03.9	+0.1
DOT	Dot Lake	3.92	343	Pn	Pn	05 15 06.8	+1.6
DOT	Dot Lake	3.92	343		Pn	05 15 06.5	+1.4
SEW	Seward	3.98	276	Pn	Pn	05 15 05.6	-0.3
WAT6	Susitna Watana	4.01	314		Pn	05 15 06.8	+0.3
JIS	Juneau Island	4.04	111	Pn	Pn	05 15 08.5	+1.7
GHO	Glory Hole Cre	4.06	300		Pn	05 15 08.2	+1.1
PMR	Palmer	4.08	297		Pn	05 15 08.3	+1.0
RIDG	Independent Ri	4.13	339		Pn	05 15 09.1	+1.0
RC01	Rabbit Creek A	4.22	290		Pn	05 15 09.1	-0.1
DHY	Denali Highway	4.22	321		Pn	05 15 10.0	+0.6
SCRK	Sand Creek	4.22	345		Pn	05 15 09.6	+0.1
DAWY	Dawson	4.28	13	Pn	Pn	05 15 10.3	+0.3
DAWY	Dawson	4.28	13		Pn	05 15 10.4	+0.3
SIT	Sitka	4.35	129	Pn	Pn	05 15 14.0	+3.1
SLKM	Skilak Lake	4.37	281		Pn	05 15 10.8	-0.6
WAT1	Susitna Watana	4.46	314		Pn	05 15 13.3	+0.8
BRSE	Bradley Lake S	4.65	272		Pn	05 15 16.5	+1.4
BRLK	Bradley Lake	4.72	272		Pn	05 15 18.3	+2.2
SUA	Susitna One	4.78	293	Pn	Pn	05 15 17.2	+0.2
EGAK	Eagle	4.87	2		Pn	05 15 18.4	+0.3
CNPM	China Poot	4.92	270		Pn	05 15 19.8	+0.9
RND	Reindeer	4.93	318		Pn	05 15 20.2	+1.1
HOM	Homer	5.11	271		Pn	05 15 23.8	+2.3
HDA	Harding Lake	5.16	333		Pn	05 15 23.4	+1.2
MCK	McKinley	5.18	321		Pn	05 15 21.7	-0.8
SKT	Skwentna	5.29	297		Pn	05 15 24.5	+0.6
IL31		5.46	335		Pn	05 15 25.6	-0.6
ILAR	Eielson Array	5.46	335	Pn	Pn	05 15 25.9	-0.4
	0.4nm,0.3s,baz=156,slow=13,SNR=19						
ILAR	Eielson Array	5.46	335		Pn	05 15 25.5	-0.8
TRF	Thorofare Moun	5.46	314		Pn	05 15 27.0	+0.6
WRH	Wood River Hil	5.49	329		Pn	05 15 28.4	+1.7
CCB	Clear Creek Bu	5.56	331		Pn	05 15 28.3	+0.7
RSO	Redoubt South	5.62	280		Pn	05 15 31.0	+2.3
RDWB	Redoubt West	5.66	281		Pn	05 15 31.0	+1.8
KTH	Kantishna Hill	5.75	313		Pn	05 15 30.8	+0.4
PRP	Porcupine Dome	5.90	344		Pn	05 15 35.7	+3.2
PPLA	Purkeypile	5.92	305		Pn	05 15 33.6	+1.0
BPAW	Bear Paw Mtn.	6.10	317		Pn	05 15 36.1	+0.9
KDAK	Kodiak Island	6.12	254	Pn	Pn	05 15 36.6	+1.3
	1.3nm,0.3s,baz=64,slow=9.2,SNR=63						
KDAK				Sn	Sn	05 16 44.2	-1.7
	1.4nm,0.3s,baz=214,slow=17,SNR=7.8						
MLY	Manley	6.66	324	Pn	Pn	05 15 42.8	+0.1
OHAK	Old Harbor	6.71	251	Pn	Pn	05 15 43.9	+0.5
EPYK	Eagle Plains	6.82	17		Pn	05 15 47.1	+2.1
FYU	Fort Yukon	6.87	348		Pn	05 15 46.4	+0.8
SVW2	Sparrevohn	7.03	286	Pn	Pn	05 15 48.4	+0.6
BMAR	Burnt Mountain	7.65	351		Pn	05 15 58.2	+1.9
IMAR	Indian Mountai	8.22	323	Pn	Pn	05 16 05.0	+0.8
COLD	Coldfoot	8.27	336	Pn	Pn	05 16 02.5	-2.3
COLD	Coldfoot	8.27	336		Pn	05 16 05.6	+0.8
COLD	Coldfoot	8.27	336		Pn	05 16 02.5	-2.3
DIB	Dawson Inlet,	8.39	139	Pn	Pn	05 16 10.5	+4.1
INK	Inuvik	9.10	19	Pn	Pn	05 16 18.7	+2.6
	0.1nm,0.3s,baz=192,slow=11,SNR=5.4						
INK	Inuvik	9.10	19	Pn	Pn	05 16 18.3	+2.2
INK	Inuvik	9.10	19		Pn	05 16 17.7	+1.6
C36M	Paulatuk	12.00	31		Pn	05 16 55.5	-0.2
DHRN	Dharma Camp	12.09	45	Pn	Pn	05 16 56.7	-0.2
DHRN	Dharma Camp	12.09	45		Pn	05 16 56.7	-0.2
YKA	Yellowknife Ar	13.19	67	Pn	Pn	05 17 06.5	-5.4
	0.0nm,0.3s,baz=273,slow=10,SNR=3.8						
KUKN	Kugluktuk,NWT	13.97	44	Pn	Pn	05 17 22.2	-0.4
KUKN	Kugluktuk,NWT	13.97	44		Pn	05 17 22.2	-0.4
H11N2	WAKE ISLAND Hy	54.21	245	T	T	06 22 28.1	
	baz=28						
H11N3	WAKE ISLAND Hy	54.21	245	T	T	06 22 31.7	
	baz=28						
H11N1	WAKE ISLAND Hy	54.23	245	T	T	06 22 29.5	
	baz=28						
H11S1	WAKE ISLAND Hy	55.36	245	T	T	06 23 35.2	
	baz=23						
H11S2	WAKE ISLAND Hy	55.38	245	T	T	06 23 37.1	
	baz=23						
H11S3	WAKE ISLAND Hy	55.38	245	T	T	06 23 41.5	
	baz=23						
SONM	Songino Array	59.27	313	P	P	05 24 08.4	+1.7
	0.4nm,0.7s,baz=20,slow=4.6,SNR=3.6						
MKAR	Makanchi Array	67.78	329	P	P	05 25 02.3	-0.6
	0.2nm,0.5s,baz=36,slow=11,SNR=2.1						
MKAR	Makanchi Array	67.78	329	P	P	05 25 02.7	-0.2

IDC 08 05:14:58.2±3.3**, 30°.52S**×**138°.20E, h0**^{km}**, mb1 3.6**/4**, mb1mx3.5**/39**, mbtmp3.4**/4**, ML3.4**/4**, Error ellipse: s-maj=84.9km s-min=15.1km az=39.0, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	3.21	116	Pn	Pn	05 15 49.7	-0.2
	1.4nm,0.3s,baz=296,slow=13,SNR=17						
STKA				Pg	Pg	05 15 58.3	-1.5
	5.3nm,0.3s,baz=298,slow=15,SNR=34						
STKA				Sn	Sn	05 16 28.1	-0.9
	5.0nm,0.3s,baz=52,slow=3.3,SNR=7.2						
STKA				Lg	Lg	05 16 39.5	
	3.6nm,0.3s,baz=165,slow=22,SNR=4.6						

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ASAR  Alice Springs     7.83 330  Pn      Pn      05 16 54.7 +1.3
        0.5nm,0.3s,baz=152,slow=12,SNR=22
ASAR                              Sn      Sn      05 18 23.6 +0.8
        0.4nm,0.3s,baz=152,slow=22,SNR=6.8
WRA   Warramunga Arr   11.10 341  Pn      Pn      05 17 37.9 -0.4
        0.4nm,0.3s,baz=153,slow=13,SNR=21
WRA                               Sn      Sn      05 19 38.7 -4.4
        0.1nm,0.3s,baz=160,slow=24,SNR=3.4
FITZ  Fitzroy Crossi   16.83 314  Pn      Pn      05 18 53.9 -1.5
        0.1nm,0.3s,baz=175,slow=16,SNR=3.3
```

DJA ***08*** *05:18:08.0±0.5, 2°N±5°×12°8E±°, h134km±3km, M4.7/20, mb4.8/20, mB5.1/8, MLv4.9/8, Mw(mB)4.5/8*

IDC ***08*** *05:18:09.1±2.0, 2°.37N×128°.35E, h150km±18km, mb4.0/21, mb1 4.1/22, mb1mx3.9/50, mbtmp4.4/22, Error ellipse: s-maj=20.5km s-min=9.2km az=78.0*

MAN ***08*** *05:18:09.7, 2°.59N×127°.91E, h4km, mb5.1, ML4.0, MS4.1*

NEIC ***08*** *05:18:10.6±1.7, 2°.27N±0°.06×128°.22E±0°.07, h161km±2km, mb4.5/63, Error ellipse: s-maj=10.5km s-min=8.5km az=49.0*

ISC 08 05:18:09.2±0.6**, 2°.36N**±0°.04×**128°.26E**±0°.06**, h147**km±5km**, n164, σ1^{s}14**/176**, mb4.4**/47**, 1C-1D, Halmahera**

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Code  Station Name       Δ°  AZ°   Phase ID         Time     Res
                                  Op      ISC     h  m  s   ISC
TNTI  Ternate           1.82 210  P       Pn      05 18 41.8 -0.2
TNTI                              S       Sn      05 19 06.5 -0.8
TNTI  Ternate           1.82 210          Pn      05 18 42.4 +0.3
TNTI                              Sn      Sn      05 19 07.4 +0.1
SIJI  Sorong            4.40 137  P       Pn      05 19 18.9 +4.3
        3.1nm,0.3s,baz=338,slow=19,SNR=3.3
SIJI                              S       Sn      05 20 07.1 +1.6
        4.5nm,0.3s,baz=65,slow=22,SNR=6.5
DDMP  Don Marcelino,    4.50 326 eP       Pn      05 19 14.9 -1.1
DDMP                             eS       Sn      05 20 07.0 -1.1
KMSI  Cibinong          4.63 248  P       Pn      05 19 17.8 +0.1
SANI  Sanana            4.94 207  P       Pn      05 19 20.2 -1.6
        1.2nm3μm331nm,0.7s
DAV   Davao City (W)    5.38 330  Pn      Pn      05 19 31.0 +3.3
SKMP  Bagumbayan, Su    5.55 318 eP       Pn      05 19 29.6 -0.2
SKMP                             eS       Sn      05 20 30.3 -2.6
KCP   Kidapawan         5.59 326⇓eP       Pn      05 19 30.9 +0.4
KCP                              i S      Sn      05 20 36.4 +2.4
NLAI  Namlea            5.69 192  P       Pn      05 19 31.7  0.0
        0.4nm3μm110nm,0.8s
BUKP  Musuan            6.34 330 eP       Pn      05 19 40.3 -0.1
LUWI  Luwuk             6.45 238  P       Pn      05 19 42.2 +0.3
        1.9nm167nm,0.6s
LUWI  Luwuk             6.45 238          Pn      05 19 42.2 +0.3
LUWI                              Sn      Sn      05 20 54.5  0.0
FAKI  Fak Fak           6.59 143  Pn      Pn      05 19 46.6 +2.8
MRSI  Marisa            6.59 254  P       Pn      05 19 42.0 -1.8
        0.4nm2μm88nm,1.0s
APSI  Ampana            7.37 244  P       Pn      05 19 53.3 -0.9
        0.5nm1μm92nm,0.4s
KDI   Kendari           8.44 222  P       Pn      05 20 06.5 -2.0
        55μm74nm,0.6s
BAKI  Biak              8.60 114  P       Pn      05 20 09.6 -1.1
TTSI  Tana Toraja      10.01 238  P       Pn      05 20 28.2 -1.2
        1μm169nm,0.6s
BNSI  Bone             10.56 231  P       Pn      05 20 36.1 -0.6
        49nm,0.6s
SPSI  Sidrap Palu      10.56 233  P       Pn      05 20 36.7  0.0
        811nm47nm,0.7s
SAUI  Saumlaki         10.72 164  P       Pn      05 20 35.9 -2.9
        135nm,1.1s
SAUI  Saumlaki         10.72 164  Pn      Pn      05 20 35.9 -2.9
BKSI  Bulukumba        11.15 227  P       Pn      05 20 46.7 +2.2
        1μm97nm,0.6s
KAPI  Kappang          11.23 229  P       Pn      05 20 47.5 +2.0
        6.7nm,0.3s,baz=78,slow=3.5,SNR=18
MMRI  Maumere          12.47 209          P       05 21 08.5 +1.0
KKM   Kota Kinabalu    12.56 287  Pn      Pn      05 21 04.0 +1.1
SOEI  Soe              12.68 198  P       Pn      05 21 08.0 +3.4
EDFI  Ende, Flores     12.84 211  P       Pn      05 21 06.7 +0.1
        460nm41nm,0.7s
PLAI  Plampang         15.26 223  P       Pn      05 21 38.1 +1.0
        68nm,1.0s
MTN   Manton Dam       15.38 169  P       Pn      05 21 37.8 -0.7
MTN                               IAmb    IAmb    05 21 47.6
        comp=Z,23nm,1.2s
JAGI  Jajag, Banyuwa   17.71 232  P       Pn      05 22 07.6 +0.7
JAGI                              IAmb    IAmb    05 22 09.4
        comp=Z,43nm,1.0s
KNRA  Kununurra        17.93 178  P       P       05 22 08.2 +0.3
KSM   Kuching          17.97 268  P       P       05 22 09.1 +0.7
FITZ  Fitzroy Crossi   20.50 187  P       P       05 22 34.2 -1.5
        comp=Z,2.2nm,0.5s,baz=22,slow=8.8,SNR=13
FITZ  Fitzroy Crossi   20.50 187  P       P       05 22 34.5 -1.3
COEN  Coen             21.95 138  P       P       05 22 48.5 -2.7
COEN                              IAmb    IAmb    05 23 02.9
        comp=Z,18nm,1.1s
WB0   Warramunga Arr   22.80 165  P       P       05 22 59.3 -0.2
WB0                               IAmb    IAmb    05 22 59.3
        comp=Z,11nm,0.8s
WRAB  Tennant Creek    22.95 165  P       P       05 23 00.6 -0.3
WRAB                              IAmb    IAmb    05 23 02.5
        comp=Z,8.7nm,0.8s
WRA   Warramunga Arr   22.96 165  P       P       05 23 00.6 -0.3
        comp=Z,2.2nm,0.3s,baz=339,slow=10,SNR=34
WRA                               S       S       05 27 03.3 +3.3
        comp=Z,1.7nm,0.6s,baz=337,slow=21,SNR=6.4
WRA   Warramunga Arr   22.96 165  P       P       05 22 59.7 -1.2
WB2   Warramunga Arr   22.96 165  P       P       05 23 00.5 -0.5
WB2                               IAmb    IAmb    05 23 02.7
        comp=Z,8.9nm,0.8s
PSA00 Pilbara Seismi   25.18 199  P       P       05 23 20.8 -0.3
PSA00                             IAmb    IAmb    05 23 36.6
        comp=Z,14nm,1.1s
AS31  Alice Springs    26.45 168  P       P       05 23 32.1 -0.5
ASAR  Alice Springs    26.45 168  P       P       05 23 31.8 -0.7
        comp=Z,1.3nm,0.4s,baz=352,slow=7.9,SNR=25
ASAR                              PcP     PcP     05 26 53.4 -0.8
        comp=Z,1.2nm,0.5s,baz=356,slow=2.7,SNR=9.1
ASAR                              ScP     ScP     05 30 19.2 -1.3
        comp=Z,0.3nm,0.7s,baz=342,slow=2.7,SNR=4.3
ASAR  Alice Springs    26.45 168  P       P       05 23 32.4 -0.2
WHN   Wuhan            30.97 336  P       P       05 24 18.1 +5.6
CMAR  Chiang Mai Arr   32.88 301  P       P       05 24 31.5 +2.1
        comp=Z,2.6nm,0.3s,baz=119,slow=7.3,SNR=4.6
CHTO  Chiang Mai       33.03 302  P       P       05 24 32.0 +1.2
KSRS  Korea Array      34.92 360  P       P       05 24 46.7  0.0
        comp=Z,1.4nm,0.6s,baz=172,slow=9.0,SNR=6.4
MJAR  Matsushiro Arr   35.23  14  P       P       05 24 47.8 -1.7
        comp=Z,2.4nm,0.7s,baz=180,slow=8.7,SNR=5.2
BBOO  Buckleboo        35.75 169  P       P       05 24 53.4 -0.6
BBOO                              IAmb    IAmb    05 24 54.9
        comp=Z,18nm,1.4s
XAN   Xi'an            36.32 332  P       P       05 24 58.8 -0.1
XAN                               IAmb    IAmb    05 25 02.5
        comp=Z,5.2nm,0.9s
STKA  Stephens Creek   36.33 161  P       P       05 24 58.6 -0.2
        comp=Z,3.8nm,0.3s,baz=349,slow=7.9,SNR=30
STKA                              PcP     PcP     05 27 20.2 -0.3
        comp=Z,1.7nm,0.4s,baz=332,slow=3.7,SNR=5.1
STKA                              ScP     ScP     05 30 52.9 -0.5
        comp=Z,0.8nm,0.3s,baz=296,slow=20,SNR=4.5
STKA  Stephens Creek   36.33 161  P       P       05 24 58.7 -0.2
ARMA  Armidale         39.50 147  P       P       05 25 25.9 +0.3
ARMA                              IAmb    IAmb    05 25 36.1
        comp=Z,7.8nm,1.0s
LZH   Lanzhou          40.45 329 eP       P       05 25 33.1 -0.4
LZH                               pP      pP      05 26 07.5 +2.5
LZH                               sP      sP      05 26 27.2 +5.8
LZH                               PP      PP      05 27 11.6 +1.8
H11S3 WAKE ISLAND Hy 40.91  64    T       T       06 09 26.5
        baz=253,slow=75,SNR=13
H11S2 WAKE ISLAND Hy 40.92  64    T       T       06 09 32.9
        baz=253,slow=75,SNR=6.8
H11S1 WAKE ISLAND Hy 40.92  64    T       T       06 09 30.9
        baz=253,slow=75,SNR=7.9
HHC   Hu-ho-hao-te     41.17 341 eP       P       05 25 41.5 +2.2
H11N1 WAKE ISLAND Hy 41.49  63    T       T       06 10 07.7
        baz=250,slow=75,SNR=15
H11N2 WAKE ISLAND Hy 41.50  63    T       T       06 10 08.2
        baz=250,slow=75,SNR=5.7
H11N3 WAKE ISLAND Hy 41.51  63    T       T       06 10 08.8
        baz=250,slow=75,SNR=15
USRK  Ussuriysk Ar.    41.79   4  P       P       05 25 44.3 +0.2
        comp=Z,1.8nm,0.6s,baz=186,slow=7.9,SNR=5.7
USRK  Ussuriysk Ar.    41.79   4  P       P       05 25 44.0 -0.1
SHL   Shillong         41.91 307  P       P       05 25 45.7 +0.1
TOO   Toolangi         42.83 160  P       P       05 25 54.0 +1.4
LSA   Lhasa            44.48 311  P       P       05 26 07.7 +1.1
GTA   Gaotai           45.05 329 ⇑P       P       05 26 11.2 +0.7
GTA                               pP      pP      05 26 41.2 -1.3
GTA                               sP      sP      05 26 57.4 -1.2
GTA                               PcP     PcP     05 27 49.7 +0.8
ODAN  Odare            46.10 306 eP       P       05 26 19.4 +0.3
RAMN  Ramite           46.78 305 eP       P       05 26 25.3 +0.9
        comp=Z,25nm,0.6s
KLR   Kul'dur          46.79   3  P       P       05 26 23.7 -0.1
        comp=Z,1.1nm,0.7s,baz=193,slow=11,SNR=4.2
JIRN  Jiri             47.41 306 eP       P       05 26 30.1 +0.7
        comp=Z,26nm,0.5s
GUN   Gumba            47.76 306 eP       P       05 26 32.7 +0.6
        comp=Z,28nm,0.5s
PKI   Pulchoki         48.00 306 eP       P       05 26 33.9  0.0
        comp=Z,10nm,0.7s
DMN   Daman            48.26 306 eP       P       05 26 36.2 +0.3
        comp=Z,16nm,0.8s
ULN   Ulaanbaatar      48.89 341  P       P       05 26 39.8 -0.4
SONM  Songino Array    49.08 341  P       P       05 26 41.6  0.0
        comp=Z,2.4nm,0.6s,baz=151,slow=8.2,SNR=20
SONM                              PcP     PcP     05 28 03.3 +0.3
        comp=Z,1.7nm,0.7s,baz=156,slow=3.6,SNR=8.2
SONM  Songino Array    49.08 341  P       P       05 26 41.4 -0.2
DANN  Dangsing         49.65 306 eP       P       05 26 47.0 +0.5
        comp=Z,36nm,0.6s
WMQ   Urumqi           54.71 325 eP       P       05 27 24.3 +1.0
WMQ                               sP      sP      05 28 14.8 +2.5
WMQ   Urumqi           54.71 325  P       P       05 27 23.9 +0.6
WMQ                               IAmb    IAmb    05 27 25.4
        comp=Z,13nm,1.1s
PETK  Petropavlovsk-   56.13  21  P       P       05 27 33.4 +0.3
        comp=Z,3.5nm,0.8s,baz=194,slow=4.9,SNR=5.4
PETK  Petropavlovsk-   56.13  21  P       P       05 27 33.8 +0.6
MK31  Makanchi Array   59.54 325  P       P       05 27 57.5 +0.4
MK31                              IAmb    IAmb    05 27 58.1
        comp=Z,5.1nm,0.8s
MKAR  Makanchi Array   59.54 325  P       P       05 27 57.4 +0.2
        comp=Z,6.4nm,0.4s,baz=118,slow=8.3,SNR=77
MKAR                              pP      pwP     05 28 34.2 -1.4
        comp=Z,1.4nm,0.6s,baz=132,slow=8.5,SNR=2.6
MKAR                              PcP     PcP     05 28 42.6 -0.4
        comp=Z,3.5nm,0.7s,baz=121,slow=5.5,SNR=10
MA2   Magadan          59.66  13  P       P       05 27 58.7 +1.1
MA2                               IAmb    IAmb    05 28 07.4
        comp=Z,15nm,1.2s
THZ   Tophouse         59.69 142  P       P       05 27 57.5 -0.7
LBZ   Lake Benmore     59.70 146  P       P       05 27 58.2 -0.1
MAKZ  Makanchi         59.73 325  P       P       05 27 58.6 +0.1
KSH   Kashi            60.09 315  P       P       05 28 05.2 +4.1
KSH                               pP      pwP     05 28 42.2 +2.7
KSH                               S       S       05 36 04.1 +1.3
KSH   Kashi            60.09 315  SS      SS      05 40 04.1 +1.8
TUWZ  Tuamarina        60.14 142  P       P       05 28 00.7 -0.5
KDJ   Kajisay          60.38 318  P       P       05 28 03.9 +0.8
KDJ                               IAmb    IAmb    05 28 04.5
        comp=Z,7.2nm,1.0s
KHZ   Kahutara         60.45 143  P       P       05 28 02.7 -0.7
BHW   Baring Head      60.70 141  P       P       05 28 03.3 -1.8
ZAA0  Zalesovo Array   62.49 333  P       P       05 28 14.8 -2.0
ZALV  Zalesovo Beam    62.49 333  P       P       05 28 15.8 -1.0
        comp=Z,1.1nm,0.3s,baz=110,slow=6.7,SNR=8.1
ZALV                              PcP     PcP     05 28 53.4 -1.3
        comp=Z,0.7nm,0.4s,baz=185,slow=4.4,SNR=4.0
ZALV  Zalesovo Beam    62.49 333  P       P       05 28 14.8 -2.0
KURBB Kurchatov Arra   63.71 327  P       P       05 28 24.7 -0.2
        comp=Z,7.3nm,0.4s,baz=127,slow=6.1,SNR=70
KURBB                             PcP     pP      05 28 59.1 +0.2
        comp=Z,0.6nm,0.5s,baz=123,slow=4.0,SNR=4.9
KURK  Kurchatov        63.71 327  P       P       05 28 24.1 -0.8
KURK  Kurchatov        63.71 327          PcP     05 28 59.1 -0.6
GAR   Garm             63.97 313  P       P       05 28 26.7 -0.4
GAR                               IAmb    IAmb    05 28 27.8
        comp=Z,12nm,1.1s
KK31  Karatay Array    65.27 317  P       P       05 28 34.7 -0.6
KK31                              IAmb    IAmb    05 28 35.9
        comp=Z,4.3nm,0.9s
KKAR  Karatay Array    65.27 317  P       P       05 28 34.7 -0.6
KKAR                              IAmb    IAmb    05 28 35.9
        comp=Z,4.3nm,0.9s
HRA   Herat            68.97 306  P       P       05 28 58.2 -0.9
TIXI  Tiksi            69.19   0  P       P       05 28 58.6 -0.7
        comp=Z,4.7nm,0.4s,baz=167,slow=5.9,SNR=19
TIXI  Tiksi            69.19   0  P       P       05 28 58.2 -1.1
TIXI                              IAmb    IAmb    05 28 59.4
        comp=Z,4.0nm,0.7s
BVAR  Borovoye Array   69.29 327  P       P       05 28 60.0 -0.4
        comp=Z,8.0nm,0.8s,baz=122,slow=7.2,SNR=29
BRVK  Borovoye         69.36 327  P       P       05 29 00.1 -0.7
BRVK                              IAmb    IAmb    05 29 01.3
        comp=Z,9.7nm,0.9s
GEYT  Alibeck          72.94 309  P       P       05 29 23.0 +0.3
        comp=Z,2.6nm,0.7s,baz=352,slow=3.0,SNR=6.0
GEYT  Alibeck          72.94 309  P       P       05 29 23.0 +0.3
GYA0B ALIBECK ARRAY    72.94 309  P       P       05 29 23.3 +0.6
GYA0B                             IAmb    IAmb    05 29 23.9
        comp=Z,4.6nm,0.8s
SOCY  Socotra          74.14 282  P       P       05 29 28.6 -1.6
SOCY                              IAmb    IAmb    05 29 28.8
        comp=Z,20nm,1.4s
ABKAR Akbulak array    74.17 321  P       P       05 29 29.2 -0.4
AKUT  Akutan           74.18  34  P       P       05 29 29.8 +0.3
ARU   Arti             76.90 328  P       P       05 29 44.2 -0.8
        comp=Z,2.6nm,0.6s,baz=274,slow=0.7,SNR=12
ARU   Arti             76.90 328  P       P       05 29 44.2 -0.8
ARU                               IAmb    IAmb    05 29 44.7
        comp=Z,7.1nm,0.7s
SDPT  Sand Point       77.47  34  P       P       05 29 48.4 +0.2
ANM   Nome             77.88  24  P       P       05 29 51.3 +1.0
CHGN  Chignik          78.82  33  P       P       05 29 55.8 +0.2
RDOG  Red Dog Mine     80.00  21  P       P       05 30 02.9 +1.1
RDOG                              IAmb    IAmb    05 30 03.1
        comp=Z,5.2nm,0.5s
VNDA  Vanda            81.89 173  P       P       05 30 11.7 +0.1
VNDA                              IAmb    IAmb    05 30 27.5
        comp=Z,13nm,1.3s
KDAK  Kodiak Island    82.22  32  P       P       05 30 14.6 +0.9
IMAR  Indian Mountai   82.96  24  P       P       05 30 18.4 +1.0
PPLA  Purkeypile       83.14  27  P       P       05 30 19.3 +0.8
SKT   Skwentna         83.32  28  P       P       05 30 18.8 -0.5
SKT                               IAmb    IAmb    05 30 19.8
        comp=Z,7.0nm,1.0s
BRLK  Bradley Lake     83.35  30  P       P       05 30 19.6 +0.1
SUA   Susitna One      83.62  29  P       P       05 30 21.2 +0.1
SUA                               IAmb    IAmb    05 30 21.9
        comp=Z,11nm,0.9s
KTH   Kantishna Hill   83.80  26  P       P       05 30 22.6 +0.8
KTH                               IAmb    IAmb    05 30 26.9
        comp=Z,9.0nm,1.3s
MLY   Manley           84.06  25  P       P       05 30 23.7 +0.5
RC01  Rabbit Creek A   84.07  29  P       P       05 30 23.3 +0.1
RC01                              IAmb    IAmb    05 30 23.6
        comp=Z,10nm,0.9s
TRF   Thorofare Moun   84.07  27  P       P       05 30 23.2 -0.1
TRF                               IAmb    IAmb    05 30 23.8
        comp=Z,5.0nm,1.0s
PMR   Palmer           84.41  28  P       P       05 30 24.9 +0.1
PMR                               IAmb    IAmb    05 30 40.5
        comp=Z,20nm,1.4s
COLD  Coldfoot         84.55  23  P       P       05 30 26.4 +1.0
RND   Reindeer         84.70  27  P       P       05 30 25.8 -0.6
RND                               IAmb    IAmb    05 30 29.2
        comp=Z,7.9nm,1.2s
KNK   Knik Glacier     84.71  29  P       P       05 30 26.8 +0.4
SML   Sawmill          84.80  28  P       P       05 30 27.4 +0.5
ILAR  Eielson Array    85.67  25  P       P       05 30 30.1 -1.0
        comp=Z,0.3nm,0.4s,baz=253,slow=4.9,SNR=8.0
BMAR  Burnt Mountain   86.74  23  P       P       05 30 37.0 +0.6
ARCES ARCESS Array B   92.25 340  P       P       05 31 00.8 -1.2
        comp=Z,7.1nm,0.9s,baz=82,slow=7.2,SNR=17
FINES FINESS Array B   93.75 332  P       P       05 31 08.1 -1.0
        comp=Z,2.1nm,0.7s,baz=90,slow=1.9,SNR=9.3
YKA   Yellowknife Ar  100.09  25  P       Pdif    05 31 37.8  0.0
        comp=Z,0.2nm,0.7s,baz=298,slow=4.1,SNR=5.7
MNTX  Cornudas Mount  118.91  52  PKPdf   PKiKP   05 36 41.5 +0.5
ECSD  EROS Data Cent  119.01  36  PKPdf   PKPdf   05 36 40.2 -0.5
TXAR  Lajitas Array   121.20  53  PKP     PKPdf   05 36 45.5  0.0
        comp=Z,0.4nm,0.6s,baz=157,slow=0.9,SNR=7.5
SCHQ  Schefferville   121.65  10  PKP     PKPdf   05 36 45.4 -0.1
        comp=Z,0.6nm,0.3s,baz=6.5,slow=3.0,SNR=7.5
SCHQ  Schefferville   121.65  10  PKPdf   PKPdf   05 36 45.5 +0.1
WMOK  Wichita Mounta  122.51  46  PKPdf   PKPdf   05 36 47.6 -0.1
E46A  Sault Ste Mari  123.61  27  PKPdf   PKPdf   05 36 49.4  0.0
S39A  Bolivar         124.61  40  PKPdf   PKPdf   05 36 51.2 -0.4
TOA0  Torodi Ar. Sit  124.79 288  PKPdf   PKPdf   05 36 52.0 -0.6
TORD  Torodi Ar. Bea  124.79 288  PKP     PKPdf   05 36 52.1 -0.5
        comp=Z,0.7nm,0.4s,baz=79,slow=1.8,SNR=12
SADO  Sadowa          127.09  24  PKPdf   PKPdf   05 36 56.3 +0.1
PLVO  Plevna          127.69  23  PKPdf   PKPdf   05 36 57.3  0.0
PLAL  Pickwick Lake   129.61  39  PKPdf   PKPdf   05 37 00.8 -0.5
GBN   Guysborough     131.65   9  PKPdf   PKiKP   05 37 06.0 +0.2
TKL   Tuckaleechee C  131.76  35  PKPdf   PKiKP   05 37 06.5 +0.1
ESPN  Las Esperanzas  144.56  65          PKPdf   05 37 29.1 -0.1
ROC1  El Roble        144.58 151  PKPdf   PKPab   05 37 28.2 +0.2
CBCY  The Bluff, Cay  144.79  50  PKPbc   PKPdf   05 37 30.1 +0.6
GO04  Tololo Observa  146.96 149  PKPbc   PKPbc   05 37 35.4 -0.1
GO02  Mina Guanaco    151.54 144  PKPbc   PKPbc   05 37 47.4 +0.3
```

NNC ***08*** *05:30:07.2±3.6, 36°.73N×71°.09E, h133km±78km, mb2.9, mpv3.7, Error ellipse: s-maj=33.7km s-min=27.8km az=43.0*

ISC 08 05:30:01.2±2.0**, 36°.4N**±0°.1×**71°.0E**±0°.2**, h100**km**, n4, σ1^{s}94**/6**, 2C-2D, Hindu Kush region**

```
Code  Station Name       Δ°  AZ°   Phase ID         Time     Res
                                  Op      ISC     h  m  s   ISC
THN   Thein Dam         5.55 134 eSG      Sn      05 32 23.5 -0.4
KK31  Karatay Array     6.71 357 ⇑P       Pn      05 31 38.7 +1.7
        5.5nm,0.5s,baz=182,slow=13,SNR=95
KK31                             ⇑S       Sn      05 32 51.2 -0.8
        0.6nm,0.3s,baz=179,slow=13,SNR=3.9
AAK   Ala-Archa         6.79  22 ⇓P       Pn      05 31 40.1 +1.7
        1.4nm,0.4s
AAK                              ⇓S       Sn      05 32 52.7 -1.6
        9.6nm,0.9s
AB31  Akbulak array    15.17 331  P       P       05 33 31.2 -1.5
        0.2nm,0.3s,baz=151,slow=12,SNR=19
```

NAO ***08*** *05:34:24.3±1.3, 70°.88N×7°.08W, ML3.8*

IDC ***08*** *05:34:25.7±0.9, 71°.08N×6°.90W, h0km, mb3.5/7, mb1 3.8/12, mb1mx3.5/57, mbtmp3.6/12, ML3.2/5, MS3.8/2, Ms1 3.7/2, ms1mx3.0/37, Error ellipse: s-maj=26.5km s-min=16.5km az=35.0*

NEIC ***08*** *05:34:27.3±1.7, 71°.05N±0°.08×7°.5W±0°.1, h10km±1km, mb4.2/12, Error ellipse: s-maj=14.1km s-min=5.3km az=169.0*

BER ***08*** *05:34:28.4±2.0, 70°.97N×7°.51W, h5km, ML3.3, ML3.8(NAO), Confirmed Earthquake*

REY ***08*** *05:34:28.8, 70°.83N×8°.60W, h10km*

DNK ***08*** *05:34:29.3±0.7, 71°.19N×8°.28W, h16km±75km, ML2.7, Hypocentre not reviewed by the ISC*

ISC 08 05:34:25.5±1.6**, 70°.93N**±0°.05×**7°.24W**±0°.04**, h7**km±11km**, n79, σ2^{s}42**/93**, mb4.0**/11**, 4D, Jan Mayen Island region**

```
Code  Station Name       Δ°  AZ°   Phase ID         Time     Res
                                  Op      ISC     h  m  s   ISC
JNE   Jan Mayen East    0.35 281⇓iP       Pb      05 34 33.0 -1.1
JNE                              eS       Sb      05 34 38.4 -1.4
JNE                               IAML            05 34 41.5
        comp=Z,6μm,0.5s
JNW   Jan Mayen West    0.40 286⇓iP       Pb      05 34 33.6 -1.4
JNW                              eS       Sb      05 34 39.1 -2.2
JNW                               IAML            05 34 40.2
        comp=Z,4μm,0.3s
JMIC  Jan Mayen         0.42 279  Pg      Pb      05 34 33.9 -1.4
JMIC                              Lg      Lg      05 34 40.0
JMIC  Jan Mayen         0.42 279  Pn      Pb      05 34 33.9 -1.4
        comp=Z,218nm,0.3s,baz=50,slow=4.7,SNR=73
JMIC                              Sn      Sb      05 34 39.7 -2.1
        comp=Z,754nm,0.3s,baz=135,slow=3.8,SNR=63
JMIC  Jan Mayen         0.42 279⇓iP       Pb      05 34 33.9 -1.4
JMIC                             eP       Pg      05 34 34.0 +0.4
JMIC                             eS       Sg      05 34 37.8 -1.3
JMIC                             eS       Sb      05 34 39.9 -1.9
JMIC                              IAML            05 34 42.3
        comp=Z,3μm,0.7s
JMI   Jan Mayen         0.49 271⇓iP       Pb      05 34 35.5 -0.9
JMI                              eS       Sb      05 34 42.7 -1.1
JMI                               IAML            05 34 48.9
        comp=Z,2μm,0.6s
DBG   Daneborg          5.16 317 e                05 35 39.8
        baz=126,slow=16
DBG                              i P              05 35 40.1
DBG                              i S              05 36 32.7
DBG                               IAML            05 36 38.2
        comp=Z,2.8nm,0.3s
ILEI  Leirhofn          5.65 221  P       Pn      05 35 50.0 +0.3
        baz=217
ILEI                              S       Sn      05 36 53.1 -1.6
        baz=217
IHED  Heoinshofoi       6.11 222  S       Sn      05 37 04.2 -1.8
        baz=218
IDIM  Dimmadalss        6.12 220  P       Pn      05 35 56.3  0.0
        baz=216
IDIM                              S       Sn      05 37 05.1 -1.4
        baz=216
IGHA  Grjothals         6.17 219  S       Sn      05 37 06.5 -1.2
        baz=215
IGHA                              P       Pn      05 35 56.4 -0.5
        baz=215
IGRS  Grimsstaoir       6.24 216  S       Sn      05 37 09.1 -0.4
        baz=212
IGRS                              P       Pn      05 35 57.5 -0.4
        baz=212
IREN  Reynihlio         6.39 219  P       Pn      05 36 00.5 +0.5
        baz=215
IREN                              S       Sn      05 37 13.2 +0.1
        baz=215
IMEL  Melhnausar        6.41 218  S       Sn      05 37 13.2 -0.3
        baz=213
IHLA  Hella             6.46 225  S       Sn      05 37 12.7 -2.1
        baz=221
DAG   Danmarks Havn     6.67 337 i P      Pn      05 36 01.4 -2.3
DAG                              eS       Sn      05 37 07.8  -12
DAG   Danmarks Havn     6.67 337 i P              05 36 01.4
DAG                              eS               05 37 07.8
IADA  Aoalbol           6.70 212  P       Pn      05 36 04.9 +0.6
        baz=208
LOF   Lofoten           7.78 101 eP       Pn      05 36 19.4 +0.4
STEI  Steigen           8.44 100 eP       Pn      05 36 27.0 -1.0
STEI                             eS       Sn      05 37 58.7 -4.6
KONS  Konsvik           8.60 111 eP       Pn      05 36 30.0 -0.2
KONS                             eS       Sn      05 38 00.8 -6.5
STOK  Stokkvaagen       8.68 112 eP       Pn      05 36 31.2 -0.1
STOK                             eS       Sn      05 38 02.3 -6.9
HSPB  Hornsund (broa    8.69  35  Pn      Pn      05 36 31.1 -0.3
HSPB  Hornsund (broa    8.69  35  P       Pn      05 36 31.1 -0.3
TRO   Tromso            8.90  86 eP       Pn      05 36 31.8 -2.6
TRO                              eS       Sn      05 38 07.1 -7.7
BRBB  Barentsburg B     9.12  29  Pn      Pn      05 36 36.9 -0.3
BRBB  Barentsburg B     9.12  29  P       Pn      05 36 36.9 -0.3
KBS   Kingsbay          9.38  23  Pn      Pn      05 36 41.3 +0.4
KBS   Kingsbay          9.38  23 eP       Pn      05 36 40.8 -0.1
KBS   Kingsbay          9.38  23          Pn      05 36 41.2 +0.4
NSS   Namsos            9.66 122 eP       Pn      05 36 45.3 +0.5
NSS                              eS       Sn      05 38 25.2 -8.2
AKN   Aaknes           10.41 140  Pn      Pn      05 36 54.6 -0.4
AKN                               Sn      Sn      05 38 45.5 -6.3
AKN   Aaknes           10.41 140  P       Pn      05 36 54.6 -0.4
AKN                               S       Sn      05 38 45.5 -6.3
KTK1  Kautokeino       10.56  86 eP       Pn      05 36 56.2 -0.8
NOR   Nord             10.94 353 i P              05 37 01.6
NOR                              i S              05 38 32.9
NOR                               IAML            05 39 01.7
        comp=Z,2.6nm,0.4s
HEF   Hetta            10.96  88 eP       Pn      05 37 00.6 -2.0
ARA0  ARCESS Array S   11.09  82  Pn      Pn      05 37 03.5 -0.8
        baz=291,slow=12
ARA0  ARCESS Array S   11.09  82  P       Pn      05 37 03.5 -0.8
        baz=291,slow=12
ARCES ARCESS Array B   11.09  82  Pn      Pn      05 37 02.9 -1.4
        comp=Z,0.2nm,0.3s,baz=296,slow=11,SNR=6.2
ARCES ARCESS Array B   11.09  82          Pn      05 37 02.5 -1.8
NOD   Norderasen       11.32 121 eP       Pn      05 37 07.5 +0.1
NC204 NORSAR Array S   12.05 134  Pn      Pn      05 37 18.9 +1.4
NOA   NORSAR Array B   12.37 134  Pn      Pn      05 37 22.3 +0.5
        comp=Z,0.0nm,0.3s,baz=322,slow=13,SNR=2.6
NB201 NORSAR Array S   12.38 134  Pn      Pn      05 37 29.3 +7.4
HFS   Hagfors          13.76 131  Pn      Pn      05 37 40.3 -0.4
        baz=333,slow=9.3
HFS   Hagfors          13.76 131  Pn      Pn      05 37 40.4 -0.3
        comp=Z,0.4nm,0.3s,baz=346,slow=11,SNR=12
HFS   Hagfors          13.76 131  P       Pn      05 37 40.3 -0.4
        baz=333,slow=9.3
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EKA	Eskdalemuir Ar	15.75	171	Pn	P	05 38 10.1	-1.5
	baz=359,slow=12,SNR=3.6						
FIA0	FINESS Array S	16.21	109	P	Pn	05 38 13.9	+0.5
	baz=327,slow=12						
FIA0	FINESS Array S	16.21	109	P	Pn	05 38 13.9	+0.5
	baz=327,slow=12						
FIA1	FINESS Array S	16.21	109	Pn	Pn	05 38 14.3	+0.9
FINES	FINESS Array B	16.21	109	Pn	Pn	05 38 13.9	+0.5
	comp=Z,0.3nm,0.3s,baz=312,slow=9.4,SNR=7.6						
FINES	FINESS Array B	16.21	109		Pn	05 38 14.3	+1.0
TULEG	Thule	17.30	316		Pn	05 38 26.4	-0.6
TULEG				IAmb	IAmb	05 38 34.8	
	comp=Z,17nm,1.4s						
KLMR	Klimovskoe	20.97	95	eP	P	05 39 09.4	+0.6
	comp=Z,295nm,1.8s						
KLMR	Klimovskoe	20.97	95	e	P	05 39 09.1	+0.4
KLMR				AMP		05 39 14.6	
	comp=Z,28nm,1.3s						
PRU	Pruhonice	23.31	143	eP	P	05 39 36.7	+3.0
DPC	Dobruska-Polom	23.33	140	eP	P	05 39 36.7	+2.7
KRLC	Kraliky	23.69	139	eP	P	05 39 36.3	-1.2
BFO	Black Forest	23.84	154	P	P	05 39 41.6	+2.7
BFO				IAmb	IAmb	05 39 45.8	
	comp=Z,11nm,1.5s						
RES	Resolute Bay	23.93	319	P	P	05 39 39.6	0.0
KHC	Kasperske Hory	23.94	145	eP	P	05 39 42.9	+3.0
KHC	Kasperske Hory	23.94	145	P	P	05 39 43.9	+4.0
GERES	GERESS Array B	24.24	145	P	P	05 39 45.1	+2.4
	comp=Z,1.4nm,0.7s,baz=353,slow=9.7,SNR=9.8						
GERES	GERESS Array B	24.24	145	P	P	05 39 45.2	+2.5
AKASG	Malin Array Be	26.23	121	P	P	05 40 01.3	+0.6
	comp=Z,2.9nm,0.8s,baz=333,slow=9.4,SNR=4.1						
BNI	Bardonecchia	26.83	158	P	P	05 40 09.0	+2.8
BUR08	Bucovina Ar. S	27.95	129	P	P	05 40 20.0	+3.7
BUR08				IAmb	IAmb	05 40 30.5	
	comp=Z,3.4nm,1.2s						
BURAR	Bucovina Array	27.98	129	P	P	05 40 19.9	+3.4
SCHQ	Schefferville	29.94	269	LR	LR	05 51 00.6	
	comp=Z,133nm,19.0s,baz=163,slow=33						
MLR	Muntele Rosu	30.14	130	LR	LR	05 53 12.9	
	comp=Z,204nm,18.1s,baz=303,slow=37						
ESDC	Sonseca Array	31.37	175	P	P	05 40 50.1	+3.5
	comp=Z,0.1nm,0.4s,baz=360,slow=9.1,SNR=4.0						
ESDC	Sonseca Array	31.37	175	IAmb	IAmb	05 40 53.2	
	comp=Z,0.8nm,1.1s						
ABKAR	Akbulak array	37.16	89	P	P	05 41 41.3	+4.8
YKA	Yellowknife Ar	37.73	314	P	P	05 41 41.8	+0.6
	comp=Z,0.3nm,0.9s,baz=26,slow=8.9,SNR=2.9						
KK31	Karatay Array	46.04	84	P	P	05 42 51.1	+1.7
KK31				IAmb	IAmb	05 43 02.7	
	comp=Z,4.3nm,1.3s						
KKAR	Karatay Array	46.04	84	P	P	05 42 51.1	+1.7
KKAR	Karatay Array	46.04	84	P	P	05 42 50.8	+1.4
KKAR				IAmb	IAmb	05 43 02.7	
	comp=Z,4.3nm,1.3s						
MKAR	Makanchi Array	46.52	71	P	P	05 42 54.6	+1.5
	comp=Z,0.2nm,0.5s,baz=336,slow=3.2,SNR=4.8						
TORD	Torodi Ar. Bea	58.01	170	P	P	05 44 20.6	+2.0
	comp=Z,1.7nm,1.1s,baz=341,slow=7.9,SNR=6.5						
TORD	Torodi Ar. Bea	58.01	170	P	P	05 44 20.6	+2.0
TXAR	Lajitas Array	64.65	286	P	P	05 45 04.9	+1.2
	comp=Z,0.3nm,0.8s,baz=64,slow=8.1,SNR=3.6						

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*IDC **08** 05:50:40.7±2.6, 7°.41S×128°.36E, h149km±26km, mb3.7/5, mb1 3.7/8, mb1mx3.5/28, mbtmp4.2/8, Error ellipse: s-maj=37.7km s-min=14.6km az=90.0*

*NEIC **08** 05:50:41.8±2.4, 7°.46S±0°.07×128°.46E±0°.06, h162km±8km, mb4.0/8, Error ellipse: s-maj=10.4km s-min=7.9km az=155.0*

*DJA **08** 05:50:42.0±0.4, 8°S±4°×12°8E±°, h161km±10km, M4.2/9, mB4.8/4, mb4.0/7, MLv4.4/9, Mw(mB)4.0/4*

ISC 08 05:50:40.7±0.5**, 7°.50S**±0°.05×**128°.41E**±0°.05**, h151km, n41, σ1s.99**/48**, mb3.9**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.91	100	P	Pn	05 51 28.1	+1.2
SAUI				S	Sn	05 52 06.0	+3.3
SAUI	Saumlaki	2.91	100	Pn	Pn	05 51 28.1	+1.2
SAUI				Sn	Sn	05 52 05.2	+2.5
BNDI	Bandanaira	3.31	27	P	Pn	05 51 34.8	+2.7
SOEI	Soe	4.66	241	P	Pn	05 51 52.1	+2.3
SOEI	Soe	4.66	241		Pn	05 51 52.1	+2.3
SOEI				Sn	Sn	05 52 44.7	+1.1
FAKI	Fak Fak	5.95	40	P	Pn	05 52 07.8	+1.1
	0.3nm32nm,0.6s						
FAKI	Fak Fak	5.95	40		Pn	05 52 06.5	-0.2
FAKI					Sn	05 53 09.7	-4.3
MTN	Manton Dam	5.95	153		Pn	05 52 08.0	+1.3
MTN					Sn	05 53 11.2	-2.9
BBSI	Bau Bau	6.13	289	P	Pn	05 52 11.7	+2.5
	0.0nm641nm8.7nm,0.9s						
MMRI	Maumere	6.21	259	Pn	Pn	05 52 12.4	+2.2
EDFI	Ende, Flores	6.76	259	P	Pn	05 52 19.7	+2.0
	0.1nm16nm,1.0s						
SIJI	Sorong	7.18	24	P	Pn	05 52 23.8	+0.6
	6.3nm,0.3s,baz=243,slow=22,SNR=29						
SIJI				S	Sn	05 53 41.5	-2.2
	4.0nm,0.3s,baz=232,slow=22,SNR=4.5						
KNRA	Kununurra	8.13	178		Pn	05 52 36.0	+0.2
BKSI	Bulukumba	8.51	284	P	Pn	05 52 42.3	+1.4
	658nm12nm,1.0s						
WBSI	Waikabubak, Su	9.16	256	P	Pn	05 52 50.8	+1.1
FITZ	Fitzroy Crossi	10.87	194	P	Pn	05 53 12.0	-0.2
	0.5nm,0.3s,baz=14,slow=8.2,SNR=15						
FITZ				S	Sn	05 55 04.9	-7.6
	2.5nm,0.3s,baz=307,slow=23,SNR=8.6						
FITZ	Fitzroy Crossi	10.87	194		Pn	05 53 11.6	-0.6
WRAB	Tennant Creek	13.64	156	Pn	Pn	05 53 48.4	+0.3
WRA	Warramunga Arr	13.64	156	P	Pn	05 53 46.3	-1.8
	0.6nm,0.3s,baz=341,slow=12,SNR=6.1						
WRA				S	Sn	05 56 09.1	-10
	2.6nm,0.3s,baz=333,slow=23,SNR=9.2						
WR0	Warramunga Arr	13.74	155	Pn	Pn	05 53 47.2	-2.1
COEN	Coen	15.86	115		Pn	05 54 15.8	0.0
COEN				IAmb	IAmb	05 54 32.9	
	comp=Z,19nm,1.4s						
AS31	Alice Springs	16.92	162	P	Pn	05 54 30.7	+2.1
ASAR	Alice Springs	16.92	162	P	Pn	05 54 30.8	+2.2
	comp=Z,0.4nm,0.3s,baz=341,slow=11,SNR=52						
BBOO	Buckleboo	26.17	165	P	P	05 56 02.6	+1.5
BBOO				IAmb	IAmb	05 56 09.4	
	comp=Z,12nm,1.3s						
STKA	Stephens Creek	27.19	155	P	P	05 56 11.4	+1.2
	comp=Z,1.7nm,0.6s,baz=313,slow=9.7,SNR=4.5						
STKA	Stephens Creek	27.19	155	P	P	05 56 11.5	+1.2
STKA				IAmb	IAmb	05 56 12.4	
	comp=Z,1.4nm,1.1s						
SONM	Songino Array	58.43	343	P	P	06 00 20.6	0.0
	comp=Z,1.5nm,0.9s,baz=156,slow=5.7,SNR=8.3						
SONM	Songino Array	58.43	343	P	P	06 00 20.6	0.0
PEA0B	Petropavlovsk-	65.30	19	P	P	06 01 06.5	+0.2
PETK	Petropavlovsk-	65.30	19	P	P	06 01 05.5	-0.7
	comp=Z,3.4nm,0.6s,baz=185,slow=4.8,SNR=6.6						
PETK	Petropavlovsk-	65.30	19	P	P	06 01 06.6	+0.4
MK31	Makanchi Array	67.79	328	P	P	06 01 23.0	+0.8
MK31				IAmb	IAmb	06 01 23.7	
	comp=Z,1.7nm,0.9s						
MKAR	Makanchi Array	67.79	328	P	P	06 01 22.3	0.0
	comp=Z,1.0nm,0.5s,baz=127,slow=7.7,SNR=16						
MKAR	Makanchi Array	67.79	328	P	P	06 01 23.1	+0.9
ZALV	Zalesovo Beam	71.34	335	P	P	06 01 42.6	-1.2
	comp=Z,1.1nm,0.5s,baz=145,slow=5.1,SNR=7.7						
ZALV	Zalesovo Beam	71.34	335	P	P	06 01 43.0	-0.8
KKAR	Karatay Array	72.68	319	P	P	06 01 52.3	+0.2
ABKAR	Akbulak array	81.92	322	P	P	06 02 42.6	-0.7
QSPA	South Pole Qui	82.48	180	P	P	06 02 46.7	+0.5
QSPA				IAmb	IAmb	06 02 59.2	
	comp=Z,3.5nm,1.4s						
TORD	Torodi Ar. Bea	127.35	281	PKP	PKPdf	06 09 28.6	+0.1
	comp=Z,0.5nm,0.6s,baz=88,slow=2.7,SNR=2.8						
TORD	Torodi Ar. Bea	127.35	281		PKPdf	06 09 28.3	-0.2

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*SJA **08** 06:01:42.2±0.8, 34°.74S×71°.88W, h9km±5km, ML3.3, MW3.3*

*GUC **08** 06:01:45.6±0.6, 34°.78S×71°.84W, h42km±2km, ML3.7*

ISC 08 06:01:46.3±1.1**, 34°.72S**±0°.04×**71°.88W**±0°.09**, h26km**±10km**, n21, σ1s.31**/33**, 7C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	Huala	0.29	188	⇑iP	Pb	06 01 53.1	-0.2
GO05				eS	Sb	06 01 58.8	+0.7
GO05				IAML		06 01 59.7	
	comp=E,14µm,0.3s						
MT01	Popeta	1.00	31	⇓eP	Pb	06 02 03.5	-1.5
MT01				eS	Sb	06 02 17.9	0.0
MT01				IAML		06 02 19.7	
	comp=N,3µm,0.4s						
ANTU	Antumapu	1.55	42	IAML		06 02 35.5	
	comp=E,3µm,0.3s						
MT02	Curacav	1.59	23	⇑iP	Pn	06 02 12.0	-0.7
MT02				eS	Sn	06 02 32.3	0.0
LMEL	Las Melosas	1.64	58	⇑iP	Pn	06 02 12.3	-1.2
LMEL				eS	Sn	06 02 33.1	-0.8
LMEL				IAML		06 02 35.8	
	comp=N,1µm,0.3s						
MT03	Universidad Ad	1.67	43	⇓eP	Pn	06 02 13.0	-0.9
MT03				eS	Sn	06 02 33.9	-0.7
CLCH	Cerro Calan	1.73	40	⇑iP	Pn	06 02 14.1	-0.6
CLCH				eS	Sn	06 02 35.3	-0.6
CLCH				IAML		06 02 45.4	
	comp=N,2µm,0.4s						
PEL	Peldehue	1.86	33	⇑iP	Pn	06 02 16.1	-0.4
PEL				eS	Sn	06 02 38.8	-0.4
PEL	Peldehue	1.86	33	iP	Pn	06 02 16.5	0.0
CCHI	Chillan	1.88	185	⇑iP	Pn	06 02 15.0	-1.7
CCHI				eS	Sn	06 02 37.4	-2.2
CCHI	Chillan	1.88	185	iP	Pn	06 02 16.8	+0.1
CCHI				eS	Sn	06 02 41.2	+1.6
ROC1	El Roble	1.89	23	iP	Pn	06 02 16.8	-0.2
ROC1				eS	Sn	06 02 43.4	+3.4
ROCH	El Roble	1.89	23	⇓iP	Pn	06 02 16.7	-0.4
ROCH				iS	Sn	06 02 40.5	+0.4
FCH	Farellones	1.92	44	⇑iP	Pn	06 02 16.7	-0.9
FCH				eS	Sn	06 02 41.3	+0.4
FCH				IAML		06 02 48.6	
	comp=N,818nm,0.2s						
LAMA	Las Malvinas	2.21	96	eP	Pn	06 02 21.0	-0.1
EDS3	Malargue	2.28	118	iP	Pn	06 02 22.7	+0.3
AAGR	Agrelo	3.02	58	iP	Pn	06 02 33.1	+0.6
ARCO	CERRO ARCO	3.09	53	eP	Pn	06 02 34.1	+0.6
ARCO				IAML		06 02 54.0	
	comp=Z,71nm,0.3s						
CANA	Caviahue	3.23	168	iP	Pn	06 02 36.3	+1.0
ASAL	Salagasta	3.31	51	iP	Pn	06 02 37.1	+0.6
RTLS	Leoncito	3.63	37	iP	Pn	06 02 42.3	+1.2
RTLS				eS	Sn	06 03 27.1	+3.9
RTLS				IAML		06 03 42.9	
	comp=Z,75nm,0.6s						

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*VAO **08** 06:06:49.8±3.1, 24°.12S×70°.23W, h10km, mb4.5*

*IDC **08** 06:07:38.5±1.0, 23°.89S×66°.44W, h200km±9km, mb3.3/8, mb1 3.6/14, mb1mx3.4/34, mbtmp3.9/14, MS2.7/1, Ms1 2.7/1, ms1mx2.3/13, Error ellipse: s-maj=17.9km s-min=12.2km az=27.0*

*GUC **08** 06:07:38.4±0.5, 23°.81S×67°.15W, h269km±11km, ML4.7*

*NEIC **08** 06:07:38.7±2.0, 23°.96S±0°.06×66°.57W±0°.08, h200km±7km, mb4.2/18, Error ellipse: s-maj=11.1km s-min=8.8km az=98.0*

ISC 08 06:07:38.2±0.4**, 23°.95S**±0°.04×**66°.58W**±0°.05**, h195km, n73, σ1s.43**/88**, mb3.9**/13**, 4C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.52	302	P	Pn	06 08 24.5	+2.1
	37nm,0.3s,baz=131,slow=6.9,SNR=68						
LVC				S	Sn	06 08 59.3	+2.5
	107nm,0.3s,baz=305,slow=20,SNR=31						
PB15	IPOC Station P	2.75	285	⇑iP	Pn	06 08 26.2	+1.3
PB15				iS	Sn	06 09 03.4	+2.2
GO02	Mina Guanaco	2.99	246	eP	Pn	06 08 31.2	+3.5
GO02				IAML		06 09 10.8	
	comp=N,972nm,0.4s						
GO02	Mina Guanaco	2.99	246		Pn	06 08 28.6	+0.9
GO02				Sn	Sn	06 09 03.5	-2.9
PB06	IPOC Station P	3.01	294	⇑iP	Pn	06 08 29.2	+1.4
PB06				iS	Sn	06 09 07.8	+1.1
PB06				IAML		06 09 11.3	
	comp=E,901nm,0.2s						
PB05	IPOC Station P	3.50	288	eP	Pn	06 08 34.2	+0.5
PB05				iS	Sn	06 09 16.9	-0.2
PB14	IPOC Station P	3.55	258	iS	Sn	06 09 19.4	+0.9
PB04	IPOC Station P	3.66	295	eP	Pn	06 08 36.1	+0.4
PB04				iS	Sn	06 09 20.1	-0.6
PB04	IPOC Station P	3.66	295		Pn	06 08 36.1	+0.4
PB04				Sn	Sn	06 09 20.6	-0.2
PB10	IPOC Station P	3.66	276	⇑iP	Pn	06 08 35.9	+0.3
PB10				iS	Sn	06 09 20.0	-0.6
PB10	IPOC Station P	3.66	276		Pn	06 08 35.9	+0.3
PB10				Sn	Sn	06 09 21.1	+0.5
PB07	IPOC Station P	3.77	305	⇑iP	Pn	06 08 38.2	+1.1
PB07				iS	Sn	06 09 22.9	-0.3
PB01	IPOC Station P	3.95	317	eP	Pn	06 08 40.5	+1.2
PB01	IPOC Station P	3.95	317	Pn	Pn	06 08 41.3	+2.0
PB01				Sn	Sn	06 09 26.2	-0.9
PB08	IPOC Station P	4.48	327	eP	Pn	06 08 48.3	+2.1
PATCX	Punta Patache	4.54	313	⇓iP	Pn	06 08 47.4	+0.7
GO03	Copiap	4.90	221		Pn	06 08 52.8	+1.7
GO03				Sn	Sn	06 09 50.0	+1.3
GO01	Chusmiza	4.91	330		Pn	06 08 54.0	+2.3
GO01				Sn	Sn	06 09 49.4	-0.2
PB11	IPOC Station P	5.05	325	Pn	Pn	06 08 54.4	+1.1
PB11				Sn	Sn	06 09 49.6	-3.0
MNMC	Minye Minye	5.56	329	Pn	Pn	06 09 00.7	+0.7
GO04	Tololo Observa	7.24	210	Pn	Pn	06 09 21.9	+0.2
CFA	Coronel Fontan	7.76	191	P	Pn	06 09 28.9	+0.6
	comp=E,1.5nm,0.3s,baz=335,slow=7.6,SNR=24						
CFA				S	Sn	06 10 51.5	-4.3
	comp=E,3.6nm,0.3s,baz=201,slow=16,SNR=17						
CFA				LR	LR	06 13 07.5	
	comp=E,57nm,20.0s,baz=145,slow=42						
CPUP	Villa Florida	8.71	108	P	Pn	06 09 40.2	-0.5
	comp=E,0.2nm,0.3s,baz=298,slow=12,SNR=18						
CPUP	Villa Florida	8.71	108		Pn	06 09 41.8	+1.1
SIV	San Ignacio	9.46	34	P	Pn	06 09 49.2	-1.4
	comp=E,0.4nm,0.3s,baz=231,slow=11,SNR=4.9						
GO05	Huala	11.96	202	P	P	06 10 27.1	-0.4
TRCB	Terra Rica	12.87	88	eP	P	06 10 38.9	+1.1
SALV	Santo Antonio	13.00	54	eP	Pn	06 10 34.7	-1.2
PTGB	Pitanga	13.26	96	eP	P	06 10 43.7	+1.5
C2SB	Chapadao do Su	13.80	71	eP	Pn	06 10 46.8	+0.9
PCMB	Pacaembu	14.32	84	eP	P	06 10 55.1	+1.1
ITRB	Iturama	15.65	77	eP	P	06 11 10.2	+1.5
ARAG	Araguaiana, MT	16.13	62	eP	Pn	06 11 15.2	+0.9
BB19B	Bebedouro	16.93	84	eP	Pn	06 11 25.0	+1.0
PLCA	Paso Flores	17.06	190	P	Pn	06 11 25.5	+0.1
	comp=E,0.1nm,0.3s,baz=35,slow=12,SNR=9.3						
PLCA	Paso Flores	17.06	190	P	Pn	06 11 25.7	+0.3
PLCA				IAmb	IAmb	06 11 32.7	
	comp=Z,5.2nm,0.6s						
RCLB	Rio Claro- Sao	17.59	89	eP	Pn	06 11 32.1	+0.4
PARB	Paraibuna	19.21	92	eP	Pn	06 11 50.5	-0.4
BDFB	Brasilia	19.32	68	P	P	06 11 47.6	-1.2
	comp=Z,1.0nm,0.3s,baz=245,slow=12,SNR=15						
BDFB	Brasilia	19.32	68	P	P	06 11 49.1	+0.3
BDFB				IAmb	IAmb	06 11 49.6	
	comp=Z,8.5nm,0.7s						
JANB	Januaria	22.76	71	eP	P	06 12 23.0	-1.0
PTGA	Pitinga	23.96	16	P	P	06 12 33.7	-1.1
	comp=Z,1.1nm,0.3s,baz=222,slow=15,SNR=3.0						
PTGA	Pitinga	23.96	16	IAmb	IAmb	06 12 45.9	
	comp=Z,9.6nm,1.4s						
SNAA	Sanae	59.27	161	P	P	06 17 19.6	+0.8
SNAA				IAmb	IAmb	06 17 26.7	
	comp=Z,4.0nm,1.2s						
BIRD	Birdtown, Kers	59.75	347	P	P	06 17 25.5	+3.0
MIAR	Mount Ida	63.58	335	P	P	06 17 47.7	-0.4
MIAR				IAmb	IAmb	06 17 54.0	
	comp=Z,5.0nm,1.4s						
TXAR	Lajitas Array	63.86	324	P	P	06 17 49.6	-0.6
	comp=Z,0.2nm,0.7s,baz=123,slow=4.6,SNR=4.2						
QSPA	South Pole Qui	66.25	180	P	P	06 18 06.7	+1.6
QSPA				IAmb	IAmb	06 18 07.0	
	comp=Z,3.7nm,0.6s						
S39A	Bolivar	66.27	337	P	P	06 18 04.7	-0.6
S39A				IAmb	IAmb	06 18 05.0	
	comp=Z,3.0nm,0.6s						
DBIC	Dimbokro	67.43	71	P	P	06 18 12.2	-1.0
	comp=Z,0.6nm,0.3s,baz=225,slow=7.1,SNR=2.7						
DBIC	Dimbokro	67.43	71	P	P	06 18 12.8	-0.4
F64A	Sherman	69.50	359	P	P	06 18 24.9	-0.3
D62A	Allapoint, All	70.74	358	P	P	06 18 32.5	-0.2
D62A				IAmb	IAmb	06 18 48.2	
	comp=Z,7.3nm,1.4s						
TOA0	Torodi Ar. Sit	76.20	69	P	P	06 19 04.3	-1.1
TORD	Torodi Ar. Bea	76.20	69	P	P	06 19 04.0	-1.4
	comp=Z,1.3nm,0.6s,baz=259,slow=5.9,SNR=10						
TORD	Torodi Ar. Bea	76.20	69	P	P	06 19 03.6	-1.8
PDAR	Pinedale Array	77.30	329	P	P	06 19 11.2	0.0
	comp=Z,0.3nm,0.5s,baz=128,slow=5.8,SNR=4.1						
ULM	Lac du Bonnet	78.31	341	P	P	06 19 15.7	-0.6
	comp=Z,0.7nm,0.4s,baz=130,slow=15,SNR=2.9						
ULM	Lac du Bonnet	78.31	341	IAmb	IAmb	06 19 34.1	
	comp=Z,4.9nm,1.4s						
REDW	Red Top Meadow	78.37	329	P	P	06 19 18.0	+0.9
NVAR	Mina Array Bea	78.74	321	P	P	06 19 20.3	+1.1
	comp=Z,0.3nm,0.6s,baz=94,slow=9.1,SNR=3.6						
RLMT	Red Lodge	78.99	331	P	P	06 19 21.0	+0.6
YHH	Holmes Hill	79.45	330	P	P	06 19 24.4	+1.3
YHL	Hebgen Lake	79.65	329	P	P	06 19 25.7	+1.5
YKA	Yellowknife Ar	94.21	340	P	P	06 20 34.0	-0.4
	comp=Z,0.4nm,0.7s,baz=132,slow=4.5,SNR=8.6						
ZALV	Zalesovo Beam	143.17	28	PKP	PKPbc	06 26 45.9	-0.2
	comp=Z,0.7nm,0.5s,baz=318,slow=1.9,SNR=3.5						
MAKZ	Makanchi	146.06	40		PKPdf	06 26 54.1	+0.3
MAKZ				PKPbc	PKPbc	06 26 55.3	+0.3
MK31	Makanchi Array	146.25	40		PKPdf	06 26 54.3	+0.1
MK31				PKPbc	PKPbc	06 26 55.6	0.0
MKAR	Makanchi Array	146.25	40	PKPbc	PKPdf	06 26 54.0	-0.1
	comp=Z,1.3nm,0.6s,baz=312,slow=2.7,SNR=19						
MKAR	Makanchi Array	146.25	40		PKPdf	06 26 53.8	-0.4
MKAR				PKPbc	PKPbc	06 26 55.7	+0.1
WMQ	Urumqi	151.06	40	eP	PKPdf	06 27 01.6	-0.5
HHC	Hu-ho-hao-te	163.08	5	eP	PKPdf	06 27 13.0	-4.4
LZH	Lanzhou	165.35	32	ePKP	PKPdf	06 27 16.1	-3.5
LZH				pPKP	pPKPdf	06 28 08.4	-3.7
LZH				sPKP		06 28 38.8	

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*JMA **08** 06:20:41.8±0.7, 45°.49N×150°.94E, h30km, M4.3*

SKHL 08 06:20:42.3±0.1**, 44°.94N×151°.10E, h37km**±2km**, mb4.2**/3**,**
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.31	278	iP	Pn	06 21 17.8	+0.1
KUR				AMB	AMB	06 21 19.0	
	30nm,0.3s						
KUR				eS	Sn	06 21 44.5	-0.3
KUR				A	A	06 21 50.0	
	210nm,0.3s						
KUR				A	A	06 21 50.0	
	80nm,0.3s						
SHO	Shikotan	3.24	252	eP	Pn	06 21 31.3	+0.8
SHO				AMB	AMB	06 21 34.0	
	30nm,0.4s						
SHO				iS	Sn	06 22 08.0	+0.2
SHO				A	A	06 22 17.0	
	110nm,0.3s						
SHO				A	A	06 22 17.0	
	90nm,0.3s						
YUK	Yuzh-Kuril'sk	3.86	258	eP	Pn	06 21 40.5	+1.5
YUK				AMB	AMB	06 21 41.0	
	20nm,0.3s						
YUK				iS	Sn	06 22 23.7	+0.7
YUK				A	A	06 22 35.0	
	130nm,0.4s						
YUK				A	A	06 22 35.0	
	80nm,0.4s						
GRPR	Tuman	3.93	258	eP	Pn	06 21 39.9	-0.1
GRPR				iS	Sn	06 22 25.6	+0.8
GRPR				A	A	06 22 30.0	
	60nm,0.3s						
GRPR				A	A	06 22 30.0	
	50nm,0.3s						
NEM2	Nemuro 2	4.16	250	P	Pn	06 21 44.2	+1.0
NEM2				eS	Sn	06 22 30.6	0.0
NMR	Nemuro--Hokkai	4.17	250	eP	Pn	06 21 44.2	+0.9
NMR				iS	Sn	06 22 31.2	+0.4
JRA	Rausu	4.40	259	P	Pn	06 21 48.8	+2.4
JNK	Nakash	4.78	256	P	Pn	06 21 53.8	+2.1
JAK	Akkeshi	5.01	249	P	Pn	06 21 55.6	+0.7
JTKR	Abashiri--Toko	5.24	262	P	Pn	06 22 00.3	+2.3
JAR	Ashorobuto	5.53	255	P	Pn	06 22 04.5	+2.5
JAR				eS	Sn	06 23 05.8	+1.6
JOB	Onbets	5.63	251	P	Pn	06 22 04.8	+1.5
JCH	Churui	6.07	250	P	Pn	06 22 10.6	+1.3

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*IDC **08** 06:21:36.6±1.9, 4°.35S×133°.55E, h0km, mb3.3/1, mb1 3.9/6, mb1mx3.7/34, mbtmp3.8/6, ML3.6/5, MS3.3/1, Ms1 3.3/1, ms1mx2.7/23, Error ellipse: s-maj=65.9km s-min=18.1km az=66.0*

ISC 08 06:21:38.1±1.1**, 4°.62S**±0°.07×**133°.2E**±0°.2**, h10km, n7, σ3s.00**/11**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.20	332	Pn	Pn	06 22 41.1	-1.2
	1.4nm,0.3s,baz=143,slow=20,SNR=1.7						
SIJI				Pg	Pb	06 22 55.6	+3.4
	9.5nm,0.3s,baz=127,slow=16,SNR=8.1						
SIJI				Sn	Sn	06 23 26.8	-4.8
	2.4nm,0.3s,baz=203,slow=23,SNR=1.3						
SIJI				Lg	Lg	06 23 47.8	
	2.3nm,0.3s,baz=180,slow=20,SNR=1.9						
PMG	Port Moresby	14.64	110	LR	LR	06 32 20.1	
	comp=Z,126nm,19.6s,baz=310,slow=45						
WRA	Warramunga Arr	15.27	176	Pn	Pn	06 25 15.3	+1.4
	0.2nm,0.3s,baz=360,slow=13,SNR=4.3						
WRA				Sn	Sn	06 28 00.2	-3.0
	0.1nm,0.3s,baz=348,slow=28,SNR=3.5						
FITZ	Fitzroy Crossi	15.30	208	Pn	P	06 25 18.8	-0.4
	0.3nm,0.3s,baz=32,slow=12,SNR=9.5						
FITZ				Sn	Sn	06 28 05.7	+1.6
	0.5nm,0.3s,baz=197,slow=15,SNR=8.5						
ASAR	Alice Springs	18.95	178	P	Pn	06 26 03.1	+2.9
	0.2nm,0.3s,baz=7.0,slow=13,SNR=20						
ASAR				S	Sn	06 29 28.8	-3.7
	0.1nm,0.3s,baz=360,slow=26,SNR=4.3						
CTA	Charters Tower	19.94	142	P	P	06 26 10.2	-0.2
	0.2nm,0.3s,baz=328,slow=13,SNR=2.0						
MKAR	Makanchi Array	68.06	325	P	P	06 32 38.1	+0.1
	0.3nm,0.7s,baz=126,slow=7.3,SNR=3.0						

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*NNC **08** 06:27:02.8±0.2, 43°.16N×77°.72E, h1km±2km, mb3.0, mpv3.1, Error ellipse: s-maj=3.3km s-min=1.3km az=178.0*

*KRNET **08** 06:27:03.0±0.1, 43°.15N×77°.73E, h20km, mb2.7*

*SOME **08** 06:27:03.1, 43°.15N×77°.72E, h15km*

ISC 08 06:27:03.1±0.9**, 43°.16N**±0°.02×**77°.72E**±0°.01**, h12km**±10km**, n66, σ0s.65**/121**, 24C-17D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANVS	Anan'yevo	0.38	186	⇓iP	Pg	06 27 10.1	-0.5
	baz=87						
ANVS				⇓iS	Sg	06 27 15.6	-0.1
	baz=87						
KOTS	Kotyrbulak	0.45	280	⇑eP	Pb	06 27 12.5	-0.5
	baz=80						
KOTS				⇑eS	Sb	06 27 19.1	-0.6
	baz=80						
KOTS	Kotyrbulak	0.45	280	⇑eP	Pb	06 27 12.5	-0.5
	33nm,0.1s						
KOTS				eS	Sb	06 27 19.1	-0.6
	89nm,0.2s						
KOTS	Kotyrbulak	0.45	280	P	Pb	06 27 12.5	-0.5
	34nm,0.2s						
KOTS				S	Sb	06 27 19.1	-0.6
	118nm,0.3s						
MDOK	Medeo	0.49	271	eP	Pg	06 27 12.9	+0.2
	baz=71						
MDOK				eS	Sg	06 27 19.8	+0.5
	baz=71						
MDOK	Medeo	0.49	271	eP	Pg	06 27 12.9	+0.2
	3.3nm,0.1s						
MDOK				eS	Sg	06 27 19.8	+0.5
	22nm,0.3s						
MDOK	Medeo	0.49	271	⇓P	Pg	06 27 12.9	+0.2
	2.6nm,0.4s						
MDOK				S	Sg	06 27 19.7	+0.5
	6.7nm,0.3s						
MDOK	Medeo	0.49	271	Pg	Pg	06 27 12.9	+0.2
	3.3nm,0.1s						
MDOK				Lg	Lg	06 27 19.8	
	22nm,0.3s						

SATY	Saty	0.51	101	eP	Pg	06 27 13.2	0.0
	18nm,0.1s						
SATY				eS	Sg	06 27 20.5	+0.5
	513nm,0.1s						
SATY	Saty	0.51	101	P	Pg	06 27 13.2	0.0
	18nm,0.1s						
SATY				S	Sg	06 27 20.5	+0.5
	513nm,0.1s						
ZHN	Zhinishke	0.53	89	eP	Pg	06 27 13.2	-0.2
	14nm,0.1s						
ZHN				eS	Sg	06 27 20.2	-0.1
	74nm,0.2s						
ZHN	Zhinishke	0.53	89	P	Pg	06 27 13.2	-0.2
	14nm,0.1s						
ZHN				S	Sg	06 27 20.2	-0.1
	74nm,0.2s						
TNSS	Tian-Shan	0.58	258	⇑eP	Pg	06 27 14.3	-0.1
	baz=59						
TNSS				⇑eS	Sg	06 27 22.5	+0.3
	baz=59						
TNSS	Tian-Shan	0.58	258	⇑eP	Pg	06 27 14.3	-0.1
	7.2nm,0.1s						
TNSS				eS	Sg	06 27 22.5	+0.3
	34nm,0.2s						
TNSS	Tian-Shan	0.58	258	P	Pg	06 27 14.3	-0.1
	7.2nm,0.1s						
TNSS				S	Sg	06 27 22.5	+0.3
	34nm,0.2s						
AAA	Alma-Ata	0.59	275	eP	Pb	06 27 15.1	-0.3
	17nm,0.1s						
AAA				eS	Sb	06 27 23.5	-0.1
	47nm,0.2s						
AAA	Alma-Ata	0.59	275	P	Pb	06 27 15.1	-0.3
	17nm,0.1s						
AAA				S	Sb	06 27 23.5	-0.1
	47nm,0.2s						
IZV	Izvestkoviy	0.82	262	eP	Pg	06 27 18.9	0.0
	baz=62						
IZV				eS	Sb	06 27 30.1	-0.3
	baz=62						
IZV	Izvestkoviy	0.82	262	eP	Pg	06 27 18.9	0.0
	4.3nm,0.1s						
IZV				eS	Sb	06 27 30.1	-0.3
	46nm,0.2s						
IZV	Izvestkoviy	0.82	262	P	Pg	06 27 18.9	0.0
	4.3nm,0.1s						
IZV				S	Sb	06 27 30.1	-0.3
	46nm,0.2s						
PRZ	Przheval'sk	0.84	143	⇓iP	Pb	06 27 19.6	-0.1
	baz=43						
PRZ				⇓iS	Sb	06 27 30.9	-0.1
	baz=43						
CHKK	Chushkaly	0.88	323	⇓eP	Pb	06 27 19.4	-0.8
	baz=23						
CHKK				⇓eS	Sb	06 27 31.3	-0.6
	baz=23						
CHKK	Chushkaly	0.88	323	⇓eP	Pb	06 27 19.4	-0.8
	14nm,0.1s						
CHKK				eS	Sb	06 27 31.3	-0.6
	82nm,0.3s						
CHKK	Chushkaly	0.88	323	P	Pb	06 27 19.4	-0.8
	14nm,0.1s						
CHKK				S	Sb	06 27 31.3	-0.6
	82nm,0.3s						
KTBS	Karatobe	0.94	307	⇓eP	Pb	06 27 20.7	-0.6
	35nm,0.1s						
KTBS				eS	Sb	06 27 33.3	-0.3
	78nm,0.2s						
KTBS	Karatobe	0.94	307	P	Pb	06 27 20.7	-0.6
	35nm,0.1s						
KTBS				S	Sb	06 27 33.3	-0.3
	78nm,0.2s						
MTBS	Maitube	0.94	269	eP	Pb	06 27 21.1	-0.3
	baz=69						
MTBS				eS	Sg	06 27 33.9	+0.3
	baz=69						
MTBS	Maitube	0.94	269	eP	Pb	06 27 21.1	-0.3
	2.6nm,0.1s						
MTBS				eS	Sg	06 27 33.9	+0.3
	15nm,0.2s						
MTBS	Maitube	0.94	269	P	Pb	06 27 21.1	-0.3
	3.7nm,0.2s						
MTBS				S	Sg	06 27 33.9	+0.3
	18nm,0.2s						
UZB	Uzynbulak	0.95	90	eP	Pb	06 27 20.7	-0.9
	3.0nm,0.1s						
UZB				eS	Sb	06 27 33.3	-0.9
	43nm,0.1s						
UZB	Uzynbulak	0.95	90	P	Pb	06 27 20.7	-0.9
	3.0nm,0.1s						
UZB				S	Sb	06 27 33.3	-0.9
	43nm,0.1s						
MNBS	Baschi	1.05	28	⇑eP	Pb	06 27 23.1	-0.1
	12nm,0.1s						
MNBS				eS	Sg	06 27 37.4	+0.4
	56nm,0.2s						
MNBS	Baschi	1.05	28	P	Pb	06 27 23.0	-0.1
	8.7nm,0.2s						
MNBS				S	Sg	06 27 37.3	+0.4
	56nm,0.2s						
ARXS	Arharly	1.06	4	eP	Pb	06 27 22.8	-0.6
	16nm,0.3s						
ARXS				eS	Sb	06 27 36.8	-0.4
	48nm,0.2s						
ARXS	Arharly	1.06	4	P	Pb	06 27 22.8	-0.6
	16nm,0.3s						
ARXS				S	Sb	06 27 36.8	-0.4
	48nm,0.2s						
KDJ	Kajisay	1.10	201	⇓iP	Pb	06 27 23.0	-1.1
	baz=1.0						
KDJ				⇓iS	Sb	06 27 37.8	-0.7
	baz=1.0						
KUU	Kurty	1.24	307	⇓eP	Pn	06 27 25.8	-0.5
	4.7nm,0.1s						
KUU				eS	Sb	06 27 42.2	-0.3
	106nm,0.3s						
KUU	Kurty	1.24	307	P	Pn	06 27 25.8	-0.5
	4.8nm,0.1s						
KUU				S	Sb	06 27 42.2	-0.3
	106nm,0.3s						
SHLS	Shalkode	1.28	89	eP	Pg	06 27 32.7	+5.1
	baz=89						
SHLS				eS	Sg	06 27 53.8	+10
	baz=89						
SHLS	Shalkode	1.28	89	eP	Pg	06 27 32.7	+5.1
	5.8nm,0.3s						
SHLS				eS	Sg	06 27 53.7	+10
	16nm,0.2s						
SHLS	Shalkode	1.28	89	P	Pg	06 27 32.7	+5.1
	5.8nm,0.3s						
SHLS				S	Sg	06 27 53.7	+10
	16nm,0.2s						
KST	Kastek	1.29	266	eP	Pb	06 27 27.0	-0.3
	baz=66						
KST				eS	Sg	06 27 44.3	-0.3
	baz=66						
KST	Kastek	1.29	266	eP	Pb	06 27 27.0	-0.3
	3.5nm,0.2s						
KST				eS	Sg	06 27 44.3	-0.3
	14nm,0.2s						
KST	Kastek	1.29	266	P	Pb	06 27 27.0	-0.3
	3.5nm,0.2s						
KST				S	Sg	06 27 44.3	-0.3
	14nm,0.2s						
ULHL	Ulahol	1.42	231	⇑iP	Pb	06 27 29.2	-0.4
	baz=31						
ULHL				⇑iS	Sb	06 27 47.7	0.0
	baz=31						
DGS	Degeres	1.43	274	eP	Pb	06 27 29.4	-0.2
	baz=74						
DGS				eS	Sb	06 27 48.1	+0.3
	baz=74						
DGS	Degeres	1.43	274	eP	Pb	06 27 29.4	-0.2
	4.1nm,0.2s						
DGS				eS	Sb	06 27 48.0	+0.3
	36nm,0.2s						
DGS	Degeres	1.43	274	P	Pb	06 27 29.4	-0.2
	4.1nm,0.2s						
DGS				S	Sb	06 27 48.0	+0.3
	36nm,0.2s						
KRBS	Karabastau	1.58	291	eP	Pb	06 27 32.0	-0.3
	2.8nm,0.1s						
KRBS				eS	Sb	06 27 52.5	+0.2
	21nm,0.3s						
KRBS	Karabastau	1.58	291	P	Pb	06 27 32.8	+0.5
	2.8nm,0.1s						
KRBS				S	Sg	06 27 53.8	-0.1
	21nm,0.3s						
DJR	Jarkent	1.91	51	eP	Pb	06 27 37.7	-0.1
	1.0nm,0.2s						
DJR				eS	Sb	06 28 02.7	+1.1
	15nm,0.3s						
DJR	Jarkent	1.91	51	P	Pb	06 27 37.7	-0.1
	1.0nm,0.2s						
DJR				S	Sb	06 28 02.7	+1.1
	15nm,0.3s						
KTMS	Ketmen	1.94	81	eP	Pb	06 27 37.8	-0.7
	baz=80						
KTMS				eS	Sb	06 28 03.1	+0.4
	baz=80						
KTMS	Ketmen	1.94	81	eP	Pb	06 27 37.8	-0.7
	1.6nm,0.1s						
KTMS				eS	Sb	06 28 03.1	+0.4
	12nm,0.1s						
KTMS	Ketmen	1.94	81	Pg	Pb	06 27 37.8	-0.7
	1.6nm,0.1s						
KTMS				Lg	Lg	06 28 03.1	
	12nm,0.1s						
KBK	Karagaybulak	2.10	257	⇑iP	Pb	06 27 40.9	-0.2
	baz=57						
KBK				⇑iS	Sb	06 28 08.2	+1.1
	baz=57						
KZA	Kyzart	2.12	240	⇑iP	Pb	06 27 41.2	-0.4
	baz=40						
KZA				⇑iS	Sb	06 28 08.9	+1.0
	baz=40						
NRN	Naryn	2.14	217	⇑iP	Pb	06 27 41.8	-0.2
	baz=18						
NRN				⇑iS	Sb	06 28 10.0	+1.4
	baz=18						
CHMS	Chumysh	2.18	267	⇑iP	Pb	06 27 41.8	-0.6
	baz=67						
CHMS				⇑iS	Sb	06 28 10.2	+0.8
	baz=67						
CHMS	Chumysh	2.18	267	⇓Pg	Pb	06 27 41.6	-0.8
	1.2nm,0.6s						
CHMS				⇓Lg	Lg	06 28 10.6	
	3.7nm,0.3s						
SGDS	Sogindy	2.27	279	Pg	Pb	06 27 44.7	+0.7
	1.7nm,0.3s						
SGDS				Lg	Lg	06 28 14.3	
	6.2nm,0.3s						
USP	Ospenovka	2.35	274	⇑iP	Pb	06 27 44.4	-1.0
	baz=74						
USP				⇑iS	Sb	06 28 14.4	-0.1
	baz=74						
AAK	Ala-Archa	2.42	259	⇓iP	Pb	06 27 45.5	-1.2
	baz=59						
AAK				⇓iS	Sb	06 28 16.2	-0.4
	baz=59						
AAK	Ala-Archa	2.42	259	⇓Pg	Pb	06 27 45.8	-0.9
	1.4nm,0.6s						
AAK				⇑Lg	Lg	06 28 19.2	
	4.8nm,0.5s						
UCH	Uchtor	2.54	250	⇑iP	Pb	06 27 47.0	-1.8
	baz=50						
UCH				⇑iS	Sb	06 28 19.0	-1.1
	baz=50						
ARLS	Aral	2.82	244	⇑iP	Pn	06 27 50.5	+2.4
	baz=44						
ARLS				⇑iS	Sb	06 28 25.2	-2.9
	baz=44						

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*RSPR **08** 06:34:27.2, 19°.57N×67°.82W, h37km±16km, MD3.4/14*
*NEIC **08** 06:34:27.8±3.1, 19°.33N±0°.04×67°.77W±0°.04, h31km±10km, Error ellipse: s-maj=7.7km s-min=4.2km az=225.0*
*OSPL **08** 06:34:28.3±2.1, 19°.25N×67°.82W, h4km±12km, MD4.4, ML3.6*
ISC 08 06:34:29.3±1.6**, 19°.22N**±0°.07×**67°.82W**±0°.03**, h30**km±13km**, n61, σ1°.20**/80**, 11C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.88	217	i P	Pn	06 34 43.4	-2.3
PCDR				eS	Sn	06 34 56.9	-0.5
PCDR				IAML		06 35 01.5	
	comp=Z,2µm,0.6s						
PCDR	Punta Cana, DR	0.88	217		Pn	06 34 43.3	-2.4
AGPR	Aguadilla, PR	1.01	138	i P	Pn	06 34 46.0	-1.4
AGPR				eS	Sb	06 35 02.0	+0.9
AGPR				IAML		06 35 03.2	
	comp=Z,3µm,0.2s						
AGPR	Aguadilla, PR	1.01	138	⇑eP	Pn	06 34 47.3	-0.1
AGPR	Aguadilla, PR	1.01	138		Pn	06 34 46.0	-1.4
AGPR					Sb	06 35 01.8	+0.7
MPR	Mayaguez	1.19	147	i P	Pn	06 34 48.9	-1.0
MPR				eS	Sn	06 35 05.4	+0.2
MPR				IAML		06 35 10.3	
	comp=Z,475nm,0.4s						
MPR	Mayaguez	1.19	147	⇓eP	Pn	06 34 50.0	+0.1
MPR	Mayaguez	1.19	147	eS	Sb	06 35 08.5	+2.0
MPR	Mayaguez	1.19	147		Pn	06 34 48.5	-1.4
MPR					Sb	06 35 08.1	+1.6
LSP	Las Mesas	1.25	146	⇑eP	Pn	06 34 51.5	+0.8
LSP	Las Mesas	1.25	146	eS	Sb	06 35 09.7	+1.5
LSP	Las Mesas	1.25	146		Pn	06 34 51.5	+0.8
LSP					Sb	06 35 09.7	+1.5
AOPR	Arecibo Observ	1.33	131	⇓eP	Pn	06 34 51.4	-0.5
AOPR	Arecibo Observ	1.33	131	eS	Sb	06 35 10.8	+0.4
AOPR	Arecibo Observ	1.33	131		Pn	06 34 50.8	-1.1
AOPR					Sb	06 35 09.8	-0.6
CRPR	Cabo Rojo, PR	1.38	151	⇓eP	Pb	06 34 53.7	-0.9
CRPR	Cabo Rojo, PR	1.38	151	eS	Sb	06 35 13.2	+1.3
CRPR	Cabo Rojo, PR	1.38	151		Pn	06 34 51.5	-1.1
CRPR					Sb	06 35 13.1	+1.3
EMPR	Esperanza - Ma	1.43	121	⇑eP	Pn	06 34 51.9	-1.2
EMPR				eS	Sn	06 35 11.8	+0.9
EMPR	Esperanza - Ma	1.43	121		Pn	06 34 52.6	-0.5
EMPR					Sb	06 35 14.0	+0.9
MLPR	Magueyes Islan	1.45	149	⇑eP	Pn	06 34 54.4	+0.9
MLPR	Magueyes Islan	1.45	149	eS	Sb	06 35 14.7	+1.0
MLPR	Magueyes Islan	1.45	149		Pn	06 34 52.7	-0.7
MLPR					Sb	06 35 14.4	+0.7
GBPR	Guanica, Bosqu	1.53	144	⇑eP	Pn	06 34 55.2	+0.7
GBPR	Guanica, Bosqu	1.53	144	eS	Sb	06 35 16.7	+0.7
GBPR	Guanica, Bosqu	1.53	144		Pn	06 34 55.2	+0.7
GBPR					Sb	06 35 16.7	+0.7
DR12	Loma Pena Alta	1.54	254		Pn	06 34 53.2	-1.6
OBIP	Obispado Ponce	1.64	135	⇑eP	Pn	06 34 56.0	-0.1
OBIP	Obispado Ponce	1.64	135	eS	Sb	06 35 18.9	-0.4
OBIP	Obispado Ponce	1.64	135		Pn	06 34 55.0	-1.1
OBIP					Sb	06 35 18.2	-1.1
ICMP	Isla Caja de M	1.81	137	⇑eP	Pn	06 34 58.9	+0.5
ICMP	Isla Caja de M	1.81	137	eS	Sb	06 35 23.4	-0.7
ICMP	Isla Caja de M	1.81	137		Pn	06 34 59.4	+1.0
ICMP					Sb	06 35 23.7	-0.3
GCPR	Guaynabo City	1.88	119	⇑eP	Pn	06 34 58.6	-0.7
GCPR	Guaynabo City	1.88	119	eS	Sn	06 35 22.9	+0.9
GCPR	Guaynabo City	1.88	119		Pn	06 34 58.8	-0.6
GCPR					Sn	06 35 23.8	+1.8
SJG	San Juan	1.93	125		Pn	06 34 59.5	-0.5
IGPR	InterUniversit	2.05	127	⇑eP	Pn	06 35 01.2	-0.5
IGPR	InterUniversit	2.05	127	eS	Sn	06 35 28.1	+1.8
IGPR	InterUniversit	2.05	127		Pn	06 35 01.9	+0.2
PDPR	Patillas Dam,	2.08	125		Pn	06 35 01.1	-1.1
SDD	Santo Domingo	2.12	249	i P	Pn	06 35 03.4	+0.6
SDD				eS	Sn	06 35 27.7	-0.5
SDD	Santo Domingo	2.12	249		Pn	06 35 03.3	+0.6
BON1	Bonao	2.45	264	i P	Pn	06 35 07.1	-0.2
BON1				eS	Sn	06 35 36.7	+0.4
BON1				IAML		06 35 44.2	
	comp=Z,534nm,2.6s						
BANI	BANI	2.54	251		Pn	06 35 09.3	+0.7
CUPR	Culebra, Puert	2.57	110	Pn	Pn	06 35 05.9	-3.0
SC01	Santiago de lo	2.75	275	i P	Pn	06 35 12.2	+0.8
SC01				IAML		06 36 06.7	
	comp=Z,238nm,0.6s						
SC01	Santiago de lo	2.75	275		Pn	06 35 09.7	-1.7
STVI	Saint Thomas	2.85	107	⇑eP	Pn	06 35 10.9	-1.8
STVI	Saint Thomas	2.85	107	eS	Sn	06 35 45.7	-0.3
STVI	Saint Thomas	2.85	107	Pn	Pn	06 35 10.7	-2.0
STVI					Sn	06 35 45.5	-0.5
TBVI	Tortola	3.14	104	⇑eP	Pn	06 35 14.9	-1.8
TBVI				eS	Sn	06 35 52.2	-0.9
TBVI	Tortola	3.14	104		Pn	06 35 14.9	-1.8
TBVI					Sn	06 35 52.2	-0.9
CDVI	St. Croix	3.25	116	Pn	Pn	06 35 18.6	+0.4
SDDR	Presa de Saban	3.29	266	i P	Pn	06 35 18.8	-0.1
SDDR				IAML		06 36 17.4	
	comp=Z,13nm,0.1s						
SDDR	Presa de Saban	3.29	266		Pn	06 35 18.4	-0.5
URIC	Uribia, Colomb	8.49	209	Pn	Pn	06 36 29.2	-1.1
RUSC	La Rusia	14.21	202		Pn	06 37 47.9	-1.1
ROSC	El Rosal	15.64	205	P	P	06 38 12.2	+0.2
ROSC				IAmb	IAmb	06 38 12.9	
	comp=Z,8.3nm,0.9s						
BIRD	Birdtown, Kers	19.02	326	P	Pn	06 38 53.1	+3.4
V55A	Taylorsville	20.35	327	P	Pn	06 39 06.8	+1.4
V55A				IAmb	IAmb	06 39 19.4	
	comp=Z,16nm,1.3s						

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*IDC **08** 06:47:01.7±2.4, 15°.78S×176°.71W, h344km±34km, mb3.0/5, mb1 3.4/6, mb1mx3.1/30, mbtmp3.7/6, Error ellipse: s-maj=130.1km s-min=19.3km az=152.0*
ISC 08 06:47:01.9±1.5**, 15°.9S**±0°.6×**176°.7W**±0°.3**, h350**km**, n6, σ0°.44**/6**, mb3.2**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	5.11	68	P	Pn	06 48 22.5	-0.4
	4.4nm,0.3s,baz=252,slow=6.4,SNR=4.4						
WRA	Warramunga Arr	46.67	257	P	P	06 54 56.9	-0.3
	0.5nm,0.6s,baz=92,slow=7.3,SNR=3.0						
ASAR	Alice Springs	46.98	252	P	P	06 54 59.5	0.0
	2.6nm,0.4s,baz=89,slow=7.7,SNR=21						
NVAR	Mina Array Bea	76.79	43	P	P	06 58 16.1	0.0
	0.3nm,0.7s,baz=230,slow=8.1,SNR=1.7						
TXAR	Lajitas Array	83.49	57	P	P	06 58 52.3	+0.6
	0.1nm,0.6s,baz=213,slow=6.5,SNR=1.7						
ILAR	Eielson Array	83.52	12	P	P	06 58 50.8	-0.1
	0.2nm,0.5s,baz=216,slow=4.6,SNR=2.3						

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*IASPEI **08** 06:55:12.7±0.9, 35°.67N±0°.02×118°.47W±0°.02, h12km±5km, Error ellipse: s-maj=3.1km s-min=2.6km az=164.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*NEIC **08** 06:55:12.9±1.0, 35°.65N±0°.02×118°.44W±0°.02, h12km±4km, Error ellipse: s-maj=2.9km s-min=1.1km az=143.0*
*ANF **08** 06:55:12.5±0.1, 35°.69N×118°.45W, h10km±1km, ML2.5/19, Error ellipse: s-maj=1.2km s-min=1.1km az=91.0*
*PAS **08** 06:55:13.4±1.0, 35°.66N±0°.02×118°.47W±0°.03, h10km, ML2.4/75, Error ellipse: s-maj=3.8km s-min=1.7km az=129.0*
*SCEDC **08** 06:55:13.4, 35°.66N×118°.47W, h10km*
ISC 08 06:55:13.1±0.8**, 35°.65N**±0°.02×**118°.46W**±0°.02**, h11**km±5km**, n81, σ0°.73**/103**, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISA	Isabella, Lake	0.01	318		Pg	06 55 14.9	-0.3
ISA	Isabella, Lake	0.01	318	P	Pg	06 55 14.9	-0.3
	baz=78,SNR=260						
ISA				S	Sg	06 55 16.3	-0.3
	baz=78						
WHFM	Hanning Flat	0.10	65		Pg	06 55 15.8	-0.2
WASM	Alta Sierra Ca	0.12	318		Pg	06 55 16.0	-0.2
WORM	Onyx Ranch	0.18	77		Pg	06 55 17.1	-0.1
WOFM	Oak Flat	0.23	240		Pg	06 55 18.2	+0.1
WBSM	Bird Springs	0.29	114		Pg	06 55 19.1	0.0
WBSM					Sg	06 55 23.4	+0.3
WCHM	Chimney Peak	0.39	54		Pg	06 55 20.5	-0.4
WCHM					Sg	06 55 25.7	-0.5
TEJ	El Tejon	0.46	204		Pg	06 55 22.0	-0.1
TEJ					Sg	06 55 28.3	+0.1
VES	Vestal, Richgr	0.54	291		Pg	06 55 23.4	-0.2
VES					Sg	06 55 30.3	-0.5
VES	Vestal, Richgr	0.54	291	P	Pg	06 55 23.4	-0.2
	baz=109,SNR=30						
VES				S	Sg	06 55 30.3	-0.5
	baz=109						
SRTC	Snort	0.58	86		Pg	06 55 24.6	+0.1
TOW	Tower One	0.59	74		Pg	06 55 24.7	+0.1
VPEM	Volcano Peak E	0.60	60		Pg	06 55 24.5	-0.4
ARVC	Arvin	0.60	210		Pg	06 55 25.0	+0.2
ARVC	Arvin	0.60	210	P	Pg	06 55 25.0	+0.2
	baz=29,SNR=14						
ARVC				S	Sg	06 55 33.5	+0.7
	baz=29						
BAKC	Calstate	0.61	240		Pg	06 55 25.2	+0.3
JRC2	Joshua Ridge	0.62	58		Pg	06 55 24.8	-0.5
JRC2					Sg	06 55 33.1	-0.4
DTP	Desert Tortois	0.63	127		Pg	06 55 25.1	-0.3
LRMC	Laurel Mtn Rad	0.66	105		Pg	06 55 25.6	-0.3
LRMC					Sg	06 55 34.3	-0.3
LRMC	Laurel Mtn Rad	0.66	105	P	Pg	06 55 25.6	-0.3
	baz=286,SNR=17						
LRMC				S	Sg	06 55 34.5	-0.1
	baz=286						
TJR	Tejon Ranch	0.66	200		Pg	06 55 25.8	-0.2
MFS	McCloud Flat S	0.68	47		Pg	06 55 25.8	-0.5
WCSM	Coso Springs S	0.68	56		Pg	06 55 25.8	-0.5
WCSM					Sg	06 55 34.5	-0.7
JFS	Joseph F. Stat	0.71	115		Pg	06 55 26.6	-0.3
CLC	China Lake	0.72	77		Pg	06 55 26.7	-0.4
CLC					Sg	06 55 36.4	-0.2
THC	Tehachapi Micr	0.76	192		Pg	06 55 27.4	-0.4
CWC	Cottonwood Cre	0.84	21		Pg	06 55 28.4	-1.1
CWC					Sg	06 55 39.3	-1.2
CWC	Cottonwood Cre	0.84	21	P	Pg	06 55 28.4	-1.1
	baz=202						
CWC				S	Sg	06 55 39.4	-1.2
	baz=202						
EDW2	Edwards Air Fo	0.86	153		Pg	06 55 29.0	-0.7
EDW2	Edwards Air Fo	0.86	153	P	Pg	06 55 29.0	-0.7
	baz=334,SNR=39						
STTC	Scott Ranch	0.86	180		Pg	06 55 29.7	0.0
MPMC	Manual Prospec	0.89	63		Pg	06 55 29.6	-0.7
MPMC					Sg	06 55 41.4	-0.5
MPMC	Manual Prospec	0.89	63	P	Pg	06 55 29.6	-0.7
	baz=244,SNR=28						
MPMC				S	Sg	06 55 41.2	-0.7
	baz=244						
CCCA	Chr Cany lake	0.90	98		Pg	06 55 30.2	-0.4
CCCA					Sg	06 55 42.4	+0.1
DAC	Darwin (Calif)	0.94	48		Pb	06 55 31.9	+0.4
VOG	Valley Oaks Go	1.00	312		Pg	06 55 31.3	-1.1
VOG	Valley Oaks Go	1.00	312	P	Pg	06 55 31.4	-0.9
	baz=131						
VOG				S	Sg	06 55 44.5	-0.9
	baz=131						
LEOC	Leona Valley	1.03	173		Pg	06 55 32.1	-0.8
BCW	Bitter Crk WRg	1.05	228		Pg	06 55 32.4	-1.0
OSI	Osito Audit: C	1.06	192		Pn	06 55 34.7	+0.8
OSI	Osito Audit: C	1.06	192	S	Sn	06 55 48.9	+0.2
	baz=11						
HYS	Haystack Butte	1.07	137		Pg	06 55 32.9	-0.9
SBB	Saddle Back Bu	1.09	151		Pb	06 55 33.4	-0.7
CARC	Carrizo Plain	1.18	253		Pb	06 55 35.0	-0.5
IR2C	Iron Canyon	1.26	178		Pn	06 55 36.3	-0.4
HOLC	Holcomb Ridge	1.29	157		Pn	06 55 36.8	-0.4
SMMC	Simmler	1.30	255		Pn	06 55 36.4	-0.8
SMMC	Simmler	1.30	255	P	Pn	06 55 36.3	-0.8
	baz=74,SNR=5.4						
CHFC	Chilao Flat St	1.36	165		Pn	06 55 38.5	+0.2
GSC	Goldstone, Bar	1.40	104		Pn	06 55 38.0	-0.6
GSC	Goldstone, Bar	1.40	104	P	Pn	06 55 38.8	+0.2
	baz=286,SNR=9.1						
GSC				S	Sb	06 55 57.4	+0.2
	baz=286						
BCH	Branch Mountai	1.40	251		Pn	06 55 38.0	-0.7
TIN	Tinemaha, Big	1.41	8	Pg	Pn	06 55 38.8	0.0
	baz=188						
RRX	Edison Barstow	1.43	122	Sg	Sg	06 56 00.0	+0.9
	baz=304						
PAGB	Antelope Grade	1.46	274	Pn	Pn	06 55 38.9	-0.5
MWC	Mount Wilson	1.46	167		Pn	06 55 39.7	+0.1
PASC	Pasadena Art C	1.50	171	Pn	Pn	06 55 40.5	+0.6
FURC	Furnace Creek,	1.53	57	Pg	Pg	06 55 42.1	-0.3
	baz=239,SNR=20						
GRAC	Grapevine Rang	1.61	33	Sg	Sg	06 56 04.2	-0.6
	baz=214						
BLG	Laguna Peak, P	1.62	198	S	Sn	06 56 03.7	+1.2
	baz=17						
BBRC	Big Bear Solar	1.88	137	Sb	Sg	06 56 13.0	-0.6
	baz=318						
MLAC	Mammoth, Mammo	2.00	351	Pb	Pb	06 55 49.3	-0.3
	baz=171,SNR=16						

MLAC				Sb	Sb	06 56 15.5	+0.9
	baz=171						
OMMB	Old Mammoth Mi	2.00	348		Pn	06 55 48.6	+1.4
MDPB	Devils Postpil	2.04	346		Pb	06 55 49.5	-0.8
TPNV	Topopah Spring	2.21	53		Pb	06 55 53.3	+0.2
TPNV	Topopah Spring	2.21	53	Pg	Pb	06 55 54.2	+1.1
	baz=235						
TPNV				Sg	Sg	06 56 23.8	-0.2
	baz=235						
GMRC	Granite Mounta	2.45	110	Sb	Sg	06 56 30.5	-1.5
	baz=292						
PFO	Pinyon Flats O	2.62	140		Pn	06 55 54.6	-0.9
XPFO	Pion Flat	2.62	140		Pn	06 55 53.9	-1.6
TPFO	Pinon Flats	2.63	140	Sb	Sg	06 56 36.0	-1.6
	baz=322						
NVAR	Mina Array Bea	2.77	3		Pb	06 56 02.5	-0.3
NV11	Mina Array Sit	2.79	5		Pb	06 56 02.7	-0.3
SHPR	Sheep Range	2.81	71	Pn	Pn	06 55 57.9	-0.2
SHPR					Pb	06 56 04.4	+1.0
CMB	Columbia Colle	2.83	328		Pn	06 55 60.0	+1.6
RYN	Ryan	2.97	359		Pb	06 56 06.4	+0.3
YERR	Yerington	3.38	350		Pb	06 56 13.8	+0.5
KVN	Kaiserville	3.41	5		Pb	06 56 14.7	+1.1
PNTR	Pine Nut	3.55	346		Pb	06 56 15.7	-0.4
VCNR	Virginia City	3.76	346		Pb	06 56 20.2	+0.7
PAHR	Pah Rah Range	4.11	350		Pb	06 56 28.3	+2.7

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*ATA **08** 07:01:49.1±3.8, 39°.05N×40°.32E, h15^{km}, ML2.7, MW3.2*
*DDA **08** 07:02:10.3, 40°.01N×38°.84E, h7^{km}±1^{km}, ML1.2*
ISC 08 07:02:11.3±1.2**, 40°.03N**±0°.06×**38°.82E**±0°.04**, h10**^{km}**, n9, σ1^{s}72**/9**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KELT	Kelkit	0.36	70	eP	Pg	07 02 17.6	-0.8
KELT				IAML		07 02 23.6	
	comp=Z,28nm,0.4s						
KELT	Kelkit	0.36	70	i P	Pg	07 02 17.7	-0.8
KELT				IAML		07 02 22.0	
	comp=N,36nm,0.3s						
KELT				i S	Sg	07 02 22.4	-0.9
KELT				IAML		07 02 23.0	
	comp=E,26nm,0.4s						
SUSE	Susehri	0.50	291	i P	Pg	07 02 20.8	-0.3
SUSE				i S	Sb	07 02 28.5	-1.3
SUSE				IAML		07 02 30.0	
	comp=N,36nm,0.2s						
REFA	Refahiye_ERZN	0.63	184	eP	Pg	07 02 13.6	-10
REFA				IAML		07 02 16.1	
	comp=Z,91nm,0.1s						
REFA	Refahiye_ERZN	0.63	184	i P	Pg	07 02 13.7	-10
REFA				i S	Sg	07 02 15.6	-16
REFA				IAML		07 02 16.0	
	comp=E,99nm,0.1s						
REFA				IAML		07 02 16.0	
	comp=N,121nm,0.2s						
KEMA	Kemaliye	0.80	198	eP	Pg	07 02 17.4	-9.2
KEMA	Kemaliye	0.80	198	i P	Pg	07 02 25.4	-1.2
KEMA				IAML		07 02 43.0	
	comp=N,5.7nm,0.4s						
CUZAR	Zara_SIVAS	0.81	261	i P	Pg	07 02 26.1	-0.9
CUZAR				IAML		07 02 37.0	
	comp=E,12nm,1.1s						
CUZAR				IAML		07 02 39.0	
	comp=N,12nm,0.3s						
TNCL	Tunceli-Merkez	1.07	148	i P	Pn	07 02 35.4	+3.0
TNCL				i S	Sb	07 02 44.3	-1.7
TNCL				IAML		07 02 45.0	
	comp=E,12nm,0.9s						
TNCL				IAML		07 02 45.0	
	comp=N,5.2nm,0.2s						

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*IDC **08** 07:03:59.0±0.9, 19°.20S×169°.16E, h158^{km}±7^{km}, mb4.1/17, mb1 4.3/18, mb1mx4.1/34, mbtmp4.5/18, MS3.0/1, Ms1 3.0/1, ms1mx2.6/27, Error ellipse: s-maj=15.8km s-min=9.7km az=137.0*
*NEIC **08** 07:03:59.9±1.7, 19°.20S±0°.08×169°.1E±0°.1, h164^{km}±5^{km}, mb4.7/72, Error ellipse: s-maj=15.6km s-min=9.3km az=120.0*
ISC 08 07:03:58.2±0.4**, 19°.14S**±0°.06×**169°.15E**±0°.07**, h147**^{km}**, n205, σ1^{s}06**/203**, mb4.6**/46**, 1C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.87	221	P	Pn	07 04 58.7	+2.0
	6.3nm,0.3s,baz=86,slow=9.7,SNR=62						
DZM				S	Sn	07 05 42.7	+0.5
	46nm,0.3s,baz=4.8,slow=12,SNR=21						
DZM	Mont Dzumac	3.87	221		Pn	07 04 57.1	+0.3
DZM				Sn	Sn	07 05 42.2	0.0
MSVF	Nonsavu	8.56	82		Pn	07 06 02.4	+3.1
HNR	Honiara	13.13	316	LR	LR	07 11 35.1	
	comp=Z,64nm,18.2s,baz=210,slow=35						
LHI	Lord Howe Isla	15.32	214	P	P	07 07 30.4	+2.1
OUZ	Omahuta	16.50	167	P	P	07 07 42.2	+1.1
EIDS	Eidsvold	17.83	246	P	Pn	07 07 58.3	+1.0
KUZ	Kuaotunu	18.47	163	P	P	07 08 03.7	+0.9
MKAZ	Moumakai	18.66	165	P	Pn	07 08 05.9	-1.0
ARMA	Armidale	19.45	231	P	Pn	07 08 15.6	-0.8
HIZ	Hauiti	19.93	167	P	P	07 08 19.8	+1.1
HIZ				IAmb	IAmb	07 08 24.1	
	comp=Z,55nm,1.3s						
HIZ	Hauiti	19.93	167	P	Pn	07 08 20.5	-1.3
HAZ	Te Kaha	20.02	160	P	P	07 08 20.6	+1.0
RUGZ	Raukumara Rang	20.18	160	P	P	07 08 22.6	+1.2
PKGZ	Pakihiroa	20.24	159	P	Pn	07 08 24.1	-1.4
URZ	Urewera	20.28	162	P	P	07 08 22.0	-0.2
	comp=Z,12nm,0.7s,baz=303,slow=4.7,SNR=17						
URZ	Urewera	20.28	162	P	P	07 08 23.0	+0.8
URZ				IAmb	IAmb	07 08 30.3	
	comp=Z,17nm,0.6s						
URZ	Urewera	20.28	162	P	P	07 08 23.2	+0.9
TWGZ	Tauwhareparae	20.47	160	P	P	07 08 25.3	+0.8
SNGZ	Shannon Statio	20.83	162	P	P	07 08 30.1	+1.9
RAHZ	Arahi	20.88	162	P	Pn	07 08 31.0	-2.1
RIGZ	Rimuhau	20.89	161	P	P	07 08 30.4	+1.6
BKZ	Black Stump Fm	20.95	164	P	P	07 08 29.2	-0.3
BKZ	Black Stump Fm	20.95	164	P	P	07 08 29.7	+0.2
NMHZ	Naumai	20.97	163	P	Pn	07 08 32.7	-1.5
KWHZ	Kaweka Forest	21.17	164	P	P	07 08 32.6	+0.6
CTA	Charters Tower	21.59	264	P	P	07 08 37.6	+1.1
	comp=Z,14nm,0.5s,baz=91,slow=12,SNR=32						
QRZ	Quartz Range	21.81	173	P	P	07 08 42.0	+3.3
QRZ				IAmb	IAmb	07 08 55.7	
	comp=Z,38nm,1.3s						
NNZ	Nelson	22.30	172	P	P	07 08 45.3	+1.7
BFZ	Birch Farm	22.32	166	P	P	07 08 42.5	-1.3
SNZO	South Karori	22.61	169	P	P	07 08 46.2	-0.2
SNZO				IAmb	IAmb	07 09 05.4	
	comp=Z,28nm,0.9s						
BHW	Baring Head	22.73	169	P	P	07 08 47.1	-0.5
THZ	Tophouse	22.78	173	P	P	07 08 48.8	+0.6
MSWZ	Moikau Station	22.81	168	P	P	07 08 47.7	-0.7
BSWZ	Blackbirch Sta	22.86	171	P	P	07 08 50.0	+1.1
PLWZ	Palliser	22.96	168	P	P	07 08 48.7	-1.2
LTZ	Lake Taylor	23.72	174	P	P	07 08 56.9	+0.1
LTZ				IAmb	IAmb	07 09 00.3	
	comp=Z,41nm,1.5s						
CAN	Canberra	24.03	224	P	P	07 09 00.3	+0.6
CAN				IAmb	IAmb	07 09 02.7	
	comp=Z,21nm,0.7s						
COEN	Coen	25.41	278	P	P	07 09 12.8	+0.4
COEN				IAmb	IAmb	07 09 18.1	
	comp=Z,30nm,1.3s						
TOO	Toolangi	27.64	223	P	P	07 09 32.5	+0.3
STKA	Stephens Creek	27.83	237	P	P	07 09 33.8	-0.1
	comp=Z,15nm,0.6s,baz=67,slow=8.1,SNR=38						
STKA	Stephens Creek	27.83	237	P	P	07 09 34.2	+0.3
BBOO	Buckleboo	32.57	239	P	P	07 10 15.8	+0.1
WB0	Warramunga Arr	32.75	263	P	P	07 10 16.8	-0.6
WB0				IAmb	IAmb	07 10 17.6	
	comp=Z,15nm,0.7s						
WB2	Warramunga Arr	32.77	263	P	P	07 10 16.5	-1.1
WB2				IAmb	IAmb	07 10 18.0	
	comp=Z,26nm,1.4s						
WRAB	Tennant Creek	32.77	263	P	P	07 10 13.0	-4.6
WRAB				IAmb	IAmb	07 10 17.9	
	comp=Z,20nm,1.1s						
WRA	Warramunga Arr	32.78	263	P	P	07 10 16.9	-0.8
	comp=Z,8.5nm,0.6s,baz=100,slow=8.1,SNR=52						
WRA				pP	pP	07 10 49.1	+1.5
	comp=Z,1.4nm,0.3s,baz=94,slow=7.8,SNR=2.8						
WRA				ScP	ScP	07 16 28.7	-1.3
	comp=Z,1.6nm,0.9s,baz=90,slow=3.5,SNR=5.0						
WRA	Warramunga Arr	32.78	263	P	P	07 10 16.6	-1.1
AS31	Alice Springs	33.07	256	P	P	07 10 20.2	0.0
ASAR	Alice Springs	33.07	256	P	P	07 10 20.1	-0.1
	comp=Z,54nm,0.6s,baz=84,slow=8.9,SNR=1065						
ASAR				pP	pP	07 10 53.0	+2.7
	comp=Z,2.9nm,0.7s,baz=85,slow=8.7,SNR=1.5						
ASAR				S	S	07 15 25.8	-2.6
	comp=Z,0.8nm,0.9s,baz=76,slow=19,SNR=4.2						
ASAR				ScP	ScP	07 16 29.8	-1.2
	comp=Z,1.6nm,0.9s,baz=94,slow=3.9,SNR=8.6						
ASAR	Alice Springs	33.07	256	P	P	07 10 19.2	-0.9
ASAR	Alice Springs	33.07	256		ScP	07 16 28.7	-2.3
MTN	Manton Dam	37.02	274	P	P	07 10 54.5	+0.4
MTN				IAmb	IAmb	07 10 54.9	
	comp=Z,13nm,0.6s						
KNRA	Kununurra	38.63	269	P	P	07 11 07.5	-0.1
KNRA				IAmb	IAmb	07 11 24.2	
	comp=Z,26nm,1.3s						
FORT	Forrest	38.82	244	P	P	07 11 08.8	-0.1
FITZ	Fitzroy Crossi	41.17	264	P	P	07 11 28.7	+0.2
FITZ				IAmb	IAmb	07 11 30.1	
	comp=Z,19nm,0.9s						
PSA00	Pilbara Seismi	46.14	258	P	P	07 12 08.3	0.0
PSA00				IAmb	IAmb	07 12 09.4	
	comp=Z,17nm,0.7s						
NWAO	Narrogin (SRO)	48.19	243	P	P	07 12 22.9	-1.0
NWAO				IAmb	IAmb	07 12 24.3	
	comp=Z,11nm,0.7s						
NWAO	Narrogin (SRO)	48.19	243	P	P	07 12 23.4	-0.6
NWAO				IAmb	IAmb	07 12 24.3	
	comp=Z,8.8nm,0.7s						
MORW	Morawa	49.13	248	P	P	07 12 30.6	-0.6
MORW				IAmb	IAmb	07 12 31.3	
	comp=Z,11nm,0.9s						
NJ2	Nanjing	70.08	316	eP	P	07 14 56.9	+2.4
QSPA	South Pole Qui	70.92	180	P	P	07 14 58.2	-1.1
	comp=Z,3.7nm,0.9s,baz=59,slow=5.4						
QSPA	South Pole Qui	70.92	180	P	P	07 14 58.6	-0.7
PETK	Petropavlovsk-	72.62	353	P	P	07 15 09.5	+0.2
	comp=Z,2.4nm,0.7s,baz=145,slow=6.3,SNR=12						
PETK	Petropavlovsk-	72.62	353	P	P	07 15 10.4	+1.1
NIKH	Nikolski High	74.30	14	P	P	07 15 18.4	-0.7
BJI	Beijing	76.81	321	eP	P	07 15 33.5	-0.2
CMAR	Chiang Mai Arr	78.39	294	P	P	07 15 43.6	+0.6
	comp=Z,0.8nm,0.4s,baz=116,slow=4.1,SNR=3.5						
HHC	Hu-ho-hao-te	80.09	319	eP	P	07 15 51.0	-0.9
CD2	Chengdu	80.11	308	P	P	07 15 51.7	-0.4
OHAK	Old Harbor	82.29	20	P	P	07 16 02.5	-0.4
LZH	Lanzhou	82.60	312	eP	P	07 16 06.9	+1.6
LZH				pP	pP	07 16 47.2	+5.5
LZH				sP	sP	07 17 09.9	+13
LZH				PP	PP	07 19 17.8	+0.6
KDAK	Kodiak Island	82.96	20	P	P	07 16 06.1	-0.2
	comp=Z,5.3nm,0.7s,baz=255,slow=12,SNR=2.8						
CNPM	China Poot	84.79	19	P	P	07 16 15.6	-0.1
SVW2	Sparrevohn	84.83	16	P	P	07 16 16.6	+0.8
SYO	Syowa Base	85.01	196⇑	ePcP	P	07 16 17.4	+0.6
KMRM	Mail Ridge	85.89	45	P	P	07 16 21.8	+0.1
O02D	Mt. Diablo Mer	86.49	45	P	P	07 16 25.8	+1.1
	baz=241						
WDC	Whiskeytown Da	86.85	45	P	P	07 16 25.8	-0.4
WDC				IAmb	IAmb	07 16 27.6	
	comp=Z,9.1nm,1.1s						
N02D	Trinity Center	86.92	45	P	P	07 16 27.9	+1.2
	baz=241						
GTA	Gaotai	87.00	313	eP	P	07 16 28.6	+1.4
GTA				pP	pP	07 16 52.8	-11
GTA				sP	sP	07 17 06.8	-12
M02C	Callahan	87.03	44	P	P	07 16 28.3	+1.1
	baz=241						
ORV	Oroville	87.07	46	P	P	07 16 27.3	-0.1
SONM	Songino Array	87.09	323	P	P	07 16 27.4	-0.1
	comp=Z,1.7nm,0.7s,baz=153,slow=5.9,SNR=11						
SONM				pP	pP	07 17 07.3	+3.0
	comp=Z,1.1nm,0.9s,baz=108,slow=4.7,SNR=3.9						
SONM	Songino Array	87.09	323	IAmb	IAmb	07 16 28.6	
	comp=Z,1.7nm,0.8s						
VES	Vestal, Richgr	87.11	51	P	P	07 16 27.5	-0.1
	baz=244						
CMB	Columbia Colle	87.15	48	P	P	07 16 28.2	+0.3
CMB				IAmb	IAmb	07 16 28.7	
	comp=Z,7.2nm,0.9s						
AFDM	Forest Hills D	87.16	47	P	P	07 16 28.4	+0.6
AFDM				IAmb	IAmb	07 16 28.8	
	comp=Z,8.2nm,1.0s						
O03E	Paynes Creek	87.21	46	P	P	07 16 28.3	+0.2
	baz=242						
YBH	Yreka Blue Hor	87.28	44	P	P	07 16 28.5	0.0
	comp=Z,3.6nm,0.7s,baz=270,slow=1.9,SNR=11						
YBH	Yreka Blue Hor	87.28	44	P	P	07 16 29.6	+1.1
YBH				IAmb	IAmb	07 16 30.4	
	comp=Z,16nm,1.5s						
ISA	Isabella, Lake	87.48	51	P	P	07 16 30.2	+0.7
ISA				IAmb	IAmb	07 16 30.6	
	comp=Z,7.3nm,0.8s						
ISA	Isabella, Lake	87.48	51	P	P	07 16 30.0	+0.5
	baz=244						
EDW2	Edwards Air Fo	87.50	52	P	P	07 16 29.7	+0.1
	baz=245						
HUMO	Hull Mountain	87.54	43	P	P	07 16 30.6	+1.0
HUMO				IAmb	IAmb	07 16 31.6	
	comp=Z,5.9nm,0.8s						
MURC	Murrieta	87.56	53	P	P	07 16 30.1	+0.2
	baz=245						
L04D	Klamath Falls	87.78	44	P	P	07 16 31.3	+0.4
	baz=242						
MONP2	Monument Peak	87.86	54	P	P	07 16 31.9	+0.4
	baz=246						
LRMC	Laurel Mtn Rad	87.98	51	P	P	07 16 32.4	+0.4
	baz=245						
IKP	In-Ko-Pah, Jac	88.00	55	P	P	07 16 32.6	+0.5
	baz=246						
CWC	Cottonwood Cre	88.10	50	P	P	07 16 32.7	+0.1
	baz=244						
PFO	Pinyon Flats O	88.12	54	P	P	07 16 32.1	-0.6
	comp=Z,2.8nm,0.8s,baz=279,slow=3.0,SNR=4.2						
PFO	Pinyon Flats O	88.12	54	IAmb	IAmb	07 16 33.5	
	comp=Z,4.0nm,0.8s						
SWSC	Sam W. Stewart	88.35	54	P	P	07 16 33.9	+0.3
	baz=246						
MPMC	Manual Prospec	88.37	51	P	P	07 16 34.5	+0.6
	baz=245						
I04A	Tendick Farm,	88.46	42	P	P	07 16 34.0	+0.1
	baz=242						
BELC	Belle Mtn. Jos	88.63	53	P	P	07 16 35.4	+0.3
	baz=246						
RYN	Ryan	88.73	48	P	P	07 16 35.4	0.0
NVAR	Mina Array Bea	88.80	49	P	P	07 16 35.7	-0.2
	comp=Z,3.1nm,0.9s,baz=227,slow=8.2,SNR=17						
NV11	Mina Array Sit	88.90	49	P	P	07 16 36.0	-0.3
NV11				IAmb	IAmb	07 16 37.3	
	comp=Z,7.0nm,1.1s						
BC3	Big Chuckawall	88.91	54	P	P	07 16 36.8	+0.5
	baz=246						
MOD	Modoc Plateau	88.95	45	P	P	07 16 36.4	-0.1
MOD				IAmb	IAmb	07 16 37.5	
	comp=Z,11nm,1.1s						
J05D	Fort Rock, OR	88.98	43	P	P	07 16 37.3	+0.8
	baz=242,SNR=5.6						
FURC	Furnace Creek,	89.00	51	P	P	07 16 37.4	+0.9
	baz=245						
GMRC	Granite Mounta	89.21	53	P	P	07 16 38.0	+0.3
	baz=246						
KVN	Kaiserville	89.21	48	P	P	07 16 37.5	-0.2
SNAA	Sanae	89.26	183	P	P	07 16 35.7	-1.6
SNAA	Sanae	89.26	183	P	P	07 16 35.6	-1.8
	comp=Z,2.3nm,0.8s,baz=212,slow=12,SNR=8.3						
SNAA	Sanae	89.26	183	IAmb	IAmb	07 16 51.0	
	comp=Z,13nm,1.5s						
IRM	Iron Mountain	89.34	53	P	P	07 16 38.8	+0.5
	baz=246						
I05D	Terrebonne, OR	89.40	42	P	P	07 16 39.2	+0.9
	baz=242						
PINE	Pine Mountain	89.40	43	P	P	07 16 38.4	-0.2
TPNV	Topopah Spring	89.65	51	P	P	07 16 39.7	-0.2
TPNV	Topopah Spring	89.65	51	P	P	07 16 40.3	+0.4
	baz=246						
Y12C	Blythe	89.66	54	P	P	07 16 39.5	-0.1
Y12C				IAmb	IAmb	07 16 41.1	
	comp=Z,6.5nm,0.8s						
Y12C	Blythe	89.66	54	P	P	07 16 40.3	+0.6
	baz=247						
G05D	Wamic, OR	89.83	41	P	P	07 16 40.6	+0.3
	baz=242						
D03D	Eldon	89.84	39	P	P	07 16 41.0	+0.8
	baz=241						
VNA3	Neumayer Olymp	89.85	180	P	P	07 16 38.2	-1.8
HDA	Harding Lake	89.87	18	P	P	07 16 39.0	-0.9
	baz=221						
DOT	Dot Lake	90.16	19	P	P	07 16 39.4	-2.0
DOT				IAmb	IAmb	07 16 42.0	
	comp=Z,6.3nm,1.2s						
IL31		90.16	17	P	P	07 16 39.2	-2.0
ILAR	Eielson Array	90.16	17	P	P	07 16 39.5	-1.9
	comp=Z,1.9nm,0.8s,baz=233,slow=4.7,SNR=20						
ILAR	Eielson Array	90.16	17	P	P	07 16 38.6	-2.7
PDMCI	Parker Dam,Lak	90.16	54	P	P	07 16 43.0	+1.0
	baz=247						
SHPR	Sheep Range	90.27	51	P	P	07 16 42.7	0.0
SHPR				IAmb	IAmb	07 16 44.0	
	comp=Z,6.0nm,1.0s						
214A	Organ Pipe Nat	90.29	56	P	P	07 16 43.2	+0.4
214A				IAmb	IAmb	07 16 44.1	
	comp=Z,7.3nm,0.9s						
214A	Organ Pipe Nat	90.29	56	P	P	07 16 43.5	+0.8
	baz=248						
WVOR	Wild Horse Val	90.30	45	P	P	07 16 42.7	0.0
WVOR				IAmb	IAmb	07 16 43.9	
	comp=Z,9.6nm,1.1s						
I07A	Izee	90.46	43	P	P	07 16 43.4	+0.1
R11A	Troy Canyon, C	90.70	50	P	P	07 16 44.3	-0.4
R11A	Troy Canyon, C	90.70	50	P	P	07 16 44.7	0.0
	baz=246						
B05A	Bryant	90.77	39	P	P	07 16 45.1	+0.6
	baz=242						
J08A	Circle Bar Ran	90.81	44	P	P	07 16 44.5	-0.5
Y14A	Wickenburg	90.89	54	P	P	07 16 45.3	-0.2
Y14A				IAmb	IAmb	07 16 46.4	
	comp=Z,3.8nm,0.8s						
G08A	Pilot Rock	91.34	42	P	P	07 16 48.1	+0.7
G08A				IAmb	IAmb	07 16 48.4	
	comp=Z,5.1nm,0.9s						
LCMT	Little Creek M	91.88	51	P	P	07 16 50.1	0.0
TUC	Tucson	92.02	57	P	P	07 16 51.2	+0.3
TUC				IAmb	IAmb	07 16 52.3	
	comp=Z,7.7nm,1.1s						
TUC	Tucson	92.02	57	P	P	07 16 51.6	+0.7
	baz=249						
U15A	North Rim	92.37	52	P	P	07 16 52.8	+0.2
MFID	Camas Ranch	92.58	45	P	P	07 16 53.0	-0.2
WUAZ	Wupatki	92.73	53	P	P	07 16 54.9	+0.7
	baz=248						
319A	Douglas	92.88	58	P	P	07 16 55.0	+0.1
MTPU	Mount Pierson	93.05	51	P	P	07 16 56.3	+0.5
ANMO	Albuquerque	96.31	55	P	P	07 17 11.5	+1.0
	baz=251						
INK	Inuvik	96.47	18	P	P	07 17 08.5	-1.7
	comp=Z,1.9nm,1.0s,baz=218,slow=6.0,SNR=5.4						
INK	Inuvik	96.47	18	IAmb	IAmb	07 17 10.7	
	comp=Z,2.5nm,1.1s						
PDAR	Pinedale Array	96.61	47	P	P	07 17 11.8	0.0
	comp=Z,0.2nm,0.5s,baz=216,slow=4.5,SNR=2.9						
TXAR	Lajitas Array	96.79	61	P	P	07 17 12.8	0.0
	comp=Z,0.4nm,0.7s,baz=223,slow=5.1,SNR=8.8						
WMQ	Urumqi	97.07	314	eP	Pdif	07 17 14.7	+1.0
C36M	Paulatuk	99.93	19	Pdiff	Pdif	07 17 24.8	-0.9
	baz=242						
YKA	Yellowknife Ar	100.62	27	P	Pdif	07 17 28.1	-0.8
	comp=Z,1.3nm,0.6s,baz=251,slow=4.4,SNR=22						
MKAR	Makanchi Array	101.61	316	P	Pdif	07 17 34.3	+0.5
	comp=Z,0.2nm,0.5s,baz=84,slow=5.8,SNR=2.7						
MKAR				PKiKP	PKiKP	07 21 55.7	-1.0
	comp=Z,0.1nm,0.5s,baz=95,slow=1.6,SNR=2.5						
ARCES	ARCESS Array B	124.95	345	PKP	PKPdf	07 22 38.8	-1.4
	comp=Z,1.1nm,0.4s,baz=71,slow=2.0,SNR=14						
ARCES	ARCESS Array B	124.95	345	PKPdf	PKPdf	07 22 38.9	-1.3
FINES	FINESS Array B	130.46	338	SKPbc	SKPab	07 25 57.7	-3.2
	comp=Z,3.3nm,1.0s,baz=60,slow=4.6,SNR=4.1						
NOA	NORSAR Array B	135.32	345	PKP	PKPdf	07 22 59.4	-0.7
	comp=Z,0.8nm,0.8s,baz=56,slow=2.3,SNR=2.8						
VYHS	Vyhne	142.15	328	ePKP	PKPdf	07 23 12.6	-0.4
CONA	Conrad Observa	144.01	329	ePKPdf	PKPdf	07 23 16.0	-0.4
	comp=Z,3.6nm,0.7s						
KHC	Kasperske Hory	144.20	332	ePKP	PKPbc	07 23 15.0	-0.2
KHC	Kasperske Hory	144.20	332		PKPab	07 23 14.4	-0.3
GEC2	GERESS Array S	144.36	332	PKPdf	PKPab	07 23 15.5	0.0
GERES	GERESS Array B	144.36	332	PKP	PKPab	07 23 15.4	0.0
	comp=Z,3.7nm,0.7s,baz=35,slow=3.6,SNR=34						
GERES	GERESS Array B	144.36	332	PKPdf	PKPab	07 23 15.2	-0.2
LIT	Litokhoron	144.58	313	PKPdf	PKPab	07 23 16.4	0.0
ARSA	Arzberg	144.64	328	ePKPdf	PKPab	07 23 16.0	-0.4
	comp=Z,6.4nm,1.2s						
GRF	Grafenberg Arr	144.76	335	ePKP	PKPbc	07 23 17.0	+0.2
	baz=38,slow=3.2						
MOA	Molln	144.83	330	i PKPdf	PKPbc	07 23 17.1	0.0
	comp=Z,12nm,0.6s						
RCBR	Riachuelo	145.01	133	PKP	PKPbc	07 23 16.5	-2.2
	comp=Z,16nm,0.8s,baz=175,slow=3.5,SNR=12						
RCBR	Riachuelo	145.01	133		PKPbc	07 23 16.2	-2.5
SOKA	Soboth	145.28	328	ePKPab	PKPab	07 23 18.8	-0.1
	comp=Z,6.5nm,0.6s,SNR=5.5						
KBA	Koelnbreinsper	145.82	330	ePKPab	PKPdf	07 23 19.2	-0.4
	comp=Z,4.1nm,0.6s						
MYKA	Terra Mystica	146.00	329	ePKPab	PKPdf	07 23 19.5	-0.3
	comp=Z,3.5nm,0.7s						
ABTA	Abfaltersbach	146.45	330	i PKPab	PKPdf	07 23 20.7	+0.1
	comp=Z,4.4nm,0.6s						
WTTA	Wattenberg	146.47	332	i PKPab	PKPbc	07 23 22.3	-0.1
	comp=Z,1.2nm,0.3s						
WLF	Walferdange	146.63	340	PKPab	PKPbc	07 23 22.9	+0.4
MOTA	Moosalm	146.64	332	i PKPab	PKPbc	07 23 22.0	-0.8
	comp=Z,8.0nm,0.9s						
RETA	Reutte	146.68	333	ePKPab	PKPbc	07 23 22.0	-0.8
	comp=Z,5.5nm,1.1s						
SQTA	Sankt Quirin	146.69	332	ePKPab	PKPbc	07 23 22.2	-0.7
	comp=Z,6.0nm,0.5s						
STAL	STALIGIAL	146.71	330	PKPbc	PKPbc	07 23 23.0	+0.1
DOU	Dourbes	146.74	342	PKPab	PKPbc	07 23 22.3	-0.5
BFO	Black Forest	146.99	336	PKPbc	PKPbc	07 23 23.3	-0.3
FETA	Feichten	147.05	332	ePKPab	PKPbc	07 23 23.3	-0.7
	comp=Z,4.3nm,0.6s,SNR=5.8						
SCTE	Santa Cesarea	147.30	316	PKPbc	PKPbc	07 23 24.6	-0.1
TEOL	Teolo	147.87	329		PKPbc	07 23 25.7	-0.3
SGRT	San Giovanni R	148.07	321	PKPbc	PKPbc	07 23 26.4	-0.5
TIP	Timpagrande	148.89	316	PKPbc	PKPbc	07 23 29.2	+0.2
NRCA	Norcia	148.90	325	PKPbc	PKPbc	07 23 27.6	-1.2
MURB	Monte Urbino	148.92	326	PKPbc	PKPbc	07 23 28.9	-0.1
ZCCA	Zocca	148.94	329	PKPbc	PKPbc	07 23 29.0	+0.1
INTR	Introdacqua	148.99	323	PKPbc	PKPbc	07 23 29.3	+0.1
SENIN	Lac Senin/Sane	149.00	335	PKPbc	PKPbc	07 23 28.1	-1.1
CASP	Castiglione de	150.12	327	PKPbc	PKPbc	07 23 30.6	-1.2
BNI	Bardonecchia	150.33	334	PKPbc	PKPbc	07 23 32.3	-0.1
TORD	Torodi Ar. Bea	166.56	246	PKP	PKPdf	07 23 46.8	-0.1
	comp=Z,0.5nm,0.8s,baz=260,slow=0.9,SNR=2.6						

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*TAP **08** 07:05:53.9, 24°.84N×122°.08E, h8^{km}, ML3.4, C*
*JMA **08** 07:05:55.0±0.1, 24°.76N×122°.11E, h38^{km}, M2.7*
ISC 08 07:05:53.5±0.9**, 24°.84N**±0°.02×**122°.14E**±0°.02**, h12**^{km}±7^{km}**, n81, σ0^{s}53**/152**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.22	321	eP	Pg	07 05 58.1	0.0
	baz=337						
TWB1				S	Sg	07 06 01.0	-0.3
	baz=337						
NTC	Toucheng	0.28	273	eP	Pg	07 05 59.1	-0.1
	baz=274						
NTC				eS	Sg	07 06 02.6	-0.5
	baz=274						
EOS1	EOS1	0.29	182	eP	Pb	07 06 00.4	-0.2
	baz=170						
EOS1				eS	Sb	07 06 05.5	+0.1
	baz=170						
TIPB	Shuangxi	0.31	295	eP	Pg	07 05 60.0	+0.1
	baz=300						
TIPB				eS	Sg	07 06 04.6	+0.5
	baz=300						
TWC	Suao	0.35	229	eP	Pg	07 06 00.7	+0.2
	baz=220						
TWC				S	Sg	07 06 05.0	-0.1
	baz=220						
ILA	Ilan	0.36	258	eP	Pg	07 05 59.7	-1.0
	baz=255						
ILA				eS	Sg	07 06 06.0	+0.5
	baz=255						
NWF	Wu-fen Shan	0.40	306	eP	Pg	07 06 02.0	+0.5
	baz=311						

NWF				S	Sb	07 06 07.7	-1.0
	baz=311						
WFSB	Wu-fen Shan	0.40	306	eP	Pb	07 06 02.1	-0.4
	baz=311						
WFSB				S	Sg	07 06 07.5	+0.8
	baz=311						
TWE	Neicheng	0.44	255	eP	Pg	07 06 02.2	0.0
	baz=251						
TWE				eS	Sg	07 06 08.5	+0.4
	baz=251						
SLBB	Yuanshan	0.46	260	eS	Sb	07 06 09.7	-0.9
	baz=258						
TWA	Mucha	0.52	286	eP	Pg	07 06 03.9	+0.2
	baz=287						
TWA				eS	Sb	07 06 11.7	-0.4
	baz=287						
ENA	Nanau	0.55	221	eP	Pg	07 06 04.5	+0.3
	baz=215						
ENA				eS	Sb	07 06 12.5	-0.3
	baz=215						
ENTT	Nioudou	0.56	249	eP	Pb	07 06 05.0	-0.2
	baz=246						
ENTT				eS	Sb	07 06 12.4	-0.8
	baz=246						
NHDH	Xindian Distri	0.57	283	eP	Pg	07 06 04.8	+0.2
	baz=284						
NHDH				eS	Sb	07 06 13.2	-0.4
	baz=284						
NWLT	Wulai	0.58	264	eP	Pb	07 06 05.3	-0.4
	baz=263						
NWLT				eS	Sg	07 06 12.8	+0.3
	baz=263						
TAP1	Taipei	0.59	290	eP	Pb	07 06 05.6	-0.2
	baz=291						
TAP1				eS	Sb	07 06 14.3	+0.1
	baz=291						
YM01	YM01	0.60	301	eP	Pb	07 06 05.6	-0.4
	baz=303						
YM01				eS	Sb	07 06 14.3	-0.1
	baz=303						
TATO	Taipei	0.60	283	eP	Pb	07 06 06.3	+0.2
	baz=284						
TATO				eS	Sb	07 06 14.3	-0.2
	baz=284						
YM11	YM11	0.60	303	eP	Pg	07 06 05.6	+0.3
	baz=305						
YM11				eS	Sb	07 06 14.4	-0.3
	baz=305						
TAP	Taipei	0.61	289	eP	Pb	07 06 05.7	-0.4
	baz=291						
TAP				eS	Sb	07 06 14.3	-0.3
	baz=291						
YM08	YM08	0.61	305	eP	Pb	07 06 05.8	-0.2
	baz=308						
YM08				eS	Sb	07 06 14.4	-0.2
	baz=308						
YM10	YM10	0.61	301	eP	Pb	07 06 06.9	+0.7
	baz=304						
YM10				eS	Sb	07 06 15.0	+0.2
	baz=304						
NDT	Datong Townshi	0.61	248	eP	Pb	07 06 05.8	-0.4
	baz=245						
NDT				eS	Sb	07 06 14.5	-0.4
	baz=245						
YM04	YM04	0.63	300	eP	Pb	07 06 06.5	+0.1
	baz=302						
YM04				eS	Sb	07 06 14.9	-0.4
	baz=302						
YM03	YM03	0.64	302	eP	Pg	07 06 06.3	+0.3
	baz=305						
YM03				eS	Sb	07 06 15.8	+0.2
	baz=305						
TWY	Chenhua	0.65	312	eP	Pb	07 06 06.8	-0.1
	baz=315						
TWY				eS	Sb	07 06 15.8	-0.2
	baz=315						
TWS1	Kuangyinshan	0.70	292	eP	Pb	07 06 07.7	0.0
	baz=294						
TWS1				eS	Sb	07 06 17.1	-0.3
	baz=294						
YHNB	Yeheng	0.71	256	eP	Pg	07 06 07.3	0.0
	baz=255						
YHNB				eS	Sb	07 06 17.5	-0.3
	baz=255						
NSK	Sanguang	0.73	257	eP	Pb	07 06 07.8	-0.4
	baz=255						
NSK				eS	Sb	07 06 18.1	0.0
	baz=255						
PCYT	Pengchaiyu	0.79	356	eP	Pb	07 06 09.6	+0.4
PCYT				eS	Sn	07 06 21.9	-0.4
NNSB	Datong	0.80	239	eP	Pg	07 06 09.0	+0.1
	baz=237						
NNSB				eS	Sb	07 06 19.9	-0.4
	baz=237						
NNSH	Datong	0.80	239	eP	Pb	07 06 09.3	-0.1
	baz=237						
NNSH				S	Sb	07 06 19.8	-0.5
	baz=237						
NNS	Nan Shan	0.80	240	eP	Pg	07 06 09.1	+0.1
	baz=237						
NNS				S	Sb	07 06 19.7	-0.6
	baz=237						
WLTB	Daxi	0.80	271	eP	Pg	07 06 09.1	+0.1
	baz=271						
WLTB				eS	Sb	07 06 20.3	+0.1
	baz=271						
NACB	Ninganchiao	0.83	217	eP	Pb	07 06 09.7	-0.1
	baz=213						
NACB				eS	Sb	07 06 21.7	+0.7
	baz=213						
JYNG	Yonagunijimaku	0.83	118	P	Pb	07 06 10.2	+0.3
JYNG				eS	Sg	07 06 20.6	+0.2
ETLH	Xiulin Townshi	0.87	224	P	Pb	07 06 10.6	0.0
	baz=220						
ETLH				eS	Sb	07 06 22.8	+0.6
	baz=220						
NCU	National Centr	0.87	279	eP	Pg	07 06 10.4	0.0
	baz=279						
NCU				eS	Sb	07 06 22.4	+0.2
	baz=279						
YOJ	Yonaguni jima	0.88	115	eP	Pb	07 06 11.7	+1.0
	baz=113						
YOJ				eS	Sn	07 06 24.8	+0.3
	baz=113						
YOJ	Yonaguni jima	0.88	115	P	Pb	07 06 11.1	+0.4
YOJ				eS	Sg	07 06 21.8	-0.2
TWD	Chiawan	0.90	213	P	Pg	07 06 10.7	-0.3
	baz=209						
TWD				S	Sb	07 06 23.1	0.0
	baz=209						
LIOB	Emei	1.04	260	eP	Pg	07 06 13.2	-0.3
	baz=258						
LIOB				eS	Sn	07 06 27.8	-0.6
	baz=258						
SBCB	Hsinchu	1.05	268	eS	Sn	07 06 28.1	-0.5
	baz=267						
ENLB	Shoufeng	1.05	208	eP	Pn	07 06 14.1	0.0
	baz=204						
ENLB				eS	Sn	07 06 29.0	+0.3
	baz=204						
TWT	Tachien	1.05	237	eP	Pb	07 06 13.9	+0.1
	baz=234						
TWT				eS	Sn	07 06 28.8	-0.2
	baz=234						
NSTT	Nanjuang	1.05	259	eP	Pg	07 06 13.6	-0.2
	baz=257						
NSTT				eS	Sb	07 06 27.9	+0.4
	baz=257						
WHF	Hehuan Shan	1.05	229	eP	Pb	07 06 13.8	-0.1
	baz=226						
WHF				S	Sb	07 06 28.2	+0.3
	baz=226						
TDCB	Techi	1.06	237	eP	Pn	07 06 14.4	0.0
	baz=235						
TDCB				S	Sb	07 06 28.4	+0.4
	baz=235						
CHGB	Renai	1.17	229	eP	Pb	07 06 15.5	-0.3
	baz=226						
CHGB				S	Sn	07 06 32.0	0.0
	baz=226						
ESL	Shilin	1.21	212	eP	Pg	07 06 17.0	+0.3
	baz=209						
ESL				eS	Sn	07 06 33.3	+0.8
	baz=209						
WHP	Taichung City	1.22	243	eP	Pg	07 06 16.8	-0.2
	baz=241						
WHP				eS	Sn	07 06 33.2	+0.2
	baz=241						
OWD	Renai	1.24	225	eP	Pb	07 06 17.1	+0.1
	baz=223						
OWD				S	Sg	07 06 33.4	-0.2
	baz=223						
NSY	Sanyi	1.32	252	eP	Pn	07 06 18.0	+0.2
	baz=250						
NSY				eS	Sg	07 06 36.1	0.0
	baz=250						
EGFH	Guangfu	1.33	209	eP	Pb	07 06 18.3	-0.1
	baz=206						
EGFH				eS	Sg	07 06 37.3	+0.8
	baz=206						
TWQ1	Liyutan	1.33	249	eP	Pb	07 06 18.5	0.0
	baz=247						
TWQ1				eS	Sg	07 06 36.8	+0.3
	baz=247						
PTSB	Yuanli	1.36	254	eS	Sg	07 06 37.0	-0.3
	baz=252						
DPDB	Guoxing	1.36	234	eS	Sg	07 06 37.5	+0.1
	baz=232						
VWDT	VWDT	1.41	220	eP	Pb	07 06 19.5	-0.3
	baz=218						
VWDT				eS	Sg	07 06 39.0	+0.1
	baz=218						
SMLT	Sun Moon Lake	1.48	230	eP	Pb	07 06 21.0	0.0
	baz=228						
SMLT				eS	Sg	07 06 40.5	-0.5
	baz=228						
HGSD	Ruisui	1.49	206	eP	Pb	07 06 21.5	+0.3
	baz=203						
HGSD				eS	Sg	07 06 41.8	+0.2
	baz=203						
TYC	Yuchr	1.49	232	eP	Pb	07 06 20.7	-0.5
	baz=229						
TYC				eS	Sb	07 06 40.5	+0.4
	baz=229						
SSLB	Suanglung	1.50	226	eP	Pb	07 06 21.7	+0.2
	baz=224						
SSLB				S	Sg	07 06 41.7	-0.3
	baz=224						
EHY	Hungye	1.52	209	eP	Pn	07 06 21.2	+0.6
	baz=207						
EHY				eS	Sg	07 06 42.2	-0.3
	baz=207						
IRIF	Iriomote-Funau	1.54	109	S	Sn	07 06 39.7	-1.0
YULB	Yu-li	1.63	208	eP	Pn	07 06 22.5	+0.4
	baz=206						
YULB				eS	Sb	07 06 44.8	+0.6
	baz=206						
WHYT	Xinyi Township	1.63	226	eP	Pb	07 06 22.9	-0.7
	baz=224						
WHYT				eS	Sb	07 06 44.2	0.0
	baz=224						
WJS	Zhushan	1.64	232	eS	Sb	07 06 44.5	+0.2
	baz=230						
TWF1	Yuli	1.67	208	eP	Pn	07 06 23.4	+0.8
	baz=205						
TWF1				eS	Sb	07 06 45.5	+0.3
	baz=205						
YUS	Yu-Shan	1.73	219	eP	Pb	07 06 24.9	-0.5
	baz=217						
YUS				eS	Sb	07 06 46.9	-0.4
	baz=217						
ALS	Alishan	1.80	223	eP	Pb	07 06 25.9	-0.7
	baz=221						
ALS				eS	Sn	07 06 48.2	+0.6
	baz=221						
FULB	Fuli	1.81	205	eP	Pb	07 06 26.2	-0.4
	baz=203						
FULB				eS	Sb	07 06 49.2	0.0
	baz=203						
JKRS	Kuro-shima	1.81	109	P	Pn	07 06 24.2	-0.3
WDLH	Douliu	1.85	232	eS	Sb	07 06 49.7	-0.9
	baz=230						
JIJ	Ishigaki jima	1.89	104	P	Pn	07 06 25.1	-0.5
JIJ				S	Sn	07 06 47.7	-1.7
ELDTW	Lidau	1.94	212	eS	Sn	07 06 51.4	+0.6
	baz=210						
CHN4	Tsaushan	2.05	224	eP	Pb	07 06 29.4	-1.3
	baz=222						
CHN4				eS	Sb	07 06 55.1	-1.0
	baz=222						
TPUB	Ta-pu	2.06	222	eP	Pn	07 06 28.7	+0.7
	baz=220						
TPUB				eS	Sb	07 06 55.5	-1.0
	baz=220						
STYT	Tauyuan	2.09	217	eP	Pn	07 06 29.3	+0.8
	baz=215						
STYT				eS	Sb	07 06 56.6	-0.9
	baz=215						
TWK	Hsinying	2.17	224	eP	Pn	07 06 30.9	+1.3
	baz=222						
TWK				eS	Sn	07 06 57.8	+1.3
	baz=222						
CHN1	Nanshi	2.21	222	eP	Pn	07 06 31.4	+1.3
	baz=220						
CHN1				eS	Sb	07 06 59.1	-1.7
	baz=220						
TWG	Pinlang	2.23	206	eS	Sb	07 06 59.9	-1.6
	baz=204						

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*IDC **08** 07:12:00.8±1.1, 32°.23S×178°.21W, h0^{km}, mb3.8/3, mb1 4.1/4, mb1mx3.9/27, mbtmp3.8/4, ML3.1/1, Error ellipse: s-maj=43.7km s-min=29.7km az=154.0*

*NEIC **08** 07:12:01.5±1.4, 32°.3S±0°.1×178°.1W±0°.2, h10^{km}±1^{km}, mb4.1/5, Error ellipse: s-maj=37.0km s-min=4.4km az=122.0*

ISC 08 07:12:02.8±1.0**, 32°.4S**±0°.1×**178°.1W**±0°.2**, h20**^{km}**, n21, σ1^{s}.18**/22**, mb4.1**/6**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.07	213	Pn	Pn	07 13 46.2	+1.0
	0.4nm,0.3s,baz=77,slow=18,SNR=1.5						
URZ				Sn	Sn	07 15 03.6	-1.3
	1.7nm,0.3s,baz=211,slow=23,SNR=7.2						
URZ	Urewera	7.07	213		Pn	07 13 45.8	+0.7
OUZ	Omahuta	7.51	246		Pn	07 13 56.4	+5.3
BKZ	Black Stump Fm	8.09	212	Pn	Pn	07 14 00.1	+0.9
HIZ	Hauiti	8.42	221	Pn	Pn	07 14 04.8	+1.2
WHZ	Wether Hill Ro	17.28	215	P	P	07 16 04.7	+0.5
BBOO	Buckleboo	38.43	257	P	P	07 19 23.9	+0.7
BBOO				IAmb	IAmb	07 19 29.1	
	comp=Z,3.9nm,1.1s						
ASAR	Alice Springs	43.00	269	P	P	07 20 00.9	-0.1
	comp=Z,1.0nm,0.8s,baz=106,slow=7.2,SNR=10						
ASAR	Alice Springs	43.00	269	P	P	07 20 00.8	-0.3
WR0	Warramunga Arr	43.99	274	P	P	07 20 08.8	-0.3
WR0				IAmb	IAmb	07 20 25.1	
	comp=Z,2.5nm,0.8s						
WRA	Warramunga Arr	44.17	274	P	P	07 20 10.2	-0.3
	comp=Z,1.4nm,0.4s,baz=113,slow=7.9,SNR=21						
WRA	Warramunga Arr	44.17	274	P	P	07 20 09.3	-1.1
FORT	Forrest	45.53	257	P	P	07 20 20.9	-0.3
FITZ	Fitzroy Crossi	52.34	271	P	P	07 21 13.8	+0.3
FITZ				IAmb	IAmb	07 21 29.1	
	comp=Z,2.3nm,0.9s						
NVAR	Mina Array Bea	89.72	43	P	P	07 25 00.9	+1.2
	comp=Z,0.4nm,0.8s,baz=220,slow=8.3,SNR=3.3						
FINES	FINESS Array B	146.98	339	PKPbc	PKPbc	07 31 42.9	-0.4
	comp=Z,3.4nm,0.8s,baz=54,slow=3.3,SNR=13						
FINES	FINESS Array B	146.98	339		PKPab	07 31 43.4	-1.3
AKASG	Malin Array Be	152.83	320	PKPbc	PKiKP	07 31 59.0	+0.9
	comp=Z,0.4nm,0.6s,baz=76,slow=1.4,SNR=3.0						
AKASG	Malin Array Be	152.83	320		PKiKP	07 31 59.0	+0.9
TORD	Torodi Ar. Bea	160.85	179	PKPab	PKPab	07 32 45.9	+1.6
	comp=Z,0.3nm,0.7s,baz=197,slow=4.5,SNR=2.4						
TORD	Torodi Ar. Bea	160.85	179	PKPdf	PKPdf	07 31 59.9	-2.3
TORD					PKPab	07 32 41.7	-2.5

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*IDC **08** 07:14:08.5±0.5, 53°.18S×9°.40E, h0^{km}, mb4.6/19, mb1 4.7/19, mb1mx4.6/29, mbtmp4.5/19, ML5.2/1, MS4.6/18, Ms1 4.6/18, ms1mx4.5/19, Error ellipse: s-maj=18.6km s-min=12.6km az=109.0*

*NEIC **08** 07:14:10.4±2.2, 53°.2S±0°.1×9°.5E±0°.1, h12^{km}±1^{km}, mb5.1/25, Ms_20 4.9/75, Mwb5.4/13, Mwc5.5(GCMT), Error ellipse: s-maj=19.1km s-min=13.6km az=160.0*

*NEIC **08** 07:14:11.5, 53°.23S×9°.34E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.19; M$_{\theta\theta}$1.44; M$_{\phi\phi}$-1.63; M$_{r\theta}$-0.29; M$_{\theta\phi}$0.43; M$_{\phi r}$-0.32; Fault plane solution: M$_0$1.66000×10^{17} NP1:φ$_s$307.54000°, δ74.40000°, λ3.93000°. NP2:φ$_s$216.48000°, δ86.21000°, λ164.37000°. Principal axes: T 1.5825, Plg14.0000°, Azm171.0000°; N 0.1450, Plg74.0000°, Azm23.0000°; P -1.7274, Plg8.0000°, Azm263.0000°;*

*GCMT **08** 07:14:14.4±0.1, 53°.25S±0°.01×9°.75E±0°.01, h16^{km}, MW5.4/154, Moment Tensor Solution. s111,c182; s154,c280; Duration: 1^{s}.3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.22±.02; M$_{\theta\theta}$1.69±.02; M$_{\phi\phi}$-1.48±.02; M$_{r\theta}$0.10±.05; M$_{\theta\phi}$0.35±.02; M$_{\phi r}$0.52±.06; Best double couple: M$_0$1.71700×10^{17} NP1:φ$_s$127.00000°, δ73.00000°, λ-10.00000°. NP2:φ$_s$220.00000°, δ80.00000°, λ-163.00000°. Principal axes: T 1.7410, Plg5.0000°, Azm353.0000°; N -0.0560, Plg70.0000°, Azm250.0000°; P -1.6930, Plg19.0000°, Azm85.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **08** 07:14:15, 53°.26S×9°.78E, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.15; M$_{\theta\theta}$1.78; M$_{\phi\phi}$-1.63; M$_{r\theta}$-0.13; M$_{\theta\phi}$0.37; M$_{\phi r}$0.32; Fault plane solution: M$_0$1.78000×10^{17} NP1:φ$_s$128.00000°, δ84.00000°, λ-10.00000°. NP2:φ$_s$219.00000°, δ80.00000°, λ-174.00000°. Principal axes: T 1.8262, Plg3.0000°, Azm174.0000°; N -0.0870, Plg78.0000°, Azm278.0000°; P -1.7392, Plg12.0000°, Azm83.0000°;*

ISC 08 07:14:10.0±0.4**, 53°.18S**±0°.07×**9°.46E**±0°.10**, h10**^{km}**, n129, σ1^{s}.41**/75**, mb4.8**/26**, MS4.8**/58**, 1C-1D, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	19.26	198	P	Pn	07 18 35.2	0.0
SNAA	Sanae	19.33	192	P	P	07 18 35.6	+0.5
SNAA	Sanae	19.33	192	P	P	07 18 35.1	0.0
	7.8nm,0.3s,baz=20,slow=9.7,SNR=197						
SNAA				S	Sn	07 21 51.8	-21
	0.8nm,0.3s,baz=341,slow=19,SNR=2.4						
SNAA				LR	LR	07 24 11.4	
	comp=Z,2μm,20.7s,baz=16,slow=31						
SNAA	Sanae	19.33	192	P	P	07 18 35.3	+0.2
VNA2	Neumayer--Watz	19.34	197	P	P	07 18 35.4	+0.3
	baz=22,slow=14						
VNA3	Neumayer Olymp	20.01	198	P	P	07 18 42.7	+0.2
SYO	Syowa Base	21.17	150	⇑eP	P	07 18 51.0	-4.0
SYO	Syowa Base	21.17	150	⇓iPn	P	07 18 54.0	-1.0
SUR	Sutherland	22.34	26	P	P	07 19 08.7	+0.6
	32nm,1.1s,baz=194,slow=9.8,SNR=5.2						
SUR				S	S	07 23 09.5	-4.3
	12nm,0.8s,baz=106,slow=12,SNR=3.5						
SUR				LR	LR	07 25 49.1	
	comp=Z,2μm,19.9s,baz=198,slow=31						
SUR	Sutherland	22.34	26	P	P	07 19 09.2	+1.1
BOSA	Boshof	27.17	32	P	P	07 19 54.4	+0.8
	7.1nm,1.0s,baz=196,slow=9.6,SNR=5.1						
BOSA				LR	LR	07 29 08.1	
	comp=Z,2μm,18.4s,baz=198,slow=33						
BOSA	Boshof	27.17	32	P	P	07 19 56.6	+3.0
BOSA				IAmb	IAmb	07 20 11.0	
	comp=Z,50nm,1.5s						
MAW	Mawson	28.94	141	LR	LR	07 29 16.7	
	comp=Z,1μm,21.4s,baz=285,slow=31						
LBTB	Lobatse	30.64	30	P	P	07 20 24.1	-0.4
	comp=Z,4.4nm,0.7s,baz=197,slow=11,SNR=5.6						
LBTB	Lobatse	30.64	30	P	P	07 20 25.0	+0.5
TSUM	Tsumeb	34.50	14	P	P	07 20 58.4	+0.2
	comp=Z,7.4nm,0.8s,baz=187,slow=7.5,SNR=8.7						
TSUM	Tsumeb	34.50	14	P	P	07 20 59.8	+1.5
TSUM				IAmb	IAmb	07 21 14.1	
	comp=Z,23nm,1.1s						
TSUM	Tsumeb	34.50	14	IAMs_20	IAMs_20	07 32 09.1	
	comp=Z,3μm,21.0s						
MATP	Matopo	35.84	32	P	P	07 21 07.1	-2.7
	comp=Z,5.2nm,0.8s,baz=211,slow=7.5,SNR=10						
QSPA	South Pole Qui	37.05	180	P	P	07 21 19.5	-0.3
	comp=Z,20nm,1.1s,baz=229,slow=3.3,SNR=28						
QSPA	South Pole Qui	37.05	180	P	P	07 21 19.9	0.0
QSPA				IAmb	IAmb	07 21 21.2	
	comp=Z,31nm,1.2s						
QSPA	South Pole Qui	37.05	180	IAMs_20	IAMs_20	07 35 08.1	
	comp=Z,2μm,21.0s						
PMSA	Palmer Station	37.37	223	LR	LR	07 33 13.1	
	comp=Z,754nm,18.6s,baz=100,slow=31						
LSZ	Lusaka	40.61	28	P	P	07 21 49.1	-0.9
	comp=Z,0.7nm,0.4s,baz=148,slow=9.5,SNR=2.5						
LSZ	Lusaka	40.61	28	IAMs_20	IAMs_20	07 36 24.9	
	comp=Z,2μm,18.0s						
LSZ	Lusaka	40.61	28	IAmb	IAmb	07 21 57.7	
	comp=Z,18nm,1.6s						
H10S2	ASCENSION HYDR	48.22	327	T	T	08 14 54.6	
	baz=60,slow=74,SNR=4.8						
H10S3	ASCENSION HYDR	48.23	327	T	T	08 14 38.7	
	baz=160,slow=74,SNR=5.8						
VNDA	Vanda	48.44	172	P	P	07 22 52.4	+0.7
	comp=Z,23nm,0.8s,baz=238,slow=6.0,SNR=23						
VNDA				LR	LR	07 42 33.1	
	comp=Z,1μm,19.5s,baz=198,slow=35						
VNDA	Vanda	48.44	172	P	P	07 22 52.9	+1.1
PLCA	Paso Flores	53.24	249	P	P	07 23 28.3	-0.2
	comp=Z,7.5nm,0.8s,baz=160,slow=7.7,SNR=14						
PLCA				LR	LR	07 42 37.5	
	comp=Z,657nm,21.9s,baz=159,slow=32						
PLCA	Paso Flores	53.24	249	P	P	07 23 28.5	0.0
CPUP	Villa Florida	55.58	271	P	P	07 23 45.4	-0.2
	comp=Z,15nm,0.8s,baz=126,slow=6.0,SNR=44						
CPUP	Villa Florida	55.58	271	P	P	07 23 44.4	-1.2
CPUP				IAmb	IAmb	07 23 46.3	
	comp=Z,16nm,0.8s						
KMBO	Kilima Mbogo	56.78	34	P	P	07 23 54.3	-0.2
	comp=Z,0.9nm,0.3s,baz=179,slow=8.2,SNR=2.7						
KMBO				LR	LR	07 47 04.7	
	comp=Z,1μm,19.4s,baz=164,slow=35						
KMBO	Kilima Mbogo	56.78	34	IAMs_20	IAMs_20	07 46 31.5	
	comp=Z,1μm,19.0s						
GO05	Huala	57.99	253	IAMs_20	IAMs_20	07 44 17.7	
	comp=Z,774nm,19.0s						
CFA	Coronel Fontan	58.27	259	P	P	07 24 03.9	-0.8
	comp=Z,8.8nm,0.9s,baz=128,slow=5.7,SNR=5.0						
BDFB	Brasilia	58.28	287	P	P	07 24 04.0	-0.9
	comp=Z,4.8nm,0.8s,baz=174,slow=6.1,SNR=6.3						
BDFB				LR	LR	07 44 03.0	
	comp=Z,546nm,18.6s,baz=136,slow=31						
BDFB	Brasilia	58.28	287	P	P	07 24 05.6	+0.6
BDFB				IAmb	IAmb	07 24 19.4	
	comp=Z,14nm,0.9s						
DBIC	Dimbokro	60.85	344	P	P	07 24 22.8	+0.4
	comp=Z,14nm,0.8s,baz=151,slow=8.2,SNR=15						
DBIC				LR	LR	07 44 53.1	
	comp=Z,379nm,21.4s,baz=125,slow=30						
MSEY	Mahe Island	61.24	55	IAMs_20	IAMs_20	07 45 56.5	
	comp=Z,1μm,19.0s						
GO02	Mina Guanaco	63.81	263	P	P	07 24 42.0	-0.7
GO02				IAmb	IAmb	07 25 06.4	
	comp=Z,15nm,0.9s						
GO02				IAMs_20	IAMs_20	07 47 49.2	
	comp=Z,1μm,22.0s						
LVC	Limon Verde	65.33	265	P	P	07 24 52.5	-0.2
LVC				IAmb	IAmb	07 25 32.8	
	comp=Z,16nm,1.2s						
TOC4	Torodi Ar. Sit	66.37	352	IAMs_20	IAMs_20	07 48 36.0	
	comp=Z,573nm,19.0s						
TOC5	Torodi Ar. Sit	66.38	352	IAMs_20	IAMs_20	07 48 35.2	
	comp=Z,637nm,19.0s						
TOC3	Torodi Ar. Sit	66.38	352	IAMs_20	IAMs_20	07 47 21.3	
	comp=Z,603nm,22.0s						
TOA0	Torodi Ar. Sit	66.40	352	P	P	07 24 58.5	-0.5
TOA0				IAmb	IAmb	07 25 10.3	
	comp=Z,18nm,1.1s						
TOA2	Torodi Ar. Sit	66.40	352	IAMs_20	IAMs_20	07 47 21.7	
	comp=Z,625nm,22.0s						
TORD	Torodi Ar. Bea	66.40	352	P	P	07 24 58.7	-0.3
	comp=Z,7.8nm,1.0s,baz=188,slow=6.9,SNR=22						
TORD				LR	LR	07 47 55.3	
	comp=Z,459nm,21.7s,baz=95,slow=30						
TORD	Torodi Ar. Bea	66.40	352	P	P	07 24 58.8	-0.3
TOA1	Torodi Ar. Sit	66.40	352	IAMs_20	IAMs_20	07 48 19.8	
	comp=Z,641nm,21.0s						
TOB5	Torodi Ar. Sit	66.40	352	IAMs_20	IAMs_20	07 48 13.9	
	comp=Z,537nm,19.0s						
TOC1	Torodi Ar. Sit	66.42	352	IAMs_20	IAMs_20	07 48 12.3	
	comp=Z,585nm,20.0s						
FURI	Furi	66.65	32	IAMs_20	IAMs_20	07 50 53.2	
	comp=Z,1μm,18.0s						
GO01	Chusmiza	67.74	267	P	P	07 25 08.5	+0.2
GO01				IAmb	IAmb	07 25 19.8	
	comp=Z,19nm,1.4s						
GO01				IAMs_20	IAMs_20	07 54 23.4	

	comp=Z,568nm,18.0s						
PB11	IPOC Station P	67.95	266	P	P	07 25 09.4	+0.2
PB11				IAmb	IAmb	07 25 21.7	
	comp=Z,17nm,0.9s						
MNMC	Minye Minye	68.39	267	P	P	07 25 13.1	+0.9
ATD	Arta Tunnel	70.49	35	IAMs_20	IAMs_20	07 53 38.0	
	comp=Z,708nm,18.0s						
H01W2	Cape Leeuwin H	70.76	123	T	T	08 43 09.4	
	baz=218,slow=75,SNR=470						
H01W3	Cape Leeuwin H	70.78	123	T	T	08 43 10.4	
	baz=218,slow=75,SNR=285						
H01W1	Cape Leeuwin H	70.78	123	T	T	08 43 09.4	
	baz=218,slow=75,SNR=679						
SAML	Samuel	72.49	279	P	P	07 25 36.6	-0.2
SAML				IAmb	IAmb	07 25 49.9	
	comp=Z,12nm,1.0s						
SAML	Samuel	72.49	279	IAMs_20	IAMs_20	07 52 00.8	
	comp=Z,521nm,20.0s						
DAMY	Dhamar	73.86	35	IAMs_20	IAMs_20	07 55 40.1	
	comp=Z,863nm,19.0s						
PTGA	Pitinga	77.19	286	IAMs_20	IAMs_20	07 53 56.9	
	comp=Z,639nm,20.0s						
RAYN	Ar Rayn	82.55	33	IAMs_20	IAMs_20	08 03 52.4	
	comp=Z,424nm,18.0s						
PALK	Pallekele	84.75	71	IAMs_20	IAMs_20	07 56 47.3	
	comp=Z,704nm,19.0s						
STKA	Stephens Creek	85.63	141	P	P	07 26 49.2	+0.5
	comp=Z,0.8nm,0.3s,baz=65,slow=14,SNR=3.7						
STKA				LR	LR	08 03 50.0	
	comp=Z,80nm,18.1s,baz=203,slow=35						
UOSS	Minazif	87.74	41	IAMs_20	IAMs_20	08 00 21.0	
	comp=Z,436nm,21.0s						
KEST	Kesra	88.55	360	LR	LR	08 03 59.7	
	comp=Z,296nm,19.1s,baz=146,slow=34						
OTAV	Otavalo	88.93	272	P	P	07 27 03.7	-1.7
ASAR	Alice Springs	89.62	131	P	P	07 27 08.1	+0.1
	comp=Z,0.4nm,0.5s,baz=204,slow=4.6,SNR=10.0						
ASAR				LR	LR	08 00 05.1	
	comp=Z,244nm,21.5s,baz=209,slow=31						
ASAR	Alice Springs	89.62	131	P	P	07 27 07.8	-0.2
ROSC	El Rosal	90.11	278	LR	LR	08 04 11.0	
	comp=Z,1µm,20.5s,baz=164,slow=33						
SANT	Santorini	90.26	13	IAMs_20	IAMs_20	08 11 39.8	
	comp=Z,436nm,18.0s						
SDV	Santo Domingo	91.16	283	IAMs_20	IAMs_20	08 04 35.8	
	comp=Z,550nm,22.0s						
LHI	Lord Howe Isla	91.60	154	IAMs_20	IAMs_20	08 09 12.3	
	comp=Z,593nm,18.0s						
ISP	Isparta	92.46	17	IAMs_20	IAMs_20	08 07 12.4	
	comp=Z,604nm,22.0s						
WRA	Warramunga Arr	93.04	129	P	P	07 27 23.6	-0.3
	comp=Z,4.0nm,0.3s,baz=210,slow=4.3,SNR=28						
WRA				LR	LR	08 02 13.8	
	comp=Z,316nm,21.6s,baz=200,slow=31						
GAZ	Gaziantep	93.16	22	IAMs_20	IAMs_20	08 04 50.3	
	comp=Z,698nm,20.0s						
ESDC	Sonseca Array	93.21	350	P	P	07 27 25.5	+1.5
	comp=Z,0.1nm,0.3s,baz=170,slow=5.7,SNR=5.0						
ESDC				LR	LR	08 05 39.5	
	comp=Z,122nm,21.7s,baz=0.0,slow=33						
ESDC	Sonseca Array	93.21	350	P	P	07 27 25.5	+1.5
SEUS	St. Eustatius	93.74	294	IAMs_20	IAMs_20	08 13 10.9	
	comp=Z,360nm,21.0s						
FNA	Florina	94.16	9	IAMs_20	IAMs_20	08 11 57.8	
	comp=Z,434nm,19.0s						
BRTR	Keskin Array B	94.87	18	P	P	07 27 31.6	-0.2
	comp=Z,0.2nm,0.5s,baz=178,slow=5.3,SNR=2.5						
BRTR				LR	LR	08 10 56.0	
	comp=Z,202nm,21.5s,baz=174,slow=36						
KULM	Kulim	94.91	88	IAMs_20	IAMs_20	08 02 44.2	
	comp=Z,315nm,19.0s						
KSM	Kuching	97.68	98	IAMs_20	IAMs_20	08 02 22.2	
	comp=Z,340nm,22.0s						
GNI	Garni	97.84	27	IAMs_20	IAMs_20	08 09 00.2	
	comp=Z,494nm,18.0s						
HRA	Herat	98.51	42	IAMs_20	IAMs_20	08 15 06.1	
	comp=Z,400nm,18.0s						
TBI	Tubuai	101.62	200	*e*SS	SS	07 46 44.6	+1.1
	comp=Z,204nm,30.2s						
TBI				*e*LQ	LQ	07 56 29.5	
	comp=Z,414nm,36.0s						
TBI				*e*LR	LR	08 01 03.9	
	comp=Z,322nm,32.2s						
TBI	Tubuai	101.62	200	*e*LR	LR	07 32 43.6	
	comp=Z,81nm,28.8s						
DZM	Mont Dzumac	102.44	158	*e*PS	PS	07 41 28.5	+4.1
	comp=Z,139nm,25.7s						
DZM	Mont Dzumac	102.44	158	*e*LR	LR	08 01 39.9	
	comp=Z,554nm,26.4s						
DZM	Mont Dzumac	102.44	158	*e*LR	LR	07 27 21.6	
	comp=Z,258nm,20.9s						
CLL	Collm	104.16	2	*e*PS	PS	07 41 46.0	+3.5
CLL				*e*SS	SS	07 47 24.0	+3.7
CLL				*e*SSS	SSS	07 51 36.0	
CLL				LmV		08 14 00.0	
	comp=Z,300nm,18.7s						
CHTO	Chiang Mai	104.53	78	IAMs_20	IAMs_20	08 06 17.4	
	comp=Z,432nm,21.0s						
KKM	Kota Kinabalu	104.84	100	IAMs_20	IAMs_20	08 10 43.9	
	comp=Z,273nm,20.0s						
AKASG	Malin Array Be	104.84	13	PP	PKiKP	07 32 36.8	+5.9
	comp=Z,0.5nm,0.6s,baz=198,slow=6.0,SNR=4.5						
SHL	Shillong	105.73	68	IAMs_20	IAMs_20	08 07 28.9	
	comp=Z,394nm,20.0s						
PPT2	Papeete2	107.23	201	*e*SS	SS	07 48 07.6	+6.8
	comp=Z,254nm,26.2s						
PPT2	Papeete2	107.23	201	*e*LR	LR	08 03 32.3	
	comp=Z,339nm,26.0s						
HAL	Halifax	115.72	311	IAMs_20	IAMs_20	08 20 36.3	
	comp=Z,346nm,22.0s						
CD2	Chengdu	116.55	73	PKP	PKiKP	07 32 54.7	+0.9
WMQ	Urumqi	117.53	53	*e*PKP	PKiKP	07 32 57.6	+2.3
LZH	Lanzhou	120.37	69	*e*PKP	PKPdf	07 32 59.7	-1.4
LZH				LR	LR		
	comp=Z,160nm,17.9s						
LZH				LR	LR		
	comp=Z,150nm,18.1s						
LZH				LR	LR		
	comp=Z,190nm,20.0s						
ZALV	Zalesovo Beam	123.66	43	PKP	PKPdf	07 33 06.7	+0.2
	comp=Z,0.2nm,0.3s,baz=144,slow=1.2,SNR=2.8						
SCHQ	Schefferville	124.67	317	PKP	PKPdf	07 33 08.6	0.0
	comp=Z,1.5nm,0.9s,baz=63,slow=4.5,SNR=3.0						
NJ2	Nanjing	126.26	83	*e*PKP	PKiKP	07 33 15.4	+2.7
TXAR	Lajitas Array	126.56	271	PKP	PKPdf	07 33 12.7	-0.5
	comp=Z,0.2nm,0.8s,baz=108,slow=2.9,SNR=2.4						
HHC	Hu-ho-hao-te	128.03	70	*e*PKP	PKPdf	07 33 14.0	-1.6
SONM	Songino Array	129.73	60	PKP	PKPdf	07 33 18.5	-0.1
	comp=Z,0.3nm,0.6s,baz=209,slow=2.4,SNR=2.6						
PDAR	Pinedale Array	139.05	281	PKP	PKPdf	07 33 33.7	-2.7
	comp=Z,0.3nm,0.5s,baz=101,slow=7.7,SNR=3.8						
FXWY	Fox Creek	140.43	281		PKiKP	07 33 40.3	-1.1
NVAR	Mina Array Bea	141.61	269	PKP	PKPdf	07 33 42.0	+0.9
	comp=Z,0.3nm,0.6s,baz=123,slow=2.7,SNR=2.7						
MSO	Missoula	143.91	283		PKPdf	07 33 46.3	+1.5
RES	Resolute Bay	144.05	334		PKPdf	07 33 43.2	-0.8
JTMT	Jette	144.58	284		PKPbc	07 33 45.1	+0.4
BMO	Blue Mountains	144.84	278		PKPdf	07 33 46.4	0.0
MOD	Modoc Plateau	144.96	272		PKPdf	07 33 46.6	-0.2
I07A	Izee	145.73	276		PKPab	07 33 49.8	+0.9
G08A	Pilot Rock	146.06	278		PKiKP	07 33 53.0	+0.3
B08A	Colville Reser	147.83	282		PKiKP	07 33 55.9	-0.3
TIXI	Tiksi	148.33	32	PKPbc	PKPbc	07 33 54.3	-0.5
	comp=Z,0.7nm,0.3s,baz=351,slow=4.6,SNR=2.4						
TIXI	Tiksi	148.33	32		PKPbc	07 33 53.8	-1.0
LON	Longmire	148.52	278		PKPab	07 33 59.7	+0.1
YKA	Yellowknife Ar	149.75	310	PKPbc	PKPbc	07 33 58.8	+0.1
	comp=Z,3.1nm,0.6s,baz=95,slow=2.8,SNR=62						
NLWA	Neilton Lookou	150.06	278		PKPab	07 34 04.1	-1.8
ILAR	Eielson Array	163.30	323	PKPab	PKPab	07 35 02.7	+0.5
	comp=Z,1.3nm,0.9s,baz=28,slow=2.8,SNR=5.1						

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*IDC **08** 07:20:21.8±1.1, 32°.37S×178°.04W, h0^{km}, mb4.3/5, mb1 4.5/6, mb1mx4.2/26, mbtmp4.3/6, ML4.1/1, MS3.7/1, Ms1 3.7/1, ms1mx2.9/24, Error ellipse: s-maj=37.6km s-min=24.9km az=143.0*

*NEIC **08** 07:20:23.2±1.9, 32°.34S±0°.09×178°.1W±0°.2, h10^{km}±1^{km}, mb4.6/13, Error ellipse: s-maj=22.5km s-min=14.7km az=83.0*

ISC 08 07:20:24.6±0.8**, 32°.4S**±0°.1×**178°.0W**±0°.1**, h20**^{km}**, n54, σ1^{s}.18**/47**, mb4.6**/9**, 2C-1D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	6.00	209	Pn	Pn	07 21 55.1	+2.8
URZ	Urewera	7.11	213	Pn	Pn	07 22 06.5	-0.9
	3.2nm,0.3s,baz=50,slow=16,SNR=12						
URZ				Sn	Sn	07 23 27.6	+0.1
	6.2nm,0.3s,baz=193,slow=24,SNR=6.8						
URZ	Urewera	7.11	213		Pn	07 22 07.5	+0.1
OUZ	Omahuta	7.54	245		Pn	07 22 18.6	+5.3
BKZ	Black Stump Fm	8.12	212		Pn	07 22 20.9	-0.6
BFZ	Birch Farm	9.50	207	Pn	Pn	07 22 39.8	-0.5
PLWZ	Palliser	10.65	208	Pn	Pn	07 22 54.6	-1.4
TUWZ	Tuamarina	11.10	213	Pn	Pn	07 23 02.8	+0.7
BSWZ	Blackbirch Sta	11.36	212	Pn	Pn	07 23 06.6	+0.9
THZ	Tophouse	11.85	215	Pn	Pn	07 23 15.1	+2.7
OXZ	Oxford	13.46	213	Pn	Pn	07 23 32.7	-1.8
RPZ	Rata Peaks	14.22	214	Pn	Pn	07 23 41.3	-3.5
	0.5nm,0.3s,baz=10,slow=11,SNR=2.9						
RPZ				Sn	Sn	07 26 04.7	-17
	0.3nm,0.3s,baz=180,slow=17,SNR=1.8						
RPZ	Rata Peaks	14.22	214		Pn	07 23 46.4	+1.6
WKZ	Wanaka	16.03	215	P	P	07 24 11.8	-0.3
WKZ				IAmb	IAmb	07 24 13.5	
	comp=Z,29nm,1.2s						
WHZ	Wether Hill Ro	17.32	215	Pn	Pn	07 24 23.6	-1.5
LHI	Lord Howe Isla	19.46	266	P	Pn	07 24 50.9	-0.5
LHI				IAmb	IAmb	07 25 00.8	
	comp=Z,53nm,1.1s						
CTA	Charters Tower	34.14	282	P	P	07 27 10.1	+1.7
	comp=Z,4.1nm,0.6s,baz=113,slow=9.1,SNR=7.0						
BBOO	Buckleboo	38.46	257	P	P	07 27 45.4	+0.2
BBOO				IAmb	IAmb	07 27 50.0	
	comp=Z,11nm,1.2s						
COEN	Coen	39.83	288	P	P	07 27 58.2	+1.4
AS31	Alice Springs	43.02	269	P	P	07 28 23.2	+0.2
ASAR	Alice Springs	43.02	269	P	P	07 28 22.9	-0.1
	comp=Z,3.7nm,0.8s,baz=106,slow=7.2,SNR=22						
ASAR	Alice Springs	43.02	269	P	P	07 28 22.3	-0.8
WR0	Warramunga Arr	44.01	274	P	P	07 28 30.9	-0.1
WR0				IAmb	IAmb	07 28 38.8	
	comp=Z,15nm,1.4s						
WB2	Warramunga Arr	44.17	274	P	P	07 28 30.6	-1.7
WB2				IAmb	IAmb	07 28 34.0	
	comp=Z,15nm,1.1s						
WRAB	Tennant Creek	44.18	274	P	P	07 28 31.5	-0.8
WRAB				IAmb	IAmb	07 28 35.7	
	comp=Z,7.7nm,0.8s						
WRA	Warramunga Arr	44.19	274	P	P	07 28 32.1	-0.2
	comp=Z,3.9nm,0.5s,baz=114,slow=7.7,SNR=8.4						
WRA	Warramunga Arr	44.19	274	P	P	07 28 31.8	-0.6
WB0	Warramunga Arr	44.22	274	P	P	07 28 32.2	-0.4
FORT	Forrest	45.56	257	P	P	07 28 42.5	-0.7
FITZ	Fitzroy Crossi	52.36	271	P	P	07 29 35.7	+0.2
GUMO	Guam	57.86	316	LR	LR	07 51 53.4	
	comp=Z,62nm,18.2s,baz=120,slow=33						
SYO	Syowa Base	75.21	193	⇑*e*P	P	07 32 05.8	+0.5
SYO	Syowa Base	75.21	193	⇑*e*pP	pP	07 32 08.0	-2.1
SYO	Syowa Base	75.21	193	⇓*e*sP	sP	07 32 09.9	-2.0
SNAA	Sanae	76.20	178	P	P	07 32 22.7	+12
VNA3	Neumayer Olymp	76.36	176	P	P	07 32 24.2	+12
VNA2	Neumayer--Watz	76.79	177	P	P	07 32 26.7	+12
VNA1	Neumayer--Stat	77.02	177	P	P	07 32 28.4	+13
PETK	Petropavlovsk-	87.70	346	P	P	07 33 11.4	+0.1
	comp=Z,4.5nm,0.9s,baz=152,slow=6.4,SNR=4.4						
PETK	Petropavlovsk-	87.70	346	P	P	07 33 12.1	+0.8
NVAR	Mina Array Bea	89.69	43	P	P	07 33 22.3	+0.9
	comp=Z,0.3nm,0.7s,baz=224,slow=5.0,SNR=2.7						
NVAR	Mina Array Bea	89.69	43	P	P	07 33 21.4	0.0
MKAR	Makanchi Array	119.00	309	PKP	PKiKP	07 39 11.2	-0.5
	comp=Z,0.3nm,0.6s,baz=54,slow=1.2,SNR=4.0						
MKAR	Makanchi Array	119.00	309		PKPdf	07 39 10.8	-0.7
KBZ	Khabaz	146.15	302	PKPbc	PKPab	07 40 03.3	-0.5
	comp=Z,1.6nm,0.7s,baz=196,slow=7.4,SNR=2.8						
FINES	FINESS Array B	146.97	339	PKPbc	PKPab	07 40 05.1	-1.3
	comp=Z,3.5nm,0.5s,baz=41,slow=4.5,SNR=43						
FINES	FINESS Array B	146.97	339		PKPab	07 40 05.2	-1.2
NB2	NORSAR Subarra	150.68	351	PKP	PKiKP	07 40 16.0	+0.8
	comp=Z,0.7nm,0.6s,baz=15,slow=2.5						
NOA	NORSAR Array B	150.68	351	PKPbc	PKiKP	07 40 15.8	+0.6
	comp=Z,1.4nm,0.7s,baz=14,slow=4.1,SNR=3.3						
AKASG	Malin Array Be	152.82	320	PKPbc	PKiKP	07 40 19.6	-0.2
	comp=Z,0.2nm,0.3s,baz=64,slow=2.0,SNR=6.3						
AKASG	Malin Array Be	152.82	320		PKPbc	07 40 18.7	-1.0
BRTR	Keskin Array B	153.46	295	PKPbc	PKPbc	07 40 21.0	-0.7
	comp=Z,1.1nm,0.7s,baz=145,slow=4.5,SNR=5.8						
BRTR	Keskin Array B	153.46	295		PKiKP	07 40 21.3	-0.5
TORD	Torodi Ar. Bea	160.88	179	PKPab	PKPab	07 41 07.7	+1.6
	comp=Z,0.5nm,0.7s,baz=193,slow=4.0,SNR=2.6						

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*IDC **08** 07:21:25.4±1.6, 32°.60S×178°.09W, h0^{km}, mb4.2/3, mb1 4.4/4, mb1mx4.0/25, mbtmp4.2/4, Error ellipse: s-maj=50.7km s-min=31.0km az=136.0*

*NEIC **08** 07:21:26.1±1.5, 32°.3S±0°.1×177°.91W±0°.07, h10^{km}±2^{km}, mb4.6/9, Error ellipse: s-maj=25.7km s-min=8.4km az=163.0*

ISC 08 07:21:27.7±1.1**, 32°.4S**±0°.1×**177°.9W**±0°.2**, h20**^{km}**, n27, σ1^{s}.58**/25**, mb4.5**/7**, 1C, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	6.00	210		Pn	07 22 56.3	+1.0
URZ	Urewera	7.11	213	Pn	Pn	07 23 07.2	-3.3
	baz=232,slow=12,SNR=1.9						
URZ				Sn	Sn	07 24 28.9	-1.8
	4.8nm,0.3s,baz=278,slow=19,SNR=2.9						
URZ	Urewera	7.11	213		Pn	07 23 11.3	+0.8
OUZ	Omahuta	7.59	246	Pn	Pn	07 23 22.6	+5.4
BKZ	Black Stump Fm	8.12	212	Pn	Pn	07 23 27.1	+2.6
BFZ	Birch Farm	9.49	208	Pn	Pn	07 23 42.7	-0.5
KHZ	Kahutara	12.07	212	Pn	Pn	07 24 19.4	+0.9
LTZ	Lake Taylor	12.94	214	Pn	Pn	07 24 29.0	-1.4
RPZ	Rata Peaks	14.22	214	Sn	Sn	07 27 07.8	-17
	0.1nm,0.3s,baz=31,slow=12,SNR=1.8						
WHZ	Wether Hill Ro	17.32	215		P	07 25 31.1	+1.5
WHZ				IAmb	IAmb	07 25 47.6	
	comp=Z,29nm,1.2s						
CTA	Charters Tower	34.23	282	P	P	07 28 12.0	-0.3
	comp=Z,1.4nm,0.4s,baz=97,slow=12,SNR=2.7						
BBOO	Buckleboo	38.53	257	P	P	07 28 48.3	-0.6
BBOO				IAmb	IAmb	07 28 58.5	
	comp=Z,12nm,1.2s						
XMAS	Kiritimati	39.38	33	P	P	07 28 54.7	-1.4
AS31	Alice Springs	43.10	269		P	07 29 27.4	+0.7
ASAR	Alice Springs	43.10	269	P	P	07 29 26.9	+0.1
	comp=Z,1.5nm,0.8s,baz=108,slow=7.9,SNR=2.6						
WR0	Warramunga Arr	44.09	274	P	P	07 29 34.2	-0.5
WR0				IAmb	IAmb	07 29 36.4	
	comp=Z,19nm,1.4s						
WB2	Warramunga Arr	44.26	274	P	P	07 29 40.5	+4.4
WB2				IAmb	IAmb	07 29 42.0	
	comp=Z,9.8nm,0.5s						
WRA	Warramunga Arr	44.27	274	P	P	07 29 36.1	-0.1
	comp=Z,3.4nm,0.3s,baz=114,slow=7.9,SNR=5.8						
WB0	Warramunga Arr	44.30	274	P	P	07 29 36.1	-0.4
WB0				IAmb	IAmb	07 29 48.6	
	comp=Z,5.1nm,0.8s						
FORT	Forrest	45.63	257	P	P	07 29 46.8	0.0
FITZ	Fitzroy Crossi	52.45	271	P	P	07 30 39.4	+0.2
SYO	Syowa Base	75.18	193	⇑*e*sP	sP	07 33 12.8	-1.8
FINES	FINESS Array B	147.04	339	PKPbc	PKPab	07 41 09.2	-0.7
	comp=Z,1.9nm,0.5s,baz=49,slow=3.8,SNR=1.8						
NOA	NORSAR Array B	150.74	351	PKPbc	PKiKP	07 41 19.8	+1.3
	comp=Z,0.6nm,0.5s,baz=18,slow=4.1,SNR=2.2						
AKASG	Malin Array Be	152.91	320	PKPbc	PKiKP	07 41 24.6	+1.4
	comp=Z,0.6nm,0.5s,baz=48,slow=3.2,SNR=4.2						
AKASG	Malin Array Be	152.91	320		PKiKP	07 41 23.9	+0.7
BRTR	Keskin Array B	153.56	295	PKPbc	PKPbc	07 41 24.6	-0.4
	comp=Z,0.6nm,0.8s,baz=28,slow=3.4,SNR=3.0						

KEA 08 07:23:59.1±0.0**, 40°.65N**×**122°.80E, h0**^{km}**, ML2.8**/4**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUJ	Sinuiju	1.40	112	Pg	Pn	07 24 25.7	-0.2
SUJ				Sg	Sg	07 24 43.8	-0.4
PYS	Pyongsong	2.73	120	Pg	Pg	07 24 50.2	-1.2
PYS				Sg	Sb	07 25 24.8	+2.0
PYAG	Pyongyang	2.78	124	Pg	Pg	07 24 51.5	-0.9
PYAG				Sg	Sg	07 25 26.8	-1.6
KGE	Kanggye	2.91	83	Sg	Sb	07 25 29.7	+1.7
HJU	Haeju	3.45	138	Sg	Sg	07 25 47.5	-2.5
HHU	Hamhung	3.69	100	Sg	Sg	07 25 54.8	-2.8

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*IDC **08** 07:35:55.4±1.8, 4°.34S×133°.35E, h0^{km}, mb3.7/2, mb1 4.1/6, mb1mx3.7/34, mbtmp3.9/6, ML3.9/4, Error ellipse: s-maj=65.6km s-min=17.7km az=67.0*

ISC 08 07:35:58.1±1.1**, 4°.54S**±0°.07×**133°.3E**±0°.2**, h21**^{km}**, n6, σ3^{s}.45**/11**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.15	331	Pn	Pn	07 36 59.7	-0.6
	2.2nm,0.3s,baz=189,slow=23,SNR=8.3						
SIJI				Pg	Pb	07 37 12.8	+2.3
	4.1nm,0.3s,baz=216,slow=22,SNR=9.4						
SIJI				Sn	Sn	07 37 43.1	-5.2
	7.9nm,0.3s,baz=281,slow=23,SNR=10						
SIJI				Lg	Lg	07 38 01.8	
	baz=142,slow=19,SNR=2.0						
WRA	Warramunga Arr	15.35	176	Pn	Pn	07 39 34.1	+0.6
	0.5nm,0.3s,baz=356,slow=13,SNR=20						
WRA				Sn	Sn	07 42 17.8	-5.3
	0.2nm,0.3s,baz=353,slow=23,SNR=2.8						
FITZ	Fitzroy Crossi	15.40	208	Pn	Pn	07 39 36.7	+2.5
	0.8nm,0.3s,baz=33,slow=11,SNR=21						
FITZ				Sn	Sn	07 42 24.7	+0.3
	0.6nm,0.3s,baz=207,slow=17,SNR=5.8						
ASAR	Alice Springs	19.03	178	P	Pn	07 40 22.0	+2.4
	0.3nm,0.3s,baz=3.1,slow=11,SNR=27						
ASAR				S	Sn	07 43 47.7	-4.6
	0.1nm,0.3s,baz=3.8,slow=30,SNR=2.5						
CTA	Charters Tower	19.98	142	P	P	07 40 30.4	+1.2
	9.7nm,0.9s,baz=302,slow=11,SNR=3.4						
MKAR	Makanchi Array	68.02	325	P	P	07 46 56.2	+0.2
	0.2nm,0.5s,baz=110,slow=6.7,SNR=3.0						

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*NEIC **08** 08:04:23.7±2.4, 18°.1N±0°.1×68°.22W±0°.04, h52^{km}±27^{km}, Error ellipse: s-maj=21.8km s-min=3.2km az=192.0*

*OSPL **08** 08:04:24.0±0.5, 17°.99N×68°.29W, h16^{km}±4^{km}, ML2.4*

*RSPR **08** 08:04:24.7, 18°.12N×68°.25W, h45^{km}±2^{km}, MD3.0/12*

ISC 08 08:04:23.3±1.6**, 18°.1N**±0°.1×**68°.25W**±0°.03**, h31**^{km}±12^{km}**, n43, σ0^{s}.96**/57**, 9C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.47	345	*i* P	Pb	08 04 33.8	+0.5
PCDR				*e*S	Sb	08 04 40.7	+0.5
PCDR	Punta Cana, DR	0.47	345	⇓*e*P	Pb	08 04 32.4	-0.9
PCDR	Punta Cana, DR	0.47	345		Pb	08 04 32.5	-0.9
PCDR					Sb	08 04 40.6	+0.4
CRPR	Cabo Rojo, PR	1.09	92	⇑*e*P	Pn	08 04 42.3	-0.1
CRPR	Cabo Rojo, PR	1.09	92	*e*S	Sn	08 04 56.4	0.0
CRPR	Cabo Rojo, PR	1.09	92		Pn	08 04 41.7	-0.7
CRPR					Sn	08 04 56.6	+0.2
LSP	Las Mesas	1.12	84	⇑*e*P	Pn	08 04 42.6	-0.3
LSP	Las Mesas	1.12	84	*e*S	Sn	08 04 57.1	-0.1
LSP	Las Mesas	1.12	84		Pn	08 04 42.6	-0.3
LSP					Sn	08 04 57.1	-0.1
MLPR	Magueyes Islan	1.16	94	⇑*e*P	Pn	08 04 43.5	+0.2
MLPR	Magueyes Islan	1.16	94	*e*S	Sn	08 04 58.2	+0.2
MLPR	Magueyes Islan	1.16	94		Pn	08 04 44.0	+0.7
MLPR					Sb	08 04 59.6	+0.3
AGPR	Aguadilla, PR	1.16	69	*i* P	Pn	08 04 44.7	+1.3
AGPR				*e*S	Sb	08 05 00.2	+0.7
AGPR				IAML		08 05 02.3	
	comp=Z,82nm,0.2s						
AGPR	Aguadilla, PR	1.16	69	⇓*e*P	Pn	08 04 43.3	-0.1
AGPR	Aguadilla, PR	1.16	69	*e*S	Sn	08 04 57.4	-0.8
AGPR	Aguadilla, PR	1.16	69		Pn	08 04 42.7	-0.7
AGPR					Sb	08 05 00.8	+1.3
DR12	Loma Pena Alta	1.29	304		Pn	08 04 41.9	-3.4
AOPR	Arecibo Observ	1.46	78	⇑*e*P	Pn	08 04 47.4	0.0
AOPR	Arecibo Observ	1.46	78	⇑*e*P	Pn	08 04 47.6	+0.2
AOPR				*e*S	Sn	08 05 05.5	0.0
AOPR	Arecibo Observ	1.46	78	*e*S	Sn	08 05 05.0	-0.6
AOPR	Arecibo Observ	1.46	78	Pn	Pn	08 04 47.0	-0.5
AOPR					Sn	08 05 07.0	+1.5
OBIP	Obispado Ponce	1.57	90	Pn	Pn	08 04 46.7	-2.3
EMPR	Esperanza - Ma	1.69	75	⇑*e*P	Pn	08 04 50.7	0.0
EMPR	Esperanza - Ma	1.69	75	*e*S	Sn	08 05 10.5	-0.8
EMPR	Esperanza - Ma	1.69	75		Pn	08 04 51.0	+0.4
EMPR					Sn	08 05 13.2	+2.0
SJG	San Juan	2.00	88	Pn	Pn	08 04 54.8	-0.2
BANI	BANI	2.03	280	Pn	Pn	08 04 55.4	0.0
IGPR	InterUniversit	2.05	92	⇓*e*P	Pn	08 04 55.7	+0.1
IGPR	InterUniversit	2.05	92	*e*S	Sn	08 05 20.2	+0.2
GCPR	Guaynabo City	2.08	83	⇑*e*P	Pn	08 04 56.4	+0.4
GCPR	Guaynabo City	2.08	83	*e*S	Sn	08 05 20.6	-0.3
GCPR	Guaynabo City	2.08	83		Pn	08 04 54.8	-1.2
PDPR	Patillas Dam,	2.12	91	Pn	Pn	08 04 54.6	-2.1
SC01	Santiago de lo	2.71	301	*i* P	Pn	08 05 05.1	+0.4
SC01				IAML		08 05 48.1	
	comp=Z,16nm,0.3s						
SC01	Santiago de lo	2.71	301	Pn	Pn	08 05 05.8	+1.0
CUPR	Culebra, Puert	2.84	84	*e*S	Sn	08 05 39.4	-0.2
CUPR	Culebra, Puert	2.84	84	⇑*e*P	Pn	08 05 06.2	-0.3
CUPR	Culebra, Puert	2.84	84		Pn	08 05 07.0	+0.6
CUPR					Sn	08 05 39.1	-0.5
SDDR	Presa de Saban	3.02	288	*i* P	Pn	08 05 09.8	+0.7
SDDR				*e*S	Sn	08 05 43.4	-0.9
SDDR				IAML		08 05 53.0	
	comp=Z,12nm,0.3s						
SDDR	Presa de Saban	3.02	288		Pn	08 05 09.4	+0.3
SDDR					Sn	08 05 46.8	+2.6
STVI	Saint Thomas	3.15	84	⇑*e*P	Pn	08 05 10.8	+0.1
STVI	Saint Thomas	3.15	84	*e*S	Sn	08 05 47.4	+0.1
STVI	Saint Thomas	3.15	84		Pn	08 05 10.2	-0.5
STVI					Sn	08 05 47.0	-0.4

IDC 08 08:39:17.3±2.0**, 1°.62N**×**126°.43E, h0**^{km}**, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.4**/40**, mbtmp3.6**/3**, Error ellipse: s-maj=176.5km s-min=24.3km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.79	160	P	P	08 44 21.3	-0.3
	0.8nm,0.4s,baz=339,slow=11,SNR=8.3						
ASAR	Alice Springs	26.16	164	P	P	08 44 53.8	+0.2
	0.6nm,0.6s,baz=347,slow=9.6,SNR=9.6						
MKAR	Makanchi Array	59.12	326	P	P	08 49 19.7	0.0
	0.2nm,0.3s,baz=121,slow=7.8,SNR=9.4						

LJU 08 08:43:18.0, 45°.94N×**15°.46E, h2**^{km}**, ML0.1, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CESS	Cesta pri Krsk	0.03	5	*i* Pg	Pg	08 43 18.7	0.0
CESS				*i* Sg	Sg	08 43 19.3	+0.1
	comp=Z,24nm,0.1s						
LEGS	Legarje	0.10	273	*i* Pg	Pg	08 43 19.9	0.0
LEGS				*i* Sg	Sg	08 43 21.6	+0.3
CRES	Cresnjev	0.12	181	*i* Pg	Pg	08 43 20.4	+0.2
	comp=Z,2.0nm,0.1s						

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*IDC **08** 08:50:52.4±3.8, 5°.58S×102°.86E, h0^{km}, mb3.8/6, mb1 3.9/6, mb1mx3.6/39, mbtmp3.8/6, Error ellipse: s-maj=160.6km s-min=20.9km az=54.0*

*NEIC **08** 08:50:55.3±2.3, 6°.01S±0°.09×102°.5E±0°.2, h35^{km}±4^{km}, mb4.4/8, Error ellipse: s-maj=27.0km s-min=8.5km az=68.0*

ISC 08 08:50:53.8±1.1**, 5°.9S**±0°.1×**102°.6E**±0°.2**, h21**^{km}**, n27, σ1^{s}.30**/24**, mb4.2**/11**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	1.61	13		Pb	08 51 22.6	-0.2
XMIS	Christmas Isla	5.44	146	Pn	Pn	08 52 13.0	-0.8
CMAR	Chiang Mai Arr	24.50	352	P	P	08 56 11.3	-0.6
	0.9nm,0.3s,baz=184,slow=8.6,SNR=3.4						
KNRA	Kununurra	27.44	113		P	08 56 39.1	+0.6
KNRA				IAmb	IAmb	08 56 48.1	
	comp=Z,12nm,1.3s						
H08S2	Diego Garcia H	29.93	265	T	T	09 28 52.8	
	baz=89,slow=76,SNR=6.4						
H08S3	Diego Garcia H	29.94	265	T	T	09 28 56.8	
	baz=89,slow=76,SNR=4.9						
H08S1	Diego Carcia H	29.95	265	T	T	09 28 48.9	
	baz=89,slow=76,SNR=4.4						
WB0	Warramunga Arr	33.83	117	P	P	08 57 38.7	+3.7
WB0				IAmb	IAmb	08 57 50.3	

	comp=Z,8.1nm,1.5s						
WRA	**Warramunga Arr**	**33.84**	**117**	P	**P**	**08 57 35.9**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=294,slow=7.4,SNR=5.0						
WRAB	**Tennant Creek**	**33.85**	**117**	P	**P**	**08 57 34.0**	**-1.2**
WRAB				IAmb	IAmb	08 57 42.8	
	comp=Z,8.4nm,1.4s						
WB2	**Warramunga Arr**	**33.85**	**117**	P	**P**	**08 57 36.1**	**+1.0**
WR0	**Warramunga Arr**	**34.03**	**117**	P	**P**	**08 57 38.0**	**+1.3**
WR0				IAmb	IAmb	08 57 41.4	
	comp=Z,8.1nm,1.3s						
ASAR	**Alice Springs**	**34.90**	**124**	P	**P**	**08 57 46.7**	**+2.5**
	comp=Z,0.2nm,0.4s,baz=298,slow=7.6,SNR=7.3						
ASAR	**Alice Springs**	**34.90**	**124**		**P**	**08 57 43.5**	**-0.7**
SONM	**Songino Array**	**53.64**	**3**	P	**P**	**09 00 13.3**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=182,slow=9.3,SNR=10.0						
SONM	**Songino Array**	**53.64**	**3**	P	**P**	**09 00 13.8**	**-0.1**
MK31	**Makanchi Array**	**55.50**	**343**	P	**P**	**09 00 28.3**	**+1.0**
MKAR	**Makanchi Array**	**55.50**	**343**	P	**P**	**09 00 27.8**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=156,slow=9.2,SNR=12						
MKAR	**Makanchi Array**	**55.50**	**343**	P	**P**	**09 00 27.5**	**+0.2**
ZAA0	**Zalesovo Array**	**61.51**	**348**	P	**P**	**09 01 08.6**	**-0.3**
ZAA0				IAmb	IAmb	09 01 09.4	
	comp=Z,1.7nm,0.9s						
ZALV	**Zalesovo Beam**	**61.51**	**348**	P	**P**	**09 01 08.7**	**-0.3**
	comp=Z,1.1nm,0.4s,baz=156,slow=5.2,SNR=7.7						
ZALV	**Zalesovo Beam**	**61.51**	**348**	P	**P**	**09 01 08.8**	**-0.1**
ABKAR	**Akbulak array**	**66.31**	**331**	P	**P**	**09 01 41.9**	**+1.2**
TX31	**Lajitas Ar. Si**	**146.00**	**44**	PKPdf	**PKPdf**	**09 10 31.1**	**-1.0**
TX32	**Lajitas Array**	**146.00**	**44**	PKPdf	**PKPdf**	**09 10 30.8**	**-1.4**
TXAR	**Lajitas Array**	**146.00**	**44**	PKPbc	**PKPdf**	**09 10 31.1**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=328,slow=1.5,SNR=9.3						
TXAR	**Lajitas Array**	**146.00**	**44**		**PKPdf**	**09 10 30.8**	**-1.3**

IDC 08 09:32:31.2±1.8**, 32°.48N**×**40°.19W, h0**km**, mb3.3**/5**, mb1 3.6**/5**, mb1mx3.4**/30**, mbtmp3.3**/5**, MS3.2**/2**, Ms1 3.2**/2**, ms1mx3.0**/16**, Error ellipse: s-maj=81.4km s-min=30.5km az=26.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**42.79**	**107**	P	P	09 40 30.8	-0.1
	0.6nm,1.0s,baz=302,slow=8.3,SNR=1.6						
H10N2	**ASCENSION HYDR**	**46.97**	**144**	T	T	10 31 03.7	
	baz=329,slow=75,SNR=24						
H10N3	**ASCENSION HYDR**	**46.98**	**144**	T	T	10 30 59.1	
	baz=329,slow=75,SNR=25						
H10N1	**ASCENSION HYDR**	**46.99**	**144**	T	T	10 31 04.3	
	baz=329,slow=75,SNR=26						
H10S3	**ASCENSION HYDR**	**47.86**	**145**	T	T	10 32 06.5	
	baz=251,slow=74,SNR=41						
H10S2	**ASCENSION HYDR**	**47.87**	**145**	T	T	10 32 04.0	
	baz=329,slow=74,SNR=16						
TXAR	**Lajitas Array**	**53.84**	**285**	P	P	09 41 55.3	-0.9
	0.1nm,0.4s,baz=92,slow=7.2,SNR=1.6						
TXAR				LR	LR	10 02 13.4	
	comp=Z,23nm,20.4s,baz=0.0,slow=33						
PDAR	**Pinedale Array**	**54.49**	**302**	P	P	09 42 02.3	+1.3
	0.3nm,0.8s,baz=82,slow=7.5,SNR=2.6						
PDAR				LR	LR	10 05 04.6	
	comp=Z,22nm,18.2s,baz=20,slow=36						
YKA	**Yellowknife Ar**	**54.64**	**327**	P	P	09 42 00.1	-1.3
	0.2nm,0.9s,baz=85,slow=7.5,SNR=2.1						
ILAR	**Eielson Array**	**67.75**	**334**	P	P	09 43 30.6	+0.3
	0.4nm,0.9s,baz=68,slow=5.1,SNR=3.5						

OSPL ***08*** *09:35:38.7±0.8, 19°.45N×67°.70W, h13km±6km, ML3.4*
RSPR ***08*** *09:35:40.5, 19°.47N×67°.69W, h65km±7km, MD3.4/13*
ISC 08 09:35:35.5±1.8**, 19°.42N**±0°.07×**67°.76W**±0°.03**, h1**km±11km**, n48, σ0ˢ.89**/55**, 9C-4D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**1.08**	**213**	*i* P	**Pg**	**09 35 55.0**	**-1.1**
PCDR				*e*S	**Sg**	**09 36 09.4**	**-0.8**
PCDR				IAML		09 36 10.5	
	comp=Z,652nm,0.5s						
PCDR	**Punta Cana, DR**	**1.08**	**213**		**Pg**	**09 35 55.0**	**-1.1**
AGPR	**Aguadilla, PR**	**1.13**	**147**	*i* P	**Pb**	**09 35 57.8**	**+0.1**
AGPR				*e*S	**Sb**	**09 36 13.4**	**+0.5**
AGPR				IAML		09 36 14.7	
	comp=Z,849nm,0.2s						
AGPR	**Aguadilla, PR**	**1.13**	**147**	⇓*e*P	**Pn**	**09 35 58.2**	**-0.1**
AGPR	**Aguadilla, PR**	**1.13**	**147**		**Pb**	**09 35 57.9**	**+0.1**
AGPR					Pn	09 35 58.0	-0.3
AGPR					**Sn**	**09 36 13.7**	**-0.7**
MPR	**Mayaguez**	**1.34**	**154**	*i* P	**Pn**	**09 36 01.4**	**+0.1**
MPR				*e*S	**Sg**	**09 36 17.9**	**-0.5**
MPR				IAML		09 36 23.2	
	comp=Z,170nm,0.3s						
MPR	**Mayaguez**	**1.34**	**154**		**Pn**	**09 36 01.3**	**+0.1**
LSP	**Las Mesas**	**1.39**	**153**	*e*S	**Sb**	**09 36 20.7**	**+0.2**
LSP	**Las Mesas**	**1.39**	**153**	⇓*e*P	**Pg**	**09 36 03.2**	**+1.1**
LSP	**Las Mesas**	**1.39**	**153**		**Pg**	**09 36 03.2**	**+1.1**
LSP					**Sb**	**09 36 20.7**	**+0.2**
AOPR	**Arecibo Observ**	**1.43**	**138**	*e*S	**Sn**	**09 36 21.6**	**-0.3**
AOPR	**Arecibo Observ**	**1.43**	**138**	⇑*e*P	**Pg**	**09 36 03.2**	**+0.3**
AOPR	**Arecibo Observ**	**1.43**	**138**	Pn	**Pg**	**09 36 02.8**	**-0.1**
AOPR					Pn	09 36 03.0	+0.5
EMPR	**Esperanza - Ma**	**1.49**	**129**	*e*S	**Sg**	**09 36 24.0**	**+0.6**
EMPR	**Esperanza - Ma**	**1.49**	**129**	⇑*e*P	**Pg**	**09 36 04.5**	**+0.4**
EMPR	**Esperanza - Ma**	**1.49**	**129**		**Pg**	**09 36 05.4**	**+1.4**
EMPR					Pn	09 36 05.6	+2.3
CRPR	**Cabo Rojo, PR**	**1.53**	**156**	*e*S	**Sn**	**09 36 24.7**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.53**	**156**	⇓*e*P	**Pg**	**09 36 05.4**	**+0.5**
CRPR	**Cabo Rojo, PR**	**1.53**	**156**		**Pb**	**09 36 05.1**	**+0.4**
CRPR					Pn	09 36 05.3	+1.4
MLPR	**Magueyes Islan**	**1.59**	**155**	*e*S	**Sn**	**09 36 26.1**	**+0.2**
MLPR	**Magueyes Islan**	**1.59**	**155**	⇓*e*P	**Pg**	**09 36 06.2**	**+0.2**
MLPR	**Magueyes Islan**	**1.59**	**155**		**Pb**	**09 36 06.0**	**+0.3**
MLPR					Pn	09 36 06.2	+1.4
GBPR	**Guanica, Bosqu**	**1.66**	**150**	*e*S	**Sn**	**09 36 27.4**	**-0.1**
GBPR	**Guanica, Bosqu**	**1.66**	**150**	⇑*e*P	**Pb**	**09 36 06.9**	**+0.1**
GBPR	**Guanica, Bosqu**	**1.66**	**150**		**Pb**	**09 36 06.9**	**+0.1**
GBPR					**Sn**	**09 36 27.4**	**-0.1**
DR12	**Loma Pena Alta**	**1.66**	**248**		**Pn**	**09 36 05.3**	**-0.4**
OBIP	**Obispado Ponce**	**1.75**	**141**	*e*S	**Sn**	**09 36 29.1**	**-0.7**
OBIP	**Obispado Ponce**	**1.75**	**141**	⇑*e*P	**Pb**	**09 36 07.7**	**-0.7**
OBIP	**Obispado Ponce**	**1.75**	**141**		**Pn**	**09 36 07.1**	**+0.2**
OBIP					Pn	09 36 07.2	+0.4
ICMP	**Isla Caja de M**	**1.92**	**142**	⇑*e*P	**Pn**	**09 36 10.1**	**+0.9**
ICMP	**Isla Caja de M**	**1.92**	**142**	*e*S	**Sn**	**09 36 33.5**	**-0.5**
ICMP	**Isla Caja de M**	**1.92**	**142**		**Pb**	**09 36 10.4**	**-0.9**
GCPR	**Guaynabo City**	**1.93**	**125**	*e*S	**Sn**	**09 36 33.1**	**-1.1**
GCPR	**Guaynabo City**	**1.93**	**125**	⇑*e*P	**Pb**	**09 36 09.9**	**-1.5**
GCPR	**Guaynabo City**	**1.93**	**125**		**Pb**	**09 36 10.5**	**-1.0**
SJG	**San Juan**	**2.00**	**130**		**Pb**	**09 36 11.5**	**-1.2**
IGPR	**InterUniversit**	**2.13**	**133**	⇑*e*P	**Pb**	**09 36 13.2**	**-1.7**
IGPR	**InterUniversit**	**2.13**	**133**	*e*S	**Sn**	**09 36 38.5**	**-0.7**
SDD	**Santo Domingo**	**2.26**	**245**	*i* P	**Pn**	**09 36 15.1**	**+1.2**
SDD				*e*S	**Sn**	**09 36 41.4**	**-0.9**
SDD	**Santo Domingo**	**2.26**	**245**	Pn	**Pn**	**09 36 15.3**	**+1.4**
CUPR	**Culebra, Puert**	**2.59**	**115**	⇑*e*P	**Pn**	**09 36 19.2**	**+0.7**
CUPR	**Culebra, Puert**	**2.59**	**115**	*e*S	**Sn**	**09 36 48.9**	**-1.6**
CUPR	**Culebra, Puert**	**2.59**	**115**		**Pn**	**09 36 18.8**	**+0.4**
CUPR					Pn	09 36 19.3	+0.9
BANI	**BANI**	**2.67**	**248**		**Pn**	**09 36 22.2**	**+2.6**
STVI	**Saint Thomas**	**2.86**	**111**	⇑*e*P	**Pn**	**09 36 22.6**	**+0.5**
STVI	**Saint Thomas**	**2.86**	**111**		**Pn**	**09 36 22.6**	**+0.5**
SDDR	**Presa de Saban**	**3.37**	**263**	*i* P	**Pn**	**09 36 30.0**	**+0.8**
SDDR				IAML		09 37 30.8	
	comp=Z,87nm,0.7s						
SDDR	**Presa de Saban**	**3.37**	**263**	Pn	**Pn**	**09 36 30.8**	**+1.6**

IDC 08 09:51:06.2±2.1**, 18°.16S**×**174°.87W, h0**km**, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.6**/35**, mbtmp3.8**/4**, MS3.6**/2**, Ms1 3.6**/2**, ms1mx2.8**/39**, Error ellipse: s-maj=65.6km s-min=34.8km az=123.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.16**	**36**	Sn	Sn	09 53 25.9	+0.8
	1.6nm,0.3s,baz=252,slow=20,SNR=1.7						
URZ	**Urewera**	**21.22**	**198**	P	P	09 55 53.3	-0.3
	3.2nm,0.5s,baz=313,slow=18,SNR=1.2						
WRA	**Warramunga Arr**	**47.90**	**259**	P	P	09 59 46.1	-0.5
	0.8nm,0.3s,baz=96,slow=7.5,SNR=2.0						
ASAR	**Alice Springs**	**47.97**	**254**	P	P	09 59 47.4	+0.2
	0.3nm,0.4s,baz=84,slow=8.8,SNR=11						
SIJI	**Sorong**	**55.58**	**282**	LR	LR	10 21 23.5	
	comp=Z,145nm,21.9s,baz=98,slow=33						
JCJ	**Chichijima**	**61.31**	**316**	LR	LR	10 25 44.9	
	comp=Z,17nm,18.5s,baz=317,slow=34						
ILAR	**Eielson Array**	**85.41**	**12**	P	P	10 03 45.0	0.0
	0.4nm,0.9s,baz=220,slow=5.9,SNR=5.6						

IDC 08 10:08:38.0±32.0**, 14°.93S**×**178°.38W, h480**km±288km**, mb2.9**/3**, mb1 3.2**/3**, mb1mx2.8**/49**, mbtmp3.8**/3**, Error ellipse: s-maj=412.2km s-min=55.9km az=132.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.27**	**257**	P	P	10 16 11.8	-0.2
	0.6nm,1.1s,baz=84,slow=6.7,SNR=5.8						
ASAR	**Alice Springs**	**45.69**	**251**	P	P	10 16 15.2	-0.1
	1.4nm,0.3s,baz=85,slow=8.4,SNR=81						
ILAR	**Eielson Array**	**83.00**	**13**	P	P	10 20 11.6	0.0
	0.5nm,0.7s,baz=224,slow=6.0,SNR=4.6						
BRTR	**Keskin Array B**	**142.67**	**318**	PKP	PKPdf	10 27 15.8	-0.6
	1.1nm,0.8s,baz=29,slow=3.3,SNR=4.1						

KEA 08 10:09:20.2±0.0**, 40°.45N**×**122°.29E, h0**km**, ML2.1**/1**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUJ	**Sinuiju**	**1.72**	**101**	Pg	Pb	10 09 52.1	-0.5
SUJ				Sg	Sn	10 10 13.8	-0.2
PYS	**Pyongsong**	**2.99**	**112**	Sg	Sb	10 10 53.5	+2.1
KGE	**Kanggye**	**3.32**	**80**	Sg	Sb	10 11 03.0	+2.0

IDC 08 10:14:40.8±5.1**, 49°.73S**×**123°.54E, h0**km**, mb3.8**/2**, mb1 4.0**/2**, mb1mx3.6**/42**, mbtmp3.8**/2**, MS3.2**/1**, Ms1 3.1**/1**, ms1mx2.8**/17**, Error ellipse: s-maj=299.9km s-min=70.8km az=98.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**16.35**	**332**	T	T	10 36 11.2	
	baz=159,slow=79,SNR=3.7						
H01W2	**Cape Leeuwin H**	**16.35**	**332**	T	T	10 36 09.0	
	baz=159,slow=79,SNR=5.0						
H01W3	**Cape Leeuwin H**	**16.37**	**332**	T	T	10 36 08.9	
	baz=159,slow=79,SNR=4.3						
STKA	**Stephens Creek**	**22.37**	**44**	LR	LR	10 26 01.7	
	comp=Z,54nm,19.4s,baz=202,slow=30						
ASAR	**Alice Springs**	**27.26**	**21**	P	P	10 20 26.5	-0.2
	2.1nm,0.9s,baz=191,slow=9.3,SNR=5.1						
WRA	**Warramunga Arr**	**30.95**	**20**	P	P	10 20 59.7	+0.2
	0.4nm,0.7s,baz=198,slow=8.9,SNR=3.7						
YKA	**Yellowknife Ar**	**146.40**	**45**	PKPbc	PKPdf	10 34 21.4	+0.5
	0.3nm,0.9s,baz=258,slow=2.5,SNR=3.4						

IDC 08 10:15:04.8±3.0**, 8°.22S**×**150°.88E, h0**km**, mb3.1**/1**, mb1 3.5**/3**, mb1mx3.3**/54**, mbtmp3.3**/3**, ML3.5**/1**, Error ellipse: s-maj=79.8km s-min=43.5km az=147.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.86**	**252**	Pn	Pn	10 16 05.4	0.0
	1.1nm,0.3s,baz=344,slow=18,SNR=3.4						
PMG				Sn	Sn	10 16 54.6	+3.1
	3.2nm,0.3s,baz=98,slow=17,SNR=7.1						
WRA	**Warramunga Arr**	**19.80**	**232**	P	P	10 19 36.0	-1.0
	0.1nm,0.3s,baz=58,slow=12,SNR=3.1						
ASAR	**Alice Springs**	**22.37**	**225**	P	P	10 20 04.8	0.0
	0.4nm,0.5s,baz=54,slow=9.0,SNR=10						
TORD	**Torodi Ar. Bea**	**149.34**	**282**	PKPbc	PKPbc	10 34 56.7	-0.1
	0.3nm,0.6s,baz=54,slow=2.5,SNR=2.2						

IDC ***08*** *10:20:24.7±1.1, 46°.13N×93°.43E, h0km, mb3.6/9, mb1 3.5/15, mb1mx3.4/60, mbtmp3.5/15, ML2.9/6, MS3.2/2, Ms1 3.1/2, ms1mx2.6/41, Error ellipse: s-maj=30.3km s-min=15.4km az=12.0*
NNC ***08*** *10:20:30.8±2.3, 45°.99N×92°.77E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=24.9km s-min=18.1km az=41.0*
ASRS ***08*** *10:20:32.1±0.5, 46°N±3°×9°4E±°, h10km, MLv4.6/12, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed*
ISC 08 10:20:26.1±0.8**, 46°.24N**±0°.06×**93°.59E**±0°.05**, h10**km**, n38, σ2ˢ.43**/59**, mb3.5**/9**, 6C-4D, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLNR	**Muhor-Tarhata,**	**4.93**	**318**	Pn	**Pn**	**10 21 43.4**	**+3.0**
SLNR				Pg	**Pg**	**10 21 58.2**	**-2.3**
SLNR				Sg	**Sg**	**10 23 09.2**	**+4.8**
CUR	**Chagan-Uzun**	**5.21**	**320**	Pn	**Pn**	**10 21 47.1**	**+2.8**
CUR				Pg	**Pg**	**10 22 05.5**	**-0.4**
CUR				Sg	**Sg**	**10 23 15.6**	**+2.2**
DGZ	**Jazzator, Alta**	**5.39**	**312**	Pn	**Pn**	**10 21 50.1**	**+3.4**
DGZ				Pg	**Pg**	**10 22 07.7**	**-1.7**
DGZ				Sg	**Sg**	**10 23 19.1**	**0.0**
KZLR	**Kyzyl**	**5.50**	**6**	Pg	**Pg**	**10 22 07.9**	**-3.4**
KZLR				Sg	**Sg**	**10 23 20.9**	**-1.5**
AKAR	**Aktash**	**5.70**	**318**	Pn	**Pn**	**10 21 53.4**	**+2.5**
AKAR				Pg	**Pg**	**10 22 13.8**	**-1.4**
AKAR				Sg	**Sg**	**10 23 30.7**	**+1.7**
CHBI	**Chibit, Altay**	**5.75**	**317**	Pn	**Pn**	**10 21 54.2**	**+2.6**
CHBI				Pg	**Pg**	**10 22 14.5**	**-1.7**
CHBI				Sg	**Sg**	**10 23 34.9**	**+4.3**
ULGR	**Ulagan, Altay**	**5.76**	**322**	Pg	**Pg**	**10 22 15.2**	**-1.3**
ULGR				Sg	**Sg**	**10 23 34.2**	**+3.2**
TUNR	**Tungur**	**6.24**	**312**	Pn	**Pn**	**10 22 01.1**	**+2.9**
TUNR				Pg	**Pg**	**10 22 22.4**	**-3.1**
TUNR				Sg	**Sg**	**10 23 46.3**	**+0.1**
DJOS	**Djoyskaya Sosn**	**6.71**	**349**	Pg	**Pg**	**10 22 31.6**	**-2.9**
DJOS				Sg	**Sg**	**10 24 05.1**	**+3.7**
CERR	**Cheremushki**	**6.76**	**349**	Pg	**Pg**	**10 22 31.5**	**-4.1**
CERR				Sg	**Sg**	**10 24 01.2**	**-2.0**
ARTR	**Artybash**	**6.93**	**326**	Pg	**Pg**	**10 22 38.0**	**-0.8**
ARTR				Sg	**Sg**	**10 24 10.8**	**+2.3**
ELDR	**Elanda**	**7.02**	**318**	Pn	Pn	10 22 12.8	+3.8
ELDR				Pg	**Pg**	**10 22 40.2**	**-0.4**
ELDR				Sg	**Sg**	**10 24 08.9**	**-2.5**
TASR	**Tashtagol**	**7.50**	**332**	Pg	**Pg**	**10 22 45.1**	**-4.7**
TASR				Sg	**Sg**	**10 24 27.8**	**+1.0**
GALT	**Gorno-Altaysk,**	**7.60**	**322**	Pg	**Pg**	**10 22 49.2**	**-2.4**
GALT				Sg	**Sg**	**10 24 33.5**	**+3.5**
MK31	**Makanchi Array**	**7.81**	**278**	⇑Pn	**Pn**	**10 22 18.9**	**-0.9**
	0.5nm,0.3s,baz=94,slow=15,SNR=68						
MK31				⇑Pg	**Pb**	**10 22 43.4**	**+1.7**
	3.4nm,0.6s,baz=72,slow=19,SNR=4.0						
MK31				⇑Lg	Lg	10 24 21.6	
	12nm,0.5s,baz=84,slow=34,SNR=5.8						
MKAR	**Makanchi Array**	**7.81**	**278**	Pn	**Pn**	**10 22 19.2**	**-0.7**
	0.3nm,0.3s,baz=93,slow=16,SNR=17						
MKAR				Lg	Lg	10 24 27.7	
	3.7nm,0.3s,baz=86,slow=34,SNR=5.6						
MAKZ	**Makanchi**	**8.03**	**278**	⇑Pn	**Pn**	**10 22 21.9**	**-1.0**
	2.1nm,0.6s						
MAKZ				⇑Pg	Pb	10 22 47.3	+1.9
	4.0nm,0.7s						
MAKZ				⇑Lg	Lg	10 24 29.8	
	30nm,0.7s						
ELT	**Eltsovka**	**8.48**	**329**	Pg	**Pg**	**10 23 04.1**	**-4.2**
ELT				Sg	**Sg**	**10 24 54.6**	**-3.5**
TLY	**Talaya**	**8.56**	**47**	Lg	Lg	10 24 58.4	
	0.0nm,0.3s,baz=50,slow=16,SNR=4.7						
MINR	**Mina**	**8.68**	**2**	Pg	Pg	10 23 08.1	-4.0
MINR				Sg	**Sg**	**10 25 04.2**	**-0.1**
SONM	**Songino Array**	**8.89**	**75**	Pn	**Pn**	**10 22 38.2**	**+3.5**
	0.1nm,0.3s,baz=264,slow=14,SNR=4.5						
SONM				Pg	Pg	10 23 12.5	-3.8
	1.0nm,0.3s,baz=266,slow=18,SNR=10.0						
SONM				Lg	Lg	10 25 07.4	
	2.5nm,0.3s,baz=266,slow=28,SNR=8.5						
ZAA0	**Zalesovo Array**	**9.54**	**327**	⇓Lg	Lg	10 25 32.9	
	3.1nm,1.0s						
ZALV	**Zalesovo Beam**	**9.54**	**327**	Pn	**Pn**	**10 22 43.6**	**+0.1**
	0.1nm,0.3s,baz=156,slow=14,SNR=2.0						
ZALV				Pg		10 23 25.7	
	0.2nm,0.3s,baz=144,slow=14,SNR=3.8						
ZALV				Lg	Lg	10 25 19.6	
	0.2nm,0.3s,baz=145,slow=18,SNR=4.2						
KURBB	**Kurchatov Arra**	**10.92**	**299**	Pn	**Pn**	**10 23 00.9**	**-1.4**
	0.1nm,0.3s,baz=100,slow=14,SNR=5.9						
KURBB				Sn	**Sn**	**10 25 02.2**	**-2.3**
	0.1nm,0.3s,baz=100,slow=27,SNR=6.3						
KURBB				Lg	Lg	10 26 03.1	
	0.2nm,0.3s,baz=114,slow=30,SNR=4.8						
KURBB	**Kurchatov Arra**	**10.92**	**299**	⇓Pn	**Pn**	**10 23 02.6**	**+0.2**
	4.8nm,0.8s						
KURBB				⇓Sn	**Sn**	**10 25 04.0**	**-0.5**
	25nm,0.8s						
KURBB				⇓Lg	Lg	10 26 05.7	
	64nm,0.7s						
AAK	**Ala-Archa**	**14.11**	**262**	Pn	**Pn**	**10 23 42.7**	**-3.4**
	0.1nm,0.3s,baz=86,slow=14,SNR=2.5						
AAK				Sn	**Sn**	**10 26 18.5**	**-4.2**
	0.1nm,0.3s,baz=52,slow=19,SNR=2.5						
AAK				Lg	Lg	10 27 42.6	
	0.1nm,0.3s,baz=312,slow=16,SNR=1.9						
BVAR	**Borovoye Array**	**16.45**	**303**	Pn	**Pn**	**10 24 15.1**	**-1.7**
	0.2nm,0.3s,baz=96,slow=13,SNR=4.4						
BVAR				Lg	Lg	10 29 00.4	
	0.1nm,0.3s,baz=115,slow=24,SNR=2.4						
AKTO	**Aktyubinsk**	**23.86**	**293**	P	**P**	**10 25 39.2**	**-0.3**
	0.6nm,0.4s,baz=70,slow=15,SNR=2.7						
ARU	**Arti**	**23.88**	**308**	P	**P**	**10 25 39.6**	**0.0**
	1.1nm,0.4s,baz=80,slow=11,SNR=5.2						
KLR	**Kul'dur**	**25.66**	**69**	LR	LR	10 38 13.2	
	comp=Z,42nm,18.6s,baz=263,slow=41						
KBZ	**Khabaz**	**35.45**	**285**	LR	LR	10 43 47.1	
	comp=Z,37nm,21.0s,baz=194,slow=40						
FINES	**FINESS Array B**	**40.63**	**317**	P	**P**	**10 28 06.0**	**+0.2**
	2.4nm,0.8s,baz=106,slow=15,SNR=3.0						
AKASG	**Malin Array Be**	**41.70**	**300**	P	**P**	**10 28 14.9**	**+0.1**
	1.2nm,0.5s,baz=63,slow=8.9,SNR=5.7						
BRTR	**Keskin Array B**	**43.42**	**284**	P	**P**	**10 28 29.9**	**+0.8**
	0.5nm,0.6s,baz=67,slow=5.7,SNR=3.1						
ILAR	**Eielson Array**	**59.74**	**26**	P	**P**	**10 30 31.1**	**+0.5**
	0.1nm,0.8s,baz=333,slow=7.5,SNR=2.6						
YKA	**Yellowknife Ar**	**69.29**	**14**	P	**P**	**10 31 33.3**	**+0.3**
	0.3nm,0.9s,baz=338,slow=5.8,SNR=3.2						
ASAR	**Alice Springs**	**78.59**	**143**	P	**P**	**10 32 27.7**	**-0.2**
	0.4nm,0.8s,baz=346,slow=6.7,SNR=4.4						
TORD	**Torodi Ar. Bea**	**81.93**	**280**	P	**P**	**10 32 45.7**	**-0.5**
	0.7nm,0.9s,baz=24,slow=5.3,SNR=3.7						

IDC ***08*** *11:11:23.3±2.9, 7°.21S×129°.19E, h124km±33km, mb3.5/2, mb1 3.6/6, mb1mx3.3/35, mbtmp3.9/6, Error ellipse: s-maj=54.1km s-min=19.3km az=83.0*
ISC 08 11:11:23.3±1.0**, 7°.29S**±0°.07×**129°.4E**±0°.2**, h150**km**, n6, σ4ˢ.33**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.64**	**16**	P	**Pn**	**11 12 58.5**	**-0.2**
	1.7nm,0.3s,baz=217,slow=20,SNR=4.7						
SIJI				S	**Sn**	**11 14 08.5**	**-4.8**
	1.0nm,0.3s,baz=319,slow=19,SNR=4.9						
FITZ	**Fitzroy Crossi**	**11.36**	**198**	P	**Pn**	**11 14 02.4**	**+1.2**
	0.4nm,0.3s,baz=23,slow=13,SNR=21						
FITZ				S	**Sn**	**11 16 00.6**	**-6.2**
	1.5nm,0.3s,baz=283,slow=22,SNR=8.7						
WRA	**Warramunga Arr**	**13.46**	**160**	P	**Pn**	**11 14 29.9**	**+1.4**
	1.0nm,0.3s,baz=335,slow=14,SNR=28						
WRA				S	Sn	11 16 51.8	-5.8
	1.7nm,0.3s,baz=331,slow=22,SNR=9.4						
ASAR	**Alice Springs**	**16.85**	**166**	P	**Pn**	**11 15 14.1**	**+3.6**
	0.6nm,0.3s,baz=341,slow=11,SNR=72						
ASAR				S	**S**	**11 18 13.6**	**-4.3**
	0.5nm,0.3s,baz=344,slow=25,SNR=6.3						
STKA	**Stephens Creek**	**26.98**	**157**	P	**P**	**11 16 54.7**	**+3.6**
	1.4nm,0.4s,baz=334,slow=12,SNR=3.2						
MKAR	**Makanchi Array**	**68.14**	**327**	P	**P**	**11 22 08.9**	**+1.7**
	0.3nm,0.5s,baz=122,slow=7.8,SNR=6.6						

INET ***08*** *11:23:39.2, 10°.23N×86°.46W, h17km, ML2.3*
UCR 08 11:23:41.4±1.4**, 10°.43N**×**86°.29W, h17**km±7km**, MD3.9, MW3.5, 5C-1D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NY14	**Universidad de**	**0.78**	**74**	⇓*e*P	Pb	11 23 56.5	0.0
NY14				*e*S	Sn	11 24 08.5	-0.4
GUAI	**GUAI**	**0.79**	**101**	⇑*e*P	Pb	11 23 55.6	-1.0
GUAI				*e*S	Sb	11 24 06.6	-0.4
GBS3	**Finca Las Img**	**0.90**	**67**	*i* P	Pb	11 23 57.7	-0.8
GBS3				*e*S	Sg	11 24 10.6	-0.1
LAPC	**Finca la Perla**	**0.91**	**68**	⇑*i*P	Pb	11 23 57.9	-0.9
LAPC				*e*S	Sb	11 24 10.4	-0.2
GPS3	**Bodega del ICE**	**0.97**	**70**	*i* P	Pb	11 23 59.0	-0.7
GPS3				*e*S	Sb	11 24 12.6	+0.3
GPS2	**Hotel Rincn d**	**0.98**	**71**	⇑*i*Pg	Pb	11 23 59.1	-0.8
GPS2				*e*S	Sg	11 24 13.2	-0.2
GPS1	**Guardaparques**	**0.99**	**69**	*i* P	Pb	11 23 59.1	-1.1
GPS1				*i* S	Sb	11 24 12.1	-0.9
BUAI	**Buenos Aires**	**1.04**	**65**	*e*P	Pb	11 24 00.3	-0.7
LIM1	**Limonal**	**1.06**	**75**	⇑*e*P	Pb	11 24 00.2	-1.1
LIM1				*e*S	Sb	11 24 15.3	+0.4
GUAB	**Guayabo de Bag**	**1.08**	**75**	*i* P	Pb	11 24 00.3	-1.4
GUAB				*e*S	Sb	11 24 15.7	+0.2
COLC	**Colonia**	**1.10**	**77**	*i* P	Pb	11 24 00.8	-1.1
COLC				*e*S	Sn	11 24 16.5	-0.3
MESS	**Mesas**	**1.12**	**74**	⇑*e*P	Pn	11 24 01.2	-1.2
MESS				*e*S	Sb	11 24 16.8	0.0
CUI	**Cuipilapa**	**1.13**	**78**	*e*P	Pn	11 24 01.3	-1.2
CUI				*e*S	Sb	11 24 16.1	-0.9
ACAL	**Aguas Claras**	**1.25**	**80**	*e*P	Pn	11 24 03.3	-1.0
ACAL				*e*S	Sn	11 24 21.0	+0.3
PTEN	**Parque Tenorio**	**1.31**	**77**	*i* P	Pn	11 24 04.4	-0.7
PTEN				*e*S	Sb	11 24 23.1	+0.8
JTS	**Las Juntas de**	**1.32**	**96**	*e*P	Pn	11 24 03.7	-1.5
CEDE	**Laguna Cedeo**	**1.56**	**88**	*e*P	Pn	11 24 08.5	0.0
FORC	**Fortuna**	**1.60**	**88**	*e*P	Pn	11 24 09.4	+0.5
ACON	**Acoyapa**	**1.88**	**36**	*e*P	Pn	11 24 12.5	-0.3
LCR2	**La Lucha 2**	**2.35**	**107**	*e*P	Pn	11 24 19.6	+0.1
ESPN	**Las Esperanzas**	**2.63**	**48**	*e*P	Pn	11 24 22.6	-0.5
CSGN	**Cosiguina Volc**	**2.82**	**334**	*e*P	Pn	11 24 27.8	+2.0

IDC ***08*** *11:31:50.4±1.2, 5°.82N×90°.69E, h0km, mb3.6/6, mb1 3.9/9, mb1mx3.6/77, mbtmp3.8/9, ML4.0/3, MS3.6/1, Ms1 3.6/1, ms1mx2.7/49, Error ellipse: s-maj=39.0km s-min=21.0km az=39.0*
ISC 08 11:31:54.9±0.9**, 5°.8N**±0°.1×**90°.80E**±0°.09**, h35**km**, n26, σ3ˢ.30**/20**, mb3.7**/8**, 4C, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**8.62**	**110**	Pn	**Pn**	**11 34 00.2**	**+2.8**
	0.5nm,0.3s,baz=306,slow=19,SNR=2.9						
PSI				Sn	**Sn**	**11 35 28.9**	**-4.8**
	0.4nm,0.3s,baz=54,slow=19,SNR=2.6						
PALK	**Pallekele**	**10.14**	**279**	Pn	**Pn**	**11 34 15.8**	**-2.4**
	2.5nm,0.3s,baz=77,slow=9.8,SNR=10.0						
PALK				Sn	Sn	11 35 56.5	-14
	1.7nm,0.3s,baz=25,slow=15,SNR=4.4						
CMAR	**Chiang Mai Arr**	**14.90**	**32**	Pn	**Pn**	**11 35 21.6**	**-1.6**
	0.4nm,0.3s,baz=230,slow=15,SNR=3.0						
RAMN	**Ramite**	**21.44**	**350**	*e*P	**P**	**11 36 46.7**	**+6.3**
	19nm,0.5s						
TAPN	**Taplejung**	**21.66**	**353**	*e*P	**P**	**11 36 40.4**	**-2.5**
	36nm,1.1s						
JIRN	**Jiri**	**22.21**	**349**	*e*P	**P**	**11 36 49.6**	**+0.8**
PKI	**Pulchoki**	**22.28**	**347**	*e*P	**P**	**11 36 53.4**	**+3.9**
PKIN	**Phulchoki**	**22.29**	**347**	*e*P	**P**	**11 36 54.0**	**+4.4**
DMN	**Daman**	**22.38**	**347**	*e*P	**P**	**11 36 56.8**	**+6.2**
GUN	**Gumba**	**22.51**	**349**	*e*P	**P**	**11 36 51.0**	**-1.0**
H08S3	**Diego Garcia H**	**22.61**	**234**	T	T	12 00 19.8	
	baz=53,slow=75,SNR=77						
H08S2	**Diego Garcia H**	**22.61**	**234**	T	T	12 00 25.9	
	baz=53,slow=75,SNR=27						
H08S1	**Diego Carcia H**	**22.62**	**234**	T	T	12 00 19.6	
	baz=53,slow=75,SNR=24						
DANN	**Dangsing**	**23.43**	**344**	*e*P	**P**	**11 37 04.3**	**+2.9**
	27nm,1.0s						
MK31	**Makanchi Array**	**41.52**	**351**	⇑Pn	**P**	**11 39 35.6**	**-3.3**
	0.4nm,0.4s,baz=128,slow=14,SNR=11						
MK31				⇑Lg	Lg	11 40 57.1	
	1.8nm,0.6s,baz=131,slow=28,SNR=6.8						
MAKZ	**Makanchi**	**41.59**	**351**	⇑Pn	**P**	**11 39 37.8**	**-1.6**
	1.0nm,0.6s						
MAKZ				⇑Lg	Lg	11 41 01.5	
	3.2nm,0.8s						
GEYT	**Alibeck**	**43.66**	**322**	P	**P**	**11 39 55.9**	**-0.5**
	0.6nm,0.4s,baz=108,slow=9.3,SNR=2.3						
SONM	**Songino Array**	**43.99**	**15**	P	**P**	**11 39 59.4**	**+0.4**
	0.5nm,0.5s,baz=201,slow=9.2,SNR=4.5						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H01W3	**Cape Leeuwin H**	**46.04**	**153**	T	T	12 29 45.7	
	baz=330,slow=75,SNR=10						
H01W2	**Cape Leeuwin H**	**46.05**	**153**	T	T	12 29 45.5	
	baz=330,slow=75,SNR=6.8						
H01W1	**Cape Leeuwin H**	**46.05**	**153**	T	T	12 29 47.5	
	baz=330,slow=75,SNR=10						
ZALV	**Zalesovo Beam**	**48.28**	**355**	P	**P**	**11 40 32.6**	**+0.2**
	0.4nm,0.5s,baz=158,slow=6.9,SNR=2.6						
WRA	**Warramunga Arr**	**49.86**	**122**	P	**P**	**11 40 46.9**	**+1.8**
	0.7nm,0.9s,baz=299,slow=7.9,SNR=3.1						
ASAR	**Alice Springs**	**51.23**	**127**	P	**P**	**11 40 56.1**	**+0.6**
	0.3nm,0.8s,baz=297,slow=7.8,SNR=3.8						
GUMO	**Guam**	**53.77**	**77**	LR	LR	12 03 56.5	
	comp=Z,67nm,21.9s,baz=118,slow=36						
GERES	**GERESS Array B**	**77.19**	**319**	P	**P**	**11 43 46.0**	**+0.6**
	0.7nm,0.6s,baz=111,slow=6.0,SNR=5.5						

IDC 08 11:33:06.9±3.8**, 6°.42S**×**151°.55E, h0**^{km}**, mb3.1**/2, **mb1 3.5**/3**, mb1mx3.2**/47**, mbtmp3.3**/3**, ML3.3**/1**, Error ellipse: s-maj=156.0km s-min=22.5km az=115.0, New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.15**	**13**	Pn	Pn	11 33 44.4	+0.4
	9.1nm,0.3s,baz=176,slow=14,SNR=1.9						
KRVT				Sn	Sn	11 34 11.5	+0.1
	34nm,0.3s,baz=1.1,slow=22,SNR=13						
WRA	**Warramunga Arr**	**21.45**	**230**	P	P	11 37 56.7	-0.2
	0.9nm,1.0s,baz=57,slow=10,SNR=2.1						
ASAR	**Alice Springs**	**24.12**	**223**	P	P	11 38 25.2	+0.5
	0.3nm,0.6s,baz=56,slow=9.8,SNR=6.6						
TORD	**Torodi Ar. Bea**	**149.57**	**285**	PKPbc	PKPbc	11 52 58.5	-0.9
	0.3nm,0.6s,baz=64,slow=3.4,SNR=2.4						

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*SJA **08** 11:45:01.1±0.7, 21°.57S×68°.50W, h135^{km}±4^{km}, ML2.9, MW3.1*

*GUC **08** 11:45:02.7±0.5, 21°.57S×68°.43W, h123^{km}±3^{km}, ML3.6*

ISC 08 11:45:00.9±1.4**, 21°.57S**±0°.03×**68°.51W**±0°.04**, h143**^{km}±10^{km}**, n38, σ1^{s}.03**/74**, 15C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.72**	**252**	⇑*i*P	**Pn**	**11 45 23.2**	**+0.2**
PB09				*e*S	**Sn**	**11 45 38.5**	**-1.2**
PB09	**IPOC Station P**	**0.72**	**252**	*i* P	**Pn**	**11 45 23.2**	**+0.2**
PB09				IAML		11 45 23.6	
	comp=Z,456nm,0.3s						
PB09				*i* S	**Sn**	**11 45 39.2**	**-0.4**
PB01	**IPOC Station P**	**1.05**	**300**	⇑*i*P	**Pn**	**11 45 25.5**	**0.0**
PB01				*e*S	**Sn**	**11 45 43.2**	**-1.1**
PB01				IAML		11 45 45.0	
	comp=E,2µm,0.2s						
LVC	**Limon Verde**	**1.10**	**200**	⇓*e*P	**Pn**	**11 45 26.4**	**+0.1**
LVC				*e*S	**Sn**	**11 45 44.9**	**-0.8**
LVC	**Limon Verde**	**1.10**	**200**	*i* P	**Pn**	**11 45 26.3**	**+0.1**
LVC				*i* S	**Sn**	**11 45 44.2**	**-1.4**
PB03	**IPOC Station P**	**1.25**	**247**	⇑*i*P	**Pn**	**11 45 27.8**	**+0.3**
PB03				*e*S	**Sn**	**11 45 47.2**	**-0.5**
PB03				IAML		11 45 48.6	
	comp=E,680nm,0.1s						
PB03	**IPOC Station P**	**1.25**	**247**	*i* P	**Pn**	**11 45 27.9**	**+0.3**
PB03				*i* S	**Sn**	**11 45 47.3**	**-0.5**
PB07	**IPOC Station P**	**1.29**	**263**	⇑*i*P	**Pn**	**11 45 28.3**	**+0.4**
PB07				*i* S	**Sn**	**11 45 48.1**	**-0.4**
PB07				IAML		11 45 49.2	
	comp=N,1µm,0.4s						
PB07	**IPOC Station P**	**1.29**	**263**	*i* P	**Pn**	**11 45 28.5**	**+0.6**
PB07				*i* S	**Sn**	**11 45 48.3**	**-0.2**
PB02	**IPOC Station P**	**1.32**	**281**	⇑*i*P	**Pn**	**11 45 28.4**	**+0.4**
PB02				*e*S	**Sn**	**11 45 48.4**	**-0.4**
PB02				IAML		11 45 50.2	
	comp=E,2µm,0.2s						
PB02	**IPOC Station P**	**1.32**	**281**	*i* P	**Pn**	**11 45 28.5**	**+0.4**
PB02				*i* S	**Sn**	**11 45 48.7**	**-0.1**
PB06	**IPOC Station P**	**1.50**	**221**	⇑*i*P	**Pn**	**11 45 30.7**	**+0.6**
PB06				*e*S	**Sn**	**11 45 52.2**	**-0.2**
PB06				IAML		11 45 53.9	
	comp=E,627nm,0.2s						
PB06	**IPOC Station P**	**1.50**	**221**	*i* P	**Pn**	**11 45 30.7**	**+0.6**
PB06				*i* S	**Sn**	**11 45 52.7**	**+0.3**
PB06				IAML		11 45 53.5	
	comp=Z,274nm,0.3s						
PB08	**IPOC Station P**	**1.55**	**337**	⇑*i*P	**Pn**	**11 45 31.6**	**+0.8**
PB08				*e*S	**Sn**	**11 45 53.5**	**-0.1**
PB08				IAML		11 45 55.5	
	comp=E,378nm,0.2s						
PB08	**IPOC Station P**	**1.55**	**337**	*i* P	**Pn**	**11 45 31.7**	**+0.8**
PB08				*i* S	**Sn**	**11 45 53.7**	**0.0**
PB04	**IPOC Station P**	**1.70**	**243**	⇑*i*P	**Pn**	**11 45 32.7**	**+0.4**
PB04				*e*S	**Sn**	**11 45 56.4**	**+0.1**
PB04				IAML		11 46 00.7	
	comp=N,334nm,0.1s						
PB04	**IPOC Station P**	**1.70**	**243**	*i* P	**Pn**	**11 45 32.7**	**+0.4**
PB04				*i* S	**Sn**	**11 45 56.6**	**+0.3**
PATCX	**Punta Patache**	**1.71**	**296**	⇑*i*P	**Pn**	**11 45 32.8**	**+0.5**
PATCX				*e*S	**Sn**	**11 45 56.1**	**-0.2**
PATCX	**Punta Patache**	**1.71**	**296**	*i* P	**Pn**	**11 45 33.1**	**+0.8**
PATCX				*i* S	**Sn**	**11 45 56.3**	**0.0**
TA01	**Diego Aracena**	**1.86**	**302**	⇑*i*P	**Pn**	**11 45 34.1**	**+0.3**
TA01				*e*S	**Sn**	**11 45 58.6**	**-0.5**
PB15	**IPOC Station P**	**1.86**	**209**	⇑*i*P	**Pn**	**11 45 35.1**	**+1.0**
PB15				*i* S	**Sn**	**11 46 00.1**	**+0.5**
PB15	**IPOC Station P**	**1.86**	**209**	*i* P	**Pn**	**11 45 35.0**	**+1.0**
PB15				*i* S	**Sn**	**11 46 00.8**	**+1.2**
GO01	**Chusmiza**	**2.00**	**341**	⇑*i*P	**Pn**	**11 45 36.7**	**+0.6**
GO01				*e*S	**Sn**	**11 46 03.2**	**+0.2**
GO01				IAML		11 46 06.6	
	comp=N,556nm,0.1s						
PB05	**IPOC Station P**	**2.02**	**231**	⇑*i*P	**Pn**	**11 45 36.5**	**+0.5**
PB05				*i* S	**Sn**	**11 46 02.6**	**-0.3**
PB05	**IPOC Station P**	**2.02**	**231**	*i* P	**Pn**	**11 45 36.6**	**+0.7**
PB05				*i* S	**Sn**	**11 46 02.0**	**-0.8**
PB11	**IPOC Station P**	**2.10**	**329**	*e*P	**Pn**	**11 45 37.1**	**+0.2**
PB11				*i* S	**Sn**	**11 46 04.1**	**-0.5**
PB11				IAML		11 46 06.2	
	comp=E,636nm,0.1s						
PB11	**IPOC Station P**	**2.10**	**329**	*i* P	**Pn**	**11 45 37.1**	**+0.2**
PB11				*i* S	**Sn**	**11 46 04.1**	**-0.5**
PSGC	**Pisagua**	**2.48**	**322**	⇑*i*P	**Pn**	**11 45 41.1**	**-0.4**
PSGC				*i* S	**Sn**	**11 46 11.3**	**-1.5**
PSGC				IAML		11 46 13.7	
	comp=E,272nm,0.3s						
PSGCX	**Pisagua**	**2.48**	**322**	*i* P	**Pn**	**11 45 41.2**	**-0.3**
PSGCX				*e*S	**Sn**	**11 46 11.0**	**-1.8**
MNMC	**Minye Minye**	**2.63**	**337**	⇑*i*P	**Pn**	**11 45 44.5**	**+0.8**
MNMC				*i* S	**Sn**	**11 46 16.7**	**+0.2**
MNMCX	**Minye Minye**	**2.63**	**337**	*i* P	**Pn**	**11 45 44.5**	**+0.8**
MNMCX				*i* S	**Sn**	**11 46 16.8**	**+0.3**
PB10	**IPOC Station P**	**2.71**	**224**	*i* P	**Pn**	**11 45 45.2**	**+1.0**
PB10				*i* S	**Sn**	**11 46 16.1**	**-1.6**
PB10				IAML		11 46 20.0	
	comp=Z,34nm,0.3s						
YJA	**Yavi**	**2.84**	**103**	*i* P	**Pn**	**11 45 47.7**	**+1.3**
YJA				*i* S	**Sn**	**11 46 21.8**	**+0.3**
YJA				IAML		11 46 25.4	
	comp=Z,6.8nm,0.5s						
HJA	**Humahuaca**	**3.30**	**120**	*i* P	**Pn**	**11 45 54.1**	**+1.9**
HJA				IAML		11 45 54.8	
	comp=Z,12nm,0.4s						
PB16	**IPOC Station P**	**3.35**	**344**	*i* P	**Pn**	**11 45 54.3**	**+1.2**
PB16				*i* S	**Sn**	**11 46 33.7**	**+0.2**
PB12	**IPOC Station P**	**3.40**	**330**	*i* P	**Pn**	**11 45 52.6**	**-0.7**
PB12				*i* S	**Sn**	**11 46 31.6**	**-2.2**
PB14	**IPOC Station P**	**3.51**	**210**	*i* P	**Pn**	**11 45 55.5**	**+0.7**
PB14				IAML		11 46 58.4	
	comp=Z,36nm,0.6s						
AZAP	**Zapla**	**4.13**	**130**	*i* P	**Pn**	**11 46 03.8**	**+0.9**
AZAP				*i* S	**Sn**	**11 46 45.2**	**-5.8**

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*MOS **08** 11:45:16.5±1.1, 45°.92N×150°.73E, h114^{km}, mb4.5/6, Error ellipse: s-maj=9.2km s-min=7.3km az=66.4*

*SKHL **08** 11:45:16.1±0.8, 45°.84N×150°.85E, h109^{km}±8^{km}, mb5.4/1, msh4.9/3*

*JMA **08** 11:45:19.6±0.4, 45°.07N×150°.82E, h116^{km}, M3.7*

*NEIC **08** 11:45:19.1±1.3, 46°.0N±0°.1×150°.67E±0°.10, h118^{km}±5^{km}, mb4.3/19, Error ellipse: s-maj=15.5km s-min=9.4km az=164.0*

*IDC **08** 11:45:19.6±2.4, 46°.11N×150°.63E, h121^{km}±20^{km}, mb3.6/19, mb1 3.7/25, mb1mx3.5/62, mbtmp3.9/25, Error ellipse: s-maj=18.5km s-min=12.3km az=140.0*

ISC 08 11:45:16.2±0.5**, 45°.81N**±0°.07×**150°.78E**±0°.06**, h100**^{km}**, n143, σ1^{s}.60**/156**, mb4.1**/33**, 4C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.13**	**255**	*i* P	**Pn**	**11 45 52.5**	**+2.1**
KUR				AMB	AMB	11 45 53.0	
	60nm,0.3s						
KUR				*e*S	**Sn**	**11 46 18.5**	**+1.9**
KUR				A	A	11 46 20.0	
	120nm,0.3s						
KUR				A	A	11 46 20.0	
	140nm,0.3s						
KUR				A	A	11 46 20.5	
	2µm,2.0s						
KUR	**Kuril'sk**	**2.13**	**255**	*e*PN	**Pn**	**11 45 52.5**	**+2.1**
SHO	**Shikotan**	**3.42**	**237**	*e*P	**Pn**	**11 46 07.8**	**+0.3**
SHO				AMB	AMB	11 46 11.0	
	30nm,0.3s						
SHO				AMB	AMB	11 46 11.1	
	900nm,3.0s						
SHO				*i* S	**Sn**	**11 46 45.4**	**-1.7**
SHO				A	A	11 46 51.0	
	170nm,0.3s						
SHO				A	A	11 46 51.0	
	150nm,0.3s						
SHO				A	A	11 46 53.8	
	500nm,2.0s						
SHO				A	A	11 46 53.8	
	500nm,2.0s						
SHO	**Shikotan**	**3.42**	**237**	*e*PN	**Pn**	**11 46 07.8**	**+0.3**
SHO				*i* S	**Sn**	**11 46 44.8**	**-2.3**
SHO				pmax	pmax		
	comp=Z,27nm,0.3s						
SHO				pmax	pmax		
	comp=N,6.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,12nm,0.2s						
SHO				smax	smax		
	comp=E,147nm,0.3s						
SHO				smax	smax		
	comp=N,168nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.92**	**245**	*e*P	**Pn**	**11 46 16.2**	**+1.9**
YUK				AMB	AMB	11 46 21.0	
	comp=N,100nm,0.3s						
YUK				*e*S	**Sn**	**11 47 01.2**	**+1.9**
YUK				A	A	11 47 04.0	
	comp=N,120nm,0.4s						
YUK				A	A	11 47 04.0	
	comp=N,210nm,0.4s						
YUK				A	A	11 47 05.8	
	comp=N,1µm,3.0s						
YUK				A	A	11 47 05.8	
	comp=N,400nm,3.0s						
YUK	**Yuzh-Kuril'sk**	**3.92**	**245**	*e*PN	**Pn**	**11 46 16.2**	**+1.9**
YUK				*e*S	**Sn**	**11 47 01.2**	**+1.9**
YUK				pmax	pmax		
	comp=N,35nm,0.3s						
YUK				pmax	pmax		
	comp=Z,95nm,0.3s						
YUK				smax	smax		
	comp=N,123nm,0.4s						
YUK				smax	smax		
	comp=E,21nm,0.5s						
GRPR	**Tuman**	**4.00**	**245**	*e*P	**Pn**	**11 46 17.4**	**+2.1**
GRPR				AMB	AMB	11 46 21.0	
	comp=E,60nm,0.3s						
GRPR				*i* S	**Sn**	**11 47 02.8**	**+1.7**
GRPR				A	A	11 47 03.0	
	comp=E,190nm,0.4s						
GRPR				A	A	11 47 03.0	
	comp=E,110nm,0.4s						
GRPR	**Tuman**	**4.00**	**245**	*e*PN	**Pn**	**11 46 17.3**	**+2.0**
GRPR				*i* S	**Sn**	**11 47 02.6**	**+1.5**
GRPR				pmax	pmax		
	comp=Z,55nm,0.3s						
GRPR				smax	smax		
	comp=E,109nm,0.4s						
GRPR				smax	smax		
	comp=N,190nm,0.3s						
NEM2	**Nemuro 2**	**4.35**	**238**	P	**Pn**	**11 46 20.2**	**+0.1**
NEM2				*e*S	**Sn**	**11 47 06.5**	**-3.2**
NMR	**Nemuro--Hokkai**	**4.36**	**238**	*e*P	**Pn**	**11 46 20.3**	**+0.1**
NMR				*e*S	**Sn**	**11 47 09.1**	**-0.7**
NMR	**Nemuro--Hokkai**	**4.36**	**238**	*e*PN	**Pn**	**11 46 20.0**	**-0.2**
NMR				*i* S	**Sn**	**11 47 06.5**	**-3.3**
JRA	**Rausu**	**4.44**	**247**	P	**Pn**	**11 46 23.3**	**+2.0**
JNK	**Nakash**	**4.86**	**245**	P	**Pn**	**11 46 28.8**	**+1.8**
JAK	**Akkeshi**	**5.19**	**239**	P	**Pn**	**11 46 31.5**	**+0.1**
JAK				*e*S	**Sn**	**11 47 27.8**	**-2.2**
JTKR	**Abashiri--Toko**	**5.22**	**252**	P	**Pn**	**11 46 34.0**	**+2.2**
JAR	**Ashorobuto**	**5.61**	**246**	P	**Pn**	**11 46 39.2**	**+2.1**
YSS	**Yuzh-Sakhalins**	**5.67**	**285**	*e*P	**Pn**	**11 46 38.6**	**+0.6**
YSS				AMB	AMB	11 46 40.5	
	comp=N,30nm,0.7s						
YSS				*e*S	**Sn**	**11 47 40.0**	**-1.7**
YSS	**Yuzh-Sakhalins**	**5.67**	**285**	*e*PN	**Pn**	**11 46 38.6**	**+0.6**
YSS				*e*S	**Sn**	**11 47 40.0**	**-1.7**
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
YSS	**Yuzh-Sakhalins**	**5.67**	**285**		**Pn**	**11 46 40.8**	**+2.8**
JOB	**Onbets**	**5.77**	**242**	P	**Pn**	**11 46 40.3**	**+1.0**
JOB				*e*S	**Sn**	**11 47 43.0**	**-1.0**
JKK2	**Kamakawa 2**	**6.03**	**254**	P	**Pn**	**11 46 45.7**	**+2.8**
SKR	**Severo-Kuril's**	**6.04**	**34**	*e*P	**Pn**	**11 46 42.2**	**-0.7**
SKR				AMB	AMB	11 46 43.7	
	comp=Z,50nm,0.8s						
SKR				*e*S	**Sn**	**11 47 46.6**	**-3.9**
SKR	**Severo-Kuril's**	**6.04**	**34**	*i* PN	**Pn**	**11 46 41.2**	**-1.7**
JKA	**Kamikawa-asahi**	**6.05**	**257**	*e*P	**Pn**	**11 46 45.8**	**+2.7**
JKA	**Kamikawa-asahi**	**6.05**	**257**		**Pn**	**11 46 45.8**	**+2.7**
ASAJ	**Asahikawa**	**6.05**	**257**	P	**Pn**	**11 46 46.1**	**+3.0**
ASAJ	**Asahikawa**	**6.05**	**257**	P	**Pn**	**11 46 45.8**	**+2.6**
	comp=Z,1.0nm,0.3s,baz=77,slow=20,SNR=7.1						
JCH	**Churui**	**6.21**	**242**	P	**Pn**	**11 46 46.1**	**+0.7**
JCH				*e*S	**Sn**	**11 47 53.1**	**-1.9**
ERM	**Erimo**	**6.69**	**238**	*i* PN	Pn	11 46 58.4	+6.6
ERM	**Erimo**	**6.69**	**238**	Pn	**Pn**	**11 46 54.6**	**+2.8**
ERM				Sn	**Sn**	**11 48 06.6**	**+0.2**
JNBK	**Urakawa-nobuka**	**6.78**	**241**	P	**Pn**	**11 46 53.0**	**0.0**
TYV	**Tymovskoe**	**7.41**	**316**	*e*P	**Pn**	**11 47 01.5**	**0.0**
TYV				AMB	AMB	11 47 04.0	
	comp=Z,10.0nm,0.4s						
TYV	**Tymovskoe**	**7.41**	**316**	*e*PN	**Pn**	**11 47 03.8**	**+2.3**
TYV				pmax	pmax		
	comp=Z,11nm,1.1s						
JNB	**Noboribetsu**	**7.76**	**248**	*e*S	**Sn**	**11 48 30.3**	**-2.3**
JKB	**Kayabe**	**8.06**	**244**	P	**Pn**	**11 47 10.1**	**-0.4**
JKB				*e*S	**Sn**	**11 48 35.0**	**-4.9**
PEA0B	**Petropavlovsk-**	**8.58**	**29**	PN	**Pn**	**11 47 19.4**	**+1.9**
PEA0B	**Petropavlovsk-**	**8.58**	**29**	Pn	**Pn**	**11 47 19.4**	**+1.9**
PETK	**Petropavlovsk-**	**8.58**	**29**	P	**Pn**	**11 47 17.3**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=214,slow=17,SNR=3.9						
PETK	**Petropavlovsk-**	**8.58**	**29**	PN	**Pn**	**11 47 20.0**	**+2.6**
PETK	**Petropavlovsk-**	**8.58**	**29**		**Pn**	**11 47 20.0**	**+2.6**
JANG	**Nango**	**8.69**	**235**	*e*S	**Sn**	**11 48 47.2**	**-7.9**
PET	**Petropavlovsk**	**8.85**	**33**	*e*P	**Pn**	**11 47 20.5**	**-0.6**
KLR	**Kul'dur**	**13.31**	**292**	P	**Pn**	**11 48 22.0**	**+1.1**
	comp=Z,0.0nm,0.3s,baz=102,slow=8.7,SNR=3.7						
USRK	**Ussuriysk Ar.**	**13.40**	**270**	P	**Pn**	**11 48 23.5**	**+1.3**
	baz=62,slow=14,SNR=2.6						
KSRS	**Korea Array**	**18.97**	**252**	P	**Pn**	**11 49 32.4**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=53,slow=13,SNR=5.3						
YAK	**Yakutsk**	**20.30**	**331**	P	**P**	**11 49 43.4**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=333,slow=0.0,SNR=3.8						
YAK	**Yakutsk**	**20.30**	**331**	P	**P**	**11 49 43.0**	**-0.6**
YAK				IAmb	IAmb	11 49 51.8	
	comp=Z,10nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**29.21**	**148**	T	T	12 22 43.3	
	baz=337,slow=76,SNR=506						
H11N1	**WAKE ISLAND Hy**	**29.22**	**148**	T	T	12 22 46.0	
	baz=337,slow=76,SNR=413						
H11N3	**WAKE ISLAND Hy**	**29.23**	**148**	T	T	12 22 46.2	
	baz=337,slow=76,SNR=389						
H11S1	**WAKE ISLAND Hy**	**30.26**	**149**	T	T	12 24 03.8	
	baz=338,slow=76,SNR=695						
H11S3	**WAKE ISLAND Hy**	**30.26**	**149**	T	T	12 24 03.0	
	baz=338,slow=76,SNR=431						
H11S2	**WAKE ISLAND Hy**	**30.27**	**149**	T	T	12 24 02.3	
	baz=338,slow=76,SNR=509						
IMAR	**Indian Mountai**	**35.48**	**36**	P	**P**	**11 52 02.7**	**+0.1**
MLY	**Manley**	**36.65**	**37**	P	**P**	**11 52 12.7**	**0.0**
MLY				IAmb	IAmb	11 52 18.2	
	comp=Z,3.9nm,1.4s						
CCB	**Clear Creek Bu**	**37.89**	**38**	P	**P**	**11 52 23.4**	**+0.3**
CCB				IAmb	IAmb	11 52 24.1	
	comp=Z,7.1nm,1.4s						
ILAR	**Eielson Array**	**38.29**	**38**	P	**P**	**11 52 25.9**	**-0.6**
	comp=Z,1.0nm,1.0s,baz=276,slow=8.3,SNR=7.5						
ILAR	**Eielson Array**	**38.29**	**38**	*e*P	**P**	**11 52 27.3**	**+0.8**
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ILAR	**Eielson Array**	**38.29**	**38**	P	**P**	**11 52 26.6**	**+0.2**
BMAR	**Burnt Mountain**	**39.20**	**33**	P	**P**	**11 52 34.9**	**+0.8**
SCRK	**Sand Creek**	**39.59**	**39**	P	**P**	**11 52 37.7**	**+0.2**
ZALV	**Zalesovo Beam**	**41.85**	**306**	PcP	**PcP**	**11 54 50.6**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=75,slow=2.2,SNR=6.3						
INK	**Inuvik**	**43.30**	**32**	P	**P**	**11 53 08.0**	**+0.4**
	comp=Z,1.7nm,0.6s,baz=296,slow=8.2,SNR=12						
INK	**Inuvik**	**43.30**	**32**	P	**P**	**11 53 08.0**	**+0.4**
INK	**Inuvik**	**43.30**	**32**	P	**P**	**11 53 07.8**	**+0.3**
INK				IAmb	IAmb	11 53 08.6	
	comp=Z,2.5nm,0.7s						
MK31	**Makanchi Array**	**45.94**	**297**	P	**P**	**11 53 28.9**	**+0.1**
MK31	**Makanchi Array**	**45.94**	**297**	P	**P**	**11 53 28.9**	**+0.1**
MKAR	**Makanchi Array**	**45.94**	**297**	P	**P**	**11 53 27.3**	**-1.5**
	comp=Z,0.3nm,0.4s,baz=70,slow=8.1,SNR=4.8						
MKAR				PcP	**PcP**	**11 55 04.3**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=62,slow=2.9,SNR=6.6						
MKAR	**Makanchi Array**	**45.94**	**297**	*e*P	**P**	**11 53 29.0**	**+0.2**
MKAR	**Makanchi Array**	**45.94**	**297**	*e*P	**P**	**11 53 29.0**	**+0.2**
MKAR	**Makanchi Array**	**45.94**	**297**	P	**P**	**11 53 28.0**	**-0.8**
C36M	**Paulatuk**	**46.43**	**29**	P	**P**	**11 53 32.4**	**0.0**
C36M				IAmb	IAmb	11 53 33.0	
	comp=Z,5.0nm,0.6s						
KURK	**Kurchatov**	**46.54**	**304**	*e*P	**P**	**11 53 32.0**	**-1.4**
KURK	**Kurchatov**	**46.54**	**304**	P	**P**	**11 53 32.0**	**-1.4**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURK	**Kurchatov**	**46.54**	**304**	P	**P**	**11 53 32.0**	**-1.4**
LSA	**Lhasa**	**48.70**	**272**	*e*P	**P**	**11 53 51.4**	**+0.4**
LSA	**Lhasa**	**48.70**	**272**	P	**P**	**11 53 51.4**	**+0.4**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LSA	**Lhasa**	**48.70**	**272**	P	**P**	**11 53 51.4**	**+0.4**
LSA				IAmb	IAmb	11 53 54.1	
	comp=Z,5.7nm,0.7s						
BVAR	**Borovoye Array**	**50.20**	**309**	PcP	**PcP**	**11 55 19.3**	**0.0**
	comp=Z,0.6nm,0.5s,baz=58,slow=3.6,SNR=3.2						
CHTO	**Chiang Mai**	**50.32**	**255**	P	**P**	**11 54 04.0**	**+1.1**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CHTO	**Chiang Mai**	**50.32**	**255**	P	**P**	**11 54 04.0**	**+1.1**
CHTO				IAmb	IAmb	11 54 05.7	
	comp=Z,2.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**50.57**	**255**	P	**P**	**11 54 07.1**	**+2.3**
	comp=Z,1.2nm,0.7s,baz=40,slow=7.0,SNR=9.5						
CMAR	**Chiang Mai Arr**	**50.57**	**255**	*e*P	**P**	**11 54 07.2**	**+2.5**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**50.57**	**255**	P	**P**	**11 54 06.2**	**+1.4**
SHL	**Shillong**	**50.72**	**268**	P	**P**	**11 54 06.8**	**+0.8**
SHL				pmax	pmax		
	comp=Z,8.0nm,0.5s						
SHL	**Shillong**	**50.72**	**268**	P	**P**	**11 54 06.8**	**+0.8**
RES	**Resolute Bay**	**52.23**	**18**	P	**P**	**11 54 16.1**	**-0.3**
RES				pmax	pmax		
	comp=Z,9.0nm,1.1s						
RES	**Resolute Bay**	**52.23**	**18**	P	**P**	**11 54 16.1**	**-0.3**
YKA	**Yellowknife Ar**	**52.64**	**36**	P	**P**	**11 54 19.8**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=300,slow=6.6,SNR=14						
YKA				pP	**pP**	**11 54 42.2**	**-0.5**
	comp=Z,1.1nm,1.1s,baz=304,slow=7.6,SNR=2.7						
KK31	**Karatay Array**	**55.03**	**298**	P	**P**	**11 54 36.2**	**-1.1**
KK31				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KK31	**Karatay Array**	**55.03**	**298**	P	**P**	**11 54 36.2**	**-1.1**
KK31				IAmb	IAmb	11 54 37.4	
	comp=Z,1.5nm,0.9s						
KKAR	**Karatay Array**	**55.03**	**298**	P	**P**	**11 54 36.1**	**-1.2**
KKAR	**Karatay Array**	**55.03**	**298**	P	**P**	**11 54 36.0**	**-1.2**
ABKAR	**Akbulak array**	**57.78**	**309**	P	**P**	**11 54 56.8**	**+0.2**
AKTO	**Aktyubinsk**	**58.14**	**311**	P	**P**	**11 54 57.5**	**-1.6**
	comp=Z,0.9nm,0.6s,baz=70,slow=9.2,SNR=3.5						
ARCES	**ARCESS Array B**	**58.20**	**340**	P	**P**	**11 54 57.5**	**-1.8**
	comp=Z,3.3nm,0.8s,baz=30,slow=5.5,SNR=2.6						
SUMG	**Summit**	**61.74**	**3**	⇑*i*P	**P**	**11 55 23.8**	**-0.1**
	comp=Z,37nm,0.8s						
SUMG	**Summit**	**61.74**	**3**	⇑*i*P	**P**	**11 55 23.8**	**-0.1**
SUMG				pmax	pmax		
	comp=Z,37nm,0.8s						
SUMG	**Summit**	**61.74**	**3**	P	**P**	**11 55 23.4**	**-0.5**
FINES	**FINESS Array B**	**64.19**	**334**	P	**P**	**11 55 37.5**	**-2.2**
	comp=Z,1.8nm,0.7s,baz=46,slow=8.2,SNR=8.4						
FINES	**FINESS Array B**	**64.19**	**334**	P	**P**	**11 55 38.7**	**-1.1**
FINES	**FINESS Array B**	**64.19**	**334**	P	**P**	**11 55 38.7**	**-1.1**
WRA	**Warramunga Arr**	**67.12**	**197**	P	**P**	**11 56 00.4**	**+1.3**
	comp=Z,0.1nm,0.4s,baz=10,slow=6.7,SNR=5.6						
NB2	**NORSAR Subarra**	**68.58**	**340**	P	**P**	**11 56 06.8**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=26,slow=6.5						
NOA	**NORSAR Array B**	**68.58**	**340**	P	**P**	**11 56 06.9**	**-0.9**
	comp=Z,1.8nm,0.6s,baz=29,slow=6.6,SNR=6.4						
ASAR	**Alice Springs**	**70.83**	**196**	P	**P**	**11 56 24.6**	**+2.6**
	comp=Z,0.3nm,0.7s,baz=11,slow=5.7,SNR=4.7						
ASAR	**Alice Springs**	**70.83**	**196**	P	**P**	**11 56 24.2**	**+2.3**
AKASG	**Malin Array Be**	**71.41**	**325**	P	**P**	**11 56 22.5**	**-2.8**
	comp=Z,0.4nm,0.4s,baz=36,slow=5.8,SNR=4.5						
AKASG	**Malin Array Be**	**71.41**	**325**	*e*P	**P**	**11 56 24.1**	**-1.1**
SCHQ	**Schefferville**	**74.79**	**21**	P	**P**	**11 56 45.0**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=322,slow=12,SNR=4.3						
SCHQ	**Schefferville**	**74.79**	**21**	P	**P**	**11 56 44.9**	**-0.2**
SCHQ				IAmb	IAmb	11 56 49.6	
	comp=Z,8.5nm,1.4s						
OJC	**Ojcow**	**75.34**	**330**	P	**P**	**11 56 47.6**	**-0.8**
OJC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
OJC	**Ojcow**	**75.34**	**330**	P	**P**	**11 56 47.6**	**-0.8**
BUR08	**Bucovina Ar. S**	**75.44**	**325**	P	**P**	**11 56 48.6**	**-0.5**
BUR08				IAmb	IAmb	11 56 49.6	
	comp=Z,3.2nm,0.6s						
BURAR	**Bucovina Array**	**75.46**	**325**	⇑P	**P**	**11 56 49.0**	**-0.2**
BURAR	**Bucovina Array**	**75.46**	**325**	P	**P**	**11 56 48.8**	**-0.4**
CLL	**Collm**	**76.63**	**334**	*i* P	**P**	**11 56 55.7**	**+0.1**
	comp=Z,6.0nm,0.8s						
CLL	**Collm**	**76.63**	**334**	*i* P	**P**	**11 56 55.7**	**+0.1**
CLL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRG	**Berggiesshubel**	**76.72**	**334**	*e*P	**P**	**11 56 55.6**	**-0.6**
	comp=Z,1.9nm,1.0s						
BRG	**Berggiesshubel**	**76.72**	**334**	*e*P	**P**	**11 56 55.6**	**-0.6**
BRG				pmax	pmax		
	comp=Z,2.0nm,1.0s						
EKA	**Eskdalemuir Ar**	**76.85**	**345**	P	**P**	**11 56 56.3**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=29,slow=6.0,SNR=3.8						
GOPC	**GO Pecny, Ondr**	**77.29**	**333**	*e*P	**P**	**11 56 59.1**	**-0.3**
GOPC	**GO Pecny, Ondr**	**77.29**	**333**	*e*P	**P**	**11 56 59.1**	**-0.3**
PRU	**Pruhonice**	**77.30**	**333**	*e*P	**P**	**11 56 58.8**	**-0.6**
PRU	**Pruhonice**	**77.30**	**333**	*e*P	**P**	**11 56 58.8**	**-0.6**
ARR	**Arges**	**77.52**	**324**	⇓P	**P**	**11 57 02.4**	**+1.5**
BRTR	**Keskin Array B**	**77.95**	**315**	P	**P**	**11 57 02.2**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=110,slow=3.6,SNR=4.1						
BRTR	**Keskin Array B**	**77.95**	**315**	*e*P	**P**	**11 57 05.3**	**+1.9**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	**Keskin Array B**	**77.95**	**315**	P	**P**	**11 57 02.5**	**-0.9**
GZR	**Gura Zlata**	**78.25**	**325**	⇑P	**P**	**11 57 04.0**	**-0.9**
KHC	**Kasperske Hory**	**78.36**	**333**	*e*P	**P**	**11 57 05.3**	**-0.1**
KHC	**Kasperske Hory**	**78.36**	**333**	*e*P	**P**	**11 57 05.3**	**-0.1**
GEC2	**GERESS Array S**	**78.57**	**333**	P	**P**	**11 57 05.8**	**-0.8**
GEC2				IAmb	IAmb	11 57 06.6	
	comp=Z,2.1nm,0.6s						
GERES	**GERESS Array B**	**78.57**	**333**	P	**P**	**11 57 05.8**	**-0.8**
	comp=Z,1.4nm,0.5s,baz=34,slow=6.2,SNR=12						
GERES	**GERESS Array B**	**78.57**	**333**	*e*P	**P**	**11 57 06.3**	**-0.3**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES	**GERESS Array B**	**78.57**	**333**	P	**P**	**11 57 05.9**	**-0.8**
TX32	**Lajitas Array**	**79.36**	**59**	P	**P**	**11 57 12.0**	**+0.8**
TXAR	**Lajitas Array**	**79.36**	**59**	P	**P**	**11 57 12.0**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=303,slow=4.4,SNR=8.9						
TXAR	**Lajitas Array**	**79.36**	**59**	P	**P**	**11 57 11.8**	**+0.6**
VTS	**Vitosha**	**80.36**	**324**	⇓P	**P**	**11 57 16.6**	**+0.2**
MMAI	**Mount Meron Ar**	**82.20**	**310**	P	**P**	**11 57 27.1**	**+0.8**
	comp=Z,4.2nm,0.7s,baz=39,slow=6.7,SNR=4.4						
EIL	**Elat**	**85.03**	**308**	P	**P**	**11 57 42.0**	**+1.3**
	comp=Z,3.9nm,0.6s,baz=351,slow=11,SNR=4.0						
PLCA	**Paso Flores**	**149.73**	**95**	PKPbc	**PKPbc**	**12 04 54.8**	**+0.9**

comp=Z,1.8nm,1.0s,baz=290,slow=4.0,SNR=3.2

MAN 08 11:51:37.5, 13°76N×120°51E, h99^{km}, mb3.7, ML2.4, MS1.9, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.26	265	eP	Pn	11 51 53.2	+1.4
LUBP				eS	Sn	11 52 04.2	+1.8
PGP	Puerto Galera	0.50	120	⇑eP	Pn	11 51 49.3	-3.9
PGP				eS	Sn	11 52 05.1	+0.1
TGY	Tagaytay City	0.54	50	⇑iP	Pn	11 51 55.9	+2.4
TGY				i S	Sn	11 52 08.7	+3.2
LQP	Lukban	1.06	70	eP	Pn	11 51 59.6	+1.0
LQP				i S	Sn	11 52 15.2	+0.6
BOAC	Boac	1.33	103	eP	Pn	11 52 02.4	+0.8
BOAC				eS	Sn	11 52 18.9	-0.9
BUSP	Coron	1.77	190	eP	Pn	11 52 07.8	+0.7
BUSP				eS	Sn	11 52 30.4	+0.8
OTRP	Odiongan	2.02	133	eP	Pn	11 52 11.2	+0.9
BALP	Baler	2.23	27	eP	Pn	11 52 10.0	-3.0
BOLP	Bolinao	2.67	348	eP	Pn	11 52 18.6	-0.3
ENPP	El Nido	2.75	203	eP	Pn	11 52 21.1	+1.2
CUYO	Cuyo Island	2.93	170	eP	Pn	11 52 22.6	+0.3

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*NORS **08** 12:07:11.6±0.0, 43°72N×43°00E, h15^{km}, MPVA4.2*

*MOS **08** 12:07:12.2±1.3, 43°77N×42°96E, h8^{km}, mb3.6/1, Error ellipse: s-maj=8.7km s-min=5.2km az=42.7*

ISC 08 12:07:12.7±0.9, **43°77N**±0°02×**43°01E**±0°02, **h7**^{km}±8^{km}, **n49**, σ**1^{s}05**/90, **4C-2D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBZ	Khabaz	0.09	246	i PG	Pg	12 07 15.2	+0.4
SHA1	Shidzhatmaz	0.26	264	i Pg	Pg	12 07 18.1	+0.2
SHA1				eSg	Sg	12 07 21.9	+0.5
SHA1	Shidzhatmaz	0.26	264	⇑iPG	Pg	12 07 18.1	+0.2
SHA1				eS	Sg	12 07 21.9	+0.5
BEYR	Belyy Ugol+	0.28	330	⇑iPG	Pg	12 07 17.9	-0.4
BEYR				eS	Sg	12 07 21.5	-0.6
KIV	Kislovodsk	0.30	309	⇑iPG	Pg	12 07 18.3	-0.4
KIV				eS	Sg	12 07 22.2	-0.5
NCK	Nalchik	0.50	122	ePg	Pg	12 07 22.6	+0.2
NCK				eSg	Sb	12 07 30.1	-1.3
NCK	Nalchik	0.50	122	dePG	Pg	12 07 22.2	-0.2
NEY	Neytrino	0.56	202	i Pg	Pg	12 07 23.6	+0.1
NEY				eSg	Sg	12 07 30.9	+0.1
NEY	Neytrino	0.56	202	i PG	Pg	12 07 23.5	0.0
NEY				pmax	pmax		
	comp=Z,248nm,0.2s						
LSNR	Lesken	0.77	129	ePg	Pb	12 07 27.6	-0.8
LSNR				eSg	Sb	12 07 39.2	+0.2
LSNR	Lesken	0.77	129	ePG	Pb	12 07 27.6	-0.8
LSNR				eS	Sb	12 07 39.2	+0.2
STDR	Stavd-Durt	0.86	117	ePg	Pn	12 07 30.3	-0.9
STDR				eSg	Sn	12 07 44.5	+0.4
STDR	Stavd-Durt	0.86	117	ePG	Pn	12 07 30.0	-1.3
STDR				eS	Sn	12 07 44.3	+0.2
PRTR	Priterechnaya	0.92	90	ePg	Pn	12 07 31.1	-1.0
PRTR				eSg	Sn	12 07 44.8	-0.7
PRTR	Priterechnaya	0.92	90	ePG	Pn	12 07 31.0	-1.0
PRTR				eS	Sn	12 07 44.8	-0.7
DIGR	Digorskoe uzhe	0.96	154	i Pg	Pg	12 07 30.5	-0.7
DIGR				eSg	Sg	12 07 42.5	-1.1
DIGR	Digorskoe uzhe	0.96	154	⇓iPG	Pg	12 07 30.5	-0.7
DIGR				eS	Sg	12 07 42.5	-1.1
KORR	Kora	1.03	131	ePg	Pn	12 07 32.7	-0.8
KORR				eSg	Sn	12 07 47.8	-0.4
KORR	Kora	1.03	131	ePG	Pn	12 07 32.7	-0.8
KORR				eS	Sn	12 07 47.8	-0.4
ARNR	Ardon	1.09	122	ePg	Pn	12 07 34.4	-0.1
ARNR				eSg	Sn	12 07 51.4	+1.5
ARNR	Ardon	1.09	122	ePG	Pn	12 07 34.4	-0.1
ARNR				eS	Sn	12 07 51.4	+1.5
ZEI	Tsey	1.17	146	ePg	Pg	12 07 35.0	-0.2
ZEI				eSg	Sg	12 07 49.7	-0.7
ZEI	Tsey	1.17	146	ePG	Pg	12 07 35.0	-0.2
ZEI				pmax	pmax		
	comp=Z,69nm,0.1s						
BTKR	Batakoyurt	1.18	109	ePG	Pn	12 07 36.1	+0.4
BTKR				eS	Sn	12 07 54.2	+2.2
ONI	Oni	1.22	165	P	Pb	12 07 35.8	-0.3
ONI				S	Sg	12 07 51.9	0.0
TRKR	Terskaya	1.25	91	ePg	Pg	12 07 36.6	0.0
TRKR				eSg	Sn	12 07 54.8	+1.2
TRKR	Terskaya	1.25	91	ePG	Pg	12 07 36.6	0.0
TRKR				eS	Sn	12 07 54.8	+1.2
GOF	Gofitskoye	1.29	1	⇑ePG	Pb	12 07 36.9	-0.5
GOF				eS	Sg	12 07 56.0	+1.7
GOF				pmax	pmax		
	comp=Z,62nm,0.3s						
GOF				smax	smax		
	comp=E,97nm,0.4s						
LACR	Lac	1.33	135	ePg	Pb	12 07 37.6	-0.4
LACR				eSg	Sg	12 07 55.3	0.0
LACR	Lac	1.33	135	ePG	Pb	12 07 37.6	-0.4
LACR				eS	Sg	12 07 55.3	0.0
VLKR	Vladikavkaz	1.41	120	ePg	Pg	12 07 39.6	-0.1
VLKR				ePg	Pb	12 07 40.1	+0.7
VLKR				eSg	Sg	12 07 59.6	+1.6
VLKR				eSg	Sg	12 07 59.6	+1.6
VLKR	Vladikavkaz	1.41	120	ePG	Pg	12 07 39.6	-0.1
VLKR				eS	Sg	12 07 59.6	+1.6
TKB	Tkibuli	1.41	181	P	Pg	12 07 40.7	+0.9
TKB				S	Sg	12 07 59.8	+1.6
KMGR	Komgaron	1.52	117	ePg	Pg	12 07 41.5	-0.4
KMGR				eSg	Sg	12 08 01.9	+0.2
KMGR	Komgaron	1.52	117	ePG	Pg	12 07 42.0	+0.1
KMGR				eS	Sg	12 08 02.8	+1.1
GUDG	Gudauri	1.69	140	P	Pb	12 07 43.0	-1.1
GUDG				S	Sb	12 08 05.3	-0.4
RPOR	Krasnaya Polya	1.99	269	i PN	Pn	12 07 47.9	+1.1
RPOR				eS	Sb	12 08 13.3	-1.0
BKRG	Bakuriani	2.04	169	P	Pg	12 07 51.6	-0.2
GROC	Groznyy	2.10	105	ePN	Pb	12 07 49.1	-2.0
GROC				eS	Sb	12 08 16.5	-0.9
GUZR	Guzeripl'	2.11	277	i PN	Pn	12 07 49.4	+1.0
GUZR				i S	Sb	12 08 17.2	-0.4
TRLG	Trialeti	2.37	160	P	Pg	12 07 57.2	-0.8
TRLG				S	Sg	12 08 29.6	+0.9
SOC	Sochi	2.40	267	ePN	Pn	12 07 51.1	-1.3
SOC				e		12 08 21.0	
SOC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SOC				smax	smax		
	comp=E,18nm,0.6s						
KZRT	Kazreti	2.59	156	P	Pg	12 08 00.6	-1.7
KZRT				S	Sg	12 08 35.7	-0.1
BTLR	Botlikh	2.59	114	i PN	Pn	12 07 55.7	+0.6
LZRR	Lazarevskoye	2.63	275	ePN	Pb	12 08 00.2	0.0
LZRR				eS	Sn	12 08 29.0	+1.2
GNBR	Gunib	3.21	114	i PN	Pn	12 08 05.6	+2.1
ANN	Anapa	4.14	286	ePN	Pn	12 08 15.6	-0.7
ANN				eS	Sb	12 09 11.5	-4.5
ANN				pmax	pmax		
	comp=Z,34nm,0.9s						
AKASG	Malin Array Be	11.65	311	i P	Pn	12 10 01.9	+2.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURK	Kurchatov	24.97	61	i P	P	12 12 36.9	+0.3
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						

IDC 08 12:07:59.6±61.0, **17°55S×179°76E, h0**^{km}, **mb4.0**/3, **mb1 4.2**/3, **mb1mx3.7**/35, **mbtmp4.0**/3, **MS3.5**/2, **Ms1 3.5**/2, **ms1mx2.8**/37, **Error ellipse: s-maj=1109.0km s-min=160.2km az=78.0, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.28	240	P	P	12 15 13.8	+0.3
	1.2nm,0.7s,baz=63,slow=6.8,SNR=3.0						
WRA	Warramunga Arr	42.98	259	P	P	12 16 00.4	-0.5
	0.7nm,0.7s,baz=96,slow=7.8,SNR=10						
ASAR	Alice Springs	43.21	254	P	P	12 16 02.8	0.0
	2.3nm,0.3s,baz=89,slow=7.8,SNR=77						
DAV	Davao City (W)	58.84	290	LR	LR	12 40 12.2	
	comp=Z,41nm,20.5s,baz=27,slow=33						
PETK	Petropavlovsk-	72.90	346	LR	LR	12 43 54.9	
	comp=Z,35nm,21.9s,baz=235,slow=30						

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*NORS **08** 12:12:43.2±0.0, 43°71N×42°99E, h17^{km}, MPVA3.9*

ISC 08 12:12:43.9±1.3, **43°71N**±0°05×**42°94E**±0°04, **h17**^{km}±10^{km}, **n15**, σ**0^{s}96**/28, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHA1	Shidzhatmaz	0.21	279	i Pg	Pb	12 12 49.6	+0.3
SHA1				eSg	Sb	12 12 53.5	+0.5
NEY	Neytrino	0.48	199	ePg	Pn	12 12 55.0	-1.1
NEY				eSg	Sb	12 13 02.4	+1.6
NCK	Nalchik	0.52	113	ePg	Pb	12 12 54.1	-0.4
NCK				eSg	Sb	12 13 01.6	-0.2
STDR	Stavd-Durt	0.88	112	ePg	Pn	12 13 02.0	+0.6
STDR				eSg	Sn	12 13 14.6	+0.7
DIGR	Digorskoe uzhe	0.93	150	i Pg	Pn	12 13 02.0	-0.4
DIGR				eSg	Sn	12 13 14.0	-1.4
PRTR	Priterechnaya	0.97	87	ePg	Pn	12 13 02.2	-0.5
PRTR				eSg	Sn	12 13 16.4	+0.3
KORR	Kora	1.03	127	ePg	Pg	12 13 03.9	+0.1
KORR				eSg	Sn	12 13 19.2	+1.7
ARNR	Ardon	1.11	118	ePg	Pg	12 13 05.9	+0.5
ARNR				eSg	Sg	12 13 22.1	+2.1
ZEI	Tsey	1.16	142	ePg	Pg	12 13 05.9	-0.3
ZEI				eSg	Sg	12 13 21.0	-0.4
ONI	Oni	1.18	161	P	Pg	12 13 07.2	+0.6
BTKR	Batakoyurt	1.21	105	ePg	Pg	12 13 07.6	+0.3
BTKR				eSg	Sg	12 13 24.9	+1.8
TRKR	Terskaya	1.30	89	ePg	Pg	12 13 08.1	-0.9
TRKR				eSg	Sg	12 13 26.0	+0.1
LACR	Lac	1.32	131	ePg	Pg	12 13 09.1	-0.3
LACR				eSg	Sg	12 13 27.2	+0.5
KMGR	Komgaron	1.55	114	ePg	Pg	12 13 13.3	-0.3
KMGR				eSg	Sg	12 13 34.1	+0.3
GUDG	Gudauri	1.68	137	P	Pg	12 13 14.8	-1.3

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*NEIC **08** 12:21:41.8±1.5, 12°15N±0°08×144°1E±0°1, h41^{km}±7^{km}, mb4.3/25, Error ellipse: s-maj=17.9km s-min=11.7km az=95.0*

*IDC **08** 12:21:43.2±2.4, 12°20N×143°97E, h51^{km}±22^{km}, mb3.7/13, mb1 3.9/13, mb1mx3.7/42, mbtmp4.0/13, MS3.3/9, Ms1 3.3/9, ms1mx3.0/46, Error ellipse: s-maj=25.2km s-min=14.2km az=105.0*

ISC 08 12:21:39.7±0.5, **12°13N**±0°07×**144°05E**±0°09, **h26**^{km}, **n58**, σ**0^{s}98**/51, **mb4.3**/23, **MS3.2**/8, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.66	29	P	Pn	12 22 07.8	+0.7
	78nm,0.3s,baz=359,slow=3.6,SNR=37						
GUMO				S	Sb	12 22 29.8	-0.2
	171nm,0.3s,baz=8.3,slow=18,SNR=17						
GUMO				LR	LR	12 23 01.0	
	comp=Z,669nm,20.9s,baz=149,slow=48						
GUMO	Guam	1.66	29		Pn	12 22 07.6	+0.5
GUMO				Sn	Sb	12 22 29.0	-1.0
PATS	Pohnpei	15.01	109	Pn	Pn	12 25 09.1	-1.2
PATS				IAmb	IAmb	12 25 16.2	
	comp=Z,14nm,1.0s						
KRVT	Keravat (AS076	18.15	154	LR	LR	12 32 02.9	
	comp=Z,72nm,18.7s,baz=29,slow=34						
JHJ	Hachijo jima 2	21.26	350	LR	LR	12 34 04.9	
	comp=Z,82nm,19.6s,baz=12,slow=35						
PMG	Port Moresby	21.61	172	LR	LR	12 34 02.9	
	comp=Z,55nm,18.0s,baz=330,slow=34						
H11S3	WAKE ISLAND Hy	22.72	71	T	T	12 50 16.9	
	baz=255,slow=74						
H11S1	WAKE ISLAND Hy	22.73	71	T	T	12 50 13.5	
	baz=255						
H11S2	WAKE ISLAND Hy	22.73	71	T	T	12 50 16.9	
	baz=255,slow=74						
H11N1	WAKE ISLAND Hy	23.20	68	T	T	12 50 48.8	
	baz=255,slow=75,SNR=7.9						
H11N2	WAKE ISLAND Hy	23.21	68	T	T	12 50 46.1	
	baz=255,slow=75,SNR=8.5						
H11N3	WAKE ISLAND Hy	23.22	68	T	T	12 50 51.6	
	baz=255,slow=75,SNR=11						
JNU	Nakatsue	24.13	332	P	P	12 26 52.9	-0.7
	comp=Z,6.4nm,1.0s,baz=173,slow=8.1,SNR=3.3						
JNU				LR	LR	12 35 07.1	
	comp=Z,38nm,18.7s,baz=246,slow=34						
JNU	Nakatsue	24.13	332	P	P	12 26 53.0	-0.7
JNU				IAmb	IAmb	12 27 11.8	
	comp=Z,20nm,1.3s						
TATO	Taipei	24.87	304	P	P	12 26 57.9	-2.5
MJAR	Matsushiro Arr	24.87	349	P	P	12 26 59.2	-1.2
	comp=Z,1.4nm,0.5s,baz=158,slow=9.7,SNR=5.4						
MJAR				LR	LR	12 36 06.8	
	comp=Z,119nm,18.7s,baz=265,slow=35						
MJAR	Matsushiro Arr	24.87	349	P	P	12 26 59.6	-0.7
KSRS	Korea Array	29.07	333	P	P	12 27 38.9	+0.9
	comp=Z,1.0nm,0.8s,baz=140,slow=9.5,SNR=3.0						
KSRS				LR	LR	12 37 54.2	
	comp=Z,22nm,18.8s,baz=225,slow=34						
WR0	Warramunga Arr	33.23	196	P	P	12 28 15.3	+0.5
WRAB	Tennant Creek	33.26	197	P	P	12 28 14.4	-0.7
WRAB				IAmb	IAmb	12 28 16.5	
	comp=Z,4.5nm,1.0s						
WRA	Warramunga Arr	33.27	197	P	P	12 28 16.1	+0.9
	comp=Z,1.7nm,0.7s,baz=20,slow=9.6,SNR=14						
AS31	Alice Springs	36.93	196	P	P	12 28 48.3	+1.6
ASAR	Alice Springs	36.93	196	P	P	12 28 48.4	+1.7
	comp=Z,0.9nm,0.6s,baz=18,slow=9.3,SNR=11						
ASAR				LR	LR	12 45 39.9	
	comp=Z,48nm,18.6s,baz=32,slow=39						
ASAR	Alice Springs	36.93	196	P	P	12 28 47.5	+0.8
CMAR	Chiang Mai Arr	43.88	284	LR	LR	12 48 20.2	
	comp=Z,30nm,18.8s,baz=175,slow=36						
BBOO	Buckleboo	45.33	189	P	P	12 29 56.6	+0.9
BBOO				IAmb	IAmb	12 29 57.9	
	comp=Z,6.3nm,0.8s						
SONM	Songino Array	47.48	326	P	P	12 30 13.8	+1.2
	comp=Z,0.4nm,0.5s,baz=145,slow=6.6,SNR=4.7						
SONM				LR	LR	12 49 54.6	
	comp=Z,51nm,18.6s,baz=354,slow=36						
SONM	Songino Array	47.48	326	P	P	12 30 13.4	+0.8
AFI	Afiamalu	50.85	119	P	P	12 30 39.4	+0.6
YAK	Yakutsk	50.90	351	P	P	12 30 39.0	+0.8
KHZ	Kahutara	60.65	155	P	P	12 31 45.6	-2.9
MK31	Makanchi Array	61.99	317	P	P	12 31 57.7	0.0
MKAR	Makanchi Array	61.99	317	P	P	12 31 58.2	+0.5
	comp=Z,0.5nm,0.5s,baz=92,slow=9.0,SNR=14						
MKAR	Makanchi Array	61.99	317	P	P	12 31 57.9	+0.2
MAKZ	Makanchi	62.21	317	P	P	12 31 59.3	+0.2
ZAA0	Zalesovo Array	62.35	325	P	P	12 31 59.7	-0.2
ZAA0				IAmb	IAmb	12 32 00.2	
	comp=Z,1.0nm,0.5s						
ZALV	Zalesovo Beam	62.35	325	P	P	12 31 59.6	-0.2
	comp=Z,1.0nm,0.6s,baz=109,slow=7.1,SNR=5.8						
ZALV				PcP	PcP	12 32 38.9	-0.4
	comp=Z,0.5nm,0.4s,baz=116,slow=3.4,SNR=2.9						
ZALV	Zalesovo Beam	62.35	325	P	P	12 31 59.4	-0.5
GHO	Glory Hole Cre	68.58	28	P	P	12 32 40.5	+0.3
RND	Reindeer	69.04	26	P	P	12 32 42.8	-0.2
RND				IAmb	IAmb	12 32 55.6	
	comp=Z,3.3nm,0.8s						
KK31	Karatay Array	69.81	312	P	P	12 32 48.0	-0.1
KKAR	Karatay Array	69.81	312	P	P	12 32 48.6	+0.4
GAR	Garm	69.86	307	P	P	12 32 48.1	-0.6
GAR				IAmb	IAmb	12 32 54.1	
	comp=Z,5.4nm,1.3s						
IL31		70.22	25	P	P	12 32 49.0	-1.1
IL31				IAmb	IAmb	12 32 54.4	
	comp=Z,2.8nm,1.1s						
ILAR	Eielson Array	70.22	25	P	P	12 32 49.0	-1.2
	comp=Z,0.7nm,0.6s,baz=251,slow=5.7,SNR=15						
TOLK	Toolik Lake Re	70.26	21	P	P	12 32 49.9	-0.5
TOLK				IAmb	IAmb	12 32 52.9	
	comp=Z,3.4nm,1.4s						
BRVK	Borovoye	70.65	322	P	P	12 32 53.4	+0.4
BRVK				IAmb	IAmb	12 32 54.5	
	comp=Z,3.4nm,0.6s						
BMAR	Burnt Mountain	71.75	23	P	P	12 32 59.6	+0.2
BCAR	Beaver Creek A	72.10	27	P	P	12 33 01.9	+0.2
ABKAR	Akbulak array	77.09	318	P	P	12 33 30.4	-0.4
C36M	Paulatuk	79.41	21	P	P	12 33 43.1	-0.1
C36M				IAmb	IAmb	12 33 44.9	
	comp=Z,2.3nm,0.6s						
GEYT	Alibeck	79.48	307	P	P	12 33 44.2	-0.1
YKA	Yellowknife Ar	84.52	27	P	P	12 34 10.9	+0.7
	comp=Z,0.8nm,0.7s,baz=285,slow=4.9,SNR=8.5						
RES	Resolute Bay	86.15	13	P	P	12 34 18.8	+0.7
RES				IAmb	IAmb	12 34 19.8	
	comp=Z,2.7nm,0.8s						
ARCES	ARCESS Array B	88.22	342	P	P	12 34 27.8	-0.5
	comp=Z,4.7nm,1.0s,baz=52,slow=9.3,SNR=3.5						
NVAR	Mina Array Bea	88.45	51	P	P	12 34 32.5	+2.1
	comp=Z,0.8nm,0.6s,baz=266,slow=5.3,SNR=10						
FINES	FINESS Array B	92.14	335	P	P	12 34 45.3	-1.4
	comp=Z,1.7nm,0.5s,baz=66,slow=5.8,SNR=16						
FINES	FINESS Array B	92.14	335	P	P	12 34 45.5	-1.2

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*IDC **08** 12:33:29.1±2.5, 0°64N×125°04E, h80^{km}±25^{km}, mb3.8/10, mb1 4.0/14, mb1mx3.8/42, mbtmp4.2/14, Error ellipse: s-maj=22.3km s-min=10.5km az=76.0*

*NEIC **08** 12:33:29.7±1.9, 0°64N±0°07×125°26E±0°06, h85^{km}±8^{km}, mb4.3/20, Error ellipse: s-maj=10.6km s-min=8.1km az=166.0*

*DJA **08** 12:33:30.0±0.2, 1°N±2°×12°5E±°, h58^{km}±5^{km}, M4.5/18, mb4.5/17, mB5.0/6, MLv4.7/18, Mw(mB)4.2/6, Mwp5.2/1*

ISC 08 12:33:29.8±0.8, **0°62N**±0°05×**125°30E**±0°04, **h83**^{km}±9^{km}, **n72**, σ**1^{s}77**/82, **mb4.3**/19, **1C-1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	1.32	268	P	Pn	12 33 51.3	-1.7
KMSI				S	Sn	12 34 08.8	-1.7
TNTI	Ternate	2.07	86	P	Pn	12 34 03.5	+0.8
TNTI	Ternate	2.07	86		Pn	12 34 03.7	+1.0
TNTI				Sn	Sn	12 34 28.9	+1.1
SANI	Sanana	2.74	166	P	Pn	12 34 10.2	-1.5
SANI				S	Sn	12 34 40.7	-3.1
LUWI	Luwuk	3.02	237	P	Pn	12 34 16.4	+0.9
LUWI				S	Sn	12 34 55.2	+4.5
LUWI	Luwuk	3.02	237	Pn	Pn	12 34 16.3	+0.8
LUWI				Sn	Sn	12 34 50.2	-0.5
MRSI	Marisa	3.37	268	P	Pn	12 34 19.1	-1.1
APSI	Ampana	3.96	247	P	Pn	12 34 29.2	+1.0
APSI				S	Sn	12 35 20.0	+6.5
NLAI	Namlea	4.23	155	P	Pn	12 34 31.9	0.0
NLAI				S	Sn	12 35 17.7	-2.5
AAI	Ambon	5.16	146	P	Pn	12 34 44.8	+0.2
	1.1nm2µm141nm,0.7s						
MSAI	Masohi	5.35	137	P	Pn	12 34 48.9	+1.7
	0.7nm926nm28nm,0.9s						
MPSI	Mapaga	5.41	267	P	Pn	12 34 48.9	+0.8
	0.2nm58nm,0.6s						
DDMP	Don Marcelino,	5.46	4	eP	Pn	12 34 47.6	-1.2
SKMP	Bagumbayan, Su	5.91	353	eP	Pn	12 34 53.1	-1.8
SIJI	Sorong	6.14	104	P	Pn	12 34 59.4	+1.4
	2.6nm,0.3s,baz=220,slow=3.8,SNR=7.3						
SIJI				S	Sn	12 36 13.7	+6.8
	0.9nm,0.3s,baz=319,slow=20,SNR=2.2						
KCP	Kidapawan	6.35	358	⇓iP	Pn	12 35 02.5	+1.5
DAV	Davao City (W)	6.42	2	P	Pn	12 35 00.1	-1.7
	39nm,0.3s,baz=229,slow=20,SNR=1.8						
DAV				S	Sn	12 36 14.4	+0.8
	78nm,0.3s,baz=230,slow=16,SNR=2.2						
DAV	Davao City (W)	6.42	2		Pn	12 35 01.3	-0.5
TTSI	Tana Toraja	6.58	236	P	Pn	12 35 04.5	+0.5
	0.4nm1µm82nm,0.9s						
CTBH	Cotabato--PC H	6.64	351	⇑eP	Pn	12 35 03.7	-1.2
BBSI	Bau Bau	6.65	204	P	Pn	12 35 04.5	-0.5
	0.1nm16nm,0.7s						
SPSI	Sidrap Palu	7.16	231	P	Pn	12 35 13.0	+1.0
	0.5nm2µm122nm,0.5s						
BNSI	Bone	7.20	226	P	Pn	12 35 13.4	+1.0
	0.2nm57nm,0.6s						
BUKP	Musuan	7.22	358	eP	Pn	12 35 14.4	+1.7
FAKI	Fak Fak	7.78	117	Pn	Pn	12 35 20.7	+0.3
FAKI				Sn	Sn	12 36 45.2	-1.7
BKSI	Bulukumba	7.85	221	P	Pn	12 35 22.9	+1.6
	0.2nm41nm,0.7s						
KAPI	Kappang	7.88	225	P	Pn	12 35 23.3	+1.6
	6.9nm,0.3s,baz=82,slow=1.9,SNR=17						
KAPI				S	Sn	12 36 46.4	-2.9
	0.6nm,0.3s,baz=162,slow=20,SNR=2.2						
SOEI	Soe	10.36	186	P	Pn	12 36 08.4	+13
KKM	Kota Kinabalu	10.55	301	Pn	Pn	12 35 57.1	-1.2
SBUM	Sibu	13.21	278		Pn	12 36 33.8	-0.3
MTN	Manton Dam	14.57	157		Pn	12 36 51.3	-0.6
KSM	Kuching	15.02	273	P	P	12 37 01.4	+0.3
PWJI	Pagerwojo	15.96	237	P	P	12 37 11.2	-0.4
	17nm,0.7s						
KNRA	Kununurra	16.55	168	P	Pn	12 37 17.1	+0.2
KNRA				IAmb	IAmb	12 37 18.9	
	comp=Z,15nm,0.8s						
KPJI	Karang Pucung	18.14	244	P	P	12 37 35.3	-0.4
	comp=Z,23nm,1.2s						
FITZ	Fitzroy Crossi	18.60	179	P	P	12 37 40.9	+0.2
	comp=Z,0.8nm,0.3s,baz=13,slow=12,SNR=22						
FITZ	Fitzroy Crossi	18.60	179	P	P	12 37 40.7	0.0
LEM	Lembang	19.14	247	P	P	12 37 45.5	-1.3
	comp=Z,3.1nm,0.3s,baz=324,slow=16,SNR=3.6						
CISI	Cisompet, Garu	19.24	245	P	P	12 37 47.4	-0.4
CISI				IAmb	IAmb	12 37 53.1	
	comp=Z,42nm,1.2s						
WB0	Warramunga Arr	22.13	157	P	P	12 38 18.4	-0.5
WB0				IAmb	IAmb	12 38 19.6	
	comp=Z,15nm,0.7s						
WRAB	Tennant Creek	22.27	157	P	P	12 38 20.3	0.0
WRAB				IAmb	IAmb	12 38 21.5	
	comp=Z,16nm,0.9s						
WRA	Warramunga Arr	22.27	157	P	P	12 38 19.8	-0.5
	comp=Z,14nm,0.7s,baz=335,slow=11,SNR=88						
WRA	Warramunga Arr	22.27	157	P	P	12 38 19.4	-0.9
WR0	Warramunga Arr	22.36	157	P	P	12 38 20.8	-0.5
WR0				IAmb	IAmb	12 38 22.1	
	comp=Z,12nm,0.7s						
PSA00	Pilbara Seismi	22.69	193	P	P	12 38 23.5	-1.2
PSA00				IAmb	IAmb	12 38 33.3	
	comp=Z,13nm,1.1s						
KULM	Kulim	25.05	281	P	P	12 38 45.6	-1.0
KULM				IAmb	IAmb	12 38 56.3	
	comp=Z,10nm,1.3s						
AS31	Alice Springs	25.54	161	P	P	12 38 52.2	+1.1
ASAR	Alice Springs	25.55	161	P	P	12 38 52.4	+1.3
	comp=Z,9.8nm,0.6s,baz=350,slow=16,SNR=75						
ASAR	Alice Springs	25.55	161	P	P	12 38 52.8	+1.7
BBOO	Buckleboo	34.76	164	P	P	12 40 12.6	+0.3
BBOO				IAmb	IAmb	12 40 28.7	
	comp=Z,11nm,1.2s						
STKA	Stephens Creek	35.81	156	P	P	12 40 22.4	+1.0
	comp=Z,3.2nm,0.7s,baz=334,slow=7.8,SNR=8.7						
STKA	Stephens Creek	35.81	156	P	P	12 40 22.5	+1.1
INU	Inuyama	36.24	16	P	P	12 40 25.1	+0.1
XAN	Xi'an	36.62	337	P	P	12 40 27.1	-1.2
XAN				IAmb	IAmb	12 40 31.0	
	comp=Z,5.6nm,1.3s						
KSRS	Korea Array	36.73	3	P	P	12 40 28.6	-0.5
	comp=Z,0.7nm,0.7s,baz=180,slow=8.9,SNR=4.3						
MJAR	Matsushiro Arr	37.69	17	P	P	12 40 37.0	-0.4
	comp=Z,1.7nm,0.7s,baz=184,slow=7.8,SNR=4.6						
CAN	Canberra	42.05	151	P	P	12 41 14.2	+0.7
USRK	Ussuriysk Ar.	43.80	7	P	P	12 41 27.1	-0.3
	comp=Z,1.2nm,0.5s,baz=205,slow=8.0,SNR=4.2						
KLR	Kul'dur	48.74	6	P	P	12 42 05.8	-0.3
	comp=Z,0.9nm,0.4s,baz=175,slow=12,SNR=7.0						
SONM	Songino Array	49.81	343	P	P	12 42 13.3	-1.2
	comp=Z,0.3nm,0.4s,baz=154,slow=7.6,SNR=3.4						
PETK	Petropavlovsk-	58.83	22	P	P	12 43 21.3	+1.7
	comp=Z,7.5nm,1.2s,baz=228,slow=1.7,SNR=3.4						
PETK	Petropavlovsk-	58.83	22	P	P	12 43 20.8	+1.2
KSH	Kashi	59.28	317	P	P	12 43 31.4	+8.2
KSH				sP	pP	12 43 42.1	-1.8
KSH				PcS	PcS	12 48 16.3	+3.6
KSH				S	S	12 51 34.6	+9.3
MK31	Makanchi Array	59.33	327	P	P	12 43 21.1	-2.1
MKAR	Makanchi Array	59.33	327	P	P	12 43 21.3	-1.9
	comp=Z,0.5nm,0.4s,baz=123,slow=7.6,SNR=19						
MKAR	Makanchi Array	59.33	327	P	P	12 43 21.2	-2.0
MAKZ	Makanchi	59.51	327	P	P	12 43 22.6	-1.9
MAKZ				IAmb	IAmb	12 43 39.2	
	comp=Z,1.9nm,1.2s						
BKZ	Black Stump Fm	61.28	136	P	P	12 43 37.1	+0.3
YAK	Yakutsk	61.35	2	P	P	12 43 37.2	+0.6
KURBB	Kurchatov Arra	63.61	329	P	P	12 43 49.7	-2.3
KURK	Kurchatov	63.62	329	P	P	12 43 50.1	-1.9
KURK				IAmb	IAmb	12 43 51.9	
	comp=Z,2.1nm,0.5s						
TORD	Torodi Ar. Bea	122.46	286	PKP	PKPdf	12 52 14.7	-2.0
	comp=Z,0.4nm,0.9s,baz=80,slow=1.8,SNR=2.7						

PRE 08 12:41:53.7±1.4,26°.40S×28°.37E,h2^{km},ML1.7

EAF 08 12:41:36.8±1.0,24°.64S×27°.62E,h0^{km}±24^{km},MD3.4, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	Lobatse	1.87	258	*i* P	Pn	12 42 09.8	-0.4
LBTB	Lobatse	1.87	258	*i* P	Pn	12 42 09.8	-0.4
PRYS	Parys	2.29	186	*e*P	Pn	12 42 13.2	-2.7
PRYS				*e*S	Sn	12 42 27.5	-17
PRYS				AML	AML	12 42 37.6	
	comp=Z,19nm,0.3s						
MSNA	Messina	3.18	45	*i* P	Pn	12 42 27.9	-0.3
MSNA	Messina	3.18	45	*i* P	Pn	12 42 27.9	-0.3
SWZ	Schweizer	3.26	219	*e*P	Pg	12 42 41.0	+1.6
SWZ				*e*S	Sb	12 43 15.6	-0.4
SWZ				AML	AML	12 43 31.0	
	comp=Z,7.4nm,0.5s						
MATP	Matopo	4.28	11	*i* P	Pn	12 42 42.4	-0.9
MATP	Matopo	4.28	11	*i* P	Pn	12 42 42.4	-0.9
BOSA	Boshof	4.48	208	*i* P	Pn	12 42 44.6	-1.5
BOSA				*i* S	Sn	12 43 36.0	-3.1
BOSA	Boshof	4.48	208	*e*P	Pn	12 42 50.2	+4.0
BOSA				*e*S	Sn	12 43 32.6	-6.5
BOSA				AML	AML	12 43 59.4	
	comp=Z,2.1nm,0.4s						
BOSA	Boshof	4.48	208	*i* P	Pn	12 42 44.6	-1.5
BOSA				*i* S	Sn	12 43 36.0	-3.1

IDC 08 12:49:52.5±1.9,10°.80N×126°.43E,h0^{km},mb3.9/5, mb1 4.0/5,mb1mx3.6/45,mbtmp3.9/5,Error ellipse: s-maj=197.6km s-min=25.8km az=69.0

ISC 08 12:49:54.4±1.2,10°.8N±0°.2×126°.3E±0°.1,h10^{km},n6, σ1^{s}.09/8,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBP	Tagbilaran	2.65	246	*e*P	Pn	12 50 38.8	+1.5
TBP				*i* S	Sg	12 51 18.5	-1.2
ASAR	Alice Springs	35.02	168	P	P	12 56 47.2	-0.2
	0.2nm,0.4s,baz=342,slow=7.1,SNR=9.0						
MKAR	Makanchi Array	51.66	322	P	P	12 59 02.1	+0.6
	0.4nm,0.6s,baz=114,slow=8.5,SNR=8.8						
MKAR				PcP	PcP	13 00 14.2	-0.9
	0.2nm,0.5s,baz=106,slow=5.1,SNR=4.0						
ZALV	Zalesovo Beam	54.21	331	P	P	12 59 20.0	-0.2
	0.4nm,0.3s,baz=110,slow=8.3,SNR=4.1						
ARCES	ARCESS Array B	83.74	340	P	P	13 02 23.8	+0.3
	4.3nm,0.9s,baz=76,slow=7.5,SNR=4.1						
FINES	FINESS Array B	85.47	332	P	P	13 02 31.4	-0.9
	2.2nm,0.8s,baz=76,slow=4.9,SNR=4.9						

IDC 08 12:50:37.0±3.4,17°.06S×177°.94W,h0^{km},mb3.8/4, mb1 4.2/4,mb1mx3.7/39,mbtmp3.8/4,Error ellipse: s-maj=185.2km s-min=29.6km az=148.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	45.23	259	P	P	12 58 56.2	-0.2
	0.3nm,0.4s,baz=92,slow=7.3,SNR=8.0						
ASAR	Alice Springs	45.45	253	P	P	12 58 58.1	-0.1
	3.9nm,0.6s,baz=88,slow=8.4,SNR=71						
ILAR	Eielson Array	84.97	13	P	P	13 03 13.8	+0.1
	0.8nm,1.1s,baz=219,slow=5.2,SNR=5.4						
PDAR	Pinedale Array	86.43	43	P	P	13 03 21.7	-0.1
	0.2nm,0.6s,baz=238,slow=5.1,SNR=2.0						

NEIC 08 12:53:19.8,36°.40N×121°.93W,h4^{km},Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.22; $M_{\theta\theta}$-1.60; $M_{\phi\phi}$1.38; $M_{r\theta}$0.29; $M_{\theta\phi}$0.76; $M_{\phi r}$0.38; Fault plane solution: $M_0$1.75000×10^{14} NP1:ϕ_s59.77000°, δ82.27000°,λ15.85000°. NP2:ϕ_s327.58000°,δ74.30000°, λ171.97000°. Principal axes: T 1.6938, Plg17.0000°, Azm285.0000°; N 0.1055, Plg72.0000°, Azm85.0000°; P -1.7992, Plg6.0000°, Azm193.0000°;

NEIC 08 12:53:19.4±1.6,36°.37N±0°.04×121°.98W±0°.04,h9^{km}±8^{km} Error ellipse: s-maj=5.9km s-min=3.6km az=218.0

NCEDC 08 12:53:20.1±1.6,36°.40N±0°.04×121°.92W±0°.04,h9^{km}±6^{km}, Mwr3.4/5,Error ellipse: s-maj=6.1km s-min=3.5km az=220.0

ANF 08 12:53:20.2±0.7,36°.28N×121°.97W,h10^{km},ML3.4/16, Error ellipse: s-maj=9.0km s-min=4.4km az=45.0

ISC 08 12:53:18.6±1.2,36°.34N±0°.02×122°.03W±0°.03,h7^{km}±9^{km}, n241,σ0^{s}.83/257,Central California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BPOM	Post Ranch	0.23	117		Pg	12 53 24.4	+1.1
HMOM	Monterey	0.28	18		Pg	12 53 24.7	+0.6
BAPM	Anderson Peak	0.35	117		Pg	12 53 26.2	+0.7
MOBB	Monterey Bay O	0.37	342		Pb	12 53 28.4	+0.9
HAST	Hastings Reser	0.39	82		Pg	12 53 26.1	-0.1
HAST					Sg	12 53 30.3	-1.0
BPCNC	Pine Canyon	0.40	53		Pg	12 53 26.3	-0.1
BSMM	Soledad Missio	0.48	84		Pg	12 53 28.0	0.0
BSRM	Salinas Radio	0.53	51		Pg	12 53 28.6	-0.1
HERM	Elkhorn Road	0.53	29		Pg	12 53 29.4	+0.5
BJCM	Johnson Can.	0.55	67		Pg	12 53 29.1	-0.2
SCZ	Santa Cruz	0.57	62		Pg	12 53 29.3	-0.2
SCZ					Sg	12 53 35.5	-1.5
HTUM	Tustin Road	0.58	32		Pg	12 53 29.9	0.0
HJGM	San Juan Grade	0.59	38		Pg	12 53 29.9	0.0
FRP	Fremont Peak	0.60	46		Pg	12 53 30.0	-0.2
HCOM	Corn Cob Canyo	0.61	25		Pg	12 53 30.7	+0.3
JELB	Ellicott, Sant	0.61	15		Pg	12 53 31.1	+0.7
BSGM	Shirttail Gulc	0.63	83		Pg	12 53 30.5	-0.2
SAO	San Andreas Ge	0.63	47	Pg	Pg	12 53 30.5	-0.3
SAO				Sg	Sg	12 53 37.8	-1.3
HBTM	San Juan Bauti	0.64	37		Pg	12 53 31.0	+0.1
BVYM	Vineyard	0.64	50		Pg	12 53 30.7	-0.3
BJOM	Mount Johnson	0.64	63		Pg	12 53 30.6	-0.4
BJOM					Sg	12 53 37.9	-1.5
ANZ	Anzar Road	0.65	32		Pg	12 53 31.1	0.0
CBC	Chamberlain	0.66	26		Pg	12 53 31.7	+0.3
BCGM	Cienega Road	0.66	56		Pg	12 53 31.1	-0.3
PAPM	Alder Peak	0.68	128		Pg	12 53 32.6	+0.8
BLRM	Lewis Ranch	0.69	61		Pg	12 53 31.7	-0.2
BSLM	Silva Ranch	0.70	51		Pg	12 53 32.5	+0.4
JRGM	Rodeo Gulch Ro	0.70	4		Pg	12 53 32.7	+0.6
JTGM	Trout Gulch Ro	0.70	10		Pg	12 53 32.7	+0.6
BPIM	Pinnacles	0.71	77		Pg	12 53 31.9	-0.4
BVL	Bear Valley	0.71	70		Pg	12 53 32.1	-0.2
OCR	O'Connell Ranc	0.71	36		Pg	12 53 32.8	+0.4
CSR	Chase Ranch	0.71	30		Pg	12 53 32.5	+0.2
BHRM	Hodges Ranch	0.73	57		Pg	12 53 32.8	+0.2
PCCM	Crazy Canyon	0.74	109		Pg	12 53 33.3	+0.5
HJSM	John Smith Roa	0.76	50		Pg	12 53 33.4	+0.2
BEHM	Elkhorn Ranch	0.76	64		Pg	12 53 33.5	+0.3
HLPM	Lions Peak	0.77	24		Pg	12 53 33.5	+0.1
BBNM	San Benito	0.79	77		Pg	12 53 33.8	0.0
JBNB	Ben Lomond Mou	0.79	352		Pg	12 53 34.4	+0.5
HLTM	Lone Tree Road	0.80	46		Pg	12 53 34.2	+0.3
LRC	Lone Oak Road	0.80	96		Pg	12 53 34.0	0.0
CDC	Canada Road	0.81	32		Pg	12 53 34.5	+0.2
HCAM	Canada Road	0.81	32		Pg	12 53 34.6	+0.2
BEMM	Emmet	0.82	66		Pg	12 53 34.3	0.0
HFEM	San Felipe	0.82	38		Pg	12 53 34.7	+0.3
LRV	Little Rabbit	0.82	84		Pg	12 53 34.4	0.0
JUMM	Mount Umunhum	0.83	7		Pg	12 53 35.1	+0.5
BBGB	Big Mountain B	0.83	73		Pg	12 53 34.9	+0.3
BBGB					Sg	12 53 45.5	+0.1
AMC	Almaden	0.83	10		Pg	12 53 34.9	+0.3
JLAB	Laurel Hill	0.85	16		Pg	12 53 35.1	+0.2
BAVM	Antelope Valle	0.86	69		Pg	12 53 35.0	-0.1
HSPM	Sheep	0.88	28		Pg	12 53 35.7	+0.2
CADM	Anderson Res.	0.89	21		Pg	12 53 35.7	+0.1
JSTM	Santa Teresa H	0.89	12		Pg	12 53 36.0	+0.3
GHS	Gilroy Hot Spr	0.89	31		Pg	12 53 35.9	+0.2
PACP	Pacheco Peak	0.90	41		Pg	12 53 36.1	+0.3
JPSM		0.90	343		Pg	12 53 36.6	+0.7
PHSB	Hesperia Broad	0.94	123		Pg	12 53 36.9	+0.3
HPCM	Pacheco Lake	0.94	40		Pg	12 53 36.8	0.0
HPCM					Sg	12 53 49.2	+0.3
SCCB	Santa Clara Co	0.96	8		Pg	12 53 37.5	+0.4
PHCM	Hearst Castle	0.96	132		Pg	12 53 37.8	+0.7
CCOB	Coe Ranch Numb	0.96	17		Pg	12 53 37.8	+0.6
PSAM	San Ardo	0.97	108		Pg	12 53 37.3	0.0
PHRM	Hernandez Vall	0.97	87		Pg	12 53 37.2	-0.1
SLD	San Luis Dam	0.98	41		Pg	12 53 37.4	-0.1
SFJWR	San Luis Fatjo	0.99	44		Pg	12 53 37.6	0.0
PMPB	Monarch Peak	1.00	97		Pg	12 53 37.5	-0.3
PMPB				Sg	Sg	12 53 50.0	-0.7
JJRM	Joaquin Road	1.02	352		Pg	12 53 38.5	+0.3
JFP	Foothills Park	1.03	353		Pg	12 53 38.5	0.0
BMSM	Mercy Hot Spri	1.04	72		Pg	12 53 38.8	+0.2
MHC	Mount Hamilton	1.05	17		Pg	12 53 39.1	+0.3
PANM	San Antonio Re	1.06	121		Pg	12 53 39.0	0.0
JSFB	Stanford Teles	1.07	354		Pg	12 53 39.4	+0.2
JRSC	Jasper Ridge	1.08	351		Pg	12 53 39.2	-0.1
ARN	Arnold Ranch	1.09	21		Pg	12 53 39.5	0.0
BRMM	Rolling Bench	1.09	62		Pg	12 53 40.1	+0.6
JHPM	Huddart Park	1.13	349		Pg	12 53 39.9	-0.4
PCBM	Cambria	1.13	136		Pb	12 53 39.8	-0.7
SCKWR	San Luis Creek	1.14	42		Pg	12 53 40.5	0.0
RAMR	Ramage Ranch	1.17	126		Pb	12 53 41.1	0.0
CMLM	Mount Lewis	1.18	15		Pg	12 53 41.1	-0.2
CMMM	Mount Mocho	1.20	21		Pb	12 53 41.2	-0.5
BLDC	Black Mountain	1.21	131		Pb	12 53 41.3	-0.6
BLDC	Black Mountain	1.21	131		Pb	12 53 41.5	-0.3
ARDC	Alexander Ranc	1.22	135		Pb	12 53 40.9	-1.0
PPO	Portuguese Can	1.23	112		Pb	12 53 41.6	-0.6
PKD	Bear Valley Ra	1.26	108		Pn	12 53 41.7	-1.0
CNIC	Niles Canyon	1.27	2		Pn	12 53 42.2	-0.6
JCPM	Coyote Point	1.27	349		Pn	12 53 42.0	-0.7
PVCM	Vineyard Canyo	1.27	108		Pn	12 53 41.8	-1.1
SAC	San Andreas	1.28	346		Pn	12 53 41.8	-1.1
PSTM	Stockdale Moun	1.29	108		Pn	12 53 42.0	-1.1
WENL	Wente Vineyard	1.30	9		Pn	12 53 42.9	-0.3
CSLM	San Leandro Hi	1.39	357		Pn	12 53 43.5	-0.9
CLCB	Lake Chabot	1.40	359		Pn	12 53 43.9	-0.7
PCMM	Cholame Hills	1.41	112		Pn	12 53 44.0	-0.7
CTM	Castle Mountai	1.43	106		Pn	12 53 44.9	-0.1
PTAM	Tassajara Cree	1.43	131		Pn	12 53 44.7	-0.3
VPDC	Valencia Peak	1.44	139		Pn	12 53 45.1	0.0
GHC	Gold Hill	1.45	110		Pn	12 53 44.7	-0.4
CMCM	Mills College	1.45	355		Pn	12 53 44.3	-0.9
EFD	Emergency Oper	1.46	133		Pn	12 53 44.8	-0.6
TCHL	Shandon	1.47	116		Pn	12 53 45.0	-0.5
PMCM	McMillan Canyo	1.47	114		Pn	12 53 45.0	-0.6
PKLM	Kerr Lake	1.48	112		Pn	12 53 45.0	-0.6
BGC	Bolinger Road	1.48	359		Pn	12 53 45.0	-0.7
DCD	Diablo Creek	1.48	139		Pn	12 53 45.0	-0.6
CMOB	Morgan Territo	1.48	7		Pn	12 53 45.3	-0.5
PSRM	Scobie Ranch	1.49	108		Pn	12 53 45.3	-0.6
DPD	Davis Peak	1.50	137		Pn	12 53 45.7	-0.1
CYBM	Yerba Buena Is	1.50	350		Pn	12 53 44.8	-1.1
JPRM	Presidio of Sa	1.50	346		Pn	12 53 45.3	-0.6
SMCB	Saint Mary's C	1.50	357		Pn	12 53 45.3	-0.6
PSNM	Stone Corral	1.50	111		Pn	12 53 45.2	-0.8
CBSNC	Byron Hot Spri	1.51	12		Pn	12 53 45.5	-0.5
CRHM	Round Hill Res	1.52	1		Pn	12 53 46.3	+0.1
BKS	Berkeley--Byer	1.55	354		Pn	12 53 45.5	-1.0
BRK	Berkeley--Havi	1.55	353		Pn	12 53 45.6	-0.9
BL67	Building 67, L	1.55	353		Pn	12 53 45.7	-0.9
VAK	Adit at Lawren	1.55	353		Pn	12 53 45.7	-0.9
PMRM	Maxey Ranch	1.55	110		Pn	12 53 46.1	-0.6
CVPM	Vollmer Peak	1.55	354		Pn	12 53 45.8	-0.9
PAGB	Antelope Grade	1.56	112		Pn	12 53 46.3	-0.5
TRAM	Private Proper	1.57	114		Pn	12 53 46.5	-0.3
FARB	Farallon Islan	1.57	330		Pn	12 53 46.2	-0.6
TSCN	Private Proper	1.57	120		Pn	12 53 46.8	-0.1
CRPB	Russellman Par	1.58	3		Pn	12 53 46.4	-0.6
THIS	South End of C	1.58	112		Pn	12 53 46.7	-0.4
BRIB	Briones	1.58	356		Pn	12 53 46.3	-0.7
BDM	Black Diamond	1.62	4		Pn	12 53 47.5	-0.1
PTRM	Twissleman Ran	1.62	114		Pn	12 53 47.1	-0.6
CSPM	San Pablo Ridg	1.63	352		Pn	12 53 47.0	-0.8
CPMM	Point Molate	1.64	349		Pn	12 53 46.7	-1.1
CPIM	Pinole Ridge	1.66	355		Pn	12 53 47.6	-0.5
MYLM	Yosemite Lake	1.66	50		Pn	12 53 47.0	-1.1
NLHM	Lake Herman	1.78	357		Pn	12 53 49.3	-0.5
NOLM	Olema	1.81	340		Pn	12 53 49.7	-0.5
PMLM	Mount Lospe	1.84	141		Pn	12 53 50.1	-0.6
SNT	Sears Point	1.88	350		Pn	12 53 50.3	-0.7
MHDM	Hidden Dam	1.88	65		Pn	12 53 50.2	-0.9
YEG	Yeguas Mountai	1.90	118		Pn	12 53 51.5	-0.1
MCCM	Marconi Confer	1.93	340		Pn	12 53 51.2	-0.6
MCCM				Sn	Sn	12 54 17.0	+0.7
SMMC	Simmler	1.94	121		Pn	12 53 51.8	-0.2
SMMC	Simmler	1.94	121	P	Pn	12 53 51.9	-0.1
	baz=305,SNR=31						
BCH	Branch Mountai	1.95	125		Pn	12 53 52.4	+0.1
MCUB	Copperopolis B	1.98	34		Pn	12 53 51.8	-0.8
CVS	Carmenet Viney	2.04	350		Pn	12 53 52.2	-1.1
CARC	Carrizo Plain	2.05	119		Pn	12 53 53.4	-0.1
MNHB	New Hogan Dam	2.05	28		Pn	12 53 52.6	-0.9
NAPC	Atlas Peak	2.11	355		Pn	12 53 53.8	-0.5
NTYM	Taylor	2.11	346		Pn	12 53 53.7	-0.6
NADM	Allendale	2.12	1		Pn	12 53 54.8	+0.3
MMIM	Miami Mountain	2.12	59		Pn	12 53 54.3	-0.3
VOG	Valley Oaks Go	2.13	90	P	Pn	12 53 55.6	+1.0
	baz=273						
CMB	Columbia Colle	2.14	37		Pn	12 53 54.4	-0.4
CMB				Sn	Sn	12 54 19.1	-2.6
AASM	Arroyo Seco	2.21	19		Pn	12 53 54.9	-0.8
NSHM	Saint Helena R	2.23	348		Pn	12 53 55.2	-0.8
MAC	Mark West Spri	2.28	346		Pn	12 53 55.9	-0.7
FIGC	Figueroa Mtn.	2.31	133		Pn	12 53 57.0	-0.1
PKM	Mcpherson Peak	2.31	128		Pn	12 53 57.6	+0.3
PKM	Mcpherson Peak	2.31	128	P	Pn	12 53 57.5	+0.3
	baz=312,SNR=16						
NBPM	Berryessa Peak	2.33	357		Pn	12 53 57.5	+0.2
NMCNC	Mill Creek, So	2.36	343		Pn	12 53 56.8	-1.0
FTR	Fort Ross	2.36	338		Pn	12 53 57.3	-0.5
NHSM	Mount Saint He	2.36	349		Pn	12 53 56.9	-1.0
MRHM	Rocky Hill	2.37	90		Pn	12 53 57.4	-0.5
KCC	Kaiser Creek	2.38	65		Pn	12 53 58.6	+0.5
NDHM	Dunnigan Hills	2.43	2		Pn	12 53 59.3	+0.6
VES	Vestal, Richgr	2.43	101		Pn	12 53 59.2	+0.5
VES	Vestal, Richgr	2.43	101	P	Pn	12 53 58.7	0.0
	baz=284,SNR=19						
HELL	Mitchell Peak,	2.44	81		Pn	12 53 58.6	-0.4
NMTM	Middletown	2.49	352		Pn	12 53 58.9	-0.7
GSSM	Skaggs Springs	2.49	342		Pn	12 53 58.6	-0.9
GCRM	Castle Rock Sp	2.49	348		Pn	12 53 58.6	-1.0
GBGM	Boggs Mountain	2.53	348		Pn	12 53 59.4	-0.7
GDXM	Geysers	2.54	346		Pn	12 53 59.4	-0.9
BCW	Bitter Crk WRg	2.54	122		Pn	12 54 01.6	+1.3
GCVM	Cloverdale	2.55	342		Pn	12 53 59.6	-0.7
MNRC	McLaughlin Min	2.56	353		Pn	12 54 00.2	-0.3
GSGM	Seigler Mounta	2.58	348		Pn	12 54 00.7	-0.1
GDCM	Dry Creek	2.61	339		Pn	12 54 00.6	-0.7
GACM	Adobe Creek	2.62	346		Pn	12 54 00.8	-0.5
MRDM	Red Cones	2.69	61		Pn	12 54 03.5	+1.0
MDPB	Devils Postpil	2.69	60		Pn	12 54 02.5	0.0
MDPB				Sn	Sn	12 54 34.7	-0.8
ASMM	Slate Mountain	2.70	23		Pn	12 54 03.1	+0.5
MINS	Minaret Summit	2.71	60		Pn	12 54 03.6	+0.7
MMPM	Mammoth Pass	2.72	61		Pn	12 54 03.9	+1.0
OMMB	Old Mammoth Mi	2.74	61		Pn	12 54 03.9	+0.6
OMMB				Sn	Sn	12 54 36.0	-0.7
AFDM	Forest Hills D	2.74	17		Pn	12 54 03.0	0.0
AFDM				Sn	Sn	12 54 34.7	-1.6
MDYM	Dry Creek	2.75	60		Pn	12 54 04.8	+1.4
MDCM	Deadman Creek	2.75	59		Pn	12 54 04.4	+1.0
MMLB	Mammoth Lakes	2.77	61		Pn	12 54 05.2	+1.5
HOPS	Hopland Field	2.78	343		Pn	12 54 02.9	-0.6
MLCM	Laurel Creek C	2.80	62		Pn	12 54 05.2	+1.2
MEMM	East Mammoth H	2.80	61		Pn	12 54 05.0	+0.9
MGPM	Gravel Pit	2.81	62		Pn	12 54 05.8	+1.6
MCSM	Casa Diablo Ho	2.82	61		Pn	12 54 06.6	+2.2
MCBM	Casa Benchmark	2.83	62		Pn	12 54 06.2	+1.8
MLAC	Mammoth, Mammo	2.86	62	P	Pn	12 54 06.6	+1.7
	baz=244,SNR=24						
ARVC	Arvin	2.87	114	P	Pn	12 54 04.4	-0.3
	baz=298,SNR=8.7						
ISA	Isabella, Lake	2.96	102		Pn	12 54 06.3	+0.2
ISA	Isabella, Lake	2.96	102	P	Pn	12 54 06.2	+0.2
	baz=286,SNR=16						
ISA				S	Sn	12 54 41.2	-0.6
	baz=286						
RUBR	Rubicon Trail	3.09	28		Pn	12 54 08.7	+0.7
TIN	Tinemaha, Big	3.13	76	P	Pn	12 54 11.2	+2.7
	baz=259						
TIN				S	Sn	12 54 47.3	+1.1
	baz=259						
CWC	Cottonwood Cre	3.19	87	P	Pn	12 54 11.0	+1.8
	baz=270						
OSI	Osito Audit: C	3.20	122		Pn	12 54 10.4	+1.1
OSI	Osito Audit: C	3.20	122	P	Pn	12 54 10.5	+1.2
	baz=305						
ORV	Oroville	3.24	7		Pn	12 54 09.8	-0.1
PNTR	Pine Nut	3.35	34		Pn	12 54 12.9	+1.3
YERR	Yerington	3.45	39		Pn	12 54 13.7	+0.9
KCPM	Cahto Peak	3.56	340	Pn	Pn	12 54 13.7	-0.7
DAC	Darwin (Calif)	3.58	90		Pn	12 54 16.1	+1.4
EDW2	Edwards Air Fo	3.59	113	P	Pn	12 54 15.4	+0.6
	baz=297						
RYN	Ryan	3.60	50		Pn	12 54 15.6	+0.6
NVAR	Mina Array Bea	3.63	54		Pn	12 54 16.5	+1.1
MPMC	Manual Prospec	3.68	93	P	Pn	12 54 19.1	+3.0
	baz=277,SNR=7.6						
NV11	Mina Array Sit	3.73	55		Pn	12 54 18.1	+1.5
BEKR	Beckworth	3.76	20		Pn	12 54 17.5	+0.3
PASC	Pasadena Art C	3.81	123		Pn	12 54 17.9	+0.2
MWC	Mount Wilson	3.87	122		Pn	12 54 19.4	+0.7
O02D	Mt. Diablo Mer	3.88	351	P	Pn	12 54 20.7	+2.0
	baz=170						
O03E	Paynes Creek	3.96	2	P	Pn	12 54 19.7	-0.1
	baz=181						
KMRM	Mail Ridge	4.10	342	Pn	Pn	12 54 21.7	0.0
KVN	Kaiserville	4.13	48		Pn	12 54 22.7	+0.5
WDC	Whiskeytown Da	4.26	355	Pn	Pn	12 54 23.5	-0.3
GSC	Goldstone, Bar	4.37	102		Pn	12 54 24.8	-0.6
GSC	Goldstone, Bar	4.37	102	P	Pn	12 54 26.7	+1.3
	baz=286						
N02D	Trinity Center	4.66	354	P	Pn	12 54 31.9	+2.5
	baz=172						
TPNV	Topopah Spring	4.69	81		Pn	12 54 30.1	+0.3
TPNV	Topopah Spring	4.69	81	P	Pn	12 54 31.9	+2.0
	baz=265						
TPNV				Sb	Sb	12 55 40.4	+2.6
	baz=265						
HEC	Hector,Ludlow	4.88	106	P	Pn	12 54 32.8	+0.4
	baz=291						
PFO	Pinyon Flats O	5.32	119	Pn	Pn	12 54 37.5	-1.0
XPFO	Pion Flat	5.32	119	Pn	Pn	12 54 37.6	-0.9
R11A	Troy Canyon, C	5.51	67		Pn	12 54 42.1	+0.9
SHPR	Sheep Range	5.54	86		Pn	12 54 42.3	+0.7
MOD	Modoc Plateau	5.72	13		Pn	12 54 45.0	+0.9
BAR	Barrett	5.73	128	Pn	Pn	12 54 43.6	-0.5
MONP2	Monument Peak	5.76	125	P	Pn	12 54 45.4	+0.7
	baz=309						
MONP2				S	Sn	12 55 49.3	-1.7
	baz=309						
L02E	Cave Junction	5.94	349	P	Pn	12 54 49.3	+2.3
	baz=167						
K02D	Willamette Mer	6.48	349	P	Pn	12 54 56.8	+2.4
	baz=167						

IDC 08 12:56:18.5±1.2,12°.45N×143°.47E,h0^{km},mb3.7/5, mb1 3.9/5,mb1mx3.5/53,mbtmp3.7/5,Error ellipse: s-maj=62.4km s-min=21.6km az=119.0

NEIC 08 12:56:20.3±0.6,12°.05N±0°.07×144°.14E±0°.08,h10^{km}±2^{km}, mb4.3/5,Error ellipse: s-maj=14.6km s-min=9.4km az=229.0

ISC 08 12:56:22.3±0.8,12°.13N±0°.07×144°.2E±0°.1,h26^{km},n18, σ1^{s}.05/17,mb4.0/8,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.61	25	Pn	Pb	12 56 50.6	-0.7
	74nm,0.3s,baz=307,slow=9.6,SNR=44						
GUMO				Sn	Sb	12 57 11.2	0.0
	121nm,0.3s,baz=353,slow=22,SNR=12						
GUMO				LR	LR	12 57 42.2	
	comp=Z,166nm,19.5s,baz=233,slow=47						
GUMO	Guam	1.61	25		Pb	12 56 50.7	-0.7
GUMO				Sn	Sb	12 57 11.6	+0.4
PATS	Pohnpei	14.91	109	Pn	Pn	12 59 51.5	0.0
RABL	Rabaul	18.06	153		Pn	13 00 30.6	-1.1
H11N1	WAKE ISLAND Hy	23.10	68	T	T	13 25 30.8	
	baz=255,slow=75,SNR=11						
H11N2	WAKE ISLAND Hy	23.11	68	T	T	13 25 28.4	
	baz=255,slow=75,SNR=8.6						
H11N3	WAKE ISLAND Hy	23.12	68	T	T	13 25 32.1	
	baz=255,slow=75,SNR=7.6						
JNU	Nakatsue	24.18	332	P	P	13 01 37.0	+0.3
JNU				IAmb	IAmb	13 01 42.7	
	comp=Z,17nm,1.4s						
KS19	Wonju Array Si	29.18	333	P	P	13 02 22.5	+0.8
KS19				IAmb	IAmb	13 02 27.9	
	comp=Z,5.3nm,1.1s						
WR0	Warramunga Arr	33.26	197	P	P	13 02 57.5	-0.2
WRA	Warramunga Arr	33.30	197	P	P	13 02 59.0	+0.9
	comp=Z,0.6nm,0.6s,baz=19,slow=9.6,SNR=4.3						
AS31	Alice Springs	36.96	196	P	P	13 03 29.1	-0.5
ASAR	Alice Springs	36.96	196	P	P	13 03 30.8	+1.1
	comp=Z,0.4nm,0.7s,baz=18,slow=9.7,SNR=7.6						
ASAR	Alice Springs	36.96	196	P	P	13 03 29.3	-0.4
BBOO	Buckleboo	45.35	190	P	P	13 04 38.6	+0.2
BBOO				IAmb	IAmb	13 04 46.4	
	comp=Z,3.4nm,1.1s						
YKA	Yellowknife Ar	84.47	27	P	P	13 08 52.7	+0.2
	comp=Z,0.3nm,0.9s,baz=288,slow=4.9,SNR=3.5						
NVAR	Mina Array Bea	88.36	51	P	P	13 09 14.8	+2.2
	comp=Z,0.3nm,0.6s,baz=258,slow=6.4,SNR=2.8						
FINES	FINESS Array B	92.19	335	P	P	13 09 27.3	-2.2
	comp=Z,3.3nm,1.0s,baz=46,slow=4.0,SNR=3.6						

UCR 08 12:59:46.9±1.0,13°.27N×89°.76W,h32^{km}±3^{km},ML3.6

SNET 08 12:59:46.8±0.9,13°.27N×89°.76W,h32^{km}±3^{km},ML3.6

INET 08 12:59:47.7,13°.41N×89°.67W,h15^{km},ML3.5

GCG 08 12:59:49.9±0.5,13°.47N×89°.85W,h71^{km}±26^{km},MD3.8

ISC 08 12:59:47.0±1.6,13°.27N±0°.07×89°.74W±0°.04,h27^{km}±13^{km}, n43,σ0^{s}.47/63,7D,El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEVE	Cerro Verde	0.57	12	*e*P	Pn	12 59 59.2	-0.3
CEVE				*e*S	Sn	13 00 08.9	+0.7
CEVE	Cerro Verde	0.57	12	*e*P	Pn	12 59 59.2	-0.3
CEVE				*e*S	Sn	13 00 08.9	+0.7
SBLS	San Blas	0.58	12	⇓*i*P	Pn	12 59 59.4	-0.4
SBLS	San Blas	0.58	12	⇓*i*P	Pn	12 59 59.4	-0.4
SNJE	San Jose	0.61	13	⇓*i*P	Pb	12 59 59.7	+0.4
SNJE	San Jose	0.61	13	⇓*i*P	Pb	12 59 59.7	+0.4
RTR	El Retiro	0.63	9	*e*P	Pn	13 00 00.1	-0.3
RTR	El Retiro	0.63	9	*e*P	Pn	13 00 00.1	-0.3
BOQS	Boqueron	0.65	44	*e*P	Pb	13 00 00.3	+0.3
BOQS				*e*S	Sn	13 00 10.5	+0.4
SNET	Serv Nac Est T	0.65	50	*e*P	Pb	12 59 59.9	0.0
SNET				*e*S	Sn	13 00 10.0	+0.1
SNET				IAML		13 00 12.3	
	comp=Z,3µm,0.2s						
SNET	Serv Nac Est T	0.65	50	*e*P	Pb	12 59 59.9	0.0
SNET				*e*S	Sn	13 00 10.0	+0.1
SNET				IAML		13 00 12.3	
	comp=Z,3µm,0.2s						
UEES	Universidad Ev	0.66	48	*e*P	Pb	13 00 00.2	+0.1
UEES				*e*S	Sn	13 00 10.2	-0.1
UEES	Universidad Ev	0.66	48	*e*P	Pb	13 00 00.2	+0.1
UEES				*e*S	Sn	13 00 10.2	-0.1
OPAM	Oficina de Pla	0.69	50	*e*P	Pb	13 00 00.5	0.0
OPAM				IAML		13 00 13.9	
	comp=Z,2µm,0.2s						
OPAM	Oficina de Pla	0.69	50	*e*P	Pb	13 00 00.5	0.0
OPAM				IAML		13 00 13.9	
	comp=Z,2µm,0.2s						
CUSC	Alcaldia de Cu	0.71	50	*e*P	Pb	13 00 01.0	+0.1
CUSC				*e*S	Sn	13 00 12.0	+0.5
CUSC				IAML		13 00 13.6	
	comp=Z,2µm,0.3s						
CUSC	Alcaldia de Cu	0.71	50	*e*P	Pb	13 00 01.0	+0.1
CUSC				*e*S	Sn	13 00 12.0	+0.5
CUSC				IAML		13 00 13.6	
	comp=Z,2µm,0.3s						
LFRS	El Faro	0.75	62	⇓*i*P	Pb	13 00 01.4	-0.2
LFU	La Fuente	0.78	52	*e*P	Pb	13 00 02.1	+0.1
LFU	La Fuente	0.78	52	*e*P	Pb	13 00 02.1	+0.1
LBRS	Las Brisas	0.83	55	*e*P	Pb	13 00 02.9	0.0
COEG	Centro de Oper	0.91	67	*e*P	Pn	13 00 03.8	-0.3
COEG				*e*S	Sn	13 00 16.6	+0.3
COEG				IAML		13 00 20.3	
	comp=Z,2µm,0.4s						
COEG	Centro de Oper	0.91	67	*e*P	Pn	13 00 03.8	-0.3
COEG				*e*S	Sn	13 00 16.6	+0.3

COEG				IAML		13 00 20.3	
	comp=Z,2µm,0.4s						
MTO3	Montecristo	1.18	18	⇓iP	Pn	13 00 07.4	-0.7
MTO3	Montecristo	1.18	18	⇓iP	Pn	13 00 07.4	-0.7
COEB	Comit de Eme	1.20	79	eP	Pn	13 00 07.5	-0.7
COEB				IAML		13 00 25.4	
	comp=Z,629nm,0.3s						
COEB	Comit de Eme	1.20	79	eP	Pn	13 00 07.5	-0.7
COEB				IAML		13 00 25.4	
	comp=Z,629nm,0.3s						
TECA	Tecapa	1.23	79	eP	Pn	13 00 08.1	-0.5
TECA	Tecapa	1.23	79	eP	Pn	13 00 08.1	-0.5
PACA	Pacayal	1.40	82	eP	Pn	13 00 10.7	-0.1
PACA				eS	Sb	13 00 29.9	-0.1
PACA	Pacayal	1.40	82	eP	Pn	13 00 10.7	-0.1
PACA				eS	Sb	13 00 29.9	-0.1
PCG	Pacaya	1.40	323	eS	Sn	13 00 28.3	-0.3
NBG	Las Nubes	1.44	336	eP	Pn	13 00 12.3	+0.7
NBG				eS	Sn	13 00 29.4	-0.3
JUCU	Jucuar¡n	1.46	90	eP	Pn	13 00 10.8	-0.8
JUCU				eS	Sn	13 00 30.0	+0.2
JUCU	Jucuar¡n	1.46	90	eP	Pn	13 00 10.8	-0.8
JUCU				eS	Sn	13 00 30.0	+0.2
BLLM	Bellamira	1.48	83	eP	Pn	13 00 11.9	0.0
BLLM	Bellamira	1.48	83	eP	Pn	13 00 11.9	0.0
FUG	Fuego 3	1.58	318	eP	Pn	13 00 13.8	+0.3
FUG				eS	Sn	13 00 32.9	-0.4
MRL	Marmol	1.80	2	eP	Pn	13 00 16.0	-0.5
MRL	Marmol	1.80	2	eP	Pn	13 00 16.0	-0.5
LCND	La Caada	1.80	89	eP	Pn	13 00 16.0	-0.3
LCND				eS	Sn	13 00 39.7	+1.3
LCND				IAML		13 00 42.4	
	comp=Z,526nm,0.4s						
LCND	La Caada	1.80	89	eP	Pn	13 00 16.0	-0.3
LCND				eS	Sn	13 00 39.7	+1.3
LCND				IAML		13 00 42.4	
	comp=Z,526nm,0.4s						
STG3	Santiaguito 3,	2.28	309	eP	Pn	13 00 23.3	+0.2
STG3				eS	Sn	13 00 49.6	-0.8

*IDC **08** 13:08:57.6±0.8, 34°.39N×80°.06E, h0^{km}, mb3.8/15, mb1 3.9/20, mb1mx3.7/60, mbtmp3.8/20, ML3.1/5, MS3.1/1, Ms1 3.1/1, ms1mx2.5/46, Error ellipse: s-maj=23.2km s-min=13.0km az=56.0*

*NEIC **08** 13:09:02.3±2.4, 34°.45N±0°.03×80°.2E±0°.1, h36^{km}±7^{km}, mb4.4/12, Error ellipse: s-maj=15.7km s-min=1.8km az=76.0*

ISC 08 13:09:02.1±0.6**, 34°.50N**±0°.07×**80°.21E**±0°.08**, h28**^{km}**, n51, σ1^{s}61**/50**, mb3.9**/19**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIL	Nilore	5.84	264		Pn	13 10 25.6	-1.2
DANN	Dangsing	6.83	153	eP	Pn	13 10 42.3	+1.5
	11nm,0.4s						
NRN	Naryn	7.68	336		Pn	13 10 54.6	+2.2
GUN	Gumba	8.16	142	eP	Pn	13 11 02.2	+3.1
	5.4nm,0.3s						
PKIN	Phulchoki	8.20	146	eP	Pn	13 11 01.4	+1.8
	7.8nm,0.5s						
PKI	Pulchoki	8.21	146	eP	Pn	13 11 01.5	+1.7
	13nm,0.6s						
JIRN	Jiri	8.52	141	eP	Pn	13 11 06.3	+2.2
	32nm,0.4s						
AAK	Ala-Archa	9.28	333	Pn	Pn	13 11 15.1	+0.9
	0.3nm,0.3s,baz=165,slow=12,SNR=3.7						
AAK				Sn	Sn	13 13 01.5	+3.9
	0.0nm,0.3s,baz=135,slow=20,SNR=1.5						
AAK				Lg	Lg	13 13 50.6	
	0.0nm,0.3s,baz=229,slow=19,SNR=2.1						
RAMN	Ramite	9.31	142	eP	Pn	13 11 16.3	+1.5
	17nm,0.6s						
TAPN	Taplejung	9.60	136	eP	Pn	13 11 20.2	+1.5
	15nm,0.7s						
ODAN	Odare	9.80	139	eP	Pn	13 11 22.2	+0.8
	8.1nm,0.5s						
KKAR	Karatay Array	11.45	322		Pn	13 11 41.1	-2.6
MAKZ	Makanchi	12.37	6		Pn	13 11 56.8	+0.5
MK31	Makanchi Array	12.39	7		Pn	13 11 56.8	+0.3
MKAR	Makanchi Array	12.39	7	Pn	Pn	13 11 57.0	+0.4
	0.4nm,0.3s,baz=185,slow=12,SNR=25						
MKAR				Sn	Sn	13 14 13.2	-0.3
	0.1nm,0.3s,baz=183,slow=20,SNR=4.7						
MKAR	Makanchi Array	12.39	7		Pn	13 11 55.8	-0.7
KURBB	Kurchatov Arra	16.16	356	Pn	Pn	13 12 45.4	-1.8
	0.0nm,0.3s,baz=184,slow=11,SNR=3.4						
KURK	Kurchatov	16.25	356	P	P	13 12 51.0	-0.2
ZALV	Zalesovo Beam	19.72	8	P	P	13 13 29.7	+0.4
	0.1nm,0.3s,baz=23,slow=27,SNR=4.2						
ZALV	Zalesovo Beam	19.72	8	P	P	13 13 26.1	-3.1
BVAR	Borovoye Array	19.80	342	P	P	13 13 29.1	-1.1
	0.1nm,0.3s,baz=158,slow=14,SNR=5.9						
BRVK	Borovoye	19.86	342	P	P	13 13 29.4	-1.4
ABKAR	Akbulak array	21.01	321	P	P	13 13 42.5	-0.8
AKTO	Aktyubinsk	22.71	321	P	P	13 13 59.5	-2.0
	1.1nm,0.5s,baz=127,slow=18,SNR=4.9						
CMAR	Chiang Mai Arr	23.09	129	P	P	13 14 06.0	+0.3
	0.8nm,0.5s,baz=309,slow=9.8,SNR=9.9						
SONM	Songino Array	23.66	48	P	P	13 14 13.3	+2.0
	0.6nm,0.7s,baz=247,slow=9.6,SNR=5.6						
ARU	Arti	26.46	333	P	P	13 14 38.3	+1.8
	0.6nm,0.4s,baz=126,slow=19,SNR=3.1						
BJT	Baijiatuau	29.01	68	P	P	13 14 56.8	-2.7
BJT				IAmb	IAmb	13 15 05.5	
	comp=Z,6.2nm,0.4s						
BRTR	Keskin Array B	37.18	292	P	P	13 16 11.7	+0.8
	comp=Z,0.2nm,0.3s,baz=99,slow=7.4,SNR=2.5						
KSRS	Korea Array	38.40	71	LR	LR	13 34 36.8	
	comp=Z,24nm,18.1s,baz=340,slow=40						
FINES	FINESS Array B	43.37	325	P	P	13 17 00.8	-0.9
	comp=Z,3.0nm,0.6s,baz=113,slow=8.9,SNR=10						
TIXI	Tiksi	44.97	20	P	P	13 17 15.4	+1.1
	comp=Z,0.7nm,0.4s,baz=236,slow=6.7,SNR=5.2						
TIXI	Tiksi	44.97	20	P	P	13 17 14.5	+0.2
TIXI				IAmb	IAmb	13 17 17.2	
	comp=Z,7.0nm,1.5s						
ARCES	ARCESS Array B	45.93	336	P	P	13 17 23.8	+1.8
	comp=Z,6.6nm,1.1s,baz=111,slow=13,SNR=4.9						
CLL	Collm	50.23	311	eP	P	13 17 55.0	-0.5
NB2	NORSAR Subarra	50.47	324	P	P	13 17 58.3	+1.1
	comp=Z,0.6nm,0.5s,baz=89,slow=7.9						
NOA	NORSAR Array B	50.47	324	P	P	13 17 58.2	+1.1
	comp=Z,1.0nm,0.7s,baz=91,slow=7.3,SNR=3.7						
TORD	Torodi Ar. Bea	73.29	275	P	P	13 20 29.6	-1.8
	comp=Z,0.6nm,0.7s,baz=55,slow=4.0,SNR=6.0						
TORD	Torodi Ar. Bea	73.29	275	IAmb	IAmb	13 20 32.6	
	comp=Z,0.9nm,0.8s						
ILAR	Eielson Array	74.43	19	P	P	13 20 37.9	+0.7
	comp=Z,0.4nm,0.8s,baz=316,slow=5.1,SNR=4.9						
INK	Inuvik	74.46	12	P	P	13 20 37.6	+0.3
INK				IAmb	IAmb	13 20 38.9	
	comp=Z,2.1nm,1.2s						
WB0	Warramunga Arr	74.59	128	P	P	13 20 38.4	-0.4
WB0				IAmb	IAmb	13 20 39.0	
	comp=Z,9.1nm,1.2s						
WRA	Warramunga Arr	74.68	128	P	P	13 20 39.0	-0.2
	comp=Z,0.9nm,0.7s,baz=324,slow=5.7,SNR=7.8						
WRA	Warramunga Arr	74.68	128	P	P	13 20 36.6	-2.6
WRAB	Tennant Creek	74.68	128	P	P	13 20 38.1	-1.2
WB2	Warramunga Arr	74.69	128	P	P	13 20 39.0	-0.3
DAWY	Dawson	76.91	17	P	P	13 20 49.1	-2.4
DAWY				IAmb	IAmb	13 20 59.6	
	comp=Z,4.4nm,1.5s						
ASAR	Alice Springs	77.09	131	P	P	13 20 53.0	0.0
	comp=Z,0.6nm,0.5s,baz=318,slow=5.7,SNR=18						
YKA	Yellowknife Ar	82.61	7	P	P	13 21 21.6	-0.7
	comp=Z,0.4nm,0.7s,baz=346,slow=4.7,SNR=8.1						
SCHQ	Schefferville	86.63	342	P	P	13 21 42.1	-0.7
	comp=Z,0.4nm,0.4s,baz=82,slow=12,SNR=2.6						
SCHQ	Schefferville	86.63	342	IAmb	IAmb	13 21 58.3	
	comp=Z,5.3nm,1.2s						

*IDC **08** 13:13:34.7±6.9, 5°.74S×145°.07E, h114^{km}±75^{km}, mb3.1/4, mb1 3.3/6, mb1mx3.1/30, mbtmp3.5/6, ML2.6/2, MS2.5/1, Ms1 2.5/1, ms1mx2.3/16, Error ellipse: s-maj=59.0km s-min=26.9km az=144.0*

ISC 08 13:13:30.7±1.2**, 5°.5S**±0°.1×**144°.9E**±0°.2**, h68**^{km}**, n6, σ1^{s}32**/7**, mb3.4**/3**, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.45	150	P	Pn	13 14 37.0	+1.3
	3.8nm,0.3s,baz=338,slow=7.5,SNR=15						
PMG				S	Sn	13 15 25.3	-1.0
	2.6nm,0.3s,baz=300,slow=20,SNR=9.1						
PMG				LR	LR	13 15 55.8	
	comp=Z,65nm,20.6s,baz=16,slow=34						
WRA	Warramunga Arr	17.61	215	P	Pn	13 17 30.2	-1.4
	0.1nm,0.3s,baz=41,slow=12,SNR=5.7						
ASAR	Alice Springs	20.89	209	P	P	13 18 07.4	-0.2
	1.0nm,0.6s,baz=33,slow=12,SNR=15						
FITZ	Fitzroy Crossi	22.56	235	P	P	13 18 26.6	+1.1
	1.4nm,1.0s,baz=63,slow=9.0,SNR=3.0						
MKAR	Makanchi Array	75.81	321	P	P	13 25 10.0	+0.5
	0.1nm,0.5s,baz=107,slow=6.3,SNR=3.7						
ILAR	Eielson Array	85.90	24	P	P	13 26 01.9	-0.9
	0.4nm,0.7s,baz=258,slow=4.7,SNR=5.1						

*IDC **08** 13:32:21.9±1.2, 13°.80N×145°.15E, h64^{km}±11^{km}, mb3.1/8, mb1 3.4/8, mb1mx3.2/38, mbtmp3.4/8, Error ellipse: s-maj=39.3km s-min=20.6km az=102.0*

ISC 08 13:32:19.0±0.9**, 13°.8N**±0°.2×**145°.6E**±0°.1**, h35**^{km}**, n15, σ1^{s}58**/10**, mb3.5**/8**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	0.74	252	P	Pn	13 32 34.8	+1.8
	554nm,0.3s,baz=5.6,slow=1.2,SNR=356						
GUMO				S	Sn	13 32 43.0	-0.1
	2µm,0.3s,baz=338,slow=19,SNR=105						
H11S3	WAKE ISLAND Hy	20.78	74	T	T	13 59 08.1	
	baz=261,slow=74,SNR=15						
H11S1	WAKE ISLAND Hy	20.79	74	T	T	13 59 07.5	
	baz=261,slow=74,SNR=12						
H11S2	WAKE ISLAND Hy	20.80	74	T	T	13 59 08.9	
	baz=261						
H11N1	WAKE ISLAND Hy	21.20	71	T	T	14 00 00.2	
	baz=257,slow=75,SNR=15						
H11N2	WAKE ISLAND Hy	21.21	71	T	T	13 59 58.5	
	baz=257,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	21.22	71	T	T	13 59 59.1	
	baz=257,slow=75,SNR=12						
MJAR	Matsushiro Arr	23.58	345	P	P	13 37 25.3	-1.1
	1.1nm,0.8s,baz=166,slow=9.9,SNR=2.9						
WRA	Warramunga Arr	35.33	199	P	P	13 39 09.2	-1.9
	0.5nm,0.5s,baz=19,slow=9.3,SNR=6.4						
ASAR	Alice Springs	38.97	197	P	P	13 39 41.2	-0.8
	0.1nm,0.4s,baz=17,slow=13,SNR=4.2						
MKAR	Makanchi Array	61.82	316	P	P	13 42 33.1	-1.4
	0.3nm,0.5s,baz=97,slow=8.2,SNR=7.5						
ILAR	Eielson Array	68.06	25	P	P	13 43 14.4	-0.3
	0.1nm,0.5s,baz=255,slow=6.4,SNR=3.2						
YKA	Yellowknife Ar	82.33	27	P	P	13 44 37.4	+0.5
	0.2nm,0.5s,baz=284,slow=4.9,SNR=4.5						
NVAR	Mina Array Bea	86.22	52	P	P	13 44 60.0	+2.5
	0.2nm,0.5s,baz=262,slow=6.1,SNR=2.9						
PDAR	Pinedale Array	91.30	45	P	P	13 45 22.1	+0.6
	0.2nm,0.7s,baz=292,slow=2.8,SNR=2.3						

*IDC **08** 13:49:34.4±2.5, 6°.59S×129°.88E, h142^{km}±26^{km}, mb3.5/9, mb1 3.7/12, mb1mx3.6/30, mbtmp4.0/12, Error ellipse: s-maj=27.9km s-min=14.7km az=75.0*

*NEIC **08** 13:49:35.3±2.3, 6°.50S±0°.05×129°.97E±0°.08, h154^{km}±10^{km}, mb4.2/9, Error ellipse: s-maj=11.5km s-min=6.8km az=88.0*

*DJA **08** 13:49:36.0±0.2, 7°S±2°×13°0E±°, h161^{km}±6^{km}, M4.8/14, mb4.3/14, mB5.1/5, MLv4.5/12, MLv5.3/2, Mw(mB)4.4/5*

ISC 08 13:49:34.4±0.5**, 6°.62S**±0°.05×**130°.04E**±0°.06**, h150**^{km}**, n60, σ2^{s}08**/63**, mb3.7**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.84	137	P	Pn	13 50 11.9	+4.1
SAUI	Saumlaki	1.84	137		Pn	13 50 12.1	+4.4
BNDI	Bandanaira	2.09	356	P	Pn	13 50 12.9	+2.3
MSAI	Masohi	3.43	341	P	Pn	13 50 30.0	+2.7
MSAI				S	Sn	13 51 09.9	+1.5
AAI	Ambon	3.44	328	P	Pn	13 50 29.6	+2.1
FAKI	Fak Fak	4.28	31	P	Pn	13 50 39.1	+0.7
FAKI	Fak Fak	4.28	31		Pn	13 50 39.2	+0.8
FAKI					Sn	13 51 27.2	-1.0
NLAI	Namlea	4.45	319	P	Pn	13 50 43.9	+3.3
SIJI	Sorong	5.84	12	P	Pn	13 50 59.4	+0.4
	8.4nm,0.3s,baz=198,slow=19,SNR=20						
SIJI				S	Sn	13 52 00.7	-4.6
	24nm,0.3s,baz=276,slow=24,SNR=24						
SWI	Sorong	5.84	12	P	Pn	13 50 59.4	+0.3
	0.9nm2µm31nm,0.7s						
SANI	Sanana	6.08	318	P	Pn	13 51 03.5	+1.3
	0.2nm45nm,0.7s						
MTN	Manton Dam	6.28	170		Pn	13 51 05.9	+1.0
SOEI	Soe	6.51	241	P	Pn	13 51 08.5	+0.5
	0.7nm2µm107nm,0.8s						
SOEI	Soe	6.51	241		Pn	13 51 08.2	+0.1
SOEI					Sn	13 52 22.7	+1.3
BAKI	Biak	8.10	49	P	Pn	13 51 33.5	+4.2
EDFI	Ende, Flores	8.54	255	P	Pn	13 51 35.6	+0.4
	3.6nm,1.2s						
KNRA	Kununurra	9.09	188		Pn	13 51 41.9	-0.4
KMSI	Cibinong	9.36	320	P	Pn	13 51 47.5	+1.5
	58nm,0.6s						
APSI	Ampana	10.11	304	P	Pn	13 51 58.7	+2.8
SPSI	Sidrap Palu	10.56	284	P	Pn	13 52 11.0	+9.1
WBSI	Waikabubak, Su	10.96	253	P	Pn	13 52 06.7	-0.5
	29nm,1.2s						
FITZ	Fitzroy Crossi	12.19	200	P	Pn	13 52 21.4	-1.8
	1.7nm,0.3s,baz=22,slow=12,SNR=33						
FITZ				S	Sn	13 54 25.6	-13
	5.5nm,0.3s,baz=115,slow=14,SNR=6.3						
FITZ	Fitzroy Crossi	12.19	200		Pn	13 52 21.7	-1.5
PLAI	Plampang	12.35	259	P	Pn	13 52 24.6	-0.7
	14nm,0.9s						
WB0	Warramunga Arr	13.74	162		Pn	13 52 41.5	-1.6
WRAB	Tennant Creek	13.88	163		Pn	13 52 43.3	-1.6
WRA	Warramunga Arr	13.89	163	P	Pn	13 52 43.2	-1.7
	2.9nm,0.3s,baz=345,slow=13,SNR=57						
WRA				S	Sn	13 55 10.1	-8.8
	4.5nm,0.3s,baz=334,slow=22,SNR=9.4						
WRA	Warramunga Arr	13.89	163		Pn	13 52 44.4	-0.6
WB2	Warramunga Arr	13.89	163		Pn	13 52 43.5	-1.6
WR0	Warramunga Arr	13.96	162	Pn	Pn	13 52 45.1	-0.8
COEN	Coen	14.83	120	P	P	13 53 01.5	+2.6
PMG	Port Moresby	17.18	100	S	S	13 56 32.2	-4.1
	0.5nm,0.3s,baz=195,slow=23,SNR=6.1						
AS31	Alice Springs	17.35	168	P	Pn	13 53 29.7	+2.1
AS31				IAmb	IAmb	13 53 33.2	
	comp=Z,4.5nm,0.5s						
ASAR	Alice Springs	17.35	168	P	Pn	13 53 29.1	+1.5
	comp=Z,1.7nm,0.3s,baz=344,slow=9.5,SNR=45						
ASAR				S	S	13 56 33.6	-6.3
	comp=Z,1.3nm,0.3s,baz=333,slow=19,SNR=5.7						
ASAR	Alice Springs	17.35	168	P	Pn	13 53 29.1	+1.4
PSA00	Pilbara Seismi	17.84	213	P	P	13 53 32.8	+0.8
PSA00				IAmb	IAmb	13 53 36.4	
	comp=Z,36nm,1.4s						
SBUM	Sibu	19.94	296	P	P	13 53 53.7	-1.2
SBUM				IAmb	IAmb	13 53 57.5	
	comp=Z,5.9nm,0.7s						
CTA	Charters Tower	20.66	132	P	P	13 54 04.7	+2.1
	comp=Z,2.2nm,0.6s,baz=325,slow=12,SNR=2.1						
STKA	Stephens Creek	27.35	158	P	P	13 55 07.1	+1.6
	comp=Z,1.2nm,0.6s,baz=326,slow=8.2,SNR=4.1						
CMAR	Chiang Mai Arr	39.52	310	P	P	13 56 50.4	-0.4
	comp=Z,0.5nm,0.5s,baz=141,slow=6.1,SNR=5.0						
MJAR	Matsushiro Arr	43.61	10	P	P	13 57 23.6	-0.3
	comp=Z,1.3nm,0.7s,baz=181,slow=9.2,SNR=4.5						
ODAN	Odare	53.04	311	eP	P	13 58 36.0	-0.6
	comp=Z,3.9nm,0.4s						
TAPN	Taplejung	53.06	311	eP	P	13 58 35.7	-1.1
	comp=Z,5.2nm,0.3s						
RAMN	Ramite	53.68	310	eP	P	13 58 40.7	-0.6
	comp=Z,10nm,0.4s						
JIRN	Jiri	54.37	311	eP	P	13 58 45.5	-0.9
	comp=Z,4.1nm,0.3s						
GUN	Gumba	54.73	311	eP	P	13 58 48.3	-0.7
	comp=Z,7.7nm,0.5s						
PKI	Pulchoki	54.91	310	eP	P	13 58 48.0	-2.2
GKN	Gorkha	55.72	310	eP	P	13 58 54.7	-1.1
DANN	Dangsing	56.56	310	eP	P	13 58 58.7	-3.3
SONM	Songino Array	58.09	341	P	P	13 59 12.5	+0.3
	comp=Z,0.3nm,0.5s,baz=177,slow=8.8,SNR=4.5						
PETK	Petropavlovsk-	63.95	18	P	P	13 59 53.0	+1.6
	comp=Z,0.8nm,0.3s,baz=211,slow=8.1,SNR=5.0						
KSH	Kashi	67.77	317	P	P	14 00 19.9	+3.7
KSH				pP	pwP	14 00 57.7	+1.4
KSH				S	S	14 09 01.5	-0.8
KSH	Kashi	67.77	317	SS	SS	14 13 30.3	+3.5
MKAR	Makanchi Array	67.93	327	P	P	14 00 17.7	+0.7
	comp=Z,4.1nm,0.5s,baz=115,slow=8.4,SNR=98						
MKAR	Makanchi Array	67.93	327	P	P	14 00 17.4	+0.4
MAKZ	Makanchi	68.11	327	P	P	14 00 17.9	-0.2
MAKZ				IAmb	IAmb	14 00 19.3	
	comp=Z,3.4nm,0.6s						
YAK	Yakutsk	68.44	360	P	P	14 00 16.6	-3.1
ZALV	Zalesovo Beam	71.26	334	P	P	14 00 36.8	-0.4
	comp=Z,0.6nm,0.5s,baz=131,slow=4.4,SNR=3.0						
KURK	Kurchatov	72.21	329	P	P	14 00 43.2	+0.2
KURK				IAmb	IAmb	14 00 45.9	
	comp=Z,1.9nm,0.8s						
ILAR	Eielson Array	92.99	25	P	P	14 02 29.8	-0.6
	comp=Z,0.2nm,0.6s,baz=235,slow=4.3,SNR=4.3						

ROM 08 13:56:48.5±0.2**, 43°.369N**±0°.007×**12°.54E**±0°.01**, h6**^{km}±2^{km}**, Md1.2**/3**, 3C, Error ellipse: s-maj=1.1km s-min=0.7km az=297.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATFO	Monte Foce - G	0.03	96	AML	AML		
	comp=E,460µm,0.2s						
ATFO				AML	AML		
	comp=E,459µm,0.2s						
ATFO				AML	AML		
	comp=N,440µm,0.3s						
ATFO				END			
ATVO	AVT- Monte Val	0.10	278	⇑eP	Pg	13 56 50.9	+0.2
ATVO				S	Sg	13 56 52.8	+0.6
ATVO				END			
ATVO				END			
ATPI	Pietralunga -	0.13	310	⇑eP	Pg	13 56 51.5	+0.3
ATPI				S	Sg	13 56 53.9	+0.8
ATPI				END			
ATPI				END			
PIEI	Pieia	0.17	359	⇑eP	Pg	13 56 52.5	+0.6
PIEI				S	Sg	13 56 55.2	+1.0
PIEI				END			

ATH 08 13:57:22.6, 38°.19N×20°.30E, h10^{km}±1^{km}**, ML2.6**/2**, Error ellipse: s-maj=2.3km s-min=1.3km az=63.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF3	Kipouria, Keph	0.04	71	P	Pg	13 57 24.4	-0.1
KEF3				S	Sg	13 57 25.5	-0.3
LXRA	Lixouri, Kepha	0.11	85	P	Pg	13 57 25.5	+0.2
LXRA				S	Sg	13 57 27.3	+0.1
KEF4	Livadi, Kephal	0.12	55	P	Pg	13 57 25.5	+0.1
KEF4				S	Sg	13 57 27.6	+0.2
ARGA	Argostoli. Kep	0.14	95	P	Pg	13 57 26.0	+0.2
ARGA				S	Sg	13 57 28.4	+0.4
KEF2	Argostoli. Kep	0.15	100	P	Pg	13 57 26.2	+0.2
KEF2				S	Sg	13 57 28.7	+0.5
KEF1	Kardakata, Kep	0.16	57	P	Pg	13 57 26.2	+0.1
KEF1				S	Sg	13 57 28.6	+0.1
VLS	Valsamata	0.23	93	P	Pg	13 57 27.3	-0.1
VLS				S	Sg	13 57 30.5	+0.1
VLS				AML	AML	13 57 30.9	
	comp=N,6411µm,0.1s						
VLS				AML	AML	13 57 31.0	
	comp=E,8242µm,0.1s						
KONA	Konidatara, Ke	0.32	42	P	Pg	13 57 28.9	0.0
KONA				S	Sg	13 57 33.7	+0.5
KFL	Anninata	0.39	102	P	Pg	13 57 30.2	-0.1
KFL				S	Sg	13 57 35.9	+0.4
KFL				AML	AML	13 57 37.4	
	comp=E,1557µm,0.3s						
KFL				AML	AML	13 57 37.5	
	comp=N,2142µm,0.3s						
EVGI	Lefkada island	0.51	33	P	Pg	13 57 32.6	0.0
EVGI				S	Sg	13 57 40.0	+0.6
MGNA	Meganis	0.60	39	P	Pg	13 57 34.1	-0.3
LKD2	Lefkada island	0.66	25	P	Pg	13 57 35.5	+0.1
PDO	Prodromos	0.80	59	P	Pg	13 57 37.6	-0.5
PVO	Paravola	1.05	66	P	Pg	13 57 42.1	-0.7

*TIR **08** 13:57:25.1, 41°.49N×19°.47E, h20^{km}, Md3.1/6*

*BEO **08** 13:57:27.4±0.5, 41°.42N×19°.44E, h13^{km}±2^{km}, ML2.9/15*

*PDG **08** 13:57:27.1±0.4, 41°.49N×19°.50E, h16^{km}, MD3.3/1, ML3.2/12, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*

*SKO **08** 13:57:27.6, 41°.44N×19°.45E, h9^{km}*

*THE **08** 13:57:28.4, 41°.54N×19°.52E, h4^{km}±1^{km}, ML2.9/2, Error ellipse: s-maj=1.8km s-min=1.0km az=81.0*

*IDC **08** 13:57:38.3±6.5, 42°.59N×21°.39E, h0^{km}, mb3.7/2, mb1 3.6/4, mb1mx3.2/38, mbtmp3.5/4, ML2.8/2, Error ellipse: s-maj=130.5km s-min=25.8km az=24.0*

ISC 08 13:57:26.8±1.0**, 41°.52N**±0°.02×**19°.44E**±0°.02**, h13**^{km}±7^{km}**, n75, σ1^{s}13**/104**, 6C-10D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.36	118	P	Pg	13 57 34.1	-0.1
TIR				S	Sg	13 57 39.4	+0.4
	3µm,0.3s						
TIR	Tirane	0.36	118	ePg	Pg	13 57 34.0	-0.1
TIR				eSg	Sg	13 57 39.5	+0.4
TIR	Tirane	0.36	118	i PG	Pg	13 57 33.9	-0.2
TIR				i SG	Sg	13 57 39.5	+0.4
TIR	Tirane	0.36	118	⇓P	Pg	13 57 34.0	-0.1
TIR				⇓S	Sg	13 57 39.6	+0.6
PUK	Puka	0.62	33	i PG	Pg	13 57 38.7	-0.3
PUK				i SG	Sb	13 57 49.1	+0.9
PHP	Peshkopia	0.77	77	P	Pg	13 57 41.2	-0.5
PHP				S	Sg	13 57 52.2	+0.4
PHP	Peshkopia	0.77	77	i PG	Pg	13 57 40.4	-1.3
PHP				i SG	Sg	13 57 52.0	+0.2
PDG	Podgorica	0.92	351	ePg	Pn	13 57 45.5	+0.1
PDG				eSg	Sn	13 58 00.6	+2.1
PDG	Podgorica	0.92	351	⇑P	Pn	13 57 46.5	+1.1
PDG				⇑S	Sn	13 57 59.5	+1.0
PDG	Podgorica	0.92	351	ePn	Pb	13 57 44.3	-0.3
BCI	Bajram Curri	0.97	29	i PG	Pb	13 57 44.6	-0.8
BCI				i SG	Sn	13 58 00.1	+0.4
OHR	Ohrid	1.10	111	i Pg	Pb	13 57 46.4	-1.3
OHR				i Sg	Sn	13 58 03.2	+0.2
OHR				eLg	Lg	13 58 03.8	
	comp=N,255nm,0.7s						
OHR				eLg	Lg	13 58 08.5	
	comp=E,189nm,0.5s						
HCY	Herceg Novi	1.17	323	ePn	Pg	13 57 49.9	+0.6
TPE	Tepelena	1.30	160	P	Pg	13 57 52.5	+0.7
TPE	Tepelena	1.30	160	i PN	Pg	13 57 52.0	+0.3
TPE				i SN	Sg	13 58 08.7	0.0
TREB	Trebinje	1.45	326	ePn	Pb	13 57 53.9	+0.3
DBRK	Dubrovnik	1.50	320	ePn	Pg	13 57 55.9	+0.3
DBRK				Sg	Sg	13 58 14.8	-0.3
BRY	Bratogost	1.54	334	ePn	Pg	13 57 56.3	0.0
SKO	Skopje	1.56	73	i Pg	Pb	13 57 55.9	+0.4
SKO				i Sg	Sg	13 58 16.8	-0.3
FNA	Florina	1.64	116	P	Pb	13 57 56.4	-0.4
FNA				S	Sb	13 58 18.2	+0.8
	comp=E,400nm,0.4s						
FNA	Florina	1.64	116	i PN	Pb	13 57 56.7	-0.1
FNA				i SN	Sb	13 58 16.9	-0.5
NEST	Nestorio	1.64	132	P	Pb	13 57 57.5	+0.5
NEST				S	Sg	13 58 18.9	-0.8
UPM	Unac-Piva	1.73	347	ePn	Pn	13 57 57.7	+1.0
SJES	Sjenica	1.78	13	ePn	Pg	13 58 00.8	-0.3
STON	Ston	1.87	317	ePn	Pn	13 57 59.8	+1.3
STON				eSn	Sb	13 58 24.4	+0.3
STON	Ston	1.87	317	ePn	Pg	13 58 02.1	-0.6
STON				Sg	Sn	13 58 23.1	+1.2
STON	Ston	1.87	317	ePn	Pb	13 58 00.1	-0.7
BAI	Bari	1.97	259	ePn	Pn	13 58 00.4	+0.5
STIP	Stip	2.06	84	ePn	Pb	13 58 04.6	+0.5
STIP				eSn	Sg	13 58 33.2	0.0
RUDO	Rudo	2.10	359	ePn	Pb	13 58 03.8	-0.9
SELS	Selova	2.10	36	ePn	Pn	13 58 02.8	+1.1
SELS				eSn	Sn	13 58 29.8	+2.0
IVAS	Ivanjica	2.12	14	ePn	Pn	13 58 03.2	+1.2
IVAS				eSn	Sb	13 58 31.2	-0.2
KPRO	Kipourio	2.14	136	P	Pb	13 58 04.3	-1.1
KZN	Kozani	2.14	124	P	Pb	13 58 04.3	-1.2
BARS	Barje	2.19	53	ePn	Pn	13 58 04.3	+1.4

BARS	Barje	2.19	53	ePn	Pg	13 58 16.7	+7.9
BARS				eSn	Sb	13 58 32.3	-1.0
SG1	Sgolgore (BA)	2.19	253	ePn	Pn	13 58 03.4	+0.5
MATE	Matera	2.24	248	⇓P	Pn	13 58 03.7	+0.1
GRG	Griva	2.30	103	P	Pn	13 58 05.7	+1.3
BBLS	Lazići	2.34	359	ePn	Pb	13 58 08.4	-0.5
BBLS	Lazići	2.34	359	ePn	Pb	13 58 08.6	-0.3
VAY	Valandovo	2.36	94	ePn	Pn	13 58 06.2	+1.0
VAY	Valandovo	2.36	94	ePn	Pn	13 58 05.9	+0.7
VAY				eSn	Sb	13 58 36.4	-1.8
VAY				eLg	Lg	13 58 43.8	
	comp=N,72nm,0.7s						
VAY				eLg	Lg	13 58 44.6	
	comp=E,55nm,0.6s						
BOSS	Bosilegrad	2.46	66	ePn	Pn	13 58 07.8	+1.1
GRUS	Gruza	2.55	21	ePn	Pn	13 58 09.5	+1.7
HAPS	Han Pijesak,BI	2.59	352	ePn	Pn	13 58 09.7	+1.2
HAPS	Han Pijesak,BI	2.59	352	ePn	Pn	13 58 09.5	+1.0
DIVS	Divibare	2.61	9	ePn	Pn	13 58 10.5	+1.8
DIVS	Divibare	2.61	9	ePn	Pn	13 58 09.8	+1.1
RICI	Ricice	2.61	320	ePn	Pn	13 58 09.5	+0.8
RICI				Sn	Sn	13 58 40.0	-0.2
KNT	Kendrikon	2.63	97	P	Pn	13 58 10.0	+1.1
BOVS	Bovan	2.69	38	ePn	Pn	13 58 11.0	+1.2
HVAR	Hvar	2.77	308	ePn	Pb	13 58 15.4	-0.7
HVAR				Sn	Sn	13 58 44.8	+0.7
TRUS	Trudelj	2.79	14	ePn	Pb	13 58 14.4	-2.1
ZAPS	Zavoj	2.94	52	ePn	Pn	13 58 15.4	+2.1
ZAPS				eSn	Sn	13 58 49.7	+1.3
VTS	Vitosha	3.03	68	ePn	Pn	13 58 15.8	+1.3
VTS	Vitosha	3.03	68	⇓P	Pn	13 58 15.8	+1.3
VTS				⇑S	Sn	13 58 51.9	+1.2
ZAGS	Zajecar	3.08	41	ePn	Pn	13 58 16.0	+0.9
TIP	Timpagrande	3.11	222	⇓P	Pn	13 58 16.1	+0.5
KIJV	Kijevo	3.34	319	ePn	Pn	13 58 20.4	+1.7
KIJV				Sn	Sn	13 58 58.7	+0.5
MORI	Morici	3.62	312	ePn	Pn	13 58 25.1	+2.7
MORI				Sn	Sn	13 59 02.8	-2.2
BLY	Banja Luka	3.62	334	⇓P	Pn	13 58 23.2	+0.6
FRGS	Fruska Gora	3.65	4	ePn	Pn	13 58 18.7	-4.2
MDVR	Moldovita	3.66	26	⇓P	Pn	13 58 24.4	+1.2
HERR	Herculane	4.00	32	⇓P	Pn	13 58 29.1	+1.4
DUGI	Dugi Otok	4.06	309	ePn	Pn	13 58 30.9	+2.3
DUGI				Sn	Sn	13 59 17.0	+0.9
BZS	Buzias	4.39	20	⇓P	Pn	13 58 33.9	+0.8
GZR	Gura Zlata	4.57	31	⇑P	Pn	13 58 37.0	+1.4
ARR	Arges	5.39	43	⇑P	Pn	13 58 48.2	+1.3
VOIR		5.65	44	⇓P	Pn	13 58 52.1	+1.6
MLR	Muntele Rosu	6.17	48	⇑P	Pn	13 58 58.6	+0.9
GERES	GERESS Array B	8.37	333	Pn	Pb	13 59 40.3	-11
	comp=E,0.1nm,0.3s,baz=141,slow=13,SNR=2.5						
FINES	FINESS Array B	20.35	9	P	P	14 02 02.2	-0.4
	comp=E,0.1nm,0.3s,baz=183,slow=12,SNR=2.6						
ZALV	Zalesovo Beam	44.14	50	P	P	14 05 33.4	-1.3
	comp=E,0.6nm,0.4s,baz=289,slow=8.8,SNR=3.0						
MKAR	Makanchi Array	44.33	61	P	P	14 05 35.7	-0.8
	comp=E,0.5nm,0.5s,baz=287,slow=7.2,SNR=9.4						

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*THE **08** 14:03:06.9, 38°.18N×20°.28E, h8^{km}±1^{km}, ML2.7/3, Error ellipse: s-maj=1.0km s-min=0.4km az=77.0*
*ATH **08** 14:03:06.6, 38°.18N×20°.27E, h9^{km}±2^{km}, ML2.8/5, Error ellipse: s-maj=2.6km s-min=1.4km az=75.0*
ISC 08 14:03:06.1±1.9, **38°.17N**±0°.04×**20°.24E**±0°.09, **h11**^{km}±5^{km}, **n34**, σ**0**^{s}**.29**/54, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.09	71	P	Pg	14 03 08.8	+0.2
KEF3				S	Sg	14 03 09.9	-0.5
CHV1	Chavriata, Kef	0.11	85	P	Pg	14 03 09.1	+0.2
AGT1	Agia Thekli	0.14	56	P	Pg	14 03 09.5	+0.2
AGT1				S	Sg	14 03 11.2	-0.3
LXRA	Lixouri, Kepha	0.16	80	P	Pg	14 03 09.9	+0.3
LXRA				S	Sg	14 03 11.9	-0.1
LXR1	Lixouri, Cepha	0.16	80	P	Pg	14 03 09.9	+0.3
LXR1				S	Sg	14 03 11.9	-0.2
KEF4	Livadi, Kephal	0.17	60	P	Pg	14 03 10.0	+0.2
KEF4				S	Sg	14 03 12.1	-0.2
ARGA	Argostoli. Kep	0.19	89	P	Pg	14 03 10.4	+0.3
ARGA				S	Sg	14 03 12.9	0.0
KEF2	Argostoli. Kep	0.19	93	P	Pg	14 03 10.6	+0.3
KEF2				S	Sg	14 03 13.1	+0.1
ARG2	Argostoli	0.20	89	P	Pg	14 03 10.5	+0.3
KEF1	Kardakata, Kep	0.21	60	P	Pg	14 03 10.6	+0.1
KEF1				S	Sg	14 03 13.3	-0.2
VLS	Valsamata	0.28	89	P	Pg	14 03 11.7	0.0
VLS				S	Sg	14 03 15.2	-0.3
VLS	Valsamata	0.28	89	P	Pg	14 03 11.6	0.0
VLS				S	Sg	14 03 15.1	-0.3
VLS				AML	AML	14 03 15.3	
	comp=N,19921μm,0.1s						
VLS				AML	AML	14 03 15.7	
	comp=E,19324μm,0.1s						
KONA	Konidatara, Ke	0.36	46	P	Pg	14 03 13.4	+0.1
KONA				S	Sg	14 03 18.3	+0.2
KONA				AML	AML	14 03 19.1	
	comp=N,6760μm,0.3s						
KONA				AML	AML	14 03 20.2	
	comp=E,4634μm,0.3s						
KFL	Anninata	0.44	98	P	Pg	14 03 14.6	-0.1
KFL				S	Sg	14 03 20.6	+0.1
	comp=E,2μm,0.3s						
KFL	Anninata	0.44	98	P	Pg	14 03 14.6	-0.1
KFL				S	Sg	14 03 20.5	0.0
KFL				AML	AML	14 03 21.9	
	comp=N,5001μm,0.3s						
KFL				AML	AML	14 03 22.1	
	comp=E,4345μm,0.3s						
EVGI	Lefkada island	0.55	36	P	Pg	14 03 16.9	0.0
EVGI				S	Sg	14 03 24.8	+0.6
EVGI	Lefkada island	0.55	36	P	Pg	14 03 16.9	0.0
EVGI				S	Sg	14 03 24.6	+0.5
MGNA	Meganis	0.65	42	P	Pg	14 03 18.5	-0.1
KRI1	kERI	0.69	138	P	Pg	14 03 19.4	0.0
KRI1				S	Sb	14 03 29.4	-0.2
	comp=E,1μm,0.2s						
LKD2	Lefkada island	0.69	28	P	Pg	14 03 19.6	0.0
LKD2				S	Sb	14 03 29.5	-0.5
LKD2	Lefkada island	0.69	28	P	Pg	14 03 19.4	-0.2
TSLK	Tsoukalades, L	0.73	26	P	Pg	14 03 20.2	0.0
TSLK	Tsoukalades, L	0.73	26	P	Pg	14 03 20.2	0.0
TSLK				AML	AML	14 03 37.8	
	comp=N,556μm,0.5s						
TSLK				AML	AML	14 03 38.5	
	comp=E,474μm,0.3s						
VTN	Vitineika	0.79	109	P	Pg	14 03 21.6	+0.2
PDO	Prodromos	0.85	60	P	Pg	14 03 22.3	-0.3
PDO				S	Sb	14 03 34.8	+0.3
PDO	Prodromos	0.85	60	P	Pg	14 03 22.1	-0.5
PDO				AML	AML	14 03 36.9	
	comp=N,987μm,0.3s						
PDO				AML	AML	14 03 37.9	
	comp=E,1073μm,0.3s						
RLS	Riolos of Patr	0.97	96	P	Pg	14 03 24.6	-0.3
RLS				S	Sb	14 03 38.6	+0.7
PVO	Paravola	1.10	66	P	Pb	14 03 26.9	-0.3
PVO				S	Sn	14 03 42.9	+0.1
	comp=E,208nm,0.5s						
PVO	Paravola	1.10	66	P	Pb	14 03 26.9	-0.3
DRO	Drossia	1.18	100	P	Pb	14 03 28.3	-0.3
DRO	Drossia	1.18	100	P	Pb	14 03 28.0	-0.6
ALIK	Aliki, Aigiali	1.48	86	P	Pb	14 03 33.5	-0.1
KLV	Kalavryta, Ach	1.51	94	P	Pn	14 03 33.6	+0.4
MAKR	Makrakomi, Fth	1.70	60	P	Pg	14 03 38.6	-0.2

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*TIR **08** 14:04:21.2, 41°.51N×19°.47E, h20^{km}, Md2.8/5*
*PDG **08** 14:04:22.6±0.3, 41°.51N×19°.56E, h15^{km}, ML2.9/11, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*
*SKO **08** 14:04:23.0, 41°.52N×19°.50E, h0^{km}*
*BEO **08** 14:04:24.3±0.6, 41°.49N×19°.59E, h14^{km}±3^{km}, ML2.5/11*
ISC 08 14:04:22.5±1.1, **41°.47N**±0°.04×**19°.46E**±0°.03, **h14**^{km}±8^{km}, **n48**, σ**0**^{s}**.76**/61, **11C-3D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.33	112	ePg	Pg	14 04 28.9	-0.3
TIR				eSg	Sg	14 04 34.5	+0.8
TIR	Tirane	0.33	112	⇓P	Pg	14 04 29.0	-0.2
TIR				⇑S	Sg	14 04 34.4	+0.7
PDG	Podgorica	0.97	351	ePg	Pn	14 04 42.2	+0.5
PDG				eSg	Sn	14 04 56.1	+0.8
PDG	Podgorica	0.97	351	⇑P	Pb	14 04 40.8	-0.3
PDG				⇑S	Sn	14 04 55.3	0.0
PDG	Podgorica	0.97	351	ePn	Pb	14 04 40.6	-0.5
OHR	Ohrid	1.07	109	ePg	Pb	14 04 42.3	-0.5
OHR				eSg	Sn	14 04 58.2	+0.5
OHR				eLg	Lg	14 04 58.7	
	comp=N,96nm,0.6s						
OHR				eLg	Lg	14 05 02.0	
	comp=E,67nm,0.5s						
HCY	Herceg Novi	1.22	324	ePn	Pn	14 04 45.3	+0.2
TREB	Trebinje	1.50	327	ePn	Pb	14 04 50.5	+0.4
TREB	Trebinje	1.50	327	ePn	Pn	14 04 48.9	0.0
DBRK	Dubrovnik	1.55	321	ePn	Pg	14 04 51.9	-0.3
DBRK				Sg	Sb	14 05 10.9	+0.5
SKO	Skopje	1.56	71	ePg	Pn	14 04 50.4	+0.6
SKO				eSg	Sb	14 05 10.7	-0.1
BRY	Bratogost	1.59	335	ePn	Pb	14 04 51.7	0.0
UPM	Unac-Piva	1.78	347	ePn	Pg	14 04 56.2	-0.5
SJES	Sjenica	1.83	12	ePn	Pb	14 04 54.6	-1.2
STON	Ston	1.92	317	ePn	Pb	14 04 58.4	+1.2
STON	Ston	1.92	317	ePn	Pb	14 04 57.3	0.0
STON				Sn	Sn	14 05 19.0	+0.3
STON	Ston	1.92	317	ePn	Pb	14 04 56.9	-0.3
STIP	Stip	2.06	83	ePn	Pb	14 04 59.6	0.0
STIP				eSn	Sb	14 05 25.2	+0.2
SELS	Selova	2.14	35	ePn	Pn	14 04 57.6	-0.2
RUDO	Rudo	2.15	358	ePn	Pb	14 05 00.5	-0.7
IVAS	Ivanjica	2.17	13	ePn	Pn	14 04 58.9	+0.7
BARS	Barje	2.21	52	ePn	Pn	14 04 59.3	+0.6
VAY	Valandovo	2.34	93	ePn	Pn	14 05 00.8	+0.3
VAY	Valandovo	2.34	93	ePn	Pn	14 05 01.0	+0.4
VAY				eSn	Sb	14 05 31.1	-2.1
VAY				eLg	Lg	14 05 37.7	
	comp=N,32nm,0.7s						
VAY				eLg	Lg	14 05 39.3	
	comp=E,27nm,0.6s						
BBLS	Lazići	2.40	359	ePn	Pb	14 05 04.0	-1.4
BBLS	Lazići	2.40	359	ePn	Pb	14 05 05.5	+0.1
BOSS	Bosilegrad	2.47	64	ePn	Pn	14 05 02.8	+0.4
GRUS	Gruza	2.59	20	ePn	Pn	14 05 05.5	+1.6
HAPS	Han Pijesak,BI	2.64	352	ePn	Pn	14 05 06.1	+1.3
HAPS	Han Pijesak,BI	2.64	352	ePn	Pn	14 05 03.9	-0.9
DIVS	Divibare	2.66	8	ePn	Pn	14 05 05.6	+0.6
DIVS	Divibare	2.66	8	ePn	Pn	14 05 05.1	+0.1
RICI	Ricice	2.66	320	ePn	Pn	14 05 06.0	+1.1
RICI				Sn	Sn	14 05 38.0	+1.1
BOVS	Bovan	2.73	37	ePn	Pn	14 05 06.4	+0.6
HVAR	Hvar	2.81	308	i Pn	Pb	14 05 10.5	-2.0
HVAR				Sn	Sn	14 05 41.1	+0.4
TRUS	Trudelj	2.84	14	ePn	Pn	14 05 08.6	+1.2
ZAPS	Zavoj	2.96	51	ePn	Pn	14 05 10.6	+1.5
VTS	Vitosha	3.04	67	ePn	Pn	14 05 11.0	+0.8
VTS	Vitosha	3.04	67	⇓P	Pn	14 05 10.9	+0.7
VTS				⇑S	Sn	14 05 46.5	+0.1
TIP	Timpagrande	3.08	223	⇓P	Pn	14 05 10.9	+0.1
ZAGS	Zajecar	3.11	40	ePn	Pn	14 05 11.1	0.0
BLY	Banja Luka	3.68	334	⇑P	Pn	14 05 18.1	-0.9
MDVR	Moldovita	3.70	26	⇑P	Pn	14 05 19.5	+0.2
HERR	Herculane	4.04	31	⇑P	Pn	14 05 23.9	0.0
BZS	Buzias	4.43	20	⇑P	Pn	14 05 29.1	-0.1
GZR	Gura Zlata	4.61	30	⇑P	Pn	14 05 31.9	+0.2
ARR	Arges	5.42	42	⇑P	Pn	14 05 43.2	+0.3
VOIR		5.68	44	⇑P	Pn	14 05 46.2	-0.3

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*IDC **08** 14:07:33.6±1.0, 20°.21N×120°.47E, h0^{km}, mb3.5/6, mb1 3.7/7, mb1mx3.5/57, mbtmp3.5/7, ML3.1/1, Error ellipse: s-maj=49.8km s-min=19.3km az=77.0*
ISC 08 14:07:37.7±1.1, **20°.2N**±0°.1×**120°.4E**±0°.3, **h28**^{km}, **n7**, σ**0**^{s}**.92**/7, **mb3.4**/6, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	18.39	19	P	Pn	14 11 50.9	+0.4
	0.1nm,0.3s,baz=202,slow=12,SNR=3.8						
SONM	Songino Array	29.82	341	P	P	14 13 41.3	-1.1
	0.5nm,0.8s,baz=159,slow=8.7,SNR=3.6						
MKAR	Makanchi Array	40.80	320	P	P	14 15 17.3	+0.7
	0.2nm,0.5s,baz=112,slow=8.9,SNR=6.5						
WRA	Warramunga Arr	42.16	160	P	P	14 15 27.3	-0.6
	0.8nm,0.9s,baz=341,slow=9.0,SNR=8.0						
ASAR	Alice Springs	45.54	163	P	P	14 15 55.6	+0.5
	0.6nm,0.5s,baz=346,slow=7.1,SNR=37						
ILAR	Eielson Array	73.06	27	P	P	14 19 04.3	-0.6
	0.2nm,0.6s,baz=264,slow=4.4,SNR=5.1						
YKA	Yellowknife Ar	86.89	22	P	P	14 20 20.4	+0.8
	0.4nm,0.7s,baz=317,slow=4.3,SNR=10						

TAP 08 14:07:58.1, 23°.22N×121°.07E, h7^{km}**, ML1.1, 1C-1D, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDTW	Lidau	0.06	238	⇓iP	Pg	14 07 59.9	-0.1
	baz=234						
ELDTW				i S	Sg	14 08 01.6	+0.3
	baz=234						
FULB	Fuli	0.20	96	⇑iP	Pg	14 08 02.6	+0.4
	baz=95						
FULB				i S	Sg	14 08 05.9	+0.9
	baz=95						
TWF1	Yuli	0.24	58	i P	Pg	14 08 03.3	+0.4
	baz=58						
TWF1				S	Sg	14 08 06.6	+0.3
	baz=58						
YULB	Yu-li	0.27	50	i P	Pg	14 08 03.5	+0.1
	baz=50						
YULB				eS	Sg	14 08 08.0	+1.0
	baz=50						
STYT	Tauyuan	0.30	259	eP	Pg	14 08 04.3	+0.4
	baz=259						
STYT				eS	Sg	14 08 08.7	+0.8
	baz=259						
EHY	Hungye	0.36	39	eP	Pg	14 08 05.5	+0.3
	baz=39						
EHY				eS	Sg	14 08 10.7	+0.7
	baz=39						
TPUB	Ta-pu	0.41	281	eP	Pb	14 08 08.2	+0.5
	baz=289						
TPUB				eS	Sb	14 08 14.2	0.0
	baz=289						
HGSD	Ruisui	0.42	50	eP	Pb	14 08 07.5	-0.3
	baz=43						
HGSD				eS	Sb	14 08 14.2	-0.2
	baz=43						
WTP	Ta-pu	0.42	273	eP	Pb	14 08 07.5	-0.5
	baz=271						
WTP				eS	Sb	14 08 14.4	-0.1
	baz=271						
VWDT	VWDT	0.53	7	eP	Pg	14 08 08.4	0.0
	baz=12						
VWDT				eS	Sb	14 08 16.6	-1.1
	baz=12						

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*IDC **08** 14:19:47.6±1.3, 41°.23N×19°.34E, h0^{km}, mb3.7/8, mb1 3.8/12, mb1mx3.6/36, mbtmp3.7/12, ML3.3/4, MS3.0/2, Ms1 3.0/2, ms1mx2.4/43, Error ellipse: s-maj=20.6km s-min=14.0km az=24.0*
*TIR **08** 14:19:52.1, 41°.52N×19°.48E, h12^{km}, Md2.8/8*
*NEIC **08** 14:19:52.7±2.6, 41°.56N±0°.05×19°.48E±0°.05, h10^{km}±1^{km}, Error ellipse: s-maj=7.1km s-min=5.1km az=209.0*
*BEO **08** 14:19:52.2±0.6, 41°.46N×19°.37E, h4^{km}±2^{km}, ML3.3/16*
*PDG **08** 14:19:53.5±0.4, 41°.54N×19°.56E, h12^{km}, MD3.4/6, ML3.4/12, Error ellipse: s-maj=0.5km s-min=0.9km az=0.0*
*SKO **08** 14:19:53.9, 41°.46N×19°.50E, h16^{km}*
*THE **08** 14:19:53.8, 41°.58N×19°.54E, h4^{km}±1^{km}, ML3.5/2, Error ellipse: s-maj=1.9km s-min=0.9km az=116.0*
*LDG **08** 14:19:53.5±0.1, 41°.51N×19°.54E, h10^{km}, Ml3.4/14, Error ellipse: s-maj=3.2km s-min=1.8km az=27.0*
ISC 08 14:19:52.8±0.9, **41°.51N**±0°.02×**19°.47E**±0°.02, **h24**^{km}±7^{km}, **n177**, σ**2**^{s}**.12**/234, **mb3.9**/8, **14C-19D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.34	118	P	Pb	14 19 59.8	-0.5
TIR				S	Sb	14 20 05.4	+0.1
	8μm,0.3s						
TIR	Tirane	0.34	118	ePg	Pb	14 19 59.7	-0.5
TIR				eSg	Sb	14 20 05.0	-0.3
TIR	Tirane	0.34	118	i PG	Pb	14 19 59.5	-0.8
TIR				i SG	Sb	14 20 04.5	-0.8
TIR	Tirane	0.34	118	⇓P	Pb	14 19 59.6	-0.6
TIR				⇓S	Sb	14 20 05.2	-0.1
TIR	Tirane	0.34	118		Pb	14 19 59.6	-0.6
TIR				Sg	Sb	14 20 05.8	+0.5
PUK	Puka	0.62	30	i PG	Pb	14 20 04.5	-0.6
PUK				i SG	Sb	14 20 13.9	+0.5
PHP	Peshkopia	0.75	76	P	Pb	14 20 06.5	-0.7
PHP				S	Sb	14 20 16.6	-0.4
PHP	Peshkopia	0.75	76	i PG	Pb	14 20 06.0	-1.2
PHP				i SG	Sn	14 20 18.7	+0.1
PDG	Podgorica	0.94	350	ePg	Pb	14 20 09.7	-0.6
PDG				eSg	Sb	14 20 22.6	+0.3
PDG	Podgorica	0.94	350	⇓P	Pn	14 20 11.9	+1.5
PDG				⇓S	Sn	14 20 25.7	+2.6
PDG	Podgorica	0.94	350	ePn	Pb	14 20 10.1	-0.2
PDG	Podgorica	0.94	350		Pn	14 20 11.3	+0.9
BCI	Bajram Curri	0.97	27	i PG	Pb	14 20 10.0	-0.9
BCI				i SG	Sn	14 20 25.8	+1.9
VLO	Vlora	1.04	179	P	Pn	14 20 14.6	+2.8
VLO	Vlora	1.04	179	i PG	Pn	14 20 13.4	+1.6
VLO				i SG	Sn	14 20 29.2	+3.6
OHR	Ohrid	1.07	111	i Pg	Pb	14 20 12.1	-0.7
OHR				i Sg	Sn	14 20 29.0	+2.4
OHR				eLg	Lg	14 20 29.6	
	comp=N,709nm,0.7s						
OHR				eLg	Lg	14 20 34.5	
	comp=E,566nm,0.5s						
HCY	Herceg Novi	1.19	323	ePn	Pb	14 20 16.0	+1.3
TPE	Tepelena	1.28	161	P	Pb	14 20 18.7	+2.6
TPE				S	Sb	14 20 37.0	+4.9
	comp=E,2μm,0.8s						
TPE	Tepelena	1.28	161	i PN	Pb	14 20 17.6	+1.4
TPE				i SN	Sb	14 20 35.3	+3.1
TREB	Trebinje	1.47	326	ePn	Pb	14 20 19.7	+0.3
TREB	Trebinje	1.47	326	ePn	Pb	14 20 20.7	+1.3
DBRK	Dubrovnik	1.52	320	ePn	Pb	14 20 22.9	+2.6
DBRK				Sn	Sb	14 20 42.3	+3.1
SKO	Skopje	1.54	72	i Pg	Pb	14 20 21.2	+0.5
SKO				i Sg	Sb	14 20 42.3	+2.5
BRY	Bratogost	1.56	334	ePn	Pb	14 20 21.7	+0.7
FNA	Florina	1.61	116	P	Pb	14 20 22.0	+0.2
FNA	Florina	1.61	116	i PN	Pb	14 20 22.0	+0.2
FNA				i SN	Sb	14 20 43.8	+2.1
FNA	Florina	1.61	116		Pb	14 20 21.9	0.0
NEST	Nestorio	1.62	132	P	Pb	14 20 22.9	+0.9
SCTE	Santa Cesarea	1.62	208	i PN	Pb	14 20 22.9	+0.9
SCTE	Santa Cesarea	1.62	208		Pb	14 20 23.0	+1.0
CGL1	Ceglie Messapi	1.73	241	⇓iPn	Pb	14 20 22.4	-1.5
UPM	Unac-Piva	1.75	346	ePn	Pb	14 20 25.7	+1.4
SJES	Sjenica	1.79	12	ePg	Pb	14 20 26.2	+1.2
SJES				eSg	Sb	14 20 50.6	+3.5
STON	Ston	1.90	317	ePn	Pb	14 20 25.3	-1.4
STON				eSn	Sb	14 20 49.0	-0.9
STON	Ston	1.90	317	ePn	Pb	14 20 28.0	+1.3
STON				Sn	Sb	14 20 48.8	-1.0
STON	Ston	1.90	317	ePn	Pb	14 20 26.6	-0.1
TAR1	Taranto	1.92	240	ePn	Pn	14 20 24.5	+0.5
BAI	Bari	1.99	259	⇓iPn	Pn	14 20 26.1	+1.1
STIP	Stip	2.04	84	ePn	Pb	14 20 30.1	+0.9
SELS	Selova	2.10	35	ePn	Pb	14 20 28.6	-1.6
RUDO	Rudo	2.11	358	ePn	Pb	14 20 28.9	-1.5
KPRO	Kipourio	2.11	137	P	Pb	14 20 30.1	-0.3
KZN	Kozani	2.12	124	P	Pb	14 20 30.2	-0.3
JAN	Janina	2.13	150	P	Pb	14 20 29.5	-1.1
IVAS	Ivanjica	2.13	13	ePn	Pn	14 20 28.4	+1.5
IVAS				eSn	Sb	14 20 57.4	+0.7
BARS	Barje	2.18	52	ePn	Pb	14 20 44.2	+13
SG1	Sgolgore (BA)	2.21	253	⇓iPn	Pn	14 20 29.0	+1.0
GRG	Griva	2.28	103	P	Pb	14 20 31.1	-2.1
KTI	Kastanea	2.29	118	P	Pb	14 20 31.3	-2.2
VAY	Valandovo	2.34	94	ePn	Pn	14 20 31.4	+1.8
VAY	Valandovo	2.34	94	i P	Pn	14 20 31.5	+1.8
VAY	Valandovo	2.34	94	ePn	Pn	14 20 31.5	+1.8
VAY				eSn	Sb	14 21 01.9	-0.7
VAY				eLg	Lg	14 21 09.5	
	comp=N,205nm,0.7s						
VAY				eLg	Lg	14 21 10.3	
	comp=E,192nm,0.8s						
BBLS	Lazići	2.36	359	ePn	Pb	14 20 32.6	-2.0
BBLS	Lazići	2.36	359	ePn	Pn	14 20 31.9	+1.8
BOSS	Bosilegrad	2.45	65	ePn	Pn	14 20 33.5	+2.2
MAKA	Makarska	2.54	315	ePn	Pn	14 20 34.3	+1.8
MAKA				Sn	Sn	14 21 02.2	-0.5
GRUS	Gruza	2.55	21	ePn	Pn	14 20 34.7	+2.0
HAPS	Han Pijesak,BI	2.61	352	ePn	Pn	14 20 35.3	+1.7
HAPS				eSn	Sb	14 21 08.7	-1.8
HAPS	Han Pijesak,BI	2.61	352	ePn	Pn	14 20 35.2	+1.7
DIVS	Divibare	2.62	8	ePn	Pn	14 20 36.0	+2.3
DIVS				eSn	Sb	14 21 09.4	-1.4
DIVS	Divibare	2.62	8	ePn	Pn	14 20 35.2	+1.5
LIT	Litokhoron	2.69	121		Pn	14 20 36.5	+1.9
BOVS	Bovan	2.69	37	ePn	Pn	14 20 37.2	+2.6
KKB	Krupnik	2.73	81	i P	Pb	14 20 38.1	-2.8
ACER	Acerenza	2.76	256		Pn	14 20 37.1	+1.5
HVAR	Hvar	2.79	308	ePn	Pb	14 20 40.1	-1.9
HVAR				Sn	Sn	14 21 11.9	+2.9
TRUS	Trudelj	2.80	14	ePn	Pn	14 20 39.3	+3.2
SGRT	San Giovanni R	2.81	276		Pn	14 20 37.1	+0.9
ZAPS	Zavoj	2.93	52	ePn	Pn	14 20 41.2	+3.3
VTS	Vitosha	3.01	67	ePn	Pn	14 20 41.4	+2.2
VTS	Vitosha	3.01	67	⇑P	Pn	14 20 41.4	+2.2
VTS				⇑S	Sn	14 21 15.2	+0.6
VTS	Vitosha	3.01	67	i P	Pn	14 20 41.4	+2.2
VTS	Vitosha	3.01	67		Pn	14 20 41.5	+2.4
TEKS	Tekeris	3.04	1	ePn	Pb	14 20 48.6	+2.4
ZAGS	Zajecar	3.08	41	ePn	Pn	14 20 41.6	+1.7
TIP	Timpagrande	3.12	223	Pn	Pn	14 20 41.4	+0.9
BLKB	Belogradchik	3.17	47	⇑S	Sn	14 21 21.5	+3.1
MMB	Musomiste	3.20	87	i P	Pn	14 20 44.3	+2.7
AGG	Agios Georgios	3.31	138		Pn	14 20 45.6	+2.5
KUBS	Kucevo	3.32	28	ePn	Pn	14 20 44.6	+1.3
KIJV	Kijevo	3.37	319	ePn	Pn	14 20 45.2	+1.3
KIJV				Sn	Sn	14 21 22.1	-1.0
MGRS	Mrkonjic Grad	3.40	330	ePn	Pn	14 20 48.0	+3.7
ZIRJ	Zirje	3.55	308	ePn	Pn	14 20 47.6	+1.3
ZIRJ				Sn	Sn	14 21 27.6	+0.1
MORI	Morici	3.64	312	ePn	Pn	14 20 49.3	+1.7
MORI				Sn	Sn	14 21 29.8	0.0
BLY	Banja Luka	3.65	333	⇓P	Pn	14 20 50.7	+3.0
BLY				⇓S	Sn	14 21 33.8	+3.8
BLY	Banja Luka	3.65	333	ePn	Pb	14 20 54.3	-2.2
FRGS	Fruska Gora	3.66	4	ePn	Pn	14 20 44.1	-3.8
MPEP	Malo Peshtene	3.66	58	i P	Pn	14 20 50.9	+3.0
MDVR	Moldovita	3.66	26	⇓P	Pn	14 20 50.0	+2.0
MDVR				⇓S	Sn	14 21 29.7	-0.7
PAOL	Paolisi	3.73	264	Pn	Pn	14 20 51.2	+2.3
RZN	Rozhen	3.94	86	i P	Pn	14 20 55.4	+3.5
HERR	Herculane	4.00	32	⇓P	Pn	14 20 54.8	+2.3
HERR				⇑S	Sn	14 21 41.0	+2.3
DUGI	Dugi Otok	4.09	309	ePn	Pn	14 20 56.4	+2.6
DUGI				Sn	Sn	14 21 40.7	-0.2
INTR	Introdacqua	4.20	279		Pn	14 20 57.1	+1.8
PLVB	Pleven	4.25	62	⇑P	Pn	14 20 57.3	+1.4
BZS	Buzias	4.39	20	⇑P	Pn	14 20 59.7	+1.7
BZS				⇑S	Sn	14 21 48.6	+0.2
NVLJ	Novalja	4.55	314	ePn	Pn	14 21 01.0	+0.9
NVLJ				Sn	Sn	14 21 49.9	-2.2
GZR	Gura Zlata	4.57	31	⇑P	Pn	14 21 02.7	+2.3
GZR				⇓S	Sn	14 21 53.0	+0.1
ITM	Ithomi	4.72	155	Pn	Pn	14 21 03.6	+1.1
NRCA	Norcia	4.91	288		Pn	14 21 07.2	+2.1
ELND	Elena	4.96	71	⇓P	Pn	14 21 07.8	+2.0
LOT	Lotru	5.03	37	⇓P	Pn	14 21 09.3	+2.5
CRES	Cresnjev	5.21	327	ePn	Pn	14 21 11.2	+2.0
ARR	Arges	5.39	43	⇓P	Pn	14 21 13.8	+2.1
ARR				⇓S	Sn	14 22 15.4	+2.5
BRJN	Brijuni	5.39	311	ePn	Pn	14 21 13.3	+1.7
BRJN				Sn	Sn	14 22 12.5	-0.3
MURB	Monte Urbino	5.44	291		Pn	14 21 14.1	+1.8
CEY	Cerknica	5.59	321	ePn	Pn	14 21 16.0	+1.5
VOIR		5.65	44	⇓P	Pn	14 21 16.9	+1.6
DRGR		5.77	23	⇑P	Pn	14 21 18.3	+1.3
DRGR				⇑S	Sn	14 22 20.9	-1.6
SOKA	Soboth	6.08	330	i Pn	Pn	14 21 24.2	+3.1
	comp=E,1.0nm,0.2s						
SOKA				eSn	Sn	14 22 29.2	-0.7
	comp=E,5.5nm,0.8s						

OBKA	Obir	6.13	326	ePn	Pn	14 21 26.3	+4.4
	comp=E,1.0nm,0.2s						
MLR	Muntele Rosu	6.17	48	Pn	Pn	14 21 26.1	+3.7
	comp=E,1.2nm,0.3s,baz=170,slow=4.7,SNR=11						
MLR				Sn	Sn	14 22 38.0	+5.8
	comp=E,0.2nm,0.3s,baz=317,slow=18,SNR=2.1						
MLR	Muntele Rosu	6.17	48	⇓P	Pn	14 21 24.3	+1.9
DOPR	Dopca	6.18	42	⇑P	Pn	14 21 24.3	+1.7
ARSA	Arzberg	6.40	335	i Pn	Pn	14 21 27.8	+2.2
	comp=E,1.0nm,0.3s						
PSZ	Piszkesteto	6.42	3	⇑P	Pn	14 21 28.0	+2.1
PLOR	Plostina	6.78	48	⇑P	Pn	14 21 32.1	+1.4
VRI	Vrincioaia	6.83	48	⇑P	Pn	14 21 33.6	+2.2
TEOL	Teolo	6.86	307	Pn	Pn	14 21 33.0	+1.1
VYHS	Vyhne	7.00	357	eSN	Sn	14 22 50.7	-1.9
KBA	Koelnbreinsper	7.09	324	i Pn	Pn	14 21 39.1	+3.9
	comp=E,1.3nm,0.3s						
KBA				eSn	Sn	14 22 55.9	+0.8
	comp=E,2.4nm,0.6s						
ABTA	Abfaltersbach	7.25	319	ePn	Pn	14 21 38.2	+1.0
	comp=E,0.7nm,0.3s						
ABTA				eSn	Sn	14 22 58.5	-0.2
	comp=E,10nm,0.8s						
CTI	Castel Tesino	7.25	311	Pn	Pn	14 21 38.4	+1.0
MOA	Molln	7.34	331	ePn	Pn	14 21 43.6	+5.1
	comp=E,0.8nm,0.2s						
MOA				eSn	Sn	14 23 05.5	+4.4
	comp=E,2.3nm,0.3s						
IDI	Anoyia	7.53	144	Pn	Pn	14 21 40.7	-0.4
	comp=E,0.3nm,0.3s,baz=216,slow=19,SNR=2.4						
IDI				Sn	Sn	14 23 00.7	-5.0
	comp=E,0.5nm,0.3s,baz=252,slow=18,SNR=2.8						
SALO	Salr	7.69	305	Pn	Pn	14 21 44.1	+0.9
MSSA	Maissana	7.83	294	Pn	Pn	14 21 46.4	+1.2
PGF	Pioggiola	7.87	281	ePn	Pn	14 21 46.1	+0.3
PGF				eSn	Sn	14 23 11.9	-2.2
	comp=E,0.7nm,0.3s						
WTTA	Wattenberg	8.04	318	ePn	Pn	14 21 51.8	+3.6
	comp=E,1.2nm,0.2s						
WTTA				eSn	Sn	14 23 18.2	-0.1
	comp=E,6.8nm,0.4s						
WATA	Walderalm	8.11	319	ePn	Pn	14 21 52.6	+3.4
	comp=E,1.9nm,0.5s						
WATA				eSn	Sn	14 23 21.6	+1.4
	comp=E,5.7nm,0.6s						
MOTA	Moosalm	8.36	317	ePn	Pn	14 21 53.4	+0.8
	comp=E,3.0nm,0.5s						
MOTA				eSn	Sn	14 23 28.0	+1.8
	comp=E,11nm,0.9s						
FUORN	Ofenpass-Fuorn	8.37	311	Pn	Pn	14 21 54.2	+1.4
GERES	GERESS Array B	8.39	333	Pn	Pn	14 21 55.1	+2.2
	comp=E,0.1nm,0.3s,baz=160,slow=12,SNR=2.9						
GERES				Sn	Sn	14 23 30.0	+3.1
	comp=E,0.3nm,0.3s,baz=156,slow=22,SNR=5.8						
DAVOX	Davos/Dischmat	8.68	311	Pn	Pn	14 21 58.0	+1.0
	comp=E,0.3nm,0.3s,baz=153,slow=14,SNR=3.7						
DAVOX				Sn	Sn	14 23 35.4	+1.3
	comp=E,0.6nm,0.3s,baz=143,slow=20,SNR=3.7						
TUE	Stuetta	8.82	308	Pn	Pn	14 22 00.1	+1.2
SBF	Sospel	9.17	289	ePn	Pn	14 22 04.5	+0.9
ELL	Elmali	9.40	117	Pn	Pn	14 22 07.3	+0.5
FRF	La Foret Royal	9.69	286	ePn	Pn	14 22 10.2	-0.4
FRF				eSn	Sn	14 23 53.5	-5.2
	comp=E,0.5nm,0.2s						
LMR	La Mourre	9.76	285	ePn	Pn	14 22 12.6	+1.0
LMR				eSn	Sn	14 23 56.2	-4.2
	comp=E,0.9nm,0.3s						
KEST	Kesra	9.79	237	LR	LR	14 26 38.7	
	comp=E,92nm,18.6s,baz=266,slow=43						
KEST	Kesra	9.79	237	Pn	Pn	14 22 14.2	+2.0
MBDF	Montbardon	9.83	293	ePn	Pn	14 22 12.3	-0.4
MBDF				eSn	Sn	14 23 57.2	-5.1
	comp=E,1.1nm,0.3s						
BNI	Bardonecchia	9.98	295	Pn	Pn	14 22 16.6	+1.9
LPG	La Plagne	10.06	298	ePn	Pn	14 22 16.6	+0.6
LPL	La Plagne	10.08	298	ePn	Pn	14 22 17.0	+0.8
LPL				eSn	Sn	14 24 02.5	-6.1
	comp=E,2.6nm,0.2s						
ORIF	Oris-en-Rattie	10.49	294	ePn	Pn	14 22 22.4	+0.7
ORIF				eSn	Sn	14 24 14.0	-4.5
	comp=E,1.8nm,0.4s						
SMRF	Simiane la Rot	10.52	288	ePn	Pn	14 22 21.8	-0.2
SMRF				eSn	Sn	14 24 14.4	-4.6
	comp=E,0.7nm,0.3s						
CABF	La Chapelle	10.89	302	ePn	Pn	14 22 26.6	-0.6
CABF				eSn	Sn	14 24 22.7	-5.7
	comp=E,1.1nm,0.4s						
BRTR	Keskin Array B	10.92	95	LR	LR	14 26 55.1	
	comp=E,56nm,18.5s,baz=302,slow=39						
HINF	Hinteralfeld	10.97	309	ePn	Pn	14 22 28.7	+0.5
HINF				eSn	Sn	14 24 24.6	-5.6
	comp=E,1.2nm,0.3s						
CDF	Champ du Feu	11.05	313	ePn	Pn	14 22 29.9	+0.5
CDF				eSn	Sn	14 24 27.9	-4.3
	comp=E,1.3nm,0.5s						
LOR	Lormes	12.56	303	ePn	Pn	14 22 50.5	+0.6
	baz=116						
LOR				eSn	Sn	14 25 01.8	-7.1
	comp=E,2.1nm,0.4s						
HFS	Hagfors	18.99	351	P	Pn	14 24 14.1	+1.0
	comp=E,0.1nm,0.3s,baz=188,slow=8.7,SNR=2.8						
FINES	FINESS Array B	20.36	9	P	P	14 24 27.3	0.0
	comp=E,3.5nm,0.9s,baz=194,slow=3.1,SNR=4.2						
ABKAR	Akbulak array	29.18	61	P	P	14 25 57.5	+5.5
ARU	Arti	29.21	46	P	P	14 25 52.5	+0.2
	comp=E,0.9nm,0.7s,baz=247,slow=4.5,SNR=4.6						
ARU	Arti	29.21	46	IAmb	IAmb	14 25 53.2	
	comp=Z,2.9nm,0.8s						
BRVK	Borovoye	35.63	53	P	P	14 26 49.6	+1.2
BRVK				IAmb	IAmb	14 26 50.5	
	comp=Z,3.5nm,0.7s						
ZALV	Zalesovo Beam	44.13	50	P	P	14 27 59.3	+0.2
	comp=Z,2.5nm,0.7s,baz=276,slow=8.8,SNR=9.1						
ZALV	Zalesovo Beam	44.13	50	P	P	14 27 58.8	-0.2
MK31	Makanchi Array	44.32	61	P	P	14 28 01.1	+0.4
MKAR	Makanchi Array	44.32	61	P	P	14 28 01.4	+0.6
	comp=Z,2.3nm,0.7s,baz=284,slow=6.9,SNR=33						
MKAR	Makanchi Array	44.32	61	P	P	14 28 01.1	+0.3
DANN	Dangsing	53.20	83	eP	P	14 29 08.8	-0.7
	comp=Z,14nm,0.7s						
DMN	Daman	54.60	83	eP	P	14 29 19.1	-0.6
	comp=Z,8.8nm,0.7s						
PKIN	Phulchoki	54.83	82	eP	P	14 29 20.4	-1.0
	comp=Z,4.3nm,0.6s						
PKI	Pulchoki	54.84	82	eP	P	14 29 20.5	-1.0
	comp=Z,6.1nm,0.7s						
GUN	Gumba	55.01	82	eP	P	14 29 22.0	-0.8
	comp=Z,13nm,0.8s						
JIRN	Jiri	55.38	82	eP	P	14 29 24.8	-0.6
	comp=Z,14nm,0.7s						
RAMN	Ramite	56.07	82	eP	P	14 29 29.4	-0.9
	comp=Z,13nm,0.6s						
TAPN	Taplejung	56.67	81	eP	P	14 29 33.6	-1.0
	comp=Z,3.9nm,0.6s						
ODAN	Odare	56.71	82	eP	P	14 29 34.2	-0.6
	comp=Z,9.0nm,0.7s						
SONM	Songino Array	59.00	52	P	P	14 29 49.8	-0.7
	comp=Z,0.2nm,0.5s,baz=297,slow=6.6,SNR=3.1						
YKA	Yellowknife Ar	69.99	339	P	P	14 31 02.2	+0.4
	comp=Z,0.3nm,0.7s,baz=39,slow=5.4,SNR=4.9						
CMAR	Chiang Mai Arr	70.24	83	P	P	14 31 03.5	-0.7
	comp=Z,0.3nm,0.3s,baz=282,slow=4.3,SNR=3.4						
ILAR	Eielson Array	73.52	354	P	P	14 31 22.9	-0.2
	comp=Z,0.2nm,0.6s,baz=13,slow=8.3,SNR=3.9						
ASAR	Alice Springs	123.25	93	PKP	PKPdf	14 38 46.1	-1.6
	comp=Z,0.2nm,0.7s,baz=347,slow=3.8,SNR=2.9						

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*TIR **08** 14:24:17.2, 41°.53N×19°.58E, h14^{km}, Md2.6/5*
*PDG **08** 14:24:17.2±0.2, 41°.54N×19°.55E, h11^{km}, ML2.7/12, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
*SKO **08** 14:24:18.0, 41°.56N×19°.71E, h0^{km}*
ISC 08 14:24:17.0±1.0, **41°.54N**±0°.04×**19°.56E**±0°.03, **h15**^{km}±8^{km}, **n18**, σ**0^{s}.74**/30, **2C-6D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.30	129	i PG	Pg	14 24 22.8	-0.4
TIR				i SG	Sg	14 24 27.3	-0.2
TIR	Tirane	0.30	129	⇑P	Pg	14 24 22.9	-0.4
TIR				⇑S	Sg	14 24 28.3	+0.8
PUK	Puka	0.57	26	i PG	Pg	14 24 27.8	-0.4
PUK				i SG	Sb	14 24 36.4	-0.3
PHP	Peshkopia	0.68	77	i PG	Pg	14 24 29.8	-0.5
PHP				i SG	Sb	14 24 39.7	-0.2
BCI	Bajram Curri	0.91	25	i PG	Pg	14 24 33.9	-0.8
BCI				i SG	Sb	14 24 46.9	+0.3
PDG	Podgorica	0.92	346	⇓P	Pg	14 24 35.1	+0.3
PDG				⇓S	Sn	14 24 49.1	+0.7
OHR	Ohrid	1.03	114	i Pg	Pg	14 24 35.5	-1.4
OHR				i Sg	Sn	14 24 52.4	+1.2
OHR				eLg	Lg	14 24 55.0	
	comp=N,40nm,0.4s						
OHR				eLg	Lg	14 24 57.5	
	comp=E,45nm,0.5s						
SKO	Skopje	1.48	72	i Pg	Pg	14 24 44.7	-0.7
SKO				i Sg	Sg	14 25 06.1	+1.6
FNA	Florina	1.57	118	i PG	Pg	14 24 55.9	+8.8
STON	Ston	1.92	315	ePg	Pb	14 24 51.8	+0.2
STON				Sg	Sn	14 25 12.7	-0.3
STIP	Stip	1.98	85	ePn	Pb	14 24 53.1	+0.4
STIP				eSn	Sg	14 25 20.5	-0.2
VAY	Valandovo	2.28	94	ePn	Pb	14 24 57.8	0.0
VAY				eSn	Sn	14 25 22.3	+0.5
VAY				eLg	Lg	14 25 31.1	
	comp=N,16nm,0.8s						
MATE	Matera	2.33	249	⇓P	Pb	14 24 59.0	+0.3
MAKA	Makarska	2.57	314	Sg	Sn	14 25 27.7	-1.3
RICI	Ricice	2.65	318	Sg	Sn	14 25 30.4	-0.7
HVAR	Hvar	2.83	307	ePn	Pb	14 25 07.1	-0.1
HVAR				Sn	Sn	14 25 36.4	+1.0
HERR	Herculane	3.94	31	⇓P	Pn	14 25 16.7	-0.3
BZS	Buzias	4.35	19	⇓P	Pn	14 25 22.9	+0.4
BZS				⇓S	Sn	14 26 11.8	-1.1

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*IDC **08** 14:54:05.2±10.0, 22°.12S×177°.00W, h195^{km}±101^{km}, mb3.4/6, mb1 3.7/7, mb1mx3.5/27, mbtmp3.9/7, Error ellipse: s-maj=65.6km s-min=24.3km az=168.0*
*NEIC **08** 14:54:12.8±1.6, 22°.6S±0°.2×176°.95W±0°.03, h276^{km}±8^{km}, mb4.1/14, Error ellipse: s-maj=22.4km s-min=4.6km az=179.0*
ISC 08 14:54:10.8±0.7, **22°.6S**±0°.1×**176°.9W**±0°.1, **h250**^{km}, **n27**, σ**1^{s}.43**/28, **mb3.7**/12, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.76	315	Pn	Pn	14 55 50.5	+1.8
RAR	Rarotonga	15.99	88	P	P	14 57 41.6	+0.1
URZ	Urewera	16.40	197	P	P	14 57 48.7	+2.8
	0.6nm,0.3s,baz=352,slow=0.9,SNR=6.5						
URZ				S	S	15 00 45.3	+0.7
	0.2nm,0.3s,baz=343,slow=19,SNR=3.9						
URZ	Urewera	16.40	197	IAmb	IAmb	14 57 55.6	
	comp=Z,30nm,1.3s						
ARMA	Armidale	29.11	248	P	P	14 59 46.5	-2.2
ARMA				IAmb	IAmb	15 00 00.3	
	comp=Z,23nm,1.4s						
EIDS	Eidsvold	29.31	258	P	P	14 59 48.4	-2.0
TAU	Tasmania Unive	35.86	227	P	P	15 00 44.8	-2.1
STKA	Stephens Creek	37.81	247	P	P	15 01 04.6	+1.1
	comp=Z,1.3nm,0.5s,baz=98,slow=12,SNR=6.8						
STKA	Stephens Creek	37.81	247	P	P	15 01 04.5	+1.1
BBOO	Buckleboo	42.53	246	P	P	15 01 43.0	+0.8
BBOO				IAmb	IAmb	15 01 53.9	
	comp=Z,5.3nm,1.0s						
AS31	Alice Springs	45.03	259	P	P	15 02 02.2	+0.1
ASAR	Alice Springs	45.03	259	P	P	15 02 02.1	0.0
	comp=Z,3.9nm,0.7s,baz=96,slow=7.7,SNR=57						
ASAR				PcP	PcP	15 03 39.2	+0.6
	comp=Z,0.4nm,0.7s,baz=99,slow=3.8,SNR=4.4						
ASAR	Alice Springs	45.03	259	P	P	15 02 00.8	-1.3
WR0	Warramunga Arr	45.13	264	P	P	15 02 02.5	-0.4
WR0				IAmb	IAmb	15 02 04.9	
	comp=Z,4.5nm,1.1s						
WB0	Warramunga Arr	45.31	264	P	P	15 02 03.4	-0.9
WB0				IAmb	IAmb	15 02 07.2	
	comp=Z,14nm,1.4s						
WB2	Warramunga Arr	45.31	264	P	P	15 02 03.4	-1.0
WB2				IAmb	IAmb	15 02 04.2	
	comp=Z,2.7nm,0.7s						
WRAB	Tennant Creek	45.31	264	P	P	15 02 03.7	-0.7
WRA	Warramunga Arr	45.32	264	P	P	15 02 03.4	-1.0
	comp=Z,1.2nm,0.4s,baz=95,slow=7.9,SNR=34						
WRA	Warramunga Arr	45.32	264	P	P	15 02 03.6	-0.8
FORT	Forrest	49.39	248	P	P	15 02 36.0	+0.4
FITZ	Fitzroy Crossi	53.75	264	P	P	15 03 07.2	-0.7
FITZ				IAmb	IAmb	15 03 09.7	
	comp=Z,8.3nm,1.4s						
NVAR	Mina Array Bea	81.90	43	P	P	15 06 01.7	-1.0
	comp=Z,0.1nm,0.4s,baz=219,slow=7.0,SNR=2.9						
TXAR	Lajitas Array	87.38	57	P	P	15 06 29.6	-0.5
	comp=Z,0.3nm,0.7s,baz=215,slow=7.7,SNR=3.1						
CMAR	Chiang Mai Arr	91.75	289	P	P	15 06 51.0	+0.4
	comp=Z,0.2nm,0.3s,baz=157,slow=2.7,SNR=3.3						
AKASG	Malin Array Be	145.34	330	PKP	PKPdf	15 13 16.9	-1.6
	comp=Z,0.2nm,0.3s,baz=44,slow=4.1,SNR=3.0						
BRTR	Keskin Array B	148.97	310	PKPbc	PKPdf	15 13 28.6	+3.5
	comp=Z,0.5nm,0.6s,baz=40,slow=2.5,SNR=3.1						
CLL	Collm	150.34	347	ePKPbc	PKPbc	15 13 32.0	-0.2

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*IDC **08** 15:06:27.8±0.8, 41°.42N×19°.41E, h0^{km}, mb3.9/12, mb1 4.0/23, mb1mx3.8/53, mbtmp3.8/23, ML3.7/11, Error ellipse: s-maj=13.5km s-min=10.4km az=25.0*
*MOS **08** 15:06:29.5±1.0, 41°.51N×19°.39E, h19^{km}, mb4.7/7, Error ellipse: s-maj=7.0km s-min=4.8km az=71.2*
*NEIC **08** 15:06:30.8±3.3, 41°.44N±0°.04×19°.43E±0°.05, h11^{km}±1^{km}, Error ellipse: s-maj=6.4km s-min=4.9km az=169.0*
*PRU **08** 15:06:30.7±0.0, 41°.22N×19°.38E, h16^{km}, M4.3*
*BEO **08** 15:06:31.7±0.5, 41°.43N×19°.47E, h14^{km}±2^{km}, ML3.8/21*
*TIR **08** 15:06:31.6, 41°.53N×19°.54E, h13^{km}, Md3.9/6*
*LDG **08** 15:06:31.4±0.1, 41°.55N×19°.52E, h10^{km}, Ml3.8/25, Error ellipse: s-maj=2.8km s-min=1.8km az=22.0*
*NEIC **08** 15:06:31.6, 41°.47N×19°.40E, h29^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.35; $M_{\theta\theta}$0.58; $M_{\phi\phi}$-0.93; $M_{r\theta}$0.56; $M_{\theta\phi}$0.60; $M_{\phi r}$-0.74; Fault plane solution: $M_0$1.37000×10^{15} NP1:ϕ_s126.91000°, δ81.49000°, λ49.36000°. NP2:ϕ_s27.12000°, δ41.37000°, λ167.06000°. Principal axes: T 1.0325, Plg39.0000°, Azm0.0000°; N 0.5240, Plg40.0000°, Azm134.0000°; P -1.5565, Plg25.0000°, Azm248.0000°;*
*MED_RC **08** 15:06:32.0±0.6, 41°.51N×19°.44E, h26^{km}±1^{km}, MW4.2/7, Moment Tensor Solution.Mantle waves: s7,c7; Duration: 1^{s}.0 Moment tensor: Scale 10^{15}Nm; M_{rr}2.80±.52; $M_{\theta\theta}$-1.14±.63; $M_{\phi\phi}$-1.66±.31; $M_{r\theta}$-0.04±.27; $M_{\theta\phi}$-0.69±.28; $M_{\phi r}$-1.11±.15; Best double couple: $M_0$2.69000×10^{15} NP1:ϕ_s41.00000°, δ35.00000°, λ104.00000°. NP2: ϕ_s204.00000°, δ56.00000°, λ80.00000°. Principal axes: T 3.0600, Plg76.0000°, Azm83.0000°; N -0.7500, Plg8.0000°, Azm209.0000°; P -2.3200, Plg11.0000°, Azm301.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*
*SKO **08** 15:06:32.0, 41°.51N×19°.44E, h0^{km}*
*THE **08** 15:06:32.4, 41°.57N×19°.56E, h4^{km}±1^{km}, ML3.7/3, Error ellipse: s-maj=1.6km s-min=0.9km az=125.0*
PDG 08 15:06:31.4±0.2, **41°.49N**×**19°.51E**, **h17**^{km}, **MD4.3**/13, **ML4.0**/12, **Error ellipse: s-maj=0.5km s-min=0.7km az=0.0, Albania**
ISC 08 15:06:31.4±0.8, **41°.51N**±0°.02×**19°.47E**±0°.02, **h25**^{km}±6^{km}, **n334**, σ**2^{s}.45**/398, **mb4.2**/17, **20C-19D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.34	118	P	Pb	15 06 38.2	-0.7
TIR				S	Sb	15 06 43.3	-0.8
	16μm,0.4s						
TIR	Tirane	0.34	118	ePg	Pb	15 06 38.0	-0.9
TIR				eSg	Sb	15 06 43.7	-0.3
TIR	Tirane	0.34	118	i PG	Pb	15 06 38.1	-0.7
TIR				i SG	Sb	15 06 43.1	-1.0
TIR	Tirane	0.34	118	⇓P	Pb	15 06 38.0	-0.9
TIR				⇓S	Sb	15 06 43.7	-0.3
TIR	Tirane	0.34	118		Pb	15 06 38.0	-0.9
TIR				Sg	Sb	15 06 43.7	-0.3
PUK	Puka	0.62	30	i PG	Pb	15 06 43.1	-0.6
PUK				i SG	Sb	15 06 52.3	+0.3
PHP	Peshkopia	0.75	76	P	Pb	15 06 44.8	-1.0
PHP	Peshkopia	0.75	76	i PG	Pb	15 06 44.6	-1.2
PHP				i SG	Sb	15 06 56.0	+0.4
PDG	Podgorica	0.94	350	ePg	Pb	15 06 51.0	+2.1
PDG				eSg	Sb	15 07 03.7	+2.8
PDG	Podgorica	0.94	350	⇓P	Pn	15 06 49.2	+0.3
PDG				⇓S	Sb	15 07 03.5	+2.6
PDG	Podgorica	0.94	350	ePn	Pn	15 06 48.9	0.0
PDG	Podgorica	0.94	350		Pb	15 06 50.5	+1.6
PDG					Sb	15 07 03.1	+2.2
BCI	Bajram Curri	0.97	27	i PG	Pn	15 06 49.0	-0.4
BCI				i SG	Sn	15 07 03.0	+0.7
VLO	Vlora	1.04	179	P	Pb	15 06 52.7	+2.0
VLO				S	Sb	15 07 09.2	+5.4
VLO	Vlora	1.04	179	i PG	Pb	15 06 52.7	+2.0
VLO				i SG	Sb	15 07 08.2	+4.3
OHR	Ohrid	1.08	111	i Pg	Pn	15 06 50.6	-0.3
OHR				i Sg	Sb	15 07 07.3	+2.3
OHR				eLg	Lg	15 07 07.6	
	comp=N,2μm,0.8s						
OHR				eLg	Lg	15 07 11.8	
	comp=E,1μm,0.7s						
HCY	Herceg Novi	1.19	323	ePn	Pb	15 06 54.4	+1.2
TPE	Tepelena	1.28	161	P	Pb	15 06 56.5	+1.8
TPE				S	Sb	15 07 15.0	+4.3
	comp=E,4μm,0.9s						
TPE	Tepelena	1.28	161	i PG	Pb	15 06 56.1	+1.4
TPE				i SG	Sb	15 07 14.8	+4.0
TREB	Trebinje	1.47	326	ePn	Pb	15 06 58.7	+0.7
TREB	Trebinje	1.47	326	ePn	Pb	15 06 58.3	+0.3
SKO	Skopje	1.54	72	i Sg	Sb	15 07 21.5	+3.1
BRY	Bratogost	1.56	334	ePn	Pb	15 06 59.9	+0.3
FNA	Florina	1.61	116	P	Pb	15 07 00.6	+0.1
FNA				S	Sb	15 07 22.2	+1.8
	comp=E,1μm,1.0s						
FNA	Florina	1.61	116	P	Pb	15 07 00.5	+0.1
FNA	Florina	1.61	116		Pb	15 07 00.5	+0.1
NEST	Nestorio	1.62	132	P	Pb	15 07 01.5	+0.9
SCTE	Santa Cesarea	1.62	208		Pn	15 06 59.5	+1.1
CGL1	Ceglie Messapi	1.73	241	⇓i Pn	Pn	15 07 01.0	+1.1
UPM	Unac-Piva	1.75	346	ePn	Pb	15 07 03.8	+1.0
SJES	Sjenica	1.79	12	ePn	Pb	15 07 03.3	-0.3
SJES				eSn	Sb	15 07 27.0	+1.4
PENT	Pentalofos	1.82	135	P	Pb	15 07 04.0	-0.1
STON	Ston	1.89	317	ePn	Pb	15 07 04.3	-0.9
STON				eSn	Sb	15 07 28.1	-0.3
STON	Ston	1.89	317	ePn	Pn	15 07 03.8	+1.7
TAR1	Taranto	1.92	240	⇓i Pn	Pn	15 07 03.2	+0.7
BAI	Bari	1.99	259	⇓i Pn	Pn	15 07 04.7	+1.3
STIP	Stip	2.04	84	ePn	Pb	15 07 08.7	+0.9
STIP				eSn	Sb	15 07 38.0	+5.2
SELS	Selova	2.10	35	ePn	Pn	15 07 07.0	+2.0
SELS				eSn	Sn	15 07 33.3	+2.9
RUDO	Rudo	2.11	358	ePn	Pn	15 07 07.1	+2.0
KPRO	Kipourio	2.12	137	P	Pb	15 07 08.4	-0.6
KZN	Kozani	2.12	124	P	Pb	15 07 08.3	-0.8
JAN	Janina	2.13	150	P	Pb	15 07 08.2	-1.0
IVAS	Ivanjica	2.13	13	ePn	Pn	15 07 07.6	+2.2
IVAS				eSn	Sb	15 07 34.9	-0.3
BARS	Barje	2.18	52	ePn	Pn	15 07 08.3	+2.2
BARS	Barje	2.18	52	ePn	Pb	15 07 21.1	+11
SG1	Sgolgore (BA)	2.21	253	⇓i Pn	Pn	15 07 07.7	+1.2
MATE	Matera	2.26	249	⇑P	Pn	15 07 08.4	+1.3
MATE	Matera	2.26	249		Pn	15 07 08.4	+1.3
GRG	Griva	2.28	103	P	Pn	15 07 09.3	+1.9
VAY	Valandovo	2.34	94	ePn	Pn	15 07 10.1	+1.9
VAY				eSn	Sn	15 07 38.9	+2.7
VAY	Valandovo	2.34	94	i P	Pn	15 07 09.7	+1.5
VAY	Valandovo	2.34	94	ePn	Pn	15 07 10.2	+2.0
VAY				eSn	Sb	15 07 41.3	+0.1
VAY				eLg	Lg	15 07 49.0	
	comp=E,394nm,0.8s						
VAY				eLg	Lg	15 07 50.2	
	comp=N,1μm,1.3s						
BBLS	Lazići	2.36	359	ePn	Pb	15 07 11.7	-1.5
BBLS	Lazići	2.36	359	ePn	Pn	15 07 11.0	+2.4
BOSS	Bosilegrad	2.45	65	ePn	Pn	15 07 12.0	+2.2
GRUS	Gruza	2.55	21	ePn	Pn	15 07 13.2	+2.1
HAPS	Han Pijesak,BI	2.60	352	ePn	Pn	15 07 14.1	+2.1
HAPS	Han Pijesak,BI	2.60	352	ePn	Pn	15 07 13.7	+1.7
DIVS	Divibare	2.62	8	ePn	Pn	15 07 14.3	+2.1
DIVS	Divibare	2.62	8	ePn	Pn	15 07 13.8	+1.6
LIT	Litokhoron	2.69	121	P	Pn	15 07 14.5	+1.4
LIT	Litokhoron	2.69	121		Pn	15 07 14.5	+1.4
BOVS	Bovan	2.69	37	ePn	Pn	15 07 14.9	+1.8
KKB	Krupnik	2.73	81	i P	Pn	15 07 16.6	+3.0
ACER	Acerenza	2.76	256		Pn	15 07 15.9	+1.9
TRUS	Trudelj	2.80	14	ePn	Pn	15 07 17.2	+2.6
SGRT	San Giovanni R	2.80	276		Pn	15 07 15.8	+1.1
ZAPS	Zavoj	2.93	52	ePn	Pn	15 07 19.5	+3.0
VTS	Vitosha	3.02	67	ePn	Pn	15 07 20.2	+2.5
VTS	Vitosha	3.02	67	⇑P	Pn	15 07 19.7	+2.0
VTS				⇓S	Sn	15 07 55.4	+2.4
VTS	Vitosha	3.02	67	i P	Pn	15 07 19.7	+2.0
VTS	Vitosha	3.02	67	P	Pn	15 07 19.9	+2.2
VTS	Vitosha	3.02	67		Pn	15 07 19.9	+2.2
TEKS	Tekeris	3.04	1	ePn	Pn	15 07 21.1	+3.2
TEKS	Tekeris	3.04	1	ePn	Pn	15 07 20.0	+2.1
ZAGS	Zajecar	3.08	41	ePn	Pn	15 07 20.2	+1.9
TIP	Timpagrande	3.12	223	⇑P	Pn	15 07 19.7	+0.7
TIP	Timpagrande	3.12	223		Pn	15 07 20.0	+1.0
MMB	Musomiste	3.20	87	i P	Pn	15 07 22.6	+2.5
AGG	Agios Georgios	3.31	138	P	Pn	15 07 24.2	+2.6
AGG	Agios Georgios	3.31	138		Pn	15 07 24.2	+2.6
KUBS	Kucevo	3.32	28	ePn	Pn	15 07 23.3	+1.5
MGRS	Mrkonjic Grad	3.39	330	ePn	Pn	15 07 25.5	+2.7
BLY	Banja Luka	3.65	333	⇑P	Pn	15 07 29.0	+2.8
BLY	Banja Luka	3.65	333	ePn	Pn	15 07 28.7	+2.5
BLY	Banja Luka	3.65	333		Pn	15 07 28.7	+2.5
PGB	Panagyurishte	3.65	72	i P	Pn	15 07 29.0	+2.7
FRGS	Fruska Gora	3.66	4	ePn	Pn	15 07 22.8	-3.6
MDVR	Moldovita	3.66	26	⇑P	Pn	15 07 28.4	+1.9
MDVR	Moldovita	3.66	26		Pn	15 07 28.4	+1.9
MPEP	Malo Peshtene	3.66	58	i P	Pn	15 07 29.0	+2.6
PAOL	Paolisi	3.73	264		Pn	15 07 29.7	+2.4
RZN	Rozhen	3.94	86	i P	Pn	15 07 33.0	+2.6
PLD	Plovdiv	3.96	80	i P	Pn	15 07 33.9	+3.4
HERR	Herculane	4.00	32	⇑P	Pn	15 07 33.3	+2.2
HERR	Herculane	4.00	32		Pn	15 07 33.3	+2.2
SRE	Strehaia	4.17	40	⇑P	Pn	15 07 35.8	+2.3
SRE	Strehaia	4.17	40	P	Pn	15 07 35.8	+2.3
SRE	Strehaia	4.17	40		Pn	15 07 35.8	+2.3
INTR	Introdacqua	4.19	279		Pn	15 07 35.5	+1.7
PLVB	Pleven	4.25	62	⇓P	Pn	15 07 37.3	+2.8
PLVB	Pleven	4.25	62		Pn	15 07 37.2	+2.8
BZS	Buzias	4.39	20	⇑P	Pn	15 07 38.0	+1.5
BZS				⇑S	Sn	15 08 27.1	+0.3
BZS	Buzias	4.39	20	P	Pn	15 07 38.0	+1.5
BZS	Buzias	4.39	20		Pn	15 07 38.0	+1.5
GZR	Gura Zlata	4.57	31	⇑P	Pn	15 07 40.6	+1.6
GZR	Gura Zlata	4.57	31	P	Pn	15 07 40.6	+1.6
GZR	Gura Zlata	4.57	31		Pn	15 07 40.6	+1.6
AQU	L'Aquila	4.61	283	ePn	Pn	15 07 41.5	+2.0
AQU	L'Aquila	4.61	283	P	Pn	15 07 41.4	+2.0
AQU	L'Aquila	4.61	283		Pn	15 07 41.4	+2.0
PVL	Pavlikeni	4.67	67	i P	Pb	15 07 56.6	+4.1
ITM	Ithomi	4.72	155	Pn	Pn	15 07 42.6	+1.6
NRCA	Norcia	4.91	288		Pn	15 07 45.9	+2.3
ELND	Elena	4.96	71	⇑P	Pn	15 07 46.7	+2.4
ELND	Elena	4.96	71		Pn	15 07 46.7	+2.4
LOT	Lotru	5.03	37	⇓P	Pn	15 07 47.6	+2.3
LOT	Lotru	5.03	37		Pn	15 07 47.6	+2.3
BOJS	Bojanci	5.04	324	ePn	Pn	15 07 47.3	+2.0
BOJS				eSn	Sn	15 08 42.4	-0.3
HUMR	Humele	5.04	51	⇓P	Pn	15 07 48.2	+2.8
HUMR	Humele	5.04	51		Pn	15 07 48.2	+2.8
CRES	Cresnjev	5.21	327	ePn	Pn	15 07 49.5	+1.9
RIY	Rijeka	5.27	318	ePn	Pn	15 07 50.3	+1.8
ARR	Arges	5.39	43	⇑P	Pn	15 07 53.1	+2.9
ARR	Arges	5.39	43		Pn	15 07 53.1	+2.9
MURB	Monte Urbino	5.43	291		Pn	15 07 53.2	+2.4
CEY	Cerknica	5.59	321	ePn	Pn	15 07 54.8	+1.8
VOIR		5.65	44	⇓P	Pn	15 07 56.6	+2.8
VOIR		5.65	44	P	Pn	15 07 56.6	+2.8
VOIR		5.65	44		Pn	15 07 56.6	+2.8
DRGR		5.77	23	⇑P	Pn	15 07 57.5	+2.0
DRGR				⇑S	Sn	15 09 00.6	-0.4
DRGR		5.77	23	P	Pn	15 07 57.5	+2.0
DRGR		5.77	23		Pn	15 07 57.5	+2.0
LJU	Ljubljana	5.78	323	ePn	Pn	15 07 57.1	+1.6
JAVS	Javornik	5.88	320	i Pn	Pn	15 07 58.5	+1.5
SOKA	Soboth	6.08	330	ePn	Pn	15 08 01.5	+1.8
	comp=N,3.9nm,0.3s,SNR=4.9						
SOKA				eSn	Sn	15 09 07.2	-1.2
	comp=N,15nm,0.6s						
OBKA	Obir	6.13	326	ePn	Pn	15 08 02.5	+2.1
	comp=N,2.9nm,0.3s						

OBKA				eSn	Sn	15 09 08.4	-1.3
	comp=N,16nm,0.5s						
MLR	Muntele Rosu	6.17	48	Pn	Pn	15 08 03.9	+3.0
	comp=N,3.1nm,0.3s,baz=156,slow=5.8,SNR=21						
MLR				Sn	Sn	15 09 13.3	+2.7
	comp=N,0.2nm,0.3s,baz=282,slow=19,SNR=1.9						
MLR	Muntele Rosu	6.17	48	⇑P	Pn	15 08 03.5	+2.6
MLR	Muntele Rosu	6.17	48	P	Pn	15 08 03.9	+3.0
MLR						15 09 13.3	
MLR	Muntele Rosu	6.17	48		Pn	15 08 05.8	+4.8
MLR	Muntele Rosu	6.17	48		Sn	15 09 13.3	+2.7
ARSA	Arzberg	6.40	335	ePn	Pn	15 08 05.9	+1.8
	comp=N,1.4nm,0.3s						
OSSC	Osservatorio P	6.40	291		Pn	15 08 06.2	+2.1
PSZ	Piszkesteto	6.42	3	⇑P	Pn	15 08 06.2	+1.9
PSZ	Piszkesteto	6.42	3	P	Pn	15 08 06.3	+1.9
PSZ	Piszkesteto	6.42	3		Pn	15 08 06.3	+1.9
PSZ	Piszkesteto	6.42	3		Pn	15 08 06.2	+1.9
CASP	Castiglione de	6.52	284	Pn	Pn	15 08 07.1	+1.4
MYKA	Terra Mystica	6.62	323	ePn	Pn	15 08 08.5	+1.4
	comp=N,2.3nm,0.3s						
MYKA				i Sn	Sn	15 09 21.0	-0.8
	comp=N,11nm,0.6s						
PLOR	Plostina	6.78	48	⇑P	Pn	15 08 12.3	+3.1
PLOR	Plostina	6.78	48	P	Pn	15 08 12.3	+3.1
PLOR	Plostina	6.78	48		Pn	15 08 12.3	+3.1
STAL	STALIGIAL	6.81	316		Pn	15 08 10.7	+1.0
VRI	Vrincioaia	6.83	48	⇓P	Pn	15 08 12.1	+2.2
VRI	Vrincioaia	6.83	48	P	Pn	15 08 12.1	+2.2
VRI	Vrincioaia	6.83	48		Pn	15 08 12.1	+2.2
ZCCA	Zocca	6.85	297		Pn	15 08 13.0	+2.7
TEOL	Teolo	6.86	307		Pn	15 08 11.5	+1.1
CONA	Conrad Observa	6.91	339	ePn	Pn	15 08 14.5	+3.4
	comp=N,1.5nm,0.3s						
HARR	Harsova	6.96	60	⇓P	Pn	15 08 14.6	+2.9
HARR	Harsova	6.96	60	P	Pn	15 08 14.6	+2.9
HARR	Harsova	6.96	60		Pn	15 08 14.6	+2.9
TRPA	Tarpa	6.97	17	⇓P	Pn	15 08 12.2	+0.3
VYHS	Vyhne	7.00	357	eP	Pn	15 08 18.3	+6.0
VYHS				e		15 09 32.7	
VYHS	Vyhne	7.00	357	ePN	Pn	15 08 18.3	+6.0
VYHS				ePG	Pb	15 08 46.5	+14
VYHS				eSN	Sn	15 09 32.7	+1.7
KECS	Kecovo	7.01	6	eSN	Sn	15 09 33.6	+2.3
MODS	Modra-Piesok	7.04	348	ePG	Pb	15 08 42.0	+9.2
MODS				eSN	Sn	15 09 31.6	-0.4
KBA	Koelnbreinsper	7.09	324	ePn	Pn	15 08 15.4	+1.7
	comp=N,2.3nm,0.3s						
KBA				eSn	Sn	15 09 33.3	-0.3
	comp=N,9.7nm,0.6s						
ABTA	Abfaltersbach	7.24	319	ePn	Pn	15 08 17.1	+1.4
	comp=N,1.8nm,0.3s						
ABTA				eSn	Sn	15 09 37.2	0.0
	comp=N,32nm,0.7s						
CTI	Castel Tesino	7.25	311	P	Pn	15 08 17.1	+1.3
CTI	Castel Tesino	7.25	311		Pn	15 08 17.1	+1.3
CFR	Carcaliu	7.30	57	⇓P	Pn	15 08 18.7	+2.3
CFR	Carcaliu	7.30	57	P	Pn	15 08 18.7	+2.3
CFR	Carcaliu	7.30	57		Pn	15 08 18.7	+2.3
MOA	Molln	7.34	331	ePn	Pn	15 08 20.6	+3.6
	comp=N,1.6nm,0.2s						
MOA				eSn	Sn	15 09 43.5	+3.9
	comp=N,15nm,0.6s						
BURAR	Bucovina Array	7.36	32	⇓P	Pn	15 08 20.5	+3.3
BURAR	Bucovina Array	7.36	32		Pn	15 08 21.8	+4.6
BURAR	Bucovina Array	7.36	32		Pn	15 08 20.5	+3.3
BUR08	Bucovina Ar. S	7.37	32		Pn	15 08 19.2	+1.7
PRMA	PARMA	7.45	299	Pn	Pn	15 08 19.4	+1.0
IDI	Anoyia	7.53	144	Pn	Pn	15 08 19.8	+0.2
	comp=N,0.3nm,0.3s,baz=1.9,slow=17,SNR=3.0						
IDI				Sn	Sn	15 09 39.8	-4.3
	comp=N,0.6nm,0.3s,baz=331,slow=19,SNR=2.4						
IDI	Anoyia	7.53	144		Pn	15 08 19.8	+0.2
IDI					Sn	15 09 39.8	-4.3
CRVS	Cervenica-Dubn	7.53	10	eP	Pn	15 08 22.3	+2.8
CRVS				e		15 09 42.5	
CRVS	Cervenica-Dubn	7.53	10	ePN	Pn	15 08 22.3	+2.8
CRVS				eSN	Sn	15 09 42.5	-1.5
KOLS	Kolonicke sedl	7.68	14	eP	Pn	15 08 25.8	+4.2
KOLS				e		15 09 48.1	
KOLS	Kolonicke sedl	7.68	14	ePN	Pn	15 08 25.8	+4.2
KOLS				eSN	Sn	15 09 48.1	+0.2
SALO	Salr	7.69	305		Sn	15 09 48.7	+0.8
TLCR		7.74	59	⇑P	Pn	15 08 24.7	+2.4
TLCR		7.74	59	P	Pn	15 08 24.8	+2.4
TLCR		7.74	59		Pn	15 08 24.8	+2.4
MSSA	Maissana	7.83	294	Pn	Pn	15 08 25.1	+1.4
PGF	Pioggiola	7.87	281	ePn	Pn	15 08 24.3	+0.1
PGF	Pioggiola	7.87	281	eP	Pn	15 08 29.9	+5.7
PGF				eSn	Sn	15 09 48.3	-4.2
	comp=N,0.5nm,0.3s						
WTTA	Wattenberg	8.03	318	ePn	Pn	15 08 29.6	+3.0
	comp=N,5.1nm,0.3s,SNR=9.8						
WTTA				eSn	Sn	15 09 56.7	0.0
	comp=N,22nm,0.5s						
WATA	Walderalm	8.11	319	ePn	Pn	15 08 29.9	+2.2
	comp=N,5.6nm,0.2s,SNR=9.7						
WATA				eSn	Sn	15 10 00.1	+1.5
	comp=N,18nm,0.5s						
SQTA	Sankt Quirin	8.22	317	Pn	Pn	15 08 31.6	+2.5
	comp=N,3.9nm,0.3s,SNR=4.7						
SQTA				eSn	Sn	15 10 02.4	+1.2
	comp=N,16nm,0.4s						
FETA	Feichten	8.35	314	i Pn	Pn	15 08 33.5	+2.6
	comp=N,0.4nm,0.2s						
FETA				eSn	Sn	15 10 05.2	+0.8
	comp=N,4.6nm,0.4s						
MOTA	Moosalm	8.36	317	ePn	Pn	15 08 32.7	+1.7
	comp=N,2.0nm,0.3s,SNR=5.1						
MOTA				eSn	Sn	15 10 06.5	+1.8
	comp=N,15nm,0.6s						
FUORN	Ofenpass-Fuorn	8.37	311		Pn	15 08 33.5	+2.3
GERES	GERESS Array B	8.39	333	Pn	Pn	15 08 33.0	+1.6
	comp=N,0.2nm,0.3s,baz=155,slow=13,SNR=8.1						
GERES				Sn	Sn	15 10 05.8	+0.5
	comp=N,1.0nm,0.3s,baz=156,slow=23,SNR=7.6						
GERES	GERESS Array B	8.39	333	P	Pn	15 08 33.0	+1.6
GERES						15 10 05.8	
GERES	GERESS Array B	8.39	333		Pn	15 08 33.3	+1.9
RETA	Reutte	8.63	317	i Pn	Pn	15 08 37.0	+2.4
	comp=N,0.9nm,0.2s						
RETA				eSn	Sn	15 10 12.9	+1.8
	comp=N,15nm,0.5s						
DAVOX	Davos/Dischmat	8.68	311	Pn	Pn	15 08 36.8	+1.4
	comp=N,1.1nm,0.3s,baz=141,slow=22,SNR=13						
DAVOX				Sn	Sn	15 10 14.2	+1.7
	comp=N,1.9nm,0.3s,baz=156,slow=20,SNR=3.3						
DAVOX	Davos/Dischmat	8.68	311	P	Pn	15 08 36.8	+1.4
DAVOX						15 10 14.2	
KHC	Kasperske Hory	8.68	333	ePN	Pn	15 08 36.8	+1.5
KHC				ex	x	15 09 07.0	
KHC				eSN	Sn	15 10 13.2	+0.9
KHC	Kasperske Hory	8.68	333	eP	Pn	15 08 36.8	+1.5
KHC				e		15 10 13.2	
TUE	Stuetta	8.82	308	Pn	Pn	15 08 38.3	+0.8
SBF	Sospel	9.17	289	ePn	Pn	15 08 41.8	-0.3
SBF				eSn	Sn	15 10 19.2	-5.3
	comp=N,4.8nm,0.3s						
FRF	La Foret Royal	9.69	286	ePn	Pn	15 08 49.3	+0.2
FRF	La Foret Royal	9.69	286	eP	Pn	15 08 52.9	+3.8
FRF				eSn	Sn	15 10 32.0	-5.1
	comp=N,4.0nm,0.3s						
LMR	La Mourre	9.76	285	ePn	Pn	15 08 48.6	-1.5
LMR				eSn	Sn	15 10 33.7	-5.1
	comp=N,1.5nm,0.3s						
MBDF	Montbardon	9.83	293	ePn	Pn	15 08 50.2	-1.0
MBDF				eSn	Sn	15 10 35.1	-5.6
	comp=N,8.2nm,0.6s						
SENIN	Lac Senin/Sane	10.03	303		Pn	15 08 53.8	-0.2
LPG	La Plagne	10.06	298	ePn	Pn	15 08 53.5	-1.0
LPG				eSn	Sn	15 10 40.6	-6.1
	comp=N,5.2nm,0.3s						
LPL	La Plagne	10.08	298	ePn	Pn	15 08 54.3	-0.4
LPL				eSn	Sn	15 10 40.3	-6.8
	comp=N,9.1nm,0.4s						
BRG	Berggiesshubel	10.12	340	SG	Sn	15 11 28.6	+41
	comp=N,4.5nm,1.0s						
ORIF	Oris-en-Rattie	10.49	294	ePn	Pn	15 08 59.9	-0.3
ORIF				eSn	Sn	15 10 51.0	-5.9
	comp=N,9.9nm,0.6s						
SMRF	Simiane la Rot	10.52	288	ePn	Pn	15 08 59.0	-1.5
SMRF				eSn	Sn	15 10 51.7	-5.8
	comp=N,0.7nm,0.2s						
CLL	Collm	10.77	338	ePn	Pn	15 09 04.0	+0.2
CLL				eSn	Sn	15 11 00.0	-3.4
CLL				e		15 11 19.0	
CLL				e		15 11 52.0	
CLL				eSg		15 12 22.0	
CLL				eSglp		15 12 29.0	
	comp=N,300nm,14.8s						
CLL				eSglp		15 12 29.0	
	comp=E,200nm,16.8s						
CLL				eSglp		15 12 29.0	
	comp=Z,100nm,18.0s						
CLL	Collm	10.77	338	eP	Pn	15 09 04.0	+0.2
CLL				e		15 11 00.0	
CABF	La Chapelle	10.89	302	ePn	Pn	15 09 04.3	-1.4
CABF				eSn	Sn	15 10 59.8	-7.0
	comp=Z,63nm,1.4s						
BRTR	Keskin Array B	10.92	95	Pn	Pn	15 09 07.2	+1.1
	comp=Z,0.1nm,0.3s,baz=286,slow=10,SNR=2.4						
BRTR	Keskin Array B	10.92	95	P	Pn	15 09 07.3	+1.1
BRTR	Keskin Array B	10.92	95		Pn	15 09 07.2	+1.1
HINF	Hinteralfeld	10.97	309	ePn	Pn	15 09 06.6	-0.1
HINF				eSn	Sn	15 11 02.0	-6.6
	comp=Z,4.6nm,0.4s						
CDF	Champ du Feu	11.05	313	ePn	Pn	15 09 06.9	-0.9
CDF	Champ du Feu	11.05	313	eP	Pn	15 09 12.4	+4.6
CDF				eSn	Sn	15 11 03.1	-7.5
	comp=Z,1.7nm,0.4s						
VIVF	Saint-Julien-l	11.31	292	ePn	Pn	15 09 10.7	-0.7
VIVF				eSn	Sn	15 11 10.1	-6.8
	comp=Z,1.2nm,0.3s						
HAU	Haudompre	11.36	309	ePn	Pn	15 09 11.4	-0.6
HAU				eSn	Sn	15 11 11.8	-6.3
	comp=Z,12nm,0.5s						
AKASG	Malin Array Be	11.41	33	Pn	Pn	15 09 14.4	+1.8
	comp=Z,0.3nm,0.3s,baz=220,slow=12,SNR=5.3						
AKASG	Malin Array Be	11.41	33	P	Pn	15 09 14.4	+1.8
AKASG	Malin Array Be	11.41	33		Pn	15 09 14.4	+1.8
SSB	Saint Sauveur	11.50	294	P	Pn	15 09 13.6	-0.3
SSB	Saint Sauveur	11.50	294	Pn	Pn	15 09 13.6	-0.3
PAGF	Fort de Pagny	12.00	311	ePn	Pn	15 09 20.0	-0.7
PAGF				eSn	Sn	15 11 26.1	-7.6
	comp=Z,1.9nm,0.3s						
SFTF	Sexfontaines	12.22	308	ePn	Pn	15 09 23.2	-0.6
	baz=120						
SFTF				eSn	Sn	15 11 31.7	-7.5
	comp=Z,3.1nm,0.3s						
SMF	Signal de Mont	12.35	300	ePn	Pn	15 09 23.9	-1.7
SMF				eSn	Sn	15 11 34.1	-8.2
	comp=Z,2.1nm,0.3s						
MEZF	Maizieres J'vi	12.36	309	ePn	Pn	15 09 24.8	-0.8
MEZF				eSn	Sn	15 11 34.3	-8.2
	comp=Z,2.9nm,0.4s						
LOR	Lormes	12.56	303	ePn	Pn	15 09 27.8	-0.6
	baz=115						
LOR				eSn	Sn	15 11 40.0	-7.3
	comp=Z,6.3nm,0.3s						
SSF	Saint Saulge	12.71	301	ePn	Pn	15 09 28.8	-1.6
SSF				eSn	Sn	15 11 43.8	-7.2
	comp=Z,4.7nm,0.5s						
AVF	Avril sur Loir	12.72	300	ePn	Pn	15 09 28.8	-1.7
AVF				eSn	Sn	15 11 44.4	-6.8
	comp=Z,1.1nm,0.3s						
MTLF	Montolieu	12.88	284	eP	Pn	15 09 36.8	+4.0
TCF	Toulx Ste Croi	13.33	297	ePn	Pn	15 09 37.3	-1.6
TCF				eSn	Sn	15 11 58.1	-8.1
	comp=Z,1.0nm,0.2s						
HYF	Humbligny	13.33	301	eSn	Sn	15 11 58.7	-7.6
BAIF	Baives	13.64	314	ePn	Pn	15 09 41.9	-1.2
SOC	Sochi	15.07	75	eP	Pn	15 10 02.5	0.0
SOC				e		15 12 54.4	
SOC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SOC				smax	smax		
	comp=N,4.0nm,0.5s						
SOC				smax	smax		
	comp=E,17nm,0.9s						
SOC				MLR	MLR		
	comp=Z,71nm,9.0s						
MMAI	Mount Meron Ar	15.24	119	Pn	Pn	15 10 04.9	0.0
	comp=Z,0.3nm,0.3s,baz=321,slow=11,SNR=2.6						
MMAI	Mount Meron Ar	15.24	119		Pn	15 10 04.9	0.0
KIV	Kislovodsk	17.22	74	eP	Pn	15 10 31.3	+1.1
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
KVAR	Kislovodsk Arr	17.23	74	P	P	15 10 31.6	-0.2
	baz=263,slow=17,SNR=2.4						
KVAR	Kislovodsk Arr	17.23	74	P	P	15 10 31.6	-0.2
KBZ	Khabaz	17.38	75	P	P	15 10 33.6	+0.4
	comp=Z,0.1nm,0.3s,baz=275,slow=11,SNR=4.6						
KBZ	Khabaz	17.38	75	P	P	15 10 33.6	+0.4
KBZ	Khabaz	17.38	75	P	P	15 10 33.6	+0.4
VSU	Vasula	17.59	13	i P	Pn	15 10 35.0	+0.5
OBN	Obninsk	17.67	34	⇓eP	Pn	15 10 35.0	-0.5
OBN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,147nm,15.0s						
ESDC	Sonseca Array	17.88	272	P	P	15 10 39.2	+0.3
	comp=Z,0.4nm,0.3s,baz=70,slow=11,SNR=3.1						
HFS	Hagfors	18.99	351	P	Pn	15 10 52.5	+0.9
	comp=Z,0.2nm,0.3s,baz=171,slow=10,SNR=4.8						
HFS	Hagfors	18.99	351	P	Pn	15 10 52.5	+0.9
HFS	Hagfors	18.99	351	P	Pn	15 10 52.5	+0.9
GNI	Garni	19.16	86	i P	P	15 10 53.9	+0.9
GNI				pmax	pmax		
	comp=Z,20nm,1.1s						
NB2	NORSAR Subarra	20.20	348	P	P	15 11 04.3	+0.3
	comp=Z,28nm,2.0s,baz=153,slow=11						
NOA	NORSAR Array B	20.20	348	P	P	15 11 04.3	+0.3
	comp=Z,1.3nm,0.8s,baz=153,slow=10,SNR=3.8						
NOA	NORSAR Array B	20.20	348	P	P	15 11 04.3	+0.3
FINES	FINESS Array B	20.36	9	P	P	15 11 06.2	+0.5
	comp=Z,5.9nm,0.7s,baz=177,slow=10,SNR=12						
FINES	FINESS Array B	20.36	9	i P	P	15 11 06.3	+0.5
FINES				pmax	pmax		
	comp=Z,6.0nm,0.7s						
FINES	FINESS Array B	20.36	9	P	P	15 11 06.2	+0.5
FIA1	FINESS Array S	20.36	9	P	P	15 11 06.1	+0.3
FIA1				IAmb	IAmb	15 11 13.1	
	comp=Z,48nm,1.4s						
KLMR	Klimovskoe	22.91	26	eP	P	15 11 31.2	-1.9
KLMR				pmax	pmax		
	comp=Z,29nm,1.1s						
KLMR	Klimovskoe	22.91	26	eP	P	15 11 31.2	-1.9
KLMR				AMP		15 11 34.6	
	comp=Z,29nm,1.1s						
TMCR	Tamitsa	25.12	19	eP	P	15 11 54.4	+0.5
TMCR				pmax	pmax		
	comp=Z,20nm,0.6s						
PRGR	Permogore	25.58	29	eP	P	15 11 56.9	-1.2
PRGR				pmax	pmax		
	comp=Z,28nm,0.6s						
ABKAR	Akbulak array	29.18	61	P	P	15 12 30.1	-0.4
ARU	Arti	29.21	46	P	P	15 12 30.8	+0.1
	comp=Z,2.3nm,0.7s,baz=270,slow=7.4,SNR=11						
ARU	Arti	29.21	46	ceP	P	15 12 30.5	-0.3
ARU				pmax	pmax		
	comp=Z,12nm,2.5s						
ARU	Arti	29.21	46	P	P	15 12 30.9	+0.1
ARU				IAmb	IAmb	15 12 31.4	
	comp=Z,6.6nm,0.7s						
GEYT	Alibeck	29.77	84	P	P	15 12 35.7	-0.3
	comp=Z,0.9nm,0.5s,baz=305,slow=5.1,SNR=3.4						
GEYT	Alibeck	29.77	84	P	P	15 12 35.7	-0.3
GEYT	Alibeck	29.77	84	IAmb	IAmb	15 12 37.7	
	comp=Z,0.8nm,0.7s						
TORD	Torodi Ar. Bea	32.23	214	P	P	15 12 58.2	+0.4
	comp=Z,0.3nm,0.5s,baz=23,slow=7.8,SNR=2.9						
TORD	Torodi Ar. Bea	32.23	214	P	P	15 12 58.2	+0.4
TORD	Torodi Ar. Bea	32.23	214	IAmb	IAmb	15 13 00.4	
	comp=Z,1.2nm,1.2s						
BRVK	Borovoye	35.63	53	ceP	P	15 13 27.7	+0.8
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BRVK	Borovoye	35.63	53	P	P	15 13 26.9	0.0
KKAR	Karatay Array	37.31	70	P	P	15 13 42.2	+0.8
KKAR	Karatay Array	37.31	70	P	P	15 13 42.2	+0.8
KSH	Kashi	42.35	73	P	P	15 14 22.1	-1.4
KSH				sP	pP	15 14 29.2	-1.8
KSH				S	S	15 20 38.6	-4.6
KSH				SS	SS	15 23 39.5	-13
MAKZ	Makanchi	44.11	61	P	P	15 14 38.1	+0.6
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MAKZ	Makanchi	44.11	61	P	P	15 14 38.1	+0.6
ZAA0	Zalesovo Array	44.13	50	P	P	15 14 38.0	+0.4
ZAA0				IAmb	IAmb	15 14 38.8	
	comp=Z,6.2nm,0.8s						
ZALV	Zalesovo Beam	44.13	50	P	P	15 14 38.0	+0.5
	comp=Z,5.0nm,0.7s,baz=279,slow=8.9,SNR=25						
ZALV	Zalesovo Beam	44.13	50	P	P	15 14 38.0	+0.5
ZALV	Zalesovo Beam	44.13	50	P	P	15 14 37.8	+0.3
MK31	Makanchi Array	44.32	61	P	P	15 14 39.7	+0.5
MK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MK31	Makanchi Array	44.32	61	P	P	15 14 39.7	+0.5
MK31				IAmb	IAmb	15 14 40.6	
	comp=Z,4.2nm,0.8s						
MKAR	Makanchi Array	44.32	61	P	P	15 14 39.8	+0.6
	comp=Z,4.9nm,0.7s,baz=282,slow=6.7,SNR=75						
MKAR	Makanchi Array	44.32	61	P	P	15 14 39.8	+0.6
MKAR	Makanchi Array	44.32	61	P	P	15 14 39.8	+0.6
WMQ	Urumqi	48.91	63	eP	P	15 15 20.0	+4.7
WMQ				pP	pP	15 15 22.5	-0.3
WMQ				sP	sP	15 15 26.0	+0.2
DANN	Dangsing	53.20	83	eP	P	15 15 47.2	-0.7
	comp=Z,45nm,0.9s						
GKN	Gorkha	54.04	83	eP	P	15 15 52.9	-1.0
	comp=Z,23nm,0.7s						
DMN	Daman	54.60	83	eP	P	15 15 57.4	-0.7
	comp=Z,16nm,0.8s						
KKN	Kakani	54.63	82	eP	P	15 15 56.9	-1.4
	comp=Z,3.3nm,0.7s						
PKIN	Phulchoki	54.83	82	eP	P	15 15 58.9	-0.9
	comp=Z,6.9nm,0.6s						
PKI	Pulchoki	54.84	82	eP	P	15 15 59.1	-0.9
	comp=Z,10nm,0.7s						
GUN	Gumba	55.01	82	eP	P	15 16 00.3	-0.9
	comp=Z,26nm,0.8s						
JIRN	Jiri	55.38	82	eP	P	15 16 03.3	-0.6
	comp=Z,33nm,0.8s						
RAMN	Ramite	56.07	82	eP	P	15 16 07.6	-1.1
	comp=Z,30nm,0.7s						
TAPN	Taplejung	56.67	81	eP	P	15 16 12.6	-0.5
	comp=Z,14nm,1.0s						
ODAN	Odare	56.71	82	eP	P	15 16 12.5	-0.8
	comp=Z,20nm,0.9s						
GTA	Gaotai	59.00	63	eP	P	15 16 29.6	+0.5
GTA				pP	pP	15 16 35.2	-1.6
GTA				sP	sP	15 16 38.3	-1.4
SONM	Songino Array	59.00	52	P	P	15 16 29.9	+0.9
	comp=Z,1.3nm,0.9s,baz=282,slow=7.4,SNR=9.4						
SONM	Songino Array	59.00	52	P	P	15 16 29.9	+0.9
SONM	Songino Array	59.00	52	P	P	15 16 29.9	+0.9
SONM	Songino Array	59.00	52	IAmb	IAmb	15 16 30.8	
	comp=Z,1.6nm,1.0s						
LZH	Lanzhou	63.46	64	eP	P	15 17 01.1	+1.7
LZH				pP	pP	15 17 05.6	-1.6
LZH				sP	sP	15 17 08.2	-1.9
LZH				PP	PP	15 19 15.7	-3.0
HHC	Hu-ho-hao-te	65.84	56	eP	P	15 17 17.0	+2.3
YKA	Yellowknife Ar	69.99	339	P	P	15 17 41.2	+0.9
	comp=Z,0.4nm,0.6s,baz=33,slow=5.2,SNR=10						
YKA	Yellowknife Ar	69.99	339	P	P	15 17 41.2	+0.9
YKA	Yellowknife Ar	69.99	339	P	P	15 17 41.2	+0.9
CMAR	Chiang Mai Arr	70.24	83	P	P	15 17 42.3	-0.3
	comp=Z,0.6nm,0.6s,baz=298,slow=5.8,SNR=6.2						
CMAR	Chiang Mai Arr	70.24	83	P	P	15 17 42.3	-0.3
CMAR	Chiang Mai Arr	70.24	83	P	P	15 17 42.3	-0.3
ILAR	Eielson Array	73.52	354	P	P	15 18 03.0	+1.5
	comp=Z,0.3nm,0.8s,baz=0.0,slow=5.4,SNR=4.4						
ILAR	Eielson Array	73.52	354	P	P	15 18 03.0	+1.5
ILAR	Eielson Array	73.52	354	P	P	15 18 03.0	+1.5
TXAR	Lajitas Array	92.10	313	P	P	15 19 37.5	-1.3
	comp=Z,0.4nm,0.8s,baz=46,slow=2.6,SNR=2.9						
TXAR	Lajitas Array	92.10	313	P	P	15 19 37.5	-1.3
TXAR	Lajitas Array	92.10	313	P	P	15 19 37.5	-1.3
ASAR	Alice Springs	123.26	93	PKP	PKPdf	15 25 25.6	-0.6
	comp=Z,0.2nm,0.6s,baz=309,slow=2.3,SNR=5.2						
ASAR	Alice Springs	123.26	93	PKIKP	PKPdf	15 25 25.6	-0.6
ASAR	Alice Springs	123.26	93		PKPdf	15 25 25.6	-0.6

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*IDC **08** 15:08:23.9±2.8, 41°.52N×19°.59E, h0^{km}, mb3.7/3, mb1 3.9/4, mb1mx3.3/43, mbtmp3.8/4, Error ellipse: s-maj=71.8km s-min=30.0km az=138.0*

*SKO **08** 15:08:26.7, 41°.56N×19°.40E, h0^{km}*

*TIR **08** 15:08:26.7, 41°.56N×19°.54E, h7^{km}, Md2.6/4*

ISC 08 15:08:25.4±2.1, **41°.54N**±0°.06×**19°.41E**±0°.09, **h9**^{km}±10^{km}, **n13,** σ**1^{s}.07**/21, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.40	119	i PG	Pg	15 08 33.4	+0.3
TIR				i SG	Sg	15 08 38.8	+0.5
PUK	Puka	0.62	36	i PG	Pb	15 08 39.1	+0.6
PUK				i SG	Sb	15 08 48.9	+1.5
PHP	Peshkopia	0.79	79	i PG	Pg	15 08 40.3	-0.3
PHP				i SG	Sb	15 08 50.8	-1.4
BCI	Bajram Curri	0.96	31	i PG	Pb	15 08 44.6	+0.3
BCI				i SG	Sb	15 08 57.6	+0.4
OHR	Ohrid	1.13	112	i Pg	Pg	15 08 45.8	-1.4
OHR				i Sg	Sb	15 09 02.7	+0.6
OHR				eLg	Lg	15 09 03.4	
	comp=N,342nm,0.4s						
OHR				eLg	Lg	15 09 05.1	
	comp=E,361nm,0.8s						
SKO	Skopje	1.58	73	i Pg	Pb	15 08 55.1	+0.3
SKO				i Sg	Sn	15 09 16.4	+2.1
STIP	Stip	2.09	85	i Pn	Pb	15 09 03.9	+0.4
STIP				eSn	Sg	15 09 31.5	-1.0
VAY	Valandovo	2.39	94	i Pn	Pn	15 09 06.2	+1.5
VAY				eSn	Sn	15 09 34.1	0.0
VAY				eLg	Lg	15 09 42.6	
	comp=N,118nm,0.7s						
VAY				eLg	Lg	15 09 43.9	
	comp=E,84nm,0.6s						
MLR	Muntele Rosu	6.18	48	Pn	Pn	15 09 57.3	+0.4
	baz=172,slow=14,SNR=2.3						
MLR				Sn	Sn	15 11 06.7	-1.1
	comp=E,0.2nm,0.3s,baz=308,slow=19,SNR=2.0						
IDI	Anoyia	7.58	144	Sn	Sn	15 11 33.4	-8.9
	baz=294,slow=18,SNR=1.6						
FINES	FINESS Array B	20.34	9	P	P	15 13 01.5	-0.2
	comp=E,1.7nm,0.7s,baz=193,slow=11,SNR=3.1						
ZALV	Zalesovo Beam	44.15	51	P	P	15 16 32.8	-1.3
	comp=E,0.6nm,0.4s,baz=289,slow=8.9,SNR=2.7						
MKAR	Makanchi Array	44.35	61	P	P	15 16 34.9	-0.9
	comp=E,0.8nm,0.7s,baz=277,slow=7.8,SNR=6.1						

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*IDC **08** 15:12:28.4±0.6, 41°.39N×19°.39E, h0^{km}, mb4.0/20, mb1 4.1/33, mb1mx4.0/54, mbtmp4.0/33, ML3.7/12, MS3.5/22, Ms1 3.5/22, ms1mx3.3/55, Error ellipse: s-maj=11.5km s-min=9.2km az=14.0*

*MOS **08** 15:12:29.3±1.4, 41°.48N×19°.42E, h11^{km}, mb4.9/10, Error ellipse: s-maj=6.2km s-min=4.5km az=84.8*

*TIR **08** 15:12:31.6, 41°.51N×19°.50E, h19^{km}, Md4.2/6*

*MED_RC **08** 15:12:32.0±0.4, 41°.48N×19°.43E, h27^{km}±1^{km}, MW4.3/13, Moment Tensor Solution.Mantle waves: s13,c18; Duration: 1^{s}.0 Moment tensor: Scale 10^{15}Nm; M_{rr}1.84±.57; $M_{\theta\theta}$1.02±.32; $M_{\phi\phi}$-2.86±.34; $M_{r\theta}$1.27±.30; $M_{\theta\phi}$1.07±.16; $M_{\phi r}$-1.87±.30; Best double couple: $M_0$3.44000×10^{15} NP1:ϕ_s15.00000°, δ31.00000°, λ135.00000°. NP2:ϕ_s145.00000°, δ69.00000°, λ67.00000°. Principal axes: T 2.9400, Plg60.0000°, Azm23.0000°; N 1.0000, Plg21.0000°, Azm154.0000°; P -3.9300, Plg21.0000°, Azm252.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*

*SKO **08** 15:12:32.0, 41°.48N×19°.43E, h0^{km}*

*NEIC **08** 15:12:32.5, 41°.47N×19°.45E, h30^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.87; $M_{\theta\theta}$-0.14; $M_{\phi\phi}$-0.73; $M_{r\theta}$0.61; $M_{\theta\phi}$0.38; $M_{\phi r}$-1.69; Fault plane solution: $M_0$2.01000×10^{15} NP1:ϕ_s327.50000°, δ13.40000°, λ78.20000°. NP2:ϕ_s159.63000°, δ76.89000°, λ92.79000°. Principal axes: T 1.9878, Plg58.0000°, Azm73.0000°; N 0.0376, Plg3.0000°, Azm339.0000°; P -2.0254, Plg32.0000°, Azm247.0000°;*

*LDG **08** 15:12:32.4±0.1, 41°.50N×19°.54E, h10^{km}, Ml3.9/29 Error ellipse: s-maj=3.1km s-min=2.0km az=28.0*

*THE **08** 15:12:33.5, 41°.55N×19°.56E, h2^{km}, ML4.0/5, Error ellipse: s-maj=1.1km s-min=0.7km az=300.0*

*BEO **08** 15:12:33.5±0.4, 41°.48N×19°.51E, h14^{km}±2^{km}, ML4.0/19*

*NEIC **08** 15:12:33.6±2.2, 41°.45N±0°.06×19°.50E±0°.05, h27^{km}±5^{km}, Error ellipse: s-maj=8.1km s-min=5.7km az=169.0*

*PRU **08** 15:12:34.5±0.0, 41°.48N×19°.53E, h9km, M4.5*
ISC 08 15:12:31.8±0.4, **41°.51N**±0°.02×**19°.45E**±0°.02, **h20**km±3km, **n326**, σ**2**^{s}**42**/385, **mb4.3**/25, **MS3.6**/12, **23C-18D, Albania**
PDG 08 15:12:32.1±0.6, **41°.47N**×**19°.44E**, **h16**km±1km, **MD4.0**/13, **ML4.1**/12, **Error ellipse: s-maj=0.4km s-min=0.7km az=0.0, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	0.35	116	P	Pb	15 12 39.2	-0.1
TIR				S	Sb	15 12 44.3	-0.1
	53µm,0.4s						
TIR	**Tirane**	0.35	116	*e*Pg	Pb	15 12 39.2	-0.1
TIR				*e*Sg	Sb	15 12 44.7	+0.2
TIR	**Tirane**	0.35	116	*i* PG	Pb	15 12 39.3	-0.1
TIR				*i* SG	Sb	15 12 44.6	+0.2
TIR	**Tirane**	0.35	116	⇓P	Pb	15 12 39.3	-0.1
TIR				⇓S	Sb	15 12 44.7	+0.2
TIR	**Tirane**	0.35	116	P	Pb	15 12 38.7	-0.6
TIR						15 12 44.9	
TIR	**Tirane**	0.35	116		Pb	15 12 38.7	-0.6
TIR				Sg	Sb	15 12 44.9	+0.5
PUK	**Puka**	0.63	32	*i* PG	Pb	15 12 43.9	-0.4
PUK				*i* SG	Sb	15 12 53.7	+0.9
PHP	**Peshkopia**	0.77	76	P	Pb	15 12 45.8	-0.7
PHP	**Peshkopia**	0.77	76	*i* PG	Pb	15 12 45.7	-0.7
PHP				*i* SG	Sb	15 12 55.5	-1.0
PDG	**Podgorica**	0.94	351	*e*Pg	Pn	15 12 51.8	+2.0
PDG				*e*Sg	Sn	15 13 04.6	+2.0
PDG	**Podgorica**	0.94	351	⇓P	Pb	15 12 50.4	+1.0
PDG				⇓S	Sn	15 13 04.8	+2.3
PDG	**Podgorica**	0.94	351	*e*Pn	Pb	15 12 49.9	+0.6
PDG	**Podgorica**	0.94	351		Pn	15 12 51.7	+2.0
BCI	**Bajram Curri**	0.98	28	*i* PG	Pb	15 12 50.0	-0.1
BCI				*i* SG	Sn	15 13 05.8	+2.1
VLO	**Vlora**	1.04	178	P	Pb	15 12 53.9	+2.9
VLO				S	Sn	15 13 09.1	+4.1
	16µm,0.6s						
VLO	**Vlora**	1.04	178	*i* PG	Pb	15 12 53.8	+2.8
VLO				*i* SG	Sn	15 13 07.7	+2.7
OHR	**Ohrid**	1.09	111	*i* Pg	Pn	15 12 51.6	-0.4
OHR				*i* Sg	Sn	15 13 08.9	+2.4
OHR				*e*Lg	Lg	15 13 10.0	
	comp=N,4µm,0.8s						
OHR				*e*Lg	Lg	15 13 12.3	
	comp=E,3µm,0.6s						
TPE	**Tepelena**	1.28	160	P	Pb	15 12 57.9	+2.7
TPE	**Tepelena**	1.28	160	*i* PN	Pb	15 12 56.6	+1.4
TPE				*i* SN	Sb	15 13 14.1	+2.9
TREB	**Trebinje**	1.46	326	*e*Pn	Pb	15 12 59.8	+1.5
TREB	**Trebinje**	1.46	326	*e*Pn	Pb	15 12 58.7	+0.4
BRY	**Bratogost**	1.55	335	*e*Pn	Pb	15 13 01.1	+1.2
SKO	**Skopje**	1.56	72	*i* Pg	Pb	15 13 00.7	+0.6
SKO				*i* Sg	Sb	15 13 21.9	+2.5
SCTE	**Santa Cesarea**	1.61	208		Pb	15 13 02.9	+2.0
FNA	**Florina**	1.63	116	P	Pb	15 13 01.6	+0.4
FNA				S	Sb	15 13 23.4	+2.2
	comp=E,4µm,0.7s						
FNA	**Florina**	1.63	116	P	Pb	15 13 01.5	+0.4
FNA	**Florina**	1.63	116		Pb	15 13 01.4	+0.4
NEST	**Nestorio**	1.63	131	P	Pb	15 13 02.4	+1.2
NEST				S	Sb	15 13 24.3	+2.9
	comp=E,2µm,1.2s						
CGL1	**Ceglie Messapi**	1.71	241	⇓*i*Pn	Pn	15 13 01.9	+1.4
UPM	**Unac-Piva**	1.74	347	*e*Pn	Pb	15 13 05.0	+1.8
SJES	**Sjenica**	1.80	12	*e*Pn	Pb	15 13 05.8	+1.7
SJES				*e*Sn	Sb	15 13 27.3	+1.0
PENT	**Pentalofos**	1.83	135	P	Pb	15 13 05.4	+0.7
PENT				S	Sb	15 13 28.9	+1.7
	comp=E,2µm,0.8s						
STON	**Ston**	1.88	317	*e*Pn	Pb	15 13 07.2	+1.7
STON				*e*Sn	Sb	15 13 29.3	+0.8
STON	**Ston**	1.88	317	*e*Pn	Pn	15 13 04.7	+1.9
TAR1	**Taranto**	1.91	240	⇓*i*Pn	Pn	15 13 04.3	+1.2
BAI	**Bari**	1.97	259	⇓*i*Pn	Pn	15 13 05.7	+1.7
STIP	**Stip**	2.06	84	*i* Pn	Pb	15 13 09.7	+1.2
STIP				*e*Sn	Sb	15 13 37.8	+4.0
RUDO	**Rudo**	2.11	359	*e*Pn	Pn	15 13 08.2	+2.2
SELS	**Selova**	2.12	35	*e*Pn	Pn	15 13 08.1	+2.0
SELS				*e*Sn	Sb	15 13 35.0	-0.3
KPRO	**Kipourio**	2.13	136	P	Pb	15 13 09.6	-0.1
KZN	**Kozani**	2.13	123	P	Pb	15 13 08.8	-0.9
JAN	**Janina**	2.13	149	P	Pb	15 13 09.7	-0.1
IVAS	**Ivanjica**	2.13	14	*e*Pn	Pb	15 13 09.1	-0.7
MEV	**Metsovon**	2.19	141	P	Pb	15 13 10.7	-0.1
SG1	**Sgolgore (BA)**	2.19	253	⇓*i*Pn	Pn	15 13 08.6	+1.5
BARS	**Barje**	2.20	53	*e*Pn	Pn	15 13 09.4	+2.3
BARS	**Barje**	2.20	53	*e*Pn	Pb	15 13 21.6	+11
GRG	**Griva**	2.30	103	P	Pn	15 13 10.6	+2.1
KTI	**Kastanea**	2.31	118	P	Pb	15 13 11.1	-1.7
VAY	**Valandovo**	2.36	93	*e*Pn	Pn	15 13 11.3	+2.0
VAY				*e*Sn	Sn	15 13 39.1	+1.4
VAY	**Valandovo**	2.36	93	*i* P	Pn	15 13 11.0	+1.7
VAY	**Valandovo**	2.36	93	*i* Pn	Pn	15 13 11.1	+1.8
VAY				*e*Sn	Sn	15 13 38.3	+0.7
VAY				*e*Lg	Lg	15 13 46.8	
	comp=N,3µm,1.6s						
VAY				*e*Lg	Lg	15 13 48.7	
	comp=E,686nm,0.8s						
BBLS	**Lazići**	2.36	359	*e*Pn	Pb	15 13 12.6	-1.1
BBLS	**Lazići**	2.36	359	*e*Pn	Pn	15 13 12.4	+2.9
BOSS	**Bosilegrad**	2.47	65	*e*Pn	Pn	15 13 12.9	+2.0
GRUS	**Gruza**	2.56	21	*e*Pn	Pn	15 13 14.9	+2.8
HAPS	**Han Pijesak,BI**	2.61	352	*e*Pn	Pn	15 13 15.3	+2.4
HAPS				*e*Sn	Sn	15 13 47.0	+3.0
HAPS	**Han Pijesak,BI**	2.61	352	*e*Pn	Pn	15 13 14.9	+2.0
DIVS	**Divibare**	2.62	9	*e*Pn	Pn	15 13 15.5	+2.4
DIVS	**Divibare**	2.62	9	*e*Pn	Pn	15 13 15.2	+2.1
KNT	**Kendrikon**	2.62	96	P	Pn	15 13 14.8	+1.8
LIT	**Litokhoron**	2.70	120	P	Pn	15 13 16.9	+2.8
LIT	**Litokhoron**	2.70	120	P	Pn	15 13 15.2	+1.1
LIT	**Litokhoron**	2.70	120		Pn	15 13 15.2	+1.1
BOVS	**Bovan**	2.71	37	*e*Pn	Pn	15 13 16.2	+2.1
BOVS				*e*Sn	Sn	15 13 48.0	+1.8
ACER	**Acerenza**	2.74	256		Pn	15 13 17.0	+2.3
KKB	**Krupnik**	2.75	81	*i* P	Pn	15 13 17.7	+3.0
THL	**Klokotos Trika**	2.75	134	P	Pn	15 13 17.4	+2.6
SGRT	**San Giovanni R**	2.79	276		Pn	15 13 16.8	+1.5
THE	**Thessaloniki**	2.80	107	P	Pn	15 13 17.0	+1.6
TRUS	**Trudelj**	2.81	14	*e*Pn	Pn	15 13 17.9	+2.4
HORT	**Hortiatis**	2.91	107	P	Pn	15 13 18.4	+1.4
ZAPS	**Zavoj**	2.95	52	*e*Pn	Pn	15 13 20.5	+3.0
SOH	**Sokhos**	3.03	102	P	Pn	15 13 20.5	+1.9
VTS	**Vitosha**	3.03	67	*e*Pn	Pn	15 13 21.1	+2.3
VTS	**Vitosha**	3.03	67	⇑P	Pn	15 13 20.9	+2.1
VTS	**Vitosha**	3.03	67	*i* P	Pn	15 13 20.9	+2.1
VTS	**Vitosha**	3.03	67	P	Pn	15 13 20.8	+2.0
VTS	**Vitosha**	3.03	67		Pn	15 13 20.8	+2.0
TEKS	**Tekeris**	3.04	1	*e*Pn	Pn	15 13 21.7	+2.9
TEKS	**Tekeris**	3.04	1	*e*Pn	Pn	15 13 21.5	+2.7
ZAGS	**Zajecar**	3.09	41	*e*Pn	Pn	15 13 21.4	+2.0
TIP	**Timpagrande**	3.10	222		Pn	15 13 20.6	+1.0
SRS	**Serrai**	3.15	96	P	Pn	15 13 22.1	+1.9
EVR	**Evrytania**	3.15	144	P	Pn	15 13 23.4	+3.0
MMB	**Musomiste**	3.21	87	*i* P	Pn	15 13 23.5	+2.3
AGG	**Agios Georgios**	3.32	137	P	Pn	15 13 24.9	+2.3
AGG	**Agios Georgios**	3.32	137		Pn	15 13 24.9	+2.3
NVR	**Nevrokopi**	3.33	91	P	Pn	15 13 24.9	+2.2
KUBS	**Kucevo**	3.33	29	*e*Pn	Pn	15 13 24.0	+1.2
DOB	**Doboj**	3.37	343	*e*Pn	Pb	15 13 28.8	-2.1
MGRS	**Mrkonjic Grad**	3.39	330	*e*Pn	Pn	15 13 26.8	+3.3
BLY	**Banja Luka**	3.64	334	⇑P	Pn	15 13 30.6	+3.6
BLY	**Banja Luka**	3.64	334	*e*Pn	Pb	15 13 33.1	-2.3
BLY	**Banja Luka**	3.64	334		Pn	15 13 30.4	+3.5
FRGS	**Fruska Gora**	3.66	4	*e*Pn	Pn	15 13 23.1	-4.2
MDVR	**Moldovita**	3.67	26	⇓P	Pn	15 13 29.7	+2.2
MPEP	**Malo Peshtene**	3.68	58	*i* P	Pn	15 13 29.8	+2.3
PAOL	**Paolisi**	3.71	264		Pn	15 13 30.8	+2.8
KAVA	**Kavala**	3.85	96	P	Pn	15 13 31.8	+1.9
DJES	**Djerdap**	3.88	34	*e*Pn	Pn	15 13 32.8	+2.5
RZN	**Rozhen**	3.96	86	*i* P	Pn	15 13 34.1	+2.6
PLD	**Plovdiv**	3.98	80	*i* P	Pn	15 13 34.9	+3.3
HERR	**Herculane**	4.01	32	⇑P	Pn	15 13 34.3	+2.2
INTR	**Introdacqua**	4.17	279		Pn	15 13 36.6	+2.2
SRE	**Strehaia**	4.19	40	⇓P	Pn	15 13 37.2	+2.7
PLVB	**Pleven**	4.27	62	⇑P	Pn	15 13 37.8	+2.2
BZS	**Buzias**	4.40	20	⇑P	Pn	15 13 39.1	+1.7
GZR	**Gura Zlata**	4.58	31	⇑P	Pn	15 13 42.2	+2.3
AQU	**L'Aquila**	4.59	283	*e*Pn	Pn	15 13 42.4	+2.4
AQU	**L'Aquila**	4.59	283	P	Pn	15 13 42.7	+2.6
AQU	**L'Aquila**	4.59	283		Pn	15 13 42.6	+2.6
PVL	**Pavlikeni**	4.69	67	*i* P	Pb	15 13 52.1	-1.1
ITM	**Ithomi**	4.73	155		Pn	15 13 43.3	+1.4
NRCA	**Norcia**	4.89	288		Pn	15 13 46.7	+2.5
ELND	**Elena**	4.98	71	⇑P	Pn	15 13 47.9	+2.5
ALN	**Alexandroupoli**	5.02	95	P	Pn	15 13 48.1	+2.2
ALN	**Alexandroupoli**	5.02	95		Pn	15 13 48.1	+2.2
SIRR	**Siria**	5.02	18	⇑P	Pn	15 13 48.1	+2.2
BOJS	**Bojanci**	5.03	324	*e*Pn	Pn	15 13 48.6	+2.6
BOJS				*e*Sn	Sn	15 14 43.4	-0.1
LOT	**Lotru**	5.04	37	⇑P	Pn	15 13 48.9	+2.5
HUMR	**Humele**	5.06	51	⇓P	Pn	15 13 49.5	+3.1
CRES	**Cresnjev**	5.20	328	*e*Pn	Pn	15 13 50.7	+2.3
RIY	**Rijeka**	5.26	318	*e*Pn	Pn	15 13 51.6	+2.4
BEHE	**Becsehely**	5.32	340	*e*Pn	Pn	15 13 56.9	+6.8
ARR	**Arges**	5.40	43	⇓P	Pn	15 13 53.9	+2.7
MURB	**Monte Urbino**	5.42	291		Pn	15 13 54.4	+2.9
VISS	**Visnje**	5.44	324	*e*Pn	Pn	15 13 55.0	+3.3
VISS				*e*Sn	Sn	15 14 54.5	+0.8
CEY	**Cerknica**	5.58	321	*e*Pn	Pn	15 13 55.9	+2.2
VAE	**Valguarnera**	5.60	226	Pn	Pn	15 13 52.9	-1.1
	comp=E,2.0nm,0.3s,baz=331,slow=11,SNR=2.0						
VOIR		5.66	44	⇑P	Pn	15 13 58.0	+3.1
DRGR		5.78	23	⇓P	Pn	15 13 58.2	+1.7
JAVS	**Javornik**	5.87	320	*i* Pn	Pn	15 13 59.5	+1.9
CORL	**Corleone**	5.95	235		Pn	15 14 00.8	+2.0
PERS	**Pernice**	6.00	330	*i* Pn	Pn	15 14 01.8	+2.4
SOKA	**Soboth**	6.07	330	*e*Pn	Pn	15 14 02.6	+2.1
	comp=E,9.8nm,0.6s,SNR=6.2						
SOKA				*e*Sn	Sn	15 15 08.4	-0.9
	comp=E,30nm,0.7s						
OBKA	**Obir**	6.12	326	*e*Pn	Pn	15 14 04.3	+3.2
	comp=E,5.1nm,0.5s,SNR=8.5						
OBKA				*e*Sn	Sn	15 15 12.7	+2.1
	comp=E,70nm,0.7s						
MLR	**Muntele Rosu**	6.18	48	Pn	Pn	15 14 04.6	+2.6
	comp=E,4.0nm,0.3s,baz=158,slow=7.3,SNR=24						
MLR				Sn	Sn	15 15 16.1	+4.0
	baz=252,slow=20,SNR=2.1						
MLR				LR	LR	15 17 24.7	
	comp=E,360nm,18.7s,baz=276,slow=47						
MLR	**Muntele Rosu**	6.18	48	⇓P	Pn	15 14 05.8	+3.8
MLR	**Muntele Rosu**	6.18	48		Pn	15 14 05.6	+3.6
DOPR	**Dopca**	6.20	42	⇓P	Pn	15 14 04.8	+2.7
CLTB	**Caltabellotta**	6.21	233		Pn	15 14 04.5	+2.2
OSSC	**Osservatorio P**	6.39	291		Pn	15 14 06.8	+2.1
ARSA	**Arzberg**	6.39	335	*e*Pn	Pn	15 14 08.0	+3.2
	comp=E,9.9nm,0.6s						
PSZ	**Piszkesteto**	6.42	3	⇑P	Pn	15 14 07.2	+2.0
PSZ	**Piszkesteto**	6.42	3	P	Pn	15 14 08.6	+3.3
PSZ	**Piszkesteto**	6.42	3		Pn	15 14 08.6	+3.3
APE	**Apeiranthos**	6.47	131	*i* P	Pn	15 14 06.8	+0.9
MYKA	**Terra Mystica**	6.61	323	*i* Pn	Pn	15 14 09.7	+1.8
	comp=E,2.6nm,0.4s						
MYKA				*e*Sn	Sn	15 15 22.4	-0.2
	comp=E,11nm,0.4s						
PLOR	**Plostina**	6.79	48	⇑P	Pn	15 14 13.6	+3.3
STAL	**STALIGIAL**	6.80	317		Pn	15 14 11.4	+0.9
ZCCA	**Zocca**	6.83	297		Pn	15 14 12.4	+1.5
VRI	**Vrincioaia**	6.84	48	⇑P	Pn	15 14 14.4	+3.4
TEOL	**Teolo**	6.85	307		Pn	15 14 12.4	+1.4
CONA	**Conrad Observa**	6.91	340	*e*Pn	Pn	15 14 15.7	+3.7
	comp=E,1.1nm,0.4s						
HARR	**Harsova**	6.98	60	⇑P	Pn	15 14 15.7	+2.9
TRPA	**Tarpa**	6.98	17	⇑P	Pn	15 14 15.4	+2.6
VYHS	**Vyhne**	7.00	357	*e*P	Pn	15 14 15.7	+2.5
VYHS				*e*		15 15 36.4	
VYHS	**Vyhne**	7.00	357	*e*PN	Pn	15 14 15.7	+2.5
VYHS				*e*SN	Sn	15 15 36.4	+4.3
KECS	**Kecovo**	7.02	6	*e*SN	Sn	15 15 36.2	+3.7
MODS	**Modra-Piesok**	7.04	348	*e*P	Pn	15 14 19.0	+5.4
MODS	**Modra-Piesok**	7.04	348	*e*PN	Pn	15 14 19.0	+5.4
KBA	**Koelnbreinsper**	7.08	324	*e*Pn	Pn	15 14 16.4	+2.0
	comp=E,12nm,0.5s						
KBA				*e*Sn	Sn	15 15 34.0	-0.4
	comp=E,19nm,0.6s						
TESR	**Tescani**	7.21	44	⇑P	Pn	15 14 18.9	+2.9
ABTA	**Abfaltersbach**	7.23	319	Pn	Pn	15 14 17.7	+1.4
	comp=E,3.2nm,0.3s,SNR=7.2						
ABTA				*e*Sn	Sn	15 15 38.3	+0.4
	comp=E,44nm,0.7s						
CTI	**Castel Tesino**	7.24	311	P	Pn	15 14 17.9	+1.4
CTI	**Castel Tesino**	7.24	311		Pn	15 14 17.9	+1.4
CFR	**Carcaliu**	7.32	57	⇑P	Pn	15 14 20.0	+2.6
MOA	**Molln**	7.34	332	*e*Pn	Pn	15 14 21.7	+3.9
	comp=E,2.9nm,0.3s						
MOA				*e*Sn	Sn	15 15 44.6	+4.2
	comp=E,25nm,0.7s						
BURAR	**Bucovina Array**	7.37	32	⇓P	Pn	15 14 21.3	+3.0
BUR08	**Bucovina Ar. S**	7.38	32		Pn	15 14 20.2	+1.7
UZH	**Uzhgorod**	7.41	15	*e*P	Pn	15 14 24.2	+5.6
UZH				*e*S	Sn	15 15 50.5	+8.5
UZH				MLR	MLR		
	comp=N,120nm,14.0s						
UZH				MLR	MLR		
	comp=E,100nm,14.0s						
UZH				MLR	MLR		
	comp=Z,70nm,14.0s						
PRMA	**PARMA**	7.43	299		Pn	15 14 21.5	+2.5
CRVS	**Cervenica-Dubn**	7.53	10	*e*P	Pn	15 14 24.3	+3.9
CRVS	**Cervenica-Dubn**	7.53	10	*e*PN	Pn	15 14 24.3	+3.9
IDI	**Anoyia**	7.54	144	Pn	Pn	15 14 19.3	-1.3
	comp=Z,0.5nm,0.3s,baz=330,slow=15,SNR=4.0						
IDI				Sn	Sn	15 15 41.2	-4.2
	comp=Z,1.1nm,0.3s,baz=48,slow=18,SNR=3.1						
IDI				LR	LR	15 17 08.7	
	comp=Z,59nm,18.7s,baz=300,slow=38						
SALO	**Salr**	7.67	305		Pn	15 14 24.2	+1.9
KOLS	**Kolonicke sedl**	7.69	14	*e*P	Pn	15 14 26.6	+4.0
KOLS	**Kolonicke sedl**	7.69	14	*e*PN	Pn	15 14 26.6	+4.0
TLCR		7.76	59	⇓P	Pn	15 14 26.9	+3.4
MSSA	**Maissana**	7.81	294		Pn	15 14 25.8	+1.5
PGF	**Pioggiola**	7.85	281	*e*Pn	Pn	15 14 25.5	+0.7
PGF	**Pioggiola**	7.85	281	*e*P	Pn	15 14 31.2	+6.4
PGF				*e*Sn	Sn	15 15 50.7	-2.4
	comp=Z,1.3nm,0.4s						
WTTA	**Wattenberg**	8.02	318	*e*Pn	Pn	15 14 30.7	+3.4
	comp=Z,7.0nm,0.3s						
WTTA				*e*Sn	Sn	15 15 58.0	+0.5
	comp=Z,54nm,0.6s						
VRAC	**Vranov**	8.06	347	Pn	Pn	15 14 29.4	+1.8
	comp=Z,0.4nm,0.3s,baz=81,slow=15,SNR=2.8						
VRAC				LR	LR	15 18 34.3	
	comp=Z,291nm,18.5s,baz=172,slow=45						
WATA	**Walderalm**	8.10	319	*e*Pn	Pn	15 14 31.7	+3.4
	comp=Z,11nm,0.4s,SNR=12						
WATA				*e*Sn	Sn	15 16 00.7	+1.3
	comp=Z,44nm,0.9s						
SQTA	**Sankt Quirin**	8.21	317	*e*Pn	Pn	15 14 32.7	+2.9
	comp=Z,4.4nm,0.3s						
SQTA				*e*Sn	Sn	15 16 03.6	+1.6
	comp=Z,41nm,0.6s						
FETA	**Feichten**	8.34	314	*e*Pn	Pn	15 14 34.5	+3.0
	comp=Z,1.7nm,0.5s,SNR=5.3						
FETA				*e*Sn	Sn	15 16 06.8	+1.7
	comp=Z,9.9nm,0.6s						
MOTA	**Moosalm**	8.35	317	*e*Pn	Pn	15 14 34.1	+2.3
	comp=Z,6.0nm,0.6s,SNR=6.0						
MOTA				*e*Sn	Sn	15 16 07.3	+1.8
	comp=Z,34nm,0.6s						
FUORN	**Ofenpass-Fuorn**	8.36	311		Pn	15 14 35.2	+3.3
GERES	**GERESS Array B**	8.38	333	Pn	Pn	15 14 34.4	+2.2
	comp=Z,0.4nm,0.3s,baz=153,slow=13,SNR=7.2						
GERES				Sn	Sn	15 16 06.8	+0.6
	comp=Z,1.2nm,0.3s,baz=159,slow=23,SNR=7.3						
GERES				LR	LR	15 18 36.2	
	comp=Z,223nm,19.3s,baz=142,slow=43						
RETA	**Reutte**	8.62	317	*i* Pn	Pn	15 14 38.7	+3.4
	comp=Z,2.2nm,0.4s						
RETA				*e*Sn	Sn	15 16 13.9	+2.0
	comp=Z,20nm,0.5s						
DAVOX	**Davos/Dischmat**	8.66	311	Pn	Pn	15 14 37.0	+0.9
	comp=Z,1.6nm,0.3s,baz=137,slow=21,SNR=12						
DAVOX				Sn	Sn	15 16 15.8	+2.5
	comp=Z,3.0nm,0.3s,baz=60,slow=5.2,SNR=5.5						
DAVOX				LR	LR	15 18 40.5	
	comp=Z,198nm,21.5s,baz=82,slow=43						
KHC	**Kasperske Hory**	8.67	334	*e*PN	Pn	15 14 38.5	+2.4
KHC				*e*x	x	15 15 08.5	
KHC				*e*SN	Sn	15 16 12.8	-0.4
KHC	**Kasperske Hory**	8.67	334	*e*P	Pn	15 14 38.5	+2.4
KHC				*e*		15 16 12.8	
KHC	**Kasperske Hory**	8.67	334		Pn	15 14 39.1	+3.0
TUE	**Stuetta**	8.81	308		Pn	15 14 39.6	+1.5
DAVA	**Damuels**	8.96	313	*e*Pn	Pn	15 14 43.4	+3.3
	comp=Z,8.1nm,0.6s						
DAVA				*e*Sn	Sn	15 16 21.6	+1.2
	comp=Z,14nm,0.5s						
SBF	**Sospel**	9.15	289	*e*Pn	Pn	15 14 44.3	+1.6
SBF				*e*Sn	Sn	15 16 21.4	-3.8
	comp=Z,17nm,0.6s						
FRF	**La Foret Royal**	9.67	287	*e*Pn	Pn	15 14 49.4	-0.3
FRF				*e*Sn	Sn	15 16 33.3	-4.4
	comp=Z,1.0nm,0.2s						
LMR	**La Mourre**	9.74	285	*e*Pn	Pn	15 14 51.6	+0.9
LMR				*e*Sn	Sn	15 16 35.7	-3.7
	comp=Z,1.3nm,0.3s						
KEST	**Kesra**	9.78	237	LR	LR	15 19 50.9	
	comp=Z,428nm,18.8s,baz=112,slow=46						
MBDF	**Montbardon**	9.81	293	*e*Pn	Pn	15 14 50.8	-1.0
MBDF				*e*Sn	Sn	15 16 36.7	-4.7
	comp=Z,16nm,0.6s						
BNI	**Bardonecchia**	9.96	295		Pn	15 14 54.1	+0.2
BNI					Sn	15 16 48.3	+3.2
SENIN	**Lac Senin/Sane**	10.01	303		Pn	15 14 55.0	+0.4
LPG	**La Plagne**	10.05	298	*e*Pn	Pn	15 14 54.8	-0.4
LPG				*e*Sn	Sn	15 16 42.5	-4.9
	comp=Z,35nm,0.7s						
LPL	**La Plagne**	10.07	298	*e*Pn	Pn	15 14 55.5	+0.1
LPL	**La Plagne**	10.07	298	*e*P	Pn	15 15 01.9	+6.5
LPL				*e*Sn	Sn	15 16 42.3	-5.4
	comp=Z,27nm,0.7s						
BRG	**Berggiesshubel**	10.11	340	*e*(P)	Pn	15 14 56.9	+1.2
	comp=Z,2.6nm,1.0s						
BRG	**Berggiesshubel**	10.11	340	SG	Sn	15 17 17.2	+29
	comp=Z,2.5nm,0.7s						
BRG	**Berggiesshubel**	10.11	340	*e*P	Pn	15 14 56.9	+1.2
BRG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ORIF	**Oris-en-Rattie**	10.47	294	*e*Pn	Pn	15 15 01.3	+0.5
ORIF				*e*Sn	Sn	15 16 52.7	-4.8
	comp=Z,16nm,0.6s						
SMRF	**Simiane la Rot**	10.50	288	*e*Pn	Pn	15 15 00.5	-0.6
SMRF				*e*Sn	Sn	15 16 53.4	-4.7
	comp=Z,0.8nm,0.3s						
CLL	**Collm**	10.76	338	*e*Pn	Pn	15 15 09.0	+4.4
CLL				*e*Pg		15 16 04.0	
CLL				*e*		15 16 52.0	
CLL				*e*Sn	Sn	15 17 03.0	-1.4
CLL				*e*		15 17 40.0	
CLL				*e*		15 17 56.0	
CLL				*e*Sg		15 18 13.0	
CLL				*e*Sglp		15 18 18.0	
	comp=N,100nm,25.2s						
CLL				*e*Sglp		15 18 18.0	
	comp=E,300nm,20.1s						
CLL				LV		15 19 00.0	
	comp=Z,200nm,18.5s						
CLL	**Collm**	10.76	338	*e*P	Pn	15 15 09.0	+4.4
CLL				*e*		15 17 03.0	
CABF	**La Chapelle**	10.88	302	*e*Pn	Pn	15 15 05.6	-0.8
CABF				*e*Sn	Sn	15 17 02.8	-4.7
	comp=Z,32nm,1.1s						
BR131	**Keskin Array S**	10.94	95	*i* P	Pn	15 15 08.1	+0.9
BRTR	**Keskin Array B**	10.94	95	Pn	Pn	15 15 09.7	+2.4
	comp=Z,0.1nm,0.3s,baz=286,slow=11,SNR=2.8						
BRTR				LR	LR	15 20 13.2	
	comp=Z,258nm,18.3s,baz=274,slow=42						
HINF	**Hinteralfeld**	10.96	309	*e*Pn	Pn	15 15 07.1	-0.3
HINF				*e*Sn	Sn	15 17 04.2	-5.1
	comp=Z,9.3nm,0.5s						
CDF	**Champ du Feu**	11.04	313	*e*Pn	Pn	15 15 08.5	0.0
CDF				*e*Sn	Sn	15 17 06.1	-5.3
	comp=Z,1.4nm,0.4s						
VIVF	**Saint-Julien-l**	11.29	292	*e*Pn	Pn	15 15 11.8	-0.2
VIVF				*e*Sn	Sn	15 17 12.3	-5.3
	comp=Z,6.7nm,0.7s						
HAU	**Haudompre**	11.35	309	*e*Pn	Pn	15 15 12.8	+0.1
HAU				*e*Sn	Sn	15 17 13.8	-5.0
	comp=Z,22nm,0.6s						
AKASG	**Malin Array Be**	11.42	33	Pn	Pn	15 15 15.1	+1.4
	comp=Z,0.2nm,0.3s,baz=220,slow=13,SNR=8.5						
PAGF	**Fort de Pagny**	11.99	311	*e*Pn	Pn	15 15 20.8	-0.6
	baz=131						
PAGF				*e*Sn	Sn	15 17 27.9	-6.5
	comp=Z,7.0nm,0.4s						
SFTF	**Sexfontaines**	12.21	308	*e*Pn	Pn	15 15 23.8	-0.7
	baz=127						
SFTF				*e*Sn	Sn	15 17 34.1	-5.9
	comp=Z,3.8nm,0.4s						
SMF	**Signal de Mont**	12.34	300	*e*Pn	Pn	15 15 25.3	-0.9
SMF				*e*Sn	Sn	15 17 36.4	-6.6
	comp=Z,7.3nm,0.5s						
MEZF	**Maizieres J'vi**	12.35	309	*e*Pn	Pn	15 15 25.2	-1.1
MEZF				*e*Sn	Sn	15 17 37.0	-6.2
	comp=Z,3.4nm,0.4s						
LOR	**Lormes**	12.54	303	*e*Pn	Pn	15 15 29.7	+0.7
	baz=114						
LOR				*e*Sn	Sn	15 17 41.9	-6.1
	comp=Z,6.7nm,0.3s						
SSF	**Saint Saulge**	12.69	301	*e*Pn	Pn	15 15 30.2	-0.9
SSF				*e*Sn	Sn	15 17 44.8	-6.9
	comp=Z,18nm,1.0s						
AVF	**Avril sur Loir**	12.70	300	*e*Pn	Pn	15 15 30.2	-1.0
AVF				*e*Sn	Sn	15 17 44.8	-7.1
	comp=Z,1.0nm,0.3s						
MTLF	**Montolieu**	12.86	284	*e*Pn	Pn	15 15 33.2	-0.2
MTLF	**Montolieu**	12.86	284	*e*P	Pn	15 15 38.9	+5.5
MTLF				*e*Sn	Sn	15 17 49.7	-6.2
	comp=Z,0.5nm,0.2s						
BGF	**Bois d'Agland**	12.96	299	*e*Pn	Pn	15 15 34.1	-0.6
BGF				*e*Sn	Sn	15 17 51.7	-6.6
	comp=Z,20nm,0.6s						
TCF	**Toulx Ste Croi**	13.31	297	*e*Pn	Pn	15 15 39.8	+0.3
TCF	**Toulx Ste Croi**	13.31	297	*e*P	P	15 15 45.1	-4.0
TCF				*e*Sn	Sn	15 18 00.1	-6.8
	comp=Z,3.3nm,0.5s						
ANN	**Anapa**	13.54	70	*e*P	Pn	15 15 34.1	-8.5
ANN				pmax	pmax		
	comp=Z,60nm,1.3s						
BAIF	**Baives**	13.63	314	*e*Pn	Pn	15 15 43.8	0.0
BAIF				*e*Sn	Sn	15 18 07.8	-6.6
	comp=Z,1.0nm,0.4s						
SOC	**Sochi**	15.09	75	*e*P	Pn	15 16 06.6	+2.9
SOC				*e*		15 19 00.2	
SOC				pmax	pmax		
	comp=Z,40nm,0.7s						
SOC				smax	smax		
	comp=N,13nm,1.1s						
SOC				smax	smax		
	comp=E,17nm,0.9s						
SOC				MLR	MLR		
	comp=Z,60nm,11.0s						
MMAI	**Mount Meron Ar**	15.26	119	Pn	Pn	15 16 04.7	-1.3
	comp=Z,0.2nm,0.3s,baz=323,slow=9.0,SNR=2.9						
MMAI				LR	LR	15 23 03.9	
	comp=Z,112nm,21.2s,baz=260,slow=42						
VSR	**Storozhevoye**	16.67	48	*e*P	Pn	15 16 24.1	0.0
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ASF	**Jabal al Asfar**	16.77	118	LR	LR	15 24 58.0	
	comp=Z,251nm,20.0s,baz=330,slow=45						
KIV	**Kislovodsk**	17.24	74	*e*P	Pn	15 16 30.0	-1.4
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
KIV				MLR	MLR		
	comp=Z,119nm,14.0s						
LPSR	**Galich'ya Gora**	17.24	43	*e*P	Pn	15 16 29.8	-1.4
LPSR				pmax	pmax		
	comp=Z,20nm,1.1s						
NEY	**Neytrino**	17.28	76	*i* P	P	15 16 33.9	+0.6
NEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KBZ	**Khabaz**	17.39	75	P	Pn	15 16 33.8	+0.6
	comp=Z,0.2nm,0.3s,baz=240,slow=8.7,SNR=7.8						
KBZ				LR	LR	15 24 34.8	
	comp=Z,77nm,18.5s,baz=276,slow=42						
VSU	**Vasula**	17.59	13	*ce*P	Pn	15 16 36.6	+1.1
VSU				pmax	pmax		
	comp=Z,155nm,0.8s						
OBN	**Obninsk**	17.68	34	⇓*e*P	P	15 16 38.5	+1.1
OBN				pmax	pmax		
	comp=Z,12nm,0.6s						
OBN				MLR	MLR		
	comp=Z,223nm,17.0s						
ESDC	**Sonseca Array**	17.86	272	P	Pn	15 16 37.6	-1.5
	comp=Z,0.2nm,0.3s,baz=71,slow=12,SNR=2.7						
VRH	**Novokhopyorsk**	18.11	50	*e*P	P	15 16 43.3	+1.1
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						

ZEI **Tsey** **18.17 78** *e*P **P** **15 16 45.0 +1.8**
ZEI pmax pmax
comp=Z,7.0nm,0.9s
MOS **Moscow** **18.55 34** *e*P **P** **15 16 45.2 -1.8**
MOS pmax pmax
comp=Z,35nm,0.8s
HFS **Hagfors** **18.99 351** P **P** **15 16 52.0 +0.2**
comp=Z,0.2nm,0.3s,baz=163,slow=11,SNR=6.3
HFS **Hagfors** **18.99 351** P **P** **15 16 52.0 +0.2**
GNI **Garni** **19.18 86** P **P** **15 16 54.9 +0.8**
comp=Z,0.8nm,0.3s,baz=318,slow=3.2,SNR=6.0
GNI **Garni** **19.18 86***ce*P **P** **15 16 55.0 +0.8**
GNI pmax pmax
comp=Z,45nm,1.0s
NB2 **NORSAR Subarra** **20.20 348** P **P** **15 17 05.6 +0.6**
comp=Z,1.9nm,0.7s,baz=161,slow=11
NOA **NORSAR Array B** **20.20 348** P **P** **15 17 05.7 +0.7**
comp=Z,2.2nm,0.8s,baz=150,slow=9.8,SNR=4.9
NOA LR LR 15 25 35.3
comp=Z,88nm,18.4s,baz=165,slow=39
EKA **Eskdalemuir Ar** **20.28 321** P **P** **15 17 06.5 +0.5**
comp=Z,0.4nm,0.3s,baz=115,slow=9.5,SNR=3.5
FINES **FINESS Array B** **20.37 9** P **P** **15 17 06.7 -0.1**
comp=Z,12nm,0.8s,baz=174,slow=7.7,SNR=16
FINES **FINESS Array B** **20.37 9** *i* P **P** **15 17 06.6 -0.2**
FINES pmax pmax
comp=Z,13nm,0.8s
FINES **FINESS Array B** **20.37 9** P **P** **15 17 06.9 +0.1**
MDT **Midelt** **20.99 253** P **P** **15 17 14.5 +0.6**
comp=Z,2.4nm,0.9s,baz=59,slow=12,SNR=2.6
MDT LR LR 15 24 36.2
comp=Z,95nm,18.6s,baz=18,slow=35
KLMR **Klimovskoe** **22.92 26** *e*P **P** **15 17 32.7 -1.4**
KLMR pmax pmax
comp=Z,51nm,1.1s
KLMR **Klimovskoe** **22.92 26** *e*P **P** **15 17 32.8 -1.4**
KLMR AMP 15 17 35.7
comp=Z,51nm,1.1s
TMCR **Tamitsa** **25.13 19** *e*P **P** **15 17 55.0 0.0**
TMCR pmax pmax
comp=Z,62nm,1.0s
KIRV **Kirov** **25.42 38** P **P** **15 17 58.7 +1.0**
comp=Z,5.6nm,0.7s,baz=58,slow=8.0,SNR=4.2
KIRV LR LR 15 29 02.9
comp=Z,164nm,18.5s,baz=261,slow=39
PRGR **Permogore** **25.59 29** *e*P **P** **15 17 58.0 -1.2**
PRGR pmax pmax
comp=Z,52nm,0.7s
AKTO **Aktyubinsk** **27.98 58** P **P** **15 18 20.3 -0.7**
comp=Z,0.7nm,0.4s,baz=262,slow=8.4,SNR=4.4
AKTO LR LR 15 31 52.4
comp=Z,121nm,19.9s,baz=278,slow=42
ABKAR **Akbulak array** **29.20 61** P **P** **15 18 31.1 -0.6**
ARU **Arti** **29.23 46** P **P** **15 18 31.6 -0.3**
comp=Z,3.1nm,0.7s,baz=253,slow=5.7,SNR=16
ARU LR LR 15 31 41.6
comp=Z,152nm,18.3s,baz=256,slow=39
ARU **Arti** **29.23 46***ce*P **P** **15 18 30.7 -1.2**
ARU pmax pmax
comp=Z,10.0nm,1.0s
ARU **Arti** **29.23 46** P **P** **15 18 31.1 -0.9**
ARU IAmb IAmb 15 18 32.5
comp=Z,11nm,0.8s
GEYT **Alibeck** **29.79 84** P **P** **15 18 35.5 -1.6**
comp=Z,1.6nm,0.6s,baz=283,slow=7.4,SNR=5.3
GEYT **Alibeck** **29.79 84** P **P** **15 18 35.7 -1.5**
SVE **Sverdlovsk** **30.44 46** *e*P **P** **15 18 43.2 +0.6**
SVE pmax pmax
comp=Z,16nm,0.9s
TORD **Torodi Ar. Bea** **32.22 214** P **P** **15 18 57.3 -1.4**
comp=Z,0.2nm,0.4s,baz=20,slow=9.2,SNR=2.1
BRVK **Borovoye** **35.64 53***ce*P **P** **15 19 28.9 +0.8**
BRVK pmax pmax
comp=Z,11nm,0.6s
BRVK **Borovoye** **35.64 53** P **P** **15 19 29.2 +1.1**
WSAR **Wadi Sarin** **37.39 107** LR LR 15 38 18.3
comp=Z,64nm,18.4s,baz=325,slow=41
AAK **Ala-Archa** **40.26 69** LR LR 15 42 00.9
comp=Z,63nm,18.8s,baz=296,slow=44
KURK **Kurchatov** **41.04 56***ce*P **P** **15 20 13.0 -0.5**
KURK pmax pmax
comp=Z,6.0nm,2.5s
KURK **Kurchatov** **41.04 56** P **P** **15 20 14.7 +1.2**
KSH **Kashi** **42.37 73** P **P** **15 20 26.0 +1.3**
KSH sP sP 15 20 33.6 +0.1
KSH S **S** **15 26 44.9 0.0**
KSH ScS **ScS** **15 30 26.0 +0.5**
MAKZ **Makanchi** **44.13 61** P **P** **15 20 38.8 +0.1**
MAKZ pmax pmax
comp=Z,6.0nm,1.0s
MAKZ **Makanchi** **44.13 61** P **P** **15 20 38.8 +0.1**
MAKZ IAmb IAmb 15 20 40.0
comp=Z,5.6nm,0.9s
ZAA0 **Zalesovo Array** **44.15 50** P **P** **15 20 37.3 -1.4**
ZAA0 IAmb IAmb 15 20 39.8
comp=Z,11nm,0.8s
ZALV **Zalesovo Beam** **44.15 50** P **P** **15 20 39.0 +0.3**
comp=Z,8.9nm,0.7s,baz=280,slow=8.8,SNR=40
ZALV LR LR 15 41 37.2
comp=Z,105nm,19.5s,baz=265,slow=40
ZALV **Zalesovo Beam** **44.15 50** P **P** **15 20 38.9 +0.1**
NRIK **Noril'sk** **44.23 28** P **P** **15 20 40.0 +0.9**
comp=Z,1.1nm,0.5s,baz=252,slow=13,SNR=3.6
MK31 **Makanchi Array** **44.34 61** P **P** **15 20 40.9 +0.5**
MK31 pmax pmax
comp=Z,7.0nm,0.9s
MK31 **Makanchi Array** **44.34 61** P **P** **15 20 40.9 +0.5**
MK31 IAmb IAmb 15 20 41.6
comp=Z,7.4nm,0.8s
MKAR **Makanchi Array** **44.34 61** P **P** **15 20 41.0 +0.6**
comp=Z,8.4nm,0.7s,baz=283,slow=6.6,SNR=125
MKAR LR LR 15 42 31.6
comp=Z,65nm,20.3s,baz=292,slow=41
MKAR **Makanchi Array** **44.34 61** *i* P **P** **15 20 40.7 +0.3**
MKAR pmax pmax
comp=Z,8.0nm,0.7s
WMQ **Urumqi** **48.93 63** *e*P **P** **15 21 20.7 +4.3**
DANN **Dangsing** **53.22 83** *e*P **P** **15 21 48.3 -0.8**
comp=Z,63nm,0.8s
GKN **Gorkha** **54.05 82** *e*P **P** **15 21 53.9 -1.2**
comp=Z,44nm,0.7s
DMN **Daman** **54.62 83** *e*P **P** **15 21 58.5 -0.8**
comp=Z,37nm,0.9s
KKN **Kakani** **54.65 82** *e*P **P** **15 21 58.5 -1.0**
comp=Z,1.5nm,0.6s
PKIN **Phulchoki** **54.85 82** *e*P **P** **15 21 59.9 -1.1**
comp=Z,17nm,0.7s
PKI **Pulchoki** **54.86 82** *e*P **P** **15 21 59.9 -1.3**
comp=Z,24nm,0.8s
GUN **Gumba** **55.03 82** *e*P **P** **15 22 01.5 -0.9**
comp=Z,55nm,0.9s
JIRN **Jiri** **55.40 82** *e*P **P** **15 22 04.3 -0.8**
comp=Z,48nm,0.7s
SCHQ **Schefferville** **55.48 316** P **P** **15 22 05.4 +0.5**
comp=Z,1.2nm,0.8s,baz=51,slow=13,SNR=2.6
SCHQ **Schefferville** **55.48 316** IAmb IAmb 15 22 16.1
comp=Z,8.9nm,1.5s
RAMN **Ramite** **56.09 82** *e*P **P** **15 22 08.8 -1.1**
comp=Z,55nm,0.7s
TAPN **Taplejung** **56.69 81** *e*P **P** **15 22 13.2 -1.1**
comp=Z,11nm,0.6s
ODAN **Odare** **56.73 82** *e*P **P** **15 22 13.5 -1.0**
comp=Z,35nm,0.9s
BATG **Bathurst New B** **58.43 307** P **P** **15 22 27.6 +1.7**
GTA **Gaotai** **59.02 63** ⇑P **P** **15 22 30.5 +0.3**
GTA pP pP 15 22 35.2 -1.5
GTA sP sP 15 22 37.5 -1.7
SONM **Songino Array** **59.02 52** P **P** **15 22 30.7 +0.6**
comp=Z,2.8nm,0.9s,baz=290,slow=8.1,SNR=19
SONM LR LR 15 50 20.9
comp=Z,91nm,19.9s,baz=355,slow=38
SONM **Songino Array** **59.02 52** P **P** **15 22 30.2 +0.1**
SONM pmax pmax
comp=Z,4.0nm,1.1s
SONM **Songino Array** **59.02 52** P **P** **15 22 30.2 +0.1**
LZH **Lanzhou** **63.48 64** *e*P **P** **15 23 01.9 +1.3**
LZH pP pP 15 23 07.6 +0.5
LZH sP sP 15 23 11.1 +1.5
LZH PP **PP** **15 25 21.4 +1.5**
HHC **Hu-ho-hao-te** **65.85 56** *e*P **P** **15 23 18.0 +2.1**
CD2 **Chengdu** **66.33 69** P **P** **15 23 19.9 +0.8**
YKA **Yellowknife Ar** **69.99 339** P **P** **15 23 42.1 +0.8**
comp=Z,1.0nm,0.7s,baz=38,slow=5.5,SNR=20
CMAR **Chiang Mai Arr** **70.26 83** P **P** **15 23 42.9 -0.9**
comp=Z,1.2nm,0.8s,baz=305,slow=7.8,SNR=11
ULM **Lac du Bonnet** **72.55 323** P **P** **15 23 56.3 -0.8**
comp=Z,2.3nm,0.8s,baz=49,slow=4.4,SNR=7.2
ULM **Lac du Bonnet** **72.55 323** IAmb IAmb 15 23 59.4
comp=Z,2.5nm,0.8s
ILAR **Eielson Array** **73.52 354** P **P** **15 24 03.2 +0.6**
comp=Z,0.6nm,0.7s,baz=5.3,slow=4.8,SNR=6.9
WHN **Wuhan** **73.83 64** P **P** **15 24 02.6 -2.4**
USRK **Ussuriysk Ar.** **75.43 43** LR LR 16 01 32.8
comp=Z,106nm,18.5s,baz=300,slow=39
PETK **Petropavlovsk-** **79.11 24** LR LR 16 04 06.6
comp=Z,68nm,19.2s,baz=246,slow=39
PDAR **Pinedale Array** **84.34 325** P **P** **15 25 02.5 -0.1**
comp=Z,0.6nm,0.7s,baz=70,slow=6.5,SNR=5.9
TXAR **Lajitas Array** **92.09 313** P **P** **15 25 40.9 +1.0**
comp=Z,0.7nm,0.8s,baz=46,slow=3.6,SNR=4.7
ASAR **Alice Springs** **123.28 93** PKP **PKPdf** **15 31 26.7 -0.7**
comp=Z,0.7nm,0.8s,baz=315,slow=1.7,SNR=12

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*IDC **08** 15:18:30.9±4.8, 41.°26N×19.°15E, h0^{km}, mb3.7/3, mb1 3.8/4, mb1mx3.3/42, mbtmp3.7/4, ML3.6/1, Error ellipse: s-maj=72.2km s-min=67.4km az=115.0*
*TIR **08** 15:18:37.6, 41.°53N×19.°58E, h7^{km}, Md2.9/5*
ISC 08 15:18:34.2±1.8**, 41.°43N**±0.°05×**19.°37E**±0.°07**, h9**^{km}±10^{km}**, n22, σ1^{s}33**/32**, 4C-6D, Albania**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TIR **Tirane** **0.38 102** *i* PG **Pb** **15 18 43.6 +0.5**
TIR *i* SG **Sb** **15 18 47.7 -1.3**
TIR **Tirane** **0.38 102** ⇓P **Pb** **15 18 43.6 +0.5**
TIR ⇓S **Sb** **15 18 49.2 +0.1**
PUK **Puka** **0.72 32** *i* PG **Sb** **15 18 57.1 -2.0**
PUK *i* SG **Pb** **15 18 49.0 -0.1**
PHP **Peshkopia** **0.84 72** *i* PG **Pg** **15 18 50.1 -0.3**
PHP *i* SG **Sb** **15 19 01.0 -1.4**
PDG **Podgorica** **1.00 355** ⇑P **Pg** **15 18 53.5 0.0**
PDG ⇑S **Sg** **15 19 05.2 -1.3**
BCI **Bajram Curri** **1.07 29** *i* PG **Pn** **15 18 55.9 +0.5**
BCI *i* SG **Sn** **15 19 09.1 -1.3**
OHR **Ohrid** **1.12 106** *e*Pg **Pb** **15 18 56.2 +0.5**
OHR *i* Sg **Sn** **15 19 13.4 +1.7**
SKO **Skopje** **1.64 70** *i* Pg **Pg** **15 19 05.5 -0.1**
SKO *i* Sg **Sg** **15 19 26.4 -0.5**
FNA **Florina** **1.65 112** *i* PN **Pg** **15 19 06.2 +0.5**
STIP **Stip** **2.13 82** *i* Pn **Pn** **15 19 08.7 -1.2**
STIP *e*Sn **Sg** **15 19 43.0 +0.5**
VAY **Valandovo** **2.41 92** *i* Pn **Pn** **15 19 12.4 -1.4**
VAY *e*Sn **Sn** **15 19 43.9 +0.5**
VTS **Vitosha** **3.11 66** ⇑P **Pn** **15 19 25.4 +1.8**
MDVR **Moldovita** **3.76 26** ⇑P **Pn** **15 19 33.9 +1.5**
HERR **Herculane** **4.10 32** ⇓P **Pn** **15 19 39.0 +1.9**
BZS **Buzias** **4.49 21** ⇓P **Pn** **15 19 44.0 +1.6**
GZR **Gura Zlata** **4.67 31** ⇓P **Pn** **15 19 46.0 +1.1**
VOIR **5.75 44** ⇓P **Pn** **15 20 01.6 +1.8**
MLR **Muntele Rosu** **6.27 47** Pn **Pn** **15 20 09.9 +2.9**
0.6nm,0.3s,baz=260,slow=3.1,SNR=4.3
IDI **Anoyia** **7.51 143** Sn **Sn** **15 21 46.9 -2.3**
0.2nm,0.3s,baz=299,slow=11,SNR=2.4
FINES **FINESS Array B** **20.45 9** P **P** **15 23 11.9 +0.2**
3.4nm,0.9s,baz=202,slow=13,SNR=2.3
ZALV **Zalesovo Beam** **44.24 50** P **P** **15 26 43.4 -0.2**
0.6nm,0.6s,baz=275,slow=7.1,SNR=2.9
MKAR **Makanchi Array** **44.42 61** P **P** **15 26 45.1 -0.1**
0.7nm,0.7s,baz=280,slow=7.8,SNR=9.8

ATH 08 15:19:36.7, 38.°34N×20.°42E, h11^{km}±2^{km}**, ML1.6/**1**, Error ellipse: s-maj=2.9km s-min=1.1km az=215.0, Greece**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF1 **Kardakata, Kep** **0.07 150** P Pg 15 19 38.8 -0.2
KEF1 S Sg 15 19 40.4 -0.3
KEF4 **Livadi, Kephal** **0.08 180** P Pg 15 19 39.0 -0.1
KEF4 S Sg 15 19 41.0 0.0
KONA **Konidatara, Ke** **0.14 54** P Pg 15 19 40.1 0.0
KONA S Sg 15 19 42.9 +0.5
LXRA **Lixouri, Kepha** **0.14 176** P Pb 15 19 40.9 -0.5
LXRA S Sg 15 19 42.8 +0.5
KEF3 **Kipouria, Keph** **0.15 203** P Pg 15 19 40.1 -0.1
KEF3 S Sg 15 19 43.1 +0.5
KEF2 **Argostoli. Kep** **0.18 164** P Pg 15 19 40.4 -0.3
KEF2 S Sg 15 19 43.7 +0.3
VLS **Valsamata** **0.21 142** P Pg 15 19 40.9 -0.2
VLS S Sg 15 19 44.2 0.0
VLS AML AML 15 19 44.5
comp=N,418µm,0.2s
VLS AML AML 15 19 44.9
comp=E,577µm,0.1s
KFL **Anninata** **0.37 129** P Pg 15 19 43.7 -0.4
KFL S Sg 15 19 49.8 +0.8
MGNA **Meganis** **0.43 42** P Pg 15 19 45.0 -0.1

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*NIC **08** 15:25:14.2±0.0, 35.°63N×31.°24E, h69^{km}±4^{km}, Ml3.1/3*
*DDA **08** 15:25:20.0, 35.°82N×31.°60E, h6^{km}±16^{km}, ML2.1*
ISC 08 15:25:17.5±1.3**, 35.°66N**±0.°05×**31.°45E**±0.°04**, h32**^{km}±15^{km}**, n19, σ1^{s}82**/30**, Cyprus region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GAZI **Gazipasa** **0.91 50** *i* P **Pn** **15 25 34.1 0.0**
GAZI *i* S **Sn** **15 25 42.8 -3.3**
GAZI IAML 15 25 48.0
comp=E,70nm,0.4s
GAZI IAML 15 25 52.0
comp=N,66nm,0.4s
AKMS **Akamas** **0.96 131** P **Pn** **15 25 33.8 -1.1**
AKMS S **Sn** **15 25 49.2 +1.7**
AKMS AML AML 15 25 50.9
comp=N,1.4nm,0.6s
AKMS AML AML 15 25 50.9
comp=N,1.4nm,0.6s
AKMS AML AML 15 25 51.8
comp=N,1.4nm,0.3s
AKMS AML AML 15 25 51.8
comp=N,1.4nm,0.3s
ALFC **Alefka** **1.06 118** P **Pn** **15 25 35.5 -0.7**
ALFC S **Sn** **15 25 51.2 +1.2**
ALFC AML AML 15 25 56.0
comp=N,1.0nm,0.3s
ALFC AML AML 15 25 56.0
comp=N,1.0nm,0.3s
ALFC AML AML 15 25 56.6
comp=N,1.0nm,0.2s
ALFC AML AML 15 25 56.6
comp=N,1.0nm,0.2s
AKUM **Antalya-Kumluc** **1.12 307** *i* P **Pn** **15 25 35.3 -1.6**
AKUM *i* S **Sn** **15 25 51.4 +0.2**
KEPZ **Antalya-Kepez** **1.25 6** *i* P **Pn** **15 25 39.0 +0.2**
KEPZ *i* S **Sb** **15 25 55.6 -0.7**
KEPZ IAML 15 26 00.0
comp=E,57nm,0.7s
KEPZ IAML 15 26 02.0
comp=N,34nm,0.3s
NATA **Nata** **1.27 133** P **Pn** **15 25 37.8 -1.2**
NATA S **Sn** **15 25 56.0 +1.1**
SZAC **Souni** **1.48 127** P **Pn** **15 25 40.8 -1.1**
SZAC S **Sn** **15 26 01.4 +1.3**
SZAC AML AML 15 26 01.8
comp=N,0.5nm,0.2s
SZAC AML AML 15 26 01.8
comp=N,0.5nm,0.2s
SZAC AML AML 15 26 07.3
comp=N,0.6nm,0.8s
SZAC AML AML 15 26 07.3
comp=N,0.6nm,0.8s
AKAS **Kas** **1.60 292** *i* P **Pb** **15 25 46.4 -0.2**
KORT **Korkueli** **1.61 327** *i* P **Pb** **15 25 47.3 +0.6**
KORT *i* S **Sb** **15 26 11.1 +4.4**
KORT IAML 15 26 21.0
comp=E,68nm,0.6s
KORT IAML 15 26 21.0
comp=N,47nm,0.8s
CSS **Mathiatis** **1.69 114** P **Pn** **15 25 43.8 -1.0**
ASGA **Asgata** **1.71 120** P **Pn** **15 25 44.7 -0.3**
ASGA S **Sn** **15 26 07.4 +1.6**
GULN **MERSIN_Gulnar** **1.78 72** *i* P **Pn** **15 25 48.1 +2.1**
GULN *i* S **Sb** **15 26 12.6 +1.2**
GULN IAML 15 26 18.0
comp=N,21nm,0.6s
GULN IAML 15 26 21.0
comp=E,31nm,0.6s
GOLH **Golhisar** **2.19 317** *i* P **Pb** **15 25 57.6 +1.0**
KMER **Konya-Meram** **2.23 19** *i* P **Pb** **15 25 56.7 -0.6**
KMER IAML 15 26 30.0
comp=N,20nm,0.7s
KMER IAML 15 26 33.0
comp=E,13nm,0.7s
BAGO **Egridir - ISPA** **2.39 347** *i* P **Pb** **15 25 58.7 -1.2**
DOGA **KONYA_Doganhis** **2.45 4** *i* P **Pn** **15 25 57.9 +2.4**
DOGA *i* S **Sb** **15 26 28.3 -2.5**
DOGA IAML 15 26 34.0
comp=E,11nm,0.4s
DOGA IAML 15 26 37.0
comp=N,22nm,0.5s
TAVA **DENIZLI_Tavas** **2.73 312** *i* P **Pb** **15 26 03.5 -2.1**
KZIL **AFYON_Kizioren** **2.80 338** *i* P **Pn** **15 26 01.1 +0.9**
KHAL **Karahalli** **3.13 330** *i* P **Pb** **15 26 09.2 -3.3**

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*BEO **08** 15:27:45.5±0.6, 41.°48N×19.°23E, h0^{km}, ML2.8/11*
*PDG **08** 15:27:49.2±0.4, 41.°54N×19.°54E, h17^{km}, MD3.3/2, ML3.1/12, Error ellipse: s-maj=1.1km s-min=1.3km az=0.0*
*TIR **08** 15:27:49.6, 41.°52N×19.°68E, h22^{km}, Md2.9/5*
ISC 08 15:27:45.5±1.4**, 41.°51N**±0.°03×**19.°34E**±0.°04**, h2**^{km}±11^{km}**, n33, σ1^{s}15**/47**, 4C-4D, Albania**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TIR **Tirane** **0.43 112** *e*Pg **Pg** **15 27 54.7 +1.0**
TIR *e*Sg **Sb** **15 28 00.7 -2.0**
TIR **Tirane** **0.43 112** *i* PG **Pb** **15 27 54.9 -0.9**
TIR *i* SG **Sg** **15 27 59.3 0.0**
TIR **Tirane** **0.43 112** ⇓P **Pb** **15 27 54.8 -0.9**
TIR ⇓S **Sg** **15 28 00.4 +1.1**
PUK **Puka** **0.68 38** *i* PG **Pb** **15 28 00.7 +0.6**
PUK *i* SG **Sb** **15 28 09.4 -0.5**
PHP **Peshkopia** **0.84 78** *i* PG **Pg** **15 28 01.8 +0.1**
PHP *i* SG **Sg** **15 28 10.6 -2.1**
PDG **Podgorica** **0.92 356** *e*Pg **Pg** **15 28 02.6 -0.6**
PDG *e*Sg **Sg** **15 28 15.7 +0.5**
PDG **Podgorica** **0.92 356** ⇑P **Pn** **15 28 06.1 +0.6**
PDG ⇓S **Sn** **15 28 21.0 +1.7**
BCI **Bajram Curri** **1.01 32** *i* PG **Pb** **15 28 06.1 +0.2**
BCI *i* SG **Sb** **15 28 19.8 +0.1**
OHR **Ohrid** **1.17 109** *e*Pg **Pg** **15 28 07.6 -0.4**
OHR *e*Sg **Sn** **15 28 24.3 -1.1**
TREB **Trebinje** **1.41 329** *e*Pn **Pn** **15 28 12.1 -0.2**
SKO **Skopje** **1.64 73** *e*Pg **Pb** **15 28 16.8 +0.3**
SKO *e*Sg **Sb** **15 28 37.8 +0.3**
FNA **Florina** **1.70 115** *i* PN **Pb** **15 28 17.6 +0.1**
FNA *i* SN **Sn** **15 28 38.3 -0.3**
SJES **Sjenica** **1.81 15** *e*Pn **Pn** **15 28 16.9 -1.0**
SJES *e*Sg **Sg** **15 28 44.4 +0.6**
STON **Ston** **1.83 319** *e*Pn **Pn** **15 28 16.8 -1.1**
STIP **Stip** **2.14 84** *e*Pn **Pg** **15 28 26.5 -0.1**
STIP *e*Sn **Sg** **15 28 53.2 -1.1**
IVAS **Ivanjica** **2.15 16** *e*Pn **Pn** **15 28 24.2 +1.7**
SELS **Selova** **2.16 37** *e*Pn **Pn** **15 28 23.9 +1.4**
BARS **Barje** **2.26 54** *e*Pn **Pn** **15 28 25.0 +1.1**
BBLS **Lazići** **2.36 1** *e*Pn **Pn** **15 28 26.5 +1.2**
VAY **Valandovo** **2.44 93** *e*Pn **Pn** **15 28 27.6 +1.3**
VAY *e*Sn **Sn** **15 28 55.3 -1.3**
BOSS **Bosilegrad** **2.54 66** *e*Pn **Pn** **15 28 28.2 +0.4**
GRUS **Gruza** **2.58 23** *e*Pn **Pb** **15 28 31.0 -1.6**
HAPS **Han Pijesak,Bl** **2.59 354** *e*Pn **Pn** **15 28 28.3 -0.3**
DIVS **Divibare** **2.63 10** *e*Pn **Pn** **15 28 30.9 +1.8**
BOVS **Bovan** **2.75 39** *e*Pn **Pn** **15 28 32.4 +1.8**
TRUS **Trudelj** **2.82 16** *e*Pn **Pn** **15 28 31.9 +0.2**
ZAPS **Zavoj** **3.01 53** *e*Pn **Pn** **15 28 36.3 +2.0**
TIP **Timpagrande** **3.05 221** ⇑P **Pn** **15 28 36.9 +2.0**
VTS **Vitosha** **3.10 68** *e*Pn **Pn** **15 28 36.9 +1.2**
VTS **Vitosha** **3.10 68** ⇓P **Pn** **15 28 36.2 +0.6**
ZAGS **Zajecar** **3.14 42** *e*Pn **Pn** **15 28 37.0 +1.0**
MDVR **Moldovita** **3.70 27** ⇑P **Pn** **15 28 44.6 +0.8**
VOIR **5.71 45** ⇑P **Pn** **15 29 13.0 +1.6**

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*IDC **08** 15:35:18.6±2.8, 21.°73S×176.°08W, h108^{km}±28^{km}, mb3.7/5, mb1 3.9/7, mb1mx3.6/32, mbtmp4.1/7, Error ellipse: s-maj=43.0km s-min=22.0km az=130.0*
*NEIC **08** 15:35:18.8±2.7, 21.°8S±0.°1×175.°9W±0.°1, h121^{km}±9^{km}, mb4.1/10, Error ellipse: s-maj=22.9km s-min=12.8km az=133.0*
ISC 08 15:35:19.6±0.6**, 21.°97S**±0.°09×**175.°77W**±0.°08**, h137**^{km}**, n24, σ1^{s}94**/26**, mb4.0**/8**, Tonga Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NIUE **Niue** **6.18 63** Pn **Pn** **15 36 51.1 +2.4**
NIUE **Sn** **15 37 55.3 -2.9**
RAO **Raoul Island** **7.51 195** P **Pn** **15 37 06.3 -0.2**
222nm,0.3s,baz=80,slow=21,SNR=4.5
AFI **Afiamalu** **8.87 26** P **Pn** **15 37 23.3 -1.6**
2.0nm,0.3s,baz=207,slow=18,SNR=3.4
AFI S Sn 15 38 50.7 -13
3.7nm,0.3s,baz=252,slow=20,SNR=4.2
AFI **Afiamalu** **8.87 26** **Pn** **15 37 24.1 -0.7**
AFI Sn 15 38 51.5 -12
RAR **Rarotonga** **14.90 90** Pn **Pn** **15 38 42.1 -1.3**
RAR IAmb IAmb 15 38 50.9
comp=Z,6.7nm,0.6s
URZ **Urewera** **17.36 199** P **Pn** **15 39 16.5 +3.1**
comp=Z,0.4nm,0.3s,baz=32,slow=19,SNR=3.8
URZ S **S** **15 42 20.7 -5.7**
comp=Z,0.2nm,0.3s,baz=30,slow=20,SNR=2.8
URZ **Urewera** **17.36 199** IAmb IAmb 15 39 21.0
comp=Z,14nm,1.1s
EIDS **Eidsvold** **30.51 257** P **P** **15 41 18.4 -1.6**
CTA **Charters Tower** **35.44 266** P **P** **15 42 03.1 +0.1**
comp=Z,4.4nm,0.7s,baz=94,slow=11,SNR=5.5
COEN **Coen** **39.77 274** P **P** **15 42 40.0 +0.6**
COEN IAmb IAmb 15 42 49.1
comp=Z,2.0nm,1.1s
BBOO **Buckleboo** **43.79 245** P **P** **15 43 12.2 +0.3**
AS31 **Alice Springs** **46.23 258** P **P** **15 43 31.6 +0.3**
ASAR **Alice Springs** **46.23 258** P **P** **15 43 31.5 +0.1**
comp=Z,4.0nm,0.8s,baz=99,slow=7.7,SNR=35
ASAR PcP **PcP** **15 45 07.2 +2.4**
comp=Z,0.6nm,0.7s,baz=98,slow=3.7,SNR=6.5
ASAR **Alice Springs** **46.23 258** P **P** **15 43 32.1 +0.8**
WR0 **Warramunga Arr** **46.29 263** P **P** **15 43 30.9 -1.0**
WR0 IAmb IAmb 15 43 41.6
comp=Z,5.2nm,1.1s
WB0 **Warramunga Arr** **46.46 263** P **P** **15 43 32.8 -0.4**
WB0 IAmb IAmb 15 43 33.4
comp=Z,6.4nm,1.1s
WB2 **Warramunga Arr** **46.47 263** P **P** **15 43 33.0 -0.2**
WRA **Warramunga Arr** **46.48 263** P **P** **15 43 32.7 -0.6**
comp=Z,1.8nm,0.8s,baz=90,slow=5.8,SNR=20
WRA **Warramunga Arr** **46.48 263** P **P** **15 43 30.7 -2.7**
KNRA **Kununurra** **52.65 267** P **P** **15 44 20.3 +0.2**
ILAR **Eielson Array** **89.29 12** P **P** **15 48 02.0 +2.2**
comp=Z,0.2nm,0.6s,baz=224,slow=6.1,SNR=2.7
CMAR **Chiang Mai Arr** **92.56 289** P **P** **15 48 14.8 -1.2**
comp=Z,0.2nm,0.3s,baz=143,slow=6.8,SNR=3.2
AKASG **Malin Array Be** **145.29 332** PKP **PKPdf** **15 54 41.7 +0.8**
comp=Z,0.2nm,0.3s,baz=42,slow=4.4,SNR=12
BRTR **Keskin Array B** **149.37 312** PKPbc **PKPbc** **15 54 53.2 +0.5**
comp=Z,0.6nm,0.6s,baz=147,slow=5.6,SNR=4.1

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*IDC **08** 15:41:46.8±0.9, 8.°79S×159.°04E, h168^{km}±16^{km}, mb3.6/9, mb1 3.8/9, mb1mx3.6/27, mbtmp4.0/9, Error ellipse: s-maj=37.0km s-min=16.4km az=129.0*
ISC 08 15:41:45.8±0.7**, 8.°6S**±0.°1×**158.°9E**±0.°1**, h150**^{km}**, n17, σ0^{s}87**/13**, mb3.7**/9**, Bougainville-Solomon Islands region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HNR **Honiara** **1.34 127** P **Pn** **15 42 14.3 +0.6**
144nm,0.3s,baz=230,slow=6.0,SNR=250
HNR S **Sn** **15 42 35.2 +0.1**
179nm,0.3s,baz=296,slow=23,SNR=8.5
HNR **Honiara** **1.34 127** *i* P **Pn** **15 42 14.0 +0.3**
WRA **Warramunga Arr** **26.24 242** P **P** **15 47 07.6 +0.5**
1.0nm,0.4s,baz=66,slow=9.2,SNR=18
H11S3 **WAKE ISLAND Hy** **28.04 16** T T 16 16 31.9
baz=195,slow=76,SNR=94
H11S2 **WAKE ISLAND Hy** **28.04 16** T T 16 16 30.1
baz=195,slow=76,SNR=111
H11S1 **WAKE ISLAND Hy** **28.05 16** T T 16 16 34.1
baz=195,slow=76,SNR=68
ASAR **Alice Springs** **28.17 235** P **P** **15 47 23.9 -0.4**
0.6nm,0.5s,baz=64,slow=10,SNR=23
ASAR PcP **PcP** **15 50 33.6 -1.1**

	0.2nm,0.7s,baz=75,slow=3.1,SNR=4.0						
H11N1	**WAKE ISLAND Hy**	**29.25**	**16**	T	T	16 18 05.5	
	baz=195,slow=76,SNR=43						
H11N3	**WAKE ISLAND Hy**	**29.26**	**16**	T	T	16 18 07.1	
	baz=195,slow=76,SNR=78						
H11N2	**WAKE ISLAND Hy**	**29.27**	**16**	T	T	16 18 04.9	
	baz=195,slow=76,SNR=49						
MJAR	**Matsushiro Arr**	**48.94**	**338**	P	**P**	**15 50 16.1**	**-0.7**
	1.0nm,0.7s,baz=158,slow=8.2,SNR=4.7						
KSRS	**Korea Array**	**54.22**	**330**	P	**P**	**15 50 57.4**	**+1.4**
	0.9nm,0.7s,baz=145,slow=9.0,SNR=4.5						
PETK	**Petropavlovsk-**	**61.50**	**359**	P	**P**	**15 51 47.0**	**+0.6**
	22nm,1.3s,baz=168,slow=7.4,SNR=7.4						
SONM	**Songino Array**	**72.80**	**326**	P	**P**	**15 52 59.1**	**+1.1**
	1.0nm,0.6s,baz=138,slow=5.6,SNR=8.9						
ILAR	**Eielson Array**	**83.52**	**20**	P	**P**	**15 53 55.4**	**-1.1**
	0.7nm,0.5s,baz=247,slow=4.8,SNR=19						
MKAR	**Makanchi Array**	**87.16**	**318**	P	**P**	**15 54 14.4**	**-0.6**
	0.5nm,0.6s,baz=99,slow=5.4,SNR=8.1						
YKA	**Yellowknife Ar**	**95.99**	**28**	P	**P**	**15 54 55.2**	**-0.3**
	0.2nm,0.7s,baz=262,slow=4.0,SNR=4.1						

KRSC 08 15:47:47.1±1.4**, 50°.49N×157°.77E, h44**km±20km**, ML3.8,**
Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.07**	**281**	*e*P	Pn	15 48 06.7	+1.1
SKR				*e*S	Sn	15 48 19.9	+0.6
PAU	**Pauzhetka**	**1.15**	**329**	*e*P	Pn	15 48 08.8	+2.0
PAU				*e*S	Sn	15 48 23.8	+2.5
KDTR	**Khodutka, Kamc**	**1.34**	**8**	*e*P	Pn	15 48 11.1	+1.8
KDTR				*e*S	Sn	15 48 28.0	+2.1
ALID	**Alaid**	**1.46**	**286**	*e*P	Pn	15 48 12.9	+1.8
ALID				*e*S	Sn	15 48 31.3	+2.1
ASAK	**Asacha**	**1.90**	**2**	*e*P	Pn	15 48 19.3	+2.2
MIPR	**Malaya Ipel'ka**	**1.90**	**341**	*e*P	Pn	15 48 20.5	+3.5
RUS	**Russkaya**	**2.00**	**13**	*e*P	Pn	15 48 20.2	+1.8
RUS				*e*S	Sn	15 48 43.5	+1.3
MTVR	**Mutnovka**	**2.02**	**7**	*e*P	Pn	15 48 21.1	+2.4
MTVR				*e*S	Sn	15 48 45.4	+2.6
GRL	**Gorelyy**	**2.08**	**5**	*e*P	Pn	15 48 22.2	+2.6
GRL				*e*S	Sn	15 48 47.8	+3.6
KRMR	**Karymshinskiy**	**2.36**	**5**	*e*P	Pn	15 48 25.7	+2.4
APC	**Apacha**	**2.47**	**351**	*e*P	Pn	15 48 27.7	+2.9
PET	**Petropavlovsk**	**2.60**	**12**	*e*P	Pn	15 48 29.0	+2.4
PET				*e*S	Sn	15 48 59.5	+2.6
DALK	**Dalny**	**2.62**	**13**	*e*P	Pn	15 48 29.4	+2.5
DALK				*e*S	Sn	15 49 00.5	+3.1
UGLR	**Uglovaya**	**2.80**	**13**	*e*P	Pn	15 48 33.4	+3.9
AVH	**Avacha**	**2.85**	**12**	*e*P	Pn	15 48 33.8	+3.7
SMAR	**Somma**	**2.85**	**13**	*e*P	Pn	15 48 34.0	+3.7
KOK	**Koryaka**	**2.86**	**10**	*e*P	Pn	15 48 34.1	+3.8
KRER	**Koryakskii**	**2.89**	**12**	*e*P	Pn	15 48 34.2	+3.5
KRX	**Arik**	**2.93**	**10**	*e*P	Pn	15 48 34.9	+3.7
SPN	**Mys Shipunski**	**2.97**	**27**	*e*S	Sn	15 49 09.2	+3.3
KZV	**Kizimen**	**4.88**	**17**	*e*P	Pn	15 49 02.8	+4.8
TUMR	**Tumrok**	**5.01**	**16**	*e*P	Pn	15 49 04.5	+4.7
KBTR	**Krutoberegovo**	**6.48**	**26**	*e*P	Pn	15 49 22.6	+2.8

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*TIR **08** 15:58:30.3, 41°.50N×19°.45E, h7km, Md3.0/4*
*THE **08** 15:58:30.9, 41°.53N×19°.44E, h0km±2km, ML2.5/3, Error ellipse: s-maj=3.3km s-min=1.0km az=304.0*
*PDG **08** 15:58:31.5±0.2, 41°.48N×19°.50E, h18km, ML2.7/11, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
*BEO **08** 15:58:32.6±0.6, 41°.50N×19°.51E, h12km±3km, ML2.5/10*
ISC 08 15:58:31.3±1.1**, 41°.52N**±0°.02×**19°.46E**±0°.03**, h11**km±8km**,**
n48, σ0s.78/68**, 5C-9D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.35**	**119**	P	**Pg**	**15 58 38.2**	**-0.1**
TIR				S	**Sg**	**15 58 43.4**	**+0.4**
	2μm,0.3s						
TIR	**Tirane**	**0.35**	**119**	*e*Pg	**Pg**	**15 58 38.2**	**-0.1**
TIR				*e*Sg	**Sg**	**15 58 43.6**	**+0.6**
TIR	**Tirane**	**0.35**	**119**	*i* PG	**Pg**	**15 58 38.1**	**-0.2**
TIR				*i* SG	**Sg**	**15 58 43.5**	**+0.6**
TIR	**Tirane**	**0.35**	**119**	⇓P	**Pg**	**15 58 38.2**	**-0.1**
TIR				⇓S	**Sg**	**15 58 43.6**	**+0.6**
PUK	**Puka**	**0.62**	**32**	*i* PG	**Pg**	**15 58 43.1**	**-0.2**
PUK				*i* SG	**Sb**	**15 58 53.0**	**+0.2**
PHP	**Peshkopia**	**0.76**	**77**	P	**Pg**	**15 58 44.8**	**-1.1**
PHP				S	**Sb**	**15 58 56.8**	**0.0**
PHP	**Peshkopia**	**0.76**	**77**	*i* PG	**Pg**	**15 58 45.0**	**-1.0**
PHP				*i* SG	**Sb**	**15 58 56.5**	**-0.3**
PDG	**Podgorica**	**0.92**	**351**	*e*Pg	**Pn**	**15 58 51.0**	**+0.8**
PDG				*e*Sg	**Sn**	**15 59 03.2**	**-0.2**
PDG	**Podgorica**	**0.92**	**351**	⇓P	**Pn**	**15 58 50.6**	**+0.4**
PDG				⇓S	**Sn**	**15 59 03.9**	**+0.5**
PDG	**Podgorica**	**0.92**	**351**	*e*Pn	**Pn**	**15 58 50.3**	**+0.1**
BCI	**Bajram Curri**	**0.96**	**28**	*i* PG	**Pg**	**15 58 48.9**	**-0.9**
BCI				*i* SG	**Sb**	**15 59 03.0**	**+0.2**
OHR	**Ohrid**	**1.09**	**112**	*e*Pg	**Pg**	**15 58 51.5**	**-0.7**
OHR				*i* Sg	**Sn**	**15 59 08.2**	**+0.5**
HCY	**Herceg Novi**	**1.17**	**323**	*e*Pn	**Pn**	**15 58 54.7**	**+1.1**
TPE	**Tepelena**	**1.29**	**161**	P	**Pg**	**15 58 55.7**	**-0.4**
TPE				S	**Sn**	**15 59 14.6**	**+2.1**
	230nm,0.8s						
TREB	**Trebinje**	**1.45**	**326**	*e*Pn	**Pb**	**15 58 58.6**	**+0.3**
SKO	**Skopje**	**1.55**	**72**	*e*Pg	**Pn**	**15 58 59.0**	**+0.2**
SKO				*i* Sg	**Sg**	**15 59 20.7**	**-0.4**
FNA	**Florina**	**1.62**	**116**	P	**Pb**	**15 59 00.8**	**-0.5**
NEST	**Nestorio**	**1.63**	**132**	P	**Pb**	**15 59 01.0**	**-0.5**
NEST				S	**Sg**	**15 59 23.4**	**-0.4**
	65nm,0.5s						
SJES	**Sjenica**	**1.78**	**12**	*e*Pn	**Pn**	**15 59 03.3**	**+1.2**
SJES				*e*Sg	**Sg**	**15 59 29.2**	**+0.6**
KEK	**Kerkira**	**1.82**	**172**	P	**Pn**	**15 59 02.5**	**-0.1**
PENT	**Pentalofos**	**1.84**	**135**	P	**Pn**	**15 59 03.1**	**+0.3**
STON	**Ston**	**1.88**	**317**	*e*Pn	**Pb**	**15 59 04.8**	**-0.8**
STON	**Ston**	**1.88**	**317**	*e*Pn	**Pg**	**15 59 06.4**	**-0.9**
STIP	**Stip**	**2.05**	**84**	*e*Pn	**Pb**	**15 59 09.3**	**+0.7**
STIP				*e*Sn	**Sg**	**15 59 37.8**	**+0.5**
RUDO	**Rudo**	**2.10**	**358**	*e*Pn	**Pb**	**15 59 09.9**	**+0.6**
SELS	**Selova**	**2.10**	**35**	*e*Pn	**Pn**	**15 59 06.9**	**+0.5**
IVAS	**Ivanjica**	**2.12**	**14**	*e*Pn	**Pn**	**15 59 08.1**	**+1.4**
BARS	**Barje**	**2.18**	**53**	*e*Pn	**Pn**	**15 59 08.1**	**+0.6**
GRG	**Griva**	**2.29**	**103**	P	**Pn**	**15 59 09.7**	**+0.7**
BBLS	**Lazići**	**2.35**	**359**	*e*Pn	**Pb**	**15 59 12.4**	**-1.2**
BBLS	**Lazići**	**2.35**	**359**	*e*Pn	**Pb**	**15 59 13.4**	**-0.2**
VAY	**Valandovo**	**2.35**	**94**	*e*Pn	**Pn**	**15 59 09.5**	**-0.3**
VAY				*e*Sn	**Sn**	**15 59 37.4**	**-1.2**
BOSS	**Bosilegrad**	**2.46**	**66**	*e*Pn	**Pn**	**15 59 12.1**	**+0.8**
GRUS	**Gruza**	**2.54**	**21**	*e*Pn	**Pn**	**15 59 13.5**	**+1.0**
HAPS	**Han Pijesak,BI**	**2.59**	**352**	*e*Pn	**Pn**	**15 59 14.1**	**+0.9**
HAPS	**Han Pijesak,BI**	**2.59**	**352**	*e*Pn	**Pn**	**15 59 14.1**	**+0.9**
DIVS	**Divibare**	**2.61**	**9**	*e*Pn	**Pn**	**15 59 15.8**	**+2.4**
DIVS	**Divibare**	**2.61**	**9**	*e*Pn	**Pn**	**15 59 12.8**	**-0.6**
BOVS	**Bovan**	**2.69**	**37**	*e*Pn	**Pn**	**15 59 15.6**	**+1.1**
ZAPS	**Zavoj**	**2.93**	**52**	*e*Pn	**Pn**	**15 59 18.8**	**+0.9**
VTS	**Vitosha**	**3.02**	**67**	⇑P	**Pn**	**15 59 18.9**	**-0.3**
VTS				⇑S	**Sn**	**15 59 55.7**	**+0.3**
ZAGS	**Zajecar**	**3.07**	**41**	*e*Pn	**Pn**	**15 59 19.9**	**+0.2**
TIP	**Timpagrande**	**3.12**	**222**	⇑P	**Pn**	**15 59 20.2**	**-0.3**
MDVR	**Moldovita**	**3.66**	**26**	⇓P	**Pn**	**15 59 27.8**	**0.0**
HERR	**Herculane**	**4.00**	**32**	⇓P	**Pn**	**15 59 33.2**	**+0.8**
HERR				⇑S	**Sn**	**16 00 19.6**	**+0.4**
BZS	**Buzias**	**4.39**	**20**	⇓P	**Pn**	**15 59 38.4**	**+0.6**
BZS				⇓S	**Sn**	**16 00 27.3**	**-1.5**
GZR	**Gura Zlata**	**4.56**	**31**	⇓P	**Pn**	**15 59 40.6**	**+0.3**
VOIR		**5.65**	**44**	⇑P	**Pn**	**15 59 55.2**	**0.0**

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*PDG **08** 16:06:19.9±0.3, 41°.57N×19°.61E, h11km, ML2.8/11, Error ellipse: s-maj=0.7km s-min=1.1km az=0.0*
*TIR **08** 16:06:19.2, 41°.55N×19°.56E, h7km, Md2.2/4*
*THE **08** 16:06:19.2, 41°.58N×19°.53E, h0km±2km, ML2.3/3, Error ellipse: s-maj=2.8km s-min=1.2km az=309.0*
*BEO **08** 16:06:21.0±0.5, 41°.54N×19°.62E, h11km±3km, ML2.5/13*
ISC 08 16:06:19.2±1.1**, 41°.53N**±0°.03×**19°.52E**±0°.03**, h14**km±9km**,**
n47, σ0s.92/68**, 6C-7D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.32**	**126**	P	**Pg**	**16 06 25.5**	**-0.2**
TIR				S	**Sb**	**16 06 30.9**	**-0.7**
	1μm,0.4s						
TIR	**Tirane**	**0.32**	**126**	*e*Pg	**Pg**	**16 06 25.3**	**-0.4**
TIR				*e*Sg	**Sb**	**16 06 31.1**	**-0.5**
TIR	**Tirane**	**0.32**	**126**	*i* PG	**Pg**	**16 06 25.3**	**-0.4**
TIR				*i* SG	**Sb**	**16 06 31.1**	**-0.5**
TIR	**Tirane**	**0.32**	**126**	⇓P	**Pg**	**16 06 25.5**	**-0.2**
TIR				⇓S	**Sb**	**16 06 30.9**	**-0.7**
PUK	**Puka**	**0.58**	**28**	*i* PG	**Pg**	**16 06 30.2**	**-0.4**
PUK				*i* SG	**Sn**	**16 06 41.5**	**-1.1**
PHP	**Peshkopia**	**0.70**	**77**	P	**Pg**	**16 06 32.0**	**-0.9**
PHP				S	**Sb**	**16 06 42.9**	**0.0**
PHP	**Peshkopia**	**0.70**	**77**	*i* PG	**Pg**	**16 06 32.2**	**-0.8**
PHP				*i* SG	**Sb**	**16 06 42.5**	**-0.4**
PDG	**Podgorica**	**0.92**	**348**	*e*Pg	**Pn**	**16 06 38.0**	**+0.3**
PDG				*e*Sg	**Sn**	**16 06 52.2**	**+1.4**
PDG	**Podgorica**	**0.92**	**348**	⇑P	**Pb**	**16 06 37.8**	**+0.8**
PDG				⇑S	**Sb**	**16 06 50.5**	**+1.5**
PDG	**Podgorica**	**0.92**	**348**	*e*Pn	**Pg**	**16 06 37.0**	**0.0**
BCI	**Bajram Curri**	**0.93**	**26**	*i* PG	**Pg**	**16 06 36.5**	**-0.6**
BCI				*i* SG	**Sb**	**16 06 50.1**	**+0.8**
OHR	**Ohrid**	**1.05**	**113**	*i* Pg	**Pg**	**16 06 38.3**	**-1.1**
OHR				*i* Sg	**Sn**	**16 06 54.9**	**+0.8**
HCY	**Herceg Novi**	**1.19**	**320**	*e*Pn	**Pg**	**16 06 41.4**	**-0.8**
TPE	**Tepelena**	**1.29**	**163**	P	**Pg**	**16 06 44.2**	**+0.2**
TREB	**Trebinje**	**1.47**	**324**	*e*Pn	**Pn**	**16 06 45.4**	**+0.1**
SKO	**Skopje**	**1.50**	**72**	*e*Pg	**Pg**	**16 06 47.4**	**-0.6**
SKO				*i* Sg	**Sg**	**16 07 08.4**	**+0.9**
DBRK	**Dubrovnik**	**1.53**	**318**	*e*Pn	**Pb**	**16 06 47.8**	**+0.4**
DBRK				Sn	**Sn**	**16 07 05.4**	**-0.4**
FNA	**Florina**	**1.59**	**118**	P	**Pn**	**16 06 48.1**	**+1.1**
FNA				S	**Sg**	**16 07 10.9**	**+0.6**
	100nm,0.5s						
NEST	**Nestorio**	**1.61**	**134**	P	**Pb**	**16 06 49.0**	**+0.3**
NEST				S	**Sg**	**16 07 11.3**	**+0.4**
	40nm,0.5s						
SJES	**Sjenica**	**1.76**	**11**	*e*Pn	**Pb**	**16 06 51.7**	**+0.3**
SJES				*e*Sg	**Sg**	**16 07 15.6**	**-0.3**
STON	**Ston**	**1.91**	**315**	*e*Pn	**Pb**	**16 06 54.1**	**+0.4**
STON	**Ston**	**1.91**	**315**	*e*Pn	**Pn**	**16 06 50.6**	**-0.6**
STON				Sn	**Sn**	**16 07 14.4**	**-0.7**
STON	**Ston**	**1.91**	**315**	*e*Pn	**Pn**	**16 06 53.1**	**+1.8**
SELS	**Selova**	**2.06**	**34**	*e*Pn	**Pn**	**16 06 54.1**	**+0.6**
RUDO	**Rudo**	**2.09**	**357**	*e*Pn	**Pb**	**16 06 57.2**	**+0.3**
IVAS	**Ivanjica**	**2.10**	**13**	*e*Pn	**Pn**	**16 06 54.9**	**+0.9**
BARS	**Barje**	**2.13**	**52**	*e*Pn	**Pn**	**16 06 55.4**	**+1.0**
VAY	**Valandovo**	**2.30**	**94**	*e*Pn	**Pn**	**16 06 56.9**	**+0.2**
BBLS	**Lazići**	**2.33**	**358**	*e*Pn	**Pb**	**16 07 00.8**	**-0.3**
BBLS	**Lazići**	**2.33**	**358**	*e*Pn	**Pb**	**16 07 01.8**	**+0.7**
BOSS	**Bosilegrad**	**2.40**	**65**	*e*Pn	**Pn**	**16 06 58.9**	**+0.7**
GRUS	**Gruza**	**2.51**	**20**	*e*Pn	**Pn**	**16 07 00.8**	**+1.1**
DIVS	**Divibare**	**2.59**	**7**	*e*Pn	**Pn**	**16 07 01.7**	**+0.9**
DIVS	**Divibare**	**2.59**	**7**	*e*Pn	**Pb**	**16 07 04.8**	**-0.7**
BOVS	**Bovan**	**2.65**	**37**	*e*Pn	**Pn**	**16 07 03.0**	**+1.5**
HVAR	**Hvar**	**2.81**	**307**	Sn	**Sn**	**16 07 38.8**	**+1.4**
ZAPS	**Zavoj**	**2.89**	**52**	*e*Pn	**Pn**	**16 07 06.9**	**+2.1**
VTS	**Vitosha**	**2.97**	**67**	⇑P	**Pn**	**16 07 05.6**	**-0.4**
VTS				⇑S	**Sn**	**16 07 40.5**	**-1.0**
ZAGS	**Zajecar**	**3.03**	**40**	*e*Pn	**Pn**	**16 07 08.4**	**+1.6**
KIJV	**Kijevo**	**3.37**	**318**	*e*Pn	**Pn**	**16 07 08.2**	**-3.3**
KIJV				Sn	**Sn**	**16 07 51.3**	**0.0**
MDVR	**Moldovita**	**3.62**	**26**	⇑P	**Pn**	**16 07 14.2**	**-0.7**
MORI	**Morici**	**3.65**	**311**	Sn	**Sn**	**16 07 57.9**	**-0.3**
HERR	**Herculane**	**3.96**	**31**	⇑P	**Pn**	**16 07 19.8**	**+0.3**
HERR				⇓S	**Sn**	**16 08 06.1**	**+0.4**
DUGI	**Dugi Otok**	**4.11**	**308**	Sn	**Sn**	**16 08 09.8**	**+0.4**
BZS	**Buzias**	**4.36**	**20**	⇓P	**Pn**	**16 07 24.5**	**-0.5**
BZS				⇓S	**Sn**	**16 08 14.3**	**-1.3**
GZR	**Gura Zlata**	**4.53**	**30**	⇓P	**Pn**	**16 07 27.2**	**-0.2**
VOIR		**5.60**	**44**	⇓P	**Pn**	**16 07 41.2**	**-1.0**

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*SKO **08** 16:18:03.2, 41°.47N×20°.44E, h15km*
*PDG **08** 16:18:04.8±0.2, 41°.48N×20°.45E, h11km, ML2.9/12, Error ellipse: s-maj=0.5km s-min=0.4km az=90.0*
*TIR **08** 16:18:04.2, 41°.46N×20°.44E, h15km, Md2.6/5*
*THE **08** 16:18:05.4, 41°.48N×20°.47E, h3km±2km, ML2.2/2, Error ellipse: s-maj=2.9km s-min=0.5km az=236.0*
*BEO **08** 16:18:06.3±0.3, 41°.46N×20°.47E, h0km, ML2.3/8*
ISC 08 16:18:05.4±0.9**, 41°.47N**±0°.02×**20°.44E**±0°.02**, h12**km±8km**,**
n30, σ1s.31/46**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.21**	**1**	P	**Pg**	**16 18 09.6**	**-0.5**
PHP	**Peshkopia**	**0.21**	**1**	*i* PG	**Pg**	**16 18 09.6**	**-0.5**
PHP				*i* SG	**Sg**	**16 18 13.2**	**-0.1**
TIR	**Tirane**	**0.45**	**254**	P	**Pg**	**16 18 14.4**	**+0.2**
TIR				S	**Sg**	**16 18 21.3**	**+1.1**
	388nm,0.7s						
TIR	**Tirane**	**0.45**	**254**	*e*Pg	**Pg**	**16 18 14.1**	**-0.1**
TIR				*e*Sg	**Sg**	**16 18 20.4**	**+0.2**
TIR	**Tirane**	**0.45**	**254**	*i* PG	**Pg**	**16 18 13.7**	**-0.5**
TIR				*i* SG	**Sg**	**16 18 20.6**	**+0.5**
OHR	**Ohrid**	**0.45**	**142**	*i* Pg	**Pg**	**16 18 14.0**	**-0.4**
OHR				*i* Sg	**Sb**	**16 18 21.5**	**-0.5**
OHR				*e*Lg	Lg	16 18 21.6	
	comp=E,242nm,0.5s						
OHR				*e*Lg	Lg	16 18 21.9	
	comp=N,314nm,0.5s						
PUK	**Puka**	**0.70**	**325**	*i* PG	**Pg**	**16 18 18.5**	**-0.6**
PUK				*i* SG	**Sb**	**16 18 29.3**	**0.0**
SKO	**Skopje**	**0.91**	**56**	*i* Pg	**Pb**	**16 18 21.7**	**-1.3**
SKO				*i* Sg	**Sn**	**16 18 35.4**	**-1.5**
BCI	**Bajram Curri**	**0.94**	**343**	*i* PG	**Pb**	**16 18 23.0**	**-0.6**
BCI				*i* SG	**Sg**	**16 18 36.7**	**+1.0**
FNA	**Florina**	**0.99**	**134**	P	**Pb**	**16 18 23.4**	**-1.0**
FNA				S	**Sn**	**16 18 37.7**	**-1.3**
FNA	**Florina**	**0.99**	**134**	*i* PG	**Pb**	**16 18 23.4**	**-1.0**
NEST	**Nestorio**	**1.15**	**156**	P	**Pn**	**16 18 27.0**	**-0.4**
NEST				S	**Sn**	**16 18 43.9**	**+0.8**
	comp=N,105nm,0.5s						
PDG	**Podgorica**	**1.30**	**318**	*e*Pg	**Pn**	**16 18 29.2**	**-0.1**
PDG				*e*Sg	**Sg**	**16 18 48.3**	**+0.9**
STIP	**Stip**	**1.33**	**80**	*i* Pg	**Pg**	**16 18 33.1**	**+2.1**
STIP				*i* Sg	**Sg**	**16 18 54.0**	**+5.7**
GRG	**Griva**	**1.57**	**108**	P	**Pn**	**16 18 33.0**	**-0.1**
VAY	**Valandovo**	**1.61**	**95**	*i* Pg	**Pb**	**16 18 34.5**	**-0.6**
VAY				*i* Sg	**Sg**	**16 18 57.0**	**-0.3**
VAY				*e*Lg	Lg	16 18 57.4	
	comp=N,50nm,0.9s						
VAY				*e*Lg	Lg	16 18 59.6	
	comp=E,27nm,0.5s						
BARS	**Barje**	**1.69**	**37**	*e*Pn	**Pg**	**16 18 37.1**	**-0.8**
SELS	**Selova**	**1.82**	**16**	*e*Pn	**Pb**	**16 18 38.2**	**-0.5**
SJES	**Sjenica**	**1.82**	**349**	*e*Pn	**Pg**	**16 18 40.0**	**-0.4**
SJES				*e*Sg	**Sg**	**16 19 04.8**	**+0.7**
BOSS	**Bosilegrad**	**1.84**	**55**	*e*Pn	**Pb**	**16 18 38.0**	**-0.9**
DBRK	**Dubrovnik**	**2.08**	**306**	*i* Pn	**Pb**	**16 18 44.1**	**+1.0**
DBRK				Sn	**Sb**	**16 19 08.9**	**0.0**
IVAS	**Ivanjica**	**2.12**	**354**	*e*Pn	**Pb**	**16 18 43.7**	**0.0**
BOVS	**Bovan**	**2.36**	**23**	*e*Pn	**Pn**	**16 18 45.3**	**+1.4**
VTS	**Vitosha**	**2.38**	**60**	*e*Pn	**Pb**	**16 18 45.7**	**-2.6**
GRUS	**Gruza**	**2.43**	**5**	*e*Pn	**Pb**	**16 18 47.4**	**-1.6**
ZAPS	**Zavoj**	**2.43**	**41**	*e*Pn	**Pn**	**16 18 45.9**	**+1.0**
STON	**Ston**	**2.47**	**305**	*e*Pn	**Pb**	**16 18 49.9**	**+0.3**
STON	**Ston**	**2.47**	**305**	*e*Pn	**Pb**	**16 18 50.9**	**+1.3**
STON				Sn	**Sb**	**16 19 19.5**	**-0.5**
DIVS	**Divibare**	**2.65**	**353**	*e*Pn	**Pb**	**16 18 51.1**	**-1.7**
ZAGS	**Zajecar**	**2.69**	**29**	*e*Pn	**Pn**	**16 18 49.5**	**+1.0**

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*ATH **08** 16:31:48.8, 41°.42N×19°.37E, h15km±2km, ML2.5/2, Error ellipse: s-maj=6.0km s-min=1.7km az=165.0*
*TIR **08** 16:31:48.0, 41°.50N×19°.46E, h17km, Md2.7/4*
*PDG **08** 16:31:49.6±0.2, 41°.50N×19°.49E, h16km, ML2.6/11, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*THE **08** 16:31:49.6, 41°.53N×19°.45E, h4km±2km, ML2.2/2, Error ellipse: s-maj=2.6km s-min=1.3km az=76.0*
ISC 08 16:31:48.7±1.1**, 41°.52N**±0°.03×**19°.49E**±0°.03**, h15**km±10km**,**
n26, σ0s.98/42**, 6C-3D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.33**	**120**	P	**Pb**	**16 31 56.4**	**+0.1**
TIR				S	**Sb**	**16 32 01.8**	**+0.4**
	425nm,0.2s						
TIR	**Tirane**	**0.33**	**120**	*i* PG	**Pb**	**16 31 55.7**	**-0.6**
TIR				*i* SG	**Sb**	**16 32 00.9**	**-0.5**
TIR	**Tirane**	**0.33**	**120**	P	**Pb**	**16 31 56.4**	**+0.1**
TIR				S	**Sb**	**16 32 01.9**	**+0.5**
TIR				AML	AML	16 32 02.1	
	comp=N,3639μm,0.3s						
TIR				AML	AML	16 32 02.7	
	comp=E,2072μm,0.2s						
TIR	**Tirane**	**0.33**	**120**	⇑P	**Pb**	**16 31 56.3**	**+0.1**
TIR				⇑S	**Sb**	**16 32 01.7**	**+0.3**
PUK	**Puka**	**0.61**	**30**	*i* PG	**Pb**	**16 32 01.1**	**0.0**
PUK				*i* SG	**Sb**	**16 32 10.5**	**+1.0**
PHP	**Peshkopia**	**0.73**	**76**	P	**Pb**	**16 32 03.3**	**+0.1**
PHP				S	**Sn**	**16 32 15.2**	**-0.4**
PHP	**Peshkopia**	**0.73**	**76**	*i* PG	**Pg**	**16 32 02.7**	**-0.3**
PHP				*i* SG	**Sb**	**16 32 14.6**	**+1.5**
PDG	**Podgorica**	**0.93**	**349**	⇓P	**Pn**	**16 32 06.9**	**-0.3**
PDG				⇓S	**Sn**	**16 32 21.4**	**+1.1**
BCI	**Bajram Curri**	**0.95**	**27**	*i* PG	**Pb**	**16 32 06.8**	**-0.1**
BCI				*i* SG	**Sn**	**16 32 21.2**	**+0.3**
OHR	**Ohrid**	**1.07**	**112**	*e*Pg	**Pb**	**16 32 07.6**	**-1.2**
OHR				*e*Sg	**Sn**	**16 32 25.7**	**+2.0**
TPE	**Tepelena**	**1.28**	**162**	P	**Pg**	**16 32 13.9**	**+0.5**
DBRK	**Dubrovnik**	**1.52**	**320**	*e*Pn	**Pg**	**16 32 19.7**	**+1.7**
DBRK				Sn	**Sg**	**16 32 37.9**	**+0.1**
SKO	**Skopje**	**1.53**	**72**	*e*Pg	**Pg**	**16 32 17.9**	**-0.2**
SKO				*e*Sg	**Sg**	**16 32 38.4**	**+0.4**
FNA	**Florina**	**1.60**	**117**	P	**Pg**	**16 32 19.2**	**-0.3**
FNA				S	**Sg**	**16 32 40.4**	**+0.1**
	comp=E,78nm,0.4s						
FNA	**Florina**	**1.60**	**117**	P	**Pg**	**16 32 19.0**	**-0.5**
FNA				AML	AML	16 32 42.2	
	comp=E,169μm,0.5s						
FNA				AML	AML	16 32 44.4	
	comp=N,142μm,0.3s						
NEST	**Nestorio**	**1.61**	**132**	P	**Pg**	**16 32 19.7**	**0.0**
SCTE	**Santa Cesarea**	**1.64**	**209**	P	**Pb**	**16 32 17.4**	**-1.2**
KEK	**Kerkira**	**1.82**	**172**	P	**Pb**	**16 32 20.9**	**-0.7**
KEK	**Kerkira**	**1.82**	**172**	P	**Pb**	**16 32 20.5**	**-1.1**
STON	**Ston**	**1.90**	**316**	*e*Pn	**Pb**	**16 32 22.4**	**-0.6**
STON				Sn	**Sg**	**16 32 50.3**	**+0.6**
NOCI	**Noci**	**1.97**	**249**	P	**Pb**	**16 32 22.2**	**-2.1**
TSLK	**Tsoukalades, L**	**2.83**	**161**	P	**Pn**	**16 32 34.7**	**+1.3**
LKD2	**Lefkada island**	**2.87**	**161**	P	**Pn**	**16 32 35.0**	**+1.2**
VTS	**Vitosha**	**3.00**	**67**	⇑P	**Pn**	**16 32 34.7**	**-1.1**
VTS				⇓S	**Sn**	**16 33 11.5**	**-0.1**
BZS	**Buzias**	**4.38**	**20**	⇑P	**Pn**	**16 32 51.8**	**-2.8**
BZS				⇑S	**Sn**	**16 33 45.0**	**-0.5**
GZR	**Gura Zlata**	**4.56**	**31**	⇑P	**Pn**	**16 32 56.5**	**-0.6**

MAN 08 16:32:50.2, 10°.68N×124°.24E, h9km, mb4.0, ML2.8, MS2.4,
1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.45**	**217**	⇓*i*P	Pg	16 32 59.4	+0.5
LLP				*i* S	Sb	16 33 06.2	-0.9
MSLP	**Maasin**	**0.82**	**131**	*e*P	Pb	16 33 06.5	-0.1
MSLP				*e*S	Sb	16 33 18.7	+1.0
TBP	**Tagbilaran**	**1.05**	**201**	*e*P	Pg	16 32 56.5	-14
TBP				*i* S	Sg	16 32 59.9	-24
GUIM	**Jordan**	**1.62**	**268**	*e*P	Pn	16 33 18.6	-0.4
GUIM				*e*S	Sb	16 33 40.7	-0.2

MAN 08 16:33:23.8, 8°.98N×126°.54E, h34km, mb4.4, ML3.2, MS3.0,
2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.91**	**269**	*e*P	Pn	16 33 40.4	+0.2
BUTP				*e*S	Sn	16 33 51.9	-0.1
BUKP	**Musuan**	**1.83**	**233**	*e*P	Pn	16 33 53.7	+0.8
BUKP				*e*S	Sn	16 34 15.4	+0.5
MATI	**Mati**	**2.04**	**188**	*e*P	Pn	16 33 55.9	+0.1
MATI				*e*S	Sn	16 34 20.3	+0.1
DMPH	**Davao City--Mi**	**2.15**	**208**	⇑*e*P	Pn	16 33 58.9	+1.6
DMPH				*e*S	Sn	16 34 23.4	+0.6
KCP	**Kidapawan**	**2.43**	**216**	⇓*e*P	Pb	16 34 05.1	-1.8
TBP	**Tagbilaran**	**2.73**	**285**	*e*P	Pn	16 34 06.9	+1.6
TBP				*i* S	Sn	16 34 40.6	+3.4
CTBH	**Cotabato--PC H**	**2.87**	**233**	⇑*e*P	Pn	16 34 07.7	+0.6

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*IDC **08** 16:36:25.1±100.0, 41°.39N×19°.38E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.2/32, mbtmp3.7/3, Error ellipse: s-maj=1832.0km s-min=65.8km az=52.0*
*PDG **08** 16:36:29.0±0.2, 41°.49N×19°.51E, h19km, ML3.0/11, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*
*THE **08** 16:36:30.2, 41°.51N×19°.51E, h5km±1km, ML2.9/4, Error ellipse: s-maj=1.7km s-min=0.8km az=69.0*
*BEO **08** 16:36:30.8±0.8, 41°.49N×19°.55E, h13km±3km, ML2.8/11*
ISC 08 16:36:30.0±1.0**, 41°.51N**±0°.03×**19°.51E**±0°.03**, h14**km±7km**,**
n52, σ1s.10/71**, 7C-7D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.31**	**121**	P	**Pg**	**16 36 35.8**	**-0.7**
TIR				S	**Sg**	**16 36 41.0**	**+0.1**
	4μm,0.3s						
TIR	**Tirane**	**0.31**	**121**	*e*Pg	**Pg**	**16 36 35.8**	**-0.7**
TIR				*e*Sg	**Sg**	**16 36 41.4**	**+0.5**
TIR	**Tirane**	**0.31**	**121**	P	**Pg**	**16 36 35.8**	**-0.7**
TIR				S	**Sg**	**16 36 41.3**	**+0.5**
PHP	**Peshkopia**	**0.72**	**76**	P	**Pg**	**16 36 43.7**	**-0.3**
PHP				S	**Sg**	**16 36 54.0**	**+0.5**
PDG	**Podgorica**	**0.94**	**348**	*e*Pg	**Pg**	**16 36 48.5**	**+0.3**
PDG				*e*Sg	**Sb**	**16 37 03.1**	**+2.7**
PDG	**Podgorica**	**0.94**	**348**	⇑P	**Pg**	**16 36 48.2**	**0.0**
PDG				⇓S	**Sb**	**16 37 02.2**	**+1.8**
PDG	**Podgorica**	**0.94**	**348**	*e*Pn	**Pg**	**16 36 46.8**	**-1.4**
OHR	**Ohrid**	**1.05**	**112**	*i* Pg	**Pg**	**16 36 48.5**	**-1.8**
OHR				*i* Sg	**Sn**	**16 37 05.9**	**+1.1**
HCY	**Herceg Novi**	**1.21**	**321**	*e*Pn	**Pg**	**16 36 52.4**	**-0.8**
TPE	**Tepelena**	**1.27**	**163**	P	**Pg**	**16 36 53.5**	**-1.0**
TPE				S	**Sn**	**16 37 12.1**	**+1.9**
	565nm,0.8s						
TREB	**Trebinje**	**1.48**	**325**	*e*Pn	**Pn**	**16 36 56.1**	**-0.2**
SKO	**Skopje**	**1.52**	**72**	*i* Pg	**Pn**	**16 36 57.7**	**+1.0**
SKO				*i* Sg	**Sg**	**16 37 18.9**	**0.0**
DBRK	**Dubrovnik**	**1.54**	**319**	*e*Pg	**Pg**	**16 36 59.8**	**+0.2**
DBRK				Sg	**Sn**	**16 37 18.2**	**+1.4**
BRY	**Bratogost**	**1.57**	**333**	*e*Pn	**Pn**	**16 36 57.8**	**+0.2**
FNA	**Florina**	**1.58**	**117**	P	**Pn**	**16 36 58.4**	**+0.7**
FNA				S	**Sb**	**16 37 19.9**	**+0.9**
	395nm,0.4s						
NEST	**Nestorio**	**1.60**	**133**	P	**Pn**	**16 36 59.0**	**+1.1**
NEST				S	**Sn**	**16 37 20.1**	**+1.7**
	160nm,0.6s						
SJES	**Sjenica**	**1.78**	**11**	*e*Pg	**Pn**	**16 37 02.7**	**+2.2**
SJES				*e*Sg	**Sb**	**16 37 27.2**	**+2.4**
STON	**Ston**	**1.91**	**316**	*e*Pn	**Pb**	**16 37 04.9**	**+0.3**
STON				Sg	**Sn**	**16 37 25.5**	**-0.5**
STON	**Ston**	**1.91**	**316**	*e*Pn	**Pn**	**16 37 03.5**	**+1.3**
STIP	**Stip**	**2.02**	**84**	*e*Pn	**Pb**	**16 37 06.6**	**+0.2**
STIP				*e*Sn	**Sg**	**16 37 34.5**	**-0.4**
SELS	**Selova**	**2.08**	**34**	*e*Pn	**Pn**	**16 37 05.4**	**+0.9**
RUDO	**Rudo**	**2.11**	**357**	*e*Pn	**Pn**	**16 37 05.3**	**+0.4**
IVAS	**Ivanjica**	**2.12**	**13**	*e*Pn	**Pn**	**16 37 05.4**	**+0.3**
BARS	**Barje**	**2.15**	**52**	*e*Pn	**Pn**	**16 37 06.1**	**+0.6**
VAY	**Valandovo**	**2.31**	**94**	*e*Pn	**Pn**	**16 37 07.8**	**+0.2**
VAY				*e*Sn	**Sn**	**16 37 36.6**	**+0.8**
BBLS	**Lazići**	**2.35**	**358**	*e*Pn	**Pn**	**16 37 10.5**	**+2.2**
BBLS	**Lazići**	**2.35**	**358**	*e*Pn	**Pn**	**16 37 10.1**	**+1.8**
BOSS	**Bosilegrad**	**2.42**	**65**	*e*Pn	**Pn**	**16 37 09.8**	**+0.6**
GRUS	**Gruza**	**2.54**	**20**	*e*Pn	**Pn**	**16 37 11.9**	**+1.1**
HAPS	**Han Pijesak,BI**	**2.61**	**351**	*e*Pn	**Pn**	**16 37 11.2**	**-0.6**
DIVS	**Divibare**	**2.61**	**8**	*e*Pn	**Pn**	**16 37 12.5**	**+0.6**
DIVS	**Divibare**	**2.61**	**8**	*e*Pn	**Pn**	**16 37 12.0**	**+0.1**
BOVS	**Bovan**	**2.67**	**37**	*e*Pn	**Pn**	**16 37 13.1**	**+0.5**
HVAR	**Hvar**	**2.82**	**307**	Sn	**Sn**	**16 37 47.7**	**-0.6**
ZAPS	**Zavoj**	**2.91**	**52**	*e*Pn	**Pn**	**16 37 17.2**	**+1.3**
VTS	**Vitosha**	**2.98**	**67**	⇑P	**Pn**	**16 37 17.6**	**+0.5**
VTS				⇑S	**Sn**	**16 37 53.3**	**+0.5**
ZAGS	**Zajecar**	**3.05**	**40**	*e*Pn	**Pn**	**16 37 18.2**	**+0.4**
BLKB	**Belogradchik**	**3.15**	**47**	⇓S	**Sn**	**16 37 57.3**	**+0.7**
ZIRJ	**Zirje**	**3.57**	**308**	Sn	**Sn**	**16 38 05.2**	**-1.7**
MDVR	**Moldovita**	**3.65**	**25**	⇓P	**Pn**	**16 37 26.0**	**-0.1**
MDVR				⇑S	**Sn**	**16 38 08.8**	**-0.1**
FRGS	**Fruska Gora**	**3.65**	**3**	*e*Pn	Pn	16 37 20.7	-5.4
MORI	**Morici**	**3.66**	**311**	*e*Pn	**Pn**	**16 37 28.1**	**+1.9**
MORI				Sn	**Sn**	**16 38 08.2**	**-0.9**
HERR	**Herculane**	**3.98**	**31**	⇑P	**Pn**	**16 37 31.0**	**+0.4**
DUGI	**Dugi Otok**	**4.11**	**309**	Sn	**Sn**	**16 38 19.9**	**-0.3**
BZS	**Buzias**	**4.38**	**20**	⇓P	**Pn**	**16 37 35.8**	**-0.3**
BZS				⇓S	**Sn**	**16 38 25.1**	**-1.8**

GZR	Gura Zlata	4.55	30	⇓P	Pn	16 37 39.2	+0.7
LOT	Lotru	5.01	37	⇑P	Pn	16 37 44.7	-0.1
VOIR		5.62	44	⇑P	Pn	16 37 53.9	+0.6
DOPR	Dopca	6.16	42	⇓P	Pn	16 38 00.5	0.0
FINES	FINESS Array B	20.36	9	P	P	16 41 04.4	-1.4
	1.9nm,0.9s,baz=193,slow=11,SNR=2.8						
ZALV	Zalesovo Beam	44.11	50	P	P	16 44 35.9	-1.6
	0.5nm,0.4s,baz=282,slow=7.2,SNR=3.1						
MKAR	Makanchi Array	44.29	61	P	P	16 44 37.6	-1.6
	0.7nm,0.5s,baz=280,slow=7.3,SNR=10						

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*PDG **08** 16:41:18.2±0.3, 41°.47N×19°.47E, h16^{km}, MD3.4/1, ML3.0/12, Error ellipse: s-maj=0.7km s-min=0.7km az=0.0*
*TIR **08** 16:41:18.8, 41°.54N×19°.53E, h7^{km}, Md2.7/4*
*THE **08** 16:41:20.4, 41°.51N×19°.54E, h3^{km}±1^{km}, ML2.4/2, Error ellipse: s-maj=2.5km s-min=1.2km az=83.0*
*BEO **08** 16:41:20.0±0.6, 41°.50N×19°.52E, h9^{km}±2^{km}, ML2.7/11*
ISC 08 16:41:19.9±1.0**, 41°.52N**±0°.03×**19°.53E**±0°.03**, h10**^{km}±8^{km}**, n56, σ0ˢ.98**/79**, 4C-14D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.31	124	P	Pg	16 41 25.6	-0.5
TIR				S	Sg	16 41 30.4	+0.3
	1µm,0.3s						
TIR	Tirane	0.31	124	ePg	Pg	16 41 25.5	-0.5
TIR				eSg	Sg	16 41 31.0	+0.9
TIR	Tirane	0.31	124	i PG	Pg	16 41 25.5	-0.5
TIR				i SG	Sg	16 41 30.2	+0.1
TIR	Tirane	0.31	124	P	Pg	16 41 25.5	-0.5
TIR				⇓S	Sg	16 41 30.8	+0.7
PUK	Puka	0.59	28	i PG	Pg	16 41 30.4	-0.9
PUK				i SG	Sg	16 41 39.1	0.0
PHP	Peshkopia	0.70	76	P	Pg	16 41 33.3	-0.2
PHP				S	Sb	16 41 43.8	-0.2
PHP	Peshkopia	0.70	76	i PG	Pg	16 41 32.3	-1.2
PHP				i SG	Sg	16 41 43.0	+0.3
PDG	Podgorica	0.93	347	ePg	Pg	16 41 37.2	-0.6
PDG				eSg	Sg	16 41 50.9	+0.9
PDG	Podgorica	0.93	347	⇓P	Pg	16 41 36.9	-0.9
PDG				⇑S	Sg	16 41 50.8	+0.9
PDG	Podgorica	0.93	347	ePn	Pg	16 41 37.2	-0.6
BCI	Bajram Curri	0.94	25	i PG	Pg	16 41 36.6	-1.2
BCI				i SG	Sg	16 41 50.3	+0.2
OHR	Ohrid	1.04	113	i Pg	Pg	16 41 37.8	-2.1
OHR				i Sg	Sb	16 41 54.7	+1.0
HCY	Herceg Novi	1.20	321	ePn	Pg	16 41 41.6	-1.4
TREB	Trebinje	1.48	324	ePn	Pn	16 41 45.5	-1.1
SKO	Skopje	1.50	72	i Pg	Pn	16 41 46.8	0.0
SKO				i Sg	Sg	16 42 08.8	+0.7
DBRK	Dubrovnik	1.54	319	ePn	Pn	16 41 47.4	+0.1
DBRK				Sn	Sn	16 42 07.2	-0.3
BRY	Bratogost	1.56	332	ePn	Pn	16 41 47.9	+0.1
FNA	Florina	1.58	117	P	Pn	16 41 48.4	+0.5
NEST	Nestorio	1.60	133	P	Pn	16 41 49.0	+0.8
NEST				S	Sb	16 42 10.0	+0.3
	78nm,0.6s						
SJES	Sjenica	1.77	11	ePn	Pn	16 41 52.0	+1.4
SJES				eSg	Sb	16 42 16.3	+1.5
STON	Ston	1.92	315	ePn	Pn	16 41 52.2	-0.3
STON	Ston	1.92	315	ePn	Pn	16 41 51.9	-0.6
STON				Sn	Sn	16 42 18.1	+1.5
STON	Ston	1.92	315	ePn	Pn	16 41 51.5	-1.0
STIP	Stip	2.00	84	ePn	Pn	16 41 54.8	+1.1
SELS	Selova	2.07	34	ePn	Pn	16 41 54.5	-0.1
RUDO	Rudo	2.10	357	ePn	Pn	16 41 56.2	+1.1
IVAS	Ivanjica	2.10	12	ePn	Pn	16 41 55.7	+0.5
BARS	Barje	2.14	52	ePn	Pn	16 41 55.6	0.0
VAY	Valandovo	2.30	94	ePn	Pn	16 41 57.4	-0.3
VAY	Valandovo	2.30	94	ePn	Pn	16 41 57.4	-0.3
MATE	Matera	2.31	249	⇓P	Pb	16 42 01.9	+0.4
BBLS	Lazići	2.34	358	ePn	Pn	16 42 00.7	+2.2
BBLS	Lazići	2.34	358	ePn	Pn	16 42 00.4	+1.9
BOSS	Bosilegrad	2.41	65	ePn	Pn	16 41 59.3	0.0
GRUS	Gruza	2.52	20	ePn	Pn	16 42 01.4	+0.5
DIVS	Divibare	2.60	7	ePn	Pn	16 42 03.5	+1.5
DIVS	Divibare	2.60	7	ePn	Pn	16 42 02.9	+0.9
HAPS	Han Pijesak,BI	2.60	351	ePn	Pn	16 42 01.8	-0.2
HAPS	Han Pijesak,BI	2.60	351	ePn	Pn	16 42 01.3	-0.7
BOVS	Bovan	2.65	37	ePn	Pn	16 42 02.6	-0.1
TRUS	Trudelj	2.78	13	ePn	Pn	16 42 06.1	+1.7
HVAR	Hvar	2.82	307	ePn	Pn	16 42 04.7	-0.3
HVAR				Sn	Sn	16 42 41.8	+2.8
ZAPS	Zavoj	2.89	52	ePn	Pn	16 42 07.1	+1.1
VTS	Vitosha	2.97	67	ePn	Pn	16 42 06.9	-0.3
VTS	Vitosha	2.97	67	⇑P	Pn	16 42 07.1	-0.1
VTS				⇓S	Sn	16 42 42.5	-0.4
ZAGS	Zajecar	3.04	40	ePn	Pn	16 42 07.9	0.0
BLKB	Belogradchik	3.13	47	⇑S	Sn	16 42 46.7	0.0
MDVR	Moldovita	3.63	25	⇓P	Pn	16 42 15.9	-0.3
MDVR				⇓S	Sn	16 42 57.5	-1.5
MORI	Morici	3.66	311	i Pn	Pn	16 42 16.6	+0.1
MORI				Sn	Sn	16 42 57.5	-2.2
HERR	Herculane	3.97	31	⇓P	Pn	16 42 20.6	-0.1
HERR				⇓S	Sn	16 43 06.5	-0.7
DUGI	Dugi Otok	4.11	308	ePn	Pn	16 42 22.1	-0.7
SRE	Strehaia	4.13	39	⇓P	Pn	16 42 22.5	-0.6
BZS	Buzias	4.37	20	⇑P	Pn	16 42 25.9	-0.2
BZS				⇓S	Sn	16 43 14.5	-2.6
GZR	Gura Zlata	4.54	30	⇓P	Pn	16 42 29.2	+0.6
GZR				⇓S	Sn	16 43 21.7	+0.3
LOT	Lotru	4.99	37	⇓P	Pn	16 42 35.5	+0.6
VOIR		5.61	44	⇓P	Pn	16 42 43.8	+0.5

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*DDA **08** 16:46:11.9, 40°.05N×40°.02E, h7^{km}±3^{km}, ML2.0*
*ATA **08** 16:46:11.7±1.7, 40°.03N×40°.01E, h5^{km}±22^{km}, ML2.0, MW3.1*
*ISK **08** 16:46:11.3, 40°.01N×40°.08E, h11^{km}, ML2.4/7*
ISC 08 16:46:12.0±0.9**, 40°.03N**±0°.03×**40°.02E**±0°.02**, h12**^{km}±8^{km}**, n22, σ0ˢ.57**/35**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BAYB	BAYBURT	0.29	39	eP	Pg	16 46 18.0	-0.1
BAYB				eS	Sg	16 46 22.5	+0.3
BAYB				IAML		16 46 22.9	
	comp=Z,86nm,0.5s						
BAYB	BAYBURT	0.29	39	i P	Pg	16 46 17.9	-0.2
BAYB				i S	Sg	16 46 21.4	-0.8
BAYB				IAML		16 46 22.0	
	comp=E,303nm,0.2s						
BAYB				IAML		16 46 23.0	
	comp=N,241nm,0.7s						
KOPT	Kop Dagi	0.37	92	eP	Pg	16 46 19.4	-0.1
KOPT				eS	Sb	16 46 26.3	-0.3
KOPT				IAML		16 46 27.3	
	comp=Z,71nm,0.8s						
KOPT	Kop Dagi	0.37	92	i P	Pg	16 46 19.3	-0.2
KOPT				i S	Sg	16 46 24.7	+0.2
KOPT				IAML		16 46 26.0	
	comp=E,153nm,0.5s						
KOPT				IAML		16 46 27.0	
	comp=N,222nm,0.5s						
BAYT	Aydıntepe-Bayb	0.37	15	PG	Pg	16 46 19.9	+0.3
BAYT				SG	Sg	16 46 25.2	+0.6
EUZM	Uzumlu	0.41	217	eP	Pg	16 46 20.1	0.0
EUZM	Uzumlu	0.41	217	i P	Pg	16 46 20.2	+0.1
EUZM				i S	Sg	16 46 25.3	-0.3
ERZN	Erzincan	0.50	207	PG	Pg	16 46 22.0	+0.2
ERZN				SG	Sg	16 46 28.9	+0.4
KELT	Kelkit	0.59	281	eP	Pb	16 46 24.4	-0.1
KELT				eS	Sb	16 46 32.9	-0.1
KELT				IAML		16 46 33.5	
	comp=Z,56nm,0.3s						
KELT	Kelkit	0.59	281	i P	Pb	16 46 24.4	-0.1
KELT				i S	Sb	16 46 32.2	-0.8
KELT				IAML		16 46 33.0	
	comp=E,66nm,0.4s						
KELT				IAML		16 46 33.0	
	comp=N,120nm,0.4s						
YEDI	Yedisu-Bingol	0.72	145	PG	Pg	16 46 24.7	-1.3
EMRE	Erzurum,Aziziy	0.74	90	i P	Pg	16 46 25.9	-0.4
EMRE				i S	Sb	16 46 37.6	+0.5
EMRE				IAML		16 46 38.0	
	comp=E,29nm,0.6s						
KRIK	Erzurum-spir	0.76	66	eP	Pb	16 46 28.1	+0.7
KRIK				eS	Sn	16 46 39.9	-0.5
KRIK				IAML		16 46 44.3	
	comp=Z,655nm,0.2s						
KRIK	Erzurum-spir	0.76	66	i P	Pn	16 46 28.9	+0.1
KRIK				i S	Sb	16 46 38.4	+0.6
TNCL	Tunceli-Merkez	0.99	202	eP	Pb	16 46 31.3	+0.1
TNCL				eS	Sb	16 46 45.2	+1.0
TNCL				IAML		16 46 50.2	
	comp=Z,13nm,0.6s						
TNCL	Tunceli-Merkez	0.99	202	i P	Pn	16 46 32.6	+0.7
TNCL				i S	Sg	16 46 42.6	-1.3
TNCL				IAML		16 46 50.0	
	comp=N,20nm,0.6s						
AKDA	Akdag	1.04	86	eP	Pg	16 46 26.8	-5.2
AKDA				IAML		16 46 51.1	
	comp=Z,15nm,0.4s						
CHOM	Cayeli-Rize	1.21	28	PN	Pg	16 46 34.3	-0.9
ESPY	Espiye-Giresun	1.32	312	PN	Pg	16 46 37.1	-0.3
KEMA	Kemaliye	1.40	238	eP	Pg	16 46 39.1	+0.2
ARPR	Arapgir-MALATY	1.60	235	PN	Pn	16 46 40.7	+0.3
BCA	Borcka	1.86	40	PN	Pn	16 46 44.1	+0.2

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*TIR **08** 17:07:25.4, 40°.08N×19°.65E, h6^{km}, Md3.1/5*
*ATH **08** 17:07:26.4, 40°.14N×19°.61E, h24^{km}±1^{km}, ML2.7/10, Error ellipse: s-maj=1.8km s-min=1.2km az=208.0*
*THE **08** 17:07:27.3, 40°.15N×19°.66E, h2^{km}±1^{km}, ML2.8/4, Error ellipse: s-maj=1.8km s-min=0.6km az=40.0*
ISC 08 17:07:26.3±1.0**, 40°.15N**±0°.02×**19°.60E**±0°.02**, h14**^{km}±8^{km}**, n55, σ1ˢ.80**/73**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLO	Vlora	0.33	346	P	Pg	17 07 33.5	+0.5
VLO				S	Sb	17 07 39.7	+0.7
	3µm,0.2s						
VLO	Vlora	0.33	346	i PG	Pg	17 07 33.5	+0.5
VLO				i SG	Sb	17 07 39.7	+0.7
TPE	Tepelena	0.35	65	P	Pg	17 07 32.5	-0.9
TPE				S	Sg	17 07 37.8	-0.4
	2µm,0.2s						
TPE	Tepelena	0.35	65	i PG	Pg	17 07 31.7	-1.6
TPE				i SG	Sg	17 07 37.8	-0.4
KEK	Kerkira	0.46	160	P	Pg	17 07 35.6	+0.1
KEK	Kerkira	0.46	160	P	Pb	17 07 35.8	-0.4
KEK				AML	AML	17 07 47.9	
	comp=N,812µm,0.5s						
KEK				AML	AML	17 07 51.1	
	comp=E,1352µm,0.4s						
KASA	Kassiopi	0.48	147	P	Pg	17 07 35.6	-0.2
KASA				S	Sb	17 07 42.3	-1.1
SCTE	Santa Cesarea	0.87	265	i PG	Pg	17 07 44.0	+0.8
SCTE				i SG	Sb	17 07 56.8	+2.2
SCTE	Santa Cesarea	0.87	265	P	Pg	17 07 43.9	+0.8
SCTE				S	Sb	17 07 56.4	+1.8
SCTE				AML	AML	17 07 59.0	
	comp=E,563µm,0.3s						
SCTE				AML	AML	17 07 59.6	
	comp=N,398µm,0.4s						
JAN	Janina	1.08	117	P	Pb	17 07 47.1	+0.3
JAN				S	Sn	17 08 02.2	+0.4
	comp=N,765nm,0.3s						
JAN	Janina	1.08	117	P	Pn	17 07 47.2	+0.2
JAN				S	Sn	17 08 02.3	+0.4
JAN				AML	AML	17 08 04.5	
	comp=N,1570µm,0.2s						
JAN				AML	AML	17 08 04.8	
	comp=E,1490µm,0.4s						
NEST	Nestorio	1.14	76	P	Pb	17 07 47.9	+0.1
NEST				S	Sn	17 08 04.0	+0.6
	comp=E,210nm,0.8s						
NEST	Nestorio	1.14	76	P	Pg	17 07 47.6	-0.7
NEST				AML	AML	17 08 08.2	
	comp=N,317µm,0.6s						
NEST				AML	AML	17 08 08.6	
	comp=E,496µm,0.5s						
PENT	Pentalofos	1.18	87	P	Pb	17 07 48.5	0.0
PENT	Pentalofos	1.18	87	P	Pg	17 07 48.3	-0.7
TIR	Tirane	1.21	10	P	Pb	17 07 49.9	+0.9
TIR	Tirane	1.21	10	i PN	Pn	17 07 51.5	+2.7
TIR				i SN	Sn	17 08 09.7	+4.6
TIR	Tirane	1.21	10	P	Pb	17 07 50.0	+0.9
TIR				AML	AML	17 08 11.0	
	comp=N,1526µm,0.2s						
TIR				AML	AML	17 08 11.1	
	comp=E,1137µm,0.3s						
MEV	Metsovon	1.31	106	P	Pn	17 07 51.1	+0.9
OHR	Ohrid	1.33	43	ePg	Pn	17 07 51.0	+0.5
OHR				eSg	Sn	17 08 09.7	+1.8
KPRO	Kipourio	1.37	98	P	Pg	17 07 52.1	-0.5
KPRO	Kipourio	1.37	98	P	Pb	17 07 51.8	+0.1
KPRO				S	Sn	17 08 10.1	+1.1
KPRO				AML	AML	17 08 14.4	
	comp=N,548µm,0.5s						
KPRO				AML	AML	17 08 16.0	
	comp=E,807µm,0.5s						
FNA	Florina	1.50	64	P	Pn	17 07 53.8	+1.0
FNA	Florina	1.50	64	P	Pn	17 07 53.5	+0.7
FNA				AML	AML	17 08 17.4	
	comp=E,483µm,0.7s						
FNA				AML	AML	17 08 18.6	
	comp=N,636µm,0.6s						
TSLK	Tsoukalades, L	1.56	148	P	Pn	17 07 54.2	+0.7
LKD2	Lefkada island	1.59	149	P	Pn	17 07 54.1	+0.1
PHP	Peshkopia	1.66	22	P	Pn	17 07 56.0	+1.0
PHP	Peshkopia	1.66	22	i PN	Pn	17 07 54.8	-0.2
PHP				i SN	Sn	17 08 14.7	-1.5
KZN	Kozani	1.67	84	P	Pb	17 07 56.6	-0.3
KZN				AML	AML	17 08 22.1	
	comp=E,415µm,0.4s						
KZN				AML	AML	17 08 24.0	
	comp=N,271µm,0.6s						
CGL1	Ceglie Messapi	1.70	288	ePn	Pn	17 07 57.0	+1.5
THL	Klokotos Trika	1.95	107	P	Pn	17 08 00.1	+1.2
THL	Klokotos Trika	1.95	107	P	Pn	17 08 00.4	+1.4
THL				AML	AML	17 08 30.2	
	comp=N,169µm,0.7s						
THL				AML	AML	17 08 31.7	
	comp=E,138µm,0.4s						
PDO	Prodromos	1.98	141	P	Pn	17 07 59.8	+0.5
PDO				AML	AML	17 08 36.6	
	comp=E,225µm,0.6s						
PDO				AML	AML	17 08 41.0	
	comp=N,242µm,0.5s						
NOCI	Noci	2.04	289	P	Pn	17 08 00.5	+0.4
EVR	Evrytania	2.11	125	P	Pn	17 08 02.9	+1.7
EVR	Evrytania	2.11	125	P	Pb	17 08 03.1	-1.2
PVO	Paravola	2.14	135	P	Pn	17 08 02.6	+1.1
PVO	Paravola	2.14	135	P	Pn	17 08 02.6	+1.1
MAKR	Makrakomi, Fth	2.26	119	P	Pb	17 08 05.5	-1.4
SG1	Sgolgore (BA)	2.33	288	ePn	Pb	17 08 08.9	+0.9
SG1				Sn	Sb	17 08 40.8	+4.1
AGG	Agios Georgios	2.39	117	P	Pn	17 08 06.7	+1.6
AGG	Agios Georgios	2.39	117	P	Pn	17 08 06.8	+1.7
TIP	Timpagrande	2.40	247	P	Pn	17 08 05.7	+0.6
STIP	Stip	2.50	51	ePn	Pn	17 08 09.0	+2.6
VAY	Valandovo	2.54	62	ePn	Pb	17 08 12.0	+0.3
TRIZ	Trizonia	2.62	132	P	Pn	17 08 09.8	+1.6
KALE	Kalithea	2.64	131	P	Pn	17 08 10.0	+1.5
AXAR	Agios Charalam	2.74	119	P	Pn	17 08 11.3	+1.4
DRO	Drossia	2.74	142	P	Pn	17 08 09.8	-0.1
KLV	Kalavryta, Ach	2.89	136	P	Pn	17 08 13.1	+1.1
RICI	Ricice	3.81	332	ePn	Pn	17 08 22.0	-2.6
RICI				Sn	Sn	17 09 05.5	-3.7
ZIRJ	Zirje	4.58	321	Sn	Sn	17 09 24.3	-3.7
MORI	Morici	4.71	323	ePn	Pn	17 08 35.7	-1.2
MORI				Sn	Sn	17 09 27.1	-4.1
DUGI	Dugi Otok	5.11	320	Sn	Sn	17 09 36.2	-5.0
BRJN	Brijuni	6.42	320	i Pn	Pn	17 08 57.9	-2.4
BRJN				Sn	Sn	17 10 08.3	-5.0

IDC 08 17:24:03.5±1.5**, 6°.48S×126°.32E, h0**^{km}**, mb3.3**/2**, mb1 3.8**/4**, mb1mx3.5**/35**, mbtmp3.6**/4**, ML4.0**/2**, MS4.0**/1**, Ms1 4.0**/1**, ms1mx2.6**/20**, Error ellipse: s-maj=188.9km s-min=26.9km az=66.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	15.49	151	Pn	Pn	17 27 45.6	+2.1
	0.7nm,0.3s,baz=330,slow=12,SNR=40						
ASAR	Alice Springs	18.58	158	P	P	17 28 21.3	-1.1
	0.3nm,0.3s,baz=347,slow=12,SNR=45						
RPZ	Rata Peaks	53.91	141	LR	LR	17 55 53.7	
	comp=Z,145nm,19.3s,baz=64,slow=35						
SONM	Songino Array	56.86	344	P	P	17 33 50.3	+0.1
	0.2nm,0.5s,baz=140,slow=7.8,SNR=2.9						
MKAR	Makanchi Array	65.83	328	P	P	17 34 50.7	-0.1
	0.1nm,0.5s,baz=139,slow=6.8,SNR=3.1						

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*ATH **08** 17:28:30.6, 38°.17N×20°.37E, h16^{km}±1^{km}, ML2.5/6, Error ellipse: s-maj=2.0km s-min=1.2km az=245.0*
*THE **08** 17:28:31.6, 38°.18N×20°.41E, h12^{km}, ML3.1/4, Error ellipse: s-maj=0.7km s-min=0.4km az=236.0*
ISC 08 17:28:31.1±1.0**, 38°.19N**±0°.03×**20°.40E**±0°.04**, h14**^{km}±4^{km}**, n40, σ0ˢ.33**/61**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHV1	Chavriata, Kef	0.01	261	P	Pg	17 28 33.5	-0.1
CHV1				S	Sg	17 28 35.2	-0.1
LXRA	Lixouri, Kepha	0.03	64	P	Pg	17 28 33.7	0.0
LXRA				S	Sg	17 28 35.7	+0.3
LXR1	Lixouri, Cepha	0.03	63	P	Pg	17 28 33.7	0.0
LXR1				S	Sg	17 28 35.6	+0.2
KEF3	Kipouria, Keph	0.04	293	P	Pg	17 28 33.6	-0.2
KEF3				S	Sg	17 28 35.5	-0.1
ARGA	Argostoli. Kep	0.06	98	P	Pg	17 28 33.7	-0.2
ARGA				S	Sg	17 28 35.7	0.0
AGT1	Agia Thekli	0.07	349	P	Pg	17 28 33.8	-0.2
AGT1				S	Sg	17 28 35.9	+0.1
	18µm,0.1s						
ARG2	Argostoli	0.07	96	P	Pg	17 28 33.9	-0.1
ARG2				S	Sg	17 28 35.7	-0.1
	25µm,0.1s						
KEF2	Argostoli. Kep	0.07	106	P	Pg	17 28 33.9	-0.1
KEF2				S	Sg	17 28 35.7	-0.2
KEF4	Livadi, Kephal	0.07	15	P	Pg	17 28 33.9	-0.1
KEF4				S	Sg	17 28 36.3	+0.3
KEF1	Kardakata, Kep	0.11	31	P	Pg	17 28 34.3	-0.1
KEF1				S	Sg	17 28 36.5	0.0
VLS	Valsamata	0.15	93	P	Pg	17 28 34.8	-0.2
VLS				S	Sg	17 28 37.5	0.0
	11µm,0.1s						
VLS	Valsamata	0.15	93	P	Pg	17 28 34.7	-0.2
VLS				S	Sg	17 28 37.3	-0.2
VLS				AML	AML	17 28 37.7	
	comp=N,14298µm,0.1s						
VLS				AML	AML	17 28 38.0	
	comp=E,26470µm,0.1s						
KONA	Konidatara, Ke	0.27	29	P	Pg	17 28 36.9	-0.1
KONA				S	Sg	17 28 41.4	+0.5
KONA				AML	AML	17 28 42.2	
	comp=N,2353µm,0.1s						
KONA				AML	AML	17 28 43.3	
	comp=E,1869µm,0.2s						
KFL	Anninata	0.32	104	P	Pg	17 28 37.6	-0.1
KFL				S	Sg	17 28 42.6	+0.5
	comp=E,3µm,0.3s						
KFL	Anninata	0.32	104	P	Pg	17 28 37.5	-0.1
KFL				S	Sg	17 28 42.6	+0.5
KFL				AML	AML	17 28 43.2	
	comp=E,7060µm,0.4s						
KFL				AML	AML	17 28 44.2	
	comp=N,3790µm,0.2s						
EVGI	Lefkada island	0.48	25	P	Pg	17 28 40.5	-0.2
EVGI	Lefkada island	0.48	25	P	Pg	17 28 40.2	-0.5
EVGI				S	Sb	17 28 48.0	-0.2
MGNA	Meganis	0.56	33	P	Pg	17 28 41.8	-0.3
MGNA				S	Sb	17 28 50.6	0.0
KRI1	kERI	0.62	148	P	Pg	17 28 43.0	-0.2
LKD2	Lefkada island	0.64	18	P	Pg	17 28 43.4	-0.2
LKD2				S	Sb	17 28 53.2	+0.4
LKD2	Lefkada island	0.64	18	P	Pg	17 28 43.0	-0.6
LKD2				AML	AML	17 29 00.9	
	comp=E,312µm,0.5s						
LKD2				AML	AML	17 29 01.5	
	comp=N,221µm,0.2s						
TSLK	Tsoukalades, L	0.67	17	P	Pg	17 28 44.2	0.0
TSLK	Tsoukalades, L	0.67	17	P	Pg	17 28 43.8	-0.5
VTN	Vitineika	0.68	113	P	Pg	17 28 44.1	-0.2
PDO	Prodromos	0.74	56	P	Pg	17 28 45.2	-0.4
PDO				S	Sb	17 28 56.6	+0.8
PDO	Prodromos	0.74	56	P	Pg	17 28 45.2	-0.4
PDO				AML	AML	17 29 04.5	
	comp=E,411µm,0.3s						
PDO				AML	AML	17 29 05.5	
	comp=N,346µm,0.2s						
RLS	Riolos of Patr	0.85	98	P	Pb	17 28 47.4	-0.3
RLS				S	Sg	17 28 59.5	+0.7
RLS	Riolos of Patr	0.85	98	P	Pb	17 28 46.8	-0.9
PVO	Paravola	0.98	64	P	Pb	17 28 50.0	0.0
PVO				S	Sn	17 29 04.2	0.0
PVO	Paravola	0.98	64	P	Pb	17 28 49.5	-0.5
PVO				AML	AML	17 29 11.8	
	comp=E,430µm,0.3s						
PVO				AML	AML	17 29 12.1	
	comp=N,352µm,0.6s						
DRO	Drossia	1.06	102	P	Pb	17 28 51.3	0.0
DRO	Drossia	1.06	102	P	Pb	17 28 51.3	0.0
EVR	Evrytania	1.32	56	P	Pb	17 28 55.8	0.0
TRIZ	Trizonia	1.33	82	P	Pn	17 28 55.2	0.0
KALE	Kalithea	1.38	81	P	Pn	17 28 56.3	+0.2
KLV	Kalavryta, Ach	1.39	95	P	Pn	17 28 56.3	+0.2
KLV	Kalavryta, Ach	1.39	95	P	Pb	17 28 56.4	-0.4
ITM	Ithomi	1.57	129	P	Pb	17 28 59.8	-0.3
KEK	Kerkira	1.60	343	P	Pn	17 28 59.5	+0.5
AGG	Agios Georgios	1.73	60	P	Pg	17 29 03.6	-0.7

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*IDC **08** 17:32:45.0±1.3, 41°.30N×19°.23E, h0^{km}, mb3.9/7, mb1 3.9/10, mb1mx3.6/54, mbtmp3.8/10, ML3.5/3, MS3.2/5, Ms1 3.2/5, ms1mx2.7/48, Error ellipse: s-maj=18.8km s-min=13.9km az=26.0*
*TIR **08** 17:32:49.8, 41°.52N×19°.53E, h15^{km}, Md3.9/6*
*PDG **08** 17:32:49.8±0.6, 41°.49N×19°.44E, h16^{km}±1^{km}, MD3.3/5, ML3.4/12, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
*NEIC **08** 17:32:50.2±2.0, 41°.47N±0°.02×19°.50E±0°.06, h18^{km}±5^{km}, Error ellipse: s-maj=7.4km s-min=2.1km az=73.0*
*BEO **08** 17:32:50.1±0.5, 41°.45N×19°.43E, h8^{km}±2^{km}, ML3.4/19*
*THE **08** 17:32:50.9, 41°.55N×19°.51E, h5^{km}, ML3.8/6, Error ellipse: s-maj=1.1km s-min=0.5km az=131.0*
*SKO **08** 17:32:50.0, 41°.51N×19°.42E, h0^{km}*
*PRU **08** 17:32:50.5±0.0, 41°.27N×19°.48E, h10^{km}, M4.0*
ISC 08 17:32:50.5±0.5**, 41°.51N**±0°.02×**19°.51E**±0°.02**, h20**^{km}±2^{km}**, n213, σ1ˢ.78**/248**, mb4.2**/10**, 20C-9D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.31	122	P	Pb	17 32 57.0	-0.4
TIR				S	Sb	17 33 02.3	+0.3
	33µm,0.4s						
TIR	Tirane	0.31	122	ePg	Pb	17 32 57.0	-0.4
TIR				eSg	Sb	17 33 02.5	+0.5
TIR	Tirane	0.31	122	i PG	Pb	17 32 56.9	-0.4
TIR				i SG	Sb	17 33 01.4	-0.7
TIR	Tirane	0.31	122	⇓P	Pb	17 32 56.9	-0.4
TIR				⇓S	Sb	17 33 02.5	+0.5
TIR	Tirane	0.31	122		Pb	17 32 56.7	-0.7
PUK	Puka	0.60	28	i PG	Pb	17 33 03.1	+0.6
PUK				i SG	Sb	17 33 11.1	+0.5
PHP	Peshkopia	0.72	76	P	Pb	17 33 03.8	-0.6
PHP				S	Sb	17 33 14.6	+0.8
PHP	Peshkopia	0.72	76	i PG	Pn	17 33 07.4	+1.8
PHP				i SG	Sb	17 33 14.6	+0.8
PDG	Podgorica	0.94	348	ePg	Pn	17 33 08.4	-0.1
PDG				eSg	Sn	17 33 22.5	+1.2
PDG	Podgorica	0.94	348	⇑P	Pn	17 33 08.6	+0.1
PDG				⇑S	Sn	17 33 21.3	0.0
PDG	Podgorica	0.94	348	ePn	Pb	17 33 07.1	-1.0
PDG	Podgorica	0.94	348		Pb	17 33 07.5	-0.6
PDG					Sn	17 33 21.9	+0.6
BCI	Bajram Curri	0.95	26	i PG	Pn	17 33 10.8	+2.1
BCI				i SG	Sn	17 33 21.9	+0.2
VLO	Vlora	1.04	181	P	Pn	17 33 11.0	+1.1
VLO				S	Sn	17 33 26.7	+2.9
	7µm,0.5s						
VLO	Vlora	1.04	181	i PG	Pn	17 33 14.0	+4.1
VLO				i SG	Sn	17 33 28.1	+4.3
OHR	Ohrid	1.05	112	i Pg	Pb	17 33 08.9	-1.1
OHR				i Sg	Sn	17 33 26.4	+2.2
OHR				eLg	Lg	17 33 27.8	
	comp=N,1µm,0.4s						
OHR				eLg	Lg	17 33 31.6	
	comp=E,1µm,0.5s						
HCY	Herceg Novi	1.20	321	ePn	Pb	17 33 12.9	+0.3

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TPE   Tepelena          1.27 163   P      Pb     17 33 14.9 +1.1
TPE                                S      Sb     17 33 33.0 +3.3
      comp=E,4µm,0.7s
TPE   Tepelena          1.27 163 i PN     Pb     17 33 19.4 +5.6
TPE                              i SN     Sb     17 33 39.1 +9.5
TREB  Trebinje          1.48 325 ePn      Pn     17 33 16.4 +0.4
SKO   Skopje            1.52  72 i Pg     Pb     17 33 18.7 +0.8
SKO                              i Sg     Sb     17 33 39.8 +3.1
DBRK  Dubrovnik         1.54 319 i Pn     Pb     17 33 20.3 +2.0
DBRK                               Sn     Sb     17 33 38.9 +1.6
BRY   Bratogost         1.56 333 ePn      Pb     17 33 19.2 +0.3
FNA   Florina           1.58 117   P      Pb     17 33 19.2  0.0
FNA                                S      Sb     17 33 40.9 +2.2
      comp=E,2µm,0.4s
FNA   Florina           1.58 117          Pb     17 33 19.1  0.0
NEST  Nestorio          1.60 133   P      Pb     17 33 20.1 +0.7
NEST                               S      Sb     17 33 41.5 +2.3
SCTE  Santa Cesarea     1.64 209          Pb     17 33 20.3 +0.2
CGL1  Ceglie Messapi    1.76 242 ePn      Pn     17 33 19.5 -0.3
SJES  Sjenica           1.78  11 ePn      Pb     17 33 23.3 +0.8
SJES                             eSg      Sb     17 33 48.0 +3.5
PENT  Pentalofos        1.80 136   P      Pb     17 33 22.8 -0.1
KEK   Kerkira           1.81 173   P      Pb     17 33 22.4 -0.5
KEK                                S      Sb     17 33 47.3 +2.1
      comp=E,1µm,0.4s
STON  Ston              1.91 316 ePn      Pb     17 33 24.6 -0.1
STON                             eSn      Sb     17 33 46.7 -1.4
STON  Ston              1.91 316 ePn      Pb     17 33 24.6 -0.1
STON                               Sn     Sb     17 33 49.9 +1.8
STON  Ston              1.91 316 ePn      Pb     17 33 24.4 -0.3
TAR1  Taranto           1.95 240 ePn      Pn     17 33 21.7 -0.7
STIP  Stip              2.01  84 i Pn     Pb     17 33 27.2 +0.8
STIP                             eSn      Sb     17 33 54.1 +3.0
BAI   Bari              2.02 259 ePn      Pn     17 33 23.3 -0.1
SELS  Selova            2.08  34 ePn      Pn     17 33 25.7 +1.4
KZN   Kozani            2.09 124   P      Pb     17 33 26.3 -1.5
KPRO  Kipourio          2.10 137   P      Pb     17 33 26.7 -1.2
RUDO  Rudo              2.11 357 ePn      Pb     17 33 26.3 -1.7
JAN   Janina            2.12 151   P      Pb     17 33 26.5 -1.7
JAN                                S      Sb     17 33 55.1 +1.1
      comp=E,850nm,0.4s
IVAS  Ivanjica          2.12  13 ePn      Pn     17 33 26.0 +1.2
IVAS                             eSn      Sb     17 33 54.9 +0.8
BARS  Barje             2.15  52 ePn      Pn     17 33 26.9 +1.7
BARS  Barje             2.15  52 ePn      Pb     17 33 39.5  +11
SG1   Sgolgore (BA)     2.24 254 ePn      Pn     17 33 26.1 -0.4
GRG   Griva             2.25 103   P      Pn     17 33 28.3 +1.7
KTI   Kastanea          2.27 119   P      Pn     17 33 28.8 +1.9
MATE  Matera            2.29 249 ⇑P       Pn     17 33 26.9 -0.2
VAY   Valandovo         2.31  94 ePn      Pn     17 33 28.8 +1.4
VAY                              eSn      Sb     17 33 58.8 -0.7
VAY   Valandovo         2.31  94 i Pn     Pn     17 33 28.7 +1.4
VAY                              eSn      Sb     17 33 57.8 -1.7
VAY                              eLg      Lg     17 34 06.7
      comp=N,379nm,0.7s
VAY                              eLg      Lg     17 34 07.1
      comp=E,376nm,0.8s
BBLS  Lazi&#263;i       2.35 358 ePn      Pb     17 33 30.7 -1.6
BBLS  Lazi&#263;i       2.35 358 ePn      Pb     17 33 31.8 -0.5
BOSS  Bosilegrad        2.42  65 ePn      Pn     17 33 30.8 +1.9
GRUS  Gruza             2.54  20 ePn      Pn     17 33 32.6 +2.1
KNT   Kendrikon         2.57  97   P      Pn     17 33 32.5 +1.5
HAPS  Han Pijesak,BI    2.61 351 ePn      Pn     17 33 32.7 +1.1
HAPS  Han Pijesak,BI    2.61 351 ePn      Pn     17 33 32.4 +0.8
DIVS  Divibare          2.61   8 ePn      Pn     17 33 32.8 +1.2
DIVS  Divibare          2.61   8 ePn      Pn     17 33 32.8 +1.2
RICI  Ricice            2.65 319 ePn      Pn     17 33 33.3 +1.3
LIT   Litokhoron        2.66 121          Pn     17 33 33.3 +1.0
BOVS  Bovan             2.67  37 ePn      Pn     17 33 33.7 +1.4
THL   Klokotos Trika    2.72 135   P      Pn     17 33 35.1 +2.0
TRUS  Trudelj           2.79  13 ePn      Pb     17 33 37.6 -2.0
ACER  Acerenza          2.79 256          Pn     17 33 34.5 +0.5
HVAR  Hvar              2.81 307 ePn      Pn     17 33 32.9 -1.4
SGRT  San Giovanni R    2.83 276          Pn     17 33 34.5 -0.2
ZAPS  Zavoj             2.91  52 ePn      Pn     17 33 38.2 +2.6
ZAPS                             eSn      Sb     17 34 15.0 -1.8
VTS   Vitosha           2.98  67 ePn      Pn     17 33 38.7 +1.9
VTS   Vitosha           2.98  67 ⇓P       Pn     17 33 38.9 +2.1
VTS                              ⇓S       Sn     17 34 14.4 +2.4
VTS   Vitosha           2.98  67          Pn     17 33 38.3 +1.5
TEKS  Tekeris           3.04   0 ePn      Pb     17 33 41.6 -2.2
ZAGS  Zajecar           3.05  40 ePn      Pn     17 33 39.0 +1.4
SRS   Serrai            3.10  96   P      Pn     17 33 39.9 +1.7
EVR   Evrytania         3.13 145   P      Pn     17 33 41.2 +2.4
TIP   Timpagrande       3.14 223 ⇑P       Pn     17 33 38.5 -0.3
TIP   Timpagrande       3.14 223          Pn     17 33 38.5 -0.3
NVR   Nevrokopi         3.27  91   P      Pn     17 33 42.4 +1.7
AGG   Agios Georgios    3.29 138          Pn     17 33 42.5 +1.6
KUBS  Kucevo            3.31  28 ePn      Pn     17 33 41.5 +0.4
KIJV  Kijevo            3.38 318 ePn      Pn     17 33 43.0 +0.8
KIJV                               Sn     Sn     17 34 22.0 +0.3
MGRS  Mrkonjic Grad     3.41 329 ePn      Pn     17 33 45.1 +2.6
ZIRJ  Zirje             3.57 308 ePn      Pn     17 33 45.3 +0.6
MDVR  Moldovita         3.64  26 ⇓P       Pn     17 33 47.2 +1.4
FRGS  Fruska Gora       3.65   3 ePn      Pn     17 33 39.2 -6.6
BLY   Banja Luka        3.66 333 ⇑P       Pn     17 33 47.6 +1.7
BLY   Banja Luka        3.66 333 ePn      Pn     17 33 48.0 +2.1
BLY   Banja Luka        3.66 333          Pn     17 33 48.0 +2.1
MORI  Morici            3.66 311 ePn      Pn     17 33 45.5 -0.4
PAOL  Paolisi           3.76 264          Pn     17 33 48.3 +1.0
HERR  Herculane         3.98  31 ⇑P       Pn     17 33 51.8 +1.5
DUGI  Dugi Otok         4.11 309 ePn      Pn     17 33 52.2 +0.1
SRE   Strehaia          4.15  39 ⇑P       Pn     17 33 54.8 +2.1
PLVB  Pleven            4.22  62 ⇑P       Pn     17 33 56.3 +2.7
INTR  Introdacqua       4.22 279          Pn     17 33 54.3 +0.5
BZS   Buzias            4.38  20 ⇑P       Pn     17 33 56.8 +1.0
GZR   Gura Zlata        4.55  30 ⇑P       Pn     17 33 59.7 +1.5
MOSL  Moslavina         4.56 335 i Pn     Pn     17 33 56.6 -1.8
NVLJ  Novalja           4.57 313 ePn      Pn     17 33 59.5 +1.2
AQU   L'Aquila          4.63 282 ePn      Pn     17 34 00.2 +0.8
AQU   L'Aquila          4.63 282          Pn     17 33 60.0 +0.6
ITM   Ithomi            4.71 156   Pn     Pn     17 34 01.0 +0.5
ELND  Elena             4.93  71 ⇓P       Pn     17 34 05.8 +2.4
NRCA  Norcia            4.93 288          Pn     17 34 04.1 +0.6
ALN   Alexandroupoli    4.97  95   Pn     Pn     17 34 04.6 +0.7
SIRR  Siria             5.00  17 ⇓P       Pn     17 34 06.2 +1.8
LOT   Lotru             5.01  37 ⇑P       Pn     17 34 06.5 +2.0
HUMR  Humele            5.02  51 ⇓P       Pn     17 34 07.1 +2.5
OZLJ  Ozalj             5.04 326 ePn      Pn     17 34 07.7 +2.7
PTJ   Puntijarka        5.09 331 ePn      Pn     17 34 09.4 +3.8
CRES  Cresnjev          5.22 327 ePn      Pn     17 34 07.4  0.0
BRJN  Brijuni           5.41 311 ePn      Pn     17 34 09.9  0.0
MURB  Monte Urbino      5.46 291          Pn     17 34 11.4 +0.7
RAZG  Razgrad           5.56  66 ⇑P       Pn     17 34 14.7 +2.6
CEY   Cerknica          5.61 321 ePn      Pn     17 34 13.3 +0.6
VOIR                    5.62  44 ⇑P       Pn     17 34 15.4 +2.5
DRGR                    5.76  22 ⇑P       Pn     17 34 16.2 +1.4
TRI   Trieste           5.92 317   Pn     Pn     17 34 17.0 +0.1
CORL  Corleone          6.00 235   Pn     Pn     17 34 18.0 -0.1
SOKA  Soboth            6.09 330 ePn      Pn     17 34 20.7 +1.4
      comp=E,1.0nm,0.3s
SOKA                             eSn      Sn     17 35 26.5 -2.0
      comp=E,6.9nm,0.8s
MLR   Muntele Rosu      6.14  47   Pn     Pn     17 34 23.5 +3.3
      comp=E,1.5nm,0.3s,baz=260,slow=18,SNR=14
MLR                                Sn     Sn     17 35 36.0 +6.2
      comp=E,0.2nm,0.3s,baz=122,slow=22,SNR=2.6
MLR                                LR     LR     17 37 10.1
      comp=E,145nm,20.1s,baz=289,slow=41
MLR   Muntele Rosu      6.14  47 ⇑P       Pn     17 34 23.4 +3.3
MLR   Muntele Rosu      6.14  47          Pn     17 34 22.5 +2.4
OBKA  Obir              6.14 326 ePn      Pn     17 34 22.0 +1.9
      comp=E,1.1nm,0.3s
CLTB  Caltabellotta     6.25 233   Pn     Pn     17 34 22.4 +0.8
ARSA  Arzberg           6.41 335 ePn      Pn     17 34 26.3 +2.6
      comp=E,1.5nm,0.3s
PSZ   Piszkesteto       6.41   2          Pn     17 34 24.5 +0.7
OSSC  Osservatorio P    6.43 291   Pn     Pn     17 34 24.8 +0.8
CASP  Castiglione de    6.55 284   Pn     Pn     17 34 25.8 +0.1
PLOR  Plostina          6.75  48 ⇑P       Pn     17 34 31.7 +3.3
VRI   Vrincioaia        6.80  48 ⇑P       Pn     17 34 31.8 +2.7
STAL  STALIGIAL         6.83 316   Pn     Pn     17 34 29.9 +0.4
ZCCA  Zocca             6.88 297   Pn     Pn     17 34 28.1 -2.0
WDD   Wied Dalam        6.88 216   Pn     Pn     17 34 27.8 -2.3
TEOL  Teolo             6.88 307   Pn     Pn     17 34 30.1 -0.1
HARR  Harsova           6.93  60 ⇑P       Pn     17 34 33.5 +2.7
VYHS  Vyhne             7.00 356 ePN      Pn     17 34 33.8 +2.0
VYHS                             ePG      Pb     17 35 04.2  +13
VYHS                             eSN      Sn     17 35 49.0 -1.7
VLC   Villacollemand    7.21 295   Pn     Pn     17 34 34.5 -0.2
ABTA  Abfaltersbach     7.26 318 ePn      Pn     17 34 36.2 +0.7
      comp=E,1.2nm,0.4s
ABTA                             eSn      Sn     17 35 55.2 -2.1
      comp=E,11nm,0.7s
CTI   Castel Tesino     7.27 311          Pn     17 34 35.9 +0.2
CFR   Carcaliu          7.28  57 ⇑P       Pn     17 34 37.7 +2.1
BURAR Bucovina Array    7.33  32 ⇑P       Pn     17 34 39.4 +2.9
BURAR Bucovina Array    7.33  32   Pn     Pn     17 34 35.3 -1.2
BUR08 Bucovina Ar. S    7.35  32   Pn     Pn     17 34 37.4 +0.7
MOA   Molln             7.36 331 ePn      Pn     17 34 40.4 +3.7
      comp=E,0.6nm,0.2s
MOA                              eSn      Sn     17 36 02.6 +3.1
      comp=E,5.3nm,0.7s
IDI   Anoyia            7.51 144   Sn     Sn     17 35 58.0 -5.5
      comp=E,0.9nm,0.3s,baz=88,slow=22,SNR=3.4
SALO  Salr              7.71 305   Pn     Pn     17 34 42.0 +0.5
TLCR                    7.71  58 ⇓P       Pn     17 34 44.5 +3.0
MSSA  Maissana          7.85 294   Pn     Pn     17 34 43.3 -0.2
KRUC  Moravsky          7.86 345 eSG      Sn     17 36 20.2 +8.3
WTTA  Wattenberg        8.05 318 i Pn     Pn     17 34 49.0 +2.7
      comp=E,1.4nm,0.3s
VRAC  Vranov            8.06 346   Sn     Sn     17 36 12.7 -4.1
      comp=E,0.8nm,0.3s,baz=145,slow=18,SNR=5.5
VRAC  Vranov            8.06 346 eSG      Sn     17 36 12.5 -4.4
WATA  Walderalm         8.13 318 eSn      Sn     17 36 20.6 +1.8
      comp=E,7.5nm,0.6s
SQTA  Sankt Quirin      8.24 317 eSn      Sn     17 36 21.7 +0.3
      comp=E,1.5nm,0.2s
FETA  Feichten          8.37 314   Pn     Pn     17 34 50.9 +0.2
      comp=E,1.1nm,0.6s
FETA                             eSn      Sn     17 36 25.5 +0.9
      comp=E,3.2nm,0.8s
MOTA  Moosalm           8.38 317 ePn      Pn     17 34 53.7 +2.9
      comp=E,1.4nm,0.4s
MOTA                             eSn      Sn     17 36 25.2 +0.4
      comp=E,6.8nm,0.7s
FUORN Ofenpass-Fuorn    8.39 311   Pn     Pn     17 34 50.4 -0.6
GEC2  GERESS Array S    8.40 333   Pn     Pn     17 34 49.5 -1.5
GERES GERESS Array B    8.40 333   Pn     Pn     17 34 50.9 -0.2
      comp=E,0.1nm,0.3s,baz=152,slow=15,SNR=3.1
GERES                              Sn     Sn     17 36 24.8 -0.5
      comp=E,0.2nm,0.3s,baz=155,slow=21,SNR=3.9
GERES GERESS Array B    8.40 333   Pn     Pn     17 34 51.8 +0.7
KWP   Kalwaria Pacla    8.42  14   Pn     Pn     17 34 52.1 +0.8
KARP  Karpathos         8.45 132   Pn     Pn     17 34 51.6 -0.1
RETA  Reutte            8.64 317 eSn      Sn     17 36 31.3 +0.1
      comp=E,2.3nm,0.4s
KHC   Kasperske Hory    8.69 333 ePN      Pn     17 34 58.0 +3.0
KHC                              eSN      Sn     17 36 33.2 +0.9
DAVOX Davos/Dischmat    8.70 310   LR     LR     17 39 03.0
      comp=E,69nm,20.3s,baz=82,slow=44
BNI   Bardonecchia     10.00 295   Pn     Pn     17 35 13.8 +0.7
SENIN Lac Senin/Sane   10.05 303   Pn     Pn     17 35 12.5 -1.3
BRTR  Keskin Array B   10.89  95   LR     LR     17 40 13.7
      comp=E,80nm,18.5s,baz=274,slow=40
AKASG Malin Array Be   11.39  33   Pn     Pn     17 35 33.3 +1.4
      comp=E,0.2nm,0.3s,baz=220,slow=12,SNR=4.6
ESK   Eskdalemuir      20.32 321   P      P      17 37 25.1 +0.1
ESK                                IAmb   IAmb   17 37 45.7
      comp=Z,20nm,1.2s
FINES FINESS Array B   20.35   9   P      P      17 37 24.9 -0.4
      comp=Z,2.1nm,0.7s,baz=179,slow=11,SNR=6.3
FINES FINESS Array B   20.35   9   P      P      17 37 25.3  0.0
FIA1  FINESS Array S   20.36   9   P      P      17 37 24.8 -0.5
NC204 NORSAR Array S   20.50 348   P      P      17 37 27.2 +0.3
NC204                              IAmb   IAmb   17 37 55.2
      comp=Z,14nm,1.1s
MDT   Midelt           21.04 253   LR     LR     17 45 16.1
      comp=Z,83nm,18.7s,baz=104,slow=36
ABKAR Akbulak array    29.15  61   P      P      17 38 50.7 +0.7
ARU   Arti             29.19  46   P      P      17 38 49.5 -0.7
      comp=Z,1.0nm,0.7s,baz=243,slow=9.0,SNR=6.6
ARU                                LR     LR     17 51 40.8
      comp=Z,112nm,18.3s,baz=248,slow=38
ARU   Arti             29.19  46   P      P      17 38 49.7 -0.5
ARU                                IAmb   IAmb   17 38 50.0
      comp=Z,3.3nm,0.7s
GEYT  Alibeck          29.74  84   P      P      17 38 54.6 -0.8
GYA0B ALIBECK ARRAY    29.74  84   P      P      17 38 55.4  0.0
GYA0B                              IAmb   IAmb   17 39 03.3
      comp=Z,2.8nm,0.7s
UOSS  Minazif          34.55 107   P      P      17 39 36.8 -0.9
BRVK  Borovoye         35.60  53   P      P      17 39 46.7 +0.3
BRVK                               IAmb   IAmb   17 39 47.8
      comp=Z,4.6nm,0.7s
KKAR  Karatay Array    37.28  70   P      P      17 40 02.0 +1.2
KURK  Kurchatov        40.99  56   P      P      17 40 34.0 +2.3
MAKZ  Makanchi         44.08  61   P      P      17 40 56.8 -0.2
ZAA0  Zalesovo Array   44.11  50   P      P      17 40 56.7 -0.4
ZAA0                               IAmb   IAmb   17 40 57.4
      comp=Z,3.2nm,0.7s
ZALV  Zalesovo Beam    44.11  50   P      P      17 40 56.4 -0.6
      comp=Z,3.9nm,0.7s,baz=277,slow=9.1,SNR=17
ZALV  Zalesovo Beam    44.11  50   P      P      17 40 56.3 -0.8
MK31  Makanchi Array   44.29  61   P      P      17 40 58.5 -0.2
MK31                               IAmb   IAmb   17 40 59.1
      comp=Z,2.2nm,0.8s
MKAR  Makanchi Array   44.29  61   P      P      17 40 58.4 -0.3
      comp=Z,3.5nm,0.7s,baz=281,slow=6.9,SNR=51
MKAR  Makanchi Array   44.29  61   P      P      17 40 58.6 -0.1
WMQ   Urumqi           48.88  63 eP       P      17 41 35.7 +0.9
DANN  Dangsing         53.17  83 eP       P      17 42 05.9 -1.5
      comp=Z,24nm,0.8s
GKN   Gorkha           54.01  83 eP       P      17 42 11.7 -1.7
      comp=Z,20nm,0.7s
DMN   Daman            54.57  83 eP       P      17 42 15.8 -1.9
      comp=Z,11nm,0.7s
KKN   Kakani           54.60  82 eP       P      17 42 15.9 -1.9
      comp=Z,12nm,0.7s
PKIN  Phulchoki        54.80  83 eP       P      17 42 17.4 -2.0
      comp=Z,7.0nm,0.7s
PKI   Pulchoki         54.81  83 eP       P      17 42 17.4 -2.1
      comp=Z,8.8nm,0.7s
GUN   Gumba            54.98  82 eP       P      17 42 19.0 -1.7
      comp=Z,15nm,0.7s
JIRN  Jiri             55.35  82 eP       P      17 42 21.7 -1.7
      comp=Z,21nm,0.7s
RAMN  Ramite           56.04  82 eP       P      17 42 26.4 -1.9
      comp=Z,20nm,0.6s
TAPN  Taplejung        56.65  81 eP       P      17 42 31.2 -1.4
      comp=Z,9.6nm,0.9s
ODAN  Odare            56.68  82 eP       P      17 42 31.1 -1.7
      comp=Z,10.0nm,0.7s
GTA   Gaotai           58.97  63 eP       P      17 42 48.2 -0.4
GTA                                pP     pP     17 42 52.8 -2.3
GTA                                sP     sP     17 42 55.2 -2.5
SONM  Songino Array    58.97  52   P      P      17 42 48.6  0.0
      comp=Z,0.8nm,0.9s,baz=292,slow=7.8,SNR=6.0
SONM  Songino Array    58.97  52   P      P      17 42 48.2 -0.3
LZH   Lanzhou          63.43  64 eP       P      17 43 20.4 +1.5
LZH                                pP     pP     17 43 26.2 +0.7
LZH                                sP     sP     17 43 29.3 +1.3
LZH                                PP     PP     17 45 41.4 +3.2
HHC   Hu-ho-hao-te     65.81  56 eP       P      17 43 35.5 +1.2
YKA   Yellowknife Ar   70.00 339   P      P      17 43 59.6 -0.5
      comp=Z,0.3nm,0.7s,baz=38,slow=5.5,SNR=7.0
CMAR  Chiang Mai Arr   70.21  83   P      P      17 44 00.8 -1.4
      comp=Z,0.5nm,0.7s,baz=312,slow=8.3,SNR=6.5
ASAR  Alice Springs   123.23  93   PKP    PKPdf  17 51 44.7 -1.3
      comp=Z,0.3nm,0.9s,baz=270,slow=0.9,SNR=4.5
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NIED ***08*** *17:38:00, 34°.50N×138°.80E, h155km, Mw3.9 Best double couple: M$_0$6.98000×10^{14} NP1:φ$_s$205.00000°, δ84.00000°, λ76.00000°. NP2:φ$_s$93.00000°, δ15.00000°, λ158.00000°.*

JMA ***08*** *17:38:14.7±0.1, 34°.49N×138°.82E, h194km±2km, M3.6*

IDC ***08*** *17:38:15.4±0.5, 34°.41N×138°.70E, h196km±6km, mb3.6/17, mb1 3.6/21, mb1mx3.4/51, mbtmp4.0/21, MS3.2/1, Ms1 3.2/1, ms1mx2.2/38, Error ellipse: s-maj=16.8km s-min=9.1km az=69.0*

NEIC ***08*** *17:38:15.6±2.3, 34°.42N±0°.07×138°.7E±0°.1, h200km±6km, mb4.2/30, Error ellipse: s-maj=12.9km s-min=9.4km az=63.0*

ISC 08 17:38:15.0±0.6**, 34°.48N**±0°.05×**138°.77E**±0°.05**, h192**km±5km**, n98,** σ1s.00/111**, mb4.0**/29**, Near south coast of eastern Honshu**

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Code  Station Name        Δ°  AZ°    Phase ID         Time      Res
                                   Op     ISC      h  m  s     ISC
JIZS  Izushimoda        0.25  21   P      Pn     17 38 40.5 +0.1
JIZS                               S      Sn     17 38 59.8 -0.4
JKO   Kozu shima        0.42 134   P      Pn     17 38 41.2 +0.3
JSG   Sagara            0.52 292   P      Pn     17 38 41.7 +0.5
JSG                              eS       Sn     17 39 02.7 +1.3
JIM2  Oshima 3          0.60  66   P      Pn     17 38 41.5 -0.1
JFNN  Fujinakano        0.72 354   P      Pn     17 38 42.3 +0.2
JFNN                               S      Sn     17 39 03.5 +0.2
JOD2  Odawara 2         0.82  18   P      Pn     17 38 42.9 +0.1
JOD2                               S      Sn     17 39 04.2 -0.2
TK02  Tokai 2           0.99 238   P      Pn     17 38 44.1 +0.5
TK02                             eS       Sn     17 39 07.3 +1.7
JYN   Shimob            1.03 350   P      Pn     17 38 44.4 +0.2
JYN                              eS       Sn     17 39 07.2 +0.2
JRY   Ryogami san       1.54   4   P      Pn     17 38 49.1 +0.8
JRY                              eS       Sn     17 39 14.7 +0.3
JHJ   Hachijo jima 2    1.60 148   P      Pn     17 38 49.1 +0.2
      349nm,0.3s,baz=71,slow=23,SNR=96
JHJ                                S      Sn     17 39 16.6 +1.4
      99nm,0.3s,baz=149,slow=24,SNR=7.9
JHJ2  Mitsune           1.62 147   P      Pn     17 38 49.0 -0.1
JHJ2  Mitsune           1.62 147          Pn     17 38 49.2 +0.1
INU   Inuyama           1.68 302          Pn     17 38 49.9 +0.3
JIE   Ise               1.71 268   P      Pn     17 38 50.0 +0.1
BSO1  Boso 1            1.83  84   P      Pn     17 38 50.1 -0.4
BSO1                             eS       Sn     17 39 17.7 -0.5
TTO1  TONANKAI O.B.S    1.86 243   P      Pn     17 38 51.5 +0.4
JYTA  Yamagatataniai    2.00 304   P      Pn     17 38 53.1 +0.2
JYTA                             eS       Sn     17 39 22.8 +0.4
JAG   Ashikaga          2.02  16   P      Pn     17 38 53.0 -0.1
JAG                                S      Sn     17 39 22.0 -0.8
MJAR  Matsushiro Arr    2.11 348   P      Pn     17 38 54.0  0.0
      0.7nm,0.3s,baz=170,slow=12,SNR=88
MJAR  Matsushiro Arr    2.11 348          Pn     17 38 53.4 -0.6
MAJO  Matsushiro        2.11 348          Pn     17 38 54.2 +0.2
MAT   Matsushiro        2.11 348   P      Pn     17 38 54.2 +0.2
MAT                              eS       Sn     17 39 24.5 -0.1
MAT   Matsushiro        2.11 348   P      Pn     17 38 54.3 +0.2
MAT                                S      Sn     17 39 24.8 +0.2
MJB9  Matsu-Tunnel      2.11 348          Pn     17 38 54.2 +0.2
JAOM  Aogashimamukai    2.18 157   P      Pn     17 38 54.9 +0.1
JWY   Kouya             2.64 265   P      Pn     17 39 00.3 +0.2
JWY                              eS       Sn     17 39 35.2 +0.1
JKG   Kaga              2.68 313   P      Pn     17 39 01.1 +0.7
JTNC  Tanabenakahech    2.70 257   P      Pn     17 39 00.7  0.0
JNU   Nakatsue          6.71 261   P      Pn     17 39 51.9 +0.5
      0.6nm,0.3s,baz=62,slow=2.9,SNR=8.5
JNU   Nakatsue          6.71 261          Pn     17 39 51.8 +0.4
JCJ   Chichijima        7.92 157   P      Pn     17 40 02.0 -5.3
      7.6nm,0.3s,baz=14,slow=20,SNR=16
JCJ                                S      Sn     17 41 25.0  -12
      23nm,0.3s,baz=269,slow=22,SNR=8.9
ERM   Erimo             8.28  23   Pn     Pn     17 40 10.8 -0.9
KSRS  Korea Array       9.28 292   P      Pn     17 40 24.7 -0.2
      0.2nm,0.3s,baz=106,slow=14,SNR=7.1
ASAJ  Asahikawa        10.07  16   P      Pn     17 40 32.2 -2.9
      0.8nm,0.3s,baz=200,slow=15,SNR=12
JKA   Kamikawa-asahi   10.07  16          Pn     17 40 32.2 -3.0
USRK  Ussuriysk Ar.    11.03 334   P      Pn     17 40 47.8 +0.3
      baz=162,slow=14,SNR=3.1
JOW   Kunigami         11.81 233   Pn     Pn     17 40 54.3 -3.5
MDJ   Mudanjiang       12.35 328   Pn     Pn     17 41 03.4 -1.0
YSS   Yuzh-Sakhalins   12.82  12   Pn     Pn     17 41 08.1 -2.2
KLR   Kul'dur          15.63 343   P      Pn     17 41 43.3 -1.7
      0.5nm,0.3s,baz=155,slow=11,SNR=17
KLR                                LR     LR     17 48 10.5
      comp=Z,80nm,20.4s,baz=8.0,slow=38
HIA   Hailar           20.39 322   P      P      17 42 38.7 +1.8
HIA                                IAmb   IAmb   17 42 39.6
      comp=Z,5.7nm,0.6s
ULN   Ulaanbaatar      27.15 309   P      P      17 43 41.8 +1.2
ULN                                IAmb   IAmb   17 43 42.4
      comp=Z,3.2nm,0.7s
SONM  Songino Array    27.56 309   P      P      17 43 45.1 +0.9
      comp=Z,1.7nm,0.9s,baz=116,slow=8.5,SNR=9.5
SONM  Songino Array    27.56 309   P      P      17 43 44.9 +0.7
YAK   Yakutsk          28.17 351   P      P      17 43 49.2 +0.1
      comp=Z,1.7nm,0.4s,baz=174,slow=2.5,SNR=4.2
YAK   Yakutsk          28.17 351   P      P      17 43 49.1  0.0
YAK                                IAmb   IAmb   17 43 51.5
      comp=Z,5.2nm,0.7s
TIXI  Tiksi            37.60 355   P      P      17 45 10.7 +0.1
      comp=Z,1.6nm,0.3s,baz=164,slow=7.0,SNR=22
TIXI  Tiksi            37.60 355   P      P      17 45 10.6 -0.1
TIXI                               IAmb   IAmb   17 45 11.4
      comp=Z,2.4nm,0.6s
CMAR  Chiang Mai Arr   38.78 256   P      P      17 45 20.3 -0.9
      comp=Z,0.3nm,0.3s,baz=54,slow=6.8,SNR=4.4
ZAA0  Zalesovo Array   42.11 315   P      P      17 45 46.2 -1.8
ZALV  Zalesovo Beam    42.11 315   P      P      17 45 48.0  0.0
      comp=Z,0.7nm,0.3s,baz=96,slow=7.9,SNR=6.7
ZALV  Zalesovo Beam    42.11 315   P      P      17 45 47.9 -0.1
MK31  Makanchi Array   43.70 304   P      P      17 46 00.8 -0.2
MKAR  Makanchi Array   43.70 304   P      P      17 46 01.2 +0.2
      comp=Z,2.2nm,0.4s,baz=85,slow=10,SNR=35
MKAR  Makanchi Array   43.70 304   P      P      17 46 00.5 -0.5
MAKZ  Makanchi         43.92 304   P      P      17 46 02.9 +0.2
MAKZ                               IAmb   IAmb   17 46 03.3
      comp=Z,4.3nm,0.3s
KURK  Kurchatov        45.86 310   P      P      17 46 17.7 -0.1
KURK                               IAmb   IAmb   17 46 18.5
      comp=Z,6.2nm,0.8s
MTN   Manton Dam       47.62 190   P      P      17 46 30.3 -1.5
BOOM  Boomskoye usch   48.83 299   P      P      17 46 41.9 +0.7
AAK   Ala-Archa        49.84 300   P      P      17 46 49.0 +0.2
PPLA  Purkeypile       50.48  34   P      P      17 46 55.9 +2.6
PPLA                               IAmb   IAmb   17 47 01.7
      comp=Z,8.4nm,1.3s
KNRA  Kununurra        50.78 192   P      P      17 46 54.2 -1.5
KNRA                               IAmb   IAmb   17 46 58.3
      comp=Z,9.0nm,1.1s
BRVK  Borovoye         50.79 314   P      P      17 46 56.4 +0.9
KK31  Karatay Array    52.57 301   P      P      17 47 09.4 +0.6
KK31                               IAmb   IAmb   17 47 09.8
      comp=Z,4.1nm,0.7s
KKAR  Karatay Array    52.57 301   P      P      17 47 08.8 -0.1
KKAR  Karatay Array    52.57 301   P      P      17 47 08.6 -0.2
KKAR                               IAmb   IAmb   17 47 09.8
      comp=Z,4.1nm,0.7s
FITZ  Fitzroy Crossi   53.76 196   P      P      17 47 16.8 -0.9
FITZ                               IAmb   IAmb   17 47 24.6
      comp=Z,7.7nm,1.5s
WB0   Warramunga Arr   54.11 185   P      P      17 47 18.8 -1.4
SCRK  Sand Creek       54.11  32   P      P      17 47 21.3 +1.4
DOT   Dot Lake         54.11  32   P      P      17 47 21.1 +1.3
DOT                                IAmb   IAmb   17 47 32.1
      comp=Z,5.6nm,1.5s
WB2   Warramunga Arr   54.28 185   P      P      17 47 20.2 -1.2
WRA   Warramunga Arr   54.28 185   P      P      17 47 20.1 -1.4
      comp=Z,0.9nm,0.4s,baz=0.2,slow=7.6,SNR=33
WRA   Warramunga Arr   54.28 185   P      P      17 47 19.8 -1.6
WR0   Warramunga Arr   54.29 185   P      P      17 47 19.9 -1.5
WR0                                IAmb   IAmb   17 47 23.9
      comp=Z,4.8nm,1.4s
CHGR  Chuyangaron      54.84 296   P      P      17 47 25.6 +0.2
ARU   Arti             56.86 319   P      P      17 47 39.5 +0.1
      comp=Z,0.7nm,0.3s,baz=89,slow=5.3,SNR=6.3
ARU   Arti             56.86 319   P      P      17 47 39.1 -0.3
ABKAR Akbulak array    57.95 311   P      P      17 47 47.1  0.0
AS31  Alice Springs    58.01 185   P      P      17 47 47.1 -0.6
ASAR  Alice Springs    58.01 185   P      P      17 47 47.2 -0.6
      comp=Z,0.3nm,0.4s,baz=18,slow=11,SNR=19
AKTO  Aktyubinsk       58.79 312   P      P      17 47 55.0 +2.0
      comp=Z,1.8nm,0.6s,baz=73,slow=12,SNR=7.2
RES   Resolute Bay     65.59  14   P      P      17 48 38.7 +1.0
ARCES ARCESS Array B   65.62 339   P      P      17 48 38.5 +0.5
      comp=Z,5.9nm,1.0s,baz=47,slow=6.7,SNR=6.8
FIA1  FINESS Array S   70.06 332   P      P      17 49 05.9 +0.1
FINES FINESS Array B   70.06 332   P      P      17 49 05.9 +0.2
      comp=Z,2.0nm,0.5s,baz=56,slow=5.8,SNR=23
SUMG  Summit           73.22 359   P      P      17 49 26.9 +1.9
AKASG Malin Array Be   74.98 322   P      P      17 49 34.6 -0.4
      comp=Z,0.7nm,0.3s,baz=51,slow=5.9,SNR=9.5
AKBB  Malin Array Si   74.98 322   P      P      17 49 34.8 -0.2
AKBB                               IAmb   IAmb   17 49 35.1
      comp=Z,11nm,1.6s
HFS   Hagfors          75.51 335   P      P      17 49 37.7 -0.2
      comp=Z,5.1nm,1.1s,baz=59,slow=5.7,SNR=8.0
NC204 NORSAR Array S   75.66 337   P      P      17 49 39.2 +0.5
NB2   NORSAR Subarra   75.69 337   P      P      17 49 39.0 +0.1
      comp=Z,0.8nm,0.6s,baz=42,slow=5.9
NOA   NORSAR Array B   75.69 337   P      P      17 49 38.9  0.0
      comp=Z,2.2nm,0.9s,baz=42,slow=5.7,SNR=4.1
NVAR  Mina Array Bea   78.25  51   P      P      17 49 55.7 +1.8
      comp=Z,0.4nm,0.7s,baz=307,slow=5.4,SNR=3.7
NVAR  Mina Array Bea   78.25  51   P      P      17 49 54.4 +0.5
BRTR  Keskin Array B   78.91 311   P      P      17 49 57.4 +0.1
      comp=Z,0.9nm,0.9s,baz=48,slow=2.1,SNR=3.6
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BRTR	**Keskin Array B**	**78.91**	**311**	P	**P**	**17 49 56.9**	**-0.5**
GERES	**GERESS Array B** comp=Z,0.3nm,0.4s,baz=76,slow=5.6,SNR=3.9	**83.71**	**327**	P	**P**	**17 50 21.9**	**-0.5**
GERES	**GERESS Array B**	**83.71**	**327**	P	**P**	**17 50 20.7**	**-1.7**

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*KRNET **08** 17:41:49.2±0.1, 42°.11N×73°.42E, h16^{km}, mb3.1*
*NNC **08** 17:41:49.5±0.5, 42°.15N×73°.42E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=4.6km s-min=2.1km az=174.0*
*SOME **08** 17:41:49.5, 42°.20N×73°.40E, h5^{km}*
*KNET **08** 17:41:51.0±0.3, 42°.16N×73°.54E, h12^{km}±1^{km}, ml2.4, Error ellipse: s-maj=1.8km s-min=1.2km az=62.0*
ISC 08 17:41:49.3±1.0**, 42°.15N**±0°.02×**73°.39E**±0°.02**, h7**^{km}±9^{km}**,**
n71, σ1^{s}.32/119**, 57C-11D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu** baz=84	**0.22**	**95**	⇑*i*P	**Pg**	**17 41 54.1**	**+0.2**
AML	baz=84			⇑*i*S	**Sg**	**17 41 56.6**	**-0.4**
AML	**Almayashu** 527nm,0.1s,SNR=2321	**0.22**	**95**	⇓P	**Pg**	**17 41 54.2**	**+0.3**
AML	1µm,0.1s			⇓S	**Sg**	**17 41 57.5**	**+0.5**
EKS2	**Erkin-Say** baz=26	**0.58**	**29**	⇑*i*P	**Pb**	**17 42 01.2**	**-0.8**
EKS2	baz=26			⇑*i*S	**Sb**	**17 42 09.5**	**-1.1**
EKS2	**Erkin-Say** 59nm,0.1s,SNR=42	**0.58**	**29**	⇑P	**Pb**	**17 42 01.4**	**-0.7**
EKS2	110nm,0.1s			⇑S	**Sb**	**17 42 09.8**	**-0.8**
MRKS	**Merke** baz=48	**0.61**	**348**	⇑*e*P	**Pb**	**17 42 01.8**	**-0.6**
MRKS	baz=48			⇑*e*S	**Sb**	**17 42 10.7**	**-0.5**
MRKS	**Merke** 42nm,0.1s	**0.61**	**348**	⇑*e*P	**Pb**	**17 42 01.8**	**-0.6**
MRKS	479nm,0.2s			*e*S	**Sb**	**17 42 10.7**	**-0.5**
MRKS	**Merke** 42nm,0.1s	**0.61**	**348**	P	**Pb**	**17 42 01.8**	**-0.6**
MRKS	548nm,0.2s			S	**Sb**	**17 42 10.7**	**-0.5**
ARLS	**Aral** baz=9.0	**0.75**	**112**	⇑*i*P	**Pg**	**17 42 03.1**	**-0.7**
ARLS	baz=9.0			⇑*i*S	**Sg**	**17 42 12.7**	**-0.8**
UCH	**Uchtor** baz=81	**0.84**	**84**	⇑*i*P	**Pg**	**17 42 05.0**	**-0.4**
UCH	baz=81			⇑*i*S	**Sg**	**17 42 16.3**	**0.0**
UCH	**Uchtor** 14nm,0.1s,SNR=83	**0.84**	**84**	⇑P	**Pg**	**17 42 05.2**	**-0.2**
UCH	132nm,0.2s			⇑S	**Sb**	**17 42 16.7**	**-1.4**
ARSB	**Arslanbob** baz=3.0	**0.88**	**201**	⇑*i*P	**Pg**	**17 42 05.2**	**-1.1**
ARSB	baz=3.0			⇑*i*S	**Sg**	**17 42 16.8**	**-0.9**
AAK	**Ala-Archa** baz=56	**0.95**	**59**	⇑*i*P	**Pg**	**17 42 07.5**	**-0.1**
AAK	baz=56			⇑*i*S	**Sb**	**17 42 20.6**	**-0.5**
AAK	**Ala-Archa** 8.8nm,0.1s,SNR=32	**0.95**	**59**	⇑P	**Pb**	**17 42 07.6**	**-0.6**
AAK	85nm,0.2s			⇓S	**Sb**	**17 42 20.0**	**-1.1**
AAK	**Ala-Archa** 5.9nm,0.3s	**0.95**	**59**	⇑P	**Pg**	**17 42 07.4**	**-0.1**
AAK	30nm,0.3s			⇑S	**Sb**	**17 42 20.2**	**-0.9**
ARK	**Arkit** baz=53	**1.12**	**252**	⇑*i*P	**Pb**	**17 42 10.3**	**-0.9**
ARK	baz=53			⇑*i*S	**Sb**	**17 42 25.7**	**-0.4**
FRU1	**Bishkek** baz=51	**1.13**	**54**	⇑*i*P	**Pb**	**17 42 10.7**	**-0.5**
FRU1	baz=51			⇑*i*S	**Sn**	**17 42 26.5**	**-1.0**
KBK	**Karagaybulak** baz=64	**1.26**	**66**	⇑*i*P	**Pb**	**17 42 13.0**	**-0.5**
KBK	baz=64			⇑*i*S	**Sn**	**17 42 30.1**	**-0.7**
KBK	**Karagaybulak** 17nm,0.1s,SNR=9.3	**1.26**	**66**	⇑P	**Pg**	**17 42 13.2**	**-0.2**
KBK	87nm,0.2s			⇑S	**Sn**	**17 42 30.6**	**-0.2**
CHMS	**Chumysh** baz=48	**1.31**	**49**	⇓*i*P	**Pg**	**17 42 14.2**	**-0.3**
CHMS	baz=48			⇓*i*S	**Sg**	**17 42 31.5**	**0.0**
CHMS	**Chumysh** 13nm,0.1s,SNR=46	**1.31**	**49**	⇑P	**Pg**	**17 42 14.4**	**-0.2**
CHMS	27nm,0.1s			⇑S	**Sg**	**17 42 32.2**	**+0.6**
CHMS	**Chumysh** 6.9nm,0.4s	**1.31**	**49**	⇓P	**Pg**	**17 42 14.3**	**-0.2**
CHMS	14nm,0.5s			⇑S	**Sg**	**17 42 31.7**	**+0.2**
USP	**Ospenovka** baz=34	**1.38**	**36**	⇑*i*P	**Pg**	**17 42 15.5**	**-0.3**
USP	baz=34			⇑*i*S	**Sg**	**17 42 34.3**	**+0.5**
USP	**Ospenovka** 35nm,0.2s,SNR=35	**1.38**	**36**	⇑P	**Pg**	**17 42 15.7**	**-0.2**
USP	89nm,0.2s			⇑S	**Sg**	**17 42 34.6**	**+0.9**
KZA	**Kyzart** baz=91	**1.38**	**92**	⇑*i*P	**Pn**	**17 42 14.8**	**-0.7**
KZA	baz=91			⇑*i*S	**Sn**	**17 42 33.3**	**-0.9**
KZA	**Kyzart** 19nm,0.2s,SNR=10	**1.38**	**92**	⇑P	**Pb**	**17 42 15.4**	**-0.4**
KZA	79nm,0.2s			⇑S	**Sg**	**17 42 33.8**	**0.0**
SGDS	**Sogindy** 20nm,0.1s	**1.59**	**35**	P	**Pg**	**17 42 19.1**	**-0.6**
SGDS	61nm,0.3s			S	**Sg**	**17 42 40.5**	**+0.2**
BOOM	**Boomskoye usch** baz=78	**1.92**	**79**	⇑*i*P	**Pb**	**17 42 24.5**	**-0.3**
BOOM	baz=78			⇑*i*S	**Sb**	**17 42 49.3**	**+0.3**
DGS	**Degeres** 76nm,0.6s	**2.06**	**57**	⇓*e*P	**Pg**	**17 42 27.7**	**-1.2**
DGS	53nm,0.4s			*e*S	**Sg**	**17 42 55.1**	**-0.6**
DGS	**Degeres** 77nm,0.4s	**2.06**	**57**	Pg	**Pg**	**17 42 27.9**	**-1.0**
DGS	53nm,0.4s			Lg	Lg	17 42 55.9	
NRN	**Naryn** baz=9.0	**2.08**	**109**	⇑*i*P	**Pn**	**17 42 25.7**	**+0.8**
NRN	baz=9.0			⇑*i*S	**Sb**	**17 42 53.0**	**-0.7**
KST	**Kastek** 57nm,0.3s	**2.10**	**64**	*e*P	**Pg**	**17 42 28.5**	**-1.0**
KST	54nm,0.5s			*e*S	**Sg**	**17 42 56.7**	**0.0**
KST	**Kastek** 57nm,0.3s	**2.10**	**64**	Pg	**Pg**	**17 42 28.5**	**-1.0**
KST	54nm,0.5s			Lg	Lg	17 42 56.7	
ULHL	**Ulahol** baz=85	**2.12**	**86**	⇑*i*P	**Pb**	**17 42 27.1**	**-1.1**
ULHL	baz=85			⇑*i*S	**Sb**	**17 42 54.5**	**-0.3**
ULHL	**Ulahol** 9.5nm,0.2s,SNR=46	**2.12**	**86**	⇓P	**Pb**	**17 42 28.2**	**0.0**
JBG	**Jabagly** 56nm,0.4s	**2.13**	**278**	Pg	**Pg**	**17 42 29.8**	**-0.4**
JBG	34nm,0.4s			Lg	Lg	17 42 59.1	
KRBS	**Karabastau** 21nm,0.4s	**2.28**	**47**	⇑*e*P	**Pb**	**17 42 30.7**	**-0.2**
KRBS	33nm,0.4s			*e*S	**Sb**	**17 43 00.2**	**+0.9**
KRBS	**Karabastau** 21nm,0.5s	**2.28**	**47**	Pg	**Pg**	**17 42 31.8**	**-1.2**
KRBS	33nm,0.4s			Lg	Lg	17 43 02.4	
KK31	**Karatay Array** 2.6nm,0.3s,baz=112,slow=12,SNR=148	**2.33**	**295**	⇑Pg	**Pb**	**17 42 30.9**	**-0.8**
KK31	19nm,0.5s,baz=118,slow=28,SNR=11			Lg	Lg	17 43 04.1	
MTBS	**Maitube** 26nm,0.3s	**2.44**	**65**	⇓*e*P	**Pg**	**17 42 34.6**	**-1.6**
MTBS	30nm,0.3s			*e*S	**Sg**	**17 43 07.4**	**-0.4**
MTBS	**Maitube** 28nm,0.4s	**2.44**	**65**	Pg	**Pg**	**17 42 34.6**	**-1.6**
MTBS	33nm,0.6s			Lg	Lg	17 43 07.4	
IZV	**Izvestkoviy** 30nm,0.2s	**2.54**	**69**	*e*P	**Pb**	**17 42 36.2**	**+0.9**
IZV	34nm,0.5s			*e*S	**Sg**	**17 43 10.1**	**-0.7**
IZV	**Izvestkoviy** 32nm,0.3s	**2.54**	**69**	Pg	**Pb**	**17 42 36.2**	**+0.9**
IZV	34nm,0.5s			Lg	Lg	17 43 10.1	
TNSS	**Tian-Shan** 29nm,0.5s	**2.77**	**70**	*e*P	**Pb**	**17 42 40.3**	**+0.8**
TNSS	43nm,0.5s			*e*S	**Sg**	**17 43 17.1**	**-1.2**
TNSS	**Tian-Shan** 29nm,0.5s	**2.77**	**70**	Pg	**Pb**	**17 42 40.3**	**+0.8**
TNSS	37nm,0.9s			Lg	Lg	17 43 17.1	
BRLS	**Borolday** 0.5nm,0.3s	**2.77**	**290**	*e*P	**Pg**	**17 42 41.3**	**-1.1**
BRLS	25nm,0.3s			*e*S	**Sg**	**17 43 18.4**	**+0.1**
BRLS	**Borolday** 0.5nm,0.3s	**2.77**	**290**	Pg	**Pg**	**17 42 41.3**	**-1.1**
BRLS	4.1nm,0.4s			Lg	Lg	17 43 18.4	
KUU	**Kurty** 4.8nm,0.4s	**2.77**	**50**	*e*P	**Pb**	**17 42 40.3**	**+1.0**
KUU	42nm,0.7s			*e*S	**Sg**	**17 43 16.8**	**-1.6**
KUU	**Kurty** 4.8nm,0.4s	**2.77**	**50**	Pg	**Pb**	**17 42 40.2**	**+1.0**
KUU	42nm,0.7s			Lg	Lg	17 43 16.8	
AAA	**Alma-Ata** 14nm,0.2s	**2.80**	**67**	*e*P	**Pg**	**17 42 41.8**	**-1.2**
AAA	8.9nm,0.2s			*e*S	**Sg**	**17 43 19.3**	**-0.1**
AAA	**Alma-Ata** 14nm,0.2s	**2.80**	**67**	Pg	**Pg**	**17 42 41.8**	**-1.2**
AAA	8.9nm,0.2s			Lg	Lg	17 43 19.3	
KDJ	**Kajisay** baz=88	**2.82**	**89**	⇑*i*P	**Pn**	**17 42 36.7**	**+1.7**
KDJ	baz=88			⇑*i*S	**Sb**	**17 43 11.3**	**-3.5**
CHM	**Chimkent** 57nm,0.2s	**2.82**	**275**	*e*P	**Pg**	**17 42 42.6**	**-0.8**
CHM	144nm,0.5s			*e*S	**Sg**	**17 43 21.2**	**+1.3**
KNDC	**Almaty** 27nm,0.8s	**2.84**	**67**	⇑Pg	**Pb**	**17 42 41.0**	**+0.6**
KNDC	78nm,0.7s			⇑Lg	Lg	17 43 19.9	
BTK	**Batken** baz=25	**2.86**	**224**	⇑*i*P	**Pn**	**17 42 37.0**	**+1.6**
BTK	baz=25			⇑*i*S	**Sn**	**17 43 12.1**	**+2.0**
MDOK	**Medeo** 14nm,0.4s	**2.88**	**68**	⇑*e*P	**Pb**	**17 42 42.2**	**+1.0**
MDOK	36nm,0.5s			*e*S	**Sg**	**17 43 20.1**	**-1.7**
MDOK	**Medeo** 9.4nm,0.5s	**2.88**	**68**	⇓Pg	**Pb**	**17 42 39.8**	**-1.3**
MDOK	31nm,0.6s			⇑Lg	Lg	17 43 20.0	
MDOK	**Medeo** 14nm,0.4s	**2.88**	**68**	Pg	**Pb**	**17 42 42.0**	**+0.8**
MDOK	38nm,0.4s			Lg	Lg	17 43 20.1	
BTLS	**Baital** 1.0nm,0.2s	**2.93**	**9**	*e*P	**Pb**	**17 42 42.9**	**+1.0**
BTLS	15nm,0.4s			*e*S	**Sg**	**17 43 21.1**	**-2.3**
BTLS	**Baital** 1.0nm,0.2s	**2.93**	**9**	Pg	**Pb**	**17 42 42.9**	**+1.0**
BTLS	15nm,0.4s			Lg	Lg	17 43 21.1	
KOTS	**Kotyrbulak** 22nm,0.3s	**2.95**	**67**	*e*P	**Pb**	**17 42 43.6**	**+1.3**
KOTS	86nm,0.5s			*e*S	**Sg**	**17 43 22.8**	**-1.2**
KOTS	**Kotyrbulak** 22nm,0.3s	**2.95**	**67**	Pg	**Pb**	**17 42 43.6**	**+1.3**
KOTS	89nm,0.8s			Lg	Lg	17 43 22.8	
CHKK	**Chushkaly** 4.3nm,0.3s	**3.14**	**56**	*e*P	**Pb**	**17 42 46.7**	**+1.2**
CHKK	30nm,0.4s			*e*S	**Sg**	**17 43 27.7**	**-2.4**
CHKK	**Chushkaly** 6.6nm,0.4s	**3.14**	**56**	Pg	**Pb**	**17 42 46.7**	**+1.2**
CHKK	30nm,0.4s			Lg	Lg	17 43 27.7	
SATY	**Saty** 26nm,0.3s	**3.81**	**75**	*e*P	**Pg**	**17 42 59.6**	**-2.7**
SATY	20nm,0.3s			*e*S	**Sg**	**17 43 49.9**	**-1.8**
SATY	**Saty** 26nm,0.3s	**3.81**	**75**	Pg	**Pg**	**17 42 59.6**	**-2.7**
SATY	20nm,0.3s			Lg	Lg	17 43 49.9	
UZB	**Uzynbulak** 3.2nm,0.4s	**4.27**	**75**	*e*P	**Pb**	**17 43 07.3**	**+2.5**
UZB	16nm,0.5s			*e*S	**Sg**	**17 44 03.0**	**-3.4**
UZB	**Uzynbulak** 3.2nm,0.4s	**4.27**	**75**	Pg	**Pb**	**17 43 07.3**	**+2.5**
UZB	16nm,0.8s			Lg	Lg	17 44 03.0	
SHLS	**Shalkode** 7.2nm,0.6s	**4.59**	**75**	*e*P	**Pg**	**17 43 18.8**	**+1.6**
SHLS	13nm,1.0s			*e*S	**Sg**	**17 44 22.6**	**+6.0**
SHLS	**Shalkode** 7.2nm,0.6s	**4.59**	**75**	Pg	**Pg**	**17 43 18.8**	**+1.6**
SHLS	13nm,1.0s			Lg	Lg	17 44 22.6	
KAPS	**Kapalarasan** 1.8nm,0.6s	**5.34**	**52**	Pg	**Pb**	**17 43 26.8**	**+3.8**
KAPS	4.9nm,0.6s			Lg	Lg	17 44 36.3	
MK31	**Makanchi Array** 0.8nm,0.5s,baz=231,slow=14,SNR=24	**7.87**	**51**	Pn	**Pn**	**17 43 44.7**	**+0.4**
MK31	0.7nm,0.5s			⇓Lg	Lg	17 45 57.2	

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*ISK **08** 17:43:59.9, 39°.92N×39°.17E, h9^{km}, ML2.9/14*
DDA 08 17:43:59.6, 39°.88N×39°.17E, h8^{km}±4^{km}**, ML2.8, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KELT	**Kelkit**	**0.27**	**14**	*i* P	Pg	17 44 06.0	+0.8
KELT				*i* S	Sg	17 44 08.7	-0.1
KELT	comp=E,1µm,0.5s			IAML		17 44 09.0	
KELT	comp=N,1µm,0.4s			IAML		17 44 12.0	
EUZM	**Uzumlu**	**0.45**	**113**	*i* P	Pb	17 44 09.6	-0.2
EUZM				*i* S	Sg	17 44 13.9	-0.2
ERZN	**Erzincan**	**0.52**	**125**	PG	Pb	17 44 10.9	-0.1
ERZN				SG	Sb	17 44 18.9	+0.1
REFA	**Refahiye_ERZN**	**0.58**	**213**	*i* P	Pg	17 44 06.5	-4.3
REFA				*i* S	Sg	17 44 10.3	-8.1
KEMA	**Kemaliye**	**0.81**	**220**	*i* P	Pb	17 44 16.1	+0.2
KEMA				*i* S	Sg	17 44 24.3	-1.3
SUSE	**Susehri**	**0.81**	**294**	*i* P	Pb	17 44 16.1	+0.1
SUSE				*i* S	Sg	17 44 25.9	+0.1
SUSE	comp=N,377nm,0.2s			IAML		17 44 28.0	
TNCL	**Tunceli-Merkez**	**0.82**	**159**	*i* P	Pb	17 44 15.8	-0.3
TNCL				*i* S	Sg	17 44 26.3	+0.2
BAYT	**Aydıntepe-Bayb**	**0.90**	**55**	PG	Pg	17 44 17.2	+0.2
BAYT				SG	Sb	17 44 29.8	-0.1
BAYB	**BAYBURT**	**0.92**	**66**	*i* P	Pb	17 44 17.7	-0.2
BAYB				*i* S	Sg	17 44 28.7	-0.5
BAYB	comp=E,238nm,0.4s			IAML		17 44 34.0	
ARPR	**Arapgir-MALATY**	**1.02**	**219**	PG	Pn	17 44 20.3	0.0
ARPR				SG	Sn	17 44 35.4	+0.6
KOPT	**Kop Dagi**	**1.03**	**82**	*i* P	Pn	17 44 20.6	0.0
KOPT				*i* S	Sn	17 44 36.5	+1.2
CUZAR	**Zara_SIVAS**	**1.07**	**271**	*i* P	Pg	17 44 20.2	0.0
CUZAR				*i* S	Sg	17 44 33.0	-1.2
ESPY	**Espiye-Giresun**	**1.08**	**342**	PG	Pg	17 44 20.4	0.0
MACK	**Trabzon**	**1.15**	**23**	*i* P	Pn	17 44 22.1	0.0
MACK				*i* S	Sg	17 44 35.0	-1.8
MACK	comp=N,270nm,0.2s			IAML		17 44 39.0	
MACK	comp=E,438nm,0.2s			IAML		17 44 39.0	
YEDI	**Yedisu-Bingol**	**1.15**	**112**	PN	Pn	17 44 22.6	+0.5
ELZG	**Elazig**	**1.39**	**186**	*i* P	Pg	17 44 26.5	+0.2
ELZG				*i* S	Sg	17 44 45.1	+0.7
ELZG	comp=N,117nm,0.2s			IAML		17 44 48.0	
ELZG	comp=E,207nm,0.8s			IAML		17 44 50.0	
KRIK	**Erzurum-spir**	**1.42**	**71**	*i* P	Pg	17 44 30.1	+3.1
KRIK				*i* S	Sg	17 44 46.1	+0.7
CUKAN	**kangal_SIVAS**	**1.43**	**247**	*i* P	Pb	17 44 26.8	+0.2
CUKAN				*i* S	Sg	17 44 45.7	+0.1
BNGB	**Bingl**	**1.47**	**127**	PN	Pg	17 44 27.9	+0.1
ORDU	**Ordu-Boztepe**	**1.49**	**318**	*i* P	Pg	17 44 28.6	+0.4
ORDU				*i* S	Sn	17 44 45.7	-0.6
ORDU	comp=N,100nm,1.0s			IAML		17 44 49.0	
RSDY	**Resadiye-TOKAT**	**1.50**	**291**	PN	Pb	17 44 27.4	-0.3
SVRC	**Sivrice-ELAZID**	**1.51**	**176**	PN	Pg	17 44 28.3	-0.2
SCER	**sogukcermik**	**1.57**	**270**	*i* P	Pb	17 44 28.9	0.0
SCER				*i* S	Sb	17 44 48.8	-0.2
SCER	comp=E,128nm,0.9s			IAML		17 44 55.0	
SCER	comp=N,132nm,0.4s			IAML		17 44 56.0	
SVSK	**Karacayir**	**1.67**	**272**	PN	Pb	17 44 30.1	-0.4
AKDA	**Akdag**	**1.70**	**82**	*i* P	Pg	17 44 31.9	-0.4
CHOM	**Cayeli-Rize**	**1.72**	**45**	PN	Pn	17 44 30.3	+0.5
DARE	**Darende-Malaty**	**1.85**	**225**	PN	Pb	17 44 33.1	-0.6
TOKT	**Tokat**	**2.06**	**283**	PN	Pn	17 44 35.4	+0.9
CUSAR	**Sarkisla-SIVAS**	**2.30**	**259**	*i* P	Pb	17 44 40.7	-0.8
BCA	**Borcka**	**2.43**	**49**	PN	Pn	17 44 40.6	+1.0
SARI	**SarD1z-Kayseri**	**2.60**	**236**	PN	Pn	17 44 43.6	+1.6
KVT	**Kavak**	**2.66**	**298**	PN	Pn	17 44 44.1	+1.3

ISK 08 17:44:08.2, 39°.09N×**42°.19E, h8**^{km}**, ML3.0**/17**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKAR	**Karacoban**	**0.19**	**330**	*i* P	Pg	17 44 13.6	+1.3
MLAZ	**Malazgirt-MUS**	**0.29**	**79**	PG	Pg	17 44 14.8	+0.8
MLAZ				SG	Sb	17 44 19.4	-1.3
ADCV	**BITLIS_Adilcev**	**0.50**	**124**	*i* P	Pg	17 44 18.6	+0.6
ADCV				*i* S	Sb	17 44 26.2	-0.7
GURO	**Guroymak-BITLI**	**0.55**	**193**	PG	Pg	17 44 19.5	+0.6
GURO				SG	Sb	17 44 27.6	-0.6
VRTB	**Varto-Mus**	**0.57**	**277**	PG	Pb	17 44 20.1	-0.5
VRTB				SG	Sb	17 44 28.3	-0.7
VRTB	**Varto-Mus**	**0.57**	**277**	*i* P	Pb	17 44 20.1	-0.5
VRTB				*i* S	Sg	17 44 27.4	+0.5
TUTA	**Tutak**	**0.58**	**57**	*i* P	Pg	17 44 19.7	+0.3
TUTA				*i* S	Sg	17 44 27.4	+0.3
MUSM	**Mu-Merkez**	**0.64**	**236**	*i* P	Pg	17 44 20.7	+0.1
MUSM				*i* S	Sg	17 44 27.6	-1.4
BLIS	**Bitlis-Merkez**	**0.67**	**185**	*i* P	Pg	17 44 21.5	+0.3
BLIS				*i* S	Sb	17 44 31.1	-0.7
AGRB	**Hanur-Agry**	**0.79**	**52**	PG	Pg	17 44 23.3	-0.2
EATA	**Eleskirt**	**0.81**	**17**	*i* P	Pg	17 44 23.6	-0.2
EATA				*i* S	Sg	17 44 34.5	+0.1
BNGL	**BINGOL**	**0.82**	**261**	*i* P	Pb	17 44 24.6	-0.2
BNGL				*i* S	Sb	17 44 35.6	-0.5
KARO	**Karliova-Bingo**	**0.91**	**284**	PG	Pb	17 44 26.1	-0.3
KOPR	**Koprukoy-ERZUR**	**0.94**	**344**	PG	Pb	17 44 26.7	-0.1
AKDM	**Akdamar-Van**	**0.98**	**140**	PG	Pg	17 44 26.8	-0.2
HOMI	**Horasan**	**0.98**	**347**	*i* P	Pg	17 44 27.2	+0.1
HOMI				*i* S	Sg	17 44 40.0	+0.1
GEVA	**Gevas**	**1.03**	**138**	*i* P	Pg	17 44 28.1	0.0
VANB	**Van**	**1.06**	**117**	PN	Pn	17 44 29.8	+0.4
TVAN	**Van**	**1.10**	**120**	*i* P	Pn	17 44 31.1	+0.9
SRTM	**Siirt_Merkez**	**1.11**	**191**	*i* P	Pn	17 44 30.8	+0.6
SRTM				*i* S	Sb	17 44 44.6	+0.2
BNGB	**Bingl**	**1.18**	**266**	PN	Pg	17 44 29.9	-0.9
SVAN	**Silvan-Diyarba**	**1.21**	**220**	PN	Pg	17 44 31.9	+0.4
CLDR	**Caldiran**	**1.35**	**87**	PN	Pb	17 44 33.8	0.0
SENK	**Senkaya-Erzuru**	**1.48**	**5**	PN	Pb	17 44 35.9	-0.1
SIRT	**Sirnak**	**1.60**	**173**	PN	Pb	17 44 37.5	-0.5
TASB	**TASBURUN-IGDIR**	**1.82**	**60**	PN	Pn	17 44 40.8	+0.9
DDEM	**Demirkent**	**1.83**	**350**	*i* P	Pb	17 44 42.1	+0.1
HAKT	**HAKKARI**	**1.94**	**141**	*i* P	Pg	17 44 47.1	+1.7
DBAD	**Bademkaya**	**1.96**	**349**	*i* P	Pn	17 44 41.0	-0.9
DYBB	**Diyarbakir**	**1.97**	**235**	PN	Pn	17 44 42.8	+0.9
DAGI	**Agillar**	**2.00**	**354**	*i* P	Pb	17 44 44.5	-0.4
MAZI	**Mazidag**	**2.13**	**221**	PN	Pn	17 44 44.9	+0.8
CUKT	**Cukurca**	**2.15**	**148**	PN	Pn	17 44 45.1	+0.6
GNI	**Garni**	**2.24**	**61**	PN	Pn	17 44 46.1	+0.4

ISC 08 17:46:54.0±0.9**, 49°.82N**±0°.04×**18°.53E**±0°.02**, h0**^{km}**, n18,**
σ0^{s}.85/31**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.25**	**274**	*e*PG	**Pg**	**17 46 59.6**	**+0.9**
OKC	comp=Z,27nm,0.4s			*e*SG	**Sg**	**17 47 03.7**	**+1.8**
MORC	**Moravsky Berou**	**0.64**	**266**	*e*PG	**Pg**	**17 47 06.8**	**+0.6**
MORC				*e*SG	**Sg**	**17 47 14.5**	**0.0**
LANS	**Liptovska Anna**	**0.91**	**137**	*e*PG	**Pg**	**17 47 11.1**	**-0.2**
LANS				*e*SG	**Sg**	**17 47 23.5**	**+0.4**
LANS				*e*LG	Lg	17 47 26.1	
OJC	**Ojcow**	**0.91**	**64**	*e*Pg	**Pg**	**17 47 10.8**	**-0.6**
OJC				*e*Sg	**Sg**	**17 47 22.8**	**-0.4**
JAVC	**Velka Javorina**	**1.11**	**211**	*e*PG	**Pg**	**17 47 15.9**	**+0.6**
KRLC	**Kraliky**	**1.16**	**283**	*e*PG	**Pg**	**17 47 15.6**	**-0.5**
KRLC	comp=Z,8.8nm,0.3s			*e*SG	**Sb**	**17 47 31.7**	**-0.8**
NIE	**Niedzica**	**1.22**	**109**	*e*Pg	**Pg**	**17 47 17.5**	**+0.2**
NIE				*e*Sg	**Sg**	**17 47 34.5**	**+1.4**
VYHS	**Vyhne**	**1.34**	**171**	*e*PN	**Pg**	**17 47 18.8**	**-0.9**
VYHS				*e*SN	**Sg**	**17 47 37.2**	**+0.1**
VRAC	**Vranov**	**1.36**	**249**	*e*PG	**Pg**	**17 47 19.6**	**-0.4**
VRAC				*e*SG	**Sg**	**17 47 37.1**	**-0.6**
DPC	**Dobruska-Polom**	**1.52**	**291**	*e*PG	**Pn**	**17 47 21.8**	**-0.6**
DPC				*e*SG	**Sb**	**17 47 42.5**	**-0.3**
KRUC	**Moravsky**	**1.59**	**242**	*e*PG	**Pn**	**17 47 23.1**	**-0.2**
KRUC				*e*SG	**Sn**	**17 47 43.5**	**-1.0**
OSTC	**Ostas**	**1.66**	**297**	*e*PG	**Pn**	**17 47 24.5**	**+0.2**
OSTC				*e*SG	**Sg**	**17 47 47.6**	**+0.3**
UPC	**Upice**	**1.76**	**294**	*e*SG	**Sg**	**17 47 50.2**	**-0.2**
CHVC	**Chvalec**	**1.77**	**297**	*e*PG	**Pn**	**17 47 26.4**	**+0.6**
CHVC				*e*SG	**Sg**	**17 47 50.9**	**+0.2**
PRU	**Pruhonice**	**2.58**	**275**	*e*SG	**Sb**	**17 48 14.5**	**+1.1**
BRG	**Berggiesshubel** 1.6nm,0.4s	**3.12**	**291**	SG	**Sg**	**17 48 33.8**	**-0.4**
KHC	**Kasperske Hory**	**3.30**	**260**	*e*PG	**Pb**	**17 47 54.3**	**+0.9**
KHC				*e*SG	**Sg**	**17 48 37.6**	**-2.4**
CLL	**Collm**	**3.83**	**295**	*e*Sg	**Sg**	**17 48 56.0**	**-0.8**

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*NCEDC **08** 17:46:57±1.0, 39°.409N±0°.008×123°.36W±0°.02, h4^{km}±7^{km}, Md2.3/10, Error ellipse: s-maj=2.0km s-min=0.5km az=57.0*
NEIC 08 17:46:57.7±0.9**, 39°.408N**±0°.005×**123°.37W**±0°.02**,**
h10^{km}±6^{km}**, Error ellipse: s-maj=2.1km s-min=0.3km az=68.0, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTC	**Three Chop Rid**	**0.15**	**267**		Pg	17 47 00.2	-0.8
KFPM	**Farley Peak**	**0.23**	**349**		Pg	17 47 01.9	-0.7
GNAM	**Navarro Ridge**	**0.29**	**224**		Pg	17 47 03.5	-0.1
KCPM	**Cahto Peak**	**0.32**	**329**		Pg	17 47 03.9	-0.3
KCPM					Sg	17 47 09.4	+0.8
GHMM	**Hull Mountain**	**0.35**	**75**		Pg	17 47 04.5	-0.2
GHOM	**Hamilton Openi**	**0.39**	**200**		Pg	17 47 05.4	0.0
KIPM	**Iron Peak**	**0.41**	**347**		Pg	17 47 05.4	-0.4
GHLM	**Highland Sprin**	**0.46**	**144**		Pg	17 47 06.2	-0.4
HOPS	**Hopland Field**	**0.47**	**151**		Pg	17 47 06.7	-0.3
HOPS					Sb	17 47 14.1	-1.0
GSNM	**Snow Mountain**	**0.49**	**164**		Pg	17 47 07.2	+0.1
KBNM	**Bluenose Ridge**	**0.50**	**15**		Pg	17 47 07.8	+0.2

KBSM	Bell Springs	0.54	341		Pg	17 47 08.2	0.0
GASB	Alder Springs	0.56	64		Pg	17 47 08.7	+0.1
GASB					Sb	17 47 17.4	-0.3
GGUM	Gualala	0.56	191		Pg	17 47 08.8	+0.2
GTSM	Trough Springs	0.60	99		Pg	17 47 09.3	-0.1
GVV	Valley View	0.65	55		Pg	17 47 10.4	+0.1
GDCM	Dry Creek	0.65	171		Pg	17 47 10.4	+0.2
GDCM					Sb	17 47 20.4	+0.2
GPMM	Pine Mountain	0.65	150		Pg	17 47 10.3	0.0
GACM	Adobe Creek	0.66	144		Pg	17 47 10.5	0.0
GCVM	Cloverdale	0.69	157		Pg	17 47 11.2	+0.1
GRTM	Round Top Moun	0.72	131		Pg	17 47 11.3	-0.2
GBMM	Baldy Mountain	0.73	111		Pg	17 47 11.7	0.0
GSGM	Seigler Mounta	0.74	136		Pb	17 47 13.4	+0.7
GDXM	Geysers	0.75	143		Pg	17 47 11.6	-0.6
GSSM	Skaggs Springs	0.76	159		Pb	17 47 12.7	-0.2
GWKM	Walker Ridge	0.77	117		Pg	17 47 12.5	0.0
KMRM	Mail Ridge	0.85	342		Pb	17 47 14.9	+0.2
O02D	Mt. Diablo Mer	0.89	30		Pg	17 47 14.9	+0.1
NMCNC	Mill Creek, So	0.89	156		Pb	17 47 15.3	+0.1
NMTM	Middletown	0.94	130		Pg	17 47 15.5	-0.2
KPPM	Pickett Peak	0.94	0		Pn	17 47 16.7	-0.4
KSMM	Slide Mountain	1.00	321		Pg	17 47 16.6	-0.3
MCCM	Marconi Confer	1.32	163	Pn	Pn	17 47 21.5	-0.5
WDC	Whiskeytown Da	1.33	28		Pn	17 47 22.0	-0.3
ORV	Oroville	1.45	84		Pn	17 47 21.7	-2.2
KHMM	Horse Mountain	1.49	349	Pn	Pn	17 47 25.1	+0.4
JCC	Jacoby Creek,	1.50	340	Pn	Pn	17 47 24.9	+0.3
BEKR	Beckworth	2.37	78		Pn	17 47 36.6	-0.1
JBNB	Ben Lomond Mou	2.47	157		Pn	17 47 38.4	+0.3
LUL	Lundy Lake	3.54	111		Pb	17 47 59.2	-1.3

IDC 08 17:49:13.8±7.2**, 31°.00N×142°.79E, h0$^{\text{km}}$, mb3.4**/3**, mb1 3.5**/4**, mb1mx3.2**/38**, mbtmp3.3**/4**, ML2.3**/1**, Error ellipse: s-maj=267.4km s-min=25.8km az=69.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	6.72	327	Pn	Pn	17 50 51.5	-2.2
	0.1nm,0.3s,baz=144,slow=11,SNR=6.5						
MKAR	Makanchi Array	48.48	307	P	P	17 57 58.9	+0.6
	0.4nm,0.6s,baz=90,slow=9.4,SNR=8.3						
WRA	Warramunga Arr	51.30	190	P	P	17 58 19.4	-0.4
	0.2nm,0.3s,baz=7.6,slow=7.7,SNR=7.3						
ASAR	Alice Springs	55.02	190	P	P	17 58 47.1	-0.1
	0.3nm,0.9s,baz=7.3,slow=8.0,SNR=6.2						

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*IDC **08** 17:52:03.1±2.3, 40°.59S×175°.83E, h0$^{\text{km}}$, mb4.2/2, mb1 4.2/4, mb1mx3.9/33, mbtmp3.9/4, ML3.1/2, MS3.0/1, Ms1 3.0/1, ms1mx2.7/19, Error ellipse: s-maj=60.3km s-min=23.4km az=135.0*

*NEIC **08** 17:52:07.1±1.6, 40°.73S±0°.05×175°.97E±0°.09, h37$^{\text{km}}$±10$^{\text{km}}$, Error ellipse: s-maj=10.7km s-min=6.5km az=113.0*

*WEL **08** 17:52:07.9, 40°.6S±0°.6×17°6E±°, h29$^{\text{km}}$±1$^{\text{km}}$, ML4.4/12, MLv4.0/115, Error ellipse: s-maj=0.0km s-min=0.0km az=91.5*

ISC 08 17:52:07.1±0.9**, 40°.71S**±0°.02×**175°.91E**±0°.03**, h34**$^{\text{km}}$±2$^{\text{km}}$**, n166, σ1^{s}.04**/171**, mb4.2**/6**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIWZ	Tintock	0.07	195	P	Pb	17 52 13.8	+0.9
TIWZ				S	Sb	17 52 18.2	+1.3
PRWZ	Pori Road	0.17	17	P	Pb	17 52 13.7	+0.2
PRWZ				S	Sb	17 52 18.1	+0.2
MRZ	Mangatainoka R	0.26	282	P	Pb	17 52 14.6	+0.2
MRZ				S	Sn	17 52 19.2	+1.5
BFZ	Birch Farm	0.26	83		Pb	17 52 15.6	+1.1
BFZ	Birch Farm	0.26	83	P	Pb	17 52 15.6	+1.1
CPWZ	Castlepoint	0.30	131	P	Pb	17 52 17.7	+2.7
POWZ	Post Office Ro	0.34	342	P	Pb	17 52 15.2	-0.3
HOWZ	Holdsworth Sta	0.35	238	P	Pn	17 52 16.8	+0.9
TMWZ	Te Maipa	0.39	182	P	Pn	17 52 18.4	+1.9
DVHZ	Dannevirke	0.46	26	P	Pb	17 52 17.1	-0.1
ANWZ	Angora Road	0.50	60	P	Pn	17 52 18.8	+1.0
MTW	Mount Morrison	0.54	215	P	Pn	17 52 20.0	+1.7
OGWZ	Otaki Gorge	0.57	259	P	Pb	17 52 19.7	+0.8
TSZ	Takapari Road	0.66	4	P	Pn	17 52 19.9	-0.1
OHWZ	Ohakea	0.68	318	P	Pn	17 52 21.1	+0.9
TRWZ	Traveller	0.70	194	P	Pb	17 52 22.5	+1.4
PRHZ	Porangahau	0.71	51	P	Pb	17 52 21.7	+0.5
CAW	Cannon Point	0.75	238	P	Pb	17 52 22.7	+0.8
PAWZ	Paruwai Farm	0.76	208	P	Pb	17 52 23.1	+1.0
WPHZ	Waipukurau	0.77	32	P	Pb	17 52 22.6	+0.5
KIW	Kapiti Island	0.77	259	P	Pb	17 52 23.0	+0.8
PNHZ	Pukenui	0.83	16	P	Pn	17 52 23.0	+0.6
MSWZ	Moikau Station	0.86	215		Pb	17 52 23.8	+0.1
MSWZ	Moikau Station	0.86	215	P	Pb	17 52 24.1	+0.4
PLWZ	Palliser	0.99	210		Pb	17 52 25.4	-0.4
PLWZ	Palliser	0.99	210	P	Pb	17 52 25.8	0.0
PXZ	Pawanui	1.00	47	P	Pb	17 52 25.5	-0.4
WEL	Wellington	1.03	236	P	Pb	17 52 26.5	0.0
BHW	Baring Head	1.05	228		Pn	17 52 26.2	+0.8
BHW	Baring Head	1.05	228	P	Pb	17 52 26.6	-0.2
SNZO	South Karori	1.09	236		Pn	17 52 26.9	+1.0
KRHZ	Kereru	1.13	18	P	Pn	17 52 27.2	+0.7
KAHZ	Kahuranaki	1.18	39	P	Pn	17 52 27.9	+0.7
WAZ	Wanganui	1.19	323	P	Pb	17 52 29.5	+0.4
BHHZ	Black Hill Sta	1.23	6	P	Pn	17 52 28.8	+0.9
MOVZ	Moawhango	1.31	355	P	Pn	17 52 30.0	+0.9
TCW	Tory Channel	1.33	248	P	Pn	17 52 30.4	+1.1
KWHZ	Kaweka Forest	1.35	17	P	Pn	17 52 30.2	+0.6
MTVZ	Mangateitei	1.37	346	P	Pn	17 52 31.3	+1.4
CKHZ	Cape Kidnapper	1.38	41	P	Pn	17 52 31.4	+1.4
MCHZ	McNeill Hill	1.41	26	P	Pn	17 52 31.0	+0.7
TRVZ	Turoa	1.44	349	P	Pn	17 52 32.4	+1.4
WHVZ	Whangaehu Hut	1.45	350	P	Pn	17 52 32.8	+1.7
TUVZ	Tukino	1.46	352	P	Pn	17 52 32.7	+1.5
FWVZ	Far West T-bar	1.48	349	P	Pn	17 52 33.0	+1.4
PKVZ	Pokaka	1.49	343	P	Pn	17 52 33.1	+1.6
DUWZ	D'Urville Isla	1.51	266	P	Pn	17 52 32.9	+1.1
NGZ	Ngauruhoe	1.55	351	P	Pn	17 52 34.1	+1.6
BKZ	Black Stump Fm	1.61	16		Pn	17 52 33.4	+0.2
BKZ	Black Stump Fm	1.61	16	P	Pn	17 52 33.5	+0.3
WTVZ	West Tongariro	1.61	351	P	Pn	17 52 34.9	+1.6
KRVZ	Karewarewa	1.63	353	P	Pn	17 52 35.1	+1.6
CMWZ	Cape Campbell	1.64	230		Pn	17 52 34.6	+1.0
CMWZ	Cape Campbell	1.64	230	P	Pn	17 52 35.1	+1.5
TUWZ	Tuamarina	1.65	244		Pn	17 52 33.9	+0.2
TUWZ	Tuamarina	1.65	244	P	Pn	17 52 34.2	+0.6
ARHZ	Aropaoanui	1.67	30	P	Pn	17 52 34.4	+0.4
TWVZ	Taurewa	1.68	347	P	Pn	17 52 35.5	+1.3
LREZ	Lake Rotokare	1.70	317	P	Pb	17 52 37.8	0.0
RITZ	Rihia Road	1.73	359	P	Pn	17 52 36.3	+1.5
KATZ	Kakaramea	1.74	355	P	Pn	17 52 36.5	+1.4
NMHZ	Naumai	1.76	23	P	Pn	17 52 35.8	+0.6
VRZ	Vera Road	1.82	331	P	Pn	17 52 37.8	+1.8
HATZ	Hinemaiaia	1.83	5	P	Pn	17 52 36.8	+0.7
BSWZ	Blackbirch Sta	1.83	236		Pn	17 52 36.6	+0.5
BSWZ	Blackbirch Sta	1.83	236	P	Pn	17 52 36.9	+0.7
RATZ	Rangitukua	1.85	357	P	Pn	17 52 37.6	+1.2
PREZ	Palmer Road	1.92	315	P	Pn	17 52 40.1	+2.7
WHHZ	Waihua	1.93	32	P	Pn	17 52 38.7	+1.2
NNZ	Nelson	1.98	254		Pn	17 52 39.2	+1.0
NNZ	Nelson	1.98	254	P	Pn	17 52 39.4	+1.2
MTHZ	Maungataniwha	1.99	21	P	Pn	17 52 38.7	+0.3
WATZ	Wairara	2.01	356	P	Pn	17 52 39.5	+0.9
DREZ	Durham Road	2.01	319	P	Pb	17 52 42.2	-0.9
RAHZ	Arahi	2.01	27	P	Pn	17 52 38.9	+0.2
NMEZ	Namu Road	2.03	309	P	Pb	17 52 42.8	-0.6
KHEZ	Kahui Hut	2.03	314	P	Pn	17 52 41.6	+2.6
MHEZ	Mangahewa	2.04	323	P	Pb	17 52 42.6	-1.0
WHTZ	Whakaora	2.04	1	P	Pn	17 52 40.3	+1.1
PKE	Pukeiti	2.12	315	P	Pb	17 52 43.7	-1.2
NBEZ	Newall Road No	2.13	312	P	Pb	17 52 44.3	-0.7
KNZ	Kokohu	2.17	39	P	Pn	17 52 40.7	-0.1
ALRZ	Allen Road	2.17	9	P	Pn	17 52 41.5	+0.6
MHGZ	Mahia Peninsul	2.19	45	P	Pn	17 52 41.2	+0.1
WPRZ	Whakapapatarin	2.20	5	P	Pn	17 52 41.7	+0.4
KUTZ	Kaahu Road	2.22	358	P	Pn	17 52 42.5	+0.9
SNGZ	Shannon Statio	2.22	30	P	Pn	17 52 42.0	+0.4
PRRZ	Plateau Road	2.24	10	P	Pb	17 52 49.2	+2.2
RTZ	Ruatahuna	2.25	22	P	Pn	17 52 42.7	+0.6
MUGZ	Murupara	2.33	17	P	Pn	17 52 43.2	+0.1
HRRZ	Handcock Road	2.34	7	P	Pb	17 52 47.4	-1.2
HIZ	Hauiti	2.34	339		Pn	17 52 44.4	+1.2
HIZ	Hauiti	2.34	339	P	Pn	17 52 44.5	+1.3
PRGZ	Paritu Road	2.35	41	P	Pn	17 52 43.2	-0.1
TLZ	Tolley Road	2.40	353	P	Pn	17 52 45.3	+1.3
HSRZ	Hossack Road	2.41	6	P	Pn	17 52 45.0	+0.8
KHZ	Kahutara	2.46	225	Pn	Pn	17 52 44.9	+0.1
KHZ	Kahutara	2.46	225	P	Pn	17 52 44.7	-0.1
RIGZ	Rimuhau	2.46	36	P	Pn	17 52 44.8	-0.1
THZ	Tophouse	2.50	244		Pn	17 52 45.5	+0.1
THZ	Tophouse	2.50	244	P	Pn	17 52 45.6	+0.2
RAGZ	Rawiri	2.50	28	P	Pn	17 52 44.9	-0.6
TARZ	Mount Tarawera	2.52	11	P	Pn	17 52 45.9	+0.2
QRZ	Quartz Range	2.57	266		Pn	17 52 46.8	+0.5
QRZ	Quartz Range	2.57	266	P	Pn	17 52 47.2	+0.9
URZ	Urewera	2.62	21	Pn	Pn	17 52 46.0	-0.9
	3.9nm,0.3s,baz=213,slow=5.4,SNR=18						
URZ				Sn	Sn	17 53 16.5	-1.2
	13nm,0.3s,baz=151,slow=9.4,SNR=6.7						
URZ				LR	LR	17 54 05.4	
	comp=Z,271nm,19.9s,baz=220,slow=48						
URZ	Urewera	2.62	21	P	Pn	17 52 46.1	-0.9
MWZ	Matawai	2.69	28	P	Pn	17 52 46.9	-1.0
TKGZ	Te Karaka	2.72	34	P	Pn	17 52 48.1	-0.3
KMRZ	Kaimai	2.86	1	P	Pn	17 52 53.4	+3.0
TOZ	Tahuroa Road	3.00	354	P	Pn	17 52 53.1	+1.0
TWGZ	Tauwhareparae	3.00	33	P	Pn	17 52 52.7	+0.5
RUGZ	Raukumara Rang	3.07	27	P	Pn	17 52 52.5	-0.8
GVZ	Greta Valley S	3.11	223	P	Pn	17 52 53.6	-0.2
PUZ	Puketiti	3.21	35	P	Pn	17 52 54.4	-0.7
DSZ	Denniston Nort	3.26	250	P	Pn	17 52 57.2	+1.3
PKGZ	Pakihiroa	3.29	32	P	Pn	17 52 55.9	-0.3
HAZ	Te Kaha	3.29	27	P	Pn	17 52 56.0	-0.2
LTZ	Lake Taylor	3.42	232	Pn	Pn	17 52 57.5	-0.5
LTZ	Lake Taylor	3.42	232	P	Pn	17 52 57.7	-0.3
AMCZ	Amberley	3.46	224	P	Pn	17 52 58.7	+0.2
MKAZ	Moumakai	3.65	351	P	Pn	17 53 02.1	+0.9
MXZ	Matakaoa Point	3.66	31	Pn	Pn	17 53 01.1	-0.2
MXZ	Matakaoa Point	3.66	31	P	Pn	17 53 01.7	+0.4
OKCZ	Okains Bay	3.68	214	P	Pn	17 53 00.9	-0.7
AWAZ	Awhitu Peninsu	3.77	344	P	Pn	17 53 04.7	+1.8
MQZ	McQueen's Vall	3.84	218	Pn	Pn	17 53 02.6	-1.2
MQZ	McQueen's Vall	3.84	218	P	Pn	17 53 02.5	-1.3
AKCZ	Akaroa Harbour	3.86	214	P	Pn	17 53 03.3	-0.7
OXZ	Oxford	3.89	227	Pn	Pn	17 53 03.3	-1.1
OXZ	Oxford	3.89	227	P	Pn	17 53 04.2	-0.2
INZ	Inchbonnie	3.90	238	P	Pn	17 53 04.2	-0.4
WTAZ	Waiatarua	3.92	344	P	Pn	17 53 07.0	+2.1
WIAZ	Waiheke Island	3.96	351	P	Pn	17 53 06.6	+1.1
MBAZ	Motutapu North	4.02	348	P	Pn	17 53 07.5	+1.3
RVAZ	Riverhead Bore	4.07	345	P	Pn	17 53 08.7	+1.7
WVZ	Waitaha Valley	4.52	237	P	Pn	17 53 13.3	+0.1
RPZ	Rata Peaks	4.69	229	Pn	Pn	17 53 15.4	-0.1
	0.9nm,0.3s,baz=68,slow=16,SNR=16						
RPZ				Sn	Sn	17 54 05.2	-3.5
	4.7nm,0.3s,baz=133,slow=23,SNR=18						
RPZ	Rata Peaks	4.69	229		Pn	17 53 15.2	-0.3
RPZ	Rata Peaks	4.69	229	P	Pn	17 53 15.3	-0.1
WCZ	Waipu Caves	4.92	345	P	Pn	17 53 20.2	+1.5
FOZ	Fox Glacier	5.33	236	Pn	Pn	17 53 22.6	-1.7
FOZ	Fox Glacier	5.33	236	P	Pn	17 53 23.5	-0.8
LBZ	Lake Benmore	5.60	227	Pn	Pn	17 53 27.8	-0.2
LBZ	Lake Benmore	5.60	227	P	Pn	17 53 27.7	-0.2
OUZ	Omahuta	5.78	341	Pn	Pn	17 53 32.0	+1.5
ODZ	Otahua Downs	5.80	220	Pn	Pn	17 53 30.1	-0.7
ODZ	Otahua Downs	5.80	220	P	Pn	17 53 29.8	-0.9
CTZ	Chatham Island	6.32	121	P	Pn	17 53 39.1	+1.3
WKZ	Wanaka	6.53	229	Pn	Pn	17 53 40.7	0.0
MLZ	Mavora Lakes	7.36	228	Pn	Pn	17 53 52.4	+0.2
WHZ	Wether Hill Ro	7.78	226	Pn	Pn	17 53 56.9	-1.0
DCZ	Deep Cove	7.97	231	Pn	Pn	17 53 59.6	-0.9
AS31	Alice Springs	38.99	283	P	P	17 59 30.6	+0.3
ASAR	Alice Springs	38.99	283	P	P	17 59 30.3	0.0
	1.4nm,0.4s,baz=120,slow=6.6,SNR=98						
ASAR	Alice Springs	38.99	283	P	P	17 59 29.9	-0.4
WR0	Warramunga Arr	40.79	288	P	P	17 59 45.4	+0.1
WR0				IAmb	IAmb	17 59 58.1	
	comp=Z,3.6nm,1.1s						
WB2	Warramunga Arr	40.94	288	P	P	17 59 46.7	+0.2
WB2				IAmb	IAmb	17 59 47.3	
	comp=Z,3.6nm,0.4s						
WRA	Warramunga Arr	40.95	288	P	P	17 59 46.8	+0.2
	comp=Z,1.9nm,0.4s,baz=126,slow=8.2,SNR=44						
WRA	Warramunga Arr	40.95	288	P	P	17 59 46.5	-0.1
WB0	Warramunga Arr	41.02	288	P	P	17 59 47.2	+0.1
WB0				IAmb	IAmb	17 59 50.9	
	comp=Z,5.4nm,1.2s						
FITZ	Fitzroy Crossi	48.49	282	P	P	18 00 47.4	+0.7
FITZ				IAmb	IAmb	18 00 53.7	
	comp=Z,7.6nm,1.4s						
QSPA	South Pole Qui	49.41	180	P	P	18 00 52.9	-0.5
PMSA	Palmer Station	64.91	156	P	P	18 02 42.7	+0.1
ARCES	ARCESS Array B	147.21	341	PKPbc	PKPab	18 11 46.9	-0.5
	comp=Z,3.4nm,0.9s,baz=67,slow=3.0,SNR=4.3						
FINES	FINESS Array B	152.33	329	PKPbc	PKPbc	18 11 58.4	0.0
	comp=Z,4.0nm,1.1s,baz=46,slow=9.9,SNR=4.5						

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*BJI **08** 18:29:05.6±0.0, 61°.15S×19°.78W, h2$^{\text{km}}$, mB5.6/14, Ms5.4/6, Ms7 5.1/8*

*IDC **08** 18:29:06.8±0.5, 60°.68S×19°.40W, h0$^{\text{km}}$, mb4.8/12, mb1 4.8/12, mb1mx4.6/23, mbtmp4.7/12, MS4.9/19, Ms1 4.9/19, ms1mx4.8/20, Error ellipse: s-maj=20.2km s-min=15.6km az=58.0*

*NEIC **08** 18:29:08.0±2.0, 60°.65S±0°.09×19°.1W±0°.2, h9$^{\text{km}}$±3$^{\text{km}}$, mb5.4/52, Error ellipse: s-maj=15.2km s-min=11.6km az=221.0*

*MOS **08** 18:29:09.1±1.3, 60°.77S×19°.41W, h22$^{\text{km}}$, mb5.8/4, MS5.0/4, Error ellipse: s-maj=22.6km s-min=11.4km az=107.6*

*GCMT **08** 18:29:12.0±0.1, 61°.05S±0°.01×19°.40W±0°.01, h13$^{\text{km}}$, MW5.4/144, Moment Tensor Solution. s117,c179; s144,c250; Duration: 1^{s}.3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.26±.02; $M_{\theta\theta}$-0.55±.02; $M_{\phi\phi}$0.81±.02; $M_{r\theta}$-0.36±.05; $M_{\theta\phi}$1.50±.02; $M_{\phi r}$0.16±.04; Best double couple: $M_0$1.70400×10^{17} NP1:ϕ_s169.00000°, δ77.00000°, λ-170.00000°. NP2:ϕ_s77.00000°, δ80.00000°, λ-13.00000°. Principal axes: T 1.7800, Plg2.0000°, Azm123.0000°; N -0.1520, Plg74.0000°, Azm219.0000°; P -1.6280, Plg16.0000°, Azm33.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 18:29:08.3±0.2**, 60°.80S**±0°.06×**19°.28W**±0°.06**, h10**$^{\text{km}}$**, n269, σ1^{s}.31**/268**, mb5.3**/41**, MS5.0**/29**, 2C-3D, East of South Sandwich Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	10.86	160	P	Pn	18 31 42.5	-0.9
VNA3	Neumayer Olymp	11.17	164	P	Pn	18 31 46.3	-1.6
VNA3				S	Sn	18 33 38.1	-14
VNA2	Neumayer--Watz	11.24	160	P	Pn	18 31 47.4	-1.3
	baz=323,slow=16						
VNA2				S	Sn	18 33 39.6	-15
	baz=319,slow=17						
HOPE	Hope Point	11.29	298	P	Pn	18 31 48.6	-0.9
HOPE	Hope Point	11.29	298		Pn	18 31 48.6	-0.9
SNAA	Sanae	12.70	156	P	Pn	18 32 06.8	-1.9
SNAA	Sanae	12.70	156	Pn	Pn	18 32 07.0	-1.8
	39nm,0.3s,baz=319,slow=15,SNR=224						
SNAA				Sn	Sn	18 34 16.0	-14
	10nm,0.3s,baz=357,slow=19,SNR=5.3						
SNAA				LR	LR	18 36 11.1	
	comp=Z,5μm,21.2s,baz=322,slow=33						
SNAA	Sanae	12.70	156	P	Pn	18 32 06.5	-2.2
SNAA	Sanae	12.70	156		Pn	18 32 06.5	-2.2
SNAA					Sn	18 34 14.2	-16
NVL	N'lazarevskaya	15.98	142	⇑*i*P	Pn	18 32 52.4	-0.3
NVL				*e*S	Sn	18 35 48.4	-1.2
NVL				pmax	pmax		
	comp=Z,77nm,0.8s						
NVL				MLR	MLR		
	comp=Z,3μm,13.0s						
PMSA	Palmer Station	20.51	239	LR	LR	18 40 30.4	
	comp=Z,2μm,19.4s,baz=106,slow=33						
PMSA	Palmer Station	20.51	239	P	Pn	18 33 54.2	+6.0
EFI	East Falkland	23.08	276	*e*P	P	18 34 12.5	-1.2
EFI				pmax	pmax		
	comp=Z,312nm,1.5s						
EFI	East Falkland	23.08	276	P	P	18 34 12.5	-1.2
EFI				IAmb	IAmb	18 34 16.6	
	comp=Z,144nm,0.8s						
SYO	Syowa Base	25.27	134	⇓*i*P	P	18 34 32.6	-1.5
SYO	Syowa Base	25.27	134	⇓*i*P	P	18 34 34.5	+0.4
USHA	Ushuaia	26.31	261	LR	LR	18 43 20.8	
	comp=Z,2μm,18.5s,baz=120,slow=32						
QSPA	South Pole Qui	29.44	180	P	P	18 35 12.9	+1.1
	comp=Z,22nm,0.8s,baz=210,slow=3.7,SNR=92						
QSPA				LR	LR	18 45 45.6	
	comp=Z,2μm,19.9s,baz=197,slow=34						
QSPA	South Pole Qui	29.44	180	P	P	18 35 12.7	+0.9
QSPA				IAmb	IAmb	18 35 24.4	
	comp=Z,81nm,1.2s						
MAW	Mawson	33.84	137	P	P	18 35 51.5	+1.4
	comp=Z,42nm,0.9s,baz=246,slow=11,SNR=8.6						
MAW				LR	LR	18 47 55.5	
	comp=Z,3μm,20.9s,baz=252,slow=33						
MAW	Mawson	33.84	137	P	P	18 35 51.6	+1.4
MAW				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MAW	Mawson	33.84	137	P	P	18 35 51.6	+1.4
PLTB	Pedras Altas	36.72	307	*e*P	P	18 36 16.0	+0.6
PLCA	Paso Flores	36.90	279	P	P	18 36 16.2	-0.7
	comp=Z,5.2nm,0.9s,baz=163,slow=8.8,SNR=7.0						
PLCA				LR	LR	18 50 10.6	
	comp=Z,1μm,19.9s,baz=158,slow=34						
PLCA	Paso Flores	36.90	279	*e*P	P	18 36 15.4	-1.5
PLCA	Paso Flores	36.90	279	P	P	18 36 15.4	-1.5
PLCA	Paso Flores	36.90	279	*e*P	P	18 36 16.4	-0.5
CNLB	Canela	37.87	312	*e*P	P	18 36 26.1	+0.9
SUR	Sutherland	38.56	61	P	P	18 36 30.0	-1.1
SUR				IAmb	IAmb	18 37 20.4	
	comp=Z,161nm,1.9s						
ITAB	Concordia	40.22	312	*e*P	P	18 36 46.2	+1.5
SBA	Scott Base	41.55	182	P	P	18 36 54.0	-1.2
SBA				pmax	pmax		
	comp=Z,171nm,1.6s						
SBA	Scott Base	41.55	182	P	P	18 36 54.0	-1.2
SBA				IAmb	IAmb	18 37 04.4	
	comp=Z,171nm,1.6s						
PARB	Paraibuna	41.65	322	*e*P	P	18 36 58.5	+1.9
VNDA	Vanda	41.93	180	P	P	18 37 00.5	+2.1
	comp=Z,3.4nm,0.7s,baz=168,slow=5.1,SNR=12						
VNDA				LR	LR	18 53 07.5	
	comp=Z,2μm,21.2s,baz=176,slow=34						
VNDA	Vanda	41.93	180	P	P	18 37 00.5	+2.1
SPB	Sao Paulo	41.97	320	P	P	18 37 00.5	+1.3
SPB				IAmb	IAmb	18 37 08.5	
	comp=Z,65nm,0.9s						
SPB	Sao Paulo	41.97	320	*e*P	P	18 37 00.5	+1.3
GO05	Huala	42.10	283	P	P	18 37 00.5	+0.3
GO05				IAmb	IAmb	18 37 11.9	
	comp=Z,73nm,1.2s						
VAO	Valinhos	42.37	321	*e*P	P	18 37 03.5	+0.9
CPUP	Villa Florida	43.02	306	P	P	18 37 07.7	0.0
	comp=Z,26nm,0.9s,baz=147,slow=6.6,SNR=30						
CPUP				LR	LR	18 53 11.3	
	comp=Z,1μm,20.2s,baz=144,slow=34						
CPUP	Villa Florida	43.02	306	P	P	18 37 06.8	-0.9
CPUP				IAmb	IAmb	18 37 11.7	
	comp=Z,48nm,1.1s						
PEL	Peldehue	43.04	286	P	P	18 37 08.5	+0.6
PEL				pmax	pmax		
	comp=Z,273nm,1.7s						
PEL	Peldehue	43.04	286	P	P	18 37 08.4	+0.6
CFA	Coronel Fontan	43.18	290	P	P	18 37 08.1	-0.9
	comp=Z,11nm,0.9s,baz=150,slow=9.3,SNR=15						
ROC1	El Roble	43.33	286	P	P	18 37 11.7	+1.2
BOSA	Boshof	43.73	63	P	P	18 37 13.7	+0.1
	comp=Z,7.1nm,1.0s,baz=213,slow=6.2,SNR=6.2						
BOSA				LR	LR	18 51 17.9	
	comp=Z,965nm,20.7s,baz=206,slow=30						
BOSA	Boshof	43.73	63	P	P	18 37 13.1	-0.5
TRCB	Terra Rica	44.46	314	*e*P	P	18 37 19.8	+0.4
SJMB	Sao Joao De Ma	44.84	330	*e*P	P	18 37 22.6	+0.2
PCMB	Pacaembu	45.08	316	*e*P	P	18 37 25.5	+1.2
GO04	Tololo Observa	45.57	288	P	P	18 37 29.1	+0.7
GO04				IAmb	IAmb	18 37 38.9	
	comp=Z,40nm,0.9s						
LBTB	Lobatse	47.02	61	P	P	18 37 38.5	-1.2
LBTB	Lobatse	47.02	61		P	18 37 39.2	-0.4
LBTB	Lobatse	47.02	61	P	P	18 37 38.5	-1.2
IPMB	Ipameri, GO	47.47	321	*e*P	P	18 37 43.8	+0.6
GO03	Copiap	47.49	291	P	P	18 37 43.8	+0.5
GO03				IAmb	IAmb	18 39 30.5	
	comp=Z,42nm,1.4s						
CASY	Casey	47.94	155	P	P	18 37 47.5	+1.3
CASY				IAmb	IAmb	18 37 49.5	
	comp=Z,21nm,0.8s						
TSUM	Tsumeb	49.02	49	P	P	18 37 54.6	-0.6
JANB	Januaria	49.13	327	*e*P	P	18 37 56.3	+0.3
GO02	Mina Guanaco	49.28	293	P	P	18 37 57.4	0.0
GO02				IAmb	IAmb	18 38 08.8	
	comp=Z,45nm,0.8s						
BDFB	Brasilia	49.62	323	LR	LR	18 55 08.8	
	comp=Z,2μm,21.9s,baz=149,slow=32						
BDFB	Brasilia	49.62	323	P	P	18 38 00.2	+0.4
BDFB				pmax	pmax		
	comp=Z,31nm,1.5s						
BDFB	Brasilia	49.62	323	P	P	18 38 00.2	+0.4
ARAG	Araguaiana, MT	50.75	318	*e*P	P	18 38 09.5	+1.2
PB10	IPOC Station P	51.14	293	P	P	18 38 12.3	+1.1
LVC	Limon Verde	51.20	295	*e*P	P	18 38 12.7	+0.7
LVC	Limon Verde	51.20	295	P	P	18 38 12.7	+0.7
LVC				IAmb	IAmb	18 38 15.8	
	comp=Z,49nm,1.3s						
LVC	Limon Verde	51.20	295	*e*P	P	18 38 11.7	-0.3
H10S2	ASCENSION HYDR	51.85	6	T	T	19 34 21.1	
	baz=37,slow=74,SNR=14						
H10S3	ASCENSION HYDR	51.85	6	T	T	19 34 07.7	
	baz=183,slow=74,SNR=26						
SALV	Santo Antonio	51.90	313	*e*P	P	18 38 17.9	+1.0
PB04	IPOC Station P	51.99	294	P	P	18 38 16.9	-0.8
PB01	IPOC Station P	52.82	296	P	P	18 38 23.7	-0.1
PB01				IAmb	IAmb	18 38 28.1	
	comp=Z,52nm,0.9s						
GO01	Chusmiza	53.90	297	P	P	18 38 32.9	+0.7
GO01				IAmb	IAmb	18 38 36.6	
	comp=Z,38nm,0.8s						
PB11	IPOC Station P	54.02	296	P	P	18 38 32.2	-0.5
MNMC	Minye Minye	54.55	297	P	P	18 38 37.1	+0.4
CLDB	Colider	56.60	316	*e*P	P	18 38 50.8	-0.3
LSZ	Lusaka	56.76	58	P	P	18 38 51.5	-0.9
LSZ				pmax	pmax		
	comp=Z,12nm,1.0s						
LSZ	Lusaka	56.76	58	P	P	18 38 51.5	-0.9
SAML	Samuel	61.07	308	*e*P	P	18 39 22.5	+0.3
SAML	Samuel	61.07	308	P	P	18 39 21.3	-0.9
SAML				pmax	pmax		
	comp=Z,138nm,1.9s						
SAML	Samuel	61.07	308	P	P	18 39 21.3	-0.9
SAML	Samuel	61.07	308	*e*P	P	18 39 21.3	-0.9
NNA	Nana	64.07	293	*e*P	P	18 39 43.1	+0.8
NNA				pmax	pmax		
	comp=Z,29nm,0.9s						
NNA	Nana	64.07	293	P	P	18 39 42.3	0.0
NNA				IAmb	IAmb	18 39 46.1	
	comp=Z,23nm,0.9s						
PTGA	Pitinga	67.49	315	P	P	18 40 03.1	-1.2
PTGA				IAmb	IAmb	18 40 19.2	
	comp=Z,49nm,1.8s						
PTGA	Pitinga	67.49	315	*e*P	P	18 40 03.6	-0.6
LIC	Lamto	67.75	15	*e*PKP1	P	18 40 05.4	-0.4
	comp=Z,32nm,1.2s						
KIC	Kosan Boka	67.92	16	*e*PKP1	P	18 40 05.8	-1.1
	comp=Z,16nm,0.9s						
TIC	Toumodi	68.16	15	*e*PKP1	P	18 40 06.6	-1.8
DBIC	Dimbokro	68.21	15	P	P	18 40 08.4	-0.3
	comp=Z,7.4nm,0.8s,baz=168,slow=7.4,SNR=9.1						
DBIC				LR	LR	19 03 54.5	
	comp=Z,568nm,18.4s,baz=168,slow=31						
DBIC	Dimbokro	68.21	15	P	P	18 40 08.0	-0.7
MBAR	Mbarara	71.08	54	LR	LR	19 08 21.8	
	comp=Z,592nm,20.4s,baz=199,slow=33						
MBAR	Mbarara	71.08	54	*i* P	P	18 40 27.5	+0.8
MBAR				pmax	pmax		
	comp=Z,8.0nm,1.4s						
MBAR	Mbarara	71.08	54	P	P	18 40 28.4	+1.7
PTLC	Puerto Leguiza	74.03	301	*e*P	P	18 40 42.9	-1.2
MQZ	McQueen's Vall	75.40	189	P	P	18 40 52.9	+1.2
MQZ				IAmb	IAmb	18 43 27.4	
	comp=Z,77nm,1.7s						
RPZ	Rata Peaks	75.51	188	P	P	18 40 52.6	+0.2
RPZ				IAmb	IAmb	18 41 07.3	
	comp=Z,24nm,1.0s						

TOA0	Torodi Ar. Sit	75.57	21	P	P	18 40 52.0	-0.9
TOA0				IAmb	IAmb	18 41 16.1	
	comp=Z,24nm,1.3s						
TORD	Torodi Ar. Bea	75.57	21	P	P	18 40 52.5	-0.4
	comp=Z,7.1nm,0.8s,baz=193,slow=6.1,SNR=41						
TORD				LR	LR	19 06 50.6	
	comp=Z,798nm,21.4s,baz=205,slow=30						
TORD	Torodi Ar. Bea	75.57	21	P	P	18 40 51.7	-1.2
OTAV	Otavalo	75.66	298	*e*P	P	18 40 57.9	+3.9
OTAV	Otavalo	75.66	298	P	P	18 40 54.5	+0.5
OTAV				pmax	pmax		
	comp=Z,55nm,1.6s						
OTAV	Otavalo	75.66	298	P	P	18 40 54.5	+0.5
OTAV				IAmb	IAmb	18 41 11.7	
	comp=Z,55nm,1.6s						
OTAV	Otavalo	75.66	298	*e*P	P	18 40 53.3	-0.8
FLOC	Florencia	75.67	301	P	P	18 40 54.0	+0.4
TAU	Tasmania Unive	76.07	170	P	P	18 40 55.8	+0.3
TAU				pmax	pmax		
	comp=Z,26nm,1.0s						
TAU	Tasmania Unive	76.07	170	P	P	18 40 55.8	+0.3
TAU				IAmb	IAmb	18 41 10.7	
	comp=Z,26nm,0.9s						
GARC	Garzon, Huila	76.14	301	*e*P	P	18 40 56.2	-0.4
LTZ	Lake Taylor	76.35	189	P	P	18 40 59.1	+1.9
LTZ				IAmb	IAmb	18 41 10.1	
	comp=Z,44nm,1.2s						
SOTA	Rioblanco	76.57	300	*e*P	P	18 41 03.2	+4.0
BBAC	Balboa, Cauca	76.74	299	*e*P	P	18 41 00.6	+0.7
POPC	Popayan, Colom	76.96	300	*e*P	P	18 41 03.2	+2.1
CMWZ	Cape Campbell	77.22	190	P	P	18 41 02.3	+0.2
BSWZ	Blackbirch Sta	77.28	190	P	P	18 41 04.2	+1.8
THZ	Tophouse	77.31	189	P	P	18 41 04.8	+2.2
THZ				IAmb	IAmb	18 41 08.3	
	comp=Z,22nm,0.9s						
ORTC	Ortega, Tolima	77.59	302	*e*P	P	18 41 05.0	+0.5
SNZO	South Karori	77.61	191	P	P	18 41 04.4	+0.2
CHIC	Chingaza	77.62	304	*e*P	P	18 41 05.9	+0.8
NNZ	Nelson	77.82	190	P	P	18 41 06.6	+1.2
ROSC	El Rosal	78.05	303	LR	LR	19 15 21.6	
	comp=Z,752nm,21.9s,baz=192,slow=36						
RUSC	La Rusia	78.51	305	*e*P	P	18 41 10.3	+0.2
RUSC	La Rusia	78.51	305	P	P	18 41 08.8	-1.3
GUY2C	Guyana, Caldas	78.83	303	*e*P	P	18 41 11.2	-0.7
GUY2C				*e*P	pwP	18 41 18.2	-1.6
PLMC	San Jos del P	78.92	302	*e*P	P	18 41 12.9	+1.1
NORC	Norcasia	78.93	303	*e*P	P	18 41 12.9	+1.1
PTBC	PUERTO BERRIO,	79.65	304	*e*P	P	18 41 13.8	-1.9
NWAO	Narrogin (SRO)	80.08	144	P	P	18 41 18.0	0.0
NWAO				pmax	pmax		
	comp=Z,114nm,1.8s						
NWAO	Narrogin (SRO)	80.08	144	P	P	18 41 18.0	0.0
NWAO	Narrogin (SRO)	80.08	144	P	P	18 41 17.6	-0.4
NWAO				IAmb	IAmb	18 43 37.5	
	comp=Z,151nm,1.9s						
SDV	Santo Domingo	80.28	308	*e*P	P	18 41 19.1	-0.2
SDV	Santo Domingo	80.28	308	P	P	18 41 19.1	-0.2
SDV				IAmb	IAmb	18 41 36.1	
	comp=Z,53nm,1.6s						
SDV	Santo Domingo	80.28	308	*e*P	P	18 41 18.8	-0.6
UREC	San Jos de Ur	81.19	304	*e*P	P	18 41 23.6	-0.4
SMLC	San Martn de	81.55	305	*e*P	P	18 41 24.4	-1.4
STKA	Stephens Creek	86.34	164	P	P	18 41 50.3	0.0
	comp=Z,4.5nm,0.8s,baz=176,slow=8.1,SNR=11						
STKA				LR	LR	19 18 20.6	
	comp=Z,3μm,19.9s,baz=186,slow=34						
STKA	Stephens Creek	86.34	164	P	P	18 41 50.3	0.0
TBI	Tubuai	86.98	225	*e*LR	LR	19 09 31.0	
	comp=Z,523nm,33.2s						
JTS	Las Juntas de	87.47	296	P	P	18 41 56.6	+0.7
JTS				pmax	pmax		
	comp=Z,35nm,1.5s						
JTS	Las Juntas de	87.47	296	P	P	18 41 56.6	+0.7
JTS				IAmb	IAmb	18 42 12.2	
	comp=Z,35nm,1.5s						
PPT2	Papeete2	92.34	227	*e*LR	LR	19 12 01.0	
	comp=Z,904nm,28.8s						
PPT	Papeete	92.36	227	LR	LR	19 15 24.0	
	comp=Z,262nm,20.9s,baz=184,slow=30						
ASAR	Alice Springs	93.06	156	P	P	18 42 21.6	-0.5
	comp=Z,2.2nm,0.8s,baz=195,slow=3.9,SNR=26						
ASAR				LR	LR	19 24 04.5	
	comp=Z,740nm,18.4s,baz=186,slow=35						
ASAR	Alice Springs	93.06	156	P	P	18 42 20.9	-1.3
AS31	Alice Springs	93.07	156	P	P	18 42 22.2	0.0
WRA	Warramunga Arr	96.77	155	P	P	18 42 38.1	-0.9
	comp=Z,0.9nm,0.8s,baz=202,slow=4.1,SNR=6.4						
WRA				LR	LR	19 23 15.9	
	comp=Z,361nm,20.5s,baz=235,slow=34						
WRA	Warramunga Arr	96.77	155	P	P	18 42 37.6	-1.5
DZM	Mont Dzumac	97.30	185	*e*LQ	LQ	19 10 16.5	
	comp=Z,972nm,29.2s						
DZM				*e*LR	LR	19 14 25.0	
	comp=Z,623nm,21.3s						
KEST	Kesra	99.00	23	LR	LR	19 24 44.4	
	comp=Z,490nm,18.4s,baz=174,slow=34						
CLL	Collm	114.72	22	*e*Pdif	Pdif	18 43 57.0	-0.9
CLL				*e*		18 47 23.0	
CLL				*e*PKiKP	PKiKP	18 47 50.0	+2.5
CLL				*e*PS	PKKPbc	18 58 24.0	-0.4
CLL				*e*PPS	PPS	18 59 54.0	
CLL				*e*SS	SS	19 04 54.0	+14
CLL				*e*(SSSS)		19 11 48.0	
CLL				LmV		19 33 00.0	
	comp=Z,300nm,18.3s						
CLL	Collm	114.72	22	*e*P	Pdif	18 43 57.0	-0.9
CLL				MLR	MLR		
	comp=Z,300nm,18.3s						
KIV	Kislovodsk	115.87	45	*i* PKIKP	PKiKP	18 47 50.7	+0.6
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
KIV				MLR	MLR		
	comp=Z,668nm,22.0s						
MAK	Makhachkala	116.73	49	*e*P	Pdif	18 44 02.7	-4.4
MAK				*i*		18 47 48.7	
MAK				*e*		18 54 37.2	
MAK				pmax	pmax		
	comp=Z,437nm,1.3s						
MAK				MLR	MLR		
	comp=Z,799nm,15.0s						
CMAR	Chiang Mai Arr	119.63	106	PKP	PKiKP	18 47 60.0	+1.9
	comp=Z,0.8nm,0.8s,baz=236,slow=3.8,SNR=7.1						
CMAR	Chiang Mai Arr	119.63	106	PKIKP	PKPdf	18 47 57.4	-0.7
CMAR	Chiang Mai Arr	119.63	106		PKPdf	18 47 57.4	-0.7
DANN	Dangsing	120.61	86	*e*P	PKiKP	18 48 00.6	+0.5
	comp=Z,21nm,0.8s						
DMN	Daman	120.66	88	*e*P	PKiKP	18 48 01.8	+1.6
GKN	Gorkha	120.75	87	*e*P	PKiKP	18 48 01.4	+1.1
PKIN	Phulchoki	120.77	88	*e*P	PKiKP	18 48 01.6	+1.1
	comp=Z,22nm,1.2s						
PKI	Pulchoki	120.77	88	*e*P	PKiKP	18 48 00.8	+0.3
	comp=Z,9.1nm,0.9s						
RAMN	Ramite	120.84	89	*e*P	PKPdf	18 48 00.0	-0.5
	comp=Z,20nm,0.9s						
KKN	Kakani	120.89	88	*e*P	PKiKP	18 48 01.9	+1.3
ODAN	Odare	121.15	90	*e*P	PKPdf	18 48 00.6	-0.5
JIRN	Jiri	121.23	89	*e*P	PKPdf	18 48 00.6	-0.8
	comp=Z,27nm,0.8s						
GUN	Gumba	121.28	88	*e*P	PKPdf	18 48 01.0	-0.4
	comp=Z,31nm,1.2s						
TAPN	Taplejung	121.72	90	*e*P	PKPdf	18 48 00.3	-1.9
CHGR	Chuyangaron	122.12	68		PKiKP	18 48 02.4	-0.1
GAR	Garm	122.92	68		PKPdf	18 48 03.4	-0.5
PSUT	Pine Spring	124.84	288		PKiKP	18 48 10.2	+2.1
RSSD	Black Hills	124.91	299	PKIKP	PKPdf	18 48 07.6	-0.1
RSSD	Black Hills	124.91	299		PKPdf	18 48 07.6	-0.1
QIZ	Qiongzhong	125.11	116	PKP	PKiKP	18 48 08.9	0.0
QIZ				PP	PP	18 49 57.6	-0.1
QIZ				SS	SS	19 06 56.1	+2.1
QIZ				LR	LR		
	comp=Z,390nm,19.9s						
NLU	North Lily Min	125.16	290		PKiKP	18 48 09.1	+0.4
TCUT	Toone Canyon	125.78	291		PKiKP	18 48 09.6	-0.3
KSH	Kashi	125.95	72	PKP	PKiKP	18 48 13.0	+2.9
KSH				PP	PP	18 50 09.3	+5.6
KSH				PKS	PKSdf	18 51 46.8	+0.5
KSH				SKKS		18 56 57.9	
KSH				AMB	AMB		
	comp=Z,130nm,6.7s						
KSH				LR	LR		
	comp=Z,360nm,14.2s						
KSH				LR	LR		
	comp=Z,280nm,11.6s						
KSH				LR	LR		
	comp=Z,380nm,15.1s						
HWUT	Hardware Ranch	126.24	292		PKPdf	18 48 09.8	-0.5
PDAR	Pinedale Array	126.25	294	PKP	PKPdf	18 48 09.2	-1.1
	comp=Z,0.7nm,0.8s,baz=139,slow=4.3,SNR=6.0						
KK31	Karatay Array	126.30	65	PKIKP	PKPdf	18 48 08.8	-1.3
KK31	Karatay Array	126.30	65	PKPdf	PKPdf	18 48 08.8	-1.3
KKAR	Karatay Array	126.30	65	PKIKP	PKiKP	18 48 10.3	-0.3
KKAR	Karatay Array	126.30	65		PKiKP	18 48 10.3	-0.3
KKAR	Karatay Array	126.30	65		PKPdf	18 48 09.5	-0.7
ULM	Lac du Bonnet	126.53	309	PKP	PKPdf	18 48 09.5	-0.8
	comp=Z,1.3nm,0.5s,baz=135,slow=5.7,SNR=2.9						
ULM	Lac du Bonnet	126.53	309		PKiKP	18 48 10.5	-0.2
ABKAR	Akbulak array	126.75	53		PKPdf	18 48 08.9	-1.8
FINES	FINESS Array B	126.78	25	PKP	PKPdf	18 48 09.6	-0.7
	comp=Z,7.6nm,1.0s,baz=149,slow=4.0,SNR=5.2						
FINES	FINESS Array B	126.78	25		PKPdf	18 48 09.0	-1.4
NVAR	Mina Array Bea	126.86	284	PKP	PKiKP	18 48 12.6	+0.5
	comp=Z,0.7nm,0.7s,baz=162,slow=1.5,SNR=6.2						
NVAR	Mina Array Bea	126.86	284		PKPdf	18 48 10.5	-1.1
KMI	Kunming	127.13	105	PKP	PKiKP	18 48 13.0	-0.1
KMI				AMB	AMB		
	comp=Z,130nm,4.4s						
KMI				LR	LR		
	comp=Z,300nm,18.6s						
KMI				LR	LR		
	comp=Z,250nm,21.5s						
KMI				LR	LR		
	comp=Z,380nm,22.5s						
ELK	Elko	127.25	288	PKIKP	PKPdf	18 48 12.2	-0.1
ELK	Elko	127.25	288		PKPdf	18 48 12.2	-0.1
FXWY	Fox Creek	127.60	294		PKPdf	18 48 12.5	-0.4
AAK	Ala-Archa	127.73	69	PKIKP	PKPdf	18 48 13.0	-0.1
AAK	Ala-Archa	127.73	69		PKPdf	18 48 13.0	-0.1
FLWY	Flagg Ranch	127.80	294		PKiKP	18 48 13.4	-0.3
YHH	Holmes Hill	128.42	295		PKiKP	18 48 15.7	+0.6
AFDM	Forest Hills D	128.54	283		PKPdf	18 48 14.4	-0.2
YHL	Hebgen Lake	128.62	295		PKPdf	18 48 14.3	-0.5
KLMR	Klimovskoe	129.46	33	*e*PKIKP	PKiKP	18 48 17.4	+1.2
KLMR				pmax	pmax		
	comp=Z,49nm,2.0s						
KLMR	Klimovskoe	129.46	33	*e*PKPdf	PKiKP	18 48 17.4	+1.2
KLMR				AMP		18 48 32.3	
	comp=Z,49nm,2.0s						
EGMT	Eagleton	130.44	298		PKPdf	18 48 17.9	0.0
MSO	Missoula	131.37	294		PKPdf	18 48 18.9	-0.9
BMO	Blue Mountains	131.40	290	PKIKP	PKPdf	18 48 20.0	+0.1
BMO	Blue Mountains	131.40	290		PKPdf	18 48 20.0	+0.1
CD2	Chengdu	132.47	102	Pdif	Pdif	18 45 18.0	+0.4
BRVK	Borovoye	133.83	57	PKIKP	PKPdf	18 48 24.0	0.0
BRVK	Borovoye	133.83	57		PKPdf	18 48 24.0	0.0
TCU	Taichung	134.23	125	PKHKP	PKPpre	18 48 09.6	
MAKZ	Makanchi	134.36	70	PKIKP	PKPdf	18 48 24.9	-0.4
MAKZ	Makanchi	134.36	70		PKPdf	18 48 24.9	-0.4
MK31	Makanchi Array	134.49	71	PKIKP	PKiKP	18 48 26.4	-0.5
MK31	Makanchi Array	134.49	71		PKiKP	18 48 26.4	-0.5
MKAR	Makanchi Array	134.49	71	PKP	PKPdf	18 48 23.8	-1.7
	comp=Z,1.4nm,0.9s,baz=259,slow=5.3,SNR=4.5						
MKAR	Makanchi Array	134.49	71		PKPdf	18 48 23.6	-1.9
WMQ	Urumqi	134.82	77	*e*PKP	PKiKP	18 48 27.7	-0.1
WMQ				AMB	AMB		
	comp=Z,88nm,5.9s						
KURK	Kurchatov	135.69	64	PKIKP	PKiKP	18 48 28.5	-0.7
KURK	Kurchatov	135.69	64		PKiKP	18 48 28.4	-0.7
LZH	Lanzhou	136.73	98	*e*PKP	PKPdf	18 48 27.4	-2.9
LZH				LR	LR		
	comp=Z,260nm,17.2s						
LZH				LR	LR		
	comp=Z,270nm,18.3s						
WHN	Wuhan	137.11	113	PKP	PKPdf	18 48 26.0	-4.9
GTA	Gaotai	137.38	92	⇑PKP	PKiKP	18 48 36.6	+3.4
GTA				AMB	AMB		
	comp=Z,130nm,8.3s						
GTA				LR	LR		
	comp=Z,170nm,20.9s						
GTA				LR	LR		
	comp=Z,210nm,21.3s						
GTA				LR	LR		
	comp=Z,240nm,20.3s						
NJ2	Nanjing	140.39	117	*e*PKP	PKiKP	18 48 39.6	+0.2
ZALV	Zalesovo Beam	140.67	65	PKP	PKPdf	18 48 34.8	-1.9
	comp=Z,1.1nm,0.7s,baz=328,slow=1.9,SNR=4.9						
ZALV	Zalesovo Beam	140.67	65		PKPdf	18 48 36.9	+0.3
YKA	Yellowknife Ar	142.47	311	PKP	PKPdf	18 48 37.8	-1.8
	comp=Z,1.3nm,0.8s,baz=117,slow=2.4,SNR=12						
YKA				PP	PP	18 51 47.5	-0.7
	comp=Z,1.1nm,0.9s,baz=126,slow=6.6,SNR=6.6						
BTO	Baotou	143.27	100	*e*PKP	PKPdf	18 48 41.5	-0.4
RES	Resolute Bay	143.88	334	PKIKP	PKPdf	18 48 41.5	-0.3
RES	Resolute Bay	143.88	334		PKPpre	18 48 38.1	
RES				PKPdf	PKPdf	18 48 41.5	-0.3
HHC	Hu-ho-hao-te	144.21	101	*e*PKP	PKiKP	18 48 45.4	-1.7
BJI	Beijing	145.77	107	*e*PKPbc	PKiKP	18 48 50.4	+0.2
MOY	Mondy	146.70	78	*e*PKP2	PKPab	18 48 49.8	-0.6
MOY				pmax	pmax		
	comp=Z,47nm,2.0s						
SONM	Songino Array	146.79	88	PKPbc	PKPbc	18 48 49.2	-0.4
	comp=Z,15nm,0.9s,baz=216,slow=3.5,SNR=25						
SONM	Songino Array	146.79	88		PKPbc	18 48 48.4	-1.2
ZAK	Zakamensk	146.98	82	*e*PKIKP	PKPdf	18 48 47.8	-0.1
ZAK				pmax	pmax		
	comp=Z,17nm,1.3s						
ULN	Ulaanbaatar	147.14	88	*e*PKP2	PKPbc	18 48 50.9	+0.3
ULN	Ulaanbaatar	147.14	88		PKPdf	18 48 49.0	+0.6
TLY	Talaya	147.99	80	PKIKP	PKPdf	18 48 50.7	+1.2
TLY	Talaya	147.99	80		PKPdf	18 48 50.7	+1.2
IRK	Irkutsk	148.64	80	*e*PKP2	PKPab	18 48 57.9	-0.1
IRK				pmax	pmax		
	comp=Z,59nm,2.1s						
KSAR	Wonju Array Be	148.82	124	PKIKP	PKPdf	18 48 52.0	+0.7
KSAR	Wonju Array Be	148.82	124		PKPdf	18 48 52.0	+0.7
KSRS	Korea Array	148.85	124	PKPbc	PKPbc	18 48 55.4	+0.2
	comp=Z,5.1nm,0.9s,baz=206,slow=1.7,SNR=11						
C36M	Paulatuk	149.23	318		PKPbc	18 48 54.3	-0.9
NRIK	Noril'sk	149.90	43	PKPbc	PKiKP	18 48 57.6	-0.1
	comp=Z,2.1nm,0.3s,baz=236,slow=1.9,SNR=7.8						
MAT	Matsushiro	151.82	139	PKP	PKiKP	18 49 05.2	+2.4
MJAR	Matsushiro Arr	151.82	139	PKPbc	PKiKP	18 49 03.7	+0.9
	comp=Z,7.2nm,0.9s,baz=201,slow=3.5,SNR=14						
MJAR	Matsushiro Arr	151.82	139		PKiKP	18 49 05.2	+2.4
INK	Inuvik	152.11	314	PKIKP	PKPbc	18 49 00.1	-1.9
INK	Inuvik	152.11	314		PKPbc	18 49 00.1	-1.9
EPYK	Eagle Plains	152.70	309		PKiKP	18 49 03.5	-0.2
DAWY	Dawson	152.99	303		PKPbc	18 49 03.2	-1.0
BCAR	Beaver Creek A	153.62	300	PKPdf	PKPdf	18 48 59.1	+1.2
BCAR					PKPbc	18 49 04.7	-0.9
DOT	Dot Lake	154.79	301	PKPdf	PKPdf	18 49 00.5	+1.0
DOT					PKPbc	18 49 07.5	-0.6
SCRK	Sand Creek	154.86	301		PKPbc	18 49 07.7	-0.7
RIDG	Independent Ri	155.15	301		PKPbc	18 49 11.5	
PAX	Paxson	155.16	299	PKIKP	PKPdf	18 48 59.3	-0.7
PAX	Paxson	155.16	299	PKPdf	PKPdf	18 48 59.3	-0.7
FYU	Fort Yukon	156.05	307	PKPdf	PKPdf	18 49 03.3	+2.3
FYU					sPKPab	18 49 32.0	+1.0
ILAR	Eielson Array	156.30	302	PKPbc	PKPbc	18 49 11.9	
	comp=Z,1.6nm,1.0s,baz=168,slow=2.9,SNR=9.4						
ILAR				PKPab	PKPab	18 49 27.7	-2.0
	comp=Z,3.1nm,1.0s,baz=126,slow=1.6,SNR=8.2						
ILAR	Eielson Array	156.30	302	PKIKP	PKPdf	18 49 00.3	-1.1
ILAR						18 49 11.2	
ILAR	Eielson Array	156.30	302	PKPdf	PKPdf	18 49 00.3	-1.1
ILAR					PKPbc	18 49 11.2	
CCB	Clear Creek Bu	156.65	302	PKPdf	PKPdf	18 49 00.4	-1.4
CCB					sPKPab	18 49 33.6	0.0
RND	Reindeer	156.76	298	PKP2	PKPab	18 49 35.5	+3.6
RND						19 49 01.5	
RND	Reindeer	156.76	298	PKPdf	PKPdf	18 49 01.4	-0.7
RND					PKPab	18 49 35.5	+3.6
PPLA	Purkeypile	158.07	296	PKPdf	PKPdf	18 49 02.1	-1.8
PPLA				PKPab	PKPab	18 49 37.4	-0.2
TIXI	Tiksi	163.45	36	PKP2	PKPab	18 50 01.4	+0.7
TIXI	Tiksi	163.45	36		PKPab	18 50 01.4	+0.7
BILL	Bilibino	172.34	344	⇓*e*PKP2	PKPab	18 50 45.3	+5.2
BILL				pmax	pmax		
	comp=Z,5.0nm,1.3s						

HEL 08 18:49:24.2±0.1, 60°.94N×26°.82E, h2^{km}, ML0.5, Confirmed Earthquake, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VJF	Virojoki	0.54	138	*e*P	Pg	18 49 34.0	-0.4
VJF				MSG		18 49 48.5	
	comp=Z,0.8nm,0.1s						
PVF	Pernaja	0.61	231	*e*P	Pg	18 49 35.2	-0.8
PVF				MSG		18 49 54.3	
	comp=Z,0.3nm,0.1s						
FIA0	FINESS Array S	0.62	325	*e*P	Pg	18 49 35.6	-0.6
FIA0				*e*S	Sg	18 49 43.5	-0.7
KAF	Kangasniemi	1.21	348	*e*SB	Sg	18 50 02.4	-0.5

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*BJI **08** 18:56:45.9±0.0, 0°.49S×126°.47E, h7^{km}, mB5.1/45, mb4.7/58, Ms4.6/34, Ms7 4.3/33*

*MOS **08** 18:56:52.5±1.1, 0°.32N×126°.20E, h10^{km}, mb5.3/32, Error ellipse: s-maj=8.1km s-min=4.8km az=112.7*

*NEIC **08** 18:56:53.3±2.0, 0°.31N±0°.06×126°.21E±0°.06, h6^{km}±3^{km}, mb5.2/183, Error ellipse: s-maj=9.2km s-min=8.4km az=173.0*

*IDC **08** 18:56:55.8±2.4, 0°.34N×126°.11E, h15^{km}±14^{km}, mb4.7/32, mb1 4.7/35, mb1mx4.7/50, mbtmp4.8/35, ML4.3/3, MS4.1/5, Ms1 4.1/5, ms1mx3.5/39, Error ellipse: s-maj=15.3km s-min=8.9km az=68.0*

*KLM **08** 18:56:57.0, 0°.22N×126°.84E, h70^{km}, mb4.9*

*DJA **08** 18:56:59.3±0.2, 0°N±2°×12°6E±°, h44^{km}±3^{km}, M4.8/56, mb4.9/56, mB5.3/20, MLv4.8/20, Mw(mB)4.7/20, Mwp5.8/5*

*GCMT **08** 18:56:59.3±0.3, 0°.21N±0°.02×126°.43E±0°.03, h28^{km}±1^{km}, MW5.0/63, Moment Tensor Solution. s29,c35; s63,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.17±.26; $M_{\theta\theta}$-1.11±.16; $M_{\phi\phi}$-2.06±.19; $M_{r\theta}$0.06±.27; $M_{\theta\phi}$-2.44±.12; $M_{\phi r}$2.27±.28; Best double couple: $M_0$4.33400×10^{16} NP1:ϕ_s242.00000°, δ36.00000°, λ128.00000°. NP2: ϕ_s18.00000°, δ62.00000°, λ66.00000°. Principal axes: T 4.1600, Plg64.0000°, Azm246.0000°; N 0.3470, Plg21.0000°, Azm30.0000°; P -4.5070, Plg14.0000°, Azm126.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 18:56:55.0±0.6**, 0°.28N**±0°.03×**126°.23E**±0°.04**, h12^{km}**±3^{km}**, n478, σ1^{s}72**/493**, mb5.2**/165**, MS4.2**/15**, 18C-14D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.24	67	P	Pn	18 57 17.6	-0.5
TNTI				S	Sg	18 57 34.6	-0.3
TNTI	Ternate	1.24	67		Pn	18 57 17.3	-0.8
KMSI	Cibinong	2.27	277	P	Pn	18 57 34.2	+1.9
KMSI				S	Sn	18 58 02.7	+2.5
SANI	Sanana	2.33	186	P	Pn	18 57 34.5	+1.3
SANI				S	Sn	18 58 03.3	+1.5
NLAI	Namlea	3.61	166	P	Pn	18 57 52.5	+1.8
LUWI	Luwuk	3.70	249	P	Pb	18 57 57.1	-3.2
LUWI	Luwuk	3.70	249		Pn	18 57 53.9	+1.9
MRSI	Marisa	4.29	273	P	Pn	18 58 01.7	+1.5
AAI	Ambon	4.41	154	P	Pn	18 58 04.3	+2.5
MSAI	Masohi	4.50	143	P	Pn	18 58 07.2	+4.1
APSI	Ampana	4.73	255	P	Pn	18 58 09.3	+3.1
SWI	Sorong	5.16	103	P	Pn	18 58 13.8	+1.7
	0.6nm4μm2μm163nm,0.7s						
SIJI	Sorong	5.17	103	Pn	Pn	18 58 15.2	+2.9
	6.8nm,0.3s,baz=170,slow=23,SNR=15						
SIJI				LR	LR	19 00 36.6	
	comp=Z,2μm,18.9s,baz=308,slow=42						
KDI	Kendari	5.55	221	P	Pn	18 58 19.5	+2.1
	0.8nm123μm248nm,0.7s						
DDMP	Don Marcelino,	5.80	355	*e*P	Pn	18 58 25.6	+4.6
BNDI	Bandanaira	6.02	142	P	Pn	18 58 26.9	+2.9
	1.5nm322nm,1.4s						
MPSI	Mapaga	6.33	271	P	Pn	18 58 31.3	+3.1
	0.4nm3μm3μm93nm,0.9s						
SKMP	Bagumbayan, Su	6.42	345	*e*P	Pn	18 58 32.5	+3.1
SKMP				*e*S	Sn	18 59 46.2	+3.5
MATI	Mati	6.62	0	*e*P	Pn	18 58 36.6	+4.4
MATI	Mati	6.62	0	*e*P	Sn	18 59 54.2	+6.6
KCP	Kidapawan	6.78	350	⇓*e*P	Pn	18 58 41.4	+7.0
BBSI	Bau Bau	6.80	212	P	Pn	18 58 38.6	+4.0
	0.2nm820nm39nm,0.8s						
FAKI	Fak Fak	6.81	118	P	Pn	18 58 36.6	+1.8
	0.3nm1μm79nm,1.0s						
FAKI	Fak Fak	6.81	118		Pn	18 58 34.2	-0.5
CTBH	Cotabato--PC H	7.17	344	⇑*e*P	Pn	18 58 44.4	+4.6
TTSI	Tana Toraja	7.21	243	P	Pn	18 58 43.3	+3.0
	0.7nm2μm172nm,0.7s						
BUKP	Musuan	7.63	351	*e*P	Pn	18 58 53.5	+7.3
BNSI	Bone	7.69	233	P	Pn	18 58 49.7	+2.9
	0.5nm2μm157nm,0.7s						
SPSI	Sidrap Palu	7.71	237	P	Pn	18 58 50.4	+3.2
	0.8nm2μm252nm,0.6s						
BKSI	Bulukumba	8.26	228	P	Pn	18 58 58.2	+3.5
	1μm104nm,0.7s						
KAPI	Kappang	8.34	231	Pn	Pn	18 58 59.0	+3.2
	8.7nm,0.3s,baz=48,slow=8.5,SNR=17						
BUTP	Butuan	8.65	356	*e*P	Pn	18 59 05.2	+5.2
SAUI	Saumlaki	9.64	148	P	Pn	18 59 16.0	+2.3
	160nm,0.7s						
SAUI	Saumlaki	9.64	148		Pn	18 59 14.2	+0.5
MMRI	Maumere	9.71	204	Pn	Pn	18 59 15.7	+1.1
MSLP	Maasin	9.88	352	*e*P	Pn	18 59 19.6	+2.7
EDFI	Ende, Flores	10.05	207	P	Pn	18 59 22.9	+3.5
	271nm26nm,1.0s						
SOEI	Soe	10.16	191	P	Pn	18 59 25.6	+4.7
	1μm110nm,1.0s						
SOEI	Soe	10.16	191		Pn	18 59 19.9	-1.1
KBKI	Kotabaru	10.67	250	P	Pn	18 59 31.2	+3.4
	18nm,1.2s						
SPMM	Sapulut	10.70	294	P	Pn	18 59 35.0	+6.8
KKM	Kota Kinabalu	11.52	300	Pn	Pn	18 59 38.1	-1.4
BATP	Bataraza	11.91	315	*e*P	Pn	18 59 49.5	+4.7
PLAI	Plampang	12.36	223	P	P	19 00 06.6	+3.5
SRBI	Singaraja	13.77	233	P	P	19 00 21.5	+2.7
MTN	Manton Dam	13.92	160	P	Pn	19 00 13.3	+1.1
	baz=14,SNR=14						
MTN	Manton Dam	13.92	160		Pn	19 00 11.6	-0.7
PGP	Puerto Galera	14.13	339	⇓*e*P	P	19 00 20.8	-2.0
SBUM	Sibu	14.17	279		Pn	19 00 15.1	-0.6
SBUM	Sibu	14.17	279	P	P	19 00 23.0	-0.2
KMMI	Kalianget	14.24	239	P	P	19 00 28.0	+4.0
KDU	Kakadu	14.30	155	P	Pn	19 00 17.3	-0.1
	baz=14,SNR=17						
JAGI	Jajag, Banyuwa	14.85	234	P	Pn	19 00 28.2	+3.2
	2μm146nm,1.2s						
JAGI	Jajag, Banyuwa	14.85	234		Pn	19 00 25.8	+0.9
GRJI	Gresik	15.47	242	P	P	19 00 42.2	+4.5
KSM	Kuching	15.96	274	P	P	19 00 43.1	-0.1
KSM				IAmb	IAmb	19 00 46.5	
	comp=Z,323nm,1.3s						
KSM	Kuching	15.96	274	P	P	19 00 45.0	+1.8
KNRA	Kununurra	16.05	171	P	Pn	19 00 41.7	+0.9
	baz=16,SNR=16						
KNRA	Kununurra	16.05	171		Pn	19 00 41.1	+0.3
SCZP	Santa Cruz	16.61	338	*e*P	Pn	19 00 47.3	-0.5
CAUP	Cauayan	17.11	346	*e*P	P	19 00 55.3	-0.6
PCJI	Pacitan	17.20	240	P	P	19 00 58.5	+1.6
	comp=Z,154nm,1.2s						
WOJI	Wonogiri, Jawa	17.26	242	P	P	19 00 58.9	+1.4
	comp=Z,79nm,1.1s						
SMRI	Semarang	17.35	245	P	P	19 01 03.8	+5.2
SMRI	Semarang	17.35	245	P	P	19 00 58.7	+0.1
SMRI				IAmb	IAmb	19 01 27.4	
	comp=Z,352nm,1.4s						
UGM	Wanagama	17.65	242		P	19 01 02.0	+0.1
UGM				IAmb	IAmb	19 01 52.9	
	comp=Z,393nm,1.7s						
SZP	Santa	18.07	342	P	Pn	19 01 05.0	-1.1
APYP	Conner	18.14	345	*e*P	Pn	19 01 06.9	-0.1
FITZ	Fitzroy Crossi	18.28	182	P	P	19 01 09.7	+1.0
	baz=18,SNR=22						
FITZ	Fitzroy Crossi	18.28	182	P	P	19 01 09.6	+0.9
	comp=Z,0.4nm,0.3s,baz=9.2,slow=6.8,SNR=16						
FITZ	Fitzroy Crossi	18.28	182	P	Pn	19 01 08.6	0.0
KPJI	Karang Pucung	18.84	246	P	Pn	19 01 17.8	+2.3
	comp=Z,2μmcomp=Z,127nm,1.2s						
LEM	Lembang	19.87	249	P	P	19 01 27.3	+0.9
	comp=Z,4.2nm,0.3s,baz=350,slow=12,SNR=17						
CISI	Cisompet, Garu	19.95	247	P	Pn	19 01 28.8	-0.1
	comp=Z,113nm,0.6s						
CISI	Cisompet, Garu	19.95	247	P	P	19 01 26.5	-0.7
CISI				IAmb	IAmb	19 01 50.5	
	comp=Z,68nm,0.7s						
CNJI	Cibinong	20.49	248	P	P	19 01 33.9	+0.9
	comp=Z,127nm,1.0s						
DBJI	Dramaga	20.59	250	P	Pn	19 01 40.5	+4.1
SKJI	Sukabumi	20.92	249	P	Pn	19 01 40.3	+0.1

	comp=Z,215nm,0.7s						
DLV	T Lat	21.08	304	P	P	19 01 39.4	-0.2
WB0	Warramunga Arr	21.47	159	P	P	19 01 42.6	-1.1
WB0				IAmb	IAmb	19 01 49.8	
	comp=Z,59nm,0.8s						
WB8	Warramunga Arr	21.51	159	P	P	19 01 44.3	+0.3
	baz=22						
WRAB	Tennant Creek	21.61	159	ceP	P	19 01 45.4	+0.3
WRAB				pmax	pmax		
	comp=Z,46nm,0.7s						
WRAB	Tennant Creek	21.61	159	P	P	19 01 43.1	-2.0
WRAB				IAmb	IAmb	19 01 53.3	
	comp=Z,64nm,0.8s						
WRA	Warramunga Arr	21.61	159	P	P	19 01 45.1	0.0
	comp=Z,56nm,0.8s,baz=336,slow=11,SNR=186						
WRA	Warramunga Arr	21.61	159	i P	P	19 01 45.2	0.0
WRA				pmax	pmax		
	comp=Z,58nm,0.8s						
WRA	Warramunga Arr	21.61	159	P	P	19 01 43.7	-1.5
WB2	Warramunga Arr	21.62	159	P	P	19 01 44.4	-0.8
WB2				IAmb	IAmb	19 01 57.6	
	comp=Z,77nm,0.8s						
WC3	Warramunga Arr	21.64	159	P	P	19 01 45.7	+0.2
	baz=22						
COEN	Coen	21.95	131	P	P	19 01 49.2	+0.4
	baz=22,SNR=13						
COEN	Coen	21.95	131	P	P	19 01 48.9	+0.1
MYKOM	Kota Tinggi	22.42	274	P	P	19 01 52.6	-1.3
MYKOM	Kota Tinggi	22.42	274	P	P	19 01 57.0	+3.1
KASI	Kota Agung	22.45	255	P	P	19 01 56.4	+2.2
	comp=Z,706nmcomp=Z,57nm,0.6s						
MDSI	Maura Dua	22.53	258	P	P	19 01 53.4	-1.7
	comp=Z,34nm,0.7s						
PSA00	Pilbara Seismi	22.60	196	P	P	19 01 54.2	-1.5
PSA00				IAmb	IAmb	19 02 02.1	
	comp=Z,135nm,1.9s						
PSA00	Pilbara Seismi	22.60	196	P	P	19 01 53.9	-1.8
PSA00				IAmb	IAmb	19 02 09.1	
	comp=Z,8.3nm,0.7s						
GUMO	Guam	22.71	54	LR	LR	19 09 58.5	
	comp=Z,402nm,20.7s,baz=262,slow=34						
LWLI	Liwa	22.76	256	P	P	19 01 59.2	+1.6
	comp=Z,14µmcomp=Z,37nm,0.6s						
PMG	Port Moresby	22.95	115	P	P	19 02 01.5	+2.0
	comp=Z,13nm,0.8s,baz=241,slow=6.0,SNR=5.2						
PMG				LR	LR	19 13 03.5	
	comp=Z,480nm,18.9s,baz=317,slow=42						
PMG	Port Moresby	22.95	115	P	P	19 02 00.8	+1.3
PMG				pmax	pmax		
	comp=Z,35nm,1.0s						
PMG	Port Moresby	22.95	115	P	P	19 02 00.8	+1.3
TWG	Pinlang	22.96	348	P	P	19 01 56.4	-3.1
YULB	Yu-li	23.46	349	P	P	19 02 03.2	-1.4
YULB				IAmb	IAmb	19 02 43.7	
	comp=Z,75nm,1.6s						
TPUB	Ta-pu	23.52	347	P	P	19 02 03.3	-1.8
TPUB				IAmb	IAmb	19 02 08.8	
	comp=Z,38nm,0.6s						
MNAI	Manna	23.70	259	P	P	19 02 04.9	-2.2
MNAI				IAmb	IAmb	19 02 40.4	
	comp=Z,142nm,1.1s						
SSLB	Suanglung	23.92	348	P	P	19 02 07.5	-1.5
KSI	Kapahiang	23.94	260	P	P	19 02 10.1	+0.7
	comp=Z,54nm,0.7s						
NACB	Ninganchiao	24.17	350	P	P	19 02 09.5	-1.8
QIS	Mount Isa	24.50	148	P	P	19 02 15.3	+0.9
	baz=25,SNR=33						
QIZ	Qiongzhong	24.61	320	P	P	19 02 15.0	-0.4
QIZ				S	S	19 06 37.7	+1.2
QIZ				LR	LR		
	comp=Z,220nm,15.5s						
QIZ				LR	LR		
	comp=Z,130nm,5.9s						
QIZ	Qiongzhong	24.61	320	P	P	19 02 15.5	+0.1
QIZ				IAmb	IAmb	19 02 34.6	
	comp=Z,91nm,1.7s						
YHNB	Yeheng	24.69	349	P	P	19 02 15.7	-0.5
YHNB				IAmb	IAmb	19 02 19.1	
	comp=Z,83nm,1.3s						
SDSI	Sungai Dareh	24.83	267	P	P	19 02 17.3	-0.2
	comp=Z,653nmcomp=Z,31nm,1.0s						
KRJI	Kerinci	24.87	264	P	P	19 02 24.6	+6.6
AS31	Alice Springs	24.95	163	P	P	19 02 18.4	-0.1
ASAR	Alice Springs	24.95	163	P	P	19 02 19.1	+0.7
	comp=Z,50nm,0.8s,baz=347,slow=12,SNR=280						
ASAR				S	S	19 06 45.7	+3.7
	comp=Z,4.7nm,1.0s,baz=347,slow=22,SNR=7.3						
ASAR	Alice Springs	24.95	163	P	P	19 02 18.4	-0.1
ASAR	Alice Springs	24.95	163	P	P	19 02 18.4	-0.1
AS19	Alice Springs	25.00	163	P	P	19 02 19.9	+1.0
	baz=25						
WRKA	Warakurna	25.25	176	P	P	19 02 21.6	+0.4
	baz=25,SNR=70						
UBPT	Khong Chiam	25.35	307	P	P	19 02 21.6	-0.5
IPM	Ipoh	25.52	280	P	P	19 02 22.2	-1.5
IPM				IAmb	IAmb	19 02 24.8	
	comp=Z,33nm,0.9s						
MTSU	Mount Surprise	25.52	137	P	P	19 02 25.1	+1.4
	baz=26,SNR=8.3						
GIRL	Giralia	25.61	206	P	P	19 02 26.8	+2.4
	baz=26,SNR=3.8						
GIRL	Giralia	25.61	206	P	P	19 02 25.6	+1.3
PDSI	Padang	25.79	267	P	P	19 02 25.9	-0.4
	comp=Z,22nm,0.8s						
KULM	Kulim	26.02	281	P	P	19 02 28.0	-0.3
KULM	Kulim	26.02	281	P	P	19 02 29.0	+0.7
JOW	Kunigami	26.47	4	P	P	19 02 32.5	+0.3
	comp=Z,5.3nm,0.8s,baz=170,slow=12,SNR=5.5						
JOW	Kunigami	26.47	4	P	P	19 02 31.6	-0.6
JOW				IAmb	IAmb	19 03 07.8	
	comp=Z,94nm,1.2s						
SISI	Saibi	27.18	267	P	P	19 02 45.9	+7.1
RPSI	Rantau Prapat	27.40	275	P	P	19 02 39.1	-1.6
RPSI	Rantau Prapat	27.40	275	P	P	19 02 40.2	-0.5
PSI	Prapat	27.41	276	P	P	19 02 40.2	-0.8
	comp=Z,6.8nm,0.4s,baz=94,slow=4.9,SNR=16						
MEEK	Meekatharra	27.75	195	P	P	19 02 46.7	+2.9
	baz=28,SNR=7.7						
PBKT	Sadao Pong	29.69	304	P	P	19 02 59.8	-1.3
MLSI	Meulaboh, Aceh	30.06	278	P	P	19 03 03.8	-0.6
	comp=Z,48nm,1.2s						
SLVN	Son La	30.21	315	P	P	19 03 04.3	-1.4
MORW	Morawa	30.77	198	P	P	19 03 10.6	+0.1
MORW				IAmb	IAmb	19 04 07.2	
	comp=Z,61nm,1.7s						
FORT	Forrest	30.94	177	P	P	19 03 12.3	+0.3
	baz=31,SNR=13						
FORT	Forrest	30.94	177	P	P	19 03 11.3	-0.6
FORT				IAmb	IAmb	19 03 24.3	
	comp=Z,39nm,0.7s						
GYA	Guiyang	32.13	326	eP	P	19 03 27.5	+4.9
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WHN	Wuhan	32.14	341	P	P	19 03 23.3	+0.8
WHN				S	S	19 08 39.1	+4.1
WHN				LR	LR		
	comp=Z,890nm,18.4s						
CM31	Chiang Mai Arr	32.32	306	P	P	19 03 22.9	-1.4
CMAR	Chiang Mai Arr	32.32	306	P	P	19 03 23.4	-0.9
	comp=Z,2.9nm,0.7s,baz=130,slow=7.0,SNR=27						
CMAR				PcP	PcP	19 06 13.6	+1.3
	comp=Z,1.2nm,0.7s,baz=133,slow=1.9,SNR=7.0						
CMAR				ScP	ScP	19 09 55.8	-0.5
	comp=Z,0.9nm,0.9s,baz=162,slow=3.2,SNR=5.5						
CMAR	Chiang Mai Arr	32.32	306	i P	P	19 03 24.1	-0.2
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CMAR	Chiang Mai Arr	32.32	306	P	P	19 03 22.2	-2.0
CMAR					PcP	19 06 13.7	+1.3
CMAR					ScP	19 09 55.7	-0.5
NJ2	Nanjing	32.36	348	eP	P	19 03 25.0	+0.6
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CHTO	Chiang Mai	32.50	306	P	P	19 03 24.8	-1.1
CHTO				pmax	pmax		
	comp=Z,11nm,0.8s						
CHTO	Chiang Mai	32.50	306	P	P	19 03 24.8	-1.1
JNU	Nakatsue	32.96	7	P	P	19 03 29.3	-0.4
JNU				IAmb	IAmb	19 03 35.4	
	comp=Z,19nm,1.0s						
KMI	Kunming	33.55	319	P	P	19 03 37.0	+1.8
KMI				pP	sP	19 03 40.2	+1.0
KMI				S	S	19 08 57.5	0.0
KMI				sS	sS	19 09 08.0	+5.8
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
KMI				pmax	pmax		
	comp=Z,140nm,5.0s						
KMI				LR	LR		
	comp=Z,250nm,9.3s						
KMI				LR	LR		
	comp=Z,200nm,8.1s						
KMI				LR	LR		
	comp=Z,260nm,15.1s						
ENH	Enshi	33.81	333	P	P	19 03 36.4	-0.8
ENH				IAmb	IAmb	19 03 39.5	
	comp=Z,21nm,0.8s						
NWAO	Narrogin (SRO)	34.10	194	P	P	19 03 40.1	+0.4
NWAO				pmax	pmax		
	comp=Z,45nm,1.3s						
NWAO	Narrogin (SRO)	34.10	194	P	P	19 03 40.0	+0.3
NWAO				IAmb	IAmb	19 03 44.4	
	comp=Z,36nm,1.3s						
NWAO	Narrogin (SRO)	34.10	194	P	P	19 03 40.1	+0.4
NWAO				IAmb	IAmb	19 03 44.4	
	comp=Z,45nm,1.3s						
BBOO	Buckleboo	34.20	165	P	P	19 03 40.2	-0.3
	baz=34,SNR=22						
BBOO	Buckleboo	34.20	165	P	P	19 03 40.1	-0.4
RMQ	Roma	34.35	143	P	P	19 03 42.7	+0.8
	baz=34,SNR=5.2						
HNR	Honiara	34.93	107	P	P	19 03 47.1	0.0
HNR				pmax	pmax		
	comp=Z,171nm,1.1s						
HNR	Honiara	34.93	107	P	P	19 03 47.1	0.0
EIDS	Eidsvold	35.04	139	P	P	19 03 49.1	+1.2
	baz=35,SNR=3.5						
EIDS	Eidsvold	35.04	139	P	P	19 03 48.6	+0.7
JHJ2	Mitsune	35.07	20	P	P	19 03 48.6	+0.6
PBA	Port Blair	35.11	290	P	P	19 03 47.3	-1.4
STKA	Stephens Creek	35.14	157	P	P	19 03 49.0	+0.3
	baz=35,SNR=21						
STKA	Stephens Creek	35.14	157	P	P	19 03 49.2	+0.6
	comp=Z,12nm,0.7s,baz=332,slow=8.7,SNR=24						
STKA	Stephens Creek	35.14	157	P	P	19 03 47.8	-0.9
STKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
STKA	Stephens Creek	35.14	157	P	P	19 03 47.8	-0.9
HTT	Hallett	35.60	162	P	P	19 03 54.8	+2.1
	baz=36,SNR=11						
TJN	Taejon	35.93	2	ceP	P	19 04 01.2	+5.9
INU	Inuyama	36.31	15	P	P	19 03 58.2	-0.5
INU				IAmb	IAmb	19 04 05.8	
	comp=Z,25nm,0.7s						
CMSA	Cobar Meteorol	36.63	152	P	P	19 04 02.4	+1.0
	baz=37,SNR=9.6						
KSAR	Wonju Array Be	37.01	2	P	P	19 04 04.9	+0.4
KSAR	Wonju Array Be	37.01	2	P	P	19 04 04.9	+0.4
KSRS	Korea Array	37.02	2	P	P	19 04 05.4	+0.8
	comp=Z,7.4nm,0.8s,baz=178,slow=9.8,SNR=20						
KSRS				PcP	PcP	19 06 26.4	+0.8
	comp=Z,1.0nm,0.6s,baz=176,slow=2.7,SNR=4.2						
KS19	Wonju Array Si	37.07	2	P	P	19 04 03.9	-1.2
XAN	Xi'an	37.30	336	P	P	19 04 06.7	-0.4
XAN				pmax	pmax		
	comp=Z,15nm,0.7s						
XAN	Xi'an	37.30	336	P	P	19 04 06.7	-0.4
MAJO	Matsushiro	37.75	16	i P	P	19 04 10.0	-0.9
MAJO				pmax	pmax		
	comp=Z,11nm,0.9s						
MAJO	Matsushiro	37.75	16	P	P	19 04 09.7	-1.2
MAT	Matsushiro	37.75	16	P	P	19 04 09.6	-1.3
MJAR	Matsushiro Arr	37.75	16	P	P	19 04 09.7	-1.2
	comp=Z,9.4nm,0.8s,baz=181,slow=9.1,SNR=24						
MJAR	Matsushiro Arr	37.75	16	P	P	19 04 08.9	-2.0
MJAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MJAR	Matsushiro Arr	37.75	16	P	P	19 04 08.9	-2.0
MJB9	Matsu-Tunnel	37.75	16	P	P	19 04 09.7	-1.2
DL2	Dalian	38.67	354	P	P	19 04 19.6	+1.0
DL2				pmax	pmax		
	comp=Z,43nm,0.7s						
ARMA	Armidale	38.94	144	P	P	19 04 21.9	+0.7
	baz=39,SNR=11						
ARMA	Armidale	38.94	144	P	P	19 04 21.2	0.0
BJT	Baijiatuau	40.60	348	P	P	19 04 34.2	-0.4
BJT				pmax	pmax		
	comp=Z,18nm,1.0s						
BJT	Baijiatuau	40.60	348	P	P	19 04 34.2	-0.4
BJI	Beijing	40.62	348	P	P	19 04 35.5	+0.7
BJI				S	S	19 10 49.7	+5.4
BJI				pmax	pmax		
	comp=Z,17nm,0.9s						
LZH	Lanzhou	41.25	332	eP	P	19 04 41.2	+0.9
LZH				pP	sP	19 04 44.6	+0.3
LZH				sP	pwP	19 04 48.8	+2.3
LZH				PP	PnPn	19 06 21.9	+1.8
LZH				pmax	pmax		
	comp=Z,29nm,1.1s						
LZH				pmax	pmax		
	comp=Z,100nm,5.4s						
LZH				LR	LR		
	comp=Z,260nm,15.2s						
LZH				LR	LR		
	comp=Z,220nm,15.2s						
LZH				LR	LR		
	comp=Z,310nm,17.0s						
SNY	Shenyang	41.42	357	⇑P	P	19 04 41.5	+0.1
SNY				eS	S	19 10 58.2	+1.9
SNY				pmax	pmax		
	comp=Z,22nm,0.7s						
SNY				LR	LR		
	comp=Z,240nm,14.6s						
SNY				LR	LR		
	comp=Z,360nm,16.7s						
SNY				LR	LR		
	comp=Z,340nm,19.9s						
SHL	Shillong	41.60	310	P	P	19 04 42.2	-1.1
SHL				pmax	pmax		
	comp=Z,13nm,0.8s						
SHL	Shillong	41.60	310	P	P	19 04 42.2	-1.1
HHC	Hu-ho-hao-te	42.52	343	eP	P	19 04 53.1	+2.6
HHC				pmax	pmax		
	comp=Z,86nm,0.9s						
HHC				pmax	pmax		
	comp=Z,310nm,4.6s						
HHC				LR	LR		
	comp=Z,790nm,13.7s						
HHC				LR	LR		
	comp=Z,830nm,14.0s						
HHC				LR	LR		
	comp=Z,840nm,14.2s						
CN2	Changchun	43.33	359	eP	P	19 04 56.0	-0.9
USA0B	Ussuriysk Arra	44.03	6	P	P	19 05 02.9	+0.4
USA0B				pmax	pmax		
	comp=Z,42nm,1.5s						
USA0B	Ussuriysk Arra	44.03	6	P	P	19 05 02.9	+0.4
USA0B				IAmb	IAmb	19 05 08.5	
	comp=Z,42nm,1.5s						
USRK	Ussuriysk Ar.	44.03	6	P	P	19 05 03.4	+0.9
	comp=Z,8.4nm,0.7s,baz=195,slow=7.9,SNR=14						
USRK	Ussuriysk Ar.	44.03	6	P	P	19 05 02.7	+0.2
USRK	Ussuriysk Ar.	44.03	6	P	P	19 05 02.7	+0.2
MDJ	Mudanjiang	44.24	3	P	P	19 05 05.0	+0.7
MDJ				pmax	pmax		
	comp=Z,12nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,130nm,3.5s						
MDJ	Mudanjiang	44.24	3	P	P	19 05 03.6	-0.7
LSA	Lhasa	44.40	314	P	P	19 05 05.4	-1.0
LSA				pmax	pmax		
	comp=Z,18nm,0.7s						
LSA	Lhasa	44.40	314	P	P	19 05 05.4	-1.0
LSA				IAmb	IAmb	19 05 09.9	
	comp=Z,18nm,0.7s						
TEY	Ternei	45.50	10	⇓eP	P	19 05 15.1	+0.9
TEY				pmax	pmax		
	comp=N,20nm,0.7s						
TEY				pmax	pmax		
	comp=Z,40nm,0.7s						
GTA	Gaotai	45.82	331	eP	P	19 05 16.5	-0.6
GTA				pP	pwP	19 05 24.2	+0.9
GTA				sP	sP	19 05 26.8	+5.7
GTA				PcP	PcP	19 06 55.3	+0.8
GTA				S	S	19 12 01.3	+0.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,60nm,6.3s						
GTA				LR	LR		
	comp=Z,190nm,15.5s						
GTA				LR	LR		
	comp=Z,190nm,15.2s						
GTA				LR	LR		
	comp=Z,240nm,17.5s						
PALK	Pallekele	45.92	280	P	P	19 05 17.3	-0.8
	comp=Z,9.1nm,0.7s,baz=112,slow=5.4,SNR=5.4						
TAU	Tasmania Unive	46.99	159	P	P	19 05 24.8	-1.2
TAU				pmax	pmax		
	comp=Z,42nm,1.3s						
TAU	Tasmania Unive	46.99	159	P	P	19 05 24.8	-1.2
TAU				IAmb	IAmb	19 06 22.7	
	comp=Z,42nm,1.3s						
YSS	Yuzh-Sakhalins	48.68	15	eP	P	19 05 39.0	0.0
YSS				e		19 05 44.9	
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
YSS	Yuzh-Sakhalins	48.68	15	P	P	19 05 38.5	-0.5
KLR	Kul'dur	48.99	5	i P	P	19 05 40.8	-0.6
KLR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HIA	Hailar	49.11	354	P	P	19 05 40.5	-1.9
HIA				pmax	pmax		
	comp=Z,11nm,0.9s						
HIA	Hailar	49.11	354	P	P	19 05 40.5	-1.9
ULN	Ulaanbaatar	50.24	343	P	P	19 05 50.6	-0.6
ULN				pmax	pmax		
	comp=Z,14nm,0.8s						
ULN	Ulaanbaatar	50.24	343	P	P	19 05 50.6	-0.6
SONM	Songino Array	50.40	343	P	P	19 05 52.5	+0.1
	comp=Z,11nm,0.7s,baz=156,slow=8.9,SNR=71						
SONM	Songino Array	50.40	343	P	P	19 05 51.8	-0.6
SONM				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SONM	Songino Array	50.40	343	P	P	19 05 51.8	-0.6
GRNR	Gornyy	51.04	8	⇑iP	P	19 05 57.6	+0.6
GRNR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GRNR				MLR	MLR		
	comp=Z,130nm,11.0s						
KAAM	Kaadhehdhoo	53.23	270	P	P	19 06 12.9	-1.1
ZEA	Zeya	53.28	1	eP	P	19 06 16.8	+3.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.4s						
ZAK	Zakamensk	53.61	342	eP	P	19 06 15.4	-0.8
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MSVF	Nonsavu	54.01	112	P	P	19 06 18.2	-1.5
MSVF				pmax	pmax		
	comp=Z,29nm,1.1s						
MSVF	Nonsavu	54.01	112	P	P	19 06 18.2	-1.5
MSVF				IAmb	IAmb	19 06 35.2	
	comp=Z,29nm,1.1s						
DGAR	Diego Garcia	54.17	261	P	P	19 06 20.2	-0.6
DGAR				pmax	pmax		
	comp=Z,56nm,0.9s						
DGAR	Diego Garcia	54.17	261	P	P	19 06 20.2	-0.6
TLY	Talaya	54.64	343	P	P	19 06 24.7	+1.1
	comp=Z,8.0nm,0.5s,baz=189,slow=8.1,SNR=18						
TLY	Talaya	54.64	343	i P	P	19 06 24.1	+0.5
TLY				pmax	pmax		
	comp=Z,7.0nm,0.5s						
TLY	Talaya	54.64	343	P	P	19 06 23.4	-0.2
TLY				IAmb	IAmb	19 06 29.0	
	comp=Z,10.0nm,0.6s						
IRK	Irkutsk	54.96	344	eP	P	19 06 26.5	+0.6
IRK				pmax	pmax		
	comp=Z,34nm,4.5s						
WMQ	Urumqi	55.28	327	eP	P	19 06 28.7	+0.3
WMQ				pmax	pmax		
	comp=Z,19nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,98nm,4.5s						
WMQ				LR	LR		
	comp=Z,710nm,29.0s						
WMQ				LR	LR		
	comp=Z,650nm,29.0s						
WMQ				LR	LR		
	comp=Z,240nm,22.1s						
WMQ	Urumqi	55.28	327	P	P	19 06 28.0	-0.4
WMQ				pmax	pmax		
	comp=Z,27nm,1.1s						
WMQ	Urumqi	55.28	327	P	P	19 06 28.0	-0.4
WMQ				IAmb	IAmb	19 06 32.5	
	comp=Z,27nm,1.1s						
MOY	Mondy	55.45	341	eP	P	19 06 31.1	+1.6
MOY				pmax	pmax		
	comp=Z,34nm,2.0s						
BOD	Bodaibo	58.19	352	eP	P	19 06 49.0	+0.3
BOD				pmax	pmax		
	comp=Z,17nm,0.8s						
PEA0B	Petropavlovsk-	58.79	22	P	P	19 06 54.0	+0.9
PEA0B				pmax	pmax		
	comp=Z,130nm,1.7s						
PEA0B	Petropavlovsk-	58.79	22	P	P	19 06 54.0	+0.9
PETK	Petropavlovsk-	58.79	22	P	P	19 06 53.6	+0.6
	comp=Z,14nm,0.6s,baz=189,slow=6.9,SNR=77						
PETK	Petropavlovsk-	58.79	22	P	P	19 06 52.8	-0.3
PETK	Petropavlovsk-	58.79	22	P	P	19 06 52.8	-0.3
PET	Petropavlovsk	59.08	22	P	P	19 06 55.7	+0.7
PET				pmax	pmax		
	comp=Z,147nm,1.6s						
PET	Petropavlovsk	59.08	22	P	P	19 06 55.7	+0.7
LBZ	Lake Benmore	59.16	145	P	P	19 06 55.2	-0.5
LBZ				IAmb	IAmb	19 07 49.7	
	comp=Z,69nm,1.6s						
THZ	Tophouse	59.33	141	P	P	19 06 55.7	-1.4
THZ				IAmb	IAmb	19 07 54.1	
	comp=Z,52nm,1.7s						
LTZ	Lake Taylor	59.49	142	P	P	19 06 57.2	-1.0
ODZ	Otahua Downs	59.81	145	P	P	19 06 59.5	-0.7
ODZ				IAmb	IAmb	19 08 27.5	
	comp=Z,35nm,1.3s						
TUWZ	Tuamarina	59.82	140	P	P	19 06 59.1	-1.3
PRZ	Przheval'sk	60.01	321	P	P	19 07 01.2	-0.7
PRZ				pmax	pmax		
	comp=Z,19nm,0.7s						
PRZ	Przheval'sk	60.01	321	P	P	19 07 01.2	-0.7
PRZ				IAmb	IAmb	19 07 08.9	
	comp=Z,19nm,0.7s						
KHZ	Kahutara	60.08	141	P	P	19 07 01.3	-0.9
KHZ				IAmb	IAmb	19 07 10.6	
	comp=Z,16nm,0.8s						
MK31	Makanchi Array	60.11	327	eP	P	19 07 02.0	-0.4
MK31	Makanchi Array	60.11	327	P	P	19 07 01.3	-1.1
MK31				IAmb	IAmb	19 07 05.6	
	comp=Z,14nm,0.9s						
MK31				PcP	PcP	19 07 47.5	-0.6
MKAR	Makanchi Array	60.11	327	P	P	19 07 02.1	-0.3
	comp=Z,17nm,0.4s,baz=119,slow=8.2,SNR=142						
MKAR				S	S	19 15 13.3	-2.1
	comp=Z,0.3nm,0.8s,baz=114,slow=14,SNR=3.8						
MKAR	Makanchi Array	60.11	327	P	P	19 07 01.1	-1.2
MKAR						19 07 47.9	
MKAR	Makanchi Array	60.11	327	P	P	19 07 01.1	-1.2
MKAR				PcP	PcP	19 07 47.9	-0.2
KSH	Kashi	60.15	317	P	P	19 07 04.2	+1.3
KSH				pP	pwP	19 07 09.1	-0.1
KSH				PcS	PcS	19 11 48.7	-2.3
KSH				S	S	19 15 16.4	-0.1
KSH				ScS	SKKSac	19 16 50.7	-2.9
KSH				pmax	pmax		
	comp=Z,21nm,0.8s						
KSH				pmax	pmax		
	comp=Z,470nm,6.2s						
KSH				LR	LR		
	comp=Z,390nm,10.9s						
KSH				LR	LR		
	comp=Z,93nm,10.7s						
KSH				LR	LR		
	comp=Z,120nm,10.5s						
SNZO	South Karori	60.25	139	P	P	19 07 02.2	-1.1
MAKZ	Makanchi	60.29	327	P	P	19 07 02.5	-1.1
MAKZ				pmax	pmax		
	comp=Z,18nm,0.6s						
MAKZ	Makanchi	60.29	327	P	P	19 07 02.5	-1.1
MAKZ				IAmb	IAmb	19 07 06.8	
	comp=Z,18nm,0.6s						
BKZ	Black Stump Fm	60.41	137	P	P	19 07 04.4	-0.2
BKZ				IAmb	IAmb	19 08 23.0	
	comp=Z,30nm,1.5s						
BHW	Baring Head	60.41	140	P	P	19 07 03.0	-1.5
URZ	Urewera	60.42	135	P	P	19 07 03.1	-1.5
URZ				IAmb	IAmb	19 08 29.6	
	comp=Z,55nm,1.5s						

KDJ	Kajisay	60.60	320	P	P	19 07 05.5	-0.5
KDJ				pmax	pmax		
	comp=Z,14nm,0.9s						
KDJ	Kajisay	60.60	320	P	P	19 07 05.5	-0.5
KDJ				IAmb	IAmb	19 07 11.1	
	comp=Z,14nm,0.9s						
MSWZ	Moikau Station	60.66	139	P	P	19 07 03.9	-2.3
PLWZ	Palliser	60.74	140	P	P	19 07 06.0	-0.7
BFZ	Birch Farm	60.96	138	P	P	19 07 07.7	-0.5
NRN	Naryn	61.04	319	P	P	19 07 08.1	-1.0
NRN				pmax	pmax		
	comp=Z,12nm,0.8s						
NRN	Naryn	61.04	319	P	P	19 07 08.1	-1.0
NRN				IAmb	IAmb	19 07 13.6	
	comp=Z,12nm,0.8s						
YAK	Yakutsk	61.65	2	eP	P	19 07 10.1	-2.3
YAK				e*PP	pwP	19 07 19.1	+0.4
YAK				e		19 07 51.5	
YAK				e		19 09 28.3	
YAK				eS	S	19 15 31.9	-2.5
YAK				e*SS	sS	19 15 57.4	+18
YAK				eSSS	SSS	19 22 22.5	
YAK				pmax	pmax		
	comp=Z,14nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,1.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,184nm,5.3s						
YAK				pmax	pmax		
	comp=N,196nm,5.8s						
YAK				pmax	pmax		
	comp=E,198nm,4.9s						
YAK				smax	smax		
	comp=N,122nm,4.6s						
YAK				smax	smax		
	comp=E,99nm,3.3s						
YAK	Yakutsk	61.65	2	P	P	19 07 11.7	-0.7
MA2	Magadan	62.15	14	ceP	P	19 07 16.9	+1.0
MA2				pmax	pmax		
	comp=Z,19nm,0.7s						
MA2	Magadan	62.15	14	P	P	19 07 15.8	-0.1
MA2				IAmb	IAmb	19 07 19.8	
	comp=Z,20nm,0.8s						
AAK	Ala-Archa	62.59	319	P	P	19 07 19.2	-0.2
	comp=Z,2.4nm,0.4s,baz=147,slow=2.7,SNR=14						
AAK	Ala-Archa	62.59	319	ceP	P	19 07 19.0	-0.4
AAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
AAK	Ala-Archa	62.59	319	P	P	19 07 18.9	-0.4
AAK				IAmb	IAmb	19 07 30.6	
	comp=Z,9.0nm,0.9s						
ARSB	Arslanbob	63.01	317	P	P	19 07 21.5	-0.7
ARSB				pmax	pmax		
	comp=Z,11nm,0.6s						
ARSB	Arslanbob	63.01	317	P	P	19 07 21.5	-0.7
ARSB				IAmb	IAmb	19 07 26.4	
	comp=Z,11nm,0.6s						
KBL	Kabul	63.25	309	P	P	19 07 21.7	-2.3
KBL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KBL	Kabul	63.25	309	P	P	19 07 21.7	-2.3
KBL				IAmb	IAmb	19 07 27.2	
	comp=Z,10nm,0.8s						
ZAA0	Zalesovo Array	63.43	334	P	P	19 07 23.1	-1.4
ZAA0				IAmb	IAmb	19 07 27.7	
	comp=Z,10nm,0.8s						
ZALV	Zalesovo Beam	63.43	334	P	P	19 07 23.2	-1.3
	comp=Z,7.9nm,0.6s,baz=124,slow=5.6,SNR=22						
ZALV	Zalesovo Beam	63.43	334	iP	P	19 07 23.7	-0.8
ZALV				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ZALV	Zalesovo Beam	63.43	334	P	P	19 07 22.7	-1.8
GAR	Garm	63.91	314	P	P	19 07 26.5	-1.6
BTK	Batken	63.97	315	P	P	19 07 26.3	-2.2
BTK				pmax	pmax		
	comp=Z,11nm,0.9s						
BTK	Batken	63.97	315	P	P	19 07 26.3	-2.2
BTK				IAmb	IAmb	19 07 39.3	
	comp=Z,11nm,0.9s						
KURBB	Kurchatov Arra	64.37	328	P	P	19 07 30.1	-0.7
	comp=Z,12nm,0.5s,baz=132,slow=6.2,SNR=108						
KURK	Kurchatov	64.38	329	ceP	P	19 07 29.7	-1.1
KURK				pmax	pmax		
	comp=Z,32nm,0.7s						
KURK	Kurchatov	64.38	329	P	P	19 07 29.7	-1.1
CHGR	Chuyangaron	64.62	313	P	P	19 07 30.9	-1.9
CHGR				IAmb	IAmb	19 07 37.4	
	comp=Z,25nm,0.9s						
KK31	Karatay Array	65.42	318	P	P	19 07 36.3	-1.5
KK31				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KK31	Karatay Array	65.42	318	P	P	19 07 36.3	-1.5
KK31				IAmb	IAmb	19 07 42.4	
	comp=Z,8.5nm,0.8s						
KKAR	Karatay Array	65.42	318	P	P	19 07 36.6	-1.2
KKAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KKAR	Karatay Array	65.42	318	P	P	19 07 36.3	-1.5
KKAR	Karatay Array	65.42	318	P	P	19 07 36.6	-1.2
KKAR				IAmb	IAmb	19 07 42.4	
	comp=Z,8.5nm,0.8s						
CASY	Casey	67.36	187	P	P	19 07 48.0	-1.7
HRA	Herat	68.56	307	P	P	19 07 57.6	-0.6
WSAR	Wadi Sarin	69.36	295	P	P	19 08 02.0	-1.2
	comp=Z,6.2nm,0.6s,baz=136,slow=6.8,SNR=9.9						
BVAR	Borovoye Array	69.94	328	P	P	19 08 05.5	-0.6
	comp=Z,3.5nm,0.4s,baz=139,slow=7.2,SNR=49						
BRVK	Borovoye	70.01	328	ceP	P	19 08 05.7	-0.8
BRVK				pmax	pmax		
	comp=Z,24nm,1.3s						
BRVK	Borovoye	70.01	328	P	P	19 08 05.9	-0.7
BRVK				IAmb	IAmb	19 08 12.9	
	comp=Z,18nm,0.8s						
MSEY	Mahe Island	70.84	265	P	P	19 08 11.4	-1.1
MSEY				pmax	pmax		
	comp=Z,64nm,1.9s						
MSEY	Mahe Island	70.84	265	P	P	19 08 11.4	-1.1
MSEY				IAmb	IAmb	19 09 32.5	
	comp=Z,64nm,1.9s						
TIXI	Tiksi	71.27	1	ceP	P	19 08 13.1	-0.8
TIXI				pmax	pmax		
	comp=Z,13nm,1.7s						
TIXI	Tiksi	71.27	1	P	P	19 08 12.8	-1.0
TIXI				IAmb	IAmb	19 08 24.6	
	comp=Z,14nm,1.2s						
ATKA	Atka Island	71.61	34	P	P	19 08 14.3	-2.0
UOSS	Minazif	71.81	296	P	P	19 08 18.7	+0.6
UOSS				IAmb	IAmb	19 08 56.3	
	comp=Z,64nm,1.9s						
SOCY	Socotra	72.59	283	P	P	19 08 20.6	-2.3
SOCY				IAmb	IAmb	19 08 25.7	
	comp=Z,30nm,0.7s						
GEYT	Alibeck	72.67	310	P	P	19 08 22.5	-0.5
	comp=Z,4.2nm,0.6s,baz=141,slow=5.0,SNR=11						
GEYT	Alibeck	72.67	310	P	P	19 08 20.8	-2.3
GYA0B	ALIBECK ARRAY	72.67	310	P	P	19 08 21.7	-1.3
BILL	Bilibino	72.99	15	⇑eP	P	19 08 24.6	+0.4
BILL				*PP	pP	19 08 28.0	+0.7
BILL				*SP	sP	19 08 30.0	+1.6
BILL						19 08 41.0	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.4s						
BILL	Bilibino	72.99	15	P	P	19 08 22.9	-1.4
NRIK	Noril'sk	73.64	347	P	P	19 08 28.5	+0.4
	comp=Z,8.0nm,0.5s,baz=146,slow=9.2,SNR=7.9						
AB31	Akbulak array	74.50	322	iP	P	19 08 33.3	-0.2
ABKAR	Akbulak array	74.50	322	P	P	19 08 32.5	-1.0
AKTO	Aktyubinsk	76.05	322	P	P	19 08 42.3	-0.1
	comp=Z,19nm,0.7s,baz=106,slow=7.3,SNR=62						
UNV	Unalaska Valle	76.53	34	P	P	19 08 46.4	+1.4
SVE	Sverdlovsk	76.63	329	⇓eP	P	19 08 45.1	-0.4
SVE				pmax	pmax		
	comp=Z,38nm,0.9s						
AKUT	Akutan	77.03	34	P	P	19 08 48.1	+0.3
ARU	Arti	77.57	328	ceP	P	19 08 49.4	-1.4
ARU				pmax	pmax		
	comp=Z,32nm,1.0s						
ARU	Arti	77.57	328	P	P	19 08 49.6	-1.3
ARU				IAmb	IAmb	19 08 56.6	
	comp=Z,25nm,0.8s						
GAMB	Gambell	77.73	24	P	P	19 08 52.2	+0.7
GAMB				IAmb	IAmb	19 10 53.0	
	comp=Z,18nm,0.5s						
FALS	False Pass	78.56	34	P	P	19 08 54.7	-1.6
ABPO	Ambohimpanom	79.69	251	P	P	19 09 03.7	+0.2
ABPO				pmax	pmax		
	comp=Z,24nm,1.5s						
ABPO	Ambohimpanom	79.69	251	P	P	19 09 03.7	+0.2
VNDA	Vanda	80.09	173	P	P	19 09 04.5	+0.2
	comp=Z,3.6nm,0.8s,baz=292,slow=7.5,SNR=5.0						
VNDA	Vanda	80.09	173	P	P	19 09 04.3	0.0
VNDA				pmax	pmax		
	comp=Z,50nm,1.7s						
VNDA	Vanda	80.09	173	P	P	19 09 04.3	0.0
VNDA				IAmb	IAmb	19 10 10.5	
	comp=Z,50nm,1.7s						
SDPT	Sand Point	80.32	34	P	P	19 09 05.5	-0.4
ANM	Nome	80.59	24	P	P	19 09 06.4	-0.8
ANM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ANM	Nome	80.59	24	P	P	19 09 06.4	-0.8
CNBA	Chernabura Isl	80.69	34	P	P	19 09 08.0	0.0
CNBA				IAmb	IAmb	19 11 04.3	
	comp=Z,68nm,1.3s						
AKT	Akhty	81.19	312	eP	P	19 09 11.2	+0.1
AKT				e		19 09 17.1	
AKT				pmax	pmax		
	comp=Z,24nm,0.7s						
RAYN	Ar Rayn	81.38	294	P	P	19 09 11.6	-0.8
RAYN				pmax	pmax		
	comp=Z,25nm,0.8s						
RAYN	Ar Rayn	81.38	294	P	P	19 09 11.6	-0.8
RAYN				IAmb	IAmb	19 09 13.2	
	comp=Z,25nm,0.8s						
CHGN	Chignik	81.66	33	P	P	19 09 13.6	+0.5
DAMY	Dhamar	82.03	285	P	P	19 09 14.1	-2.1
DAMY				IAmb	IAmb	19 09 18.8	
	comp=Z,28nm,0.7s						
RDOG	Red Dog Mine	82.66	21	P	P	19 09 14.7	-3.4
RDOG				IAmb	IAmb	19 09 25.5	
	comp=Z,13nm,0.8s						
GROC	Groznyy	82.83	313	eP	P	19 09 17.9	-1.6
GROC				e		19 09 22.2	
GROC				pmax	pmax		
	comp=Z,45nm,1.5s						
CHIR	Chirikof Islan	83.11	34	P	P	19 09 19.8	-0.9
GNI	Garni	83.30	310	P	P	19 09 19.6	-2.6
GNI				pmax	pmax		
	comp=Z,22nm,1.1s						
GNI	Garni	83.30	310	P	P	19 09 19.6	-2.6
GNI				IAmb	IAmb	19 09 44.1	
	comp=Z,22nm,1.1s						
TBLG	Delisi	83.45	312	P	P	19 09 20.8	-2.0
TBLG				pmax	pmax		
	comp=Z,18nm,0.7s						
TBLG	Delisi	83.45	312	P	P	19 09 20.8	-2.0
TBLG				IAmb	IAmb	19 09 31.4	
	comp=Z,18nm,0.7s						
ATD	Arta Tunnel	83.46	281	P	P	19 09 20.2	-3.2
ATD				IAmb	IAmb	19 09 26.1	
	comp=Z,26nm,1.0s						
SII	Sitkinak Islan	84.02	33	P	P	19 09 24.1	-1.3
SVW2	Sparrevohn	84.05	29	P	P	19 09 22.7	-2.7
SVW2				IAmb	IAmb	19 09 27.8	
	comp=Z,44nm,1.7s						
ZEI	Tsey	84.17	313	eP	P	19 09 23.0	-3.7
ZEI				pmax	pmax		
	comp=Z,13nm,0.7s						
TTA	Tatalina	84.18	27	P	P	19 09 27.1	+0.9
TTA	Tatalina	84.18	27	P	P	19 09 27.1	+0.9
AKH	Akhalkalaki	84.36	311	⇓P	P	19 09 29.1	+1.5
AKH	Akhalkalaki	84.36	311	P	P	19 09 26.8	-0.8
AKH				pmax	pmax		
	comp=Z,26nm,0.9s						
AKH	Akhalkalaki	84.36	311	P	P	19 09 26.8	-0.8
AKH				IAmb	IAmb	19 09 30.8	
	comp=Z,26nm,0.9s						
NCK	Nalchik	84.45	314	iP	P	19 09 28.4	+0.5
NCK				pmax	pmax		
	comp=Z,12nm,1.4s						
PPT	Papeete	84.55	108	P	P	19 09 25.7	-3.2
PPT	Papeete	84.55	108	P	P	19 09 25.7	-3.2
OHAK	Old Harbor	84.60	33	P	P	19 09 29.1	+0.8
KBZ	Khabaz	84.98	314	P	P	19 09 30.3	-0.1
	comp=Z,16nm,1.1s,baz=268,slow=4.5,SNR=13						
KDAK	Kodiak Island	85.05	32	LR	LR	19 42 29.1	
	comp=Z,73nm,21.9s,baz=253,slow=32						
KDAK	Kodiak Island	85.05	32	P	P	19 09 31.2	+0.7
KDAK				pmax	pmax		
	comp=Z,216nm,1.9s						
KDAK	Kodiak Island	85.05	32	P	P	19 09 31.2	+0.7
NEY	Neytrino	85.07	313	iP	P	19 09 32.0	+0.8
NEY				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIV	Kislovodsk	85.14	314	⇓P	P	19 09 33.4	+2.0
KIV	Kislovodsk	85.14	314	eP	P	19 09 31.8	+0.4
KIV				pmax	pmax		
	comp=Z,28nm,1.0s						
KIV	Kislovodsk	85.14	314	P	P	19 09 30.9	-0.5
KIV				IAmb	IAmb	19 09 44.3	
	comp=Z,24nm,1.2s						
PRGR	Permogore	85.28	332	eP	P	19 09 30.4	-1.1
PRGR				pmax	pmax		
	comp=Z,27nm,0.9s						
RSO	Redoubt South	85.32	29	P	P	19 09 33.0	+1.0
IMAR	Indian Mountai	85.68	24	P	P	19 09 33.6	+0.1
PPLA	Purkeypile	85.90	27	P	P	19 09 34.3	-0.5
PPLA				IAmb	IAmb	19 11 38.1	
	comp=Z,34nm,1.7s						
CNPM	China Poot	85.96	30	P	P	19 09 35.2	+0.1
SKT	Skwentna	86.09	28	P	P	19 09 36.1	+0.4
BRLK	Bradley Lake	86.16	30	P	P	19 09 35.3	-0.8
VRH	Novokhopyorsk	86.33	321	eP	P	19 09 36.4	-0.6
VRH				pmax	pmax		
	comp=Z,30nm,0.7s						
SUA	Susitna One	86.41	29	P	P	19 09 37.9	+0.6
SUA				IAmb	IAmb	19 09 47.4	
	comp=Z,10.0nm,0.9s						
KTH	Kantishna Hill	86.55	26	P	P	19 09 38.9	+0.9
KTH				IAmb	IAmb	19 12 41.2	
	comp=Z,34nm,1.9s						
MLY	Manley	86.79	25	P	P	19 09 39.2	+0.2
TRF	Thorofare Moun	86.82	27	P	P	19 09 38.3	-1.1
TRF				IAmb	IAmb	19 12 04.9	
	comp=Z,31nm,1.7s						
RC01	Rabbit Creek A	86.86	29	P	P	19 09 39.2	-0.2
RC01				IAmb	IAmb	19 12 07.3	
	comp=Z,49nm,1.6s						
SEW	Seward	86.91	30	P	P	19 09 38.1	-1.6
COLD	Coldfoot	87.24	23	P	P	19 09 41.0	-0.1
BWN	Browne	87.26	26	P	P	19 09 39.7	-1.6
GHO	Glory Hole Cre	87.31	28	P	P	19 09 41.1	-0.6
MCK	McKinley	87.45	26	P	P	19 09 40.3	-2.0
MCK				pmax	pmax		
	comp=Z,46nm,2.0s						
MCK	McKinley	87.45	26	P	P	19 09 40.3	-2.0
MCK				IAmb	IAmb	19 10 56.4	
	comp=Z,46nm,2.0s						
RND	Reindeer	87.46	27	P	P	19 09 40.6	-1.8
RND				pmax	pmax		
	comp=Z,38nm,1.9s						
RND	Reindeer	87.46	27	P	P	19 09 40.6	-1.8
RND				IAmb	IAmb	19 09 45.2	
	comp=Z,38nm,1.9s						
KNK	Knik Glacier	87.50	29	P	P	19 09 41.1	-1.5
KNK				IAmb	IAmb	19 09 45.8	
	comp=Z,14nm,1.0s						
SML	Sawmill	87.59	28	P	P	19 09 43.6	+0.6
TOLK	Toolik Lake Re	87.62	21	P	P	19 09 44.1	+1.1
WRH	Wood River Hil	87.88	26	P	P	19 09 42.9	-1.4
WRH				IAmb	IAmb	19 10 00.4	
	comp=Z,27nm,1.6s						
VSR	Storozhevoye	87.93	321	eP	P	19 09 42.8	-2.0
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CCB	Clear Creek Bu	88.01	25	P	P	19 09 44.1	-0.7
SCM	Sheep Creek Mo	88.06	28	P	P	19 09 44.0	-1.3
SCM				pmax	pmax		
	comp=Z,105nm,2.0s						
SCM	Sheep Creek Mo	88.06	28	P	P	19 09 44.0	-1.3
DHY	Denali Highway	88.11	27	P	P	19 09 45.5	-0.1
DHY				IAmb	IAmb	19 11 14.6	
	comp=Z,29nm,1.9s						
GLI	Glacier Island	88.13	29	P	P	19 09 44.1	-1.4
LPSR	Galich'ya Gora	88.13	322	eP	P	19 09 46.1	+0.4
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KLMR	Klimovskoe	88.14	331	eP	P	19 09 44.7	-0.8
KLMR				pmax	pmax		
	comp=Z,43nm,1.6s						
KLMR	Klimovskoe	88.14	331	eP	P	19 09 44.8	-0.8
KLMR				AMP		19 09 52.4	
	comp=Z,43nm,1.6s						
HDA	Harding Lake	88.37	26	P	P	19 09 45.2	-1.4
HDA				IAmb	IAmb	19 13 02.2	
	comp=Z,25nm,1.9s						
IL31		88.41	25	P	P	19 09 45.0	-1.8
ILAR	Eielson Array	88.41	25	P	P	19 09 45.5	-1.3
	comp=Z,0.5nm,0.4s,baz=250,slow=4.9,SNR=8.7						
FID	Port Fidalgo	88.42	29	P	P	19 09 45.2	-1.8
KMBO	Kilima Mbogo	88.98	269	P	P	19 09 51.7	+0.9
	comp=Z,5.0nm,0.9s,baz=43,slow=6.5,SNR=11						
KMBO	Kilima Mbogo	88.98	269	iP	P	19 09 54.9	+4.0
KMBO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KMBO	Kilima Mbogo	88.98	269	P	P	19 09 48.2	-2.6
GAZ	Gaziantep	89.05	307	P	P	19 09 50.4	-0.1
GAZ				IAmb	IAmb	19 09 56.5	
	comp=Z,54nm,1.8s						
SYO	Syowa Base	89.05	201	⇑eP	P	19 09 50.0	+0.3
SYO	Syowa Base	89.05	201	⇓ePcP	PcP	19 09 51.4	+0.3
RIDG	Independent Ri	89.27	26	P	P	19 09 50.7	-0.3
RIDG				IAmb	IAmb	19 09 58.3	
	comp=Z,30nm,1.7s						
ASF	Jabal al Asfar	89.28	302	P	P	19 09 52.1	+0.4
	comp=Z,6.9nm,0.9s,baz=39,slow=4.9,SNR=7.3						
BMAR	Burnt Mountain	89.43	23	P	P	19 09 50.6	-1.0
OBN	Obninsk	89.57	325	⇑eP	P	19 09 50.5	-1.9
OBN				e		19 09 52.8	
OBN				e*PP	pP	19 09 55.2	-0.3
OBN				S	SKSac	19 20 25.0	+2.4
OBN				SS	SS	19 26 46.0	+7.1
OBN				pmax	pmax		
	comp=Z,38nm,1.7s						
OBN	Obninsk	89.57	325	P	P	19 09 51.2	-1.2
DOT	Dot Lake	89.62	27		P	19 09 52.5	0.0
SCRK	Sand Creek	89.65	26	P	P	19 09 52.2	-0.6
SCRK				IAmb	IAmb	19 09 54.6	
	comp=Z,22nm,1.8s						
GLB	Gilahina Butte	89.73	29	P	P	19 09 50.5	-2.6
GLB				IAmb	IAmb	19 12 30.0	
	comp=Z,36nm,1.7s						
QSPA	South Pole Qui	90.21	180	P	P	19 09 55.1	-0.3
QSPA				IAmb	IAmb	19 10 13.8	
	comp=Z,9.4nm,1.1s						
BALM	Baldy	90.45	29	P	P	19 09 54.5	-2.0
BCAR	Beaver Creek A	90.65	27	P	P	19 09 56.9	-0.6
BARN	Barnard Glacie	90.78	29	P	P	19 09 57.4	-0.8
BARN				IAmb	IAmb	19 10 54.0	
	comp=Z,28nm,1.4s						
EGAK	Eagle	90.86	25	P	P	19 09 57.4	-0.8
EGAK				IAmb	IAmb	19 12 24.8	
	comp=Z,22nm,1.9s						
CTGM	Chitina Glacie	90.94	29	P	P	19 09 58.2	-0.7
DAWY	Dawson	91.67	26	P	P	19 10 00.5	-1.6
DAWY				IAmb	IAmb	19 11 37.6	
	comp=Z,18nm,1.7s						
BR131	Keskin Array S	91.82	310	P	P	19 10 01.9	-1.5
BR131				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BR131	Keskin Array S	91.82	310	P	P	19 10 01.9	-1.5
BRTR	Keskin Array B	91.82	310	P	P	19 10 02.1	-1.4
	comp=Z,3.6nm,0.8s,baz=125,slow=5.5,SNR=16						
BRTR	Keskin Array B	91.82	310	P	P	19 10 01.8	-1.7
YKU2	Yakutat	91.85	31	P	P	19 10 00.3	-2.5
HYT	Haines Junctio	92.82	29	P	P	19 10 09.2	+1.6
ARCES	ARCESS Array B	93.49	340	P	P	19 10 10.3	0.0
	comp=Z,8.1nm,0.9s,baz=83,slow=5.9,SNR=12						
ARCES	ARCESS Array B	93.49	340	P	P	19 10 10.0	-0.3
ARCES	ARCESS Array B	93.49	340	P	P	19 10 10.0	-0.3
ARE0	ARCESS Array S	93.49	340	P	P	19 10 10.2	-0.1
ARE0				IAmb	IAmb	19 10 39.1	
	comp=Z,12nm,2.0s						
INK	Inuvik	93.53	22	P	P	19 10 10.7	+0.2
INK				pmax	pmax		
	comp=Z,25nm,2.0s						
INK	Inuvik	93.53	22	P	P	19 10 10.7	+0.2
INK				IAmb	IAmb	19 10 26.7	
	comp=Z,25nm,2.0s						
SKAG	Skagway	94.06	30	P	P	19 10 12.1	-1.0
SKAG				IAmb	IAmb	19 11 35.7	
	comp=Z,32nm,1.3s						
WHY	Whitehorse	94.12	29	P	P	19 10 13.3	-0.3
AKASG	Malin Array Be	94.23	321	P	P	19 10 12.6	-1.5
	comp=Z,1.0nm,0.6s,baz=68,slow=4.9,SNR=6.0						
AKASG	Malin Array Be	94.23	321	P	P	19 10 12.4	-1.7
FIA1	FINESS Array S	94.61	332	P	P	19 10 12.1	-3.5
FINES	FINESS Array B	94.61	332	P	P	19 10 14.9	-0.6
	comp=Z,2.3nm,0.8s,baz=105,slow=3.0,SNR=6.0						
FINES	FINESS Array B	94.61	332	iP	P	19 10 13.6	-2.0
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FINES	FINESS Array B	94.61	332	P	P	19 10 12.1	-3.5
SORM	Soroca	95.06	318	⇓P	P	19 10 16.9	-1.0
SORM	Soroca	95.06	318	⇓P	P	19 10 16.9	-1.0
TESR	Tescani	96.39	317	⇓P	P	19 10 23.8	-0.4
VRI	Vrincioaia	96.42	316	⇓P	P	19 10 19.7	-4.6
VRI	Vrincioaia	96.42	316	⇓P	P	19 10 19.7	-4.6
C36M	Paulatuk	96.60	20	P	P	19 10 23.3	-1.2
C36M				IAmb	IAmb	19 10 27.9	
	comp=Z,4.9nm,0.8s						
MLR	Muntele Rosu	97.01	316	⇑P	P	19 10 19.2	-7.9
MLR	Muntele Rosu	97.01	316	⇑P	P	19 10 19.2	-7.9
BURAR	Bucovina Array	97.22	318	⇓P	P	19 10 27.6	-0.3
BURAR	Bucovina Array	97.22	318	⇓P	P	19 10 27.6	-0.3
BURAR	Bucovina Array	97.22	318	P	P	19 10 26.9	-1.0
BUR08	Bucovina Ar. S	97.22	318	P	P	19 10 26.6	-1.4
KOLS	Kolonicke sedl	98.94	320	eP	Pdif	19 10 38.8	+3.3
KOLS	Kolonicke sedl	98.94	320	ePDIFF	Pdif	19 10 38.8	+3.3
UZH	Uzhgorod	98.98	319	eP	Pdif	19 10 37.8	+2.1
UZH				i		19 10 41.7	
DRGR		99.03	317	⇑P	Pdif	19 10 35.6	-0.5
DRGR		99.03	317	⇑P	Pdif	19 10 35.6	-0.5
CRVS	Cervenica-Dubn	99.47	320	eP	Pdif	19 10 38.6	+0.7
CRVS	Cervenica-Dubn	99.47	320	ePDIFF	Pdif	19 10 38.6	+0.7
BOSA	Boshof	99.77	241	LR	LR	19 51 48.8	
	comp=Z,110nm,20.4s,baz=81,slow=33						
VYHS	Vyhne	101.25	320	eP	Pdif	19 10 49.1	+3.2
VYHS	Vyhne	101.25	320	ePDIFF	Pdif	19 10 49.1	+3.2
TOA0	Torodi Ar. Sit	123.44	286		PKPdf	19 15 51.6	-1.8
TORD	Torodi Ar. Bea	123.44	286	PKP	PKPdf	19 15 53.0	-0.3
	comp=Z,2.5nm,0.7s,baz=71,slow=1.9,SNR=10						
TORD				PKKPbc	PKKPab	19 25 43.1	+0.9
	comp=Z,1.3nm,1.0s,baz=298,slow=3.1,SNR=4.0						
TORD	Torodi Ar. Bea	123.44	286		PKPdf	19 15 51.7	-1.6
TORD					PKKPab	19 25 44.5	+2.3
CPUP	Villa Florida	153.88	173	PKPbc	PKiKP	19 16 56.5	+1.3
	comp=Z,2.1nm,0.7s,baz=139,slow=1.7,SNR=4.4						
CPUP	Villa Florida	153.88	173	PKIKP	PKiKP	19 16 58.8	+3.6
CPUP	Villa Florida	153.88	173		PKiKP	19 16 58.8	+3.6

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*OTT **08** 19:00:52.0±0.3, 72°.71N×70°.61W, h18^{km}, ML3.3/5, Baffin Bay Seismic Zone. 245km east from Pond Inlet, Nu*

ISC 08 19:00:49.1±1.0**, 72°.75N**±0°.05×**70°.82W**±0°.06**, h10**^{km}**, n8,**
σ**3^{s}.17**/14**, Baffin Bay**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLRN	Clyde River	2.39	162	PN	Pn	19 01 29.7	+1.5
CLRN				SN	Sn	19 01 56.4	-1.1
CLRN				Trac		19 01 57.2	
	comp=Z,32nm,0.1s						
TULEG	Thule	3.85	7	PN	Pn	19 01 50.6	+2.5
TULEG				SN	Sn	19 02 32.4	-1.0
TULEG				Trac		19 02 33.9	
	comp=Z,6.3nm,0.2s						
KULLO	Kullorsuaq	4.25	58	PN	Pn	19 01 56.2	+2.5
KULLO				SN	Sn	19 02 40.9	-2.5
KULLO				Trac		19 02 42.9	
	comp=Z,3.1nm,0.1s						
ILON	Igloolik, Nuna	4.93	232	PN	Pn	19 02 05.3	+2.2
ILON				SN	Sn	19 02 58.9	-1.1
ILON				Trac		19 03 27.1	
	comp=Z,7.1nm,0.2s						
RES	Resolute Bay	7.01	297	PN	Pn	19 02 34.4	+2.8
RES				SN	Sn	19 03 49.3	-1.9
RES				Trac		19 03 57.4	
	comp=Z,76nm,1.6s						
EUNU	Eureka	8.16	341	SN	Sn	19 04 15.6	-4.0

FRB	Frobisher Bay	9.08	174	PN	Pn	19 03 01.9	+2.0
FRB				SN	Sn	19 04 35.1	-6.9
FRB				Trac		19 04 45.4	
	comp=Z,6.7nm,0.4s						
SUMG	Summit	9.59	76	iP	Pn	19 03 08.7	+1.5

*IDC **08** 19:01:10.0±1.5, 24.°06N×69.°87E, h0^{km}, mb3.6/3, mb1 3.8/4, mb1mx3.3/51, mbtmp3.7/4, ML3.8/1, MS4.0/3, Ms1 4.1/3, ms1mx3.2/37, Error ellipse: s-maj=39.5km s-min=34.3km az=61.0*

*NDI **08** 19:01:11.0±2.0, 23.°52N×70.°22E, h10^{km}, ML4.0*

ISC 08 19:01:10.2±0.7, 23.°67N±0.°07×70.°19E±0.°06, h15^{km}, n33, σ3^{s}47/22, mb3.6/3, MS3.8/3, Southern India

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHUJ	Bhuj	0.64	230	eP	Pg	19 01 21.8	-1.0
BHUJ				eS	Sg	19 01 30.7	-0.6
BHUJ				IAML		19 01 31.7	
	comp=N,10µm,0.1s						
AJM	Ajmer	4.92	54	ix	Pn	19 02 29.0	+5.4
AJM				ix	x	19 03 43.0	
POO	Poona	6.15	146	ex	Pn	19 02 45.2	+4.6
BHPL	Bhopal	6.66	92	eP	Pn	19 02 48.2	+0.6
BHPL				ex	x	19 03 55.3	
BHPL				eS	Sn	19 03 57.9	-5.4
KUDL	Kundal	7.21	51	ex	Pn	19 02 45.5	-10
KUDL				ex	Sn	19 04 14.8	-2.0
KAD	Karad	7.35	149	ex	Pn	19 02 42.8	-14
KAD				ix	Sn	19 04 16.6	-3.8
LATR	Latur	7.92	130	ex	Pg	19 03 39.8	
LATR				ex	x	19 05 01.1	
NDI	New Delhi	8.05	50	ex	Sn	19 04 48.0	+11
NGP	Nagpur	8.57	105	ex	Sn	19 04 53.1	+2.8
NGP				AML	AML	19 05 43.8	
	comp=N,45nm,1.1s						
NGP				AML	AML	19 05 43.8	
	comp=N,45nm,1.1s						
THW	Thamme Wali	9.20	8	P	Pn	19 03 24.7	+2.3
SMLA	Simla	9.68	38	ex	Pn	19 03 28.8	-0.1
SMLA				ex	x	19 03 29.8	
SMLA				ex	x	19 05 27.7	
SMLA				ex	x	19 05 28.0	
DHRM	DHARAMSHALA	10.11	31	eP	Pn	19 03 37.6	+2.4
CEP	Cherat	10.23	8	P	Pn	19 03 39.0	+2.3
CHCP	Chirah Chowk	10.31	14	P	Pn	19 03 37.0	-0.7
WSAR	Wadi Sarin	10.62	270	Pn	Pn	19 03 39.5	-2.5
	comp=N,0.7nm,0.3s,baz=124,slow=12,SNR=14						
WSAR				Sn	Sn	19 05 29.1	-12
	comp=N,0.2nm,0.3s,baz=79,slow=19,SNR=3.5						
JOSI	Joshimath	10.80	49	eP	Pn	19 03 47.0	+2.5
JOSI				eS	Sn	19 05 58.3	+13
GKN	Gorkha	13.71	69	eP	Pn	19 04 20.4	-3.9
DMN	Daman	14.02	71	eP	Pn	19 04 23.2	-5.4
	comp=N,7.3nm,0.4s						
KKN	Kakani	14.21	70	eP	Pn	19 04 25.4	-5.8
	comp=N,12nm,0.5s						
PKIN	Phulchoki	14.26	71	eP	Pn	19 04 26.6	-5.4
	comp=N,12nm,0.4s						
PKI	Pulchoki	14.27	71	eP	Pn	19 04 26.3	-5.9
	comp=N,9.8nm,0.5s						
GUN	Gumba	14.75	70	eP	Pn	19 04 33.7	-5.1
JIRN	Jiri	14.96	71	eP	Pn	19 04 35.4	-6.3
RAMN	Ramite	15.20	74	eP	Pn	19 04 38.6	-6.1
ODAN	Odare	15.88	75	eP	Pn	19 04 48.3	-5.3
TAPN	Taplejung	16.24	73	eP	Pn	19 04 53.5	-4.7
AAK	Ala-Archa	19.25	10	P	Pn	19 05 36.3	+1.0
	comp=N,0.1nm,0.3s,baz=196,slow=8.2,SNR=8.4						
MKAR	Makanchi Array	25.04	20	P	P	19 06 33.5	-0.4
	comp=N,1.9nm,0.8s,baz=207,slow=11,SNR=19						
NOA	NORSAR Array B	54.64	329	LR	LR	19 36 04.7	
	comp=N,68nm,19.5s,baz=195,slow=39						
YAK	Yakutsk	55.15	30	LR	LR	19 34 25.0	
	comp=N,93nm,21.6s,baz=164,slow=36						
WRA	Warramunga Arr	76.07	119	P	P	19 13 02.0	+4.3
	comp=N,0.4nm,0.9s,baz=309,slow=5.4,SNR=3.3						
ASAR	Alice Springs	77.70	123	P	P	19 13 12.1	+5.3
	comp=N,0.4nm,0.8s,baz=312,slow=6.0,SNR=5.3						
ILAR	Eielson Array	87.30	15	LR	LR	19 56 42.4	
	comp=N,295nm,19.2s,baz=116,slow=38						

UCR 08 19:08:46.8±1.0, 10.°62N×84.°80W, h178^{km}±3^{km}, MD3.9, MW3.6, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEDE	Laguna Cedeo	0.16	144	iP	Pn	19 09 10.8	+0.2
FORC	Fortuna	0.20	140	iP	Pn	19 09 10.9	+0.3
PTEN	Parque Tenorio	0.20	297	iP	Pn	19 09 11.1	+0.5
ACAL	Aguas Claras	0.23	273	iP	Pn	19 09 10.7	+0.1
CUI	Cuipilapa	0.36	276	iP	Pn	19 09 11.0	+0.1
CUI				iS	Sn	19 09 30.0	+0.6
JTS	Las Juntas de	0.36	204	eP	Pn	19 09 10.9	-0.1
JTS				eS	Sn	19 09 30.3	+0.8
COLC	Colonia	0.40	276	iP	Pn	19 09 11.3	+0.3
MESS	Mesas	0.40	287	iP	Pn	19 09 11.6	+0.5
GPS1	Guardaparques	0.56	286	iP	Pn	19 09 11.8	0.0
GPS1				iS	Sn	19 09 31.4	+0.5
GPS3	Bodega del ICE	0.57	284	iP	Pn	19 09 11.8	+0.1
BUEV	Buena Vista	0.62	287	iP	Pn	19 09 12.1	0.0
LAPC	Finca la Perla	0.64	283	iP	Pn	19 09 11.8	-0.3
LAPC				iS	Sn	19 09 31.5	0.0
GBS3	Finca Las Img	0.66	284	iP	Pn	19 09 11.9	-0.3
NY14	Universidad de	0.72	272	iP	Pn	19 09 12.6	+0.1
NY14				iS	Sn	19 09 33.0	+0.8
GUAI	GUAI	0.78	244	iP	Pn	19 09 12.8	0.0
HDC	Heredia	0.91	132	eP	Pn	19 09 14.3	+0.4
LCR2	La Lucha 2	1.18	138	eP	Pn	19 09 16.2	+0.2
LCR2				eS	Sn	19 09 39.9	+1.5
BRU2	Volcan	2.76	131	eP	Pn	19 09 33.8	+1.1
BRU2				eS	Sn	19 10 09.2	+0.9

WEL 08 19:17:33.7±0.6, 32°S±6°×17°9W±1°1, h419^{km}±14^{km}, M3.9/26, mB4.4/18, MLv4.8/26, Mw(mB)3.6/18, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	6.07	198	P	P	19 19 09.5	+2.2
MXZ				S	S	19 20 22.3	-1.9
WMGZ	Waiomatatini S	6.29	196	P	P	19 19 10.7	+1.0
WMGZ				S	S	19 20 27.4	-1.1
KUZ	Kuaotunu	6.40	218	P	P	19 19 13.7	+2.7
PKGZ	Pakihiroa	6.44	198	P	P	19 19 14.4	+3.0
PKGZ				S	S	19 20 31.1	-0.5
WCZ	Waipu Caves	6.67	230	P	P	19 19 13.8	-0.6
OUZ	Omahuta	6.80	238	P	P	19 19 13.5	-2.3
MWZ	Matawai	7.01	200	P	P	19 19 17.2	-0.9
MWZ				S	S	19 20 42.2	-0.7
AWAZ	Awhitu Peninsu	7.22	222	P	P	19 19 21.6	+1.2
TARZ	Mount Tarawera	7.27	207	P	P	19 19 22.7	+1.7
MUGZ	Murupara	7.38	204	P	P	19 19 20.9	-1.3
MUGZ				S	S	19 20 51.6	+1.1
RTZ	Ruatahuna	7.44	203	P	P	19 19 22.2	-0.6
RTZ				S	S	19 20 50.4	-1.3
SNGZ	Shannon Statio	7.48	200	P	P	19 19 24.5	+1.3
SNGZ				S	S	19 20 55.2	+2.8
RAHZ	Arahi	7.68	201	P	P	19 19 24.4	-1.0
RAHZ				S	S	19 20 56.5	0.0
MTHZ	Maungataniwha	7.70	203	P	P	19 19 24.4	-1.2
MTHZ				S	S	19 20 58.2	+1.3
MTHZ	Maungataniwha	7.70	203	P	S	19 21 00.4	+3.5
WHHZ	Waihua	7.78	200	P	S	19 21 01.2	+2.6
MRHZ	Matea Rd	7.83	205	P	P	19 19 27.1	+0.1
NMHZ	Naumai	7.93	202	P	P	19 19 27.6	-0.6
NMHZ	Naumai	7.93	202	P	S	19 21 05.0	+3.2
WATZ	Wairara	7.98	209	P	P	19 19 29.2	+0.5
HATZ	Hinemaiaia	8.00	206	P	P	19 19 28.6	-0.3
ARHZ	Aropaoanui	8.03	201	P	P	19 19 30.2	+1.2
ARHZ				S	S	19 21 06.2	+2.6
BKZ	Black Stump Fm	8.10	203	P	P	19 19 27.8	-2.1
BKZ				S	S	19 21 06.4	+1.3
BKZ	Black Stump Fm	8.10	203	P	S	19 21 07.1	+1.9
RATZ	Rangitukua	8.10	208	P	P	19 19 30.8	+0.8
HIZ	Hauiti	8.21	214	P	P	19 19 32.2	+1.1
KATZ	Kakaramea	8.22	208	P	P	19 19 32.0	+0.6
MCHZ	McNeill Hill	8.28	202	P	P	19 19 30.8	-1.1
MCHZ	McNeill Hill	8.28	202	P	S	19 21 12.1	+3.2
KRVZ	Karewarewa	8.35	208	P	P	19 19 33.8	+1.0
KWHZ	Kaweka Forest	8.35	203	P	P	19 19 30.8	-1.9
KWHZ	Kaweka Forest	8.35	203	P	S	19 21 12.5	+2.0
CKHZ	Cape Kidnapper	8.37	199	P	P	19 19 23.4	-9.4
WTVZ	West Tongariro	8.39	208	P	P	19 19 32.7	-0.5
TWVZ	Taurewa	8.41	209	P	P	19 19 33.0	-0.4
NGZ	Ngauruhoe	8.43	208	P	P	19 19 33.1	-0.6
FWVZ	Far West T-bar	8.52	208	P	P	19 19 33.9	-0.8
BHHZ	Black Hill Sta	8.54	205	P	P	19 19 33.6	-1.1
BHHZ	Black Hill Sta	8.54	205	P	S	19 21 14.1	-0.1
KAHZ	Kahuranaki	8.55	200	P	P	19 19 35.5	+0.6
KAHZ	Kahuranaki	8.55	200	P	S	19 21 13.8	-0.7
KRHZ	Kereru	8.57	203	P	P	19 19 33.5	-1.5
KRHZ	Kereru	8.57	203	P	S	19 21 14.5	-0.4
MOVZ	Moawhango	8.58	206	P	P	19 19 33.8	-1.4
MOVZ	Moawhango	8.58	206	P	S	19 21 15.9	+0.8
PKVZ	Pokaka	8.63	208	P	P	19 19 35.0	-0.9
VRZ	Vera Road	8.75	212	P	P	19 19 38.1	+1.1
PXZ	Pawanui	8.77	199	P	P	19 19 36.1	-1.2
PXZ	Pawanui	8.77	199	P	S	19 21 17.5	-1.5
PNHZ	Pukenui	8.87	203	P	P	19 19 36.3	-2.0
PNHZ	Pukenui	8.87	203	P	S	19 21 22.6	+1.5
WPHZ	Waipukurau	8.93	201	P	P	19 19 39.2	+0.2
WPHZ	Waipukurau	8.93	201	P	S	19 21 21.3	-1.0
PRHZ	Porangahau	9.06	200	P	P	19 19 39.8	-0.7
PRHZ	Porangahau	9.06	200	P	S	19 21 23.5	-1.5
TSZ	Takapari Road	9.08	203	P	P	19 19 39.5	-1.2
TSZ	Takapari Road	9.08	203	P	S	19 21 24.6	-0.8
PKE	Pukeiti	9.16	214	P	P	19 19 42.9	+1.3
DVHZ	Dannevirke	9.23	202	P	P	19 19 41.2	-1.1
DVHZ	Dannevirke	9.23	202	P	S	19 21 26.6	-1.8
ANWZ	Angora Road	9.28	200	P	S	19 21 33.3	+3.8
POWZ	Post Office Ro	9.44	203	P	P	19 19 44.8	+0.2
PRWZ	Pori Road	9.52	202	P	P	19 19 44.8	-0.7
BFZ	Birch Farm	9.55	201	P	P	19 19 44.5	-1.4
MRZ	Mangatainoka R	9.75	203	P	P	19 19 46.5	-1.5
TIWZ	Tintock	9.75	202	P	P	19 19 48.4	+0.2
HOWZ	Holdsworth Sta	9.98	203	P	P	19 19 47.6	-3.1
OGWZ	Otaki Gorge	10.03	205	P	P	19 19 49.1	-2.0
TMWZ	Te Maipa	10.05	201	P	P	19 19 50.8	-0.6
KIW	Kapiti Island	10.16	205	P	P	19 19 50.4	-2.2
MTW	Mount Morrison	10.22	202	P	P	19 19 52.3	-0.9
CAW	Cannon Point	10.32	204	P	P	19 19 51.7	-2.7
PAWZ	Paruwai Farm	10.45	202	P	P	19 19 55.3	-0.5
MSWZ	Moikau Station	10.54	203	P	P	19 19 55.6	-1.1
BHW	Baring Head	10.66	204	P	P	19 19 57.2	-0.8
PLWZ	Palliser	10.67	202	P	P	19 19 57.8	-0.5
CMWZ	Cape Campbell	11.19	206	P	P	19 20 05.5	+1.6
BSWZ	Blackbirch Sta	11.29	207	P	P	19 20 04.5	-0.5

IDC 08 19:46:13.4±4.0, 3.°51S×130.°93E, h0^{km}, mb3.4/2, mb1 3.6/3, mb1mx3.3/21, mbtmp3.4/3, ML3.5/1, Error ellipse: s-maj=287.9km s-min=28.2km az=72.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.67	169	Pn	Pn	19 50 07.2	-1.4
	0.2nm,0.3s,baz=349,slow=11,SNR=9.5						
WRA				Sn	Sn	19 53 01.2	-13
	0.1nm,0.3s,baz=354,slow=23,SNR=4.6						
ASAR	Alice Springs	20.24	172	P	P	19 50 51.0	+0.6
	1.0nm,0.5s,baz=349,slow=11,SNR=26						
MKAR	Makanchi Array	65.86	326	P	P	19 57 00.9	0.0
	0.2nm,0.6s,baz=108,slow=8.8,SNR=3.1						

*NEIC **08** 20:07:23.9±1.1, 40.°25N±0.°03×124.°54W±0.°08, h28^{km}±8^{km}, Error ellipse: s-maj=8.8km s-min=3.8km az=81.0*

*ANF **08** 20:07:25.7±0.6, 40.°38N×124.°30W, h20^{km}, ML2.5/6, Error ellipse: s-maj=4.9km s-min=2.7km az=50.0*

*NCEDC **08** 20:07:25.9±2.2, 40.°29N±0.°02×124.°40W±0.°07, h20^{km}±7^{km}, Md2.8/59, Error ellipse: s-maj=7.6km s-min=2.4km az=94.0*

ISC 08 20:07:24.0±1.3, 40.°25N±0.°03×124.°51W±0.°06, h33^{km}±7^{km}, n71, σ1^{s}08/83, Near coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	0.26	31		Pb	20 07 31.6	+0.2
KCTM					Sb	20 07 36.3	0.0
KSMM	Slide Mountain	0.26	104		Pb	20 07 31.3	-0.1
KMPM	Mount Pierce	0.34	61		Pb	20 07 32.1	-0.3
KMPM					Sb	20 07 37.0	-1.1
KCRM	Chalk Rock	0.56	71		Pb	20 07 35.7	+0.2
KMRM	Mail Ridge	0.61	93		Pb	20 07 36.7	+0.2
KMRM					Sn	20 07 45.6	+0.4
JCC	Jacoby Creek,	0.67	33	Pg	Pb	20 07 36.8	-0.6
JCC	Jacoby Creek,	0.67	33		Sb	20 07 44.8	-1.7
KBSM	Bell Springs	0.78	115		Pb	20 07 39.1	-0.1
KHMM	Horse Mountain	0.86	43		Pb	20 07 39.9	-0.7
KPPM	Pickett Peak	0.88	84		Pb	20 07 40.7	-0.3
KIPM	Iron Peak	0.91	119		Pb	20 07 40.9	-0.5
KCPM	Cahto Peak	0.91	128		Pb	20 07 41.0	-0.4
KRPM	Rodgers	0.98	22		Pb	20 07 41.5	-1.0
KFPM	Farley Peak	1.03	126		Pb	20 07 42.6	-0.8
KHBM	Hayfork Bally	1.07	67		Pb	20 07 42.7	-1.4
KBNM	Bluenose Ridge	1.07	109		Pb	20 07 43.4	-0.7
GTC	Three Chop Rid	1.12	139		Pn	20 07 43.9	+0.5
LBPM	Beegum Peak	1.25	86		Pn	20 07 45.7	+0.5
GNAM	Navarro Ridge	1.25	147		Pn	20 07 45.9	+0.7
KOMM	Orleans Mounta	1.30	38		Pn	20 07 46.0	+0.1
O02D	Mt. Diablo Mer	1.32	93		Pn	20 07 47.0	+0.9
O02D	Mt. Diablo Mer	1.32	93	P	Pn	20 07 47.0	+0.9
	baz=276,SNR=84						
O02D				S	Sb	20 08 02.9	-2.0
	baz=276						
KRMB	Red Mountain	1.35	20		Pn	20 07 46.7	+0.1
GHOM	Hamilton Openi	1.42	148		Pn	20 07 48.1	+0.6
GHMM	Hull Mountain	1.43	121		Pn	20 07 48.1	+0.3
LGPM	Granite Peak	1.44	62		Pn	20 07 48.1	+0.3
GROM	Round Mountain	1.45	103		Pn	20 07 48.7	+0.7
GVV	Valley View	1.49	108		Pn	20 07 49.0	+0.5
GASB	Alder Springs	1.50	113		Pn	20 07 49.1	+0.4
WDC	Whiskeytown Da	1.54	77		Pn	20 07 49.5	+0.4
WDC	Whiskeytown Da	1.54	77		Pn	20 07 49.6	+0.5
WDC				Sn	Sn	20 08 08.3	+0.4
N02D	Trinity Center	1.55	62		Pn	20 07 49.7	+0.4
N02D	Trinity Center	1.55	62	P	Pn	20 07 49.6	+0.2
	baz=242,SNR=122						
N02D				S	Sn	20 08 07.8	-0.6
	baz=242						
GGUM	Gualala	1.60	150		Pn	20 07 50.5	+0.6
LBKM	Bonanza King	1.63	59		Pn	20 07 50.9	+0.4
GSNM	Snow Mountain	1.66	142		Pn	20 07 51.5	+0.7
GHLM	Highland Sprin	1.67	136		Pn	20 07 51.5	+0.6
HOPS	Hopland Field	1.68	138		Pn	20 07 51.6	+0.6
M02C	Callahan	1.70	47		Pn	20 07 51.8	+0.4
M02C	Callahan	1.70	47	P	Pn	20 07 51.6	+0.3
	baz=227,SNR=49						
M02C				S	Sn	20 08 11.4	-0.5
	baz=227						
LTCM	Tuscan Springs	1.83	91		Pn	20 07 54.0	+1.0
KTRM	Thompson Ridge	1.86	27		Pn	20 07 54.1	+0.4
LSHM	Sage Hen Hill	1.96	73		Pn	20 07 55.8	+0.8
LAMM	Antelope Mount	1.97	46		Pn	20 07 55.8	+0.6
KBO	Bosley Butte	1.97	6	Pn	Pn	20 07 56.9	+1.7
YBH	Yreka Blue Hor	2.01	42	Pn	Pn	20 07 56.1	+0.4
L02E	Cave Junction	2.02	19	P	Pn	20 07 56.4	+0.7
	baz=198,SNR=9.4						
L02E				S	Sn	20 08 19.3	-0.7
	baz=198						
LGBM	Gray Butte	2.07	57		Pn	20 07 57.9	+1.2
O03E	Paynes Creek	2.07	88		Pn	20 07 56.7	+0.2
O03E	Paynes Creek	2.07	88	P	Pn	20 07 56.9	+0.4
	baz=271,SNR=44						
O03E				S	Sn	20 08 21.6	+0.4
	baz=271						
M03C	McCloud	2.08	60		Pn	20 07 58.0	+1.4
LDBM	Digger Butte	2.09	84		Pn	20 07 57.1	+0.3
LMPM	Military Pass	2.17	54		Pn	20 07 59.7	+1.7
LHEM	Herd Peak	2.21	51		Pn	20 08 00.0	+1.4
B040	Montague	2.23	44		Pn	20 07 59.7	+1.0
LBFM	Black Fox Moun	2.27	60		Pn	20 08 01.0	+1.6
MGL	Magalia	2.31	100		Pn	20 08 00.7	+1.0
HATC	Hat Creek Radi	2.39	75		Pn	20 08 02.3	+1.4
ORV	Oroville	2.42	106		Pn	20 08 02.5	+1.3
ORV				Sn	Sn	20 08 30.0	+0.4
LTIM	Timbered Crate	2.48	67		Pn	20 08 03.1	+1.1
LBCM	Butte Creek Ri	2.48	75		Pn	20 08 03.2	+1.1
K02D	Willamette Mer	2.52	14	P	Pn	20 08 03.8	+1.1
	baz=193,SNR=17						
K02D				S	Sn	20 08 31.6	-0.7
	baz=193						
L04D	Klamath Falls	2.57	40	P	Pn	20 08 05.6	+2.1
	baz=220,SNR=39						
L04D				S	Sn	20 08 35.8	+2.1
	baz=220						
AFDM	Forest Hills D	3.03	114	Pn	Pn	20 08 11.0	+1.4
CRPB	Russellman Par	3.09	138		Pb	20 08 16.3	-1.9
MOD	Modoc Plateau	3.58	61		Pn	20 08 17.9	+0.5
J05D	Fort Rock, OR	3.90	38	P	Pn	20 08 24.0	+2.3
	baz=219,SNR=5.4						
PNTR	Pine Nut	3.96	105		Pn	20 08 25.5	+2.8
PAHR	Pah Rah Range	3.98	96	Pn	Pn	20 08 25.2	+2.5
YERR	Yerington	4.26	106	Pn	Pn	20 08 29.2	+2.5
WOFM	Oak Flat	6.57	134		Pn	20 08 60.0	+1.6

*IDC **08** 20:10:26.3±1.4, 16.°60N×123.°23E, h0^{km}, mb3.6/4, mb1 3.9/5, mb1mx3.4/49, mbtmp3.7/5, ML4.7/1, Error ellipse: s-maj=55.9km s-min=20.8km az=67.0*

*NEIC **08** 20:10:28.7±2.5, 16.°67N±0.°07×123.°03E±0.°09, h23^{km}±6^{km}, mb4.0/8, Error ellipse: s-maj=12.8km s-min=9.1km az=62.0*

*MAN **08** 20:10:28.9, 16.°22N×122.°45E, h4^{km}, mb5.2, ML4.2, MS4.3*

ISC 08 20:10:29.7±1.4, 16.°25N±0.°03×122.°47E±0.°05, h17^{km}±9^{km}, n40, σ1^{s}31/43, mb3.8/8, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAUP	Cauayan	0.93	318	eP	Pg	20 10 46.6	-1.0
CAUP				eS	Sb	20 11 00.7	+1.4
BALP	Baler	0.99	240	eP	Pg	20 10 47.8	-1.1
BALP				eS	Sn	20 11 02.5	+0.1
PCPH	Palayan	1.48	243	⇓ep	Pn	20 10 56.0	+0.5
PCPH				eS	Sg	20 11 15.8	-1.9
POLP	Polilio Island	1.59	199	eP	Pn	20 10 57.3	+0.2
POLP				eS	Sn	20 11 18.1	+0.8
SMPP	San Manuel, Pa	1.72	267	eP	Pn	20 10 58.9	+0.1
SMPP				eS	Sn	20 11 21.2	+0.9
APYP	Conner	1.98	324	eP	Pn	20 11 02.3	-0.1
APYP				eS	Sn	20 11 26.7	-0.3
SGCP	Mt. Cagua	2.02	349	eP	Pn	20 11 04.8	+1.8
SGCP				eS	Sg	20 11 36.0	+1.1
LQP	Lukban	2.30	203	eP	Pn	20 11 08.3	+1.3
LQP				eS	Sb	20 11 39.3	+0.1
SZP	Santa	2.32	304	Pn	Pn	20 11 08.9	+1.9
BOLP	Bolinao	2.45	273	eP	Pn	20 11 11.5	+2.6
BOLP				eS	Sb	20 11 42.5	-0.8
SCZP	Santa Cruz	2.50	260	eP	Pn	20 11 11.0	+1.5
SCZP				eS	Sg	20 11 51.0	+0.8
SIPP	Brgy, Tapao	2.54	311	⇑eP	Pn	20 11 12.1	+2.0
SIPP				eS	Sb	20 11 47.9	+2.1
TGY	Tagaytay City	2.59	215	Pn	Pg	20 11 19.5	0.0
	69nm,0.3s,baz=107,slow=3.9,SNR=5.9						
TGY				Sn	Sg	20 11 56.5	+3.4
	46nm,0.3s,baz=148,slow=22,SNR=9.4						
BOAC	Boac	2.84	192	eP	Pn	20 11 15.1	+0.9
PVCP	Virac	3.10	148	eP	Pn	20 11 18.8	+1.0
LUBP	Lubang	3.29	221	eP	Pg	20 11 31.6	-1.2
OTRP	Odiongan	3.89	186	eP	Pn	20 11 30.8	+2.1
SSLB	Suanglung	7.63	350	Pn	Pn	20 12 13.6	-6.6
PBKT	Sadao Pong	20.62	274	P	Pn	20 15 11.5	+0.9
PBKT				IAmb	IAmb	20 15 17.1	
	comp=Z,3.5nm,1.0s						
SONM	Songino Array	34.17	341	P	P	20 17 12.2	-1.8
FITZ	Fitzroy Crossi	34.27	175	P	P	20 17 15.2	+0.1
WRA	Warramunga Arr	37.81	162	P	P	20 17 45.3	-0.1
	comp=Z,1.3nm,0.8s,baz=344,slow=9.0,SNR=8.3						
WB2	Warramunga Arr	37.81	162	P	P	20 17 44.9	-0.5
WB2				IAmb	IAmb	20 17 48.1	
	comp=Z,6.5nm,1.3s						
WR0	Warramunga Arr	37.89	161	P	P	20 17 46.0	0.0
WR0				IAmb	IAmb	20 18 04.5	
	comp=Z,1.7nm,1.0s						
ASAR	Alice Springs	41.22	164	P	P	20 18 14.4	+0.6
	comp=Z,0.9nm,0.6s,baz=350,slow=7.8,SNR=11						
ASAR	Alice Springs	41.22	164	P	P	20 18 14.2	+0.4
H11S3	WAKE ISLAND Hy	42.19	80	T	T	21 03 36.7	
	baz=274,slow=74,SNR=49						
H11S1	WAKE ISLAND Hy	42.20	80	T	T	21 03 34.5	
	baz=274,slow=74,SNR=32						
H11S2	WAKE ISLAND Hy	42.21	80	T	T	21 03 39.0	
	baz=274,slow=74,SNR=37						
H11N1	WAKE ISLAND Hy	42.31	78	T	T	21 03 42.5	
	baz=273,slow=74,SNR=27						
H11N2	WAKE ISLAND Hy	42.31	78	T	T	21 03 42.4	
	baz=273,slow=74,SNR=31						
H11N3	WAKE ISLAND Hy	42.33	78	T	T	21 03 44.2	
	baz=273,slow=74,SNR=17						
MK31	Makanchi Array	45.06	321	P	P	20 18 44.0	-0.7
MKAR	Makanchi Array	45.06	321	P	P	20 18 45.8	+1.1
	comp=Z,0.3nm,0.8s,baz=109,slow=8.3,SNR=2.7						
MKAR	Makanchi Array	45.06	321	P	P	20 18 44.1	-0.6
ZALV	Zalesovo Beam	47.63	331	P	P	20 19 01.3	-3.4
KURK	Kurchatov	49.08	324	P	P	20 19 14.4	-1.5
KURK				IAmb	IAmb	20 19 27.7	
	comp=Z,2.1nm,1.1s						
KURBB	Kurchatov Arra	49.08	324	P	P	20 19 16.0	0.0
	comp=Z,0.5nm,0.6s,baz=121,slow=8.1,SNR=6.8						
KKAR	Karatay Array	51.47	312	P	P	20 19 33.7	-0.5
BRVK	Borovoye	54.75	324	P	P	20 19 57.3	-0.8
BRVK				IAmb	IAmb	20 20 14.7	
	comp=Z,2.1nm,1.1s						

*GCG **08** 20:19:45.5±0.9, 13.°51N×90.°42W, h79^{km}±37^{km}, MD4.1*

*NEIC **08** 20:19:45.3±1.6, 13.°87N±0.°07×90.°40W±0.°05, h113^{km}±7^{km}, mb4.2/10, Md4.0/11(MEX), Error ellipse: s-maj=11.4km s-min=5.7km az=201.0*

*INET **08** 20:19:45.9, 13.°79N×90.°44W, h95^{km}, ML4.5*

*SNET **08** 20:19:46.2±0.9, 13.°90N×90.°26W, h106^{km}±3^{km}, ML3.9*

*UCR **08** 20:19:46.5, 13.°90N×90.°26W, h106^{km}, MD4.4, ML3.8, mb4.2(NEIC)*

*MEX **08** 20:19:46.1±0.6, 14.°00N×90.°36W, h132^{km}±17^{km}, MD4.0*

*IDC **08** 20:19:47.5±1.7, 14.°28N×89.°94W, h123^{km}±7^{km}, mb3.4/4, mb1 3.6/6, mb1mx3.2/31, mbtmp3.8/6, MS3.2/1, Ms1 3.2/1, ms1mx2.4/32, Error ellipse: s-maj=53.2km s-min=21.2km az=45.0*

ISC 08 20:19:45.2±0.7, 13.°90N±0.°05×90.°37W±0.°04, h114^{km}±5^{km}, n107, σ1^{s}16/147, mb4.1/6, 1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	Ixpaco	0.28	346	⇓iP	Pn	20 20 01.5	-0.1
PCG	Pacaya	0.54	335	eP	Pn	20 20 03.9	+0.8
NBG	Las Nubes	0.69	2	eP	Pn	20 20 06.8	+2.6
RTR	El Retiro	0.70	90	eP	Pn	20 20 04.2	+0.1
RTR				eS	Sn	20 20 18.1	-0.3
RTR	El Retiro	0.70	90	eP	Pn	20 20 04.2	+0.1
RTR				eS	Sn	20 20 18.1	-0.3
FUG	Fuego 3	0.71	320	eP	Pn	20 20 04.5	+0.2
CEVE	Cerro Verde	0.73	95	eP	Pn	20 20 04.3	-0.1
CEVE				eS	Sn	20 20 19.0	+0.1
CEVE				IAML		20 20 21.1	
	comp=Z,4µm,0.4s						
CEVE	Cerro Verde	0.73	95	eP	Pn	20 20 04.3	-0.1
CEVE				eS	Sn	20 20 19.0	+0.1
CEVE				IAML		20 20 21.1	
	comp=Z,4µm,0.4s						
SBLS	San Blas	0.73	94	eP	Pn	20 20 04.1	-0.4
SBLS				eS	Sn	20 20 19.0	+0.1
SBLS	San Blas	0.73	94	eP	Pn	20 20 04.1	-0.4
SBLS				eS	Sn	20 20 19.0	+0.1
SNJE	San Jose	0.74	92	eP	Pn	20 20 04.3	-0.2
SNJE				eS	Sn	20 20 19.2	+0.1
SNJE	San Jose	0.74	92	eP	Pn	20 20 04.3	-0.2
SNJE				eS	Sn	20 20 19.2	+0.1
BOQS	Boqueron	1.07	98	eP	Pn	20 20 07.6	0.0
BOQS				eS	Sn	20 20 24.4	-0.2
LALI	Alcalda de L	1.10	112	eP	Pn	20 20 07.5	-0.2
LALI				eS	Sn	20 20 24.0	-0.6
LALI	Alcalda de L	1.10	112	eP	Pn	20 20 07.5	-0.2
LALI				eS	Sn	20 20 24.0	-0.6
MTO3	Montecristo	1.10	63	eP	Pn	20 20 07.7	-0.3
MTO3	Montecristo	1.10	63	eP	Pn	20 20 07.7	-0.3
APG	El Apazote	1.10	355	P	Pn	20 20 09.0	+0.9
	comp=Z,13nm,0.3s,baz=185,slow=7.6,SNR=9.4						
APG				S	Sn	20 20 25.8	+0.5
	comp=Z,14nm,0.3s,baz=285,slow=23,SNR=4.7						
SNET	Serv Nac Est T	1.12	101	eP	Pn	20 20 07.6	-0.4
SNET				eS	Sn	20 20 25.0	-0.4

SNET				IAML		20 20 32.9	
	comp=Z,1µm,0.1s						
SNET	Serv Nac Est T	1.12	101	*e*P	Pn	20 20 07.6	-0.4
SNET				*e*S	Sn	20 20 25.0	-0.4
SNET				IAML		20 20 32.9	
	comp=Z,1µm,0.1s						
SNET	Serv Nac Est T	1.12	101		Pn	20 20 07.8	-0.3
SNET				Sn	Sn	20 20 25.9	+0.5
OPAM	Oficina de Pla	1.15	99	*e*P	Pn	20 20 07.7	-0.6
OPAM	Oficina de Pla	1.15	99	*e*P	Pn	20 20 07.7	-0.6
CUSC	Alcaldia de Cu	1.17	98	*e*P	Pn	20 20 08.2	-0.3
CUSC				*e*S	Sn	20 20 25.4	-0.7
CUSC	Alcaldia de Cu	1.17	98	*e*P	Pn	20 20 08.2	-0.3
CUSC				*e*S	Sn	20 20 25.4	-0.7
LOMA	Loma Larga	1.19	102	*e*P	Pn	20 20 09.2	+0.4
LOMA				*e*S	Sn	20 20 25.6	-1.1
LOMA	Loma Larga	1.19	102	*e*P	Pn	20 20 09.2	+0.4
LOMA				*e*S	Sn	20 20 25.6	-1.1
LFU	La Fuente	1.23	97	*e*P	Pn	20 20 09.0	-0.2
LFU	La Fuente	1.23	97	*e*P	Pn	20 20 09.0	-0.2
ERG	Entre ros, C	1.28	295	*e*P	Pn	20 20 10.4	+0.6
ERG				*e*S	Sn	20 20 29.6	+1.3
LBRS	Las Brisas	1.30	97	*e*P	Pn	20 20 10.1	+0.1
LFRS	El Faro	1.30	102	*e*P	Pn	20 20 09.7	-0.3
LFRS				*e*S	Sn	20 20 27.8	-1.0
MRL	Marmol	1.35	29	*e*P	Pn	20 20 11.3	+0.5
MRL				*e*S	Sn	20 20 30.5	+0.4
MRL	Marmol	1.35	29	*e*P	Pn	20 20 11.3	+0.5
MRL				*e*S	Sn	20 20 30.5	+0.4
STG3	Santiaguito 3,	1.42	305	*e*P	Pn	20 20 11.6	+0.2
COEG	Centro de Oper	1.47	101	*e*P	Pn	20 20 12.1	+0.1
COEG				*e*S	Sn	20 20 30.9	-1.4
COEG	Centro de Oper	1.47	101	*e*P	Pn	20 20 12.1	+0.1
COEG				*e*S	Sn	20 20 30.9	-1.4
COEB	Comit de Eme	1.83	102	*e*P	Pn	20 20 16.8	+0.4
COEB				*e*S	Sn	20 20 40.2	+0.1
COEB	Comit de Eme	1.83	102	*e*P	Pn	20 20 16.8	+0.4
COEB				*e*S	Sn	20 20 40.2	+0.1
TECA	Tecapa	1.86	102	*e*P	Pn	20 20 17.0	+0.2
TECA	Tecapa	1.86	102	*e*P	Pn	20 20 17.0	+0.2
PACA	Pacayal	2.03	102	*e*P	Pn	20 20 18.9	0.0
PACA	Pacayal	2.03	102	*e*P	Pn	20 20 18.9	0.0
THIG		2.10	299	*i* P	Pn	20 20 19.9	+0.4
THIG				*i* S	Sn	20 20 45.9	0.0
THIG		2.10	299		Pn	20 20 19.9	+0.4
THIG					Sn	20 20 45.9	0.0
JUCU	Jucuar¡n	2.16	107	*e*P	Pn	20 20 20.3	-0.1
JUCU	Jucuar¡n	2.16	107	*e*P	Pn	20 20 20.3	-0.1
FAGO	Alcalda de S	2.21	95	*e*P	Pn	20 20 21.0	0.0
FAGO	Alcalda de S	2.21	95	*e*P	Pn	20 20 21.0	0.0
LCND	La Caada	2.48	103	*e*P	Pn	20 20 24.7	+0.2
LCND	La Caada	2.48	103	*e*P	Pn	20 20 24.7	+0.2
CNCH	Conchagua	2.54	104	*e*P	Pn	20 20 25.6	+0.2
CNCH				*e*S	Sn	20 20 56.4	+0.1
CNCH	Conchagua	2.54	104	*e*P	Pn	20 20 25.6	+0.2
CNCH				*e*S	Sn	20 20 56.4	+0.1
CSGN	Cosiguina Volc	2.88	108	*e*P	Pn	20 20 33.0	+3.1
CSGN	Cosiguina Volc	2.88	108		Pn	20 20 30.6	+0.7
CSGN				Sn	Sn	20 21 05.1	+0.9
CCIG	Comitan	2.92	324	*e*P	Pn	20 20 29.5	-1.0
CCIG				*i* S	Sn	20 21 03.6	-1.7
CCIG	Comitan	2.92	324		Pn	20 20 31.2	+0.7
CCIG				Sn	Sn	20 21 06.1	+0.7
TGUH	Tegucigalpa,Un	3.01	87	*i* P	Pn	20 20 31.8	+0.2
TGUH	Tegucigalpa,Un	3.01	87		Pn	20 20 31.8	+0.2
PCIG		3.29	303	*e*P	Pn	20 20 34.8	-0.3
PCIG				*e*S	Sn	20 21 12.7	-1.1
PCIG		3.29	303		Pn	20 20 34.8	-0.3
CRIN	San Cristobal	3.44	110	*e*P	Pn	20 20 38.5	+1.2
ESTN	Estel	3.97	101	*e*P	Pn	20 20 45.1	+0.8
ESTN	Estel	3.97	101		Pn	20 20 45.4	+1.0
ESTN				Sn	Sn	20 21 31.1	+0.9
MOMN	Momotombo	4.01	111	*e*P	Pn	20 20 44.6	-0.3
MOMN	Momotombo	4.01	111	*e*P	Pn	20 20 44.6	-0.3
MATN	Matagalpa	4.43	102	*e*P	Pn	20 20 50.9	+0.4
MASN	Masaya	4.53	114	*e*P	Pn	20 20 52.4	+0.6
CMIG	Matias Romero	5.39	307	P	Pn	20 21 02.8	-0.5
	comp=Z,2.5nm,0.3s,baz=129,slow=9.5,SNR=29						
CMIG				S	Sn	20 22 00.1	-4.1
	comp=Z,1.6nm,0.3s,baz=34,slow=19,SNR=6.5						
CMIG	Matias Romero	5.39	307	*e*P	Pn	20 21 02.7	-0.6
CMIG				*i* S	Sn	20 22 02.4	-1.9
CMIG	Matias Romero	5.39	307		Pn	20 21 02.7	-0.6
ACON	Acoyapa	5.42	110	*e*P	Pn	20 21 04.2	+0.5
ACON	Acoyapa	5.42	110		Pn	20 21 03.8	+0.1
NY14	Universidad de	5.72	124	*i* P	Pn	20 21 09.9	+2.0
GB1A	Borinquen Arri	5.74	122	*i* P	Pn	20 21 09.2	+1.1
GUAI	GUAI	5.96	127	*i* P	Pn	20 21 13.1	+1.9
COLC	Colonia	5.98	122	*i* P	Pn	20 21 12.8	+1.4
COLC				*i* S	Sn	20 22 14.7	-4.0
CUI	Cuipilapa	6.02	122	*i* P	Pn	20 21 13.1	+1.1
CUI				*i* S	Sn	20 22 15.9	-3.7
JTS	Las Juntas de	6.39	123	P	Pn	20 21 18.2	+1.2
	comp=Z,8.7nm,0.3s,baz=331,slow=24,SNR=21						
JTS				S	Sn	20 22 24.3	-4.4
	comp=Z,2.5nm,0.3s,baz=252,slow=15,SNR=3.2						
JTS	Las Juntas de	6.39	123	*e*P	Pn	20 21 18.5	+1.5
JTS	Las Juntas de	6.39	123		Pn	20 21 18.0	+1.0
TEIG	Tepich	6.61	17	P	Pn	20 21 19.9	+0.1
	comp=Z,5.0nm,0.3s,baz=90,slow=0.0,SNR=26						
TEIG	Tepich	6.61	17	Pn	Pn	20 21 20.1	+0.3
LCR2	La Lucha 2	7.47	123	*e*P	Pn	20 21 34.3	+2.5
TLIG	Tlapa	8.69	296		Pn	20 21 48.5	+0.3
ZAIG	Zacatecas	14.55	309		Pn	20 23 08.1	+2.1
RUSC	La Rusia	18.78	113	P	P	20 23 54.1	-2.3
FLOC	Florencia	19.01	129	P	Pn	20 24 01.9	+1.6
TXAR	Lajitas Array	19.69	323	P	P	20 24 07.7	+2.1
	comp=Z,0.1nm,0.3s,baz=145,slow=13,SNR=4.5						
TXAR	Lajitas Array	19.69	323	P	P	20 24 06.3	+0.6
TX32	Lajitas Array	19.69	323	P	P	20 24 06.0	+0.3
Z50A	Ashland	19.69	11	P	P	20 24 06.4	+0.8
BANI	BANI	19.73	74	P	P	20 24 07.9	+1.7
SDV	Santo Domingo	19.97	102	P	P	20 24 11.3	+2.4
	comp=Z,0.3nm,0.3s,baz=286,slow=7.4,SNR=5.1						
LPIG	La Paz	21.39	301	LR	LR	20 33 27.4	
	comp=Z,64nm,21.9s,baz=332,slow=38						
W35A	Tecumseh	21.96	346	P	P	20 24 28.3	-1.5
T47A	Sharon Grove	23.18	7	P	P	20 24 41.5	-0.4
T49A	Edmonton	23.51	10	P	P	20 24 44.6	-0.4
T49A				IAmb	IAmb	20 24 45.6	
	comp=Z,8.0nm,0.8s						
WCI	Wyandotte Cave	24.50	8	P	P	20 24 53.6	-0.3
WCI				IAmb	IAmb	20 24 54.6	
	comp=Z,13nm,1.0s						
NVAR	Mina Array Bea	34.76	320	P	P	20 26 26.5	+1.5
	comp=Z,0.8nm,0.7s,baz=138,slow=7.2,SNR=6.7						
NVAR	Mina Array Bea	34.76	320	P	P	20 26 25.3	+0.3
ULM	Lac du Bonnet	36.53	354	P	P	20 26 37.5	-2.1
	comp=Z,1.3nm,0.4s,baz=188,slow=8.0,SNR=4.6						
ULM	Lac du Bonnet	36.53	354	P	P	20 26 37.3	-2.3
ULM				IAmb	IAmb	20 26 37.9	
	comp=Z,1.5nm,0.9s						
SCHQ	Schefferville	44.78	19	P	P	20 27 45.5	-2.0
	comp=Z,2.0nm,0.6s,baz=238,slow=8.0,SNR=5.0						
SCHQ	Schefferville	44.78	19	P	P	20 27 45.6	-1.8
SCHQ				IAmb	IAmb	20 27 52.2	
	comp=Z,8.4nm,1.4s						
YKA	Yellowknife Ar	51.50	346	P	P	20 28 37.5	-1.4
	comp=Z,0.1nm,0.3s,baz=146,slow=8.2,SNR=4.0						
CMAR	Chiang Mai Arr	146.57	344	PKPbc	PKPdf	20 39 13.5	+0.8
	comp=Z,0.8nm,0.5s,baz=344,slow=3.3,SNR=5.7						

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*TIR **08** 20:24:09.3, 41°.51N×19°.46E, h6^{km}, Md2.6/4*

ISC 08 20:24:10.4±1.8, **41°.54N**±0°.06×**19°.51E**±0°.09, **h12**^{km}, **n5**, σ**0^{s}.99**/9, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.33	125	*i* PG	Pg	20 24 16.4	-0.7
TIR				*i* SG	Sg	20 24 22.2	+0.7
PUK	Puka	0.58	30	*i* PG	Pg	20 24 22.1	+0.4
PUK				*i* SG	Sb	20 24 31.8	+1.0
PHP	Peshkopia	0.72	78	*i* PG	Pg	20 24 23.6	-0.7
PHP				*i* SG	Sb	20 24 35.2	+0.5
BCI	Bajram Curri	0.93	27	*i* PG	Pg	20 24 26.6	-1.7
BCI				*i* SG	Sn	20 24 42.3	-0.2
STON	Ston	1.89	315	Sn	Sn	20 25 06.6	+0.4

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*IDC **08** 20:52:47.9±1.2, 38°.00N×15°.22E, h0^{km}, mb3.7/4, mb1 3.7/6, mb1mx3.4/55, mbtmp3.6/6, ML3.4/2, MS3.1/3, Ms1 3.2/3, ms1mx2.7/52, Error ellipse: s-maj=34.9km s-min=9.1km az=135.0*

*ROM **08** 20:52:50.8±0.1, 37°.922N±0°.006×14°.86E±0°.01, h37^{km}, ML4.0/27, Mw3.8, Error ellipse: s-maj=0.9km s-min=0.7km az=107.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.25; $M_{\theta\theta}$1.58; $M_{\phi\phi}$-0.33; $M_{r\theta}$-4.61; $M_{\theta\phi}$0.89; $M_{\phi r}$-1.81; Fault plane solution: $M_0$5.19820×10^{14} NP1:ϕ_s69.00000°, δ81.00000°, λ-90.00000°. NP2:ϕ_s248.00000°, δ9.00000°, λ-90.00000°.*

*LDG **08** 20:52:50.0±0.1, 37°.91N×14°.92E, h37^{km}, Ml3.0/6 Error ellipse: s-maj=3.2km s-min=2.9km az=79.0*

ISC 08 20:52:51.1±0.8, **37°.95N**±0°.02×**14°.96E**±0°.02, **h33**^{km}±1^{km}, **n101**, σ**1^{s}.90**/128, **mb3.8**/4, **22C-9D**, **Sicily**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MUCR	Ucria	0.11	322	⇑P	Pn	20 52 56.8	+0.4
MUCR				S	Sb	20 53 02.1	+1.0
MUCR				AML	AML		
MUCR				AML	AML		
	comp=E,81500µm,0.4s						
EMSG	Monte Spagnolo	0.13	184	P	Pb	20 52 57.5	+0.3
EMSG				S	Sb	20 53 03.2	+1.8
EMSG				AML	AML		
	comp=E,42350µm,0.5s						
EMSG				AML	AML		
	comp=E,42350µm,0.5s						
EMSG				AML	AML		
EPZF	Pizzo Felice	0.15	213	P	Pn	20 52 57.2	+0.1
EPZF				S	Sb	20 53 02.9	+1.3
EPZF				AML	AML		
	comp=E,72500µm,1.0s						
EPZF				AML	AML		
NOV	Novara	0.16	62	⇑P	Pb	20 52 57.9	+0.6
NOV				S	Sb	20 53 03.0	+1.4
NOV				AML	AML		
	comp=N,41300µm,0.8s						
NOV				AML	AML		
	comp=E,50000µm,0.5s						
NOV				AML	AML		
	comp=N,41300µm,0.8s						
MNO	Monte Soro	0.21	265	P	Pn	20 52 57.3	-0.8
MNO				S	Sn	20 53 02.4	+0.4
MNO				AML	AML		
MNO				AML	AML		
AIO	Antillo	0.21	85	⇓P	Pn	20 52 58.7	+0.7
AIO				S	Sb	20 53 04.5	+2.0
MCPD	Capo d'Orlando	0.25	312	P	Pn	20 52 57.8	-0.7
MCPD				S	Sb	20 53 03.4	+0.4
MCSR	Castroreale	0.25	64	⇑P	Pn	20 52 59.0	+0.4
MCSR				S	Sb	20 53 05.1	+1.8
MCSR				AML	AML		
	comp=E,46200µm,0.3s						
MCSR				AML	AML		
	comp=N,63900µm,0.3s						
MCSR				AML	AML		
	comp=N,63900µm,0.3s						
MCSR				AML	AML		
	comp=E,46200µm,0.3s						
ESLN	Serra La Nave	0.26	178	⇑P	Pn	20 52 58.5	-0.3
ESLN				S	Sn	20 53 04.2	+0.6
ESLN				AML	AML		
	comp=E,31950µm,0.6s						
ESLN				AML	AML		
	comp=N,32100µm,0.5s						
ESLN				AML	AML		
	comp=E,31950µm,0.6s						
ESLN				AML	AML		
	comp=N,32100µm,0.5s						
MPNC	Port Mandanici	0.36	58	P	Pb	20 53 00.8	+1.2
MPNC				S	Sb	20 53 08.7	+3.2
MILZ	Milazzo	0.38	34	⇑P	Pn	20 53 02.3	+1.9
MILZ				S	Sb	20 53 10.0	+4.1
MILZ				AML	AML		
	comp=E,60000µm,0.5s						
MILZ				AML	AML		
	comp=N,32400µm,0.8s						
MILZ				AML	AML		
	comp=E,60000µm,0.5s						
MILZ				AML	AML		
	comp=N,32400µm,0.8s						
GALF	Gagliano Caste	0.40	232	⇓P	Pb	20 52 59.6	-0.5
GALF				S	Sn	20 53 07.2	+0.2
GALF				AML	AML		
	comp=E,19400µm,0.7s						
GALF				AML	AML		
	comp=N,16100µm,1.0s						
GALF				AML	AML		
	comp=N,16100µm,1.0s						
GALF				AML	AML		
	comp=E,19400µm,0.7s						
ECNV	Catenanuova	0.41	209	P	Pb	20 53 00.7	+0.4
ECNV				AML	AML		
	comp=E,35750µm,0.5s						
ECNV				AML	AML		
	comp=N,32750µm,1.2s						
VPL	Vulcano Piano	0.42	2	⇑P	Pb	20 53 00.8	+0.2
VPL				S	Sn	20 53 08.6	+0.9
VPL				AML	AML		
	comp=E,29800µm,1.4s						
VPL				AML	AML		
	comp=N,70450µm,0.5s						
VPL				AML	AML		
	comp=E,29800µm,1.4s						
VPL				AML	AML		
	comp=N,70450µm,0.5s						
LLI	Lipari	0.49	359	⇑P	Pb	20 53 02.0	+0.5
LLI				AML	AML		
	comp=E,14900µm,1.4s						
LLI				AML	AML		
	comp=E,16100µm,1.4s						
LLI				AML	AML		
	comp=N,84850µm,0.6s						
LLI				AML	AML		
	comp=E,16100µm,1.4s						
LLI				AML	AML		
	comp=N,84850µm,0.6s						
CAGR	Agira	0.49	228	P	Pb	20 53 01.9	+0.3
CAGR				AML	AML		
	comp=E,16850µm,0.5s						
CAGR				AML	AML		
	comp=N,14500µm,0.6s						
CAGR				AML	AML		
	comp=N,14500µm,0.6s						
CAGR				AML	AML		
	comp=E,16850µm,0.5s						
MSRU	Castanea	0.53	54	P	Pb	20 53 03.6	+1.4
MSRU				S	Sn	20 53 13.8	+3.6
MTTG	Motta San Giov	0.58	85	⇓P	Pb	20 53 04.4	+1.5
MTTG				AML	AML		
	comp=E,6535µm,0.5s						
MTTG				AML	AML		
	comp=N,10385µm,0.6s						
HLNI	Lentini	0.61	187	P	Pn	20 53 01.8	-1.6
HLNI				S	Sn	20 53 11.4	-0.7
HLNI				AML	AML		
	comp=N,7700µm,0.5s						
HLNI				AML	AML		
	comp=E,5840µm,0.8s						
VAE	Valguarnera	0.64	223	Pg	Pn	20 53 04.8	+0.8
	comp=E,38nm,0.3s,baz=23,slow=6.0,SNR=208						
VAE				Lg	Lg	20 53 16.8	
	comp=E,197nm,0.3s,baz=155,slow=17,SNR=30						
HCRL	Carlentini	0.67	175	P	Pn	20 53 02.9	-1.4
HCRL				S	Sn	20 53 13.8	+0.1
PETRA	Petralia Sopra	0.68	260	P	Pn	20 53 04.0	-0.6
PETRA				AML	AML		
	comp=N,11400µm,0.6s						
PETRA				AML	AML		
	comp=E,12125µm,0.6s						
HAGA	Augusta	0.68	167	P	Pn	20 53 03.1	-1.4
HAGA				S	Sn	20 53 13.9	-0.1
HAGA				AML	AML		
	comp=E,5415µm,0.3s						
HAGA				AML	AML		
	comp=N,8995µm,1.3s						
IFIL	Filicudi I Eol	0.69	333	P	Pn	20 53 04.0	-0.5
IFIL				S	Sn	20 53 13.9	-0.1
IFIL				AML	AML		
	comp=N,20400µm,0.3s						
IFIL				AML	AML		
	comp=E,2965µm,0.1s						
IFIL				AML	AML		
	comp=N,20400µm,0.3s						
MSCL	Scilla	0.71	67	P	Pb	20 53 06.7	+1.6
MSCL				AML	AML		
	comp=E,14450µm,0.7s						
MSCL				AML	AML		
	comp=N,11600µm,0.6s						
GMB	Gambarie	0.72	72	P	Pb	20 53 07.0	+1.7
AGST	Augusta-Monte	0.73	163	P	Pn	20 53 04.0	-1.0
AGST				AML	AML		
	comp=E,10700µm,0.5s						
AGST				AML	AML		
	comp=N,9600µm,0.9s						
GIB	Gibilmanna	0.74	273	⇑P	Pn	20 53 05.0	-0.4
GIB				AML	AML		
	comp=E,9465µm,1.0s						
GIB				AML	AML		
	comp=N,7910µm,0.7s						
IACL	Alicudi	0.75	321	P	Pn	20 53 04.8	-0.6
IACL				S	Sn	20 53 15.8	+0.2
RESU	Resuttano	0.78	247	AML	AML		
	comp=N,7615µm,0.8s						
RESU				AML	AML		
	comp=E,4295µm,1.2s						
CEL	Celeste	0.80	67	P	Pb	20 53 08.1	+1.6
HVZN	Vizzini	0.80	194	P	Pn	20 53 04.8	-1.3
HVZN				AML	AML		
	comp=E,31800µm,0.4s						
HVZN				AML	AML		
	comp=N,26350µm,1.4s						
HVZN				AML	AML		
	comp=E,31800µm,0.4s						
HVZN				AML	AML		
	comp=N,26350µm,1.4s						
SSY	Sortino	0.80	174	P	Pn	20 53 04.7	-1.5
MPAZ	Palizzi	0.83	90	⇑P	Pb	20 53 08.5	+1.5
MPAZ				AML	AML		
	comp=E,5525µm,0.5s						
MPAZ				AML	AML		
	comp=N,5575µm,1.1s						
MEU	Monte Lauro	0.85	182	P	Pn	20 53 05.5	-1.4
MEU				AML	AML		
	comp=N,9435µm,0.2s						
MEU				AML	AML		
	comp=E,8355µm,1.5s						
ISTR	Stromboli Gino	0.85	12	P	Pn	20 53 07.1	+0.3
IST3	Stromboli F	0.87	14	P	Pn	20 53 08.0	+0.9
SOI	Samo	0.87	82	⇑P	Pb	20 53 09.2	+1.4
SOI				AML	AML		
	comp=E,3320µm,0.5s						
SOI				AML	AML		
	comp=N,3160µm,0.6s						
HBSP	Bosco Santo Pi	0.91	205	P	Pn	20 53 06.5	-1.0
JOPP	Joppolo	0.98	48	P	Pn	20 53 09.7	+1.1
JOPP				AML	AML		
	comp=N,2645µm,0.4s						
JOPP				AML	AML		
	comp=E,2555µm,1.6s						
ALJA	Alia	0.98	258	P	Pb	20 53 10.1	+0.5
HAVL	Avola	1.00	172	P	Pn	20 53 07.5	-1.4
HMDC	Modica	1.00	188	P	Pn	20 53 07.9	-1.0
CLTA	Licata	1.12	225	P	Pn	20 53 10.9	+0.4
FAVR	Favara	1.24	237	P	Pn	20 53 13.7	+1.6
HPAC	Pachino	1.26	175	P	Pn	20 53 12.4	0.0
PLAC	Placanica	1.26	66	P	Pb	20 53 15.4	+1.0
GRI	Girifalco	1.44	52	P	Pn	20 53 16.4	+1.5
USI	Ustica	1.59	299	P	Pn	20 53 16.1	-0.9
CAR1	CAROLEI	1.63	37	P	Pn	20 53 18.7	+1.2
CET2	Cetraro	1.75	26	P	Pn	20 53 20.2	+0.9
TIP	Timpagrande	1.87	48	⇑P	Pn	20 53 23.5	+2.6
TIP				⇓S	Sn	20 53 40.4	-2.9
TIP	Timpagrande	1.87	48	P	Pn	20 53 23.1	+2.3
CELI	Celico	1.89	39	P	Pn	20 53 22.8	+1.6
T0702	Acquaformosa (	1.97	26	P	Pn	20 53 23.4	+1.1
LADO	San Nicola del	2.06	49	P	Pb	20 53 27.0	-1.0
MMN	Mormanno	2.09	22	P	Pn	20 53 25.3	+1.5
CUC	Castrocucco	2.14	18	P	Pn	20 53 25.6	+1.0
BULG	Bulgheria - Ca	2.15	9	P	Pn	20 53 25.5	+0.8
MGR	Morigerati	2.23	12	P	Pn	20 53 26.5	+0.7
SIRI	Monte Sirino -	2.33	17	P	Pn	20 53 28.6	+1.3
SCHR	S. Chirico Rap	2.41	21	P	Pn	20 53 29.9	+1.6
MATE	Matera	3.01	26	⇑P	Pn	20 53 39.1	+2.6
MATE				⇑S	Sn	20 54 08.9	-2.5
TAR1	Taranto	3.14	34	*e*Pn	Pn	20 53 40.6	+2.4
SG1	Sgolgore (BA)	3.17	24	⇑*i*Pn	Pn	20 53 41.2	+2.4
CGL1	Ceglie Messapi	3.33	35	*e*Pn	Pn	20 53 42.8	+1.9
BAI	Bari	3.48	25	⇓*i*Pn	Pn	20 53 45.1	+2.2
KEST	Kesra	5.02	245	Pn	Pn	20 54 06.9	+2.7
	comp=E,0.4nm,0.3s,baz=30,slow=11,SNR=7.4						
KEST				Sn	Sn	20 55 02.9	+1.8
	comp=E,0.5nm,0.3s,baz=229,slow=21,SNR=2.3						
DBRK	Dubrovnik	5.30	26	*e*Pn	Pn	20 54 08.2	+0.2
DBRK				Sn	Sn	20 55 07.7	-0.2
STON	Ston	5.34	22	*e*Pn	Pn	20 54 09.7	+1.2
STON				Sn	Sn	20 55 08.9	+0.1
PDG	Podgorica	5.55	35	⇑P	Pn	20 54 12.8	+1.5
PDG				⇑S	Sn	20 55 11.3	-2.7
RICI	Ricice	5.78	16	*e*Pn	Pn	20 54 16.7	+2.2
RICI				Sn	Sn	20 55 21.5	+1.9
KIJV	Kijevo	6.14	10	*e*Pn	Pn	20 54 22.5	+2.9
KIJV				Sn	Sn	20 55 33.3	+4.7
PGF	Pioggiola	6.47	317	*e*Pn	Pn	20 54 18.6	-5.5
PGF				*e*Sn	Sn	20 55 29.6	-7.2
	comp=E,4.4nm,0.3s						
VTS	Vitosha	7.85	51	⇓P	Pn	20 54 44.1	+1.0
BLKB	Belogradchik	8.14	43	⇑S	Sn	20 56 15.0	-2.8
SBF	Sospel	8.20	318	*e*Pn	Pn	20 54 45.8	-2.0
SBF				*e*Sn	Sn	20 56 11.6	-7.8
	comp=E,0.7nm,0.3s						
LMR	La Mourre	8.38	313	*e*P	Pn	20 54 51.2	+1.1
IDI	Anoyia	8.41	105	Sn	Sn	20 56 20.7	-3.9
	comp=E,2.1nm,0.3s,baz=113,slow=23,SNR=15						
FRF	La Foret Royal	8.44	314	*e*P	Pn	20 54 52.2	+1.2
MDVR	Moldovita	8.50	34	⇑P	Pn	20 54 53.2	+1.3
MDVR				⇓S	Sn	20 56 22.8	-3.9
HERR	Herculane	8.90	37	⇑P	Pn	20 54 58.8	+1.5
HERR				⇑S	Sn	20 56 33.4	-3.0
BZS	Buzias	9.12	31	⇑P	Pn	20 55 01.2	+0.8
BZS				⇑S	Sn	20 56 38.4	-3.5
MBDF	Montbardon	9.15	320	*e*P	Pn	20 55 03.7	+2.8
MBDF				*e*Sn	Sn	20 56 34.5	-8.2
	comp=E,0.2nm,0.2s						
SMRF	Simiane la Rot	9.30	313	*e*P	Pn	20 55 04.5	+1.6
GZR	Gura Zlata	9.45	36	⇓P	Pn	20 55 06.3	+1.3
LPG	La Plagne	9.71	323	*e*P	Pn	20 55 12.0	+3.2
LPL	La Plagne	9.74	323	*e*P	Pn	20 55 12.3	+3.3
LPL				*e*Sn	Sn	20 56 49.0	-8.3
	comp=E,0.4nm,0.3s						
ORIF	Oris-en-Rattie	9.74	318	*e*P	Pn	20 55 12.7	+3.8
ORIF				*e*Sn	Sn	20 56 47.4	-10
	comp=E,0.3nm,0.3s						
VIVF	Saint-Julien-l	10.35	315	*e*P	Pn	20 55 19.7	+2.4
LASF	Ste Croix	10.38	310	*e*Pn	Pn	20 55 15.3	-2.3
VOIR		10.61	42	⇓P	Pn	20 55 22.1	+1.2
VYHS	Vyhne	10.91	14	*e*PN	Pn	20 55 28.6	+3.8
GERES	GERESS Array B	10.93	356	Pn	Pn	20 55 27.1	+1.9
	comp=E,0.2nm,0.3s,baz=167,slow=13,SNR=6.1						
GERES				LR	LR	21 00 18.0	
	comp=E,88nm,18.4s,baz=281,slow=41						
MTLF	Montolieu	11.07	303	*e*Pn	Pn	20 55 24.8	-2.3
MDT	Midelt	16.75	258	LR	LR	21 04 33.3	
	comp=E,70nm,19.5s,baz=338,slow=42						
HFS	Hagfors	22.21	358	P	P	20 57 43.4	-1.1
	comp=E,3.4nm,0.8s,baz=181,slow=9.4,SNR=3.5						
NOA	NORSAR Array B	23.23	355	LR	LR	21 06 50.4	
	comp=E,55nm,18.1s,baz=250,slow=36						
FINES	FINESS Array B	24.52	13	P	P	20 58 07.7	+0.5
	comp=E,1.8nm,0.6s,baz=190,slow=7.8,SNR=11						
MKAR	Makanchi Array	49.13	57	P	P	21 01 36.0	+0.5
	comp=E,0.5nm,0.5s,baz=286,slow=7.2,SNR=16						
SONM	Songino Array	63.94	49	P	P	21 03 21.3	+0.3
	comp=E,0.3nm,0.5s,baz=283,slow=6.1,SNR=4.0						

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*GCG **08** 20:54:38.0±0.3, 13°.46N×91°.54W, h7^{km}±17^{km}, MD4.1*

*NEIC **08** 20:54:43.5±1.9, 13°.70N±0°.06×91°.42W±0°.06, h52^{km}±8^{km}, Error ellipse: s-maj=10.0km s-min=5.6km az=225.0*

*MEX **08** 20:54:44.9±0.5, 13°.90N×91°.29W, h68^{km}±19^{km}, MD4.1*

*UCR **08** 20:54:44.0±1.3, 13°.92N×91°.34W, h34^{km}±999^{km}, ML3.9, mb4.1(NEIC)*

*SNET **08** 20:54:44.0±1.1, 13°.94N×91°.33W, h34^{km}±748^{km}, ML4.2*

*IDC **08** 20:54:45.6±3.9, 13°.78N×91°.33W, h81^{km}±23^{km}, mb3.5/3, mb1 3.8/5, mb1mx3.4/41, mbtmp3.8/5, Error ellipse:*

s-maj=39.8km s-min=14.2km az=3.0

ISC 08 20:54:43.8±1.0**, 13°.75N**±0°.07×**91°.41W**±0°.04**, h54**^{km}±9^{km}**, n93,** σ**0**^{s}**.89**/126**, mb4.1**/9**, 1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERG	Entre ros, C	0.71	348	eP	Pn	20 54 58.4	+0.6
FUG	Fuego 3	0.89	38	eP	Pn	20 55 00.1	-0.3
FUG				eP		20 55 00.6	
STG3	Santiaguito 3,	0.97	351	eP	Pn	20 55 01.1	-0.4
PCG	Pacaya	1.01	50	eP	Pn	20 55 02.3	+0.2
IXG	Ixpaco	1.03	66	⇓iP	Pn	20 55 01.6	-0.7
NBG	Las Nubes	1.33	51	eP	Pn	20 55 07.4	+1.1
THIG		1.42	324	eP	Pn	20 55 07.1	-0.2
THIG				eS	Sn	20 55 24.4	-0.5
THIG		1.42	324		Pn	20 55 07.1	-0.2
THIG					Sn	20 55 24.4	-0.5
APG	El Apazote	1.55	36	P	Pn	20 55 09.8	+0.4
	116nm,0.3s,baz=218,slow=11,SNR=360						
APG				S	Sn	20 55 30.1	+1.7
	235nm,0.3s,baz=220,slow=21,SNR=19						
APG				LR	LR	20 55 42.4	
	comp=Z,400nm,18.8s,baz=234,slow=38						
RTR	El Retiro	1.72	85	eP	Pn	20 55 11.5	0.0
RTR				eS	Sn	20 55 32.7	+0.2
RTR	El Retiro	1.72	85	eP	Pn	20 55 11.5	0.0
RTR				eS	Sn	20 55 32.7	+0.2
CEVE	Cerro Verde	1.74	87	eP	Pn	20 55 11.4	-0.5
CEVE				eS	Sn	20 55 32.6	-0.4
CEVE	Cerro Verde	1.74	87	eP	Pn	20 55 11.4	-0.5
CEVE				eS	Sn	20 55 32.6	-0.4
SBLS	San Blas	1.74	87	eP	Pn	20 55 11.2	-0.7
SBLS				eS	Sn	20 55 32.5	-0.6
SBLS	San Blas	1.74	87	eP	Pn	20 55 11.2	-0.7
SBLS				eS	Sn	20 55 32.5	-0.6
SNJE	San Jose	1.76	86	eP	Pn	20 55 11.8	-0.3
SNJE				eS	Sn	20 55 33.8	+0.4
SNJE	San Jose	1.76	86	eP	Pn	20 55 11.8	-0.3
SNJE				eS	Sn	20 55 33.8	+0.4
UNIC	Universidad Ca	1.82	82	eP	Pn	20 55 12.6	-0.2
UNIC	Universidad Ca	1.82	82	eP	Pn	20 55 12.6	-0.2
LALI	Alcalda de L	2.05	97	eP	Pn	20 55 15.3	-0.5
LALI	Alcalda de L	2.05	97	eP	Pn	20 55 15.3	-0.5
BOQS	Boqueron	2.07	90	eP	Pn	20 55 16.0	-0.4
BOQS				eS	Sn	20 55 41.5	+0.3
MTO3	Montecristo	2.09	72	eP	Pn	20 55 15.5	-1.2
MTO3	Montecristo	2.09	72	eP	Pn	20 55 15.5	-1.2
UEES	Universidad Ev	2.11	91	eP	Pn	20 55 16.7	-0.1
UEES				eS	Sn	20 55 42.1	+0.2
UEES	Universidad Ev	2.11	91	eP	Pn	20 55 16.7	-0.1
UEES				eS	Sn	20 55 42.1	+0.2
SNET	Serv Nac Est T	2.12	91	eP	Pn	20 55 17.1	+0.2
SNET				eS	Sn	20 55 42.3	+0.2
SNET	Serv Nac Est T	2.12	91	eP	Pn	20 55 17.1	+0.2
SNET				eS	Sn	20 55 42.3	+0.2
SNET	Serv Nac Est T	2.12	91		Pn	20 55 16.8	-0.1
SNET				Sn	Sn	20 55 41.1	-1.0
MRL	Marmol	2.14	51	eP	Pn	20 55 18.4	+1.1
OPAM	Oficina de Pla	2.15	91	eP	Pn	20 55 16.6	-0.8
OPAM				eS	Sn	20 55 42.3	-0.6
OPAM	Oficina de Pla	2.15	91	eP	Pn	20 55 16.6	-0.8
OPAM				eS	Sn	20 55 42.3	-0.6
CUSC	Alcaldia de Cu	2.17	90	eP	Pn	20 55 17.3	-0.3
CUSC				eS	Sn	20 55 43.7	+0.4
CUSC	Alcaldia de Cu	2.17	90	eP	Pn	20 55 17.3	-0.3
CUSC				eS	Sn	20 55 43.7	+0.4
LOMA	Loma Larga	2.18	92	eP	Pn	20 55 17.4	-0.3
LOMA				eS	Sn	20 55 43.4	-0.4
LOMA	Loma Larga	2.18	92	eP	Pn	20 55 17.4	-0.3
LOMA				eS	Sn	20 55 43.4	-0.4
LFU	La Fuente	2.23	90	eP	Pn	20 55 18.4	-0.1
LFU	La Fuente	2.23	90	eP	Pn	20 55 18.4	-0.1
LFRS	El Faro	2.29	93	eP	Pn	20 55 19.4	+0.1
LFRS				eS	Sn	20 55 46.7	+0.4
LBRS	Las Brisas	2.30	90	eP	Pn	20 55 19.1	-0.3
COEG	Centro de Oper	2.46	93	eP	Pn	20 55 21.5	-0.1
COEG				eS	Sn	20 55 50.8	+0.2
COEG	Centro de Oper	2.46	93	eP	Pn	20 55 21.5	-0.1
COEG				eS	Sn	20 55 50.8	+0.2
CCIG	Comitan	2.62	345	iP	Pn	20 55 22.8	-1.0
CCIG				iS	Sn	20 55 51.7	-2.8
CCIG	Comitan	2.62	345		Pn	20 55 25.1	+1.2
CCIG				Sn	Sn	20 55 55.5	+1.0
CCIG	Comitan	2.62	345		Pn	20 55 25.5	+1.7
PCIG		2.62	318	eP	Pn	20 55 23.3	-0.3
PCIG				iS	Sn	20 55 53.1	-1.1
PCIG		2.62	318		Pn	20 55 23.3	-0.3
COEB	Comit de Eme	2.81	95	eP	Pn	20 55 26.4	0.0
COEB	Comit de Eme	2.81	95	eP	Pn	20 55 26.4	0.0
TECA	Tecapa	2.84	95	eP	Pn	20 55 27.2	+0.3
TECA	Tecapa	2.84	95	eP	Pn	20 55 27.2	+0.3
PACA	Pacayal	3.02	95	eP	Pn	20 55 29.0	-0.2
PACA	Pacayal	3.02	95	eP	Pn	20 55 29.0	-0.2
TGIG		3.44	332	iP	Pn	20 55 34.0	-1.0
TGIG				iS	Sn	20 56 12.2	-2.3
TGIG		3.44	332		Pn	20 55 36.3	+1.3
LCND	La Caada	3.45	97	eP	Pn	20 55 35.3	+0.2
LCND				IAML		20 56 09.8	
	comp=Z,491nm,0.3s						
LCND	La Caada	3.45	97	eP	Pn	20 55 35.3	+0.2
LCND				IAML		20 56 09.8	
	comp=Z,491nm,0.3s						
CSGN	Cosiguina Volc	3.83	101	Pn	Pn	20 55 39.9	-0.4
TGUH	Tegucigalpa,Un	4.03	85	iP	Pn	20 55 41.6	-1.5
CMIG	Matias Romero	4.72	315	P	Pn	20 55 53.0	+0.5
	comp=Z,6.9nm,0.3s,baz=127,slow=11,SNR=17						
CMIG				S	Sn	20 56 50.0	+4.1
	comp=Z,9.8nm,0.3s,baz=82,slow=19,SNR=8.5						
CMIG	Matias Romero	4.72	315	eP	Pn	20 55 52.5	0.0
CMIG				iS	Sn	20 56 45.3	-0.6
CMIG	Matias Romero	4.72	315		Pn	20 55 52.5	0.0
TEIG	Tepich	7.11	25	P	Pn	20 56 25.1	-0.1
	comp=Z,34nm,0.3s,SNR=112						
TEIG	Tepich	7.11	25		Pn	20 56 25.4	+0.1
TLIG	Tlapa	7.87	300		Pn	20 56 36.4	+0.6
553A	Crawfordville	17.59	20	P	P	20 58 47.0	+1.5
346A	Big Creek Wild	17.65	5	P	P	20 58 47.7	+1.5
TXAR	Lajitas Array	19.22	326	P	Pn	20 59 05.6	+0.5
	comp=Z,0.2nm,0.3s,baz=151,slow=11,SNR=6.4						
TXAR	Lajitas Array	19.22	326	P	P	20 59 04.5	+0.9
TX32	Lajitas Array	19.23	326	P	P	20 59 04.5	+0.9
LRAL	Lakeview Retre	19.62	11	P	Pn	20 59 08.3	-1.3
LRAL				IAmb	IAmb	20 59 13.6	
	comp=Z,28nm,1.4s						
FLOC	Florencia	19.72	126	P	P	20 59 09.8	+0.6
Z50A	Ashland	20.05	14	P	P	20 59 12.1	-0.4
ABTX	Abilene, Hawle	20.24	340	P	P	20 59 14.7	+0.1
ABTX				IAmb	IAmb	20 59 15.9	
	comp=Z,5.8nm,0.7s						
MIAR	Mount Ida	20.80	355	P	P	20 59 21.3	+0.7
MIAR				IAmb	IAmb	20 59 29.2	
	comp=Z,8.7nm,1.3s						
GOGA	Godfrey	20.87	19	P	P	20 59 21.8	+0.5
GOGA				IAmb	IAmb	20 59 30.6	
	comp=Z,12nm,1.4s						
Y52A	Lilburn	21.11	17	P	P	20 59 23.2	-0.8
Y52A				IAmb	IAmb	20 59 26.0	
	comp=Z,14nm,1.4s						
WHAR	Wooly Hollow	21.47	358	P	P	20 59 27.7	0.0
MNTX	Cornudas Mount	21.99	327	P	P	20 59 33.5	+0.1
MNTX				IAmb	IAmb	20 59 36.8	
	comp=Z,5.5nm,1.1s						
TKL	Tuckaleechee C	22.88	16	P	P	20 59 41.0	-1.7
	comp=Z,4.2nm,0.5s,baz=222,slow=14,SNR=16						
MGMO	Mountain Grove	23.32	358	P	P	20 59 46.2	-1.0
MGMO				IAmb	IAmb	20 59 46.9	
	comp=Z,5.6nm,0.7s						
CCM	Cathedral Cave	24.21	0	P	P	20 59 54.0	-1.3
CCM				IAmb	IAmb	20 59 55.4	
	comp=Z,7.9nm,0.7s						
MTPU	Mount Pierson	30.43	326	P	P	21 00 52.1	+0.5
NVAR	Mina Array Bea	34.23	321	P	P	21 01 27.4	+2.7
	comp=Z,1.3nm,0.8s,baz=134,slow=8.4,SNR=9.3						
NVAR	Mina Array Bea	34.23	321	P	P	21 01 24.8	+0.2
PTGA	Pitinga	34.31	112	P	P	21 01 24.5	-0.9
PTGA				IAmb	IAmb	21 01 33.1	
	comp=Z,6.5nm,1.4s						
MCMT	McKenzie Canyo	35.95	334	P	P	21 01 40.7	+1.3
J08A	Circle Bar Ran	37.56	327	P	P	21 01 53.9	+0.8
YKA	Yellowknife Ar	51.40	346	P	P	21 03 41.1	-1.8
	comp=Z,0.3nm,0.4s,baz=148,slow=7.7,SNR=7.9						
ILAR	Eielson Array	63.30	337	P	P	21 05 05.8	-1.0
	comp=Z,0.6nm,0.9s,baz=130,slow=6.5,SNR=5.3						
ILAR	Eielson Array	63.30	337	P	P	21 05 07.8	+1.0
CMAR	Chiang Mai Arr	146.41	342	PKPbc	PKPdf	21 14 18.3	0.0
	comp=Z,1.2nm,0.7s,baz=333,slow=3.3,SNR=7.4						
CMAR				pPKPbc	pPKPdf	21 14 34.8	+0.1
	comp=Z,1.6nm,0.7s,baz=333,slow=3.4,SNR=7.2						
CMAR	Chiang Mai Arr	146.41	342		PKPdf	21 14 19.1	+0.8

INET ***08*** *20:55:01.6, 11°.35N×87°.84W, h15*^{km}*, ML3.3*

IDC 08 20:55:08.6±6.3**, 11°.55N**×**87°.42W, h40**^{km}±52^{km}**, mb3.8**/3**, mb1 3.9**/4**, mb1mx3.4**/40**, mbtmp3.9**/4**, ML3.0**/1**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.7**/40**, Error ellipse: s-maj=155.3km s-min=22.9km az=45.0, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	Las Juntas de	2.73	117	Pn	Pn	20 55 50.1	+0.2
	2.8nm,0.3s,baz=26,slow=18,SNR=8.7						
JTS				Sn	Sn	20 56 22.0	+0.3
	19nm,0.3s,baz=337,slow=17,SNR=11						
TXAR	Lajitas Array	23.29	322	P	P	21 00 12.9	-0.2
	0.7nm,0.5s,baz=134,slow=12,SNR=4.4						
H06E1	SOCORRO T-PHAS	23.78	290	T	T	21 24 45.6	
	SNR=11						
NNA	Nana	25.63	155	LR	LR	21 10 18.6	
	comp=Z,45nm,18.2s,baz=320,slow=36						
SIV	San Ignacio	37.80	136	P	P	21 02 21.4	0.0
	2.0nm,0.5s,baz=324,slow=11,SNR=10						
BDFB	Brasilia	47.45	124	P	P	21 03 39.3	-0.6
	2.4nm,0.4s,baz=268,slow=5.3,SNR=5.2						
CMAR	Chiang Mai Arr	149.53	348	PKPbc	PKPbc	21 14 54.4	-0.2
	0.9nm,0.9s,baz=352,slow=3.4,SNR=5.0						

IDC 08 20:56:23.1±3.0**, 10°.96S**×**118°.73E, h0**^{km}**, mb3.5**/1**, mb1 3.6**/4**, mb1mx3.3**/47**, mbtmp3.4**/4**, ML3.4**/3**, Error ellipse: s-maj=226.5km s-min=25.8km az=49.0, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.76	137	Pn	Pn	20 58 43.7	-1.1
	0.6nm,0.3s,baz=335,slow=13,SNR=20						
FITZ				Sn	Sn	21 00 24.2	-11
	0.3nm,0.3s,baz=183,slow=19,SNR=4.9						
WRA	Warramunga Arr	17.49	123	P	Pn	21 00 28.4	-0.2
	0.1nm,0.3s,baz=295,slow=13,SNR=5.4						
ASAR	Alice Springs	19.20	133	P	Pn	21 00 49.8	+0.2
	0.1nm,0.3s,baz=314,slow=13,SNR=9.4						
MKAR	Makanchi Array	66.07	333	P	P	21 07 11.8	-0.1
	0.2nm,0.5s,baz=140,slow=7.7,SNR=5.3						

BJI ***08*** *20:56:51.4±0.0, 10°.08S×161°.58E, h64*^{km}*, mB5.3/50, mb5.1/66, Ms4.9/31, Ms7 4.6/23*

IDC ***08*** *20:56:51.4±0.6, 10°.33S×161°.63E, h52*^{km}*±4*^{km}*, mb5.0/25, mb1 5.0/25, mb1mx4.9/40, mbtmp5.2/25, MS4.3/34, Ms1 4.3/34, ms1mx4.2/39, Error ellipse: s-maj=11.5km s-min=7.9km az=31.0*

GCMT ***08*** *20:56:53.0±0.2, 10°.28S±0°.01×161°.40E±0°.01, h46*^{km}*, MW5.2/105, Moment Tensor Solution. s105,c140; s100,c145; Duration: 0 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*6.21±.15;* $M_{\theta\theta}$*-2.64±.11;* $M_{\phi\phi}$*-3.58±.11;* $M_{r\theta}$*-0.87±.10;* $M_{\theta\phi}$*3.26±.09;* $M_{\phi r}$*2.62±.10; Best double couple:* M_0*6.88700×10*^{16} *NP1:*ϕ_s*130.00000°, δ35.00000°, λ75.00000°. NP2:*ϕ_s*328.00000°, δ57.00000°, λ100.00000°. Principal axes: T 6.8670, Plg76.0000°, Azm268.0000°; N 0.0290, Plg8.0000°, Azm142.0000°; P -6.9060, Plg11.0000°, Azm51.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***08*** *20:56:54.1±0.8, 10°.20S×161°.33E, h79*^{km}*, mb5.3/19 Error ellipse: s-maj=7.3km s-min=6.4km az=97.1*

NEIC ***08*** *20:56:55.0±1.3, 10°.27S±0°.07×161°.40E±0°.07, h77*^{km}*±4*^{km}*, mb5.3/192, Error ellipse: s-maj=11.6km s-min=8.6km az=51.0*

ISC 08 20:56:52.8±0.4**, 10°.27S**±0°.04×**161°.46E**±0°.05**, h57**^{km}±3^{km}**, h57**^{km}**:pP-P, n717,** σ**1**^{s}**.14**/716**, mb5.4**/207**, MS4.4**/47**, 14C-1D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.71	299	P	Pn	20 57 21.4	+1.1
	1µm,0.3s,baz=168,slow=9.2,SNR=170						
HNR				S	Sn	20 57 45.4	+4.3
	7µm,0.3s,baz=130,slow=17,SNR=12						
HNR				LR	LR	20 58 14.2	
	comp=Z,10µm,21.9s,baz=106,slow=44						
HNR	Honiara	1.71	299	iP	Pn	20 57 20.0	-0.3
HNR				iS	Sn	20 57 57.0	+16
RABL	Rabaul	11.02	303	Pn	Pn	20 59 27.9	0.0
KRVT	Keravat (AS076	11.08	302	LR	LR	21 04 30.5	
	comp=Z,3µm,19.9s,baz=125,slow=41						
DZM	Mont Dzumac	12.67	158	P	Pn	20 59 51.6	+1.3
	6.1nm,0.3s,baz=38,slow=9.9,SNR=73						
DZM				LR	LR	21 03 55.6	
	comp=Z,1µm,21.0s,baz=328,slow=34						
DZM	Mont Dzumac	12.67	158	ePn	Pn	20 59 53.2	+2.8
	215nm,1.3s						
DZM				eSn	Sn	21 02 06.3	-3.6
	79nm,1.2s						
DZM				eLR	LR	21 02 51.7	
	comp=Z,3µm,24.2s						
DZM	Mont Dzumac	12.67	158		Pn	20 59 52.5	+2.1
DZM				Sn	Sn	21 02 08.2	-1.7
PMG	Port Moresby	14.12	272	P	P	21 00 13.5	-2.5
	0.9nm,0.3s,baz=101,slow=8.6,SNR=9.0						
PMG				LR	LR	21 05 14.0	
	comp=Z,4µm,21.8s,baz=130,slow=35						
PMG	Port Moresby	14.12	272	P	Pn	21 00 12.0	+2.0
PMG	Port Moresby	14.12	272		Pn	21 00 12.0	+2.0
MANU	Manus Island	16.21	299		Pn	21 00 37.1	+0.1
PATS	Pohnpei	17.28	349	P	P	21 00 52.1	+1.0
	baz=17,SNR=7.9						
PATS	Pohnpei	17.28	349		Pn	21 00 50.0	-0.3
PATS				IAmb	IAmb	21 01 11.5	
	comp=Z,136nm,0.9s						
CTA	Charters Tower	17.61	235	P	P	21 00 57.1	+2.4
	comp=Z,3.3nm,0.3s,baz=59,slow=13,SNR=28						
CTA				LR	LR	21 07 02.2	
	comp=Z,2µm,21.6s,baz=41,slow=34						
MSVF	Nonsavu	17.71	117	P	P	21 00 57.1	+1.2
MSVF				pmax	pmax		
	comp=Z,106nm,1.4s						
MSVF	Nonsavu	17.71	117	P	P	21 00 57.1	+1.2
EIDS	Eidsvold	17.96	212	P	Pn	21 01 00.6	+2.0
	baz=18,SNR=13						
EIDS	Eidsvold	17.96	212	P	Pn	21 00 59.1	+0.6
COEN	Coen	18.25	257	P	Pn	21 01 03.6	+1.4
	baz=18,SNR=9.2						
COEN	Coen	18.25	257		Pn	21 01 05.0	+2.8
COEN				IAmb	IAmb	21 01 13.3	
	comp=Z,96nm,0.8s						
MTSU	Mount Surprise	18.36	243	P	Pn	21 01 06.3	+2.8
	baz=18,SNR=46						
KWAJ	Kwajalein Atol	19.91	18	P	P	21 01 20.0	+0.1
KWAJ				pmax	pmax		
	comp=Z,738nm,1.5s						
KWAJ	Kwajalein Atol	19.91	18	P	P	21 01 20.0	+0.1
RMQ	Roma	20.11	215	P	Pn	21 01 24.8	+0.5
	baz=20,SNR=50						
LHI	Lord Howe Isla	21.26	186	P	P	21 01 37.3	+3.0
LHI				IAmb	IAmb	21 02 10.7	
	comp=Z,107nm,1.2s						
ARMA	Armidale	22.04	203	P	P	21 01 43.8	+1.0
	baz=22,SNR=53						
ARMA	Armidale	22.04	203	P	P	21 01 43.5	+0.6
ARMA				IAmb	IAmb	21 01 47.1	
	comp=Z,59nm,0.7s						
GENI	Genyem	22.48	288	P	P	21 01 48.1	+0.5
	comp=Z,103nm,1.0s						
QLP	Quilpie	22.98	223	P	P	21 01 53.7	+0.9
	baz=23,SNR=10						
QIS	Mount Isa	23.39	241	P	P	21 01 57.0	+0.2
	baz=24,SNR=19						
SMPI	Sarmi	24.05	289	P	P	21 02 02.4	-0.5
	comp=Z,268nm,1.3s						
MGCD	Mangrove Creek	24.74	201	P	P	21 02 10.5	+1.6
	baz=25,SNR=6.6						
RIV	Riverview	25.28	200	P	P	21 02 15.6	+1.7
	baz=26						
CMSA	Cobar Meteorol	25.72	212	P	P	21 02 18.3	+0.4
	baz=26,SNR=45						
AFI	Afiamalu	26.41	101	LR	LR	21 10 46.1	
	comp=Z,923nm,20.0s,baz=274,slow=32						
YNG	Young	26.74	205	P	P	21 02 28.0	+0.9
	baz=27,SNR=10.0						
OUZ	Omahuta	27.19	158	P	P	21 02 32.3	+1.2
CNB	Canberra Magne	27.26	202	P	P	21 02 33.1	+1.3
	baz=28,SNR=19						
CAN	Canberra	27.40	203	P	P	21 02 33.7	+0.6
CAN				pmax	pmax		
	comp=Z,22nm,0.8s						
CAN	Canberra	27.40	203	P	P	21 02 33.7	+0.6
WB0	Warramunga Arr	27.76	247	P	P	21 02 36.2	-0.2
WB0				IAmb	IAmb	21 02 38.1	
	comp=Z,113nm,0.7s						
WB8	Warramunga Arr	27.78	247	P	P	21 02 36.6	0.0
	baz=28						
WRAB	Tennant Creek	27.84	247	P	P	21 02 36.9	-0.3
WRAB				pmax	pmax		
	comp=Z,75nm,0.8s						
WRAB	Tennant Creek	27.84	247	P	P	21 02 36.9	-0.3
WRAB				IAmb	IAmb	21 02 38.8	
	comp=Z,75nm,0.8s						
WB2	Warramunga Arr	27.84	247	P	P	21 02 36.9	-0.3
WB2				IAmb	IAmb	21 02 39.0	
	comp=Z,69nm,0.7s						
WRA	Warramunga Arr	27.86	247	P	P	21 02 37.2	-0.1
	comp=Z,68nm,0.6s,baz=75,slow=8.9,SNR=336						
WRA				ScP	ScP	21 09 28.2	-0.1
	comp=Z,3.4nm,1.1s,baz=76,slow=3.6,SNR=4.6						
WRA				LR	LR	21 12 56.7	
	comp=Z,1µm,21.6s,baz=80,slow=34						
WRA	Warramunga Arr	27.86	247	P	P	21 02 36.5	-0.8
STKA	Stephens Creek	28.29	218	P	P	21 02 41.5	+0.6
	baz=28,SNR=16						
STKA	Stephens Creek	28.29	218	P	P	21 02 40.1	-0.8
	comp=Z,7.9nm,0.9s,baz=51,slow=12,SNR=25						
STKA				LR	LR	21 14 04.9	
	comp=Z,2µm,18.5s,baz=38,slow=36						
STKA	Stephens Creek	28.29	218	P	P	21 02 40.8	-0.2
STKA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
STKA	Stephens Creek	28.29	218	P	P	21 02 40.8	-0.2
KDU	Kakadu	28.50	262	P	P	21 02 43.0	-0.1
	baz=29,SNR=28						
GUMO	Guam	28.86	325	LR	LR	21 15 51.3	
	comp=Z,232nm,18.2s,baz=146,slow=39						
MILA	Mila	28.89	201	P	P	21 02 47.5	+1.2
	baz=29,SNR=7.9						
H11S2	WAKE ISLAND Hy	29.05	10	T	T	21 32 18.6	
	baz=193,slow=74,SNR=254						
H11S3	WAKE ISLAND Hy	29.05	10	T	T	21 32 17.4	
	baz=193,slow=74,SNR=181						
H11S1	WAKE ISLAND Hy	29.06	10	T	T	21 32 18.7	
	baz=193						
AS31	Alice Springs	29.46	240	P	P	21 02 50.6	-0.9
ASAR	Alice Springs	29.46	240	P	P	21 02 50.3	-1.2
	comp=Z,20nm,0.9s,baz=64,slow=9.8,SNR=84						
ASAR				LR	LR	21 14 39.7	
	comp=Z,2µm,18.7s,baz=62,slow=36						
ASAR	Alice Springs	29.46	240	P	P	21 02 51.0	-0.5
ASAR	Alice Springs	29.46	240	P	P	21 02 51.0	-0.5
MTN	Manton Dam	29.82	262	P	P	21 02 54.8	+0.1
	baz=30,SNR=16						
MTN	Manton Dam	29.82	262	P	P	21 02 54.3	-0.4
MTN				IAmb	IAmb	21 02 55.7	
	comp=Z,72nm,0.9s						
SAUI	Saumlaki	29.86	272	P	P	21 02 56.3	+1.2
	comp=Z,14µmcomp=Z,211nm,1.1s						
SAUI	Saumlaki	29.86	272	P	P	21 02 55.2	+0.1
FAKI	Fak Fak	29.90	282	P	P	21 02 54.9	-0.7
H11N1	WAKE ISLAND Hy	30.27	10	T	T	21 33 39.4	
	baz=193,slow=76,SNR=342						
H11N3	WAKE ISLAND Hy	30.28	10	T	T	21 33 52.2	
	baz=193,slow=76,SNR=178						
H11N2	WAKE ISLAND Hy	30.29	10	T	T	21 33 35.4	
	baz=193,slow=76,SNR=92						
TOO	Toolangi	30.75	205	P	P	21 03 04.2	+1.4
	baz=31,SNR=44						
TOO	Toolangi	30.75	205	P	P	21 03 03.7	+0.9
TOO				pmax	pmax		
	comp=Z,32nm,0.7s						
TOO	Toolangi	30.75	205	P	P	21 03 03.7	+0.9
TOO				IAmb	IAmb	21 03 04.7	
	comp=Z,32nm,0.7s						
HTT	Hallett	30.98	219	P	P	21 03 05.5	+0.6
	baz=31,SNR=12						
MXZ	Matakaoa Point	31.12	154	P	P	21 03 06.5	+0.6
MXZ				IAmb	IAmb	21 03 11.1	
	comp=Z,143nm,1.6s						
URZ	Urewera	31.20	156	LR	LR	21 14 15.0	
	comp=Z,487nm,19.9s,baz=357,slow=34						
URZ	Urewera	31.20	156	P	P	21 03 07.7	+1.0
URZ				IAmb	IAmb	21 03 56.0	
	comp=Z,46nm,1.3s						
SIJI	Sorong	31.44	285	LR	LR	21 17 34.4	
	comp=Z,536nm,19.1s,baz=90,slow=39						
BKZ	Black Stump Fm	31.75	157	P	P	21 03 11.9	+0.4
BKZ				IAmb	IAmb	21 03 13.3	
	comp=Z,28nm,0.7s						
QRZ	Quartz Range	31.97	164	P	P	21 03 14.5	+1.2
QRZ				IAmb	IAmb	21 03 59.5	
	comp=Z,55nm,1.3s						
KNRA	Kununurra	32.29	257	P	P	21 03 16.9	+0.4
	baz=32,SNR=77						
KNRA	Kununurra	32.29	257	P	P	21 03 16.5	0.0
BBOO	Buckleboo	32.41	222	P	P	21 03 17.4	0.0
	baz=33,SNR=70						
BBOO	Buckleboo	32.41	222	P	P	21 03 17.4	0.0
BBOO				IAmb	IAmb	21 03 21.2	
	comp=Z,53nm,0.8s						
NNZ	Nelson	32.57	163	P	P	21 03 19.3	+0.7
NNZ				IAmb	IAmb	21 03 39.1	
	comp=Z,56nm,1.3s						
TUWZ	Tuamarina	32.93	163	P	P	21 03 22.4	+0.6
THZ	Tophouse	32.94	164	P	P	21 03 22.1	+0.1
BFZ	Birch Farm	32.99	159	P	P	21 03 21.7	-0.7
BFZ				IAmb	IAmb	21 04 30.8	
	comp=Z,68nm,1.6s						
MSAI	Masohi	33.01	280	P	P	21 03 22.2	-0.6
	comp=Z,14nm,0.7s						
SNZO	South Karori	33.05	162	P	P	21 03 22.5	-0.3
SNZO				IAmb	IAmb	21 03 32.4	
	comp=Z,78nm,1.4s						
BSWZ	Blackbirch Sta	33.17	163	P	P	21 03 24.0	+0.2
BHW	Baring Head	33.19	161	P	P	21 03 23.9	-0.2
MSWZ	Moikau Station	33.31	161	P	P	21 03 24.3	-0.8
AAI	Ambon	33.64	279	P	P	21 03 27.9	-0.4
	comp=Z,107nm,0.8s						
KHZ	Kahutara	33.72	164	P	P	21 03 28.5	-0.1
KHZ				IAmb	IAmb	21 03 48.0	
	comp=Z,33nm,1.2s						
LTZ	Lake Taylor	33.73	166	P	P	21 03 29.0	+0.2
LTZ				IAmb	IAmb	21 03 49.2	
	comp=Z,68nm,1.4s						
RPZ	Rata Peaks	34.34	168	P	P	21 03 34.0	-0.1
	comp=Z,32nm,0.8s,baz=331,slow=4.0,SNR=10						
RPZ	Rata Peaks	34.34	168	P	P	21 03 34.0	-0.1
RPZ				IAmb	IAmb	21 03 37.9	
	comp=Z,37nm,0.8s						
MOO	Moorlands	34.40	199	P	P	21 03 36.3	+1.8
	baz=35,SNR=16						
WRKA	Warakurna	34.73	241	P	P	21 03 37.0	-0.7
	baz=35,SNR=24						
TAU	Tasmania Unive	34.78	198	P	P	21 03 38.8	+1.0
TAU				pmax	pmax		
	comp=Z,132nm,1.6s						
TAU	Tasmania Unive	34.78	198	P	P	21 03 38.8	+1.0
NLAI	Namlea	34.81	279	P	P	21 03 39.9	+1.5
	comp=Z,2µmcomp=Z,132nm,1.3s						
DCZ	Deep Cove	35.41	173	P	P	21 03 43.1	-0.1
DCZ				IAmb	IAmb	21 03 50.8	
	comp=Z,38nm,0.9s						
ODZ	Otahua Downs	35.54	169	P	P	21 03 44.3	0.0
ODZ				IAmb	IAmb	21 04 37.3	
	comp=Z,87nm,1.7s						
FITZ	Fitzroy Crossi	35.54	253	P	P	21 03 44.0	-0.7
	baz=36,SNR=130						
FITZ	Fitzroy Crossi	35.54	253	P	P	21 03 43.9	-0.8
	comp=Z,134nm,0.8s,baz=71,slow=8.0,SNR=199						
FITZ				LR	LR	21 17 52.0	
	comp=Z,541nm,20.9s,baz=72,slow=35						
FITZ	Fitzroy Crossi	35.54	253	P	P	21 03 44.3	-0.4
WHZ	Wether Hill Ro	35.93	172	P	P	21 03 47.4	-0.3
WHZ				IAmb	IAmb	21 03 53.0	
	comp=Z,137nm,1.9s						

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SANI  Sanana            36.17 281  P      P      21 03 50.3 +0.2
      comp=Z,1µmcomp=Z,103nm,1.1s
SOEI  Soe               36.62 267  P      P      21 03 54.8 +0.7
      comp=Z,63nm,1.2s
SOEI  Soe               36.62 267  P      P      21 03 54.0 -0.1
FORT  Forrest           37.12 232  P      P      21 03 59.1 +1.0
      baz=37,SNR=15
FORT  Forrest           37.12 232  P      P      21 03 58.4 +0.3
FORT                               IAmb   IAmb   21 04 18.1
      comp=Z,62nm,0.9s
MMRI  Maumere           38.71 269  P      P      21 04 11.3 -0.4
      comp=Z,3µmcomp=Z,285nm,1.3s
MMRI  Maumere           38.71 269  P      P      21 04 10.8 -0.9
RAR   Rarotonga         38.76 111  LR     LR     21 16 23.6
      comp=Z,543nm,20.7s,baz=308,slow=30
BBSI  Bau Bau           38.80 274  P      P      21 04 19.2 +6.8
KMSI  Cibinong          38.81 284  P      P      21 04 18.5 +6.0
EDFI  Ende, Flores      39.24 269  P      P      21 04 15.0 -1.2
      comp=Z,960nmcomp=Z,78nm,1.6s
LUWI  Luwuk             39.53 281  P      P      21 04 19.1 +0.6
      comp=Z,9µmcomp=Z,222nm,1.3s
LUWI  Luwuk             39.53 281  P      P      21 04 17.8 -0.7
DAV   Davao City (W)    39.67 294  LR     LR     21 19 59.8
      comp=Z,190nm,21.6s,baz=104,slow=35
DAV   Davao City (W)    39.67 294  P      P      21 04 19.9 +0.3
WSI   Waingapu          40.53 267  P      P      21 04 31.4 +4.6
APSI  Ampana            40.65 281  P      P      21 04 28.6 +0.8
      comp=Z,1µmcomp=Z,93nm,1.3s
MRSI  Marisa            40.74 283  P      P      21 04 28.5  0.0
      comp=Z,509nmcomp=Z,40nm,1.2s
BKSI  Bulukumba         41.23 274  P      P      21 04 32.2 -0.3
      comp=Z,596nmcomp=Z,43nm,0.8s
BNSI  Bone              41.40 275  P      P      21 04 34.1 +0.1
      comp=Z,2µmcomp=Z,228nm,1.0s
WBSI  Waikabubak, Su    41.42 267  P      P      21 04 33.3 -0.9
      comp=Z,2µmcomp=Z,218nm,0.8s
PSA00 Pilbara Seismi    41.44 249  P      P      21 04 33.7 -0.5
PSA00 Pilbara Seismi    41.44 249  P      P      21 04 32.8 -1.4
PSA00                              IAmb   IAmb   21 04 34.8
      comp=Z,50nm,0.8s
JCJ   Chichijima        41.59 334  P      P      21 04 35.3  0.0
      comp=Z,167nm,0.7s,baz=327,slow=21,SNR=12
KAPI  Kappang           41.64 274  P      P      21 04 35.4 -0.5
      comp=Z,81nm,0.9s,baz=109,slow=6.4,SNR=29
SPSI  Sidrap Palu       41.81 276  P      P      21 04 36.5 -0.8
      comp=Z,650nmcomp=Z,74nm,1.1s
TTSI  Tana Toraja       41.94 277  P      P      21 04 39.3 +0.9
      comp=Z,784nmcomp=Z,63nm,1.0s
KMBL  Kambalda          42.22 234  P      P      21 04 41.1 +0.7
      baz=42,SNR=6.0
MPSI  Mapaga            42.66 282  P      P      21 04 43.2 -1.1
      comp=Z,12µmcomp=Z,63nm,0.9s
PLAI  Plampang          43.08 268  P      P      21 04 46.2 -1.4
      comp=Z,3µmcomp=Z,289nm,1.2s
MEEK  Meekatharra       43.54 242  P      P      21 04 51.6 +0.3
      baz=44,SNR=70
SMKI  Samarinda         45.07 280  P      P      21 05 06.0 +2.4
      comp=Z,331nm,0.8s
BKB   Balikpapan        45.18 278  P      P      21 05 08.6 +4.1
BKB   Balikpapan        45.18 278  P      P      21 05 04.9 +0.5
KBKI  Kotabaru          45.47 275  P      P      21 05 07.4 +0.7
      comp=Z,314nmcomp=Z,30nm,1.3s
KLBR  Kellerberrin      45.62 236  P      P      21 05 07.9 +0.3
      baz=46,SNR=7.4
DNP   Denpasar          45.62 268  P      P      21 05 08.0 +0.1
      comp=Z,16µmcomp=Z,496nm,1.0s
IGBI  Denpasar          45.67 268  P      P      21 05 07.7 -0.6
      comp=Z,3µmcomp=Z,400nm,0.9s
SRBI  Singaraja         45.68 269  P      P      21 05 07.4 -1.0
      comp=Z,171nm,1.0s
BLDU  Ballidu           46.19 237  P      P      21 05 12.3 +0.1
      baz=46,SNR=43
MORW  Morawa            46.34 240  P      P      21 05 13.7 +0.3
      baz=46,SNR=19
MORW  Morawa            46.34 240  P      P      21 05 13.5 +0.1
MORW                               IAmb   IAmb   21 05 14.7
      comp=Z,54nm,0.8s
NWAO  Narrogin (SRO)    46.45 234  P      P      21 05 14.6 +0.4
      baz=47,SNR=7.6
NWAO  Narrogin (SRO)    46.45 234  P      P      21 05 14.5 +0.2
      comp=Z,30nm,0.9s,baz=49,slow=6.5,SNR=9.6
NWAO  Narrogin (SRO)    46.45 234  P      P      21 05 14.2 -0.1
JAGI  Jajag, Banyuwa    46.68 268  P      P      21 05 14.3 -2.0
      comp=Z,3µmcomp=Z,388nm,1.0s
JAGI  Jajag, Banyuwa    46.68 268  P      P      21 05 14.8 -1.5
GIRL  Giralia           46.74 249  P      P      21 05 18.1 +1.5
      baz=47,SNR=4.0
GIRL  Giralia           46.74 249  P      P      21 05 17.4 +0.7
MUN   Mundaring         46.99 236  P      P      21 05 19.3 +0.8
      baz=47,SNR=5.2
RKGY  Rocky Gully       47.21 232  P      P      21 05 21.0 +0.8
      baz=47,SNR=5.1
SPMM  Sapulut           47.22 286  P      P      21 05 21.0 +0.5
JHJ2  Mitsune           47.82 335  P      P      21 05 25.2 +0.4
JHJ   Hachijo jima 2    47.84 335  LR     LR     21 27 05.8
      comp=Z,228nm,18.2s,baz=136,slow=38
KKM   Kota Kinabalu     47.89 288  P      P      21 05 25.3 -0.4
KKM                                IAmb   IAmb   21 05 26.9
      comp=Z,71nm,0.9s
PPT   Papeete           47.97 104  LR     LR     21 21 05.2
      comp=Z,285nm,21.6s,baz=267,slow=30
PPT2  Papeete2          47.97 104 eLR     LR     21 18 49.8
      comp=Z,710nm,25.5s
TBI   Tubuai            48.52 112 eLQ     LQ     21 17 02.6
      comp=Z,691nm,34.0s
TBI                               eLR     LR     21 19 07.3
      comp=Z,626nm,27.8s
PCJI  Pacitan           49.64 268  P      P      21 05 38.8 -0.3
      comp=Z,5µmcomp=Z,418nm,1.2s
WOJI  Wonogiri, Jawa    49.93 268  P      P      21 05 41.1 -0.2
      comp=Z,2µmcomp=Z,113nm,1.6s
UGM   Wanagama          50.31 268  P      P      21 05 44.9 +0.6
      comp=Z,135nm,1.1s
UGM   Wanagama          50.31 268  P      P      21 05 43.7 -0.6
SMRI  Semarang          50.50 269  P      P      21 05 44.5 -1.2
SBUM  Sibu              50.62 282  P      P      21 05 46.4 -0.2
SBUM                               IAmb   IAmb   21 05 47.7
      comp=Z,18nm,1.0s
SBUM  Sibu              50.62 282  P      P      21 05 47.0 +0.4
INU   Inuyama           50.92 334  P      P      21 05 49.4 +1.0
MJAR  Matsushiro Arr    51.45 336  P      P      21 05 51.3 -1.1
      comp=Z,25nm,0.6s,baz=156,slow=8.2,SNR=83
MJAR                               LR     LR     21 26 43.2
      comp=Z,203nm,21.6s,baz=155,slow=35
MJAR  Matsushiro Arr    51.45 336  P      P      21 05 51.3 -1.1
MAJO  Matsushiro        51.45 336  P      P      21 05 52.0 -0.4
MAJO                               pmax   pmax
      comp=Z,45nm,0.6s
MAJO  Matsushiro        51.45 336  P      P      21 05 52.0 -0.4
MAT   Matsushiro        51.45 336  P      P      21 05 51.5 -0.9
MAT                               eS      S      21 13 08.4 +0.1
MJB9  Matsu-Tunnel      51.46 336  P      P      21 05 51.9 -0.5
KHU   Kahuku            51.48  55  P      P      21 05 54.1 +1.0
KHU                                pmax   pmax
      comp=Z,253nm,1.3s
KHU   Kahuku            51.48  55  P      P      21 05 54.1 +1.0
YULB  Yu-li             51.61 311  P      P      21 05 53.2 -0.5
YULB                               IAmb   IAmb   21 05 56.3
      comp=Z,26nm,0.8s
AIN   Ainahou           51.67  55  P      P      21 05 55.3 +0.8
HMH   Humu‘ula Sheep    51.77  55  P      P      21 05 56.1 +0.7
NACB  Ninganchiao       51.85 312  P      P      21 05 55.5 -0.1
KPJI  Karang Pucung     51.95 269  P      P      21 05 56.7 +0.2
      comp=Z,64nm,0.8s
TPUB  Ta-pu             52.05 310  P      P      21 05 56.2 -0.9
TPUB                               IAmb   IAmb   21 06 17.9
      comp=Z,58nm,1.1s
JNU   Nakatsue          52.07 327  P      P      21 05 56.9 -0.2
      comp=Z,49nm,0.9s,baz=117,slow=3.1,SNR=30
JNU                                LR     LR     21 28 27.8
      comp=Z,68nm,18.5s,baz=156,slow=36
JNU   Nakatsue          52.07 327  P      P      21 05 57.1  0.0
SSLB  Suanglung         52.09 311  P      P      21 05 56.6 -0.8
SSLB                               IAmb   IAmb   21 05 58.3
      comp=Z,45nm,1.0s
KSM   Kuching           52.22 280  P      P      21 05 57.7 -0.8
KSM                                IAmb   IAmb   21 05 58.8
      comp=Z,58nm,0.9s
KSM   Kuching           52.22 280  P      P      21 05 58.0 -0.6
YHNB  Yeheng            52.30 312  P      P      21 05 59.1 +0.1
TATO  Taipei            52.40 313  P      P      21 05 59.4 -0.2
CISI  Cisompet, Garu    53.02 268  P      P      21 06 03.2 -1.3
      comp=Z,2µmcomp=Z,160nm,1.1s
CISI  Cisompet, Garu    53.02 268  P      P      21 06 03.3 -1.3
LEM   Lembang           53.31 269  P      P      21 06 06.0 -0.8
      comp=Z,106nm,1.0s,baz=55,slow=5.8,SNR=31
LEM   Lembang           53.31 269  P      P      21 06 06.0 -0.8
CNJI  Cibinong          53.73 268  P      P      21 06 09.3 -0.3
      comp=Z,2µmcomp=Z,123nm,1.2s
DBJI  Dramaga           54.20 269  P      P      21 06 12.4 -0.7
      comp=Z,60nm,1.2s
SKJI  Sukabumi          54.33 269  P      P      21 06 13.9 -0.1
      comp=Z,2µmcomp=Z,216nm,0.9s
ERM   Erimo             54.68 343  P      P      21 06 17.5 +1.5
ERM                                pmax   pmax
      comp=Z,152nm,1.3s
ERM   Erimo             54.68 343  P      P      21 06 17.5 +1.5
XMIS  Christmas Isla    54.83 264  P      P      21 06 17.0 -0.7
TJN   Taejon            56.42 327ceP      P      21 06 29.4 +0.8
KASI  Kota Agung        56.56 270  P      P      21 06 28.1 -2.0
      comp=Z,1µmcomp=Z,145nm,1.0s
PMBI  Palembang         56.72 273  P      P      21 06 32.5 +1.3
      comp=Z,236nm,1.1s
PMBI  Palembang         56.72 273  P      P      21 06 31.0 -0.2
ASAJ  Asahikawa         56.78 344  LR     LR     21 28 09.6
      comp=Z,432nm,21.8s,baz=162,slow=33
KSRS  Korea Array       56.94 328  P      P      21 06 32.0 -0.3
      comp=Z,24nm,1.0s,baz=143,slow=7.2,SNR=41
KSRS                               LR     LR     21 29 04.6
      comp=Z,184nm,20.7s,baz=128,slow=34
KSRS  Korea Array       56.94 328  P      P      21 06 32.0 -0.3
KSAR  Wonju Array Be    56.95 328  P      P      21 06 32.3  0.0
KSAR  Wonju Array Be    56.95 328  P      P      21 06 32.3  0.0
KS19  Wonju Array Si    57.00 328  P      P      21 06 32.5 -0.3
KS19                               IAmb   IAmb   21 06 34.2
      comp=Z,33nm,0.9s
MDSI  Maura Dua         57.04 271  P      P      21 06 31.6 -1.9
      comp=Z,674nmcomp=Z,67nm,1.1s
LWLI  Liwa              57.07 271  P      P      21 06 32.7 -1.1
      comp=Z,43nm,0.9s
DLV   T  Lat            57.08 291  P      P      21 06 33.6 -0.3
DLV                                IAmb   IAmb   21 06 35.2
      comp=Z,38nm,0.9s
TAOE  Nuku Hiva Isla    57.53  94 eLR     LR     21 23 14.8
      comp=Z,635nm,25.2s
INCN  Inchon            57.63 327  P      P      21 06 37.4 +0.2
INCN                               pmax   pmax
      comp=Z,59nm,0.9s
INCN  Inchon            57.63 327  P      P      21 06 37.4 +0.2
TPRI  Tanjung Pinang    57.72 278  P      P      21 06 38.2 -0.1
      comp=Z,3µmcomp=Z,139nm,0.8s
NJ2   Nanjing           58.56 318 eP      P      21 06 44.6 +0.8
NJ2                                pmax   pmax
      comp=Z,25nm,0.5s
MYKOM Kota Tinggi       58.57 278  P      P      21 06 43.8 -0.4
QIZ   Qiongzhong        58.62 300  P      P      21 06 44.0 -0.5
QIZ                                S      S      21 14 44.2 -0.7
QIZ                                LR     LR
      comp=Z,240nm,9.9s
QIZ                                LR     LR
      comp=Z,290nm,24.7s
KSI   Kapahiang         58.73 272  P      P      21 06 46.1 +0.7
      comp=Z,2µmcomp=Z,33nm,0.9s
YSS   Yuzh-Sakhalins    59.37 345 eP      P      21 06 49.4 +0.4
YSS                               e              21 07 06.4
YSS                                pmax   pmax
      comp=Z,20nm,1.2s
YSS                                MLR    MLR
      comp=Z,300nm,16.0s
YSS                                MLR    MLR
      comp=N,200nm,15.0s
YSS   Yuzh-Sakhalins    59.37 345  P      P      21 06 48.9 -0.2
YSS                                IAmb   IAmb   21 07 08.1
      comp=Z,32nm,1.0s
KRJI  Kerinci           60.12 273  P      P      21 06 54.3 -0.7
      comp=Z,4µmcomp=Z,221nm,1.2s
SDSI  Sungai Dareh      60.37 275  P      P      21 06 55.9 -0.7
      comp=Z,1µmcomp=Z,104nm,0.9s
USA0B Ussuriysk Arra    60.45 336c iP     P      21 06 56.3 -0.2
USA0B Ussuriysk Arra    60.45 336  P      P      21 06 57.1 +0.5
USRK  Ussuriysk Ar.     60.45 336  P      P      21 06 56.6  0.0
      comp=Z,42nm,0.8s,baz=146,slow=6.3,SNR=40
USRK                               LR     LR     21 31 10.5
      comp=Z,116nm,21.0s,baz=131,slow=34
USRK  Ussuriysk Ar.     60.45 336  P      P      21 06 56.7 +0.2
USRK  Ussuriysk Ar.     60.45 336  P      P      21 06 56.7 +0.2
WHN   Wuhan             60.77 314  P      P      21 06 58.0 -1.0
WHN                                pP     pP     21 07 17.1 +2.7
WHN                                S      S      21 15 11.4 -0.7
WHN                                LR     LR
      comp=Z,600nm,16.5s
UBPT  Khong Chiam       61.00 294  P      P      21 07 00.8  0.0
BKNI  Bangkinang        61.00 276  P      P      21 07 01.3 +0.4
      comp=Z,2µmcomp=Z,250nm,1.1s
BKNI  Bangkinang        61.00 276  P      P      21 07 00.9  0.0
PDSI  Padang            61.32 275  P      P      21 07 01.4 -1.7
      comp=Z,34nm,0.7s
DL2   Dalian            61.39 325  P      P      21 07 02.8 -0.2
DL2                                pP     pP     21 07 19.4 +1.4
DL2                               eS      S      21 15 19.5 -0.2
DL2                                pmax   pmax
      comp=Z,41nm,0.8s
DL2                                LR     LR
      comp=Z,280nm,17.8s
DL2                                LR     LR
      comp=Z,230nm,16.6s
PPSI  Pulau Pagai       61.43 272  P      P      21 07 04.2 +0.4
      comp=Z,139nm,0.8s
MDJ   Mudanjiang        61.78 335  P      P      21 07 06.7 +1.2
MDJ                                pmax   pmax
      comp=Z,31nm,0.9s
MDJ                                pmax   pmax
      comp=Z,180nm,4.7s
MDJ   Mudanjiang        61.78 335  P      P      21 07 05.8 +0.3
IPM   Ipoh              61.94 281  P      P      21 07 06.8 -0.4
IPM   Ipoh              61.94 281  P      P      21 07 07.0 -0.3
TIA   Tai'an            62.29 320  P      P      21 07 09.0 -0.1
TIA                                pmax   pmax
      comp=Z,12nm,0.8s
KULM  Kulim             62.50 281  P      P      21 07 10.5 -0.5
KULM  Kulim             62.50 281  P      P      21 07 10.0 -1.0
SISI  Saibi             62.59 274  P      P      21 07 11.1 -0.5
      comp=Z,42nm,0.8s
CN2   Changchun         62.99 331 eP      P      21 07 13.2 -0.4
CN2                               epP     pP     21 07 29.2 +0.6
CN2                               eS      S      21 15 37.2 -2.4
CN2                                pmax   pmax
      comp=Z,50nm,1.0s
CN2                                LR     LR
      comp=Z,270nm,20.0s
CN2                                LR     LR
      comp=Z,190nm,20.0s
TYV   Tymovskoe         63.04 347 eP      P      21 07 15.4 +1.6
TYV                                pmax   pmax
      comp=Z,13nm,0.6s
TYV                                pmax   pmax
      comp=Z,200nm,5.0s
PET   Petropavlovsk     63.09 358 eP      P      21 07 16.4 +2.3
PET                               eS      S      21 15 44.9 +4.4
PEA0B Petropavlovsk-    63.21 357  P      P      21 07 15.6 +0.7
PEA0B                              pmax   pmax
      comp=Z,181nm,1.9s
PEA0B Petropavlovsk-    63.21 357  P      P      21 07 15.6 +0.7
PETK  Petropavlovsk-    63.21 357  P      P      21 07 15.5 +0.6
      comp=Z,5.2nm,0.7s,baz=152,slow=7.2,SNR=10
PETK                               LR     LR     21 30 19.6
      comp=Z,246nm,21.8s,baz=227,slow=32
PETK  Petropavlovsk-    63.21 357  P      P      21 07 15.3 +0.4
RPSI  Rantau Prapat     63.57 278  P      P      21 07 17.2 -1.0
RPSI                               IAmb   IAmb   21 07 17.8
      comp=Z,45nm,0.9s
PSI   Prapat            63.59 278  P      P      21 07 17.1 -1.3
      comp=Z,24nm,0.7s,baz=123,slow=2.6,SNR=30
PSI   Prapat            63.59 278  P      P      21 07 17.2 -1.3
PSI                                pmax   pmax
      comp=Z,45nm,0.9s
PBSI  Pulau Batu        63.63 275  P      P      21 07 18.7 +0.2
      comp=Z,206nm,1.2s
SMY   Shemya            63.68   9  P      P      21 07 18.7 +0.7
SMY                                pmax   pmax
      comp=Z,169nm,1.3s
SMY   Shemya            63.68   9  P      P      21 07 18.7 +0.7
ENH   Enshi             64.18 311  P      P      21 07 21.3 -0.5
ENH                                IAmb   IAmb   21 07 42.4
      comp=Z,79nm,1.3s
GRNR  Gornyy            64.57 343⇑iP      P      21 07 24.4 +0.4
GRNR                               pmax   pmax
      comp=Z,10.0nm,0.6s
GRNR                               MLR    MLR
      comp=Z,170nm,18.0s
SLVN  Son La            64.65 299  P      P      21 07 24.9 -0.2
ADK   Adak              64.71  15  P      P      21 07 25.8 +1.0
ADK                                pmax   pmax
      comp=Z,120nm,1.4s
ADK   Adak              64.71  15  P      P      21 07 25.8 +1.0
KLR   Kul'dur           64.75 339⇑iP      P      21 07 24.3 -0.8
KLR                                pmax   pmax
      comp=Z,28nm,1.4s
BJI   Beijing           65.29 323 eP      P      21 07 29.2 +0.4
BJI                                PcP    PcP    21 07 59.5 -1.2
BJI                                pmax   pmax
      comp=Z,9.0nm,0.8s
PBKT  Sadao Pong        65.50 293  P      P      21 07 30.7 +0.1
CASY  Casey             65.61 200  P      P      21 07 30.5  0.0
CASY                               IAmb   IAmb   21 07 31.4
      comp=Z,47nm,0.8s
LHMI  Lhok Sumawe       66.07 280  P      P      21 07 33.5 -0.9
MLSI  Meulaboh, Aceh    66.37 279  P      P      21 07 35.3 -1.0
      comp=Z,250nm,0.7s
XAN   Xi'an             66.53 314  P      P      21 07 35.7 -1.3
XAN                                pmax   pmax
      comp=Z,26nm,0.7s
XAN   Xi'an             66.53 314  P      P      21 07 36.1 -0.9
XAN                                pmax   pmax
      comp=Z,32nm,0.8s
XAN   Xi'an             66.53 314  P      P      21 07 36.1 -0.9
XAN                                IAmb   IAmb   21 07 37.6
      comp=Z,32nm,0.8s
KMI   Kunming           67.15 303  P      P      21 07 42.5 +1.2
KMI                                pP     sP     21 08 02.4 -0.6
KMI                                sP     PcP    21 08 07.2 -1.9
KMI                                PP     PP     21 10 14.0 +4.0
KMI                                S      S      21 16 29.7 -2.2
KMI                                sS     sS     21 17 00.8 +2.4
KMI                                SS     SS     21 20 46.8 -5.4
KMI                                pmax   pmax
      comp=Z,20nm,0.5s
KMI                                pmax   pmax
      comp=Z,190nm,3.3s
KMI                                LR     LR
      comp=Z,180nm,11.7s
KMI                                LR     LR
      comp=Z,220nm,15.2s
KMI                                LR     LR
      comp=Z,280nm,15.7s
VNDA  Vanda             67.23 180  P      P      21 07 41.1 +0.4
      comp=Z,10nm,0.7s,baz=340,slow=7.1,SNR=24
VNDA                               LR     LR     21 31 26.7
      comp=Z,109nm,21.7s,baz=18,slow=31
VNDA  Vanda             67.23 180  P      P      21 07 41.2 +0.5
VNDA                               pmax   pmax
      comp=Z,50nm,1.5s
VNDA  Vanda             67.23 180  P      P      21 07 41.2 +0.5
VNDA                               IAmb   IAmb   21 07 42.2
      comp=Z,50nm,1.5s
CM31  Chiang Mai Arr    67.96 295  P      P      21 07 46.6 +0.3
CMAR  Chiang Mai Arr    67.96 295  P      P      21 07 45.5 -0.7
      comp=Z,7.4nm,0.8s,baz=128,slow=4.8,SNR=67
CMAR                               LR     LR     21 36 13.7
      comp=Z,55nm,21.9s,baz=118,slow=35
CMAR  Chiang Mai Arr    67.96 295ceP      P      21 07 46.2 -0.1
CMAR                               pmax   pmax
      comp=Z,7.0nm,0.8s
CMAR  Chiang Mai Arr    67.96 295  P      P      21 07 46.0 -0.3
CHTO  Chiang Mai        68.07 295  P      P      21 07 47.0  0.0
CHTO                               pmax   pmax
      comp=Z,58nm,1.8s
CHTO  Chiang Mai        68.07 295  P      P      21 07 47.0  0.0
CHTO                               IAmb   IAmb   21 07 48.8
      comp=Z,58nm,1.8s
HHC   Hu-ho-hao-te      68.56 321 eP      P      21 07 50.8 +1.0
HHC                                pP     pP     21 08 04.9 -0.4
HHC                                pmax   pmax
      comp=Z,1µm,5.8s
HHC                                LR     LR
      comp=Z,2µm,16.7s
HHC                                LR     LR
      comp=Z,1µm,17.0s
HHC                                LR     LR
      comp=Z,2µm,16.2s
CD2   Chengdu           68.81 309  P      P      21 07 50.6 -0.9
CD2                                pmax   pmax
      comp=Z,20nm,0.5s
BTO   Baotou            69.38 320 eP      P      21 07 55.3 +0.5
HIA   Hailar            69.68 332  P      P      21 07 56.3 -0.1
HIA                                pmax   pmax
      comp=Z,40nm,0.9s
HIA   Hailar            69.68 332  P      P      21 07 56.3 -0.1
HIA                                IAmb   IAmb   21 08 14.7
      comp=Z,40nm,0.9s
AKUT  Akutan            69.89  20  P      P      21 07 58.2 +0.7
ZEA   Zeya              70.06 339 eP      P      21 07 58.8 +0.2
ZEA                                pmax   pmax
      comp=Z,35nm,1.0s
MA2   Magadan           70.14 354  LR     LR     21 35 54.7
      comp=Z,151nm,20.6s,baz=171,slow=33
MA2   Magadan           70.14 354 i P     P      21 07 58.9 -0.1
MA2                                pmax   pmax
      comp=Z,4.0nm,0.3s
MA2   Magadan           70.14 354  P      P      21 07 59.3 +0.4
LZH   Lanzhou           71.15 314 ⇑P      P      21 08 07.4 +1.6
LZH                                pP     pP     21 08 22.7 +1.3
LZH                                sP     sP     21 08 27.8 +0.1
LZH                                PP     PP     21 10 44.4  0.0
LZH                                pmax   pmax
      comp=Z,30nm,1.3s
LZH                                pmax   pmax
      comp=Z,130nm,5.0s
LZH                                LR     LR
      comp=Z,220nm,17.3s
LZH                                LR     LR
      comp=Z,310nm,16.6s
LZH                                LR     LR
      comp=Z,310nm,18.1s
KOHI  KOHIMA            74.61 300 eP      P      21 08 25.0 -1.5
ULN   Ulaanbaatar       75.24 326  P      P      21 08 30.0 +0.3
ULN                                pmax   pmax
      comp=Z,55nm,0.9s
ULN   Ulaanbaatar       75.24 326  P      P      21 08 30.0 +0.3
ULN                                IAmb   IAmb   21 08 48.7
      comp=Z,55nm,0.9s
GTA   Gaotai            75.52 315 ⇑P      P      21 08 31.5  0.0
GTA                                pP     pP     21 08 47.3 +0.2
GTA                                sP     sP     21 08 54.7 +1.3
GTA                                S      S      21 18 08.2 +0.3
GTA                                pmax   pmax
      comp=Z,9.0nm,1.1s
GTA                                pmax   pmax
      comp=Z,92nm,7.1s
GTA                                LR     LR
      comp=Z,120nm,17.5s
GTA                                LR     LR
      comp=Z,180nm,18.7s
GTA                                LR     LR
      comp=Z,250nm,18.4s
SONM  Songino Array     75.59 325  P      P      21 08 31.5 -0.2
      comp=Z,38nm,0.8s,baz=140,slow=5.3,SNR=216
SONM                               LR     LR     21 40 47.2
      comp=Z,116nm,21.9s,baz=130,slow=35
SONM  Songino Array     75.59 325  P      P      21 08 31.7  0.0
SONM                               pmax   pmax
      comp=Z,39nm,0.8s
SONM  Songino Array     75.59 325  P      P      21 08 31.7  0.0
TEZP  TEZPUR            76.02 301 eP      P      21 08 33.8 -0.6
TEZP                              eP      P      21 08 34.1 -0.3
TEZP                               IAmb   IAmb   21 08 36.5
      comp=Z,20nm,1.0s
YAK   Yakutsk           76.22 345 eP      P      21 08 34.0 -0.7
YAK                               e              21 08 44.4
YAK                               e*PP    pP     21 08 50.7 +0.6
YAK                               ePPP    PPP    21 13 13.6
YAK                               eS      S      21 18 13.6 -0.8
YAK                               e*SS    ScS    21 18 53.3 +8.6
YAK                               eSS     SS     21 23 11.9 +2.5
YAK                               eSSS    SSS    21 26 30.2
YAK                                pmax   pmax
      comp=Z,35nm,0.9s
YAK                                pmax   pmax
      comp=N,9.0nm,1.0s
YAK                                pmax   pmax
      comp=E,5.0nm,1.2s
YAK                                pmax   pmax
      comp=Z,166nm,5.4s
YAK                                pmax   pmax
      comp=N,255nm,4.7s
YAK                                pmax   pmax
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	comp=E,135nm,5.7s						
YAK				smax	smax		
	comp=N,134nm,4.9s						
YAK				smax	smax		
	comp=E,141nm,4.3s						
YAK	**Yakutsk**	**76.22**	**345**	P	**P**	**21 08 34.5**	**-0.2**
YAK				IAmb	IAmb	21 08 36.9	
	comp=Z,51nm,0.8s						
SHL	**Shillong**	**76.46**	**299**	*e*P	**P**	**21 08 37.0**	**-0.2**
SHL	**Shillong**	**76.46**	**299**	P	**P**	**21 08 36.5**	**-0.7**
SHL				pmax	pmax		
	comp=Z,17nm,0.9s						
SHL	**Shillong**	**76.46**	**299**	P	**P**	**21 08 36.5**	**-0.7**
OHAK	**Old Harbor**	**76.81**	**23**	P	**P**	**21 08 38.8**	**+0.6**
KDAK	**Kodiak Island**	**77.47**	**23**	P	**P**	**21 08 42.7**	**+0.8**
KDAK				pmax	pmax		
	comp=Z,46nm,1.0s						
KDAK	**Kodiak Island**	**77.47**	**23**	P	**P**	**21 08 42.7**	**+0.8**
KDAK				IAmb	IAmb	21 08 44.2	
	comp=Z,46nm,0.9s						
BOD	**Bodaibo**	**78.09**	**336**	*e*P	**P**	**21 08 44.6**	**-0.7**
BOD				pmax	pmax		
	comp=Z,24nm,1.4s						
BILL	**Bilibino**	**78.19**	**2**	*ce*P	**P**	**21 08 45.6**	**0.0**
BILL				*e*		21 08 52.2	
BILL				*e**SP	**sP**	**21 09 06.6**	**-0.6**
BILL				*e*		21 09 16.0	
BILL				*e*S	**S**	**21 18 34.0**	**-1.6**
BILL				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BILL	**Bilibino**	**78.19**	**2**	P	**P**	**21 08 45.7**	**0.0**
BILL				IAmb	IAmb	21 09 04.0	
	comp=Z,34nm,1.1s						
LSA	**Lhasa**	**78.40**	**303**	P	**P**	**21 08 48.8**	**+0.5**
LSA	**Lhasa**	**78.40**	**303**	P	**P**	**21 08 47.8**	**-0.5**
LSA				pmax	pmax		
	comp=Z,16nm,1.3s						
LSA	**Lhasa**	**78.40**	**303**	P	**P**	**21 08 47.8**	**-0.5**
ZAK	**Zakamensk**	**78.69**	**326**	*e*P	**P**	**21 08 48.4**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,23nm,1.0s						
ANM	**Nome**	**78.70**	**14**	P	**P**	**21 08 49.2**	**+0.6**
ANM				pmax	pmax		
	comp=Z,28nm,1.5s						
ANM	**Nome**	**78.70**	**14**	P	**P**	**21 08 49.2**	**+0.6**
SVW2	**Sparrevohn**	**78.75**	**20**	P	**P**	**21 08 49.7**	**+0.8**
IRK	**Irkutsk**	**79.15**	**328**	*e*P	**P**	**21 08 51.9**	**+0.6**
IRK				*e*		21 09 06.2	
IRK				pmax	pmax		
	comp=Z,58nm,1.9s						
CNPM	**China Poot**	**79.18**	**22**	P	**P**	**21 08 51.8**	**+0.5**
CNPM				IAmb	IAmb	21 09 12.3	
	comp=Z,64nm,1.0s						
TLY	**Talaya**	**79.18**	**328**	P	**P**	**21 08 51.6**	**+0.1**
	comp=Z,15nm,0.7s,baz=228,slow=3.1,SNR=16						
TLY				pP	**pP**	**21 09 06.2**	**-1.1**
	comp=Z,11nm,0.6s,baz=160,slow=5.5,SNR=2.7						
TLY	**Talaya**	**79.18**	**328**	*i* P	**P**	**21 08 51.1**	**-0.4**
TLY				pmax	pmax		
	comp=Z,16nm,0.7s						
TLY	**Talaya**	**79.18**	**328**	P	**P**	**21 08 51.4**	**-0.2**
TLY				IAmb	IAmb	21 09 12.9	
	comp=Z,35nm,1.0s						
RSO	**Redoubt South**	**79.27**	**21**	P	**P**	**21 08 51.9**	**-0.2**
BRLK	**Bradley Lake**	**79.47**	**22**	P	**P**	**21 08 53.4**	**+0.5**
BRLK				IAmb	IAmb	21 09 09.7	
	comp=Z,49nm,1.0s						
QSPA	**South Pole Qui**	**79.72**	**180**	P	**P**	**21 08 54.1**	**-0.4**
QSPA				IAmb	IAmb	21 08 55.4	
	comp=Z,44nm,1.0s						
TTA	**Tatalina**	**79.96**	**18**	P	**P**	**21 08 56.2**	**+0.6**
TTA	**Tatalina**	**79.96**	**18**	P	**P**	**21 08 56.2**	**+0.6**
TAPN	**Taplejung**	**80.56**	**300**	*e*P	**P**	**21 08 59.7**	**-0.2**
MOY	**Mondy**	**80.59**	**327**	*e*P	**P**	**21 08 58.4**	**-0.9**
MOY				pmax	pmax		
	comp=Z,54nm,2.4s						
SUA	**Susitna One**	**80.67**	**21**	P	**P**	**21 08 59.5**	**0.0**
SUA				IAmb	IAmb	21 09 04.0	
	comp=Z,26nm,0.8s						
ODAN	**Odare**	**80.70**	**299**	*e*P	**P**	**21 09 00.2**	**-0.3**
SKT	**Skwentna**	**80.75**	**20**	P	**P**	**21 08 59.5**	**-0.2**
RC01	**Rabbit Creek A**	**80.78**	**22**	P	**P**	**21 09 00.3**	**+0.3**
PPLA	**Purkeypile**	**81.16**	**20**	P	**P**	**21 09 02.1**	**0.0**
PMR	**Palmer**	**81.34**	**22**	P	**P**	**21 09 03.6**	**+0.8**
PMR				pmax	pmax		
	comp=Z,25nm,1.0s						
PMR	**Palmer**	**81.34**	**22**	P	**P**	**21 09 03.6**	**+0.8**
PMR				IAmb	IAmb	21 09 19.4	
	comp=Z,25nm,1.0s						
RAMN	**Ramite**	**81.40**	**299**	*e*P	**P**	**21 09 03.5**	**-0.8**
JIRN	**Jiri**	**81.94**	**300**	*e*P	**P**	**21 09 06.6**	**-0.7**
RDOG	**Red Dog Mine**	**82.15**	**13**	P	**P**	**21 09 07.6**	**+0.5**
TRF	**Thorofare Moun**	**82.17**	**20**	P	**P**	**21 09 07.3**	**-0.1**
TRF				IAmb	IAmb	21 09 23.1	
	comp=Z,27nm,0.9s						
PALK	**Pallekele**	**82.27**	**279**	P	**P**	**21 09 09.5**	**+0.7**
	comp=Z,15nm,0.8s,baz=43,slow=2.8,SNR=6.5						
GUN	**Gumba**	**82.28**	**300**	*e*P	**P**	**21 09 08.6**	**-0.4**
PKI	**Pulchoki**	**82.59**	**300**	*e*P	**P**	**21 09 09.8**	**-0.8**
	comp=Z,30nm,1.0s						
PKIN	**Phulchoki**	**82.60**	**300**	*e*P	**P**	**21 09 09.2**	**-1.4**
RND	**Reindeer**	**82.62**	**20**	P	**P**	**21 09 10.1**	**+0.4**
RND				pmax	pmax		
	comp=Z,34nm,1.0s						
RND	**Reindeer**	**82.62**	**20**	P	**P**	**21 09 10.1**	**+0.4**
RND				IAmb	IAmb	21 09 25.3	
	comp=Z,34nm,1.0s						
KKN	**Kakani**	**82.76**	**300**	*e*P	**P**	**21 09 10.8**	**-0.6**
DMN	**Daman**	**82.86**	**300**	*e*P	**P**	**21 09 11.5**	**-0.4**
	comp=Z,67nm,1.0s						
IMAR	**Indian Mountai**	**82.86**	**17**	P	**P**	**21 09 11.4**	**+0.6**
DHY	**Denali Highway**	**82.92**	**21**	P	**P**	**21 09 11.4**	**+0.1**
CRQM	**Cirque**	**83.10**	**24**	P	**P**	**21 09 13.2**	**+0.9**
CRQM				IAmb	IAmb	21 09 30.3	
	comp=Z,47nm,0.9s						
TGL	**Tana Glacier**	**83.23**	**24**	P	**P**	**21 09 14.2**	**+1.3**
TGL				IAmb	IAmb	21 09 30.9	
	comp=Z,35nm,1.0s						
VRDI	**Verde Repeater**	**83.25**	**24**	P	**P**	**21 09 14.0**	**+0.9**
VRDI				IAmb	IAmb	21 09 30.4	
	comp=Z,29nm,1.0s						
NEA	**Nenana**	**83.32**	**19**	P	**P**	**21 09 13.4**	**+0.3**
NEA				IAmb	IAmb	21 09 29.1	
	comp=Z,35nm,0.9s						
GKN	**Gorkha**	**83.36**	**300**	*e*P	**P**	**21 09 13.3**	**-1.1**
	comp=Z,115nm,1.0s						
MCARA	**McCarthy VSAT**	**83.51**	**24**	P	**P**	**21 09 15.7**	**+1.5**
MCARA				IAmb	IAmb	21 09 32.2	
	comp=Z,43nm,0.9s						
WRH	**Wood River Hil**	**83.58**	**20**	P	**P**	**21 09 14.5**	**0.0**
WRH				IAmb	IAmb	21 09 30.3	
	comp=Z,29nm,1.0s						
CCB	**Clear Creek Bu**	**83.78**	**20**	P	**P**	**21 09 15.3**	**-0.2**
MAW	**Mawson**	**83.84**	**202**	P	**P**	**21 09 16.3**	**+0.4**
	comp=Z,21nm,0.8s,baz=97,slow=10,SNR=6.3						
MAW				LR	LR	21 42 41.5	
	comp=Z,118nm,18.6s,baz=66,slow=33						
MAW	**Mawson**	**83.84**	**202**	P	**P**	**21 09 16.2**	**+0.4**
MDM	**Murphy Dome**	**83.85**	**19**	P	**P**	**21 09 15.9**	**0.0**
MDM				IAmb	IAmb	21 09 31.7	
	comp=Z,26nm,0.9s						
BARN	**Barnard Glacie**	**83.87**	**24**	P	**P**	**21 09 17.7**	**+1.4**
BARN				IAmb	IAmb	21 09 19.1	
	comp=Z,23nm,0.6s						
TCOL	**CIGO, UAF Yank**	**83.91**	**19**	P	**P**	**21 09 16.4**	**+0.3**
	baz=230,SNR=11						
COLA	**College**	**83.92**	**19**	P	**P**	**21 09 16.0**	**-0.1**
COLA				pmax	pmax		
	comp=Z,50nm,0.8s						
COLA	**College**	**83.92**	**19**	P	**P**	**21 09 16.0**	**-0.1**
COLA				IAmb	IAmb	21 09 32.0	
	comp=Z,50nm,0.8s						
HDA	**Harding Lake**	**83.92**	**20**	P	**P**	**21 09 16.7**	**+0.5**
HDA				IAmb	IAmb	21 09 32.5	
	comp=Z,44nm,0.9s						
HDA	**Harding Lake**	**83.92**	**20**	P	**P**	**21 09 16.7**	**+0.5**
	baz=231,SNR=26						
IL31		**84.17**	**20**	P	**P**	**21 09 17.1**	**-0.3**
IL31				IAmb	IAmb	21 09 33.5	
	comp=Z,34nm,1.2s						
ILAR	**Eielson Array**	**84.17**	**20**	P	**P**	**21 09 17.1**	**-0.4**
	comp=Z,6.1nm,0.7s,baz=249,slow=4.8,SNR=95						
ILAR				pP	**pP**	**21 09 32.0**	**-1.3**
	comp=Z,22nm,1.1s,baz=262,slow=3.7,SNR=14						
ILAR				LR	LR	21 42 47.5	
	comp=Z,282nm,18.8s,baz=240,slow=33						
ILAR	**Eielson Array**	**84.17**	**20**	P	**P**	**21 09 17.4**	**-0.1**
DANN	**Dangsing**	**84.20**	**300**	*e*P	**P**	**21 09 17.3**	**-1.6**
	comp=Z,65nm,0.9s						
POKR	**Poker Plat Res**	**84.21**	**19**	P	**P**	**21 09 17.7**	**0.0**
	baz=230,SNR=12						
RIDG	**Independent Ri**	**84.23**	**21**	P	**P**	**21 09 18.2**	**+0.3**
RIDG				IAmb	IAmb	21 09 34.2	
	comp=Z,23nm,0.9s						
H02S1	**DAWSON INLET T**	**84.34**	**34**	T	T	22 42 19.4	
	SNR=3.2						
TIXI	**Tiksi**	**84.57**	**350**	*ce*P	**P**	**21 09 18.3**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,14nm,1.2s						
TIXI	**Tiksi**	**84.57**	**350**	P	**P**	**21 09 19.1**	**-0.2**
TIXI				IAmb	IAmb	21 09 34.5	
	comp=Z,45nm,1.5s						
SCRK	**Sand Creek**	**84.68**	**21**	P	**P**	**21 09 20.7**	**+0.4**
SCRK				IAmb	IAmb	21 09 23.0	
	comp=Z,20nm,0.7s						
BCAR	**Beaver Creek A**	**84.95**	**22**	P	**P**	**21 09 22.5**	**+1.0**
KCPM	**Cahto Peak**	**85.16**	**48**	P	**P**	**21 09 23.8**	**+0.6**
KCPM				IAmb	IAmb	21 09 50.8	
	comp=Z,87nm,1.9s						
KMRM	**Mail Ridge**	**85.22**	**48**	P	**P**	**21 09 24.1**	**+0.6**
KMRM				IAmb	IAmb	21 09 27.7	
	comp=Z,23nm,1.0s						
HYT	**Haines Junctio**	**85.46**	**25**	P	**P**	**21 09 25.1**	**+0.8**
GDXM	**Geysers**	**85.48**	**49**	P	**P**	**21 09 25.4**	**+0.7**
WMQ	**Urumqi**	**85.59**	**316**	*e*P	**P**	**21 09 24.5**	**-0.7**
WMQ				pP	pP	21 09 44.7	+3.7
WMQ				LR	LR		
	comp=Z,860nm,29.3s						
WMQ				LR	LR		
	comp=Z,1µm,29.3s						
WMQ	**Urumqi**	**85.59**	**316**	P	**P**	**21 09 24.8**	**-0.4**
WMQ				pmax	pmax		
	comp=Z,58nm,1.8s						
WMQ	**Urumqi**	**85.59**	**316**	P	**P**	**21 09 24.8**	**-0.4**
WMQ				IAmb	IAmb	21 09 46.1	
	comp=Z,58nm,1.8s						
TOLK	**Toolik Lake Re**	**85.88**	**16**	P	**P**	**21 09 26.9**	**+0.8**
TOLK	**Toolik Lake Re**	**85.88**	**16**	P	**P**	**21 09 27.1**	**+1.1**
	baz=228						
O02D	**Mt. Diablo Mer**	**85.88**	**48**	P	**P**	**21 09 28.6**	**+1.9**
	baz=253,SNR=12						
J01E	**Myrtle Point**	**85.96**	**45**	P	**P**	**21 09 29.5**	**+2.5**
	baz=252						
K02D	**Willamette Mer**	**86.01**	**46**	P	**P**	**21 09 29.7**	**+2.4**
	baz=252						
EGAK	**Eagle**	**86.14**	**21**	P	**P**	**21 09 28.4**	**+1.0**
EGAK				IAmb	IAmb	21 09 44.3	
	comp=Z,43nm,1.0s						
N02D	**Trinity Center**	**86.18**	**47**	P	**P**	**21 09 30.7**	**+2.6**
	baz=253						
WDC	**Whiskeytown Da**	**86.18**	**48**	P	**P**	**21 09 28.6**	**+0.5**
WDC				pmax	pmax		
	comp=Z,36nm,1.9s						
WDC	**Whiskeytown Da**	**86.18**	**48**	P	**P**	**21 09 28.6**	**+0.5**
WDC				IAmb	IAmb	21 09 55.4	
	comp=Z,36nm,1.9s						
M02C	**Callahan**	**86.19**	**47**	P	**P**	**21 09 30.7**	**+2.4**
	baz=253,SNR=9.0						
HYB	**Hyderabad**	**86.37**	**288**	*i* P	**P**	**21 09 28.0**	**-1.6**
YBH	**Yreka Blue Hor**	**86.40**	**47**	P	**P**	**21 09 30.8**	**+1.5**
YBH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
YBH	**Yreka Blue Hor**	**86.40**	**47**	P	**P**	**21 09 30.8**	**+1.5**
DAWY	**Dawson**	**86.40**	**22**	P	**P**	**21 09 29.5**	**+0.8**
DAWY				IAmb	IAmb	21 09 46.4	
	comp=Z,42nm,1.1s						
HUMO	**Hull Mountain**	**86.48**	**46**	P	**P**	**21 09 30.8**	**+1.2**
I03D	**Drain, OR**	**86.53**	**45**	P	**P**	**21 09 32.1**	**+2.4**
	baz=252						
BMAR	**Burnt Mountain**	**86.55**	**18**	P	**P**	**21 09 30.5**	**+1.1**
O03E	**Paynes Creek**	**86.64**	**48**	P	**P**	**21 09 32.3**	**+1.8**
	baz=254,SNR=6.7						
ORV	**Oroville**	**86.66**	**49**	P	**P**	**21 09 31.4**	**+0.9**
ORV				pmax	pmax		
	comp=Z,13nm,1.3s						
ORV	**Oroville**	**86.66**	**49**	P	**P**	**21 09 31.4**	**+0.9**
PKM	**Mcpherson Peak**	**86.71**	**54**	P	**P**	**21 09 33.5**	**+2.4**
	baz=255						
L04D	**Klamath Falls**	**86.83**	**46**	P	**P**	**21 09 33.6**	**+2.1**
	baz=253						
AFDM	**Forest Hills D**	**86.89**	**50**	P	**P**	**21 09 32.3**	**+0.7**
M04C	**Macdoel**	**87.03**	**47**	P	**P**	**21 09 34.6**	**+2.2**
	baz=254						
CMB	**Columbia Colle**	**87.08**	**51**	P	**P**	**21 09 32.8**	**+0.1**
CMB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CMB	**Columbia Colle**	**87.08**	**51**	P	**P**	**21 09 32.8**	**+0.1**
I04A	**Tendick Farm,**	**87.21**	**45**	P	**P**	**21 09 34.9**	**+1.8**
	baz=253						
BEKR	**Beckworth**	**87.59**	**49**	P	**P**	**21 09 35.2**	**0.0**
BEKR				IAmb	IAmb	21 12 41.6	
	comp=Z,15nm,0.5s						
J05D	**Fort Rock, OR**	**87.88**	**45**	P	**P**	**21 09 38.9**	**+2.4**
	baz=254						
PNTR	**Pine Nut**	**87.95**	**50**	P	**P**	**21 09 37.3**	**+0.3**
PNTR				IAmb	IAmb	21 09 43.0	
	comp=Z,12nm,0.7s						
MWC	**Mount Wilson**	**87.95**	**55**	P	**P**	**21 09 37.4**	**+0.3**
MWC				pmax	pmax		
	comp=Z,47nm,1.4s						
MWC	**Mount Wilson**	**87.95**	**55**	P	**P**	**21 09 37.4**	**+0.3**
MWC				IAmb	IAmb	21 09 55.2	
	comp=Z,47nm,1.4s						
ISA	**Isabella, Lake**	**87.97**	**53**	P	**P**	**21 09 37.3**	**+0.3**
ISA				pmax	pmax		
	comp=Z,13nm,1.2s						
ISA	**Isabella, Lake**	**87.97**	**53**	P	**P**	**21 09 37.3**	**+0.3**
ISA	**Isabella, Lake**	**87.97**	**53**	P	**P**	**21 09 38.9**	**+1.9**
	baz=256						
MDPB	**Devils Postpil**	**87.98**	**51**	P	**P**	**21 09 37.5**	**+0.3**
OMMB	**Old Mammoth Mi**	**88.04**	**51**	P	**P**	**21 09 37.7**	**+0.1**
EDW2	**Edwards Air Fo**	**88.16**	**54**	P	**P**	**21 09 40.1**	**+2.2**
	baz=256						
MOD	**Modoc Plateau**	**88.17**	**47**	P	**P**	**21 09 38.3**	**+0.4**
YERR	**Yerington**	**88.20**	**50**	P	**P**	**21 09 37.8**	**-0.4**
PAHR	**Pah Rah Range**	**88.27**	**49**	P	**P**	**21 09 38.3**	**-0.1**
PAHR				IAmb	IAmb	21 09 57.0	
	comp=Z,22nm,1.5s						
BFSC	**Mount Baldy Ra**	**88.28**	**55**	P	**P**	**21 09 40.3**	**+1.7**
	baz=256						
CWC	**Cottonwood Cre**	**88.47**	**53**	P	**P**	**21 09 41.0**	**+1.5**
	baz=256						
LRMC	**Laurel Mtn Rad**	**88.55**	**54**	P	**P**	**21 09 42.1**	**+2.2**
	baz=256						
EPYK	**Eagle Plains**	**88.56**	**21**	P	**P**	**21 09 40.6**	**+1.6**
	baz=240						
RYN	**Ryan**	**88.65**	**50**	P	**P**	**21 09 40.9**	**+0.6**
NVAR	**Mina Array Bea**	**88.77**	**51**	P	**P**	**21 09 42.4**	**+1.5**
	comp=Z,8.6nm,0.7s,baz=236,slow=7.0,SNR=50						
NVAR				LR	LR	21 43 20.7	
	comp=Z,87nm,18.4s,baz=296,slow=31						
NVAR	**Mina Array Bea**	**88.77**	**51**	P	**P**	**21 09 42.1**	**+1.2**
MPMC	**Manual Prospec**	**88.84**	**53**	P	**P**	**21 09 42.8**	**+1.5**
	baz=256,SNR=11						
NV11	**Mina Array Sit**	**88.89**	**51**	P	**P**	**21 09 41.2**	**-0.1**
NV11				IAmb	IAmb	21 10 16.0	
	comp=Z,24nm,1.6s						
MONP2	**Monument Peak**	**88.98**	**56**	P	**P**	**21 09 43.9**	**+1.9**
	baz=257						
PFO	**Pinyon Flats O**	**89.11**	**56**	P	**P**	**21 09 44.0**	**+1.5**
	comp=Z,6.2nm,0.8s,baz=271,slow=6.2,SNR=8.3						
PFO	**Pinyon Flats O**	**89.11**	**56**	P	**P**	**21 09 44.4**	**+1.9**
	baz=257						
TPFO	**Pinon Flats**	**89.11**	**56**	P	**P**	**21 09 44.4**	**+1.9**
	baz=257						
XPFO	**Pion Flat**	**89.11**	**56**	P	**P**	**21 09 43.3**	**+0.8**
XPFO				IAmb	IAmb	21 10 01.0	
	comp=Z,41nm,1.9s						
IKP	**In-Ko-Pah, Jac**	**89.18**	**57**	P	**P**	**21 09 44.8**	**+2.0**
	baz=257						
GSC	**Goldstone, Bar**	**89.21**	**54**	P	**P**	**21 09 43.1**	**+0.2**
GSC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GSC	**Goldstone, Bar**	**89.21**	**54**	P	**P**	**21 09 43.0**	**+0.2**
GSC	**Goldstone, Bar**	**89.21**	**54**	P	**P**	**21 09 44.9**	**+2.1**
	baz=257						
I07A	**Izee**	**89.31**	**45**	P	**P**	**21 09 44.0**	**+0.9**
FURC	**Furnace Creek,**	**89.43**	**53**	P	**P**	**21 09 46.1**	**+2.5**
	baz=257,SNR=12						
HEC	**Hector,Ludlow**	**89.48**	**55**	P	**P**	**21 09 46.3**	**+2.2**
	baz=257,SNR=9.2						
WVOR	**Wild Horse Val**	**89.50**	**47**	P	**P**	**21 09 44.5**	**+0.4**
WVOR				pmax	pmax		
	comp=Z,27nm,1.4s						
WVOR	**Wild Horse Val**	**89.50**	**47**	P	**P**	**21 09 44.5**	**+0.4**
WVOR				IAmb	IAmb	21 10 11.9	
	comp=Z,27nm,1.4s						
BELC	**Belle Mtn. Jos**	**89.57**	**55**	P	**P**	**21 09 46.7**	**+2.1**
	baz=257						
SHOC	**Shoshone, Teco**	**89.76**	**54**	P	**P**	**21 09 47.4**	**+2.1**
	baz=257						
J08A	**Circle Bar Ran**	**89.85**	**46**	P	**P**	**21 09 45.7**	**0.0**
J08A				IAmb	IAmb	21 09 52.2	
	comp=Z,22nm,1.2s						
BC3	**Big Chuckawall**	**89.94**	**56**	P	**P**	**21 09 48.8**	**+2.5**
	baz=258						
TUQ	**Turquoise Moun**	**89.94**	**54**	P	**P**	**21 09 48.8**	**+2.5**
	baz=257,SNR=5.1						
GMRC	**Granite Mounta**	**90.01**	**55**	P	**P**	**21 09 48.9**	**+2.2**
	baz=258,SNR=12						
TPNV	**Topopah Spring**	**90.01**	**53**	P	**P**	**21 09 47.0**	**+0.3**
TPNV				pmax	pmax		
	comp=Z,15nm,0.9s						
TPNV	**Topopah Spring**	**90.01**	**53**	P	**P**	**21 09 47.0**	**+0.3**
TPNV				IAmb	IAmb	21 09 52.5	
	comp=Z,14nm,0.8s						
TPNV	**Topopah Spring**	**90.01**	**53**	P	**P**	**21 09 48.3**	**+1.6**
	baz=257						
MK31	**Makanchi Array**	**90.10**	**318**	P	**P**	**21 09 45.8**	**-0.9**
MK31				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MK31	**Makanchi Array**	**90.10**	**318**	P	**P**	**21 09 45.8**	**-0.9**
MKAR	**Makanchi Array**	**90.10**	**318**	P	**P**	**21 09 45.4**	**-1.2**
	comp=Z,3.8nm,0.5s,baz=92,slow=5.8,SNR=86						
MKAR				pP	**pP**	**21 10 00.5**	**-2.1**
	comp=Z,4.5nm,0.7s,baz=97,slow=5.8,SNR=9.1						
MKAR				LR	LR	21 51 13.4	
	comp=Z,73nm,21.0s,baz=68,slow=36						
MKAR	**Makanchi Array**	**90.10**	**318**	P	**P**	**21 09 45.6**	**-1.0**
IRM	**Iron Mountain**	**90.29**	**55**	P	**P**	**21 09 50.4**	**+2.6**
	baz=258,SNR=7.2						
MAKZ	**Makanchi**	**90.31**	**318**	P	**P**	**21 09 46.9**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,16nm,1.1s						
MAKZ	**Makanchi**	**90.31**	**318**	P	**P**	**21 09 46.9**	**-0.8**
MAKZ				IAmb	IAmb	21 10 20.3	
	comp=Z,16nm,1.1s						
GLA	**Glamis**	**90.32**	**57**	P	**P**	**21 09 50.8**	**+2.7**
	baz=258						
SMLA	**Simla**	**90.42**	**301**	*e*P	**P**	**21 09 46.8**	**-1.6**
SMLA				IAmb	IAmb	21 10 05.3	
	comp=Z,10nm,1.1s						
ZAA0	**Zalesovo Array**	**90.49**	**325**	P	**P**	**21 09 46.4**	**-1.9**
ZALV	**Zalesovo Beam**	**90.49**	**325**	P	**P**	**21 09 46.5**	**-1.7**
	comp=Z,3.5nm,0.7s,baz=116,slow=4.5,SNR=18						
ZALV				LR	LR	21 51 11.4	
	comp=Z,99nm,20.4s,baz=90,slow=36						
B08A	**Colville Reser**	**90.52**	**41**	P	**P**	**21 09 49.3**	**+0.7**
INK	**Inuvik**	**90.57**	**20**	LR	LR	21 44 59.2	
	comp=Z,475nm,21.6s,baz=185,slow=32						
INK	**Inuvik**	**90.57**	**20**	P	**P**	**21 09 48.2**	**-0.1**
INK				pmax	pmax		
	comp=Z,24nm,1.6s						
INK	**Inuvik**	**90.57**	**20**	P	**P**	**21 09 48.2**	**-0.1**
INK				IAmb	IAmb	21 10 19.3	
	comp=Z,24nm,1.6s						
Y12C	**Blythe**	**90.71**	**56**	P	**P**	**21 09 49.9**	**+0.1**
Y12C				IAmb	IAmb	21 09 55.7	
	comp=Z,8.7nm,0.8s						
Y12C	**Blythe**	**90.71**	**56**	P	**P**	**21 09 52.4**	**+2.6**
	baz=258						
SHPR	**Sheep Range**	**90.77**	**53**	P	**P**	**21 09 50.9**	**+0.6**
SHPR				IAmb	IAmb	21 10 08.9	
	comp=Z,14nm,1.0s						
R11A	**Troy Canyon, C**	**90.83**	**51**	P	**P**	**21 09 52.7**	**+2.2**
	baz=258						
H06S1	**SOCORRO T**	**90.98**	**71**	T	T	22 50 17.8	
	SNR=20						
BMO	**Blue Mountains**	**91.02**	**45**	P	**P**	**21 09 51.1**	**0.0**
BMO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BMO	**Blue Mountains**	**91.02**	**45**	P	**P**	**21 09 51.0**	**0.0**
H06E1	**SOCORRO T-PHAS**	**91.02**	**71**	T	T	22 50 18.4	
	SNR=46						
113A	**Mohawk Valley,**	**91.14**	**57**	P	**P**	**21 09 51.7**	**-0.1**
SYO	**Syowa Base**	**91.26**	**198⇑**	*e*P	**P**	**21 09 50.0**	**-1.6**
SYO	**Syowa Base**	**91.26**	**198⇑**	*e*PcP	**PcP**	**21 09 52.8**	**+0.3**
ELK	**Elko**	**91.60**	**49**	P	**P**	**21 09 54.9**	**+0.8**
ELK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ELK	**Elko**	**91.60**	**49**	P	**P**	**21 09 54.9**	**+0.8**
MFID	**Camas Ranch**	**91.74**	**46**	P	**P**	**21 09 55.3**	**+0.8**
MFID				IAmb	IAmb	21 09 57.8	
	comp=Z,6.9nm,0.8s						
214A	**Organ Pipe Nat**	**91.78**	**58**	P	**P**	**21 09 54.7**	**-0.1**
214A				IAmb	IAmb	21 10 35.8	
	comp=Z,18nm,1.6s						
214A	**Organ Pipe Nat**	**91.78**	**58**	P	**P**	**21 09 56.1**	**+1.2**
	baz=259						
PRZ	**Przheval'sk**	**91.79**	**313**	P	**P**	**21 09 54.7**	**-0.2**
PRZ				pmax	pmax		
	comp=Z,47nm,1.3s						
PRZ	**Przheval'sk**	**91.79**	**313**	P	**P**	**21 09 54.7**	**-0.2**
NEW	**Newport**	**91.93**	**41**	P	**P**	**21 09 54.8**	**-0.4**
NEW				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NEW	**Newport**	**91.93**	**41**	P	**P**	**21 09 54.8**	**-0.4**
NEW				IAmb	IAmb	21 09 57.3	
	comp=Z,8.9nm,0.8s						
NEW	**Newport**	**91.93**	**41**	P	**P**	**21 09 56.8**	**+1.6**
	baz=257						
PSUT	**Pine Spring**	**92.20**	**51**	P	**P**	**21 09 56.5**	**-0.4**
KSH	**Kashi**	**93.00**	**309**	P	**P**	**21 10 02.2**	**+1.8**
KSH				sP	sP	21 10 25.8	+2.6
KSH				S	**S**	**21 20 59.5**	**-2.9**
KSH				SS	**SS**	**21 27 19.5**	**+1.4**
KSH				pmax	pmax		
	comp=Z,18nm,1.1s						
KSH				pmax	pmax		
	comp=Z,200nm,6.4s						
KSH				LR	LR		
	comp=Z,280nm,11.8s						
KSH				LR	LR		
	comp=Z,340nm,12.2s						
KSH				LR	LR		
	comp=Z,360nm,10.4s						
KURK	**Kurchatov**	**93.37**	**321**	*ce*P	**P**	**21 10 00.1**	**-1.6**
KURK				pmax	pmax		
	comp=Z,13nm,1.3s						
KURK	**Kurchatov**	**93.37**	**321**	P	**P**	**21 10 00.3**	**-1.4**
KURK				IAmb	IAmb	21 10 02.2	
	comp=Z,8.1nm,0.8s						
KURBB	**Kurchatov Arra**	**93.41**	**321**	PP	PP	21 13 45.2	-1.5
	comp=Z,1.0nm,0.9s,baz=104,slow=6.5,SNR=4.2						
TUC	**Tucson**	**93.53**	**58**	P	**P**	**21 10 05.4**	**+2.5**
	baz=260						
NRIK	**Noril'sk**	**93.95**	**340**	LR	LR	21 51 18.5	
	comp=Z,187nm,21.4s,baz=86,slow=35						
C36M	**Paulatuk**	**94.14**	**20**	P	**P**	**21 10 04.6**	**-0.1**
C36M				IAmb	IAmb	21 10 20.5	
	comp=Z,16nm,0.9s						
C36M	**Paulatuk**	**94.14**	**20**	P	**P**	**21 10 05.0**	**+0.2**
	baz=252						
AAK	**Ala-Archa**	**94.66**	**312**	*i* P	**P**	**21 10 07.1**	**-0.9**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
H17A	**Grant Village**	**95.65**	**46**	P	**P**	**21 10 16.3**	**+3.7**
	baz=261						
PDAR	**Pinedale Array**	**96.14**	**48**	P	**P**	**21 10 16.1**	**+1.2**
	comp=Z,1.3nm,0.7s,baz=242,slow=2.9,SNR=17						
PDAR				LR	LR	21 46 31.2	
	comp=Z,100nm,21.2s,baz=258,slow=31						
PDAR	**Pinedale Array**	**96.14**	**48**	P	**P**	**21 10 14.9**	**0.0**
YKA	**Yellowknife Ar**	**96.24**	**28**	P	**P**	**21 10 14.1**	**-0.4**
	comp=Z,5.7nm,0.6s,baz=257,slow=4.5,SNR=78						
YKA				pP	**pP**	**21 10 28.6**	**-1.9**
	comp=Z,6.1nm,0.9s,baz=256,slow=4.4,SNR=10						
EGMT	**Eagleton**	**96.74**	**43**	P	**P**	**21 10 18.5**	**+1.2**
	baz=262						
ANMO	**Albuquerque**	**97.49**	**56**	*ce*P	**P**	**21 10 21.0**	**-0.1**
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ANMO	**Albuquerque**	**97.49**	**56**	P	Pdif	21 10 23.3	+2.1
	baz=263						
SNAA	**Sanae**	**97.57**	**185**	P	**P**	**21 10 19.4**	**-1.2**
SNAA	**Sanae**	**97.57**	**185**	P	**P**	**21 10 19.7**	**-0.9**
SNAA				pmax	pmax		

	comp=Z,25nm,1.8s						
SNAA	**Sanae**	**97.57**	**185**	P	**P**	**21 10 19.7**	**-0.9**
SNAA				IAmb	IAmb	21 12 16.8	
	comp=Z,25nm,1.8s						
KK31	**Karatay Array**	**97.62**	**312**	P	**P**	**21 10 20.2**	**-1.1**
KK31				pmax	pmax		
	comp=Z,7.0nm,1.5s						
KK31	**Karatay Array**	**97.62**	**312**	P	**P**	**21 10 20.2**	**-1.1**
KKAR	**Karatay Array**	**97.62**	**312**	P	**P**	**21 10 20.0**	**-1.3**
KKAR	**Karatay Array**	**97.62**	**312**	P	**P**	**21 10 20.0**	**-1.3**
VNA3	**Neumayer Olymp**	**98.45**	**183**	P	**P**	**21 10 23.4**	**-1.1**
BVAR	**Borovoye Array**	**98.76**	**322**	PP	**PP**	**21 14 28.3**	**+0.2**
	comp=Z,1.3nm,0.9s,baz=97,slow=7.6,SNR=3.6						
BRVK	**Borovoye**	**98.83**	**322**	*ce*P	**P**	**21 10 24.5**	**-1.9**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRVK	**Borovoye**	**98.83**	**322**	P	**P**	**21 10 25.2**	**-1.2**
BRVK				IAmb	IAmb	21 10 45.5	
	comp=Z,7.1nm,1.1s						
TXAR	**Lajitas Array**	**99.17**	**62**	PP	**PP**	**21 14 31.7**	**-0.3**
	comp=Z,2.0nm,1.1s,baz=202,slow=2.7,SNR=4.0						
APA	**Apatity**	**113.36**	**341**	⇓*i*PKIKP	**PKiKP**	**21 15 28.2**	**+4.5**
APA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,1μm,20.0s						
WCI	**Wyandotte Cave**	**113.74**	**53**	PKiKP	**PKiKP**	**21 15 24.9**	**-0.5**
	baz=276						
N47A	**Urbana**	**113.91**	**50**	PKiKP	**PKiKP**	**21 15 25.9**	**+0.4**
	baz=277						
L47A	**Sherwood**	**114.13**	**49**	PKiKP	PKPdf	21 15 25.5	-0.4
	baz=278						
O48A	**Farmland**	**114.39**	**50**	PKiKP	PKPdf	21 15 25.7	-0.8
	baz=277						
N48A	**Decatur**	**114.41**	**50**	PKiKP	PKPdf	21 15 24.7	-1.9
	baz=278						
ARCES	**ARCESS Array B**	**114.50**	**344**	PKP	**PKiKP**	**21 15 24.5**	**-1.4**
	comp=Z,3.7nm,0.8s,baz=64,slow=2.8,SNR=9.8						
L48A	**N Adams**	**114.70**	**49**	P	PKPdf	21 15 26.2	-0.9
	baz=279						
D47A	**Chapleau**	**114.73**	**43**	P	**PKiKP**	**21 15 26.2**	**-0.8**
	baz=282						
E47A	**Iron Bridge**	**114.73**	**44**	P	**PKiKP**	**21 15 26.4**	**-0.6**
	baz=282						
K48A	**Perry**	**114.80**	**48**	P	**PKiKP**	**21 15 26.2**	**-1.0**
	baz=279						
W50A	**Signal Mountai**	**114.81**	**56**	P	PKPdf	21 15 26.8	-0.7
	baz=275						
P49A	**Miami Univ. Ec**	**114.82**	**51**	P	PKPdf	21 15 27.0	-0.4
	baz=277						
N49A	**Columbus Grove**	**115.03**	**50**	P	**PKiKP**	**21 15 26.9**	**-0.8**
	baz=278						
R50A	**Paris**	**115.27**	**53**	P	**PKPdf**	**21 15 28.2**	**0.0**
	baz=277						
S50A	**Richmond**	**115.29**	**53**	P	**PKiKP**	**21 15 28.2**	**-0.2**
	baz=277						
E48A	**Lockeyer**	**115.48**	**43**	P	**PKiKP**	**21 15 27.6**	**-0.9**
	baz=282						
I49A	**Point Hope**	**115.53**	**46**	P	**PKiKP**	**21 15 27.6**	**-1.0**
	baz=281						
D48A	**Paudash Townsh**	**115.57**	**42**	P	**PKiKP**	**21 15 28.1**	**-0.5**
	baz=283						
O50A	**Cable**	**115.57**	**50**	P	**PKiKP**	**21 15 27.8**	**-1.0**
	baz=278						
F49A	**Sandfield**	**115.71**	**44**	P	**PKiKP**	**21 15 28.3**	**-0.6**
	baz=282						
L50A	**Kingsville**	**115.88**	**48**	P	**PKPdf**	**21 15 29.2**	**-0.1**
	baz=280						
P51A	**Williamsport**	**116.09**	**51**	P	**PKPdf**	**21 15 29.2**	**-0.7**
	baz=278						
P52A	**Corning**	**116.78**	**51**	P	**PKPdf**	**21 15 29.5**	**-1.7**
	baz=279						
T53A	**Wise**	**116.85**	**54**	P	**PKiKP**	**21 15 32.0**	**+0.5**
	baz=278						
D50A	**G1974 Best Tow**	**116.87**	**42**	P	**PKPdf**	**21 15 30.0**	**-1.1**
	baz=285						
F51A	**Arnstein**	**117.13**	**44**	P	**PKPdf**	**21 15 31.2**	**-0.4**
	baz=284						
W54A	**Cherokee Point**	**117.36**	**56**	P	**PKiKP**	**21 15 32.7**	**+0.3**
	baz=277						
P53A	**Whipple**	**117.37**	**51**	P	**PKPdf**	**21 15 32.2**	**-0.1**
	baz=280						
I52A	**Shelburne**	**117.37**	**46**	P	**PKiKP**	**21 15 32.1**	**-0.1**
	baz=283						
O53A	**New Philadelph**	**117.37**	**50**	P	**PKPdf**	**21 15 31.5**	**-0.7**
	baz=280						
V54A	**Nebo**	**117.47**	**55**	P	**PKPdf**	**21 15 32.0**	**-0.6**
	baz=277						
N53A	**Lisbon**	**117.56**	**49**	P	**PKPdf**	**21 15 32.0**	**-0.6**
	baz=281						
F52A	**Sundridge**	**117.56**	**44**	P	**PKPdf**	**21 15 32.0**	**-0.5**
	baz=284						
KIV	**Kislovodsk**	**117.69**	**314**	*i* PKIKP	**PKPdf**	**21 15 30.6**	**-2.3**
KIV				pmax	pmax		
	comp=Z,21nm,0.9s						
KIV				MLR	MLR		
	comp=Z,294nm,21.0s						
Q54A	**Coxs Mills**	**117.88**	**51**	P	**PKPdf**	**21 15 32.5**	**-0.7**
	baz=280						
E52A	**Mattawa**	**117.88**	**43**	P	**PKPdf**	**21 15 32.3**	**-0.8**
	baz=285						
X55A	**Gracelyn & Ava**	**117.89**	**56**	P	**PKiKP**	**21 15 33.5**	**+0.1**
	baz=277						
O54A	**Avella**	**118.02**	**50**	P	**PKPdf**	**21 15 32.9**	**-0.6**
	baz=281						
N54A	**Moraine State**	**118.16**	**49**	P	**PKiKP**	**21 15 33.7**	**-0.1**
	baz=281						
LSQQ	**Lebel-sur-Quev**	**118.18**	**39**	P	**PKPdf**	**21 15 32.7**	**-0.9**
	baz=288						
G53A	**Haliburton**	**118.20**	**44**	P	**PKPdf**	**21 15 32.9**	**-0.9**
	baz=285						
M54A	**Oil Creek Stat**	**118.29**	**48**	P	**PKPdf**	**21 15 33.6**	**-0.4**
	baz=282						
D53A	**Lac Vacive, Po**	**118.30**	**42**	P	**PKPdf**	**21 15 32.8**	**-1.1**
	baz=286						
H53A	**Bobcaygeon**	**118.37**	**45**	P	**PKiKP**	**21 15 34.0**	**-0.1**
	baz=284						
ALGO	**Algonquin Park**	**118.38**	**43**	P	**PKPdf**	**21 15 33.0**	**-1.0**
	baz=286						
L54A	**Sinclairville**	**118.39**	**47**	P	**PKPdf**	**21 15 33.6**	**-0.6**
	baz=283						
G54A	**Lake Saint Pet**	**118.50**	**44**	P	**PKPdf**	**21 15 34.0**	**-0.3**
	baz=285						
E53A	**Dumoine, Ponti**	**118.52**	**43**	P	**PKPdf**	**21 15 34.1**	**-0.2**
	baz=286						
R55A	**Marlinton**	**118.55**	**52**	P	**PKPdf**	**21 15 33.8**	**-0.9**
	baz=280						
K54A	**Basiliko Farm,**	**118.76**	**47**	P	**PKPdf**	**21 15 34.1**	**-0.8**
	baz=283						
O55A	**Ligonier**	**118.82**	**50**	P	**PKPdf**	**21 15 34.2**	**-0.9**
	baz=282						
E54A	**Lac Daplat, Po**	**118.82**	**42**	P	**PKPdf**	**21 15 33.8**	**-1.0**
	baz=286						
T56A	**Rocky Mt**	**118.83**	**53**	P	**PKiKP**	**21 15 35.2**	**0.0**
	baz=279						
M55A	**Ridgway**	**118.96**	**48**		**PKPdf**	**21 15 34.4**	**-1.0**
M55A	**Ridgway**	**118.96**	**48**	P	**PKPdf**	**21 15 34.6**	**-0.8**
	baz=283						
D54A	**Lac Fusel, La**	**118.96**	**41**	P	**PKPdf**	**21 15 33.7**	**-1.5**
	baz=287						
L55A	**Hinsdale**	**119.04**	**47**	P	**PKPdf**	**21 15 34.6**	**-0.8**
	baz=283						
I55A	**Frankford**	**119.08**	**45**	P	**PKPdf**	**21 15 35.2**	**-0.2**
	baz=285						
K55A	**Perry**	**119.18**	**47**	P	**PKPdf**	**21 15 35.2**	**-0.5**
	baz=284						
H55A	**Tweed**	**119.34**	**44**	P	**PKPdf**	**21 15 35.2**	**-0.7**
	baz=286						
O56A	**Blue Knob Stat**	**119.36**	**50**	P	**PKPdf**	**21 15 35.5**	**-0.6**
	baz=282						
M56A	**Emporium**	**119.38**	**48**	P	**PKPdf**	**21 15 35.6**	**-0.5**
	baz=283						
N56A	**West Decatur**	**119.42**	**49**	P	**PKPdf**	**21 15 35.5**	**-0.7**
	baz=283						
G55A	**Calabogie**	**119.47**	**44**	P	**PKPdf**	**21 15 34.9**	**-1.2**
	baz=286						
FINES	**FINESS Array B**	**119.47**	**337**	PKP	**PKPdf**	**21 15 34.7**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=64,slow=4.4,SNR=5.0						
E55A	**Montcerf-Lytto**	**119.56**	**42**	P	**PKPdf**	**21 15 35.7**	**-0.5**
	baz=288						
L56A	**Greenwood**	**119.68**	**47**	P	**PKPdf**	**21 15 36.4**	**-0.3**
	baz=284						
K56A	**Middlesex**	**119.72**	**47**	P	**PKPdf**	**21 15 36.6**	**-0.2**
	baz=284						
Q57A	**Strasburg**	**119.73**	**51**	P	**PKPdf**	**21 15 36.5**	**-0.3**
	baz=282						
D55A	**Sainte-Anne-du**	**119.78**	**41**	P	**PKPdf**	**21 15 36.1**	**-0.5**
	baz=288						
SSPA	**Standing Stone**	**119.79**	**49**	P	**PKPdf**	**21 15 36.1**	**-0.8**
	baz=283						
J56A	**Wolcott**	**119.90**	**46**	P	**PKPdf**	**21 15 36.4**	**-0.6**
	baz=285						
H56A	**Elgin**	**119.97**	**44**	P	**PKPdf**	**21 15 35.9**	**-1.1**
	baz=286						
M57A	**Sunshine Farm,**	**120.19**	**48**	P	**PKPdf**	**21 15 37.2**	**-0.4**
	baz=284						
E56A	**St. Veronique**	**120.21**	**42**	P	**PKPdf**	**21 15 37.0**	**-0.5**
	baz=288						
L57A	**Andrews Acres**	**120.23**	**47**	P	**PKPdf**	**21 15 37.6**	**-0.2**
	baz=284						
D56A	**ZEC Mazanza, M**	**120.23**	**41**	P	**PKPdf**	**21 15 36.4**	**-1.2**
	baz=289						
K57A	**Scipio Center**	**120.28**	**46**	P	**PKPdf**	**21 15 37.4**	**-0.4**
	baz=285						
R58B	**Mineral**	**120.34**	**52**	P	**PKPdf**	**21 15 37.6**	**-0.4**
	baz=281						
J57A	**Williamstown**	**120.47**	**45**	P	**PKPdf**	**21 15 37.0**	**-1.1**
	baz=286						
I57A	**Carthage**	**120.56**	**45**	P	**PKPdf**	**21 15 38.2**	**-0.1**
	baz=286						
H57A	**Richville**	**120.60**	**44**	P	**PKPdf**	**21 15 37.3**	**-1.0**
	baz=287						
N58A	**Sunbury**	**120.61**	**49**	P	**PKPdf**	**21 15 38.4**	**0.0**
	baz=284						
M58A	**Price's Panora**	**120.67**	**48**	P	**PKPdf**	**21 15 38.0**	**-0.6**
	baz=284						
D57A	**Chemin Vers le**	**120.80**	**41**	P	**PKPdf**	**21 15 37.5**	**-1.2**
	baz=290						
E57A	**Chemin Saint G**	**120.83**	**42**	P	**PKPdf**	**21 15 38.4**	**-0.4**
	baz=289						
L58A	**Harry Jones Me**	**120.94**	**47**	P	**PKiKP**	**21 15 39.2**	**0.0**
	baz=285						
O59A	**Robesonia**	**121.12**	**49**	P	**PKiKP**	**21 15 39.5**	**-0.1**
	baz=284						
N59A	**State Game Lan**	**121.28**	**48**	P	**PKiKP**	**21 15 39.9**	**0.0**
	baz=285						
G58A	**Ormstown**	**121.30**	**43**	P	**PKPdf**	**21 15 39.3**	**-0.3**
	baz=288						
M59A	**Waymart**	**121.37**	**47**	P	**PKiKP**	**21 15 40.0**	**-0.1**
	baz=285						
E58A	**La Victoria**	**121.42**	**41**	P	**PKPdf**	**21 15 39.5**	**-0.3**
	baz=290						
D58A	**Chemin du LacG**	**121.42**	**41**	P	**PKPdf**	**21 15 39.2**	**-0.6**
	baz=291						
H58A	**Gabriels**	**121.44**	**44**	P	**PKPdf**	**21 15 39.2**	**-0.8**
	baz=288						
L59A	**Walton**	**121.48**	**47**	P	**PKiKP**	**21 15 40.2**	**-0.1**
	baz=286						
J59A	**Piesco**	**121.50**	**45**	P	**PKPdf**	**21 15 39.0**	**-1.1**
	baz=287						
SCHQ	**Schefferville**	**121.56**	**30**	PKP	**PKiKP**	**21 15 40.0**	**0.0**
	comp=Z,1.8nm,0.5s,baz=267,slow=1.2,SNR=7.6						
SCHQ	**Schefferville**	**121.56**	**30**		**PKPdf**	**21 15 39.2**	**-0.7**
O60A	**Telford**	**121.70**	**49**	P	**PKiKP**	**21 15 41.1**	**+0.4**
	baz=284						
N60A	**Cedar Hill Far**	**121.79**	**48**	P	**PKPdf**	**21 15 40.6**	**-0.1**
	baz=285						
I59A	**Olmsteadville**	**121.84**	**45**	P	**PKiKP**	**21 15 40.8**	**-0.1**
	baz=288						
L60A	**Shokan**	**122.12**	**47**	P	**PKPdf**	**21 15 41.4**	**0.0**
	baz=286						
I60A	**Shoreham**	**122.22**	**44**	P	**PKiKP**	**21 15 41.7**	**+0.1**
	baz=288						
F60A	**Warwick**	**122.42**	**42**	P	**PKPdf**	**21 15 41.6**	**-0.2**
	baz=291						
L61A	**Hillsdale 1, H**	**122.54**	**46**	P	**PKiKP**	**21 15 42.2**	**-0.2**
	baz=287						
K61A	**Williamstown**	**122.60**	**46**	P	**PKiKP**	**21 15 42.8**	**+0.4**
	baz=288						
E60A	**Ste Agathe de**	**122.60**	**41**	P	**PKPdf**	**21 15 41.1**	**-1.0**
	baz=291						
M61A	**Granite Spring**	**122.64**	**47**	P	**PKPdf**	**21 15 41.8**	**-0.5**
	baz=286						
BOSA	**Boshof**	**122.70**	**226**	PKP	**PKPdf**	**21 15 42.3**	**-0.8**
	comp=Z,3.1nm,0.6s,baz=126,slow=1.8,SNR=13						
BOSA	**Boshof**	**122.70**	**226**		**PKPdf**	**21 15 41.8**	**-1.2**
D60A	**Saint Jean D'O**	**122.74**	**40**	P	**PKPdf**	**21 15 41.2**	**-1.1**
	baz=292						
J61A	**Chester**	**122.89**	**45**	P	**PKPdf**	**21 15 42.6**	**-0.1**
	baz=289						
I61A	**Oroboro, Fairl**	**122.94**	**44**	P	**PKiKP**	**21 15 43.1**	**0.0**
	baz=289						
L61B	**Northampton**	**123.08**	**46**	P	**PKPdf**	**21 15 43.0**	**-0.2**
	baz=288						
E61A	**Lac Etchemin**	**123.20**	**41**	P	**PKiKP**	**21 15 43.8**	**+0.3**
	baz=292						
H62A	**Milan**	**123.43**	**43**	P	**PKiKP**	**21 15 44.5**	**+0.4**
	baz=291						
J62A	**Henniker**	**123.44**	**45**	P	**PKiKP**	**21 15 44.3**	**+0.2**
	baz=289						
G62A	**West of Eustis**	**123.62**	**42**	P	**PKiKP**	**21 15 44.4**	**0.0**
	baz=292						
K63A	**Dunstable**	**123.81**	**45**	P	**PKiKP**	**21 15 44.8**	**0.0**
	baz=289						
D62A	**Allapoint, All**	**123.85**	**39**	P	**PKPdf**	**21 15 44.1**	**-0.3**
	baz=294						
AKASG	**Malin Array Be**	**123.88**	**325**	PKP	**PKPdf**	**21 15 43.3**	**-1.1**
	comp=Z,2.2nm,0.7s,baz=51,slow=2.3,SNR=9.8						
AKASG				pPKP	**pPKPdf**	**21 15 58.3**	**-2.9**
	comp=Z,1.2nm,0.6s,baz=54,slow=2.6,SNR=4.7						
AKASG				PP	**PP**	**21 17 27.7**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=54,slow=6.7,SNR=4.1						
AKASG	**Malin Array Be**	**123.88**	**325**		**PKPdf**	**21 15 43.2**	**-1.2**
L63A	**North Scituate**	**124.02**	**46**	P	**PKPdf**	**21 15 45.0**	**+0.1**
	baz=288						
G63A	**Kingsbury**	**124.26**	**42**	P	**PKPdf**	**21 15 45.0**	**-0.3**
	baz=292						
F63A	**Nahmakanta, Br**	**124.37**	**41**	P	**PKiKP**	**21 15 45.8**	**0.0**
	baz=293						
D63A	**Stockholm**	**124.46**	**39**	P	**PKPdf**	**21 15 45.4**	**-0.3**
	baz=295						
E63A	**Oxbow**	**124.52**	**40**	P	**PKPdf**	**21 15 45.7**	**-0.1**
	baz=294						
H64A	**Troy**	**124.70**	**42**	P	**PKiKP**	**21 15 46.3**	**-0.2**
	baz=292						
G64A	**Maxfield**	**124.77**	**41**	P	**PKiKP**	**21 15 46.4**	**-0.2**
	baz=293						
F64A	**Sherman**	**124.79**	**41**	P	**PKPdf**	**21 15 46.1**	**-0.2**
	baz=294						
NB2	**NORSAR Subarra**	**124.79**	**343**	PKPdf	**PKPdf**	**21 15 45.7**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=36,slow=1.8						
NOA	**NORSAR Array B**	**124.79**	**343**	PKP	**PKPdf**	**21 15 45.5**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=34,slow=1.9,SNR=6.3						
BRTR	**Keskin Array B**	**125.33**	**312**	PKP	**PKPdf**	**21 15 46.9**	**-0.9**
	comp=Z,1.1nm,0.6s,baz=139,slow=4.9,SNR=8.4						
BRTR	**Keskin Array B**	**125.33**	**312**	PKIKP	**PKPdf**	**21 15 47.1**	**-0.7**
BRTR	**Keskin Array B**	**125.33**	**312**		**PKPdf**	**21 15 47.0**	**-0.7**
LSZ	**Lusaka**	**127.21**	**242**	PKIKP	**PKPdf**	**21 15 51.4**	**-0.6**
LSZ	**Lusaka**	**127.21**	**242**		**PKPdf**	**21 15 51.4**	**-0.6**
CPUP	**Villa Florida**	**127.61**	**135**	PKP	**PKPdf**	**21 15 51.6**	**-0.8**
	comp=Z,2.3nm,0.7s,baz=113,slow=3.0,SNR=7.9						
KOLS	**Kolonicke sedl**	**128.64**	**327**	*e*PKIKP	**PKPdf**	**21 15 53.2**	**-0.4**
KOLS	**Kolonicke sedl**	**128.64**	**327**	*e*PKP	**PKPdf**	**21 15 53.2**	**-0.4**
SDV	**Santo Domingo**	**128.66**	**87**		**PKPdf**	**21 15 53.9**	**-1.0**
UZH	**Uzhgorod**	**128.80**	**326**	*e*PKIKP	PKiKP	21 16 03.5	+8.9
UZH				*e*		21 16 32.3	
VYHS	**Vyhne**	**130.73**	**328**	*e*PKIKP	**PKPdf**	**21 15 57.8**	**+0.2**
VYHS	**Vyhne**	**130.73**	**328**	*e*PKP	**PKPdf**	**21 15 57.8**	**+0.2**
CLL	**Collm**	**131.64**	**334**	*e*PKIKP	**PKiKP**	**21 16 03.0**	**+2.8**
CONA	**Conrad Observa**	**132.63**	**329**	*e*PKiKP	**PKiKP**	**21 16 01.8**	**-0.6**
	comp=Z,1.8nm,0.6s						
KHC	**Kasperske Hory**	**132.93**	**332**	*e*PKP	**PKiKP**	**21 16 02.5**	**-0.5**
KHC	**Kasperske Hory**	**132.93**	**332**	*e*PKIKP	**PKiKP**	**21 16 02.5**	**-0.5**
GERES	**GERESS Array B**	**133.07**	**331**	PKP	**PKPdf**	**21 16 02.0**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=38,slow=3.2,SNR=6.2						
GERES	**GERESS Array B**	**133.07**	**331**		**PKPdf**	**21 16 01.3**	**-0.8**
MOA	**Molln**	**133.48**	**330**	*e*PKiKP	**PKiKP**	**21 16 03.4**	**-0.7**
	comp=Z,0.8nm,0.5s						
ABTA	**Abfaltersbach**	**135.11**	**330**	*e*PKPdf	**PKPdf**	**21 16 05.7**	**-0.3**
	comp=Z,2.5nm,0.5s						
MOTA	**Moosalm**	**135.37**	**331**	*e*PKiKP	**PKPdf**	**21 16 06.4**	**-0.2**
	comp=Z,1.0nm,0.5s						
SQTA	**Sankt Quirin**	**135.41**	**331**	*e*PKiKP	**PKPdf**	**21 16 07.0**	**+0.4**
	comp=Z,0.6nm,0.3s						
KEST	**Kesra**	**144.17**	**319**	PKP	**PKPab**	**21 16 20.7**	**+0.1**
	comp=Z,9.2nm,0.7s,baz=342,slow=2.8,SNR=15						
PBRG	**Braganca**	**146.92**	**344**	*e*PKPbc	**PKPbc**	**21 16 29.4**	**+0.2**
PBRG				*i* LQ	LQ	21 16 44.0	
PCAB	**Cabril**	**147.35**	**345**	*e*PKPbc	**PKPbc**	**21 16 31.0**	**+0.6**
MVO	**Moncorvo**	**147.60**	**344**	*e*PKPbc	**PKPbc**	**21 16 31.3**	**+0.1**
MVO				*i* LQ	LQ	21 16 46.2	
PVRL	**Vila Real**	**147.68**	**345**	*e*PKPbc	**PKPbc**	**21 16 31.6**	**+0.3**
PVRL				*i* LQ	LQ	21 16 46.5	
ESBB	**Sonseca Array**	**147.97**	**339**		**PKPbc**	**21 16 33.0**	**+0.8**
ESDC	**Sonseca Array**	**147.97**	**339**	PKPbc	**PKPbc**	**21 16 31.1**	**-1.1**
	comp=Z,2.0nm,0.6s,baz=23,slow=2.2,SNR=15						
ESDC	**Sonseca Array**	**147.97**	**339**		**PKPbc**	**21 16 31.9**	**-0.4**
PAB	**San Pablo**	**148.22**	**339**	PKP2	**PKPbc**	**21 16 32.9**	**0.0**
PAB	**San Pablo**	**148.22**	**339**		**PKPbc**	**21 16 32.9**	**0.0**
PVIS	**Viseu**	**148.25**	**345**	*e*PKPbc	**PKPbc**	**21 16 32.9**	**0.0**
PVIS				*i* LQ	LQ	21 16 47.8	
MTE	**Manteigas**	**148.45**	**344**		**PKPbc**	**21 16 33.2**	**-0.2**
MTE	**Manteigas**	**148.45**	**344**	*e*PKPbc	**PKPbc**	**21 16 33.7**	**+0.2**
MTE				*i* LQ	LQ	21 16 48.6	
COI	**Coimbra**	**148.86**	**345**	PKP2	**PKPbc**	**21 16 34.7**	**+0.3**
COI	**Coimbra**	**148.86**	**345**		**PKPbc**	**21 16 34.7**	**+0.3**
COI	**Coimbra**	**148.86**	**345**	*e*PKPbc	**PKiKP**	**21 16 36.1**	**+0.3**
PCBR	**Castelo Branco**	**148.95**	**343**	*e*PKPbc	**PKPbc**	**21 16 34.7**	**+0.1**
PCBR				*i* LQ	LQ	21 16 49.7	
PCAS	**Casmilo, Conde**	**149.03**	**345**	*e*PKPbc	**PKPbc**	**21 16 32.8**	**-2.1**
PCAS				*i* LQ	LQ	21 16 49.7	
PMRV	**Marv??o**	**149.31**	**343**	*e*PKPbc	**PKPbc**	**21 16 35.8**	**+0.2**
PMRV				*i* LQ	LQ	21 16 50.7	
PTOM	**Tomar**	**149.41**	**345**	*e*PKPbc	**PKPbc**	**21 16 35.2**	**-0.6**
PTOM				*i* LQ	LQ	21 16 51.0	
PMTG	**Montargil**	**149.88**	**344**	*e*PKPbc	**PKPbc**	**21 16 36.8**	**-0.2**
PMTG				*i* LQ	LQ	21 16 51.7	
PMAFR	**Mafra**	**150.26**	**345**	*i* LQ	LQ	21 16 45.7	
PBEJ	**Beja**	**150.75**	**343**	*e*PKPbc	**PKiKP**	**21 16 39.5**	**-0.2**
PNCL	**Nicolau / Gran**	**150.86**	**344**	*e*PKPbc	**PKPbc**	**21 16 38.9**	**-0.4**
PNCL				*i* LQ	LQ	21 16 54.5	
LIJA	**Lijar**	**150.95**	**338**	*e*P	**PKiKP**	**21 16 40.4**	**+0.1**
PCVE	**Castro Verde**	**151.16**	**343**	*e*PKPbc	**PKiKP**	**21 16 41.4**	**+0.8**
PTEO	**Sao Teotonio**	**151.44**	**344**	*e*PKPbc	**PKiKP**	**21 16 42.3**	**+1.1**
TAM	**Tamanrasset**	**153.84**	**301**	PKIKP	**PKPdf**	**21 16 37.5**	**-1.2**
TAM	**Tamanrasset**	**153.84**	**301**	PKPdf	**PKPdf**	**21 16 37.5**	**-1.2**
TAM					**PKiKP**	**21 16 47.1**	**+0.3**
TOA0	**Torodi Ar. Sit**	**159.99**	**280**		**PKPab**	**21 17 25.4**	**-1.0**
TORD	**Torodi Ar. Bea**	**159.99**	**280**	PKP	**PKPdf**	**21 16 45.5**	**-1.1**
	comp=Z,1.5nm,0.8s,baz=75,slow=0.6,SNR=6.2						
TORD				pPKP	**pPKPdf**	**21 17 00.1**	**-3.6**
	comp=Z,3.3nm,1.1s,baz=46,slow=1.4,SNR=7.1						
TORD				PKPab	**PKPab**	**21 17 25.5**	**-0.8**
	comp=Z,3.1nm,0.8s,baz=104,slow=3.7,SNR=7.7						
TORD	**Torodi Ar. Bea**	**159.99**	**280**		**PKPdf**	**21 16 44.4**	**-2.1**
TORD					**PKPab**	**21 17 25.4**	**-1.0**

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*NEIC **08** 21:06:08.7±2.1, 23°.85S±0°.09×179°.7W±0°.1, h524^{km}±6^{km}, mb4.7/210, Error ellipse: s-maj=15.4km s-min=12.2km az=127.0*

*IDC **08** 21:06:09.1±0.7, 23°.91S×179°.82W, h522^{km}±7^{km}, mb4.1/21, mb1 4.3/22, mb1mx4.0/47, mbtmp5.0/22, Error ellipse: s-maj=12.6km s-min=10.0km az=150.0*

ISC 08 21:06:07.4±0.3, 23°.87S±0°.05×179°.69W±0°.05, h512^{km}, n394, σ1^{s}.26/413, mb4.7/144, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**5.59**	**164**	P	**P**	**21 07 39.2**	**-1.0**
	213nm,0.3s,baz=75,slow=3.0,SNR=5.9						
RAO				S	**S**	**21 08 57.1**	**+0.8**
	114nm,0.3s,baz=91,slow=19,SNR=4.4						
RAO	**Raoul Island**	**5.59**	**164**	P	**P**	**21 07 42.5**	**+2.2**
MSVF	**Nonsavu**	**6.46**	**341**	P	**P**	**21 07 50.1**	**+1.2**
NIUE	**Niue**	**10.27**	**64**	P	**P**	**21 08 28.6**	**+0.9**
	baz=10,SNR=4.3						
NIUE	**Niue**	**10.27**	**64**	P	**P**	**21 08 28.4**	**+0.7**
AFI	**Afiamalu**	**12.41**	**38**	P	**P**	**21 08 46.8**	**-3.6**
	7.4nm,0.3s,baz=36,slow=6.4,SNR=20						
AFI				S	S	21 10 56.0	-8.9
	7.1nm,0.3s,baz=35,slow=22,SNR=5.7						
OUZ	**Omahuta**	**12.72**	**206**	P	**P**	**21 08 55.5**	**+2.2**
DZM	**Mont Dzumac**	**12.89**	**275**	P	**P**	**21 08 56.6**	**+1.1**
	1.2nm,0.3s,baz=73,slow=18,SNR=10						
DZM	**Mont Dzumac**	**12.89**	**275**	P	**P**	**21 08 57.0**	**+1.5**
MXZ	**Matakaoa Point**	**13.76**	**187**	P	**P**	**21 09 01.7**	**-2.4**
URZ	**Urewera**	**14.60**	**190**	P	**P**	**21 09 10.1**	**-2.9**
	14nm,0.3s,baz=288,slow=4.5,SNR=38						
URZ				S	**S**	**21 11 41.6**	**-4.6**
	4.2nm,0.3s,baz=14,slow=23,SNR=9.9						
URZ	**Urewera**	**14.60**	**190**	P	**P**	**21 09 10.5**	**-2.6**
HIZ	**Hauiti**	**15.32**	**196**	P	**P**	**21 09 20.6**	**0.0**
BKZ	**Black Stump Fm**	**15.59**	**191**	P	**P**	**21 09 22.8**	**-0.7**
BFZ	**Birch Farm**	**17.11**	**191**	P	**P**	**21 09 37.1**	**-1.6**
MSWZ	**Moikau Station**	**18.00**	**192**	P	**P**	**21 09 45.8**	**-1.2**
SNZO	**South Karori**	**18.01**	**194**	P	**P**	**21 09 45.4**	**-1.6**
BHW	**Baring Head**	**18.07**	**193**	P	**P**	**21 09 45.9**	**-1.7**
QRZ	**Quartz Range**	**18.12**	**199**	P	**P**	**21 09 47.7**	**-0.4**
PLWZ	**Palliser**	**18.15**	**192**	P	**P**	**21 09 46.0**	**-2.4**
NNZ	**Nelson**	**18.25**	**197**	P	**P**	**21 09 48.4**	**-0.7**
TUWZ	**Tuamarina**	**18.30**	**195**	P	**P**	**21 09 48.5**	**-1.2**
CMWZ	**Cape Campbell**	**18.54**	**194**	P	**P**	**21 09 51.8**	**0.0**
BSWZ	**Blackbirch Sta**	**18.59**	**195**	P	**P**	**21 09 53.0**	**+0.7**
BSWZ					**S**	**21 12 56.5**	**+1.0**
THZ	**Tophouse**	**18.88**	**197**	P	**P**	**21 09 54.1**	**-0.9**
KHZ	**Kahutara**	**19.33**	**195**	P	**P**	**21 09 58.6**	**-0.4**
LTZ	**Lake Taylor**	**20.00**	**198**	P	**P**	**21 10 05.3**	**+0.1**
LHI	**Lord Howe Isla**	**20.27**	**243**	P	**P**	**21 10 10.6**	**+2.8**
	baz=20,SNR=3.4						
LHI	**Lord Howe Isla**	**20.27**	**243**	P	**P**	**21 10 08.8**	**+1.0**
OXZ	**Oxford**	**20.57**	**197**	P	**P**	**21 10 09.6**	**-0.8**
MQZ	**McQueen's Vall**	**20.76**	**196**	P	**P**	**21 10 11.9**	**-0.1**
MQZ				IAmb	IAmb	21 10 12.2	
	comp=Z,26nm,1.0s						
RPZ	**Rata Peaks**	**21.21**	**199**	P	**P**	**21 10 15.8**	**-0.3**
	comp=Z,42nm,0.5s,baz=277,slow=1.1,SNR=37						
RPZ	**Rata Peaks**	**21.21**	**199**	P	**P**	**21 10 14.3**	**-1.9**
FOZ	**Fox Glacier**	**21.43**	**201**	P	**P**	**21 10 16.7**	**-1.4**
LBZ	**Lake Benmore**	**22.08**	**200**	P	**P**	**21 10 23.9**	**-0.1**
LBZ				IAmb	IAmb	21 10 41.6	
	comp=Z,22nm,1.1s						
ODZ	**Otahua Downs**	**22.54**	**198**	P	**P**	**21 10 28.2**	**+0.1**
ODZ				IAmb	IAmb	21 10 35.8	
	comp=Z,18nm,0.7s						
WKZ	**Wanaka**	**22.85**	**201**	P	**P**	**21 10 30.6**	**-0.3**
WKZ				IAmb	IAmb	21 10 40.8	
	comp=Z,40nm,1.1s						
DCZ	**Deep Cove**	**24.05**	**203**	P	**P**	**21 10 41.6**	**+0.2**
DCZ				IAmb	IAmb	21 10 42.8	
	comp=Z,18nm,1.0s						
WHZ	**Wether Hill Ro**	**24.14**	**201**	P	**P**	**21 10 41.9**	**-0.4**
WHZ				IAmb	IAmb	21 10 44.1	
	comp=Z,27nm,1.1s						
HNR	**Honiara**	**24.17**	**303**	P	**P**	**21 10 41.6**	**-1.4**
ARMA	**Armidale**	**26.30**	**249**	P	**P**	**21 11 03.3**	**+1.5**
	baz=26,SNR=30						
ARMA	**Armidale**	**26.30**	**249**	P	**P**	**21 11 02.1**	**+0.3**
EIDS	**Eidsvold**	**26.59**	**261**	P	**P**	**21 11 04.8**	**+0.5**
	baz=27,SNR=21						
EIDS	**Eidsvold**	**26.59**	**261**	P	**P**	**21 11 04.2**	**-0.1**
MGCD	**Mangrove Creek**	**27.21**	**243**	P	**P**	**21 11 11.4**	**+1.7**
	baz=27,SNR=13						
RMQ	**Roma**	**28.63**	**258**	P	**P**	**21 11 23.8**	**+1.6**
	baz=29,SNR=24						
CNB	**Canberra Magne**	**29.11**	**240**	P	**P**	**21 11 27.6**	**+1.3**
	baz=29,SNR=18						
CAN	**Canberra**	**29.40**	**240**	P	**P**	**21 11 29.4**	**+0.6**
YNG	**Young**	**29.65**	**242**	P	**P**	**21 11 32.6**	**+1.6**
	baz=30,SNR=11						
MILA	**Mila**	**29.75**	**237**	P	**P**	**21 11 33.1**	**+1.2**
	baz=30,SNR=4.9						
CMSA	**Cobar Meteorol**	**31.49**	**248**	P	**P**	**21 11 47.3**	**+0.5**
	baz=32,SNR=44						
CTA	**Charters Tower**	**31.76**	**270**	P	**P**	**21 11 50.0**	**+0.7**
	comp=Z,137nm,0.6s,baz=96,slow=11,SNR=171						
QLP	**Quilpie**	**32.68**	**258**	P	**P**	**21 11 57.4**	**+0.3**
	baz=33,SNR=11						
TOO	**Toolangi**	**32.70**	**237**	P	**P**	**21 11 57.9**	**+0.8**
	baz=33,SNR=24						
TOO	**Toolangi**	**32.70**	**237**	P	**P**	**21 11 57.2**	**+0.1**
TOO				IAmb	IAmb	21 11 58.8	
	comp=Z,23nm,0.7s						
TAU	**Tasmania Unive**	**33.16**	**227**	P	**P**	**21 12 00.9**	**+0.1**
TAU				IAmb	IAmb	21 12 02.4	
	comp=Z,20nm,0.8s						
XMAS	**Kiritimati**	**33.64**	**43**	P	**P**	**21 12 05.9**	**+0.7**
MTSU	**Mount Surprise**	**34.02**	**273**	P	**P**	**21 12 09.2**	**+0.7**
	baz=34,SNR=100						
PMG	**Port Moresby**	**34.75**	**289**	P	**P**	**21 12 14.7**	**+0.1**
	comp=Z,134nm,0.8s,baz=112,slow=6.0,SNR=47						
PMG	**Port Moresby**	**34.75**	**289**	IAmb	IAmb	21 12 15.7	
	comp=Z,148nm,0.8s						
STKA	**Stephens Creek**	**34.99**	**248**	P	**P**	**21 12 17.0**	**+0.5**
	baz=35,SNR=34						
STKA	**Stephens Creek**	**34.99**	**248**	P	**P**	**21 12 16.9**	**+0.5**
	comp=Z,26nm,0.9s,baz=95,slow=11,SNR=41						
STKA				PcP	**PcP**	**21 14 35.0**	**+0.5**

	comp=Z,2.1nm,0.7s,baz=169,slow=1.5,SNR=2.9						
STKA	Stephens Creek	34.99	248	P	P	21 12 16.6	+0.1
ARPS	Mount Arapiles	35.38	240	P	P	21 12 20.0	+0.4
	baz=36						
COEN	Coen	36.39	279	P	P	21 12 28.8	+0.5
	baz=36,SNR=12						
COEN	Coen	36.39	279	P	P	21 12 28.5	+0.2
COEN				IAmb	IAmb	21 12 30.5	
	comp=Z,47nm,1.0s						
HTT	Hallett	37.34	246	P	P	21 12 36.0	0.0
	baz=38,SNR=44						
QIS	Mount Isa	37.73	267	P	P	21 12 39.0	-0.3
	baz=38,SNR=6.5						
BBOO	Buckleboo	39.71	247	P	P	21 12 54.7	-0.5
	baz=40,SNR=33						
BBOO	Buckleboo	39.71	247	P	P	21 12 54.5	-0.7
AS04	Alice Springs	42.30	261	P	P	21 13 16.0	+0.1
	baz=42						
AS31	Alice Springs	42.31	261	P	P	21 13 15.8	-0.3
AS31				IAmb	IAmb	21 13 17.3	
	comp=Z,19nm,0.6s						
ASAR	Alice Springs	42.32	261	P	P	21 13 16.0	-0.1
	comp=Z,70nm,0.8s,baz=100,slow=6.7,SNR=387						
ASAR				ScP	ScP	21 18 00.8	+0.9
	comp=Z,6.2nm,0.9s,baz=108,slow=3.9,SNR=15						
ASAR				S	S	21 18 57.9	-2.0
	comp=Z,3.9nm,0.9s,baz=100,slow=16,SNR=9.8						
ASAR	Alice Springs	42.32	261	P	P	21 13 15.3	-0.7
WR0	Warramunga Arr	42.50	266	P	P	21 13 16.7	-0.9
WC2	Warramunga Arr	42.67	266	P	P	21 13 18.6	-0.3
	baz=43						
WB2	Warramunga Arr	42.68	266	P	P	21 13 18.3	-0.6
WRAB	Tennant Creek	42.68	266	P	P	21 13 18.5	-0.5
WB0	Warramunga Arr	42.68	266	P	P	21 13 18.5	-0.5
WRA	Warramunga Arr	42.69	266	P	P	21 13 18.1	-0.9
	comp=Z,108nm,0.7s,baz=103,slow=8.4,SNR=479						
WRA				ScP	ScP	21 18 02.8	+1.4
	comp=Z,6.0nm,1.0s,baz=97,slow=4.2,SNR=8.0						
WRA				S	S	21 19 01.7	-3.5
	comp=Z,2.4nm,0.7s,baz=101,slow=14,SNR=4.8						
WRA	Warramunga Arr	42.69	266	P	P	21 13 18.5	-0.5
GENI	Genyem	44.17	292	P	P	21 13 30.9	+0.3
	comp=Z,148nm,0.9s						
KDU	Kakadu	46.56	275	P	P	21 13 47.8	-1.1
	baz=47,SNR=69						
FORT	Forrest	46.58	250	P	P	21 13 48.2	-0.7
	baz=47,SNR=75						
FORT	Forrest	46.58	250	P	P	21 13 48.0	-0.9
WRKA	Warakurna	47.12	257	P	P	21 13 52.8	-0.3
	baz=47,SNR=99						
MTN	Manton Dam	47.73	274	P	P	21 13 56.7	-1.0
	baz=48,SNR=18						
MTN	Manton Dam	47.73	274	P	P	21 13 57.3	-0.5
MTN				IAmb	IAmb	21 13 57.6	
	comp=Z,32nm,0.7s						
KHU	Kahuku	48.87	31	P	P	21 14 06.9	+0.6
KHU				IAmb	IAmb	21 14 26.1	
	comp=Z,47nm,1.1s						
KNRA	Kununurra	48.97	270	P	P	21 14 06.9	0.0
	baz=49,SNR=42						
KNRA	Kununurra	48.97	270	P	P	21 14 06.9	0.0
HUH	Hualalai	49.14	30	P	P	21 14 08.6	+0.1
MLH	Mauna Loa	49.19	31	P	P	21 14 08.3	-0.4
HMH	Humu‘ula Sheep	49.23	31	P	P	21 14 09.7	+0.5
SAUI	Saumlaki	49.44	280	P	P	21 14 11.6	+1.1
	comp=Z,212nm,1.0s						
SAUI	Saumlaki	49.44	280	P	P	21 14 09.8	-0.6
HPAH	Hawaii Prepara	49.51	30	P	P	21 14 11.4	+0.5
HON	Honolulu	49.64	27	P	P	21 14 11.1	-0.6
HLK	Haleakala	49.89	29	P	P	21 14 13.1	-0.9
FAKI	Fak Fak	50.84	287	P	P	21 14 19.5	-1.3
FAKI				IAmb	IAmb	21 14 20.6	
	comp=Z,22nm,0.7s						
FITZ	Fitzroy Crossi	51.11	265	P	P	21 14 22.7	+0.1
	baz=51,SNR=54						
FITZ	Fitzroy Crossi	51.11	265	P	P	21 14 22.8	+0.1
	comp=Z,50nm,0.7s,baz=119,slow=4.0,SNR=95						
FITZ	Fitzroy Crossi	51.11	265	P	P	21 14 22.5	-0.2
KMBL	Kambalda	51.80	248	P	P	21 14 27.2	-0.3
	baz=52,SNR=4.5						
SIJI	Sorong	52.69	288	P	P	21 14 34.0	-0.2
	comp=Z,141nm,0.7s,baz=86,slow=4.7,SNR=40						
SWI	Sorong	52.70	288	P	P	21 14 34.1	-0.1
	comp=Z,2µmcomp=Z,263nm,0.8s						
MSAI	Masohi	53.57	284	P	P	21 14 44.3	+3.9
AAI	Ambon	54.07	283	P	P	21 14 45.0	+1.0
	comp=Z,86nm,1.3s						
VNDA	Vanda	54.43	185	P	P	21 14 45.8	+0.3
	comp=Z,8.5nm,1.3s,baz=8.3,slow=5.5,SNR=3.0						
VNDA	Vanda	54.43	185	P	P	21 14 44.5	-1.0
SOEI	Soe	55.12	275	P	P	21 14 52.7	+1.2
	comp=Z,2µmcomp=Z,210nm,1.0s						
SOEI	Soe	55.12	275	P	P	21 14 51.0	-0.5
NLAI	Namlea	55.25	283	P	P	21 14 52.9	+0.7
	comp=Z,1µmcomp=Z,61nm,1.2s						
KLBR	Kellerberrin	55.26	247	P	P	21 14 51.7	-0.3
	baz=55,SNR=20						
MEEK	Meekatharra	55.39	253	P	P	21 14 52.2	-0.9
	baz=56,SNR=13						
PSA00	Pilbara Seismi	55.44	260	P	P	21 14 51.7	-1.8
PSA00				IAmb	IAmb	21 14 54.1	
	comp=Z,22nm,0.9s						
PSA00	Pilbara Seismi	55.44	260	P	P	21 14 51.7	-1.8
NWAO	Narrogin (SRO)	55.50	245	P	P	21 14 53.6	-0.2
	baz=56,SNR=8.3						
NWAO	Narrogin (SRO)	55.50	245	P	P	21 14 52.8	-1.0
NWAO	Narrogin (SRO)	55.50	245	P	P	21 14 52.9	-0.9
NWAO				IAmb	IAmb	21 15 10.6	
	comp=Z,27nm,1.1s						
BLDU	Ballidu	56.30	248	P	P	21 14 58.8	-0.5
	baz=56,SNR=25						
MUN	Mundaring	56.50	246	P	P	21 15 00.8	+0.1
	baz=57,SNR=6.2						
TNTI	Ternate	56.89	288	P	P	21 15 01.3	-2.2
TNTI				IAmb	IAmb	21 15 04.2	
	comp=Z,47nm,0.9s						
MORW	Morawa	57.15	250	P	P	21 15 04.9	-0.3
	baz=57,SNR=23						
MORW	Morawa	57.15	250	P	P	21 15 03.9	-1.3
MORW				IAmb	IAmb	21 15 05.8	
	comp=Z,39nm,0.8s						
MMRI	Maumere	57.40	275	P	P	21 15 05.6	-1.5
EDFI	Ende, Flores	57.85	275	P	P	21 15 10.0	-0.3
	comp=Z,664nmcomp=Z,76nm,0.9s						
WSI	Waingapu	58.78	273	P	P	21 15 16.9	+0.5
	comp=Z,4µmcomp=Z,400nm,0.8s						
WBSI	Waikabubak, Su	59.62	273	P	P	21 15 23.1	+1.0
	comp=Z,73nm,0.7s						
LUWI	Luwuk	60.09	283	P	P	21 15 25.2	-0.1
GIRL	Giralia	60.20	257	P	P	21 15 26.8	+1.0
	baz=60,SNR=4.7						
BKSI	Bulukumba	60.64	278	P	P	21 15 28.1	-0.7
	comp=Z,598nmcomp=Z,84nm,0.8s						
BNSI	Bone	61.03	279	P	P	21 15 31.9	+0.5
	comp=Z,12µmcomp=Z,720nmcomp=Z,49nm,0.8s						
PLAI	Plampang	61.40	273	P	P	21 15 33.5	-0.4
	comp=Z,2µmcomp=Z,189nm,0.9s						
SPSI	Sidrap Palu	61.52	279	P	P	21 15 33.6	-1.0
	comp=Z,31nm,0.8s						
TTSI	Tana Toraja	61.86	280	P	P	21 15 38.0	+1.1
	comp=Z,19nm,1.2s						
MPSI	Mapaga	63.27	283	P	P	21 15 45.4	-0.6
	comp=Z,644nmcomp=Z,80nm,0.9s						
SRBI	Singaraja	64.03	273	P	P	21 15 51.1	+0.3
	comp=Z,59nm,1.0s						
JAGI	Jajag, Banyuwa	64.85	272	P	P	21 15 55.1	-1.0
	comp=Z,60nm,1.1s						
JAGI	Jajag, Banyuwa	64.85	272	P	P	21 15 54.8	-1.3
QSPA	South Pole Qui	66.21	180	P	P	21 16 05.3	+1.4
	comp=Z,3.2nm,0.8s,baz=355,slow=5.7,SNR=6.4						
QSPA				pP	pwP	21 17 51.4	-0.2
	comp=Z,9.4nm,1.0s,baz=20,slow=4.9,SNR=7.0						
QSPA	South Pole Qui	66.21	180	P	P	21 16 05.5	+1.6
GRJI	Gresik	66.97	273	P	P	21 16 09.9	+0.6
	comp=Z,2µmcomp=Z,208nm,0.7s						
PCJI	Pacitan	67.68	271	P	P	21 16 13.9	+0.3
	comp=Z,2µmcomp=Z,214nm,0.6s						
WOJI	Wonogiri, Jawa	68.04	271	P	P	21 16 16.1	+0.2
	comp=Z,78nm,1.0s						
UGM	Wanagama	68.38	271	P	P	21 16 17.7	-0.3
KKM	Kota Kinabalu	69.16	287	P	P	21 16 22.5	-0.3
KKM				IAmb	IAmb	21 16 23.7	
	comp=Z,19nm,0.6s						
KPJI	Karang Pucung	70.06	271	P	P	21 16 28.6	+0.6
	comp=Z,46nm,0.9s						
CISI	Cisompet, Garu	71.00	270	P	P	21 16 32.3	-1.4
CISI				IAmb	IAmb	21 16 33.5	
	comp=Z,38nm,0.8s						
SBUM	Sibu	71.08	282	P	P	21 16 34.4	+0.3
XMIS	Christmas Isla	71.88	266	P	P	21 16 38.5	-0.3
MJAR	Matsushiro Arr	72.03	325	P	P	21 16 39.1	-0.1
	comp=Z,3.2nm,0.8s,baz=162,slow=6.1,SNR=8.5						
MJAR	Matsushiro Arr	72.03	325	IAmb	IAmb	21 16 39.2	
	comp=Z,1.6nm,0.9s						
DBJI	Dramaga	72.36	271	P	P	21 16 41.6	0.0
	comp=Z,45nm,1.1s						
KSM	Kuching	72.38	280	P	P	21 16 41.8	+0.1
NACB	Ninganchiao	74.31	306	P	P	21 16 51.6	-0.9
NACB				IAmb	IAmb	21 16 52.9	
	comp=Z,42nm,1.1s						
SSLB	Suanglung	74.57	305	P	P	21 16 51.8	-2.1
SSLB				IAmb	IAmb	21 16 54.2	
	comp=Z,17nm,1.0s						
KASI	Kota Agung	74.82	271	P	P	21 16 55.0	-0.6
	comp=Z,57nm,0.9s						
MDSI	Maura Dua	75.52	271	P	P	21 16 58.3	-1.2
	comp=Z,29nm,0.9s						
ATKA	Atka Island	75.90	3	P	P	21 17 01.0	+0.4
NIKH	Nikolski High	77.09	7	P	P	21 17 07.1	-0.2
NIKH				IAmb	IAmb	21 17 08.3	
	comp=Z,53nm,0.8s						
KSI	Kapahiang	77.30	272	P	P	21 17 08.5	-0.9
	comp=Z,1µmcomp=Z,70nm,0.8s						
UNV	Unalaska Valle	78.23	8	P	P	21 17 13.5	+0.2
UNV				IAmb	IAmb	21 17 14.1	
	comp=Z,16nm,0.8s						
KSRS	Korea Array	78.40	320	P	P	21 17 16.1	+1.4
	comp=Z,2.9nm,0.7s,baz=130,slow=5.7,SNR=12						
KSAR	Wonju Array Be	78.42	320	P	P	21 17 15.9	+1.1
DLV	T Lat	78.65	288	P	P	21 17 17.6	+0.8
DLV				IAmb	IAmb	21 17 18.7	
	comp=Z,25nm,0.9s						
PETK	Petropavlovsk-	79.14	346	P	P	21 17 18.3	0.0
	comp=Z,5.0nm,0.8s,baz=116,slow=5.6,SNR=5.1						
SDSI	Sungai Dareh	79.45	274	P	P	21 17 19.8	-1.1
	comp=Z,2µmcomp=Z,7.4nm,0.9s						
BKNI	Bangkinang	80.32	275	P	P	21 17 18.3	-7.1
PDSI	Padang	80.34	273	P	P	21 17 25.1	-0.5
	comp=Z,6.0nm,0.8s						
NJ2	Nanjing	80.85	311	*e*P	P	21 17 28.3	+0.6
USRK	Ussuriysk Ar.	80.89	327	P	P	21 17 28.4	+0.7
	comp=Z,3.0nm,0.7s,baz=138,slow=3.7,SNR=9.2						
HOPS	Hopland Field	81.93	41	P	P	21 17 34.8	+1.7
HOPS				IAmb	IAmb	21 17 36.1	
	comp=Z,15nm,1.1s						
IPM	Ipoh	82.04	278	P	P	21 17 34.3	0.0
IPM				IAmb	IAmb	21 17 35.3	
	comp=Z,19nm,0.7s						
BAR	Barrett	82.30	49	P	P	21 17 35.9	+0.7
KMRM	Mail Ridge	82.34	40	P	P	21 17 36.2	+1.0
KMRM				IAmb	IAmb	21 17 38.2	
	comp=Z,23nm,1.0s						
MURC	Murrieta	82.46	48	P	P	21 17 37.9	+1.9
	baz=235						
BFSC	Mount Baldy Ra	82.51	48	P	P	21 17 37.9	+1.6
	baz=234						
MONP2	Monument Peak	82.59	49	P	P	21 17 38.6	+1.7
	baz=235						
EDW2	Edwards Air Fo	82.66	47	P	P	21 17 38.6	+1.6
	baz=234						
IKP	In-Ko-Pah, Jac	82.67	50	P	P	21 17 39.5	+2.3
	baz=236						
KULM	Kulim	82.71	279	P	P	21 17 36.7	-1.0
KULM				IAmb	IAmb	21 17 39.0	
	comp=Z,12nm,0.7s						
ISA	Isabella, Lake	82.80	46	P	P	21 17 38.9	+1.2
ISA				IAmb	IAmb	21 17 40.4	
	comp=Z,12nm,0.8s						
ISA	Isabella, Lake	82.80	46	P	P	21 17 39.5	+1.8
	baz=234,SNR=8.8						
O02D	Mt. Diablo Mer	82.85	40	P	P	21 17 40.5	+2.6
	baz=230,SNR=13						
PFO	Pinyon Flats O	82.97	49	P	P	21 17 40.3	+1.6
	comp=Z,2.7nm,0.8s,baz=310,slow=1.3,SNR=3.9						
PFO	Pinyon Flats O	82.97	49	P	P	21 17 39.3	+0.6
XPFO	Pion Flat	82.97	49	P	P	21 17 39.5	+0.8
CMB	Columbia Colle	82.99	43	P	P	21 17 40.0	+1.4
CMB				IAmb	IAmb	21 17 41.0	
	comp=Z,13nm,0.9s						
SWSC	Sam W. Stewart	83.05	50	P	P	21 17 40.9	+1.9
	baz=236						
AFDM	Forest Hills D	83.18	42	P	P	21 17 41.2	+1.7
AFDM				IAmb	IAmb	21 17 41.9	
	comp=Z,13nm,1.0s						
WHN	Wuhan	83.20	307	P	P	21 17 40.0	+0.3
RPSI	Rantau Prapat	83.21	276	P	P	21 17 39.7	-0.5
RPSI				IAmb	IAmb	21 17 40.4	
	comp=Z,12nm,0.9s						
LRMC	Laurel Mtn Rad	83.22	47	P	P	21 17 41.5	+1.7
	baz=234,SNR=5.2						
ORV	Oroville	83.23	41	P	P	21 17 41.1	+1.4
ORV				IAmb	IAmb	21 17 42.2	
	comp=Z,12nm,0.9s						
WDC	Whiskeytown Da	83.25	40	P	P	21 17 41.6	+1.8
WDC				IAmb	IAmb	21 17 42.7	
	comp=Z,14nm,1.1s						
KBO	Bosley Butte	83.33	38	P	P	21 17 38.2	-2.0
KBO				IAmb	IAmb	21 17 45.8	
	comp=Z,30nm,1.1s						
N02D	Trinity Center	83.41	40	P	P	21 17 42.8	+2.2
	baz=230						
BELC	Belle Mtn. Jos	83.51	49	P	P	21 17 43.5	+2.1
	baz=236,SNR=6.3						
CWC	Cottonwood Cre	83.51	46	P	P	21 17 42.7	+1.3
	baz=234						
O03E	Paynes Creek	83.51	41	P	P	21 17 42.6	+1.4
	baz=231,SNR=10						
MDPB	Devils Postpil	83.57	44	P	P	21 17 42.8	+1.0
M02C	Callahan	83.59	39	P	P	21 17 44.1	+2.6
	baz=230,SNR=6.9						
OMMB	Old Mammoth Mi	83.61	44	P	P	21 17 42.0	-0.1
MPMC	Manual Prospec	83.68	46	P	P	21 17 43.9	+1.6
	baz=234						
BC3	Big Chuckawall	83.69	49	P	P	21 17 44.7	+2.5
	baz=236						
GSC	Goldstone, Bar	83.70	47	P	P	21 17 43.4	+1.2
GSC	Goldstone, Bar	83.70	47	P	P	21 17 43.8	+1.5
	baz=235,SNR=6.0						
HEC	Hector,Ludlow	83.75	48	P	P	21 17 44.1	+1.6
	baz=235,SNR=12						
TIN	Tinemaha, Big	83.77	45	P	P	21 17 44.7	+2.1
	baz=234						
GLA	Glamis	83.79	50	P	P	21 17 44.1	+1.4
GLA				IAmb	IAmb	21 17 46.1	
	comp=Z,22nm,1.0s						
GLA	Glamis	83.79	50	P	P	21 17 45.1	+2.4
	baz=236,SNR=6.1						
YBH	Yreka Blue Hor	83.89	39	P	P	21 17 45.3	+2.3
	comp=Z,6.4nm,0.8s,baz=14,slow=3.2,SNR=16						
YBH				pP	pwP	21 19 39.5	+2.3
	comp=Z,1.7nm,0.8s,baz=190,slow=6.8,SNR=3.6						
YBH	Yreka Blue Hor	83.89	39	P	P	21 17 44.6	+1.6
YBH				IAmb	IAmb	21 17 46.0	
	comp=Z,12nm,1.0s						
CN2	Changchun	84.03	323	*e*P	P	21 17 44.8	+1.3
PNTR	Pine Nut	84.11	43	P	P	21 17 44.9	+0.5
PNTR				IAmb	IAmb	21 17 47.0	
	comp=Z,20nm,1.0s						
BEKR	Beckworth	84.12	42	P	P	21 17 44.9	+0.6
GMRC	Granite Mounta	84.18	48	P	P	21 17 46.3	+1.6
	baz=236,SNR=6.2						
IRM	Iron Mountain	84.18	49	P	P	21 17 46.7	+2.1
	baz=236,SNR=5.9						
YERR	Yerington	84.28	43	P	P	21 17 46.8	+1.6
YERR				IAmb	IAmb	21 17 47.6	
	comp=Z,11nm,1.0s						
HUMO	Hull Mountain	84.30	38	P	P	21 17 45.9	+1.0
GRAC	Grapevine Rang	84.30	45	P	P	21 17 46.9	+1.8
	baz=234						
TUQ	Turquoise Moun	84.37	47	P	P	21 17 47.0	+1.4
	baz=236						
113A	Mohawk Valley,	84.38	51	P	P	21 17 46.0	+0.4
Y12C	Blythe	84.39	49	P	P	21 17 47.1	+1.6
Y12C				IAmb	IAmb	21 17 48.6	
	comp=Z,14nm,1.1s						
Y12C	Blythe	84.39	49	P	P	21 17 47.8	+2.2
	baz=236						
SHOC	Shoshone, Teco	84.39	47	P	P	21 17 47.9	+2.3
	baz=235						
TIA	Tai'an	84.41	314	P	P	21 17 47.2	+1.6
TIA				pmax	pmax		
	comp=Z,15nm,1.0s						
L04D	Klamath Falls	84.43	39	P	P	21 17 47.5	+1.8
	baz=231						
HSIG		84.46	55	P	P	21 17 47.2	+1.2
HSIG				IAmb	IAmb	21 17 48.7	
	comp=Z,16nm,0.8s						
RYN	Ryan	84.51	44	P	P	21 17 46.0	-0.3
NVAR	Mina Array Bea	84.54	44	P	P	21 17 48.0	+1.6
	comp=Z,3.4nm,0.8s,baz=222,slow=7.8,SNR=18						
NVAR				pP	pwP	21 19 43.3	+2.3
	comp=Z,0.2nm,0.4s,baz=218,slow=9.0,SNR=2.7						
NVAR	Mina Array Bea	84.54	44	P	P	21 17 47.6	+1.1
PAHR	Pah Rah Range	84.62	42	P	P	21 17 47.5	+0.8
214A	Organ Pipe Nat	84.63	52	P	P	21 17 47.6	+0.8
214A	Organ Pipe Nat	84.63	52	P	P	21 17 49.2	+2.4
	baz=238						
NV11	Mina Array Sit	84.63	44	P	P	21 17 48.1	+1.2
I03D	Drain, OR	84.78	37	P	P	21 17 49.5	+2.3
	baz=230						
NEE2	Needles Airpor	84.88	49	P	P	21 17 50.4	+2.5
	baz=236						
PDMCI	Parker Dam,Lak	84.96	49	P	P	21 17 50.8	+2.5
	baz=237						
K04D	Chiloquin, OR	85.00	39	P	P	21 17 50.3	+1.8
	baz=231						
TPNV	Topopah Spring	85.01	46	P	P	21 17 50.5	+1.8
TPNV	Topopah Spring	85.01	46	P	P	21 17 50.6	+1.8
	baz=235,SNR=7.4						
KVN	Kaiserville	85.03	43	P	P	21 17 50.1	+1.2
MOD	Modoc Plateau	85.40	40	P	P	21 17 51.8	+1.3
SHPR	Sheep Range	85.48	47	P	P	21 17 53.1	+2.0
Y14A	Wickenburg	85.55	50	P	P	21 17 53.4	+2.1
W13A	Hualapai Mount	85.57	49	P	P	21 17 52.6	+1.0
J05D	Fort Rock, OR	85.71	39	P	P	21 17 53.9	+1.9
	baz=231						
H04A	Detroit Lake	86.05	37	P	P	21 17 53.8	+0.4
H04A				IAmb	IAmb	21 18 07.9	
	comp=Z,11nm,0.7s						
PINE	Pine Mountain	86.19	38	P	P	21 17 56.6	+2.3
PINE				IAmb	IAmb	21 17 57.3	
	comp=Z,13nm,0.9s						
R11A	Troy Canyon, C	86.23	45	P	P	21 17 54.9	+0.2
R11A	Troy Canyon, C	86.23	45	P	P	21 17 55.7	+1.1
	baz=236						
TUC	Tucson	86.28	52	P	P	21 17 56.3	+1.4
TUC				IAmb	IAmb	21 17 58.4	
	comp=Z,13nm,0.8s						
TUC	Tucson	86.28	52	P	P	21 17 57.4	+2.5
	baz=239						
ENH	Enshi	86.65	305	P	P	21 17 57.1	+0.5
ENH				IAmb	IAmb	21 17 58.7	
	comp=Z,18nm,0.9s						
WVOR	Wild Horse Val	86.70	40	P	P	21 17 57.9	+1.3
WVOR				IAmb	IAmb	21 17 59.4	
	comp=Z,12nm,1.1s						
F04A	Amboy	86.72	36	P	P	21 17 56.4	-0.1
F04A				IAmb	IAmb	21 17 59.1	
	comp=Z,25nm,1.0s						
RSO	Redoubt South	86.85	13	P	P	21 17 57.4	+0.3
319A	Douglas	86.90	54	P	P	21 17 59.9	+2.1
319A				IAmb	IAmb	21 18 01.4	
	comp=Z,16nm,0.9s						
X16A	Lo Mia Camp, P	86.90	50	P	P	21 17 59.8	+1.9
LCMT	Little Creek M	87.04	47	P	P	21 17 59.0	+0.5
I07A	Izee	87.19	39	P	P	21 17 59.9	+1.0
I07A				IAmb	IAmb	21 18 01.7	
	comp=Z,18nm,1.0s						
BJI	Beijing	87.20	316	*e*P	P	21 17 59.6	+0.7
PBKT	Sadao Pong	87.22	289	P	P	21 18 00.1	+0.6
PBKT				IAmb	IAmb	21 18 02.3	
	comp=Z,9.0nm,1.0s						
G06A	Carlson Farm,	87.26	37	P	P	21 17 59.5	+0.4
G06A				IAmb	IAmb	21 18 01.6	
	comp=Z,11nm,0.9s						
J08A	Circle Bar Ran	87.35	40	P	P	21 18 00.1	+0.4
J08A				IAmb	IAmb	21 18 02.9	
	comp=Z,13nm,1.0s						
U15A	North Rim	87.37	48	P	P	21 18 00.2	+0.1
U15A				IAmb	IAmb	21 18 03.2	
	comp=Z,11nm,0.9s						
PSUT	Pine Spring	87.47	46	P	P	21 18 00.9	+0.5
WUAZ	Wupatki	87.53	49	P	P	21 18 01.2	+0.5
LON	Longmire	87.56	36	P	P	21 18 01.1	+0.6
D05A	Enumclaw	87.75	35	P	P	21 18 01.5	+0.2
ELK	Elko	87.80	43	P	P	21 18 02.1	+0.1
PKCU	Pink Cliffs	87.90	47	P	P	21 18 04.0	+1.3
X18A	Snowflake	88.02	51	P	P	21 18 04.4	+1.3
F07A	Phinny Hill Vi	88.06	37	P	P	21 18 03.7	+0.9
F07A				IAmb	IAmb	21 18 05.9	
	comp=Z,6.9nm,0.9s						
RC01	Rabbit Creek A	88.07	14	P	P	21 18 03.1	+0.7
RC01				IAmb	IAmb	21 18 03.4	
	comp=Z,16nm,1.1s						
ZAIG	Zacatecas	88.08	64	P	P	21 18 03.9	+0.1
SUA	Susitna One	88.18	13	P	P	21 18 03.0	-0.1
SUA				IAmb	IAmb	21 18 04.5	
	comp=Z,15nm,0.8s						
G08A	Pilot Rock	88.23	38	P	P	21 18 03.3	-0.5
G08A				IAmb	IAmb	21 18 06.3	
	comp=Z,18nm,1.1s						
MTPU	Mount Pierson	88.31	47	P	P	21 18 05.6	+1.0
B05A	Bryant	88.37	34	P	P	21 18 06.1	+1.9
	baz=231						
W18A	Petrified Fore	88.47	50	P	P	21 18 05.8	+0.6
LTY	Liberty	88.49	36	P	P	21 18 05.3	+0.4
LTY				IAmb	IAmb	21 18 07.0	
	comp=Z,7.0nm,0.8s						
GLI	Glacier Island	88.49	15	P	P	21 18 04.9	+0.5
E07A	Sunnyside	88.50	37	P	P	21 18 06.3	+1.5
E07A				IAmb	IAmb	21 18 07.6	
	comp=Z,13nm,0.9s						
MSU	Marysvale	88.56	46	P	P	21 18 05.8	+0.2
HAWA	Hanford	88.58	37	P	P	21 18 06.2	+1.1
HAWA				IAmb	IAmb	21 18 07.9	
	comp=Z,13nm,0.9s						
121A	Cookes Peak, D	88.58	53	P	P	21 18 06.5	+0.7
121A				IAmb	IAmb	21 18 09.1	
	comp=Z,7.9nm,1.1s						
121A	Cookes Peak, D	88.58	53	P	P	21 18 08.2	+2.4
	baz=240						
KNK	Knik Glacier	88.64	14	P	P	21 18 05.5	+0.3
KNK				IAmb	IAmb	21 18 06.6	
	comp=Z,12nm,0.8s						
PMR	Palmer	88.65	14	P	P	21 18 05.2	+0.1
PMR				IAmb	IAmb	21 18 06.4	
	comp=Z,10nm,0.9s						
B06A	Marblemount	88.85	34	P	P	21 18 06.9	+0.6
B06A				IAmb	IAmb	21 18 08.3	
	comp=Z,6.3nm,0.5s						
GHO	Glory Hole Cre	88.85	14	P	P	21 18 06.4	+0.2
GHO				IAmb	IAmb	21 18 08.1	
	comp=Z,23nm,0.9s						
E08A	Dider Farm, El	88.90	37	P	P	21 18 07.2	+0.5
E08A				IAmb	IAmb	21 18 09.2	
	comp=Z,7.1nm,1.0s						
BMO	Blue Mountains	88.91	39	P	P	21 18 07.5	+0.6
XAN	Xi'an	88.94	308	P	P	21 18 07.2	0.0
XAN				IAmb	IAmb	21 18 09.5	
	comp=Z,9.3nm,0.8s						
MFID	Camas Ranch	88.95	41	P	P	21 18 08.0	+0.8
MFID				IAmb	IAmb	21 18 09.6	
	comp=Z,14nm,1.0s						
TLIG	Tlapa	89.20	70	P	P	21 18 09.4	+0.5
TLIG				IAmb	IAmb	21 18 12.0	
	comp=Z,7.6nm,1.0s						
BGU	Big Grassy Mou	89.30	44	P	P	21 18 09.6	+0.7
D08A	Wollman Farm,	89.31	37	P	P	21 18 09.4	+0.8
D08A				IAmb	IAmb	21 18 11.2	
	comp=Z,16nm,1.1s						
NLU	North Lily Min	89.39	45	P	P	21 18 09.6	+0.2
E09A	Wood Farm, Sta	89.42	37	P	P	21 18 08.6	-0.5
E09A				IAmb	IAmb	21 18 11.2	
	comp=Z,8.7nm,0.8s						
Q16A	Castle Valley	89.44	47	P	P	21 18 11.2	+1.5
F10A	Beach Ranch, E	89.61	38	P	P	21 18 11.0	+0.9
F10A				IAmb	IAmb	21 18 11.9	
	comp=Z,9.1nm,0.9s						
TMUT	Trail Mountain	89.62	46	P	P	21 18 12.3	+1.7
VRDI	Verde Repeater	89.71	17	P	P	21 18 10.8	+0.5
MPU	Maple Canyon	89.72	45	P	P	21 18 13.0	+2.1
CM31	Chiang Mai Arr	89.78	290	P	P	21 18 12.6	+1.1
CM31				IAmb	IAmb	21 18 14.4	
	comp=Z,15nm,1.0s						
CMAR	Chiang Mai Arr	89.78	290	P	P	21 18 13.2	+1.8
	comp=Z,7.4nm,0.9s,baz=139,slow=3.4,SNR=49						

CMAR				PP	PP	21 21 54.3	+1.1
	comp=Z,1.7nm,1.0s,baz=131,slow=6.2,SNR=10						
CMAR	Chiang Mai Arr	89.78	290	P	P	21 18 12.9	+1.5
CMAR					PP	21 21 51.7	-1.4
GLB	Gilahina Butte	89.80	16	P	P	21 18 11.1	+0.5
GLB				IAmb	IAmb	21 18 12.1	
	comp=Z,8.3nm,1.0s						
B08A	Colville Reser	89.88	35	P	P	21 18 11.3	+0.1
SPUT	South Promonto	89.88	44	P	P	21 18 12.4	+0.8
HVU	Hansel Valley	89.92	43	P	P	21 18 12.5	+0.7
CHTO	Chiang Mai	89.93	291	P	P	21 18 12.4	+0.3
CHTO				IAmb	IAmb	21 18 14.7	
	comp=Z,14nm,0.9s						
MCARA	McCarthy VSAT	89.95	17	P	P	21 18 12.0	+0.8
MCARA				IAmb	IAmb	21 18 13.8	
	comp=Z,22nm,1.2s						
MNTX	Cornudas Mount	89.97	55	P	P	21 18 12.7	+0.7
MNTX				IAmb	IAmb	21 18 14.8	
	comp=Z,7.4nm,1.0s						
SRU	San Rafael Swe	89.97	47	P	P	21 18 13.1	+1.0
CTU	Camp Tracy	90.00	45	P	P	21 18 12.7	+0.5
P17A	Butcher Ranch,	90.02	46	P	P	21 18 13.3	+1.1
KTH	Kantishna Hill	90.03	12	P	P	21 18 12.1	+0.5
BARN	Barnard Glacie	90.05	17	P	P	21 18 11.9	0.0
BARN				IAmb	IAmb	21 18 13.9	
	comp=Z,13nm,1.1s						
TRF	Thorofare Moun	90.06	13	P	P	21 18 11.6	-0.2
TRF				IAmb	IAmb	21 18 12.5	
	comp=Z,12nm,0.9s						
JIS	Juneau Island	90.08	22	P	P	21 18 11.2	-0.6
JIS				IAmb	IAmb	21 18 17.8	
	comp=Z,13nm,1.2s						
C09A	Chrisman Ranch	90.11	36	P	P	21 18 12.4	+0.1
JLU	Jordanelle	90.14	45	P	P	21 18 12.9	0.0
BESE	Bessie Mountai	90.15	22	P	P	21 18 13.4	+1.1
BESE				IAmb	IAmb	21 18 21.1	
	comp=Z,18nm,1.0s						
TXAR	Lajitas Array	90.18	58	P	P	21 18 14.8	+1.6
	comp=Z,4.4nm,0.7s,baz=214,slow=6.2,SNR=14						
RND	Reindeer	90.32	13	P	P	21 18 12.8	-0.1
RND				IAmb	IAmb	21 18 14.1	
	comp=Z,12nm,0.9s						
DHY	Denali Highway	90.35	14	P	P	21 18 13.4	+0.2
TCUT	Toone Canyon	90.44	45	P	P	21 18 15.6	+1.3
HHC	Hu-ho-hao-te	90.59	315	*e*P	P	21 18 15.5	+0.7
HHC				pmax	pmax		
	comp=Z,66nm,1.2s						
HHC				pmax	pmax		
	comp=Z,250nm,7.0s						
HWUT	Hardware Ranch	90.60	44	P	P	21 18 15.3	+0.4
HWUT				IAmb	IAmb	21 18 16.8	
	comp=Z,6.0nm,0.8s						
ANMO	Albuquerque	90.72	52	P	P	21 18 17.4	+1.7
ANMO				IAmb	IAmb	21 18 18.1	
	comp=Z,5.2nm,1.1s						
ANMO	Albuquerque	90.72	52	P	P	21 18 17.1	+1.5
	baz=241						
CD2	Chengdu	91.30	303	P	P	21 18 16.6	-1.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
RDMU	Red Mountain	91.35	46	P	P	21 18 18.9	+0.5
WRH	Wood River Hil	91.42	13	P	P	21 18 17.8	-0.1
WRH				IAmb	IAmb	21 18 18.7	
	comp=Z,4.0nm,0.8s						
AHID	Auburn Hatcher	91.50	43	P	P	21 18 19.9	+0.8
AHID				IAmb	IAmb	21 18 22.1	
	comp=Z,6.3nm,0.8s						
MCMT	McKenzie Canyo	91.52	41	P	P	21 18 19.7	+0.5
DOT	Dot Lake	91.61	15	P	P	21 18 19.3	+0.4
HDA	Harding Lake	91.61	14	P	P	21 18 19.3	+0.5
HDA	Harding Lake	91.61	14	P	P	21 18 18.9	+0.1
	baz=210						
ROC1	El Roble	91.63	127	P	P	21 18 15.8	-4.3
CCB	Clear Creek Bu	91.63	13	P	P	21 18 18.7	-0.1
BCAR	Beaver Creek A	91.68	16	P	P	21 18 19.0	-0.2
IMAR	Indian Mountai	91.73	10	P	P	21 18 19.7	+0.4
S22A	4UR Ranch, Cre	91.80	49	P	P	21 18 21.9	+1.2
S22A				IAmb	IAmb	21 18 23.2	
	comp=Z,6.1nm,1.0s						
S22A	4UR Ranch, Cre	91.80	49	P	P	21 18 22.3	+1.6
	baz=241						
MDM	Murphy Dome	91.82	13	P	P	21 18 19.8	0.0
MDM				IAmb	IAmb	21 18 29.1	
	comp=Z,3.4nm,0.8s						
COLA	College	91.82	13	P	P	21 18 19.1	-0.6
COLA				IAmb	IAmb	21 18 22.4	
	comp=Z,4.5nm,0.8s						
SCRK	Sand Creek	91.90	15	P	P	21 18 19.2	-1.1
ILAR	Eielson Array	91.94	13	P	P	21 18 20.1	-0.2
	comp=Z,1.1nm,0.8s,baz=224,slow=5.6,SNR=12						
ILAR				PP	PP	21 22 05.9	-3.2
	comp=Z,1.6nm,0.9s,baz=224,slow=6.9,SNR=5.7						
REDW	Red Top Meadow	91.97	43	P	P	21 18 21.8	+0.5
REDW				IAmb	IAmb	21 18 23.7	
	comp=Z,8.9nm,1.1s						
O20A	White River Ci	92.01	47	P	P	21 18 20.5	-1.0
O20A				IAmb	IAmb	21 18 23.1	
	comp=Z,5.9nm,1.1s						
O20A	White River Ci	92.01	47	P	P	21 18 22.9	+1.4
	baz=240						
QLMT	Earthquake Lak	92.38	41	P	P	21 18 23.8	+0.7
SMCO	Snowmass	92.40	48	P	P	21 18 23.6	0.0
FLWY	Flagg Ranch	92.43	42	P	P	21 18 22.6	-0.8
PD31	Pinedale Array	92.47	44	P	P	21 18 24.5	+0.9
PDAR	Pinedale Array	92.47	44	P	P	21 18 24.4	+0.7
	comp=Z,2.3nm,0.7s,baz=214,slow=3.9,SNR=22						
PDAR				PP	PP	21 22 11.9	-2.1
	comp=Z,1.1nm,1.0s,baz=251,slow=4.5,SNR=4.4						
PDAR	Pinedale Array	92.47	44	P	P	21 18 24.0	+0.4
PDAR					PP	21 22 12.2	-1.8
YHB	Horse Butte	92.48	42	P	P	21 18 22.6	-0.9
RDOG	Red Dog Mine	92.49	6	P	P	21 18 23.1	+0.4
YHL	Hebgen Lake	92.54	41	P	P	21 18 24.7	+0.7
SDCO	Great Sand Dun	92.73	50	P	P	21 18 25.1	+0.2
RWWY	Rawlins	93.45	46	P	P	21 18 24.2	-4.0
Q24A	Divide	93.54	49	P	P	21 18 27.0	-1.7
Q24A				IAmb	IAmb	21 18 27.9	
	comp=Z,4.7nm,1.0s						
LZH	Lanzhou	93.58	308	*e*P	P	21 18 29.3	+0.6
LZH				sP	sP	21 21 14.1	+1.4
LZH				pmax	pmax		
	comp=Z,13nm,1.2s						
LZH				pmax	pmax		
	comp=Z,70nm,5.4s						
N23A	Red Feather La	93.91	47	P	P	21 18 31.9	+1.6
N23A				IAmb	IAmb	21 18 34.4	
	comp=Z,5.1nm,0.8s						
BMAR	Burnt Mountain	94.71	13	P	P	21 18 33.4	+0.4
ABTX	Abilene, Hawle	94.73	57	P	P	21 18 34.0	+0.1
ABTX				IAmb	IAmb	21 18 35.1	
	comp=Z,6.4nm,1.1s						
GO03	Copiap	94.89	123	P	P	21 18 34.1	-0.8
YKA	Yellowknife Ar	100.22	25	PP	PP	21 23 09.1	-3.0
	comp=Z,0.9nm,1.0s,baz=242,slow=7.1,SNR=6.0						
MKAR	Makanchi Array	112.34	313	PKiKP	PKiKP	21 23 44.1	-0.6
	comp=Z,0.4nm,0.6s,baz=216,slow=1.2,SNR=5.1						
KURBB	Kurchatov Arra	115.42	316	PKP	PKPdf	21 23 49.8	-0.6
	comp=Z,0.6nm,0.7s,baz=108,slow=1.8,SNR=8.0						
KURBB				PP	PP	21 25 04.8	+3.1
	comp=Z,1.3nm,1.0s,baz=102,slow=7.3,SNR=6.6						
KSH	Kashi	115.49	304	PKP	PKPdf	21 23 47.0	-4.1
KSH				sPKP		21 26 46.4	
KSH				SKKS		21 31 02.4	
KK31	Karatay Array	120.07	307		PKPdf	21 23 59.6	-0.1
KKAR	Karatay Array	120.07	307		PKPdf	21 23 59.6	-0.1
BVAR	Borovoye Array	120.60	319	PKP	PKPdf	21 24 00.1	-0.2
	comp=Z,0.7nm,0.4s,baz=124,slow=1.8,SNR=10						
ARU	Arti	127.03	324	PKP	PKPdf	21 24 12.8	+0.3
	comp=Z,0.6nm,0.4s,baz=103,slow=10,SNR=3.3						
GEYT	Alibeck	129.19	300	PKP	PKiKP	21 24 18.4	+0.3
	comp=Z,1.2nm,0.8s,baz=256,slow=6.0,SNR=3.6						
GEYT				SKPbc	SKPab	21 26 50.6	+0.1
	comp=Z,1.5nm,0.6s,baz=222,slow=2.0,SNR=6.8						
ARCES	ARCESS Array B	131.91	348	SKPbc	SKPab	21 27 00.9	-0.1
	comp=Z,5.1nm,0.8s,baz=72,slow=9.1,SNR=4.6						
FINES	FINESS Array B	138.51	342	SKPbc	SKPbc	21 27 20.8	+0.6
	comp=Z,4.6nm,0.7s,baz=25,slow=5.0,SNR=8.9						
AKASG	Malin Array Be	145.10	327	PKPbc	PKPdf	21 24 46.3	+0.4
	comp=Z,1.5nm,0.4s,baz=40,slow=4.3,SNR=14						
AKASG				SKPbc	SKiKP	21 27 37.9	+0.4
	comp=Z,1.6nm,0.5s,baz=44,slow=2.9,SNR=7.5						
BR131	Keskin Array S	147.78	307		PKPbc	21 24 54.9	+0.2
BR131				PKPab	PKPab	21 24 59.8	+0.8
BRTR	Keskin Array B	147.78	307	PKPbc	PKPbc	21 24 54.8	+0.1
	comp=Z,1.9nm,0.7s,baz=141,slow=4.5,SNR=9.6						
BRTR				PKPab	PKPab	21 24 59.2	+0.3
	comp=Z,4.2nm,0.6s,baz=83,slow=2.5,SNR=17						
BRTR	Keskin Array B	147.78	307		PKPbc	21 24 54.5	-0.2
BRTR				PKPab	PKPab	21 24 59.8	+0.8
CLL	Collm	150.91	344	*e*PKPbc	PKPbc	21 25 01.0	-0.6
ESDC	Sonseca Array	163.83	12	PKPab	PKPab	21 26 07.6	0.0
	comp=Z,0.4nm,0.8s,baz=342,slow=5.1,SNR=9.2						
ESDC	Sonseca Array	163.83	12		PKPab	21 26 07.9	+0.3
TORD	Torodi Ar. Bea	169.25	187	PKP	PKPdf	21 25 15.6	-0.8
	comp=Z,0.8nm,0.9s,baz=228,slow=3.5,SNR=3.0						
TORD				PKPab	PKPab	21 26 31.6	-0.4
	comp=Z,1.1nm,0.7s,baz=171,slow=3.7,SNR=5.7						
TORD	Torodi Ar. Bea	169.25	187		PKPab	21 26 32.1	+0.2

NIED ***08*** *21:07:00, 36°.30N×141°.10E, h35^{km}, Mw3.7 Best double couple: M$_0$4.28000×10^{14} NP1:φ$_s$221.00000°, δ84.00000°, λ-120.00000°. NP2:φ$_s$121.00000°, δ31.00000°, λ-13.00000°.*

IDC ***08*** *21:07:31.2±1.3, 36°.41N×140°.90E, h0^{km}, mb3.7/8, mb1 3.8/9, mb1mx3.5/53, mbtmp3.7/9, ML2.8/1, MS4.0/2, Ms1 4.0/2, ms1mx2.8/60, Error ellipse: s-maj=27.9km s-min=24.4km az=24.0*

JMA ***08*** *21:07:33.1±0.1, 36°.25N×140°.99E, h39^{km}±1^{km}, M3.8*

JMA Felt II J1.

NEIC ***08*** *21:07:33.7±1.4, 36°.16N±0°.07×141°.2E±0°.1, h46^{km}±5^{km}, mb4.5/10, Error ellipse: s-maj=12.7km s-min=10.5km az=90.0*

ISC 08 21:07:32.5±1.2**, 36°.27N**±0°.03×**141°.08E**±0°.06**, h25**^{km}±9^{km}**, n43, σ1^s.39**/52**, mb4.0**/13**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHYU	Hitachinakayam	0.41	280	P	Pn	21 07 41.8	-0.9
JHYU				S	Sb	21 07 47.4	+0.4
JHO	Hitachi	0.53	310	P	Pb	21 07 43.5	+0.2
JHO				S	Sb	21 07 50.6	0.0
JIHU	Itakohorinouch	0.54	236	P	Pn	21 07 44.1	-0.5
JIHU				S	Sb	21 07 51.5	+0.7
CHOJ	Chosi	0.59	198	P	Pb	21 07 44.2	-0.1
CHOJ				S	Sb	21 07 51.7	-0.6
JYT	Yasato	0.72	267	P	Pb	21 07 45.7	-0.6
JYT				S	Sb	21 07 54.3	-1.5
JSMT	Sammumatsuo	0.81	220	P	Pb	21 07 47.6	-0.3
JSMT				S	Sb	21 07 58.3	-0.1
ONAJ	Iwakimizuishiy	0.86	345	P	Pb	21 07 48.4	-0.4
ONAJ				*e*S	Sb	21 07 59.4	-0.6
JFK	Kawauchi	1.11	351	P	Pn	21 07 51.9	-0.5
JFK				S	Sb	21 08 05.4	-1.6
JAG	Ashikaga	1.32	277	P	Pn	21 07 54.5	-0.8
JAG				S	Sn	21 08 09.7	-2.5
JFT	Otama	1.38	335	P	Pb	21 07 57.1	-0.5
JFT				S	Sn	21 08 13.8	+0.2
MJAR	Matsushiro Arr	2.33	278	Pn	Pn	21 08 09.6	+0.3
	2.8nm,0.3s,baz=121,slow=8.8,SNR=244						
MJAR				Sn	Sn	21 08 38.1	+1.0
	2.7nm,0.3s,baz=45,slow=41,SNR=9.0						
MJAR				LR	LR	21 09 13.0	
	comp=Z,144nm,18.2s,baz=115,slow=48						
MAJO	Matsushiro	2.33	278		Pn	21 08 10.1	+0.8
MAT	Matsushiro	2.33	278	P	Pn	21 08 09.5	+0.2
MAT				S	Sn	21 08 34.8	-2.4
MJB9	Matsu-Tunnel	2.34	278		Pn	21 08 10.4	+1.1
JHJ2	Mitsune	3.32	199	Pn	Pn	21 08 22.3	-0.5
INU	Inuyama	3.43	256		Pn	21 08 26.3	+2.0
ERM	Erimo	5.96	15	Pn	Pn	21 09 00.1	+1.0
JCJ	Chichijima	9.20	174	Pn	Pn	21 09 41.9	-1.6
	5.5nm,0.3s,baz=287,slow=19,SNR=3.6						
USRK	Ussuriysk Ar.	10.53	322	Pn	Pn	21 10 05.2	+3.4
USA0B	Ussuriysk Arra	10.53	322	Pn	Pn	21 10 03.4	+1.7
SONM	Songino Array	28.00	305	P	P	21 13 21.5	+0.2
	0.4nm,0.6s,baz=107,slow=9.3,SNR=3.5						
SONM	Songino Array	28.00	305	IAmb	IAmb	21 13 30.6	
	comp=Z,0.8nm,1.2s						
ZALV	Zalesovo Beam	42.23	313	P	P	21 15 24.3	+1.0
	comp=Z,1.0nm,0.5s,baz=115,slow=6.4,SNR=5.3						
ZALV	Zalesovo Beam	42.23	313	P	P	21 15 23.6	+0.3
MKAR	Makanchi Array	44.30	303	P	P	21 15 41.4	+1.3
	comp=Z,0.7nm,0.7s,baz=91,slow=11,SNR=4.3						
MAKZ	Makanchi	44.51	303	P	P	21 15 42.0	+0.1
KURK	Kurchatov	46.20	309	P	P	21 15 55.1	0.0
KURBB	Kurchatov Arra	46.26	309	P	P	21 15 55.9	+0.3
	comp=Z,0.6nm,0.3s,baz=81,slow=7.6,SNR=19						
KDJ	Kajisay	48.84	297	P	P	21 16 14.1	-1.9
SEW	Seward	49.32	38	P	P	21 16 17.3	-1.8
SEW				IAmb	IAmb	21 16 31.2	
	comp=Z,9.2nm,1.0s						
MDM	Murphy Dome	49.70	32	P	P	21 16 21.2	-0.9
MDM				IAmb	IAmb	21 16 34.2	
	comp=Z,3.3nm,0.8s						
SML	Sawmill	49.77	36	P	P	21 16 21.9	-0.7
SML				IAmb	IAmb	21 16 29.9	
	comp=Z,8.4nm,1.1s						
ILAR	Eielson Array	50.28	32	P	P	21 16 29.5	+3.1
	comp=Z,0.4nm,0.8s,baz=274,slow=5.3,SNR=4.0						
BVAR	Borovoye Array	50.89	313	P	P	21 16 31.4	+0.2
	comp=Z,0.3nm,0.5s,baz=125,slow=8.8,SNR=4.1						
KNRA	Kununurra	52.96	195	P	P	21 16 43.3	-3.6
KKAR	Karatay Array	53.28	300	P	P	21 16 48.4	-0.7
GAR	Garm	54.79	296	P	P	21 17 00.1	-0.2
GAR				IAmb	IAmb	21 17 15.5	
	comp=Z,2.3nm,0.8s						
CHGR	Chuyangaron	55.75	296	P	P	21 17 06.4	-0.8
CHGR				IAmb	IAmb	21 17 19.8	
	comp=Z,5.6nm,1.0s						
WRA	Warramunga Arr	56.27	188	P	P	21 17 14.1	+3.2
	comp=Z,0.4nm,0.5s,baz=2.5,slow=7.4,SNR=2.7						
ARU	Arti	56.76	319	P	P	21 17 14.7	+0.7
	comp=Z,1.0nm,0.5s,baz=77,slow=6.2,SNR=6.6						
ABKAR	Akbulak array	58.23	310	P	P	21 17 24.1	-0.3
MMAI	Mount Meron Ar	82.19	305	LR	LR	22 00 17.6	
	comp=Z,30nm,18.3s,baz=155,slow=39						
SCHQ	Schefferville	86.14	16	LR	LR	22 03 55.8	
	comp=Z,205nm,18.7s,baz=326,slow=39						

ROM 08 21:13:54.1±0.2**, 43°.397N**±0°.004×**12°.485E**±0°.006**, h6**^{km}±1^{km}**, ML1.2**/2**, 5C-2D, Error ellipse: s-maj=0.5km s-min=0.2km az=64.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATVO	AVT- Monte Val	0.06	256	⇑P	Pg	21 13 55.8	+0.1
ATVO				S	Sg	21 13 56.9	+0.1
ATFO	Monte Foce - G	0.07	116	⇓P	Pg	21 13 56.0	+0.1
ATFO				S	Sg	21 13 57.4	+0.3
ATPI	Pietralunga -	0.08	312	⇑*e*P	Pg	21 13 56.2	+0.2
ATPI				S	Sg	21 13 57.9	+0.5
MURB	Monte Urbino	0.14	168	⇓*e*P	Pg	21 13 57.4	+0.4
MURB				S	Sg	21 14 00.2	+1.4
MURB				AML	AML		
	comp=E,206μm,1.2s						
MURB				AML	AML		
	comp=N,234μm,0.3s						
PIEI	Pieia	0.14	15	⇑*e*P	Pg	21 13 57.6	+0.5
PIEI				S	Sg	21 14 00.5	+1.4
PIEI				AML	AML		
	comp=E,148μm,0.2s						
PIEI				AML	AML		
	comp=N,80μm,0.2s						
BADI	Badiali	0.21	303	⇑*e*P	Pg	21 13 58.8	+0.5
BADI				S	Sg	21 14 02.7	+1.6
NARO	Abbazia di Nar	0.23	18	⇑*e*P	Pg	21 13 58.9	+0.3
NARO				S	Sg	21 14 02.9	+1.3

UCR ***08*** *21:16:57.4±3.0, 12°.39N×87°.80W, h57^{km}±54^{km}, ML3.6*

SNET ***08*** *21:16:59.0±0.8, 12°.46N×87°.85W, h49^{km}±25^{km}, ML3.6*

INET ***08*** *21:17:00.6, 12°.53N×87°.64W, h59^{km}, ML4.1*

ISC 08 21:16:58.0±2.0**, 12°.4N**±0°.1×**87°.81W**±0°.06**, h58**^{km}±26^{km}**, n37, σ0^s.41**/57**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	Cosiguina Volc	0.62	23	*e*P	Pn	21 17 11.7	+0.3
CRIN	San Cristobal	0.80	68	*e*P	Pn	21 17 14.0	+0.5
CNCH	Conchagua	0.87	358	*e*P	Pn	21 17 14.2	-0.3
CNCH				*e*S	Sn	21 17 27.0	+0.4
CNCH	Conchagua	0.87	358	*e*P	Pn	21 17 14.2	-0.3
CNCH				*e*S	Sn	21 17 27.0	+0.4
LCND	La Caada	0.91	355	*e*P	Pn	21 17 14.6	-0.2
LCND				*e*S	Sn	21 17 27.0	-0.1
LCND				IAML		21 17 29.3	
	comp=Z,2μm,0.3s						
LCND	La Caada	0.91	355	*e*P	Pn	21 17 14.6	-0.2
LCND				*e*S	Sn	21 17 27.0	-0.1
LCND				IAML		21 17 29.3	
	comp=Z,2μm,0.3s						
JUCU	Jucuar¡n	0.95	333	*e*P	Pn	21 17 14.9	-0.5
JUCU				*e*S	Sn	21 17 28.2	-0.1
JUCU	Jucuar¡n	0.95	333	*e*P	Pn	21 17 14.9	-0.5
JUCU				*e*S	Sn	21 17 28.2	-0.1
CNGN	Cerro Negro	1.09	85	*e*P	Pn	21 17 17.1	-0.1
BLLM	Bellamira	1.12	338	*e*P	Pn	21 17 17.8	+0.1
BLLM				*e*S	Sn	21 17 31.9	-0.3
BLLM	Bellamira	1.12	338	*e*P	Pn	21 17 17.8	+0.1
BLLM				*e*S	Sn	21 17 31.9	-0.3
VSM	San Miguel	1.12	336	*e*P	Pn	21 17 18.4	+0.6
VSM	San Miguel	1.12	336	*e*P	Pn	21 17 18.4	+0.6
LCY	Lacayo	1.12	335	*e*P	Pn	21 17 18.0	+0.2
LCY				*e*S	Sn	21 17 32.2	-0.2
LCY	Lacayo	1.12	335	*e*P	Pn	21 17 18.0	+0.2
LCY				*e*S	Sn	21 17 32.2	-0.2
RANC	El Ranchito	1.13	336	*e*P	Pn	21 17 18.1	+0.2
RANC	El Ranchito	1.13	336	*e*P	Pn	21 17 18.1	+0.2
PACA	Pacayal	1.18	335	*e*P	Pn	21 17 18.6	+0.2
PACA				*e*S	Sn	21 17 34.0	+0.3
PACA	Pacayal	1.18	335	*e*P	Pn	21 17 18.6	+0.2
PACA				*e*S	Sn	21 17 34.0	+0.3
ALJI	Alcalda de J	1.19	321	*e*P	Pn	21 17 17.6	-0.8
ALJI				*e*S	Sn	21 17 33.0	-0.7
ALJI				*e*S		21 17 33.0	
ALJI	Alcalda de J	1.19	321	*e*P	Pn	21 17 17.6	-0.8
ALJI				*e*S	Sn	21 17 33.0	-0.7
ALJI				*e*S		21 17 33.0	
TECA	Tecapa	1.28	328	*e*P	Pn	21 17 20.3	+0.4
TECA				*e*S	Sn	21 17 36.5	+0.3
TECA	Tecapa	1.28	328	*e*P	Pn	21 17 20.3	+0.4
TECA				*e*S	Sn	21 17 36.5	+0.3
COEB	Comit de Eme	1.30	327	*e*P	Pn	21 17 20.9	+0.8
COEB				*e*S	Sn	21 17 36.3	-0.3
COEB	Comit de Eme	1.30	327	*e*P	Pn	21 17 20.9	+0.8
COEB				*e*S	Sn	21 17 36.3	-0.3
FAGO	Alcalda de S	1.32	347	*e*P	Pn	21 17 20.0	-0.3
FAGO	Alcalda de S	1.32	347	*e*P	Pn	21 17 20.0	-0.3
ESTN	Estel	1.57	63	*e*P	Pn	21 17 23.4	-0.2
COEG	Centro de Oper	1.60	319	*e*P	Pn	21 17 23.9	-0.2
COEG				*e*S	Sn	21 17 44.4	+0.6
COEG				IAML		21 17 47.7	
	comp=Z,484nm,0.3s						
COEG	Centro de Oper	1.60	319	*e*P	Pn	21 17 23.9	-0.2
COEG				*e*S	Sn	21 17 44.4	+0.6
COEG				IAML		21 17 47.7	
	comp=Z,484nm,0.3s						
LFRS	El Faro	1.73	315	*e*P	Pn	21 17 26.4	+0.5
LFRS				*e*S	Sn	21 17 47.0	+0.2
TGUH	Tegucigalpa,Un	1.73	17	*e*P	Pn	21 17 25.9	0.0
TGUH	Tegucigalpa,Un	1.73	17	*e*P	Pn	21 17 25.9	0.0
LOMA	Loma Larga	1.82	313	*e*P	Pn	21 17 27.4	+0.3
LOMA	Loma Larga	1.82	313	*e*P	Pn	21 17 27.4	+0.3
MATN	Matagalpa	1.91	74	*e*P	Pn	21 17 28.0	-0.3
ACON	Acoyapa	2.61	99	*e*P	Pn	21 17 31.9	-5.9

IDC ***08*** *21:25:02.0±1.1, 60°.58S×19°.71W, h0^{km}, mb4.2/3, mb1 4.2/3, mb1mx3.9/23, mbtmp4.2/3, Error ellipse: s-maj=51.9km s-min=38.2km az=54.0*

NEIC ***08*** *21:25:03.8±1.8, 60°.9S±0°.1×19°.5W±0°.3, h20^{km}±4^{km}, mb4.7/11, Error ellipse: s-maj=26.0km s-min=13.2km az=51.0*

ISC 08 21:25:02.5±0.7**, 60°.8S**±0°.1×**19°.5W**±0°.2**, h10**^{km}**, n25, σ1^s.11**/24**, mb4.5**/9**, East of South Sandwich Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	10.89	160	P	Pn	21 27 38.5	+0.3
HOPE	Hope Point	11.18	298	Pn	Pn	21 27 41.9	-0.3
VNA3	Neumayer Olymp	11.20	163	P	Pn	21 27 41.9	-0.5
VNA2	Neumayer--Watz	11.28	159	P	Pn	21 27 43.1	-0.4
	baz=325,slow=13						
SNAA	Sanae	12.74	156	P	Pn	21 28 02.7	-0.9
SNAA	Sanae	12.74	156		Pn	21 28 02.7	-0.9
EFI	East Falkland	22.95	276	P	P	21 30 06.8	+0.2
QSPA	South Pole Qui	29.43	180	P	P	21 31 06.5	+0.6
CPUP	Villa Florida	42.93	306	P	P	21 33 01.0	-0.2
	0.9nm,0.4s,baz=148,slow=8.7,SNR=3.7						
GO01	Chusmiza	53.79	297	P	P	21 34 27.0	+1.4
GO01				IAmb	IAmb	21 34 35.1	
	comp=Z,4.7nm,0.9s						
MNMC	Minye Minye	54.44	297	P	P	21 34 32.1	+2.0
MNMC				IAmb	IAmb	21 34 33.0	
	comp=Z,7.9nm,0.8s						
SAML	Samuel	60.97	309	P	P	21 35 16.3	+0.6
SAML				IAmb	IAmb	21 35 17.6	
	comp=Z,3.8nm,0.8s						
OTAV	Otavalo	75.55	298	P	P	21 36 47.6	-0.1
OTAV				IAmb	IAmb	21 36 49.1	
	comp=Z,3.7nm,0.4s						
TORD	Torodi Ar. Bea	75.63	21	P	P	21 36 47.6	+0.2
	comp=Z,1.7nm,0.7s,baz=205,slow=5.4,SNR=10						
TORD	Torodi Ar. Bea	75.63	21	P	P	21 36 47.3	-0.1
PAYG	Puerto Ayora	80.10	287	P	P	21 37 12.9	+0.4
SDV	Santo Domingo	80.18	309	P	P	21 37 12.4	-0.6
CAN	Canberra	83.76	171	P	P	21 37 30.1	-1.5
CAN				IAmb	IAmb	21 37 34.6	
	comp=Z,6.9nm,1.0s						
STKA	Stephens Creek	86.37	164	P	P	21 37 47.1	+2.5
	comp=Z,2.3nm,1.0s,baz=207,slow=8.8,SNR=4.3						
JTS	Las Juntas de	87.36	296	P	P	21 37 47.0	-2.6
JTS				IAmb	IAmb	21 37 59.8	
	comp=Z,2.5nm,0.8s						
MKAR	Makanchi Array	134.62	71	PKP	PKiKP	21 44 22.1	+0.6
	comp=Z,0.2nm,0.7s,baz=214,slow=4.9,SNR=2.9						
YKA	Yellowknife Ar	142.37	311	PKP	PKiKP	21 44 35.6	-1.1
	comp=Z,0.2nm,0.5s,baz=117,slow=3.2,SNR=3.5						
RES	Resolute Bay	143.83	334	PKP	PKPbc	21 44 34.1	+0.4
	comp=Z,1.2nm,0.8s,baz=158,slow=5.9,SNR=6.6						
SONM	Songino Array	146.92	88	PKPbc	PKPbc	21 44 44.7	+0.5
	comp=Z,1.7nm,0.8s,baz=222,slow=1.9,SNR=11						
INK	Inuvik	152.03	314	PKPbc	PKPbc	21 44 55.9	-0.2
	comp=Z,1.6nm,0.8s,baz=131,slow=2.9,SNR=3.7						

IDC 08 21:39:49.2±57.0**, 19°.85S**×**174°.77W, h0**^{km}**, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.5**/30**, mbtmp3.6**/3**, Error ellipse: s-maj=1076.0km s-min=177.6km az=83.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	40.80	244	P	P	21 47 32.3	-0.2
	0.7nm,0.4s,baz=97,slow=12,SNR=4.3						
ASAR	Alice Springs	47.62	256	P	P	21 48 27.1	-0.2
	0.6nm,0.7s,baz=97,slow=8.3,SNR=8.7						
WRA	Warramunga Arr	47.69	261	P	P	21 48 27.9	0.0
	0.4nm,0.5s,baz=95,slow=8.1,SNR=21						

IDC ***08*** *21:46:38.6±2.1, 39°.62N×55°.71E, h0^{km}, mb3.2/3, mb1 3.3/6, mb1mx3.2/37, mbtmp3.3/6, ML3.2/3, Error ellipse: s-maj=33.5km s-min=14.5km az=56.0*

TEH ***08*** *21:46:39.7, 39°.84N×55°.90E, h19^{km}, ML3.5*

NNC ***08*** *21:46:39.2±3.7, 40°.06N×56°.31E, h4^{km}±22^{km}, mb4.6, Error ellipse: s-maj=45.4km s-min=8.5km az=81.0*

ISC 08 21:46:39.7±0.8**, 39°.97N**±0°.06×**55°.99E**±0°.07**, h10**^{km}**, n19, σ1^s.80**/21**, 3C-2D, Turkmenistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GEYT	Alibeck	2.63	140	Pn	Pn	21 47 20.9	-1.3
	1.8nm,0.3s,baz=314,slow=16,SNR=20						
GEYT				Sn	Sn	21 47 51.6	-2.6
	5.9nm,0.3s,baz=338,slow=19,SNR=7.0						
GEYT				Lg	Lg	21 47 59.8	
	11nm,0.3s,baz=293,slow=37,SNR=9.9						
GYA0B	ALIBECK ARRAY	2.63	140	⇓Pn	Pn	21 47 21.4	-0.9
GYA0B				⇑Lg	Lg	21 47 59.9	
IMND	Minoodasht	2.75	190	*e*Pn	Pn	21 47 22.2	-1.6
IEMG	Emamgholi	3.29	140	*e*	Sg	21 48 29.1	+3.6
ISFR	Sfrayin	3.31	151	*e*Pn	Pn	21 47 31.7	-0.2
ISFR				*e*		21 48 30.8	
IKRD	Kardeh	3.76	147	*e*Pn	Pb	21 47 44.9	-1.4
IKRD				*e*		21 49 03.4	

IPAY	Payeh	4.24	145	ePn	Pn	21 47 44.4	-0.2
IPAY				e		21 49 06.6	
IPRN	Peran	4.71	219	ePn	Pn	21 47 50.7	-0.2
IANJ	Anjilo	4.79	201	ePn	Pn	21 47 52.9	+0.8
TKDS	Koohdasht(Taba	6.41	172	ePn	Pn	21 48 13.2	-1.1
ISRB	Sarab	6.83	254	ePn	Pn	21 48 19.5	-0.7
IHRS	Heris	7.15	260	ePn	Pn	21 48 24.1	-0.4
AB31	Akbulak array	9.70	16	Pn	Pn	21 48 58.0	-1.3
	14nm,0.2s,baz=202,slow=14,SNR=24						
AB31				⇓Sn	Sn	21 50 46.4	-1.8
	1.7nm,0.4s						
AKTO	Aktyubinsk	10.56	7	Pn	Pn	21 49 13.3	+2.3
	0.3nm,0.3s,baz=180,slow=22,SNR=3.9						
AKTO	Aktyubinsk	10.56	7	⇑Pn	Pn	21 49 09.5	-1.6
	1.8nm,0.6s						
AKTO				⇑Sn	Sn	21 51 08.4	-0.9
	7.1nm,1.1s						
BVAR	Borovoye Array	16.35	32	Pn	Pn	21 50 32.1	+2.9
	0.1nm,0.3s,baz=218,slow=11,SNR=3.4						
MKAR	Makanchi Array	20.24	62	P	Pn	21 51 19.5	+2.6
	0.3nm,0.7s,baz=253,slow=12,SNR=3.5						
AKASG	Malin Array Be	21.54	309	P	P	21 51 29.9	+0.9
	0.2nm,0.3s,baz=107,slow=10,SNR=4.3						
ZALV	Zalesovo Beam	23.93	45	P	P	21 51 56.3	+2.6
	0.5nm,0.6s,baz=224,slow=8.1,SNR=2.8						

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*INET **08** 21:50:33.8, 10°.72N×85°.77W, h10^{km}, ML2.3*

UCR 08 21:50:33.2±1.3**, 10°.70N×85°.85W, h40^{km}**±8^{km}**, MD3.6, MW3.5, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NY14	Universidad de	0.31	100	i P	Pn	21 50 41.7	+0.1
NY14				i S	Sn	21 50 49.0	+1.6
LAPC	Finca la Perla	0.41	81	i P	Pn	21 50 42.5	-0.3
LAPC				i S	Sn	21 50 49.9	+0.4
BUEV	Buena Vista	0.44	78	i P	Pn	21 50 43.2	-0.1
GPS3	Bodega del ICE	0.47	84	i P	Pn	21 50 43.5	-0.1
GPS3				i S	Sn	21 50 51.5	+0.5
GPS2	Hotel Rincn d	0.49	84	i P	Pn	21 50 43.8	-0.1
GPS2				i S	Sn	21 50 51.8	+0.4
GPS1	Guardaparques	0.49	82	i P	Pn	21 50 43.8	-0.1
GUAB	Guayabo de Bag	0.60	90	i P	Pn	21 50 45.0	-0.4
COLC	Colonia	0.63	93	i P	Pn	21 50 45.6	-0.2
COLC				i S	Sn	21 50 55.1	+0.4
CUI	Cuipilapa	0.67	94	eP	Pn	21 50 46.2	-0.1
CUI				eS	Sn	21 50 56.4	+0.6
ACAL	Aguas Claras	0.80	95	i P	Pn	21 50 48.1	0.0
PTEN	Parque Tenorio	0.84	89	i P	Pn	21 50 49.1	+0.4
JTS	Las Juntas de	0.97	115	eP	Pn	21 50 49.8	-0.6
JTS				eS	Sn	21 51 03.7	+0.7
CEDE	Laguna Cedeo	1.14	101	eP	Pn	21 50 53.3	+0.5
CEDE				eS	Sn	21 51 10.1	+2.8
LCR2	La Lucha 2	2.05	118	eP	Pn	21 51 09.0	+3.6

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*ANF **08** 21:50:54.9±1.1, 35°.86N×96°.98W, h2^{km}±6^{km}, ML3.6/7, Error ellipse: s-maj=24.5km s-min=3.1km az=165.0*

*TUL **08** 21:50:55±1.3, 35°.80N±0°.02×96°.98W±0°.02, h5^{km}±7^{km}, ML3.3, Error ellipse: s-maj=2.4km s-min=2.3km az=183.0*

*NEIC **08** 21:50:55.3±0.9, 35°.80N±0°.01×96°.97W±0°.01, h5^{km}±2^{km}, Error ellipse: s-maj=2.3km s-min=0.9km az=224.0*

ISC 08 21:50:55.4±1.2**, 35°.81N**±0°.04×**96°.98W**±0°.03**, h4^{km}**±11^{km}**, n31, σ0^{s}.60**/39**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK005	Luther M Schoo	0.23	228	Pg	Pg	21 50 59.8	0.0
OK005				Sg	Sg	21 51 03.3	+0.5
OK001	Jones High Sch	0.35	226	Pg	Pg	21 51 02.1	-0.1
OK001				Sg	Sg	21 51 07.2	+0.4
ADOK	Arcadia Dam	0.35	244	Pg	Pg	21 51 02.3	+0.1
ADOK				Sg	Sg	21 51 07.4	+0.5
OK009	Oakdale Elemen	0.42	238	Pg	Pg	21 51 03.5	-0.1
OK009				Sg	Sg	21 51 09.6	+0.5
OKCSW	OKLAHOMA CITY	0.55	223	Pg	Pg	21 51 05.3	-0.6
OKCFA	Oklahoma City	0.55	225	Pg	Pg	21 51 05.3	-0.6
FNO	Franklin	0.65	212	Pg	Pg	21 51 07.4	-0.5
W35A	Tecumseh	0.66	172		Pg	21 51 07.3	-0.7
TUL1	Leonard	0.97	84	Pg	Pg	21 51 13.2	-1.0
TUL1	Leonard	0.97	84	P	Pg	21 51 13.1	-1.0
	baz=264						
TUL1				S	Sg	21 51 26.3	-0.4
	baz=264						
T35A	Sooner Cattle	1.17	19		Pg	21 51 17.3	-0.6
X34A	Smith Ranch, M	1.39	210		Pn	21 51 20.8	-0.9
WMOK	Wichita Mounta	1.82	235		Pn	21 51 27.2	-0.4
WMOK	Wichita Mounta	1.82	235	P	Pn	21 51 27.1	-0.4
	baz=54						
WMOK				S	Sb	21 51 52.2	-0.3
	baz=54						
U38A	Gravette	2.19	73		Pn	21 51 33.1	+0.4
HHAR	Hobbs	2.51	78		Pn	21 51 38.2	+1.1
W39A	Magazine	2.68	102	P	Pn	21 51 39.9	+0.5
	baz=284						
W39A				S	Sn	21 52 13.2	+1.0
	baz=284						
MIAR	Mount Ida	3.06	113		Pn	21 51 45.4	+0.8
MIAR	Mount Ida	3.06	113	P	Pn	21 51 45.2	+0.6
	baz=295						
S39A	Bolivar	3.49	56		Pn	21 51 50.6	+0.1
X40A	Basin Creek Fa	3.65	110	Pn	Pn	21 51 53.4	+0.8
X40A	Basin Creek Fa	3.65	110	P	Pn	21 51 53.4	+0.8
	baz=292						
CBKS	Cedar Bluff	3.72	325	Pn	Pn	21 51 53.6	-0.2
WLAR	White Oak Lake	3.82	122	Pn	Pn	21 51 54.7	-0.4
WHAR	Wooly Hollow	3.86	96		Pn	21 51 56.2	+0.6
ABTX	Abilene, Hawle	3.87	216	Pn	Pn	21 51 55.0	-0.7
ABTX	Abilene, Hawle	3.87	216	Pb	Pb	21 52 04.7	+0.5
	baz=34						
W41B	Gary Mavity, V	3.91	98		Pn	21 51 56.4	+0.1
W41B	Gary Mavity, V	3.91	98	P	Pn	21 51 56.5	+0.1
	baz=281						
W41B				S	Sn	21 52 42.4	-0.4
	baz=281						
AMTX	Amarillo	3.95	258	Pn	Pn	21 51 56.5	-0.4
MSTX	Muleshoe	5.10	251	Pn	Pn	21 52 12.4	-0.3

IDC 08 21:59:41.1±45.0**, 15°.80S**×**172°.85W, h0^{km}, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.6**/33**, mbtmp3.9**/3**, Error ellipse: s-maj=865.8km s-min=186.6km az=79.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	44.30	240	P	P	22 07 53.9	+1.0
	0.4nm,0.2s,baz=70,slow=9.3,SNR=3.6						
WRA	Warramunga Arr	50.27	257	P	P	22 08 38.6	-1.0
	0.3nm,0.4s,baz=96,slow=8.0,SNR=10.0						
ASAR	Alice Springs	50.49	252	P	P	22 08 41.4	0.0
	3.0nm,0.5s,baz=89,slow=8.0,SNR=67						

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*IDC **08** 22:17:10.0±30.0, 18°.67S×175°.95W, h0^{km}, mb4.1/4, mb1 4.3/4, mb1mx3.8/42, mbtmp4.1/4, Error ellipse: s-maj=585.1km s-min=145.6km az=87.0*

*NEIC **08** 22:18:29.3±2.6, 20°.7S±0°.2×179°.4W±0°.1, h561^{km}±15^{km}, mb4.0/11, Error ellipse: s-maj=37.7km s-min=7.3km az=159.0*

ISC 08 22:18:28.7±10.0**, 20°.7S**±0°.8×**17°9W**±°**, h550^{km}, n22, σ1^{s}.14**/16**, mb3.9**/9**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BFZ	Birch Farm	20.31	190	P	P	22 22 28.6	+1.1
QRZ	Quartz Range	21.26	197	P	P	22 22 33.7	-2.3
STKA	Stephens Creek	36.56	244	P	P	22 24 49.4	+0.9
	1.0nm,0.4s,baz=81,slow=10.0,SNR=7.9						
STKA	Stephens Creek	36.56	244	P	P	22 24 49.4	+0.9
STKA	Stephens Creek	36.56	244	IAmb	IAmb	22 24 50.1	
	comp=Z,0.8nm,1.1s						
BBOO	Buckleboo	41.32	243	P	P	22 25 27.3	+0.4
BBOO				IAmb	IAmb	22 25 27.8	
	comp=Z,5.2nm,0.6s						
WR0	Warramunga Arr	43.11	263	P	P	22 25 39.9	-1.2
WR0				IAmb	IAmb	22 25 42.8	
	comp=Z,3.3nm,1.0s						
AS31	Alice Springs	43.22	257	P	P	22 25 42.0	+0.1
ASAR	Alice Springs	43.22	257	P	P	22 25 41.9	-0.1
	comp=Z,3.9nm,0.8s,baz=87,slow=7.7,SNR=42						
ASAR	Alice Springs	43.22	257	P	P	22 25 41.9	-0.1
WB0	Warramunga Arr	43.27	263	P	P	22 25 40.6	-1.8
WB0				IAmb	IAmb	22 25 46.3	
	comp=Z,11nm,1.4s						
WB2	Warramunga Arr	43.28	262	P	P	22 25 41.5	-1.0
WB2				IAmb	IAmb	22 25 58.7	
	comp=Z,4.1nm,1.1s						
WRA	Warramunga Arr	43.30	262	P	P	22 25 41.4	-1.2
	comp=Z,0.5nm,0.3s,baz=97,slow=7.0,SNR=18						
WRA	Warramunga Arr	43.30	262	P	P	22 25 41.4	-1.2
WRA	Warramunga Arr	43.30	262	IAmb	IAmb	22 25 50.2	
	comp=Z,0.1nm,1.1s						
FORT	Forrest	48.04	247	P	P	22 26 18.5	-0.1
FORT				IAmb	IAmb	22 26 34.8	
	comp=Z,14nm,1.1s						
FITZ	Fitzroy Crossi	51.72	263	P	P	22 26 45.6	0.0
	comp=Z,0.9nm,0.5s,baz=76,slow=12,SNR=6.9						
FITZ	Fitzroy Crossi	51.72	263	P	P	22 26 45.6	0.0
FITZ	Fitzroy Crossi	51.72	263	IAmb	IAmb	22 26 56.4	
	comp=Z,2.5nm,1.1s						
MBWA	Marble Bar	56.55	258		pP	22 29 06.0	+0.9
BILL	Bilibino	89.06	355		pwP	22 32 30.7	+2.5
WMOK	Wichita Mounta	94.18	55		pP	22 32 50.9	+1.4

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*NEIC **08** 22:27:47±2.2, 2°.66S±0°.07×126°.77E±0°.07, h34^{km}±7^{km}, mb4.2/18, Error ellipse: s-maj=10.1km s-min=9.4km az=194.0*

*IDC **08** 22:27:49.2±2.6, 2°.82S×126°.84E, h60^{km}±29^{km}, mb3.5/4, mb1 3.8/7, mb1mx3.5/39, mbtmp3.9/7, ML4.1/3, MS3.0/1, Ms1 3.0/1, ms1mx2.4/23, Error ellipse: s-maj=22.2km s-min=17.5km az=130.0*

ISC 08 22:27:47.3±0.6**, 2°.73S**±0°.07×**126°.77E**±0°.06**, h35^{km}, n35, σ1^{s}.11**/34**, mb4.1**/10**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	3.53	10	Pn	Pn	22 28 38.2	-1.4
LUWI	Luwuk	4.33	293		Pn	22 28 48.5	-2.1
SIJI	Sorong	4.86	68	P	Pn	22 28 59.0	+1.0
	9.5nm,0.3s,baz=235,slow=22,SNR=31						
SIJI				S	Sn	22 29 55.1	+1.9
	6.4nm,0.3s,baz=143,slow=24,SNR=15						
FAKI	Fak Fak	5.48	92	Pn	Pn	22 29 06.2	-0.3
SAUI	Saumlaki	6.90	139	Pn	Pn	22 29 25.8	-0.3
KAPI	Kappang	7.36	252	P	Pn	22 29 34.2	+1.9
	4.5nm,0.3s,baz=44,slow=4.3,SNR=9.9						
MMRI	Maumere	7.40	217	Pn	Pn	22 29 33.0	+0.1
KNRA	Kununurra	13.02	171	Pn	Pn	22 30 50.1	+0.3
FITZ	Fitzroy Crossi	15.32	184	Pn	Pn	22 31 21.7	+0.7
WB0	Warramunga Arr	18.50	157	P	P	22 31 60.0	-0.7
WRA	Warramunga Arr	18.64	157	P	P	22 32 00.9	-1.3
	0.4nm,0.3s,baz=338,slow=12,SNR=17						
WRA	Warramunga Arr	18.64	157	P	Pn	22 32 02.5	-0.2
WB2	Warramunga Arr	18.65	157	P	Pn	22 32 02.0	-0.7
WR0	Warramunga Arr	18.74	157	P	P	22 32 02.1	-1.1
CISI	Cisompet, Garu	19.47	255	P	Pn	22 32 12.2	-0.6
CISI				IAmb	IAmb	22 32 25.6	
	comp=Z,16nm,0.7s						
COEN	Coen	19.68	125	P	Pn	22 32 13.9	-1.3
COEN				IAmb	IAmb	22 32 15.2	
	comp=Z,7.3nm,0.7s						
PMG	Port Moresby	21.33	109	P	P	22 32 32.2	+0.8
PMG				IAmb	IAmb	22 32 44.1	
	comp=Z,20nm,1.1s						
AS31	Alice Springs	21.93	162	P	P	22 32 37.4	-0.5
ASAR	Alice Springs	21.93	162	P	P	22 32 37.0	-0.9
	comp=Z,1.1nm,0.3s,baz=346,slow=12,SNR=26						
SSLB	Suanglung	26.95	348	P	P	22 33 24.2	-1.5
SSLB				IAmb	IAmb	22 33 30.4	
	comp=Z,7.8nm,1.0s						
NACB	Ninganchiao	27.21	350	P	P	22 33 26.6	-1.3
RPSI	Rantau Prapat	28.35	281	P	P	22 33 38.6	+0.4
RPSI				IAmb	IAmb	22 33 46.9	
	comp=Z,4.5nm,1.1s						
KSRS	Korea Array	39.99	1	LR	LR	22 58 30.2	
	comp=Z,17nm,18.1s,baz=316,slow=46						
SONM	Songino Array	53.42	343	P	P	22 37 03.3	-0.5
	comp=Z,0.6nm,0.6s,baz=153,slow=8.0,SNR=5.3						
SONM	Songino Array	53.42	343	IAmb	IAmb	22 37 05.6	
	comp=Z,0.7nm,0.9s						
BKZ	Black Stump Fm	57.88	136	P	P	22 37 35.7	-0.3
MK31	Makanchi Array	62.91	327	P	P	22 38 11.3	+1.2
MK31				IAmb	IAmb	22 38 11.9	
	comp=Z,1.7nm,0.9s						
MKAR	Makanchi Array	62.91	327	P	P	22 38 11.1	+0.9
	comp=Z,1.3nm,0.7s,baz=130,slow=8.0,SNR=20						
MKAR	Makanchi Array	62.91	327	P	P	22 38 11.2	+1.0
MAKZ	Makanchi	63.09	327	P	P	22 38 11.5	+0.2
MAKZ				IAmb	IAmb	22 38 20.6	
	comp=Z,1.6nm,1.0s						
ZALV	Zalesovo Beam	66.36	334	P	P	22 38 31.5	-0.9
	comp=Z,0.4nm,0.6s,baz=147,slow=8.2,SNR=2.5						
GAR	Garm	66.39	315	P	P	22 38 34.7	+1.6
CHGR	Chuyangaron	67.07	314	P	P	22 38 38.8	+1.4
KURK	Kurchatov	67.22	329	P	P	22 38 38.9	+1.0
KURK				IAmb	IAmb	22 38 47.8	
	comp=Z,4.3nm,1.1s						
KKAR	Karatay Array	68.02	319	P	P	22 38 44.1	+0.8

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*GCG **08** 22:44:10.0±0.4, 13°.29N×91°.72W, h32^{km}, MD4.1*

*MEX **08** 22:44:16.2±0.6, 13°.66N×91°.42W, h26^{km}±13^{km}, MD3.9*

*SNET **08** 22:44:17.6±1.4, 13°.96N×91°.33W, h34^{km}±21^{km}, ML3.9*

*UCR **08** 22:44:17.9±1.7, 13°.96N×91°.34W, h36^{km}±999^{km}, ML3.8*

ISC 08 22:44:15.0±2.4**, 13°.7N**±0°.1×**91°.47W**±0°.06**, h27^{km}**±19^{km}**, n22, σ0^{s}.70**/36**, 1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	0.96	39	eP	Pn	22 44 34.1	+1.1
STG3	Santiaguito 3,	1.01	355	⇓eP	Pn	22 44 34.2	+0.6
PCG	Pacaya	1.08	51	eP	Pn	22 44 36.3	+1.6
IXG	Ixpaco	1.10	65	eP	Pn	22 44 34.5	-0.5
IXG	Ixpaco	1.10	65	eP	Pn	22 44 34.5	-0.5
IXG	Ixpaco	1.10	65	eP	Pb	22 44 35.5	-0.2
THIG		1.42	327	i P	Pn	22 44 39.3	+0.1
THIG				i S	Sn	22 44 56.2	-0.9
RTR	El Retiro	1.79	84	eP	Pn	22 44 44.8	+0.5
RTR	El Retiro	1.79	84	eP	Pn	22 44 44.8	+0.5
CEVE	Cerro Verde	1.80	86	eP	Pn	22 44 44.8	+0.2
CEVE				eS	Sn	22 45 06.4	-0.3
CEVE				IAML		22 45 09.3	
	comp=Z,1µm,0.2s						
CEVE	Cerro Verde	1.80	86	eP	Pn	22 44 44.8	+0.2
CEVE				eS	Sn	22 45 06.4	-0.3
CEVE				IAML		22 45 09.3	
	comp=Z,1µm,0.2s						
SBLS	San Blas	1.80	85	eP	Pn	22 44 44.9	+0.3
SBLS				eS	Sn	22 45 06.1	-0.6
SBLS	San Blas	1.80	85	eP	Pn	22 44 44.9	+0.3
SBLS				eS	Sn	22 45 06.1	-0.6
SNJE	San Jose	1.82	85	eP	Pn	22 44 44.9	+0.1
SNJE				eS	Sn	22 45 07.8	+0.6
SNJE	San Jose	1.82	85	eP	Pn	22 44 44.9	+0.1
SNJE				eS	Sn	22 45 07.8	+0.6
BOQS	Boqueron	2.13	89	eP	Pn	22 44 50.1	+1.0
BOQS				eS	Sn	22 45 15.1	+0.2
MTO3	Montecristo	2.16	71	eP	Pn	22 44 50.2	+0.6
MTO3				eS	Sn	22 45 14.2	-1.5
MTO3	Montecristo	2.16	71	eP	Pn	22 44 50.2	+0.6
MTO3				eS	Sn	22 45 14.2	-1.5
PCIG		2.61	320	eP	Pn	22 44 55.4	-0.1
PCIG				i S	Sn	22 45 25.7	-0.6
CCIG	Comitan	2.64	346	i P	Pn	22 44 55.9	-0.2
CCIG				i S	Sn	22 45 27.4	-0.1
TGIG		3.45	333	i P	Pn	22 45 07.0	-0.1
TGIG				eS	Sn	22 45 47.9	+0.8
CMIG	Matias Romero	4.71	316	eP	Pn	22 45 25.2	+0.8
CMIG				eS	Sn	22 46 18.3	+0.1

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*GCG **08** 22:49:07.8±0.6, 14°.80N×92°.16W, h78^{km}±11^{km}, MD3.8*

*MEX **08** 22:49:07.2±0.5, 14°.57N×92°.07W, h85^{km}±4^{km}, MD4.0*

ISC 08 22:49:09.6±1.7**, 14°.7N**±0°.1×**92°.16W**±0°.08**, h70^{km}**±11^{km}**, n9, σ1^{s}.02**/16**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.20	328	eP	Pn	22 49 19.2	-1.0
THIG				eS	Sn	22 49 29.0	+1.1
STG3	Santiaguito 3,	0.57	92	eP	Pn	22 49 22.8	-0.5
ERG	Entre ros, C	0.64	117	eP	Pn	22 49 23.0	-0.8
FUG	Fuego 3	1.30	102	eP	Pn	22 49 31.6	-0.5
FUG				eS	Sn	22 49 49.6	+0.5
PCIG		1.41	313	eP	Pn	22 49 32.6	-0.7
PCIG				eS	Sn	22 49 51.7	+0.5
CCIG	Comitan	1.54	1	i P	Pn	22 49 34.4	-0.9
CCIG				i S	Sn	22 49 55.5	+0.9
IXG	Ixpaco	1.75	108	eP	Pn	22 49 37.2	-0.9
IXG				i S	Sn	22 50 00.8	+1.2
TGIG		2.23	336	i P	Pn	22 49 43.1	-1.4
TGIG				i S	Sn	22 50 12.6	+1.5
CMIG	Matias Romero	3.52	312	eP	Pn	22 50 02.0	+0.2
CMIG				i S	Sn	22 50 42.8	+0.5

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*IDC **08** 22:53:29.4±0.9, 9°.08S×157°.83E, h0^{km}, mb3.9/8, mb1 4.1/9, mb1mx3.9/31, mbtmp3.9/9, ML3.5/1, MS3.2/6, Ms1 3.2/6, ms1mx3.0/29, Error ellipse: s-maj=26.8km s-min=18.9km az=162.0*

ISC 08 22:53:33.2±0.8**, 9°.1S**±0°.2×**157°.79E**±0°.08**, h23^{km}, n14, σ1^{s}.31**/11**, mb3.9**/8**, MS3.3**/3**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.15	99	Pn	Pn	22 54 06.2	-1.6
	15nm,0.3s,baz=225,slow=4.3,SNR=3.7						
HNR				Sn	Sn	22 54 32.1	-1.7
	93nm,0.3s,baz=38,slow=22,SNR=8.6						
HNR				LR	LR	22 55 00.9	
	comp=Z,225nm,20.2s,baz=327,slow=43						
HNR	Honiara	2.15	99	eP	Pb	22 54 14.0	+2.4
PMG	Port Moresby	10.50	267	LR	LR	22 59 47.6	
	comp=Z,119nm,18.1s,baz=134,slow=36						
DZM	Mont Dzumac	15.36	148	LR	LR	23 01 01.0	
	comp=Z,82nm,18.7s,baz=38,slow=29						
WRA	Warramunga Arr	25.11	242	P	P	22 58 55.6	-0.9
	2.9nm,0.8s,baz=74,slow=9.6,SNR=4.9						
ASAR	Alice Springs	27.06	235	P	P	22 59 13.7	-0.5
	0.9nm,0.9s,baz=66,slow=9.1,SNR=6.9						
STKA	Stephens Creek	27.21	211	P	P	22 59 16.2	+0.7
	2.6nm,0.7s,baz=32,slow=12,SNR=7.9						
STKA				LR	LR	23 09 48.3	
	comp=Z,72nm,19.1s,baz=25,slow=36						
FITZ	Fitzroy Crossi	32.46	251	LR	LR	23 12 26.2	
	comp=Z,58nm,19.0s,baz=170,slow=35						
DAV	Davao City (W)	35.89	296	LR	LR	23 15 30.2	
	comp=Z,35nm,19.4s,baz=325,slow=37						
CMAR	Chiang Mai Arr	64.18	296	P	P	23 04 07.0	+0.5
	0.4nm,0.3s,baz=107,slow=3.6,SNR=4.7						
SONM	Songino Array	72.58	327	P	P	23 04 59.1	+0.3
	0.7nm,0.8s,baz=133,slow=4.7,SNR=5.9						
ILAR	Eielson Array	84.31	21	P	P	23 06 02.6	-0.4
	0.6nm,1.0s,baz=231,slow=5.7,SNR=4.7						
MKAR	Makanchi Array	86.79	318	P	P	23 06 15.2	-0.6
	0.8nm,0.7s,baz=98,slow=5.3,SNR=8.7						
NVAR	Mina Array Bea	90.84	51	P	P	23 06 35.7	+0.3
	0.2nm,0.4s,baz=234,slow=7.7,SNR=2.7						

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*JMA **08** 22:54:13.8±0.2, 35°.84N×140°.99E, h33^{km}±2^{km}, M3.0*

*IDC **08** 22:54:14.6±6.1, 36°.35N×140°.84E, h0^{km}, mb3.2/2, mb1 3.1/3, mb1mx3.0/39, mbtmp3.1/3, ML1.8/1, Error ellipse: s-maj=117.1km s-min=49.2km az=162.0*

ISC 08 22:54:14.7±1.5**, 35°.90N**±0°.05×**140°.97E**±0°.09**, h23^{km}**±9^{km}**, n10, σ0^{s}.75**/18**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.21	205	P	Pb	22 54 19.9	-0.5
CHOJ				S	Sb	22 54 24.2	0.0
JIHU	Itakohorinouch	0.36	281	P	Pb	22 54 23.3	+0.7
JIHU				S	Sn	22 54 30.2	-0.8
JSMT	Sammumatsuo	0.49	239	P	Pb	22 54 24.4	-0.4
JSMT				S	Sb	22 54 32.5	+0.9
JHYU	Hitachinakayam	0.54	325	P	Pb	22 54 26.0	+0.5
JHYU				S	Sn	22 54 34.6	-0.7
JYT	Yasato	0.71	298	P	Pb	22 54 27.6	-0.8
JYT				S	Sb	22 54 37.3	-0.4
JHO	Hitachi	0.78	336	P	Pb	22 54 29.1	-0.5
JHO				S	Sb	22 54 40.0	+0.2
MJAR	Matsushiro Arr	2.32	287	Pn	Pn	22 54 51.4	-0.1
	0.3nm,0.3s,baz=92,slow=10,SNR=24						
MJAR				Sn	Sn	22 55 18.0	-1.3
	0.2nm,0.3s,baz=291,slow=17,SNR=4.8						
MAT	Matsushiro	2.32	287	P	Pn	22 54 51.2	-0.3
MAT				eS	Sn	22 55 19.8	+0.4
SONM	Songino Array	28.14	306	P	P	23 00 06.4	+1.3
	0.2nm,0.7s,baz=104,slow=11,SNR=2.1						
MKAR	Makanchi Array	44.43	303	P	P	23 02 23.3	-0.3
	0.3nm,0.9s,baz=79,slow=7.5,SNR=2.8						

IDC 08 23:02:55.2±2.5**, 4°.55S**×**132°.74E, h0^{km}, mb3.2**/1**, mb1 3.6**/5**, mb1mx3.4**/29**, mbtmp3.4**/5**, ML3.3**/4**, Error ellipse: s-maj=98.9km s-min=23.4km az=82.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.94	338	Pn	Pn	23 03 55.3	-1.8
	1.1nm,0.3s,baz=251,slow=21,SNR=7.5						
SIJI				Sn	Sn	23 04 39.9	-4.3
	0.9nm,0.3s,baz=180,slow=20,SNR=3.8						
FITZ	Fitzroy Crossi	15.15	207	Pn	Pn	23 06 30.2	-0.5
	0.1nm,0.3s,baz=43,slow=13,SNR=4.0						
FITZ				Sn	Sn	23 09 19.7	+0.4
	0.1nm,0.3s,baz=82,slow=14,SNR=3.2						
WRA	Warramunga Arr	15.38	174	Pn	Pn	23 06 31.8	-1.9
	0.1nm,0.3s,baz=355,slow=12,SNR=4.7						
ASAR	Alice Springs	19.04	177	P	Pn	23 07 19.6	-0.2
	0.2nm,0.3s,baz=2.7,slow=11,SNR=18						
MKAR	Makanchi Array	67.74	325	P	P	23 13 55.3	+0.5
	0.2nm,0.6s,baz=120,slow=9.0,SNR=3.2						

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*DJA **08** 23:42:45.2±0.4, 10°S±4°×11°9E±°, h10^{km}, M4.4/12, mB4.8/2, mb4.7/3, MLv4.3/12, Mw(mB)4.1/2*

*NEIC **08** 23:42:47.0±2.4, 10°.16S±0°.05×118°.89E±0°.06, h75^{km}±10^{km}, mb4.1/13, Error ellipse: s-maj=9.8km s-min=4.7km az=125.0*

*IDC **08** 23:42:47.0±4.0, 10°.13S×118°.94E, h74^{km}±33^{km}, mb3.6/5, mb1 3.7/9, mb1mx3.5/44, mbtmp3.9/9, MS2.9/1, Ms1 2.9/1, ms1mx2.6/21, Error ellipse: s-maj=56.4km s-min=15.2km az=72.0*

ISC 08 23:42:43.5±0.6**, 10°.24S**±0°.06×**118°.76E**±0°.05**, h33^{km}, n38, σ2^{s}.18**/40**, mb4.0**/8**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.86	46	P	Pn	23 42 57.3	-2.0
WSI	Waingapu	1.61	70	P	Pn	23 43 11.6	+1.9
WSI				S	Sb	23 43 34.4	+1.6
PLAI	Plampang	1.70	325	P	Pn	23 43 10.1	-0.9
PLAI				S	Sn	23 43 32.8	+1.2
BASI	Baing, Sumba	1.79	90	P	Pb	23 43 16.0	+0.3
BASI				S	Sb	23 43 39.7	+1.9
EDFI	Ende, Flores	3.25	63	P	Pn	23 43 33.2	+0.9
MMRI	Maumere	3.78	65	P	Pn	23 43 41.6	+2.0
MMRI	Maumere	3.78	65		Pn	23 43 41.8	+2.2
IGBI	Denpasar	3.83	291	P	Pn	23 43 45.0	+4.7
SRBI	Singaraja	4.10	301	P	Pn	23 43 47.5	+3.5
JAGI	Jajag, Banyuwa	4.88	291	P	Pn	23 43 57.1	+2.5
JAGI	Jajag, Banyuwa	4.88	291		Pn	23 43 58.3	+3.6
BKSI	Bulukumba	5.06	16	P	Pn	23 43 57.9	+0.7
KAPI	Kappang	5.28	11	P	Pn	23 44 02.1	+1.9
	9.2nm,0.3s,baz=183,slow=7.3,SNR=16						
KAPI				S	Sn	23 45 00.4	+0.5
	14nm,0.3s,baz=352,slow=17,SNR=8.9						
KAPI				LR	LR	23 46 16.5	
	comp=Z,131nm,21.5s,baz=222,slow=41						
SOEI	Soe	5.45	85	P	Pn	23 44 04.9	+2.3
	0.3nm46nm,1.2s						
SOEI	Soe	5.45	85		Pn	23 44 05.5	+2.9
BNSI	Bone	5.95	13	P	Pn	23 44 12.6	+3.2
	0.2nm720nm58nm,0.8s						
FITZ	Fitzroy Crossi	10.27	140	P	Pn	23 45 09.4	+0.7
	0.9nm,0.3s,baz=329,slow=9.1,SNR=17						
FITZ				S	Sn	23 46 59.4	-3.4
	0.6nm,0.3s,baz=174,slow=17,SNR=6.1						
PSA00	Pilbara Seismi	11.32	175	Pn	Pn	23 45 23.4	+0.3
MTN	Manton Dam	12.40	103		Pn	23 45 43.8	+6.0
GIRL	Giralia	13.08	199	Pn	Pn	23 45 48.5	+1.4
MNAI	Manna	16.72	289	Pn	Pn	23 46 35.4	-0.1

WB0	Warramunga Arr	17.81	124	P	P	23 46 50.7	+1.2
WB0				IAmb	IAmb	23 47 08.2	
	comp=Z,3.1nm,0.9s						
WRA	Warramunga Arr	17.86	125	P	Pn	23 46 49.2	-0.4
	comp=Z,0.2nm,0.3s,baz=298,slow=13,SNR=4.9						
WRAB	Tennant Creek	17.86	124	P	Pn	23 46 47.0	-2.6
WR0	Warramunga Arr	18.03	124	P	Pn	23 46 51.5	-0.2
MORW	Morawa	18.91	187	P	Pn	23 47 05.7	+3.4
MORW				IAmb	IAmb	23 47 14.5	
	comp=Z,12nm,1.1s						
AS31	Alice Springs	19.68	135		Pn	23 47 12.1	+0.5
ASAR	Alice Springs	19.68	135	P	P	23 47 11.3	+1.3
	comp=Z,0.4nm,0.3s,baz=316,slow=11,SNR=55						
FORT	Forrest	22.20	158	P	P	23 47 36.6	-0.5
FORT				IAmb	IAmb	23 47 52.8	
	comp=Z,19nm,1.1s						
NWAO	Narrogin (SRO)	22.63	183	P	P	23 47 42.8	+1.1
NWAO				IAmb	IAmb	23 48 01.2	
	comp=Z,12nm,1.1s						
NWAO	Narrogin (SRO)	22.63	183	P	P	23 47 43.4	+1.7
NWAO				IAmb	IAmb	23 48 01.2	
	comp=Z,14nm,1.0s						
COEN	Coen	24.15	101	P	P	23 47 52.8	-4.1
COEN				IAmb	IAmb	23 48 04.1	
	comp=Z,5.9nm,1.1s						
MJAR	Matsushiro Arr	50.00	20	P	P	23 51 31.6	-3.2
	comp=Z,0.9nm,0.9s,baz=183,slow=6.7,SNR=4.0						
SONM	Songino Array	58.85	350	P	P	23 52 37.6	-1.4
	comp=Z,0.5nm,0.5s,baz=167,slow=7.7,SNR=8.7						
MKAR	Makanchi Array	65.44	333	P	P	23 53 22.1	-1.1
	comp=Z,0.5nm,0.5s,baz=162,slow=6.8,SNR=9.7						
ZALV	Zalesovo Beam	70.11	339	P	P	23 53 50.6	-1.8
	comp=Z,0.6nm,0.3s,baz=150,slow=6.2,SNR=5.3						
TIXI	Tiksi	81.98	3	P	P	23 54 57.7	-2.0
	comp=Z,0.6nm,0.4s,baz=291,slow=2.0,SNR=2.8						
TIXI	Tiksi	81.98	3	IAmb	IAmb	23 54 58.8	
	comp=Z,1.5nm,0.8s						

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*ATH **09** 00:15:47.6, 36°.49N×26°.78E, h126^{km}±8^{km}, ML2.8/3, Error ellipse: s-maj=9.2km s-min=1.9km az=126.0*
*ISK **09** 00:15:47.7, 36°.53N×26°.81E, h127^{km}±2^{km}, ML2.7/10*
*THE **09** 00:15:50.1, 36°.63N×26°.68E, h99^{km}±10^{km}, ML2.6/7, Error ellipse: s-maj=10.9km s-min=0.7km az=151.0*
*DDA **09** 00:16:01.3, 37°.03N×27°.41E, h7^{km}±4^{km}, ML1.9*
ISC 09 00:15:46.3±1.5**, 36°.53N**±0°.05×**26°.87E**±0°.04**, h136**^{km}±10^{km}**, n49, σ2^{s}05**/73**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOSK	Kos Island	0.24	21	PG	Pn	00 16 05.8	+0.9
DAT	Datca	0.61	70	PG	Pn	00 16 07.9	+1.1
DAT	Datca	0.61	70	*i* P	Pn	00 16 08.1	+1.3
DAT				*i* S	Sn	00 16 21.5	-0.8
BODT	Bodrum	0.64	33	PG	Pn	00 16 08.2	+1.3
BODT				SG	Sn	00 16 23.0	+0.4
KARP	Karpathos	1.00	166	P	Pn	00 16 10.6	+0.8
KARP				S	Sn	00 16 27.1	-0.6
	405nm,0.3s						
KARP	Karpathos	1.00	166	P	Pn	00 16 10.6	+0.8
KARP				S	Sn	00 16 27.2	-0.5
KARP				AML	AML	00 16 30.3	
	comp=E,651µm,0.3s						
KARP				AML	AML	00 16 30.5	
	comp=N,1059µm,0.2s						
KARP	Karpathos	1.00	166	PG	Pn	00 16 10.6	+0.8
ARG	Arkhangelos	1.06	107	P	Pn	00 16 12.1	+1.8
ARG				S	Sn	00 16 28.8	+0.3
	comp=N,168nm,0.2s						
ARG	Arkhangelos	1.06	107	P	Pn	00 16 12.1	+1.8
ARG				S	Sn	00 16 29.5	+1.1
ARG				AML	AML	00 16 31.9	
	comp=N,238µm,0.1s						
ARG				AML	AML	00 16 32.5	
	comp=E,564µm,0.2s						
ARG	Arkhangelos	1.06	107	PN	Pn	00 16 12.0	+1.8
ARG				SN	Sn	00 16 29.3	+0.8
SANT	Santorini	1.15	263	PN	Pn	00 16 11.9	+0.8
SMG	Samos	1.18	359	P	Pn	00 16 13.0	+1.6
YER	Yerkesik	1.29	61	PN	Pn	00 16 14.6	+2.0
AYDN	Tasoluk	1.39	35	*i* P	Pn	00 16 15.6	+1.9
TURN	Turunc	1.44	75	PN	Pn	00 16 12.7	-1.4
TURN				SN	Sn	00 16 30.4	-4.8
TURN	Turunc	1.44	75	*i* P	Pn	00 16 12.6	-1.4
TURN				*i* S	Sn	00 16 26.4	-8.8
TURN				IAML		00 16 30.0	
	comp=E,59nm,0.3s						
TURN				IAML		00 16 31.0	
	comp=N,57nm,0.5s						
STIA	Sitia Lasithi	1.46	206	P	Pn	00 16 15.0	+0.6
STIA				S	Sn	00 16 34.9	-0.9
DALY	Dalyan (Mula)	1.47	78	PN	Pn	00 16 16.3	+2.0
DALY				SN	Sn	00 16 37.8	+2.0
DALY	Dalyan (Mula)	1.47	78	*i* P	Pn	00 16 16.9	+2.6
DALY				*i* S	Sn	00 16 34.8	-1.0
ZKR	Zakros	1.50	201	P	Pn	00 16 16.3	+1.4
ZKR				S	Sn	00 16 36.1	-0.5
	comp=N,112nm,0.4s						
ZKR	Zakros	1.50	201	P	Pn	00 16 16.2	+1.4
ZKR				AML	AML	00 16 38.1	
	comp=E,323µm,0.4s						
ZKR				AML	AML	00 16 40.7	
	comp=N,118µm,0.4s						
ZKR	Zakros	1.50	201	PN	Pn	00 16 16.4	+1.6
ZKR				SN	Sn	00 16 37.1	+0.5
NPS	Neapolis	1.62	219	P	Pn	00 16 16.6	+0.5
NPS				S	Sn	00 16 37.6	-1.4
	comp=N,168nm,0.3s						
NPS	Neapolis	1.62	219	P	Pn	00 16 16.6	+0.5
FRMA	Ierapetra Chan	1.77	212	P	Pn	00 16 18.7	+0.9
FRMA				S	Sn	00 16 40.7	-1.2
	comp=N,38nm,0.2s						
LAST	Lasithi	1.77	220	P	Pn	00 16 18.3	+0.4
LAST				S	Sn	00 16 40.6	-1.5
	comp=N,88nm,0.3s						
LAST	Lasithi	1.77	220	P	Pn	00 16 18.3	+0.4
FETY	Fethiye	1.79	86	PN	Pn	00 16 19.8	+1.8
FETY	Fethiye	1.79	86	*i* P	Pn	00 16 19.8	+1.8
FETY				*i* S	Sn	00 16 39.6	-2.7
HRKL	Herakleio	1.88	230	PN	Pn	00 16 19.7	+0.6
TAVA	DENIZLI_Tavas	1.89	60	*i* P	Pn	00 16 21.1	+1.9
TAVA				*i* S	Sn	00 16 43.1	-1.5
KSTL	Kastelli Herak	1.90	231	P	Pn	00 16 18.8	-0.6
KSTL				S	Sn	00 16 41.4	-3.3
IDI	Anoyia	2.02	233	P	Pn	00 16 21.2	+0.3
IDI				S	Sn	00 16 45.4	-2.1
	comp=N,55nm,0.2s						
IDI	Anoyia	2.02	233	P	Pn	00 16 21.2	+0.3
IDI	Anoyia	2.02	233	PN	Pn	00 16 21.2	+0.3
KSL	Kastellorizon	2.22	99	P	Pn	00 16 25.5	+2.3
AKAS	Kas	2.23	97	PN	Pn	00 16 25.6	+2.1
AKAS	Kas	2.23	97	*i* P	Pn	00 16 25.2	+1.8
AKAS				*i* S	Sn	00 16 48.2	-3.7
SIVA	Sivas	2.25	229	P	Pn	00 16 24.9	+1.3
SIVA				S	Sn	00 16 51.2	-1.0
SIVA	Sivas	2.25	229	P	Pn	00 16 24.8	+1.2
GOLH	Golhisar	2.27	71	*i* P	Pn	00 16 26.6	+2.7
GOLH				*i* S	Sn	00 16 47.5	-5.5
VAM	Vamos	2.44	244	P	Pn	00 16 26.4	+0.5
VAM	Vamos	2.44	244	P	Pn	00 16 26.7	+0.8
ELL	Elmali	2.46	84	PN	Pn	00 16 28.9	+2.6
IMMV	Iera Moni Meta	2.57	246	P	Pn	00 16 28.3	+0.7
IMMV	Iera Moni Meta	2.57	246	P	Pn	00 16 28.4	+0.7
IMMV	Iera Moni Meta	2.57	246	PN	Pn	00 16 28.9	+1.3
DYR	Agios Nikonas	3.65	275	P	Pn	00 16 44.3	+2.7
ITM	Ithomi	4.02	281	P	Pn	00 16 48.2	+1.8

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*IDC **09** 00:38:48.6±2.0, 0°.98N×127°.30E, h0^{km}, mb3.6/3, mb1 3.8/3, mb1mx3.4/33, mbtmp3.6/3, MS3.4/2, Ms1 3.4/2, ms1mx2.7/34, Error ellipse: s-maj=150.2km s-min=25.5km az=66.0*
*DJA **09** 00:39:03.9±0.9, 1°N±6°×12°7E±°, h154^{km}±6^{km}, M3.9/6, MLv3.9/6*
ISC 09 00:39:05.6±1.3**, 0°.9N**±0°.1×**127°.4E**±0°.1**, h150**^{km}**, n8, σ1^{s}41**/8**, mb3.4**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.14	180	P	Pn	00 39 25.9	+0.2
TNTI				S	Sn	00 39 43.2	+2.1
SANI	Sanana	3.25	205	P	Pn	00 39 56.7	+0.6
KMSI	Cibinong	3.40	264	P	Pn	00 39 57.5	-0.6
KMSI				S	Sn	00 40 39.6	+0.9
WSI	Waingapu	12.65	214	P	P	00 42 15.0	+9.3
WRA	Warramunga Arr	21.82	162	P	P	00 43 44.4	-1.7
	1.9nm,0.4s,baz=342,slow=10,SNR=27						
WRA				LR	LR	00 53 45.7	
	comp=Z,34nm,18.9s,baz=325,slow=41						
ASAR	Alice Springs	25.24	166	P	P	00 44 16.8	-1.1
	0.3nm,0.3s,baz=342,slow=9.3,SNR=8.5						
JCJ	Chichijima	29.67	27	LR	LR	00 54 01.3	
	comp=Z,180nm,21.6s,baz=118,slow=31						
MKAR	Makanchi Array	60.23	326	P	P	00 48 58.0	+0.1
	0.1nm,0.3s,baz=117,slow=7.0,SNR=6.1						

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*IDC **09** 00:49:52.7±0.8, 9°.35S×114°.80E, h0^{km}, mb4.3/10, mb1 4.3/12, mb1mx4.1/37, mbtmp4.2/12, ML3.8/2, MS3.3/3, Ms1 3.4/3, ms1mx2.9/31, Error ellipse: s-maj=39.1km s-min=14.4km az=46.0*
*NEIC **09** 00:49:57.2±3.0, 9°.31S±0°.06×115°.25E±0°.06, h41^{km}±7^{km}, mb4.2/25, Error ellipse: s-maj=10.2km s-min=7.3km az=214.0*
*DJA **09** 00:50:02.5±0.4, 9°S±4°×11°5E±°, h38^{km}±6^{km}, M4.6/21, mB5.3/2, mb4.7/7, MLv4.5/21, Mw(mB)4.7/2*
ISC 09 00:50:00.3±0.8**, 9°.43S**±0°.06×**115°.04E**±0°.04**, h62**^{km}±8^{km}**, n81, σ1^{s}78**/84**, mb4.2**/21**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGBI	Denpasar	0.62	10	P	Pn	00 50 14.3	+0.5
IGBI				S	Sn	00 50 24.1	+0.5
DNP	Denpasar	0.77	13	P	Pn	00 50 16.8	+1.3
DNP				S	Sn	00 50 27.2	+0.5
JAGI	Jajag, Banyuwa	1.30	317	P	Pn	00 50 22.9	+0.5
JAGI				S	Sn	00 50 39.0	+0.1
JAGI	Jajag, Banyuwa	1.30	317		Pn	00 50 22.9	+0.5
JAGI				Sn	Sn	00 50 39.4	+0.6
SRBI	Singaraja	1.35	7	P	Pn	00 50 24.9	+1.8
GMJI	Gumukmas	1.95	306	P	Pn	00 50 31.8	+0.6
KMMI	Kalianget	2.59	336	P	Pn	00 50 42.2	+2.3
PLAI	Plampang	2.77	78	P	Pn	00 50 44.4	+2.1
PLAI				S	Sn	00 51 14.8	+0.2
PWJI	Pagerwojo	3.49	293	P	Pn	00 50 53.8	+1.6
GRJI	Gresik	3.56	314	P	Pn	00 50 55.3	+2.2
GRJI				S	Sn	00 51 36.4	+2.4
PCJI	Pacitan	4.01	288	P	Pn	00 51 00.6	+1.3
PCJI				S	Sn	00 51 43.4	-1.7
WBSI	Waikabubak, Su	4.30	93	P	Pn	00 51 06.1	+2.9
WOJI	Wonogiri, Jawa	4.37	291	P	Pn	00 51 08.0	+3.8
UGM	Wanagama	4.71	288	P	Pn	00 51 12.0	+3.0
UGM				S	Sn	00 52 01.6	-0.8
UGM	Wanagama	4.71	288		Pn	00 51 09.4	+0.5
SMRI	Semarang	5.13	297	Pn	Pn	00 51 14.7	0.0
KPJI	Karang Pucung	6.39	289	P	Pn	00 51 34.3	+2.4
	0.3nm59nm,0.5s						
KAPI	Kappang	6.41	47	Pn	Pn	00 51 31.1	-1.1
	1.5nm,0.3s,baz=258,slow=1.5,SNR=5.3						
KAPI				Sn	Sn	00 52 41.7	-2.3
	2.2nm,0.3s,baz=115,slow=16,SNR=2.9						
KAPI				LR	LR	00 54 40.6	
	comp=Z,109nm,18.5s,baz=230,slow=44						
BKSI	Bulukumba	6.49	51	P	Pn	00 51 34.3	+1.1
	0.1nm33nm,0.7s						
EDFI	Ende, Flores	6.60	85	P	Pn	00 51 36.9	+2.0
	0.1nm288nm12nm,0.7s						
BNSI	Bone	7.09	46	P	Pn	00 51 44.3	+2.8
	0.1nm23nm,0.5s						
MMRI	Maumere	7.15	84	Pn	Pn	00 51 35.4	-7.0
CISI	Cisompet, Garu	7.39	284	P	Pn	00 51 47.2	+1.6
	1.4nm15µm100nm,0.6s						
CISI	Cisompet, Garu	7.39	284		Pn	00 51 44.8	-0.7
CNJI	Cibinong	8.11	284	P	Pn	00 51 57.5	+2.1
BKB	Balikpapan	8.32	13	Pn	Pn	00 51 53.4	-5.0
SOEI	Soe	9.11	93	Pn	Pn	00 52 03.4	-5.8
XMIS	Christmas Isla	9.31	263	Pn	Pn	00 52 11.3	-0.5
LUWI	Luwuk	11.34	43	Pn	Pn	00 52 31.3	-8.4
PSA00	Pilbara Seismi	12.93	160	Pn	Pn	00 52 56.1	-5.1
MNAI	Manna	13.01	292	Pn	Pn	00 53 01.3	-1.1
GIRL	Giralia	13.16	183	Pn	Pn	00 53 00.4	-4.0
FITZ	Fitzroy Crossi	13.42	131	Pn	Pn	00 53 05.7	-2.2
	0.4nm,0.3s,baz=318,slow=12,SNR=24						
FITZ				Sn	Sn	00 55 28.6	-6.8
	0.8nm,0.3s,baz=189,slow=21,SNR=5.8						
FITZ	Fitzroy Crossi	13.42	131	Pn	Pn	00 53 05.7	-2.2
FITZ					Sn	00 55 25.9	-10
KNRA	Kununurra	14.76	116	Pn	Pn	00 53 24.6	-1.0
MORW	Morawa	19.56	177	P	Pn	00 54 25.1	+0.2
MORW				IAmb	IAmb	00 54 41.8	
	comp=Z,8.7nm,1.1s						
WB0	Warramunga Arr	21.34	121	P	P	00 54 43.3	+0.9
WRA	Warramunga Arr	21.37	121	P	P	00 54 45.6	+2.9
	comp=Z,8.7nm,0.4s,baz=293,slow=12,SNR=45						
WB2	Warramunga Arr	21.38	121	P	P	00 54 45.7	+2.8
WR0	Warramunga Arr	21.55	121	P	P	00 54 44.8	+0.2
WR0				IAmb	IAmb	00 54 57.6	
	comp=Z,5.8nm,1.1s						
ASAR	Alice Springs	22.92	130	P	P	00 55 00.4	+1.1
	comp=Z,3.3nm,0.7s,baz=304,slow=8.6,SNR=28						
ASAR				PcP	PcP	00 58 49.4	+1.5
	comp=Z,0.6nm,0.7s,baz=326,slow=2.2,SNR=5.7						
ASAR	Alice Springs	22.92	130	P	P	00 54 60.0	+0.7
LHMI	Lhok Sumawe	23.18	308	P	P	00 55 01.4	-0.4
NWAO	Narrogin (SRO)	23.47	175	P	P	00 55 05.9	+1.5
NWAO				IAmb	IAmb	00 55 14.6	
	comp=Z,11nm,1.1s						
NWAO	Narrogin (SRO)	23.47	175	P	P	00 55 06.5	+2.1
NWAO				IAmb	IAmb	00 55 14.6	
	comp=Z,13nm,1.1s						
FORT	Forrest	24.46	152	P	P	00 55 15.6	+2.1
BBOO	Buckleboo	30.30	143	P	P	00 56 04.9	-1.0
BBOO				IAmb	IAmb	00 56 13.9	
	comp=Z,2.5nm,1.1s						
PMG	Port Moresby	31.68	93	P	P	00 56 20.9	+2.7
	comp=Z,5.6nm,0.3s,baz=256,slow=4.2,SNR=3.7						
CMAR	Chiang Mai Arr	31.94	330	P	P	00 56 20.7	+0.3
	comp=Z,2.2nm,0.6s,baz=160,slow=7.6,SNR=16						
CMAR				LR	LR	01 10 29.4	
	comp=Z,70nm,18.6s,baz=224,slow=39						
STKA	Stephens Creek	33.23	136	P	P	00 56 34.4	+2.7
	comp=Z,0.8nm,0.4s,baz=316,slow=13,SNR=3.6						
STKA				PcP	PcP	00 59 14.8	+1.7
	comp=Z,1.4nm,0.7s,baz=243,slow=4.5,SNR=3.2						
SHL	Shillong	41.45	328	P	P	00 57 39.7	-1.7
SHL				IAmb	IAmb	00 57 41.6	
	comp=Z,4.4nm,0.8s						
H08S2	Diego Garcia H	42.09	269	T	T	01 42 48.4	
	baz=96,slow=74,SNR=2.9						
H08S3	Diego Garcia H	42.11	269	T	T	01 42 23.5	
	baz=208,slow=74,SNR=6.7						
HHC	Hu-ho-hao-te	50.13	357	*e*P	P	00 58 49.3	-0.2
SONM	Songino Array	57.53	353	P	P	00 59 42.7	-0.6
	comp=Z,1.0nm,0.8s,baz=171,slow=7.3,SNR=8.4						
SONM				PcP	PcP	01 00 36.4	+0.2
	comp=Z,0.8nm,0.6s,baz=178,slow=2.8,SNR=5.1						
SONM	Songino Array	57.53	353	P	P	00 59 41.9	-1.5
WMQ	Urumqi	58.53	337	*e*P	P	00 59 51.2	+0.8
TLY	Talaya	61.65	352	LR	LR	01 30 31.4	
	comp=Z,45nm,18.6s,baz=304,slow=40						
MK31	Makanchi Array	63.14	335	P	P	01 00 20.4	-1.2
MK31				IAmb	IAmb	01 00 21.7	
	comp=Z,2.3nm,0.8s						
MKAR	Makanchi Array	63.14	335	P	P	01 00 20.8	-0.8
	comp=Z,2.2nm,0.6s,baz=149,slow=7.0,SNR=39						
MKAR	Makanchi Array	63.14	335	P	P	01 00 20.1	-1.5
MAKZ	Makanchi	63.28	335	P	P	01 00 21.8	-0.7
MAKZ				IAmb	IAmb	01 00 22.5	
	comp=Z,1.2nm,0.7s						
GAR	Garm	63.63	322	P	P	01 00 24.4	-0.7
AAK	Ala-Archa	63.68	328	P	P	01 00 24.3	-1.2
AAK				IAmb	IAmb	01 00 26.3	
	comp=Z,2.4nm,0.8s						
KKAR	Karatay Array	66.15	326	P	P	01 00 40.5	-0.8
KKAR	Karatay Array	66.15	326	P	P	01 00 40.9	-0.4
KKAR				IAmb	IAmb	01 00 57.0	
	comp=Z,0.9nm,0.8s						
ZAA0	Zalesovo Array	68.12	341	IAmb	IAmb	01 00 52.7	
	comp=Z,2.5nm,0.8s						
ZALV	Zalesovo Beam	68.12	341	P	P	01 00 52.1	-1.4
	comp=Z,2.1nm,0.6s,baz=154,slow=4.5,SNR=12						
ZALV	Zalesovo Beam	68.12	341	P	P	01 00 51.8	-1.7
GEYT	Alibeck	70.96	315	P	P	01 01 11.9	+0.5
	comp=Z,4.6nm,0.7s,baz=174,slow=4.5,SNR=14						
GEYT	Alibeck	70.96	315	P	P	01 01 11.9	+0.5
GYA0B	ALIBECK ARRAY	70.96	315	P	P	01 01 11.7	+0.2
PEA0B	Petropavlovsk-	72.09	25	P	P	01 01 15.7	-2.1
PETK	Petropavlovsk-	72.09	25	P	P	01 01 14.4	-3.4
VNDA	Vanda	72.19	170	P	P	01 01 20.0	+1.9
VNDA				IAmb	IAmb	01 01 29.6	
	comp=Z,2.4nm,1.0s						
BRVK	Borovoye	72.96	334	P	P	01 01 21.2	-1.8
BRVK				IAmb	IAmb	01 01 23.2	
	comp=Z,3.4nm,0.8s						
RAYN	Ar Rayn	75.40	297	P	P	01 01 37.8	-0.2
RAYN				IAmb	IAmb	01 01 41.1	
	comp=Z,1.6nm,0.9s						
ABKAR	Akbulak array	75.71	326	P	P	01 01 38.5	-0.6
BRTR	Keskin Array B	89.42	310	P	P	01 02 50.6	-0.1
	comp=Z,0.5nm,0.7s,baz=83,slow=3.9,SNR=3.8						
BRTR	Keskin Array B	89.42	310	P	P	01 02 50.2	-0.5
YKA	Yellowknife Ar	116.16	23	PKP	PKPdf	01 08 36.3	+0.2
	comp=Z,0.3nm,0.6s,baz=302,slow=1.4,SNR=4.1						

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*IDC **09** 00:55:59.9±1.5, 32°.68N×140°.00E, h129^{km}±8^{km}, mb3.3/4, mb1 3.4/5, mb1mx3.1/31, mbtmp3.6/5, Error ellipse: s-maj=91.0km s-min=13.1km az=71.0*
*JMA **09** 00:56:00.0±0.1, 32°.85N×140°.24E, h136^{km}±2^{km}, M3.4*
ISC 09 00:55:60.0±1.1**, 32°.80N**±0°.06×**140°.2E**±0°.1**, h136**^{km}±6^{km}**, n19, σ0^{s}67**/25**, mb3.7**/4**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHCJ	Hachijojimakas	0.45	307	P	Pn	00 56 19.5	+0.1
JHJ2	Mitsune	0.47	312	P	Pn	00 56 19.7	+0.2
JHJ2				S	Sn	00 56 34.2	-0.1
JHJ	Hachijo jima 2	0.49	311	P	Pn	00 56 19.8	+0.1
	485nm,0.3s,baz=337,slow=20,SNR=206						
JHJ				S	Sn	00 56 34.3	-0.3
	202nm,0.3s,baz=68,slow=20,SNR=14						
JAOM	Aogashimamukai	0.52	230	P	Pn	00 56 20.2	+0.4
JAOM				S	Sn	00 56 35.2	+0.5
JMKN	Mikurajimanish	1.22	334	P	Pn	00 56 25.2	-0.2
JMKN				S	Sn	00 56 44.1	-0.8
JKO	Kozu shima	1.66	327	P	Pn	00 56 30.3	+0.1
BSO1	Boso 1	1.95	18	P	Pn	00 56 33.4	+0.3
BSO1				S	Sn	00 56 59.3	+0.7
BSO3	Boso 3	2.01	7	P	Pn	00 56 34.3	+0.2
JIM2	Oshima 3	2.03	341	P	Pn	00 56 34.6	0.0
JIM2				S	Sn	00 56 59.7	-1.4
JYN	Shimob	3.03	333	P	Pn	00 56 48.4	+1.1
JYN				S	Sn	00 57 24.9	+1.1
JRY	Ryogami san	3.39	342	P	Pn	00 56 52.2	+0.3
JRY				S	Sn	00 57 31.0	-1.1
MJAR	Matsushiro Arr	4.09	337	P	Pn	00 57 01.3	+0.3
	0.2nm,0.3s,baz=153,slow=14,SNR=9.8						
MJAR				S	Sn	00 57 48.3	-0.1
	0.2nm,0.3s,baz=156,slow=18,SNR=7.5						
H11N2	WAKE ISLAND Hy	27.14	112	T	T	01 30 37.2	
	baz=306,slow=75,SNR=5.2						
H11N1	WAKE ISLAND Hy	27.14	112	T	T	01 30 52.6	
	baz=306,slow=75,SNR=3.4						
H11N3	WAKE ISLAND Hy	27.16	112	T	T	01 30 43.3	
	baz=306,slow=75,SNR=3.3						
SONM	Songino Array	29.57	311	P	P	01 01 52.9	+0.9
	0.5nm,0.7s,baz=104,slow=11,SNR=3.6						
MKAR	Makanchi Array	45.66	306	P	P	01 04 06.8	-0.2
	0.7nm,0.6s,baz=84,slow=9.5,SNR=12						
WRA	Warramunga Arr	52.74	187	P	P	01 05 00.1	-0.8
	0.6nm,0.4s,baz=3.1,slow=7.6,SNR=16						
ASAR	Alice Springs	56.47	187	P	P	01 05 27.2	-0.6
	0.5nm,0.4s,baz=0.2,slow=6.0,SNR=21						

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*IDC **09** 01:01:05.2±1.5, 21°.02S×68°.16W, h125^{km}±17^{km}, mb3.9/3, mb1 3.8/6, mb1mx3.5/26, mbtmp4.1/6, Error ellipse: s-maj=31.0km s-min=20.8km az=125.0*
*GUC **09** 01:01:07.1±0.5, 21°.05S×68°.46W, h140^{km}±3^{km}, ML3.8*
ISC 09 01:01:05.2±0.9**, 21°.07S**±0°.04×**68°.37W**±0°.10**, h140**^{km}±8^{km}**, n24, σ1^{s}62**/42**, mb4.1**/3**, 11C-3D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	IPOC Station P	1.04	271	⇑*i*P	Pn	01 01 29.8	+0.2
PB01				*e*S	Sn	01 01 47.5	-0.6
PB09	IPOC Station P	1.08	228	⇓*e*P	Pn	01 01 31.3	+1.3
PB09				*e*S	Sn	01 01 50.2	+1.3
PB08	IPOC Station P	1.18	322	⇑*i*P	Pn	01 01 32.0	+0.8
PB08				*e*S	Sn	01 01 51.0	+0.1
PB08				IAML		01 01 52.6	
	comp=N,1µm,0.4s						
PB02	IPOC Station P	1.44	260	⇑*i*P	Pn	01 01 34.1	+0.5
PB02				*e*S	Sn	01 01 54.4	-0.8
PB02				IAML		01 01 56.4	
	comp=E,2µm,0.1s						
PB07	IPOC Station P	1.55	245	⇓*e*P	Pn	01 01 35.3	+0.4
PB07				*e*S	Sn	01 01 57.1	-0.4
PB07				IAML		01 01 58.4	
	comp=N,1µm,0.4s						
GO01	Chusmiza	1.60	331	⇑*i*P	Pn	01 01 36.1	+0.5
GO01				*e*S	Sn	01 01 58.8	-0.1
GO01				IAML		01 02 03.7	
	comp=N,3µm,0.1s						
LVC	Limon Verde	1.61	198	P	Pn	01 01 36.9	+1.3
	comp=N,14nm,0.3s,baz=26,slow=12,SNR=262						
LVC				S	Sn	01 01 59.6	+0.7
	comp=N,35nm,0.3s,baz=6.3,slow=8.1,SNR=13						
PB03	IPOC Station P	1.61	233	⇓*e*P	Pn	01 01 36.1	+0.7
PB03				*e*S	Sn	01 01 58.2	-0.3
PB03				IAML		01 01 59.2	
	comp=E,995nm,0.3s						
PATCX	Punta Patache	1.68	278	⇑*i*P	Pn	01 01 36.6	+0.4
PATCX				*e*S	Sn	01 01 58.6	-1.3
PATCX				IAML		01 02 02.5	
	comp=E,580nm,0.5s						
TA01	Diego Aracena	1.77	286	⇑*i*P	Pn	01 01 37.0	-0.1
TA01				*e*S	Sn	01 01 59.6	-1.7
PB11	IPOC Station P	1.78	317	⇑*i*P	Pn	01 01 37.5	+0.1
PB11				*e*S	Sn	01 02 01.2	-0.7
PB06	IPOC Station P	1.97	214	⇑*i*P	Pn	01 01 40.6	+1.0
PB06				*e*S	Sn	01 02 06.4	+0.5
PB06				IAML		01 02 07.1	
	comp=E,1µm,0.3s						
PB04	IPOC Station P	2.07	232	⇑*i*P	Pn	01 01 41.5	+0.7
PB04				*i* S	Sn	01 02 07.7	-0.5
PB04				IAML		01 02 12.9	
	comp=N,703nm,0.2s						
PSGC	Pisagua	2.20	312	⇑*i*P	Pn	01 01 41.9	-0.5
PSGC				*e*S	Sn	01 02 09.0	-1.9
PSGC				IAML		01 02 11.9	
	comp=N,401nm,0.3s						
MNMC	Minye Minye	2.25	329	⇑*i*P	Pn	01 01 43.8	+0.7
MNMC				*i* S	Sn	01 02 12.0	-0.2
PB15	IPOC Station P	2.36	205	*i* P	Pn	01 01 45.5	+1.2
PB15				*i* S	Sn	01 02 15.6	+1.2
PB05	IPOC Station P	2.45	223	*e*P	Pn	01 01 45.9	+0.5
PB05				*i* S	Sn	01 02 15.5	-0.9
SIV	San Ignacio	8.57	55	P	Pn	01 03 03.6	-2.9
	comp=N,3.0nm,0.3s,baz=238,slow=17,SNR=46						
CFA	Coronel Fontan	10.49	179	P	Pn	01 03 30.9	-1.0
	comp=N,0.4nm,0.3s,baz=359,slow=13,SNR=10.0						
CFA				S	Sn	01 05 20.3	-7.5
	comp=N,0.5nm,0.3s,baz=159,slow=22,SNR=4.3						
PLCA	Paso Flores	19.68	185	P	Pn	01 05 25.8	-0.5
	comp=N,0.1nm,0.3s,baz=19,slow=9.5,SNR=3.4						
ULM	Lac du Bonnet	75.06	342	P	P	01 12 32.7	+1.4
	comp=N,2.5nm,0.5s,baz=161,slow=6.5,SNR=11						
TORD	Torodi Ar. Bea	76.74	70	P	P	01 12 42.4	+0.7
	comp=N,1.9nm,0.5s,baz=252,slow=5.2,SNR=24						
YKA	Yellowknife Ar	90.95	340	P	P	01 13 54.7	+1.9
	comp=N,0.6nm,0.7s,baz=134,slow=4.5,SNR=10						
MKAR	Makanchi Array	145.00	36	PKP	PKiKP	01 20 27.6	-2.1
	comp=N,0.8nm,0.7s,baz=326,slow=3.3,SNR=9.8						

KEA 09 01:08:49.3±0.0**, 40°.47N×122°.26E, h0**^{km}**, ML2.7**/3**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUJ	Sinuiju	1.75	101	Pg	Pb	01 09 21.9	-0.4
SUJ				Sg	Sn	01 09 44.1	+0.2
PYS	Pyongsong	3.03	113	Pg	Pb	01 09 45.1	+1.0
PYS				Sg	Sb	01 10 23.2	+1.6
PYAG	Pyongyang	3.05	117	Sg	Sb	01 10 24.6	+2.4
KGE	Kanggye	3.35	80	Sg	Sb	01 10 33.3	+2.6
HJU	Haeju	3.63	131	Sg	Sg	01 10 46.7	+0.9

*IDC **09** 01:12:23.3±1.1, 2°.42S×127°.72E, h0^{km}, mb3.7/4, mb1 4.1/8, mb1mx3.7/43, mbtmp3.9/8, ML4.1/4, MS3.5/2, Ms1 3.5/2, ms1mx2.8/38, Error ellipse: s-maj=31.4km s-min=20.2km az=68.0*

*DJA **09** 01:12:25.5±0.2, 2°S±2°×12°7E±°, h10^{km}, M4.4/11, mB4.8/2, mb4.8/2, MLv4.2/11, Mw(mB)4.1/2*

*NEIC **09** 01:12:26.2±1.5, 2°.55S±0°.10×127°.61E±0°.04, h19^{km}±6^{km}, mb4.2/9, Error ellipse: s-maj=14.5km s-min=5.9km az=170.0*

ISC 09 01:12:26.8±0.7, **2°.57S**±0°.05×**127°.36E**±0°.04, **h29**^{km}, **n33**, σ**1**^{s}.**80**/36, **mb3.8**/4, **Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	Namlea	0.72	201	P	Pn	01 12 40.5	-0.5
NLAI				S	Sb	01 12 49.9	-0.4
AAI	Ambon	1.39	143	P	Pb	01 12 52.9	+0.7
SANI	Sanana	1.46	291	P	Pn	01 12 50.5	-0.8
SANI				S	Sn	01 13 06.3	-3.2
MSAI	Masohi	1.75	116	P	Pb	01 12 59.1	+0.8
MSAI				S	Sb	01 13 21.2	+1.3
BNDI	Bandanaira	3.20	127	P	Pn	01 13 17.0	+1.8
SWI	Sorong	4.25	67	P	Pn	01 13 30.8	+1.1
SWI				S	Sn	01 14 20.7	+2.3
SIJI	Sorong	4.25	67	Pn	Pn	01 13 25.3	-4.5
	1.8nm,0.3s,baz=180,slow=20,SNR=18						
SIJI				Sn	Sn	01 14 18.2	-0.2
	5.4nm,0.3s,baz=202,slow=23,SNR=7.3						
KMSI	Cibinong	4.60	313	P	Pn	01 13 34.2	-0.3
LUWI	Luwuk	4.83	288	P	Pn	01 13 37.2	-0.4
LUWI				S	Sn	01 14 35.0	+2.4
LUWI	Luwuk	4.83	288	Pn	Pn	01 13 37.8	+0.2
FAKI	Fak Fak	4.90	94	P	Pn	01 13 40.2	+1.6
FAKI	Fak Fak	4.90	94	Pn	Pn	01 13 35.8	-2.8
FAKI					Sn	01 14 29.1	-5.2
MRSI	Marisa	6.20	299	P	Pn	01 13 56.3	-0.2
SPSI	Sidrap Palu	7.70	259	P	Pn	01 14 22.5	+5.3
KAPI	Kappang	7.97	252	Pn	Pn	01 14 25.9	+5.1
	1.1nm,0.3s,baz=121,slow=8.0,SNR=4.0						
KAPI				LR	LR	01 18 15.0	
	comp=Z,46nm,20.6s,baz=64,slow=42						
MPSI	Mapaga	8.00	291	P	Pn	01 14 29.1	+7.9
FITZ	Fitzroy Crossi	15.53	186	Pn	P	01 16 08.4	+0.4
	0.4nm,0.3s,baz=18,slow=9.3,SNR=14						
FITZ	Fitzroy Crossi	15.53	186	IAmb	IAmb	01 16 57.3	
	comp=Z,24nm,2.0s						
WB0	Warramunga Arr	18.43	159	P	P	01 16 38.7	-1.4
WB0				IAmb	IAmb	01 16 40.9	
	comp=Z,12nm,0.8s						
WRA	Warramunga Arr	18.57	159	P	P	01 16 41.4	-0.2
	comp=Z,2.0nm,0.3s,baz=341,slow=12,SNR=16						
WRA				S	Sn	01 20 07.4	-1.5
	comp=Z,0.0nm,0.3s,baz=328,slow=18,SNR=2.2						
WRA	Warramunga Arr	18.57	159	P	P	01 16 41.3	-0.4
WB2	Warramunga Arr	18.57	159	P	P	01 16 40.6	-1.1
WB2				IAmb	IAmb	01 16 50.2	
	comp=Z,14nm,0.7s						
WR0	Warramunga Arr	18.66	158	P	P	01 16 42.3	-0.3
AS31	Alice Springs	21.91	164	P	P	01 17 17.5	-0.4
ASAR	Alice Springs	21.91	164	P	P	01 17 18.0	0.0
	comp=Z,2.2nm,0.4s,baz=348,slow=12,SNR=58						
ASAR				S	S	01 21 16.4	-2.2
	comp=Z,0.9nm,0.8s,baz=346,slow=22,SNR=6.1						
STKA	Stephens Creek	32.09	157	P	P	01 18 51.6	+0.1
	comp=Z,1.5nm,0.7s,baz=333,slow=8.3,SNR=4.9						
STKA	Stephens Creek	32.09	157	IAmb	IAmb	01 19 24.0	
	comp=Z,6.4nm,1.9s						
MK31	Makanchi Array	63.10	327	P	P	01 22 53.3	+1.6
MKAR	Makanchi Array	63.10	327	P	P	01 22 53.4	+1.6
	comp=Z,0.4nm,0.8s,baz=115,slow=8.1,SNR=4.2						
KURBB	Kurchatov Arra	67.38	329	P	P	01 23 19.9	+0.6
	comp=Z,0.4nm,0.7s,baz=126,slow=6.2,SNR=4.2						
KURK	Kurchatov	67.39	329	P	P	01 23 19.9	+0.5
KIRV	Kirov	85.91	329	LR	LR	02 05 02.8	
	comp=Z,150nm,19.0s,baz=247,slow=37						
CPUP	Villa Florida	150.92	171	PKPbc	PKiKP	01 32 19.9	+1.7
	comp=Z,1.3nm,0.9s,baz=169,slow=2.0,SNR=4.1						

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*IDC **09** 01:12:57.4±3.7, 5°.58S×76°.83W, h33^{km}±29^{km}, mb3.7/13, mb1 4.0/20, mb1mx3.9/34, mbtmp4.0/20, ML3.9/5, MS3.4/2, Ms1 3.4/2, ms1mx3.1/25, Error ellipse: s-maj=18.1km s-min=12.3km az=73.0*

ISC 09 01:12:57.5±0.5, **5°.59S**±0°.05×**76°.66W**±0°.07, **h35**^{km}, **n50**, σ**1**^{s}.**68**/53, **mb3.9**/14, **Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	Atahualpa	2.31	228	Pn	Pn	01 13 32.6	-0.8
ATAH				Sn	Sn	01 13 58.8	-1.9
	183nm,0.3s,baz=357,slow=5.7,SNR=12						
ATAH				LR	LR	01 14 35.8	
	comp=Z,732nm,19.1s,baz=100,slow=45						
PTLC	Puerto Leguiza	6.02	18	eP	Pn	01 14 21.4	-2.7
OTAV	Otavalo	6.06	343	eP	Pn	01 14 28.4	+3.4
NNA	Nana	6.36	182	Pn	Pn	01 14 29.4	+0.6
	23nm,0.3s,baz=353,slow=8.3,SNR=37						
NNA				Sn	Sn	01 15 38.3	-2.0
	22nm,0.3s,baz=290,slow=12,SNR=6.1						
CRUC	La Cruz	7.12	358	eP	Pn	01 14 48.6	+9.1
FLOC	Florencia	7.20	8	eP	Pn	01 14 41.6	+1.3
BBAC	Balboa, Cauca	7.58	356	eP	Pn	01 14 47.9	+2.1
SOTA	Rioblanco	7.67	0	eP	Pn	01 14 48.6	+1.3
GARC	Garzon, Huila	7.81	9	eP	Pn	01 14 47.9	-1.1
PCON	Cinco Dias	7.87	2	eP	Pn	01 14 50.0	0.0
POPC	Popayan, Colom	8.07	360	eP	Pn	01 14 56.3	+3.7
GR1C	Gorgona, Isla	8.67	350	eP	Pn	01 15 07.4	+7.0
YOTC	Yotoco, Valle	9.51	2	eP	Pn	01 15 14.4	+2.2
ORTC	Ortega, Tolima	9.54	9	eP	Pn	01 15 13.0	+0.5
VILC	Villavicencio,	10.08	17	eP	Pn	01 15 23.5	+3.5
CHIC	Chingaza	10.56	16	eP	Pn	01 15 29.1	+2.2
ROSC	El Rosal	10.62	13	Pn	Pn	01 15 29.1	+1.4
	0.8nm,0.3s,baz=70,slow=23,SNR=3.2						
ROSC				LR	LR	01 20 48.9	
	comp=Z,231nm,19.2s,baz=220,slow=44						
GUY2C	Guyana, Caldas	10.82	7	eP	Pn	01 15 32.6	+2.2
NORC	Norcasia	11.22	9	eP	Pn	01 15 35.4	-0.2
CBOC	Ciudad Bolivar	11.40	3	eP	Pn	01 15 36.7	-1.3
RUSC	La Rusia	11.95	17	eP	Pn	01 15 47.9	+2.0
PTBC	PUERTO BERRIO,	12.25	10	eP	Pn	01 15 50.0	+0.4
SAML	Samuel	13.78	105	eP	Pn	01 16 10.2	-0.3
SMLC	San Martn de	14.53	10	eP	P	01 16 28.4	+1.6
SOCV	Socops	14.95	23	eP	Pn	01 16 24.9	-1.5
SDV	Santo Domingo	15.59	23	Pn	P	01 16 36.1	-2.6
	0.6nm,0.3s,baz=28,slow=16,SNR=4.8						
SDV	Santo Domingo	15.59	23	eP	Pn	01 16 34.6	-0.2
CODC	Agustn Codazz	15.75	12	eP	P	01 16 38.8	-1.6
PTGA	Pitinga	17.35	74	P	P	01 16 58.9	+0.7
	1.2nm,0.3s,baz=249,slow=22,SNR=7.7						
PTGA				S	Sn	01 20 04.5	-4.8
	0.9nm,0.3s,baz=279,slow=9.2,SNR=4.3						
SIV	San Ignacio	18.46	125	P	Pn	01 17 10.9	+0.2
	0.2nm,0.3s,baz=322,slow=14,SNR=4.5						
LVC	Limon Verde	18.50	157	P	Pn	01 17 13.6	+2.1
	0.6nm,0.3s,baz=50,slow=3.2,SNR=4.9						
CFA	Coronel Fontan	27.06	164	P	P	01 18 37.4	+0.6
	1.9nm,0.7s,baz=303,slow=4.3,SNR=4.4						
CPUP	Villa Florida	27.68	140	P	P	01 18 43.2	+0.9
	1.6nm,0.6s,baz=342,slow=10.0,SNR=8.2						
BDFB	Brasilia	29.84	112	P	P	01 19 02.3	+0.5
	1.5nm,0.7s,baz=277,slow=8.1,SNR=3.4						
PLCA	Paso Flores	35.42	172	P	P	01 19 50.2	0.0
	0.6nm,0.7s,baz=0.0,slow=12,SNR=3.4						
PLCA				PcP	PcP	01 22 20.1	+0.5
	1.5nm,0.9s,baz=315,slow=2.9,SNR=4.3						
TXAR	Lajitas Array	43.35	325	P	P	01 20 56.0	-0.6
	0.6nm,0.7s,baz=116,slow=6.1,SNR=3.4						
PDAR	Pinedale Array	56.63	331	P	P	01 22 36.8	-0.6
	0.2nm,0.4s,baz=122,slow=8.6,SNR=3.6						
ULM	Lac du Bonnet	58.05	346	P	P	01 22 45.8	-1.1
	0.9nm,0.6s,baz=144,slow=4.7,SNR=3.2						
NVAR	Mina Array Bea	58.38	322	P	P	01 22 49.3	-0.5
	1.0nm,0.7s,baz=136,slow=6.8,SNR=8.3						
SCHQ	Schefferville	60.76	6	P	P	01 23 06.0	+0.4
	0.8nm,0.6s,baz=256,slow=17,SNR=4.3						
SCHQ				PcP	PcP	01 23 49.7	+0.4
	0.9nm,0.5s,baz=187,slow=1.6,SNR=4.5						
YKA	Yellowknife Ar	73.81	343	P	P	01 24 27.2	-0.9
	1.1nm,0.7s,baz=139,slow=6.3,SNR=18						
TORD	Torodi Ar. Bea	79.99	76	P	P	01 25 05.3	+1.4
	1.1nm,0.4s,baz=277,slow=5.6,SNR=34						
ESDC	Sonseca Array	80.39	48	P	P	01 25 07.7	+2.0
	0.4nm,0.6s,baz=241,slow=6.3,SNR=2.9						
ILAR	Eielson Array	86.74	336	P	P	01 25 37.4	-0.2
	0.5nm,0.8s,baz=116,slow=4.1,SNR=4.3						
VNDA	Vanda	91.07	191	P	P	01 25 58.2	+0.3
	9.5nm,1.3s,baz=59,slow=12,SNR=3.7						
ZALV	Zalesovo Beam	129.49	14	PKP	PKiKP	01 32 02.9	-0.4
	1.0nm,0.4s,baz=242,slow=2.9,SNR=8.1						
MKAR	Makanchi Array	135.12	20	PKP	PKPdf	01 32 13.0	-0.4
	0.5nm,0.7s,baz=327,slow=2.1,SNR=8.3						
SONM	Songino Array	137.83	357	PKP	PKPdf	01 32 18.5	0.0
	0.5nm,0.4s,baz=331,slow=2.0,SNR=6.3						
ASAR	Alice Springs	138.34	225	PKhKP	PKPpre	01 32 10.7	
	0.2nm,0.7s,baz=141,slow=3.5,SNR=3.5						
ASAR				PKP	PKPdf	01 32 19.4	-0.7
	0.6nm,0.9s,baz=113,slow=2.5,SNR=3.8						
WRA	Warramunga Arr	140.33	229	PKP	PKiKP	01 32 24.9	-1.4
	0.3nm,0.4s,baz=119,slow=2.2,SNR=2.4						

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*IDC **09** 01:49:04.0±1.4, 33°.00S×72°.27W, h0^{km}, mb4.4/5, mb1 4.1/10, mb1mx3.9/31, mbtmp4.1/10, ML3.8/5, MS3.4/4, Ms1 3.4/4, ms1mx3.2/19, Error ellipse: s-maj=40.4km s-min=18.5km az=105.0*

*NEIC **09** 01:49:04.5±1.5, 33°.07S±0°.05×72°.17W±0°.05, h1^{km}±2^{km}, Error ellipse: s-maj=7.6km s-min=5.9km az=166.0*

*GUC **09** 01:49:07.9±0.6, 33°.16S×71°.93W, h17^{km}±4^{km}, ML3.9*

ISC 09 01:49:04.8±1.9, **33°.07S**±0°.06×**72°.12W**±0°.07, **h2**^{km}±11^{km}, **n37**, σ**0**^{s}.**86**/40, **mb4.3**/6, **8D**, **Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MT02	Curacav	0.85	103	⇓iP	Pg	01 49 21.6	+0.5
MT02				iS	Sg	01 49 31.6	-0.5
MT02				IAML		01 49 35.8	
	comp=N,3μm,0.3s						
ROC1	El Roble	0.93	85		Pg	01 49 23.4	+0.6
ROCH	El Roble	0.94	85	⇓iP	Pg	01 49 23.4	+0.5
ROCH				iS	Sg	01 49 35.2	+0.2
ROCH				IAML		01 49 39.4	
	comp=E,5μm,0.6s						
MT01	Popeta	1.08	138	⇓iP	Pg	01 49 25.3	-0.2
MT01				iS	Sg	01 49 38.7	-0.8
MT01				IAML		01 49 41.0	
	comp=E,8μm,0.2s						
PEL	Peldehue	1.21	94	⇓iP	Pg	01 49 27.9	-0.1
PEL				iS	Sg	01 49 43.0	-0.7
PEL				IAML		01 49 47.6	
	comp=N,4μm,0.4s						
PEL	Peldehue	1.21	94		Pg	01 49 27.9	-0.1
ANTU	Antumapu	1.34	112	IAML		01 49 52.6	
	comp=E,5μm,0.5s						
CLCH	Cerro Calan	1.37	104	⇓iP	Pn	01 49 30.5	-0.6
CLCH				iS	Sg	01 49 47.7	-1.1
CLCH				IAML		01 49 51.6	
	comp=E,9μm,0.7s						
MT03	Universidad Ad	1.42	108	⇓iP	Pn	01 49 31.1	-0.7
MT03				IAML		01 49 57.1	
	comp=N,10μm,0.3s						
FCH	Farellones	1.56	100	⇓iP	Pn	01 49 33.5	-0.4
FCH				iS	Sn	01 49 53.2	-1.7
FCH				IAML		01 49 57.1	
	comp=E,3μm,0.3s						
LMEL	Las Melosas	1.78	116	⇓iP	Pn	01 49 36.9	0.0
LMEL				IAML		01 50 05.1	
	comp=N,4μm,0.3s						
GO05	Huala	1.94	175		Pn	01 49 38.4	-0.6
GO04	Tololo Observa	3.10	22		Pn	01 49 55.4	+0.4
CFA	Coronel Fontan	3.60	67	Pn	Pn	01 50 04.3	+2.6
	comp=N,14nm,0.3s,baz=230,slow=9.9,SNR=88						
CFA				Lg	Lg	01 50 56.0	
	comp=N,41nm,0.3s,baz=147,slow=16,SNR=7.0						
CFA				LR	LR	01 51 22.8	
	comp=N,355nm,19.9s,baz=280,slow=38						
LCO	Las Campanas	4.22	17	Pn	Pn	01 50 10.9	+0.3
GO03	Copiap	5.69	17		Pn	01 50 30.2	-0.4
PLCA	Paso Flores	7.75	171	Pn	Pn	01 50 59.5	+0.7
	comp=N,1.0nm,0.3s,baz=354,slow=12,SNR=35						
PLCA				Lg	Lg	01 53 12.8	
	comp=N,0.1nm,0.3s,baz=85,slow=23,SNR=2.9						
PLCA	Paso Flores	7.75	171		Pn	01 50 59.9	+1.0
GO02	Mina Guanaco	8.18	16	Pn	Pn	01 51 02.9	-2.0
LVC	Limon Verde	10.80	16	Pn	Pn	01 51 40.8	-0.1
	comp=N,0.1nm,0.3s,baz=139,slow=9.3,SNR=2.1						
LVC				Sn	Sn	01 53 55.4	+13
	comp=N,0.1nm,0.3s,baz=92,slow=15,SNR=1.9						
LVC				LR	LR	01 55 58.5	
	comp=N,129nm,21.2s,baz=205,slow=38						
CPUP	Villa Florida	14.49	66	Pn	Pn	01 52 31.9	+0.7
	comp=N,0.1nm,0.3s,baz=235,slow=13,SNR=3.2						
CPUP				Sn	Sn	01 55 13.7	+1.2
	comp=N,0.1nm,0.3s,baz=242,slow=13,SNR=2.6						
CPUP				LR	LR	01 58 30.4	
	comp=N,131nm,19.1s,baz=220,slow=39						
SIV	San Ignacio	19.72	33	P	P	01 53 35.6	-0.3
	comp=N,0.1nm,0.3s,baz=230,slow=12,SNR=7.1						
SPB	Sao Paulo	23.65	73	P	P	01 54 17.4	-0.3
SAML	Samuel	25.38	21	P	P	01 54 34.1	+0.4
SAML				IAmb	IAmb	01 54 35.9	
	comp=Z,4.0nm,0.8s						
BDFB	Brasilia	27.88	57	P	P	01 54 56.6	+0.3
	comp=Z,1.8nm,0.5s,baz=230,slow=6.4,SNR=5.3						
BDFB				LR	LR	02 07 13.4	
	comp=Z,199nm,20.9s,baz=225,slow=39						
RUSC	La Rusia	38.76	358	P	P	01 56 32.1	+0.8
QSPA	South Pole Qui	57.17	180	P	P	01 58 53.9	+0.8
	comp=Z,2.7nm,0.9s,baz=167,slow=9.3,SNR=5.0						
DBIC	Dimbokro	74.95	72	P	P	02 00 47.3	-0.6
	comp=Z,5.1nm,0.9s,baz=208,slow=6.7,SNR=3.2						
BOSA	Boshof	80.57	118	P	P	02 01 18.8	-0.5
	comp=Z,2.9nm,0.9s,baz=296,slow=8.0,SNR=4.3						
TOA0	Torodi Ar. Sit	83.96	70	P	P	02 01 36.9	-0.1
TORD	Torodi Ar. Bea	83.96	70	P	P	02 01 36.4	-0.6
	comp=Z,2.0nm,0.8s,baz=248,slow=4.6,SNR=9.3						
TORD	Torodi Ar. Bea	83.96	70	P	P	02 01 36.0	-1.0
H11S2	WAKE ISLAND Hy	125.71	270	T	T	04 26 57.5	
	baz=118,slow=74,SNR=5.8						
H11S1	WAKE ISLAND Hy	125.72	270	T	T	04 26 56.2	
	baz=118,slow=74,SNR=7.2						
H11S3	WAKE ISLAND Hy	125.73	270	T	T	04 26 58.8	
	baz=118,slow=74,SNR=3.5						
ZALV	Zalesovo Beam	153.47	31	PKPbc	PKPbc	02 09 04.2	-0.2
	comp=Z,0.5nm,0.4s,baz=318,slow=4.0,SNR=4.1						
ZALV				PKPab	sPKPab	02 09 14.9	-1.7
	comp=Z,0.5nm,0.5s,baz=336,slow=3.2,SNR=4.5						
MKAR	Makanchi Array	156.19	47	PKPab	PKPab	02 09 28.1	-0.5
	comp=Z,0.4nm,0.6s,baz=278,slow=4.5,SNR=5.2						

IDC 09 01:50:41.9±1.4, **56°.18S**×**27°.70W**, **h0**^{km}, **mb4.0**/2, **mb1 4.1**/3, **mb1mx3.8**/20, **mbtmp4.1**/3, **ML4.1**/1, **Error ellipse: s-maj=84.1km s-min=31.0km az=80.0**, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	Sanae	18.75	156	P	P	01 55 01.0	-0.9
	0.6nm,0.3s,baz=299,slow=11,SNR=29						
QSPA	South Pole Qui	34.08	180	P	P	01 57 27.4	-0.3
	1.0nm,0.4s,baz=222,slow=14,SNR=21						
VNDA	Vanda	46.43	183	P	P	01 59 10.3	+0.7
	1.2nm,0.5s,baz=172,slow=8.3,SNR=5.1						
YKA	Yellowknife Ar	136.07	318	PKP	PKPdf	02 10 02.5	-0.8
	0.3nm,0.5s,baz=126,slow=2.4,SNR=7.8						
ILAR	Eielson Array	149.98	312	PKPbc	PKPbc	02 10 31.9	-0.7
	0.5nm,0.6s,baz=84,slow=2.0,SNR=10						
SONM	Songino Array	151.02	87	PKPbc	PKPbc	02 10 36.0	+0.1
	0.1nm,0.3s,baz=226,slow=3.7,SNR=4.3						

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*ATH **09** 01:53:32.9, 38°.42N×22°.45E, h9^{km}±3^{km}, ML3.4/28, Error ellipse: s-maj=3.1km s-min=0.6km az=355.0*

*IDC **09** 01:53:32.7±1.4, 38°.34N×22°.49E, h0^{km}, mb3.7/3, mb1 3.7/6, mb1mx3.4/37, mbtmp3.6/6, ML3.5/3, Error ellipse: s-maj=32.3km s-min=20.3km az=113.0*

*IASPEI **09** 01:53:33.1±0.8, 38°.42N±0°.02×22°.45E±0°.01, h9^{km}±6^{km}, mb3.8/3, Error ellipse: s-maj=2.4km s-min=2.1km az=175.2, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*THE **09** 01:53:33.2, 38°.42N×22°.45E, h6^{km}±1^{km}, ML3.4/12, Error ellipse: s-maj=1.1km s-min=0.2km az=279.0*

ISC 09 01:53:33.2±0.8, **38°.42N**±0°.02×**22°.45E**±0°.01, **h7**^{km}±6^{km}, **n94**, σ**0**^{s}.**79**/138, **mb3.8**/3, **4C-8D**, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLFA	Delphi	0.07	31	P	Pg	01 53 34.8	-0.4
DLFA				S	Sg	01 53 36.0	-0.6
DLFA				AML	AML	01 53 36.6	
DLFA				AML	AML	01 53 36.9	
KALE	Kalithea	0.24	264	P	Pg	01 53 38.1	0.0
KALE				S	Sg	01 53 42.2	+0.8
	20μm,0.5s						
KALE	Kalithea	0.24	264	P	Pg	01 53 38.0	-0.1
KALE				S	Sg	01 53 42.0	+0.6
KALE				AML	AML	01 53 44.1	
	comp=E,45096μm,0.7s						
KALE				AML	AML	01 53 45.2	
	comp=N,34420μm,0.3s						
TRIZ	Trizonia	0.30	260	P	Pg	01 53 39.0	-0.1
TRIZ				S	Sg	01 53 43.6	+0.5
	comp=N,17μm,0.4s						
TRIZ	Trizonia	0.30	260	P	Pg	01 53 39.0	-0.1
TRIZ				S	Sg	01 53 43.6	+0.5
ALIK	Aliki, Aigiali	0.31	240	P	Pg	01 53 39.5	+0.2
AXAR	Agios Charalam	0.39	25	P	Pg	01 53 41.1	+0.3
AXAR	Agios Charalam	0.39	25	P	Pg	01 53 41.2	+0.3
AXAR				S	Sg	01 53 46.7	+0.8
AXAR				AML	AML	01 53 48.3	
AXAR				AML	AML	01 53 48.5	
PROD	Prodromos	0.39	114	P	Pg	01 53 40.6	-0.2
PROD				S	Sg	01 53 46.4	+0.5
PROD	Prodromos	0.39	114	P	Pg	01 53 40.6	-0.2
PROD				S	Sg	01 53 46.4	+0.5
PROD				AML	AML	01 53 47.8	
	comp=E,32738μm,0.3s						
PROD				AML	AML	01 53 49.3	
	comp=N,26461μm,0.2s						
LAKA	Lakka	0.41	245	P	Pg	01 53 40.4	-0.8
LAKA				S	Sg	01 53 47.3	+0.7
LAKA	Lakka	0.41	245	P	Pg	01 53 40.3	-0.9
LAKA				S	Sg	01 53 46.7	+0.1
LAKA				AML	AML	01 53 50.5	
	comp=N,2253μm,0.5s						
LAKA				AML	AML	01 53 57.3	
	comp=E,3848μm,0.7s						
KLV	Kalavryta, Ach	0.44	212	P	Pg	01 53 41.3	-0.5
KLV	Kalavryta, Ach	0.44	212	P	Pg	01 53 41.1	-0.7
KLV				S	Sg	01 53 47.4	-0.1
KLV				AML	AML	01 53 49.9	
	comp=N,2031μm,0.4s						
KLV				AML	AML	01 53 50.8	
	comp=E,2230μm,0.5s						
LKR	Lokris	0.49	61	P	Pg	01 53 42.2	-0.5
LKR				S	Sg	01 53 49.9	+0.7
	comp=E,9μm,0.1s						
LKR	Lokris	0.49	61	P	Pg	01 53 42.0	-0.7
LKR				S	Sg	01 53 49.1	-0.1
LKR				AML	AML	01 53 50.9	
	comp=E,20294μm,0.2s						
LKR				AML	AML	01 53 52.5	
	comp=N,15724μm,0.2s						
UPR	University Cam	0.54	256	P	Pg	01 53 44.0	+0.4
UPR	University Cam	0.54	256	P	Pg	01 53 43.2	-0.4
LTK	Loutraki	0.57	134	P	Pg	01 53 44.2	0.0
LTK				S	Sg	01 53 52.4	+0.8
LTK	Loutraki	0.57	134	P	Pg	01 53 44.0	-0.1
LTK				S	Sg	01 53 51.4	-0.2
LTK				AML	AML	01 53 53.9	
	comp=N,7004μm,0.4s						
LTK				AML	AML	01 53 57.2	
	comp=E,5847μm,0.3s						
LOUT	Loutraki	0.59	136	P	Pg	01 53 44.7	0.0
LOUT				S	Sg	01 53 53.2	+0.7
	comp=E,3μm,0.3s						
LOUT	Loutraki	0.59	136	P	Pg	01 53 44.5	-0.2
LOUT				S	Sg	01 53 53.4	+0.9
LOUT				AML	AML	01 53 56.5	
	comp=N,1096μm,0.3s						
LOUT				AML	AML	01 53 57.9	
	comp=E,1232μm,0.3s						
AGG	Agios Georgios	0.61	351	P	Pg	01 53 44.4	-0.7
AGG				S	Sg	01 53 53.7	+0.6
AGG	Agios Georgios	0.61	351	P	Pg	01 53 44.2	-0.9
AGG				S	Sg	01 53 53.0	-0.1
AGG				AML	AML	01 53 56.2	
	comp=N,3078μm,0.4s						
AGG				AML	AML	01 53 58.1	
	comp=E,3689μm,0.4s						
MAKR	Makrakomi, Fth	0.65	338	P	Pg	01 53 45.2	-0.5
MAKR				S	Sg	01 53 55.0	+0.9
	comp=E,4μm,0.9s						
MAKR	Makrakomi, Fth	0.65	338	P	Pg	01 53 45.2	-0.5
MAKR				S	Sg	01 53 54.7	+0.6
MAKR				AML	AML	01 54 02.3	
	comp=E,7036μm,1.0s						
MAKR				AML	AML	01 54 03.2	
	comp=N,9546μm,0.8s						
VIL2	Platees	0.68	107	P	Pg	01 53 46.5	+0.3
VIL2				S	Sb	01 53 56.3	-0.6
VIL2				AML	AML	01 54 00.1	
	comp=N,20313μm,0.5s						
VIL2				AML	AML	01 54 00.3	
	comp=E,14596μm,0.6s						
EVR	Evrytania	0.71	315	P	Pg	01 53 46.2	-0.7
EVR				S	Sg	01 53 56.8	+0.7
	comp=E,3μm,0.7s						
EVR	Evrytania	0.71	315	P	Pg	01 53 46.1	-0.7
EVR				S	Sb	01 53 57.0	-0.9
EVR				AML	AML	01 53 58.7	
	comp=N,6129μm,0.5s						
EVR				AML	AML	01 54 00.9	
	comp=E,4780μm,0.5s						
VILL	Villia	0.72	110	P	Pg	01 53 46.5	-0.7
VILL				S	Sb	01 53 57.5	-0.8
DRO	Drossia	0.74	232	P	Pg	01 53 46.9	-0.6
DRO				S	Sb	01 53 58.2	-0.6
	comp=E,2μm,0.4s						
DRO	Drossia	0.74	232	P	Pg	01 53 47.0	-0.6
DRO				AML	AML	01 54 04.8	
	comp=E,5761μm,0.4s						
DRO				AML	AML	01 54 05.0	
	comp=N,3251μm,0.4s						
PVO	Paravola	0.75	286	P	Pg	01 53 47.3	-0.4
PVO				S	Sb	01 53 58.3	-0.7
	comp=N,2μm,0.9s						
PVO	Paravola	0.75	286	P	Pg	01 53 47.0	-0.7
PVO				AML	AML	01 54 05.4	
	comp=E,3018μm,0.6s						
PVO				AML	AML	01 54 07.3	
	comp=N,3394μm,0.8s						
RLS	Riolos of Patr	0.85	245	P	Pg	01 53 49.0	-0.6
RLS	Riolos of Patr	0.85	245	P	Pg	01 53 48.8	-0.8
MRKA	Markates	0.94	72	P	Pg	01 53 50.8	-0.5
MRKA				S	Sb	01 54 04.8	+0.3
	comp=N,2μm,0.6s						
MRKA	Markates	0.94	72	P	Pg	01 53 49.7	-1.6
MRKA				S	Sg	01 54 03.9	+0.4
MRKA				AML	AML	01 54 08.3	
	comp=E,3941μm,0.6s						
MRKA				AML	AML	01 54 10.6	
	comp=N,5321μm,0.4s						
PDO	Prodromos	1.01	281	P	Pg	01 53 52.6	0.0
PDO				AML	AML	01 54 17.7	
	comp=N,4772μm,0.4s						
PDO				AML	AML	01 54 19.0	
	comp=E,2660μm,0.6s						
VLX	Vlachokerasia	1.05	183	P	Pb	01 53 53.6	-0.1
VLX				AML	AML	01 54 11.5	
	comp=E,2389μm,0.5s						
VLX				AML	AML	01 54 13.9	
	comp=N,1967μm,0.8s						
AMT	Artemida-Makis	1.06	214	P	Pg	01 53 52.9	-0.6
AMT	Artemida-Makis	1.06	214	P	Pg	01 53 52.7	-0.8
NEO	Neokhori	1.08	34	P	Pg	01 53 53.3	-0.6
NEO				S	Sn	01 54 09.2	-0.7
	comp=N,3μm,0.3s						
NEO	Neokhori	1.08	34	P	Pg	01 53 53.9	0.0
ATH	Athens Observa	1.09	114	P	Pg	01 53 53.9	-0.3
ATH				S	Sn	01 54 09.5	-0.7
	comp=N,4μm,0.5s						
ATH	Athens Observa	1.09	114	P	Pg	01 53 53.7	-0.5
ATH				S	Sb	01 54 09.4	+0.5
ATH				AML	AML	01 54 13.1	
	comp=N,6264μm,0.5s						
ATH				AML	AML	01 54 14.6	
	comp=E,9202μm,0.8s						

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SKIA  Skiathos         1.09  46   P      Pg      01 53 53.5 -0.7
SKIA  Skiathos         1.09  46   P      Pg      01 53 53.6 -0.7
SKIA                              S      Sb      01 54 09.1 +0.2
SKIA                              AML    AML     01 54 11.4
      comp=E,3194µm,0.6s
SKIA                              AML    AML     01 54 12.9
      comp=N,3909µm,0.7s
DID   Didima           1.10 145   P      Pg      01 53 53.9 -0.5
DID   Didima           1.10 145   P      Pg      01 53 54.3 -0.1
DID                               S      Sb      01 54 09.1  0.0
DID                               AML    AML     01 54 11.6
      comp=N,3046µm,0.8s
DID                               AML    AML     01 54 15.2
      comp=E,2628µm,0.5s
XOR   Xorichti         1.11  31   P      Pg      01 53 54.0 -0.6
XOR   Xorichti         1.11  31   P      Pg      01 53 54.2 -0.4
XOR                               S      Sb      01 54 09.3 -0.1
XOR                               AML    AML     01 54 13.5
      comp=N,5042µm,0.5s
XOR                               AML    AML     01 54 13.6
      comp=E,3132µm,0.7s
VTN   Vitineika        1.11 244   P      Pn      01 53 55.1 -0.1
ATHU  Athens Univers   1.15 113   P      Pg      01 53 54.4 -0.8
ATHU                              S      Sn      01 54 11.2 -0.3
      comp=E,1µm,0.5s
ATHU  Athens Univers   1.15 113   P      Pg      01 53 54.3 -0.9
ATHU                              S      Sb      01 54 10.7 +0.3
ATHU                              AML    AML     01 54 14.1
      comp=N,2631µm,0.4s
ATHU                              AML    AML     01 54 14.9
      comp=E,1400µm,0.6s
KRND  KRANIDI          1.17 151   P      Pg      01 53 55.2 -0.5
KRND  KRANIDI          1.17 151   P      Pg      01 53 55.3 -0.5
KRND                              S      Sb      01 54 11.4 +0.3
KRND                              AML    AML     01 54 16.4
      comp=N,3715µm,0.3s
KRND                              AML    AML     01 54 17.4
      comp=E,3795µm,0.4s
PTL   Penteli          1.17 108   P      Pg      01 53 55.1 -0.7
PTL   Penteli          1.17 108   P      Pg      01 53 54.4 -1.3
PTL                               S      Sb      01 54 11.5 +0.3
PTL                               AML    AML     01 54 14.3
      comp=N,3924µm,0.5s
PTL                               AML    AML     01 54 14.7
      comp=E,4800µm,0.6s
THL   Klokotos Trika   1.20 344   P      Pb      01 53 54.7 -1.5
VLY   Voula,Athens     1.20 118   P      Pb      01 53 55.7 -0.6
VLY   Voula,Athens     1.20 118   P      Pb      01 53 56.1 -0.2
VLY                               S      Sb      01 54 12.2 +0.2
VLY                               AML    AML     01 54 16.7
      comp=E,5778µm,0.5s
VLY                               AML    AML     01 54 17.5
      comp=N,5922µm,0.7s
DION  Dionisos Attik   1.22 106   P      Pb      01 53 56.1 -0.5
DION                              S      Sn      01 54 13.6 +0.2
DION  Dionisos Attik   1.22 106   P      Pb      01 53 56.0 -0.5
DION                              S      Sn      01 54 13.0 -0.3
ITM   Ithomi           1.30 199   P      Pn      01 53 56.9 -0.9
KFL   Anninata         1.34 257   P      Pn      01 53 57.9 -0.4
AOS   Alonnisos        1.35  56   P      Pn      01 53 57.3 -1.1
LKD2  Lefkada island   1.45 285   P      Pb      01 54 00.4 -0.2
LKD2                              AML    AML     01 54 28.7
      comp=E,1301µm,0.9s
LKD2                              AML    AML     01 54 28.8
      comp=N,2509µm,1.1s
TSLK  Tsoukalades, L   1.46 287   P      Pg      01 54 01.4 +0.1
VLS   Valsamata        1.48 261   P      Pn      01 53 59.8 -0.5
KEF1  Kardakata, Kep   1.56 266   P      Pn      01 54 01.4 +0.1
KEF2  Argostoli. Kep   1.56 261   P      Pn      01 54 00.7 -0.6
KARY  Karystos         1.61 103   P      Pn      01 54 02.0 -0.1
KARY                              S      Sg      01 54 24.6 -0.5
KARY                              AML    AML     01 54 28.3
      comp=N,1825µm,0.5s
KARY                              AML    AML     01 54 29.9
      comp=E,1490µm,0.4s
PYL   PYLOS            1.62 200   P      Pb      01 54 02.8 -0.6
DYR   Agios Nikonas    1.65 183   P      Pb      01 54 04.0  0.0
LIT   Litokhoron       1.68   1   P      Pn      01 54 03.1  0.0
APE   Apeiranthos      2.79 118 ⇓P      Pn      01 54 19.0 +0.7
IDI   Anoyia           3.69 147   Pn     Pn      01 54 31.7 +1.0
      comp=E,1.3nm,0.3s,baz=307,slow=12,SNR=7.6
IDI                               Sn     Sn      01 55 15.0 +0.7
      comp=E,2.6nm,0.3s,baz=72,slow=20,SNR=3.4
VTS   Vitosha          4.24   8 ⇓P      Pn      01 54 39.7 +1.4
TIP   Timpagrande      4.51 281 ⇓P      Pn      01 54 44.8 +2.9
PDG   Podgorica        4.69 330 ⇑P      Pn      01 54 46.3 +1.9
ELND  Elena            5.21  29 ⇑P      Pn      01 54 51.1 -0.4
PLVB  Pleven           5.23  18 ⇓P      Pn      01 54 52.7 +0.9
HERR  Herculane        6.46 360 ⇓P      Pn      01 55 08.7  0.0
GZR   Gura Zlata       6.98   2 ⇓P      Pn      01 55 17.0 +1.2
BZS   Buzias           7.22 355 ⇓P      Pn      01 55 19.6 +0.5
VOIR                   7.28  15 ⇑P      Pn      01 55 20.6 +0.6
MLR   Muntele Rosu     7.53  19   Pn     Pn      01 55 27.5 +3.9
      comp=E,0.9nm,0.3s,baz=143,slow=14,SNR=3.7
MLR   Muntele Rosu     7.53  19 ⇓P      Pn      01 55 24.8 +1.3
VRI   Vrincioaia       8.09  22 ⇑P      Pn      01 55 32.2 +1.1
BRTR  Keskin Array B   8.80  78   Pn     Pn      01 55 43.6 +2.7
      comp=E,0.1nm,0.3s,baz=259,slow=12,SNR=6.7
TORD  Torodi Ar. Bea  31.19 222   P      P       01 59 53.3 +0.2
      comp=E,0.7nm,0.6s,baz=35,slow=9.0,SNR=7.2
MKAR  Makanchi Array  43.88  59   P      P       02 01 40.1 -0.1
      comp=E,0.3nm,0.5s,baz=270,slow=8.0,SNR=8.7
ZALV  Zalesovo Beam   44.40  48   P      P       02 01 43.5 -0.7
      comp=E,0.9nm,0.5s,baz=274,slow=8.4,SNR=4.5
```

IDC 09 02:10:33.5±10.0**, 31°.48S**×**179°.63W, h157km**±106km**,**
mb3.5/2**, mb1 3.6**/3**, mb1mx3.3**/40**, mbtmp3.8**/3**, Error ellipse: s-maj=93.0km s-min=54.2km az=177.0,**
Kermadec Islands region

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Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                                  Op     ISC       h  m  s    ISC
URZ   Urewera          7.28 201   P      Pn      02 12 17.9 +0.7
      0.6nm,0.3s,baz=271,slow=4.3,SNR=16
URZ                               S      Sn      02 13 38.1 -0.5
      1.1nm,0.3s,baz=63,slow=17,SNR=8.6
ASAR  Alice Springs   41.67 269   P      P       02 18 06.7 -0.2
      0.6nm,0.5s,baz=103,slow=7.6,SNR=12
WRA   Warramunga Arr  42.76 274   P      P       02 18 15.6  0.0
      1.3nm,0.3s,baz=113,slow=7.7,SNR=12
FINES FINESS Array B 145.65 338   PKPbc  PKPdf   02 29 52.0 -0.4
      4.1nm,1.1s,baz=42,slow=4.3,SNR=3.7
```

RSNC ***09*** *02:10:57.7±0.7, 0°.61N×77°.67W, h0km±5km, ML3.9, Mw4.3*
IGQ ***09*** *02:10:57.8±0.4, 1°N±2°×7°8W±°, h8km, M4.3*
NEIC ***09*** *02:10:58.1±1.2, 0°.33N±0°.06×77°.63W±0°.05, h10km±3km, mb4.3/6, Error ellipse: s-maj=9.2km s-min=7.4km az=174.0*

ISC 09 02:10:57.7±0.6**, 0°.50N**±0°.03×**77°.58W**±0°.02**, h10km, n84,**
σ2ˢ.44/109**, 4C-1D, Colombia-Ecuador border region**

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Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                                  Op     ISC       h  m  s    ISC
ATUL  Tulcn            0.31 331   P      Pg      02 11 02.6 -1.4
ECEN  Cerro Negro      0.51 309   P      Pg      02 11 06.2 -1.6
YAHU  Yahuarcocha      0.51 255   P      Pg      02 11 06.3 -1.5
YAHU  Yahuarcocha      0.51 255   S      Sg      02 11 13.7 -1.0
AIB2  Ibarra (Univer   0.55 254   P      Pg      02 11 07.3 -1.2
CAYA  Cayambe          0.59 224   P      Pg      02 11 07.9 -1.5
IMBA  Imbabura, San    0.66 250   P      Pb      02 11 10.1 -1.6
URCU  Urcuqui          0.68 265   P      Pg      02 11 10.1 -0.9
ACOT  Cotacachi (Cas   0.73 254   P      Pb      02 11 11.7 -1.0
COTA  Cotacachi        0.78 258   P      Pg      02 11 11.9 -0.9
CPAS2 Pasto            0.79  24   eP     Pg      02 11 10.3 -2.7
CPAS2                             eS     Sg      02 11 21.8 -1.5
CUSW  Cuicocha Oeste   0.80 255   P      Pg      02 11 12.3 -1.0
CUIC  Cuicocha-Domo    0.81 256   P      Pg      02 11 12.1 -1.3
CUIC  Cuicocha-Domo    0.81 256   S      Sb      02 11 24.3 -1.0
CUSE  Cuicocha Este    0.85 257   P      Pg      02 11 12.6 -1.6
OTAV  Otavalo          0.91 253 ⇓eP     Pg      02 11 13.7 -1.8
OTAV                              eS     Sb      02 11 26.5 -1.8
OTAV                              i              02 11 31.6
      comp=Z,914nm,0.6s
OTAV  Otavalo          0.91 253          Pg      02 11 13.6 -1.8
OTAV  Otavalo          0.91 253   P      Pg      02 11 13.6 -1.8
APS4  Papallacta       1.01 212   P      Pg      02 11 15.2 -2.1
PULU  Pululahua        1.04 243   P      Pg      02 11 16.1 -1.8
ANTS  Antisana-Sarah   1.16 211   P      Pg      02 11 17.8 -2.3
YANA  Yana             1.17 238   P      Pg      02 11 18.1 -2.2
ANTG  Antisana-Guama   1.21 214   P      Pg      02 11 18.8 -2.2
ANTM  Antisana-La Mi   1.22 212   P      Pg      02 11 18.8 -2.4
GGP   Refugio Guagua   1.22 237   P      Pg      02 11 19.8 -1.4
PINO  Pino             1.22 238   P      Pg      02 11 19.6 -1.7
GGPC  Guagua Pichinc   1.22 237   S      Sg      02 11 35.5 -1.8
GGPC  Guagua Pichinc   1.22 237   P      Pg      02 11 19.6 -1.7
TERV  Terraza Guagua   1.23 237   P      Pg      02 11 19.7 -1.7
CRUC  La Cruz          1.23  30 ⇑eP     Pn      02 11 18.1 -3.2
CRUC                              i              02 11 37.9
      comp=Z,1µm,0.3s
PAC1  Pacto, Paraso    1.24 259   P      Pb      02 11 19.0 -2.3
NINA  Atacazo Ninahu   1.37 230   P      Pn      02 11 22.0 -1.3
VC1   Cotopaxi 1       1.40 216   P      Pn      02 11 23.0 -0.9
TAMB  Tambo            1.43 214   P      Pn      02 11 23.4 -0.8
BTAM  Cotopaxi Volca   1.43 215   P      Pn      02 11 23.4 -0.8
BREF  Cotopaxi Volca   1.45 217   P      Pb      02 11 24.1 -1.1
APR2  Miler            1.45 253   P      Pb      02 11 23.5 -1.5
BNAS  Cotopaxi Volca   1.47 218   P      Pb      02 11 24.8 -0.8
BMOR  Cotopaxi Volca   1.51 216   P      Pn      02 11 24.6 -0.7
VCES  Cotopaxi         1.53 212   P      Pn      02 11 25.0 -0.6
BBAC  Balboa, Cauca    1.55  12 ⇑eP     Pn      02 11 24.2 -1.4
BBAC                              eS     Sn      02 11 44.3 -1.6
BBAC                              i              02 11 49.4
      comp=Z,1µm,0.3s
ILLI  Illinizas Sur    1.67 224   P      Pb      02 11 27.7 -1.2
PIS1  Pisayambo        1.75 208   P      Pb      02 11 28.8 -1.4
PISA  Pisayambo        1.75 208   P      Pb      02 11 28.9 -1.3
SOTA  Rioblanco        1.89  31   eP     Pn      02 11 30.4 -0.2
SOTA                              eS     Sn      02 11 54.9 +0.2
SOTA                              i              02 12 01.1
      comp=Z,511nm,0.5s
BRUN  Tungurahua Vol   2.08 204   P      Pb      02 11 34.0 -1.8
BULB  Ulba Tungurahu   2.10 203   P      Pb      02 11 34.0 -2.1
BBIL  Ulba Tungurahu   2.14 205   P      Pb      02 11 35.3 -1.6
PCON  Cinco Dias       2.17  33 ⇑eP     Pb      02 11 35.5 -1.9
PCON                              eS     Sn      02 12 02.5 +0.9
PCON                              i              02 12 10.4
      comp=Z,239nm,0.4s
BPAT  Tungurahua Vol   2.17 203   P      Pb      02 11 35.5 -1.8
BMAS  Trigal station   2.19 204   P      Pb      02 11 35.8 -1.8
FLOC  Florencia        2.20  61   eP     Pn      02 11 35.0 +0.5
FLOC                              eS     Sb      02 12 03.7 -1.4
FLOC                              i              02 12 06.7
      comp=Z,3µm,0.3s
FLOC  Florencia        2.20  61          Pn      02 11 35.3 +0.8
FLOC                              Sn     Sb      02 12 03.7 -1.4
GR1C  Gorgona, Isla    2.56 347   eP     Pn      02 11 39.5 +0.3
GR1C                              eS     Sn      02 12 11.3 +0.8
GARC  Garzon, Huila    2.67  51   eP     Pn      02 11 40.8 -0.3
GARC                              eS     Sn      02 12 15.6 +1.9
PTLC  Puerto Leguiza   2.80  97   eP     Pb      02 11 46.9 -1.0
PTLC                              eS     Sb      02 12 21.6 -0.7
PTLC                              i              02 12 30.6
      comp=Z,1µm,0.5s
MALC  Bahia Malaga     3.50   4   eP     Pb      02 11 56.0 -3.8
MALC                              eS     Sn      02 12 34.6 +0.9
MALC                              i              02 12 57.6
      comp=Z,41nm,0.5s
YOTC  Yotoco, Valle    3.67  20 ⇑eP     Pn      02 11 56.6 +1.9
YOTC                              eS     Sn      02 12 40.4 +2.2
YOTC                              i              02 12 50.1
      comp=Z,69nm,0.9s
PPLP  Puerto Lpez      3.79 238   P      Pn      02 11 57.4 +1.2
MACC  Macarena, Meta   4.07  66   eP     Pb      02 12 07.6 -2.0
MACC                              eS     Sb      02 12 59.3 +0.4
MACC                              i              02 13 05.2
      comp=Z,739nm,0.3s
ORTC  Ortega, Tolima   4.11  34   eP     Pn      02 12 03.9 +3.2
ORTC                              eS     Sg      02 13 06.8 -3.0
ORTC                              i              02 13 19.0
      comp=Z,77nm,0.4s
PLMC  San Jos del P    4.56  16   eP     Pn      02 12 08.4 +1.4
PLMC                              eS     Sb      02 13 10.8 -2.3
GUY2C Guyana, Caldas   5.19  25   eP     Pn      02 12 19.1 +3.2
GUY2C                             eS     Sg      02 13 42.5 -2.0
GUY2C                             i              02 13 47.6
      comp=N,21nm,0.7s
VILC  Villavicencio,   5.28  47   eP     Pn      02 12 19.9 +2.9
VILC                              eS     Sg      02 13 40.6 -6.9
VILC                              i              02 13 50.3
      comp=Z,260nm,0.3s
GUVC  San Jose del G   5.35  68   eP     Pb      02 12 34.9 +3.6
GUVC                              eS     Sb      02 13 36.1 +0.5
GUVC                              i              02 13 48.8
      comp=Z,729nm,0.3s
ROSC  El Rosal         5.40  37   eP     Pb      02 12 25.6 -6.8
ROSC                              eS     Sg      02 13 47.7 -3.6
ROSC                              i              02 14 04.9
      comp=Z,36nm,0.4s
ROSC  El Rosal         5.40  37          Pn      02 12 21.5 +2.7
CBOC  Ciudad Bolivar   5.55  16   eP     Pn      02 12 23.1 +2.5
CBOC                              eS     Sn      02 13 21.1 -3.6
CHIC  Chingaza         5.62  43   eP     Pn      02 12 24.2 +2.4
CHIC                              eS     Sg      02 13 51.2 -7.1
CHIC                              i              02 14 01.1
      comp=Z,190nm,1.0s
SPBC  San Pablo de B   6.20  34   eP     Pn      02 12 32.7 +3.2
SPBC                              eS     Sg      02 14 14.6 -2.4
SPBC                              i              02 14 26.4
      comp=Z,13nm,0.3s
PTGC  Puerto Gaitan,   6.56  56   eP     Pb      02 12 57.3 +5.2
PTGC                              eS     Sb      02 14 16.4 +5.8
PTGC                              i              02 14 38.7
      comp=Z,219nm,0.9s
PTBC  PUERTO BERRIO,   6.76  27   eP     Pn      02 12 38.4 +1.3
PTBC                              eS     Sg      02 14 28.2 -6.7
RUSC  La Rusia         6.99  40   eP     Pn      02 12 42.6 +2.0
RUSC                              eS     Sg      02 14 34.0 -8.2
RUSC                              i              02 14 50.9
      comp=Z,18nm,0.8s
RUSC  La Rusia         6.99  40          Pn      02 12 43.6 +3.0
BARC  Barichara        7.47  36   eP     Pn      02 12 50.9 +3.8
BARC                              eS     Sb      02 14 38.3 +1.3
BARC                              i              02 15 52.3
      comp=Z,36nm,0.8s
PAMC  Pamplona, Colo   8.36  35   eP     Pn      02 13 02.7 +3.3
PAMC                              eS     Sg      02 15 24.1 -2.0
SDV   Santo Domingo   10.83  39          Pn      02 13 35.5 +2.4
HDC   Heredia         11.46 326   Pn     Pn      02 13 42.6 +0.8
GCPR  Guaynabo City   20.99  32   P      P       02 15 44.1 +2.6
MNMC  Minye Minye     21.02 159   P      P       02 15 41.9 -0.1
MNMC                              IAmb   IAmb    02 15 43.2
      comp=Z,9.7nm,0.6s
V48A  Smith Brothers  36.10 347   P      P       02 18 01.7 +1.8
U40A  Yellville       38.39 340   P      P       02 18 21.3 +1.9
FVM   French Village  39.13 344   P      P       02 18 27.4 +1.8
MSTX  Muleshoe        40.82 327   P      P       02 18 43.2 +3.4
MSTX                              IAmb   IAmb    02 18 44.6
      comp=Z,7.9nm,1.1s
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BJI ***09*** *02:20:54.6±0.0, 1°.13N×123°.22E, h43km, mB4.9/2, mb4.6/7, Ms5.2/1*
DJA ***09*** *02:20:55.7±0.6, 2°N±3°×12°4E±°, h32km±7km, M4.8/18, mb4.7/18, mB5.4/7, MLv4.7/13, Mw(mB)4.9/7*
IDC ***09*** *02:20:57.5±0.7, 1°.61N×123°.81E, h48km±7km, mb4.0/7, mb1 4.3/10, mb1mx3.9/40, mbtmp4.4/10, ML4.5/3, MS3.6/6, Ms1 3.6/6, ms1mx3.2/38, Error ellipse: s-maj=24.0km s-min=10.5km az=92.0*
NEIC ***09*** *02:21:04.3±2.0, 0°.97N±0°.06×124°.10E±0°.08, h35km±8km, mb4.4/21, Error ellipse: s-maj=12.7km s-min=8.2km az=115.0*

ISC 09 02:20:56.0±0.5**, 1°.68N**±0°.04×**123°.70E**±0°.06**, h35km, n78,**
σ1ˢ.32/58**, mb4.4**/16**, MS3.5**/5**, 2D, Minahassa Peninsula, Sulawesi**

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Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                                  Op     ISC       h  m  s    ISC
KMSI  Cibinong         1.13 166   P      Pn      02 21 14.5 -0.9
KMSI                              S      Sn      02 21 28.5 -1.2
MRSI  Marisa           2.13 236   P      Pn      02 21 28.8 -0.2
MRSI                              S      Sn      02 21 53.5 -0.7
LUWI  Luwuk            2.86 199   P      Pn      02 21 41.5 +2.4
LUWI                              S      Sn      02 22 17.0 +4.7
LUWI  Luwuk            2.86 199          Pn      02 21 40.6 +1.5
APSI  Ampana           3.29 219   P      Pn      02 21 44.7 -0.3
APSI                              S      Sn      02 22 22.7 -0.3
TNTI  Ternate          3.77 104   P      Pn      02 21 51.6 -0.1
TNTI  Ternate          3.77 104   Pn     Pn      02 21 52.4 +0.7
MPSI  Mapaga           4.03 251   P      Pn      02 21 54.3 -0.9
SANI  Sanana           4.35 148   P      Pn      02 21 59.0 -0.7
PCI   Palu             4.64 236   P      Pn      02 22 12.9 +9.3
DDMP  Don Marcelino,   4.83  24   eP     Pn      02 22 06.6 +0.3
SKMP  Bagumbayan, Su   4.88  10   eP     Pn      02 22 05.8 -1.2
KCP   Kidapawan        5.47  15 ⇓iP     Pn      02 22 16.5 +1.4
KCP                               i S    Sn      02 23 17.1 +0.2
CTBH  Cotabato--PC H   5.53   6 ⇓iP     Pn      02 22 15.4 -0.5
DAV   Davao City (W)   5.67  19   P      Pn      02 22 20.7 +2.8
      42nm,0.3s,baz=16,slow=1.2,SNR=7.2
DAV                               S      Sn      02 23 21.1 -0.7
      29nm,0.3s,baz=43,slow=20,SNR=1.5
NLAI  Namlea           5.95 145   P      Pn      02 22 21.0 -0.6
      0.5nm4µm53nm,0.4s
TTSI  Tana Toraja      6.09 220   P      Pn      02 22 23.2 -0.3
      0.5nm2µm149nm,0.7s
PAGZ  Pagadian         6.14 357   eP     Pn      02 22 24.9 +0.7
BUKP  Musuan           6.31  12   eP     Pn      02 22 26.9 +0.3
BUKP                              eS     Pn      02 22 28.4 +1.9
SPSI  Sidrap Palu      6.85 215   P      Pn      02 22 33.5 -0.4
      0.2nm709nm54nm,0.6s
BNSI  Bone             7.03 211   P      Pn      02 22 35.9 -0.5
      0.3nm1µm88nm,0.6s
MSAI  Masohi           7.23 134   P      Pn      02 22 38.7 -0.5
      1µm40nm,0.8s
KAPI  Kappang          7.73 211   P      Pn      02 22 46.5 +0.4
      2.9nm,0.3s,baz=26,slow=4.8,SNR=11
KAPI                              S      Sn      02 24 09.7 -2.8
      1.3nm,0.3s,baz=243,slow=23,SNR=3.5
KAPI                              LR     LR      02 26 10.3
      comp=Z,161nm,18.7s,baz=34,slow=40
BKSI  Bulukumba        7.82 207   P      Pn      02 22 46.8 -0.5
      0.1nm26nm,0.7s
KBKI  Kotabaru         9.01 237   P      Pn      02 23 02.8 -0.8
      9.2nm,0.7s
EDFI  Ende, Flores    10.55 191   P      Pn      02 23 24.1 -0.8
      3.8nm,0.5s
MTN   Manton Dam      16.21 153   Pn     Pn      02 24 39.5 -1.6
MTN                               IAmb   IAmb    02 24 44.8
      comp=Z,10nm,0.7s
KNRA  Kununurra       17.96 164          P       02 25 02.9 -0.4
FITZ  Fitzroy Crossi  19.75 175   P      P       02 25 21.6 -1.4
      comp=Z,0.8nm,0.3s,baz=7.2,slow=7.8,SNR=34
FITZ  Fitzroy Crossi  19.75 175   P      Pn      02 25 22.8 -1.8
MDSI  Maura Dua       20.45 253   P      P       02 25 31.1 +0.5
      comp=Z,19nm,1.1s
TPUB  Ta-pu           21.70 352   P      P       02 25 59.9  +16
PDSI  Padang          23.38 264   P      P       02 26 17.2  +15
WB0   Warramunga Arr  23.76 154   P      P       02 26 04.5 -0.8
WRA   Warramunga Arr  23.89 155   P      P       02 26 05.9 -0.7
      comp=Z,13nm,0.8s,baz=334,slow=9.8,SNR=18
WRA   Warramunga Arr  23.89 155   P      P       02 26 06.6  0.0
WB2   Warramunga Arr  23.89 155   P      P       02 26 07.1 +0.5
WB2                               IAmb   IAmb    02 26 21.5
      comp=Z,17nm,0.9s
RPSI  Rantau Prapat   24.78 273   P      P       02 26 28.6  +14
AS31  Alice Springs   27.08 159   P      P       02 26 37.7 +2.2
ASAR  Alice Springs   27.08 159   P      P       02 26 35.5  0.0
      comp=Z,3.4nm,0.5s,baz=336,slow=7.6,SNR=56
ASAR  Alice Springs   27.08 159   P      P       02 26 37.7 +2.2
CMAR  Chiang Mai Arr  29.45 306   LR     LR      02 39 52.7
      comp=Z,40nm,19.0s,baz=208,slow=38
CHTO  Chiang Mai      29.64 307   P      P       02 27 13.2  +15
CHTO                              IAmb   IAmb    02 27 14.8
      comp=Z,6.7nm,1.3s
CD2   Chengdu         34.66 329   P      P       02 27 58.4  +16
MJAR  Matsushiro Arr  37.20  19   P      P       02 28 02.8 -1.2
      comp=Z,2.3nm,0.8s,baz=199,slow=10,SNR=6.3
STKA  Stephens Creek  37.44 155   P      P       02 28 06.2 +0.1
      comp=Z,3.0nm,0.6s,baz=336,slow=7.3,SNR=7.2
STKA  Stephens Creek  37.44 155   P      P       02 28 06.8 +0.7
SHL   Shillong        38.77 310   P      P       02 28 32.9  +15
HHC   Hu-ho-hao-te    40.51 346   eP     P       02 28 50.0  +18
LSA   Lhasa           41.63 315   P      P       02 28 57.4  +16
LSA                               IAmb   IAmb    02 29 14.0
      comp=Z,3.4nm,0.7s
CN2   Changchun       41.97   2   eP     P       02 28 48.9 +5.3
CN2                               pmax   pmax
      comp=Z,10.0nm,0.6s
GTA   Gaotai          43.41 333   eP     P       02 29 12.0  +16
GTA                               pP     pwP     02 29 20.6  +10
GTA                               sP     sP      02 29 24.6  +17
SONM  Songino Array   48.36 344   P      P       02 29 35.9 +1.5
      comp=Z,0.4nm,0.7s,baz=157,slow=7.7,SNR=2.7
SONM                              pP     pwP     02 29 48.7 -1.2
      comp=Z,0.8nm,0.6s,baz=167,slow=9.4,SNR=5.2
SONM  Songino Array   48.36 344   P      P       02 29 48.3  +14
WMQ   Urumqi          52.74 328   eP     P       02 30 23.6  +16
WMQ                               sP     pwP     02 30 34.6  +11
KSH   Kashi           57.41 317   P      P       02 30 58.7  +17
KSH                               sP     pwP     02 31 09.2  +12
KSH                               S      S       02 38 56.8  +21
KSH   Kashi           57.41 317   SS     SS      02 42 50.2  +24
MK31  Makanchi Array  57.57 327   P      P       02 30 56.9  +15
MK31                              IAmb   IAmb    02 30 58.4
      comp=Z,6.1nm,1.1s
MKAR  Makanchi Array  57.57 327   P      P       02 30 42.9 +0.6
      comp=Z,1.9nm,0.7s,baz=123,slow=7.8,SNR=23
MKAR                              pP     pwP     02 30 57.8 -0.4
      comp=Z,1.1nm,0.3s,baz=122,slow=8.7,SNR=13
MKAR  Makanchi Array  57.57 327   P      P       02 30 56.7  +14
MAKZ  Makanchi        57.75 327   P      P       02 30 58.6  +15
YAK   Yakutsk         60.37   3   LR     LR      03 00 49.2
      comp=Z,26nm,18.2s,baz=76,slow=40
KBL   Kabul           60.41 309   P      P       02 31 16.7  +14
KBL                               IAmb   IAmb    02 31 17.6
      comp=Z,3.0nm,0.7s
ZAA0  Zalesovo Array  61.09 335   P      P       02 31 20.1  +14
ZAA0                              IAmb   IAmb    02 31 21.6
      comp=Z,3.9nm,0.9s
ZALV  Zalesovo Beam   61.09 335   P      P       02 31 08.6 +2.3
      comp=Z,0.8nm,0.6s,baz=142,slow=7.3,SNR=3.1
ZALV                              pP     sP      02 31 20.3 +1.5
      comp=Z,3.0nm,0.8s,baz=107,slow=5.1,SNR=6.7
ZALV  Zalesovo Beam   61.09 335   P      P       02 31 19.6  +13
MA2   Magadan         61.44  15   LR     LR      02 58 14.9
      comp=Z,32nm,18.5s,baz=314,slow=36
KURK  Kurchatov       61.89 329   P      P       02 31 26.7  +15
KKAR  Karatay Array   62.71 319   P      P       02 31 32.4  +15
BRVK  Borovoye        67.49 328   P      P       02 32 02.5  +14
ABKAR Akbulak array   71.84 322   P      P       02 32 29.2  +14
RAYN  Ar Rayn         78.51 294   P      P       02 33 06.8  +12
RAYN                              IAmb   IAmb    02 33 09.0
      comp=Z,3.8nm,1.1s
VNDA  Vanda           81.80 172   P      P       02 33 10.5 -0.4
      comp=Z,5.5nm,1.1s,baz=297,slow=11,SNR=3.6
AKASG Malin Array Be  91.56 321   LR     LR      03 21 30.3
      comp=Z,40nm,19.0s,baz=285,slow=40
VRAC  Vranov          99.81 321   LR     LR      03 27 08.6
      comp=Z,202nm,18.6s,baz=316,slow=40
TORD  Torodi Ar. Bea 120.63 286   PKP    PKPdf   02 39 44.0 -1.2
      comp=Z,0.7nm,1.1s,baz=26,slow=3.7,SNR=2.4
TXAR  Lajitas Array  125.24  52   PKP    PKPdf   02 39 53.3 -0.5
      comp=Z,0.2nm,0.3s,baz=305,slow=6.3,SNR=3.7
CFA   Coronel Fontan 148.17 160   PKPbc  PKPbc   02 40 38.8 -0.1
      comp=Z,1.3nm,0.4s,baz=212,slow=2.7,SNR=4.4
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IDC ***09*** *02:24:42.6±2.0, 1°.09S×134°.09E, h0km, mb3.7/2, mb1 4.0/5, mb1mx3.7/33, mbtmp3.8/5, ML3.7/3, Error ellipse: s-maj=39.7km s-min=17.2km az=70.0*
NEIC ***09*** *02:24:48.2±0.2, 1°.1S±0°.1×133°.87E±0°.07, h33km±10km, mb4.1/4, Error ellipse: s-maj=17.7km s-min=5.7km az=208.0*

ISC 09 02:24:47.4±1.7**, 1°.1S**±0°.1×**133°.9E**±0°.1**, h27km, n11,**
σ0ˢ.94/11**, mb3.7**/3**, Irian Jaya region**

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Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                                  Op     ISC       h  m  s    ISC
FAKI  Fak Fak          2.45 222          Pn      02 25 25.0 -0.6
SIJI  Sorong           2.64 275   Pn     Pn      02 25 28.2  0.0
      9.7nm,0.3s,baz=211,slow=23,SNR=35
SIJI                              Sn     Sb      02 26 06.0  0.0
      37nm,0.3s,baz=145,slow=24,SNR=17
KNRA  Kununurra       15.35 199   Pn     Pn      02 28 22.6 +0.3
KNRA                              IAmb   IAmb    02 28 29.1
      comp=Z,20nm,1.1s
WRA   Warramunga Arr  18.74 179   P      P       02 29 03.3 -1.0
      comp=Z,0.6nm,0.3s,baz=359,slow=12,SNR=9.3
WRA   Warramunga Arr  18.74 179   IAmb   IAmb    02 29 06.8
      comp=Z,0.4nm,1.0s
FITZ  Fitzroy Crossi  18.75 205   P      P       02 29 04.1 -0.3
      comp=Z,0.1nm,0.3s,baz=19,slow=12,SNR=4.4
FITZ  Fitzroy Crossi  18.75 205   IAmb   IAmb    02 29 33.2
      comp=Z,26nm,1.8s
AS31  Alice Springs   22.44 180   P      P       02 29 43.8 -0.6
AS31                              IAmb   IAmb    02 29 52.1
      comp=Z,1.9nm,0.8s
ASAR  Alice Springs   22.44 180   P      P       02 29 44.3 -0.1
```

	comp=Z,2.8nm,0.6s,baz=7.4,slow=12,SNR=13						
ASAR				S	S	02 33 51.6	+2.1
	comp=Z,1.7nm,1.1s,baz=6.3,slow=26,SNR=6.2						
ASAR	Alice Springs	22.44	180	P	P	02 29 43.6	-0.8
MKAR	Makanchi Array	65.61	324	P	P	02 35 29.2	+0.1
	comp=Z,0.4nm,0.7s,baz=109,slow=7.5,SNR=5.2						

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*ANF **09** 02:27:15.7±0.1, 36.°05N×117.°58W, h4^{km}±1^{km}, ML2.6/26, Error ellipse: s-maj=1.2km s-min=1.1km az=27.0*

*IASPEI **09** 02:27:16.0±0.9, 36.°05N±0.°02×117.°58W±0.°02, h11^{km}±6^{km}, Error ellipse: s-maj=2.9km s-min=2.8km az=145.7, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*PAS **09** 02:27:16.3±2.1, 36.°05N±0.°01×117.°57W±0.°02, h3^{km}±6^{km}, ML2.7/84, Error ellipse: s-maj=2.8km s-min=1.5km az=58.0*

*SCEDC **09** 02:27:16.3, 36.°04N×117.°58W, h0^{km}*

*NEIC **09** 02:27:16.2±2.0, 36.°047N±0.°005×117.°57W±0.°02, h2^{km}±6^{km}, Error ellipse: s-maj=2.7km s-min=0.7km az=80.0*

ISC 09 02:27:16.8±0.8, **36.°06N**±0.°02×**117.°57W**±0.°02, **h9**^{km}±6^{km}, **n83,** σ**1.^{s}18**/103, **California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPMC	Manual Prospec	0.06	91		Pg	02 27 19.0	-0.1
MPMC	Manual Prospec	0.06	91	P	Pg	02 27 17.7	-1.4
	baz=257,SNR=1000						
MPMC				S	Pg	02 27 19.0	-0.1
	baz=257						
WCSM	Coso Springs S	0.16	259		Pg	02 27 19.4	-1.1
JRC2	Joshua Ridge	0.21	249		Pg	02 27 23.2	+2.0
VPEM	Volcano Peak E	0.23	242		Pg	02 27 20.6	-1.0
MFS	McCloud Flat S	0.24	284		Pg	02 27 20.9	-0.9
CLC	China Lake	0.24	186		Pg	02 27 24.2	+2.5
TOW	Tower One	0.29	213		Pg	02 27 22.1	-0.6
WCHM	Chimney Peak	0.45	247		Pg	02 27 24.5	-1.1
CGO	Cerro Gordo	0.53	339		Pg	02 27 26.1	-1.0
CGO					Sg	02 27 34.4	+0.3
CCCA	Chr Cany lake	0.56	163		Sg	02 27 34.8	-0.2
CWC	Cottonwood Cre	0.56	313		Pg	02 27 27.0	-0.7
CWC					Sg	02 27 34.7	-0.5
CWC	Cottonwood Cre	0.56	313	P	Pg	02 27 27.0	-0.7
	baz=134						
CWC				S	Sg	02 27 34.7	-0.5
	baz=134						
QSM	Queen of Sheba	0.57	99		Pg	02 27 27.2	-0.8
LRMC	Laurel Mtn Rad	0.58	189	P	Pg	02 27 27.0	-1.1
	baz=8.6,SNR=79						
LRMC				S	Sg	02 27 35.3	-0.6
	baz=8.6						
WORM	Onyx Ranch	0.66	237		Sg	02 27 36.9	-1.2
WBSM	Bird Springs	0.70	222		Sg	02 27 38.6	-0.8
FURC	Furnace Creek,	0.70	54	P	Pg	02 27 30.0	-0.3
	baz=234,SNR=24						
FURC				S	Sg	02 27 39.9	+0.4
	baz=234						
JFS	Joseph F. Stat	0.71	187		Pg	02 27 29.3	-1.3
WHFM	Hanning Flat	0.73	241		Sg	02 27 39.4	-1.0
TMO	Tin Mountain	0.76	10		Pg	02 27 30.3	-1.2
DTP	Desert Tortois	0.82	196		Pg	02 27 31.2	-1.4
ISA	Isabella, Lake	0.83	242		Sg	02 27 42.7	-1.1
ISA	Isabella, Lake	0.83	242	P	Pg	02 27 31.7	-1.2
	baz=62,SNR=39						
ISA				S	Sg	02 27 42.7	-1.1
	baz=62						
FMT	Funeral Mounta	0.86	47		Pg	02 27 32.5	-0.8
FMT					Sg	02 27 43.7	-0.9
WASM	Alta Sierra Ca	0.86	249		Pg	02 27 32.3	-1.1
GRAC	Grapevine Rang	0.95	10		Pg	02 27 34.2	-0.9
GRAC	Grapevine Rang	0.95	10	P	Pg	02 27 34.2	-0.9
	baz=190,SNR=86						
GVN	Grapevine	0.96	11		Pg	02 27 34.3	-0.9
GSC	Goldstone, Bar	0.98	140		Pg	02 27 34.4	-1.2
GSC	Goldstone, Bar	0.98	140	Pg	Pg	02 27 34.0	-1.6
GSC	Goldstone, Bar	0.98	140	P	Pg	02 27 34.5	-1.2
	baz=320,SNR=53						
GSC				S	Sg	02 27 47.7	-0.6
	baz=320						
SHOC	Shoshone, Teco	1.06	98		Pg	02 27 36.2	-0.9
SHOC	Shoshone, Teco	1.06	98	P	Pg	02 27 36.3	-0.9
	baz=278,SNR=49						
SHOC				S	Sb	02 27 51.6	+0.3
	baz=278						
WOFM	Oak Flat	1.07	241		Pg	02 27 35.9	-1.4
AMDNV	Amargosa	1.11	69		Pg	02 27 37.1	-1.1
TIN	Tinemaha, Big	1.13	332	P	Pg	02 27 37.3	-1.1
	baz=152,SNR=11						
TIN				S	Sg	02 27 52.6	-0.6
	baz=152						
HYS	Haystack Butte	1.19	180		Pg	02 27 37.7	-2.0
EDW2	Edwards Air Fo	1.23	197		Pg	02 27 38.3	-2.0
EDW2	Edwards Air Fo	1.23	197	P	Pg	02 27 38.5	-1.9
	baz=16,SNR=41						
EDW2				S	Sg	02 27 54.7	-1.6
	baz=16						
VES	Vestal, Richgr	1.25	260		Pg	02 27 39.0	-1.8
VES	Vestal, Richgr	1.25	260	P	Pg	02 27 39.6	-1.2
	baz=80,SNR=9.1						
VES				S	Sg	02 27 56.2	-0.8
	baz=80						
ALV	Alvord Mountai	1.25	142		Pg	02 27 39.3	-1.6
RRX	Edison Barstow	1.27	158		Pg	02 27 39.9	-1.2
RRX	Edison Barstow	1.27	158	P	Pg	02 27 40.4	-0.8
	baz=338,SNR=8.0						
RRX				S	Sb	02 27 57.8	+0.5
	baz=338						
SBB	Saddle Back Bu	1.38	189		Pn	02 27 42.0	-0.3
TPNV	Topopah Spring	1.39	50		Pn	02 27 42.2	-0.3
TPNV	Topopah Spring	1.39	50	P	Pn	02 27 42.0	-0.4
	baz=230,SNR=25						
TPNV				S	Sg	02 28 00.8	-0.6
	baz=230						
ARVC	Arvin	1.39	228	P	Pn	02 27 42.1	-0.2
	baz=48						
ARVC				S	Sg	02 28 00.0	-1.4
	baz=48						
TUQ	Turquoise Moun	1.48	114	P	Pn	02 27 42.5	-1.1
	baz=295,SNR=24						
TUQ				S	Sn	02 28 04.6	+1.6
	baz=295						
VOG	Valley Oaks Go	1.49	281	P	Pn	02 27 43.9	+0.2
	baz=100						
HEC	Hector,Ludlow	1.59	140	P	Pn	02 27 43.9	-1.2
	baz=320,SNR=5.3						
HEC				S	Sg	02 28 07.2	-0.6
	baz=320						
BBRC	Big Bear Solar	1.87	163	Sb	Sg	02 28 16.3	-0.6
	baz=343						
MLAC	Mammoth, Mammo	1.87	327	Sg	Sg	02 28 17.9	+1.0
	baz=147						
MWC	Mount Wilson	1.87	193		Pn	02 27 49.7	+0.6
MCSM	Casa Diablo Ho	1.92	326		Pb	02 27 52.5	+0.4
OMMB	Old Mammoth Mi	1.93	324		Pn	02 27 50.7	+0.6
PASC	Pasadena Art C	1.95	195		Pn	02 27 50.4	+0.4
MDPB	Devils Postpil	1.98	323		Pn	02 27 51.9	+1.1
SHPR	Sheep Range	2.00	76		Pn	02 27 51.0	+0.2
GMRC	Granite Mounta	2.01	129	Sb	Sb	02 28 19.7	+0.9
	baz=309						
SMMC	Simmler	2.11	250	Sb	Sb	02 28 21.9	+0.4
	baz=69						
PKM	Mcpherson Peak	2.17	238	Sb	Sb	02 28 23.9	+0.4
	baz=57						
MMIM	Miami Mountain	2.21	309		Pb	02 27 56.5	-0.6
NV11	Mina Array Sit	2.42	349	Pn	Pn	02 27 56.8	+0.2
BELC	Belle Mtn. Jos	2.42	147	Sb	Sg	02 28 32.9	-1.8
	baz=328						
NVAR	Mina Array Bea	2.44	346	Pn	Pn	02 27 57.6	+0.6
MURC	Murrieta	2.47	173	Pg	Pb	02 28 01.9	+0.6
	baz=353						
PFO	Pinyon Flats O	2.61	159	Pn	Pn	02 28 00.3	+1.1
PFO	Pinyon Flats O	2.61	159	Pg	Pb	02 28 04.5	+0.8
	baz=340						
PFO				Sb	Sg	02 28 38.6	-1.9
	baz=340						
XPFO	Pion Flat	2.61	159	Pn	Pn	02 28 00.5	+1.3
RYN	Ryan	2.67	344	Pn	Pn	02 27 59.9	-0.3
IRM	Iron Mountain	2.75	133	Sb	Sg	02 28 43.4	-1.7
	baz=314						
R11A	Troy Canyon, C	2.78	34		Pb	02 28 06.8	+0.1
R11A	Troy Canyon, C	2.78	34	Pg	Pb	02 28 08.3	+1.5
	baz=215						
R11A				Sb	Sg	02 28 43.8	-2.3
	baz=215						
SBI	Santa Barbara	2.84	205		Pn	02 28 04.8	+2.6
CMB	Columbia Colle	3.00	312	Pn	Pn	02 28 04.5	+0.1
KVN	Kaiserville	3.02	352	Pn	Pn	02 28 04.6	-0.3
DPP	Dos Picos Cty	3.10	170		Pn	02 28 08.3	+2.5
W13A	Hualapai Mount	3.15	107	Pn	Pn	02 28 06.3	-0.4
EML	El Monte Cty P	3.22	169		Pn	02 28 10.7	+3.2
PSUT	Pine Spring	3.86	49	Pn	Pn	02 28 17.7	+1.2
U15A	North Rim	4.28	84	Pn	Pn	02 28 23.6	+1.3

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*ATA **09** 02:27:18.7±2.6, 38.°71N×43.°30E, h32^{km}±34^{km}, ML1.5, MW2.5*

*ISK **09** 02:27:20.8, 38.°71N×43.°17E, h14^{km}±1^{km}, ML1.8/6*

*DDA **09** 02:27:21.5, 38.°67N×43.°18E, h7^{km}±2^{km}, ML1.5*

ISC 09 02:27:20.6±0.9, **38.°70N**±0.°05×**43.°25E**±0.°04, **h29**^{km}±9^{km}, **n17,** σ**0.^{s}91**/27, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	Van	0.15	134	PG	Pb	02 27 26.9	+0.6
VANB				SG	Sb	02 27 31.4	+1.1
TVAN	Van	0.21	144	*e*P	Pb	02 27 26.9	-0.2
TVAN				*e*S	Sb	02 27 31.2	-0.3
TVAN				IAML		02 27 31.9	
	comp=Z,88nm,0.4s						
TVAN	Van	0.21	144	*i* P	Pb	02 27 26.8	-0.2
TVAN				*i* S	Sb	02 27 30.0	-1.4
TVAN				IAML		02 27 31.0	
	comp=N,219nm,0.3s						
TVAN				IAML		02 27 31.0	
	comp=E,208nm,0.4s						
VMUR	Van-Muradiye	0.38	40	*i* P	Pn	02 27 30.3	-0.1
VMUR				*i* S	Sn	02 27 36.8	0.0
VMUR				IAML		02 27 38.0	
	comp=N,32nm,0.3s						
VMUR				IAML		02 27 39.0	
	comp=E,48nm,0.4s						
GEVA	Gevas	0.41	202	*e*P	Pb	02 27 29.5	-0.2
GEVA				*e*S	Sb	02 27 37.0	+1.0
GEVA				IAML		02 27 41.9	
	comp=Z,16nm,0.6s						
GEVA	Gevas	0.41	202	*i* P	Pb	02 27 29.6	-0.2
GEVA				*i* S	Sb	02 27 35.0	-1.0
GEVA				IAML		02 27 38.0	
	comp=E,19nm,0.6s						
AKDM	Akdamar-Van	0.43	210	PG	Pb	02 27 29.4	-0.5
CLDR	Caldiran	0.68	49	PG	Pn	02 27 35.3	+0.8
CLDR	Caldiran	0.68	49	*i* P	Pn	02 27 34.9	+0.4
CLDR				*i* S	Sn	02 27 45.2	+0.9
MLAZ	Malazgirt-MUS	0.70	309	PG	Pb	02 27 33.9	-0.6
AGRB	Hanur-Agry	0.90	347	PG	Pn	02 27 38.2	+0.8
BLIS	Bitlis-Merkez	0.94	253	*e*P	Pn	02 27 38.6	+0.8
BLIS				*e*S	Sn	02 27 51.2	+0.8
BLIS				IAML		02 27 52.1	
	comp=Z,17nm,0.4s						
BLIS	Bitlis-Merkez	0.94	253	*i* P	Pn	02 27 38.4	+0.5
BLIS				*i* S	Sb	02 27 49.2	-1.3
BLIS				IAML		02 27 51.0	
	comp=E,20nm,0.6s						
BLIS				IAML		02 27 52.0	
	comp=N,25nm,0.4s						
GURO	Guroymak-BITLI	0.97	262	PG	Pn	02 27 38.7	+0.4
EATA	Eleskirt	1.30	333	*e*P	Pb	02 27 45.0	+0.4
EATA				IAML		02 28 05.7	
	comp=N,1.9nm,0.5s						
IGDI	IGDIR	1.33	28	*e*P	Pn	02 27 41.5	-1.7
MUSM	Mu-Merkez	1.36	272	*i* P	Pb	02 27 46.5	+1.0
MUSM				*i* S	Sn	02 27 59.2	-1.7

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*TRN **09** 02:39:21.2, 18.°13N×63.°74W, h23^{km}, MD3.6*

*NEIC **09** 02:39:24±1.7, 18.°1N±0.°3×63.°70W±0.°09, h45^{km}±32^{km}, Error ellipse: s-maj=38.7km s-min=3.3km az=197.0*

*RSPR **09** 02:39:24.9, 18.°91N×63.°81W, h46^{km}±7^{km}, MD2.8/5*

ISC 09 02:39:21.8±1.4, **18.°12N**±0.°08×**63.°75W**±0.°03, **h8**^{km}±11^{km}, **n38,** σ**0.^{s}80**/57, **10C-2D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMRT	St. Maarten	0.65	96	*e*P	Pb	02 39 35.6	+0.3
SMRT				*e*S	Sb	02 39 45.1	+0.5
SMRT	St. Maarten	0.65	96		Pb	02 39 35.7	+0.3
SABA	Saba	0.69	136	*e*P	Pb	02 39 36.4	+0.2
SABA				*e*S	Sg	02 39 44.9	+0.7
SABA	Saba	0.69	136		Pg	02 39 35.1	0.0
TBVI	Tortola	0.88	290⇑	*e*P	Pn	02 39 40.5	0.0
TBVI	Tortola	0.88	290⇑	*e*P	Pn	02 39 40.5	0.0
TBVI				*e*S	Sn	02 39 52.6	-0.8
TBVI	Tortola	0.88	290		Pn	02 39 40.5	0.0
TBVI					Sn	02 39 52.6	-0.8
SEUS	St. Eustatius	0.96	130	*e*P	Pb	02 39 40.4	-0.3
SEUS				*e*S	Sg	02 39 52.8	0.0
SEUS	St. Eustatius	0.96	130		Pg	02 39 40.0	-0.2
CDVI	St. Croix	1.03	250		Pg	02 39 41.7	+0.1
STVI	Saint Thomas	1.17	282⇑	*e*P	Pb	02 39 44.1	-0.1
STVI	Saint Thomas	1.17	282⇑	*e*P	Pn	02 39 44.9	+0.4
STVI				*e*S	Sb	02 39 59.5	-0.1
STVI	Saint Thomas	1.17	282⇑	*e*P	Pb	02 39 44.1	-0.1
STVI				*e*S	Sb	02 39 59.5	-0.1
STVI	Saint Thomas	1.17	282		Pn	02 39 44.9	+0.4
STVI					Sb	02 39 59.5	-0.1
SKI	Saint Kitts	1.24	129	*e*P	Pb	02 39 45.4	-0.1
SKI				*e*S	Sg	02 40 00.9	-0.8
SKOC	St. Kitts, UWI	1.27	130	*e*P	Pn	02 39 44.8	-1.0
SKOC				*e*S	Sg	02 40 01.8	-0.9
NVDO	Nevis, Disaste	1.47	132	*e*P	Pn	02 39 48.8	+0.3
NVDO				*e*S	Sn	02 40 07.8	-0.2
CUPR	Culebra, Puert	1.47	278⇓	*e*P	Pn	02 39 48.8	+0.2
CUPR	Culebra, Puert	1.47	278	*e*S	Sn	02 40 07.2	-0.8
CUPR	Culebra, Puert	1.47	278		Pn	02 39 48.8	+0.2
CUPR					Sn	02 40 07.2	-0.8
ANWB	Willy Bob	1.92	103	*e*P	Pn	02 39 55.6	+0.7
ANWB				*e*S	Sn	02 40 19.9	+0.7
ANWB	Willy Bob	1.92	103	Pn	Pn	02 39 55.3	+0.4
MLYT	Lee's Yard	2.04	133	*e*P	Pn	02 39 57.0	+0.5
MLYT				*e*S	Sn	02 40 20.6	-1.5
PDPR	Patillas Dam,	2.16	268⇓	*e*P	Pn	02 39 59.2	+1.0
PDPR	Patillas Dam,	2.16	268	*e*S	Sn	02 40 26.4	+1.3
PDPR	Patillas Dam,	2.16	268		Pn	02 39 59.2	+1.0
PDPR					Sn	02 40 26.4	+1.3
GCPR	Guaynabo City	2.23	275		Sn	02 40 28.1	+1.4
IGPR	InterUniversit	2.25	267⇑	*e*P	Pn	02 40 00.4	+1.1
IGPR	InterUniversit	2.25	267	*e*S	Sn	02 40 28.7	+1.5
SJG	San Juan	2.28	270		Sn	02 40 28.9	+0.8
OBIP	Obispado Ponce	2.72	269	Pn	Pn	02 40 05.8	0.0
AOPR	Arecibo Observ	2.86	275⇑	*e*P	Pn	02 40 07.5	-0.3
AOPR	Arecibo Observ	2.86	275⇑	*e*P	Pn	02 40 07.5	-0.3
AOPR				*e*S	Sn	02 40 40.2	-2.3
AOPR	Arecibo Observ	2.86	275		Pn	02 40 07.5	-0.3
AOPR					Sn	02 40 40.2	-2.3
MLPR	Magueyes Islan	3.14	268	Pn	Pn	02 40 12.2	+0.6
CRPR	Cabo Rojo, PR	3.20	269⇑	*e*P	Pn	02 40 12.8	+0.4
CRPR	Cabo Rojo, PR	3.20	269⇑	*e*P	Pn	02 40 12.8	+0.4
CRPR				*e*S	Sn	02 40 50.6	-0.1
CRPR	Cabo Rojo, PR	3.20	269		Pn	02 40 12.8	+0.4
CRPR					Sn	02 40 50.6	-0.1

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*UCR **09** 02:41:10.8±1.4, 13.°82N×90.°69W, h73^{km}±16^{km}, ML3.5*

*SNET **09** 02:41:10.8±1.2, 13.°83N×90.°69W, h70^{km}±14^{km}, ML3.6*

*MEX **09** 02:41:11.8±0.3, 13.°35N×90.°98W, h15^{km}, MD4.1*

*GCG **09** 02:41:13.1±0.3, 13.°81N×90.°68W, h55^{km}±10^{km}, MD3.9*

ISC 09 02:41:13.0±1.5, **13.°7N**±0.°1×**90.°64W**±0.°06, **h63**^{km}±16^{km}, **n29,** σ**1.^{s}26**/41, **5C-3D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	Ixpaco	0.47	24⇑	*i*P	Pn	02 41 23.6	-1.5
IXG	Ixpaco	0.47	24⇑	*i*P	Pn	02 41 23.6	-1.5
IXG	Ixpaco	0.47	24⇑	*e*P	Pn	02 41 24.6	-0.5
PCG	Pacaya	0.65	3⇓	*e*P	Pn	02 41 26.5	-0.6
FUG	Fuego 3	0.73	344	*e*P	Pn	02 41 27.1	-0.8
FUG				*e*P		02 41 27.4	
NBG	Las Nubes	0.89	18	*e*P	Pn	02 41 29.8	-0.2
RTR	El Retiro	0.98	81	*e*P	Pn	02 41 30.2	-0.8
RTR				*e*S	Sn	02 41 46.0	+1.6
RTR	El Retiro	0.98	81	*e*P	Pn	02 41 30.2	-0.8
RTR				*e*S	Sn	02 41 46.0	+1.6
CEVE	Cerro Verde	0.99	85	*e*P	Pn	02 41 30.2	-1.0
CEVE				*e*S	Sn	02 41 45.7	+1.0
CEVE				IAML		02 41 46.7	
	comp=Z,1µm,0.2s						
CEVE	Cerro Verde	0.99	85	*e*P	Pn	02 41 30.2	-1.0
CEVE				*e*S	Sn	02 41 45.7	+1.0
CEVE				IAML		02 41 46.7	
	comp=Z,1µm,0.2s						
SBLS	San Blas	0.99	84	*e*P	Pn	02 41 30.1	-1.1
SBLS	San Blas	0.99	84	*e*P	Pn	02 41 30.1	-1.1
SNJE	San Jose	1.01	83	*e*P	Pn	02 41 30.4	-1.1
SNJE	San Jose	1.01	83	*e*P	Pn	02 41 30.4	-1.1
LALI	Alcalda de L	1.30	101	*e*P	Pn	02 41 34.4	-0.7
LALI				*e*S	Sn	02 41 52.5	+0.8
LALI	Alcalda de L	1.30	101	*e*P	Pn	02 41 34.4	-0.7
LALI				*e*S	Sn	02 41 52.5	+0.8
BOQS	Boqueron	1.32	90	*e*P	Pn	02 41 34.6	-0.9
STG3	Santiaguito 3,	1.32	317	*e*P	Pn	02 41 35.0	-0.6
MTO3	Montecristo	1.40	62⇓	*i*P	Pn	02 41 34.6	-2.0
MTO3	Montecristo	1.40	62⇓	*i*P	Pn	02 41 34.6	-2.0
LOMA	Loma Larga	1.43	94	*e*P	Pn	02 41 37.1	+0.2
LOMA				*e*S	Sn	02 41 55.8	+0.9
LOMA				IAML		02 41 58.9	
	comp=Z,542nm,0.3s						
LOMA	Loma Larga	1.43	94	*e*P	Pn	02 41 37.1	+0.2
LOMA				*e*S	Sn	02 41 55.8	+0.9
LOMA				IAML		02 41 58.9	
	comp=Z,542nm,0.3s						
LFRS	El Faro	1.54	94	*e*P	Pn	02 41 37.5	-0.8
MRL	Marmol	1.62	35⇑	*i*P	Pn	02 41 37.9	-1.7
MRL	Marmol	1.62	35⇑	*i*P	Pn	02 41 37.9	-1.7
CCIG	Comitan	2.92	330	*e*P	Pn	02 41 57.6	+0.5
CCIG				*i* S	Sn	02 42 34.4	+3.3
PCIG		3.17	308	*i* P	Pn	02 41 59.1	-1.3
PCIG				*e*S	Sn	02 42 35.7	-1.4
TGIG		3.86	322	*i* P	Pn	02 42 10.1	+0.2
TGIG				*i* S	Sn	02 42 55.3	+1.3
CMIG	Matias Romero	5.28	310	*e*P	Pn	02 42 28.4	-0.9
CMIG				*i* S	Sn	02 43 28.6	-0.3

MAN 09 02:50:03.7, 4.°34N×124.°72E, h323^{km}**, mb5.5, ML4.5, MS4.8, Celebes Sea**

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*MEX **09** 02:58:47.5±0.4, 16.°06N×90.°28W, h20^{km}±15^{km}, MD4.2*

*GCG **09** 02:58:48.1±0.5, 16.°19N×90.°48W, h84^{km}±27^{km}, MD4.0*

ISC 09 02:58:46.0±2.3, **16.°3N**±0.°1×**90.°38W**±0.°07, **h111**^{km}±30^{km}, **n9,** σ**1.^{s}05**/14, **Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRL	Marmol	1.36	151	*e*P	Pn	02 59 12.3	+0.8
MRL				*e*S	Sn	02 59 31.5	+0.7
NBG	Las Nubes	1.68	179	*e*P	Pn	02 59 16.1	+0.8
CCIG	Comitan	1.69	271	*e*P	Pn	02 59 14.6	-0.8
CCIG				*i* S	Sn	02 59 35.9	-1.9
FUG	Fuego 3	1.87	194	*e*P	Pn	02 59 18.2	+0.5
FUG				*i* S	Sn	02 59 40.8	-0.9
STG3	Santiaguito 3,	1.93	217	*e*P	Pn	02 59 18.3	-0.2
IXG	Ixpaco	2.09	182	*e*P	Pn	02 59 20.8	+0.4
TGIG		2.68	281	*e*P	Pn	02 59 29.5	+1.5
TGIG				*i* S	Sn	03 00 00.9	+0.7
PCIG		2.79	259	*e*P	Pn	02 59 29.6	+0.2
PCIG				*i* S	Sn	03 00 02.7	0.0
TGUH	Tegucigalpa,Un	3.72	126	*i* P	Pn	02 59 40.8	-1.0

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*IDC **09** 03:31:23.6±1.0, 54.°98N×162.°72E, h0^{km}, mb3.8/14, mb1 4.0/15, mb1mx3.8/64, mbtmp3.8/15, ML2.8/1, MS3.5/8, Ms1 3.5/8, ms1mx3.2/48, Error ellipse: s-maj=27.1km s-min=17.2km az=138.0*

*KRSC **09** 03:31:23.9±0.6, 54.°72N×163.°21E, h64^{km}±19^{km}, ML4.2*

*MOS **09** 03:31:26.0±0.7, 54.°74N×163.°14E, h45^{km}, mb4.6/1, Error ellipse: s-maj=7.2km s-min=4.9km az=85.8*

*NEIC **09** 03:31:29±1.5, 54.°9N±0.°1×162.°7E±0.°2, h37^{km}±10^{km}, mb4.3/8, Error ellipse: s-maj=23.2km s-min=13.2km az=133.0*

ISC 09 03:31:26.8±2.6, **54.°78N**±0.°04×**163.°02E**±0.°07, **h26**^{km}±18^{km}, **n116,** σ**0.^{s}97**/128, **mb3.8**/16, **MS3.6**/5, **Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	1.44	356	*e*P	Pn	03 31 50.0	-1.1
KBTR				*e*S	Sn	03 32 09.5	+0.3
KBTR	Krutoberegovo	1.44	356	PN	Pn	03 31 50.0	-1.1
KBTR				S	Sn	03 32 09.5	+0.3
KBG	Krutoberegovo	1.49	353	*e*P	Pn	03 31 50.9	-0.9
KBG				*e*S	Sn	03 32 11.0	+0.6
KBG	Krutoberegovo	1.49	353	PN	Pn	03 31 50.9	-0.9
KBG				S	Sn	03 32 11.0	+0.6
TUMD	Tumrok D	1.57	287	*e*P	Pn	03 31 52.9	0.0
KZV	Kizimen	1.61	283	*e*P	Pn	03 31 53.6	0.0
KZV				*e*S	Sb	03 32 15.3	-0.5
KZV	Kizimen	1.61	283	PN	Pn	03 31 53.6	0.0
KZV				S	Sb	03 32 15.3	-0.5
TUMR	Tumrok	1.73	288	*e*P	Pn	03 31 55.7	+0.5
TUMR	Tumrok	1.73	288	PN	Pn	03 31 55.7	+0.5
BKI	Bering	1.76	75	*e*P	Pn	03 31 52.9	-2.6
BKI				*e*S	Sn	03 32 14.5	-2.4
BKI	Bering	1.76	75	PN	Pn	03 31 52.9	-2.6
BKI				S	Sn	03 32 14.5	-2.4
ZLN	Zelenaya	1.77	315	*e*P	Pn	03 31 56.6	+0.8
ZLN	Zelenaya	1.77	315	PN	Pn	03 31 56.6	+0.8
CIRR	Tsirk	1.86	317	*e*P	Pn	03 31 57.6	+0.5
CIRR	Tsirk	1.86	317	PN	Pn	03 31 57.6	+0.5
LGNR	Loginova	1.86	316	*e*P	Pn	03 31 57.9	+0.7
LGNR	Loginova	1.86	316	PN	Pn	03 31 57.9	+0.7
KMNR	Kamenistaya	1.87	303	*e*P	Pn	03 31 57.5	+0.3
KMNR				*e*S	Sb	03 32 22.7	-0.5
KMNR	Kamenistaya	1.87	303	PN	Pn	03 31 57.5	+0.3
KMNR				S	Sb	03 32 22.7	-0.5
KIRR	Kirishev	1.93	309	*e*P	Pn	03 31 58.8	+0.8
KIRR	Kirishev	1.93	309	PN	Pn	03 31 58.8	+0.8
KRSR	Krestovskiy	2.01	317	*e*P	Pn	03 31 58.9	-0.2
KRSR	Krestovskiy	2.01	317	PN	Pn	03 31 58.9	-0.2
SMKR	Semkarok	2.01	335	*e*P	Pn	03 31 58.8	-0.3
SMKR	Semkarok	2.01	335	PN	Pn	03 31 58.8	-0.3
KLY	Klyuchi	2.04	320	*e*P	Pn	03 31 58.3	-1.1
KLY	Klyuchi	2.04	320	PN	Pn	03 31 58.3	-1.1
BDR	Baidarnaya	2.07	331	*e*P	Pn	03 32 00.4	+0.5
BDR	Baidarnaya	2.07	331	PN	Pn	03 32 00.4	+0.5
SRKR	Sorokina	2.15	332	*e*P	Pn	03 32 01.2	+0.2
SRKR	Sorokina	2.15	332	PN	Pn	03 32 01.2	+0.2
KOZ	Kozyrevsk	2.21	307	*e*P	Pn	03 32 02.3	+0.6
KOZ	Kozyrevsk	2.21	307	PN	Pn	03 32 02.3	+0.6
KII	Karymskiy	2.21	252	*e*P	Pn	03 32 01.2	-0.7
KII	Karymskiy	2.21	252	PN	Pn	03 32 01.2	-0.7
SRDR	Sredinnyy	2.43	311	*e*P	Pn	03 32 04.7	-0.1
SRDR	Sredinnyy	2.43	311	PN	Pn	03 32 04.7	-0.1
SPN	Mys Shipunski	2.44	228	*e*P	Pn	03 32 03.3	-1.6
SPN				*e*S	Sn	03 32 32.7	-1.2
SPN	Mys Shipunski	2.44	228	PN	Pn	03 32 03.3	-1.6
SPN				S	Sn	03 32 32.7	-1.2
NLC	Nalytchevo	2.70	235	*e*P	Pn	03 32 08.0	-0.4
NLC				*e*S	Sn	03 32 41.2	+1.0
NLC	Nalytchevo	2.70	235	PN	Pn	03 32 08.0	-0.4
NLC				S	Sn	03 32 41.2	+1.0
ESO	Esso	2.72	297	*e*P	Pn	03 32 08.8	0.0
ESO	Esso	2.72	297	PN	Pn	03 32 08.8	0.0
SMAR	Somma	2.91	240	*e*P	Pn	03 32 11.9	+0.3
SMAR	Somma	2.91	240	PN	Pn	03 32 11.9	+0.3
KRER	Koryakskii	2.92	241	*e*P	Pn	03 32 11.8	+0.2
KRER	Koryakskii	2.92	241	PN	Pn	03 32 11.8	+0.2
UGLR	Uglovaya	2.93	239	*e*P	Pn	03 32 12.1	+0.3
UGLR	Uglovaya	2.93	239	PN	Pn	03 32 12.1	+0.3
KRX	Arik	2.94	243	*e*P	Pn	03 32 12.2	+0.3
KRX	Arik	2.94	243	PN	Pn	03 32 12.2	+0.3
AVH	Avacha	2.94	241	*e*P	Pn	03 32 12.7	+0.8
AVH	Avacha	2.94	241	PN	Pn	03 32 12.7	+0.8
KOK	Koryaka	2.98	242	*e*P	Pn	03 32 13.0	+0.6
KOK	Koryaka	2.98	242	PN	Pn	03 32 13.0	+0.6
DALK	Dalny	3.07	237	*e*P	Pn	03 32 12.9	-0.6
DALK				*e*S	Sn	03 32 48.9	-0.4
DALK	Dalny	3.07	237	PN	Pn	03 32 12.9	-0.6
DALK				S	Sn	03 32 48.9	-0.4

PET	Petropavlovsk	3.12	238	*e*PN	Pn	03 32 14.7	+0.4
PET				*e*S	Sn	03 32 51.2	+0.6
PET				pmax	pmax		
	comp=Z,106nm,0.9s						
PET				smax	smax		
	comp=N,362nm,0.7s						
PET				smax	smax		
	comp=E,294nm,0.7s						
PET				MLR	MLR		
	comp=Z,400nm,12.0s						
KRMR	Karymshinskiy	3.49	238	*e*P	Pn	03 32 19.9	+0.6
KRMR				*e*S	Sn	03 33 01.1	+1.3
KRMR	Karymshinskiy	3.49	238	PN	Pn	03 32 19.9	+0.6
KRMR				S	Sn	03 33 01.1	+1.3
PETK	Petropavlovsk-	3.56	244	Pn	Pn	03 32 20.9	+0.6
	comp=Z,4.0nm,0.3s,baz=74,slow=18,SNR=57						
PETK				Sn	Sn	03 33 02.8	+1.3
	comp=Z,2.4nm,0.3s,baz=82,slow=21,SNR=5.9						
PETK				LR	LR	03 33 17.3	
	comp=Z,103nm,19.8s,baz=62,slow=32						
PETK	Petropavlovsk-	3.56	244		Pn	03 32 20.6	+0.3
RUS	Russkaya	3.56	231	*e*P	Pn	03 32 20.1	-0.2
RUS				*e*S	Sn	03 33 01.7	+0.1
RUS	Russkaya	3.56	231	PN	Pn	03 32 20.1	-0.2
RUS				S	Sn	03 33 01.7	+0.1
MTVR	Mutnovka	3.68	233	*e*P	Pn	03 32 22.1	0.0
MTVR	Mutnovka	3.68	233	PN	Pn	03 32 22.1	0.0
GRL	Gorelyy	3.69	235	*e*P	Pn	03 32 22.8	+0.6
GRL	Gorelyy	3.69	235	PN	Pn	03 32 22.8	+0.6
ASAK	Asacha	3.88	234	*e*P	Pn	03 32 25.6	+0.8
ASAK	Asacha	3.88	234	PN	Pn	03 32 25.6	+0.8
APC	Apacha	3.94	244	*e*P	Pn	03 32 27.8	+2.4
APC	Apacha	3.94	244	PN	Pn	03 32 27.8	+2.4
OSSR	Ossora	4.49	0	*e*P	Pn	03 32 32.9	0.0
OSSR				*e*S	Sn	03 33 24.0	-0.2
OSSR	Ossora	4.49	0	PN	Pn	03 32 32.9	0.0
OSSR				S	Sn	03 33 24.0	-0.2
MIPR	Malaya Ipel'ka	4.50	239	*e*P	Pn	03 32 34.6	+1.4
MIPR	Malaya Ipel'ka	4.50	239	PN	Pn	03 32 34.6	+1.4
PALN	Palana	4.63	340	*e*P	Pn	03 32 36.5	+1.5
PALN	Palana	4.63	340	PN	Pn	03 32 36.5	+1.5
PAU	Pauzhetka	5.00	231	*e*P	Pn	03 32 40.4	+0.4
PAU	Pauzhetka	5.00	231	PN	Pn	03 32 40.4	+0.4
MA2	Magadan	8.21	311	LR	LR	03 36 58.6	
	comp=Z,207nm,19.6s,baz=118,slow=42						
BILL	Bilibino	13.40	5	PN	Pn	03 34 37.4	+2.5
BILL	Bilibino	13.40	5	Pn	Pn	03 34 37.4	+2.5
KLR	Kul'dur	19.93	267	LR	LR	03 43 26.2	
	comp=Z,83nm,18.6s,baz=60,slow=37						
TIXI	Tiksi	22.34	332	P	P	03 36 20.7	-1.3
	comp=Z,1.8nm,0.3s,baz=130,slow=12,SNR=5.0						
TIXI				LR	LR	03 46 06.8	
	comp=Z,178nm,18.4s,baz=136,slow=40						
TIXI	Tiksi	22.34	332	P	P	03 36 20.8	-1.3
TIXI				IAmb	IAmb	03 36 24.0	
	comp=Z,9.1nm,1.4s						
IMAR	Indian Mountai	23.59	44	P	P	03 36 36.6	+1.6
MJAR	Matsushiro Arr	24.95	233	P	P	03 36 48.6	+0.8
	comp=Z,3.7nm,1.0s,baz=29,slow=9.7,SNR=7.1						
MJAR				LR	LR	03 47 38.2	
	comp=Z,54nm,18.6s,baz=35,slow=39						
IL31		26.40	48	P	P	03 37 01.8	+1.2
ILAR	Eielson Array	26.40	48	P	P	03 37 00.0	-0.7
	comp=Z,1.6nm,1.0s,baz=269,slow=8.1,SNR=11						
BMAR	Burnt Mountain	27.33	42	P	P	03 37 10.1	+1.0
BCAR	Beaver Creek A	28.81	51	P	P	03 37 23.8	+1.5
C36M	Paulatuk	34.67	37	P	P	03 38 14.1	+0.6
C36M				IAmb	IAmb	03 38 15.2	
	comp=Z,7.8nm,1.4s						
TLY	Talaya	34.76	290	LR	LR	03 53 59.9	
	comp=Z,155nm,18.0s,baz=42,slow=39						
H11N2	WAKE ISLAND Hy	35.11	174	T	T	04 15 44.2	
	baz=355,slow=76,SNR=8.2						
H11N3	WAKE ISLAND Hy	35.12	174	T	T	04 15 42.9	
	baz=355,slow=76,SNR=9.4						
H11N1	WAKE ISLAND Hy	35.13	174	T	T	04 15 44.4	
	baz=355,slow=76,SNR=7.8						
YKA	Yellowknife Ar	40.75	45	P	P	03 39 06.3	+1.3
	comp=Z,0.3nm,0.6s,baz=299,slow=7.5,SNR=4.0						
KURK	Kurchatov	48.31	302	P	P	03 40 04.6	-0.9
KURK	Kurchatov	48.31	302	P	P	03 40 04.5	-0.9
KURBB	Kurchatov Arra	48.41	302	P	P	03 40 04.6	-1.7
	comp=Z,0.4nm,0.7s,baz=54,slow=7.4,SNR=3.7						
MK31	Makanchi Array	48.98	296	P	P	03 40 09.1	-1.6
MK31				pmax	pmax		
	comp=Z,8.0nm,2.0s						
MK31	Makanchi Array	48.98	296	P	P	03 40 09.1	-1.6
MK31				IAmb	IAmb	03 40 21.3	
	comp=Z,8.5nm,1.9s						
MKAR	Makanchi Array	48.98	296	P	P	03 40 07.7	-3.0
	comp=Z,0.5nm,0.6s,baz=58,slow=7.3,SNR=5.3						
BVAR	Borovoye Array	50.69	309	P	P	03 40 21.5	-2.1
	comp=Z,1.0nm,0.7s,baz=56,slow=9.1,SNR=7.0						
ABKAR	Akbulak array	58.00	311	P	P	03 41 15.1	-1.7
FINES	FINESS Array B	59.24	338	P	P	03 41 24.4	-0.8
	comp=Z,2.5nm,0.7s,baz=25,slow=9.5,SNR=8.3						
CMAR	Chiang Mai Arr	60.20	260	LR	LR	04 10 52.3	
	comp=Z,45nm,19.2s,baz=5.0,slow=39						
BORG	Borgarnes	60.76	2	LR	LR	04 11 16.4	
	comp=Z,239nm,18.4s,baz=109,slow=40						
AKASG	Malin Array Be	68.03	330	P	P	03 42 22.1	-1.3
	comp=Z,1.3nm,0.5s,baz=28,slow=6.2,SNR=6.7						
KBZ	Khabaz	69.47	318	P	P	03 42 32.5	0.0
	comp=Z,5.3nm,0.9s,baz=90,slow=2.4,SNR=5.6						
GERES	GERESS Array B	73.57	339	P	P	03 42 58.1	+0.9
	comp=Z,0.4nm,0.8s,baz=357,slow=5.9,SNR=3.7						
BRTR	Keskin Array B	76.39	322	P	P	03 43 13.5	-0.2
	comp=Z,0.8nm,0.8s,baz=55,slow=5.5,SNR=3.6						
ASAR	Alice Springs	82.03	207	P	P	03 43 45.5	+1.3
	comp=Z,0.5nm,0.9s,baz=8.4,slow=7.6,SNR=3.5						
ESDC	Sonseca Array	85.26	350	P	P	03 44 01.5	+0.5
	comp=Z,0.2nm,0.4s,baz=7.8,slow=4.5,SNR=5.4						
ESDC	Sonseca Array	85.26	350	P	P	03 44 01.9	+0.9

IDC 09 03:34:01.6±1.9**, 1°.13N×127°.02E, h0**^{km}**, mb3.4**/4**, mb1 3.6**/4**, mb1mx3.3**/61**, mbtmp3.4**/4**, Error ellipse: s-maj=179.8km s-min=21.7km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.14	161	P	P	03 38 58.0	-1.1
	0.6nm,0.5s,baz=340,slow=12,SNR=10						
ASAR	Alice Springs	25.54	165	P	P	03 39 33.2	+1.0
	1.1nm,1.1s,baz=345,slow=11,SNR=6.1						
MKAR	Makanchi Array	59.85	326	P	P	03 44 10.1	+1.0
	0.4nm,0.7s,baz=132,slow=6.4,SNR=3.6						
KURBB	Kurchatov Arra	64.08	328	P	P	03 44 36.1	-1.2
	0.5nm,0.7s,baz=123,slow=7.0,SNR=5.9						

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*KRSC **09** 03:37:12.9±0.8, 51°.15N×157°.22E, h93^{km}±11^{km}, ML4.0*

*IDC **09** 03:37:15.8±2.6, 51°.39N×156°.87E, h118^{km}±20^{km}, mb3.1/4, mb1 3.3/5, mb1mx2.9/60, mbtmp3.4/5, Error ellipse: s-maj=33.7km s-min=18.9km az=155.0*

ISC 09 03:37:12.6±1.2**, 51°.1N**±0°.1×**157°.13E**±0°.08**, h97**^{km}±9^{km}**, n33, σ1s.15**/42**, mb3.4**/4**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	Pauzhetka	0.45	334	*e*P	Pn	03 37 28.7	+1.0
SKR	Severo-Kuril's	0.75	240	*e*P	Pn	03 37 31.9	+1.8
SKR				*e*S	Sn	03 37 46.0	+2.7
KDTR	Khodutka, Kamc	0.95	38	*i* P	Pn	03 37 32.6	+0.3
KDTR				*e*S	Sn	03 37 46.8	-0.2
ALID	Alaid	1.02	260	*i* P	Pn	03 37 34.6	+1.4
ALID				*e*S	Sn	03 37 50.3	+1.7
MIPR	Malaya Ipel'ka	1.24	349	*e*P	Pn	03 37 36.0	+0.5
MIPR				*e*S	Sn	03 37 52.8	0.0
ASAK	Asacha	1.41	20	*e*P	Pn	03 37 38.4	+0.8
MTVR	Mutnovka	1.57	24	*e*P	Pn	03 37 40.4	+0.7
MTVR				*e*S	Sn	03 38 00.8	+0.6
GRL	Gorelyy	1.60	21	*e*P	Pn	03 37 40.8	+0.7
GRL				*e*S	Sn	03 38 01.2	+0.2
RUS	Russkaya	1.62	31	*e*P	Pn	03 37 40.2	0.0
RUS				*e*S	Sn	03 38 00.1	-1.0
APC	Apacha	1.87	0	*e*P	Pn	03 37 43.4	+0.1
APC				*e*S	Sn	03 38 06.4	-0.3
KRMR	Karymshinskiy	1.88	19	*e*P	Pn	03 37 43.5	+0.1
KRMR				*e*S	Sn	03 38 05.9	-1.0
PETK	Petropavlovsk-	2.08	9	P	Pn	03 37 46.6	+0.5
	11nm,0.3s,baz=182,slow=12,SNR=309						
PETK				S	Sn	03 38 10.3	-1.4
	4.2nm,0.3s,baz=175,slow=18,SNR=5.7						
DALK	Dalny	2.21	26	*e*P	Pn	03 37 48.1	+0.3
DALK				*e*S	Sn	03 38 14.1	-0.6
UGLR	Uglovaya	2.39	25	*e*P	Pn	03 37 51.7	+1.4
AVH	Avacha	2.42	24	*e*P	Pn	03 37 52.3	+1.7
KOK	Koryaka	2.42	22	*e*P	Pn	03 37 52.2	+1.6
SMAR	Somma	2.43	24	*e*P	Pn	03 37 52.1	+1.2
KRER	Koryakskii	2.46	23	*e*P	Pn	03 37 53.1	+1.9
KRX	Arik	2.48	21	*e*P	Pn	03 37 52.6	+1.1
NLC	Nalytchevo	2.52	32	*e*P	Pn	03 37 51.3	-0.5
NLC				*e*S	Sn	03 38 19.8	-2.0
SPN	Mys Shipunski	2.71	40	*e*P	Pn	03 37 54.6	+0.2
SPN				*e*S	Sn	03 38 25.1	-1.4
KII	Karymskiy	3.30	24	*e*P	Pn	03 38 02.4	+0.1
KZV	Kizimen	4.48	24	*e*P	Pn	03 38 19.9	+1.5
TUMD	Tumrok D	4.59	24	*e*P	Pn	03 38 21.3	+1.6
TUMR	Tumrok	4.60	22	*e*P	Pn	03 38 22.1	+2.2
KMNR	Kamenistaya	5.06	20	*e*P	Pn	03 38 28.4	+2.3
KBTR	Krutoberegovo	6.17	31	*e*P	Pn	03 38 42.1	+1.1
MJAR	Matsushiro Arr	19.84	230	P	Pn	03 41 38.2	0.0
	baz=191,slow=19,SNR=3.3						
YKA	Yellowknife Ar	45.90	40	P	P	03 45 24.9	0.0
	0.2nm,0.6s,baz=299,slow=7.4,SNR=3.7						
KURBB	Kurchatov Arra	47.35	302	P	P	03 45 34.3	-2.1
	0.4nm,0.4s,baz=61,slow=7.6,SNR=6.8						
MKAR	Makanchi Array	47.39	296	P	P	03 45 35.9	-0.9
	0.2nm,0.5s,baz=61,slow=6.7,SNR=3.7						
TXAR	Lajitas Array	73.14	64	P	P	03 48 33.4	+0.7
	0.4nm,0.5s,baz=310,slow=5.6,SNR=2.9						
PLCA	Paso Flores	145.80	91	PKPbc	PKPdf	03 56 40.2	+0.9
	2.3nm,0.9s,baz=288,slow=3.2,SNR=3.0						

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*IDC **09** 03:40:10.0±5.5, 38°.30N×73°.41E, h126^{km}±48^{km}, mb3.4/2, mb1 3.2/7, mb1mx2.9/55, mbtmp3.6/7, Error ellipse: s-maj=54.1km s-min=42.6km az=125.0*

*NNC **09** 03:40:11.5±5.9, 38°.67N×72°.90E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=47.4km s-min=35.4km az=158.0*

ISC 09 03:40:12.6±1.8**, 38°.5N**±0°.1×**73°.2E**±0°.1**, h140**^{km}**, n12, σ1s.17**/15**, 4C-1D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	4.28	13	P	Pn	03 41 17.0	+0.6
	0.8nm,0.3s,baz=165,slow=7.9,SNR=10						
AAK				S	Sn	03 42 05.2	-0.7
	1.4nm,0.3s,baz=308,slow=23,SNR=11						
AAK	Ala-Archa	4.28	13	⇑Pn	Pn	03 41 16.4	+0.1
	2.6nm,0.6s						
AAK				⇑Sn	Sn	03 42 06.1	+0.2
	3.9nm,0.5s						
KK31	Karatay Array	5.06	337	⇑Pn	Pn	03 41 26.8	+0.2
	2.6nm,0.3s,baz=135,slow=11,SNR=170						
KK31				Sn	Sn	03 42 22.4	-2.0
	17nm,0.6s,baz=154,slow=22,SNR=21						
MKAR	Makanchi Array	10.67	36	P	Pn	03 42 39.8	-1.8
	0.1nm,0.3s,baz=215,slow=13,SNR=5.0						
KURBB	Kurchatov Arra	12.73	16	P	P	03 43 13.3	-0.7
	0.0nm,0.3s,baz=207,slow=10,SNR=5.2						
AB31	Akbulak array	14.39	323	⇓P	Pn	03 43 29.9	+0.2
	0.3nm,0.3s,baz=133,slow=13,SNR=14						
BVAR	Borovoye Array	14.69	353	P	Pn	03 43 35.5	+2.1
	0.3nm,0.3s,baz=155,slow=9.3,SNR=7.8						
AKTO	Aktyubinsk	16.11	323	P	Pn	03 43 52.0	+1.0
	0.2nm,0.3s,baz=141,slow=12,SNR=4.9						
AKTO	Aktyubinsk	16.11	323	⇑P	Pn	03 43 50.7	-0.3
	2.2nm,0.8s						
ZALV	Zalesovo Beam	17.41	23	P	P	03 44 05.1	-0.7
	0.2nm,0.3s,baz=212,slow=10,SNR=4.4						
ARCES	ARCESS Array B	40.03	336	P	P	03 47 34.6	+1.2
	3.3nm,0.8s,baz=114,slow=9.0,SNR=5.1						
TORD	Torodi Ar. Bea	67.51	269	P	P	03 50 53.3	-0.6
	0.2nm,0.4s,baz=39,slow=6.3,SNR=7.5						

IDC 09 03:45:42.3±11.0**, 23°.27S×70°.42E, h0**^{km}**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/42**, mbtmp3.4**/3**, Error ellipse: s-maj=351.1km s-min=43.7km az=52.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	57.78	104	P	P	03 55 36.8	+1.0
	0.3nm,0.7s,baz=255,slow=6.5,SNR=5.1						
WRA	Warramunga Arr	59.10	100	P	P	03 55 44.0	-1.0
	0.5nm,0.9s,baz=256,slow=6.8,SNR=3.3						
MKAR	Makanchi Array	70.55	9	P	P	03 56 59.0	+0.1
	0.3nm,0.8s,baz=190,slow=4.4,SNR=3.5						

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*NCEDC **09** 04:25:40.6±1.2, 38°.81N±0°.02×122°.80W±0°.03, h3^{km}±5^{km}, ML2.8/34, Error ellipse: s-maj=4.0km s-min=2.1km az=64.0*

NEIC 09 04:25:40.7±1.0**, 38°.84N**±0°.02×**122°.75W**±0°.02**, h2**^{km}±6^{km}**, Error ellipse: s-maj=2.9km s-min=2.1km az=63.0, Northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSGM	Seigler Mounta	0.04	51		Pg	04 25 43.0	+1.6
GDXM	Geysers	0.05	227		Sg	04 25 41.9	-0.6
GDXM	Geysers	0.05	227	Pg	Pg	04 25 41.2	-0.5
GCRM	Castle Rock Sp	0.07	161		Pg	04 25 42.2	+0.1
GACM	Adobe Creek	0.10	288		Pg	04 25 42.6	0.0
GPMM	Pine Mountain	0.16	272		Pg	04 25 43.4	-0.3
NHSM	Mount Saint He	0.21	151		Pg	04 25 44.8	0.0
GHLM	Highland Sprin	0.29	313		Pg	04 25 46.6	+0.3
MAC	Mark West Spri	0.29	176		Pg	04 25 46.2	-0.1
HOPS	Hopland Field	0.29	301		Sg	04 25 46.7	-3.5
HOPS	Hopland Field	0.29	301	Pg	Pg	04 25 46.1	-0.3
NSHM	Saint Helena R	0.34	161		Pg	04 25 47.2	0.0
GBMM	Baldy Mountain	0.36	33		Pb	04 25 49.3	-0.5
GSNM	Snow Mountain	0.36	286		Pg	04 25 47.7	+0.1
GDCM	Dry Creek	0.39	259		Pg	04 25 48.0	-0.2
NTYM	Taylor	0.46	172		Pg	04 25 49.4	-0.1
NBPM	Berryessa Peak	0.47	112		Pb	04 25 51.3	-0.3
GTSM	Trough Springs	0.48	13		Pb	04 25 51.6	-0.3
CVS	Carmenet Viney	0.55	156		Pg	04 25 51.1	0.0
NAPC	Atlas Peak	0.56	136		Pg	04 25 51.7	+0.3
GGUM	Gualala	0.59	272		Pg	04 25 51.9	0.0
GFC	Funks Creek	0.60	36		Pn	04 25 55.5	-0.7
GHOM	Hamilton Openi	0.65	288		Pg	04 25 53.4	+0.2
NDHM	Dunnigan Hills	0.66	97		Pb	04 25 55.8	+0.9
SNT	Sears Point	0.70	161		Pg	04 25 53.7	-0.4
MCCM	Marconi Confer	0.70	189		Sg	04 25 54.3	-9.0
MCCM	Marconi Confer	0.70	189	Pg	Pg	04 25 54.0	-0.2
NADM	Allendale	0.72	122		Pb	04 25 56.6	+0.7
GCK	Clark Valley	0.74	19		Pn	04 25 57.8	-0.4
GNAM	Navarro Ridge	0.77	297		Pg	04 25 56.2	+0.7
NOLM	Olema	0.80	183		Pg	04 25 56.1	+0.1
GASB	Alder Springs	0.81	2		Pb	04 25 58.4	+0.8
OSUM	Sutter Buttes	0.82	58		Pb	04 25 57.1	-0.5
GTC	Three Chop Rid	0.84	312		Pg	04 25 57.0	+0.3
SUTB	Sutter Butte	0.84	62		Pg	04 25 57.0	+0.2
NLHM	Lake Herman	0.86	147		Pg	04 25 57.3	+0.2
NPRM	Point Reyes	0.87	194		Pg	04 25 57.1	-0.2
CPMM	Point Molate	0.93	163		Pg	04 25 58.3	-0.2
GVV	Valley View	0.93	3		Pn	04 26 00.8	-0.2
CSPM	San Pablo Ridg	0.95	159		Pg	04 25 59.1	+0.2
CPIM	Pinole Ridge	0.95	154		Pg	04 25 59.1	+0.2
KFPM	Farley Peak	0.95	327		Pb	04 25 59.6	-0.3
VAK	Adit at Lawren	1.04	158		Pg	04 26 00.4	-0.2
BL67	Building 67, L	1.04	158		Pg	04 26 00.4	-0.2
CVPM	Vollmer Peak	1.04	157		Pg	04 26 00.4	-0.3
BKS	Berkeley--Byer	1.05	157		Pg	04 26 00.3	-0.4
KCPM	Cahto Peak	1.06	323		Pg	04 26 01.1	+0.1
JPRM	Presidio of Sa	1.07	168		Pg	04 26 00.8	-0.3
ORV	Oroville	1.20	53	Pg	Pg	04 26 02.4	-1.3
AFDM	Forest Hills D	1.39	85		Pn	04 26 05.3	-1.9
KMRM	Mail Ridge	1.56	332	Pg	Pg	04 26 12.5	+1.8
WDC	Whiskeytown Da	1.74	5		Pn	04 26 12.6	+0.6
CMB	Columbia Colle	2.02	113		Pn	04 26 14.9	-0.9
RUBR	Rubicon Trail	2.03	83		Pn	04 26 16.1	0.0
BEKR	Beckworth	2.11	60		Pn	04 26 17.7	+0.5
MPK	Martis Peak	2.16	77		Pn	04 26 18.9	+0.9
SAO	San Andreas Ge	2.32	153		Pn	04 26 18.3	-1.6
VCNR	Virginia City	2.45	78		Pn	04 26 22.8	+0.8
PNTR	Pine Nut	2.46	83		Pn	04 26 22.8	+0.6
YERR	Yerington	2.74	86		Pn	04 26 26.0	+0.2
PAHR	Pah Rah Range	2.75	71		Pn	04 26 26.1	+0.2
PMPB	Monarch Peak	3.04	149		Pn	04 26 29.6	-0.3
RYN	Ryan	3.31	92		Pn	04 26 33.8	+0.1
NVAR	Mina Array Bea	3.50	95		Pn	04 26 36.3	-0.1
NV11	Mina Array Sit	3.62	95		Pn	04 26 37.6	-0.3
KVN	Kaiserville	3.63	85		Pn	04 26 37.8	-0.3
ISA	Isabella, Lake	4.66	132		Pn	04 26 51.9	-0.2

IDC 09 04:33:40.0±2.8**, 4°.60S×133°.24E, h0**^{km}**, mb3.3**/1**, mb1 4.1**/4**, mb1mx3.7**/24**, mbtmp3.9**/4**, ML4.1**/3**, MS3.3**/4**, Ms1 3.4**/4**, ms1mx3.0**/14**, Error ellipse: s-maj=105.5km s-min=31.0km az=80.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	14.62	110	LR	LR	04 43 32.5	
	comp=Z,94nm,20.1s,baz=352,slow=40						
WRA	Warramunga Arr	15.29	176	Pn	Pn	04 37 15.6	-1.7
	1.3nm,0.3s,baz=357,slow=32,SNR=13						
WRA				Sn	Sn	04 40 01.4	-6.1
	0.8nm,0.3s,baz=40,slow=26,SNR=11						
FITZ	Fitzroy Crossi	15.33	208	Pn	Pn	04 37 16.2	-1.6
	0.4nm,0.3s,baz=40,slow=11,SNR=8.9						
FITZ				Sn	Sn	04 40 04.2	-4.4
	0.2nm,0.3s,baz=56,slow=18,SNR=4.9						
ASAR	Alice Springs	18.96	178	P	Pn	04 38 04.3	+0.7
	0.3nm,0.3s,baz=2.5,slow=11,SNR=19						
GUMO	Guam	21.45	32	LR	LR	04 46 15.1	
	comp=Z,46nm,20.0s,baz=114,slow=35						
NWAO	Narrogin (SRO)	31.90	206	LR	LR	04 54 09.1	
	comp=Z,135nm,18.8s,baz=114,slow=38						
CMAR	Chiang Mai Arr	40.83	305	LR	LR	05 03 25.6	
	comp=Z,39nm,18.0s,baz=266,slow=44						
MKAR	Makanchi Array	68.06	325	P	P	04 44 41.5	0.0
	0.2nm,0.6s,baz=114,slow=9.8,SNR=2.3						

IDC 09 04:51:00.9±2.3**, 22°.24S×112°.91W, h0**^{km}**, mb3.5**/4**, mb1 4.0**/4**, mb1mx3.8**/15**, mbtmp3.5**/4**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx3.1**/12**, Error ellipse: s-maj=115.4km s-min=56.1km az=104.0, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	Rapa Nui	5.86	147	LR	LR	04 54 16.5	
	comp=Z,367nm,18.6s,baz=310,slow=33						
TXAR	Lajitas Array	52.04	10	P	P	05 00 13.5	+1.0
	0.2nm,0.5s,baz=184,slow=5.2,SNR=1.7						
NVAR	Mina Array Bea	60.55	355	P	P	05 01 13.6	+0.2
	0.5nm,0.7s,baz=182,slow=10,SNR=5.2						
PDAR	Pinedale Array	64.75	3	P	P	05 01 41.3	0.0
	0.3nm,0.6s,baz=211,slow=6.9,SNR=2.9						
YKA	Yellowknife Ar	84.45	359	P	P	05 03 33.1	-1.8
	0.4nm,0.8s,baz=194,slow=5.3,SNR=4.4						
H11S2	WAKE ISLAND Hy	88.38	291	T	T	06 39 58.2	
	baz=116,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	88.39	291	T	T	06 40 01.5	
	baz=116,slow=75,SNR=9.7						
H11S3	WAKE ISLAND Hy	88.40	291	T	T	06 39 59.5	
	baz=116,slow=75,SNR=10						
BRTR	Keskin Array B	146.69	51	PKPbc	PKPbc	05 10 44.3	-0.8
	0.7nm,0.8s,baz=343,slow=3.0,SNR=2.4						
CMAR	Chiang Mai Arr	149.93	269	PKPbc	PKPbc	05 10 54.2	+0.2
	0.6nm,0.3s,baz=31,slow=2.1,SNR=1.6						

WEL 09 05:13:32.6, 43°S±1°×**17°2E**±°**, h8**^{km}±1^{km}**, M2.6**/15**, mB4.5**/1**, ML2.7**/13**, MLv2.6**/15**, Mw(mB)3.7**/1**, Error ellipse: s-maj=0.0km s-min=0.0km az=135.2, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMCZ	Amberley	0.23	149	P	Pg	05 13 38.8	+1.5
LTZ	Lake Taylor	0.25	321	P	Pb	05 13 39.4	0.0
GVZ	Greta Valley S	0.40	89	P	Pb	05 13 41.8	-0.2
OXZ	Oxford	0.48	223	P	Pb	05 13 43.8	+0.6
MQZ	McQueen's Vall	0.74	171	P	Pb	05 13 48.0	+0.3
INZ	Inchbonnie	0.81	288	P	Pn	05 13 50.1	-0.1
OKCZ	Okains Bay	0.85	151	P	Pn	05 13 51.3	+0.3
AKCZ	Akaroa Harbour	0.95	161	P	Pn	05 13 52.1	-0.1
KHZ	Kahutara	0.96	54	P	Pn	05 13 52.3	0.0
THZ	Tophouse	1.25	14	P	Pg	05 13 56.9	+0.3
RPZ	Rata Peaks	1.28	234	P	Pn	05 13 56.8	+0.1
WVZ	Waitaha Valley	1.29	265	P	Pg	05 13 58.1	+0.9
BSWZ	Blackbirch Sta	1.63	40	P	Pb	05 14 02.4	-0.5
NNZ	Nelson	1.88	21	P	Pb	05 14 06.4	-0.7
TUWZ	Tuamarina	1.89	35	P	Pb	05 14 07.0	-0.3
QRZ	Quartz Range	2.15	1	P	Pn	05 14 09.4	+0.6
LBZ	Lake Benmore	2.18	229	P	Pg	05 14 15.5	+1.0
TCW	Tory Channel	2.21	38	P	Pb	05 14 12.4	-0.4
DUWZ	D'Urville Isla	2.42	27	P	Pn	05 14 14.4	+1.8
ODZ	Otahua Downs	2.46	212	P	Pn	05 14 12.7	-0.3
MTW	Mount Morrison	2.89	52	P	Pb	05 14 23.2	-1.2
JCZ	Jackson Bay	2.91	247	P	Pn	05 14 20.6	+1.4
PKE	Pukeiti	3.95	17	P	Pn	05 14 35.9	+2.5
TARZ	Mount Tarawera	5.64	34	P	Pn	05 14 59.6	+2.9

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*MEX **09** 05:15:46.9±1.1, 32°.46N×115°.08W, h5^{km}±10^{km}, MD3.7*

*ECX **09** 05:15:46.2±0.6, 32°.42N×115°.22W, h10^{km}±2^{km}, MD2.4, ML2.6*

ISC 09 05:15:46.3±1.0**, 32°.38N**±0°.04×**115°.16W**±0°.06**, h14**^{km}±5^{km}**, n13, σ0s.59**/18**, 4C-1D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBIG	Mexicali	0.04	306	⇑*e*P	Pg	05 15 48.9	-0.1
MBIG	Mexicali	0.04	306	*e*P	Pg	05 15 48.4	-0.5
MBIG				*i* S	Sg	05 15 51.1	+0.4
CPBX	Cerro Prieto	0.13	286	⇑*e*P	Pg	05 15 49.7	-0.1
CPBX				⇓*e*		05 15 54.4	
CPBX				IAML		05 15 54.4	
	comp=N,13µm,0.1s						
POT2	Potabilizadora	0.31	322	*e*P	Pg	05 15 53.4	+0.7
POT2				*e*S	Sg	05 15 57.3	+0.2
DREC	Desert Rsrch C	0.48	330	*e*P	Pb	05 15 57.4	+0.8
WESC	Westside Schoo	0.61	308	*e*P	Pg	05 15 58.6	+0.4
GLA	Glamis	0.72	23	⇑*e*P	Pn	05 16 01.8	-0.3
GLA				*e*S	Sn	05 16 12.1	-0.8
ESJX	Sierra Juarez	0.77	241	IAML		05 16 12.5	
	comp=E,117nm,0.1s						
ESJX				*e*		05 16 12.5	
SWSC	Sam W. Stewart	0.78	316	*e*S	Sg	05 16 11.7	0.0
IKP	In-Ko-Pah, Jac	0.84	289	⇑*e*P	Pg	05 16 02.3	-0.4
ECBX	El Chinero	0.91	174	*e*P	Pn	05 16 04.8	+0.1
ECBX				*e*S	Sn	05 16 18.1	+0.6
TJIG	Tijuana	1.28	273	*e*P	Pn	05 16 09.6	-0.1
TJIG				*e*S	Sb	05 16 25.3	-1.2
SPIG	San Pedro Mart	1.36	191	*i* P	Pn	05 16 11.1	0.0
SPIG				*e*S	Sb	05 16 28.4	-0.6

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*TIR **09** 05:18:03.2, 41°.49N×19°.47E, h17^{km}, Md2.5/3*

ISC 09 05:17:58.0±3.0**, 42°.0N**±0°.1×**20°.4E**±0°.2**, h10**^{km}**, n5, σ2s.16**/8**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	Peshkopia	0.30	179	*i* PG	Pg	05 18 01.9	-2.3
PHP				*i* SG	Sb	05 18 14.6	+3.9
PUK	Puka	0.41	278	*i* PG	Pg	05 18 00.4	-5.7
PUK				*i* SG	Sg	05 18 10.3	-1.1
DBRK	Dubrovnik	1.83	293	*i* Pn	Pg	05 18 33.5	+0.5
DBRK				Sn	Sb	05 18 53.6	-0.8
STON	Ston	2.21	294	*i* Pn	Pb	05 18 38.2	+0.2
STON				Sn	Sb	05 19 05.9	+0.5
KIJV	Kijevo	3.58	306	Sn	Sn	05 19 36.4	+0.6

VIE 09 05:32:50.8±0.3**, 47°.15N×14°.51E, h6**^{km}±6^{km}**, ml1.0**/5**, Error ellipse: s-maj=2.9km s-min=1.9km az=121.0 7 km SE of Unzmarkt, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOKA	Soboth	0.59	142	*e*Pg	Pg	05 33 02.4	+0.2
	0.1nm,0.0s						
SOKA				*e*Sg	Sg	05 33 10.6	+0.7
	0.6nm,0.1s						
OBKA	Obir	0.64	177	*e*Pg	Pg	05 33 03.6	+0.5
	0.4nm,0.1s						
OBKA				Sg	Sg	05 33 12.5	+1.0
	0.2nm,0.1s						
ARSA	Arzberg	0.70	81	Pg	Pg	05 33 03.9	-0.3

	0.3nm,0.2s						
ARSA				Sg	Sg	05 33 13.4	+0.1
	0.1nm,0.1s						
MYKA	**Terra Mystica**	**0.79**	**229**	Sg	Sg	05 33 16.1	0.0
	0.5nm,0.1s						

LJU 09 05:33:00.6, 45°.74N×14°.87E, h2^{km}, ML0.1, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VISS	**Visnje**	**0.06**	**339**	⇓ *i*Pg	Pg	05 33 01.9	0.0
VISS				*i* Sg	Sg	05 33 02.9	+0.1
	comp=Z,5.0nm,0.1s						

IDC 09 05:36:08.6±3.1, 4°.49S×133°.16E, h0^{km}, mb3.2/1, mb1 3.7/5, mb1mx3.5/46, mbtmp3.6/5, ML3.5/4, MS3.5/1, Ms1 3.4/1, ms1mx2.7/14, Error ellipse: s-maj=127.4km s-min=25.9km az=78.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.06**	**332**	Pn	Pn	05 37 12.4	+0.3
	0.9nm,0.3s,baz=125,slow=23,SNR=1.8						
SIJI				Sn	Sn	05 37 57.9	-2.6
	1.4nm,0.3s,baz=84,slow=24,SNR=1.5						
FITZ	**Fitzroy Crossi**	**15.40**	**208**	Pn	Pn	05 39 47.0	-0.3
	0.3nm,0.3s,baz=30,slow=11,SNR=10						
FITZ				Sn	Sn	05 42 31.8	-7.0
	0.1nm,0.3s,baz=136,slow=12,SNR=2.4						
WRA	**Warramunga Arr**	**15.40**	**176**	Pn	Pn	05 39 46.1	-1.3
	0.1nm,0.3s,baz=354,slow=13,SNR=3.0						
WRA				Sn	Sn	05 42 28.9	-10
	0.0nm,0.3s,baz=353,slow=24,SNR=2.0						
ASAR	**Alice Springs**	**19.08**	**178**	P	Pn	05 40 33.6	0.0
	0.2nm,0.3s,baz=4.8,slow=12,SNR=18						
STKA	**Stephens Creek**	**28.37**	**165**	LR	LR	05 54 47.6	
	comp=Z,97nm,21.2s,baz=203,slow=39						
MKAR	**Makanchi Array**	**67.93**	**325**	P	P	05 47 09.2	-0.1
	0.1nm,0.4s,baz=112,slow=7.2,SNR=1.5						

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*IDC **09** 05:38:27.8±0.9, 17°.77N×119°.82E, h0^{km}, mb3.7/8, mb1 3.9/8, mb1mx3.5/52, mbtmp3.7/8, Error ellipse: s-maj=79.7km s-min=17.4km az=65.0*

ISC 09 05:38:32.6±0.9, 17°.8N±0°.2×119°.8E±0°.5, h32^{km}, n8, $\sigma 0^{s}.77$/8, mb3.6/8, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**31.95**	**343**	P	**P**	**05 44 56.2**	**+0.6**
	0.2nm,0.4s,baz=179,slow=9.8,SNR=3.0						
WRA	**Warramunga Arr**	**40.09**	**158**	P	**P**	**05 46 04.2**	**-1.2**
	0.9nm,0.5s,baz=335,slow=9.6,SNR=6.4						
MKAR	**Makanchi Array**	**42.30**	**322**	P	**P**	**05 46 23.2**	**-0.2**
	0.7nm,0.9s,baz=127,slow=9.3,SNR=3.4						
ASAR	**Alice Springs**	**43.41**	**161**	P	**P**	**05 46 32.7**	**+0.1**
	0.3nm,0.5s,baz=339,slow=6.8,SNR=5.8						
ZALV	**Zalesovo Beam**	**45.09**	**331**	P	**P**	**05 46 45.3**	**-0.3**
	1.6nm,0.9s,baz=131,slow=8.1,SNR=5.0						
KURBB	**Kurchatov Arra**	**46.37**	**325**	P	**P**	**05 46 55.3**	**-0.5**
	1.0nm,0.3s,baz=121,slow=8.7,SNR=10						
STKA	**Stephens Creek**	**53.60**	**157**	P	**P**	**05 47 51.7**	**+0.9**
	1.4nm,0.5s,baz=333,slow=6.8,SNR=3.0						
YKA	**Yellowknife Ar**	**89.38**	**22**	P	**P**	**05 51 25.6**	**-0.3**
	0.2nm,0.8s,baz=318,slow=3.8,SNR=6.0						

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*MAN **09** 05:43:31.4, 17°.24N×119°.22E, h33^{km}, mb4.6, ML3.4, MS3.3*

*NEIC **09** 05:43:35.4±1.6, 17°.22N±0°.07×119°.42E±0°.09, h42^{km}±7^{km}, mb4.5/45, Error ellipse: s-maj=12.8km s-min=9.5km az=94.0*

*IDC **09** 05:43:36.7±2.9, 17°.15N×119°.45E, h62^{km}±27^{km}, mb3.9/25, mb1 4.0/28, mb1mx3.9/54, mbtmp4.2/28, ML4.0/3, MS4.1/1, Ms1 4.1/1, ms1mx3.0/32, Error ellipse: s-maj=18.3km s-min=11.0km az=74.0*

ISC 09 05:43:31.2±0.4, 17°.24N±0°.04×119°.25E±0°.05, h10^{km}, n100, $\sigma 1^{s}.39$/104, mb4.4/42, 2C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOLP	**Bolinao**	**1.07**	**143**	*e*P	**Pg**	**05 43 50.6**	**-1.2**
SZP	**Santa**	**1.19**	**75**	Pn	**Pn**	**05 43 52.0**	**-1.9**
SIPP	**Brgy, Tapao**	**1.34**	**59**	⇑ *e*P	**Pn**	**05 43 53.3**	**-2.7**
SIPP				*e*S	**Sb**	**05 44 13.9**	**+0.4**
SCZP	**Santa Cruz**	**1.59**	**156**	*e*P	**Pn**	**05 43 57.4**	**-2.0**
SMPP	**San Manuel, Pa**	**1.75**	**128**	*e*P	**Pn**	**05 44 00.1**	**-1.6**
APYP	**Conner**	**2.00**	**72**	*e*P	**Pn**	**05 44 04.5**	**-0.6**
APYP				*e*S	**Sn**	**05 44 28.4**	**-1.8**
CAUP	**Cauayan**	**2.48**	**97**	*e*P	**Pn**	**05 44 13.4**	**+1.7**
CAUP				*e*S	**Sg**	**05 44 56.5**	**+5.5**
BALP	**Baler**	**2.69**	**123**	*e*P	**Pn**	**05 44 16.0**	**+1.5**
TGY	**Tagaytay City**	**3.52**	**152**	P	**Pn**	**05 44 27.5**	**+1.4**
	45nm,0.3s,baz=289,slow=6.3,SNR=1.9						
TGY	**Tagaytay City**	**3.52**	**152**	⇑ *e*P	Pg	05 44 49.0	+10
LQP	**Lukban**	**3.81**	**144**	*e*P	**Pn**	**05 44 29.1**	**-1.2**
PGP	**Puerto Galera**	**4.07**	**156**	⇓ *e*P	**Pg**	**05 44 52.2**	**+3.0**
TPUB	**Ta-pu**	**6.16**	**12**	Pn	**Pn**	**05 45 03.0**	**+0.6**
YULB	**Yu-li**	**6.41**	**17**	Pn	**Pn**	**05 45 07.3**	**+1.5**
SSLB	**Suanglung**	**6.70**	**13**	Pn	**Pn**	**05 45 11.7**	**+1.9**
SBUM	**Sibu**	**16.24**	**206**		**P**	**05 47 24.1**	**+1.4**
PBKT	**Sadao Pong**	**17.51**	**270**	P	**P**	**05 47 37.9**	**+1.2**
JNU	**Nakatsue**	**18.97**	**31**	P	**P**	**05 47 52.2**	**-0.6**
	0.2nm,0.3s,baz=212,slow=4.0,SNR=4.0						
XAN	**Xi'an**	**19.12**	**333**	P	**Pn**	**05 47 56.1**	**+0.7**
CMAR	**Chiang Mai Arr**	**19.37**	**277**	P	**Pn**	**05 47 59.6**	**+1.2**
	0.4nm,0.3s,baz=98,slow=10.0,SNR=12						
CMAR	**Chiang Mai Arr**	**19.37**	**277**	P	**Pn**	**05 48 01.0**	**+2.6**
CHTO	**Chiang Mai**	**19.37**	**278**	P	**Pn**	**05 47 59.9**	**+1.4**
KSAR	**Wonju Array Be**	**21.51**	**19**	P	**P**	**05 48 20.1**	**-0.3**
KSRS	**Korea Array**	**21.54**	**19**	P	**P**	**05 48 19.6**	**-1.0**
	9.0nm,1.0s,baz=201,slow=12,SNR=12						
BJT	**Baijiatuau**	**22.85**	**354**	P	**P**	**05 48 35.6**	**+1.0**
MJAR	**Matsushiro Arr**	**25.51**	**37**	P	**P**	**05 48 59.0**	**-1.0**
	1.0nm,0.8s,baz=217,slow=5.9,SNR=1.7						
SHL	**Shillong**	**26.75**	**293**	P	**P**	**05 49 12.1**	**+0.6**
SHL				IAmb	IAmb	05 49 13.0	
	comp=Z,14nm,1.2s						
LSA	**Lhasa**	**28.52**	**301**	P	**P**	**05 49 27.2**	**-0.4**
USRK	**Ussuriysk Ar.**	**28.94**	**19**	P	**P**	**05 49 30.9**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=200,slow=12,SNR=2.9						
SONM	**Songino Array**	**32.28**	**344**	P	**P**	**05 50 00.9**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=165,slow=9.8,SNR=9.6						
SONM	**Songino Array**	**32.28**	**344**	P	**P**	**05 50 00.9**	**+0.6**
KLR	**Kul'dur**	**33.48**	**15**	P	**P**	**05 50 11.4**	**+0.8**
	comp=Z,4.3nm,1.0s,baz=214,slow=6.9,SNR=8.4						
FITZ	**Fitzroy Crossi**	**35.68**	**170**	P	**P**	**05 50 27.2**	**-2.7**
	comp=Z,3.8nm,1.0s,baz=344,slow=8.0,SNR=7.8						
FITZ	**Fitzroy Crossi**	**35.68**	**170**	P	**P**	**05 50 27.8**	**-2.1**
FITZ				IAmb	IAmb	05 50 36.0	
	comp=Z,8.6nm,1.1s						
WB0	**Warramunga Arr**	**39.67**	**157**	P	**P**	**05 51 02.2**	**-1.5**
WRA	**Warramunga Arr**	**39.81**	**158**	P	**P**	**05 51 01.9**	**-2.9**
	comp=Z,3.5nm,0.4s,baz=334,slow=9.6,SNR=6.1						
WRA	**Warramunga Arr**	**39.81**	**158**	P	**P**	**05 51 03.1**	**-1.8**
WB2	**Warramunga Arr**	**39.82**	**157**	P	**P**	**05 51 02.9**	**-2.1**
WB2				IAmb	IAmb	05 51 09.9	
	comp=Z,7.6nm,0.8s						
WR0	**Warramunga Arr**	**39.90**	**157**	P	**P**	**05 51 04.1**	**-1.5**
WR0				IAmb	IAmb	05 51 08.4	
	comp=Z,9.1nm,1.2s						
MK31	**Makanchi Array**	**42.38**	**322**	P	**P**	**05 51 26.7**	**+0.9**
MKAR	**Makanchi Array**	**42.38**	**322**	P	**P**	**05 51 27.5**	**+1.7**
	comp=Z,3.4nm,0.9s,baz=123,slow=8.8,SNR=28						
MKAR				PcP	**PcP**	**05 53 18.6**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=94,slow=4.0,SNR=5.4						
MKAR	**Makanchi Array**	**42.38**	**322**	P	**P**	**05 51 27.1**	**+1.3**
MAKZ	**Makanchi**	**42.57**	**322**	P	**P**	**05 51 27.6**	**+0.2**
AS31	**Alice Springs**	**43.10**	**160**	P	**P**	**05 51 30.1**	**-1.8**
ASAR	**Alice Springs**	**43.11**	**160**	P	**P**	**05 51 30.3**	**-1.6**
	comp=Z,1.4nm,0.4s,baz=340,slow=7.2,SNR=44						
NIL	**Nilore**	**44.26**	**301**	P	**P**	**05 51 41.1**	**0.0**
NIL				IAmb	IAmb	05 51 44.2	
	comp=Z,5.1nm,0.7s						
ZAA0	**Zalesovo Array**	**45.29**	**332**	P	**P**	**05 51 49.2**	**+0.2**
ZAA0				IAmb	IAmb	05 51 50.5	
	comp=Z,8.9nm,1.1s						
ZALV	**Zalesovo Beam**	**45.29**	**332**	P	**P**	**05 51 49.5**	**+0.5**
	comp=Z,5.8nm,0.8s,baz=127,slow=7.2,SNR=18						
ZALV	**Zalesovo Beam**	**45.29**	**332**	P	**P**	**05 51 49.2**	**+0.2**
YAK	**Yakutsk**	**45.34**	**7**	P	**P**	**05 51 49.6**	**+0.3**
KURK	**Kurchatov**	**46.49**	**325**	P	**P**	**05 51 59.2**	**+0.6**
PETK	**Petropavlovsk-**	**46.67**	**31**	P	**P**	**05 51 58.6**	**-1.4**
	comp=Z,2.7nm,0.8s,baz=212,slow=14,SNR=2.8						
GAR	**Garm**	**47.64**	**307**	P	**P**	**05 52 07.9**	**0.0**
CHGR	**Chuyangaron**	**48.45**	**307**	P	**P**	**05 52 14.4**	**+0.2**
KK31	**Karatay Array**	**48.53**	**313**	P	**P**	**05 52 16.1**	**+1.5**
KK31				IAmb	IAmb	05 52 16.6	
	comp=Z,5.1nm,0.8s						
KKAR	**Karatay Array**	**48.53**	**313**	P	**P**	**05 52 16.4**	**+1.8**
KKAR				IAmb	IAmb	05 52 16.5	
	comp=Z,5.1nm,0.8s						
KKAR	**Karatay Array**	**48.53**	**313**	P	**P**	**05 52 16.0**	**+1.3**
BVAR	**Borovoye Array**	**52.08**	**325**	P	**P**	**05 52 41.6**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=108,slow=9.5,SNR=8.8						
BVAR				PcP	**PcP**	**05 53 52.7**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=134,slow=6.2,SNR=3.7						
BRVK	**Borovoye**	**52.15**	**325**	P	**P**	**05 52 43.5**	**+1.6**
BBOO	**Buckleboo**	**52.30**	**162**	P	**P**	**05 52 41.9**	**-1.2**
STKA	**Stephens Creek**	**53.34**	**156**	P	**P**	**05 52 48.9**	**-1.9**
	comp=Z,3.0nm,0.7s,baz=332,slow=7.1,SNR=8.4						
STKA	**Stephens Creek**	**53.34**	**156**	P	**P**	**05 52 50.6**	**-0.2**
TIXI	**Tiksi**	**54.70**	**4**	P	**P**	**05 52 59.2**	**-1.0**
TIXI				IAmb	IAmb	05 53 06.8	
	comp=Z,9.2nm,1.5s						
NRIK	**Noril'sk**	**55.67**	**347**	P	**P**	**05 53 07.2**	**-0.1**
	comp=Z,7.7nm,0.7s,baz=124,slow=6.8,SNR=10						
NRIK				LR	LR	06 19 27.0	
	comp=Z,172nm,19.1s,baz=328,slow=38						
ARMA	**Armidale**	**56.72**	**146**	P	**P**	**05 53 12.8**	**-2.7**
GEYT	**Alibeck**	**56.96**	**304**	P	**P**	**05 53 18.2**	**+1.1**
	comp=Z,3.1nm,0.9s,baz=242,slow=3.2,SNR=4.9						
GEYT	**Alibeck**	**56.96**	**304**	P	**P**	**05 53 18.2**	**+1.1**
ABKAR	**Akbulak array**	**57.17**	**318**	P	**P**	**05 53 18.7**	**+0.5**
ABKAR	**Akbulak array**	**57.17**	**318**	P	**P**	**05 53 18.8**	**+0.5**
ABKAR				IAmb	IAmb	05 53 19.4	
	comp=Z,2.9nm,0.8s						
AKTO	**Aktyubinsk**	**58.63**	**319**	P	**P**	**05 53 28.8**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=87,slow=9.9,SNR=4.0						
BILL	**Bilibino**	**58.80**	**19**	P	**P**	**05 53 29.8**	**+0.4**
ARU	**Arti**	**59.68**	**326**	P	**P**	**05 53 35.4**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=97,slow=7.2,SNR=4.0						
ANM	**Nome**	**68.29**	**27**	P	**P**	**05 54 33.4**	**+1.2**
IMAR	**Indian Mountai**	**73.19**	**25**	P	**P**	**05 55 02.5**	**+0.5**
PPLA	**Purkeypile**	**74.16**	**28**	P	**P**	**05 55 07.7**	**-0.3**
PPLA				IAmb	IAmb	05 55 22.2	
	comp=Z,8.8nm,1.3s						
MLY	**Manley**	**74.53**	**26**	P	**P**	**05 55 11.0**	**+1.0**
MLY				IAmb	IAmb	05 55 11.3	
	comp=Z,7.8nm,1.0s						
TRF	**Thorofare Moun**	**74.94**	**28**	P	**P**	**05 55 13.0**	**+0.5**
TRF				IAmb	IAmb	05 55 21.7	
	comp=Z,7.3nm,1.1s						
ARCES	**ARCESS Array B**	**75.30**	**339**	P	**P**	**05 55 13.4**	**-0.9**
	comp=Z,11nm,1.1s,baz=67,slow=9.3,SNR=3.6						
WRH	**Wood River Hil**	**75.74**	**27**	P	**P**	**05 55 17.5**	**+0.6**
WRH				IAmb	IAmb	05 55 24.5	
	comp=Z,2.6nm,0.8s						
ILAR	**Eielson Array**	**76.20**	**26**	P	**P**	**05 55 17.8**	**-1.7**
	comp=Z,0.5nm,0.8s,baz=264,slow=5.1,SNR=5.3						
ILAR	**Eielson Array**	**76.20**	**26**	P	**P**	**05 55 18.6**	**-0.9**
FIA1	**FINESS Array S**	**76.53**	**330**	P	**P**	**05 55 21.6**	**+0.2**
FINES	**FINESS Array B**	**76.53**	**330**	P	**P**	**05 55 20.5**	**-0.9**
	comp=Z,1.9nm,0.6s,baz=55,slow=7.9,SNR=11						
FINES	**FINESS Array B**	**76.53**	**330**	P	**P**	**05 55 21.3**	**-0.1**
BMAR	**Burnt Mountain**	**76.58**	**23**	P	**P**	**05 55 22.2**	**+0.5**
AKASG	**Malin Array Be**	**76.87**	**319**	P	**P**	**05 55 21.9**	**-1.7**
	comp=Z,1.0nm,0.7s,baz=68,slow=6.4,SNR=5.6						
RIDG	**Independent Ri**	**77.28**	**27**	P	**P**	**05 55 25.1**	**-0.6**
RIDG				IAmb	IAmb	05 55 32.6	
	comp=Z,4.6nm,1.0s						
SCRK	**Sand Creek**	**77.60**	**27**	P	**P**	**05 55 27.0**	**-0.6**
SCRK				IAmb	IAmb	05 55 27.3	
	comp=Z,5.7nm,1.4s						
EGAK	**Eagle**	**78.58**	**26**	P	**P**	**05 55 32.8**	**-0.1**
EGAK				IAmb	IAmb	05 55 33.3	
	comp=Z,5.5nm,1.0s						
BCAR	**Beaver Creek A**	**78.78**	**27**	P	**P**	**05 55 35.1**	**+1.0**
BURAR	**Bucovina Array**	**80.13**	**317**	P	**P**	**05 55 42.4**	**+0.7**
INK	**Inuvik**	**80.31**	**21**	P	**P**	**05 55 40.5**	**-1.6**
	comp=Z,1.3nm,0.8s,baz=346,slow=2.7,SNR=4.5						
INK	**Inuvik**	**80.31**	**21**	P	**P**	**05 55 41.8**	**-0.4**
INK				IAmb	IAmb	05 55 49.3	
	comp=Z,6.6nm,1.4s						
NB2	**NORSAR Subarra**	**83.49**	**332**	P	**P**	**05 55 57.5**	**-1.6**
	comp=Z,2.9nm,0.8s,baz=67,slow=4.6						
NOA	**NORSAR Array B**	**83.49**	**332**	P	**P**	**05 55 58.1**	**-1.1**
	comp=Z,2.7nm,0.8s,baz=66,slow=4.8,SNR=7.8						
NC204	**NORSAR Array S**	**83.59**	**333**	P	**P**	**05 55 59.6**	**-0.1**
RES	**Resolute Bay**	**85.76**	**9**	P	**P**	**05 56 10.3**	**0.0**
RES				IAmb	IAmb	05 56 10.8	
	comp=Z,3.3nm,0.9s						
GERES	**GERESS Array B**	**87.02**	**320**	P	**P**	**05 56 15.8**	**-1.3**
	comp=Z,0.7nm,0.8s,baz=40,slow=6.9,SNR=5.2						
YKA	**Yellowknife Ar**	**90.04**	**22**	P	**P**	**05 56 30.2**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=319,slow=4.0,SNR=20						
TXAR	**Lajitas Array**	**117.87**	**42**	PKP	**PKPdf**	**06 02 17.5**	**-1.4**
	comp=Z,0.4nm,0.7s,baz=48,slow=1.3,SNR=2.1						

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*BJI **09** 05:45:54.9±0.0, 16°.97N×119°.54E, h15^{km}, mB4.9/41, mb4.5/56, Ms4.5/35, Ms7 4.2/34*

*IDC **09** 05:45:55.9±0.5, 17°.20N×119°.38E, h0^{km}, mb4.5/26, mb1 4.6/28, mb1mx4.5/48, mbtmp4.5/28, ML4.2/2, MS3.7/15, Ms1 3.8/15, ms1mx3.6/35, Error ellipse: s-maj=17.5km s-min=11.6km az=74.0*

*MAN **09** 05:45:58.2, 17°.29N×119°.30E, h7^{km}, mb5.1, ML4.1, MS4.2*

*NEIC **09** 05:46:02.6±1.6, 17°.35N±0°.06×119°.31E±0°.08, h40^{km}±5^{km}, mb4.8/105, Error ellipse: s-maj=10.7km s-min=8.4km az=111.0*

ISC 09 05:46:00.4±0.8, 17°.30N±0°.03×119°.46E±0°.04, h23^{km}±6^{km}, n247, $\sigma 1^{s}.63$/260, mb4.8/92, MS3.8/18, 12C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SZP	**Santa**	**0.98**	**75**	Pn	**Pb**	**05 46 19.5**	**+0.7**
BOLP	**Bolinao**	**1.01**	**155**	*e*P	**Pb**	**05 46 18.1**	**-1.3**
SIPP	**Brgy, Tapao**	**1.13**	**57**	⇑ *e*P	**Pn**	**05 46 20.7**	**-0.2**
SIPP				*e*S	**Sb**	**05 46 32.0**	**-3.7**
SCZP	**Santa Cruz**	**1.58**	**164**	*e*P	**Pb**	**05 46 31.3**	**+2.4**
SCZP				*e*S	**Sn**	**05 46 46.7**	**0.0**
APYP	**Conner**	**1.79**	**72**	*e*P	**Pn**	**05 46 31.6**	**+1.7**
APYP				*e*S	**Sb**	**05 46 57.3**	**+2.8**
CAUP	**Cauayan**	**2.29**	**99**	*e*P	**Pb**	**05 46 41.4**	**+0.4**
CAUP				*e*S	Sb	05 47 23.5	+15
BALP	**Baler**	**2.56**	**127**	*e*P	**Pn**	**05 46 43.1**	**+2.6**
BALP				*e*S	**Sb**	**05 47 15.2**	**-1.4**
TGY	**Tagaytay City**	**3.48**	**156**	Pn	**Pn**	**05 46 56.9**	**+3.6**
	27nm,0.3s,baz=311,slow=21,SNR=1.8						
TGY				LR	LR	05 48 33.7	
	comp=Z,1μm,21.2s,baz=348,slow=46						
POLP	**Polilio Island**	**3.50**	**137**	*e*P	**Pb**	**05 47 03.8**	**+2.1**
LQP	**Lukban**	**3.75**	**147**	*e*P	**Pn**	**05 46 59.4**	**+2.3**
TWG	**Pinlang**	**5.70**	**15**	Pn	**Pn**	**05 47 21.2**	**-2.4**
YULB	**Yu-li**	**6.30**	**16**		**Pn**	**05 47 33.1**	**+1.1**
SSLB	**Suanglung**	**6.60**	**12**		**Pn**	**05 47 38.1**	**+2.0**
YHNB	**Yeheng**	**7.55**	**13**	Pn	**Pn**	**05 47 48.9**	**-0.2**
QIZ	**Qiongzhong**	**9.30**	**282**	P	**Pn**	**05 48 11.2**	**-2.0**
QIZ				S	**Sn**	**05 49 55.6**	**-1.6**
QIZ				LR	LR		
	comp=N,680nm,10.6s						
QIZ				LR	LR		
	comp=E,540nm,11.6s						
QIZ				LR	LR		
	comp=Z,630nm,12.4s						
WHN	**Wuhan**	**13.98**	**341**	⇑P	**P**	**05 49 27.3**	**+2.4**
NJ2	**Nanjing**	**14.70**	**358**	*e*P	**Pn**	**05 49 28.5**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
GYA	**Guiyang**	**14.96**	**310**	*e*P	**P**	**05 49 37.2**	**+1.2**
SBUM	**Sibu**	**16.38**	**207**	Pn	**Pn**	**05 49 48.3**	**-0.8**
KMI	**Kunming**	**17.41**	**299**	P	**Pn**	**05 50 00.7**	**-1.5**
KMI				pP	pP	05 50 06.7	-2.2
KMI				sP	pwP	05 50 13.0	+0.1
KMI				PP	**PnPn**	**05 50 18.8**	**+6.3**
KMI				S	**Sn**	**05 53 17.5**	**+2.0**
KMI				SS	**SnSn**	**05 53 37.9**	**+8.8**
KMI				pmax	pmax		
	comp=Z,13nm,1.4s						
KMI				pmax	pmax		
	comp=Z,150nm,4.6s						
KMI				LR	LR		
	comp=N,570nm,11.4s						
KMI				LR	LR		
	comp=E,580nm,17.1s						
KMI				LR	LR		
	comp=Z,500nm,23.5s						
PBKT	**Sadao Pong**	**17.71**	**270**	P	**Pn**	**05 50 03.8**	**-1.9**
KSM	**Kuching**	**18.12**	**211**	P	**P**	**05 50 10.8**	**-0.2**
TNTI	**Ternate**	**18.18**	**154**	P	**Pn**	**05 50 10.2**	**-1.2**
LUWI	**Luwuk**	**18.52**	**170**	P	**Pn**	**05 50 19.1**	**+3.5**
	5μm108nm,1.1s						
LUWI	**Luwuk**	**18.52**	**170**	P	**P**	**05 50 15.1**	**-0.2**
JNU	**Nakatsue**	**18.81**	**31**	P	**Pn**	**05 50 19.5**	**+0.4**
	0.5nm,0.3s,baz=174,slow=5.6,SNR=15						
JNU				LR	LR	05 56 57.4	
	comp=Z,67nm,19.7s,baz=229,slow=35						
JNU	**Nakatsue**	**18.81**	**31**	P	**P**	**05 50 18.8**	**+0.3**
JNU				IAmb	IAmb	05 50 21.5	
	comp=Z,71nm,1.0s						
XAN	**Xi'an**	**19.16**	**332**	P	**P**	**05 50 22.4**	**+0.1**
XAN				pP	sP	05 50 30.2	-0.6
XAN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
XAN	**Xi'an**	**19.16**	**332**	P	**P**	**05 50 20.9**	**-1.4**
CM31	**Chiang Mai Arr**	**19.56**	**276**	P	**P**	**05 50 26.6**	**-0.3**
CMAR	**Chiang Mai Arr**	**19.56**	**276**	P	**P**	**05 50 26.1**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=86,slow=9.2,SNR=13						
CMAR				PcP	**PcP**	**05 54 46.7**	**0.0**
	baz=48,slow=1.3,SNR=4.7						
CMAR				LR	LR	05 57 36.0	
	comp=Z,184nm,21.2s,baz=86,slow=36						
CMAR	**Chiang Mai Arr**	**19.56**	**276**	P	**Pn**	**05 50 29.6**	**+1.4**
CHTO	**Chiang Mai**	**19.57**	**278**	P	**P**	**05 50 26.0**	**-0.8**
CD2	**Chengdu**	**19.69**	**316**	P	**P**	**05 50 28.5**	**+0.4**
CD2				pP	sP	05 50 35.6	-1.0
CD2				PP	**PnPn**	**05 50 48.7**	**+5.1**
CD2				S	**Sn**	**05 54 12.3**	**+2.0**
CD2				SS	SnSn	05 54 39.6	+15
CD2				pmax	pmax		
	comp=Z,30nm,0.8s						
CD2				pmax	pmax		
	comp=Z,600nm,7.1s						
CD2				LR	LR		
	comp=Z,2μm,12.9s						
CD2				LR	LR		
	comp=Z,2μm,11.7s						
CD2				LR	LR		
	comp=Z,1μm,10.3s						
TTSI	**Tana Toraja**	**20.22**	**179**	P	Pn	05 50 48.8	+13
SPSI	**Sidrap Palu**	**21.13**	**179**	P	**P**	**05 50 47.2**	**+3.4**
	comp=Z,578nmcomp=Z,39nm,1.1s						
KSAR	**Wonju Array Be**	**21.39**	**19**	P	**P**	**05 50 47.4**	**+0.9**
KSRS	**Korea Array**	**21.41**	**19**	P	**P**	**05 50 46.8**	**+0.1**
	comp=Z,21nm,0.9s,baz=202,slow=11,SNR=26						
KSRS				LR	LR	05 58 32.8	
	comp=Z,129nm,19.5s,baz=198,slow=35						
KS19	**Wonju Array Si**	**21.44**	**19**	P	**P**	**05 50 47.1**	**+0.1**
NLAI	**Namlea**	**21.76**	**159**	P	**P**	**05 50 55.2**	**+4.7**
	comp=Z,49nm,1.1s						
KULM	**Kulim**	**21.94**	**239**	P	**P**	**05 50 52.9**	**+0.3**
IPM	**Ipoh**	**22.11**	**237**	P	**P**	**05 50 52.7**	**-1.6**
AAI	**Ambon**	**22.57**	**157**	P	P	05 51 07.4	+8.2
BJT	**Baijiatuau**	**22.82**	**353**	P	**P**	**05 50 59.9**	**-1.7**
BJI	**Beijing**	**22.84**	**353**	⇑ *e*P	**P**	**05 51 02.7**	**+0.8**
BJI				S	**S**	**05 55 15.3**	**+5.4**
BJI				sS	Sn	05 55 24.8	-0.7
BJI				pmax	pmax		
	comp=Z,16nm,1.3s						
BJI				pmax	pmax		
	comp=Z,230nm,5.5s						
BJI				LR	LR		
	comp=Z,210nm,21.4s						
LZH	**Lanzhou**	**23.28**	**327**	*e*P	**P**	**05 51 07.4**	**+0.7**
LZH				sP	pwP	05 51 17.5	+1.5
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,210nm,5.4s						
LZH				LR	LR		
	comp=Z,690nm,13.0s						
LZH				LR	LR		
	comp=Z,760nm,14.8s						
LZH				LR	LR		
	comp=Z,850nm,15.9s						
FAKI	**Fak Fak**	**23.73**	**147**	P	**P**	**05 51 10.5**	**-0.5**
FAKI				IAmb	IAmb	05 51 17.0	
	comp=Z,43nm,1.1s						
INU	**Inuyama**	**23.82**	**38**	P	**P**	**05 51 12.4**	**+0.7**
INU				IAmb	IAmb	05 51 21.0	
	comp=Z,47nm,1.0s						
JHJ	**Hachijo jima 2**	**24.14**	**45**	LR	LR	05 59 24.1	
	comp=Z,92nm,18.5s,baz=70,slow=33						
HHC	**Hu-ho-hao-te**	**24.44**	**345**	*e*P	**P**	**05 51 18.6**	**+1.1**
HHC				pmax	pmax		
	comp=Z,89nm,0.8s						
HHC				pmax	pmax		
	comp=Z,340nm,4.1s						
HHC				LR	LR		
	comp=Z,790nm,11.9s						
HHC				LR	LR		
	comp=Z,840nm,11.1s						
HHC				LR	LR		
	comp=Z,840nm,11.9s						
BKNI	**Bangkinang**	**24.77**	**229**	P	**P**	**05 51 20.0**	**-0.6**
RPSI	**Rantau Prapat**	**24.85**	**237**	P	**P**	**05 51 16.7**	**-4.7**
RPSI				IAmb	IAmb	05 51 20.9	
	comp=Z,16nm,0.8s						
MAT	**Matsushiro**	**25.34**	**37**	P	**P**	**05 51 28.1**	**+2.4**
MJAR	**Matsushiro Arr**	**25.34**	**37**	P	**P**	**05 51 27.5**	**+1.8**
	comp=Z,1.3nm,0.8s,baz=98,slow=18,SNR=4.5						
MJAR	**Matsushiro Arr**	**25.34**	**37**	P	**P**	**05 51 26.2**	**+0.5**
EDFI	**Ende, Flores**	**25.98**	**175**	P	**P**	**05 51 31.7**	**0.0**
	comp=Z,356nmcomp=Z,29nm,1.4s						
PLAI	**Plampang**	**26.02**	**184**	P	**P**	**05 51 29.0**	**-2.9**
PWJI	**Pagerwojo**	**26.28**	**197**	P	**P**	**05 51 41.0**	**+6.8**
MDSI	**Maura Dua**	**26.39**	**216**	P	**P**	**05 51 34.7**	**-0.6**
	comp=Z,10nm,1.2s						
SHL	**Shillong**	**26.91**	**293**	P	**P**	**05 51 38.8**	**-1.4**
SHL				IAmb	IAmb	05 51 50.5	
	comp=Z,19nm,0.9s						
SOEI	**Soe**	**27.30**	**170**	P	**P**	**05 51 44.4**	**+0.7**
SOEI				IAmb	IAmb	05 52 02.9	
	comp=Z,41nm,1.1s						
GTA	**Gaotai**	**27.88**	**326**	*e*P	**P**	**05 51 48.9**	**+0.2**
GTA				pP	sP	05 51 56.5	-1.0
GTA				sP	pwP	05 51 59.7	+1.4
GTA				S	**S**	**05 56 30.4**	**-0.6**
GTA				sS	sS	05 56 40.8	-0.5
GTA				SS	**SnSn**	**05 57 50.5**	**+5.2**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,100nm,7.5s						
GTA				LR	LR		
	comp=Z,250nm,17.8s						
GTA				LR	LR		
	comp=Z,410nm,17.8s						
GTA				LR	LR		
	comp=Z,500nm,18.1s						
LSA	**Lhasa**	**28.66**	**301**	P	**P**	**05 51 57.3**	**+1.1**
USRK	**Ussuriysk Ar.**	**28.82**	**19**	P	**P**	**05 51 55.6**	**-1.2**
	comp=Z,2.8nm,0.7s,baz=216,slow=8.1,SNR=4.8						
USRK				LR	LR	06 04 48.0	
	comp=Z,86nm,19.2s,baz=243,slow=39						
USRK	**Ussuriysk Ar.**	**28.82**	**19**	P	**P**	**05 51 57.1**	**+0.3**
TAPN	**Taplejung**	**30.95**	**294**	*e*P	**P**	**05 52 15.5**	**-0.7**
ODAN	**Odare**	**31.13**	**293**	*e*P	**P**	**05 52 17.5**	**-0.3**
	comp=Z,35nm,0.9s						
RAMN	**Ramite**	**31.84**	**293**	*e*P	**P**	**05 52 23.8**	**-0.2**
	comp=Z,23nm,0.7s						
ULN	**Ulaanbaatar**	**32.14**	**344**	P	**P**	**05 52 26.9**	**+0.6**
SONM	**Songino Array**	**32.28**	**343**	P	**P**	**05 52 27.6**	**+0.1**
	comp=Z,3.1nm,0.7s,baz=164,slow=9.9,SNR=21						
SONM				LR	LR	06 05 59.5	
	comp=Z,157nm,18.7s,baz=176,slow=37						
SONM	**Songino Array**	**32.28**	**343**	P	**P**	**05 52 27.6**	**+0.1**
JIRN	**Jiri**	**32.33**	**295**	*e*P	**P**	**05 52 28.0**	**-0.5**
	comp=Z,94nm,1.4s						
GUN	**Gumba**	**32.65**	**295**	*e*P	**P**	**05 52 30.6**	**-0.7**
	comp=Z,33nm,0.9s						
PKI	**Pulchoki**	**32.99**	**294**	*e*P	**P**	**05 52 33.0**	**-1.3**
PKIN	**Phulchoki**	**33.01**	**294**	*e*P	**P**	**05 52 33.0**	**-1.3**
	comp=Z,5.6nm,0.5s						
DMN	**Daman**	**33.27**	**294**	*e*P	**P**	**05 52 35.5**	**-1.0**
	comp=Z,26nm,1.0s						
KLR	**Kul'dur**	**33.37**	**15**	P	**P**	**05 52 37.3**	**+0.5**
	comp=Z,11nm,0.9s,baz=232,slow=6.8,SNR=21						

KNRA	**Kununurra**	**34.03**	**164**	P	**P**	**05 52 42.1**	**-0.7**
KNRA				IAmb	IAmb	05 52 50.9	
	comp=Z,14nm,0.9s						
DANN	**Dangsing**	**34.57**	**295**	*e*P	**P**	**05 52 46.6**	**-1.3**
YSS	**Yuzh-Sakhalins**	**35.27**	**28**	P	**P**	**05 52 54.3**	**+1.0**
YSS				IAmb	IAmb	05 52 55.1	
	comp=Z,17nm,0.9s						
FITZ	**Fitzroy Crossi**	**35.70**	**170**	P	**P**	**05 52 55.1**	**-2.1**
	comp=Z,9.8nm,0.9s,baz=338,slow=3.2,SNR=12						
FITZ	**Fitzroy Crossi**	**35.70**	**170**	P	**P**	**05 52 55.6**	**-1.6**
FITZ				IAmb	IAmb	05 52 59.5	
	comp=Z,20nm,1.1s						
WMQ	**Urumqi**	**37.64**	**321**	*e*P	**P**	**05 53 15.7**	**+2.0**
WMQ				pP	sP	05 53 21.7	-0.9
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,130nm,4.7s						
WMQ				LR	LR		
	comp=Z,820nm,14.1s						
WMQ				LR	LR		
	comp=Z,550nm,18.7s						
WMQ				LR	LR		
	comp=Z,310nm,16.7s						
PSA00	**Pilbara Seismi**	**38.64**	**179**		**PcP**	**05 55 35.2**	**+1.0**
WB0	**Warramunga Arr**	**39.65**	**158**	P	**P**	**05 53 28.6**	**-2.1**
WB0				IAmb	IAmb	05 53 35.7	
	comp=Z,14nm,0.8s						
WRA	**Warramunga Arr**	**39.79**	**158**	P	**P**	**05 53 30.1**	**-1.8**
	comp=Z,8.5nm,1.0s,baz=337,slow=9.2,SNR=7.0						
WRA	**Warramunga Arr**	**39.79**	**158**	P	**P**	**05 53 29.5**	**-2.4**
WB2	**Warramunga Arr**	**39.80**	**158**	P	**P**	**05 53 29.2**	**-2.7**
WB2				IAmb	IAmb	05 53 40.0	
	comp=Z,21nm,1.1s						
WR0	**Warramunga Arr**	**39.88**	**158**	P	**P**	**05 53 30.4**	**-2.2**
WR0				IAmb	IAmb	05 53 40.1	
	comp=Z,23nm,1.1s						
MK31	**Makanchi Array**	**42.46**	**322**	P	**P**	**05 53 54.4**	**+0.8**
MKAR	**Makanchi Array**	**42.46**	**322**	P	**P**	**05 53 54.2**	**+0.6**
	comp=Z,9.2nm,0.9s,baz=123,slow=8.8,SNR=30						
MKAR				PcP	**PcP**	**05 55 45.6**	**-0.7**
	comp=Z,3.7nm,0.9s,baz=96,slow=3.8,SNR=6.0						
MKAR	**Makanchi Array**	**42.46**	**322**	P	**P**	**05 53 54.5**	**+0.9**
MAKZ	**Makanchi**	**42.65**	**322**	P	**P**	**05 53 55.9**	**+0.8**
AS31	**Alice Springs**	**43.09**	**160**	P	**P**	**05 53 57.6**	**-1.4**
ASAR	**Alice Springs**	**43.09**	**160**	P	**P**	**05 53 57.8**	**-1.2**
	comp=Z,2.8nm,0.6s,baz=339,slow=6.7,SNR=24						
ASAR				PcP	**PcP**	**05 55 48.0**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=350,slow=2.6,SNR=4.9						
ASAR				LR	LR	06 13 23.4	
	comp=Z,83nm,21.3s,baz=352,slow=38						
ASAR	**Alice Springs**	**43.09**	**160**	P	**P**	**05 53 57.3**	**-1.7**
KSH	**Kashi**	**43.66**	**310**	P	**P**	**05 54 06.5**	**+2.9**
KSH				sP	pwP	05 54 14.0	+0.6
KSH				S	**S**	**06 00 37.1**	**+4.9**
KSH				SS	**SS**	**06 03 44.7**	**-3.0**
KSH				pmax	pmax		
	comp=Z,21nm,1.0s						
KSH				pmax	pmax		
	comp=Z,550nm,9.1s						
KSH				LR	LR		
	comp=Z,510nm,10.8s						
KSH				LR	LR		
	comp=Z,490nm,12.1s						
KSH				LR	LR		
	comp=Z,430nm,14.0s						
NRN	**Naryn**	**44.25**	**312**	P	**P**	**05 54 09.0**	**+0.4**
NRN				IAmb	IAmb	05 54 10.2	
	comp=Z,16nm,0.9s						
NIL	**Nilore**	**44.40**	**301**	P	**P**	**05 54 08.4**	**-1.1**
NIL				IAmb	IAmb	05 54 16.9	
	comp=Z,28nm,1.3s						
KZA	**Kyzart**	**45.00**	**313**	P	**P**	**05 54 14.8**	**+0.2**
	SNR=5.5						
YAK	**Yakutsk**	**45.26**	**7**	P	**P**	**05 54 15.6**	**-0.2**
YAK				IAmb	IAmb	05 54 17.6	
	comp=Z,21nm,1.2s						
ZAA0	**Zalesovo Array**	**45.33**	**332**	P	**P**	**05 54 16.0**	**-0.5**
ZAA0				IAmb	IAmb	05 54 17.5	
	comp=Z,17nm,0.9s						
ZALV	**Zalesovo Beam**	**45.33**	**332**	P	**P**	**05 54 16.4**	**-0.1**
	comp=Z,12nm,0.8s,baz=126,slow=6.9,SNR=37						
ZALV				LR	LR	06 12 09.3	
	comp=Z,87nm,18.2s,baz=310,slow=35						
ZALV	**Zalesovo Beam**	**45.33**	**332**	P	**P**	**05 54 16.2**	**-0.4**
KBK	**Karagaybulak**	**45.40**	**313**	P	**P**	**05 54 18.9**	**+1.3**
	SNR=5.8						
UCH	**Uchtor**	**45.56**	**313**	P	**P**	**05 54 20.3**	**+1.2**
	SNR=12						
CHMS	**Chumysh**	**45.66**	**314**	P	**P**	**05 54 20.1**	**+0.7**
	SNR=5.4						
AAK	**Ala-Archa**	**45.71**	**313**	P	**P**	**05 54 20.8**	**+0.8**
AML	**Almayashu**	**46.11**	**312**	P	**P**	**05 54 24.2**	**+0.8**
	SNR=6.6						
MORW	**Morawa**	**46.22**	**184**	P	**P**	**05 54 24.0**	**+0.3**
PETK	**Petropavlovsk-**	**46.51**	**31**	P	**P**	**05 54 25.8**	**-0.1**
	comp=Z,5.0nm,0.7s,baz=204,slow=6.5,SNR=5.8						
PETK				LR	LR	06 15 20.0	
	comp=Z,46nm,21.7s,baz=245,slow=38						
PETK	**Petropavlovsk-**	**46.51**	**31**	P	**P**	**05 54 26.0**	**+0.1**
KURK	**Kurchatov**	**46.56**	**325**	P	**P**	**05 54 26.6**	**+0.3**
GAR	**Garm**	**47.76**	**307**	P	**P**	**05 54 36.1**	**+0.1**
KBL	**Kabul**	**47.98**	**301**	P	**P**	**05 54 37.2**	**-0.7**
KBL				IAmb	IAmb	05 54 45.2	
	comp=Z,11nm,1.2s						
HNR	**Honiara**	**48.03**	**120**	LR	LR	06 11 53.2	
	comp=Z,87nm,19.7s,baz=10,slow=32						
FORT	**Forrest**	**48.51**	**170**	P	**P**	**05 54 39.7**	**-1.9**
KK31	**Karatay Array**	**48.64**	**313**	P	**P**	**05 54 42.7**	**0.0**
KK31				IAmb	IAmb	05 54 43.5	
	comp=Z,11nm,0.9s						
KKAR	**Karatay Array**	**48.64**	**313**	P	**P**	**05 54 42.7**	**0.0**
KKAR				IAmb	IAmb	05 54 43.5	
	comp=Z,11nm,0.9s						
KKAR	**Karatay Array**	**48.64**	**313**	P	**P**	**05 54 42.1**	**-0.5**
BRVK	**Borovoye**	**52.22**	**325**	P	**P**	**05 55 09.0**	**-0.5**
BRVK				IAmb	IAmb	05 55 10.9	
	comp=Z,15nm,1.1s						
BBOO	**Buckleboo**	**52.30**	**162**	P	**P**	**05 55 08.3**	**-1.9**
STKA	**Stephens Creek**	**53.31**	**156**	P	**P**	**05 55 16.7**	**-1.0**
	comp=Z,13nm,0.9s,baz=337,slow=7.4,SNR=16						
STKA	**Stephens Creek**	**53.31**	**156**	P	**P**	**05 55 16.6**	**-1.2**
TIXI	**Tiksi**	**54.63**	**4**	P	**P**	**05 55 26.1**	**-0.7**
TIXI				IAmb	IAmb	05 55 27.1	
	comp=Z,12nm,1.1s						
NRIK	**Noril'sk**	**55.66**	**347**	P	**P**	**05 55 34.2**	**-0.1**
	comp=Z,22nm,0.7s,baz=137,slow=7.4,SNR=23						
GEYT	**Alibeck**	**57.10**	**304**	P	**P**	**05 55 45.4**	**+0.2**
	comp=Z,8.3nm,0.9s,baz=131,slow=4.1,SNR=13						
GEYT	**Alibeck**	**57.10**	**304**	P	**P**	**05 55 45.1**	**-0.1**
GYA0B	**ALIBECK ARRAY**	**57.10**	**304**	P	**P**	**05 55 45.4**	**+0.2**
GYA0B				IAmb	IAmb	05 55 46.5	
	comp=Z,12nm,0.9s						
ABKAR	**Akbulak array**	**57.26**	**318**	P	**P**	**05 55 45.5**	**-0.6**
ABKAR	**Akbulak array**	**57.26**	**318**	P	**P**	**05 55 45.6**	**-0.4**
ABKAR				IAmb	IAmb	05 55 46.8	
	comp=Z,7.8nm,1.1s						
BILL	**Bilibino**	**58.68**	**19**	P	**P**	**05 55 56.2**	**+0.5**
BILL				IAmb	IAmb	05 56 03.9	
	comp=Z,9.3nm,0.8s						
AKTO	**Aktyubinsk**	**58.72**	**319**	P	**P**	**05 55 55.9**	**-0.4**
	comp=Z,2.0nm,0.5s,baz=108,slow=11,SNR=4.6						
ARU	**Arti**	**59.74**	**326**	P	**P**	**05 56 02.5**	**-0.8**
	comp=Z,2.0nm,0.5s,baz=118,slow=4.6,SNR=10						
ARU	**Arti**	**59.74**	**326**	P	**P**	**05 56 02.3**	**-0.9**
ARU				IAmb	IAmb	05 56 03.0	
	comp=Z,6.9nm,0.6s						
TOO	**Toolangi**	**59.83**	**156**	P	**P**	**05 56 03.3**	**-0.8**
GAMB	**Gambell**	**65.29**	**27**	P	**P**	**05 56 41.4**	**+1.3**
ANM	**Nome**	**68.15**	**27**	P	**P**	**05 56 59.6**	**+1.2**
ANM				IAmb	IAmb	05 57 01.2	
	comp=Z,17nm,1.2s						
KBZ	**Khabaz**	**68.62**	**311**	P	**P**	**05 57 00.7**	**-1.1**
	comp=Z,6.2nm,0.9s,baz=155,slow=9.8,SNR=5.8						
KIV	**Kislovodsk**	**68.76**	**311**	P	**P**	**05 57 02.2**	**-0.6**
KIV				IAmb	IAmb	05 57 03.5	
	comp=Z,14nm,0.9s						
RAYN	**Ar Rayn**	**68.92**	**289**	P	**P**	**05 57 03.1**	**-1.0**
RAYN				IAmb	IAmb	05 57 04.1	
	comp=Z,8.0nm,0.8s						
RDOG	**Red Dog Mine**	**69.46**	**23**	P	**P**	**05 57 07.4**	**+0.8**
RDOG				IAmb	IAmb	05 57 08.8	
	comp=Z,6.7nm,0.7s						
KLMR	**Klimovskoe**	**70.16**	**329**	*e*P	**P**	**05 57 06.6**	**-4.3**
KLMR				AMP		05 57 11.7	
	comp=Z,54nm,2.7s						
TTA	**Tatalina**	**72.27**	**29**	P	**P**	**05 57 25.1**	**+1.3**
TTA				IAmb	IAmb	05 57 32.8	
	comp=Z,8.1nm,0.8s						
IMAR	**Indian Mountai**	**73.05**	**25**	P	**P**	**05 57 29.0**	**+0.7**
RSO	**Redoubt South**	**74.04**	**31**	P	**P**	**05 57 35.0**	**+0.5**
COLD	**Coldfoot**	**74.33**	**24**	P	**P**	**05 57 36.7**	**+0.9**
TOLK	**Toolik Lake Re**	**74.39**	**22**	P	**P**	**05 57 37.2**	**+1.0**
TOLK				IAmb	IAmb	05 57 45.0	
	comp=Z,14nm,0.9s						
MLY	**Manley**	**74.39**	**26**	P	**P**	**05 57 37.4**	**+1.1**
BPAW	**Bear Paw Mtn.**	**74.41**	**27**	P	**P**	**05 57 36.5**	**+0.2**
KTH	**Kantishna Hill**	**74.50**	**28**	P	**P**	**05 57 37.1**	**+0.2**
KTH				IAmb	IAmb	05 57 39.0	
	comp=Z,13nm,1.1s						
SUA	**Susitna One**	**74.87**	**30**	P	**P**	**05 57 38.3**	**-0.9**
NEA	**Nenana**	**75.16**	**27**	P	**P**	**05 57 41.0**	**+0.4**
ARCES	**ARCESS Array B**	**75.31**	**339**	P	**P**	**05 57 41.2**	**-0.2**
	comp=Z,10nm,0.9s,baz=80,slow=9.0,SNR=5.9						
ARCES	**ARCESS Array B**	**75.31**	**339**	P	**P**	**05 57 41.0**	**-0.4**
MCK	**McKinley**	**75.36**	**27**	P	**P**	**05 57 41.6**	**-0.2**
RND	**Reindeer**	**75.44**	**28**	P	**P**	**05 57 42.7**	**+0.3**
MDM	**Murphy Dome**	**75.46**	**26**	P	**P**	**05 57 43.5**	**+1.2**
MDM				IAmb	IAmb	05 57 51.7	
	comp=Z,18nm,1.0s						
WRH	**Wood River Hil**	**75.60**	**27**	P	**P**	**05 57 44.0**	**+0.8**
WRH				IAmb	IAmb	05 57 51.8	
	comp=Z,7.7nm,0.8s						
PMR	**Palmer**	**75.62**	**30**	P	**P**	**05 57 43.8**	**+0.6**
PMR				IAmb	IAmb	05 57 51.5	
	comp=Z,12nm,1.0s						
GHO	**Glory Hole Cre**	**75.69**	**29**	P	**P**	**05 57 44.5**	**+0.7**
GHO				IAmb	IAmb	05 57 48.5	
	comp=Z,12nm,1.1s						
CCB	**Clear Creek Bu**	**75.69**	**26**	P	**P**	**05 57 43.9**	**+0.3**
SML	**Sawmill**	**75.96**	**29**	P	**P**	**05 57 46.3**	**+1.0**
BRTR	**Keskin Array B**	**76.00**	**308**	P	**P**	**05 57 44.4**	**-1.8**
	comp=Z,1.1nm,0.8s,baz=117,slow=2.8,SNR=4.4						
IL31		**76.06**	**26**	P	**P**	**05 57 45.7**	**0.0**
ILAR	**Eielson Array**	**76.06**	**26**	P	**P**	**05 57 44.7**	**-1.1**
	comp=Z,2.8nm,1.0s,baz=252,slow=4.7,SNR=16						
ILAR	**Eielson Array**	**76.06**	**26**	P	**P**	**05 57 45.3**	**-0.5**
HDA	**Harding Lake**	**76.10**	**27**	P	**P**	**05 57 45.7**	**-0.3**
DHY	**Denali Highway**	**76.16**	**28**	P	**P**	**05 57 46.5**	**-0.1**
DHY				IAmb	IAmb	05 57 55.5	
	comp=Z,6.8nm,0.8s						
BMAR	**Burnt Mountain**	**76.44**	**23**	P	**P**	**05 57 49.3**	**+1.3**
FINES	**FINESS Array B**	**76.58**	**330**	P	**P**	**05 57 48.0**	**-0.8**
	comp=Z,3.0nm,0.6s,baz=50,slow=5.8,SNR=25						
FINES	**FINESS Array B**	**76.58**	**330**	P	**P**	**05 57 48.2**	**-0.5**
AKASG	**Malin Array Be**	**76.96**	**319**	P	**P**	**05 57 49.2**	**-2.0**
	comp=Z,1.4nm,0.6s,baz=65,slow=5.6,SNR=13						
AKASG	**Malin Array Be**	**76.96**	**319**	P	**P**	**05 57 49.5**	**-1.7**
PAX	**Paxson**	**77.03**	**28**	P	**P**	**05 57 51.3**	**-0.1**
PAX				IAmb	IAmb	05 58 00.3	
	comp=Z,7.8nm,0.9s						
RIDG	**Independent Ri**	**77.14**	**27**	P	**P**	**05 57 51.8**	**-0.2**
RIDG				IAmb	IAmb	05 57 59.8	
	comp=Z,11nm,0.9s						
BKZ	**Black Stump Fm**	**77.40**	**138**	P	**P**	**05 57 54.3**	**+0.5**
SCRK	**Sand Creek**	**77.46**	**27**	P	**P**	**05 57 53.7**	**-0.2**
DOT	**Dot Lake**	**77.50**	**27**	P	**P**	**05 57 54.0**	**+0.1**
DOT				IAmb	IAmb	05 58 01.8	
	comp=Z,18nm,1.4s						
GLB	**Gilahina Butte**	**78.14**	**29**	P	**P**	**05 57 58.0**	**+0.3**
GLB				IAmb	IAmb	05 58 06.8	
	comp=Z,14nm,1.0s						
EGAK	**Eagle**	**78.44**	**26**	P	**P**	**05 57 59.4**	**+0.3**
EGAK				IAmb	IAmb	05 58 00.4	
	comp=Z,7.5nm,0.8s						
BCAR	**Beaver Creek A**	**78.64**	**27**	P	**P**	**05 58 01.4**	**+1.0**
ISP	**Isparta**	**78.78**	**306**	P	**P**	**05 57 59.4**	**-2.3**
ISP				IAmb	IAmb	05 58 01.4	
	comp=Z,10nm,1.0s						
DAWY	**Dawson**	**79.38**	**26**	P	**P**	**05 58 05.1**	**+0.7**
DAWY				IAmb	IAmb	05 58 13.0	
	comp=Z,12nm,1.0s						
CTGM	**Chitina Glacie**	**79.43**	**29**	P	**P**	**05 58 05.8**	**+1.0**
TESR	**Tescani**	**79.55**	**315**	⇑P	**P**	**05 58 04.9**	**-0.7**
EPYK	**Eagle Plains**	**79.72**	**23**	P	**P**	**05 58 06.3**	**+0.2**
INK	**Inuvik**	**80.19**	**21**	P	**P**	**05 58 08.6**	**0.0**
INK				IAmb	IAmb	05 58 16.4	
	comp=Z,8.7nm,0.9s						
BURAR	**Bucovina Array**	**80.22**	**317**	⇑P	**P**	**05 58 09.1**	**-0.2**
BURAR	**Bucovina Array**	**80.22**	**317**	P	**P**	**05 58 08.5**	**-0.8**
BUR08	**Bucovina Ar. S**	**80.22**	**317**	P	**P**	**05 58 08.3**	**-1.1**
MLR	**Muntele Rosu**	**80.28**	**315**	⇑P	**P**	**05 58 09.5**	**-0.2**
ARR	**Arges**	**81.20**	**315**	⇑P	**P**	**05 58 14.3**	**-0.3**
KWP	**Kalwaria Pacla**	**81.28**	**319**	P	**P**	**05 58 13.6**	**-1.3**
TRPA	**Tarpa**	**81.82**	**318**	⇑P	**P**	**05 58 17.2**	**-0.4**
DRGR		**82.09**	**316**	⇑P	**P**	**05 58 19.1**	**-0.2**
CRVS	**Cervenica-Dubn**	**82.28**	**319**	*e*P	**P**	**05 58 20.7**	**+0.6**
C36M	**Paulatuk**	**82.80**	**19**	P	**P**	**05 58 21.9**	**-0.4**
KMBO	**Kilima Mbogo**	**82.89**	**267**	P	**P**	**05 58 23.1**	**-1.1**
	comp=Z,1.8nm,0.9s,baz=38,slow=8.1,SNR=4.0						
KMBO	**Kilima Mbogo**	**82.89**	**267**	P	**P**	**05 58 21.8**	**-2.4**
OJC	**Ojcow**	**82.90**	**320**	P	**P**	**05 58 22.5**	**-0.8**
OJC				IAmb	IAmb	05 58 23.3	
	comp=Z,8.2nm,1.0s						
VTS	**Vitosha**	**82.94**	**312**	⇑P	**P**	**05 58 22.2**	**-1.7**
NC405	**NORSAR Array S**	**83.28**	**332**	P	**P**	**05 58 24.4**	**-0.6**
LANS	**Liptovska Anna**	**83.45**	**319**	*e*P	**P**	**05 58 27.3**	**+1.1**
NB2	**NORSAR Subarra**	**83.53**	**332**	P	**P**	**05 58 25.0**	**-1.4**
	comp=Z,19nm,1.2s,baz=65,slow=4.8						
NB2	**NORSAR Subarra**	**83.53**	**332**	P	**P**	**05 58 25.0**	**-1.4**
	baz=65,slow=4.8						
NOA	**NORSAR Array B**	**83.53**	**332**	P	**P**	**05 58 24.9**	**-1.5**
	comp=Z,5.6nm,0.8s,baz=65,slow=4.9,SNR=18						
CASY	**Casey**	**83.60**	**184**	P	**P**	**05 58 27.5**	**+1.2**
NAO01	**NORSAR Array S**	**83.76**	**332**	P	**P**	**05 58 26.1**	**-1.4**
VYHS	**Vyhne**	**84.06**	**319**	*e*P	**P**	**05 58 29.1**	**-0.2**
MORC	**Moravsky Berou**	**84.42**	**320**	⇑P	**P**	**05 58 31.1**	**-0.1**
MORC	**Moravsky Berou**	**84.42**	**320**	*e*P	**P**	**05 58 30.9**	**-0.3**
MORC	**Moravsky Berou**	**84.42**	**320**	P	**P**	**05 58 30.7**	**-0.5**
MORC				IAmb	IAmb	05 58 31.9	
	comp=Z,10nm,1.2s						
JAVC	**Velka Javorina**	**84.66**	**320**	*e*P	**P**	**05 58 33.1**	**+0.7**
KRLC	**Kraliky**	**84.78**	**321**	*e*P	**P**	**05 58 32.7**	**-0.3**
KRLC				*e*x	x	05 58 39.5	
OSTC	**Ostas**	**84.95**	**321**	*e*P	**P**	**05 58 34.2**	**+0.4**
DPC	**Dobruska-Polom**	**84.96**	**321**	*e*P	**P**	**05 58 33.8**	**-0.1**
VRAC	**Vranov**	**85.17**	**320**	⇑P	**P**	**05 58 34.9**	**0.0**
VRAC	**Vranov**	**85.17**	**320**	*e*P	**P**	**05 58 35.1**	**+0.2**
KRUC	**Moravsky**	**85.38**	**320**	*e*P	**P**	**05 58 35.9**	**0.0**
RES	**Resolute Bay**	**85.68**	**9**	P	**P**	**05 58 36.8**	**-0.2**
RES				IAmb	IAmb	05 58 37.9	
	comp=Z,7.9nm,0.8s						
GOPC	**GO Pecny, Ondr**	**86.04**	**321**	*e*P	**P**	**05 58 39.4**	**+0.2**
CONA	**Conrad Observa**	**86.12**	**319**	*e*PcP	**P**	**05 58 39.0**	**-0.7**
	comp=Z,1.5nm,0.6s						
PRU	**Pruhonice**	**86.16**	**321**	*e*P	**P**	**05 58 39.7**	**-0.1**
BRG	**Berggiesshubel**	**86.17**	**322**	*e*P	**P**	**05 58 39.2**	**-0.7**
	comp=Z,10nm,1.0s						
BRG				*e*		05 58 45.0	
	comp=Z,5.6nm,1.0s						
TULEG	**Thule**	**86.22**	**2**	P	**P**	**05 58 39.5**	**-0.1**
CLL	**Collm**	**86.55**	**323**	*i* P	**P**	**05 58 41.7**	**0.0**
	comp=Z,5.0nm,0.9s						
CLL				*i*		05 58 48.4	
CLL	**Collm**	**86.55**	**323**	P	**P**	**05 58 41.5**	**-0.2**
CLL				IAmb	IAmb	05 58 42.7	
	comp=Z,3.7nm,0.7s						
ARSA	**Arzberg**	**86.58**	**319**	*e*PcP	**P**	**05 58 41.2**	**-0.8**
	comp=Z,1.8nm,0.7s						
KHC	**Kasperske Hory**	**87.07**	**321**	*e*P	**P**	**05 58 43.1**	**-1.2**
GERES	**GERESS Array B**	**87.10**	**320**	P	**P**	**05 58 43.3**	**-1.3**
	comp=Z,1.8nm,0.8s,baz=63,slow=3.6,SNR=12						
GERES				LR	LR	06 37 49.2	
	comp=Z,287nm,19.1s,baz=326,slow=36						
SOKA	**Soboth**	**87.11**	**318**	*e*PcP	**P**	**05 58 44.1**	**-0.6**
	comp=Z,0.5nm,0.3s						
MOA	**Molln**	**87.14**	**319**	*e*PcP	**P**	**05 58 44.5**	**-0.2**
	comp=Z,4.5nm,0.8s						
WTTA	**Wattenberg**	**89.01**	**320**	*e*PcP	**P**	**05 58 52.7**	**-1.1**
	comp=Z,4.1nm,0.6s						
WATA	**Walderalm**	**89.02**	**320**	*e*PcP	**P**	**05 58 52.6**	**-1.2**
	comp=Z,2.6nm,0.6s						
SQTA	**Sankt Quirin**	**89.29**	**320**	*e*PcP	**P**	**05 58 54.1**	**-0.9**
	comp=Z,3.4nm,0.6s						
MOTA	**Moosalm**	**89.31**	**320**	*e*PcP	**P**	**05 58 54.0**	**-1.1**
	comp=Z,1.3nm,0.5s						
FETA	**Feichten**	**89.67**	**320**	*e*PcP	**P**	**05 58 56.2**	**-0.7**
	comp=Z,1.3nm,0.5s						
YKA	**Yellowknife Ar**	**89.91**	**22**	P	**P**	**05 58 57.6**	**+0.1**
	comp=Z,3.2nm,0.8s,baz=317,slow=4.2,SNR=46						
DAVA	**Damuels**	**90.08**	**320**	*e*PcP	**PcP**	**05 58 59.4**	**-0.6**
	comp=Z,2.3nm,0.6s						
KEST	**Kesra**	**95.48**	**310**	LR	LR	06 48 21.8	
	comp=Z,94nm,20.0s,baz=258,slow=39						
PPT	**Papeete**	**95.97**	**106**	LR	LR	06 38 50.4	
	comp=Z,37nm,19.1s,baz=194,slow=33						
FRB	**Frobisher Bay**	**98.97**	**4**	LR	LR	06 47 35.3	
	comp=Z,128nm,18.5s,baz=62,slow=37						
TXAR	**Lajitas Array**	**117.69**	**42**	PKP	**PKPdf**	**06 04 44.8**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=354,slow=5.0,SNR=3.5						
TXAR	**Lajitas Array**	**117.69**	**42**		**PKPdf**	**06 04 45.2**	**-0.3**
PDPR	**Patillas Dam,**	**144.49**	**9**		**PKPab**	**06 05 32.4**	**-1.6**
SDV	**Santo Domingo**	**152.13**	**22**		**PKPdf**	**06 05 47.1**	**-1.5**
SDV				PKPbc	**pPKPdf**	**06 05 54.5**	**-1.1**
SDV				PKPab	**pPKPbc**	**06 06 01.6**	**-0.5**

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*IDC **09** 06:03:16.0±2.2, 17°.32S×178°.37W, h546^{km}±33^{km}, mb2.9/7, mb1 3.3/8, mb1mx3.1/32, mbtmp3.9/8, Error ellipse: s-maj=114.4km s-min=15.8km az=150.0*

ISC 09 06:03:16.0±1.3**, 17°.3S**±0°.5×**178°.4W**±0°.3**, h550**^{km}**, n10, σ0ˢ.50**/10**, mb3.4**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.20**	**63**	P	**P**	**06 05 06.2**	**+0.1**
	2.7nm,0.3s,baz=117,slow=11,SNR=2.1						
STKA	**Stephens Creek**	**38.95**	**240**	P	**P**	**06 09 55.2**	**0.0**
	0.6nm,0.3s,baz=96,slow=19,SNR=3.0						
WRA	**Warramunga Arr**	**44.76**	**259**	P	**P**	**06 10 41.0**	**-0.2**
	0.6nm,0.5s,baz=91,slow=7.2,SNR=5.5						
ASAR	**Alice Springs**	**44.98**	**254**	P	**P**	**06 10 43.1**	**+0.2**
	3.7nm,0.5s,baz=86,slow=8.6,SNR=30						
NVAR	**Mina Array Bea**	**78.96**	**44**	P	**P**	**06 14 24.1**	**+0.7**
	0.5nm,0.7s,baz=221,slow=8.7,SNR=4.8						
ILAR	**Eielson Array**	**85.27**	**13**	P	**P**	**06 14 54.8**	**+0.3**
	0.3nm,0.4s,baz=221,slow=4.9,SNR=5.6						
PDAR	**Pinedale Array**	**86.89**	**43**	P	**P**	**06 15 02.0**	**-1.0**
	0.3nm,0.7s,baz=221,slow=3.6,SNR=2.6						
YKA	**Yellowknife Ar**	**93.76**	**25**	P	**P**	**06 15 33.6**	**-0.3**
	0.2nm,0.6s,baz=250,slow=4.4,SNR=2.8						
BRTR	**Keskin Array B**	**144.35**	**315**	PKP	**PKPab**	**06 21 50.4**	**-0.1**
	0.4nm,0.5s,baz=111,slow=2.9,SNR=1.9						
GERES	**GERESS Array B**	**147.01**	**345**	PKPbc	**PKPbc**	**06 21 57.7**	**+0.3**
	0.6nm,0.5s,baz=18,slow=2.6,SNR=7.6						

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*NEIC **09** 06:11:05.8±1.4, 1°.92N±0°.06×127°.64E±0°.06, h177^{km}±4^{km}, mb4.7/89, Error ellipse: s-maj=9.6km s-min=8.1km az=46.0*

*DJA **09** 06:11:06.1±0.3, 2°N±3°×12°8E±°, h165^{km}±3^{km}, M4.8/24, mb4.9/24, mB5.1/14, MLv5.3/15, Mw(mB)4.5/14*

*IDC **09** 06:11:06.2±0.6, 1°.87N×127°.69E, h182^{km}±5^{km}, mb4.1/19, mb1 4.2/23, mb1mx4.1/34, mbtmp4.6/23, MS3.4/7, Ms1 3.4/7, ms1mx3.2/31, Error ellipse: s-maj=12.6km s-min=5.6km az=74.0*

ISC 09 06:11:05.7±0.5**, 1°.92N**±0°.03×**127°.66E**±0°.05**, h175**^{km}±4^{km}**, h176**^{km}**:pP-P, n231, σ1ˢ.21**/263**, mb4.7**/65**, 5C-1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.18**	**195**	P	**Pn**	**06 11 34.4**	**+0.1**
TNTI				S	**Sn**	**06 11 55.4**	**-1.0**
TNTI	**Ternate**	**1.18**	**195**		**Pn**	**06 11 35.0**	**+0.7**
TNTI				Sn	**Sn**	**06 11 58.0**	**+1.6**
KMSI	**Cibinong**	**3.92**	**250**	P	**Pn**	**06 12 06.0**	**+0.4**
KMSI				S	**Sn**	**06 12 53.8**	**+1.5**
SANI	**Sanana**	**4.28**	**203**	P	**Pn**	**06 12 08.7**	**-1.6**
SANI				S	**Sn**	**06 12 56.1**	**-4.8**
SIJI	**Sorong**	**4.54**	**128**	P	**Pn**	**06 12 14.7**	**+1.0**
	18nm,0.3s,baz=340,slow=7.5,SNR=41						
SIJI				S	**Sn**	**06 13 06.6**	**-0.3**
	2.7nm,0.3s,baz=359,slow=23,SNR=6.0						
DDMP	**Don Marcelino,**	**4.59**	**335**	*e*P	**Pn**	**06 12 12.8**	**-1.6**
DDMP				*e*S	**Sn**	**06 13 05.2**	**-2.8**
GSPH	**General Santos**	**4.95**	**327**	⇑*i*P	**Pn**	**06 12 17.1**	**-1.9**
GSPH				*i* S	**Sn**	**06 13 11.7**	**-4.9**
NLAI	**Namlea**	**5.15**	**186**	P	**Pn**	**06 12 21.8**	**+0.2**
	9.4nm42μm3μm,0.6s						
MATI	**Mati**	**5.19**	**344**	*e*S	**Sn**	**06 13 16.8**	**-5.2**
DAV	**Davao City (W)**	**5.53**	**338**	P	**Pn**	**06 12 26.3**	**-0.1**
	61nm,0.3s,baz=56,slow=6.0,SNR=5.9						
DAV				S	**Sn**	**06 13 28.8**	**-1.1**
	29nm,0.3s,baz=257,slow=23,SNR=5.5						
DAV				LR	LR	06 15 03.7	
	comp=Z,390nm,19.0s,baz=340,slow=42						
DAV	**Davao City (W)**	**5.53**	**338**	⇓*e*P	**Pn**	**06 12 28.2**	**+1.7**
DAV	**Davao City (W)**	**5.53**	**338**	Pn	**Pn**	**06 12 26.7**	**+0.2**
SKMP	**Bagumbayan, Su**	**5.53**	**326**	*e*P	**Pn**	**06 12 25.5**	**-1.0**
DMPH	**Davao City--Mi**	**5.56**	**337**	⇑*e*P	**Pn**	**06 12 27.3**	**+0.3**
AAI	**Ambon**	**5.59**	**175**	P	**Pn**	**06 12 28.3**	**+1.0**
	1.4nm6μm455nm,1.0s						
KCP	**Kidapawan**	**5.67**	**333**	⇑*i*P	**Pn**	**06 12 28.3**	**-0.2**
KCP				*i* S	**Sn**	**06 13 32.4**	**-1.1**
LUWI	**Luwuk**	**5.71**	**239**	P	**Pn**	**06 12 28.2**	**-0.6**
	9.5nm6μm366nm,0.8s						
LUWI	**Luwuk**	**5.71**	**239**		**Pn**	**06 12 28.6**	**-0.2**
LUWI				Sn	**Sn**	**06 13 33.5**	**-0.6**
MRSI	**Marisa**	**5.90**	**256**	P	**Pn**	**06 12 32.2**	**+0.9**
	2.5nm4μm309nm,0.5s						
CTBH	**Cotabato--PC H**	**6.27**	**327**	⇑*i*P	**Pn**	**06 12 34.8**	**-1.5**
BUKP	**Musuan**	**6.46**	**336**	*e*P	**Pn**	**06 12 38.4**	**-0.4**
BUKP				*e*S	**Sn**	**06 13 50.1**	**-2.1**
APSI	**Ampana**	**6.64**	**245**	P	**Pn**	**06 12 41.0**	**-0.1**
	2.1nm3μm222nm,1.1s						
FAKI	**Fak Fak**	**6.64**	**136**	P	**Pn**	**06 12 41.6**	**+0.5**
	0.3nm102nm,0.8s						
FAKI	**Fak Fak**	**6.64**	**136**		**Pn**	**06 12 42.2**	**+1.0**
PAGZ	**Pagadian**	**7.27**	**324**	*e*P	**Pn**	**06 12 47.7**	**-1.8**
BUTP	**Butuan**	**7.29**	**344**	*e*P	**Pn**	**06 12 49.1**	**-0.7**
MPSI	**Mapaga**	**7.92**	**259**	P	**Pn**	**06 12 58.8**	**+0.8**
	0.4nm25nm,0.7s						
BBSI	**Bau Bau**	**8.94**	**215**	P	**Pn**	**06 13 12.7**	**+1.2**
	602nm75nm,0.9s						
TTSI	**Tana Toraja**	**9.26**	**238**	P	**Pn**	**06 13 15.8**	**+0.1**
	3μm326nm,1.0s						
SPSI	**Sidrap Palu**	**9.82**	**233**	P	**Pn**	**06 13 23.4**	**+0.4**
	1μm105nm,0.7s						
BNSI	**Bone**	**9.82**	**230**	P	**Pn**	**06 13 23.1**	**+0.1**
	1μm149nm,0.7s						
BKSI	**Bulukumba**	**10.41**	**226**	P	**Pn**	**06 13 31.7**	**+0.9**
	842nm83nm,0.9s						
KAPI	**Kappang**	**10.48**	**229**	P	**Pn**	**06 13 33.8**	**+2.1**
	4.5nm,0.3s,baz=22,slow=8.5,SNR=11						
KAPI				S	**Sn**	**06 15 25.3**	**-2.9**
	6.5nm,0.3s,baz=324,slow=23,SNR=14						
KAPI				LR	LR	06 17 57.7	
	comp=Z,96nm,20.8s,baz=350,slow=39						
SOEI	**Soe**	**12.08**	**196**	P	**Pn**	**06 13 54.8**	**+2.3**
	2μm148nm,0.8s						
SOEI	**Soe**	**12.08**	**196**		**Pn**	**06 13 52.6**	**+0.1**
KKM	**Kota Kinabalu**	**12.13**	**290**	Pn	**Pn**	**06 13 52.9**	**-0.3**
EDFI	**Ende, Flores**	**12.15**	**209**	P	**Pn**	**06 13 54.5**	**+1.0**
	714nm42nm,1.0s						
GENI	**Genyem**	**13.28**	**110**	P	**Pn**	**06 14 08.6**	**+0.9**
	158nm,0.9s						
TGY	**Tagaytay City**	**13.81**	**332**	P	**Pn**	**06 14 15.5**	**+1.0**
	73nm,0.3s,baz=355,slow=1.3,SNR=5.9						
WBSI	**Waikabubak, Su**	**14.13**	**216**	P	**Pn**	**06 14 19.6**	**+1.2**
	83nm,0.9s						
PLAI	**Plampang**	**14.53**	**223**	P	**P**	**06 14 24.4**	**-0.7**
	1μm125nm,1.1s						
MTN	**Manton Dam**	**15.06**	**167**		**Pn**	**06 14 28.8**	**-1.1**
MTN				IAmb	IAmb	06 14 30.0	
	comp=Z,36nm,0.7s						
MTN					**Sn**	**06 17 12.2**	**-5.8**
SRBI	**Singaraja**	**15.90**	**231**	P	**P**	**06 14 41.9**	**+1.6**
	comp=Z,926nmcomp=Z,56nm,0.8s						
JAGI	**Jajag, Banyuwa**	**16.97**	**232**	P	**Pn**	**06 14 54.0**	**+1.0**
	comp=Z,42nm,0.7s						
JAGI	**Jajag, Banyuwa**	**16.97**	**232**	P	**P**	**06 14 50.6**	**-1.5**
JAGI				IAmb	IAmb	06 15 02.7	
	comp=Z,72nm,1.3s						
KSM	**Kuching**	**17.35**	**269**	P	**P**	**06 14 54.0**	**-2.4**
KNRA	**Kununurra**	**17.52**	**176**	P	**P**	**06 14 57.1**	**-1.0**
FITZ	**Fitzroy Crossi**	**19.99**	**186**	P	**P**	**06 15 24.5**	**-0.4**
	comp=Z,2.0nm,0.3s,baz=19,slow=8.0,SNR=39						
FITZ				S	**S**	**06 18 56.0**	**-4.1**
	comp=Z,0.1nm,0.3s,baz=192,slow=18,SNR=3.9						
FITZ	**Fitzroy Crossi**	**19.99**	**186**	P	**P**	**06 15 24.5**	**-0.4**
MANU	**Manus Island**	**20.09**	**101**	P	**P**	**06 15 26.1**	**+0.1**
MANU				IAmb	IAmb	06 15 26.3	

	comp=Z,24nm,0.6s						
TWG	Pinlang	21.74	343	P	P	06 15 41.3	-2.2
COEN	Coen	22.03	136	P	P	06 15 45.3	-1.1
COEN				IAmb	IAmb	06 15 57.2	
	comp=Z,47nm,1.4s						
YULB	Yu-li	22.22	344	P	P	06 15 45.6	-2.6
YULB				IAmb	IAmb	06 15 52.1	
	comp=Z,21nm,0.9s						
TPUB	Ta-pu	22.32	343	P	P	06 15 48.4	-0.8
WB0	Warramunga Arr	22.54	163	P	P	06 15 51.0	-0.2
WRA	Warramunga Arr	22.69	164	P	P	06 15 52.0	-0.6
	comp=Z,18nm,0.4s,baz=344,slow=9.9,SNR=68						
WRA				S	S	06 19 46.3	-1.4
	comp=Z,24nm,1.1s,baz=341,slow=20,SNR=11						
WRA				LR	LR	06 25 05.6	
	comp=Z,140nm,19.4s,baz=290,slow=37						
WRA	Warramunga Arr	22.69	164	P	P	06 15 51.5	-1.1
SSLB	Suanglung	22.69	344	P	P	06 15 51.4	-1.2
SSLB				IAmb	IAmb	06 15 58.1	
	comp=Z,28nm,0.8s						
WB2	Warramunga Arr	22.69	164	P	P	06 15 52.3	-0.3
WR0	Warramunga Arr	22.76	163	P	P	06 15 53.1	-0.1
WR0				IAmb	IAmb	06 15 53.9	
	comp=Z,26nm,0.9s						
YOJ	Yonaguni jima	22.86	349	P	P	06 15 54.8	+0.7
NACB	Ninganchiao	22.89	346	P	P	06 15 52.4	-1.9
NACB				IAmb	IAmb	06 16 06.3	
	comp=Z,23nm,0.9s						
YHNB	Yeheng	23.42	345	P	P	06 15 58.5	-0.8
KNMB	Chin-men Tao	24.14	339	P	P	06 16 05.4	-0.3
PSA00	Pilbara Seismi	24.57	198	P	P	06 16 09.7	+0.1
PSA00				IAmb	IAmb	06 16 10.9	
	comp=Z,13nm,0.7s						
JOW	Kunigami	24.78	1	P	P	06 16 13.1	+1.6
	comp=Z,2.7nm,0.6s,baz=190,slow=13,SNR=3.6						
JOW	Kunigami	24.78	1	P	P	06 16 12.5	+1.0
JOW				IAmb	IAmb	06 16 16.5	
	comp=Z,28nm,0.8s						
RABL	Rabaul	25.22	104	P	P	06 16 13.8	-1.9
RGRI	Rengat	25.43	265	P	P	06 16 19.3	+1.8
UBPT	Khong Chiam	25.60	302	P	P	06 16 22.9	+3.9
UBPT				IAmb	IAmb	06 16 23.7	
	comp=Z,16nm,0.7s						
AS31	Alice Springs	26.14	167	P	P	06 16 23.7	-0.2
ASAR	Alice Springs	26.14	167	P	P	06 16 23.6	-0.3
	comp=Z,5.2nm,0.4s,baz=340,slow=6.6,SNR=65						
ASAR				pP	pP	06 17 00.2	+0.4
	comp=Z,4.2nm,0.8s,baz=334,slow=7.9,SNR=2.1						
ASAR				PcP	PcP	06 19 46.7	0.0
	comp=Z,5.3nm,0.5s,baz=352,slow=2.2,SNR=14						
ASAR				S	S	06 20 39.5	-3.2
	comp=Z,2.3nm,0.8s,baz=349,slow=16,SNR=4.7						
ASAR				LR	LR	06 27 07.8	
	comp=Z,98nm,19.8s,baz=332,slow=37						
ASAR	Alice Springs	26.14	167	P	P	06 16 23.7	-0.2
CTA	Charters Tower	28.48	141	P	P	06 16 44.5	-0.2
	comp=Z,7.3nm,0.9s,baz=322,slow=13,SNR=4.6						
NJ2	Nanjing	31.10	345	*e*P	P	06 17 08.6	+0.9
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
WHN	Wuhan	31.14	337	⇑P	P	06 17 10.2	+2.1
WHN				pmax	pmax		
	comp=Z,36nm,0.6s						
JNU	Nakatsue	31.19	5	P	P	06 17 08.0	-0.4
JNU				IAmb	IAmb	06 17 08.8	
	comp=Z,22nm,1.0s						
FORT	Forrest	32.52	179	P	P	06 17 20.3	+0.3
CMAR	Chiang Mai Arr	32.60	302	P	P	06 17 22.7	+1.7
	comp=Z,1.2nm,0.3s,baz=112,slow=7.7,SNR=5.0						
CMAR				pP	pwP	06 18 00.8	+1.4
	comp=Z,1.5nm,0.4s,baz=118,slow=7.1,SNR=2.0						
CMAR				PcP	PcP	06 20 05.0	+1.7
	comp=Z,1.4nm,0.3s,baz=156,slow=2.6,SNR=5.1						
MORW	Morawa	32.76	199	P	P	06 17 22.1	-0.2
MORW				IAmb	IAmb	06 17 33.7	
	comp=Z,26nm,1.4s						
KMI	Kunming	33.32	316	P	P	06 17 29.3	+1.9
KMI				pmax	pmax		
	comp=Z,16nm,1.3s						
HNR	Honiara	34.08	110	P	P	06 17 33.9	0.0
KSAR	Wonju Array Be	35.35	0	P	P	06 17 44.5	0.0
EIDS	Eidsvold	35.36	142	P	P	06 17 44.6	-0.1
EIDS				IAmb	IAmb	06 17 45.2	
	comp=Z,24nm,0.7s						
KSRS	Korea Array	35.37	0	P	P	06 17 44.6	+0.1
	comp=Z,21nm,1.1s,baz=176,slow=10,SNR=20						
KSRS				LR	LR	06 36 13.8	
	comp=Z,29nm,19.1s,baz=336,slow=43						
KS19	Wonju Array Si	35.41	0	P	P	06 17 45.0	0.0
KS19				IAmb	IAmb	06 17 45.4	
	comp=Z,16nm,1.1s						
BBOO	Buckleboo	35.44	168	P	P	06 17 44.8	-0.5
BBOO				IAmb	IAmb	06 17 45.8	
	comp=Z,24nm,0.8s						
MAJO	Matsushiro	35.81	15	P	P	06 17 47.5	-0.9
MJAR	Matsushiro Arr	35.81	15	P	P	06 17 46.8	-1.6
	comp=Z,3.1nm,0.6s,baz=188,slow=9.1,SNR=12						
MJAR				PcP	PcP	06 20 12.7	+0.6
	comp=Z,2.7nm,0.7s,baz=193,slow=3.5,SNR=6.5						
MJAR	Matsushiro Arr	35.81	15	P	P	06 17 46.6	-1.8
NWAO	Narrogin (SRO)	36.03	195	P	P	06 17 50.7	+0.4
NWAO				IAmb	IAmb	06 18 07.8	
	comp=Z,31nm,1.4s						
NWAO	Narrogin (SRO)	36.03	195	P	P	06 17 50.6	+0.3
NWAO				IAmb	IAmb	06 18 07.8	
	comp=Z,26nm,1.4s						
STKA	Stephens Creek	36.12	160	P	P	06 17 51.2	+0.2
	comp=Z,72nm,0.6s,baz=334,slow=8.9,SNR=220						
STKA				PcP	PcP	06 20 13.2	0.0
	comp=Z,4.8nm,0.4s,baz=351,slow=5.6,SNR=5.8						
STKA				LR	LR	06 33 29.9	
	comp=Z,89nm,20.5s,baz=13,slow=37						
STKA	Stephens Creek	36.12	160	P	P	06 17 51.5	+0.5
STKA				IAmb	IAmb	06 17 52.0	
	comp=Z,16nm,0.7s						
XAN	Xi'an	36.44	333	P	P	06 17 54.5	+0.6
XAN				pmax	pmax		
	comp=Z,21nm,0.7s						
XAN	Xi'an	36.44	333	P	P	06 17 54.7	+0.9
XAN				IAmb	IAmb	06 17 55.2	
	comp=Z,16nm,0.7s						
CD2	Chengdu	36.65	324	P	P	06 17 55.2	-0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BJT	Baijiatuau	39.34	346	P	P	06 18 18.5	+0.6
BJT				IAmb	IAmb	06 18 19.0	
	comp=Z,16nm,0.7s						
BJI	Beijing	39.36	346	P	P	06 18 18.2	+0.1
BJI				pP	pwP	06 18 58.3	+0.1
BJI				pmax	pmax		
	comp=Z,21nm,0.7s						
ARMA	Armidale	39.45	146	P	P	06 18 20.2	+1.0
HHC	Hu-ho-hao-te	41.40	341	*e*P	P	06 18 35.0	0.0
HHC				pmax	pmax		
	comp=Z,78nm,0.9s						
HHC				pmax	pmax		
	comp=Z,300nm,4.5s						
SHL	Shillong	41.70	307	P	P	06 18 39.3	+1.5
SHL				IAmb	IAmb	06 18 40.0	
	comp=Z,19nm,0.6s						
CAN	Canberra	42.08	154	P	P	06 18 41.8	+1.3
CAN				IAmb	IAmb	06 18 50.4	
	comp=Z,27nm,1.4s						
USRK	Ussuriysk Ar.	42.28	5	P	P	06 18 42.2	+0.3
	comp=Z,6.2nm,0.7s,baz=208,slow=8.9,SNR=9.9						
USRK	Ussuriysk Ar.	42.28	5	P	P	06 18 42.4	+0.5
TOO	Toolangi	42.62	159	P	P	06 18 46.3	+1.4
TOO				IAmb	IAmb	06 18 46.7	
	comp=Z,10nm,0.7s						
DZM	Mont Dzumac	44.74	124	P	P	06 19 02.6	+0.5
DZM				IAmb	IAmb	06 19 06.9	
	comp=Z,32nm,1.2s						
GTA	Gaotai	45.12	329	*e*P	P	06 19 06.3	+1.4
GTA				pP	pwP	06 19 46.7	+1.2
GTA				sP	sP	06 20 05.4	+3.4
GTA				PcP	PcP	06 20 43.1	+0.7
GTA				S	S	06 25 31.6	+0.5
GTA				sS	sS	06 26 40.7	+2.6
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,170nm,5.6s						
GTA				LR	LR		
	comp=Z,140nm,19.7s						
GTA				LR	LR		
	comp=Z,160nm,19.7s						
GTA				LR	LR		
	comp=Z,200nm,20.3s						
TAPN	Taplejung	45.84	307	*e*P	P	06 19 12.3	+1.4
	comp=Z,9.8nm,0.4s						
ODAN	Odare	45.88	306	*e*P	P	06 19 12.7	+1.5
	comp=Z,19nm,0.6s						
RAMN	Ramite	46.56	306	*e*P	P	06 19 18.3	+1.8
	comp=Z,25nm,0.7s						
JIRN	Jiri	47.19	307	*e*P	P	06 19 23.0	+1.5
	comp=Z,50nm,0.8s						
GUN	Gumba	47.55	307	*e*P	P	06 19 25.5	+1.3
	comp=Z,24nm,0.4s						
PKI	Pulchoki	47.78	306	*e*P	P	06 19 26.8	+0.8
	comp=Z,13nm,0.8s						
PKIN	Phulchoki	47.79	306	*e*P	P	06 19 26.9	+0.9
	comp=Z,4.6nm,0.3s						
DMN	Daman	48.04	306	*e*P	P	06 19 29.3	+1.4
ULN	Ulaanbaatar	49.12	342	P	P	06 19 36.7	+1.0
SONM	Songino Array	49.30	341	P	P	06 19 37.5	+0.4
	comp=Z,3.4nm,0.6s,baz=155,slow=7.9,SNR=32						
SONM				pP	pP	06 20 16.7	+1.3
	comp=Z,1.8nm,0.9s,baz=146,slow=6.6,SNR=2.7						
SONM				PcP	PcP	06 20 56.5	-0.6
	comp=Z,1.8nm,0.8s,baz=169,slow=4.2,SNR=4.1						
SONM	Songino Array	49.30	341	P	P	06 19 38.0	+0.9
DANN	Dangsing	49.43	306	*e*P	P	06 19 39.7	+1.1
	comp=Z,36nm,0.7s						
MSVF	Nonsavu	53.32	114	P	P	06 20 09.1	+1.7
TLY	Talaya	53.53	342	LR	LR	06 47 24.1	
	comp=Z,86nm,18.1s,baz=332,slow=41						
WMQ	Urumqi	54.73	325	*e*P	P	06 20 18.8	+1.6
WMQ				pP	pwP	06 20 58.4	-1.0
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,76nm,4.7s						
WMQ				LR	LR		
	comp=Z,530nm,29.2s						
WMQ				LR	LR		
	comp=Z,900nm,29.1s						
WMQ				LR	LR		
	comp=Z,790nm,29.3s						
PETK	Petropavlovsk-	56.76	21	P	P	06 20 30.9	-0.4
	comp=Z,6.1nm,0.8s,baz=185,slow=5.7,SNR=10						
PETK	Petropavlovsk-	56.76	21	P	P	06 20 31.8	+0.5
DCZ	Deep Cove	58.72	148	P	P	06 20 45.3	+0.2
DCZ				IAmb	IAmb	06 20 46.2	
	comp=Z,9.4nm,0.7s						
QRZ	Quartz Range	58.94	141	P	P	06 20 47.5	+0.8
QRZ				IAmb	IAmb	06 20 48.0	
	comp=Z,18nm,0.9s						
MK31	Makanchi Array	59.57	325	P	P	06 20 51.7	+0.8
MKAR	Makanchi Array	59.57	325	P	P	06 20 51.5	+0.5
	comp=Z,4.6nm,0.3s,baz=114,slow=7.9,SNR=124						
MKAR				pP	pwP	06 21 32.7	-1.2
	comp=Z,7.3nm,0.7s,baz=126,slow=8.3,SNR=6.4						
LBZ	Lake Benmore	59.67	146	P	P	06 20 51.9	+0.3
THZ	Tophouse	59.71	142	P	P	06 20 51.8	-0.3
RPZ	Rata Peaks	59.75	145	P	P	06 20 51.9	-0.3
	comp=Z,22nm,0.8s,baz=356,slow=4.4,SNR=7.3						
RPZ	Rata Peaks	59.75	145	P	P	06 20 52.6	+0.4
MAKZ	Makanchi	59.75	325	P	P	06 20 52.8	+0.6
KSH	Kashi	59.98	315	P	P	06 20 55.6	+1.5
KSH				sP	sP	06 21 55.7	+3.2
KSH				S	S	06 28 51.3	-1.6
KSH				SS	SS	06 32 52.7	+0.1
KSH				pmax	pmax		
	comp=Z,14nm,0.5s						
KSH				pmax	pmax		
	comp=Z,320nm,5.6s						
KSH				LR	LR		
	comp=Z,350nm,13.5s						
KSH				LR	LR		
	comp=Z,200nm,10.5s						
KSH				LR	LR		
	comp=Z,250nm,17.6s						
SNZO	South Karori	60.58	141	P	P	06 20 56.7	-1.1
BKZ	Black Stump Fm	60.62	138	P	P	06 20 57.9	-0.5
BKZ				IAmb	IAmb	06 20 58.5	
	comp=Z,22nm,1.2s						
MQZ	McQueen's Vall	60.68	144	P	P	06 20 59.2	+0.7
MQZ				IAmb	IAmb	06 21 02.6	
	comp=Z,26nm,1.1s						
BHW	Baring Head	60.74	141	P	P	06 20 57.8	-1.1
ZAA0	Zalesovo Array	62.62	333	P	P	06 21 11.4	+0.2
ZALV	Zalesovo Beam	62.62	333	P	P	06 21 10.4	-0.9
	comp=Z,1.7nm,0.8s,baz=116,slow=6.8,SNR=5.9						
ZALV				pP	pwP	06 21 54.4	-0.1
	comp=Z,2.1nm,0.8s,baz=111,slow=8.1,SNR=2.8						
KBL	Kabul	63.36	308	P	P	06 21 16.3	-0.6
KBL				IAmb	IAmb	06 21 17.9	
	comp=Z,4.9nm,0.8s						
KURK	Kurchatov	63.76	328	P	P	06 21 18.6	-0.3
KURK				IAmb	IAmb	06 21 26.4	
	comp=Z,10nm,0.7s						
GAR	Garm	63.83	313	P	P	06 21 20.0	+0.2
GAR				IAmb	IAmb	06 21 21.0	
	comp=Z,18nm,1.4s						
CHGR	Chuyangaron	64.57	312	P	P	06 21 24.0	-0.6
CHGR				IAmb	IAmb	06 21 42.1	
	comp=Z,6.6nm,1.1s						
KK31	Karatay Array	65.19	317	P	P	06 21 28.4	0.0
KKAR	Karatay Array	65.19	317	P	P	06 21 28.6	+0.3
KKAR	Karatay Array	65.19	317	P	P	06 21 28.4	0.0
KKAR				IAmb	IAmb	06 21 35.2	
	comp=Z,2.5nm,0.9s						
BRVK	Borovoye	69.41	327	P	P	06 21 54.1	-0.6
TIXI	Tiksi	69.63	0	P	P	06 21 54.6	-1.0
GEYT	Alibeck	72.75	309	P	P	06 22 15.5	+0.3
	comp=Z,3.4nm,0.7s,baz=145,slow=5.4,SNR=6.4						
GEYT	Alibeck	72.75	309	IAmb	IAmb	06 22 16.7	
	comp=Z,2.8nm,0.7s						
ABKAR	Akbulak array	74.14	321	P	P	06 22 22.1	-0.8
ABKAR	Akbulak array	74.14	321	P	P	06 22 21.3	-1.6
ABKAR				IAmb	IAmb	06 22 25.5	
	comp=Z,2.9nm,0.9s						
ANM	Nome	78.53	24	P	P	06 22 47.6	+0.3
VNDA	Vanda	81.52	173	P	P	06 23 03.4	+0.2
	comp=Z,17nm,0.6s,baz=318,slow=6.7,SNR=72						
VNDA	Vanda	81.52	173	P	P	06 23 03.1	-0.1
VNDA				IAmb	IAmb	06 23 04.1	
	comp=Z,21nm,0.8s						
RAYN	Ar Rayn	82.05	293	P	P	06 23 06.7	-0.4
TTA	Tatalina	82.09	27	P	P	06 23 06.9	+0.4
TTA				IAmb	IAmb	06 23 08.3	
	comp=Z,14nm,1.2s						
RSO	Redoubt South	83.20	29	P	P	06 23 11.8	-0.6
IMAR	Indian Mountai	83.61	24	P	P	06 23 14.6	+0.5
PPLA	Purkeypile	83.81	27	P	P	06 23 15.3	-0.1
PPLA				IAmb	IAmb	06 23 16.1	
	comp=Z,11nm,1.1s						
SUA	Susitna One	84.30	29	P	P	06 23 17.7	-0.2
PMR	Palmer	85.08	28	P	P	06 23 21.2	-0.4
PMR				IAmb	IAmb	06 23 22.3	
	comp=Z,15nm,0.9s						
MCK	McKinley	85.36	26	P	P	06 23 22.8	-0.3
MCK				IAmb	IAmb	06 23 23.9	
	comp=Z,7.4nm,0.7s						
RND	Reindeer	85.37	27	P	P	06 23 22.6	-0.5
RND				IAmb	IAmb	06 23 23.4	
	comp=Z,8.2nm,0.6s						
SML	Sawmill	85.48	28	P	P	06 23 23.4	-0.2
SML				IAmb	IAmb	06 23 24.7	
	comp=Z,14nm,0.6s						
TOLK	Toolik Lake Re	85.58	21	P	P	06 23 24.5	+0.4
TOLK				IAmb	IAmb	06 23 26.2	
	comp=Z,5.3nm,0.8s						
HDA	Harding Lake	86.28	26	P	P	06 23 26.4	-1.1
IL31		86.33	25	P	P	06 23 26.2	-1.4
ILAR	Eielson Array	86.33	25	P	P	06 23 26.6	-1.2
	comp=Z,1.6nm,1.0s,baz=222,slow=5.2,SNR=8.9						
ILAR	Eielson Array	86.33	25	P	P	06 23 26.2	-1.5
RIDG	Independent Ri	87.18	26	P	P	06 23 31.5	-0.4
RIDG				IAmb	IAmb	06 23 32.5	
	comp=Z,7.5nm,0.9s						
BMAR	Burnt Mountain	87.38	23	P	P	06 23 33.1	+0.3
DOT	Dot Lake	87.53	27	P	P	06 23 32.7	-0.9
BCAR	Beaver Creek A	88.56	27	P	P	06 23 38.9	+0.5
BARN	Barnard Glacie	88.67	29	P	P	06 23 40.3	+1.1
EGAK	Eagle	88.78	25	P	P	06 23 39.5	0.0
DAWY	Dawson	89.58	26	P	P	06 23 43.4	+0.2
DAWY				IAmb	IAmb	06 23 44.2	
	comp=Z,6.4nm,0.9s						
KMBO	Kilima Mbogo	90.45	269	P	P	06 23 48.5	-0.1
	comp=Z,1.4nm,0.7s,baz=56,slow=8.6,SNR=4.3						
KMBO	Kilima Mbogo	90.45	269	IAmb	IAmb	06 23 50.4	
	comp=Z,3.9nm,1.2s						
QSPA	South Pole Qui	91.83	180	P	P	06 23 54.1	+0.4
ARCES	ARCESS Array B	92.46	340	P	P	06 23 55.1	-1.4
	comp=Z,7.6nm,0.6s,baz=84,slow=5.4,SNR=25						
FINES	FINESS Array B	93.86	332	P	P	06 24 01.6	-1.3
	comp=Z,0.4nm,0.3s,baz=64,slow=4.4,SNR=5.5						
FINES				LR	LR	07 08 27.7	
	comp=Z,248nm,18.6s,baz=265,slow=37						
KWP	Kalwaria Pacla	98.19	321	P	P	06 24 22.7	-0.2
YKA	Yellowknife Ar	100.75	25	P	Pdif	06 24 33.2	-0.8
	comp=Z,0.5nm,0.8s,baz=295,slow=4.6,SNR=8.2						
ULM	Lac du Bonnet	116.08	29	PKP	PKPdf	06 29 27.1	-1.0
	comp=Z,1.8nm,0.6s,baz=297,slow=2.5,SNR=5.7						
ULM	Lac du Bonnet	116.08	29		PKPdf	06 29 27.2	-0.8
ANMO	Albuquerque	117.53	49		PKiKP	06 29 32.5	+0.9
MNTX	Cornudas Mount	119.66	52		PKiKP	06 29 36.3	+0.7
ECSD	EROS Data Cent	119.72	36		PKPdf	06 29 35.2	-0.1
E38A	The Farm, Brul	120.65	30		PKPdf	06 29 36.6	-0.4
MSTX	Muleshoe	120.70	48		PKPdf	06 29 37.1	-0.5
R32A	Long Quarter,	121.40	42		PKiKP	06 29 39.0	+0.1
TX31	Lajitas Ar. Si	121.94	53		PKiKP	06 29 40.3	0.0
TX32	Lajitas Array	121.94	53		PKiKP	06 29 40.4	+0.2
TXAR	Lajitas Array	121.94	53	PKP	PKPdf	06 29 39.5	-0.6
	comp=Z,1.4nm,0.6s,baz=312,slow=0.7,SNR=10						
TXAR	Lajitas Array	121.94	53		PKiKP	06 29 40.4	+0.2
COWI	Conover	122.21	30		PKPdf	06 29 39.8	-0.2
G40A	Rib Lake	122.25	31		PKPdf	06 29 39.5	-0.6
E43A	Lone Tree Farm	123.04	28		PKPdf	06 29 41.3	-0.3
WMOK	Wichita Mounta	123.25	46		PKPdf	06 29 42.4	0.0
JFWS	Jewell Farm	123.83	33		PKPdf	06 29 42.7	-0.5
I42A	Draeger Farm,	123.87	31		PKPdf	06 29 42.5	-0.8
X34A	Smith Ranch, M	124.00	45		PKiKP	06 29 44.1	0.0
E46A	Sault Ste Mari	124.27	26		PKPdf	06 29 43.8	-0.1
TOA0	Torodi Ar. Sit	124.36	287		PKPdf	06 29 44.7	-0.2
TORD	Torodi Ar. Bea	124.36	287	PKP	PKPdf	06 29 44.8	-0.2
	comp=Z,4.5nm,0.6s,baz=60,slow=2.0,SNR=25						
JCT	Junction City	124.51	51		PKiKP	06 29 45.6	+0.4
G45A	Suttons Bay	124.66	28		PKiKP	06 29 45.1	0.0
S39A	Bolivar	125.33	40		PKPdf	06 29 46.1	-0.2
U38A	Gravette	125.37	41		PKPdf	06 29 45.6	-0.7
J47A	Sunmer	126.40	29		PKiKP	06 29 48.4	-0.2
P43A	Skaggs, Pawnee	126.42	35		PKPdf	06 29 47.6	-0.6
U40A	Yellville	126.42	41		PKPdf	06 29 48.5	+0.1
J48A	Bridge Port	126.86	28		PKPdf	06 29 49.1	+0.2
MIAR	Mount Ida	126.98	43		PKiKP	06 29 50.1	+0.1
OLIL	Olney	127.85	35		PKiKP	06 29 51.7	+0.1
O49A	Covington	128.90	31		PKPdf	06 29 53.2	+0.2
PLAL	Pickwick Lake	130.33	39		PKPdf	06 29 55.8	-0.1
DBIC	Dimbokro	131.85	281	PKP	PKPdf	06 29 59.0	-0.3
	comp=Z,2.5nm,0.6s,baz=69,slow=1.6,SNR=5.1						
DBIC	Dimbokro	131.85	281		PKiKP	06 30 00.3	+0.1
PLCA	Paso Flores	137.99	159	PKP	PKPdf	06 30 10.2	+0.1
	comp=Z,1.9nm,0.6s,baz=297,slow=1.9,SNR=9.2						
PLCA	Paso Flores	137.99	159		PKPdf	06 30 10.9	+0.8
JTS	Las Juntas de	145.34	69	PKPdf	PKPab	06 30 24.6	+0.2
GO03	Copiap	149.25	148		PKiKP	06 30 35.3	-0.3
GO02	Mina Guanaco	151.52	146		PKPbc	06 30 40.5	+0.2
GO02				PKPab	PKPab	06 30 50.5	+1.2
CPUP	Villa Florida	155.26	169	PKP	PKPdf	06 30 37.5	-1.4
	comp=Z,1.7nm,1.0s,baz=209,slow=4.1,SNR=4.0						
CPUP				PKPbc	PKPbc	06 30 47.8	
	comp=Z,3.9nm,0.9s,baz=216,slow=2.0,SNR=8.9						
CPUP				PKPab	PKPab	06 31 05.5	+0.9
	comp=Z,6.8nm,0.7s,baz=204,slow=3.6,SNR=17						
CPUP	Villa Florida	155.26	169		PKPdf	06 30 37.9	-1.0
CPUP					PKPbc	06 30 48.8	
CPUP					PKPab	06 31 05.3	+0.8
MNMC	Minye Minye	155.95	136		PKPab	06 31 08.9	+0.8
SDV	Santo Domingo	158.84	59		PKPdf	06 30 44.1	0.0
SDV					PKPab	06 31 20.7	-0.1

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*TIR **09** 06:11:47.5, 41°.51N×19°.42E, h17^{km}, Md3.2/6*
*PDG **09** 06:11:48.8±0.2, 41°.46N×19°.46E, h18^{km}, MD3.4/1, ML3.1/12, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*BEO **09** 06:11:49.7±0.5, 41°.50N×19°.44E, h5^{km}±2^{km}, ML2.8/14*
*SKO **09** 06:11:50.5, 41°.48N×19°.47E, h12^{km}*
*THE **09** 06:11:50.3, 41°.56N×19°.52E, h3^{km}±1^{km}, ML2.9/3, Error ellipse: s-maj=2.5km s-min=1.4km az=324.0*
ISC 09 06:11:49.7±1.0**, 41°.51N**±0°.02×**19°.47E**±0°.02**, h11**^{km}±8^{km}**, n83,** σ**1^{s}07**/113**, 20C-4D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.34	118	P	Pg	06 11 56.4	-0.1
TIR				S	Sg	06 12 01.4	+0.4
	5µm,0.4s						
TIR	Tirane	0.34	118	*e*Pg	Pg	06 11 56.2	-0.3
TIR				*e*Sg	Sg	06 12 01.5	+0.4
TIR	Tirane	0.34	118	*i* PG	Pg	06 11 56.6	+0.1
TIR				*i* SG	Sg	06 12 01.4	+0.4
TIR	Tirane	0.34	118	⇑P	Pg	06 11 56.2	-0.3
TIR				⇑S	Sg	06 12 01.9	+0.9
PUK	Puka	0.62	31	*i* PG	Pg	06 12 00.4	-1.4
PUK				*i* SG	Sg	06 12 10.3	+0.3
PHP	Peshkopia	0.75	76	P	Pg	06 12 03.2	-1.0
PHP				S	Sg	06 12 14.0	-0.1
PHP	Peshkopia	0.75	76	*i* PG	Pg	06 12 01.9	-2.4
PHP				*i* SG	Sg	06 12 14.6	+0.5
PDG	Podgorica	0.94	350	*e*Pg	Pg	06 12 06.0	-1.7
PDG				*e*Sg	Sg	06 12 19.6	-0.3
PDG	Podgorica	0.94	350	⇑P	Pg	06 12 08.3	+0.6
PDG				⇑S	Sn	06 12 23.6	+1.4
PDG	Podgorica	0.94	350	*e*Pn	Pg	06 12 07.1	-0.6
BCI	Bajram Curri	0.97	27	*i* PG	Pg	06 12 06.1	-2.3
BCI				*i* SG	Sg	06 12 21.3	+0.3
VLO	Vlora	1.04	179	P	Pn	06 12 11.1	+0.9
OHR	Ohrid	1.08	111	*i* Pg	Pb	06 12 09.3	-1.1
OHR				*i* Sg	Sn	06 12 25.9	+0.1
OHR				*e*Lg	Lg	06 12 27.3	
	comp=N,245nm,0.6s						
OHR				*e*Lg	Lg	06 12 31.1	
	comp=E,194nm,0.5s						
HCY	Herceg Novi	1.19	323	*e*Pn	Pb	06 12 12.9	+0.7
TPE	Tepelena	1.28	161	P	Pn	06 12 14.0	+0.5
TPE	Tepelena	1.28	161	*i* PN	Pn	06 12 12.1	-1.4
TPE				*i* SN	Sb	06 12 30.6	+0.4
TREB	Trebinje	1.47	326	*e*Pn	Pn	06 12 16.4	+0.3
TREB				*e*Sg	Sb	06 12 36.3	+0.7
TREB	Trebinje	1.47	326	*e*Pn	Pn	06 12 15.9	-0.2
DBRK	Dubrovnik	1.52	320	*e*Pn	Pb	06 12 18.4	+0.5
DBRK				Sg	Sb	06 12 38.3	+1.1
SKO	Skopje	1.55	72	*e*Pn	Pn	06 12 18.0	+0.8
SKO	Skopje	1.55	72	*i* Pg	Pb	06 12 18.3	0.0
SKO				*i* Sg	Sg	06 12 39.2	-0.2
BRY	Bratogost	1.55	334	*e*Pn	Pb	06 12 18.6	0.0
FNA	Florina	1.61	116	P	Pn	06 12 18.9	+0.7
FNA				S	Sb	06 12 40.4	+0.5
	comp=E,355nm,0.4s						
FNA	Florina	1.61	116	*i* PN	Pn	06 12 18.8	+0.7
FNA				*i* SN	Sb	06 12 40.0	+0.1
NEST	Nestorio	1.62	132	P	Pb	06 12 19.6	-0.1
NEST				S	Sg	06 12 42.1	+0.3
	comp=E,142nm,0.5s						
CGL1	Ceglie Messapi	1.73	241	*e*Pn	Pn	06 12 18.8	-0.9
SJES	Sjenica	1.79	12	*e*Pn	Pb	06 12 22.8	+0.2
SJES				*e*Sg	Sg	06 12 47.1	-0.2
STON	Ston	1.89	317	*e*Pn	Pn	06 12 22.7	+0.8
STON				*e*Sn	Sn	06 12 46.5	+0.8
STON	Ston	1.89	317	*e*Pn	Pb	06 12 24.0	-0.2
STON				Sn	Sg	06 12 50.0	-0.5
STON	Ston	1.89	317	*e*Pn	Pn	06 12 22.0	+0.1
BAI	Bari	1.99	259	*e*Pn	Pn	06 12 22.7	-0.6
STIP	Stip	2.05	84	*i* Pn	Pb	06 12 26.8	-0.1
STIP				*e*Sn	Sb	06 12 53.7	+1.4
SELS	Selova	2.10	35	*e*Pn	Pn	06 12 24.9	0.0
RUDO	Rudo	2.11	358	*e*Pn	Pn	06 12 25.9	+1.0
IVAS	Ivanjica	2.13	14	*e*Pn	Pn	06 12 25.7	+0.5
BARS	Barje	2.18	52	*e*Pn	Pn	06 12 26.5	+0.6
BARS	Barje	2.18	52	*e*Pn	Pg	06 12 40.9	+9.4
SG1	Sgolgore (BA)	2.21	253	*e*Pn	Pn	06 12 25.5	-0.8
MATE	Matera	2.26	249	⇑P	Pn	06 12 26.6	-0.4
MATE				⇑S	Sn	06 12 54.4	-0.4
VAY	Valandovo	2.34	94	*i* Pn	Pn	06 12 28.5	+0.4
VAY				*e*Sn	Sn	06 12 58.2	+1.4
VAY				*e*Lg	Lg	06 13 06.6	
	comp=N,57nm,0.8s						
VAY				*e*Lg	Lg	06 13 07.3	
	comp=E,56nm,0.8s						

BBLS	Lazići	2.36	359	ePn	Pn	06 12 30.0	+1.6
BBLS	Lazići	2.36	359	ePn	Pn	06 12 30.2	+1.8
BOSS	Bosilegrad	2.45	65	ePn	Pn	06 12 30.1	+0.4
MAKA	Makarska	2.54	315	Sn	Sn	06 13 01.1	-0.6
GRUS	Gruza	2.55	21	ePn	Pn	06 12 32.0	+1.0
HAPS	Han Pijesak,BI	2.60	352	ePn	Pn	06 12 32.0	+0.2
HAPS	Han Pijesak,BI	2.60	352	ePn	Pn	06 12 31.7	-0.1
DIVS	Divibare	2.62	8	ePn	Pn	06 12 32.5	+0.5
DIVS	Divibare	2.62	8	ePn	Pn	06 12 31.3	-0.7
RICI	Ricice	2.63	320	Sn	Sn	06 13 04.6	+0.6
BOVS	Bovan	2.69	37	ePn	Pn	06 12 33.1	+0.2
HVAR	Hvar	2.79	308	Sn	Sn	06 13 09.3	+1.4
TRUS	Trudelj	2.80	14	ePn	Pn	06 12 36.9	+2.5
ZAPS	Zavoj	2.93	52	ePn	Pn	06 12 38.1	+1.8
VTS	Vitosha	3.02	67	ePn	Pn	06 12 38.3	+0.8
VTS	Vitosha	3.02	67	⇓P	Pn	06 12 37.3	-0.2
VTS				⇑S	Sn	06 13 13.1	-0.6
ZAGS	Zajecar	3.08	41	ePn	Pn	06 12 38.4	+0.2
TIP	Timpagrande	3.12	223	⇑P	Pn	06 12 37.9	-0.9
BLKB	Belogradchik	3.17	47	⇑S	Sn	06 13 17.5	+0.1
KIJV	Kijevo	3.36	319	Sn	Sn	06 13 21.1	-0.9
MGRS	Mrkonjic Grad	3.39	330	ePn	Pn	06 12 44.7	+2.1
ZIRJ	Zirje	3.55	308	Sn	Sn	06 13 25.7	-0.8
MORI	Morici	3.64	312	Sn	Sn	06 13 28.1	-0.7
BLY	Banja Luka	3.65	333	⇑P	Pn	06 12 46.2	+0.2
BLY				⇑S	Sn	06 13 30.4	+1.4
BLY	Banja Luka	3.65	333	ePn	Pb	06 12 54.2	+0.1
FRGS	Fruska Gora	3.66	4	ePn	Pn	06 12 40.6	-5.6
MDVR	Moldovita	3.66	26	⇑P	Pn	06 12 46.6	+0.3
MDVR				⇑S	Sn	06 13 28.3	-1.2
HERR	Herculane	4.00	32	⇑P	Pn	06 12 51.1	+0.2
HERR				⇑S	Sn	06 13 37.4	-0.4
DUGI	Dugi Otok	4.09	309	ePn	Pn	06 12 52.6	+0.5
DUGI				Sn	Sn	06 13 37.8	-2.1
SRE	Strehaia	4.17	40	⇑P	Pn	06 12 53.3	0.0
BZS	Buzias	4.39	20	ePn	Pn	06 12 55.9	-0.4
BZS	Buzias	4.39	20	⇓P	Pn	06 12 56.6	+0.3
BZS				⇑S	Sn	06 13 44.9	-2.5
GZR	Gura Zlata	4.57	31	⇑P	Pn	06 12 59.2	+0.4
GZR				⇑S	Sn	06 13 51.0	-0.9
CRES	Cresnjev	5.20	327	ePn	Pn	06 13 08.0	+0.5
CEY	Cerknica	5.59	321	ePn	Pn	06 13 12.9	+0.1
VOIR		5.65	44	⇓P	Pn	06 13 13.1	-0.5
DRGR		5.77	23	⇓P	Pn	06 13 15.6	+0.3
DRGR				⇑S	Sn	06 14 18.1	-3.5
SOKA	Soboth	6.07	330	ePn	Pn	06 13 21.7	+2.2
	comp=E,0.5nm,0.2s						
OBKA	Obir	6.13	326	ePn	Pn	06 13 21.7	+1.5
	comp=E,0.5nm,0.2s						
ABTA	Abfaltersbach	7.24	319	ePn	Pn	06 13 37.2	+1.7
	comp=E,0.2nm,0.2s						
MOA	Molln	7.34	331	ePn	Pn	06 13 40.0	+3.1
	comp=E,0.1nm,0.1s						
WTTA	Wattenberg	8.03	318	ePn	Pn	06 13 48.4	+1.9
	comp=E,0.6nm,0.2s						
SQTA	Sankt Quirin	8.22	317	ePn	Pn	06 13 50.8	+1.9
	comp=E,0.4nm,0.2s						

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*THR **09** 06:34:10.8±0.9, 38°.16N×46°.44E, h14km±9km, ML3.0*
*NSSP **09** 06:34:10.0, 38°.07N×46°.35E, h10km, Ms3.2*
*TEH **09** 06:34:10.8, 38°.09N×46°.42E, h7km, ML3.6*
ISC 09 06:34:11.0±1.1**, 38°.12N**±0°.03×**46°.42E**±0°.03**, h6**km±11km**,**
n38, σ1ˢ24/45**, 2C, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TABZ	Tabriz	0.10	230	ePg	Pg	06 34 13.8	+0.6
ITBZ	Tabriz	0.24	297	ePg	Pg	06 34 15.7	-0.1
ITBZ				eSg	Sg	06 34 19.7	+0.6
ITBZ	Tabriz	0.24	297	Pg	Pg	06 34 15.6	-0.2
TVRZ	Varzaqan	0.43	27	ePg	Pb	06 34 20.0	-1.1
TVRZ				eSg	Sb	06 34 27.4	-0.5
IHRS	Heris	0.53	68	ePg	Pg	06 34 21.2	+0.1
IHRS	Heris	0.53	68	Pg	Pg	06 34 21.1	0.0
AHAR	Ahar	0.62	53	ePg	Pg	06 34 23.1	+0.2
IHSH	Hashtrud	0.69	74	ePg	Pn	06 34 30.5	+3.0
IHSH				e		06 34 30.9	
IHSH	Hashtrud	0.69	74	Pg	Pn	06 34 30.5	+3.0
IMRD	Marand	0.82	317	ePg	Pg	06 34 26.2	-0.5
IMRD				e		06 34 39.0	
IMRD	Marand	0.82	317	Pg	Pg	06 34 26.2	-0.5
ISRB	Sarab	1.03	106	ePg	Pg	06 34 29.5	-1.2
ISRB				e		06 34 48.3	
ISRB	Sarab	1.03	106		Pg	06 34 29.7	-1.0
GRMI	Germi	1.34	59	ePg	Pn	06 34 35.4	-1.0
GRMI	Germi	1.34	59	ePg	Pn	06 34 35.4	-1.0
MAHB	Mahabad	1.47	203	ePn	Pn	06 34 37.1	-1.0
MAHB				e		06 35 00.1	
MAHB	Mahabad	1.47	203		Pn	06 34 37.0	-1.0
MAKU	Maku	1.84	313	ePg	Pb	06 34 43.9	-1.1
MAKU				eSg	Sb	06 35 08.4	0.0
MAKU				IAML		06 35 12.8	
	comp=E,132nm,0.4s						
MAKU	Maku	1.84	313	ePg	Pb	06 34 43.9	-1.1
ZNJK	Zanjan	2.31	128	ePn	Pn	06 34 50.8	+1.0
ZNJK				eSg	Sg	06 35 23.4	-1.8
ZNJK	Zanjan	2.31	128	ePn	Pn	06 34 50.8	+1.0
NRKZ	NAREK	2.33	324	iP	Pb	06 34 53.0	-0.3
NRKZ				iS	Sb	06 35 23.2	+0.8
GNI	Garni	2.41	328	⇑iP	Pb	06 34 55.3	+0.5
GNI				⇑iS	Sg	06 35 28.3	-0.2
GNI	Garni	2.41	328		Pb	06 34 55.5	+0.6
KAPZ	Kaputan	2.57	329	iP	Pb	06 34 57.6	0.0
KAPZ				iS	Sg	06 35 32.8	-0.9
METS	Metsamor	2.73	319	iP	Pb	06 35 00.8	+0.7
METS				iS	Sg	06 35 37.6	-0.9
SNGE	Sanandaj	3.11	166	ePn	Pn	06 35 02.9	+2.1
SNGE	Sanandaj	3.11	166	ePn	Pn	06 35 02.9	+2.1
ILIN	Lien	3.23	172	e		06 32 00.2	
ILIN				ePn	Pn	06 35 04.8	+2.4
HSRG	Sareghieh	3.24	152	ePn	Pn	06 35 03.3	+0.7
QABG	Abgarm-Qazvin	3.49	133	ePn	Pn	06 35 06.7	+0.7
IALM	Almabolaq	3.54	156	ePn	Pn	06 35 07.1	+0.3
QALM	Alamut, Qazvin	3.77	115	ePn	Pn	06 35 11.6	+1.8
IGHG	Ghaleghazi	3.79	178	e		06 36 26.7	
IRAZ	Razeghan	3.91	133	ePn	Pn	06 35 12.9	+1.2
IRAZ				e		06 36 24.8	
HSAM	Samen	4.28	155	ePn	Pn	06 35 18.5	+1.6
CHTH	Charan	4.36	119	ePn	Pn	06 35 19.2	+1.2
CHTH				IAML		06 36 31.0	
	comp=N,13nm,0.5s						
CHTH	Charan	4.36	119	ePn	Pn	06 35 19.2	+1.2

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*NORS **09** 06:48:21.8±0.0, 42°.51N×43°.47E, h12km, MPVA3.6*
*IASPEI **09** 06:48:22.8±0.8, 42°.54N±0°.02×43°.45E±0°.03, h10km±4km, Error ellipse: s-maj=3.8km s-min=3.2km az=104.2, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*DDA **09** 06:48:22.6, 42°.53N×43°.37E, h7km±1km, ML2.2*
*TIF **09** 06:48:22.0, 42°.59N×43°.46E, h15km*
*ISK **09** 06:48:22.7, 42°.53N×43°.48E, h9km, ML2.5/2*
ISC 09 06:48:22.8±0.8**, 42°.53N**±0°.02×**43°.46E**±0°.02**, h10**km±4km**,**
n37, σ0ˢ46/69**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONI	Oni	0.06	358	P	Pg	06 48 25.2	+0.1
ONI				S	Sg	06 48 26.7	+0.1
ONI	Oni	0.06	358	P	Pg	06 48 25.0	0.0
ONI				S	Sg	06 48 26.7	+0.1
ONI	Oni	0.06	358	PG	Pg	06 48 25.1	+0.1
ONI				SG	Sg	06 48 26.7	+0.1
ONI	Oni	0.06	358	ePg	Pg	06 48 25.2	+0.1
ONI				eSg	Sg	06 48 25.7	-0.9
DIGR	Digorskoe uzhe	0.38	14	iPg	Pg	06 48 30.1	-0.2
DIGR				eSg	Sg	06 48 35.5	+0.1
TKB	Tkibuli	0.39	242	P	Pb	06 48 31.1	-0.6
TKB				S	Sb	06 48 37.3	-0.5
TKB	Tkibuli	0.39	242	P	Pb	06 48 31.1	-0.6
TKB				S	Sb	06 48 37.3	-0.5
ZEI	Tsey	0.41	52	iPg	Pg	06 48 31.1	0.0
ZEI				iSg	Sg	06 48 36.9	+0.4
LACR	Lac	0.69	64	iPg	Pg	06 48 35.4	-0.7
LACR				eSg	Sb	06 48 45.8	-0.6
KORR	Kora	0.71	39	ePg	Pb	06 48 37.4	+0.1
KORR				eSg	Sb	06 48 47.5	+0.4
GUDG	Gudauri	0.76	95	P	Pg	06 48 37.0	-0.4
GUDG	Gudauri	0.76	95	ePg	Pg	06 48 37.0	-0.4
LSNR	Lesken	0.79	20	ePg	Pb	06 48 38.4	-0.3
LSNR				eSg	Sb	06 48 49.0	-0.5
ARNR	Ardon	0.89	43	ePg	Pb	06 48 40.1	-0.2
ARNR				eSg	Sb	06 48 52.5	+0.4
NEY	Neytrino	0.90	323	ePg	Pg	06 48 39.9	-0.2
NEY				eSg	Sg	06 48 52.0	+0.2
STDR	Stavd-Durt	0.95	28	ePg	Pn	06 48 41.9	-0.2
STDR				eSg	Sb	06 48 54.2	+0.4
NCK	Nalchik	0.97	6	ePg	Pb	06 48 41.6	0.0
NCK				eSg	Sb	06 48 54.9	+0.5
TRLG	Trialeti	1.10	154	P	Pn	06 48 44.1	-0.3
TRLG				S	Sn	06 49 00.2	+0.5
TRLG	Trialeti	1.10	154	P	Pn	06 48 44.3	-0.1
TRLG				S	Sn	06 49 00.3	+0.5
AKH	Akhalkalaki	1.12	179	P	Pn	06 48 44.8	+0.1
AKH				S	Sn	06 49 00.8	+0.5
AKH	Akhalkalaki	1.12	179	P	Pn	06 48 44.9	+0.2
AKH				S	Sn	06 49 00.8	+0.5
AKH	Akhalkalaki	1.12	179	PN	Pn	06 48 44.6	-0.1
AKH				SN	Sn	06 49 00.4	+0.1
AKH	Akhalkalaki	1.12	179	ePg	Pn	06 48 44.8	+0.1
AKH				eSg	Sn	06 49 00.8	+0.5
EPOS	Posof	1.16	208	iP	Pg	06 48 45.5	+0.4
EPOS				iS	Sn	06 49 00.7	-0.6
BTNK	Botanikuri	1.31	130	P	Pg	06 48 47.5	-0.4
BTNK				S	Sg	06 49 05.7	+0.7
BTNK	Botanikuri	1.31	130	ePg	Pg	06 48 47.5	-0.4
BTNK				eSg	Sg	06 49 05.7	+0.7
SHA1	Shidzhatmaz	1.34	334	ePg	Pg	06 48 48.2	-0.3
SHA1				eSg	Sn	06 49 05.6	0.0
BATM	Batumi	1.61	235	P	Pb	06 48 52.8	+0.2
BATM				S	Sg	06 49 14.7	+0.2
BATM	Batumi	1.61	235	PN	Pb	06 48 52.1	-0.4
BATM	Batumi	1.61	235	ePg	Pb	06 48 52.8	+0.2
BATM				eSg	Sg	06 49 14.7	+0.2
BATM	Batumi	1.61	235	iP	Pb	06 48 52.1	-0.4
BATM				iS	Sg	06 49 14.5	0.0
BCA	Borcka	1.75	232	PN	Pb	06 48 54.2	-0.7
DBOC	Borcka	1.79	229	iP	Pb	06 48 55.0	-0.6
DBOC				iS	Sb	06 49 18.9	+0.9
DBOC				IAML		06 49 22.0	
	comp=E,27nm,0.5s						
DAGI	Agillar	1.86	219	iP	Pb	06 48 57.4	+0.5
DAGI				iS	Sb	06 49 20.2	+0.1
DBAD	Bademkaya	2.01	222	iP	Pb	06 48 59.0	-0.4
DBAD				iS	Sb	06 49 23.5	-0.9
DBAD				IAML		06 49 28.0	
	comp=N,25nm,1.2s						
DDEM	Demirkent	2.08	218	iP	Pb	06 49 00.6	-0.1
DDEM				iS	Sg	06 49 28.7	-0.9
DDEM				IAML		06 49 30.0	
	comp=N,42nm,0.4s						
CHOM	Cayeli-Rize	2.47	235	PN	Pn	06 49 04.4	+1.3

WEL 09 07:22:41.2±0.5**, 33°S**±5°×**17°9W**±1°5**, h33**km**, M4.2**/22**,**
mB4.8/12**, ML4.7**/18**, MLv4.6**/22**, Mw(mB)4.1**/12**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.58	9	P	Pn	07 23 33.0	-1.4
GLKZ				S	Sn	07 24 14.1	-1.5
TWGZ	Tauwhareparae	6.06	207	P	Pn	07 24 09.1	+0.6
TWGZ				S	Sn	07 25 18.9	+2.3
CNGZ	Carnagh Statio	6.25	204	P	Pn	07 24 13.0	+2.0
TKGZ	Te Karaka	6.34	207	P	Pn	07 24 14.8	+2.5
TKGZ				S	Sn	07 25 24.0	+0.5
MWZ	Matawai	6.37	209	P	Pn	07 24 13.9	+1.2
MWZ				S	Sn	07 25 24.0	-0.4
OPRZ	Ohinepanea	6.43	217	P	Pn	07 24 15.9	+2.5
URZ	Urewera	6.49	212	P	Pn	07 24 14.7	+0.4
RAGZ	Rawiri	6.56	209	P	Pn	07 24 19.0	+3.7
RIGZ	Rimuhau	6.60	206	P	Pn	07 24 18.0	+2.0
RIGZ				S	Sn	07 25 28.0	-2.0
MUGZ	Murupara	6.82	213	P	Pn	07 24 18.6	-0.3
MUGZ				S	Sn	07 25 35.7	+0.3
SNGZ	Shannon Statio	6.83	208	P	Pn	07 24 21.0	+2.0
SNGZ				S	Sn	07 25 34.8	-0.9
RTZ	Ruatahuna	6.84	211	P	Pn	07 24 21.3	+2.1
KNZ	Kokohu	6.92	205	P	Pn	07 24 22.5	+2.3
KNZ				S	Sn	07 25 36.3	-1.4
RAHZ	Arahi	7.05	209	P	Pn	07 24 21.6	-0.4
RAHZ				S	Sn	07 25 38.3	-2.7
ARHZ	Aropaoanui	7.38	208	P	Pn	07 24 28.7	+2.2
BKZ	Black Stump Fm	7.51	211	P	Pn	07 24 29.5	+1.1
MCHZ	McNeill Hill	7.66	209	P	Pn	07 24 31.9	+1.6
KWHZ	Kaweka Forest	7.75	210	P	Pn	07 24 31.2	-0.5
HIZ	Hauiti	7.83	222	P	Pn	07 24 35.7	+3.0
KAHZ	Kahuranaki	7.89	207	P	Pn	07 24 32.6	-0.9
KRHZ	Kereru	7.96	210	P	Pn	07 24 34.7	+0.2
BHHZ	Black Hill Sta	7.96	212	P	Pn	07 24 34.5	-0.1
MOVZ	Moawhango	8.04	214	P	Pn	07 24 36.5	+0.8
PNHZ	Pukenui	8.26	209	P	Pn	07 24 38.0	-0.6
PRHZ	Porangahau	8.39	206	P	Pn	07 24 39.1	-1.3
PKE	Pukeiti	8.79	221	P	Pn	07 24 48.1	+2.3
KHEZ	Kahui Hut	8.84	221	P	Pn	07 24 48.8	+2.2
BFZ	Birch Farm	8.90	207	P	Pn	07 24 45.3	-2.0
MRZ	Mangatainoka R	9.14	209	P	Pn	07 24 48.5	-2.2
TMWZ	Te Maipa	9.40	207	P	Pn	07 24 52.7	-1.5
OGWZ	Otaki Gorge	9.45	211	P	Pn	07 24 53.0	-1.8
KIW	Kapiti Island	9.59	211	P	Pn	07 24 53.7	-3.2
CAW	Cannon Point	9.73	210	P	Pn	07 24 56.5	-2.2
MSWZ	Moikau Station	9.91	208	P	Pn	07 24 59.6	-1.6

NNC 09 07:28:27.1±0.4**, 50°.01N×78°.70E, h0**km**, mb3.7, mpv3.2,**
16C-8D, Error ellipse: s-maj=4.3km s-min=2.2km az=65.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	Kurchatov Arra	0.59	348	⇑P	Pg	07 28 38.6	+0.2
KUR07				⇑S	Sb	07 28 47.8	-1.4
KUR06	Kurchatov Arra	0.61	349	⇑P	Pg	07 28 38.0	-0.8
KUR06				⇑S	Sb	07 28 48.3	-1.4
KUR14	Kurchatov Arra	0.61	353	⇑P	Pg	07 28 38.9	0.0
KUR14				⇑S	Sg	07 28 47.4	+0.6
KUR15	Kurchatov Arra	0.62	352	⇑P	Pg	07 28 39.1	+0.1
KUR15				⇓S	Sg	07 28 48.2	+1.2
KURBB	Kurchatov Arra	0.63	350	⇑P	Pg	07 28 39.3	+0.1
	13nm,0.3s						
KURBB				⇓S	Sg	07 28 48.4	+1.1
	120nm,0.6s						
KUR16	Kurchatov Arra	0.63	348	⇑P	Pg	07 28 39.3	0.0
KUR16				⇑S	Sg	07 28 48.6	+1.0
KUR17	Kurchatov Arra	0.64	347	⇑P	Pg	07 28 39.7	+0.2
KUR17				⇓S	Sg	07 28 48.9	+1.1
KUR05	Kurchatov Arra	0.65	351	⇑P	Pg	07 28 39.5	0.0
KUR05				⇓S	Sg	07 28 48.6	+0.7
KUR04	Kurchatov Arra	0.66	351	⇓P	Pg	07 28 40.0	+0.1
KUR04				⇑S	Sg	07 28 49.3	+0.8
KURK	Kurchatov	0.71	356	⇓P	Pg	07 28 40.4	-0.4
	6.9nm,0.4s						
KURK				⇑S	Sg	07 28 50.5	+0.5
	9.6nm,0.4s						
SEM	Semipalatinsk	1.07	67	P	Pg	07 28 48.1	+0.4
	7.0nm,0.2s						
SEM				S	Sb	07 29 02.8	-0.5
	34nm,0.3s						
MAKZ	Makanchi	3.87	144	⇓Pg	Pb	07 29 38.2	+1.9
	0.8nm,0.3s						
MAKZ				⇑Lg	Lg	07 30 28.5	
	3.9nm,0.5s						
BRZS	Berezniki	3.89	272	Pg	Pg	07 29 39.8	-1.8
	7.4nm,0.3s						
BRZS				Lg	Lg	07 30 32.2	
	20nm,0.4s						
MK31	Makanchi Array	4.01	142	⇑Pn	Pn	07 29 31.8	+2.0
	0.3nm,0.2s,baz=324,slow=10,SNR=64						
MK31				Pg	Pb	07 29 39.6	+1.1
	1.5nm,0.4s,baz=327,slow=14,SNR=20						
MK31				⇓Lg	Lg	07 30 33.7	
	2.8nm,0.4s,baz=328,slow=26,SNR=12						
KAPS	Kapalarasan	4.75	174	Pg	Pb	07 29 53.1	+1.9
	1.7nm,0.5s						
ARXS	Arharly	5.83	186	Pg	Pb	07 30 12.9	+3.2
	2.8nm,0.5s						
MNBS	Baschi	5.93	182	Lg	Lg	07 31 30.5	
	9.2nm,0.4s						
KTBS	Karatobe	6.45	193	Pg	Pg	07 30 25.7	-4.9
	1.2nm,0.5s						
DGS	Degeres	7.06	198	Pg	Pb	07 30 36.3	+5.6
	4.0nm,0.4s						

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*DRS **09** 08:15:16.0±0.0, 43°.13N×45°.45E, h24km*
*NORS **09** 08:15:16.9±0.0, 42°.75N×45°.66E, h31km, MPVA4.1*
*MOS **09** 08:15:17.0±1.7, 42°.91N×45°.72E, h17km, mb3.7/1, Error ellipse: s-maj=10.2km s-min=5.2km az=27.7*
ISC 09 08:15:18.2±1.9**, 42°.97N**±0°.04×**45°.84E**±0°.02**, h37**km±1km**,**
n48, σ1ˢ95/75**, 10C-6D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GROC	Groznyy	0.24	352	ePG	Pn	08 15 26.6	-0.2
GROC				e		08 15 31.6	
GROC				pmax	pmax		
	comp=Z,1μm,0.2s						
GROC				smax	smax		
	comp=N,2μm,0.4s						
GROC				smax	smax		
	comp=E,2μm,0.4s						
GROC				smax	smax		
	comp=E,2μm,0.4s						
BTLR	Botlikh	0.41	137	iPg	Pn	08 15 27.3	-0.1
	comp=E,355nm,0.6s						
BTLR				eSg	Sn	08 15 34.2	-0.1
	comp=E,2μm,0.4s						
BTLR	Botlikh	0.41	137	d iPG	Pn	08 15 27.3	-0.1
DLMR	Dylym	0.59	80	ePg	Pn	08 15 29.5	-0.7
	comp=E,321nm,0.2s						
DLMR				eSg	Sn	08 15 38.5	-0.1
	comp=E,606nm,0.3s						
DLMR	Dylym	0.59	80	ePG	Pn	08 15 29.5	-0.7
DLMR				eS	Sn	08 15 38.5	-0.1
DLMR				pmax	pmax		
	comp=Z,321nm,0.2s						
KMGR	Komgaron	0.72	278	ePG	Pn	08 15 31.6	-0.3
KMGR				eS	Sn	08 15 44.3	+2.6
DBC	Dubki	0.73	85	iPg	Pn	08 15 32.2	+0.2
	comp=Z,98nm,0.1s						
DBC				eSg	Sn	08 15 44.2	+2.2
	comp=Z,284nm,0.2s						
DBC	Dubki	0.73	85	⇑iPG	Pn	08 15 32.2	+0.2
DBC				e		08 15 44.3	
DBC				pmax	pmax		
	comp=Z,117nm,0.2s						
DBC				smax	smax		
	comp=N,261nm,0.4s						
UNCR	Uncukul	0.75	109	ePg	Pn	08 15 32.5	+0.3
	comp=N,101nm,0.0s						
UNCR				eSg	Sn	08 15 43.5	+1.2
	comp=N,2μm,0.0s						
UNCR	Uncukul	0.75	109	ePG	Pn	08 15 32.5	+0.3
UNCR				eS	Sn	08 15 43.5	+1.2
XNZR	Khunzakh	0.77	123	iPg	Pn	08 15 32.0	-0.7
XNZR				eSg	Sn	08 15 42.8	-0.3
XNZR	Khunzakh	0.77	123	⇓iPG	Pn	08 15 31.9	-0.7
XNZR				eS	Sn	08 15 42.7	-0.3
KRNR	Karanay	0.80	100	iPg	Pn	08 15 32.5	-0.5
	comp=N,78nm,0.2s						
KRNR				iSg	Sn	08 15 44.5	+0.8
	comp=N,362nm,0.3s						
KRNR	Karanay	0.80	100	⇑iPG	Pn	08 15 32.5	-0.5
KRNR				iS	Sn	08 15 44.5	+0.8
KRNR				pmax	pmax		
	comp=Z,78nm,0.2s						
ARKR	Arakani	0.93	113	ePg	Pn	08 15 37.0	+2.3
	comp=Z,58nm,0.0s						
ARKR				eSg	Sn	08 15 49.0	+2.2
	comp=Z,347nm,0.0s						
ARKR	Arakani	0.93	113	PG	Pn	08 15 37.0	+2.3
ARKR				S	Sn	08 15 49.0	+2.2
BUJR	Buynaksk	0.94	98	ePg	Pn	08 15 34.9	0.0
BUJR				eSg	Sn	08 15 48.6	+1.4
BUJR	Buynaksk	0.94	98	⇑ePG	Pn	08 15 36.4	+1.5
BUJR				e		08 15 50.9	
BUJR				pmax	pmax		
	comp=Z,112nm,0.4s						
BUJR				smax	smax		
	comp=N,575nm,0.5s						
GNBR	Gunib	1.01	124	ePg	Pn	08 15 36.2	+0.4
	comp=N,31nm,0.4s						
GNBR				eSg	Sn	08 15 50.1	+1.3
	comp=N,513nm,0.4s						
GNBR	Gunib	1.01	124	⇓ePG	Pn	08 15 36.2	+0.4
GNBR				e		08 15 50.2	
GNBR				pmax	pmax		
	comp=Z,65nm,0.4s						
GNBR				smax	smax		
	comp=N,357nm,0.5s						
BTKR	Batakoyurt	1.03	294	ePG	Pn	08 15 37.6	+1.5
BTKR				eS	Sn	08 15 51.8	+2.4
TRKR	Terskaya	1.11	314	iPG	Pn	08 15 41.7	+4.6
TRKR				iS	Sn	08 15 58.6	+7.5
GUDG	Gudauri	1.12	244	P	Pn	08 15 35.3	-2.2
GUDG				S	Sn	08 15 50.5	-1.3
LACR	Lac	1.14	264	c iPG	Pn	08 15 35.4	-2.3
ARNR	Ardon	1.16	281	ePG	Pn	08 15 38.5	+0.6
ARNR				eS	Sn	08 15 53.6	+1.1
MAK	Makhachkala	1.22	90	ePG	Pn	08 15 40.7	+2.0
MAK				eS	Sn	08 15 58.3	+4.3
KMKR	Kumukh	1.25	131	ePg	Pn	08 15 40.0	+0.7
	comp=N,35nm,0.2s						
KMKR				eSg	Sn	08 15 55.5	+0.5
	comp=N,268nm,0.3s						
KMKR	Kumukh	1.25	131	ePG	Pn	08 15 40.0	+0.7
KMKR				eS	Sn	08 15 55.5	+0.5
KMKR				pmax	pmax		
	comp=Z,35nm,0.2s						
KORR	Kora	1.30	276	d ePG	Pn	08 15 39.3	-0.6
STDR	Stavd-Durt	1.36	288	ePG	Pn	08 15 40.3	-0.3
STDR				eS	Sn	08 15 58.8	+1.4
PRTR	Priterechnaya	1.38	305	ePG	Pn	08 15 43.3	+2.4
PRTR				eS	Sn	08 15 58.8	+0.9
ZEI	Tsey	1.44	264	ePG	Pn	08 15 40.0	-1.8
TBLG	Delisi	1.48	214	P	Pn	08 15 42.5	+0.2
TBLG				S	Sn	08 16 02.6	+2.2
BTNK	Botanikuri	1.50	211	P	Pn	08 15 42.7	+0.2
URKR	Urkarakh	1.55	120	ePG	Pn	08 15 47.1	+3.8
URKR				eS	Sn	08 16 05.7	+3.5
DIGR	Digorskoe uzhe	1.66	268	ePG	Pn	08 15 42.9	-2.0
ONI	Oni	1.80	259	P	Pn	08 15 46.4	-0.3
TRLG	Trialeti	1.92	223	P	Pn	08 15 48.6	+0.2
AKT	Akhty	2.04	136	⇑ePN	Pn	08 15 53.7	+3.6
AKT				e		08 16 22.4	
AKT				pmax	pmax		
	comp=Z,25nm,0.5s						
AKT				smax	smax		
	comp=N,64nm,0.3s						
KBZ	Khabaz	2.28	291	ePN	Pn	08 15 51.9	-1.3
NEY	Neytrino	2.30	278	⇑ePN	Pn	08 15 54.2	+0.5
AKH	Akhalkalaki	2.34	229	ePN	Pn	08 15 56.3	+2.1
AKH				eS	Sn	08 16 24.3	+2.6
SHA1	Shidzhatmaz	2.45	289	c ePN	Pn	08 15 54.9	-0.9
KIV	Kislovodsk	2.50	294	ePN	Pn	08 15 55.2	-1.2
GOF	Gofitskoye	2.91	317	⇑ePN	Pn	08 16 01.5	-0.4
GOF				pmax	pmax		
	comp=Z,98nm,0.3s						
AKTO	Aktyubinsk	11.20	44	⇓P	Pn	08 17 53.2	-2.4
	comp=Z,0.5nm,0.2s						
AKTO				⇓S	Sn	08 19 49.7	-10
	comp=Z,1.2nm,0.3s						
AB31	Akbulak array	11.63	52	⇑P	Pn	08 17 59.7	-1.8
	comp=Z,0.2nm,0.2s,baz=254,slow=15,SNR=4.5						
AB31				⇑S	Sn	08 20 04.1	-5.7
	comp=Z,0.5nm,0.2s,baz=242,slow=27,SNR=4.9						
OBN	Obninsk	13.58	337	eP	Pn	08 18 29.7	+1.7
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						

PGC 09 08:42:24.6±1.6**, 50°.23N×130°.25W, h10**km**, MLSn3.3**/14**,**
Mw3.9/14**, Mw3.9**/15**, 207km west of Pt. Hardy, Bc Vancouver Island, Canada Region, Vancouver Island region**

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	1.42	72	P	Pn	08 42 47.9	-2.5
HOLB				S	Sn	08 43 04.3	-4.8
BPBC	**Brooks Peninsu**	1.59	92	Pn	Pn	08 42 50.2	-2.7
PHC	**Port Hardy**	1.86	74	Pn	Pn	08 42 54.5	-2.0
PHC				Sn	Sn	08 43 15.8	-4.3
MAYB	**Maynard**	1.98	84	Pn	Pn	08 42 56.4	-1.9
EDB	**Eliza Dome**	2.05	99	Sn	Sn	08 43 20.0	-4.6
TLCB	**Telegraph Cove**	2.21	80	Pn	Pn	08 43 00.2	-1.1
TLCB				Sn	Sn	08 43 25.1	-3.5
BBB	**Bella Bella**	2.38	34	Pn	Pn	08 43 01.0	-2.6
HG3B	**Hotspring**	2.47	343	Pn	Pn	08 43 02.5	-2.4
HG3B				Sn	Sn	08 43 30.0	-5.1
BNB	**Barry Inlet**	2.53	339	Pn	Pn	08 43 02.5	-3.4
BNB				Sn	Sn	08 43 31.6	-5.2
SPLB	**Strathcona Par**	2.98	95	Pn	Pn	08 43 11.1	-0.8
SPLB				Sn	Sn	08 43 46.2	-1.4
BCBC	**Bella Coola**	3.07	44	Pn	Pn	08 43 12.8	-0.3
BCBC				Sn	Sn	08 43 46.9	-2.9
MOBC	**Moresby Island**	3.11	341	Pn	Pn	08 43 11.0	-2.8
MOBC				Sn	Sn	08 43 46.8	-4.3
CBB	**Campbell River**	3.15	92	Pn	Pn	08 43 13.4	-0.8
CBB				Sn	Sn	08 43 46.1	-5.7
VIB	**Van Inlet**	3.35	336	Sn	Sn	08 43 50.4	-6.5
SHB	**Sechelt**	4.17	96	Pn	Pn	08 43 29.1	+0.8
UBRB	**Upper Baezaeko**	4.68	53	Pn	Pn	08 43 35.3	0.0
UBRB				Sn	Sn	08 44 27.9	-1.9
LLLB	**Lillooet**	5.36	83	Pn	Pn	08 43 44.2	-0.5
VDB	**Vedder Mountai**	5.43	100	Pn	Pn	08 43 47.6	+2.1
FSB	**Fort Saint Jam**	5.59	38	Pn	Pn	08 43 46.4	-1.4
FSB				Sn	Sn	08 44 49.3	-2.8
MBW	**Mount Baker**	5.63	102	Pn	Pn	08 43 50.2	+1.8
B08A	**Colville Reser**	7.38	100	Pn	Pn	08 44 13.7	+1.4
BMBC	**Bull Mountain**	7.60	37	Pn	Pn	08 44 15.7	+0.3
NBC4	**NorthernBC 4**	7.96	43	Pn	Pn	08 44 20.3	0.0
NBC5	**NorthernBC 5**	8.56	29	Pn	Pn	08 44 27.7	-0.9

GCG ***09*** *08:45:46.0±0.3, 14°.05N×91°.85W, h35^{km}±999^{km}, MD4.0*
SNET ***09*** *08:45:49.1±0.9, 14°.09N×91°.58W, h43^{km}±12^{km}, ML3.4*
ISC 09 08:45:47.2±1.7, **13°.9N**±0°.1×**91°.76W**±0°.07, **h48**^{km}±50^{km}, **n19**, σ**1^{s}01**/25, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	1.02	60	*e*P	**Pn**	**08 46 04.8**	**-0.5**
THIG		1.08	333		**Pn**	**08 46 06.2**	**+0.1**
THIG					**Sn**	**08 46 19.7**	**-0.3**
PCG	**Pacaya**	1.20	68	*e*P	**Pn**	**08 46 08.0**	**+0.1**
IXG	**Ixpaco**	1.30	79	*e*P	**Pn**	**08 46 08.3**	**-0.8**
IXG	**Ixpaco**	1.30	79	*e*P	**Pn**	**08 46 09.3**	**+0.2**
NBG	**Las Nubes**	1.51	65	*e*P	**Pn**	**08 46 13.6**	**+1.4**
NBG				*e*S	**Sn**	**08 46 32.6**	**+1.8**
RTR	**El Retiro**	2.05	91	*e*P	**Pn**	**08 46 20.0**	**+0.6**
CEVE	**Cerro Verde**	2.08	93	*e*P	**Pn**	**08 46 20.4**	**+0.6**
CEVE				*e*S	**Sn**	**08 46 44.5**	**-0.1**
CEVE				IAML		08 46 50.3	
	comp=Z,390nm,0.4s						
SBLS	**San Blas**	2.08	92	*e*P	**Pn**	**08 46 20.4**	**+0.6**
SBLS				*e*S	**Sn**	**08 46 43.9**	**-0.7**
SNJE	**San Jose**	2.09	92	*e*P	**Pn**	**08 46 20.2**	**+0.2**
PCIG		2.25	321		**Pn**	**08 46 22.4**	**+0.4**
PCIG					**Sn**	**08 46 46.6**	**-2.1**
CCIG	**Comitan**	2.36	351		**Pn**	**08 46 25.0**	**+1.3**
CCIG	**Comitan**	2.36	351		**Pn**	**08 46 24.8**	**+1.1**
MTO3	**Montecristo**	2.37	79	*e*P	**Pn**	**08 46 23.0**	**-0.8**
UEES	**Universidad Ev**	2.46	95	IAML		08 47 00.8	
	comp=Z,181nm,0.2s						
TGIG		3.12	335		**Pn**	**08 46 35.3**	**+1.3**
CSGN	**Cosiguina Volc**	4.20	103	Pn	**Pn**	**08 46 48.7**	**0.0**
CSGN				Sn	**Sn**	**08 47 36.9**	**+0.3**
CMIG	**Matias Romero**	4.35	317		**Pn**	**08 46 51.9**	**+1.1**
CMIG					**Sn**	**08 47 39.2**	**-1.1**
TEIG	**Tepich**	7.08	28	Pn	**Pn**	**08 47 27.2**	**-1.1**

KRNET ***09*** *08:51:11.1±0.1, 40°.89N×74°.14E, h16^{km}, mb3.3*
NNC ***09*** *08:51:12.5±1.2, 40°.88N×74°.17E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=9.0km s-min=5.7km az=172.0*
ISU ***09*** *08:51:13.0, 40°.00N×73°.90E, h5^{km}*
SOME ***09*** *08:51:14.2, 41°.00N×74°.18E, h15^{km}*
ISC 09 08:51:10.6±1.3, **40°.86N**±0°.04×**74°.17E**±0°.02, **h5**^{km}±12^{km}, **n61**, σ**1^{s}32**/98, **28C-12D**, **Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	1.00	7	⇓*i*P	**Pg**	**08 51 30.0**	**+0.1**
	baz=8.0						
ARLS				⇓*e*S	**Sb**	**08 51 43.9**	**-0.3**
	baz=8.0						
ARSB	**Arslanbob**	1.01	298	⇑*i*P	**Pg**	**08 51 29.8**	**-0.2**
	baz=97						
ARSB				⇑*i*S	**Sb**	**08 51 43.5**	**-0.8**
	baz=97						
ARSB	**Arslanbob**	1.01	298	*e*P	**Pg**	**08 51 29.2**	**-0.8**
ARSB				*e*S	**Sg**	**08 51 42.7**	**-0.4**
AML	**Almayashu**	1.32	344	⇓*i*P	**Pn**	**08 51 35.6**	**-0.4**
	baz=45						
AML				⇓*i*S	**Sn**	**08 51 53.5**	**-0.7**
	baz=45						
AML	**Almayashu**	1.32	344	P	**Pn**	**08 51 35.8**	**-0.3**
	SNR=47						
ANR	**Andizhan**	1.38	266	*e*P	**Pg**	**08 51 38.3**	**+1.3**
ANR				*e*S	**Sg**	**08 51 56.9**	**+2.0**
UCH	**Uchtor**	1.39	11	⇑*i*P	**Pb**	**08 51 37.2**	**-0.1**
	baz=12						
UCH				⇑*i*S	**Sg**	**08 51 56.0**	**+0.7**
	baz=12						
UCH	**Uchtor**	1.39	11	P	**Pg**	**08 51 37.5**	**+0.2**
	SNR=52						
KZA	**Kyzart**	1.46	33	⇑*e*P	**Pg**	**08 51 38.9**	**+0.2**
	baz=35						
KZA				⇑*i*S	**Sg**	**08 51 58.9**	**+1.3**
	baz=35						
KZA	**Kyzart**	1.46	33	P	**Pg**	**08 51 39.1**	**+0.4**
	SNR=22						
NRN	**Naryn**	1.50	67	⇑*i*P	**Pb**	**08 51 39.1**	**0.0**
	baz=68						
NRN				⇑*i*S	**Sg**	**08 51 59.7**	**+1.0**
	baz=68						
AAK	**Ala-Archa**	1.79	8	⇑*i*P	**Pb**	**08 51 44.2**	**+0.2**
	baz=9.0						
AAK				⇑*i*S	**Sg**	**08 52 08.2**	**0.0**
	baz=9.0						
AAK	**Ala-Archa**	1.79	8	P	**Pg**	**08 51 44.8**	**-0.2**
	SNR=27						
AAK	**Ala-Archa**	1.79	8	⇑P	**Pb**	**08 51 44.4**	**+0.4**
	13nm,0.4s						
AAK				⇓S	**Sg**	**08 52 08.2**	**0.0**
	6.8nm,0.3s						
EKS2	**Erkin-Say**	1.82	351	⇑*i*P	**Pb**	**08 51 44.6**	**+0.1**
	baz=52						
EKS2				⇑*i*S	**Sg**	**08 52 08.9**	**-0.3**
	baz=52						
EKS2	**Erkin-Say**	1.82	351	P	**Pg**	**08 51 45.0**	**-0.5**
	SNR=28						
KBK	**Karagaybulak**	1.89	18	⇑*i*P	**Pb**	**08 51 45.7**	**+0.1**
	baz=19						
KBK				⇑*i*S	**Sg**	**08 52 11.3**	**+0.1**
	baz=19						
KBK	**Karagaybulak**	1.89	18	P	**Pg**	**08 51 47.1**	**+0.3**
	SNR=20						
ARK	**Arkit**	1.91	300	⇓*i*P	**Pb**	**08 51 45.7**	**-0.2**
	baz=99						
ARK				⇓*i*S	**Sg**	**08 52 10.9**	**-1.0**
	baz=99						
MRKS	**Merke**	2.01	340	*e*P	**Pg**	**08 51 49.3**	**+0.2**
	24nm,0.4s						
MRKS				*e*S	**Sg**	**08 52 15.2**	**0.0**
	27nm,0.7s						
MRKS	**Merke**	2.01	340	Pg	**Pg**	**08 51 49.3**	**+0.2**
	24nm,0.4s						
MRKS				Lg	Lg	08 52 15.2	
	27nm,0.7s						
ULHL	**Ulahol**	2.08	48	⇑*i*P	**Pb**	**08 51 49.2**	**+0.2**
	baz=49						
ULHL				⇑*i*S	**Sg**	**08 52 17.2**	**-0.3**
	baz=49						
ULHL	**Ulahol**	2.08	48	P	**Pg**	**08 51 50.4**	**-0.1**
	SNR=36						
BOOM	**Boomskoye usch**	2.10	39	⇑*i*P	**Pb**	**08 51 49.3**	**0.0**
	baz=40						
BOOM				⇑*i*S	**Sg**	**08 52 17.4**	**-0.7**
	baz=40						
CHMS	**Chumysh**	2.18	11	⇑*e*P	**Pb**	**08 51 50.2**	**-0.3**
	baz=12						
CHMS				⇑*i*S	**Sb**	**08 52 18.7**	**+0.8**
	baz=12						
CHMS	**Chumysh**	2.18	11	P	**Pg**	**08 51 52.0**	**-0.4**
	SNR=12						
CHMS	**Chumysh**	2.18	11	⇑P	**Pg**	**08 51 51.7**	**-0.7**
	15nm,0.5s						
CHMS				⇓S	**Sg**	**08 52 21.1**	**+0.5**
	26nm,0.8s						
USP	**Ospenovka**	2.42	6	⇑*i*P	**Pb**	**08 51 53.6**	**-1.0**
	baz=6.0						
USP				⇑*i*S	**Sb**	**08 52 24.4**	**-0.3**
	baz=6.0						
USP	**Ospenovka**	2.42	6	P	**Pb**	**08 51 55.4**	**+0.8**
	SNR=19						
KST	**Kastek**	2.56	31	*e*P	**Pg**	**08 51 60.0**	**+0.3**
	13nm,0.3s						
KST				*e*S	**Sg**	**08 52 34.4**	**+1.6**
	62nm,0.4s						
KDJ	**Kajisay**	2.59	60	⇓*i*P	**Pb**	**08 51 55.9**	**-1.8**
	baz=61						
KDJ				⇓*i*S	**Sb**	**08 52 30.4**	**+0.5**
	baz=61						
SGDS	**Sogindy**	2.61	7	Pg	**Pg**	**08 51 59.8**	**-0.8**
	12nm,0.6s						
SGDS				Lg	Lg	08 52 34.1	
	12nm,0.4s						
DGS	**Degeres**	2.66	26	*e*P	**Pg**	**08 52 01.1**	**-0.5**
	19nm,0.5s						
DGS				*e*S	**Sg**	**08 52 36.4**	**+0.3**
	65nm,0.6s						
DGS	**Degeres**	2.66	26	Pg	**Pg**	**08 52 01.1**	**-0.5**
	19nm,0.5s						
DGS				Lg	Lg	08 52 36.4	
	65nm,0.6s						
BTK	**Batken**	2.68	254	⇑*i*P	**Pb**	**08 51 57.3**	**-1.8**
	baz=53						
BTK				⇑*i*S	**Sb**	**08 52 31.3**	**-1.0**
	baz=53						
MTBS	**Maitube**	2.82	36	*e*P	**Pg**	**08 52 03.9**	**-0.8**
	13nm,0.3s						
MTBS				*e*S	**Sg**	**08 52 40.8**	**-0.5**
	44nm,0.6s						
IZV	**Izvestkoviy**	2.84	39	*e*P	**Pg**	**08 52 04.1**	**-0.9**
	9.5nm,0.2s						
IZV				*e*S	**Sg**	**08 52 41.6**	**-0.1**
	66nm,0.4s						
IZV	**Izvestkoviy**	2.84	39	Pg	**Pg**	**08 52 04.1**	**-0.9**
	9.5nm,0.2s						
IZV				Lg	Lg	08 52 41.6	
	66nm,0.4s						
TNSS	**Tian-Shan**	3.00	43	*e*P	**Pg**	**08 52 07.0**	**-1.2**
	11nm,0.4s						
TNSS				*e*S	**Sg**	**08 52 46.6**	**-0.4**
	43nm,0.6s						
TNSS	**Tian-Shan**	3.00	43	Pg	**Pg**	**08 52 07.0**	**-1.2**
	11nm,0.4s						
TNSS				Lg	Lg	08 52 46.6	
	43nm,0.6s						
KRBS	**Karabastau**	3.04	21	*e*P	**Pg**	**08 52 07.8**	**-1.1**
	30nm,0.4s						
KRBS				*e*S	**Sg**	**08 52 47.9**	**-0.5**
	21nm,0.5s						
KRBS	**Karabastau**	3.04	21	Pg	**Pg**	**08 52 07.8**	**-1.1**
	30nm,0.4s						
KRBS				Lg	Lg	08 52 47.9	
	21nm,0.5s						
MDOK	**Medeo**	3.15	42	*e*P	**Pg**	**08 52 09.4**	**-1.5**
	24nm,1.5s						
MDOK				*e*S	**Sg**	**08 52 51.0**	**-0.6**
	28nm,0.5s						
MDOK	**Medeo**	3.15	42	Pg	**Pb**	**08 52 09.2**	**+2.1**
	1.9nm,0.3s						
MDOK				⇓Lg	Lg	08 52 50.9	
	10nm,0.5s						
MDOK	**Medeo**	3.15	42	Pg	**Pg**	**08 52 09.4**	**-1.5**
	24nm,1.5s						
MDOK				Lg	Lg	08 52 51.0	
	28nm,0.5s						
ANVS	**Anan'yevo**	3.24	53	⇑*i*P	**Pn**	**08 52 05.4**	**+3.1**
	baz=53						
ANVS				⇑*e*S	**Sb**	**08 52 45.7**	**-2.9**
	baz=53						
KTBS	**Karatobe**	3.40	32	*e*P	**Pg**	**08 52 13.9**	**-1.9**
	4.6nm,0.2s						
KTBS				*e*S	**Sg**	**08 52 58.9**	**-1.0**
	39nm,0.4s						
KTBS	**Karatobe**	3.40	32	Pg	**Pg**	**08 52 13.9**	**-1.9**
	4.6nm,0.2s						
KTBS				Lg	Lg	08 52 58.9	
	39nm,0.4s						
KUU	**Kurty**	3.43	27	*e*P	**Pb**	**08 52 14.2**	**+2.3**
	5.7nm,0.3s						
KUU				*e*S	**Sg**	**08 52 59.3**	**-1.5**
	28nm,0.3s						
KUU	**Kurty**	3.43	27	Pg	**Pb**	**08 52 14.2**	**+2.3**
	5.7nm,0.3s						
KUU				Lg	Lg	08 52 59.3	
	28nm,0.3s						
KK31	**Karatay Array**	3.53	311	Pg	**Pb**	**08 52 15.2**	**+1.6**
	0.9nm,0.4s,baz=130,slow=15,SNR=18						
KK31				⇓Lg	Lg	08 53 01.4	
	2.3nm,0.3s,baz=126,slow=30,SNR=11						
CHKK	**Chushkaly**	3.65	34	*e*P	**Pb**	**08 52 18.2**	**+2.6**
	3.0nm,0.1s						
CHKK				*e*S	**Sg**	**08 53 06.3**	**-1.5**
	20nm,0.5s						
BRLS	**Borolday**	3.89	305	*e*P	**Pb**	**08 52 22.4**	**+2.6**
	1.0nm,0.4s						
BRLS				*e*S	**Sg**	**08 53 13.0**	**-2.6**
	6.8nm,0.5s						
BRLS	**Borolday**	3.89	305	Pg	**Pb**	**08 52 22.3**	**+2.6**
	1.0nm,0.4s						
BRLS				Lg	Lg	08 53 13.0	
	6.8nm,0.5s						
ZHN	**Zhinishke**	3.92	53	*e*P	**Pg**	**08 52 25.1**	**-0.7**
	6.8nm,0.1s						
ZHN				*e*S	**Sg**	**08 53 17.6**	**+0.9**
	5.0nm,0.2s						
KURS	**Kuram**	3.96	47	*e*P	**Pg**	**08 52 24.3**	**-2.3**
	8.7nm,1.5s						
KURS				*e*S	**Sg**	**08 53 16.2**	**-1.7**
	7.1nm,0.7s						
KURS	**Kuram**	3.96	47	Pg	**Pg**	**08 52 24.3**	**-2.3**
	8.7nm,1.5s						
KURS				Lg	Lg	08 53 16.2	
	7.1nm,0.7s						
BTLS	**Baital**	4.18	359	*e*P	**Pg**	**08 52 28.9**	**-1.8**
	1.1nm,0.5s						
BTLS				*e*S	**Sg**	**08 53 24.9**	**+0.1**
	3.9nm,0.7s						
BTLS	**Baital**	4.18	359	Pg	**Pg**	**08 52 28.9**	**-1.8**
	1.1nm,0.5s						
BTLS				Lg	Lg	08 53 24.9	
	3.9nm,0.7s						
ARXS	**Arharly**	4.30	38	*e*P	**Pb**	**08 52 29.7**	**+2.9**
	2.7nm,0.5s						
ARXS				*e*S	**Sg**	**08 53 26.1**	**-2.7**
	20nm,0.5s						
ARXS	**Arharly**	4.30	38	Pg	**Pb**	**08 52 29.7**	**+2.9**
	2.7nm,0.5s						
ARXS				Lg	Lg	08 53 26.1	
	20nm,0.5s						

IDC 09 09:13:08.5±3.9, **34°.90N**×**77°.51E**, **h0**^{km}, **mb3.6**/2, **mb1 3.6**/5, **mb1mx3.3**/44, **mbtmp3.4**/5, **ML3.2**/3, **Error ellipse: s-maj=71.8km s-min=63.2km az=92.0**, **Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	8.08	344	Pn	Pn	09 15 10.1	+2.9
	0.2nm,0.3s,baz=166,slow=8.3,SNR=1.6						
AAK				Lg	Lg	09 17 09.8	
	0.2nm,0.3s,baz=225,slow=22,SNR=2.3						
MKAR	**Makanchi Array**	12.42	15	Pn	Pn	09 16 09.0	+2.4
	0.1nm,0.3s,baz=200,slow=12,SNR=7.7						
MKAR				Sn	Sn	09 18 16.0	-10
	0.0nm,0.3s,baz=194,slow=24,SNR=3.2						
BVAR	**Borovoye Array**	18.82	347	P	P	09 17 29.6	0.0
	0.1nm,0.3s,baz=146,slow=8.5,SNR=5.2						
FINES	**FINESS Array B**	41.78	326	P	P	09 20 59.5	+0.2
	3.3nm,1.0s,baz=115,slow=8.6,SNR=5.2						
YKA	**Yellowknife Ar**	82.46	6	P	P	09 25 32.2	-0.2
	0.1nm,0.6s,baz=344,slow=4.9,SNR=4.8						

IDC ***09*** *09:18:22.5±19.0, 17°.53S×178°.70W, h583^{km}±246^{km}, mb3.2/8, mb1 3.5/8, mb1mx3.1/41, mbtmp4.1/8, Error ellipse: s-maj=87.6km s-min=65.6km az=171.0*
NEIC ***09*** *09:18:23.1±1.0, 17°.7S±0°.1×178°.7W±0°.1, h596^{km}±10^{km}, mb4.1/25, Error ellipse: s-maj=19.8km s-min=12.4km az=215.0*
ISC 09 09:18:23.5±0.7, **17°.7S**±0°.2×**178°.7W**±0°.1, **h600**^{km}, **n39**, σ**0^{s}44**/40, **mb4.0**/19, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	3.13	269	P	**P**	**09 19 42.9**	**-0.6**
DZM	**Mont Dzumac**	14.65	250	P	**P**	**09 21 29.5**	**+0.8**
OUZ	**Omahuta**	18.73	200	P	**P**	**09 22 06.2**	**+0.6**
OUZ				IAmb	IAmb	09 22 12.6	
	comp=Z,11nm,1.3s						
ARMA	**Armidale**	29.82	239	P	**P**	**09 23 44.0**	**+0.1**
CTA	**Charters Tower**	33.23	260	P	**P**	**09 24 12.8**	**-0.1**
	comp=Z,1.4nm,0.3s,baz=79,slow=11,SNR=1.9						
COEN	**Coen**	36.86	270	P	**P**	**09 24 42.9**	**0.0**
STKA	**Stephens Creek**	38.50	241	P	**P**	**09 24 56.3**	**+0.2**
	comp=Z,2.5nm,0.5s,baz=94,slow=10,SNR=11						
STKA	**Stephens Creek**	38.50	241	P	**P**	**09 24 56.4**	**+0.4**
BBOO	**Buckleboo**	43.28	241	P	**P**	**09 25 33.5**	**-0.2**
BBOO				IAmb	IAmb	09 25 34.4	
	comp=Z,8.1nm,1.1s						
WR0	**Warramunga Arr**	44.23	259	P	**P**	**09 25 40.8**	**-0.5**
WR0				IAmb	IAmb	09 25 44.9	
	comp=Z,6.5nm,1.1s						
WB0	**Warramunga Arr**	44.39	260	P	**P**	**09 25 42.1**	**-0.4**
WB2	**Warramunga Arr**	44.41	259	P	**P**	**09 25 42.3**	**-0.4**
WRA	**Warramunga Arr**	44.42	259	P	**P**	**09 25 42.7**	**-0.1**
	comp=Z,1.2nm,0.3s,baz=93,slow=7.3,SNR=44						
WRA	**Warramunga Arr**	44.42	259	P	**P**	**09 25 42.4**	**-0.4**
AS31	**Alice Springs**	44.60	254	P	**P**	**09 25 44.3**	**+0.1**
AS31				IAmb	IAmb	09 25 44.9	
	comp=Z,4.1nm,0.8s						
ASAR	**Alice Springs**	44.60	254	P	**P**	**09 25 44.2**	**+0.1**
	comp=Z,14nm,0.6s,baz=88,slow=8.5,SNR=315						
ASAR	**Alice Springs**	44.60	254	P	**P**	**09 25 44.0**	**-0.2**
ASAR				PcP	**PcP**	**09 27 13.6**	**-0.1**
MTN	**Manton Dam**	48.56	268	P	**P**	**09 26 14.2**	**+0.3**
FORT	**Forrest**	49.86	244	P	**P**	**09 26 22.6**	**-0.7**
KNRA	**Kununurra**	50.26	264		**P**	**09 26 26.7**	**+0.3**
FITZ	**Fitzroy Crossi**	52.82	260	P	**P**	**09 26 45.3**	**+0.5**
PSAC2	**Pilbara Seismi**	57.67	255	P	**P**	**09 27 19.0**	**+0.6**
PSAC2				IAmb	IAmb	09 27 21.3	
	comp=Z,15nm,1.2s						
PSAB2	**Pilbara Seismi**	57.71	255	P	**P**	**09 27 18.5**	**-0.1**
PSAB2				IAmb	IAmb	09 27 27.9	
	comp=Z,26nm,1.5s						
PSAA3	**Pilbara Seismi**	57.71	255	P	**P**	**09 27 18.8**	**+0.2**
PSAA1	**Pilbara Seismi**	57.73	255	P	**P**	**09 27 18.6**	**-0.2**
PSAA1				IAmb	IAmb	09 27 18.8	
	comp=Z,9.5nm,1.1s						
PSAC3	**Pilbara Seismi**	57.73	255	P	**P**	**09 27 19.0**	**+0.2**
PSAC3				IAmb	IAmb	09 27 25.5	
	comp=Z,14nm,1.2s						
PSAD1	**Pilbara Seismi**	57.75	255	P	**P**	**09 27 18.8**	**-0.1**
PSAD1				IAmb	IAmb	09 27 22.1	
	comp=Z,11nm,1.2s						
PSAD3	**Pilbara Seismi**	57.77	255	P	**P**	**09 27 18.9**	**-0.2**
PSAD3				IAmb	IAmb	09 27 19.6	
	comp=Z,7.3nm,0.9s						
QSPA	**South Pole Qui**	72.33	180	P	**P**	**09 28 48.6**	**-0.8**
PNTR	**Pine Nut**	78.97	43	P	**P**	**09 29 26.9**	**+0.2**
NVAR	**Mina Array Bea**	79.46	44	P	**P**	**09 29 28.9**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=223,slow=7.6,SNR=5.5						
NVAR	**Mina Array Bea**	79.46	44	P	**P**	**09 29 29.7**	**+0.4**
GHO	**Glory Hole Cre**	82.69	14	P	**P**	**09 29 45.4**	**+0.3**
GHO				IAmb	IAmb	09 29 49.2	
	comp=Z,12nm,1.3s						
TRF	**Thorofare Moun**	83.89	12	P	**P**	**09 29 50.8**	**-0.2**
TRF				IAmb	IAmb	09 29 51.7	
	comp=Z,4.1nm,1.0s						
ILAR	**Eielson Array**	85.77	13	P	**P**	**09 29 59.5**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=222,slow=5.1,SNR=2.2						
TXAR	**Lajitas Array**	86.11	58	P	**P**	**09 30 02.9**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=180,slow=0.3,SNR=3.7						
TXAR	**Lajitas Array**	86.11	58	P	**P**	**09 30 03.5**	**+1.0**
PDAR	**Pinedale Array**	87.39	44	P	**P**	**09 30 07.8**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=209,slow=5.4,SNR=3.9						
PDAR	**Pinedale Array**	87.39	44	P	**P**	**09 30 07.9**	**-0.5**

IDC 09 09:25:30.1±2.6, **9°.68S**×**151°.76E**, **h0**^{km}, **mb3.3**/3, **mb1 3.5**/5, **mb1mx3.4**/34, **mbtmp3.4**/5, **ML2.1**/2, **MS3.4**/4, **Ms1 3.4**/4, **ms1mx3.1**/18, **Error ellipse: s-maj=45.7km s-min=37.3km az=99.0**, **D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	4.54	273	Pn	Pn	09 26 39.0	-1.2
	0.8nm,0.3s,baz=285,slow=13,SNR=1.3						
PMG				Sn	Sn	09 27 36.6	+2.8
	0.4nm,0.3s,baz=108,slow=20,SNR=1.9						
PMG				LR	LR	09 28 25.1	
	comp=Z,279nm,18.7s,baz=117,slow=38						
DZM	**Mont Dzumac**	18.72	133	LR	LR	09 35 57.1	
	comp=Z,186nm,18.2s,baz=242,slow=34						
WRA	**Warramunga Arr**	19.67	237	P	P	09 30 01.2	+0.3
	0.0nm,0.3s,baz=60,slow=12,SNR=4.6						
WRA				LR	LR	09 37 18.0	
	comp=Z,72nm,18.8s,baz=105,slow=36						
ASAR	**Alice Springs**	22.00	229	P	P	09 30 26.4	+0.2
	0.3nm,0.8s,baz=57,slow=12,SNR=4.1						
STKA	**Stephens Creek**	24.01	202	P	P	09 30 46.5	-0.3
	1.6nm,1.0s,baz=0.0,slow=15,SNR=2.2						
FITZ	**Fitzroy Crossi**	26.67	249	LR	LR	09 41 23.6	
	comp=Z,88nm,18.1s,baz=52,slow=36						
MKAR	**Makanchi Array**	83.33	320	P	P	09 37 59.2	+0.1
	0.5nm,0.9s,baz=117,slow=5.5,SNR=4.6						

IDC 09 09:28:52.9±3.2, **4°.30S**×**133°.61E**, **h0**^{km}, **mb3.0**/1, **mb1 3.5**/5, **mb1mx3.4**/33, **mbtmp3.4**/5, **ML3.3**/4, **Error ellipse: s-maj=121.8km s-min=26.4km az=77.0**, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	4.14	325	Pn	Pn	09 29 58.7	+1.3
	0.4nm,0.3s,baz=255,slow=23,SNR=2.2						
SIJI				Sn	Sn	09 30 42.5	-4.0
	0.6nm,0.3s,baz=285,slow=23,SNR=1.4						
WRA	**Warramunga Arr**	15.56	177	Pn	Pn	09 32 32.1	-1.7
	0.1nm,0.3s,baz=357,slow=13,SNR=5.9						
WRA				Sn	Sn	09 35 15.9	-11
	0.2nm,0.3s,baz=0.4,slow=24,SNR=4.8						
FITZ	**Fitzroy Crossi**	15.77	209	Pn	Pn	09 32 35.8	-0.8
	0.3nm,0.3s,baz=28,slow=17,SNR=1.8						
FITZ				Sn	Sn	09 35 24.1	-8.0
	0.8nm,0.3s,baz=179,slow=12,SNR=9.4						
ASAR	**Alice Springs**	19.25	179	P	Pn	09 33 20.5	+0.5
	0.1nm,0.3s,baz=2.4,slow=13,SNR=8.2						
ASAR				S	Sn	09 36 45.5	-11
	0.0nm,0.3s,baz=358,slow=28,SNR=4.0						
MKAR	**Makanchi Array**	68.03	325	P	P	09 39 53.7	-0.6
	0.1nm,0.5s,baz=142,slow=7.2,SNR=1.2						

IDC 09 09:42:47.5±3.2, **4°.49N**×**93°.66E**, **h0**^{km}, **mb3.6**/3, **mb1 3.9**/4, **mb1mx3.5**/44, **mbtmp3.7**/4, **MS3.8**/1, **Ms1 3.8**/1, **ms1mx2.9**/41, **Error ellipse: s-maj=116.1km s-min=28.1km az=62.0**, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	14.81	20	Pn	Pn	09 46 17.9	-0.5
	baz=214,slow=12,SNR=1.2						
H08S2	**Diego Garcia H**	24.31	240	T	T	10 14 18.9	
	baz=63						
H08S3	**Diego Garcia H**	24.31	240	T	T	10 14 12.9	
	baz=63						
H08S1	**Diego Carcia H**	24.33	240	T	T	10 14 12.4	
	baz=63						
MKAR	**Makanchi Array**	43.28	349	P	P	09 50 50.8	-0.1
	0.2nm,0.5s,baz=166,slow=8.8,SNR=4.7						
WRA	**Warramunga Arr**	46.77	123	P	P	09 51 19.6	+0.5
	2.1nm,0.5s,baz=301,slow=9.3,SNR=9.7						
ASAR	**Alice Springs**	48.19	127	P	P	09 51 29.2	-0.9
	0.1nm,0.4s,baz=294,slow=8.0,SNR=4.7						
AKTO	**Aktyubinsk**	54.70	333	LR	LR	10 15 46.2	

comp=Z,86nm,18.2s,baz=318,slow=36

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*IDC **09** 09:46:49.3±3.9, 11°.24N×140°.58E, h52^{km}±37^{km}, mb3.6/12, mb1 3.8/13, mb1mx3.7/35, mbtmp3.9/13, ML4.1/1, MS3.3/4, Ms1 3.3/4, ms1mx3.0/32, Error ellipse: s-maj=28.5km s-min=14.0km az=104.0*

*NEIC **09** 09:46:50.3±1.0, 11°.2N±0°.1×140°.6E±0°.1, h60^{km}±9^{km}, mb4.3/14, Error ellipse: s-maj=24.3km s-min=11.3km az=124.0*

ISC 09 09:46:47.4±0.6**, 11°.22N**±0°.10×**140°.5E**±0°.1**, h33**^{km}**, n43,** σ**0ˢ.82**/37**, mb4.0**/18**, MS3.0**/3**, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	4.91	61	P	Pn	09 47 59.5	+0.6
	8.4nm,0.3s,baz=256,slow=4.2,SNR=2.3						
GUMO				S	Sn	09 48 53.9	-0.7
	9.8nm,0.3s,baz=327,slow=23,SNR=1.5						
GUMO				LR	LR	09 49 54.7	
	comp=Z,293nm,18.9s,baz=200,slow=39						
GUMO	Guam	4.91	61		Pn	09 48 00.2	+1.3
MJAR	Matsushiro Arr	25.30	356	LR	LR	09 59 31.6	
	comp=Z,45nm,21.6s,baz=105,slow=30						
H11S3	WAKE ISLAND Hy	26.34	71	T	T	10 20 53.4	
	baz=255,slow=75,SNR=21						
H11S1	WAKE ISLAND Hy	26.35	71	T	T	10 20 53.4	
	baz=255,slow=75,SNR=3.2						
H11S2	WAKE ISLAND Hy	26.35	71	T	T	10 20 53.4	
	baz=255,slow=75,SNR=18						
H11N1	WAKE ISLAND Hy	26.80	68	T	T	10 21 26.4	
	baz=254,slow=75,SNR=4.0						
H11N2	WAKE ISLAND Hy	26.81	68	T	T	10 21 27.5	
	baz=254,slow=75,SNR=3.5						
H11N3	WAKE ISLAND Hy	26.82	68	T	T	10 21 28.3	
	baz=254,slow=75,SNR=5.0						
KSRS	Korea Array	28.45	339	LR	LR	10 02 53.5	
	comp=Z,43nm,19.4s,baz=188,slow=34						
KNRA	Kununurra	29.12	204	P	P	09 52 45.5	-0.1
KNRA				IAmb	IAmb	09 52 46.6	
	comp=Z,9.9nm,0.9s						
WB0	Warramunga Arr	31.36	191	P	P	09 53 05.2	-0.1
WB0				IAmb	IAmb	09 53 18.9	
	comp=Z,3.1nm,1.0s						
WR0	Warramunga Arr	31.52	191	P	P	09 53 06.6	-0.2
WR0				IAmb	IAmb	09 53 12.4	
	comp=Z,7.0nm,1.1s						
WB2	Warramunga Arr	31.54	191	P	P	09 53 06.7	-0.2
WRA	Warramunga Arr	31.55	191	P	P	09 53 06.7	-0.2
	comp=Z,1.3nm,0.8s,baz=8.4,slow=9.7,SNR=30						
WRA				LR	LR	10 05 54.0	
	comp=Z,109nm,19.8s,baz=75,slow=36						
WRA	Warramunga Arr	31.55	191	P	P	09 53 05.2	-1.7
AS31	Alice Springs	35.26	190	P	P	09 53 40.1	+0.8
ASAR	Alice Springs	35.26	190	P	P	09 53 39.8	+0.5
	comp=Z,0.5nm,0.5s,baz=20,slow=12,SNR=20						
ASAR				PcP	PcP	09 56 10.4	+0.8
	comp=Z,0.3nm,0.7s,baz=20,slow=2.6,SNR=5.2						
ASAR	Alice Springs	35.26	190	P	P	09 53 38.6	-0.7
STKA	Stephens Creek	42.86	179	P	P	09 54 42.3	-0.4
	comp=Z,2.0nm,0.8s,baz=360,slow=8.6,SNR=4.4						
STKA	Stephens Creek	42.86	179	P	P	09 54 42.5	-0.1
BBOO	Buckleboo	43.98	185	P	P	09 54 51.5	-0.2
PETK	Petropavlovsk-	44.01	15	P	P	09 54 52.0	+0.2
	comp=Z,1.1nm,0.8s,baz=159,slow=8.6,SNR=5.8						
SONM	Songino Array	46.34	329	P	P	09 55 11.2	+0.8
	comp=Z,0.1nm,0.4s,baz=125,slow=7.2,SNR=2.2						
SONM	Songino Array	46.34	329	P	P	09 55 10.4	-0.1
MORW	Morawa	46.48	210	P	P	09 55 12.2	+0.6
NWAO	Narrogin (SRO)	49.18	206	P	P	09 55 32.8	+0.3
MKAR	Makanchi Array	60.27	318	P	P	09 56 53.0	+0.2
	comp=Z,0.3nm,0.6s,baz=89,slow=8.5,SNR=3.5						
MKAR	Makanchi Array	60.27	318	P	P	09 56 53.7	+0.9
ZALV	Zalesovo Beam	61.11	326	P	P	09 56 57.9	-0.3
	comp=Z,0.6nm,0.6s,baz=104,slow=5.9,SNR=2.2						
KURK	Kurchatov	63.67	321	P	P	09 57 15.2	-0.3
KURK				IAmb	IAmb	09 57 25.7	
	comp=Z,2.6nm,0.9s						
IMAR	Indian Mountai	70.06	23	P	P	09 57 56.3	+0.4
PMR	Palmer	70.91	28	P	P	09 58 00.9	-0.2
PMR				IAmb	IAmb	09 58 06.6	
	comp=Z,7.5nm,1.4s						
MLY	Manley	71.00	25	P	P	09 58 01.0	-0.7
TOLK	Toolik Lake Re	72.36	21	P	P	09 58 10.3	+0.5
TOLK				IAmb	IAmb	09 58 14.5	
	comp=Z,2.2nm,0.8s						
ILAR	Eielson Array	72.54	25	P	P	09 58 08.9	-2.0
	comp=Z,0.5nm,0.6s,baz=245,slow=6.1,SNR=9.8						
ILAR	Eielson Array	72.54	25	P	P	09 58 09.1	-1.8
BMAR	Burnt Mountain	73.94	23	P	P	09 58 19.5	+0.2
YKA	Yellowknife Ar	86.92	27	P	P	09 59 28.1	-0.7
	comp=Z,0.8nm,0.7s,baz=290,slow=4.9,SNR=11						
ARCES	ARCESS Array B	87.97	341	P	P	09 59 34.2	+0.4
	comp=Z,3.0nm,0.8s,baz=8.6,slow=6.7,SNR=3.0						
ARCES	ARCESS Array B	87.97	341	P	P	09 59 34.3	+0.5
FINES	FINESS Array B	91.44	334	P	P	09 59 48.4	-1.8
	comp=Z,5.0nm,1.0s,baz=112,slow=8.5,SNR=4.7						
NVAR	Mina Array Bea	91.75	50	P	P	09 59 52.5	0.0
	comp=Z,0.2nm,0.5s,baz=280,slow=5.4,SNR=2.5						

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*KRNET **09** 09:58:15.7±0.1, 41°.53N×78°.95E, h13^{km}, mb2.5*

*SOME **09** 09:58:17.4, 41°.60N×78°.88E, h20^{km}*

*NNC **09** 09:58:18.5±1.4, 41°.69N×78°.93E, h0^{km}, mb3.3, mpv3.2, Error ellipse: s-maj=9.0km s-min=5.9km az=168.0*

ISC 09 09:58:16.4±2.0**, 41°.56N**±0°.07×**78°.92E**±0°.04**, h8**^{km}±11^{km}**, n35,** σ**1ˢ.04**/61**, 6C-6D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	Przheval'sk	1.00	337	⇑iP	Pg	09 58 35.0	-0.7
	baz=38						
PRZ				⇑eS	Sg	09 58 48.8	+0.1
	baz=38						
KDJ	Kajisay	1.42	294	⇓iP	Pn	09 58 42.1	-0.7
	baz=95						
KDJ				⇓iS	Sb	09 59 01.5	-0.2
	baz=95						
ANVS	Anan'yevo	1.54	323	⇑iP	Pn	09 58 44.7	+0.3
	baz=23						
ANVS				⇑iS	Sg	09 59 06.0	+0.1
	baz=23						
SATY	Saty	1.55	346	eP	Pb	09 58 45.3	-0.2
	13nm,0.2s						
SATY				eS	Sb	09 59 05.1	-0.2
	10nm,0.1s						
SATY	Saty	1.55	346	P	Pb	09 58 45.3	-0.2
	10nm,0.1s						
SATY				S	Sg	09 59 05.4	-0.8
	22nm,0.1s						
UZB	Uzynbulak	1.59	3	eP	Pn	09 58 45.1	+0.1
	3.9nm,0.1s						
UZB				eS	Sn	09 59 04.7	-1.2
	12nm,0.2s						
UZB	Uzynbulak	1.59	3	P	Pn	09 58 45.1	+0.1
	3.9nm,0.1s						
UZB				S	Sn	09 59 04.7	-1.2
	12nm,0.2s						
SHLS	Shalkode	1.65	14	eP	Pg	09 58 48.6	+0.7
	9.6nm,0.3s						
SHLS				eS	Sg	09 59 10.7	+1.3
	26nm,0.3s						
SHLS	Shalkode	1.65	14	P	Pg	09 58 48.6	+0.7
	9.6nm,0.3s						
SHLS				S	Sg	09 59 10.7	+1.3
	26nm,0.3s						
ZHN	Zhinishke	1.65	347	eP	Pb	09 58 47.2	+0.1
	6.6nm,0.1s						
ZHN				eS	Sg	09 59 08.5	-0.9
	46nm,0.5s						
ZHN	Zhinishke	1.65	347	P	Pb	09 58 47.2	+0.1
	6.6nm,0.1s						
ZHN				S	Sg	09 59 08.5	-0.9
	46nm,0.5s						
ULHL	Ulahol	2.12	290	⇓iP	Pn	09 58 53.5	+1.2
	baz=91						
ULHL				⇓iS	Sb	09 59 20.8	-0.9
	baz=91						
KTMS	Ketmen	2.16	29	eP	Pb	09 58 55.3	-0.6
	2.6nm,0.1s						
KTMS				eS	Sb	09 59 22.3	-0.6
	7.4nm,0.2s						
KTMS	Ketmen	2.16	29	Pg	Pb	09 58 55.3	-0.6
	2.6nm,0.1s						
KTMS				Lg	Lg	09 59 22.3	
	7.4nm,0.2s						
NRN	Naryn	2.20	268	⇑iP	Pn	09 58 54.5	+0.9
	baz=68						
NRN				⇑iS	Sb	09 59 23.0	-1.2
	baz=68						
IZV	Izvestkoviy	2.26	312	eP	Pb	09 58 58.5	+0.9
	2.7nm,0.1s						
IZV				eS	Sg	09 59 27.7	-1.4
	17nm,0.3s						
IZV	Izvestkoviy	2.26	312	Pg	Pb	09 58 58.5	+0.9
	2.7nm,0.1s						
IZV				Lg	Lg	09 59 27.7	
	17nm,0.3s						
BOOM	Boomskoye usch	2.41	294	⇓iP	Pn	09 58 57.7	+1.4
	baz=94						
BOOM				⇓iS	Sb	09 59 28.2	-1.9
	baz=94						
MTBS	Maitube	2.43	311	eP	Pb	09 59 01.6	+1.3
	3.8nm,0.2s						
MTBS				eS	Sg	09 59 32.9	-1.4
	14nm,0.2s						
MNBS	Baschi	2.55	351	eP	Pb	09 59 02.5	0.0
	9.3nm,0.3s						
MNBS				eS	Sb	09 59 34.5	+0.5
	35nm,0.3s						
MNBS	Baschi	2.55	351	Pg	Pb	09 59 02.5	0.0
	9.3nm,0.3s						
KST	Kastek	2.65	305	eP	Pb	09 59 05.7	+1.5
	33nm,2.1s						
KST				eS	Sg	09 59 39.8	-1.7
	16nm,0.7s						
CHKK	Chushkaly	2.70	329	eP	Pb	09 59 05.0	0.0
	3.3nm,0.3s						
CHKK				eS	Sb	09 59 39.1	+0.8
	15nm,0.4s						
CHKK	Chushkaly	2.70	329	Pg	Pb	09 59 05.0	0.0
	3.3nm,0.3s						
CHKK				Lg	Lg	09 59 39.1	
	15nm,0.4s						
KTBS	Karatobe	2.71	323	eP	Pb	09 59 05.9	+0.7
	1.3nm,0.5s						
KTBS				eS	Sb	09 59 40.5	+1.8
	15nm,0.3s						
KTBS	Karatobe	2.71	323	Pg	Pb	09 59 05.9	+0.7
	1.3nm,0.5s						
KTBS				Lg	Lg	09 59 40.5	
	15nm,0.3s						
ARXS	Arharly	2.77	343	eP	Pb	09 59 06.5	+0.2
	1.9nm,0.2s						
ARXS				eS	Sb	09 59 41.3	+0.8
	5.0nm,0.3s						
ARXS	Arharly	2.77	343	Pg	Pb	09 59 06.5	+0.2
	1.9nm,0.2s						
ARXS				Lg	Lg	09 59 41.3	
	5.0nm,0.3s						
DJR	Jarkent	2.84	13	eP	Pb	09 59 07.3	-0.2
	0.5nm,0.1s						
DJR				eS	Sb	09 59 42.9	+0.4
	13nm,0.3s						
DJR	Jarkent	2.84	13	Pg	Pb	09 59 07.3	-0.2
	0.5nm,0.1s						
DJR				Lg	Lg	09 59 42.9	
	13nm,0.3s						
DGS	Degeres	2.88	307	eP	Pb	09 59 08.9	+0.9
	2.3nm,0.4s						
DGS				eS	Sb	09 59 45.7	+2.2
	9.1nm,0.6s						
DGS	Degeres	2.88	307	Pg	Pb	09 59 09.0	+0.9
	2.3nm,0.4s						
DGS				Lg	Lg	09 59 45.7	
	9.1nm,0.6s						
KUU	Kurty	3.01	322	eP	Pb	09 59 10.9	+0.6
	2.7nm,0.9s						
KUU				eS	Sb	09 59 49.2	+2.0
	7.5nm,1.1s						
KUU	Kurty	3.01	322	Pg	Pb	09 59 10.9	+0.6
	2.7nm,0.9s						
KUU				Lg	Lg	09 59 49.2	
	7.5nm,1.1s						
KRBS	Karabastau	3.21	313	eP	Pb	09 59 15.5	+1.8
	0.5nm,0.2s						
KRBS				eS	Sg	09 59 56.6	-2.9
	3.4nm,0.4s						

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*KRSC **09** 10:32:06.4±0.8, 55°.42N×162°.76E, h61^{km}±20^{km}, ML3.8*

*IDC **09** 10:32:11.6±5.8, 55°.66N×162°.46E, h75^{km}±40^{km}, mb3.2/7, mb1 3.3/8, mb1mx3.0/63, mbtmp3.5/8, ML2.0/1, Error ellipse: s-maj=55.9km s-min=23.0km az=99.0*

ISC 09 10:32:08.4±1.0**, 55°.48N**±0°.03×**162°.79E**±0°.04**, h56**^{km}±10^{km}**, n45,** σ**1ˢ.10**/64**, mb3.7**/7**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.73	1	i P	Pn	10 32 22.6	-0.3
KBTR				eS	Sn	10 32 33.8	+0.4
KBG	Krutoberegovo	0.78	356	i P	Pn	10 32 23.1	-0.3
KBG				eS	Sn	10 32 34.7	+0.2
ZLN	Zelenaya	1.25	297	eP	Pn	10 32 29.7	0.0
ZLN				eS	Sn	10 32 46.0	+0.4
CIRR	Tsirk	1.32	300	eP	Pn	10 32 30.4	-0.3
LGNR	Loginova	1.33	298	eP	Pn	10 32 31.0	0.0
SMKR	Semkarok	1.33	327	eP	Pn	10 32 30.7	-0.1
SMKR				eS	Sn	10 32 47.7	+0.1
TUMD	Tumrok D	1.40	260	eP	Pn	10 32 31.4	-0.2
TUMD				eS	Sn	10 32 48.7	-0.3
BDR	Baidarnaya	1.41	322	i P	Pn	10 32 32.2	+0.3
BDR				eS	Sn	10 32 50.8	+1.4
KIRR	Kirishev	1.47	290	i P	Pn	10 32 32.9	+0.2
KIRR				eS	Sn	10 32 52.1	+1.2
KLY	Klyuchi	1.47	306	i P	Pn	10 32 31.2	-1.3
KLY				eS	Sn	10 32 48.7	-2.0
KZV	Kizimen	1.48	257	eP	Pn	10 32 32.5	-0.3
KZV				eS	Sn	10 32 50.7	-0.4
KMNR	Kamenistaya	1.48	282	i P	Pn	10 32 33.1	+0.3
KMNR				eS	Sn	10 32 51.4	+0.3
SRKR	Sorokina	1.49	323	eP	Pn	10 32 33.2	+0.3
SRKR				eS	Sn	10 32 52.1	+0.7
TUMR	Tumrok	1.52	264	eP	Pn	10 32 33.6	+0.2
TUMR				eS	Sn	10 32 52.4	+0.2
KPT	Kopyto	1.54	290	eS	Sn	10 32 53.4	+0.9
KOZ	Kozyrevsk	1.75	291	eP	Pn	10 32 37.1	+0.7
KOZ				eS	Sn	10 32 59.5	+1.9
BKI	Bering	1.84	97	eP	Pn	10 32 38.1	+0.6
BKI				eS	Sn	10 33 00.0	+0.4
SRDR	Sredinnyy	1.93	297	eP	Pn	10 32 39.2	+0.4
SRDR				eS	Sn	10 33 02.2	+0.2
ESO	Esso	2.36	283	eP	Pn	10 32 44.7	0.0
KII	Karymskiy	2.42	235	eP	Pn	10 32 45.7	+0.2
KII				eS	Sn	10 33 13.7	-0.2
SPN	Mys Shipunski	2.88	215	eP	Pn	10 32 50.3	-1.5
SPN				eS	Sn	10 33 22.6	-2.7
NLC	Nalytchevo	3.07	223	eP	Pn	10 32 54.4	+0.1
NLC				eS	Sn	10 33 28.7	-1.1
KRER	Koryakskii	3.21	229	eP	Pn	10 32 57.4	+0.9
KRX	Arik	3.22	230	eP	Pn	10 32 56.4	-0.2
SMAR	Somma	3.22	228	eP	Pn	10 32 57.4	+0.8
AVH	Avacha	3.25	229	eP	Pn	10 32 58.6	+1.7
UGLR	Uglovaya	3.25	227	eP	Pn	10 32 57.4	+0.5
KOK	Koryaka	3.27	230	eP	Pn	10 32 57.7	+0.5
DALK	Dalny	3.41	226	eP	Pn	10 32 58.6	-0.4
DALK				eS	Sn	10 33 36.5	-1.6
PETK	Petropavlovsk-	3.81	234	P	Pn	10 33 05.6	+1.0
	0.5nm,0.3s,baz=74,slow=19,SNR=12						
PETK				S	Sn	10 33 51.8	+3.7
	0.9nm,0.3s,baz=90,slow=18,SNR=4.4						
KRMR	Karymshinskiy	3.81	228	eP	Pn	10 33 05.6	+1.1
KRMR				eS	Sn	10 33 47.9	-0.2
RUS	Russkaya	3.96	221	eS	Sn	10 33 51.5	-0.2
GRL	Gorelyy	4.04	225	eP	Pn	10 33 09.2	+1.4
MTVR	Mutnovka	4.05	224	eP	Pn	10 33 09.4	+1.5
MTVR				eS	Sn	10 33 55.1	+1.0
ASAK	Asacha	4.24	225	eP	Pn	10 33 11.9	+1.4
TIXI	Tiksi	21.66	331	P	P	10 36 54.4	+0.7
	1.8nm,0.3s,baz=119,slow=5.5,SNR=7.2						
H11N2	WAKE ISLAND Hy	35.82	173	T	T	11 18 12.5	
	baz=356,slow=76,SNR=4.2						
H11N3	WAKE ISLAND Hy	35.84	173	T	T	11 18 10.5	
	baz=356,slow=76,SNR=4.5						
H11N1	WAKE ISLAND Hy	35.84	173	T	T	11 18 14.8	
	baz=356,slow=76,SNR=5.8						
KURBB	Kurchatov Arra	47.93	301	P	P	10 40 38.7	-2.0
	0.2nm,0.4s,baz=54,slow=7.7,SNR=2.8						
MKAR	Makanchi Array	48.56	295	P	P	10 40 44.1	-1.6
	0.1nm,0.4s,baz=64,slow=9.8,SNR=3.5						
BVAR	Borovoye Array	50.15	308	P	P	10 40 55.9	-1.8
	0.4nm,0.5s,baz=64,slow=6.8,SNR=3.6						
FINES	FINESS Array B	58.55	337	P	P	10 41 58.5	+0.1
	2.1nm,0.8s,baz=19,slow=8.8,SNR=4.5						
CMAR	Chiang Mai Arr	60.21	259	P	P	10 42 11.9	+1.4
	0.4nm,0.3s,baz=45,slow=6.8,SNR=4.6						
ASAR	Alice Springs	82.59	207	P	P	10 44 26.5	+1.4
	0.4nm,0.8s,baz=15,slow=4.8,SNR=4.1						

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*NEIC **09** 10:38:51.1±1.0, 20°.0S±0°.1×177°.4W±0°.2, h526^{km}±16^{km}, mb4.2/15, Error ellipse: s-maj=29.2km s-min=12.8km az=73.0*

*IDC **09** 10:39:01.2±50.0, 20°.71S×178°.23W, h569^{km}±417^{km}, mb3.3/4, mb1 3.5/4, mb1mx2.9/40, mbtmp4.4/4, Error ellipse: s-maj=413.2km s-min=113.1km az=75.0*

ISC 09 10:38:53.4±1.7**, 19°.9S**±0°.2×**177°.6W**±0°.2**, h550**^{km}**, n22,** σ**1ˢ.76**/23**, mb4.2**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.64	297	P	P	10 40 18.4	-2.0
OUZ	Omahuta	17.15	205	P	P	10 42 23.2	-0.1
OUZ				IAmb	IAmb	10 42 41.0	
	comp=Z,12nm,1.3s						
URZ	Urewera	18.89	193	P	P	10 42 41.1	+2.0
RPZ	Rata Peaks	25.60	199	P	P	10 43 33.8	-5.5
WHZ	Wether Hill Ro	28.55	201		P	10 44 03.5	-1.5
WHZ				IAmb	IAmb	10 44 05.8	
	comp=Z,12nm,1.2s						
EIDS	Eidsvold	29.38	253	P	P	10 44 12.5	0.0
ARMA	Armidale	29.68	243	P	P	10 44 14.8	-0.4
ARMA				IAmb	IAmb	10 44 28.1	
	comp=Z,18nm,1.5s						
CTA	Charters Tower	33.93	263	P	P	10 44 52.5	+1.1
	comp=Z,7.4nm,1.0s,baz=98,slow=11,SNR=6.5						
STKA	Stephens Creek	38.40	244	P	P	10 45 27.6	-0.5
	comp=Z,1.6nm,0.6s,baz=96,slow=9.2,SNR=4.4						
STKA	Stephens Creek	38.40	244	P	P	10 45 28.5	+0.4
BBOO	Buckleboo	43.16	243	P	P	10 46 04.9	-1.1
BBOO				IAmb	IAmb	10 46 19.3	
	comp=Z,9.6nm,1.4s						
WR0	Warramunga Arr	44.87	261	P	P	10 46 19.9	+0.5
WR0				IAmb	IAmb	10 46 21.3	
	comp=Z,2.9nm,0.7s						
AS31	Alice Springs	45.03	256	P	P	10 46 20.7	+0.1
ASAR	Alice Springs	45.03	256	P	P	10 46 21.2	+0.6
	comp=Z,6.7nm,0.8s,baz=94,slow=8.1,SNR=97						
ASAR				PcP	PcP	10 47 52.9	+3.1
	comp=Z,0.5nm,0.7s,baz=118,slow=3.7,SNR=4.3						
ASAR	Alice Springs	45.03	256	P	P	10 46 20.8	+0.2
WB0	Warramunga Arr	45.04	262	P	P	10 46 21.1	+0.4
WB0				IAmb	IAmb	10 46 21.9	
	comp=Z,6.8nm,0.5s						
WRA	Warramunga Arr	45.06	261	P	P	10 46 21.5	+0.6
	comp=Z,3.7nm,0.6s,baz=100,slow=8.5,SNR=7.4						
WRA	Warramunga Arr	45.06	261	P	P	10 46 21.4	+0.6
MTN	Manton Dam	49.53	270	P	P	10 46 56.3	+1.8
MTN				IAmb	IAmb	10 46 57.0	
	comp=Z,8.8nm,0.9s						
KNRA	Kununurra	51.08	266	P	P	10 47 07.7	+2.0
KNRA				IAmb	IAmb	10 47 08.6	
	comp=Z,6.0nm,0.8s						
QSPA	South Pole Qui	70.19	180	P	P	10 49 10.7	-0.2
STVI	Saint Thomas	116.74	79	PKPdf	PKiKP	10 56 35.6	-0.6

WEL 09 10:42:38.8, 38°S±3°×**17°6E**±°**, h198**^{km}±8^{km}**, M2.5**/36**, mB4.8**/1**, MLv2.5**/36**, Mw(mB)4.1**/1**, Error ellipse: s-maj=0.0km s-min=0.0km az=91.4, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATZ	Hinemaiaia	0.55	141	P	Pn	10 43 05.4	-0.4
WTVZ	West Tongariro	0.65	184	P	Pn	10 43 06.6	+0.2
MRHZ	Matea Rd	0.70	122	P	Pn	10 43 06.0	-0.6
NGZ	Ngauruhoe	0.71	183	P	Pn	10 43 07.1	+0.3
TOZ	Tahuroa Road	0.74	351	P	Pn	10 43 06.9	+0.1
TUVZ	Tukino	0.80	180	P	Pn	10 43 07.5	+0.3
MUGZ	Murupara	0.88	91	P	Pn	10 43 07.3	-0.2
MTVZ	Mangateitei	0.93	189	P	Pn	10 43 08.4	+0.4
MOVZ	Moawhango	0.95	175	P	Pn	10 43 07.9	-0.1
BKZ	Black Stump Fm	0.96	137	P	Pn	10 43 07.9	-0.2
MTHZ	Maungataniwha	1.01	113	P	Pn	10 43 08.3	-0.2
RTZ	Ruatahuna	1.05	99	P	Pn	10 43 08.5	-0.3
BHHZ	Black Hill Sta	1.07	163	P	Pn	10 43 08.7	-0.1
NMHZ	Naumai	1.10	125	P	Pn	10 43 09.9	+0.7
KWHZ	Kaweka Forest	1.13	148	P	Pn	10 43 09.5	+0.2
URZ	Urewera	1.17	80	P	Pn	10 43 09.2	-0.3
RAHZ	Arahi	1.21	112	P	Pn	10 43 10.2	+0.4
MCHZ	McNeill Hill	1.27	141	P	Pn	10 43 11.1	+0.8
KRHZ	Kereru	1.30	155	P	Pn	10 43 10.9	+0.2
ARHZ	Aropaoanui	1.32	128	P	Pn	10 43 11.1	+0.4
SNGZ	Shannon Statio	1.36	104	P	Pn	10 43 11.4	+0.3
RAGZ	Rawiri	1.39	92	P	Pn	10 43 11.4	+0.1
MKAZ	Moumakai	1.41	344	P	Pn	10 43 13.6	+2.0
MWZ	Matawai	1.48	86	P	Pn	10 43 12.3	+0.2
PNHZ	Pukenui	1.51	164	P	Pn	10 43 12.7	+0.3
TSZ	Takapari Road	1.61	172	P	Pn	10 43 13.7	+0.4
KAHZ	Kahuranaki	1.64	145	P	Pn	10 43 14.2	+0.7
RIGZ	Rimuhau	1.67	99	P	Pn	10 43 14.3	+0.4
RUGZ	Raukumara Rang	1.67	73	P	Pn	10 43 13.3	-0.7
KNZ	Kokohu	1.68	110	P	Pn	10 43 14.2	+0.3
WPHZ	Waipukurau	1.71	159	P	Pn	10 43 14.6	+0.4
TKGZ	Te Karaka	1.73	90	P	Pn	10 43 15.0	+0.7
HAZ	Te Kaha	1.82	68	P	Pn	10 43 15.1	-0.2
PXZ	Pawanui	1.83	149	P	Pn	10 43 15.2	-0.1
DVHZ	Dannevirke	1.88	168	P	Pn	10 43 15.9	+0.1
MHGZ	Mahia Peninsul	1.89	112	P	Pn	10 43 16.6	+0.6
RVAZ	Riverhead Bore	1.89	333	P	Pn	10 43 16.8	+0.7
PRHZ	Porangahau	1.96	157	P	Pn	10 43 17.1	+0.4
PKGZ	Pakihiroa	2.00	74	P	Pn	10 43 17.6	+0.5
ANWZ	Angora Road	2.09	163	P	Pn	10 43 18.5	+0.5
MRZ	Mangatainoka R	2.19	181	P	Pn	10 43 19.4	+0.2
BFZ	Birch Farm	2.26	168	P	Pn	10 43 20.0	+0.1
TIWZ	Tintock	2.32	176	P	Pn	10 43 20.8	+0.3
TMWZ	Te Maipa	2.65	176	P	Pn	10 43 24.2	0.0
NNZ	Nelson	3.26	212	P	Pn	10 43 31.6	+0.3
KHZ	Kahutara	4.26	202	P	Pn	10 43 44.1	+0.4
LTZ	Lake Taylor	5.02	210	P	Pn	10 43 53.2	-0.1

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*NEIC **09** 10:56:26.1±2.3, 7°.6S±0°.1×120°.1E±0°.1, h407^{km}±12^{km}, mb4.2/10, Error ellipse: s-maj=18.6km s-min=13.4km az=223.0*

*IDC **09** 10:56:26.9±1.6, 7°.41S×120°.28E, h413^{km}±15^{km}, mb3.2/5, mb1 3.3/8, mb1mx3.1/40, mbtmp4.0/8, Error ellipse: s-maj=105.3km s-min=11.1km az=58.0*

*DJA **09** 10:56:28.6±0.7, 8°S±6°×12°0E±°, h366^{km}±8^{km}, M3.5/9, MLv3.5/9*

ISC 09 10:56:25.7±0.7**, 7°.55S**±0°.06×**120°.16E**±0°.07**, h400**^{km}**, n34,** σ**1ˢ.40**/40**, mb3.8**/6**, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDFI	Ende, Flores	1.93	128	P	Pn	10 57 20.4	-0.9
EDFI				S	S	10 58 02.5	-3.7
WBSI	Waikabubak, Su	2.21	200	P	Pn	10 57 23.0	-0.1
WBSI				S	S	10 58 07.3	-2.1
BKSI	Bulukumba	2.22	359	P	Pn	10 57 23.0	-0.1
MMRI	Maumere	2.32	118	P	Pn	10 57 23.5	-0.3
MMRI	Maumere	2.32	118		Pn	10 57 24.2	+0.4
KAPI	Kappang	2.55	351	P	Pn	10 57 27.3	+1.8
	25nm,0.3s,baz=179,slow=6.0,SNR=54						
PLAI	Plampang	2.68	242	P	Pn	10 57 26.0	-0.4
PLAI				S	S	10 58 14.4	-1.0
BASI	Baing, Sumba	2.68	171	P	Pn	10 57 27.8	+1.4
BNSI	Bone	3.13	359	P	Pn	10 57 30.8	+0.8
SOEI	Soe	4.61	119	P	Pn	10 57 44.6	+0.6
SOEI	Soe	4.61	119		Pn	10 57 44.5	+0.6
SOEI				S	S	10 58 44.5	-3.0
JAGI	Jajag, Banyuwa	6.02	261		Pn	10 57 57.6	-0.9
KNRA	Kununurra	11.67	135	P	Pn	10 59 06.0	+2.9
FITZ	Fitzroy Crossi	11.76	154	P	Pn	10 59 04.2	+0.1
	0.2nm,0.3s,baz=334,slow=9.8,SNR=9.3						
FITZ	Fitzroy Crossi	11.76	154	P	Pn	10 59 04.1	0.0
MTN	Manton Dam	12.01	117	P	P	10 59 06.7	+1.1
GIRL	Giralia	16.05	200	P	P	10 59 51.7	+2.2
WB0	Warramunga Arr	18.38	133	P	P	11 00 14.5	+0.1
WB0				IAmb	IAmb	11 00 28.6	
	comp=Z,8.3nm,1.3s						

WRA	Warramunga Arr	18.46	133	P	P	11 00 15.4	+0.2
	comp=Z,1.4nm,0.3s,baz=316,slow=10,SNR=10.0						
WRA				S	S	11 03 22.5	-1.9
	comp=Z,0.1nm,0.3s,baz=308,slow=21,SNR=4.3						
WB2	Warramunga Arr	18.46	133	P	P	11 00 12.7	-2.6
WB2				IAmb	IAmb	11 00 15.7	
	comp=Z,2.8nm,0.7s						
WR0	Warramunga Arr	18.61	133	P	P	11 00 16.6	-0.2
WR0				IAmb	IAmb	11 00 17.4	
	comp=Z,8.9nm,1.2s						
AS31	Alice Springs	20.75	142	P	P	11 00 37.8	+0.7
ASAR	Alice Springs	20.75	142	P	P	11 00 37.8	+0.7
	comp=Z,2.8nm,0.6s,baz=318,slow=8.2,SNR=52						
ASAR				S	S	11 04 03.7	+1.5
	comp=Z,0.2nm,0.5s,baz=305,slow=17,SNR=3.3						
BBOO	Buckleboo	29.15	152	P	P	11 01 52.6	+0.6
BBOO				IAmb	IAmb	11 01 58.8	
	comp=Z,7.7nm,1.1s						
TWG	Pinlang	30.20	2	P	P	11 02 01.9	+0.7
TWG				IAmb	IAmb	11 02 18.5	
	comp=Z,207nm,1.4s						
STKA	Stephens Creek	31.38	143	P	P	11 02 12.3	+0.8
	comp=Z,1.6nm,0.3s,baz=318,slow=8.8,SNR=7.7						
STKA	Stephens Creek	31.38	143	P	P	11 02 12.3	+0.8
YOJ	Yonaguni jima	31.94	5	P	P	11 02 15.0	-1.3
SONM	Songino Array	56.47	349	P	P	11 05 27.2	-0.6
	comp=Z,0.4nm,0.7s,baz=155,slow=6.1,SNR=3.1						
SONM	Songino Array	56.47	349	P	P	11 05 27.1	-0.6
MKAR	Makanchi Array	63.71	332	P	P	11 06 15.9	-0.3
	comp=Z,0.4nm,0.4s,baz=146,slow=7.8,SNR=12						
MKAR	Makanchi Array	63.71	332	P	P	11 06 16.1	-0.1
ZALV	Zalesovo Beam	68.11	338	P	P	11 06 42.7	-1.0
	comp=Z,0.7nm,0.3s,baz=120,slow=6.5,SNR=3.9						
ZALV	Zalesovo Beam	68.11	338	P	P	11 06 42.4	-1.3

*GRAL **09** 11:03:20.2±0.3, 33°.61N×35°.39E, h22^{km}±3^{km}, MD2.5*
*GII **09** 11:03:21.0±0.8, 33°.58N×35°.46E, h10^{km}, Mm1.5/2*
ISC 09 11:03:20.3±1.4, **33°.62N**±0°.04×**35°.41E**±0°.08, **h15**^{km}±10^{km}, **n9**, σ**0^{s}.28**/16, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DQRL	Deir Qamar	0.16	56	*e*P	Pb	11 03 25.0	-0.1
DQRL				*e*S	Sb	11 03 28.4	+0.1
BHL	Bhannes	0.35	35	*e*P	Pg	11 03 27.5	-0.1
BHL				*e*S	Sg	11 03 33.0	+0.4
RCY	Rachaya	0.38	108	*e*P	Pg	11 03 27.8	-0.2
NATI	Neve Ativ	0.45	142	Pg	Pg	11 03 29.5	+0.3
NATI				Sg	Sg	11 03 34.9	-0.3
KSDI	Kefar Szold	0.47	154	Pg	Pg	11 03 29.6	0.0
KSDI				Sg	Sg	11 03 36.4	+0.4
MMA0B	Mount Meron ar	0.60	180	Pg	Pg	11 03 32.1	0.0
MMA0B				Sg	Sb	11 03 41.1	+0.3
OFRI	`Ofer	1.05	200	Pg	Pb	11 03 40.1	-0.1
MMLI	Mount Malkishu	1.17	179	Pg	Pn	11 03 42.2	0.0
MMLI				Sg	Sn	11 03 58.1	+0.1
HMDT	Nahal Hemdat	1.36	176	Pn	Pb	11 03 45.3	-0.2
HMDT				Sn	Sg	11 04 03.8	-0.4

*IDC **09** 11:03:21.6±1.4, 19°.28S×177°.44W, h542^{km}±16^{km}, mb3.4/13, mb1 3.6/16, mb1mx3.4/34, mbtmp4.3/16, Error ellipse: s-maj=19.7km s-min=10.6km az=142.0*
*NEIC **09** 11:03:24.5±1.2, 19°.2S±0°.1×177°.6W±0°.1, h572^{km}±7^{km}, mb4.5/38, Error ellipse: s-maj=19.9km s-min=16.1km az=133.0*
ISC 09 11:03:23.6±0.5, **19°.25S**±0°.09×**177°.44W**±0°.08, **h570**^{km}, **n95**, σ**1^{s}.49**/105, **mb4.4**/29, **6C**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.53	289	P	P	11 04 51.9	+0.8
AFI	Afiamalu	7.59	47	P	P	11 05 16.9	-1.3
	7.9nm,0.3s,baz=155,slow=3.2,SNR=11						
AFI				S	S	11 06 45.6	-6.4
	2.3nm,0.3s,baz=260,slow=18,SNR=5.2						
DZM	Mont Dzumac	15.34	257	P	P	11 06 35.0	-1.2
	0.9nm,0.3s,baz=11,slow=20,SNR=8.2						
DZM	Mont Dzumac	15.34	257	P	P	11 06 37.0	+0.8
DZM				IAmb	IAmb	11 06 51.9	
	comp=Z,20nm,1.1s						
OUZ	Omahuta	17.78	205	P	P	11 07 01.1	+2.7
URZ	Urewera	19.53	193	P	P	11 07 12.7	-1.6
	comp=Z,1.8nm,0.3s,baz=275,slow=3.2,SNR=16						
URZ	Urewera	19.53	193	P	P	11 07 12.8	-1.5
URZ				IAmb	IAmb	11 07 28.3	
	comp=Z,13nm,1.1s						
BHW	Baring Head	23.05	195	P	P	11 07 44.1	-1.7
NNZ	Nelson	23.26	198	P	P	11 07 49.0	+1.3
HNR	Honiara	23.95	291	P	P	11 07 50.6	-3.6
MLZ	Mavora Lakes	28.67	201	P	P	11 08 35.2	-0.1
MLZ				IAmb	IAmb	11 08 46.5	
	comp=Z,20nm,1.4s						
WHZ	Wether Hill Ro	29.19	201	P	P	11 08 40.3	+0.5
EIDS	Eidsvold	29.70	252	P	P	11 08 43.2	-1.3
EIDS				IAmb	IAmb	11 09 00.4	
	comp=Z,26nm,1.2s						
ARMA	Armidale	30.10	242	P	P	11 08 48.3	+0.3
ARMA				IAmb	IAmb	11 08 48.6	
	comp=Z,14nm,1.5s						
CTA	Charters Tower	34.15	262	P	P	11 09 22.0	-0.4
	comp=Z,7.4nm,0.5s,baz=91,slow=10.0,SNR=15						
PMG	Port Moresby	35.60	281	P	P	11 09 34.6	+0.2
	comp=Z,14nm,0.7s,baz=26,slow=8.9,SNR=4.6						
PMG	Port Moresby	35.60	281	IAmb	IAmb	11 09 35.7	
	comp=Z,17nm,0.8s						
TOO	Toolangi	37.06	233	P	P	11 09 46.1	-0.1
TOO				IAmb	IAmb	11 09 46.9	
	comp=Z,9.6nm,0.8s						
COEN	Coen	38.05	272	P	P	11 09 55.0	+0.5
COEN				IAmb	IAmb	11 10 06.0	
	comp=Z,15nm,1.2s						
STKA	Stephens Creek	38.81	243	P	P	11 10 00.8	+0.3
	comp=Z,2.6nm,0.3s,baz=87,slow=8.7,SNR=15						
STKA	Stephens Creek	38.81	243	P	P	11 10 00.8	+0.3
BBOO	Buckleboo	43.58	242	P	P	11 10 38.0	-0.2
WB0	Warramunga Arr	45.28	261	P	P	11 10 50.6	-0.8
WB0				IAmb	IAmb	11 10 51.4	
	comp=Z,18nm,1.3s						
WB0				PcP	PcP	11 12 19.3	+0.2
WRA	Warramunga Arr	45.31	261	P	P	11 10 50.7	-1.0
	comp=Z,9.6nm,0.3s,baz=98,slow=8.1,SNR=52						
WRA				PcP	PcP	11 12 19.2	+0.1
	comp=Z,1.0nm,0.5s,baz=98,slow=3.7,SNR=4.7						
WRA	Warramunga Arr	45.31	261	P	P	11 10 50.9	-0.7
AS31	Alice Springs	45.33	255	P	P	11 10 51.3	-0.4
AS31				PcP	PcP	11 12 19.4	+0.2
ASAR	Alice Springs	45.33	255	P	P	11 10 51.2	-0.5
	comp=Z,5.3nm,0.4s,baz=85,slow=8.1,SNR=115						
ASAR				PcP	PcP	11 12 19.1	-0.1
	comp=Z,1.9nm,0.6s,baz=102,slow=3.6,SNR=9.1						
ASAR				S	S	11 16 48.5	-3.2
	comp=Z,0.9nm,0.9s,baz=90,slow=15,SNR=6.9						
ASAR	Alice Springs	45.33	255	P	P	11 10 50.9	-0.9
ASAR				PcP	PcP	11 12 19.1	-0.1
MTN	Manton Dam	49.69	269	P	P	11 11 23.7	-0.7
MTN				IAmb	IAmb	11 11 24.8	
	comp=Z,11nm,0.8s						
FORT	Forrest	50.28	246	P	P	11 11 27.9	-0.6
KNRA	Kununurra	51.28	265	P	P	11 11 35.3	-0.6
KNRA				IAmb	IAmb	11 11 36.1	
	comp=Z,12nm,0.8s						
SIJI	Sorong	53.44	284	P	P	11 11 51.7	+0.3
	comp=Z,28nm,0.7s,baz=90,slow=7.1,SNR=5.6						
FITZ	Fitzroy Crossi	53.72	261	P	P	11 11 53.0	-0.3
SOEI	Soe	57.00	271	P	P	11 12 17.6	+1.2
SOEI				IAmb	IAmb	11 12 18.3	
	comp=Z,29nm,0.7s						
PSA00	Pilbara Seismi	58.47	256	P	P	11 12 25.5	-0.6
MMRI	Maumere	59.24	271	P	P	11 12 30.9	-0.4
MMRI				IAmb	IAmb	11 12 31.6	
	comp=Z,48nm,1.1s						
MORW	Morawa	60.79	247	P	P	11 12 40.5	-0.9
MORW				IAmb	IAmb	11 12 47.5	
	comp=Z,32nm,1.4s						
MJAR	Matsushiro Arr	69.52	323	P	P	11 13 35.7	-0.2
	comp=Z,2.2nm,0.6s,baz=142,slow=6.2,SNR=11						
MJAR	Matsushiro Arr	69.52	323	P	P	11 13 35.5	-0.3
MAJO	Matsushiro	69.52	323	P	P	11 13 36.3	+0.5
MAJO				IAmb	IAmb	11 13 48.0	
	comp=Z,17nm,1.4s						
MAT	Matsushiro	69.52	323	P	P	11 13 36.1	+0.3
MJB9	Matsu-Tunnel	69.53	323	P	P	11 13 36.4	+0.5
MJB9				IAmb	IAmb	11 13 47.9	
	comp=Z,18nm,1.4s						
UGM	Wanagama	70.52	268	P	P	11 13 42.2	0.0
QSPA	South Pole Qui	70.82	180	P	P	11 13 44.1	+0.9
CISI	Cisompet, Garu	73.18	268	P	P	11 13 56.7	-1.1
NACB	Ninganchiao	73.42	304	P	P	11 13 55.4	-3.3
SSLB	Suanglung	73.73	303	P	P	11 13 59.6	-1.0
SSLB				IAmb	IAmb	11 14 08.0	
	comp=Z,15nm,1.1s						
TPUB	Ta-pu	73.74	302	P	P	11 13 60.0	-0.7
PETK	Petropavlovsk-	75.20	345	P	P	11 14 08.6	+0.4
	comp=Z,2.0nm,0.7s,baz=130,slow=9.6,SNR=10						
PETK	Petropavlovsk-	75.20	345	P	P	11 14 09.3	+1.2
YERR	Yerington	79.47	42	P	P	11 14 33.6	+1.7
NJ2	Nanjing	79.49	309	*e*P	P	11 14 33.6	+1.8
NVAR	Mina Array Bea	79.76	43	P	P	11 14 35.1	+1.7
	comp=Z,0.4nm,0.6s,baz=217,slow=8.8,SNR=4.7						
PMR	Palmer	83.68	13	P	P	11 14 52.9	+0.4
GHO	Glory Hole Cre	83.89	13	P	P	11 14 54.2	+0.6
GHO				IAmb	IAmb	11 14 54.3	
	comp=Z,13nm,1.3s						
SCM	Sheep Creek Mo	84.30	14	P	P	11 14 56.2	+0.5
TXAR	Lajitas Array	85.94	57	P	P	11 15 06.8	+2.4
	comp=Z,0.4nm,0.6s,baz=258,slow=2.7,SNR=3.4						
ILAR	Eielson Array	86.98	13	P	P	11 15 08.3	0.0
	comp=Z,0.5nm,0.6s,baz=230,slow=5.2,SNR=11						
PDAR	Pinedale Array	87.69	43	P	P	11 15 13.8	+1.3
	comp=Z,0.2nm,0.5s,baz=256,slow=3.6,SNR=2.8						
HHC	Hu-ho-hao-te	88.86	314	*e*P	P	11 15 21.5	+3.7
CMAR	Chiang Mai Arr	90.19	289	P	P	11 15 26.1	+1.7
	comp=Z,1.8nm,0.8s,baz=116,slow=2.8,SNR=13						
CD2	Chengdu	90.56	303	P	P	11 15 25.1	-0.7
YKA	Yellowknife Ar	95.16	25	P	P	11 15 46.5	+0.5
	comp=Z,0.2nm,0.9s,baz=226,slow=4.2,SNR=3.3						
ZALV	Zalesovo Beam	109.84	321	PKiKP	PKiKP	11 20 48.4	-1.9
	comp=Z,0.4nm,0.3s,baz=98,slow=2.9,SNR=2.4						
MKAR	Makanchi Array	110.72	314	PKiKP	PKiKP	11 20 51.3	-0.9
	comp=Z,0.5nm,0.5s,baz=123,slow=0.4,SNR=13						
KSH	Kashi	114.60	305	PKP	PKPdf	11 20 56.8	-3.1
KSH				PP	PP	11 22 12.7	+4.4
KSH				SKS	SKSdf	11 27 11.7	-6.8
KSH	Kashi	114.60	305	SS	SS	11 37 19.6	0.0
ARCES	ARCESS Array B	127.78	350	PKP	PKiKP	11 21 24.6	-0.2
	comp=Z,2.8nm,0.8s,baz=75,slow=0.8,SNR=9.4						
AKASG	Malin Array Be	142.16	332	PKhKP	PKPpre	11 21 47.4	
	comp=Z,0.9nm,0.3s,baz=44,slow=4.2,SNR=9.2						
BUR08	Bucovina Ar. S	146.20	332		PKPab	11 22 02.1	-1.1
BURAR	Bucovina Array	146.22	332		PKPdf	11 21 59.4	+0.7
BURAR					PKPbc	11 22 01.8	+1.0
BR131	Keskin Array S	146.37	314		PKPbc	11 22 02.1	+0.5
BRTR	Keskin Array B	146.37	314	PKPbc	PKPbc	11 22 01.6	+0.1
	comp=Z,2.1nm,0.5s,baz=137,slow=5.0,SNR=12						
OSTC	Ostas	146.92	344⇑	*e*PKP	PKiKP	11 22 04.0	-0.4
CLL	Collm	146.96	348	*e*PKPbc	PKiKP	11 22 04.0	-0.4
	comp=Z,6.0nm,0.6s						
CLL				*e*PKPab	PKPab	11 22 07.0	+1.2
CLL	Collm	146.96	348		PKiKP	11 22 04.2	-0.2
DPC	Dobruska-Polom	147.08	344⇑	*e*PKP	PKiKP	11 22 04.1	-0.7
DPC				*e*PKPAB	PKPab	11 22 07.5	+1.0
BRG	Berggiesshubel	147.17	347	*e*PKP	PKPbc	11 22 03.8	+0.7
	comp=Z,2.7nm,0.7s						
BRG	Berggiesshubel	147.17	347	*e*PKP	PKPbc	11 22 03.8	+0.7
	comp=Z,2.7nm,0.7s						
KRLC	Kraliky	147.21	343⇑	*e*PKP	PKiKP	11 22 04.4	-0.7
KRLC				*e*PKPAB	PKPab	11 22 07.9	+0.9
PRU	Pruhonice	147.87	345⇑	*e*PKP	PKiKP	11 22 05.8	-0.5
PRU				*e*PKPAB	PKPab	11 22 10.2	+0.6
GOPC	GO Pecny, Ondr	147.88	345⇑	*e*PKP	PKiKP	11 22 06.1	-0.3
VYHS	Vyhne	147.99	339	*e*PKP	PKPbc	11 22 06.0	+0.6
VYHS				*e*		11 22 11.1	
MODS	Modra-Piesok	148.59	341	*e*PKP	PKPbc	11 22 07.2	+0.3
KHC	Kasperske Hory	148.89	346⇑	*e*PKP	PKPbc	11 22 08.0	+0.4
KHC	Kasperske Hory	148.89	346		PKiKP	11 22 08.4	-0.2
GEC2	GERESS Array S	149.13	346		PKiKP	11 22 08.9	-0.2
GERES	GERESS Array B	149.13	346	PKPbc	PKPbc	11 22 08.6	+0.3
	comp=Z,2.4nm,0.7s,baz=31,slow=3.1,SNR=14						
CONA	Conrad Observa	149.41	342	*i* PKiKP	PKiKP	11 22 09.7	-0.1
	comp=Z,3.3nm,0.6s						
MOA	Molln	149.92	344	*i* PKiKP	PKPbc	11 22 10.1	+0.1
	comp=Z,1.7nm,0.6s						
WATA	Walderalm	151.03	347	*e*PKiKP	PKPbc	11 22 12.7	-0.1
	comp=Z,3.5nm,0.5s,SNR=4.9						
WTTA	Wattenberg	151.08	347	*e*PKiKP	PKPbc	11 22 13.1	+0.1
	comp=Z,7.4nm,0.5s,SNR=8.9						
MOTA	Moosalm	151.11	348	*i* PKiKP	PKPbc	11 22 13.1	+0.1
	comp=Z,6.9nm,0.9s						
SQTA	Sankt Quirin	151.21	348	*e*PKiKP	PKPbc	11 22 13.3	+0.1
	comp=Z,4.6nm,0.6s						
ABTA	Abfaltersbach	151.38	346	*e*PKPbc	PKPbc	11 22 13.2	-0.3
	comp=Z,6.6nm,0.6s,SNR=6.8						

*IDC **09** 11:13:36.6±0.7, 8°.49N×126°.87E, h0^{km}, mb4.0/16, mb1 4.1/16, mb1mx3.9/47, mbtmp4.0/16, MS3.3/2, Ms1 3.3/2, ms1mx2.8/53, Error ellipse: s-maj=35.0km s-min=14.9km az=73.0*
*MAN **09** 11:13:37.9, 8°.61N×127°.36E, h47^{km}, mb4.9, ML3.9, MS3.9*
*NEIC **09** 11:13:48.2±1.8, 8°.43N±0°.10×126°.7E±0°.1, h90^{km}±8^{km}, mb4.3/20, Error ellipse: s-maj=19.1km s-min=14.1km az=83.0*
ISC 09 11:13:39.0±2.8, **8°.60N**±0°.04×**127°.15E**±0°.07, **h13**^{km}±17^{km}, **n68**, σ**1^{s}.32**/70, **mb4.2**/25, **1C-3D**, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	Butuan	1.55	284	*e*P	Pn	11 14 05.8	-0.5
BUTP				*e*S	Sg	11 14 28.5	-0.4
MATI	Mati	1.87	208	*e*P	Pn	11 14 08.7	-2.0
DAV	Davao City (W)	2.17	226	Pn	Pn	11 14 15.7	+0.8
	96nm,0.3s,baz=259,slow=3.6,SNR=8.0						
DAV				LR	LR	11 14 42.7	
	comp=Z,262nm,19.6s,baz=34,slow=35						
DAV				Sn	Sn	11 14 43.5	+1.8
	83nm,0.3s,baz=66,slow=20,SNR=6.6						
DAV	Davao City (W)	2.17	226		Pn	11 14 16.5	+1.5
BUKP	Musuan	2.18	251	*e*P	Pn	11 14 15.3	+0.2
BUKP				*e*S	Sn	11 14 44.1	+2.1
DMPH	Davao City--Mi	2.22	227⇓	*e*P	Pn	11 14 17.6	+2.1
DMPH				*i* S	Sn	11 14 45.1	+2.3
MSLP	Maasin	2.72	304	*e*P	Pn	11 14 23.2	+0.7
MSLP				*e*S	Sb	11 15 00.4	-0.5
DDMP	Don Marcelino,	2.86	210	*e*P	Pn	11 14 25.1	+0.7
DDMP				*e*S	Sn	11 14 58.7	0.0
CTBH	Cotabato--PC H	3.18	245⇓	*i*P	Pn	11 14 28.7	-0.1
SKMP	Bagumbayan, Su	3.31	231	*e*P	Pn	11 14 30.7	+0.2
GSPH	General Santos	3.31	221⇑	*i*P	Pn	11 14 33.3	+2.5
GSPH				*i* S	Sn	11 15 09.3	-0.9
LLP	Lapu-Lapu	3.57	299	*e*P	Pn	11 14 34.6	+0.4
LLP				*e*S	Sn	11 15 18.9	+2.6
PAGZ	Pagadian	3.80	259	*e*P	Pn	11 14 39.2	+1.9
SNPH	Sibulan	3.93	281	*e*P	Pn	11 14 41.0	+1.8
SNPH				*e*S	Sn	11 15 26.4	+1.1
CNP	Catarman	4.59	328	*e*P	Pn	11 14 48.5	+0.3
GUIM	Jordan	4.92	294	*e*P	Pn	11 14 52.4	-0.4
RCP	Roxas	5.24	305⇓	*e*P	Pn	11 14 58.8	+1.8
TGY	Tagaytay City	8.18	312	LR	LR	11 18 58.9	
	comp=Z,152nm,18.3s,baz=270,slow=40						
SAUI	Saumlaki	16.99	166	Pn	Pn	11 17 37.4	+0.8
GUMO	Guam	18.08	73	LR	LR	11 23 40.0	
	comp=Z,140nm,19.4s,baz=194,slow=33						
MTN	Manton Dam	21.67	169	P	P	11 18 30.2	+0.6
MTN				IAmb	IAmb	11 18 45.8	
	comp=Z,15nm,1.1s						
UBPT	Khong Chiam	22.21	289	P	P	11 18 35.9	+0.4
UBPT				IAmb	IAmb	11 18 53.2	
	comp=Z,9.5nm,1.1s						
KNRA	Kununurra	24.18	176	P	P	11 18 56.4	+1.1
KNRA				IAmb	IAmb	11 19 07.0	
	comp=Z,10.0nm,0.7s						
FITZ	Fitzroy Crossi	26.57	183	P	P	11 19 16.0	-1.0
	comp=Z,2.8nm,0.6s,baz=357,slow=8.6,SNR=13						
FITZ	Fitzroy Crossi	26.57	183	P	P	11 19 17.0	0.0
FITZ				IAmb	IAmb	11 19 29.1	
	comp=Z,5.1nm,0.7s						
PBKT	Sadao Pong	26.72	290	P	P	11 19 17.6	-0.8
PBKT				IAmb	IAmb	11 19 31.1	
	comp=Z,12nm,1.3s						
CMAR	Chiang Mai Arr	29.08	293	P	P	11 19 38.1	-1.5
	comp=Z,0.5nm,0.3s,baz=107,slow=6.5,SNR=9.0						
WB0	Warramunga Arr	29.08	166	P	P	11 19 40.1	+0.6
WRA	Warramunga Arr	29.23	166	P	P	11 19 39.1	-1.7
	comp=Z,0.5nm,0.5s,baz=347,slow=9.1,SNR=6.3						
WR0	Warramunga Arr	29.30	166	P	P	11 19 42.5	+1.1
AS31	Alice Springs	32.74	168	P	P	11 20 13.6	+1.8
ASAR	Alice Springs	32.74	168	P	P	11 20 11.0	-0.8
	comp=Z,0.7nm,0.4s,baz=345,slow=7.4,SNR=23						
ASAR	Alice Springs	32.74	168	P	P	11 20 13.6	+1.8
USRK	Ussuriysk Ar.	35.71	6	P	P	11 20 38.1	+0.8
	comp=Z,2.5nm,0.7s,baz=196,slow=8.8,SNR=1.8						
USRK	Ussuriysk Ar.	35.71	6	P	P	11 20 39.9	+2.6
FORT	Forrest	39.16	179	P	P	11 21 06.3	-0.3
H11S3	WAKE ISLAND Hy	39.60	71	T	T	12 04 18.9	
	baz=261,SNR=3.6						
H11S1	WAKE ISLAND Hy	39.61	71	T	T	12 04 16.1	
	baz=261						
H11S2	WAKE ISLAND Hy	39.61	71	T	T	12 04 23.3	
	baz=261						
H11N1	WAKE ISLAND Hy	39.99	70	T	T	12 05 01.6	
	baz=265						
H11N2	WAKE ISLAND Hy	40.00	70	T	T	12 05 00.3	
	baz=265						
H11N3	WAKE ISLAND Hy	40.01	70	T	T	12 04 56.8	
	baz=265,SNR=3.4						
BBOO	Buckleboo	42.05	169	P	P	11 21 30.4	-0.1
BBOO				IAmb	IAmb	11 21 33.0	
	comp=Z,15nm,1.4s						
SONM	Songino Array	42.87	339	P	P	11 21 36.9	-0.4
	comp=Z,0.3nm,0.3s,baz=160,slow=4.6,SNR=3.9						
SONM				PcP	PcP	11 23 28.1	0.0
	comp=Z,0.3nm,0.7s,baz=143,slow=4.0,SNR=2.6						
SONM	Songino Array	42.87	339	P	P	11 21 37.2	-0.1
MK31	Makanchi Array	53.87	323	P	P	11 23 01.1	-0.9
MK31				IAmb	IAmb	11 23 02.5	
	comp=Z,1.1nm,0.7s						
MKAR	Makanchi Array	53.87	323	P	P	11 23 01.0	-1.0
	comp=Z,1.1nm,0.5s,baz=115,slow=7.8,SNR=26						
MKAR				PcP	PcP	11 24 07.1	-0.5
	comp=Z,0.7nm,0.7s,baz=134,slow=5.2,SNR=4.4						
MKAR	Makanchi Array	53.87	323	P	P	11 23 01.2	-0.8
MAKZ	Makanchi	54.06	323	P	P	11 23 02.5	-0.9
NIL	Nilore	55.39	305	P	P	11 23 11.6	-1.7
ZALV	Zalesovo Beam	56.49	331	P	P	11 23 19.7	-1.1
	comp=Z,0.7nm,0.4s,baz=137,slow=5.6,SNR=3.1						
KURK	Kurchatov	57.92	326	P	P	11 23 30.1	-0.8
KURK				IAmb	IAmb	11 23 31.3	
	comp=Z,1.8nm,0.7s						
KURBB	Kurchatov Arra	57.93	326	P	P	11 23 30.4	-0.6
	comp=Z,1.5nm,0.5s,baz=123,slow=7.0,SNR=19						
GAR	Garm	59.02	310	P	P	11 23 34.0	-5.0
KKAR	Karatay Array	60.03	315	P	P	11 23 44.8	-1.0
TIXI	Tiksi	63.00	1	P	P	11 24 07.0	+1.8
TIXI				IAmb	IAmb	11 24 07.3	
	comp=Z,4.5nm,0.7s						
BVAR	Borovoye Array	63.52	326	P	P	11 24 08.8	-0.2
	comp=Z,2.0nm,0.7s,baz=111,slow=8.1,SNR=9.9						
ABKAR	Akbulak array	68.70	320	P	P	11 24 41.1	-1.2
ARU	Arti	71.09	327	P	P	11 24 55.6	-1.3
	comp=Z,1.1nm,0.6s,baz=35,slow=3.8,SNR=5.2						
ARU	Arti	71.09	327	P	P	11 24 55.4	-1.5
ARU				IAmb	IAmb	11 25 14.5	
	comp=Z,11nm,1.5s						
PMR	Palmer	79.50	29	P	P	11 25 47.2	+2.0
PMR				IAmb	IAmb	11 26 04.9	
	comp=Z,10nm,1.3s						
ILAR	Eielson Array	80.56	26	P	P	11 25 52.1	+1.2
	comp=Z,0.3nm,0.8s,baz=230,slow=5.2,SNR=4.0						
ARCES	ARCESS Array B	86.05	340	P	P	11 26 18.9	-0.3
	comp=Z,2.7nm,0.7s,baz=46,slow=7.0,SNR=4.3						
ARCES	ARCESS Array B	86.05	340	P	P	11 26 18.4	-0.7
BRTR	Keskin Array B	87.25	310	P	P	11 26 23.7	-2.1
	comp=Z,0.7nm,0.7s,baz=106,slow=2.1,SNR=3.5						
BRTR	Keskin Array B	87.25	310	P	P	11 26 23.4	-2.4
FINES	FINESS Array B	87.76	332	P	P	11 26 26.5	-1.1
	comp=Z,0.8nm,0.4s,baz=78,slow=4.0,SNR=11						
YKA	Yellowknife Ar	94.92	24	P	P	11 27 02.4	+1.5
	comp=Z,0.5nm,0.8s,baz=299,slow=4.3,SNR=10.0						

*IDC **09** 11:26:17.1±0.4, 23°.15N×80°.71W, h0^{km}, mb4.5/36, mb1 4.6/40, mb1mx4.6/56, mbtmp4.5/40, ML3.9/4, MS3.8/18, Ms1 3.8/18, ms1mx3.6/46, Error ellipse: s-maj=12.7km s-min=10.0km az=70.0*
*NEIC **09** 11:26:18.3±2.1, 23°.16N±0°.04×80°.78W±0°.02, h10^{km}±1^{km}, mb4.7/316, Error ellipse: s-maj=7.2km s-min=3.4km az=156.0*
*SSNC **09** 11:26:18.9±2.1, 23°.20N×80°.68W, h7^{km}±8^{km}, MD4.6, MS4.2, MW4.5*
ISC 09 11:26:18.3±0.3, **23°.18N**±0°.03×**80°.72W**±0°.04, **h10**^{km}, **n771**, σ**1^{s}.85**/668, **mb4.7**/129, **MS3.8**/13, **3C-2D**, **Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MGV	Manicaragua	1.27	147	*e*Pg	Pn	11 26 40.5	-1.6
MGV				*e*Sg	Sb	11 26 56.1	-2.6
SOR	Soroa	2.15	260	*e*P	Pn	11 26 54.1	-0.1
SOR				*e*S	Sn	11 27 17.9	-3.0
061Z	Ochoppi	2.67	356	*e*P	Pn	11 27 00.3	-1.1
061Z	Ochoppi	2.67	356		Pn	11 27 00.3	-1.1
061Z				Sn	Sn	11 27 33.3	-0.7
CCCC	Cccc	3.37	125	*e*P	Pn	11 27 13.7	+2.6
CBCY	The Bluff, Cay	3.54	165	*e*P	Pn	11 27 11.8	-1.6
CBCY	The Bluff, Cay	3.54	165		Pn	11 27 11.8	-1.6
CBCY				Sn	Sn	11 27 54.6	-0.8
060A	Indiantown	3.85	5		Pn	11 27 17.9	+0.2
FSCY	Frank Sound, G	3.88	187	*e*P	Pn	11 27 16.9	-1.1
FSCY	Frank Sound, G	3.88	187		Pn	11 27 16.9	-1.1
FSCY				Sn	Sn	11 28 01.6	-2.0
LMGC	Las Mercedes	4.64	131	*e*P	Pn	11 27 26.0	-2.6
LMGC				*e*S	Sn	11 28 17.9	-4.7
LMGC				IVMs_BB	IVMs_BB	11 28 48.1	
	comp=E,3µm,4.8s						
LMGC				IVMs_BB	IVMs_BB	11 28 54.2	
	comp=N,5µm,4.4s						
DWPF	Disney Wildern	4.95	353	*e*P	Pn	11 27 31.7	-1.0
DWPF				*e*S	Sn	11 28 24.8	-5.2
DWPF	Disney Wildern	4.95	353		Pn	11 27 32.6	-0.1
DWPF				Sn	Sn	11 28 28.5	-1.5
DWPF	Disney Wildern	4.95	353	P	Pn	11 27 32.2	-0.6
	baz=173						
RCC	Rio Carpintero	5.65	123	*e*P	Pn	11 27 40.8	-1.6
RCC				*e*S	Sn	11 28 42.0	-5.4
RCC				IVMs_BB	IVMs_BB	11 29 31.6	
	comp=N,4µm,3.4s						
RCC				IVMs_BB	IVMs_BB	11 29 42.6	
	comp=E,2µm,3.6s						
MTDJ	Mount Denham	5.76	148		Pn	11 27 42.9	-1.2
BBJ	Bamboo Saint A	5.76	145⇑	*i*P	Pn	11 27 44.5	+0.4
MCJ	Malvern	5.95	151	*i* P	Pn	11 27 48.5	+1.9
MCJ				*i* S	Sn	11 28 56.8	+1.8
GTMO	Guantanamo	6.04	120	*e*P	Pn	11 27 48.2	+0.5
GTMO				*e*S	Sn	11 28 54.3	-2.6
GTBY	Guantanamo Bay	6.14	121		Pn	11 27 51.3	+2.1
STH	Stony Hill	6.26	144⇓	*i*P	Pn	11 27 49.7	-1.1
HOJ	Hope	6.35	143⇓	*i*P	Pn	11 27 56.2	+4.1
PCJ	Portland Cotta	6.36	148	*i* P	Pn	11 27 53.7	+1.5
656A	Willston	6.37	346		Pn	11 27 51.0	-1.3
MASC	Masc	6.74	115	*e*P	Pn	11 27 55.3	-2.0
MASC				*e*S	Sn	11 28 58.8	-15
MASC				IVMs_BB	IVMs_BB	11 30 22.6	
	comp=E,1µm,4.1s						
MASC				IVMs_BB	IVMs_BB	11 30 22.8	
	comp=N,3µm,6.9s						
456A	Hilliard	7.60	351		Pn	11 28 09.1	-0.1
TEIG	Tepich	7.62	249	Pn	Pn	11 28 06.8	-2.6
	comp=N,24nm,0.3s,SNR=60						
TEIG				Sn	Sn	11 29 32.0	-3.9
	comp=N,26nm,0.3s,SNR=3.9						
TEIG				LR	LR	11 31 13.2	
	comp=N,1µm,18.4s,baz=70,slow=39						
TEIG	Tepich	7.62	249	*e*P	Sn	11 29 31.1	-4.8
553A	Crawfordville	7.73	335		Pn	11 28 09.5	-1.4
TIGA	Tifton	8.61	343		Pn	11 28 21.6	-1.5
TIGA	Tifton	8.61	343	P	Pn	11 28 22.3	-0.7
	baz=163						
451A	Vernon	8.65	330	Pn	Pn	11 28 22.6	-1.1
257A	Skidaway Islan	8.76	358		Pn	11 28 23.4	-1.7
255A	Hazlehurst	8.85	350		Pn	11 28 24.8	-1.5
352A	Blakely	9.07	337		Pn	11 28 27.0	-2.4
157A	Early Branch	9.46	359	P	Pn	11 28 32.7	-2.0
	baz=179						
158A	Hollywood	9.53	3	P	Pn	11 28 33.7	-1.9
	baz=183						
154A	Montrose	9.63	348		Pn	11 28 35.3	-1.7
RGRS	Roger Stewart	9.70	3		Pn	11 28 35.4	-2.5
SDDR	Presa de Saban	9.74	114		Pn	11 28 36.6	-2.0

BRAL	Brewton	9.75	326	P	Pn	11 28 37.9	-0.7
	baz=144						
NHSC	New Hope	9.90	3		Pn	11 28 37.6	-3.0
NHSC	New Hope	9.90	3	P	Pn	11 28 37.7	-3.0
	baz=183						
Z57A	Bowman	10.08	0	P	Pn	11 28 40.5	-2.6
	baz=180						
Z59A	Georgetown, SC	10.10	7	P	Pn	11 28 40.0	-3.4
	baz=188						
Z56A	Williston	10.12	357	P	Pn	11 28 40.4	-3.4
	baz=177						
Z58A	St. Stephen	10.14	4	P	Pn	11 28 41.0	-3.0
	baz=185						
GOGA	Godfrey	10.47	347	P	Pn	11 28 46.4	-2.2
	baz=166						
Y56A	Pelion	10.58	357	P	Pn	11 28 47.1	-2.9
	baz=177						
Y58A	Scranton	10.72	5	P	Pn	11 28 48.5	-3.5
	baz=186						
Y55A	Saluda	10.76	355	P	Pn	11 28 49.4	-3.1
	baz=175,SNR=8.9						
Y57A	Sumter	10.80	1		Pn	11 28 49.0	-4.0
Y57A	Sumter	10.80	1	P	Pn	11 28 51.0	-2.0
	baz=182						
Y59A	Loris	10.89	8	P	Pn	11 28 51.0	-3.2
	baz=189						
TGUH	Tegucigalpa,Un	11.00	216	*e*P	Pn	11 28 59.5	+3.6
TGUH	Tegucigalpa,Un	11.00	216		Pn	11 28 56.7	+0.8
Y60A	Bolivia	11.00	11	P	Pn	11 28 52.6	-3.2
	baz=192						
Z50A	Ashland	11.03	337	P	Pn	11 28 53.8	-2.4
	baz=155,SNR=14						
Y52A	Lilburn	11.04	345	P	Pn	11 28 55.2	-1.1
	baz=164						
HODGE	Hodges	11.09	353		Pn	11 28 54.0	-3.0
X57A	Johnson Farm,	11.25	3	P	Pn	11 28 55.9	-3.3
	baz=183						
LRAL	Lakeview Retre	11.27	332	P	Pn	11 28 56.2	-3.2
	baz=149						
X56A	White Oak	11.27	359	P	Pn	11 28 56.3	-3.2
	baz=179,SNR=5.2						
X55A	Gracelyn & Ava	11.27	356	P	Pn	11 28 56.0	-3.6
	baz=176						
X58A	Rowland	11.39	6	P	Pn	11 28 59.2	-2.0
	baz=187,SNR=7.2						
X54A	Belton	11.41	353	P	Pn	11 28 58.6	-2.9
	baz=173,SNR=6.3						
BIRD	Birdtown, Kers	11.42	1		Pn	11 28 59.3	-2.2
X59A	McDuffie Farm,	11.50	9	P	Pn	11 29 00.2	-2.4
	baz=190						
X53A	Estanollee	11.50	349	P	Pn	11 29 00.8	-1.8
	baz=168						
X60A	Albert Glenn T	11.60	11	P	Pn	11 28 59.7	-4.3
	baz=193						
W58A	Raeford	11.87	6	P	Pn	11 29 03.2	-4.4
	baz=187,SNR=12						
X51A	Calhoun	11.90	343	P	Pn	11 29 06.7	-1.5
	baz=162,SNR=5.3						
W56A	Indian Trail	11.91	1	P	Pn	11 29 04.6	-3.6
	baz=181,SNR=5.6						
KMSC	Kings Mountain	11.93	358	P	Pn	11 29 04.8	-3.7
	baz=178,SNR=9.3						
W54A	Cherokee Point	11.93	354	P	Pn	11 29 05.6	-2.9
	baz=174,SNR=8.2						
W57A	Gilead	11.94	3		Pn	11 29 04.3	-4.4
W57A	Gilead	11.94	3	P	Pn	11 29 04.3	-4.4
	baz=184,SNR=7.1						
W59A	Clinton	12.11	9	P	Pn	11 29 07.4	-3.5
	baz=190						
W60A	Pink Hill	12.11	12	P	Pn	11 29 08.1	-2.9
	baz=194						
W52A	Murphy	12.19	347	P	Pn	11 29 10.3	-1.8
	baz=166						
CNNC	Cliffs of the	12.26	11	P	Pn	11 29 09.9	-3.2
	baz=192						
APG	El Apazote	12.29	230	Pn	Pn	11 29 14.4	+0.8
	comp=N,2.1nm,0.3s,baz=93,slow=14,SNR=23						
APG				Sn	Sn	11 31 31.4	+0.5
	comp=N,2.9nm,0.3s,baz=316,slow=18,SNR=4.3						
APG				LR	LR	11 33 27.2	
	comp=N,446nm,22.0s,baz=58,slow=35						
W61A	Ground Anchor	12.38	14	P	Pn	11 29 11.0	-3.7
	baz=196						
VBMS	Vicksburg	12.50	318	P	Pn	11 29 14.5	-1.8
	baz=134						
V53A	Saluda	12.57	352	P	Pn	11 29 15.7	-1.7
	baz=171,SNR=11						
V56A	Mocksville	12.58	1	P	Pn	11 29 13.5	-3.9
	baz=181,SNR=12						
V54A	Nebo	12.60	355	P	Pn	11 29 14.5	-3.1
	baz=175,SNR=11						
W50A	Signal Mountai	12.62	343	P	Pn	11 29 16.6	-1.5
	baz=161,SNR=8.6						
V55A	Taylorsville	12.63	358	P	Pn	11 29 14.1	-4.0
	baz=178,SNR=7.6						
V58A	Windy Hill, Pi	12.64	6	P	Pn	11 29 13.9	-4.3
	baz=187,SNR=9.3						
V57A	Coltrane Farms	12.69	3	P	Pn	11 29 14.9	-4.0
	baz=184,SNR=11						
TKL	Tuckaleechee C	12.71	349	Pn	Pn	11 29 16.6	-2.6
	comp=N,1.9nm,0.3s,baz=170,slow=14,SNR=30						
TKL				Sn	Sn	11 31 37.3	-3.6
	comp=N,7.9nm,0.3s,baz=285,slow=5.7,SNR=3.9						
TKL				LR	LR	11 34 07.9	
	comp=N,108nm,21.8s,baz=172,slow=37						
V59A	Middlesex	12.72	9	P	Pn	11 29 14.8	-4.5
	baz=191,SNR=12						
CCIG	Comitan	12.75	239		Pn	11 29 20.8	+0.8
V60A	Jim Taylor Roa	12.89	13	P	Pn	11 29 18.7	-2.9
	baz=195,SNR=8.1						
V51A	Loudon	12.97	347	P	Pn	11 29 20.7	-2.0
	baz=165						
V61A	Roper	13.07	15	P	Pn	11 29 20.4	-3.7
	baz=197						
U56A	King	13.12	1	P	Pn	11 29 21.4	-3.4
	baz=182,SNR=16						
U57A	Blanch	13.26	5	P	Pn	11 29 22.4	-4.3
	baz=186,SNR=8.1						
U55A	TA2, Sparta	13.28	359	P	Pn	11 29 23.5	-3.5
	baz=179						
U58A	Oxford	13.30	8	P	Pn	11 29 22.5	-4.7
	baz=189,SNR=13						
U54A	Nelsons Funny	13.33	356	P	Pn	11 29 24.3	-3.3
	baz=176,SNR=8.9						
U59A	Littleton	13.37	10	P	Pn	11 29 23.9	-4.2
	baz=192,SNR=7.2						
JTS	Las Juntas de	13.45	198	Pn	Pn	11 29 28.9	-0.4
	comp=N,0.3nm,0.3s,baz=49,slow=11,SNR=3.4						
JTS				LR	LR	11 34 17.4	
	comp=N,279nm,20.0s,baz=74,slow=36						
JTS	Las Juntas de	13.45	198		Pn	11 29 29.3	0.0
TZTN	Tazewell	13.54	350	P	Pn	11 29 28.2	-2.3
	baz=169						
U60A	Pendleton	13.60	12	P	Pn	11 29 26.4	-4.8
	baz=194						
OXF	Oxford	13.61	328	P	Pn	11 29 28.4	-3.0
	baz=144						
U61A	Possum Corner	13.62	15	P	Pn	11 29 26.2	-5.3
	baz=197						
T56A	Rocky Mt	13.81	2	P	Pn	11 29 30.6	-3.6
	baz=183,SNR=8.3						
T57A	Hurt	13.83	5	P	Pn	11 29 30.2	-4.2
	baz=186						
T53A	Wise	13.84	354	P	Pn	11 29 31.9	-2.8
	baz=173						
T58A	Grand View Acr	13.85	7	P	Pn	11 29 30.0	-4.7
	baz=189,SNR=13						
T54A	Tazewell	13.85	357	P	Pn	11 29 31.4	-3.4
	baz=177,SNR=12						
T55A	Pulaski	13.89	360	P	Pn	11 29 33.5	-1.8
	baz=180						
BLA	Blacksburg	13.98	1	P	Pn	11 29 33.8	-2.8
	baz=181						
T59A	Double "B" Far	14.01	11		Pn	11 29 32.0	-4.9
T59A	Double "B" Far	14.01	11	P	Pn	11 29 32.1	-4.8
	baz=192,SNR=5.3						
T52A	Hallie	14.01	352	P	Pn	11 29 34.8	-2.2
	baz=172						
T51A	Gray	14.02	349	P	Pn	11 29 33.9	-3.1
	baz=168						
URIC	Uribia, Colomb	14.12	142	*e*P	P	11 29 44.1	-2.2
URIC	Uribia, Colomb	14.12	142	P	P	11 29 44.1	-2.2
OBIP	Obispado Ponce	14.16	109	Pn	Pn	11 29 38.2	-1.0
SJCC	San Jacinto, C	14.24	157	*e*P	Pn	11 29 42.6	+2.5
T50A	Nancy	14.24	346	P	Pn	11 29 37.3	-2.8
	baz=165,SNR=5.3						
WVT	Waverly	14.30	336		Pn	11 29 38.5	-2.4
WVT	Waverly	14.30	336	P	Pn	11 29 38.9	-2.0
	baz=153						
T60A	Surry	14.33	13	P	Pn	11 29 37.2	-4.0
	baz=195,SNR=15						
X43A	Marvell	14.37	324	P	Pn	11 29 38.8	-3.0
	baz=140						
S56A	Natural Bridge	14.48	4	P	Pn	11 29 40.3	-3.1
	baz=184						
T49A	Edmonton	14.48	344	P	Pn	11 29 41.1	-2.3
	baz=162						
S53A	Williamson	14.50	356	P	Pn	11 29 40.8	-2.9
	baz=175						
GCPR	Guaynabo City	14.52	107		Pn	11 29 41.2	-2.8
SJG	San Juan	14.54	108	Pn	Pn	11 29 40.1	-4.2
	comp=N,0.8nm,0.3s,baz=297,slow=18,SNR=5.5						
SJG				Sn	Sn	11 32 08.3	-17
	comp=N,1.9nm,0.3s,baz=315,slow=22,SNR=7.2						
SJG				LR	LR	11 36 11.2	
	comp=N,428nm,18.5s,baz=263,slow=41						
SJG	San Juan	14.54	108		Pn	11 29 41.8	-2.4
S55A	Lewisburg	14.54	1	P	Pn	11 29 41.3	-3.0
	baz=181						
S58A	Poland Farm, P	14.56	8	P	Pn	11 29 39.9	-4.6
	baz=190,SNR=9.1						
S54A	Dingess, Beckl	14.58	358	P	Pn	11 29 42.4	-2.4
	baz=178						
S52A	Salyersville	14.59	353	P	Pn	11 29 42.4	-2.5
	baz=172						
S57A	Dark Hollow, R	14.61	6	P	Pn	11 29 41.8	-3.3
	baz=187,SNR=11						
CMIG	Matias Romero	14.61	248	Pn	Pn	11 29 39.6	-5.7
	comp=N,1.2nm,0.3s,baz=52,slow=12,SNR=15						
CMIG				Sn	Sn	11 32 17.9	-10
	comp=N,1.5nm,0.3s,baz=222,slow=15,SNR=4.9						
CMIG				LR	LR	11 35 56.5	
	comp=N,495nm,18.8s,baz=50,slow=40						
S51A	Beattyville	14.62	351	P	Pn	11 29 44.2	-1.0
	baz=170						
Z41A	Richland Creek	14.62	316	P	Pn	11 29 42.8	-2.5
	baz=131						
S50A	Richmond	14.79	348	P	Pn	11 29 45.9	-1.7
	baz=167,SNR=5.7						
S59A	Mechanicsville	14.82	11	P	Pn	11 29 43.3	-4.7
	baz=193						
S60A	Water View	14.89	13	P	Pn	11 29 44.6	-4.3
	baz=195						
CODC	Agustn Codazz	14.90	151	*e*P	P	11 29 55.7	+0.8
R58B	Mineral	14.93	9	P	Pn	11 29 45.4	-4.1
	baz=190,SNR=15						
R54A	Victor	14.95	359	P	Pn	11 29 47.4	-2.4
	baz=179						
NATX	Nacogdoches	15.03	308	P	Pn	11 29 47.9	-2.8
	baz=122						
R55A	Marlinton	15.06	2		Pn	11 29 50.1	-1.2
R55A	Marlinton	15.06	2	P	Pn	11 29 47.9	-3.3
	baz=182,SNR=5.7						
S49A	Springfield	15.07	346	P	Pn	11 29 48.2	-3.2
	baz=164						
WLAR	White Oak Lake	15.10	317	IAmb	IAmb	11 30 03.7	
	comp=Z,29nm,0.9s						
HKT	Hockley	15.10	300		Pn	11 29 51.2	-0.6
R53A	Hurricane	15.13	356	IAmb	IAmb	11 30 03.9	
	comp=Z,39nm,0.9s						
R53A	Hurricane	15.13	356	P	Pn	11 29 48.9	-3.3
	baz=176						
R57A	Stanardsville	15.18	7	P	Pn	11 29 48.7	-4.1
	baz=188,SNR=14						
R52A	Catlettsburg	15.19	354	P	Pn	11 29 50.9	-2.2
	baz=174						
R56A	Bull Pasture M	15.22	4	P	Pn	11 29 49.3	-4.1
	baz=185						
CUPR	Culebra, Puert	15.23	106		Pn	11 29 50.7	-2.9
CUPR				IAmb	IAmb	11 30 04.3	
	comp=Z,21nm,0.8s						
CBN	Corbin Frederi	15.24	10	P	Pn	11 29 49.1	-4.6
	baz=192						
R58A	Rapidan	15.24	8	P	Pn	11 29 49.6	-4.1
	baz=190,SNR=11						
R51A	Hillsboro	15.27	351	P	Pn	11 29 51.9	-2.0
	baz=170						
R59A	King George, V	15.28	11	P	Pn	11 29 51.9	-2.2
	baz=193,SNR=5.5						
R50A	Paris	15.36	349	P	Pn	11 29 53.9	-1.4
	baz=168						
UALR	University of	15.38	321	IAmb	IAmb	11 30 07.6	
	comp=Z,20nm,0.7s						
R60A	Leonardtown, M	15.45	12	P	Pn	11 29 52.1	-4.2
	baz=195,SNR=6.1						
X40A	Basin Creek Fa	15.46	319	P	Pn	11 29 53.2	-3.3
	baz=134						
STVI	Saint Thomas	15.51	105	IAmb	IAmb	11 30 14.0	
	comp=Z,30nm,0.9s						
R49A	Shelbyville	15.53	347	IAmb	IAmb	11 30 04.0	
	comp=Z,37nm,0.8s						
R49A	Shelbyville	15.53	347	P	Pn	11 29 54.5	-3.0
	baz=165,SNR=7.8						
W41B	Gary Mavity, V	15.61	323	IAmb	IAmb	11 30 13.6	
	comp=Z,22nm,0.8s						
W41B	Gary Mavity, V	15.61	323	P	Pn	11 29 57.6	-0.8
	baz=137,SNR=7.1						
Q53A	Leroy	15.64	358	P	Pn	11 29 56.0	-2.8
	baz=178						
SMLC	San Martn de	15.66	155	*e*P	P	11 30 02.8	-0.6
WCI	Wyandotte Cave	15.74	344		Pn	11 29 58.1	-2.0
WCI				IAmb	IAmb	11 30 17.5	
	comp=Z,40nm,0.7s						
WCI	Wyandotte Cave	15.74	344	P	Pn	11 29 58.0	-2.2
	baz=161						
Q54A	Coxs Mills	15.75	360	P	Pn	11 29 57.1	-3.1
	baz=180						
Q55A	Buckhannon	15.77	2	P	Pn	11 29 57.1	-3.5
	baz=182						
Q52A	Bidwell	15.78	356	P	Pn	11 29 57.4	-3.3
	baz=175,SNR=13						
R61A	Willards	15.78	16	P	Pn	11 29 57.6	-3.1
	baz=199						
Q50A	Georgetown	15.86	351	P	Pn	11 30 00.6	-1.1
	baz=169,SNR=17						
Q56A	Snyder Ridge,	15.86	4	P	Pn	11 29 58.3	-3.4
	baz=185						
Q58A	Fox Den Farm,	15.92	9	P	Pn	11 29 58.9	-3.6
	baz=190,SNR=6.6						
Q57A	Strasburg	15.92	7	P	Pn	11 29 59.0	-3.6
	baz=188,SNR=14						
MIAR	Mount Ida	15.95	318		Pn	11 29 59.5	-3.3
MIAR				IAmb	IAmb	11 30 08.1	
	comp=Z,60nm,1.4s						
MIAR	Mount Ida	15.95	318	P	Pn	11 29 59.6	-3.3
	baz=132,SNR=8.8						
Q51A	Peebles	15.95	353	IAmb	IAmb	11 30 11.1	
	comp=Z,62nm,0.9s						
Q51A	Peebles	15.95	353	P	Pn	11 29 59.7	-3.1
	baz=171						
Q59A	Harwood	16.01	12	P	Pn	11 30 00.7	-2.9
	baz=194						
UREC	San Jos de Ur	16.13	161	*e*P	P	11 30 09.4	+0.8
Q49A	Aurora	16.17	348	P	Pn	11 30 03.9	-1.7
	baz=166,SNR=6.4						
P53A	Whipple	16.26	358	IAmb	IAmb	11 30 12.2	
	comp=Z,56nm,0.8s						
P53A	Whipple	16.26	358	P	Pn	11 30 07.0	+0.1
	baz=178,SNR=9.7						
Q48A	North Vernon	16.27	346	P	Pn	11 30 04.6	-2.3
	baz=164,SNR=7.0						
P55A	Reedsville	16.29	2	P	Pn	11 30 05.1	-2.1
	baz=183,SNR=5.9						
Q60A	Greensboro	16.31	14	P	Pn	11 30 03.6	-3.8
	baz=196						
Q61A	Milford	16.31	15	P	Pn	11 30 04.7	-2.8
	baz=198						
P56A	Dayton Farm, R	16.35	5	P	Pn	11 30 05.2	-2.8
	baz=186						
P51A	Williamsport	16.37	354	IAmb	IAmb	11 30 21.5	
	comp=Z,32nm,0.8s						
P51A	Williamsport	16.37	354	P	Pn	11 30 05.5	-2.7
	baz=173						
P54A	Burton	16.37	1	P	Pn	11 30 05.3	-2.9
	baz=181						
P57A	Homestead Farm	16.41	7	P	Pn	11 30 05.9	-2.8
	baz=189,SNR=9.4						
MCWV	Mont Chateau	16.44	2	IAmb	IAmb	11 30 18.0	
	comp=Z,46nm,1.0s						
MCWV	Mont Chateau	16.44	2	P	Pn	11 30 09.4	+0.3
	baz=183						
P52A	Corning	16.44	356	P	Pn	11 30 06.3	-2.9
	baz=176						
OCAC	Ocana	16.47	153	*e*P	Pn	11 30 11.1	+1.3
SDMD	Soldier’s Deli	16.51	11	IAmb	IAmb	11 30 17.1	
	comp=Z,48nm,0.8s						
P58A	Pank, Wackersv	16.51	9	P	Pn	11 30 06.9	-3.2
	baz=191,SNR=5.4						
W39A	Magazine	16.52	319	P	Pn	11 30 09.9	-0.2
	baz=133						
P50A	Jamestown	16.58	352	P	Pn	11 30 09.6	-1.3
	baz=170,SNR=21						
ZARC	Zaragoza, Cauc	16.59	159	*e*P	P	11 30 14.0	+0.3
DBBC	Dabeiba	16.65	164	*e*P	P	11 30 15.5	+1.0
P49A	Miami Univ. Ec	16.65	349	P	Pn	11 30 09.3	-2.5
	baz=167						
P48A	Milroy	16.71	347	P	Pn	11 30 11.8	-0.8
	baz=165,SNR=5.9						
OLIL	Olney	16.73	340	IAmb	IAmb	11 30 22.9	
	comp=Z,30nm,0.7s						
P59A	Jarrettsville	16.77	12	P	Pn	11 30 10.7	-2.6
	baz=194,SNR=6.1						
U40A	Yellville	16.81	324	IAmb	IAmb	11 30 23.5	
	comp=Z,33nm,0.8s						
U40A	Yellville	16.81	324	P	Pn	11 30 09.9	-4.0
	baz=138,SNR=14						
FVM	French Village	16.94	333	IAmb	IAmb	11 30 30.8	
	comp=Z,22nm,0.6s						
O51A	Pataskala	16.99	355	P	Pn	11 30 13.7	-2.4
	baz=174,SNR=9.6						
O55A	Ligonier	17.02	4	P	Pn	11 30 15.7	-0.7
	baz=185,SNR=6.6						
O53A	New Philadelph	17.02	359	P	Pn	11 30 14.3	-2.1
	baz=179						
O50A	Cable	17.09	352	P	Pn	11 30 16.1	-1.3
	baz=171,SNR=7.4						
ACSO	Alum Creek Sta	17.11	354	P	Pn	11 30 15.4	-2.2
	baz=173,SNR=10						
O56A	Blue Knob Stat	17.13	6	IAmb	IAmb	11 30 22.6	
	comp=Z,73nm,1.2s						
O56A	Blue Knob Stat	17.13	6	P	Pn	11 30 17.0	-0.9
	baz=187,SNR=8.0						
MVL	Millersville	17.17	11	P	Pn	11 30 16.4	-1.9
O57A	Amberson	17.18	8	P	Pn	11 30 16.9	-1.5
	baz=190,SNR=8.7						
O58A	Lewisberry	17.19	10	P	Pn	11 30 15.7	-2.9
	baz=192						
P61A	Hammonton	17.19	16	P	Pn	11 30 15.0	-3.6
SDV	Santo Domingo	17.19	144	P	Pn	11 30 18.7	-0.2
	comp=Z,0.9nm,0.3s,baz=348,slow=7.0,SNR=17						
SDV	Santo Domingo	17.19	144	*e*P	P	11 30 20.2	-0.3
SDV	Santo Domingo	17.19	144	P	Pn	11 30 19.9	+1.0
SDV				IAmb	IAmb	11 30 29.9	
	comp=Z,48nm,0.9s						
SDV	Santo Domingo	17.19	144	*e*P	Pn	11 30 19.4	+0.5
WHTX	Lake Whitney,	17.22	304	IAmb	IAmb	11 30 32.7	
	comp=Z,45nm,0.8s						
WHTX	Lake Whitney,	17.22	304	P	Pn	11 30 15.3	-3.8
	baz=117						
CCM	Cathedral Cave	17.35	331	P	Pn	11 30 18.8	-1.8
CCM	Cathedral Cave	17.35	331	P	Pn	11 30 19.1	-1.5
	baz=146						
O48A	Farmland	17.43	349	P	P	11 30 22.9	0.0
	baz=166,SNR=9.4						
O59A	Robesonia	17.50	12	P	Pn	11 30 20.3	-2.2
	baz=194,SNR=8.9						
PAMC	Pamplona, Colo	17.54	153	*e*P	P	11 30 25.8	+1.1
SSPA	Standing Stone	17.56	7	P	Pn	11 30 21.2	-2.0
SSPA	Standing Stone	17.56	7	P	Pn	11 30 21.3	-2.0
	baz=189						
N53A	Lisbon	17.57	360	P	Pn	11 30 22.1	-1.3
	baz=180						
833A	Chaparral WMA,	17.58	291	IAmb	IAmb	11 30 26.1	
	comp=Z,70nm,0.8s						
833A	Chaparral WMA,	17.58	291	P	Pn	11 30 20.7	-2.9
	baz=103						
SOCV	Socops	17.58	146	*e*P	P	11 30 25.8	+1.1
N55A	Marion Center	17.61	4	P	P	11 30 26.3	+1.5
	baz=185,SNR=10						
PTBC	PUERTO BERRIO,	17.61	159	*e*P	P	11 30 28.8	+3.7
HELC	Santa Helena	17.62	163	*e*P	Pn	11 30 25.4	+1.0
N50A	Nevada	17.66	354	P	Pn	11 30 23.2	-1.1
	baz=173,SNR=5.1						
O60A	Telford	17.66	13	P	Pn	11 30 23.9	-0.5
	baz=196						
Z35A	Perchaven, San	17.71	308	IAmb	IAmb	11 30 28.1	
	comp=Z,43nm,1.1s						
N54A	Moraine State	17.74	2	IAmb	IAmb	11 30 37.6	
	comp=Z,51nm,1.2s						
N54A	Moraine State	17.74	2	P	Pn	11 30 25.1	-0.3
	baz=182,SNR=6.6						
N51A	Ashland	17.74	356	P	Pn	11 30 24.4	-1.0
	baz=175						
N56A	West Decatur	17.80	6	P	P	11 30 27.4	+0.4
	baz=188						
N58A	Sunbury	17.92	10	P	Pn	11 30 26.6	-1.1
	baz=192						
N49A	Columbus Grove	17.93	351	P	Pn	11 30 27.6	-0.2
	baz=170						
LUPA	Lehigh Univers	17.94	13	P	Pn	11 30 25.8	-2.1
SFIN	Lafayette	17.97	344	IAmb	IAmb	11 30 31.2	
	comp=Z,26nm,0.7s						
SFIN	Lafayette	17.97	344	P	Pn	11 30 26.1	-2.1
	baz=161,SNR=7.0						
N48A	Decatur	17.99	349	P	P	11 30 29.7	+0.7
	baz=167						
BARC	Barichara	18.02	155	*e*P	P	11 30 30.5	+0.7
P43A	Skaggs, Pawnee	18.03	338	IAmb	IAmb	11 30 46.1	
	comp=Z,43nm,0.9s						
N47A	Urbana	18.14	348	P	P	11 30 31.1	+0.5
	baz=165						
M51A	Elyria	18.14	356	P	Pn	11 30 29.3	-1.0
	baz=176						
O44A	Mansfield	18.14	341	IAmb	IAmb	11 30 33.4	
	comp=Z,31nm,0.8s						
N59A	State Game Lan	18.16	12	P	Pn	11 30 30.2	-0.5
	baz=195						
BRNJ	Basking Ridge	18.20	15	IAmb	IAmb	11 30 40.2	
	comp=Z,53nm,0.8s						
M53A	WI Miller and	18.20	0	P	P	11 30 32.4	+1.0
	baz=180						
TUL1	Leonard	18.21	318	P	Pn	11 30 31.8	+0.5
	baz=130						
N60A	Cedar Hill Far	18.26	14	P	Pn	11 30 30.0	-1.8
	baz=197,SNR=9.1						
M50A	Fremont	18.27	354	IAmb	IAmb	11 30 35.1	
	comp=Z,42nm,0.7s						
M50A	Fremont	18.27	354	P	Pn	11 30 32.1	+0.1
	baz=173,SNR=15						
M54A	Oil Creek Stat	18.29	3	P	P	11 30 34.5	+2.1
	baz=183						
M55A	Ridgway	18.31	5	IAmb	IAmb	11 30 38.8	
	comp=Z,45nm,1.1s						
M55A	Ridgway	18.31	5	P	P	11 30 33.9	+1.4
	baz=186,SNR=10						
M52A	Chesterland	18.31	358	P	Pn	11 30 31.8	-0.7
	baz=178						
N61A	South Mountain	18.33	16	P	Pn	11 30 30.3	-2.4
	baz=199						
M57A	Sunshine Farm,	18.35	9	IAmb	IAmb	11 30 37.3	
	comp=Z,37nm,0.9s						
M57A	Sunshine Farm,	18.35	9	P	P	11 30 33.4	+0.4
	baz=191,SNR=8.9						
M56A	Emporium	18.37	6	IAmb	IAmb	11 30 37.4	
	comp=Z,39nm,0.8s						
M56A	Emporium	18.37	6	P	P	11 30 34.9	+1.6
	baz=188,SNR=9.6						
NORC	Norcasia	18.40	161	*e*P	Pn	11 30 34.4	+0.6
M49A	Liberty Center	18.44	352	P	Pn	11 30 35.6	+1.6
	baz=171,SNR=7.4						
M58A	Price’s Panora	18.48	10	P	Pn	11 30 35.3	+0.7
	baz=193,SNR=5.7						
JCT	Junction City	18.50	297	IAmb	IAmb	11 30 36.6	
	comp=Z,39nm,1.0s						
JCT	Junction City	18.50	297	P	P	11 30 33.3	-1.5
	baz=109,SNR=16						
ODNJ	Ogdensburg	18.57	15	IAmb	IAmb	11 30 39.7	
	comp=Z,36nm,0.8s						
M47A	Cromwell	18.59	348	P	P	11 30 36.1	+0.5
	baz=166,SNR=6.9						
RUSC	La Rusia	18.70	156	*e*P	Pn	11 30 39.0	+1.2
RUSC	La Rusia	18.70	156	P	P	11 30 37.2	-0.4
L53A	Girard	18.72	1	P	Pn	11 30 39.2	+1.7
	baz=182,SNR=7.6						
HDIL	Hopedale	18.77	339	IAmb	IAmb	11 30 45.6	
	comp=Z,33nm,0.7s						
HDIL	Hopedale	18.77	339	P	P	11 30 38.4	+0.8
	baz=155,SNR=6.5						
X34A	Smith Ranch, M	18.78	311	P	P	11 30 37.2	-0.6
X34A				IAmb	IAmb	11 30 52.6	
	comp=Z,40nm,1.2s						
M60A	Port Jervis	18.80	14	P	Pn	11 30 38.8	+0.4
	baz=198						

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M59A  Waymart          18.83  12 P     Pn    11 30 39.9 +1.1
      baz=195
L50A  Kingsville       18.89 355 P     P     11 30 38.9 +0.1
      baz=174
ERPA  Erie             18.89   2 IAmb  IAmb  11 30 59.3
      comp=Z,33nm,0.8s
ERPA  Erie             18.89   2 P     Pn    11 30 39.8 +0.3
      baz=182
L48A  N Adams          18.96 351 P     P     11 30 40.3 +0.6
      baz=170,SNR=12
OKCFA Oklahoma City    18.98 314 IAmb  IAmb  11 30 47.9
      comp=Z,24nm,0.7s
M61A  Granite Spring   18.99  16 P     P     11 30 40.2 +0.1
      baz=200
L54A  Sinclairville    19.03   3 P     Pn    11 30 41.5 +0.3
      baz=184,SNR=12
L57A  Andrews Acres    19.04   9 P     Pn    11 30 41.5 +0.1
      baz=191
L55A  Hinsdale         19.04   5 P     Pn    11 30 42.2 +0.8
      baz=187,SNR=6.6
L49A  Milan            19.04 353 P     Pn    11 30 42.8 +1.4
      baz=172,SNR=12
L56A  Greenwood        19.08   7 IAmb  IAmb  11 30 46.1
      comp=Z,36nm,0.8s
L56A  Greenwood        19.08   7 P     Pn    11 30 42.5 +0.6
      baz=189,SNR=9.7
L47A  Sherwood         19.11 350 P     P     11 30 42.2 +0.8
      baz=168
ABTX  Abilene, Hawle   19.16 304 IAmb  IAmb  11 30 45.4
      comp=Z,34nm,1.1s
ABTX  Abilene, Hawle   19.16 304 P     P     11 30 42.4 +0.4
      baz=115,SNR=20
M44A  Midewin, Midew   19.16 343 IAmb  IAmb  11 31 01.1
      comp=Z,29nm,0.9s
AAM   Ann Arbor        19.22 353 P     Pn    11 30 43.9 +0.4
      baz=172
L58A  Harry Jones Me   19.24  11 P     Pn    11 30 44.4 +0.7
      baz=194,SNR=7.0
WVNY  West Valley, N   19.25   5 IAmb  IAmb  11 30 48.3
      comp=Z,31nm,0.8s
ROSC  El Rosal         19.25 160 LR    LR    11 38 19.1
      comp=Z,194nm,19.3s,baz=360,slow=38
T35A  Sooner Cattle    19.31 319 IAmb  IAmb  11 30 50.2
      comp=Z,27nm,0.6s
L46A  Eue Claire       19.35 347 IAmb  IAmb  11 31 03.2
      comp=Z,38nm,1.1s
M62A  Hamden           19.35  18 P     P     11 30 43.5  -0.5
      baz=202
BINY  Binghamton       19.37  11 IAmb  IAmb  11 31 04.1
      comp=Z,27nm,0.9s
BINY  Binghamton       19.37  11 P     Pn    11 30 45.6 +0.3
      baz=193
MOIG  Morelia          19.37 263 P     Pn    11 30 46.4 +0.7
K54A  Basiliko Farm,   19.45   4 P     P     11 30 46.0 +1.0
      baz=186
N41A  Harden Midland   19.45 336 IAmb  IAmb  11 30 56.0
      comp=Z,34nm,0.8s
K51A  Iona Station     19.50 358 P     P     11 30 46.5 +0.9
      baz=178
WMOK  Wichita Mounta   19.52 310 P     P     11 30 45.5  -0.4
      baz=122,SNR=26
L60A  Shokan           19.52  15 P     Pn    11 30 47.5 +0.4
      baz=198
L59A  Walton           19.54  13 IAmb  IAmb  11 30 48.9
      comp=Z,31nm,0.8s
L59A  Walton           19.54  13 P     Pn    11 30 47.5 +0.2
      baz=196,SNR=7.0
K52A  Tillsonburg      19.54   0 P     P     11 30 46.8 +0.7
      baz=180,SNR=7.8
YOTC  Yotoco, Valle    19.55 167 eP    P     11 30 42.5  -4.0
M63A  Gales Ferry      19.57  20 P     Pn    11 30 47.8 +0.2
      baz=204
K50A  Casco            19.60 356 IAmb  IAmb  11 30 59.6
      comp=Z,28nm,0.8s
K50A  Casco            19.60 356 P     Pn    11 30 48.1 +0.1
      baz=175,SNR=5.3
K55A  Perry            19.61   6 P     Pn    11 30 48.1  -0.2
      baz=187,SNR=7.3
CHIC  Chingaza         19.64 159 eP    Pn    11 30 49.5 +0.4
K56A  Middlesex        19.66   7 P     Pn    11 30 48.8  -0.1
      baz=189
K47A  Vermontville     19.76 351 P     P     11 30 48.9 +0.5
      baz=168,SNR=24
K48A  Perry            19.77 353 P     P     11 30 49.0 +0.5
      baz=171,SNR=11
K57A  Scipio Center    19.80   9 P     P     11 30 50.0 +1.1
      baz=192
L44A  Lake County Fo   19.87 344 IAmb  IAmb  11 30 57.7
      comp=Z,34nm,0.7s
L44A  Lake County Fo   19.87 344 P     P     11 30 50.4 +0.8
      baz=160
L61A  Hillsdale 1, H   19.88  16 P     P     11 30 50.8 +1.1
      baz=200
ORTC  Ortega, Tolima   19.88 164 eP    Pn    11 30 52.3 +0.7
K46A  Dorr             19.90 349 P     P     11 30 50.1 +0.1
      baz=166,SNR=5.9
K58A  Earlville        19.98  11 P     P     11 30 51.8 +1.0
      baz=194
J52A  Paris            20.00   1 P     Pn    11 30 52.6  -0.2
      baz=181
MEDO  Medina           20.02   5 IAmb  IAmb  11 30 56.4
      comp=Z,36nm,1.0s
PCRV  Puerto La Cruz   20.09 127 P     P     11 30 51.6  -0.6
      comp=Z,6.7nm,0.9s,baz=315,slow=7.1,SNR=2.4
J54A  Appleton         20.11   4 IAmb  IAmb  11 30 57.0
      comp=Z,32nm,0.9s
ZAIG  Zacatecas        20.12 273       P     11 30 54.1 +1.2
ZAIG                             IAmb  IAmb  11 30 56.0
      comp=Z,40nm,1.0s
L63A  North Scituate   20.12  20 P     P     11 30 53.4 +1.0
      baz=205
PLCV  Puerto La Cruz   20.13 127 P     P     11 30 51.6  -1.0
K59A  Cooperstown      20.14  13 P     Pn    11 30 54.0  -0.4
      baz=196,SNR=9.3
J55A  Hilton           20.17   6 IAmb  IAmb  11 31 00.9
      comp=Z,27nm,0.8s
J55A  Hilton           20.17   6 P     P     11 30 53.2 +0.3
      baz=188
BRYW  Bryant College   20.20  20 P     P     11 30 54.4 +1.2
BRYW                             IAmb  IAmb  11 30 55.2
      comp=Z,47nm,1.1s
K60A  Five Rivers En   20.20  15 P     P     11 30 54.2 +1.0
      baz=199
L42A  Oliver, Polo     20.20 340 IAmb  IAmb  11 30 55.0
      comp=Z,27nm,0.8s
J48A  Bridge Port      20.22 354 P     P     11 30 52.8  -0.6
J48A  Bridge Port      20.22 354 P     P     11 30 53.7 +0.3
      baz=172,SNR=20
J49A  Marlette         20.22 355 P     P     11 30 53.9 +0.5
      baz=174,SNR=14
QUA2  Belchertown      20.28  18 IAmb  IAmb  11 30 56.2
      comp=Z,33nm,0.9s
J47A  Sunmer           20.29 351 IAmb  IAmb  11 31 00.4
      comp=Z,27nm,0.7s
J47A  Sunmer           20.29 351 P     P     11 30 54.5 +0.4
      baz=169
J56A  Wolcott          20.29   8 IAmb  IAmb  11 31 10.4
      comp=Z,18nm,0.7s
J56A  Wolcott          20.29   8 P     P     11 30 55.0 +0.8
      baz=190
L61B  Northampton      20.35  17 P     P     11 30 55.7 +0.9
      baz=202
K61A  Williamstown     20.40  16 P     Pn    11 30 57.0  -0.5
      baz=200
K43A  Burlington       20.47 344 IAmb  IAmb  11 31 04.7
      comp=Z,29nm,0.8s
J46A  Howard City      20.52 350 P     P     11 30 57.0 +0.3
      baz=167,SNR=6.7
J57A  Williamstown     20.55  10 P     P     11 30 57.2 +0.2
J57A  Williamstown     20.55  10 P     P     11 30 58.1 +1.1
      baz=193,SNR=14
I51A  Listowel         20.57 359 P     P     11 30 57.6 +0.4
      baz=179,SNR=6.0
I53A  Kortright Cn E   20.61   2 P     P     11 30 58.2 +0.6
      baz=183
J58A  Remsen           20.62  11 P     P     11 30 58.7 +0.9
      baz=194
K62A  Royalston        20.67  18 IAmb  IAmb  11 31 02.5
      comp=Z,32nm,0.8s
K62A  Royalston        20.67  18 P     P     11 30 59.5 +1.2
      baz=203
L40A  Anamosa          20.77 337 IAmb  IAmb  11 31 08.2
      comp=Z,35nm,1.1s
I49A  Point Hope       20.77 356 P     P     11 30 59.9 +0.4
      baz=175,SNR=34
I52A  Shelburne        20.84   1 P     P     11 31 00.8 +0.6
      baz=182,SNR=18
KSU1  Kansas State U   20.85 323 P     P     11 31 00.2  -0.1
      baz=135
J59A  Piesco           20.87  13 IAmb  IAmb  11 31 04.7
      comp=Z,33nm,1.1s
J59A  Piesco           20.87  13 P     P     11 31 01.6 +1.1
      baz=196
K63A  Dunstable        20.90  19 P     P     11 31 01.8 +1.1
      baz=204
J60A  Lant Hill Farm   20.90  15 P     Pn    11 31 02.6  -0.7
      baz=199,SNR=7.5
I58A  Old Forge        21.00  12 P     P     11 31 03.1 +1.2
      baz=195,SNR=9.1
I47A  Gladwin          21.02 352 IAmb  IAmb  11 31 07.7
      comp=Z,44nm,0.9s
I47A  Gladwin          21.02 352 P     P     11 31 02.5 +0.4
      baz=170,SNR=8.9
I46A  Reed City        21.07 350 P     P     11 31 03.1 +0.4
      baz=168
I48A  Sherman Twp      21.09 354 P     P     11 31 03.9 +1.0
      baz=172,SNR=13
I57A  Carthage         21.12  10 P     P     11 31 03.8 +0.6
      baz=193
I55A  Frankford        21.13   6 P     P     11 31 03.9 +0.7
      baz=188,SNR=12
PCON  Cinco Dias       21.15 168 eP    P     11 31 06.3 +2.0
JFWS  Jewell Farm      21.21 340 P     P     11 31 04.3 +0.1
      baz=155,SNR=28
I45A  Fountain         21.29 349 P     P     11 31 06.0 +1.0
      baz=166,SNR=11
SOTA  Rioblanco        21.30 169 eP    P     11 31 07.2 +1.4
BBAC  Balboa, Cauca    21.30 170 eP    P     11 31 07.1 +1.5
J62A  Henniker         21.31  18 P     P     11 31 06.5 +1.3
      baz=203
I59A  Olmsteadville    21.32  14 P     P     11 31 06.5 +1.2
      baz=198
SCIA  State Center     21.39 334 IAmb  IAmb  11 31 11.5
      comp=Z,58nm,1.1s
H53A  Bobcaygeon       21.41   4 P     P     11 31 07.0 +0.7
      baz=186,SNR=27
H52A  Wyevale          21.42   2 P     P     11 31 06.9 +0.6
      baz=182,SNR=20
DELO  Deloro Mine      21.43   6 IAmb  IAmb  11 31 11.2
      comp=Z,34nm,0.9s
TXAR  Lajitas Array    21.46 291 P     P     11 31 07.4 +0.4
      comp=Z,13nm,0.6s,baz=108,slow=8.3,SNR=44
TXAR                             S     S     11 34 55.4  -10
      comp=Z,0.8nm,0.4s,baz=111,slow=23,SNR=6.3
TX31  Lajitas Ar. Si   21.46 291 IAmb  IAmb  11 31 11.4
      comp=Z,21nm,0.8s
TX32  Lajitas Array    21.46 291 P     P     11 31 07.2 +0.1
TX32                             IAmb  IAmb  11 31 11.4
      comp=Z,21nm,0.8s
GARC  Garzon, Huila    21.48 166 eP    P     11 31 08.7 +1.2
I60A  Shoreham         21.50  15 P     P     11 31 08.7 +1.5
      baz=199
H55A  Tweed            21.51   7 P     P     11 31 07.7 +0.4
      baz=189,SNR=12
H47A  Mio              21.55 353 P     P     11 31 08.9 +1.0
      baz=171,SNR=13
H48A  Harrisville      21.57 355 P     P     11 31 08.1 +0.1
      baz=174,SNR=21
SADO  Sadowa           21.57   3 P     P     11 31 08.4 +0.4
      comp=Z,48nm,0.8s,baz=231,slow=5.6,SNR=61
SADO                             LR    LR    11 40 18.0
      comp=Z,468nm,18.7s,baz=182,slow=39
J63A  Strafford        21.57  19 P     P     11 31 08.9 +0.9
      baz=205
HNH   Hanover          21.62  17 IAmb  IAmb  11 31 11.2
      comp=Z,42nm,0.9s
H56A  Elgin            21.67   9 P     P     11 31 09.7 +0.6
      baz=191
H57A  Richville        21.67  10 P     P     11 31 09.9 +0.8
      baz=194,SNR=8.4
AMTX  Amarillo         21.67 307 P     P     11 31 09.9 +0.6
      baz=117
I42A  Draeger Farm,    21.73 344 P     P     11 31 09.7  -0.1
GLMI  Grayling         21.82 353 P     P     11 31 11.6 +0.8
      baz=170,SNR=20
H45A  Beulah           21.83 350 P     P     11 31 10.9 +0.2
      baz=167,SNR=11
H58A  Gabriels         21.85  13 P     P     11 31 11.9 +0.8
      baz=196
I61A  Oroboro, Fairl   21.85  17 P     P     11 31 12.8 +1.8
      baz=202
MACC  Macarena, Meta   21.95 161 eP    P     11 31 12.7 +0.3
G53A  Haliburton       21.95   4 P     P     11 31 12.7 +0.5
      baz=185,SNR=10
LONY  Lake Ozonia      21.97  12 IAmb  IAmb  11 31 16.8
      comp=Z,22nm,1.0s
LONY  Lake Ozonia      21.97  12 P     P     11 31 13.1 +0.8
      baz=195
PLVO  Plevna           22.00   7 IAmb  IAmb  11 31 16.2
      comp=Z,37nm,1.2s
FLOC  Florencia        22.03 166 eP    P     11 31 14.0 +0.8
FLOC                            ⇑iP    P     11 31 14.3 +1.1
FLOC  Florencia        22.03 166 P     P     11 31 14.3 +1.1
G47A  Hillman          22.09 354 P     P     11 31 14.2 +0.7
      baz=172,SNR=60
VT1   Waterbury        22.09  15 IAmb  IAmb  11 31 24.8
      comp=Z,33nm,1.3s
MSTX  Muleshoe         22.10 304 P     P     11 31 14.3 +0.3
      baz=114,SNR=31
H59A  Cadyville        22.17  13 P     P     11 31 15.4 +0.9
      baz=197,SNR=7.2
G45A  Suttons Bay      22.17 351 P     P     11 31 14.7 +0.2
      baz=168,SNR=33
I40A  Norwalk          22.21 341 IAmb  IAmb  11 31 17.5
      comp=Z,21nm,0.7s
LBNH  Lisbon           22.21  17 P     P     11 31 14.4  -0.6
      baz=202
G55A  Calabogie        22.26   7 P     P     11 31 16.5 +1.1
      baz=190,SNR=9.2
G54A  Lake Saint Pet   22.26   5 P     P     11 31 15.7 +0.2
      baz=186
H60A  Morristown       22.32  15 P     P     11 31 17.7 +1.7
      baz=200
G46A  Petoskey         22.34 352 P     P     11 31 16.6 +0.4
      baz=170
G57A  Newington        22.36  11 P     P     11 31 17.1 +0.6
      baz=194
FRNY  Flat Rock        22.37  13 P     P     11 31 16.8 +0.2
I63A  Otisfield        22.42  19 IAmb  IAmb  11 31 19.4
      comp=Z,31nm,1.0s
I63A  Otisfield        22.42  19 P     P     11 31 18.6 +1.4
      baz=205
CBKS  Cedar Bluff      22.48 318 P     P     11 31 17.8  -0.1
CBKS  Cedar Bluff      22.48 318 P     P     11 31 18.4 +0.5
      baz=129
H61A  Lyndonville      22.48  17 P     P     11 31 19.4 +1.6
      baz=202,SNR=6.6
F49A  Sandfield        22.55 358 P     P     11 31 18.0  -0.5
      baz=177
G58A  Ormstown         22.58  12 P     P     11 31 19.5 +0.7
      baz=196
F52A  Sundridge        22.59   3 P     P     11 31 18.9   0.0
      baz=184,SNR=7.6
F48A  Evansville       22.64 357 P     P     11 31 19.2  -0.3
      baz=176,SNR=9.6
G59A  Clarenceville    22.70  14 P     P     11 31 20.8 +0.8
      baz=198
F51A  Arnstein         22.70   1 P     P     11 31 20.1   0.0
      baz=182,SNR=17
F45A  CMU Biological   22.78 351 P     P     11 31 21.3 +0.3
      baz=169,SNR=24
F55A  Otter Lake       22.87   8 P     P     11 31 23.1 +1.2
      baz=190
HPIG                   22.89 285 IAmb  IAmb  11 31 25.6
      comp=Z,32nm,0.9s
G60A  Masonville       22.91  15 P     P     11 31 21.3  -1.0
      baz=200
OTAV  Otavalo          22.91 174 eP    P     11 31 24.2 +1.2
OTAV  Otavalo          22.91 174 P     P     11 31 24.2 +1.2
OTAV  Otavalo          22.91 174 eP    P     11 31 24.4 +1.3
E52A  Mattawa          23.11   4 P     P     11 31 24.2  -0.2
      baz=185
E48A  Lockeyer         23.27 357 P     P     11 31 26.0   0.0
      baz=177,SNR=15
E53A  Dumoine, Ponti   23.27   5 P     P     11 31 26.3 +0.3
      baz=187,SNR=9.2
G61A  St-Isidore-de-   23.29  17 P     P     11 31 27.4 +1.2
      baz=202
E47A  Iron Bridge      23.31 356 P     P     11 31 26.5 +0.1
      baz=174,SNR=17
E51A  G1948 Merrick    23.32   2 P     P     11 31 26.5 +0.1
      baz=183
E54A  Lac Daplat, Po   23.37   6 P     P     11 31 27.2 +0.2
      baz=188,SNR=26
MNTX  Cornudas Mount   23.44 297 P     P     11 31 27.0  -0.8
MNTX                             IAmb  IAmb  11 31 45.2
      comp=Z,15nm,0.8s
MNTX  Cornudas Mount   23.44 297 P     P     11 31 28.0 +0.2
      baz=105
E56A  St. Veronique    23.75  10 P     P     11 31 31.8 +1.0
      baz=193,SNR=5.6
E44A  Grand Marais A   23.76 351 P     P     11 31 32.0 +1.2
      baz=168,SNR=7.4
E57A  Chemin Saint G   23.78  11 P     P     11 31 31.3 +0.3
      baz=195
D46A  Sault St. Mari   23.80 354 P     P     11 31 31.8 +0.5
      baz=173,SNR=26
F60A  Warwick          23.82  15 P     P     11 31 32.9 +1.5
      baz=200
D51A  Lot 18 Range I   23.88   2 P     P     11 31 32.1 +0.1
      baz=183,SNR=7.8
D47A  Chapleau         23.90 356 P     P     11 31 32.3 +0.1
      baz=175,SNR=7.6
E58A  La Victoria      23.91  13 P     P     11 31 33.1 +0.9
      baz=197
D50A  G1974 Best Tow   23.94   1 P     P     11 31 32.6   0.0
      baz=182,SNR=11
D48A  Paudash Townsh   23.95 358 P     P     11 31 33.3 +0.6
      baz=178,SNR=8.1
D53A  Lac Vacive, Po   23.97   5 IAmb  IAmb  11 31 39.4
      comp=Z,18nm,0.8s
D53A  Lac Vacive, Po   23.97   5 P     P     11 31 33.8 +1.0
      baz=187,SNR=11
D49A  Beulah Townshi   24.04 359 P     P     11 31 33.8 +0.3
      baz=179
SPMN  Marine on St.    24.10 339 P     P     11 31 34.5 +0.5
      baz=152
D54A  Lac Fusel, La    24.14   7 P     P     11 31 34.9 +0.5
      baz=189,SNR=15
D55A  Sainte-Anne-du   24.15   9 P     P     11 31 35.4 +0.8
      baz=192,SNR=15
D56A  ZEC Mazanza, M   24.29  10 P     P     11 31 36.5 +0.7
      baz=194,SNR=15
E60A  Ste Agathe de    24.32  16 P     P     11 31 37.8 +1.7
      baz=201
ECSD  EROS Data Cent   24.33 331 P     P     11 31 35.9  -0.4
ECSD                             IAmb  IAmb  11 31 38.7
      comp=Z,16nm,0.8s
ECSD  EROS Data Cent   24.33 331 P     P     11 31 36.3 +0.1
      baz=142,SNR=30
F63A  Nahmakanta, Br   24.37  20 IAmb  IAmb  11 31 41.6
      comp=Z,26nm,1.0s
F63A  Nahmakanta, Br   24.37  20 P     P     11 31 38.3 +1.8
      baz=207
D57A  Chemin Vers le   24.41  11 P     P     11 31 37.6 +0.7
      baz=195
KSCO  Kaye Shedlock’   24.42 315 P     P     11 31 38.3 +1.0
      baz=124,SNR=16
T25A  Trinidad         24.67 310 P     P     11 31 41.4 +1.7
      baz=118,SNR=38
D58A  Chemin du LacG   24.68  13 P     P     11 31 40.8 +1.5
      baz=198,SNR=6.2
F64A  Sherman          24.75  21 IAmb  IAmb  11 31 42.8
      comp=Z,13nm,0.8s
F64A  Sherman          24.75  21 P     P     11 31 41.9 +1.9
      baz=208
D59A  Saint-Raymond    24.82  15 P     P     11 31 42.9 +2.3
      baz=200
D60A  Saint Jean D’O   24.96  16 P     P     11 31 42.7 +0.9
      baz=202
OGNE  Ogallala         25.19 320 P     P     11 31 45.3 +1.2
      baz=128
E63A  Oxbow            25.23  20 P     P     11 31 45.8 +1.5
      baz=207
ANMO  Albuquerque      25.29 303 P     P     11 31 45.7 +0.5
      comp=Z,12nm,1.0s,baz=124,slow=11,SNR=23
ANMO                             LR    LR    11 42 43.2
      comp=Z,76nm,20.8s,baz=126,slow=39
ANMO  Albuquerque      25.29 303 P     P     11 31 46.8 +1.5
ANMO                             IAmb  IAmb  11 31 50.9
      comp=Z,14nm,0.9s
ANMO  Albuquerque      25.29 303 P     P     11 31 46.1 +0.8
      baz=111
Y22D  IRIS PASSCAL I   25.36 301 P     P     11 31 47.8 +1.9
      baz=109
D61A  St Aubert, Com   25.41  17 P     P     11 31 49.4 +3.4
      baz=203,SNR=11
E64A  Bridgewater      25.41  21 P     P     11 31 48.9 +2.9
      baz=209
121A  Cookes Peak, D   25.62 297 P     P     11 31 49.9 +1.6
      baz=105,SNR=23
D62A  Allapoint, All   25.62  19 P     P     11 31 49.2 +1.3
      baz=206
SDCO  Great Sand Dun   25.72 310 IAmb  IAmb  11 31 53.6
      comp=Z,23nm,1.4s
SDCO  Great Sand Dun   25.72 310 P     P     11 31 50.5 +1.2
      baz=118
D63A  Stockholm        25.87  20 P     P     11 31 51.4 +1.3
      baz=207
Q24A  Divide           26.06 313 IAmb  IAmb  11 32 01.4
      comp=Z,21nm,1.2s
Q24A  Divide           26.06 313 P     P     11 31 53.5 +1.2
      baz=120
EYMN  Ely              26.16 343 P     P     11 31 52.8  -0.1
      baz=157,SNR=34
319A  Douglas          26.61 294 IAmb  IAmb  11 32 08.6
      comp=Z,20nm,0.9s
S22A  4UR Ranch, Cre   26.67 309 P     P     11 31 59.8 +2.0
      baz=116,SNR=5.7
ISCO  Idaho Springs    26.80 314 P     P     11 31 59.7 +0.7
ISCO                             IAmb  IAmb  11 32 06.7
      comp=Z,12nm,0.9s
ISCO  Idaho Springs    26.80 314 P     P     11 32 00.5 +1.5
      baz=121,SNR=18
LPIG  La Paz           27.10 278 P     P     11 32 02.5 +1.0
      comp=Z,23nm,0.8s,baz=15,slow=9.4,SNR=2.6
LPIG                             LR    LR    11 44 15.7
      comp=Z,70nm,19.5s,baz=154,slow=40
SMCO  Snowmass         27.41 312 IAmb  IAmb  11 32 06.6
      comp=Z,24nm,1.5s
N23A  Red Feather La   27.58 316 IAmb  IAmb  11 32 12.3
      comp=Z,12nm,0.8s
N23A  Red Feather La   27.58 316 P     P     11 32 07.0 +1.0
      baz=122,SNR=6.1
MVCO  Mesa Verde       27.66 307 P     P     11 32 07.8 +1.1
      baz=113
HSIG                   27.72 289 IAmb  IAmb  11 32 09.1
      comp=Z,28nm,1.3s
AGMN  Agassiz Nation   27.81 338 IAmb  IAmb  11 32 10.4
      comp=Z,14nm,0.8s
AGMN  Agassiz Nation   27.81 338 P     P     11 32 07.9 +0.3
      baz=149,SNR=15
X18A  Snowflake        27.89 300 IAmb  IAmb  11 32 11.4
      comp=Z,20nm,1.4s
TUC   Tucson           28.04 296 P     P     11 32 11.1 +1.1
TUC                              IAmb  IAmb  11 32 17.3
      comp=Z,16nm,1.4s
TUC   Tucson           28.04 296 P     P     11 32 11.6 +1.6
      baz=102
RSSD  Black Hills      28.34 323 P     P     11 32 12.8 +0.1
RSSD  Black Hills      28.34 323 P     P     11 32 13.3 +0.7
      baz=130
O20A  White River Ci   28.72 313 P     P     11 32 18.3 +2.2
      baz=118
WUAZ  Wupatki          29.29 302 IAmb  IAmb  11 32 26.3
      comp=Z,13nm,0.9s
WUAZ  Wupatki          29.29 302 P     P     11 32 22.4 +1.3
      baz=107,SNR=9.7
ULM   Lac du Bonnet    29.50 340 P     P     11 32 22.5  -0.1
      comp=Z,2.6nm,0.6s,baz=157,slow=7.7,SNR=8.2
ULM                              LR    LR    11 43 51.6
      comp=Z,159nm,18.6s,baz=70,slow=36
214A  Organ Pipe Nat   29.67 294 P     P     11 32 25.6 +1.2
      baz=99
ATAH  Atahualpa        30.22 175 P     P     11 32 31.7 +1.9
      comp=Z,14nm,0.8s,baz=345,slow=5.6,SNR=9.4
BW06  Boulder Array    30.86 316 P     P     11 32 35.4 +0.3
      baz=120
PDAR  Pinedale Array   30.86 316 P     P     11 32 35.0  -0.1
      comp=Z,2.0nm,0.7s,baz=124,slow=11,SNR=18
PDAR                             PcP   PcP   11 35 31.9   0.0
      comp=Z,1.7nm,0.8s,baz=131,slow=3.7,SNR=4.3
PDAR                             ScP   ScP   11 39 15.2 +0.3
      comp=Z,2.7nm,1.0s,baz=103,slow=4.7,SNR=8.6
PDAR                             LR    LR    11 45 44.8
      comp=Z,119nm,18.2s,baz=72,slow=38
PDAR  Pinedale Array   30.86 316 P     P     11 32 35.0  -0.1
W13A  Hualapai Mount   31.17 300 IAmb  IAmb  11 32 40.9
      comp=Z,7.8nm,1.0s
PTGA  Pitinga          31.19 137 P     P     11 32 38.7 +0.8
PTGA                             IAmb  IAmb  11 32 42.2
      comp=Z,6.2nm,0.8s
PTGA  Pitinga          31.19 137 eP    P     11 32 39.0 +1.1
PTGA                             eS    S     11 37 46.1 +2.0
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PDMCI	Parker Dam,Lak	31.20	298	P	P	11 32 39.3	+1.5
	baz=102						
DGMT	Dagmar	31.36	329	P	P	11 32 40.0	+0.8
	baz=135						
Y12C	Blythe	31.40	297	IAmb	IAmb	11 32 42.3	
	comp=Z,12nm,0.9s						
Y12C	Blythe	31.40	297	P	P	11 32 41.4	+1.7
	baz=101,SNR=6.2						
GLA	Glamis	31.53	296	P	P	11 32 42.5	+1.6
	baz=100,SNR=6.8						
HWUT	Hardware Ranch	31.63	313	IAmb	IAmb	11 32 43.7	
	comp=Z,8.0nm,0.9s						
DUG	Dugway, Tooele	31.92	310	IAmb	IAmb	11 32 46.3	
	comp=Z,8.9nm,0.8s						
DUG	Dugway, Tooele	31.92	310	P	P	11 32 45.5	+1.2
	baz=113,SNR=11						
IRM	Iron Mountain	31.98	298	P	P	11 32 46.9	+2.1
	baz=101,SNR=22						
BC3	Big Chuckawall	32.15	297	P	P	11 32 48.2	+1.8
	baz=100						
FXWY	Fox Creek	32.23	317	IAmb	IAmb	11 32 51.3	
	comp=Z,7.6nm,0.8s						
FLWY	Flagg Ranch	32.24	318	P	P	11 32 47.9	+0.7
FLWY				IAmb	IAmb	11 32 49.0	
	comp=Z,10nm,0.8s						
LKWY	Lake	32.31	319	IAmb	IAmb	11 32 54.8	
	comp=Z,6.2nm,0.8s						
SWSC	Sam W. Stewart	32.32	295	P	P	11 32 49.6	+1.9
	baz=99,SNR=5.6						
H17A	Grant Village	32.33	318	IAmb	IAmb	11 32 53.3	
	comp=Z,12nm,1.3s						
H17A	Grant Village	32.33	318	P	P	11 32 49.3	+1.3
	baz=121						
SHPR	Sheep Range	32.51	302	IAmb	IAmb	11 32 52.6	
	comp=Z,7.9nm,1.0s						
GMRC	Granite Mounta	32.52	299	P	P	11 32 51.2	+1.6
	baz=102,SNR=11						
IKP	In-Ko-Pah, Jac	32.54	295	P	P	11 32 52.7	+3.0
	baz=98,SNR=5.3						
BELC	Belle Mtn. Jos	32.65	297	P	P	11 32 52.5	+1.7
	baz=100,SNR=10.0						
MONP2	Monument Peak	32.83	295	P	P	11 32 54.7	+2.2
	baz=98,SNR=11						
TUQ	Turquoise Moun	32.87	300	P	P	11 32 54.6	+1.9
	baz=102,SNR=10						
XPFO	Pion Flat	32.96	296	P	P	11 32 55.3	+1.7
XPFO				IAmb	IAmb	11 32 58.9	
	comp=Z,12nm,0.9s						
PFO	Pinyon Flats O	32.97	296	P	P	11 32 54.8	+1.3
PFO				IAmb	IAmb	11 32 58.8	
	comp=Z,12nm,0.9s						
PFO	Pinyon Flats O	32.97	296	P	P	11 32 56.3	+2.7
	baz=99,SNR=11						
HEC	Hector,Ludlow	33.08	299	P	P	11 32 56.6	+2.2
	baz=101,SNR=6.8						
SHOC	Shoshone, Teco	33.24	301	P	P	11 32 58.0	+2.2
	baz=103,SNR=9.3						
SCHQ	Schefferville	33.27	15	P	P	11 32 56.4	+0.6
	comp=Z,4.9nm,0.8s,baz=214,slow=6.1,SNR=11						
SCHQ				LR	LR	11 46 19.3	
	comp=Z,161nm,19.1s,baz=286,slow=36						
R11A	Troy Canyon, C	33.33	305	IAmb	IAmb	11 33 00.1	
	comp=Z,8.6nm,1.4s						
R11A	Troy Canyon, C	33.33	305	P	P	11 32 58.4	+1.6
	baz=107						
109C	Camp Elliot, M	33.40	295	P	P	11 32 59.0	+1.8
	baz=98						
BBRC	Big Bear Solar	33.45	297	P	P	11 33 00.2	+2.3
	baz=100,SNR=6.5						
TPNV	Topopah Spring	33.47	302	IAmb	IAmb	11 33 01.2	
	comp=Z,7.0nm,0.9s						
TPNV	Topopah Spring	33.47	302	P	P	11 33 00.1	+2.2
	baz=104,SNR=9.0						
GSC	Goldstone, Bar	33.55	299	IAmb	IAmb	11 33 00.9	
	comp=Z,7.9nm,0.7s						
GSC	Goldstone, Bar	33.55	299	P	P	11 33 00.5	+1.9
	baz=101,SNR=8.9						
MURC	Murrieta	33.57	296	P	P	11 33 00.6	+1.8
	baz=98,SNR=5.9						
FURC	Furnace Creek,	33.83	301	P	P	11 33 03.1	+2.2
	baz=103,SNR=7.1						
ELK	Elko	33.84	309	IAmb	IAmb	11 33 03.0	
	comp=Z,8.4nm,0.9s						
EGMT	Eagleton	33.88	324	IAmb	IAmb	11 33 03.4	
	comp=Z,17nm,1.4s						
EGMT	Eagleton	33.88	324	P	P	11 33 02.0	+0.7
	baz=127						
BFSC	Mount Baldy Ra	34.05	297	P	P	11 33 04.6	+1.6
	baz=99,SNR=7.7						
MPMC	Manual Prospec	34.24	300	P	P	11 33 06.3	+1.6
	baz=102,SNR=10						
LRMC	Laurel Mtn Rad	34.28	299	P	P	11 33 06.6	+1.6
	baz=101,SNR=16						
GRAC	Grapevine Rang	34.35	302	P	P	11 33 07.4	+2.0
	baz=103						
MWC	Mount Wilson	34.38	297	IAmb	IAmb	11 33 12.9	
	comp=Z,17nm,1.5s						
EDW2	Edwards Air Fo	34.43	298	P	P	11 33 08.1	+1.9
	baz=100,SNR=29						
CIS	Catalina Islan	34.56	296	P	P	11 33 09.1	+1.9
	baz=97						
DECC	Green Verdugo	34.60	297	P	P	11 33 09.6	+1.9
	baz=99						
CWC	Cottonwood Cre	34.79	301	P	P	11 33 11.2	+1.8
	baz=102						
ISA	Isabella, Lake	34.95	299	P	P	11 33 12.8	+2.1
	baz=100,SNR=5.8						
OSI	Osito Audit: C	34.98	298	P	P	11 33 12.6	+1.6
	baz=99						
ARVC	Arvin	35.15	298	P	P	11 33 14.4	+2.1
	baz=100,SNR=12						
FFC	Flin Flon	35.28	339	P	P	11 33 13.3	+0.2
NVAR	Mina Array Bea	35.41	304	P	P	11 33 16.0	+1.2
	comp=Z,2.3nm,0.6s,baz=114,slow=9.0,SNR=20						
NVAR				PcP	PcP	11 35 46.1	+1.5
	comp=Z,1.6nm,0.7s,baz=124,slow=3.4,SNR=4.8						
NVAR				ScP	ScP	11 39 31.8	+1.1
	comp=Z,0.5nm,0.8s,baz=140,slow=4.4,SNR=3.7						
NVAR	Mina Array Bea	35.41	304	P	P	11 33 15.5	+0.7
KVN	Kaiserville	35.42	305	IAmb	IAmb	11 33 17.0	
	comp=Z,12nm,1.0s						
VES	Vestal, Richgr	35.47	300	P	P	11 33 17.2	+2.1
	baz=100,SNR=18						
SCZ2	Santa Cruz Isl	35.64	296	P	P	11 33 18.8	+2.2
	baz=97						
PKM	Mcpherson Peak	35.91	298	P	P	11 33 20.8	+1.7
	baz=98,SNR=7.7						
SMMC	Simmler	36.12	299	P	P	11 33 22.9	+2.2
	baz=99						
SAML	Samuel	36.25	150	*e*P	P	11 33 21.6	-0.3
SAML	Samuel	36.25	150	P	P	11 33 21.9	0.0
SAML	Samuel	36.25	150	*e*P	P	11 33 21.9	0.0
SAML				*e*S	S	11 39 05.2	+2.7
JTMT	Jette	36.26	321	IAmb	IAmb	11 33 23.5	
	comp=Z,10nm,0.8s						
PNTR	Pine Nut	36.55	305	IAmb	IAmb	11 33 31.9	
	comp=Z,9.2nm,0.8s						
WVOR	Wild Horse Val	36.81	311	IAmb	IAmb	11 33 31.9	
	comp=Z,8.9nm,0.9s						
PMPB	Monarch Peak	36.91	300	IAmb	IAmb	11 33 31.4	
	comp=Z,21nm,1.0s						
J08A	Circle Bar Ran	37.02	312	P	P	11 33 28.3	-0.1
J08A				IAmb	IAmb	11 33 31.9	
	comp=Z,14nm,0.9s						
AFDM	Forest Hills D	37.56	304	IAmb	IAmb	11 33 34.4	
	comp=Z,12nm,1.3s						
NEW	Newport	38.18	320	IAmb	IAmb	11 33 41.4	
	comp=Z,12nm,0.9s						
NEW	Newport	38.18	320	P	P	11 33 38.3	+0.3
	baz=118,SNR=12						
C09A	Chrisman Ranch	38.65	319	IAmb	IAmb	11 33 45.5	
	comp=Z,9.9nm,0.8s						
B08A	Colville Reser	39.54	319	IAmb	IAmb	11 33 50.5	
	comp=Z,19nm,1.1s						
CLDB	Colider	41.72	142	*e*P	P	11 34 06.3	-1.4
LLLB	Lillooet	42.00	321	IAmb	IAmb	11 34 14.0	
	comp=Z,20nm,1.5s						
MNMC	Minye Minye	43.44	165	P	P	11 34 21.1	-0.8
PB11	IPOC Station P	44.03	165	P	P	11 34 25.4	-1.2
GO01	Chusmiza	44.05	164	P	P	11 34 26.6	-0.4
PB01	IPOC Station P	45.30	165	IAmb	IAmb	11 34 40.7	
	comp=Z,12nm,1.0s						
YKA	Yellowknife Ar	45.46	339	P	P	11 34 37.3	0.0
	comp=Z,4.3nm,0.9s,baz=129,slow=8.5,SNR=42						
YKA				PcP	PcP	11 36 16.3	+0.1
	comp=Z,3.0nm,1.1s,baz=136,slow=3.3,SNR=5.6						
YKA				LR	LR	11 54 22.4	
	comp=Z,114nm,21.1s,baz=0.0,slow=37						
SALV	Santo Antonio	45.91	145	*e*P	P	11 34 41.8	+0.3
LVC	Limon Verde	46.95	165	P	P	11 34 50.5	+0.7
	comp=Z,8.5nm,0.8s,baz=8.6,slow=6.8,SNR=9.2						
LVC	Limon Verde	46.95	165	P	P	11 34 49.4	-0.4
LVC	Limon Verde	46.95	165	*e*P	P	11 34 50.3	+0.4
SFJD	Kangerlussuaq	47.71	15	*i* P	P	11 34 54.8	-0.1
ARAG	Araguaiana, MT	47.89	141	*e*P	P	11 34 56.9	0.0
BDFB	Brasilia	50.12	137	P	P	11 35 14.5	+0.4
	comp=Z,3.5nm,0.7s,baz=296,slow=14,SNR=4.9						
BDFB	Brasilia	50.12	137	P	P	11 35 14.8	+0.6
ANGG	Ammassalik, Gr	50.57	22		P	11 35 16.9	+0.1
IPMB	Ipameri, GO	51.80	139	*e*P	P	11 35 26.6	-0.1
C36M	Paulatuk	52.89	342	P	P	11 35 34.5	+0.4
	baz=128						
CPUP	Villa Florida	54.18	154	P	P	11 35 43.3	-0.7
	comp=Z,1.0nm,0.5s,baz=352,slow=8.2,SNR=5.0						
CPUP				LR	LR	11 58 25.4	
	comp=Z,74nm,19.5s,baz=244,slow=36						
SUMG	Summit	54.66	14	*i* P	P	11 35 47.3	-0.2
	comp=Z,12nm,0.8s						
PTGB	Pitanga	55.14	148	*e*P	P	11 35 50.8	-0.3
INK	Inuvik	55.24	339	LR	LR	12 02 34.7	
	comp=Z,120nm,19.4s,baz=80,slow=39						
INK	Inuvik	55.24	339	IAmb	IAmb	11 35 59.3	
	comp=Z,11nm,1.2s						
CFA	Coronel Fontan	55.77	167	P	P	11 35 54.3	-1.2
	comp=Z,10nm,0.9s,baz=342,slow=7.4,SNR=10						
BORG	Borgarnes	56.32	26	P	P	11 36 00.4	+1.4
	comp=Z,30nm,1.0s,baz=224,slow=7.4,SNR=3.1						
BCAR	Beaver Creek A	56.55	331	P	P	11 36 01.4	+0.6
EGAK	Eagle	56.76	334	IAmb	IAmb	11 36 07.2	
	comp=Z,6.0nm,1.1s						
DOT	Dot Lake	57.69	332	IAmb	IAmb	11 36 28.0	
	comp=Z,5.0nm,0.9s						
SCRK	Sand Creek	57.73	332	IAmb	IAmb	11 36 25.8	
	comp=Z,6.3nm,1.0s						
RIDG	Independent Ri	58.05	332	IAmb	IAmb	11 36 15.5	
	comp=Z,8.4nm,0.9s						
PAX	Paxson	58.16	331	IAmb	IAmb	11 36 27.9	
	comp=Z,6.8nm,0.7s						
BMAR	Burnt Mountain	58.83	336	P	P	11 36 17.2	+0.4
HDA	Harding Lake	59.09	332	IAmb	IAmb	11 36 28.6	
	comp=Z,7.3nm,1.0s						
HDA	Harding Lake	59.09	332	P	P	11 36 19.0	+0.5
	baz=101						
IL31		59.13	333	IAmb	IAmb	11 36 23.8	
	comp=Z,4.8nm,0.9s						
ILAR	Eielson Array	59.13	333	P	P	11 36 19.2	+0.4
	comp=Z,3.1nm,0.8s,baz=105,slow=5.1,SNR=24						
ILAR	Eielson Array	59.13	333	P	P	11 36 18.9	+0.1
CCB	Clear Creek Bu	59.50	333	IAmb	IAmb	11 36 27.4	
	comp=Z,3.7nm,0.6s						
CNLB	Canela	59.59	150	*e*P	P	11 36 21.8	-0.6
MCK	McKinley	59.83	331	P	P	11 36 24.1	+0.3
PLTB	Pedras Altas	60.49	154	*e*P	P	11 36 28.1	-0.4
BPAW	Bear Paw Mtn.	60.78	332	IAmb	IAmb	11 36 33.2	
	comp=Z,5.6nm,0.9s						
MLY	Manley	60.80	333	IAmb	IAmb	11 36 35.7	
	comp=Z,4.6nm,0.8s						
SKT	Skwentna	60.80	329	IAmb	IAmb	11 36 42.1	
	comp=Z,7.5nm,0.8s						
TOLK	Toolik Lake Re	60.93	337	IAmb	IAmb	11 36 36.8	
	comp=Z,3.8nm,0.9s						
TOLK	Toolik Lake Re	60.93	337	P	P	11 36 32.0	+0.8
	baz=101						
IMAR	Indian Mountai	62.16	334	P	P	11 36 39.9	+0.5
PMTG	Montargil	62.53	57	*e*P	P	11 36 45.5	+3.0
PVIS	Viseu	62.55	55	*e*P	P	11 36 43.1	+0.5
SVW2	Sparrevohn	62.68	328	P	P	11 36 42.8	-0.3
SVW2				IAmb	IAmb	11 36 48.4	
	comp=Z,5.3nm,0.7s						
MTE	Manteigas	62.86	55	*e*P	P	11 36 45.7	+1.0
TTA	Tatalina	62.94	330	P	P	11 36 44.7	-0.1
PCBR	Castelo Branco	62.99	56	*e*P	P	11 36 46.6	+1.1
PMRV	Marv??o	63.12	56	*e*P	P	11 36 46.6	+0.2
MVO	Moncorvo	63.14	54	*e*P	P	11 36 47.0	+0.4
PBRG	Braganca	63.27	54	*e*P	P	11 36 48.2	+0.9
NOR	Nord	63.48	8	*i* P	P	11 36 47.1	-1.0
	comp=Z,4.1nm,0.8s						
PLCA	Paso Flores	64.29	171	P	P	11 36 52.9	-1.0
	comp=Z,8.8nm,0.8s,baz=12,slow=7.2,SNR=21						
PLCA	Paso Flores	64.29	171	P	P	11 36 53.0	-0.9
PLCA	Paso Flores	64.29	171	*e*P	P	11 36 53.0	-0.9
ESDC	Sonseca Array	65.69	56	P	P	11 37 03.7	+0.4
	comp=Z,1.7nm,0.6s,baz=279,slow=5.9,SNR=11						
ESDC	Sonseca Array	65.69	56	P	P	11 37 04.3	+1.0
CLF	Chambon-Foret	68.55	46	P	P	11 37 22.2	+1.0
DOU	Dourbes	69.64	43	P	P	11 37 28.4	+0.5
BCLA	Clavier	70.02	43	⇑P	P	11 37 31.1	+0.8
NB2	NORSAR Subarra	70.92	31	P	P	11 37 36.3	+0.7
	comp=Z,1.6nm,0.7s,baz=287,slow=6.5						
NOA	NORSAR Array B	70.92	31	P	P	11 37 35.9	+0.3
	comp=Z,2.3nm,0.7s,baz=284,slow=6.0,SNR=5.2						
SENIN	Lac Senin/Sane	72.28	47	P	P	11 37 45.5	+1.2
SENIN				IAmb	IAmb	11 37 45.9	
	comp=Z,7.1nm,0.8s						
HFS	Hagfors	72.33	32	P	P	11 37 44.4	+0.3
	comp=Z,3.4nm,0.9s,baz=260,slow=4.2,SNR=5.0						
DAVA	Damuels	73.73	45	*e*pP	P	11 37 54.0	+1.1
	comp=Z,5.7nm,0.8s						
DAVOX	Davos/Dischmat	73.87	46	P	P	11 37 55.0	+1.3
	comp=Z,4.6nm,0.7s,baz=274,slow=3.4,SNR=12						
ARCES	ARCESS Array B	73.98	21	P	P	11 37 54.0	+0.3
	comp=Z,8.2nm,0.8s,baz=20,slow=3.9,SNR=9.7						
RETA	Reutte	74.24	45	*e*pP	P	11 37 56.8	+1.1
	comp=Z,4.3nm,0.7s						
TIC	Toumodi	74.29	89	*e*P	P	11 37 57.2	+0.7
FETA	Feichten	74.36	45	*e*pP	P	11 37 57.6	+1.1
	comp=Z,12nm,1.3s						
DBIC	Dimbokro	74.43	89	P	P	11 37 57.4	+0.1
	comp=Z,5.9nm,0.6s,baz=243,slow=4.3,SNR=10						
DBIC				LR	LR	12 06 18.3	
	comp=Z,127nm,20.2s,baz=333,slow=32						
DBIC	Dimbokro	74.43	89	IAmb	IAmb	11 38 00.6	
	comp=Z,12nm,1.0s						
LIC	Lamto	74.44	90	*e*P	P	11 37 57.2	-0.1
	comp=Z,20nm,0.6s						
CLL	Collm	74.50	41	*e*P	P	11 37 58.0	+1.0
	comp=Z,17nm,1.6s						
MOTA	Moosalm	74.51	45	*i* pP	P	11 37 58.1	+0.7
	comp=Z,19nm,1.4s						
SQTA	Sankt Quirin	74.61	45	*e*pP	P	11 37 58.8	+0.9
	comp=Z,14nm,1.3s						
KIC	Kosan Boka	74.65	90	*e*P	P	11 37 58.7	+0.1
	comp=Z,34nm,0.9s						
WATA	Walderalm	74.82	45	*e*pP	P	11 38 00.1	+1.0
	comp=Z,3.8nm,0.7s						
WTTA	Wattenberg	74.88	45	*e*pP	P	11 38 00.0	+0.5
	comp=Z,4.2nm,0.7s						
BRG	Berggiesshubel	75.20	41	*e*P	P	11 38 01.3	+0.3
	comp=Z,4.4nm,0.8s						
BRG				*e*		11 38 04.7	
	comp=Z,9.0nm,1.1s						
CTI	Castel Tesino	75.26	46	IAmb	IAmb	11 38 09.2	
	comp=Z,5.0nm,0.7s						
KHC	Kasperske Hory	75.53	43	*e*P	P	11 38 03.9	+0.8
ABTA	Abfaltersbach	75.61	45	*e*P	P	11 38 03.7	0.0
	comp=Z,4.5nm,0.9s						
GERES	GERESS Array B	75.70	43	P	P	11 38 05.1	+1.0
	comp=Z,1.9nm,0.9s,baz=294,slow=4.2,SNR=7.8						
GERES	GERESS Array B	75.70	43	P	P	11 38 05.4	+1.3
PRU	Pruhonice	75.85	42	*e*P	P	11 38 05.5	+0.7
GOPC	GO Pecny, Ondr	76.02	42	*e*P	P	11 38 06.6	+0.7
KBA	Koelnbreinsper	76.04	45	*e*sP	sP	11 38 09.3	-1.4
	comp=Z,6.0nm,0.8s						
MOA	Molln	76.38	44	*e*pP	P	11 38 08.6	+0.7
	comp=Z,5.2nm,0.8s						
CHVC	Chvalec	76.56	41	*e*P	P	11 38 09.8	+0.9
UPC	Upice	76.56	41	*e*P	P	11 38 09.4	+0.5
OSTC	Ostas	76.67	41	*e*P	P	11 38 10.7	+1.2
DPC	Dobruska-Polom	76.80	41	*e*P	P	11 38 11.3	+1.0
KEST	Kesra	76.89	57	P	P	11 38 12.5	+1.4
	comp=Z,6.4nm,0.8s,baz=283,slow=4.2,SNR=6.2						
OBKA	Obir	77.01	45	*i* P	P	11 38 11.9	+0.3
	comp=Z,9.5nm,0.9s						
SOKA	Soboth	77.27	45	*i* P	P	11 38 13.0	-0.1
	comp=Z,8.2nm,0.8s						
KRUC	Moravsky	77.30	42	*e*P	P	11 38 13.3	+0.2
VRAC	Vranov	77.33	42	P	P	11 38 14.4	+1.1
	comp=Z,3.1nm,0.7s,baz=297,slow=7.2,SNR=6.3						
VRAC	Vranov	77.33	42	*e*P	P	11 38 13.6	+0.3
CONA	Conrad Observa	77.36	43	*i* pP	P	11 38 14.3	+0.7
	comp=Z,2.6nm,0.8s						
FINES	FINESS Array B	77.55	28	P	P	11 38 14.5	+0.3
	comp=Z,2.3nm,0.8s,baz=276,slow=3.6,SNR=7.0						
MORC	Moravsky Berou	77.74	41	*e*P	P	11 38 15.5	-0.1
MORC	Moravsky Berou	77.74	41	IAmb	IAmb	11 38 17.5	
	comp=Z,6.0nm,1.2s						
TORD	Torodi Ar. Bea	78.06	81	P	P	11 38 18.8	+0.8
	comp=Z,0.6nm,0.5s,baz=305,slow=5.1,SNR=2.3						
TORD				LR	LR	12 11 22.2	
	comp=Z,156nm,18.7s,baz=340,slow=35						
TORD	Torodi Ar. Bea	78.06	81	IAmb	IAmb	11 38 23.8	
	comp=Z,1.5nm,1.1s						
MODS	Modra-Piesok	78.09	42	*e*P	P	11 38 17.6	+0.1
SMOL	Smolenice	78.13	42	*e*P	P	11 38 19.4	+1.7
VYHS	Vyhne	79.01	42	*e*P	P	11 38 24.0	+1.4
TIXI	Tiksi	83.23	351	P	P	11 38 44.2	-0.3
	comp=Z,2.0nm,0.5s,baz=32,slow=4.8,SNR=4.8						
TIXI	Tiksi	83.23	351	P	P	11 38 43.5	-1.0
TIXI				IAmb	IAmb	11 38 45.2	
	comp=Z,3.5nm,0.8s						
KLMR	Klimovskoe	83.42	25	*e*P	P	11 38 43.2	-2.6
KLMR				AMP		11 38 51.3	
	comp=Z,33nm,1.8s						
AKASG	Malin Array Be	84.11	37	P	P	11 38 49.2	-0.3
	comp=Z,1.0nm,0.6s,baz=290,slow=4.2,SNR=5.6						
AKASG	Malin Array Be	84.11	37	P	P	11 38 48.0	-1.5
MLR	Muntele Rosu	84.69	43	P	P	11 38 52.9	+0.2
	comp=Z,2.1nm,0.5s,baz=66,slow=14,SNR=2.9						
IDI	Anoyia	88.71	52	P	P	11 39 14.4	+1.9
	comp=Z,20nm,0.7s,baz=302,slow=7.1,SNR=7.6						
PETK	Petropavlovsk-	88.75	329	P	P	11 39 13.1	+0.9
	comp=Z,3.3nm,0.8s,baz=71,slow=5.8,SNR=4.8						
BRTR	Keskin Array B	92.49	45	P	P	11 39 30.1	0.0
	comp=Z,0.9nm,0.7s,baz=316,slow=3.4,SNR=4.4						
ARU	Arti	93.55	21	P	P	11 39 35.1	+0.7
	comp=Z,0.6nm,0.4s,baz=322,slow=17,SNR=3.3						
ARU	Arti	93.55	21	IAmb	IAmb	11 39 51.0	
	comp=Z,2.6nm,0.7s						
BVAR	Borovoye Array	100.06	17	P	Pdif	11 40 04.9	+0.9
	comp=Z,0.8nm,0.9s,baz=356,slow=6.2,SNR=4.2						
WMQ	Urumqi	112.48	9	*e*PKP	PKiKP	11 44 54.1	-1.0
WMQ				LR	LR		
	comp=Z,140nm,24.1s						
KSH	Kashi	113.93	20	PKP	PKiKP	11 44 58.2	+0.2
KSH				PP	PP	11 45 55.7	+5.3
KSH				SKS	SKSdf	11 52 08.8	-1.8
KSH				SKKS	SKKSac	11 52 48.2	-5.7
KSH				LR	LR		
	comp=Z,240nm,11.4s						
NJ2	Nanjing	121.97	340	*e*PKP	PKPdf	11 45 13.4	-0.1
CD2	Chengdu	126.04	355	PKP	PKPdf	11 45 18.7	-2.7
CMAR	Chiang Mai Arr	138.61	0	PKP	PKPdf	11 45 46.3	+1.0
	comp=Z,0.5nm,0.4s,baz=316,slow=2.5,SNR=5.0						
STKA	Stephens Creek	141.69	247	PKhKP	PKPpre	11 45 46.5	
	comp=Z,2.3nm,0.5s,baz=106,slow=5.1,SNR=8.4						
STKA	Stephens Creek	141.69	247	PKPdf	PKPdf	11 45 46.7	-3.8
PALK	Pallekele	144.69	33	PKPdf	PKPab	11 45 55.4	+0.4
BBOO	Buckleboo	146.28	245		PKPdf	11 45 59.1	+0.6
WB0	Warramunga Arr	147.20	269		PKPdf	11 46 00.6	+0.2
WB0					PKPbc	11 46 02.8	+0.2
WB2	Warramunga Arr	147.27	269		PKPdf	11 46 00.8	+0.3
WB2					PKPbc	11 46 03.0	+0.2
WRA	Warramunga Arr	147.28	269	PKP	PKPdf	11 46 00.3	-0.2
	comp=Z,16nm,0.7s,baz=78,slow=3.8,SNR=96						
WRA				PKPbc	PKPbc	11 46 03.0	+0.1
	comp=Z,18nm,0.7s,baz=77,slow=3.9,SNR=83						
WRA	Warramunga Arr	147.28	269		PKPdf	11 46 00.8	+0.3
WRA					PKPbc	11 46 03.2	+0.4
MTN	Manton Dam	148.08	283		PKPbc	11 46 05.6	+0.5
AS31	Alice Springs	148.27	262		PKPdf	11 46 02.1	0.0
AS31					PKPbc	11 46 05.0	-0.4
ASAR	Alice Springs	148.27	262	PKP	PKPdf	11 46 01.7	-0.4
	comp=Z,17nm,0.6s,baz=86,slow=2.5,SNR=168						
ASAR				PKPbc	PKPbc	11 46 05.2	-0.3
	comp=Z,22nm,0.8s,baz=83,slow=2.2,SNR=180						
ASAR	Alice Springs	148.27	262		PKPdf	11 46 02.1	0.0
ASAR					PKPbc	11 46 05.3	-0.2
FITZ	Fitzroy Crossi	154.84	277	PKPbc	PKPbc	11 46 20.6	-0.1
	comp=Z,2.5nm,0.8s,baz=183,slow=1.9,SNR=4.1						
FITZ				PKPab	PKPab	11 46 36.6	+0.7
	comp=Z,6.9nm,0.6s,baz=82,slow=3.1,SNR=29						
FITZ	Fitzroy Crossi	154.84	277	PKPbc	PKPbc	11 46 20.3	-0.5
FITZ					PKPab	11 46 37.0	+1.1
PSAA3	Pilbara Seismi	160.91	271	PKPab	PKPab	11 47 01.9	-0.3
PSAB3	Pilbara Seismi	160.91	271		PKPab	11 47 02.4	+0.3
PSA00	Pilbara Seismi	160.91	271	PKPab	PKPab	11 47 01.5	-0.7

IDC ***09*** *11:30:57.8±1.7, 0°.33S×123°.03E, h76^{km}±16^{km}, mb3.6/9, mb1 3.8/12, mb1mx3.5/54, mbtmp4.0/12, MS3.0/2, Ms1 3.0/2, ms1mx2.5/42, Error ellipse: s-maj=18.6km s-min=12.4km az=86.0*

NEIC ***09*** *11:30:59.6±2.5, 0°.46S±0°.08×122°.92E±0°.07, h92^{km}±5^{km}, mb4.2/16, Error ellipse: s-maj=13.0km s-min=7.9km az=142.0*

DJA ***09*** *11:30:59.4±0.2, 0°S±2°×12°3E±°, h56^{km}±8^{km}, M4.4/17, mB5.0/4, mb4.6/6, MLv4.4/17, MLv4.3/6, Mw(mB)4.3/4*

ISC 09 11:30:58.8±0.7**, 0°.36S**±0°.05×**123°.09E**±0°.04**, h83**^{km}±6^{km}**, n57,** σ1^{s}**60**/71**, mb4.1**/16**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	Luwuk	0.75	205	P	Pn	11 31 13.9	-1.3
LUWI				S	Sn	11 31 27.2	-0.1
LUWI	Luwuk	0.75	205		Pn	11 31 14.2	-1.0
LUWI				Sn	Sn	11 31 27.2	-0.1
KMSI	Cibinong	1.29	44	P	Pn	11 31 21.5	0.0
KMSI				S	Sn	11 31 38.8	+0.2
MRSI	Marisa	1.41	306	P	Pn	11 31 21.5	-1.6
MRSI				S	Sn	11 31 38.8	-2.6
APSI	Ampana	1.54	249	P	Pn	11 31 24.3	-0.4
APSI				S	Sn	11 31 49.4	+5.1
MPSI	Mapaga	3.26	282	P	Pn	11 31 48.4	+0.7
SANI	Sanana	3.35	120	P	Pn	11 31 46.9	-2.1
SANI				S	Sn	11 32 23.6	-4.2
TTSI	Tana Toraja	4.22	231	P	Pn	11 32 01.3	+0.6
TTSI				S	Sn	11 32 48.2	-0.6
TNTI	Ternate	4.43	75	P	Pn	11 32 04.5	+0.9
TNTI				S	Sn	11 32 56.3	+2.4
TNTI	Ternate	4.43	75	Pn	Pn	11 32 07.6	+4.0
TNTI				Sn	Sn	11 32 59.3	+5.4
SPSI	Sidrap Palu	4.88	223	P	Pn	11 32 09.9	+0.2
NLAI	Namlea	4.93	126	P	Pn	11 32 10.2	-0.2
BNSI	Bone	5.00	216	P	Pn	11 32 12.4	+1.1
BBSI	Bau Bau	5.12	186	P	Pn	11 32 14.1	+1.1
	0.1nm0.1nm190nm18nm,0.6s						
KAPI	Kappang	5.70	216	P	Pn	11 32 21.3	+0.4
	4.9nm,0.3s,baz=317,slow=0.7,SNR=18						
KAPI				S	Sn	11 33 23.1	-1.9
	4.9nm,0.3s,baz=207,slow=22,SNR=8.8						
KAPI				LR	LR	11 35 02.0	
	comp=Z,83nm,21.5s,baz=54,slow=43						
BKSI	Bulukumba	5.75	211	P	Pn	11 32 21.7	+0.1
	0.1nm30nm,0.7s						
AAI	Ambon	6.08	123	P	Pn	11 32 27.6	+1.4
	0.7nm2µm136nm,0.7s						
SIJI	Sorong	8.20	94	P	Pn	11 32 56.0	+0.9
	2.6nm,0.3s,baz=263,slow=8.1,SNR=5.3						
MMRI	Maumere	8.27	186	Pn	Pn	11 32 57.9	+1.9
KKM	Kota Kinabalu	9.35	313	Pn	Pn	11 33 12.7	+1.8
FAKI	Fak Fak	9.51	106	Pn	Pn	11 33 11.1	-1.8
MTN	Manton Dam	14.75	148		P	11 34 26.8	-0.3
KNRA	Kununurra	16.22	160		P	11 34 44.8	+1.4
KNRA				IAmb	IAmb	11 34 45.7	
	comp=Z,8.8nm,0.7s						
FITZ	Fitzroy Crossi	17.81	172	P	P	11 35 00.1	-0.8
	comp=Z,0.2nm,0.3s,baz=359,slow=9.6,SNR=9.6						
FITZ	Fitzroy Crossi	17.81	172	P	P	11 35 01.1	+0.2
WB0	Warramunga Arr	22.24	151		P	11 35 48.5	-0.5
WRA	Warramunga Arr	22.37	151	P	P	11 35 49.8	-0.5
	comp=Z,1.4nm,0.5s,baz=327,slow=11,SNR=11						
WRA				ScP	ScP	11 43 13.6	+0.5
	comp=Z,0.6nm,0.7s,baz=328,slow=2.7,SNR=4.4						
WB2	Warramunga Arr	22.37	151	P	P	11 35 49.4	-1.0
WB2				IAmb	IAmb	11 35 56.7	
	comp=Z,5.0nm,1.1s						
WR0	Warramunga Arr	22.48	151	P	P	11 35 51.0	-0.5
WR0				IAmb	IAmb	11 35 52.6	
	comp=Z,6.0nm,1.0s						
TPUB	Ta-pu	23.64	354	P	P	11 36 03.8	+1.0
RPSI	Rantau Prapat	24.34	277	P	P	11 36 08.7	-0.5
RPSI				IAmb	IAmb	11 36 09.7	
	comp=Z,7.2nm,0.9s						
YHNB	Yeheng	24.93	356	P	P	11 36 15.5	+0.9
YHNB				IAmb	IAmb	11 36 34.1	
	comp=Z,41nm,1.2s						
AS31	Alice Springs	25.44	156	P	P	11 36 20.4	+1.4

ASAR	Alice Springs	25.44	156	P	P	11 36 19.7	+0.6
	comp=Z,0.7nm,0.6s,baz=345,slow=14,SNR=20						
ASAR				PcP	PcP	11 39 49.2	-0.2
	comp=Z,0.5nm,0.7s,baz=350,slow=2.1,SNR=6.1						
ASAR				ScP	ScP	11 43 22.2	+0.7
	comp=Z,0.4nm,0.7s,baz=352,slow=2.0,SNR=5.8						
ASAR	Alice Springs	25.44	156	P	P	11 36 19.4	+0.3
PMG	Port Moresby	25.59	111	LR	LR	11 47 58.0	
	comp=Z,47nm,19.1s,baz=306,slow=40						
CMAR	Chiang Mai Arr	30.21	310	P	P	11 37 02.6	+0.9
	comp=Z,0.8nm,0.7s,baz=142,slow=8.0,SNR=8.8						
CMAR				PcP	PcP	11 40 00.8	-0.3
	comp=Z,0.5nm,0.6s,baz=116,slow=2.1,SNR=3.5						
CMAR	Chiang Mai Arr	30.21	310	P	P	11 37 02.1	+0.4
BBOO	Buckleboo	34.52	161	P	P	11 37 39.3	+0.1
BBOO				IAmb	IAmb	11 37 43.4	
	comp=Z,13nm,1.4s						
MJAR	Matsushiro Arr	39.31	19	P	P	11 38 17.9	-1.9
	comp=Z,1.6nm,0.7s,baz=200,slow=16,SNR=4.7						
USRK	Ussuriysk Ar.	45.07	9	P	P	11 39 05.8	-0.7
	comp=Z,1.8nm,0.6s,baz=192,slow=5.9,SNR=6.5						
USRK	Ussuriysk Ar.	45.07	9	P	P	11 39 06.3	-0.2
SONM	Songino Array	50.15	345	P	P	11 39 45.7	-0.3
	comp=Z,2.0nm,0.7s,baz=160,slow=7.5,SNR=18						
SONM				PcP	PcP	11 41 02.5	-1.7
	comp=Z,0.2nm,0.4s,baz=173,slow=4.2,SNR=2.5						
SONM	Songino Array	50.15	345	P	P	11 39 46.7	+0.8
KSH	Kashi	58.50	318	P	P	11 40 50.2	+3.5
KSH				sP	sP	11 41 17.9	+1.8
KSH				S	S	11 48 46.6	+2.4
KSH	Kashi	58.50	318	SS	SS	11 52 42.2	+4.1
MK31	Makanchi Array	58.96	328	P	P	11 40 49.0	-0.7
MK31				IAmb	IAmb	11 40 50.6	
	comp=Z,3.1nm,1.5s						
MKAR	Makanchi Array	58.96	328	P	P	11 40 48.5	-1.2
	comp=Z,1.0nm,0.5s,baz=126,slow=8.2,SNR=24						
MKAR				PcP	PcP	11 41 37.8	-0.2
	comp=Z,0.4nm,0.5s,baz=138,slow=4.1,SNR=3.4						
PETK	Petropavlovsk-	60.58	23	P	P	11 41 00.5	-0.1
	comp=Z,1.8nm,0.9s,baz=214,slow=2.5,SNR=5.3						
PETK	Petropavlovsk-	60.58	23	P	P	11 41 01.4	+0.8
KURBB	Kurchatov Arra	63.31	330	P	P	11 41 17.8	-1.2
	comp=Z,0.5nm,0.5s,baz=136,slow=6.5,SNR=7.9						
KURK	Kurchatov	63.33	330	P	P	11 41 17.9	-1.1
KURK				IAmb	IAmb	11 41 33.9	
	comp=Z,4.8nm,1.4s						
MSEY	Mahe Island	67.65	265	P	P	11 41 46.2	-1.5
KEKH	Kekaha	78.27	68	P	P	11 42 51.5	+1.2
TORD	Torodi Ar. Bea	120.58	285	PKP	PKPdf	11 49 40.1	-1.9
	comp=Z,0.9nm,0.8s,baz=34,slow=3.5,SNR=3.6						
TORD	Torodi Ar. Bea	120.58	285		PKPdf	11 49 40.3	-1.8
FSCY	Frank Sound, G	149.65	50	PKPbc	PKPbc	11 50 38.2	-1.6

DDA ***09*** *11:31:32.8, 41°.54N×43°.64E, h7^{km}±4^{km}, ML3.5*
NSSP ***09*** *11:31:33.0, 41°.47N×43°.72E, h7^{km}, Ms3.3*
NORS ***09*** *11:31:33.9±0.0, 41°.63N×43°.63E, h2^{km}, MPVA4.5*
TIF ***09*** *11:31:33.0, 41°.49N×43°.66E, h18^{km}*
ISK ***09*** *11:31:33.4, 41°.52N×43°.64E, h5^{km}, ML3.5/8*
MOS ***09*** *11:31:34.4±0.0, 41°.49N×43°.68E, h1^{km}, MPVA4.2*
ISC 09 11:31:34.2±0.9, **41°.50N**±0°.01×**43°.66E**±0°.01, **h6**^{km}±7^{km}, **n106**, σ**1^{s}19**/177, **12C-6D, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKH	Akhalkalaki	0.15	236	P	Pg	11 31 37.3	0.0
AKH				S	Sg	11 31 39.7	+0.2
AKH	Akhalkalaki	0.15	236	PG	Pg	11 31 37.3	0.0
AKH				SG	Sg	11 31 39.6	+0.1
AKH	Akhalkalaki	0.15	236	*i* Pg	Pg	11 31 37.3	0.0
AKH				*i* Sg	Sg	11 31 39.7	+0.2
AKH	Akhalkalaki	0.15	236	*e*PG	Pg	11 31 37.3	0.0
BGD	Bogdanovka	0.24	192	P	Pg	11 31 39.0	+0.1
BGD				S	Sg	11 31 42.9	+0.9
BGD	Bogdanovka	0.24	192	*e*PG	Pg	11 31 38.9	+0.1
BGD				*e*S	Sg	11 31 42.9	+0.9
TRLG	Trialeti	0.33	82	P	Pg	11 31 40.9	+0.1
TRLG				S	Sg	11 31 46.1	+1.0
TRLG	Trialeti	0.33	82	*e*PG	Pg	11 31 40.8	+0.1
TRLG				*e*S	Sg	11 31 46.1	+1.0
KZRT	Kazreti	0.56	101	P	Pg	11 31 44.7	-0.3
KZRT				S	Sg	11 31 52.8	+0.4
KZRT	Kazreti	0.56	101	*i* Pg	Pg	11 31 44.7	-0.3
KZRT				*e*Sg	Sg	11 31 52.8	+0.4
KZRT	Kazreti	0.56	101	*i* P	Pg	11 31 44.5	-0.5
KZRT				*i* S	Sg	11 31 52.2	-0.2
KZRT	Kazreti	0.56	101	*e*PG	Pg	11 31 44.7	-0.3
KZRT				*e*S	Sg	11 31 52.8	+0.4
EPOS	Posof	0.70	271	*i* P	Pg	11 31 47.2	-0.5
EPOS				*i* S	Sg	11 31 55.9	-0.9
EPOS				IAML		11 32 01.0	
	comp=N,753nm,0.4s						
STE	Stepanavan	0.73	133	⇑*i*P	Pg	11 31 45.0	-3.2
EAK	Akyaka	0.81	183	*i* P	Pg	11 31 49.0	-0.8
EAK				*i* S	Sg	11 32 00.5	+0.3
EAK				IAML		11 32 01.0	
	comp=E,2μm,0.4s						
TBLG	Delisi	0.84	73	P	Pg	11 31 49.9	-0.4
TBLG				S	Sg	11 32 01.6	+0.3
TBLG	Delisi	0.84	73	PG	Pg	11 31 49.9	-0.4
TBLG				SG	Sb	11 32 01.9	-0.8
TBLG	Delisi	0.84	73	*i* Pg	Pg	11 31 49.9	-0.4
TBLG				*i* Sg	Sg	11 32 01.6	+0.3
TBLG	Delisi	0.84	73	*e*PG	Pg	11 31 49.8	-0.4
TBLG				*e*S	Sg	11 32 01.5	+0.3
BTNK	Botanikuri	0.87	77	P	Pg	11 31 50.4	-0.5
BTNK				S	Sg	11 32 02.6	+0.3
BTNK	Botanikuri	0.87	77	*i* Pg	Pg	11 31 50.4	-0.5
BTNK				*e*Sg	Sg	11 32 02.6	+0.3
BTNK	Botanikuri	0.87	77	*e*PG	Pg	11 31 50.4	-0.5
BTNK				*e*S	Sg	11 32 02.6	+0.3
SEAG	Tbilisi Sea	0.90	72	P	Pg	11 31 49.1	-2.3
SEAG				S	Sg	11 32 02.6	-0.5
SEAG	Tbilisi Sea	0.90	72	*e*PG	Pg	11 31 49.1	-2.3
SEAG				*e*S	Sg	11 32 02.5	-0.5
TKB	Tkibuli	0.99	330	P	Pg	11 31 52.4	-0.7
TKB				S	Sg	11 32 06.0	-0.1
TKB	Tkibuli	0.99	330	*e*PG	Pg	11 31 52.4	-0.7
TKB				*e*S	Sg	11 32 05.9	-0.1
DIGO	Kars	1.10	191	*i* P	Pg	11 31 54.0	-1.3
ONI	Oni	1.10	352	P	Pg	11 31 54.5	-0.9
ONI				S	Sg	11 32 09.7	0.0
ONI	Oni	1.10	352	PG	Pg	11 31 54.5	-0.9
ONI				SG	Sb	11 32 10.1	-0.3
ONI	Oni	1.10	352	*i* Pg	Pb	11 31 55.5	-0.2
ONI				*i* Sg	Sb	11 32 10.7	+0.3
ONI	Oni	1.10	352	*e*PG	Pg	11 31 54.5	-0.9
ONI				*e*S	Sg	11 32 09.7	0.0
GUDG	Gudauri	1.14	32	P	Pg	11 31 54.5	-1.7
GUDG				S	Sg	11 32 07.5	-3.4
GUDG	Gudauri	1.14	32	*i* Pg	Pn	11 31 56.5	-0.5
GUDG				*e*Sg	Sn	11 32 12.5	-0.5
GUDG	Gudauri	1.14	32	*e*PG	Pg	11 31 54.4	-1.7
ARUZ	Aruch	1.25	165	*i* P	Pg	11 31 57.5	-0.7
ARUZ				*i* S	Sn	11 32 15.1	-0.4
ZEI	Tsey	1.30	8	*i* Pg	Pg	11 31 59.3	+0.1
ZEI				*e*Sg	Sn	11 32 17.5	+0.5
ZEI	Tsey	1.30	8	*ce*PG	Pn	11 31 58.2	-0.9
SENK	Senkaya-Erzuru	1.36	227	PN	Pb	11 31 59.9	-0.3
DAGI	Agillar	1.38	253	*i* P	Pn	11 31 59.3	-0.8
DAGI				*i* S	Sb	11 32 17.1	-1.2
DAGI				IAML		11 32 22.0	
	comp=N,544nm,1.0s						
METS	Metsamor	1.38	167	*i* P	Pg	11 32 01.6	+0.9
METS				*i* S	Sg	11 32 20.4	+1.9
VNNZ	Vanand	1.40	175	*i* P	Pn	11 32 00.1	-0.1
VNNZ				*i* S	Sg	11 32 20.3	+1.3
DIGR	Digorskoe uzhe	1.40	358	*e*Pg	Pg	11 32 01.1	0.0
DIGR				*e*Sg	Sn	11 32 20.4	+1.0
DIGR	Digorskoe uzhe	1.40	358	*ce*PG	Pn	11 31 59.8	-0.7
KAPZ	Kaputan	1.41	146	*i* P	Pg	11 32 01.0	-0.2
KAPZ				*i* S	Sg	11 32 20.2	+0.7
LACR	Lac	1.41	19	*i* Pg	Pg	11 32 01.6	+0.3
LACR				*e*Sg	Sg	11 32 20.2	+0.6
LACR	Lac	1.41	19	*de*PG	Pn	11 31 59.4	-1.1
BATM	Batumi	1.48	275	P	Pn	11 32 00.3	-1.0
BATM				S	Sn	11 32 19.9	-1.1
BATM	Batumi	1.48	275	PN	Pn	11 32 00.4	-0.9
BATM	Batumi	1.48	275	*i* Pg	Pg	11 32 03.3	+0.8
BATM				*e*Sg	Sg	11 32 23.9	+2.2
BATM	Batumi	1.48	275	*i* P	Pn	11 32 00.3	-1.0
BATM				*i* S	Sn	11 32 19.1	-1.9
BATM	Batumi	1.48	275	*e*PG	Pn	11 32 00.3	-1.0
BATM				*e*S	Sn	11 32 19.9	-1.1
DBOC	Borcka	1.51	265	*i* P	Pn	11 32 00.7	-1.0
BCA	Borcka	1.53	269	PN	Pn	11 32 01.6	-0.5
DBAD	Bademkaya	1.56	253	*i* P	Pn	11 32 02.4	-0.1
DBAD				*i* S	Sn	11 32 21.7	-1.3
DBAD				IAML		11 32 24.0	
	comp=N,1μm,0.5s						
DDEM	Demirkent	1.56	248	*i* P	Pn	11 32 02.5	-0.1
DDEM				*i* S	Sn	11 32 22.7	-0.5
TASB	TASBURUN-IGDIR	1.57	164	PN	Pb	11 32 03.1	-0.6
GNI	Garni	1.57	148	⇑*i*P	Pb	11 32 03.6	-0.1
GNI				⇑*i*S	Sg	11 32 25.2	+0.5
GNI	Garni	1.57	148	PN	Pb	11 32 03.7	-0.1
GNI	Garni	1.57	148	*c i*PG	Pb	11 32 03.5	-0.3
GNI				*i* S	Sg	11 32 26.1	+1.3
GNI				pmax	pmax		
	comp=Z,655nm,0.7s						
GNI				smax	smax		
	comp=Z,2.0nm,0.6s						
KORR	Kora	1.62	11	*i* Pg	Pg	11 32 05.2	+0.1
KORR				*e*Sg	Sg	11 32 27.6	+1.4
KORR	Kora	1.62	11	*ce*PN	Pg	11 32 05.1	-0.1
IGDI	IGDIR	1.66	169	*i* P	Pn	11 32 03.6	-0.2
NRKZ	NAREK	1.68	153	*i* P	Pb	11 32 04.9	-0.5
NRKZ				*i* S	Sg	11 32 27.6	-0.4
VLKR	Vladikavkaz	1.72	26	*e*Pg	Pg	11 32 06.5	-0.7
VLKR				*e*Sg	Sg	11 32 31.2	+1.7
VLKR	Vladikavkaz	1.72	26	*de*PN	Pg	11 32 07.2	0.0
ARNR	Ardon	1.75	15	*e*Pg	Pg	11 32 07.3	-0.3
ARNR				*e*Sg	Sg	11 32 31.8	+1.5
ARNR	Ardon	1.75	15	*e*PN	Pg	11 32 07.5	-0.1
ARNR				*e*S	Sg	11 32 32.2	+1.9
LSNR	Lesken	1.79	4	*e*Pg	Pb	11 32 07.6	+0.3
LSNR				*i* Sg	Sg	11 32 31.8	+0.3
KMGR	Komgaron	1.80	29	*i* Pg	Pg	11 32 08.1	-0.5
KMGR				*e*Sg	Sg	11 32 32.5	+0.6
KMGR	Komgaron	1.80	29	*e*PN	Pg	11 32 08.3	-0.3
KMGR				*e*S	Sg	11 32 34.2	+2.3
EATA	Eleskirt	1.86	209	*i* P	Pb	11 32 07.9	-0.8
NEY	Neytrino	1.89	339	*e*Pg	Pb	11 32 08.6	-0.5
NEY				*e*Sg	Sg	11 32 34.3	-0.5
NEY	Neytrino	1.89	339	*ce*PN	Pb	11 32 08.7	-0.4
NEY				pmax	pmax		
	comp=Z,11nm,0.5s						
STDR	Stavd-Durt	1.90	9	⇑*i*PN	Pg	11 32 11.1	+0.6
STDR				*e*S	Sg	11 32 38.4	+3.3
AGRB	Hanur-Agry	1.98	195	PN	Pn	11 32 08.9	+0.5
BTKR	Batakoyurt	1.98	19	*e*Pg	Pb	11 32 11.0	+0.3
BTKR	Batakoyurt	1.98	19	⇓*i*PN	Pg	11 32 12.6	+0.4
BTKR				*e*S	Sg	11 32 41.7	+3.8
NCK	Nalchik	2.00	359	*i* Pg	Pg	11 32 11.5	-0.9
NCK				*e*Sg	Sg	11 32 37.4	-1.0
NCK	Nalchik	2.00	359	*ce*PN	Pg	11 32 12.1	-0.4
NCK				*e*S	Sg	11 32 40.6	+2.2
NCK				pmax	pmax		
	comp=Z,168nm,0.4s						
NCK				smax	smax		
	comp=Z,203nm,0.8s						
KOPR	Koprukoy-ERZUR	2.04	223	PN	Pn	11 32 10.2	+1.1
GANJ	Ganja	2.18	112	PN	Pn	11 32 12.1	+1.1
BTLR	Botlikh	2.23	58	*e*Pg	Pb	11 32 13.5	-1.4
BTLR				*e*Sg	Sb	11 32 42.5	-0.4
BTLR	Botlikh	2.23	58	⇓*e*PN	Pb	11 32 14.0	-1.0
KBZ	Khabaz	2.30	346	*ce*PN	Pb	11 32 15.5	-0.6
GROC	Groznyy	2.33	42	*e*Pn	Pb	11 32 14.6	-1.9
GROC				*e*Sn	Sb	11 32 45.0	-0.5
GROC	Groznyy	2.33	42	*e*PN	Pn	11 32 14.2	+1.2
GROC				*e*		11 32 47.2	
GROC				pmax	pmax		
	comp=Z,134nm,0.6s						
GROC				smax	smax		
	comp=N,183nm,0.6s						
GROC				smax	smax		
	comp=E,641nm,0.6s						
GROC				smax	smax		
	comp=E,538nm,0.6s						
GROC				MLR	MLR		
	comp=Z,117nm,2.0s						
CLDR	Caldiran	2.36	175	*i* P	Pb	11 32 18.0	+0.8
SHA1	Shidzhatmaz	2.36	342	*e*Pn	Pb	11 32 16.3	-0.9
SHA1				*e*Sn	Sb	11 32 46.2	-0.5
SHA1	Shidzhatmaz	2.36	342	*de*PN	Pb	11 32 15.5	-1.7
KRIK	Erzurum-spir	2.37	242	*i* P	Pg	11 32 19.9	+0.2
XNZR	Khunzakh	2.50	64	*i* Pn	Pb	11 32 17.2	-2.3
XNZR				*e*Sn	Sb	11 32 49.0	-1.6
KIV	Kislovodsk	2.56	344	PN	Pn	11 32 16.1	-0.2
KIV	Kislovodsk	2.56	344	*e*PN	Pn	11 32 17.3	+1.0
KIV				*e*S	Sb	11 32 50.1	-2.2
KIV				pmax	pmax		
	comp=Z,50nm,0.9s						
GNBR	Gunib	2.62	69	*e*Pn	Pn	11 32 18.9	+1.8
GNBR				*e*Sn	Sn	11 32 51.1	+1.9
GNBR	Gunib	2.62	69	⇓*e*PN	Pb	11 32 20.0	-1.5
SEKA	Sheki	2.68	95	PN	Pb	11 32 20.2	-2.3
MNGR	Mingechevir, A	2.68	104	PN	Pb	11 32 21.2	-1.4
ARXR	Arkhyz	2.72	320	*e*Pn	Pb	11 32 21.4	-1.8
ARXR				*e*Sn	Sb	11 32 54.1	-2.7
BAYT	Aydıntepe-Bayb	2.88	249	PN	Pn	11 32 21.8	+1.0
AKT	Akhty	3.06	89	*e*Pn	Pn	11 32 25.1	+1.9
AKT				*e*Sn	Sn	11 33 01.6	+1.5
AKT	Akhty	3.06	89	*e*PN	Pn	11 32 25.0	+1.9
AKT				*e*		11 32 32.2	
AKT				*e*S	Sn	11 33 01.6	+1.5
AKT				*e*		11 33 07.8	
AKT				*e*		11 33 15.6	
AKT				pmax	pmax		
	comp=Z,88nm,0.6s						
AKT				smax	smax		
	comp=N,120nm,0.3s						
AKT				smax	smax		
	comp=E,159nm,0.4s						
AKT				smax	smax		
	comp=E,141nm,0.6s						
AKT				MLR	MLR		
	comp=Z,60nm,2.0s						
AKDM	Akdamar-Van	3.21	190	PN	Pn	11 32 26.5	+1.3
SOC	Sochi	3.58	307	*e*PN	Pn	11 32 31.6	+1.4
SOC				*e*		11 33 16.3	
SOC				pmax	pmax		
	comp=Z,77nm,0.8s						
SOC				MLR	MLR		
	comp=Z,150nm,9.0s						
GOF	Gofitskoye	3.59	353	⇑*e*PN	Pb	11 32 38.4	+0.4
GOF				*e*S	Sg	11 33 32.1	+2.7
GOF				pmax	pmax		
	comp=Z,26nm,0.4s						
GOF				smax	smax		
	comp=E,54nm,0.6s						
GOF				smax	smax		
	comp=N,88nm,0.6s						
GUZR	Guzeripl'	3.61	315	*e*Pn	Pn	11 32 32.7	+2.0
GUZR				*e*Sn	Sn	11 33 16.4	+2.7
LZRR	Lazarevskoye	3.99	309	*e*Pn	Pn	11 32 38.4	+2.6
LZRR				*e*Sn	Sn	11 33 25.1	+2.4

THE ***09*** *11:35:27.8, 38°.28N×20°.39E, h10^{km}, ML2.7/4, Error ellipse: s-maj=0.9km s-min=0.3km az=247.0*
ATH ***09*** *11:35:27.6, 38°.29N×20°.38E, h11^{km}±1^{km}, ML2.5/4, Error ellipse: s-maj=1.9km s-min=0.7km az=240.0*
ISC 09 11:35:27.6±1.1, **38°.28N**±0°.03×**20°.38E**±0°.05, **h12**^{km}±6^{km}, **n35**, σ**0^{s}26**/54, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGT1	Agia Thekli	0.03	173	P	Pg	11 35 29.6	-0.2
AGT1				S	Sg	11 35 31.1	-0.2
	12μm,0.1s						
KEF4	Livadi, Kephal	0.04	125	P	Pg	11 35 29.7	-0.1
KEF4				S	Sg	11 35 31.3	-0.2
KEF3	Kipouria, Keph	0.08	197	P	Pg	11 35 30.1	-0.1
KEF3				S	Sg	11 35 32.1	0.0
LXR1	Lixouri, Cepha	0.10	150	P	Pg	11 35 30.4	+0.1
LXRA	Lixouri, Kepha	0.10	151	P	Pg	11 35 30.4	0.0
LXRA				S	Sg	11 35 32.7	+0.3
CHV1	Chavriata, Kef	0.10	179	P	Pg	11 35 30.4	0.0
ARGA	Argostoli. Kep	0.13	143	P	Pg	11 35 30.8	-0.1
ARGA				S	Sg	11 35 33.1	-0.1
KEF2	Argostoli. Kep	0.14	144	P	Pg	11 35 31.0	0.0
KEF2				S	Sg	11 35 33.5	-0.1
VLS	Valsamata	0.20	122	P	Pg	11 35 31.7	-0.2
VLS				S	Sg	11 35 34.8	-0.1
	5μm,0.2s						
VLS	Valsamata	0.20	122	P	Pg	11 35 31.7	-0.2
VLS				S	Sg	11 35 34.9	-0.1
VLS				AML	AML	11 35 35.1	
	comp=N,10425μm,0.3s						
VLS				AML	AML	11 35 35.3	
	comp=E,10250μm,0.1s						
KONA	Konidatara, Ke	0.21	47	P	Pg	11 35 32.0	-0.1
KONA				S	Sg	11 35 35.2	0.0
KONA				AML	AML	11 35 35.6	
	comp=E,2205μm,0.2s						
KONA				AML	AML	11 35 35.8	
	comp=N,3868μm,0.3s						
FSK	Fiskardo	0.23	39	P	Pg	11 35 32.3	-0.1
FSK				S	Sg	11 35 35.8	+0.1
	comp=N,1μm,0.3s						
FSK	Fiskardo	0.23	39	P	Pg	11 35 32.3	-0.1
FSK				S	Sg	11 35 35.6	-0.1
FSK				AML	AML	11 35 36.4	
	comp=N,2496μm,0.3s						
FSK				AML	AML	11 35 36.5	
	comp=E,3391μm,0.2s						
KFL	Anninata	0.37	118	P	Pg	11 35 34.7	-0.2
KFL				S	Sg	11 35 40.3	+0.5
	comp=E,1μm,0.3s						
KFL	Anninata	0.37	118	P	Pg	11 35 34.6	-0.3
KFL				S	Sg	11 35 39.9	+0.1
KFL				AML	AML	11 35 40.8	
	comp=N,2702μm,0.4s						
KFL				AML	AML	11 35 41.0	
	comp=E,2013μm,0.3s						
EVGI	Lefkada island	0.40	33	P	Pg	11 35 35.5	-0.1
EVGI				S	Sg	11 35 41.6	+0.6
EVGI	Lefkada island	0.40	33	P	Pg	11 35 35.4	-0.2
EVGI				S	Sg	11 35 40.9	0.0
MGNA	Meganis	0.49	41	P	Pg	11 35 36.8	-0.4
MGNA				S	Sg	11 35 43.7	-0.1
LKD2	Lefkada island	0.55	23	P	Pg	11 35 38.0	-0.3
LKD2				S	Sg	11 35 46.0	+0.3
LKD2	Lefkada island	0.55	23	P	Pg	11 35 38.0	-0.3
TSLK	Tsoukalades, L	0.58	22	P	Pg	11 35 38.7	-0.3
TSLK				S	Sb	11 35 47.6	-0.3
TSLK	Tsoukalades, L	0.58	22	P	Pg	11 35 38.5	-0.4
PDO	Prodromos	0.71	63	P	Pg	11 35 41.1	-0.2
PDO				S	Sb	11 35 51.3	-0.1
PDO	Prodromos	0.71	63	P	Pg	11 35 41.0	-0.2
PVO	Paravola	0.96	69	P	Pg	11 35 45.9	-0.2
PVO	Paravola	0.96	69	P	Pg	11 35 45.8	-0.2
DRO	Drossia	1.10	107	P	Pb	11 35 48.2	-0.3
DRO	Drossia	1.10	107	P	Pb	11 35 48.5	0.0
ANX	Ano Chora	1.25	75	P	Pn	11 35 50.9	0.0
SERG	Sergoula	1.33	84	P	Pb	11 35 52.6	+0.3
KALE	Kalithea	1.39	85	P	Pg	11 35 54.2	0.0
KLV	Kalavryta, Ach	1.42	99	P	Pn	11 35 53.2	0.0
KEK	Kerkira	1.50	343	P	Pb	11 35 55.5	+0.2
AGG	Agios Georgios	1.70	64	P	Pb	11 35 59.4	+0.7
THL	Klokotos Trika	1.81	44	P	Pb	11 36 00.9	+0.3

CNRM ***09*** *11:42:46.7, 33°.73N×4°.33W, h0^{km}*
INMG ***09*** *11:42:47.9±1.3, 33°.69N×4°.80W, h0^{km}, ML2.3, Error ellipse: s-maj=9.6km s-min=2.5km az=80.0*
MDD ***09*** *11:42:48.4±2.4, 33°.72N×4°.72W, h0^{km}, mb3.9/2, Error ellipse: s-maj=20.8km s-min=16.9km az=165.0, PRXIMO*
SFS ***09*** *11:42:49.0, 33°.75N×5°.08W, ML3.6, SEFROU (MARRUECOS)*
ISC 09 11:42:47.3±1.1, **33°.74N**±0°.02×**4°.44W**±0°.03, **h17**^{km}±9^{km}, **n35**, σ**1^{s}62**/62, **Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCRM	LCR	0.35	262	P	Pn	11 42 58.2	+0.5
LCRM				S	Sb	11 43 03.7	+3.2
SICH	Sidi Chahed	0.82	297	P	Pb	11 43 04.0	+1.0
SICH				S	Sb	11 43 16.3	+2.5
CZD	Col de Zad	0.86	216	P	Pg	11 43 04.4	+0.2
CZD				S	Sn	11 43 18.7	+1.5
AKLM	AKL	0.91	32	P	Pn	11 43 04.6	-0.7
AKLM				S	Sn	11 43 17.7	-0.4
MD31	MD31	0.91	197	P	Pb	11 43 04.0	-0.6
MD31				S	Sb	11 43 16.7	+0.3
MDT	Midelt	0.93	189	P	Pb	11 43 04.4	-0.6
MDT				S	Sb	11 43 16.5	-0.6
PVLZ	Peæn de	1.44	4	Pn	Pg	11 43 15.1	+0.1
PVLZ				Sn	Sg	11 43 33.4	-0.3
PVLZ	Peæn de	1.44	4	*e*P	Pg	11 43 15.1	+0.1
PVLZ				*e*S	Sg	11 43 33.4	-0.3
PALE	Palemas	1.53	15	P	Pg	11 43 17.8	+0.9
PALE				S	Sg	11 43 36.7	-0.1
CHEFC	Chefchaouen	1.56	332	P	Pg	11 43 18.1	+0.8
GOG	Mont Gurugu	1.90	38	P	Pb	11 43 20.5	-1.1
GOG				S	Sn	11 43 42.8	+0.2
TAF	Taforalt	1.99	57	P	Pn	11 43 20.5	+0.2
TAF				S	Sn	11 43 44.9	+0.1
GOLM	Goulmima	2.07	192	P	Pb	11 43 25.8	+1.3
GOLM				S	Sg	11 43 53.3	-0.7
TDRA	Tendrara	2.13	108	P	Pn	11 43 22.9	+0.7
ARF	Arif	2.31	175	S	Sg	11 43 59.0	-2.4
AVE	Averroes	2.52	261	*e*P	Pg	11 43 35.5	-0.2
AVE				*e*S	Sb	11 44 05.0	+2.1
EMIJ	Mijas	2.83	355	Pn	Pb	11 43 35.0	-2.4
	0.2nm,0.1s,SNR=4.0						
EMIJ				Sn	Sn	11 44 07.7	+2.2
	1.2nm,0.1s,SNR=7.9						
ECAB	El Cabril	4.40	350	Pn	Pn	11 43 55.0	+1.7
	0.2nm,0.1s,SNR=6.2						
ECAB				Sn	Sn	11 44 45.1	+0.9
	0.7nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	4.41	336	Pn	Pn	11 43 53.5	+0.1
	0.3nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	11 44 41.8	-2.7
	0.1nm,0.1s,SNR=7.9						
EADA	Adamuz	4.42	359	Pn	Pn	11 43 57.4	+3.8
	1.2nm,0.2s,SNR=7.9						
EADA				Sn	Sn	11 44 46.5	+1.7
	0.5nm,0.1s,SNR=7.9						
PBDV	Barranco-do-Ve	4.51	322	Sn	Sn	11 44 44.6	-2.3
	4.4nm,0.6s						
PBDV	Barranco-do-Ve	4.51	322	*e*Sn	Sn	11 44 44.6	-2.3
PBDV				A	A	11 44 52.1	
	4.4nm,0.6s						
EGRO	El Granado	4.53	328	Pn	Pn	11 43 55.0	0.0
	1.0nm,0.1s,SNR=4.6						
EGRO				Sn	Sn	11 44 44.8	-2.4
	1.8nm,0.2s,SNR=7.9						
PVAQ	Vaqueiros	4.53	325	Pn	Pn	11 43 55.5	+0.4
PVAQ				Sn	Sn	11 44 44.7	-2.6
	4.4nm,0.5s						
PVAQ	Vaqueiros	4.53	325	*e*Pn	Pn	11 43 55.5	+0.4
PVAQ				*e*Sn	Sn	11 44 44.7	-2.6
PVAQ				A	A	11 44 52.8	
	4.4nm,0.5s						
PCVE	Castro Verde	4.87	324	Pn	Pn	11 43 59.9	+0.2
PCVE	Castro Verde	4.87	324	*e*Pn	Pn	11 43 59.9	+0.2
PTEO	Sao Teotonio	5.16	319	Pn	Pn	11 44 04.2	+0.5
PTEO				Sn	Sn	11 45 00.2	-2.6
	3.8nm,0.6s						
PTEO	Sao Teotonio	5.16	319	*e*Pn	Pn	11 44 04.2	+0.5
PTEO				*e*Sn	Sn	11 45 00.2	-2.6
PTEO				A	A	11 45 05.0	
	7.7nm,0.6s						
EBAD	Badajoz	5.42	338	Pn	Pn	11 44 07.5	+0.2
	0.7nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	11 45 07.1	-2.2
	1.1nm,0.2s,SNR=7.9						
PNCL	Nicolau / Gran	5.48	324	Pn	Pn	11 44 08.4	+0.3
PNCL				Sn	Sn	11 45 07.6	-3.2
	1.9nm,0.4s						
PNCL	Nicolau / Gran	5.48	324	*e*Pn	Pn	11 44 08.4	+0.3
PNCL				*e*Sn	Sn	11 45 07.6	-3.2
PNCL				A	A	11 45 11.6	
	1.9nm,0.4s						
PAB	San Pablo	5.80	1	Sn	Sn	11 45 19.1	+0.5
	0.1nm,0.1s,SNR=7.9						
PMTG	Montargil	6.13	331	Pn	Pn	11 44 17.2	+0.1
PMTG				Sn	Sn	11 45 25.4	-1.4
PMTG	Montargil	6.13	331	*e*Pn	Pn	11 44 17.2	+0.1
PMTG				*e*Sn	Sn	11 45 25.4	-1.4

BJI ***09*** *11:49:02.5±0.0, 11°.98S×118°.85E, h15^{km}, mB5.0/26, mb4.6/35, Ms5.0/5, Ms7 4.7/5*

IDC ***09*** *11:49:05.0±0.5, 11°.26S×119°.28E, h0^{km}, mb4.3/23, mb1 4.5/28, mb1mx4.3/58, mbtmp4.4/28, ML4.7/5, MS3.7/9, Ms1 3.6/9, ms1mx3.3/43, Error ellipse: s-maj=19.8km s-min=12.4km az=75.0*

NEIC ***09*** *11:49:07.8±2.3, 11°.44S±0°.06×119°.08E±0°.06, h21^{km}±3^{km}, mb4.7/26, Error ellipse: s-maj=9.7km s-min=7.9km az=51.0*

DJA ***09*** *11:49:08.4±0.8, 11°S±2°×11°9E±°, h18^{km}±7^{km}, M5.1/39, mb5.2/39, mB5.5/20, MLv5.2/20, Mw(mB)5.0/20*

ISC 09 11:49:06.4±0.3**, 11°.42S**±0°.05×**119°.13E**±0°.04**, h10**^{km}**, n157,** σ**1^{s}81**/159**, mb4.6**/42**, MS4.2**/6**, South of Sumba**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	Waikabubak, Su	1.79	8	P	Pn	11 49 38.2	+0.8
WBSI				S	Sn	11 49 59.6	-0.6
BASI	Baing, Sumba	1.86	50	P	Pn	11 49 38.2	-0.2
BASI				S	Sn	11 50 00.3	-1.6
WSI	Waingapu	2.09	34	P	Pn	11 49 44.0	+2.5
PLAI	Plampang	2.90	333	P	Pn	11 49 53.3	+0.7
PLAI				S	Sn	11 50 26.3	-1.3
EDFI	Ende, Flores	3.66	44	P	Pn	11 50 03.3	0.0
EDFI				S	Sn	11 50 43.5	-3.1
MMRI	Maumere	4.13	48	P	Pn	11 50 09.4	-0.2
MMRI				S	Sn	11 50 54.3	-3.7
MMRI	Maumere	4.13	48		Pn	11 50 09.6	0.0
MMRI				Sn	Sn	11 50 53.3	-4.7
IGBI	Denpasar	4.69	303	P	Pn	11 50 16.4	-0.9
IGBI				S	Sn	11 51 07.0	-4.9
DNP	Denpasar	4.72	305	P	Pn	11 50 16.6	-1.1
DNP				S	Sn	11 51 09.3	-3.3
SRBI	Singaraja	5.08	310	P	Pn	11 50 22.7	0.0
	1.8nm8µm342nm,0.4s						
SOEI	Soe	5.32	72	P	Pn	11 50 28.0	+1.9
	2.1nm4µm494nm,0.7s						
SOEI	Soe	5.32	72		Pn	11 50 27.7	+1.6
JAGI	Jajag, Banyuwa	5.71	300	P	Pn	11 50 29.6	-1.7
	2.9nm13µm504nm,0.5s						
JAGI	Jajag, Banyuwa	5.71	300		Pn	11 50 28.0	-3.4
JAGI				Sn	Sn	11 51 31.5	-5.5
BKSI	Bulukumba	6.14	9	P	Pn	11 50 39.4	+2.2
	1.1nm4µm212nm,0.4s						
KAPI	Kappang	6.39	6	Pn	Pn	11 50 40.2	-0.5
	18nm,0.3s,baz=175,slow=5.7,SNR=55						
KAPI				Sn	Sn	11 51 50.2	-3.7
	14nm,0.3s,baz=210,slow=22,SNR=6.3						
KAPI				LR	LR	11 52 40.2	
	comp=Z,153nm,19.4s,baz=160,slow=35						
GMJI	Gumukmas	6.41	299	P	Pn	11 50 40.2	-0.8
KMMI	Kalianget	6.69	310	P	Pn	11 50 44.6	-0.2
	0.9nm4µm206nm,0.6s						
BBSI	Bau Bau	6.81	30	P	Pn	11 50 49.4	+3.0
	0.1nm304nm20nm,0.8s						
BNSI	Bone	7.04	8	P	Pn	11 50 53.5	+3.9
	0.3nm1µm66nm,0.5s						
SPSI	Sidrap Palu	7.43	5	P	Pn	11 50 58.9	+3.9
	0.2nm55nm,0.8s						
GRJI	Gresik	7.94	304	P	Pn	11 51 02.5	+0.5
	0.4nm90nm,0.9s						
PWJI	Pagerwojo	7.97	294	P	Pn	11 51 01.9	-0.4
	0.9nm3µm99nm,0.4s						
TTSI	Tana Toraja	8.35	5	P	Pn	11 51 14.0	+6.4
PCJI	Pacitan	8.46	292	P	Pn	11 51 08.2	-0.9
	3µm209nm,0.9s						
KBKI	Kotabaru	8.58	340	P	Pn	11 51 12.9	+2.1
	36nm,0.5s						
WOJI	Wonogiri, Jawa	8.83	293	P	Pn	11 51 14.5	+0.2
	68nm,0.8s						
FITZ	Fitzroy Crossi	9.15	137	Pn	Pn	11 51 17.2	-1.4
	10nm,0.3s,baz=324,slow=8.7,SNR=192						
FITZ				Sn	Sn	11 52 54.1	-7.7
	15nm,0.3s,baz=257,slow=16,SNR=11						
FITZ				LR	LR	11 55 10.7	
	comp=Z,590nm,18.5s,baz=280,slow=40						
FITZ	Fitzroy Crossi	9.15	137		Pn	11 51 17.8	-0.9
UGM	Wanagama	9.17	292	P	Pn	11 51 18.1	-0.8
	242nm,0.5s						
UGM	Wanagama	9.17	292		Pn	11 51 18.0	-0.9
SMRI	Semarang	9.61	296	Pn	Pn	11 51 24.6	-0.3
PSAD1	Pilbara Seismi	10.00	176	Pn	Pn	11 51 28.3	-1.9
PSAC2	Pilbara Seismi	10.11	176		Pn	11 51 29.7	-2.1
PSA00	Pilbara Seismi	10.12	176		Pn	11 51 29.8	-2.0
PSA00	Pilbara Seismi	10.12	176	Pn	Pn	11 51 29.2	-2.7
KNRA	Kununurra	10.28	115		Pn	11 51 33.1	-1.0
KPJI	Karang Pucung	10.85	291	P	Pn	11 51 43.2	+1.4
	116nm,0.5s						
CISI	Cisompet, Garu	11.80	288		Pn	11 51 51.9	-3.0
MTN	Manton Dam	11.83	98		Pn	11 51 54.8	-0.5
GIRL	Giralia	12.10	202	Pn	Pn	11 51 57.8	-1.2
MRSI	Marisa	12.15	14	P	Pn	11 52 02.4	+2.8
	8µm193nm,0.5s						
CNJI	Cibinong	12.52	288	P	Pn	11 52 03.2	-1.6
	40nm,0.6s						
FAKI	Fak Fak	15.51	58	P	Pn	11 52 46.6	+1.2
	73nm,0.7s						
FAKI	Fak Fak	15.51	58	P	Pn	11 52 47.0	+1.5
FAKI				IAmb	IAmb	11 52 48.4	
	comp=Z,47nm,0.7s						
SIJI	Sorong	15.97	50	Pn	Pn	11 52 47.0	-4.4
	comp=Z,0.9nm,0.3s,baz=242,slow=8.1,SNR=6.4						
SIJI				Sn	Sn	11 55 45.5	-3.3
	comp=Z,0.4nm,0.3s,baz=315,slow=23,SNR=2.2						
SIJI				LR	LR	11 59 18.1	
	comp=Z,165nm,19.0s,baz=119,slow=39						
LWLI	Liwa	16.20	292	P	P	11 53 06.7	+9.0
MDSI	Maura Dua	16.32	294	P	Pn	11 52 58.2	+2.4
	comp=Z,674nmcomp=Z,51nm,1.3s						
WB0	Warramunga Arr	16.88	121	P	Pn	11 52 59.8	-3.1
WRA	Warramunga Arr	16.91	122	Pn	Pn	11 53 00.6	-2.8
	comp=Z,2.2nm,0.3s,baz=291,slow=13,SNR=48						
WRA				Sn	Sn	11 55 56.6	-15
	comp=Z,2.8nm,0.3s,baz=292,slow=25,SNR=6.0						
WRA				LR	LR	11 59 59.5	
	comp=Z,377nm,19.1s,baz=310,slow=39						
WRA	Warramunga Arr	16.91	122	P	Pn	11 52 59.8	-3.6
WB2	Warramunga Arr	16.92	122	P	Pn	11 53 00.4	-3.1
MNAI	Manna	17.48	292	P	Pn	11 53 06.4	-4.1
MNAI	Manna	17.48	292	Pn	Pn	11 53 07.4	-3.0
MORW	Morawa	17.79	189	P	Pn	11 53 12.4	-1.9
MORW				IAmb	IAmb	11 53 24.9	
	comp=Z,99nm,0.8s						
KSI	Kapahiang	18.10	294	P	Pn	11 53 17.1	-1.2
	comp=Z,22µmcomp=Z,287nm,0.6s						
AS31	Alice Springs	18.60	133	P	P	11 53 24.9	+0.9
ASAR	Alice Springs	18.60	133	P	P	11 53 24.6	+0.5
	comp=Z,4.5nm,0.3s,baz=316,slow=15,SNR=196						
ASAR				S	Sn	11 56 39.6	-13
	comp=Z,1.2nm,0.3s,baz=313,slow=25,SNR=7.1						
ASAR				LR	LR	12 00 44.7	
	comp=Z,222nm,19.1s,baz=302,slow=38						
ASAR	Alice Springs	18.60	133	P	P	11 53 24.2	+0.1
DAV	Davao City (W)	19.46	20	LR	LR	12 00 55.7	
	comp=Z,97nm,20.7s,baz=198,slow=37						
KRJI	Kerinci	19.82	297	P	Pn	11 53 41.4	+2.3
	comp=Z,7µmcomp=Z,430nm,0.6s						
SDSI	Sungai Dareh	20.43	299	P	P	11 53 45.4	+1.4
	comp=Z,66nm,1.9s						
PPSI	Pulau Pagai	20.81	293	P	P	11 53 49.4	+1.2
	comp=Z,98nm,0.7s						
FORT	Forrest	20.97	158	P	P	11 53 51.4	+1.6
PDSI	Padang	21.27	298	P	P	11 53 56.5	+3.3
	comp=Z,758nmcomp=Z,42nm,0.5s						
BKNI	Bangkinang	21.43	302	P	P	11 54 04.0	+9.2
NWAO	Narrogin (SRO)	21.48	184	P	P	11 53 57.9	+2.7
	comp=Z,48nm,0.8s,baz=16,slow=12,SNR=24						
NWAO				S	S	11 57 39.2	-14
	comp=Z,40nm,0.5s,baz=289,slow=14,SNR=6.0						
NWAO				LR	LR	12 01 56.1	
	comp=Z,188nm,20.5s,baz=355,slow=36						
NWAO	Narrogin (SRO)	21.48	184	P	P	11 53 57.4	+2.2
NWAO				IAmb	IAmb	11 54 02.7	
	comp=Z,43nm,0.8s						
SISI	Saibi	22.27	295	P	P	11 54 06.1	+2.2
	comp=Z,32nm,0.6s						
PBSI	Pulau Batu	23.58	297	P	P	11 54 19.7	+2.2
	comp=Z,38nm,0.8s						
RPSI	Rantau Prapat	24.50	304	P	P	11 54 26.4	+0.3
KCSI	Kotacane, Aceh	25.91	304	P	P	11 54 38.1	-0.9
	comp=Z,37nm,1.6s						
TPTI		26.25	302	P	P	11 54 42.2	+0.2
BBOO	Buckleboo	26.37	146	P	P	11 54 43.3	+0.3
BBOO				IAmb	IAmb	11 55 00.5	
	comp=Z,10nm,0.9s						
STKA	Stephens Creek	29.05	138	P	P	11 55 07.8	+0.9
	comp=Z,1.5nm,0.7s,baz=327,slow=8.7,SNR=5.7						
STKA				LR	LR	12 07 30.7	
	comp=Z,191nm,20.0s,baz=325,slow=38						
STKA	Stephens Creek	29.05	138	P	P	11 55 07.9	+0.9
PBKT	Sadao Pong	33.10	327	P	P	11 55 42.2	-0.6
PBKT				IAmb	IAmb	11 55 51.4	
	comp=Z,4.0nm,0.6s						
CMAR	Chiang Mai Arr	35.75	326	P	P	11 56 05.6	-0.1
	comp=Z,0.8nm,0.3s,baz=155,slow=6.5,SNR=5.2						
CMAR				PcP	PcP	11 58 35.6	+1.8
	comp=Z,0.5nm,0.3s,baz=169,slow=1.8,SNR=3.4						
NJ2	Nanjing	43.23	360	*e*P	P	11 57 09.2	+1.3
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
CD2	Chengdu	44.60	341	P	P	11 57 19.3	+0.2
CD2				pmax	pmax		
	comp=Z,40nm,0.5s						
H08S2	Diego Garcia H	46.10	270	T	T	12 48 22.3	
	baz=95,slow=76,SNR=6.4						
H08S3	Diego Garcia H	46.12	270	T	T	12 48 10.7	
	baz=95,slow=76,SNR=14						
H08S1	Diego Carcia H	46.12	270	T	T	12 48 05.5	
	baz=95,slow=76,SNR=6.5						
ODAN	Odare	48.97	321	*e*P	P	11 57 52.8	-0.8
	comp=Z,10nm,0.3s						
TAPN	Taplejung	49.13	322	*e*P	P	11 57 54.3	-0.6
KSRS	Korea Array	49.31	9	P	P	11 57 55.4	-0.2
	comp=Z,0.8nm,0.6s,baz=184,slow=9.5,SNR=3.3						
LZH	Lanzhou	49.40	344	*e*P	P	11 57 57.4	+0.8
LZH				pP	pwP	11 58 05.4	+0.3
LZH				sP	sP	11 58 09.7	+11
LZH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
RAMN	Ramite	49.52	321	*e*P	P	11 57 56.6	-1.2
JIRN	Jiri	50.28	321	*e*P	P	11 58 02.8	-0.9
	comp=Z,21nm,0.5s						
GUN	Gumba	50.65	321	*e*P	P	11 58 05.8	-0.7
	comp=Z,37nm,0.9s						
DMN	Daman	50.91	320	*e*P	P	11 58 07.5	-0.9
MJAR	Matsushiro Arr	50.98	20	P	P	11 58 06.3	-2.2
	comp=Z,2.3nm,0.8s,baz=190,slow=7.7,SNR=6.1						
BJI	Beijing	51.27	357	P	P	11 58 11.6	+1.1
BJI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
DANN	Dangsing	52.28	320	*e*P	P	11 58 18.0	-0.7
	comp=Z,37nm,0.5s						
HHC	Hu-ho-hao-te	52.47	353	*e*P	P	11 58 22.0	+2.4
HHC				pmax	pmax		
	comp=Z,280nm,5.0s						
GTA	Gaotai	53.67	341	*e*P	P	11 58 28.7	+0.2
GTA				pP	pwP	11 58 36.3	-0.7
GTA				sP	sP	11 58 39.3	+8.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,60nm,7.0s						
GTA				LR	LR		
	comp=Z,160nm,17.8s						
GTA				LR	LR		
	comp=Z,140nm,16.2s						
GTA				LR	LR		
	comp=Z,120nm,16.2s						
OXZ	Oxford	55.53	135	P	P	11 58 41.6	-0.3
OXZ				IAmb	IAmb	11 58 51.9	
	comp=Z,11nm,1.1s						
USRK	Ussuriysk Ar.	56.58	11	P	P	11 58 48.8	-0.4
	comp=Z,1.7nm,0.6s,baz=200,slow=6.2,SNR=5.2						
ASAJ	Asahikawa	59.25	20	P	P	11 59 07.0	-1.1
	comp=Z,11nm,0.9s,baz=214,slow=8.5,SNR=8.6						
JKA	Kamikawa-asahi	59.25	20	P	P	11 59 07.0	-1.1
ULN	Ulaanbaatar	59.99	351	P	P	11 59 13.3	0.0
ULN				IAmb	IAmb	11 59 22.6	
	comp=Z,3.5nm,0.7s						
SONM	Songino Array	60.07	350	P	P	11 59 13.5	-0.2
	comp=Z,2.7nm,0.5s,baz=169,slow=8.2,SNR=30						
SONM	Songino Array	60.07	350	P	P	11 59 13.0	-0.8
WMQ	Urumqi	61.98	335	*e*P	P	11 59 27.4	+0.7
WMQ				pP	pwP	11 59 35.1	-0.2
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,92nm,5.9s						
WMQ				LR	LR		
	comp=Z,160nm,10.9s						
WMQ				LR	LR		
	comp=Z,240nm,7.7s						
WMQ				LR	LR		
	comp=Z,220nm,7.1s						
TLY	Talaya	64.26	349	P	P	11 59 42.8	+1.1
	comp=Z,1.2nm,0.6s,baz=180,slow=21,SNR=3.0						
TLY	Talaya	64.26	349	IAmb	IAmb	11 59 51.7	
	comp=Z,2.4nm,0.9s						
KSH	Kashi	64.62	324	P	P	11 59 46.6	+2.2
KSH				sP	pwP	11 59 57.4	+4.3
KSH				PcS		12 04 23.4	
KSH				S	S	12 08 22.6	-1.9
KSH				SS	SS	12 12 38.4	+2.8
KSH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,220nm,4.5s						
KSH				LR	LR		
	comp=Z,540nm,12.9s						
KSH				LR	LR		
	comp=Z,290nm,9.8s						
KSH				LR	LR		
	comp=Z,350nm,12.7s						
MK31	Makanchi Array	66.66	333	P	P	11 59 55.9	-1.5
MK31				IAmb	IAmb	12 00 06.1	
	comp=Z,3.6nm,0.8s						
MKAR	Makanchi Array	66.66	333	P	P	11 59 56.4	-0.9
	comp=Z,3.6nm,0.5s,baz=144,slow=6.2,SNR=53						
MKAR	Makanchi Array	66.66	333	P	P	11 59 55.7	-1.6
MAW	Mawson	67.02	200	LR	LR	12 28 07.0	
	comp=Z,127nm,18.2s,baz=68,slow=35						
AAK	Ala-Archa	67.53	326	P	P	12 00 02.9	-0.3
	comp=Z,1.4nm,0.5s,baz=153,slow=16,SNR=4.8						
AAK	Ala-Archa	67.53	326	IAmb	IAmb	12 00 13.9	
	comp=Z,6.5nm,1.1s						
WSAR	Wadi Sarin	68.47	301	P	P	12 00 10.0	+0.7
	comp=Z,1.6nm,0.6s,baz=123,slow=9.3,SNR=2.4						
SOCY	Socotra	68.79	288	P	P	12 00 08.1	-3.4
OPO	Ambohidratompo	69.47	254	P	P	12 00 18.2	+2.3
	comp=Z,3.4nm,0.9s,baz=86,slow=15,SNR=2.7						
VNDA	Vanda	69.59	171	P	P	12 00 16.6	+1.3
	comp=Z,2.1nm,0.8s,baz=304,slow=11,SNR=4.3						
KURBB	Kurchatov Arra	71.18	334	P	P	12 00 24.4	-0.9
	comp=Z,1.3nm,0.6s,baz=139,slow=5.7,SNR=19						
KURK	Kurchatov	71.21	334	P	P	12 00 25.7	+0.1
KURK				IAmb	IAmb	12 00 34.9	
	comp=Z,14nm,1.5s						
ZAA0	Zalesovo Array	71.33	339	P	P	12 00 24.5	-1.7
ZAA0				IAmb	IAmb	12 00 26.3	
	comp=Z,3.8nm,0.6s						
ZALV	Zalesovo Beam	71.33	339	P	P	12 00 24.6	-1.6
	comp=Z,4.6nm,0.6s,baz=146,slow=4.8,SNR=17						
ZALV	Zalesovo Beam	71.33	339	P	P	12 00 24.1	-2.1
PETK	Petropavlovsk-	72.23	23	P	P	12 00 31.0	-0.6
	comp=Z,3.3nm,1.0s,baz=146,slow=8.2,SNR=4.5						
PETK	Petropavlovsk-	72.23	23	P	P	12 00 31.5	-0.1
MA2	Magadan	75.20	16	P	P	12 00 48.1	-0.8
	comp=Z,3.7nm,0.6s,baz=215,slow=8.9,SNR=4.1						
MA2	Magadan	75.20	16	P	P	12 00 49.2	+0.3
GEYT	Alibeck	75.20	314	P	P	12 00 49.1	-0.4
	comp=Z,1.0nm,0.4s,baz=126,slow=11,SNR=3.2						
BVAR	Borovoye Array	76.48	332	P	P	12 00 55.7	-0.7
	comp=Z,1.1nm,0.6s,baz=123,slow=5.5,SNR=5.7						
SEY	Seymchan	78.45	15	P	P	12 01 06.5	-0.7
	comp=Z,4.3nm,0.3s,baz=221,slow=5.1,SNR=28						
QSPA	South Pole Qui	78.59	180	P	P	12 01 08.4	+0.2
QSPA				IAmb	IAmb	12 01 09.8	
	comp=Z,13nm,1.4s						
ABKAR	Akbulak array	79.60	325	P	P	12 01 13.3	-0.4
AKTO	Aktyubinsk	81.27	325	P	P	12 01 22.8	0.0
	comp=Z,2.9nm,0.6s,baz=98,slow=8.8,SNR=14						
TIXI	Tiksi	83.14	3	P	P	12 01 30.9	-1.1
	comp=Z,2.1nm,0.4s,baz=327,slow=0.8,SNR=4.0						
TIXI	Tiksi	83.14	3	P	P	12 01 30.6	-1.5
TIXI				IAmb	IAmb	12 01 49.5	
	comp=Z,5.1nm,0.9s						
YKA	Yellowknife Ar	116.33	25	PKP	PKPdf	12 07 49.0	-0.9
	comp=Z,0.3nm,0.6s,baz=308,slow=1.6,SNR=6.0						
TORD	Torodi Ar. Bea	118.98	279	PKP	PKPdf	12 07 56.0	-0.4
	comp=Z,0.8nm,0.5s,baz=79,slow=1.4,SNR=7.9						
PLCA	Paso Flores	127.34	171	PKP	PKPdf	12 08 11.6	-0.3
	comp=Z,2.3nm,1.0s,baz=194,slow=4.9,SNR=4.1						
WCI	Wyandotte Cave	144.95	36		PKPab	12 08 43.3	-0.2
W45A	Hickory Valley	145.09	43		PKPbc	12 08 43.9	-0.2
OXF	Oxford	145.31	44		PKPbc	12 08 44.5	-0.3
WVT	Waverly	145.39	40		PKPbc	12 08 44.6	-0.4
J57A	Williamstown	145.54	20		PKPdf	12 08 45.0	-0.2
NCB	Newcomb	145.58	17		PKPdf	12 08 45.7	+0.5
PLAL	Pickwick Lake	145.93	42		PKPdf	12 08 46.0	-0.2
T49A	Edmonton	146.16	37		PKPdf	12 08 47.0	+0.5
V48A	Smith Brothers	146.27	40		PKPdf	12 08 47.2	+0.5
CLTN	Cedars of Leba	146.35	39		PKPdf	12 08 48.1	+1.3
U49A	Red Boiling Sp	146.41	38		PKPdf	12 08 48.0	+1.1
X48A	Hartselle	146.92	42		PKPdf	12 08 48.8	+1.0
W50A	Signal Mountai	147.56	39		PKPdf	12 08 51.2	+2.3
LRAL	Lakeview Retre	147.80	44		PKPdf	12 08 52.1	+2.8
GO01	Chusmiza	148.04	165		PKPbc	12 08 54.5	+0.7
Z50A	Ashland	148.39	43		PKPdf	12 08 53.0	+2.7
MNMC	Minye Minye	148.45	164		PKPdf	12 08 50.0	-1.1
V53A	Saluda	148.73	36		PKPdf	12 08 54.4	+3.6
BDFB	Brasilia	150.25	206	PKPbc	PKPbc	12 08 59.6	+0.6
	comp=Z,3.8nm,0.5s,baz=166,slow=4.2,SNR=8.7						
BDFB	Brasilia	150.25	206		PKPbc	12 08 60.0	+1.0

IDC ***09*** *11:57:45.6±1.4, 51°.70N×175°.95W, h0^{km}, mb3.6/5, mb1 3.9/7, mb1mx3.4/68, mbtmp3.7/7, ML3.7/2, MS3.5/2, Ms1 3.5/2, ms1mx2.9/48, Error ellipse: s-maj=68.6km s-min=25.0km az=140.0*

AEIC ***09*** *11:57:51.2±2.6, 51°.69N±0°.04×175°.64W±0°.05, h40^{km}±7^{km}, ML3.7/29, mb3.8/22(NEIC), Error ellipse: s-maj=7.0km s-min=3.1km az=205.0*

NEIC ***09*** *11:57:52.3±2.1, 51°.7N±0°.1×175°.68W±0°.07, h41^{km}±10^{km}, Error ellipse: s-maj=17.2km s-min=5.0km az=167.0*

ISC 09 11:57:52.5±0.9**, 51°.66N**±0°.10×**175°.68W**±0°.04**, h47**^{km}**, n71,** σ**1^{s}09**/68**, mb3.7**/8**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSMY	Great Sitkin M	0.45	329		Pn	11 58 02.4	-0.6
GSTD	Great Sitkin T	0.49	324		Pn	11 58 02.9	-0.6
GSTD					Sn	11 58 11.4	0.0
GSTR	Great Sitkin T	0.49	332		Pn	11 58 03.1	-0.4
ETKA	Kagalaska Isla	0.49	294		Pn	11 58 02.4	-1.1
ETKA					Sn	11 58 10.9	-0.5
ADAG	Mount Adagdak	0.65	300		Pn	11 58 05.3	-0.2
ADK	Adak	0.66	290		Pn	11 58 04.5	-1.2
KIRH	Kanaga Island	0.91	286		Pn	11 58 08.2	-0.7
KIKV	Kanaga Island	0.95	284		Pn	11 58 08.6	-0.9
KIMD	Kanaga Island	0.97	276		Pn	11 58 08.5	-1.2
KICM	Kanaga Island	0.97	286		Pn	11 58 08.8	-1.0
ATKA	Atka Island	1.07	59		Pn	11 58 09.7	-1.4
ATKA	Atka Island	1.07	59		Sn	11 58 23.4	-1.4
KOKL	Mount Kliuchef	1.13	54		Pn	11 58 11.4	-0.6
KOFP	Korovin Flat P	1.16	57		Pn	11 58 11.4	-1.0
KOSE	Korovin Southe	1.22	55		Pn	11 58 13.0	-0.2
TAPA	Tanaga Point A	1.33	277		Pn	11 58 14.2	-0.6
TAFP	Tanaga Falls P	1.45	280		Pn	11 58 16.0	-0.3
TAFP					Sn	11 58 34.6	+0.4
TASE	Tanaga Southea	1.47	278		Pn	11 58 16.4	-0.3
NIKH	Nikolski High	4.39	70		Pn	11 58 57.0	+0.4
MGOD	Makushin Gods	5.76	65		Pn	11 59 15.3	-0.1
MSW	Makushin Switc	5.85	64		Pn	11 59 17.2	+0.6
MNAT	Makushin Natee	5.90	64		Pn	11 59 18.0	+0.7
UNV	Unalaska Valle	5.99	65		Pn	11 59 20.4	+2.0
SPIA	Saint Paul Isl	6.37	28		Pn	11 59 23.0	-0.7
CNBA	Chernabura Isl	10.15	66	Pn	Pn	12 00 15.6	+0.2
GAMB	Gambell	12.33	8	Pn	Pn	12 00 46.1	+1.0
ANM	Nome	14.01	19	P	P	12 01 13.7	-1.1
OHAK	Old Harbor	14.13	58	P	P	12 01 15.1	-1.1
KDAK	Kodiak Island	14.64	56	Pn	Pn	12 01 15.5	-1.0
	0.3nm,0.3s,baz=301,slow=5.9,SNR=11						
KDAK	Kodiak Island	14.64	56		Pn	12 01 14.6	-1.9
KDAK				P	P	12 01 20.9	-0.9
CNPM	China Poot	15.83	51	P	P	12 01 33.5	-1.5
BRLK	Bradley Lake	16.07	50	P	P	12 01 36.1	-1.6
PETK	Petropavlovsk-	16.29	286	LR	LR	12 08 36.4	
	comp=Z,24nm,18.2s,baz=62,slow=40						
SKT	Skwentna	16.66	42	P	P	12 01 45.1	+0.9
SKT				IAmb	IAmb	12 01 59.1	
	comp=Z,9.6nm,1.3s						
KTH	Kantishna Hill	17.68	38	P	P	12 01 56.7	+1.2
TRF	Thorofare Moun	17.87	39	P	P	12 02 00.0	+2.3
IMAR	Indian Mountai	18.14	29	P	Pn	12 02 02.2	+1.6
RND	Reindeer	18.42	40	P	Pn	12 02 03.7	-0.4
RND				IAmb	IAmb	12 02 07.6	
	comp=Z,5.0nm,0.6s						
MLY	Manley	18.54	34	P	Pn	12 02 06.3	+0.7
MLY				IAmb	IAmb	12 02 16.3	
	comp=Z,9.9nm,1.5s						
DHY	Denali Highway	18.88	42	P	Pn	12 02 09.3	-0.4
DHY				IAmb	IAmb	12 02 13.1	
	comp=Z,4.5nm,0.7s						
WRH	Wood River Hil	19.22	38	P	Pn	12 02 14.3	+0.7
CCB	Clear Creek Bu	19.41	37	P	Pn	12 02 14.8	-1.1
HDA	Harding Lake	19.63	38	P	Pn	12 02 17.5	-0.9
HDA				IAmb	IAmb	12 02 19.5	
	comp=Z,3.1nm,0.6s						
IL31		19.82	38	P	Pn	12 02 20.1	-0.6
IL31				IAmb	IAmb	12 02 38.0	
	comp=Z,7.1nm,1.4s						
ILAR	Eielson Array	19.82	38	P	Pn	12 02 20.0	-0.7
	comp=Z,0.3nm,0.3s,baz=226,slow=9.7,SNR=16						
ILAR	Eielson Array	19.82	38	P	Pn	12 02 21.0	+0.3
RIDG	Independent Ri	20.19	41	P	P	12 02 21.5	-1.4
RIDG				IAmb	IAmb	12 02 29.8	
	comp=Z,4.4nm,0.8s						
DOT	Dot Lake	20.48	42	P	P	12 02 25.6	-0.4
SCRK	Sand Creek	20.63	41	P	P	12 02 27.5	-0.2
TOLK	Toolik Lake Re	21.12	27	P	P	12 02 33.9	+1.0
BMAR	Burnt Mountain	21.94	32	P	P	12 02 39.2	-2.5
EGAK	Eagle	22.06	40	P	P	12 02 43.4	+0.4
EGAK				IAmb	IAmb	12 02 51.9	
	comp=Z,6.7nm,1.1s						
DAWY	Dawson	22.57	43	P	P	12 02 48.6	+0.1
DAWY				IAmb	IAmb	12 02 56.9	
	comp=Z,5.1nm,1.4s						
EPYK	Eagle Plains	24.33	38	P	P	12 03 07.4	+1.9
INK	Inuvik	26.11	35	P	P	12 03 19.9	-1.6
	comp=Z,0.5nm,0.4s,baz=264,slow=9.3,SNR=3.0						
INK	Inuvik	26.11	35	P	P	12 03 19.7	-1.8
INK				IAmb	IAmb	12 03 25.5	
	comp=Z,5.3nm,1.5s						
C36M	Paulatuk	29.70	34	P	P	12 03 55.8	+2.4
C36M				IAmb	IAmb	12 04 01.2	
	comp=Z,2.6nm,1.4s						
YKA	Yellowknife Ar	33.62	47	P	P	12 04 27.7	-0.2
	comp=Z,0.3nm,0.8s,baz=283,slow=8.1,SNR=3.9						
YKA				PcP	PcP	12 07 07.0	0.0
	comp=Z,0.2nm,0.6s,baz=278,slow=3.4,SNR=5.9						
H11N2	WAKE ISLAND Hy	34.68	210	T	T	12 41 22.5	
	baz=18,slow=76,SNR=50						
H11N3	WAKE ISLAND Hy	34.69	210	T	T	12 41 16.6	
	baz=18,slow=76,SNR=42						
H11N1	WAKE ISLAND Hy	34.70	210	T	T	12 41 13.0	
	baz=18,slow=76,SNR=49						
H11S1	WAKE ISLAND Hy	35.89	209	T	T	12 42 54.2	
	baz=18,slow=76,SNR=24						
H11S2	WAKE ISLAND Hy	35.90	209	T	T	12 42 50.7	
	baz=18,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	35.90	209	T	T	12 42 48.5	
	baz=18,slow=76,SNR=16						
NEW	Newport	36.95	72	P	P	12 04 58.2	+1.3
	comp=Z,0.8nm,0.5s,baz=287,slow=14,SNR=3.8						
NEW	Newport	36.95	72	P	P	12 04 58.5	+1.6
NEW				IAmb	IAmb	12 05 05.7	
	comp=Z,3.1nm,1.4s						
PDAR	Pinedale Array	44.36	74	P	P	12 05 58.4	+0.2
	comp=Z,0.6nm,0.5s,baz=303,slow=3.5,SNR=7.6						
PDAR	Pinedale Array	44.36	74	P	P	12 05 58.0	-0.2
DZM	Mont Dzumac	75.07	197	LR	LR	12 38 58.6	
	comp=Z,207nm,19.8s,baz=35,slow=33						
ASAR	Alice Springs	87.04	225	P	P	12 10 32.4	-0.4
	comp=Z,0.4nm,0.8s,baz=22,slow=6.1,SNR=3.5						
ASAR	Alice Springs	87.04	225	P	P	12 10 32.7	-0.1

THE ***09*** *11:58:01.8, 38°.41N×22°.45E, h16^{km}±1^{km}, ML2.4/5, Error ellipse: s-maj=1.3km s-min=0.4km az=295.0*

ATH 09 11:58:01.8, 38°.41N×**22°.47E, h9**^{km}±3^{km}**, ML2.5**/8**, Error**

ellipse: s-maj=3.6km s-min=0.7km az=339.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLFA	Delphi	0.08	16	P	Pg	11 58 03.7	-0.2
DLFA				AML	AML	11 58 05.3	
	comp=E,7331µm,0.1s						
DLFA				S	Sg	11 58 05.3	-0.2
DLFA				AML	AML	11 58 05.4	
	comp=N,3647µm,0.1s						
KALE	Kalithea	0.26	267	P	Pg	11 58 06.9	-0.1
KALE				S	Sg	11 58 11.2	+0.7
KALE	Kalithea	0.26	267	P	Pg	11 58 06.9	-0.1
KALE				S	Sg	11 58 10.9	+0.4
KALE				AML	AML	11 58 13.2	
	comp=E,958µm,0.3s						
KALE				AML	AML	11 58 13.9	
	comp=N,1196µm,0.4s						
TRIZ	Trizonia	0.31	263	P	Pg	11 58 07.8	-0.2
TRIZ				S	Sg	11 58 12.8	+0.6
	comp=N,482nm,0.3s						
TRIZ	Trizonia	0.31	263	P	Pg	11 58 07.8	-0.2
TRIZ				S	Sg	11 58 12.9	+0.7
SERG	Sergoula	0.32	272	P	Pg	11 58 08.0	-0.2
SERG				S	Sg	11 58 13.2	+0.7
	comp=N,858nm,0.2s						
SERG	Sergoula	0.32	272	P	Pg	11 58 08.0	-0.2
SERG				S	Sg	11 58 13.2	+0.7
SERG				AML	AML	11 58 13.5	
	comp=N,2290µm,0.3s						
SERG				AML	AML	11 58 13.6	
	comp=E,1130µm,0.2s						
AXAR	Agios Charalam	0.39	22	P	Pg	11 58 10.0	+0.6
AXAR				S	Sb	11 58 16.2	-0.8
	comp=E,1µm,0.3s						
AXAR	Agios Charalam	0.39	22	P	Pg	11 58 10.0	+0.6
AXAR				AML	AML	11 58 17.2	
	comp=E,3168µm,0.4s						
AXAR				AML	AML	11 58 19.6	
	comp=N,2299µm,0.2s						
LAKA	Lakka	0.42	247	P	Pg	11 58 09.2	-0.7
KLV	Kalavryta, Ach	0.44	215	P	Pg	11 58 10.1	-0.2
KLV				S	Sg	11 58 16.6	+0.5
KLV	Kalavryta, Ach	0.44	215	P	Pg	11 58 10.1	-0.3
KLV				S	Sg	11 58 16.0	-0.1
ANX	Ano Chora	0.47	294	P	Pg	11 58 10.8	-0.1
ANX				S	Sg	11 58 17.6	+0.5
	comp=N,565nm,0.4s						
ANX	Ano Chora	0.47	294	P	Pg	11 58 10.8	-0.2
ANX				S	Sg	11 58 18.0	+0.9
ANX				AML	AML	11 58 19.5	
	comp=N,1439µm,0.4s						
ANX				AML	AML	11 58 20.5	
	comp=E,793µm,0.4s						
LKR	Lokris	0.48	59	P	Pg	11 58 10.9	-0.2
LKR				S	Sb	11 58 18.9	-0.8
	comp=E,650nm,0.1s						
LKR	Lokris	0.48	59	P	Pg	11 58 10.8	-0.4
LKR				S	Sg	11 58 17.9	+0.4
LKR				AML	AML	11 58 19.6	
	comp=E,1417µm,0.1s						
LKR				AML	AML	11 58 19.6	
	comp=N,1152µm,0.1s						
LTK	Loutraki	0.55	134	P	Pb	11 58 13.2	-0.3
LTK	Loutraki	0.55	134	P	Pb	11 58 13.1	-0.5
LTK				S	Sg	11 58 20.2	+0.7
AGG	Agios Georgios	0.62	350	P	Pg	11 58 13.2	-0.7
AGG	Agios Georgios	0.62	350	P	Pg	11 58 13.1	-0.8
AGG				S	Sg	11 58 21.9	-0.2
VIL2	Platees	0.66	107	P	Pb	11 58 15.1	-0.3
VIL2				S	Sb	11 58 25.1	+0.4
MAKR	Makrakomi, Fth	0.66	337	P	Pg	11 58 14.3	-0.3
MAKR	Makrakomi, Fth	0.66	337	P	Pg	11 58 14.4	-0.1
VILL	Villia	0.71	110	P	Pg	11 58 15.6	+0.2
VILL				S	Sb	11 58 26.3	+0.2
EVR	Evrytania	0.73	315	P	Pg	11 58 15.5	-0.3
EVR	Evrytania	0.73	315	P	Pg	11 58 15.5	-0.3

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*IDC **09** 11:59:09.1±2.6, 37°.31N×72°.23E, h166^{km}±22^{km}, mb3.4/13, mb1 3.4/20, mb1mx3.2/68, mbtmp3.9/20, Error ellipse: s-maj=20.0km s-min=14.1km az=180.0*

*NEIC **09** 11:59:12.0±1.7, 37°.52N±0°.04×72°.19E±0°.09, h187^{km}±5^{km}, mb4.1/14, Error ellipse: s-maj=10.1km s-min=6.5km az=83.0*

*NNC **09** 11:59:18.4±8.3, 38°.04N×72°.26E, h217^{km}±96^{km}, mb3.1, mpv4.0, Error ellipse: s-maj=93.1km s-min=51.5km az=175.0*

ISC 09 11:59:11.8±0.5**, 37°.46N**±0°.04×**72°.19E**±0°.05**, h200**^{km}**, n92,** σ**1^{s}.97**/108**, mb3.9**/17**, 2C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.13	317		Pn	11 59 51.1	-0.7
GAR				Sn	Sn	12 00 18.9	-4.1
CHGR	Chuyangaron	2.67	298		Pn	11 59 57.0	-0.7
CHGR				Sn	Sn	12 00 29.7	-3.9
BTK	Batken	2.81	338		Pn	11 59 59.5	+0.3
BTK				Sn	Sn	12 00 33.3	-3.2
KSH	Kashi	3.61	54	Pn	Pn	12 00 03.3	-5.6
KSH				Sn	Sn	12 00 40.7	-13
CEP	Cherat	3.63	184	P	Pn	12 00 09.6	+0.4
CEP				S	Sn	12 00 53.0	-1.2
KBL	Kabul	3.87	222	Pn	Pn	12 00 12.9	+0.7
KBL				Sn	Sn	12 00 59.3	-0.1
CHCP	Chirah Chowk	3.89	167	P	Pn	12 00 13.5	+1.2
NIL	Nilore	3.90	167		Pn	12 00 13.5	+1.1
NIL				Sn	Sn	12 00 58.8	-1.0
ARSB	Arslanbob	3.91	9	Pn	Pn	12 00 11.0	-1.6
TAS	Tashkent	4.46	331	Pn	Pn	12 00 19.0	-0.3
TAS					Sn	12 01 08.8	-3.7
THW	Thamme Wali	4.67	185	P	Pn	12 00 22.2	+0.2
AML	Almayashu	4.81	14	P	Pn	12 00 23.2	-0.9
	SNR=109						
NRN	Naryn	4.95	35		Pn	12 00 23.5	-2.3
UCH	Uchtor	5.09	20	P	Pn	12 00 26.8	-0.9
	SNR=8.8						
KZA	Kyzart	5.18	26	P	Pn	12 00 27.4	-1.5
	SNR=15						
EKS2	Erkin-Say	5.34	13	P	Pn	12 00 29.9	-0.6
	SNR=15						
AAK	Ala-Archa	5.47	18	P	Pn	12 00 31.9	-0.4
	4.5nm,0.3s,baz=170,slow=7.2,SNR=34						
AAK				S	Sn	12 01 32.9	-3.0
	4.5nm,0.3s,baz=332,slow=23,SNR=29						
AAK	Ala-Archa	5.47	18	P	Pn	12 00 31.7	-0.6
	SNR=7.1						
AAK	Ala-Archa	5.47	18	P	Pn	12 00 31.9	-0.4
	9.3nm,0.5s						
AAK				S	Sn	12 01 31.7	-4.2
	42nm,0.7s						
AAK	Ala-Archa	5.47	18		Pn	12 00 32.1	-0.1
AAK					Sn	12 01 32.6	-3.3
SARP	Sargodha	5.54	176	P	Pn	12 00 32.6	-0.5
KBK	Karagaybulak	5.61	21	P	Pn	12 00 34.5	+0.5
	SNR=5.9						
ULHL	Ulahol	5.71	32	P	Pn	12 00 34.3	-1.1
	SNR=17						
KK31	Karatay Array	5.78	348	⇑P	Pn	12 00 35.4	-0.8
	12nm,0.4s,baz=165,slow=12,SNR=293						
KK31				S	Sn	12 01 36.4	-6.6
	19nm,0.2s,baz=161,slow=24,SNR=6.7						
KK31	Karatay Array	5.78	348	Pn	Pn	12 00 35.5	-0.6
KKAR	Karatay Array	5.78	348	Pn	Pn	12 00 35.3	-0.9
KKAR	Karatay Array	5.78	348	Pn	Pn	12 00 35.5	-0.7
THN	Thein Dam	5.79	149	*e*P	Pn	12 00 35.5	-0.8
THN				*e*S	Sn	12 01 38.5	-4.6
BOOM	Boomskoye usch	5.79	29	Pn	Pn	12 00 36.0	-0.5
CHMS	Chumysh	5.87	19	P	Pn	12 00 36.9	-0.4
	SNR=5.3						
KDJ	Kajisay	6.05	38	Pn	Pn	12 00 38.5	-1.3
DHRM	DHARAMSHALA	6.20	146	*e*P	Pn	12 00 41.1	-0.7
DHRM				*e*S	Sn	12 01 48.0	-5.1
DHRM				IAML		12 01 52.6	
	comp=E,224nm,0.7s						
DHRM				IAML		12 01 52.8	
	comp=N,234nm,0.5s						
SMLA	Simla	7.54	145	*e*P	Pn	12 00 58.0	-1.0
SMLA				*e*S	Sn	12 02 19.4	-4.9
SMLA				IAML		12 02 22.2	
	comp=N,61nm,0.6s						
SMLA				IAML		12 02 22.5	
	comp=E,85nm,0.6s						
JOSI	Joshimath	9.21	136	*e*P	Pn	12 01 20.2	-0.8
JOSI				*e*S	Sn	12 02 57.3	-7.0
JOSI				IAML		12 02 58.9	
	comp=N,61nm,0.1s						
JOSI				IAML		12 03 02.2	
	comp=E,79nm,0.2s						
GEYT	Alibeck	11.16	277	P	Pn	12 01 44.8	-1.1
	comp=E,0.9nm,0.3s,baz=92,slow=10,SNR=6.2						
GEYT				S	Sn	12 03 45.0	-5.4
	comp=E,1.6nm,0.3s,baz=84,slow=35,SNR=6.7						
GEYT	Alibeck	11.16	277	Pn	Pn	12 01 45.5	-0.4
GYA0B	ALIBECK ARRAY	11.16	277	Pn	Pn	12 01 44.8	-1.1
MAKZ	Makanchi	11.83	35	Pn	Pn	12 01 53.0	-1.4
MK31	Makanchi Array	11.96	36	Pn	Pn	12 01 55.5	-0.6
MKAR	Makanchi Array	11.96	36	P	Pn	12 01 55.7	-0.4
	comp=E,0.1nm,0.3s,baz=215,slow=12,SNR=5.7						
MKAR	Makanchi Array	11.96	36	Pn	Pn	12 01 57.0	+0.9
MKAR				P	P	12 02 01.9	+1.1
DANN	Dangsing	13.29	130	*e*P	Pn	12 02 11.4	-1.9
	comp=E,31nm,0.2s						
KURBB	Kurchatov Arra	13.92	17	P	P	12 02 21.8	-0.7
	comp=E,0.1nm,0.3s,baz=203,slow=11,SNR=7.2						
KURK	Kurchatov	14.03	17	P	P	12 02 23.7	+0.1
GKN	Gorkha	14.08	128	*e*P	Pn	12 02 22.2	-0.7
	comp=E,35nm,0.2s						
KKN	Kakani	14.64	127	*e*P	Pn	12 02 29.7	-0.1
DMN	Daman	14.65	128	*e*P	Pn	12 02 30.0	-0.1
	comp=E,28nm,0.3s						
AB31	Akbulak array	14.75	327	⇑P	Pn	12 02 30.6	-0.2
	comp=E,1.9nm,0.3s,baz=136,slow=13,SNR=62						
ABKAR	Akbulak array	14.75	327	P	Pn	12 02 30.8	0.0
ABKAR	Akbulak array	14.75	327	P	P	12 02 31.0	-0.8
PKIN	Phulchoki	14.86	128	*e*P	Pn	12 02 32.8	+0.2
PKI	Pulchoki	14.87	128	*e*P	Pn	12 02 33.3	+0.5
GUN	Gumba	14.94	126	*e*P	Pn	12 02 33.5	-0.1
JIRN	Jiri	15.31	126	*e*P	P	12 02 39.1	+0.6
	comp=E,169nm,0.4s						
BVAR	Borovoye Array	15.62	356	P	P	12 02 41.3	+0.1
	comp=E,0.4nm,0.3s,baz=165,slow=12,SNR=10						
BRVK	Borovoye	15.66	356	P	P	12 02 42.2	+0.5
RAMN	Ramite	16.06	127	*e*P	Pn	12 02 48.0	+0.9
	comp=E,34nm,0.4s						
AKTO	Aktyubinsk	16.47	326	P	Pn	12 02 52.2	+0.7
	comp=E,2.4nm,0.3s,baz=125,slow=9.0,SNR=32						
AKTO				S	S	12 05 48.8	-3.8
	comp=E,0.3nm,0.3s,baz=65,slow=20,SNR=5.5						
AKTO	Aktyubinsk	16.47	326	⇓P	Pn	12 02 52.8	+1.3
	comp=E,5.2nm,0.4s						
TAPN	Taplejung	16.52	123	*e*P	Pn	12 02 54.1	+1.5
ODAN	Odare	16.63	125	*e*P	Pn	12 02 55.2	+1.2
ZAA0	Zalesovo Array	18.66	24	P	P	12 03 15.2	+0.8
ZAA0				IAmb	IAmb	12 03 15.8	
	comp=Z,3.8nm,0.7s						
ZALV	Zalesovo Beam	18.66	24	P	P	12 03 15.3	+0.9
	comp=Z,0.8nm,0.3s,baz=222,slow=11,SNR=15						
ZALV	Zalesovo Beam	18.66	24	P	P	12 03 13.8	-0.6
ARU	Arti	21.06	339	P	P	12 03 41.8	+1.7
	comp=Z,0.8nm,0.5s,baz=152,slow=3.4,SNR=5.2						
ARU	Arti	21.06	339	P	P	12 03 41.2	+1.1
ARU				IAmb	IAmb	12 03 50.2	
	comp=Z,9.4nm,1.5s						
SONM	Songino Array	27.01	57	P	P	12 04 37.8	+2.5
	comp=Z,0.3nm,0.3s,baz=260,slow=8.6,SNR=5.7						
SONM	Songino Array	27.01	57	IAmb	IAmb	12 04 38.2	
	comp=Z,0.6nm,1.0s						
FINES	FINESS Array B	37.23	325	P	P	12 06 05.5	+1.9
	comp=Z,4.4nm,0.9s,baz=116,slow=8.8,SNR=6.6						
ARCES	ARCESS Array B	40.63	337	P	P	12 06 33.9	+2.1
	comp=Z,7.3nm,1.1s,baz=112,slow=8.8,SNR=5.0						
ARCES	ARCESS Array B	40.63	337	P	P	12 06 34.2	+2.4
HFS	Hagfors	42.91	321	P	P	12 06 51.8	+1.5
	comp=Z,3.8nm,0.9s,baz=106,slow=11,SNR=5.8						
KLR	Kul'dur	43.81	55	P	P	12 06 59.7	+1.9
	comp=Z,0.7nm,0.5s,baz=284,slow=12,SNR=3.0						
NOA	NORSAR Array B	44.20	322	P	P	12 07 02.3	+1.6
	comp=Z,0.6nm,0.8s,baz=95,slow=7.6,SNR=2.7						
NC204	NORSAR Array S	44.43	323	P	P	12 07 03.9	+1.4
TIXI	Tiksi	44.53	22	P	P	12 07 04.1	+1.1
	comp=Z,2.3nm,0.3s,baz=250,slow=2.4,SNR=6.6						
TIXI	Tiksi	44.53	22	P	P	12 07 04.6	+1.5
TORD	Torodi Ar. Bea	66.69	269	P	P	12 09 42.5	+1.1
	comp=Z,1.2nm,0.5s,baz=44,slow=5.6,SNR=15						
TORD	Torodi Ar. Bea	66.69	269	P	P	12 09 42.6	+1.1
ILAR	Eielson Array	73.60	16	P	P	12 10 23.9	+1.3
	comp=Z,0.2nm,0.6s,baz=313,slow=5.9,SNR=3.3						
KTH	Kantishna Hill	73.66	19	P	P	12 10 24.3	+1.2
KTH				IAmb	IAmb	12 10 31.6	
	comp=Z,7.8nm,1.4s						
PPLA	Purkeypile	73.87	19	P	P	12 10 25.6	+1.2
PPLA				IAmb	IAmb	12 10 38.4	
	comp=Z,4.7nm,1.2s						
MCK	McKinley	74.00	18	P	P	12 10 26.3	+1.3
MCK				IAmb	IAmb	12 10 30.6	
	comp=Z,7.3nm,1.4s						
SCRK	Sand Creek	74.92	16	P	P	12 10 32.1	+1.6
DHY	Denali Highway	74.94	17	P	P	12 10 31.7	+1.1
DHY				IAmb	IAmb	12 10 44.5	
	comp=Z,3.6nm,1.2s						
SUA	Susitna One	75.44	20	P	P	12 10 34.9	+1.5
SCM	Sheep Creek Mo	76.01	18	P	P	12 10 37.9	+1.3
CTGM	Chitina Glacie	78.17	16	P	P	12 10 49.8	+1.1
YKA	Yellowknife Ar	80.24	3	P	P	12 11 01.2	+1.5
	comp=Z,0.4nm,0.4s,baz=351,slow=5.3,SNR=16						
WRA	Warramunga Arr	81.70	123	P	P	12 11 08.0	0.0
	comp=Z,0.4nm,0.6s,baz=324,slow=4.5,SNR=14						
WR0	Warramunga Arr	81.85	123	P	P	12 11 08.7	0.0
ASAR	Alice Springs	84.03	126	P	P	12 11 20.1	+0.2
	comp=Z,0.1nm,0.8s,baz=330,slow=5.4,SNR=2.9						

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*NEIC **09** 12:15:20.9±1.0, 9°.160S±0°.010×158°.99E±0°.08, h6^{km}±5^{km}, mb4.7/20, Error ellipse: s-maj=11.7km s-min=1.4km az=91.0*

*IDC **09** 12:15:20.0±1.0, 9°.12S×158°.97E, h0^{km}, mb4.1/7, mb1 4.3/8, mb1mx4.1/40, mbtmp4.1/8, ML3.6/1, MS3.8/1, Ms1 3.7/1, ms1mx2.9/28, Error ellipse: s-maj=23.8km s-min=18.7km az=54.0*

ISC 09 12:15:21.3±0.6**, 9°.15S**±0°.08×**158°.93E**±0°.09**, h10**^{km}**, n44,** σ**0^{s}.81**/38**, mb4.5**/14**, 2C, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.04	106	Pn	Pn	12 15 41.4	-0.6
	1µm,0.3s,baz=222,slow=3.5,SNR=298						
HNR				Sn	Sn	12 15 56.0	-0.6
	2µm,0.3s,baz=0.0,slow=20,SNR=13						
HNR	Honiara	1.04	106	*i* P	Pg	12 15 35.0	-6.4
HNR	Honiara	1.04	106		Pn	12 15 41.3	-0.6
HNR				Sn	Sn	12 15 55.6	-1.0
DZM	Mont Dzumac	14.74	152	Pn	Pn	12 18 51.4	+1.4
	0.2nm,0.3s,baz=261,slow=19,SNR=2.5						
PATS	Pohnpei	15.89	358	Pn	Pn	12 19 05.0	-0.3
PATS				IAmb	IAmb	12 19 09.5	
	comp=Z,122nm,1.4s						
STKA	Stephens Creek	27.75	213	P	P	12 21 10.5	+0.1
	comp=Z,0.9nm,0.5s,baz=42,slow=17,SNR=5.2						
STKA				LR	LR	12 31 56.4	
	comp=Z,202nm,20.9s,baz=10,slow=36						
STKA	Stephens Creek	27.75	213	P	P	12 21 10.8	+0.5
H11S2	WAKE ISLAND Hy	28.52	16	T	T	12 50 05.5	
	baz=194,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	28.52	16	T	T	12 50 08.4	
	baz=194,slow=76,SNR=21						
H11S1	WAKE ISLAND Hy	28.53	16	T	T	12 50 11.9	
	baz=194,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	29.74	15	T	T	12 51 39.8	
	baz=194,slow=76,SNR=9.6						
H11N3	WAKE ISLAND Hy	29.75	15	T	T	12 51 45.5	
	baz=194,slow=76,SNR=16						
H11N2	WAKE ISLAND Hy	29.75	15	T	T	12 51 41.0	
	baz=194,slow=76,SNR=16						
BBOO	Buckleboo	31.64	219	P	P	12 21 44.0	-0.8
BBOO				IAmb	IAmb	12 21 50.2	
	comp=Z,7.0nm,1.1s						
URZ	Urewera	33.28	153	P	P	12 22 00.4	+1.3
	comp=Z,3.5nm,0.4s,baz=258,slow=6.8,SNR=5.2						
URZ	Urewera	33.28	153	P	P	12 22 00.6	+1.5
URZ				IAmb	IAmb	12 22 04.3	
	comp=Z,9.2nm,1.0s						
TUWZ	Tuamarina	34.78	160	P	P	12 22 12.0	-0.1
BFZ	Birch Farm	34.96	157	P	P	12 22 13.6	-0.1
LTZ	Lake Taylor	35.48	163	P	P	12 22 18.2	0.0
OXZ	Oxford	35.92	164	P	P	12 22 22.2	+0.3
OXZ				IAmb	IAmb	12 22 24.9	
	comp=Z,19nm,1.4s						
RPZ	Rata Peaks	36.02	165	P	P	12 22 22.5	-0.3
	comp=Z,7.1nm,0.9s,baz=209,slow=13,SNR=4.1						
RPZ	Rata Peaks	36.02	165	P	P	12 22 22.4	-0.3
RPZ				IAmb	IAmb	12 22 31.0	
	comp=Z,19nm,1.2s						
PEA0B	Petropavlovsk-	62.02	359	P	P	12 25 42.0	+0.3
PETK	Petropavlovsk-	62.02	359	P	P	12 25 41.9	+0.1
	comp=Z,1.0nm,0.5s,baz=146,slow=6.9,SNR=5.1						
PETK	Petropavlovsk-	62.02	359	P	P	12 25 41.0	-0.7
VNDA	Vanda	68.36	179	P	P	12 26 23.2	+0.6
VNDA				IAmb	IAmb	12 26 23.6	
	comp=Z,4.5nm,0.9s						
UNV	Unalaska Valle	69.23	21	P	P	12 26 28.2	-0.1
CNBA	Chernabura Isl	72.59	24	P	P	12 26 48.9	+0.2
SDPT	Sand Point	72.63	23	P	P	12 26 50.2	+1.3
RC01	Rabbit Creek A	80.69	23	P	P	12 27 34.7	+0.3
QSPA	South Pole Qui	80.84	180	P	P	12 27 35.2	-0.2
QSPA				IAmb	IAmb	12 27 36.1	
	comp=Z,3.2nm,0.8s						
PMR	Palmer	81.24	22	P	P	12 27 37.7	+0.4
GHO	Glory Hole Cre	81.43	22	P	P	12 27 39.0	+0.6
GHO				IAmb	IAmb	12 27 46.4	
	comp=Z,8.7nm,1.1s						
TRF	Thorofare Moun	81.99	21	P	P	12 27 42.5	+1.0
IMAR	Indian Mountai	82.54	18	P	P	12 27 45.1	+1.0
CCB	Clear Creek Bu	83.59	20	P	P	12 27 49.7	+0.2
CCB				IAmb	IAmb	12 27 55.5	
	comp=Z,3.9nm,1.2s						
IL31		83.98	20	P	P	12 27 51.4	-0.1
ILAR	Eielson Array	83.98	20	P	P	12 27 50.9	-0.7
	comp=Z,0.3nm,0.4s,baz=224,slow=3.8,SNR=9.7						
ILAR	Eielson Array	83.98	20	P	P	12 27 50.5	-1.0
DOT	Dot Lake	84.34	22	P	P	12 27 54.2	+0.7
DOT				IAmb	IAmb	12 28 02.3	
	comp=Z,4.2nm,0.9s						
NVAR	Mina Array Bea	90.01	51	P	P	12 28 23.0	+1.2
	comp=Z,1.3nm,1.0s,baz=251,slow=4.7,SNR=7.3						
SYO	Syowa Base	91.54	198	⇑*e*P	P	12 28 25.8	-2.2
SYO	Syowa Base	91.54	198	⇑*e*sP	sP	12 28 32.0	-0.4
YKA	Yellowknife Ar	96.41	28	P	P	12 28 50.3	-0.1
	comp=Z,0.1nm,0.5s,baz=258,slow=4.5,SNR=3.2						

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*INET **09** 12:16:04.1, 12°.32N×87°.57W, h52^{km}, ML3.6*

SNET 09 12:16:02.9±2.4**, 12°.48N×87°.58W, h83**^{km}±255^{km}**, ML3.0, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.83	343	*e*P	Pn	12 16 21.5	+1.2
CNCH				*e*S	Sn	12 16 33.6	+0.5
CNCH				*e*S		12 16 34.4	
CNCH				*e*S		12 16 34.6	
CNCH				IAML		12 16 38.4	
	comp=Z,517nm,0.3s						
LCND	La Caada	0.87	340	*e*P	Pn	12 16 22.3	+1.6
LCND				*e*S	Sn	12 16 35.2	+1.3
LCND				*e*S		12 16 35.4	
LCND				IAML		12 16 38.4	
	comp=Z,197nm,0.2s						
MOMN	Momotombo	1.02	94	*e*P	Pn	12 16 21.8	-0.6
MOMN				IAML		12 16 37.6	
PACA	Pacayal	1.22	324	*e*P	Pn	12 16 24.7	-0.2
PACA				*e*S	Sn	12 16 41.8	+0.4

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*BJI **09** 12:16:30.2±0.0, 5°.73S×147°.90E, h245^{km}, mB4.9/49, mb5.2/76*

*MOS **09** 12:16:31.8±0.8, 5°.51S×147°.55E, h233^{km}, mb5.1/24, Error ellipse: s-maj=10.6km s-min=5.9km az=100.8*

*IDC **09** 12:16:32.8±0.7, 5°.58S×147°.64E, h232^{km}±6^{km}, mb4.6/28, mb1 4.7/35, mb1mx4.6/44, mbtmp5.2/35, Error ellipse: s-maj=9.2km s-min=5.8km az=97.0*

*DJA **09** 12:16:33.1±0.4, 5°S±3°×14°8E±°, h229^{km}±5^{km}, M5.1/42, mb5.0/42, mB5.4/12, MLv5.5/2, Mw(mB)4.8/12*

*NEIC **09** 12:16:34.0±2.3, 5°.55S±0°.06×147°.63E±0°.07, h244^{km}±3^{km}, mb5.0/174, Error ellipse: s-maj=10.8km s-min=8.6km az=103.0*

*GCMT **09** 12:16:34.0±0.3, 5°.60S±0°.02×147°.59E±0°.02, h232^{km}±2^{km}, MW5.1/93, Moment Tensor Solution. s50,c58; s93,c127; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.22±.15; $M_{\theta\theta}$-4.90±.15; $M_{\phi\phi}$-0.32±.18; $M_{r\theta}$0.49±.16; $M_{\theta\phi}$0.96±.20; $M_{\phi r}$0.68±.18; Best double couple: $M_0$5.22200×10^{16} NP1:ϕ_s289.00000°, δ44.00000°, λ102.00000°. NP2: ϕ_s94.00000°, δ47.00000°, λ79.00000°. Principal axes: T 5.3380, Plg82.0000°, Azm295.0000°; N -0.2380, Plg8.0000°, Azm101.0000°; P -5.1060, Plg2.0000°, Azm191.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 12:16:32.6±0.4**, 5°.55S**±0°.04×**147°.60E**±0°.04**, h232**^{km}±3^{km}**, h235**^{km}**:pP-P, n737,** σ**1^{s}.07**/726**, mb5.0**/156**, 28C-3D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	3.49	356		Pn	12 17 30.4	+0.8
PMG	Port Moresby	3.86	186	P	Pn	12 17 32.9	-1.1
	790nm,0.3s,baz=39,slow=5.6,SNR=2236						
PMG				S	S	12 18 18.6	-3.7
	145nm,0.3s,baz=0.7,slow=11,SNR=4.8						
PMG	Port Moresby	3.86	186	P	Pn	12 17 33.0	-1.0
KRVT	Keravat (AS076	4.58	75	P	Pn	12 17 41.4	-1.3
	100nm,0.3s,baz=243,slow=3.0,SNR=54						
RABL	Rabaul	4.75	74		Pn	12 17 43.2	-1.5
GENI	Genyem	7.97	291	P	Pn	12 18 21.5	-4.1
COEN	Coen	9.42	207	P	Pn	12 18 44.2	0.0
	baz=9.5,SNR=29						
COEN	Coen	9.42	207		Pn	12 18 45.9	+1.7
SMPI	Sarmi	9.55	291	P	Pn	12 18 44.8	-0.9
	68nm,0.9s						
HNR	Honiara	12.84	108	P	Pn	12 19 26.5	-0.7
	5.3nm,0.3s,baz=270,slow=10,SNR=2.4						
HNR	Honiara	12.84	108	P	Pn	12 19 27.0	-0.2
HNR	Honiara	12.84	108		Pn	12 19 27.0	-0.2
MTSU	Mount Surprise	12.91	194	P	Pn	12 19 28.5	+0.3
	baz=13,SNR=60						
RKPI	Ransiki, Papua	13.98	286	P	P	12 19 46.7	+4.3
CTA	Charters Tower	14.51	185	P	P	12 19 48.9	+0.7
	4.5nm,0.3s,baz=5.9,slow=12,SNR=44						
FAKI	Fak Fak	15.53	279	P	P	12 19 58.0	-1.5
	63nm,1.0s						
FAKI	Fak Fak	15.53	279	P	P	12 19 59.9	+0.4
FAKI				IAmb	IAmb	12 20 17.1	
	comp=Z,52nm,0.9s						
PATS	Pohnpei	16.30	41	P	P	12 20 06.8	-1.1
	baz=16,SNR=11						
PATS	Pohnpei	16.30	41	P	Pn	12 20 09.7	+0.5
SAUI	Saumlaki	16.36	261	P	Pn	12 20 10.1	+0.1
	comp=Z,8µmcomp=Z,234nm,1.2s						
SAUI	Saumlaki	16.36	261	P	Pn	12 20 11.4	+1.4
KDU	Kakadu	16.52	244	P	P	12 20 10.4	0.0
	baz=17,SNR=413						
QIS	Mount Isa	16.82	207	P	Pn	12 20 14.5	-0.8
	baz=17,SNR=46						
SIJI	Sorong	16.95	285	P	P	12 20 15.5	+0.3
	comp=Z,4.4nm,0.3s,baz=57,slow=16,SNR=8.6						
SWI	Sorong	16.96	285	P	P	12 20 14.2	-1.0
	comp=Z,2µmcomp=Z,50nm,0.7s						
BNDI	Bandanaira	17.66	273	P	Pn	12 20 24.5	-0.7
	comp=Z,11µmcomp=Z,444nm,0.8s						
MTN	Manton Dam	17.79	245	P	P	12 20 25.0	+0.8
	baz=18,SNR=69						
MTN	Manton Dam	17.79	245	P	P	12 20 25.3	+1.0
WB0	Warramunga Arr	19.10	221	P	P	12 20 39.3	+0.9
GUMO	Guam	19.20	352	P	P	12 20 40.4	+0.9
	comp=Z,4.9nm,0.3s,baz=192,slow=20,SNR=2.7						
GUMO	Guam	19.20	352	P	P	12 20 40.0	+0.5
WB2	Warramunga Arr	19.25	221	P	P	12 20 41.0	+1.0
WRA	Warramunga Arr	19.26	221	P	P	12 20 40.6	+0.4
	comp=Z,12nm,0.3s,baz=47,slow=11,SNR=518						
WRA				S	S	12 24 05.2	-0.7
	comp=Z,2.8nm,0.3s,baz=40,slow=18,SNR=16						
WRA				ScP	ScP	12 28 08.9	+2.3
	comp=Z,0.1nm,0.3s,baz=34,slow=2.2,SNR=5.1						
WRA	Warramunga Arr	19.26	221	P	P	12 20 40.1	0.0
EIDS	Eidsvold	19.99	171	P	P	12 20 49.0	+1.2
	baz=20,SNR=9.3						
EIDS	Eidsvold	19.99	171	P	P	12 20 49.0	+1.2
EIDS				IAmb	IAmb	12 20 55.7	
	comp=Z,56nm,1.2s						

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RMQ   Roma              20.85 177   P       P       12 20 58.3 +1.3
        baz=21,SNR=36
KNRA  Kununurra         21.05 240   P       P       12 20 58.6 -0.5
        baz=21,SNR=199
KNRA  Kununurra         21.05 240   P       P       12 20 58.8 -0.3
QLP   Quilpie           21.16 188   P       P       12 21 01.2 +1.0
        baz=21,SNR=21
AS31  Alice Springs     22.32 215   P       P       12 21 13.0 +1.7
ASAR  Alice Springs     22.33 215   P       P       12 21 12.5 +1.2
        comp=Z,40nm,0.9s,baz=35,slow=11,SNR=504
ASAR                                S       S       12 25 01.0 +1.4
        comp=Z,60nm,0.8s,baz=33,slow=20,SNR=8.1
ASAR                                ScP     ScP     12 28 16.3 +2.3
        comp=Z,5.3nm,0.9s,baz=46,slow=4.0,SNR=4.8
ASAR                                PKiKP   PKiKP   12 32 41.9 -2.1
        comp=Z,0.4nm,0.6s,baz=44,slow=0.3,SNR=4.7
ASAR  Alice Springs     22.33 215   P       P       12 21 12.4 +1.0
SOEI  Soe               23.49 258   P       P       12 21 22.8 +0.7
        comp=Z,2µmcomp=Z,122nm,1.0s
SOEI  Soe               23.49 258   P       P       12 21 22.9 +0.8
DZM   Mont Dzumac       24.54 134   P       P       12 21 31.1 -0.4
        comp=Z,23nm,0.7s,baz=266,slow=11,SNR=23
DZM   Mont Dzumac       24.54 134   P       P       12 21 30.9 -0.6
DZM                                 IAmb    IAmb    12 21 34.3
        comp=Z,88nm,1.5s
FITZ  Fitzroy Crossi    24.81 238   P       P       12 21 34.4 +0.5
        comp=Z,97nm,0.4s,baz=54,slow=7.3,SNR=400
ARMA  Armidale          25.03 172   P       P       12 21 36.8 +1.0
        baz=25,SNR=24
ARMA  Armidale          25.03 172   P       P       12 21 36.7 +0.8
ARMA                                IAmb    IAmb    12 22 26.4
        comp=Z,90nm,1.4s
MMRI  Maumere           25.35 262   P       P       12 21 39.6 +0.8
        comp=Z,91nm,1.1s
MMRI  Maumere           25.35 262   P       P       12 21 38.1 -0.7
EDFI  Ende, Flores      25.90 261   P       P       12 21 42.9 -1.0
        comp=Z,35nm,0.8s
CMSA  Cobar Meteorol    25.92 184   P       P       12 21 44.2 +0.5
        baz=26,SNR=9.4
STKA  Stephens Creek    26.79 191   P       P       12 21 51.8 +0.3
        baz=27,SNR=8.0
STKA  Stephens Creek    26.79 191   P       P       12 21 51.7 +0.2
        comp=Z,4.7nm,0.4s,baz=5.4,slow=8.8,SNR=18
STKA  Stephens Creek    26.79 191   P       P       12 21 51.8 +0.3
STKA                                pmax    pmax
        comp=Z,7.0nm,1.1s
STKA  Stephens Creek    26.79 191   P       P       12 21 51.8 +0.3
WRKA  Warakurna         26.80 222   P       P       12 21 52.3 +0.6
        baz=27,SNR=249
YNG   Young             28.62 179   P       P       12 22 08.8 +1.2
        baz=29,SNR=6.3
HTT   Hallett           28.89 195   P       P       12 22 10.8 +0.6
        baz=29,SNR=12
BBOO  Buckleboo         29.18 200   P       P       12 22 13.6 +0.9
        baz=29,SNR=8.8
BBOO  Buckleboo         29.18 200   P       P       12 22 13.0 +0.3
BBOO                                IAmb    IAmb    12 23 09.7
        comp=Z,26nm,0.9s
CAN   Canberra          29.66 178   P       P       12 22 18.0 +1.1
CAN                                 pmax    pmax
        comp=Z,69nm,1.8s
CAN   Canberra          29.66 178   P       P       12 22 18.0 +1.1
CAN                                 IAmb    IAmb    12 22 24.5
        comp=Z,68nm,1.8s
CNB   Canberra Magne    29.67 177   P       P       12 22 18.2 +1.2
        baz=30,SNR=10.0
PLAI  Plampang          29.76 262   P       P       12 22 16.2 -1.8
        comp=Z,34nm,0.7s
FORT  Forrest           31.10 214   P       P       12 22 30.3 +0.7
        baz=31,SNR=11
FORT  Forrest           31.10 214   P       P       12 22 29.4 -0.2
PSA00 Pilbara Seismi    31.24 237   P       P       12 22 30.5 -0.4
PSA00 Pilbara Seismi    31.24 237   P       P       12 22 30.1 -0.9
PSA00                               IAmb    IAmb    12 22 31.5
        comp=Z,43nm,0.9s
MILA  Mila              31.39 178   P       P       12 22 33.0 +0.9
        baz=32,SNR=3.7
KBKI  Kotabaru          31.41 273   P       P       12 22 32.9 +0.4
        comp=Z,11nm,0.8s
ARPS  Mount Arapiles    31.52 189   P       P       12 22 34.1 +1.0
        baz=32,SNR=13
TOO   Toolangi          31.93 183   P       P       12 22 37.8 +1.0
TOO                                 pmax    pmax
        comp=Z,19nm,1.2s
TOO   Toolangi          31.93 183   P       P       12 22 37.8 +1.0
MSVF  Nonsavu           32.13 115⇓eP    P       12 22 42.6 +3.8
MSVF  Nonsavu           32.13 115   P       P       12 22 40.7 +1.9
MSVF                                IAmb    IAmb    12 23 08.1
        comp=Z,80nm,1.9s
JAGI  Jajag, Banyuwa    33.31 263   P       P       12 22 46.9 -2.1
JAGI                                IAmb    IAmb    12 22 47.9
        comp=Z,97nm,1.7s
MEEK  Meekatharra       34.70 230   P       P       12 23 01.5 +0.7
        baz=35,SNR=119
KMBL  Kambalda          35.23 220   P       P       12 23 05.8 +0.5
        baz=35,SNR=29
PWJI  Pagerwojo         35.62 264   P       P       12 23 10.7 +1.9
        comp=Z,26nm,0.7s
SBUM  Sibu              36.22 282   P       P       12 23 13.0 -0.9
PCJI  Pacitan           36.25 264   P       P       12 23 13.4 -0.7
        comp=Z,80nm,0.9s
GIRL  Giralia           36.41 239   P       P       12 23 17.2 +1.8
        baz=36,SNR=21
GIRL  Giralia           36.41 239   P       P       12 23 16.8 +1.4
UGM   Wanagama          36.89 264   P       P       12 23 19.9 +0.3
        comp=Z,130nm,1.9s
UGM   Wanagama          36.89 264   P       P       12 23 20.1 +0.6
TAU   Tasmania Unive    37.21 180   P       P       12 23 23.3 +1.5
TAU                                 pmax    pmax
        comp=Z,103nm,1.6s
TAU   Tasmania Unive    37.21 180   P       P       12 23 23.3 +1.5
TAU                                 IAmb    IAmb    12 24 09.4
        comp=Z,103nm,1.6s
JOW   Kunigami          37.23 331   P       P       12 23 23.4 +1.1
JOW                                 IAmb    IAmb    12 23 23.9
        comp=Z,32nm,0.6s
MORW  Morawa            37.91 228   P       P       12 23 28.6 +0.6
        baz=38,SNR=33
OUZ   Omahuta           38.03 144   P       P       12 23 30.2 +1.4
OUZ   Omahuta           38.03 144   P       P       12 23 31.5 +2.7
KLBR  Kellerberrin      38.11 223   P       P       12 23 29.6 +0.1
        baz=38,SNR=39
BLDU  Ballidu           38.27 226   P       P       12 23 31.3 +0.3
        baz=38,SNR=55
KPJI  Karang Pucung     38.46 265   P       P       12 23 36.0 +3.3
YULB  Yu-li             38.56 319   P       P       12 23 33.7 +0.3
YULB                                IAmb    IAmb    12 23 35.3
        comp=Z,51nm,0.6s
NACB  Ninganchiao       38.92 320   P       P       12 23 37.2 +0.8
TPUB  Ta-pu             38.93 318   P       P       12 23 36.0 -0.5
SSLB  Suanglung         39.06 319   P       P       12 23 37.6  0.0
SSLB                                IAmb    IAmb    12 23 39.3
        comp=Z,41nm,0.5s
NWAO  Narrogin (SRO)    39.26 222   P       P       12 23 39.4 +0.3
        baz=39,SNR=7.0
NWAO  Narrogin (SRO)    39.26 222   P       P       12 23 39.1  0.0
        comp=Z,14nm,0.7s,baz=74,slow=9.2,SNR=11
NWAO  Narrogin (SRO)    39.26 222   P       P       12 23 39.3 +0.2
NWAO                                pmax    pmax
        comp=Z,83nm,1.7s
NWAO  Narrogin (SRO)    39.26 222   P       P       12 23 39.3 +0.2
NWAO                                IAmb    IAmb    12 23 49.9
        comp=Z,83nm,1.6s
MUN   Mundaring         39.40 224   P       P       12 23 40.7 +0.5
        baz=40,SNR=9.4
YHNB  Yeheng            39.42 321   P       P       12 23 41.6 +1.1
CISI  Cisompet, Garu    39.56 265   P       P       12 23 42.1 +0.2
        comp=Z,124nm,0.6s
CISI  Cisompet, Garu    39.56 265   P       P       12 23 40.8 -1.2
TATO  Taipei            39.57 321   P       P       12 23 43.0 +1.3
CNJI  Cibinong          40.24 265   P       P       12 23 46.2 -1.2
        comp=Z,2µmcomp=Z,121nm,1.1s
KUZ   Kuaotunu          40.33 144   P       P       12 23 48.8 +1.0
RKGY  Rocky Gully       40.46 220   P       P       12 23 50.2 +1.3
        baz=41,SNR=6.1
HIZ   Hauiti            41.09 147   P       P       12 23 56.4 +2.4
HIZ   Hauiti            41.09 147   P       P       12 23 56.2 +2.2
KNMB  Chin-men Tao      41.22 318   P       P       12 23 56.6 +1.4
QZH   Quanzhou          41.41 318⇓iP    P       12 23 57.8 +1.1
QZH                                 pmax    pmax
        comp=Z,110nm,0.6s
JNU   Nakatsue          41.60 339   P       P       12 23 58.7 +0.5
        comp=Z,53nm,0.7s,baz=165,slow=2.5,SNR=35
JNU   Nakatsue          41.60 339   IAmb    IAmb    12 23 59.8
        comp=Z,57nm,0.8s
WTVZ  West Tongariro    41.92 147   P       P       12 24 03.8 +3.0
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NGZ   Ngauruhoe         41.97 147   P       P       12 24 03.6 +2.3
HATZ  Hinemaiaia        42.03 146   P       P       12 24 03.6 +1.9
MUGZ  Murupara          42.13 145   P       P       12 24 04.8 +2.4
URZ   Urewera           42.17 145   P       P       12 24 03.2 +0.5
        comp=Z,10nm,0.3s,baz=259,slow=4.9,SNR=37
URZ   Urewera           42.17 145   P       P       12 24 03.4 +0.7
RUGZ  Raukumara Rang    42.30 144   P       P       12 24 04.6 +0.7
NNZ   Nelson            42.34 151   P       P       12 24 05.0 +1.0
NNZ                                 IAmb    IAmb    12 24 05.8
        comp=Z,122nm,1.6s
NNZ   Nelson            42.34 151   P       P       12 24 03.5 -0.5
RTZ   Ruatahuna         42.34 145   P       P       12 24 05.0 +0.8
MTHZ  Maungataniwha     42.43 146   P       P       12 24 05.5 +0.7
BHHZ  Black Hill Sta    42.44 147   P       P       12 24 06.0 +1.1
PKGZ  Pakihiroa         42.48 144   P       P       12 24 06.6 +1.2
THZ   Tophouse          42.53 152   IAmb    IAmb    12 24 17.2
        comp=Z,96nm,1.8s
NMHZ  Naumai            42.58 146   P       P       12 24 07.7 +1.6
KWHZ  Kaweka Forest     42.59 147   P       P       12 24 07.5 +1.4
RAHZ  Arahi             42.61 145   P       P       12 24 07.7 +1.5
TWGZ  Tauwhareparae     42.62 144   P       P       12 24 07.9 +1.5
WMGZ  Waiomatatini S    42.64 143   P       P       12 24 07.4 +0.9
SNGZ  Shannon Statio    42.66 145   P       P       12 24 07.6 +0.9
KRHZ  Kereru            42.72 147   P       P       12 24 08.1 +0.9
TKGZ  Te Karaka         42.72 144   P       P       12 24 08.0 +0.9
MJAR  Matsushiro Arr    42.78 349   P       P       12 24 07.7 +0.1
        comp=Z,42nm,0.8s,baz=165,slow=7.8,SNR=98
MJAR                                PcP     PcP     12 25 54.1 -0.5
        comp=Z,9.1nm,0.8s,baz=169,slow=3.5,SNR=6.6
MJAR                                ScP     ScP     12 29 23.5 +0.1
        comp=Z,2.2nm,0.8s,baz=149,slow=5.3,SNR=4.7
MJAR  Matsushiro Arr    42.78 349   P       P       12 24 07.2 -0.5
MJAR                                        PcP     12 25 54.6 +0.1
MAJO  Matsushiro        42.78 349   P       P       12 24 07.4 -0.2
MAJO                                pmax    pmax
        comp=Z,81nm,1.0s
MAJO  Matsushiro        42.78 349   P       P       12 24 07.4 -0.2
MAJO                                IAmb    IAmb    12 24 09.0
        comp=Z,81nm,0.9s
MAT   Matsushiro        42.78 349   P       P       12 24 07.8 +0.2
MJB9  Matsu-Tunnel      42.79 349   IAmb    IAmb    12 24 09.0
        comp=Z,82nm,0.9s
LTZ   Lake Taylor       43.04 153   P       P       12 24 10.5 +0.9
LTZ                                 IAmb    IAmb    12 24 11.6
        comp=Z,109nm,1.8s
SNZO  South Karori      43.06 150   P       P       12 24 10.0 +0.3
SNZO                                IAmb    IAmb    12 25 19.7
        comp=Z,168nm,1.6s
CMWZ  Cape Campbell     43.15 151   P       P       12 24 11.1 +0.6
DCZ   Deep Cove         43.26 160   P       P       12 24 13.0 +1.7
MDSI  Maura Dua         43.26 269   P       P       12 24 11.9 +0.1
        comp=Z,17nm,1.0s
RPZ   Rata Peaks        43.26 155   P       P       12 24 11.5 +0.1
        comp=Z,25nm,0.7s,baz=283,slow=3.3,SNR=17
RPZ   Rata Peaks        43.26 155   P       P       12 24 13.0 +1.6
KHZ   Kahutara          43.33 152   P       P       12 24 11.8 -0.1
KHZ                                 IAmb    IAmb    12 24 24.4
        comp=Z,101nm,1.9s
OXZ   Oxford            43.37 154   P       P       12 24 12.2 -0.1
BFZ   Birch Farm        43.39 148   P       P       12 24 12.6 +0.1
BFZ                                 IAmb    IAmb    12 24 14.0
        comp=Z,165nm,1.7s
LBZ   Lake Benmore      43.46 156   P       P       12 24 13.5 +0.6
MLZ   Mavora Lakes      43.51 159   P       P       12 24 14.6 +1.3
MQZ   McQueen's Vall    43.94 154   P       P       12 24 17.9 +1.1
MYKOM Kota Tinggi       44.30 278   P       P       12 24 20.0 -0.1
MNAI  Manna             44.48 269   P       P       12 24 20.8 -0.8
MNAI                                IAmb    IAmb    12 25 49.4
        comp=Z,131nm,1.0s
TJN   Taejon            45.81 337⇑eP    P       12 24 33.3 +1.7
SDSI  Sungai Dareh      46.31 274   P       P       12 24 35.3 -0.5
        comp=Z,40nm,0.7s
NJ2   Nanjing           46.34 326  eP       P       12 24 37.0 +1.3
NJ2                                 pmax    pmax
        comp=Z,99nm,0.7s
KSRS  Korea Array       46.55 338   P       P       12 24 38.1 +0.9
        comp=Z,12nm,0.6s,baz=156,slow=9.1,SNR=48
KSRS                                PcP     PcP     12 26 07.8 +0.4
        comp=Z,7.6nm,0.8s,baz=169,slow=3.6,SNR=11
KSAR  Wonju Array Be    46.55 338   P       P       12 24 38.4 +1.1
KSAR                                                12 26 08.4
KSAR  Wonju Array Be    46.55 338   P       P       12 24 38.4 +1.1
KSAR                                        PcP     12 26 08.4 +0.9
INCN  Inchon            47.06 337   P       P       12 24 42.8 +1.5
INCN                                pmax    pmax
        comp=Z,50nm,0.9s
INCN  Inchon            47.06 337   P       P       12 24 42.8 +1.5
INCN                                IAmb    IAmb    12 24 43.2
        comp=Z,50nm,0.9s
PDSI  Padang            47.27 274   P       P       12 24 42.0 -1.3
        comp=Z,14nm,0.5s
IPM   Ipoh              47.56 281   P       P       12 24 45.0 -0.6
WHN   Wuhan             47.96 320 ⇑P       P       12 24 49.3 +1.0
WHN                                 pmax    pmax
        comp=Z,210nm,1.4s
KULM  Kulim             48.10 282   P       P       12 24 49.0 -0.6
SISI  Saibi             48.59 273   P       P       12 24 54.0 +0.6
        comp=Z,22nm,0.6s
RPSI  Rantau Prapat     49.30 278   P       P       12 24 58.0 -0.8
PSI   Prapat            49.32 278   P       P       12 24 58.0 -1.1
PSI                                 pmax    pmax
        comp=Z,16nm,0.6s
ASAJ  Asahikawa         49.64 355   P       P       12 25 02.2 +1.5
        comp=Z,11nm,0.6s,baz=220,slow=6.0,SNR=28
DL2   Dalian            50.35 334   P       P       12 25 06.8 +0.6
DL2                                 pmax    pmax
        comp=Z,56nm,0.7s
TIA   Tai'an            50.41 328   P       P       12 25 06.3 -0.4
TIA                                 pmax    pmax
        comp=Z,61nm,1.0s
KCSI  Kotacane, Aceh    50.58 279   P       P       12 25 07.4 -1.0
        comp=Z,1µmcomp=Z,28nm,0.6s
GYA   Guiyang           50.84 311  eP       P       12 25 11.0 +0.8
GYA                                 pmax    pmax
        comp=Z,20nm,0.9s
ENH   Enshi             51.00 317   IAmb    IAmb    12 25 12.5
        comp=Z,145nm,1.4s
PBKT  Sadao Pong        51.07 296   P       P       12 25 13.2 +1.2
PBKT                                        PcP     12 26 25.5 +1.1
USA0B Ussuriysk Arra    51.48 346   IAmb    IAmb    12 25 16.5
        comp=Z,112nm,1.6s
USRK  Ussuriysk Ar.     51.48 346   P       P       12 25 15.7 +1.2
        comp=Z,24nm,0.5s,baz=159,slow=7.8,SNR=102
USRK                                PcP     PcP     12 26 25.1 -0.2
        comp=Z,6.9nm,0.5s,baz=180,slow=3.6,SNR=9.0
USRK  Ussuriysk Ar.     51.48 346   P       P       12 25 15.4 +0.9
USRK                                        PcP     12 26 25.4  0.0
YSS   Yuzh-Sakhalins    52.45 356⇑eP    P       12 25 22.0 +0.4
YSS                                e*PP     pP      12 26 10.0 -1.8
YSS                                e                12 26 29.0
YSS                                e*SP     sP      12 26 35.6 -1.5
YSS                                e                12 27 24.6
YSS                                ePPP     PPP     12 28 32.8
YSS                                eS       S       12 32 33.2 +3.8
YSS                                eSS      SS      12 36 11.0  0.0
YSS                                 pmax    pmax
        comp=Z,30nm,1.2s
YSS                                 MLR     MLR
        comp=Z,200nm,19.0s
YSS   Yuzh-Sakhalins    52.45 356   P       P       12 25 22.1 +0.6
MDJ   Mudanjiang        52.49 344   P       P       12 25 22.8 +0.8
MDJ                                 pmax    pmax
        comp=Z,33nm,0.9s
MDJ                                 pmax    pmax
        comp=Z,180nm,4.3s
CN2   Changchun         53.04 340  eP       P       12 25 26.4 +0.5
CN2                                 pmax    pmax
        comp=Z,10.0nm,0.6s
KMI   Kunming           53.20 307   P       P       12 25 29.1 +1.3
KMI                                 pP      pwP     12 26 22.6 +2.1
KMI                                 pmax    pmax
        comp=Z,26nm,1.0s
KMI                                 pmax    pmax
        comp=Z,220nm,4.1s
KMI                                 LR      LR
        comp=Z,130nm,17.3s
KMI                                 LR      LR
        comp=Z,140nm,18.1s
KMI                                 LR      LR
        comp=Z,180nm,27.6s
CM31  Chiang Mai Arr    53.56 298   P       P       12 25 31.9 +1.6
CMAR  Chiang Mai Arr    53.56 298   P       P       12 25 31.1 +0.8
        comp=Z,4.4nm,0.5s,baz=122,slow=5.9,SNR=34
CMAR                                pP      pwP     12 26 22.7 -0.1
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```
        comp=Z,4.3nm,1.0s,baz=122,slow=5.5,SNR=3.0
CMAR  Chiang Mai Arr    53.56 298   P       P       12 25 31.2 +1.0
CHTO  Chiang Mai        53.70 298   P       P       12 25 31.6 +0.4
CHTO                                pmax    pmax
        comp=Z,10.0nm,0.7s
CHTO  Chiang Mai        53.70 298   P       P       12 25 31.6 +0.4
CHTO                                        PcP     12 26 34.7 +0.3
XAN   Xi'an             53.72 320   IAmb    IAmb    12 25 32.3
        comp=Z,59nm,0.7s
BJT   Baijiatuau        53.79 330   IAmb    IAmb    12 25 32.9
        comp=Z,46nm,1.3s
BJI   Beijing           53.80 330⇑eP    P       12 25 31.8 +0.2
BJI                                 pP      pP      12 26 23.2 +1.2
BJI                                 PcP     PcP     12 26 34.5 +0.3
BJI                                 sP      sP      12 26 48.8 +1.5
BJI                                 pmax    pmax
        comp=Z,28nm,0.9s
TIY   Taiyuan           54.07 326  eP       P       12 25 35.2 +1.6
CD2   Chengdu           55.39 314⇑iP    P       12 25 43.8 +0.6
CD2                                 S       S       12 33 12.6 +3.0
CD2                                 pmax    pmax
        comp=Z,180nm,0.5s
CD2                                 pmax    pmax
        comp=Z,270nm,8.5s
KLR   Kul'dur           56.28 348c iP    P       12 25 49.9 +0.8
KLR                                 pmax    pmax
        comp=Z,75nm,1.5s
TYV   Tymovskoe         56.35 356  eP       P       12 25 50.9 +1.4
TYV                                 pmax    pmax
        comp=Z,45nm,0.6s
TYV                                 pmax    pmax
        comp=Z,200nm,2.3s
HHC   Hu-ho-hao-te      56.77 328  eP       P       12 25 53.6 +0.8
HHC                                 S       S       12 33 23.9 -3.6
HHC                                 pmax    pmax
        comp=Z,85nm,1.0s
HHC                                 pmax    pmax
        comp=Z,330nm,5.1s
BTO   Baotou            57.43 327  eP       P       12 25 58.2 +0.7
LZH   Lanzhou           58.26 319  eP       P       12 26 07.1 +3.7
LZH                                 pP      pwP     12 26 57.6 +0.5
LZH                                 sP      sP      12 27 22.0 +2.1
LZH                                 pmax    pmax
        comp=Z,19nm,1.0s
LZH                                 pmax    pmax
        comp=Z,66nm,4.9s
PEA0B Petropavlovsk-    59.06   7deP    P       12 26 09.7 +1.4
PEA0B Petropavlovsk-    59.06   7   P       P       12 26 09.7 +1.4
PEA0B                               IAmb    IAmb    12 26 10.6
        comp=Z,38nm,0.7s
PETK  Petropavlovsk-    59.06   7   P       P       12 26 09.3 +0.9
        comp=Z,29nm,0.7s,baz=170,slow=8.1,SNR=80
PETK                                PcP     PcP     12 26 54.0 -0.5
        comp=Z,7.1nm,0.8s,baz=181,slow=5.9,SNR=3.8
PETK  Petropavlovsk-    59.06   7   P       P       12 26 08.9 +0.5
PET   Petropavlovsk     59.10   8   P       P       12 26 09.5 +0.9
PET                                 pmax    pmax
        comp=Z,172nm,1.7s
PET   Petropavlovsk     59.10   8   P       P       12 26 09.5 +0.9
KIP   Kipapa            59.66  61   P       P       12 26 14.2 +1.2
KIP                                 pmax    pmax
        comp=Z,466nm,1.8s
KIP   Kipapa            59.66  61   P       P       12 26 14.2 +1.2
HPAH  Hawaii Prepara    61.24  64   P       P       12 26 25.1 +1.2
POHA  Pohakuloa         61.31  64   P       P       12 26 25.5 +1.0
ZEA   Zeya              61.50 346  eP       P       12 26 25.9 +1.1
ZEA                                 pmax    pmax
        comp=N,87nm,0.9s
ZEA                                 pmax    pmax
        comp=E,27nm,0.9s
ZEA                                 pmax    pmax
        comp=Z,150nm,0.9s
SHL   Shillong          62.27 303   P       P       12 26 31.1 +0.3
SHL                                 pmax    pmax
        comp=Z,108nm,1.7s
SHL   Shillong          62.27 303   P       P       12 26 31.1 +0.3
SHL                                 IAmb    IAmb    12 26 31.8
        comp=Z,108nm,1.7s
GTA   Gaotai            62.78 320 ⇑P       P       12 26 34.9 +1.1
GTA                                 pP      pwP     12 27 28.1 -0.3
GTA                                 S       S       12 34 41.8 -2.5
GTA                                 SS      SS      12 38 51.2 -2.7
GTA                                 pmax    pmax
        comp=Z,40nm,0.8s
GTA                                 pmax    pmax
        comp=Z,170nm,6.7s
GTA                                 LR      LR
        comp=Z,120nm,16.5s
GTA                                 LR      LR
        comp=Z,100nm,18.4s
GTA                                 LR      LR
        comp=Z,130nm,17.1s
ULN   Ulaanbaatar       64.00 331   P       P       12 26 43.1 +1.4
ULN                                 pmax    pmax
        comp=Z,42nm,0.8s
ULN   Ulaanbaatar       64.00 331   P       P       12 26 43.0 +1.4
ULN                                 IAmb    IAmb    12 26 43.7
        comp=Z,42nm,0.8s
SONM  Songino Array     64.30 330   P       P       12 26 44.4 +0.8
        comp=Z,23nm,0.7s,baz=143,slow=5.2,SNR=187
SONM                                PcP     PcP     12 27 16.2  0.0
        comp=Z,6.7nm,0.9s,baz=145,slow=6.6,SNR=4.5
SONM  Songino Array     64.30 330   P       P       12 26 44.7 +1.1
SONM                                pmax    pmax
        comp=Z,73nm,1.4s
SONM  Songino Array     64.30 330   P       P       12 26 44.7 +1.1
LSA   Lhasa             64.45 307   IAmb    IAmb    12 26 47.1
        comp=Z,34nm,0.8s
MA2   Magadan           64.97   2c iP    P       12 26 48.0 +0.6
MA2                                 pmax    pmax
        comp=Z,46nm,1.0s
MA2   Magadan           64.97   2   P       P       12 26 48.2 +0.8
MA2                                 IAmb    IAmb    12 26 49.2
        comp=Z,40nm,0.9s
TAPN  Taplejung         66.40 303  eP       P       12 26 57.7  0.0
ODAN  Odare             66.51 302  eP       P       12 26 58.2 -0.1
        comp=Z,46nm,0.7s
RAMN  Ramite            67.20 302  eP       P       12 27 02.5 -0.2
        comp=Z,26nm,0.5s
ZAK   Zakamensk         67.53 331  eP       P       12 27 03.8 -0.3
ZAK                                e                12 27 55.5
ZAK                                 pmax    pmax
        comp=Z,51nm,1.0s
ZAK                                 pmax    pmax
        comp=Z,5.0nm,1.1s
JIRN  Jiri              67.78 303  eP       P       12 27 06.3 -0.1
        comp=Z,58nm,0.6s
GUN   Gumba             68.12 303  eP       P       12 27 08.5  0.0
        comp=Z,119nm,0.7s
TLY   Talaya            68.22 332ceP    P       12 27 09.2 +1.0
TLY                                 pmax    pmax
        comp=Z,37nm,1.6s
TLY   Talaya            68.22 332   P       P       12 27 09.5 +1.2
SEY   Seymchan          68.39   2⇑eP    P       12 27 09.4 +0.5
PKI   Pulchoki          68.41 302  eP       P       12 27 09.8 -0.4
        comp=Z,17nm,0.5s
PKIN  Phulchoki         68.42 302  eP       P       12 27 09.5 -0.8
        comp=Z,17nm,0.5s
KKN   Kakani            68.58 303  eP       P       12 27 10.9 -0.3
DMN   Daman             68.67 302  eP       P       12 27 11.7 -0.1
        comp=Z,54nm,0.6s
BOD   Bodaibo           68.74 341  eP       P       12 27 11.1 -0.1
BOD                                 pmax    pmax
        comp=Z,31nm,1.2s
YAK   Yakutsk           68.79 351c iP    P       12 27 11.8 +0.4
YAK                                e                12 27 32.6
YAK                                e                12 29 43.7
YAK                                eS       S       12 35 57.1 +1.4
YAK                                e                12 36 48.6
YAK                                eSS      SS      12 40 23.6 -2.2
YAK                                 pmax    pmax
        comp=E,5.0nm,1.1s
YAK                                 pmax    pmax
        comp=N,26nm,1.3s
YAK                                 pmax    pmax
        comp=Z,51nm,1.4s
YAK                                 pmax    pmax
        comp=Z,157nm,5.3s
YAK                                 pmax    pmax
        comp=E,83nm,5.1s
YAK                                 pmax    pmax
        comp=N,93nm,4.8s
YAK                                 smax    smax
        comp=E,137nm,3.8s
YAK                                 smax    smax
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	comp=N,101nm,3.6s						
YAK	Yakutsk	68.79	351	P	P	12 27 12.4	+1.0
GKN	Gorkha	69.19	303	eP	P	12 27 14.7	-0.2
	comp=N,54nm,0.6s						
MOY	Mondy	69.47	331	eP	P	12 27 16.9	+0.9
MOY				pmax	pmax		
	comp=Z,67nm,1.5s						
DANN	Dangsing	70.03	303	eP	P	12 27 19.5	-0.7
	comp=Z,48nm,0.6s						
UNV	Unalaska Valle	70.54	27	P	P	12 27 23.3	+1.0
UNV				IAmb	IAmb	12 28 13.0	
	comp=Z,42nm,1.3s						
HYB	Hyderabad	71.86	290	i P	P	12 27 29.5	-1.5
VNDA	Vanda	72.33	177	P	P	12 27 33.1	+0.4
	comp=Z,24nm,0.9s,baz=332,slow=6.8,SNR=48						
VNDA	Vanda	72.33	177	P	P	12 27 33.4	+0.8
VNDA				pmax	pmax		
	comp=Z,24nm,0.9s						
VNDA	Vanda	72.33	177	P	P	12 27 33.4	+0.8
VNDA				IAmb	IAmb	12 27 34.3	
	comp=Z,24nm,0.8s						
WMQ	Urumqi	72.84	319	eP	P	12 27 36.7	+0.4
WMQ				pP	pwP	12 28 31.9	-0.5
WMQ				pmax	pmax		
	comp=Z,24nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,98nm,4.5s						
WMQ				LR	LR		
	comp=Z,260nm,6.5s						
WMQ				LR	LR		
	comp=Z,260nm,6.5s						
SDPT	Sand Point	74.23	28	P	P	12 27 43.8	-0.2
SDPT				IAmb	IAmb	12 27 45.6	
	comp=Z,38nm,0.9s						
BILL	Bilibino	74.59	7	c iP	P	12 27 46.4	+0.5
BILL				pmax	pmax		
	comp=Z,26nm,1.0s						
BILL	Bilibino	74.59	7	P	P	12 27 47.2	+1.3
BILL				IAmb	IAmb	12 27 47.9	
	comp=Z,27nm,1.1s						
KAAM	Kaadhehdhoo	74.72	272	P	P	12 27 49.7	+1.9
MK31	Makanchi Array	77.53	320	eP	P	12 28 02.8	-0.1
MK31	Makanchi Array	77.53	320	IAmb	IAmb	12 28 03.5	
	comp=Z,17nm,0.6s						
MKAR	Makanchi Array	77.53	320	P	P	12 28 03.0	+0.1
	comp=Z,25nm,0.6s,baz=99,slow=8.4,SNR=429						
MKAR	Makanchi Array	77.53	320	ceP	P	12 28 03.0	+0.1
MKAR				pmax	pmax		
	comp=Z,26nm,0.6s						
MKAR	Makanchi Array	77.53	320	P	P	12 28 03.1	+0.2
MAKZ	Makanchi	77.74	320	P	P	12 28 04.3	+0.3
MAKZ				pmax	pmax		
	comp=Z,65nm,1.2s						
MAKZ	Makanchi	77.74	320	P	P	12 28 04.3	+0.3
MAKZ				IAmb	IAmb	12 28 04.9	
	comp=Z,65nm,1.2s						
TIXI	Tiksi	78.02	354	⇑eP	P	12 28 04.2	-0.8
TIXI				pmax	pmax		
	comp=Z,21nm,1.0s						
TIXI	Tiksi	78.02	354	P	P	12 28 04.5	-0.5
OHAK	Old Harbor	78.62	28	P	P	12 28 09.0	+0.5
ZAA0	Zalesovo Array	78.95	328	IAmb	IAmb	12 28 10.4	
	comp=Z,29nm,0.7s						
ZALV	Zalesovo Beam	78.95	328	P	P	12 28 09.6	-0.9
	comp=Z,27nm,0.5s,baz=111,slow=5.3,SNR=114						
ZALV	Zalesovo Beam	78.95	328	P	P	12 28 09.7	-0.8
ZALV	Zalesovo Beam	78.95	328	P	P	12 28 09.7	-0.8
KDAK	Kodiak Island	79.22	28	P	P	12 28 12.0	+0.1
	comp=Z,6.5nm,0.5s,baz=238,slow=5.4,SNR=9.8						
KDAK	Kodiak Island	79.22	28	P	P	12 28 12.9	+1.0
KDAK				pmax	pmax		
	comp=Z,219nm,2.0s						
KDAK	Kodiak Island	79.22	28	P	P	12 28 12.9	+1.0
KSH	Kashi	79.52	312	P	P	12 28 15.3	+1.2
KSH				pP	pP	12 29 09.6	+0.7
KSH				S	S	12 37 51.0	-5.3
KSH				SS	SS	12 43 14.3	+4.5
KSH				pmax	pmax		
	comp=Z,60nm,0.8s						
KSH				pmax	pmax		
	comp=Z,490nm,9.1s						
KSH				LR	LR		
	comp=Z,410nm,9.5s						
KSH				LR	LR		
	comp=Z,460nm,11.4s						
KSH				LR	LR		
	comp=Z,310nm,11.3s						
NIL	Nilore	80.15	305	P	P	12 28 17.3	-0.2
NIL				pmax	pmax		
	comp=Z,79nm,0.8s						
NIL	Nilore	80.15	305	P	P	12 28 17.3	-0.2
HOM	Homer	80.55	27	P	P	12 28 19.5	+0.5
KZA	Kyzart	80.76	314	P	P	12 28 22.0	+1.0
	SNR=13						
KBK	Karagaybulak	81.13	315	P	P	12 28 22.8	+0.1
	SNR=7.4						
RDOG	Red Dog Mine	81.14	17	IAmb	IAmb	12 28 24.8	
	comp=Z,20nm,0.8s						
KURK	Kurchatov	81.21	323	c iP	P	12 28 22.2	-0.4
KURK				pmax	pmax		
	comp=Z,25nm,0.9s						
KURK	Kurchatov	81.21	323	P	P	12 28 22.4	-0.1
KURK				IAmb	IAmb	12 28 23.4	
	comp=Z,22nm,0.9s						
UCH	Uchtor	81.33	314	P	P	12 28 24.9	+0.8
	SNR=9.1						
CHMS	Chumysh	81.37	315	P	P	12 28 23.8	0.0
	SNR=13						
AAK	Ala-Archa	81.45	314	P	P	12 28 24.6	+0.4
	SNR=10						
AAK	Ala-Archa	81.45	314	c iP	P	12 28 24.3	0.0
AAK				pmax	pmax		
	comp=Z,16nm,0.6s						
AAK	Ala-Archa	81.45	314	P	P	12 28 24.7	+0.4
AAK				IAmb	IAmb	12 28 25.4	
	comp=Z,20nm,0.7s						
USP	Ospenovka	81.62	315	P	P	12 28 25.2	+0.2
	SNR=15						
SKT	Skwentna	81.71	25	IAmb	IAmb	12 29 40.3	
	comp=Z,40nm,1.9s						
SUA	Susitna One	81.80	25	P	P	12 28 25.6	0.0
PPLA	Purkeypile	81.89	24	IAmb	IAmb	12 30 59.2	
	comp=Z,33nm,1.5s						
AML	Almayashu	81.89	314	P	P	12 28 27.5	+0.6
	SNR=13						
EKS2	Erkin-Say	81.97	314	P	P	12 28 27.5	+0.5
	SNR=12						
RC01	Rabbit Creek A	82.06	26	IAmb	IAmb	12 28 28.4	
	comp=Z,54nm,1.3s						
PMR	Palmer	82.55	26	IAmb	IAmb	12 28 30.6	
	comp=Z,24nm,1.1s						
GHO	Glory Hole Cre	82.71	25	IAmb	IAmb	12 28 31.7	
	comp=Z,33nm,1.2s						
KNK	Knik Glacier	82.76	26	IAmb	IAmb	12 28 32.3	
	comp=Z,21nm,0.9s						
IMAR	Indian Mountai	82.86	21	P	P	12 28 31.2	+0.3
MAW	Mawson	82.89	203	P	P	12 28 31.1	+0.1
	comp=Z,24nm,0.9s,baz=104,slow=7.4,SNR=8.6						
MAW	Mawson	82.89	203	P	P	12 28 31.2	+0.1
MAW				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MAW	Mawson	82.89	203	P	P	12 28 31.2	+0.1
SML	Sawmill	82.98	25	IAmb	IAmb	12 28 33.3	
	comp=Z,71nm,1.2s						
HIN	Hinchinbrook I	83.20	27	P	P	12 28 33.0	+0.3
RND	Reindeer	83.47	24	IAmb	IAmb	12 28 35.0	
	comp=Z,29nm,0.8s						
MLY	Manley	83.48	22	IAmb	IAmb	12 28 36.0	
	comp=Z,30nm,1.0s						
BWN	Browne	83.57	23	IAmb	IAmb	12 28 36.1	
	comp=Z,41nm,1.0s						
MCK	McKinley	83.58	24	IAmb	IAmb	12 28 35.7	
	comp=Z,46nm,1.0s						
EYAK	Cordova Ski Ar	83.60	27	P	P	12 28 35.3	+0.6
EYAK				IAmb	IAmb	12 31 39.4	
	comp=Z,80nm,1.6s						
GAR	Garm	83.65	310	IAmb	IAmb	12 28 36.0	
	comp=Z,31nm,1.1s						
KBL	Kabul	83.75	306	P	P	12 28 35.5	-0.9
KBL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KBL	Kabul	83.75	306	P	P	12 28 35.5	-0.9
DHY	Denali Highway	83.93	25	IAmb	IAmb	12 28 38.2	
	comp=Z,26nm,0.8s						
RAGM	Ragged Mountai	84.03	28	P	P	12 28 38.1	+1.1
WRH	Wood River Hil	84.24	23	IAmb	IAmb	12 28 38.7	
	comp=Z,24nm,1.0s						
KK31	Karatay Array	84.40	314	P	P	12 28 38.7	-0.5
KK31	Karatay Array	84.40	314	IAmb	IAmb	12 28 40.1	
	comp=Z,40nm,1.2s						
KKAR	Karatay Array	84.40	314	P	P	12 28 39.0	-0.2
KKAR	Karatay Array	84.40	314	P	P	12 28 39.0	-0.2
KKAR	Karatay Array	84.40	314	IAmb	IAmb	12 28 40.1	
	comp=Z,40nm,1.2s						
QSPA	South Pole Qui	84.42	180	P	P	12 28 39.1	+0.1
CCB	Clear Creek Bu	84.42	23	IAmb	IAmb	12 28 39.5	
	comp=Z,25nm,1.0s						
TCOL	CIGO, UAF Yank	84.50	23	P	P	12 28 38.8	-0.3
	baz=244						
COLA	College	84.50	23	P	P	12 28 38.3	-0.9
COLA				pmax	pmax		
	comp=Z,27nm,0.8s						
COLA	College	84.50	23	P	P	12 28 38.3	-0.9
COLA				IAmb	IAmb	12 28 39.9	
	comp=Z,26nm,0.8s						
HDA	Harding Lake	84.66	23	P	P	12 28 39.3	-0.7
	baz=245						
POKR	Poker Plat Res	84.77	23	P	P	12 28 40.0	-0.6
	baz=245						
GLB	Gilahina Butte	84.81	27	IAmb	IAmb	12 28 42.3	
	comp=Z,20nm,0.9s						
IL31		84.83	23	IAmb	IAmb	12 28 41.2	
	comp=Z,21nm,0.8s						
ILAR	Eielson Array	84.83	23	P	P	12 28 39.5	-1.4
	comp=Z,18nm,0.7s,baz=253,slow=4.9,SNR=86						
ILAR				pP	pP	12 29 36.5	+0.3
	comp=Z,5.3nm,0.8s,baz=259,slow=5.2,SNR=5.3						
ILAR				PKKP	PKKPdf	12 46 45.6	+2.6
	comp=Z,0.2nm,0.5s,baz=18,slow=1.8,SNR=4.6						
ILAR	Eielson Array	84.83	23	P	P	12 28 39.6	-1.3
ILAR	Eielson Array	84.83	23	P	P	12 28 39.6	-1.3
CRQM	Cirque	84.87	27	IAmb	IAmb	12 28 43.5	
	comp=Z,48nm,1.2s						
VRDI	Verde Repeater	84.90	27	IAmb	IAmb	12 28 42.8	
	comp=Z,18nm,1.0s						
NRIK	Noril'sk	85.03	342	P	P	12 28 41.6	-0.2
	comp=Z,22nm,0.6s,baz=128,slow=4.4,SNR=40						
RIDG	Independent Ri	85.24	24	IAmb	IAmb	12 28 44.6	
	comp=Z,26nm,1.0s						
BALM	Baldy	85.33	27	IAmb	IAmb	12 28 45.7	
	comp=Z,49nm,1.3s						
MENT	Mentasta	85.41	25	IAmb	IAmb	12 28 45.3	
	comp=Z,14nm,0.7s						
TOLK	Toolik Lake Re	85.58	19	IAmb	IAmb	12 28 47.1	
	comp=Z,18nm,0.8s						
TOLK	Toolik Lake Re	85.58	19	P	P	12 28 45.7	+1.1
	baz=243						
BARN	Barnard Glacie	85.65	27	IAmb	IAmb	12 28 47.6	
	comp=Z,49nm,1.0s						
BCAR	Beaver Creek A	86.28	25	P	P	12 28 48.0	-0.1
BMAR	Burnt Mountain	86.76	21	P	P	12 28 50.8	+0.4
BRVK	Borovoye	86.83	324	ceP	P	12 28 49.6	-1.3
BRVK				pmax	pmax		
	comp=Z,28nm,1.0s						
BRVK	Borovoye	86.83	324	P	P	12 28 49.8	-1.1
BRVK				IAmb	IAmb	12 28 50.8	
	comp=Z,25nm,0.9s						
EGAK	Eagle	87.11	24	IAmb	IAmb	12 28 54.0	
	comp=Z,24nm,0.8s						
HYT	Haines Junctio	87.52	28	IAmb	IAmb	12 28 56.7	
	comp=Z,34nm,0.9s						
DAWY	Dawson	87.61	25	IAmb	IAmb	12 28 56.9	
	comp=Z,27nm,0.9s						
HRA	Herat	89.27	304	IAmb	IAmb	12 29 03.1	
	comp=Z,16nm,1.1s						
EPYK	Eagle Plains	89.35	23	P	P	12 29 03.4	+0.8
	baz=255						
DLBC	Dease Lake	90.70	31	P	P	12 29 09.4	+0.3
	comp=Z,5.6nm,0.9s,baz=280,slow=8.9,SNR=6.2						
INK	Inuvik	91.02	21	P	P	12 29 09.8	-0.4
	comp=Z,9.5nm,0.9s,baz=293,slow=2.0,SNR=22						
SYO	Syowa Base	91.22	200	⇑iP	P	12 29 09.8	-1.4
ABKAR	Akbulak array	92.63	319	P	P	12 29 16.2	-1.9
ABKAR	Akbulak array	92.63	319	IAmb	IAmb	12 29 17.4	
	comp=Z,16nm,0.9s						
SVE	Sverdlovsk	92.94	327	eP	P	12 29 17.8	-1.5
SVE				pmax	pmax		
	comp=Z,13nm,1.2s						
GEYT	Alibeck	92.96	308	P	P	12 29 19.1	-0.9
	comp=Z,3.7nm,0.6s,baz=164,slow=2.8,SNR=8.1						
O02D	Mt. Diablo Mer	93.24	50	P	P	12 29 22.4	+1.2
	baz=266						
YBH	Yreka Blue Hor	93.42	49	P	P	12 29 22.2	+0.1
	comp=Z,3.6nm,0.9s,baz=251,slow=5.0,SNR=4.1						
WDC	Whiskeytown Da	93.46	50	IAmb	IAmb	12 32 07.2	
	comp=Z,30nm,1.9s						
ARU	Arti	94.05	326	c iP	P	12 29 22.4	-2.0
ARU						12 33 10.8	
ARU				S	SKSac	12 39 34.2	-2.5
ARU				pmax	pmax		
	comp=Z,13nm,0.9s						
ARU	Arti	94.05	326	P	P	12 29 22.6	-1.8
ARU				IAmb	IAmb	12 29 23.3	
	comp=Z,12nm,0.9s						
ORV	Oroville	94.19	51	IAmb	IAmb	12 29 26.6	
	comp=Z,8.9nm,1.1s						
C36M	Paulatuk	94.56	21	P	P	12 29 26.3	-0.2
	baz=266						
BEKR	Beckworth	95.08	51	IAmb	IAmb	12 31 30.7	
	comp=Z,9.3nm,0.7s						
B08A	Colville Reser	96.15	42	IAmb	IAmb	12 29 34.9	
	comp=Z,6.1nm,0.9s						
NVAR	Mina Array Bea	96.62	52	P	P	12 29 36.7	-0.2
	comp=Z,1.2nm,0.8s,baz=274,slow=5.8,SNR=8.1						
NVAR				PP	PP	12 33 34.7	0.0
	comp=Z,0.8nm,1.0s,baz=265,slow=8.1,SNR=3.6						
NVAR	Mina Array Bea	96.62	52	P	P	12 29 37.4	+0.5
MWC	Mount Wilson	96.67	56	IAmb	IAmb	12 29 38.0	
	comp=Z,13nm,1.2s						
CWC	Cottonwood Cre	96.73	54	P	P	12 29 37.6	+0.2
	baz=268						
EDW2	Edwards Air Fo	96.75	56	P	P	12 29 38.0	+0.7
	baz=268						
LRMC	Laurel Mtn Rad	97.03	55	P	Pdif	12 29 39.3	+0.6
	baz=268						
MPMC	Manual Prospec	97.20	54	P	Pdif	12 29 40.0	+0.4
	baz=268						
F10A	Beach Ranch, E	97.55	44	IAmb	IAmb	12 29 42.6	
	comp=Z,5.6nm,0.8s						
NEW	Newport	97.62	42	IAmb	IAmb	12 29 41.7	
	comp=Z,8.6nm,0.9s						
NEW	Newport	97.62	42	P	Pdif	12 29 41.2	+0.3
	baz=270						
TPNV	Topopah Spring	98.22	54	P	Pdif	12 29 44.6	+0.5
	baz=269						
YKA	Yellowknife Ar	98.50	28	P	P	12 29 44.1	-0.3
	comp=Z,5.5nm,0.9s,baz=272,slow=4.5,SNR=48						
YKA				pP	pP	12 30 41.2	+0.5
	comp=Z,2.1nm,1.0s,baz=273,slow=4.3,SNR=4.1						
YKA				PP	PP	12 33 45.7	-2.2
	comp=Z,0.8nm,0.9s,baz=273,slow=7.3,SNR=5.8						
YKA				PKiKP	PKiKP	12 34 14.4	-0.7
	comp=Z,0.3nm,0.6s,baz=269,slow=1.3,SNR=5.6						
YKA				PKKPbc	PKKPbc	12 46 12.4	-4.0
	comp=Z,0.9nm,0.7s,baz=91,slow=3.0,SNR=18						
SNAA	Sanae	100.53	189	Pdiff	Pdif	12 29 52.6	-0.9
VNA2	Neumayer--Watz	101.88	188	Pdiff	Pdif	12 29 59.4	0.0
	baz=182,slow=2.7						
VNA3	Neumayer Olymp	101.89	187	Pdiff	Pdif	12 29 58.8	-0.7
BW06	Boulder Array	103.17	48	P	Pdif	12 30 05.9	-0.2
	baz=275						
PDAR	Pinedale Array	103.17	48	Pdiff	Pdif	12 30 05.8	-0.3
	comp=Z,1.4nm,0.8s,baz=259,slow=3.0,SNR=8.9						
PDAR				PKiKP	PP	12 34 23.9	-0.1
	comp=Z,0.3nm,0.6s,baz=279,slow=1.7,SNR=3.6						
PDAR				PKKPbc	PKKPbc	12 45 58.8	-3.6
	comp=Z,0.1nm,0.5s,baz=133,slow=6.3,SNR=3.7						
ARCES	ARCESS Array B	106.02	342	Pdiff	Pdif	12 30 16.8	-1.0
	comp=Z,4.4nm,0.7s,baz=76,slow=7.6,SNR=10						
ARCES				PKiKP	PKiKP	12 34 27.4	-1.2
	comp=Z,6.5nm,1.1s,baz=45,slow=4.0,SNR=5.5						
ARCES				PKKPbc	PKKPbc	12 45 49.9	-4.6
	comp=Z,1.3nm,0.5s,baz=255,slow=1.2,SNR=15						
OBN	Obninsk	106.49	326	eP	Pdif	12 30 19.9	-0.2
OBN				e		12 34 44.6	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MNTX	Cornudas Mount	107.37	59	P	PKiKP	12 34 32.7	+0.5
	baz=274						
TXAR	Lajitas Array	109.02	61	PKiKP	PKiKP	12 34 35.8	+0.4
	comp=Z,0.7nm,0.7s,baz=276,slow=2.5,SNR=4.7						
MSTX	Muleshoe	109.35	56	P	PKiKP	12 34 36.1	+0.1
	baz=276						
FINES	FINESS Array B	109.53	334	Pdiff	Pdif	12 30 31.8	-1.7
	comp=Z,3.7nm,0.6s,baz=94,slow=5.7,SNR=16						
FINES				PKiKP	PKiKP	12 34 34.5	-0.8
	comp=Z,1.2nm,0.6s,baz=119,slow=6.7,SNR=3.7						
VSU	Vasula	110.49	331	⇑iPKIKP	PKiKP	12 34 36.3	-0.9
ULM	Lac du Bonnet	111.04	38	PKiKP	PKiKP	12 34 37.3	-1.2
	comp=Z,3.7nm,0.6s,baz=309,slow=1.9,SNR=13						
BRTR	Keskin Array B	111.89	311	PKiKP	PKiKP	12 34 39.7	-1.0
	comp=Z,0.7nm,0.7s,baz=135,slow=4.8,SNR=3.4						
BRTR				PP	PP	12 35 27.7	+0.3
	comp=Z,0.7nm,0.7s,baz=113,slow=9.6,SNR=3.3						
AKASG	Malin Array Be	112.02	323	PKiKP	PKiKP	12 34 39.5	-0.8
	comp=Z,1.8nm,0.7s,baz=62,slow=2.1,SNR=6.5						
AKASG				PKKPbc	PKKPbc	12 45 31.4	-3.4
	comp=Z,0.6nm,0.6s,baz=263,slow=4.0,SNR=5.2						
JCT	Junction City	112.25	59	P	PKiKP	12 34 41.4	0.0
	baz=277						
ECSD	EROS Data Cent	112.34	45	P	PKiKP	12 34 40.4	-0.8
	baz=284						
WMOK	Wichita Mounta	112.52	55	P	PKiKP	12 34 41.7	-0.2
	baz=279						
EYMN	Ely	114.51	39	P	PKPdf	12 34 44.3	-0.9
	baz=290						
MATP	Matopo	114.88	245	PKKPbc	PKKPbc	12 45 21.1	-3.3
	comp=Z,1.1nm,0.5s,baz=226,slow=2.6,SNR=4.1						
BOSA	Boshof	114.99	235	PKP	PKPdf	12 34 46.9	0.0
	comp=Z,2.9nm,0.9s,baz=20,slow=5.5,SNR=4.2						
BURAR	Bucovina Array	115.56	321	⇑P	PKiKP	12 34 48.8	+1.4
BURAR	Bucovina Array	115.56	321	⇑PKIKP	PKiKP	12 34 48.8	+1.4
LBTB	Lobatse	115.99	239	PKKPbc	PKKPbc	12 45 21.0	+0.4
	comp=Z,1.3nm,0.6s,baz=0.0,slow=2.0,SNR=3.1						
LBTB	Lobatse	115.99	239		PKKPbc	12 45 21.0	+0.4
S39A	Bolivar	116.25	51		PKPdf	12 34 47.1	-1.8
NATX	Nacogdoches	116.42	57	P	PKiKP	12 34 49.9	+0.6
	baz=280						
W39A	Magazine	116.46	53	P	PKPdf	12 34 48.8	-0.6
	baz=283						
LSZ	Lusaka	116.53	250	PKP	PKiKP	12 34 50.4	+0.3
	comp=Z,2.4nm,0.3s,baz=137,slow=2.2,SNR=4.4						
D41A	Chassel	116.68	39		PKPdf	12 34 47.9	-1.5
MIAR	Mount Ida	116.77	54	P	PKPdf	12 34 49.6	-0.4
	baz=282						
U40A	Yellville	116.93	52	P	PKPdf	12 34 48.9	-1.4
	baz=284						
JFWS	Jewell Farm	117.02	44	P	PKPdf	12 34 48.5	-1.7
	baz=289						
DRGR		117.45	321	⇑P	PKPdf	12 34 50.1	-0.9
DRGR		117.45	321	⇑PKIKP	PKPdf	12 34 50.1	-0.9
I42A	Draeger Farm,	117.61	43		PKPdf	12 34 49.0	-2.3
W41B	Gary Mavity, V	117.69	53	P	PKPdf	12 34 50.6	-1.1
	baz=284						
CCM	Cathedral Cave	117.74	50	PKIKP	PKPdf	12 34 50.0	-1.7
CCM	Cathedral Cave	117.74	50		PKPdf	12 34 50.0	-1.7
CCM	Cathedral Cave	117.74	50	P	PKPdf	12 34 50.3	-1.4
	baz=286						
GZR	Gura Zlata	117.95	319	⇑P	PKPdf	12 34 51.7	-0.3
GZR	Gura Zlata	117.95	319	⇑PKIKP	PKPdf	12 34 51.7	-0.3
P43A	Skaggs, Pawnee	118.57	48		PKPdf	12 34 52.4	-0.9
BZS	Buzias	118.61	320	⇑P	PKPdf	12 34 52.4	-0.8
BZS	Buzias	118.61	320	⇑PKIKP	PKPdf	12 34 52.4	-0.8
L44A	Lake County Fo	118.89	44	P	PKPdf	12 34 52.8	-1.0
	baz=290						
VYHS	Vyhne	119.09	324	ePKIKP	PKPdf	12 34 53.6	-0.5
VYHS	Vyhne	119.09	324	ePKP	PKPdf	12 34 53.5	-0.5
F45A	CMU Biological	119.16	40	P	PKPdf	12 34 53.0	-1.2
	baz=294						
G45A	Suttons Bay	119.33	41	P	PKPdf	12 34 53.5	-1.1
	baz=294						
S44A	Carbondale	119.36	50		PKPdf	12 34 53.9	-0.9
D46A	Sault St. Mari	119.58	38	P	PKPdf	12 34 54.0	-0.9
	baz=296						
IDI	Anoyia	119.69	308	PKP	PKiKP	12 34 55.7	0.0
	comp=Z,7.8nm,0.7s,baz=216,slow=19,SNR=3.5						
G46A	Petoskey	119.73	40	P	PKPdf	12 34 54.5	-0.8
	baz=295						
344A	Westbrook Farm	119.77	57		PKiKP	12 34 55.9	0.0
MODS	Modra-Piesok	120.07	324	ePKIKP	PKPdf	12 34 55.7	-0.2
MODS	Modra-Piesok	120.07	324	ePKP	PKPdf	12 34 55.7	-0.2
D47A	Chapleau	120.07	38	P	PKPdf	12 34 55.1	-0.9
	baz=297						
L46A	Eue Claire	120.08	44	P	PKPdf	12 34 55.3	-0.8
	baz=292						
SFIN	Lafayette	120.09	46	P	PKPdf	12 34 55.7	-0.4
	baz=290						
K46A	Dorr	120.18	43	P	PKPdf	12 34 55.4	-0.8
	baz=292						
E47A	Iron Bridge	120.24	38	P	PKPdf	12 34 55.4	-0.9
	baz=297						
ZST	Bratislava	120.25	324	ePKIKP	PKPdf	12 34 55.7	-0.5
ZST	Bratislava	120.25	324	ePKP	PKPdf	12 34 55.7	-0.5
G47A	Hillman	120.44	40	P	PKPdf	12 34 55.9	-0.8
	baz=296						
J47A	Sunmer	120.61	42	P	PKPdf	12 34 56.2	-0.9
	baz=294						
TREC	Trest	120.64	326	ePKPDF	PKPdf	12 34 56.8	-0.2
TREC	Trest	120.64	326	ePKIKP	PKPdf	12 34 56.8	-0.2
GOPC	GO Pecny, Ondr	120.70	327	ePKPDF	PKPdf	12 34 57.1	0.0
GOPC	GO Pecny, Ondr	120.70	327	ePKIKP	PKPdf	12 34 57.1	0.0
K47A	Vermontville	120.72	43	P	PKPdf	12 34 56.2	-1.1
	baz=293						
M47A	Cromwell	120.79	45	P	PKPdf	12 34 56.8	-0.7
	baz=292						
D48A	Paudash Townsh	120.80	37	P	PKPdf	12 34 56.3	-1.1
	baz=298						
L47A	Sherwood	120.85	44	P	PKPdf	12 34 56.5	-1.1
	baz=293						
CLL	Collm	120.89	329	i PKiKP	PKiKP	12 34 57.6	+0.1
	comp=Z,5.0nm,0.9s						
CLL	Collm	120.89	329	i PKIKP	PKiKP	12 34 57.6	+0.1
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WVT	Waverly	120.91	51	PKIKP	PKPdf	12 34 56.1	-1.8
WVT	Waverly	120.91	51		PKPdf	12 34 56.0	-1.8
WVT	Waverly	120.91	51	P	PKPdf	12 34 56.8	-1.1
	baz=287						
E48A	Lockeyer	120.91	38	P	PKPdf	12 34 56.7	-0.8
	baz=298						
N47A	Urbana	120.91	45	P	PKPdf	12 34 56.6	-1.2
	baz=292						
F48A	Evansville	120.93	39	P	PKPdf	12 34 56.5	-1.1
	baz=297						
I48A	Sherman Twp	120.96	41	P	PKPdf	12 34 57.0	-0.7
	baz=295						
H48A	Harrisville	120.98	40	P	PKPdf	12 34 56.8	-1.0
	baz=296						
D49A	Beulah Townshi	121.03	37	P	PKPdf	12 34 57.0	-0.8
	baz=299						
CONA	Conrad Observa	121.11	324	ePKPdf	PKPdf	12 34 57.2	-0.9
	comp=Z,3.1nm,0.7s						
K48A	Perry	121.26	43	P	PKPdf	12 34 57.4	-1.0
	baz=294						
J48A	Bridge Port	121.28	42	P	PKPdf	12 34 57.7	-0.7
	baz=295						
F49A	Sandfield	121.32	39	P	PKPdf	12 34 57.4	-0.9
	baz=297						
L48A	N Adams	121.39	44	P	PKPdf	12 34 57.5	-1.2
	baz=293						
N48A	Decatur	121.39	45	P	PKPdf	12 34 57.7	-0.9
	baz=292						
WCI	Wyandotte Cave	121.41	48	PKIKP	PKPdf	12 34 57.4	-1.4
WCI	Wyandotte Cave	121.41	48		PKPdf	12 34 57.4	-1.4
WCI	Wyandotte Cave	121.41	48	P	PKPdf	12 34 57.9	-0.9
	baz=290						
O48A	Farmland	121.53	46	P	PKPdf	12 34 57.9	-1.1
	baz=292						
Q48A	North Vernon	121.58	47	P	PKPdf	12 34 58.4	-0.7
	baz=290						
P48A	Milroy	121.62	47	P	PKPdf	12 34 58.1	-1.1
	baz=291						
I49A	Point Hope	121.64	41	P	PKPdf	12 34 58.2	-0.8
	baz=296						
ARSA	Arzberg	121.65	324	ePKiKP	PKiKP	12 34 59.1	0.0
	comp=Z,4.3nm,1.2s						
J49A	Marlette	121.68	42	P	PKPdf	12 34 58.1	-1.0
	baz=295						
K49A	Clarkson	121.71	42	P	PKPdf	12 34 58.5	-0.8
	baz=295						
L49A	Milan	121.78	43	P	PKPdf	12 34 58.8	-0.6
	baz=294						
KHC	Kasperske Hory	121.79	326	ePKPDF	PKPdf	12 34 58.3	-0.9
KHC	Kasperske Hory	121.79	326	PKIKP	PKPdf	12 34 58.4	-0.9
KHC	Kasperske Hory	121.79	326		PKPdf	12 34 58.4	-0.9
NKC	Novy Kostel	121.79	328	ePKPDF	PKiKP	12 34 59.3	0.0
NKC	Novy Kostel	121.79	328	ePKIKP	PKiKP	12 34 59.3	0.0
GERES	GERESS Array B	121.87	326	PKP	PKPdf	12 34 58.5	-0.9
	comp=Z,2.4nm,0.7s,baz=78,slow=1.2,SNR=17						

GERES				PKKPbc	PKKPab	12 44 58.0	-1.3
	comp=Z,0.6nm,0.6s,baz=213,slow=3.4,SNR=5.5						
GERES	GERESS Array B	121.87	326		PKPdf	12 34 58.0	-1.5
N49A	Columbus Grove	121.96	45	P	PKPdf	12 34 59.0	-0.7
	baz=293						
D50A	G1974 Best Tow	121.98	36	P	PKPdf	12 34 58.8	-0.8
	baz=300						
MOA	Molln	122.08	325	*e*PKPdf	PKPdf	12 34 59.2	-0.6
	comp=Z,1.5nm,0.6s						
P49A	Miami Univ. Ec	122.10	46	P	PKPdf	12 34 59.3	-0.8
	baz=292						
O49A	Covington	122.13	45		PKPdf	12 34 58.8	-1.3
O49A	Covington	122.13	45	P	PKPdf	12 34 59.0	-1.2
	baz=292						
PLCA	Paso Flores	122.17	146	PKP	PKPdf	12 34 59.9	-0.4
	comp=Z,3.8nm,0.5s,baz=270,slow=2.7,SNR=44						
PLCA				PKKPbc	PKKPbc	12 44 57.5	-1.4
	comp=Z,4.0nm,0.8s,baz=55,slow=6.2,SNR=7.7						
R49A	Shelbyville	122.22	48	P	PKPdf	12 34 59.9	-0.4
	baz=290						
SOKA	Soboth	122.22	323	*i* PKiKP	PKPdf	12 34 59.6	-0.6
	comp=Z,4.7nm,1.0s						
K50A	Casco	122.27	42	P	PKPdf	12 34 59.5	-0.8
	baz=295						
D51A	Lot 18 Range I	122.29	36	P	PKPdf	12 34 59.2	-1.0
	baz=301						
S49A	Springfield	122.31	48	P	PKPdf	12 34 59.6	-0.9
	baz=290						
T49A	Edmonton	122.35	49	P	PKPdf	12 34 60.0	-0.7
	baz=290						
LRAL	Lakeview Retre	122.45	54	P	PKPdf	12 35 00.1	-0.9
	baz=286						
L50A	Kingsville	122.45	43	P	PKPdf	12 34 59.9	-0.8
	baz=295						
E51A	G1948 Merrick	122.50	37	P	PKPdf	12 34 59.9	-0.7
	baz=300						
F51A	Arnstein	122.55	38	P	PKPdf	12 34 59.7	-1.0
	baz=300						
M50A	Fremont	122.56	44	P	PKPdf	12 35 00.1	-0.8
	baz=294						
OBKA	Obir	122.60	323	*e*PKPdf	PKPdf	12 34 60.0	-1.0
	comp=Z,6.1nm,0.9s						
O50A	Cable	122.66	45	P	PKPdf	12 34 59.9	-1.2
	baz=293						
P50A	Jamestown	122.73	46	P	PKPdf	12 35 00.4	-0.9
	baz=292						
N50A	Nevada	122.74	44	P	PKPdf	12 35 00.7	-0.5
	baz=294						
R50A	Paris	122.84	48	P	PKPdf	12 35 00.7	-0.8
	baz=291						
VLDQ	Val d'Or	122.86	34		PKPdf	12 34 59.0	-2.2
I51A	Listowel	122.86	40	P	PKPdf	12 35 00.5	-0.9
	baz=297						
T50A	Nancy	122.91	49	P	PKPdf	12 35 00.7	-1.0
	baz=290						
F52A	Sundridge	122.97	38	P	PKPdf	12 35 00.6	-0.9
	baz=300						
S50A	Richmond	123.00	48	P	PKPdf	12 35 00.8	-1.0
	baz=291						
KBA	Koelnbreinsper	123.01	324	*i* PKPdf	PKPdf	12 35 00.6	-1.3
	comp=Z,6.5nm,1.0s						
ACSO	Alum Creek Sta	123.07	45		PKPdf	12 35 00.5	-1.4
ACSO	Alum Creek Sta	123.07	45	P	PKPdf	12 35 00.9	-1.0
	baz=294						
E52A	Mattawa	123.13	37	P	PKPdf	12 35 01.1	-0.8
	baz=301						
W50A	Signal Mountai	123.14	51	P	PKPdf	12 35 01.0	-1.3
	baz=289						
N51A	Ashland	123.22	44	P	PKPdf	12 35 01.1	-1.1
	baz=294						
Z50A	Ashland	123.25	54	P	PKPdf	12 35 01.3	-1.2
	baz=287						
D53A	Lac Vacive, Po	123.27	36	P	PKPdf	12 35 01.3	-0.8
	baz=302						
Q51A	Peebles	123.28	46		PKPdf	12 35 01.0	-1.3
Q51A	Peebles	123.28	46	P	PKPdf	12 35 01.1	-1.3
	baz=292						
I52A	Shelburne	123.28	40	P	PKPdf	12 35 01.3	-0.9
	baz=298						
P51A	Williamsport	123.31	46	P	PKPdf	12 35 01.4	-1.0
	baz=293						
O51A	Pataskala	123.37	45	P	PKPdf	12 35 01.4	-1.1
	baz=294						
SCHQ	Schefferville	123.59	23	PKP	PKPdf	12 35 01.9	-0.6
	comp=Z,4.2nm,0.6s,baz=351,slow=2.8,SNR=11						
SCHQ				PKKPbc	PKKPab	12 44 51.1	-0.6
	comp=Z,2.4nm,0.7s,baz=171,slow=3.9,SNR=7.6						
SCHQ	Schefferville	123.59	23		PKPdf	12 35 01.5	-1.0
T51A	Gray	123.59	49	P	PKPdf	12 35 02.1	-0.9
	baz=291						
S51A	Beattyville	123.62	48	P	PKPdf	12 35 02.1	-0.9
	baz=291						
M52A	Chesterland	123.65	43	P	PKPdf	12 35 02.4	-0.6
	baz=296						
E53A	Dumoine, Ponti	123.67	36	P	PKPdf	12 35 01.7	-1.2
	baz=302						
ABTA	Abfaltersbach	123.67	324	*i* PKPdf	PKPdf	12 35 00.7	-2.3
	comp=Z,6.1nm,1.0s						
V51A	Loudon	123.69	50	P	PKPdf	12 35 02.2	-1.0
	baz=290						
N52A	McGinn’s Farm,	123.73	44	P	PKPdf	12 35 02.5	-0.7
	baz=295						
G53A	Haliburton	123.74	38	P	PKPdf	12 35 02.3	-0.7
	baz=300						
D54A	Lac Fusel, La	123.83	35	P	PKPdf	12 35 01.5	-1.7
	baz=303						
WATA	Walderalm	123.89	325	*e*PKPdf	PKPdf	12 35 02.5	-1.0
	comp=Z,4.7nm,0.6s						
WTTA	Wattenberg	123.89	325	*e*PKiKP	PKPdf	12 35 03.1	-0.4
	comp=Z,12nm,0.9s						
P52A	Corning	123.91	45	P	PKPdf	12 35 02.2	-1.4
	baz=294						
E54A	Lac Daplat, Po	123.92	36	P	PKPdf	12 35 02.3	-1.1
	baz=302						
G54A	Lake Saint Pet	123.92	37	P	PKPdf	12 35 02.6	-0.8
	baz=301						
S52A	Salyersville	123.98	48	P	PKPdf	12 35 02.8	-0.9
	baz=292						
H53A	Bobcaygeon	124.04	38	P	PKPdf	12 35 03.2	-0.5
	baz=300						
TZTN	Tazewell	124.04	49	P	PKPdf	12 35 03.5	-0.4
	baz=291						
R52A	Catlettsburg	124.05	47	P	PKPdf	12 35 03.2	-0.7
	baz=293						
Q52A	Bidwell	124.08	46	P	PKPdf	12 35 03.0	-0.9
	baz=293						
MOTA	Moosalm	124.15	326	*i* PKPdf	PKPdf	12 35 02.7	-1.2
	comp=Z,11nm,1.0s						
M53A	WI Miller and	124.16	43	P	PKPdf	12 35 03.2	-0.8
	baz=296						
SQTA	Sankt Quirin	124.16	325	*i* PKPdf	PKPdf	12 35 03.1	-0.9
	comp=Z,6.7nm,0.8s						
TKL	Tuckaleechee C	124.18	50	PKIKP	PKPdf	12 35 03.4	-0.8
TKL	Tuckaleechee C	124.18	50		PKPdf	12 35 03.4	-0.8
L53A	Girard	124.20	42	P	PKPdf	12 35 03.0	-1.0
	baz=297						
W52A	Murphy	124.25	51	P	PKPdf	12 35 03.8	-0.6
	baz=290						
T52A	Hallie	124.26	48	P	PKPdf	12 35 04.0	-0.3
	baz=292						
RETA	Reutte	124.26	326	*e*PKPdf	PKPdf	12 35 02.6	-1.5
	comp=Z,5.1nm,1.2s						
O53A	New Philadelph	124.30	44	P	PKPdf	12 35 03.8	-0.5
	baz=295						
N53A	Lisbon	124.32	43	P	PKPdf	12 35 03.9	-0.4
	baz=296						
P53A	Whipple	124.49	45	P	PKPdf	12 35 04.0	-0.6
	baz=294						
FETA	Feichten	124.54	325	*i* PKiKP	PKPdf	12 35 04.3	-0.5
	comp=Z,6.9nm,0.9s						
Y52A	Lilburn	124.54	52		PKPdf	12 35 04.8	-0.1
Y52A	Lilburn	124.54	52	P	PKPdf	12 35 04.6	-0.4
	baz=289						
R53A	Hurricane	124.56	47	P	PKPdf	12 35 04.0	-0.8
	baz=293						
E55A	Montcerf-Lytto	124.56	35	P	PKPdf	12 35 03.4	-1.1
	baz=304						
D55A	Sainte-Anne-du	124.58	35	P	PKPdf	12 35 03.8	-0.8
	baz=304						
T53A	Wise	124.64	48	P	PKPdf	12 35 04.6	-0.5
	baz=292						
Q53A	Leroy	124.65	46	P	PKPdf	12 35 04.4	-0.6
	baz=294						
S53A	Williamson	124.68	47	P	PKPdf	12 35 04.6	-0.5
	baz=293						
L54A	Sinclairville	124.70	41	P	PKPdf	12 35 04.0	-1.0
	baz=298						
F55A	Otter Lake	124.73	36	P	PKPdf	12 35 03.9	-1.0
	baz=303						
I55A	Frankford	124.78	38	P	PKPdf	12 35 04.3	-0.8
	baz=301						
M54A	Oil Creek Stat	124.80	42		PKPdf	12 35 04.3	-0.9
M54A	Oil Creek Stat	124.80	42	P	PKPdf	12 35 04.7	-0.6
	baz=297						
G55A	Calabogie	124.82	37	P	PKPdf	12 35 04.1	-1.0
	baz=302						
N54A	Moraine State	124.83	43	P	PKPdf	12 35 04.8	-0.5
	baz=296						
DAVA	Damuels	124.87	326	*e*PKiKP	PKPdf	12 35 04.7	-0.7
	comp=Z,4.1nm,0.7s						
O54A	Avella	124.91	44	P	PKPdf	12 35 05.1	-0.4
	baz=296						
V53A	Saluda	124.91	50	P	PKPdf	12 35 04.9	-0.7
	baz=291						
H55A	Tweed	124.91	38	P	PKPdf	12 35 04.2	-1.1
	baz=301						
K54A	Basiliko Farm,	124.93	41	P	PKPdf	12 35 04.1	-1.4
	baz=299						
X53A	Estanollee	124.93	51	P	PKPdf	12 35 05.6	-0.1
	baz=290						
D56A	ZEC Mazanza, M	124.97	34	P	PKPdf	12 35 04.2	-1.2
	baz=305						
TSUM	Tsumeb	124.99	242	PKP	PKPdf	12 35 06.4	+0.1
	comp=Z,1.6nm,0.6s,baz=131,slow=2.9,SNR=3.9						
BG3	Lake Jocassee	125.05	51		PKPdf	12 35 05.8	-0.1
P54A	Burton	125.08	45	P	PKPdf	12 35 05.1	-0.7
	baz=295						
Q54A	Coxs Mills	125.09	45	P	PKPdf	12 35 05.1	-0.7
	baz=294						
E56A	St. Veronique	125.10	35	P	PKPdf	12 35 04.3	-1.3
	baz=305						
DAVOX	Davos/Dischmat	125.16	326	PKP	PKPdf	12 35 05.3	-0.7
	comp=Z,5.5nm,0.7s,baz=220,slow=4.2,SNR=10						
DAVOX				PKKPbc	PKKPab	12 44 45.8	+0.4
	comp=Z,2.5nm,0.8s,baz=336,slow=24,SNR=5.2						
GOGA	Godfrey	125.16	53	P	PKPdf	12 35 05.6	-0.6
	baz=289						
J55A	Hilton	125.17	40	P	PKPdf	12 35 04.6	-1.2
	baz=300						
S54A	Dingess, Beckl	125.23	47	P	PKPdf	12 35 05.5	-0.7
	baz=293						
K55A	Perry	125.27	40	P	PKPdf	12 35 04.9	-1.2
	baz=299						
L55A	Hinsdale	125.30	41	P	PKPdf	12 35 05.3	-0.9
	baz=299						
R54A	Victor	125.31	46	P	PKPdf	12 35 05.5	-0.8
	baz=294						
T54A	Tazewell	125.32	48	P	PKPdf	12 35 05.6	-0.8
	baz=293						
U54A	Nelsons Funny	125.35	49	P	PKPdf	12 35 06.5	0.0
	baz=292						
M55A	Ridgway	125.42	42	P	PKPdf	12 35 05.8	-0.7
	baz=298						
H56A	Elgin	125.45	37	P	PKPdf	12 35 05.4	-0.9
	baz=302						
D57A	Chemin Vers le	125.47	34	P	PKPdf	12 35 05.5	-0.8
	baz=306						
MCWV	Mont Chateau	125.50	44	P	PKPdf	12 35 06.1	-0.5
	baz=296						
V54A	Nebo	125.53	49	P	PKPdf	12 35 06.4	-0.4
	baz=292						
W54A	Cherokee Point	125.59	50	P	PKPdf	12 35 06.4	-0.5
	baz=291						
BMRD	Maredsous	125.61	332	PKiKP	PKPdf	12 35 06.6	+0.1
Q55A	Buckhannon	125.62	45	P	PKPdf	12 35 06.2	-0.7
	baz=295						
O55A	Ligonier	125.63	43	P	PKPdf	12 35 06.4	-0.5
	baz=297						
X54A	Belton	125.64	51	P	PKPdf	12 35 06.9	-0.1
	baz=290						
TIGA	Tifton	125.67	55	P	PKPdf	12 35 06.8	-0.3
	baz=287						
E57A	Chemin Saint G	125.67	35	P	PKPdf	12 35 05.8	-1.0
	baz=305						
F57A	Harrington	125.71	35	P	PKPdf	12 35 06.0	-0.8
	baz=304						
J56A	Wolcott	125.77	39	P	PKPdf	12 35 05.9	-1.0
	baz=301						
M56A	Emporium	125.80	42		PKPdf	12 35 06.2	-0.9
M56A	Emporium	125.80	42	P	PKPdf	12 35 06.6	-0.6
	baz=298						
DOU	Dourbes	125.83	331	PKiKP	PKiKP	12 35 07.2	-0.1
T55A	Pulaski	125.88	48	P	PKPdf	12 35 06.7	-0.8
	baz=293						
L56A	Greenwood	125.89	41	P	PKPdf	12 35 06.7	-0.6
	baz=300						
R55A	Marlinton	125.89	46	P	PKPdf	12 35 07.1	-0.4
	baz=295						
U55A	TA2, Sparta	125.93	48	P	PKPdf	12 35 07.2	-0.4
	baz=293						
G57A	Newington	125.93	36	P	PKPdf	12 35 06.2	-1.0
	baz=304						
D58A	Chemin du LacG	125.97	33	P	PKPdf	12 35 06.3	-1.0
	baz=307						
N56A	West Decatur	125.99	42	P	PKPdf	12 35 06.8	-0.8
	baz=298						
H57A	Richville	126.04	37	P	PKPdf	12 35 06.9	-0.6
	baz=303						
V55A	Taylorsville	126.05	49		PKPdf	12 35 07.0	-0.8
V55A	Taylorsville	126.05	49	P	PKPdf	12 35 07.5	-0.2
	baz=292						
O56A	Blue Knob Stat	126.11	43	P	PKPdf	12 35 07.5	-0.3
	baz=297						
BLA	Blacksburg	126.11	47	P	PKPdf	12 35 07.6	-0.3
	baz=294						
I57A	Carthage	126.16	38	P	PKPdf	12 35 07.4	-0.4
	baz=302						
E58A	La Victoria	126.19	34	P	PKPdf	12 35 07.2	-0.5
	baz=306						
KMSC	Kings Mountain	126.22	50	P	PKPdf	12 35 07.8	-0.4
	baz=292						
Q56A	Snyder Ridge,	126.23	45	P	PKPdf	12 35 07.2	-0.8
	baz=296						
J57A	Williamstown	126.24	39	P	PKPdf	12 35 07.2	-0.6
	baz=302						
X55A	Gracelyn & Ava	126.24	51	P	PKPdf	12 35 07.9	-0.3
	baz=291						
Y55A	Saluda	126.25	52	P	PKPdf	12 35 08.2	0.0
	baz=290						
P56A	Dayton Farm, R	126.27	44	P	PKPdf	12 35 07.6	-0.5
	baz=297						
R56A	Bull Pasture M	126.35	46	P	PKPdf	12 35 08.2	-0.1
	baz=295						
SSPA	Standing Stone	126.40	42		PKPdf	12 35 07.3	-1.0
SSPA	Standing Stone	126.40	42	P	PKPdf	12 35 07.8	-0.5
	baz=298						
L57A	Andrews Acres	126.42	40	P	PKPdf	12 35 07.7	-0.6
	baz=300						
LONY	Lake Ozonia	126.44	37	P	PKPdf	12 35 07.8	-0.5
	baz=304						
G58A	Ormstown	126.45	36	P	PKPdf	12 35 07.7	-0.5
	baz=305						
T56A	Rocky Mt	126.47	47	P	PKPdf	12 35 08.1	-0.5
	baz=294						
U56A	King	126.48	48	P	PKPdf	12 35 08.3	-0.3
	baz=293						
S56A	Natural Bridge	126.54	46	P	PKPdf	12 35 08.0	-0.6
	baz=295						
M57A	Sunshine Farm,	126.56	41	P	PKPdf	12 35 08.4	-0.2
	baz=299						
V56A	Mocksville	126.61	49	P	PKPdf	12 35 08.6	-0.2
	baz=293						
X56A	White Oak	126.69	51	P	PKPdf	12 35 09.1	+0.1
	baz=291						
J58A	Remsen	126.70	38	P	PKPdf	12 35 08.5	-0.3
	baz=302						
I58A	Old Forge	126.72	38	P	PKPdf	12 35 08.5	-0.4
	baz=303						
Y56A	Pelion	126.73	52	P	PKiKP	12 35 09.6	0.0
	baz=291						
O57A	Amberson	126.77	43	P	PKPdf	12 35 08.7	-0.3
	baz=298						
Q57A	Strasburg	126.77	44	P	PKPdf	12 35 08.8	-0.2
	baz=297						
H58A	Gabriels	126.79	37	P	PKPdf	12 35 08.7	-0.3
	baz=304						
K58A	Earlville	126.79	39	P	PKPdf	12 35 08.5	-0.5
	baz=302						
P57A	Homestead Farm	126.85	44	P	PKPdf	12 35 08.8	-0.4
	baz=297						
BINY	Binghamton	126.87	40	P	PKPdf	12 35 08.7	-0.4
	baz=301						
H59A	Cadyville	126.95	36	P	PKiKP	12 35 09.6	-0.1
	baz=305						
M58A	Price’s Panora	126.98	41	P	PKPdf	12 35 09.0	-0.4
	baz=300						
G59A	Clarenceville	127.00	35	P	PKPdf	12 35 08.8	-0.4
	baz=306						
L58A	Harry Jones Me	127.04	40	P	PKPdf	12 35 09.1	-0.3
	baz=301						
T57A	Hurt	127.05	47	P	PKPdf	12 35 09.2	-0.5
	baz=295						
N58A	Sunbury	127.08	42		PKPdf	12 35 09.0	-0.6
N58A	Sunbury	127.08	42	P	PKPdf	12 35 08.9	-0.6
	baz=299						
V57A	Coltrane Farms	127.12	49	P	PKPdf	12 35 09.6	-0.2
	baz=293						
J59A	Piesco	127.12	38	P	PKPdf	12 35 09.1	-0.5
	baz=303						
D60A	Saint Jean D’O	127.14	32	P	PKPdf	12 35 09.2	-0.3
	baz=309						
F60A	Warwick	127.17	34	P	PKPdf	12 35 09.5	0.0
	baz=307						
E60A	Ste Agathe de	127.20	33	P	PKPdf	12 35 09.6	0.0
	baz=308						
U57A	Blanch	127.22	48	P	PKPdf	12 35 09.7	-0.2
	baz=294						
W57A	Gilead	127.24	49	P	PKPdf	12 35 09.8	-0.3
	baz=293						
K59A	Cooperstown	127.28	39	P	PKPdf	12 35 09.5	-0.5
	baz=302						
O58A	Lewisberry	127.29	43	P	PKPdf	12 35 10.2	+0.2
	baz=299						
I59A	Olmsteadville	127.32	37	P	PKPdf	12 35 09.9	-0.1
	baz=304						
Q58A	Fox Den Farm,	127.32	44	P	PKPdf	12 35 10.2	+0.1
	baz=297						
P58A	Pank, Wackersv	127.33	43	P	PKPdf	12 35 09.8	-0.3
	baz=298						
D61A	St Aubert, Com	127.35	32	P	PKPdf	12 35 09.7	-0.2
	baz=310						
Y57A	Sumter	127.36	51	P	PKiKP	12 35 10.7	-0.1
	baz=292						
M59A	Waymart	127.56	40	P	PKPdf	12 35 10.6	+0.1
	baz=301						
T58A	Grand View Acr	127.60	47	P	PKPdf	12 35 10.9	+0.2
	baz=295						
R58B	Mineral	127.62	45	P	PKPdf	12 35 10.3	-0.4
	baz=296						
I60A	Shoreham	127.64	37	P	PKPdf	12 35 10.7	+0.1
	baz=305						
V58A	Windy Hill, Pi	127.64	48	P	PKPdf	12 35 10.6	-0.1
	baz=294						
S58A	Poland Farm, P	127.66	46	P	PKPdf	12 35 10.9	+0.1
	baz=296						
N59A	State Game Lan	127.66	41	P	PKPdf	12 35 10.8	0.0
	baz=300						
E61A	Lac Etchemin	127.68	33	P	PKiKP	12 35 11.0	-0.1
	baz=309						
F61A	St Evariste	127.69	33	P	PKiKP	12 35 10.9	-0.2
	baz=308						
U58A	Oxford	127.82	47	P	PKPdf	12 35 10.9	-0.2
	baz=295						
W58A	Raeford	127.86	49	P	PKPdf	12 35 11.3	+0.1
	baz=293						
J60A	Lant Hill Farm	127.90	37	P	PKPdf	12 35 11.3	+0.3
	baz=304						
Y58A	Scranton	127.96	51	P	PKiKP	12 35 12.0	-0.1
	baz=292						
X58A	Rowland	127.97	50	P	PKiKP	12 35 12.1	+0.1
	baz=293						
D62A	Allapoint, All	128.02	31	P	PKPdf	12 35 11.0	-0.2
	baz=311						
Z58A	St. Stephen	128.06	52	P	PKiKP	12 35 12.6	+0.4
	baz=292						
N60A	Cedar Hill Far	128.12	41	P	PKPdf	12 35 11.6	+0.1
	baz=301						
O60A	Telford	128.21	42	P	PKiKP	12 35 12.1	-0.2
	baz=300						
LBNH	Lisbon	128.22	36	P	PKiKP	12 35 12.2	-0.1
	baz=306						
I61A	Oroboro, Fairl	128.23	36	P	PKPdf	12 35 11.9	+0.2
	baz=306						
T59A	Double "B" Far	128.29	46	P	PKPdf	12 35 12.1	+0.2
	baz=296						
P60A	Greenville	128.30	42	P	PKiKP	12 35 12.3	-0.3
	baz=300						
V59A	Middlesex	128.31	48	P	PKPdf	12 35 12.2	+0.2
	baz=295						
K61A	Williamstown	128.32	38	P	PKiKP	12 35 12.6	0.0
	baz=304						
J61A	Chester	128.37	37	P	PKiKP	12 35 12.6	0.0
	baz=305						
D63A	Stockholm	128.53	31	P	PKPdf	12 35 11.6	-0.5
	baz=312						
M61A	Granite Spring	128.75	40	P	PKPdf	12 35 13.0	+0.3
	baz=303						
PQI	Presque Isle	128.82	31		PKPdf	12 35 11.6	-1.1
G63A	Kingsbury	128.98	33	P	PKiKP	12 35 13.5	-0.3
	baz=309						
X60A	Albert Glenn T	128.99	49	P	PKiKP	12 35 14.0	-0.1
	baz=294						
PKME	Peaks-Kenny Pk	129.06	33	P	PKiKP	12 35 13.6	-0.3
	baz=310						
F64A	Sherman	129.18	32	P	PKPdf	12 35 13.6	+0.1
	baz=311						
KEST	Kesra	131.30	314	PKP	PKiKP	12 35 19.4	+0.6
	comp=Z,3.3nm,0.6s,baz=182,slow=2.8,SNR=4.4						
GO01	Chusmiza	135.98	126		PKPdf	12 35 28.2	+0.6
ESDC	Sonseca Array	137.44	327	PKhKP	PKPpre	12 35 17.3	
	comp=Z,0.2nm,0.3s,baz=46,slow=1.9,SNR=3.0						
ROSC	El Rosal	138.25	89	PKP	PKPdf	12 35 32.7	+0.9
	comp=Z,20nm,0.5s,baz=159,slow=11,SNR=5.8						
CPUP	Villa Florida	140.15	144	PKhKP	PKPpre	12 35 27.4	
	comp=Z,2.3nm,0.7s,baz=358,slow=1.7,SNR=6.5						
MDT	Midelt	142.49	320	PKhKP	PKPpre	12 35 34.5	
	comp=Z,1.6nm,0.4s,baz=42,slow=0.9,SNR=9.9						
AVE	Averroes	143.91	323	P	PKPbc	12 35 39.9	+0.5
	SNR=7.8						
TZRR	Tazzarine	144.42	318	P	PKPbc	12 35 41.1	0.0
	SNR=7.7						
SJG	San Juan	144.77	66	PKIKP	PKPbc	12 35 40.8	-1.6
SJG	San Juan	144.77	66		PKPbc	12 35 40.8	-1.6
ZGR	Zagora	144.87	317	P	PKPdf	12 35 43.0	+0.2
	SNR=21						
OUZM	OUZ	145.12	319	P	PKPab	12 35 44.0	+0.4
	SNR=20						
CUPR	Culebra, Puert	145.50	66		PKPdf	12 35 43.7	-0.4
TOA0	Torodi Ar. Sit	145.55	285		PKPdf	12 35 43.1	-1.2
TORD	Torodi Ar. Bea	145.55	285	PKPbc	PKPdf	12 35 43.8	-0.4
	comp=Z,17nm,0.4s,baz=58,slow=3.6,SNR=199						
TORD	Torodi Ar. Bea	145.55	285		PKPdf	12 35 43.5	-0.8
OUK	Oukaimeden	145.63	321	P	PKPab	12 35 46.1	+0.4
	SNR=18						
SAML	Samuel	146.10	115	PKIKP	PKPdf	12 35 45.2	-0.1
SAML	Samuel	146.10	115		PKPdf	12 35 45.2	-0.1
SPB	Sao Paulo	147.53	154		PKPbc	12 35 49.8	-0.5
PTGA	Pitinga	151.78	102		PKPbc	12 36 00.1	-0.8
KIC	Kosan Boka	152.48	273	*e*PKIKP	PKPbc	12 36 02.6	+0.1
	comp=Z,13nm,0.6s						
DBIC	Dimbokro	152.59	274	PKPbc	PKPbc	12 36 02.1	-0.6
	comp=Z,5.6nm,0.5s,baz=50,slow=1.5,SNR=17						
DBIC	Dimbokro	152.59	274		PKPbc	12 36 02.3	-0.5
TIC	Toumodi	152.75	274	*e*PKIKP	PKPbc	12 36 02.9	-0.2
LIC	Lamto	152.76	273	*e*PKIKP	PKPbc	12 36 03.1	0.0
	comp=Z,29nm,0.5s						
BDFB	Brasilia	153.88	144	PKP	PKPdf	12 35 57.7	+0.2
	comp=Z,2.0nm,0.7s,baz=227,slow=4.2,SNR=4.8						
BDFB				PKPbc	PKPbc	12 36 05.2	-0.5
	comp=Z,7.2nm,0.5s,baz=213,slow=1.8,SNR=11						
BDFB				PKPab	PKPab	12 36 18.8	-0.8
	comp=Z,18nm,0.8s,baz=203,slow=4.1,SNR=13						

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*IDC **09** 12:46:06.5±3.0, 36°.43N×71°.35E, h160km±27km, mb3.4/9, mb1 3.5/16, mb1mx3.2/56, mbtmp3.9/16, Error ellipse: s-maj=22.0km s-min=15.7km az=10.0*

*BJI **09** 12:46:07.4±0.0, 36°.51N×71°.44E, h176km, mB4.7/4, mb4.3/8*

*MOS **09** 12:46:08.5±1.0, 36°.66N×71°.33E, h183km, mb4.0/4, Error ellipse: s-maj=16.0km s-min=6.7km az=90.1*

*NEIC **09** 12:46:09.4±2.5, 36°.70N±0°.05×71°.33E±0°.09, h180km±6km, mb4.1/16, Error ellipse: s-maj=10.4km s-min=7.5km az=81.0*

*NNC **09** 12:46:14.3±3.8, 37°.08N×71°.42E, h185km±52km, mb3.2, mpv4.3, Error ellipse: s-maj=38.8km s-min=24.3km az=22.0*

ISC 09 12:46:10.3±0.5, **36°.66N**±0°.05×**71°.37E**±0°.05, **h200**km, **n100**, σ**2.31**/116, **5C-4D, Afghanistan-Tajikistan border region**

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

GAR	Garm	2.48	341		Pn	12 46 51.8	-2.3
GAR				Sn	Sn	12 47 22.6	-5.9
CHGR	Chuyangaron	2.66	319		Pn	12 46 53.8	-2.2
CHGR				Sn	Sn	12 47 26.3	-5.5
KBL	Kabul	2.83	223		Pn	12 46 56.6	-1.7
KBL				Sn	Sn	12 47 32.1	-3.6
CHCP	Chirah Chowk	3.37	152	P	Pn	12 47 03.5	-0.9
NIL	Nilore	3.37	152	PN	Pn	12 47 03.9	-0.6
NIL						12 47 45.3	
NIL	Nilore	3.37	152		Pn	12 47 03.9	-0.6
NIL				Sn	Sn	12 47 45.3	-1.5
BTK	Batken	3.42	353		Pn	12 47 04.2	-0.8
BTK				Sn	Sn	12 47 44.8	-3.3
THW	Thamme Wali	3.86	175	P	Pn	12 47 09.2	-1.3
KSH	Kashi	4.62	50	P	Pn	12 47 14.3	-5.7
KSH				S	Sn	12 48 01.2	-14
KSH				smax	smax		
	comp=N,900nm,0.3s						
KSH				smax	smax		
	comp=E,640nm,0.3s						
ARSB	Arslanbob	4.83	15	PN	Pn	12 47 20.0	-2.6
ARSB	Arslanbob	4.83	15	Pn	Pn	12 47 20.0	-2.6
THN	Thein Dam	5.53	138	*e*P	Pn	12 47 27.8	-3.8
THN				*e*S	Sn	12 48 31.0	-4.7
AML	Almayashu	5.76	18	P	Pn	12 47 32.8	-1.9
	SNR=292						
DHRM	DHARAMSHALA	5.99	136	*e*P	Pn	12 47 36.1	-1.6
DHRM				*e*S	Sn	12 48 41.0	-5.7
DHRM				IAML		12 48 44.7	
	comp=N,154nm,0.1s						
DHRM				IAML		12 48 45.0	
	comp=E,222nm,0.6s						
UCH	Uchtor	6.07	23	P	Pn	12 47 36.8	-2.1
	SNR=18						
KZA	Kyzart	6.19	28	P	Pn	12 47 38.1	-2.3
	SNR=15						
EKS2	Erkin-Say	6.28	16	P	Pn	12 47 39.9	-1.3
	SNR=46						
AAK	Ala-Archa	6.44	21	P	Pn	12 47 41.9	-1.4
	comp=E,7.2nm,0.3s,baz=161,slow=6.2,SNR=96						
AAK				S	Sn	12 48 51.3	-5.8
	comp=E,3.0nm,0.3s,baz=109,slow=18,SNR=13						
AAK	Ala-Archa	6.44	21	P	Pn	12 47 42.0	-1.4
	SNR=14						
AAK	Ala-Archa	6.44	21	⇑P	Pn	12 47 41.8	-1.6
	comp=E,8.6nm,0.4s						
AAK				⇓S	Sn	12 48 51.1	-6.0
	comp=E,40nm,0.8s						
AAK	Ala-Archa	6.44	21	*ce*PN	Pn	12 47 42.1	-1.3
AAK	Ala-Archa	6.44	21		Pn	12 47 41.8	-1.6
AAK				Sn	Sn	12 48 52.1	-5.0
KK31	Karatay Array	6.47	354	⇑P	Pn	12 47 42.1	-1.5
	comp=E,15nm,0.3s,baz=179,slow=12,SNR=653						
KK31				⇑S	Sn	12 48 51.8	-5.8
	comp=E,15nm,0.5s,baz=180,slow=23,SNR=9.1						
KK31	Karatay Array	6.47	354	PN	Pn	12 47 42.1	-1.5
KK31	Karatay Array	6.47	354		Pn	12 47 42.0	-1.5
KKAR	Karatay Array	6.47	354	PN	Pn	12 47 42.1	-1.5
KKAR	Karatay Array	6.47	354		Pn	12 47 42.1	-1.5
KKAR	Karatay Array	6.47	354		Pn	12 47 41.8	-1.8
ULHL	Ulahol	6.74	33	P	Pn	12 47 46.5	-0.7
	SNR=9.3						
CHMS	Chumysh	6.85	21	P	Pn	12 47 47.0	-1.5
	SNR=7.6						
USP	Ospenovka	7.03	19	P	Pn	12 47 48.8	-2.0
	SNR=14						
SMLA	Simla	7.32	137	*e*P	Pn	12 47 53.0	-1.7
SMLA				*e*S	Sn	12 49 11.2	-6.5
SMLA				IAML		12 49 13.2	
	comp=N,59nm,0.6s						
SMLA				IAML		12 49 14.0	
	comp=E,56nm,0.3s						
JOSI	Joshimath	9.14	129	*e*P	Pn	12 48 18.3	-0.4
JOSI				IAML		12 49 49.0	
	comp=E,53nm,0.2s						
JOSI				IAML		12 49 49.2	
	comp=N,68nm,0.2s						
JOSI				*e*S	Sn	12 49 55.3	-6.0
GEYT	Alibeck	10.63	281	P	Pn	12 48 36.1	-1.6
	comp=N,0.3nm,0.3s,baz=294,slow=11,SNR=5.0						
GEYT				S	Sn	12 50 32.5	-3.9
	comp=N,0.6nm,0.3s,baz=104,slow=15,SNR=3.1						
MAKZ	Makanchi	12.86	35	P	Pn	12 49 04.6	-1.3
MAKZ	Makanchi	12.86	35	Pn	Pn	12 49 04.6	-1.3
MK31	Makanchi Array	12.99	35	*i* P	Pn	12 49 07.1	-0.5
MK31	Makanchi Array	12.99	35		Pn	12 49 07.3	-0.3
MKAR	Makanchi Array	12.99	35	P	Pn	12 49 06.8	-0.7
	comp=N,0.2nm,0.3s,baz=226,slow=13,SNR=15						
MKAR	Makanchi Array	12.99	35	*i* P	Pn	12 49 07.3	-0.3
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	12.99	35		Pn	12 49 08.1	+0.5
DANN	Dangsing	13.33	125	*e*P	Pn	12 49 11.7	-0.5
WMQ	Urumqi	14.37	55	*e*P	P	12 49 26.7	+0.6
WMQ				sP	Pn	12 50 10.4	+46
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,180nm,5.9s						
WMQ				LR	LR		
	comp=Z,250nm,5.9s						
WMQ				LR	LR		
	comp=Z,120nm,7.3s						
WMQ				LR	LR		
	comp=Z,140nm,5.9s						
KKN	Kakani	14.71	123	*e*P	Pn	12 49 28.7	-0.5
KURBB	Kurchatov Arra	14.88	18	P	P	12 49 32.4	+0.7
	comp=Z,0.2nm,0.3s,baz=207,slow=10,SNR=4.7						
PKIN	Phulchoki	14.93	123	*e*P	Pn	12 49 31.5	-0.4
PKI	Pulchoki	14.94	123	*e*P	Pn	12 49 32.0	-0.1
KURK	Kurchatov	14.99	18	⇓*e*P	P	12 49 34.2	+1.4
KURK				pmax	pmax		
	comp=Z,9.0nm,2.5s						
KURK	Kurchatov	14.99	18	P	P	12 49 33.4	+0.5
GUN	Gumba	15.04	121	*e*P	Pn	12 49 31.9	-1.5
AB31	Akbulak array	15.09	330	⇓P	P	12 49 33.8	-0.2
	comp=Z,0.8nm,0.4s,baz=141,slow=12,SNR=56						
AB31	Akbulak array	15.09	330	*i* P	P	12 49 33.8	-0.2
ABKAR	Akbulak array	15.09	330	P	P	12 49 33.0	-1.0
ABKAR	Akbulak array	15.09	330		Pn	12 49 31.7	-1.8
JIRN	Jiri	15.41	121	*e*P	Pn	12 49 36.7	-1.2
BVAR	Borovoye Array	16.38	358	P	Pn	12 49 48.4	-0.6
	comp=Z,0.8nm,0.3s,baz=152,slow=10,SNR=23						
BRVK	Borovoye	16.42	358	*de*P	Pn	12 49 50.6	+1.2
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BRVK	Borovoye	16.42	358	P	Pn	12 49 49.9	+0.4
TAPN	Taplejung	16.66	119	*e*P	Pn	12 49 52.1	-0.8
AKTO	Aktyubinsk	16.80	329	P	Pn	12 49 54.0	+0.1
	comp=Z,0.6nm,0.3s,baz=136,slow=10,SNR=7.8						
AKTO				S	S	12 52 54.3	-3.4
	comp=Z,0.1nm,0.3s,baz=96,slow=19,SNR=3.2						
AKTO	Aktyubinsk	16.80	329	⇑P	Pn	12 49 54.0	+0.1
	comp=Z,3.2nm,0.8s						
AKTO	Aktyubinsk	16.80	329	P	Pn	12 49 54.0	+0.1
ZAA0	Zalesovo Array	19.65	24	P	Pn	12 50 25.4	-2.2
ZAA0				IAmb	IAmb	12 50 28.7	
	comp=Z,2.0nm,0.6s						
ZALV	Zalesovo Beam	19.65	24	P	P	12 50 24.4	+0.7
	comp=Z,0.6nm,0.3s,baz=214,slow=11,SNR=15						
ZALV	Zalesovo Beam	19.65	24	P	P	12 50 23.8	+0.2
KMI	Kunming	29.15	104	P	P	12 51 56.1	+3.0
KMI				pmax	pmax		
	comp=Z,16nm,0.7s						
BRTR	Keskin Array B	29.67	288	P	P	12 51 57.8	+0.4
	comp=Z,0.5nm,0.7s,baz=88,slow=13,SNR=3.5						
BRTR	Keskin Array B	29.67	288	P	P	12 51 57.5	+0.1
OBN	Obninsk	30.01	319	*e*P	P	12 52 03.3	+3.3
OBN				*e**PP	pP	12 52 41.3	0.0
OBN				*e*		12 53 07.3	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC	Hu-ho-hao-te	31.43	70	*e*P	P	12 52 15.6	+2.7
HHC				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC				pmax	pmax		
	comp=Z,53nm,4.6s						
AKASG	Malin Array Be	33.08	309	P	P	12 52 28.2	+1.3
	comp=Z,0.3nm,0.4s,baz=79,slow=7.4,SNR=3.5						
AKASG	Malin Array Be	33.08	309	P	P	12 52 26.8	-0.1
BURAR	Bucovina Array	35.45	303	P	P	12 52 48.2	+0.8
BUR08	Bucovina Ar. S	35.46	303	P	P	12 52 50.2	+2.6
FINES	FINESS Array B	37.52	326	P	P	12 53 06.2	+1.6
	comp=Z,0.6nm,0.4s,baz=125,slow=9.2,SNR=9.4						
FINES	FINESS Array B	37.52	326	*i* P	P	12 53 06.6	+2.0
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	37.52	326	P	P	12 53 06.6	+2.0
ARCES	ARCESS Array B	41.11	337	P	P	12 53 35.9	+1.6
	comp=Z,6.7nm,1.1s,baz=114,slow=9.0,SNR=6.2						
ARCES	ARCESS Array B	41.11	337	P	P	12 53 35.1	+0.8
NC405	NORSAR Array S	44.20	323	P	P	12 53 59.5	+0.4
NC405				IAmb	IAmb	12 54 18.2	
	comp=Z,18nm,1.3s						
NC602	NORSAR Array S	44.25	323	P	P	12 53 59.7	+0.2
NC303	NORSAR Array S	44.38	323	P	P	12 54 01.9	+1.4
NB2	NORSAR Subarra	44.43	323	P	P	12 54 02.5	+1.5
	comp=Z,0.6nm,0.4s,baz=98,slow=7.9						
NOA	NORSAR Array B	44.43	323	P	P	12 54 02.6	+1.5
	comp=Z,0.3nm,0.3s,baz=105,slow=7.1,SNR=6.2						
TWG	Pinlang	44.84	94	P	P	12 54 05.0	+0.3
MSSA	Maissana	46.67	300	P	P	12 54 21.1	+2.3
MSSA				IAmb	IAmb	12 54 27.9	
	comp=Z,12nm,1.0s						
BILL	Bilibino	58.34	26	*e*P	P	12 55 46.0	+2.1
BILL				*e**PP	pP	12 56 29.0	-1.7
BILL				*e*		12 56 35.7	
BILL				*e*		12 57 58.0	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.1s						
TOA0	Torodi Ar. Sit	66.02	269	P	P	12 56 35.4	-0.3
TOA0				IAmb	IAmb	12 56 35.9	
	comp=Z,1.5nm,0.8s						
TORD	Torodi Ar. Bea	66.02	269	P	P	12 56 35.2	-0.5
	comp=Z,0.9nm,0.4s,baz=50,slow=5.7,SNR=17						
TORD	Torodi Ar. Bea	66.02	269	P	P	12 56 35.4	-0.3
GAMB	Gambell	68.24	25	P	P	12 56 52.4	+3.5
GAMB				IAmb	IAmb	12 56 57.8	
	comp=Z,10nm,1.5s						
INK	Inuvik	73.70	9	P	P	12 57 24.2	+2.5
INK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
INK	Inuvik	73.70	9	P	P	12 57 24.2	+2.5
DHY	Denali Highway	75.89	17	P	P	12 57 36.2	+1.7
DHY				IAmb	IAmb	12 57 37.3	
	comp=Z,3.9nm,1.2s						
YKA	Yellowknife Ar	81.08	3	P	P	12 58 04.7	+2.1
	comp=Z,0.1nm,0.3s,baz=351,slow=5.3,SNR=11						
WRA	Warramunga Arr	81.82	122	P	P	12 58 07.4	+0.2
	comp=Z,0.6nm,0.7s,baz=323,slow=4.9,SNR=8.0						
WRA	Warramunga Arr	81.82	122	P	P	12 58 07.8	+0.6
WRA	Warramunga Arr	81.82	122	P	P	12 58 07.8	+0.6
WB2	Warramunga Arr	81.83	122	P	P	12 58 07.5	+0.3
WB2				IAmb	IAmb	12 58 22.7	
	comp=Z,4.3nm,1.4s						
ASAR	Alice Springs	84.10	125	P	P	12 58 19.3	+0.5
	comp=Z,0.4nm,0.6s,baz=308,slow=4.8,SNR=12						

IDC 09 13:11:54.6±2.1**, 1°.43N×127°.40E, h0^{km}, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.2**/43**, mbtmp3.2**/3**, Error ellipse: s-maj=144.0km s-min=27.7km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.30	163	P	P	13 16 54.2	+0.3
	0.7nm,0.6s,baz=342,slow=11,SNR=12						
ASAR	Alice Springs	25.74	166	P	P	13 17 26.8	-0.3
	0.2nm,0.4s,baz=347,slow=7.8,SNR=8.1						
MKAR	Makanchi Array	59.82	326	P	P	13 22 01.9	0.0
	0.1nm,0.4s,baz=114,slow=9.4,SNR=3.3						

MEX 09 13:13:20.2±0.7**, 24°.52N×100°.39W, h10^{km}, MD3.9, Central Mexico**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LNIG	Linares	0.92	65	*e*P	Pg	13 13 35.6	-2.3
LNIG				*e*S	Sg	13 13 46.6	-3.3
MNIG	Monterrey	1.09	5	*e*P	Pg	13 13 37.1	-4.2
MNIG				*e*S	Sg	13 13 51.9	-3.6
JCT	Junction City	5.96	5	*e*P	Pn	13 14 46.4	-2.2
JCT				*e*S	Sn	13 15 53.1	-3.8

TIR ***09*** *13:19:46.0, 40°.57N×20°.59E, h2^{km}, Md3.4/8*
BEO ***09*** *13:19:46.8±1.0, 40°.44N×20°.57E, h5^{km}±4^{km}, ML2.8/9*
SKO ***09*** *13:19:47.6, 40°.50N×20°.56E, h4^{km}*
THE ***09*** *13:19:47.4, 40°.53N×20°.60E, h0^{km}±1^{km}, ML3.1/7, Error ellipse: s-maj=1.9km s-min=0.5km az=321.0*
PDG ***09*** *13:19:47.8±0.5, 40°.57N×20°.63E, h7^{km}±1^{km}, ML3.2/10, Error ellipse: s-maj=0.9km s-min=1.1km az=0.0*
IDC ***09*** *13:19:48.1±2.0, 40°.76N×20°.85E, h0^{km}, mb3.5/3, mb1 3.7/5, mb1mx3.4/31, mbtmp3.5/5, ML3.4/2, Error ellipse: s-maj=52.8km s-min=22.3km az=47.0*
ISC 09 13:19:47.6±1.0**, 40°.54N**±0°.02×**20°.59E**±0°.02**, h8^{km}**±8^{km}**, n79, σ1^{s}.15**/113**, mb3.4**/3**, 9C-5D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEST	Nestorio	0.37	109	P	Pg	13 19 54.6	-0.3
NEST				S	Sg	13 20 00.0	+0.2
	3µm,0.4s						
TPE	Tepelena	0.51	241	P	Pg	13 19 56.6	-0.8
TPE				S	Sg	13 20 04.6	+0.6
	3µm,0.5s						
TPE	Tepelena	0.51	241	*i* PG	Pg	13 19 56.6	-0.8
TPE				*i* SG	Sb	13 20 05.2	-1.1
PENT	Pentalofos	0.54	129	P	Pg	13 19 57.6	-0.5
PENT				S	Sg	13 20 05.4	+0.2
	3µm,0.3s						
OHR	Ohrid	0.59	15	*i* Pg	Pg	13 19 59.2	+0.1
OHR				*i* Sg	Sg	13 20 08.0	+1.0
OHR				*e*Lg	Lg	13 20 08.5	
	comp=N,296nm,0.5s						
OHR				*e*Lg	Lg	13 20 09.3	
	comp=E,849nm,0.5s						
FNA	Florina	0.65	67	P	Pg	13 19 59.4	-0.7
FNA				S	Sg	13 20 09.2	+0.6
	comp=E,4µm,0.5s						
FNA	Florina	0.65	67	*i* PG	Pg	13 19 59.3	-0.7
FNA				*i* SG	Sg	13 20 09.0	+0.5
KPRO	Kipourio	0.83	134	P	Pg	13 20 02.5	-1.1
KPRO				S	Sb	13 20 15.2	-0.5
	comp=E,2µm,0.3s						
VLO	Vlora	0.84	266	P	Pb	13 20 04.1	-0.3
VLO	Vlora	0.84	266	*i* PG	Pg	13 20 03.2	-0.5
VLO				*i* SG	Sb	13 20 15.9	+0.1
JAN	Janina	0.90	167	P	Pg	13 20 03.9	-1.1
JAN				S	Sb	13 20 17.4	-0.3
	comp=E,980nm,0.4s						
KZN	Kozani	0.93	104	P	Pg	13 20 04.5	-1.0
KZN				S	Sb	13 20 18.8	+0.2
	comp=E,2µm,0.3s						
TIR	Tirane	0.98	326	P	Pg	13 20 05.2	-1.2
TIR	Tirane	0.98	326	*e*Pg	Pg	13 20 05.1	-1.3
TIR				*e*Sg	Sn	13 20 22.1	+0.4
TIR	Tirane	0.98	326	*i* PG	Pg	13 20 04.5	-1.9
TIR				*i* SG	Sb	13 20 19.8	-0.1
TIR	Tirane	0.98	326	⇓P	Pg	13 20 06.6	+0.2
KEK	Kerkira	1.02	217	P	Pg	13 20 06.4	-0.9
KEK				S	Sb	13 20 21.7	+0.5
PHP	Peshkopia	1.15	354	P	Pg	13 20 09.1	-0.6
PHP				S	Sn	13 20 26.1	+0.1
PHP	Peshkopia	1.15	354	*i* PG	Pg	13 20 08.2	-1.6
PHP				*i* SG	Sb	13 20 25.3	+0.4
KTI	Kastanea	1.17	97	P	Pg	13 20 09.1	-1.0
GRG	Griva	1.44	73	P	Pn	13 20 13.7	-0.3
SKO	Skopje	1.57	24	*e*Pn	Pg	13 20 17.4	-0.3
SKO				*e*Sn	Sg	13 20 38.8	+0.7
SKO	Skopje	1.57	24	*i* Pg	Pg	13 20 17.9	+0.1
PUK	Puka	1.59	341	*i* PN	Pn	13 20 16.4	+0.3
PUK				*i* SN	Sg	13 20 39.6	+0.8
STIP	Stip	1.67	46	*i* Pn	Pg	13 20 19.4	-0.2
SCTE	Santa Cesarea	1.69	255	*i* PN	Pb	13 20 19.0	+0.1
SCTE				*i* SN	Sg	13 20 43.7	+1.9
VAY	Valandovo	1.69	62	*e*Pn	Pb	13 20 18.5	-0.5
VAY				*e*Sg	Sg	13 20 42.7	+0.7
VAY	Valandovo	1.69	62	*i* Pg	Pb	13 20 18.7	-0.3
VAY				*i* Sg	Sg	13 20 43.0	+1.0
VAY				*e*Lg	Lg	13 20 44.8	
	comp=E,125nm,0.6s						
VAY				*e*Lg	Lg	13 20 46.2	
	comp=N,305nm,0.8s						
BCI	Bajram Curri	1.87	348	*i* SN	Sg	13 20 47.9	+0.2
HORT	Hortiatis	1.91	87	P	Pn	13 20 20.5	-0.1
PDG	Podgorica	2.14	332	*e*Pn	Pn	13 20 25.1	+1.5
PDG	Podgorica	2.14	332	⇑P	Pn	13 20 24.5	+0.9
PDG				⇑S	Sb	13 20 52.4	-0.9
PDG	Podgorica	2.14	332	*e*Pn	Pn	13 20 24.9	+1.3
BOSS	Bosilegrad	2.42	35	*e*Pn	Pn	13 20 27.1	-0.3
HCY	Herceg Novi	2.47	321	*e*Pn	Pn	13 20 28.3	+0.1
SELS	Selova	2.71	8	*e*Pn	Pn	13 20 33.3	+1.8
TREB	Trebinje	2.75	323	*e*Pn	Pn	13 20 32.1	+0.1
SJES	Sjenica	2.76	351	*e*Pn	Pn	13 20 32.9	+0.7
DBRK	Dubrovnik	2.81	320	*e*Pn	Pn	13 20 32.0	-0.8
DBRK				Sn	Sn	13 21 07.1	+0.2
BRY	Bratogost	2.82	328	*e*Pn	Pn	13 20 33.9	+0.8
VTS	Vitosha	2.87	43	*e*Pn	Pn	13 20 35.1	+1.3
VTS	Vitosha	2.87	43	⇑P	Pn	13 20 33.3	-0.5
VTS				⇓S	Sn	13 21 08.0	-0.6
IVAS	Ivanjica	3.05	354	*e*Pn	Pn	13 20 37.0	+0.8
ZAPS	Zavoj	3.13	28	*e*Pn	Pn	13 20 38.4	+1.1
STON	Ston	3.18	318	*e*Pn	Pn	13 20 38.0	+0.1
STON				*e*Sn	Sn	13 21 15.8	-0.2
STON	Ston	3.18	318	*e*Pn	Pn	13 20 38.3	+0.5
STON				Sn	Sn	13 21 14.7	-1.2
STON	Ston	3.18	318	*e*Pn	Pn	13 20 38.4	+0.5
BOVS	Bovan	3.20	15	*e*Pn	Pn	13 20 38.2	0.0
TIP	Timpagrande	3.25	247	⇓P	Pn	13 20 39.4	+0.5
TIP				⇓S	Sn	13 21 21.3	+3.6
GRUS	Gruza	3.35	2	*e*Pn	Pn	13 20 40.4	+0.2
BBLS	Lazići	3.44	346	*e*Pn	Pn	13 20 44.4	+2.8
BLKB	Belogradchik	3.45	26	⇑S	Sn	13 21 23.4	+0.7
ZAGS	Zajecar	3.49	20	*e*Pn	Pn	13 20 41.1	-1.1
DIVS	Divibare	3.58	353	*e*Pn	Pn	13 20 45.6	+2.0
TRUS	Trudelj	3.69	358	*e*Pn	Pn	13 20 44.0	-0.9
HAPS	Han Pijesak,Bl	3.75	342	*e*Pn	Pn	13 20 42.8	-3.0
RICI	Ricice	3.92	320	*e*Pn	Pn	13 20 48.2	+0.1
RICI				Sn	Sn	13 21 33.2	-1.1
MDVR	Moldovita	4.32	11	⇑P	Pn	13 20 54.0	+0.3
MDVR				⇓S	Sn	13 21 44.4	+0.1
HERR	Herculane	4.54	17	⇑P	Pn	13 20 57.0	+0.3
HERR				⇑S	Sn	13 21 50.4	+0.8
FRGS	Fruska Gora	4.65	353	*e*Pn	Pn	13 20 54.3	-3.9
KIJV	Kijevo	4.65	320	*e*Pn	Pn	13 20 58.1	0.0
KIJV				Sn	Sn	13 21 52.5	+0.2
ZIRJ	Zirje	4.82	312	*e*Pn	Pn	13 20 59.0	-1.4
ZIRJ				Sn	Sn	13 21 54.8	-1.7
MORI	Morici	4.92	314	*e*Pn	Pn	13 21 01.2	-0.5
MORI				Sn	Sn	13 21 57.5	-1.4
GZR	Gura Zlata	5.11	18	⇑P	Pn	13 21 05.1	+0.6
GZR				⇑S	Sn	13 22 05.3	+1.6
IDI	Anoyia	6.25	146	Pn	Pn	13 21 23.8	+3.7
	comp=N,0.5nm,0.3s,baz=348,slow=14,SNR=3.4						
CRES	Cresnjev	6.48	326	*e*Pn	Pn	13 21 23.2	-0.1
CEY	Cerknica	6.88	321	*e*Pn	Pn	13 21 28.6	-0.1
SOKA	Soboth	7.34	329	*e*Pn	Pn	13 21 35.0	-0.1
	comp=N,1.7nm,0.4s						
OBKA	Obir	7.41	326	*e*Pn	Pn	13 21 37.9	+1.9
	comp=N,0.8nm,0.3s						
ARSA	Arzberg	7.64	333	*e*Pn	Pn	13 21 39.6	+0.4
	comp=N,0.7nm,0.3s						
VYHS	Vyhne	8.05	352	*e*SN	Sn	13 23 14.4	-1.6
ABTA	Abfaltersbach	8.53	319	*i* Pn	Pn	13 21 51.9	+0.4
WTTA	Wattenberg	9.32	319	*e*Pn	Pn	13 22 04.5	+2.1
	comp=N,1.6nm,0.3s						
FETA	Feichten	9.63	316	Pn	Pn	13 22 09.0	+2.4
	comp=N,0.8nm,0.5s						
GERES	GERESS Array B	9.64	332	Pn	Pn	13 22 08.3	+1.6
	comp=N,0.2nm,0.3s,baz=159,slow=14,SNR=5.4						
MOTA	Moosalm	9.64	318	*e*Pn	Pn	13 22 07.1	+0.3
	comp=N,2.6nm,0.6s						
FINES	FINESS Array B	21.20	7	P	P	13 24 32.6	-0.7
	comp=N,5.0nm,0.9s,baz=185,slow=9.8,SNR=3.7						
MKAR	Makanchi Array	44.05	60	P	P	13 27 55.1	-0.7
	comp=N,0.6nm,1.1s,baz=284,slow=7.9,SNR=2.9						
YKA	Yellowknife Ar	71.19	340	P	P	13 31 06.9	+0.4
	comp=N,0.2nm,0.6s,baz=49,slow=5.6,SNR=3.9						

IDC 09 13:23:52.1±2.1**, 6°.12S×129°.68E, h0^{km}, mb3.2**/1**, mb1 3.5**/4**, mb1mx3.3**/27**, mbtmp3.3**/4**, ML3.5**/3**, Error ellipse: s-maj=87.9km s-min=27.5km az=76.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	12.55	198	Pn	Pn	13 26 53.3	+1.3
	0.2nm,0.3s,baz=28,slow=9.7,SNR=8.9						
WRA	Warramunga Arr	14.47	162	Pn	Pn	13 27 16.3	-2.0
	0.3nm,0.3s,baz=340,slow=14,SNR=22						
WRA				Sn	Sn	13 29 43.0	-17
	0.1nm,0.3s,baz=344,slow=22,SNR=4.1						
ASAR	Alice Springs	17.92	167	P	Pn	13 28 03.2	+0.3
	0.1nm,0.3s,baz=346,slow=12,SNR=9.6						
MKAR	Makanchi Array	67.32	327	P	P	13 34 48.9	0.0
	0.2nm,0.7s,baz=126,slow=7.3,SNR=2.6						

SNET ***09*** *13:39:41.9±1.2, 12°.47N×87°.85W, h35^{km}±999^{km}, ML3.8*
INET ***09*** *13:39:42.1, 12°.50N×87°.77W, h65^{km}, ML4.1*
UCR ***09*** *13:39:42.6±1.6, 12°.50N×87°.85W, h35^{km}±13^{km}, ML3.7*
ISC 09 13:39:42.4±1.6**, 12°.51N**±0°.06×**87°.80W**±0°.06**, h33^{km}**±9^{km}**, n46, σ0^{s}.65**/58**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	0.77	358	*e*P	Pn	13 39 57.1	+0.1
CNCH	Conchagua	0.77	358	*e*P	Pn	13 39 57.1	+0.1
LCND	La Caada	0.80	354	*e*P	Pn	13 39 57.6	+0.1
LCND				*e*S	Sb	13 40 09.6	+1.0
LCND				IAML		13 40 11.0	
	comp=Z,3µm,0.3s						
LCND	La Caada	0.80	354	*e*P	Pn	13 39 57.6	+0.1
LCND				*e*S	Sb	13 40 09.6	+1.0
LCND				IAML		13 40 11.0	
	comp=Z,3µm,0.3s						
JUCU	Jucuar¡n	0.86	330	*e*P	Pn	13 39 57.9	-0.5
JUCU				*e*S	Sn	13 40 09.6	-0.2
JUCU	Jucuar¡n	0.86	330	*e*P	Pn	13 39 57.9	-0.5
JUCU				*e*S	Sn	13 40 09.6	-0.2
BLLM	Bellamira	1.02	336	*e*P	Pn	13 40 00.7	+0.2
BLLM	Bellamira	1.02	336	*e*P	Pn	13 40 00.7	+0.2
VSM	San Miguel	1.03	333	*e*P	Pn	13 40 01.2	+0.5
VSM	San Miguel	1.03	333	*e*P	Pn	13 40 01.2	+0.5
LCY	Lacayo	1.03	332	*e*P	Pn	13 40 00.9	+0.2
LCY	Lacayo	1.03	332	*e*P	Pn	13 40 00.9	+0.2
PACA	Pacayal	1.08	332	*e*P	Pn	13 40 01.7	+0.2
PACA				*e*S	Sn	13 40 15.8	+0.4
PACA	Pacayal	1.08	332	*e*P	Pn	13 40 01.7	+0.2
PACA				*e*S	Sn	13 40 15.8	+0.4
ALJI	Alcalda de J	1.11	318	*e*P	Pn	13 40 01.5	-0.1
ALJI				*e*S	Sn	13 40 15.6	-0.2
ALJI				IAML		13 40 18.4	
	comp=Z,1µm,0.1s						
ALJI	Alcalda de J	1.11	318	*e*P	Pn	13 40 01.5	-0.1
ALJI				*e*S	Sn	13 40 15.6	-0.2
ALJI				IAML		13 40 18.4	
	comp=Z,1µm,0.1s						
TECA	Tecapa	1.20	325	*e*P	Pn	13 40 03.2	+0.2
TECA	Tecapa	1.20	325	*e*P	Pn	13 40 03.2	+0.2
COEB	Comit de Eme	1.22	324	*e*P	Pn	13 40 03.3	+0.1
COEB				*e*S	Sn	13 40 19.0	+0.3
COEB	Comit de Eme	1.22	324	*e*P	Pn	13 40 03.3	+0.1
COEB				*e*S	Sn	13 40 19.0	+0.3
FAGO	Alcalda de S	1.22	346	*e*P	Pn	13 40 02.9	-0.3
FAGO				*e*S	Sn	13 40 19.1	+0.5
FAGO	Alcalda de S	1.22	346	*e*P	Pn	13 40 02.9	-0.3
FAGO				*e*S	Sn	13 40 19.1	+0.5
COPN	Copaltepe	1.23	105	*e*P	Pn	13 40 02.5	-0.8
COPN	Copaltepe	1.23	105	*e*P	Pn	13 40 02.5	-0.8
MOMN	Momotombo	1.24	94	*e*P	Pn	13 40 02.6	-0.9
MOMN	Momotombo	1.24	94	*e*P	Pn	13 40 02.6	-0.9
COEG	Centro de Oper	1.53	317	*e*S	Sn	13 40 25.8	-0.4
COEG	Centro de Oper	1.53	317	*e*S	Sn	13 40 25.8	-0.4
LFRS	El Faro	1.66	312	*e*P	Pn	13 40 09.2	-0.1
LBRS	Las Brisas	1.72	316	*e*P	Pn	13 40 09.8	-0.3
LOMA	Loma Larga	1.75	310	*e*P	Pn	13 40 10.3	-0.3
LOMA				*e*S	Sn	13 40 32.0	+0.2
LOMA	Loma Larga	1.75	310	*e*P	Pn	13 40 10.3	-0.3
LOMA				*e*S	Sn	13 40 32.0	+0.2
SNET	Serv Nac Est T	1.82	310	*e*S	Sn	13 40 32.9	-0.6
SNET	Serv Nac Est T	1.82	310	*e*S	Sn	13 40 32.9	-0.6
CEVE	Cerro Verde	2.21	307	IAML		13 40 54.0	
	comp=Z,525nm,0.4s						
CEVE	Cerro Verde	2.21	307	IAML		13 40 54.0	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,525nm,0.4s						
GBS3	Finca Las Img	2.87	126	eP	Pn	13 40 25.6	-0.3
NY14	Universidad de	2.89	129	eP	Pn	13 40 27.5	+1.3
GB1A	Borinquen Arri	2.89	125	eP	Pn	13 40 27.5	+1.2
LAPC	Finca la Perla	2.89	126	eP	Pn	13 40 27.1	+0.9
BUEV	Buena Vista	2.90	126	eP	Pn	13 40 28.1	+1.7
MESS	Mesas	3.10	124	eP	Pn	13 40 29.5	+0.4
COLC	Colonia	3.13	125	eP	Pn	13 40 31.6	+2.0
GUAI	GUAI	3.16	134	eP	Pn	13 40 30.5	+0.6
CUI	Cuipilapa	3.17	125	eP	Pn	13 40 30.9	+0.8
CEDE	Laguna Cedeo	3.64	123	eP	Pb	13 40 45.0	-1.1

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*DJA **09** 13:42:18.7±0.2, 9°S±2°×11°3E±°, h70km±2km, M5.2/79, mB5.6/43, mb5.3/79, MLv5.9/24, Mw5.0/12, Mw(mB)5.1/43, Mwp5.2/7*

*NEIC **09** 13:42:19.0±1.5, 8°.89S±0°.07×113°.08E±0°.05, h79km±3km, mb5.3/111, Error ellipse: s-maj=10.9km s-min=7.6km az=180.0*

*GCMT **09** 13:42:18.0±0.2, 9°.10S±0°.01×113°.07E±0°.01, h76km±1km, MW5.2/114, Moment Tensor Solution. s87,c119; s114,c196; Duration: 1s.0 Moment tensor: Scale 10^{16} Nm; M_{rr}-4.05±.16; $M_{\theta\theta}$-2.31±.16; $M_{\phi\phi}$6.36±.16; $M_{r\theta}$4.07±.09; $M_{\theta\phi}$2.44±.13; $M_{\phi r}$1.87±.13; Best double couple: $M_0$7.54900×10^{16} NP1:ϕ_s342.00000°, δ43.00000°, λ-147.00000°. NP2:ϕ_s227.00000°, δ68.00000°, λ-52.00000°. Principal axes: T 7.7550, Plg15.0000°, Azm290.0000°; N -0.4120, Plg35.0000°, Azm30.0000°; P -7.3420, Plg51.0000°, Azm181.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **09** 13:42:18.5±0.0, 8°.90S×113°.10E, h74km, mB5.2/50, mb5.1/65, Ms4.8/41, Ms7 4.5/39*

*IDC **09** 13:42:19.3±1.1, 8°.85S×113°.10E, h77km±8km, mb4.8/32, mb1 4.8/34, mb1mx4.7/42, mbtmp5.1/34, MS4.1/34, Ms1 4.1/34, ms1mx4.0/47, Error ellipse: s-maj=11.3km s-min=8.2km az=58.0*

*MOS **09** 13:42:20.5±1.2, 8°.79S×113°.15E, h103km, mb5.2/49, Error ellipse: s-maj=8.3km s-min=5.0km az=110.9*

*KLM **09** 13:42:20.0, 9°.12S×113°.05E, h53km, mb5.1*

ISC 09 13:42:19.6±0.4, **8°.98S**±0°.04×**113°.01E**±0°.04, **h86km**±3km, **h86km:pP-P, n923, σ1s.58**/888, **mb5.2**/131, **19C-19D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	1.24	66	P	Pn	13 42 39.5	-2.4
JAGI	Jajag, Banyuwa	1.24	66		Pn	13 42 39.8	-2.1
PWJI	Pagerwojo	1.53	309	P	Pn	13 42 44.8	-0.7
PCJI	Pacitan	1.98	293	P	Pn	13 42 50.8	-0.5
IGBI	Denpasar	2.12	86	P	Pn	13 42 51.4	-1.8
GRJI	Gresik	2.12	346	P	Pn	13 42 53.7	+0.4
KMMI	Kalianget	2.14	26	P	Pn	13 42 53.8	+0.3
DNP	Denpasar	2.20	82	P	Pn	13 42 53.1	-1.1
SRBI	Singaraja	2.35	68	P	Pn	13 42 55.3	-1.0
WOJI	Wonogiri, Jawa	2.36	299	P	Pn	13 42 56.3	-0.1
UGM	Wanagama	2.68	293	P	Pn	13 43 00.8	0.0
UGM	Wanagama	2.68	293		Pn	13 43 00.6	-0.1
SMRI	Semarang	3.19	307	P	Pn	13 43 08.0	+0.4
SMRI	Semarang	3.19	307		Pn	13 43 07.4	-0.2
KPJI	Karang Pucung	4.36	292	P	Pn	13 43 23.8	+0.3
PLAI	Plampang	4.71	88	P	Pn	13 43 27.1	-1.2
CISI	Cisompet, Garu	5.33	285	P	Pn	13 43 35.3	-1.5
	37nm5µm51µm5µm,0.8s						
CISI	Cisompet, Garu	5.33	285		Pn	13 43 36.4	-0.4
LEM	Lembang	5.76	291	P	Pn	13 43 43.3	+0.6
	4.5nm3µm7µm929nm,0.9s						
CNJI	Cibinong	6.05	286	P	Pn	13 43 46.8	+0.2
	10nm5µm22µm3µm,0.9s						
WBSI	Waikabubak, Su	6.33	96	P	Pn	13 43 48.2	-2.2
	10nm10µm1µm,0.8s						
KBKI	Kotabaru	6.46	29	P	Pn	13 43 53.2	+1.1
	0.5nm1µm79nm,0.7s						
DBJI	Dramaga	6.66	291	P	Pn	13 43 54.5	-0.3
	3.1nm707nm,0.9s						
SKJI	Sukabumi	6.69	287	P	Pn	13 43 55.1	-0.1
	16nm16µm1µm,0.7s						
TNG	Tangerang	6.90	293	P	Pn	13 43 58.8	+0.7
	4.9nm556nm,0.5s						
WSI	Waingapu	7.22	96	P	Pn	13 44 02.7	+0.2
	31nm23µm2µm,0.9s						
BASI	Baing, Sumba	7.56	100	P	Pn	13 44 06.2	-1.0
	6.3nm4µm5µm400nm,0.7s						
KAPI	Kappang	7.77	60	P	Pn	13 44 08.8	-1.1
	6.8nm,0.3s,baz=206,slow=6.2,SNR=10						
KAPI				S	Sn	13 45 33.7	-2.7
	20nm,0.3s,baz=218,slow=19,SNR=4.1						
KAPI				LR	LR	13 47 40.3	
	comp=Z,1µm,19.9s,baz=252,slow=42						
BKSI	Bulukumba	7.94	63	P	Pn	13 44 11.2	-1.1
	2µm218nm,0.7s						
SPSI	Sidrap Palu	8.36	54	P	Pn	13 44 19.6	+1.5
	1µm52nm,0.7s						
BNSI	Bone	8.39	58	P	Pn	13 44 21.0	+2.5
	2µm131nm,0.6s						
EDFI	Ende, Flores	8.58	89	P	Pn	13 44 19.8	-1.4
	2µm2µm125nm,0.8s						
TTSI	Tana Toraja	8.98	49	P	Pn	13 44 27.6	+1.1
	1µm142nm,0.9s						
MMRI	Maumere	9.13	89	P	Pn	13 44 27.9	-0.6
	4µm5µm298nm,0.7s						
MMRI	Maumere	9.13	89		Pn	13 44 26.3	-2.2
LWLI	Liwa	9.72	293	P	Pn	13 44 36.7	0.0
	233nm,0.7s						
MDSI	Maura Dua	9.84	296	P	Pn	13 44 37.8	-0.5
	1µm116nm,1.1s						
BBSI	Bau Bau	10.10	71	P	Pn	13 44 44.3	+2.5
	575nm45nm,1.1s						
PMBI	Palembang	10.16	306	Pn	Pn	13 44 43.9	+1.2
KSM	Kuching	10.73	345	P	Pn	13 44 53.0	+2.6
MNAI	Manna	10.99	294	P	Pn	13 44 52.6	-1.3
	20µm2µm,1.0s						
MNAI	Manna	10.99	294		Pn	13 44 52.4	-1.6
SOEI	Soe	11.13	95	P	Pn	13 44 53.7	-2.3
	3µm3µm202nm,0.6s						
SOEI	Soe	11.13	95		Pn	13 44 53.5	-2.5
SBUM	Sibu	11.39	356	P	Pn	13 45 03.0	+3.7
MPSI	Mapaga	11.53	37	P	Pn	13 45 04.4	+3.2
	1µm57nm,0.9s						
KSI	Kapahiang	11.63	296	P	Pn	13 45 01.6	-1.0
	11µm2µm,0.9s						
APSI	Ampana	11.76	47	P	Pn	13 45 07.2	+2.9
	1µm98nm,1.0s						
LUWI	Luwuk	12.52	51	P	Pn	13 45 13.8	-0.8
	4µm94nm,1.1s						
LUWI	Luwuk	12.52	51	Pn	Pn	13 45 08.0	-6.6
MRSI	Marisa	12.94	44	P	Pn	13 45 22.4	+2.1
	1µm135nm,1.0s						
TPRI	Tanjung Pinang	12.97	319	P	P	13 45 25.1	-2.8
KRJI	Kerinci	13.37	300	P	Pn	13 45 24.5	-1.6
	11µm1µm,0.9s						
GIRL	Giralia	13.63	175		Pn	13 45 24.0	-5.3
SDSI	Sungai Dareh	14.03	304	P	Pn	13 45 33.0	-1.6
	1µm67nm,1.0s						
MYKOM	Kota Tinggi	14.07	319	P	P	13 45 39.0	-1.1
PSA00	Pilbara Seismi	14.14	153		Pn	13 45 29.2	-6.7
PPSI	Pulau Pagai	14.33	295	P	Pn	13 45 34.0	-4.4
KMSI	Cibinong	14.48	50	P	P	13 45 44.2	-0.4
	4µm379nm,0.9s						
SANI	Sanana	14.63	63	P	Pn	13 45 43.5	+1.1
	2µm132nm,1.2s						
PDSI	Padang	14.84	302	P	Pn	13 45 41.3	-3.8
BKNI	Bangkinang	15.09	307	Pn	Pn	13 45 45.0	-3.2
FITZ	Fitzroy Crossi	15.25	128	P	Pn	13 45 45.4	-4.8
	2.9nm,0.3s,baz=314,slow=8.7,SNR=73						
FITZ				S	Sn	13 48 22.7	-16
	4.0nm,0.3s,baz=177,slow=19,SNR=5.2						
FITZ				LR	LR	13 51 54.2	
	comp=Z,1µm,21.1s,baz=286,slow=38						
FITZ	Fitzroy Crossi	15.25	128		Pn	13 45 45.4	-4.8
SISI	Saibi	15.80	298	P	Pn	13 45 52.1	-5.2
AAI	Ambon	15.98	72	P	Pn	13 46 00.3	+0.9
	2µm126nm,0.6s						
COCO	West Island	16.21	257	P	Pn	13 45 57.8	-4.6
COCO				pmax	pmax		
	comp=Z,215nm,1.2s						
COCO	West Island	16.21	257	Pn	Pn	13 45 57.8	-4.6
COCO				IAmb	IAmb	13 46 07.9	
	comp=Z,215nm,1.1s						
KNRA	Kununurra	16.76	115	P	Pn	13 46 07.4	-1.7
	baz=17,SNR=218						
KNRA	Kununurra	16.76	115	P	Pn	13 46 07.4	-1.7
PBSI	Pulau Batu	17.14	300	P	P	13 46 14.3	+0.1
	comp=Z,62nm,0.8s						
BNDI	Bandanaira	17.35	76	P	Pn	13 46 16.4	0.0
	comp=Z,2µmcomp=Z,6µmcomp=Z,530nm,0.9s						
IPM	Ipoh	17.93	318	P	Pn	13 46 27.0	+3.5
SAUI	Saumlaki	18.12	88	P	Pn	13 46 25.7	0.0
	comp=Z,6µmcomp=Z,285nm,0.7s						
SAUI	Saumlaki	18.12	88	P	P	13 46 22.6	-2.4
SAUI				IAmb	IAmb	13 46 58.9	
	comp=Z,201nm,0.7s						
MTN	Manton Dam	18.20	104	P	P	13 46 25.0	-0.9
MEEK	Meekatharra	18.34	164	P	P	13 46 27.1	-0.3
	baz=18,SNR=28						
KULM	Kulim	18.79	319	P	Pn	13 46 36.0	+2.3
KDU	Kakadu	19.46	103	P	P	13 46 38.1	-1.6
	baz=20,SNR=47						
CTBH	Cotabato--PC H	19.61	35	⇓iP	Pn	13 46 42.8	-0.6
KCSI	Kotacane, Aceh	19.62	309	P	Pn	13 46 42.7	-0.9
	comp=Z,2µmcomp=Z,30nm,1.5s						
SWI	Sorong	19.88	67	P	P	13 46 41.6	-2.6
SIJI	Sorong	19.88	67	P	P	13 46 42.0	-2.2
	comp=Z,3.6nm,0.3s,baz=268,slow=6.2,SNR=28						
KCP	Kidapawan	19.93	38	⇓eP	Pn	13 46 49.9	+2.7
FAKI	Fak Fak	20.05	74	P	P	13 46 45.6	-0.5
	comp=Z,166nm,0.9s						
FAKI	Fak Fak	20.05	74	P	P	13 46 42.8	-3.4
FAKI				IAmb	IAmb	13 46 49.7	
	comp=Z,121nm,0.8s						
MORW	Morawa	20.18	172	P	P	13 46 47.4	+0.1
	baz=20,SNR=13						
MORW	Morawa	20.18	172	P	P	13 46 47.3	0.0
DAV	Davao City (W)	20.28	39	LR	LR	13 55 05.0	
	comp=Z,614nm,21.8s,baz=304,slow=38						
BUKP	Musuan	20.61	36	eP	Pn	13 46 55.2	+0.1
WRKA	Warakurna	21.61	140	P	P	13 47 02.3	-0.4
	baz=22,SNR=49						
BLDU	Ballidu	21.80	171	P	P	13 47 04.8	+0.2
	baz=22,SNR=39						
MSLP	Maasin	22.36	32	eP	P	13 47 13.1	+2.3
KLBR	Kellerberrin	22.92	170	P	P	13 47 17.1	+0.6
	baz=23,SNR=41						
OTRP	Odiongan	23.02	23	eP	P	13 47 17.7	+0.1
MUN	Mundaring	23.07	173	P	P	13 47 18.5	+0.6
	baz=23,SNR=5.6						
WRA	Warramunga Arr	23.32	120	P	P	13 47 19.0	-1.4
	comp=Z,87nm,0.8s,baz=295,slow=12,SNR=433						
WRA				S	S	13 51 34.3	+7.8
	comp=Z,6.8nm,0.8s,baz=290,slow=21,SNR=5.7						
WRA				LR	LR	13 56 19.9	
	comp=Z,983nm,21.8s,baz=285,slow=36						
WRA	Warramunga Arr	23.32	120	P	P	13 47 18.5	-1.9
WB2	Warramunga Arr	23.33	120	P	P	13 47 19.0	-1.5
WB2				IAmb	IAmb	13 47 21.0	
	comp=Z,125nm,0.8s						
KMBL	Kambalda	23.75	161	P	P	13 47 24.1	-0.1
	baz=24,SNR=24						
NWAO	Narrogin (SRO)	24.14	171	P	P	13 47 28.3	+0.6
	baz=24,SNR=7.2						
NWAO	Narrogin (SRO)	24.14	171	P	P	13 47 28.1	+0.5
	comp=Z,40nm,0.7s,baz=350,slow=9.0,SNR=21						
NWAO				S	S	13 51 51.1	+12
	comp=Z,17nm,0.7s,baz=229,slow=23,SNR=4.1						
NWAO				LR	LR	13 56 40.6	
	comp=Z,673nm,21.6s,baz=343,slow=36						
NWAO	Narrogin (SRO)	24.14	171	P	P	13 47 27.4	-0.3
NWAO	Narrogin (SRO)	24.14	171	P	P	13 47 27.3	-0.3
NWAO				IAmb	IAmb	13 47 29.0	
	comp=Z,30nm,0.8s						
TGY	Tagaytay City	24.25	19	LR	LR	13 57 35.7	
	comp=Z,548nm,21.8s,baz=182,slow=38						
AS31	Alice Springs	24.75	129	P	P	13 47 32.8	-0.6
ASAR	Alice Springs	24.75	129	P	P	13 47 33.1	-0.2
	comp=Z,81nm,0.7s,baz=303,slow=8.8,SNR=1040						
ASAR				PcP	PcP	13 51 09.7	+1.4
	comp=Z,9.6nm,0.7s,baz=318,slow=2.0,SNR=8.2						
ASAR				S	S	13 52 13.1	+24
	comp=Z,16nm,0.9s,baz=304,slow=24,SNR=10						
ASAR				LR	LR	13 57 08.0	
	comp=Z,508nm,21.7s,baz=292,slow=36						
ASAR	Alice Springs	24.75	129	P	P	13 47 33.0	-0.4
RKGY	Rocky Gully	25.76	172	P	P	13 47 43.8	+1.4
	baz=26,SNR=7.6						
FORT	Forrest	25.83	149	P	P	13 47 43.4	+0.3
	baz=26,SNR=60						
FORT	Forrest	25.83	149	P	P	13 47 42.9	-0.1
QIZ	Qiongzhong	28.01	354	P	P	13 48 03.1	+0.5
QIZ				S	S	13 52 43.6	+2.6
QIZ				LR	LR		
	comp=Z,410nm,14.4s						
QIZ				LR	LR		
	comp=Z,480nm,12.1s						
QIZ				LR	LR		
	comp=Z,410nm,14.8s						
PBKT	Sadao Pong	28.05	335	P	P	13 48 02.5	-0.5
QIS	Mount Isa	28.12	117	P	P	13 48 03.7	0.0
	baz=28,SNR=25						
COEN	Coen	29.96	102	P	P	13 48 20.0	-0.1
	baz=30,SNR=4.9						
COEN	Coen	29.96	102	P	P	13 48 19.7	-0.4
CM31	Chiang Mai Arr	30.60	333	P	P	13 48 26.6	+1.0
	SNR=8.4						
CM31	Chiang Mai Arr	30.60	333	P	P	13 48 25.3	-0.3
CMAR	Chiang Mai Arr	30.60	333	P	P	13 48 25.9	+0.3
	comp=Z,8.4nm,0.8s,baz=167,slow=8.2,SNR=64						
CMAR				PcP	PcP	13 51 24.5	+2.1
	comp=Z,3.0nm,0.7s,baz=181,slow=3.0,SNR=4.2						
CMAR				S	S	13 53 27.6	+5.9
	comp=Z,0.4nm,0.3s,baz=161,slow=14,SNR=4.9						
CMAR				ScP	ScP	13 54 59.4	+2.0
	comp=Z,2.9nm,1.0s,baz=168,slow=3.1,SNR=7.6						
CMAR				LR	LR	14 01 11.8	
	comp=Z,608nm,20.2s,baz=141,slow=37						
CMAR	Chiang Mai Arr	30.60	333	ceP	P	13 48 26.2	+0.6
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CMAR	Chiang Mai Arr	30.60	333	P	P	13 48 25.0	-0.6
CHTO	Chiang Mai	30.91	333	P	P	13 48 28.4	+0.1
CHTO				pmax	pmax		
	comp=Z,12nm,1.1s						
CHTO	Chiang Mai	30.91	333	P	P	13 48 28.4	+0.1
MTSU	Mount Surprise	31.72	110	P	P	13 48 36.4	+0.8
	baz=32,SNR=73						
BBOO	Buckleboo	31.88	141	P	P	13 48 36.7	-0.1
	baz=32,SNR=36						
BBOO	Buckleboo	31.88	141	P	P	13 48 36.5	-0.3
BBOO				IAmb	IAmb	13 48 37.6	
	comp=Z,33nm,0.7s						
TPUB	Ta-pu	32.94	13	P	P	13 48 45.5	-0.6
TPUB				IAmb	IAmb	13 48 58.0	
	comp=Z,109nm,1.6s						
YULB	Yu-li	33.18	14	P	P	13 48 47.2	-1.0
PMG	Port Moresby	33.70	93	P	P	13 48 52.7	-0.2
	comp=Z,10nm,0.4s,baz=265,slow=18,SNR=5.7						
PMG				LR	LR	14 04 25.6	
	comp=Z,223nm,22.0s,baz=300,slow=39						
PMG	Port Moresby	33.70	93	P	P	13 48 52.8	-0.2
PMG				pmax	pmax		
	comp=Z,17nm,0.9s						
PMG	Port Moresby	33.70	93	IAmb	IAmb	13 48 56.3	
	comp=Z,17nm,0.9s						
CTA	Charters Tower	33.95	113	P	P	13 48 55.9	+0.8
	comp=Z,40nm,0.8s,baz=280,slow=11,SNR=23						
CTA				LR	LR	14 03 53.7	
	comp=Z,356nm,20.2s,baz=278,slow=38						
NACB	Ninganchiao	34.01	14	P	P	13 48 53.3	-2.1
NACB				IAmb	IAmb	13 49 30.2	
	comp=Z,41nm,1.1s						
HTT	Hallett	34.09	139	P	P	13 48 56.8	+0.7
	baz=34,SNR=31						
QLP	Quilpie	34.36	125	P	P	13 48 59.6	+1.2
	baz=34,SNR=15						
YHNB	Yeheng	34.43	14	P	P	13 48 57.2	-1.9
STKA	Stephens Creek	34.96	135	P	P	13 49 04.3	+0.7
	baz=35,SNR=214						
STKA	Stephens Creek	34.96	135	P	P	13 49 04.3	+0.7
	comp=Z,65nm,0.5s,baz=313,slow=9.0,SNR=279						
STKA				PcP	PcP	13 51 35.2	+0.9
	comp=Z,20nm,0.6s,baz=311,slow=7.1,SNR=4.1						
STKA				LR	LR	14 03 57.3	
	comp=Z,1µm,21.7s,baz=297,slow=37						
STKA	Stephens Creek	34.96	135	P	P	13 49 04.0	+0.4
STKA				IAmb	IAmb	13 49 06.2	
	comp=Z,17nm,0.6s						
KMI	Kunming	35.35	344	P	P	13 49 10.3	+3.1
KMI				pP	pP	13 49 27.8	+0.7
KMI				sP	sP	13 49 40.4	+3.5
KMI				S	S	13 54 38.7	+3.1
KMI				pmax	pmax		
	comp=Z,14nm,1.0s						
KMI				pmax	pmax		
	comp=Z,100nm,3.1s						
KMI				LR	LR		
	comp=Z,750nm,15.0s						
KMI				LR	LR		
	comp=Z,360nm,20.2s						
KMI				LR	LR		
	comp=Z,890nm,16.0s						
GYA	Guiyang	35.77	350	⇑iP	P	13 49 12.6	+2.0
GYA				pP	pP	13 49 26.7	-3.8
GYA				PP	PP	13 50 33.7	+0.2
GYA				sS	sS	13 55 17.3	+1.9
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,140nm,4.6s						
GYA				LR	LR		
	comp=Z,340nm,17.3s						
GYA				LR	LR		
	comp=Z,300nm,15.1s						
GYA				LR	LR		
	comp=Z,510nm,15.7s						
PALK	Pallekele	36.02	296	P	P	13 49 13.1	+0.2
	comp=Z,17nm,1.0s,baz=146,slow=3.2,SNR=3.8						
PALK				LR	LR	14 04 39.4	
	comp=Z,107nm,20.3s,baz=204,slow=37						
PALK	Pallekele	36.02	296	⇓eP	P	13 49 13.1	+0.2
PALK				pmax	pmax		
	comp=Z,29nm,1.1s						
CMSA	Cobar Meteorol	37.75	131	P	P	13 49 28.4	+1.1
	baz=38,SNR=58						
BRDH	Bariadhala	37.79	327	LR	LR	14 07 08.5	
	comp=Z,598nm,20.7s,baz=150,slow=40						
GUMO	Guam	38.77	55	LR	LR	14 05 33.0	
	comp=Z,82nm,22.0s,baz=238,slow=36						
KRVT	Keravat (AS076	39.01	86	LR	LR	14 07 05.2	
	comp=Z,130nm,21.2s,baz=264,slow=38						
RABL	Rabaul	39.17	86	P	P	13 49 38.1	-1.4
RABL				IAmb	IAmb	13 49 47.5	
	comp=Z,23nm,0.8s						
WHN	Wuhan	39.32	2	⇓P	P	13 49 41.8	+1.4
EIDS	Eidsvold	39.67	119	P	P	13 49 44.7	+1.1
	baz=40,SNR=8.4						
EIDS	Eidsvold	39.67	119	P	P	13 49 43.4	-0.1
EIDS				IAmb	IAmb	13 49 45.6	
	comp=Z,23nm,0.8s						
SHL	Shillong	40.03	330	P	P	13 49 46.5	-0.1
	SNR=16						
SHL	Shillong	40.03	330	P	P	13 49 45.8	-0.8
SHL				pmax	pmax		
	comp=Z,95nm,1.2s						
SHL	Shillong	40.03	330	P	P	13 49 45.8	-0.8
H08S2	Diego Garcia H	40.10	269	T	T	14 33 32.2	
	baz=94						
H08S3	Diego Garcia H	40.11	269	T	T	14 33 58.7	
	baz=94,slow=74						
H08S1	Diego Carcia H	40.12	269	T	T	14 33 07.2	
	baz=94,slow=74						
DGAR	Diego Garcia	40.16	269	⇓eP	P	13 49 49.2	+1.5
DGAR				pmax	pmax		
	comp=Z,78nm,0.8s						
CD2	Chengdu	40.65	348	⇑iP	P	13 49 51.0	-0.5
CD2				PcP	PcP	13 51 50.9	-1.0
CD2				S	S	13 55 55.4	+0.2
CD2				pmax	pmax		
	comp=Z,30nm,0.4s						
CD2				pmax	pmax		
	comp=Z,180nm,5.0s						
CD2				LR	LR		
	comp=Z,1µm,26.0s						
CD2				LR	LR		
	comp=Z,1µm,15.7s						
CD2				LR	LR		
	comp=Z,1µm,29.9s						
TOO	Toolangi	40.86	139	P	P	13 49 55.3	+2.2
	baz=41,SNR=35						
TOO	Toolangi	40.86	139	P	P	13 49 54.4	+1.2
TOO				pmax	pmax		
	comp=Z,56nm,0.9s						
TOO	Toolangi	40.86	139	P	P	13 49 54.4	+1.2
TOO				IAmb	IAmb	13 49 57.2	
	comp=Z,56nm,0.8s						
KAAM	Kaadhehdhoo	40.95	281	P	P	13 49 55.1	+0.9
YNG	Young	41.08	133	P	P	13 49 56.6	+1.5
	baz=41,SNR=141						
NJ2	Nanjing	41.18	8	eP	P	13 49 56.0	+0.2
NJ2				pmax	pmax		
	comp=Z,12nm,0.7s						
ARMA	Armidale	41.85	126	P	P	13 50 02.8	+1.3
ARMA				IAmb	IAmb	13 50 04.8	
	comp=Z,36nm,0.7s						
CAN	Canberra	42.02	134	P	P	13 50 03.6	+0.9
CAN				pmax	pmax		
	comp=Z,53nm,0.7s						
CAN	Canberra	42.02	134	P	P	13 50 03.6	+0.9
CNB	Canberra Magne	42.27	134	P	P	13 50 06.1	+1.2
	baz=42,SNR=20						
RIV	Riverview	42.89	131	P	P	13 50 11.6	+1.9
	baz=43,SNR=6.5						
XAN	Xi'an	42.96	355	P	P	13 50 10.5	+0.2
XAN				S	S	13 56 21.6	-7.7
XAN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,180nm,4.3s						
XAN				LR	LR		
	comp=Z,260nm,8.8s						
XAN				LR	LR		
	comp=Z,290nm,16.2s						
XAN				LR	LR		
	comp=Z,400nm,17.7s						
XAN	Xi'an	42.96	355	P	P	13 50 09.9	-0.4
XAN				pmax	pmax		
	comp=Z,58nm,1.8s						
XAN	Xi'an	42.96	355	P	P	13 50 09.9	-0.4
XAN				IAmb	IAmb	13 50 45.4	
	comp=Z,58nm,1.8s						
HYB	Hyderabad	42.98	308	i P	P	13 50 08.0	-2.7
ODAN	Odare	43.45	326	eP	P	13 50 13.8	-0.7
	comp=Z,164nm,0.9s						
TAPN	Taplejung	43.65	327	eP	P	13 50 16.1	-0.2
	comp=Z,135nm,0.9s						
LSA	Lhasa	43.84	332	P	P	13 50 18.8	+0.8
LSA				pmax	pmax		
	comp=Z,65nm,0.8s						
LSA	Lhasa	43.84	332	P	P	13 50 18.6	+0.6
LSA	Lhasa	43.84	332	P	P	13 50 18.6	+0.6
LSA	Lhasa	43.84	332	P	P	13 50 18.0	+0.1
LSA				pmax	pmax		
	comp=Z,28nm,1.0s						
LSA	Lhasa	43.84	332	P	P	13 50 18.0	+0.1
RAMN	Ramite	43.96	325	eP	P	13 50 18.1	-0.6
JIRN	Jiri	44.74	325	eP	P	13 50 24.4	-0.6
	comp=Z,187nm,0.9s						
GUN	Gumba	45.10	325	eP	P	13 50 27.2	-0.7
	comp=Z,94nm,0.6s						
PKI	Pulchoki	45.11	325	eP	P	13 50 26.6	-1.3
	comp=Z,55nm,1.0s						
PKIN	Phulchoki	45.12	325	eP	P	13 50 26.6	-1.4
	comp=Z,18nm,0.6s						
TAU	Tasmania Unive	45.19	144	P	P	13 50 28.5	+0.5
TAU				pmax	pmax		
	comp=Z,92nm,1.6s						
TAU	Tasmania Unive	45.19	144	P	P	13 50 28.5	+0.5
TAU				IAmb	IAmb	13 51 34.8	
	comp=Z,92nm,1.6s						
JNU	Nakatsue	45.20	21	LR	LR	14 11 12.1	
	comp=Z,57nm,19.2s,baz=201,slow=38						
DMN	Daman	45.31	324	eP	P	13 50 28.5	-1.0
	comp=Z,99nm,0.9s						
KKN	Kakani	45.35	325	eP	P	13 50 28.6	-1.1
	comp=Z,56nm,0.8s						
LZH	Lanzhou	45.65	350	eP	P	13 50 33.9	+2.0
LZH				pP	pP	13 50 51.1	-1.2
LZH				sP	sP	13 51 00.5	-1.4
LZH				PP	PP	13 52 23.7	+3.2
LZH				pmax	pmax		
	comp=Z,32nm,1.1s						
LZH				pmax	pmax		
	comp=Z,150nm,4.9s						
LZH				LR	LR		
	comp=Z,370nm,14.1s						
LZH				LR	LR		

	comp=Z,370nm,13.2s						
LZH				LR	LR		
	comp=Z,380nm,14.6s						
GKN	**Gorkha**	**45.88**	**324**	*e*P	**P**	**13 50 33.5**	**-0.3**
HNR	**Honiara**	**46.31**	**94**	P	**P**	**13 50 37.2**	**0.0**
	comp=Z,138nm,0.8s,baz=275,slow=7.6,SNR=4.4						
HNR	**Honiara**	**46.31**	**94**	P	**P**	**13 50 37.0**	**-0.2**
HNR	**Honiara**	**46.31**	**94**	P	**P**	**13 50 36.4**	**-0.8**
DANN	**Dangsing**	**46.65**	**324**	*e*P	**P**	**13 50 38.8**	**-1.2**
	comp=Z,81nm,0.7s						
POO	**Poona**	**47.33**	**305**	*e*P	P	13 50 39.6	-5.6
KSAR	**Wonju Array Be**	**48.24**	**16**	P	**P**	**13 50 51.7**	**-0.1**
KSAR	**Wonju Array Be**	**48.24**	**16**	P	**P**	**13 50 51.7**	**-0.1**
KSRS	**Korea Array**	**48.26**	**16**	P	**P**	**13 50 52.2**	**+0.3**
	comp=Z,7.9nm,1.0s,baz=198,slow=6.9,SNR=12						
KSRS				PcP	**PcP**	**13 52 18.7**	**+1.0**
	comp=Z,4.7nm,0.7s,baz=187,slow=4.4,SNR=6.6						
KSRS				LR	LR	14 14 27.2	
	comp=Z,74nm,18.1s,baz=208,slow=40						
BJT	**Baijiatuau**	**48.84**	**3**	P	**P**	**13 50 55.5**	**-0.9**
BJT				pmax	pmax		
	comp=Z,12nm,0.6s						
BJT	**Baijiatuau**	**48.84**	**3**	P	**P**	**13 50 55.5**	**-0.9**
BJT				IAmb	IAmb	13 51 27.0	
	comp=Z,12nm,0.6s						
BJI	**Beijing**	**48.86**	**3**	P	**P**	**13 50 56.8**	**+0.3**
BJI				sP	**sP**	**13 51 26.6**	**-0.2**
BJI				PcP	**PcP**	**13 52 21.2**	**+1.4**
BJI				S	**S**	**13 57 57.4**	**+3.8**
BJI				pmax	pmax		
	comp=Z,13nm,0.7s						
BJI				LR	LR		
	comp=Z,230nm,23.5s						
BJI				LR	LR		
	comp=Z,190nm,16.2s						
BTO	**Baotou**	**49.42**	**357**	*e*P	**P**	**13 51 02.0**	**+1.1**
INU	**Inuyama**	**49.58**	**26**	P	**P**	**13 51 00.1**	**-2.0**
INU				IAmb	IAmb	13 51 01.4	
	comp=Z,35nm,1.2s						
HHC	**Hu-ho-hao-te**	**49.60**	**359**	*e*P	**P**	**13 51 03.6**	**+1.3**
HHC				pmax	pmax		
	comp=Z,210nm,1.0s						
HHC				pmax	pmax		
	comp=Z,1µm,4.7s						
GTA	**Gaotai**	**49.68**	**347**	⇓P	**P**	**13 51 04.0**	**+1.0**
GTA				pP	pP	13 51 22.6	-1.1
GTA				sP	sP	13 51 31.8	-1.5
GTA				ScP	**ScP**	**13 56 12.0**	**+1.0**
GTA				PcS	**PcS**	**13 56 14.8**	**-5.2**
GTA				S	**S**	**13 58 09.9**	**+4.4**
GTA				sS	sS	13 58 39.9	-0.5
GTA				ScS	**ScS**	**14 00 46.5**	**0.0**
GTA				pmax	pmax		
	comp=Z,15nm,1.0s						
GTA				pmax	pmax		
	comp=Z,160nm,8.7s						
GTA				LR	LR		
	comp=Z,270nm,18.4s						
GTA				LR	LR		
	comp=Z,380nm,16.5s						
GTA				LR	LR		
	comp=Z,340nm,18.4s						
MAJO	**Matsushiro**	**51.10**	**26**	P	**P**	**13 51 11.1**	**-2.5**
MAJO				pmax	pmax		
	comp=Z,13nm,0.7s						
MAJO	**Matsushiro**	**51.10**	**26**	P	**P**	**13 51 11.1**	**-2.5**
MAJO				IAmb	IAmb	13 51 18.9	
	comp=Z,13nm,0.7s						
MAT	**Matsushiro**	**51.10**	**26**	P	**P**	**13 51 11.4**	**-2.2**
MJAR	**Matsushiro Arr**	**51.10**	**26**	P	**P**	**13 51 11.5**	**-2.1**
	comp=Z,20nm,0.9s,baz=202,slow=7.9,SNR=35						
MJAR				PcP	**PcP**	**13 52 29.3**	**+1.1**
	comp=Z,6.7nm,0.8s,baz=202,slow=5.9,SNR=4.8						
MJAR				ScP	**ScP**	**13 56 18.5**	**+1.4**
	comp=Z,2.0nm,0.8s,baz=206,slow=5.2,SNR=4.7						
MJAR				LR	LR	14 16 30.1	
	comp=Z,44nm,18.1s,baz=215,slow=40						
MJAR	**Matsushiro Arr**	**51.10**	**26**	P	**P**	**13 51 11.1**	**-2.5**
MJB9	**Matsu-Tunnel**	**51.11**	**26**	P	**P**	**13 51 11.2**	**-2.5**
MJB9				IAmb	IAmb	13 51 18.9	
	comp=Z,14nm,0.7s						
SNY	**Shenyang**	**51.48**	**10**	⇓P	P	13 51 22.4	+6.1
SNY				S	**S**	**13 58 32.5**	**+2.5**
SNY				pmax	pmax		
	comp=Z,8.0nm,0.5s						
SNY				pmax	pmax		
	comp=Z,240nm,6.0s						
SNY				LR	LR		
	comp=Z,240nm,4.4s						
SNY				LR	LR		
	comp=Z,350nm,4.0s						
SNY				LR	LR		
	comp=Z,300nm,18.6s						
DZM	**Mont Dzumac**	**52.85**	**111**	P	**P**	**13 51 28.3**	**+1.3**
	comp=Z,24nm,0.9s,baz=315,slow=16,SNR=6.2						
DZM	**Mont Dzumac**	**52.85**	**111**	*e*P	**P**	**13 51 29.8**	**+2.8**
	comp=Z,60nm,1.0s						
DZM	**Mont Dzumac**	**52.85**	**111**	*e*LR	LR	14 06 52.6	
	comp=Z,887nm,37.8s						
CN2	**Changchun**	**53.74**	**11**	*e*P	P	13 51 27.6	-5.3
CN2				*e*S	**S**	**13 59 03.6**	**+2.9**
MDJ	**Mudanjiang**	**55.42**	**14**	P	**P**	**13 51 44.4**	**-0.6**
MDJ				pmax	pmax		
	comp=Z,24nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,140nm,4.7s						
MDJ	**Mudanjiang**	**55.42**	**14**	P	**P**	**13 51 43.8**	**-1.2**
USA0B	**Ussuriysk Arra**	**55.66**	**16**	⇓*i*P	**P**	**13 51 46.4**	**-0.4**
USA0B	**Ussuriysk Arra**	**55.66**	**16**	P	**P**	**13 51 45.8**	**-0.9**
USA0B				IAmb	IAmb	13 51 48.1	
	comp=Z,41nm,1.0s						
USRK	**Ussuriysk Ar.**	**55.66**	**16**	P	**P**	**13 51 46.2**	**-0.5**
	comp=Z,28nm,0.8s,baz=198,slow=4.4,SNR=33						
USRK	**Ussuriysk Ar.**	**55.66**	**16**	P	**P**	**13 51 45.6**	**-1.2**
NIL	**Nilore**	**56.77**	**320**	P	**P**	**13 51 52.8**	**-2.2**
NIL				pmax	pmax		
	comp=Z,59nm,1.4s						
NIL	**Nilore**	**56.77**	**320**	P	**P**	**13 51 52.8**	**-2.2**
ULN	**Ulaanbaatar**	**56.84**	**355**	P	**P**	**13 51 54.5**	**-0.9**
ULN				pmax	pmax		
	comp=Z,16nm,1.0s						
ULN	**Ulaanbaatar**	**56.84**	**355**	P	**P**	**13 51 54.5**	**-0.9**
ULN				IAmb	IAmb	13 51 57.1	
	comp=Z,16nm,0.9s						
SONM	**Songino Array**	**56.87**	**355**	P	**P**	**13 51 55.6**	**0.0**
	comp=Z,11nm,0.8s,baz=175,slow=8.4,SNR=81						
SONM				ScP	**ScP**	**13 56 43.1**	**+0.9**
	comp=Z,0.8nm,0.8s,baz=145,slow=5.3,SNR=4.1						
SONM				LR	LR	14 18 15.8	
	comp=Z,272nm,19.8s,baz=178,slow=38						
SONM	**Songino Array**	**56.87**	**355**	P	**P**	**13 51 55.1**	**-0.5**
MSEY	**Mahe Island**	**57.24**	**270**	P	**P**	**13 51 58.8**	**+0.1**
MSEY				pmax	pmax		
	comp=Z,23nm,1.1s						
MSEY	**Mahe Island**	**57.24**	**270**	P	**P**	**13 51 58.8**	**+0.1**
MSEY				IAmb	IAmb	13 52 34.4	
	comp=Z,23nm,1.1s						
CASY	**Casey**	**57.24**	**181**	P	**P**	**13 51 57.0**	**-0.7**
CASY				IAmb	IAmb	13 52 36.7	
	comp=Z,32nm,1.1s						
WMQ	**Urumqi**	**57.36**	**338**	*e*P	**P**	**13 51 59.4**	**+0.4**
WMQ				pP	pP	13 52 19.4	-0.7
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,130nm,4.9s						
WMQ				LR	LR		
	comp=Z,440nm,23.7s						
WMQ				LR	LR		
	comp=Z,830nm,29.1s						
WMQ				LR	LR		
	comp=Z,280nm,25.1s						
WMQ	**Urumqi**	**57.36**	**338**	P	**P**	**13 51 59.0**	**0.0**
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
WMQ	**Urumqi**	**57.36**	**338**	P	**P**	**13 51 59.0**	**0.0**
WMQ				IAmb	IAmb	13 52 00.4	
	comp=Z,19nm,0.7s						
ERM	**Erimo**	**57.78**	**26**	⇓*e*P	**P**	**13 52 01.6**	**-0.2**
ERM				pmax	pmax		
	comp=Z,42nm,0.9s						
TEY	**Ternei**	**57.83**	**20**	⇓*e*P	**P**	**13 52 01.9**	**-0.2**
TEY				pmax	pmax		
	comp=E,10.0nm,1.4s						
TEY				pmax	pmax		
	comp=N,30nm,0.8s						
TEY				pmax	pmax		
	comp=Z,60nm,0.8s						
MCQ	**Macquarie Isla**	**58.22**	**150**	P	**P**	**13 52 03.1**	**-1.6**
MCQ				pmax	pmax		
	comp=Z,747nm,2.0s						
MCQ	**Macquarie Isla**	**58.22**	**150**	P	**P**	**13 52 03.1**	**-1.6**
DCZ	**Deep Cove**	**58.84**	**138**	P	**P**	**13 52 10.9**	**+1.7**
KSH	**Kashi**	**59.22**	**327**	P	**P**	**13 52 10.0**	**-2.1**
KSH				sP	sP	13 52 44.8	+2.0
KSH				SS	SS	14 04 07.1	-2.6
KSH				pmax	pmax		
	comp=Z,25nm,1.1s						
KSH				pmax	pmax		
	comp=Z,240nm,4.2s						
KSH				LR	LR		
	comp=Z,690nm,13.2s						
KSH				LR	LR		
	comp=Z,340nm,10.5s						
KSH				LR	LR		
	comp=Z,370nm,15.3s						
ASAJ	**Asahikawa**	**59.26**	**24**	LR	LR	14 17 55.8	
	comp=Z,68nm,19.4s,baz=175,slow=36						
WHZ	**Wether Hill Ro**	**59.51**	**138**	P	**P**	**13 52 15.3**	**+1.3**
WHZ				IAmb	IAmb	13 52 16.6	
	comp=Z,27nm,0.9s						
ZAK	**Zakamensk**	**59.72**	**353**	*e*P	**P**	**13 52 14.8**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
WKZ	**Wanaka**	**59.87**	**137**	P	**P**	**13 52 17.3**	**+0.9**
WKZ				IAmb	IAmb	13 52 29.8	
	comp=Z,29nm,0.8s						
FOZ	**Fox Glacier**	**60.01**	**135**	P	**P**	**13 52 18.0**	**+0.6**
FOZ				IAmb	IAmb	13 53 34.9	
	comp=Z,33nm,1.2s						
KBL	**Kabul**	**60.04**	**319**	P	**P**	**13 52 15.8**	**-2.2**
KBL				pmax	pmax		
	comp=Z,13nm,0.9s						
KBL	**Kabul**	**60.04**	**319**	P	**P**	**13 52 15.8**	**-2.2**
KLR	**Kul'dur**	**60.26**	**14**	LR	LR	14 19 52.7	
	comp=Z,138nm,18.4s,baz=192,slow=38						
KLR	**Kul'dur**	**60.26**	**14**	*ce*P	**P**	**13 52 17.7**	**-1.1**
KLR				pmax	pmax		
	comp=Z,13nm,0.9s						
KDJ	**Kajisay**	**60.52**	**330**	P	**P**	**13 52 20.0**	**-1.0**
KDJ				pmax	pmax		
	comp=Z,233nm,1.5s						
KDJ	**Kajisay**	**60.52**	**330**	P	**P**	**13 52 20.0**	**-1.0**
LBZ	**Lake Benmore**	**60.52**	**136**	P	**P**	**13 52 20.1**	**-0.7**
LBZ				IAmb	IAmb	13 52 47.1	
	comp=Z,24nm,1.2s						
NRN	**Naryn**	**60.60**	**329**	P	**P**	**13 52 20.5**	**-1.3**
NRN				pmax	pmax		
	comp=Z,32nm,1.2s						
NRN	**Naryn**	**60.60**	**329**	P	**P**	**13 52 20.5**	**-1.3**
NRN				IAmb	IAmb	13 52 22.2	
	comp=Z,32nm,1.1s						
RPZ	**Rata Peaks**	**60.92**	**135**	P	**P**	**13 52 24.4**	**+0.8**
	comp=Z,91nm,0.9s,baz=283,slow=2.0,SNR=28						
RPZ				LR	LR	14 17 57.7	
	comp=Z,627nm,21.0s,baz=230,slow=35						
RPZ	**Rata Peaks**	**60.92**	**135**	P	**P**	**13 52 24.1**	**+0.5**
TLY	**Talaya**	**60.96**	**353**	LR	LR	14 21 02.2	
	comp=Z,110nm,20.4s,baz=178,slow=38						
TLY	**Talaya**	**60.96**	**353**	*c i*P	**P**	**13 52 24.6**	**+1.0**
TLY				pmax	pmax		
	comp=Z,22nm,1.1s						
TLY	**Talaya**	**60.96**	**353**	P	**P**	**13 52 20.2**	**-3.4**
TLY				IAmb	IAmb	13 52 25.8	
	comp=Z,17nm,1.0s						
ODZ	**Otahua Downs**	**61.03**	**137**	P	**P**	**13 52 25.1**	**+0.8**
ODZ				IAmb	IAmb	13 53 59.0	
	comp=Z,28nm,1.4s						
QRZ	**Quartz Range**	**61.23**	**132**	P	**P**	**13 52 27.5**	**+1.8**
MOY	**Mondy**	**61.29**	**351**	*e*P	**P**	**13 52 26.4**	**+0.4**
MOY				pmax	pmax		
	comp=Z,23nm,1.3s						
IRK	**Irkutsk**	**61.44**	**354**	*e*P	**P**	**13 52 26.2**	**-0.6**
IRK				pmax	pmax		
	comp=Z,35nm,2.4s						
OXZ	**Oxford**	**61.51**	**135**	P	**P**	**13 52 28.2**	**+0.7**
LTZ	**Lake Taylor**	**61.53**	**134**	P	**P**	**13 52 28.2**	**+0.4**
LTZ				IAmb	IAmb	13 52 34.1	
	comp=Z,25nm,1.2s						
YSS	**Yuzh-Sakhalins**	**61.67**	**23**	⇓*e*P	**P**	**13 52 27.6**	**-0.8**
YSS				*e**PP	**pP**	**13 52 50.0**	**+0.1**
YSS				*e**SP	**sP**	**13 53 01.1**	**+1.8**
YSS				*e*		13 53 07.9	
YSS				*e*		13 54 42.5	
YSS				*e*S	**S**	**14 00 43.1**	**-1.2**
YSS				pmax	pmax		
	comp=N,30nm,0.7s						
YSS				pmax	pmax		
	comp=E,20nm,0.7s						
YSS				pmax	pmax		
	comp=Z,60nm,0.7s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
YSS	**Yuzh-Sakhalins**	**61.67**	**23**	P	**P**	**13 52 27.7**	**-0.8**
MHTO	**MHTO**	**61.73**	**300**	P	**P**	**13 52 28.9**	**-0.5**
	SNR=10						
THZ	**Tophouse**	**61.73**	**133**	P	**P**	**13 52 29.7**	**+0.6**
MK31	**Makanchi Array**	**61.91**	**337**	*e*P	**P**	**13 52 29.4**	**-0.8**
MK31	**Makanchi Array**	**61.91**	**337**	P	**P**	**13 52 29.3**	**-0.9**
MK31				IAmb	IAmb	13 52 31.4	
	comp=Z,36nm,1.2s						
MKAR	**Makanchi Array**	**61.91**	**337**	P	**P**	**13 52 29.6**	**-0.5**
	comp=Z,20nm,0.5s,baz=151,slow=7.3,SNR=311						
MKAR				S	**S**	**14 00 44.8**	**-2.7**
	comp=Z,1.4nm,0.9s,baz=155,slow=12,SNR=6.7						
MKAR				PKPPKP	**P'P'df**	**14 21 42.4**	**+4.6**
	comp=Z,0.4nm,0.8s,baz=298,slow=2.6,SNR=4.3						
MKAR				LR	LR	14 21 50.4	
	comp=Z,178nm,21.2s,baz=164,slow=38						
MKAR	**Makanchi Array**	**61.91**	**337**	P	**P**	**13 52 29.2**	**-1.0**
NNZ	**Nelson**	**61.95**	**132**	P	**P**	**13 52 30.4**	**-0.1**
MQZ	**McQueen’s Vall**	**62.04**	**135**	P	**P**	**13 52 32.5**	**+1.4**
MAKZ	**Makanchi**	**62.05**	**336**	P	**P**	**13 52 30.6**	**-0.5**
MAKZ	**Makanchi**	**62.05**	**336**	P	**P**	**13 52 30.3**	**-0.8**
MAKZ				IAmb	IAmb	13 52 32.2	
	comp=Z,23nm,1.2s						
GAR	**Garm**	**62.06**	**323**	P	**P**	**13 52 30.2**	**-1.2**
GAR				IAmb	IAmb	13 52 36.5	
	comp=Z,14nm,0.7s						
JMDO	**Jabal Madar**	**62.16**	**301**	P	**P**	**13 52 32.6**	**+0.3**
	SNR=6.6						
AAK	**Ala-Archa**	**62.25**	**329**	*i* P	**P**	**13 52 32.9**	**+0.2**
	SNR=6.8						
AAK	**Ala-Archa**	**62.25**	**329**	*i* P	**P**	**13 52 32.9**	**+0.2**
	SNR=6.8						
AAK	**Ala-Archa**	**62.25**	**329**	⇑*e*P	**P**	**13 52 33.2**	**+0.6**
AAK				pmax	pmax		
	comp=Z,18nm,0.8s						
AAK	**Ala-Archa**	**62.25**	**329**	P	**P**	**13 52 31.9**	**-0.7**
AAK				IAmb	IAmb	13 52 34.4	
	comp=Z,19nm,0.9s						
SOCY	**Socotra**	**62.31**	**289**	P	**P**	**13 52 33.4**	**-0.1**
SOCY				IAmb	IAmb	13 52 34.9	
	comp=Z,43nm,1.0s						
KHZ	**Kahutara**	**62.34**	**133**	P	**P**	**13 52 33.5**	**+0.3**
KHZ				IAmb	IAmb	13 52 35.7	
	comp=Z,25nm,0.9s						
TUWZ	**Tuamarina**	**62.41**	**132**	P	**P**	**13 52 33.7**	**+0.1**
BSWZ	**Blackbirch Sta**	**62.42**	**132**	P	**P**	**13 52 34.0**	**+0.2**
BTK	**Batken**	**62.46**	**324**	P	**P**	**13 52 33.3**	**-0.7**
BTK				pmax	pmax		
	comp=Z,21nm,1.3s						
BTK	**Batken**	**62.46**	**324**	P	**P**	**13 52 33.3**	**-0.7**
SMDO	**Samad**	**62.48**	**302**	P	**P**	**13 52 34.5**	**-0.1**
	SNR=7.0						
CHGR	**Chuyangaron**	**62.53**	**322**	P	**P**	**13 52 32.1**	**-2.5**
CHGR				IAmb	IAmb	13 52 34.0	
	comp=Z,28nm,1.1s						
BIDO	**Bidbid**	**62.61**	**302**	P	**P**	**13 52 35.9**	**+0.7**
	SNR=7.5						
SHAO	**Shalim**	**62.68**	**296**	*i* P	**P**	**13 52 36.2**	**+0.4**
	SNR=6.9						
SHAO	**Shalim**	**62.68**	**296**	*i* P	**P**	**13 52 36.2**	**+0.4**
	SNR=6.9						
GRNR	**Gornyy**	**62.88**	**16**	⇑*i*P	**P**	**13 52 36.2**	**-0.3**
GRNR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GRNR				MLR	MLR		
	comp=Z,130nm,14.0s						
SNZO	**South Karori**	**62.94**	**132**	P	**P**	**13 52 37.2**	**+0.1**
BHW	**Baring Head**	**63.08**	**132**	P	**P**	**13 52 38.2**	**+0.1**
MSWZ	**Moikau Station**	**63.36**	**132**	P	**P**	**13 52 40.1**	**+0.1**
PLWZ	**Palliser**	**63.40**	**132**	P	**P**	**13 52 40.4**	**+0.1**
MSVF	**Nonsavu**	**63.62**	**105**	⇑*e*P	**P**	**13 52 44.3**	**+2.1**
MSVF				pmax	pmax		
	comp=Z,152nm,3.3s						
MSVF	**Nonsavu**	**63.62**	**105**	P	**P**	**13 52 41.3**	**-0.9**
MSVF				IAmb	IAmb	13 52 47.5	
	comp=Z,27nm,1.1s						
ZEA	**Zeya**	**63.64**	**9**	*e*P	**P**	**13 52 41.1**	**-0.3**
ZEA				pmax	pmax		
	comp=E,22nm,0.9s						
ZEA				pmax	pmax		
	comp=N,26nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,38nm,0.8s						
RBK	**Rabkut**	**63.77**	**294**	P	**P**	**13 52 43.7**	**+0.6**
	SNR=6.5						
CRZF	**Crozet Islands**	**63.78**	**222**	P	**P**	**13 52 43.1**	**+0.5**
BKZ	**Black Stump Fm**	**63.87**	**129**	P	**P**	**13 52 43.7**	**+0.3**
BKZ				IAmb	IAmb	13 52 45.2	
	comp=Z,42nm,0.8s						
BFZ	**Birch Farm**	**63.96**	**131**	P	**P**	**13 52 44.7**	**+0.8**
BFZ				IAmb	IAmb	13 52 47.3	
	comp=Z,48nm,1.0s						
URZ	**Urewera**	**64.19**	**128**	P	**P**	**13 52 45.8**	**+0.3**
	comp=Z,12nm,0.6s,baz=255,slow=5.9,SNR=18						
URZ				LR	LR	14 20 34.7	
	comp=Z,391nm,21.4s,baz=356,slow=36						
URZ	**Urewera**	**64.19**	**128**	P	**P**	**13 52 45.5**	**0.0**
URZ				IAmb	IAmb	13 53 21.4	
	comp=Z,27nm,1.1s						
WHFO	**Wadi Hawf**	**64.30**	**295**	P	**P**	**13 52 46.2**	**-0.4**
	SNR=6.0						
OPO	**Ambohidratompo**	**64.35**	**254**	P	**P**	**13 52 47.8**	**+0.8**
	comp=Z,5.6nm,0.8s,baz=106,slow=6.3,SNR=5.1						
ABTO	**Aybut**	**64.54**	**294**	P	**P**	**13 52 48.2**	**+0.1**
	SNR=8.8						
KK31	**Karatay Array**	**64.67**	**327**	*i* P	**P**	**13 52 47.3**	**-1.1**
KK31	**Karatay Array**	**64.67**	**327**	P	**P**	**13 52 46.9**	**-1.6**
KKAR	**Karatay Array**	**64.67**	**327**	P	**P**	**13 52 46.8**	**-1.7**
KKAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KKAR	**Karatay Array**	**64.67**	**327**	P	**P**	**13 52 46.8**	**-1.7**
KKAR	**Karatay Array**	**64.67**	**327**	P	**P**	**13 52 47.1**	**-1.3**
KKAR				IAmb	IAmb	13 52 53.7	
	comp=Z,5.7nm,0.7s						
UOSS	**Minazif**	**64.79**	**303**	*i* P	**P**	**13 52 48.6**	**-1.0**
	SNR=6.8						
UOSS	**Minazif**	**64.79**	**303**	*i* P	**P**	**13 52 48.6**	**-1.0**
	SNR=6.8						
UOSS	**Minazif**	**64.79**	**303**	P	**P**	**13 52 48.2**	**-1.4**
HATD	**Hatta, Dubai**	**64.80**	**303**	*i* P	**P**	**13 52 49.5**	**-0.2**
	SNR=8.7						
HATD	**Hatta, Dubai**	**64.80**	**303**	*i* P	**P**	**13 52 49.5**	**-0.2**
	SNR=8.7						
HATD	**Hatta, Dubai**	**64.80**	**303**	P	**P**	**13 52 49.7**	**+0.1**
	SNR=5.7						
ASHO	**Ashiyiah**	**64.81**	**303**	*i* P	**P**	**13 52 49.2**	**-0.6**
	SNR=13						
ASHO	**Ashiyiah**	**64.81**	**303**	*i* P	**P**	**13 52 49.2**	**-0.6**
	SNR=13						
ASHO	**Ashiyiah**	**64.81**	**303**	P	**P**	**13 52 49.7**	**0.0**
	SNR=6.4						
TYV	**Tymovskoe**	**64.91**	**20**	*e*P	**P**	**13 52 52.0**	**+2.3**
TYV				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MXZ	**Matakaoa Point**	**65.02**	**127**	P	**P**	**13 52 51.9**	**+1.0**
BANOM	**Banah**	**65.11**	**304**	P	**P**	**13 52 51.1**	**-0.5**
BANOM	**Banah**	**65.11**	**304**	P	**P**	**13 52 51.1**	**-0.5**
FAQ	**Al Faqa, Dubai**	**65.22**	**302**	P	**P**	**13 52 52.0**	**-0.4**
FAQ	**Al Faqa, Dubai**	**65.22**	**302**	P	**P**	**13 52 52.0**	**-0.4**
KURBB	**Kurchatov Arra**	**66.48**	**337**	S	**S**	**14 01 39.3**	**-4.3**
	comp=Z,0.3nm,0.8s,baz=96,slow=8.9,SNR=4.3						
KURK	**Kurchatov**	**66.52**	**337**	*ce*P	**P**	**13 52 59.3**	**-0.8**
KURK				pmax	pmax		
	comp=Z,33nm,1.0s						
KURK	**Kurchatov**	**66.52**	**337**	P	**P**	**13 52 59.3**	**-0.8**
KURK				IAmb	IAmb	13 53 01.3	
	comp=Z,31nm,1.0s						
KURK	**Kurchatov**	**66.52**	**337**		**S**	**14 01 39.3**	**-4.8**
BOD	**Bodaibo**	**66.58**	**1**	*e*P	**P**	**13 52 59.8**	**-0.5**
BOD				pmax	pmax		
	comp=Z,22nm,1.4s						
ZAA0	**Zalesovo Array**	**67.07**	**342**	P	**P**	**13 53 02.2**	**-1.4**
ZAA0				IAmb	IAmb	13 53 03.8	
	comp=Z,36nm,0.8s						
ZALV	**Zalesovo Beam**	**67.07**	**342**	P	**P**	**13 53 02.5**	**-1.0**
	comp=Z,47nm,0.8s,baz=147,slow=4.4,SNR=136						
ZALV				S	**S**	**14 01 42.8**	**-7.9**
	comp=Z,4.3nm,0.8s,baz=126,slow=11,SNR=7.0						
ZALV				LR	LR	14 24 25.9	
	comp=Z,221nm,18.5s,baz=180,slow=38						
ZALV	**Zalesovo Beam**	**67.07**	**342**	P	**P**	**13 53 02.3**	**-1.3**
MAW	**Mawson**	**67.30**	**199**	LR	LR	14 18 13.1	
	comp=Z,90nm,20.4s,baz=64,slow=32						
GEYT	**Alibeck**	**69.25**	**316**	P	**P**	**13 53 18.5**	**+0.9**
	comp=Z,4.2nm,0.7s,baz=142,slow=7.3,SNR=9.9						
GEYT				LR	LR	14 26 08.6	
	comp=Z,144nm,18.8s,baz=35,slow=38						
BRVK	**Borovoye**	**71.68**	**334**	⇑*i*P	**P**	**13 53 32.0**	**0.0**
BRVK				pmax	pmax		
	comp=Z,14nm,1.3s						
BRVK	**Borovoye**	**71.68**	**334**	P	**P**	**13 53 31.5**	**-0.6**
YAK	**Yakutsk**	**71.98**	**8**	S	**S**	**14 02 43.6**	**-4.3**
	comp=Z,1.0nm,0.3s,baz=132,slow=23,SNR=16						
YAK	**Yakutsk**	**71.98**	**8**	*e*P	**P**	**13 53 31.0**	**-2.6**
YAK				*e*		13 53 49.6	
YAK				*e**PP	**pP**	**13 53 55.9**	**+0.3**
YAK				*e*		13 56 17.7	
YAK				*e*S	**S**	**14 02 42.9**	**-5.1**
YAK				pmax	pmax		
	comp=Z,45nm,0.9s						
YAK				pmax	pmax		
	comp=N,19nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,133nm,4.2s						
YAK				pmax	pmax		
	comp=N,68nm,3.8s						
YAK				smax	smax		
	comp=N,88nm,2.2s						
YAK	**Yakutsk**	**71.98**	**8**	P	**P**	**13 53 31.6**	**-2.0**
YAK				IAmb	IAmb	13 53 34.5	
	comp=Z,51nm,0.9s						
PEA0B	**Petropavlovsk-**	**72.56**	**26**	⇑*i*P	**P**	**13 53 36.4**	**-0.9**
PEA0B	**Petropavlovsk-**	**72.56**	**26**	P	**P**	**13 53 36.8**	**-0.5**
PETK	**Petropavlovsk-**	**72.56**	**26**	P	**P**	**13 53 37.0**	**-0.3**
	comp=Z,10nm,0.7s,baz=197,slow=3.4,SNR=52						
PETK				LR	LR	14 28 09.3	
	comp=Z,62nm,19.3s,baz=241,slow=38						
PETK	**Petropavlovsk-**	**72.56**	**26**	P	**P**	**13 53 36.7**	**-0.6**
PET	**Petropavlovsk**	**72.93**	**27**	P	**P**	**13 53 39.0**	**-0.4**
PET				pmax	pmax		
	comp=Z,107nm,1.6s						
PET	**Petropavlovsk**	**72.93**	**27**	P	**P**	**13 53 39.0**	**-0.4**
VNDA	**Vanda**	**72.97**	**170**	P	**P**	**13 53 40.4**	**+1.0**
	comp=Z,6.3nm,0.9s,baz=290,slow=7.8,SNR=9.6						
VNDA				LR	LR	14 22 52.3	
	comp=Z,160nm,21.8s,baz=320,slow=33						
VNDA	**Vanda**	**72.97**	**170**	P	**P**	**13 53 40.4**	**+1.0**
RAYN	**Ar Rayn**	**73.42**	**298**	*i* P	**P**	**13 53 42.5**	**-0.6**
	SNR=19						
RAYN	**Ar Rayn**	**73.42**	**298**	*i* P	**P**	**13 53 42.5**	**-0.6**
	SNR=19						
RAYN	**Ar Rayn**	**73.42**	**298**	P	**P**	**13 53 42.0**	**-1.1**
RAYN	**Ar Rayn**	**73.42**	**298**	P	**P**	**13 53 42.0**	**-1.1**
AB31	**Akbulak array**	**74.23**	**327**	*i* P	**P**	**13 53 46.6**	**-0.6**
ABKAR	**Akbulak array**	**74.23**	**327**	P	**P**	**13 53 46.2**	**-1.0**
MA2	**Magadan**	**74.69**	**19**	*ce*P	**P**	**13 53 50.2**	**+0.6**
MA2				pmax	pmax		
	comp=Z,14nm,1.0s						
MA2	**Magadan**	**74.69**	**19**	P	**P**	**13 53 48.8**	**-0.8**
SYO	**Syowa Base**	**75.74**	**201**	⇑*i*P	**P**	**13 53 57.1**	**+1.5**
SYO	**Syowa Base**	**75.74**	**201**	⇓*e*PcP	**PcP**	**13 54 07.0**	**-0.9**
KMBO	**Kilima Mbogo**	**75.76**	**271**	P	**P**	**13 53 59.2**	**+2.1**
	comp=Z,4.6nm,0.8s,baz=72,slow=6.5,SNR=14						
KMBO	**Kilima Mbogo**	**75.76**	**271**	*i* P	**P**	**13 53 59.7**	**+2.6**
	SNR=9.2						
KMBO	**Kilima Mbogo**	**75.76**	**271**	*i* P	**P**	**13 53 59.7**	**+2.6**
	SNR=9.2						
KMBO	**Kilima Mbogo**	**75.76**	**271**	P	**P**	**13 53 55.4**	**-1.7**
AKTO	**Aktyubinsk**	**75.93**	**327**	P	**P**	**13 53 56.4**	**-0.5**
SEY	**Seymchan**	**77.80**	**17**	⇓*i*P	**P**	**13 54 08.3**	**+1.2**
AKT	**Akhty**	**77.99**	**316**	*e*P	**P**	**13 54 09.2**	**+0.3**

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AKT                                   e               13 54 18.2
AKT                                   e*PP    pP      13 54 31.6 +0.7
AKT                                    pmax   pmax
       comp=Z,16nm,1.0s
SVE    Sverdlovsk          78.35 334⇑eP      P       13 54 10.5 +0.2
SVE                                    pmax   pmax
       comp=Z,41nm,1.1s
ARU    Arti                79.04 333c iP     P       13 54 13.8 -0.3
ARU                                                   13 57 10.9
ARU                                    S      S       14 04 08.4 +2.2
ARU                                    SS     SS      14 09 12.9 -1.0
ARU                                    pmax   pmax
       comp=Z,28nm,1.1s
ARU    Arti                79.04 333   P      P       13 54 13.8 -0.3
ARU                                    IAmb   IAmb    13 54 15.7
       comp=Z,27nm,1.1s
GNI    Garni               79.59 314deP      P       13 54 18.6 +0.9
GNI                                    pmax   pmax
       comp=Z,39nm,1.0s
GNI    Garni               79.59 314   P      P       13 54 18.4 +0.7
CLDR   Caldiran            79.83 312   P      P       13 54 19.7 +0.6
NRIK   Noril'sk            80.12 351   P      P       13 54 19.9 +0.2
       comp=Z,13nm,0.9s,baz=152,slow=5.8,SNR=17
NRIK   Noril'sk            80.12 351   P      P       13 54 20.0 +0.2
AKDM   Akdamar-Van         80.24 311   P      P       13 54 21.7 +0.4
AGRB   Hanur-Agry          80.65 313   P      P       13 54 24.4 +0.9
AKH    Akhalkalaki         80.92 314   P      P       13 54 24.4 -0.5
AKH                                    pmax   pmax
       comp=Z,19nm,1.2s
AKH    Akhalkalaki         80.92 314   P      P       13 54 24.4 -0.5
QSPA   South Pole Qui      81.01 180   P      P       13 54 25.4 +0.6
       comp=Z,11nm,1.0s,baz=7.4,slow=0.7,SNR=21
QSPA   South Pole Qui      81.01 180   P      P       13 54 25.6 +0.7
QSPA                                   IAmb   IAmb    13 54 27.8
       comp=Z,35nm,1.4s
ZEI    Tsey                81.12 316  eP      P       13 54 24.8 -1.1
ZEI                                    pmax   pmax
       comp=Z,13nm,0.7s
TIXI   Tiksi               81.15   5⇓eP      P       13 54 23.7 -1.5
TIXI                                   pmax   pmax
       comp=Z,36nm,1.0s
TIXI   Tiksi               81.15   5   P      P       13 54 23.6 -1.6
TIXI                                   IAmb   IAmb    13 54 25.7
       comp=Z,31nm,0.9s
NCK    Nalchik             81.58 316⇑eP      P       13 54 29.5 +1.4
NCK                                    pmax   pmax
       comp=Z,22nm,0.7s
MATP   Matopo              81.81 251   P      P       13 54 28.6 -1.3
       comp=Z,9.4nm,0.6s,baz=108,slow=4.8,SNR=24
NEY    Neytrino            82.09 316⇓eP      P       13 54 33.2 +2.2
NEY                                    pmax   pmax
       comp=Z,7.0nm,0.9s
KBZ    Khabaz              82.14 317   P      P       13 54 31.9 +0.9
       comp=Z,17nm,0.9s,baz=115,slow=3.5,SNR=21
KBZ                                    PKKPbc PKKPbc  14 13 00.5 -0.7
       comp=Z,2.5nm,0.9s,baz=356,slow=3.0,SNR=4.2
KBZ    Khabaz              82.14 317d iP     P       13 54 31.8 +0.9
KBZ                                    pmax   pmax
       comp=Z,24nm,1.0s
KIV    Kislovodsk          82.36 317  eP      P       13 54 33.5 +1.2
KIV                                    pmax   pmax
       comp=Z,39nm,1.1s
KIV                                    MLR    MLR
       comp=Z,358nm,19.0s
GOF    Gofitskoye          82.51 318⇑eP      P       13 54 34.0 +1.1
GOF                                    pmax   pmax
       comp=Z,16nm,0.6s
URFA   Urfa                83.09 310   P      P       13 54 37.6 +1.4
BOSA   Boshof              83.80 242   P      P       13 54 42.3 +2.1
       comp=Z,6.6nm,0.8s,baz=89,slow=2.1,SNR=7.0
BOSA                                   LR     LR      14 26 50.5
       comp=Z,182nm,19.5s,baz=101,slow=32
BOSA   Boshof              83.80 242   P      P       13 54 41.6 +1.4
BOSA                                   IAmb   IAmb    13 54 43.5
       comp=Z,38nm,1.3s
LBTB   Lobatse             83.93 246   P      P       13 54 42.7 +1.8
LBTB                                   pmax   pmax
       comp=Z,22nm,1.1s
LBTB   Lobatse             83.93 246   P      P       13 54 42.7 +1.8
LBTB                                   IAmb   IAmb    13 54 44.3
       comp=Z,22nm,1.1s
HRFI   Mount Harif         84.19 302   P      P       13 54 42.8 +0.9
GAZ    Gaziantep           84.25 309   P      P       13 54 42.7 +0.6
GAZ                                    IAmb   IAmb    13 54 44.7
       comp=Z,32nm,1.1s
DARE   Darende-Malaty      84.42 310   P      P       13 54 44.7 +1.7
KMRS   Kahramanmaras       84.58 309   P      P       13 54 44.7 +1.0
SVSK   Karacayir           85.15 311   P      P       13 54 48.3 +1.8
VRH    Novokhopyorsk       85.48 323  eP      P       13 54 47.6 -0.2
VRH                                    pmax   pmax
       comp=Z,20nm,0.7s
BILL   Bilibino            85.50  18⇑iP      P       13 54 46.4 -1.2
BILL   Bilibino            85.50  18   P      P       13 54 46.7 -0.9
CMRD   Camardi-Nigde       86.08 309   P      P       13 54 52.4 +1.1
YOZ    Yozgat              86.33 311   P      P       13 54 52.9 +0.4
CSS    Mathiatis           86.74 306   P      P       13 54 55.2 +0.7
CSS    Mathiatis           86.74 306   P      P       13 54 55.4 +0.9
CSS                                    IAmb   IAmb    13 54 56.8
       comp=Z,38nm,1.1s
IKL    Isikli              86.75 307   P      P       13 54 53.8 -0.7
KEBE   Keben-Mersin        86.78 307   P      P       13 54 55.8 +1.1
TEVE   Tevekalti-Mers      86.99 307   P      P       13 54 56.6 +0.9
VSR    Storozhevoye        87.00 323  eP      P       13 54 54.7 -0.6
VSR                                    pmax   pmax
       comp=Z,50nm,0.7s
YESY   Yesilyurt           87.07 309   P      P       13 54 57.0 +0.8
PRGR   Permogore           87.41 334  eP      P       13 54 53.0 -4.0
PRGR                                   pmax   pmax
       comp=Z,16nm,0.5s
LPSR   Galich'ya Gora      87.57 324  eP      P       13 54 58.6 +0.6
LPSR                                   pmax   pmax
       comp=Z,60nm,0.9s
BR131  Keskin Array S      87.61 311   P      P       13 54 59.9 +1.2
       SNR=8.6
BR131  Keskin Array S      87.61 311d iP     P       13 54 59.0 +0.2
BR131  Keskin Array S      87.61 311   P      P       13 54 58.7  0.0
BR131                                  IAmb   IAmb    13 55 00.8
       comp=Z,24nm,0.9s
BRTR   Keskin Array B      87.61 311   P      P       13 54 59.3 +0.6
       comp=Z,18nm,0.9s,baz=131,slow=6.2,SNR=79
BRTR   Keskin Array B      87.61 311  i P     P       13 54 58.9 +0.2
BRTR                                   pmax   pmax
       comp=Z,18nm,0.9s
BRTR   Keskin Array B      87.61 311   P      P       13 54 58.4 -0.4
GAZI   Gazipasa            87.83 307   P      P       13 54 59.7  0.0
KIZT   Kizilcal            88.74 310   P      P       13 55 03.7 -0.4
MOS    Moscow              89.25 327  eP      P       13 55 05.9  0.0
MOS                                    pmax   pmax
       comp=Z,34nm,0.9s
SNAA   Sanae               89.38 197   P      P       13 55 08.3 +1.9
SNAA   Sanae               89.38 197   P      P       13 55 08.3 +1.9
       comp=Z,15nm,0.6s,baz=167,slow=4.7,SNR=74
SNAA   Sanae               89.38 197d iP     P       13 55 08.1 +1.7
SNAA   Sanae               89.38 197   P      P       13 55 07.5 +1.2
KORT   Korkueli            89.54 307   P      P       13 55 09.2 +1.3
OBN    Obninsk             89.65 326  eP      P       13 55 08.8 +1.1
OBN                                   e*PP    pP      13 55 33.3 +3.0
OBN                                   e               13 58 38.5
OBN                                    pmax   pmax
       comp=Z,56nm,1.7s
KLMR   Klimovskoe          89.88 332  eP      P       13 55 02.6 -6.1
KLMR                                   pmax   pmax
       comp=Z,30nm,1.6s
KLMR   Klimovskoe          89.88 332  eP      P       13 55 02.7 -6.0
KLMR                                   AMP            13 55 09.1
       comp=Z,30nm,1.6s
VNA2   Neumayer--Watz      91.02 196   P      P       13 55 16.0 +2.0
       baz=106,slow=3.8
VNA1   Neumayer--Stat      91.41 197   P      P       13 55 18.0 +2.2
VNA3   Neumayer Olymp      91.48 196   P      P       13 55 18.0 +1.9
GAMB   Gambell             91.58  25   P      P       13 55 16.8 +0.3
GAMB                                   IAmb   IAmb    13 55 18.5
       comp=Z,15nm,1.3s
AKASG  Malin Array Be      92.97 321   P      P       13 55 22.8 -0.4
       comp=Z,8.5nm,0.9s,baz=81,slow=4.8,SNR=21
AKASG  Malin Array Be      92.97 321   P      P       13 55 22.6 -0.7
AKBB   Malin Array Si      92.97 321   P      P       13 55 22.5 -0.7
AKBB                                   pmax   pmax
       comp=Z,11nm,0.9s
AKBB   Malin Array Si      92.97 321   P      P       13 55 22.5 -0.7
AKBB                                   IAmb   IAmb    13 55 23.7
       comp=Z,11nm,0.9s
TBI    Tubuai              93.31 114  eLR     LR      14 25 37.2
       comp=Z,257nm,26.8s
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APA    Apatity             94.29 338⇑iP      P       13 55 21.0 -8.0
APA                                    pmax   pmax
       comp=Z,9.0nm,1.0s
APA                                    MLR    MLR
       comp=Z,2µm,20.0s
PPT2   Papeete2            94.30 108  eLR     LR      14 26 04.8
       comp=Z,365nm,27.0s
PPT    Papeete             94.31 108   LR     LR      14 41 47.1
       comp=Z,24nm,18.2s,baz=336,slow=38
FINES  FINESS Array B      96.35 331   P      P       13 55 39.2 +0.7
       comp=Z,2.3nm,0.7s,baz=123,slow=7.0,SNR=6.5
FINES                                  LR     LR      14 44 07.3
       comp=Z,367nm,19.7s,baz=248,slow=38
FINES  FINESS Array B      96.35 331  i P     P       13 55 41.0 +2.5
FINES                                  pmax   pmax
       comp=Z,2.0nm,0.6s
KOLS   Kolonicke sedl      97.18 318  eP      Pdif    13 55 43.4 +0.7
KOLS   Kolonicke sedl      97.18 318  ePDIFF  Pdif    13 55 43.4 +0.7
ARCES  ARCESS Array B      97.47 339   P      Pdif    13 55 44.6 +1.1
       comp=Z,3.1nm,0.9s,baz=88,slow=9.1,SNR=2.9
ARCES                                  LR     LR      14 43 33.0
       comp=Z,302nm,18.3s,baz=202,slow=38
VYHS   Vyhne               99.42 318  eP      Pdif    13 55 52.6  0.0
VYHS   Vyhne               99.42 318  ePDIFF  Pdif    13 55 52.6  0.0
ILAR   Eielson Array      102.38  26   P      Pdif    13 56 03.5 -1.9
       comp=Z,1.0nm,1.2s,baz=284,slow=4.5,SNR=2.9
ILAR                                   PKKPbc PKKPbc  14 12 08.2 -1.2
       comp=Z,0.6nm,0.6s,baz=92,slow=1.2,SNR=9.2
GERES  GERESS Array B     102.83 318   PP     PKiKP   14 00 21.2 -6.9
       comp=Z,0.5nm,0.7s,baz=88,slow=8.9,SNR=3.7
TORD   Torodi Ar. Bea     112.64 281   PKiKP  PKiKP   14 00 47.4 +0.3
       comp=Z,1.8nm,0.5s,baz=68,slow=1.7,SNR=11
TORD                                   SKP    SKPdf   14 04 15.4 +0.3
       comp=Z,0.8nm,0.8s,baz=16,slow=2.6,SNR=3.5
TORD                                   PKKPbc PKKPbc  14 11 36.7 +1.0
       comp=Z,0.9nm,0.8s,baz=317,slow=5.2,SNR=4.8
ESDC   Sonseca Array      116.39 310   PKP    PKiKP   14 00 54.5 +0.7
       comp=Z,0.1nm,0.3s,baz=38,slow=2.1,SNR=5.7
ESDC   Sonseca Array      116.39 310          PKPdf   14 00 53.6 -0.1
YKA    Yellowknife Ar     116.53  23   PKP    PKiKP   14 00 53.4 +0.2
       comp=Z,1.8nm,0.7s,baz=320,slow=1.6,SNR=36
YKA                                    SKP    SKPdf   14 04 21.9 +0.7
       comp=Z,1.1nm,0.7s,baz=309,slow=1.7,SNR=9.2
YKA                                    PKKPbc PKKPbc  14 11 20.9 -2.8
       comp=Z,0.6nm,0.7s,baz=120,slow=4.1,SNR=10
DBIC   Dimbokro           118.46 273   PKP    PKiKP   14 00 58.7 +0.3
       comp=Z,2.7nm,0.6s,baz=59,slow=0.6,SNR=6.4
PNT    Penticton          120.64  37   PKIKP  PKiKP   14 01 08.3 +6.6
YBH    Yreka Blue Hor     121.29  46   PKP    PKiKP   14 01 04.6 +1.3
       comp=Z,6.5nm,1.1s,baz=199,slow=2.2,SNR=3.6
AFDM   Forest Hills D     123.38  49   PKPdf  PKiKP   14 01 07.6 +0.1
PNTR   Pine Nut           124.35  48          PKPdf   14 01 08.3 -1.0
MSO    Missoula           125.16  38          PKPdf   14 01 09.6 -0.9
MSO    Missoula           125.16  38   P      PKiKP   14 01 10.9 +0.1
       baz=298
PKM    Mcpherson Peak     125.39  53   P      PKiKP   14 01 13.9 +2.1
       baz=285
NVAR   Mina Array Bea     125.52  49   PKP    PKiKP   14 01 13.5 +1.5
       comp=Z,3.0nm,0.8s,baz=244,slow=2.1,SNR=19
NVAR   Mina Array Bea     125.52  49          PKiKP   14 01 12.5 +0.5
CWC    Cottonwood Cre     126.31  51   P      PKiKP   14 01 14.9 +1.4
       baz=288
FFC    Flin Flon          126.57  24   PKIKP  PKiKP   14 01 13.2  0.0
FFC    Flin Flon          126.57  24          PKiKP   14 01 13.2  0.0
EDW2   Edwards Air Fo     126.83  53   P      PKiKP   14 01 16.3 +1.9
       baz=286,SNR=7.1
MPMC   Manual Prospec     126.88  51   P      PKiKP   14 01 16.4 +1.7
       baz=288,SNR=7.4
LRMC   Laurel Mtn Rad     126.90  52   P      PKiKP   14 01 16.5 +1.8
       baz=287
ELK    Elko               126.92  45   PKIKP  PKPdf   14 01 13.9 -0.3
ELK    Elko               126.92  45          PKPdf   14 01 13.8 -0.3
BFSC   Mount Baldy Ra     127.27  54   P      PKiKP   14 01 17.1 +1.6
       baz=286
TPNV   Topopah Spring     127.54  50   P      PKiKP   14 01 18.1 +2.2
       baz=289
R11A   Troy Canyon, C     127.56  48   P      PKiKP   14 01 18.3 +2.4
       baz=291,SNR=6.2
GSC    Goldstone, Bar     127.64  52   P      PKiKP   14 01 17.9 +1.8
       baz=288
MURC   Murrieta           127.82  54   P      PKiKP   14 01 18.1 +1.7
       baz=286
PFO    Pinyon Flats O     128.41  54   PKP    PKiKP   14 01 18.3 +0.5
       comp=Z,4.0nm,0.9s,baz=82,slow=1.7,SNR=6.0
PFO    Pinyon Flats O     128.41  54   P      PKiKP   14 01 20.2 +2.5
       baz=287
TPFO   Pinon Flats        128.41  54   P      PKiKP   14 01 19.7 +1.9
       baz=287
BELC   Belle Mtn. Jos     128.66  53   P      PKiKP   14 01 20.3 +2.1
       baz=287,SNR=5.6
GMRC   Granite Mounta     128.69  52   P      PKiKP   14 01 20.4 +2.1
       baz=288,SNR=7.1
RLMT   Red Lodge          128.83  38   P      PKiKP   14 01 19.6 +1.2
       baz=302
DUG    Dugway, Tooele     128.83  45   P      PKiKP   14 01 20.6 +2.2
       baz=295,SNR=5.5
IKP    In-Ko-Pah, Jac     128.96  55   P      PKiKP   14 01 20.9 +2.1
       baz=286
BW06   Boulder Array      129.85  40   P      PKiKP   14 01 22.9 +2.4
       baz=300
PDAR   Pinedale Array     129.85  40   PKP    PKiKP   14 01 20.7 +0.2
       comp=Z,1.1nm,0.9s,baz=281,slow=0.8,SNR=7.7
PDAR                                   SKPbc  SKPab   14 04 34.4 +0.1
       comp=Z,1.6nm,0.8s,baz=253,slow=0.9,SNR=9.6
PDAR   Pinedale Array     129.85  40          PKPdf   14 01 19.6 -0.1
PLCA   Paso Flores        130.42 176   PKP    PKiKP   14 01 21.8 +0.2
       comp=Z,1.4nm,1.0s,baz=346,slow=17,SNR=3.0
PLCA                                   SKPbc  SKPbc   14 04 38.8 +2.1
       comp=Z,2.6nm,0.8s,baz=153,slow=11,SNR=2.9
WUAZ   Wupatki            131.74  50   P      PKiKP   14 01 26.3 +1.9
       baz=292
O20A   White River Ci     131.99  43   P      PKiKP   14 01 25.6 +0.8
       baz=299
ULM    Lac du Bonnet      132.40  25   PKP    PKiKP   14 01 24.7 -0.4
       comp=Z,2.3nm,0.7s,baz=321,slow=2.1,SNR=5.8
ULM                                    SKPbc  SKPbc   14 04 43.7 +0.5
       comp=Z,9.1nm,0.9s,baz=306,slow=5.3,SNR=16
ULM    Lac du Bonnet      132.40  25          SKPbc   14 04 43.6 +0.3
SCHQ   Schefferville      134.27 360   PKP    PKiKP   14 01 28.5 -0.3
       comp=Z,2.9nm,0.6s,baz=42,slow=2.1,SNR=8.6
SCHQ                                   SKPbc  SKPbc   14 04 50.3 +0.8
       comp=Z,7.9nm,0.8s,baz=40,slow=3.5,SNR=11
SCHQ   Schefferville      134.27 360          SKPbc   14 04 50.0 +0.5
ANMO   Albuquerque        135.64  48   P      PKiKP   14 01 34.1 +1.7
       baz=296
T25A   Trinidad           136.07  44   P      PKiKP   14 01 34.1 +0.8
       baz=300
MNTX   Cornudas Mount     137.83  52   P      PKiKP   14 01 37.4 +0.7
       baz=294
D46A   Sault St. Mari     139.52  18   P      PKPdf   14 01 29.1 -8.2
       baz=334
D47A   Chapleau           139.65  17   P      PKPdf   14 01 29.0 -8.6
       baz=335
TX32   Lajitas Array      140.12  54   PKPpre PKPdf   14 01 31.6 -7.5
TXAR   Lajitas Array      140.12  54   PKhKP  PKPdf   14 01 33.0 -6.1
       comp=Z,2.5nm,0.6s,baz=261,slow=2.9,SNR=18
TXAR                                   SKPbc  SKPbc   14 05 08.6 +1.0
       comp=Z,1.2nm,0.8s,baz=252,slow=1.8,SNR=4.7
TXAR   Lajitas Array      140.12  54   PKHKP  PKPdf   14 01 32.2 -6.9
TXAR   Lajitas Array      140.12  54          PKPdf   14 01 32.2 -6.9
E47A   Iron Bridge        140.14  18   P      PKPdf   14 01 32.3 -6.2
       baz=334
D50A   G1974 Best Tow     140.41  14   P      PKPdf   14 01 31.6 -7.3
       baz=340
E48A   Lockeyer           140.44  17   P      PKPdf   14 01 31.7 -7.3
       baz=336
JFWS   Jewell Farm        140.54  27   PKIKP  PKPdf   14 01 39.3  0.0
JFWS   Jewell Farm        140.54  27          PKPdf   14 01 39.3  0.0
G45A   Suttons Bay        140.62  21   P      PKPdf   14 01 33.4 -6.0
       baz=330
L40A   Anamosa            140.75  29          PKPdf   14 01 39.4 -0.3
F48A   Evansville         140.91  17   P      PKPdf   14 01 33.6 -6.3
       baz=335
D53A   Lac Vacive, Po     140.96  12   P      PKPdf   14 01 33.6 -6.3
       baz=343
G47A   Hillman            141.11  19   P      PKPdf   14 01 34.6 -5.6
       baz=333
WMOK   Wichita Mounta     141.22  44   P      PKPdf   14 01 35.9 -4.9
       baz=304
E53A   Dumoine, Ponti     141.63  12   P      PKPdf   14 01 35.4 -5.8
       baz=343
D58A   Chemin du LacG     141.69   6   P      PKiKP   14 01 44.3 +0.2
       baz=350
ABTX   Abilene, Hawle     141.73  47   P      PKPdf   14 01 39.4 -2.4
       baz=301
F52A   Sundridge          141.82  14   P      PKPdf   14 01 36.2 -5.3
       baz=340
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E56A   St. Veronique      141.94   9   P      PKPdf   14 01 37.2 -4.5
       baz=347
I48A   Sherman Twp        142.04  20   P      PKPdf   14 01 40.1 -1.9
       baz=332
E57A   Chemin Saint G     142.20   8   P      PKPdf   14 01 39.6 -2.6
       baz=348
E58A   La Victoria        142.36   7   P      PKPdf   14 01 38.7 -3.7
       baz=350
E61A   Lac Etchemin       142.56   4   P      PKPdf   14 01 39.9 -2.9
       baz=354
G53A   Haliburton         142.62  14   P      PKPdf   14 01 39.2 -3.7
       baz=341
JCT    Junction City      142.66  50   P      PKPdf   14 01 41.0 -2.6
       baz=298
J48A   Bridge Port        142.80  20   P      PKPdf   14 01 40.0 -3.3
       baz=332
F60A   Warwick            142.90   6   P      PKPdf   14 01 40.2 -3.2
       baz=352
K47A   Vermontville       142.91  22   P      PKPdf   14 01 40.9 -2.7
       baz=330
J49A   Marlette           142.96  20   P      PKPdf   14 01 40.3 -3.3
       baz=333
F61A   St Evariste        142.98   5   P      PKPdf   14 01 41.3 -2.3
       baz=353
H53A   Bobcaygeon         143.15  14   P      PKPbc   14 01 41.2 +0.3
       baz=341
I51A   Listowel           143.22  17   P      PKPbc   14 01 41.5 +0.2
       baz=336
G57A   Newington          143.35  10   P      PKPbc   14 01 42.5 +1.0
       baz=347
K49A   Clarkson           143.36  20   P      PKPbc   14 01 41.6  0.0
       baz=332
L47A   Sherwood           143.43  23   P      PKPbc   14 01 41.8 -0.1
       baz=329
G58A   Ormstown           143.45   8   P      PKPbc   14 01 42.4 +0.7
       baz=348
H55A   Tweed              143.48  12   P      PKPbc   14 01 42.3 +0.4
       baz=343
X37A   Clayton            143.59  41          PKPbc   14 01 43.6 +1.1
G61A   St-Isidore-de-     143.62   5   P      PKPbc   14 01 43.0 +0.7
       baz=352
H56A   Elgin              143.62  11   P      PKPbc   14 01 42.9 +0.6
       baz=344
CPUP   Villa Florida      143.66 195   PKP    PKPdf   14 01 44.7 -0.7
       comp=Z,13nm,0.9s,baz=164,slow=2.6,SNR=29
CPUP   Villa Florida      143.66 195          PKPbc   14 01 44.1 +1.1
CCM    Cathedral Cave     143.73  33   PKIKP  PKPab   14 01 41.6 -0.5
CCM    Cathedral Cave     143.73  33   PKPpre PKPab   14 01 41.6 -0.4
CCM    Cathedral Cave     143.73  33   P      PKPbc   14 01 43.3 +0.4
       baz=317
L48A   N Adams            143.75  22   P      PKPbc   14 01 43.2 +0.4
       baz=330
PKME   Peaks-Kenny Pk     143.80   3   P      PKPbc   14 01 43.7 +0.9
       baz=356
MGMO   Mountain Grove     143.80  35   PKPpre PKPab   14 01 42.1 -0.3
G64A   Maxfield           143.83   2   P      PKPbc   14 01 43.8 +0.9
       baz=357
L49A   Milan              143.85  21   P      PKPbc   14 01 43.6 +0.5
       baz=331
LONY   Lake Ozonia        143.89   9          PKPdf   14 01 44.7 -0.5
LONY   Lake Ozonia        143.89   9   P      PKPdf   14 01 44.7 -0.5
       baz=347
J52A   Paris              143.89  17   P      PKPbc   14 01 43.9 +0.7
       baz=337
G65A   Princeton          143.91   1          PKPbc   14 01 43.6 +0.4
G65A   Princeton          143.91   1   P      PKPbc   14 01 43.8 +0.6
       baz=359
G63A   Kingsbury          143.93   3   P      PKPbc   14 01 44.2 +1.0
       baz=356
SFIN   Lafayette          143.98  27          PKPbc   14 01 43.5  0.0
SFIN   Lafayette          143.98  27   P      PKPbc   14 01 43.5  0.0
       baz=325
H59A   Cadyville          144.00   8   P      PKPbc   14 01 44.2 +0.7
       baz=349
U40A   Yellville          144.01  37          PKPbc   14 01 43.6 -0.2
U40A   Yellville          144.01  37   P      PKPbc   14 01 43.6 -0.1
       baz=313
H58A   Gabriels           144.15   9   P      PKPbc   14 01 44.5 +0.6
       baz=348
N47A   Urbana             144.16  25          PKPbc   14 01 44.0 -0.1
N47A   Urbana             144.16  25   P      PKPbc   14 01 44.2 +0.1
       baz=327,SNR=12
435B   Jarrell            144.18  48          PKPbc   14 01 44.2 -0.2
H60A   Morristown         144.21   7   P      PKPdf   14 01 45.0 -0.8
       baz=350
W39A   Magazine           144.22  39          PKPbc   14 01 44.2 -0.2
W39A   Magazine           144.22  39   P      PKPbc   14 01 44.4  0.0
       baz=310
FVM    French Village     144.22  33   PKIKP  PKPbc   14 01 44.3 -0.1
FVM    French Village     144.22  33          PKPbc   14 01 44.3 -0.1
L50A   Kingsville         144.24  20   P      PKPbc   14 01 44.5 +0.3
       baz=333
K52A   Tillsonburg        144.25  17   P      PKPdf   14 01 45.1 -0.8
       baz=336
H61A   Lyndonville        144.32   6   P      PKPdf   14 01 45.8 -0.2
       baz=352,SNR=6.9
H63A   New Sharon         144.36   4   P      PKPdf   14 01 45.6 -0.4
       baz=355
H62A   Milan              144.36   5   P      PKPdf   14 01 45.5 -0.5
       baz=353
I57A   Carthage           144.37  11   P      PKPdf   14 01 45.7 -0.3
       baz=345
H65A   Eastbrook          144.40   2   P      PKPbc   14 01 45.3 +0.7
       baz=358
H64A   Troy               144.42   3   P      PKPbc   14 01 45.0 +0.2
       baz=356
N48A   Decatur            144.45  24   P      PKPbc   14 01 45.4 +0.4
       baz=328,SNR=14
WVL    Waterville         144.48   3          PKPdf   14 01 45.6 -0.6
MEDO   Medina             144.50  15          PKPbc   14 01 45.4 +0.3
P46A   Rosedale           144.55  27          PKPbc   14 01 45.2 -0.1
J55A   Hilton             144.56  14   P      PKPdf   14 01 45.8 -0.6
       baz=341
NCB    Newcomb            144.58   9          PKPbc   14 01 45.8 +0.5
LBNH   Lisbon             144.62   6   P      PKPdf   14 01 46.5  0.0
       baz=352
N49A   Columbus Grove     144.72  23          PKPbc   14 01 45.9  0.0
N49A   Columbus Grove     144.72  23   P      PKPdf   14 01 46.4 -0.4
       baz=330,SNR=20
M50A   Fremont            144.73  21          PKPab   14 01 45.5 -0.2
M50A   Fremont            144.73  21   P      PKPbc   14 01 46.0 +0.2
       baz=332,SNR=8.1
I58A   Old Forge          144.73  10   P      PKPbc   14 01 45.9 +0.1
       baz=346
FCAR   Ozark Folk Cen     144.76  37          PKPab   14 01 45.6 -0.4
J56A   Wolcott            144.77  13          PKPbc   14 01 45.9  0.0
J56A   Wolcott            144.77  13   P      PKPdf   14 01 46.4 -0.3
       baz=343,SNR=8.7
MIAR   Mount Ida          144.77  40   PKIKP  PKPbc   14 01 46.2  0.0
MIAR   Mount Ida          144.77  40          PKPbc   14 01 46.2  0.0
MIAR   Mount Ida          144.77  40   P      PKPdf   14 01 46.7 -0.4
       baz=310,SNR=31
I59A   Olmsteadville      144.81   9   P      PKPdf   14 01 46.8 -0.1
       baz=348
237A   Washetta, Mont     144.81  45          PKPab   14 01 46.3  0.0
J57A   Williamstown       144.81  11          PKPdf   14 01 46.4 -0.4
J57A   Williamstown       144.81  11   P      PKPdf   14 01 46.7 -0.1
       baz=344,SNR=18
OLIL   Olney              144.83  29          PKPbc   14 01 46.5 +0.3
I60A   Shoreham           144.84   8   P      PKPdf   14 01 47.1 +0.3
       baz=349,SNR=16
I61A   Oroboro, Fairl     144.89   7   P      PKPdf   14 01 47.6 +0.6
       baz=351,SNR=5.3
O48A   Farmland           144.91  25   P      PKPbc   14 01 46.7 +0.2
       baz=328,SNR=23
I63A   Otisfield          144.93   5          PKPdf   14 01 46.7 -0.3
I63A   Otisfield          144.93   5   P      PKPdf   14 01 47.4 +0.4
       baz=354
K54A   Basiliko Farm,     144.96  15   P      PKPdf   14 01 47.1 -0.1
       baz=340,SNR=29
J58A   Remsen             145.00  11          PKPbc   14 01 46.5 -0.2
J58A   Remsen             145.00  11   P      PKPdf   14 01 47.4 +0.2
       baz=346,SNR=9.7
K55A   Perry              145.01  14   P      PKPdf   14 01 47.3 +0.1
       baz=341,SNR=13
J59A   Piesco             145.03  10          PKPbc   14 01 46.4 -0.3
J59A   Piesco             145.03  10   P      PKPdf   14 01 47.5 +0.3
       baz=347,SNR=14
I62A   Tamworth           145.04   5          PKPdf   14 01 47.1 -0.1
I62A   Tamworth           145.04   5   P      PKPbc   14 01 45.7 -1.0
       baz=352
S44A   Carbondale         145.05  32          PKPdf   14 01 47.4  0.0
ERPA   Erie               145.07  17          PKPdf   14 01 47.3 -0.1
ERPA   Erie               145.07  17   P      PKPdf   14 01 47.6 +0.2
       baz=337
WHAR   Wooly Hollow       145.07  38          PKPbc   14 01 46.9 -0.2
```

M51A	**Elyria**	**145.09**	**20**	P	**PKPab**	**14 01 47.0**	**0.0**
	baz=333						
HNH	**Hanover**	**145.10**	**7**		**PKPdf**	**14 01 47.8**	**+0.4**
PBMO	**Poplar Bluff**	**145.10**	**34**		**PKPbc**	**14 01 46.8**	**-0.4**
L53A	**Girard**	**145.14**	**17**	P	**PKPdf**	**14 01 47.6**	**+0.2**
	baz=337,SNR=16						
L54A	**Sinclairville**	**145.15**	**16**	P	**PKPdf**	**14 01 47.6**	**+0.1**
	baz=338,SNR=49						
M52A	**Chesterland**	**145.18**	**19**		**PKPdf**	**14 01 47.6**	**+0.1**
M52A	**Chesterland**	**145.18**	**19**	P	**PKPdf**	**14 01 47.7**	**+0.2**
	baz=335,SNR=23						
W41B	**Gary Mavity, V**	**145.18**	**38**		**PKPbc**	**14 01 46.6**	**-0.8**
W41B	**Gary Mavity, V**	**145.18**	**38**	P	**PKPbc**	**14 01 47.4**	**-0.1**
	baz=313,SNR=18						
WVNY	**West Valley, N**	**145.18**	**15**		**PKPdf**	**14 01 47.5**	**0.0**
LCAR	**Lake Charles**	**145.20**	**36**		**PKPbc**	**14 01 47.4**	**-0.1**
K56A	**Middlesex**	**145.21**	**13**	P	**PKPdf**	**14 01 47.8**	**+0.2**
	baz=342,SNR=11						
BLO	**Bloomington**	**145.22**	**27**	PKIKP	**PKPab**	**14 01 47.6**	**0.0**
BLO	**Bloomington**	**145.22**	**27**		**PKPab**	**14 01 47.6**	**0.0**
ACCN	**Adirondack Com**	**145.24**	**9**		**PKPdf**	**14 01 47.7**	**+0.1**
N50A	**Nevada**	**145.24**	**22**	P	**PKPdf**	**14 01 48.0**	**+0.3**
	baz=331,SNR=44						
X40A	**Basin Creek Fa**	**145.27**	**39**		**PKPab**	**14 01 48.0**	**0.0**
X40A	**Basin Creek Fa**	**145.27**	**39**	P	**PKPab**	**14 01 48.9**	**+1.0**
	baz=311,SNR=7.4						
O49A	**Covington**	**145.29**	**24**		**PKPdf**	**14 01 47.7**	**-0.1**
O49A	**Covington**	**145.29**	**24**	P	**PKPab**	**14 01 48.0**	**+0.2**
	baz=329,SNR=48						
K57A	**Scipio Center**	**145.36**	**12**	P	**PKPab**	**14 01 48.3**	**+0.3**
	baz=343,SNR=14						
UALR	**University of**	**145.38**	**38**		**PKPdf**	**14 01 47.9**	**-0.2**
N51A	**Ashland**	**145.39**	**21**		**PKPbc**	**14 01 48.0**	**0.0**
N51A	**Ashland**	**145.39**	**21**	P	**PKPab**	**14 01 48.2**	**0.0**
	baz=333,SNR=19						
J60A	**Lant Hill Farm**	**145.41**	**8**	P	**PKPab**	**14 01 48.6**	**+0.5**
	baz=349						
J61A	**Chester**	**145.43**	**7**	P	**PKPab**	**14 01 49.2**	**+1.0**
	baz=350,SNR=11						
L55A	**Hinsdale**	**145.43**	**15**	P	**PKPab**	**14 01 48.6**	**+0.2**
	baz=340,SNR=23						
ALLY	**Alegheny Colle**	**145.45**	**18**		**PKPbc**	**14 01 48.1**	**0.0**
P48A	**Milroy**	**145.46**	**26**		**PKPdf**	**14 01 47.9**	**-0.2**
P48A	**Milroy**	**145.46**	**26**	P	**PKPab**	**14 01 48.4**	**-0.1**
	baz=327,SNR=25						
M53A	**WI Miller and**	**145.48**	**18**	P	**PKPab**	**14 01 48.8**	**+0.3**
	baz=336,SNR=53						
K58A	**Earlville**	**145.50**	**11**		**PKPab**	**14 01 48.6**	**+0.1**
K58A	**Earlville**	**145.50**	**11**	P	**PKPab**	**14 01 49.1**	**+0.5**
	baz=345,SNR=12						
PARMO	**Parma**	**145.56**	**33**		**PKPbc**	**14 01 48.6**	**0.0**
O50A	**Cable**	**145.61**	**23**	P	**PKPab**	**14 01 49.3**	**+0.2**
	baz=330,SNR=70						
WLAR	**White Oak Lake**	**145.61**	**41**		**PKPab**	**14 01 49.4**	**+0.2**
J62A	**Henniker**	**145.63**	**6**	P	**PKPab**	**14 01 49.7**	**+0.7**
	baz=352,SNR=7.9						
K59A	**Cooperstown**	**145.64**	**10**	P	**PKPab**	**14 01 49.1**	**+0.1**
	baz=346,SNR=5.8						
USIN	**University of**	**145.65**	**30**		**PKPbc**	**14 01 48.8**	**-0.1**
J63A	**Strafford**	**145.65**	**5**	P	**PKPab**	**14 01 49.6**	**+0.6**
	baz=353						
L56A	**Greenwood**	**145.69**	**14**		**PKPbc**	**14 01 48.9**	**0.0**
L56A	**Greenwood**	**145.69**	**14**	P	**PKPab**	**14 01 49.3**	**0.0**
	baz=341,SNR=21						
P49A	**Miami Univ. Ec**	**145.70**	**25**	P	**PKPab**	**14 01 49.2**	**-0.2**
	baz=328,SNR=40						
N52A	**McGinn's Farm,**	**145.72**	**20**	P	**PKPab**	**14 01 49.4**	**0.0**
	baz=334,SNR=35						
M54A	**Oil Creek Stat**	**145.72**	**17**		**PKPab**	**14 01 49.5**	**+0.1**
M54A	**Oil Creek Stat**	**145.72**	**17**	P	**PKPab**	**14 01 49.5**	**+0.1**
	baz=337,SNR=37						
NATX	**Nacogdoches**	**145.75**	**45**	P	**PKiKP**	**14 01 52.9**	**0.0**
	baz=306						
Q48A	**North Vernon**	**145.77**	**26**	P	**PKPab**	**14 01 49.6**	**0.0**
	baz=326,SNR=29						
ACSO	**Alum Creek Sta**	**145.78**	**22**		**PKPab**	**14 01 49.5**	**-0.1**
ACSO	**Alum Creek Sta**	**145.78**	**22**	P	**PKPab**	**14 01 49.6**	**0.0**
	baz=331,SNR=66						
K60A	**Five Rivers En**	**145.96**	**9**	P	**PKPab**	**14 01 50.7**	**+0.5**
	baz=348,SNR=9.0						
BINY	**Binghamton**	**145.98**	**12**	PKPbc	**PKPab**	**14 01 50.2**	**-0.2**
BINY	**Binghamton**	**145.98**	**12**	P	**PKPab**	**14 01 50.3**	**-0.1**
	baz=344						
L57A	**Andrews Acres**	**145.99**	**13**	P	**PKPab**	**14 01 50.3**	**-0.1**
	baz=342,SNR=19						
O51A	**Pataskala**	**145.99**	**22**	P	**PKPab**	**14 01 50.3**	**-0.2**
	baz=332,SNR=53						
K61A	**Williamstown**	**146.00**	**8**	P	**PKPab**	**14 01 51.1**	**+0.7**
	baz=349						
P50A	**Jamestown**	**146.00**	**24**	P	**PKPbc**	**14 01 50.0**	**+0.1**
	baz=329,SNR=28						
N53A	**Lisbon**	**146.01**	**19**	PKPbc	**PKPab**	**14 01 50.4**	**-0.1**
N53A	**Lisbon**	**146.01**	**19**	P	**PKPab**	**14 01 50.5**	**+0.1**
	baz=335,SNR=22						
M55A	**Ridgway**	**146.01**	**16**	PKPbc	**PKPab**	**14 01 50.3**	**-0.2**
M55A	**Ridgway**	**146.01**	**16**	P	**PKPab**	**14 01 50.3**	**-0.2**
	baz=339,SNR=17						
Q49A	**Aurora**	**146.07**	**25**	P	**PKPbc**	**14 01 50.4**	**+0.3**
	baz=327,SNR=16						
Z41A	**Richland Creek**	**146.08**	**41**	P	**PKPab**	**14 01 51.5**	**+0.5**
	baz=310,SNR=6.4						
WCI	**Wyandotte Cave**	**146.09**	**28**	PKP2	**PKPbc**	**14 01 50.3**	**+0.1**
WCI	**Wyandotte Cave**	**146.09**	**28**	PKPbc	**PKPbc**	**14 01 50.3**	**+0.1**
WCI	**Wyandotte Cave**	**146.09**	**28**	P	**PKPab**	**14 01 50.6**	**-0.3**
	baz=324						
N54A	**Moraine State**	**146.13**	**18**	PKPbc	**PKPbc**	**14 01 50.5**	**+0.3**
N54A	**Moraine State**	**146.13**	**18**	P	**PKPab**	**14 01 50.8**	**-0.2**
	baz=336,SNR=28						
K62A	**Royalston**	**146.14**	**7**	P	**PKPab**	**14 01 51.3**	**+0.4**
	baz=351						
M56A	**Emporium**	**146.15**	**15**	PKPbc	**PKPbc**	**14 01 50.4**	**+0.1**
M56A	**Emporium**	**146.15**	**15**	P	**PKPab**	**14 01 50.8**	**-0.2**
	baz=340,SNR=23						
L58A	**Harry Jones Me**	**146.16**	**12**	P	**PKPab**	**14 01 51.1**	**+0.1**
	baz=344,SNR=18						
L59A	**Walton**	**146.17**	**11**	PKPbc	**PKPbc**	**14 01 50.7**	**+0.3**
L59A	**Walton**	**146.17**	**11**	P	**PKPab**	**14 01 51.1**	**0.0**
	baz=346,SNR=13						
K63A	**Dunstable**	**146.19**	**6**	P	**PKPab**	**14 01 51.3**	**+0.2**
	baz=352						
O52A	**Adamsville**	**146.29**	**21**		**PKPbc**	**14 01 50.6**	**-0.1**
O52A	**Adamsville**	**146.29**	**21**	P	**PKPab**	**14 01 51.4**	**-0.2**
	baz=333,SNR=21						
L61B	**Northampton**	**146.29**	**8**	P	**PKPab**	**14 01 51.1**	**-0.4**
	baz=350						
HRV	**Adam Dziewonsk**	**146.37**	**6**	PKP2	**PKPab**	**14 01 51.6**	**-0.2**
HRV	**Adam Dziewonsk**	**146.37**	**6**		**PKPab**	**14 01 51.6**	**-0.2**
HRV	**Adam Dziewonsk**	**146.37**	**6**	P	**PKPab**	**14 01 51.8**	**0.0**
	baz=352						
O53A	**New Philadelph**	**146.38**	**20**	P	**PKPab**	**14 01 51.5**	**-0.5**
	baz=334,SNR=13						
P51A	**Williamsport**	**146.40**	**23**		**PKPbc**	**14 01 51.0**	**-0.1**
P51A	**Williamsport**	**146.40**	**23**	P	**PKPbc**	**14 01 51.3**	**+0.2**
	baz=330,SNR=24						
L61A	**Hillsdale 1, H**	**146.42**	**9**	P	**PKPab**	**14 01 51.9**	**-0.1**
	baz=348						
X43A	**Marvell**	**146.44**	**37**		**PKPbc**	**14 01 51.0**	**-0.3**
X43A	**Marvell**	**146.44**	**37**	P	**PKPab**	**14 01 51.9**	**-0.5**
	baz=314						
L60A	**Shokan**	**146.51**	**10**	P	**PKPab**	**14 01 52.2**	**-0.2**
	baz=347						
R49A	**Shelbyville**	**146.54**	**26**		**PKPbc**	**14 01 51.6**	**0.0**
R49A	**Shelbyville**	**146.54**	**26**	P	**PKPab**	**14 01 52.0**	**-0.6**
	baz=326,SNR=24						
M57A	**Sunshine Farm,**	**146.55**	**14**	PKPbc	**PKPbc**	**14 01 51.7**	**+0.3**
M57A	**Sunshine Farm,**	**146.55**	**14**	P	**PKPab**	**14 01 52.3**	**-0.3**
	baz=342,SNR=24						
Q50A	**Georgetown**	**146.58**	**24**	P	**PKPbc**	**14 01 51.9**	**+0.3**
	baz=328,SNR=5.5						
N55A	**Marion Center**	**146.59**	**17**	P	**PKPbc**	**14 01 52.0**	**+0.4**
	baz=338,SNR=9.2						
P52A	**Corning**	**146.61**	**22**	P	**PKPbc**	**14 01 51.9**	**+0.2**
	baz=332,SNR=22						
N56A	**West Decatur**	**146.65**	**16**	P	**PKPab**	**14 01 52.4**	**-0.6**
	baz=339,SNR=16						
M58A	**Price's Panora**	**146.67**	**13**	P	**PKPab**	**14 01 52.5**	**-0.5**
	baz=343,SNR=22						
Q51A	**Peebles**	**146.68**	**24**		**PKPbc**	**14 01 51.1**	**-0.8**
Q51A	**Peebles**	**146.68**	**24**	P	**PKPbc**	**14 01 52.3**	**+0.4**
	baz=330,SNR=27						
T47A	**Sharon Grove**	**146.69**	**30**		**PKPbc**	**14 01 51.9**	**0.0**
O54A	**Avella**	**146.72**	**19**	PKPbc	**PKPbc**	**14 01 52.6**	**+0.6**
O54A	**Avella**	**146.72**	**19**	P	**PKPab**	**14 01 52.8**	**-0.4**
	baz=335,SNR=21						
M59A	**Waymart**	**146.73**	**12**	P	**PKPab**	**14 01 52.9**	**-0.4**
	baz=345,SNR=12						
KSCT	**Kent School, K**	**146.89**	**9**		**PKPbc**	**14 01 53.0**	**+0.6**
S49A	**Springfield**	**146.91**	**27**	P	**PKPbc**	**14 01 52.9**	**+0.4**
	baz=326,SNR=17						
R50A	**Paris**	**146.91**	**25**		**PKPbc**	**14 01 52.4**	**-0.2**
R50A	**Paris**	**146.91**	**25**	P	**PKPbc**	**14 01 52.8**	**+0.2**
	baz=327,SNR=15						
W45A	**Hickory Valley**	**146.97**	**35**		**PKPbc**	**14 01 52.7**	**-0.2**
WVT	**Waverly**	**146.98**	**32**	PKP2	**PKPbc**	**14 01 52.9**	**0.0**
WVT	**Waverly**	**146.98**	**32**		**PKPbc**	**14 01 52.9**	**0.0**
WVT	**Waverly**	**146.98**	**32**	P	**PKPbc**	**14 01 53.3**	**+0.5**
	baz=320						
L63A	**North Scituate**	**147.00**	**6**	P	**PKPab**	**14 01 53.5**	**-0.8**
	baz=352						
P53A	**Whipple**	**147.01**	**21**		**PKPbc**	**14 01 53.0**	**+0.2**
P53A	**Whipple**	**147.01**	**21**	P	**PKPbc**	**14 01 53.5**	**+0.7**
	baz=333,SNR=31						
SSPA	**Standing Stone**	**147.02**	**15**		**PKPbc**	**14 01 52.9**	**+0.1**
SSPA	**Standing Stone**	**147.02**	**15**	P	**PKPbc**	**14 01 53.4**	**+0.6**
	baz=340						
O55A	**Ligonier**	**147.03**	**17**	P	**PKPbc**	**14 01 53.5**	**+0.6**
	baz=337,SNR=7.0						
M60A	**Port Jervis**	**147.09**	**11**	P	**PKPab**	**14 01 53.9**	**-0.8**
	baz=346,SNR=11						
N58A	**Sunbury**	**147.12**	**14**		**PKPbc**	**14 01 53.3**	**+0.2**
N58A	**Sunbury**	**147.12**	**14**	P	**PKPbc**	**14 01 53.7**	**+0.6**
	baz=342,SNR=23						
Q52A	**Bidwell**	**147.15**	**22**	P	**PKPbc**	**14 01 53.6**	**+0.4**
	baz=331,SNR=16						
O56A	**Blue Knob Stat**	**147.18**	**16**		**PKPbc**	**14 01 53.2**	**-0.1**
O56A	**Blue Knob Stat**	**147.18**	**16**	P	**PKPbc**	**14 01 53.9**	**+0.6**
	baz=339,SNR=12						
R51A	**Hillsboro**	**147.21**	**25**	P	**PKPab**	**14 01 54.6**	**-0.6**
	baz=329,SNR=10						
P54A	**Burton**	**147.21**	**19**	P	**PKPbc**	**14 01 54.1**	**+0.7**
	baz=335,SNR=26						
M61A	**Granite Spring**	**147.25**	**9**	P	**PKPbc**	**14 01 54.2**	**+0.8**
	baz=348,SNR=5.0						
N59A	**State Game Lan**	**147.26**	**12**		**PKPbc**	**14 01 53.8**	**+0.3**
N59A	**State Game Lan**	**147.26**	**12**	P	**PKPbc**	**14 01 54.4**	**+0.9**
	baz=344,SNR=18						
OXF	**Oxford**	**147.31**	**36**	PKP2	**PKPbc**	**14 01 53.8**	**0.0**
OXF	**Oxford**	**147.31**	**36**		**PKPbc**	**14 01 53.8**	**0.0**
OXF	**Oxford**	**147.31**	**36**	P	**PKPbc**	**14 01 54.3**	**+0.5**
	baz=316						
ODNJ	**Ogdensburg**	**147.33**	**11**		**PKPbc**	**14 01 54.1**	**+0.5**
T49A	**Edmonton**	**147.35**	**28**		**PKPbc**	**14 01 53.9**	**0.0**
T49A	**Edmonton**	**147.35**	**28**	P	**PKPbc**	**14 01 54.2**	**+0.4**
	baz=324,SNR=13						
M64A	**Tiverton**	**147.35**	**6**	P	**PKPbc**	**14 01 54.4**	**+0.7**
	baz=352						
MCWV	**Mont Chateau**	**147.37**	**19**		**PKPbc**	**14 01 54.1**	**+0.3**
MCWV	**Mont Chateau**	**147.37**	**19**	P	**PKPbc**	**14 01 54.6**	**+0.8**
	baz=336						
S50A	**Richmond**	**147.39**	**26**	P	**PKPbc**	**14 01 54.2**	**+0.3**
	baz=327,SNR=13						
N60A	**Cedar Hill Far**	**147.44**	**11**	P	**PKPbc**	**14 01 54.7**	**+0.8**
	baz=345,SNR=9.2						
O57A	**Amberson**	**147.49**	**15**	P	**PKPbc**	**14 01 54.7**	**+0.6**
	baz=340,SNR=8.0						
P55A	**Reedsville**	**147.51**	**19**	P	**PKPbc**	**14 01 54.8**	**+0.5**
	baz=336,SNR=14						
Q53A	**Leroy**	**147.52**	**21**	P	**PKPbc**	**14 01 54.9**	**+0.7**
	baz=332,SNR=10						
PAL	**Palisades**	**147.52**	**10**	PKP2	**PKPbc**	**14 01 54.7**	**+0.5**
PAL	**Palisades**	**147.52**	**10**		**PKPbc**	**14 01 54.7**	**+0.5**
PAL	**Palisades**	**147.52**	**10**	P	**PKPbc**	**14 01 54.9**	**+0.8**
	baz=347,SNR=9.3						
R52A	**Catlettsburg**	**147.55**	**23**	P	**PKPbc**	**14 01 54.6**	**+0.3**
	baz=330,SNR=5.8						
LUPA	**Lehigh Univers**	**147.65**	**12**		**PKPbc**	**14 01 54.2**	**-0.3**
Q54A	**Coxs Mills**	**147.65**	**20**		**PKPbc**	**14 01 54.4**	**-0.2**
Q54A	**Coxs Mills**	**147.65**	**20**	P	**PKPbc**	**14 01 55.2**	**+0.6**
	baz=334,SNR=17						
N61A	**South Mountain**	**147.70**	**10**	P	**PKPbc**	**14 01 55.5**	**+0.9**
	baz=346						
U49A	**Red Boiling Sp**	**147.71**	**29**		**PKPbc**	**14 01 54.1**	**-0.7**
PLAL	**Pickwick Lake**	**147.72**	**34**		**PKPbc**	**14 01 54.5**	**-0.4**
BRNJ	**Basking Ridge**	**147.72**	**11**	PKPbc	**PKiKP**	**14 01 55.7**	**-1.0**
T50A	**Nancy**	**147.74**	**27**	P	**PKPbc**	**14 01 55.2**	**+0.3**
	baz=326,SNR=21						
O59A	**Robesonia**	**147.75**	**13**	P	**PKPbc**	**14 01 55.4**	**+0.6**
	baz=343,SNR=7.9						
O58A	**Lewisberry**	**147.75**	**14**	P	**PKPbc**	**14 01 55.5**	**+0.6**
	baz=341,SNR=9.8						
S51A	**Beattyville**	**147.77**	**25**	P	**PKPbc**	**14 01 55.1**	**+0.1**
	baz=328						
CLTN	**Cedars of Leba**	**147.78**	**30**		**PKPbc**	**14 01 54.6**	**-0.4**
V48A	**Smith Brothers**	**147.80**	**31**		**PKPbc**	**14 01 54.9**	**-0.2**
P56A	**Dayton Farm, R**	**147.81**	**17**	P	**PKPbc**	**14 01 55.6**	**+0.6**
	baz=338,SNR=17						
R53A	**Hurricane**	**147.82**	**22**		**PKPbc**	**14 01 54.8**	**-0.3**
R53A	**Hurricane**	**147.82**	**22**	P	**PKPbc**	**14 01 55.5**	**+0.4**
	baz=331,SNR=12						
Q55A	**Buckhannon**	**147.89**	**19**	P	**PKPbc**	**14 01 55.8**	**+0.5**
	baz=335,SNR=15						
O60A	**Telford**	**147.91**	**12**	P	**PKPbc**	**14 01 55.7**	**+0.5**
	baz=344						
S52A	**Salyersville**	**147.95**	**24**	P	**PKPbc**	**14 01 56.0**	**+0.5**
	baz=329,SNR=17						
MVL	**Millersville**	**148.00**	**14**		**PKPbc**	**14 01 55.8**	**+0.3**
P57A	**Homestead Farm**	**148.07**	**16**		**PKPbc**	**14 01 56.0**	**+0.3**
P57A	**Homestead Farm**	**148.07**	**16**	P	**PKPbc**	**14 01 56.4**	**+0.7**
	baz=339,SNR=9.4						
TLIG	**Tlapa**	**148.15**	**71**		**PKiKP**	**14 01 58.5**	**+0.1**
T51A	**Gray**	**148.18**	**26**	P	**PKPbc**	**14 01 56.5**	**+0.4**
	baz=327,SNR=11						
P58A	**Pank, Wackersv**	**148.25**	**15**	P	**PKPbc**	**14 01 57.0**	**+0.8**
	baz=340,SNR=8.2						
R54A	**Victor**	**148.31**	**21**	P	**PKPbc**	**14 01 56.8**	**+0.4**
	baz=333,SNR=9.1						
S53A	**Williamson**	**148.32**	**23**	P	**PKPbc**	**14 01 56.9**	**+0.4**
	baz=331,SNR=5.6						
P60A	**Greenville**	**148.34**	**13**		**PKPbc**	**14 01 56.6**	**+0.3**
P60A	**Greenville**	**148.34**	**13**	P	**PKPbc**	**14 01 57.0**	**+0.6**
	baz=344						
P59A	**Jarrettsville**	**148.35**	**14**	P	**PKPbc**	**14 01 57.1**	**+0.7**
	baz=342,SNR=7.3						
Q57A	**Strasburg**	**148.37**	**17**	P	**PKPbc**	**14 01 57.0**	**+0.5**
	baz=338						
SDMD	**Soldier's Deli**	**148.44**	**15**		**PKPbc**	**14 01 56.9**	**+0.2**
T52A	**Hallie**	**148.47**	**25**		**PKPbc**	**14 01 57.4**	**+0.4**
T52A	**Hallie**	**148.47**	**25**	P	**PKPbc**	**14 01 57.3**	**+0.4**
	baz=329,SNR=8.3						
R55A	**Marlinton**	**148.52**	**20**		**PKPbc**	**14 01 57.2**	**+0.2**
R55A	**Marlinton**	**148.52**	**20**	P	**PKPbc**	**14 01 57.7**	**+0.7**
	baz=335						
S54A	**Dingess, Beckl**	**148.53**	**22**		**PKPbc**	**14 01 57.2**	**+0.1**
S54A	**Dingess, Beckl**	**148.53**	**22**	P	**PKPbc**	**14 01 57.7**	**+0.7**
	baz=332,SNR=10						
LVC	**Limon Verde**	**148.54**	**177**	PKP2	**PKiKP**	**14 01 59.9**	**+0.5**
LVC	**Limon Verde**	**148.54**	**177**		**PKiKP**	**14 01 59.9**	**+0.5**
R56A	**Bull Pasture M**	**148.65**	**19**	P	**PKPbc**	**14 01 57.8**	**+0.5**
	baz=336,SNR=6.4						
Q58A	**Fox Den Farm,**	**148.66**	**16**	P	**PKPbc**	**14 01 57.7**	**+0.5**
	baz=339,SNR=13						
SWET	**Sewanee**	**148.66**	**31**		**PKPbc**	**14 01 57.1**	**-0.4**
X48A	**Hartselle**	**148.67**	**33**		**PKPbc**	**14 01 56.8**	**-0.6**
TZTN	**Tazewell**	**148.71**	**26**		**PKPbc**	**14 01 57.7**	**+0.3**
TZTN	**Tazewell**	**148.71**	**26**	P	**PKPbc**	**14 01 57.8**	**+0.3**
	baz=327						
T53A	**Wise**	**148.76**	**24**	P	**PKiKP**	**14 01 58.5**	**-0.6**
	baz=329,SNR=6.6						
S55A	**Lewisburg**	**148.85**	**21**	P	**PKPbc**	**14 01 58.1**	**+0.2**
	baz=334						
V51A	**Loudon**	**148.96**	**28**		**PKPbc**	**14 01 57.9**	**-0.2**
V51A	**Loudon**	**148.96**	**28**	P	**PKiKP**	**14 01 58.8**	**-0.6**
	baz=325,SNR=9.8						
W50A	**Signal Mountai**	**148.99**	**30**		**PKPbc**	**14 01 58.0**	**-0.2**
W50A	**Signal Mountai**	**148.99**	**30**	P	**PKPbc**	**14 01 58.8**	**+0.5**
	baz=323,SNR=10						
R57A	**Stanardsville**	**149.02**	**18**	P	**PKiKP**	**14 01 59.2**	**-0.2**
	baz=337,SNR=7.6						
T54A	**Tazewell**	**149.08**	**23**	P	**PKiKP**	**14 01 59.1**	**-0.6**
	baz=331,SNR=12						
BDFB	**Brasilia**	**149.15**	**218**	PKPbc	**PKiKP**	**14 02 01.1**	**+0.6**
	comp=Z,18nm,0.7s,baz=145,slow=3.4,SNR=26						
BDFB	**Brasilia**	**149.15**	**218**	PKPbc	**PKiKP**	**14 02 00.8**	**+0.3**
CPCT	**Cooper Cave**	**149.17**	**29**		**PKPbc**	**14 01 58.5**	**-0.2**
R58A	**Rapidan**	**149.17**	**17**	P	**PKiKP**	**14 01 59.4**	**-0.3**
	baz=338,SNR=9.8						
S56A	**Natural Bridge**	**149.26**	**20**	P	**PKPbc**	**14 01 59.2**	**+0.4**
	baz=335,SNR=5.8						
T55A	**Pulaski**	**149.33**	**22**	P	**PKPbc**	**14 01 59.6**	**+0.5**
	baz=332,SNR=7.3						
TKL	**Tuckaleechee C**	**149.35**	**27**	PKP2	**PKPbc**	**14 01 59.5**	**+0.4**
TKL	**Tuckaleechee C**	**149.35**	**27**		**PKPbc**	**14 01 59.5**	**+0.4**
FPAL	**Fort Paine**	**149.36**	**31**		**PKPbc**	**14 01 58.9**	**-0.3**
BLA	**Blacksburg**	**149.38**	**21**	PKP2	**PKPbc**	**14 01 59.2**	**0.0**
BLA	**Blacksburg**	**149.38**	**21**		**PKPbc**	**14 01 59.2**	**0.0**
BLA	**Blacksburg**	**149.38**	**21**	P	**PKPbc**	**14 01 59.4**	**+0.2**
	baz=333						
S57A	**Dark Hollow, R**	**149.38**	**19**		**PKPbc**	**14 01 59.3**	**+0.2**
S57A	**Dark Hollow, R**	**149.38**	**19**	P	**PKPbc**	**14 01 59.0**	**-0.1**
	baz=336						
U54A	**Nelsons Funny**	**149.45**	**24**		**PKPbc**	**14 01 59.5**	**+0.1**
U54A	**Nelsons Funny**	**149.45**	**24**	P	**PKPbc**	**14 01 59.9**	**+0.5**
	baz=330						
Y49A	**Blount Mountai**	**149.47**	**33**		**PKPbc**	**14 01 59.7**	**+0.2**
R58B	**Mineral**	**149.52**	**17**		**PKPbc**	**14 01 59.8**	**+0.3**
R58B	**Mineral**	**149.52**	**17**	P	**PKiKP**	**14 02 00.2**	**-0.2**
	baz=338,SNR=6.4						
T56A	**Rocky Mt**	**149.68**	**21**	P	**PKiKP**	**14 02 00.5**	**-0.4**
	baz=334,SNR=9.7						
X51A	**Calhoun**	**149.72**	**30**		**PKPbc**	**14 02 00.2**	**+0.2**
X51A	**Calhoun**	**149.72**	**30**	P	**PKiKP**	**14 02 00.7**	**-0.3**
	baz=323,SNR=7.3						
W52A	**Murphy**	**149.74**	**28**		**PKPbc**	**14 02 00.2**	**+0.1**
W52A	**Murphy**	**149.74**	**28**	P	**PKiKP**	**14 02 01.1**	**0.0**
	baz=325,SNR=11						
LRAL	**Lakeview Retre**	**149.76**	**35**		**PKPbc**	**14 02 00.6**	**+0.4**
LRAL	**Lakeview Retre**	**149.76**	**35**	P	**PKiKP**	**14 02 00.8**	**-0.4**
	baz=318						
V53A	**Saluda**	**149.76**	**26**		**PKiKP**	**14 02 00.8**	**-0.3**
V53A	**Saluda**	**149.76**	**26**	P	**PKiKP**	**14 02 01.1**	**-0.1**
	baz=328,SNR=16						
U55A	**TA2, Sparta**	**149.77**	**23**	P	**PKiKP**	**14 02 00.8**	**-0.3**
	baz=332,SNR=10						
S58A	**Poland Farm, P**	**149.79**	**18**		**PKiKP**	**14 02 00.7**	**-0.3**
S58A	**Poland Farm, P**	**149.79**	**18**	P	**PKiKP**	**14 02 01.0**	**-0.1**
	baz=338,SNR=8.1						
S59A	**Mechanicsville**	**149.87**	**16**	P	**PKiKP**	**14 02 01.4**	**+0.2**
	baz=339,SNR=5.9						
T57A	**Hurt**	**149.97**	**20**		**PKPbc**	**14 02 00.9**	**+0.3**
T57A	**Hurt**	**149.97**	**20**	P	**PKiKP**	**14 02 01.2**	**-0.2**
	baz=335						
V54A	**Nebo**	**150.04**	**25**	P	**PKiKP**	**14 02 01.5**	**-0.1**
	baz=329,SNR=6.9						
U56A	**King**	**150.16**	**22**		**PKPbc**	**14 02 01.2**	**+0.1**
U56A	**King**	**150.16**	**22**	P	**PKiKP**	**14 02 01.6**	**-0.3**
	baz=333						
Z50A	**Ashland**	**150.19**	**33**		**PKPbc**	**14 02 00.5**	**-0.8**
Z50A	**Ashland**	**150.19**	**33**	P	**PKiKP**	**14 02 01.8**	**-0.2**
	baz=320,SNR=11						
T58A	**Grand View Acr**	**150.26**	**19**	P	**PKiKP**	**14 02 02.0**	**-0.1**
	baz=336,SNR=6.2						
V55A	**Taylorsville**	**150.28**	**24**		**PKPbc**	**14 02 01.1**	**-0.3**
V55A	**Taylorsville**	**150.28**	**24**	P	**PKiKP**	**14 02 01.8**	**-0.3**
	baz=331						
BG3	**Lake Jocassee**	**150.28**	**27**		**PKiKP**	**14 02 01.9**	**-0.3**
U57A	**Blanch**	**150.46**	**20**	P	**PKiKP**	**14 02 02.5**	**0.0**
	baz=335,SNR=7.6						
X53A	**Estanollee**	**150.52**	**28**	P	**PKiKP**	**14 02 03.1**	**+0.4**
	baz=326,SNR=7.2						
W54A	**Cherokee Point**	**150.53**	**26**	P	**PKiKP**	**14 02 02.8**	**+0.1**
	baz=328						
T59A	**Double "B" Far**	**150.54**	**17**		**PKiKP**	**14 02 02.4**	**-0.2**
T59A	**Double "B" Far**	**150.54**	**17**	P	**PKiKP**	**14 02 03.0**	**+0.4**
	baz=338,SNR=12						
V56A	**Mocksville**	**150.59**	**23**	P	**PKiKP**	**14 02 02.7**	**-0.1**
	baz=332,SNR=5.5						
T60A	**Surry**	**150.61**	**16**	P	**PKiKP**	**14 02 03.6**	**+0.8**
	baz=340						
Y52A	**Lilburn**	**150.67**	**30**		**PKiKP**	**14 02 03.2**	**+0.2**
Y52A	**Lilburn**	**150.67**	**30**	P	**PKiKP**	**14 02 03.7**	**+0.7**
	baz=324,SNR=12						
U58A	**Oxford**	**150.76**	**19**	P	**PKiKP**	**14 02 03.3**	**+0.2**
	baz=336,SNR=7.6						
V57A	**Coltrane Farms**	**150.79**	**22**	P	**PKiKP**	**14 02 03.0**	**-0.1**
	baz=333,SNR=9.0						
KMSC	**Kings Mountain**	**150.84**	**25**		**PKiKP**	**14 02 03.2**	**-0.1**
KMSC	**Kings Mountain**	**150.84**	**25**	P	**PKiKP**	**14 02 03.4**	**+0.1**
	baz=330,SNR=9.0						
X54A	**Belton**	**150.90**	**27**	P	**PKiKP**	**14 02 03.7**	**+0.3**
	baz=328,SNR=8.2						
PAULI	**Pauline**	**150.91**	**26**		**PKiKP**	**14 02 03.3**	**-0.2**
250A	**Grady**	**150.96**	**35**		**PKiKP**	**14 02 03.6**	**0.0**
U59A	**Littleton**	**151.04**	**18**		**PKiKP**	**14 02 03.5**	**-0.2**
U59A	**Littleton**	**151.04**	**18**	P	**PKiKP**	**14 02 03.9**	**+0.3**
	baz=338						
V58A	**Windy Hill, Pi**	**151.11**	**21**		**PKiKP**	**14 02 03.6**	**-0.2**
V58A	**Windy Hill, Pi**	**151.11**	**21**	P	**PKiKP**	**14 02 04.0**	**+0.2**
	baz=335						
U60A	**Pendleton**	**151.12**	**17**	P	**PKiKP**	**14 02 04.4**	**+0.6**
	baz=339						
W56A	**Indian Trail**	**151.15**	**24**	P	**PKiKP**	**14 02 04.0**	**+0.1**
	baz=331						
HODGE	**Hodges**	**151.22**	**27**		**PKiKP**	**14 02 04.1**	**0.0**
X55A	**Gracelyn & Ava**	**151.29**	**26**	P	**PKiKP**	**14 02 04.6**	**+0.3**
	baz=329,SNR=7.8						
PB11	**IPOC Station P**	**151.32**	**175**	PKPbc	**PKiKP**	**14 02 05.5**	**+0.6**
GOGA	**Godfrey**	**151.33**	**30**	PKIKP	**PKPbc**	**14 02 03.9**	**0.0**
GOGA	**Godfrey**	**151.33**	**30**		**PKPbc**	**14 02 03.9**	**0.0**
GOGA	**Godfrey**	**151.33**	**30**	P	**PKiKP**	**14 02 04.8**	**+0.5**
	baz=324,SNR=7.0						
W57A	**Gilead**	**151.36**	**23**		**PKiKP**	**14 02 04.2**	**-0.2**
W57A	**Gilead**	**151.36**	**23**	P	**PKiKP**	**14 02 04.7**	**+0.3**
	baz=332,SNR=5.8						
V59A	**Middlesex**	**151.43**	**19**	P	**PKiKP**	**14 02 04.9**	**+0.4**
	baz=336						
X56A	**White Oak**	**151.53**	**25**	P	**PKiKP**	**14 02 05.1**	**+0.4**
	baz=330,SNR=6.7						
JSC	**Jenkinsville**	**151.61**	**25**	PKIKP	**PKiKP**	**14 02 05.1**	**+0.2**
JSC	**Jenkinsville**	**151.61**	**25**		**PKiKP**	**14 02 05.1**	**+0.2**
BIRD	**Birdtown, Kers**	**151.63**	**24**		**PKiKP**	**14 02 05.0**	**+0.1**
Y55A	**Saluda**	**151.65**	**27**	P	**PKiKP**	**14 02 05.4**	**+0.4**
	baz=328,SNR=5.5						
V60A	**Jim Taylor Roa**	**151.74**	**18**		**PKiKP**	**14 02 05.1**	**-0.1**
V60A	**Jim Taylor Roa**	**151.74**	**18**	P	**PKiKP**	**14 02 05.7**	**+0.6**
	baz=338						
W58A	**Raeford**	**151.76**	**22**	P	**PKiKP**	**14 02 05.1**	**-0.1**
	baz=334						
V61A	**Roper**	**151.92**	**17**	P	**PKiKP**	**14 02 05.9**	**+0.4**
	baz=340						
352A	**Blakely**	**152.08**	**34**		**PKiKP**	**14 02 06.4**	**+0.4**
X58A	**Rowland**	**152.14**	**22**		**PKiKP**	**14 02 05.9**	**-0.1**
X58A	**Rowland**	**152.14**	**22**	P	**PKiKP**	**14 02 06.6**	**+0.6**
	baz=333						
W60A	**Pink Hill**	**152.26**	**19**	P	**PKiKP**	**14 02 06.6**	**+0.4**
	baz=337						
X60A	**Albert Glenn T**	**152.60**	**20**	P	**PKiKP**	**14 02 07.5**	**+0.6**
	baz=336						
Z57A	**Bowman**	**152.69**	**26**	P	**PKiKP**	**14 02 08.1**	**+1.0**
	baz=329						
TIGA	**Tifton**	**152.84**	**32**		**PKiKP**	**14 02 08.0**	**+0.5**
TIGA					**PKPab**	**14 02 18.3**	**-0.2**
TIGA	**Tifton**	**152.84**	**32**	P	**PKiKP**	**14 02 08.5**	**+1.0**
	baz=322						
SAML	**Samuel**	**161.79**	**192**	PKP2	**PKPab**	**14 02 58.1**	**+0.8**
SAML	**Samuel**	**161.79**	**192**		**PKPab**	**14 02 58.1**	**+0.8**
SDV	**Santo Domingo**	**176.40**	**91**		**PKPab**	**14 04 04.2**	**+1.5**

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*IDC **09** 13:52:38.4±1.1, 17°.18N×119°.57E, h0^{km}, mb3.6/6, mb1 3.7/7, mb1mx3.4/51, mbtmp3.5/7, Error ellipse: s-maj=41.8km s-min=20.4km az=65.0*

ISC 09 13:52:42.6±1.2**, 17°.2N**±0°.2×**119°.5E**±0°.2**, h30**^{km}**, n7,** σ**1**^{s}**.34**/7**, mb3.4**/6**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**19.62**	**277**	P	**Pn**	**13 57 10.2**	**-0.1**
	baz=105,slow=11,SNR=3.5						
KSRS	**Korea Array**	**21.53**	**19**	P	**P**	**13 57 29.7**	**+0.4**
	1.2nm,0.8s,baz=209,slow=12,SNR=3.6						
WRA	**Warramunga Arr**	**39.65**	**158**	P	**P**	**14 00 10.4**	**-1.5**
	0.4nm,0.6s,baz=342,slow=9.0,SNR=3.4						
MKAR	**Makanchi Array**	**42.59**	**322**	P	**P**	**14 00 36.0**	**+0.1**
	0.6nm,0.9s,baz=116,slow=9.9,SNR=3.5						
ASAR	**Alice Springs**	**42.95**	**160**	P	**P**	**14 00 40.5**	**+1.5**
	0.4nm,0.5s,baz=344,slow=6.9,SNR=4.6						
ZALV	**Zalesovo Beam**	**45.48**	**332**	P	**P**	**14 00 57.6**	**-1.3**
	1.1nm,0.7s,baz=126,slow=7.3,SNR=4.1						
KURBB	**Kurchatov Arra**	**46.70**	**325**	P	**P**	**14 01 09.4**	**+0.8**
	2.3nm,0.9s,baz=122,slow=8.4,SNR=12						

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*SJA **09** 13:53:20.6±0.7, 23°.11S×66°.74W, h244^{km}±6^{km}, ML3.5, MW3.4*

*VAO **09** 13:53:21.2±0.5, 23°.20S×67°.49W, h298^{km}±8^{km}, mb3.8*

*NEIC **09** 13:53:21.7±1.5, 23°.11S±0°.05×66°.7W±0°.2, h219^{km}±16^{km}, mb4.4/3, Error ellipse: s-maj=23.7km s-min=6.6km*

az=89.0

*GUC **09** 13:53:23.9±0.5, 23°.03S×67°.06W, h245^{km}±8^{km}, ML4.1*

ISC 09 13:53:21.5±0.7, 23°.12S±0°.05×66°.84W±0°.04, h235^{km}±6^{km}, n57, σ1.^{s}48/78, 12C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HJA	**Humahuaca**	1.32	94	*i*P	**Pn**	**13 53 57.3**	**-0.2**
HJA				*e*S	**S**	**13 54 24.6**	**-0.9**
YJA	**Yavi**	1.54	53	*i*P	**Pn**	**13 53 59.0**	**-0.3**
YJA				*e*S	**S**	**13 54 28.6**	**-0.2**
AZAP	**Zapla**	1.97	124	*i*P	**Pn**	**13 54 02.3**	**-0.3**
AZAP				*e*S	**S**	**13 54 33.9**	**-1.0**
LVC	**Limon Verde**	1.97	284	⇓*i*P	**Pn**	**13 54 03.7**	**+0.8**
LVC				*i*S	**S**	**13 54 33.8**	**-1.3**
LVC	**Limon Verde**	1.97	284		**Pn**	**13 54 03.6**	**+0.8**
LVC	**Limon Verde**	1.97	284	*e*P	**Pn**	**13 54 03.9**	**+1.1**
LVC	**Limon Verde**	1.97	284	*i*P	**Pn**	**13 54 03.7**	**+0.8**
PB15	**IPOC Station P**	2.42	267	⇑*i*P	**Pn**	**13 54 08.3**	**+1.3**
PB15				*i*S	**S**	**13 54 42.2**	**-0.5**
PB15				IAML		13 54 48.7	
	comp=E,1µm,0.3s						
PB15	**IPOC Station P**	2.42	267	*i*P	**Pn**	**13 54 08.3**	**+1.3**
PB15				*e*S	**S**	**13 54 43.2**	**+0.5**
PB06	**IPOC Station P**	2.55	279	*i*P	**Pn**	**13 54 09.3**	**+1.0**
PB06				*i*S	**S**	**13 54 44.1**	**-1.0**
PB06				IAML		13 54 48.5	
	comp=E,192nm,0.2s						
PB06	**IPOC Station P**	2.55	279	*i*P	**Pn**	**13 54 09.4**	**+1.1**
PB06				*e*S	**S**	**13 54 45.3**	**+0.2**
PB06				IAML		13 54 48.4	
	comp=Z,88nm,0.3s						
PB09	**IPOC Station P**	2.58	300	⇑*i*P	**Pn**	**13 54 10.1**	**+1.3**
PB09				*i*S	**S**	**13 54 45.3**	**-0.4**
PB09	**IPOC Station P**	2.58	300	*i*P	**Pn**	**13 54 10.1**	**+1.3**
PB09				*e*S	**S**	**13 54 45.8**	**+0.1**
PB09				IAML		13 54 46.5	
	comp=Z,131nm,0.7s						
PB03	**IPOC Station P**	2.89	291	⇑*i*P	**Pn**	**13 54 12.8**	**+0.7**
PB03				*i*S	**S**	**13 54 49.7**	**-2.0**
PB03				IAML		13 54 51.9	
	comp=E,234nm,0.3s						
PB05	**IPOC Station P**	3.11	274	⇑*i*P	**Pn**	**13 54 15.3**	**+0.9**
PB05				*i*S	**S**	**13 54 54.5**	**-1.4**
PB05				IAML		13 54 57.7	
	comp=N,134nm,0.3s						
PB05	**IPOC Station P**	3.11	274	*i*P	**Pn**	**13 54 15.3**	**+0.9**
PB05				IAML		13 54 59.4	
	comp=Z,59nm,0.4s						
PB07	**IPOC Station P**	3.14	296	⇑*i*P	**Pn**	**13 54 15.5**	**+0.7**
PB07				*i*S	**S**	**13 54 54.4**	**-2.3**
PB07				IAML		13 54 57.8	
	comp=E,346nm,0.3s						
PB04	**IPOC Station P**	3.15	284	⇑*i*P	**Pn**	**13 54 15.8**	**+0.9**
PB04				*i*S	**S**	**13 54 54.9**	**-2.0**
PB04				IAML		13 54 58.0	
	comp=N,269nm,0.5s						
PB04	**IPOC Station P**	3.15	284		**Pn**	**13 54 15.7**	**+0.7**
PB04	**IPOC Station P**	3.15	284	*i*P	**Pn**	**13 54 16.0**	**+1.1**
PB01	**IPOC Station P**	3.21	310	⇑*i*P	**Pn**	**13 54 16.0**	**+0.5**
PB01				*i*S	**S**	**13 54 55.6**	**-2.3**
PB01				IAML		13 54 58.1	
	comp=E,188nm,0.2s						
PB01	**IPOC Station P**	3.21	310		**Pn**	**13 54 15.9**	**+0.4**
GO02	**Mina Guanaco**	3.23	230	⇑*i*P	**Pn**	**13 54 17.5**	**+1.5**
GO02				*i*S	**S**	**13 54 59.4**	**+0.6**
GO02	**Mina Guanaco**	3.23	230		**Pn**	**13 54 17.4**	**+1.5**
PB02	**IPOC Station P**	3.35	302	⇑*i*P	**Pn**	**13 54 17.6**	**+0.5**
PB02				*i*S	**S**	**13 54 58.2**	**-2.7**
PB10	**IPOC Station P**	3.43	263	⇑*i*P	**Pn**	**13 54 19.2**	**+1.3**
PB10				*i*S	**S**	**13 55 01.2**	**-1.3**
PB10				IAML		13 55 03.0	
	comp=E,115nm,0.3s						
PB10	**IPOC Station P**	3.43	263		**Pn**	**13 54 19.1**	**+1.1**
PB10	**IPOC Station P**	3.43	263	*i*P	**Pn**	**13 54 19.3**	**+1.3**
PB10				IAML		13 55 04.9	
	comp=Z,42nm,0.9s						
PB08	**IPOC Station P**	3.66	324	⇑*i*P	**Pn**	**13 54 22.2**	**+1.2**
PB08				*i*S	**S**	**13 55 07.0**	**-0.9**
PATCX	**Punta Patache**	3.83	306	⇑*i*P	**Pn**	**13 54 23.2**	**+0.4**
PATCX				*i*S	**S**	**13 55 08.2**	**-2.8**
GO01	**Chusmiza**	4.07	327		**Pn**	**13 54 26.6**	**+0.6**
PB11	**IPOC Station P**	4.25	321		**Pn**	**13 54 27.5**	**-0.3**
MNMC	**Minye Minye**	4.73	327		**Pn**	**13 54 33.9**	**+0.1**
GO03	**Copiap**	5.41	214		**Pn**	**13 54 42.2**	**+0.3**
GO04	**Tololo Observa**	7.87	206	Pn	**Pn**	**13 55 14.1**	**+0.9**
SALV	**Santo Antonio**	12.72	58	*e*P	**P**	**13 56 19.2**	**+2.1**
ITAB	**Concordia**	13.94	110	*e*P	**P**	**13 56 33.3**	**+2.8**
SAML	**Samuel**	14.52	15	P	**P**	**13 56 38.2**	**+1.1**
ARAG	**Araguaiana, MT**	15.97	65	*e*P	**Pn**	**13 56 55.7**	**+1.6**
CLDB	**Colider**	16.11	43	*e*P	**P**	**13 56 54.5**	**-0.1**
BB19B	**Bebedouro**	17.10	87	*e*P	**Pn**	**13 57 08.2**	**+0.8**
RCLB	**Rio Claro- Sao**	17.83	92	*e*P	**Pn**	**13 57 15.2**	**-0.7**
SPB	**Sao Paulo**	17.83	95	*e*P	**Pn**	**13 57 15.4**	**-0.5**
PLCA	**Paso Flores**	17.84	189	P	**Pn**	**13 57 16.4**	**+0.5**
PLCA				IAmb	IAmb	13 58 13.7	
	comp=Z,35nm,2.0s						
PLCA	**Paso Flores**	17.84	189	*e*P	**P**	**13 57 07.1**	**-6.2**
IPMB	**Ipameri, GO**	18.18	77	*e*P	**Pn**	**13 57 19.1**	**-1.0**
VAO	**Valinhos**	18.30	94	*e*P	**P**	**13 57 19.9**	**+1.4**
BDFB	**Brasilia**	19.25	71	P	**P**	**13 57 29.2**	**+0.4**
BDFB				IAmb	IAmb	13 57 31.0	
	comp=Z,9.3nm,0.7s						
PARB	**Paraibuna**	19.51	95	*e*P	**P**	**13 57 32.9**	**+1.4**
BSCB	**Bom Sucesso**	20.56	88	*e*P	**P**	**13 57 44.2**	**+1.4**
ESAR	**Angra dos Reis**	20.61	94	*e*P	**P**	**13 57 44.0**	**+0.8**
JANB	**Januaria**	22.73	73	*e*P	**P**	**13 58 03.4**	**-0.3**
PTGA	**Pitinga**	23.23	18	*e*P	**P**	**13 58 05.4**	**-2.8**
SMTB	**Santa Maria do**	23.27	56	*e*P	**P**	**13 58 08.4**	**-0.1**
OTAV	**Otavalo**	25.82	332	P	**P**	**13 58 35.2**	**+3.1**
OTAV				IAmb	IAmb	13 59 29.0	
	comp=Z,7.9nm,1.4s						
KSH	**Kashi**	144.57	54	PKP	PKPbc	14 12 29.7	+0.1
KSH				sPKP		14 13 50.7	
KSH				PP	**PP**	**14 15 50.5**	**+1.1**
KSH				SKS	**SKSdf**	**14 19 15.1**	**-2.2**
CD2	**Chengdu**	168.59	45	PKP	**PKPdf**	**14 13 00.9**	**+0.3**

IDC 09 13:53:34.0±52.0, 22°.70S×172°.49W, h0^{km}, mb3.8/3, mb1 3.9/3, mb1mx3.6/43, mbtmp3.8/3, MS3.8/2, Ms1 3.7/2, ms1mx3.1/25, Error ellipse: s-maj=996.2km s-min=194.5km az=88.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	41.56	247	P	P	14 01 22.1	-1.6
	2.5nm,0.9s,baz=90,slow=11,SNR=2.8						
STKA				LR	LR	14 17 29.2	
	comp=Z,102nm,18.1s,baz=105,slow=34						
ASAR	**Alice Springs**	49.04	258	P	P	14 02 23.1	-0.1
	0.2nm,0.3s,baz=93,slow=7.6,SNR=7.5						
ASAR				LR	LR	14 21 53.9	
	comp=Z,104nm,21.1s,baz=158,slow=35						
WRA	**Warramunga Arr**	49.40	263	P	P	14 02 26.7	+0.7
	0.5nm,0.3s,baz=99,slow=6.8,SNR=20						

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*IDC **09** 13:57:42.4±1.1, 17°.64N×119°.53E, h0^{km}, mb3.4/5, mb1 3.6/5, mb1mx3.3/49, mbtmp3.5/5, Error ellipse: s-maj=56.4km s-min=19.8km az=69.0*

*MAN **09** 13:57:46.7, 17°.81N×119°.73E, h15^{km}, mb5.0, ML3.9, MS3.9*

ISC 09 13:57:46.7±1.0, 17°.63N±0°.09×119°.67E±0°.08, h32^{km}, n12, σ1.^{s}08/15, mb3.2/5, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	0.81	69	⇓*i*P	**Pn**	**13 58 00.4**	**-1.5**
SIPP				*e*S	**Sb**	**13 58 12.9**	**0.0**
APYP	**Conner**	1.52	81	*e*P	**Pn**	**13 58 11.2**	**-0.5**
APYP				*e*S	**Sn**	**13 58 31.4**	**+1.0**
SMPP	**San Manuel, Pa**	1.76	146	*e*P	**Pb**	**13 58 17.5**	**-0.9**
SCZP	**Santa Cruz**	1.86	173	*e*P	**Pb**	**13 58 20.0**	**-0.1**
CAUP	**Cauayan**	2.17	108	*e*P	**Pb**	**13 58 24.6**	**-0.7**
SGCP	**Mt. Cagua**	2.34	75	*e*P	**Pn**	**13 58 24.1**	**+1.0**
SGCP				*e*S	**Sn**	**13 58 52.6**	**+1.8**
BALP	**Baler**	2.62	135	*e*P	**Pb**	**13 58 31.6**	**-1.5**
KSRS	**Korea Array**	21.04	19	P	**P**	**14 02 27.4**	**-0.5**
	0.7nm,0.6s,baz=197,slow=10,SNR=3.4						
WRA	**Warramunga Arr**	40.02	158	P	**P**	**14 05 19.2**	**+0.3**
	0.2nm,0.4s,baz=327,slow=11,SNR=4.5						
MKAR	**Makanchi Array**	42.32	322	P	**P**	**14 05 36.9**	**-0.7**
	0.5nm,1.0s,baz=123,slow=5.3,SNR=3.3						
ASAR	**Alice Springs**	43.34	161	P	**P**	**14 05 47.2**	**+1.2**
	0.6nm,0.7s,baz=338,slow=7.0,SNR=9.5						
KURBB	**Kurchatov Arra**	46.41	325	P	**P**	**14 06 10.6**	**+0.5**
	0.7nm,0.6s,baz=118,slow=8.1,SNR=7.1						

IDC 09 13:59:40.0±2.5, 5°.81S×126°.86E, h0^{km}, mb3.3/1, mb1 3.5/3, mb1mx3.2/41, mbtmp3.3/3, ML3.4/2, Error ellipse: s-maj=328.0km s-min=31.8km az=64.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	15.81	153	Pn	P	14 03 26.4	-1.8
	0.2nm,0.3s,baz=332,slow=12,SNR=10						
ASAR	**Alice Springs**	19.00	160	P	P	14 04 02.4	-1.0
	0.1nm,0.3s,baz=344,slow=13,SNR=4.4						
MKAR	**Makanchi Array**	65.55	328	P	P	14 10 25.5	0.0
	0.3nm,0.7s,baz=116,slow=8.3,SNR=3.1						

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*IDC **09** 14:15:21.2±2.7, 29°.12S×176°.45W, h100^{km}±16^{km}, mb3.3/4, mb1 3.6/5, mb1mx3.5/21, mbtmp3.7/5, Error ellipse: s-maj=46.1km s-min=30.7km az=160.0*

ISC 09 14:15:21.3±1.2, 29°.0S±0°.1×176°.5W±0°.1, h100^{km}, n16, σ1.^{s}39/15, mb3.7/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	1.28	257	P	**Pn**	**14 15 43.9**	**-0.9**
	1µm,0.3s,baz=82,slow=11,SNR=63						
RAO				S	**Sn**	**14 16 03.4**	**+0.7**
	644nm,0.3s,baz=143,slow=20,SNR=3.5						
URZ	**Urewera**	10.68	208	P	**Pn**	**14 17 49.1**	**-2.1**
	0.4nm,0.3s,baz=260,slow=5.3,SNR=7.1						
URZ				S	**Sn**	**14 19 50.8**	**+2.1**
	0.5nm,0.3s,baz=63,slow=16,SNR=3.7						
TIWZ	**Tintock**	13.33	206	P	P	14 18 42.3	+10
MRZ	**Mangatainoka R**	13.35	207	P	P	14 18 43.0	+10
OGWZ	**Otaki Gorge**	13.64	208	P	P	14 18 40.9	+5.1
TUWZ	**Tuamarina**	14.67	210	P	**P**	**14 18 44.7**	**-2.5**
NNZ	**Nelson**	14.75	211	P	**Pn**	**14 18 45.1**	**+0.4**
KHZ	**Kahutara**	15.65	208	P	**P**	**14 18 59.6**	**+1.5**
GVZ	**Greta Valley S**	16.32	208	P	**P**	**14 19 04.9**	**-0.5**
LTZ	**Lake Taylor**	16.49	210	P	**P**	**14 19 07.7**	**+0.2**
OXZ	**Oxford**	17.03	210	P	**P**	**14 19 14.2**	**+0.8**
STKA	**Stephens Creek**	36.10	255	P	**P**	**14 22 15.0**	**+1.4**
	0.5nm,0.5s,baz=103,slow=14,SNR=3.8						
ASAR	**Alice Springs**	44.52	265	P	**P**	**14 23 22.6**	**-0.6**
	0.5nm,0.5s,baz=99,slow=6.8,SNR=11						
WRA	**Warramunga Arr**	45.39	270	P	**P**	**14 23 29.2**	**-0.8**
	0.5nm,0.5s,baz=108,slow=8.0,SNR=6.7						
NVAR	**Mina Array Bea**	86.30	42	P	**P**	**14 27 53.0**	**+0.8**
	0.8nm,1.0s,baz=219,slow=7.0,SNR=3.2						
AKASG	**Malin Array Be**	150.92	325	PKPbc	**PKiKP**	**14 35 02.6**	**+0.1**
	0.4nm,0.4s,baz=46,slow=3.7,SNR=3.6						

JMA 09 14:42:46.6±0.4, 24°.44N×123°.93E, h1^{km}±5^{km}, M0.6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIJ	**Ishigaki jima**	0.21	111	P	Pg	14 42 50.8	+0.2
JIJ				S	Sg	14 42 53.7	+0.4
IRIF	**Iriomote-Funau**	0.21	240	P	Pg	14 42 51.0	+0.4
IRIF				S	Sg	14 42 53.9	+0.5
JKRS	**Kuro-shima**	0.21	160	P	Pg	14 42 51.2	+0.5
JKRS				S	Sg	14 42 54.4	+0.9
JISG	**Ishigakijimahi**	0.38	67	P	Pg	14 42 54.5	+0.7

TAP 09 14:43:15.0, 23°.99N×122°.39E, h5^{km}±1^{km}, ML2.2, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1**	0.60	337	P	Pb	14 43 27.9	-0.1
	baz=337						
EOS1				S	Sb	14 43 37.5	+0.8
	baz=337						
ENA	**Nanau**	0.73	306	*i*P	Pb	14 43 30.1	-0.1
	baz=306						
ENA				S	Sb	14 43 41.5	+1.1
	baz=306						
NACB	**Ninganchiao**	0.74	284	*e*P	Pb	14 43 30.4	0.0
	baz=283						
NACB				*e*S	Sb	14 43 41.7	+0.9
	baz=283						
TWC	**Suao**	0.78	322	P	Pg	14 43 30.6	+0.5
	baz=321						
TWC				*i*S	Sb	14 43 42.2	+0.2
	baz=321						
ETLH	**Xiulin Townshi**	0.85	285	*e*P	Pn	14 43 33.2	-0.5
	baz=284						
ETLH				*e*S	Sn	14 43 45.9	-0.7
	baz=284						
ESL	**Shilin**	0.89	259	*e*P	Pb	14 43 32.8	-0.1
	baz=258						
ESL				*e*S	Sb	14 43 46.2	+1.1
	baz=258						
EGFH	**Guangfu**	0.94	250	*e*S	Sn	14 43 48.3	-0.2
	baz=249						
ILA	**Ilan**	0.96	323	*e*P	Pb	14 43 34.3	+0.1
	baz=323						
ILA				*e*S	Sb	14 43 48.1	+1.0
	baz=323						
TWE	**Neicheng**	0.98	318	P	Pb	14 43 34.6	+0.2
	baz=318						
TWE				*e*S	Sb	14 43 48.0	+0.4
	baz=318						
ENTT	**Nioudou**	0.99	311	P	Pb	14 43 34.9	+0.3
	baz=310						
ENTT				S	Sn	14 43 49.8	0.0
	baz=310						
NTC	**Toucheng**	0.99	330	*e*S	Sn	14 43 49.6	-0.4
	baz=329						
NDT	**Datong Townshi**	1.00	307	P	Pn	14 43 35.3	-0.4
	baz=307						
NDT				S	Sn	14 43 49.9	-0.2
	baz=307						
NNSB	**Datong**	1.01	295	*e*P	Pb	14 43 35.0	-0.1
	baz=295						
NNSB				*e*S	Sb	14 43 49.6	+0.9
	baz=295						
NNSH	**Datong**	1.01	296	*e*P	Pb	14 43 34.9	-0.2
	baz=295						
NNSH				*e*S	Sn	14 43 49.8	-0.8
	baz=295						
HGSD	**Ruisui**	1.01	241	P	Pn	14 43 36.1	+0.3
	baz=240						
SLBB	**Yuanshan**	1.02	318	P	Pg	14 43 34.7	+0.1
	baz=317						
SLBB				S	Sb	14 43 49.6	+0.8
	baz=317						
NNS	**Nan Shan**	1.02	296	P	Pb	14 43 35.4	+0.1
	baz=295						
NNS				S	Sn	14 43 50.4	-0.5
	baz=295						
WHF	**Hehuan Shan**	1.03	279	P	Pb	14 43 35.5	-0.2
	baz=278						
WHF				S	Sb	14 43 49.6	0.0
	baz=278						
TIPB	**Shuangxi**	1.10	332	P	Pb	14 43 36.5	0.0
	baz=332						
TIPB				S	Sb	14 43 51.1	0.0
	baz=332						
OWD	**Renai**	1.11	268	*e*P	Pb	14 43 36.8	+0.1
	baz=267						
OWD				*e*S	Sb	14 43 51.6	+0.1
	baz=267						
CHGB	**Renai**	1.11	274	*e*P	Pg	14 43 36.4	+0.1
	baz=273						
CHGB				*e*S	Sn	14 43 54.1	+1.0
	baz=273						
NWLT	**Wulai**	1.12	314	*e*P	Pn	14 43 37.7	+0.4
	baz=314						
NWLT				*e*S	Sn	14 43 52.6	-0.5
	baz=314						
TWT	**Tachien**	1.14	283	*e*P	Pn	14 43 38.6	+0.9
	baz=282						
TWT				*e*S	Sn	14 43 54.7	+1.0
	baz=282						
YHNB	**Yeheng**	1.14	306	P	Pb	14 43 37.1	-0.1
	baz=306						
YHNB				*e*S	Sn	14 43 53.5	-0.2
	baz=306						
TDCB	**Techi**	1.15	283	*e*P	Pn	14 43 38.0	+0.1
	baz=282						
TDCB				*e*S	Sb	14 43 53.4	+0.6
	baz=282						
NSK	**Sanguang**	1.16	306	P	Pb	14 43 37.5	0.0
	baz=306						
NSK				S	Sn	14 43 54.1	0.0
	baz=306						
VWDT	**VWDT**	1.16	258	*e*P	Pg	14 43 37.1	-0.2
	baz=258						
YULB	**Yu-li**	1.16	239	P	Pg	14 43 36.8	-0.5
	baz=239						
TWF1	**Yuli**	1.19	238	*e*P	Pb	14 43 38.0	+0.1
	baz=237						
TWF1				*e*S	Sn	14 43 54.2	-0.4
	baz=237						
NWF	**Wu-fen Shan**	1.21	333	*e*S	Sn	14 43 55.7	+0.4
	baz=332						
WFSB	**Wu-fen Shan**	1.21	333	*e*S	Sn	14 43 56.0	+0.8
	baz=332						
NHDH	**Xindian Distri**	1.24	321	*e*P	Pn	14 43 39.6	+0.6
	baz=320						
NHDH				*e*S	Sn	14 43 57.2	+1.1
	baz=320						
SSLB	**Suanglung**	1.33	261	*e*P	Pn	14 43 40.1	-0.1
	baz=261						
SSLB				*e*S	Sn	14 43 58.0	-0.3
	baz=261						
DPDB	**Guoxing**	1.33	272	*e*P	Pg	14 43 40.8	+0.2
	baz=271						
WHP	**Taichung City**	1.34	282	P	Pg	14 43 41.6	+0.8
	baz=282						
WHP				*e*S	Sn	14 44 00.8	+2.0
	baz=282						
YM10	**YM10**	1.38	327	*e*P	Pg	14 43 42.0	+0.6
	baz=327						
TYC	**Yuchr**	1.40	267	*e*P	Pn	14 43 40.7	-0.5
	baz=266						
LIOB	**Emei**	1.41	298	*e*P	Pg	14 43 42.8	+0.8
	baz=297						
LIOB				*e*S	Sg	14 44 01.7	+1.4
	baz=297						
NSTT	**Nanjuang**	1.41	297	*e*P	Pn	14 43 41.6	+0.2
	baz=296						
WHYT	**Xinyi Township**	1.43	258	*e*P	Pb	14 43 42.3	+0.1
	baz=258						
NCU	**National Centr**	1.46	312	*e*P	Pn	14 43 42.2	+0.2
	baz=311						
NCU				*e*S	Sg	14 44 02.5	+0.4
	baz=311						
ELDTW	**Lidau**	1.49	238	*e*P	Pn	14 43 41.9	-0.6
	baz=237						
ELDTW				S	Sn	14 44 01.2	-1.1
	baz=237						
ALS	**Alishan**	1.53	252	*e*P	Pn	14 43 43.4	+0.2
	baz=251						
ALS				*e*S	Sn	14 44 03.2	-0.3
	baz=251						
CHN5	**Tsauling**	1.61	256	*e*P	Pb	14 43 45.3	0.0
	baz=255						
CHN5				*e*S	Sg	14 44 06.9	+0.1
	baz=255						

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*IDC **09** 14:51:18.9±1.4, 14°.90S×166°.95E, h0^{km}, mb3.9/5, mb1 4.0/6, mb1mx3.7/32, mbtmp3.9/6, ML3.7/1, MS3.5/6, Ms1 3.5/6, ms1mx3.2/34, Error ellipse: s-maj=48.9km s-min=25.6km az=106.0*

ISC 09 14:51:26.4±1.2, 15°.01S±0°.09×167°.0E±0°.3, h57^{km}, n11, σ1.^{s}52/7, mb3.7/5, MS3.5/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	7.04	184	Pn	**Pn**	**14 53 05.9**	**-1.1**
	1.4nm,0.3s,baz=25,slow=19,SNR=15						
DZM				Sn	**Sn**	**14 54 27.5**	**+1.7**
	0.7nm,0.3s,baz=307,slow=20,SNR=2.6						
DZM				LR	LR	14 55 40.7	
	comp=Z,169nm,19.0s,baz=7.0,slow=37						
HNR	**Honiara**	8.81	308	LR	LR	14 56 22.9	
	comp=Z,111nm,18.3s,baz=78,slow=35						
STKA	**Stephens Creek**	28.59	230	LR	LR	15 06 37.1	
	comp=Z,124nm,19.7s,baz=26,slow=32						
WRA	**Warramunga Arr**	31.47	256	LR	LR	15 09 40.2	
	comp=Z,76nm,18.9s,baz=225,slow=35						
ASAR	**Alice Springs**	32.30	249	P	**P**	**14 57 49.8**	**-0.4**
	0.7nm,0.8s,baz=77,slow=9.3,SNR=6.0						
GUMO	**Guam**	35.85	321	LR	LR	15 13 27.3	
	comp=Z,48nm,19.1s,baz=77,slow=37						
PETK	**Petropavlovsk-**	68.30	354	P	**P**	**15 02 22.5**	**+1.2**
	3.1nm,0.8s,baz=148,slow=8.5,SNR=3.7						
CMAR	**Chiang Mai Arr**	74.79	294	P	**P**	**15 03 00.4**	**-0.7**
	0.2nm,0.3s,baz=104,slow=3.8,SNR=3.6						
ILAR	**Eielson Array**	86.88	18	P	**P**	**15 04 03.4**	**-1.2**
	0.9nm,0.8s,baz=235,slow=5.5,SNR=13						
PDAR	**Pinedale Array**	95.36	47	LR	LR	15 40 29.5	
	comp=Z,66nm,20.0s,baz=33,slow=31						
MKAR	**Makanchi Array**	97.20	316	P	**P**	**15 04 54.2**	**+1.3**
	0.2nm,0.8s,baz=90,slow=8.6,SNR=1.9						

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*NEIC **09** 14:52:50.0±1.8, 19°.0N±0°.2×118°.0W±0°.2, h16^{km}±8^{km}, mb4.0/54, Error ellipse: s-maj=27.3km s-min=22.4km az=225.0*

*IDC **09** 14:52:49.3±4.1, 19°.29N×117°.87W, h0^{km}, mb3.6/6, mb1 3.9/9, mb1mx3.8/36, mbtmp3.6/9, ML3.3/3, MS3.5/1, Ms1 3.5/1, ms1mx2.7/41, Error ellipse: s-maj=73.8km s-min=33.7km az=34.0*

ISC 09 14:52:50.1±2.3, 19°.2N±0°.2×118°.0W±0°.2, h10^{km}, n70, σ0.^{s}92/70, mb4.0/12, Eastcentral Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAR	**Barrett**	13.52	5	Pn	**Pn**	**14 56 02.7**	**+0.7**
113A	**Mohawk Valley,**	14.07	15		**Pn**	**14 56 09.4**	**-0.1**
XPFO	**Pion Flat**	14.46	5	Pn	**Pn**	**14 56 14.8**	**-0.2**
PFO	**Pinyon Flats O**	14.46	5	Pn	**Pn**	**14 56 14.9**	**-0.1**
319A	**Douglas**	14.47	31	Pn	**Pn**	**14 56 14.4**	**-0.7**
TUC	**Tucson**	14.60	25	Pn	**Pn**	**14 56 17.3**	**+0.5**
Y12C	**Blythe**	14.86	11	Pn	**Pn**	**14 56 20.7**	**+0.4**
PASC	**Pasadena Art C**	14.96	359	Pn	**Pn**	**14 56 23.0**	**+1.3**
PASC				IAmb	IAmb	14 56 23.6	
	comp=Z,19nm,1.6s						
121A	**Cookes Peak, D**	16.15	32	Pn	**P**	**14 56 39.3**	**-1.3**
121A				IAmb	IAmb	14 56 49.0	
	comp=Z,8.5nm,1.0s						
X16A	**Lo Mia Camp, P**	16.27	20	Pn	**Pn**	**14 56 40.1**	**+1.2**
W13A	**Hualapai Mount**	16.29	12	Pn	**Pn**	**14 56 39.9**	**+0.8**
ISA	**Isabella, Lake**	16.45	358	Pn	**Pn**	**14 56 42.1**	**+0.9**
TX31	**Lajitas Ar. Si**	16.49	49	P	**P**	**14 56 44.1**	**-0.3**
TX31				IAmb	IAmb	14 56 49.5	
	comp=Z,18nm,1.6s						
TX32	**Lajitas Array**	16.49	49	P	**P**	**14 56 44.3**	**0.0**
TX32				IAmb	IAmb	14 56 49.5	
	comp=Z,18nm,1.6s						
TXAR	**Lajitas Array**	16.49	49	Pn	**Pn**	**14 56 40.9**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=246,slow=7.8,SNR=2.6						
TXAR	**Lajitas Array**	16.49	49	P	**P**	**14 56 44.2**	**-0.1**
PAGB	**Antelope Grade**	16.64	353	Pn	**Pn**	**14 56 40.4**	**-3.1**
PAGB				IAmb	IAmb	14 56 41.0	
	comp=Z,18nm,1.4s						
MNTX	**Cornudas Mount**	16.86	40		**P**	**14 56 47.7**	**-0.7**
X18A	**Snowflake**	16.89	23	P	**Pn**	**14 56 48.1**	**+1.4**
X18A				IAmb	IAmb	14 56 51.6	
	comp=Z,28nm,1.9s						
WUAZ	**Wupatki**	17.31	18		**P**	**14 56 53.4**	**-0.1**
WUAZ				IAmb	IAmb	14 56 56.6	
	comp=Z,12nm,1.4s						
SHPR	**Sheep Range**	17.46	8	P	**P**	**14 56 57.0**	**+1.8**
SHPR				IAmb	IAmb	14 57 29.9	
	comp=Z,13nm,2.0s						
TPNV	**Topopah Spring**	17.79	4		**Pn**	**14 56 58.2**	**+0.2**
TPNV				IAmb	IAmb	14 57 02.1	
	comp=Z,17nm,1.8s						
U15A	**North Rim**	17.92	15		**P**	**14 57 01.1**	**+0.8**
U15A				IAmb	IAmb	14 57 02.2	
	comp=Z,13nm,1.8s						
KNB	**Kanab**	18.36	13	P	**P**	**14 57 04.5**	**-0.5**
OMMB	**Old Mammoth Mi**	18.42	357	P	**P**	**14 57 05.6**	**-0.2**
ANMO	**Albuquerque**	18.74	31	P	**P**	**14 57 08.7**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=204,slow=14,SNR=4.1						
ANMO				LR	LR	15 03 23.6	
	comp=Z,139nm,18.9s,baz=15,slow=34						

ANMO	Albuquerque	18.74	31	P	P	14 57 08.2	-1.1
PKCU	Pink Cliffs	18.88	14	P	P	14 57 11.2	+0.2
CMB	Columbia Colle	18.93	354	P	P	14 57 11.9	+0.6
NVAR	Mina Array Bea	19.21	359	P	P	14 57 14.6	+0.2
	comp=Z,0.1nm,0.3s,baz=180,slow=14,SNR=3.3						
R11A	Troy Canyon, C	19.24	6	P	P	14 57 15.3	+0.6
MCCM	Marconi Confer	19.41	348	P	Pn	14 57 18.9	+1.4
MTPU	Mount Pierson	19.48	14	P	Pn	14 57 19.2	+0.5
PSUT	Pine Spring	19.64	10	P	P	14 57 19.6	+0.5
YERR	Yerington	19.80	357	P	P	14 57 21.4	+0.5
YERR				IAmb	IAmb	14 57 25.8	
	comp=Z,9.6nm,1.5s						
KVN	Kaiserville	19.83	360	P	P	14 57 21.3	+0.1
PNTR	Pine Nut	19.92	356	P	P	14 57 22.7	+0.5
PAHR	Pah Rah Range	20.52	357	P	P	14 57 30.1	+1.5
PAHR				IAmb	IAmb	14 57 53.3	
	comp=Z,8.7nm,1.7s						
Q16A	Castle Valley	20.55	15	P	P	14 57 29.6	+0.5
TMUT	Trail Mountain	20.91	15	P	P	14 57 34.9	+1.9
S22A	4UR Ranch, Cre	20.91	25	P	P	14 57 32.8	-0.3
S22A				IAmb	IAmb	14 57 54.5	
	comp=Z,9.0nm,1.5s						
KCPM	Cahto Peak	21.04	348	P	P	14 57 33.3	-0.9
P17A	Butcher Ranch,	21.19	16	P	P	14 57 35.7	-0.2
ABTX	Abilene, Hawle	21.20	47	P	P	14 57 34.9	-1.0
ABTX				IAmb	IAmb	14 57 36.3	
	comp=Z,13nm,1.1s						
AMTX	Amarillo	21.30	39	P	P	14 57 36.1	-0.9
AMTX				IAmb	IAmb	14 57 40.1	
	comp=Z,10nm,1.1s						
DUG	Dugway, Tooele	21.43	11	P	P	14 57 39.5	+1.0
DUG				IAmb	IAmb	14 57 44.5	
	comp=Z,9.4nm,1.3s						
SDCO	Great Sand Dun	21.48	28	P	P	14 57 38.9	-0.3
SDCO				IAmb	IAmb	14 57 42.6	
	comp=Z,6.1nm,1.0s						
ELK	Elko	21.65	6	P	P	14 57 40.5	-0.4
	comp=Z,2.0nm,0.7s,baz=194,slow=6.4,SNR=8.2						
ELK	Elko	21.65	6	P	P	14 57 40.4	-0.5
ELK				IAmb	IAmb	14 57 43.5	
	comp=Z,5.3nm,1.1s						
CMIG	Matias Romero	22.01	92	P	P	14 57 45.4	+0.6
	comp=Z,6.7nm,1.0s,baz=305,slow=12,SNR=2.3						
JLU	Jordanelle	22.09	13	P	P	14 57 46.4	+0.7
CTU	Camp Tracy	22.12	13	P	P	14 57 47.2	+1.3
WHTX	Lake Whitney,	22.43	51	P	P	14 57 51.3	+2.2
WHTX				IAmb	IAmb	14 57 56.7	
	comp=Z,7.5nm,0.8s						
O20A	White River Ci	22.52	20	P	P	14 57 50.9	+0.6
RDMU	Red Mountain	22.53	17	P	P	14 57 50.9	+0.6
TCUT	Toone Canyon	22.60	13	P	P	14 57 50.8	-0.3
MOD	Modoc Plateau	22.77	355	P	P	14 57 53.6	+0.9
WVOR	Wild Horse Val	23.22	359	P	P	14 57 58.4	+1.0
X34A	Smith Ranch, M	23.57	45	P	P	14 58 00.7	-0.2
RWWY	Rawlins	24.26	20	P	P	14 58 08.6	+0.9
W35A	Tecumseh	24.53	45	P	P	14 58 09.1	-0.8
PDAR	Pinedale Array	24.59	15	P	P	14 58 09.5	-1.1
	comp=Z,1.4nm,1.0s,baz=207,slow=8.8,SNR=6.4						
PDAR	Pinedale Array	24.59	15	P	P	14 58 09.2	-1.4
REDW	Red Top Meadow	24.87	12	P	P	14 58 12.7	-0.4
FLWY	Flagg Ranch	25.59	12	P	P	14 58 19.3	-0.3
FLWY				IAmb	IAmb	14 58 22.5	
	comp=Z,4.9nm,0.8s						
S44A	Carbondale	31.09	48	P	P	14 59 08.2	-0.3
YKA	Yellowknife Ar	43.37	2	P	P	15 00 51.9	-0.4
	comp=Z,0.6nm,0.7s,baz=179,slow=8.8,SNR=14						
TRQ	Mont Tremblant	44.63	43	P	P	15 01 03.0	+0.2
ILAR	Eielson Array	49.52	344	P	P	15 01 40.5	-0.1
	comp=Z,0.4nm,0.9s,baz=150,slow=7.3,SNR=4.6						
SCHQ	Schefferville	52.46	35	P	P	15 02 02.0	-0.9
	comp=Z,1.7nm,0.8s,baz=266,slow=5.1,SNR=6.5						

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*NIED **09** 15:13:00, 43°.30N×145°.80E, h95^{km}, Mw4.6 Best double couple: $M_0$9.92000×10^{15} NP1:ϕ_s245.00000°, δ61.00000°, λ-95.00000°. NP2:ϕ_s76.00000°, δ29.00000°, λ-80.00000°.*

*BJI **09** 15:13:19.0±0.0, 43°.44N×145°.86E, h81^{km}, mB5.1/46, mb4.9/66, Ms4.5/20, Ms7 4.3/11*

*MOS **09** 15:13:21.1±0.9, 43°.30N×145°.83E, h100^{km}, mb5.0/57, Error ellipse: s-maj=5.5km s-min=4.0km az=103.4*

MOS Felt (II-III) at Malokuril'skoye, (II) at Yuzhno-Kuril'sk, Goryachiy Plyazh.

*IDC **09** 15:13:21.7±0.4, 43°.34N×145°.90E, h93^{km}±3^{km}, mb4.4/34, mb1 4.5/44, mb1mx4.5/60, mbtmp4.8/44, MS3.5/14, Ms1 3.5/14, ms1mx3.3/46, Error ellipse: s-maj=8.1km s-min=7.0km az=161.0*

*SKHL **09** 15:13:22.8±0.1, 43°.39N×145°.87E, h100^{km}±6^{km}, mb5.7/2, msh6.7/8*

SKHL Felt (II) at Goryachiy Plyazh, Yushno-Kuril'sk; (II-III) at Malokuril'skoye.

*JMA **09** 15:13:22.6±0.1, 43°.27N×145°.88E, h90^{km}±1^{km}, M4.6*

JMA Felt III J1.

*NEIC **09** 15:13:22.3±1.3, 43°.34N±0°.06×145°.86E±0°.10, h97^{km}±4^{km}, mb4.9/372, Error ellipse: s-maj=10.1km s-min=8.7km az=109.0*

ISC 09 15:13:21.6±0.3**, 43°.36N**±0°.03×**145°.88E**±0°.03**, h93**^{km}±2^{km}**, h93**^{km}**:pP-P, n1022, σ1^s.26**/1120**, mb4.9**/291**, 35C-53D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.10	276	⇓P	Pn	15 13 35.5	+0.9
NEM2				eS	Sn	15 13 45.0	+0.8
NMR	Nemuro--Hokkai	0.11	278	i P	Pn	15 13 35.6	+1.0
NMR				i S	Sn	15 13 45.1	+0.8
GLVR	Golovnino	0.46	326	i P	Pn	15 13 37.8	+1.5
GLVR				AMB	AMB	15 13 39.0	
	3μm,0.5s						
GLVR				AMB	AMB	15 13 39.0	
	6μm,0.5s						
GLVR				AMB	AMB	15 13 39.0	
	17μm,0.5s						
GLVR				i S	Sn	15 13 48.9	+1.7
GLVR				A	A	15 13 50.0	
	100μm,0.6s						
GLVR				A	A	15 13 50.0	
	55μm,0.6s						
GLVR	Golovnino	0.46	326	d iPN	Pn	15 13 37.8	+1.5
GLVR				i S	Sn	15 13 48.9	+1.7
GLVR				pmax	pmax		
	comp=N,3μm,0.1s						
GLVR				pmax	pmax		
	comp=E,6μm,0.1s						
GLVR				pmax	pmax		
	comp=Z,17μm,0.1s						
GLVR				smax	smax		
	comp=N,100μm,0.4s						
GLVR				smax	smax		
	comp=E,55μm,0.4s						
JKHN	Kushirohamanak	0.59	243	⇓P	Pn	15 13 38.0	+0.7
JKHN				eS	Sn	15 13 49.6	+0.6
GRPR	Tuman	0.64	353	i P	Pn	15 13 39.0	+1.3
GRPR				AMB	AMB	15 13 39.7	
	comp=E,7μm,0.5s						
GRPR				AMB	AMB	15 13 39.7	
	comp=E,27μm,0.5s						
GRPR				i S	Sn	15 13 51.3	+1.5
GRPR				A	A	15 13 51.8	
	comp=E,140μm,0.6s						
GRPR				A	A	15 13 51.8	
	comp=E,139μm,0.6s						
GRPR	Tuman	0.64	353	d iPN	Pn	15 13 39.1	+1.3
GRPR				i S	Sn	15 13 51.3	+1.5
GRPR				pmax	pmax		
	comp=E,7μm,0.4s						
GRPR				pmax	pmax		
	comp=Z,27μm,0.4s						
GRPR				pmax	pmax		
	comp=N,8μm,0.3s						
GRPR				smax	smax		
	comp=N,141μm,0.4s						
GRPR				smax	smax		
	comp=E,139μm,0.4s						
YUK	Yuzh-Kuril'sk	0.68	359	i P	Pn	15 13 39.4	+1.3
YUK				AMB	AMB	15 13 39.8	
	comp=E,15μm,0.5s						
YUK				i S	Sn	15 13 51.8	+1.4
YUK				A	A	15 13 53.0	
	comp=E,51μm,0.6s						
YUK				A	A	15 13 53.0	
	comp=E,69μm,0.6s						
YUK	Yuzh-Kuril'sk	0.68	359	d iPN	Pn	15 13 39.2	+1.1
LAGR	Lagunnoye	0.70	355	eP	Pn	15 13 39.0	+0.7
JNSB	Nemuroshibetsu	0.76	304	⇓P	Pn	15 13 40.2	+1.3
JNSB				eS	Sn	15 13 53.5	+1.7
JRA	Rausu	0.80	317	⇓P	Pn	15 13 40.9	+1.7
JRA				eS	Sn	15 13 54.5	+2.0
SHO	Shikotan	0.86	53	i P	Pn	15 13 41.0	+1.0
SHO				AMB	AMB	15 13 41.0	
	comp=E,6μm,0.5s						
SHO				eS	Sn	15 13 54.6	+0.9
SHO				A	A	15 13 55.0	
	comp=E,35μm,0.5s						
SHO				A	A	15 13 55.0	
	comp=E,39μm,0.5s						
SHO	Shikotan	0.86	53	d iPN	Pn	15 13 40.9	+1.0
SHO				eS	Sn	15 13 54.4	+0.7
SHO				pmax	pmax		
	comp=Z,6μm,0.5s						
SHO				pmax	pmax		
	comp=N,2μm,0.4s						
SHO				pmax	pmax		
	comp=E,3μm,0.4s						
SHO				smax	smax		
	comp=N,35μm,0.2s						
SHO				smax	smax		
	comp=E,39μm,0.5s						
JNK	Nakash	0.87	286	⇓P	Pn	15 13 40.8	+0.8
JNK				eS	Sn	15 13 54.2	+0.3
JAK	Akkeshi	0.94	248	⇓P	Pn	15 13 41.2	+0.5
JAK				eS	Sn	15 13 55.2	+0.2
JAR	Ashorobuto	1.54	269	⇓P	Pn	15 13 49.1	+1.2
JAR				eS	Sn	15 14 09.0	+1.1
JTKR	Abashiri--Toko	1.56	294	⇑P	Pn	15 13 49.7	+1.6
JTKR				eS	Sn	15 14 09.9	+1.7
JOB	Onbets	1.56	254	⇓P	Pn	15 13 49.1	+0.9
JOB				eS	Sn	15 14 08.7	+0.4
JMP	Maruseppu	1.94	291	⇑P	Pn	15 13 54.7	+1.6
JMP				eS	Sn	15 14 18.9	+1.8
JCH	Churui	1.99	249	⇓P	Pn	15 13 54.1	+0.4
JCH				eS	Sn	15 14 17.5	-0.6
KUR	Kuril'sk	2.36	37	i P	Pn	15 14 01.0	+2.4
KUR				AMB	AMB	15 14 01.0	
	comp=E,270nm,0.5s						
KUR				AMB	AMB	15 14 01.0	
	comp=E,1μm,0.5s						
KUR				i S	Sn	15 14 28.4	+1.5
KUR				A	A	15 14 31.0	
	comp=E,4μm,0.4s						
KUR				A	A	15 14 31.0	
	comp=E,3μm,0.4s						
KUR	Kuril'sk	2.36	37	i PN	Pn	15 14 00.9	+2.4
ERM	Erimo	2.41	237	d ePN	Pn	15 14 00.6	+1.4
ERM				pmax	pmax		
	comp=Z,312nm,0.5s						
ERM	Erimo	2.41	237		Pn	15 14 00.2	+1.0
JKA	Kamikawa-asahi	2.49	289	eP	Pn	15 14 02.6	+2.3
JKA	Kamikawa-asahi	2.49	289		Pn	15 14 02.6	+2.3
JKA					Sn	15 14 32.1	+2.0
ASAJ	Asahikawa	2.50	289	P	Pn	15 14 02.6	+2.3
	baz=109,slow=9.4						
ASAJ				S	Sn	15 14 32.1	+1.9
	comp=Z,188nm,0.3s,baz=287,slow=19,SNR=15						
ASAJ				LR	LR	15 14 48.6	
	comp=Z,834nm,18.5s,baz=162,slow=34						
YSS	Yuzh-Sakhalins	4.22	330	i P	Pn	15 14 25.0	+1.5
YSS				AMB	AMB	15 14 26.0	
	comp=Z,140nm,0.8s						
YSS				AMB	AMB	15 14 26.0	
	comp=Z,70nm,0.8s						
YSS				AMB	AMB	15 14 26.0	
	comp=Z,230nm,0.8s						
YSS				eS	Sn	15 15 12.0	+0.3
YSS				A	A	15 15 16.0	
	comp=Z,680nm,0.8s						
YSS				A	A	15 15 16.0	
	comp=Z,480nm,0.8s						
YSS				AMS	AMS	15 16 36.0	
	comp=Z,800nm,12.0s						
YSS	Yuzh-Sakhalins	4.22	330	α iPN	Pn	15 14 25.1	+1.5
YSS				eS	Sn	15 15 13.5	+1.8
YSS				pmax	pmax		
	comp=Z,230nm,0.8s						
YSS				pmax	pmax		
	comp=N,140nm,0.7s						
YSS				pmax	pmax		
	comp=E,70nm,0.7s						
YSS				smax	smax		
	comp=N,680nm,0.9s						
YSS				smax	smax		
	comp=E,480nm,1.2s						
YSS				MLR	MLR		
	comp=Z,800nm,12.0s						
YSS	Yuzh-Sakhalins	4.22	330		Pn	15 14 24.9	+1.5
UGL	Uglegorsk	6.30	337	i P	Pn	15 14 53.5	+1.7
UGL				AMB	AMB	15 14 55.0	
	comp=Z,2μm,3.0s						
UGL				AMB	AMB	15 14 55.2	
	comp=Z,400nm,0.8s						
UGL				eS	Sn	15 16 01.7	-0.6
UGL				A	A	15 16 10.0	
	comp=Z,900nm,2.0s						
UGL				A	A	15 16 10.0	
	comp=Z,800nm,2.0s						
UGL				A	A	15 16 13.0	
	comp=Z,1μm,0.9s						
UGL				A	A	15 16 13.0	
	comp=Z,800nm,0.9s						
UGL	Uglegorsk	6.30	337	⇑ iPN	Pn	15 14 54.5	+2.7
UGL				eS	Sn	15 16 05.7	+3.4
UGL				pmax	pmax		
	comp=Z,2μm,1.1s						
UGL				pmax	pmax		
	comp=Z,1μm,0.8s						
UGL				pmax	pmax		
	comp=N,317nm,1.2s						
UGL				pmax	pmax		
	comp=E,707nm,0.9s						
UGL				smax	smax		
	comp=N,900nm,2.8s						
UGL				smax	smax		
	comp=E,800nm,3.0s						
UGL				smax	smax		
	comp=E,157nm,1.1s						
UGL				smax	smax		
	comp=N,168nm,0.9s						
TEY	Ternei	6.87	287	eP	Pn	15 15 01.2	+1.6
TEY				AMB	AMB	15 15 01.9	
	comp=N,20nm,0.6s						
TEY				AMB	AMB	15 15 01.9	
	comp=N,80nm,0.6s						
TEY				AMB	AMB	15 15 01.9	
	comp=N,70nm,0.6s						
TEY	Ternei	6.87	287	⇑ ePN	Pn	15 15 01.2	+1.6
TEY				pmax	pmax		
	comp=E,80nm,0.9s						
TEY				pmax	pmax		
	comp=Z,70nm,0.8s						
TEY				pmax	pmax		
	comp=N,20nm,0.9s						
TYV	Tymovskoe	7.83	345	eP	Pn	15 15 14.0	+1.5
TYV				AMB	AMB	15 15 15.0	
	comp=N,300nm,2.0s						
TYV				AMB	AMB	15 15 16.0	
	comp=N,80nm,0.7s						
TYV				eS	Sn	15 16 37.4	-2.0
TYV				A	A	15 16 44.2	
	comp=N,40nm,1.0s						
TYV	Tymovskoe	7.83	345	ePN	Pn	15 15 14.3	+1.8
TYV				eS	Sn	15 16 43.2	+3.8
TYV				pmax	pmax		
	comp=Z,300nm,2.4s						
TYV				pmax	pmax		
	comp=Z,83nm,0.7s						
TYV				smax	smax		
	comp=E,39nm,1.0s						
MJB9	Matsu-Tunnel	8.99	223		Pn	15 15 27.4	-1.2
MAJO	Matsushiro	8.99	223	d ePN	Pn	15 15 27.6	-1.0
MAJO				pmax	pmax		
	comp=Z,21nm,0.8s						
MAJO	Matsushiro	8.99	223		Pn	15 15 27.2	-1.4
MAT	Matsushiro	8.99	223	P	Pn	15 15 27.1	-1.5
MAT				S	Sn	15 17 05.5	-2.6
MJAR	Matsushiro Arr	8.99	223	P	Pn	15 15 27.6	-0.9
	comp=Z,0.3nm,0.3s,baz=29,slow=14,SNR=32						
MJAR				S	Sn	15 17 17.6	+9.5
	comp=Z,0.4nm,0.3s,baz=77,slow=19,SNR=4.6						
MJAR	Matsushiro Arr	8.99	223		Pn	15 15 27.1	-1.5
GRNR	Gornyy	9.82	322	eP	Pn	15 15 41.1	+1.3
GRNR				AMB	AMB	15 15 43.4	
	comp=Z,20nm,0.7s						
GRNR				AMB	AMB	15 15 43.4	
	comp=Z,20nm,0.7s						
GRNR				AMB	AMB	15 15 43.4	
	comp=Z,20nm,0.7s						
GRNR	Gornyy	9.82	322	⇑ iPN	Pn	15 15 41.1	+1.3
GRNR				eS	Sn	15 17 31.8	+3.7
GRNR				pmax	pmax		
	comp=Z,20nm,0.7s						
GRNR				smax	smax		
	comp=E,3.0nm,0.8s						
GRNR				MLR	MLR		
	comp=Z,150nm,17.0s						
USA0B	Ussuriysk Arra	10.08	280	PN	Pn	15 15 43.1	-0.2
USA0B	Ussuriysk Arra	10.08	280		Pn	15 15 43.0	-0.2
USRK	Ussuriysk Ar.	10.08	280	P	Pn	15 15 43.2	-0.1
	baz=86,slow=13,SNR=54						
USRK				LR	LR	15 19 21.5	
	comp=Z,97nm,21.4s,baz=88,slow=36						
USRK	Ussuriysk Ar.	10.08	280		Pn	15 15 42.9	-0.4
SKR	Severo-Kuril’s	10.12	40	eP	Pn	15 15 43.7	-0.1
SKR	Severo-Kuril’s	10.12	40	⇓ ePN	Pn	15 15 42.7	-1.1
VLA	Vladivostok	10.22	273	eP	Pn	15 15 46.3	+1.2
VLA	Vladivostok	10.22	273	⇑ ePN	Pn	15 15 46.3	+1.2
VLA				pmax	pmax		
	comp=Z,54nm,1.0s						
INU	Inuyama	10.53	224	Pn	Pn	15 15 48.9	-0.5
MSHR	Mys Shultsa	10.82	271	⇓ ePN	Pn	15 15 52.8	-0.5
JHJ2	Mitsune	11.28	207	Pn	Pn	15 15 58.2	-1.4
JHJ	Hachijo jima 2	11.28	207	P	Pn	15 15 59.1	-0.6
	comp=Z,13nm,0.3s,baz=311,slow=19,SNR=4.4						
JHJ				S	Sn	15 17 53.3	-10
	comp=Z,44nm,0.3s,baz=251,slow=23,SNR=8.8						
JHJ				LR	LR	15 20 46.9	
	comp=Z,81nm,19.5s,baz=74,slow=40						
KLR	Kul'dur	11.40	306	P	Pn	15 16 01.5	+0.4
	comp=Z,1.1nm,0.3s,baz=102,slow=16,SNR=26						
KLR				LR	LR	15 20 36.8	
	comp=Z,165nm,20.7s,baz=126,slow=38						
KLR	Kul'dur	11.40	306	eP	Pn	15 16 01.8	+0.7
KLR	Kul'dur	11.40	306	c ePN	Pn	15 16 01.8	+0.7
KLR				pmax	pmax		
	comp=Z,17nm,1.5s						
MDJ	Mudanjiang	11.80	282	P	Pn	15 16 06.4	-0.2
MDJ				pmax	pmax		
	comp=Z,51nm,1.0s						
MDJ	Mudanjiang	11.80	282		Pn	15 16 05.8	-0.8
PEA0B	Petropavlovsk-	12.53	35	⇓ ePN	Pn	15 16 14.5	-1.7
PEA0B	Petropavlovsk-	12.53	35	Pn	Pn	15 16 14.2	-2.0
PETK	Petropavlovsk-	12.53	35	P	Pn	15 16 14.8	-1.5
	comp=Z,1.2nm,0.3s,baz=179,slow=12,SNR=37						
PETK	Petropavlovsk-	12.53	35		Pn	15 16 13.6	-2.7
PET	Petropavlovsk	12.87	37	eP	Pn	15 16 18.7	-2.1
PET	Petropavlovsk	12.87	37	PN	Pn	15 16 18.7	-2.1
PET	Petropavlovsk	12.87	37	Pn	Pn	15 16 18.7	-2.1
EKMR	Ekimchan	12.97	323	eP	Pn	15 16 21.9	-0.2
EKMR				AMB	AMB	15 16 28.0	
	comp=Z,20nm,0.8s						
CN2	Changchun	14.81	279	eP	Pn	15 16 44.2	-1.9
CN2				eS	Sn	15 19 29.4	+0.1
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,100nm,6.0s						
CN2				LR	LR		
	comp=Z,200nm,11.0s						
CN2				LR	LR		
	comp=Z,200nm,11.0s						
KSRS	Korea Array	14.88	253	P	Pn	15 16 46.7	-0.3
	comp=Z,0.2nm,0.3s,baz=54,slow=13,SNR=7.1						
KSRS				LR	LR	15 22 26.0	
	comp=Z,55nm,18.1s,baz=326,slow=36						
KSRS	Korea Array	14.88	253	eP	Pn	15 16 47.6	+0.6
KS19	Wonju Array Si	14.90	253	P	P	15 16 50.0	-0.6
JNU	Nakatsue	15.57	234	LR	LR	15 23 40.2	
	comp=Z,118nm,19.4s,baz=22,slow=40						
JNU	Nakatsue	15.57	234	Pn	Pn	15 16 56.6	+0.7
JNU				IAmb	IAmb	15 17 31.0	
	comp=Z,100nm,1.5s						
BMKR	Bomnak	15.88	322	eP	Pn	15 16 58.8	-0.7
BMKR				AMB	AMB	15 17 01.9	
	comp=Z,10.0nm,0.7s						
ZEA	Zeya	16.07	317	eP	Pn	15 17 00.5	-1.4
ZEA				AMB	AMB	15 17 04.8	
	comp=Z,50nm,0.7s						
ZEA				AMS	AMS	15 24 35.0	
	comp=Z,200nm,14.0s						
ZEA				AMS	AMS	15 24 35.0	
	comp=Z,300nm,14.0s						
ZEA				AMS	AMS	15 24 35.0	
	comp=Z,50nm,14.0s						
ZEA	Zeya	16.07	317	eP	Pn	15 17 00.5	-1.4
ZEA				pmax	pmax		
	comp=N,38nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,50nm,0.7s						
ZEA				MLR	MLR		
	comp=Z,300nm,15.0s						
ZEA				MLR	MLR		
	comp=E,200nm,14.0s						
JCJ	Chichijima	16.50	192	P	Pn	15 17 07.3	0.0
	comp=E,38nm,0.3s,baz=294,slow=21,SNR=6.6						
MA2	Magadan	16.52	9	P	Pn	15 17 07.0	-0.4
	comp=E,1.6nm,0.3s,baz=190,slow=10,SNR=17						
MA2				LR	LR	15 22 43.5	
	comp=E,103nm,21.0s,baz=202,slow=34						
MA2	Magadan	16.52	9	eP	Pn	15 17 07.3	0.0
MA2	Magadan	16.52	9	d eP	Pn	15 17 07.3	0.0
MA2				pmax	pmax		
	comp=Z,16nm,0.8s						
MA2	Magadan	16.52	9		Pn	15 17 07.0	-0.4
MA2				IAmb	IAmb	15 17 15.4	
	comp=Z,48nm,0.5s						
KROS	Kirovskiy	16.59	318	eP	Pn	15 17 08.0	-0.4
KROS				AMB	AMB	15 17 11.1	
	comp=Z,7.0nm,0.8s						
KROS				AMB	AMB	15 17 11.1	
	comp=Z,6.0nm,0.8s						
KROS				AMB	AMB	15 17 11.1	
	comp=Z,10.0nm,0.8s						
HIA	Hailar	18.95	297	P	P	15 17 33.1	-2.0
HIA				pmax	pmax		
	comp=Z,20nm,0.7s						
HIA	Hailar	18.95	297	P	P	15 17 33.1	-2.0
SEY	Seymchan	19.98	9	P	P	15 17 44.6	-1.5
	comp=Z,1.8nm,0.3s,baz=181,slow=9.3,SNR=79						
SMY	Shemya	20.95	54	P	Pn	15 17 58.9	-1.2
SMY				pmax	pmax		
	comp=Z,487nm,2.0s						
SMY	Shemya	20.95	54	P	Pn	15 17 58.9	-1.3
YAK	Yakutsk	21.01	338	P	P	15 17 54.1	-3.2
	comp=Z,20nm,0.4s,baz=158,slow=2.5,SNR=34						
YAK	Yakutsk	21.01	338	eP	P	15 17 52.7	-4.6
YAK				eS	S	15 21 37.2	-8.6
YAK				e*SS	Sn	15 22 05.5	+7.7
YAK				e		15 29 09.4	
YAK				pmax	pmax		
	comp=Z,39nm,0.8s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,8.0nm,0.9s						
YAK				smax	smax		
	comp=N,106nm,1.8s						
YAK				smax	smax		
	comp=E,77nm,1.8s						
YAK	Yakutsk	21.01	338	P	P	15 17 53.8	-3.5
YAK				IAmb	IAmb	15 17 56.2	
	comp=Z,46nm,0.7s						
JOW	Kunigami	21.82	227	P	P	15 18 05.9	-0.3
JOW				IAmb	IAmb	15 18 42.6	
	comp=Z,46nm,1.2s						
BJI	Beijing	22.37	272	P	P	15 18 11.7	-0.2
BJI				pP	pP	15 18 30.4	+0.2
BJI				PcP	PcP	15 22 01.3	-2.2
BJI				S	S	15 22 11.2	-0.2
BJI				pmax	pmax		
	comp=Z,23nm,1.0s						
BJT	Baijiatuau	22.38	272	P	P	15 18 11.1	-1.0
BJT				pmax	pmax		
	comp=Z,16nm,0.7s						

BJT	Baijiatuau	22.38	272	P	P	15 18 11.1	-1.0
TIA	Tai'an	23.14	262	P	P	15 18 19.0	-0.8
TIA				pmax	pmax		
	comp=Z,24nm,0.8s						
NJ2	Nanjing	24.07	251	eP	P	15 18 27.8	-0.4
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BOD	Bodaibo	24.58	317	eP	P	15 18 29.5	-3.1
BOD				pmax	pmax		
	comp=Z,16nm,1.1s						
HHC	Hu-ho-hao-te	25.48	276	eP	P	15 18 43.2	+2.1
HHC				pmax	pmax		
	comp=Z,84nm,0.8s						
HHC				pmax	pmax		
	comp=Z,300nm,4.0s						
YOJ	Yonaguni jima	26.60	232	P	P	15 18 50.3	-0.9
YOJ				pmax	pmax		
	comp=Z,193nm,1.2s						
YOJ	Yonaguni jima	26.60	232	P	P	15 18 50.3	-0.9
BTO	Baotou	26.67	276	eP	P	15 18 54.5	+2.7
BILL	Bilibino	27.00	17	eP	P	15 18 53.1	-1.2
BILL	Bilibino	27.00	17	⇓eP	P	15 18 53.1	-1.2
BILL				pmax	pmax		
	comp=Z,9.0nm,1.4s						
BILL	Bilibino	27.00	17	P	P	15 18 52.5	-1.9
ULN	Ulaanbaatar	27.33	293	eP	P	15 18 58.3	+0.6
ULN	Ulaanbaatar	27.33	293	P	P	15 18 58.3	+0.6
ULN				pmax	pmax		
	comp=Z,47nm,0.8s						
ULN	Ulaanbaatar	27.33	293	P	P	15 18 58.2	+0.6
ULN				IAmb	IAmb	15 18 59.5	
	comp=Z,47nm,0.8s						
SONM	Songino Array	27.77	293	P	P	15 19 02.5	+0.9
	comp=Z,92nm,0.7s,baz=83,slow=8.5,SNR=533						
SONM				ScP	ScP	15 25 47.1	-0.8
	comp=Z,0.8nm,0.8s,baz=162,slow=0.3,SNR=4.6						
SONM				LR	LR	15 30 54.5	
	comp=Z,189nm,18.1s,baz=2.0,slow=38						
SONM	Songino Array	27.77	293	P	P	15 19 02.2	+0.6
WHN	Wuhan	28.08	253	⇓P	P	15 19 11.2	+6.9
TPUB	Ta-pu	28.88	234	P	P	15 19 11.9	+0.3
TPUB				IAmb	IAmb	15 19 27.7	
	comp=Z,86nm,1.5s						
TWG	Pinlang	28.99	233	P	P	15 19 12.8	+0.3
TLY	Talaya	29.36	301	P	P	15 19 16.3	+0.8
	comp=Z,7.7nm,0.7s,baz=148,slow=1.6,SNR=9.9						
TLY	Talaya	29.36	301	eP	P	15 19 15.8	+0.3
TLY	Talaya	29.36	301	c iP	P	15 19 15.8	+0.3
TLY				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TLY	Talaya	29.36	301	P	P	15 19 15.4	-0.2
KNMB	Chin-men Tao	29.38	239	P	P	15 19 15.9	-0.1
H11N2	WAKE ISLAND Hy	29.43	137	T	T	15 50 28.8	
	baz=328,slow=75,SNR=670						
H11N1	WAKE ISLAND Hy	29.44	137	T	T	15 50 24.9	
	baz=328,slow=75,SNR=1611						
H11N3	WAKE ISLAND Hy	29.45	137	T	T	15 50 29.6	
	baz=328,slow=75,SNR=315						
TIXI	Tiksi	29.57	349	P	P	15 19 12.9	-4.2
	comp=Z,3.0nm,0.7s,baz=286,slow=1.4,SNR=10						
TIXI	Tiksi	29.57	349	⇓eP	P	15 19 13.5	-3.6
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TIXI	Tiksi	29.57	349	P	P	15 19 12.9	-4.2
ZAK	Zakamensk	29.63	299	eP	P	15 19 18.3	+0.3
ZAK	Zakamensk	29.63	299	eP	P	15 19 18.3	+0.3
ZAK				e		15 22 20.2	
ZAK				pmax	pmax		
	comp=Z,39nm,1.0s						
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
XAN	Xi'an	30.10	265	P	P	15 19 22.1	-0.2
XAN				pmax	pmax		
	comp=Z,38nm,1.7s						
XAN	Xi'an	30.10	265	P	P	15 19 22.1	-0.2
XAN				IAmb	IAmb	15 19 30.8	
	comp=Z,38nm,1.7s						
H11S1	WAKE ISLAND Hy	30.37	138	T	T	15 51 35.0	
	baz=330,slow=76,SNR=2444						
H11S3	WAKE ISLAND Hy	30.38	138	T	T	15 51 37.7	
	baz=330,slow=76,SNR=2999						
H11S2	WAKE ISLAND Hy	30.39	138	T	T	15 51 30.5	
	baz=330,slow=76,SNR=2139						
MOY	Mondy	31.01	301	eP	P	15 19 30.9	+0.7
MOY	Mondy	31.01	301	eP	P	15 19 30.9	+0.7
MOY				pmax	pmax		
	comp=Z,26nm,2.3s						
GAMB	Gambell	31.56	35	P	P	15 19 35.9	+1.2
LZH	Lanzhou	32.86	272	eP	P	15 19 47.6	+1.0
LZH				pP	pP	15 20 10.1	+2.3
LZH				sP	sP	15 20 21.7	+3.2
LZH				ePP	PP	15 21 04.5	+2.0
LZH				pmax	pmax		
	comp=Z,22nm,1.0s						
LZH				pmax	pmax		
	comp=Z,100nm,4.6s						
LZH				LR	LR		
	comp=Z,270nm,13.2s						
LZH				LR	LR		
	comp=Z,230nm,13.6s						
LZH				LR	LR		
	comp=Z,280nm,14.1s						
ANM	Nome	34.44	35	P	P	15 20 01.2	+1.3
ANM				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ANM	Nome	34.44	35	P	P	15 20 01.2	+1.3
ANM				IAmb	IAmb	15 20 02.7	
	comp=Z,7.0nm,0.6s						
GTA	Gaotai	34.45	280	eP	P	15 20 01.5	+1.2
GTA				PcP	PcP	15 22 35.1	+1.4
GTA				S	S	15 25 24.2	+2.4
GTA				ScS	ScS	15 30 13.7	+0.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,59nm,6.5s						
GTA				LR	LR		
	comp=Z,190nm,16.5s						
GTA				LR	LR		
	comp=Z,160nm,17.8s						
CD2	Chengdu	35.44	264	P	P	15 20 08.1	-0.8
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GYA	Guiyang	35.92	255	eP	P	15 20 18.9	+5.8
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
RDOG	Red Dog Mine	36.33	30	P	P	15 20 16.4	+0.4
CHGN	Chignik	37.16	50	P	P	15 20 22.6	-0.4
TTA	Tatalina	38.32	39	P	P	15 20 34.0	+1.1
TTA	Tatalina	38.32	39	P	P	15 20 34.0	+1.1
SVW2	Sparrevohn	38.48	42	P	P	15 20 36.0	+1.8
SVW2				IAmb	IAmb	15 20 57.3	
	comp=Z,8.4nm,0.7s						
CHIR	Chirikof Islan	38.76	50	P	P	15 20 37.1	+0.5
QIZ	Qiongzhong	38.76	243	P	P	15 20 36.8	-0.2
NRIK	Noril'sk	39.15	331	P	P	15 20 38.0	-1.7
	comp=Z,5.3nm,0.4s,baz=193,slow=2.2,SNR=17						
NRIK				ScP	ScP	15 26 27.6	+0.5
	comp=Z,1.0nm,0.4s,baz=126,slow=2.7,SNR=4.6						
NRIK				LR	LR	15 37 31.0	
	comp=Z,130nm,19.0s,baz=307,slow=37						
IMAR	Indian Mountai	39.49	34	P	P	15 20 43.0	+0.5
KMI	Kunming	39.53	257	P	P	15 20 45.6	+2.0
KMI				pmax	pmax		
	comp=Z,17nm,0.7s						
KMI	Kunming	39.53	257	P	P	15 20 42.3	-1.3
KMI				pmax	pmax		
	comp=Z,26nm,0.5s						
KMI	Kunming	39.53	257	P	P	15 20 42.3	-1.3
OHAK	Old Harbor	39.88	48	P	P	15 20 46.1	+0.3
RSO	Redoubt South	39.88	43	P	P	15 20 47.0	+0.9
PPLA	Purkeypile	40.07	39	P	P	15 20 49.5	+1.9
PPLA				IAmb	IAmb	15 21 09.3	
	comp=Z,12nm,0.8s						
KDAK	Kodiak Island	40.20	47	P	P	15 20 46.5	-1.9
	comp=Z,26nm,0.7s,baz=279,slow=2.5,SNR=17						
KDAK	Kodiak Island	40.20	47	P	P	15 20 48.8	+0.3
KDAK				pmax	pmax		
	comp=Z,102nm,1.4s						
KDAK	Kodiak Island	40.20	47	P	P	15 20 48.8	+0.3
SKT	Skwentna	40.40	40	P	P	15 20 51.1	+1.0
SKT				IAmb	IAmb	15 20 55.2	
	comp=Z,19nm,1.5s						
HOM	Homer	40.49	44	P	P	15 20 51.4	+0.5
ZAA0	Zalesovo Array	40.50	307	P	P	15 20 49.9	-1.1
ZAA0				IAmb	IAmb	15 20 52.5	
	comp=Z,28nm,1.0s						
ZALV	Zalesovo Beam	40.50	307	P	P	15 20 50.5	-0.5
	comp=Z,13nm,0.4s,baz=93,slow=7.9,SNR=57						
ZALV				PcP	PcP	15 22 52.1	+0.4
	comp=Z,8.2nm,0.6s,baz=90,slow=3.3,SNR=9.7						
ZALV	Zalesovo Beam	40.50	307	P	P	15 20 49.7	-1.3
ZALV					PcP	15 22 51.9	+0.1
BPAW	Bear Paw Mtn.	40.59	37	P	P	15 20 52.3	+0.5
BPAW				IAmb	IAmb	15 20 54.9	
	comp=Z,12nm,0.7s						
KTH	Kantishna Hill	40.63	38	P	P	15 20 53.6	+1.5
KTH				IAmb	IAmb	15 20 55.7	
	comp=Z,27nm,0.7s						
MLY	Manley	40.70	36	P	P	15 20 54.2	+1.5
MLY				IAmb	IAmb	15 20 56.3	
	comp=Z,20nm,1.0s						
CNPM	China Poot	40.71	44	P	P	15 20 53.7	+1.0
SUA	Susitna One	40.80	41	P	P	15 20 54.5	+0.9
SUA				IAmb	IAmb	15 20 57.3	
	comp=Z,11nm,0.8s						
BRLK	Bradley Lake	40.87	44	P	P	15 20 55.1	+1.1
BRLK				IAmb	IAmb	15 22 06.7	
	comp=Z,56nm,1.6s						
TRF	Thorofare Moun	40.92	38	P	P	15 20 55.6	+1.0
TRF				IAmb	IAmb	15 20 58.9	
	comp=Z,15nm,0.7s						
COLD	Coldfoot	40.98	32	P	P	15 20 56.2	+1.4
BWN	Browne	41.26	37	P	P	15 20 59.5	+2.3
TOLK	Toolik Lake Re	41.29	30	P	P	15 20 58.2	+0.8
TOLK				IAmb	IAmb	15 21 00.7	
	comp=Z,9.3nm,0.5s						
TOLK	Toolik Lake Re	41.29	30	P	P	15 20 58.4	+1.0
	baz=266,SNR=9.5						
RC01	Rabbit Creek A	41.31	42	P	P	15 20 58.3	+0.6
RC01				IAmb	IAmb	15 21 20.0	
	comp=Z,17nm,0.8s						
WMQ	Urumqi	41.38	291	eP	P	15 20 59.4	+0.9
WMQ				pP	pP	15 21 22.1	+1.9
WMQ				pmax	pmax		
	comp=Z,23nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,280nm,6.5s						
WMQ				LR	LR		
	comp=Z,260nm,7.3s						
WMQ				LR	LR		
	comp=Z,230nm,6.7s						
WMQ				LR	LR		
	comp=Z,180nm,7.3s						
WMQ	Urumqi	41.38	291	P	P	15 20 58.3	-0.2
WMQ				pmax	pmax		
	comp=Z,37nm,1.1s						
WMQ	Urumqi	41.38	291	P	P	15 20 58.3	-0.2
WMQ				IAmb	IAmb	15 21 03.2	
	comp=Z,37nm,1.1s						
NEA	Nenana	41.42	36	P	P	15 20 59.7	+1.3
MCK	McKinley	41.51	38	P	P	15 21 00.1	+0.8
MCK				pmax	pmax		
	comp=Z,11nm,0.6s						
MCK	McKinley	41.51	38	P	P	15 21 00.1	+0.8
MCK				IAmb	IAmb	15 21 01.6	
	comp=Z,11nm,0.6s						
SEW	Seward	41.55	43	P	P	15 20 59.6	+0.1
SEW				IAmb	IAmb	15 21 31.0	
	comp=Z,63nm,1.4s						
PMR	Palmer	41.56	41	P	P	15 20 59.9	+0.3
PMR				pmax	pmax		
	comp=Z,23nm,1.4s						
PMR	Palmer	41.56	41	P	P	15 20 59.9	+0.3
PMR				IAmb	IAmb	15 21 31.4	
	comp=Z,23nm,1.4s						
RND	Reindeer	41.56	38	P	P	15 20 59.9	+0.2
RND				pmax	pmax		
	comp=Z,18nm,0.6s						
RND	Reindeer	41.56	38	P	P	15 20 59.9	+0.2
RND				IAmb	IAmb	15 21 02.5	
	comp=Z,18nm,0.6s						
GHO	Glory Hole Cre	41.65	41	P	P	15 21 01.2	+0.7
GHO				IAmb	IAmb	15 21 22.6	
	comp=Z,13nm,0.7s						
MDM	Murphy Dome	41.77	36	P	P	15 21 02.2	+0.8
WRH	Wood River Hil	41.85	36	P	P	15 21 02.9	+0.9
WRH				IAmb	IAmb	15 21 06.0	
	comp=Z,16nm,0.8s						
KNK	Knik Glacier	41.90	41	P	P	15 21 03.2	+0.8
KNK				IAmb	IAmb	15 21 25.4	
	comp=Z,16nm,0.8s						
SML	Sawmill	41.92	40	P	P	15 21 03.5	+0.8
SML				IAmb	IAmb	15 21 25.6	
	comp=Z,27nm,0.7s						
TCOL	CIGO, UAF Yank	41.93	36	P	P	15 21 04.3	+1.7
	baz=272,SNR=33						
COLA	College	41.94	36	P	P	15 21 03.6	+1.0
COLA				pmax	pmax		
	comp=Z,61nm,0.8s						
COLA	College	41.94	36	P	P	15 21 03.6	+1.0
CCB	Clear Creek Bu	41.96	36	P	P	15 21 03.8	+0.9
CCB				IAmb	IAmb	15 21 06.8	
	comp=Z,12nm,0.6s						
POKR	Poker Plat Res	42.10	35	P	P	15 21 05.7	+1.7
	baz=272,SNR=30						
DHY	Denali Highway	42.25	38	P	P	15 21 06.2	+0.7
DHY				IAmb	IAmb	15 21 10.5	
	comp=Z,13nm,0.7s						
HDA	Harding Lake	42.35	36	P	P	15 21 06.3	+0.2
HDA				IAmb	IAmb	15 21 09.1	
	comp=Z,22nm,0.6s						
HDA	Harding Lake	42.35	36	P	P	15 21 06.5	+0.5
	baz=274,SNR=12						
IL31		42.35	36	P	P	15 21 06.5	+0.6
IL31				IAmb	IAmb	15 21 09.6	
	comp=Z,54nm,1.2s						
ILAR	Eielson Array	42.35	36	P	P	15 21 06.7	+0.7
	comp=Z,14nm,0.6s,baz=251,slow=4.3,SNR=192						
ILAR	Eielson Array	42.35	36	P	P	15 21 06.3	+0.3
SCM	Sheep Creek Mo	42.39	40	P	P	15 21 07.4	+0.9
SCM				pmax	pmax		
	comp=Z,141nm,2.0s						
SCM	Sheep Creek Mo	42.39	40	P	P	15 21 07.4	+0.9
GLI	Glacier Island	42.62	42	P	P	15 21 08.9	+0.7
PRP	Porcupine Dome	42.88	35	P	P	15 21 11.9	+1.4
FID	Port Fidalgo	42.93	42	P	P	15 21 11.3	+0.5
FYU	Fort Yukon	42.94	33	P	P	15 21 12.6	+1.8
HIN	Hinchinbrook I	42.97	42	P	P	15 21 12.3	+1.1
PAX	Paxson	43.13	38	P	P	15 21 13.7	+1.2
PAX				pmax	pmax		
	comp=Z,23nm,1.6s						
PAX	Paxson	43.13	38	P	P	15 21 13.7	+1.2
PAX				IAmb	IAmb	15 21 37.2	
	comp=Z,23nm,1.6s						
BMAR	Burnt Mountain	43.16	32	P	P	15 21 14.3	+1.8
EYAK	Cordova Ski Ar	43.32	42	P	P	15 21 15.6	+1.7
RIDG	Independent Ri	43.33	37	P	P	15 21 14.2	+0.2
RIDG				IAmb	IAmb	15 21 16.9	
	comp=Z,16nm,0.7s						
SCRK	Sand Creek	43.68	37	P	P	15 21 17.3	+0.4
SCRK				IAmb	IAmb	15 21 19.2	
	comp=Z,22nm,0.8s						
DOT	Dot Lake	43.68	37	P	P	15 21 17.1	+0.3
DOT				IAmb	IAmb	15 21 22.3	
	comp=Z,13nm,0.7s						
RAGM	Ragged Mountai	43.87	42	P	P	15 21 19.8	+1.4
MENT	Mentasta	43.93	38	P	P	15 21 20.4	+1.6
MENT				IAmb	IAmb	15 21 28.6	
	comp=Z,12nm,0.6s						
MK31	Makanchi Array	43.95	298	eP	P	15 21 19.3	+0.1
MK31	Makanchi Array	43.95	298	P	P	15 21 19.5	+0.3
MKAR	Makanchi Array	43.95	298	P	P	15 21 19.7	+0.5
	comp=Z,24nm,0.5s,baz=80,slow=9.2,SNR=272						
MKAR				LR	LR	15 42 20.1	
	comp=Z,104nm,18.6s,baz=316,slow=40						
MKAR	Makanchi Array	43.95	298	P	P	15 21 19.6	+0.4
GLB	Gilahina Butte	44.11	41	P	P	15 21 21.4	+1.1
GLB				IAmb	IAmb	15 21 35.8	
	comp=Z,12nm,0.9s						
MAKZ	Makanchi	44.14	298	P	P	15 21 21.1	+0.4
MAKZ				pmax	pmax		
	comp=Z,23nm,0.6s						
MAKZ	Makanchi	44.14	298	P	P	15 21 21.1	+0.4
MAKZ				IAmb	IAmb	15 21 23.0	
	comp=Z,23nm,0.6s						
VRDI	Verde Repeater	44.32	41	P	P	15 21 23.1	+1.0
VRDI				IAmb	IAmb	15 23 07.4	
	comp=Z,79nm,1.9s						
MCARA	McCarthy VSAT	44.49	41	P	P	15 21 25.0	+1.7
MCARA				IAmb	IAmb	15 21 46.7	
	comp=Z,16nm,0.9s						
CRQM	Cirque	44.55	41	P	P	15 21 25.5	+1.5
CRQM				IAmb	IAmb	15 22 00.3	
	comp=Z,44nm,1.0s						
TGL	Tana Glacier	44.70	41	P	P	15 21 26.6	+1.6
BCAR	Beaver Creek A	44.78	38	P	P	15 21 27.1	+1.5
EGAK	Eagle	44.79	36	P	P	15 21 26.2	+0.6
BALM	Baldy	44.88	41	P	P	15 21 27.2	+0.7
BALM				IAmb	IAmb	15 21 30.1	
	comp=Z,12nm,0.7s						
KURK	Kurchatov	44.98	304	eP	P	15 21 27.4	+0.1
KURK	Kurchatov	44.98	304	P	P	15 21 27.4	+0.1
KURK				pmax	pmax		
	comp=Z,66nm,0.9s						
KURK	Kurchatov	44.98	304	P	P	15 21 27.4	+0.1
BARN	Barnard Glacie	45.20	41	P	P	15 21 30.5	+1.4
BARN				IAmb	IAmb	15 21 56.5	
	comp=Z,41nm,1.4s						
LSA	Lhasa	45.27	271	P	P	15 21 31.1	+0.6
LSA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LSA	Lhasa	45.27	271	P	P	15 21 31.1	+0.6
CTGM	Chitina Glacie	45.38	41	P	P	15 21 31.9	+1.4
CTGM				IAmb	IAmb	15 21 36.7	
	comp=Z,16nm,0.6s						
TNTI	Ternate	45.51	206	P	P	15 21 32.3	+0.4
TNTI				IAmb	IAmb	15 22 58.6	
	comp=Z,36nm,1.0s						
DAWY	Dawson	45.66	36	P	P	15 21 33.4	+0.8
SIJI	Sorong	45.94	201	P	P	15 21 35.0	-0.2
	comp=Z,16nm,0.7s,baz=22,slow=8.7,SNR=6.2						
SIJI				LR	LR	15 39 33.1	
	comp=Z,65nm,18.8s,baz=181,slow=34						
PCA	Pinnacle	46.09	42	P	P	15 21 37.0	+1.0
CHTO	Chiang Mai	46.28	253	P	P	15 21 39.6	+1.7
CHTO	Chiang Mai	46.28	253	P	P	15 21 38.2	+0.3
EPYK	Eagle Plains	46.36	33	P	P	15 21 39.1	+1.1
EPYK	Eagle Plains	46.36	33	P	P	15 21 39.9	+1.9
	baz=280						
PBKT	Sadao Pong	46.42	249	P	P	15 21 38.8	-0.2
YKU2	Yakutat	46.52	43	P	P	15 21 40.4	+1.2
CM31	Chiang Mai Arr	46.52	253	P	P	15 21 39.1	-0.7
CMAR	Chiang Mai Arr	46.52	253	P	P	15 21 40.9	+1.0
	comp=Z,1.1nm,0.6s,baz=44,slow=7.4,SNR=15						
CMAR				PcP	PcP	15 23 13.7	+0.9
	comp=Z,0.9nm,0.5s,baz=15,slow=1.6,SNR=5.1						
CMAR				LR	LR	15 43 26.0	
	comp=Z,14nm,19.0s,baz=175,slow=39						
CMAR	Chiang Mai Arr	46.52	253	P	P	15 21 39.5	-0.3
INK	Inuvik	47.21	30	P	P	15 21 45.6	+1.1
	comp=Z,12nm,0.3s,baz=295,slow=7.4,SNR=101						
INK	Inuvik	47.21	30	P	P	15 21 45.4	+0.9
INK				IAmb	IAmb	15 21 46.8	
	comp=Z,15nm,0.7s						
HYT	Haines Junctio	47.23	40	P	P	15 21 47.1	+2.1
RABL	Rabaul	47.67	172	P	P	15 21 49.1	+0.4
FAKI	Fak Fak	47.67	199	P	P	15 21 48.4	-0.3
FAKI				IAmb	IAmb	15 22 29.1	
	comp=Z,42nm,1.2s						
MRSI	Marisa	47.75	213	P	P	15 21 49.4	+0.1
	comp=Z,524nmcomp=Z,42nm,1.1s						
WHY	Whitehorse	48.52	40	P	P	15 21 55.6	+0.8
WHY				IAmb	IAmb	15 21 59.5	
	comp=Z,46nm,1.9s						
BRVK	Borovoye	49.08	309	eP	P	15 21 58.9	-0.3
BRVK	Borovoye	49.08	309	deP	P	15 21 58.9	-0.3
BRVK				pmax	pmax		
	comp=Z,39nm,1.1s						
BRVK	Borovoye	49.08	309	P	P	15 21 59.2	0.0
TAPN	Taplejung	49.09	271	eP	P	15 22 01.1	+1.2
KDJ	Kajisay	49.13	294	P	P	15 22 01.2	+1.3
KDJ				pmax	pmax		
	comp=Z,506nm,2.0s						
KDJ	Kajisay	49.13	294	P	P	15 22 01.2	+1.3
APSI	Ampana	49.13	213	P	P	15 22 01.6	+1.7
JIS	Juneau Island	49.50	43	P	P	15 22 04.2	+2.0
ODAN	Odare	49.61	271	eP	P	15 22 04.6	+0.8
JIRN	Jiri	50.02	272	eP	P	15 22 07.8	+0.7
GUN	Gumba	50.11	273	eP	P	15 22 08.3	+0.6
RAMN	Ramite	50.13	271	eP	P	15 22 08.1	+0.3
	comp=Z,27nm,0.6s						
NRN	Naryn	50.23	293	P	P	15 22 09.9	+1.4
NRN				pmax	pmax		
	comp=Z,78nm,1.9s						
NRN	Naryn	50.23	293	P	P	15 22 09.8	+1.4
C36M	Paulatuk	50.26	27	P	P	15 22 08.3	+0.5
C36M				IAmb	IAmb	15 22 10.4	
	comp=Z,9.0nm,0.6s						
C36M	Paulatuk	50.26	27	P	P	15 22 08.6	+0.8
	baz=288,SNR=17						
PKI	Pulchoki	50.65	273	eP	P	15 22 11.9	+0.2
PKIN	Phulchoki	50.65	273	eP	P	15 22 11.8	+0.1
AAK	Ala-Archa	50.69	295	eP	P	15 22 12.1	+0.4
AAK	Ala-Archa	50.69	295	⇑eP	P	15 22 12.1	+0.4
AAK				pmax	pmax		
	comp=Z,31nm,1.9s						
AAK	Ala-Archa	50.69	295	P	P	15 22 11.9	+0.2
AAK				IAmb	IAmb	15 22 14.8	
	comp=Z,33nm,1.4s						
DMN	Daman	50.84	273	eP	P	15 22 13.7	+0.6
	comp=Z,19nm,0.7s						
GKN	Gorkha	50.96	274	eP	P	15 22 14.0	+0.1
KSH	Kashi	51.14	291	P	P	15 22 19.3	+4.2
KSH				pP	pP	15 22 42.3	+4.8
KSH				S	S	15 29 29.6	+3.5
KSH				sS	sS	15 30 10.0	+5.5
KSH				SS	SS	15 33 04.3	+2.3
KSH				pmax	pmax		
	comp=Z,19nm,1.1s						
KSH				pmax	pmax		
	comp=Z,390nm,9.0s						
KSH				LR	LR		
	comp=Z,560nm,12.5s						
KSH				LR	LR		
	comp=Z,260nm,12.0s						
DANN	Dangsing	51.40	275	eP	P	15 22 18.1	+0.7
	comp=Z,101nm,0.7s						
DLBC	Dease Lake	51.59	42	P	P	15 22 19.8	+1.7
	comp=Z,3.5nm,0.7s,baz=281,slow=1.3,SNR=4.9						
DLBC	Dease Lake	51.59	42	P	P	15 22 20.2	+2.2
SVE	Sverdlovsk	52.79	317	eP	P	15 22 27.2	+0.3
SVE	Sverdlovsk	52.79	317	eP	P	15 22 27.2	+0.3
SVE				pmax	pmax		
	comp=Z,88nm,1.3s						
KK31	Karatay Array	53.08	298	eP	P	15 22 29.2	0.0
KK31	Karatay Array	53.08	298	P	P	15 22 29.1	0.0
KK31				IAmb	IAmb	15 22 32.6	
	comp=Z,16nm,0.7s						
KKAR	Karatay Array	53.08	298	P	P	15 22 29.0	-0.2
KKAR				pmax	pmax		
	comp=Z,16nm,0.7s						
KKAR	Karatay Array	53.08	298	P	P	15 22 29.0	-0.2
KKAR	Karatay Array	53.08	298	P	P	15 22 29.1	-0.2
KKAR				IAmb	IAmb	15 22 32.6	
	comp=Z,16nm,0.7s						
KAPI	Kappang	53.63	213	P	P	15 22 34.2	+0.8
	comp=Z,3.3nm,0.3s,baz=207,slow=14,SNR=6.0						
HPAH	Hawaii Prepara	53.70	96	P	P	15 22 34.0	-0.1
ARU	Arti	54.00	317	eP	P	15 22 35.5	-0.2
ARU	Arti	54.00	317	c iP	P	15 22 35.5	-0.2
ARU				*PP	pP	15 22 55.1	-3.2
ARU						15 24 36.1	
ARU				S	S	15 30 04.0	-0.2
ARU				SS	SS	15 33 52.7	+6.6
ARU				pmax	pmax		
	comp=Z,105nm,1.3s						
ARU	Arti	54.00	317	P	P	15 22 35.5	-0.2
HNR	Honiara	54.08	163	P	P	15 22 37.9	+1.2
HNR				pmax	pmax		
	comp=Z,111nm,1.0s						
HNR	Honiara	54.08	163	P	P	15 22 37.9	+1.2
BTK	Batken	54.35	294	P	P	15 22 38.3	-0.3
BTK				pmax	pmax		
	comp=Z,12nm,1.0s						
BTK	Batken	54.35	294	P	P	15 22 38.3	-0.3
BTK				IAmb	IAmb	15 23 04.2	
	comp=Z,12nm,1.0s						
HATHI	Halemaʻumaʻu T	54.40	97	P	P	15 22 37.5	-1.7
RIM	Rim	54.41	97	P	P	15 22 37.0	-2.4
PUH	Pauahi	54.47	97	P	P	15 22 39.5	-0.3
JCUZ	Jacuzzi	54.54	96	P	P	15 22 38.7	-1.6
NOR	Nord	54.95	357	i P	P	15 22 41.0	-1.2
	comp=Z,7.6nm,0.8s						

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NOR   Nord              54.95 357 i P    P      15 22 41.0 -1.2
NOR                                 pmax pmax
      comp=Z,8.0nm,0.8s
KBS   Kingsbay          55.02 350   P    P      15 22 43.7 +0.9
KBS                                 pmax pmax
      comp=Z,129nm,1.7s
KBS   Kingsbay          55.02 350   P    P      15 22 43.7 +0.9
GAR   Garm              55.22 293   P    P      15 22 45.0 +0.1
GAR                                 IAmb IAmb   15 23 09.5
      comp=Z,31nm,1.1s
RES   Resolute Bay      55.61  16   P    P      15 22 47.3 +0.3
RES                                 pmax pmax
      comp=Z,110nm,0.7s
RES   Resolute Bay      55.61  16   P    P      15 22 47.3 +0.3
NIL   Nilore            56.01 286   P    P      15 22 50.5 -0.1
NIL                                 IAmb IAmb   15 22 54.4
      comp=Z,14nm,0.7s
NIL                                      pP     15 23 13.1 -0.3
CHGR  Chuyangaron       56.17 293   P    P      15 22 51.4 -0.4
CHGR                                pP   pP     15 23 14.3 -0.2
SOEI  Soe               56.41 206   P    P      15 22 52.5 -1.0
SOEI                                IAmb IAmb   15 23 46.5
      comp=Z,25nm,1.2s
AB31  Akbulak array     56.59 308   P    P      15 22 54.9 +0.5
ABKAR Akbulak array     56.59 308   P    P      15 22 55.0 +0.6
YKA   Yellowknife Ar    56.64  33   P    P      15 22 55.2 +0.6
      comp=Z,5.9nm,0.8s,baz=304,slow=6.4,SNR=61
COEN  Coen              57.08 183   P    P      15 22 58.9 +0.7
PRGR  Permogore         57.38 326  eP    P      15 22 59.0 -0.8
PRGR                                pmax pmax
      comp=Z,68nm,0.9s
MTN   Manton Dam        57.53 197   P    P      15 23 01.0 -0.3
LVZ   Lovozero          57.77 335   P    P      15 23 02.5  0.0
LVZ                                 pmax pmax
      comp=Z,318nm,2.0s
LVZ   Lovozero          57.77 335   P    P      15 23 02.5  0.0
PSI   Prapat            57.96 239   P    P      15 23 03.6 -1.0
RPSI  Rantau Prapat     58.04 239   P    P      15 23 03.6 -1.4
BASI  Baing, Sumba      58.09 210   P    P      15 23 07.5 +2.2
      comp=Z,64nm,0.8s
TULEG Thule             58.36   9   P    P      15 23 05.6 -0.8
KBL   Kabul             58.45 289   P    P      15 23 07.4 -0.6
KBL                                      pP     15 23 29.8 -1.1
KBL                                 IAmb IAmb   15 23 31.1
      comp=Z,7.9nm,0.7s
KEV   Kevo              58.75 339   P    P      15 23 09.3  0.0
KEV                                 pmax pmax
      comp=Z,212nm,2.0s
KEV   Kevo              58.75 339   P    P      15 23 09.2  0.0
TMCR  Tamitsa           58.87 331  eP    P      15 23 10.1  0.0
TMCR                                pmax pmax
      comp=Z,118nm,1.3s
HAMF  Hammerfest        58.98 341  eP    P      15 23 10.2 -0.6
ARCES ARCESS Array B    59.29 339   P    P      15 23 13.1 +0.1
      comp=Z,9.1nm,0.5s,baz=39,slow=7.3,SNR=50
ARCES ARCESS Array B    59.29 339   P    P      15 23 13.0  0.0
ARCES ARCESS Array B    59.29 339   P    P      15 23 13.0  0.0
ARE0  ARCESS Array S    59.29 339  eP    P      15 23 13.9 +0.9
ARE0  ARCESS Array S    59.29 339   P    P      15 23 13.0  0.0
ARE0                                IAmb IAmb   15 24 48.4
      comp=Z,13nm,2.0s
SDSI  Sungai Dareh      59.36 234   P    P      15 23 14.9 +0.7
SDSI  Sungai Dareh      59.36 234   P    P      15 23 15.3 +1.1
      comp=Z,761nmcomp=Z,27nm,1.0s
LLLB  Lillooet          59.40  48   P    P      15 23 14.8 +0.8
LLLB                                IAmb IAmb   15 25 23.4
      comp=Z,24nm,1.7s
DAG   Danmarks Havn     59.75 356 i P    P      15 23 15.7 -0.3
DAG   Danmarks Havn     59.75 356 i P    P      15 23 15.7 -0.3
KTK1  Kautokeino        60.24 340  eP    P      15 23 19.7 +0.3
KLMR  Klimovskoe        60.27 327  eP    P      15 23 14.9 -4.9
KLMR                                pmax pmax
      comp=Z,64nm,1.3s
KLMR  Klimovskoe        60.27 327  eP    P      15 23 14.9 -4.9
KLMR                                AMP         15 23 20.9
      comp=Z,64nm,1.3s
MDSI  Maura Dua         60.67 230   P    P      15 23 24.3 +1.2
      comp=Z,8.5nm,0.9s
KNRA  Kununurra         60.80 199   P    P      15 23 23.7 -0.1
TRO   Tromso            60.84 341  eP    P      15 23 23.8 +0.3
KASI  Kota Agung        61.35 229   P    P      15 23 29.7 +2.0
      comp=Z,25nm,0.5s
HYB   Hyderabad         61.84 268 i P    P      15 23 30.5 -0.6
B08A  Colville Reser    62.03  49   P    P      15 23 32.6 +0.7
B08A                                IAmb IAmb   15 23 33.8
      comp=Z,24nm,1.6s
KEBM  Edson Butte       62.24  56   P    P      15 23 33.8 +0.3
C09A  Chrisman Ranch    62.93  49   P    P      15 23 38.7 +0.8
F07A  Phinny Hill Vi    63.11  51   P    P      15 23 40.2 +1.1
F07A                                IAmb IAmb   15 24 07.6
      comp=Z,14nm,0.8s
LOF   Lofoten           63.24 342  eP    P      15 23 39.6  0.0
E08A  Dider Farm, El    63.25  50   P    P      15 23 40.9 +0.8
NEW   Newport           63.29  48   P    P      15 23 41.0 +0.7
      comp=Z,4.7nm,0.9s,baz=306,slow=6.8,SNR=7.5
NEW   Newport           63.29  48   P    P      15 23 40.8 +0.4
NEW                                      pP     15 24 03.3 -0.3
NEW   Newport           63.29  48   P    P      15 23 41.3 +1.0
      baz=306,SNR=6.3
WB0   Warramunga Arr    63.69 192   P    P      15 23 42.3 -0.8
WB0                                 IAmb IAmb   15 23 43.0
      comp=Z,12nm,1.0s
PINE  Pine Mountain     63.74  54   P    P      15 23 44.8 +1.2
PINE                                IAmb IAmb   15 23 46.2
      comp=Z,8.5nm,0.8s
E09A  Wood Farm, Sta    63.75  50   P    P      15 23 44.1 +0.8
E09A                                IAmb IAmb   15 23 45.4
      comp=Z,13nm,0.9s
GEYT  Alibeck           63.81 298   P    P      15 23 44.2 +0.2
      comp=Z,3.4nm,0.5s,baz=62,slow=4.1,SNR=9.4
GEYT                                pP   pP     15 24 07.6 +0.4
      comp=Z,3.8nm,0.7s,baz=5.7,slow=1.5,SNR=3.7
L04D  Klamath Falls     63.85  56   P    P      15 23 45.3 +1.1
      baz=306
WB2   Warramunga Arr    63.87 192   P    P      15 23 43.5 -0.8
WB2                                 IAmb IAmb   15 23 45.2
      comp=Z,11nm,0.8s
WRA   Warramunga Arr    63.87 192   P    P      15 23 43.6 -0.7
      comp=Z,6.9nm,0.7s,baz=7.4,slow=6.7,SNR=36
WRA                                 pP   pP     15 24 07.9 +0.7
      comp=Z,2.4nm,0.7s,baz=13,slow=6.8,SNR=3.6
WRA                                 PcP  PcP    15 24 18.6 -0.6
      comp=Z,7.6nm,0.8s,baz=4.4,slow=4.0,SNR=15
WRA   Warramunga Arr    63.87 192   P    P      15 23 43.3 -1.0
YBH   Yreka Blue Hor    63.88  56   P    P      15 23 45.2 +0.8
      comp=Z,4.8nm,0.7s,baz=357,slow=5.2,SNR=14
YBH   Yreka Blue Hor    63.88  56   P    P      15 23 45.9 +1.5
YBH                                 pmax pmax
      comp=Z,7.0nm,0.9s
YBH   Yreka Blue Hor    63.88  56   P    P      15 23 45.9 +1.5
FITZ  Fitzroy Crossi    63.91 201   P    P      15 23 44.4 -0.2
      comp=Z,5.3nm,0.8s,baz=16,slow=3.5,SNR=9.1
FITZ  Fitzroy Crossi    63.91 201   P    P      15 23 44.6  0.0
FITZ                                IAmb IAmb   15 24 39.6
      comp=Z,42nm,1.9s
M02C  Callahan          64.00  57   P    P      15 23 47.1 +1.9
      baz=306
KMRM  Mail Ridge        64.15  58   P    P      15 23 47.1 +0.9
MOS   Moscow            64.22 323  eP    P      15 23 45.3 -0.9
MOS                                 pmax pmax
      comp=Z,54nm,1.1s
N02D  Trinity Center    64.33  57   P    P      15 23 49.1 +1.8
      baz=306
SUMG  Summit            64.33   1⇑iP    P      15 23 48.3 +1.1
      comp=Z,109nm,0.8s
SUMG  Summit            64.33   1⇑iP    P      15 23 48.3 +1.1
SUMG                                pmax pmax
      comp=Z,110nm,0.8s
SUMG  Summit            64.33   1   P    P      15 23 47.9 +0.7
M04C  Macdoel           64.38  56   P    P      15 23 49.8 +2.0
      baz=306
I07A  Izee              64.41  53   P    P      15 23 48.8 +0.9
I07A                                IAmb IAmb   15 24 05.4
      comp=Z,25nm,1.8s
WALA  Waterton Lakes    64.52  46   P    P      15 23 49.4 +0.8
KCPM  Cahto Peak        64.55  59   P    P      15 23 50.2 +1.4
MOR8  Moi Rana          64.60 340  eP    P      15 23 47.6 -1.0
KONS  Konsvik           64.65 341  eP    P      15 23 48.9 +0.1
WDC   Whiskeytown Da    64.66  57   P    P      15 23 50.4 +1.0
WDC                                 pmax pmax
      comp=Z,7.0nm,0.9s
WDC   Whiskeytown Da    64.66  57   P    P      15 23 50.4 +1.0
O02D  Mt. Diablo Mer    64.75  58   P    P      15 23 51.8 +1.8
      baz=306
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FIA1  FINESS Array S    64.80 333   P    P      15 23 50.2 +0.3
FINES FINESS Array B    64.80 333   P    P      15 23 50.2 +0.3
      comp=Z,83nm,0.5s,baz=44,slow=7.6,SNR=776
FINES                               pP   pP     15 24 13.7 +0.4
      comp=Z,11nm,0.6s,baz=35,slow=7.7,SNR=2.7
FINES FINESS Array B    64.80 333   P    P      15 23 49.9  0.0
OBN   Obninsk           65.08 323  eP    P      15 23 52.1 +0.3
OBN   Obninsk           65.08 323  eP    P      15 23 52.1 +0.3
OBN                                e*PP  pP     15 24 14.3 -0.8
OBN                                e            15 24 25.8
OBN                                e            15 26 16.1
OBN                                 pmax pmax
      comp=Z,79nm,1.7s
OBN   Obninsk           65.08 323   P    P      15 23 51.9 +0.1
JTMT  Jette             65.12  47   P    P      15 23 52.9 +0.4
VRH   Novokhopyorsk     65.20 318  eP    P      15 23 52.5 -0.1
VRH                                 pmax pmax
      comp=Z,60nm,0.7s
BMO   Blue Mountains    65.21  51   P    P      15 23 54.0 +1.0
BMO                                 pmax pmax
      comp=Z,3.0nm,0.9s
BMO   Blue Mountains    65.21  51   P    P      15 23 54.0 +1.0
MOD   Modoc Plateau     65.24  55   P    P      15 23 54.3 +1.0
HOPS  Hopland Field     65.28  59   P    P      15 23 54.1 +0.7
O03E  Paynes Creek      65.29  57   P    P      15 23 54.3 +0.8
      baz=307
LPSR  Galich'ya Gora    65.64 320  eP    P      15 23 55.3 -0.2
LPSR                                pmax pmax
      comp=Z,50nm,0.7s
MSO   Missoula          65.87  48   P    P      15 23 57.9 +0.6
MSO                                      pP     15 24 20.8 +0.2
MSO   Missoula          65.87  48   P    P      15 23 58.1 +0.8
      baz=308
WVOR  Wild Horse Val    65.91  54   P    P      15 23 58.4 +0.8
WVOR                                pmax pmax
      comp=Z,15nm,1.6s
WVOR  Wild Horse Val    65.91  54   P    P      15 23 58.4 +0.8
WVOR                                IAmb IAmb   15 24 22.0
      comp=Z,15nm,1.6s
ORV   Oroville          65.92  58   P    P      15 23 57.8 +0.3
ORV                                 pmax pmax
      comp=Z,5.0nm,0.8s
ORV   Oroville          65.92  58   P    P      15 23 57.8 +0.3
SCO   Scoresbysund      66.13 356 i P    P      15 23 59.0 +0.7
      comp=Z,22nm,0.9s
SCO   Scoresbysund      66.13 356 i P    P      15 23 59.0 +0.7
SCO                                 pmax pmax
      comp=Z,23nm,0.9s
SCO   Scoresbysund      66.13 356   P    P      15 23 59.0 +0.7
SCO                                 IAmb IAmb   15 24 00.3
      comp=Z,19nm,1.0s
VSR   Storozhevoye      66.43 319  eP    P      15 24 00.6 +0.1
VSR                                 pmax pmax
      comp=Z,70nm,0.7s
BEKR  Beckworth         66.43  57   P    P      15 24 01.5 +0.5
BEKR                                IAmb IAmb   15 24 02.8
      comp=Z,8.1nm,0.8s
NSS   Namsos            66.54 340  eP    P      15 24 01.5 +0.5
FFC   Flin Flon         66.56  36   P    P      15 24 01.7 +0.3
FFC                                 pmax pmax
      comp=Z,9.0nm,1.0s
FFC   Flin Flon         66.56  36   P    P      15 24 01.7 +0.3
FFC                                 IAmb IAmb   15 24 02.9
      comp=Z,9.3nm,0.9s
AFDM  Forest Hills D    66.61  58   P    P      15 24 02.5 +0.5
VSU   Vasula            66.72 330  eP    P      15 24 03.4 +1.2
VSU   Vasula            66.72 330ceP    P      15 24 02.7 +0.5
VSU                                 pmax pmax
      comp=Z,353nm,1.3s
FCC   Fort Churchill    66.82  29   P    P      15 24 02.9  0.0
FCC                                 pmax pmax
      comp=Z,8.0nm,0.7s
FCC   Fort Churchill    66.82  29   P    P      15 24 02.9  0.0
FCC                                 IAmb IAmb   15 24 12.8
      comp=Z,7.9nm,0.7s
ILULI Ilulissat         67.05   7   P    P      15 24 04.0 -0.2
ILULI                               pmax pmax
      comp=Z,19nm,0.7s
ILULI Ilulissat         67.05   7   P    P      15 24 04.0 -0.2
ILULI                               IAmb IAmb   15 24 06.2
      comp=Z,19nm,0.7s
PAHR  Pah Rah Range     67.12  57   P    P      15 24 06.2 +0.8
PAHR                                IAmb IAmb   15 24 07.3
      comp=Z,12nm,1.1s
VCNR  Virginia City     67.21  57   P    P      15 24 07.3 +1.3
VCNR                                IAmb IAmb   15 25 02.9
      comp=Z,6.5nm,0.5s
EGMT  Eagleton          67.32  45   P    P      15 24 05.1 -1.4
EGMT                                IAmb IAmb   15 25 09.0
      comp=Z,20nm,1.0s
PNTR  Pine Nut          67.37  57   P    P      15 24 07.2 +0.1
PNTR                                IAmb IAmb   15 24 08.8
      comp=Z,15nm,1.2s
DLMT  Dillon            67.52  48   P    P      15 24 08.5 +0.7
CMB   Columbia Colle    67.53  59   P    P      15 24 08.3 +0.4
CMB                                 pmax pmax
      comp=Z,22nm,1.7s
CMB   Columbia Colle    67.53  59   P    P      15 24 08.3 +0.4
CMB                                 IAmb IAmb   15 24 09.8
      comp=Z,22nm,1.6s
AS31  Alice Springs     67.59 192   P    P      15 24 08.3 +0.1
ASAR  Alice Springs     67.59 192   P    P      15 24 08.4 +0.2
      comp=Z,5.4nm,0.6s,baz=11,slow=5.9,SNR=97
ASAR                                pP   pP     15 24 33.0 +1.6
      comp=Z,3.8nm,0.8s,baz=8.1,slow=4.9,SNR=4.3
ASAR  Alice Springs     67.59 192   P    P      15 24 08.2  0.0
YERR  Yerington         67.65  57   P    P      15 24 09.5 +0.7
YERR                                IAmb IAmb   15 24 10.9
      comp=Z,13nm,0.9s
MCMT  McKenzie Canyo    67.72  49   P    P      15 24 09.9 +0.7
TBLU  Trondheim         68.03 340  eP    P      15 24 09.9 -0.5
AKT   Akhty             68.05 307  eP    P      15 24 12.2 +1.0
AKT                                e*PP  pP     15 24 35.3 +0.6
AKT                                e            15 24 35.7
AKT                                e*SP  sP     15 24 45.6 +0.8
AKT                                 pmax pmax
      comp=Z,23nm,0.7s
KVN   Kaiserville       68.31  56   P    P      15 24 13.8 +0.9
KVN                                 pmax pmax
      comp=Z,10.0nm,0.8s
KVN   Kaiserville       68.31  56   P    P      15 24 13.8 +0.9
KVN                                 IAmb IAmb   15 24 15.0
      comp=Z,10nm,0.8s
RYN   Ryan              68.31  57   P    P      15 24 14.1 +1.2
RYN                                 IAmb IAmb   15 24 15.0
      comp=Z,7.9nm,0.8s
NVAR  Mina Array Bea    68.57  57   P    P      15 24 15.8 +1.2
      comp=Z,6.4nm,0.6s,baz=295,slow=6.6,SNR=71
NVAR                                pP   pP     15 24 38.5 +0.4
      comp=Z,2.8nm,0.7s,baz=300,slow=6.3,SNR=3.9
NVAR  Mina Array Bea    68.57  57   P    P      15 24 15.4 +0.9
MDPB  Devils Postpil    68.59  58   P    P      15 24 15.8 +1.0
MDPB                                IAmb IAmb   15 24 16.9
      comp=Z,21nm,1.8s
YHL   Hebgen Lake       68.61  48   P    P      15 24 15.7 +0.9
OMMB  Old Mammoth Mi    68.65  58   P    P      15 24 15.9 +0.7
NV11  Mina Array Sit    68.66  57   P    P      15 24 16.0 +0.9
YHB   Horse Butte       68.67  48   P    P      15 24 16.0 +0.9
PSAD1 Pilbara Seismi    68.80 206   P    P      15 24 15.9 +0.2
PSAD1                               IAmb IAmb   15 24 18.6
      comp=Z,17nm,1.1s
GCMT  Greycliff         68.82  47   P    P      15 24 17.1 +1.2
YHH   Holmes Hill       68.84  48   P    P      15 24 17.1 +0.9
YHH                                      pP     15 24 39.7 -0.1
YMR   Madison River     68.85  48   P    P      15 24 16.7 +0.4
PSAC2 Pilbara Seismi    68.87 206   P    P      15 24 16.2  0.0
PSAC2                               IAmb IAmb   15 25 05.0
      comp=Z,70nm,1.9s
PSAC1 Pilbara Seismi    68.88 206   P    P      15 24 16.3 +0.1
PSAC1                               IAmb IAmb   15 25 21.1
      comp=Z,37nm,1.5s
IZAR  Zarasai           68.88 328  eP    P      15 24 18.4 +2.5
PSAB2 Pilbara Seismi    68.88 206   P    P      15 24 16.3 +0.1
PSAB2                               IAmb IAmb   15 24 17.2
      comp=Z,15nm,0.9s
PSAA2 Pilbara Seismi    68.89 206   P    P      15 24 16.4 +0.1
PSAA2                               IAmb IAmb   15 24 16.9
      comp=Z,15nm,0.9s
PSA00 Pilbara Seismi    68.90 206   P    P      15 24 16.5 +0.2
PSA00                               IAmb IAmb   15 24 17.0
      comp=Z,14nm,0.9s
PSAA3 Pilbara Seismi    68.90 206   P    P      15 24 16.5 +0.1
PSAA3                               IAmb IAmb   15 24 55.0
      comp=Z,69nm,1.8s
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PSAB1 Pilbara Seismi    68.90 206   P    P      15 24 16.1 -0.3
PSAB1                               IAmb IAmb   15 25 29.3
      comp=Z,34nm,1.5s
PSAD2 Pilbara Seismi    68.91 206   P    P      15 24 16.4  0.0
PSAD2                               IAmb IAmb   15 25 15.9
      comp=Z,21nm,1.2s
PSAA1 Pilbara Seismi    68.91 206   P    P      15 24 16.6 +0.2
PSAA1                               IAmb IAmb   15 24 16.8
      comp=Z,13nm,1.1s
PSAB3 Pilbara Seismi    68.92 206   P    P      15 24 16.5 +0.1
PSAB3                               IAmb IAmb   15 26 26.7
      comp=Z,53nm,1.7s
ELK   Elko              68.95  54   P    P      15 24 16.6 -0.3
      comp=Z,1.5nm,0.7s,baz=318,slow=7.7,SNR=7.8
ELK                                 pP   PcP    15 24 41.0 +0.4
      comp=Z,0.8nm,0.6s,baz=225,slow=5.7,SNR=2.7
ELK   Elko              68.95  54   P    P      15 24 17.5 +0.6
ELK                                 *PP  PcP    15 24 41.1 +0.4
ELK                                 pmax pmax
      comp=Z,3.0nm,1.0s
ELK   Elko              68.95  54   P    P      15 24 17.5 +0.6
PSAC3 Pilbara Seismi    68.95 206   P    P      15 24 16.5 -0.1
PSAC3                               IAmb IAmb   15 25 36.6
      comp=Z,32nm,1.4s
PSAD3 Pilbara Seismi    68.99 206   P    P      15 24 17.2 +0.3
PSAD3                               IAmb IAmb   15 24 58.0
      comp=Z,34nm,1.4s
ISAL  Salakas           69.06 328  eP    P      15 24 18.9 +1.9
NCK   Nalchik           69.13 310⇑eP    P      15 24 20.7 +3.0
NCK                                 pmax pmax
      comp=Z,27nm,0.7s
YNE   Yellowstone No    69.15  47   P    P      15 24 19.0 +0.9
H17A  Grant Village     69.24  48   P    P      15 24 21.2 +2.5
H17A                                IAmb IAmb   15 24 22.4
      comp=Z,11nm,1.0s
H17A  Grant Village     69.24  48   P    P      15 24 21.7 +3.0
      baz=311,SNR=8.9
SFJD  Kangerlussuaq     69.26   7 i P    P      15 24 18.1 +0.1
SFJD  Kangerlussuaq     69.26   7 i P    P      15 24 18.1 +0.1
SFJD  Kangerlussuaq     69.26   7   P    P      15 24 17.6 -0.4
SFJD                                IAmb IAmb   15 24 20.3
      comp=Z,18nm,1.1s
MOL   Molde             69.27 341  eP    P      15 24 18.8 +0.6
KIV   Kislovodsk        69.33 311  eP    P      15 24 20.9 +1.9
KIV                                 pmax pmax
      comp=Z,188nm,1.1s
KIV   Kislovodsk        69.33 311   P    P      15 24 19.6 +0.6
DOMB  Dombas            69.35 340  eP    P      15 24 18.9 +0.2
KBZ   Khabaz            69.36 311   P    P      15 24 19.8 +0.7
      comp=Z,17nm,0.6s,baz=97,slow=3.4,SNR=22
KBZ                                 LR   LR     15 59 00.8
      comp=Z,213nm,18.0s,baz=321,slow=40
KBZ   Khabaz            69.36 311  eP    P      15 24 20.1 +1.0
KBZ   Khabaz            69.36 311c iP    P      15 24 20.1 +1.0
KBZ                                 pmax pmax
      comp=Z,16nm,0.6s
FLWY  Flagg Ranch       69.38  49   P    P      15 24 20.5 +1.0
ZEI   Tsey              69.42 310  eP    P      15 24 18.4 -1.3
ZEI                                 pmax pmax
      comp=Z,13nm,0.6s
NC303 NORSAR Array S    69.44 338  eP    P      15 24 19.6 +0.3
NC303 NORSAR Array S    69.44 338   P    P      15 24 19.4 +0.2
NC405 NORSAR Array S    69.44 338   P    P      15 24 19.5 +0.3
SMMC  Simmler           69.47  61   P    P      15 24 21.3 +1.3
      baz=309
FXWY  Fox Creek         69.49  49   P    P      15 24 21.7 +1.5
NC204 NORSAR Array S    69.56 339   P    P      15 24 20.3 +0.3
NB201 NORSAR Array S    69.60 338   P    P      15 24 20.5 +0.2
TBLG  Delisi            69.62 308   P    P      15 24 22.0 +1.2
TBLG                                pmax pmax
      comp=Z,33nm,0.6s
TBLG  Delisi            69.62 308   P    P      15 24 22.0 +1.2
NB2   NORSAR Subarra    69.63 338   P    P      15 24 20.9 +0.4
      comp=Z,32nm,0.5s,baz=32,slow=6.9
NB2   NORSAR Subarra    69.63 338   P    P      15 24 20.9 +0.4
      baz=32,slow=6.9
NOA   NORSAR Array B    69.63 338   P    P      15 24 20.9 +0.4
      comp=Z,32nm,0.5s,baz=32,slow=6.5,SNR=140
NOA                                 pP   pP     15 24 44.0 -0.1
      comp=Z,6.4nm,0.8s,baz=34,slow=6.2,SNR=3.3
NOA                                 LR   LR     15 57 50.5
      comp=Z,47nm,19.0s,baz=300,slow=38
VES   Vestal, Richgr    69.71  60   P    P      15 24 22.0 +0.6
      baz=309
AKN   Aaknes            69.74 341  eP    P      15 24 22.3 +1.2
SNOW  Snow King Moun    69.75  49   P    P      15 24 22.8 +1.0
NBO00 NORSAR Array S    69.76 339   P    P      15 24 21.3 +0.1
REDW  Red Top Meadow    69.76  49   P    P      15 24 22.4 +0.5
NEY   Neytrino          69.77 311⇓eP    P      15 24 24.7 +2.8
NEY                                 pmax pmax
      comp=Z,3.0nm,0.7s
NC602 NORSAR Array S    69.80 338   P    P      15 24 21.4 -0.1
DGMT  Dagmar            69.81  42   P    P      15 24 22.2 +0.4
DGMT                                IAmb IAmb   15 24 32.5
      comp=Z,15nm,1.0s
DGMT  Dagmar            69.81  42   P    P      15 24 22.5 +0.7
      baz=313
NAO01 NORSAR Array S    69.88 338   P    P      15 24 22.0  0.0
PABE  Paberze           69.92 329  eP    P      15 24 23.3 +1.0
CWC   Cottonwood Cre    69.96  59   P    P      15 24 24.0 +0.8
      baz=310
LAO   LASA Array        70.01  44   P    P      15 24 23.4 +0.3
AHID  Auburn Hatcher    70.02  50   P    P      15 24 23.9 +0.5
GRAC  Grapevine Rang    70.05  58   P    P      15 24 25.1 +1.6
      baz=310,SNR=19
BGU   Big Grassy Mou    70.12  52   P    P      15 24 24.2 +0.2
R11A  Troy Canyon, C    70.27  56   P    P      15 24 25.5 +0.5
R11A  Troy Canyon, C    70.27  56   P    P      15 24 26.0 +0.9
      baz=310,SNR=8.3
HWUT  Hardware Ranch    70.51  51   P    P      15 24 27.2 +0.7
MPMC  Manual Prospec    70.57  59   P    P      15 24 27.9 +1.0
      baz=310,SNR=7.4
GNI   Garni             70.65 307⇓eP    P      15 24 28.7 +1.5
GNI                                 pmax pmax
      comp=Z,29nm,0.7s
FURC  Furnace Creek,    70.70  58   P    P      15 24 28.6 +1.3
      baz=310,SNR=5.1
SKAR  Skarslia          70.70 339  eP    P      15 24 27.8 +0.7
OSI   Osito Audit: C    70.72  60   P    P      15 24 28.6 +0.9
OSI                                 IAmb IAmb   15 24 29.6
      comp=Z,11nm,0.8s
OSI   Osito Audit: C    70.72  60   P    P      15 24 28.9 +1.2
      baz=310
DUG   Dugway, Tooele    70.72  53   P    P      15 24 28.6 +0.9
DUG                                 pmax pmax
      comp=Z,13nm,1.3s
DUG   Dugway, Tooele    70.72  53   P    P      15 24 28.6 +0.9
DUG   Dugway, Tooele    70.72  53   P    P      15 24 29.1 +1.4
      baz=311,SNR=8.0
TPNV  Topopah Spring    70.77  57   P    P      15 24 28.7 +0.7
TPNV                                pmax pmax
      comp=Z,8.0nm,0.8s
TPNV  Topopah Spring    70.77  57   P    P      15 24 28.7 +0.7
TPNV  Topopah Spring    70.77  57   P    P      15 24 29.1 +1.1
      baz=310,SNR=8.5
LRMC  Laurel Mtn Rad    70.82  59   P    P      15 24 29.1 +0.7
      baz=310
BW06  Boulder Array     70.87  49   P    P      15 24 29.0 +0.4
BW06  Boulder Array     70.87  49   P    P      15 24 29.5 +0.8
      baz=312
PD31  Pinedale Array    70.87  49   P    P      15 24 29.0 +0.4
PDAR  Pinedale Array    70.87  49   P    P      15 24 29.1 +0.5
      comp=Z,3.6nm,0.5s,baz=268,slow=1.3,SNR=49
PDAR  Pinedale Array    70.87  49   P    P      15 24 29.0 +0.4
TCUT  Toone Canyon      70.92  51   P    P      15 24 29.5 +0.5
EDW2  Edwards Air Fo    71.01  60   P    P      15 24 30.4 +1.0
      baz=310,SNR=6.5
PSUT  Pine Spring       71.19  55   P    P      15 24 30.9 +0.3
KONO  Kongsberg         71.24 338  eP    P      15 24 30.2  0.0
KONO  Kongsberg         71.24 338   P    P      15 24 29.8 -0.5
KONO                                pmax pmax
      comp=Z,145nm,2.0s
KONO  Kongsberg         71.24 338   P    P      15 24 29.8 -0.5
NLU   North Lily Min    71.31  53   P    P      15 24 31.9 +0.6
ANGG  Ammassalik, Gr    71.33   2   P    P      15 24 31.4 +0.7
AKASG Malin Array Be    71.34 323   P    P      15 24 31.2 +0.2
      comp=Z,14nm,0.5s,baz=39,slow=6.5,SNR=57
AKASG                               pP   pP     15 24 53.7 -1.0
      comp=Z,9.7nm,0.7s,baz=39,slow=6.9,SNR=5.6
AKASG Malin Array Be    71.34 323   P    P      15 24 30.8 -0.2
AKBB  Malin Array Si    71.34 323   P    P      15 24 30.9 -0.1
AKBB                                pmax pmax
      comp=Z,21nm,0.8s
AKBB  Malin Array Si    71.34 323   P    P      15 24 30.9 -0.1
AKBB                                IAmb IAmb   15 24 33.4
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	comp=Z,21nm,0.8s						
SUW	Suwalki	71.36	328	*e*P	P	15 24 32.1	+1.1
SUW	Suwalki	71.36	328	*e*P	P	15 24 32.1	+1.1
SUW	Suwalki	71.36	328	P	P	15 24 31.7	+0.7
MWC	Mount Wilson	71.39	60	P	P	15 24 32.1	+0.2
MWC				pmax	pmax		
	comp=Z,14nm,1.4s						
MWC	Mount Wilson	71.39	60	P	P	15 24 32.1	+0.2
MWC				IAmb	IAmb	15 24 33.6	
	comp=Z,14nm,1.4s						
BATM	Batumi	71.43	310	⇓P	P	15 24 35.7	+4.0
BATM	Batumi	71.43	310	⇓P	P	15 24 35.7	+4.0
GSC	Goldstone, Bar	71.48	59	P	P	15 24 32.9	+0.6
GSC				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GSC	Goldstone, Bar	71.48	59	P	P	15 24 32.9	+0.6
GSC	Goldstone, Bar	71.48	59	P	P	15 24 33.2	+0.9
	baz=310						
MPU	Maple Canyon	71.52	52	P	P	15 24 33.1	+0.5
BFSC	Mount Baldy Ra	71.63	60	P	P	15 24 34.0	+0.8
	baz=310						
ASK	Askoy	71.65	341	*e*P	P	15 24 33.5	+0.8
BER	Bergen	71.70	341	*e*P	P	15 24 33.6	+0.7
SHPR	Sheep Range	71.72	57	P	P	15 24 34.6	+0.8
BORG	Borgarnes	71.77	354	P	P	15 24 35.1	+1.8
BORG				pmax	pmax		
	comp=Z,436nm,1.9s						
BORG	Borgarnes	71.77	354	P	P	15 24 35.1	+1.8
ODD1	Odda	71.79	340	*e*P	P	15 24 34.8	+1.1
GIRL	Giralia	71.83	211	P	P	15 24 35.4	+1.3
TUQ	Turquoise Moun	71.95	58	P	P	15 24 36.4	+1.3
	baz=311						
TCRU	Three Creeks R	71.97	54	P	P	15 24 36.1	+0.7
KLNR	Kaliningrad	72.00	330	⇓*e*P	P	15 24 35.1	+0.2
KLNR				pmax	pmax		
	comp=Z,60nm,0.8s						
HEC	Hector,Ludlow	72.08	59	P	P	15 24 36.9	+1.1
	baz=311,SNR=6.7						
MSU	Marysvale	72.20	54	P	P	15 24 37.8	+1.1
MSU	Marysvale	72.20	54	P	P	15 24 37.8	+1.1
TMUT	Trail Mountain	72.24	53	P	P	15 24 37.9	+0.9
BLS5	Blasjo	72.26	340	*e*P	P	15 24 36.8	+0.4
RDMU	Red Mountain	72.33	51	P	P	15 24 38.3	+0.9
MURC	Murrieta	72.34	60	P	P	15 24 38.1	+0.7
	baz=311						
ULM	Lac du Bonnet	72.37	36	P	P	15 24 36.9	-0.3
	comp=Z,2.6nm,0.5s,baz=321,slow=7.2,SNR=9.3						
ULM	Lac du Bonnet	72.37	36	P	P	15 24 36.8	-0.4
P17A	Butcher Ranch,	72.39	52	P	P	15 24 37.9	+0.2
MTPU	Mount Pierson	72.50	54	P	P	15 24 40.1	+1.4
Q16A	Castle Valley	72.52	53	P	P	15 24 39.9	+1.4
GMRC	Granite Mounta	72.53	59	P	P	15 24 39.6	+0.9
	baz=311,SNR=5.7						
LCMT	Little Creek M	72.55	55	P	P	15 24 39.7	+1.0
K22A	Casper	72.60	47	P	P	15 24 39.4	+0.5
K22A				IAmb	IAmb	15 24 40.5	
	comp=Z,27nm,1.5s						
KMY	Karmoy	72.75	340	*e*P	P	15 24 40.9	+1.7
SRU	San Rafael Swe	72.76	52	P	P	15 24 40.3	+0.3
SRU				pmax	pmax		
	comp=Z,11nm,1.0s						
SRU	San Rafael Swe	72.76	52	P	P	15 24 40.3	+0.3
PFO	Pinyon Flats O	72.80	60	P	P	15 24 39.7	-0.5
	comp=Z,2.5nm,0.7s,baz=337,slow=2.6,SNR=3.8						
PFO	Pinyon Flats O	72.80	60	P	P	15 24 40.5	+0.3
PFO				pmax	pmax		
	comp=Z,24nm,2.0s						
PFO	Pinyon Flats O	72.80	60	P	P	15 24 40.5	+0.3
PFO				IAmb	IAmb	15 24 48.1	
	comp=Z,24nm,1.9s						
PFO	Pinyon Flats O	72.80	60	P	P	15 24 41.5	+1.3
	baz=311						
KNB	Kanab	72.80	55	P	P	15 24 41.4	+1.2
KNB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KNB	Kanab	72.80	55	P	P	15 24 41.4	+1.2
XPFO	Pion Flat	72.80	60	P	P	15 24 40.4	+0.2
XPFO				IAmb	IAmb	15 24 48.1	
	comp=Z,26nm,2.0s						
TPFO	Pinon Flats	72.81	60	P	P	15 24 41.5	+1.3
	baz=311						
PKCU	Pink Cliffs	72.82	55	P	P	15 24 41.8	+1.3
BELC	Belle Mtn. Jos	72.83	59	P	P	15 24 40.9	+0.4
	baz=311						
RSSD	Black Hills	72.89	45	P	P	15 24 40.2	-0.5
RSSD	Black Hills	72.89	45	P	P	15 24 40.2	-0.5
RSSD	Black Hills	72.89	45	P	P	15 24 40.9	+0.2
	baz=314						
SNART	Snartemo	73.00	339	*e*P	P	15 24 42.0	+1.3
UOSS	Minazif	73.10	288	P	P	15 24 41.7	-0.2
IRM	Iron Mountain	73.27	59	P	P	15 24 43.8	+1.0
	baz=311						
BAR	Barrett	73.27	61	P	P	15 24 43.2	+0.3
O20A	White River Ci	73.37	50	P	P	15 24 43.8	+0.2
O20A	White River Ci	73.37	50	P	P	15 24 44.3	+0.8
	baz=313						
BC3	Big Chuckawall	73.40	59	P	P	15 24 44.7	+0.9
	baz=311						
W13A	Hualapai Mount	73.43	57	P	P	15 24 43.9	-0.1
BSD	Bornholm Skovb	73.43	333	*i* P	P	15 24 43.6	+0.3
	comp=Z,19nm,0.7s						
BSD	Bornholm Skovb	73.43	333	*e*P	P	15 24 43.6	+0.3
BSD				pmax	pmax		
	comp=Z,19nm,0.7s						
U15A	North Rim	73.51	55	P	P	15 24 45.2	+0.7
SORM	Soroca	73.61	322	⇑P	P	15 24 44.7	+0.2
SORM	Soroca	73.61	322	⇑P	P	15 24 44.7	+0.2
PDMCI	Parker Dam,Lak	73.79	58	P	P	15 24 47.1	+1.2
	baz=312						
AGMN	Agassiz Nation	73.82	38	P	P	15 24 45.4	-0.4
AGMN	Agassiz Nation	73.82	38	P	P	15 24 45.8	0.0
	baz=318						
Y12C	Blythe	73.92	59	P	P	15 24 46.8	+0.2
Y12C				IAmb	IAmb	15 24 48.7	
	comp=Z,13nm,1.2s						
Y12C	Blythe	73.92	59	P	P	15 24 47.6	+1.0
	baz=312						
N23A	Red Feather La	74.12	48	P	P	15 24 47.9	-0.1
N23A	Red Feather La	74.12	48	P	P	15 24 49.4	+1.4
	baz=314						
GLA	Glamis	74.19	59	P	P	15 24 49.0	+0.7
GLA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GLA	Glamis	74.19	59	P	P	15 24 49.0	+0.7
RGN	Rugen	74.42	334	P	P	15 24 49.6	+0.5
WUAZ	Wupatki	74.67	56	P	P	15 24 51.2	+0.1
WUAZ	Wupatki	74.67	56	P	P	15 24 52.7	+1.5
	baz=313						
SMCO	Snowmass	74.74	50	P	P	15 24 52.1	+0.3
Y14A	Wickenburg	74.74	58	P	P	15 24 52.2	+0.8
DIKM	Dikmen	74.91	313	⇓P	P	15 24 55.6	+3.4
KWP	Kalwaria Pacla	74.92	326	*e*P	P	15 24 53.4	+1.3
KWP				*e*pP	pP	15 25 16.5	+0.5
KWP	Kalwaria Pacla	74.92	326	P	P	15 24 53.1	+1.0
KWP				pmax	pmax		
	comp=Z,33nm,0.9s						
KWP	Kalwaria Pacla	74.92	326	P	P	15 24 53.1	+1.0
KWP				IAmb	IAmb	15 25 18.6	
	comp=Z,33nm,0.9s						
STKA	Stephens Creek	74.97	184	P	P	15 24 52.5	+0.1
	comp=Z,6.5nm,1.1s,baz=6.7,slow=8.2,SNR=9.5						
STKA	Stephens Creek	74.97	184	P	P	15 24 52.9	+0.5
STKA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
STKA	Stephens Creek	74.97	184	P	P	15 24 52.9	+0.5
ISCO	Idaho Springs	75.06	49	P	P	15 24 54.7	+1.2
	baz=314						
MVCO	Mesa Verde	75.22	53	P	P	15 24 54.9	+0.5
MVCO	Mesa Verde	75.22	53	P	P	15 24 55.4	+1.0
	baz=314,SNR=5.6						
X16A	Lo Mia Camp, P	75.38	56	P	P	15 24 56.3	+1.0
BUR08	Bucovina Ar. S	75.38	323	P	P	15 24 55.6	+0.6
BUR08				pP	pP	15 25 19.0	+0.1
BUR08				IAmb	IAmb	15 25 20.4	
	comp=Z,13nm,0.9s						
BURAR	Bucovina Array	75.40	323	⇓P	P	15 24 55.8	+0.7
BURAR	Bucovina Array	75.40	323	⇓P	P	15 24 55.8	+0.7
BURAR	Bucovina Array	75.40	323	P	P	15 24 55.6	+0.6
BURAR				pP	pP	15 25 19.2	+0.2
NRS	Narsarsuaq	75.44	6	P	P	15 24 55.8	+1.0
NRS				pmax	pmax		
	comp=Z,110nm,1.9s						
NRS	Narsarsuaq	75.44	6	P	P	15 24 55.8	+1.0
LHI	Lord Howe Isla	75.49	168	P	P	15 24 56.3	+1.0
FORT	Forrest	75.56	196	P	P	15 24 56.3	+0.5
FORT				IAmb	IAmb	15 24 58.4	
	comp=Z,25nm,0.7s						
TLCR		75.58	319	⇓P	P	15 24 56.6	+0.6
TLCR		75.58	319	⇓P	P	15 24 56.6	+0.6
TESR	Tescani	75.60	322	⇑P	P	15 24 58.3	+2.2
OJC	Ojcow	75.62	328	*e*P	P	15 24 57.1	+0.9
OJC				*e*pP	pP	15 25 20.5	+0.5
OJC	Ojcow	75.62	328	*e*P	P	15 24 57.1	+0.9
OJC				*e**PP	pP	15 25 20.5	+0.5
OJC	Ojcow	75.62	328	P	P	15 24 57.1	+0.9
OJC				IAmb	IAmb	15 25 00.5	
	comp=Z,29nm,0.9s						
KOLS	Kolonicke sedl	75.64	325	*e*P	P	15 24 57.6	+1.3
KOLS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KOLS	Kolonicke sedl	75.64	325	*e*P	P	15 24 57.6	+1.3
S22A	4UR Ranch, Cre	75.81	51	P	P	15 24 58.4	+0.6
S22A	4UR Ranch, Cre	75.81	51	P	P	15 24 59.1	+1.3
	baz=314						
Q24A	Divide	75.91	49	P	P	15 24 58.2	-0.2
Q24A	Divide	75.91	49	P	P	15 24 59.2	+0.8
	baz=315						
CFR	Carcaliu	75.91	320	⇓P	P	15 24 59.9	+2.1
CFR	Carcaliu	75.91	320	⇓P	P	15 24 59.9	+2.1
W18A	Petrified Fore	75.93	55	P	P	15 24 59.4	+1.0
CRVS	Cervenica-Dubn	76.00	326	*e*P	P	15 25 00.1	+1.8
CRVS				pmax	pmax		
	comp=Z,16nm,0.8s						
CRVS	Cervenica-Dubn	76.00	326	*e*P	P	15 25 00.1	+1.8
EYMN	Ely	76.00	36	P	P	15 24 58.1	-0.2
EYMN	Ely	76.00	36	P	P	15 24 58.3	-0.1
	baz=321,SNR=6.0						
VRI	Vrincioaia	76.05	321	⇑P	P	15 25 02.4	+3.7
VRI	Vrincioaia	76.05	321	⇑P	P	15 25 02.4	+3.7
NIE	Niedzica	76.06	327	*e*pP	pP	15 25 24.0	+1.4
ILGA	Ilgaz	76.14	314	P	P	15 25 00.1	+0.6
ILGA				IAmb	IAmb	15 25 06.7	
	comp=Z,11nm,0.8s						
OGNE	Ogallala	76.19	46	P	P	15 24 59.8	+0.1
OGNE				IAmb	IAmb	15 25 01.0	
	comp=Z,21nm,0.8s						
OGNE	Ogallala	76.19	46	P	P	15 25 00.1	+0.5
	baz=316						
X18A	Snowflake	76.20	56	P	P	15 25 00.4	+0.5
X18A				IAmb	IAmb	15 25 02.3	
	comp=Z,21nm,1.9s						
TIRR	Tirgusor	76.31	319	P	P	15 25 01.5	+1.4
TIRR	Tirgusor	76.31	319	P	P	15 25 01.5	+1.4
BBOO	Buckleboo	76.33	188	P	P	15 25 00.6	+0.5
BBOO				IAmb	IAmb	15 25 01.6	
	comp=Z,9.6nm,0.9s						
HARR	Harsova	76.37	320	⇑P	P	15 25 03.1	+2.6
HARR	Harsova	76.37	320	⇑P	P	15 25 03.1	+2.6
KSP	Ksiaz	76.45	330	*e*P	P	15 25 02.3	+1.5
KSP				*e*pP	pP	15 25 25.3	+0.5
KSP	Ksiaz	76.45	330	*e*P	P	15 25 02.3	+1.5
KSP				*e**PP	pP	15 25 25.3	+0.5
SDCO	Great Sand Dun	76.56	51	P	P	15 25 02.8	+0.7
SDCO	Great Sand Dun	76.56	51	P	P	15 25 03.0	+0.9
	baz=315						
OKC	Ostrava-Krasne	76.57	328	*e*P	P	15 25 03.3	+1.8
OKC				*e*pP	pP	15 25 26.2	+0.8
OKC	Ostrava-Krasne	76.57	328	*e*P	P	15 25 03.3	+1.8
OKC				*e*		15 25 26.2	
DOPR	Dopca	76.58	322	⇓P	P	15 25 05.8	+4.1
LANS	Liptovska Anna	76.60	327	*e*P	P	15 25 03.8	+2.0
LANS				pmax	pmax		
	comp=Z,15nm,0.8s						
LANS	Liptovska Anna	76.60	327	*e*P	P	15 25 03.8	+2.0
MLR	Muntele Rosu	76.69	321	⇑P	P	15 25 06.1	+3.7
MLR	Muntele Rosu	76.69	321	⇑P	P	15 25 06.1	+3.7
MLR	Muntele Rosu	76.69	321	P	P	15 25 03.6	+1.1
MLR				IAmb	IAmb	15 25 17.2	
	comp=Z,59nm,2.0s						
OSTC	Ostas	76.71	330	*e*P	P	15 25 04.5	+2.2
CHVC	Chvalec	76.74	330	*e*P	P	15 25 03.4	+0.9
UPC	Upice	76.82	330	*e*P	P	15 25 04.1	+1.1
UPC				*e*pP	pP	15 25 27.4	+0.5
UPC	Upice	76.82	330	*e*P	P	15 25 04.1	+1.1
UPC				*e*		15 25 27.4	
DPC	Dobruska-Polom	76.84	330	*e*P	P	15 25 04.2	+1.1
DPC				*e*pP	pP	15 25 27.7	+0.6
DPC	Dobruska-Polom	76.84	330	*e*P	P	15 25 04.2	+1.1
DPC				*e*		15 25 27.7	
MORC	Moravsky Berou	76.85	329	⇓P	P	15 25 04.5	+1.3
MORC	Moravsky Berou	76.85	329	⇓P	P	15 25 04.5	+1.3
MORC	Moravsky Berou	76.85	329	*e*P	P	15 25 04.5	+1.3
MORC				*e*		15 25 27.8	
MORC	Moravsky Berou	76.85	329	P	P	15 25 03.8	+0.6
MORC					pP	15 25 27.4	+0.3
MORC				IAmb	IAmb	15 25 29.6	
	comp=Z,19nm,0.9s						
ICOR	Ion Corvin	76.86	319	⇓P	P	15 25 06.9	+3.7
ECSD	EROS Data Cent	76.88	41	P	P	15 25 03.2	-0.1
ECSD	EROS Data Cent	76.88	41	P	P	15 25 03.5	+0.1
	baz=318,SNR=7.0						
KRLC	Kraliky	76.89	329	*e*P	P	15 25 04.0	+0.6
KRLC				*e*pP	pP	15 25 27.0	-0.4
KRLC	Kraliky	76.89	329	*e*P	P	15 25 04.0	+0.6
KRLC				*e*		15 25 27.0	
E38A	The Farm, Brul	77.01	37	P	P	15 25 03.7	-0.4
E38A				IAmb	IAmb	15 25 04.6	
	comp=Z,8.3nm,0.7s						
MORW	Morawa	77.10	207	P	P	15 25 04.8	+0.3
MORW				IAmb	IAmb	15 25 07.2	
	comp=Z,40nm,1.4s						
DRGR		77.12	324	⇓P	P	15 25 08.5	+3.7
DRGR		77.12	324	⇓P	P	15 25 08.5	+3.7
VOIR		77.14	322	⇑P	P	15 25 05.4	+0.5
VOIR		77.14	322	⇑P	P	15 25 05.4	+0.5
BR131	Keskin Array S	77.14	313	P	P	15 25 05.5	+0.4
BR131				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BR131	Keskin Array S	77.14	313	P	P	15 25 05.5	+0.4
BRTR	Keskin Array B	77.14	313	P	P	15 25 06.0	+0.9
	comp=Z,2.1nm,0.6s,baz=87,slow=2.5,SNR=19						
BRTR				PP	PP	15 28 01.2	+1.9
	comp=Z,1.5nm,1.0s,baz=54,slow=6.3,SNR=4.6						
BRTR	Keskin Array B	77.14	313	P	P	15 25 06.0	+0.9
BRTR	Keskin Array B	77.14	313	P	P	15 25 05.5	+0.4
TUC	Tucson	77.21	58	P	P	15 25 06.3	+0.8
TUC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TUC	Tucson	77.21	58	P	P	15 25 06.3	+0.8
TUC	Tucson	77.21	58	P	P	15 25 06.4	+0.9
	baz=313						
CLL	Collm	77.23	332	⇑*i*P	P	15 25 06.3	+1.1
	comp=Z,17nm,0.8s						
CLL				*e*PcP	PcP	15 25 15.0	-0.5
CLL				*i* pP	pP	15 25 30.1	+0.9
CLL				*e*sP	sP	15 25 41.0	+1.8
CLL				*e*PP	PP	15 28 04.0	+4.5
CLL	Collm	77.23	332	⇑*i*P	P	15 25 06.3	+1.1
CLL				*i* *PP	pP	15 25 30.1	+0.9
CLL				pmax	pmax		
	comp=Z,17nm,0.8s						
CLL	Collm	77.23	332	P	P	15 25 06.0	+0.8
CLL				IAmb	IAmb	15 25 08.9	
	comp=Z,16nm,0.8s						
BRG	Berggiesshubel	77.27	331	*e*P	P	15 25 05.9	+0.5
	comp=Z,10nm,1.4s						
BRG				*e*		15 25 29.5	
	comp=Z,4.3nm,0.9s						
BRG	Berggiesshubel	77.27	331	*e*P	P	15 25 05.9	+0.5
BRG				*e*		15 25 29.5	
BRG				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
VYHS	Vyhne	77.38	327	*e*P	P	15 25 07.3	+1.1
VYHS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
VYHS	Vyhne	77.38	327	*e*P	P	15 25 07.2	+1.1
ARR	Arges	77.38	322	⇓P	P	15 25 08.7	+2.5
PSZ	Piszkesteto	77.41	326	⇓P	P	15 25 09.6	+3.3
PSZ	Piszkesteto	77.41	326	P	P	15 25 07.2	+0.8
PSZ				pmax	pmax		
	comp=Z,16nm,0.9s						
PSZ	Piszkesteto	77.41	326	P	P	15 25 07.2	+0.8
PSZ				IAmb	IAmb	15 25 33.1	
	comp=Z,16nm,0.9s						
ANTO	Ankara	77.48	314	⇓P	P	15 25 10.6	+3.7
ANTO	Ankara	77.48	314	⇓P	P	15 25 10.6	+3.7
JAVC	Velka Javorina	77.54	328	*e*P	P	15 25 10.1	+3.0
JAVC				*e*		15 25 32.8	
VRAC	Vranov	77.59	329	⇑P	P	15 25 08.8	+1.5
VRAC	Vranov	77.59	329	⇑P	P	15 25 08.8	+1.5
VRAC	Vranov	77.59	329	*e*P	P	15 25 08.8	+1.5
VRAC				*e*		15 25 32.0	
T25A	Trinidad	77.61	50	P	P	15 25 08.4	+0.5
T25A	Trinidad	77.61	50	P	P	15 25 08.7	+0.9
	baz=315						
GOPC	GO Pecny, Ondr	77.76	330	*e*P	P	15 25 09.4	+1.2
GOPC				*e*pP	pP	15 25 32.4	+0.2
GOPC	GO Pecny, Ondr	77.76	330	*e*P	P	15 25 09.4	+1.2
GOPC				*e*		15 25 32.4	
PRU	Pruhonice	77.79	330	*e*P	P	15 25 09.2	+0.9
PRU				*e*pP	pP	15 25 33.1	+0.8
PRU	Pruhonice	77.79	330	*e*P	P	15 25 09.2	+0.9
PRU				*e*		15 25 33.1	
KRUC	Moravsky	77.86	329	*e*P	P	15 25 09.4	+0.6
KRUC				*e*		15 25 33.4	
MDUB	Mudurnu	77.88	315	P	P	15 25 09.2	0.0
D41A	Chassel	77.92	35	P	P	15 25 09.0	-0.1
D41A				IAmb	IAmb	15 25 10.3	
	comp=Z,33nm,1.6s						
ANMO	Albuquerque	77.98	53	⇑*i*P	P	15 25 10.8	+0.9
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.9s						
ANMO	Albuquerque	77.98	53	P	P	15 25 10.7	+0.7
ANMO	Albuquerque	77.98	53	P	P	15 25 11.3	+1.4
	baz=315						
TREC	Trest	78.01	329	*e*P	P	15 25 13.0	+3.4
TREC	Trest	78.01	329	*e*P	P	15 25 13.0	+3.4
MODS	Modra-Piesok	78.09	328	*e*P	P	15 25 11.5	+1.4
MODS	Modra-Piesok	78.09	328	*e*P	P	15 25 11.5	+1.4
GZR	Gura Zlata	78.19	323	⇓P	P	15 25 11.0	+0.3
GZR	Gura Zlata	78.19	323	⇓P	P	15 25 11.0	+0.3
ESK	Eskdalemuir	78.25	343	P	P	15 25 11.3	+0.5
ESK				pmax	pmax		
	comp=Z,104nm,1.6s						
ESK	Eskdalemuir	78.25	343	P	P	15 25 11.3	+0.5
SCHQ	Schefferville	78.30	19	P	P	15 25 11.4	+0.3
	comp=Z,5.5nm,0.7s,baz=328,slow=6.5,SNR=9.6						
SCHQ	Schefferville	78.30	19	P	P	15 25 10.8	-0.3
COWI	Conover	78.44	36	P	P	15 25 11.7	-0.3
BZS	Buzias	78.52	324	⇓P	P	15 25 14.0	+1.6
BZS	Buzias	78.52	324	⇓P	P	15 25 14.0	+1.6
G40A	Rib Lake	78.64	37	P	P	15 25 12.8	-0.4
HERR	Herculane	78.75	323	⇓P	P	15 25 16.4	+2.7
319A	Douglas	78.78	57	P	P	15 25 15.5	+1.2
319A				IAmb	IAmb	15 25 16.4	
	comp=Z,20nm,0.8s						
KHC	Kasperske Hory	78.85	330	*e*P	P	15 25 15.1	+0.8
KHC				*e*pP	pP	15 25 38.2	-0.1
KHC	Kasperske Hory	78.85	330	⇑*e*P	P	15 25 15.3	+1.0
KHC				pmax	pmax		
	comp=Z,12nm,0.6s						
KHC	Kasperske Hory	78.85	330	P	P	15 25 14.9	+0.6
121A	Cookes Peak, D	78.88	56	P	P	15 25 16.1	+1.2
121A				IAmb	IAmb	15 25 17.4	
	comp=Z,29nm,1.4s						
121A	Cookes Peak, D	78.88	56	P	P	15 25 16.7	+1.8
	baz=315						
PLVB	Pleven	78.91	321	⇑P	P	15 25 18.1	+3.5
CBKS	Cedar Bluff	78.94	46	P	P	15 25 14.1	-0.9
CBKS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CBKS	Cedar Bluff	78.94	46	P	P	15 25 14.1	-0.9
CONA	Conrad Observa	79.00	328	*e*PcP	PcP	15 25 18.4	-5.0
	comp=Z,3.3nm,0.7s						
CONA				*e*pP	pP	15 25 39.9	+0.6
	comp=Z,9.9nm,0.8s,SNR=7.1						
GEC2	GERESS Array S	79.04	330	P	P	15 25 16.2	+0.8
GEC2					pP	15 25 39.2	-0.3
GERES	GERESS Array B	79.04	330	P	P	15 25 15.8	+0.4
	comp=Z,1.5nm,0.4s,baz=32,slow=5.7,SNR=16						
GERES				pP	pP	15 25 39.6	+0.1
	comp=Z,3.8nm,0.8s,baz=38,slow=5.2,SNR=7.2						
GERES	GERESS Array B	79.04	330	P	P	15 25 15.2	-0.2
GERES					pP	15 25 39.0	-0.4
E43A	Lone Tree Farm	79.12	34	P	P	15 25 15.4	-0.4
GRA1	Grafenberg Arr	79.21	332	P	P	15 25 16.7	+0.5
GRA1					pP	15 25 40.8	+0.6
GRA1				IAmb	IAmb	15 25 42.2	
	comp=Z,20nm,0.9s						
GRF	Grafenberg Arr	79.21	332	*e*P	P	15 25 17.5	+1.4
	comp=Z,11nm,0.8s,baz=30,slow=4.7						
GRF				*e*pP	pP	15 25 40.9	+0.6
	baz=31,slow=4.7						
E44A	Grand Marais A	79.36	33	P	P	15 25 17.1	+0.1
E44A				IAmb	IAmb	15 25 18.0	
	comp=Z,19nm,0.9s						
I40A	Norwalk	79.54	38	P	P	15 25 17.8	-0.3
I40A				IAmb	IAmb	15 25 28.4	
	comp=Z,8.2nm,0.5s						
MOA	Molln	79.67	329	*e*PcP	PcP	15 25 21.8	-4.5
	comp=Z,3.6nm,1.1s						
MOA				*e*pP	pP	15 25 44.0	+1.2
	comp=Z,3.0nm,0.8s						
ARSA	Arzberg	79.69	328	*e*PcP	P	15 25 23.4	+4.5
	comp=Z,2.7nm,0.8s						
R32A	Long Quarter,	79.78	46	P	P	15 25 18.7	-0.8
D46A	Sault St. Mari	79.88	32	P	P	15 25 19.4	-0.5
	baz=326						
MEM	Membach	80.10	335	P	P	15 25 24.1	+3.1
	comp=Z,8.4nm,1.1s						
MEM				pP	pP	15 25 45.5	+0.4
D47A	Chapleau	80.10	32	P	P	15 25 20.4	-0.6
	baz=326						
VTS	Vitosha	80.15	321	⇓P	P	15 25 24.7	+3.1
VTS	Vitosha	80.15	321	⇓P	P	15 25 24.7	+3.1
VTS	Vitosha	80.15	321	P	P	15 25 21.7	+0.1
VTS				IAmb	IAmb	15 25 48.5	
	comp=Z,22nm,1.2s						
E46A	Sault Ste Mari	80.21	33	P	P	15 25 21.1	-0.5
E46A				IAmb	IAmb	15 25 22.2	
	comp=Z,28nm,1.6s						
F45A	CMU Biological	80.28	34	P	P	15 25 21.7	-0.3
	baz=325						
NWAO	Narrogin (SRO)	80.31	204	P	P	15 25 21.8	-0.3
	comp=Z,21nm,0.8s,baz=50,slow=4.0,SNR=9.5						
NWAO	Narrogin (SRO)	80.31	204	IAmb	IAmb	15 25 23.4	
	comp=Z,27nm,0.9s						
SOKA	Soboth	80.35	328	*e*PcP	PcP	15 25 24.7	-4.6
	comp=Z,6.2nm,1.1s						
SOKA				*e*pP	pP	15 25 47.5	+0.9
	comp=Z,12nm,1.0s,SNR=5.7						
KSU1	Kansas State U	80.36	44	P	P	15 25 22.3	-0.3
	baz=319						
JFWS	Jewell Farm	80.48	38	P	P	15 25 23.0	-0.1
	baz=322						
BCLA	Clavier	80.48	336	P	P	15 25 25.0	+2.0
BCLA				pP	pP	15 25 47.8	+0.7
D48A	Paudash Townsh	80.49	31	P	P	15 25 22.5	-0.7
	baz=327						
E47A	Iron Bridge	80.53	32	P	P	15 25 23.0	-0.4
	baz=326,SNR=5.7						
D49A	Beulah Townshi	80.58	30	P	P	15 25 22.8	-0.8
	baz=327						
KBA	Koelnbreinsper	80.66	329	*e*PcP	PcP	15 25 27.4	-3.4
	comp=Z,5.5nm,0.6s						
KBA				*e*pP	pP	15 25 48.8	+0.4
	comp=Z,11nm,0.7s						
OBKA	Obir	80.67	328	*e*PcP	PcP	15 25 26.4	-4.4
	comp=Z,6.0nm,1.0s						
L40A	Anamosa	80.70	39	P	P	15 25 23.8	-0.5
BMRD	Maredsous	80.75	336	P	P	15 25 25.4	+1.0
BMRD				pP	pP	15 25 49.5	+1.0
G45A	Suttons Bay	80.75	34	P	P	15 25 24.4	-0.1
	baz=325						
AMTX	Amarillo	80.76	50	P	P	15 25 25.8	+0.9
	baz=317						
MNTX	Cornudas Mount	80.91	55	P	P	15 25 25.8	+0.2
MNTX	Cornudas Mount	80.91	55	P	P	15 25 26.7	+1.1
	baz=316						
MYKA	Terra Mystica	80.92	329	*e*PcP	PcP	15 25 27.6	-4.2
	comp=Z,2.5nm,0.7s						
MYKA				*e*pP	pP	15 25 49.5	-0.1
	comp=Z,7.1nm,0.8s						
E48A	Lockeyer	80.94	31	P	P	15 25 24.9	-0.6
	baz=327						
WATA	Walderalm	81.08	330	*e*PcP	PcP	15 25 28.8	-3.8
	comp=Z,3.9nm,0.4s						
WATA				*e*pP	pP	15 25 51.0	+0.4
	comp=Z,12nm,0.8s						
WTTA	Wattenberg	81.12	330	*e*P	P	15 25 27.7	+1.0

	comp=Z,3.8nm,0.6s						
WTTA				*e*pP	pP	15 25 51.3	+0.4
	comp=Z,11nm,0.9s						
D50A	G1974 Best Tow	81.22	30	P	P	15 25 26.3	-0.7
	baz=328						
RETA	Reutte	81.25	331	*e*pP	pP	15 25 51.7	+0.3
	comp=Z,8.1nm,1.1s						
MOTA	Moosalm	81.25	331	*e*PcP	PcP	15 25 29.8	-3.5
	comp=Z,5.6nm,0.6s						
MOTA				*e*pP	pP	15 25 51.7	+0.1
	comp=Z,18nm,1.0s,SNR=6.5						
VLDQ	Val d'Or	81.25	28	P	P	15 25 26.0	-1.1
VLDQ				IAmb	IAmb	15 25 51.1	
	comp=Z,12nm,0.8s						
F48A	Evansville	81.31	32	P	P	15 25 27.2	-0.3
	baz=326						
SQTA	Sankt Quirin	81.31	331	*e*PcP	PcP	15 25 29.3	-4.3
	comp=Z,4.1nm,0.5s						
SQTA				*e*pP	pP	15 25 52.2	+0.3
	comp=Z,11nm,1.0s,SNR=5.2						
RAYN	Ar Rayn	81.32	294	P	P	15 25 27.3	-0.7
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RAYN	Ar Rayn	81.32	294	P	P	15 25 27.3	-0.7
G47A	Hillman	81.37	33	P	P	15 25 27.8	0.0
	baz=326						
D51A	Lot 18 Range I	81.45	29	P	P	15 25 28.0	-0.3
	baz=328						
STAL	STALIGIAL	81.58	329	P	P	15 25 28.7	-0.2
STAL					pP	15 25 52.6	-0.5
STAL				IAmb	IAmb	15 25 53.7	
	comp=Z,11nm,0.7s						
F49A	Sandfield	81.59	32	P	P	15 25 28.7	-0.3
	baz=327						
FETA	Feichten	81.66	331	*e*PcP	PcP	15 25 32.6	-2.5
	comp=Z,4.3nm,1.0s						
FETA				*e*pP	pP	15 25 54.2	+0.4
	comp=Z,8.7nm,1.1s						
DAVA	Damuels	81.73	331	*e*PcP	PcP	15 25 32.2	-3.2
	comp=Z,4.4nm,0.5s						
DAVA				*i* pP	pP	15 25 54.8	+0.8
	comp=Z,8.1nm,0.9s						
ECH	Echery	81.84	334	P	P	15 25 30.4	+0.2
ECH				pP	pP	15 25 54.2	-0.3
ECH				IAmb	IAmb	15 25 55.6	
	comp=Z,11nm,1.0s						
E51A	G1948 Merrick	81.89	30	P	P	15 25 30.0	-0.5
	baz=328						
N41A	Harden Midland	81.94	40	P	P	15 25 30.7	-0.2
N41A					pP	15 25 55.6	+0.6
N41A				IAmb	IAmb	15 25 57.2	
	comp=Z,16nm,0.8s						
H48A	Harrisville	81.97	33	P	P	15 25 31.3	+0.3
	baz=326						
D53A	Lac Vacive, Po	82.05	28	P	P	15 25 31.0	-0.4
D53A	Lac Vacive, Po	82.05	28	P	P	15 25 31.2	-0.2
	baz=330						
PDG	Podgorica	82.08	323	⇓P	P	15 25 34.6	+3.0
L44A	Lake County Fo	82.11	37	P	P	15 25 32.1	+0.4
	baz=324						
CTI	Castel Tesino	82.15	330	P	P	15 25 32.7	+0.7
CTI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CTI	Castel Tesino	82.15	330	P	P	15 25 32.7	+0.7
F51A	Arnstein	82.25	30	P	P	15 25 31.9	-0.5
	baz=328						
D54A	Lac Fusel, La	82.35	28	P	P	15 25 32.5	-0.4
	baz=330						
E52A	Mattawa	82.40	29	P	P	15 25 32.4	-0.8
	baz=329						
WMOK	Wichita Mounta	82.48	49	P	P	15 25 33.9	0.0
WMOK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
WMOK	Wichita Mounta	82.48	49	P	P	15 25 33.9	0.0
WMOK	Wichita Mounta	82.48	49	P	P	15 25 34.3	+0.4
	baz=318,SNR=6.4						
F52A	Sundridge	82.58	30	P	P	15 25 34.0	-0.1
	baz=329						
TUE	Stuetta	82.61	331	P	P	15 25 35.4	+0.8
TUE				IAmb	IAmb	15 25 39.6	
	comp=Z,7.0nm,0.6s						
E53A	Dumoine, Ponti	82.67	29	P	P	15 25 34.3	-0.3
	baz=330						
M44A	Midewin, Midew	82.68	38	P	P	15 25 34.8	0.0
M44A				IAmb	IAmb	15 25 35.6	
	comp=Z,21nm,1.0s						
HDIL	Hopedale	82.78	39	P	P	15 25 35.2	-0.1
HDIL				IAmb	IAmb	15 25 36.2	
	comp=Z,16nm,0.8s						
HDIL	Hopedale	82.78	39	P	P	15 25 35.7	+0.4
	baz=323						
I49A	Point Hope	82.80	33	P	P	15 25 36.1	+0.8
	baz=327						
FNO	Franklin	82.84	47	P	P	15 25 36.4	+0.7
D55A	Sainte-Anne-du	82.86	27	P	P	15 25 35.4	-0.2
	baz=331						
L46A	Eue Claire	82.95	36	P	P	15 25 35.9	-0.2
L46A				IAmb	IAmb	15 26 01.3	
	comp=Z,21nm,1.1s						
L46A	Eue Claire	82.95	36	P	P	15 25 36.3	+0.2
	baz=325						
J48A	Bridge Port	82.95	34	P	P	15 25 36.9	+0.8
	baz=326						
K47A	Vermontville	82.96	35	P	P	15 25 36.4	+0.2
	baz=325						
D56A	ZEC Mazanza, M	83.07	27	P	P	15 25 36.8	+0.1
	baz=332						
S39A	Bolivar	83.10	43	P	P	15 25 36.4	-0.6
X34A	Smith Ranch, M	83.10	48	P	P	15 25 37.8	+0.7
X34A				IAmb	IAmb	15 25 38.9	
	comp=Z,16nm,1.0s						
TUL1	Leonard	83.20	46	P	P	15 25 37.8	+0.3
TUL1				IAmb	IAmb	15 25 38.8	
	comp=Z,12nm,0.8s						
TUL1	Leonard	83.20	46	P	P	15 25 38.1	+0.6
	baz=320,SNR=5.6						
K48A	Perry	83.22	35	P	P	15 25 38.2	+0.7
	baz=326						
D57A	Chemin Vers le	83.38	26	P	P	15 25 38.3	0.0
	baz=332,SNR=7.3						
G53A	Haliburton	83.41	30	P	P	15 25 38.1	-0.4
	baz=329						
E56A	St. Veronique	83.42	27	P	P	15 25 38.4	-0.1
	baz=331						
L47A	Sherwood	83.45	36	P	P	15 25 38.7	0.0
	baz=325						
U38A	Gravette	83.52	45	P	P	15 25 39.0	-0.2
ABTX	Abilene, Hawle	83.57	51	P	P	15 25 41.5	+2.0
	baz=318						
I51A	Listowel	83.63	32	P	P	15 25 40.1	+0.5
	baz=328						
TX31	Lajitas Ar. Si	83.64	55	P	P	15 25 40.3	+0.3
TX31				IAmb	IAmb	15 25 41.8	
	comp=Z,7.2nm,0.8s						
TX32	Lajitas Array	83.64	55	P	P	15 25 40.6	+0.6
TX32				IAmb	IAmb	15 25 41.8	
	comp=Z,7.4nm,0.8s						
TXAR	Lajitas Array	83.64	55	P	P	15 25 40.9	+0.8
	comp=Z,5.8nm,0.8s,baz=293,slow=3.8,SNR=39						
TXAR	Lajitas Array	83.64	55	P	P	15 25 40.6	+0.5
L48A	N Adams	83.80	35	P	P	15 25 41.0	+0.5
	baz=326,SNR=5.6						
E57A	Chemin Saint G	83.83	27	P	P	15 25 40.6	0.0
	baz=332,SNR=5.0						
CCM	Cathedral Cave	83.84	42	P	P	15 25 40.8	+0.1
CCM				pmax	pmax		
	comp=Z,13nm,1.1s						
CCM	Cathedral Cave	83.84	42	P	P	15 25 40.8	+0.1
CCM				IAmb	IAmb	15 25 41.7	
	comp=Z,13nm,1.1s						
CCM	Cathedral Cave	83.84	42	P	P	15 25 41.1	+0.4
	baz=322						
TRQ	Mont Tremblant	83.87	27	P	P	15 25 40.5	-0.3
HHAR	Hobbs	83.87	45	P	P	15 25 40.8	-0.3
SFIN	Lafayette	83.92	38	P	P	15 25 41.3	+0.2
	baz=324						
G55A	Calabogie	83.98	29	P	P	15 25 40.7	-0.6
	baz=330						
N47A	Urbana	84.13	37	P	P	15 25 41.7	-0.5
N47A				IAmb	IAmb	15 26 07.2	
	comp=Z,9.9nm,0.8s						
N47A	Urbana	84.13	37	P	P	15 25 42.0	-0.2
	baz=325						
HPIG		84.14	58	P	P	15 25 43.4	+0.6
HPIG				IAmb	IAmb	15 25 44.5	
	comp=Z,16nm,1.2s						
E58A	La Victoria	84.15	26	P	P	15 25 42.3	+0.1
	baz=332,SNR=5.2						
J52A	Paris	84.31	32	P	P	15 25 43.4	+0.3
	baz=328						
D61A	St Aubert, Com	84.36	24	P	P	15 25 43.5	+0.3
	baz=334						
U40A	Yellville	84.37	44	P	P	15 25 43.4	-0.2
U40A				IAmb	IAmb	15 25 44.4	
	comp=Z,12nm,0.8s						
U40A	Yellville	84.37	44	P	P	15 25 43.6	+0.1
	baz=321,SNR=10						
Z35A	Perchaven, San	84.37	49	P	P	15 25 43.4	-0.2
M49A	Liberty Center	84.38	35	P	P	15 25 43.5	+0.1
	baz=326						
L50A	Kingsville	84.39	34	P	P	15 25 43.7	+0.2
	baz=327						
D60A	Saint Jean D’O	84.40	24	P	P	15 25 43.3	-0.1
	baz=334						
H55A	Tweed	84.42	29	P	P	15 25 43.5	-0.1
	baz=330						
N48A	Decatur	84.44	36	P	P	15 25 43.8	0.0
	baz=325						
P46A	Rosedale	84.49	38	P	P	15 25 44.2	+0.1
P46A				IAmb	IAmb	15 26 11.7	
	comp=Z,21nm,0.8s						
K52A	Tillsonburg	84.61	32	P	P	15 25 44.8	+0.2
	baz=328						
G57A	Newington	84.70	28	P	P	15 25 44.6	-0.4
	baz=331						
E60A	Ste Agathe de	84.73	25	P	P	15 25 45.0	-0.1
	baz=334						
N49A	Columbus Grove	84.75	36	P	P	15 25 45.4	+0.1
N49A				pP	pP	15 26 08.8	-0.8
N49A				IAmb	IAmb	15 26 11.2	
	comp=Z,11nm,1.1s						
N49A	Columbus Grove	84.75	36	P	P	15 25 45.7	+0.4
	baz=326						
F59A	Saint Guilaume	84.77	26	P	P	15 25 45.7	+0.4
	baz=333						
W39A	Magazine	84.79	45	P	P	15 25 46.0	+0.4
	baz=321						
D62A	Allapoint, All	84.80	23	P	P	15 25 45.6	+0.2
	baz=335						
E61A	Lac Etchemin	84.96	24	P	P	15 25 46.3	0.0
	baz=334						
G58A	Ormstown	84.98	27	P	P	15 25 46.0	-0.3
	baz=332						
JCT	Junction City	85.07	52	P	P	15 25 47.3	+0.1
JCT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
JCT	Junction City	85.07	52	P	P	15 25 47.3	+0.1
JCT				IAmb	IAmb	15 25 48.4	
	comp=Z,8.5nm,0.8s						
JCT	Junction City	85.07	52	P	P	15 25 47.7	+0.5
	baz=318						
S44A	Carbondale	85.08	41	P	P	15 25 47.2	+0.2
S44A				IAmb	IAmb	15 25 48.3	
	comp=Z,20nm,0.7s						
FCAR	Ozark Folk Cen	85.10	44	P	P	15 25 47.0	-0.2
FCAR				IAmb	IAmb	15 25 47.9	
	comp=Z,9.9nm,0.8s						
F61A	St Evariste	85.22	25	P	P	15 25 48.4	+0.8
	baz=334						
PBMO	Poplar Bluff	85.24	42	P	P	15 25 48.2	+0.3
PBMO				IAmb	IAmb	15 25 49.2	
	comp=Z,11nm,0.6s						
O49A	Covington	85.29	36	P	P	15 25 48.3	+0.3
	baz=326						
N50A	Nevada	85.31	35	P	P	15 25 48.6	+0.4
	baz=326						
M52A	Chesterland	85.40	34	P	P	15 25 48.7	+0.1
M52A				IAmb	IAmb	15 25 49.5	
	comp=Z,10nm,0.7s						
M52A	Chesterland	85.40	34	P	P	15 25 49.0	+0.4
	baz=328						
MIAR	Mount Ida	85.40	45	P	P	15 25 49.0	+0.3
MIAR				pmax	pmax		
	comp=Z,11nm,0.8s						
MIAR	Mount Ida	85.40	45	P	P	15 25 49.0	+0.3
MIAR				IAmb	IAmb	15 25 50.1	
	comp=Z,11nm,0.8s						
MIAR	Mount Ida	85.40	45	P	P	15 25 49.3	+0.6
	baz=321,SNR=8.6						
WHAR	Wooly Hollow	85.49	44	P	P	15 25 49.1	0.0
WHAR				IAmb	IAmb	15 25 50.1	
	comp=Z,18nm,0.7s						
L53A	Girard	85.49	33	P	P	15 25 49.5	+0.4
	baz=328						
H59A	Cadyville	85.54	27	P	P	15 25 48.7	-0.5
	baz=332						
H58A	Gabriels	85.58	28	P	P	15 25 48.9	-0.6
	baz=332						
W41B	Gary Mavity, V	85.60	44	P	P	15 25 49.7	+0.1
W41B				IAmb	IAmb	15 26 00.7	
	comp=Z,7.6nm,0.9s						
W41B	Gary Mavity, V	85.60	44	P	P	15 25 49.4	-0.2
	baz=322						
L54A	Sinclairville	85.62	32	P	P	15 25 49.8	+0.2
	baz=329						
J56A	Wolcott	85.64	30	P	P	15 25 49.3	-0.4
	baz=330						
P49A	Miami Univ. Ec	85.66	37	P	P	15 25 50.1	+0.2
	baz=326						
PARMO	Parma	85.67	42	P	P	15 25 50.0	+0.1
G61A	St-Isidore-de-	85.67	25	P	P	15 25 50.7	+0.8
	baz=334						
Q48A	North Vernon	85.71	38	P	P	15 25 50.6	+0.5
	baz=325						
M53A	WI Miller and	85.76	33	P	P	15 25 50.8	+0.4
	baz=328						
ACSO	Alum Creek Sta	85.83	35	P	P	15 25 51.2	+0.5
	baz=327						
X40A	Basin Creek Fa	85.83	45	P	P	15 25 51.4	+0.6
	baz=321						
P50A	Jamestown	86.00	36	P	P	15 25 51.8	+0.2
	baz=326						
WCI	Wyandotte Cave	86.03	39	P	P	15 25 51.2	-0.5
WCI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WCI	Wyandotte Cave	86.03	39	P	P	15 25 51.2	-0.5
WCI				IAmb	IAmb	15 26 19.2	
	comp=Z,6.9nm,0.8s						
WCI	Wyandotte Cave	86.03	39	P	P	15 25 51.8	+0.1
	baz=325						
M54A	Oil Creek Stat	86.10	33	P	P	15 25 52.3	+0.2
	baz=329						
N53A	Lisbon	86.23	34	P	P	15 25 52.7	0.0
N53A				IAmb	IAmb	15 25 54.0	
	comp=Z,12nm,1.0s						
N53A					pP	15 26 17.0	-0.2
N53A	Lisbon	86.23	34	P	P	15 25 53.1	+0.4
	baz=328						
J59A	Piesco	86.31	28	P	P	15 25 52.8	-0.2
	baz=332						
H62A	Milan	86.43	26	P	P	15 25 54.2	+0.7
	baz=334						
N54A	Moraine State	86.44	33	P	P	15 25 54.2	+0.4
	baz=328						
M55A	Ridgway	86.49	32	P	P	15 25 54.3	+0.4
	baz=329						
O53A	New Philadelph	86.55	34	P	P	15 25 54.7	+0.4
	baz=328						
T47A	Sharon Grove	86.67	40	P	P	15 25 55.2	+0.3
T47A				IAmb	IAmb	15 25 56.3	
	comp=Z,16nm,0.9s						
Q51A	Peebles	86.68	36	P	P	15 25 55.0	0.0
Q51A				IAmb	IAmb	15 26 05.9	
	comp=Z,13nm,0.8s						
Q51A	Peebles	86.68	36	P	P	15 25 55.2	+0.3
	baz=326						
P52A	Corning	86.69	35	P	P	15 25 55.0	0.0
	baz=327						
K59A	Cooperstown	86.80	29	P	P	15 25 55.7	+0.2
	baz=332						
S49A	Springfield	86.85	38	P	P	15 25 56.2	+0.4
	baz=325						
O54A	Avella	86.95	34	P	P	15 25 56.9	+0.7
	baz=328						
N55A	Marion Center	86.99	32	P	P	15 25 56.9	+0.5
	baz=329						
WVT	Waverly	87.02	41	P	P	15 25 56.7	+0.1
WVT				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WVT	Waverly	87.02	41	P	P	15 25 56.7	+0.1
WVT				IAmb	IAmb	15 25 57.7	
	comp=Z,5.7nm,0.7s						
WVT	Waverly	87.02	41	P	P	15 25 57.0	+0.5
	baz=324						
N56A	West Decatur	87.14	32	P	P	15 25 57.4	+0.3
	baz=330						
R51A	Hillsboro	87.18	37	P	P	15 25 58.0	+0.6
	baz=326						
M57A	Sunshine Farm,	87.22	31	P	P	15 25 57.8	+0.3
	baz=330						
T49A	Edmonton	87.30	39	P	P	15 25 57.9	0.0
T49A				IAmb	IAmb	15 25 59.2	
	comp=Z,7.0nm,0.8s						
T49A	Edmonton	87.30	39	P	P	15 25 57.9	0.0
	baz=325						
S50A	Richmond	87.33	38	P	P	15 25 58.5	+0.4
	baz=326						
O55A	Ligonier	87.36	33	P	P	15 25 57.7	-0.5
	baz=329						
P54A	Burton	87.40	34	P	P	15 25 58.9	+0.5
	baz=328						
OXF	Oxford	87.55	43	P	P	15 25 59.3	+0.2
OXF				pmax	pmax		
	comp=Z,21nm,1.0s						
OXF	Oxford	87.55	43	P	P	15 25 59.3	+0.2
OXF				IAmb	IAmb	15 26 00.2	
	comp=Z,21nm,1.0s						
OXF	Oxford	87.55	43	P	P	15 25 59.4	+0.3
	baz=323						
O56A	Blue Knob Stat	87.59	32	P	P	15 25 59.4	+0.1
O56A				IAmb	IAmb	15 26 00.6	
	comp=Z,11nm,0.8s						
O56A	Blue Knob Stat	87.59	32	P	P	15 26 00.0	+0.7
	baz=329						
MCWV	Mont Chateau	87.61	34	P	P	15 25 59.9	+0.5
MCWV				IAmb	IAmb	15 26 26.1	
	comp=Z,17nm,1.4s						
MCWV	Mont Chateau	87.61	34	P	P	15 26 00.3	+1.0
	baz=329						
U49A	Red Boiling Sp	87.67	39	P	P	15 26 00.2	+0.5
U49A				IAmb	IAmb	15 26 00.9	
	comp=Z,13nm,0.7s						
T50A	Nancy	87.68	38	P	P	15 26 00.3	+0.5
	baz=326,SNR=8.4						
S51A	Beattyville	87.72	37	P	P	15 26 00.7	+0.7
	baz=326						
P55A	Reedsville	87.74	34	P	P	15 26 00.5	+0.5
	baz=329						
CLTN	Cedars of Leba	87.75	40	P	P	15 26 00.5	+0.4
CLTN				IAmb	IAmb	15 26 01.4	
	comp=Z,7.0nm,0.7s						
Q54A	Coxs Mills	87.78	35	P	P	15 26 00.6	+0.5
Q54A	Coxs Mills	87.78	35	P	P	15 26 00.8	+0.6
	baz=328						
PLAL	Pickwick Lake	87.82	42	P	P	15 26 00.3	-0.1
PLAL				IAmb	IAmb	15 26 00.8	
	comp=Z,6.8nm,0.6s						
Q55A	Buckhannon	88.08	34	P	P	15 26 02.4	+0.8
	baz=328						
T51A	Gray	88.13	38	P	P	15 26 02.3	+0.4
	baz=326						
P56A	Dayton Farm, R	88.14	33	P	P	15 26 02.7	+0.8
	baz=329						
O58A	Lewisberry	88.35	31	P	P	15 26 03.1	+0.2
	baz=330						
T52A	Hallie	88.43	37	P	P	15 26 03.8	+0.5
	baz=327						
O59A	Robesonia	88.47	31	P	P	15 26 03.4	-0.1
	baz=331						
TZTN	Tazewell	88.65	38	P	P	15 26 04.9	+0.5
	baz=326						
SWET	Sewanee	88.66	40	P	P	15 26 04.1	-0.4
SWET				IAmb	IAmb	15 26 05.2	
	comp=Z,12nm,0.8s						
SWET					pP	15 26 28.8	-0.2
R55A	Marlinton	88.67	34	P	P	15 26 05.3	+0.8
	baz=328						
V51A	Loudon	88.91	39	P	P	15 26 06.1	+0.5
	baz=326						
T54A	Tazewell	89.09	36	P	P	15 26 06.3	-0.2
	baz=328						
CPCT	Cooper Cave	89.12	39	P	P	15 26 06.8	+0.2
CPCT				IAmb	IAmb	15 26 07.7	
	comp=Z,12nm,1.0s						
T55A	Pulaski	89.38	36	P	P	15 26 08.5	+0.7
	baz=328						
OXZ	Oxford	89.42	161	P	P	15 26 08.6	+1.1
T57A	Hurt	90.12	35	P	P	15 26 11.7	+0.5
	baz=329						
Z50A	Ashland	90.27	41	P	P	15 26 11.9	-0.1
Z50A	Ashland	90.27	41	P	P	15 26 12.3	+0.3
	baz=325,SNR=7.2						
X53A	Estanollee	90.46	39	P	P	15 26 14.0	+1.1
	baz=327						
W54A	Cherokee Point	90.48	38	P	P	15 26 13.5	+0.5
	baz=327						
KMSC	Kings Mountain	90.81	37	P	P	15 26 14.8	+0.4
	baz=328						
ESDC	Sonseca Array	92.97	337	P	P	15 26 23.8	-0.6
	comp=Z,1.0nm,0.7s,baz=17,slow=3.5,SNR=5.3						
ESDC				pP	pP	15 26 49.0	-0.1
	comp=Z,0.5nm,0.5s,baz=18,slow=3.9,SNR=2.9						
ESDC	Sonseca Array	92.97	337	P	P	15 26 23.9	-0.5
ESDC	Sonseca Array	92.97	337	IAmb	IAmb	15 26 50.1	
	comp=Z,1.1nm,0.8s						
TORD	Torodi Ar. Bea	114.93	321	PKP	PKiKP	15 31 51.1	-0.9
	comp=Z,0.6nm,0.4s,baz=19,slow=1.7,SNR=11						
TORD				PP	PP	15 32 45.4	-5.6
	comp=Z,1.6nm,0.7s,baz=9.0,slow=9.4,SNR=8.1						
DBIC	Dimbokro	123.58	324	PKP	PKPdf	15 32 07.7	-0.9
	comp=Z,2.3nm,0.7s,baz=197,slow=1.2,SNR=4.4						
NVL	N'lazarevskaya	144.44	204	*e*PKIKP	PKPbc	15 32 44.7	+0.3
NVL				pmax	pmax		
	comp=Z,17nm,0.8s						
LVC	Limon Verde	144.59	65	PKIKP	PKPdf	15 32 47.6	-0.2
LVC	Limon Verde	144.59	65		PKPdf	15 32 47.6	-0.2
GO02	Mina Guanaco	145.85	70	PKPbc	PKPbc	15 32 50.8	+0.2
GO03	Copiap	146.95	74		PKPbc	15 32 53.9	+0.4
SNAA	Sanae	147.80	198	PKPdf	PKPbc	15 32 54.6	+0.2
SNAA	Sanae	147.80	198	PKP2	PKPbc	15 32 54.4	0.0
SNAA	Sanae	147.80	198	PKPbc	PKPbc	15 32 54.4	0.0
GO04	Tololo Observa	148.07	78		PKPbc	15 32 56.7	+0.1
VNA2	Neumayer--Watz	149.34	197	PKPdf	PKPbc	15 32 58.8	+0.5
	baz=107,slow=1.3						
VNA3	Neumayer Olymp	149.55	195	PKPdf	PKPbc	15 32 59.1	+0.2
BDFB	Brasilia	149.94	27	PKPbc	PKPbc	15 33 01.6	+0.1
	comp=Z,6.9nm,0.8s,baz=12,slow=2.5,SNR=9.1						
BDFB	Brasilia	149.94	27		PKPbc	15 33 01.4	-0.2
PLCA	Paso Flores	152.96	97	PKPbc	PKPbc	15 33 06.8	-1.0
	comp=Z,1.9nm,0.9s,baz=284,slow=7.4,SNR=4.2						
CPUP	Villa Florida	154.61	56	PKPbc	PKPbc	15 33 10.7	-0.9
	comp=Z,0.8nm,0.5s,baz=223,slow=2.4,SNR=5.0						

NEIC ***09*** *15:15:48.7±0.4, 37°.4S±0°.1×177°.1E±0°.1, h153^{km}±4^{km}, mb4.5/8, ML4.0(WEL), Error ellipse: s-maj=21.6km s-min=9.5km az=154.0*

WEL ***09*** *15:15:49.1, 37°S±3°×17°7E±°, h148^{km}±4^{km}, M3.6/35, MLv3.6/35, Error ellipse: s-maj=0.0km s-min=0.0km az=141.4*

IDC ***09*** *15:15:50.0±0.8, 37°.58S×176°.76E, h146^{km}±6^{km}, mb3.7/4, mb1 3.9/5, mb1mx3.5/37, mbtmp4.2/5, Error ellipse: s-maj=22.6km s-min=20.3km az=49.0*

ISC 09 15:15:50.1±0.7**, 37°.59S**±0°.06×**176°.99E**±0°.05**, h161**^{km}±5^{km}**,**
n195, σ1^{s}**79**/207**, mb4.0**/6**, 1C, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHRZ	Whale Island	0.27	183	P	Pn	15 16 10.5	-1.3
OPRZ	Ohinepanea	0.43	233	P	Pn	15 16 10.6	-1.7
OPRZ				S	Sn	15 16 26.9	-2.5
MARZ	Manawahe	0.47	212	P	Pn	15 16 11.3	-1.3
EDRZ	Edgecumbe	0.56	201	P	Pn	15 16 12.2	-0.8
TGRZ	Tauranga	0.60	256	P	Pn	15 16 11.6	-1.5
LIRZ	Lichensteins R	0.64	229	P	Pn	15 16 12.5	-0.8
HAZ	Te Kaha	0.65	105	P	Pn	15 16 11.1	-2.2
HAZ				S	Sn	15 16 28.1	-3.1
RUGZ	Raukumara Rang	0.66	125	P	Pn	15 16 11.3	-2.3
RUGZ				S	Sn	15 16 29.2	-2.5
URZ	Urewera	0.68	172	P	Pn	15 16 12.0	-1.5
	70nm,0.3s,baz=257,slow=4.3,SNR=507						
URZ				S	Sn	15 16 30.3	-1.4
	184nm,0.3s,baz=200,slow=22,SNR=20						
URZ	Urewera	0.68	172		Pn	15 16 12.4	-1.1
URZ				Sn	Sn	15 16 31.0	-0.6
URZ	Urewera	0.68	172	P	Pn	15 16 12.5	-1.1
URZ				S	Sn	15 16 30.5	-1.2
MKRZ	Makatiti	0.69	217	P	Pn	15 16 13.7	-0.1
OMRZ	Omania	0.71	223	P	Pn	15 16 13.1	-0.7

KARZ	Kaharoa	0.73	234	P	Pn	15 16 13.1	-0.8
TARZ	Mount Tarawera	0.75	211	P	Pn	15 16 14.0	-0.1
NGRZ	Ngongotaha	0.82	231	P	Pn	15 16 14.2	-0.4
HLRZ	Highlands Stat	0.84	217	P	Pn	15 16 14.6	-0.1
RRRZ	Republican Roa	0.84	207	P	Pn	15 16 14.4	-0.3
MWZ	Matawai	0.86	151	P	Pn	15 16 13.7	-1.1
MWZ				S	Sn	15 16 33.8	-0.1
UTU	Utuhina	0.86	227	P	Pn	15 16 14.9	+0.1
KMRZ	Kaimai	0.87	252	P	Pn	15 16 14.0	-0.9
MUGZ	Murupara	0.91	191	P	Pn	15 16 14.7	-0.4
PKGZ	Pakihiroa	0.91	110	P	Pn	15 16 13.9	-1.3
PKGZ				S	Sn	15 16 31.9	-2.6
HSRZ	Hossack Road	0.93	219	P	Pn	15 16 15.5	+0.2
RAGZ	Rawiri	0.97	160	P	Pn	15 16 15.3	-0.3
HRRZ	Handcock Road	0.98	215	P	Pn	15 16 15.9	+0.2
TWGZ	Tauwhareparae	0.98	127	P	Pn	15 16 14.5	-1.3
PRRZ	Plateau Road	1.03	207	P	Pn	15 16 16.2	+0.1
RTZ	Ruatahuna	1.03	181	P	Pn	15 16 15.8	-0.3
GRRZ	Galatos Road	1.03	222	P	Pn	15 16 16.3	+0.2
MXZ	Matakaoa Point	1.04	89	Pn	Pn	15 16 13.9	-2.2
MXZ					Sn	15 16 31.9	-4.3
MXZ	Matakaoa Point	1.04	89	P	Pn	15 16 14.1	-2.1
MXZ				S	Sn	15 16 33.5	-2.7
TKGZ	Te Karaka	1.09	142	P	Pn	15 16 15.8	-0.7
ALRZ	Allen Road	1.10	208	P	Pn	15 16 17.1	+0.4
PUZ	Puketiti	1.11	116	P	Pn	15 16 15.2	-1.6
WPRZ	Whakapapatarin	1.14	215	P	Pn	15 16 17.6	+0.6
WMGZ	Waiomatatini S	1.15	102	P	Pn	15 16 15.6	-1.5
WMGZ				S	Sn	15 16 36.2	-1.7
TOZ	Tahuroa Road	1.19	263	P	Pn	15 16 16.8	-0.7
SNGZ	Shannon Statio	1.23	167	P	Pn	15 16 18.2	+0.4
MTHZ	Maungataniwha	1.27	185	P	Pn	15 16 18.5	+0.2
RIGZ	Rimuhau	1.27	152	P	Pn	15 16 18.2	-0.1
KUTZ	Kaahu Road	1.29	225	P	Pn	15 16 18.9	+0.5
CNGZ	Carnagh Statio	1.31	133	P	Pn	15 16 18.7	+0.1
KUZ	Kuaotunu	1.32	309	P	Pn	15 16 15.6	-3.0
MRHZ	Matea Rd	1.32	200	P	Pn	15 16 19.1	+0.3
RAHZ	Arahi	1.33	177	P	Pn	15 16 19.3	+0.6
WHTZ	Whakaora	1.35	217	P	Pn	15 16 20.1	+1.1
TLZ	Tolley Road	1.37	237	P	Pn	15 16 19.5	+0.4
HATZ	Hinemaiaia	1.48	208	P	Pn	15 16 21.0	+0.7
WATZ	Wairara	1.50	221	P	Pn	15 16 21.3	+0.9
WHHZ	Waihua	1.50	173	P	Pn	15 16 21.4	+1.0
PRGZ	Paritu Road	1.51	153	P	Pn	15 16 20.8	+0.2
NMHZ	Naumai	1.52	185	P	Pn	15 16 21.8	+1.1
KNZ	Kokohu	1.53	160	P	Pn	15 16 20.7	0.0
MKAZ	Moumakai	1.54	288	P	Pn	15 16 19.3	-1.5
RATZ	Rangitukua	1.60	217	P	Pn	15 16 22.5	+1.0
BKZ	Black Stump Fm	1.62	194		Pn	15 16 21.9	+0.1
BKZ	Black Stump Fm	1.62	194	P	Pn	15 16 21.8	+0.1
RITZ	Rihia Road	1.65	212	P	Pn	15 16 23.3	+1.3
ARHZ	Aropaoanui	1.67	180	P	Pn	15 16 23.0	+0.8
WIAZ	Waiheke Island	1.68	298	P	Pn	15 16 20.4	-1.9
MHGZ	Mahia Peninsul	1.72	156	P	Pn	15 16 23.2	+0.5
KATZ	Kakaramea	1.72	216	P	Pn	15 16 23.8	+1.0
KBAZ	Karaka Road Bo	1.75	286	P	Pn	15 16 22.2	-0.8
ETAZ	East Tamaki Re	1.76	290	P	Pn	15 16 21.9	-1.3
GRZ	Great Barrier	1.81	317	P	Pn	15 16 20.7	-3.1
KRVZ	Karewarewa	1.84	215	P	Pn	15 16 25.3	+1.1
MBAZ	Motutapu North	1.86	295	P	Pn	15 16 22.7	-1.6
MCHZ	McNeill Hill	1.87	187	P	Pn	15 16 24.9	+0.6
WTVZ	West Tongariro	1.88	215	P	Pn	15 16 25.6	+0.9
TWVZ	Taurewa	1.92	219	P	Pn	15 16 26.1	+1.1
HIZ	Hauiti	1.92	241		Pn	15 16 25.8	+0.9
HIZ	Hauiti	1.92	241	P	Pn	15 16 25.9	+0.9
NGZ	Ngauruhoe	1.93	214	P	Pn	15 16 26.3	+1.1
EPAZ	Eden Park BICE	1.93	291	P	Pn	15 16 23.8	-1.3
AWAZ	Awhitu Peninsu	1.94	285	P	Pn	15 16 24.0	-1.2
HBAZ	Herne Bay Bore	1.95	291	P	Pn	15 16 23.9	-1.3
TUVZ	Tukino	1.98	212	P	Pn	15 16 26.6	+0.9
ABAZ	Army Bay	1.99	299	P	Pn	15 16 24.0	-1.7
FWVZ	Far West T-bar	2.01	214	P	Pn	15 16 27.0	+0.8
WHVZ	Whangaehu Hut	2.02	213	P	Pn	15 16 27.1	+0.8
DRZ	Dome Shelter	2.03	213	P	Pn	15 16 27.7	+1.2
BHHZ	Black Hill Sta	2.04	201	P	Pn	15 16 26.5	+0.2
WTAZ	Waiatarua	2.04	288	P	Pn	15 16 25.1	-1.1
TRVZ	Turoa	2.05	213	P	Pn	15 16 27.5	+0.8
MOVZ	Moawhango	2.06	208	P	Pn	15 16 26.7	+0.1
CKHZ	Cape Kidnapper	2.07	178	P	Pn	15 16 26.5	-0.1
RVAZ	Riverhead Bore	2.09	292	P	Pn	15 16 25.4	-1.5
KRHZ	Kereru	2.11	193	P	Pn	15 16 27.2	+0.1
PKVZ	Pokaka	2.14	217	P	Pn	15 16 28.4	+0.9
MTVZ	Mangateitei	2.16	213	P	Pn	15 16 28.6	+0.9
KAHZ	Kahuranaki	2.21	182	P	Pn	15 16 28.8	+0.6
VRZ	Vera Road	2.33	228	P	Pn	15 16 31.2	+1.5
PNHZ	Pukenui	2.41	195	P	Pn	15 16 30.4	-0.2
PXZ	Pawanui	2.44	182	P	Pn	15 16 31.0	0.0
WPHZ	Waipukurau	2.51	190	P	Pn	15 16 31.8	0.0
MHEZ	Mangahewa	2.57	234	P	Pn	15 16 34.6	+2.1
TSZ	Takapari Road	2.60	198	P	Pn	15 16 32.4	-0.5
WAZ	Wanganui	2.67	215	P	Pn	15 16 34.4	+0.6
WCZ	Waipu Caves	2.69	307	P	Pn	15 16 31.7	-2.3
PRHZ	Porangahau	2.69	186	P	Pn	15 16 33.8	-0.1
DREZ	Durham Road	2.71	233	P	Pn	15 16 36.5	+2.2
LREZ	Lake Rotokare	2.76	227	P	Pn	15 16 36.5	+1.7
DVHZ	Dannevirke	2.78	193	P	Pn	15 16 34.6	-0.6
PREZ	Palmer Road	2.83	231	P	Pn	15 16 38.1	+2.3
PKE	Pukeiti	2.85	235	P	Pn	15 16 38.0	+2.0
KHEZ	Kahui Hut	2.89	233	P	Pn	15 16 38.5	+1.9
ANWZ	Angora Road	2.90	188	P	Pn	15 16 36.4	-0.1
OHWZ	Ohakea	2.92	206	P	Pn	15 16 37.4	+0.5
POWZ	Post Office Ro	2.96	198	P	Pn	15 16 37.0	-0.3
NBEZ	Newall Road No	2.97	235	P	Pn	15 16 39.6	+2.1
NMEZ	Namu Road	3.05	232	P	Pn	15 16 40.1	+1.7
PRWZ	Pori Road	3.07	195	P	Pn	15 16 38.5	-0.2
BFZ	Birch Farm	3.15	190		Pn	15 16 38.8	-0.8
BFZ	Birch Farm	3.15	190	P	Pn	15 16 38.9	-0.8
MRZ	Mangatainoka R	3.26	199	P	Pn	15 16 39.9	-1.1
TIWZ	Tintock	3.30	195	P	Pn	15 16 40.9	-0.7
CPWZ	Castlepoint	3.38	190	P	Pn	15 16 42.4	-0.2
HOWZ	Holdsworth Sta	3.50	199	P	Pn	15 16 42.8	-1.4
OGWZ	Otaki Gorge	3.52	203	P	Pn	15 16 43.4	-1.0
OUZ	Omahuta	3.62	310		Pn	15 16 43.5	-2.2
OUZ	Omahuta	3.62	310	P	Pn	15 16 43.4	-2.2
TMWZ	Te Maipa	3.62	193	P	Pn	15 16 44.5	-1.2
KIW	Kapiti Island	3.65	206	P	Pn	15 16 44.8	-1.3
MTW	Mount Morrison	3.75	197	P	Pn	15 16 45.7	-1.6
CAW	Cannon Point	3.82	202	P	Pn	15 16 46.5	-1.7
TRWZ	Traveller	3.94	194	P	Pn	15 16 48.3	-1.5
PAWZ	Paruwai Farm	3.98	197	P	Pn	15 16 48.5	-1.8
DUWZ	D'Urville Isla	4.00	216	P	Pn	15 16 48.9	-1.7
MSWZ	Moikau Station	4.05	199		Pn	15 16 49.4	-1.9
MSWZ	Moikau Station	4.05	199	P	Pn	15 16 49.4	-1.9
WEL	Wellington	4.08	204	P	Pn	15 16 50.0	-1.5
SNZO	South Karori	4.12	205		Pn	15 16 49.7	-2.3
BHW	Baring Head	4.16	203		Pn	15 16 50.4	-2.1
BHW	Baring Head	4.16	203	P	Pn	15 16 50.7	-1.8
TCW	Tory Channel	4.19	209	P	Pn	15 16 50.9	-2.0
PLWZ	Palliser	4.20	198		Pn	15 16 50.7	-2.4
PLWZ	Palliser	4.20	198	P	Pn	15 16 51.1	-2.1
TUWZ	Tuamarina	4.50	211		Pn	15 16 54.6	-2.5
TUWZ	Tuamarina	4.50	211	P	Pn	15 16 54.8	-2.2
NNZ	Nelson	4.58	217		Pn	15 16 55.6	-2.4
NNZ	Nelson	4.58	217	P	Pn	15 16 56.0	-2.1
CMWZ	Cape Campbell	4.68	206		Pn	15 16 57.7	-1.7
QRZ	Quartz Range	4.74	226		Pn	15 16 57.8	-2.4
QRZ	Quartz Range	4.74	226	P	Pn	15 16 58.0	-2.2
BSWZ	Blackbirch Sta	4.77	209		Pn	15 16 58.4	-2.2
BSWZ	Blackbirch Sta	4.77	209	P	Pn	15 16 59.2	-1.4
THZ	Tophouse	5.23	216		Pn	15 17 03.8	-2.8
THZ	Tophouse	5.23	216	P	Pn	15 17 04.2	-2.4
KHZ	Kahutara	5.50	208		Pn	15 17 07.2	-3.0
LTZ	Lake Taylor	6.32	213		Pn	15 17 17.4	-3.8
OXZ	Oxford	6.87	212		Pn	15 17 23.7	-4.5
MQZ	McQueen's Vall	6.95	207		Pn	15 17 25.0	-4.3
WVZ	Waitaha Valley	7.27	219	P	Pn	15 17 31.8	-1.8
RPZ	Rata Peaks	7.60	215	P	Pn	15 17 35.9	-2.2
	2.4nm,0.3s,baz=50,slow=2.1,SNR=20						
RPZ				S	Sn	15 18 57.8	-5.3
	5.5nm,0.3s,baz=126,slow=22,SNR=15						
RPZ	Rata Peaks	7.60	215		Pn	15 17 35.1	-2.9
RPZ	Rata Peaks	7.60	215	P	Pn	15 17 35.5	-2.6
CTZ	Chatham Island	7.83	144	P	Pn	15 17 43.5	+2.4
CTZ				S	Sn	15 19 05.5	-3.0
FOZ	Fox Glacier	8.07	220	Pn	Pn	15 17 41.1	-3.1
FOZ	Fox Glacier	8.07	220	P	Pn	15 17 41.4	-2.8
LBZ	Lake Benmore	8.52	215		Pn	15 17 47.4	-2.8
LBZ	Lake Benmore	8.52	215	P	Pn	15 17 47.7	-2.6
ODZ	Otahua Downs	8.85	211		Pn	15 17 51.1	-3.5
JCZ	Jackson Bay	8.98	221	P	Pn	15 17 53.4	-3.0
WKZ	Wanaka	9.40	217		Pn	15 17 58.9	-3.0
WKZ	Wanaka	9.40	217	P	Pn	15 17 59.7	-2.2
MSZ	Milford Sound	9.84	221	P	Pn	15 18 06.4	-1.2
MLZ	Mavora Lakes	10.23	218		Pn	15 18 09.9	-2.9
MLZ	Mavora Lakes	10.23	218	P	Pn	15 18 10.7	-2.1
WHZ	Wether Hill Ro	10.70	216		Pn	15 18 15.5	-3.5
WHZ	Wether Hill Ro	10.70	216	P	Pn	15 18 17.0	-1.9
DCZ	Deep Cove	10.78	220	Pn	Pn	15 18 17.9	-2.1
STKA	Stephens Creek	29.53	270	P	P	15 21 40.6	+1.2
	2.2nm,0.7s,baz=104,slow=8.3,SNR=6.9						
STKA	Stephens Creek	29.53	270	P	P	15 21 41.4	+2.0
BBOO	Buckleboo	33.60	266	P	P	15 22 15.4	+0.4
BBOO				IAmb	IAmb	15 23 27.7	
	comp=Z,22nm,1.5s						
AS31	Alice Springs	39.25	278	P	P	15 23 03.3	+0.2
AS31				IAmb	IAmb	15 24 09.2	
	comp=Z,2.1nm,0.7s						
ASAR	Alice Springs	39.25	278	P	P	15 23 03.2	+0.1
	comp=Z,2.6nm,0.7s,baz=123,slow=8.3,SNR=61						
FORT	Forrest	40.67	265	P	P	15 23 15.1	+0.5
WB2	Warramunga Arr	40.91	283	P	P	15 23 16.5	-0.3
WRA	Warramunga Arr	40.92	283	P	P	15 23 16.7	-0.1
	comp=Z,1.1nm,0.5s,baz=123,slow=8.1,SNR=26						
WRA	Warramunga Arr	40.92	283	P	P	15 23 16.8	-0.1
WB0	Warramunga Arr	40.98	284	P	P	15 23 17.1	-0.2
QSPA	South Pole Qui	52.54	180	P	P	15 24 49.5	+2.9
	comp=Z,2.3nm,0.6s,baz=197,slow=5.1,SNR=30						
QSPA	South Pole Qui	52.54	180	P	P	15 24 50.4	+3.8
QSPA				IAmb	IAmb	15 25 50.5	
	comp=Z,12nm,1.6s						
SYO	Syowa Base	69.15	195	⇑*e*P	P	15 26 36.6	-1.8
SNAA	Sanae	71.04	180	P	P	15 26 51.6	+1.5
VNA3	Neumayer Olymp	71.37	178	P	P	15 26 53.5	+1.6
VNA2	Neumayer--Watz	71.75	178	P	P	15 26 56.0	+1.9
	baz=187,slow=5.1						
HHC	Hu-ho-hao-te	98.35	316	*e*P	Pdif	15 29 10.7	+1.4
KSH	Kashi	120.16	299	PKP	PKiKP	15 34 22.1	+0.3
KSH				PP	PP	15 35 54.0	+4.2
KSH				SKS	SKSdf	15 41 13.6	-5.0
KSH	Kashi	120.16	299	SS	SS	15 52 08.3	+3.7
ARCES	ARCESS Array B	144.50	343	PKP	PKPbc	15 35 05.4	+0.3
	comp=Z,2.7nm,0.8s,baz=46,slow=3.9,SNR=5.4						
FINES	FINESS Array B	150.03	332	PKPbc	PKiKP	15 35 22.3	+0.9
	comp=Z,3.0nm,0.9s,baz=90,slow=4.9,SNR=4.2						
BRTR	Keskin Array B	151.43	286	PKPbc	PKPbc	15 35 23.7	-1.1
	comp=Z,0.5nm,0.7s,baz=117,slow=1.6,SNR=3.3						
TORD	Torodi Ar. Bea	155.30	191	PKPab	PKPab	15 35 50.8	+0.4
	comp=Z,0.5nm,0.5s,baz=168,slow=4.1,SNR=4.9						

DJA 09 15:22:42.0±0.5, 8°S±3°×10°7E±°, h10^{km}, M4.2/11, mb4.5/3, MLv4.0/11, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNJI	Cibinong	0.96	34	P	Pg	15 22 59.5	-1.0
CNJI				S	Sg	15 23 12.9	-0.1
CNJI	Cibinong	0.96	34	P	Pg	15 22 59.1	-1.4
SKJI	Sukabumi	1.10	358	P	Pb	15 23 03.1	0.0
SKJI				S	Sb	15 23 18.1	+0.6
SKJI	Sukabumi	1.10	358	P	Pb	15 23 02.1	-1.0
CISI	Cisompet, Garu	1.33	66	P	Pn	15 23 04.8	-1.9
CISI	Cisompet, Garu	1.33	66	P	Pn	15 23 05.0	-1.8
DBJI	Dramaga	1.55	6	P	Pn	15 23 09.6	-0.2
DBJI				S	Sb	15 23 30.5	-0.2
DBJI	Dramaga	1.55	6	P	Pg	15 23 11.4	-0.5
LEM	Lembang	1.63	39	P	Pn	15 23 10.8	-0.2
LEM				S	Sb	15 23 32.7	-0.3
LEM	Lembang	1.63	39	P	Pb	15 23 11.7	-0.6
KPJI	Karang Pucung	2.44	72	P	Pn	15 23 22.0	0.0
KPJI				S	Sn	15 23 53.0	+1.0
KPJI	Karang Pucung	2.44	72	P	Pn	15 23 22.4	+0.4
	60nm,0.6s						
KASI	Kota Agung	3.31	321	P	Pn	15 23 33.5	-0.3
UGM	Wanagama	3.90	87	P	Pn	15 23 42.1	0.0
UGM				S	Sn	15 24 29.3	+1.3
PCJI	Pacitan	4.54	91	P	Pn	15 23 52.2	+1.3
MNAI	Manna	5.19	316	P	Pn	15 23 59.0	-0.8
	0.6nm122nm,0.9s						
JAGI	Jajag, Banyuwa	7.49	93	P	Pn	15 24 30.3	-1.1

NEIC ***09*** *15:32:57.6±1.1, 22°0S±0°2×172°5E±0°1, h68^{km}±7^{km}, mb4.6/8, Error ellipse: s-maj=24.3km s-min=14.9km az=162.0*

IDC ***09*** *15:32:58.0±7.5, 22°11S×172°58E, h78^{km}±53^{km}, mb3.6/6, mb1 3.8/7, mb1mx3.5/33, mbtmp3.9/7, ML4.4/1, Error ellipse: s-maj=78.7km s-min=35.4km az=148.0*

ISC 09 15:32:54.9±0.8, 22°1S±0°1×172°57E±0°08, h35^{km}, n26, σ2^{s}41/21, mb4.1/10, 1C, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	5.68	269	P	Pn	15 34 18.7	+1.8
	9.8nm,0.3s,baz=144,slow=13,SNR=77						
DZM				S	Sn	15 35 26.1	+5.2
	baz=240,slow=20,SNR=3.1						
DZM	Mont Dzumac	5.68	269	Pn	Pn	15 34 18.5	+1.6
MSVF	Nonsavu	6.76	51	Pn	Pn	15 34 33.1	+1.2
RAO	Raoul Island	11.13	132	Pn	Pn	15 35 35.9	+4.3
CTA	Charters Tower	24.62	270	P	P	15 38 12.5	+0.2
	4.1nm,0.8s,baz=71,slow=14,SNR=2.8						
STKA	Stephens Creek	29.16	244	P	P	15 38 53.1	+0.1
	0.8nm,0.6s,baz=92,slow=11,SNR=5.4						
STKA	Stephens Creek	29.16	244	P	P	15 38 51.7	-1.3
TAU	Tasmania Unive	29.51	219	P	P	15 38 54.4	-1.5
WR0	Warramunga Arr	35.49	266	P	P	15 39 47.6	-1.0
WR0				IAmb	IAmb	15 40 56.9	
	comp=Z,12nm,1.4s						
ASAR	Alice Springs	35.58	260	P	P	15 39 48.1	-1.2
	comp=Z,1.3nm,0.8s,baz=77,slow=10,SNR=14						
ASAR	Alice Springs	35.58	260	P	P	15 39 47.9	-1.3
WB0	Warramunga Arr	35.67	267	P	P	15 39 48.9	-1.2
WB0				IAmb	IAmb	15 40 33.7	
	comp=Z,8.2nm,1.3s						
WB2	Warramunga Arr	35.67	266	P	P	15 39 49.0	-1.1
WB2				IAmb	IAmb	15 40 08.2	
	comp=Z,9.0nm,1.2s						
WRAB	Tennant Creek	35.68	266	P	P	15 39 49.3	-0.8
WRAB				IAmb	IAmb	15 40 07.9	
	comp=Z,14nm,1.4s						
WRA	Warramunga Arr	35.68	266	P	P	15 39 48.6	-1.6
	comp=Z,0.6nm,0.4s,baz=97,slow=8.5,SNR=14						
WRA	Warramunga Arr	35.68	266	P	P	15 39 49.3	-0.9
H11S2	WAKE ISLAND Hy	40.77	351	T	T	16 24 17.5	
	baz=171,slow=76,SNR=32						
H11S3	WAKE ISLAND Hy	40.78	351	T	T	16 24 18.0	
	baz=171,slow=76,SNR=27						
H11S1	WAKE ISLAND Hy	40.79	351	T	T	16 24 18.9	
	baz=171,slow=76,SNR=34						
H11N1	WAKE ISLAND Hy	41.95	352	T	T	16 25 46.6	
	baz=173,slow=76,SNR=7.4						
H11N3	WAKE ISLAND Hy	41.96	352	T	T	16 25 48.3	
	baz=173,slow=76,SNR=4.7						
H11N2	WAKE ISLAND Hy	41.97	352	T	T	16 25 47.7	
	baz=173,slow=76,SNR=6.9						
FITZ	Fitzroy Crossi	44.11	266	P	P	15 40 57.1	-3.1
	comp=Z,1.9nm,0.6s,baz=103,slow=10,SNR=6.6						
FITZ	Fitzroy Crossi	44.11	266	P	P	15 40 57.5	-2.7
FITZ				IAmb	IAmb	15 41 12.8	
	comp=Z,7.7nm,1.1s						
SYO	Syowa Base	83.01	195	⇑*e*X	P	15 45 12.0	-4.2
ILAR	Eielson Array	92.09	16	P	P	15 45 58.6	-1.3
	comp=Z,0.2nm,0.7s,baz=207,slow=3.8,SNR=3.3						

UCR 09 15:37:52.5±1.0, 10°01N×84°51W, h67^{km}±3^{km}, MD3.5, MW3.0, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HDC	Heredia	0.39	91	*e*P	Pn	15 38 04.1	-0.1
SJS	Escuela Geolog	0.46	99	*e*S	Sn	15 38 14.9	+1.1
FORC	Fortuna	0.48	341	*i* P	Pn	15 38 04.9	0.0
FORC				*i* S	Sn	15 38 14.6	+0.6
CEDE	Laguna Cedeo	0.51	338	*i* P	Pn	15 38 05.2	-0.1
CEDE				*e*S	Sn	15 38 15.7	+1.2
JTS	Las Juntas de	0.52	303	*e*P	Pn	15 38 05.2	0.0
JTS				*e*S	Sn	15 38 15.1	+0.6
LCR2	La Lucha 2	0.57	118	*e*P	Pn	15 38 05.8	-0.2
LCR2				*e*S	Sn	15 38 16.2	+0.4
ACAL	Aguas Claras	0.81	320	*i* P	Pn	15 38 08.6	0.0
ACAL				*i* S	Sn	15 38 21.1	+0.7
PTEN	Parque Tenorio	0.84	326	*i* P	Pn	15 38 08.8	-0.1
CUI	Cuipilapa	0.91	315	*i* P	Pn	15 38 09.7	-0.1
CUI				*i* S	Sn	15 38 22.9	+0.4
COLC	Colonia	0.94	314	*i* P	Pn	15 38 10.0	-0.1
MESS	Mesas	0.99	317	*i* P	Pn	15 38 10.8	0.0
MESS				*i* S	Sn	15 38 24.7	+0.4
GUAI	GUAI	1.02	285	*i* P	Pn	15 38 11.6	+0.6
GUAI				*i* S	Sn	15 38 25.7	+0.8
GPS3	Bodega del ICE	1.12	312	*i* P	Pn	15 38 12.3	-0.2
EDLM	Las Mercedes	1.17	128	*e*S	Sn	15 38 29.7	+1.3
NY14	Universidad de	1.19	302	*i* P	Pn	15 38 13.6	+0.3

IDC 09 15:39:27.5±1.2, 5°.10S×151°.42E, h137^{km}±24^{km}, mb3.0/4, mb1 3.1/4, mb1mx2.9/30, mbtmp3.4/4, MS3.4/1, Ms1 3.4/1, ms1mx2.8/5, Error ellipse: s-maj=97.7km s-min=24.0km az=113.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	0.99	38	P	Pn	15 39 50.9	-0.1
	11nm,0.3s,baz=230,slow=4.5,SNR=28						
KRVT				S	Sn	15 40 09.2	+0.4
	38nm,0.3s,baz=63,slow=8.3,SNR=7.7						
WRA	Warramunga Arr	22.23	227	P	P	15 44 12.4	-0.8
	0.7nm,1.0s,baz=52,slow=10,SNR=2.7						
ASAR	Alice Springs	25.02	221	P	P	15 44 38.5	-0.5
	0.4nm,0.9s,baz=58,slow=8.7,SNR=8.3						
ASAR				LR	LR	15 53 25.3	
	comp=Z,92nm,20.9s,baz=96,slow=34						
FITZ	Fitzroy Crossi	28.31	241	P	P	15 45 10.4	+1.9
	1.1nm,0.7s,baz=63,slow=11,SNR=1.8						
MKAR	Makanchi Array	79.64	319	P	P	15 51 19.4	-0.4
	0.1nm,0.6s,baz=100,slow=7.5,SNR=2.8						

IDC ***09*** *15:48:39.6±0.5, 32°21S×71°64W, h0^{km}, mb4.8/10, mb1 4.6/14, mb1mx4.4/26, mbtmp4.6/14, ML4.2/4, MS3.8/10, Ms1 3.8/10, ms1mx3.5/35, Error ellipse: s-maj=20.2km s-min=14.6km az=92.0*

SJA ***09*** *15:48:40.4±1.2, 32°36S×72°04W, h10^{km}±19^{km}, ML4.5, MW4.5*

NEIC ***09*** *15:48:43, 32°25S×71°72W, h40^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}4.99; $M_{\theta\theta}$-0.53; $M_{\phi\phi}$-4.46; $M_{r\theta}$0.46; $M_{\theta\phi}$-1.41; $M_{\phi r}$-4.16; Fault plane solution: $M_0$6.49000×10^{15} NP1:ϕ_s30.46000°, δ27.37000°, λ114.66000°. NP2:ϕ_s183.13000°, δ65.31000°, λ77.81000°. Principal axes: T 6.6842, Plg67.0000°, Azm70.0000°; N -0.4182, Plg11.0000°, Azm188.0000°; P -6.2661, Plg19.0000°, Azm282.0000°;*

GUC ***09*** *15:48:43.8±0.6, 32°24S×71°55W, h26^{km}±5^{km}, ML4.4*

NEIC ***09*** *15:48:44.7±1.1, 32°25S±0°05×71°73W±0°09, h35^{km}±1^{km}, Error ellipse: s-maj=10.9km s-min=6.7km az=88.0*

VAO ***09*** *15:49:02.0±1.8, 31°97S×70°95W, h171^{km}±9^{km}, mb4.3*

ISC 09 15:48:43.5±1.1, 32°24S±0°03×71°72W±0°06, h27^{km}±7^{km}, n183, σ1^{s}19/186, mb4.9/26, MS3.9/5, 2C-7D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	El Roble	0.94	141	⇓*i*P	Pn	15 49 01.1	-0.1
ROCH				*i* S	Sn	15 49 13.9	0.0
ROCH				IAML		15 49 16.3	
	comp=N,30μm,0.3s						
ROC1	El Roble	0.94	141		Pb	15 49 01.0	-0.4
ROC1	El Roble	0.94	141	*i* P	Pn	15 49 01.1	-0.1
ROC1				*e*S	Sn	15 49 15.6	+1.6
PEL	Peldehue	1.25	136	⇓*i*P	Pb	15 49 05.9	-0.6
PEL				*i* S	Sb	15 49 22.7	+0.4
PEL				IAML		15 49 25.3	
	comp=N,14μm,0.2s						
PEL	Peldehue	1.25	136		Pb	15 49 05.8	-0.8
PEL	Peldehue	1.25	136	*i* P	Pb	15 49 06.1	-0.4
CLCH	Cerro Calan	1.52	140	⇓*i*P	Pb	15 49 10.0	-1.1
CLCH				*i* S	Sb	15 49 30.0	0.0
CLCH				IAML		15 49 33.8	
	comp=E,14μm,0.4s						
FSR	Penalolen	1.59	141	*i* P	Pb	15 49 12.4	+0.2
FSR				*i* S	Sb	15 49 33.4	+1.4
ANTU	Antumapu	1.61	146	*e*P	Pb	15 49 12.5	-0.1
ANTU				*i* S	Sb	15 49 33.9	+1.4
ANTU				IAML		15 49 41.2	
	comp=N,9μm,0.3s						
MT03	Universidad Ad	1.61	141	⇓*i*P	Pb	15 49 11.3	-1.4
MT03				*i* S	Sb	15 49 32.8	+0.2
MT03				IAML		15 49 36.6	
	comp=N,18μm,0.2s						
FCH	Farellones	1.62	132	⇓*i*P	Pb	15 49 11.6	-1.3
FCH				*i* S	Sb	15 49 33.1	+0.1
FCH				IAML		15 49 37.9	
	comp=N,6μm,0.1s						
CO03	El Pedregal	1.65	32	*e*P	Pb	15 49 12.3	-1.0
CO03				*i* S	Sb	15 49 34.0	+0.3
CO03				IAML		15 49 38.2	
	comp=E,11μm,0.6s						
LMEL	Las Melosas	2.04	142	⇓*i*P	Pb	15 49 17.9	-2.2
LMEL				*i* S	Sb	15 49 44.6	-0.6
LMEL				IAML		15 49 49.4	
	comp=N,6μm,0.1s						
RTLS	Leoncito	2.10	79	*i* P	Pb	15 49 22.3	+1.2
RTLS				IAML		15 49 30.9	
	comp=Z,3μm,0.6s						
GO04	Tololo Observa	2.21	21	⇑*i*P	Pn	15 49 19.4	+0.9
GO04				*i* S	Sb	15 49 51.5	+1.6
GO04	Tololo Observa	2.21	21		Pn	15 49 19.5	+0.9
ARCO	CERRO ARCO	2.43	105	*i* P	Pb	15 49 26.9	+0.3
ARCO				IAML		15 50 08.4	
	comp=Z,1μm,0.5s						
ASAL	Salagasta	2.46	99	*i* P	Pb	15 49 27.5	+0.4
AAGR	Agrelo	2.58	110	*i* P	Pb	15 49 28.8	-0.4
ZON	Zonda	2.67	76	*i* P	Pb	15 49 29.9	-0.9
RTCV	Cerro Valdivia	2.72	83	*i* P	Pb	15 49 30.6	-1.0
GO05	Huala	2.77	184		Pn	15 49 25.3	-0.8
GO05	Huala	2.77	184	*i* P	Pn	15 49 25.3	-0.8
ACCO	Cerro Coronel	2.80	55	*i* P	Pb	15 49 32.6	-0.5
RTLL	Cerro Villicun	2.91	73	*i* P	Pb	15 49 32.2	-2.5
CFA	Coronel Fontan	3.02	79	Pn	Pb	15 49 33.1	-3.6
	comp=Z,104nm,0.3s,baz=235,slow=7.9,SNR=352						
CFA				Lg	Lg	15 50 14.9	
	comp=Z,327nm,0.3s,baz=29,slow=20,SNR=12						
CFA				LR	LR	15 50 37.2	
	comp=Z,567nm,19.2s,baz=260,slow=40						
ACDV	Cuesta del Vie	3.03	48	*i* P	Pb	15 49 35.2	-1.7
AMOG	MOGNA	3.04	66	*i* P	Pb	15 49 35.2	-1.8
CCHI	Chillan	4.36	184	*i* P	Pn	15 49 49.4	+1.4
APLL	PUNTA DE LOS L	4.80	69	*i* P	Pn	15 49 58.5	+4.3
GO03	Copiap	4.81	16		Pn	15 49 54.0	-0.2
GO03	Copiap	4.81	16	*i* P	Pn	15 49 54.2	-0.1
CANA	Caviahue	5.66	175	*i* P	Pn	15 50 09.2	+3.2
CANA				IAML		15 51 51.6	
	comp=Z,73nm,0.7s						
GO02	Mina Guanaco	7.29	15		Pn	15 50 26.7	-1.9
AHML	Horco Molle	7.77	47	*i* P	Pn	15 50 34.5	-0.5
PLCA	Paso Flores	8.53	174	Pn	Pn	15 50 44.7	-0.6
	comp=Z,1.4nm,0.3s,baz=1.7,slow=12,SNR=36						
PLCA				Lg	Lg	15 53 08.1	
	comp=Z,0.2nm,0.3s,baz=258,slow=3.3,SNR=3.2						
PLCA				LR	LR	15 54 16.0	
	comp=Z,274nm,20.5s,baz=358,slow=39						
PLCA	Paso Flores	8.53	174		Pn	15 50 45.8	+0.5
LVC	Limon Verde	9.91	15	Pn	Pn	15 51 04.3	-0.2
	comp=Z,0.6nm,0.3s,baz=180,slow=8.1,SNR=2.8						
LVC				Sn	Sn	15 53 11.2	+16
	comp=Z,1.7nm,0.3s,baz=276,slow=17,SNR=3.9						
LVC				LR	LR	15 54 57.9	
	comp=Z,416nm,21.9s,baz=208,slow=38						
LVC	Limon Verde	9.91	15		Pn	15 51 02.9	-1.6
LVC	Limon Verde	9.91	15	*e*P	Pn	15 51 16.1	+12
LVC				*e*S	Sn	15 53 01.8	+6.7
MNMC	Minye Minye	13.19	9	Pn	Pn	15 51 50.9	+1.5
CPUP	Villa Florida	13.86	69	Pn	Pn	15 51 56.4	-1.9
	comp=Z,0.2nm,0.3s,baz=238,slow=13,SNR=4.3						
CPUP				LR	LR	15 58 03.1	
	comp=Z,286nm,19.9s,baz=250,slow=41						
CPUP	Villa Florida	13.86	69		Pn	15 51 58.5	+0.2
OGAUY	Aigu	14.38	103	*e*P	P	15 52 11.9	-0.1
PLTB	Pedras Altas	15.38	93	*e*P	P	15 52 23.5	+0.4
CPSB	Cacapava Do Su	15.73	88	*e*P	Pn	15 52 22.1	-1.1
ITAB	Concordia	17.72	79	*e*P	P	15 52 49.2	+0.2
CNLB	Canela	18.16	86	*e*P	P	15 52 54.7	+0.7
AQDB	Aquidauana	18.50	55	*e*P	Pn	15 52 58.2	+0.2

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PTGB  Pitanga           18.81  71 eP      P       15 53 01.1 -0.1
SIV   San Ignacio       18.85  33  P      P       15 53 01.2 -0.3
      comp=Z,0.7nm,0.3s,baz=219,slow=9.5,SNR=17
SIV                               LR      LR      16 01 37.5
      comp=Z,270nm,20.1s,baz=262,slow=41
GO09  Cerro Castillo    19.02 181  P      P       15 53 03.0 -0.2
GO09                              IAmb    IAmb    15 53 27.3
      comp=Z,85nm,1.5s
TRCB  Terra Rica        19.34  66 eP      Pn      15 53 07.5 -0.6
NNA   Nana              20.70 346 LR      LR      16 00 01.5
      comp=Z,111nm,18.2s,baz=180,slow=33
PCMB  Pacaembu          21.05  65 eP      P       15 53 25.2 -0.4
FRTB  Fartura           21.48  71 eP      P       15 53 29.5 -0.6
C2SB  Chapadao do Su    21.64  56 eP      P       15 53 31.8  0.0
SALV  Santo Antonio     21.83  46 eP      P       15 53 32.8 -1.1
EFI   East Falkland     21.84 157  P      P       15 53 34.3 +0.6
USHA  Ushuaia           22.70 175  P      P       15 53 44.1 +1.2
      comp=Z,21nm,1.1s,baz=25,slow=8.0,SNR=3.3
USHA                              LR      LR      16 03 33.0
      comp=Z,436nm,19.1s,baz=44,slow=39
ITRB  Iturama           22.85  62 eP      P       15 53 43.3 -1.5
SPB   Sao Paulo         23.08  74  P      P       15 53 46.5 -0.6
SPB                               IAmb    IAmb    15 53 48.5
      comp=Z,33nm,1.1s
SPB   Sao Paulo         23.08  74 eP      P       15 53 45.8 -1.4
BB19B Bebedouro         23.47  67 eP      P       15 53 50.1 -1.0
RCLB  Rio Claro- Sao    23.56  72 eP      P       15 53 50.7 -1.3
VAO   Valinhos          23.74  73 eP      P       15 53 52.5 -1.1
ARAG  Araguaiana, MT    24.46  52 eP      P       15 53 59.9 -0.4
SAML  Samuel            24.49  21  P      P       15 53 60.0 -0.6
SAML  Samuel            24.49  21 eP      P       15 54 01.1 +0.6
IPMB  Ipameri, GO       25.50  62 eP      P       15 54 08.6 -1.3
ESAR  Angra dos Reis    25.79  76 eP      P       15 54 11.1 -1.2
CLDB  Colider           25.84  38 eP      P       15 54 12.3 -0.5
BSCB  Bom Sucesso       26.49  72 eP      P       15 54 17.4 -1.4
BDFB  Brasilia          27.15  58  P      P       15 54 23.2 -1.6
      comp=Z,17nm,0.9s,baz=238,slow=9.0,SNR=17
BDFB                              LR      LR      16 06 11.1
      comp=Z,341nm,20.9s,baz=266,slow=39
BDFB  Brasilia          27.15  58  P      P       15 54 24.2 -0.6
BDFB                              IAmb    IAmb    15 54 25.5
      comp=Z,35nm,1.3s
JANB  Januaria          30.24  62 eP      P       15 54 50.2 -2.1
SJMB  Sao Joao De Ma    30.56  71 eP      P       15 54 53.9 -1.1
BSFB  Barra de Sao F    30.77  72 eP      P       15 54 55.5 -1.3
SMTB  Santa Maria do    32.27  49 eP      P       15 55 09.3 -0.8
PTGA  Pitinga           33.24  22  P      P       15 55 18.0 -0.6
PTGA                              IAmb    IAmb    15 55 19.3
      comp=Z,14nm,0.8s
PTGA  Pitinga           33.24  22 eP      P       15 55 18.2 -0.4
NBPN  Ponto Novo - B    36.01  61 eP      P       15 55 41.0 -1.5
NBLA  Lagarto - SE      37.72  64 eP      P       15 55 55.2 -1.9
RUSC  La Rusia          37.94 358  P      P       15 56 00.1 +0.7
NBTA  Tacaratu-PE       38.72  61 eP      P       15 56 04.2 -1.4
NBMA  Muriti-CE         39.38  58 eP      P       15 56 10.2 -0.9
NBAN  Anadia - AL       39.71  63 eP      P       15 56 12.5 -1.3
NBLI  Livramento-PB     40.70  60 eP      P       15 56 20.3 -1.8
SDV   Santo Domingo     40.91   2  P      P       15 56 21.9 -1.9
      comp=Z,3.8nm,0.8s,baz=191,slow=6.6,SNR=5.2
SDV   Santo Domingo     40.91   2 eP      P       15 56 24.2 +0.4
NBRF  Rio Formoso -     41.21  63 eP      P       15 56 24.8 -1.4
TOSP  Speyside          44.59  16  P      P       15 56 53.9 +0.4
OBIP  Obispado Ponce    50.24   6  P      P       15 57 36.5 -0.8
OBIP                              IAmb    IAmb    15 57 37.5
      comp=Z,21nm,1.4s
BANI  BANI              50.36   2  P      P       15 57 38.9 +0.5
VNA3  Neumayer Olymp    50.89 158  P      P       15 57 42.8 +1.1
VNA2  Neumayer--Watz    51.53 158  P      P       15 57 47.4 +0.9
      baz=285,slow=8.6
SNAA  Sanae             53.11 158  P      P       15 57 59.1 +0.8
SNAA  Sanae             53.11 158  P      P       15 57 59.1 +0.8
      comp=Z,5.7nm,0.5s,baz=277,slow=7.6,SNR=43
SNAA  Sanae             53.11 158  P      P       15 57 58.7 +0.4
SNAA                              IAmb    IAmb    15 58 00.1
      comp=Z,23nm,1.3s
QSPA  South Pole Qui    57.99 180  P      P       15 58 34.7 +1.1
      comp=Z,9.1nm,0.8s,baz=220,slow=1.1,SNR=6.9
QSPA  South Pole Qui    57.99 180  P      P       15 58 34.3 +0.7
QSPA                              IAmb    IAmb    15 58 35.5
      comp=Z,11nm,0.8s
SYO   Syowa Base        67.40 159⇑iP      P       15 59 35.0 -1.0
SYO   Syowa Base        67.40 159⇓epP     pP      15 59 42.0 -2.2
TXAR  Lajitas Array     68.34 330  P      P       15 59 43.6 +1.1
      comp=Z,0.4nm,0.6s,baz=146,slow=8.3,SNR=3.3
WVT   Waverly           69.67 346  P      P       15 59 49.6 -0.9
WVT                               IAmb    IAmb    16 00 00.1
      comp=Z,7.7nm,1.0s
PPT   Papeete           70.78 261 LR      LR      16 23 21.5
      comp=Z,258nm,18.8s,baz=192,slow=29
LIC   Lamto             73.96  72 eP      P       16 00 16.8 -0.1
      comp=Z,33nm,0.7s
TIC   Toumodi           74.22  71 eP      P       16 00 18.0 -0.4
KIC   Kosan Boka        74.27  72 eP      P       16 00 18.7  0.0
      comp=Z,26nm,0.7s
DBIC  Dimbokro          74.36  72  P      P       16 00 19.4 +0.2
      comp=Z,16nm,0.7s,baz=207,slow=6.4,SNR=22
DBIC  Dimbokro          74.36  72  P      P       16 00 19.1  0.0
ANMO  Albuquerque       74.38 331 LR      LR      16 26 43.3
      comp=Z,70nm,20.0s,baz=114,slow=31
M44A  Midewin, Midew    74.80 347  P      P       16 00 20.9 -0.2
LONY  Lake Ozonia       76.54 358  P      P       16 00 30.6 -0.4
G62A  West of Eustis    77.10   1  P      P       16 00 35.6 +1.5
G62A                              IAmb    IAmb    16 00 36.5
      comp=Z,13nm,0.8s
GGN   Saint George      77.12   4  P      P       16 00 35.7 +1.6
PKME  Peaks-Kenny Pk    77.17   2  P      P       16 00 35.6 +1.2
RAR   Rarotonga         77.42 253  P      P       16 00 36.3 -0.3
      comp=Z,10nm,0.4s,baz=136,slow=19,SNR=6.1
F64A  Sherman           77.80   2  P      P       16 00 39.3 +1.3
LMN   Caledonia Moun    77.98   5  P      P       16 00 40.0 +1.0
E63A  Oxbow             78.35   2  P      P       16 00 42.2 +1.1
E63A                              IAmb    IAmb    16 01 59.7
      comp=Z,22nm,1.4s
PQI   Presque Isle      78.62   3  P      P       16 00 43.3 +0.8
PQI                               IAmb    IAmb    16 03 36.1
      comp=Z,18nm,1.3s
ECSD  EROS Data Cent    78.96 342  P      P       16 00 44.7 +0.2
D62A  Allapoint, All    78.99   2  P      P       16 00 45.5 +1.0
D62A                              IAmb    IAmb    16 00 46.9
      comp=Z,10nm,0.8s
E46A  Sault Ste Mari    79.07 351  P      P       16 00 45.2 +0.3
E46A                              IAmb    IAmb    16 01 24.8
      comp=Z,19nm,1.5s
D53A  Lac Vacive, Po    79.14 356  P      P       16 00 45.5 +0.2
BATG  Bathurst New B    79.31   4  P      P       16 00 47.5 +1.2
BATG                              IAmb    IAmb    16 02 22.1
      comp=Z,15nm,1.3s
TSUM  Tsumeb            79.43 106  P      P       16 00 49.2 +1.3
TSUM                              IAmb    IAmb    16 00 49.5
      comp=Z,18nm,1.3s
E43A  Lone Tree Farm    79.46 349  P      P       16 00 47.3 +0.2
BOSA  Boshof            80.65 118  P      P       16 00 54.1 -0.3
      comp=Z,3.0nm,0.6s,baz=274,slow=4.2,SNR=5.6
BOSA  Boshof            80.65 118 IAmb    IAmb    16 00 56.0
      comp=Z,17nm,1.2s
PDAR  Pinedale Array    82.32 333  P      P       16 01 04.1 +1.3
      comp=Z,0.1nm,0.4s,baz=121,slow=4.5,SNR=2.5
NVAR  Mina Array Bea    82.60 325  P      P       16 01 05.5 +1.1
      comp=Z,0.6nm,0.9s,baz=159,slow=6.0,SNR=3.6
TOA0  Torodi Ar. Sit    83.36  70  P      P       16 01 08.6  0.0
TORD  Torodi Ar. Bea    83.36  70  P      P       16 01 08.4 -0.1
      comp=Z,10nm,0.8s,baz=263,slow=4.7,SNR=40
TORD  Torodi Ar. Bea    83.36  70  P      P       16 01 08.6 +0.1
ULM   Lac du Bonnet     84.88 345  P      P       16 01 15.8 +0.4
      comp=Z,1.3nm,0.6s,baz=167,slow=5.4,SNR=5.7
ULM   Lac du Bonnet     84.88 345 IAmb    IAmb    16 01 15.9
      comp=Z,5.1nm,1.0s
LSZ   Lusaka            90.09 108  P      P       16 01 41.5 -0.2
YKA   Yellowknife Ar   100.48 341  P      Pdif    16 02 27.3 -0.4
      comp=Z,0.4nm,0.7s,baz=133,slow=4.6,SNR=8.3
TOLK  Toolik Lake Re   115.39 337         PKiKP   16 07 22.2 +0.4
ASAR  Alice Springs    119.25 207 PKP     PKPdf   16 07 29.7 -1.1
      comp=Z,0.5nm,0.8s,baz=134,slow=1.0,SNR=6.4
BRTR  Keskin Array B   120.73  60 PKP     PKPdf   16 07 31.6 -1.6
      comp=Z,1.4nm,0.8s,baz=197,slow=3.4,SNR=6.9
AKASG Malin Array Be   120.80  47 PKP     PKPdf   16 07 31.4 -1.3
      comp=Z,0.8nm,0.7s,baz=266,slow=2.7,SNR=7.4
WRA   Warramunga Arr   122.43 209 PKP     PKPdf   16 07 36.1 -0.8
      comp=Z,1.9nm,0.8s,baz=161,slow=1.6,SNR=8.4
H11S2 WAKE ISLAND Hy   126.05 270 T       T       18 26 45.2
      baz=118,slow=75,SNR=135
H11S1 WAKE ISLAND Hy   126.06 270 T       T       18 26 42.7
      baz=118,slow=75,SNR=136
H11S3 WAKE ISLAND Hy   126.07 270 T       T       18 26 46.6
      baz=118,slow=75,SNR=112
H11N3 WAKE ISLAND Hy   126.42 272 T       T       18 27 09.4
      baz=117,slow=76,SNR=28
H11N1 WAKE ISLAND Hy   126.44 272 T       T       18 27 14.1
      baz=117,slow=76,SNR=17
H11N2 WAKE ISLAND Hy   126.44 272 T       T       18 27 16.3
      baz=117,slow=76,SNR=60
KLMR  Klimovskoe       127.82  35 ePKPdf  PKPdf   16 07 44.6 -1.2
KLMR                              AMP             16 07 48.1
      comp=Z,33nm,1.9s
GEYT  Alibeck          138.96  68 PKP     PKPdf   16 08 07.3 -0.3
      comp=Z,1.0nm,0.7s,baz=289,slow=4.4,SNR=3.5
TIXI  Tiksi            139.01 350 PKP     PKPdf   16 08 06.0 -0.6
      comp=Z,1.6nm,0.6s,baz=89,slow=3.1,SNR=6.9
TIXI  Tiksi            139.01 350         PKPdf   16 08 06.8 +0.3
ABKAR Akbulak array    140.37  50         PKPpre  16 08 01.8
ABKAR                             PKPdf   PKPdf   16 08 09.7  0.0
BRVK  Borovoye         145.72  41         PKPbc   16 08 19.8 +0.3
BVAR  Borovoye Array   145.80  41 PKPbc   PKPab   16 08 20.4 +0.3
      comp=Z,5.4nm,0.5s,baz=296,slow=2.0,SNR=64
YAK   Yakutsk          147.16 342 PKPbc   PKPbc   16 08 23.7 +0.3
      comp=Z,12nm,0.6s,baz=66,slow=0.7,SNR=16
YAK   Yakutsk          147.16 342         PKPbc   16 08 23.3 -0.1
CHGR  Chuyangaron      147.67  67 PKPbc   PKPbc   16 08 25.5 -0.2
KK31  Karatay Array    148.44  59         PKPbc   16 08 27.3 -0.2
KKAR  Karatay Array    148.44  59         PKPbc   16 08 27.2 -0.2
KKAR  Karatay Array    148.44  59         PKPbc   16 08 27.3 -0.2
GAR   Garm             148.57  67 PKPbc   PKPbc   16 08 28.0 -0.1
KURBB Kurchatov Arra   151.39  41 PKPbc   PKPbc   16 08 34.8 +0.4
      comp=Z,11nm,0.7s,baz=302,slow=2.9,SNR=27
KURK  Kurchatov        151.39  41         PKPbc   16 08 34.5 +0.1
AAK   Ala-Archa        151.40  59 PKPbc   PKiKP   16 08 36.0 +0.6
      comp=Z,15nm,0.7s,baz=166,slow=2.3,SNR=40
AAK   Ala-Archa        151.40  59         PKiKP   16 08 35.7 +0.3
ZAA0  Zalesovo Array   152.59  31         PKPbc   16 08 36.9  0.0
ZALV  Zalesovo Beam    152.59  31 PKP     PKPdf   16 08 30.0  0.0
      comp=Z,0.8nm,0.6s,baz=270,slow=1.0,SNR=5.4
ZALV                              PKPbc   PKPbc   16 08 37.2 +0.2
      comp=Z,12nm,0.6s,baz=294,slow=3.4,SNR=54
ZALV  Zalesovo Beam    152.59  31         PKPdf   16 08 29.8 -0.1
ZALV                                      PKPbc   16 08 36.9 -0.1
KSH   Kashi            152.93  65 PKPbc   PKPdf   16 08 28.4 -2.7
MAKZ  Makanchi         155.18  46         PKPab   16 08 58.9 +0.1
MK31  Makanchi Array   155.38  46         PKPdf   16 08 43.1 +8.9
MK31                                      PKPab   16 08 59.6 -0.1
MKAR  Makanchi Array   155.38  46 PKP     PKPdf   16 08 34.4 +0.2
      comp=Z,0.5nm,0.7s,baz=8.1,slow=1.4,SNR=6.1
MKAR                              PKPbc   pPKPdf  16 08 43.2 +0.2
      comp=Z,1.4nm,0.8s,baz=325,slow=2.1,SNR=12
MKAR                              PKPab   PKPab   16 08 60.0 +0.3
      comp=Z,6.8nm,0.6s,baz=272,slow=3.8,SNR=31
MKAR  Makanchi Array   155.38  46         PKPdf   16 08 33.8 -0.4
MKAR  Makanchi Array   155.38  46 PKPab   PKPab   16 08 59.6 -0.1
WMQ   Urumqi           160.14  49 ePKP    PKPdf   16 08 40.3 +0.1
WMQ                               LR      LR
      comp=Z,100nm,29.1s
TLY   Talaya           160.28   9 PKPab   PKPab   16 09 21.8 +1.2
      comp=Z,1.1nm,0.4s,baz=315,slow=4.9,SNR=3.5
TLY   Talaya           160.28   9         PKPab   16 09 22.0 +1.4
KMI   Kunming          171.40 144 PKP     PKPdf   16 08 46.4 -3.8
CD2   Chengdu          175.91 108 PKP     PKPdf   16 08 49.9 -1.5
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IDC ***09*** *16:02:56.5±0.4, 19°.24N×95°.69E, h0^{km}, mb4.7/36, mb1 4.7/39, mb1mx4.7/54, mbtmp4.7/39, ML4.3/3, MS3.7/11, Ms1 3.8/11, ms1mx3.6/36, Error ellipse: s-maj=13.2km s-min=8.9km az=34.0*

MOS ***09*** *16:02:58.7±0.9, 19°.25N×95°.68E, h27^{km}, mb5.1/66, MS4.2/5, Error ellipse: s-maj=6.8km s-min=3.8km az=122.0*

NEIC ***09*** *16:02:59.7±1.2, 19°.19N±0°.06×95°.72E±0°.05, h25^{km}±3^{km}, mb5.1/118, Error ellipse: s-maj=8.7km s-min=7.1km az=174.0*

NDI ***09*** *16:03:02.3±2.7, 19°.29N×95°.74E, h33^{km}, mb5.0, mb5.1(NEIC)*

BJI ***09*** *16:03:03.0±0.0, 19°.30N×95°.80E, h30^{km}, mB4.9/55, mb4.8/69, ML4.8/2, Ms4.7/62, Ms7 4.4/53*

BGR ***09*** *16:03:13.9±0.0, 20°.18N×93°.81E, h33^{km}, mb5.2*

ISC 09 16:03:00.5±0.7**, 19°.18N**±0°.03×**95°.65E**±0°.03**, h29**^{km}±4^{km}**, n586, σ1^{s}.44**/626**, mb5.0**/158**, MS4.1**/23**, 43C-27D, Myanmar**

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Code  Station Name        Δ°  AZ°  Phase ID         Time      Res
                                   Op      ISC      h  m  s   ISC
MHMT  Maesarieng         2.38 114  P       Pn       16 03 36.5 -1.0
CHTO  Chiang Mai         3.14  96  P       Pn       16 03 46.7 -1.3
CHTO  Chiang Mai         3.14  96          Pn       16 03 46.7 -1.3
CMMT  Chiang Mai         3.14  96  P       Pn       16 03 47.0 -1.1
CMMT                               S       Sb       16 04 27.6 -5.9
CM31  Chiang Mai Arr     3.20 102  P       Pn       16 03 48.2 -0.6
      SNR=460
CM31  Chiang Mai Arr     3.20 102  P       Pn       16 03 48.4 -0.4
CM31                               S       Sb       16 04 38.8 +3.5
CM31  Chiang Mai Arr     3.20 102          Pn       16 03 47.9 -1.0
CMAR  Chiang Mai Arr     3.20 102  Pn      Pn       16 03 47.7 -1.2
      10nm,0.3s,baz=275,slow=14,SNR=212
CMAR                               Pg      Pb       16 03 55.5 -1.1
      70nm,0.3s,baz=279,slow=19,SNR=135
CMAR                               Lg      Lg       16 04 36.2
      171nm,0.3s,baz=207,slow=29,SNR=10
CMAR                               LR      LR       16 04 52.8
      comp=Z,223nm,18.8s,baz=105,slow=37
CMAR  Chiang Mai Arr     3.20 102  P       Pn       16 03 47.1 -1.7
CMAR  Chiang Mai Arr     3.20 102          Pn       16 03 47.1 -1.7
CM01  Chiang Mai Arr     3.22 103  P       Pn       16 03 48.2 -1.0
CM01                               S       Sb       16 04 37.8 +1.9
LAMP  Lampang            3.83  99  P       Pn       16 03 57.0 -0.5
LAMP                               S       Sb       16 04 54.4 +1.2
PAYA  Payao              3.99  87  P       Pb       16 04 06.2 -4.0
PAYA                               S       Sb       16 04 58.5 +0.6
UMPA  Umpang Tak         4.25 134  P       Pn       16 04 03.8 +0.4
PHRA  Phrae              4.39  98  P       Pn       16 04 05.0 -0.2
PHRA                               S       Sb       16 05 17.5 +8.1
NANT  Nan                4.79  94  P       Pn       16 04 12.7 +1.9
NANT                               S       Sb       16 05 30.0 +8.9
UTTA  Uttaradit          4.87 106  P       Pn       16 04 11.1 -0.7
UTTA                               S       Sb       16 05 27.2 +4.0
PHIT  Phitsanulok        4.94 113  P       Pn       16 04 11.9 -0.9
BRDH  Bariadhala         5.11 314  Pn      Pn       16 04 15.8 +0.6
      25nm,0.3s,baz=90,slow=20,SNR=3.3
BRDH                               Sn      Sn       16 05 15.6 +2.4
      13nm,0.3s,baz=116,slow=8.2,SNR=4.8
BRDH                               LR      LR       16 07 02.0
      comp=Z,582nm,18.2s,baz=122,slow=48
PBKT  Sadao Pong         5.69 116  P       Pn       16 04 21.9 -1.1
PBKT  Sadao Pong         5.69 116          Pn       16 04 21.8 -1.3
DGPR  DIGLIPUR           6.51 204 eP       Pn       16 04 35.0 +0.6
DGPR                              eS       Sn       16 05 45.8 -2.0
CHAI  Chaiyaphum         6.87 117  P       Pn       16 04 40.9 +1.6
NONG  Nongkai            7.19  98  P       Pn       16 04 43.9 +0.2
NONG                               S       Sb       16 06 21.7 -8.4
SHL   Shillong           7.25 332 eP       Pn       16 04 44.8 +0.1
SHL   Shillong           7.25 332  P       Pn       16 04 45.7 +1.0
      SNR=54
SHL   Shillong           7.25 332  P       Pn       16 04 45.1 +0.4
SHL   Shillong           7.25 332          Pn       16 04 45.1 +0.4
PHET  Kaeng Krachan      7.31 148  P       Pn       16 04 44.3 -1.1
PATY  Pattaya            7.99 140  P       Pn       16 04 52.8 -1.9
PBA   Port Blair         7.99 201 eP       Pn       16 04 55.9 +1.2
PBA                               eS       Sn       16 06 22.6 -1.4
PBA   Port Blair         7.99 201          Pn       16 04 55.4 +0.7
LKP   Lekhapani          8.12   1 ex       Pn       16 05 02.2 +5.8
SKNT  Sakolnakorn        8.22 104  P       Pn       16 05 00.1 +2.2
ZIRO  ZIRO               8.47 349 eP       Pn       16 05 01.6 +0.1
KMI   Kunming            8.84  47  P       Pn       16 05 12.5 +6.0
KMI                                S       Sn       16 06 53.7 +8.4
KMI                                pmax    pmax
      comp=Z,14nm,1.3s
KMI                                pmax    pmax
      comp=Z,93nm,3.3s
KMI                                LR      LR
      comp=N,2µm,6.6s
KMI                                LR      LR
      comp=E,2µm,7.8s
KMI                                LR      LR
      comp=Z,2µm,12.9s
BWNR  Bhubaneshwar       9.34 278 eP       Pn       16 05 13.7 +0.5
BWNR                              eS       Sn       16 06 50.6 -6.6
BOK   Bokaro            10.18 299 eP       Pn       16 05 26.5 +1.7
BOK                               eS       Sn       16 07 10.8 -7.2
GTK   Tadong            10.37 323 eP       Pn       16 05 28.4 +1.0
ODAN  Odare             10.78 317 eP       Pn       16 05 33.5 +0.4
TAPN  Taplejung         10.92 320 eP       Pn       16 05 34.7 -0.5
      34nm,0.4s
CHLP  Challavanipeta    11.00 268 eP       Pn       16 05 36.0 +0.1
CHLP                              e                 16 07 28.3
LSA   Lhasa             11.25 340  P       Pn       16 05 40.2 +0.5
LSA                                pmax    pmax
      comp=Z,16nm,0.6s
LSA   Lhasa             11.25 340  P       Pn       16 05 39.3 -0.4
LSA   Lhasa             11.25 340          Pn       16 05 39.3 -0.4
RAMN  Ramite            11.36 315 eP       Pn       16 05 40.6 -0.5
      25nm,0.4s
JIRN  Jiri              12.11 316 eP       Pn       16 05 50.6 -0.8
GYA   Guiyang           12.47  52⇓iP       Pn       16 05 59.8 +3.6
GYA                                PP      P        16 06 08.3 +0.6
GYA                                S       Sn       16 08 23.3 +9.1
GYA                                SS      SnSn     16 08 33.9 +7.4
GYA                                pmax    pmax
      comp=Z,10.0nm,1.2s
GYA                                pmax    pmax
      comp=Z,110nm,3.5s
GYA                                LR      LR
      comp=N,2µm,10.3s
GYA                                LR      LR
      comp=E,2µm,10.5s
GYA                                LR      LR
      comp=Z,3µm,11.4s
GUN   Gumba             12.48 316 eP       Pn       16 05 56.1 -0.4
PKI   Pulchoki          12.57 314 eP       Pn       16 05 57.0 -0.7
      46nm,0.8s
PKIN  Phulchoki         12.58 314 eP       Pn       16 05 57.1 -0.8
      31nm,0.6s
DMN   Daman             12.80 313 eP       Pn       16 06 00.2 -0.7
GKN   Gorkha            13.37 313 eP       Pn       16 06 07.6 -0.9
      41nm,0.3s
QIZ   Qiongzhong        13.42  88  P       Pn       16 06 08.4 -0.6
QIZ                                S       Sn       16 08 36.4 -0.9
QIZ                                LR      LR
      comp=N,2µm,10.4s
QIZ                                LR      LR
      comp=E,980nm,12.8s
QIZ                                LR      LR
      comp=Z,960nm,11.1s
QIZ   Qiongzhong        13.42  88  Pn      Pn       16 06 07.5 -1.5
PVM   Polavaram         13.47 264 eP       Pn       16 06 10.1 +0.4
PVM                               e                 16 08 30.3
CD2   Chengdu           13.79  31  P       Pn       16 06 13.7 -0.4
CD2                                S       Sn       16 08 43.4 -2.9
CD2                                pmax    pmax
      comp=Z,40nm,0.4s
CD2                                pmax    pmax
      comp=Z,360nm,6.3s
CD2                                LR      LR
      comp=N,3µm,9.0s
CD2                                LR      LR
      comp=E,4µm,7.3s
CD2                                LR      LR
      comp=Z,5µm,8.2s
DANN  Dangsing          14.20 312 eP       Pn       16 06 18.0 -1.9
      167nm,0.6s
MYLAV Mylavaram         14.49 263 eP       Pn       16 06 24.6 +0.9
MYLAV                              IAmb    IAmb     16 06 34.6
      comp=Z,4.2nm,0.8s
MYLAV                             e                 16 08 53.4
GGR   Gangavaram        14.72 267 eP       Pn       16 06 27.6 +0.7
GGR                                IAmb    IAmb     16 06 32.0
      comp=Z,1.7nm,0.8s
GGR                               e                 16 08 59.3
MLSI  Meulaboh, Aceh    14.84 177  P       P        16 06 33.2 -0.7
      comp=Z,3µmcomp=Z,72nm,0.6s
ADKI  Addanki           15.32 260 eP       Pn       16 06 34.1 -0.6
ADKI                               IAmb    IAmb     16 06 38.7
      comp=Z,5.7nm,0.6s
ADKI                              e                 16 09 12.5
RPR   Rampur            15.47 271 eP       Pn       16 06 37.1 +0.4
RPR                                IAmb    IAmb     16 06 44.7
      comp=Z,5.1nm,0.7s
RPR                               e                 16 09 20.7
KCSI  Kotacane, Aceh    15.70 172  P       P        16 06 44.6 +1.1
      comp=Z,484nmcomp=Z,30nm,0.9s
NJS   Nagarjunasagar    15.78 263 eP       Pn       16 06 41.1 +0.4
NJS                                IAmb    IAmb     16 06 50.2
      comp=Z,16nm,1.0s
NJS                               e                 16 09 24.0
SKHT  Srikalahasti      16.21 253 eP       Pn       16 06 47.8 +1.5
SKHT                               IAmb    IAmb     16 06 53.7
      comp=Z,5.4nm,0.9s
SKHT                              e                 16 09 31.9
SRLM  Srisailam         16.26 262 eP       Pn       16 06 46.4 -0.6
SRLM                               IAmb    IAmb     16 06 55.4
      comp=Z,13nm,0.9s
SRLM                              e                 16 09 35.6
HYB   Hyderabad         16.33 267 i P      P        16 06 54.0 +3.5
HYB                               eS       Sn       16 09 39.0 -9.3
HYBB  Hyderabad (bro    16.33 267 eP       Pn       16 06 47.4 -0.4
HYBB                               IAmb    IAmb     16 06 56.3
      comp=Z,22nm,0.9s
HYBB                              e                 16 09 39.0
HYBB                              eSn      Sn       16 09 47.9 -0.4
SRSP  Sriramsagar       16.37 272 eP       Pn       16 06 46.4 -1.9
SRSP                               IAmb    IAmb     16 06 46.8
      comp=Z,1.3nm,0.5s
SRSP                              e                 16 09 40.5
PSI   Prapat            16.59 168  P       P        16 06 52.7 -0.8
PSI                                pmax    pmax
      comp=Z,34nm,1.2s
RPSI  Rantau Prapat     16.69 169  P       Pn       16 06 52.7 +0.3
ENH   Enshi             16.71  46  Pn      Pn       16 06 51.7 -0.9
KLRI  Killari           18.09 270 eP       P        16 07 11.7 +1.6
KLRI                               IAmb    IAmb     16 07 16.1
      comp=Z,8.7nm,0.7s
KLRI                              e                 16 10 15.7
LATR  Latur             18.09 271  IAmb    IAmb     16 06 26.4
      comp=Z,56nm,1.4s
LZH   Lanzhou           18.33  22 eP       P        16 07 15.6 +3.0
LZH                                sP      sP       16 07 25.2 +0.9
LZH                                S       S        16 10 40.2 -0.5
LZH                                sS      sS       16 10 48.3 -5.0
LZH                                pmax    pmax
      comp=Z,54nm,1.0s
LZH                                pmax    pmax
      comp=Z,620nm,4.9s
LZH                                LR      LR
      comp=Z,1µm,9.8s
LZH                                LR      LR
      comp=Z,740nm,7.6s
LZH                                LR      LR
      comp=Z,1µm,10.2s
PALK  Pallekele         18.74 233  Pn      Pn       16 07 20.0 +2.3
      comp=Z,0.4nm,0.3s,baz=48,slow=15,SNR=3.3
PALK                               S       Sn       16 10 38.8 -7.8
      comp=Z,0.7nm,0.3s,baz=1.2,slow=14,SNR=4.1
PALK                               LR      LR       16 15 09.4
      comp=Z,150nm,20.8s,baz=44,slow=39
PALK  Pallekele         18.74 233  P       Pn       16 07 20.0 +2.3
PALK                               S       Sn       16 10 38.8 -7.8
PALK                               pmax    pmax
      comp=Z,78nm,1.7s
PALK  Pallekele         18.74 233  IAmb    IAmb     16 07 29.8
      comp=Z,78nm,1.7s
XAN   Xi'an             18.94  36  P       Pn       16 07 19.8 -0.2
XAN                                S       Sn       16 10 41.8  -10
XAN                                pmax    pmax
      comp=Z,18nm,0.7s
XAN                                pmax    pmax
      comp=Z,160nm,3.7s
XAN                                LR      LR
      comp=Z,670nm,6.5s
XAN                                LR      LR
      comp=Z,740nm,7.6s
XAN                                LR      LR
      comp=Z,590nm,8.8s
XAN   Xi'an             18.94  36  P       P        16 07 17.9 -1.3
XAN                                pmax    pmax
      comp=Z,26nm,0.7s
XAN   Xi'an             18.94  36  P       P        16 07 17.9 -1.3
WHN   Wuhan             20.36  53 ⇓P       Pn       16 07 37.1 +0.2
WHN                                S       S        16 11 10.0  -11
WHN                                pmax    pmax
      comp=Z,78nm,1.3s
WHN                                LR      LR
      comp=Z,1µm,10.9s
WHN                                LR      LR
      comp=Z,2µm,8.5s
WHN                                LR      LR
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      comp=Z,2µm,9.7s
GTA   Gaotai           20.48   9  ⇑P      Pn     16 07 37.2 -1.2
GTA                                pP     sP     16 07 47.0 -0.9
GTA                                sP     pP     16 07 50.9 +6.8
GTA                                S      S      16 11 22.5 -1.5
GTA                                sS     sS     16 11 35.0 -1.6
GTA                                PcP    PcP    16 11 48.6 +1.3
GTA                                PcS    PcS    16 15 25.5 +0.4
GTA                                pmax   pmax
      comp=Z,8.0nm,1.0s
GTA                                pmax   pmax
      comp=Z,97nm,7.3s
GTA                                LR     LR
      comp=Z,380nm,14.6s
GTA                                LR     LR
      comp=Z,200nm,16.8s
SMLA  Simla            20.50 309 ⇑iP      Pn     16 07 37.7 -0.8
SMLA                               IAmb   IAmb   16 07 44.7
      comp=Z,138nm,1.0s
PDSI  Padang           20.52 166   P      Pn     16 07 39.4 +0.6
      comp=Z,10nm,0.9s
SDSI  Sungai Dareh     20.78 164   P      Pn     16 07 41.4 -0.4
      comp=Z,539nmcomp=Z,11nm,0.9s
DHRM  DHARAMSHALA      21.71 311  eP      P      16 07 50.2 +0.6
DHRM                               IAmb   IAmb   16 07 55.7
      comp=Z,39nm,0.4s
TIY   Taiyuan          23.57  35  eP      P      16 08 08.6 -0.1
TIY                                S      S      16 12 16.3 -4.8
TIY                                pmax   pmax
      comp=Z,25nm,0.8s
TIY                                pmax   pmax
      comp=Z,140nm,5.5s
TIY                                LR     LR
      comp=Z,440nm,8.9s
TIY                                LR     LR
      comp=Z,420nm,9.6s
TIY                                LR     LR
      comp=Z,410nm,15.3s
NJ2   Nanjing          24.47  54  eP      P      16 08 16.2 -0.9
NJ2                                pmax   pmax
      comp=Z,11nm,0.5s
NJ2                                pmax   pmax
      comp=Z,240nm,4.9s
NJ2                                LR     LR
      comp=Z,720nm,8.1s
NJ2                                LR     LR
      comp=Z,310nm,7.1s
NJ2                                LR     LR
      comp=Z,690nm,11.4s
NIL   Nilore           24.63 310   P      P      16 08 18.8 +0.3
NIL                                pmax   pmax
      comp=Z,93nm,0.9s
NIL   Nilore           24.63 310   P      P      16 08 18.8 +0.3
NIL                                IAmb   IAmb   16 08 21.3
      comp=Z,93nm,0.9s
BTO   Baotou           24.66  27  eP      P      16 08 20.0 +1.2
MDSI  Maura Dua        24.97 159   P      P      16 08 22.7 +1.0
      comp=Z,14nm,1.0s
TIA   Tai'an           25.39  44   P      P      16 08 26.1 +0.7
TIA                                pmax   pmax
      comp=Z,21nm,0.8s
TIA                                pmax   pmax
      comp=Z,150nm,8.8s
TIA                                LR     LR
      comp=Z,280nm,14.2s
TIA                                LR     LR
      comp=Z,440nm,16.1s
TIA                                LR     LR
      comp=Z,740nm,16.7s
WMQ   Urumqi           25.46 347  eP      P      16 08 27.2 +1.2
WMQ                                pP     sP     16 08 37.4 -0.7
WMQ                                sP     pP     16 08 43.8 +9.3
WMQ                                pmax   pmax
      comp=Z,23nm,0.9s
WMQ                                pmax   pmax
      comp=Z,170nm,5.5s
WMQ                                LR     LR
      comp=Z,310nm,7.3s
WMQ                                LR     LR
      comp=Z,350nm,7.9s
WMQ                                LR     LR
      comp=Z,230nm,7.9s
WMQ   Urumqi           25.46 347   P      P      16 08 26.8 +0.8
WMQ                                pmax   pmax
      comp=Z,22nm,0.7s
WMQ   Urumqi           25.46 347   P      P      16 08 26.8 +0.8
WMQ                                IAmb   IAmb   16 08 28.9
      comp=Z,22nm,0.7s
HHC   Hu-ho-hao-te     25.54  29  eP      P      16 08 27.0 +0.2
HHC   Hu-ho-hao-te     25.54  29  eP      P      16 08 28.6 +1.8
HHC                                pP     sP     16 08 36.5 -2.4
HHC                                pmax   pmax
      comp=Z,140nm,0.8s
HHC                                pmax   pmax
      comp=Z,440nm,4.1s
HHC                                LR     LR
      comp=Z,1µm,10.1s
HHC                                LR     LR
      comp=Z,1µm,11.2s
HHC                                LR     LR
      comp=Z,1µm,11.3s
KSH   Kashi            26.44 324   P      P      16 08 35.1 +0.1
KSH                                sP     sP     16 08 52.4 +5.3
KSH                                S      S      16 13 03.6 -3.4
KSH                                SS     SnSn   16 14 15.8 +6.5
KSH                                PcS    PcS    16 15 41.6 +0.5
KSH                                pmax   pmax
      comp=Z,450nm,5.3s
KSH                                LR     LR
      comp=Z,700nm,11.0s
KSH                                LR     LR
      comp=Z,640nm,10.3s
KSH                                LR     LR
      comp=Z,440nm,10.4s
BJT   Baijiatuau       27.25  36   P      P      16 08 43.7 +1.5
BJT                                pmax   pmax
      comp=Z,19nm,0.9s
BJT   Baijiatuau       27.25  36   P      P      16 08 43.7 +1.5
BJI   Beijing          27.27  36 ⇓iP      P      16 08 44.7 +2.4
BJI                                S      S      16 13 20.2 +0.4
BJI                                pmax   pmax
      comp=Z,22nm,1.1s
BJI                                LR     LR
      comp=Z,480nm,11.1s
BJI                                LR     LR
      comp=Z,300nm,8.0s
NRN   Naryn            27.80 327   P      P      16 08 47.6 +0.2
NRN                                pmax   pmax
      comp=Z,45nm,1.4s
NRN   Naryn            27.80 327   P      P      16 08 47.6 +0.2
NRN                                IAmb   IAmb   16 08 51.2
      comp=Z,45nm,1.4s
KBL   Kabul            28.12 308   P      P      16 08 49.8 -0.5
KBL                                pmax   pmax
      comp=Z,21nm,0.8s
KBL   Kabul            28.12 308   P      P      16 08 49.8 -0.5
KBL                                IAmb   IAmb   16 08 56.8
      comp=Z,21nm,0.8s
KAAM  Kaadhehdhoo      28.95 233   P      P      16 08 57.3 -0.3
AAK   Ala-Archa        29.44 327   P      P      16 09 02.5 +0.7
      comp=Z,19nm,0.8s,baz=133,slow=5.9,SNR=15
AAK   Ala-Archa        29.44 327c iP      P      16 09 02.9 +1.1
AAK                                pmax   pmax
      comp=Z,24nm,0.9s
AAK   Ala-Archa        29.44 327   P      P      16 09 02.3 +0.5
AAK                                IAmb   IAmb   16 09 04.1
      comp=Z,22nm,0.9s
FRU1  Bishkek          29.50 328   P      P      16 09 03.2 +1.0
FRU1                               pmax   pmax
      comp=Z,160nm,1.9s
FRU1  Bishkek          29.50 328   P      P      16 09 03.2 +1.0
GAR   Garm             29.50 317   P      P      16 09 02.5 +0.1
GAR                                IAmb   IAmb   16 09 03.7
      comp=Z,48nm,0.8s
MK31  Makanchi Array   29.65 341  eP      P      16 09 03.3 -0.1
MK31  Makanchi Array   29.65 341   P      P      16 09 03.6 +0.2
MKAR  Makanchi Array   29.65 341   P      P      16 09 03.8 +0.3
      comp=Z,12nm,0.6s,baz=151,slow=9.4,SNR=92
MKAR                               PcP    PcP    16 12 08.0 +0.6
      comp=Z,1.2nm,0.7s,baz=160,slow=1.5,SNR=5.5
MKAR  Makanchi Array   29.65 341   P      P      16 09 03.4  0.0
MKAR                                             16 12 08.0
MKAR  Makanchi Array   29.65 341   P      P      16 09 03.4  0.0
MAKZ  Makanchi         29.75 341   P      P      16 09 04.3 -0.1
MAKZ                               pmax   pmax
      comp=Z,7.0nm,0.9s
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MAKZ  Makanchi         29.75 341   P      P      16 09 04.3 -0.1
MAKZ                               IAmb   IAmb   16 09 05.4
      comp=Z,6.8nm,0.9s
BTK   Batken           29.81 320   P      P      16 09 05.8 +0.8
BTK                                pmax   pmax
      comp=Z,22nm,1.0s
BTK   Batken           29.81 320   P      P      16 09 05.8 +0.8
BTK                                IAmb   IAmb   16 09 07.0
      comp=Z,22nm,0.9s
SONM  Songino Array    29.89  15   P      P      16 09 06.9 +1.2
      comp=Z,7.0nm,0.8s,baz=199,slow=11,SNR=54
SONM                               PcP    PcP    16 12 08.9 +0.7
      comp=Z,1.6nm,0.8s,baz=209,slow=4.9,SNR=4.5
SONM                               LR     LR     16 23 02.5
      comp=Z,128nm,20.3s,baz=202,slow=40
SONM  Songino Array    29.89  15   P      P      16 09 06.4 +0.7
CHGR  Chuyangaron      30.06 316   P      P      16 09 07.4 +0.1
ULN   Ulaanbaatar      30.08  15   P      P      16 09 07.8 +0.4
ULN                                pmax   pmax
      comp=Z,9.0nm,0.9s
ULN   Ulaanbaatar      30.08  15   P      P      16 09 07.8 +0.4
JOW   Kunigami         30.92  70   P      P      16 09 13.8 -1.1
JOW                                IAmb   IAmb   16 09 56.4
      comp=Z,46nm,1.1s
ZAK   Zakamensk        31.72   9  eP      P      16 09 22.1 +0.3
ZAK                                pmax   pmax
      comp=Z,5.0nm,1.2s
KK31  Karatay Array    31.89 324   P      P      16 09 23.1 -0.2
KK31                               pmax   pmax
      comp=Z,7.0nm,0.9s
KK31  Karatay Array    31.89 324   P      P      16 09 23.1 -0.2
KKAR  Karatay Array    31.89 324   P      P      16 09 23.2 -0.1
KKAR  Karatay Array    31.89 324   P      P      16 09 23.2 -0.1
KKAR  Karatay Array    31.89 324   P      P      16 09 23.1 -0.2
KKAR                               IAmb   IAmb   16 09 25.3
      comp=Z,6.7nm,0.8s
TTSI  Tana Toraja      32.45 130   P      P      16 09 31.1 +2.7
      comp=Z,14nm,1.0s
SNY   Shenyang         32.74  40  ⇓P      P      16 09 32.2 +1.5
SNY                                S      S      16 14 49.8 +4.2
SNY                                pmax   pmax
      comp=Z,18nm,0.9s
SNY                                pmax   pmax
      comp=Z,200nm,5.3s
SNY                                LR     LR
      comp=Z,320nm,7.3s
SNY                                LR     LR
      comp=Z,280nm,8.0s
SNY                                LR     LR
      comp=Z,370nm,9.0s
TLY   Talaya           33.04   9   P      P      16 09 32.8 -0.4
      comp=Z,2.5nm,0.8s,baz=164,slow=8.0,SNR=5.5
TLY   Talaya           33.04   9 ⇓eP      P      16 09 33.7 +0.5
TLY                                pmax   pmax
      comp=Z,5.0nm,1.1s
TLY   Talaya           33.04   9   P      P      16 09 32.5 -0.7
SPSI  Sidrap Palu      33.05 132   P      P      16 09 36.1 +2.4
      comp=Z,30nm,1.2s
KSRS  Korea Array      33.52  50   P      P      16 09 37.0 -0.5
      comp=Z,1.8nm,0.6s,baz=245,slow=7.7,SNR=7.3
KSRS                               LR     LR     16 22 56.1
      comp=Z,105nm,18.7s,baz=274,slow=36
KURBB Kurchatov Arra   34.20 341   P      P      16 09 43.2 -0.1
      comp=Z,15nm,0.7s,baz=152,slow=8.3,SNR=66
KURBB                              PcP    PcP    16 12 20.4 +0.8
      comp=Z,4.7nm,0.7s,baz=161,slow=2.4,SNR=18
KURBB                              ScP    ScP    16 16 05.0 +2.3
      comp=Z,1.1nm,0.9s,baz=164,slow=3.4,SNR=8.5
KURK  Kurchatov        34.25 341c iP      P      16 09 43.4 -0.3
KURK                               pmax   pmax
      comp=Z,17nm,0.7s
KURK  Kurchatov        34.25 341   P      P      16 09 43.2 -0.5
KURK                               IAmb   IAmb   16 09 44.5
      comp=Z,19nm,0.8s
KURK  Kurchatov        34.25 341          PcP    16 12 20.4 +0.6
KURK                                      ScP    16 16 05.0 +2.1
BKSI  Bulukumba        34.26 133   P      P      16 09 45.4 +1.2
WBK   Wadi Bani Khal   34.38 282   P      P      16 09 49.1 +3.8
      SNR=7.7
CN2   Changchun        35.00  39  eP      P      16 09 49.9 -0.4
CN2                               eS      S      16 15 19.2 -1.3
CN2                                pmax   pmax
      comp=Z,10.0nm,0.9s
CN2                                pmax   pmax
      comp=Z,200nm,4.4s
CN2                                LR     LR
      comp=Z,300nm,11.0s
CN2                                LR     LR
      comp=Z,400nm,11.0s
CN2                                LR     LR
      comp=Z,300nm,10.0s
JMDO  Jabal Madar      35.19 282   P      P      16 09 55.6 +3.4
      SNR=7.3
SMDO  Samad            35.23 283   P      P      16 09 55.6 +3.0
      SNR=8.6
SMDO                               P      P      16 09 55.6 +3.0
      SNR=8.6
MHTO  MHTO             35.38 279   P      P      16 09 57.1 +3.2
      SNR=5.7
ZAA0  Zalesovo Array   35.69 349   P      P      16 09 55.9 -0.2
ZAA0                               IAmb   IAmb   16 09 57.5
      comp=Z,30nm,0.9s
ZALV  Zalesovo Beam    35.69 349   P      P      16 09 56.5 +0.3
      comp=Z,17nm,0.7s,baz=171,slow=8.7,SNR=34
ZALV                               PcP    PcP    16 12 23.4 -0.6
      comp=Z,1.3nm,0.4s,baz=191,slow=2.2,SNR=5.6
ZALV  Zalesovo Beam    35.69 349   P      P      16 09 55.9 -0.2
HOQ   Hoqain           35.90 284   P      P      16 10 01.5 +3.2
      SNR=12
BSY   Bisya            36.02 282   P      P      16 10 02.8 +3.5
      SNR=9.1
ASHO  Ashiyiah         37.04 286   P      P      16 10 12.0 +3.8
      SNR=8.2
GEYT  Alibeck          37.57 308   P      P      16 10 13.8 +1.4
      comp=Z,18nm,0.9s,baz=141,slow=7.6,SNR=39
GEYT                               PcP    PcP    16 12 30.9 +0.9
      comp=Z,4.6nm,0.8s,baz=126,slow=4.2,SNR=4.5
WSI   Waingapu         37.58 138   P      P      16 10 14.8 +2.2
      comp=Z,179nm,0.6s
BVAR  Borovoye Array   39.05 336   P      P      16 10 24.2 -0.4
      comp=Z,3.5nm,0.7s,baz=144,slow=9.6,SNR=14
BVAR                               PcP    PcP    16 12 35.0 +0.7
      comp=Z,4.2nm,0.7s,baz=140,slow=3.3,SNR=10
BRVK  Borovoye         39.12 336ceP      P      16 10 24.6 -0.6
BRVK                               pmax   pmax
      comp=Z,19nm,2.5s
BRVK  Borovoye         39.12 336   P      P      16 10 24.6 -0.6
USA0B Ussuriysk Arra   39.24  42   P      P      16 10 26.6 +0.3
USA0B                              pmax   pmax
      comp=Z,39nm,1.8s
USA0B Ussuriysk Arra   39.24  42   P      P      16 10 26.6 +0.3
USRK  Ussuriysk Ar.    39.24  42   P      P      16 10 26.2 -0.1
      comp=Z,6.3nm,0.8s,baz=254,slow=6.6,SNR=12
USRK                               LR     LR     16 28 33.7
      comp=Z,218nm,18.6s,baz=225,slow=39
USRK  Ussuriysk Ar.    39.24  42   P      P      16 10 26.7 +0.4
USRK  Ussuriysk Ar.    39.24  42   P      P      16 10 26.7 +0.4
SOEI  Soe              40.28 133   P      P      16 10 34.9 -0.5
      comp=Z,1µmcomp=Z,137nm,0.9s
SOEI  Soe              40.28 133   P      P      16 10 34.8 -0.6
BOD   Bodaibo          40.89  15  eP      P      16 10 40.9 +1.1
BOD                                pmax   pmax
      comp=Z,10.0nm,1.4s
MAJO  Matsushiro       41.04  56 ⇑eP      P      16 10 42.6 +1.2
MAJO                               pmax   pmax
      comp=Z,23nm,1.6s
MJAR  Matsushiro Arr   41.04  56   P      P      16 10 41.6 +0.2
      comp=Z,1.9nm,0.6s,baz=272,slow=8.5,SNR=9.9
MJAR                               PcP    PcP    16 12 41.1 +0.2
      comp=Z,2.9nm,0.8s,baz=248,slow=2.0,SNR=7.1
MJAR                               LR     LR     16 29 40.6
      comp=Z,125nm,18.4s,baz=280,slow=39
AB31  Akbulak array    41.45 325  i P     P      16 10 44.9 +0.4
ABKAR Akbulak array    41.45 325   P      P      16 10 44.6 +0.1
KLR   Kul'dur          41.65  36c iP      P      16 10 47.1 +0.9
KLR                                pmax   pmax
      comp=Z,22nm,1.1s
FAKI  Fak Fak          42.16 117   P      P      16 10 50.9 +0.1
FAKI                               IAmb   IAmb   16 10 52.4
      comp=Z,31nm,0.9s
ZEA   Zeya             42.19  28  eP      P      16 10 51.1 +0.6
ZEA                                pmax   pmax
      comp=Z,12nm,1.0s
ZEA                                MLR    MLR
      comp=N,300nm,11.0s
ZEA                                MLR    MLR
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      comp=Z,400nm,11.0s
AKTO  Aktyubinsk       43.14 325   P      P      16 10 58.2  0.0
      comp=Z,7.7nm,0.4s,baz=110,slow=6.4,SNR=34
AKTO                               PcP    PcP    16 12 47.0 -0.6
      comp=Z,2.6nm,0.6s,baz=103,slow=7.5,SNR=3.2
GRNR  Gornyy           45.02  36 ⇑iP      P      16 11 14.6 +1.2
GRNR                               pmax   pmax
      comp=Z,20nm,1.0s
GRNR                               MLR    MLR
      comp=Z,170nm,16.0s
SVE   Sverdlovsk       45.70 334  eP      P      16 11 18.8 +0.1
SVE                                pmax   pmax
      comp=Z,43nm,1.0s
AKT   Akhty            46.26 309  eP      P      16 11 24.7 +1.3
AKT                               e              16 13 00.1
AKT                                pmax   pmax
      comp=Z,23nm,0.8s
ARU   Arti             46.34 332   P      P      16 11 23.4 -0.3
      comp=Z,2.4nm,0.3s,baz=143,slow=5.3,SNR=17
ARU                                PcP    PcP    16 12 58.3 -0.2
      comp=Z,1.8nm,0.6s,baz=126,slow=23,SNR=4.1
ARU   Arti             46.34 332c iP      P      16 11 23.4 -0.3
ARU                                              16 12 59.1
ARU                                              16 13 11.8
ARU                                S      S      16 18 11.3 +2.3
ARU                                pmax   pmax
      comp=Z,14nm,0.8s
ARU   Arti             46.34 332   P      P      16 11 23.4 -0.3
ARU                                IAmb   IAmb   16 11 24.3
      comp=Z,11nm,0.6s
RAYN  Ar Rayn          46.72 285   P      P      16 11 27.0 -0.3
RAYN                               pmax   pmax
      comp=Z,16nm,1.5s
RAYN  Ar Rayn          46.72 285   P      P      16 11 27.0 -0.3
YSS   Yuzh-Sakhalins   47.26  43 ⇓eP      P      16 11 32.6 +1.5
YSS                                pmax   pmax
      comp=Z,20nm,1.0s
YSS                                MLR    MLR
      comp=Z,300nm,14.0s
YSS   Yuzh-Sakhalins   47.26  43   P      P      16 11 30.3 -0.7
YSS                                IAmb   IAmb   16 11 35.0
      comp=Z,16nm,0.9s
MTN   Manton Dam       47.27 130   P      P      16 11 30.8 -0.7
FITZ  Fitzroy Crossi   47.33 140   P      P      16 11 31.1 -0.7
FITZ                               IAmb   IAmb   16 11 33.8
      comp=Z,15nm,1.2s
KNRA  Kununurra        47.55 135   P      P      16 11 33.8 +0.2
KNRA                               IAmb   IAmb   16 11 35.0
      comp=Z,18nm,1.0s
GROC  Groznyy          48.06 311  eP      P      16 11 36.7 -0.6
GROC                              e              16 13 06.4
GROC                               pmax   pmax
      comp=Z,24nm,0.8s
GNI   Garni            48.20 307   P      P      16 11 39.2 +0.5
      comp=Z,5.4nm,0.7s,baz=337,slow=22,SNR=4.0
GNI   Garni            48.20 307ceP      P      16 11 40.4 +1.7
GNI                                pmax   pmax
      comp=Z,34nm,1.1s
GNI   Garni            48.20 307   IAmb   IAmb   16 11 51.1
      comp=Z,11nm,0.9s
TYV   Tymovskoe        48.62  38  eP      P      16 11 38.1 -3.4
TYV                                pmax   pmax
      comp=Z,200nm,3.3s
TYV                                pmax   pmax
      comp=Z,12nm,1.2s
YAK   Yakutsk          48.91  20   P      P      16 11 43.7 +0.1
      comp=Z,9.3nm,0.7s,baz=221,slow=1.9,SNR=9.9
YAK   Yakutsk          48.91  20  eP      P      16 11 41.5 -2.0
YAK                               e*PP    pP     16 11 51.0 -1.5
YAK                               e              16 13 05.8
YAK                               eS      S      16 18 41.4 -3.8
YAK                               e*SS    sS     16 19 03.1 +3.1
YAK                               e              16 21 30.3
YAK                               eSS     SS     16 22 15.4 -0.6
YAK                                pmax   pmax
      comp=E,3.0nm,0.9s
YAK                                pmax   pmax
      comp=Z,11nm,0.9s
YAK                                pmax   pmax
      comp=N,2.0nm,1.0s
YAK                                pmax   pmax
      comp=Z,94nm,4.8s
YAK                                smax   smax
      comp=N,124nm,3.6s
YAK                                smax   smax
      comp=E,101nm,4.2s
YAK                                MLR    MLR
      comp=Z,130nm,21.0s
YAK                                MLR    MLR
      comp=N,92nm,20.0s
YAK   Yakutsk          48.91  20   P      P      16 11 43.3 -0.2
YAK                                IAmb   IAmb   16 11 44.3
      comp=Z,15nm,0.6s
ZEI   Tsey             49.32 310  eP      P      16 11 48.2 +0.9
ZEI                                pmax   pmax
      comp=Z,38nm,1.3s
AKH   Akhalkalaki      49.36 308   P      P      16 11 49.4 +1.8
AKH                                pmax   pmax
      comp=Z,21nm,1.0s
AKH   Akhalkalaki      49.36 308   P      P      16 11 49.4 +1.8
AKH                                IAmb   IAmb   16 11 50.7
      comp=Z,21nm,1.0s
NCK   Nalchik          49.69 311 ⇑eP      P      16 11 51.5 +1.6
NCK                                pmax   pmax
      comp=Z,4.0nm,0.3s
KBZ   Khabaz           50.23 311   P      P      16 11 54.4 +0.5
      comp=Z,6.0nm,0.9s,baz=147,slow=7.5,SNR=8.1
KBZ   Khabaz           50.23 311 ⇑eP      P      16 11 54.4 +0.5
KBZ                                pmax   pmax
      comp=Z,8.0nm,0.9s
NEY   Neytrino         50.26 311 ⇑eP      P      16 11 56.7 +2.3
NEY                                pmax   pmax
      comp=Z,6.0nm,0.8s
NRIK  Noril'sk         50.40 356   P      P      16 11 54.9 +0.1
      comp=Z,9.1nm,0.4s,baz=149,slow=5.7,SNR=24
NRIK                               PcP    PcP    16 13 12.8 -0.1
      comp=Z,2.9nm,0.6s,baz=130,slow=4.1,SNR=4.0
KIV   Kislovodsk       50.43 312  eP      P      16 11 56.6 +1.0
KIV                                pmax   pmax
      comp=Z,95nm,1.0s
KIV   Kislovodsk       50.43 312   P      P      16 11 55.4 -0.2
KIV                                IAmb   IAmb   16 11 57.8
      comp=Z,32nm,1.0s
KIRV  Kirov            51.64 331   P      P      16 12 03.9 -0.3
      comp=Z,19nm,0.5s,baz=128,slow=4.7,SNR=6.5
SOC   Sochi            52.48 311  eP      P      16 12 12.1 +1.3
SOC                               e              16 14 08.2
SOC                               ePPP    PPP    16 15 12.0
SOC                               eS      S      16 19 38.9 +3.5
SOC                               eSS     SS     16 23 14.3 +0.8
SOC                               eSSS    SSS    16 24 54.5
SOC                                pmax   pmax
      comp=Z,47nm,1.3s
SOC                                MLR    MLR
      comp=Z,155nm,14.0s
VRH   Novokhopyorsk    52.85 320  eP      P      16 12 12.3 -1.0
VRH                                pmax   pmax
      comp=Z,40nm,0.9s
WB0   Warramunga Arr   54.23 133   P      P      16 12 24.3 +0.3
WB0                                IAmb   IAmb   16 12 25.2
      comp=Z,11nm,0.7s
ANN   Anapa            54.29 312  eP      P      16 12 17.1 -6.9
ANN                               e*PP    pP     16 12 27.6 -5.4
ANN                               e              16 14 21.5
ANN                                pmax   pmax
      comp=Z,106nm,1.5s
WRA   Warramunga Arr   54.31 134   P      P      16 12 25.2 +0.6
      comp=Z,11nm,0.8s,baz=328,slow=7.3,SNR=71
WRA                                PcP    PcP    16 13 28.6 +0.2
      comp=Z,1.6nm,0.8s,baz=324,slow=3.6,SNR=5.6
WRA   Warramunga Arr   54.31 134   P      P      16 12 24.4 -0.1
WRA                                              16 13 28.6
WRA                                pmax   pmax
      comp=Z,1.0nm,0.9s
WRA   Warramunga Arr   54.31 134   P      P      16 12 24.4 -0.1
WB2   Warramunga Arr   54.32 134   P      P      16 12 24.6  0.0
WB2                                IAmb   IAmb   16 12 26.1
      comp=Z,22nm,0.9s
VSR   Storozhevoye     54.40 320  eP      P      16 12 23.4 -1.3
VSR                                pmax   pmax
      comp=Z,30nm,1.5s
PRGR  Permogore        54.77 333  eP      P      16 12 25.5 -1.7
PRGR                               pmax   pmax
      comp=Z,32nm,0.8s
LPSR  Galich'ya Gora   54.89 321  eP      P      16 12 27.3 -1.0
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LPSR				pmax	pmax		
	comp=Z,30nm,0.7s						
TIXI	Tiksi	55.93	12	P	P	16 12 34.9	-0.5
	comp=Z,13nm,0.6s,baz=184,slow=4.6,SNR=57						
TIXI	Tiksi	55.93	12	⇑eP	P	16 12 34.9	-0.5
TIXI				pmax	pmax		
	comp=Z,27nm,1.7s						
TIXI	Tiksi	55.93	12	P	P	16 12 34.9	-0.5
TIXI				IAmb	IAmb	16 12 35.6	
	comp=Z,27nm,1.3s						
MA2	Magadan	56.21	30c	iP	P	16 12 38.1	+0.5
MA2				pmax	pmax		
	comp=Z,30nm,1.0s						
MA2	Magadan	56.21	30	P	P	16 12 37.9	+0.2
MA2				IAmb	IAmb	16 12 39.1	
	comp=Z,22nm,0.8s						
BZK	Bozkurt	56.47	308	⇓P	P	16 12 41.1	+1.3
AS31	Alice Springs	56.62	137	P	P	16 12 41.3	+0.2
ASAR	Alice Springs	56.62	137	P	P	16 12 41.7	+0.6
	comp=Z,3.7nm,0.7s,baz=316,slow=7.1,SNR=80						
ASAR				PcP	PcP	16 13 37.1	-0.1
	comp=Z,1.6nm,0.7s,baz=314,slow=4.6,SNR=5.5						
ASAR				LR	LR	16 38 15.7	
	comp=Z,117nm,19.4s,baz=128,slow=37						
BR131	Keskin Array S	56.63	305c	eP	P	16 12 41.4	+0.2
BR131	Keskin Array S	56.63	305	P	P	16 12 40.9	-0.3
BRTR	Keskin Array B	56.63	305	P	P	16 12 41.5	+0.2
	comp=Z,4.0nm,0.9s,baz=120,slow=8.4,SNR=23						
BRTR				PcP	PcP	16 13 36.8	-0.6
	comp=Z,1.5nm,0.7s,baz=116,slow=2.9,SNR=4.0						
BRTR	Keskin Array B	56.63	305	P	P	16 12 40.9	-0.3
ILGA	Ilgaz	56.63	307	P	P	16 12 42.4	+1.1
ILGA				IAmb	IAmb	16 12 44.0	
	comp=Z,30nm,1.0s						
OBN	Obninsk	56.89	324	eP	P	16 12 41.9	-0.6
OBN				e		16 13 37.1	
OBN				e		16 14 48.4	
OBN				ePPP	PPP	16 16 04.4	
OBN				pmax	pmax		
	comp=Z,31nm,1.7s						
OBN				MLR	MLR		
	comp=Z,308nm,18.0s						
KLMR	Klimovskoe	57.14	331	eP	P	16 12 42.9	-1.3
KLMR				pmax	pmax		
	comp=Z,19nm,0.9s						
KLMR	Klimovskoe	57.14	331	eP	P	16 12 42.9	-1.3
KLMR				AMP		16 12 47.0	
	comp=Z,19nm,0.9s						
PETK	Petropavlovsk-	58.15	39	P	P	16 12 51.7	+0.2
	comp=Z,2.2nm,0.8s,baz=224,slow=7.7,SNR=4.1						
PETK				LR	LR	16 38 53.5	
	comp=Z,119nm,19.2s,baz=243,slow=37						
SEY	Seymchan	58.16	27	⇓iP	P	16 12 51.4	0.0
ELL	Elmali	59.57	302	P	P	16 13 02.0	+0.2
ELL				pmax	pmax		
	comp=Z,154nm,0.9s						
ELL	Elmali	59.57	302	P	P	16 13 02.0	+0.2
RABL	Rabaul	60.24	107	P	P	16 13 05.9	-0.6
AKASG	Malin Array Be	60.50	318	P	P	16 13 07.1	-0.7
	comp=Z,9.3nm,0.7s,baz=80,slow=6.5,SNR=45						
AKASG				PP	PP	16 15 20.0	-1.1
	comp=Z,1.3nm,0.7s,baz=85,slow=8.6,SNR=4.2						
AKASG	Malin Array Be	60.50	318	P	P	16 13 06.4	-1.4
AKASG						16 15 20.0	
AKASG				pmax	pmax		
	comp=Z,22nm,1.8s						
AKASG	Malin Array Be	60.50	318	P	P	16 13 06.4	-1.4
AKBB	Malin Array Si	60.50	318c	eP	P	16 13 07.0	-0.8
AKBB	Malin Array Si	60.50	318	P	P	16 13 06.7	-1.0
AKBB				IAmb	IAmb	16 13 08.0	
	comp=Z,25nm,1.0s						
TIRR	Tirgusor	60.67	311	⇓P	P	16 13 11.0	+2.0
TIRR	Tirgusor	60.67	311	⇓P	P	16 13 11.0	+2.0
KMBO	Kilima Mbogo	60.74	257	P	P	16 13 11.8	+1.5
	comp=Z,1.8nm,0.8s,baz=26,slow=4.8,SNR=4.8						
KMBO	Kilima Mbogo	60.74	257	P	P	16 13 11.8	+1.5
KMBO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SORM	Soroca	60.87	315	⇑P	P	16 13 10.0	-0.3
SORM	Soroca	60.87	315	⇑P	P	16 13 10.0	-0.3
CFR	Carcaliu	60.89	312	⇑P	P	16 13 10.6	+0.1
CFR	Carcaliu	60.89	312	⇑P	P	16 13 10.6	+0.1
KARP	Karpathos	61.86	301	P	P	16 13 17.4	0.0
VRI	Vrincioaia	61.89	312	⇓P	P	16 13 18.8	+1.4
VRI	Vrincioaia	61.89	312	⇓P	P	16 13 18.8	+1.4
PLOR	Plostina	61.95	312	⇓P	P	16 13 19.0	+1.3
PLOR	Plostina	61.95	312	⇓P	P	16 13 19.0	+1.3
TESR	Tescani	61.96	313	⇓P	P	16 13 18.0	+0.3
RAZG	Razgrad	62.04	310	⇓P	P	16 13 23.9	+5.6
NACGM	Naroch	62.39	323	e	P	16 13 21.0	+0.5
MLR	Muntele Rosu	62.44	312	P	P	16 13 22.2	+1.0
	comp=Z,32nm,0.9s,baz=140,slow=2.1,SNR=24						
MLR	Muntele Rosu	62.44	312	⇓P	P	16 13 22.4	+1.2
MLR	Muntele Rosu	62.44	312	⇓P	P	16 13 22.4	+1.2
MLR	Muntele Rosu	62.44	312	P	P	16 13 21.8	+0.7
IZAR	Zarasai	62.78	323	eP	P	16 13 24.1	+1.1
ISAL	Salakas	62.84	323	eP	P	16 13 23.8	+0.4
VSU	Vasula	62.84	327	eP	P	16 13 22.8	-0.5
VSU	Vasula	62.84	327	⇑eP	P	16 13 23.0	-0.3
BURAR	Bucovina Array	62.96	314	⇑P	P	16 13 25.1	+0.5
BURAR	Bucovina Array	62.96	314	⇑P	P	16 13 25.1	+0.5
BURAR	Bucovina Array	62.96	314	P	P	16 13 24.5	0.0
BUR08	Bucovina Ar. S	62.97	314	P	P	16 13 24.8	+0.2
BUR08				IAmb	IAmb	16 13 26.1	
	comp=Z,11nm,0.9s						
VOIR		63.07	312	⇓P	P	16 13 25.3	0.0
VOIR		63.07	312	⇓P	P	16 13 25.3	0.0
ARR	Arges	63.36	312	⇑P	P	16 13 27.6	+0.4
FINES	FINESS Array B	63.58	330	P	P	16 13 28.1	-0.1
	comp=Z,9.7nm,0.7s,baz=100,slow=5.6,SNR=43						
LVV	L'vov	63.78	317	eP	P	16 13 29.5	-0.3
PABE	Paberze	64.05	323	eP	P	16 13 32.2	+0.8
CJR	Cluj-Napoca	64.06	313	⇓P	P	16 13 33.2	+1.4
CJR	Cluj-Napoca	64.06	313	⇓P	P	16 13 33.2	+1.4
SUW	Suwalki	64.43	321	eP	P	16 13 33.8	-0.1
SUW	Suwalki	64.43	321	P	P	16 13 33.5	-0.4
SUW				pmax	pmax		
	comp=Z,82nm,1.0s						
SUW	Suwalki	64.43	321	P	P	16 13 33.5	-0.4
VTS	Vitosha	64.46	309	⇑P	P	16 13 35.2	+0.6
VTS	Vitosha	64.46	309	⇑P	P	16 13 35.2	+0.6
VTS	Vitosha	64.46	309	P	P	16 13 34.9	+0.3
VTS				IAmb	IAmb	16 13 36.2	
	comp=Z,12nm,0.9s						
BBOO	Buckleboo	64.53	143	P	P	16 13 35.2	+0.3
BBOO				IAmb	IAmb	16 13 36.5	
	comp=Z,11nm,0.8s						
KWP	Kalwaria Pacla	64.64	317	eP	P	16 13 36.1	+0.7
KWP	Kalwaria Pacla	64.64	317	eP	P	16 13 36.1	+0.7
KWP	Kalwaria Pacla	64.64	317	P	P	16 13 35.4	0.0
DRGR		64.67	313	⇑P	P	16 13 36.7	+0.9
DRGR		64.67	313	⇑P	P	16 13 36.7	+0.9
TRPA	Tarpa	64.76	315	⇑P	P	16 13 36.9	+0.7
UZH	Uzhgorod	64.92	315	eP	P	16 13 36.2	-1.0
UZH				i		16 13 42.0	
UZH				e		16 13 49.3	
KOLS	Kolonicke sedl	64.92	316	eP	P	16 13 37.8	+0.5
KOLS	Kolonicke sedl	64.92	316	eP	P	16 13 37.8	+0.5
HERR	Herculane	64.94	311	⇓P	P	16 13 38.8	+1.3
BILL	Bilibino	65.13	23	⇑eP	P	16 13 37.8	-0.5
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL	Bilibino	65.13	23	P	P	16 13 37.3	-1.0
LIT	Litokhoron	65.19	306	P	P	16 13 38.5	-0.8
LIT				pmax	pmax		
	comp=Z,14nm,0.7s						
LIT	Litokhoron	65.19	306	P	P	16 13 38.5	-0.8
LIT				IAmb	IAmb	16 13 39.8	
	comp=Z,14nm,0.7s						
ARCES	ARCESS Array B	65.25	339	P	P	16 13 39.0	-0.1
	comp=Z,5.6nm,0.7s,baz=96,slow=5.7,SNR=13						
ARE0	ARCESS Array S	65.25	339	P	P	16 13 39.2	+0.2
AGG	Agios Georgios	65.41	305	P	P	16 13 39.7	-1.0
AGG				pmax	pmax		
	comp=Z,167nm,2.0s						
AGG	Agios Georgios	65.41	305	P	P	16 13 39.6	-1.0
SIRR	Siria	65.42	313	⇑P	P	16 13 41.5	+1.0
MDVR	Moldovita	65.45	311	⇑P	P	16 13 41.8	+0.9
CRVS	Cervenica-Dubn	65.46	316	eP	P	16 13 42.0	+1.2
CRVS				pmax	pmax		
	comp=Z,39nm,1.0s						
CRVS	Cervenica-Dubn	65.46	316	eP	P	16 13 42.0	+1.2
BZS	Buzias	65.47	312	⇓P	P	16 13 41.6	+0.7
BZS	Buzias	65.47	312	⇓P	P	16 13 41.6	+0.7
BEL	Belsk	65.84	319	eP	P	16 13 43.9	+0.8
BEL	Belsk	65.84	319	eP	P	16 13 43.9	+0.8
ITM	Ithomi	65.92	303	P	P	16 13 43.3	-0.7
FNA	Florina	65.98	307	P	P	16 13 43.7	-0.7
FNA				pmax	pmax		
	comp=Z,23nm,0.9s						
FNA	Florina	65.98	307	P	P	16 13 43.7	-0.7
FNA				IAmb	IAmb	16 13 44.8	
	comp=Z,23nm,0.9s						
NIE	Niedzica	66.21	316	eP	P	16 13 47.0	+1.3
NIE	Niedzica	66.21	316	eP	P	16 13 47.0	+1.3
OJC	Ojcow	66.50	317	eP	P	16 13 47.9	+0.4
OJC	Ojcow	66.50	317	eP	P	16 13 47.9	+0.4
OJC	Ojcow	66.50	317	P	P	16 13 48.0	+0.5
OJC				IAmb	IAmb	16 13 48.7	
	comp=Z,19nm,1.0s						
PSZ	Piszkesteto	66.54	315	⇓P	P	16 13 48.6	+0.7
PSZ	Piszkesteto	66.54	315	⇓P	P	16 13 48.6	+0.7
PSZ	Piszkesteto	66.54	315	P	P	16 13 48.5	+0.7
PSZ				IAmb	IAmb	16 13 49.3	
	comp=Z,15nm,1.0s						
MBAR	Mbarara	66.59	261	P	P	16 13 48.4	-0.4
MBAR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MBAR	Mbarara	66.59	261	P	P	16 13 48.4	-0.4
LANS	Liptovska Anna	66.76	316	eP	P	16 13 50.4	+1.2
LANS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LANS	Liptovska Anna	66.76	316	eP	P	16 13 50.4	+1.2
STKA	Stephens Creek	67.20	138	P	P	16 13 53.3	+1.2
	comp=Z,6.1nm,0.7s,baz=304,slow=7.8,SNR=24						
STKA	Stephens Creek	67.20	138	P	P	16 13 52.3	+0.2
STKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
STKA	Stephens Creek	67.20	138	P	P	16 13 52.2	+0.2
VYHS	Vyhne	67.22	315	eP	P	16 13 52.4	+0.3
VYHS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VYHS	Vyhne	67.22	315	eP	P	16 13 52.4	+0.3
PDG	Podgorica	67.41	309	⇑P	P	16 13 53.4	0.0
PDG	Podgorica	67.41	309	P	P	16 13 53.0	-0.3
PDG				IAmb	IAmb	16 14 48.2	
	comp=Z,31nm,1.3s						
OKC	Ostrava-Krasne	67.59	317	eP	P	16 13 55.2	+0.9
OKC	Ostrava-Krasne	67.59	317	eP	P	16 13 55.2	+0.9
OKC				smax	smax		
	comp=N,10.0nm,0.2s						
JAVC	Velka Javorina	67.96	316	eP	P	16 13 58.0	+1.2
MORC	Moravsky Berou	67.98	317	⇑P	P	16 13 57.8	+0.9
MORC	Moravsky Berou	67.98	317	⇑P	P	16 13 57.8	+0.9
MORC	Moravsky Berou	67.98	317	eP	P	16 13 57.5	+0.6
MORC	Moravsky Berou	67.98	317	P	P	16 13 57.8	+0.9
MORC				IAmb	IAmb	16 13 58.5	
	comp=Z,8.2nm,0.8s						
MODS	Modra-Piesok	68.26	315	eP	P	16 13 58.3	-0.4
MODS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MODS	Modra-Piesok	68.26	315	eP	P	16 13 58.3	-0.4
SCTE	Santa Cesarea	68.27	306	P	P	16 13 57.7	-1.1
KRLC	Kraliky	68.45	317	eP	P	16 14 00.4	+0.6
KRLC	Kraliky	68.45	317	eP	P	16 14 00.4	+0.6
VRAC	Vranov	68.63	316	⇑P	P	16 14 02.2	+1.2
VRAC	Vranov	68.63	316	⇑P	P	16 14 02.2	+1.2
VRAC	Vranov	68.63	316	eP	P	16 14 02.0	+1.0
BLY	Banja Luka	68.67	311	P	P	16 14 01.6	+0.4
BLY				IAmb	IAmb	16 14 03.1	
	comp=Z,15nm,0.9s						
KSP	Ksiaz	68.70	318	eP	P	16 14 02.1	+0.8
KSP	Ksiaz	68.70	318	eP	P	16 14 02.1	+0.8
DPC	Dobruska-Polom	68.72	317	eP	P	16 14 02.6	+1.1
DPC	Dobruska-Polom	68.72	317	eP	P	16 14 02.6	+1.1
OSTC	Ostas	68.77	318	eP	P	16 14 02.6	+0.8
KRUC	Moravsky	68.78	316	eP	P	16 14 02.2	+0.3
CHVC	Chvalec	68.87	318	eP	P	16 14 03.2	+0.7
CONA	Conrad Observa	69.25	315	eP	P	16 14 05.2	+0.3
	comp=Z,12nm,1.3s,SNR=5.5						
ARSA	Arzberg	69.55	314	eP	P	16 14 07.0	+0.3
	comp=Z,6.5nm,0.8s						
HFS	Hagfors	69.58	328	P	P	16 14 06.6	0.0
	comp=Z,12nm,0.6s,baz=106,slow=5.3,SNR=38						
TIP	Timpagrande	69.70	306	P	P	16 14 07.8	-0.1
TIP				IAmb	IAmb	16 14 17.2	
	comp=Z,18nm,1.2s						
GOPC	GO Pecny, Ondr	69.75	317	eP	P	16 14 08.5	+0.6
GOPC	GO Pecny, Ondr	69.75	317	eP	P	16 14 08.5	+0.6
PRU	Pruhonice	69.90	317	eP	P	16 14 09.6	+0.9
PRU	Pruhonice	69.90	317	eP	P	16 14 09.6	+0.9
SOKA	Soboth	69.94	314	eP	P	16 14 09.9	+0.7
	comp=Z,9.7nm,0.8s						
PDKS	Podkum	70.05	313	i P	P	16 14 10.8	+1.0
ACER	Acerenza	70.08	307	P	P	16 14 10.0	-0.1
BRG	Berggiesshubel	70.18	318	eP	P	16 14 11.3	+0.8
	comp=Z,16nm,0.8s						
BRG				i		16 14 14.0	
	comp=Z,11nm,0.7s						
BRG				ePP	PP	16 16 43.3	-2.5
	comp=Z,32nm,2.1s						
BRG	Berggiesshubel	70.18	318	eP	P	16 14 11.3	+0.8
BRG				e		16 16 43.3	
BRG				pmax	pmax		
	comp=Z,16nm,0.8s						
BRG				pmax	pmax		
	comp=Z,11nm,0.7s						
BRG				pmax	pmax		
	comp=Z,33nm,2.1s						
MOA	Molln	70.32	315	eP	P	16 14 11.6	+0.2
	comp=Z,10.0nm,0.7s,SNR=5.2						
LJU	Ljubljana	70.37	313	i P	P	16 14 12.7	+0.9
NC405	NORSAR Array S	70.49	329	P	P	16 14 11.7	-0.5
GEC2	GERESS Array S	70.57	316	P	P	16 14 13.2	+0.1
GEC2				IAmb	IAmb	16 14 14.6	
	comp=Z,18nm,0.8s						
GERES	GERESS Array B	70.57	316	P	P	16 14 13.7	+0.6
	comp=Z,15nm,0.8s,baz=79,slow=5.9,SNR=108						
GERES	GERESS Array B	70.57	316	P	P	16 14 13.2	+0.1
GERES	GERESS Array B	70.57	316	P	P	16 14 13.2	+0.1
NC602	NORSAR Array S	70.60	329	P	P	16 14 12.7	-0.2
KHC	Kasperske Hory	70.62	316	eP	P	16 14 13.5	+0.3
KHC	Kasperske Hory	70.62	316	⇑eP	P	16 14 13.8	+0.6
KHC				pmax	pmax		
	comp=Z,19nm,1.0s						
KHC	Kasperske Hory	70.62	316	P	P	16 14 13.3	+0.1
NC303	NORSAR Array S	70.65	329	P	P	16 14 12.9	-0.3
NB201	NORSAR Array S	70.70	329	P	P	16 14 13.5	0.0
CLL	Collm	70.72	319	eP	P	16 14 15.0	+1.2
	comp=Z,13nm,1.2s						
CLL	Collm	70.72	319	eP	P	16 14 15.0	+1.2
CLL				pmax	pmax		
	comp=Z,13nm,1.2s						
NB2	NORSAR Subarra	70.74	329	P	P	16 14 13.3	-0.4
	comp=Z,6.8nm,0.7s,baz=85,slow=6.2						
NOA	NORSAR Array B	70.74	329	P	P	16 14 13.4	-0.3
	comp=Z,5.6nm,0.7s,baz=86,slow=6.0,SNR=22						
CADS	Cadrg	70.89	313	i P	P	16 14 15.0	+0.1
NAO01	NORSAR Array S	70.92	329	P	P	16 14 14.0	-0.8
NC204	NORSAR Array S	70.94	329	P	P	16 14 14.7	-0.3
TRI	Trieste	70.95	313	P	P	16 14 14.5	-0.7
TRI				pmax	pmax		
	comp=Z,19nm,1.0s						
TRI	Trieste	70.95	313	P	P	16 14 14.5	-0.7
TRI				IAmb	IAmb	16 14 28.8	
	comp=Z,19nm,1.0s						
NBO00	NORSAR Array S	70.95	329	P	P	16 14 14.3	-0.7
KBA	Koelnbreinsper	71.04	314	eP	P	16 14 15.8	-0.2
	comp=Z,3.0nm,0.6s						
NKC	Novy Kostel	71.21	318	eP	P	16 14 17.7	+0.9
NKC	Novy Kostel	71.21	318	eP	P	16 14 17.7	+0.9
INTR	Introdacqua	71.41	309	P	P	16 14 17.9	-0.3
STAL	STALIGIAL	71.59	313	P	P	16 14 18.7	-0.5
STAL				IAmb	IAmb	16 14 19.9	
	comp=Z,23nm,0.8s						
ABTA	Abfaltersbach	71.65	314	eP	P	16 14 19.2	-0.4
	comp=Z,8.5nm,1.0s						
KONO	Kongsberg	71.68	328	P	P	16 14 19.3	-0.1
KONO				pmax	pmax		
	comp=Z,123nm,1.9s						
KONO	Kongsberg	71.68	328	P	P	16 14 19.3	-0.1
NRCA	Norcia	71.85	310	P	P	16 14 21.3	+0.4
NRCA				IAmb	IAmb	16 14 23.0	
	comp=Z,42nm,1.2s						
GRF	Grafenberg Arr	72.07	317	eP	P	16 14 23.0	+1.0
	comp=Z,33nm,1.5s,baz=90,slow=5.2						
WTTA	Wattenberg	72.17	315	eP	P	16 14 22.6	-0.2
	comp=Z,5.4nm,0.6s,SNR=6.6						
WATA	Walderalm	72.20	315	eP	P	16 14 22.6	-0.3
	comp=Z,3.9nm,0.6s,SNR=5.6						
MURB	Monte Urbino	72.20	310	P	P	16 14 23.3	+0.3
CTI	Castel Tesino	72.35	313	P	P	16 14 23.6	-0.2
CTI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CTI	Castel Tesino	72.35	313	P	P	16 14 23.6	-0.2
TEOL	Teolo	72.45	313	P	P	16 14 24.3	-0.1
TEOL				IAmb	IAmb	16 14 25.7	
	comp=Z,14nm,0.8s						
SQTA	Sankt Quirin	72.46	315	eP	P	16 14 24.1	-0.4
	comp=Z,12nm,0.7s,SNR=6.0						
MOTA	Moosalm	72.51	315	eP	P	16 14 24.2	-0.6
	comp=Z,24nm,0.9s,SNR=8.3						
RETA	Reutte	72.72	315	eP	P	16 14 25.9	-0.1
	comp=Z,9.0nm,0.6s,SNR=8.3						
FETA	Feichten	72.82	314	eP	P	16 14 26.5	-0.1
	comp=Z,10nm,0.8s,SNR=5.4						
LATE	Laterza	72.84	310	P	P	16 14 26.1	-0.6
OSSC	Osservatorio P	73.08	311	P	P	16 14 27.7	-0.4
OSSC				IAmb	IAmb	16 14 30.7	
	comp=Z,23nm,1.0s						
ZCCA	Zocca	73.12	312	P	P	16 14 28.6	+0.2
ZCCA				IAmb	IAmb	16 14 31.5	
	comp=Z,26nm,0.9s						
SALO	Salr	73.20	313	P	P	16 14 28.8	0.0
DAVA	Damuels	73.34	315	i P	P	16 14 29.9	+0.1
	comp=Z,15nm,0.8s,SNR=7.2						
TOO	Toolangi	73.38	141	P	P	16 14 31.0	+1.1
TOO				pmax	pmax		
	comp=Z,15nm,1.2s						
TOO	Toolangi	73.38	141	P	P	16 14 30.9	+1.1
TOO				IAmb	IAmb	16 16 41.5	
	comp=Z,15nm,1.2s						
STU	Stuttgart	73.53	316	P	P	16 14 30.7	+0.1
STU				pmax	pmax		
	comp=Z,27nm,1.1s						
STU	Stuttgart	73.53	316	P	P	16 14 30.7	+0.1
STU				IAmb	IAmb	16 14 32.3	
	comp=Z,27nm,1.1s						
TUE	Stuetta	73.85	314	P	P	16 14 32.2	-0.6
BFO	Black Forest	74.17	316	P	P	16 14 33.7	-0.8
BFO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BFO	Black Forest	74.17	316	P	P	16 14 33.7	-0.8
NOR	Nord	74.32	352	i P	P	16 14 34.8	+0.1
NOR	Nord	74.32	352	i P	P	16 14 34.8	+0.1
LSZ	Lusaka	74.68	248	P	P	16 14 39.0	+1.0
LSZ				pmax	pmax		
	comp=Z,19nm,1.0s						
LSZ	Lusaka	74.68	248	P	P	16 14 39.0	+1.0
LSZ				IAmb	IAmb	16 14 43.0	
	comp=Z,19nm,1.0s						
ECH	Echery	74.97	316	P	P	16 14 39.0	-0.1
ECH				pmax	pmax		
	comp=Z,16nm,1.5s						
ECH	Echery	74.97	316	P	P	16 14 39.0	-0.1
SENIN	Lac Senin/Sane	75.26	314	P	P	16 14 40.9	-0.2
SENIN				IAmb	IAmb	16 14 43.4	
	comp=Z,9.5nm,0.8s						
WLF	Walferdange	75.31	318	P	P	16 14 40.6	-0.4
WLF				pmax	pmax		
	comp=Z,24nm,1.1s						
WLF	Walferdange	75.31	318	P	P	16 14 40.6	-0.4
WLF				IAmb	IAmb	16 14 43.9	
	comp=Z,24nm,1.1s						
BNI	Bardonecchia	75.97	313	P	P	16 14 45.1	+0.1
BNI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BNI	Bardonecchia	75.97	313	P	P	16 14 45.1	+0.1
KEST	Kesra	76.15	303	P	P	16 14 46.8	+0.7
	comp=Z,14nm,1.0s,baz=293,slow=1.9,SNR=8.9						
KEST	Kesra	76.15	303	P	P	16 14 46.9	+0.7
KEST				IAmb	IAmb	16 14 48.2	
	comp=Z,26nm,1.1s						
CRZF	Crozet Islands	76.34	210	P	P	16 14 46.4	-0.3
RDOG	Red Dog Mine	76.58	22	P	P	16 14 47.5	-0.3
RDOG				IAmb	IAmb	16 15 33.6	
	comp=Z,8.2nm,0.7s						
SSB	Saint Sauveur	77.39	314	P	P	16 14 53.3	+0.4
SSB				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SSB	Saint Sauveur	77.39	314	P	P	16 14 53.3	+0.4
CLF	Chambon-Foret	78.20	317	P	P	16 14 57.5	+0.2
CLF				IAmb	IAmb	16 14 58.9	
	comp=Z,35nm,1.1s						
TOLK	Toolik Lake Re	80.87	20	P	P	16 15 12.4	+0.9
	baz=300						
BOSA	Boshof	82.92	237	P	P	16 15 24.0	+1.0
	comp=Z,5.8nm,0.8s,baz=63,slow=2.2,SNR=6.9						
BOSA				LR	LR	16 46 26.2	
	comp=Z,66nm,20.2s,baz=80,slow=32						
BOSA	Boshof	82.92	237	P	P	16 15 24.0	+1.0
BOSA				pmax	pmax		
	comp=Z,48nm,1.8s						
BOSA	Boshof	82.92	237	IAmb	IAmb	16 15 43.6	
	comp=Z,48nm,1.8s						
SUMG	Summit	83.50	347	⇑iP	P	16 15 25.8	+0.2
	comp=Z,36nm,0.7s						
SUMG	Summit	83.50	347	⇑iP	P	16 15 25.8	+0.2
SUMG				pmax	pmax		
	comp=Z,36nm,0.7s						
SUMG	Summit	83.50	347	P	P	16 15 25.2	-0.4
SUMG				IAmb	IAmb	16 15 26.7	
	comp=Z,16nm,0.8s						
ILAR	Eielson Array	83.79	22	LR	LR	16 55 13.2	
	comp=Z,83nm,18.6s,baz=15,slow=38						
ESDC	Sonseca Array	85.08	310	P	P	16 15 34.7	+0.8
	comp=Z,3.6nm,0.8s,baz=53,slow=5.0,SNR=18						
ESDC	Sonseca Array	85.08	310	P	P	16 15 33.6	-0.3
INK	Inuvik	85.79	16	P	P	16 15 36.4	-0.3
INK				pmax	pmax		
	comp=Z,15nm,1.1s						
INK	Inuvik	85.79	16	P	P	16 15 36.4	-0.3
INK				IAmb	IAmb	16 15 38.0	
	comp=Z,15nm,1.1s						
RES	Resolute Bay	86.11	3	P	P	16 15 38.2	0.0
RES				pmax	pmax		
	comp=Z,8.0nm,0.9s						
RES	Resolute Bay	86.11	3	P	P	16 15 38.2	0.0
RES				IAmb	IAmb	16 15 39.7	
	comp=Z,8.0nm,0.8s						
PBRG	Braganca	86.26	313	eP	P	16 15 41.5	+1.8
MVO	Moncorvo	86.70	312	eP	P	16 15 43.3	+1.4
C36M	Paulatuk	87.28	13	P	P	16 15 43.2	-0.9
C36M				IAmb	IAmb	16 15 44.6	
	comp=Z,22nm,1.0s						
C36M	Paulatuk	87.28	13	P	P	16 15 43.8	-0.2
	baz=323						
MTE	Manteigas	87.36	312	eP	P	16 15 47.3	+2.2
PCBR	Castelo Branco	87.53	311	eP	P	16 15 47.4	+1.5
PMRV	Marv??o	87.63	311	eP	P	16 15 47.8	+1.4
PTOM	Tomar	88.28	311	eP	P	16 15 51.0	+1.6
PVAQ	Vaqueiros	88.65	309	eP	P	16 15 49.7	-1.5
PNCL	Nicolau / Gran	88.96	310	eP	P	16 15 54.5	+1.8
TORD	Torodi Ar. Bea	89.41	284	P	P	16 15 55.8	+0.6
	comp=Z,2.8nm,0.8s,baz=84,slow=4.6,SNR=12						
TORD				PP	PP	16 19 26.8	+0.4
	comp=Z,1.2nm,1.0s,baz=88,slow=5.0,SNR=4.3						
TORD	Torodi Ar. Bea	89.41	284	P	P	16 15 55.0	-0.2
SFJD	Kangerlussuaq	90.50	347	i P	P	16 15 58.7	-0.5
SFJD	Kangerlussuaq	90.50	347	i P	P	16 15 58.7	-0.5
SFJD	Kangerlussuaq	90.50	347	P	P	16 15 59.2	0.0
YKA	Yellowknife Ar	95.15	14	P	P	16 16 20.8	0.0
	comp=Z,1.5nm,0.8s,baz=330,slow=4.6,SNR=8.5						
YKA				PP	PP	16 20 10.1	+0.2
	comp=Z,0.8nm,0.9s,baz=335,slow=8.0,SNR=4.7						
SYO	Syowa Base	96.57	198	⇑eP	P	16 16 27.0	+0.1
SYO	Syowa Base	96.57	198	⇑eX	P	16 16 33.0	+6.1
PDAR	Pinedale Array	114.13	20	PKP	PKiKP	16 21 37.2	-0.3
	comp=Z,0.7nm,0.6s,baz=136,slow=1.7,SNR=7.5						
NVAR	Mina Array Bea	114.43	29	PKP	PKPdf	16 21 39.2	+0.9
	comp=Z,0.8nm,0.6s,baz=290,slow=2.0,SNR=8.2						
NVAR	Mina Array Bea	114.43	29		PKPdf	16 21 38.8	+0.5
R11A	Troy Canyon, C	115.70	27		PKPdf	16 21 41.2	+0.5
R11A	Troy Canyon, C	115.70	27	P	PKPdf	16 21 41.4	+0.7
	baz=327						
ECSD	EROS Data Cent	116.39	10	P	PKPdf	16 21 41.4	-0.2
	baz=347						
MTPU	Mount Pierson	117.36	25		PKiKP	16 21 44.7	+0.6
L54A	Sinclairville	118.72	356	P	PKPdf	16 21 45.8	-0.3
	baz=5.3						
L57A	Andrews Acres	118.74	354	P	PKiKP	16 21 46.6	+0.4
	baz=8.0						

L47A	**Sherwood**	**119.15**	**1**	P	**PKPdf**	**16 21 46.8**	**-0.2**
	baz=359						
L48A	**N Adams**	**119.19**	**0**	P	**PKPdf**	**16 21 46.6**	**-0.5**
	baz=360						
M54A	**Oil Creek Stat**	**119.47**	**356**	P	**PKPdf**	**16 21 47.4**	**-0.2**
	baz=5.0						
N58A	**Sunbury**	**119.87**	**353**	P	**PKiKP**	**16 21 48.4**	**0.0**
	baz=8.2						
N49A	**Columbus Grove**	**120.21**	**360**	P	**PKPdf**	**16 21 48.7**	**-0.3**
	baz=0.1						
N53A	**Lisbon**	**120.23**	**357**	P	**PKiKP**	**16 21 49.3**	**+0.2**
	baz=3.8						
N48A	**Decatur**	**120.27**	**1**	P	**PKPdf**	**16 21 48.7**	**-0.4**
	baz=359						
O56A	**Blue Knob Stat**	**120.62**	**355**	P	**PKiKP**	**16 21 50.1**	**+0.1**
	baz=6.2						
T25A	**Trinidad**	**120.88**	**19**	P	**PKPdf**	**16 21 50.5**	**-0.2**
	baz=338						
ACSO	**Alum Creek Sta**	**120.88**	**359**	P	**PKPdf**	**16 21 49.8**	**-0.5**
	baz=1.4						
KSU1	**Kansas State U**	**120.90**	**11**	P	**PKPdf**	**16 21 49.9**	**-0.5**
	baz=346						
O49A	**Covington**	**120.94**	**360**	P	**PKPdf**	**16 21 49.9**	**-0.6**
	baz=360						
O51A	**Pataskala**	**120.96**	**358**	P	**PKPdf**	**16 21 50.2**	**-0.3**
	baz=1.8						
O50A	**Cable**	**120.98**	**359**	P	**PKPdf**	**16 21 50.1**	**-0.4**
	baz=0.7						
P54A	**Burton**	**121.42**	**356**	P	**PKiKP**	**16 21 51.7**	**+0.2**
	baz=4.2						
P52A	**Corning**	**121.46**	**358**	P	**PKPdf**	**16 21 50.9**	**-0.5**
	baz=2.4						
P55A	**Reedsville**	**121.47**	**356**	P	**PKPdf**	**16 21 51.1**	**-0.4**
	baz=4.9						
P50A	**Jamestown**	**121.52**	**360**	P	**PKPdf**	**16 21 50.8**	**-0.8**
	baz=0.5						
P48A	**Milroy**	**121.66**	**1**	P	**PKPdf**	**16 21 51.1**	**-0.7**
	baz=359						
Q55A	**Buckhannon**	**122.00**	**356**	P	**PKiKP**	**16 21 52.8**	**+0.1**
	baz=4.7						
Q54A	**Coxs Mills**	**122.05**	**357**	P	**PKiKP**	**16 21 52.6**	**-0.2**
	baz=3.8						
Q48A	**North Vernon**	**122.18**	**1**	P	**PKPdf**	**16 21 52.5**	**-0.3**
	baz=358						
ANMO	**Albuquerque**	**122.22**	**21**	PKP	**PKiKP**	**16 21 54.3**	**+0.9**
	comp=Z,3.0nm,0.6s,baz=333,slow=1.6,SNR=14						
ANMO	**Albuquerque**	**122.22**	**21**	PKIKP	**PKPdf**	**16 21 52.7**	**-0.6**
ANMO	**Albuquerque**	**122.22**	**21**		**PKPdf**	**16 21 52.7**	**-0.6**
ANMO	**Albuquerque**	**122.22**	**21**	P	**PKiKP**	**16 21 54.2**	**+0.8**
	baz=335						
S39A	**Bolivar**	**122.81**	**8**		**PKPdf**	**16 21 52.5**	**-1.6**
TUC	**Tucson**	**122.89**	**27**	P	**PKiKP**	**16 21 55.8**	**+1.1**
	baz=330						
S59A	**Mechanicsville**	**122.98**	**353**	P	**PKiKP**	**16 21 54.7**	**+0.1**
	baz=7.8						
S44A	**Carbondale**	**123.24**	**5**		**PKPdf**	**16 21 54.4**	**-0.5**
S53A	**Williamson**	**123.41**	**358**	P	**PKPdf**	**16 21 55.2**	**-0.1**
	baz=2.4						
S52A	**Salyersville**	**123.43**	**359**	P	**PKPdf**	**16 21 55.0**	**-0.3**
	baz=1.4						
S50A	**Richmond**	**123.45**	**0**	P	**PKPdf**	**16 21 54.7**	**-0.6**
	baz=360						
S51A	**Beattyville**	**123.48**	**359**	P	**PKPdf**	**16 21 55.1**	**-0.3**
	baz=0.8						
T47A	**Sharon Grove**	**124.08**	**3**		**PKPdf**	**16 21 55.8**	**-0.7**
HHAR	**Hobbs**	**124.10**	**9**		**PKPdf**	**16 21 55.8**	**-0.8**
T50A	**Nancy**	**124.10**	**0**	P	**PKPdf**	**16 21 56.2**	**-0.4**
	baz=359						
TUL1	**Leonard**	**124.15**	**11**	P	**PKPdf**	**16 21 56.5**	**-0.2**
	baz=347						
U40A	**Yellville**	**124.18**	**8**		**PKPdf**	**16 21 55.9**	**-0.9**
U40A	**Yellville**	**124.18**	**8**	P	**PKPdf**	**16 21 56.4**	**-0.4**
	baz=350						
MSTX	**Muleshoe**	**124.31**	**19**		**PKPdf**	**16 21 56.5**	**-0.7**
MSTX	**Muleshoe**	**124.31**	**19**	P	**PKiKP**	**16 21 57.3**	**-0.2**
	baz=339						
U55A	**TA2, Sparta**	**124.53**	**357**	P	**PKPdf**	**16 21 57.5**	**0.0**
	baz=3.7						
TZTN	**Tazewell**	**124.58**	**359**	P	**PKPdf**	**16 21 57.5**	**0.0**
	baz=0.8						
WMOK	**Wichita Mounta**	**124.65**	**14**	P	**PKPdf**	**16 21 57.5**	**-0.3**
	baz=343						
FCAR	**Ozark Folk Cen**	**124.74**	**8**		**PKPdf**	**16 21 57.0**	**-0.8**
WVT	**Waverly**	**124.89**	**3**	PKIKP	**PKPdf**	**16 21 57.5**	**-0.6**
WVT	**Waverly**	**124.89**	**3**		**PKPdf**	**16 21 57.5**	**-0.6**
WVT	**Waverly**	**124.89**	**3**	P	**PKPdf**	**16 21 57.9**	**-0.2**
	baz=356						
CLTN	**Cedars of Leba**	**125.00**	**2**		**PKPdf**	**16 21 57.5**	**-0.9**
V57A	**Coltrane Farms**	**125.06**	**355**	P	**PKPdf**	**16 21 58.4**	**0.0**
	baz=5.2						
V51A	**Loudon**	**125.32**	**0**	P	**PKiKP**	**16 21 59.0**	**-0.3**
	baz=360						
W41B	**Gary Mavity, V**	**125.43**	**8**	P	**PKPdf**	**16 21 58.9**	**-0.2**
	baz=351						
V53A	**Saluda**	**125.43**	**358**	P	**PKPdf**	**16 21 59.3**	**0.0**
	baz=1.7						
TKL	**Tuckaleechee C**	**125.46**	**359**	PKP	**PKPdf**	**16 21 59.2**	**0.0**
	comp=Z,4.5nm,0.6s,baz=150,slow=2.7,SNR=12						
MNTX	**Cornudas Mount**	**125.54**	**22**		**PKPdf**	**16 21 59.3**	**-0.2**
MNTX	**Cornudas Mount**	**125.54**	**22**	P	**PKiKP**	**16 22 00.1**	**+0.2**
	baz=335						
MIAR	**Mount Ida**	**125.86**	**9**	PKIKP	**PKPdf**	**16 21 59.2**	**-0.8**
MIAR	**Mount Ida**	**125.86**	**9**		**PKPdf**	**16 21 59.2**	**-0.8**
MIAR	**Mount Ida**	**125.86**	**9**	P	**PKiKP**	**16 22 00.3**	**-0.1**
	baz=349						
PLAL	**Pickwick Lake**	**126.02**	**4**		**PKPdf**	**16 21 59.4**	**-0.9**
ABTX	**Abilene, Hawle**	**126.45**	**16**	P	**PKiKP**	**16 22 01.7**	**0.0**
	baz=342						
X54A	**Belton**	**126.54**	**358**	P	**PKiKP**	**16 22 01.7**	**-0.1**
	baz=2.2						
TX31	**Lajitas Ar. Si**	**128.29**	**22**		**PKPdf**	**16 22 04.5**	**-0.5**
TX32	**Lajitas Array**	**128.29**	**22**		**PKPdf**	**16 22 04.8**	**-0.2**
TXAR	**Lajitas Array**	**128.29**	**22**	PKP	**PKiKP**	**16 22 05.8**	**+0.2**
	comp=Z,1.6nm,0.5s,baz=208,slow=0.3,SNR=15						
TXAR	**Lajitas Array**	**128.29**	**22**	PKIKP	**PKPdf**	**16 22 04.2**	**-0.8**
TXAR	**Lajitas Array**	**128.29**	**22**		**PKPdf**	**16 22 04.2**	**-0.8**
JCT	**Junction City**	**128.44**	**17**	PKIKP	**PKPdf**	**16 22 04.2**	**-0.9**
JCT	**Junction City**	**128.44**	**17**		**PKPdf**	**16 22 04.2**	**-0.9**
JCT	**Junction City**	**128.44**	**17**	P	**PKiKP**	**16 22 05.5**	**-0.2**
	baz=341						
PLCV	**Puerto La Cruz**	**144.94**	**325**		**PKPab**	**16 22 34.8**	**-0.1**
PCRV	**Puerto La Cruz**	**144.95**	**325**	PKP	**PKPab**	**16 22 34.8**	**-0.2**
	comp=Z,18nm,0.5s,baz=333,slow=2.0,SNR=12						
BDFB	**Brasilia**	**145.19**	**270**	PKPbc	**PKPdf**	**16 22 36.9**	**+0.6**
	comp=Z,15nm,0.8s,baz=100,slow=3.1,SNR=21						
BDFB	**Brasilia**	**145.19**	**270**	PKIKP	**PKPdf**	**16 22 36.3**	**0.0**
BDFB	**Brasilia**	**145.19**	**270**		**PKPdf**	**16 22 36.3**	**0.0**
TGUH	**Tegucigalpa,Un**	**146.85**	**5**	*e*P	**PKPab**	**16 22 41.4**	**-0.8**
TGUH	**Tegucigalpa,Un**	**146.85**	**5**		**PKPbc**	**16 22 40.4**	**-0.6**
SDV	**Santo Domingo**	**149.01**	**333**	PKPbc	**PKPbc**	**16 22 47.2**	**+0.3**
	comp=Z,17nm,0.8s,baz=42,slow=1.5,SNR=21						
SDV	**Santo Domingo**	**149.01**	**333**	*e*P	**PKPbc**	**16 22 46.4**	**-0.5**
SDV	**Santo Domingo**	**149.01**	**333**		**PKPbc**	**16 22 46.1**	**-0.9**
PTGA	**Pitinga**	**149.88**	**305**		**PKPbc**	**16 22 48.9**	**0.0**
SMLC	**San Martn de**	**150.41**	**339**	*e*P	**PKPbc**	**16 22 49.5**	**-0.6**
OCAC	**Ocana**	**150.67**	**337**	*e*P	**PKPbc**	**16 22 49.5**	**-1.4**
PAMC	**Pamplona, Colo**	**151.26**	**335**	*e*P	**PKPbc**	**16 22 52.2**	**-0.5**
BRRC	**Barranca, Sant**	**151.85**	**337**	*e*P	**PKiKP**	**16 22 54.8**	**+0.9**
UREC	**San Jos de Ur**	**151.86**	**341**	*e*P	**PKiKP**	**16 22 54.1**	**+0.2**
RUSC	**La Rusia**	**152.73**	**335**	*e*P	**PKiKP**	**16 22 56.8**	**+0.5**
RUSC	**La Rusia**	**152.73**	**335**		**PKPdf**	**16 22 48.1**	**-0.9**
DBBC	**Dabeiba**	**152.76**	**342**	*e*P	**PKiKP**	**16 22 56.6**	**+0.7**
NORC	**Norcasia**	**153.70**	**338**	*e*P	**PKPbc**	**16 22 55.7**	**-2.0**
CPUP	**Villa Florida**	**154.12**	**249**	PKP	**PKPdf**	**16 22 51.0**	**+1.0**
	comp=Z,2.9nm,1.0s,baz=94,slow=2.4,SNR=5.4						
CPUP				PKPbc	**PKPbc**	**16 22 57.9**	**-0.2**
	comp=Z,6.5nm,0.5s,baz=99,slow=2.4,SNR=22						
CPUP	**Villa Florida**	**154.12**	**249**	PKIKP	**PKPbc**	**16 22 57.6**	**-0.5**
CPUP	**Villa Florida**	**154.12**	**249**	PKPbc	**PKPbc**	**16 22 57.6**	**-0.5**
GUY2C	**Guyana, Caldas**	**154.19**	**339**	*e*P	**PKPbc**	**16 22 57.5**	**-1.8**
CHN	**Chinchina**	**154.51**	**339**	PKIKP	**PKPbc**	**16 22 57.0**	**-2.6**
CHN				pmax	pmax		
	comp=Z,119nm,2.0s						

*GCG **09** 16:10:21.7±0.4, 16°.92N×91°.64W, h49^{km}±794^{km}, MD4.2*
*NEIC **09** 16:10:22.9±2.6, 14°.12N±0°.06×93°.26W±0°.05, h10^{km}±1^{km}, mb4.3/33, Md4.1/20(MEX), Error ellipse: s-maj=10.0km s-min=8.3km az=178.0*
*MEX **09** 16:10:22.4±1.0, 13°.82N×93°.29W, h50^{km}±76^{km}, MD4.1*
*IDC **09** 16:10:22.9±1.5, 14°.36N×93°.02W, h0^{km}, mb3.9/8, mb1 4.1/11, mb1mx3.9/41, mbtmp3.9/11, ML3.4/3, MS3.4/2, Ms1 3.4/2, ms1mx2.8/37, Error ellipse: s-maj=46.5km s-min=17.2km az=39.0*

ISC 09 16:10:21.4±1.9**, 14°.09N**±0°.06×**93°.26W**±0°.04**, h1**^{km}±11^{km}**,**
n71, σ1^{s}.34/81**, mb4.1**/18**, 1D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**1.26**	**49**	*i* P	**Pg**	**16 10 45.1**	**-0.5**
THIG				*e*S	**Sg**	**16 11 02.3**	**+0.4**
THIG		**1.26**	**49**		**Pg**	**16 10 45.1**	**-0.5**
THIG					**Sg**	**16 11 02.3**	**+0.4**
PCIG		**1.61**	**1**	*i* P	**Pn**	**16 10 49.6**	**-1.4**
PCIG				*i* S	**Sn**	**16 11 11.8**	**-0.7**
PCIG		**1.61**	**1**		**Pn**	**16 10 49.6**	**-1.4**
PCIG					**Sn**	**16 11 11.8**	**-0.7**
ERG	**Entre ros, C**	**1.67**	**78**	*e*S	Sg	16 11 29.3	+14
STG3	**Santiaguito 3,**	**1.75**	**69**	*e*P	**Pn**	**16 10 52.8**	**-0.2**
FUG	**Fuego 3**	**2.37**	**81**	*e*P	**Pn**	**16 11 01.7**	**+0.1**
CCIG	**Comitan**	**2.44**	**26**	*i* P	**Pn**	**16 11 01.7**	**-0.9**
CCIG				*i* S	**Sn**	**16 11 32.7**	**-0.4**
CCIG	**Comitan**	**2.44**	**26**		**Pn**	**16 11 03.7**	**+1.1**
CCIG	**Comitan**	**2.44**	**26**		**Pn**	**16 11 01.7**	**-0.9**
CCIG					**Sn**	**16 11 32.7**	**-0.4**
PCG	**Pacaya**	**2.58**	**83**	*e*S	**Sn**	**16 11 36.6**	**-0.3**
TGIG		**2.68**	**3**	*e*P	**Pn**	**16 11 06.1**	**+0.3**
TGIG				*i* S	**Sn**	**16 11 40.0**	**+1.0**
TGIG		**2.68**	**3**		**Pn**	**16 11 06.1**	**+0.3**
TGIG					**Sn**	**16 11 40.0**	**+1.0**
IXG	**Ixpaco**	**2.73**	**88**	*e*P	**Pn**	**16 11 07.4**	**+0.7**
APG	**El Apazote**	**2.85**	**71**	Pn	**Pn**	**16 11 07.8**	**-0.5**
	5.4nm,0.3s,baz=288,slow=7.3,SNR=34						
APG				Sn	**Sn**	**16 11 38.1**	**-5.3**
	10nm,0.3s,baz=319,slow=17,SNR=6.0						
HUIG	**Huatulco**	**3.23**	**302**	*e*P	**Pn**	**16 11 12.1**	**-1.1**
HUIG				*i* S	**Sn**	**16 11 49.4**	**-2.9**
HUIG	**Huatulco**	**3.23**	**302**		**Pn**	**16 11 12.1**	**-1.1**
HUIG					**Sn**	**16 11 49.4**	**-2.9**
CMIG	**Matias Romero**	**3.38**	**332**	Pn	**Pn**	**16 11 15.4**	**+0.1**
	2.1nm,0.3s,baz=140,slow=11,SNR=35						
CMIG				Sn	**Sn**	**16 11 58.2**	**+2.1**
	6.2nm,0.3s,baz=66,slow=15,SNR=5.0						
CMIG	**Matias Romero**	**3.38**	**332**	*e*P	**Pn**	**16 11 15.4**	**+0.1**
CMIG				*i* S	**Sn**	**16 11 56.2**	**+0.2**
CMIG	**Matias Romero**	**3.38**	**332**		**Pn**	**16 11 15.4**	**+0.1**
CMIG					**Sn**	**16 11 56.2**	**+0.2**
TEIG	**Tepich**	**7.74**	**37**	LR	LR	16 15 35.4	
	comp=Z,347nm,19.2s,baz=71,slow=42						
TEIG	**Tepich**	**7.74**	**37**		**Pn**	**16 12 14.2**	**-1.1**
TX31	**Lajitas Ar. Si**	**17.98**	**329**	P	**Pn**	**16 14 33.0**	**+0.1**
TX32	**Lajitas Array**	**17.98**	**329**		**Pn**	**16 14 33.2**	**+0.4**
TXAR	**Lajitas Array**	**17.98**	**329**	P	**P**	**16 14 34.7**	**+1.2**
	0.1nm,0.3s,baz=165,slow=7.3,SNR=4.5						
TXAR	**Lajitas Array**	**17.98**	**329**		**Pn**	**16 14 32.1**	**-0.7**
Z35A	**Perchaven, San**	**19.50**	**350**	P	**Pn**	**16 14 52.9**	**+1.6**
Z35A				IAmb	IAmb	16 14 56.9	
	comp=Z,16nm,0.8s						
GUY2C	**Guyana, Caldas**	**19.70**	**115**	*e*P	**Pn**	**16 14 54.0**	**-0.2**
PTBC	**PUERTO BERRIO,**	**19.95**	**110**	*e*P	**P**	**16 14 55.5**	**+0.4**
ORTC	**Ortega, Tolima**	**20.44**	**118**⇓	*e*P	Pn	16 15 05.5	+2.9
GOGA	**Godfrey**	**21.20**	**23**	P	**P**	**16 15 07.3**	**-1.2**
GOGA				IAmb	IAmb	16 15 55.4	
	comp=Z,47nm,1.8s						
W35A	**Tecumseh**	**21.23**	**352**	P	**P**	**16 15 09.3**	**+0.4**
FNO	**Franklin**	**21.41**	**351**	P	**P**	**16 15 11.7**	**+0.9**
CHIC	**Chingaza**	**21.41**	**114**	*e*P	**P**	**16 15 14.4**	**+2.9**
RUSC	**La Rusia**	**21.45**	**110**	*e*P	**P**	**16 15 11.4**	**-0.6**
RUSC	**La Rusia**	**21.45**	**110**	P	**P**	**16 15 12.0**	**0.0**
MSTX	**Muleshoe**	**21.60**	**338**	P	**P**	**16 15 13.9**	**+0.9**
MSTX				IAmb	IAmb	16 15 17.2	
	comp=Z,6.6nm,0.8s						
FCAR	**Ozark Folk Cen**	**21.73**	**2**	P	**P**	**16 15 13.5**	**-0.8**
FCAR				IAmb	IAmb	16 15 17.0	
	comp=Z,7.7nm,0.8s						
AMTX	**Amarillo**	**22.06**	**341**	P	**P**	**16 15 18.3**	**+0.4**
AMTX				IAmb	IAmb	16 15 30.2	
	comp=Z,11nm,1.0s						
U40A	**Yellville**	**22.18**	**1**	P	**P**	**16 15 18.1**	**-1.0**
U38A	**Gravette**	**22.28**	**358**	P	**P**	**16 15 20.8**	**+0.6**
TAMC	**Tame, Arauca**	**22.43**	**108**	*e*P	**P**	**16 15 25.8**	**+3.8**
121A	**Cookes Peak, D**	**22.65**	**327**	P	**P**	**16 15 26.4**	**+2.0**
121A				IAmb	IAmb	16 15 55.2	
	comp=Z,14nm,1.2s						
PBMO	**Poplar Bluff**	**22.74**	**6**	P	**P**	**16 15 24.6**	**-0.4**
PBMO				IAmb	IAmb	16 15 25.8	
	comp=Z,4.4nm,0.7s						
SDV	**Santo Domingo**	**22.75**	**101**	P	**P**	**16 15 24.6**	**-1.0**
	comp=Z,4.9nm,0.7s,baz=294,slow=4.7,SNR=7.3						
SDV	**Santo Domingo**	**22.75**	**101**	P	**P**	**16 15 24.6**	**-1.0**
SDV				IAmb	IAmb	16 15 27.5	
	comp=Z,5.6nm,0.8s						
JSC	**Jenkinsville**	**22.85**	**26**	P	**P**	**16 15 24.4**	**-1.9**
T35A	**Sooner Cattle**	**22.92**	**353**	P	**P**	**16 15 25.9**	**-1.1**
MGMO	**Mountain Grove**	**22.99**	**2**	P	**P**	**16 15 26.8**	**-0.9**
MGMO				IAmb	IAmb	16 15 28.3	
	comp=Z,5.2nm,0.8s						
TKL	**Tuckaleechee C**	**23.11**	**20**	LR	LR	16 24 29.4	
	comp=Z,74nm,19.4s,baz=166,slow=37						
S39A	**Bolivar**	**23.51**	**360**	P	**P**	**16 15 31.7**	**-1.3**
S39A				IAmb	IAmb	16 15 32.9	
	comp=Z,6.9nm,0.7s						
CCM	**Cathedral Cave**	**23.94**	**4**	P	**P**	**16 15 36.0**	**-1.1**
ANMO	**Albuquerque**	**23.94**	**332**	P	**P**	**16 15 38.1**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=140,slow=16,SNR=2.0						
R32A	**Long Quarter,**	**24.72**	**350**	P	**P**	**16 15 44.8**	**+0.5**
T25A	**Trinidad**	**25.02**	**339**	P	**P**	**16 15 49.6**	**+2.2**
T25A				IAmb	IAmb	16 15 57.5	
	comp=Z,6.1nm,1.0s						
BLO	**Bloomington**	**25.68**	**12**	P	**P**	**16 15 52.8**	**-0.2**
SDCO	**Great Sand Dun**	**25.96**	**337**	P	**P**	**16 15 57.3**	**+1.4**
SDCO				IAmb	IAmb	16 16 03.3	
	comp=Z,9.4nm,1.6s						
ECSD	**EROS Data Cent**	**29.69**	**355**	P	**P**	**16 16 27.8**	**-1.1**
NVAR	**Mina Array Bea**	**32.85**	**322**	P	**P**	**16 16 59.1**	**+2.1**
	comp=Z,0.9nm,0.8s,baz=136,slow=9.1,SNR=7.8						
YNE	**Yellowstone No**	**33.95**	**339**	P	**P**	**16 17 07.3**	**+0.7**
ULM	**Lac du Bonnet**	**36.13**	**357**	P	**P**	**16 17 23.4**	**-1.7**
	comp=Z,2.6nm,0.8s,baz=175,slow=8.3,SNR=6.5						
F10A	**Beach Ranch, E**	**37.66**	**332**	P	**P**	**16 17 39.4**	**+1.1**
SIV	**San Ignacio**	**43.64**	**132**	P	**P**	**16 18 30.0**	**+2.0**
	comp=Z,1.3nm,1.0s,baz=299,slow=12,SNR=4.7						
YKA	**Yellowknife Ar**	**50.67**	**347**	P	**P**	**16 19 22.1**	**0.0**
	comp=Z,4.3nm,0.7s,baz=151,slow=7.6,SNR=50						
ILAR	**Eielson Array**	**62.28**	**337**	P	**P**	**16 20 44.6**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=148,slow=4.4,SNR=4.7						
BMAR	**Burnt Mountain**	**62.80**	**340**	P	**P**	**16 20 48.4**	**0.0**
TRF	**Thorofare Moun**	**63.04**	**335**	P	**P**	**16 20 50.7**	**+0.5**
ARCES	**ARCESS Array B**	**86.43**	**18**	P	**P**	**16 23 04.5**	**-1.0**
	comp=Z,2.3nm,0.9s,baz=289,slow=7.6,SNR=3.6						
WMQ	**Urumqi**	**122.37**	**359**	*e*P	**PKPdf**	**16 29 18.5**	**-0.4**
CMAR	**Chiang Mai Arr**	**145.50**	**339**	PKPbc	**PKPab**	**16 30 02.4**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=338,slow=3.3,SNR=10						
CMAR	**Chiang Mai Arr**	**145.50**	**339**		**PKPbc**	**16 30 01.7**	**-0.7**

*NEIC **09** 16:11:15.6±1.3, 20°.6S±0°.1×177°.75W±0°.04, h515^{km}±8^{km}, mb4.8/28, Error ellipse: s-maj=19.9km s-min=5.6km az=181.0*
*IDC **09** 16:11:17.3±3.8, 20°.66S×177°.73W, h532^{km}±44^{km}, mb3.3/10, mb1 3.5/11, mb1mx3.3/31, mbtmp4.3/11, Error ellipse: s-maj=34.7km s-min=18.9km az=160.0*

ISC 09 16:11:17.5±0.7**, 20°.6S**±0°.1×**177°.8W**±0°.1**, h534**^{km}**, n47,**
σ1^{s}.02/44**, mb4.6**/21**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.85**	**305**	P	**P**	**16 12 42.9**	**-2.4**
RAR	**Rarotonga**	**16.85**	**95**	P	**P**	**16 14 44.6**	**-1.0**
	4.5nm,0.3s,baz=138,slow=5.5,SNR=6.2						
RAR	**Rarotonga**	**16.85**	**95**	IAmb	IAmb	16 15 15.5	
	comp=Z,32nm,1.4s						
URZ	**Urewera**	**18.15**	**193**	P	**P**	**16 14 56.1**	**-1.2**
QRZ	**Quartz Range**	**21.78**	**200**	P	**P**	**16 15 29.7**	**-0.6**
THZ	**Tophouse**	**22.52**	**198**	P	**P**	**16 15 35.8**	**-1.1**
THZ				IAmb	IAmb	16 16 33.5	
	comp=Z,19nm,1.3s						
KHZ	**Kahutara**	**22.95**	**197**	P	**P**	**16 15 40.0**	**-0.7**
KHZ				IAmb	IAmb	16 16 00.8	
	comp=Z,25nm,1.2s						
LTZ	**Lake Taylor**	**23.64**	**198**	P	**P**	**16 15 45.0**	**-2.0**
OXZ	**Oxford**	**24.21**	**198**	P	**P**	**16 15 50.2**	**-1.7**
OXZ				IAmb	IAmb	16 16 15.3	
	comp=Z,26nm,1.4s						
WHZ	**Wether Hill Ro**	**27.82**	**202**	P	**P**	**16 16 24.3**	**+0.7**
WHZ				IAmb	IAmb	16 16 30.7	
	comp=Z,21nm,1.3s						
EIDS	**Eidsvold**	**29.00**	**255**	P	**P**	**16 16 34.4**	**+0.1**
EIDS				IAmb	IAmb	16 17 29.6	
	comp=Z,31nm,1.5s						
ARMA	**Armidale**	**29.20**	**244**	P	**P**	**16 16 36.7**	**+0.7**
CTA	**Charters Tower**	**33.67**	**264**	P	**P**	**16 17 14.1**	**-0.3**
	comp=Z,2.8nm,0.5s,baz=78,slow=8.9,SNR=4.7						
STKA	**Stephens Creek**	**37.92**	**244**	P	**P**	**16 17 49.8**	**+0.5**
	comp=Z,1.7nm,0.4s,baz=99,slow=12,SNR=14						
BBOO	**Buckleboo**	**42.67**	**244**	P	**P**	**16 18 27.0**	**-0.4**
WR0	**Warramunga Arr**	**44.59**	**262**	P	**P**	**16 18 41.6**	**-0.8**
WR0				IAmb	IAmb	16 20 20.1	
	comp=Z,29nm,1.1s						
AS31	**Alice Springs**	**44.68**	**257**	P	**P**	**16 18 42.9**	**-0.3**
ASAR	**Alice Springs**	**44.68**	**257**	P	**P**	**16 18 43.2**	**+0.1**
	comp=Z,5.1nm,0.5s,baz=93,slow=8.0,SNR=156						
ASAR				PcP	**PcP**	**16 20 14.9**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=103,slow=3.5,SNR=4.2						
ASAR	**Alice Springs**	**44.68**	**257**	P	**P**	**16 18 42.5**	**-0.7**
WB0	**Warramunga Arr**	**44.75**	**262**	P	**P**	**16 18 43.2**	**-0.5**
WB0				IAmb	IAmb	16 20 21.1	
	comp=Z,43nm,0.8s						
WB2	**Warramunga Arr**	**44.76**	**262**	P	**P**	**16 18 43.2**	**-0.5**
WB2				IAmb	IAmb	16 20 21.4	
	comp=Z,31nm,0.8s						
WRAB	**Tennant Creek**	**44.77**	**262**	P	**P**	**16 18 43.3**	**-0.5**
WRAB				IAmb	IAmb	16 20 21.3	
	comp=Z,30nm,0.8s						
WRA	**Warramunga Arr**	**44.78**	**262**	P	**P**	**16 18 43.5**	**-0.3**
	comp=Z,2.7nm,0.4s,baz=98,slow=7.7,SNR=56						
WRA	**Warramunga Arr**	**44.78**	**262**	P	**P**	**16 18 43.2**	**-0.7**
FORT	**Forrest**	**49.43**	**247**	P	**P**	**16 19 18.5**	**-0.3**
KNRA	**Kununurra**	**50.84**	**266**	P	**P**	**16 19 29.2**	**-0.1**
KNRA				IAmb	IAmb	16 21 03.9	
	comp=Z,49nm,0.9s						
FITZ	**Fitzroy Crossi**	**53.20**	**262**	P	**P**	**16 19 46.5**	**+0.3**
SOEI	**Soe**	**56.69**	**272**	P	**P**	**16 20 12.3**	**+1.5**
PSA00	**Pilbara Seismi**	**57.83**	**257**	P	**P**	**16 20 17.4**	**-0.9**
PSA00	**Pilbara Seismi**	**57.83**	**257**	P	**P**	**16 20 17.8**	**-0.6**
PSA00				IAmb	IAmb	16 21 56.6	
	comp=Z,40nm,0.8s						
QSPA	**South Pole Qui**	**69.47**	**180**	P	**P**	**16 21 33.2**	**+1.2**
UGM	**Wanagama**	**70.15**	**269**	P	**P**	**16 21 37.3**	**+0.3**
MJAR	**Matsushiro Arr**	**70.40**	**324**	P	**P**	**16 21 37.5**	**-0.3**
	comp=Z,1.6nm,0.4s,baz=139,slow=6.3,SNR=6.9						
KSM	**Kuching**	**73.61**	**278**	P	**P**	**16 21 57.3**	**+0.3**
KSM				IAmb	IAmb	16 23 24.7	
	comp=Z,35nm,1.0s						
KSRS	**Korea Array**	**77.08**	**318**	P	**P**	**16 22 16.6**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=125,slow=5.3,SNR=2.9						
USRK	**Ussuriysk Ar.**	**79.15**	**326**	P	**P**	**16 22 28.3**	**+1.6**
	comp=Z,3.2nm,0.8s,baz=122,slow=5.2,SNR=4.4						
NVAR	**Mina Array Bea**	**80.96**	**43**	P	**P**	**16 22 38.1**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=227,slow=9.9,SNR=3.8						
NVAR	**Mina Array Bea**	**80.96**	**43**	P	**P**	**16 22 37.3**	**+0.7**
SYO	**Syowa Base**	**86.67**	**193**⇓	*e*pP	pP	16 24 55.0	-5.0
ILAR	**Eielson Array**	**88.36**	**13**	P	**P**	**16 23 10.8**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=217,slow=5.6,SNR=5.6						
CMAR	**Chiang Mai Arr**	**90.33**	**289**	P	**P**	**16 23 24.1**	**+2.0**
	comp=Z,1.1nm,1.0s,baz=130,slow=3.0,SNR=6.9						
CMAR	**Chiang Mai Arr**	**90.33**	**289**	P	**P**	**16 23 23.7**	**+1.6**
MKAR	**Makanchi Array**	**111.40**	**313**	PKiKP	**PKiKP**	**16 28 49.2**	**-1.7**
	comp=Z,0.1nm,0.5s,baz=134,slow=0.5,SNR=3.5						
AKASG	**Malin Array Be**	**143.19**	**331**	PKP	PKPab	16 29 48.1	-0.3
	comp=Z,0.5nm,0.5s,baz=42,slow=4.6,SNR=13						
AKASG	**Malin Array Be**	**143.19**	**331**	PKPpre	PKPab	16 29 47.9	-0.5
BRTR	**Keskin Array B**	**147.04**	**312**	PKPbc	**PKPbc**	**16 30 00.3**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=110,slow=3.2,SNR=3.6						
GERES	**GERESS Array B**	**150.34**	**345**	PKPbc	**PKPbc**	**16 30 08.4**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=32,slow=5.8,SNR=3.3						

*NEIC **09** 16:11:23, 61°.05N×150°.73W, h58^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.49; $M_{\theta\theta}$0.09; $M_{\phi\phi}$0.40; $M_{r\theta}$0.28; $M_{\theta\phi}$-0.06; $M_{\phi r}$0.92; Fault plane solution: $M_0$1.06000×10^{15} NP1:ϕ_s341.13000°, δ14.07000°, λ-121.82000°. NP2:ϕ_s193.73000°, δ78.08000°, λ-82.47000°. Principal axes: T 0.9870, Plg33.0000°, Azm277.0000°; N 0.1391, Plg7.0000°, Azm12.0000°; P -1.1261, Plg56.0000°, Azm113.0000°;*
*NEIC **09** 16:11:23.8±1.9, 61°.05N±0°.03×150°.72W±0°.04, h54^{km}±4^{km} Error ellipse: s-maj=4.2km s-min=2.9km az=187.0*
*AEIC **09** 16:11:24.4±1.8, 61°.03N±0°.03×150°.69W±0°.04, h52^{km}±4^{km}, ML3.7/134, mb4.5/19(NEIC), Mwr4.0/22(NEIC), Error ellipse: s-maj=4.2km s-min=2.7km az=178.0*
*IDC **09** 16:11:27.3±5.2, 61°.19N×150°.54W, h87^{km}±46^{km}, mb3.6/6, mb1 3.8/8, mb1mx3.3/51, mbtmp3.8/8, MS3.3/2, Ms1 3.3/2, ms1mx3.0/31, Error ellipse: s-maj=38.7km s-min=20.2km az=34.0*

ISC 09 16:11:23.7±0.7**, 61°.03N**±0°.03×**150°.69W**±0°.03**, h56**^{km}±6^{km}**,**
n149, σ0^{s}.81/163**, mb4.2**/12**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FIS	**Fire Island**	**0.26**	**63**		**Pn**	**16 11 33.5**	**+0.6**
CAPN	**Captain Cook N**	**0.35**	**221**		**Pn**	**16 11 34.8**	**+1.1**
SUA	**Susitna One**	**0.44**	**356**		**Pn**	**16 11 33.9**	**-0.9**
SUA					**Sn**	**16 11 42.6**	**-0.2**
RC01	**Rabbit Creek A**	**0.47**	**82**		**Pn**	**16 11 34.5**	**-0.4**
RC01					**Sn**	**16 11 43.8**	**+0.7**
SLKM	**Skilak Lake**	**0.57**	**156**		**Pn**	**16 11 35.6**	**-0.5**
SLKM					**Sn**	**16 11 45.7**	**+0.5**
CGLM	**Capps Glacier**	**0.70**	**294**		**Pn**	**16 11 37.2**	**-0.6**
STLK	**Strandline Lak**	**0.73**	**311**		**Pn**	**16 11 37.6**	**-0.5**
CKN	**Chakachatna No**	**0.75**	**286**		**Pn**	**16 11 38.1**	**-0.3**
CRP	**Crater Peak**	**0.75**	**289**		**Sn**	**16 11 49.6**	**+0.4**
SPCR	**Spurr Chakacha**	**0.76**	**284**		**Pn**	**16 11 38.0**	**-0.5**
SPCR					**Sn**	**16 11 49.3**	**0.0**
SPBG	**Spurr Blockage**	**0.85**	**287**		**Pn**	**16 11 39.0**	**-0.7**
SPBG					**Sn**	**16 11 51.2**	**-0.1**
PMR	**Palmer**	**0.94**	**52**		**Pn**	**16 11 40.2**	**-0.5**
PMR					**Sn**	**16 11 54.0**	**+0.8**
SKT	**Skwentna**	**1.04**	**337**		**Pn**	**16 11 41.9**	**-0.2**
SKT					**Sn**	**16 11 56.1**	**+0.5**
DFR	**Drift River**	**1.07**	**247**		**Pn**	**16 11 41.9**	**-0.7**
DFR					**Sn**	**16 11 57.3**	**+0.7**
SEW	**Seward**	**1.11**	**146**		**Pn**	**16 11 42.5**	**-0.5**
RDJH	**Redoubt Jeurge**	**1.13**	**248**		**Pn**	**16 11 42.8**	**-0.6**
RDJH					**Sn**	**16 11 58.4**	**+0.4**
GHO	**Glory Hole Cre**	**1.13**	**48**		**Pn**	**16 11 43.0**	**-0.3**
GHO					**Sn**	**16 11 58.8**	**+0.9**
KNK	**Knik Glacier**	**1.15**	**69**		**Pn**	**16 11 43.5**	**+0.1**
KNK					**Sn**	**16 11 59.4**	**+1.2**
PWL	**Port Wells**	**1.16**	**97**		**Pn**	**16 11 43.5**	**-0.1**
RSO	**Redoubt South**	**1.16**	**242**		**Pn**	**16 11 43.4**	**-0.6**
RDWB	**Redoubt West**	**1.19**	**244**		**Pn**	**16 11 43.7**	**-0.5**
RDWB					**Sn**	**16 11 59.8**	**+0.3**
RED	**Redoubt Volcan**	**1.19**	**240**		**Pn**	**16 11 43.7**	**-0.5**
RED					**Sn**	**16 12 00.2**	**+0.7**
BRLK	**Bradley Lake**	**1.27**	**185**		**Pn**	**16 11 45.3**	**+0.1**
BRLK					**Sn**	**16 12 03.5**	**+2.2**
BRSE	**Bradley Lake S**	**1.29**	**181**		**Pn**	**16 11 45.3**	**-0.1**
SML	**Sawmill**	**1.38**	**54**		**Pn**	**16 11 46.5**	**-0.1**
SML					**Sn**	**16 12 04.1**	**+0.3**
HOM	**Homer**	**1.46**	**199**		**Pn**	**16 11 48.4**	**+0.8**
ILIM	**Iliamna**	**1.47**	**231**		**Pn**	**16 11 48.5**	**+0.6**
CNPM	**China Poot**	**1.53**	**191**		**Pn**	**16 11 48.8**	**+0.1**
CNPM					**Sn**	**16 12 08.1**	**+0.5**
IVE	**Iliamna Volcan**	**1.54**	**230**		**Pn**	**16 11 49.1**	**+0.3**
ILW	**Iliamna West**	**1.55**	**232**		**Pn**	**16 11 49.3**	**+0.1**
ILS	**Iliamna Low So**	**1.60**	**229**		**Pn**	**16 11 50.2**	**+0.6**
GLI	**Glacier Island**	**1.76**	**93**		**Pn**	**16 11 50.5**	**-1.3**
SCM	**Sheep Creek Mo**	**1.81**	**62**		**Pn**	**16 11 52.5**	**0.0**
JPK	**Jack Peak**	**1.99**	**87**		**Pn**	**16 11 54.6**	**-0.4**
PPLA	**Purkeypile**	**2.00**	**340**		**Pn**	**16 11 55.5**	**+0.3**
HUR	**Hurricane**	**2.02**	**14**		**Pn**	**16 11 56.2**	**+0.9**
WAT1	**Susitna Watana**	**2.07**	**28**		**Pn**	**16 11 56.4**	**+0.3**
FID	**Port Fidalgo**	**2.08**	**96**		**Pn**	**16 11 54.5**	**-1.6**
WAT6	**Susitna Watana**	**2.09**	**41**		**Pn**	**16 11 56.2**	**-0.3**
AU22	**Augustine Moun**	**2.13**	**220**		**Pn**	**16 11 57.6**	**+0.8**
AU2	**Augustine Isla**	**2.14**	**220**		**Pn**	**16 11 57.7**	**+0.7**
AUL	**Augustine Lava**	**2.15**	**221**		**Pn**	**16 11 58.2**	**+1.1**
HIN	**Hinchinbrook I**	**2.15**	**105**		**Pn**	**16 11 56.4**	**-0.8**
AUP	**Augustine Pinn**	**2.16**	**220**		**Pn**	**16 11 58.3**	**+1.0**
AUQ	**Augustine Qik'**	**2.16**	**220**		**Pn**	**16 11 58.3**	**+1.0**
AUH	**Augustine H**	**2.17**	**221**		**Pn**	**16 11 58.0**	**+0.7**
AUW	**Augustine West**	**2.17**	**221**		**Pn**	**16 11 58.4**	**+1.1**
WAT2	**Susitna Watana**	**2.18**	**26**		**Pn**	**16 11 58.0**	**+0.4**
SVW2	**Sparrevohn**	**2.38**	**274**		**Pn**	**16 11 59.5**	**-0.7**
TRF	**Thorofare Moun**	**2.44**	**4**		**Pn**	**16 12 02.3**	**+1.2**
EYAK	**Cordova Ski Ar**	**2.47**	**99**		**Pn**	**16 12 00.1**	**-1.3**
KTH	**Kantishna Hill**	**2.54**	**358**		**Pn**	**16 12 03.6**	**+1.2**

RND	Reindeer	2.54	19		Pn	16 12 04.3	+1.9
DHY	Denali Highway	2.58	36		Pn	16 12 03.7	+0.6
MID	Middleton Isla	2.70	125		Pn	16 12 05.2	+0.7
FOSS	Fourpeaked Sta	2.70	215		Pn	16 12 05.6	+0.9
PS12	TAPS Pump St12	2.72	78		Pn	16 12 04.6	-0.2
MCK	McKinley	2.83	16		Pn	16 12 06.9	+0.5
GOAT	Goat Mountain	2.96	96		Pn	16 12 06.7	-1.5
CHUM	Lake Minchumin	2.96	346		Pn	16 12 08.8	+0.6
RAGM	Ragged Mountai	3.02	100		Pn	16 12 07.3	-1.8
BPAW	Bear Paw Mtn.	3.08	358		Pn	16 12 10.5	+0.6
PAX	Paxson	3.14	49		Pn	16 12 11.6	+1.0
TT01	Tatalina	3.15	309		Pn	16 12 10.2	-0.4
TTA	Tatalina	3.15	310		Pn	16 12 10.5	-0.4
BWN	Browne	3.21	10		Pn	16 12 12.2	+0.8
KAHC	Katmai Hardscr	3.23	224		Pn	16 12 12.7	+0.6
GLB	Gilahina Butte	3.35	80		Pn	16 12 12.7	-0.8
KDAK	Kodiak Island	3.40	197		Pn	16 12 13.6	-0.6
BERG	Berg Lake	3.49	97		Pn	16 12 13.3	-2.1
VRDI	Verde Repeater	3.52	84		Pn	16 12 14.9	-1.0
NEA	Nenana	3.64	11		Pn	16 12 18.5	+1.1
WRH	Wood River Hil	3.66	18		Pn	16 12 18.6	+0.9
CRQM	Cirque	3.70	91		Pn	16 12 17.2	-1.2
MCARA	McCarthy VSAT	3.73	81		Pn	16 12 18.6	0.0
HDA	Harding Lake	3.80	25		Pn	16 12 21.2	+1.5
MENT	Mentasta	3.80	57		Pn	16 12 19.7	0.0
RIDG	Independent Ri	3.85	42		Pn	16 12 21.3	+1.0
TGL	Tana Glacier	3.85	91		Pn	16 12 19.1	-1.4
CCB	Clear Creek Bu	3.86	19		Pn	16 12 21.3	+0.8
PS08	TAPS Pump Stn8	3.95	25		Pn	16 12 22.6	+1.0
PTPK	Patty Peak	3.99	84		Pn	16 12 22.0	-0.4
MLY	Manley	4.02	360		Pn	16 12 23.5	+0.8
OHAK	Old Harbor	4.05	200		Pn	16 12 22.3	-0.7
BALM	Baldy	4.06	86		Pn	16 12 22.5	-0.8
KIAG	Kiagna River	4.06	88		Pn	16 12 22.3	-1.1
TCOL	CIGO, UAF Yank	4.07	17		Pn	16 12 24.0	+0.7
COLA	College	4.07	17		Pn	16 12 23.7	+0.4
MDM	Murphy Dome	4.10	15		Pn	16 12 24.8	+1.0
IL31		4.14	23		Pn	16 12 24.5	+0.3
ILAR	Eielson Array	4.14	23	P	Pn	16 12 24.2	-0.1
	1.7nm,0.3s,baz=212,slow=14,SNR=105						
ILAR				S	Sn	16 13 12.1	+0.8
	4.0nm,0.3s,baz=209,slow=16,SNR=5.5						
ILAR				LR	LR	16 14 19.5	
	comp=Z,73nm,21.7s,baz=262,slow=44						
ILAR	Eielson Array	4.14	23		Pn	16 12 24.5	+0.3
SCRK	Sand Creek	4.29	43		Pn	16 12 26.1	-0.3
POKR	Poker Plat Res	4.36	18		Pn	16 12 27.5	+0.2
BARN	Barnard Glacie	4.39	86		Pn	16 12 27.9	0.0
PLK3	Peulik 3	4.40	223		Pn	16 12 28.8	+0.9
CTGM	Chitina Glacie	4.55	87		Pn	16 12 30.0	-0.1
BC03		4.66	60		Pn	16 12 31.2	-0.2
BCAR	Beaver Creek A	4.66	60		Pn	16 12 30.6	-0.9
YUK2	White River	4.79	77		Pn	16 12 33.0	-0.3
SII	Sitkinak Islan	4.84	204	Pn	Pn	16 12 33.4	-0.5
BVCY	Beaver Creek	4.88	69		Pn	16 12 34.9	+0.5
YUK3	Moose Creek	4.97	77		Pn	16 12 36.0	+0.1
YUK1	Sand Pete Hill	4.98	72		Pn	16 12 36.2	+0.3
PRP	Porcupine Dome	5.07	25		Pn	16 12 38.3	+1.2
IM03		5.16	346		Pn	16 12 38.5	+0.4
IMAR	Indian Mountai	5.16	346		Pn	16 12 38.5	+0.2
PCA	Pinnacle	5.23	96		Pn	16 12 37.9	-1.4
EGAK	Eagle	5.75	45		Pn	16 12 46.2	-0.1
CHIR	Chirikof Islan	5.83	209		Pn	16 12 46.1	-1.3
YUK6	Outpost Mounta	6.00	85		Pn	16 12 48.9	-1.1
DAWY	Dawson	6.04	55		Pn	16 12 50.3	-0.1
FYU	Fort Yukon	6.06	21		Pn	16 12 51.2	+0.7
YUK7	Dusty Glacier	6.17	89		Pn	16 12 51.4	-0.8
CHGN	Chignik	6.22	224	Pn	Pn	16 12 53.0	+0.2
HYT	Haines Junctio	6.43	86		Pn	16 12 55.0	-0.8
BM03	Burnt Mountain	6.94	20		Pn	16 13 02.1	-0.5
BMAR	Burnt Mountain	6.95	20		Pn	16 13 02.8	0.0
ANM	Nome	7.60	304		Pn	16 13 11.2	-0.5
TOLK	Toolik Lake Re	7.66	3		Pn	16 13 11.5	-1.0
WHY	Whitehorse	7.73	86		Pn	16 13 12.2	-1.4
C36M	Paulatuk	13.81	42	P	P	16 14 42.1	-0.9
YKA	Yellowknife Ar	17.00	69	P	Pn	16 15 17.8	+0.5
	0.2nm,0.3s,baz=276,slow=9.5,SNR=41						
BEKR	Beckworth	28.22	125	P	P	16 17 12.2	+1.0
GCMT	Greycliff	28.23	104	P	P	16 17 12.4	+1.2
LAO	LASA Array	29.22	99	P	P	16 17 20.9	+1.0
LAO				IAmb	IAmb	16 17 21.5	
	comp=Z,8.6nm,0.5s						
ELK	Elko	29.63	117	P	P	16 17 25.0	+1.2
NVAR	Mina Array Bea	30.28	123	P	P	16 17 31.4	+1.9
	comp=Z,1.6nm,0.6s,baz=317,slow=9.1,SNR=17						
R11A	Troy Canyon, C	31.47	120	P	P	16 17 40.9	+0.9
ULM	Lac du Bonnet	31.81	85	P	P	16 17 41.2	-1.3
	comp=Z,0.6nm,0.4s,baz=311,slow=9.3,SNR=3.6						
ULM	Lac du Bonnet	31.81	85	IAmb	IAmb	16 17 43.4	
	comp=Z,6.7nm,1.2s						
TPNV	Topopah Spring	32.38	122	P	P	16 17 49.0	+1.0
TPNV				IAmb	IAmb	16 17 50.7	
	comp=Z,2.8nm,0.9s						
SRU	San Rafael Swe	33.05	113	P	P	16 17 54.8	+1.1
WUAZ	Wupatki	35.66	118	P	P	16 18 17.8	+1.4
WUAZ				IAmb	IAmb	16 18 18.8	
	comp=Z,5.2nm,0.8s						
SCHQ	Schefferville	42.05	59	P	P	16 19 08.7	-0.6
	comp=Z,1.7nm,0.7s,baz=325,slow=8.4,SNR=4.2						
SCHQ	Schefferville	42.05	59	IAmb	IAmb	16 19 09.0	
	comp=Z,2.1nm,0.8s						
U38A	Gravette	42.74	99	P	P	16 19 14.0	-1.2
U38A				IAmb	IAmb	16 19 14.9	
	comp=Z,4.2nm,0.6s						
NRIK	Noril'sk	43.48	334	LR	LR	16 40 47.4	
	comp=Z,182nm,18.1s,baz=312,slow=41						
TXAR	Lajitas Array	44.31	114	P	P	16 19 28.0	0.0
	comp=Z,0.2nm,0.4s,baz=355,slow=7.2,SNR=3.5						
JCT	Junction City	45.09	109	P	P	16 19 34.6	+0.5
JCT				IAmb	IAmb	16 19 36.0	
	comp=Z,6.0nm,0.7s						
I63A	Otisfield	48.28	72	P	P	16 19 58.7	0.0
TKL	Tuckaleechee C	48.52	90	P	P	16 20 00.1	-0.7
	comp=Z,1.4nm,0.5s,baz=238,slow=1.1,SNR=5.1						
TKL	Tuckaleechee C	48.52	90	P	P	16 20 00.3	-0.4
TKL				IAmb	IAmb	16 20 09.5	
	comp=Z,9.3nm,1.4s						
FPAL	Fort Paine	48.52	92	P	P	16 20 00.4	-0.4
FPAL				IAmb	IAmb	16 20 01.1	
	comp=Z,6.2nm,1.1s						
ODNJ	Ogdensburg	48.67	78	P	P	16 20 01.0	-0.8
Z50A	Ashland	49.41	93	P	P	16 20 07.3	-0.3
W57A	Gilead	50.76	87	P	P	16 20 17.8	0.0
SONM	Songino Array	55.10	307	P	P	16 20 49.7	0.0
	comp=Z,0.9nm,0.8s,baz=40,slow=7.6,SNR=8.3						
SONM	Songino Array	55.10	307	P	P	16 20 49.1	-0.7

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*MOS **09** 16:12:12.2±0.9, 15°.08S×175°.73W, h307^{km}, mb4.9/20, Error ellipse: s-maj=9.5km s-min=6.5km az=49.8*

*IDC **09** 16:12:12.9±1.4, 15°.17S×175°.66W, h303^{km}±13^{km}, mb4.4/21, mb1 4.6/23, mb1mx4.5/32, mbtmp5.1/23, Error ellipse: s-maj=12.9km s-min=8.2km az=146.0*

*BJI **09** 16:12:14.0±0.0, 15°.30S×175°.60W, h345^{km}, mB5.0/23, mb4.5/38*

*NEIC **09** 16:12:15.4±1.2, 15°.20S±0°.09×175°.66W±0°.08, h332^{km}±5^{km}, mb5.1/346, Error ellipse: s-maj=14.2km s-min=10.8km az=147.0*

*GCMT **09** 16:12:18.4±0.5, 15°.25S±0°.05×175°.50W±0°.05, h337^{km}±2^{km}, MW5.3/55, Moment Tensor Solution. s55,c74; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.05±.04; $M_{\theta\theta}$0.28±.07; $M_{\phi\phi}$-0.32±.05; $M_{r\theta}$-0.06±.05; $M_{\theta\phi}$0.13±.05; $M_{\phi r}$-0.97±.04; Best double couple: $M_0$1.00700×10^{17} NP1:ϕ_s300.00000°,δ12.00000°, λ23.00000°. NP2:ϕ_s187.00000°,δ85.00000°,λ101.00000°. Principal axes: T 0.8790, Plg49.0000°, Azm108.0000°; N 0.2550, Plg11.0000°, Azm6.0000°; P -1.1340, Plg39.0000°, Azm266.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 09 16:12:14.3±0.4**, 15°.15S**±0°.06×**175°.64W**±0°.05**, h318^{km}**±4^{km}**, h318^{km}:pP-P, n793,** σ**0^{s}94**/784**, mb5.1**/223**, 23C-25D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.94	72	P	Pn	16 13 20.7	-0.3
	868nm,0.3s,baz=66,slow=1.1,SNR=650						
AFI				S	S	16 14 17.0	+2.6
	baz=107,slow=20,SNR=1.4						
MSVF	Nonsavu	6.58	246	*de*P	Pn	16 13 55.0	+3.9
MSVF	Nonsavu	6.58	246		Pn	16 13 54.0	+2.9
NIUE	Niue	6.72	126		Pn	16 13 53.1	+0.4
KNTN	Kanton	12.89	18	P	P	16 15 07.7	+0.4
RAR	Rarotonga	16.23	114	P	Pn	16 15 46.9	+0.3
RAR				pmax	pmax		
	comp=Z,305nm,1.7s						
RAR	Rarotonga	16.23	114	P	Pn	16 15 46.9	+0.3
DZM	Mont Dzumac	18.31	245	P	P	16 16 06.6	0.0
	comp=Z,2.2nm,0.3s,baz=151,slow=22,SNR=15						
DZM	Mont Dzumac	18.31	245	P	P	16 16 07.9	+1.4
DZM				IAmb	IAmb	16 16 26.3	
	comp=Z,137nm,1.8s						
OUZ	Omahuta	22.20	204	P	P	16 16 45.7	+1.0
MXZ	Matakaoa Point	22.96	192	P	P	16 16 51.7	+0.1
URZ	Urewera	23.90	194	P	P	16 16 57.9	-2.2
	comp=Z,20nm,0.6s,baz=339,slow=2.6,SNR=18						
URZ	Urewera	23.90	194	P	P	16 16 56.9	-3.1
HNR	Honiara	24.51	281	P	P	16 17 04.1	-1.8
HNR				pmax	pmax		
	comp=Z,135nm,0.9s						
HNR	Honiara	24.51	281	P	P	16 17 04.1	-1.8
HIZ	Hauiti	24.74	198	P	P	16 17 06.1	-1.6
HIZ				IAmb	IAmb	16 17 09.6	
	comp=Z,105nm,1.3s						
BKZ	Black Stump Fm	24.91	195	P	P	16 17 06.6	-2.6
BFZ	Birch Farm	26.41	194	P	P	16 17 20.5	-2.0
PMOR	Pomariorio Ree	26.79	93	*e*P	P	16 17 26.4	+0.2
	comp=Z,145nm,1.1s						
VAH	Vaihoa	27.03	94	*e*P	P	16 17 28.3	0.0
	comp=Z,126nm,1.2s						
MSWZ	Moikau Station	27.34	195	P	P	16 17 29.8	-1.1
SNZO	South Karori	27.38	196	P	P	16 17 29.5	-1.7
BHW	Baring Head	27.43	196	P	P	16 17 30.2	-1.4
QRZ	Quartz Range	27.58	200	P	P	16 17 31.9	-1.0
QRZ				IAmb	IAmb	16 17 34.5	
	comp=Z,132nm,1.4s						
NNZ	Nelson	27.67	198	P	P	16 17 32.1	-1.6
NNZ				IAmb	IAmb	16 17 51.2	
	comp=Z,216nm,2.0s						
TUWZ	Tuamarina	27.70	197	P	P	16 17 32.3	-1.7
BSWZ	Blackbirch Sta	27.99	197	P	P	16 17 35.9	-0.7
THZ	Tophouse	28.31	198	P	P	16 17 37.1	-2.4
THZ				IAmb	IAmb	16 17 45.0	
	comp=Z,104nm,1.8s						
KHZ	Kahutara	28.73	197	P	P	16 17 41.2	-1.8
LTZ	Lake Taylor	29.43	198	P	P	16 17 46.5	-2.9
OXZ	Oxford	30.00	198	P	P	16 17 51.8	-2.4
MQZ	McQueen's Vall	30.17	197	P	P	16 17 54.0	-1.7
RPZ	Rata Peaks	30.66	199	P	P	16 17 58.6	-1.4
	comp=Z,11nm,0.6s,baz=223,slow=1.4,SNR=14						
RPZ	Rata Peaks	30.66	199	P	P	16 17 58.6	-1.4
FOZ	Fox Glacier	30.90	201	P	P	16 18 00.2	-1.9
LBZ	Lake Benmore	31.54	200	P	P	16 18 04.9	-2.8
ODZ	Otahua Downs	31.98	199	P	P	16 18 09.7	-1.8
WKZ	Wanaka	32.31	201	P	P	16 18 12.1	-2.3
WKZ				IAmb	IAmb	16 18 21.5	
	comp=Z,101nm,1.7s						
EIDS	Eidsvold	32.75	247	P	P	16 18 18.0	-0.4
RABL	Rabaul	33.50	286	P	P	16 18 24.1	-0.9
DCZ	Deep Cove	33.52	202	P	P	16 18 24.0	-0.7
KRVT	Keravat (AS076	33.59	285	P	P	16 18 24.5	-1.2
	comp=Z,126nm,0.7s,baz=278,slow=1.6,SNR=12						
WHZ	Wether Hill Ro	33.61	201	P	P	16 18 24.0	-1.5
WHZ				IAmb	IAmb	16 18 27.3	
	comp=Z,57nm,0.8s						
ARMA	Armidale	33.64	237	P	P	16 18 25.5	-0.7
CTA	Charters Tower	36.59	257	P	P	16 18 51.0	-0.2
	comp=Z,65nm,0.9s,baz=90,slow=10.0,SNR=31						
PMG	Port Moresby	36.76	275	P	P	16 18 53.0	+0.5
	comp=Z,61nm,0.8s,baz=62,slow=6.1,SNR=25						
PMG	Port Moresby	36.76	275	P	P	16 18 53.1	+0.5
PMG				pmax	pmax		
	comp=Z,63nm,0.9s						
PMG	Port Moresby	36.76	275	IAmb	IAmb	16 18 55.3	
	comp=Z,63nm,0.8s						
CAN	Canberra	37.49	231	P	P	16 18 58.1	-0.5
CAN				pmax	pmax		
	comp=Z,28nm,1.2s						
CAN	Canberra	37.49	231	P	P	16 18 58.1	-0.5
KHU	Kahuku	39.45	31	P	P	16 19 15.8	+0.7
KHU				pmax	pmax		
	comp=Z,469nm,1.8s						
KHU	Kahuku	39.45	31	P	P	16 19 15.8	+0.7
KHLU	Kahalu`u	39.61	30	P	P	16 19 16.2	0.0
KHLU				IAmb	IAmb	16 19 18.4	
	comp=Z,129nm,1.0s						
AIN	Ainahou	39.64	31	P	P	16 19 16.9	+0.4
HUH	Hualalai	39.72	30	P	P	16 19 17.3	0.0
MLOA	Mauna Loa Obse	39.72	30	P	P	16 19 17.7	+0.2
HMH	Humu‘ula Sheep	39.82	30	P	P	16 19 18.8	+0.7
COEN	Coen	39.84	266	P	P	16 19 18.7	+0.5
COEN				IAmb	IAmb	16 19 22.9	
	comp=Z,59nm,0.8s						
POHA	Pohakuloa	39.93	30	P	P	16 19 19.2	+0.3
KEKH	Kekaha	40.07	23	P	P	16 19 21.0	+1.2
HPAH	Hawaii Prepara	40.08	30	P	P	16 19 20.9	+0.9
KIP	Kipapa	40.25	26	P	P	16 19 22.4	+1.1
KIP				pmax	pmax		
	comp=Z,431nm,1.9s						
KIP	Kipapa	40.25	26	P	P	16 19 22.4	+1.1
HLK	Haleakala	40.45	29	P	P	16 19 24.1	+0.9
KHLH	Kahului Airpor	40.48	28	P	P	16 19 24.3	+1.1
KHLH				IAmb	IAmb	16 19 25.7	
	comp=Z,114nm,0.8s						
TOO	Toolangi	40.97	230	P	P	16 19 26.7	-0.4
TOO				pmax	pmax		
	comp=Z,41nm,1.0s						
TOO	Toolangi	40.97	230	P	P	16 19 26.7	-0.4
TAU	Tasmania Unive	42.06	221	P	P	16 19 35.0	-0.6
TAU				pmax	pmax		
	comp=Z,80nm,1.4s						
TAU	Tasmania Unive	42.06	221	P	P	16 19 35.0	-0.6
STKA	Stephens Creek	42.30	239	P	P	16 19 37.6	-0.2
	comp=Z,39nm,0.4s,baz=82,slow=8.9,SNR=166						
STKA				ScP	ScP	16 24 48.3	+3.4
	comp=Z,1.9nm,0.8s,baz=51,slow=2.2,SNR=3.5						
STKA	Stephens Creek	42.30	239	P	P	16 19 37.3	-0.5
STKA				pmax	pmax		
	comp=Z,15nm,0.8s						
STKA	Stephens Creek	42.30	239	P	P	16 19 37.3	-0.5
GENI	Genyem	45.30	282	P	P	16 20 03.4	+1.7
	comp=Z,2µmcomp=Z,142nm,1.0s						
SMPI	Sarmi	46.87	282	P	P	16 20 15.1	+1.2
	comp=Z,60nm,1.3s						
BBOO	Buckleboo	47.08	239	P	P	16 20 14.8	-0.5
BBOO				IAmb	IAmb	16 20 16.4	
	comp=Z,130nm,0.8s						
WB0	Warramunga Arr	47.75	257	P	P	16 20 19.6	-1.1
WB2	Warramunga Arr	47.79	257	P	P	16 20 19.8	-1.1
WRA	Warramunga Arr	47.80	257	P	P	16 20 20.2	-0.7
	comp=Z,23nm,0.7s,baz=81,slow=6.6,SNR=96						
WRA	Warramunga Arr	47.80	257	*i* P	P	16 20 20.2	-0.7
WRA				pmax	pmax		
	comp=Z,8.0nm,0.3s						
WRA	Warramunga Arr	47.80	257	P	P	16 20 19.4	-1.6
AS31	Alice Springs	48.13	252	P	P	16 20 23.1	-0.4
ASAR	Alice Springs	48.13	252	P	P	16 20 23.1	-0.4
	comp=Z,194nm,0.6s,baz=89,slow=7.7,SNR=886						
ASAR				ScP	ScP	16 25 11.2	+1.9
	comp=Z,2.2nm,0.8s,baz=98,slow=4.7,SNR=5.5						
ASAR				S	S	16 26 56.4	-1.5
	comp=Z,1.4nm,0.9s,baz=82,slow=16,SNR=5.1						
ASAR	Alice Springs	48.13	252	P	P	16 20 22.6	-0.9
ASAR	Alice Springs	48.13	252	P	P	16 20 22.6	-0.9
MTN	Manton Dam	51.60	265	P	P	16 20 49.1	-0.3
MTN				IAmb	IAmb	16 20 50.3	
	comp=Z,76nm,0.8s						
FAKI	Fak Fak	52.74	278	P	P	16 20 58.5	+0.7
KNRA	Kununurra	53.47	262	P	P	16 21 02.4	-0.5
FORT	Forrest	53.60	243	P	P	16 21 02.5	-1.2
FORT				IAmb	IAmb	16 21 04.8	
	comp=Z,92nm,0.7s						
SWI	Sorong	54.29	280	P	P	16 21 09.8	+0.8
	comp=Z,2µmcomp=Z,256nm,0.8s						
FITZ	Fitzroy Crossi	56.15	258	P	P	16 21 21.9	-0.2
AAI	Ambon	56.41	276	P	P	16 21 24.6	+0.6
	comp=Z,1µmcomp=Z,102nm,0.5s						
TNTI	Ternate	58.50	280	P	P	16 21 38.5	+0.1
SOEI	Soe	58.78	268	P	P	16 21 41.7	+1.2
	comp=Z,2µmcomp=Z,154nm,0.8s						
SOEI	Soe	58.78	268	P	P	16 21 41.6	+1.1
SANI	Sanana	58.98	277	P	P	16 21 41.5	-0.3
	comp=Z,852nmcomp=Z,78nm,1.0s						
MMRI	Maumere	60.97	268	P	P	16 21 55.3	+0.1
MMRI				IAmb	IAmb	16 21 56.0	
	comp=Z,70nm,0.9s						
PSA00	Pilbara Seismi	61.20	253	P	P	16 21 55.9	-0.7
PSA00				IAmb	IAmb	16 21 57.4	
	comp=Z,55nm,0.9s						
EDFI	Ende, Flores	61.48	268	P	P	16 21 57.8	-0.9
	comp=Z,807nmcomp=Z,92nm,0.8s						
KMSI	Cibinong	61.66	279	P	P	16 21 59.8	0.0
	comp=Z,1µmcomp=Z,136nm,0.8s						
LUWI	Luwuk	62.35	277	P	P	16 22 01.4	-2.9
LUWI				IAmb	IAmb	16 22 06.3	
	comp=Z,64nm,0.9s						
NWAO	Narrogin (SRO)	62.86	241	P	P	16 22 06.2	-1.2
NWAO				pmax	pmax		
	comp=Z,66nm,1.7s						
NWAO	Narrogin (SRO)	62.86	241	P	P	16 22 06.2	-1.2
NWAO				IAmb	IAmb	16 22 11.8	
	comp=Z,81nm,1.6s						
NWAO	Narrogin (SRO)	62.86	241	P	P	16 22 06.2	-1.2
NWAO				IAmb	IAmb	16 22 11.8	
	comp=Z,66nm,1.6s						
VNDA	Vanda	63.42	185	P	P	16 22 11.0	+0.8
	comp=Z,6.0nm,0.9s,baz=6.1,slow=6.2,SNR=7.8						
APSI	Ampana	63.46	277	P	P	16 22 12.6	+1.0
	comp=Z,724nmcomp=Z,62nm,1.2s						
MRSI	Marisa	63.58	278	P	P	16 22 12.4	0.0
	comp=Z,28nm,1.3s						
BNSI	Bone	64.02	272	P	P	16 22 16.4	+1.2
	comp=Z,2µmcomp=Z,60nm,1.3s						
MORW	Morawa	64.03	245	P	P	16 22 13.9	-1.3
MSLP	Maasin	64.08	289	*e*P	P	16 22 16.5	+0.9
PLAI	Plampang	65.23	267	P	P	16 22 23.6	+0.5
	comp=Z,77nm,1.0s						
MPSI	Mapaga	65.49	277	P	P	16 22 25.4	+0.7
	comp=Z,6µmcomp=Z,60nm,0.9s						
GIRL	Giralia	66.25	252	P	P	16 22 29.3	-0.1
ADK	Adak	66.75	359	P	P	16 22 31.9	+0.1
ADK				pmax	pmax		
	comp=Z,63nm,1.3s						
ADK	Adak	66.75	359	P	P	16 22 31.9	+0.1
ADK				IAmb	IAmb	16 23 09.0	
	comp=Z,63nm,1.3s						
MJAR	Matsushiro Arr	67.37	321	P	P	16 22 34.9	-1.1
	comp=Z,3.7nm,0.8s,baz=142,slow=5.4,SNR=6.8						
MJAR	Matsushiro Arr	67.37	321	P	P	16 22 34.9	-1.1
MJAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MJAR	Matsushiro Arr	67.37	321	IAmb	IAmb	16 22 54.5	
	comp=Z,2.4nm,1.0s						
MAJO	Matsushiro	67.37	321	⇑*e*P	P	16 22 35.6	-0.4
MAJO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MAJO	Matsushiro	67.37	321	P	P	16 22 35.6	-0.4
MAJO				IAmb	IAmb	16 23 26.0	
	comp=Z,68nm,1.9s						
MAT	Matsushiro	67.37	321	P	P	16 22 35.8	-0.2
MJB9	Matsu-Tunnel	67.37	321	P	P	16 22 35.6	-0.4
MJB9				IAmb	IAmb	16 23 26.0	
	comp=Z,69nm,1.9s						
KBKI	Kotabaru	68.10	273	P	P	16 22 42.6	+1.6
	comp=Z,28nm,0.9s						
JAGI	Jajag, Banyuwa	68.81	267	P	P	16 22 44.5	-0.9
JAGI	Jajag, Banyuwa	68.81	267	P	P	16 22 43.7	-1.7
AKUT	Akutan	69.52	6	P	P	16 22 47.7	-1.1
JNU	Nakatsue	70.06	314	P	P	16 22 52.3	-0.3
CNBA	Chernabura Isl	71.01	10	P	P	16 22 57.0	-0.8
CNBA				IAmb	IAmb	16 23 28.7	
	comp=Z,119nm,2.0s						
SDPT	Sand Point	71.38	9	P	P	16 22 59.3	-0.6
SDPT				IAmb	IAmb	16 23 00.3	
	comp=Z,44nm,0.8s						
PEA0B	Petropavlovsk-	71.75	343	⇓*e*P	P	16 23 02.1	-0.1
PEA0B	Petropavlovsk-	71.75	343	P	P	16 23 02.6	+0.4
PEA0B				IAmb	IAmb	16 25 05.3	
	comp=Z,51nm,1.3s						
PETK	Petropavlovsk-	71.75	343	P	P	16 23 02.3	0.0
	comp=Z,7.1nm,0.7s,baz=140,slow=9.4,SNR=7.5						
PETK	Petropavlovsk-	71.75	343	P	P	16 23 02.6	+0.4
PETK	Petropavlovsk-	71.75	343	P	P	16 23 02.6	+0.4
YSS	Yuzh-Sakhalins	72.21	331	⇑*e*P	P	16 23 06.0	+0.9
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
YSS	Yuzh-Sakhalins	72.21	331	P	P	16 23 05.1	+0.1
SCZ2	Santa Cruz Isl	72.30	46	P	P	16 23 07.8	+1.8
	baz=237						
UGM	Wanagama	72.43	266	P	P	16 23 06.5	-0.7
MCCM	Marconi Confer	72.48	41	P	P	16 23 07.2	+0.3
MCCM				IAmb	IAmb	16 23 08.7	
	comp=Z,30nm,0.8s						
TWG	Pinlang	72.52	300	P	P	16 23 07.3	-0.1
SCI2	San Clemente I	72.52	48	P	P	16 23 08.5	+1.3
	baz=238						
SAO	San Andreas Ge	72.60	43	P	P	16 23 07.9	+0.3
SAO				pmax	pmax		
	comp=Z,42nm,0.9s						
SAO	San Andreas Ge	72.60	43	P	P	16 23 07.9	+0.3
SAO				IAmb	IAmb	16 23 09.8	
	comp=Z,42nm,0.8s						
PKM	Mcpherson Peak	72.66	45	P	P	16 23 09.5	+1.3
	baz=237,SNR=8.7						
NACB	Ninganchiao	72.67	302	P	P	16 23 07.8	-0.5
NACB				IAmb	IAmb	16 24 36.1	
	comp=Z,30nm,1.0s						
CHIR	Chirikof Islan	72.68	12	P	P	16 23 07.8	+0.2
PMPB	Monarch Peak	72.72	44	P	P	16 23 08.2	-0.2
PMPB				IAmb	IAmb	16 23 10.7	
	comp=Z,39nm,0.7s						
SMMC	Simmler	72.77	45	P	P	16 23 10.1	+1.4
	baz=236,SNR=16						
PAGB	Antelope Grade	72.82	44	P	P	16 23 09.9	+0.9
CIS	Catalina Islan	72.84	47	P	P	16 23 10.1	+0.9
	baz=238						
HOPS	Hopland Field	72.86	40	P	P	16 23 10.0	+0.9
HOPS				IAmb	IAmb	16 23 11.4	
	comp=Z,57nm,1.1s						
GDXM	Geysers	72.92	41	P	P	16 23 10.4	+0.8
KCPM	Cahto Peak	72.96	40	P	P	16 23 09.7	-0.1
KCPM				IAmb	IAmb	16 23 12.2	
	comp=Z,41nm,1.1s						
SSLB	Suanglung	73.03	301	P	P	16 23 09.7	-0.8
SSLB				IAmb	IAmb	16 25 03.6	
	comp=Z,104nm,1.8s						
YHNB	Yeheng	73.06	302	P	P	16 23 09.7	-1.0
TPUB	Ta-pu	73.09	300	P	P	16 23 09.4	-1.4
TATO	Taipei	73.11	302	P	P	16 23 11.4	+0.6
KMRM	Mail Ridge	73.21	39	P	P	16 23 11.9	+0.7
JCC	Jacoby Creek,	73.38	38	P	P	16 23 12.8	+0.8
PASC	Pasadena Art C	73.41	47	P	P	16 23 12.7	+0.3
PASC				IAmb	IAmb	16 23 14.0	
	comp=Z,26nm,0.9s						
ARVC	Arvin	73.47	46	P	P	16 23 13.6	+0.9
	baz=237,SNR=8.5						
109C	Camp Elliot, M	73.51	48	P	P	16 23 13.4	+0.4
MWC	Mount Wilson	73.53	47	P	P	16 23 13.5	+0.2
MWC				pmax	pmax		
	comp=Z,36nm,0.9s						
MWC	Mount Wilson	73.53	47	P	P	16 23 13.5	+0.2
MWC				IAmb	IAmb	16 23 14.9	
	comp=Z,36nm,0.8s						
KHMM	Horse Mountain	73.59	38	P	P	16 23 14.7	+1.2
KHMM				IAmb	IAmb	16 23 16.6	
	comp=Z,64nm,1.1s						
SII	Sitkinak Islan	73.66	12	P	P	16 23 13.7	+0.4
SII				IAmb	IAmb	16 23 14.5	
	comp=Z,42nm,0.8s						
VES	Vestal, Richgr	73.68	45	P	P	16 23 14.5	+0.6
	baz=237,SNR=12						
BAR	Barrett	73.72	49	P	P	16 23 14.6	+0.3
O02D	Mt. Diablo Mer	73.74	40	P	P	16 23 15.6	+1.3
	baz=233,SNR=15						
MURC	Murrieta	73.81	48	P	P	16 23 15.5	+0.7
	baz=239,SNR=10						
BFSC	Mount Baldy Ra	73.81	47	P	P	16 23 15.2	+0.3
	baz=238,SNR=14						
KRMB	Red Mountain	73.88	38	P	P	16 23 15.1	0.0
KRMB				IAmb	IAmb	16 23 17.6	
	comp=Z,31nm,0.8s						
EDW2	Edwards Air Fo	73.92	46	P	P	16 23 15.9	+0.5
	baz=238,SNR=34						
ISA	Isabella, Lake	74.00	45	P	P	16 23 16.5	+0.6
ISA				pmax	pmax		
	comp=Z,27nm,1.0s						
ISA	Isabella, Lake	74.00	45	P	P	16 23 16.5	+0.6
ISA				IAmb	IAmb	16 23 17.9	
	comp=Z,27nm,1.0s						

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ISA    Isabella, Lake    74.00  45  P      P      16 23 16.6 +0.8
       baz=237,SNR=20
MONP2  Monument Peak     74.01  49  P      P      16 23 16.9 +0.7
       baz=240,SNR=18
CMB    Columbia Colle    74.02  42  P      P      16 23 16.1 +0.2
CMB                                 pmax   pmax
       comp=Z,33nm,0.9s
CMB    Columbia Colle    74.02  42  P      P      16 23 16.1 +0.2
CMB                                 IAmb   IAmb   16 23 17.7
       comp=Z,33nm,0.8s
IKP    In-Ko-Pah, Jac    74.12  49  P      P      16 23 17.5 +0.9
       baz=240,SNR=11
WDC    Whiskeytown Da    74.13  39  P      P      16 23 16.6 +0.2
WDC                                 pmax   pmax
       comp=Z,33nm,1.0s
WDC    Whiskeytown Da    74.13  39  P      P      16 23 16.6 +0.2
WDC                                 IAmb   IAmb   16 23 18.6
       comp=Z,33nm,0.9s
AFDM   Forest Hills D    74.16  41  P      P      16 23 16.5 -0.2
AFDM                                IAmb   IAmb   16 23 18.3
       comp=Z,30nm,1.0s
ORV    Oroville          74.18  41  P      P      16 23 16.3 -0.4
ORV                                 pmax   pmax
       comp=Z,19nm,0.9s
ORV    Oroville          74.18  41  P      P      16 23 16.3 -0.4
N02D   Trinity Center    74.27  39  P      P      16 23 18.5 +1.2
       baz=233,SNR=18
PFO    Pinyon Flats O    74.35  48  P      P      16 23 18.1 +0.1
       comp=Z,12nm,0.8s,baz=255,slow=4.7,SNR=24
PFO    Pinyon Flats O    74.35  48⇓eP      P      16 23 18.4 +0.4
PFO                                 pmax   pmax
       comp=Z,30nm,0.9s
PFO    Pinyon Flats O    74.35  48  P      P      16 23 17.5 -0.4
PFO    Pinyon Flats O    74.35  48  P      P      16 23 18.7 +0.8
       baz=239,SNR=10
TPFO   Pinon Flats       74.35  48  P      P      16 23 18.5 +0.6
       baz=239,SNR=10.0
XPFO   Pion Flat         74.35  48  P      P      16 23 17.5 -0.5
O03E   Paynes Creek      74.42  40  P      P      16 23 18.5 +0.3
       baz=234,SNR=12
M02C   Callahan          74.43  38  P      P      16 23 19.5 +1.3
       baz=233,SNR=11
LRMC   Laurel Mtn Rad    74.45  46  P      P      16 23 19.1 +0.5
       baz=238,SNR=16
L02E   Cave Junction     74.45  37  P      P      16 23 19.6 +1.3
       baz=232
OHAK   Old Harbor        74.46  12  P      P      16 23 17.6 -0.3
KEBM   Edson Butte       74.47  37  P      P      16 23 18.2 -0.2
KSRS   Korea Array       74.47 317  P      P      16 23 19.9 +1.4
       comp=Z,2.8nm,0.8s,baz=126,slow=6.5,SNR=6.8
SWSC   Sam W. Stewart    74.49  49  P      P      16 23 19.6 +1.0
       baz=240,SNR=5.1
KSAR   Wonju Array Be    74.49 316  P      P      16 23 18.9 +0.4
KSAR   Wonju Array Be    74.49 316  P      P      16 23 18.9 +0.4
SRIG   Santa Rosalia     74.56  56  P      P      16 23 19.3 +0.1
SRIG                                IAmb   IAmb   16 23 21.1
       comp=Z,47nm,0.9s
RRX    Edison Barstow    74.61  47  P      P      16 23 20.6 +1.2
       baz=239
MDPB   Devils Postpil    74.66  43  P      P      16 23 19.9 +0.1
MDPB                                IAmb   IAmb   16 23 21.7
       comp=Z,34nm,0.8s
CWC    Cottonwood Cre    74.68  45  P      P      16 23 20.4 +0.5
       baz=238
OMMB   Old Mammoth Mi    74.70  43  P      P      16 23 20.0 -0.1
YBH    Yreka Blue Hor    74.72  38  P      P      16 23 20.6 +0.7
YBH                                 pmax   pmax
       comp=Z,62nm,0.8s
YBH    Yreka Blue Hor    74.72  38  P      P      16 23 20.6 +0.7
K02D   Willamette Mer    74.74  37  P      P      16 23 21.1 +1.1
       baz=232,SNR=6.3
RUBR   Rubicon Trail     74.74  42  P      P      16 23 21.1 +0.8
MLAC   Mammoth, Mammo74.82  44  P      P      16 23 21.9 +1.2
       baz=237,SNR=8.3
BELC   Belle Mtn. Jos    74.87  48  P      P      16 23 21.6 +0.6
       baz=240,SNR=21
J01E   Myrtle Point      74.88  37  P      P      16 23 21.9 +1.3
       baz=232
MPMC   Manual Prospec    74.89  45  P      P      16 23 21.7 +0.6
       baz=238,SNR=36
QSPA   South Pole Qui    74.89 180  P      P      16 23 21.4 +0.8
TIN    Tinemaha, Big     74.91  44  P      P      16 23 22.7 +1.6
       baz=237
GSC    Goldstone, Bar    74.97  46  P      P      16 23 21.8 +0.3
GSC                                 pmax   pmax
       comp=Z,25nm,0.9s
GSC    Goldstone, Bar    74.97  46  P      P      16 23 21.8 +0.3
GSC                                 IAmb   IAmb   16 23 23.2
       comp=Z,25nm,0.9s
GSC    Goldstone, Bar    74.97  46  P      P      16 23 21.9 +0.5
       baz=239,SNR=25
HEC    Hector,Ludlow     75.05  47  P      P      16 23 22.6 +0.7
       baz=239,SNR=20
BEKR   Beckworth         75.08  41  P      P      16 23 22.1 +0.1
BEKR                                IAmb   IAmb   16 23 23.9
       comp=Z,38nm,1.0s
BC3    Big Chuckawall    75.09  48  P      P      16 23 22.6 +0.4
       baz=240,SNR=16
HUMO   Hull Mountain     75.10  37  P      P      16 23 22.4 +0.5
HUMO                                IAmb   IAmb   16 23 24.5
       comp=Z,50nm,1.2s
PNTR   Pine Nut          75.12  42  P      P      16 23 22.7 +0.3
PNTR                                pP     pwP    16 24 36.3 -3.1
KDAK   Kodiak Island     75.12  13 eP      P      16 23 21.8 +0.1
KDAK   Kodiak Island     75.12  13  P      P      16 23 21.8 +0.1
VCNR   Virginia City     75.20  42  P      P      16 23 23.0 +0.2
VCNR                                IAmb   IAmb   16 23 24.8
       comp=Z,31nm,0.8s
GLA    Glamis            75.25  49  P      P      16 23 23.6 +0.6
GLA                                 pmax   pmax
       comp=Z,40nm,1.1s
GLA    Glamis            75.25  49  P      P      16 23 23.6 +0.6
GLA                                 IAmb   IAmb   16 23 25.6
       comp=Z,40nm,1.1s
GLA    Glamis            75.25  49  P      P      16 23 24.1 +1.1
       baz=240,SNR=11
L04D   Klamath Falls     75.25  38  P      P      16 23 23.9 +0.9
       baz=233,SNR=13
M04C   Macdoel           75.27  39  P      P      16 23 23.9 +0.8
       baz=234,SNR=12
YERR   Yerington         75.30  42  P      P      16 23 23.4  0.0
YERR                                IAmb   IAmb   16 23 25.1
       comp=Z,44nm,0.8s
GRAC   Grapevine Rang    75.46  45  P      P      16 23 25.1 +1.0
       baz=238,SNR=21
GMRC   Granite Mounta    75.51  47  P      P      16 23 25.1 +0.5
       baz=240,SNR=14
FURC   Furnace Creek,    75.53  45  P      P      16 23 25.2 +0.8
       baz=238,SNR=5.3
I03D   Drain, OR         75.54  36  P      P      16 23 25.3 +0.9
       baz=232
IRM    Iron Mountain     75.56  48  P      P      16 23 25.6 +0.8
       baz=240,SNR=20
RYN    Ryan              75.57  43  P      P      16 23 24.9  0.0
RYN                                 IAmb   IAmb   16 23 26.8
       comp=Z,32nm,0.9s
RYN                                 pP     pP     16 24 37.7 +1.7
NVAR   Mina Array Bea    75.60  43  P      P      16 23 25.7 +0.5
       comp=Z,32nm,0.7s,baz=227,slow=9.5,SNR=228
NVAR                                PP     PP     16 26 18.2 -1.6
       comp=Z,1.7nm,1.0s,baz=217,slow=7.4,SNR=6.5
NVAR   Mina Array Bea    75.60  43  P      P      16 23 25.0 -0.1
NVAR                                pP     pP     16 24 38.0 +1.7
PAHR   Pah Rah Range     75.61  41  P      P      16 23 25.2 +0.2
PAHR                                IAmb   IAmb   16 23 26.9
       comp=Z,27nm,0.8s
PAHR                                pP     pP     16 24 38.4 +2.0
SHOC   Shoshone, Teco    75.64  46  P      P      16 23 25.8 +0.6
       baz=239,SNR=8.4
TUQ    Turquoise Moun    75.65  47  P      P      16 23 26.2 +0.9
       baz=239,SNR=7.3
NV11   Mina Array Sit    75.70  43  P      P      16 23 25.8 +0.2
NV11                                IAmb   IAmb   16 23 27.6
       comp=Z,38nm,0.9s
NV11                                pP     pP     16 24 38.6 +1.8
Y12C   Blythe            75.81  49  P      P      16 23 26.6 +0.4
Y12C                                IAmb   IAmb   16 23 28.3
       comp=Z,30nm,0.8s
Y12C   Blythe            75.81  49  P      P      16 23 27.1 +1.0
       baz=241,SNR=8.9
113A   Mohawk Valley,    75.90  50  P      P      16 23 26.9 +0.3
113A                                IAmb   IAmb   16 23 28.8
       comp=Z,28nm,0.9s
J04D   Umpqua Nationa    75.98  37  P      P      16 23 28.3 +1.2
       baz=233,SNR=16
KVN    Kaiserville       76.08  43  P      P      16 23 27.7 -0.1
KVN                                 pmax   pmax
       comp=Z,31nm,0.8s
KVN    Kaiserville       76.08  43  P      P      16 23 27.7 -0.1
KVN                                 IAmb   IAmb   16 23 29.5
       comp=Z,31nm,0.8s
I04A   Tendick Farm,     76.14  37  P      P      16 23 28.3 +0.5
       baz=233,SNR=6.3
TPNV   Topopah Spring    76.20  45  P      P      16 23 28.6 +0.1
TPNV                                pmax   pmax
       comp=Z,28nm,0.8s
TPNV   Topopah Spring    76.20  45  P      P      16 23 28.6 +0.1
TPNV                                IAmb   IAmb   16 23 30.4
       comp=Z,28nm,0.8s
TPNV   Topopah Spring    76.20  45  P      P      16 23 29.0 +0.6
       baz=239,SNR=40
214A   Organ Pipe Nat    76.23  51  P      P      16 23 29.5 +1.0
214A                                IAmb   IAmb   16 23 30.9
       comp=Z,40nm,1.2s
214A   Organ Pipe Nat    76.23  51  P      P      16 23 29.9 +1.3
       baz=242,SNR=7.6
NEE2   Needles Airpor    76.24  48  P      P      16 23 29.9 +1.4
       baz=240
MOD    Modoc Plateau     76.28  39  P      P      16 23 28.7  0.0
MOD                                 IAmb   IAmb   16 23 30.6
       comp=Z,30nm,0.8s
MOD                                 pP     pP     16 24 42.3 +2.1
HSIG                     76.33  55  P      P      16 23 28.9 -0.2
HSIG                                IAmb   IAmb   16 23 30.8
       comp=Z,31nm,0.8s
PDMCI  Parker Dam,Lak    76.36  48  P      P      16 23 30.2 +1.0
       baz=241,SNR=17
H04D   Lebanon           76.40  36  P      P      16 23 30.3 +1.1
       baz=232
G03D   McMinnville, O    76.52  35  P      P      16 23 30.8 +1.0
       baz=232
J05D   Fort Rock, OR     76.52  38  P      P      16 23 30.9 +0.8
       baz=234,SNR=20
SHPR   Sheep Range       76.73  46  P      P      16 23 31.4  0.0
F03A   Seaside           76.81  34  P      P      16 23 32.5 +1.1
H04A   Detroit Lake      76.81  36  P      P      16 23 31.6 +0.1
H04A                                IAmb   IAmb   16 23 32.5
       comp=Z,34nm,0.7s
W13A   Hualapai Mount    76.93  48  P      P      16 23 33.1 +0.4
PINE   Pine Mountain     76.99  37  P      P      16 23 33.6 +0.9
PINE                                pP     pwP    16 24 46.7 -3.0
CNPM   China Poot        77.01  12  P      P      16 23 32.9 +0.7
Y14A   Wickenburg        77.01  49  P      P      16 23 34.1 +1.2
Y14A                                IAmb   IAmb   16 23 35.0
       comp=Z,27nm,0.7s
I05D   Terrebonne, OR    77.08  37  P      P      16 23 33.9 +0.8
       baz=233,SNR=8.7
E03A   Lebam             77.19  34  P      P      16 23 34.5 +1.0
F04D   Rainier, OR       77.20  35  P      P      16 23 35.0 +1.4
       baz=232
BRLK   Bradley Lake      77.30  13  P      P      16 23 33.9 +0.1
R11A   Troy Canyon, C    77.37  44  P      P      16 23 35.4 +0.4
R11A   Troy Canyon, C    77.37  44  P      P      16 23 35.6 +0.6
       baz=239,SNR=26
F04A   Amboy             77.43  35  P      P      16 23 35.2 +0.4
F04A                                IAmb   IAmb   16 23 59.6
       comp=Z,20nm,0.7s
DIB    Dawson Inlet,     77.51  25  P      P      16 23 35.8 +0.8
NLWA   Neilton Lookou    77.56  33  P      P      16 23 36.3 +0.8
RSO    Redoubt South     77.57  11  P      P      16 23 34.9 -0.6
WVOR   Wild Horse Val    77.60  39  P      P      16 23 35.7 -0.3
WVOR                                pmax   pmax
       comp=Z,32nm,1.0s
WVOR   Wild Horse Val    77.60  39  P      P      16 23 35.7 -0.3
WVOR                                IAmb   IAmb   16 23 38.0
       comp=Z,32nm,1.0s
G05D   Wamic, OR         77.64  36  P      P      16 23 36.9 +0.8
       baz=233
SVW2   Sparrevohn        77.66  10  P      P      16 23 35.3 -0.4
E04D   Cinebar           77.73  34  P      P      16 23 37.6 +1.1
       baz=232
TUC    Tucson            77.92  52  P      P      16 23 37.8 -0.2
TUC                                 pmax   pmax
       comp=Z,29nm,0.9s
TUC    Tucson            77.92  52  P      P      16 23 37.8 -0.2
TUC                                 IAmb   IAmb   16 23 40.6
       comp=Z,30nm,0.8s
TUC    Tucson            77.92  52  P      P      16 23 39.6 +1.6
       baz=243
F05D   White Salmon      77.94  35  P      P      16 23 38.5 +0.9
       baz=233
D04E   Lakebay           78.01  34  P      P      16 23 39.5 +1.6
       baz=232
I07A   Izee              78.01  38  P      P      16 23 38.5 +0.3
I07A                                IAmb   IAmb   16 23 40.2
       comp=Z,30nm,0.9s
G06A   Carlson Farm,     78.02  36  P      P      16 23 38.4 +0.2
D03D   Eldon             78.06  33  P      P      16 23 38.9 +0.7
       baz=232
J08A   Circle Bar Ran    78.21  39  P      P      16 23 39.9 +0.5
J08A                                IAmb   IAmb   16 23 41.2
       comp=Z,39nm,1.2s
LON    Longmire          78.27  35  P      P      16 23 39.5  0.0
LON                                 pmax   pmax
       comp=Z,10.0nm,0.7s
LON    Longmire          78.27  35  P      P      16 23 39.5  0.0
NJ2    Nanjing           78.30 308 eP      P      16 23 39.6 -0.3
NJ2                                 pmax   pmax
       comp=Z,9.0nm,0.5s
LCMT   Little Creek M    78.31  46  P      P      16 23 40.2 +0.1
X16A   Lo Mia Camp, P    78.38  49  P      P      16 23 41.1 +0.5
X16A                                IAmb   IAmb   16 23 43.1
       comp=Z,40nm,1.0s
D05A   Enumclaw          78.43  34  P      P      16 23 41.2 +0.9
PGC    Sidney            78.56  32  P      P      16 23 40.9  0.0
KNB    Kanab             78.61  47  P      P      16 23 42.0 +0.2
KNB                                 pmax   pmax
       comp=Z,15nm,0.7s
KNB    Kanab             78.61  47  P      P      16 23 42.0 +0.2
PSUT   Pine Spring       78.64  45  P      P      16 23 42.0 +0.1
319A   Douglas           78.66  53  P      P      16 23 42.8 +0.8
319A                                IAmb   IAmb   16 23 44.7
       comp=Z,30nm,0.8s
U15A   North Rim         78.71  47  P      P      16 23 42.5 +0.1
U15A                                IAmb   IAmb   16 23 44.9
       comp=Z,25nm,1.0s
RC01   Rabbit Creek A    78.74  13  P      P      16 23 41.5 -0.2
RC01                                IAmb   IAmb   16 23 42.9
       comp=Z,31nm,0.9s
F07A   Phinny Hill Vi    78.81  36  P      P      16 23 42.7 +0.3
F07A                                IAmb   IAmb   16 23 44.0
       comp=Z,26nm,0.8s
ELK    Elko              78.84  42  P      P      16 23 43.1 +0.1
ELK                                 pmax   pmax
       comp=Z,20nm,0.9s
ELK    Elko              78.84  42  P      P      16 23 43.1 +0.1
ELK                                 IAmb   IAmb   16 23 44.6
       comp=Z,20nm,0.8s
HIN    Hinchinbrook I    78.85  14  P      P      16 23 42.6 +0.3
SUA    Susitna One       78.88  12  P      P      16 23 42.2 -0.3
WUAZ   Wupatki           78.94  48  P      P      16 23 44.3 +0.8
WUAZ                                IAmb   IAmb   16 23 46.0
       comp=Z,28nm,1.1s
WUAZ   Wupatki           78.94  48  P      P      16 23 44.7 +1.2
       baz=242,SNR=18
A04D   Lummi Island      78.99  33  P      P      16 23 44.1 +0.9
       baz=232,SNR=8.4
G08A   Pilot Rock        79.02  37  P      P      16 23 43.7  0.0
G08A                                IAmb   IAmb   16 23 45.5
       comp=Z,37nm,1.0s
B05A   Bryant            79.03  33  P      P      16 23 44.1 +0.6
       baz=232,SNR=15
GLI    Glacier Island    79.14  14  P      P      16 23 43.4 -0.4
KLR    Kul'dur           79.14 328⇓eP      P      16 23 44.1  0.0
KLR                                 pmax   pmax
       comp=Z,8.0nm,1.5s
FID    Port Fidalgo      79.17  14  P      P      16 23 43.3 -0.6
FID                                 IAmb   IAmb   16 26 16.2
       comp=Z,62nm,1.3s
PKCU   Pink Cliffs       79.17  46  P      P      16 23 46.1 +1.1
LTY    Liberty           79.19  35  P      P      16 23 43.9 -0.6
LTY                                 IAmb   IAmb   16 23 45.9
       comp=Z,30nm,1.2s
SKT    Skwentna          79.20  11  P      P      16 23 42.5 -1.6
SKT                                 IAmb   IAmb   16 23 44.2
       comp=Z,34nm,1.6s
E07A   Sunnyside         79.23  36  P      P      16 23 45.2 +0.6
MA2    Magadan           79.29 343⇑eP      P      16 23 43.6 -1.0
MA2                                 pmax   pmax
       comp=Z,8.0nm,1.0s
MA2    Magadan           79.29 343  P      P      16 23 44.0 -0.6
KNK    Knik Glacier      79.31  13  P      P      16 23 44.4 -0.3
KNK                                 IAmb   IAmb   16 23 45.4
       comp=Z,20nm,0.6s
HAWA   Hanford           79.32  36  P      P      16 23 45.3 +0.2
HAWA                                IAmb   IAmb   16 23 46.9
       comp=Z,37nm,0.8s
PMR    Palmer            79.33  13  P      P      16 23 43.8 -0.9
PMR                                 pmax   pmax
       comp=Z,21nm,0.9s
PMR    Palmer            79.33  13  P      P      16 23 43.8 -0.9
PMR                                 IAmb   IAmb   16 23 45.9
       comp=Z,21nm,0.9s
X18A   Snowflake         79.53  50  P      P      16 23 47.0 +0.2
X18A                                IAmb   IAmb   16 23 49.2
       comp=Z,22nm,1.1s
GHO    Glory Hole Cre    79.53  13  P      P      16 23 45.6 -0.4
MTPU   Mount Pierson     79.55  46  P      P      16 23 47.9 +0.8
E08A   Dider Farm, El    79.64  36  P      P      16 23 47.3 +0.4
E08A                                IAmb   IAmb   16 23 48.6
       comp=Z,34nm,0.9s
SML    Sawmill           79.69  13  P      P      16 23 46.6 -0.2
SML                                 IAmb   IAmb   16 24 44.0
       comp=Z,18nm,0.8s
HPIG                     79.73  58  P      P      16 23 47.9 -0.2
BMO    Blue Mountains    79.74  38  P      P      16 23 47.5  0.0
BMO                                 pmax   pmax
       comp=Z,24nm,0.9s
BMO    Blue Mountains    79.74  38  P      P      16 23 47.5  0.0
BMO                                 IAmb   IAmb   16 23 49.0
       comp=Z,24nm,0.9s
MSU    Marysvale         79.78  45  P      P      16 23 48.6 +0.5
MSU    Marysvale         79.78  45  P      P      16 23 48.6 +0.5
ANM    Nome              79.85   4  P      P      16 23 48.1 +0.6
ANM                                 pmax   pmax
       comp=Z,12nm,0.8s
ANM    Nome              79.85   4  P      P      16 23 48.1 +0.6
MFID   Camas Ranch       79.86  40  P      P      16 23 48.4 +0.2
MFID                                IAmb   IAmb   16 23 49.9
       comp=Z,26nm,0.9s
SCM    Sheep Creek Mo    79.93  13  P      P      16 23 48.1  0.0
SCM                                 pmax   pmax
       comp=Z,39nm,0.7s
SCM    Sheep Creek Mo    79.93  13  P      P      16 23 48.1  0.0
CRQM   Cirque            80.00  16  P      P      16 23 48.7 +0.1
TGL    Tana Glacier      80.08  16  P      P      16 23 48.5 -0.5
TGL                                 IAmb   IAmb   16 23 49.9
       comp=Z,33nm,0.7s
DUG    Dugway, Tooele    80.16  44  P      P      16 23 49.7 -0.2
DUG                                 pmax   pmax
       comp=Z,16nm,0.9s
DUG    Dugway, Tooele    80.16  44  P      P      16 23 49.7 -0.2
DUG    Dugway, Tooele    80.16  44  P      P      16 23 50.3 +0.3
       baz=241
E09A   Wood Farm, Sta    80.18  36  P      P      16 23 49.9 +0.2
E09A                                IAmb   IAmb   16 23 51.0
       comp=Z,20nm,0.9s
121A   Cookes Peak, D    80.30  53  P      P      16 23 51.9 +1.0
121A                                IAmb   IAmb   16 23 53.6
       comp=Z,34nm,1.1s
121A   Cookes Peak, D    80.30  53  P      P      16 23 52.4 +1.5
       baz=245
VRDI   Verde Repeater    80.32  15  P      P      16 23 50.1 -0.2
VRDI                                IAmb   IAmb   16 23 51.1
       comp=Z,26nm,0.7s
BGU    Big Grassy Mou    80.38  43  P      P      16 23 50.7 -0.3
F10A   Beach Ranch, E    80.41  37  P      P      16 23 50.8 -0.3
F10A                                IAmb   IAmb   16 23 52.2
       comp=Z,35nm,0.8s
GLB    Gilahina Butte    80.41  15  P      P      16 23 50.5 -0.2
BALM   Baldy             80.44  16  P      P      16 23 50.8 -0.1
NLU    North Lily Min    80.54  44  P      P      16 23 52.1  0.0
MCARA  McCarthy VSAT     80.56  15  P      P      16 23 51.4  0.0
MCARA                               IAmb   IAmb   16 23 52.8
       comp=Z,38nm,1.1s
B08A   Colville Reser    80.57  34  P      P      16 23 51.3 -0.5
B08A                                IAmb   IAmb   16 23 52.7
       comp=Z,18nm,0.8s
B08A                                pP     pwP    16 25 08.1 -1.3
LLLB   Lillooet          80.58  31  P      P      16 23 51.8  0.0
BARN   Barnard Glacie    80.64  16  P      P      16 23 52.3 +0.2
CTGM   Chitina Glacie    80.65  16  P      P      16 23 52.2 +0.2
Q16A   Castle Valley     80.66  46  P      P      16 23 53.6 +0.9
KTH    Kantishna Hill    80.76  11  P      P      16 23 51.2 -1.2
TRF    Thorofare Moun    80.78  11  P      P      16 23 51.9 -0.8
TRF                                 IAmb   IAmb   16 23 53.2
       comp=Z,26nm,0.9s
TMUT   Trail Mountain    80.81  45  P      P      16 23 54.5 +0.9
ZAIG   Zacatecas         80.82  63  P      P      16 23 55.0 +1.1
C09A   Chrisman Ranch    80.83  35  P      P      16 23 53.0 -0.2
C09A                                IAmb   IAmb   16 23 54.6
       comp=Z,30nm,1.2s
MPU    Maple Canyon      80.87  44  P      P      16 23 54.3 +0.5
SPUT   South Promonto    80.94  43  P      P      16 23 54.7 +0.6
HVU    Hansel Valley     80.96  42  P      P      16 23 54.6 +0.4
HVU                                 pmax   pmax
       comp=Z,30nm,0.9s
HVU    Hansel Valley     80.96  42  P      P      16 23 54.6 +0.4
RND    Reindeer          81.02  12  P      P      16 23 53.7 -0.1
RND                                 pmax   pmax
       comp=Z,35nm,0.8s
RND    Reindeer          81.02  12  P      P      16 23 53.7 -0.1
RND                                 IAmb   IAmb   16 23 55.1
       comp=Z,35nm,0.8s
DHY    Denali Highway    81.02  13  P      P      16 23 53.6 -0.4
CTU    Camp Tracy        81.11  44  P      P      16 23 55.4 +0.4
WHN    Wuhan             81.17 305 ⇑P      P      16 23 54.5 -0.7
SRU    San Rafael Swe    81.20  46  P      P      16 23 55.9 +0.4
SRU                                 *PP    pwP    16 25 10.2 -3.4
SRU                                 pmax   pmax
       comp=Z,37nm,1.1s
SRU    San Rafael Swe    81.20  46  P      P      16 23 55.9 +0.4
SRU                                 pP     pwP    16 25 10.2 -3.4
SKAG   Skagway           81.21  20  P      P      16 23 55.6 +0.9
SKAG                                IAmb   IAmb   16 23 57.2
       comp=Z,38nm,1.0s
P17A   Butcher Ranch,    81.22  45  P      P      16 23 56.3 +0.8
BPAW   Bear Paw Mtn.     81.25  11  P      P      16 23 53.7 -1.2
JLU    Jordanelle        81.27  44  P      P      16 23 56.1 +0.2
MCK    McKinley          81.30  12  P      P      16 23 54.5 -0.7
MCK                                 pmax   pmax
       comp=Z,43nm,0.9s
MCK    McKinley          81.30  12  P      P      16 23 54.5 -0.7
TCUT   Toone Canyon      81.54  43  P      P      16 23 57.5 +0.2
TCUT                                pP     pP     16 25 12.1 +2.5
BWN    Browne            81.59  11  P      P      16 23 56.2 -0.5
Y22D   IRIS PASSCAL I    81.60  51  P      P      16 23 58.9 +1.3
Y22D   IRIS PASSCAL I    81.60  51  P      P      16 23 59.3 +1.7
       baz=245
HYT    Haines Junctio    81.61  18  P      P      16 23 57.2 +0.2
HYT                                 IAmb   IAmb   16 23 59.0
       comp=Z,26nm,1.2s
HWUT   Hardware Ranch    81.67  43  P      P      16 23 57.4 -0.5
HWUT                                IAmb   IAmb   16 23 59.3
       comp=Z,24nm,0.8s
MENT   Mentasta          81.72  14  P      P      16 23 57.7 +0.2
MENT                                IAmb   IAmb   16 23 59.0
       comp=Z,28nm,1.0s
SEY    Seymchan          81.73 346⇓eP      P      16 23 56.5 -0.9
NEW    Newport           81.73  35  P      P      16 23 57.7 -0.2
NEW                                 pmax   pmax
       comp=Z,42nm,1.7s
NEW    Newport           81.73  35  P      P      16 23 57.7 -0.2
NEW                                 IAmb   IAmb   16 23 58.7
       comp=Z,42nm,1.7s
NEW    Newport           81.73  35  P      P      16 23 57.4 -0.4
       baz=236
MVCO   Mesa Verde        81.77  48  P      P      16 23 58.5 -0.1
MVCO   Mesa Verde        81.77  48  P      P      16 23 59.2 +0.7
       baz=244,SNR=5.9
MNTX   Cornudas Mount    81.82  54  P      P      16 23 58.9 +0.3
MNTX                                IAmb   IAmb   16 24 01.2
       comp=Z,41nm,1.1s
MNTX   Cornudas Mount    81.82  54  P      P      16 23 59.9 +1.2
       baz=246
NEA    Nenana            82.03  11  P      P      16 23 58.1 -0.8
NEA                                 IAmb   IAmb   16 26 09.4
       comp=Z,59nm,1.7s
WRH    Wood River Hil    82.12  12  P      P      16 23 58.9 -0.5
WRH                                 IAmb   IAmb   16 24 01.2
       comp=Z,38nm,1.0s
MLY    Manley            82.14  10  P      P      16 23 58.7 -0.9
MLY                                 IAmb   IAmb   16 24 00.2
       comp=Z,25nm,1.1s
RIDG   Independent Ri    82.16  13  P      P      16 23 59.1 -0.6
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RIDG                                IAmb    IAmb     16 24 00.9
      comp=Z,30nm,1.1s
DLBC  Dease Lake        82.27  22   P       P        16 24 00.6 +0.2
DLBC                                IAmb    IAmb     16 24 03.1
      comp=Z,66nm,1.7s
TX31  Lajitas Ar. Si    82.28  57   P       P        16 24 01.4 +0.2
TX31                                IAmb    IAmb     16 24 03.9
      comp=Z,45nm,1.3s
TX32  Lajitas Array     82.28  57   P       P        16 24 01.9 +0.7
TX32                                IAmb    IAmb     16 24 04.0
      comp=Z,46nm,1.3s
TXAR  Lajitas Array     82.28  57   P       P        16 24 02.7 +1.5
      comp=Z,12nm,0.8s,baz=219,slow=8.4,SNR=61
TXAR  Lajitas Array     82.28  57   P       P        16 24 01.8 +0.6
TXAR                                *PP     pwP      16 25 16.7 -1.6
TXAR  Lajitas Array     82.28  57   P       P        16 24 01.8 +0.6
TXAR                                pP      pwP      16 25 16.6 -1.6
WHY   Whitehorse        82.28  19   P       P        16 24 01.2 +0.7
WHY                                 IAmb    IAmb     16 24 02.4
      comp=Z,24nm,1.1s
BCAR  Beaver Creek A    82.30  15   P       P        16 24 00.3 -0.1
HDA   Harding Lake      82.30  12   P       P        16 24 00.2 -0.2
HDA   Harding Lake      82.30  12   P       P        16 24 00.2 -0.2
      baz=208,SNR=28
ANMO  Albuquerque       82.31  51   P       P        16 24 01.6 +0.2
      comp=Z,21nm,0.9s,baz=232,slow=5.9,SNR=43
ANMO  Albuquerque       82.31  51c iP      P        16 24 02.3 +0.9
ANMO                                pmax    pmax
      comp=Z,42nm,1.3s
ANMO  Albuquerque       82.31  51   P       P        16 24 01.3 -0.1
ANMO                                IAmb    IAmb     16 24 03.5
      comp=Z,40nm,1.2s
ANMO                                pP      pwP      16 25 16.3 -2.4
ANMO  Albuquerque       82.31  51   P       P        16 24 02.3 +0.9
      baz=246
CCB   Clear Creek Bu    82.34  12   P       P        16 23 59.6 -0.9
CCB                                 IAmb    IAmb     16 24 01.2
      comp=Z,48nm,1.1s
MCMT  McKenzie Canyo    82.43  40   P       P        16 24 02.0 +0.2
RDMU  Red Mountain      82.52  45   P       P        16 24 01.9 -0.4
AHID  Auburn Hatcher    82.53  42   P       P        16 24 02.4  0.0
AHID                                IAmb    IAmb     16 24 04.7
      comp=Z,26nm,0.9s
AHID                                pP      pwP      16 25 18.3 -2.5
TCOL  CIGO, UAF Yank    82.53  12   P       P        16 24 01.3 -0.2
      baz=207,SNR=14
COLA  College           82.53  12  eP       P        16 24 00.5 -1.0
COLA  College           82.53  12   P       P        16 24 01.0 -0.5
MDM   Murphy Dome       82.54  11   P       P        16 24 01.1 -0.5
MDM                                 IAmb    IAmb     16 24 02.4
      comp=Z,36nm,1.1s
IMAR  Indian Mountai    82.54   9   P       P        16 24 01.6  0.0
SCRK  Sand Creek        82.55  14   P       P        16 24 01.7 -0.2
SCRK                                IAmb    IAmb     16 24 03.6
      comp=Z,22nm,0.8s
IL31                    82.63  12   P       P        16 24 01.0 -1.0
IL31                                IAmb    IAmb     16 24 03.0
      comp=Z,27nm,0.9s
ILAR  Eielson Array     82.63  12   P       P        16 24 01.2 -0.9
      comp=Z,12nm,0.4s,baz=213,slow=5.4,SNR=322
ILAR  Eielson Array     82.63  12   P       P        16 24 00.8 -1.3
ILAR  Eielson Array     82.63  12   P       P        16 24 00.8 -1.3
TLIG  Tlapa             82.63  70   P       P        16 24 02.4 -0.9
MSO   Missoula          82.78  38   P       P        16 24 03.2 -0.2
MSO                                 IAmb    IAmb     16 24 04.5
      comp=Z,32nm,1.4s
MSO   Missoula          82.78  38   P       P        16 24 03.2 -0.2
      baz=239
POKR  Poker Plat Res    82.83  12   P       P        16 24 02.6 -0.5
      baz=207,SNR=27
DLMT  Dillon            82.85  39   P       P        16 24 03.4 -0.4
DLMT                                IAmb    IAmb     16 24 05.8
      comp=Z,39nm,1.0s
REDW  Red Top Meadow    82.97  42   P       P        16 24 04.6  0.0
REDW                                IAmb    IAmb     16 24 07.1
      comp=Z,50nm,1.1s
FXWY  Fox Creek         82.99  41   P       P        16 24 04.8  0.0
FXWY                                IAmb    IAmb     16 24 07.5
      comp=Z,22nm,0.8s
SNOW  Snow King Moun    83.08  42   P       P        16 24 05.4 +0.2
S22A  4UR Ranch, Cre    83.20  48   P       P        16 24 06.4 +0.4
S22A  4UR Ranch, Cre    83.20  48   P       P        16 24 06.9 +0.9
      baz=245,SNR=64
O20A  White River Ci    83.23  45   P       P        16 24 05.8 -0.2
O20A                                IAmb    IAmb     16 24 07.6
      comp=Z,28nm,0.8s
O20A  White River Ci    83.23  45   P       P        16 24 06.4 +0.5
      baz=244
QLMT  Earthquake Lak    83.31  40   P       P        16 24 06.9 +0.7
FLWY  Flagg Ranch       83.41  41   P       P        16 24 07.1 +0.3
FLWY                                IAmb    IAmb     16 24 09.1
      comp=Z,45nm,1.0s
YHB   Horse Butte       83.42  40   P       P        16 24 07.4 +0.5
YPP   Pitchstone Pla    83.43  41   P       P        16 24 08.0 +1.0
YHL   Hebgen Lake       83.47  40   P       P        16 24 07.6 +0.4
YHL                                 pP      pwP      16 25 22.9 -3.1
RDOG  Red Dog Mine      83.48   5   P       P        16 24 06.8 +0.4
BW06  Boulder Array     83.53  43   P       P        16 24 07.1 -0.4
BW06                                IAmb    IAmb     16 24 08.7
      comp=Z,31nm,0.9s
BW06  Boulder Array     83.53  43   P       P        16 24 07.4 -0.1
      baz=243
PD31  Pinedale Array    83.53  43   P       P        16 24 07.1 -0.4
PD31                                IAmb    IAmb     16 24 08.7
      comp=Z,29nm,0.9s
PDAR  Pinedale Array    83.53  43   P       P        16 24 07.2 -0.2
      comp=Z,22nm,0.8s,baz=212,slow=2.9,SNR=125
PDAR  Pinedale Array    83.53  43   P       P        16 24 06.8 -0.6
PRP   Porcupine Dome    83.56  12   P       P        16 24 06.8 -0.2
PRP                                 IAmb    IAmb     16 24 08.2
      comp=Z,39nm,0.9s
H17A  Grant Village     83.64  41   P       P        16 24 09.4 +1.4
H17A                                IAmb    IAmb     16 24 11.0
      comp=Z,26nm,0.9s
H17A  Grant Village     83.64  41   P       P        16 24 10.0 +2.0
      baz=242
YHH   Holmes Hill       83.65  40   P       P        16 24 08.7 +0.6
SMCO  Snowmass          83.70  47   P       P        16 24 08.6  0.0
SMCO                                IAmb    IAmb     16 24 10.3
      comp=Z,32nm,1.2s
YNR   Norris Junctio    83.72  41   P       P        16 24 09.0 +0.6
DAWY  Dawson            83.73  15   P       P        16 24 07.7  0.0
DAWY                                IAmb    IAmb     16 24 09.3
      comp=Z,40nm,0.8s
BJI   Beijing           83.73 314⇑eP       P        16 24 09.4 +1.2
BJI                                 pmax    pmax
      comp=Z,15nm,1.1s
LKWY  Lake              83.83  41   P       P        16 24 10.0 +1.1
LKWY                                pmax    pmax
      comp=Z,38nm,1.1s
LKWY  Lake              83.83  41   P       P        16 24 10.0 +1.1
LKWY                                IAmb    IAmb     16 24 12.2
      comp=Z,38nm,1.1s
EGAK  Eagle             83.89  14   P       P        16 24 08.1 -0.3
EGAK                                IAmb    IAmb     16 24 09.9
      comp=Z,29nm,0.9s
WALA  Waterton Lakes    83.95  36   P       P        16 24 09.0 -0.3
BILL  Bilibino          83.99 353c iP      P        16 24 09.0 +0.1
BILL                                pmax    pmax
      comp=Z,13nm,0.7s
SDCO  Great Sand Dun    84.16  49   P       P        16 24 10.8  0.0
SDCO  Great Sand Dun    84.16  49   P       P        16 24 11.1 +0.4
      baz=246
YNE   Yellowstone No    84.28  40   P       P        16 24 11.6 +0.4
YNE                                 pP      pwP      16 25 27.1 -2.9
T25A  Trinidad          84.71  49   P       P        16 24 12.7 -0.8
T25A  Trinidad          84.71  49   P       P        16 24 13.7 +0.2
      baz=247
MSTX  Muleshoe          84.72  53   P       P        16 24 13.3 -0.2
MSTX  Muleshoe          84.72  53   P       P        16 24 13.7 +0.3
      baz=248
RLMT  Red Lodge         84.80  41   P       P        16 24 14.3 +0.5
RLMT                                IAmb    IAmb     16 24 15.8
      comp=Z,24nm,0.8s
RLMT  Red Lodge         84.80  41   P       P        16 24 14.8 +1.1
      baz=243
GCMT  Greycliff         84.86  40   P       P        16 24 14.2 +0.3
GCMT                                pP      pwP      16 25 29.5 -3.1
Q24A  Divide            84.91  48   P       P        16 24 14.7 +0.2
Q24A  Divide            84.91  48   P       P        16 24 15.1 +0.6
      baz=246,SNR=7.7
ISCO  Idaho Springs     84.92  47   P       P        16 24 14.4 -0.2
ISCO                                pmax    pmax
      comp=Z,5.0nm,0.9s
ISCO  Idaho Springs     84.92  47   P       P        16 24 14.4 -0.2
ISCO  Idaho Springs     84.92  47   P       P        16 24 15.1 +0.5
      baz=246,SNR=7.2
ENH   Enshi             84.96 303   P       P        16 24 14.5 -0.1
ENH                                 IAmb    IAmb     16 24 17.6
      comp=Z,72nm,1.6s
N23A  Red Feather La    85.14  46   P       P        16 24 15.4 -0.1
N23A  Red Feather La    85.14  46   P       P        16 24 16.1 +0.6
      baz=245,SNR=6.7
833A  Chaparral WMA,    85.42  59   P       P        16 24 16.6 -0.3
833A                                IAmb    IAmb     16 24 18.9
      comp=Z,46nm,1.1s
833A  Chaparral WMA,    85.42  59   P       P        16 24 18.1 +1.3
      baz=250
BMAR  Burnt Mountain    85.42  12   P       P        16 24 16.4 +0.3
TOLK  Toolik Lake Re    85.63   9   P       P        16 24 17.4 +0.4
TOLK  Toolik Lake Re    85.63   9   P       P        16 24 17.7 +0.7
      baz=205
JCT   Junction City     85.82  57   P       P        16 24 18.6 -0.3
JCT                                 pmax    pmax
      comp=Z,14nm,0.9s
JCT   Junction City     85.82  57   P       P        16 24 18.6 -0.3
JCT   Junction City     85.82  57   P       P        16 24 19.1 +0.3
      baz=250
EGMT  Eagleton          85.85  38   P       P        16 24 18.6 -0.1
EGMT                                IAmb    IAmb     16 24 20.1
      comp=Z,18nm,0.9s
EGMT  Eagleton          85.85  38   P       P        16 24 19.3 +0.7
      baz=242
AMTX  Amarillo          85.90  52   P       P        16 24 18.8 -0.4
AMTX  Amarillo          85.90  52   P       P        16 24 19.4 +0.2
      baz=248
EPYK  Eagle Plains      86.26  15   P       P        16 24 19.9 -0.2
EPYK  Eagle Plains      86.26  15   P       P        16 24 20.3 +0.1
      baz=217
ABTX  Abilene, Hawle    86.68  55   P       P        16 24 22.4 -0.6
ABTX                                IAmb    IAmb     16 24 26.2
      comp=Z,16nm,0.8s
ABTX  Abilene, Hawle    86.68  55   P       P        16 24 23.1 +0.1
      baz=250
XAN   Xi'an             86.73 306   P       P        16 24 22.1 -1.1
XAN                                 pmax    pmax
      comp=Z,22nm,1.0s
XAN   Xi'an             86.73 306   P       P        16 24 22.1 -1.1
XAN                                 IAmb    IAmb     16 24 25.2
      comp=Z,22nm,1.0s
HHC   Hu-ho-hao-te      87.28 313  eP       P        16 24 27.0 +1.3
HHC                                 pmax    pmax
      comp=Z,70nm,1.2s
HHC                                 pmax    pmax
      comp=Z,260nm,6.9s
LAO   LASA Array        87.40  40   P       P        16 24 25.0 -1.1
LAO   LASA Array        87.40  40   P       P        16 24 27.5 +1.4
      baz=245
RSSD  Black Hills       87.75  43   P       P        16 24 27.2 -0.8
RSSD                                pmax    pmax
      comp=Z,18nm,0.9s
RSSD  Black Hills       87.75  43   P       P        16 24 27.2 -0.8
RSSD                                IAmb    IAmb     16 24 28.9
      comp=Z,18nm,0.9s
RSSD  Black Hills       87.75  43   P       P        16 24 27.9 -0.1
      baz=246
WMOK  Wichita Mounta    88.08  53   P       P        16 24 28.9 -0.6
WMOK                                pmax    pmax
      comp=Z,6.0nm,1.1s
WMOK  Wichita Mounta    88.08  53   P       P        16 24 28.9 -0.6
WMOK  Wichita Mounta    88.08  53   P       P        16 24 29.7 +0.2
      baz=250
CCIG  Comitan           88.13  73   P       P        16 24 29.7 -0.6
INK   Inuvik            88.55  14   P       P        16 24 30.1 -0.8
INK                                 pmax    pmax
      comp=Z,20nm,1.7s
INK   Inuvik            88.55  14   P       P        16 24 30.1 -0.8
X34A  Smith Ranch, M    88.77  54   P       P        16 24 32.5 -0.3
HKT   Hockley           88.89  59   P       P        16 24 32.9 -0.4
HKT                                 pmax    pmax
      comp=Z,58nm,1.9s
HKT   Hockley           88.89  59   P       P        16 24 32.9 -0.4
HKT                                 IAmb    IAmb     16 24 36.0
      comp=Z,58nm,1.9s
KMI   Kunming           88.97 296   P       P        16 24 36.5 +2.3
KMI                                 pmax    pmax
      comp=Z,22nm,1.2s
FNO   Franklin          89.32  53   P       P        16 24 35.1 -0.2
OKCFA Oklahoma City     89.33  53   P       P        16 24 34.6 -0.7
R32A  Long Quarter,     89.38  50   P       P        16 24 34.6 -0.9
R32A                                IAmb    IAmb     16 24 36.4
      comp=Z,26nm,0.7s
DGMT  Dagmar            89.39  39   P       P        16 24 35.3  0.0
DGMT  Dagmar            89.39  39   P       P        16 24 36.3 +1.0
      baz=246
CD2   Chengdu           89.84 302   P       P        16 24 37.3 -0.5
CD2                                 pmax    pmax
      comp=Z,20nm,0.5s
NATX  Nacogdoches       90.40  57   P       P        16 24 40.9 +0.5
NATX                                IAmb    IAmb     16 24 42.5
      comp=Z,33nm,1.0s
NATX  Nacogdoches       90.40  57   P       P        16 24 41.9 +1.5
      baz=252
CM31  Chiang Mai Arr    90.48 289   P       P        16 24 41.8 +0.7
CMAR  Chiang Mai Arr    90.48 289   P       P        16 24 42.3 +1.3
      comp=Z,6.4nm,0.8s,baz=93,slow=2.6,SNR=46
CMAR                                PKKPbc  PKKPbc   16 42 08.3 +1.1
      comp=Z,0.6nm,0.6s,baz=288,slow=4.6,SNR=6.1
CMAR  Chiang Mai Arr    90.48 289   P       P        16 24 41.4 +0.4
CMAR  Chiang Mai Arr    90.48 289   P       P        16 24 41.4 +0.4
T35A  Sooner Cattle     90.53  52   P       P        16 24 40.2 -0.6
CHTO  Chiang Mai        90.58 289   P       P        16 24 41.8 +0.3
CHTO                                pmax    pmax
      comp=Z,10.0nm,0.8s
CHTO  Chiang Mai        90.58 289   P       P        16 24 41.8 +0.3
X37A  Clayton           90.69  54   P       P        16 24 40.5 -1.1
YKA   Yellowknife Ar    90.73  24   P       P        16 24 40.8 -0.4
      comp=Z,6.8nm,0.9s,baz=234,slow=4.4,SNR=47
YKA                                 PP      PP       16 28 18.4 -3.4
      comp=Z,0.3nm,0.8s,baz=239,slow=8.2,SNR=4.0
TUL1  Leonard           90.77  53   P       P        16 24 41.5 -0.5
TUL1                                IAmb    IAmb     16 24 53.2
      comp=Z,14nm,0.4s
TUL1  Leonard           90.77  53   P       P        16 24 42.4 +0.4
      baz=252
KSU1  Kansas State U    91.15  50   P       P        16 24 44.1 +0.4
      baz=251
PLCA  Paso Flores       91.28 133   P       P        16 24 46.5 +2.0
      comp=Z,4.5nm,0.9s,baz=236,slow=6.3,SNR=6.2
PLCA  Paso Flores       91.28 133   P       P        16 24 46.5 +2.0
PLCA                                pmax    pmax
      comp=Z,46nm,2.0s
PLCA  Paso Flores       91.28 133   IAmb    IAmb     16 26 46.3
      comp=Z,46nm,2.0s
LZH   Lanzhou           91.34 307  eP       P        16 24 46.5 +1.7
LZH                                 pP      pwP      16 26 05.8 +3.7
LZH                                 sP      sP       16 26 39.3 +6.9
LZH                                 pmax    pmax
      comp=Z,21nm,1.0s
LZH                                 pmax    pmax
      comp=Z,95nm,4.9s
C36M  Paulatuk          91.71  16   P       P        16 24 45.1 -0.4
C36M                                IAmb    IAmb     16 24 46.4
      comp=Z,19nm,1.0s
C36M  Paulatuk          91.71  16   P       P        16 24 45.3 -0.2
      baz=229,SNR=17
MDND  Maddock           92.00  41   P       P        16 24 46.8 -0.6
MDND  Maddock           92.00  41   P       P        16 24 47.6 +0.2
      baz=250
U38A  Gravette          92.02  53   P       P        16 24 47.2 -0.5
U38A                                IAmb    IAmb     16 25 39.4
      comp=Z,10nm,0.7s
MIAR  Mount Ida         92.09  55   P       P        16 24 48.7 +0.6
      baz=253
W39A  Magazine          92.12  54   P       P        16 24 47.7 -0.5
W39A  Magazine          92.12  54   P       P        16 24 48.8 +0.6
      baz=253,SNR=5.9
WLAR  White Oak Lake    92.22  56   P       P        16 24 48.1 -0.6
HHAR  Hobbs             92.31  53   P       P        16 24 48.6 -0.5
Z41A  Richland Creek    92.34  56   P       P        16 24 49.8 +0.5
Z41A  Richland Creek    92.34  56   P       P        16 24 50.6 +1.3
      baz=253
SYO   Syowa Base        92.41 192⇓eP       P        16 24 48.0 -0.9
ECSD  EROS Data Cent    92.61  45   P       P        16 24 49.0 -1.4
ECSD                                IAmb    IAmb     16 24 50.9
      comp=Z,33nm,1.4s
ECSD  EROS Data Cent    92.61  45   P       P        16 24 49.6 -0.7
      baz=252
FFC   Flin Flon         93.09  34   P       P        16 24 51.3 -0.9
FFC                                 pmax    pmax
      comp=Z,8.0nm,1.3s
FFC   Flin Flon         93.09  34   P       P        16 24 51.3 -0.9
UALR  University of     93.13  55   P       P        16 24 53.4 +0.5
UALR                                IAmb    IAmb     16 24 54.7
      comp=Z,17nm,1.0s
U40A  Yellville         93.17  53   P       P        16 24 52.9 -0.2
U40A                                IAmb    IAmb     16 24 54.1
      comp=Z,16nm,0.9s
U40A  Yellville         93.17  53   P       P        16 24 53.4 +0.3
      baz=254,SNR=12
S39A  Bolivar           93.19  52   P       P        16 24 52.6 -0.5
S39A                                IAmb    IAmb     16 24 54.1
      comp=Z,19nm,0.8s
SONM  Songino Array     93.22 319   P       P        16 24 53.9 +0.7
      comp=Z,0.3nm,0.5s,baz=116,slow=5.7,SNR=3.8
SONM  Songino Array     93.22 319   P       P        16 24 53.9 +0.7
SONM                                pmax    pmax
      comp=Z,1.0nm,1.2s
SNAA  Sanae             93.26 178   P       P        16 24 52.9  0.0
VNA3  Neumayer Olymp    93.29 175   P       P        16 24 53.7 +0.7
JTS   Las Juntas de     93.30  80c iP      P        16 24 55.9 +1.8
JTS                                 pmax    pmax
      comp=Z,34nm,1.1s
JTS   Las Juntas de     93.30  80   P       P        16 24 54.6 +0.4
W41B  Gary Mavity, V    93.32  55   P       P        16 24 53.9 +0.2
W41B                                IAmb    IAmb     16 24 55.4
      comp=Z,18nm,1.0s
W41B  Gary Mavity, V    93.32  55   P       P        16 24 54.4 +0.7
      baz=254,SNR=8.4
WHAR  Wooly Hollow      93.32  54   P       P        16 24 53.8 +0.1
WHAR                                IAmb    IAmb     16 24 55.2
      comp=Z,18nm,1.0s
344A  Westbrook Farm    93.53  59   P       P        16 24 56.1 +1.3
FCAR  Ozark Folk Cen    93.61  54   P       P        16 24 54.7 -0.4
FCAR                                IAmb    IAmb     16 24 56.1
      comp=Z,18nm,1.4s
VNA2  Neumayer--Watz    93.76 176   P       P        16 24 56.1 +0.9
      baz=186,slow=3.1
MGMO  Mountain Grove    93.85  53   P       P        16 24 56.0 -0.2
TIXI  Tiksi             94.19 345⇓eP       P        16 24 56.3 -0.6
TIXI                                pmax    pmax
      comp=Z,2.0nm,0.8s
LCAR  Lake Charles      94.42  54   P       P        16 24 58.0 -0.8
LCAR                                IAmb    IAmb     16 24 59.7
      comp=Z,13nm,1.1s
SCIA  State Center      94.46  48   P       P        16 24 59.8 +0.9
      baz=254
AGMN  Agassiz Nation    94.52  41   P       P        16 24 58.1 -0.8
AGMN                                IAmb    IAmb     16 24 59.7
      comp=Z,12nm,1.1s
AGMN  Agassiz Nation    94.52  41   P       P        16 24 58.4 -0.5
      baz=252,SNR=6.4
CCM   Cathedral Cave    94.87  52   P       P        16 24 59.9 -0.9
CCM                                 pmax    pmax
      comp=Z,12nm,1.0s
CCM   Cathedral Cave    94.87  52   P       P        16 24 59.9 -0.9
CCM                                 IAmb    IAmb     16 25 01.6
      comp=Z,12nm,0.9s
CCM   Cathedral Cave    94.87  52   P       P        16 25 00.5 -0.3
      baz=255
ULM   Lac du Bonnet     95.10  39   P       P        16 25 00.8 -0.8
      comp=Z,4.2nm,0.8s,baz=232,slow=4.8,SNR=9.2
ULM   Lac du Bonnet     95.10  39   P       P        16 25 00.5 -1.1
ULM                                 pmax    pmax
      comp=Z,15nm,1.4s
ULM   Lac du Bonnet     95.10  39   P       P        16 25 00.5 -1.1
ULM                                 IAmb    IAmb     16 25 02.0
      comp=Z,15nm,1.4s
GTA   Gaotai            95.34 309  eP       P        16 25 03.4 +0.3
GTA                                 sP      sP       16 26 54.0 +3.3
GTA                                 pmax    pmax
      comp=Z,4.0nm,1.5s
FVM   French Village    95.48  52   P       P        16 25 01.8 -1.8
FVM                                 pmax    pmax
      comp=Z,11nm,1.0s
FVM   French Village    95.48  52   P       P        16 25 01.8 -1.8
FVM                                 IAmb    IAmb     16 25 05.3
      comp=Z,11nm,1.0s
SPMN  Marine on St.     95.66  45   P       P        16 25 03.0 -1.2
SPMN  Marine on St.     95.66  45   P       P        16 25 04.4 +0.2
      baz=254
L40A  Anamosa           95.93  48   P       P        16 25 05.0 -0.5
I40A  Norwalk           96.82  47   P       P        16 25 08.5 -1.0
JFWS  Jewell Farm       96.84  48   P       P        16 25 08.9 -0.7
JFWS                                pmax    pmax
      comp=Z,31nm,0.7s
JFWS  Jewell Farm       96.84  48   P       P        16 25 08.9 -0.7
JFWS  Jewell Farm       96.84  48   P       P        16 25 09.4 -0.2
      baz=256
WVT   Waverly           97.04  55   P       P        16 25 10.7  0.0
WVT                                 pmax    pmax
      comp=Z,8.0nm,1.1s
WVT   Waverly           97.04  55   P       P        16 25 10.7  0.0
WVT   Waverly           97.04  55   P       Pdif     16 25 11.5 +0.9
      baz=256
L42A  Oliver, Polo      97.04  49   P       P        16 25 10.0 -0.5
EYMN  Ely               97.24  42   Pdiff   P        16 25 10.7 -0.6
      baz=256
G40A  Rib Lake          97.45  45   P       P        16 25 11.7 -0.6
I42A  Draeger Farm,     98.02  47   P       P        16 25 14.6 -0.3
I42A                                IAmb    IAmb     16 25 15.9
      comp=Z,13nm,0.9s
K43A  Burlington        98.17  48   P       P        16 25 15.3 -0.2
COWI  Conover           98.37  45   P       Pdif     16 25 16.2 -0.2
COWI                                IAmb    IAmb     16 25 17.9
      comp=Z,12nm,1.1s
O50A  Cable            101.12  51   Pdiff   Pdif     16 25 28.3 -0.4
      baz=260
K48A  Perry            101.22  49   Pdiff   Pdif     16 25 29.8 +0.7
      baz=260
D46A  Sault St. Mari   101.98  44   Pdiff   Pdif     16 25 32.8 +0.4
      baz=261
E47A  Iron Bridge      102.42  45   Pdiff   Pdif     16 25 34.8 +0.5
      baz=261
MKAR  Makanchi Array   109.11 315   PKiKP   PKiKP    16 30 06.0 -0.5
      comp=Z,0.4nm,0.4s,baz=158,slow=0.9,SNR=13
MKAR                                PKKPbc  PKKPbc   16 41 14.9 -0.9
      comp=Z,0.7nm,0.7s,baz=273,slow=3.3,SNR=7.7
KURK  Kurchatov        111.53 319⇓iPKIKP   PKiKP    16 30 09.7 -1.2
KSH   Kashi            113.59 307   PKP     PKiKP    16 30 13.7 -1.7
KSH                                 PP      PP       16 31 18.6 +5.7
KSH                                 PKS     PKSdf    16 33 49.3 -2.9
KSH                                 SS      SS       16 46 38.4 +3.1
KSH                                 LR      LR
      comp=Z,620nm,10.8s
KSH                                 LR      LR
      comp=Z,540nm,12.1s
KSH                                 LR      LR
      comp=Z,430nm,13.4s
BRVK  Borovoye         116.41 322⇓iPKIKP   PKPdf    16 30 20.1 -0.1
NRS   Narsarsuaq       121.97  26   PKIKP   PKPdf    16 30 29.9 -0.7
NRS   Narsarsuaq       121.97  26           PKPdf    16 30 29.9 -0.7
ARU   Arti             121.98 328 i PKIKP   PKiKP    16 30 31.0  0.0
ARU                                                  16 32 11.8
ARU                                                  16 37 09.4
ARCES ARCESS Array B   124.04 351   PKP     PKPdf    16 30 34.5  0.0
      comp=Z,7.7nm,0.6s,baz=13,slow=1.5,SNR=35
FINES FINESS Array B   131.21 346   PKhKP   PKPpre   16 30 37.3
      comp=Z,4.5nm,1.0s,baz=323,slow=2.9,SNR=4.2
FINES                               PKP     PKPdf    16 30 47.8 -0.5
      comp=Z,3.5nm,0.9s,baz=16,slow=4.1,SNR=9.4
OBN   Obninsk          133.00 335  ePKIKP   PKPdf    16 30 52.0 +0.2
OBN                                e                 16 33 17.8
OBN                                 pmax    pmax
      comp=Z,4.0nm,0.9s
VSU   Vasula           133.65 344⇓ePKIKP   PKiKP    16 30 54.9 +0.6
NB2   NORSAR Subarra   133.91 355   P       PKPdf    16 30 53.5  0.0
      comp=Z,1.0nm,0.7s,baz=38,slow=5.6
NOA   NORSAR Array B   133.91 355   PKP     PKPdf    16 30 53.6 +0.2
      comp=Z,1.2nm,0.8s,baz=39,slow=5.7,SNR=4.3
AKT   Akhty            134.33 314  ePKIKP   PKiKP    16 30 57.8 +1.4
AKT                                e                 16 33 35.9
AKT                                 pmax    pmax
      comp=Z,34nm,1.3s
AKASG Malin Array Be   139.25 336   PKP     PKPdf    16 31 02.7 -0.9
      comp=Z,1.3nm,0.6s,baz=34,slow=2.7,SNR=6.3
KOLS  Kolonicke sedl   143.24 340  ePKIKP   PKPdf    16 31 12.4 +1.5
KOLS  Kolonicke sedl   143.24 340  ePKP     PKPdf    16 31 12.4 +1.5
CLL   Collm            143.26 351  ePKPdf   PKPbc    16 31 09.0 +0.2
CLL   Collm            143.26 351  ePKIKP   PKPbc    16 31 09.0 +0.2
OSTC  Ostas            143.40 347  ePKP     PKPdf    16 31 11.6 +0.5
UZH   Uzhgorod         143.50 340  ePKIKP   PKPbc    16 31 09.2 -0.3
CRVS  Cervenica-Dubn   143.53 341  ePKIKP   PKPbc    16 31 10.2 +0.5
CRVS  Cervenica-Dubn   143.53 341  ePKP     PKPbc    16 31 10.2 +0.5
BRG   Berggiesshubel   143.53 350 i PKP     PKPdf    16 31 11.1 -0.2
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	comp=Z,4.0nm,0.9s						
BRG	Berggiesshubel	143.53	350	i PKIKP	PKPdf	16 31 11.1	-0.2
BRG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DPC	Dobruska-Polom	143.57	347	ePKP	PKPbc	16 31 09.6	-0.2
DPC	Dobruska-Polom	143.57	347	ePKIKP	PKPbc	16 31 09.6	-0.2
OKC	Ostrava-Krasne	143.62	345	ePKP	PKPbc	16 31 09.8	-0.1
OKC	Ostrava-Krasne	143.62	345	ePKIKP	PKPbc	16 31 09.8	-0.1
KMBO	Kilima Mbogo	143.67	246	PKP	PKPbc	16 31 11.9	+0.5
	comp=Z,12nm,0.9s,baz=73,slow=5.5,SNR=32						
KMBO	Kilima Mbogo	143.67	246	PKIKP	PKPab	16 31 10.9	+0.3
KMBO	Kilima Mbogo	143.67	246		PKPab	16 31 10.9	+0.3
KRLC	Kraliky	143.73	346	ePKP	PKPbc	16 31 10.3	+0.1
KRLC	Kraliky	143.73	346	ePKIKP	PKPbc	16 31 10.3	+0.1
ILGA	Ilgaz	143.75	321		PKPbc	16 31 11.5	+0.7
MORC	Moravsky Berou	143.83	345	⇓P	PKPbc	16 31 10.7	+0.2
MORC	Moravsky Berou	143.83	345	⇓PKIKP	PKPbc	16 31 10.7	+0.2
MORC	Moravsky Berou	143.83	345	ePKP	PKPbc	16 31 10.4	-0.1
MORC	Moravsky Berou	143.83	345		PKPbc	16 31 10.3	-0.3
TRPA	Tarpa	143.84	339	⇓P	PKPbc	16 31 10.5	-0.1
LANS	Liptovska Anna	143.90	343	ePKIKP	PKPdf	16 31 11.5	-0.6
LANS	Liptovska Anna	143.90	343	ePKP	PKPdf	16 31 11.5	-0.6
PRU	Pruhonice	144.28	349	ePKP	PKPbc	16 31 11.8	0.0
PRU	Pruhonice	144.28	349	ePKIKP	PKPbc	16 31 11.8	0.0
GOPC	GO Pecny, Ondr	144.30	348	ePKP	PKPbc	16 31 12.2	+0.3
GOPC	GO Pecny, Ondr	144.30	348	ePKIKP	PKPbc	16 31 12.2	+0.3
HARR	Harsova	144.42	331	⇑P	PKPdf	16 31 12.9	-0.1
HARR	Harsova	144.42	331	⇑PKIKP	PKPdf	16 31 12.9	-0.1
BEBN	Eben Emael	144.43	359	PKiKP	PKPdf	16 31 12.7	-0.1
UCC	Uccle	144.44	360	PKiKP	PKPbc	16 31 12.3	+0.1
VRAC	Vranov	144.49	346	⇑P	PKPbc	16 31 12.7	+0.3
VRAC	Vranov	144.49	346	⇑PKIKP	PKPbc	16 31 12.7	+0.3
VRAC	Vranov	144.49	346	ePKP	PKPab	16 31 12.3	-0.1
DOPR	Dopca	144.56	334	⇓P	PKPdf	16 31 13.4	+0.1
BR131	Keskin Array S	144.58	319	PKIKP	PKPab	16 31 13.1	-0.1
BR131	Keskin Array S	144.58	319		PKPab	16 31 13.1	-0.1
BRTR	Keskin Array B	144.58	319	PKP	PKPdf	16 31 13.5	-0.2
	comp=Z,11nm,0.8s,baz=86,slow=2.5,SNR=55						
BRTR	Keskin Array B	144.58	319	PKIKP	PKPab	16 31 12.8	-0.4
BRTR	Keskin Array B	144.58	319		PKPab	16 31 12.8	-0.4
MEM	Membach	144.60	358	PKiKP	PKPbc	16 31 12.7	0.0
BSTI	Sart Tilman	144.64	359	PKiKP	PKPdf	16 31 13.1	-0.1
JAVC	Velka Javorina	144.65	345	ePKP	PKPdf	16 31 14.1	+0.7
VYHS	Vyhne	144.67	343	ePKIKP	PKPdf	16 31 13.4	0.0
VYHS	Vyhne	144.67	343	ePKP	PKPdf	16 31 13.4	0.0
MLR	Muntele Rosu	144.71	333	⇓P	PKPdf	16 31 13.7	0.0
MLR	Muntele Rosu	144.71	333	⇓PKIKP	PKPdf	16 31 13.7	0.0
MLR	Muntele Rosu	144.71	333		PKPbc	16 31 13.3	-0.1
TREC	Trest	144.75	347	ePKP	PKPbc	16 31 13.3	+0.1
TREC	Trest	144.75	347	ePKIKP	PKPbc	16 31 13.3	+0.1
KRUC	Moravsky	144.77	346	ePKP	PKPbc	16 31 13.1	-0.2
BCLA	Clavier	144.81	359	PKiKP	PKPbc	16 31 13.3	0.0
BGES	Gesves	144.85	359	PKiKP	PKPbc	16 31 13.3	-0.1
BHOU	Houvegnez	144.86	358	PKPdf	PKPbc	16 31 11.9	-1.6
BHOU				PKiKP	PKPab	16 31 14.1	+0.3
PSZ	Piszkesteto	144.88	342	⇑P	PKPab	16 31 14.2	+0.2
PSZ	Piszkesteto	144.88	342	⇑PKIKP	PKPab	16 31 14.2	+0.2
PSZ	Piszkesteto	144.88	342		PKPbc	16 31 13.7	0.0
DRGR		144.93	338	⇑P	PKPbc	16 31 13.7	-0.2
DRGR		144.93	338	⇑PKIKP	PKPbc	16 31 13.7	-0.2
BMRD	Maredsous	144.93	360	PKiKP	PKPbc	16 31 13.4	-0.3
SMOL	Smolenice	145.03	345	ePKIKP	PKPab	16 31 15.1	+0.7
SMOL	Smolenice	145.03	345	ePKP	PKPab	16 31 15.1	+0.7
GRA1	Grafenberg Arr	145.09	352		PKPab	16 31 14.7	0.0
GRF	Grafenberg Arr	145.09	352	ePKPbc	PKPab	16 31 14.9	+0.2
	baz=12,slow=2.9						
GRF	Grafenberg Arr	145.09	352	PKP2	PKPab	16 31 14.7	0.0
VOIR		145.13	334	⇓P	PKPab	16 31 15.3	+0.3
VOIR		145.13	334	⇓PKP2	PKPab	16 31 15.3	+0.3
DOU	Dourbes	145.14	360	PKPdf	PKPdf	16 31 12.6	-1.5
DOU				PKiKP	PKPab	16 31 14.6	-0.2
MODS	Modra-Piesok	145.20	345	ePKP2	PKPbc	16 31 14.7	+0.1
MODS	Modra-Piesok	145.20	345	ePKP	PKPbc	16 31 14.7	+0.1
KHC	Kasperske Hory	145.28	349	ePKP	PKPbc	16 31 15.1	+0.2
KHC				epPKP	pPKiKP	16 32 41.0	+3.9
KHC	Kasperske Hory	145.28	349	ePKP2	PKPbc	16 31 15.1	+0.2
KHC	Kasperske Hory	145.28	349		PKPdf	16 31 14.4	0.0
ARR	Arges	145.36	335	⇑P	PKPab	16 31 16.3	+0.4
ZST	Bratislava	145.40	345	ePKP2	PKPbc	16 31 15.3	+0.1
ZST	Bratislava	145.40	345	ePKP	PKPbc	16 31 15.3	+0.1
GEC2	GERESS Array S	145.53	349	PKPbc	PKPdf	16 31 15.3	+0.4
GERES	GERESS Array B	145.53	349	PKPbc	PKPbc	16 31 15.8	0.0
	comp=Z,3.7nm,0.7s,baz=16,slow=3.0,SNR=27						
GERES	GERESS Array B	145.53	349	PKP2	PKPdf	16 31 15.2	+0.2
GERES	GERESS Array B	145.53	349	PKPbc	PKPdf	16 31 15.2	+0.2
WLF	Walferdange	145.54	358	PKiKP	PKPab	16 31 16.1	-0.3
WLF	Walferdange	145.54	358	PKP2	PKPbc	16 31 15.9	+0.3
WLF	Walferdange	145.54	358	PKPbc	PKPbc	16 31 15.9	+0.3
SIRR	Siria	145.75	338	⇓P	PKPbc	16 31 16.8	+0.5
RAZG	Razgrad	145.94	331	⇓P	PKPdf	16 31 16.0	+0.3
CONA	Conrad Observa	145.95	346	i PKiKP	PKPab	16 31 17.7	-0.4
	comp=Z,9.8nm,0.7s,SNR=5.9						
GZR	Gura Zlata	146.08	336	⇑P	PKPbc	16 31 17.3	-0.1
GZR	Gura Zlata	146.08	336	⇑PKIKP	PKPbc	16 31 17.3	-0.1
BZS	Buzias	146.33	338	⇑P	PKPbc	16 31 17.9	-0.1
BZS	Buzias	146.33	338	⇑PKP2	PKPbc	16 31 17.9	-0.1
MOA	Molln	146.37	348	i PKPab	PKPbc	16 31 18.6	+0.4
	comp=Z,7.7nm,0.7s						
HERR	Herculane	146.65	336	⇑P	PKPbc	16 31 19.0	0.0
ARSA	Arzberg	146.67	346	ePKPab	PKPbc	16 31 18.9	-0.1
	comp=Z,4.0nm,0.7s						
BFO	Black Forest	146.75	355	PKP2	PKPbc	16 31 19.0	-0.2
BFO	Black Forest	146.75	355		PKPbc	16 31 19.0	-0.2
ECH	Echery	146.94	357	PKP2	PKPbc	16 31 19.1	-0.6
ECH	Echery	146.94	357		PKPbc	16 31 19.1	-0.6
PLVB	Pleven	146.95	332	⇑P	PKPbc	16 31 20.5	+0.6
MDVR	Moldovita	147.00	337	⇓P	PKPbc	16 31 20.1	+0.1
CLF	Chambon-Foret	147.17	3		PKPbc	16 31 20.0	-0.3
KBA	Koelnbreinsper	147.29	349	i PKiKP	PKPbc	16 31 20.6	-0.3
	comp=Z,5.6nm,0.5s						
RETA	Reutte	147.32	352	ePKiKP	PKPbc	16 31 20.9	0.0
	comp=Z,14nm,1.2s						
SOKA	Soboth	147.32	346	i PKiKP	PKPbc	16 31 20.7	-0.2
	comp=Z,6.3nm,0.7s						
PERS	Pernice	147.34	346	ePKPbc	PKPbc	16 31 20.5	-0.4
WATA	Walderalm	147.35	351	ePKiKP	PKPbc	16 31 20.9	-0.1
	comp=Z,5.7nm,0.6s						
MOTA	Moosalm	147.41	351	i PKiKP	PKPbc	16 31 21.2	0.0
	comp=Z,14nm,1.2s						
WTTA	Wattenberg	147.41	351	ePKiKP	PKPbc	16 31 21.3	+0.1
	comp=Z,9.4nm,0.5s,SNR=9.0						
SQTA	Sankt Quirin	147.52	351	ePKiKP	PKPbc	16 31 21.6	+0.2
	comp=Z,5.2nm,0.6s						
LEF	Lefka	147.59	313	⇓P	PKPbc	16 31 22.1	+0.3
OBKA	Obir	147.59	347	ePKiKP	PKPbc	16 31 22.0	+0.4
	comp=Z,5.0nm,0.6s						
DAVA	Damuels	147.63	353	i PKiKP	PKPbc	16 31 21.7	-0.1
	comp=Z,12nm,0.7s,SNR=5.3						
MYKA	Terra Mystica	147.66	348	ePKiKP	PKPbc	16 31 21.0	-0.7
	comp=Z,11nm,0.7s,SNR=5.9						
ABTA	Abfaltersbach	147.76	349	i PKiKP	PKPbc	16 31 21.6	-0.5
	comp=Z,8.8nm,0.7s						
FETA	Feichten	147.78	352	i PKiKP	PKPbc	16 31 21.8	-0.4
	comp=Z,15nm,1.3s						
LJU	Ljubljana	148.03	347	ePKPbc	PKPbc	16 31 22.6	-0.1
GBAS	Gorenja Brezov	148.16	347	ePKPbc	PKPbc	16 31 22.8	-0.2
VTS	Vitosha	148.18	333	⇓P	PKPbc	16 31 23.6	+0.3
VTS	Vitosha	148.18	333	⇓PKP2	PKPbc	16 31 23.6	+0.3
VTS	Vitosha	148.18	333		PKPbc	16 31 22.9	-0.4
STAL	STALIGIAL	148.20	349		PKPbc	16 31 22.1	-1.0
MANT	Manisa	148.45	322		PKPbc	16 31 22.5	-1.7
TUE	Stuetta	148.49	353		PKPbc	16 31 23.8	-0.3
CTI	Castel Tesino	148.59	350	PKP2	PKPbc	16 31 23.3	-0.9
CTI	Castel Tesino	148.59	350		PKPbc	16 31 23.3	-0.9
SENIN	Lac Senin/Sane	148.78	356		PKPbc	16 31 24.3	-0.5
SALO	Salr	149.18	352		PKPbc	16 31 24.9	-0.7
TEOL	Teolo	149.25	350		PKPbc	16 31 25.7	-0.1
SSB	Saint Sauveur	149.96	360	PKP2	PKPbc	16 31 27.7	+0.2
SSB	Saint Sauveur	149.96	360		PKPbc	16 31 27.7	+0.2
BNI	Bardonecchia	150.12	357	PKIKP	PKPbc	16 31 28.4	+0.4
BNI	Bardonecchia	150.12	357		PKPbc	16 31 28.4	+0.4
OSSC	Osservatorio P	151.11	350		PKPbc	16 31 29.0	-1.2
MURB	Monte Urbino	151.12	348		PKPbc	16 31 29.6	-0.6
NRCA	Norcia	151.40	346		PKPbc	16 31 30.8	-0.2
PCAB	Cabril	151.44	20	ePKPbc	PKiKP	16 31 31.6	+0.2
PCAB	Cabril	151.44	20	ePKPab	PKPab	16 31 39.7	-0.9
PBRG	Braganca	151.75	18	ePKPbc	PKiKP	16 31 32.1	0.0
PBRG	Braganca	151.75	18	ePKPab	PKPab	16 31 41.9	0.0
PVRL	Vila Real	151.94	20	ePKPbc	PKiKP	16 31 32.9	+0.4
MVO	Moncorvo	152.25	19	ePKPbc	PKiKP	16 31 33.7	+0.5
PVIS	Viseu	152.38	20	ePKPbc	PKiKP	16 31 33.5	+0.1
PVIS	Viseu	152.38	20	ePKPab	PKPab	16 31 44.7	+0.1
PCAS	Casmilo, Conde	152.76	22	ePKPbc	PKiKP	16 31 34.5	+0.4
PCAS	Casmilo, Conde	152.76	22	ePKPab	PKPab	16 31 46.5	+0.4
MTE	Manteigas	152.78	20	ePKPbc	PKiKP	16 31 34.6	+0.3
MTE	Manteigas	152.78	20	ePKPab	PKPab	16 31 46.3	0.0
PTOM	Tomar	153.17	22	ePKPbc	PKiKP	16 31 35.6	+0.6
PTOM	Tomar	153.17	22	ePKPab	PKPab	16 31 48.5	+0.6
PCBR	Castelo Branco	153.31	21	ePKPbc	PKiKP	16 31 35.3	0.0
PCBR	Castelo Branco	153.31	21	ePKPab	PKPab	16 31 48.3	-0.1
TIP	Timpagrande	153.70	338	⇓P	PKiKP	16 31 36.7	+0.5
PMRV	Marv??o	153.70	21	ePKPbc	PKiKP	16 31 36.6	+0.5
PMTG	Montargil	153.72	23	ePKPbc	PKiKP	16 31 36.3	+0.2
PMTG	Montargil	153.72	23	ePKPab	PKPab	16 31 49.2	-1.0
ESDC	Sonseca Array	154.50	15	PKPbc	PKPbc	16 31 37.2	-0.6
	comp=Z,1.9nm,0.8s,baz=339,slow=3.6,SNR=7.3						
ESDC				PKPab	PKPab	16 31 53.4	-0.2
	comp=Z,4.7nm,0.9s,baz=327,slow=3.7,SNR=11						
ESDC	Sonseca Array	154.50	15		PKPbc	16 31 37.4	-0.4
ESDC					PKPab	16 31 53.3	-0.3
DBIC	Dimbokro	167.64	132	PKPab	PKPab	16 32 51.9	+0.2
	comp=Z,5.8nm,0.8s,baz=143,slow=3.1,SNR=4.6						
TORD	Torodi Ar. Bea	176.74	127	PKP	PKPdf	16 31 46.8	-0.8
	comp=Z,2.6nm,0.9s,baz=128,slow=1.2,SNR=7.8						
TORD				PKPab	PKPab	16 33 31.7	-0.4
	comp=Z,3.1nm,0.6s,baz=259,slow=3.7,SNR=14						
TORD	Torodi Ar. Bea	176.74	127		PKPdf	16 31 46.6	-1.0
TORD					PKPab	16 33 31.1	-0.9

JMA 09 16:19:21.1±0.1, 38°.87N×142°.44E, h32^{km}±2^{km}, M2.5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.64	289	P	Pb	16 19 33.7	-0.1
OFUJ				S	Sb	16 19 42.4	-0.2
JKMT	Kesennumamotoy	0.76	266	P	Pn	16 19 35.3	-0.2
JKMT				S	Sb	16 19 45.0	-0.9
MIYJ	Miyakonagasawa	0.85	326	P	Pn	16 19 36.5	-0.4
MIYJ				S	Sn	16 19 47.4	-0.9
JIO	Ouri	0.95	244	P	Pn	16 19 37.8	-0.4
JIO				S	Sn	16 19 49.3	-1.3
JMK	Ichinoseki	0.95	275	P	Pn	16 19 38.5	+0.2
JMK				S	Sn	16 19 50.6	-0.2
JOM	Ohasama	1.08	304	P	Pn	16 19 40.4	+0.4
JOM				S	Sn	16 19 54.0	+0.2
JRG	Rokugo	1.50	291	P	Pb	16 19 47.6	-0.7
JRG				eS	Sb	16 20 06.3	-0.7
JMM	Marumori	1.64	233	P	Pn	16 19 47.6	-0.1

MAN 09 16:21:14.7, 7°.39N×124°.73E, h31^{km}, mb4.6, ML3.5, MS3.3, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTBH	Cotabato--PC H	0.50	251	⇓iP	Pn	16 21 26.2	+0.4
CTBH				i S	Sn	16 21 34.4	+1.0
KCP	Kidapawan	0.52	136	⇓iP	Pn	16 21 26.5	+0.4
KCP				i S	Sn	16 21 49.0	+15
BUKP	Musuan	0.59	34	eP	Pn	16 21 27.3	+0.3
BUKP				eS	Sn	16 21 36.8	+1.2
DMPH	Davao City--Mi	0.83	111	⇑iP	Pb	16 21 42.6	+12
DMPH				eS	Sb	16 21 49.5	+7.8
SKMP	Bagumbayan, Su	0.88	192	eP	Pn	16 21 30.8	-0.2
SKMP				eS	Sb	16 21 43.3	+0.3
PAGZ	Pagadian	1.41	289	eP	Pb	16 21 41.9	+1.5

MAN 09 16:38:27.4, 16°.74N×119°.94E, h6^{km}, mb4.8, ML3.7, MS3.7, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOLP	Bolinao	0.36	184	eP	Pb	16 38 37.0	+0.7
BOLP				eS	Sb	16 38 43.9	+1.6
SMPP	San Manuel, Pa	0.93	130	eP	Pg	16 38 44.2	-1.0
SMPP				eS	Sg	16 38 56.0	-1.2
SCZP	Santa Cruz	0.96	182	eP	Pg	16 38 44.6	-1.3
SCZP				eS	Sg	16 38 57.0	-1.5
SIPP	Brgy, Tapao	1.27	23	⇑eP	Pn	16 38 49.6	-2.2
SIPP				eS	Sn	16 39 10.3	+1.1
APYP	Conner	1.67	48	eP	Pn	16 38 56.5	-0.8
APYP				eS	Sn	16 39 17.6	-1.4
CAUP	Cauayan	1.82	83	eP	Pb	16 39 00.2	-0.9
BALP	Baler	1.86	122	eP	Pn	16 38 59.7	-0.1
SGCP	Mt. Cagua	2.50	53	eP	Pn	16 39 09.2	+0.5
SGCP				eS	Sn	16 39 41.5	+1.9
POLP	Polilio Island	2.78	136	eP	Pn	16 39 13.1	+0.6
TGY	Tagaytay City	2.80	160	⇓eP	Pn	16 39 13.8	+1.0
LQP	Lukban	3.04	149	eP	Pn	16 39 16.5	+0.3
LQP				eS	Sb	16 40 01.2	+1.7

WEL 09 17:01:29.8, 38°S±1°×17°7E±°, h108^{km}±1^{km}, M3.6/73, MLv3.6/73, Error ellipse: s-maj=0.0km s-min=0.0km az=7.7, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARZ	Manawahe	0.09	258	P	Pn	17 01 44.8	+0.1
MARZ				S	Sn	17 01 57.0	+1.1
EDRZ	Edgecumbe	0.14	195	P	Pn	17 01 45.0	+0.1
WHRZ	Whale Island	0.18	54	P	Pn	17 01 45.3	+0.4
OPRZ	Ohinepanea	0.22	304	P	Pn	17 01 44.8	-0.2
OPRZ				S	Sn	17 01 56.5	+0.1
MKRZ	Makatiti	0.30	236	P	Pn	17 01 46.3	+0.9
LIRZ	Lichensteins R	0.32	263	P	Pn	17 01 45.5	+0.1
TARZ	Mount Tarawera	0.35	219	P	Pn	17 01 45.9	+0.2
OMRZ	Omania	0.36	247	P	Pn	17 01 45.8	+0.2
URZ	Urewera	0.39	139	P	Pn	17 01 45.5	-0.2
URZ				S	Sn	17 01 57.7	0.0
RRRZ	Republican Roa	0.43	210	P	Pn	17 01 46.0	0.0
KARZ	Kaharoa	0.43	263	P	Pn	17 01 46.0	0.0
HLRZ	Highlands Stat	0.45	230	P	Pn	17 01 46.5	+0.4
TGRZ	Tauranga	0.48	299	P	Pn	17 01 46.3	0.0
NGRZ	Ngongotaha	0.49	254	P	Pn	17 01 46.8	+0.4
MUGZ	Murupara	0.51	181	P	Pn	17 01 46.3	-0.1
MUGZ				S	Sn	17 01 59.5	+0.4
UTU	Utuhina	0.51	246	P	Pn	17 01 47.1	+0.6
WIZ	White Island	0.54	36	P	Pn	17 01 46.7	+0.1
HSRZ	Hossack Road	0.55	231	P	Pn	17 01 47.3	+0.5
HRRZ	Handcock Road	0.58	223	P	Pn	17 01 47.2	+0.2
PRRZ	Plateau Road	0.62	210	P	Pn	17 01 47.3	+0.1
GRRZ	Galatos Road	0.66	234	P	Pn	17 01 48.1	+0.5
RTZ	Ruatahuna	0.67	167	P	Pn	17 01 47.9	+0.1
KMRZ	Kaimai	0.68	280	P	Pn	17 01 47.9	+0.1
ALRZ	Allen Road	0.69	210	P	Pn	17 01 48.0	+0.2
MWZ	Matawai	0.69	122	P	Pn	17 01 48.0	+0.1
RUGZ	Raukumara Rang	0.70	90	P	Pn	17 01 47.4	-0.7
RAGZ	Rawiri	0.72	137	P	Pn	17 01 48.7	+0.4
WPRZ	Whakapapatarin	0.74	221	P	Pn	17 01 48.7	+0.4
HAZ	Te Kaha	0.82	75	P	Pn	17 01 48.6	-0.3
MTHZ	Maungataniwha	0.89	177	P	Pn	17 01 50.0	+0.3
MRHZ	Matea Rd	0.91	198	P	Pn	17 01 50.0	0.0
KUTZ	Kaahu Road	0.92	235	P	Pn	17 01 50.4	+0.4
SNGZ	Shannon Statio	0.92	152	P	Pn	17 01 50.6	+0.6
WHTZ	Whakaora	0.96	223	P	Pn	17 01 51.2	+0.8
TKGZ	Te Karaka	0.96	120	P	Pn	17 01 50.8	+0.4
TWGZ	Tauwhareparae	0.97	103	P	Pn	17 01 51.0	+0.6
RAHZ	Arahi	0.98	166	P	Pn	17 01 51.3	+0.7
TOZ	Tahuroa Road	1.04	283	P	Pn	17 01 51.5	+0.3
TLZ	Tolley Road	1.05	249	P	Pn	17 01 51.7	+0.3
RIGZ	Rimuhau	1.06	134	P	Pn	17 01 52.0	+0.5
HATZ	Hinemaiaia	1.07	210	P	Pn	17 01 51.8	+0.2
WATZ	Wairara	1.11	228	P	Pn	17 01 52.4	+0.4
NMHZ	Naumai	1.13	179	P	Pn	17 01 53.0	+0.7
WHHZ	Waihua	1.16	163	P	Pn	17 01 53.0	+0.4
PUZ	Puketiti	1.17	96	P	Pn	17 01 52.5	-0.1
RATZ	Rangitukua	1.20	221	P	Pn	17 01 53.6	+0.6
BKZ	Black Stump Fm	1.22	191	P	Pn	17 01 53.3	+0.1
CNGZ	Carnagh Statio	1.23	115	P	Pn	17 01 54.0	+0.7
RITZ	Rihia Road	1.25	216	P	Pn	17 01 54.2	+0.7
KNZ	Kokohu	1.26	147	P	Pn	17 01 53.5	-0.1
MXZ	Matakaoa Point	1.27	72	P	Pn	17 01 54.6	+0.9
PRGZ	Paritu Road	1.29	138	P	Pn	17 01 53.9	0.0
WMGZ	Waiomatatini S	1.30	84	P	Pn	17 01 54.4	+0.4
ARHZ	Aropaoanui	1.31	173	P	Pn	17 01 54.5	+0.4
KATZ	Kakaramea	1.32	220	P	Pn	17 01 54.9	+0.4
KRVZ	Karewarewa	1.44	218	P	Pn	17 01 56.7	+0.8
MHGZ	Mahia Peninsul	1.48	144	P	Pn	17 01 56.3	+0.2
MCHZ	McNeill Hill	1.48	183	P	Pn	17 01 56.5	+0.3
WTVZ	West Tongariro	1.48	219	P	Pn	17 01 57.1	+0.8
KWHZ	Kaweka Forest	1.48	191	P	Pn	17 01 56.5	+0.2
KUZ	Kuaotunu	1.48	325	P	Pn	17 01 56.2	-0.1
NGZ	Ngauruhoe	1.52	217	P	Pn	17 01 57.8	+0.9
TWVZ	Taurewa	1.53	223	P	Pn	17 01 57.4	+0.6
MKAZ	Moumakai	1.55	303	P	Pn	17 01 57.4	+0.3
TUVZ	Tukino	1.57	214	P	Pn	17 01 58.1	+0.6
FWVZ	Far West T-bar	1.61	217	P	Pn	17 01 58.5	+0.5
HIZ	Hauiti	1.61	250	P	Pn	17 01 58.5	+0.7
WHVZ	Whangaehu Hut	1.61	215	P	Pn	17 01 58.6	+0.5
DRZ	Dome Shelter	1.62	216	P	Pn	17 01 58.9	+0.7
BHHZ	Black Hill Sta	1.62	200	P	Pn	17 01 57.8	-0.2
TRVZ	Turoa	1.65	216	P	Pn	17 01 59.0	+0.5
MOVZ	Moawhango	1.65	209	P	Pn	17 01 58.2	-0.1
CKHZ	Cape Kidnapper	1.71	172	P	Pn	17 01 58.6	-0.3
KRHZ	Kereru	1.71	191	P	Pn	17 01 58.5	-0.5
PKVZ	Pokaka	1.74	220	P	Pn	17 01 60.0	+0.6
KBAZ	Karaka Road Bo	1.74	299	P	Pn	17 02 00.2	+0.9
MTVZ	Mangateitei	1.75	216	P	Pn	17 01 60.0	+0.4
WIAZ	Waiheke Island	1.76	311	P	Pn	17 02 00.2	+0.5
ETAZ	East Tamaki Re	1.79	304	P	Pn	17 02 00.7	+0.7
KAHZ	Kahuranaki	1.83	178	P	Pn	17 02 00.0	-0.5
MBAZ	Motutapu North	1.92	308	P	Pn	17 02 02.3	+0.7
AWAZ	Awhitu Peninsu	1.93	297	P	Pn	17 02 02.1	+0.4
EPAZ	Eden Park BICE	1.96	303	P	Pn	17 02 02.7	+0.6
VRZ	Vera Road	1.97	233	P	Pn	17 02 03.0	+0.8
HBAZ	Herne Bay Bore	1.98	304	P	Pn	17 02 03.0	+0.7
PNHZ	Pukenui	2.00	193	P	Pn	17 02 01.6	-1.0
GRZ	Great Barrier	2.02	328	P	Pn	17 02 03.2	+0.3
WTAZ	Waiatarua	2.04	300	P	Pn	17 02 03.8	+0.6
PXZ	Pawanui	2.06	178	P	Pn	17 02 02.2	-1.2
ABAZ	Army Bay	2.07	311	P	Pn	17 02 04.3	+0.8
WPHZ	Waipukurau	2.11	187	P	Pn	17 02 03.1	-1.0
RVAZ	Riverhead Bore	2.12	304	P	Pn	17 02 04.6	+0.4
TSZ	Takapari Road	2.19	197	P	Pn	17 02 03.7	-1.4
MHEZ	Mangahewa	2.23	239	P	Pn	17 02 07.4	+1.8
WAZ	Wanganui	2.27	218	P	Pn	17 02 06.4	+0.2
PRHZ	Porangahau	2.30	183	P	Pn	17 02 05.3	-1.2
DVHZ	Dannevirke	2.38	191	P	Pn	17 02 05.8	-1.7
LREZ	Lake Rotokare	2.39	231	P	Pn	17 02 08.7	+1.1
PREZ	Palmer Road	2.47	235	P	Pn	17 02 10.8	+2.1
OHWZ	Ohakea	2.51	207	P	Pn	17 02 08.6	-0.6
PKE	Pukeiti	2.51	240	P	Pn	17 02 10.1	+0.8
KHEZ	Kahui Hut	2.54	238	P	Pn	17 02 10.9	+1.1
POWZ	Post Office Ro	2.55	198	P	Pn	17 02 08.2	-1.6
NBEZ	Newall Road No	2.63	239	P	Pn	17 02 11.8	+1.1
PRWZ	Pori Road	2.66	193	P	Pn	17 02 09.7	-1.5
BFZ	Birch Farm	2.74	189	P	Pn	17 02 10.2	-2.1
WCZ	Waipu Caves	2.81	315	P	Pn	17 02 13.8	+0.6
MRZ	Mangatainoka R	2.85	199	P	Pn	17 02 11.3	-2.4
TIWZ	Tintock	2.89	194	P	Pn	17 02 12.0	-2.3
CPWZ	Castlepoint	2.98	189	P	Pn	17 02 13.8	-1.5
HOWZ	Holdsworth Sta	3.09	198	P	Pn	17 02 14.1	-2.8
OGWZ	Otaki Gorge	3.11	203	P	Pn	17 02 14.7	-2.4
TMWZ	Te Maipa	3.21	192	P	Pn	17 02 15.9	-2.6
KIW	Kapiti Island	3.24	206	P	Pn	17 02 16.1	-2.7
MTW	Mount Morrison	3.34	197	P	Pn	17 02 16.9	-3.3
CAW	Cannon Point	3.41	202	P	Pn	17 02 18.0	-3.1
TRWZ	Traveller	3.53	194	P	Pn	17 02 19.7	-3.0
PAWZ	Paruwai Farm	3.57	197	P	Pn	17 02 20.0	-3.3
DUWZ	D’Urville Isla	3.60	217	P	Pn	17 02 20.8	-2.8
MSWZ	Moikau Station	3.64	199	P	Pn	17 02 20.7	-3.5
WEL	Wellington	3.66	205	P	Pn	17 02 21.2	-3.2
BHW	Baring Head	3.74	203	P	Pn	17 02 21.8	-3.7
OUZ	Omahuta	3.75	316	P	Pn	17 02 26.7	+1.0
TCW	Tory Channel	3.78	210	P	Pn	17 02 22.7	-3.3
PLWZ	Palliser	3.79	198	P	Pn	17 02 22.5	-3.7
QRZ	Quartz Range	4.36	228	P	Pn	17 02 31.1	-2.8
CTZ	Chatham Island	7.63	141	P	Pn	17 03 19.1	+1.1
CTZ				S	Sn	17 04 34.3	-8.5
JCZ	Jackson Bay	8.59	222	P	Pn	17 03 27.8	-3.4

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*TUL **09** 17:05:54±0.8, 35°.49N±0°.01×97°.25W±0°.02, h7^{km}±5^{km}, ML3.0, Error ellipse: s-maj=2.2km s-min=1.6km az=93.0*

*NEIC **09** 17:05:54.8±1.0, 35°.496N±0°.009×97°.24W±0°.02, h9^{km}±4^{km}, Error ellipse: s-maj=2.0km s-min=1.4km az=89.0*

*ANF **09** 17:05:55.2±1.2, 35°.71N×97°.37W, h26^{km}±10^{km}, ML3.8/9, Error ellipse: s-maj=10.6km s-min=2.5km az=160.0*

ISC 09 17:05:54.9±0.8, 35°.53N±0°.03×97°.28W±0°.03, h14^{km}±5^{km}, n38, σ1§58/49, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK001	Jones High Sch	0.03	349	Pg	Pg	17 05 56.6	-0.8
OK001				Sg	Sg	17 05 58.2	-0.9
OK009	Oakdale Elemen	0.12	293		Pg	17 05 58.2	-0.1
OK009				Sg	Sg	17 06 01.1	+0.4
ADOK	Arcadia Dam	0.14	329		Pg	17 05 58.6	+0.1
ADOK				Sg	Sg	17 06 01.8	+0.7
OKCSW	OKLAHOMA CITY	0.18	225		Pg	17 05 58.1	-0.9
OKCSW				Sg	Sg	17 06 01.1	-0.8
OKCFA	Oklahoma City	0.18	230		Pg	17 05 58.3	-0.8
OKCFA				Sg	Sg	17 06 01.4	-0.6
FNO	Franklin	0.29	199		Pg	17 06 00.3	-0.7
FNO				Sg	Sg	17 06 04.4	-0.7
W35A	Tecumseh	0.50	138		Pg	17 06 03.4	-1.5
W35A				Sg	Sg	17 06 09.9	-1.7
X34A	Smith Ranch, M	1.03	206		Pg	17 06 13.8	-0.9
X34A					Sg	17 06 28.3	0.0
TUL1	Leonard	1.27	72		Pg	17 06 16.9	-2.4
TUL1	Leonard	1.27	72	P	Pg	17 06 17.0	-2.4
	baz=251						
TUL1				S	Sb	17 06 34.4	-0.4
	baz=251						
WMOK	Wichita Mounta	1.46	238		Pn	17 06 20.6	-0.3
WMOK				Sn	Sg	17 06 40.3	-1.6
WMOK	Wichita Mounta	1.46	238	P	Pn	17 06 20.9	0.0
	baz=58						
WMOK				S	Sg	17 06 40.3	-1.6
	baz=58						
T35A	Sooner Cattle	1.52	24		Pb	17 06 21.9	-0.9
X37A	Clayton	1.83	120		Pn	17 06 26.4	+0.5
Z35A	Perchaven, San	2.20	179		Pn	17 06 31.6	+0.6
U38A	Gravette	2.52	68		Pn	17 06 35.6	+0.2
HHAR	Hobbs	2.81	74		Pn	17 06 39.9	+0.5
W39A	Magazine	2.88	96		Pn	17 06 40.6	+0.3
W39A	Magazine	2.88	96	P	Pn	17 06 40.7	+0.4
	baz=277						
W39A				S	Sn	17 07 16.6	+1.9
	baz=277						
MIAR	Mount Ida	3.20	107		Pn	17 06 45.4	+0.7
MIAR	Mount Ida	3.20	107	P	Pn	17 06 46.1	+1.4
	baz=289						
MIAR				S	Sn	17 07 24.6	+2.0
	baz=289						
ABTX	Abilene, Hawle	3.50	215	Pn	Pn	17 06 50.9	+2.0
WHTX	Lake Whitney,	3.53	182	Pn	Pn	17 06 49.7	+0.3
WHTX	Lake Whitney,	3.53	182	P	Pn	17 06 50.3	+1.0
	baz=2.8						
AMTX	Amarillo	3.66	261		Pn	17 06 53.2	+2.1
AMTX	Amarillo	3.66	261	P	Pn	17 06 53.2	+2.1
	baz=79						
U40A	Yellville	3.69	76		Pn	17 06 52.0	+0.5
X40A	Basin Creek Fa	3.80	105	Pn	Pn	17 06 53.3	+0.4
X40A	Basin Creek Fa	3.80	105	Sb	Sb	17 07 52.4	+4.9
	baz=287						
WHAR	Wooly Hollow	4.09	92		Pn	17 06 57.3	+0.3
W41B	Gary Mavity, V	4.13	94		Pn	17 06 58.3	+0.8
W41B	Gary Mavity, V	4.13	94	P	Pn	17 06 58.3	+0.8
	baz=276						
FCAR	Ozark Folk Cen	4.21	84	Pn	Pn	17 06 58.9	+0.2
MSTX	Muleshoe	4.78	253	Sb	Sg	17 08 22.9	-5.4
	baz=70						
SDCO	Great Sand Dun	6.97	291		Pn	17 07 38.4	+1.6
ANMO	Albuquerque	7.53	268		Pn	17 07 45.1	+0.7
S22A	4UR Ranch, Cre	7.99	289		Pg	17 08 22.6	-5.2
ECSD	EROS Data Cent	8.21	3	Pn	Pn	17 07 52.8	-0.8

IDC 09 17:16:11.3±2.3, 1°.29N×127°.11E, h0^{km}, mb3.1/3, mb1 3.3/3, mb1mx3.1/35, mbtmp3.1/3, Error ellipse: s-maj=192.4km s-min=26.8km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.26	162	P	P	17 21 09.7	-0.4
	0.2nm,0.4s,baz=340,slow=11,SNR=5.2						
ASAR	Alice Springs	25.67	166	P	P	17 21 43.5	+0.3
	0.3nm,0.8s,baz=349,slow=10,SNR=6.2						
MKAR	Makanchi Array	59.77	326	P	P	17 26 18.1	-0.1

0.4nm,0.8s,baz=122,slow=7.4,SNR=4.9

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*NEIC **09** 17:22:28.9±2.2, 27°.93S±0°.06×66°.37W±0°.08, h163^{km}±5^{km}, mb4.4/20, Error ellipse: s-maj=10.9km s-min=8.1km az=102.0*

*IDC **09** 17:22:28.8±1.1, 27°.90S×66°.37W, h156^{km}±11^{km}, mb3.8/13, mb1 3.9/19, mb1mx3.8/34, mbtmp4.3/19, Error ellipse: s-maj=14.5km s-min=8.8km az=88.0*

*SJA **09** 17:22:29.6±0.8, 28°.00S×66°.40W, h193^{km}±5^{km}, ML3.9, MW3.9*

ISC 09 17:22:29.5±0.4**, 27°.87S**±0°.04×**66°.47W**±0°.05**, h167**^{km}**, n73, σ1^{s}.51**/81**, mb4.2**/18**, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CYA	**Choya**	**0.82**	**134**	*i* P	**Pn**	**17 22 57.4**	**+2.7**
CYA				IAML		17 23 16.9	
	comp=Z,192nm,0.8s						
CYA				*e*S	**Sn**	**17 23 16.9**	**+2.8**
ACLC	**CERRO LA CRUZ**	**1.61**	**195**	*i* P	**Pn**	**17 23 03.9**	**+2.2**
VCA	**Vinchina**	**1.75**	**240**	*i* P	**Pn**	**17 23 05.9**	**+2.7**
VCA				*e*S	**Sn**	**17 23 32.5**	**+3.2**
VCA				IAML		17 23 36.7	
	comp=Z,2µm,0.4s						
APLL	**PUNTA DE LOS L**	**2.52**	**181**	*i* P	**Pn**	**17 23 12.8**	**+1.0**
APLL				*e*S	**Sn**	**17 23 43.9**	**-0.8**
APLL				IAML		17 23 45.6	
	comp=Z,463nm,0.6s						
ACDV	**Cuesta del Vie**	**3.26**	**225**	*i* P	**Pn**	**17 23 22.6**	**+1.6**
ACDV				*e*S	**Sn**	**17 24 01.7**	**+0.7**
ACDV				IAML		17 24 02.5	
	comp=Z,486nm,0.7s						
GO03	**Copiap**	**3.34**	**274**		**Pn**	**17 23 23.2**	**+1.3**
GO03				Sn	**Sn**	**17 24 02.2**	**-0.5**
AROD	**Rodeo**	**3.48**	**228**	*i* P	**Pn**	**17 23 25.4**	**+1.5**
AROD				*e*S	**Sn**	**17 24 07.2**	**+0.9**
AROD				IAML		17 24 07.8	
	comp=Z,68nm,1.3s						
ACCO	**Cerro Coronel**	**3.53**	**219**	*i* P	**Pn**	**17 23 25.4**	**+0.9**
ACCO				*e*S	**Sn**	**17 24 07.9**	**+0.5**
ACCO				IAML		17 24 09.9	
	comp=Z,467nm,0.3s						
AZAP	**Zapla**	**3.84**	**20**	*i* P	**Pn**	**17 23 31.5**	**+3.0**
AZAP				IAML		17 24 23.9	
	comp=Z,39nm,0.8s						
GO02	**Mina Guanaco**	**3.88**	**313**		**Pn**	**17 23 32.1**	**+3.0**
LCO	**Las Campanas**	**3.89**	**252**	Pn	**Pn**	**17 23 29.9**	**+0.7**
CFA	**Coronel Fontan**	**4.03**	**202**	P	**Pn**	**17 23 30.9**	**+0.3**
	comp=Z,142nm,0.3s,baz=231,slow=22,SNR=1161						
CFA				S	**Sn**	**17 24 15.7**	**-2.7**
	comp=Z,34nm,0.3s,baz=27,slow=16,SNR=9.9						
ZON	**Zonda**	**4.14**	**207**	*i* P	**Pn**	**17 23 32.4**	**+0.4**
ZON				IAML		17 24 22.6	
	comp=Z,173nm,0.3s						
GO04	**Tololo Observa**	**4.43**	**238**	Pn	**Pn**	**17 23 36.3**	**+0.3**
AAGR	**Agrelo**	**5.58**	**201**	*i* P	**Pn**	**17 23 51.2**	**+0.2**
AAGR				IAML		17 24 56.9	
	comp=Z,140nm,0.3s						
LVC	**Limon Verde**	**5.68**	**337**	P	**Pn**	**17 23 54.3**	**+1.7**
	comp=Z,16nm,0.3s,baz=129,slow=10.0,SNR=96						
LVC				S	**Sn**	**17 24 57.2**	**-0.5**
	comp=Z,15nm,0.3s,baz=302,slow=23,SNR=14						
LVC	**Limon Verde**	**5.68**	**337**		**Pn**	**17 23 54.6**	**+2.0**
LVC					**Sn**	**17 24 58.0**	**+0.4**
PB10	**IPOC Station P**	**5.69**	**319**		**Pn**	**17 23 53.6**	**+1.3**
PEL	**Peldehue**	**6.39**	**214**		**Pn**	**17 24 00.7**	**-0.9**
PB04	**IPOC Station P**	**6.44**	**328**		**Pn**	**17 24 02.9**	**+0.5**
PB01	**IPOC Station P**	**7.33**	**337**		**Pn**	**17 24 14.2**	**+0.1**
CPUP	**Villa Florida**	**8.29**	**81**	P	**Pn**	**17 24 26.7**	**0.0**
	comp=Z,0.1nm,0.3s,baz=268,slow=12,SNR=13						
GO05	**Huala**	**8.51**	**212**	Pn	**Pn**	**17 24 26.7**	**-2.9**
GO01	**Chusmiza**	**8.53**	**342**		**Pn**	**17 24 30.4**	**-0.1**
PB11	**IPOC Station P**	**8.58**	**339**		**Pn**	**17 24 29.4**	**-1.4**
MNMC	**Minye Minye**	**9.16**	**341**		**Pn**	**17 24 38.0**	**-0.5**
SIV	**San Ignacio**	**12.84**	**24**	P	**Pn**	**17 25 26.7**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=224,slow=15,SNR=12						
PLCA	**Paso Flores**	**13.27**	**194**	P	**Pn**	**17 25 31.9**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=26,slow=12,SNR=6.3						
PLCA	**Paso Flores**	**13.27**	**194**		**Pn**	**17 25 31.7**	**+0.2**
NNA	**Nana**	**18.55**	**326**	P	**Pn**	**17 26 35.4**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=198,slow=10,SNR=5.3						
SAML	**Samuel**	**19.07**	**10**	P	**P**	**17 26 39.8**	**+0.4**
BDFB	**Brasilia**	**20.99**	**58**	P	**P**	**17 26 59.0**	**-1.1**
	comp=Z,3.7nm,0.7s,baz=209,slow=12,SNR=5.3						
BDFB	**Brasilia**	**20.99**	**58**	P	**P**	**17 26 59.1**	**-0.9**
GO09	**Cerro Castillo**	**23.79**	**189**	P	**P**	**17 27 25.6**	**-1.2**
GO09				IAmb	IAmb	17 27 32.0	
	comp=Z,19nm,1.1s						
PTGA	**Pitinga**	**27.70**	**14**	P	**P**	**17 28 01.5**	**-0.8**
	comp=Z,3.1nm,0.4s,baz=199,slow=15,SNR=7.9						
PTGA	**Pitinga**	**27.70**	**14**	P	**P**	**17 28 02.6**	**+0.4**
PTGA				IAmb	IAmb	17 28 03.2	
	comp=Z,4.1nm,0.6s						
RUSC	**La Rusia**	**34.16**	**348**	P	**P**	**17 28 60.0**	**+0.5**
RCBR	**Riachuelo**	**36.37**	**59**	P	**P**	**17 29 14.3**	**-3.6**
RCBR				IAmb	IAmb	17 29 16.3	
	comp=Z,9.3nm,1.1s						
PMSA	**Palmer Station**	**36.95**	**178**	P	**P**	**17 29 21.7**	**-0.4**
	comp=Z,27nm,0.9s,baz=333,slow=6.8,SNR=2.4						
PMSA	**Palmer Station**	**36.95**	**178**	P	**P**	**17 29 22.1**	**0.0**
BCIP	**Isla Barro Col**	**39.02**	**339**	P	**P**	**17 29 37.6**	**-2.4**
TOSP	**Speyside**	**39.36**	**9**	P	**P**	**17 29 40.1**	**-2.7**
TEIG	**Tepich**	**52.26**	**334**	P	**P**	**17 31 24.6**	**+0.8**
	comp=Z,7.1nm,0.6s,baz=163,slow=0.0,SNR=7.6						
TEIG	**Tepich**	**52.26**	**334**	P	**P**	**17 31 24.6**	**+0.8**
TEIG				IAmb	IAmb	17 31 30.5	
	comp=Z,14nm,1.1s						
VNA3	**Neumayer Olymp**	**53.36**	**160**	P	pP	17 32 11.7	+1.9
VNA2	**Neumayer--Watz**	**53.94**	**160**	P	pP	17 32 15.9	+1.9
	baz=282,slow=10						
SNAA	**Sanae**	**55.56**	**160**	P	pP	17 32 27.5	+1.6
SNAA	**Sanae**	**55.56**	**160**	pP	pP	17 32 26.3	+0.4
	comp=Z,1.2nm,0.6s,baz=256,slow=9.4,SNR=5.5						
QSPA	**South Pole Qui**	**62.35**	**180**	P	**P**	**17 32 35.2**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=161,slow=3.5,SNR=4.9						
QSPA	**South Pole Qui**	**62.35**	**180**	P	**P**	**17 32 33.2**	**-0.9**
WVT	**Waverly**	**66.76**	**341**	P	**P**	**17 33 02.7**	**-0.1**
TXAR	**Lajitas Array**	**67.10**	**325**	P	**P**	**17 33 06.2**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=148,slow=9.7,SNR=8.0						
DBIC	**Dimbokro**	**68.63**	**70**	P	**P**	**17 33 14.3**	**-0.7**
	comp=Z,1.9nm,0.5s,baz=220,slow=13,SNR=2.9						
DBIC	**Dimbokro**	**68.63**	**70**	P	**P**	**17 33 13.0**	**-2.0**
DBIC				IAmb	IAmb	17 33 14.5	
	comp=Z,3.9nm,0.8s						
CCM	**Cathedral Cave**	**69.56**	**339**	P	**P**	**17 33 19.1**	**-1.1**
CCM				IAmb	IAmb	17 33 21.3	
	comp=Z,7.5nm,0.7s						
S39A	**Bolivar**	**69.91**	**338**	P	**P**	**17 33 22.9**	**+0.6**
S39A				IAmb	IAmb	17 33 23.9	
	comp=Z,10.0nm,0.8s						
ECSD	**EROS Data Cent**	**76.43**	**338**	P	**P**	**17 34 01.0**	**+0.5**
ECSD				IAmb	IAmb	17 34 01.6	
	comp=Z,4.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**77.55**	**68**	P	**P**	**17 34 06.5**	**-0.8**
	comp=Z,2.4nm,0.6s,baz=272,slow=5.6,SNR=9.7						
TORD	**Torodi Ar. Bea**	**77.55**	**68**	P	**P**	**17 34 06.2**	**-1.1**
MTPU	**Mount Pierson**	**78.30**	**325**	P	**P**	**17 34 11.7**	**+0.3**
BOSA	**Boshof**	**78.58**	**116**	P	**P**	**17 34 13.2**	**+0.1**
	comp=Z,3.1nm,0.9s,baz=264,slow=9.2,SNR=3.3						
PDAR	**Pinedale Array**	**80.70**	**329**	P	**P**	**17 34 25.1**	**+1.0**
	comp=Z,1.1nm,0.6s,baz=125,slow=8.0,SNR=11						
HWUT	**Hardware Ranch**	**80.73**	**327**	P	**P**	**17 34 24.6**	**+0.4**
HWUT				IAmb	IAmb	17 34 26.3	
	comp=Z,5.2nm,0.8s						
NVAR	**Mina Array Bea**	**81.84**	**321**	P	**P**	**17 34 31.7**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=142,slow=6.4,SNR=5.4						
ULM	**Lac du Bonnet**	**82.03**	**341**	P	**P**	**17 34 31.1**	**+0.4**
	comp=Z,1.1nm,0.4s,baz=148,slow=7.3,SNR=4.6						
YKA	**Yellowknife Ar**	**97.90**	**340**	P	Pdif	17 35 45.7	+0.1
	comp=Z,0.4nm,0.8s,baz=132,slow=4.6,SNR=7.0						
ASAR	**Alice Springs**	**125.12**	**203**	PKP	**PKPdf**	**17 41 10.5**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=133,slow=1.5,SNR=14						
ZALV	**Zalesovo Beam**	**146.52**	**31**	PKPbc	**PKPbc**	**17 41 50.5**	**-0.2**
	comp=Z,4.1nm,0.6s,baz=282,slow=3.4,SNR=16						
ZALV				pPKPbc	pPKPab	17 42 36.2	+0.8
	comp=Z,1.0nm,0.6s,baz=319,slow=5.9,SNR=3.6						
ZALV	**Zalesovo Beam**	**146.52**	**31**		**PKPab**	**17 41 52.2**	**+0.1**
KSH	**Kashi**	**146.89**	**60**	PKPbc	**PKPbc**	**17 41 53.2**	**+0.8**
KSH				pPKP	pPKPbc	17 42 35.7	-0.8
KSH				PP	**PP**	**17 45 22.3**	**+3.8**
KSH				PKS	**PKSdf**	**17 45 29.6**	**+4.0**
MKAR	**Makanchi Array**	**149.09**	**44**	PKPbc	**PKiKP**	**17 41 58.6**	**-0.4**
	comp=Z,3.6nm,0.8s,baz=303,slow=2.8,SNR=28						
MKAR				pPKPbc	**pPKPbc**	**17 42 43.5**	**+1.8**
	comp=Z,1.2nm,0.9s,baz=300,slow=2.7,SNR=4.4						
MKAR	**Makanchi Array**	**149.09**	**44**		**PKPbc**	**17 41 58.4**	**+0.6**
SONM	**Songino Array**	**159.31**	**14**	PKPab	**PKPab**	**17 42 45.6**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=355,slow=3.9,SNR=6.8						

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*IDC **09** 17:24:04.3±0.5, 4°.40S×102°.05E, h0^{km}, mb4.4/22, mb1 4.5/22, mb1mx4.3/39, mbtmp4.4/22, MS3.6/5, Ms1 3.6/5, ms1mx3.3/39, Error ellipse: s-maj=18.3km s-min=12.2km az=47.0*

*KLM **09** 17:24:08.0, 4°.76S×101°.81E, h38^{km}, mb4.9*

*BJI **09** 17:24:09.0±0.0, 4°.50S×102°.00E, h39^{km}, mB5.2/30, mb4.8/43, Ms4.7/12, Ms7 4.4/11*

*DJA **09** 17:24:10.7±0.7, 5°S±3°×10°2E±°, h30^{km}±8^{km}, M4.9/19, mb5.0/19, mB5.4/6, MLv4.9/18, Mw(mB)4.9/6*

*NEIC **09** 17:24:12.1±1.6, 4°.4S±0°.1×102°.14E±0°.03, h59^{km}±5^{km}, mb4.7/30, Error ellipse: s-maj=15.3km s-min=3.5km az=171.0*

ISC 09 17:24:11.5±1.0**, 4°.51S**±0°.06×**102°.02E**±0°.06**, h56**^{km}±8^{km}**, n213, σ1^{s}.15**/220**, mb4.7**/38**, 4C-4D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.95**	**81**	P	**Pn**	**17 24 27.9**	**-0.8**
MNAI				S	**Sn**	**17 24 40.9**	**-0.5**
MNAI	**Manna**	**0.95**	**81**		**Pn**	**17 24 28.5**	**-0.2**
MNAI				Sn	**Sn**	**17 24 39.3**	**-2.1**
KSI	**Kapahiang**	**1.03**	**34**	P	**Pn**	**17 24 28.9**	**-0.9**
KSI				S	**Sn**	**17 24 44.3**	**+1.0**
LWLI	**Liwa**	**2.10**	**104**	P	**Pn**	**17 24 43.9**	**-0.4**
LWLI				S	**Sn**	**17 25 09.5**	**+0.1**
MDSI	**Maura Dua**	**2.15**	**90**	P	**Pn**	**17 24 44.9**	**-0.1**
MDSI				S	**Sn**	**17 25 10.9**	**+0.3**
KRJI	**Kerinci**	**2.46**	**347**	P	**Pn**	**17 24 50.1**	**+0.7**
KRJI				S	**Sn**	**17 25 19.7**	**+1.3**
PPSI	**Pulau Pagai**	**2.65**	**311**	P	**Pn**	**17 24 52.0**	**+0.2**
KASI	**Kota Agung**	**2.67**	**112**	P	**Pn**	**17 24 51.5**	**-0.6**
KASI				S	**Sn**	**17 25 22.2**	**-1.0**
SDSI	**Sungai Dareh**	**3.60**	**351**	P	**Pn**	**17 25 05.6**	**+0.8**
PDSI	**Padang**	**3.90**	**336**	P	**Pn**	**17 25 09.1**	**+0.2**
SISI	**Saibi**	**4.31**	**317**	P	**Pn**	**17 25 14.2**	**-0.3**
BKNI	**Bangkinang**	**4.90**	**348**	P	**Pn**	**17 25 24.7**	**+2.0**
DBJI	**Dramaga**	**5.13**	**114**	P	**Pn**	**17 25 26.5**	**+0.7**
	1.0nm5µm208nm,1.5s						
SKJI	**Sukabumi**	**5.15**	**119**	P	**Pn**	**17 25 26.2**	**+0.1**
	1.7nm3µm277nm,1.1s						
PBSI	**Pulau Batu**	**5.79**	**320**	P	**Pn**	**17 25 34.2**	**-0.7**
	1.8nm3µm183nm,0.5s						
CNJI	**Cibinong**	**5.80**	**119**	P	**Pn**	**17 25 33.3**	**-1.7**
	1.3nm4µm104nm,0.4s						
TPRI	**Tanjung Pinang**	**5.94**	**25**	P	Pn	17 25 50.0	+13
LEM	**Lembang**	**6.03**	**113**	P	**Pn**	**17 25 39.7**	**+1.4**
	0.5nm2µm104nm,0.9s						
CISI	**Cisompet, Garu**	**6.51**	**118**	P	**Pn**	**17 25 42.7**	**-2.1**
	1.5nm5µm208nm,0.6s						
CISI	**Cisompet, Garu**	**6.51**	**118**		**Pn**	**17 25 43.3**	**-1.5**
MYKOM	**Kota Tinggi**	**6.52**	**16**	P	**Pn**	**17 25 47.0**	**+2.1**
KPJI	**Karang Pucung**	**7.43**	**113**	P	**Pn**	**17 25 57.8**	**+0.5**
	0.2nm54nm,0.5s						
SNSI	**Sinabang, Aceh**	**8.92**	**320**	P	**Pn**	**17 26 18.8**	**+1.0**
	156nm,0.7s						
IPM	**Ipoh**	**8.98**	**354**	P	**Pn**	**17 26 19.0**	**+0.3**
UGM	**Wanagama**	**9.11**	**112**	P	**Pn**	**17 26 20.3**	**-0.1**
	124nm,0.8s						
UGM	**Wanagama**	**9.11**	**112**		**Pn**	**17 26 20.1**	**-0.2**
WOJI	**Wonogiri, Jawa**	**9.45**	**111**	P	**Pn**	**17 26 24.5**	**-0.6**
	25nm,0.6s						
PCJI	**Pacitan**	**9.81**	**112**	P	**Pn**	**17 26 28.8**	**-1.2**
	57nm,0.7s						
KULM	**Kulim**	**9.83**	**352**	P	**Pn**	**17 26 30.0**	**-0.2**
MLSI	**Meulaboh, Aceh**	**10.37**	**327**	P	**Pn**	**17 26 36.8**	**-0.8**
	208nm,0.8s						
GRJI	**Gresik**	**10.68**	**103**	P	**Pn**	**17 26 43.5**	**+1.6**
	88nm,0.8s						
JAGI	**Jajag, Banyuwa**	**12.68**	**109**	P	**Pn**	**17 27 07.0**	**-2.2**
	49nm,0.9s						
JAGI	**Jajag, Banyuwa**	**12.68**	**109**		**Pn**	**17 27 06.6**	**-2.6**
SRBI	**Singaraja**	**13.59**	**106**	P	**Pn**	**17 27 20.9**	**-0.7**
	38nm,0.6s						
PLAI	**Plampang**	**16.23**	**106**	P	**Pn**	**17 27 53.6**	**-2.4**
	51nm,0.6s						
WBSI	**Waikabubak, Su**	**17.97**	**107**	P	**Pn**	**17 28 18.9**	**+1.2**
	36nm,1.0s						
EDFI	**Ende, Flores**	**19.99**	**103**	P	**Pn**	**17 28 41.9**	**+0.1**
PBKT	**Sadao Pong**	**20.97**	**357**	P	**P**	**17 28 49.0**	**-1.1**
SOEI	**Soe**	**22.68**	**105**	P	**P**	**17 29 08.4**	**-0.3**
SOEI				IAmb	IAmb	17 29 21.7	
	comp=Z,14nm,0.7s						
CMAR	**Chiang Mai Arr**	**23.02**	**353**	P	**P**	**17 29 09.7**	**-2.3**
	comp=Z,5.9nm,0.9s,baz=184,slow=9.4,SNR=22						
CMAR				PcP	**PcP**	**17 33 01.6**	**+1.4**
	comp=Z,0.8nm,0.5s,baz=213,slow=3.2,SNR=7.3						
CMAR				LR	LR	17 37 54.1	
	comp=Z,34nm,20.0s,baz=192,slow=36						
CMAR	**Chiang Mai Arr**	**23.02**	**353**	P	**P**	**17 29 10.7**	**-1.3**
CMAR				PcP	**PcP**	**17 33 01.8**	**+1.7**
FITZ	**Fitzroy Crossi**	**26.76**	**122**	P	**P**	**17 29 45.5**	**-0.8**
	comp=Z,2.5nm,0.7s,baz=334,slow=7.9,SNR=9.7						
FITZ				LR	LR	17 41 34.8	
	comp=Z,85nm,19.8s,baz=310,slow=39						
FITZ	**Fitzroy Crossi**	**26.76**	**122**	P	**P**	**17 29 46.4**	**+0.2**
H08S2	**Diego Garcia H**	**29.52**	**262**	T	T	18 00 36.8	
	baz=86,slow=76,SNR=88						
H08S3	**Diego Garcia H**	**29.53**	**263**	T	T	18 00 28.6	
	baz=86,slow=76,SNR=266						
H08S1	**Diego Carcia H**	**29.54**	**262**	T	T	18 00 35.4	
	baz=86,slow=76,SNR=114						
SHL	**Shillong**	**31.47**	**342**	P	**P**	**17 30 27.9**	**-0.3**
SHL				IAmb	IAmb	17 30 28.3	
	comp=Z,15nm,0.8s						
H01W3	**Cape Leeuwin H**	**32.24**	**161**	T	T	18 04 32.1	
	baz=339,slow=76,SNR=10						
H01W2	**Cape Leeuwin H**	**32.26**	**161**	T	T	18 04 30.8	
	baz=339,slow=76,SNR=20						
H01W1	**Cape Leeuwin H**	**32.26**	**161**	T	T	18 04 32.7	
	baz=339,slow=76,SNR=6.3						
ODAN	**Odare**	**34.24**	**336**	*e*P	**P**	**17 30 53.2**	**+0.7**
	comp=Z,26nm,0.6s						
TAPN	**Taplejung**	**34.56**	**337**	*e*P	**P**	**17 30 56.1**	**+0.8**
	comp=Z,57nm,0.8s						
RAMN	**Ramite**	**34.65**	**335**	*e*P	**P**	**17 30 56.9**	**+0.9**
	comp=Z,12nm,0.3s						
WRA	**Warramunga Arr**	**35.01**	**119**	P	**P**	**17 30 58.8**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=322,slow=11,SNR=41						
WRA				PcP	**PcP**	**17 33 30.8**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=298,slow=2.3,SNR=4.4						
WRA	**Warramunga Arr**	**35.01**	**119**	P	**P**	**17 30 56.9**	**-2.1**
CD2	**Chengdu**	**35.26**	**3**	P	**P**	**17 31 01.4**	**+0.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
JIRN	**Jiri**	**35.44**	**335**	*e*P	**P**	**17 31 03.7**	**+0.7**
	comp=Z,42nm,0.6s						
LSA	**Lhasa**	**35.58**	**344**	P	**P**	**17 31 04.4**	**+0.2**
LSA				IAmb	IAmb	17 31 05.6	
	comp=Z,9.1nm,0.9s						
PKI	**Pulchoki**	**35.70**	**334**	*e*P	**P**	**17 31 05.2**	**+0.1**
	comp=Z,7.9nm,0.5s						
PKIN	**Phulchoki**	**35.71**	**334**	*e*P	**P**	**17 31 05.3**	**+0.2**
GUN	**Gumba**	**35.79**	**335**	*e*P	**P**	**17 31 06.8**	**+0.8**
	comp=Z,44nm,0.5s						
AS31	**Alice Springs**	**36.17**	**125**	P	**P**	**17 31 09.3**	**+0.4**
ASAR	**Alice Springs**	**36.17**	**125**	P	**P**	**17 31 09.2**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=296,slow=7.8,SNR=32						
ASAR				PcP	**PcP**	**17 33 34.4**	**+0.7**
	comp=Z,1.3nm,0.7s,baz=310,slow=3.7,SNR=6.0						
ASAR				LR	LR	17 47 30.3	
	comp=Z,91nm,19.1s,baz=289,slow=39						
ASAR	**Alice Springs**	**36.17**	**125**	P	**P**	**17 31 09.4**	**+0.5**
ASAR					**PcP**	**17 33 34.0**	**+0.3**
GKN	**Gorkha**	**36.41**	**334**	*e*P	**P**	**17 31 11.7**	**+0.7**
	comp=Z,20nm,0.4s						
WHN	**Wuhan**	**36.80**	**18**	⇑P	**P**	**17 31 09.8**	**-4.2**
DANN	**Dangsing**	**37.10**	**333**	*e*P	**P**	**17 31 17.7**	**+0.6**
	comp=Z,43nm,0.4s						
NJ2	**Nanjing**	**39.73**	**23**	*e*P	**P**	**17 31 41.2**	**+2.5**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
LZH	**Lanzhou**	**40.42**	**2**	*e*P	**P**	**17 31 45.6**	**+1.0**
LZH				pP	pP	17 31 58.0	-0.8
LZH				sP	sP	17 32 05.1	-0.1
LZH				pmax	pmax		
	comp=Z,20nm,0.9s						
GTA	**Gaotai**	**43.75**	**358**	*e*P	**P**	**17 32 11.9**	**+0.3**
GTA				pP	pP	17 32 23.1	-2.9
GTA				sP	sP	17 32 27.5	-4.9
GTA				S	**S**	**17 38 40.8**	**+2.7**
GTA				sS	sS	17 38 59.8	-2.0
GTA				SS	**SS**	**17 41 50.6**	**-5.1**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,160nm,7.6s						
GTA				LR	LR		
	comp=Z,130nm,19.7s						
GTA				LR	LR		
	comp=Z,180nm,19.4s						
GTA				LR	LR		
	comp=Z,220nm,18.4s						
HHC	**Hu-ho-hao-te**	**45.98**	**10**	*e*P	**P**	**17 32 31.3**	**+2.0**
HHC				pmax	pmax		
	comp=Z,280nm,4.9s						
STKA	**Stephens Creek**	**45.99**	**131**	P	**P**	**17 32 30.5**	**+1.0**
	comp=Z,3.1nm,0.7s,baz=303,slow=9.0,SNR=11						
STKA				LR	LR	17 53 17.0	
	comp=Z,70nm,20.1s,baz=230,slow=38						
STKA	**Stephens Creek**	**45.99**	**131**	P	**P**	**17 32 30.4**	**+1.0**
NIL	**Nilore**	**46.69**	**327**	P	**P**	**17 32 35.2**	**+0.3**
KSRS	**Korea Array**	**48.21**	**28**	P	**P**	**17 32 45.8**	**-0.8**
	comp=Z,2.8nm,0.6s,baz=226,slow=7.3,SNR=13						
WMQ	**Urumqi**	**49.81**	**346**	*e*P	**P**	**17 33 00.0**	**+1.1**
WMQ				pP	pP	17 33 14.1	+0.7
WMQ				S	**S**	**17 40 08.1**	**+3.6**
WMQ				pmax	pmax		
	comp=Z,30nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,210nm,6.3s						
WMQ				LR	LR		
	comp=Z,160nm,20.5s						
WMQ				LR	LR		
	comp=Z,960nm,25.1s						
WMQ				LR	LR		
	comp=Z,120nm,21.5s						
WMQ	**Urumqi**	**49.81**	**346**	P	**P**	**17 33 00.1**	**+1.3**
KRVT	**Keravat (AS076**	**49.85**	**92**	P	**P**	**17 33 01.2**	**+1.6**
	comp=Z,17nm,0.6s,baz=306,slow=5.1,SNR=3.0						
KSH	**Kashi**	**49.96**	**334**	P	**P**	**17 32 59.4**	**-0.7**
KSH				pP	pP	17 33 12.0	-2.5
KSH				PcP	**PcP**	**17 34 20.9**	**+1.3**
KSH				PcS	**PcS**	**17 38 12.1**	**-4.6**
KSH				S	**S**	**17 40 03.2**	**-3.6**
KSH				ScS	**ScS**	**17 42 40.8**	**-6.0**
KSH				pmax	pmax		
	comp=Z,15nm,0.6s						
KSH				pmax	pmax		
	comp=Z,460nm,7.6s						
KSH				LR	LR		
	comp=Z,280nm,11.0s						
KSH				LR	LR		
	comp=Z,560nm,9.3s						
KSH				LR	LR		
	comp=Z,620nm,11.8s						
SONM	**Songino Array**	**52.26**	**4**	P	**P**	**17 33 17.9**	**+0.6**
	comp=Z,13nm,0.6s,baz=185,slow=9.6,SNR=149						
SONM				PcP	**PcP**	**17 34 28.1**	**+0.1**
	comp=Z,2.6nm,0.5s,baz=188,slow=3.7,SNR=10.0						
SONM	**Songino Array**	**52.26**	**4**	P	**P**	**17 33 18.1**	**+0.9**
SONM					**PcP**	**17 34 28.5**	**+0.5**
GAR	**Garm**	**52.27**	**329**	P	**P**	**17 33 17.1**	**-0.3**
ULN	**Ulaanbaatar**	**52.34**	**4**	P	**P**	**17 33 18.0**	**+0.2**
ULN				IAmb	IAmb	17 33 19.2	
	comp=Z,5.3nm,0.7s						
CHGR	**Chuyangaron**	**52.62**	**328**	P	**P**	**17 33 18.6**	**-1.5**
CHGR				IAmb	IAmb	17 33 33.9	
	comp=Z,11nm,0.9s						
BTK	**Batken**	**52.81**	**330**	P	**P**	**17 33 21.7**	**+0.3**
MJAR	**Matsushiro Arr**	**53.01**	**37**	P	**P**	**17 33 20.6**	**-2.3**
	comp=Z,2.2nm,0.7s,baz=203,slow=6.1,SNR=12						
MJAR	**Matsushiro Arr**	**53.01**	**37**	IAmb	IAmb	17 33 21.6	
	comp=Z,1.7nm,0.8s						
MK31	**Makanchi Array**	**53.98**	**343**	P	**P**	**17 33 29.8**	**0.0**
MKAR	**Makanchi Array**	**53.98**	**343**	P	**P**	**17 33 29.7**	**-0.1**
	comp=Z,12nm,0.6s,baz=156,slow=8.8,SNR=154						
MAKZ	**Makanchi**	**54.09**	**343**	P	**P**	**17 33 30.3**	**-0.3**
MAKZ				IAmb	IAmb	17 33 32.7	
	comp=Z,6.6nm,1.0s						
USRK	**Ussuriysk Ar.**	**55.46**	**26**	P	**P**	**17 33 40.1**	**-0.4**
	comp=Z,6.8nm,0.5s,baz=209,slow=5.1,SNR=30						
USRK	**Ussuriysk Ar.**	**55.46**	**26**	P	**P**	**17 33 40.4**	**-0.1**
KURK	**Kurchatov**	**58.57**	**343**	P	**P**	**17 34 02.3**	**-0.1**
GEYT	**Alibeck**	**58.65**	**320**	P	**P**	**17 34 03.8**	**+0.5**
	comp=Z,4.9nm,0.8s,baz=175,slow=5.5,SNR=10						
GEYT	**Alibeck**	**58.65**	**320**	P	**P**	**17 34 03.6**	**+0.3**
ZAA0	**Zalesovo Array**	**60.00**	**348**	P	**P**	**17 34 11.9**	**-0.3**
ZALV	**Zalesovo Beam**	**60.00**	**348**	P	**P**	**17 34 11.8**	**-0.4**
	comp=Z,15nm,0.4s,baz=169,slow=4.9,SNR=102						
ZALV	**Zalesovo Beam**	**60.00**	**348**	P	**P**	**17 34 11.9**	**-0.3**
BRVK	**Borovoye**	**63.29**	**339**	P	**P**	**17 34 33.9**	**-0.5**
BRVK				IAmb	IAmb	17 34 34.4	
	comp=Z,6.6nm,0.7s						
KMBO	**Kilima Mbogo**	**64.76**	**271**	P	**P**	**17 34 46.2**	**+1.1**
	comp=Z,0.7nm,0.5s,baz=39,slow=12,SNR=4.7						
KMBO	**Kilima Mbogo**	**64.76**	**271**	IAmb	IAmb	17 34 48.5	
	comp=Z,6.0nm,1.5s						
ABKAR	**Akbulak array**	**64.79**	**331**	P	**P**	**17 34 44.2**	**-0.1**
ABKAR				IAmb	IAmb	17 34 44.9	
	comp=Z,8.5nm,0.8s						
ABKAR	**Akbulak array**	**64.79**	**331**	P	**P**	**17 34 44.1**	**-0.1**
KBZ	**Khabaz**	**71.51**	**319**	P	**P**	**17 35 27.2**	**+0.7**
	comp=Z,4.0nm,0.7s,baz=116,slow=7.5,SNR=10						
PETK	**Petropavlovsk-**	**73.94**	**31**	P	**P**	**17 35 39.8**	**-1.0**
	comp=Z,2.3nm,0.9s,baz=247,slow=8.7,SNR=8.0						
NRIK	**Noril'sk**	**74.36**	**355**	LR	LR	18 09 22.0	
	comp=Z,190nm,18.6s,baz=308,slow=37						
SYO	**Syowa Base**	**76.17**	**199**	⇑*e*P	**P**	**17 35 53.4**	**+0.1**
BOSA	**Boshof**	**76.24**	**242**	P	**P**	**17 35 55.5**	**+0.7**
	comp=Z,3.1nm,1.0s,baz=96,slow=4.9,SNR=5.7						
BOSA	**Boshof**	**76.24**	**242**	IAmb	IAmb	17 35 58.2	
	comp=Z,21nm,1.5s						
BR131	**Keskin Array S**	**76.49**	**312**	P	**P**	**17 35 56.0**	**+0.1**
BR131				IAmb	IAmb	17 35 56.6	
	comp=Z,6.8nm,0.7s						
BRTR	**Keskin Array B**	**76.49**	**312**	P	**P**	**17 35 56.0**	**+0.1**
	comp=Z,5.2nm,0.6s,baz=138,slow=7.2,SNR=40						
BRTR	**Keskin Array B**	**76.49**	**312**	P	**P**	**17 35 56.1**	**+0.2**
TIXI	**Tiksi**	**78.01**	**8**	P	**P**	**17 36 02.3**	**-1.2**
TIXI				IAmb	IAmb	17 36 02.9	
	comp=Z,9.1nm,1.2s						
KLMR	**Klimovskoe**	**80.95**	**334**	*e*P	P	17 36 33.0	+13
KLMR				AMP		17 36 40.3	
	comp=Z,49nm,2.1s						
SORM	**Soroca**	**82.54**	**320**	⇑P	**P**	**17 36 28.9**	**+0.5**
AKASG	**Malin Array Be**	**82.69**	**322**	P	**P**	**17 36 28.9**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=91,slow=4.7,SNR=7.2						
VRI	**Vrincioaia**	**83.05**	**317**	⇓P	**P**	**17 36 32.6**	**+1.5**
TESR	**Tescani**	**83.25**	**318**	⇓P	**P**	**17 36 33.3**	**+1.2**
MLR	**Muntele Rosu**	**83.50**	**317**	⇑P	**P**	**17 36 34.7**	**+1.1**
PLVB	**Pleven**	**83.97**	**314**	⇓P	**P**	**17 36 36.4**	**+0.5**
BURAR	**Bucovina Array**	**84.46**	**319**	⇓P	**P**	**17 36 40.4**	**+1.9**
BURAR	**Bucovina Array**	**84.46**	**319**	P	**P**	**17 36 40.4**	**+1.9**
BUR08	**Bucovina Ar. S**	**84.48**	**319**	P	**P**	**17 36 40.5**	**+2.0**
BUR08				IAmb	IAmb	17 36 41.0	
	comp=Z,8.3nm,1.0s						
KOLS	**Kolonicke sedl**	**86.66**	**319**	*e*P	**P**	**17 36 51.0**	**+1.8**
CRVS	**Cervenica-Dubn**	**87.18**	**319**	*e*P	**P**	**17 36 52.7**	**+1.0**
FINES	**FINESS Array B**	**87.25**	**332**	P	**P**	**17 36 52.2**	**+0.4**
	comp=Z,1.4nm,0.5s,baz=104,slow=5.3,SNR=14						
ARCES	**ARCESS Array B**	**89.50**	**340**	P	**P**	**17 37 02.5**	**+0.2**
	comp=Z,2.6nm,0.7s,baz=95,slow=5.4,SNR=7.4						
GERES	**GERESS Array B**	**92.25**	**319**	P	**P**	**17 37 16.6**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=107,slow=3.2,SNR=7.6						
CPUP	**Villa Florida**	**143.39**	**212**	PKP	**PKPdf**	**17 43 40.5**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=225,slow=6.2,SNR=4.8						
BDFB	**Brasilia**	**144.21**	**235**	PKP	**PKPdf**	**17 43 42.0**	**-0.4**
	comp=Z,6.0nm,0.5s,baz=152,slow=2.8,SNR=13						
WMOK	**Wichita Mounta**	**144.27**	**30**	P	**PKPab**	**17 43 39.8**	**0.0**
	baz=323,SNR=12						
O51A	**Pataskala**	**144.28**	**6**	P	**PKPab**	**17 43 39.5**	**-0.1**
	baz=352						
CCM	**Cathedral Cave**	**144.48**	**18**		**PKPab**	**17 43 40.4**	**0.0**
CCM	**Cathedral Cave**	**144.48**	**18**	P	**PKPab**	**17 43 40.3**	**-0.1**
	baz=337						
P48A	**Milroy**	**144.56**	**10**	P	**PKPab**	**17 43 40.8**	**+0.1**
	baz=347						
P50A	**Jamestown**	**144.66**	**8**	P	**PKPab**	**17 43 40.3**	**-0.8**
	baz=350						
TUL1	**Leonard**	**144.70**	**25**		PKPbc	17 43 41.7	+0.2
TUL1	**Leonard**	**144.70**	**25**	P	**PKPab**	**17 43 41.3**	**-0.1**
	baz=328,SNR=6.6						

FVM	French Village	144.80	17		PKPab	17 43 41.4	-0.2
U38A	Gravette	144.82	23		PKPab	17 43 41.5	-0.3
P52A	Corning	144.83	6	P	PKPab	17 43 41.0	-0.7
	baz=353						
MCWV	Mont Chateau	144.97	3	P	PKPbc	17 43 42.4	+0.2
	baz=357						
P54A	Burton	144.99	3	P	PKPab	17 43 42.2	-0.1
	baz=356						
Q48A	North Vernon	145.02	11	P	PKPbc	17 43 42.3	-0.1
	baz=347,SNR=8.8						
P53A	Whipple	145.04	5	P	PKPbc	17 43 42.1	-0.4
	baz=354						
Q49A	Aurora	145.09	9	P	PKPbc	17 43 42.5	-0.2
	baz=348,SNR=5.2						
P55A	Reedsville	145.12	2	P	PKPbc	17 43 42.6	-0.1
	baz=357						
P56A	Dayton Farm, R	145.15	1	P	PKPbc	17 43 42.8	0.0
	baz=359						
P58A	Pank, Wackersv	145.17	359	P	PKPbc	17 43 42.5	-0.3
	baz=1.2						
P57A	Homestead Farm	145.18	0	P	PKPbc	17 43 42.8	-0.1
	baz=0.0						
Q51A	Peebles	145.30	7	P	PKPbc	17 43 43.0	-0.3
	baz=351,SNR=7.9						
TX31	Lajitas Ar. Si	145.34	42		PKPab	17 43 44.9	+0.8
TX32	Lajitas Array	145.34	42		PKPab	17 43 44.9	+0.9
TXAR	Lajitas Array	145.34	42	PKPbc	PKPab	17 43 44.6	+0.6
	comp=Z,11nm,0.7s,baz=292,slow=1.0,SNR=116						
TXAR	Lajitas Array	145.34	42		PKPab	17 43 44.8	+0.7
Q50A	Georgetown	145.39	8	P	PKPbc	17 43 43.0	-0.6
	baz=350						
ABTX	Abilene, Hawle	145.46	33	P	PKPab	17 43 44.4	+0.1
	baz=320,SNR=6.5						
U40A	Yellville	145.48	21	P	PKPdf	17 43 43.7	-0.3
	baz=333,SNR=29						
Q52A	Bidwell	145.48	6	P	PKPdf	17 43 43.5	-0.4
	baz=352						
Q54A	Coxs Mills	145.58	4	P	PKPdf	17 43 43.9	-0.1
	baz=355,SNR=6.4						
WCI	Wyandotte Cave	145.59	12		PKPbc	17 43 44.4	+0.2
WCI	Wyandotte Cave	145.59	12	P	PKPbc	17 43 44.2	-0.1
	baz=345						
Q55A	Buckhannon	145.62	3	P	PKPdf	17 43 44.0	-0.1
	baz=356						
Q57A	Strasburg	145.63	1	P	PKPdf	17 43 44.0	0.0
	baz=359,SNR=5.6						
Q53A	Leroy	145.66	5	P	PKPdf	17 43 44.2	+0.1
	baz=354						
R49A	Shelbyville	145.74	10	P	PKPdf	17 43 44.5	+0.2
	baz=347,SNR=5.6						
R50A	Paris	145.89	9	P	PKPdf	17 43 44.6	0.0
	baz=349,SNR=5.2						
R51A	Hillsboro	145.98	8	P	PKPdf	17 43 44.8	+0.1
	baz=350						
R52A	Catlettsburg	146.06	7	P	PKPbc	17 43 45.3	-0.4
	baz=352						
R53A	Hurricane	146.14	6	P	PKPbc	17 43 45.5	-0.4
	baz=353						
S49A	Springfield	146.21	10	P	PKPbc	17 43 46.3	+0.1
	baz=347						
R55A	Marlinton	146.33	3	P	PKPbc	17 43 46.3	-0.3
	baz=356						
R58A	Rapidan	146.37	0	P	PKPbc	17 43 46.7	+0.1
	baz=0.0						
S50A	Richmond	146.47	9	P	PKPdf	17 43 46.1	+0.5
	baz=348						
S51A	Beattyville	146.63	8	P	PKPbc	17 43 47.1	-0.3
	baz=350						
S52A	Salyersville	146.66	7	P	PKPbc	17 43 47.3	-0.2
	baz=351						
R58B	Mineral	146.70	360	P	PKPab	17 43 48.8	+0.1
	baz=0.2						
W41B	Gary Mavity, V	146.75	22	P	PKPab	17 43 49.0	0.0
	baz=334						
MIAR	Mount Ida	146.79	24	P	PKPbc	17 43 48.5	+0.5
	baz=331						
S57A	Dark Hollow, R	146.89	1	P	PKPbc	17 43 48.2	0.0
	baz=358						
JCT	Junction City	146.97	36	P	PKPbc	17 43 49.2	+0.5
	baz=317						
S58A	Poland Farm, P	147.05	0	P	PKPbc	17 43 48.3	-0.2
	baz=360						
T52A	Hallie	147.23	7	P	PKPbc	17 43 48.8	-0.4
	baz=351						
T51A	Gray	147.24	9	P	PKPbc	17 43 48.8	-0.4
	baz=349						
WVT	Waverly	147.25	15		PKPbc	17 43 49.2	0.0
WVT	Waverly	147.25	15	P	PKPbc	17 43 49.1	-0.1
	baz=342						
T54A	Tazewell	147.43	5	P	PKPbc	17 43 49.5	-0.3
	baz=353						
T55A	Pulaski	147.44	4	P	PKPbc	17 43 50.4	+0.7
	baz=355						
T56A	Rocky Mt	147.58	3	P	PKPbc	17 43 49.9	-0.2
	baz=356						
T59A	Double "B" Far	147.69	359	P	PKPbc	17 43 50.2	-0.1
	baz=0.8						
TZTN	Tazewell	147.71	8	P	PKPbc	17 43 50.0	-0.4
	baz=350						
T58A	Grand View Acr	147.71	1	P	PKPbc	17 43 50.7	+0.2
	baz=359						
U55A	TA2, Sparta	148.03	5	P	PKPbc	17 43 51.0	-0.4
	baz=354						
U57A	Blanch	148.21	2	P	PKPbc	17 43 51.5	-0.2
	baz=358						
V55A	Taylorsville	148.67	5	P	PKPbc	17 43 52.9	-0.1
	baz=354						
V54A	Nebo	148.67	6	P	PKPbc	17 43 52.3	-0.7
	baz=352						
V53A	Saluda	148.67	8	P	PKPbc	17 43 53.0	-0.1
	baz=351						
NATX	Nacogdoches	148.69	28	P	PKPbc	17 43 53.7	+0.5
	baz=327						
V57A	Coltrane Farms	148.73	3	P	PKPbc	17 43 52.7	-0.5
	baz=357						
W52A	Murphy	149.07	10	P	PKPbc	17 43 54.2	+0.1
	baz=348						
W54A	Cherokee Point	149.32	7	P	PKPbc	17 43 54.6	-0.1
	baz=352						
KMSC	Kings Mountain	149.36	5	P	PKPbc	17 43 54.7	0.0
	baz=354						
X53A	Estanollee	149.75	9	P	PKPbc	17 43 55.9	+0.2
	baz=350						
X54A	Belton	149.83	7	P	PKPbc	17 43 56.1	+0.1
	baz=351						
X55A	Gracelyn & Ava	150.00	6	P	PKPbc	17 43 56.4	+0.1
	baz=353						
X56A	White Oak	150.03	5	P	PKPbc	17 43 56.4	0.0
	baz=354						
Y52A	Lilburn	150.25	10	P	PKiKP	17 43 57.5	-0.3
	baz=348						
Z50A	Ashland	150.46	14	P	PKPbc	17 43 57.2	-0.3
	baz=344						
GOGA	Godfrey	150.79	9	P	PKPbc	17 43 58.2	-0.1
	baz=349						
Z57A	Bowman	151.25	5	P	PKPbc	17 43 59.3	0.0
	baz=354						
Z58A	St. Stephen	151.27	3	P	PKiKP	17 43 59.9	0.0
	baz=356						
LVC	Limon Verde	151.63	198	PKPbc	PKiKP	17 44 02.4	+0.9
	comp=Z,3.2nm,0.7s,baz=246,slow=5.3,SNR=5.2						
SIV	San Ignacio	153.64	219	PKPbc	PKiKP	17 44 05.3	0.0
	comp=Z,0.6nm,0.8s,baz=115,slow=7.0,SNR=4.5						

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*IDC **09** 17:37:27.8±1.9, 7°.28S×129°.45E, h108^{km}±16^{km}, mb3.7/6, mb1 3.8/10, mb1mx3.6/29, mbtmp4.1/10, Error ellipse: s-maj=35.4km s-min=15.1km az=76.0*

ISC 09 17:37:25.9±0.6, **7°.38S**±0°.06×**129°.6E**±0°.1, **h100**^{km}**, n21,** σ**1ˢ.96**/28, **mb3.8**/6, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.69	15	P	Pn	17 39 01.8	+0.2
	1.4nm,0.3s,baz=46,slow=20,SNR=13						
SIJI				S	Sn	17 40 12.4	-3.9
	0.4nm,0.3s,baz=37,slow=20,SNR=5.6						
FITZ	Fitzroy Crossi	11.32	199	P	Pn	17 40 05.5	+1.0
	0.7nm,0.3s,baz=18,slow=11,SNR=34						
FITZ				S	Sn	17 42 04.7	-4.4
	1.0nm,0.3s,baz=64,slow=18,SNR=4.3						
WRA	Warramunga Arr	13.31	160	P	Pn	17 40 32.5	+1.5
	0.7nm,0.3s,baz=329,slow=13,SNR=30						
WRA				S	Sn	17 42 53.8	-3.8
	1.5nm,0.3s,baz=331,slow=23,SNR=18						
WRA				ScP	ScP	17 49 15.8	-1.6
	0.1nm,0.3s,baz=304,slow=2.2,SNR=4.6						
ASAR	Alice Springs	16.72	166	P	Pn	17 41 16.8	+2.6
	0.3nm,0.3s,baz=347,slow=9.5,SNR=47						
ASAR				S	Sn	17 44 16.6	-3.2
	0.2nm,0.3s,baz=344,slow=18,SNR=4.4						
ASAR				ScP	ScP	17 49 22.5	-0.9
	0.1nm,0.3s,baz=2.7,slow=1.7,SNR=11						
STKA	Stephens Creek	26.82	157	P	P	17 43 01.1	+4.2
	1.6nm,0.7s,baz=312,slow=8.6,SNR=4.9						
CMAR	Chiang Mai Arr	39.66	311	P	P	17 44 48.5	+0.2
	0.8nm,0.7s,baz=136,slow=7.4,SNR=11						
CMAR				PcP	PcP	17 46 54.5	+0.9
	0.2nm,0.6s,baz=151,slow=3.1,SNR=4.3						
ODAN	Odare	53.19	311	*e*P	P	17 46 34.0	-0.4
	12nm,0.5s						
TAPN	Taplejung	53.23	312	*e*P	P	17 46 34.1	-0.6
	9.8nm,0.5s						
RAMN	Ramite	53.83	311	*e*P	P	17 46 38.8	-0.3
	30nm,0.6s						
JIRN	Jiri	54.52	312	*e*P	P	17 46 43.9	-0.3
	15nm,0.6s						
GUN	Gumba	54.89	312	*e*P	P	17 46 46.4	-0.4
	26nm,0.7s						
PKI	Pulchoki	55.05	311	*e*P	P	17 46 47.2	-0.8
	6.8nm,0.6s						
PKIN	Phulchoki	55.07	311	*e*P	P	17 46 47.5	-0.5
	6.0nm,0.6s						
DMN	Daman	55.30	311	*e*P	P	17 46 49.6	-0.1
	12nm,0.9s						
GKN	Gorkha	55.86	311	*e*P	P	17 46 53.5	-0.1
	12nm,0.5s						
DANN	Dangsing	56.70	311	*e*P	P	17 46 59.8	+0.1
	9.9nm,0.8s						
SONM	Songino Array	58.67	342	P	P	17 47 13.7	+0.7
	0.7nm,0.6s,baz=158,slow=6.1,SNR=6.7						
MKAR	Makanchi Array	68.31	327	P	P	17 48 16.8	+0.4
	3.2nm,0.7s,baz=129,slow=7.8,SNR=37						
ZALV	Zalesovo Beam	71.74	334	P	P	17 48 35.7	-1.4
	0.6nm,0.4s,baz=111,slow=3.6,SNR=3.3						
SEY	Seymchan	72.26	11	P	P	17 48 40.8	+0.7
	0.7nm,0.4s,baz=195,slow=6.9,SNR=5.1						
TORD	Torodi Ar. Bea	128.47	281	PKP	PKPdf	17 56 22.5	+0.4
	0.3nm,0.6s,baz=86,slow=2.4,SNR=2.1						

IDC 09 18:05:12.3±2.2, **2°.48N**×**127°.51E, h0**^{km}**, mb3.3**/3, **mb1 3.5**/3, **mb1mx3.3**/37, **mbtmp3.3**/3, **MS3.6**/1, **Ms1 3.6**/1, **ms1mx2.6**/22, **Error ellipse: s-maj=155.5km s-min=26.9km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.27	164	P	P	18 10 20.4	-1.3
	0.7nm,0.4s,baz=343,slow=11,SNR=21						
ASAR	Alice Springs	26.72	167	P	P	18 10 55.0	+1.3
	0.3nm,0.8s,baz=346,slow=11,SNR=4.1						
USRK	Ussuriysk Ar.	41.74	5	LR	LR	18 34 22.8	
	comp=Z,64nm,18.4s,baz=332,slow=42						
MKAR	Makanchi Array	59.02	325	P	P	18 15 14.1	0.0
	0.2nm,0.6s,baz=116,slow=6.6,SNR=4.1						

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*IDC **09** 18:15:00.5±0.9, 44°.50N×28°.20W, h0^{km}, mb3.8/14, mb1 3.9/16, mb1mx3.8/43, mbtmp3.8/16, ML4.0/2, MS3.8/17, Ms1 3.8/17, ms1mx3.6/41, Error ellipse: s-maj=28.1km s-min=14.6km az=16.0*

*NEIC **09** 18:15:02.2±1.4, 44°.7N±0°.2×27°.9W±0°.2, h10^{km}±1^{km}, mb4.3/9, Error ellipse: s-maj=28.2km s-min=18.7km az=193.0*

ISC 09 18:15:03.9±0.8, **44°.6N**±0°.2×**28°.04W**±0°.09, **h20**^{km}**, n37,** σ**1ˢ.03**/32, **mb4.0**/17, **MS3.8**/16, **Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESDC	Sonseca Array	18.49	97	P	Pn	18 19 21.0	+2.1
	0.2nm,0.3s,baz=286,slow=6.5,SNR=3.5						
ESDC				LR	LR	18 25 27.0	
	comp=Z,166nm,18.7s,baz=310,slow=34						
ESDC	Sonseca Array	18.49	97	P	P	18 19 16.8	-2.0
EKA	Eskdalemuir Ar	19.18	47	P	Pn	18 19 28.3	+1.3
	baz=251,slow=7.0,SNR=6.0						
MDT	Midelt	21.66	115	LR	LR	18 26 42.6	
	comp=Z,80nm,19.2s,baz=3.0,slow=32						
DAVOX	Davos/Dischmat	26.42	72	LR	LR	18 29 43.1	
	comp=Z,292nm,21.2s,baz=346,slow=33						
SCHQ	Schefferville	26.77	306	P	P	18 20 41.4	-0.8
	5.3nm,1.0s,baz=98,slow=8.9,SNR=4.9						
SCHQ				LR	LR	18 30 04.7	
	comp=Z,188nm,18.3s,baz=6.5,slow=34						
SCHQ	Schefferville	26.77	306	P	P	18 20 41.8	-0.5
SCHQ				IAmb	IAmb	18 20 47.3	
	comp=Z,6.1nm,1.0s						
NOA	NORSAR Array B	28.31	40	LR	LR	18 29 59.9	
	comp=Z,203nm,18.9s,baz=280,slow=32						
GERES	GERESS Array B	28.67	66	P	P	18 21 00.3	+1.0
	comp=Z,0.3nm,0.6s,baz=291,slow=12,SNR=2.6						
GERES				LR	LR	18 31 32.8	
	comp=Z,204nm,18.6s,baz=325,slow=34						
GERES	GERESS Array B	28.67	66	P	P	18 20 58.0	-1.3
FRB	Frobisher Bay	29.75	324	P	P	18 21 07.7	-0.9
	comp=Z,2.1nm,0.9s,baz=105,slow=8.8,SNR=5.7						
FRB				LR	LR	18 30 12.0	
	comp=Z,141nm,18.3s,baz=51,slow=31						
AKASG	Malin Array Be	38.22	60	P	P	18 22 22.1	-0.1
	comp=Z,0.8nm,0.8s,baz=277,slow=8.4,SNR=3.6						
TORD	Torodi Ar. Bea	40.31	132	P	P	18 22 39.6	-0.4
	comp=Z,4.4nm,0.8s,baz=323,slow=8.2,SNR=19						
TORD				LR	LR	18 38 17.1	
	comp=Z,198nm,19.3s,baz=345,slow=35						
TORD	Torodi Ar. Bea	40.31	132	P	P	18 22 39.8	-0.1
RES	Resolute Bay	41.50	338	P	P	18 22 48.2	-0.9
	comp=Z,0.8nm,0.9s,baz=65,slow=9.2,SNR=2.7						
RES	Resolute Bay	41.50	338	P	P	18 22 50.4	+1.4
DBIC	Dimbokro	42.84	145	LR	LR	18 38 43.5	
	comp=Z,135nm,21.1s,baz=347,slow=33						
ULM	Lac du Bonnet	44.81	302	LR	LR	18 39 55.4	
	comp=Z,166nm,21.8s,baz=29,slow=33						
MGMO	Mountain Grove	48.02	285	P	P	18 23 43.4	+1.8
YKA	Yellowknife Ar	50.25	323	P	P	18 23 57.7	-0.5
	comp=Z,0.4nm,0.8s,baz=68,slow=9.1,SNR=4.8						
YKA				PcP	PcP	18 25 15.9	-1.0
	comp=Z,0.4nm,0.7s,baz=73,slow=4.3,SNR=3.8						
YKA				LR	LR	18 41 28.6	
	comp=Z,118nm,18.6s,baz=0.0,slow=32						
INK	Inuvik	54.66	334	P	P	18 24 31.5	+0.7
	comp=Z,2.1nm,1.0s,baz=18,slow=9.6,SNR=2.3						
INK				LR	LR	18 46 46.5	
	comp=Z,68nm,19.1s,baz=7.5,slow=35						
PDAR	Pinedale Array	56.57	299	P	P	18 24 45.0	-0.3
	comp=Z,0.3nm,0.7s,baz=61,slow=16,SNR=2.5						
PDAR				LR	LR	18 47 17.2	
	comp=Z,146nm,19.6s,baz=42,slow=34						
ROSC	El Rosal	56.58	240	LR	LR	18 45 36.2	
	comp=Z,53nm,21.1s,baz=200,slow=32						
DUG	Dugway, Tooele	60.03	298	P	P	18 25 09.9	+0.5
DUG				IAmb	IAmb	18 25 15.8	
	comp=Z,3.7nm,1.0s						
TXAR	Lajitas Array	60.27	283	P	P	18 25 10.3	-0.9
	comp=Z,1.5nm,0.9s,baz=64,slow=5.8,SNR=10						
TXAR				LR	LR	18 49 34.6	
	comp=Z,95nm,21.9s,baz=0.0,slow=34						
TXAR	Lajitas Array	60.27	283	P	P	18 25 11.6	+0.4
TX31	Lajitas Ar. Si	60.28	283	P	P	18 25 11.9	+0.7
TX31				IAmb	IAmb	18 25 20.9	
	comp=Z,1.3nm,0.9s						
ILAR	Eielson Array	61.04	335	P	P	18 25 16.6	+1.0
	comp=Z,0.8nm,1.0s,baz=43,slow=6.0,SNR=3.6						
ILAR				PcP	PcP	18 25 58.0	-0.7
	comp=Z,0.6nm,0.8s,baz=11,slow=3.0,SNR=5.2						
ILAR	Eielson Array	61.04	335	P	P	18 25 14.0	-1.6
BDFB	Brasilia	62.64	202	LR	LR	18 47 32.9	
	comp=Z,71nm,21.4s,baz=96,slow=31						
ZALV	Zalesovo Beam	66.41	36	P	P	18 25 50.9	-0.3
	comp=Z,0.4nm,0.5s,baz=305,slow=11,SNR=3.8						
ZALV				LR	LR	18 53 44.3	
	comp=Z,154nm,19.7s,baz=320,slow=35						
MK31	Makanchi Array	70.26	43	P	P	18 26 14.8	-0.8
MK31				IAmb	IAmb	18 26 22.8	
	comp=Z,3.6nm,1.4s						
MKAR	Makanchi Array	70.26	43	P	P	18 26 16.4	+0.8
	comp=Z,0.8nm,0.7s,baz=321,slow=5.8,SNR=9.2						
MKAR	Makanchi Array	70.26	43	P	P	18 26 15.3	-0.2
SONM	Songino Array	79.64	29	P	P	18 27 10.7	+0.9
	comp=Z,1.7nm,0.9s,baz=312,slow=6.9,SNR=14						
SONM	Songino Array	79.64	29	P	P	18 27 09.4	-0.4
ASAR	Alice Springs	154.44	41	PKPab	PKPab	18 35 17.1	-0.3
	comp=Z,0.6nm,0.8s,baz=321,slow=3.2,SNR=4.8						

IDC 09 18:22:04.2±3.2, **17°.23S**×**175°.10W, h207**^{km}±38^{km}, **mb3.4**/4, **mb1 3.6**/5, **mb1mx3.3**/26, **mbtmp4.0**/5, **Error ellipse: s-maj=149.9km s-min=25.4km az=139.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.60	45	P	Pn	18 23 13.8	0.0
	5.9nm,0.3s,baz=205,slow=5.4,SNR=5.7						
AFI				S	S	18 24 04.1	-4.2
	22nm,0.3s,baz=82,slow=22,SNR=13						
STKA	Stephens Creek	41.72	241	P	P	18 29 33.3	+0.3
	1.7nm,0.6s,baz=76,slow=9.3,SNR=6.8						
WRA	Warramunga Arr	47.86	258	P	P	18 30 21.2	-0.5
	0.3nm,0.3s,baz=97,slow=7.2,SNR=14						
ASAR	Alice Springs	48.01	253	P	P	18 30 22.6	-0.1
	4.8nm,0.7s,baz=92,slow=8.0,SNR=102						
ILAR	Eielson Array	84.55	12	P	P	18 34 13.6	0.0
	0.4nm,0.9s,baz=224,slow=6.6,SNR=5.5						

IDC 09 18:22:34.4±2.3, **60°.55S**×**47°.42W, h0**^{km}**, mb3.7**/2, **mb1 3.8**/2, **mb1mx3.6**/22, **mbtmp3.7**/2, **Error ellipse: s-maj=107.9km s-min=40.8km az=21.0, Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	24.43	314	P	P	18 27 54.5	-0.1
	1.0nm,0.5s,baz=170,slow=11,SNR=5.4						
TORD	Torodi Ar. Bea	83.19	48	P	P	18 35 02.2	0.0
	0.4nm,0.7s,baz=194,slow=5.5,SNR=2.4						
ILAR	Eielson Array	145.11	312	PKPbc	PKPbc	18 42 10.8	-0.7
	0.5nm,0.5s,baz=150,slow=1.4,SNR=8.9						
MKAR	Makanchi Array	148.06	92	PKPbc	PKPbc	18 42 20.0	-0.8
	0.4nm,0.6s,baz=226,slow=1.7,SNR=6.2						

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*ARE **09** 18:26:19±3.4, 16°.0S±0°.1×73°.1W±0°.2, h37^{km}±9^{km}, ML4.2, mb4.2/3(NEIC), Error ellipse: s-maj=0.0km s-min=0.0km az=149.0*

NEIC 09 18:26:18.8±3.6, **16°.3S**±0°.2×**73°.2W**±0°.1, **h76**^{km}±27^{km}, **Error ellipse: s-maj=27.8km s-min=15.4km az=211.0, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNMC	Minye Minye	4.45	129		Pn	18 27 24.4	+0.3
MNMC				Sn	Sn	18 28 13.5	-1.4
PB11	IPOC Station P	4.83	136		Pn	18 27 29.1	0.0
PB11				Sn	Sn	18 28 21.3	-2.5
GO01	Chusmiza	5.08	132		Pn	18 27 33.4	+0.5
PB01	IPOC Station P	5.89	144		Pn	18 27 43.9	+0.4
PB01					Sn	18 28 45.9	-3.8
PB04	IPOC Station P	6.65	155	Pn	Pn	18 27 54.2	+0.1
PB04					Sn	18 29 06.1	-2.5
LVC	Limon Verde	7.47	148	Pn	Pn	18 28 06.6	+1.2
PB10	IPOC Station P	7.59	161	Pn	Pn	18 28 06.7	0.0
GO02	Mina Guanaco	9.44	159	Pn	Pn	18 28 33.0	+0.8
ROSC	El Rosal	21.05	357	P	P	18 30 55.8	-1.3
ROSC				IAmb	IAmb	18 31 13.6	
	comp=Z,6.9nm,1.0s						
RUSC	La Rusia	22.07	0	P	P	18 31 06.6	-1.5
PAYG	Puerto Ayora	22.90	311	P	P	18 31 17.9	+1.5
PAYG				IAmb	IAmb	18 31 18.9	
	comp=Z,17nm,0.9s						

IDC 09 18:37:51.5±1.7, **1°.62N**×**123°.41E, h0**^{km}**, mb3.3**/3, **mb1 3.6**/3, **mb1mx3.3**/40, **mbtmp3.3**/3, **Error ellipse: s-maj=190.8km s-min=25.1km az=62.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.96	154	P	P	18 43 07.2	-0.5
	0.3nm,0.4s,baz=331,slow=11,SNR=6.5						
ASAR	Alice Springs	27.13	159	P	P	18 43 37.9	+1.3
	0.2nm,0.6s,baz=342,slow=7.3,SNR=4.5						
MKAR	Makanchi Array	57.46	328	P	P	18 47 41.7	-0.6
	0.1nm,0.4s,baz=111,slow=7.9,SNR=3.0						

IDC 09 18:53:41.7±1.5, **4°.93S**×**149°.98E, h0**^{km}**, mb3.2**/3, **mb1 3.6**/4, **mb1mx3.3**/33, **mbtmp3.4**/4, **ML3.9**/1, **Error ellipse: s-maj=61.5km s-min=20.2km az=146.0, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.14	73	Pn	Pn	18 54 19.4	+0.7
	38nm,0.3s,baz=155,slow=1.9,SNR=42						
KRVT				Sn	Sb	18 54 48.6	+0.2
	26nm,0.3s,baz=94,slow=22,SNR=4.9						
WRA	Warramunga Arr	21.32	224	P	P	18 58 31.9	+1.6
	0.8nm,0.8s,baz=54,slow=10,SNR=5.9						
ASAR	Alice Springs	24.23	218	P	P	18 59 00.1	-0.4
	0.8nm,0.8s,baz=54,slow=9.4,SNR=11						
ILAR	Eielson Array	83.35	23	P	P	19 06 09.4	-1.0
	0.2nm,0.6s,baz=246,slow=5.6,SNR=4.7						

MAN 09 18:57:09.8, 6°.37N×126°.17E, h10^{km}**, mb4.4, ML3.2, MS3.0, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.53	240	*e*P	Pg	18 57 20.3	+0.3
DDMP				*e*S	Sb	18 57 29.7	+0.9
MATI	Mati	0.58	9	*e*P	Pb	18 57 21.5	-0.4
MATI				*e*S	Sn	18 57 33.6	+0.1
GSPH	General Santos	1.25	257	⇓*i*P	Pn	18 57 31.0	-2.4
GSPH				*i* S	Sb	18 57 46.1	-3.5
SKMP	Bagumbayan, Su	1.62	275	*e*P	Pn	18 57 38.1	-0.3

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*NEIC **09** 18:58:30.6±1.8, 19°.22N±0°.06×66°.76W±0°.04, h35^{km}±54^{km}, Error ellipse: s-maj=9.5km s-min=5.0km az=185.0*

*RSPR **09** 18:58:33.8, 19°.07N×66°.84W, h48^{km}±4^{km}, MD2.7/11*

ISC 09 18:58:31.3±1.9, **19°.1N**±0°.1×**66°.85W**±0°.05, **h29**^{km}**, n34,** σ**0ˢ.55**/41, **10C-1D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.71	200	⇑*e*P	Pn	18 58 45.5	+0.1
AGPR	Aguadilla, PR	0.71	200	*e*S	Sn	18 58 56.0	+0.7
AGPR	Aguadilla, PR	0.71	200		Pn	18 58 45.5	+0.1
AGPR					Sn	18 58 56.0	+0.7
EMPR	Esperanza - Ma	0.72	155	⇑*e*P	Pn	18 58 46.2	+0.7
EMPR	Esperanza - Ma	0.72	155	*e*S	Sn	18 58 55.4	-0.3
EMPR	Esperanza - Ma	0.72	155		Pn	18 58 46.2	+0.7
EMPR					Sn	18 58 55.4	-0.3
AOPR	Arecibo Observ	0.79	173	⇑*e*P	Pn	18 58 46.8	+0.3
AOPR	Arecibo Observ	0.79	173	*e*S	Sn	18 58 56.9	-0.5
AOPR	Arecibo Observ	0.79	173		Pn	18 58 46.8	+0.3
AOPR					Sn	18 58 56.9	-0.5
IDE	Isla Desecheo	0.95	218	⇓*e*P	Pb	18 58 49.2	0.0
IDE	Isla Desecheo	0.95	218	*e*S	Sn	18 59 01.3	0.0
IDE	Isla Desecheo	0.95	218		Pb	18 58 49.2	0.0
IDE					Sn	18 59 01.3	0.0
LSP	Las Mesas	0.98	193	⇑*e*P	Pn	18 58 49.0	-0.2
LSP	Las Mesas	0.98	193		Pn	18 58 49.0	-0.2
OBIP	Obispado Ponce	1.11	168	⇑*e*P	Pn	18 58 50.7	-0.2
OBIP	Obispado Ponce	1.11	168	*e*S	Sn	18 59 04.5	-0.8
OBIP	Obispado Ponce	1.11	168		Pn	18 58 50.7	-0.2
OBIP					Sn	18 59 04.5	-0.8
CRPR	Cabo Rojo, PR	1.15	192	⇑*e*P	Pn	18 58 51.7	+0.3
CRPR	Cabo Rojo, PR	1.15	192	*e*S	Sn	18 59 05.4	-0.8
CRPR	Cabo Rojo, PR	1.15	192		Pn	18 58 51.7	+0.3
CRPR					Sn	18 59 05.4	-0.8
MLPR	Magueyes Islan	1.18	189	⇑*e*P	Pb	18 58 52.9	-0.1
MLPR	Magueyes Islan	1.18	189		Pb	18 58 52.9	-0.1
SJG	San Juan	1.22	147	Pn	Pn	18 58 51.7	-0.7
IGPR	InterUniversit	1.36	149	⇑*e*P	Pn	18 58 55.1	+0.8
PDPR	Patillas Dam,	1.36	145	⇑*e*P	Pn	18 58 55.0	+0.7
PDPR	Patillas Dam,	1.36	145		Pn	18 58 55.0	+0.7
CUPR	Culebra, Puert	1.70	119	⇑*e*P	Pn	18 58 59.4	+0.4
CUPR	Culebra, Puert	1.70	119	*e*S	Sn	18 59 19.2	-0.5
CUPR	Culebra, Puert	1.70	119		Pn	18 58 59.4	+0.4
CUPR					Sn	18 59 19.2	-0.5
DR12	Loma Pena Alta	2.42	262	Pn	Pn	18 59 08.7	-0.2
SDD	Santo Domingo	2.98	257	Pn	Pn	18 59 16.1	-0.5
SDDR	Presa de Saban	4.20	269	Pn	Pn	18 59 33.7	+0.3
GRGR	Grenville	8.57	144	Pn	Pn	19 00 34.5	+0.9

URIC	Uribia, Colomb	8.90	215	Pn	Pn	19 00 39.2	+1.3

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*IDC **09** 18:58:37.7±1.5, 8°.21S×121°.86E, h0^{km}, mb3.7/2, mb1 3.9/5, mb1mx3.6/36, mbtmp3.7/5, ML3.8/3, Error ellipse: s-maj=147.6km s-min=22.9km az=58.0*

*DJA **09** 18:58:41.8±0.4, 8°S±3°×12°2E±°, h10^{km}±3^{km}, M4.2/12, mb4.7/1, MLv3.9/12*

ISC 09 18:58:42.6±0.8**, 8°.46S**±0°.05×**121°.89E**±0°.04**, h31^{km}, n16,** σ**2^{s}.00**/24**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDFI	Ende, Flores	0.35	214	P	Pb	18 58 49.7	-1.2
EDFI				S	Sb	18 58 54.8	-1.7
MMRI	Maumere	0.39	117	P	Pn	18 58 52.4	+0.3
MMRI				S	Sn	18 58 59.6	+1.2
WSI	Waingapu	1.98	232	P	Pn	18 59 14.7	+0.8
WSI				S	Sn	18 59 39.6	+1.9
BASI	Baing, Sumba	2.17	216	P	Pn	18 59 17.0	+0.4
BASI				S	Sn	18 59 44.2	+1.7
SOEI	Soe	2.68	119	P	Pb	18 59 29.3	-0.7
WBSI	Waikabubak, Su	2.73	244	P	Pn	18 59 24.4	+0.1
BBSI	Bau Bau	3.03	13	P	Pn	18 59 30.1	+1.7
BKSI	Bulukumba	3.58	331	P	Pn	18 59 34.2	-1.7
PLAI	Plampang	4.08	265	P	Pn	18 59 43.3	+0.4
PLAI				S	Sn	19 00 30.2	+0.6
BNSI	Bone	4.40	336	P	Pn	18 59 48.6	+1.3
SPSI	Sidrap Palu	4.94	335	P	Pn	18 59 54.9	+0.2
FITZ	Fitzroy Crossi	10.25	160	Pn	Pn	19 01 08.5	+0.9
	0.5nm,0.3s,baz=359,slow=9.4,SNR=14						
FITZ				Sn	Sn	19 03 03.1	+1.5
	0.4nm,0.3s,baz=189,slow=15,SNR=3.7						
WRA	Warramunga Arr	16.60	135	Pn	Pn	19 02 32.4	-0.8
	0.3nm,0.3s,baz=320,slow=14,SNR=16						
WRA				Sn	Sn	19 05 31.8	-4.8
	0.2nm,0.3s,baz=304,slow=23,SNR=5.8						
ASAR	Alice Springs	19.00	144	P	Pn	19 03 04.7	+1.9
	0.8nm,0.3s,baz=314,slow=10.0,SNR=54						
ASAR				S	Sn	19 06 29.9	-5.0
	0.1nm,0.3s,baz=312,slow=21,SNR=6.1						
STKA	Stephens Creek	29.64	145	P	P	19 04 47.5	+2.0
	1.4nm,0.7s,baz=314,slow=10,SNR=2.9						
MKAR	Makanchi Array	65.32	331	P	P	19 09 20.1	-1.7
	0.3nm,0.8s,baz=126,slow=7.7,SNR=3.6						

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*ANF **09** 18:59:47.8±0.1, 36°.09N×117°.85W, h3^{km}±1^{km}, ML3.2/35, Error ellipse: s-maj=1.1km s-min=1.0km az=77.0*

*IASPEI **09** 18:59:48.1±1.0, 36°.10N±0°.02×117°.85W±0°.02, h8^{km}±6^{km}, Error ellipse: s-maj=2.9km s-min=2.7km az=81.0, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*SCEDC **09** 18:59:48.5, 36°.10N×117°.84W, h2^{km}*

*PAS **09** 18:59:48.5±1.2, 36°.105N±0°.009×117°.85W±0°.02, h3^{km}±6^{km}, ML3.1/161, Error ellipse: s-maj=2.9km s-min=1.3km az=93.0*

*NEIC **09** 18:59:48.4±1.3, 36°.09N±0°.01×117°.81W±0°.02, h2^{km}±7^{km}, Error ellipse: s-maj=2.8km s-min=1.6km az=107.0*

ISC 09 18:59:48.5±0.9**, 36°.10N**±0°.01×**117°.84W**±0°.02**, h4^{km}**±7^{km}**, n92,** σ**0^{s}.82**/128**, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MFS	McCloud Flat S	0.02	316		Pg	18 59 49.2	-0.3
JRC2	Joshua Ridge	0.12	169		Pg	18 59 50.9	0.0
JRC2					Sg	18 59 53.0	+0.4
VPEM	Volcano Peak E	0.15	174		Pg	18 59 51.5	0.0
MPMC	Manual Prospec	0.28	99	P	Pg	18 59 54.0	0.0
	baz=279,SNR=1000						
MPMC				S	Sg	18 59 58.3	+0.5
	baz=279						
WCHM	Chimney Peak	0.29	222		Pg	18 59 53.9	-0.3
CWC	Cottonwood Cre	0.39	330		Pg	18 59 55.7	-0.4
CWC	Cottonwood Cre	0.39	330	P	Pg	18 59 55.6	-0.4
	baz=151						
CWC				S	Sg	19 00 01.2	0.0
	baz=151						
CGO	Cerro Gordo	0.45	3		Pg	18 59 56.8	-0.4
CGO					Sg	19 00 03.4	+0.3
WORM	Onyx Ranch	0.52	219		Pg	18 59 58.1	-0.4
WORM					Sg	19 00 05.1	-0.2
WHFM	Hanning Flat	0.58	226		Sg	19 00 07.1	0.0
WBSM	Bird Springs	0.61	204		Sg	19 00 08.6	+0.3
LRMC	Laurel Mtn Rad	0.63	169		Pg	19 00 00.5	-0.1
LRMC	Laurel Mtn Rad	0.63	169	P	Pg	19 00 00.4	-0.2
	baz=348,SNR=139						
LRMC				S	Sg	19 00 09.3	+0.5
	baz=348						
ISA	Isabella, Lake	0.68	230		Pg	19 00 01.0	-0.5
ISA	Isabella, Lake	0.68	230		Sg	19 00 10.2	0.0
ISA	Isabella, Lake	0.68	230	P	Pg	19 00 01.0	-0.5
	baz=49,SNR=277						
ISA				S	Sg	19 00 10.2	0.0
	baz=49						
WASM	Alta Sierra Ca	0.69	238		Pg	19 00 01.4	-0.3
CCCA	Chr Cany lake	0.69	146		Sg	19 00 11.7	+1.0
JFS	Joseph F. Stat	0.76	170		Pg	19 00 02.7	-0.4
JFS					Sg	19 00 13.0	+0.1
TMO	Tin Mountain	0.78	26		Pg	19 00 02.9	-0.6
QSM	Queen of Sheba	0.80	100		Pg	19 00 03.5	-0.2
FURC	Furnace Creek,	0.87	65		Pg	19 00 05.1	0.0
FURC	Furnace Creek,	0.87	65	P	Pg	19 00 05.2	+0.1
	baz=245,SNR=69						
FURC				S	Sg	19 00 17.2	+0.9
	baz=245						
GRAC	Grapevine Rang	0.97	23	P	Pg	19 00 06.5	-0.5
	baz=203,SNR=25						
GRAC				S	Sg	19 00 20.5	+0.9
	baz=203						
GVN	Grapevine	0.98	24		Pg	19 00 06.8	-0.5
TIN	Tinemaha, Big	1.00	342		Pg	19 00 07.2	-0.5
TIN	Tinemaha, Big	1.00	342	P	Pg	19 00 07.3	-0.4
	baz=162,SNR=34						
TIN				S	Sg	19 00 21.4	+0.7
	baz=162						
VES	Vestal, Richgr	1.05	256		Pg	19 00 07.8	-0.7
VES					Sg	19 00 22.0	-0.1
VES	Vestal, Richgr	1.05	256	P	Pg	19 00 08.0	-0.5
	baz=75,SNR=104						
VES				S	Sg	19 00 21.9	-0.1
	baz=75						
TEJ	El Tejon	1.11	219		Pg	19 00 08.7	-1.1
RCTC	Rector, Farmer	1.16	281		Pg	19 00 09.5	-1.1
GSC	Goldstone, Bar	1.16	133		Pg	19 00 09.9	-0.7
GSC	Goldstone, Bar	1.16	133	P	Pg	19 00 09.9	-0.7
	baz=314,SNR=405						
GSC				S	Sg	19 00 25.6	-0.1
	baz=314						
EDW2	Edwards Air Fo	1.23	186		Sg	19 00 26.7	-1.1
EDW2	Edwards Air Fo	1.23	186	P	Pg	19 00 10.7	-1.2
	baz=5.7,SNR=248						
EDW2				S	Sg	19 00 27.0	-0.8
	baz=5.7						
HYS	Haystack Butte	1.25	170		Pg	19 00 11.7	-0.8
ARVC	Arvin	1.27	220	P	Pg	19 00 11.9	-0.8
	baz=39,SNR=203						
ARVC				S	Sg	19 00 28.9	-0.2
	baz=39						
VOG	Valley Oaks Go	1.27	280		Sg	19 00 27.6	-1.7
VOG	Valley Oaks Go	1.27	280	P	Pg	19 00 11.8	-1.0
	baz=100,SNR=7.5						
VOG				S	Sg	19 00 28.9	-0.3
	baz=100						
BAKC	Calstate	1.28	234		Pg	19 00 12.0	-1.0
SHOC	Shoshone, Teco	1.28	99		Pg	19 00 11.8	-1.2
SHOC	Shoshone, Teco	1.28	99	P	Pg	19 00 11.8	-1.2
	baz=280,SNR=46						
SHOC				S	Sn	19 00 30.9	+0.1
	baz=280						
AMDNV	Amargosa	1.30	74		Pg	19 00 12.4	-1.1
RRX	Edison Barstow	1.40	151	P	Pn	19 00 14.5	-0.3
	baz=331						
RRX				S	Sn	19 00 35.3	+1.6
	baz=331						
SBB	Saddle Back Bu	1.41	180		Pn	19 00 14.0	-1.0
ALV	Alvord Mountai	1.43	136		Pn	19 00 14.1	-1.1
TPNV	Topopah Spring	1.53	56		Pn	19 00 16.3	-0.5
TPNV	Topopah Spring	1.53	56	P	Pn	19 00 16.3	-0.5
	baz=237,SNR=106						
TPNV				S	Sb	19 00 37.7	+0.3
	baz=237						
OSI	Osito Audit: C	1.65	206		Pn	19 00 18.2	-0.1
OSI	Osito Audit: C	1.65	206	Pb	Pb	19 00 19.1	-0.4
	baz=26,SNR=12						
OSI				Sb	Sg	19 00 41.8	+0.3
	baz=26						
TUQ	Turquoise Moun	1.69	113		Pn	19 00 17.7	-1.2
TUQ	Turquoise Moun	1.69	113	P	Pn	19 00 17.7	-1.2
	baz=294,SNR=94						
TUQ				Sb	Sg	19 00 42.9	+0.1
	baz=294						
MLAC	Mammoth, Mammo	1.72	333	Pb	Pn	19 00 20.2	+0.8
	baz=152,SNR=35						
MLAC				Sb	Sg	19 00 43.8	0.0
	baz=152						
FRI	Friant	1.75	301		Pn	19 00 19.6	0.0
HEC	Hector,Ludlow	1.76	136	Pn	Pn	19 00 18.8	-1.1
	baz=316,SNR=45						
HEC				Pb	Pb	19 00 20.8	-0.7
	baz=316						
HEC				Sb	Sg	19 00 45.0	-0.1
	baz=316						
MCSM	Casa Diablo Ho	1.77	331		Pb	19 00 21.1	-0.6
OMMB	Old Mammoth Mi	1.77	329		Pn	19 00 20.8	+0.6
MDPB	Devils Postpil	1.82	327		Pn	19 00 21.7	+0.8
BFSC	Mount Baldy Ra	1.86	175	Pg	Pb	19 00 23.4	+0.3
	baz=355,SNR=19						
BFSC				S	Sb	19 00 46.6	-0.2
	baz=355						
MWC	Mount Wilson	1.88	186		Pn	19 00 21.4	-0.2
DECC	Green Verdugo	1.89	193	Pg	Pb	19 00 23.9	+0.4
	baz=12,SNR=8.1						
DECC				Sb	Sb	19 00 47.8	+0.3
	baz=12						
SMMC	Simmler	1.93	247	Pb	Pn	19 00 22.9	+0.8
	baz=65						
SMMC				Sb	Sb	19 00 48.4	-0.1
	baz=65						
BBRC	Big Bear Solar	1.98	158	Sb	Sg	19 00 52.3	+0.2
	baz=338						
PKM	Mcpherson Peak	2.02	234	Pb	Pn	19 00 24.3	+0.9
	baz=52,SNR=13						
PKM				Sb	Sb	19 00 51.2	-0.2
	baz=52						
MMIM	Miami Mountain	2.02	311		Pb	19 00 24.9	-0.9
BCH	Branch Mountai	2.05	244		Pn	19 00 24.7	+0.9
SHPR	Sheep Range	2.20	79		Pn	19 00 26.0	+0.1
GMRC	Granite Mounta	2.21	126	P	Pn	19 00 24.4	-1.6
	baz=307,SNR=20						
BLG	Laguna Peak, P	2.23	207	Pg	Pb	19 00 29.8	+0.4
	baz=26,SNR=5.2						
SBC	Santa Barbara	2.26	223		Pn	19 00 27.2	+0.7
SBC	Santa Barbara	2.26	223	Sb	Sg	19 00 59.8	-1.2
	baz=42						
NV11	Mina Array Sit	2.34	354		Pn	19 00 28.7	+0.9
NVAR	Mina Array Bea	2.35	351		Pb	19 00 30.9	-0.6
PMPB	Monarch Peak	2.40	274		Pn	19 00 30.4	+1.7
POB	Polly Butte	2.52	162		Pn	19 00 30.4	0.0
MURC	Murrieta	2.55	168	P	Pn	19 00 30.5	-0.1
	baz=348						
MURC				Sb	Sb	19 01 07.5	+0.9
	baz=348						
RYN	Ryan	2.58	348		Pb	19 00 35.9	+0.5
BELC	Belle Mtn. Jos	2.58	144	P	Pn	19 00 30.6	-0.6
	baz=325,SNR=7.4						
PFO	Pinyon Flats O	2.73	155		Pn	19 00 32.8	-0.4
PFO	Pinyon Flats O	2.73	155	Pn	Pn	19 00 32.7	-0.5
	baz=336,SNR=7.8						
PFO				Pg	Pb	19 00 39.3	+1.3
	baz=336						
PFO				Sb	Sg	19 01 15.4	-0.7
	baz=336						
XPFO	Pion Flat	2.73	155		Pn	19 00 32.8	-0.4
CIS	Catalina Islan	2.73	190	Pg	Pb	19 00 39.4	+1.4
	baz=9.7						
CIS				Sb	Sb	19 01 13.9	+2.1
	baz=9.7						
R11A	Troy Canyon, C	2.87	38	P	Pn	19 00 36.2	+1.0
	baz=219,SNR=9.0						
R11A				Sb	Sg	19 01 19.2	-1.6
	baz=219						
IRM	Iron Mountain	2.94	131	Pn	Pn	19 00 34.4	-1.5
	baz=312						
IRM				Pg	Pg	19 00 44.1	-0.6
	baz=312						
BC3	Big Chuckawall	3.13	141	P	Pn	19 00 37.5	-1.2
	baz=322						
W13A	Hualapai Mount	3.37	106		Pn	19 00 41.6	-0.5
MONP2	Monument Peak	3.41	160		Pn	19 00 42.6	0.0
MONP2	Monument Peak	3.41	160	Pb	Pb	19 00 51.3	+1.7
	baz=340						
MONP2				Sb	Sg	19 01 35.2	-2.7
	baz=340						
VCNR	Virginia City	3.50	336		Pn	19 00 42.0	-1.8
BAR	Barrett	3.55	164		Pn	19 00 44.2	-0.1
Y12C	Blythe	3.59	130		Pn	19 00 43.7	-1.2
LCMT	Little Creek M	3.81	75		Pn	19 00 49.0	+0.9

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*NEIC **09** 19:11:14.8±3.0, 9°.19N±0°.06×61°.35W±0°.04, h56^{km}±10^{km}, mb4.3/6, Error ellipse: s-maj=9.5km s-min=5.6km az=160.0*

*IDC **09** 19:11:14.2±3.7, 9°.38N×61°.34W, h31^{km}±27^{km}, mb3.6/8, mb1 4.0/13, mb1mx3.7/48, mbtmp3.9/13, ML3.8/5, MS3.0/4, Ms1 3.0/4, ms1mx2.8/35, Error ellipse: s-maj=28.9km s-min=16.7km az=47.0*

*TRN **09** 19:11:17.6, 9°.43N×61°.47W, h78^{km}, MD4.3*

ISC 09 19:11:14.7±0.8**, 9°.20N**±0°.04×**61°.38W**±0°.05**, h56^{km}**±9^{km}**, n76,** σ**2^{s}.64**/94**, mb4.0**/10**, 1C-1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPP	Pointe-a-Pierr	1.11	356	⇑*i*P	Pn	19 11 36.4	+2.3
TPP				*e*S	Sn	19 11 57.4	+8.9
TBH	Brigand Hill	1.31	13	*e*P	Pn	19 11 38.3	+1.5
TBH				*e*S	Sn	19 11 59.9	+6.6
TRN	Trinidad (W)	1.44	359	*e*P	Pn	19 11 39.2	+0.8
TRN	Trinidad (W)	1.44	359	*e*	Pn	19 11 49.1	+11
TRN				*e*S	Sn	19 11 55.0	-1.4
GUIV	Guiria	1.66	330	*e*P	Pn	19 11 41.7	+0.2
GUIV				*e*S	Sn	19 12 00.6	-1.2
TOSP	Speyside	2.25	22	*e*S	Sn	19 12 14.4	-1.6
TOSP	Speyside	2.25	22		Pn	19 11 49.7	+0.3
TOSP				Sn	Sn	19 12 13.9	-2.0
GRGR	Grenville	2.93	355	*e*P	Pn	19 11 58.8	-0.1
GRGR				*e*S	Sn	19 12 30.2	-2.6
GRGR	Grenville	2.93	355		Pn	19 11 59.1	+0.3
GRHS	Sauteurs	3.02	355	*e*P	Pn	19 12 00.5	+0.5
GRHS				*e*S	Sn	19 12 31.4	-3.5
GRSS	Sisters	3.09	356	*e*P	Pn	19 12 01.2	+0.2
GRSS				*e*S	Sn	19 12 32.4	-4.3
PLCV	Puerto La Cruz	3.31	287		Pn	19 12 05.6	+1.5
PLCV					Pn	19 12 15.3	+11
PLCV					Sn	19 12 42.1	-0.1
PCRV	Puerto La Cruz	3.36	287	Pn	Pn	19 12 05.6	+0.9
	5.4nm,0.3s,baz=97,slow=3.6,SNR=59						
PCRV				Pg		19 12 15.3	
	9.5nm,0.3s,baz=93,slow=11,SNR=21						
PCRV				Sn	Sn	19 12 42.1	-1.3
	41nm,0.3s,baz=53,slow=4.4,SNR=4.3						
PCRV				Lg	Lg	19 12 59.0	
	68nm,0.3s,baz=286,slow=17,SNR=9.9						
SVB	Belmont	4.05	2	*e*P	Pn	19 12 14.6	+0.4
SVB				*e*S	Sn	19 12 56.3	-4.1
SVB	Belmont	4.05	2		Pn	19 12 14.8	+0.6
SVCV	St. Vincent, C	4.05	3	*e*P	Pn	19 12 14.4	+0.1
SVCV				*e*S	Sn	19 12 56.6	-3.9
SVV	Soufriere Volc	4.10	2	*e*P	Pn	19 12 15.3	+0.4
SVV				*e*S	Sn	19 12 57.2	-4.3
SSV	Crater Summit	4.11	2	*e*P	Pn	19 12 15.2	+0.1
SSV				*e*S	Sn	19 12 57.2	-4.7
SFAN	Fancy Village	4.16	3	*e*P	Pn	19 12 16.4	+0.7
SFAN				*e*S	Sn	19 12 59.3	-3.9
BCHC	Barbados, Cave	4.27	23	*e*P	Pn	19 12 18.5	+1.3
BCHC				*e*S	Sn	19 13 03.1	-2.6
BBGH	Gun Hill	4.31	24	*e*P	Pn	19 12 19.1	+1.4
BBGH				*e*S	Sn	19 13 03.6	-3.1
BBGH	Gun Hill	4.31	24	Pn	Pn	19 12 19.0	+1.3
MCLT	Moule a Chique	4.50	5	*e*P	Pn	19 12 20.2	-0.2
MCLT	Moule a Chique	4.50	5	*e*S	Sn	19 13 08.2	-3.3
MCLT	Moule a Chique	4.50	5	Pn	Pn	19 12 20.4	-0.1
SLB	Belfond	4.61	4	*e*P	Pn	19 12 22.7	+0.7
SLB	Belfond	4.61	4	*e*S	Sn	19 13 10.6	-3.7
SLAC	Saint Lucia, A	4.69	6	*e*P	Pn	19 12 23.4	+0.3
SLAC	Saint Lucia, A	4.69	6	*e*S	Sn	19 13 11.3	-4.9
SLBI	Saint Lucia, B	4.81	5	*e*P	Pn	19 12 24.5	-0.1
SLBI	Saint Lucia, B	4.81	5	*e*S	Sn	19 13 14.5	-4.5
FDF	Fort de France	5.51	2	*e*P	Pn	19 12 34.0	-0.2
FDF	Fort de France	5.51	2	*e*	Sn	19 13 33.2	-3.0
FDF	Fort de France	5.51	2		Pn	19 12 34.5	+0.3
BBL	Barber's Block	6.29	359	*e*P	Pn	19 12 45.7	+0.8
BBL	Barber's Block	6.29	359	*e*S	Sn	19 13 49.5	-6.0
BAUV	El Baul	6.59	268	*e*P	Pn	19 12 49.4	+0.4
BAUV	El Baul	6.59	268	*e*S	Sn	19 13 59.3	-3.5
MLYT	Lee's Yard	7.52	354	*e*P	Pn	19 13 02.7	+0.9
SKI	Saint Kitts	8.20	351	Pn	Pn	19 13 12.4	+1.4
ANWB	Willy Bob	8.43	357	*e*P	Pn	19 13 14.9	+0.7
SDV	Santo Domingo	9.15	269	Pn	Pn	19 13 23.9	-0.4
	7.0nm,0.3s,baz=79,slow=8.5,SNR=38						
SDV				Sn	Sn	19 14 59.7	-6.3
	8.9nm,0.3s,baz=46,slow=20,SNR=14						
SDV	Santo Domingo	9.15	269	*e*P	Pn	19 13 23.4	-0.8
SOCV	Socops	9.42	265	*e*P	Pn	19 13 27.0	-0.8
MDP	Montagnes des	9.57	115	Pn	Pn	19 13 29.5	-0.3
	3.3nm,0.3s,baz=319,slow=14,SNR=45						
MDP				Sn	Sn	19 15 10.4	-5.7
	7.6nm,0.3s,baz=54,slow=16,SNR=8.3						
MDP				LR	LR	19 16 56.5	
	comp=Z,72nm,19.2s,baz=346,slow=36						
STVI	Saint Thomas	9.74	339		Pn	19 13 31.9	-0.2
CUPR	Culebra, Puert	9.82	338	Pn	Pn	19 13 32.5	-0.7
PTGA	Pitinga	9.96	172	Pn	Pn	19 13 36.3	+1.0
	1.5nm,0.3s,baz=335,slow=22,SNR=12						
PTGA				Sn	Sn	19 15 23.9	-1.7
	4.1nm,0.3s,baz=82,slow=17,SNR=12						
PTGA				Lg	Lg	19 16 25.4	
	10nm,0.3s,baz=262,slow=22,SNR=22						
PTGA				LR	LR	19 17 48.0	
	comp=Z,53nm,19.5s,baz=28,slow=39						
PTGA	Pitinga	9.96	172		Pn	19 13 36.8	+1.5
PTGA					Sn	19 15 23.6	-2.0
SJG	San Juan	10.00	333	Pn	Pn	19 13 32.2	-3.4
	0.3nm,0.3s,baz=138,slow=12,SNR=1.7						
SJG				LR	LR	19 18 26.6	
	comp=Z,58nm,18.4s,baz=74,slow=44						
PAMC	Pamplona, Colo	11.36	261	⇓*e*P	Pn	19 13 55.2	+0.5
OCAC	Ocana	11.85	266	*e*P	Pn	19 14 05.6	+4.5
RUSC	La Rusia	12.06	255	*e*P	Pn	19 14 03.2	-1.2
RUSC	La Rusia	12.06	255	Pn	Pn	19 14 05.3	+1.0
DR12	Loma Pena Alta	12.29	322	Pn	Pn	19 14 08.8	+1.7
ZARC	Zaragoza, Cauc	13.45	264	*e*P	Pn	19 14 21.7	-1.1
NORC	Norcasia	13.86	256	*e*P	Pn	19 14 28.4	-0.1
GUY2C	Guyana, Caldas	14.43	255	*e*P	Pn	19 14 37.7	+1.3
SIV	San Ignacio	25.03	179	P	P	19 16 38.3	+4.6
	0.4nm,0.5s,baz=13,slow=14,SNR=3.8						
GO01	Chusmiza	29.70	195	P	P	19 17 14.3	-1.8
Y58A	Scranton	29.79	328	P	P	19 17 13.4	-2.9
PB11	IPOC Station P	29.91	196	P	P	19 17 15.5	-2.1
PB11				IAmb	IAmb	19 17 15.6	
	comp=Z,4.8nm,0.9s						
S39A	Bolivar	40.42	320	P	P	19 18 48.0	+0.4
S39A				IAmb	IAmb	19 18 48.8	
	comp=Z,5.0nm,0.6s						
TXAR	Lajitas Array	44.35	303	P	P	19 19 21.2	+1.4
	comp=Z,0.1nm,0.4s,baz=113,slow=8.7,SNR=4.3						
TXAR	Lajitas Array	44.35	303	P	P	19 19 21.4	+1.6
SCHQ	Schefferville	45.72	356	P	P	19 19 32.8	+2.6
	comp=Z,2.6nm,0.5s,baz=174,slow=9.4,SNR=12						
SCHQ	Schefferville	45.72	356	P	P	19 19 33.6	+3.4
SCHQ				IAmb	IAmb	19 19 37.6	
	comp=Z,2.4nm,0.9s						
LPIG	La Paz	48.91	294	LR	LR	19 40 35.5	
	comp=Z,55nm,19.2s,baz=7.5,slow=36						
ULM	Lac du Bonnet	49.90	332	P	P	19 20 02.2	-0.3
	comp=Z,1.8nm,0.5s,baz=139,slow=7.0,SNR=6.8						
ULM	Lac du Bonnet	49.90	332	IAmb	IAmb	19 20 03.4	
	comp=Z,2.2nm,0.6s						
PDAR	Pinedale Array	53.69	317	P	P	19 20 32.0	+0.8
	comp=Z,0.5nm,0.7s,baz=115,slow=10,SNR=5.6						
PDAR	Pinedale Array	53.69	317	P	P	19 20 32.4	+1.2
GCMT	Greycliff	55.03	320	P	P	19 20 42.5	+1.7
NVAR	Mina Array Bea	58.57	310	P	P	19 21 07.9	+1.8
	comp=Z,0.8nm,0.6s,baz=103,slow=6.7,SNR=7.9						
YKA	Yellowknife Ar	65.48	336	P	P	19 21 52.5	+0.9
	comp=Z,1.0nm,0.7s,baz=110,slow=7.7,SNR=12						
ILAR	Eielson Array	79.83	334	P	P	19 23 19.1	+2.2
	comp=Z,0.4nm,0.6s,baz=92,slow=4.9,SNR=10						

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*ANF **09** 19:13:44.8±1.5, 40°.64N×124°.09W, h15^{km}±11^{km}, ML2.3/4, Error ellipse: s-maj=10.1km s-min=5.0km az=54.0*

*NEIC **09** 19:13:45.8±1.6, 40°.61N±0°.03×124°.11W±0°.04, h21^{km}±10^{km}, Error ellipse: s-maj=5.8km s-min=3.7km az=133.0*

*NCEDC **09** 19:13:45.9±2.5, 40°.58N±0°.01×124°.09W±0°.02, h19^{km}±2^{km}, Md2.5/25, Error ellipse: s-maj=2.7km s-min=1.7km az=118.0*

ISC 09 19:13:45.7±1.0**, 40°.61N**±0°.02×**124°.09W**±0°.05**, h19^{km}**±3^{km}**, n37,** σ**1^{s}.00**/45**, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMPM	Mount Pierce	0.19	187		Pg	19 13 50.8	+0.1
KMPM					Sg	19 13 54.9	+0.8
JCC	Jacoby Creek,	0.22	12	Pg	Pg	19 13 51.5	+0.5
JCC				Sg	Sg	19 13 56.2	+1.6
KCTM	Capetown	0.23	235		Pg	19 13 51.6	+0.4
KCTM					Sg	19 13 56.4	+1.5
KCRM	Chalk Rock	0.27	131		Pb	19 13 52.2	+0.2
KHMM	Horse Mountain	0.38	45		Pb	19 13 54.6	+0.4
KHMM	Horse Mountain	0.38	45	Sg	Sb	19 14 01.4	+1.7
KCSM	Cold Springs	0.44	99		Pb	19 13 55.6	+0.4
KMRM	Mail Ridge	0.48	143		Pb	19 13 56.1	+0.4
KMRM	Mail Ridge	0.48	143	Sg	Sb	19 14 04.1	+1.6
KRPM	Rodgers	0.55	5		Pg	19 13 57.1	+0.2
KPPM	Pickett Peak	0.61	115		Pg	19 13 58.3	+0.3
KHBM	Hayfork Bally	0.66	85		Pb	19 13 58.6	-0.2
KBSM	Bell Springs	0.79	151		Pb	19 14 00.3	-0.5
KOMM	Orleans Mounta	0.83	35		Pb	19 14 01.1	-0.5
KRMB	Red Mountain	0.93	8		Pb	19 14 02.3	-1.0
LBPM	Beegum Peak	0.96	107		Pb	19 14 02.7	-1.2
KCPM	Cahto Peak	1.00	157		Pb	19 14 03.3	-1.2
LGPM	Granite Peak	1.00	72		Pb	19 14 03.6	-1.0
O02D	Mt. Diablo Mer	1.08	113		Pb	19 14 04.5	-1.5
O02D	Mt. Diablo Mer	1.08	113	P	Pb	19 14 04.5	-1.5
	baz=293,SNR=50						
O02D				S	Sn	19 14 20.8	+0.2
	baz=293						
KFPM	Farley Peak	1.09	152		Pb	19 14 04.3	-1.8
N02D	Trinity Center	1.11	70		Pn	19 14 05.1	-1.3
N02D	Trinity Center	1.11	70	P	Pn	19 14 05.2	-1.3
	baz=250,SNR=44						
WDC	Whiskeytown Da	1.18	91	Pn	Pn	19 14 05.7	-1.6
LBKM	Bonanza King	1.18	66		Pn	19 14 06.3	-1.1
M02C	Callahan	1.22	50		Pn	19 14 07.0	-1.0
M02C	Callahan	1.22	50	P	Pn	19 14 06.9	-1.0
	baz=229,SNR=104						
M02C				S	Sn	19 14 24.6	+0.6
	baz=229						
YBH	Yreka Blue Hor	1.53	42	Pn	Pn	19 14 11.3	-1.0
LSHM	Sage Hen Hill	1.57	82		Pn	19 14 12.0	-0.6
L02E	Cave Junction	1.59	13	P	Pn	19 14 12.4	-0.6
	baz=193,SNR=12						
L02E				S	Sn	19 14 32.5	-0.5
	baz=193						
LGBM	Gray Butte	1.61	62		Pn	19 14 13.5	0.0
O03E	Paynes Creek	1.77	99	P	Pn	19 14 15.5	0.0
	baz=280						
LBFM	Black Fox Moun	1.82	65		Pn	19 14 16.4	+0.1
M04C	Macdoel	2.06	55	P	Pn	19 14 19.4	-0.2
	baz=235						
L04D	Klamath Falls	2.10	39	P	Pn	19 14 21.0	+1.0
	baz=220,SNR=46						
L04D				S	Sb	19 14 47.5	-1.5
	baz=220						
K02D	Willamette Mer	2.11	9	P	Pn	19 14 19.7	-0.5
	baz=189,SNR=17						
K02D				S	Sn	19 14 45.1	-0.9
	baz=189						
HUMO	Hull Mountain	2.17	23	Pn	Pn	19 14 20.9	-0.1

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*NORS **09** 19:20:25.6±0.0, 41°.49N×43°.88E, h9^{km}, MPVA3.1*

*DDA **09** 19:20:25.5, 41°.53N×43°.63E, h4^{km}±1^{km}, ML1.9*
*TIF **09** 19:20:25.1, 41°.50N×43°.66E, h14^{km}±1^{km}*
*ISK **09** 19:20:25.3, 41°.52N×43°.64E, h8^{km}, ML2.4/6*
ISC 09 19:20:25.7±0.8**, 41°.52N**±0°.02×**43°.66E**±0°.02**, h10**^{km}±7^{km}**, n40, σ0.^{s}46**/75**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
AKH	Akhalkalaki	0.16	229	P	Pg	19 20 29.4	0.0
AKH				S	Sg	19 20 31.7	-0.2
AKH	Akhalkalaki	0.16	229	PG	Pg	19 20 29.4	0.0
AKH				SG	Sg	19 20 31.8	-0.2
AKH	Akhalkalaki	0.16	229	*e*Pg	Pg	19 20 29.4	0.0
AKH				*e*Sg	Sg	19 20 31.7	-0.2
BGD	Bogdanovka	0.26	190	P	Pg	19 20 31.2	+0.2
BGD				S	Sg	19 20 34.7	+0.1
TRLG	Trialeti	0.34	86	P	Pg	19 20 32.9	+0.5
TRLG				S	Sg	19 20 37.9	+1.0
KZRT	Kazreti	0.57	103	P	Pg	19 20 36.9	0.0
KZRT				S	Sg	19 20 44.6	+0.2
KZRT	Kazreti	0.57	103	*e*Pg	Pg	19 20 36.9	0.0
KZRT				*e*Sg	Sg	19 20 44.6	+0.2
KZRT	Kazreti	0.57	103	*i* P	Pg	19 20 36.8	0.0
EPOS	Posof	0.70	269	*i* P	Pg	19 20 39.3	+0.1
EPOS				*i* S	Sg	19 20 48.8	+0.5
EPOS				IAML		19 20 54.0	
	comp=E,20nm,0.4s						
EPOS				IAML		19 20 55.0	
	comp=N,41nm,0.4s						
EAK	Akyaka	0.83	183	*i* P	Pg	19 20 41.1	-0.6
EAK				*i* S	Sg	19 20 52.5	-0.1
EAK				IAML		19 20 58.0	
	comp=N,50nm,0.4s						
EAK				IAML		19 21 02.0	
	comp=E,48nm,0.7s						
TBLG	Delisi	0.84	75	P	Pb	19 20 42.0	-0.4
TBLG				S	Sb	19 20 53.6	-0.1
TBLG	Delisi	0.84	75	PG	Pb	19 20 42.0	-0.4
TBLG				SG	Sb	19 20 53.9	+0.2
TBLG	Delisi	0.84	75	*e*Pg	Pb	19 20 42.0	-0.4
TBLG				*e*Sg	Sb	19 20 53.6	-0.1
TBLG	Delisi	0.84	75	*i* P	Pb	19 20 42.1	-0.2
TBLG				*i* S	Sb	19 20 53.9	+0.2
TBLG				IAML		19 20 55.0	
	comp=E,20nm,0.2s						
TBLG				IAML		19 20 56.0	
	comp=N,17nm,0.6s						
BTNK	Botanikuri	0.87	79	P	Pb	19 20 42.6	-0.4
BTNK				S	Sb	19 20 54.7	0.0
BTNK	Botanikuri	0.87	79	*e*Pg	Pb	19 20 42.6	-0.4
BTNK				*e*Sg	Sb	19 20 54.7	0.0
BTNK	Botanikuri	0.87	79	*i* P	Pb	19 20 42.6	-0.4
BTNK				*i* S	Sb	19 20 54.8	0.0
BTNK				IAML		19 20 55.0	
	comp=N,67nm,0.2s						
BTNK				IAML		19 20 57.0	
	comp=E,32nm,0.1s						
TKB	Tkibuli	0.97	330	P	Pb	19 20 44.6	0.0
TKB				S	Sb	19 20 58.1	+0.6
ONI	Oni	1.08	352	P	Pn	19 20 46.6	-0.4
ONI				S	Sn	19 21 01.9	-0.2
ONI	Oni	1.08	352	PG	Pn	19 20 46.6	-0.4
ONI				SG	Sn	19 21 01.8	-0.3
ONI	Oni	1.08	352	*e*Pg	Pn	19 20 46.6	-0.4
ONI				*e*Sg	Sn	19 21 01.9	-0.2
GUDG	Gudauri	1.13	33	P	Pg	19 20 47.1	-0.3
GUDG				S	Sn	19 21 02.7	-0.7
GUDG	Gudauri	1.13	33	*e*Pg	Pb	19 20 47.2	-0.2
GUDG				*e*Sg	Sn	19 21 03.7	+0.3
ZEI	Tsey	1.28	8	*e*Pg	Pg	19 20 50.1	-0.2
ZEI				*e*Sg	Sn	19 21 09.2	+1.9
DIGR	Digorskoe uzhe	1.38	358	*e*Pg	Pg	19 20 52.1	-0.2
DIGR				*e*Sg	Sg	19 21 11.8	+1.6
DAGI	Agillar	1.38	252	*i* P	Pb	19 20 51.6	-0.2
DAGI				*i* S	Sg	19 21 10.4	+0.2
DAGI				IAML		19 21 11.0	
	comp=N,20nm,0.3s						
DAGI				IAML		19 21 12.0	
	comp=E,20nm,0.5s						
BATM	Batumi	1.48	274	P	Pn	19 20 52.6	+0.3
BATM				S	Sb	19 21 12.0	0.0
BATM	Batumi	1.48	274	PN	Pb	19 20 52.7	-0.5
BATM				SN	Sb	19 21 11.8	-0.2
BATM	Batumi	1.48	274	*e*Pg	Pg	19 20 53.6	-0.4
BATM				*e*Sg	Sg	19 21 14.0	+0.9
BATM	Batumi	1.48	274	*i* P	Pn	19 20 52.6	+0.3
BATM				*i* S	Sb	19 21 11.9	0.0
DBOC	Borcka	1.51	264	*i* P	Pb	19 20 53.5	-0.2
DBOC				*i* S	Sn	19 21 12.5	0.0
DBOC				IAML		19 21 17.0	
	comp=E,20nm,0.5s						
BCA	Borcka	1.53	268	PN	Pb	19 20 53.6	-0.5
DBAD	Bademkaya	1.56	252	*i* P	Pb	19 20 54.7	-0.1
DBAD				*i* S	Sb	19 21 14.4	-0.2
DBAD				IAML		19 21 17.0	
	comp=E,26nm,0.5s						
DBAD				IAML		19 21 17.0	
	comp=N,34nm,0.4s						
DDEM	Demirkent	1.57	247	*i* P	Pb	19 20 54.8	-0.1
DDEM				*i* S	Sb	19 21 15.3	+0.5
DDEM				IAML		19 21 17.0	
	comp=E,48nm,0.3s						
DDEM				IAML		19 21 19.0	
	comp=N,63nm,0.4s						
TASB	TASBURUN-IGDIR	1.59	164	PN	Pb	19 20 55.0	-0.3
GNI	Garni	1.60	149	PN	Pb	19 20 55.3	-0.1
ARNR	Ardon	1.73	15	*e*Pg	Pg	19 20 58.4	-0.4
ARNR				*e*Sg	Sg	19 21 21.5	+0.3
NEY	Neytrino	1.86	339	*e*Pg	Pb	19 20 59.8	-0.1
NEY				*e*Sg	Sg	19 21 24.9	-0.7
AGRB	Hanur-Agry	2.00	195	PN	Pn	19 21 00.3	+0.5
BTLR	Botlikh	2.23	58	*e*Pg	Pb	19 21 05.3	-0.8
BTLR				*i* Sg	Sb	19 21 33.5	-0.2

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*GCG **09** 19:32:31.4±0.4, 12°.54N×88°.38W, h122^{km}±230^{km}, MD4.2*
*IDC **09** 19:32:31.9±0.7, 13°.58N×88°.28W, h220^{km}±7^{km}, mb3.3/8, mb1 3.6/13, mb1mx3.4/41, mbtmp4.0/13, Error ellipse: s-maj=22.1km s-min=8.4km az=45.0*
*SNET **09** 19:32:31.1±1.9, 13°.28N×88°.35W, h220^{km}±19^{km}, ML4.2*
*INET **09** 19:32:32.2, 13°.58N×88°.16W, h225^{km}, ML4.2*
*NEIC **09** 19:32:32.5±2.2, 13°.56N±0°.09×88°.33W±0°.07, h221^{km}±7^{km}, mb4.3/28, Error ellipse: s-maj=13.8km s-min=9.4km az=207.0*
*UCR **09** 19:32:33.3±1.8, 13°.26N×88°.48W, h205^{km}±14^{km}, MD4.3, ML4.0, mb4.3(NEIC)*
ISC 09 19:32:31.8±0.6**, 13°.52N**±0°.07×**88°.35W**±0°.05**, h218**^{km}±5^{km}**, n97, σ1.^{s}42**/106**, mb4.1**/13**, 1D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
PACA	Pacayal	0.06	156	*e*P	Pn	19 33 01.0	+0.7
PACA	Pacayal	0.06	156	*e*P	Pn	19 33 01.0	+0.7
LCY	Lacayo	0.11	152	*e*P	Pn	19 33 00.9	+0.6
LCY	Lacayo	0.11	152	*e*P	Pn	19 33 00.9	+0.6
VSM	San Miguel	0.12	143	*e*P	Pn	19 33 00.9	+0.4
VSM	San Miguel	0.12	143	*e*P	Pn	19 33 00.9	+0.4
COEB	Comit de Eme	0.18	262	*e*P	Pn	19 33 01.0	+0.7
COEB	Comit de Eme	0.18	262	*e*P	Pn	19 33 01.0	+0.7
JUCU	Jucuar¡n	0.28	160	*e*P	Pn	19 33 00.7	+0.2
JUCU	Jucuar¡n	0.28	160	*e*P	Pn	19 33 00.7	+0.2
FAGO	Alcalda de S	0.29	54	*i* P	Pn	19 33 01.0	+0.6
FAGO				*e*S	S	19 33 22.9	+0.1
FAGO	Alcalda de S	0.29	54	*i* P	Pn	19 33 01.0	+0.6
FAGO				*e*S	S	19 33 22.9	+0.1
LCND	La Caada	0.49	115	*e*P	Pn	19 33 01.8	+0.8
LCND				IAML		19 33 02.5	
	comp=Z,2µm,0.3s						
LCND				*e*S	S	19 33 24.2	+0.6
LCND	La Caada	0.49	115	*e*P	Pn	19 33 01.8	+0.8
LCND				IAML		19 33 02.5	
	comp=Z,2µm,0.3s						
LCND				*e*S	S	19 33 24.2	+0.6
COEG	Centro de Oper	0.53	281	*e*P	Pn	19 33 01.5	+0.4
COEG	Centro de Oper	0.53	281	*e*P	Pn	19 33 01.5	+0.4
CNCH	Conchagua	0.56	116	*e*P	Pn	19 33 01.9	+0.6
CNCH				*e*P		19 33 01.9	
CNCH	Conchagua	0.56	116	*e*P	Pn	19 33 01.9	+0.6
LFRS	El Faro	0.70	278	*e*P	Pn	19 33 02.4	+0.5
LBRS	Las Brisas	0.71	288	*e*P	Pn	19 33 02.8	+0.9
LFU	La Fuente	0.78	287	*e*P	Pn	19 33 03.0	+0.8
LFU	La Fuente	0.78	287	*e*P	Pn	19 33 03.0	+0.8
SNET	Serv Nac Est T	0.87	281		Pn	19 33 03.1	+0.4
BOQS	Boqueron	0.93	283	*e*P	Pn	19 33 03.4	+0.2
LALI	Alcalda de L	0.95	268	*e*P	Pn	19 33 02.8	-0.2
LALI	Alcalda de L	0.95	268	*e*P	Pn	19 33 02.8	-0.2
TGUH	Tegucigalpa,Un	1.17	63		Pn	19 33 05.5	+0.8
CEVE	Cerro Verde	1.28	284	*e*P	Pn	19 33 06.1	+0.5
CEVE				IAML		19 33 10.6	
	comp=Z,975nm,0.4s						
CEVE	Cerro Verde	1.28	284	*e*P	Pn	19 33 06.1	+0.5
CEVE				IAML		19 33 10.6	
	comp=Z,975nm,0.4s						
RTR	El Retiro	1.31	287	*e*P	Pn	19 33 06.6	+0.8
RTR	El Retiro	1.31	287	*e*P	Pn	19 33 06.6	+0.8
MRL	Marmol	2.02	320	*e*P	Pn	19 33 13.6	+1.5
MRL	Marmol	2.02	320	*e*P	Pn	19 33 13.6	+1.5
IXG	Ixpaco	2.13	288	⇓*i*P	Pn	19 33 14.6	+1.5
COPN	Copaltepe	2.17	128	*e*S	S	19 33 42.7	-2.9
COPN	Copaltepe	2.17	128	*e*S	S	19 33 42.7	-2.9
NBG	Las Nubes	2.21	299	*e*P	Pn	19 33 16.5	+2.5
PCG	Pacaya	2.36	292	*e*P	Pn	19 33 17.3	+1.7
APG	El Apazote	2.52	306	P	Pn	19 33 18.9	+1.6
	comp=Z,22nm,0.3s,baz=132,slow=5.2,SNR=86						
APG				S	S	19 33 54.0	+1.3
	baz=348,slow=19,SNR=7.3						
FUG	Fuego 3	2.59	291	*e*P	Pn	19 33 19.6	+1.6
FUG				*e*P		19 33 19.9	
FUG				*e*S	S	19 33 57.3	+3.5
STG3	Santiaguito 3,	3.34	291	*e*P	Pn	19 33 28.3	+1.8
NY14	Universidad de	3.97	136	*i* P	Pn	19 33 36.2	+2.3
CUI	Cuipilapa	4.22	132	*i* P	Pn	19 33 39.1	+2.0
GUAI	GUAI	4.26	139	*i* P	Pn	19 33 39.4	+1.9
GUAI				*i* S	S	19 34 27.1	-1.9
JTS	Las Juntas de	4.62	134	P	Pn	19 33 43.1	+1.2
	comp=Z,13nm,0.3s,baz=11,slow=16,SNR=38						
JTS				S	S	19 34 36.5	-0.7
	comp=Z,20nm,0.3s,baz=353,slow=21,SNR=18						
JTS	Las Juntas de	4.62	134		Pn	19 33 43.5	+1.5
TEIG	Tepich	6.67	1	P	Pn	19 34 08.1	+0.3
	comp=Z,2.8nm,0.3s,baz=314,slow=0.0,SNR=18						
TEIG	Tepich	6.67	1		Pn	19 34 08.7	+0.8
CMIG	Matias Romero	7.24	300	P	Pn	19 34 14.9	-0.3
	comp=Z,0.7nm,0.3s,baz=146,slow=9.9,SNR=7.3						
CMIG				S	S	19 35 29.9	-7.7
	comp=Z,1.0nm,0.3s,baz=13,slow=15,SNR=11						
MTDJ	Mount Denham	11.40	64	P	P	19 35 15.8	+1.9
URIC	Uribia, Colomb	16.07	95	P	P	19 36 04.3	-1.1
656A	Willston	16.66	18	Pn	Pn	19 36 13.2	0.0
RUSC	La Rusia	16.84	115		Pn	19 36 15.8	-0.2
SDDR	Presa de Saban	17.25	69	Pn	Pn	19 36 20.5	+0.2
SDDR				IAmb	IAmb	19 36 23.8	
	comp=Z,20nm,1.4s						
BANI	BANI	17.96	72	P	Pn	19 36 27.4	-1.2
SDV	Santo Domingo	17.98	103	P	P	19 36 27.2	+0.7
	comp=Z,1.8nm,0.3s,baz=294,slow=5.1,SNR=16						
SDV	Santo Domingo	17.98	103	P	P	19 36 26.9	+0.3
DR12	Loma Pena Alta	18.95	71	P	P	19 36 38.4	+1.5
152A	Waverly Hall	19.34	9	P	P	19 36 42.3	+1.4
152A				IAmb	IAmb	19 36 45.0	
	comp=Z,7.0nm,0.5s						
Z50A	Ashland	19.77	6	P	P	19 36 46.5	+1.1
Z50A				IAmb	IAmb	19 36 49.3	
	comp=Z,5.5nm,0.8s						
GOGA	Godfrey	20.29	12	P	P	19 36 51.7	+0.7
GOGA				IAmb	IAmb	19 37 09.9	
	comp=Z,14nm,1.5s						
Y49A	Blount Mountai	20.32	5	P	P	19 36 51.2	-0.2
Y49A				IAmb	IAmb	19 36 55.3	
	comp=Z,7.2nm,1.2s						
Y52A	Lilburn	20.62	10	P	P	19 36 54.0	-0.6
Y52A				IAmb	IAmb	19 36 56.5	
	comp=Z,8.6nm,1.1s						
TX31	Lajitas Ar. Si	21.20	320	P	P	19 37 00.5	-0.3
TX32	Lajitas Array	21.20	320	P	P	19 37 01.9	+1.1
TXAR	Lajitas Array	21.20	320	P	P	19 37 01.9	+1.1
	comp=Z,0.9nm,0.6s,baz=143,slow=9.1,SNR=11						
TXAR	Lajitas Array	21.20	320	P	P	19 37 01.4	+0.7
MIAR	Mount Ida	21.46	348	P	P	19 37 03.9	+0.7
MIAR				IAmb	IAmb	19 37 05.9	
	comp=Z,8.0nm,0.8s						
TKL	Tuckaleechee C	22.42	10	P	P	19 37 12.5	+0.2
	comp=Z,3.8nm,0.5s,baz=188,slow=14,SNR=6.2						
TKL	Tuckaleechee C	22.42	10	IAmb	IAmb	19 37 14.1	
	comp=Z,11nm,1.2s						
X34A	Smith Ranch, M	22.68	339	P	P	19 37 15.4	+0.7
U40A	Yellville	23.09	351	P	P	19 37 18.6	+0.1
U40A				IAmb	IAmb	19 37 19.7	
	comp=Z,6.3nm,1.1s						
FNO	Franklin	23.13	341	P	P	19 37 18.9	+0.1
WMOK	Wichita Mounta	23.14	338	P	P	19 37 19.5	+0.7
HHAR	Hobbs	23.21	348	P	P	19 37 20.7	+1.2
HHAR				IAmb	IAmb	19 37 21.8	
	comp=Z,4.3nm,0.6s						
T47A	Sharon Grove	23.39	3	P	P	19 37 20.9	-0.2
S39A	Bolivar	24.47	350	P	P	19 37 31.3	+0.4
Q54A	Coxs Mills	26.22	13	P	P	19 37 47.0	+0.4
Q54A				IAmb	IAmb	19 38 00.5	
	comp=Z,12nm,1.4s						
PDAR	Pinedale Array	34.42	332	P	P	19 38 59.5	+0.6
	comp=Z,0.2nm,0.4s,baz=128,slow=9.6,SNR=4.5						
AGMN	Agassiz Nation	35.23	351	P	P	19 39 04.7	-0.7
AGMN				IAmb	IAmb	19 39 05.5	
	comp=Z,10nm,1.3s						
REDW	Red Top Meadow	35.48	331	P	P	19 39 09.8	+1.9
ULM	Lac du Bonnet	37.14	352	P	P	19 39 19.9	-1.6
	comp=Z,3.0nm,0.5s,baz=169,slow=8.3,SNR=9.6						
ULM	Lac du Bonnet	37.14	352	P	P	19 39 20.1	-1.4
MCMT	McKenzie Canyo	37.53	331	P	P	19 39 27.3	+2.1
SCHQ	Schefferville	44.52	18	P	P	19 40 20.4	-1.3
	comp=Z,2.7nm,0.6s,baz=208,slow=6.5,SNR=5.6						
SCHQ	Schefferville	44.52	18	P	P	19 40 20.2	-1.5
YKA	Yellowknife Ar	52.35	345	P	P	19 41 20.4	-0.7
	comp=Z,0.8nm,0.5s,baz=147,slow=6.6,SNR=15						
YKA				pP	pP	19 42 11.8	+2.3
	comp=Z,0.3nm,0.8s,baz=141,slow=8.0,SNR=5.5						
PLCA	Paso Flores	56.45	164	P	P	19 41 51.7	+0.7
	comp=Z,1.6nm,0.7s,baz=5.1,slow=11,SNR=3.5						
RES	Resolute Bay	61.26	358	P	P	19 42 21.3	-2.2
ILAR	Eielson Array	64.69	336	P	P	19 42 45.5	-0.7
	comp=Z,0.2nm,0.5s,baz=158,slow=5.2,SNR=9.9						
ILAR	Eielson Array	64.69	336	P	P	19 42 45.8	-0.5
MKAR	Makanchi Array	119.38	7	PKP	PKPdf	19 50 53.0	-2.5
	comp=Z,0.1nm,0.3s,baz=345,slow=3.2,SNR=3.9						
STKA	Stephens Creek	130.89	239	PKP	PKPdf	19 51 18.1	+0.3
	comp=Z,0.9nm,0.5s,baz=342,slow=6.4,SNR=4.5						
WRA	Warramunga Arr	138.71	255	PKP	PKPdf	19 51 32.6	-0.2
	comp=Z,1.5nm,0.5s,baz=92,slow=2.6,SNR=27						
WRA	Warramunga Arr	138.71	255		PKiKP	19 51 34.1	-0.9
ASAR	Alice Springs	138.84	249	PKhKP	PKPpre	19 51 25.1	
	comp=Z,0.2nm,0.3s,baz=106,slow=3.5,SNR=3.9						
ASAR				PKP	PKPdf	19 51 33.5	+0.5
	comp=Z,0.6nm,0.6s,baz=98,slow=1.9,SNR=9.8						
CMAR	Chiang Mai Arr	147.42	347	PKPbc	PKPbc	19 51 50.0	-0.8
	comp=Z,0.2nm,0.3s,baz=349,slow=3.7,SNR=4.0						

MAN 09 19:37:59.4, 10°.09N×124°.23E, h14^{km}, mb3.8, ML2.5, MS2.0, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
LLP	Lapu-Lapu	0.35	311	⇓*i*P	Pg	19 38 06.8	+0.3
LLP				*i* S	Sb	19 38 12.3	-0.5
TBP	Tagbilaran	0.54	223	*e*P	Pg	19 38 08.6	-1.4
TBP				*i* S	Sg	19 38 15.5	-1.7
MSLP	Maasin	0.62	86	*e*P	Pb	19 38 12.2	+0.1
MSLP				*e*S	Sn	19 38 23.4	-0.2
SNPH	Sibulan	1.23	233	*e*P	Pn	19 38 21.2	-1.1
SNPH				*e*S	Sb	19 38 38.4	+0.2
GUIM	Jordan	1.70	288	*e*P	Pn	19 38 28.4	-0.4
GUIM				*e*S	Sb	19 38 51.6	-0.2
BUKP	Musuan	2.34	159	*e*P	Pn	19 38 38.4	+0.8
BUKP				*e*S	Sg	19 39 13.6	-1.2

MAN 09 19:39:28.1, 10°.06N×124°.20E, h13^{km}, mb4.4, ML3.3, MS3.1, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
LLP	Lapu-Lapu	0.34	319	⇓*i*P	Pg	19 39 35.4	+0.4
LLP				*i* S	Sb	19 39 41.2	-0.2
TBP	Tagbilaran	0.49	222	*e*P	Pg	19 39 35.8	-1.9
TBP				*i* S	Sg	19 39 42.2	-2.1
MSLP	Maasin	0.66	83	*e*P	Pb	19 39 41.4	0.0
MSLP				*e*S	Sn	19 39 53.3	-0.1
SNPH	Sibulan	1.18	233	*i* P	Pn	19 39 48.5	-1.9
SNPH				*i* S	Sb	19 40 02.5	-3.2
GUIM	Jordan	1.68	290	*e*P	Pn	19 39 57.2	+0.1
GUIM				*e*S	Sb	19 40 19.5	-0.4
BUKP	Musuan	2.33	158	*e*P	Pn	19 40 06.8	+0.6
BUKP				*e*S	Sg	19 40 41.5	-1.5

IDC 09 20:04:03.4±7.4**, 15°.43S×172°.99W, h0**^{km}**, mb3.8**/2**, mb1 4.1**/2**, mb1mx3.5**/37**, mbtmp3.8**/2**, Error ellipse: s-maj=349.1km s-min=25.9km az=141.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	1.91	38	Pn	Pn	20 04 36.1	-1.3
	17nm,0.3s,baz=317,slow=4.6,SNR=12						
AFI				Sn	Sn	20 04 55.7	-6.5
	90nm,0.3s,baz=75,slow=20,SNR=18						
H11S2	WAKE ISLAND Hy	39.20	329	T	T	20 52 53.6	
	baz=149,slow=76						
H11S3	WAKE ISLAND Hy	39.21	329	T	T	20 52 53.7	
	baz=149,slow=76						
H11S1	WAKE ISLAND Hy	39.22	329	T	T	20 52 53.7	
	baz=149,slow=76						
H11N3	WAKE ISLAND Hy	40.14	330	T	T	20 54 03.5	
	baz=149,slow=76						
H11N1	WAKE ISLAND Hy	40.14	330	T	T	20 54 03.9	
	baz=149,slow=76						
H11N2	WAKE ISLAND Hy	40.16	330	T	T	20 54 04.6	
	baz=149,slow=76						
WRA	Warramunga Arr	50.23	257	P	P	20 13 01.1	-0.6
	0.5nm,0.5s,baz=93,slow=6.6,SNR=19						
ASAR	Alice Springs	50.48	252	P	P	20 13 03.0	-0.7
	1.3nm,0.6s,baz=84,slow=8.4,SNR=22						
BRTR	Keskin Array B	146.43	321	PKPbc	PKPab	20 23 48.5	+0.7
	0.6nm,0.7s,baz=90,slow=2.6,SNR=4.2						

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*NEIC **09** 20:06:41.6±1.0, 43°.82N±0°.05×105°.24W±0°.02, h0^{km}±2^{km}, ML3.4/40, Error ellipse: s-maj=9.0km s-min=3.1km az=9.0*
*IDC **09** 20:06:41.2±1.8, 43°.91N×105°.54W, h0^{km}, mb3.8/3, mb1 3.7/8, mb1mx3.5/44, mbtmp3.5/8, ML3.0/4, Error ellipse: s-maj=58.7km s-min=8.1km az=146.0*
ISC 09 20:06:40.9±0.8**, 43°.84N**±0°.06×**105°.25W**±0°.07**, h0**^{km}**, n40, σ0.^{s}96**/40**, mb3.6**/3**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.92	72		Pb	20 06 59.4	-0.5
K22A	Casper	1.51	219		Pn	20 07 07.8	-1.6
K22A				IAML		20 07 32.5	
	comp=E,304nm,0.6s						
K22A				IAML		20 07 33.1	
	comp=N,406nm,0.3s						
RWWY	Rawlins	2.59	215		Pn	20 07 24.3	0.0
RWWY				IAML		20 07 59.8	
	comp=N,188nm,0.7s						
RWWY				IAML		20 08 02.3	
	comp=N,203nm,0.8s						
N23A	Red Feather La	2.99	190		Pn	20 07 30.3	+0.5
N23A				IAML		20 08 16.8	
	comp=N,137nm,0.6s						
N23A				IAML		20 08 17.1	
	comp=E,82nm,0.7s						
RLMT	Red Lodge	3.15	295		Pn	20 07 33.0	+1.0
RLMT				IAML		20 08 30.9	
	comp=E,68nm,0.6s						
RLMT				IAML		20 08 35.0	
	comp=E,84nm,0.6s						
BW06	Boulder Array	3.33	253		Pn	20 07 34.8	+0.3
BW06				IAML		20 08 32.4	
	comp=N,49nm,0.6s						
BW06				IAML		20 08 35.3	
	comp=E,48nm,0.7s						
PD31	Pinedale Array	3.33	253		Pn	20 07 34.6	+0.2
PDAR	Pinedale Array	3.33	253	Pn	Pn	20 07 34.6	+0.2
	comp=E,5.3nm,0.3s,baz=75,slow=15,SNR=86						
PDAR				Lg	Lg	20 08 19.0	
	comp=E,3.9nm,0.3s,baz=74,slow=26,SNR=4.3						
OGNE	Ogallala	3.74	139		Pn	20 07 40.1	0.0
OGNE				IAML		20 09 04.8	
	comp=E,92nm,0.8s						
FLWY	Flagg Ranch	3.95	275		Pn	20 07 43.8	+0.8
FLWY				IAML		20 08 55.1	
	comp=E,28nm,1.1s						
ISCO	Idaho Springs	4.04	184		Pn	20 07 45.3	+0.9
FXWY	Fox Creek	4.20	269		Pn	20 07 47.5	+1.2
O20A	White River Ci	4.32	212		Pn	20 07 48.6	+0.6
O20A				IAML		20 08 59.1	
	comp=E,48nm,0.8s						
O20A				IAML		20 09 06.2	
	comp=N,38nm,0.9s						
YHB	Horse Butte	4.37	284		Pn	20 07 49.1	+0.4
YHL	Hebgen Lake	4.38	285		Pn	20 07 49.7	+0.7
AHID	Auburn Hatcher	4.41	258		Pn	20 07 50.9	+1.6
AHID				IAML		20 09 15.4	
	comp=E,39nm,0.8s						
RDMU	Red Mountain	4.58	226		Pn	20 07 53.2	+1.6
DGMT	Dagmar	4.69	9		Pn	20 07 55.7	+2.7
Q24A	Divide	4.87	179		Pn	20 07 56.0	+0.3
Q24A				IAML		20 09 13.5	
	comp=E,24nm,0.6s						
HWUT	Hardware Ranch	5.16	247		Pn	20 07 59.9	+0.3
HWUT				IAML		20 09 39.2	
	comp=E,25nm,0.8s						
HWUT				IAML		20 09 41.6	
	comp=E,36nm,0.7s						
KSCO	Kaye Shedlock'	5.21	157		Pn	20 08 00.4	+0.2
EGMT	Eagleton	5.24	325		Pn	20 07 59.6	-0.9
SPUT	South Promonto	5.89	247		Pn	20 08 10.2	+0.7
P17A	Butcher Ranch,	6.00	225		Pn	20 08 10.3	-0.8
SDCO	Great Sand Dun	6.09	182		Pn	20 08 13.4	+1.0
SRU	San Rafael Swe	6.17	222		Pn	20 08 13.1	-0.2
S22A	4UR Ranch, Cre	6.20	192		Pn	20 08 14.2	+0.2
ECSD	EROS Data Cent	6.25	88		Pn	20 08 15.8	+1.4
TMUT	Trail Mountain	6.37	227		Pn	20 08 16.8	+0.5
Q16A	Castle Valley	6.63	224		Pn	20 08 20.1	+0.3
T25A	Trinidad	6.72	174		Pn	20 08 21.5	+0.5
AGMN	Agassiz Nation	7.90	52		Pn	20 08 38.4	+1.3
ELK	Elko	8.03	251	Pn	Pn	20 08 41.1	+2.1
	comp=E,0.4nm,0.3s,baz=52,slow=17,SNR=5.4						
ULM	Lac du Bonnet	9.05	42	Pn	Pn	20 08 52.2	-0.6
	comp=E,1.3nm,0.3s,baz=233,slow=11,SNR=19						
ULM				Lg	Lg	20 11 22.4	
	comp=E,0.4nm,0.3s,baz=138,slow=20,SNR=3.6						
FFC	Flin Flon	11.10	10		Pn	20 09 20.8	-0.1
NVAR	Mina Array Bea	11.23	246	Pn	Pn	20 09 23.0	+0.2
	comp=E,0.2nm,0.3s,baz=68,slow=10,SNR=4.1						
YKA	Yellowknife Ar	19.47	347	P	P	20 11 08.2	-0.8
	comp=E,0.1nm,0.3s,baz=158,slow=12,SNR=4.0						
ARCES	ARCESS Array B	61.32	18	P	P	20 16 57.3	-0.4
	comp=E,4.0nm,1.1s,baz=337,slow=6.3,SNR=4.0						
SONM	Songino Array	84.55	339	P	P	20 19 16.0	+0.1
	comp=E,0.2nm,0.5s,baz=20,slow=4.6,SNR=2.7						
MKAR	Makanchi Array	89.51	355	P	P	20 19 39.8	-0.1
	comp=E,0.3nm,0.7s,baz=349,slow=2.8,SNR=4.5						

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*ATA **09** 20:15:25.5±2.2, 39°.34N×42°.03E, h7^{km}±38^{km}, ML2.3, MW3.7*
*ISK **09** 20:15:25.4, 39°.35N×41°.96E, h15^{km}, ML2.3/9*
*DDA **09** 20:15:26.1, 39°.37N×42°.00E, h7^{km}±5^{km}, ML1.9*
ISC 09 20:15:25.8±1.1**, 39°.36N**±0°.02×**42°.00E**±0°.02**, h6**^{km}±9^{km}**, n32, σ0.^{s}95**/54**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
EKAR	Karacoban	0.12	152	*i* P	Pg	20 15 29.9	+1.6
VRTB	Varto-Mus	0.46	245	PG	Pb	20 15 35.5	-0.9
VRTB	Varto-Mus	0.46	245	*i* P	Pb	20 15 36.0	-0.4
VRTB				IAML		20 15 44.0	
	comp=N,272nm,0.2s						
VRTB				IAML		20 15 44.0	
	comp=E,346nm,0.2s						
VRTB				*i* S	Sb	20 15 44.2	+0.5
MLAZ	Malazgirt-MUS	0.48	117	PG	Pb	20 15 35.8	-1.0
MLAZ				SG	Sb	20 15 43.8	-0.4
EATA	Eleskirt	0.63	37	*e*P	Pb	20 15 39.1	-0.4
EATA				*e*S	Sb	20 15 47.3	-1.4
EATA				IAML		20 15 49.9	
	comp=Z,22nm,0.3s						

KOPR	Koprukoy-ERZUR	0.64	350	PG	Pb	20 15 38.9	-0.6
KOPR				SG	Sb	20 15 48.1	-0.8
HOMI	Horasan	0.69	354	eP	Pb	20 15 39.7	-0.7
HOMI				eS	Sb	20 15 50.8	+0.5
HOMI				IAML		20 15 56.5	
	comp=Z,31nm,0.7s						
HOMI	Horasan	0.69	354	iP	Pb	20 15 39.8	-0.7
HOMI				IAML		20 15 54.0	
	comp=E,128nm,0.6s						
HOMI				IAML		20 15 56.0	
	comp=N,135nm,0.3s						
KARO	Karliova-Bingo	0.73	266	PG	Pg	20 15 39.4	-0.5
KARO				SG	Sg	20 15 49.5	0.0
MUSM	Mu-Merkez	0.74	211	iP	Pg	20 15 39.5	-0.4
MUSM				IAML		20 15 52.0	
	comp=N,78nm,0.3s						
MUSM				IAML		20 15 52.0	
	comp=E,42nm,0.2s						
BNGL	BINGOL	0.77	239	eP	Pb	20 15 41.1	-0.7
BNGL				eS	Sb	20 15 52.9	+0.3
BNGL				IAML		20 15 55.0	
	comp=Z,390nm,0.4s						
BNGL	BINGOL	0.77	239	iP	Pb	20 15 41.3	-0.5
BNGL				iS	Sb	20 15 53.2	+0.6
ADCV	BITLIS_Adilcev	0.79	134	iP	Pg	20 15 41.0	0.0
ADCV				iS	Sb	20 15 53.6	+0.5
ADCV				IAML		20 15 54.0	
	comp=E,25nm,0.3s						
ADCV				IAML		20 15 58.0	
	comp=N,30nm,0.3s						
AGRB	Hanur-Agry	0.80	74	PG	Pb	20 15 41.8	-0.5
AGRB				SG	Sb	20 15 52.9	-0.5
GURO	Guroymak-BITLI	0.81	178	PG	Pg	20 15 40.8	-0.5
ECAT	Cat-ERZURUM	0.83	288	eP	Pg	20 15 41.2	-0.4
ECAT				IAML		20 15 55.4	
	comp=Z,30nm,0.3s						
ECAT	Cat-ERZURUM	0.83	288	iP	Pg	20 15 41.3	-0.4
ECAT				iS	Sb	20 15 53.5	-0.7
ECAT				IAML		20 15 55.0	
	comp=N,18nm,0.4s						
ECAT				IAML		20 15 56.0	
	comp=E,27nm,0.4s						
AKDA	Akdag	0.89	327	eP	Pb	20 15 43.4	-0.4
AKDA				eS	Sg	20 15 53.8	-0.7
AKDA				IAML		20 16 01.3	
	comp=Z,65nm,0.2s						
AKDA	Akdag	0.89	327	iP	Pb	20 15 43.4	-0.4
BLIS	Bitlis-Merkez	0.95	174	eP	Pg	20 15 43.6	-0.3
BLIS				eS	Sb	20 15 56.7	-0.8
BLIS				IAML		20 15 59.5	
	comp=Z,63nm,0.4s						
BLIS	Bitlis-Merkez	0.95	174	iP	Pg	20 15 43.8	-0.1
BLIS				iS	Sb	20 15 57.0	-0.5
BLIS				IAML		20 15 58.0	
	comp=N,93nm,0.5s						
BLIS				IAML		20 15 58.0	
	comp=E,73nm,0.3s						
EMRE	Erzurum,Aziziy	1.03	311	iP	Pb	20 15 46.2	-0.1
EMRE				iS	Sn	20 16 03.0	+1.0
EMRE				IAML		20 16 05.0	
	comp=N,116nm,0.6s						
EMRE				IAML		20 16 06.0	
	comp=E,109nm,0.4s						
BNGB	Bingl	1.09	251	PG	Pg	20 15 46.3	-0.3
YEDI	Yedisu-Bingol	1.13	275	PN	Pg	20 15 46.5	-0.9
YEDI				SN	Sb	20 16 02.5	-0.3
KRIK	Erzurum-spir	1.28	320	eP	Pg	20 15 52.4	+2.0
KRIK				eS	Sn	20 16 10.7	+2.7
KRIK				IAML		20 16 13.5	
	comp=Z,428nm,0.4s						
VMUR	Van-Muradiye	1.28	106	iP	Pg	20 15 50.4	+0.1
VMUR				iS	Sn	20 16 09.2	+1.2
VMUR				IAML		20 16 14.0	
	comp=N,15nm,0.6s						
VMUR				IAML		20 16 25.0	
	comp=E,13nm,0.8s						
AKDM	Akdamar-Van	1.28	143	PN	Pn	20 15 49.5	-0.9
DYDN	Diyadin	1.32	81	eP	Pg	20 15 51.9	+0.7
DYDN				eS	Sn	20 16 09.7	+0.6
DYDN				IAML		20 16 12.9	
	comp=Z,18nm,0.3s						
DYDN	Diyadin	1.32	81	iP	Pg	20 15 51.2	0.0
DYDN				iS	Sn	20 16 09.6	+0.4
DYDN				IAML		20 16 13.0	
	comp=E,25nm,0.5s						
DYDN				IAML		20 16 13.0	
	comp=N,18nm,0.4s						
GEVA	Gevas	1.33	141	eP	Pn	20 15 50.7	-0.5
GEVA				eS	Sn	20 16 10.8	+1.5
GEVA				IAML		20 16 17.8	
	comp=Z,8.9nm,0.4s						
SRTM	Siirt_Merkez	1.37	182	iP	Pg	20 15 52.6	+0.6
SRTM				iS	Sn	20 16 13.2	+3.3
SRTM				IAML		20 16 16.0	
	comp=N,22nm,0.6s						
SRTM				IAML		20 16 16.0	
	comp=E,18nm,0.6s						
TVAN	Van	1.38	127	iP	Pg	20 15 52.2	0.0
TVAN				IAML		20 16 15.0	
	comp=N,26nm,0.4s						
TVAN				IAML		20 16 15.0	
	comp=E,22nm,0.3s						

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*IDC **09** 20:23:28.4±4.6, 5°.05N×72°.75W, h35^{km}±30^{km}, mb3.5/2, mb1 3.7/3, mb1mx3.2/40, mbtmp3.8/3, ML2.9/1, Error ellipse: s-maj=50.3km s-min=20.7km az=138.0*

*RSNC **09** 20:23:29.6±1.1, 5°.12N×72°.81W, h0^{km}±4^{km}, ML3.1*

ISC 09 20:23:27.7±1.4**, 5°.11N**±0°.03×**72°.77W**±0°.03**, h12**^{km}±9^{km}**, n26, σ1^{s}60**/38**, 3D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUSC	La Rusia	0.83	338	⇓iP	Pb	20 23 44.8	+0.4
RUSC				eS	Sb	20 23 56.5	+0.6
RUSC				i		20 24 01.3	
	comp=Z,251nm,0.4s						
CHIC	Chingaza	1.07	243	⇓iP	Pb	20 23 48.3	-0.1
CHIC				eS	Sb	20 24 02.1	-0.5
CHIC				i		20 24 05.5	
	comp=Z,370nm,0.5s						
PTGC	Puerto Gaitan,	1.11	145	⇓iP	Pn	20 23 49.9	+0.8
PTGC				eS	Sn	20 24 05.7	+1.4
PTGC				i		20 24 08.7	
	comp=Z,429nm,0.2s						
VILC	Villavicencio,	1.35	223	eP	Pn	20 23 53.2	+0.7
VILC				eS	Sn	20 24 12.1	+1.6
VILC				i		20 24 18.4	
	comp=Z,314nm,0.4s						
SPBC	San Pablo de B	1.40	293	eP	Pg	20 23 53.5	-1.2
SPBC				eS	Sg	20 24 11.7	-1.1
SPBC				i		20 24 14.2	
	comp=Z,256nm,0.2s						
CVER	Cruz Verde, Cu	1.42	246	eP	Pb	20 23 56.0	+1.5
BARC	Barichara	1.53	345	eP	Pn	20 23 56.1	+1.1
BARC				eS	Sn	20 24 17.2	+2.2
BARC				i		20 24 18.7	
	comp=Z,625nm,0.5s						
ROSC	El Rosal	1.56	260	Pg	Pb	20 23 58.3	+1.5
	comp=Z,18nm,0.3s,baz=105,slow=20,SNR=21						
ROSC				Lg	Lg	20 24 20.3	
	comp=Z,50nm,0.3s,baz=190,slow=23,SNR=17						
ROSC	El Rosal	1.56	260	eP	Pb	20 23 58.0	+1.1
ROSC				eS	Sn	20 24 20.0	+3.8
ROSC				i		20 24 23.7	
	comp=Z,122nm,0.5s						
TAMC	Tame, Arauca	1.64	37	eP	Pg	20 23 59.4	+0.3
TAMC				eS	Sg	20 24 22.2	+1.8
TAMC				i		20 24 27.6	
	comp=Z,179nm,0.2s						
NORC	Norcasia	2.13	282	eP	Pn	20 24 04.9	+1.6
BRRC	Barranca, Sant	2.19	335	eP	Pn	20 24 05.8	+1.8
BRRC				eS	Sn	20 24 33.9	+2.8
BRRC				i		20 24 41.3	
	comp=Z,54nm,0.2s						
PTBC	PUERTO BERRIO,	2.19	310	eP	Pb	20 24 06.4	-1.0
PTBC				eS	Sb	20 24 34.3	-0.3
PTBC				i		20 24 37.0	
	comp=Z,82nm,0.5s						
PAMC	Pamplona, Colo	2.21	2	eP	Pn	20 24 06.3	+1.6
PAMC				eS	Sb	20 24 36.1	+0.6
GUVC	San Jose del G	2.56	177	eS	Sn	20 24 41.3	+1.2
GUVC				i		20 24 56.3	
	comp=Z,242nm,0.2s						
GUY2C	Guyana, Caldas	2.58	273	eP	Pn	20 24 10.8	+1.0
ORTC	Ortega, Tolima	2.74	244	eP	Pn	20 24 13.6	+2.0
ZARC	Zaragoza, Cauc	3.14	319	eP	Pn	20 24 19.1	+2.0
ZARC				i		20 25 10.0	
	comp=Z,26nm,0.3s						
SMLC	San Martn de	3.88	341	eP	Pn	20 24 26.3	-1.0
GARC	Garzon, Huila	3.98	223	eP	Pn	20 24 29.5	+0.7
SDV	Santo Domingo	4.31	29	Pn	Pn	20 24 34.1	+0.8
	comp=Z,6.9nm,0.3s,baz=205,slow=2.2,SNR=42						
SDV				Sn	Sn	20 25 24.2	+0.6
	comp=Z,6.5nm,0.3s,baz=241,slow=23,SNR=11						
SDV				Lg	Lg	20 25 44.6	
	comp=Z,8.4nm,0.3s,baz=244,slow=18,SNR=9.7						
SDV	Santo Domingo	4.31	29	eP	Pn	20 24 34.4	+1.1
ULM	Lac du Bonnet	49.00	341	P	P	20 32 11.4	-2.8
	comp=Z,1.0nm,0.4s,baz=129,slow=10,SNR=4.7						
YKA	Yellowknife Ar	64.98	340	P	P	20 34 04.5	-2.7
	comp=Z,0.2nm,0.6s,baz=139,slow=6.2,SNR=5.1						
ASAR	Alice Springs	148.37	232	PKPbc	PKPdf	20 43 11.1	-0.5
	comp=Z,0.2nm,0.3s,baz=122,slow=4.5,SNR=3.7						
WRA	Warramunga Arr	149.78	238	PKPbc	PKPdf	20 43 15.3	+1.3
	comp=Z,0.3nm,0.3s,baz=108,slow=2.8,SNR=9.9						

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*IDC **09** 20:27:28.8±7.6, 32°.16S×179°.44E, h333^{km}±89^{km}, mb3.3/3, mb1 3.6/5, mb1mx3.3/43, mbtmp4.3/5, Error ellipse: s-maj=158.6km s-min=74.0km az=102.0*

*WEL **09** 20:27:33.8±0.4, 33°S±6°×18°0W±1°4, h298^{km}±7^{km}, M4.3/35, mB4.8/25, ML5.0/8, MLv5.0/35, Mw(mB)4.1/25*

ISC 09 20:27:29.5±0.9**, 32°.33S**±0°.05×**179°.5E**±0°.1**, h350**^{km}**, n95, σ3^{s}14**/94**, mb3.5**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.77	36	P	Pn	20 28 34.8	-1.4
GLKZ				S	S	20 29 25.1	-4.9
RAO	Raoul Island	3.78	36	S	S	20 29 27.7	-2.5
	144nm,0.3s,baz=60,slow=20,SNR=3.5						
MXZ	Matakaoa Point	5.32	190	P	Pn	20 28 55.0	+2.5
MXZ				S	S	20 30 00.9	+1.2
WMGZ	Waiomatatini S	5.55	189	P	Pn	20 28 58.2	+3.0
WMGZ				S	S	20 30 06.2	+1.6
HAZ	Te Kaha	5.60	194	P	Pn	20 28 57.6	+2.0
HAZ				S	S	20 30 06.8	+1.3
PUZ	Puketiti	5.82	190	P	Pn	20 29 02.4	+4.2
PUZ				S	S	20 30 10.2	0.0
RUGZ	Raukumara Rang	5.82	195	P	Pn	20 29 00.8	+2.5
RUGZ				S	S	20 30 10.0	-0.4
TWGZ	Tauwhareparae	5.97	192	P	Pn	20 29 02.7	+2.8
TWGZ				S	S	20 30 14.6	+1.4
TWGZ	Tauwhareparae	5.97	192	P	S	20 30 16.7	+3.5
OPRZ	Ohinepanea	6.01	203	P	Pn	20 29 05.9	+5.5
MARZ	Manawahe	6.11	202	P	Pn	20 29 06.9	+5.4
MWZ	Matawai	6.21	195	P	Pn	20 29 05.0	+2.3
MWZ				S	S	20 30 19.5	+1.2
MWZ	Matawai	6.21	195	P	S	20 30 15.3	-2.9
CNGZ	Carnagh Statio	6.23	190	P	Pn	20 29 06.1	+3.2
KMRZ	Kaimai	6.24	207	P	Pn	20 29 09.5	+6.5
URZ	Urewera	6.24	198	P	Pn	20 29 04.1	+1.2
	14nm,0.3s,baz=281,slow=3.7,SNR=78						
URZ				S	S	20 30 19.5	+0.8
	12nm,0.3s,baz=119,slow=21,SNR=12						
URZ	Urewera	6.24	198	P	Pn	20 29 04.6	+1.6
URZ				S	S	20 30 18.8	+0.1
URZ	Urewera	6.24	198	P	S	20 30 19.1	+0.4
TKGZ	Te Karaka	6.25	192	P	Pn	20 29 06.3	+3.3
TKGZ				S	S	20 30 19.2	+0.2
TKGZ	Te Karaka	6.25	192	P	S	20 30 18.2	-0.8
KARZ	Kaharoa	6.28	204	P	Pn	20 29 09.2	+5.7
MKRZ	Makatiti	6.31	202	P	Pn	20 29 10.3	+6.4
TARZ	Mount Tarawera	6.39	202	P	Pn	20 29 10.2	+5.4
RAGZ	Rawiri	6.39	195	P	Pn	20 29 09.1	+4.4
RAGZ				S	S	20 30 23.4	+1.3
RAGZ	Rawiri	6.39	195	P	S	20 30 21.5	-0.6
RRRZ	Republican Roa	6.48	201	P	Pn	20 29 11.6	+5.8
RIGZ	Rimuhau	6.52	192	P	Pn	20 29 09.3	+3.0
RIGZ	Rimuhau	6.52	192	P	S	20 30 22.0	-2.8
MUGZ	Murupara	6.53	199	P	Pn	20 29 08.9	+2.5
HSRZ	Hossack Road	6.54	203	P	Pn	20 29 12.3	+5.9
HRRZ	Handcock Road	6.60	203	P	Pn	20 29 12.4	+5.2
RTZ	Ruatahuna	6.61	198	P	Pn	20 29 10.2	+3.0
RTZ	Ruatahuna	6.61	198	P	S	20 30 27.9	+1.3
GRRZ	Galatos Road	6.62	204	P	Pn	20 29 13.2	+5.8
PRRZ	Plateau Road	6.66	202	P	Pn	20 29 12.2	+4.4
SNGZ	Shannon Statio	6.68	195	P	Pn	20 29 11.4	+3.3
SNGZ	Shannon Statio	6.68	195	P	S	20 30 27.2	-1.0
PRGZ	Paritu Road	6.71	191	P	Pn	20 29 13.6	+5.1
PRGZ	Paritu Road	6.71	191	P	S	20 30 27.3	-1.6
ALRZ	Allen Road	6.74	202	P	Pn	20 29 11.9	+3.1
KNZ	Kokohu	6.84	192	P	Pn	20 29 13.3	+3.3
KNZ	Kokohu	6.84	192	P	S	20 30 29.6	-2.0
KUTZ	Kaahu Road	6.85	205	P	Pn	20 29 16.0	+6.0
MTHZ	Maungataniwha	6.87	198	P	Pn	20 29 12.9	+2.7
MTHZ	Maungataniwha	6.87	198	P	S	20 30 33.0	+0.9
RAHZ	Arahi	6.87	196	P	Pn	20 29 13.1	+2.9
RAHZ	Arahi	6.87	196	P	S	20 30 31.9	-0.2
MHGZ	Mahia Peninsul	6.93	190	P	Pn	20 29 14.8	+3.7
MHGZ	Mahia Peninsul	6.93	190	P	S	20 30 32.0	-1.6
MRHZ	Matea Rd	6.96	200	P	Pn	20 29 14.8	+3.4
WHHZ	Waihua	6.99	195	P	Pn	20 29 14.6	+3.0
WHHZ	Waihua	6.99	195	P	S	20 30 35.2	+0.6
WATZ	Wairara	7.07	205	P	Pn	20 29 17.3	+4.6
NMHZ	Naumai	7.10	197	P	Pn	20 29 16.2	+3.1
NMHZ	Naumai	7.10	197	P	S	20 30 42.0	+4.7
RATZ	Rangitukua	7.20	204	P	Pn	20 29 18.4	+4.2
ARHZ	Aropaoanui	7.22	196	P	Pn	20 29 18.0	+3.7
ARHZ	Aropaoanui	7.22	196	P	S	20 30 37.1	-2.5
BKZ	Black Stump Fm	7.25	199	P	S	20 30 35.9	-4.6
KATZ	Kakaramea	7.33	204	P	Pn	20 29 19.9	+4.2
KRVZ	Karewarewa	7.45	204	P	Pn	20 29 21.0	+3.8
MCHZ	McNeill Hill	7.46	197	P	Pn	20 29 20.6	+3.5
MCHZ	McNeill Hill	7.46	197	P	S	20 30 46.7	+1.8
KWHZ	Kaweka Forest	7.51	199	P	S	20 30 47.7	+1.6
NGZ	Ngauruhoe	7.54	204	P	Pn	20 29 21.7	+3.5
CKHZ	Cape Kidnapper	7.58	194	P	Pn	20 29 21.6	+3.1
CKHZ	Cape Kidnapper	7.58	194	P	S	20 30 46.4	-0.9
TUVZ	Tukino	7.60	203	P	Pn	20 29 22.5	+3.5
FWVZ	Far West T-bar	7.62	204	P	Pn	20 29 22.8	+3.4
WHVZ	Whangaehu Hut	7.64	204	P	Pn	20 29 22.9	+3.4
BHHZ	Black Hill Sta	7.67	200	P	S	20 30 51.7	+2.1
KAHZ	Kahuranaki	7.75	195	P	Pn	20 29 23.5	+2.8
PXZ	Pawanui	7.98	195	P	Pn	20 29 25.6	+2.3
WPHZ	Waipukurau	8.11	197	P	S	20 30 57.4	-1.6
TIWZ	Tintock	8.92	198	P	S	20 31 13.8	-3.0
CPWZ	Castlepoint	8.97	196	P	S	20 31 15.8	-1.8
HOWZ	Holdsworth Sta	9.14	199	P	S	20 31 18.3	-3.1
TMWZ	Te Maipa	9.23	197	P	S	20 31 18.5	-5.0
MTW	Mount Morrison	9.38	199	P	S	20 31 19.3	-7.4
TRWZ	Traveller	9.56	198	P	S	20 31 28.5	-2.2
PAWZ	Paruwai Farm	9.61	199	P	S	20 31 27.4	-4.4
MSWZ	Moikau Station	9.69	199	P	S	20 31 28.3	-5.3
BHW	Baring Head	9.79	201	P	S	20 31 31.5	-4.3
TCW	Tory Channel	9.81	204	P	S	20 31 30.6	-5.6
PLWZ	Palliser	9.83	199	P	S	20 31 30.1	-6.7
TUWZ	Tuamarina	10.12	205	P	S	20 31 36.9	-6.1
CMWZ	Cape Campbell	10.31	203	P	S	20 31 44.3	-2.9
BSWZ	Blackbirch Sta	10.39	204	P	S	20 31 45.1	-4.0
THZ	Tophouse	10.79	207	P	S	20 31 52.6	-5.4
KHZ	Kahutara	11.13	204	P	S	20 31 56.6	-8.7
DSZ	Denniston Nort	11.23	211	P	S	20 32 02.4	-5.3
RPZ	Rata Peaks	13.17	208	P	P	20 30 24.8	+0.9
	1.0nm,0.3s,baz=33,slow=2.9,SNR=8.2						
RPZ				S	S	20 32 42.8	-5.7
	1.7nm,0.3s,baz=20,slow=17,SNR=13						
STKA	Stephens Creek	32.02	260	P	P	20 33 25.9	+1.3
	1.5nm,0.7s,baz=86,slow=9.4,SNR=6.1						
ASAR	Alice Springs	40.94	270	P	P	20 34 39.1	-0.3
	0.7nm,0.5s,baz=105,slow=7.5,SNR=8.1						
WRA	Warramunga Arr	42.11	276	P	P	20 34 48.3	-0.6
	2.0nm,0.4s,baz=115,slow=7.6,SNR=21						

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*RSNC **09** 20:29:52.6±2.8, 1°.50N×79°.71W, h22^{km}±23^{km}, ML5.2, Mw5.5*

*NEIC **09** 20:29:52.6±1.7, 1°.66N±0°.05×79°.35W±0°.06, h6^{km}±1^{km}, mb5.2/286, Ms_20 4.9/417, Mwb5.6/31, Mww5.6, Mwc5.6(GCMT), Error ellipse: s-maj=10.6km s-min=8.7km az=75.0*

*VAO **09** 20:29:54.0±0.4, 1°.58N×79°.24W, h10^{km}, mb5.0*

*NEIC **09** 20:29:54, 1°.65N×79°.27W, h7^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.01; $M_{\theta\theta}$0.07; $M_{\phi\phi}$-1.08; $M_{r\theta}$0.20; $M_{\theta\phi}$-0.50; $M_{\phi r}$-2.68; Fault plane solution: $M_0$2.93000×10^{17} NP1:ϕ_s44.46000°, δ15.03000°, λ135.75000°. NP2:ϕ_s177.72000°, δ79.58000°, λ79.11000°. Principal axes: T 2.9088, Plg54.0000°, Azm75.0000°; N 0.0334, Plg11.0000°, Azm180.0000°; P -2.9422, Plg34.0000°, Azm277.0000°;*

*IGQ **09** 20:29:55.7±0.3, 2°N±2°×7°9W±°, h8^{km}, M5.3*

*MOS **09** 20:29:56.0±1.3, 1°.71N×79°.46W, h33^{km}, mb5.7/13, MS4.8/8, Error ellipse: s-maj=12.8km s-min=7.9km az=93.6*

*IDC **09** 20:29:58.9±1.7, 1°.66N×79°.30W, h51^{km}±15^{km}, mb4.4/37, mb1 4.6/45, mb1mx4.5/53, mbtmp4.7/45, ML4.3/8, MS5.0/30, Ms1 5.0/30, ms1mx4.9/35, Error ellipse: s-maj=14.1km s-min=8.1km az=51.0*

*GCMT **09** 20:29:58.6±0.1, 1°.67N±0°.01×79°.49W±0°.01, h15^{km}, MW5.6/122, Moment Tensor Solution. s115,c171; s122,c206; Duration: 1^{s}6 Moment tensor: Scale 10^{17} Nm; M_{rr}1.07±.02; $M_{\theta\theta}$0.03±.02; $M_{\phi\phi}$-1.10±.02; $M_{r\theta}$-0.05±.07; $M_{\theta\phi}$-0.44±.01; $M_{\phi r}$-3.18±.06; Best double couple: $M_0$3.38900×10^{17} NP1:ϕ_s38.00000°, δ12.00000°, λ126.00000°. NP2:ϕ_s182.00000°, δ80.00000°, λ83.00000°. Principal axes: T 3.3590, Plg54.0000°, Azm84.0000°; N 0.0610, Plg7.0000°, Azm183.0000°; P -3.4190, Plg35.0000°, Azm278.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **09** 20:30:00, 1°.65N×79°.21W, h26^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.02; $M_{\theta\theta}$-0.12; $M_{\phi\phi}$-0.91; $M_{r\theta}$-0.35; $M_{\theta\phi}$-0.64; $M_{\phi r}$-3.12; Fault plane solution: $M_0$3.35000×10^{17} NP1:ϕ_s188.00000°, δ81.00000°, λ81.00000°. NP2:ϕ_s52.00000°, δ13.00000°, λ134.00000°. Principal axes: T 3.3259, Plg53.0000°, Azm87.0000°; N 0.0400, Plg9.0000°, Azm189.0000°; P -3.3659, Plg35.0000°, Azm285.0000°;*

*NEIC **09** 20:30:00, 1°.69N×79°.52W, h17^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.15; $M_{\theta\theta}$0.00; $M_{\phi\phi}$-1.15; $M_{r\theta}$-0.01; $M_{\theta\phi}$-0.53; $M_{\phi r}$-2.63; Fault plane solution: $M_0$2.92000×10^{17} NP1:ϕ_s182.00000°, δ78.00000°, λ80.00000°. NP2:ϕ_s42.00000°, δ15.00000°, λ128.00000°. Principal axes: T 2.8977, Plg56.0000°, Azm80.0000°; N 0.0417, Plg9.0000°, Azm184.0000°; P -2.9394, Plg32.0000°, Azm280.0000°;*

*BGR **09** 20:30:07.8±0.0, 2°.98N×78°.11W, h33^{km}, mb5.7, Ms4.9*

ISC 09 20:29:54.8±1.0**, 1°.52N**±0°.02×**79°.56W**±0°.03**, h26**^{km}±6^{km}**, n1132, σ1^{s}73**/847**, mb5.3**/234**, MS4.9**/246**, 28C-9D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAC1	Pacto, Paraso	1.46	148	P	Pb	20 30 19.8	-1.7
APR2	Miler	1.55	158	P	Pb	20 30 22.6	-0.3
APR2	Miler	1.55	158	S	Sb	20 30 45.0	+2.9
MAG1	Magdalena	1.59	188	P	Pb	20 30 24.4	+0.7
CUSE	Cuicocha Este	1.67	136	P	Pn	20 30 23.0	+0.2
CUSE	Cuicocha Este	1.67	136	S	Sb	20 30 45.9	-0.1
OTAV	Otavalo	1.69	139	⇑iP	Pn	20 30 23.1	0.0
OTAV				ePg	Pb	20 30 25.5	0.0
OTAV				eS	Sn	20 30 42.5	-1.5
OTAV				i		20 30 50.5	
	comp=Z,4μm,1.0s						
OTAV	Otavalo	1.69	139		Pn	20 30 23.3	+0.2
OTAV				Sn	Sn	20 30 43.1	-1.0
OTAV	Otavalo	1.69	139	P	Pn	20 30 23.1	0.0
URCU	Urcuqui	1.69	129	P	Pn	20 30 23.4	+0.3
URCU	Urcuqui	1.69	129	S	Sb	20 30 46.7	+0.3
COTA	Cotacachi	1.69	134	P	Pn	20 30 23.7	+0.5
CUIC	Cuicocha-Domo	1.70	135	S	Sb	20 30 46.5	-0.3
CUIC	Cuicocha-Domo	1.70	135	P	Pn	20 30 23.5	+0.3
CUSW	Cuicocha Oeste	1.72	135	S	Sb	20 30 47.4	+0.1
CUSW	Cuicocha Oeste	1.72	135	P	Pn	20 30 24.0	+0.5
ECEN	Cerro Negro	1.73	113	P	Pn	20 30 24.9	+1.1
ACOT	Cotacachi (Cas	1.77	133	S	Sb	20 30 49.9	+1.2
ACOT	Cotacachi (Cas	1.77	133	P	Pb	20 30 25.7	-1.0
AOTA	Otavalo	1.82	134	P	Pb	20 30 27.1	-0.5
PULU	Pululahua	1.82	145	P	Pb	20 30 26.0	-1.8
CMBC	Cumbal	1.83	108	eP	Pn	20 30 24.6	-0.4
CMBC				ePg	Pb	20 30 26.1	-1.8
CMBC				eS	Sn	20 30 49.4	+1.9
CMBC				i		20 31 05.4	
	comp=Z,16μm,0.7s						
IMBA	Imbabura, San	1.84	132	P	Pb	20 30 26.7	-1.3
AIB2	Ibarra (Univer	1.86	129	P	Pb	20 30 26.8	-1.7
YAHU	Yahuarcocha	1.87	127	P	Pn	20 30 26.6	+1.1
JAMA	Jama	1.88	200	P	Pb	20 30 28.1	-0.5
YANA	Yana	1.90	149	P	Pb	20 30 27.6	-1.6
PINO	Pino	1.92	150	P	Pb	20 30 28.1	-1.4
TERV	Terraza Guagua	1.93	150	P	Pb	20 30 28.1	-1.7
GGPC	Guagua Pichinc	1.94	150	P	Pb	20 30 28.4	-1.5
TULM	Tulcn-Chalpat	1.94	114	P	Pn	20 30 26.8	+0.2
ATUL	Tulcn	1.98	112	P	Pn	20 30 27.9	+1.0
GR1C	Gorgona, Isla	2.03	43	⇑iP	Pn	20 30 23.5	-3.9
GR1C				ePg	Pb	20 30 29.0	-2.0
GR1C				eS	Sb	20 30 57.8	+1.9
GR1C				i		20 31 05.2	
	comp=Z,14μm,1.3s						
CABP	Cabo Pasado	2.08	205	P	Pb	20 30 30.1	-1.8
NINA	Atacazo Ninahu	2.12	154	P	Pb	20 30 30.9	-2.0
CAYA	Cayambe	2.13	132	P	Pb	20 30 31.1	-2.0
CPAS1	Pasto	2.26	98	eP	Pn	20 30 31.0	+0.1
CPAS1	Pasto	2.26	98	eS	Sn	20 31 00.7	+2.5
CPAS1	Pasto	2.26	98	i	Sb	20 31 08.5	+5.6
	comp=Z,10μm,0.8s						
CPAS2	Pasto	2.33	97	⇓eP	Pn	20 30 32.8	+1.0
CPAS2	Pasto	2.33	97	eS	Sn	20 31 02.3	+2.6
CPAS2	Pasto	2.33	97	i	Sb	20 31 11.4	+6.6
	comp=Z,26μm,0.5s						
BBAC	Balboa, Cauca	2.37	78	⇑iP	Pn	20 30 29.9	-2.3
BBAC				eS	Sn	20 30 59.2	-1.3
BBAC				i		20 31 23.3	
	comp=Z,9μm,1.0s						
ILLI	Illinizas Sur	2.37	159	P	Pb	20 30 34.9	-2.2
APS4	Papallacta	2.37	142	P	Pb	20 30 35.9	-1.2
PAST	Pastocalle	2.38	157	P	Pb	20 30 36.1	-1.2
ANTG	Antisana-Guama	2.39	147	P	Pb	20 30 35.6	-2.0
CAMI	Rancho Maria	2.42	154	P	Pb	20 30 36.5	-1.5
BNAS	Cotopaxi Volca	2.43	154	P	Pb	20 30 36.9	-1.3
ANTS	Antisana-Sarah	2.44	145	P	Pb	20 30 36.4	-2.0
VC1	Cotopaxi 1	2.44	152	P	Pb	20 30 36.8	-1.5
ANTM	Antisana-La Mi	2.44	147	P	Pb	20 30 36.4	-2.0
BREF	Cotopaxi Volca	2.44	153	P	Pb	20 30 37.2	-1.3
BTAM	Cotopaxi Volca	2.47	152	P	Pb	20 30 37.5	-1.3
CONE	Cono NE Rev Vo	2.48	129	P	Pb	20 30 37.1	-1.9
BMOR	Cotopaxi Volca	2.49	154	P	Pb	20 30 37.6	-1.7
TAMB	Tambo	2.50	152	P	Pb	20 30 38.0	-1.4
VCES	Cotopaxi	2.58	153	P	Pb	20 30 39.4	-1.4
CRUC	La Cruz	2.61	89	⇑eP	Pn	20 30 35.2	-0.4
CRUC				i		20 31 18.9	
	comp=Z,15μm,0.6s						
SAGO	Sagoatoa	2.80	161	P	Pb	20 30 42.5	-2.0
PIS1	Pisayambo	2.81	155	P	Pb	20 30 43.1	-1.7
PISA	Pisayambo	2.81	155	P	Pb	20 30 42.8	-2.0
SOTA	Rioblanco	3.01	78	⇑iP	Pn	20 30 40.5	-0.8
SOTA				eS	Sn	20 31 18.0	+1.1
SOTA				i		20 31 27.0	
	comp=Z,8μm,0.7s						
POPC	Popayan, Colom	3.06	71	⇑iP	Pn	20 30 39.8	-1.9
POPC				eS	Sn	20 31 16.1	-1.5
POPC				i		20 31 48.6	
	comp=Z,4μm,1.4s						
BBIL	Ulba Tungurahu	3.14	160	P	Pb	20 30 47.2	-2.9
BULB	Ulba Tungurahu	3.15	159	P	Pb	20 30 47.2	-3.2
BMAS	Trigal station	3.19	160	P	Pb	20 30 47.5	-3.5
BPAT	Tungurahua Vol	3.21	159	P	Pb	20 30 47.8	-3.6
PCON	Cinco Dias	3.26	76	⇑iP	Pn	20 30 44.3	-0.6
PCON				eS	Sb	20 31 29.9	-1.9
PCON				i		20 31 39.5	
	comp=Z,9μm,1.3s						
MALC	Bahia Malaga	3.33	42	⇑iP	Pn	20 30 42.6	-2.6
MALC				eS	Sb	20 31 33.3	0.0
MALC				i		20 32 20.3	
	comp=Z,4μm,1.3s						
FLOC	Florencia	3.91	89	⇑iP	Pn	20 30 53.8	+0.6
	comp=Z,1μm,0.7s						
FLOC				eS	Sn	20 31 39.8	+1.5
FLOC				i		20 31 53.5	

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       comp=Z,4µm,1.1s
FLOC   Florencia          3.91  89          Pn         20 30 53.8 +0.6
COHC   Cochancay          3.97 176   P      Pn         20 30 56.2 +2.2
YOTC   Yotoco, Valle      4.04  53⇑iP       Pn         20 30 50.5 -4.6
YOTC                               eS       Sn         20 31 41.6 -0.1
YOTC                               i                   20 32 00.8
       comp=Z,3µm,0.7s
GARC   Garzon, Huila      4.12  81⇑eP       Pn         20 30 55.9 -0.5
GARC                               eS       Sb         20 31 58.2 +2.0
GARC                               i                   20 32 09.1
       comp=Z,2µm,1.7s
MORR   Playas El Morr     4.20 191   P      Pb         20 31 00.9 -7.2
PLMC   San Jos del P      4.69  44  eP      Pn         20 31 00.6 -3.5
PLMC                               i                   20 32 26.8
       comp=Z,4µm,1.4s
ORTC   Ortega, Tolima     4.92  61⇑eP       Pn         20 31 05.2 -2.0
ORTC                               eS       Sn         20 32 08.1 +4.7
ORTC                               i                   20 32 32.0
       comp=Z,4µm,1.2s
PTLC   Puerto Leguiza     4.95 106⇑eP       Pn         20 31 09.4 +1.8
PTLC                               eS       Sb         20 32 27.0 +7.1
PTLC                               i                   20 32 53.8
       comp=Z,3µm,2.1s
SOLC   Bahia Solano       5.15  25  eP      Pn         20 31 09.3 -1.0
SOLC                               i                   20 33 05.1
       comp=Z,485nm,1.3s
GUY2C  Guyana, Caldas     5.58  49⇑iP       Pn         20 31 13.8 -2.8
GUY2C                              eS       Sn         20 32 24.9 +4.8
GUY2C                              i                   20 32 53.6
       comp=Z,2µm,1.6s
CBOC   Ciudad Bolivar     5.58  39  eP      Pn         20 31 12.4 -4.0
CBOC                               eS       Sb         20 32 34.6 -3.7
CBOC                               i                   20 32 55.8
       comp=Z,2µm,1.3s
MACC   Macarena, Meta     5.74  84  eP      Pn         20 31 18.1 -0.4
MACC                               i                   20 33 13.7
       comp=Z,964nm,1.3s
PTAC   Punta Ardita,      5.86  17  eP      Pn         20 31 19.8 -0.3
PTAC                               i                   20 33 38.0
       comp=Z,322nm,1.6s
HELC   Santa Helena       6.14  41⇑eP       Pn         20 31 20.8 -3.5
       comp=Z,267nm,0.6s
HELC                               eS       Sb         20 32 45.3 -9.3
HELC                               i                   20 32 57.1
       comp=Z,1µm,1.3s
NORC   Norcasia           6.17  49⇑eP       Pn         20 31 21.9 -2.5
NORC                               eS       Sn         20 32 42.7 +8.5
NORC                               i                   20 32 51.1
       comp=Z,1µm,1.2s
ROSC   El Rosal           6.18  58   P      Pn         20 31 24.7 -0.2
       comp=Z,18nm,0.3s,baz=215,slow=3.9,SNR=35
ROSC                                S       Sn         20 32 41.9 +6.9
       comp=Z,26nm,0.3s,baz=197,slow=19,SNR=3.0
ROSC                                LR      LR         20 34 11.3
       comp=Z,29µm,18.8s,baz=224,slow=43
ROSC   El Rosal           6.18  58⇑eP       Pn         20 31 23.7 -1.2
ROSC                               eS       Sn         20 32 42.3 +7.3
ROSC                               i                   20 33 14.8
       comp=Z,2µm,3.0s
ROSC   El Rosal           6.18  58          Pn         20 31 23.9 -1.0
VILC   Villavicencio,     6.40  66  eP      Pn         20 31 27.4 -0.2
VILC                               i                   20 33 22.8
       comp=Z,1µm,1.5s
DBBC   Dabeiba            6.40  31  eP      Pn         20 31 27.6  0.0
DBBC                               eS       Sb         20 33 06.5 +4.6
DBBC                               i                   20 33 18.0
       comp=Z,2µm,2.0s
CHIC   Chingaza           6.59  62⇑eP       Pn         20 31 28.4 -2.0
CHIC                               eS       Sn         20 32 46.4 +1.3
CHIC                               i                   20 33 30.1
       comp=Z,1µm,1.7s
SPBC   San Pablo de B     6.84  53  eP      Pn         20 31 31.2 -2.5
SPBC                               i                   20 33 21.4
       comp=Z,578nm,1.8s
PTBC   PUERTO BERRIO,     7.13  45⇑eP       Pn         20 31 34.8 -2.8
PTBC                               eS       Sn         20 33 03.0 +5.2
PTBC                               i                   20 33 22.9
       comp=Z,774nm,2.0s
UREC   San Jos de Ur      7.38  33  eP      Pn         20 31 41.2 +0.3
UREC                               i                   20 33 38.1
       comp=Z,674nm,1.4s
CAPC   Capurgana          7.41  17  eP      Pn         20 31 41.9 +0.6
CAPC                               i                   20 34 02.2
       comp=Z,350nm,1.6s
ZARC   Zaragoza, Cauc     7.56  38  eP      Pn         20 31 42.7 -0.8
ZARC                               i                   20 33 36.3
       comp=Z,502nm,1.0s
BCIP   Isla Barro Col     7.60 358   P      Pn         20 31 46.5 +2.4
RUSC   La Rusia           7.79  56  eP      Pn         20 31 45.9 -1.1
RUSC                               i                   20 34 06.8
       comp=Z,862nm,1.7s
ATAH   Atahualpa          8.67 172   P      Pn         20 32 04.3 +5.2
       comp=Z,2.6nm,0.3s,baz=357,slow=7.6,SNR=15
ATAH                                S       Sn         20 33 45.9  +10
       comp=Z,0.7nm,0.3s,baz=153,slow=11,SNR=2.6
SMLC   San Martn de       9.07  37  eP      Pn         20 32 04.4 +0.3
SMLC                               i                   20 34 24.3
       comp=Z,345nm,1.4s
OCAC   Ocana              9.12  43  eP      Pn         20 32 05.5 +0.5
OCAC                               eS       Sn         20 33 55.7 +8.6
OCAC                               i                   20 34 17.0
       comp=Z,226nm,0.9s
TAMC   Tame, Arauca       9.16  58  eP      Pn         20 32 06.2 +0.7
TAMC                               i                   20 34 35.6
       comp=Z,351nm,1.8s
SJCC   San Jacinto, C     9.39  27  eP      Pn         20 32 08.9 +0.3
SJCC                               i                   20 34 38.7
       comp=Z,106nm,2.2s
JTS    Las Juntas de     10.23 329   P      Pn         20 32 23.1 +3.0
       comp=Z,0.6nm,0.3s,baz=201,slow=7.2,SNR=21
JTS                                 S       Sn         20 34 11.5 -2.6
       comp=Z,1.1nm,0.3s,baz=3.6,slow=19,SNR=3.9
JTS                                 LR      LR         20 35 46.8
       comp=Z,13µm,19.7s,baz=212,slow=34
JTS    Las Juntas de     10.23 329d iP      Pn         20 32 22.6 +2.5
JTS    Las Juntas de     10.23 329          Pn         20 32 23.0 +2.9
JTS                                         Sn         20 34 15.7 +1.5
CODC   Agustn Codazz     10.34  36  eP      Pn         20 32 20.9 -0.7
PAYG   Puerto Ayora      10.94 259  eP      Pn         20 32 35.2 +5.3
PAYG   Puerto Ayora      10.94 259          Pn         20 32 34.6 +4.7
PAYG   Puerto Ayora      10.94 259   P      Pn         20 32 34.5 +4.6
SMRC   Santa Marta, M    10.95  29  eP      Pn         20 32 29.4 -0.5
SDV    Santo Domingo     11.51  50   P      Pn         20 32 35.1 -2.7
       comp=Z,5.7nm,0.3s,baz=165,slow=12,SNR=29
SDV                                 S       Sn         20 34 45.8 +0.1
       comp=Z,2.6nm,0.3s,baz=270,slow=20,SNR=2.6
SDV                                 LR      LR         20 37 26.5
       comp=Z,4µm,21.9s,baz=223,slow=40
SDV    Santo Domingo     11.51  50          Pn         20 32 36.8 -1.1
SDV    Santo Domingo     11.51  50  eP      Pn         20 32 34.5 -3.3
SDV    Santo Domingo     11.51  50   P      Pn         20 32 37.0 -0.8
ESPN   Las Esperanzas    11.60 336   P      Pn         20 32 40.0 +1.1
ACON   Acoyapa           11.78 332   P      Pn         20 32 45.1 +3.8
URIC   Uribia, Colomb    12.60  36          Pn         20 32 49.9 -2.6
BAUV   El Baul           13.63  57  eP      Pn         20 33 02.9 -3.7
NNA    Nana              13.69 169   P      Pn         20 33 09.9 +2.5
       comp=Z,3.0nm,0.3s,baz=345,slow=13,SNR=6.0
NNA                                 S       Sn         20 35 45.6 +6.9
       comp=Z,1.1nm,0.3s,baz=177,slow=19,SNR=1.9
NNA    Nana              13.69 169⇑eP       P          20 33 11.5 -4.4
NNA                                 pmax    pmax
       comp=Z,73nm,1.3s
MTDJ   Mount Denham      16.72   7   P      P          20 33 48.7 -1.0
MTDJ                                IAmb    IAmb       20 34 28.1
       comp=Z,376nm,1.4s
PCRV   Puerto La Cruz    17.15  59   P      P          20 33 53.5 -0.9
       comp=Z,9.1nm,0.3s,baz=247,slow=4.4,SNR=38
PCRV                                LR      LR         20 41 43.5
       comp=Z,14µm,20.3s,slow=42
PLCV   Puerto La Cruz    17.18  59   P      Pn         20 33 53.5 +0.2
APG    El Apazote        17.19 322   P      P          20 33 57.6 +2.6
       comp=Z,7.6nm,0.3s,baz=135,slow=8.9,SNR=36
APG                                 LR      LR         20 39 29.0
       comp=Z,5µm,20.1s,baz=139,slow=33
GTBY   Guantanamo Bay    18.81  13   P      P          20 34 09.6 -2.9
GTBY                                IAmb    IAmb       20 34 49.1
       comp=Z,169nm,1.2s
BANI   BANI              19.05  28   P      P          20 34 11.1 -4.2
SDDR   Presa de Saban    19.16  25          Pn         20 34 18.5 +1.0
SAML   Samuel            19.35 123   P      Pn         20 34 19.0 -0.8
SAML                                pmax    pmax
       comp=Z,396nm,1.7s
SAML   Samuel            19.35 123   P      Pn         20 34 19.0 -0.8
SAML                                IAmb    IAmb       20 34 21.4
       comp=Z,396nm,1.6s
SAML   Samuel            19.35 123  eP      P          20 34 17.8 -0.8
PTGA   Pitinga           19.72  96   P      P          20 34 22.7 +0.1
       comp=Z,6.5nm,0.3s,baz=280,slow=16,SNR=51
PTGA   Pitinga           19.72  96   P      P          20 34 23.0 +0.3
PTGA   Pitinga           19.72  96  eP      P          20 34 22.2 -0.4
DR12   Loma Pena Alta    19.85  30   P      P          20 34 21.9 -2.2
TPP    Pointe-a-Pierr    20.00  63  eP      P          20 34 22.4 -3.3
TBH    Brigand Hill      20.42  63  eP      P          20 34 29.3 -1.0
CRPR   Cabo Rojo, PR     20.44  36   P      P          20 34 30.7 +0.2
TEIG   Tepich            20.45 336   P      Pn         20 34 32.5 -0.3
       comp=Z,7.2nm,0.4s,baz=25,slow=0.0,SNR=13
TEIG                                LR      LR         20 41 51.5
       comp=Z,4µm,18.5s,baz=70,slow=35
TEIG   Tepich            20.45 336          Pn         20 34 32.5 -0.3
TEIG                                IAmb    IAmb       20 35 27.9
       comp=Z,170nm,1.4s
MLPR   Magueyes Islan    20.45  36   P      P          20 34 30.1 -0.5
MLPR                                IAmb    IAmb       20 34 37.1
       comp=Z,228nm,1.3s
MPR    Mayaguez          20.59  36   P      Pn         20 34 33.3 -1.1
GRGR   Grenville         20.65  58  eP      P          20 34 30.9 -1.8
GRGR   Grenville         20.65  58   P      P          20 34 29.9 -2.9
GRGR                                IAMs_20 IAMs_20    20 43 42.1
       comp=Z,6µm,21.0s
ICMP   Isla Caja de M    20.70  37   P      P          20 34 30.2 -3.0
GRHS   Sauteurs          20.70  58  eP      P          20 34 32.4 -1.0
GRSS   Sisters           20.77  58  eP      P          20 34 33.9 -0.1
AGPR   Aguadilla, PR     20.81  35   P      P          20 34 34.2 -0.2
SJG    San Juan          21.10  38   P      P          20 34 36.7 -0.8
       comp=Z,100nm,1.0s,baz=217,slow=8.7,SNR=48
SJG                                 LR      LR         20 44 05.7
       comp=Z,4µm,20.5s,baz=213,slow=41
SJG    San Juan          21.10  38   P      P          20 34 37.0 -0.6
SJG                                 pmax    pmax
       comp=Z,234nm,1.3s
SJG                                 MLR     MLR
       comp=Z,4µm,20.0s
SJG    San Juan          21.10  38   P      P          20 34 37.0 -0.6
SJG                                 IAmb    IAmb       20 34 38.5
       comp=Z,234nm,1.2s
SJG    San Juan          21.10  38   IAMs_20 IAMs_20   20 43 43.3
       comp=Z,4µm,20.0s
EMPR   Esperanza - Ma    21.15  36   P      P          20 34 38.0 -0.1
TOSP   Speyside          21.24  62  eP      P          20 34 33.8 -5.3
TOSP   Speyside          21.24  62   P      P          20 34 37.8 -1.2
TOSP                                IAmb    IAmb       20 34 38.9
       comp=Z,172nm,1.1s
GCPR   Guaynabo City     21.29  38          P          20 34 40.1 +0.5
SVB    Belmont           21.56  56  eP      P          20 34 36.1 -6.5
SVB    Belmont           21.56  56   IAMs_20 IAMs_20   20 44 10.3
       comp=Z,4µm,19.0s
CMIG   Matias Romero     21.60 317   P      P          20 34 44.8 +1.8
       comp=Z,11nm,0.8s,baz=110,slow=9.7,SNR=20
CMIG                                LR      LR         20 41 32.7
       comp=Z,2µm,21.8s,baz=146,slow=32
SVV    Soufriere Volc    21.61  56  eP      P          20 34 42.3 -0.8
SSV    Crater Summit     21.64  56  eP      P          20 34 41.2 -2.3
SVCV   St. Vincent, C    21.65  56  eP      P          20 34 39.4 -4.2
CDVI   St. Croix         21.71  41   P      P          20 34 43.5 -0.6
CUPR   Culebra, Puert    21.79  39   P      P          20 34 44.7 -0.2
SLB    Belfond           22.02  55  eP      P          20 34 46.7 -0.9
STVI   Saint Thomas      22.03  40   P      P          20 34 47.0 -0.6
MCLT   Moule a Chique    22.05  56  eP      P          20 34 44.1 -3.7
MCLT   Moule a Chique    22.05  56   IAMs_20 IAMs_20   20 43 51.1
       comp=Z,5µm,22.0s
SLAC   Saint Lucia, A    22.18  55  eP      P          20 34 45.0 -4.2
SLBI   Saint Lucia, B    22.18  55  eP      P          20 34 44.4 -4.9
FDF    Fort de France    22.43  53  eP      P          20 34 47.3 -4.6
FDF    Fort de France    22.43  53   P      P          20 34 51.6 -0.3
FDF                                 pmax    pmax
       comp=Z,480nm,1.2s
FDF                                 MLR     MLR
       comp=Z,6µm,18.0s
FDF    Fort de France    22.43  53   P      P          20 34 51.6 -0.3
FDF                                 IAMs_20 IAMs_20    20 44 52.6
       comp=Z,5µm,18.0s
SABA   Saba              22.65  44  eP      P          20 34 48.6 -5.7
MDPO   Dominica; Chan    22.68  51  eP      P          20 34 54.4 -0.1
DLPL   La Plaine         22.69  52  eP      P          20 34 50.8 -3.9
DLPL   La Plaine         22.69  52   IAMs_20 IAMs_20   20 45 01.4
       comp=Z,6µm,20.0s
MDPV   Dominica, Penn    22.73  51  eP      P          20 34 54.9 -0.2
MNMC   Minye Minye       22.74 155   IAMs_20 IAMs_20   20 44 10.2
       comp=Z,5µm,22.0s
SEUS   St. Eustatius     22.75  45  eP      P          20 34 50.9 -4.3
DWS    Wesley            22.78  51  eP      P          20 34 54.6 -1.0
MLYT   Lee's Yard        22.82  48  eP      P          20 34 53.8 -2.2
SKI    Saint Kitts       22.82  45  eP      P          20 34 47.5 -8.5
SKI    Saint Kitts       22.82  45   IAMs_20 IAMs_20   20 44 37.6
       comp=Z,4µm,21.0s
BBGH   Gun Hill          22.93  59  eP      P          20 34 51.0 -6.1
SMRT   St. Maarten       23.06  44  eP      P          20 34 53.9 -4.7
ANWB   Willy Bob         23.72  46  eP      P          20 35 02.0 -3.0
PB01   IPOC Station P    24.49 157   IAMs_20 IAMs_20   20 46 03.9
       comp=Z,5µm,22.0s
TLIG   Tlapa             24.56 312   IAMs_20 IAMs_20   20 42 31.7
       comp=Z,3µm,18.0s
SIV    San Ignacio       25.23 134   P      P          20 35 19.7 +0.8
       comp=Z,8.0nm,0.6s,baz=330,slow=9.3,SNR=47
SIV                                 LR      LR         20 45 33.5
       comp=Z,11µm,19.0s,baz=328,slow=37
UNM    Universidad Na    26.12 314   IAMs_20 IAMs_20   20 43 40.9
       comp=Z,4µm,21.0s
LVC    Limon Verde       26.13 157   LR     LR         20 48 11.8
       comp=Z,7µm,18.8s,baz=323,slow=42
LVC    Limon Verde       26.13 157   P      P          20 35 25.6 -1.8
LVC                                 pmax    pmax
       comp=Z,48nm,0.9s
LVC                                 MLR     MLR
       comp=Z,6µm,21.0s
LVC    Limon Verde       26.13 157   P      P          20 35 25.6 -1.8
LVC                                 IAmb    IAmb       20 35 50.1
       comp=Z,48nm,0.8s
DWPF   Disney Wildern    26.50 356   P      P          20 35 31.0 +0.7
       baz=175
MDP    Montagnes des     27.10  82   P      P          20 35 35.3 -0.6
       comp=Z,42nm,0.7s,baz=260,slow=7.7,SNR=38
MDP                                 LR      LR         20 46 51.3
       comp=Z,11µm,18.4s,baz=270,slow=38
553A   Crawfordville     28.89 351   IAMs_20 IAMs_20   20 46 20.2
       comp=Z,2µm,20.0s
SALV   Santo Antonio     29.25 127  eP      P          20 35 55.0  0.0
451A   Vernon            29.53 349   IAMs_20 IAMs_20   20 47 46.4
       comp=Z,2µm,20.0s
TIGA   Tifton            30.00 353   P      P          20 36 02.4 +0.9
       baz=171
352A   Blakely           30.23 351   IAMs_20 IAMs_20   20 47 11.7
       comp=Z,3µm,20.0s
BRAL   Brewton           30.33 347   P      P          20 36 06.9 +2.5
       baz=164
255A   Hazlehurst        30.37 355   IAMs_20 IAMs_20   20 47 35.1
       comp=Z,2µm,20.0s
ZAIG   Zacatecas         30.75 315   IAMs_20 IAMs_20   20 46 32.3
       comp=Z,3µm,21.0s
250A   Grady             30.95 349   IAMs_20 IAMs_20   20 48 50.1
       comp=Z,2µm,19.0s
157A   Early Branch      31.02 358   P      P          20 36 12.8 +2.3
       baz=177
154A   Montrose          31.11 354   IAMs_20 IAMs_20   20 47 57.8
       comp=Z,2µm,20.0s
KVTX   Kingsville        31.28 327   IAMs_20 IAMs_20   20 50 03.0
       comp=Z,3µm,21.0s
152A   Waverly Hall      31.36 352   IAMs_20 IAMs_20   20 47 46.5
       comp=Z,3µm,20.0s
NHSC   New Hope          31.43 359   P      P          20 36 16.2 +2.1
       baz=178
Z57A   Bowman            31.63 358   P      P          20 36 17.7 +1.9
       baz=177
Z58A   St. Stephen       31.65 360   P      P          20 36 17.9 +1.9
       baz=179,SNR=5.6
Z56A   Williston         31.69 357   P      P          20 36 18.3 +2.0
       baz=176
441A   DeRidder          31.82 337   IAMs_20 IAMs_20   20 50 41.1
       comp=Z,2µm,21.0s
GOGA   Godfrey           31.94 354   P      P          20 36 19.9 +1.4
       baz=172
AQDB   Aquidauana        32.00 134  eP      P          20 36 19.2 -0.1
Z51A   Franklin          32.07 351   IAMs_20 IAMs_20   20 48 18.4
       comp=Z,3µm,20.0s
LRAL   Lakeview Retre    32.12 348   P      P          20 36 20.0 -0.1
LRAL                                IAmb    IAmb       20 36 31.1
       comp=Z,30nm,0.8s
LRAL   Lakeview Retre    32.12 348   P      P          20 36 21.3 +1.2
       baz=165
Z50A   Ashland           32.13 350   P      P          20 36 20.6 +0.4
Z50A                                IAmb    IAmb       20 36 31.1
       comp=Z,33nm,1.0s
Z50A                                IAMs_20 IAMs_20    20 49 36.2
       comp=Z,2µm,19.0s
Z50A   Ashland           32.13 350   P      P          20 36 21.1 +0.8
       baz=168,SNR=11
Y56A   Pelion            32.15 357   P      P          20 36 21.7 +1.3
       baz=176
VBMS   Vicksburg         32.24 342   P      P          20 36 22.8 +1.7
       baz=159
Y59A   Loris             32.31   1   IAMs_20 IAMs_20   20 48 13.9
       comp=Z,3µm,20.0s
Y59A   Loris             32.31   1   P      P          20 36 23.2 +1.4
       baz=181
Y55A   Saluda            32.32 356   P      P          20 36 22.8 +0.9
       baz=175,SNR=6.9
ARAG   Araguaiana, MT    32.33 123  eP      P          20 36 22.0 -0.2
Y57A   Sumter            32.34 359   IAMs_20 IAMs_20   20 51 25.9
       comp=Z,2µm,20.0s
Y60A   Bolivia           32.34   2   IAMs_20 IAMs_20   20 48 24.7
       comp=Z,2µm,20.0s
Y60A   Bolivia           32.34   2   P      P          20 36 23.3 +1.3
       baz=182
Y52A   Lilburn           32.45 353   IAMs_20 IAMs_20   20 48 50.4
       comp=Z,2µm,20.0s
Y52A   Lilburn           32.45 353   P      P          20 36 23.8 +0.7
       baz=171
X57A   Johnson Farm,     32.78 359   P      P          20 36 27.6 +1.6
       baz=178
Y49A   Blount Mountai    32.81 349   IAMs_20 IAMs_20   20 49 48.1
       comp=Z,2µm,20.0s
X56A   White Oak         32.83 358   P      P          20 36 27.9 +1.5
       baz=177
X55A   Gracelyn & Ava    32.84 357   P      P          20 36 27.9 +1.4
       baz=176,SNR=8.4
X58A   Rowland           32.87   0   IAMs_20 IAMs_20   20 49 35.7
       comp=Z,2µm,21.0s
X58A   Rowland           32.87   0   P      P          20 36 27.9 +1.3
       baz=180
X59A   McDuffie Farm,    32.90   1   P      P          20 36 28.1 +1.2
       baz=181
X54A   Belton            32.97 356   P      P          20 36 28.4 +0.9
       baz=174
BIRD   Birdtown, Kers    32.97 359   IAMs_20 IAMs_20   20 51 44.5
       comp=Z,2µm,20.0s
X53A   Estanollee        33.00 354   P      P          20 36 28.3 +0.5
       baz=173
C2SB   Chapadao do Su    33.11 129  eP      P          20 36 30.3 +1.3
X51A   Calhoun           33.25 352   IAMs_20 IAMs_20   20 48 54.6
       comp=Z,2µm,20.0s
X51A   Calhoun           33.25 352   P      P          20 36 32.2 +2.2
       baz=170
NATX   Nacogdoches       33.29 336   P      P          20 36 34.1 +3.7
       baz=151
W58A   Raeford           33.33   0   P      P          20 36 33.3 +2.6
       baz=180
FPAL   Fort Paine        33.34 351   P      P          20 36 30.3 -0.5
FPAL                                IAmb    IAmb       20 36 41.3
       comp=Z,29nm,1.0s
FPAL                                IAMs_20 IAMs_20    20 48 57.0
       comp=Z,2µm,20.0s
W57A   Gilead            33.47 359   IAmb   IAmb       20 36 50.2
       comp=Z,25nm,1.1s
W57A                                IAMs_20 IAMs_20    20 50 19.7
       comp=Z,2µm,21.0s
W57A   Gilead            33.47 359   P      P          20 36 32.5 +0.6
       baz=179,SNR=5.3
SMTB   Santa Maria do    33.49 108  eP      P          20 36 31.3 -1.1
W54A   Cherokee Point    33.49 356   P      P          20 36 33.3 +1.2
       baz=175
KMSC   Kings Mountain    33.49 357   IAmb   IAmb       20 36 43.4
       comp=Z,53nm,1.2s
KMSC                                IAMs_20 IAMs_20    20 52 16.6
       comp=Z,2µm,21.0s
KMSC   Kings Mountain    33.49 357   P      P          20 36 33.3 +1.2
       baz=176,SNR=7.7
W59A   Clinton           33.49   2   P      P          20 36 33.0 +0.9
       baz=182
W52A   Murphy            33.65 354   P      P          20 36 34.7 +1.1
       baz=172
BBSR   BB Station        33.73  23   IAMs_20 IAMs_20   20 51 47.1
       comp=Z,2µm,19.0s
435B   Jarrell           33.75 331   IAmb   IAmb       20 37 05.9
       comp=Z,22nm,0.9s
435B   Jarrell           33.75 331   P      P          20 36 36.8 +2.4
       baz=146
Z41A   Richland Creek    33.93 340   P      P          20 36 37.8 +1.8
       baz=155
237A   Washetta, Mont    33.98 335   IAmb   IAmb       20 36 48.0
       comp=Z,38nm,0.8s
SWET   Sewanee           34.05 351   P      P          20 36 37.2 +0.1
SWET                                IAmb    IAmb       20 36 47.4
       comp=Z,24nm,0.9s
SWET                                IAMs_20 IAMs_20    20 49 29.9
       comp=Z,3µm,20.0s
CPCT   Cooper Cave       34.08 353   IAmb   IAmb       20 36 48.3
       comp=Z,28nm,0.9s
CPCT                                IAMs_20 IAMs_20    20 49 41.4
       comp=Z,2µm,21.0s
OXF    Oxford            34.09 345   IAmb   IAmb       20 37 07.3
       comp=Z,54nm,1.2s
OXF    Oxford            34.09 345   P      P          20 36 37.8 +0.5
       baz=162
V59A   Middlesex         34.10   2   P      P          20 36 38.4 +1.0
       baz=182,SNR=6.7
V58A   Windy Hill, Pi    34.11   1   IAmb   IAmb       20 36 39.3
       comp=Z,49nm,1.1s
V58A                                IAMs_20 IAMs_20    20 51 10.5
       comp=Z,2µm,20.0s
V58A   Windy Hill, Pi    34.11   1   P      P          20 36 38.0 +0.6
       baz=180,SNR=9.7
V53A   Saluda            34.11 355   IAMs_20 IAMs_20   20 50 46.2
       comp=Z,2µm,19.0s
V53A   Saluda            34.11 355   P      P          20 36 38.8 +1.2
       baz=174
V56A   Mocksville        34.13 359   P      P          20 36 38.7 +1.1
       baz=178
V60A   Jim Taylor Roa    34.14   3   IAmb   IAmb       20 36 39.4
       comp=Z,45nm,1.0s
V60A   Jim Taylor Roa    34.14   3   P      P          20 36 38.9 +1.2
       baz=184
V54A   Nebo              34.16 357   P      P          20 36 39.6 +1.6
       baz=175,SNR=5.9
TKL    Tuckaleechee C    34.19 354   P      P          20 36 38.3 +0.1
       comp=Z,4.3nm,0.8s,baz=217,slow=6.0,SNR=6.5
TKL                                 LR      LR         20 50 04.5
       comp=Z,2µm,20.0s,baz=173,slow=35
TKL    Tuckaleechee C    34.19 354   IAmb   IAmb       20 36 55.7
       comp=Z,50nm,1.6s
V55A   Taylorsville      34.20 358   IAmb   IAmb       20 37 06.3
       comp=Z,44nm,1.2s
V55A                                IAMs_20 IAMs_20    20 52 36.1
       comp=Z,2µm,21.0s
V55A   Taylorsville      34.20 358   P      P          20 36 38.9 +0.6
       baz=177
V57A   Coltrane Farms    34.20 360   P      P          20 36 38.9 +0.6
       baz=179,SNR=5.6
V51A   Loudon            34.40 353   IAMs_20 IAMs_20   20 49 51.0
       comp=Z,2µm,20.0s
V51A   Loudon            34.40 353   P      P          20 36 40.7 +0.7
       baz=171,SNR=7.1
X43A   Marvell           34.49 343   P      P          20 36 41.7 +0.9
       baz=159
JCT    Junction City     34.62 328   IAmb   IAmb       20 37 05.5
       comp=Z,50nm,1.4s
JCT    Junction City     34.62 328   P      P          20 36 45.1 +3.1
       baz=142
W45A   Hickory Valley    34.65 346   IAmb   IAmb       20 37 11.5
       comp=Z,48nm,1.1s
CFA    Coronel Fontan    34.65 163   P      P          20 36 43.8 +1.5
       comp=Z,3.1nm,0.7s,baz=321,slow=7.3,SNR=6.9
U56A   King              34.66 359   IAMs_20 IAMs_20   20 50 57.4
       comp=Z,2µm,22.0s
U56A   King              34.66 359   P      P          20 36 43.9 +1.6
       baz=178,SNR=5.4
WHTX   Lake Whitney,     34.70 333   IAmb   IAmb       20 37 13.1
       comp=Z,35nm,1.1s
U59A   Littleton         34.70   3   IAmb   IAmb       20 36 44.8
       comp=Z,73nm,1.7s
U59A   Littleton         34.70   3   P      P          20 36 43.7 +1.1
       baz=183
V48A   Smith Brothers    34.71 350   P      P          20 36 42.5 -0.3
V48A                                IAMs_20 IAMs_20    20 50 57.5
       comp=Z,2µm,20.0s
U58A   Oxford            34.72   1   P      P          20 36 43.7 +1.0
       baz=181,SNR=7.9
U57A   Blanch            34.74   0   P      P          20 36 43.8 +0.8
       baz=180,SNR=12
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U61A	Possum Corner	34.76	4	IAMs_20	IAMs_20	20 50 55.3	
	comp=Z,2µm,21.0s						
U55A	TA2, Sparta	34.84	358	P	P	20 36 44.9	+1.0
	baz=177,SNR=5.5						
U60A	Pendleton	34.85	3	P	P	20 36 45.3	+1.5
	baz=184						
U54A	Nelsons Funny	34.89	357	IAMs_20	IAMs_20	20 53 00.6	
	comp=Z,2µm,20.0s						
U54A	Nelsons Funny	34.89	357	P	P	20 36 46.0	+1.7
	baz=176						
CLTN	Cedars of Leba	34.97	350	IAMs_20	IAMs_20	20 49 57.3	
	comp=Z,2µm,21.0s						
CPUP	Villa Florida	35.03	144	P	P	20 36 45.6	0.0
	comp=Z,6.2nm,0.8s,baz=333,slow=8.7,SNR=9.5						
CPUP				LR	LR	20 53 15.6	
	comp=Z,5µm,18.4s,baz=319,slow=40						
CPUP	Villa Florida	35.03	144	eP	P	20 36 44.3	-1.3
TZTN	Tazewell	35.05	354	IAmb	IAmb	20 37 03.0	
	comp=Z,76nm,1.5s						
TZTN	Tazewell	35.05	354	P	P	20 36 46.7	+1.1
	baz=173						
X40A	Basin Creek Fa	35.06	341	IAmb	IAmb	20 36 55.5	
	comp=Z,52nm,1.7s						
X40A	Basin Creek Fa	35.06	341	P	P	20 36 47.9	+2.1
	baz=156						
UALR	University of	35.17	342	IAmb	IAmb	20 36 57.2	
	comp=Z,34nm,0.8s						
H06E1	SOCORRO T-PHAS	35.20	301	T	T	21 14 00.7	
	SNR=75						
T58A	Grand View Acr	35.27	1	P	P	20 36 48.1	+0.6
	baz=181						
WVT	Waverly	35.28	348	P	P	20 36 46.8	-0.8
WVT				pmax	pmax		
	comp=Z,18nm,0.9s						
WVT				MLR	MLR		
	comp=Z,2µm,21.0s						
WVT	Waverly	35.28	348	P	P	20 36 46.8	-0.8
WVT	Waverly	35.28	348	IAMs_20	IAMs_20	20 51 23.8	
	comp=Z,2µm,21.0s						
WVT	Waverly	35.28	348	P	P	20 36 47.6	0.0
	baz=165						
U49A	Red Boiling Sp	35.29	351	IAmb	IAmb	20 37 03.9	
	comp=Z,106nm,2.0s						
U49A				IAMs_20	IAMs_20	20 50 07.8	
	comp=Z,2µm,20.0s						
T57A	Hurt	35.31	0	P	P	20 36 47.5	-0.4
T57A				IAmb	IAmb	20 36 59.3	
	comp=Z,39nm,0.9s						
T57A				IAMs_20	IAMs_20	20 50 04.3	
	comp=Z,2µm,21.0s						
T57A	Hurt	35.31	0	P	P	20 36 48.7	+0.9
	baz=180,SNR=12						
T59A	Double "B" Far	35.33	3	P	P	20 36 48.9	+0.9
	baz=183,SNR=9.3						
T56A	Rocky Mt	35.34	359	P	P	20 36 49.4	+1.2
	baz=179,SNR=6.9						
MIAR	Mount Ida	35.37	340	P	P	20 36 52.5	+4.1
	baz=155						
T53A	Wise	35.40	356	P	P	20 36 49.3	+0.6
	baz=174,SNR=6.0						
T54A	Tazewell	35.42	357	P	P	20 36 49.7	+0.8
	baz=176,SNR=6.6						
T55A	Pulaski	35.44	358	P	P	20 36 50.8	+1.8
	baz=177,SNR=5.6						
T51A	Gray	35.51	354	P	P	20 36 50.4	+0.9
	baz=172,SNR=7.5						
W41B	Gary Mavity, V	35.51	342	IAmb	IAmb	20 37 06.1	
	comp=Z,31nm,0.9s						
W41B	Gary Mavity, V	35.51	342	P	P	20 36 50.7	+1.1
	baz=157,SNR=9.6						
BLA	Blacksburg	35.53	359	IAmb	IAmb	20 37 01.2	
	comp=Z,32nm,1.0s						
BLA				IAMs_20	IAMs_20	20 53 11.3	
	comp=Z,2µm,21.0s						
BLA	Blacksburg	35.53	359	P	P	20 36 51.8	+2.0
	baz=178						
BDFB	Brasilia	35.54	120	P	P	20 36 49.2	-1.0
	comp=Z,11nm,1.1s,baz=282,slow=11,SNR=10						
BDFB				LR	LR	20 51 33.3	
	comp=Z,3µm,19.5s,baz=292,slow=37						
BDFB	Brasilia	35.54	120	IAmb	IAmb	20 36 51.2	
	comp=Z,52nm,1.6s						
T52A	Hallie	35.56	355	IAMs_20	IAMs_20	20 51 57.3	
	comp=Z,2µm,18.0s						
T52A	Hallie	35.56	355	P	P	20 36 51.2	+1.2
	baz=174,SNR=11						
ITRB	Iturama	35.58	128	eP	P	20 36 50.0	-0.4
WHAR	Wooly Hollow	35.63	342	IAmb	IAmb	20 37 01.0	
	comp=Z,34nm,0.9s						
T50A	Nancy	35.66	353	P	P	20 36 51.4	+0.5
	baz=170,SNR=7.4						
TRCB	Terra Rica	35.67	134	eP	P	20 36 50.4	-0.9
T49A	Edmonton	35.84	352	IAMs_20	IAMs_20	20 50 25.2	
	comp=Z,2µm,21.0s						
T49A	Edmonton	35.84	352	P	P	20 36 52.5	+0.1
	baz=169,SNR=10						
S58A	Poland Farm, P	35.95	2	IAMs_20	IAMs_20	20 50 33.1	
	comp=Z,2µm,22.0s						
S58A	Poland Farm, P	35.95	2	P	P	20 36 54.0	+0.7
	baz=182						
TXAR	Lajitas Array	35.95	323	P	P	20 36 55.9	+2.3
	comp=Z,4.9nm,1.0s,baz=144,slow=7.3,SNR=21						
TXAR				PcP	PcP	20 39 22.0	+1.7
	comp=Z,2.2nm,0.9s,baz=161,slow=5.7,SNR=3.9						
TXAR				LR	LR	20 52 35.5	
	comp=Z,735nm,20.3s,baz=0.0,slow=38						
PCMB	Pacaembu	35.96	131	eP	P	20 36 53.0	-0.6
T47A	Sharon Grove	35.98	350	IAmb	IAmb	20 37 03.5	
	comp=Z,32nm,1.0s						
T47A				IAMs_20	IAMs_20	20 54 18.0	
	comp=Z,2µm,18.0s						
S56A	Natural Bridge	35.98	360	P	P	20 36 55.3	+1.7
	baz=180						
LCAR	Lake Charles	36.02	344	P	P	20 36 53.7	-0.3
LCAR				IAmb	IAmb	20 37 04.1	
	comp=Z,27nm,0.8s						
W39A	Magazine	36.03	340	IAmb	IAmb	20 37 05.2	
	comp=Z,26nm,0.8s						
W39A	Magazine	36.03	340	P	P	20 36 55.2	+1.2
	baz=155,SNR=9.2						
S53A	Williamson	36.06	357	P	P	20 36 54.9	+0.5
	baz=175,SNR=6.3						
S57A	Dark Hollow, R	36.07	1	IAMs_20	IAMs_20	20 50 27.5	
	comp=Z,2µm,21.0s						
S57A	Dark Hollow, R	36.07	1	P	P	20 36 55.3	+0.9
	baz=180,SNR=5.5						
S55A	Lewisburg	36.09	359	P	P	20 36 55.4	+0.8
	baz=178,SNR=7.0						
S60A	Water View	36.11	4	P	P	20 36 56.9	+2.2
	baz=184						
S59A	Mechanicsville	36.13	3	P	P	20 36 55.8	+1.0
	baz=183,SNR=5.5						
S52A	Salyersville	36.13	355	P	P	20 36 55.3	+0.4
	baz=174,SNR=6.4						
S51A	Beattyville	36.14	355	IAmb	IAmb	20 37 36.6	
	comp=Z,34nm,1.1s						
S51A				IAMs_20	IAMs_20	20 51 57.8	
	comp=Z,2µm,19.0s						
S51A	Beattyville	36.14	355	P	P	20 36 55.4	+0.4
	baz=173,SNR=7.1						
S54A	Dingess, Beckl	36.14	358	P	P	20 36 55.7	+0.6
	baz=177						
ABTX	Abilene, Hawle	36.26	331	P	P	20 36 58.2	+2.1
	baz=144						
S50A	Richmond	36.26	354	P	P	20 36 56.5	+0.5
	baz=171,SNR=8.2						
R58B	Mineral	36.30	2	IAMs_20	IAMs_20	20 50 45.5	
	comp=Z,2µm,19.0s						
R58B	Mineral	36.30	2	P	P	20 36 57.5	+1.2
	baz=182,SNR=5.8						
IPMB	Ipameri, GO	36.44	124	eP	P	20 36 57.1	-0.8
S49A	Springfield	36.47	352	P	P	20 36 57.9	+0.1
	baz=170,SNR=13						
R54A	Victor	36.51	358	P	P	20 36 59.0	+0.8
	baz=177,SNR=5.8						
CBN	Corbin Frederi	36.56	3	P	P	20 37 00.5	+2.0
	baz=183						
R59A	King George, V	36.57	3	P	P	20 37 00.6	+2.0
	baz=184						
R55A	Marlinton	36.59	359	IAmb	IAmb	20 37 30.9	
	comp=Z,37nm,1.1s						
R55A				IAMs_20	IAMs_20	20 54 44.4	
	comp=Z,2µm,19.0s						
R55A	Marlinton	36.59	359	P	P	20 37 00.1	+1.1
	baz=179						
R57A	Stanardsville	36.62	1	P	P	20 37 00.8	+1.7
	baz=181						
R58A	Rapidan	36.63	2	P	P	20 37 00.5	+1.3
	baz=182,SNR=19						
R60A	Leonardtown, M	36.68	4	P	P	20 37 00.9	+1.4
	baz=184						
R53A	Hurricane	36.70	357	IAmb	IAmb	20 37 09.8	
	comp=Z,126nm,1.9s						
R53A				IAMs_20	IAMs_20	20 52 19.5	
	comp=Z,2µm,20.0s						
R53A	Hurricane	36.70	357	P	P	20 37 00.9	+1.1
	baz=176						
R56A	Bull Pasture M	36.71	0	P	P	20 37 01.3	+1.4
	baz=180						
R52A	Catlettsburg	36.75	356	P	P	20 37 00.8	+0.6
	baz=174						
U40A	Yellville	36.79	342	P	P	20 37 00.3	-0.2
U40A				IAmb	IAmb	20 37 11.1	
	comp=Z,38nm,0.9s						
U40A	Yellville	36.79	342	P	P	20 37 00.9	+0.4
	baz=157,SNR=9.0						
R51A	Hillsboro	36.79	355	P	P	20 37 01.0	+0.5
	baz=173,SNR=13						
R50A	Paris	36.85	354	P	P	20 37 01.9	+0.9
	baz=172,SNR=5.9						
R49A	Shelbyville	36.96	353	IAmb	IAmb	20 37 12.0	
	comp=Z,30nm,0.9s						
R49A				IAMs_20	IAMs_20	20 51 21.7	
	comp=Z,3µm,20.0s						
R49A	Shelbyville	36.96	353	P	P	20 37 02.3	+0.4
	baz=170,SNR=7.3						
USIN	University of	37.03	349	IAmb	IAmb	20 37 12.4	
	comp=Z,61nm,0.9s						
USIN				IAMs_20	IAMs_20	20 54 59.9	
	comp=Z,2µm,18.0s						
WCI	Wyandotte Cave	37.05	351	IAMs_20	IAMs_20	20 51 13.4	
	comp=Z,2µm,20.0s						
WCI	Wyandotte Cave	37.05	351	P	P	20 37 02.7	-0.1
	baz=168						
X34A	Smith Ranch, M	37.07	335	IAmb	IAmb	20 38 12.4	
	comp=Z,63nm,1.6s						
X34A				IAMs_20	IAMs_20	20 53 48.5	
	comp=Z,2µm,21.0s						
S44A	Carbondale	37.09	347	IAmb	IAmb	20 37 32.1	
	comp=Z,40nm,1.1s						
Q53A	Leroy	37.21	357	P	P	20 37 04.9	+0.9
	baz=176,SNR=12						
LPIG	La Paz	37.27	310	LR	LR	20 49 27.8	
	comp=Z,1µm,21.4s,baz=122,slow=31						
Q58A	Fox Den Farm,	37.28	2	P	P	20 37 06.0	+1.3
	baz=183,SNR=11						
PTGB	Pitanga	37.30	136	eP	P	20 37 04.6	-0.5
Q55A	Buckhannon	37.30	359	P	P	20 37 06.5	+1.6
	baz=179,SNR=8.1						
Q54A	Coxs Mills	37.31	358	IAmb	IAmb	20 37 06.6	
	comp=Z,79nm,1.8s						
Q54A				IAMs_20	IAMs_20	20 52 27.4	
	comp=Z,2µm,22.0s						
Q54A	Coxs Mills	37.31	358	P	P	20 37 05.1	+0.2
	baz=177,SNR=5.6						
Q56A	Snyder Ridge,	37.35	0	IAmb	IAmb	20 37 16.3	
	comp=Z,92nm,1.7s						
Q56A	Snyder Ridge,	37.35	0	P	P	20 37 06.8	+1.5
	baz=180						
Q52A	Bidwell	37.35	357	P	P	20 37 05.8	+0.5
	baz=175,SNR=7.2						
Q57A	Strasburg	37.35	1	P	P	20 37 06.7	+1.4
	baz=181						
Q50A	Georgetown	37.37	354	P	P	20 37 06.3	+0.8
	baz=172						
TUL1	Leonard	37.39	338	P	P	20 37 06.0	+0.3
TUL1	Leonard	37.39	338	P	P	20 37 07.0	+1.3
	baz=152						
Q60A	Greensboro	37.46	5	P	P	20 37 08.4	+2.2
	baz=186						
Q51A	Peebles	37.49	355	IAMs_20	IAMs_20	20 53 06.6	
	comp=Z,2µm,18.0s						
Q51A	Peebles	37.49	355	P	P	20 37 07.1	+0.7
	baz=173						
WMOK	Wichita Mounta	37.60	334	P	P	20 37 08.1	+0.6
WMOK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WMOK				MLR	MLR		
	comp=Z,800nm,20.0s						
WMOK	Wichita Mounta	37.60	334	P	P	20 37 08.1	+0.6
WMOK	Wichita Mounta	37.60	334	P	P	20 37 12.3	+4.8
	baz=147						
Q49A	Aurora	37.63	353	P	P	20 37 07.4	-0.2
	baz=171						
Q48A	North Vernon	37.66	352	P	P	20 37 07.3	-0.5
	baz=169,SNR=6.9						
BB19B	Bebedouro	37.76	128	eP	P	20 37 08.5	-0.5
SDMD	Soldier's Deli	37.80	3	IAmb	IAmb	20 37 11.4	
	comp=Z,68nm,1.9s						
P55A	Reedsville	37.81	360	P	P	20 37 11.6	+2.4
	baz=179						
P56A	Dayton Farm, R	37.81	1	P	P	20 37 10.6	+1.4
	baz=181,SNR=7.6						
P57A	Homestead Farm	37.81	2	IAmb	IAmb	20 37 13.1	
	comp=Z,131nm,1.9s						
P57A				IAMs_20	IAMs_20	20 51 31.5	
	comp=Z,2µm,21.0s						
P57A	Homestead Farm	37.81	2	P	P	20 37 11.5	+2.3
	baz=182,SNR=6.3						
P53A	Whipple	37.83	358	IAmb	IAmb	20 37 36.4	
	comp=Z,44nm,1.2s						
P53A				IAMs_20	IAMs_20	20 54 22.2	
	comp=Z,2µm,19.0s						
P53A	Whipple	37.83	358	P	P	20 37 10.0	+0.7
	baz=177,SNR=5.5						
P58A	Pank, Wackersv	37.85	3	P	P	20 37 10.8	+1.4
	baz=183,SNR=9.3						
OLIL	Olney	37.85	349	IAmb	IAmb	20 37 19.8	
	comp=Z,43nm,0.9s						
OLIL				IAMs_20	IAMs_20	20 55 33.8	
	comp=Z,2µm,18.0s						
CCM	Cathedral Cave	37.91	345	P	P	20 37 09.7	-0.3
CCM				pmax	pmax		
	comp=Z,38nm,0.9s						
CCM				MLR	MLR		
	comp=Z,900nm,20.0s						
CCM	Cathedral Cave	37.91	345	P	P	20 37 09.7	-0.3
CCM				IAmb	IAmb	20 37 19.8	
	comp=Z,38nm,0.9s						
CCM	Cathedral Cave	37.91	345	P	P	20 37 10.0	-0.1
	baz=160						
P54A	Burton	37.91	359	P	P	20 37 11.0	+0.9
	baz=178						
P51A	Williamsport	37.92	356	IAMs_20	IAMs_20	20 52 09.9	
	comp=Z,2µm,20.0s						
P51A	Williamsport	37.92	356	P	P	20 37 10.2	+0.2
	baz=174						
ITQB	Itaqui	37.98	147	eP	P	20 37 11.7	+1.0
P52A	Corning	38.01	357	P	P	20 37 11.4	+0.5
	baz=175,SNR=8.2						
BLO	Bloomington	38.01	351	IAmb	IAmb	20 37 20.6	
	comp=Z,52nm,1.1s						
BLO				IAMs_20	IAMs_20	20 51 43.8	
	comp=Z,3µm,21.0s						
P59A	Jarrettsville	38.02	4	P	P	20 37 12.9	+2.0
	baz=185						
P50A	Jamestown	38.11	355	P	P	20 37 11.1	-0.6
	baz=173,SNR=6.1						
P49A	Miami Univ. Ec	38.13	354	P	P	20 37 11.6	-0.2
	baz=171						
P48A	Milroy	38.14	353	IAMs_20	IAMs_20	20 52 08.0	
	comp=Z,3µm,20.0s						
P48A	Milroy	38.14	353	P	P	20 37 11.8	-0.2
	baz=170,SNR=5.9						
SLM	Saint Louis	38.21	346	IAMs_20	IAMs_20	20 52 50.6	
	comp=Z,2µm,20.0s						
FRTB	Fartura	38.25	132	eP	P	20 37 12.3	-0.8
P60A	Greenville	38.28	5	P	P	20 37 14.4	+1.4
	baz=186						
MVL	Millersville	38.41	4	IAmb	IAmb	20 37 16.9	
	comp=Z,50nm,1.0s						
MVL				IAMs_20	IAMs_20	20 52 42.1	
	comp=Z,2µm,21.0s						
O52A	Adamsville	38.47	357	IAmb	IAmb	20 37 24.6	
	comp=Z,100nm,1.9s						
O52A				IAMs_20	IAMs_20	20 55 19.4	
	comp=Z,2µm,21.0s						
O52A	Adamsville	38.47	357	P	P	20 37 15.0	+0.2
	baz=176						
O54A	Avella	38.49	359	IAMs_20	IAMs_20	20 53 24.7	
	comp=Z,2µm,21.0s						
O54A	Avella	38.49	359	P	P	20 37 15.2	+0.3
	baz=178						
O58A	Lewisberry	38.50	3	P	P	20 37 16.0	+1.1
	baz=184,SNR=9.0						
O55A	Ligonier	38.51	0	P	P	20 37 16.0	+0.9
	baz=180,SNR=5.1						
NBPS	Pedro II - PI	38.53	99	eP	P	20 37 14.6	-1.2
O51A	Pataskala	38.55	356	P	P	20 37 15.7	+0.4
	baz=175						
O57A	Amberson	38.55	2	P	P	20 37 16.4	+1.0
	baz=183,SNR=6.2						
P46A	Rosedale	38.56	351	IAMs_20	IAMs_20	20 53 17.2	
	comp=Z,2µm,20.0s						
JANB	Januaria	38.56	117	eP	P	20 37 14.7	-1.3
O53A	New Philadelph	38.58	358	P	P	20 37 16.5	+0.9
	baz=177,SNR=6.5						
O56A	Blue Knob Stat	38.58	1	IAmb	IAmb	20 37 55.2	
	comp=Z,39nm,1.1s						
O56A				IAMs_20	IAMs_20	20 52 04.9	
	comp=Z,2µm,19.0s						
O56A	Blue Knob Stat	38.58	1	P	P	20 37 16.7	+1.0
	baz=181,SNR=7.4						
O50A	Cable	38.63	355	P	P	20 37 15.9	-0.1
	baz=173,SNR=5.0						
ACSO	Alum Creek Sta	38.66	356	IAMs_20	IAMs_20	20 53 20.5	
	comp=Z,2µm,19.0s						
ACSO	Alum Creek Sta	38.66	356	P	P	20 37 16.6	+0.2
	baz=174,SNR=7.4						
MNTX	Cornudas Mount	38.67	324	P	P	20 37 19.0	+2.4
	baz=136						
O49A	Covington	38.73	354	IAMs_20	IAMs_20	20 55 59.6	
	comp=Z,2µm,19.0s						
O49A	Covington	38.73	354	P	P	20 37 16.9	0.0
	baz=172						
O59A	Robesonia	38.74	4	P	P	20 37 18.2	+1.3
	baz=185,SNR=8.8						
O60A	Telford	38.80	5	P	P	20 37 18.4	+1.0
	baz=186,SNR=5.7						
O48A	Farmland	38.89	353	P	P	20 37 18.0	-0.2
	baz=171						
MSTX	Muleshoe	38.91	329	IAmb	IAmb	20 37 38.6	
	comp=Z,52nm,1.1s						
MSTX	Muleshoe	38.91	329	P	P	20 37 20.8	+2.2
	baz=141,SNR=29						
ITAB	Concordia	38.92	139	eP	P	20 37 18.4	-0.2
SSPA	Standing Stone	38.97	2	IAMs_20	IAMs_20	20 52 17.1	
	comp=Z,2µm,22.0s						
SSPA	Standing Stone	38.97	2	P	P	20 37 19.8	+0.9
	baz=182						
P43A	Skaggs, Pawnee	39.02	348	IAmb	IAmb	20 37 48.1	
	comp=Z,92nm,1.4s						
P43A				IAMs_20	IAMs_20	20 56 13.7	
	comp=Z,2µm,20.0s						
N55A	Marion Center	39.09	1	P	P	20 37 20.8	+0.9
	baz=180,SNR=8.6						
N53A	Lisbon	39.13	358	IAMs_20	IAMs_20	20 53 22.5	
	comp=Z,2µm,21.0s						
N53A	Lisbon	39.13	358	P	P	20 37 20.8	+0.6
	baz=178						
N50A	Nevada	39.21	356	P	P	20 37 20.3	-0.6
	baz=174						
N58A	Sunbury	39.23	3	IAmb	IAmb	20 37 23.6	
	comp=Z,54nm,1.3s						
N58A				IAMs_20	IAMs_20	20 53 17.8	
	comp=Z,1µm,20.0s						
N58A	Sunbury	39.23	3	P	P	20 37 21.9	+0.9
	baz=184,SNR=5.6						
N56A	West Decatur	39.24	2	P	P	20 37 22.3	+1.2
	baz=182,SNR=6.7						
N54A	Moraine State	39.27	359	IAmb	IAmb	20 38 15.6	
	comp=Z,122nm,1.7s						
N54A				IAMs_20	IAMs_20	20 54 00.2	
	comp=Z,2µm,19.0s						
N54A	Moraine State	39.27	359	P	P	20 37 22.0	+0.6
	baz=179,SNR=7.2						
SFIN	Lafayette	39.28	351	IAMs_20	IAMs_20	20 52 32.4	
	comp=Z,3µm,21.0s						
SFIN	Lafayette	39.28	351	P	P	20 37 20.3	-1.2
	baz=168						
O44A	Mansfield	39.30	349	IAmb	IAmb	20 37 30.9	
	comp=Z,107nm,1.6s						
O44A				IAMs_20	IAMs_20	20 53 49.0	
	comp=Z,2µm,20.0s						
N51A	Ashland	39.30	357	IAMs_20	IAMs_20	20 53 58.4	
	comp=Z,2µm,19.0s						
N51A	Ashland	39.30	357	P	P	20 37 21.6	-0.1
	baz=175						
N61A	South Mountain	39.34	6	P	P	20 37 23.5	+1.5
	baz=188						
N59A	State Game Lan	39.37	5	P	P	20 37 23.7	+1.4
	baz=186,SNR=9.2						
N60A	Cedar Hill Far	39.38	5	P	P	20 37 23.7	+1.4
	baz=187,SNR=6.4						
N49A	Columbus Grove	39.45	354	IAMs_20	IAMs_20	20 54 15.4	
	comp=Z,2µm,19.0s						
N49A	Columbus Grove	39.45	354	P	P	20 37 22.6	-0.2
	baz=172						
N48A	Decatur	39.47	353	P	P	20 37 22.7	-0.4
	baz=171						
N47A	Urbana	39.57	353	IAMs_20	IAMs_20	20 53 02.9	
	comp=Z,2µm,21.0s						
N47A	Urbana	39.57	353	P	P	20 37 22.9	-1.1
	baz=170,SNR=7.2						
PAL	Palisades	39.64	7	P	P	20 37 23.6	-0.9
	baz=188						
M57A	Sunshine Farm,	39.70	3	IAMs_20	IAMs_20	20 52 50.4	
	comp=Z,2µm,20.0s						
M57A	Sunshine Farm,	39.70	3	P	P	20 37 26.2	+1.2
	baz=183,SNR=13						
M51A	Elyria	39.70	357	P	P	20 37 25.0	0.0
	baz=175						
M53A	WI Miller and	39.75	359	P	P	20 37 25.3	-0.2
	baz=178						
M58A	Price's Panora	39.77	4	P	P	20 37 26.8	+1.2
	baz=184,SNR=7.5						
M55A	Ridgway	39.78	1	P	P	20 37 23.8	-1.9
M55A				IAmb	IAmb	20 37 27.9	
	comp=Z,120nm,1.8s						
M55A				IAMs_20	IAMs_20	20 52 41.6	
	comp=Z,2µm,21.0s						
M55A	Ridgway	39.78	1	P	P	20 37 26.0	+0.4
	baz=181,SNR=7.3						
NBMO	Morrinhos-CE	39.79	97	eP	P	20 37 25.0	-1.1
M56A	Emporium	39.80	2	IAMs_20	IAMs_20	20 52 42.2	
	comp=Z,2µm,21.0s						
M56A	Emporium	39.80	2	P	P	20 37 26.6	+0.7
	baz=182,SNR=11						
M54A	Oil Creek Stat	39.81	360	IAmb	IAmb	20 37 35.9	
	comp=Z,93nm,1.6s						
M54A				IAMs_20	IAMs_20	20 54 26.5	
	comp=Z,1µm,19.0s						
M54A	Oil Creek Stat	39.81	360	P	P	20 37 26.3	+0.4
	baz=179,SNR=5.8						
M50A	Fremont	39.83	356	IAMs_20	IAMs_20	20 54 05.4	
	comp=Z,2µm,20.0s						
M50A	Fremont	39.83	356	P	P	20 37 26.6	+0.6
	baz=174						
HDIL	Hopedale	39.85	348	IAmb	IAmb	20 37 35.4	
	comp=Z,38nm,0.9s						
HDIL				IAMs_20	IAMs_20	20 56 38.6	
	comp=Z,2µm,18.0s						
HDIL	Hopedale	39.85	348	P	P	20 37 25.1	-1.1
	baz=164						
M52A	Chesterland	39.88	358	IAMs_20	IAMs_20	20 54 37.4	
	comp=Z,2µm,20.0s						
M52A	Chesterland	39.88	358	P	P	20 37 27.0	+0.5
	baz=177						
M60A	Port Jervis	39.88	6	P	P	20 37 28.0	+1.6
	baz=187						
M49A	Liberty Center	39.98	355	P	P	20 37 27.0	-0.3
	baz=173						
SPB	Sao Paulo	39.99	131	eP	P	20 37 27.3	-0.4
M59A	Waymart	40.02	5	P	P	20 37 28.9	+1.3
	baz=186,SNR=8.0						
VAO	Valinhos	40.02	129	eP	P	20 37 26.9	-1.1
M47A	Cromwell	40.04	353	P	P	20 37 27.7	0.0
	baz=170						
M48A	Edgerton	40.06	354	IAMs_20	IAMs_20	20 55 14.6	
	comp=Z,2µm,18.0s						
M62A	Hamden	40.20	8	P	P	20 37 29.7	+0.6
	baz=190						
L53A	Girard	40.26	359	P	P	20 37 29.8	+0.1
	baz=178						
M63A	Gales Ferry	40.28	9	P	P	20 37 31.1	+1.3
	baz=191						
CPSB	Cacapava Do Su	40.34	144	eP	P	20 37 30.1	-0.3
L57A	Andrews Acres	40.38	3	P	P	20 37 31.6	+1.0
	baz=184,SNR=16						
ERPA	Erie	40.42	360	IAmb	IAmb	20 38 25.6	
	comp=Z,96nm,1.8s						
ERPA				IAMs_20	IAMs_20	20 54 44.7	
	comp=Z,2µm,20.0s						
ERPA	Erie	40.42	360	P	P	20 37 31.8	+0.8

	baz=179						
M44A	Midewin, Midew	40.42	350	IAMs_20	IAMs_20	20 54 34.6	
	comp=Z,2μm,20.0s						
L50A	Kingsville	40.45	356	P	P	20 37 31.5	+0.3
	baz=175						
L56A	Greenwood	40.48	2	IAmb	IAmb	20 37 41.8	
	comp=Z,168nm,1.9s						
L56A				IAMs_20	IAMs_20	20 53 14.0	
	comp=Z,2μm,21.0s						
L56A	Greenwood	40.48	2	P	P	20 37 32.0	+0.6
	baz=183,SNR=6.2						
L58A	Harry Jones Me	40.48	4	P	P	20 37 33.0	+1.5
	baz=185,SNR=9.6						
L55A	Hinsdale	40.50	1	P	P	20 37 32.1	+0.4
	baz=181,SNR=7.8						
KSU1	Kansas State U	40.52	339	P	P	20 37 33.1	+1.2
	baz=153						
L54A	Sinclairville	40.54	0	P	P	20 37 32.2	+0.3
	baz=180,SNR=6.0						
NBPB	Pedra_Branca-C	40.54	100	*e*P	P	20 37 30.8	-1.6
L60A	Shokan	40.58	6	P	P	20 37 33.4	+1.1
	baz=188						
L49A	Milan	40.59	355	P	P	20 37 32.3	0.0
	baz=173						
L47A	Sherwood	40.60	354	P	P	20 37 32.1	-0.3
	baz=171,SNR=5.7						
BINY	Binghamton	40.63	4	IAmb	IAmb	20 37 35.2	
	comp=Z,88nm,1.2s						
BINY	Binghamton	40.63	4	P	P	20 37 34.0	+1.3
	baz=185						
M65A	Busby, Falmout	40.67	10	IAMs_20	IAMs_20	20 52 51.1	
	comp=Z,2μm,22.0s						
L59A	Walton	40.69	5	P	P	20 37 34.5	+1.2
	baz=186,SNR=6.3						
121A	Cookes Peak, D	40.70	322	IAmb	IAmb	20 37 54.0	
	comp=Z,92nm,1.5s						
121A				IAMs_20	IAMs_20	20 54 53.1	
	comp=Z,2μm,18.0s						
121A	Cookes Peak, D	40.70	322	P	P	20 37 37.6	+3.9
	baz=133,SNR=13						
WVNY	West Valley, N	40.72	1	IAmb	IAmb	20 38 12.4	
	comp=Z,79nm,1.5s						
WVNY				IAMs_20	IAMs_20	20 53 11.4	
	comp=Z,2μm,21.0s						
BSCB	Bom Sucesso	40.73	125	*e*P	P	20 37 33.3	-0.6
L46A	Eue Claire	40.77	352	IAMs_20	IAMs_20	20 53 28.6	
	comp=Z,2μm,20.0s						
L46A	Eue Claire	40.77	352	P	P	20 37 33.1	-0.8
	baz=169						
AAM	Ann Arbor	40.77	355	IAMs_20	IAMs_20	20 57 20.3	
	comp=Z,2μm,20.0s						
AAM	Ann Arbor	40.77	355	P	P	20 37 34.0	+0.2
	baz=173						
L62A	Suffield	40.81	8	P	P	20 37 36.0	+1.9
	baz=190						
L61A	Hillsdale 1, H	40.85	7	P	P	20 37 36.5	+2.0
	baz=189						
BRYW	Bryant College	40.86	9	IAMs_20	IAMs_20	20 57 33.3	
	comp=Z,2μm,18.0s						
319A	Douglas	40.87	320	IAmb	IAmb	20 37 57.6	
	comp=Z,90nm,1.8s						
319A				IAMs_20	IAMs_20	20 53 17.9	
	comp=Z,2μm,18.0s						
K54A	Basiliko Farm,	40.92	1	P	P	20 37 36.5	+1.4
	baz=181						
NBPN	Ponto Novo - B	41.03	108	*e*P	P	20 37 34.9	-1.5
K56A	Middlesex	41.05	3	P	P	20 37 37.3	+1.2
	baz=183,SNR=5.7						
K55A	Perry	41.05	2	P	P	20 37 36.6	+0.4
	baz=182						
K51A	Iona Station	41.06	358	P	P	20 37 35.6	-0.6
	baz=177						
QUA2	Belchertown	41.09	8	IAmb	IAmb	20 37 38.7	
	comp=Z,135nm,1.7s						
QUA2				IAMs_20	IAMs_20	20 57 44.5	
	comp=Z,1μm,19.0s						
K52A	Tillsonburg	41.09	359	P	P	20 37 36.7	+0.3
	baz=178						
K57A	Scipio Center	41.12	3	P	P	20 37 37.4	+0.6
	baz=184,SNR=12						
K50A	Casco	41.17	357	IAMs_20	IAMs_20	20 55 05.7	
	comp=Z,2μm,19.0s						
K50A	Casco	41.17	357	P	P	20 37 36.9	-0.2
	baz=175						
L44A	Lake County Fo	41.17	351	IAMs_20	IAMs_20	20 53 40.4	
	comp=Z,2μm,21.0s						
K58A	Earlville	41.21	4	IAMs_20	IAMs_20	20 54 29.1	
	comp=Z,2μm,21.0s						
K58A	Earlville	41.21	4	P	P	20 37 38.4	+0.9
	baz=186,SNR=9.3						
L61B	Northampton	41.22	8	P	P	20 37 38.2	+0.7
	baz=190						
K49A	Clarkson	41.23	356	P	P	20 37 37.7	+0.1
	baz=174						
PARB	Paraibuna	41.24	129	*e*P	P	20 37 37.9	-0.2
PLTB	Pedras Altas	41.25	146	*e*P	P	20 37 37.9	0.0
K47A	Vermontville	41.26	354	P	P	20 37 37.2	-0.7
	baz=171,SNR=6.4						
K59A	Cooperstown	41.29	5	P	P	20 37 39.4	+1.3
	baz=187,SNR=7.4						
K48A	Perry	41.31	355	P	P	20 37 37.7	-0.6
	baz=173						
L42A	Oliver, Polo	41.32	349	IAmb	IAmb	20 38 06.4	
	comp=Z,55nm,1.4s						
L42A				IAMs_20	IAMs_20	20 57 26.5	
	comp=Z,1μm,18.0s						
WES	Weston	41.35	9	IAMs_20	IAMs_20	20 57 55.3	
	comp=Z,1μm,19.0s						
K61A	Williamstown	41.36	7	P	P	20 37 40.1	+1.4
	baz=189						
K46A	Dorr	41.37	353	P	P	20 37 37.0	-1.7
	baz=170						
TRY	Troy	41.37	7	IAmb	IAmb	20 37 41.6	
	comp=Z,69nm,1.3s						
HRV	Adam Dziewonsk	41.43	9	IAmb	IAmb	20 37 41.1	
	comp=Z,84nm,1.4s						
HRV	Adam Dziewonsk	41.43	9	IAMs_20	IAMs_20	20 57 48.5	
	comp=Z,1μm,19.0s						
HRV	Adam Dziewonsk	41.43	9	P	P	20 37 40.6	+1.4
	baz=192						
CBKS	Cedar Bluff	41.46	336	P	P	20 37 42.1	+2.5
	baz=148						
MEDO	Medina	41.48	1	IAMs_20	IAMs_20	20 53 45.5	
	comp=Z,2μm,21.0s						
K62A	Royalston	41.49	8	P	P	20 37 41.0	+1.2
	baz=191,SNR=5.2						
LPA	La Plata	41.52	153	*i* P	P	20 37 41.4	+1.3
LPA				PP	PP	20 39 15.1	-1.2
LPA				PCP	PcP	20 39 31.1	-6.3
LPA				PPP	PPP	20 39 44.4	
LPA				S	S	20 43 56.8	+2.5
LPA				PKIKP	PKiKP	20 46 42.4	-2.4
LPA				SCS	SS	20 46 56.9	-2.7
LPA				SSS	SSS	20 47 29.6	
LPA				SKIKS		20 53 34.6	
J52A	Paris	41.55	359	P	P	20 37 40.9	+0.6
	baz=178						
J54A	Appleton	41.58	1	IAMs_20	IAMs_20	20 53 37.3	
	comp=Z,2μm,21.0s						
J54A	Appleton	41.58	1	P	P	20 37 41.6	+1.1
	baz=181						
J55A	Hilton	41.59	2	IAMs_20	IAMs_20	20 53 59.6	
	comp=Z,2μm,21.0s						
J55A	Hilton	41.59	2	P	P	20 37 41.0	+0.4
	baz=182						
K63A	Dunstable	41.62	9	P	P	20 37 42.0	+1.3
	baz=192,SNR=6.1						
NBCL	Cascavel-CE	41.63	98	*e*P	P	20 37 40.6	-0.7
ANMO	Albuquerque	41.64	326	P	P	20 37 44.0	+2.7
	comp=Z,18nm,1.0s,baz=146,slow=9.5,SNR=33						
ANMO	Albuquerque	41.64	326	P	P	20 37 44.6	+3.2
	baz=137						
NBMA	Muriti-CE	41.65	103	*e*P	P	20 37 40.6	-0.9
J56A	Wolcott	41.65	3	P	P	20 37 41.3	+0.3
J56A				IAmb	IAmb	20 37 42.7	
	comp=Z,46nm,0.7s						
J56A				IAMs_20	IAMs_20	20 54 08.9	
	comp=Z,1μm,21.0s						
J56A	Wolcott	41.65	3	P	P	20 37 41.4	+0.4
	baz=184,SNR=12						
L40A	Anamosa	41.70	347	IAmb	IAmb	20 37 57.5	
	comp=Z,113nm,1.9s						
K43A	Burlington	41.75	350	IAMs_20	IAMs_20	20 57 47.8	
	comp=Z,2μm,18.0s						
J48A	Bridge Port	41.77	355	IAmb	IAmb	20 37 51.1	
	comp=Z,120nm,1.8s						
J48A				IAMs_20	IAMs_20	20 58 09.8	
	comp=Z,2μm,20.0s						
J48A	Bridge Port	41.77	355	P	P	20 37 41.2	-0.8
	baz=173						
J49A	Marlette	41.78	356	P	P	20 37 42.1	-0.1
	baz=174						
J47A	Sunmer	41.80	354	IAMs_20	IAMs_20	20 57 53.8	
	comp=Z,2μm,18.0s						
J47A	Sunmer	41.80	354	P	P	20 37 42.2	-0.1
	baz=172						
J57A	Williamstown	41.83	4	IAmb	IAmb	20 37 52.7	
	comp=Z,76nm,1.5s						
J57A				IAMs_20	IAMs_20	20 54 48.5	
	comp=Z,2μm,20.0s						
J57A	Williamstown	41.83	4	P	P	20 37 43.0	+0.5
	baz=185,SNR=7.4						
J58A	Remsen	41.84	5	IAmb	IAmb	20 37 44.7	
	comp=Z,38nm,1.0s						
J58A	Remsen	41.84	5	P	P	20 37 43.4	+0.8
	baz=186,SNR=11						
J60A	Lant Hill Farm	41.91	7	P	P	20 37 44.5	+1.4
	baz=189,SNR=6.2						
J46A	Howard City	42.00	353	P	P	20 37 43.5	-0.4
	baz=170						
ESAR	Angra dos Reis	42.00	128	*e*P	P	20 37 45.1	+0.8
J59A	Piesco	42.01	6	IAmb	IAmb	20 37 46.2	
	comp=Z,39nm,0.8s						
J59A	Piesco	42.01	6	P	P	20 37 45.0	+1.0
	baz=187,SNR=14						
ACCN	Adirondack Com	42.02	6	IAmb	IAmb	20 37 45.9	
	comp=Z,63nm,1.4s						
J62A	Henniker	42.10	8	P	P	20 37 46.2	+1.5
	baz=191						
J61A	Chester	42.11	8	P	P	20 37 46.6	+1.8
	baz=190						
I51A	Listowel	42.12	358	P	P	20 37 45.2	+0.3
	baz=177						
J45A	Montague	42.18	353	IAMs_20	IAMs_20	20 54 40.9	
	comp=Z,2μm,20.0s						
I58A	Old Forge	42.19	5	P	P	20 37 46.2	+0.7
	baz=186,SNR=6.3						
T25A	Trinidad	42.21	330	IAmb	IAmb	20 38 30.1	
	comp=Z,49nm,1.1s						
T25A	Trinidad	42.21	330	P	P	20 37 49.3	+3.3
	baz=141,SNR=24						
PECO	Prince Edward	42.30	3	IAmb	IAmb	20 37 47.6	
	comp=Z,24nm,0.7s						
PECO				IAMs_20	IAMs_20	20 54 19.2	
	comp=Z,1μm,19.0s						
JFWS	Jewell Farm	42.31	348	IAMs_20	IAMs_20	20 57 19.8	
	comp=Z,2μm,20.0s						
JFWS	Jewell Farm	42.31	348	P	P	20 37 46.0	-0.4
	baz=164,SNR=6.1						
I49A	Point Hope	42.34	356	IAMs_20	IAMs_20	20 55 40.6	
	comp=Z,2μm,20.0s						
I49A	Point Hope	42.34	356	P	P	20 37 46.3	-0.4
	baz=175						
I52A	Shelburne	42.37	359	P	P	20 37 46.9	-0.1
	baz=179						
I57A	Carthage	42.38	4	P	P	20 37 48.0	+1.0
	baz=185,SNR=8.0						
I59A	Olmsteadville	42.40	6	P	P	20 37 48.0	+0.8
	baz=188,SNR=15						
TUC	Tucson	42.45	319	P	P	20 37 50.7	+2.8
	baz=130						
I60A	Shoreham	42.51	7	P	P	20 37 49.7	+1.6
	baz=189,SNR=14						
NCB	Newcomb	42.54	6	IAmb	IAmb	20 37 50.5	
	comp=Z,90nm,1.6s						
I47A	Gladwin	42.55	355	IAmb	IAmb	20 37 53.1	
	comp=Z,66nm,1.4s						
I47A	Gladwin	42.55	355	P	P	20 37 48.0	-0.4
	baz=172						
I55A	Frankford	42.55	2	P	P	20 37 49.0	+0.7
	baz=182						
OGAUY	Aigu	42.62	149	*e*P	P	20 37 50.8	+1.7
I48A	Sherman Twp	42.65	356	P	P	20 37 49.1	0.0
	baz=174						
NBTA	Tacaratu-PE	42.67	105	*e*P	P	20 37 48.0	-1.9
I61A	Oroboro, Fairl	42.74	8	P	P	20 37 50.9	+1.0
	baz=190						
SJMB	Sao Joao De Ma	42.74	120	*e*P	P	20 37 49.9	-0.5
I45A	Fountain	42.75	353	IAMs_20	IAMs_20	20 54 39.0	
	comp=Z,2μm,20.0s						
I62A	Tamworth	42.80	9	P	P	20 37 52.0	+1.5
	baz=192						
PLCA	Paso Flores	42.85	170	P	P	20 37 53.1	+2.2
	comp=Z,6.3nm,0.6s,baz=4.5,slow=9.0,SNR=42						
PLCA	Paso Flores	42.85	170	P	P	20 37 53.7	+2.7
PLCA				pmax	pmax		
	comp=Z,24nm,1.1s						
PLCA	Paso Flores	42.85	170	P	P	20 37 53.6	+2.7
PLCA	Paso Flores	42.85	170	*e*P	P	20 37 52.9	+2.0
DELO	Deloro Mine	42.85	2	P	P	20 37 49.3	-1.5
DELO				IAmb	IAmb	20 37 52.1	
	comp=Z,99nm,1.5s						
DELO				IAMs_20	IAMs_20	20 54 39.0	
	comp=Z,1μm,19.0s						
KSCO	Kaye Shedlock'	42.86	333	IAMs_20	IAMs_20	20 57 07.7	
	comp=Z,1μm,20.0s						
KSCO	Kaye Shedlock'	42.86	333	P	P	20 37 55.5	+4.3
	baz=144						
H53A	Bobcaygeon	42.88	1	P	P	20 37 50.8	-0.3
	baz=181,SNR=5.2						
H55A	Tweed	42.90	2	P	P	20 37 51.6	+0.4
	baz=183,SNR=8.1						
H57A	Richville	42.92	4	P	P	20 37 52.1	+0.8
	baz=186,SNR=7.0						
NBIT	Itapeh - BA	42.93	114	*e*P	P	20 37 51.8	-0.2
H52A	Wyevale	42.94	360	P	P	20 37 51.3	-0.2
	baz=179						
H58A	Gabriels	42.98	6	P	P	20 37 52.4	+0.4
	baz=188,SNR=8.5						
H56A	Elgin	42.99	3	P	P	20 37 52.6	+0.7
	baz=184,SNR=16						
NBPA	Parau_RN	43.00	100	*e*P	P	20 37 50.8	-1.7
I42A	Draeger Farm,	43.01	350	IAMs_20	IAMs_20	20 56 13.0	
	comp=Z,2μm,19.0s						
VT1	Waterbury	43.06	7	IAMs_20	IAMs_20	20 59 06.3	
	comp=Z,1μm,21.0s						
SADO	Sadowa	43.07	0	P	P	20 37 52.3	-0.3
	comp=Z,9.3nm,1.0s,baz=245,slow=2.6,SNR=7.1						
SADO	Sadowa	43.07	0	P	P	20 37 50.6	-1.9
SADO				IAmb	IAmb	20 37 53.4	
	comp=Z,57nm,1.5s						
SADO				IAMs_20	IAMs_20	20 54 32.8	
	comp=Z,1μm,21.0s						
LBNH	Lisbon	43.08	8	IAmb	IAmb	20 37 55.4	
	comp=Z,74nm,1.2s						
LBNH				IAMs_20	IAMs_20	20 59 11.0	
	comp=Z,1μm,18.0s						
LBNH	Lisbon	43.08	8	P	P	20 37 54.1	+1.4
	baz=191						
BSFB	Barra de Sao F	43.09	120	*e*P	P	20 37 52.1	-1.0
I63A	Otisfield	43.10	9	IAmb	IAmb	20 37 54.7	
	comp=Z,68nm,1.3s						
I63A				IAMs_20	IAMs_20	20 58 56.4	
	comp=Z,1μm,19.0s						
I63A	Otisfield	43.10	9	P	P	20 37 54.1	+1.3
	baz=193,SNR=5.1						
BGNE	Belgrade	43.11	339	P	P	20 37 53.7	+0.7
	baz=152						
H48A	Harrisville	43.13	356	P	P	20 37 52.9	-0.2
	baz=174						
I64A	Boothbay	43.13	10	P	P	20 37 54.1	+1.1
	baz=194						
SDCO	Great Sand Dun	43.23	330	IAmb	IAmb	20 38 01.3	
	comp=Z,44nm,1.1s						
SDCO				IAMs_20	IAMs_20	20 57 33.1	
	comp=Z,1μm,18.0s						
SDCO	Great Sand Dun	43.23	330	P	P	20 37 57.5	+3.1
	baz=140						
H59A	Cadyville	43.26	6	P	P	20 37 55.1	+1.0
	baz=188,SNR=7.3						
H60A	Morristown	43.29	7	P	P	20 37 55.6	+1.2
	baz=190						
I40A	Norwalk	43.32	348	IAMs_20	IAMs_20	20 58 46.6	
	comp=Z,2μm,18.0s						
NBLA	Lagarto - SE	43.36	108	*e*P	P	20 37 53.4	-2.0
H61A	Lyndonville	43.37	8	P	P	20 37 56.3	+1.3
	baz=191						
X18A	Snowflake	43.38	323	IAMs_20	IAMs_20	20 55 22.1	
	comp=Z,2μm,19.0s						
PLVO	Plevna	43.40	3	IAMs_20	IAMs_20	20 54 55.2	
	comp=Z,1μm,20.0s						
NBLI	Livramento-PB	43.41	102	*e*P	P	20 37 54.6	-1.3
G53A	Haliburton	43.43	1	P	P	20 37 55.0	-0.5
	baz=181						
FRNY	Flat Rock	43.46	6	IAmb	IAmb	20 37 58.0	
	comp=Z,103nm,1.5s						
H62A	Milan	43.52	9	IAmb	IAmb	20 37 58.4	
	comp=Z,60nm,1.2s						
H62A	Milan	43.52	9	P	P	20 37 57.3	+1.1
	baz=192						
214A	Organ Pipe Nat	43.58	317	IAmb	IAmb	20 38 17.8	
	comp=Z,57nm,1.5s						
214A				IAMs_20	IAMs_20	20 54 01.7	
	comp=Z,2μm,20.0s						
214A	Organ Pipe Nat	43.58	317	P	P	20 38 00.3	+3.4
	baz=127						
G57A	Newington	43.59	5	P	P	20 37 57.3	+0.6
	baz=186,SNR=12						
G55A	Calabogie	43.62	3	P	P	20 37 57.3	+0.3
	baz=184,SNR=14						
G47A	Hillman	43.64	356	P	P	20 37 56.7	-0.4
	baz=173,SNR=8.4						
W18A	Petrified Fore	43.66	323	IAmb	IAmb	20 38 27.8	
	comp=Z,57nm,1.1s						
W18A	Petrified Fore	43.66	323	P	P	20 38 01.2	+3.5
	baz=133,SNR=9.6						
G45A	Suttons Bay	43.67	354	IAmb	IAmb	20 38 21.8	
	comp=Z,27nm,0.8s						
G45A				IAMs_20	IAMs_20	20 58 52.3	
	comp=Z,2μm,19.0s						
G45A	Suttons Bay	43.67	354	P	P	20 37 57.2	-0.3
	baz=171						
G54A	Lake Saint Pet	43.72	1	P	P	20 37 57.6	-0.3
	baz=182,SNR=12						
G58A	Ormstown	43.72	6	P	P	20 37 58.7	+0.9
	baz=188,SNR=7.1						
G59A	Clarenceville	43.74	7	P	P	20 37 59.1	+1.2
	baz=189,SNR=7.9						
WVL	Waterville	43.75	10	IAmb	IAmb	20 38 00.8	
	comp=Z,64nm,1.5s						
WVL				IAMs_20	IAMs_20	20 57 52.8	
	comp=Z,1μm,20.0s						
H63A	New Sharon	43.78	10	P	P	20 38 00.4	+2.1
	baz=193,SNR=5.4						
G60A	Masonville	43.87	7	P	P	20 38 00.4	+1.3
	baz=190,SNR=10.0						
G46A	Petoskey	43.87	355	P	P	20 37 58.7	-0.4
	baz=172						
S22A	4UR Ranch, Cre	43.91	328	IAMs_20	IAMs_20	20 59 50.4	
	comp=Z,1μm,20.0s						
S22A	4UR Ranch, Cre	43.91	328	P	P	20 38 02.9	+3.0
	baz=138,SNR=5.9						
Q24A	Divide	44.00	331	IAMs_20	IAMs_20	20 57 58.4	
	comp=Z,1μm,22.0s						
Q24A	Divide	44.00	331	P	P	20 38 03.0	+2.4
	baz=141						
F52A	Sundridge	44.10	0	P	P	20 38 01.1	+0.3
	baz=180						
F49A	Sandfield	44.12	358	P	P	20 37 59.7	-1.3
	baz=176						
G61A	St-Isidore-de-	44.16	8	P	P	20 38 03.0	+1.6
	baz=191,SNR=11						
RCBR	Riachuelo	44.20	100	P	P	20 38 01.0	-1.2
	comp=Z,14nm,1.1s,baz=269,slow=9.4,SNR=5.4						
RCBR	Riachuelo	44.20	100	IAmb	IAmb	20 38 01.8	
	comp=Z,57nm,1.4s						
RCBR	Riachuelo	44.20	100	*e*P	P	20 38 01.3	-1.0
F48A	Evansville	44.21	357	P	P	20 38 00.4	-1.3
	baz=175						
F55A	Otter Lake	44.22	3	P	P	20 38 02.3	+0.4
	baz=184,SNR=6.0						
F51A	Arnstein	44.23	360	P	P	20 38 01.7	-0.2
	baz=179						
X16A	Lo Mia Camp, P	44.23	321	IAmb	IAmb	20 38 16.8	
	comp=Z,49nm,1.9s						
G62A	West of Eustis	44.24	9	IAMs_20	IAMs_20	20 55 02.8	
	comp=Z,1μm,22.0s						
G62A	West of Eustis	44.24	9	P	P	20 38 03.8	+1.8
	baz=193,SNR=14						
G63A	Kingsbury	44.29	10	P	P	20 38 03.6	+1.1
	baz=194						
F45A	CMU Biological	44.30	354	P	P	20 38 01.9	-0.5
	baz=171						
F57A	Harrington	44.32	5	P	P	20 38 03.5	+0.9
	baz=187						
MVCO	Mesa Verde	44.42	326	IAmb	IAmb	20 38 23.8	
	comp=Z,94nm,1.7s						
MVCO				IAMs_20	IAMs_20	20 56 52.9	
	comp=Z,1μm,22.0s						
MVCO	Mesa Verde	44.42	326	P	P	20 38 06.8	+2.9
	baz=136						
H66A	Whiting	44.43	12	P	P	20 38 03.9	+0.4
	baz=197						
PKME	Peaks-Kenny Pk	44.50	10	P	P	20 38 05.5	+1.5
	baz=194						
NBAN	Anadia - AL	44.51	105	*e*P	P	20 38 03.2	-1.5
F59A	Saint Guilaume	44.55	7	P	P	20 38 05.6	+1.2
	baz=189,SNR=7.5						
G40A	Rib Lake	44.57	349	IAmb	IAmb	20 38 33.9	
	comp=Z,32nm,1.1s						
G40A				IAMs_20	IAMs_20	20 59 34.4	
	comp=Z,2μm,19.0s						
E52A	Mattawa	44.59	1	P	P	20 38 03.7	-1.0
	baz=181,SNR=6.3						
ECSD	EROS Data Cent	44.69	342	P	P	20 38 06.3	+0.6
	baz=155						
F42A	Maple Grove Fa	44.70	351	IAmb	IAmb	20 38 15.2	
	comp=Z,25nm,0.8s						
113A	Mohawk Valley,	44.71	318	IAmb	IAmb	20 38 24.6	
	comp=Z,78nm,1.9s						
113A				IAMs_20	IAMs_20	20 54 36.7	
	comp=Z,2μm,20.0s						
E53A	Dumoine, Ponti	44.71	2	P	P	20 38 05.2	-0.5
	baz=182						
F60A	Warwick	44.77	8	P	P	20 38 07.3	+1.1
	baz=190,SNR=9.4						
G65A	Princeton	44.77	12	IAMs_20	IAMs_20	20 59 44.5	
	comp=Z,1μm,19.0s						
G65A	Princeton	44.77	12	P	P	20 38 06.4	+0.1
	baz=197						
E54A	Lac Daplat, Po	44.78	2	P	P	20 38 06.0	-0.3
	baz=183,SNR=9.8						
E51A	G1948 Merrick	44.83	0	P	P	20 38 06.1	-0.6
	baz=180,SNR=12						
E48A	Lockeyer	44.84	357	P	P	20 38 05.9	-0.9
	baz=176,SNR=10						
GGN	Saint George	44.85	13	P	P	20 38 03.8	-3.1
E47A	Iron Bridge	44.87	356	P	P	20 38 06.2	-0.8
	baz=174,SNR=8.3						
ISCO	Idaho Springs	44.88	331	P	P	20 38 10.6	+3.0
	baz=141,SNR=7.1						
NBPV	Pedro Velho	44.89	101	*e*P	P	20 38 06.7	-1.0
F61A	St Evariste	44.91	8	P	P	20 38 08.1	+0.8
	baz=192,SNR=6.1						
WUAZ	Wupatki	44.91	322	IAmb	IAmb	20 38 25.6	
	comp=Z,42nm,1.0s						
WUAZ				IAMs_20	IAMs_20	20 56 26.5	
	comp=Z,2μm,18.0s						
WUAZ	Wupatki	44.91	322	P	P	20 38 11.1	+3.3
	baz=131,SNR=16						
Y14A	Wickenburg	44.92	320	IAmb	IAmb	20 38 27.3	
	comp=Z,75nm,2.0s						
F63A	Nahmakanta, Br	44.95	10	IAMs_20	IAMs_20	20 58 29.5	
	comp=Z,2μm,20.0s						
F63A	Nahmakanta, Br	44.95	10	P	P	20 38 08.9	+1.2
	baz=194						
E57A	Chemin Saint G	44.96	5	P	P	20 38 08.1	+0.3
	baz=187,SNR=16						
E58A	La Victoria	45.01	6	P	P	20 38 08.5	+0.4
	baz=188,SNR=11						
E56A	St. Veronique	45.02	4	P	P	20 38 08.6	+0.4
	baz=186,SNR=17						
SMCO	Snowmass	45.07	330	IAmb	IAmb	20 38 23.3	
	comp=Z,28nm,1.0s						
SMCO				IAMs_20	IAMs_20	20 59 54.8	
	comp=Z,2μm,21.0s						
SPMN	Marine on St.	45.07	347	P	P	20 38 08.0	-0.6
	baz=161						
E43A	Lone Tree Farm	45.15	353	P	P	20 38 08.8	-0.5
E43A				IAmb	IAmb	20 38 09.7	
	comp=Z,19nm,0.8s						
E43A				IAMs_20	IAMs_20	20 56 12.4	
	comp=Z,2μm,21.0s						
COWI	Conover	45.19	351	IAmb	IAmb	20 38 18.7	
	comp=Z,97nm,2.0s						
COWI				IAMs_20	IAMs_20	20 56 03.7	
	comp=Z,2μm,21.0s						
E59A	St. Maurice	45.20	7	P	P	20 38 11.3	+1.6
	baz=190						
E60A	Ste Agathe de	45.23	8	P	P	20 38 10.4	+0.5
	baz=191,SNR=8.4						
F64A	Sherman	45.25	11	IAMs_20	IAMs_20	20 58 46.3	
	comp=Z,2μm,21.0s						
F64A	Sherman	45.25	11	P	P	20 38 11.3	+1.3

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      baz=196
D46A  Sault St. Mari   45.36 356  P        P        20 38 09.9 -1.1
      baz=173,SNR=6.7
D53A  Lac Vacive, Po   45.41   2  IAMs_20  IAMs_20  20 56 14.5
      comp=Z,2µm,20.0s
D53A  Lac Vacive, Po   45.41   2  P        P        20 38 11.1 -0.2
      baz=182,SNR=9.9
NBRF  Rio Formoso -    45.43 104 eP        P        20 38 10.5 -1.4
E61A  Lac Etchemin     45.43   9  P        P        20 38 12.8 +1.3
      baz=192,SNR=8.8
D55A  Sainte-Anne-du   45.46   4  P        P        20 38 11.8 +0.1
      baz=185,SNR=14
D47A  Chapleau         45.46 357  P        P        20 38 10.5 -1.3
      baz=175,SNR=12
D50A  G1974 Best Tow   45.47 360  P        P        20 38 11.2 -0.6
      baz=179
D48A  Paudash Townsh   45.52 358  P        P        20 38 11.1 -1.1
      baz=176,SNR=9.9
D54A  Lac Fusel, La    45.52   3  P        P        20 38 11.8 -0.4
      baz=184,SNR=11
D56A  ZEC Mazanza, M   45.54   5  P        P        20 38 12.5 +0.1
      baz=186,SNR=14
D57A  Chemin Vers le   45.59   5  P        P        20 38 13.2 +0.5
      baz=188,SNR=14
GLA   Glamis           45.59 317  P        P        20 38 16.2 +3.1
      baz=126
D49A  Beulah Townshi   45.60 358  P        P        20 38 11.9 -0.9
      baz=177
D58A  Chemin du LacG   45.77   6  P        P        20 38 14.8 +0.6
      baz=189,SNR=10
E63A  Oxbow            45.77  11  IAMs_20  IAMs_20  20 59 02.2
      comp=Z,2µm,20.0s
E63A  Oxbow            45.77  11  P        P        20 38 15.5 +1.4
      baz=195,SNR=7.7
Y12C  Blythe           45.80 318  P        P        20 38 17.5 +2.8
      baz=127
D59A  Saint-Raymond    45.81   7  P        P        20 38 15.8 +1.4
      baz=190
D60A  Saint Jean D'O   45.84   8  P        P        20 38 16.0 +1.3
      baz=192,SNR=10
E64A  Bridgewater      45.88  11  P        P        20 38 15.9 +0.9
      baz=196,SNR=7.2
PDMCI Parker Dam,Lak   45.89 319  P        P        20 38 18.2 +2.9
      baz=128
N23A  Red Feather La   45.89 332  IAmb     IAmb     20 39 11.9
      comp=Z,40nm,1.4s
N23A  Red Feather La   45.89 332  P        P        20 38 18.9 +3.4
      baz=141
D41A  Chassel          46.04 351  IAMs_20  IAMs_20  20 56 39.0
      comp=Z,2µm,21.0s
SUSD  Miller           46.07 341  P        P        20 38 17.3 +0.7
      baz=152
U15A  North Rim        46.07 323  IAmb     IAmb     20 38 38.0
      comp=Z,57nm,1.7s
PQI   Presque Isle     46.09  11  IAMs_20  IAMs_20  20 59 20.5
      comp=Z,1µm,19.0s
E38A  The Farm, Brul   46.12 349  IAmb     IAmb     20 38 47.8
      comp=Z,75nm,1.9s
E38A                              IAMs_20  IAMs_20  20 57 49.4
      comp=Z,2µm,21.0s
SWSC  Sam W. Stewart   46.20 316  P        P        20 38 21.6 +3.8
      baz=125
W13A  Hualapai Mount   46.21 320  IAmb     IAmb     20 38 36.9
      comp=Z,58nm,1.6s
W13A                              IAMs_20  IAMs_20  20 57 12.2
      comp=Z,2µm,18.0s
D61A  St Aubert, Com   46.23   9  P        P        20 38 19.3 +1.6
      baz=193,SNR=15
IKP   In-Ko-Pah, Jac   46.24 316  P        P        20 38 21.6 +3.3
      baz=124
D62A  Allapoint, All   46.30  10  IAMs_20  IAMs_20  20 59 12.1
      comp=Z,2µm,21.0s
D62A  Allapoint, All   46.30  10  P        P        20 38 19.8 +1.5
      baz=194,SNR=21
BC3   Big Chuckawall   46.37 317  P        P        20 38 22.5 +3.2
      baz=126
D63A  Stockholm        46.42  11  P        P        20 38 20.6 +1.3
      baz=196,SNR=8.8
O20A  White River Ci   46.43 329  IAmb     IAmb     20 39 01.7
      comp=Z,24nm,1.1s
O20A  White River Ci   46.43 329  P        P        20 38 22.8 +3.1
      baz=138
VLDQ  Val d'Or         46.45   2  IAmb     IAmb     20 38 20.4
      comp=Z,26nm,1.4s
VLDQ                              IAMs_20  IAMs_20  20 56 48.9
      comp=Z,2µm,19.0s
IRM   Iron Mountain    46.46 318  P        P        20 38 23.2 +3.4
      baz=126,SNR=5.5
NEE2  Needles Airpor   46.48 319  P        P        20 38 23.3 +3.3
      baz=127
MONP2 Monument Peak    46.60 316  P        P        20 38 24.4 +3.2
      baz=124
BAR   Barrett          46.65 316  IAMs_20  IAMs_20  20 56 53.4
      comp=Z,1µm,18.0s
BELC  Belle Mtn. Jos   46.94 318  P        P        20 38 27.2 +3.4
      baz=125
PFO   Pinyon Flats O   47.03 317  P        P        20 38 26.2 +1.8
      comp=Z,0.9nm,0.3s,baz=170,slow=8.9,SNR=4.1
PFO   Pinyon Flats O   47.03 317⇑eP        P        20 38 27.2 +2.7
PFO                               pmax     pmax
      comp=Z,49nm,4.0s
PFO   Pinyon Flats O   47.03 317  IAmb     IAmb     20 38 43.1
      comp=Z,28nm,1.4s
BATG  Bathurst New B   47.07  13  IAMs_20  IAMs_20  20 56 54.1
      comp=Z,2µm,22.0s
109C  Camp Elliot, M   47.07 316  P        P        20 38 27.5 +2.9
      baz=123
GMRC  Granite Mounta   47.17 319  P        P        20 38 29.0 +3.4
      baz=126,SNR=5.6
EYMN  Ely              47.39 349  P        P        20 38 25.2 -1.6
EYMN                              IAmb     IAmb     20 38 46.2
      comp=Z,22nm,1.3s
EYMN  Ely              47.39 349  IAMs_20  IAMs_20  21 01 12.1
      comp=Z,2µm,18.0s
EYMN  Ely              47.39 349  P        P        20 38 26.5 -0.4
      baz=163
MURC  Murrieta         47.53 316  P        P        20 38 31.5 +3.2
      baz=124
K22A  Casper           47.54 333  IAMs_20  IAMs_20  20 58 38.6
      comp=Z,1µm,22.0s
HEC   Hector,Ludlow    47.65 318  P        P        20 38 32.7 +3.5
      baz=126,SNR=8.4
RSSD  Black Hills      47.66 336  IAMs_20  IAMs_20  21 00 06.7
      comp=Z,1µm,21.0s
RSSD  Black Hills      47.66 336  P        P        20 38 31.7 +2.3
      baz=146
TUQ   Turquoise Moun   47.74 319  P        P        20 38 33.0 +3.1
      baz=126
SHPR  Sheep Range      47.90 321  IAMs_20  IAMs_20  20 57 50.7
      comp=Z,1µm,20.0s
BFSC  Mount Baldy Ra   48.21 317  P        P        20 38 36.4 +2.9
      baz=124
GSC   Goldstone, Bar   48.24 318  IAmb     IAmb     20 38 52.4
      comp=Z,33nm,1.3s
GSC   Goldstone, Bar   48.24 318  P        P        20 38 37.1 +3.3
      baz=126,SNR=7.9
SHOC  Shoshone, Teco   48.24 319  P        P        20 38 36.9 +3.2
      baz=126
AGMN  Agassiz Nation   48.68 346  IAmb     IAmb     20 38 56.5
      comp=Z,38nm,1.7s
AGMN  Agassiz Nation   48.68 346  P        P        20 38 36.8  0.0
      baz=158
EDW2  Edwards Air Fo   48.80 317  P        P        20 38 40.8 +2.7
      baz=124,SNR=7.0
TPNV  Topopah Spring   48.86 321  IAmb     IAmb     20 39 05.2
      comp=Z,52nm,1.8s
TPNV                              IAMs_20  IAMs_20  20 58 46.3
      comp=Z,1µm,19.0s
TPNV  Topopah Spring   48.86 321  P        P        20 38 42.0 +3.4
      baz=127,SNR=9.5
DUG   Dugway, Tooele   48.91 326  IAmb     IAmb     20 38 57.1
      comp=Z,43nm,1.6s
DUG   Dugway, Tooele   48.91 326  P        P        20 38 42.0 +3.1
      baz=133
LRMC  Laurel Mtn Rad   48.92 318  P        P        20 38 42.3 +3.2
      baz=125
FURC  Furnace Creek,   48.96 320  P        P        20 38 42.9 +3.8
      baz=126
BW06  Boulder Array    49.06 331  IAMs_20  IAMs_20  21 00 53.2
      comp=Z,1µm,19.0s
BW06  Boulder Array    49.06 331  P        P        20 38 43.7 +3.6
      baz=138
PD31  Pinedale Array   49.06 331  IAmb     IAmb     20 38 57.1
      comp=Z,31nm,1.4s
PDAR  Pinedale Array   49.06 331  P        P        20 38 41.5 +1.3
      comp=Z,3.2nm,1.0s,baz=130,slow=8.3,SNR=9.3
MPMC  Manual Prospec   49.13 319  P        P        20 38 43.2 +2.4
      baz=125,SNR=6.2
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MDND  Maddock          49.31 342  P        P        20 38 43.0 +1.3
      baz=153
R11A  Troy Canyon, C   49.31 322  IAMs_20  IAMs_20  20 59 00.0
      comp=Z,2µm,19.0s
R11A  Troy Canyon, C   49.31 322  P        P        20 38 45.0 +2.9
      baz=129
ARVC  Arvin            49.50 317  P        P        20 38 46.7 +3.3
      baz=123
ISA   Isabella, Lake   49.56 318  P        P        20 38 47.1 +3.2
      baz=124
CWC   Cottonwood Cre   49.74 319  P        P        20 38 48.6 +3.2
      baz=125
AHID  Auburn Hatcher   49.82 330  IAMs_20  IAMs_20  21 01 28.6
      comp=Z,2µm,20.0s
PKM   Mcpherson Peak   50.05 316  P        P        20 38 50.9 +3.2
      baz=122,SNR=7.3
VES   Vestal, Richgr   50.07 318  P        P        20 38 51.1 +3.5
      baz=124
REDW  Red Top Meadow   50.13 330  P        P        20 38 48.5 +0.2
REDW                              IAmb     IAmb     20 39 21.2
      comp=Z,30nm,1.1s
FXWY  Fox Creek        50.42 331  IAMs_20  IAMs_20  21 00 49.4
      comp=Z,918nm,18.0s
ULM   Lac du Bonnet    50.50 346  P        P        20 38 50.0 -0.7
      comp=Z,7.0nm,0.6s,baz=156,slow=7.7,SNR=20
ULM   Lac du Bonnet    50.50 346⇑eP        P        20 38 49.4 -1.2
ULM   Lac du Bonnet    50.50 346  P        P        20 38 50.0 -0.7
ULM                               IAmb     IAmb     20 38 59.1
      comp=Z,17nm,0.8s
ULM                               IAMs_20  IAMs_20  21 02 22.7
      comp=Z,1µm,19.0s
FLWY  Flagg Ranch      50.59 331  IAMs_20  IAMs_20  21 01 38.8
      comp=Z,1µm,20.0s
ELK   Elko             50.65 325  P        P        20 38 53.3 +1.1
      comp=Z,2.7nm,0.9s,baz=134,slow=4.0,SNR=10
ELK   Elko             50.65 325  IAMs_20  IAMs_20  20 59 18.1
      comp=Z,1µm,22.0s
RLMT  Red Lodge        50.71 333  IAMs_20  IAMs_20  21 00 03.5
      comp=Z,1µm,22.0s
PAGB  Antelope Grade   50.80 317  IAMs_20  IAMs_20  21 03 45.2
      comp=Z,846nm,18.0s
NV11  Mina Array Sit   50.96 321  IAMs_20  IAMs_20  21 01 39.8
      comp=Z,2µm,19.0s
NVAR  Mina Array Bea   51.05 321  P        P        20 38 57.6 +2.3
      comp=Z,6.5nm,0.9s,baz=137,slow=7.2,SNR=24
NVAR                              LR       LR       21 01 50.9
      comp=Z,1µm,18.5s,baz=136,slow=38
MDPB  Devils Postpil   51.08 320  IAMs_20  IAMs_20  21 01 21.2
      comp=Z,1µm,19.0s
DRLN  Deer Lake        51.18  18  P        P        20 38 54.2 -1.6
KVN   Kaiserville      51.29 322  IAMs_20  IAMs_20  21 01 10.7
      comp=Z,1µm,20.0s
RYN   Ryan             51.31 321  IAMs_20  IAMs_20  21 01 41.0
      comp=Z,2µm,19.0s
DGMT  Dagmar           51.37 339  P        P        20 39 00.1 +2.9
      baz=147
YERR  Yerington        51.97 321  IAMs_20  IAMs_20  21 02 12.6
      comp=Z,1µm,18.0s
PNTR  Pine Nut         52.26 321  IAMs_20  IAMs_20  21 04 59.2
      comp=Z,1µm,21.0s
MFID  Camas Ranch      52.75 327  IAMs_20  IAMs_20  21 00 43.4
      comp=Z,1µm,19.0s
EGMT  Eagleton         53.16 335  P        P        20 39 12.9 +2.2
      baz=141
BEKR  Beckworth        53.19 321  IAMs_20  IAMs_20  21 01 26.7
      comp=Z,1µm,21.0s
SCHQ  Schefferville    54.15   9  P        P        20 39 17.6 -0.1
      comp=Z,19nm,0.9s,baz=216,slow=6.2,SNR=28
SCHQ                              LR       LR       21 04 14.4
      comp=Z,839nm,18.6s,baz=192,slow=38
SCHQ  Schefferville    54.15   9  P        P        20 39 17.4 -0.3
SCHQ                              IAmb     IAmb     20 39 19.0
      comp=Z,41nm,1.0s
MSO   Missoula         54.16 331  IAMs_20  IAMs_20  21 03 55.1
      comp=Z,1µm,20.0s
MSO   Missoula         54.16 331  P        P        20 39 20.4 +2.4
      baz=136
O03E  Paynes Creek     54.34 321  P        P        20 39 22.0 +2.6
      baz=124
MOD   Modoc Plateau    54.35 323  IAMs_20  IAMs_20  21 01 29.2
      comp=Z,1µm,22.0s
F10A  Beach Ranch, E   55.20 329  IAMs_20  IAMs_20  21 03 17.1
      comp=Z,2µm,22.0s
M04C  Macdoel          55.21 322  P        P        20 39 29.0 +3.2
      baz=125
K04D  Chiloquin, OR    55.64 323  P        P        20 39 32.0 +3.1
      baz=125
YBH   Yreka Blue Hor   55.72 322  P        P        20 39 30.0 +0.6
      comp=Z,3.8nm,0.9s,baz=92,slow=3.9,SNR=6.7
YBH   Yreka Blue Hor   55.72 322  P        P        20 39 29.4  0.0
YBH                               pmax     pmax
      comp=Z,69nm,2.0s
YBH   Yreka Blue Hor   55.72 322  P        P        20 39 29.4  0.0
YBH                               IAmb     IAmb     20 40 10.9
      comp=Z,69nm,2.0s
J05D  Fort Rock, OR    55.72 324  P        P        20 39 32.1 +2.6
      baz=126,SNR=7.1
L04D  Klamath Falls    55.74 322  P        P        20 39 31.7 +2.0
      baz=124
WALA  Waterton Lakes   55.76 333  IAMs_20  IAMs_20  21 04 24.2
      comp=Z,1µm,19.0s
E09A  Wood Farm, Sta   56.04 329  IAMs_20  IAMs_20  21 05 22.2
      comp=Z,1µm,18.0s
EFI   East Falkland    56.04 164⇓eP        P        20 39 34.6 +3.3
FFC   Flin Flon        56.12 345 eP        P        20 39 31.6 -0.3
FFC   Flin Flon        56.12 345  IAMs_20  IAMs_20  21 06 24.4
      comp=Z,1µm,19.0s
J04D  Umpqua Nationa   56.21 324  P        P        20 39 35.4 +2.3
      baz=125,SNR=6.9
HUMO  Hull Mountain    56.36 322  IAMs_20  IAMs_20  21 04 48.8
      comp=Z,1µm,19.0s
I05D  Terrebonne, OR   56.41 325  P        P        20 39 37.8 +3.5
      baz=127
NEW   Newport          56.70 331  P        P        20 39 37.2 +0.9
      comp=Z,7.3nm,1.1s,baz=133,slow=6.1,SNR=6.3
NEW   Newport          56.70 331  P        P        20 39 38.6 +2.4
      baz=133
I04A  Tendick Farm,    56.71 324  P        P        20 39 38.2 +1.8
      baz=125
SACV  Santiago Islan   56.79  73  IAMs_20  IAMs_20  21 03 19.8
      comp=Z,1µm,19.0s
K02D  Willamette Mer   56.84 322  P        P        20 39 39.8 +2.4
      baz=124
G05D  Wamic, OR        56.94 326  P        P        20 39 41.5 +3.5
      baz=127
J01E  Myrtle Point     57.26 323  P        P        20 39 43.2 +3.0
      baz=124
A04D  Lummi Island     59.82 328  P        P        20 39 59.9 +1.9
      baz=128
TAOE  Nuku Hiva Isla   61.24 259 eLR       LR       20 58 22.2
      comp=Z,1µm,25.9s
FRB   Frobisher Bay    62.62   5  P        P        20 40 15.2 -1.4
      comp=Z,9.5nm,1.0s,baz=212,slow=6.7,SNR=18
YKA   Yellowknife Ar   66.22 343  P        P        20 40 39.7 -0.5
      comp=Z,5.1nm,0.7s,baz=133,slow=6.9,SNR=24
YKA                               LR       LR       21 12 31.1
      comp=Z,554nm,18.6s,baz=0.0,slow=39
SFJD  Kangerlussuaq    68.41  12 i P       P        20 40 52.4 -1.6
SFJD  Kangerlussuaq    68.41  12 eP        P        20 40 52.4 -1.6
DLBC  Dease Lake       69.08 334  P        P        20 41 00.3 +1.8
      comp=Z,16nm,1.1s,baz=109,slow=7.4,SNR=5.4
ILULI Ilulissat        70.22  10 i P       P        20 41 03.5 -1.7
      comp=Z,64nm,1.4s
ILULI Ilulissat        70.22  10 i P       P        20 41 03.5 -1.7
ILULI                             pmax     pmax
      comp=Z,64nm,1.4s
PPT   Papeete          71.46 251  LR       LR       21 05 01.4
      comp=Z,757nm,20.0s,baz=80,slow=29
PPT2  Papeete2         71.46 251 eS        S        20 50 30.5 -0.9
      comp=Z,686nm,25.5s
PPT2  Papeete2         71.46 251 eLR       LR       21 03 06.9
      comp=Z,1µm,24.0s,baz=86
TBI   Tubuai           72.22 245 eS        S        20 50 41.9 +2.1
      comp=Z,1µm,27.5s
TBI   Tubuai           72.22 245 eLR       LR       21 03 26.0
      comp=Z,1µm,25.5s,baz=79
HYT   Haines Junctio   73.57 334  IAMs_20  IAMs_20  21 14 37.1
      comp=Z,860nm,20.0s
RES   Resolute Bay     73.65 356  P        P        20 41 24.4 -1.3
      comp=Z,4.5nm,1.1s,baz=179,slow=10,SNR=10
MORF  Marmelete        73.94  52 eP        P        20 41 28.5 +0.3
      comp=Z,178nm,1.9s
PNCL  Nicolau / Gran   74.19  51 eP        P        20 41 30.3 +0.8
      comp=Z,103nm,1.7s
LIC   Lamto            74.46  84 eP        P        20 41 30.9 -0.7
      comp=Z,79nm,1.2s
LIC   Lamto            74.46  84  P        P        20 41 30.9 -0.7
TIC   Toumodi          74.47  84 eP        P        20 41 30.9 -0.8
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TIC   Toumodi          74.47  84  P        P        20 41 30.9 -0.8
TIC   Toumodi          74.47  84  P        P        20 41 30.9 -0.8
PTOM  Tomar            74.56  49 eP        P        20 41 32.6 +0.9
      comp=Z,74nm,1.5s
PCAS  Casmilo, Conde   74.58  49 eP        P        20 41 32.4 +0.6
      comp=Z,139nm,1.6s
PMTG  Montargil        74.60  50 eP        P        20 41 32.2 +0.3
      comp=Z,34nm,1.3s
DBIC  Dimbokro         74.63  84  P        P        20 41 32.0 -0.6
      comp=Z,22nm,1.1s,baz=261,slow=6.4,SNR=8.2
DBIC                              LR       LR       21 12 30.5
      comp=Z,1µm,18.8s,baz=240,slow=34
COI   Coimbra          74.67  49 eP        P        20 41 31.6 -0.7
      comp=Z,218nm,1.8s
KIC   Kosan Boka       74.75  84 eP        P        20 41 32.7 -0.6
      comp=Z,126nm,1.3s
KIC   Kosan Boka       74.75  84  P        P        20 41 32.7 -0.6
PVIS  Viseu            75.16  48 eP        P        20 41 35.5 +0.3
      comp=Z,64nm,1.6s
PMRV  Marv??o          75.30  50 eP        P        20 41 36.0  0.0
      comp=Z,63nm,1.7s
PCBR  Castelo Branco   75.31  49 eP        P        20 41 36.1 +0.1
      comp=Z,64nm,1.9s
MTE   Manteigas        75.36  49 eP        P        20 41 36.8 +0.4
      comp=Z,57nm,1.8s
PVRL  Vila Real        75.40  48 eP        P        20 41 37.2 +0.6
      comp=Z,65nm,1.7s
SUMG  Summit           75.40  12 i P       P        20 41 36.4 +0.1
      comp=Z,120nm,1.0s
SUMG                             i                  20 41 45.7
SUMG  Summit           75.40  12  P        P        20 41 36.5 +0.1
SUMG                              pmax     pmax
      comp=Z,55nm,1.1s
SUMG  Summit           75.40  12  P        P        20 41 36.5 +0.1
MVO   Moncorvo         75.89  48 eP        P        20 41 40.0 +0.6
      comp=Z,71nm,1.7s
INK   Inuvik           75.93 342  P        P        20 41 39.8 +0.9
      comp=Z,12nm,1.0s,baz=133,slow=4.3,SNR=14
EPYK  Eagle Plains     75.96 340  P        P        20 41 41.8 +2.5
      baz=120
PBRG  Braganca         76.22  47 eP        P        20 41 41.8 +0.6
      comp=Z,78nm,1.8s
VRDI  Verde Repeater   76.36 333  IAMs_20  IAMs_20  21 18 38.0
      comp=Z,777nm,19.0s
BCAR  Beaver Creek A   76.38 336  P        P        20 41 43.8 +2.1
MDT   Midelt           76.54  57  P        P        20 41 43.9 +0.6
      comp=Z,11nm,1.0s,baz=285,slow=6.4,SNR=11
DOT   Dot Lake         77.55 336  IAMs_20  IAMs_20  21 16 50.3
      comp=Z,888nm,22.0s
PAB   San Pablo        77.64  50  P        P        20 41 49.1 -0.3
PAB                               pmax     pmax
      comp=Z,67nm,1.3s
PAB   San Pablo        77.64  50  P        P        20 41 49.1 -0.3
SCRK  Sand Creek       77.64 336  IAmb     IAmb     20 42 00.5
      comp=Z,54nm,1.9s
SCRK                              IAMs_20  IAMs_20  21 19 04.7
      comp=Z,837nm,19.0s
PAX   Paxson           77.89 335  IAMs_20  IAMs_20  21 18 00.2
      comp=Z,632nm,20.0s
ESDC  Sonseca Array    77.96  50  P        P        20 41 51.5 +0.5
      comp=Z,5.2nm,0.6s,baz=266,slow=5.4,SNR=48
ESDC                              LR       LR       21 13 15.6
      comp=Z,332nm,21.0s,baz=310,slow=33
KNK   Knik Glacier     78.69 333  IAmb     IAmb     20 42 06.8
      comp=Z,24nm,1.1s
PRP   Porcupine Dome   78.84 337  IAMs_20  IAMs_20  21 17 58.0
      comp=Z,844nm,21.0s
GHO   Glory Hole Cre   79.01 333  IAmb     IAmb     20 42 26.9
      comp=Z,22nm,1.0s
HDA   Harding Lake     79.01 336  IAmb     IAmb     20 42 32.6
      comp=Z,28nm,1.3s
HDA   Harding Lake     79.01 336  P        P        20 41 58.4 +2.1
      baz=110
ILAR  Eielson Array    79.11 336  P        P        20 41 57.8 +1.0
      comp=Z,4.6nm,1.0s,baz=120,slow=3.5,SNR=20
ILAR                              LR       LR       21 19 42.3
      comp=Z,708nm,18.3s,baz=120,slow=38
RC01  Rabbit Creek A   79.18 332  IAmb     IAmb     20 42 36.1
      comp=Z,33nm,1.3s
RC01                              IAMs_20  IAMs_20  21 19 24.8
      comp=Z,829nm,21.0s
BMAR  Burnt Mountain   79.21 339  P        P        20 41 58.9 +1.5
CCB   Clear Creek Bu   79.44 336  IAmb     IAmb     20 42 36.9
      comp=Z,37nm,1.9s
POKR  Poker Plat Res   79.45 337  P        P        20 42 00.9 +2.2
      baz=109
RSBS  Rosebush, Pemb   79.47  37 eP        P        20 41 58.7 -0.4
RND   Reindeer         79.48 335  P        P        20 42 00.3 +1.3
RND                               pmax     pmax
      comp=Z,105nm,1.8s
RND                               MLR      MLR
      comp=Z,900nm,19.0s
RND   Reindeer         79.48 335  P        P        20 42 00.3 +1.3
TCOL  CIGO, UAF Yank   79.54 336  P        P        20 42 01.7 +2.6
      baz=109
BWN   Browne           79.97 335  IAmb     IAmb     20 42 40.1
      comp=Z,38nm,1.0s
TRF   Thorofare Moun   80.11 334  P        P        20 42 02.9 +0.4
TRF                               IAmb     IAmb     20 42 38.3
      comp=Z,31nm,1.4s
SKT   Skwentna         80.25 333  IAmb     IAmb     20 42 08.4
      comp=Z,44nm,1.3s
SKT                               IAMs_20  IAMs_20  21 20 39.0
      comp=Z,707nm,20.0s
KTH   Kantishna Hill   80.41 335  IAMs_20  IAMs_20  21 18 34.0
      comp=Z,830nm,20.0s
MCH1  Michaelchurch    80.54  38 eP        P        20 42 04.5 -0.4
FOEL  Foel Wylfa       80.57  37 eP        P        20 42 04.7 -0.3
FOEL                              IAmb     IAmb     20 42 06.2
      comp=Z,53nm,1.1s
BPAW  Bear Paw Mtn.    80.59 335  P        P        20 42 05.4 +0.5
MONM  Monmouth         80.63  38 eP        P        20 42 05.6 +0.2
MONM                              IAmb     IAmb     20 42 06.9
      comp=Z,92nm,1.4s
HLM1  Long Mynd        80.70  37 eP        P        20 42 05.8 +0.1
HLM1                              IAmb     IAmb     20 42 07.1
      comp=Z,69nm,1.2s
STRD  Stroud           81.02  38 eP        P        20 42 07.3 -0.1
STRD                              IAmb     IAmb     20 42 08.6
      comp=Z,40nm,0.8s
TOA0  Torodi Ar. Sit   81.14  77  P        P        20 42 07.9 -0.9
TORD  Torodi Ar. Bea   81.14  77  P        P        20 42 07.7 -1.1
      comp=Z,5.8nm,0.9s,baz=276,slow=3.8,SNR=24
TORD                              LR       LR       21 16 34.1
      comp=Z,1µm,20.9s,baz=295,slow=35
ESY   Stoneypath       81.44  34 eP        P        20 42 09.9 +0.4
LBWR  Ladybower, Pea   81.53  36 eP        P        20 42 10.7 +0.6
LBWR                              IAmb     IAmb     20 42 11.9
      comp=Z,67nm,0.9s
EDMD  Edmundbyers      81.62  35 eP        P        20 42 10.7 +0.1
CWF   Charnwood Fore   81.68  37 eP        P        20 42 11.2 +0.3
SVW2  Sparrevohn       81.93 332  P        P        20 42 12.9 +0.8
SVW2                              IAmb     IAmb     20 42 14.5
      comp=Z,26nm,1.4s
IMAR  Indian Mountai   82.21 337  P        P        20 42 14.4 +1.0
GDLE  Glaisdale, N Y   82.22  35 eP        P        20 42 14.2 +0.6
WACR  West Acre        82.85  37 eP        P        20 42 16.7 -0.3
WACR                              IAmb     IAmb     20 42 18.2
      comp=Z,240nm,1.2s
VNA3  Neumayer Olymp   85.05 162  P        P        20 42 29.4 +1.5
VNA2  Neumayer--Watz   85.65 162  P        P        20 42 31.8 +0.9
      baz=306,slow=4.0
WLF   Walferdange      86.07  41 eP        P        20 42 35.1 +1.7
      comp=Z,151nm,1.4s,baz=271,slow=5.0
AHRW  Bad Neuenahr-A   86.69  40 eP        P        20 42 38.2 +1.8
      comp=Z,109nm,1.2s,baz=271,slow=5.0
IBBN  Ibbenburen       87.16  38 eP        P        20 42 40.1 +1.5
      comp=Z,200nm,1.7s,baz=271,slow=5.0
SNAA  Sanae            87.27 162  P        P        20 42 40.1 +1.3
SNAA  Sanae            87.27 162⇑iP        P        20 42 40.3 +1.4
SNAA  Sanae            87.27 162  P        P        20 42 40.0 +1.1
SNAA                              IAMs_20  IAMs_20  21 21 56.1
      comp=Z,652nm,20.0s
BFO   Black Forest     87.47  42 eP        P        20 42 40.9 +0.6
      comp=Z,45nm,1.5s,baz=271,slow=5.0
BFO   Black Forest     87.47  42 eP        P        20 42 40.5 +0.2
TNS   Taunus Mts       87.56  40 eP        P        20 42 42.1 +1.4
      comp=Z,95nm,1.6s,baz=271,slow=5.0
MUD   Monsted U'grnd   88.04  34 i P       P        20 42 43.0 +0.2
      comp=Z,142nm,1.5s
MUD   Monsted U'grnd   88.04  34 i P       P        20 42 43.0 +0.2
MUD                               pmax     pmax
      comp=Z,140nm,1.5s
STU   Stuttgart        88.05  41 eP        P        20 42 44.2 +1.2
      comp=Z,74nm,1.4s,baz=271,slow=5.0
KEST  Kesra            88.23  54  P        P        20 42 43.0 -1.3
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           comp=Z,3.5nm,0.8s,baz=307,slow=5.1,SNR=3.0
KEST                                  LR        LR         21 19 56.3
           comp=Z,534nm,21.4s,baz=202,slow=34
DAVA  Damuels            88.51   43  epP        P          20 42 46.6 +1.1
           comp=Z,54nm,1.4s,SNR=14
GTTG  Gottingen          88.53   39  eP         P          20 42 46.9 +1.7
           comp=Z,72nm,1.7s,baz=271,slow=5.0
UBBA  Unterbreizbach     88.56   39  eP         P          20 42 46.8 +1.6
           comp=Z,57nm,2.0s,baz=271,slow=5.0
NRDL  Niedersach Rie     88.60   38  eP         P          20 42 47.4 +1.9
           comp=Z,146nm,2.1s,baz=271,slow=5.0
UBR   Ueberruh           88.66   43  eP         P          20 42 47.6 +1.6
           comp=Z,164nm,1.7s,baz=271,slow=5.0
BSEG  Bad Segeberg       88.71   36  eP         P          20 42 47.5 +1.5
           comp=Z,134nm,1.9s,baz=271,slow=5.0
CLZ   Clausthal          88.78   38  eP         P          20 42 48.1 +1.7
           comp=Z,116nm,2.0s,baz=271,slow=5.0
ASSE  Asse, Remlinge     88.96   38  eP         P          20 42 49.0 +1.9
           comp=Z,188nm,2.1s,baz=271,slow=5.0
NB2   NORSAR Subarra     89.06   29   P         P          20 42 48.3 +0.7
           comp=Z,114nm,2.0s,baz=264,slow=4.6
NB2   NORSAR Subarra     89.06   29   P         P          20 42 48.3 +0.7
           baz=264,slow=4.6
NOA   NORSAR Array B     89.06   29   P         P          20 42 48.0 +0.4
           comp=Z,4.4nm,1.0s,baz=276,slow=4.5,SNR=5.5
NOA                                   LR        LR         21 18 40.9
           comp=Z,408nm,21.1s,baz=265,slow=33
FETA  Feichten           89.10   43  epP        P          20 42 49.3 +1.1
           comp=Z,40nm,1.3s,SNR=16
RETA  Reutte             89.11   43  epP        P          20 42 48.9 +0.7
           comp=Z,21nm,1.4s,SNR=8.3
MOTA  Moosalm            89.35   43  epP        P          20 42 50.1 +0.7
           comp=Z,23nm,1.3s,SNR=6.6
GRF   Grafenberg Arr     89.36   40  eP         P          20 42 51.0 +1.8
           comp=Z,68nm,1.6s,baz=271,slow=5.0
GRF                                  eL         L          21 18 37.4
           comp=Z,564nm,21.6s
SQTA  Sankt Quirin       89.42   43  epP        P          20 42 50.7 +1.0
           comp=Z,44nm,1.5s,SNR=12
FUR   Furstenfeldbru     89.44   42  eP         P          20 42 51.1 +1.5
           comp=Z,167nm,1.9s,baz=271,slow=5.0
MOX   Moxa               89.58   40  eP         P          20 42 51.9 +1.6
           comp=Z,20nm,1.4s,baz=271,slow=5.0
MOX                                  eL         L          21 23 36.3
           comp=Z,529nm,21.3s
GAMB  Gambell            89.60  334   IAMs_20   IAMs_20    21 29 49.0
           comp=Z,592nm,20.0s
NEUB  Neuenburg          89.67   39  eP         P          20 42 52.2 +1.7
           comp=Z,109nm,2.1s,baz=271,slow=5.0
WATA  Walderalm          89.67   43  epP        P          20 42 51.8 +0.9
           comp=Z,24nm,1.5s,SNR=8.0
WTTA  Wattenberg         89.71   43  epP        P          20 42 52.1 +1.0
           comp=Z,28nm,1.4s,SNR=12
MANZ  Manzenberg         89.92   40  eP         P          20 42 53.8 +2.0
           comp=Z,207nm,2.5s,baz=271,slow=5.0
PLN   Plauen             89.94   40  eP         P          20 42 53.4 +1.6
           comp=Z,115nm,2.5s,baz=271,slow=5.0
ROTZ  Rotzenmuhle        90.00   40  eP         P          20 42 54.2 +2.0
           comp=Z,112nm,2.0s,baz=271,slow=5.0
GUNZ  Gunzen             90.05   40  eP         P          20 42 54.3 +1.8
           comp=Z,67nm,2.0s,baz=271,slow=5.0
WERN  Wernitzgruen       90.08   40  eP         P          20 42 54.5 +1.9
           comp=Z,131nm,2.3s,baz=271,slow=5.0
TANN  Tannenbergstha     90.13   40  eP         P          20 42 54.7 +1.8
           comp=Z,334nm,2.4s,baz=271,slow=5.0
ABTA  Abfaltersbach      90.33   43  epP        P          20 42 54.8 +0.9
           comp=Z,24nm,1.4s,SNR=6.0
CLL   Collm              90.43   39  i P        P          20 42 56.1 +1.9
           comp=Z,86nm,2.1s
CLL                                  i                     20 43 17.0
CLL                                  e(PP)                 20 46 54.0
CLL                                  eS         S          20 53 52.0 +4.5
CLL                                  eSS        SS         20 59 48.0  0.0
CLL                                   LmV                  21 26 00.0
           comp=Z,600nm,21.7s
CLL   Collm              90.43   39  eP         P          20 42 56.8 +2.6
           comp=Z,86nm,2.1s,baz=271,slow=5.0
CLL   Collm              90.43   39  i P        P          20 42 56.1 +1.9
CLL                                  eS         S          20 53 52.0 +4.5
CLL                                   pmax      pmax
           comp=Z,86nm,2.1s
CLL                                   MLR       MLR
           comp=Z,600nm,21.7s
WET   Wettzell           90.46   41  eP         P          20 42 56.2 +1.8
           comp=Z,99nm,1.8s,baz=271,slow=5.0
RJOB  Jochberg           90.48   42  eP         P          20 42 55.9 +1.4
           comp=Z,29nm,1.5s,baz=271,slow=5.0
KBA   Koelnbreinsper     90.88   43  epP        P          20 42 57.6 +1.0
           comp=Z,22nm,1.9s,SNR=6.2
KHC   Kasperske Hory     90.92   41  eP         P          20 42 58.0 +1.4
KHC                                  ex         x          20 43 09.7
KHC   Kasperske Hory     90.92   41⇑iP          P          20 42 56.9 +0.3
KHC                                   pmax      pmax
           comp=Z,62nm,1.8s
GEC2  GERESS Array S     91.02   41  eP         P          20 42 58.6 +1.6
           comp=Z,41nm,1.9s,baz=271,slow=5.0
GEC2  GERESS Array S     91.02   41   IAmb      IAmb       20 42 58.8
           comp=Z,20nm,1.5s
GERES GERESS Array B     91.02   41   P         P          20 42 57.6 +0.5
           comp=Z,1.3nm,0.6s,baz=282,slow=2.6,SNR=10
GERES                                 LR        LR         21 19 47.1
           comp=Z,383nm,20.1s,baz=306,slow=33
GERES GERESS Array B     91.02   41  eP         P          20 42 57.8 +0.7
GERES GERESS Array B     91.02   41   P         P          20 42 56.0 -1.1
BRG   Berggiesshubel     91.05   39  eP         P          20 42 57.8 +0.7
           comp=Z,48nm,1.8s
BRG   Berggiesshubel     91.05   39  eP         P          20 42 57.8 +0.7
           comp=Z,48nm,1.8s
BRG   Berggiesshubel     91.05   39  eP         P          20 42 58.9 +1.9
           comp=Z,48nm,1.8s,baz=271,slow=5.0
BRG   Berggiesshubel     91.05   39  eP         P          20 42 57.8 +0.7
BRG                                   pmax      pmax
           comp=Z,48nm,1.8s
JAVS  Javornik           91.45   44  eP         P          20 42 59.8 +0.6
MOA   Molln              91.46   42  epP        P          20 42 59.9 +0.9
           comp=Z,22nm,1.7s
PRU   Pruhonice          91.49   40  eP         P          20 42 59.8 +0.7
PRU   Pruhonice          91.49   40  eP         P          20 42 59.8 +0.7
QSPA  South Pole Qui     91.56  180   P         P          20 43 00.3 +1.1
OBKA  Obir               91.74   44  eP         P          20 42 59.4 -1.1
           comp=Z,19nm,1.9s
LJU   Ljubljana          91.76   44  eP         P          20 43 01.8 +1.4
NVL   N'lazarevskaya     91.88  161  eP         P          20 43 06.3 +5.9
NVL                                  eS         SKSac      20 53 35.3 +3.9
NVL                                   pmax      pmax
           comp=Z,9.0nm,1.0s
SOKA  Soboth             92.06   43  epP        P          20 43 02.6 +0.6
           comp=Z,11nm,1.4s
PAOL  Paolisi            92.13   49   IAMs_20   IAMs_20    21 15 32.2
           comp=Z,591nm,21.0s
ARSA  Arzberg            92.35   43  i pP       P          20 43 03.8 +0.6
OSTC  Ostas              92.52   39  eP         P          20 43 05.7 +1.8
CONA  Conrad Observa     92.52   42  epP        P          20 43 05.2 +1.2
           comp=Z,18nm,1.3s,SNR=7.1
DPC   Dobruska-Polom     92.60   40  eP         P          20 43 06.1 +1.8
DPC   Dobruska-Polom     92.60   40  eP         P          20 43 06.1 +1.8
KRUC  Moravsky           92.77   41  eP         P          20 43 06.1 +1.0
VRAC  Vranov             92.88   41  eP         P          20 43 06.9 +1.3
KRLC  Kraliky            92.92   40  eP         P          20 43 07.8 +2.0
KRLC  Kraliky            92.92   40  eP         P          20 43 07.8 +2.0
ZST   Bratislava         93.33   42  eP         P          20 43 08.3 +0.7
ZST                                   pmax      pmax
           comp=Z,82nm,1.8s
ZST   Bratislava         93.33   42  eP         P          20 43 08.3 +0.7
MODS  Modra-Piesok       93.42   42  eP         P          20 43 09.0 +0.9
MODS                                  pmax      pmax
           comp=Z,87nm,1.8s
MODS  Modra-Piesok       93.42   42  eP         P          20 43 09.0 +0.9
MORC  Moravsky Berou     93.44   40  eP         P          20 43 09.6 +1.4
SMOL  Smolenice          93.51   41  eP         P          20 43 10.4 +1.9
SMOL                                  pmax      pmax
           comp=Z,9.0nm,1.5s
SMOL  Smolenice          93.51   41  eP         P          20 43 10.4 +1.9
JAVC  Velka Javorina     93.63   41  eP         P          20 43 11.3 +2.2
OKC   Ostrava-Krasne     93.83   40  eP         P          20 43 11.6 +1.7
OKC   Ostrava-Krasne     93.83   40  eP         P          20 43 11.6 +1.7
ARCES ARCESS Array B     93.83   20   P         P          20 43 08.9 -0.6
           comp=Z,8.1nm,1.2s,baz=304,slow=6.4,SNR=4.5
ARCES                                 LR        LR         21 21 46.3
           comp=Z,400nm,19.0s,baz=257,slow=33
VYHS  Vyhne              94.44   41  eP         P          20 43 14.5 +1.7
VYHS                                  pmax      pmax
           comp=Z,51nm,1.9s
VYHS  Vyhne              94.44   41  eP         P          20 43 14.5 +1.7
LANS  Liptovska Anna     94.77   41  eP         P          20 43 17.8 +3.5
LANS                                  pmax      pmax
           comp=Z,10.0nm,1.3s
LANS  Liptovska Anna     94.77   41  eP         P          20 43 17.8 +3.5
FINES FINESS Array B     96.11   28   P         P          20 43 19.7 -0.3
           comp=Z,1.7nm,0.6s,baz=242,slow=12,SNR=5.9
FINES                                 LR        LR         21 25 37.3
           comp=Z,398nm,18.3s,baz=292,slow=35
UZH   Uzhgorod           96.69   41  eP         P          20 43 30.4 +7.4
UZH                                  e                     20 43 38.4
UZH                                  e                     20 43 49.0
APA   Apatity            97.20   21⇑iP          Pdif       20 43 30.7 +5.7
APA                                   pmax      pmax
           comp=Z,7.0nm,1.2s
APA                                   MLR       MLR
           comp=Z,2µm,27.0s
BILL  Bilibino           97.44  340⇑eP          Pdif       20 43 28.1 +2.0
BILL                                  pmax      pmax
           comp=Z,10.0nm,1.6s
VNDA  Vanda              97.45  191   LR        LR         21 21 28.7
           comp=Z,240nm,19.2s,baz=122,slow=32
LVZ   Lovozero           97.52   20⇑eP          Pdif       20 43 28.0 +1.6
AKASG Malin Array Be    100.62   38  i P        Pdif       20 43 41.5 +0.9
OBN   Obninsk           103.38   32  eP         Pdif       20 43 52.7  0.0
OBN                                  e                     20 48 07.7
OBN                                  ePPP       PPP        20 50 20.4
OBN                                   pmax      pmax
           comp=Z,3.0nm,0.9s
OBN                                   MLR       MLR
           comp=Z,536nm,17.0s
DZM   Mont Dzumac       112.76  247  ePS        PS         20 58 50.7 -2.7
           comp=Z,516nm,30.2s
DZM   Mont Dzumac       112.76  247  eLR        LR         21 22 20.3
           comp=Z,819nm,23.8s
ABKAR Akbulak array     118.57   29             PKiKP      20 48 41.2 +0.7
BRVK  Borovoye          120.05   21⇓iPKIKP      PKPdf      20 48 41.8 -1.5
KLR   Kul'dur           122.69  336⇓ePKIKP      PKiKP      20 48 48.6 -0.1
ZALV  Zalesovo Beam     123.22   11   PKP       PKiKP      20 48 49.4 -0.2
           comp=Z,1.5nm,0.5s,baz=248,slow=3.9,SNR=11
GEYT  Alibeck           124.64   40   PKP       PKPdf      20 48 51.1 -1.5
           comp=Z,1.8nm,0.5s,baz=264,slow=3.0,SNR=5.7
KURK  Kurchatov         124.73   17⇓iPKIKP      PKiKP      20 48 53.2 +0.6
TLY   Talaya            126.93  358⇓ePKIKP      PKiKP      20 48 57.8 +0.7
MJAR  Matsushiro Arr    128.37  321   PKP       PKiKP      20 48 59.7 -0.7
           comp=Z,1.0nm,0.6s,baz=123,slow=1.0,SNR=3.5
MAKZ  Makanchi          129.21   16   PKIKP     PKiKP      20 49 01.5 -0.3
MAKZ  Makanchi          129.21   16             PKiKP      20 49 01.5 -0.3
MK31  Makanchi Array    129.31   16   PKIKP     PKiKP      20 49 02.1 +0.1
MK31  Makanchi Array    129.31   16             PKiKP      20 49 02.1 +0.1
MKAR  Makanchi Array    129.31   16   PKP       PKiKP      20 49 01.2 -0.7
           comp=Z,0.9nm,0.6s,baz=348,slow=2.8,SNR=12
MKAR  Makanchi Array    129.31   16   PKIKP     PKiKP      20 49 01.9 -0.1
MKAR  Makanchi Array    129.31   16             PKiKP      20 49 01.9 -0.1
HRA   Herat             129.41   41             PKiKP      20 49 03.0 +0.2
AAK   Ala-Archa         130.21   25d iPKIKP     PKiKP      20 49 05.3 +1.2
SONM  Songino Array     130.57  355   PKP       PKiKP      20 49 04.3 -0.4
           comp=Z,1.5nm,0.9s,baz=94,slow=2.0,SNR=9.9
STKA  Stephens Creek    130.86  228   PKP       PKiKP      20 49 05.4 -0.1
           comp=Z,2.5nm,1.0s,baz=0.1,slow=8.8,SNR=3.6
KSH   Kashi             133.41   26   PKP       PKiKP      20 49 08.9 -1.7
KSH                                   PP        PP         20 51 39.2 +3.2
KSH                                   SKS       SKSdf      20 56 14.9 -4.5
KSH                                   SKKS      SKKSac     20 58 27.3 -4.1
KSH                                   AMB       AMB
           comp=Z,570nm,6.1s
KSH                                   LR        LR
           comp=Z,2µm,12.5s
KSH                                   LR        LR
           comp=Z,750nm,11.7s
KSH                                   LR        LR
           comp=Z,670nm,12.8s
WMQ   Urumqi            133.44   13  ePKP       PKiKP      20 49 10.1 -0.4
WMQ                                   LR        LR
           comp=Z,1µm,28.9s
WMQ                                   LR        LR
           comp=Z,820nm,27.7s
WMQ                                   LR        LR
           comp=Z,230nm,20.1s
KSRS  Korea Array       133.62  330   PKhKP     PKPpre     20 49 04.8
           comp=Z,2.1nm,0.9s,baz=92,slow=29,SNR=2.9
KSRS                                  PKP       PKiKP      20 49 10.4 -0.4
           comp=Z,1.9nm,0.7s,baz=23,slow=1.9,SNR=8.0
HHC   Hu-ho-hao-te      136.63  348  ePKP       PKPdf      20 49 13.7 -1.6
GTA   Gaotai            139.27    1 ⇑PKP        PKPdf      20 49 18.1 -2.2
GTA                                   PP        PP         20 52 13.6 +1.3
GTA                                   SS        SS         21 10 26.9 -1.0
GTA                                   AMB       AMB
           comp=Z,190nm,10.6s
GTA                                   LR        LR
           comp=Z,240nm,19.7s
GTA                                   LR        LR
           comp=Z,240nm,19.0s
GTA                                   LR        LR
           comp=Z,480nm,21.3s
ASAR  Alice Springs     140.82  233   PKhKP     PKPpre     20 49 18.1
           comp=Z,0.6nm,0.4s,baz=117,slow=3.1,SNR=5.9
WRA   Warramunga Arr    142.14  239   PKhKP     PKPpre     20 49 22.4
           comp=Z,2.5nm,0.6s,baz=110,slow=2.1,SNR=26
NJ2   Nanjing           142.33  334  ePKP       PKiKP      20 49 26.2 -2.6
LZH   Lanzhou           142.45  355  ePKP       PKPdf      20 49 22.6 -3.6
LZH                                   sPKP                 20 49 42.3
LZH                                   LR        LR
           comp=Z,530nm,17.9s
LZH                                   LR        LR
           comp=Z,460nm,18.1s
LZH                                   LR        LR
           comp=Z,560nm,18.4s
WHN   Wuhan             145.47  339 ⇓PKPbc      PKPab      20 49 31.3 -0.2
WHN                                   AMB       AMB
           comp=Z,640nm,6.9s
WHN                                   LR        LR
           comp=Z,830nm,12.8s
WHN                                   LR        LR
           comp=Z,660nm,10.7s
WHN                                   LR        LR
           comp=Z,1µm,22.3s
DANN  Dangsing          146.26   27  eP         PKPab      20 49 34.1 -0.8
GKN   Gorkha            146.95   26  eP         PKPbc      20 49 34.4 -1.7
           comp=Z,252nm,1.5s
KKN   Kakani            147.42   25  eP         PKPbc      20 49 35.3 -2.2
DMN   Daman             147.50   26  eP         PKPbc      20 49 35.1 -2.6
GUN   Gumba             147.56   25  eP         PKPbc      20 49 35.9 -2.1
MTN   Manton Dam        147.59  248             PKiKP      20 49 39.6 -0.5
CD2   Chengdu           147.60  355   PKPbc     PKPdf      20 49 33.0 -2.0
PKIN  Phulchoki         147.65   26  eP         PKPbc      20 49 35.6 -2.6
           comp=Z,28nm,0.8s
PKI   Pulchoki          147.66   25  eP         PKPdf      20 49 35.4 -0.2
           comp=Z,83nm,1.2s
LSA   Lhasa             147.71   15   PKPbc     PKPbc      20 49 36.8 -1.7
JIRN  Jiri              147.91   24  eP         PKPbc      20 49 36.8 -2.2
           comp=Z,253nm,1.5s
KAD   Karad             148.06   53  eP         PKPbc      20 49 38.5 -0.7
RAMN  Ramite            148.71   24  eP         PKPbc      20 49 37.7 -3.3
           comp=Z,119nm,1.4s
KNRA  Kununurra         148.73  242             PKPab      20 49 42.6 -2.0
TAPN  Taplejung         148.79   22  eP         PKPbc      20 49 38.5 -2.7
ODAN  Odare             149.11   23  eP         PKPbc      20 49 38.9 -3.1
           comp=Z,75nm,1.3s
HYB   Hyderabad         151.38   48  i PKP      PKPdf      20 49 41.0 -0.3
HYB                                  e                     20 50 18.0
GYA   Guiyang           151.54  348   PKPbc     PKiKP      20 49 48.2 +0.1
GYA                                   PP        PP         20 53 51.7  +26
KMI   Kunming           153.42  355   PKPbc     PKPdf      20 49 42.6 -1.9
KMI                                   sPKP                 20 49 52.3
TBP   Tagbilaran        154.15  296  eP         PKPdf      20 49 38.6 -6.8
QIZ   Qiongzhong        157.59  336   PKP       PKPdf      20 49 49.7 -0.2
QIZ                                   PP        PP         20 54 01.2 +1.8
QIZ                                   SS        SS         21 13 58.1 +4.0
QIZ                                   LR        LR
           comp=Z,410nm,20.3s
QIZ                                   LR        LR
           comp=Z,210nm,17.6s
CMAR  Chiang Mai Arr    160.10    4   PKP       PKPdf      20 49 52.8 -0.1
           comp=Z,0.7nm,0.7s,baz=316,slow=1.8,SNR=11
CMAR                                  PKPab     PKPab      20 50 32.0 -0.5
           comp=Z,2.4nm,0.9s,baz=335,slow=5.0,SNR=9.1
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*ATH **09** 20:38:03.8, 36°.00N×27°.94E, h83^{km}±4^{km}, ML2.4/2, Error ellipse: s-maj=4.5km s-min=2.0km az=136.0*

*DDA **09** 20:38:04.2, 35°.90N×28°.08E, h8^{km}±6^{km}, ML2.0*

*ISK **09** 20:38:04.1, 35°.99N×27°.95E, h77^{km}±2^{km}, ML2.6/12*

ISC 09 20:38:05.2±1.5, **36°.01N**±0°.05×**27°.97E**±0°.04, **h72**^{km}±11^{km}, **n28,** σ**0**^{s}**.99**/40, **Dodecanese Islands**

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Code  Station Name         Δ°   AZ°     Phase ID                Time    Res
                                     Op         ISC          h  m  s    ISC
ARG   Arkhangelos         0.24   31   P         Pn         20 38 16.9 +0.6
ARG                                   S         Sn         20 38 25.1 +0.7
ARG                                   AML       AML        20 38 26.2
           comp=E,453µm,0.3s
ARG                                   AML       AML        20 38 26.8
           comp=N,269µm,0.2s
DAT   Datca               0.79  336   PG        Pn         20 38 21.5 +0.1
DAT                                   SG        Sn         20 38 33.8 +0.4
DAT   Datca               0.79  336  i P        Pn         20 38 21.6 +0.2
DAT                                  i S        Sn         20 38 33.9 +0.6
DAT                                   IAML                 20 38 35.0
           comp=N,67nm,0.2s
DAT                                   IAML                 20 38 35.0
           comp=E,70nm,0.2s
KARP  Karpathos           0.80  235   P         Pn         20 38 21.4 -0.1
KARP                                  S         Sn         20 38 33.3 -0.3
KARP                                  AML       AML        20 38 34.2
           comp=N,678µm,0.2s
KARP                                  AML       AML        20 38 34.9
           comp=E,478µm,0.1s
KARP  Karpathos           0.80  235   PG        Pn         20 38 21.4 -0.1
KARP                                  SG        Sn         20 38 33.3 -0.3
DALY  Dalyan (Mula)       0.98   34   PG        Pn         20 38 23.9 +0.3
DALY  Dalyan (Mula)       0.98   34  i P        Pn         20 38 24.1 +0.6
DALY                                 i S        Sn         20 38 37.9 +0.7
DALY                                  IAML                 20 38 39.0
           comp=N,46nm,0.4s
DALY                                  IAML                 20 38 40.0
           comp=E,36nm,0.3s
TURN  Turunc              1.00   30   PG        Pn         20 38 21.9 -2.0
TURN                                  SG        Sn         20 38 34.5 -3.2
TURN  Turunc              1.00   30  i P        Pn         20 38 22.4 -1.5
TURN                                 i S        Sn         20 38 35.0 -2.8
TURN                                  IAML                 20 38 36.0
           comp=N,190nm,0.2s
TURN                                  IAML                 20 38 36.0
           comp=E,117nm,0.2s
FETY  Fethiye             1.10   55   PN        Pn         20 38 23.7 -1.4
FETY  Fethiye             1.10   55  i P        Pn         20 38 25.1  0.0
FETY                                 i S        Sn         20 38 40.0 +0.1
FETY                                  IAML                 20 38 40.0
           comp=E,15nm,0.5s
FETY                                  IAML                 20 38 41.0
           comp=N,15nm,0.6s
YER   Yerkesik            1.15   13   PN        Pn         20 38 26.2 +0.4
BODT  Bodrum              1.18  333   PN        Pn         20 38 26.0 -0.1
KSL   Kastellorizon       1.31   83   P         Pn         20 38 27.9 +0.1
AKAS  Kas                 1.34   80   PN        Pn         20 38 28.2 -0.1
AKAS  Kas                 1.34   80  i P        Pn         20 38 28.3 -0.1
AKAS                                  IAML                 20 38 46.0
           comp=E,13nm,0.5s
AKAS                                 i S        Sn         20 38 46.4 +0.7
AKAS                                  IAML                 20 38 56.0
           comp=N,18nm,1.3s
TAVA  DENIZLI_Tavas       1.64   27  i P        Pn         20 38 32.6 +0.4
TAVA                                 i S        Sn         20 38 53.3 +0.7
TAVA                                  IAML                 20 38 54.0
           comp=N,21nm,0.3s
TAVA                                  IAML                 20 38 55.0
           comp=E,26nm,0.2s
AYDN  Tasoluk             1.65  358  i P        Pn         20 38 32.6 +0.3
AYDN                                 i S        Sn         20 38 52.9 +0.1
AYDN                                  IAML                 20 38 54.0
           comp=N,34nm,0.4s
AYDN                                  IAML                 20 38 55.0
           comp=E,16nm,0.4s
ZKR   Zakros              1.68  239   P         Pn         20 38 33.0 +0.3
ZKR   Zakros              1.68  239   PN        Pn         20 38 32.9 +0.2
ELL   Elmali              1.73   64   PN        Pn         20 38 33.8 +0.4
GOLH  Golhisar            1.77   46  i S        Sn         20 38 57.8 +2.0
GCAM  G?zelcaml?          1.79  341   PN        Pn         20 38 34.4 +0.4
GCAM  G?zelcaml?          1.79  341  i P        Pn         20 38 34.5 +0.4
GCAM                                  IAML                 20 39 08.0
           comp=E,43nm,1.4s
GCAM                                  IAML                 20 39 37.0
           comp=N,52nm,1.7s
SMG   Samos               1.93  332   P         Pn         20 38 35.8 -0.1
AYDB  Zeytinkoy-Aydi      1.94  358   PN        Pn         20 38 36.2  0.0
NPS   Neapolis            2.06  250   P         Pn         20 38 37.2 -0.5
LAST  Lasithi             2.20  248   P         Pn         20 38 39.4 -0.3
```

HVO 09 20:44:07.6±0.4, **19°.39N**±0°.01×**155°.247W**±0°.009, **h3**^{km}±1^{km}, **ML3.6**/39, **Error ellipse: s-maj=1.8km s-min=1.2km az=192.0, Hawaiian Islands**

```
Code  Station Name         Δ°   AZ°     Phase ID                Time    Res
                                     Op         ISC          h  m  s    ISC
KKO   Keanakako`i         0.02  299             Pg         20 44 08.9 +0.5
KKO                                  Sg         Sg         20 44 09.5 +0.5
RIM   Rim                 0.03  286             Pg         20 44 09.0 +0.5
RIM                                  Sg         Sg         20 44 09.6 +0.6
PUH   Pauahi              0.03  115             Pg         20 44 09.2 +0.7
PUH                                  Sg         Sg         20 44 10.0 +0.9
HATHI Halema‘uma‘u T      0.04  339             Pg         20 44 09.2 +0.6
HATHI                                Sg         Sg         20 44 10.2 +0.9
NPH   North Pit           0.04  307             Pg         20 44 09.2 +0.6
NPH                                  Sg         Sg         20 44 10.1 +0.8
SDHHI Sand Hill           0.04  272             Pg         20 44 09.4 +0.7
UWB   Uwekahuna B         0.05  321             Pg         20 44 09.4 +0.7
WRMHI West Rim            0.05  290             Pg         20 44 09.5 +0.7
UWE   Uwekahuna           0.06  307             Pg         20 44 09.6 +0.8
HLP   Hilina Pali         0.11  212             Pg         20 44 10.7 +0.9
STCH  Steam Cracks        0.12   91             Pg         20 44 10.7 +0.8
NPOC  North of Pu‘u       0.13   88             Pg         20 44 11.0 +0.8
JCUZ  Jacuzzi             0.14   91             Pg         20 44 11.1 +0.8
MLH   Mauna Loa           0.17  309             Pg         20 44 11.9 +0.9
AIN   Ainahou             0.20  266             Pg         20 44 12.4 +0.9
HMH   Humu‘ula Sheep      0.31  314             Pg         20 44 14.3 +0.6
MLOA  Mauna Loa Obse      0.34  295             Pg         20 44 14.8 +0.5
MWH   Moku‘aweowe         0.34  286             Pg         20 44 14.9 +0.5
KHU   Kahuku              0.38  248             Pg         20 44 15.2 +0.4
POHA  Pohakuloa           0.46  324             Pg         20 44 16.4  0.0
HUH   Hualalai            0.63  298             Pg         20 44 20.4 +0.7
KHLU  Kahalu`u            0.64  289             Pg         20 44 19.5 -0.5
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*ISN **09** 20:46:15.8±1.5, 34°.40N×45°.79E, h7^{km}±8^{km}, ML2.8*

*TEH **09** 20:46:18.7, 34°.33N×45°.75E, h19^{km}, ML3.0*

ISC 09 20:46:18.2±0.8, **34°.38N**±0°.04×**45°.70E**±0°.03, **h18**^{km}, **n24,** σ**1**^{s}**.39**/29, **Iran-Iraq border region**

```
Code  Station Name         Δ°   AZ°     Phase ID                Time    Res
                                     Op         ISC          h  m  s    ISC
IDHR  Dehrash             0.65   61  ePg        Pb         20 46 30.8 -0.4
IGHG  Ghaleghazi          0.72   94  ePg        Pg         20 46 32.4 -0.1
IGHG                                 e                     20 46 32.8
KCHF  Cheshme Sefid,      1.12   95  ePg        Pn         20 46 38.8 -0.4
KCHF                                 e                     20 46 42.1
ILIN  Lien                1.17   62  ePg        Pg         20 46 40.9 -0.1
KER   Kermanshah          1.19   89  ePg        Pg         20 46 40.8 -0.4
IBDR  Badra               1.28  171  ePg        Pn         20 46 40.0 -1.2
IBDR                                 eSg        Sn         20 46 58.0 +0.1
IBDR                                  AML       AML        20 46 59.9
           comp=E,113nm,0.6s
IBDR                                  AML       AML        20 46 59.9
           comp=N,87nm,0.3s
IKRK  Kirkuk              1.51  313  ePn        Pb         20 46 45.0 -0.7
IKRK                                 eSn        Sg         20 47 07.0  0.0
IKRK                                  AML       AML        20 47 08.9
           comp=N,167nm,0.5s
IKRK                                  AML       AML        20 47 09.3
           comp=E,187nm,0.6s
IKOM  Komasi              1.52   97  ePn        Pg         20 46 46.4 -1.1
IKOM                                 e                     20 46 48.0
BHD   Baghdad             1.56  225  ePn        Pb         20 46 47.0 +0.5
BHD                                   AML       AML        20 47 05.3
           comp=E,246nm,0.7s
BHD                                  eSn        Sg         20 47 09.0 +0.5
IBZA  Bozab               1.79   87  ePn        Pb         20 46 50.6 -0.1
IBZA                                 e                     20 46 53.4
IKFM  Kafar-mosalman      1.98  115  ePn        Pb         20 46 52.4 -1.3
IKFM                                 e                     20 46 55.8
IALM  Almabolaq           2.09   76  ePn        Pb         20 46 55.3 -0.5
IDOB  Doab                2.14  105  ePn        Pn         20 46 54.3 +1.0
HSRG  Sareghieh           2.29   67  ePn        Pb         20 46 58.3 -0.9
MAHB  Mahabad             2.38    0  ePn        Pb         20 46 59.5 -1.2
MAHB                                 e                     20 47 00.3
IKMR  Kamar-syah          2.39  110  ePn        Pn         20 46 57.5 +1.0
IKMR                                 e                     20 47 39.1
HSAM  Samen               2.41   93  ePn        Pn         20 46 58.3 +1.3
BDRS  Dareh Seyedi        2.67   98  ePn        Pn         20 47 01.8 +1.1
BMDN  Meydan              2.69  104  ePn        Pn         20 47 01.9 +1.1
```

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSL	Mosul	2.92	314	*e*Pn	Pn	20 47 06.0	+2.2
MSL				*e*Sn	Sb	20 47 42.0	-3.1
NSR	Nassriya	3.38	174	*e*Pn	Pn	20 47 11.0	+0.9
NSR				*e*Sn	Sn	20 47 52.0	+2.2
IRAZ	Razeghan	3.63	72	*e*Pn	Pn	20 47 17.0	+3.3
QAM	Ghamsar	4.81	96	*e*Pn	Pn	20 47 31.4	+1.5
IKLH	Kolahrood	5.01	101	*e*Pn	Pn	20 47 34.2	+1.5

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*JMA **09** 20:58:03.0±0.1, 27°.67N×140°.73E, h161^{km}, M3.8*
*IDC **09** 20:58:08.0±4.5, 27°.63N×140°.33E, h210^{km}±44^{km}, mb3.2/4, mb1 3.4/5, mb1mx3.0/26, mbtmp3.6/5, Error ellipse: s-maj=61.5km s-min=21.7km az=99.0*
ISC 09 20:58:02.0±1.1, **27°.70N**±0°.08×**140°.6E**±0°.2, **h150**^{km}, **n11**, σ**2^{s}27**/15, **mb3.3**/4, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.55	113	P	Pn	20 58 32.8	+0.7
CBIJ				*e*S	Sn	20 58 55.3	+0.2
JHH2	Haha-jima-NKT2	1.77	126	P	Pn	20 58 35.1	+0.5
JHH2				*e*S	Sn	20 58 59.6	+0.1
BSO1	Boso 1	6.94	3	P	Pn	20 59 43.2	+2.5
BSO1				*e*S	Sn	21 00 57.6	-0.6
BSO3	Boso 3	7.08	360	P	Pn	20 59 44.9	+2.1
BSO4	Boso 4	7.27	358	P	Pn	20 59 47.9	+2.4
BSO4				*e*S	Sn	21 01 07.7	+0.9
JHO	Hitachi	8.88	360	P	Pn	21 00 08.0	+0.8
JHO				*e*S	Sn	21 01 39.4	-6.4
MJAR	Matsushiro Arr	9.04	348	P	Pn	21 00 14.8	+5.5
	0.1nm,0.3s,baz=142,slow=8.5,SNR=5.1						
WRA	Warramunga Arr	47.74	188	P	P	21 06 23.2	-0.8
	0.3nm,0.4s,baz=6.9,slow=7.8,SNR=8.5						
YKA	Yellowknife Ar	72.28	28	P	P	21 09 10.8	+0.1
	0.2nm,0.4s,baz=296,slow=6.2,SNR=4.1						
FINES	FINESS Array B	76.77	333	P	P	21 09 36.0	-0.7
	2.9nm,1.0s,baz=50,slow=7.5,SNR=2.5						
NVAR	Mina Array Bea	81.26	51	P	P	21 10 02.9	+1.0
	0.2nm,0.6s,baz=290,slow=8.4,SNR=2.5						

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*GCG **09** 21:08:30.6±0.5, 15°.89N×92°.17W, h20^{km}±999^{km}, MD3.8*
*MEX **09** 21:08:30.5±0.8, 14°.28N×93°.04W, h15^{km}, MD3.9*
ISC 09 21:08:26.4±2.4, **14°.3N**±0°.1×**93°.00W**±0°.07, **h7**^{km}±14^{km}, **n8**, σ**1^{s}16**/15, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.92	51	*i* P	Pn	21 08 46.0	+0.2
THIG				*i* S	Sb	21 08 58.3	+1.3
PCIG		1.39	351	*e*P	Pn	21 08 52.5	+0.2
PCIG				*i* S	Sn	21 09 09.7	-1.2
STG3	Santiaguito 3,	1.44	74	*e*P	Pg	21 08 54.4	+0.5
STG3				*e*S	Sg	21 09 12.7	+0.1
FUG	Fuego 3	2.09	86	*e*P	Pn	21 09 02.5	+0.4
CCIG	Comitan	2.12	23	*i* P	Pn	21 09 03.3	+0.9
CCIG				*i* S	Sn	21 09 28.6	-0.5
TGIG		2.44	357	*i* P	Pn	21 09 07.9	+1.1
TGIG				*i* S	Sn	21 09 36.1	-0.9
IXG	Ixpaco	2.48	93	*e*P	Pb	21 09 09.4	-2.1
IXG				*e*S	Sn	21 09 39.6	+1.4
CMIG	Matias Romero	3.30	327	*e*P	Pn	21 09 20.0	+1.5
CMIG				*i* S	Sn	21 09 57.7	-0.3

IDC 09 21:18:17.2±6.0, **4°.15S**×**133°.13E**, **h0**^{km}, **mb3.5**/1, **mb1 3.4**/3, **mb1mx3.2**/27, **mbtmp3.2**/3, **ML2.9**/2, **Error ellipse: s-maj=366.4km s-min=31.8km az=76.0**, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.75	176	Pn	Pn	21 21 59.1	-1.4
	0.0nm,0.3s,baz=354,slow=13,SNR=3.5						
ASAR	Alice Springs	19.42	178	P	Pn	21 22 45.9	-0.4
	0.1nm,0.3s,baz=5.7,slow=10,SNR=2.7						
MKAR	Makanchi Array	67.63	325	P	P	21 29 16.0	0.0
	0.2nm,0.5s,baz=116,slow=7.9,SNR=7.3						

IDC 09 21:19:32.7±5.6, **4°.50S**×**132°.97E**, **h0**^{km}, **mb3.3**/1, **mb1 3.6**/3, **mb1mx3.3**/25, **mbtmp3.4**/3, **ML3.0**/2, **MS3.9**/1, **Ms1 3.9**/1, **ms1mx2.9**/19, **Error ellipse: s-maj=341.1km s-min=31.9km az=76.0**, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.40	175	Pn	Pn	21 23 10.2	-1.4
	0.1nm,0.3s,baz=353,slow=13,SNR=4.9						
KRVT	Keravat (AS076	19.00	90	LR	LR	21 32 47.6	
	comp=Z,367nm,20.9s,baz=64,slow=42						
ASAR	Alice Springs	19.07	177	P	Pn	21 23 57.6	-0.1
	0.0nm,0.3s,baz=0.7,slow=12,SNR=3.9						
MKAR	Makanchi Array	67.83	325	P	P	21 30 32.8	0.0
	0.2nm,0.7s,baz=114,slow=8.6,SNR=4.3						

MAN 09 21:43:13.1, 9°.87N×123°.96E, h9^{km}**, mb4.5, ML3.4, MS3.2, 3D, Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBP	Tagbilaran	0.20	208	*e*P	Pg	21 43 16.5	-0.6
TBP				*i* S	Sg	21 43 19.4	-0.6
LLP	Lapu-Lapu	0.45	1	⇓*i*P	Pg	21 43 22.1	+0.2
LLP				*e*S	Sb	21 43 29.0	-1.0
SNPH	Sibulan	0.88	234	⇓*i*P	Pg	21 43 29.6	-0.5
SNPH				*i* S	Sg	21 43 41.0	-0.6
MSLP	Maasin	0.93	73	*e*P	Pg	21 43 31.0	0.0
MSLP				*e*S	Sn	21 43 45.4	-0.4
GUIM	Jordan	1.54	299	*e*P	Pn	21 43 40.3	-0.5
GUIM				*e*S	Sn	21 44 00.8	-0.2
RCP	Roxas	2.06	325	⇓*e*P	Pn	21 43 48.5	+0.5
BUKP	Musuan	2.26	151	*e*P	Pn	21 43 51.1	+0.4

IDC 09 21:54:06.0±4.8, **1°.78S**×**137°.78E**, **h0**^{km}, **mb3.2**/2, **mb1 3.6**/3, **mb1mx3.2**/33, **mbtmp3.4**/3, **ML3.7**/1, **Error ellipse: s-maj=208.2km s-min=28.3km az=84.0**, **Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.36	190	P	Pn	21 58 21.9	-0.5
	0.2nm,0.3s,baz=14,slow=12,SNR=14						
ASAR	Alice Springs	22.08	189	P	P	21 59 03.8	+0.8
	0.3nm,0.4s,baz=17,slow=9.8,SNR=4.1						
MKAR	Makanchi Array	68.49	323	P	P	22 05 10.1	-0.2
	0.4nm,1.1s,baz=104,slow=6.1,SNR=2.3						

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*RSPR **09** 22:02:40.9, 19°.53N×68°.07W, h75^{km}±15^{km}, MD3.5/10*
*OSPL **09** 22:02:41.8±1.9, 19°.58N×67°.63W, h16^{km}±79^{km}, ML3.3*
ISC 09 22:02:38.2±2.3, **19°.52N**±0°.08×**67°.92W**±0°.08, **h7**^{km}±16^{km}, **n46**, σ**0^{s}95**/55, **17C**, **Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	1.09	204	*i* P	Pg	22 02 59.0	-0.1
PCDR				*e*S	Sg	22 03 13.0	-0.3
PCDR				IAML		22 03 18.0	
	comp=Z,488nm,0.5s						
PCDR	Punta Cana, DR	1.09	204	⇑*e*P	Pg	22 02 59.2	+0.1
PCDR				*e*S	Sg	22 03 13.8	+0.5
PCDR	Punta Cana, DR	1.09	204	⇑*e*P	Pg	22 02 59.2	+0.1
PCDR	Punta Cana, DR	1.09	204		Pg	22 02 59.2	+0.1
PCDR					Sg	22 03 13.1	-0.3
AGPR	Aguadilla, PR	1.29	144	*i* P	Pn	22 03 02.4	-0.3
AGPR				*e*S	Sb	22 03 17.2	-2.4
AGPR				IAML		22 03 18.4	
	comp=Z,788nm,0.3s						
AGPR	Aguadilla, PR	1.29	144	⇑*e*P	Pn	22 03 03.0	+0.3
AGPR	Aguadilla, PR	1.29	144		Pn	22 03 03.0	+0.3
AGPR	Aguadilla, PR	1.29	144		Pn	22 03 02.8	0.0
MPR	Mayaguez	1.49	150	*i* P	Pn	22 03 05.8	+0.3
MPR				*e*S	Sn	22 03 23.3	-1.9
MPR				IAML		22 03 27.1	
	comp=Z,147nm,0.2s						
MPR	Mayaguez	1.49	150		Pn	22 03 05.4	0.0
LSP	Las Mesas	1.55	149	*e*S	Sn	22 03 26.7	0.0
LSP	Las Mesas	1.55	149	⇑*e*P	Pn	22 03 07.0	+0.7
LSP	Las Mesas	1.55	149		Pn	22 03 07.0	+0.7
LSP					Sn	22 03 26.7	0.0
DR12	Loma Pena Alta	1.56	243	Pn	Pg	22 03 08.8	+0.6
AOPR	Arecibo Observ	1.60	136	⇑*e*P	Pn	22 03 07.3	+0.3
AOPR	Arecibo Observ	1.60	136	⇑*e*P	Pn	22 03 07.4	+0.4
AOPR	Arecibo Observ	1.60	136		Pn	22 03 07.4	+0.4
EMPR	Esperanza - Ma	1.67	128	*e*S	Sn	22 03 30.7	+1.1
EMPR	Esperanza - Ma	1.67	128	⇑*e*P	Pn	22 03 09.0	+1.1
EMPR	Esperanza - Ma	1.67	128		Pn	22 03 09.0	+1.1
CRPR	Cabo Rojo, PR	1.69	153	*e*S	Sn	22 03 30.1	+0.2
CRPR	Cabo Rojo, PR	1.69	153	⇑*e*P	Pn	22 03 09.0	+0.9
CRPR	Cabo Rojo, PR	1.69	153		Pn	22 03 09.0	+0.9
CRPR					Sn	22 03 30.1	+0.2
MLPR	Magueyes Islan	1.75	152	*e*S	Sn	22 03 31.6	+0.1
MLPR	Magueyes Islan	1.75	152	⇑*e*P	Pn	22 03 09.8	+0.9
MLPR	Magueyes Islan	1.75	152		Pn	22 03 09.8	+0.9
MLPR					Sn	22 03 31.6	+0.1
GBPR	Guanica, Bosqu	1.82	147	⇑*e*P	Pn	22 03 11.2	+1.2
GBPR	Guanica, Bosqu	1.82	147	*e*S	Sn	22 03 34.2	+0.9
GBPR	Guanica, Bosqu	1.82	147		Pn	22 03 11.2	+1.2
GBPR					Sn	22 03 34.2	+0.9
OBIP	Obispado Ponce	1.92	139	⇑*e*P	Pn	22 03 12.2	+0.8
OBIP	Obispado Ponce	1.92	139		Pn	22 03 12.2	+0.8
ICMP	Isla Caja de M	2.09	141	⇑*e*P	Pn	22 03 15.1	+1.4
ICMP	Isla Caja de M	2.09	141		Pn	22 03 15.1	+1.4
GCPR	Guaynabo City	2.11	124	⇑*e*P	Pn	22 03 15.0	+1.0
GCPR	Guaynabo City	2.11	124		Pn	22 03 15.0	+1.0
SDD	Santo Domingo	2.16	241	*i* P	Pb	22 03 18.9	+1.2
SDD				*e*S	Sg	22 03 47.3	-0.5
SJG	San Juan	2.18	130		Pn	22 03 14.1	-0.8
IGPR	InterUniversit	2.31	132	⇑*e*P	Pn	22 03 18.2	+1.6
IGPR	InterUniversit	2.31	132	⇑*e*P	Pn	22 03 18.3	+1.6
IGPR	InterUniversit	2.31	132		Pn	22 03 18.2	+1.6
PDPR	Patillas Dam,	2.33	129	⇑*e*P	Pn	22 03 18.7	+1.7
PDPR	Patillas Dam,	2.33	129		Pn	22 03 17.1	+0.1
CUPR	Culebra, Puert	2.77	115	Pn	Pn	22 03 22.7	-0.3
STVI	Saint Thomas	3.04	112	⇑*e*P	Pn	22 03 27.5	+0.8
STVI	Saint Thomas	3.04	112		Pn	22 03 26.5	-0.2
SDDR	Presa de Saban	3.23	261	*i* P	Pb	22 03 34.4	-1.6
SDDR				IAML		22 04 34.8	
	comp=Z,81nm,0.7s						

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*IDC **09** 22:13:29.3±0.8, 56°.49N×121°.02E, h0^{km}, mb3.7/11, mb1 3.9/17, mb1mx3.7/44, mbtmp3.8/17, ML3.9/5, Error ellipse: s-maj=17.0km s-min=10.8km az=146.0*
*MOS **09** 22:13:29.5±1.6, 56°.52N×121°.06E, h10^{km}, mb4.3/7, Error ellipse: s-maj=9.6km s-min=8.2km az=67.9*
*BYKL **09** 22:13:30.9±0.6, 56°.56N×121°.13E*
*YARS **09** 22:13:30.7±0.0, 56°.54N×121°.12E, h12^{km}, mb0.0/20, ML4.7/16, Ms0.0/20*
*NEIC **09** 22:13:30.4±1.4, 56°.58N±0°.04×121°.1E±0°.1, h9^{km}±5^{km}, mb4.0/7, Error ellipse: s-maj=9.1km s-min=4.3km az=113.0*
ISC 09 22:13:30.2±1.0, **56°.57N**±0°.03×**121°.10E**±0°.02, **h5**^{km}±7^{km}, **n121**, σ**2^{s}33**/172, **mb3.9**/23, **6C-10D**, **Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YKLR	Yuktali	0.31	86	*i* Pg	Pg	22 13 37.3	+1.1
	0.8nm,0.2s						
YKLR				*e*Sg	Sg	22 13 40.4	+0.2
	10nm,0.4s						
YKLR				*e*Sg	Sg	22 13 40.4	+0.2
	13nm,0.5s						
YKLR	Yuktali	0.31	86	⇓*i*P	Pg	22 13 37.3	+1.1
YKLR				*e*S	Sg	22 13 40.4	+0.2
KHNR	Khani	0.71	300	⇑*i*Pg	Pg	22 13 44.1	+0.2
KHNR				*e*Sg	Sg	22 13 53.9	+0.8
KHN	Khani	0.81	296	*i* Pg	Pg	22 13 44.0	-1.7
	0.4nm,0.1s						
KHN				*e*Sg	Sg	22 13 53.6	-2.5
	7.2nm,0.1s						
CRS	Chara	1.60	283	*e*Pg	Pn	22 14 00.1	+0.9
CRS				*e*		22 14 05.0	
CRS				max		22 14 05.7	
	2µm,0.8s						
CRS				*e*Sg	Sg	22 14 22.4	+0.9
CRS				Smax		22 14 24.4	
	4µm,0.5s						
CRS	Chara	1.60	283	*e*Pn	Pn	22 14 00.1	+0.9
	1.9nm,0.8s						
CRS				*e*Sg	Sn	22 14 20.8	+0.5
	4.4nm,0.5s						
CRS	Chara	1.60	283	P	Pn	22 14 00.0	+0.9
CRS	Chara	1.60	283		Pn	22 14 00.0	+0.9
CLNS	Chul'man	2.11	81	*e*Pn	Pn	22 14 07.2	+1.0
CLNS				*i* Pg	Pb	22 14 09.4	+0.4
	0.3nm,0.3s						
CLNS				*e*Sg	Sg	22 14 36.9	-1.0
	8.4nm,1.1s						
CLNS				*e*Sg	Sg	22 14 36.9	-1.0
	8.7nm,1.1s						
CLNS	Chul'man	2.11	81	*e*P	Pn	22 14 07.4	+1.2
CLNS				*e*		22 14 36.0	
IENR	Iengra	2.12	98	*e*Pg	Pb	22 14 09.4	+0.3
IENR				*e*		22 14 13.4	
IENR				*e*Sg	Sg	22 14 36.8	-1.3
IENR	Iengra	2.12	98	*e*Pg	Pb	22 14 09.3	+0.3
	0.4nm,0.3s						
IENR				*e*Sg	Sg	22 14 37.3	-0.8
	1.4nm,0.6s						
IENR				*e*Sg	Sg	22 14 37.3	-0.8
	2.4nm,0.6s						
TUP	Tupik	2.25	197	⇓*i*Pn	Pn	22 14 08.2	+0.1
TUP				*e*Pg	Pb	22 14 10.9	-0.4
TUP				Pmax		22 14 14.9	
	2µm,0.7s						
TUP				*e*Sg	Sb	22 14 40.8	+1.4
TUP				Smax		22 14 44.3	
	3µm,1.1s						
TUP	Tupik	2.25	197	*i* Pn	Pn	22 14 08.2	+0.1
TUP				*e*Pg	Pb	22 14 10.9	-0.4
	1.5nm,0.7s						
TUP				*e*Sg	Sb	22 14 40.8	+1.4
	2.5nm,1.1s						
TUP	Tupik	2.25	197	⇓*i*P	Pn	22 14 08.2	+0.1
TUP				*e*S	Sn	22 14 36.2	0.0
TUP				pmax	pmax		
	comp=Z,2µm,0.4s						
TUP				smax	smax		
	comp=E,2µm,0.4s						
TUP	Tupik	2.25	197		Pn	22 14 08.1	0.0
TNDR	Tynda	2.49	123	*e*Pn	Pn	22 14 12.0	+0.5
TNDR				*i* Pg	Pb	22 14 15.1	-0.3
	comp=E,1.0nm,0.5s						
TNDR				*e*Sn	Sn	22 14 41.9	-0.3
TNDR				*e*Sg	Sb	22 14 48.0	+1.6
	comp=E,2.3nm,0.6s						
TNDR				*e*Sg	Sb	22 14 48.0	+1.6
	comp=E,1.1nm,0.3s						
ALDR	Aldan	3.09	47	*e*Pn	Pn	22 14 20.3	+0.6
ALDR				*e*Pg	Pb	22 14 27.1	+1.4
	comp=E,0.1nm,0.4s						
ALDR				*e*Sn	Sn	22 14 57.7	+0.6
ALDR				*e*Sg	Sg	22 15 08.1	-1.3
	comp=E,0.5nm,0.2s						
ALDR				*e*Sg	Sg	22 15 08.1	-1.3
	comp=E,0.3nm,0.1s						
OLMR	Olekminsk	3.83	355	*e*Pn	Pn	22 14 30.4	+0.6
OLMR				*i* Pg	Pb	22 14 40.1	+1.9
	comp=E,0.6nm,0.5s						
OLMR				*e*Sn	Sn	22 15 15.8	+0.6
OLMR				*e*Sg	Sg	22 15 31.5	-1.7
	comp=E,1.4nm,0.6s						
OLMR				*e*Sg	Sg	22 15 31.5	-1.7
	comp=E,1.6nm,0.7s						
BOD	Bodaibo	4.06	291	*e*	Pn	22 14 27.9	-5.1
BOD				*e*Pg	Pb	22 14 42.6	+0.4
BOD				Pmax		22 14 48.0	
	comp=E,46nm,0.8s						
BOD				*e*Sg	Sb	22 15 36.1	+4.6
BOD				Smax		22 15 41.6	
	comp=E,662nm,1.2s						
BOD	Bodaibo	4.06	291	*e*P	Pn	22 14 34.3	+1.3
BOD				pmax	pmax		
	comp=Z,46nm,0.8s						
SVKR	Severomuysk	4.22	267	*e*	Pb	22 14 41.4	-3.6
SVKR				*e*		22 14 50.7	
SVKR				max		22 14 53.2	
	comp=Z,197nm,0.7s						
SVKR				*e*Sn	Sn	22 15 24.5	-0.5
SVKR				*e*Sg	Sb	22 15 41.1	+4.8
SVKR				*e*		22 15 46.9	
SVKR				max		22 15 57.0	
	comp=Z,798nm,0.7s						
UKT	Uakit	4.33	259	*e*Pn	Pn	22 14 37.5	+0.7
UKT				⇓*i*Pg	Pb	22 14 48.0	+1.1
UKT				Pmax		22 14 55.1	
	comp=Z,126nm,1.1s						
UKT				*e*		22 15 43.8	
UKT				*e*Sg	Sg	22 15 45.6	-3.6
UKT				Smax		22 15 51.7	
	comp=Z,700nm,0.7s						
UKT	Uakit	4.33	259	*e*P	Pn	22 14 37.8	+1.0
UKT				pmax	pmax		
	comp=Z,127nm,1.0s						
ZEA	Zeya	4.53	126	⇑*i*P	Pn	22 14 40.2	+0.8
ZEA				*e*S	Sn	22 15 26.2	-6.1
ZEA				pmax	pmax		
	comp=Z,62nm,0.1s						
ZEA				pmax	pmax		
	comp=N,75nm,0.7s						
ZEA				pmax	pmax		
	comp=E,87nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,75nm,0.5s						
ZEA				smax	smax		
	comp=N,40nm,0.7s						
ZEA				smax	smax		
	comp=E,170nm,0.8s						
ZEA				smax	smax		
	comp=N,58nm,0.8s						
ZEA				smax	smax		
	comp=E,530nm,0.8s						
ZEA				smax	smax		
	comp=N,2µm,0.5s						
BMKR	Bomnak	4.76	110	*e*Pn	Pn	22 14 41.8	-0.9
BMKR				*e*Pg	Pb	22 14 56.8	+2.6
	comp=N,0.1nm,0.2s						
BMKR				*e*Sg	Sb	22 15 54.5	+2.7
	comp=N,0.7nm,0.2s						
YOA	Uoyan	5.24	269	*e*	Pg	22 15 10.0	-0.4
YOA				*e*		22 15 15.0	
YOA				max		22 15 20.6	
	comp=N,190nm,0.2s						
YOA				*e*Sg	Sg	22 16 13.2	-5.0
YOA				*e*		22 16 18.4	
YOA				max		22 16 31.9	
	comp=N,2µm,1.8s						
VTMR	Vitim	5.38	306	*e*Pn	Pn	22 14 52.5	+1.4
VTMR				*e*Pg	Pb	22 15 08.0	+3.4
	comp=N,0.1nm,0.3s						
VTMR				*e*Sn	Sn	22 15 53.2	-0.2
VTMR				*e*Sg	Sg	22 16 18.5	-4.4
	comp=N,0.9nm,0.4s						
VTMR				*e*Sg	Sg	22 16 18.5	-4.4
	comp=N,1.0nm,0.4s						
CGD	Chagda	5.55	63	*e*Pn	Pn	22 14 54.5	+1.0
CGD				*e*Pg	Pb	22 15 11.1	+3.5
	comp=N,0.1nm,0.6s						
CGD				*e*Sn	Sn	22 15 58.2	+0.6
CGD				*e*Sg	Sg	22 16 24.6	-3.9
	comp=N,0.8nm,0.3s						
CGD				*e*Sg	Sg	22 16 24.6	-3.9
	comp=N,1.4nm,0.7s						
KMO	Kumora	5.57	267	*e*Pn	Pn	22 14 55.1	+1.4
KMO				*e*		22 15 01.6	
KMO				*e*Pg	Pb	22 15 10.2	+2.3
KMO				Pmax		22 15 20.8	
	comp=N,50nm,1.0s						
KMO				*e*Sg	Sg	22 16 23.7	-5.2
KMO				Smax		22 16 39.0	
	comp=N,451nm,1.6s						
KMO				*e*		22 16 45.1	
KMO	Kumora	5.57	267	*e*P	Pn	22 14 57.4	+3.7
KMO				pmax	pmax		
	comp=Z,30nm,0.5s						
YLYR	Ulyunkhan	5.87	257	⇓*i*Pn	Pn	22 14 58.7	+0.8
YLYR				*e*		22 15 03.1	
YLYR				*e*Pg	Pb	22 15 17.2	+4.2
YLYR				Pmax		22 15 36.2	
	comp=Z,32nm,1.2s						
YLYR				*e*		22 16 06.4	
YLYR				*e*Sg	Sg	22 16 34.4	-4.1
YLYR				Smax		22 16 58.7	
	comp=Z,327nm,1.1s						
YLYR	Ulyunkhan	5.87	257	*e*P	Pn	22 14 58.9	+1.0
YLYR				pmax	pmax		
	comp=Z,33nm,1.1s						
CIT	Chita	6.35	227	*e*Sg	Sb	22 16 45.9	+8.6
CIT				*e*		22 16 49.7	
CIT				max		22 17 16.3	
	comp=Z,766nm,1.2s						
NIZ	Nizh Angarsk	6.51	268	*e*Pn	Pn	22 15 07.8	+1.2
NIZ				*e*		22 15 14.7	
NIZ				*e*Pg	Pb	22 15 26.6	+2.8
NIZ				*e*		22 15 32.8	
NIZ				max		22 15 33.8	
	comp=Z,28nm,0.9s						
NIZ				*e*Sg	Sg	22 16 52.6	-6.4
NIZ				Smax		22 17 07.6	
	comp=Z,136nm,1.2s						
NIZ				*e*		22 17 10.1	
NIZ				*e*		22 17 27.0	
TBGR	Tabaga	6.85	36	*e*Pn	Pn	22 15 12.1	+0.9
TBGR				*e*Pg	Pb	22 15 33.9	+4.3
	comp=Z,0.2nm,0.4s						
TBGR				*e*Sn	Sn	22 16 28.8	-0.7
TBGR				*e*Sg	Sg	22 17 05.3	-4.6
	comp=Z,3.8nm,0.9s						
TBGR				*e*Sg	Sg	22 17 05.3	-4.6
	comp=Z,4.5nm,1.1s						
SYVR	Suvo	7.00	250	*e*	Pn	22 15 13.8	+0.4
SYVR				max		22 15 26.6	
	comp=Z,4.0nm,0.1s						
SYVR				*e*Sg	Sg	22 17 06.5	-8.4
SYVR				*e*		22 17 11.3	
SYVR				*e*		22 17 16.3	
SYVR				max		22 17 23.2	
	comp=Z,226nm,1.0s						
YAK	Yakutsk	7.02	35	Pn	Pn	22 15 13.7	+0.2
	comp=Z,0.1nm,0.3s,baz=222,slow=7.5,SNR=5.7						
YAK				Sn	Sn	22 16 29.6	-3.9
	comp=Z,0.5nm,0.3s,baz=124,slow=23,SNR=9.5						
YAK				Lg	Lg	22 17 04.6	
	comp=Z,1.5nm,0.3s,baz=142,slow=23,SNR=16						
YAK	Yakutsk	7.02	35	*e*Pn	Pn	22 15 14.9	+1.4
YAK				*e*Pg	Pb	22 15 37.8	+5.4
YAK				*e*Sn	Sn	22 16 33.2	-0.4
YAK				*e*Sg	Sg	22 17 10.8	-4.4
YAK	Yakutsk	7.02	35	*e*P	Pn	22 15 13.6	+0.2
YAK				*e*		22 16 29.2	
YAK				pmax	pmax		
	comp=Z,5.0nm,0.3s						
YAK				pmax	pmax		
	comp=Z,18nm,0.4s						
YAK				smax	smax		
	comp=E,72nm,0.6s						
YAK				smax	smax		
	comp=N,19nm,0.4s						
YAK				smax	smax		
	comp=E,564nm,0.9s						
YAK				smax	smax		
	comp=N,649nm,0.7s						
YAK				smax	smax		
	comp=Z,415nm,8.1s						
YAK	Yakutsk	7.02	35		Pn	22 15 12.8	-0.7
YAK					Sn	22 16 32.3	-1.2
HIA	Hailar	7.36	187	*e*	Pb	22 15 37.6	-0.8
HIA				Pg	Pg	22 15 42.7	-8.4
HIA				*e*		22 16 50.4	
HIA				*e*Sg	Sg	22 17 19.2	-7.2
HIA				*e*		22 17 33.5	
HIA	Hailar	7.36	187	Pn	Pn	22 15 16.8	-1.5
HIA					Sn	22 16 38.5	-3.8
YCRN	Chernyshevskiy	7.79	330	*e*Pn	Pn	22 15 25.4	+1.3
YCRN				*e*Pg	Pb	22 15 51.4	+5.8
	comp=Z,0.1nm,1.0s						
YCRN				*e*Sn	Sn	22 16 52.0	-0.5
YCRN				*e*Sg	Sg	22 17 35.0	-5.0
	comp=Z,0.3nm,1.3s						
YCRN				*e*Sg	Sg	22 17 35.0	-5.0
	comp=Z,0.3nm,1.2s						
MXMB	Maximikha	7.85	250	*e*	Pg	22 16 00.0	-0.5
MXMB				*e*		22 17 12.5	
MXMB				*e*Sg	Sg	22 17 32.4	-10
MXMB				*e*		22 17 52.6	
OGRR	Ongureny	8.28	255	*e*	Pg	22 16 12.5	+3.8

OGRR				max		22 16 15.9	
	comp=Z,13nm,1.1s						
OGRR				*e*		22 17 31.2	
OGRR				*e*Sg	Sg	22 17 45.7	-10
OGRR				Smax		22 17 58.8	
	comp=Z,139nm,2.2s						
KELR	**Kotokel**	**8.46**	**249**	*e*Sg	Sg	22 17 53.2	-8.2
KPC	**Khapcheranga**	**8.64**	**221**	*e*Pn	**Pn**	**22 15 35.0**	**-1.0**
KPC				*e*		22 15 39.4	
KPC				*e*		22 15 49.0	
KPC				max		22 16 14.9	
	comp=Z,7.0nm,0.4s						
KPC				*e*		22 17 13.9	
KPC				*e*Sg	Sg	22 17 58.6	-8.8
KPC				*e*		22 18 14.2	
KPC				max		22 18 15.4	
	comp=Z,443nm,1.6s						
KPC	**Khapcheranga**	**8.64**	**221**	*e*P	**Pn**	**22 15 35.3**	**-0.7**
KPC				pmax	pmax		
	comp=Z,7.0nm,0.4s						
TRTB	**Turuntaevo**	**8.98**	**247**	*e*	Pn	22 15 53.1	+13
TRTB				*e*Sg	Sg	22 18 09.9	-8.2
ZRHB	**Zarechye**	**9.04**	**249**	*e*		22 17 42.8	
ZRHB				Sg	Sn	22 18 10.5	+47
ZRHB				*e*		22 18 37.7	
ZRHB				max		22 18 45.6	
	comp=Z,662nm,1.5s						
TRG	**Tyrgan**	**9.36**	**252**	*e*Pn	**Pn**	**22 15 45.2**	**-0.5**
TRG				max		22 16 09.1	
	comp=Z,1.0nm,0.3s						
TRG				*e*Sg	Sn	22 18 19.3	+48
TRG				*e*		22 18 31.8	
TRG				max		22 18 34.8	
	comp=Z,109nm,1.8s						
TRG	**Tyrgan**	**9.36**	**252**	*e*P	**Pn**	**22 15 44.0**	**-1.7**
TRG				*e*S	**Sn**	**22 17 28.8**	**-2.5**
TRG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
TRG				smax	smax		
	comp=N,110nm,1.8s						
FFNB	**Fofonovo**	**9.52**	**248**	*e*	Pn	22 16 19.0	+31
FFNB				*e*Sg	Sn	22 18 24.7	+49
KAB	**Kabansk**	**9.58**	**248**	*e*Sg	Sn	22 18 26.6	+50
KAB				Smax		22 18 54.0	
	comp=N,867nm,1.9s						
STDB	**Stepnoy Dvoret**	**9.66**	**249**	*e*	Pn	22 16 42.4	+53
STDB				Sg	Sn	22 18 32.0	+53
STDB				*e*		22 18 48.1	
HRMR	**Khuramsha**	**9.67**	**245**	*e*Pn	**Pn**	**22 15 50.3**	**+0.4**
HRMR				*e*		22 16 32.0	
HRMR				max		22 16 39.1	
	comp=N,10.0nm,0.6s						
HRMR				*e*		22 17 40.4	
HRMR				*e*Sg	Sn	22 18 31.0	+52
HRMR				Smax		22 18 55.2	
	comp=N,507nm,1.3s						
KLR	**Kul'dur**	**9.76**	**134**	Pn	**Pn**	**22 15 52.2**	**+1.0**
	comp=N,1.3nm,0.3s,baz=328,slow=17,SNR=19						
KLR				Sn	Sn	22 17 31.1	-10
	comp=N,1.1nm,0.3s,baz=46,slow=18,SNR=1.9						
KLR				Lg	Lg	22 18 34.0	
	comp=N,1.1nm,0.3s,baz=225,slow=21,SNR=2.1						
KLR	**Kul'dur**	**9.76**	**134**	⇑*e*P	**Pn**	**22 15 52.0**	**+0.8**
KLR				*i* S	**Sn**	**22 17 41.7**	**+0.6**
KLR				pmax	pmax		
	comp=Z,6.0nm,2.7s						
BGT	**Bolshoye Golou**	**10.22**	**250**	Sg	Sn	22 18 45.9	+53
BGT				*e*		22 18 55.1	
BGT				max		22 19 13.8	
	comp=Z,45nm,1.7s						
LSTR	**Listvyanka**	**10.62**	**251**	*e*		22 17 48.6	
LSTR				*e*Sg	Sn	22 19 00.4	+58
LSTR				*e*		22 19 06.0	
LSTR				max		22 20 29.3	
	comp=Z,58nm,1.9s						
IVK	**Ivanovka**	**10.87**	**251**	*e*	**Pn**	**22 16 09.7**	**+3.3**
IVK				*e*Sg	Sn	22 19 08.3	+60
IVK				Smax		22 19 49.7	
	comp=Z,71nm,1.8s						
TLY	**Talaya**	**11.34**	**252**	*e*Sn	Sn	22 19 06.3	+46
TLY				Sg		22 19 22.8	
TLY				*e*		22 20 01.3	
TLY				max		22 20 03.5	
	comp=Z,36nm,2.5s						
TLY	**Talaya**	**11.34**	**252**	Lg	Lg	22 19 24.8	
	comp=Z,0.0nm,0.3s,baz=85,slow=21,SNR=2.3						
ARS	**Arshan**	**11.86**	**255**	*e*		22 18 51.2	
ARS				*e*Sg		22 19 39.0	
ARS				Smax		22 19 53.4	
	comp=Z,68nm,1.6s						
ZAK	**Zakamensk**	**12.27**	**247**	*e*Sg		22 19 51.4	
ZAK				Smax		22 20 45.6	
	comp=Z,81nm,1.8s						
ZAK	**Zakamensk**	**12.27**	**247**	*e*P	**Pn**	**22 16 26.4**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
SONM	**Songino Array**	**12.54**	**232**	Pn	**Pn**	**22 16 28.4**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=36,slow=14,SNR=8.9						
SONM				Lg	Lg	22 20 01.3	
	comp=Z,1.5nm,0.3s,baz=47,slow=27,SNR=10						
SONM	**Songino Array**	**12.54**	**232**		**Pn**	**22 16 28.1**	**-1.3**
MOY	**Mondy**	**12.76**	**256**	*e*	Pn	22 17 19.0	+47
MOY				max		22 17 31.3	
	comp=Z,1.0nm,0.4s						
MOY				*e*		22 18 58.2	
MOY				*e*Sg		22 20 06.9	
MOY				Smax		22 20 33.5	
	comp=Z,69nm,2.0s						
ORL	**Orlik**	**12.98**	**261**	*e*	Pn	22 16 45.8	+10
ORL				*e*		22 17 06.9	
ORL				max		22 17 19.3	
	comp=Z,1.0nm,0.4s						
ORL				*e*		22 19 36.3	
ORL				*e*Sg		22 20 13.9	
ORL				Smax		22 20 34.3	
	comp=Z,50nm,1.6s						
USRK	**Ussuriysk Ar.**	**14.17**	**146**	Lg	Lg	22 20 57.2	
	baz=320,slow=23,SNR=4.1						
TDJR	**Todzha**	**15.08**	**264**	Sg		22 21 17.4	
TDJR				*e*		22 21 28.8	
TIXI	**Tiksi**	**15.49**	**9**	Pn	**Pn**	**22 17 04.9**	**-4.1**
	comp=Z,2.9nm,0.3s,baz=189,slow=10.0,SNR=28						
TIXI				Sn	Sn	22 19 45.3	-15
	comp=Z,0.4nm,0.3s,baz=328,slow=17,SNR=2.9						
TIXI				Lg	Lg	22 21 48.4	
	comp=Z,0.3nm,0.3s,baz=147,slow=20,SNR=1.6						
TIXI	**Tiksi**	**15.49**	**9**	*de*P	**Pn**	**22 17 10.0**	**+1.0**
TIXI	**Tiksi**	**15.49**	**9**		**Pn**	**22 17 08.8**	**-0.3**
MA2	**Magadan**	**15.91**	**67**	⇓*e*P	**P**	**22 17 17.5**	**-0.8**
MA2				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SEY	**Seymchan**	**16.86**	**55**	Pn	**Pn**	**22 17 25.9**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=257,slow=12,SNR=4.0						
SEY				Lg	Lg	22 22 13.9	
	comp=Z,0.1nm,0.3s,baz=285,slow=13,SNR=3.9						
SEY	**Seymchan**	**16.86**	**55**	⇓*e*P	**P**	**22 17 30.0**	**+1.1**
NRIK	**Noril'sk**	**19.55**	**324**	P	**P**	**22 17 57.4**	**-1.0**
	comp=Z,0.8nm,0.3s,baz=112,slow=12,SNR=8.0						
NRIK				Lg	Lg	22 23 45.1	
	comp=Z,0.4nm,0.3s,baz=201,slow=11,SNR=1.3						
ZALV	**Zalesovo Beam**	**20.69**	**278**	P	Pn	22 18 13.6	+0.4
	comp=Z,0.4nm,0.3s,baz=57,slow=10,SNR=3.1						
ZALV	**Zalesovo Beam**	**20.69**	**278**	P	**P**	**22 18 09.8**	**-1.1**
ZALV	**Zalesovo Beam**	**20.69**	**278**	P	**P**	**22 18 09.8**	**-1.1**
PETK	**Petropavlovsk-**	**21.19**	**84**	P	**P**	**22 18 16.1**	**-0.2**
	comp=Z,3.0nm,0.8s,baz=280,slow=11,SNR=2.9						
BILL	**Bilibino**	**23.30**	**42**	⇓*e*P	**P**	**22 18 40.9**	**+2.4**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURK	**Kurchatov**	**25.53**	**275**	⇓*e*P	**P**	**22 18 59.7**	**+0.3**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	**Kurchatov**	**25.53**	**275**	P	**P**	**22 18 59.8**	**+0.3**
KURBB	**Kurchatov Arra**	**25.62**	**275**	P	**P**	**22 19 00.6**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=63,slow=9.4,SNR=7.5						
MK31	**Makanchi Array**	**25.65**	**264**	⇑*e*P	**P**	**22 19 03.5**	**+2.9**
MKAR	**Makanchi Array**	**25.65**	**264**	P	**P**	**22 18 60.0**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=58,slow=7.0,SNR=4.9						
MKAR	**Makanchi Array**	**25.65**	**264**	*e*P	**P**	**22 19 06.6**	**+6.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**25.65**	**264**	P	**P**	**22 19 00.2**	**-0.4**
BVAR	**Borovoye Array**	**28.90**	**285**	P	**P**	**22 19 29.7**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=60,slow=8.8,SNR=7.6						
BRVK	**Borovoye**	**28.94**	**285**	⇑*e*P	**P**	**22 19 31.6**	**+1.5**
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRVK	**Borovoye**	**28.94**	**285**	P	**P**	**22 19 28.1**	**-2.0**
BRVK				IAmb	IAmb	22 19 36.0	
	comp=Z,1.3nm,0.8s						
AAK	**Ala-Archa**	**32.58**	**265**	⇑*e*P	**P**	**22 20 05.2**	**+2.7**
AAK				pmax	pmax		
	comp=Z,12nm,1.8s						
ABKAR	**Akbulak array**	**36.48**	**285**	P	**P**	**22 20 32.6**	**-3.3**
ABKAR				IAmb	IAmb	22 20 42.9	
	comp=Z,1.7nm,0.8s						
IMAR	**Indian Mountai**	**38.83**	**41**	P	**P**	**22 20 55.0**	**-0.6**
BMAR	**Burnt Mountain**	**41.22**	**36**	P	**P**	**22 21 15.3**	**-0.2**
ILAR	**Eielson Array**	**41.91**	**40**	P	**P**	**22 21 22.7**	**+1.6**
	comp=Z,1.4nm,0.9s,baz=294,slow=7.8,SNR=12						
ILAR	**Eielson Array**	**41.91**	**40**	*e*P	**P**	**22 21 25.5**	**+4.3**
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ILAR	**Eielson Array**	**41.91**	**40**	P	**P**	**22 21 21.3**	**+0.2**
HDA	**Harding Lake**	**42.09**	**40**	P	**P**	**22 21 24.5**	**+1.8**
HDA				IAmb	IAmb	22 21 31.5	
	comp=Z,1.6nm,0.9s						
OBN	**Obninsk**	**44.60**	**305**	*e*P	**P**	**22 21 45.2**	**+2.2**
OBN				*e*		22 23 29.5	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
VRH	**Novokhopyorsk**	**44.64**	**298**	*e*P	**P**	**22 21 42.9**	**-0.4**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
FINES	**FINESS Array B**	**45.00**	**317**	P	**P**	**22 21 45.0**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=56,slow=7.8,SNR=6.7						
LPSR	**Galich'ya Gora**	**45.09**	**301**	*e*P	**P**	**22 21 45.4**	**-1.5**
LPSR				pmax	pmax		
	comp=Z,10.0nm,2.3s						
VSR	**Storozhevoye**	**45.87**	**300**	*e*P	**P**	**22 21 52.0**	**-1.0**
VSR				pmax	pmax		
	comp=Z,9.0nm,1.5s						
C36M	**Paulatuk**	**45.88**	**27**	P	**P**	**22 21 52.6**	**-0.3**
C36M				IAmb	IAmb	22 21 57.2	
	comp=Z,3.2nm,0.7s						
AKASG	**Malin Array Be**	**50.86**	**305**	P	**P**	**22 22 30.9**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=41,slow=8.6,SNR=13						
AKASG	**Malin Array Be**	**50.86**	**305**	P	**P**	**22 22 31.0**	**-0.6**
YKA	**Yellowknife Ar**	**53.64**	**28**	P	**P**	**22 22 51.4**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=330,slow=6.4,SNR=5.4						
BUR08	**Bucovina Ar. S**	**54.90**	**305**	P	**P**	**22 23 00.4**	**-1.1**
BUR08				IAmb	IAmb	22 23 02.0	
	comp=Z,2.1nm,0.9s						
BURAR	**Bucovina Array**	**54.91**	**305**	P	**P**	**22 23 00.2**	**-1.4**
BRTR	**Keskin Array B**	**56.70**	**293**	P	**P**	**22 23 14.9**	**+0.3**
	comp=Z,1.0nm,0.9s,baz=46,slow=4.8,SNR=3.6						
BRTR	**Keskin Array B**	**56.70**	**293**	P	**P**	**22 23 15.0**	**+0.3**
BRTR	**Keskin Array B**	**56.70**	**293**	P	**P**	**22 23 14.2**	**-0.4**
PDAR	**Pinedale Array**	**72.24**	**37**	P	**P**	**22 24 56.1**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=354,slow=4.0,SNR=3.1						
WRA	**Warramunga Arr**	**77.03**	**167**	P	**P**	**22 25 23.2**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=347,slow=6.9,SNR=5.4						
CPUP	**Villa Florida**	**149.76**	**357**	PKPbc	**PKPbc**	**22 33 20.0**	**-0.8**
	comp=Z,1.8nm,0.8s,baz=332,slow=2.1,SNR=3.4						
CPUP	**Villa Florida**	**149.76**	**357**	PKP2	**PKPbc**	**22 33 20.0**	**-0.8**

IDC 09 22:23:31.9±2.4**, 6°.83S**×**129°.00E, h0^{km}, mb3.2**/1**, mb1 3.8**/3**, mb1mx3.4**/30**, mbtmp3.6**/3**, ML3.8**/2**, Error ellipse: s-maj=144.6km s-min=33.2km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.02**	**159**	Pn	Pn	22 26 51.7	-0.4
	0.7nm,0.3s,baz=341,slow=13,SNR=12						
WRA				Sn	Sn	22 29 12.2	-16
	0.5nm,0.3s,baz=331,slow=23,SNR=12						
ASAR	**Alice Springs**	**17.39**	**165**	P	Pn	22 27 36.4	+0.2
	0.2nm,0.3s,baz=338,slow=11,SNR=8.4						
ASAR				S	Sn	22 30 33.5	-17
	0.1nm,0.3s,baz=348,slow=27,SNR=2.7						
MKAR	**Makanchi Array**	**67.55**	**327**	P	P	22 34 30.3	0.0
	0.1nm,0.5s,baz=132,slow=5.7,SNR=2.1						

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*NEIC **09** 23:01:13.6±1.2, 12°.49N±0°.08×93°.25E±0°.07, h69^{km}±7^{km}, mb4.1/7, Error ellipse: s-maj=14.2km s-min=7.1km az=141.0*

*IDC **09** 23:01:13.7±1.1, 12°.51N×93°.31E, h68^{km}±9^{km}, mb3.6/10, mb1 3.7/12, mb1mx3.4/45, mbtmp3.9/12, Error ellipse: s-maj=21.4km s-min=13.7km az=62.0*

ISC 09 23:01:13.9±0.8**, 12°.52N**±0°.07×**93°.28E**±0°.08**, h71**^{km}±7^{km}**, h71^{km}:pP-P, n43,** σ**0^{s}.80**/43**, mb4.0**/12**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.01**	**211**		Pn	23 01 31.6	-0.9
CM31	**Chiang Mai Arr**	**8.04**	**42**		**Pn**	**23 03 09.5**	**+1.5**
CMAR	**Chiang Mai Arr**	**8.04**	**42**	P	**Pn**	**23 03 09.0**	**+1.0**
	0.9nm,0.3s,baz=236,slow=15,SNR=32						
CMAR				S	**Sn**	**23 04 36.6**	**-0.8**
	0.2nm,0.3s,baz=235,slow=27,SNR=6.6						
CMAR	**Chiang Mai Arr**	**8.04**	**42**		**Pn**	**23 03 08.7**	**+0.7**
CHTO	**Chiang Mai**	**8.30**	**40**		**Pn**	**23 03 13.0**	**+1.5**
PBKT	**Sadao Pong**	**8.46**	**61**		**Pn**	**23 03 14.7**	**+0.9**
KULM	**Kulim**	**10.23**	**134**	Pn	**Pn**	**23 03 37.9**	**-0.1**
PALK	**Pallekele**	**13.44**	**248**	P	**Pn**	**23 04 21.8**	**+0.1**
	0.2nm,0.3s,baz=55,slow=12,SNR=2.8						
PALK				S	Sn	23 06 32.1	-17
	1.1nm,0.3s,baz=33,slow=4.9,SNR=12						
ODAN	**Odare**	**15.30**	**340**	*e*P	**Pn**	**23 04 44.9**	**-1.1**
	47nm,0.3s						
TAPN	**Taplejung**	**15.65**	**341**	*e*P	**Pn**	**23 04 49.4**	**-1.1**
	32nm,0.4s						
RAMN	**Ramite**	**15.66**	**337**	*e*P	**Pn**	**23 04 49.1**	**-1.5**
	32nm,0.3s						
JIRN	**Jiri**	**16.46**	**337**	*e*P	**Pn**	**23 05 00.3**	**-0.4**
	19nm,0.2s						
PKI	**Pulchoki**	**16.69**	**335**	*e*P	**Pn**	**23 05 02.8**	**-0.7**
	15nm,0.3s						
PKIN	**Phulchoki**	**16.70**	**335**	*e*P	**Pn**	**23 05 02.8**	**-0.8**
	12nm,0.3s						
GUN	**Gumba**	**16.80**	**337**	*e*P	**Pn**	**23 05 05.0**	**0.0**
	7.1nm,0.3s						
DMN	**Daman**	**16.85**	**334**	*e*P	**Pn**	**23 05 05.4**	**-0.1**
	12nm,0.3s						
KKN	**Kakani**	**16.93**	**335**	*e*P	**Pn**	**23 05 06.6**	**+0.1**
LSA	**Lhasa**	**17.21**	**354**	P	**P**	**23 05 10.7**	**0.0**
LSA					**S**	**23 08 25.3**	**-1.0**
GKN	**Gorkha**	**17.39**	**334**	*e*P	**Pn**	**23 05 12.3**	**+0.2**
	24nm,0.2s						
DANN	**Dangsing**	**18.08**	**332**	*e*P	**Pn**	**23 05 20.8**	**+0.2**
H08S3	**Diego Garcia H**	**28.77**	**227**	T	T	23 36 22.2	
	baz=49,SNR=13						
H08S2	**Diego Garcia H**	**28.78**	**227**	T	T	23 36 33.8	
	baz=49						
H08S1	**Diego Carcia H**	**28.79**	**227**	T	T	23 36 35.1	
	baz=49						
MKAR	**Makanchi Array**	**35.40**	**347**	P	**P**	**23 08 03.1**	**+0.2**
	0.3nm,0.3s,baz=165,slow=7.9,SNR=11						
MKAR				pP	**pP**	**23 08 19.2**	**-0.6**
	0.6nm,0.8s,baz=163,slow=10.0,SNR=5.0						
SONM	**Songino Array**	**36.87**	**15**	P	**P**	**23 08 15.9**	**+0.3**
	0.3nm,0.4s,baz=190,slow=6.9,SNR=4.1						
SONM				pP	**pP**	**23 08 33.5**	**+1.0**
	0.2nm,0.5s,baz=205,slow=6.4,SNR=2.1						
SONM	**Songino Array**	**36.87**	**15**	IAmb	IAmb	23 08 17.6	
	comp=Z,0.7nm,1.1s						
KURBB	**Kurchatov Arra**	**39.86**	**345**	P	**P**	**23 08 40.5**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=156,slow=6.3,SNR=3.4						
KURBB				pP	**pP**	**23 08 56.8**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=156,slow=7.2,SNR=3.6						
KURBB				PcP	**PcP**	**23 10 45.8**	**+0.8**
	comp=Z,0.2nm,0.2s,baz=152,slow=4.2,SNR=4.3						
KURK	**Kurchatov**	**39.92**	**345**	P	**P**	**23 08 40.5**	**-0.4**
KURK	**Kurchatov**	**39.92**	**345**		**pP**	**23 08 56.8**	**-1.4**
KURK					**PcP**	**23 10 45.8**	**+0.6**
KURK	**Kurchatov**	**39.92**	**345**	IAmb	IAmb	23 08 48.4	
	comp=Z,1.9nm,1.1s						
GEYT	**Alibeck**	**40.25**	**315**	P	**P**	**23 08 45.2**	**+1.2**
	comp=Z,1.8nm,0.7s,baz=181,slow=12,SNR=6.1						
GEYT	**Alibeck**	**40.25**	**315**	IAmb	IAmb	23 08 46.1	
	comp=Z,1.3nm,0.7s						
ZALV	**Zalesovo Beam**	**41.87**	**353**	P	**P**	**23 08 56.5**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=178,slow=7.9,SNR=3.6						
NWAO	**Narrogin (SRO)**	**50.66**	**154**	P	**P**	**23 10 05.8**	**-0.3**
	comp=Z,7.7nm,1.0s,baz=282,slow=14,SNR=3.3						
WRA	**Warramunga Arr**	**51.71**	**128**	P	**P**	**23 10 13.9**	**-0.3**
	comp=Z,1.3nm,0.5s,baz=301,slow=9.6,SNR=16						
WRA				PcP	**PcP**	**23 11 27.1**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=322,slow=3.1,SNR=9.2						
WRA	**Warramunga Arr**	**51.71**	**128**	IAmb	IAmb	23 10 22.7	
	comp=Z,0.4nm,0.3s						
ASAR	**Alice Springs**	**53.59**	**132**	P	**P**	**23 10 27.6**	**-0.5**
	comp=Z,1.3nm,0.4s,baz=309,slow=6.9,SNR=19						
ASAR				PcP	**PcP**	**23 11 33.8**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=336,slow=5.5,SNR=4.8						
BR131	**Keskin Array S**	**58.81**	**309**	P	**P**	**23 11 05.8**	**+0.5**
BR131				IAmb	IAmb	23 11 14.6	
	comp=Z,2.6nm,1.1s						
STKA	**Stephens Creek**	**63.94**	**135**	P	**P**	**23 11 39.7**	**0.0**
	comp=Z,2.3nm,1.0s,baz=281,slow=5.2,SNR=2.7						
STKA	**Stephens Creek**	**63.94**	**135**	IAmb	IAmb	23 11 41.9	
	comp=Z,0.7nm,1.0s						
FINES	**FINESS Array B**	**68.24**	**332**	P	**P**	**23 12 06.2**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=134,slow=5.5,SNR=5.1						
IMAR	**Indian Mountai**	**87.67**	**22**	P	**P**	**23 13 54.4**	**0.0**
TXAR	**Lajitas Array**	**135.29**	**21**	PKP	**PKiKP**	**23 20 26.5**	**-1.4**
	comp=Z,0.2nm,0.5s,baz=321,slow=1.2,SNR=2.2						

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*NEIC **09** 23:53:34.0±2.3, 29°.16N±0°.07×67°.73E±0°.09, h10^{km}±1^{km}, mb4.2/19, Error ellipse: s-maj=13.0km s-min=7.4km az=128.0*

*IDC **09** 23:53:34.7±0.9, 29°.40N×67°.49E, h0^{km}, mb3.8/19, mb1 4.0/21, mb1mx3.8/53, mbtmp3.9/21, ML4.2/2, MS3.5/4, Ms1 3.5/4, ms1mx3.1/43, Error ellipse: s-maj=21.6km s-min=17.6km az=153.0*

*MOS **09** 23:53:39.6±0.9, 29°.55N×67°.80E, h36^{km}, mb4.5/8, Error ellipse: s-maj=17.1km s-min=6.7km az=78.9*

ISC 09 23:53:37.9±0.4**, 29°.29N**±0°.05×**67°.58E**±0°.04**, h35**^{km}**, n131,** σ**2^{s}.70**/137**, mb4.0**/29**, 5C-3D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	**Kabul**	**5.38**	**13**	P	**Pn**	**23 54 59.0**	**+3.1**
	SNR=9.4						
KBL				S	**Sn**	**23 56 00.4**	**+3.7**
KBL	**Kabul**	**5.38**	**13**	P	**Pn**	**23 54 56.7**	**+0.8**
KBL	**Kabul**	**5.38**	**13**		**Pn**	**23 54 56.7**	**+0.8**
BHUJ	**Bhuj**	**6.29**	**162**	*e*P	**Pn**	**23 55 10.0**	**+1.7**
BHUJ				IAmb	IAmb	23 55 12.0	
	comp=Z,18nm,0.5s						
BHUJ				*e*S	**Sn**	**23 56 21.5**	**+2.6**
BHUJ				IAmb	IAmb	23 56 27.8	
	comp=N,773nm,0.1s						
BHUJ				IAmb	IAmb	23 56 28.9	
	comp=E,165nm,0.9s						
NIL	**Nilore**	**6.51**	**47**	P	**Pn**	**23 55 08.9**	**-2.3**
NIL	**Nilore**	**6.51**	**47**		**Pn**	**23 55 08.9**	**-2.3**
HRA	**Herat**	**6.81**	**320**	Pn	**Pn**	**23 55 17.4**	**+1.9**
THN	**Thein Dam**	**7.66**	**64**	*e*P	**Pn**	**23 55 28.0**	**+1.0**
THN				*e*x	x	23 56 53.5	
DHRM	**DHARAMSHALA**	**8.06**	**66**	*e*P	**Pn**	**23 55 34.1**	**+1.4**
DHRM				*e*S	**Sn**	**23 57 01.5**	**-1.3**
NDI	**New Delhi**	**8.46**	**92**	*e*P	**Pn**	**23 55 38.5**	**+0.5**
NDI				*e*x	x	23 57 10.5	
SMLA	**Simla**	**8.50**	**75**	*e*P	**Pn**	**23 55 39.9**	**+1.5**
SMLA				*e*S	**Sn**	**23 57 10.2**	**-2.8**
SMLA				IAML		23 57 16.3	
	comp=E,104nm,0.4s						
SMLA				IAML		23 57 16.5	
	comp=N,120nm,0.4s						
CHGR	**Chuyangaron**	**9.43**	**8**		**Pn**	**23 55 51.6**	**+0.3**
GAR	**Garm**	**9.95**	**12**		**Pn**	**23 55 58.6**	**+0.2**
WSAR	**Wadi Sarin**	**10.04**	**235**	Pn	**Pn**	**23 55 58.8**	**-0.8**
	comp=N,3.2nm,0.3s,baz=96,slow=7.5,SNR=54						
WSAR				Sn	Sn	23 57 41.7	-9.4
	comp=N,3.8nm,0.3s,baz=282,slow=19,SNR=13						
WSAR				LR	LR	00 01 13.2	
	comp=N,215nm,19.1s,baz=94,slow=46						
WSAR	**Wadi Sarin**	**10.04**	**235**	P	**Pn**	**23 55 58.8**	**-0.8**
	SNR=13						
WSAR				S	Sn	23 57 41.7	-9.3
WBK	**Wadi Bani Khal**	**10.21**	**231**	P	**Pn**	**23 56 01.3**	**-0.7**
	SNR=61						
WBK				S	**Sn**	**23 57 47.3**	**-8.0**
BIDO	**Bidbid**	**10.23**	**238**	P	**Pn**	**23 56 03.8**	**+1.5**
BIDO				S	**Sn**	**23 57 48.7**	**-7.1**
JOSI	**Joshimath**	**10.47**	**80**	*e*P	**Pn**	**23 56 05.5**	**-0.3**
JOSI				*e*S	**Sn**	**23 57 58.9**	**-3.1**
JOSI				IAML		23 58 07.7	
	comp=N,86nm,0.8s						
JOSI				IAML		23 58 11.2	
	comp=E,79nm,0.7s						
BANOM	**Banah**	**10.55**	**254**	Pn	**Pn**	**23 56 03.6**	**-3.1**
BANOM				Sn	Sn	23 57 53.1	-11
BANOM	**Banah**	**10.55**	**254**	P	**Pn**	**23 56 03.6**	**-3.1**
BANOM				S	Sn	23 57 53.1	-11
BANOM	**Banah**	**10.55**	**254**	P	**Pn**	**23 56 06.8**	**+0.2**
	SNR=8.4						
BANOM				S	**Sn**	**23 57 56.3**	**-7.4**
SMDO	**Samad**	**10.57**	**236**	P	**Pn**	**23 56 07.3**	**+0.3**
	SNR=8.7						
SMDO				S	**Sn**	**23 57 56.3**	**-7.9**
BHPL	**Bhopal**	**10.69**	**122**	*e*S	**Sn**	**23 58 05.5**	**-1.7**
MDH	**Madha**	**10.79**	**251**	Pn	**Pn**	**23 56 08.8**	**-1.2**
MDH				Sn	Sn	23 57 58.8	-11
MDH	**Madha**	**10.79**	**251**	P	**Pn**	**23 56 08.8**	**-1.2**
MDH				S	Sn	23 57 58.8	-11
HOQ	**Hoqain**	**10.81**	**241**	P	**Pn**	**23 56 09.7**	**-0.6**
	SNR=36						
HOQ				S	**Sn**	**23 58 01.7**	**-8.3**
MSFE	**Esma-Masafi**	**10.88**	**252**	*i* Pn	**Pn**	**23 56 10.8**	**-0.4**
	SNR=8.0						
MSFE	**Esma-Masafi**	**10.88**	**252**	*i* P	**Pn**	**23 56 10.8**	**-0.4**
	SNR=8.0						
JMDO	**Jabal Madar**	**10.96**	**233**	P	**Pn**	**23 56 13.2**	**+0.8**
	SNR=77						
UOSS	**Minazif**	**11.02**	**250**	Pn	**Pn**	**23 56 11.2**	**-1.8**
UOSS	**Minazif**	**11.02**	**250**	P	**Pn**	**23 56 11.2**	**-1.8**
UOSS	**Minazif**	**11.02**	**250**	Pn	**Pn**	**23 56 12.4**	**-0.7**
BTK	**Batken**	**11.07**	**13**	P	**Pn**	**23 56 14.1**	**+0.4**
BTK	**Batken**	**11.07**	**13**	Pn	**Pn**	**23 56 14.1**	**+0.4**
HATD	**Hatta, Dubai**	**11.13**	**249**	Pn	**Pn**	**23 56 12.9**	**-1.6**
HATD	**Hatta, Dubai**	**11.13**	**249**	P	**Pn**	**23 56 12.9**	**-1.6**
SOHO	**SOHO**	**11.13**	**245**	P	**Pn**	**23 56 13.6**	**-1.0**
	SNR=9.4						
SOHO				S	Sn	23 58 07.9	-10
ASHO	**Ashiyiah**	**11.25**	**249**	*i* Pn	**Pn**	**23 56 14.9**	**-1.3**
	SNR=15						
ASHO	**Ashiyiah**	**11.25**	**249**	*i* P	**Pn**	**23 56 14.9**	**-1.3**
	SNR=15						
ASHO	**Ashiyiah**	**11.25**	**249**	P	**Pn**	**23 56 15.7**	**-0.5**
	SNR=15						
ASHO				S	Sn	23 58 09.8	-11
BSY	**Bisya**	**11.38**	**237**	P	**Pn**	**23 56 20.0**	**+1.9**
	SNR=14						
BSY				S	**Sn**	**23 58 18.2**	**-5.9**
ARQ	**Araqi**	**11.55**	**242**	P	**Pn**	**23 56 23.1**	**+2.7**
	SNR=24						
ARQ				S	**Sn**	**23 58 24.9**	**-3.3**
GEYT	**Alibeck**	**11.67**	**320**	Pn	**Pn**	**23 56 22.4**	**+0.4**
KSH	**Kashi**	**12.32**	**32**	P	**Pn**	**23 56 27.9**	**-3.1**
KSH				sP	P	23 56 33.3	-9.4
KSH				S	Sn	23 58 28.7	-18
KSH				SS	**SnSn**	**23 58 46.3**	**-13**
KK31	**Karatay Array**	**13.98**	**9**	P	**Pn**	**23 56 54.4**	**+0.9**
KK31	**Karatay Array**	**13.98**	**9**		**Pn**	**23 56 54.4**	**+0.9**
KKAR	**Karatay Array**	**13.98**	**9**	P	**Pn**	**23 56 54.4**	**+0.9**
KKAR	**Karatay Array**	**13.98**	**9**		**Pn**	**23 56 54.4**	**+0.9**
KKAR	**Karatay Array**	**13.98**	**9**	Pn	**Pn**	**23 56 52.5**	**-1.0**
DANN	**Dangsing**	**14.22**	**90**	*e*P	**Pn**	**23 56 55.7**	**-1.4**
	comp=E,57nm,0.7s						
AAK	**Ala-Archa**	**14.44**	**21**	Pn	**Pn**	**23 56 58.9**	**-1.0**
	comp=E,0.8nm,0.3s,baz=174,slow=4.2,SNR=17						
AAK				Sn	**Sn**	**23 59 32.1**	**-6.6**
	comp=E,0.1nm,0.3s,baz=232,slow=21,SNR=2.4						
AAK				LR	LR	00 02 48.1	
	comp=E,198nm,21.5s,baz=250,slow=38						
AAK	**Ala-Archa**	**14.44**	**21**	Pn	**Pn**	**23 56 58.1**	**-1.7**
AAK	**Ala-Archa**	**14.44**	**21**	P	**Pn**	**23 56 58.1**	**-1.7**
AAK	**Ala-Archa**	**14.44**	**21**	⇑*e*P	**Pn**	**23 56 59.2**	**-0.6**
AAK				pmax	pmax		
	comp=Z,11nm,1.9s						
AAK	**Ala-Archa**	**14.44**	**21**		**Pn**	**23 56 59.6**	**-0.2**
GKN	**Gorkha**	**15.04**	**91**	*e*P	**Pn**	**23 57 05.7**	**-2.2**
	comp=Z,18nm,0.3s						
HYB	**Hyderabad**	**15.52**	**137**	*i* P	**P**	**23 57 21.0**	**+2.8**
KKN	**Kakani**	**15.63**	**91**	*e*P	**Pn**	**23 57 13.5**	**-2.3**

PKIN	Phulchoki	15.77	92	eP	Pn	23 57 15.3	-2.3
	comp=Z,10nm,0.4s						
PKI	Pulchoki	15.78	92	eP	Pn	23 57 15.6	-2.2
GUN	Gumba	16.14	90	eP	Pn	23 57 20.6	-1.8
	comp=Z,32nm,0.3s						
JIRN	Jiri	16.45	91	eP	Pn	23 57 24.7	-1.7
RAMN	Ramite	16.94	93	eP	Pn	23 57 31.1	-1.4
ODAN	Odare	17.65	93	eP	Pn	23 57 41.2	-0.1
	comp=Z,20nm,0.6s						
TAPN	Taplejung	17.83	91	eP	Pn	23 57 42.9	-0.7
RAYN	Ar Rayn	20.58	259	P	P	23 58 14.8	+0.9
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
RAYN	Ar Rayn	20.58	259	P	P	23 58 14.8	+0.9
RAYN				IAmb	IAmb	23 58 22.1	
	comp=Z,6.2nm,0.8s						
ABKAR	Akbulak array	20.77	346	P	Pn	23 58 17.1	-1.2
ABKAR	Akbulak array	20.77	346	P	Pn	23 58 17.5	-0.8
ABKAR				IAmb	IAmb	23 58 34.0	
	comp=Z,3.2nm,1.0s						
MAKZ	Makanchi	20.78	29	P	P	23 58 15.2	-0.7
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MAKZ	Makanchi	20.78	29	P	P	23 58 15.2	-0.7
MK31	Makanchi Array	20.91	29	P	P	23 58 16.2	-1.0
MK31				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MK31	Makanchi Array	20.91	29	P	P	23 58 16.2	-1.0
MKAR	Makanchi Array	20.91	29	P	P	23 58 17.7	+0.5
	comp=Z,3.4nm,0.6s,baz=211,slow=10,SNR=44						
MKAR				LR	LR	00 08 09.4	
	comp=Z,154nm,19.7s,baz=290,slow=42						
MKAR	Makanchi Array	20.91	29	P	P	23 58 16.6	-0.6
MKAR	Makanchi Array	20.91	29	P	P	23 58 16.6	-0.6
GNI	Garni	21.61	306	P	P	23 58 25.4	+0.3
	comp=Z,1.3nm,0.6s,baz=135,slow=8.6,SNR=2.1						
GNI	Garni	21.61	306	⇑eP	P	23 58 28.6	+3.6
GNI	Garni	21.61	306	P	P	23 58 28.1	+3.1
GNI				IAmb	IAmb	23 58 40.5	
	comp=Z,19nm,1.4s						
WMQ	Urumqi	21.63	42	eP	P	23 58 24.1	-1.0
WMQ				sP	pP	23 58 30.5	-3.9
WMQ				PP	PnPn	23 58 45.4	-0.9
AKTO	Aktyubinsk	22.32	344	P	P	23 58 32.5	+0.2
	comp=Z,1.8nm,0.9s,baz=163,slow=16,SNR=2.2						
KURBB	Kurchatov Arra	22.85	18	P	P	23 58 38.4	+0.5
	comp=Z,4.2nm,0.6s,baz=211,slow=9.4,SNR=33						
KURK	Kurchatov	22.96	18	⇑eP	P	23 58 39.5	+0.5
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KURK	Kurchatov	22.96	18	P	P	23 58 39.2	+0.1
KURK				IAmb	IAmb	23 58 40.1	
	comp=Z,5.0nm,0.8s						
AKH	Akhalkalaki	22.98	308	P	P	23 58 40.4	+0.8
AKH				pmax	pmax		
	comp=Z,5.0nm,1.2s						
AKH	Akhalkalaki	22.98	308	P	P	23 58 40.4	+0.8
AKH				IAmb	IAmb	23 58 55.8	
	comp=Z,5.3nm,1.2s						
BVAR	Borovoye Array	23.80	4	P	P	23 58 47.5	+0.2
	comp=Z,1.3nm,0.6s,baz=177,slow=9.6,SNR=12						
BRVK	Borovoye	23.83	4	⇑eP	P	23 58 49.2	+1.7
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BRVK	Borovoye	23.83	4	P	P	23 58 48.5	+0.9
BRVK				IAmb	IAmb	23 59 03.1	
	comp=Z,10.0nm,1.5s						
KIV	Kislovodsk	24.64	313	eP	P	23 59 00.8	+5.6
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
ZAA0	Zalesovo Array	27.66	22	P	P	23 59 21.4	-0.8
ZAA0				IAmb	IAmb	23 59 34.1	
	comp=Z,2.6nm,1.1s						
ZALV	Zalesovo Beam	27.66	22	P	P	23 59 22.8	+0.6
	comp=Z,1.0nm,0.7s,baz=232,slow=12,SNR=6.1						
ZALV	Zalesovo Beam	27.66	22	P	P	23 59 20.3	-1.9
CMAR	Chiang Mai Arr	30.55	104	LR	LR	00 13 23.6	
	comp=Z,66nm,19.6s,baz=295,slow=39						
CMAR	Chiang Mai Arr	30.55	104	i P	P	23 59 40.2	-8.1
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
OBN	Obninsk	34.05	328	⇑eP	P	00 00 25.2	+6.7
OBN				pmax	pmax		
	comp=Z,31nm,2.3s						
SONM	Songino Array	35.09	47	P	P	00 00 29.7	+1.9
	comp=Z,0.4nm,0.5s,baz=244,slow=7.7,SNR=4.4						
SONM	Songino Array	35.09	47	P	P	00 00 23.4	-4.4
SONM				*PP	pP	00 00 29.7	-8.3
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	35.09	47	P	P	00 00 23.4	-4.4
HHC	Hu-ho-hao-te	37.44	60	eP	P	00 00 43.5	-4.5
LIT	Litokhoron	38.25	299	P	P	00 00 54.2	-0.5
LIT				pmax	pmax		
	comp=Z,22nm,0.9s						
LIT	Litokhoron	38.25	299	P	P	00 00 54.2	-0.5
KWP	Kalwaria Pacla	39.44	314	P	P	00 01 04.1	-0.4
KWP				pmax	pmax		
	comp=Z,11nm,1.5s						
KWP	Kalwaria Pacla	39.44	314	P	P	00 01 04.1	-0.4
KWP				IAmb	IAmb	00 01 07.2	
	comp=Z,11nm,1.5s						
NRIK	Noril'sk	41.72	10	P	P	00 01 24.6	+1.6
	comp=Z,1.1nm,0.4s,baz=179,slow=7.8,SNR=5.0						
FINES	FINESS Array B	42.16	332	P	P	00 01 28.4	+1.6
	comp=Z,1.3nm,0.8s,baz=123,slow=10,SNR=3.7						
ARCES	ARCESS Array B	46.87	341	P	P	00 02 05.1	+0.9
	comp=Z,2.3nm,0.8s,baz=113,slow=6.9,SNR=3.7						
KEST	Kesra	48.91	293	P	P	00 02 21.8	+1.1
	comp=Z,5.7nm,1.2s,baz=90,slow=1.9,SNR=2.5						
KEST	Kesra	48.91	293	IAmb	IAmb	00 02 37.7	
	comp=Z,15nm,1.4s						
KSRS	Korea Array	50.30	64	P	P	00 02 33.1	+2.0
	comp=Z,2.0nm,0.7s,baz=264,slow=6.8,SNR=4.3						
USRK	Ussuriysk Ar.	52.44	55	P	P	00 02 41.1	-5.9
USRK	Ussuriysk Ar.	52.44	55	P	P	00 02 41.1	-5.9
TIXI	Tiksi	53.52	20	⇓iP	P	00 02 56.4	+1.9
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ESDC	Sonseca Array	58.47	301	P	P	00 03 31.4	+0.9
	comp=Z,0.7nm,0.8s,baz=65,slow=7.1,SNR=3.7						
SEY	Seymchan	62.03	31	⇓eP	P	00 03 57.4	+3.0
TORD	Torodi Ar. Bea	62.76	270	P	P	00 04 01.5	+1.5
	comp=Z,2.2nm,0.8s,baz=68,slow=5.3,SNR=4.1						
TORD	Torodi Ar. Bea	62.76	270	IAmb	IAmb	00 04 10.7	
	comp=Z,4.2nm,0.7s						
BILL	Bilibino	66.34	24	⇓eP	P	00 04 24.8	+2.2
BILL				pmax	pmax		
	comp=Z,7.0nm,2.0s						
NRS	Narsarsuaq	74.92	332	P	P	00 05 12.0	-2.9
NRS				pmax	pmax		
	comp=Z,137nm,1.3s						
NRS	Narsarsuaq	74.92	332	P	P	00 05 12.0	-2.9
NWAO	Narrogin (SRO)	77.74	139	P	P	00 05 29.1	-2.2
NWAO				pmax	pmax		
	comp=Z,22nm,1.2s						
NWAO	Narrogin (SRO)	77.74	139	P	P	00 05 29.1	-2.2
IMAR	Indian Mountai	79.89	16	P	P	00 05 43.4	+0.7
BMAR	Burnt Mountain	80.59	12	P	P	00 05 45.6	-0.9
WRA	Warramunga Arr	80.84	119	P	P	00 05 51.6	+3.1
	comp=Z,0.5nm,0.8s,baz=325,slow=4.7,SNR=2.5						
INK	Inuvik	81.44	8	P	P	00 05 53.1	+2.2
	comp=Z,0.7nm,0.5s,baz=333,slow=4.5,SNR=4.3						
INK	Inuvik	81.44	8	P	P	00 05 51.7	+0.8
INK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
INK	Inuvik	81.44	8	P	P	00 05 51.7	+0.8
INK				IAmb	IAmb	00 06 02.0	
	comp=Z,3.0nm,1.3s						
ILAR	Eielson Array	82.47	14	P	P	00 05 57.6	+1.3
	comp=Z,0.1nm,0.5s,baz=308,slow=4.4,SNR=4.1						
ASAR	Alice Springs	82.69	122	P	P	00 06 01.4	+3.2
	comp=Z,0.3nm,0.6s,baz=309,slow=5.4,SNR=3.4						
YKA	Yellowknife Ar	88.52	1	P	P	00 06 28.2	+1.7
	comp=Z,0.4nm,0.6s,baz=355,slow=5.0,SNR=8.4						

RSNC 10 00:21:50.4±1.4**, 1°.68N×79°.84W, h24**^{km}±10^{km}**, ML3.1, Mw3.6, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	Otavalo	1.99	136	eP	Pn	00 22 24.0	+0.9
OTAV				ePg	Pb	00 22 24.5	-1.8
OTAV				eS	Sn	00 22 47.2	-0.2
OTAV				i		00 22 52.0	
	comp=Z,86nm,1.2s						
GR1C	Gorgona, Isla	2.13	52	eP	Pn	00 22 22.9	-1.6
GR1C				eSg	Sb	00 22 56.0	+1.7
GR1C				i		00 23 01.1	
	comp=Z,69nm,0.7s						
BBAC	Balboa, Cauca	2.61	82	eP	Pn	00 22 29.5	-1.8
BBAC				i		00 23 02.3	
	comp=Z,100nm,0.3s						
CRUC	La Cruz	2.89	92	eP	Pn	00 22 35.5	+0.2
CRUC				eS	Sn	00 23 08.1	-1.4
CRUC				i		00 23 18.5	
	comp=Z,126nm,0.6s						
SOTA	Rioblanco	3.26	82	eP	Pn	00 22 40.2	-0.3
SOTA				i		00 23 22.2	
	comp=Z,84nm,0.6s						
POPC	Popayan, Colom	3.27	75	eP	Pn	00 22 39.4	-1.1
POPC				eS	Sn	00 23 19.1	+0.2
POPC				i		00 23 20.9	
	comp=Z,32nm,1.0s						
PCON	Cinco Dias	3.50	79	eP	Pn	00 22 43.4	-0.4
PCON				eS	Sn	00 23 22.7	-2.1
PCON				i		00 23 46.9	
	comp=Z,57nm,0.9s						
YOTC	Yotoco, Valle	4.17	57	eP	Pn	00 22 50.7	-2.0
YOTC				i		00 23 48.2	
	comp=Z,15nm,0.5s						
GARC	Garzon, Huila	4.37	83	eP	Pn	00 22 53.6	-2.0
GARC				i		00 24 05.3	
	comp=Z,13nm,0.6s						
ORTC	Ortega, Tolima	5.09	64	eP	Pn	00 23 07.5	+2.1
ORTC				i		00 24 24.8	
	comp=Z,28nm,0.8s						

MEX ***10*** *00:37:57.2±0.4, 15°.84N×98°.48W, h5^{km}±4^{km}, MD5.8*

IDC ***10*** *00:37:58.5±2.8, 16°.24N×98°.27W, h0^{km}, mb4.0/8, mb1 4.2/13, mb1mx4.0/42, mbtmp4.0/13, ML3.7/5, MS5.1/1, Ms1 5.1/1, ms1mx4.6/20, Error ellipse: s-maj=54.5km s-min=18.8km az=19.0*

ISC 10 00:37:58.6±2.2**, 15°.86N**±0°.07×**98°.46W**±0°.04**, h23**^{km}±17^{km}**, n41,** σ1^s.**83**/59**, mb3.9**/7**, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEIG	Puerto Escondi	1.27	84	eP	Pn	00 38 18.2	-2.7
PEIG				i S	Sn	00 38 34.6	-2.7
YOIG	Yosondua	1.32	41	eP	Pn	00 38 19.4	-2.6
YOIG				eS	Sn	00 38 36.5	-2.5
TLIG	Tlapa	1.70	357	eP	Pn	00 38 24.1	-2.8
ACP2	Acapulco	1.70	307	i P	Pn	00 38 24.5	-2.4
VHO	Vista Hermosa	2.05	54	eP	Pn	00 38 29.8	-2.1
VHO				i S	Sn	00 38 55.8	-1.0
HLIG	Huajuapan de L	2.06	18	eP	Pn	00 38 29.5	-2.5
HLIG				i S	Sn	00 38 54.8	-2.3
FTIG	Fresnillo de T	2.06	9	eP	Pn	00 38 29.6	-2.3
FTIG				i S	Sn	00 38 54.1	-2.9
CAIG	El Cayaco	2.10	305	eP	Pn	00 38 28.8	-3.6
HUIG	Huatulco	2.27	92	eP	Pn	00 38 32.2	-2.4
TOIG	Toxpalan	2.59	31	eP	Pn	00 38 37.9	-1.4
TOIG				i S	Sn	00 39 08.7	-1.4
PLIG	Platanillo	2.71	339	eP	Pn	00 38 39.1	-1.8
TPIG	Tehuac#an	2.75	22	eP	Pn	00 38 40.4	-1.1
ARIG	Puente Sto Nin	3.01	323	eP	Pn	00 38 43.0	-1.9
ARIG				i S	Sn	00 39 18.5	-1.8
YAIG	Yautepec	3.04	349	eP	Pn	00 38 44.1	-1.4
YAIG				i S	Sn	00 39 20.4	-0.9
PPM	Popocatepetl	3.19	357	eP	Pn	00 38 46.5	-1.4
PPM				i S	Sn	00 39 24.2	-1.3
MAVM	Malinalco, Edo	3.24	342	eP	Pn	00 38 48.0	-0.2
ZIIG	Zihuatanejo	3.36	302	eP	Pn	00 38 47.7	-2.1
ZIIG				i S	Sn	00 39 26.7	-2.3
UNM	Universidad Na	3.52	349	i P	Pn	00 38 50.2	-2.0
UNM				i S	Sn	00 39 32.0	-1.2
CMIG	Matias Romero	3.64	70	Pn	Pn	00 38 51.5	-2.1
	12nm,0.3s,baz=241,slow=13,SNR=116						
CMIG				Sn	Sn	00 39 34.2	-1.7
	114nm,0.3s,baz=251,slow=17,SNR=7.8						
CMIG	Matias Romero	3.64	70	eP	Pn	00 38 51.1	-2.5
CMIG				i S	Sn	00 39 35.0	-0.9
ZUVM	ZUMPANGO	3.99	352	eP	Pb	00 39 08.4	0.0
MOIG	Morelia	4.60	326	i P	Pn	00 39 06.0	-1.0
MOIG				i S	Sn	00 39 58.2	-1.7
JRQG	Juriquilla Cam	5.17	339	i P	Pn	00 39 14.4	-0.5
JRQG				i S	Sn	00 40 13.2	-0.8
TGIG		5.21	79	eP	Pn	00 39 13.6	-1.5
TGIG				eS	Sn	00 40 13.3	-1.3
MMIG	Aquila	5.26	298	i P	Pn	00 39 13.9	-2.0
MMIG				i S	Sn	00 40 14.5	-1.3
THIG		6.05	98	i P	Pn	00 39 26.0	-0.7
THIG				i S	Sn	00 40 33.8	-1.5
CCIG	Comitan	6.09	85	i P	Pn	00 39 27.0	-0.4
CCIG				i S	Sn	00 40 36.3	-0.3
APG	El Apazote	7.76	95	Pn	Pn	00 39 51.7	+1.3
	0.4nm,0.3s,baz=298,slow=15,SNR=5.5						
TEIG	Tepich	10.61	64	Pn	Pn	00 40 27.6	-1.7
	3.0nm,0.3s,baz=89,slow=0.0,SNR=17						
TXAR	Lajitas Array	14.24	341	Pn	Pn	00 41 20.1	+1.0
	0.1nm,0.3s,baz=168,slow=14,SNR=5.8						
JTS	Las Juntas de	14.27	111	Pn	Pn	00 41 22.7	+3.3
	0.4nm,0.3s,baz=318,slow=16,SNR=2.9						
WHTX	Lake Whitney,	16.09	3	Pn	P	00 41 47.2	+0.7
WHTX				IAmb	IAmb	00 42 10.3	
	comp=Z,584nm,1.2s						
ABTX	Abilene, Hawle	16.73	357	Pn	P	00 41 54.9	+1.3
ANMO	Albuquerque	20.32	341	P	Pn	00 42 34.5	-0.9
	comp=Z,7.9nm,0.9s,baz=154,slow=11,SNR=24						
TKL	Tuckaleechee C	23.69	31	P	P	00 43 08.2	-0.4
	comp=Z,2.7nm,0.6s,baz=186,slow=8.9,SNR=4.4						
PDAR	Pinedale Array	28.45	343	P	P	00 43 52.9	+0.8
	comp=Z,1.3nm,0.9s,baz=138,slow=9.1,SNR=10						
NVAR	Mina Array Bea	28.47	326	P	P	00 43 54.3	+2.1
	comp=Z,1.9nm,0.8s,baz=156,slow=10,SNR=14						
NVAR				LR	LR	00 54 35.4	
	comp=Z,4µm,20.6s,baz=141,slow=35						
ULM	Lac du Bonnet	34.37	3	P	P	00 44 43.0	-0.6
	comp=Z,1.9nm,0.8s,baz=186,slow=6.2,SNR=5.6						
SCHQ	Schefferville	45.92	25	P	P	00 46 19.3	-0.1
	comp=Z,4.9nm,0.8s,baz=231,slow=6.7,SNR=9.8						
YKA	Yellowknife Ar	47.95	350	P	P	00 46 35.1	0.0
	comp=Z,1.5nm,0.8s,baz=158,slow=7.3,SNR=22						
ILAR	Eielson Array	58.73	338	P	P	00 47 55.4	+1.0
	comp=Z,1.0nm,0.9s,baz=152,slow=4.9,SNR=11						

MOS ***10*** *00:38:14.3±1.1, 16°.08N×98°.27W, h14^{km}, mb5.7/50, MS5.6/28, Error ellipse: s-maj=7.9km s-min=4.6km az=98.4*

BJI ***10*** *00:38:14.6±0.0, 16°.06N×98°.27W, h20^{km}, mB6.1/35, Ms6.2/34, Ms7 5.9/36*

IDC ***10*** *00:38:14.3±0.5, 15°.99N×98°.34W, h0^{km}, mb4.7/31, mb1 4.8/36, mb1mx4.8/42, mbtmp4.7/36, ML4.3/5, MS5.7/15, Ms1 5.7/15, ms1mx5.6/18, Error ellipse: s-maj=15.0km s-min=9.0km az=43.0*

NEIC ***10*** *00:38:15.1±1.4, 16°.04N±0°.06×98°.34W±0°.05, h8^{km}±3^{km}, mb5.6/571, Ms_20 5.7/504, Mwb6.0/44, Mww5.8, Md5.8/58(MEX), Mwc5.9(GCMT), Error ellipse: s-maj=10.2km s-min=5.8km az=207.0*

NEIC ***10*** *00:38:15.1, 16°.04N×98°.34W, h3^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.50; $M_{\theta\theta}$-0.46; $M_{\phi\phi}$-0.04; $M_{r\theta}$1.10; $M_{\theta\phi}$0.07; $M_{\phi r}$-0.24; Fault plane solution: $M_0$1.23000×10^{18} NP1:ϕ_s276.71000°, δ11.60000°, λ84.88000°. NP2:ϕ_s101.94000°, δ78.45000°, λ91.05000°. Principal axes: T 1.2448, Plg57.0000°, Azm13.0000°; N -0.0340, Plg1.0000°, Azm282.0000°; P -1.2109, Plg33.0000°, Azm191.0000°;*

NEIC ***10*** *00:38:18, 16°.00N×98°.37W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}4.83; $M_{\theta\theta}$-4.49; $M_{\phi\phi}$-0.34; $M_{r\theta}$5.08; $M_{\theta\phi}$1.12; $M_{\phi r}$-1.51; Fault plane solution: $M_0$7.15000×10^{17} NP1:ϕ_s106.00000°, δ69.00000°, λ91.00000°. NP2:ϕ_s282.00000°, δ21.00000°, λ87.00000°. Principal axes: T 7.1829, Plg66.0000°, Azm18.0000°; N -0.0633, Plg1.0000°, Azm285.0000°; P -7.1197, Plg24.0000°, Azm195.0000°;*

GCMT ***10*** *00:38:18.1±0.1, 16°.02N×98°.42W, h12^{km}, MW5.8/154, Moment Tensor Solution. s143,c273; s154,c488; Duration: 1^s.9 Moment tensor: Scale 10^{17}Nm; M_{rr}4.71±.03; $M_{\theta\theta}$-4.22±.03; $M_{\phi\phi}$-0.48±.03; $M_{r\theta}$3.35±.08; $M_{\theta\phi}$0.97±.03; $M_{\phi r}$-1.77±.09; Best double couple: $M_0$5.94300×10^{17} NP1:ϕ_s276.00000°, δ26.00000°, λ76.00000°. NP2:ϕ_s112.00000°, δ65.00000°, λ97.00000°. Principal axes: T 6.1210, Plg69.0000°, Azm36.0000°; N -0.3480, Plg6.0000°, Azm289.0000°; P -5.7650, Plg20.0000°, Azm197.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

UCR ***10*** *00:38:19.3±3.2, 16°.08N×98°.27W, h10^{km}, mb5.8(NEIC)*

INET ***10*** *00:38:20.9, 16°.12N×98°.27W, h10^{km}, ML5.7*

NEIC ***10*** *00:38:24, 16°.12N×98°.25W, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}3.80; $M_{\theta\theta}$-2.83; $M_{\phi\phi}$-0.97; $M_{r\theta}$4.66; $M_{\theta\phi}$0.82; $M_{\phi r}$-1.41; Fault plane solution: $M_0$6.01000×10^{17} NP1:ϕ_s108.00000°, δ72.00000°, λ89.00000°. NP2:ϕ_s292.00000°, δ18.00000°, λ94.00000°. Principal axes: T 6.3113, Plg63.0000°, Azm15.0000°; N -0.6674, Plg1.0000°, Azm108.0000°; P -5.6439, Plg27.0000°, Azm199.0000°;*

BGR ***10*** *00:38:27.9±0.0, 18°.56N×98°.03W, h22^{km}, mb6.0, mB_BB6.5, Ms5.9*

ISC 10 00:38:15.9±0.3**, 15°.92N**±0°.04×**98°.38W**±0°.03**, h17**^{km}**, n1539,** σ1^s.**36**/1328**, mb5.6**/315**, MS5.7**/300**, 19C-5D, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	Tlapa	1.65	354		Pn	00 38 42.2	-2.1
TLIG	Tlapa	1.65	354		Pb	00 38 45.8	-0.2
TLIG	Tlapa	1.65	354	i S	Pb	00 38 45.8	-0.2
ACP2	Acapulco	1.73	304		Pn	00 38 45.3	0.0
ACP2	Acapulco	1.73	304	i S	Pn	00 38 45.3	0.0
CAIG	El Cayaco	2.13	302		Pb	00 38 55.1	+1.0
CAIG	El Cayaco	2.13	302	i S	Pb	00 38 55.1	+1.0
HUIG	Huatulco	2.19	94		Pg	00 38 58.9	+0.9
HUIG	Huatulco	2.19	94	i S	Pg	00 38 58.9	+0.9
MEIG	Mezcala	2.33	329	i S	Pg	00 39 02.1	+1.5
MEIG	Mezcala	2.33	329		Pg	00 39 02.1	+1.5
TPIG	Tehuac#an	2.67	21		Pg	00 39 13.0	+5.8
TPIG	Tehuac#an	2.67	21	i S	Pg	00 39 13.0	+5.8
PLIG	Platanillo	2.69	337		Pg	00 39 11.8	+4.2
PLIG	Platanillo	2.69	337	i S	Pg	00 39 11.8	+4.2
UNM	Universidad Na	3.48	347	P	Pn	00 39 06.6	-3.0
UNM	Universidad Na	3.48	347	Pn	Pn	00 39 06.6	-3.0
CMIG	Matias Romero	3.55	70	Pn	Pn	00 39 09.8	-0.5
	42nm,0.3s,baz=253,slow=13,SNR=28						
CMIG				Sn	Sn	00 39 52.6	+0.7
	420nm,0.3s,baz=127,slow=18,SNR=12						
CMIG				Lg	Lg	00 40 06.7	
	342nm,0.3s,baz=338,slow=19,SNR=6.9						
CMIG				LR	LR	00 40 43.0	
	comp=Z,80µm,18.2s,baz=258,slow=43						
PTVM	Pico Tres Padr	3.72	349	eP	Pn	00 39 10.1	-2.8
PTVM	Pico Tres Padr	3.72	349		Pn	00 39 10.1	-2.8
VTVM	Tizayuca	3.85	354	eP	Pn	00 39 10.6	-4.1
VTVM	Tizayuca	3.85	354		Pn	00 39 10.6	-4.1
MOIG	Morelia	4.60	325	Pn	Pn	00 39 24.1	-0.9
CCIG	Comitan	6.01	86		Pn	00 39 43.1	-1.2
APG	El Apazote	7.68	96	Pn	Pn	00 40 08.3	+0.9
	3.4nm,0.3s,baz=170,slow=8.9,SNR=25						
APG				Sn	Sn	00 41 34.3	+0.1
	15nm,0.3s,baz=340,slow=15,SNR=5.3						
ZAIG	Zacatecas	7.88	331	Pn	Pn	00 40 07.8	-2.3
SNET	Serv Nac Est T	9.12	103	Pn	Pn	00 40 27.6	+0.7
TEIG	Tepich	10.52	64	Pn	Pn	00 40 45.4	-0.6
	baz=122,slow=0.0						
TEIG	Tepich	10.52	64		Pn	00 40 43.4	-2.6
TGUH	Tegucigalpa,Un	10.89	98	Pn	Pn	00 40 49.3	-1.9
KVTX	Kingsville	11.58	2	Pn	Pn	00 40 58.6	-2.0
833A	Chaparral WMA,	12.38	356		Pn	00 41 10.3	-1.2
833A	Chaparral WMA,	12.38	356	P	Pn	00 41 11.9	+0.4
	baz=175,SNR=23						
735A	Kenedy	12.89	2		Pn	00 41 16.4	-2.0
HPIG		12.89	329	Pn	Pn	00 41 18.3	-0.3
PLVR	Palo Verde	13.84	112	eP	P	00 41 37.6	-2.3
LPIG	La Paz	13.85	308	Pn	Pn	00 41 31.9	+0.3
	2.2nm,0.3s,baz=104,slow=4.2,SNR=3.5						
LPIG				LR	LR	00 45 54.0	
	comp=Z,30µm,19.4s,baz=130,slow=33						
HKT	Hockley	14.16	9	P	Pn	00 41 33.0	-2.8
HKT	Hockley	14.16	9	Pn	Pn	00 41 33.0	-2.8
TX31	Lajitas Ar. Si	14.22	341	Pn	Pn	00 41 35.8	-0.9
TX32	Lajitas Array	14.22	341		Pn	00 41 35.5	-1.2
TXAR	Lajitas Array	14.22	341	Pn	Pn	00 41 37.6	+1.0
	0.1nm,0.3s,baz=160,slow=15,SNR=34						
TXAR				Lg	Lg	00 45 42.9	
	0.0nm,0.3s,baz=79,slow=23,SNR=3.4						
TXAR				LR	LR	00 47 44.1	
	comp=Z,22µm,19.8s,baz=0.0,slow=40						
TXAR	Lajitas Array	14.22	341	P	Pn	00 41 35.0	-1.6
TXAR	Lajitas Array	14.22	341		Pn	00 41 35.0	-1.6
JTS	Las Juntas de	14.22	112	Pn	Pn	00 41 38.9	+2.3
	1.7nm,0.3s,baz=354,slow=13,SNR=15						
JTS	Las Juntas de	14.22	112	d iP	Pn	00 41 40.7	+4.0
JTS				pmax	pmax		
	comp=Z,357nm,3.1s						
JTS	Las Juntas de	14.22	112	eP	Pn	00 41 39.0	+2.3
JTS	Las Juntas de	14.22	112		Pn	00 41 36.4	-0.2
CEDE	Laguna Cedeo	14.36	110	eP	Pn	00 41 41.3	+2.6
JCT	Junction City	14.56	355	P	Pn	00 41 39.4	-1.9
JCT	Junction City	14.56	355	Pn	Pn	00 41 39.4	-1.9
JCT	Junction City	14.56	355	P	Pn	00 41 40.0	-1.2
	baz=174,SNR=9.2						
435B	Jarrell	14.82	3		Pn	00 41 42.6	-2.2
435B	Jarrell	14.82	3	P	Pn	00 41 43.1	-1.6
	baz=183,SNR=5.2						
HDC	Heredia	15.09	111	eP	P	00 41 51.9	-1.9
HDC	Heredia	15.09	111	P	Pn	00 41 49.5	+0.8
ICCO	Coco Island	15.15	132	⇑eP	P	00 41 54.0	-0.3
LCR2	La Lucha 2	15.30	112	eP	P	00 41 55.7	-0.5
441A	DeRidder	15.51	17	P	Pn	00 41 50.1	-3.8
441A				IAmb	IAmb	00 42 10.6	
	comp=Z,430nm,1.2s						
WHTX	Lake Whitney,	16.03	3	P	Pn	00 41 58.6	-2.0
	baz=183,SNR=20						
NATX	Nacogdoches	16.13	11		Pn	00 42 00.1	-1.9
NATX				IAmb	IAmb	00 42 35.4	
	comp=Z,887nm,1.7s						
NATX	Nacogdoches	16.13	11	P	Pn	00 41 58.2	-3.8
	baz=193						
237A	Washetta, Mont	16.18	8		Pn	00 42 01.9	-0.7
237A				IAmb	IAmb	00 42 11.8	
	comp=Z,472nm,1.2s						
342A	Flagon Creek P	16.35	19		Pn	00 42 03.5	-1.2
ABTX	Abilene, Hawle	16.68	356	P	Pn	00 42 06.9	-2.0
	baz=176						
FSCY	Frank Sound, G	16.73	76	Pn	Pn	00 42 08.1	-1.6
BRU2	Volcan	16.87	113	eP	P	00 42 14.8	+1.2
MNTX	Cornudas Mount	16.96	339	Pn	Pn	00 42 10.6	-1.9
MNTX	Cornudas Mount	16.96	339	P	Pn	00 42 11.9	-0.6
	baz=156						
344A	Westbrook Farm	16.97	23	P	Pn	00 42 08.8	-3.8
344A				IAmb	IAmb	00 42 16.2	
	comp=Z,725nm,1.9s						
SRIG	Santa Rosalia	17.16	314	Pn	Pn	00 42 14.0	-0.9
Z35A	Perchaven, San	17.37	3		Pn	00 42 16.1	-1.5
346A	Big Creek Wild	17.42	26		Pn	00 42 15.7	-2.5
HSIG		17.45	321		Pn	00 42 17.7	-0.9
Z38A	Mt. Pleasant	17.54	9		Pn	00 42 17.7	-2.0
Z38A				IAmb	IAmb	00 42 26.8	
	comp=Z,803nm,1.5s						
VBMS	Vicksburg	17.73	22	P	Pn	00 42 19.1	-3.0
VBMS	Vicksburg	17.73	22	P	Pn	00 42 19.1	-3.0
	baz=206						
143A	Socs Landing,	17.87	19	P	Pn	00 42 21.0	-2.8
Z41A	Richland Creek	17.99	15	P	Pn	00 42 23.1	-2.2
Z41A				IAmb	IAmb	00 42 44.7	
	comp=Z,610nm,1.4s						
Z41A	Richland Creek	17.99	15	P	Pn	00 42 21.9	-3.3
	baz=198,SNR=12						
CBCY	The Bluff, Cay	18.13	75		Pn	00 42 26.1	-1.0
PAYG	Puerto Ayora	18.32	153		P	00 42 31.3	+1.9
WLAR	White Oak Lake	18.32	14	P	Pn	00 42 26.8	-2.6
319A	Douglas	18.33	329	P	Pn	00 42 29.1	-0.5
BRAL	Brewton	18.37	32	P	Pn	00 42 27.6	-2.4
BRAL	Brewton	18.37	32	P	Pn	00 42 27.1	-2.8
	baz=217						
MSTX	Muleshoe	18.41	348		P	00 42 29.0	-1.4
MSTX	Muleshoe	18.41	348	P	P	00 42 29.0	-1.4
	baz=166,SNR=17						
X34A	Smith Ranch, M	18.61	1	P	P	00 42 31.2	-1.4
X34A				IAmb	IAmb	00 42 39.1	

	comp=Z,506nm,1.2s						
121A	Cookes Peak, D	18.62	334	P	P	00 42 31.9	-0.9
121A				IAmb	IAmb	00 42 39.7	
	comp=Z,637nm,1.9s						
121A	Cookes Peak, D	18.62	334	P	Pn	00 42 33.8	+0.7
	baz=150,SNR=12						
451A	Vernon	18.65	36	P	P	00 42 29.8	-3.2
WMOK	Wichita Mounta	18.75	359	P	P	00 42 31.5	-2.6
WMOK				pmax	pmax		
	comp=Z,91nm,1.2s						
WMOK	Wichita Mounta	18.75	359	P	P	00 42 31.5	-2.6
WMOK	Wichita Mounta	18.75	359	P	P	00 42 32.5	-1.6
	baz=179,SNR=15						
CCAR	Cane Creek	18.89	17	P	P	00 42 34.1	-1.4
MIAR	Mount Ida	19.05	12	P	P	00 42 35.9	-1.4
MIAR				pmax	pmax		
	comp=Z,160nm,1.2s						
MIAR	Mount Ida	19.05	12	P	P	00 42 35.9	-1.4
MIAR	Mount Ida	19.05	12	P	P	00 42 35.7	-1.7
	baz=194,SNR=21						
061Z	Ochoppi	19.07	56	P	P	00 42 36.3	-1.3
553A	Crawfordville	19.12	40	P	P	00 42 36.3	-1.8
AMTX	Amarillo	19.12	352	P	P	00 42 37.6	-0.7
AMTX	Amarillo	19.12	352	P	P	00 42 37.3	-0.9
	baz=170						
X40A	Basin Creek Fa	19.15	14	P	P	00 42 36.6	-1.9
	baz=196,SNR=10						
W35A	Tecumseh	19.20	4	P	P	00 42 38.0	-1.0
FNO	Franklin	19.28	2	P	P	00 42 39.0	-0.9
BCIP	Isla Barro Col	19.29	108	*e*P	Pn	00 42 41.8	+0.6
BCIP	Isla Barro Col	19.29	108	P	P	00 42 40.8	+0.6
BCIP				pmax	pmax		
	comp=Z,388nm,1.5s						
BCIP	Isla Barro Col	19.29	108	P	P	00 42 40.8	+0.6
BCIP				IAmb	IAmb	00 42 53.2	
	comp=Z,388nm,1.4s						
ZANG	Zanguenga, Cho	19.34	109	*e*P	Pn	00 42 45.0	+3.1
OKCSW	OKLAHOMA CITY	19.43	2	P	P	00 42 39.5	-2.0
OKCFA	Oklahoma City	19.44	2	P	P	00 42 41.1	-0.5
OKCFA				IAmb	IAmb	00 42 47.4	
	comp=Z,916nm,1.5s						
UALR	University of	19.55	15	P	P	00 42 41.9	-0.9
W39A	Magazine	19.64	11	P	P	00 42 42.8	-0.9
W39A				IAmb	IAmb	00 42 56.3	
	comp=Z,305nm,1.2s						
W39A	Magazine	19.64	11	P	P	00 42 43.0	-0.8
	baz=193,SNR=13						
Y22D	IRIS PASSCAL I	19.65	338	P	Pn	00 42 45.5	-0.1
Y22D				IAmb	IAmb	00 43 35.6	
	comp=Z,447nm,1.5s						
Y22D	IRIS PASSCAL I	19.65	338	P	Pn	00 42 45.4	-0.1
	baz=155						
X43A	Marvell	19.71	19	P	P	00 42 44.2	-0.3
X43A				IAmb	IAmb	00 42 50.3	
	comp=Z,950nm,1.6s						
X43A	Marvell	19.71	19	P	P	00 42 44.3	-0.3
	baz=202,SNR=6.2						
352A	Blakely	19.76	36	P	P	00 42 44.1	-1.1
656A	Willston	19.80	45	P	P	00 42 44.8	-0.7
DWPF	Disney Wildern	19.82	49	P	P	00 42 45.1	-0.8
DWPF	Disney Wildern	19.82	49	P	P	00 42 44.3	-1.5
	baz=236						
TUC	Tucson	19.84	328	P	P	00 42 45.3	-0.8
TUC				pmax	pmax		
	comp=Z,198nm,1.6s						
TUC	Tucson	19.84	328	P	P	00 42 45.3	-0.8
TUC	Tucson	19.84	328	P	Pn	00 42 47.3	-0.4
	baz=142						
LRAL	Lakeview Retre	19.92	29	P	P	00 42 45.9	-0.9
LRAL	Lakeview Retre	19.92	29	P	P	00 42 46.1	-0.8
	baz=214						
W41B	Gary Mavity, V	19.95	15	P	P	00 42 45.7	-1.5
W41B	Gary Mavity, V	19.95	15	P	P	00 42 46.4	-0.8
	baz=197,SNR=15						
TUL1	Leonard	20.05	6	P	P	00 42 46.8	-1.5
TUL1				IAmb	IAmb	00 42 57.2	
	comp=Z,251nm,1.1s						
TUL1	Leonard	20.05	6	P	P	00 42 47.0	-1.2
	baz=187,SNR=17						
WHAR	Wooly Hollow	20.05	15	P	P	00 42 46.6	-1.7
MTDJ	Mount Denham	20.06	80	P	P	00 42 48.9	+0.3
MTDJ				IAmb	IAmb	00 42 51.0	
	comp=Z,338nm,1.3s						
060A	Indiantown	20.06	54	P	P	00 42 48.2	-0.2
OXF	Oxford	20.20	22	P	P	00 42 48.9	-1.0
OXF				pmax	pmax		
	comp=Z,320nm,1.2s						
OXF	Oxford	20.20	22	P	P	00 42 48.9	-1.0
OXF				IAmb	IAmb	00 42 55.7	
	comp=Z,320nm,1.2s						
OXF	Oxford	20.20	22	P	P	00 42 48.7	-1.2
	baz=206						
ANMO	Albuquerque	20.29	341	P	P	00 42 52.0	+0.9
	comp=Z,70nm,1.0s,baz=154,slow=12,SNR=72						
ANMO				Lg	Lg	00 49 02.9	
	comp=Z,0.7nm,0.5s,baz=274,slow=14,SNR=4.0						
ANMO				LR	LR	00 50 55.5	
	comp=Z,41µm,19.4s,baz=154,slow=38						
ANMO	Albuquerque	20.29	341	*c i*P	P	00 42 52.0	+0.9
ANMO				pmax	pmax		
	comp=Z,241nm,1.4s						
ANMO	Albuquerque	20.29	341	IAmb	IAmb	00 42 54.0	
	comp=Z,240nm,1.3s						
ANMO	Albuquerque	20.29	341	P	P	00 42 52.0	+0.9
	baz=157						
TIGA	Tifton	20.51	39	P	P	00 42 52.3	-1.1
	baz=224,SNR=9.8						
Z50A	Ashland	20.61	31	P	P	00 42 53.9	-0.5
Z50A	Ashland	20.61	31	P	P	00 42 54.0	-0.5
	baz=216,SNR=16						
FCAR	Ozark Folk Cen	20.66	15	P	P	00 42 53.7	-1.2
HHAR	Hobbs	20.67	10	P	P	00 42 53.6	-1.4
HHAR				IAmb	IAmb	00 43 05.6	
	comp=Z,385nm,1.6s						
214A	Organ Pipe Nat	20.68	323	P	P	00 42 56.3	+1.1
214A				IAmb	IAmb	00 43 04.4	
	comp=Z,776nm,1.8s						
214A				IAMs_20	IAMs_20	00 50 55.0	
	comp=Z,33µm,19.0s						
214A	Organ Pipe Nat	20.68	323	P	P	00 42 56.4	+1.3
	baz=137,SNR=20						
HBAR	Harrisburg	20.74	18	IAmb	IAmb	00 42 57.9	
	comp=Z,403nm,0.9s						
U38A	Gravette	20.75	9	P	P	00 42 54.2	-1.6
152A	Waverly Hall	20.78	34	P	P	00 42 54.5	-1.7
W45A	Hickory Valley	20.86	22	P	P	00 42 56.2	-0.8
W45A				IAmb	IAmb	00 43 07.6	
	comp=Z,386nm,1.1s						
Y49A	Blount Mountai	20.87	29	P	P	00 42 56.0	-1.2
U40A	Yellville	20.95	13	P	P	00 42 57.7	-0.3
U40A				IAmb	IAmb	00 43 03.2	
	comp=Z,331nm,1.2s						
U40A	Yellville	20.95	13	P	P	00 42 56.9	-1.1
	baz=195,SNR=16						
T35A	Sooner Cattle	20.98	4	P	P	00 42 57.4	-1.0
T35A				IAmb	IAmb	00 43 03.1	
	comp=Z,547nm,1.5s						
456A	Hilliard	21.00	43	IAmb	IAmb	00 43 04.5	
	comp=Z,421nm,1.3s						
X48A	Hartselle	21.08	27	P	P	00 42 58.3	-1.2
X48A				IAmb	IAmb	00 43 03.2	
	comp=Z,626nm,1.9s						
PLAL	Pickwick Lake	21.12	24	P	P	00 42 58.8	-1.1
PLAL				IAmb	IAmb	00 43 04.6	
	comp=Z,373nm,1.4s						
X18A	Snowflake	21.25	333	P	P	00 43 01.2	-0.3
X18A				IAmb	IAmb	00 43 05.3	
	comp=Z,398nm,1.6s						
GNAR	Gosnell	21.32	19	P	P	00 43 01.5	-0.4
GNAR				IAmb	IAmb	00 43 10.1	
	comp=Z,682nm,1.4s						
HALT	Halls	21.49	20	IAmb	IAmb	00 43 13.3	
	comp=Z,609nm,1.3s						
LNXT	Lenox	21.61	20	P	P	00 43 05.5	+0.4
154A	Montrose	21.64	37	P	P	00 43 03.9	-1.6
154A				IAmb	IAmb	00 43 37.9	
	comp=Z,178nm,0.8s						
W18A	Petrified Fore	21.66	334	P	P	00 43 05.9	0.0
W18A				IAmb	IAmb	00 43 17.5	
	comp=Z,261nm,1.3s						
W18A				IAMs_20	IAMs_20	00 51 57.7	
	comp=Z,42µm,20.0s						
W18A	Petrified Fore	21.66	334	P	P	00 43 07.0	+1.0
	baz=149,SNR=14						
CAPC	Capurgana	21.77	107	*e*P	P	00 43 07.7	+0.7
T25A	Trinidad	21.81	347	P	P	00 43 08.1	+0.6
T25A				IAMs_20	IAMs_20	00 50 42.9	
	comp=Z,24µm,18.0s						
T25A	Trinidad	21.81	347	P	P	00 43 08.2	+0.7
	baz=164,SNR=28						
FPAL	Fort Paine	21.81	29	P	P	00 43 06.9	-0.4
FPAL				IAmb	IAmb	00 43 20.6	
	comp=Z,528nm,1.8s						
113A	Mohawk Valley,	21.82	323	P	P	00 43 08.9	+1.5
113A				IAmb	IAmb	00 43 27.1	
	comp=Z,303nm,1.5s						
GLAT	Glass	21.83	20	P	P	00 43 06.1	-1.3
MGMO	Mountain Grove	21.84	13	P	P	00 43 06.1	-1.5
MGMO				IAmb	IAmb	00 43 16.5	
	comp=Z,419nm,1.3s						
X16A	Lo Mia Camp, P	21.85	330	P	P	00 43 09.5	+1.5
X16A				IAmb	IAmb	00 43 13.1	
	comp=Z,280nm,1.2s						
X16A				IAMs_20	IAMs_20	00 52 03.8	
	comp=Z,32µm,19.0s						
PENMO	Penman	21.89	19	P	P	00 43 08.9	+0.8
PTAC	Punta Ardita,	21.94	111	*e*P	P	00 43 10.4	+1.6
PBMO	Poplar Bluff	21.95	17	P	P	00 43 08.3	-0.5
PBMO				IAmb	IAmb	00 43 12.3	
	comp=Z,256nm,1.1s						
GOGA	Godfrey	22.02	35	P	P	00 43 08.2	-1.4
GOGA				pmax	pmax		
	comp=Z,133nm,0.9s						
GOGA	Godfrey	22.02	35	P	P	00 43 08.2	-1.4
GOGA	Godfrey	22.02	35	P	P	00 43 08.1	-1.4
	baz=221,SNR=20						
UTMT	University of	22.04	21	P	P	00 43 08.9	-0.8
PARMO	Parma	22.04	19	P	P	00 43 10.0	+0.3
PARMO				IAmb	IAmb	00 43 20.2	
	comp=Z,299nm,1.0s						
Y52A	Lilburn	22.05	33	P	P	00 43 08.8	-1.1
Y52A				IAmb	IAmb	00 43 15.8	
	comp=Z,228nm,1.0s						
Y52A	Lilburn	22.05	33	P	P	00 43 08.4	-1.5
	baz=219,SNR=23						
HICK	Hickman	22.10	20	P	P	00 43 10.4	+0.1
S39A	Bolivar	22.15	11	P	P	00 43 10.6	-0.3
S39A				IAmb	IAmb	00 43 14.0	
	comp=Z,430nm,1.3s						
HENM	Henderson Moun	22.18	19	P	P	00 43 10.9	-0.3
HENM				IAmb	IAmb	00 43 20.8	
	comp=Z,209nm,0.9s						
X51A	Calhoun	22.19	31	P	P	00 43 09.7	-1.7
X51A	Calhoun	22.19	31	P	P	00 43 10.1	-1.4
	baz=216,SNR=13						
SWET	Sewanee	22.22	28	P	P	00 43 10.3	-1.4
SWET				IAmb	IAmb	00 43 17.8	
	comp=Z,225nm,1.0s						
WVT	Waverly	22.22	23	P	P	00 43 10.0	-1.7
WVT				pmax	pmax		
	comp=Z,374nm,1.2s						
WVT	Waverly	22.22	23	P	P	00 43 10.0	-1.7
WVT				IAmb	IAmb	00 43 19.3	
	comp=Z,374nm,1.2s						
WVT	Waverly	22.22	23	P	P	00 43 10.0	-1.7
	baz=208						
Y14A	Wickenburg	22.27	326	P	P	00 43 13.0	+0.7
Y14A				IAmb	IAmb	00 43 26.4	
	comp=Z,302nm,1.4s						
Y14A				IAMs_20	IAMs_20	00 52 07.0	
	comp=Z,34µm,18.0s						
V48A	Smith Brothers	22.28	25	P	P	00 43 11.1	-1.2
V48A				IAmb	IAmb	00 43 20.1	
	comp=Z,289nm,1.1s						
R32A	Long Quarter,	22.42	359	P	P	00 43 13.2	-0.7
R32A				IAmb	IAmb	00 43 18.8	
	comp=Z,258nm,1.2s						
R32A				IAMs_20	IAMs_20	00 52 21.0	
	comp=Z,23µm,21.0s						
257A	Skidaway Islan	22.47	42	P	P	00 43 13.0	-1.4
257A				IAmb	IAmb	00 43 19.6	
	comp=Z,459nm,1.5s						
LCBC	Los crdobas,	22.60	105	*e*P	P	00 43 20.3	+4.3
SDCO	Great Sand Dun	22.64	345	P	P	00 43 16.5	+0.1
SDCO				IAMs_20	IAMs_20	00 52 39.0	
	comp=Z,34µm,19.0s						
SDCO	Great Sand Dun	22.64	345	P	P	00 43 16.6	+0.1
	baz=162						
GLA	Glamis	22.64	322	IAmb	IAmb	00 43 24.2	
	comp=Z,423nm,1.6s						
GLA	Glamis	22.64	322	P	P	00 43 17.2	+0.9
	baz=135,SNR=18						
WUAZ	Wupatki	22.72	332	P	P	00 43 18.1	+0.9
WUAZ				IAMs_20	IAMs_20	00 51 36.7	
	comp=Z,20µm,22.0s						
WUAZ	Wupatki	22.72	332	P	P	00 43 18.4	+1.2
	baz=146,SNR=18						
T45A	Paducah	22.73	21	P	P	00 43 16.7	-0.4
T45A				IAmb	IAmb	00 43 28.3	
	comp=Z,238nm,0.7s						
CLTN	Cedars of Leba	22.79	26	P	P	00 43 16.5	-1.2
CBKS	Cedar Bluff	22.84	357	IAmb	IAmb	00 43 27.1	
	comp=Z,351nm,1.2s						
CBKS	Cedar Bluff	22.84	357	P	P	00 43 16.9	-1.5
	baz=176						
CCM	Cathedral Cave	22.93	15	P	P	00 43 17.5	-1.8
	baz=198						
X53A	Estanollee	22.94	33	P	P	00 43 17.4	-2.0
	baz=220,SNR=20						
157A	Early Branch	22.95	40	P	P	00 43 18.5	-1.0
	baz=228						
Y12C	Blythe	22.97	324	P	P	00 43 19.7	+0.1
Y12C	Blythe	22.97	324	P	P	00 43 20.0	+0.4
	baz=137,SNR=31						
S22A	4UR Ranch, Cre	22.99	343	P	P	00 43 20.4	+0.1
S22A				IAmb	IAmb	00 43 43.4	
	comp=Z,204nm,1.2s						
S22A				IAMs_20	IAMs_20	00 52 33.5	
	comp=Z,34µm,18.0s						
S22A	4UR Ranch, Cre	22.99	343	P	P	00 43 21.0	+0.8
	baz=159						
MVCO	Mesa Verde	23.03	339	P	P	00 43 21.0	+0.4
MVCO				IAmb	IAmb	00 43 27.6	
	comp=Z,422nm,1.2s						
MVCO				IAMs_20	IAMs_20	00 51 59.6	
	comp=Z,23µm,20.0s						
MVCO	Mesa Verde	23.03	339	P	P	00 43 20.7	+0.1
	baz=154						
CPCT	Cooper Cave	23.07	30	P	P	00 43 18.9	-1.8
W52A	Murphy	23.07	31	P	P	00 43 19.8	-1.0
	baz=218,SNR=22						
S44A	Carbondale	23.14	19	P	P	00 43 20.9	-0.5
S44A				IAmb	IAmb	00 43 23.4	
	comp=Z,301nm,1.1s						
KSU1	Kansas State U	23.15	4	P	P	00 43 19.9	-1.6
	baz=184,SNR=14						
IKP	In-Ko-Pah, Jac	23.15	319	P	P	00 43 22.7	+1.0
	baz=132,SNR=18						
SWSC	Sam W. Stewart	23.16	320	P	P	00 43 22.5	+0.9
	baz=133,SNR=23						
PDMCI	Parker Dam,Lak	23.16	325	P	P	00 43 22.6	+1.0
	baz=138,SNR=20						
Z56A	Williston	23.17	38	P	P	00 43 20.5	-1.2
	baz=226,SNR=19						
T47A	Sharon Grove	23.25	23	P	P	00 43 21.1	-1.4
T47A				IAmb	IAmb	00 43 29.1	
	comp=Z,312nm,1.1s						
HODGE	Hodges	23.30	36	P	P	00 43 22.1	-0.9
HODGE				IAmb	IAmb	00 43 28.2	
	comp=Z,226nm,1.1s						
KSCO	Kaye Shedlock’	23.31	352	P	P	00 43 22.5	-0.7
KSCO	Kaye Shedlock’	23.31	352	P	P	00 43 23.4	+0.2
	baz=170,SNR=11						
Y55A	Saluda	23.32	37	P	P	00 43 21.7	-1.5
	baz=224,SNR=18						
PIZC	Pizarro, Choco	23.33	116	*e*P	P	00 43 26.8	+3.3
U49A	Red Boiling Sp	23.38	26	P	P	00 43 22.9	-0.9
U49A				IAmb	IAmb	00 43 31.0	
	comp=Z,183nm,1.1s						
SJCC	San Jacinto, C	23.38	102	*e*P	P	00 43 24.6	+0.6
DBBC	Dabeiba	23.43	110	*e*P	P	00 43 28.2	+3.6
V51A	Loudon	23.43	30	P	P	00 43 23.7	-0.6
V51A	Loudon	23.43	30	P	P	00 43 23.1	-1.3
	baz=216,SNR=25						
BC3	Big Chuckawall	23.44	322	P	P	00 43 25.4	+0.8
	baz=135,SNR=27						
X54A	Belton	23.47	35	P	P	00 43 23.9	-0.8
	baz=222,SNR=21						
158A	Hollywood	23.50	41	P	P	00 43 24.3	-0.7
	baz=229,SNR=8.9						
BG3	Lake Jocassee	23.51	33	P	P	00 43 23.7	-1.4
MONP2	Monument Peak	23.51	319	P	P	00 43 26.4	+1.0
	baz=132,SNR=16						
BAR	Barrett	23.53	318	IAmb	IAmb	00 43 34.5	
	comp=Z,556nm,1.9s						
BAR				IAMs_20	IAMs_20	00 52 27.9	
	comp=Z,18µm,20.0s						
Y56A	Pelion	23.54	38	P	P	00 43 24.1	-1.2
	baz=225						
Z57A	Bowman	23.55	40	P	P	00 43 24.5	-1.1
	baz=227,SNR=28						
TKL	Tuckaleechee C	23.60	31	P	P	00 43 26.2	+0.2
	comp=Z,29nm,0.9s,baz=192,slow=11,SNR=18						
TKL	Tuckaleechee C	23.60	31	P	P	00 43 25.4	-0.6
TKL				pmax	pmax		
	comp=Z,231nm,1.6s						
TKL	Tuckaleechee C	23.60	31	P	P	00 43 25.4	-0.6
TKL				IAmb	IAmb	00 43 31.3	
	comp=Z,231nm,1.6s						
RGRS	Roger Stewart	23.61	41	P	P	00 43 25.2	-0.8
IRM	Iron Mountain	23.62	323	P	P	00 43 27.5	+1.3
	baz=136,SNR=32						
W13A	Hualapai Mount	23.62	327	P	P	00 43 28.4	+1.9
W13A				IAmb	IAmb	00 43 34.9	
	comp=Z,575nm,1.9s						
W13A				IAMs_20	IAMs_20	00 52 55.9	
	comp=Z,18µm,20.0s						
GR1C	Gorgona, Isla	23.67	121	*e*P	P	00 43 29.4	+2.6
Q24A	Divide	23.72	347	P	P	00 43 27.3	-0.2
Q24A				IAmb	IAmb	00 43 35.1	
	comp=Z,498nm,1.8s						
Q24A				IAMs_20	IAMs_20	00 52 28.6	
	comp=Z,18µm,19.0s						
Q24A	Divide	23.72	347	P	P	00 43 27.7	+0.3
	baz=164						
NHSC	New Hope	23.75	41	P	P	00 43 26.9	-0.5
NHSC	New Hope	23.75	41	P	P	00 43 27.0	-0.4
	baz=228						
UREC	San Jos de Ur	23.77	107	*e*P	P	00 43 29.2	+1.4
NEE2	Needles Airpor	23.77	325	P	P	00 43 28.9	+1.3
	baz=138						
X55A	Gracelyn & Ava	23.83	36	P	P	00 43 27.6	-0.6
	baz=223,SNR=19						
U15A	North Rim	23.89	331	P	P	00 43 30.3	+1.2
U15A				IAmb	IAmb	00 43 37.6	
	comp=Z,377nm,1.4s						
JSC	Jenkinsville	23.91	37	P	P	00 43 28.8	-0.1
JSC				pmax	pmax		
	comp=Z,151nm,1.4s						
JSC	Jenkinsville	23.91	37	P	P	00 43 28.8	-0.1
109C	Camp Elliot, M	23.94	318	P	P	00 43 29.6	+0.3
109C	Camp Elliot, M	23.94	318	P	P	00 43 29.8	+0.5
	baz=130,SNR=8.5						
SMRC	Santa Marta, M	23.94	98	*e*P	P	00 43 30.3	+0.8
W54A	Cherokee Point	23.98	34	P	P	00 43 29.4	-0.2
	baz=221,SNR=20						
T49A	Edmonton	23.98	26	P	P	00 43 28.7	-0.9
	baz=212,SNR=19						
PAULI	Pauline	23.98	35	IAmb	IAmb	00 43 35.7	
	comp=Z,174nm,1.1s						
BELC	Belle Mtn. Jos	24.00	322	P	P	00 43 30.8	+0.7
	baz=134,SNR=24						
TPFO	Pinon Flats	24.01	320	P	P	00 43 31.1	+1.0
	baz=133,SNR=22						
XPFO	Pion Flat	24.01	320	P	P	00 43 30.4	+0.3
XPFO				IAmb	IAmb	00 43 38.4	
	comp=Z,519nm,1.9s						
PFO	Pinyon Flats O	24.02	320	P	P	00 43 31.7	+1.6
	comp=Z,26nm,1.2s,baz=128,slow=11,SNR=36						
PFO	Pinyon Flats O	24.02	320	*de*P	P	00 43 29.7	-0.4
PFO				pmax	pmax		
	comp=Z,327nm,2.2s						
PFO	Pinyon Flats O	24.02	320	P	P	00 43 30.0	-0.1
PFO				IAmb	IAmb	00 43 38.4	
	comp=Z,517nm,1.9s						
PFO	Pinyon Flats O	24.02	320	P	P	00 43 31.2	+1.0
	baz=133,SNR=18						
V53A	Saluda	24.09	32	P	P	00 43 30.6	-0.1
	baz=219,SNR=16						
CBOC	Ciudad Bolivar	24.10	112	*e*P	P	00 43 34.0	+2.8
Z58A	St. Stephen	24.13	41	P	P	00 43 30.9	-0.1
	baz=228,SNR=23						
X56A	White Oak	24.19	37	P	P	00 43 31.2	-0.4
	baz=224,SNR=24						
T50A	Nancy	24.21	27	P	P	00 43 31.1	-0.7
	baz=213,SNR=26						
Y57A	Sumter	24.23	39	P	P	00 43 31.2	-0.8
Y57A	Sumter	24.23	39	P	P	00 43 31.5	-0.5
	baz=226,SNR=15						
ARGC	Ariguani, Magd	24.27	101	*e*P	P	00 43 33.9	+1.3
PLMC	San Jos del P	24.30	114	*e*P	P	00 43 34.1	+1.3
GMRC	Granite Mounta	24.36	324	P	P	00 43 34.1	+0.7
	baz=136,SNR=29						
SMCO	Snowmass	24.37	344	P	P	00 43 34.3	+0.6
SMCO				IAMs_20	IAMs_20	00 53 30.9	
	comp=Z,31µm,20.0s						
HELC	Santa Helena	24.39	111	*e*P	P	00 43 36.7	+2.7
Z59A	Georgetown, SC	24.41	42	P	P	00 43 33.5	-0.1
	baz=230,SNR=11						
TZTN	Tazewell	24.41	30	P	P	00 43 33.3	-0.3
	baz=216						
MURC	Murrieta	24.46	319	P	P	00 43 35.3	+1.2
	baz=131,SNR=16						
ZARC	Zaragoza, Cauc	24.48	107	*e*P	P	00 43 35.5	+1.0
KMSC	Kings Mountain	24.49	35	P	P	00 43 34.2	-0.1
	baz=223,SNR=21						
T51A	Gray	24.57	29	P	P	00 43 34.5	-0.5
	baz=215,SNR=17						
Y58A	Scranton	24.60	40	P	P	00 43 35.1	-0.2
	baz=228,SNR=19						
ISCO	Idaho Springs	24.62	347	IAMs_20	IAMs_20	00 53 38.5	
	comp=Z,23µm,18.0s						
ISCO	Idaho Springs	24.62	347	P	P	00 43 36.6	+0.7
	baz=163,SNR=16						
V54A	Nebo	24.63	34	P	P	00 43 35.3	-0.3
	baz=221,SNR=18						
WCI	Wyandotte Cave	24.65	23	P	P	00 43 34.9	-0.8
WCI				pmax	pmax		
	comp=Z,336nm,1.2s						
WCI	Wyandotte Cave	24.65	23	P	P	00 43 34.9	-0.8
WCI	Wyandotte Cave	24.65	23	P	P	00 43 35.3	-0.5
	baz=209						
S49A	Springfield	24.66	25	P	P	00 43 34.9	-0.9
	baz=211,SNR=22						
YOTC	Yotoco, Valle	24.69	116	*e*P	P	00 43 37.0	+0.6
X57A	Johnson Farm,	24.72	38	P	P	00 43 36.4	0.0
	baz=226,SNR=16						
BBRC	Big Bear Solar	24.74	321	P	P	00 43 38.6	+1.8
	baz=133						
SMLC	San Martn de	24.76	104	*e*P	P	00 43 38.3	+1.4
HEC	Hector,Ludlow	24.78	323	P	P	00 43 38.3	+1.2
	baz=135,SNR=15						
W56A	Indian Trail	24.91	36	P	P	00 43 37.9	-0.2
	baz=224,SNR=22						
SCI2	San Clemente I	24.94	317	P	P	00 43 39.6	+1.2
	baz=128						
S50A	Richmond	24.95	27	P	P	00 43 38.0	-0.5
	baz=213,SNR=28						
GUY2C	Guyana, Caldas	24.96	113	*e*P	P	00 43 41.9	+2.6
BBAC	Balboa, Cauca	24.98	121	*e*P	P	00 43 42.2	+3.0
TUQ	Turquoise Moun	24.98	324	P	P	00 43 39.8	+0.8
	baz=136,SNR=18						
CODC	Agustn Codazz	25.00	101	*e*P	P	00 43 39.9	+0.7
V55A	Taylorsville	25.08	34	P	P	00 43 37.6	-2.0
V55A	Taylorsville	25.08	34	P	P	00 43 39.6	0.0
	baz=222,SNR=26						
OTAV	Otavalo	25.09	127	*e*P	P	00 43 43.8	+3.4
OTAV	Otavalo	25.09	127	P	P	00 43 41.0	+0.6
OTAV				pmax	pmax		
	comp=Z,159nm,1.4s						
OTAV	Otavalo	25.09	127	P	P	00 43 41.0	+0.6
OTAV				IAmb	IAmb	00 44 10.6	
	comp=Z,159nm,1.4s						
OTAV	Otavalo	25.09	127	*e*P	P	00 43 41.2	+0.8
CIS	Catalina Islan	25.11	318	P	P	00 43 40.6	+0.6
	baz=129,SNR=9.3						
T52A	Hallie	25.14	30	P	P	00 43 40.0	-0.2
	baz=217,SNR=14						
OGNE	Ogallala	25.14	353	P	P	00 43 41.1	+0.9
	baz=172						
R49A	Shelbyville	25.14	25	IAmb	IAmb	00 43 43.2	
	comp=Z,220nm,1.4s						
R49A	Shelbyville	25.14	25	P	P	00 43 39.8	-0.4
	baz=211,SNR=17						
Y59A	Loris	25.15	41	P	P	00 43 40.3	0.0
	baz=229,SNR=16						
POPC	Popayan, Colom	25.16	120	*e*P	P	00 43 42.7	+1.8

BFSC	Mount Baldy Ra	25.18	320	P	P	00 43 41.8	+1.1
	baz=132,SNR=20						
RRX	Edison Barstow	25.20	322	P	P	00 43 42.0	+1.2
	baz=134						
PTBC	PUERTO BERRIO,	25.22	109	*e*P	P	00 43 43.3	+2.1
FMP	Fort Macarthur	25.23	318	P	P	00 43 42.0	+1.0
	baz=130						
X58A	Rowland	25.24	39	P	P	00 43 41.7	+0.6
	baz=227,SNR=8.7						
NORC	Norcasia	25.25	111	*e*P	P	00 43 43.5	+2.0
T53A	Wise	25.25	31	P	P	00 43 41.0	-0.3
	baz=218,SNR=11						
U54A	Nelsons Funny	25.26	33	P	P	00 43 41.0	-0.3
	baz=220,SNR=17						
W57A	Gilead	25.26	37	P	P	00 43 40.9	-0.4
	baz=225,SNR=27						
S51A	Beattyville	25.28	28	P	P	00 43 41.2	-0.3
	baz=215,SNR=28						
SHPR	Sheep Range	25.36	327	P	P	00 43 42.7	+0.2
SHPR				IAMs_20	IAMs_20	00 53 26.9	
	comp=Z,18µm,18.0s						
GSC	Goldstone, Bar	25.39	323	P	P	00 43 43.2	+0.6
GSC				pmax	pmax		
	comp=Z,290nm,1.5s						
GSC				MLR	MLR		
	comp=Z,18µm,21.0s						
GSC	Goldstone, Bar	25.39	323	P	P	00 43 43.2	+0.6
GSC				IAmb	IAmb	00 43 52.2	
	comp=Z,290nm,1.5s						
GSC				IAMs_20	IAMs_20	00 54 07.9	
	comp=Z,17µm,21.0s						
GSC	Goldstone, Bar	25.39	323	P	P	00 43 43.8	+1.2
	baz=135,SNR=17						
BGNE	Belgrade	25.40	0	P	P	00 43 42.9	+0.3
	baz=180						
MWC	Mount Wilson	25.41	319	P	P	00 43 43.3	+0.4
MWC				pmax	pmax		
	comp=Z,329nm,1.6s						
MWC				MLR	MLR		
	comp=Z,6µm,20.0s						
MWC	Mount Wilson	25.41	319	P	P	00 43 43.3	+0.4
MWC				IAmb	IAmb	00 43 53.2	
	comp=Z,329nm,1.6s						
V56A	Mocksville	25.44	36	P	P	00 43 42.9	-0.1
	baz=223,SNR=15						
SOTA	Rioblanco	25.44	120	*e*P	P	00 43 48.2	+4.5
PASC	Pasadena Art C	25.46	319	IAmb	IAmb	00 43 53.5	
	comp=Z,256nm,1.6s						
Q48A	North Vernon	25.47	23	P	P	00 43 42.6	-0.6
	baz=209,SNR=18						
R50A	Paris	25.49	26	P	P	00 43 42.9	-0.5
	baz=213,SNR=20						
PCON	Cinco Dias	25.51	120	*e*P	P	00 43 47.1	+2.7
SHOC	Shoshone, Teco	25.52	325	P	P	00 43 44.6	+1.0
	baz=136,SNR=11						
S52A	Salyersville	25.55	29	P	P	00 43 43.5	-0.4
	baz=216,SNR=20						
Y60A	Bolivia	25.58	42	P	P	00 43 43.6	-0.5
Y60A				IAmb	IAmb	00 43 50.8	
	comp=Z,362nm,1.7s						
Y60A	Bolivia	25.58	42	P	P	00 43 44.0	-0.2
	baz=230						
DECC	Green Verdugo	25.61	319	P	P	00 43 45.9	+1.4
	baz=130						
O20A	White River Ci	25.62	342	P	P	00 43 45.6	+0.9
	baz=158,SNR=20						
W58A	Raeford	25.62	39	P	P	00 43 44.6	+0.1
	baz=227,SNR=24						
OCAC	Ocana	25.64	104	*e*P	P	00 43 46.7	+1.6
U55A	TA2, Sparta	25.65	34	P	P	00 43 44.6	-0.4
	baz=221,SNR=17						
BRRC	Barranca, Sant	25.68	107	*e*P	P	00 43 47.3	+2.0
ORTC	Ortega, Tolima	25.68	115	*e*P	P	00 43 46.9	+1.5
X59A	McDuffie Farm,	25.70	40	P	P	00 43 45.4	+0.1
	baz=229,SNR=13						
N23A	Red Feather La	25.74	347	IAMs_20	IAMs_20	00 54 47.1	
	comp=Z,21µm,21.0s						
N23A	Red Feather La	25.74	347	P	P	00 43 46.9	+0.9
	baz=163,SNR=14						
SNCC	San Nicolas Is	25.75	316	P	P	00 43 46.6	+0.8
SNCC				IAmb	IAmb	00 43 50.0	
	comp=Z,160nm,1.2s						
SNCC	San Nicolas Is	25.75	316	P	P	00 43 45.9	+0.1
	baz=127						
HDIL	Hopedale	25.79	16	P	P	00 43 45.9	-0.1
	baz=200,SNR=10						
T54A	Tazewell	25.80	32	P	P	00 43 45.8	-0.5
	baz=220,SNR=16						
EDW2	Edwards Air Fo	25.81	321	P	P	00 43 47.0	+0.7
	baz=132,SNR=26						
R51A	Hillsboro	25.83	27	P	P	00 43 46.2	-0.2
	baz=214,SNR=21						
Q49A	Aurora	25.86	25	P	P	00 43 46.2	-0.6
	baz=211,SNR=15						
U56A	King	25.90	35	P	P	00 43 47.0	-0.1
	baz=223,SNR=16						
V57A	Coltrane Farms	25.90	36	P	P	00 43 47.0	-0.2
	baz=225,SNR=26						
SPBC	San Pablo de B	25.93	110	*e*P	P	00 43 50.8	+3.1
URIC	Uribia, Colomb	25.95	96	*e*P	P	00 43 48.6	+0.8
BLG	Laguna Peak, P	25.98	318	P	P	00 43 48.8	+0.9
	baz=129,SNR=19						
S53A	Williamson	26.01	30	P	P	00 43 47.8	-0.3
	baz=218,SNR=12						
SDDR	Presa de Saban	26.01	79	P	P	00 43 48.2	-0.1
LRMC	Laurel Mtn Rad	26.03	322	P	P	00 43 49.6	+1.1
	baz=133,SNR=27						
P48A	Milroy	26.05	23	IAmb	IAmb	00 44 35.3	
	comp=Z,348nm,1.7s						
P48A	Milroy	26.05	23	P	P	00 43 47.6	-0.8
	baz=209,SNR=11						
ROSC	El Rosal	26.06	112	P	P	00 43 51.5	+2.3
	comp=Z,16nm,0.9s,baz=316,slow=8.3,SNR=14						
ROSC	El Rosal	26.06	112	*e*P	P	00 43 53.9	+4.7
OSI	Osito Audit: C	26.09	319	P	P	00 43 48.3	-0.6
OSI				IAmb	IAmb	00 43 58.8	
	comp=Z,441nm,1.9s						
OSI				IAMs_20	IAMs_20	00 55 48.5	
	comp=Z,16µm,20.0s						
OSI	Osito Audit: C	26.09	319	P	P	00 43 49.9	+1.1
	baz=130						
X60A	Albert Glenn T	26.10	41	P	P	00 43 49.0	+0.2
	baz=230						
Q50A	Georgetown	26.11	26	P	P	00 43 48.5	-0.4
	baz=213,SNR=14						
W59A	Clinton	26.19	39	P	P	00 43 49.9	+0.2
	baz=228						
V58A	Windy Hill, Pi	26.22	37	P	P	00 43 49.9	-0.1
	baz=226,SNR=22						
T55A	Pulaski	26.25	33	P	P	00 43 50.2	-0.2
	baz=221,SNR=22						
FURC	Furnace Creek,	26.25	325	P	P	00 43 51.6	+1.3
	baz=136,SNR=14						
TPNV	Topopah Spring	26.27	326	IAMs_20	IAMs_20	00 53 56.1	
	comp=Z,14µm,18.0s						
TPNV	Topopah Spring	26.27	326	P	P	00 43 52.1	+1.4
	baz=138,SNR=19						
SFIN	Lafayette	26.28	20	P	P	00 43 50.0	-0.4
SFIN	Lafayette	26.28	20	P	P	00 43 50.0	-0.4
	baz=205,SNR=16						
SCZ2	Santa Cruz Isl	26.28	317	P	P	00 43 51.6	+1.1
	baz=128						
SCIA	State Center	26.28	9	P	P	00 43 50.1	-0.4
	baz=191,SNR=14						
R52A	Catlettsburg	26.28	29	P	P	00 43 50.0	-0.5
	baz=216,SNR=9.1						
MPMC	Manual Prospec	26.32	323	P	P	00 43 52.2	+1.1
	baz=135,SNR=20						
GARC	Garzon, Huila	26.35	119	*e*P	P	00 43 53.9	+2.3
P49A	Miami Univ. Ec	26.39	24	P	P	00 43 51.0	-0.5
	baz=211,SNR=16						
ARVC	Arvin	26.48	320	P	P	00 43 53.4	+1.0
	baz=131,SNR=12						
S54A	Dingess, Beckl	26.50	31	P	P	00 43 52.3	-0.3
	baz=219,SNR=13						
BLA	Blacksburg	26.51	33	IAmb	IAmb	00 44 07.8	
	comp=Z,219nm,1.2s						
BLA	Blacksburg	26.51	33	P	P	00 43 52.6	-0.1
	baz=222,SNR=12						
PAMC	Pamplona, Colo	26.53	106	*e*P	P	00 43 56.4	+2.8
Q51A	Peebles	26.53	27	P	P	00 43 52.5	-0.3
	baz=214,SNR=19						
U57A	Blanch	26.54	36	P	P	00 43 53.1	+0.2
	baz=225,SNR=24						
FLOC	Florencia	26.54	120	*e*P	P	00 43 56.0	+2.8
FLOC	Florencia	26.54	120	P	P	00 43 54.1	+0.9
W60A	Pink Hill	26.57	40	P	P	00 43 53.5	+0.4
	baz=229,SNR=12						
CNNC	Cliffs of the	26.58	40	IAmb	IAmb	00 43 60.0	
	comp=Z,188nm,0.9s						
CNNC	Cliffs of the	26.58	40	P	P	00 43 53.3	0.0
	baz=229						
T56A	Rocky Mt	26.59	34	P	P	00 43 53.4	0.0
	baz=222,SNR=10						
R53A	Hurricane	26.60	30	IAmb	IAmb	00 44 10.5	
	comp=Z,129nm,1.0s						
R53A	Hurricane	26.60	30	P	P	00 43 53.4	0.0
	baz=217,SNR=17						
SBC	Santa Barbara	26.61	318	P	P	00 43 54.2	+0.8
	baz=128						
ISA	Isabella, Lake	26.62	321	P	P	00 43 54.9	+1.2
	baz=132,SNR=18						
CHIC	Chingaza	26.68	112	*e*P	P	00 43 57.2	+2.4
V59A	Middlesex	26.72	39	P	P	00 43 53.9	-0.6
	baz=227,SNR=23						
RUSC	La Rusia	26.73	109	*e*P	P	00 43 57.1	+1.8
RWWY	Rawlins	26.79	345	IAMs_20	IAMs_20	00 55 07.9	
	comp=Z,23µm,19.0s						
P50A	Jamestown	26.82	26	P	P	00 43 54.7	-0.7
	baz=212,SNR=16						
O48A	Farmland	26.85	23	P	P	00 43 54.7	-0.9
	baz=209,SNR=19						
BANI	BANI	26.88	81	P	P	00 43 55.6	-0.6
S55A	Lewisburg	26.89	33	P	P	00 43 55.8	-0.3
	baz=221						
M44A	Midewin, Midew	26.91	17	P	P	00 43 55.5	-0.7
GRAC	Grapevine Rang	26.91	325	P	P	00 43 58.0	+1.7
	baz=136,SNR=15						
CWC	Cottonwood Cre	26.92	323	P	P	00 43 57.7	+1.1
	baz=134						
PKM	Mcpherson Peak	26.95	318	P	P	00 43 57.7	+0.9
	baz=129,SNR=12						
R54A	Victor	26.96	31	P	P	00 43 56.4	-0.3
	baz=219,SNR=12						
Q52A	Bidwell	26.96	29	P	P	00 43 56.2	-0.4
	baz=216,SNR=21						
U58A	Oxford	26.97	37	P	P	00 43 56.4	-0.3
	baz=226,SNR=18						
T57A	Hurt	26.99	35	P	P	00 43 55.3	-1.7
T57A				IAmb	IAmb	00 44 06.5	
	comp=Z,278nm,1.2s						
T57A	Hurt	26.99	35	P	P	00 43 57.1	+0.1
	baz=224,SNR=16						
R11A	Troy Canyon, C	27.00	329	P	P	00 43 58.3	+1.1
	baz=141,SNR=25						
P51A	Williamsport	27.03	27	P	P	00 43 56.6	-0.7
	baz=214,SNR=17						
L42A	Oliver, Polo	27.06	14	IAmb	IAmb	00 44 03.5	
	comp=Z,258nm,1.2s						
O49A	Covington	27.10	24	P	P	00 43 57.2	-0.7
	baz=211,SNR=13						
W61A	Ground Anchor	27.10	41	P	P	00 43 57.7	-0.2
	baz=230						
VES	Vestal, Richgr	27.11	321	P	P	00 43 59.6	+1.6
	baz=132,SNR=23						
N47A	Urbana	27.20	21	P	P	00 43 57.9	-0.9
N47A	Urbana	27.20	21	P	P	00 43 57.8	-0.9
	baz=207,SNR=22						
Q53A	Leroy	27.23	30	P	P	00 43 58.7	-0.3
	baz=218,SNR=17						
DUG	Dugway, Tooele	27.26	335	P	P	00 43 59.3	-0.2
DUG				pmax	pmax		
	comp=Z,125nm,1.5s						
DUG				MLR	MLR		
	comp=Z,26µm,19.0s						
DUG	Dugway, Tooele	27.26	335	P	P	00 43 59.3	-0.2
DUG				IAMs_20	IAMs_20	00 55 08.8	
	comp=Z,26µm,19.0s						
DUG	Dugway, Tooele	27.26	335	P	P	00 44 00.8	+1.3
	baz=148,SNR=17						
SDD	Santo Domingo	27.30	81	IAMs_20	IAMs_20	00 52 37.6	
	comp=Z,13µm,21.0s						
V60A	Jim Taylor Roa	27.31	40	P	P	00 43 59.8	0.0
	baz=229,SNR=9.6						
S56A	Natural Bridge	27.32	34	P	P	00 43 59.4	-0.5
	baz=222,SNR=8.8						
SMMC	Simmler	27.33	319	P	P	00 44 01.4	+1.3
	baz=129,SNR=11						
O50A	Cable	27.35	25	P	P	00 43 59.4	-0.8
	baz=212,SNR=13						
T58A	Grand View Acr	27.36	36	P	P	00 43 59.8	-0.4
	baz=225,SNR=26						
U59A	Littleton	27.38	38	IAmb	IAmb	00 44 12.2	
	comp=Z,126nm,1.2s						
U59A	Littleton	27.38	38	P	P	00 44 00.5	0.0
	baz=227,SNR=15						
N48A	Decatur	27.42	22	P	P	00 43 59.9	-0.8
	baz=209,SNR=15						
TIN	Tinemaha, Big	27.44	324	P	P	00 44 02.9	+1.8
	baz=135						
R55A	Marlinton	27.48	32	P	P	00 44 01.4	0.0
	baz=221,SNR=12						
K22A	Casper	27.55	347	IAmb	IAmb	00 44 11.6	
	comp=Z,192nm,1.4s						
K22A				IAMs_20	IAMs_20	00 56 43.1	
	comp=Z,21µm,21.0s						
K22A	Casper	27.55	347	P	P	00 44 02.7	+0.7
	baz=163,SNR=12						
P52A	Corning	27.57	28	P	P	00 44 01.4	-0.7
	baz=216,SNR=17						
VOG	Valley Oaks Go	27.61	321	P	P	00 44 03.7	+1.2
	baz=132						
M47A	Cromwell	27.65	21	P	P	00 44 02.2	-0.6
	baz=207,SNR=10						
Q54A	Coxs Mills	27.66	30	P	P	00 44 02.8	-0.1
	baz=219,SNR=14						
L44A	Lake County Fo	27.68	17	P	P	00 44 03.1	0.0
	baz=202,SNR=15						
ACSO	Alum Creek Sta	27.69	26	IAmb	IAmb	00 44 13.2	
	comp=Z,360nm,1.8s						
ACSO	Alum Creek Sta	27.69	26	P	P	00 44 02.7	-0.5
	baz=213,SNR=16						
TAMC	Tame, Arauca	27.70	107	*e*P	P	00 44 05.8	+2.2
S57A	Dark Hollow, R	27.71	35	IAmb	IAmb	00 44 09.1	
	comp=Z,257nm,1.6s						
S57A	Dark Hollow, R	27.71	35	P	P	00 44 03.2	-0.2
	baz=223,SNR=14						
V61A	Roper	27.75	40	P	P	00 44 03.9	+0.1
	baz=230						
ECSD	EROS Data Cent	27.77	3	P	P	00 44 03.4	-0.4
ECSD				IAmb	IAmb	00 44 14.1	
	comp=Z,165nm,1.6s						
ECSD	EROS Data Cent	27.77	3	P	P	00 44 03.5	-0.3
	baz=184,SNR=20						
MACC	Macarena, Meta	27.77	117	*e*P	P	00 44 05.1	+0.9
O51A	Pataskala	27.78	27	P	P	00 44 03.2	-0.8
	baz=214,SNR=16						
P53A	Whipple	27.79	29	IAmb	IAmb	00 44 10.4	
	comp=Z,111nm,1.2s						
P53A	Whipple	27.79	29	P	P	00 44 03.8	-0.2
	baz=217,SNR=12						
N49A	Columbus Grove	27.79	23	IAmb	IAmb	00 44 46.5	
	comp=Z,121nm,1.5s						
N49A	Columbus Grove	27.79	23	P	P	00 44 03.4	-0.7
	baz=210						
JFWS	Jewell Farm	27.79	13	IAmb	IAmb	00 44 10.0	
	comp=Z,106nm,1.1s						
JFWS	Jewell Farm	27.79	13	IAMs_20	IAMs_20	00 57 02.3	
	comp=Z,14µm,20.0s						
JFWS	Jewell Farm	27.79	13	P	P	00 44 03.8	-0.3
	baz=197,SNR=14						
U60A	Pendleton	27.84	39	P	P	00 44 04.6	+0.1
	baz=228,SNR=21						
R56A	Bull Pasture M	27.94	33	P	P	00 44 05.3	-0.2
	baz=222,SNR=12						
T59A	Double "B" Far	27.94	37	P	P	00 44 05.6	+0.1
	baz=227,SNR=23						
SDV	Santo Domingo	27.96	101	P	P	00 44 07.6	+1.5
	comp=Z,10nm,0.8s,baz=292,slow=9.5,SNR=12						
SDV	Santo Domingo	27.96	101	*e*P	P	00 44 07.3	+1.2
SDV	Santo Domingo	27.96	101	P	P	00 44 06.4	+0.3
SDV				IAmb	IAmb	00 44 20.2	
	comp=Z,161nm,1.5s						
SDV	Santo Domingo	27.96	101	*e*P	P	00 44 06.4	+0.3
L46A	Eue Claire	28.01	19	IAmb	IAmb	00 44 12.0	
	comp=Z,185nm,1.4s						
L46A	Eue Claire	28.01	19	P	P	00 44 05.4	-0.6
	baz=205						
Q55A	Buckhannon	28.04	31	P	P	00 44 06.4	+0.1
	baz=220						
N50A	Nevada	28.07	25	P	P	00 44 05.7	-0.9
	baz=212,SNR=8.7						
M48A	Edgerton	28.08	22	IAmb	IAmb	00 44 13.3	
	comp=Z,214nm,1.6s						
M48A	Edgerton	28.08	22	P	P	00 44 06.0	-0.7
	baz=209						
O52A	Adamsville	28.09	28	IAmb	IAmb	00 44 55.2	
	comp=Z,196nm,1.6s						
O52A	Adamsville	28.09	28	P	P	00 44 06.0	-0.8
	baz=216,SNR=9.6						
S58A	Poland Farm, P	28.10	36	IAmb	IAmb	00 44 15.0	
	comp=Z,294nm,1.9s						
S58A	Poland Farm, P	28.10	36	P	P	00 44 06.7	-0.1
	baz=225,SNR=8.7						
U61A	Possum Corner	28.18	40	P	P	00 44 08.0	+0.4
	baz=230,SNR=5.6						
MLAC	Mammoth, Mammo	28.19	324	P	P	00 44 09.0	+1.1
	baz=134						
OMMB	Old Mammoth Mi	28.27	324	IAmb	IAmb	00 44 18.0	
	comp=Z,196nm,1.6s						
PTGC	Puerto Gaitan,	28.30	112	*e*P	P	00 44 09.9	+1.0
P54A	Burton	28.31	30	P	P	00 44 08.8	0.0
	baz=218,SNR=14						
MDPB	Devils Postpil	28.33	324	IAmb	IAmb	00 44 21.6	
	comp=Z,113nm,1.4s						
R57A	Stanardsville	28.33	34	P	P	00 44 08.6	-0.3
	baz=224,SNR=7.7						
L47A	Sherwood	28.34	21	P	P	00 44 07.9	-1.1
	baz=207,SNR=14						
M49A	Liberty Center	28.35	23	P	P	00 44 07.9	-1.1
	baz=210						
NV11	Mina Array Sit	28.39	326	IAmb	IAmb	00 44 19.1	
	comp=Z,276nm,1.6s						
NV11				IAMs_20	IAMs_20	00 55 28.0	
	comp=Z,16µm,18.0s						
PMPB	Monarch Peak	28.41	320	IAmb	IAmb	00 44 22.9	
	comp=Z,194nm,1.5s						
BW06	Boulder Array	28.42	343	P	P	00 44 10.5	+0.5
	baz=157						
PDAR	Pinedale Array	28.42	343	P	P	00 44 10.8	+0.8
	comp=Z,21nm,1.1s,baz=148,slow=8.7,SNR=26						
PDAR				PcP	PcP	00 47 21.9	-0.2
	comp=Z,2.2nm,1.1s,baz=95,slow=5.4,SNR=3.7						
PDAR				LR	LR	00 56 16.2	
	comp=Z,28µm,19.2s,baz=165,slow=38						
SUSD	Miller	28.44	359	IAMs_20	IAMs_20	00 56 50.2	
	comp=Z,21µm,21.0s						
SUSD	Miller	28.44	359	P	P	00 44 09.6	-0.3
	baz=179						
R58B	Mineral	28.45	36	IAmb	IAmb	00 44 18.1	
	comp=Z,129nm,1.5s						
R58B	Mineral	28.45	36	P	P	00 44 09.6	-0.3
	baz=225,SNR=10.0						
NVAR	Mina Array Bea	28.46	326	P	P	00 44 12.3	+1.9
	comp=Z,21nm,1.0s,baz=153,slow=9.9,SNR=46						
NVAR				PcP	PcP	00 47 23.2	+0.9
	comp=Z,3.7nm,0.9s,baz=125,slow=2.4,SNR=3.9						
O53A	New Philadelph	28.48	28	P	P	00 44 09.7	-0.5
	baz=216						
N51A	Ashland	28.52	26	IAmb	IAmb	00 44 21.7	
	comp=Z,114nm,1.4s						
N51A	Ashland	28.52	26	P	P	00 44 09.4	-1.2
	baz=214,SNR=7.3						
RSSD	Black Hills	28.52	351	P	P	00 44 10.5	-0.3
RSSD				pmax	pmax		
	comp=Z,220nm,1.9s						
RSSD				MLR	MLR		
	comp=Z,22µm,18.0s						
RSSD	Black Hills	28.52	351	P	P	00 44 10.5	-0.3
RSSD				IAmb	IAmb	00 44 13.8	
	comp=Z,220nm,1.9s						
RSSD	Black Hills	28.52	351	IAMs_20	IAMs_20	00 56 20.6	
	comp=Z,23µm,18.0s						
RSSD	Black Hills	28.52	351	P	P	00 44 11.5	+0.7
	baz=168						
Q56A	Snyder Ridge,	28.53	32	P	P	00 44 11.2	+0.5
	baz=221,SNR=12						
T60A	Surry	28.54	38	IAMs_20	IAMs_20	00 57 18.8	
	comp=Z,11µm,19.0s						
T60A	Surry	28.54	38	P	P	00 44 10.7	-0.1
	baz=228,SNR=9.7						
P55A	Reedsville	28.56	31	P	P	00 44 10.8	-0.2
	baz=220						
L48A	N Adams	28.59	22	P	P	00 44 10.2	-0.9
	baz=209,SNR=10						
R58A	Rapidan	28.61	35	P	P	00 44 11.4	0.0
	baz=224,SNR=16						
S59A	Mechanicsville	28.64	37	P	P	00 44 11.5	-0.1
	baz=226,SNR=13						
M50A	Fremont	28.65	25	IAmb	IAmb	00 44 22.3	
	comp=Z,101nm,1.3s						
M50A	Fremont	28.65	25	P	P	00 44 10.8	-0.9
	baz=212						
I40A	Norwalk	28.66	12	IAmb	IAmb	00 44 18.0	
	comp=Z,243nm,1.7s						
I40A				IAMs_20	IAMs_20	00 57 15.5	
	comp=Z,15µm,19.0s						
MCWV	Mont Chateau	28.66	31	P	P	00 44 11.7	-0.2
	baz=220						
N52A	McGinn’s Farm,	28.72	27	P	P	00 44 11.2	-1.2
	baz=215						
RYN	Ryan	28.73	326	IAmb	IAmb	00 44 22.1	
	comp=Z,145nm,1.5s						
ELK	Elko	28.74	333	P	P	00 44 13.9	+1.1
	comp=Z,14nm,1.2s,baz=151,slow=8.1,SNR=31						
ELK				LR	LR	00 56 35.8	
	comp=Z,29µm,20.0s,baz=154,slow=38						
ELK	Elko	28.74	333	IAmb	IAmb	00 44 21.1	
	comp=Z,243nm,1.9s						
K46A	Dorr	28.78	20	P	P	00 44 11.9	-1.0
	baz=206,SNR=11						
O54A	Avella	28.81	29	IAmb	IAmb	00 44 25.6	
	comp=Z,328nm,1.8s						
O54A	Avella	28.81	29	P	P	00 44 13.0	-0.3
	baz=218,SNR=6.9						
CBN	Corbin Frederi	28.90	36	IAmb	IAmb	00 44 22.5	
	comp=Z,154nm,1.4s						
CBN	Corbin Frederi	28.90	36	P	P	00 44 13.8	-0.2
	baz=226						
Q57A	Strasburg	28.93	33	P	P	00 44 14.4	+0.2
	baz=223,SNR=9.6						
M51A	Elyria	28.94	26	P	P	00 44 13.0	-1.3
	baz=214,SNR=9.8						
S60A	Water View	28.97	37	P	P	00 44 15.0	+0.4
	baz=227,SNR=11						
L49A	Milan	28.97	23	P	P	00 44 13.7	-0.8
	baz=210						
I42A	Draeger Farm,	29.02	14	IAmb	IAmb	00 44 21.4	
	comp=Z,179nm,1.6s						
I42A				IAMs_20	IAMs_20	00 57 08.2	
	comp=Z,14µm,20.0s						
K47A	Vermontville	29.03	21	P	P	00 44 14.2	-0.8
	baz=207,SNR=10						
R59A	King George, V	29.04	36	P	P	00 44 15.4	+0.2
	baz=226						
P56A	Dayton Farm, R	29.05	32	P	P	00 44 15.3	0.0
	baz=222						
N53A	Lisbon	29.10	28	IAmb	IAmb	00 44 26.9	
	comp=Z,221nm,1.8s						
N53A	Lisbon	29.10	28	P	P	00 44 15.0	-0.7
	baz=217,SNR=8.7						
AAM	Ann Arbor	29.18	23	P	P	00 44 15.7	-0.7
	baz=210						
Q58A	Fox Den Farm,	29.25	34	P	P	00 44 17.2	+0.1
	baz=224						
J45A	Montague	29.27	18	P	P	00 44 16.6	-0.6
	baz=204						
L50A	Kingsville	29.28	24	P	P	00 44 16.2	-1.2
	baz=212						
O55A	Ligonier	29.35	31	P	P	00 44 17.6	-0.4
	baz=220,SNR=7.1						
REDW	Red Top Meadow	29.36	341	IAmb	IAmb	00 44 29.1	
	comp=Z,256nm,1.6s						
REDW				IAMs_20	IAMs_20	00 56 46.9	
	comp=Z,20µm,19.0s						
YERR	Yerington	29.37	326	IAmb	IAmb	00 44 26.8	
	comp=Z,295nm,1.9s						
R60A	Leonardtown, M	29.39	37	P	P	00 44 18.5	+0.1
	baz=227						
SNOW	Snow King Moun	29.42	341	P	P	00 44 18.7	-0.2
SNOW				IAmb	IAmb	00 44 29.0	
	comp=Z,172nm,1.4s						
J46A	Howard City	29.42	19	P	P	00 44 18.1	-0.5
	baz=206,SNR=7.0						
K48A	Perry	29.45	22	P	P	00 44 18.0	-0.8
	baz=209,SNR=10						
M52A	Chesterland	29.46	27	IAmb	IAmb	00 44 24.5	
	comp=Z,299nm,1.9s						
M52A	Chesterland	29.46	27	P	P	00 44 17.9	-1.0
	baz=215,SNR=7.0						
P57A	Homestead Farm	29.47	33	P	P	00 44 19.4	+0.4
	baz=223,SNR=10.0						
S61A	Accomac	29.53	38	P	P	00 44 19.9	+0.4

	baz=229						
J47A	**Sunmer**	29.59	20	P	P	00 44 19.5	-0.5
	baz=207,SNR=6.8						
SPMN	**Marine on St.**	29.59	8	IAmb	IAmb	00 44 26.0	
	comp=Z,194nm,1.6s						
SPMN				IAMs_20	IAMs_20	00 57 02.6	
	comp=Z,13µm,18.0s						
SPMN	**Marine on St.**	29.59	8	P	P	00 44 19.5	-0.6
	baz=191,SNR=15						
N54A	**Moraine State**	29.61	29	P	P	00 44 19.9	-0.3
	baz=218,SNR=12						
PNTR	**Pine Nut**	29.64	325	IAmb	IAmb	00 44 30.3	
	comp=Z,166nm,1.4s						
K49A	**Clarkson**	29.67	23	P	P	00 44 19.8	-1.0
	baz=210						
M53A	**WI Miller and**	29.68	28	P	P	00 44 20.2	-0.6
	baz=216,SNR=8.5						
Q59A	**Harwood**	29.76	36	P	P	00 44 21.6	0.0
	baz=226						
O56A	**Blue Knob Stat**	29.76	31	P	P	00 44 21.5	-0.2
	baz=221						
VCNR	**Virginia City**	29.82	326	IAmb	IAmb	00 44 31.9	
	comp=Z,133nm,1.5s						
H43A	**Windswept, Lux**	29.85	15	IAMs_20	IAMs_20	00 57 46.0	
	comp=Z,14µm,20.0s						
P58A	**Pank, Wackersv**	29.85	34	P	P	00 44 22.4	0.0
	baz=224,SNR=5.8						
I45A	**Fountain**	29.87	18	IAMs_20	IAMs_20	00 58 12.5	
	comp=Z,14µm,21.0s						
I45A	**Fountain**	29.87	18	P	P	00 44 22.2	-0.3
	baz=204						
RUBR	**Rubicon Trail**	29.92	325	IAmb	IAmb	00 44 39.9	
	comp=Z,211nm,1.3s						
N55A	**Marion Center**	29.95	30	P	P	00 44 23.1	-0.2
	baz=220,SNR=9.2						
FLWY	**Flagg Ranch**	29.96	342	IAmb	IAmb	00 44 47.0	
	comp=Z,169nm,1.6s						
PAHR	**Pah Rah Range**	29.97	326	P	P	00 44 23.9	+0.3
PAHR				IAMs_20	IAMs_20	00 57 02.0	
	comp=Z,17µm,18.0s						
K50A	**Casco**	29.98	24	P	P	00 44 22.2	-1.3
K50A				IAmb	IAmb	00 44 33.6	
	comp=Z,200nm,1.7s						
K50A	**Casco**	29.98	24	P	P	00 44 22.2	-1.3
	baz=211						
J48A	**Bridge Port**	30.00	22	P	P	00 44 22.4	-1.3
J48A				IAmb	IAmb	00 44 30.6	
	comp=Z,105nm,1.3s						
J48A	**Bridge Port**	30.00	22	P	P	00 44 23.1	-0.6
	baz=209,SNR=7.7						
I46A	**Reed City**	30.02	19	P	P	00 44 23.1	-0.8
	baz=205						
MLPR	**Magueyes Islan**	30.03	82	P	P	00 44 23.7	-0.5
G40A	**Rib Lake**	30.06	12	IAmb	IAmb	00 44 30.4	
	comp=Z,235nm,1.8s						
R61A	**Willards**	30.16	38	P	P	00 44 26.7	+1.6
	baz=228						
M54A	**Oil Creek Stat**	30.19	29	P	P	00 44 24.6	-0.8
M54A				IAmb	IAmb	00 44 31.7	
	comp=Z,159nm,1.4s						
M54A	**Oil Creek Stat**	30.19	29	P	P	00 44 25.2	-0.2
	baz=218,SNR=12						
O57A	**Amberson**	30.20	33	P	P	00 44 24.7	-0.7
	baz=223						
H17A	**Grant Village**	30.21	342	P	P	00 44 27.1	+1.3
H17A				IAmb	IAmb	00 44 39.0	
	comp=Z,137nm,1.8s						
H17A	**Grant Village**	30.21	342	P	P	00 44 27.2	+1.3
	baz=156,SNR=7.5						
ATAH	**Atahualpa**	30.27	138	P	P	00 44 29.2	+2.4
	comp=Z,15nm,0.8s,baz=321,slow=12,SNR=12						
L53A	**Girard**	30.28	27	P	P	00 44 25.2	-1.0
	baz=216,SNR=8.8						
J49A	**Marlette**	30.29	22	P	P	00 44 24.9	-1.3
	baz=210						
AOPR	**Arecibo Observ**	30.30	81	P	P	00 44 26.4	-0.2
AOPR				IAmb	IAmb	00 44 36.4	
	comp=Z,169nm,1.9s						
Q60A	**Greensboro**	30.32	36	P	P	00 44 26.2	-0.3
Q60A	**Greensboro**	30.32	36	P	P	00 44 26.6	+0.1
	baz=227						
LKWY	**Lake**	30.32	343	P	P	00 44 28.7	+1.9
LKWY				pmax	pmax		
	comp=Z,83nm,1.4s						
LKWY				MLR	MLR		
	comp=Z,68µm,20.0s						
LKWY	**Lake**	30.32	343	P	P	00 44 28.7	+1.9
K51A	**Iona Station**	30.38	25	P	P	00 44 25.0	-2.0
	baz=213						
SSPA	**Standing Stone**	30.38	32	P	P	00 44 26.6	-0.5
SSPA	**Standing Stone**	30.38	32	P	P	00 44 27.0	-0.1
	baz=222						
N56A	**West Decatur**	30.39	31	P	P	00 44 27.0	-0.2
	baz=221,SNR=7.9						
I47A	**Gladwin**	30.39	20	IAmb	IAmb	00 44 33.3	
	comp=Z,206nm,1.6s						
I47A	**Gladwin**	30.39	20	P	P	00 44 26.5	-0.6
	baz=207,SNR=10.0						
P59A	**Jarrettsville**	30.41	35	P	P	00 44 27.3	0.0
	baz=225						
YMP	**Mirror Lake Pl**	30.41	343	P	P	00 44 28.4	+0.7
OBIP	**Obispado Ponce**	30.44	81	IAmb	IAmb	00 44 33.2	
	comp=Z,146nm,1.9s						
H45A	**Beulah**	30.46	18	P	P	00 44 27.2	-0.5
	baz=204						
YUF	**Upper Falls**	30.48	343	P	P	00 44 28.9	+0.7
O58A	**Lewisberry**	30.51	34	P	P	00 44 28.1	-0.1
	baz=224						
ICMP	**Isla Caja de M**	30.52	82	P	P	00 44 28.2	-0.4
ERPA	**Erie**	30.53	28	P	P	00 44 27.5	-0.9
	baz=217						
RLMT	**Red Lodge**	30.53	345	P	P	00 44 28.4	-0.2
RLMT				IAmb	IAmb	00 44 38.3	
	comp=Z,92nm,1.2s						
RLMT				IAMs_20	IAMs_20	00 57 40.9	
	comp=Z,17µm,21.0s						
RLMT	**Red Lodge**	30.53	345	P	P	00 44 29.2	+0.6
	baz=159						
Q61A	**Milford**	30.53	37	P	P	00 44 28.6	+0.2
	baz=228						
YNR	**Norris Junctio**	30.54	343	P	P	00 44 28.7	0.0
YNM	**Yellowstone No**	30.55	343	P	P	00 44 28.7	-0.2
M55A	**Ridgway**	30.58	30	P	P	00 44 27.6	-1.3
M55A				IAmb	IAmb	00 44 35.2	
	comp=Z,177nm,1.4s						
M55A	**Ridgway**	30.58	30	P	P	00 44 28.7	-0.2
	baz=219,SNR=14						
BEKR	**Beckworth**	30.61	326	P	P	00 44 30.3	+0.9
BEKR				IAmb	IAmb	00 44 37.6	
	comp=Z,144nm,1.8s						
BEKR				IAMs_20	IAMs_20	00 57 03.8	
	comp=Z,14µm,18.0s						
YNE	**Yellowstone No**	30.62	344	P	P	00 44 29.4	-0.1
H46A	**Fife Lake**	30.64	19	P	P	00 44 28.6	-0.7
	baz=205						
YHH	**Holmes Hill**	30.65	342	P	P	00 44 29.7	-0.1
YHB	**Horse Butte**	30.72	342	P	P	00 44 30.3	0.0
MVL	**Millersville**	30.73	34	P	P	00 44 28.6	-1.5
K52A	**Tillsonburg**	30.75	26	P	P	00 44 29.0	-1.3
	baz=215						
YHL	**Hebgen Lake**	30.80	342	P	P	00 44 30.5	-0.7
I48A	**Sherman Twp**	30.81	21	P	P	00 44 30.4	-0.4
	baz=208,SNR=8.6						
QLMT	**Earthquake Lak**	30.86	342	P	P	00 44 32.9	+1.3
M56A	**Emporium**	30.87	30	IAmb	IAmb	00 44 40.2	
	comp=Z,133nm,1.3s						
M56A	**Emporium**	30.87	30	P	P	00 44 31.2	-0.3
	baz=220,SNR=12						
SJG	**San Juan**	30.88	81	P	P	00 44 31.7	+0.1
	comp=Z,22nm,0.8s,baz=284,slow=9.4,SNR=12						
SJG	**San Juan**	30.88	81	*e*P	P	00 44 30.0	-1.7
SJG	**San Juan**	30.88	81	P	P	00 44 31.4	-0.3
SJG				pmax	pmax		
	comp=Z,82nm,1.4s						
SJG				MLR	MLR		
	comp=Z,4µm,18.0s						
SJG	**San Juan**	30.88	81	P	P	00 44 31.4	-0.3
SJG				IAmb	IAmb	00 44 40.8	
	comp=Z,82nm,1.4s						
I49A	**Point Hope**	30.90	22	P	P	00 44 31.3	-0.3
I49A				IAMs_20	IAMs_20	00 59 02.0	
	comp=Z,10µm,21.0s						
I49A	**Point Hope**	30.90	22	P	P	00 44 30.5	-1.2
	baz=210						
MCCM	**Marconi Confer**	30.92	320	P	P	00 44 32.7	+0.9
MCCM				IAmb	IAmb	00 44 48.1	
	comp=Z,86nm,1.4s						
L54A	**Sinclairville**	30.92	28	P	P	00 44 31.3	-0.6
	baz=218,SNR=12						
GCPR	**Guaynabo City**	30.93	81	P	P	00 44 32.1	-0.1
G45A	**Suttons Bay**	30.95	18	IAmb	IAmb	00 44 40.7	
	comp=Z,173nm,1.3s						
G45A				IAMs_20	IAMs_20	00 59 06.3	
	comp=Z,11µm,20.0s						
G45A	**Suttons Bay**	30.95	18	P	P	00 44 31.7	-0.4
	baz=204,SNR=8.0						
F42A	**Maple Grove Fa**	30.97	14	IAmb	IAmb	00 44 39.9	
	comp=Z,86nm,1.2s						
P60A	**Greenville**	30.99	35	P	P	00 44 32.5	+0.1
P60A				IAmb	IAmb	00 44 40.7	
	comp=Z,101nm,1.2s						
P60A	**Greenville**	30.99	35	P	P	00 44 32.0	-0.4
	baz=226						
PDPR	**Patillas Dam,**	31.00	81	P	P	00 44 32.5	-0.3
H47A	**Mio**	31.00	20	P	P	00 44 32.1	-0.5
	baz=207						
ORV	**Oroville**	31.02	324	P	P	00 44 32.5	-0.3
ORV				pmax	pmax		
	comp=Z,123nm,1.6s						
ORV				MLR	MLR		
	comp=Z,10µm,18.0s						
ORV	**Oroville**	31.02	324	P	P	00 44 32.5	-0.3
ORV				IAmb	IAmb	00 44 42.3	
	comp=Z,123nm,1.6s						
ORV				IAMs_20	IAMs_20	00 56 45.0	
	comp=Z,10µm,18.0s						
O59A	**Robesonia**	31.04	34	P	P	00 44 32.9	0.0
	baz=225						
COWI	**Conover**	31.07	13	IAmb	IAmb	00 44 41.0	
	comp=Z,88nm,1.4s						
COWI				IAMs_20	IAMs_20	00 57 57.4	
	comp=Z,11µm,22.0s						
GLMI	**Grayling**	31.07	19	P	P	00 44 32.6	-0.5
GLMI				IAmb	IAmb	00 44 41.0	
	comp=Z,140nm,1.2s						
GLMI	**Grayling**	31.07	19	P	P	00 44 32.8	-0.3
	baz=206						
E38A	**The Farm, Brul**	31.12	9	IAmb	IAmb	00 44 43.7	
	comp=Z,100nm,1.4s						
E38A				IAMs_20	IAMs_20	00 58 24.1	
	comp=Z,15µm,20.0s						
N58A	**Sunbury**	31.13	33	P	P	00 44 32.9	-0.8
N58A	**Sunbury**	31.13	33	P	P	00 44 33.5	-0.2
	baz=223						
D32A	**Dogwood Acres,**	31.15	2	P	P	00 44 33.0	-0.7
D32A				IAmb	IAmb	00 44 39.3	
	comp=Z,140nm,1.6s						
D32A				IAMs_20	IAMs_20	00 57 40.9	
	comp=Z,20µm,19.0s						
MFID	**Camas Ranch**	31.19	335	IAmb	IAmb	00 44 52.3	
	comp=Z,86nm,1.2s						
MFID				IAMs_20	IAMs_20	00 56 42.7	
	comp=Z,22µm,20.0s						
J52A	**Paris**	31.23	26	P	P	00 44 33.2	-1.3
	baz=215,SNR=7.6						
GDXM	**Geysers**	31.29	322	IAMs_20	IAMs_20	00 56 33.0	
	comp=Z,21µm,18.0s						
M57A	**Sunshine Farm,**	31.29	32	P	P	00 44 35.1	0.0
	baz=222						
L55A	**Hinsdale**	31.29	29	P	P	00 44 34.8	-0.4
	baz=219						
P61A	**Hammonton**	31.37	36	P	P	00 44 34.8	-0.9
LAO	**LASA Array**	31.37	350	IAMs_20	IAMs_20	00 57 02.0	
	comp=Z,20µm,19.0s						
LAO	**LASA Array**	31.37	350	P	P	00 44 35.8	0.0
	baz=165						
WVNY	**West Valley, N**	31.39	29	P	P	00 44 34.5	-1.4
WVNY				IAmb	IAmb	00 44 42.3	
	comp=Z,168nm,1.3s						
H48A	**Harrisville**	31.39	21	IAmb	IAmb	00 44 38.7	
	comp=Z,195nm,1.6s						
H48A				IAMs_20	IAMs_20	00 59 28.9	
	comp=Z,10µm,21.0s						
H48A	**Harrisville**	31.39	21	P	P	00 44 35.3	-0.6
	baz=209						
G46A	**Petoskey**	31.44	18	P	P	00 44 35.7	-0.6
	baz=206						
O60A	**Telford**	31.46	35	P	P	00 44 36.8	+0.2
	baz=226						
I51A	**Listowel**	31.47	24	P	P	00 44 35.5	-1.2
	baz=213						
K54A	**Basiliko Farm,**	31.50	28	P	P	00 44 36.5	-0.5
	baz=218						
HOPS	**Hopland Field**	31.57	322	P	P	00 44 38.3	+0.7
HOPS				IAmb	IAmb	00 44 46.2	
	comp=Z,201nm,1.6s						
HOPS				IAMs_20	IAMs_20	00 56 41.6	
	comp=Z,14µm,18.0s						
F45A	**CMU Biological**	31.58	17	P	P	00 44 37.0	-0.5
	baz=204,SNR=12						
G47A	**Hillman**	31.63	20	P	P	00 44 37.2	-0.9
	baz=207						
WVOR	**Wild Horse Val**	31.63	331	P	P	00 44 38.0	-0.3
WVOR				pmax	pmax		
	comp=Z,184nm,1.7s						
WVOR				MLR	MLR		
	comp=Z,19µm,20.0s						
WVOR	**Wild Horse Val**	31.63	331	P	P	00 44 38.0	-0.3
WVOR				IAmb	IAmb	00 44 46.9	
	comp=Z,184nm,1.6s						
WVOR				IAMs_20	IAMs_20	00 57 36.7	
	comp=Z,19µm,20.0s						
M58A	**Price's Panora**	31.65	32	P	P	00 44 38.0	-0.4
	baz=223,SNR=7.2						
L56A	**Greenwood**	31.67	30	P	P	00 44 38.4	-0.1
	baz=221						
LUPA	**Lehigh Univers**	31.68	35	P	P	00 44 37.7	-0.8
N59A	**State Game Lan**	31.69	34	P	P	00 44 38.4	-0.3
N59A	**State Game Lan**	31.69	34	P	P	00 44 38.8	+0.1
	baz=225						
CUPR	**Culebra, Puert**	31.70	81	P	P	00 44 39.4	+0.5
O03E	**Paynes Creek**	31.70	325	P	P	00 44 39.7	+0.9
	baz=133						
DLMT	**Dillon**	31.70	341	P	P	00 44 39.5	+0.7
DLMT				IAmb	IAmb	00 44 47.1	
	comp=Z,205nm,1.6s						
O61A	**Allentown**	31.79	36	P	P	00 44 39.3	-0.2
	baz=228						
E43A	**Lone Tree Farm**	31.82	15	P	P	00 44 38.1	-1.6
E43A				IAmb	IAmb	00 44 45.6	
	comp=Z,136nm,1.4s						
E43A				IAMs_20	IAMs_20	00 58 20.3	
	comp=Z,13µm,21.0s						
MDND	**Maddock**	31.86	358	P	P	00 44 39.2	-0.9
MDND				IAMs_20	IAMs_20	00 58 39.7	
	comp=Z,20µm,19.0s						
MDND	**Maddock**	31.86	358	P	P	00 44 40.2	+0.2
	baz=178,SNR=22						
K55A	**Perry**	31.88	29	P	P	00 44 39.9	-0.5
	baz=219						
L57A	**Andrews Acres**	31.92	31	P	P	00 44 40.4	-0.2
	baz=222						
STVI	**Saint Thomas**	32.01	81	P	P	00 44 41.4	-0.3
STVI				IAmb	IAmb	00 44 52.1	
	comp=Z,104nm,1.2s						
N60A	**Cedar Hill Far**	32.02	34	P	P	00 44 41.8	+0.3
	baz=226						
I52A	**Shelburne**	32.03	25	P	P	00 44 40.4	-1.2
	baz=214						
MOD	**Modoc Plateau**	32.05	328	P	P	00 44 42.0	+0.1
MOD				IAmb	IAmb	00 44 49.8	
	comp=Z,183nm,1.8s						
MOD				IAMs_20	IAMs_20	00 59 02.7	
	comp=Z,14µm,18.0s						
MEDO	**Medina**	32.05	28	P	P	00 44 40.4	-1.4
J54A	**Appleton**	32.05	28	P	P	00 44 40.7	-1.1
J54A	**Appleton**	32.05	28	P	P	00 44 40.9	-0.8
	baz=218						
LRM	**Limekiln Ridge**	32.07	341	P	P	00 44 43.0	+0.9
I53A	**Kortright Cn E**	32.08	26	P	P	00 44 41.0	-1.0
	baz=216						
D41A	**Chassel**	32.11	13	P	P	00 44 40.9	-1.3
D41A				IAMs_20	IAMs_20	00 59 22.8	
	comp=Z,9µm,20.0s						
BRNJ	**Basking Ridge**	32.18	35	P	P	00 44 42.6	-0.4
BRNJ				IAmb	IAmb	00 44 51.5	
	comp=Z,98nm,1.1s						
CDVI	**St. Croix**	32.20	82	P	P	00 44 43.0	-0.4
CDVI				IAmb	IAmb	00 44 53.1	
	comp=Z,63nm,0.9s						
K56A	**Middlesex**	32.21	30	P	P	00 44 43.0	-0.2
	baz=220,SNR=14						
J08A	**Circle Bar Ran**	32.28	332	P	P	00 44 44.3	+0.4
J08A				IAMs_20	IAMs_20	00 56 37.7	
	comp=Z,20µm,19.0s						
WDC	**Whiskeytown Da**	32.31	324	P	P	00 44 43.5	-0.5
WDC				pmax	pmax		
	comp=Z,54nm,1.7s						
WDC				MLR	MLR		
	comp=Z,14µm,19.0s						
WDC	**Whiskeytown Da**	32.31	324	P	P	00 44 43.5	-0.5
WDC				IAMs_20	IAMs_20	00 58 39.9	
	comp=Z,14µm,19.0s						
M59A	**Waymart**	32.31	33	P	P	00 44 43.9	-0.2
	baz=224						
KCPM	**Cahto Peak**	32.32	322	P	P	00 44 45.1	+0.8
KCPM				IAMs_20	IAMs_20	00 57 15.3	
	comp=Z,14µm,18.0s						
E44A	**Grand Marais A**	32.33	16	P	P	00 44 43.4	-0.7
E44A				IAmb	IAmb	00 44 50.8	
	comp=Z,120nm,1.1s						
E44A				IAMs_20	IAMs_20	00 58 48.6	
	comp=Z,14µm,21.0s						
E44A	**Grand Marais A**	32.33	16	P	P	00 44 44.2	+0.1
	baz=203,SNR=7.2						
AGMN	**Agassiz Nation**	32.36	3	P	P	00 44 43.8	-0.6
AGMN				IAMs_20	IAMs_20	00 58 49.8	
	comp=Z,14µm,18.0s						
AGMN	**Agassiz Nation**	32.36	3	P	P	00 44 44.0	-0.4
	baz=184,SNR=17						
N61A	**South Mountain**	32.38	35	P	P	00 44 44.9	+0.2
	baz=227						
J55A	**Hilton**	32.42	29	P	P	00 44 44.2	-0.8
J55A				IAmb	IAmb	00 44 50.8	
	comp=Z,160nm,1.6s						
J55A	**Hilton**	32.42	29	P	P	00 44 43.7	-1.2
	baz=219						
ODNJ	**Ogdensburg**	32.43	35	IAmb	IAmb	00 44 53.8	
	comp=Z,104nm,1.7s						
EYMN	**Ely**	32.44	9	IAmb	IAmb	00 44 51.1	
	comp=Z,174nm,1.8s						
EYMN	**Ely**	32.44	9	IAMs_20	IAMs_20	00 59 13.0	
	comp=Z,12µm,19.0s						
EYMN	**Ely**	32.44	9	P	P	00 44 44.3	-0.8
	baz=192,SNR=16						
L58A	**Harry Jones Me**	32.46	32	P	P	00 44 45.4	0.0
	baz=223,SNR=9.7						
BINY	**Binghamton**	32.50	32	P	P	00 44 45.4	-0.4
BINY	**Binghamton**	32.50	32	P	P	00 44 45.4	-0.4
	baz=223						
E46A	**Sault Ste Mari**	32.55	18	P	P	00 44 45.1	-1.0
E46A				IAmb	IAmb	00 44 52.4	
	comp=Z,236nm,1.8s						
E46A				IAMs_20	IAMs_20	01 00 06.7	
	comp=Z,13µm,19.0s						
M60A	**Port Jervis**	32.59	34	P	P	00 44 46.6	+0.1
	baz=226						
CPNY	**Central Park**	32.59	36	P	P	00 44 45.9	-0.6
CPNY				IAmb	IAmb	00 44 54.6	
	comp=Z,81nm,1.4s						
F48A	**Evansville**	32.62	21	P	P	00 44 46.1	-0.6
	baz=209,SNR=11						
H52A	**Wyevale**	32.62	25	P	P	00 44 45.5	-1.2
	baz=214						
K57A	**Scipio Center**	32.63	31	P	P	00 44 46.3	-0.6
	baz=222,SNR=7.3						
KMRM	**Mail Ridge**	32.74	323	P	P	00 44 48.1	+0.2
KMRM				IAMs_20	IAMs_20	00 58 07.1	
	comp=Z,16µm,18.0s						
M04C	**Macdoel**	32.75	327	P	P	00 44 49.1	+0.9
	baz=135						
F49A	**Sandfield**	32.76	21	P	P	00 44 47.1	-0.8
	baz=210,SNR=11						
PAL	**Palisades**	32.77	35	P	P	00 44 47.1	-0.9
PAL				pmax	pmax		
	comp=Z,89nm,1.1s						
PAL				MLR	MLR		
	comp=Z,10µm,20.0s						
PAL	**Palisades**	32.77	35	P	P	00 44 47.1	-0.9
PAL				IAmb	IAmb	00 44 56.3	
	comp=Z,89nm,1.1s						
PAL				IAMs_20	IAMs_20	01 00 21.6	
	comp=Z,10µm,20.0s						
PAL	**Palisades**	32.77	35	P	P	00 44 47.9	-0.2
	baz=227						
DGMT	**Dagmar**	32.81	353	P	P	00 44 48.3	-0.2
DGMT	**Dagmar**	32.81	353	IAMs_20	IAMs_20	01 00 28.2	
	comp=Z,19µm,19.0s						
DGMT	**Dagmar**	32.81	353	P	P	00 44 49.1	+0.6
	baz=170,SNR=11						
J56A	**Wolcott**	32.87	30	P	P	00 44 48.7	-0.2
J56A				IAmb	IAmb	00 44 55.1	
	comp=Z,177nm,1.4s						
J56A	**Wolcott**	32.87	30	P	P	00 44 48.5	-0.5
	baz=220,SNR=10						
E47A	**Iron Bridge**	32.95	19	P	P	00 44 49.6	-0.1
	baz=207,SNR=19						
N62A	**Caumsett State**	32.96	36	P	P	00 44 49.5	-0.3
	baz=228						
BMO	**Blue Mountains**	32.97	335	P	P	00 44 49.1	-0.9
BMO				pmax	pmax		
	comp=Z,163nm,1.9s						
BMO				MLR	MLR		
	comp=Z,4µm,18.0s						
BMO	**Blue Mountains**	32.97	335	P	P	00 44 49.1	-0.9
BMO				IAmb	IAmb	00 44 57.0	
	comp=Z,163nm,1.9s						
L59A	**Walton**	32.98	33	P	P	00 44 49.0	-0.9
L59A				IAmb	IAmb	00 44 53.8	
	comp=Z,74nm,1.1s						
L59A	**Walton**	32.98	33	P	P	00 44 49.9	-0.1
	baz=224						
M02C	**Callahan**	33.03	325	P	P	00 44 50.2	-0.3
	baz=133						
SADO	**Sadowa**	33.03	26	P	P	00 44 47.9	-2.5
M61A	**Granite Spring**	33.05	35	P	P	00 44 50.5	-0.1
	baz=227,SNR=11						
K58A	**Earlville**	33.08	31	P	P	00 44 49.3	-1.6
K58A				IAmb	IAmb	00 45 00.3	
	comp=Z,128nm,1.5s						
K58A	**Earlville**	33.08	31	P	P	00 44 50.7	-0.1
	baz=223						
D46A	**Sault St. Mari**	33.11	18	P	P	00 44 50.7	-0.3
	baz=206,SNR=22						
H53A	**Bobcaygeon**	33.11	26	P	P	00 44 50.3	-0.7
	baz=217,SNR=13						
KHMM	**Horse Mountain**	33.18	324	P	P	00 44 51.0	-0.8
KHMM				IAmb	IAmb	00 45 08.7	
	comp=Z,110nm,1.3s						
YBH	**Yreka Blue Hor**	33.19	326	P	P	00 44 51.6	-0.2
	comp=Z,2.9nm,0.7s,baz=64,slow=9.4,SNR=5.7						
YBH	**Yreka Blue Hor**	33.19	326	IAMs_20	IAMs_20	00 58 16.1	
	comp=Z,10µm,20.0s						
I55A	**Frankford**	33.22	28	P	P	00 44 51.2	-0.7
	baz=218						
L60A	**Shokan**	33.27	34	P	P	00 44 52.3	-0.1
	baz=226						
L04D	**Klamath Falls**	33.31	327	P	P	00 44 53.7	+0.7
	baz=135						
I07A	**Izee**	33.31	332	P	P	00 44 52.3	-0.7
I07A				IAMs_20	IAMs_20	00 59 05.0	
	comp=Z,21µm,19.0s						
K04D	**Chiloquin, OR**	33.31	328	P	P	00 44 53.5	+0.5
	baz=136						
JCC	**Jacoby Creek,**	33.31	323	P	P	00 44 52.2	-0.6
JCC				IAMs_20	IAMs_20	00 58 34.5	
	comp=Z,12µm,20.0s						
PECO	**Prince Edward**	33.31	29	P	P	00 44 52.0	-0.8
E48A	**Lockeyer**	33.34	21	P	P	00 44 52.9	-0.1
	baz=209,SNR=14						
EGMT	**Eagleton**	33.37	346	P	P	00 44 52.9	-0.4
EGMT				IAMs_20	IAMs_20	00 57 54.9	
	comp=Z,11µm,22.0s						
EGMT	**Eagleton**	33.37	346	P	P	00 44 54.1	+0.8
	baz=160,SNR=18						
J57A	**Williamstown**	33.39	30	P	P	00 44 52.8	-0.6
J57A				IAmb	IAmb	00 45 02.7	
	comp=Z,96nm,1.2s						
J57A	**Williamstown**	33.39	30	P	P	00 44 53.1	-0.4
	baz=222,SNR=9.8						
MSO	**Missoula**	33.43	340	P	P	00 44 54.6	+0.6
MSO				IAmb	IAmb	00 45 01.5	
	comp=Z,155nm,1.8s						
MSO	**Missoula**	33.43	340	P	P	00 44 54.8	+0.8
	baz=152						
DELO	**Deloro Mine**	33.48	27	IAmb	IAmb	00 44 60.0	
	comp=Z,88nm,1.3s						
KSCT	**Kent School, K**	33.49	35	IAmb	IAmb	00 45 03.0	
	comp=Z,79nm,1.1s						
K59A	**Cooperstown**	33.49	32	P	P	00 44 54.3	-0.1
	baz=224						

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YLE   Yale              33.52  36  P        P        00 44 54.9 +0.3
YLE                                IAmb     IAmb     00 45 05.8
      comp=Z,112nm,1.2s
J05D  Fort Rock, OR     33.53 329  P        P        00 44 55.8 +0.9
      baz=137
G53A  Haliburton        33.53  26  P        P        00 44 53.5  -1.3
      baz=216,SNR=7.9
D47A  Chapleau          33.54  19  P        P        00 44 54.4  -0.4
      baz=207
M62A  Hamden            33.63  36  P        P        00 44 55.3  -0.3
      baz=228
SABA  Saba              33.66  82 eP        P        00 44 55.0  -1.1
F51A  Arnstein          33.68  23  P        P        00 44 55.0  -1.0
      baz=213
J58A  Remsen            33.70  31  IAmb     IAmb     00 45 04.8
      comp=Z,180nm,1.8s
J58A  Remsen            33.70  31  P        P        00 44 55.9  -0.3
      baz=223
H55A  Tweed             33.70  28  P        P        00 44 55.1  -1.1
      baz=219
KRMB  Red Mountain      33.70 324  P        P        00 44 56.0  -0.4
KRMB                               IAmb     IAmb     00 45 12.7
      comp=Z,162nm,1.5s
PINE  Pine Mountain     33.76 330  IAMs_20  IAMs_20  00 59 19.1
      comp=Z,13µm,22.0s
L61A  Hillsdale 1, H    33.77  34  P        P        00 44 56.8   0.0
      baz=227
F52A  Sundridge         33.80  24  P        P        00 44 55.7  -1.3
      baz=214
SMRT  St. Maarten       33.80  81 eP        P        00 44 54.0  -3.4
F10A  Beach Ranch, E    33.87 336  P        P        00 44 57.9 +0.2
F10A                               IAmb     IAmb     00 45 01.3
      comp=Z,122nm,1.2s
K60A  Five Rivers En    33.88  33  P        P        00 44 58.1 +0.3
      baz=226
SEUS  St. Eustatius     33.91  82 eP        P        00 44 54.0  -4.3
HUMO  Hull Mountain     33.92 327  P        P        00 44 58.0  -0.2
HUMO                               IAMs_20  IAMs_20  00 57 51.6
      comp=Z,10µm,21.0s
J04D  Umpqua Nationa    33.93 328  P        P        00 44 59.4 +0.9
      baz=136,SNR=14
I57A  Carthage          33.94  30  P        P        00 44 57.4  -0.9
      baz=222
G54A  Lake Saint Pet    33.98  26  P        P        00 44 57.7  -0.9
      baz=217,SNR=8.8
G08A  Pilot Rock        34.02 334  P        P        00 44 58.4  -0.7
G08A                               IAmb     IAmb     00 45 06.3
      comp=Z,190nm,1.8s
G08A                               IAMs_20  IAMs_20  00 58 29.7
      comp=Z,19µm,19.0s
D48A  Paudash Townsh    34.07  20  P        P        00 44 58.8  -0.6
      baz=209,SNR=24
TRY   Troy              34.08  33  P        P        00 44 58.0  -1.5
TRY                                IAmb     IAmb     00 45 12.8
      comp=Z,168nm,1.8s
M63A  Gales Ferry       34.08  37  P        P        00 44 59.6 +0.1
      baz=230
I58A  Old Forge         34.10  31  P        P        00 44 59.4  -0.3
      baz=223,SNR=16
PLVO  Plevna            34.13  27  P        P        00 44 57.4  -2.5
L62A  Suffield          34.15  35  P        P        00 44 60.0  -0.1
      baz=228
SKI   Saint Kitts       34.15  82 eP        P        00 44 58.8  -1.7
SKI   Saint Kitts       34.15  82  P        P        00 45 00.2  -0.2
SKI                                MLR      MLR
      comp=Z,7µm,22.0s
SKI   Saint Kitts       34.15  82  P        P        00 45 00.2  -0.2
H56A  Elgin             34.16  29  P        P        00 44 59.6  -0.6
      baz=220,SNR=9.9
J59A  Piesco            34.17  32  P        P        00 45 00.1  -0.2
      baz=224,SNR=6.2
K61A  Williamstown      34.25  34  P        P        00 45 01.5 +0.5
      baz=226,SNR=12
D49A  Beulah Townshi    34.30  21  P        P        00 45 00.9  -0.5
      baz=210,SNR=11
ULM   Lac du Bonnet     34.31   3  P        P        00 45 00.8  -0.6
      comp=Z,30nm,1.2s,baz=187,slow=8.5,SNR=29
ULM                                LR       LR       00 59 24.1
      comp=Z,8µm,18.6s,baz=186,slow=37
ULM   Lac du Bonnet     34.31   3  IAmb     IAmb     00 45 07.1
      comp=Z,173nm,1.6s
ULM                                IAMs_20  IAMs_20  00 59 50.4
      comp=Z,14µm,21.0s
KBO   Bosley Butte      34.34 325  P        P        00 45 02.5 +0.6
E51A  G1948 Merrick     34.35  23  P        P        00 45 01.1  -0.6
      baz=213,SNR=14
JTMT  Jette             34.35 341  IAmb     IAmb     00 45 09.3
      comp=Z,208nm,1.8s
I05D  Terrebonne, OR    34.36 330  P        P        00 45 02.5 +0.5
      baz=138
K02D  Willamette Mer    34.36 326  P        P        00 45 01.9  -0.1
      baz=133
L61B  Northampton       34.42  35  P        P        00 45 02.4  -0.1
      baz=228
ALGO  Algonquin Park    34.44  25  P        P        00 45 01.6  -1.0
      baz=216
G55A  Calabogie         34.46  27  P        P        00 45 01.8  -0.9
      baz=219,SNR=9.6
H57A  Richville         34.47  30  P        P        00 45 02.5  -0.3
      baz=222,SNR=11
E52A  Mattawa           34.47  24  P        P        00 45 01.8  -1.1
      baz=215
QUA2  Belchertown       34.48  35  P        P        00 45 02.2  -0.8
I04A  Tendick Farm,     34.48 329  P        P        00 45 03.3 +0.3
      baz=136
ACCN  Adirondack Com    34.54  33  P        P        00 45 02.6  -0.8
J60A  Lant Hill Farm    34.57  33  P        P        00 45 04.1 +0.3
      baz=226
L63A  North Scituate    34.63  36  P        P        00 45 04.0  -0.3
      baz=230
BBSR  BB Station        34.64  56  IAMs_20  IAMs_20  00 57 56.0
      comp=Z,10µm,21.0s
M64A  Tiverton          34.66  37  P        P        00 45 05.1 +0.6
      baz=231
NCB   Newcomb           34.67  31  P        P        00 45 03.4  -1.3
E09A  Wood Farm, Sta    34.67 336  P        P        00 45 04.7 +0.1
BRYW  Bryant College    34.70  36  IAMs_20  IAMs_20  01 01 27.9
      comp=Z,8µm,21.0s
MLYT  Lee's Yard        34.71  84 eP        P        00 45 02.9  -2.4
G06A  Carlson Farm,     34.71 332  P        P        00 45 05.8 +0.8
G06A                               IAmb     IAmb     00 45 12.5
      comp=Z,121nm,1.8s
I59A  Olmsteadville     34.72  32  P        P        00 45 04.8  -0.3
      baz=224,SNR=7.3
D50A  G1974 Best Tow    34.75  22  P        P        00 45 04.3  -1.0
      baz=212,SNR=6.4
K62A  Royalston         34.81  35  P        P        00 45 04.8  -1.0
K62A  Royalston         34.81  35  P        P        00 45 05.6  -0.2
      baz=228
J01E  Myrtle Point      34.82 326  P        P        00 45 07.2 +1.3
      baz=133
KEBM  Edson Butte       34.84 326  P        P        00 45 06.8 +0.6
KEBM                               IAMs_20  IAMs_20  01 00 51.0
      comp=Z,12µm,18.0s
D51A  Lot 18 Range I    34.86  23  P        P        00 45 05.3  -0.8
      baz=213,SNR=7.6
I03D  Drain, OR         34.89 328  P        P        00 45 06.8 +0.3
      baz=135
F07A  Phinny Hill Vi    34.91 333  P        P        00 45 06.5  -0.2
E53A  Dumoine, Ponti    34.95  25  P        P        00 45 06.3  -0.6
      baz=216,SNR=10
NNA   Nana              34.97 141  P        P        00 45 08.1 +0.6
NNA                                pmax     pmax
      comp=Z,59nm,1.5s
NNA   Nana              34.97 141  P        P        00 45 08.1 +0.6
NNA   Nana              34.97 141  IAMs_20  IAMs_20  00 56 02.0
      comp=Z,10µm,21.0s
LONY  Lake Ozonia       34.97  30  P        P        00 45 06.4  -0.8
LONY                               IAmb     IAmb     00 46 07.7
      comp=Z,104nm,0.9s
LONY  Lake Ozonia       34.97  30  P        P        00 45 06.8  -0.5
      baz=223
M65A  Busby, Falmout    34.99  38  P        P        00 45 07.0  -0.3
M65A                               IAmb     IAmb     00 45 54.4
      comp=Z,229nm,1.7s
M65A                               IAMs_20  IAMs_20  01 01 16.6
      comp=Z,9µm,18.0s
M65A  Busby, Falmout    34.99  38  P        P        00 45 07.1  -0.3
      baz=231
H58A  Gabriels          35.02  31  P        P        00 45 07.0  -0.6
      baz=223,SNR=7.7
H04A  Detroit Lake      35.02 330  P        P        00 45 07.4  -0.3
H04A                               IAmb     IAmb     00 45 15.9
      comp=Z,186nm,1.5s
E08A  Dider Farm, El    35.02 335  P        P        00 45 07.1  -0.5
E08A                               IAMs_20  IAMs_20  00 58 49.2
      comp=Z,15µm,20.0s
ANWB  Willy Bob         35.04  82 eP        P        00 45 04.8  -3.3
ANWB  Willy Bob         35.04  82  P        P        00 45 06.4  -1.7
ANWB                               IAmb     IAmb     00 45 21.1
      comp=Z,210nm,1.6s
I60A  Shoreham          35.05  32  P        P        00 45 07.7  -0.2
      baz=225
F55A  Otter Lake        35.07  27  P        P        00 45 07.1  -1.0
      baz=219
HRV   Adam Dziewonsk    35.08  35  P        P        00 45 07.4  -0.7
HRV                                pmax     pmax
      comp=Z,47nm,1.1s
HRV                                MLR      MLR
      comp=Z,6µm,21.0s
HRV   Adam Dziewonsk    35.08  35  P        P        00 45 07.4  -0.7
HRV   Adam Dziewonsk    35.08  35  P        P        00 45 07.7  -0.4
      baz=229
J61A  Chester           35.09  34  P        P        00 45 09.2 +0.9
      baz=227
L64A  Middleborough     35.12  37  P        P        00 45 09.6 +1.1
      baz=231
WES   Weston            35.13  36  P        P        00 45 05.9  -2.7
WES                                pmax     pmax
      comp=Z,54nm,1.4s
WES                                MLR      MLR
      comp=Z,7µm,22.0s
WES   Weston            35.13  36  P        P        00 45 05.9  -2.7
G57A  Newington         35.14  29  P        P        00 45 08.0  -0.6
      baz=222,SNR=8.5
HAWA  Hanford           35.14 334  P        P        00 45 08.4  -0.2
HAWA                               IAMs_20  IAMs_20  00 58 07.3
      comp=Z,10µm,22.0s
H04D  Lebanon           35.17 329  P        P        00 45 11.2 +2.3
      baz=136
BCX   Boston College    35.18  36  P        P        00 45 08.7  -0.4
E54A  Lac Daplat, Po    35.19  26  P        P        00 45 08.4  -0.7
      baz=217,SNR=13
K63A  Dunstable         35.21  35  P        P        00 45 10.2 +0.9
      baz=229
E07A  Sunnyside         35.41 334  P        P        00 45 11.5 +0.5
E07A                               IAMs_20  IAMs_20  00 59 13.4
      comp=Z,15µm,19.0s
WALA  Waterton Lakes    35.41 342  P        P        00 45 09.7  -1.4
WALA                               IAmb     IAmb     00 45 18.7
      comp=Z,127nm,1.4s
J62A  Henniker          35.41  34  P        P        00 45 12.0 +1.0
      baz=228
H59A  Cadyville         35.42  31  P        P        00 45 11.0  -0.1
      baz=224,SNR=7.9
HNH   Hanover           35.48  33  P        P        00 45 10.7  -1.0
HNH                                IAmb     IAmb     00 45 23.6
      comp=Z,108nm,1.6s
D53A  Lac Vacive, Po    35.50  25  P        P        00 45 10.8  -0.9
D53A  Lac Vacive, Po    35.50  25  P        P        00 45 11.7   0.0
      baz=216,SNR=8.0
COR   Corvallis         35.50 329  P        P        00 45 11.9 +0.1
COR                                pmax     pmax
      comp=Z,302nm,1.6s
COR                                MLR      MLR
      comp=Z,13µm,20.0s
COR   Corvallis         35.50 329  P        P        00 45 11.8 +0.1
COR   Corvallis         35.50 329  IAMs_20  IAMs_20  00 59 11.2
      comp=Z,13µm,20.0s
MDPO  Dominica; Chan    35.51  85 eP        P        00 45 18.3 +6.1
MDPV  Dominica, Penn    35.54  85 eP        P        00 45 14.4 +1.9
F05D  White Salmon      35.58 332  P        P        00 45 14.2 +1.7
      baz=140,SNR=11
FRNY  Flat Rock         35.61  31  IAmb     IAmb     00 45 26.5
      comp=Z,191nm,2.0s
G58A  Ormstown          35.61  30  P        P        00 45 12.4  -0.2
      baz=223
DWS   Wesley            35.65  85 eP        P        00 45 12.2  -1.2
FFD   Franklin Falls    35.66  34  P        P        00 45 13.7 +0.5
FFD                                IAmb     IAmb     00 45 55.1
      comp=Z,138nm,1.8s
I61A  Oroboro, Fairl    35.68  33  P        P        00 45 13.7 +0.4
      baz=227
E55A  Montcerf-Lytto    35.68  27  P        P        00 45 12.5  -0.8
      baz=219
NEW   Newport           35.75 338  IAMs_20  IAMs_20  01 01 01.3
      comp=Z,14µm,22.0s
NEW   Newport           35.75 338  P        P        00 45 14.0   0.0
      baz=148,SNR=8.4
C09A  Chrisman Ranch    35.78 337  IAmb     IAmb     00 45 21.7
      comp=Z,237nm,1.8s
C09A                               IAMs_20  IAMs_20  00 59 13.3
      comp=Z,15µm,21.0s
GRHS  Sauteurs          35.79  91 eP        P        00 45 14.2  -0.4
GRGR  Grenville         35.80  91 eP        P        00 45 11.6  -3.1
F57A  Harrington        35.80  29  P        P        00 45 13.8  -0.5
      baz=221
GRSS  Sisters           35.81  91 eP        P        00 45 16.9 +2.1
J63A  Strafford         35.85  35  P        P        00 45 14.8 +0.1
      baz=229
H60A  Morristown        35.86  32  P        P        00 45 14.8  -0.1
      baz=225
FDF   Fort de France    35.89  87  P        P        00 45 15.2  -0.3
FDF                                pmax     pmax
      comp=Z,149nm,1.3s
FDF   Fort de France    35.89  87  P        P        00 45 15.2  -0.3
FDF                                IAmb     IAmb     00 45 24.8
      comp=Z,149nm,1.3s
G03D  McMinnville, O    35.93 330  P        P        00 45 16.3 +0.9
      baz=136
D54A  Lac Fusel, La     35.98  25  P        P        00 45 15.2  -0.7
      baz=217,SNR=9.0
G59A  Clarenceville     35.99  31  P        P        00 45 15.7  -0.2
      baz=224
SVB   Belmont           35.99  89 eP        P        00 45 14.1  -2.3
SVB   Belmont           35.99  89  P        P        00 45 14.7  -1.7
LBNH  Lisbon            36.04  33  IAmb     IAmb     00 45 26.3
      comp=Z,146nm,1.6s
LBNH  Lisbon            36.04  33  P        P        00 45 16.8 +0.4
      baz=227
F04A  Amboy             36.06 331  P        P        00 45 16.3  -0.3
F04A                               IAmb     IAmb     00 45 24.1
      comp=Z,169nm,1.7s
SVCV  St. Vincent, C    36.10  89 eP        P        00 45 15.5  -1.8
I62A  Tamworth          36.10  34  IAmb     IAmb     00 45 23.8
      comp=Z,82nm,1.1s
I62A  Tamworth          36.10  34  P        P        00 45 17.5 +0.5
      baz=228,SNR=10
SLB   Belfond           36.12  88 eP        P        00 45 18.7 +1.3
SLBI  Saint Lucia, B    36.15  88 eP        P        00 45 20.1 +2.5
E56A  St. Veronique     36.20  28  P        P        00 45 17.3  -0.4
      baz=220,SNR=9.5
MCLT  Moule a Chique    36.23  88  P        P        00 45 19.1 +0.7
H61A  Lyndonville       36.24  33  P        P        00 45 18.6 +0.4
      baz=226
SLAC  Saint Lucia, A    36.25  88 eP        P        00 45 17.8  -0.7
LTY   Liberty           36.30 334  P        P        00 45 18.8 +0.1
D55A  Sainte-Anne-du    36.38  27  P        P        00 45 18.8  -0.5
      baz=219,SNR=16
LON   Longmire          36.40 333  P        P        00 45 19.3  -0.2
LON                                pmax     pmax
      comp=Z,157nm,1.9s
LON                                MLR      MLR
      comp=Z,22µm,20.0s
LON   Longmire          36.40 333  P        P        00 45 19.3  -0.2
LON                                IAmb     IAmb     00 45 27.3
      comp=Z,157nm,1.9s
G60A  Masonville        36.42  32  P        P        00 45 19.8 +0.1
      baz=225
VLDQ  Val d'Or          36.44  24  P        P        00 45 18.4  -1.3
VLDQ                               IAmb     IAmb     00 45 20.5
      comp=Z,129nm,1.9s
VLDQ                               IAMs_20  IAMs_20  01 02 55.0
      comp=Z,9µm,21.0s
F04D  Rainier, OR       36.45 331  P        P        00 45 21.2 +1.4
      baz=138
E57A  Chemin Saint G    36.50  29  P        P        00 45 20.0  -0.4
      baz=222,SNR=13
E04D  Cinebar           36.59 332  P        P        00 45 21.9 +0.8
      baz=138
I63A  Otisfield         36.63  34  P        P        00 45 22.4 +1.0
I63A  Otisfield         36.63  34  P        P        00 45 21.4   0.0
      baz=229
B08A  Colville Reser    36.65 336  IAmb     IAmb     00 45 28.9
      comp=Z,147nm,1.6s
B08A                               IAMs_20  IAMs_20  01 01 03.1
      comp=Z,17µm,19.0s
H62A  Milan             36.67  33  P        P        00 45 20.4  -1.4
H62A  Milan             36.67  33  P        P        00 45 22.1 +0.4
      baz=227
D56A  ZEC Mazanza, M    36.71  27  P        P        00 45 21.4  -0.7
      baz=220,SNR=11
F59A  Saint Guilaume    36.74  30  P        P        00 45 22.2  -0.1
      baz=224
D05A  Enumclaw          36.81 333  IAmb     IAmb     00 45 35.4
      comp=Z,109nm,1.2s
D05A                               IAMs_20  IAMs_20  01 00 36.7
      comp=Z,19µm,21.0s
E58A  La Victoria       36.88  29  P        P        00 45 23.3  -0.2
      baz=223,SNR=13
C06D  Leavenworth       36.92 335  P        P        00 45 24.8 +1.0
      baz=142
G61A  St-Isidore-de-    36.96  32  P        P        00 45 24.7 +0.4
      baz=226
TOSP  Speyside          37.03  92 eP        P        00 45 26.6 +1.4
E03A  Lebam             37.05 331  P        P        00 45 25.1 +0.2
E03A                               IAmb     IAmb     00 45 33.9
      comp=Z,265nm,1.5s
E03A                               IAMs_20  IAMs_20  01 01 35.0
      comp=Z,13µm,20.0s
I64A  Boothbay          37.06  35  P        P        00 45 25.9 +0.8
      baz=230
D57A  Chemin Vers le    37.08  28  P        P        00 45 24.8  -0.4
      baz=221,SNR=8.1
D04E  Lakebay           37.15 332  P        P        00 45 27.0 +1.2
      baz=139
F60A  Warwick           37.23  31  P        P        00 45 26.2  -0.3
      baz=225
E59A  St. Maurice       37.32  30  P        P        00 45 27.2   0.0
      baz=224
H63A  New Sharon        37.33  34  P        P        00 45 29.1 +1.7
      baz=229
LSQQ  Lebel-sur-Quev    37.39  23  P        P        00 45 27.2  -0.7
      baz=215
G62A  West of Eustis    37.43  33  P        P        00 45 27.9  -0.4
G62A                               IAmb     IAmb     00 45 41.6
      comp=Z,108nm,1.1s
G62A  West of Eustis    37.43  33  P        P        00 45 28.9 +0.6
      baz=228,SNR=12
WVL   Waterville        37.47  34  P        P        00 45 27.0  -1.5
D03D  Eldon             37.56 332  P        P        00 45 29.4 +0.1
      baz=139
BCHC  Barbados, Cave    37.58  89 eP        P        00 45 35.8 +6.0
D58A  Chemin du LacG    37.59  29  P        P        00 45 29.3  -0.3
      baz=223,SNR=11
B06A  Marblemount       37.63 335  P        P        00 45 29.7  -0.1
BBGH  Gun Hill          37.64  89  IAMs_20  IAMs_20  01 00 50.2
      comp=Z,7µm,19.0s
B05A  Bryant            37.69 334  P        P        00 45 29.9  -0.5
      baz=141,SNR=7.3
F61A  St Evariste       37.71  32  P        P        00 45 30.1  -0.5
      baz=226
MATQ  Matagami          37.72  22  P        P        00 45 29.9  -0.8
      baz=214
BBSP  Saint Philip      37.75  89 eP        P        00 45 34.8 +3.5
H64A  Troy              37.75  35  P        P        00 45 31.2 +0.3
      baz=230
E60A  Ste Agathe de     37.76  31  P        P        00 45 31.0   0.0
      baz=225,SNR=10.0
NLWA  Neilton Lookou    37.81 332  P        P        00 45 31.9 +0.4
NLWA                               IAmb     IAmb     00 45 40.5
      comp=Z,257nm,1.6s
G63A  Kingsbury         37.85  34  P        P        00 45 31.9 +0.1
      baz=229,SNR=11
LATQ  La Tuque          37.85  29  P        P        00 45 31.2  -0.6
LATQ  La Tuque          37.85  29  P        P        00 45 31.6  -0.1
      baz=223
D59A  Saint-Raymond     38.02  30  P        P        00 45 32.9  -0.3
      baz=224
PKME  Peaks-Kenny Pk    38.12  34  P        P        00 45 33.3  -0.7
PKME  Peaks-Kenny Pk    38.12  34  P        P        00 45 34.6 +0.6
      baz=229
E61A  Lac Etchemin      38.28  31  P        P        00 45 35.8 +0.4
      baz=227
A04D  Lummi Island      38.30 334  P        P        00 45 36.1 +0.6
      baz=140,SNR=7.0
H65A  Eastbrook         38.33  35  P        P        00 45 36.1 +0.3
      baz=231
D60A  Saint Jean D’O    38.40  31  P        P        00 45 36.4   0.0
      baz=226
G64A  Maxfield          38.40  34  P        P        00 45 36.5 +0.1
      baz=230
F63A  Nahmakanta, Br    38.51  33  P        P        00 45 37.5 +0.1
      baz=229
PGC   Sidney            38.56 333  IAmb     IAmb     00 45 45.3
      comp=Z,284nm,1.9s
EMMW  East Machias      38.77  36  P        P        00 45 38.6  -0.9
FFC   Flin Flon         38.83 357  P        P        00 45 39.4  -0.5
FFC   Flin Flon         38.83 357  P        P        00 45 39.4  -0.5
FFC                                IAmb     IAmb     00 45 46.5
      comp=Z,242nm,1.9s
H66A  Whiting           38.90  36  P        P        00 45 40.7 +0.1
      baz=232
D61A  St Aubert, Com    38.96  31  P        P        00 45 41.4 +0.4
      baz=226,SNR=9.5
F64A  Sherman           39.01  34  P        P        00 45 41.2  -0.3
F64A  Sherman           39.01  34  P        P        00 45 41.7 +0.1
      baz=230,SNR=8.5
G65A  Princeton         39.02  35  P        P        00 45 41.9 +0.3
G65A  Princeton         39.02  35  P        P        00 45 42.1 +0.5
      baz=232,SNR=7.4
E63A  Oxbow             39.34  33  P        P        00 45 44.1  -0.1
      baz=229,SNR=8.3
GGN   Saint George      39.37  36  P        P        00 45 43.8  -0.8
D62A  Allapoint, All    39.45  32  P        P        00 45 44.3  -0.9
D62A  Allapoint, All    39.45  32  P        P        00 45 45.5 +0.3
      baz=228,SNR=13
LLLB  Lillooet          39.45 336  P        P        00 45 45.4 +0.2
LLLB                               IAmb     IAmb     00 45 52.6
      comp=Z,273nm,1.8s
E64A  Bridgewater       39.65  33  P        P        00 45 46.8   0.0
      baz=230
PQI   Presque Isle      39.71  33  P        P        00 45 46.5  -0.8
D63A  Stockholm         39.90  33  P        P        00 45 49.2 +0.3
      baz=229,SNR=11
LMN   Caledonia Moun    40.96  36  P        P        00 45 57.3  -0.4
LMN                                IAMs_20  IAMs_20  01 04 56.4
      comp=Z,11µm,18.0s
HAL   Halifax           40.98  38  IAMs_20  IAMs_20  01 04 12.0
      comp=Z,9µm,21.0s
BATG  Bathurst New B    41.13  34  P        P        00 45 58.4  -0.7
PTGA  Pitinga           41.38 110  P        P        00 46 01.7 +0.2
      comp=Z,9.5nm,0.8s,baz=295,slow=8.6,SNR=19
PTGA  Pitinga           41.38 110  P        P        00 46 00.8  -0.7
PTGA  Pitinga           41.38 110 eP        P        00 46 00.6  -0.9
GBN   Guysborough       42.63  39  P        P        00 46 10.2  -1.2
SAML  Samuel            42.72 123  P        P        00 46 11.9  -0.6
SAML                               pmax     pmax
      comp=Z,37nm,1.3s
SAML                               MLR      MLR
      comp=Z,3µm,19.0s
SAML  Samuel            42.72 123  P        P        00 46 11.8  -0.6
SAML  Samuel            42.72 123 eP        P        00 46 12.0  -0.6
FCC   Fort Churchill    42.90   3  P        P        00 46 13.0  -0.3
FCC                                pmax     pmax
      comp=Z,204nm,1.7s
FCC   Fort Churchill    42.90   3  P        P        00 46 13.0  -0.3
FCC                                IAmb     IAmb     00 46 20.2
      comp=Z,204nm,1.7s
MNMC  Minye Minye       44.89 140  IAmb     IAmb     00 47 06.0
      comp=Z,94nm,1.4s
PB11  IPOC Station P    45.32 140  IAmb     IAmb     00 47 02.8
      comp=Z,117nm,1.3s
GO01  Chusmiza          45.54 140  P        P        00 46 36.2 +0.7
GO01                               IAmb     IAmb     00 47 11.1
      comp=Z,113nm,1.6s
MOBC  Moresby Island    45.55 332  P        P        00 46 35.1 +0.4
MOBC                               IAmb     IAmb     00 46 42.8
      comp=Z,189nm,1.6s
DIB   Dawson Inlet,     45.81 332  IAMs_20  IAMs_20  01 05 34.8
      comp=Z,8µm,21.0s
SCHQ  Schefferville     45.84  25  P        P        00 46 37.2 +0.3
      comp=Z,41nm,0.9s,baz=232,slow=5.9,SNR=33
SCHQ                               LR       LR       01 08 55.7
      comp=Z,7µm,18.4s,baz=224,slow=40
SCHQ  Schefferville     45.84  25  IAmb     IAmb     00 46 43.5
      comp=Z,142nm,1.1s
PB01  IPOC Station P    46.40 141  P        P        00 46 42.6 +0.8
PB01                               IAmb     IAmb     00 47 11.4
      comp=Z,146nm,1.7s
DRLN  Deer Lake         46.96  36  P        P        00 46 45.1  -0.7
DRLN                               IAmb     IAmb     00 46 52.4
      comp=Z,91nm,1.1s
DRLN                               IAMs_20  IAMs_20  01 06 41.1
      comp=Z,10µm,22.0s
PB04  IPOC Station P    47.01 143  P        P        00 46 47.9 +1.1
PB04                               IAmb     IAmb     00 47 21.5
      comp=Z,116nm,1.4s
CRAG  Craig             47.61 334  P        P        00 46 50.8   0.0
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PB10	**IPOC Station P**	47.70	145	P	P	00 46 52.2	+0.2
PB10				IAmb	IAmb	00 47 15.4	
	comp=Z,99nm,1.4s						
YKA	**Yellowknife Ar**	47.91	350	P	P	00 46 53.3	+0.3
	comp=Z,26nm,1.1s,baz=155,slow=7.4,SNR=52						
YKA				LR	LR	01 08 25.4	
	comp=Z,12µm,19.4s,baz=0.0,slow=38						
WRAK	**Wrangell Islan**	47.93	335	IAMs_20	IAMs_20	01 06 43.7	
	comp=Z,9µm,20.0s						
LVC	**Limon Verde**	47.94	142	P	P	00 46 56.1	+1.9
	comp=Z,5.9nm,0.8s,baz=336,slow=2.8,SNR=7.5						
LVC	**Limon Verde**	47.94	142	P	P	00 46 55.1	+0.9
LVC				pmax	pmax		
	comp=Z,203nm,1.6s						
LVC	**Limon Verde**	47.94	142	P	P	00 46 55.1	+0.9
TAOE	**Nuku Hiva Isla**	48.13	242	*e*S	S	00 53 51.0	-3.0
	comp=Z,2µm,24.8s						
TAOE				*e*LQ	LQ	00 58 21.3	
	comp=Z,4µm,24.9s						
TAOE				*e*LR	LR	01 00 24.6	
	comp=Z,9µm,24.6s,baz=62						
TAOE	**Nuku Hiva Isla**	48.13	242	*e*T	T	01 38 06.9	
	comp=Z,45nm,0.2s						
DLBC	**Dease Lake**	48.50	338	P	P	00 46 59.0	+1.2
GO02	**Mina Guanaco**	49.54	145	P	P	00 47 07.3	+0.9
GO02				IAmb	IAmb	00 47 36.4	
	comp=Z,180nm,1.8s						
SIT	**Sitka**	49.58	334	IAMs_20	IAMs_20	01 06 13.3	
	comp=Z,11µm,20.0s						
CLDB	**Colider**	49.85	120	*e*P	P	00 47 07.0	-1.7
JIS	**Juneau Island**	50.01	336	P	P	00 47 09.5	+0.4
JIS				IAmb	IAmb	00 48 15.9	
	comp=Z,83nm,1.6s						
BESE	**Bessie Mountai**	50.40	336	P	P	00 47 12.3	+0.1
BESE				IAmb	IAmb	00 47 20.6	
	comp=Z,190nm,1.9s						
BESE				IAMs_20	IAMs_20	01 09 41.8	
	comp=Z,10µm,20.0s						
GO03	**Copiap**	51.14	147	IAMs_20	IAMs_20	01 03 41.2	
	comp=Z,5µm,22.0s						
PTCN	**Pitcairn Islan**	51.14	218	IAMs_20	IAMs_20	01 03 01.3	
	comp=Z,4µm,18.0s						
SKAG	**Skagway**	51.17	337	P	P	00 47 17.6	-0.4
SKAG				IAmb	IAmb	00 47 21.3	
	comp=Z,184nm,1.9s						
WHY	**Whitehorse**	51.82	338	P	P	00 47 22.3	-0.7
SALV	**Santo Antonio**	52.67	125	*e*P	P	00 47 29.6	-0.1
HYT	**Haines Junctio**	52.90	337	P	P	00 47 31.9	+0.9
YKU2	**Yakutat**	52.91	335	P	P	00 47 29.4	-1.5
GO04	**Tololo Observa**	52.97	150	P	P	00 47 32.3	+0.3
GO04				IAmb	IAmb	00 48 05.7	
	comp=Z,104nm,1.4s						
GO04				IAMs_20	IAMs_20	01 04 22.2	
	comp=Z,7µm,20.0s						
PCA	**Pinnacle**	53.50	335	P	P	00 47 34.9	-0.5
PUH	**Pauahi**	54.08	283	P	P	00 47 38.8	-1.4
HATHI	**Halema‘uma‘u T**	54.11	283	P	P	00 47 37.5	-3.0
UWE	**Uwekahuna**	54.14	283	P	P	00 47 39.0	-1.8
WRMHI	**West Rim**	54.15	283	P	P	00 47 39.8	-1.0
HLP	**Hilina Pali**	54.17	283	P	P	00 47 41.5	+0.6
MLH	**Mauna Loa**	54.22	283	P	P	00 47 42.2	+0.7
AIN	**Ainahou**	54.30	283	P	P	00 47 41.5	-0.5
BARN	**Barnard Glacie**	54.63	336	P	P	00 47 44.1	+0.3
BALM	**Baldy**	54.89	336	P	P	00 47 45.4	-0.2
BALM				IAmb	IAmb	00 47 55.1	
	comp=Z,142nm,1.6s						
TGL	**Tana Glacier**	54.92	335	P	P	00 47 45.9	+0.1
CRQM	**Cirque**	55.05	335	IAmb	IAmb	00 47 59.1	
	comp=Z,150nm,1.4s						
ROC1	**El Roble**	55.20	152	P	P	00 47 48.6	+0.3
AQDB	**Aquidauana**	55.36	129	*e*P	P	00 47 48.8	-0.5
MCARA	**McCarthy VSAT**	55.36	336	P	P	00 47 49.6	+0.8
MCARA				IAmb	IAmb	00 48 08.2	
	comp=Z,87nm,1.1s						
VRDI	**Verde Repeater**	55.44	335	P	P	00 47 49.9	+0.3
VRDI				IAmb	IAmb	00 47 59.0	
	comp=Z,62nm,1.3s						
PEL	**Peldehue**	55.50	152	P	P	00 47 51.3	+1.2
PEL				pmax	pmax		
	comp=Z,64nm,1.4s						
PEL	**Peldehue**	55.50	152	P	P	00 47 51.3	+1.2
PEL				IAmb	IAmb	00 47 55.4	
	comp=Z,64nm,1.4s						
PEL				IAMs_20	IAMs_20	01 06 17.3	
	comp=Z,7µm,20.0s						
DAWY	**Dawson**	55.67	340	P	P	00 47 50.7	-0.3
DAWY				IAmb	IAmb	00 47 58.3	
	comp=Z,105nm,1.8s						
ARAG	**Araguaiana, MT**	55.68	122	*e*P	P	00 47 51.6	-0.1
MID	**Middleton Isla**	55.70	333	IAMs_20	IAMs_20	01 08 48.1	
	comp=Z,5µm,20.0s						
GLB	**Gilahina Butte**	55.71	336	P	P	00 47 51.7	+0.3
GLB				IAmb	IAmb	00 47 59.7	
	comp=Z,107nm,1.5s						
C36M	**Paulatuk**	55.78	349	P	P	00 47 51.3	-0.3
	baz=150,SNR=9.1						
BCAR	**Beaver Creek A**	55.88	338	P	P	00 47 53.3	+0.8
SMTB	**Santa Maria do**	55.99	113	*e*P	P	00 47 55.4	+1.4
EYAK	**Cordova Ski Ar**	56.02	334	P	P	00 47 54.2	+0.8
EYAK				IAmb	IAmb	00 47 58.3	
	comp=Z,59nm,1.2s						
HIN	**Hinchinbrook I**	56.26	334	P	P	00 47 55.5	+0.3
EPYK	**Eagle Plains**	56.39	343	P	P	00 47 56.7	+0.6
EPYK				IAmb	IAmb	00 48 03.5	
	comp=Z,197nm,1.9s						
EPYK	**Eagle Plains**	56.39	343	P	P	00 47 56.3	+0.2
	baz=134						
FID	**Port Fidalgo**	56.43	334	P	P	00 47 56.4	0.0
FID				IAMs_20	IAMs_20	01 12 18.4	
	comp=Z,8µm,18.0s						
OPA	**Opana**	56.46	286	P	P	00 47 57.0	-0.3
OPA				pmax	pmax		
	comp=Z,508nm,1.8s						
OPA	**Opana**	56.46	286	P	P	00 47 57.0	-0.3
MENT	**Mentasta**	56.52	337	P	P	00 47 56.7	-0.4
MENT				IAmb	IAmb	00 48 05.2	
	comp=Z,162nm,1.9s						
GO05	**Huala**	56.53	154	P	P	00 47 58.1	+0.7
GO05				IAMs_20	IAMs_20	01 06 11.7	
	comp=Z,6µm,20.0s						
C2SB	**Chapadao do Su**	56.54	126	*e*P	P	00 47 59.0	+1.2
EGAK	**Eagle**	56.71	340	P	P	00 47 58.4	0.0
EGAK				IAmb	IAmb	00 48 05.5	
	comp=Z,106nm,1.5s						
GLI	**Glacier Island**	56.76	334	P	P	00 47 59.2	+0.4
GLI				IAmb	IAmb	00 48 05.6	
	comp=Z,66nm,1.2s						
GLI				IAMs_20	IAMs_20	01 11 41.0	
	comp=Z,6µm,19.0s						
INK	**Inuvik**	56.94	345	P	P	00 47 59.7	-0.2
INK				pmax	pmax		
	comp=Z,159nm,1.6s						
INK				MLR	MLR		
	comp=Z,17µm,19.0s						
INK	**Inuvik**	56.94	345	P	P	00 47 59.7	-0.2
INK				IAmb	IAmb	00 48 06.9	
	comp=Z,159nm,1.6s						
DOT	**Dot Lake**	57.05	338	P	P	00 48 00.8	0.0
DOT				IAmb	IAmb	00 48 08.9	
	comp=Z,115nm,1.3s						
DOT				IAMs_20	IAMs_20	01 10 45.7	
	comp=Z,9µm,22.0s						
SCM	**Sheep Creek Mo**	57.34	335	IAmb	IAmb	00 48 33.6	
	comp=Z,126nm,1.6s						
RIDG	**Independent Ri**	57.39	337	P	P	00 48 03.4	+0.1
SEW	**Seward**	57.41	332	P	P	00 48 03.7	+0.4
SEW				IAmb	IAmb	00 48 10.7	
	comp=Z,149nm,1.6s						
KNK	**Knik Glacier**	57.60	334	P	P	00 48 05.9	+1.1
KNK				IAmb	IAmb	00 48 15.9	
	comp=Z,94nm,1.5s						
SML	**Sawmill**	57.74	335	P	P	00 48 06.1	+0.4
SML				IAmb	IAmb	00 48 17.5	
	comp=Z,150nm,1.4s						
KDAK	**Kodiak Island**	57.89	329	P	P	00 48 07.8	+1.1
	comp=Z,7.1nm,0.8s,baz=102,slow=7.9,SNR=3.2						
KDAK	**Kodiak Island**	57.89	329	P	P	00 48 07.8	+1.1
KDAK				pmax	pmax		
	comp=Z,107nm,1.6s						
KDAK	**Kodiak Island**	57.89	329	IAMs_20	IAMs_20	01 11 50.3	
	comp=Z,7µm,18.0s						
KDAK	**Kodiak Island**	57.89	329	IAmb	IAmb	00 48 16.7	
	comp=Z,107nm,1.6s						
BRLK	**Bradley Lake**	57.90	332	P	P	00 48 07.2	+0.3
BRLK				IAMs_20	IAMs_20	01 11 11.5	
	comp=Z,5µm,20.0s						
CPUP	**Villa Florida**	57.93	136	P	P	00 48 07.5	0.0
	comp=Z,4.3nm,1.0s,baz=320,slow=7.7,SNR=7.1						
CPUP	**Villa Florida**	57.93	136	*e*P	P	00 48 07.2	-0.2
CNPM	**China Poot**	57.96	331	P	P	00 48 06.9	-0.4
CNPM				IAmb	IAmb	00 48 09.7	
	comp=Z,131nm,1.6s						
CNPM				IAMs_20	IAMs_20	01 12 28.0	
	comp=Z,5µm,21.0s						
GHO	**Glory Hole Cre**	57.97	334	P	P	00 48 07.7	+0.3
GHO				IAmb	IAmb	00 48 19.1	
	comp=Z,105nm,1.3s						
GHO				IAMs_20	IAMs_20	01 11 12.0	
	comp=Z,8µm,21.0s						
PMR	**Palmer**	57.97	334	P	P	00 48 07.7	+0.5
PMR				pmax	pmax		
	comp=Z,61nm,1.1s						
PMR	**Palmer**	57.97	334	P	P	00 48 07.7	+0.5
PMR				IAmb	IAmb	00 48 15.8	
	comp=Z,61nm,1.1s						
PMR				IAMs_20	IAMs_20	01 12 07.0	
	comp=Z,8µm,18.0s						
RC01	**Rabbit Creek A**	57.99	333	P	P	00 48 07.8	+0.3
RC01				IAmb	IAmb	00 48 19.0	
	comp=Z,52nm,1.2s						
RC01				IAMs_20	IAMs_20	01 12 40.6	
	comp=Z,6µm,19.0s						
DHY	**Denali Highway**	57.99	336	P	P	00 48 07.6	0.0
DHY				IAmb	IAmb	00 48 31.3	
	comp=Z,123nm,2.0s						
OHAK	**Old Harbor**	58.03	328	IAMs_20	IAMs_20	01 13 31.5	
	comp=Z,5µm,19.0s						
HOM	**Homer**	58.20	331	IAMs_20	IAMs_20	01 11 10.5	
	comp=Z,5µm,22.0s						
SII	**Sitkinak Islan**	58.24	327	P	P	00 48 09.5	+0.2
SII				IAmb	IAmb	00 48 19.8	
	comp=Z,97nm,1.3s						
SII				IAMs_20	IAMs_20	01 12 25.8	
	comp=Z,7µm,18.0s						
HDA	**Harding Lake**	58.53	338	P	P	00 48 11.4	+0.2
HDA				IAmb	IAmb	00 48 19.4	
	comp=Z,77nm,1.3s						
HDA	**Harding Lake**	58.53	338	P	P	00 48 11.5	+0.2
	baz=122,SNR=15						
SUA	**Susitna One**	58.59	334	P	P	00 48 12.4	+0.6
SUA				IAmb	IAmb	00 48 20.5	
	comp=Z,117nm,1.2s						
SUA				IAMs_20	IAMs_20	01 13 18.6	
	comp=Z,7µm,19.0s						
PRP	**Porcupine Dome**	58.64	339	P	P	00 48 12.4	+0.3
IL31		58.71	338	P	P	00 48 12.8	+0.4
ILAR	**Eielson Array**	58.71	338	P	P	00 48 13.2	+0.8
	comp=Z,18nm,1.1s,baz=143,slow=4.9,SNR=50						
ILAR				LR	LR	01 15 31.7	
	comp=Z,9µm,18.9s,baz=137,slow=38						
NRS	**Narsarsuaq**	58.71	27	P	P	00 48 12.1	-0.3
NRS				pmax	pmax		
	comp=Z,65nm,1.3s						
NRS	**Narsarsuaq**	58.71	27	P	P	00 48 12.1	-0.3
NRS				IAmb	IAmb	00 48 42.9	
	comp=Z,65nm,1.3s						
RND	**Reindeer**	58.74	336	P	P	00 48 13.1	+0.3
RND				pmax	pmax		
	comp=Z,378nm,1.7s						
RND	**Reindeer**	58.74	336	P	P	00 48 13.1	+0.3
CHIR	**Chirikof Islan**	58.75	326	P	P	00 48 12.8	0.0
BDFB	**Brasilia**	58.78	120	P	P	00 48 14.6	+0.8
	comp=Z,7.4nm,0.8s,baz=285,slow=9.3,SNR=8.7						
BDFB	**Brasilia**	58.78	120	P	P	00 48 13.2	-0.6
BDFB				pmax	pmax		
	comp=Z,121nm,2.0s						
BDFB				MLR	MLR		
	comp=Z,4µm,19.0s						
BDFB	**Brasilia**	58.78	120	P	P	00 48 13.2	-0.6
BDFB				IAmb	IAmb	00 48 33.8	
	comp=Z,121nm,2.0s						
BDFB				IAMs_20	IAMs_20	01 13 22.3	
	comp=Z,4µm,19.0s						
RES	**Resolute Bay**	58.81	1	IAmb	IAmb	00 48 24.4	
	comp=Z,80nm,1.8s						
RES				IAMs_20	IAMs_20	01 13 08.1	
	comp=Z,5µm,18.0s						
CCB	**Clear Creek Bu**	58.98	338	IAmb	IAmb	00 48 16.2	
	comp=Z,61nm,1.6s						
WRH	**Wood River Hil**	58.99	337	IAmb	IAmb	00 48 23.3	
	comp=Z,65nm,1.4s						
ITRB	**Iturama**	59.00	125	*e*P	P	00 48 15.3	+0.2
TRCB	**Terra Rica**	59.03	130	*e*P	P	00 48 15.9	+0.6
POKR	**Poker Plat Res**	59.09	338	P	P	00 48 15.3	+0.2
	baz=122,SNR=9.8						
COLA	**College**	59.11	338	P	P	00 48 15.4	+0.2
COLA				pmax	pmax		
	comp=Z,63nm,1.3s						
COLA	**College**	59.11	338	P	P	00 48 15.4	+0.2
COLA				IAmb	IAmb	00 48 22.1	
	comp=Z,63nm,1.2s						
TCOL	**CIGO, UAF Yank**	59.12	338	P	P	00 48 15.3	+0.1
	baz=122						
SKT	**Skwentna**	59.16	334	IAmb	IAmb	00 48 24.1	
	comp=Z,103nm,1.2s						
TRF	**Thorofare Moun**	59.33	336	P	P	00 48 17.6	+0.7
PCMB	**Pacaembu**	59.37	128	*e*P	P	00 48 18.0	+0.4
BMAR	**Burnt Mountain**	59.44	341	P	P	00 48 17.6	+0.1
KTH	**Kantishna Hill**	59.62	336	IAmb	IAmb	00 48 26.9	
	comp=Z,85nm,1.2s						
SFJD	**Kangerlussuaq**	59.68	20	⇑*i*P	P	00 48 19.2	+0.1
SFJD	**Kangerlussuaq**	59.68	20	⇑*i*P	P	00 48 19.2	+0.1
SFJD	**Kangerlussuaq**	59.68	20	P	P	00 48 19.1	0.0
SFJD				IAmb	IAmb	00 48 26.0	
	comp=Z,80nm,1.2s						
SFJD	**Kangerlussuaq**	59.68	20	IAMs_20	IAMs_20	01 18 21.0	
	comp=Z,4µm,18.0s						
IPMB	**Ipameri, GO**	59.80	122	*e*P	P	00 48 21.1	+0.3
NBPS	**Pedro II - PI**	59.82	105	*e*P	P	00 48 21.8	+0.7
PPLA	**Purkeypile**	59.84	335	P	P	00 48 20.9	+0.5
MLY	**Manley**	60.25	337	P	P	00 48 23.6	+0.4
CHGN	**Chignik**	60.39	326	IAMs_20	IAMs_20	01 11 59.6	
	comp=Z,3µm,19.0s						
PPT	**Papeete**	60.44	239	P	P	00 48 25.2	+0.1
PPT	**Papeete**	60.44	239	P	P	00 48 25.2	+0.1
PPTF	**Pamatai, Papee**	60.44	239	P	P	00 48 25.0	-0.1
PPT2	**Papeete2**	60.45	239	*e*S	S	00 56 36.3	-3.8
	comp=Z,5µm,26.8s						
PPT2				*e*LQ	LQ	01 03 42.4	
	comp=Z,7µm,30.2s						
PPT2				*e*LR	LR	01 06 07.9	
	comp=Z,6µm,25.0s,baz=54						
SVW2	**Sparrevohn**	60.57	332	IAMs_20	IAMs_20	01 14 05.5	
	comp=Z,7µm,18.0s						
PTGB	**Pitanga**	60.59	131	*e*P	P	00 48 26.3	+0.2
ITQB	**Itaqui**	60.63	138	*e*P	P	00 48 26.3	+0.2
CNBA	**Chernabura Isl**	60.63	324	P	P	00 48 25.4	-0.4
CNBA				IAMs_20	IAMs_20	01 13 06.3	
	comp=Z,4µm,20.0s						
ILULI	**Ilulissat**	60.82	17	*i* P	P	00 48 27.4	+0.6
ILULI	**Ilulissat**	60.82	17	*i* P	P	00 48 27.4	+0.6
ILULI	**Ilulissat**	60.82	17	P	P	00 48 27.0	+0.1
ILULI				IAmb	IAmb	00 48 27.8	
	comp=Z,153nm,1.9s						
ILULI				IAMs_20	IAMs_20	01 18 45.9	
	comp=Z,5µm,18.0s						
COLD	**Coldfoot**	61.15	340	P	P	00 48 29.6	+0.5
COLD				IAmb	IAmb	00 48 37.1	
	comp=Z,69nm,1.6s						
BB19B	**Bebedouro**	61.18	125	*e*P	P	00 48 30.4	+0.3
TTA	**Tatalina**	61.45	334	P	P	00 48 30.9	-0.4
TTA	**Tatalina**	61.45	334	P	P	00 48 30.9	-0.4
JANB	**Januaria**	61.63	117	*e*P	P	00 48 34.4	+1.1
FRTB	**Fartura**	61.64	128	*e*P	P	00 48 32.9	-0.3
TOLK	**Toolik Lake Re**	61.68	341	P	P	00 48 33.2	+0.5
	baz=122,SNR=6.6						
IMAR	**Indian Mountai**	61.81	338	P	P	00 48 33.6	0.0
NBPB	**Pedra_Branca-C**	61.96	105	*e*P	P	00 48 35.1	-0.4
PLCA	**Paso Flores**	62.00	156	P	P	00 48 36.5	+1.1
	comp=Z,22nm,1.1s,baz=357,slow=6.9,SNR=15						
PLCA				LR	LR	01 10 08.8	
	comp=Z,4µm,18.2s,baz=360,slow=31						
PLCA	**Paso Flores**	62.00	156	P	P	00 48 36.7	+1.4
PLCA				pmax	pmax		
	comp=Z,35nm,1.2s						
PLCA	**Paso Flores**	62.00	156	P	P	00 48 36.7	+1.4
PLCA				IAmb	IAmb	00 48 39.1	
	comp=Z,34nm,1.1s						
PLCA	**Paso Flores**	62.00	156	*e*P	P	00 48 36.9	+1.6
ITAB	**Concordia**	62.07	133	*e*P	P	00 48 36.1	+0.1
TULEG	**Thule**	62.55	7	IAmb	IAmb	00 48 39.5	
	comp=Z,70nm,1.5s						
NBCL	**Cascavel-CE**	62.70	103	*e*P	P	00 48 41.2	+0.7
FALS	**False Pass**	62.80	324	P	P	00 48 40.0	-0.4
FALS				IAMs_20	IAMs_20	01 13 37.6	
	comp=Z,4µm,19.0s						
KULLO	**Kullorsuaq**	62.84	11	⇑*i*P	P	00 48 40.5	+0.1
	comp=Z,73nm,1.2s						
KULLO	**Kullorsuaq**	62.84	11	⇑*i*P	P	00 48 40.5	+0.1
KULLO				pmax	pmax		
	comp=Z,73nm,1.2s						
CPSB	**Cacapava Do Su**	63.18	137	*e*P	P	00 48 43.8	+0.5
TBI	**Tubuai**	63.38	233	*e*S	S	00 57 13.1	-3.8
	comp=Z,2µm,26.2s						
NBMA	**Muriti-CE**	63.38	107	*e*P	P	00 48 42.9	-2.2
SPB	**Sao Paulo**	63.41	127	P	P	00 48 44.7	-0.2
SPB				IAMs_20	IAMs_20	01 15 17.8	
	comp=Z,3µm,18.0s						
SPB	**Sao Paulo**	63.41	127	*e*P	P	00 48 45.3	+0.4
NBPN	**Ponto Novo - B**	63.42	111	*e*P	P	00 48 45.5	+0.2
VAO	**Valinhos**	63.44	126	*e*P	P	00 48 45.7	+0.4
ANGG	**Ammassalik, Gr**	63.70	24	P	P	00 48 46.1	0.0
PLTB	**Pedras Altas**	63.96	138	*e*P	P	00 48 48.6	+0.2
BSCB	**Bom Sucesso**	64.13	123	*e*P	P	00 48 51.0	+1.1
CNLB	**Canela**	64.23	134	*e*P	P	00 48 51.1	+0.8
NBPA	**Parau_RN**	64.33	105	*e*P	P	00 48 51.9	+0.6
UNV	**Unalaska Valle**	64.41	322	P	P	00 48 51.3	+0.2
PARB	**Paraibuna**	64.67	126	*e*P	P	00 48 54.4	+1.0
NBTA	**Tacaratu-PE**	64.68	108	*e*P	P	00 48 54.0	+0.4
ROSA	**Rosais**	64.82	54	P	P	00 48 53.7	-0.4
OGAUY	**Aigu**	64.98	141	*e*P	P	00 48 56.2	+1.2
NBLI	**Livramento-PB**	65.06	106	*e*P	P	00 48 56.8	+0.7
ESAR	**Angra dos Reis**	65.43	125	*e*P	P	00 48 59.1	+0.9
RCBR	**Riachuelo**	65.49	104	P	P	00 48 59.0	+0.2
RCBR				pmax	pmax		
	comp=Z,106nm,1.8s						
RCBR				MLR	MLR		
	comp=Z,4µm,18.0s						
RCBR	**Riachuelo**	65.49	104	P	P	00 48 59.0	+0.2
RCBR				IAmb	IAmb	00 49 21.2	
	comp=Z,106nm,1.8s						
RCBR	**Riachuelo**	65.49	104	IAMs_20	IAMs_20	01 21 35.2	
	comp=Z,4µm,18.0s						
RCBR	**Riachuelo**	65.49	104	*e*P	P	00 48 59.6	+0.8
NBLA	**Lagarto - SE**	65.65	110	*e*P	P	00 49 00.4	+0.6
NIKH	**Nikolski High**	65.70	321	IAMs_20	IAMs_20	01 18 21.6	
	comp=Z,3µm,18.0s						
NBIT	**Itapeh - BA**	65.79	115	*e*P	P	00 49 01.3	+0.7
SJMB	**Sao Joao De Ma**	65.97	119	*e*P	P	00 49 02.6	+0.9
SUMG	**Summit**	66.10	17	⇑*i*P	P	00 49 02.7	+0.5
	comp=Z,257nm,1.3s						
SUMG	**Summit**	66.10	17	⇑*i*P	P	00 49 02.7	+0.5
SUMG				pmax	pmax		
	comp=Z,260nm,1.3s						
SUMG	**Summit**	66.10	17	P	P	00 49 01.7	-0.6
NBPV	**Pedro Velho**	66.26	105	*e*P	P	00 49 04.7	+1.0
BSFB	**Barra de Sao F**	66.31	119	*e*P	P	00 49 05.0	+1.1
NBAN	**Anadia - AL**	66.52	108	*e*P	P	00 49 06.2	+0.8
SPIA	**Saint Paul Isl**	66.94	326	IAMs_20	IAMs_20	01 16 54.0	
	comp=Z,6µm,19.0s						
CMLA	**Cha da Macela**	66.98	55	P	P	00 49 06.1	-1.9
CMLA				pmax	pmax		
	comp=Z,343nm,1.2s						
CMLA	**Cha da Macela**	66.98	55	P	P	00 49 06.1	-1.9
NBRF	**Rio Formoso -**	67.21	107	*e*P	P	00 49 10.6	+0.7
GAMB	**Gambell**	68.48	333	P	P	00 49 16.7	-0.2
ADK	**Adak**	70.44	320	IAMs_20	IAMs_20	01 22 46.0	
	comp=Z,3µm,19.0s						
DAG	**Danmarks Havn**	72.26	14	⇑*i*P	P	00 49 39.5	-0.4
DAG	**Danmarks Havn**	72.26	14	⇑*i*P	P	00 49 39.5	-0.4
NOR	**Nord**	73.14	9	⇑*i*P	P	00 49 45.2	+0.1
	comp=Z,228nm,1.9s						
NOR	**Nord**	73.14	9	⇑*i*P	P	00 49 45.2	+0.1
NOR				pmax	pmax		
	comp=Z,230nm,1.9s						
PMOZ	**Porto Moniz, M**	74.26	60	*e*LR	LR	01 13 31.6	
	comp=Z,3µm,20.0s						
EFI	**East Falkland**	75.90	155	IAMs_20	IAMs_20	01 18 43.3	
	comp=Z,5µm,19.0s						
BILL	**Bilibino**	77.36	337	⇓*i*P	P	00 50 10.4	+0.8
BILL				pmax	pmax		
	comp=Z,65nm,1.7s						
BILL	**Bilibino**	77.36	337	P	P	00 50 09.6	0.0
BILL				IAmb	IAmb	00 50 16.9	
	comp=Z,76nm,1.3s						
KBS	**Kingsbay**	78.30	11	P	P	00 50 15.3	+0.7
KBS				pmax	pmax		
	comp=Z,99nm,1.3s						
KBS				MLR	MLR		
	comp=Z,5µm,22.0s						
KBS	**Kingsbay**	78.30	11	P	P	00 50 15.3	+0.7
KBS				IAmb	IAmb	00 50 23.2	
	comp=Z,99nm,1.3s						
KBS	**Kingsbay**	78.30	11	IAMs_20	IAMs_20	01 25 38.0	
	comp=Z,5µm,22.0s						
PMAFR	**Mafra**	79.49	52	*e*SKS	SKSac	01 00 35.1	-2.9
LIS	**Lisbon**	79.64	53	*e*P	P	00 50 22.5	-0.2
LIS				AMS	AMS	01 25 52.4	
	comp=E,4µm,25.5s						
LIS	**Lisbon**	79.64	53	*e*P	P	00 50 22.4	-0.2
PCAS	**Casmilo, Conde**	79.85	51	*e*P	P	00 50 25.5	+1.7
	comp=E,150nm,1.5s						
PCAS	**Casmilo, Conde**	79.85	51	*e*SKS	SKSac	01 00 38.8	-1.7
COI	**Coimbra**	79.88	51	P	P	00 50 22.4	-1.6
COI				pmax	pmax		
	comp=Z,158nm,1.8s						
COI	**Coimbra**	79.88	51	P	P	00 50 22.4	-1.6
COI				IAmb	IAmb	00 50 31.3	
	comp=Z,158nm,1.8s						
COI				IAMs_20	IAMs_20	01 20 49.2	
	comp=Z,4µm,20.0s						
PTOM	**Tomar**	80.01	52	*e*P	P	00 50 25.3	+0.6
	comp=Z,75nm,1.6s						
PVIS	**Viseu**	80.16	50	*e*P	P	00 50 24.1	-1.5
	comp=Z,76nm,1.7s						
PVRL	**Vila Real**	80.17	50	*e*P	P	00 50 26.5	+0.9
	comp=Z,56nm,1.8s						
PFVI	**Vila Bisbo**	80.22	54	IAMs_20	IAMs_20	01 23 06.5	
	comp=Z,4µm,19.0s						
PFVI	**Vila Bisbo**	80.22	54	*e*P	P	00 50 31.4	+5.5
PFVI	**Vila Bisbo**	80.22	54	*e*SKS	SKSac	01 00 43.0	-0.2
PNCL	**Nicolau / Gran**	80.24	53	*e*P	P	00 50 33.1	+7.1
PNCL	**Nicolau / Gran**	80.24	53	*e*SKS	SKSac	01 00 42.6	-0.6
PMTG	**Montargil**	80.27	52	*e*P	P	00 50 26.2	+0.1
	comp=Z,77nm,1.8s						
PMTG	**Montargil**	80.27	52	*e*SKS	SKSac	01 00 40.3	-3.1
MORF	**Marmelete**	80.32	54	*e*P	P	00 50 26.1	-0.4
MORF				*e*S	S	01 00 31.9	+0.1
MORF				AMS	AMS	01 25 32.1	
	comp=Z,2µm,18.0s						
MORF	**Marmelete**	80.32	54	*e*P	P	00 50 26.1	-0.4
MORF				*e*S	S	01 00 31.9	+0.1
MORF	**Marmelete**	80.32	54	*e*SKS	SKSac	01 00 41.8	-2.2
MTE	**Manteigas**	80.49	51	*e*P	P	00 50 27.8	+0.4
	comp=Z,58nm,1.6s						
MTE	**Manteigas**	80.49	51	*e*SKS	SKSac	01 00 44.5	-0.6
MTE				*e*SS	SS	01 05 56.5	+11
MTE	**Manteigas**	80.49	51	*e*LR	LR	01 16 07.7	
	comp=Z,3µm,22.0s						
MESJ	**Messejana**	80.54	53	*e*P	P	00 50 27.4	-0.2
MESJ				*e*S	S	01 00 33.9	0.0
MESJ				AMS	AMS	01 27 10.7	
	comp=Z,2µm,27.4s						
MESJ	**Messejana**	80.54	53	*e*P	P	00 50 27.3	-0.2
MESJ				*e*S	S	01 00 33.8	0.0
PCBR	**Castelo Branco**	80.66	51	*e*P	P	00 50 29.2	+1.0
	comp=Z,60nm,1.9s						
MVO	**Moncorvo**	80.70	50	*e*P	P	00 50 29.4	+0.9
	comp=Z,68nm,1.6s						
MVO	**Moncorvo**	80.70	50	*e*SKS	SKSac	01 00 46.6	+0.1
MVO				*e*SS	SS	01 05 59.8	+11
MVO	**Moncorvo**	80.70	50	*e*LR	LR	01 16 06.4	
	comp=Z,2µm,16.0s						
PCVE	**Castro Verde**	80.72	54	*e*P	P	00 50 29.4	+0.8
	comp=Z,74nm,1.9s						
PCVE	**Castro Verde**	80.72	54	*e*SKS	SKSac	01 00 46.6	0.0
PBRG	**Braganca**	80.77	49	*e*P	P	00 50 29.7	+0.9
	comp=Z,56nm,2.0s						
PBRG	**Braganca**	80.77	49	*e*SKS	SKSac	01 00 47.8	+0.9
PBEJ	**Beja**	80.77	53	*e*P	P	00 50 30.4	+1.6
	comp=Z,70nm,1.7s						
PESTR	**Estremoz**	80.79	52	*e*SKS	SKSac	01 00 47.7	+0.6
PMRV	**Marv??o**	80.82	52	*e*P	P	00 50 29.9	+0.8
	comp=Z,100nm,1.9s						

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PMRV  Marv??o           80.82  52 eSKS     SKSac    01 00 47.4 +0.1
PMRV  Marv??o           80.82  52 eLR      LR       01 15 31.3
      comp=Z,3µm,20.0s
PBDV  Barranco-do-Ve    80.89  54 eP       P        00 50 29.7 +0.1
      comp=Z,160nm,1.6s
PBDV  Barranco-do-Ve    80.89  54 eSKS     SKSac    01 00 49.4 +1.5
PVAQ  Vaqueiros         81.03  54  IAMs_20 IAMs_20  01 24 17.7
      comp=Z,2µm,19.0s
PVAQ  Vaqueiros         81.03  54 eP       P        00 50 31.4 +1.2
      comp=Z,127nm,1.6s
PVAQ  Vaqueiros         81.03  54 eSKS     SKSac    01 00 51.0 +2.3
PVAQ                              eSS      SS       01 05 53.1 -0.2
PVAQ  Vaqueiros         81.03  54 eLR      LR       01 15 56.9
      comp=Z,2µm,18.0s
TTIG  Tnine Tigouga,    82.03  61  P       P        00 50 40.0 +4.2
      SNR=6.1
PAB   San Pablo         83.08  51  P       P        00 50 40.5 -0.6
PAB                                pmax    pmax
      comp=Z,110nm,1.6s
PAB   San Pablo         83.08  51  P       P        00 50 40.5 -0.6
PAB                                IAmb    IAmb     00 50 48.6
      comp=Z,110nm,1.6s
PAB   San Pablo         83.08  51  IAMs_20 IAMs_20  01 21 47.7
      comp=Z,3µm,22.0s
ESDC  Sonseca Array     83.33  51  P       P        00 50 43.2 +0.9
      comp=Z,2.5nm,0.8s,baz=299,slow=5.1,SNR=15
ESDC  Sonseca Array     83.33  51  P       P        00 50 41.4 -0.9
ESBB  Sonseca Array     83.33  51  P       P        00 50 41.8 -0.6
ESBB                               IAmb    IAmb     00 51 35.1
      comp=Z,61nm,1.8s
ESBB                               IAMs_20 IAMs_20  01 21 31.5
      comp=Z,3µm,21.0s
OUZM  OUZ               83.34  60  P       P        00 50 44.1 +1.5
      SNR=8.9
TZRR  Tazzarine         84.36  60  P       P        00 50 50.0 +2.1
      SNR=7.7
SEY   Seymchan          84.42 334⇓iP       P        00 50 48.6 +1.3
ZGR   Zagora            84.49  60  P       P        00 50 50.0 +1.5
      SNR=9.4
MDT   Midelt            84.62  58  P       P        00 50 50.2 +1.1
      SNR=8.2
PET   Petropavlovsk     85.02 324  IAMs_20 IAMs_20  01 29 28.4
      comp=Z,2µm,18.0s
ARF   Arif              85.31  59  P       P        00 50 54.2 +1.6
      SNR=8.6
NB2   NORSAR Subarra    85.35  27  P       P        00 50 52.6 +0.5
      comp=Z,23nm,1.7s,baz=301,slow=5.1
NB2   NORSAR Subarra    85.35  27  P       P        00 50 52.6 +0.5
      baz=301,slow=5.1
NOA   NORSAR Array B    85.35  27  P       P        00 50 53.2 +1.1
      comp=Z,1.3nm,0.7s,baz=301,slow=5.0,SNR=3.7
PEA0B Petropavlovsk-    85.53 324  IAmb    IAmb     00 51 01.8
      comp=Z,99nm,1.6s
PEA0B                              IAMs_20 IAMs_20  01 29 43.8
      comp=Z,3µm,20.0s
PETK  Petropavlovsk-    85.53 324  P       P        00 50 53.9 +0.7
      comp=Z,5.5nm,0.8s,baz=91,slow=9.9,SNR=5.4
PETK  Petropavlovsk-    85.53 324  P       P        00 50 52.8 -0.4
PETK  Petropavlovsk-    85.53 324  P       P        00 50 52.8 -0.4
UCC   Uccle             85.64  38  IAmb    IAmb     00 51 00.8
      comp=Z,103nm,1.6s
UCC                                IAMs_20 IAMs_20  01 30 36.4
      comp=Z,3µm,19.0s
CART  Cartagena         86.14  52  IAMs_20 IAMs_20  01 24 25.8
      comp=Z,3µm,21.0s
ARCES ARCESS Array B    86.19  17  P       P        00 50 55.7 -0.4
      comp=Z,5.5nm,0.9s,baz=347,slow=5.0,SNR=4.7
MA2   Magadan           86.55 332⇓eP       P        00 50 58.9 +0.9
MA2                                pmax    pmax
      comp=Z,55nm,1.9s
MA2   Magadan           86.55 332  P       P        00 50 57.9 -0.1
MA2                                IAmb    IAmb     00 51 12.6
      comp=Z,38nm,1.2s
MA2   Magadan           86.55 332  IAMs_20 IAMs_20  01 28 22.0
      comp=Z,3µm,20.0s
TIXI  Tiksi             87.04 347c iP      P        00 50 59.5 -0.7
TIXI                               pmax    pmax
      comp=Z,63nm,2.0s
TIXI  Tiksi             87.04 347  P       P        00 51 00.3 +0.1
TIXI                               IAmb    IAmb     00 51 06.7
      comp=Z,106nm,1.7s
TIXI                               IAMs_20 IAMs_20  01 30 24.2
      comp=Z,4µm,22.0s
WLF   Walferdange       87.12  39  IAmb    IAmb     00 51 08.6
      comp=Z,131nm,2.0s
HOPE  Hope Point        87.42 149  IAMs_20 IAMs_20  01 27 13.8
      comp=Z,3µm,20.0s
SSB   Saint Sauveur     87.64  44  P       P        00 51 03.3 -0.4
SSB                                pmax    pmax
      comp=Z,112nm,2.0s
SSB                                MLR     MLR
      comp=Z,3µm,18.0s
SSB   Saint Sauveur     87.64  44  P       P        00 51 03.3 -0.4
SSB                                IAmb    IAmb     00 51 11.0
      comp=Z,112nm,2.0s
SSB   Saint Sauveur     87.64  44  IAMs_20 IAMs_20  01 33 38.9
      comp=Z,3µm,18.0s
BFO   Black Forest      88.95  40  IAMs_20 IAMs_20  01 32 22.0
      comp=Z,3µm,19.0s
BNI   Bardonecchia      89.14  43  IAMs_20 IAMs_20  01 34 54.3
      comp=Z,4µm,18.0s
STU   Stuttgart         89.30  39  IAMs_20 IAMs_20  01 33 04.3
      comp=Z,3µm,19.0s
H11S1 WAKE ISLAND Hy    89.56 289  T       T        02 30 16.4
      baz=76
H11S2 WAKE ISLAND Hy    89.56 289  T       T        02 30 16.7
      baz=76
H11S3 WAKE ISLAND Hy    89.58 289  T       T        02 30 14.3
      baz=76
APA   Apatity           89.68  17⇑iP       P        00 51 00.0  -13
APA                                pmax    pmax
      comp=Z,7.0nm,1.4s
GRA1  Grafenberg Arr    90.14  38  IAmb    IAmb     00 51 22.9
      comp=Z,65nm,1.7s
GRF   Grafenberg Arr    90.14  38 eP       P        00 51 15.1 -0.2
      comp=Z,248nm,2.8s,baz=289,slow=4.7
GRF                               epP      pP       00 51 21.5 +1.0
      baz=289,slow=4.7
GRF                               ePP      PP       00 54 47.8 -0.5
GRF                               eL       L        01 34 59.8
      comp=Z,4µm,18.7s
TUE   Stuetta           90.31  41  IAMs_20 IAMs_20  01 32 38.3
      comp=Z,4µm,20.0s
DAVA  Damuels           90.32  40 i pP     P        00 51 17.4 +1.0
      comp=Z,29nm,1.6s
DAVA                              i PP     PP       00 54 50.1 +0.1
      comp=Z,11nm,1.9s
CLL   Collm             90.46  36 eP       P        00 51 17.0 +0.3
CLL                               e                 00 51 43.0
CLL                               ePP      PP       00 54 54.0 +3.2
CLL                               ePPP     PPP      00 56 48.0
CLL                               eSKSac   SKSac    01 01 53.0 +5.5
CLL                               ePS      PS       01 03 21.0 +1.3
CLL                               eSS      SS       01 08 15.0 +4.1
CLL                               e                 01 09 18.0
CLL                               eSSS     SSS      01 11 54.0
CLL                               eSSSS             01 15 00.0
CLL                                LmH              01 32 00.0
      comp=N,2µm,21.6s
CLL                                LmH              01 32 00.0
      comp=E,800nm,20.3s
CLL                                LmV              01 42 00.0
      comp=Z,2µm,18.0s
CLL   Collm             90.46  36 eP       P        00 51 17.0 +0.3
CLL                                MLR     MLR
      comp=Z,2µm,18.0s
NKC   Novy Kostel       90.62  37  AMS     AMS      01 34 00.0
      comp=Z,3µm,22.0s
RETA  Reutte            90.78  40 i pP     P        00 51 19.6 +1.1
      comp=Z,17nm,1.6s
RETA                              i PP     PP       00 54 53.1 -0.5
      comp=Z,11nm,1.9s
FETA  Feichten          90.96  40 i pP     P        00 51 20.7 +1.3
      comp=Z,10.0nm,1.4s
FETA                              i PP     PP       00 54 53.1 -2.0
      comp=Z,11nm,1.9s
MOTA  Moosalm           91.06  40 i pP     P        00 51 21.0 +1.2
      comp=Z,14nm,1.2s
MOTA                              i PP     PP       00 54 56.4 +0.5
      comp=Z,14nm,1.7s
SQTA  Sankt Quirin      91.17  40 i pP     P        00 51 21.0 +0.6
      comp=Z,17nm,1.8s
SQTA                              i PP     PP       00 54 58.5 +1.7
      comp=Z,11nm,1.5s
BRG   Berggiesshubel    91.19  36 eP       P        00 51 20.4 +0.3
      comp=Z,16nm,1.5s
BRG                               i                 00 51 26.1
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      comp=Z,22nm,1.7s
BRG                               ePP      PP       00 54 57.9 +1.3
      comp=Z,26nm,1.7s
BRG                                SKS     SKSac    01 01 56.0 +4.3
BRG                                SS      SS       01 08 18.0 -3.4
BRG   Berggiesshubel    91.19  36 eP       P        00 51 20.4 +0.3
BRG                               i                 00 51 26.1
BRG                               e                 00 54 57.9
BRG                                                 01 01 56.0
BRG                                SS      SS       01 08 18.0 -3.4
BRG                                pmax    pmax
      comp=Z,16nm,1.5s
BRG                                pmax    pmax
      comp=Z,22nm,1.7s
BRG                                pmax    pmax
      comp=Z,26nm,1.7s
BRG                                MLR     MLR
      comp=N,1µm,17.7s
BRG                                MLR     MLR
      comp=E,2µm,20.3s
BRG                                MLR     MLR
      comp=Z,2µm,11.8s
FINES FINESS Array B    91.29  23  P       P        00 51 21.1 +0.7
      comp=Z,5.2nm,1.0s,baz=258,slow=7.0,SNR=3.5
FINES                              LR      LR       01 33 14.1
      comp=Z,4µm,21.7s,baz=308,slow=36
WATA  Walderalm         91.35  40 i pP     P        00 51 21.8 +0.6
      comp=Z,19nm,1.5s
WATA                              i PP     PP       00 54 56.6 -1.6
      comp=Z,11nm,2.0s
WTTA  Wattenberg        91.42  40 i PcP    P        00 51 21.9 +0.4
      comp=Z,16nm,1.6s
WTTA                              i PP     PP       00 54 58.9 +0.1
      comp=Z,11nm,1.5s
PVCC  Panska Ves        91.70  36 eSS      SS       01 08 32.5 +3.7
PVCC                               AMS     AMS      01 36 00.0
      comp=Z,3µm,20.1s
KHC   Kasperske Hory    91.77  38 eP       P        00 51 23.7 +0.8
KHC                               ePP      PP       00 55 01.5 +0.2
KHC                               eSKS     SKSac    01 01 58.5 +3.3
KHC                               eSS      SS       01 08 33.5 +3.6
KHC                                AMS     AMS      01 34 40.0
      comp=Z,3µm,17.5s
KHC   Kasperske Hory    91.77  38 eP       P        00 51 23.7 +0.8
KHC                               e                 00 55 01.5
KHC                               e                 01 01 58.5
KHC                               eSS      SS       01 08 33.5 +3.6
KHC                                MLR     MLR
      comp=Z,3µm,17.5s
PRA   Prague            91.83  36  AMS     AMS      01 34 30.0
      comp=Z,4µm,20.2s
VLC   Villacollemand    91.92  43  IAMs_20 IAMs_20  01 32 58.0
      comp=Z,2µm,19.0s
PRU   Pruhonice         91.93  37  AMS     AMS      01 34 30.0
      comp=Z,4µm,18.8s
CTI   Castel Tesino     91.94  41  IAMs_20 IAMs_20  01 34 08.4
      comp=Z,2µm,19.0s
GEC2  GERESS Array S    91.97  38  P       P        00 51 23.5 -0.4
GEC2                               IAMs_20 IAMs_20  01 34 47.7
      comp=Z,4µm,19.0s
GERES GERESS Array B    91.97  38  P       P        00 51 24.7 +0.7
      comp=Z,0.3nm,0.4s,baz=61,slow=3.8,SNR=5.5
GERES                              PP      PP       00 55 00.0 -2.9
      comp=Z,0.7nm,0.8s,baz=311,slow=6.5,SNR=3.6
GERES                              LR      LR       01 34 48.6
      comp=Z,3µm,19.0s,baz=302,slow=37
GERES GERESS Array B    91.97  38  P       P        00 51 23.5 -0.4
GERES GERESS Array B    91.97  38  P       P        00 51 23.5 -0.4
GOPC  GO Pecny, Ondr    92.11  36  AMS     AMS      01 34 40.0
      comp=Z,4µm,19.2s
ABTA  Abfaltersbach     92.18  40 i PcP    P        00 51 24.2 -0.7
      comp=Z,20nm,1.6s
TEOL  Teolo             92.25  42  IAMs_20 IAMs_20  01 36 59.6
      comp=Z,3µm,19.0s
CHVC  Chvalec           92.50  36 eSKS     SKSac    01 02 01.3 +2.1
CHVC                               AMS     AMS      01 33 30.0
      comp=Z,3µm,23.7s
UPC   Upice             92.52  36 eSS      SS       01 08 50.3  +10
KBA   Koelnbreinsper    92.55  39 i PcP    P        00 51 26.6 -0.1
      comp=Z,17nm,1.6s
OSTC  Ostas             92.61  35 eP       P        00 51 27.4 +0.6
OSTC                               AMS     AMS      01 35 40.0
      comp=Z,2µm,12.1s
KLNR  Kaliningrad       92.65  31⇑eP       P        00 51 29.9 +3.1
OSSC  Osservatorio P    92.75  43  IAMs_20 IAMs_20  01 33 01.0
      comp=Z,2µm,20.0s
MOA   Molln             92.76  38 i P      P        00 51 26.6 -0.9
      comp=Z,7.1nm,1.7s
MOA                               i PP     PP       00 55 10.9 +1.8
      comp=Z,13nm,1.4s
DPC   Dobruska-Polom    92.77  36 eSS      SS       01 08 43.6 -0.6
DPC                                AMS     AMS      01 38 50.0
      comp=Z,3µm,17.3s
TREC  Trest             92.80  37  AMS     AMS      01 36 30.0
      comp=Z,5µm,19.9s
MYKA  Terra Mystica     92.93  40 i pP     P        00 51 29.7 +1.3
      comp=Z,8.9nm,1.1s
MYKA                              i PP     PP       00 55 12.9 +2.4
KRLC  Kraliky           93.16  36  AMS     AMS      01 38 50.0
      comp=Z,3µm,18.8s
TRI   Trieste           93.42  41  IAMs_20 IAMs_20  01 35 42.4
      comp=Z,2µm,19.0s
VRAC  Vranov            93.43  36 eP       P        00 51 30.3 -0.3
VRAC                              ePP      PP       00 55 13.6 -0.7
KRUC  Moravsky          93.44  37 eP       P        00 51 30.4 -0.2
KRUC                              ePP      PP       00 55 13.1 -1.2
OBKA  Obir              93.54  40 i PcP    P        00 51 31.2  0.0
      comp=Z,14nm,1.5s
OBKA                              i PP     PP       00 55 15.4  0.0
      comp=Z,15nm,1.6s
YAK   Yakutsk           93.60 339 eP       P        00 51 30.8 -0.2
YAK                               e*PP     sP       00 51 38.3 +0.2
YAK                               e                 00 55 17.3
YAK                               eS       SKSac    01 02 04.8 +0.1
YAK                                pmax    pmax
      comp=Z,11nm,1.0s
YAK                                pmax    pmax
      comp=E,4.0nm,0.9s
YAK                                pmax    pmax
      comp=Z,263nm,3.9s
YAK                                pmax    pmax
      comp=N,48nm,1.9s
YAK                                pmax    pmax
      comp=E,86nm,3.3s
YAK                                smax    smax
      comp=E,556nm,5.9s
YAK                                smax    smax
      comp=N,613nm,5.8s
YAK                                MLR     MLR
      comp=Z,4µm,18.0s
YAK                                MLR     MLR
      comp=E,2µm,14.0s
YAK                                MLR     MLR
      comp=N,2µm,16.0s
CONA  Conrad Observa    93.67  38 i pP     P        00 51 32.9 +1.1
      comp=N,12nm,1.7s
CONA                              i PP     PP       00 55 14.9 -1.4
      comp=N,9.3nm,1.8s
MORC  Moravsky Berou    93.74  36 eP       P        00 51 32.0  0.0
MORC                              ePP      PP       00 55 16.2 -0.5
MORC  Moravsky Berou    93.74  36  IAmb    IAmb     00 51 39.2
      comp=Z,56nm,2.0s
MORC                               IAMs_20 IAMs_20  01 34 23.3
      comp=Z,2µm,20.0s
SOKA  Soboth            93.76  39 i PcP    P        00 51 31.9 -0.3
      comp=Z,14nm,1.7s
ARSA  Arzberg           93.79  39 i PP     PP       00 55 18.8 +1.6
      comp=Z,12nm,2.4s
OKC   Ostrava-Krasne    94.05  36 eSKS     SKSac    01 02 12.9 +5.2
OKC                                AMS     AMS      01 34 30.0
      comp=Z,3µm,22.8s
MXZ   Matakaoa Point    94.38 232  IAMs_20 IAMs_20  01 40 43.1
      comp=Z,2µm,18.0s
KEST  Kesra             94.58  51  P       P        00 51 37.5 +1.3
      comp=Z,4.2nm,1.0s,baz=288,slow=9.6,SNR=2.2
KEST  Kesra             94.58  51  IAmb    IAmb     00 51 47.8
      comp=Z,64nm,1.9s
KEST                               IAMs_20 IAMs_20  01 27 53.3
      comp=Z,2µm,22.0s
NKL   Nikolayevsk       94.61 329 eP       P        00 51 36.1 +0.3
NKL                                pmax    pmax
      comp=Z,16nm,1.5s
NKL                                pmax    pmax
      comp=N,4.0nm,1.4s
NKL                                pmax    pmax
      comp=E,2.0nm,1.2s
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AQU   L'Aquila          94.69  44  IAMs_20 IAMs_20  01 37 15.3
      comp=Z,2µm,20.0s
TYV   Tymovskoe         94.85 326 eP       P        00 51 38.5 +1.5
TYV                               eS       S        01 02 52.7 +2.5
TYV                                pmax    pmax
      comp=Z,11nm,1.6s
TYV                                pmax    pmax
      comp=Z,200nm,5.2s
TYV                                smax    smax
      comp=E,2µm,10.2s
NRIK  Noril'sk          94.87 358  P       P        00 51 37.1 +0.4
      comp=E,1.1nm,0.4s,baz=25,slow=4.7,SNR=7.5
NRIK                               LR      LR       01 36 35.0
      comp=E,3µm,21.3s,baz=44,slow=37
NRIK  Noril'sk          94.87 358 eP       P        00 51 36.4 -0.3
VYHS  Vyhne             95.12  36 eP       P        00 51 42.9 +4.6
VYHS  Vyhne             95.12  36 eP       P        00 51 42.9 +4.6
URZ   Urewera           95.49 232  IAMs_20 IAMs_20  01 24 14.3
      comp=Z,2µm,21.0s
TOC7  Torodi Ar. Sit    95.85  75  IAMs_20 IAMs_20  01 33 03.7
      comp=Z,3µm,20.0s
TOB5  Torodi Ar. Sit    95.86  75  IAMs_20 IAMs_20  01 33 03.8
      comp=Z,3µm,20.0s
TOB4  Torodi Ar. Sit    95.87  75  IAMs_20 IAMs_20  01 33 04.0
      comp=Z,3µm,19.0s
TOA0  Torodi Ar. Sit    95.87  75  IAMs_20 IAMs_20  01 33 04.2
      comp=Z,3µm,20.0s
TORD  Torodi Ar. Bea    95.87  75  P       P        00 51 41.8 -0.6
      comp=Z,1.3nm,1.0s,baz=286,slow=3.9,SNR=4.9
TORD                               PP      PP       00 55 32.8 -1.7
      comp=Z,1.8nm,1.1s,baz=291,slow=5.6,SNR=3.6
TORD                               LR      LR       01 33 33.9
      comp=Z,2µm,18.9s,baz=310,slow=35
TOA3  Torodi Ar. Sit    95.87  75  IAMs_20 IAMs_20  01 33 04.2
      comp=Z,3µm,20.0s
TOA2  Torodi Ar. Sit    95.88  75  IAMs_20 IAMs_20  01 33 04.4
      comp=Z,3µm,19.0s
TOB3  Torodi Ar. Sit    95.89  75  IAMs_20 IAMs_20  01 33 04.5
      comp=Z,3µm,20.0s
TOC4  Torodi Ar. Sit    95.89  75  IAMs_20 IAMs_20  01 33 04.5
      comp=Z,3µm,20.0s
TOC2  Torodi Ar. Sit    95.89  75  IAMs_20 IAMs_20  01 33 04.8
      comp=Z,3µm,20.0s
TOC3  Torodi Ar. Sit    95.90  75  IAMs_20 IAMs_20  01 33 04.9
      comp=Z,3µm,20.0s
BLY   Banja Luka        96.00  40  IAMs_20 IAMs_20  01 36 15.8
      comp=Z,3µm,20.0s
BKZ   Black Stump Fm    96.19 231  IAMs_20 IAMs_20  01 26 51.0
      comp=Z,3µm,20.0s
TAM   Tamanrasset       96.22  64  IAmb    IAmb     00 51 51.8
      comp=Z,54nm,2.0s
TAM                                IAMs_20 IAMs_20  01 30 51.4
      comp=Z,2µm,21.0s
KLMR  Klimovskoe        96.42  19 eP       P        00 51 40.7 -3.2
KLMR                              e                 00 55 34.0
KLMR                               SS      SS       01 09 43.5 +8.2
KLMR                               pmax    pmax
      comp=Z,40nm,1.8s
KLMR  Klimovskoe        96.42  19 eP       P        00 51 40.8 -3.2
KLMR                               AMP              00 51 51.3
      comp=Z,40nm,1.8s
KLMR                              ePP      PP       00 55 34.1 -2.9
KLMR                               SS      SS       01 09 43.5 +8.2
KLMR                               SS      SS       01 09 43.5 +8.2
KLMR                               LQ      LQ       01 24 35.8
KLMR                               LQ      LQ       01 24 35.8
KLMR                               LR      LR       01 28 18.1
YUK   Yuzh-Kuril'sk     96.48 319 eP       P        00 51 44.5 -0.1
YUK                               e                 00 55 35.9
YUK                               ePPP     PPP      00 57 39.0
YUK                               eS       SKSac    01 02 20.4 -0.4
YUK                               eSS      SS       01 09 31.0 -6.2
YUK                                pmax    pmax
      comp=Z,517nm,1.3s
YUK                                pmax    pmax
      comp=N,301nm,1.0s
YUK                                pmax    pmax
      comp=E,320nm,1.0s
SGRT  San Giovanni R    96.51  43  IAMs_20 IAMs_20  01 37 02.5
      comp=Z,2µm,20.0s
CORL  Corleone          96.58  48  IAMs_20 IAMs_20  01 31 00.7
      comp=Z,2µm,20.0s
BFZ   Birch Farm        96.78 230  IAMs_20 IAMs_20  01 26 52.3
      comp=Z,3µm,20.0s
YSS   Yuzh-Sakhalins    96.87 323⇑eP       P        00 51 45.2 -1.1
YSS                                pmax    pmax
      comp=Z,3.0nm,0.4s
UZH   Uzhgorod          96.99  35 eP       P        00 51 49.2 +2.4
LVV   L'vov             97.26  33 eP       P        00 51 46.1 -1.9
LVV                               e                 00 55 45.7
LVV                               e                 01 03 02.9
LVV                                MLR     MLR
      comp=Z,2µm,21.0s
LVV                                MLR     MLR
      comp=N,1µm,20.0s
LVV                                MLR     MLR
      comp=E,800nm,21.0s
HIZ   Hauiti            97.26 232  IAMs_20 IAMs_20  01 27 10.3
      comp=Z,2µm,19.0s
PRGR  Permogore         97.60  16 eP       Pdif     00 51 53.4 +4.1
PRGR                               pmax    pmax
      comp=Z,17nm,0.9s
SNZO  South Karori      98.06 229  IAMs_20 IAMs_20  01 25 22.4
      comp=Z,3µm,22.0s
GRNR  Gornyy            98.14 328⇑iP       Pdif     00 51 53.3 +1.3
GRNR                               pmax    pmax
      comp=Z,4.0nm,1.2s
GRNR                               MLR     MLR
      comp=Z,2µm,19.0s
WDD   Wied Dalam        98.36  49  IAMs_20 IAMs_20  01 30 24.1
      comp=Z,2µm,22.0s
TIP   Timpagrande       98.41  45  IAMs_20 IAMs_20  01 42 11.9
      comp=Z,3µm,18.0s
PDG   Podgorica         98.46  42  IAMs_20 IAMs_20  01 38 09.1
      comp=Z,2µm,19.0s
NNZ   Nelson            99.01 230  IAMs_20 IAMs_20  01 27 56.5
      comp=Z,2µm,21.0s
SCTE  Santa Cesarea     99.13  44  IAMs_20 IAMs_20  01 36 29.8
      comp=Z,2µm,20.0s
ERM   Erimo             99.21 318  IAMs_20 IAMs_20  01 37 19.3
      comp=Z,2µm,20.0s
AKASG Malin Array Be    99.38  31  P       Pdif     00 51 57.5  0.0
      comp=Z,0.2nm,0.4s,baz=275,slow=5.0,SNR=5.0
AKASG Malin Array Be    99.38  31  P       Pdif     00 51 57.5  0.0
AKASG                              pmax    pmax
      comp=Z,6.0nm,1.8s
AKASG Malin Array Be    99.38  31  IAmb    IAmb     00 52 03.0
      comp=Z,6.3nm,1.8s
THZ   Tophouse          99.48 229  IAMs_20 IAMs_20  01 26 53.0
      comp=Z,4µm,20.0s
QRZ   Quartz Range      99.55 230  IAMs_20 IAMs_20  01 28 35.8
      comp=Z,2µm,20.0s
LTZ   Lake Taylor      100.16 228  IAMs_20 IAMs_20  01 33 21.9
      comp=Z,3µm,19.0s
DZM   Mont Dzumac      100.51 250 eSKSac   SKSac    01 02 38.4 -3.6
      comp=Z,4µm,45.4s
DZM   Mont Dzumac      100.51 250 eLR      LR       01 24 59.0
      comp=Z,3µm,23.9s
VTS   Vitosha          100.86  40  IAMs_20 IAMs_20  01 40 18.2
      comp=Z,2µm,19.0s
RPZ   Rata Peaks       101.22 228  IAMs_20 IAMs_20  01 32 57.0
      comp=Z,3µm,18.0s
BOD   Bodaibo          101.81 343 eP       Pdif     00 52 05.9 -2.2
BOD                                pmax    pmax
      comp=Z,6.0nm,1.8s
LBZ   Lake Benmore     101.96 227  IAMs_20 IAMs_20  01 27 42.6
      comp=Z,3µm,20.0s
ITM   Ithomi           102.93  45  IAMs_20 IAMs_20  01 43 41.6
      comp=Z,2µm,20.0s
USA0B Ussuriysk Arra   104.60 325  IAMs_20 IAMs_20  01 43 59.2
      comp=Z,2µm,18.0s
MAJO  Matsushiro       105.38 316  IAMs_20 IAMs_20  01 45 45.8
      comp=Z,1µm,19.0s
MJB9  Matsu-Tunnel     105.38 316  IAMs_20 IAMs_20  01 47 00.8
      comp=Z,1µm,18.0s
MDJ   Mudanjiang       105.62 327  IAMs_20 IAMs_20  01 41 09.7
      comp=Z,3µm,20.0s
QSPA  South Pole Qui   105.85 180  IAMs_20 IAMs_20  01 33 48.4
      comp=Z,2µm,19.0s
SNAA  Sanae            106.73 161  IAMs_20 IAMs_20  01 32 01.3
      comp=Z,1µm,21.0s
ILGA  Ilgaz            108.03  36  IAMs_20 IAMs_20  01 44 40.5
      comp=Z,1µm,20.0s
ISP   Isparta          108.18  40  IAMs_20 IAMs_20  01 49 18.5
      comp=Z,2µm,19.0s
ANTO  Ankara           108.27  38  IAMs_20 IAMs_20  01 42 41.0
      comp=Z,2µm,22.0s
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CN2	Changchun	108.34	328	Pdif	Pdif	00 52 36.3	-1.2
CN2				ePP	PP	00 57 10.3	+3.4
CN2				eSS	SS	01 12 20.2	-0.5
CN2				LR	LR		
	comp=Z,2µm,14.0s						
CN2				LR	LR		
	comp=Z,1µm,14.0s						
CN2				LR	LR		
	comp=Z,2µm,22.0s						
BRTR	Keskin Array B	108.86	37	PP	PP	00 57 15.5	+4.4
	comp=Z,2.1nm,1.0s,baz=340,slow=10,SNR=4.6						
RABL	Rabaul	109.84	271	IAMs_20	IAMs_20	01 33 32.9	
	comp=Z,2µm,20.0s						
ZAA0	Zalesovo Array	110.37	358	IAMs_20	IAMs_20	01 47 36.6	
	comp=Z,3µm,20.0s						
ZALV	Zalesovo Beam	110.37	358	PP	PP	00 57 15.0	-6.0
	comp=Z,0.3nm,0.3s,baz=347,slow=5.3,SNR=4.0						
KIV	Kislovodsk	110.61	29	i PKIKP	PKiKP	00 56 47.8	-0.2
KIV				e		00 57 22.1	
KIV				ePS	PS	01 06 54.9	+0.6
KIV				eSS	SS	01 12 50.6	-0.7
KIV				pmax	pmax		
	comp=Z,13nm,1.1s						
KIV				MLR	MLR		
	comp=Z,4µm,21.0s						
KIV	Kislovodsk	110.61	29	IAMs_20	IAMs_20	01 44 23.0	
	comp=Z,2µm,21.0s						
INCN	Inchon	112.08	323	IAMs_20	IAMs_20	01 49 46.4	
	comp=Z,1µm,20.0s						
SONM	Songino Array	112.78	342	PP	PP	00 57 39.9	+1.2
	comp=Z,2.0nm,1.1s,baz=35,slow=4.7,SNR=7.1						
AKH	Akhalkalaki	112.94	30	IAMs_20	IAMs_20	01 49 11.7	
	comp=Z,1µm,20.0s						
MAK	Makhachkala	113.56	27	eP	Pdif	00 52 57.7	-3.0
MAK				e		00 57 40.6	
MAK				e		01 03 28.9	
MAK				ePS	PS	01 07 19.4	-1.7
MAK				pmax	pmax		
	comp=Z,313nm,1.3s						
DL2	Dalian	113.86	327	SS	SS	01 13 40.7	+6.2
GNI	Garni	114.51	30	IAMs_20	IAMs_20	01 50 06.4	
	comp=Z,1µm,19.0s						
AKT	Akhty	114.85	28	ePKIKP	PKPdf	00 56 57.7	+1.5
AKT				pmax	pmax		
	comp=Z,7.0nm,0.1s						
BJT	Baijiatuau	115.73	331	IAMs_20	IAMs_20	01 46 37.5	
	comp=Z,2µm,19.0s						
HHC	Hu-ho-hao-te	117.06	335	ePKP	PKiKP	00 57 01.9	+1.4
HHC				PP	PP	00 58 10.7	+1.6
HHC				AMB	AMB		
	comp=Z,2µm,9.0s						
HHC				LR	LR		
	comp=Z,5µm,19.6s						
HHC				LR	LR		
	comp=Z,3µm,19.0s						
HHC				LR	LR		
	comp=Z,5µm,18.1s						
MKAR	Makanchi Array	117.58	359	PKP	PKPdf	00 57 00.2	-1.0
	comp=Z,0.6nm,0.7s,baz=26,slow=1.9,SNR=6.4						
MKAR				PP	PP	00 58 09.7	-2.5
	comp=Z,1.2nm,0.9s,baz=19,slow=4.4,SNR=4.7						
TSUM	Tsumeb	119.15	103	IAMs_20	IAMs_20	01 47 23.3	
	comp=Z,949nm,19.0s						
SSE	Sheshan	119.75	321	PKP	PKPdf	00 57 02.1	-3.7
SSE				PP	PP	00 58 28.8	+0.8
SSE				SS	SS	01 14 47.2	-4.5
SSE				AMB	AMB		
	comp=Z,150nm,4.4s						
SSE				LR	LR		
	comp=Z,660nm,18.1s						
SSE				LR	LR		
	comp=Z,1µm,18.1s						
SSE	Sheshan	119.75	321	IAMs_20	IAMs_20	01 53 26.9	
	comp=Z,2µm,20.0s						
TOO	Toolangi	120.14	236	IAMs_20	IAMs_20	01 43 29.1	
	comp=Z,1µm,18.0s						
WMQ	Urumqi	120.30	355	ePKP	PKiKP	00 57 07.3	+0.6
WMQ				LR	LR		
	comp=Z,3µm,20.7s						
WMQ				LR	LR		
	comp=Z,2µm,28.9s						
WMQ				LR	LR		
	comp=Z,2µm,23.5s						
WMQ	Urumqi	120.30	355	IAMs_20	IAMs_20	01 51 04.5	
	comp=Z,2µm,19.0s						
NJ2	Nanjing	120.44	323	ePKP	PKPdf	00 57 06.5	-0.6
NJ2				SKS	SKSdf	01 04 14.6	-4.1
NJ2				SKKS	SKKSac	01 05 30.4	-2.6
NJ2				AMB	AMB		
	comp=Z,260nm,5.7s						
NJ2				LR	LR		
	comp=Z,3µm,15.4s						
NJ2				LR	LR		
	comp=Z,2µm,18.3s						
NJ2				LR	LR		
	comp=Z,2µm,21.2s						
SYO	Syowa Base	120.78	164⇑	epPdiff	Pdif	00 53 35.0	+2.9
SYO	Syowa Base	120.78	164⇑	epPKPdf	pPKPdf	00 57 10.0	-1.3
TAS	Tashkent	121.92	11	IAMs_20	IAMs_20	01 56 17.8	
	comp=Z,2µm,20.0s						
GEYT	Alibeck	122.07	22	PKP	PKPdf	00 57 10.3	+0.1
	comp=Z,1.2nm,0.6s,baz=241,slow=3.0,SNR=4.0						
GEYT				PP	PP	00 58 43.1	-0.3
	comp=Z,1.2nm,0.6s,baz=354,slow=1.4,SNR=4.0						
GYA0B	ALIBECK ARRAY	122.07	22	IAMs_20	IAMs_20	01 56 26.5	
	comp=Z,2µm,21.0s						
ASHT	Ashkhabad	122.15	22	IAMs_20	IAMs_20	01 51 53.7	
	comp=Z,3µm,22.0s						
GTA	Gaotai	122.40	343	ePKP	PKiKP	00 57 12.0	+1.0
GTA				PP	PP	00 58 51.8	+6.2
GTA				SKKS		01 05 43.1	
GTA				SS	SS	01 15 28.6	+3.9
GTA				AMB	AMB		
	comp=Z,390nm,9.8s						
GTA				LR	LR		
	comp=Z,2µm,22.5s						
GTA				LR	LR		
	comp=Z,2µm,24.7s						
GTA				LR	LR		
	comp=Z,3µm,20.9s						
STKA	Stephens Creek	123.56	242	PKP	PKiKP	00 57 14.3	+1.0
	comp=Z,5.0nm,0.8s,baz=143,slow=1.8,SNR=6.0						
XAN	Xi'an	123.93	333	PKP	PKPdf	00 57 13.6	-0.2
XAN				PP	PP	00 58 56.4	+0.3
XAN				SKS	SKSdf	01 04 18.1	-7.3
XAN				SKKS	SKKSac	01 05 53.1	-2.5
XAN				SS	SS	01 15 49.3	+4.9
XAN				AMB	AMB		
	comp=Z,730nm,11.5s						
XAN				LR	LR		
	comp=Z,2µm,21.1s						
XAN				LR	LR		
	comp=Z,3µm,16.2s						
XAN				LR	LR		
	comp=Z,3µm,15.2s						
XAN	Xi'an	123.93	333	IAMs_20	IAMs_20	01 58 22.7	
	comp=Z,3µm,22.0s						
YHNB	Yeheng	124.05	315	IAMs_20	IAMs_20	01 52 05.2	
	comp=Z,1µm,19.0s						
WHN	Wuhan	124.09	326	PKP	PKiKP	00 57 15.4	+1.0
WHN				SS	SS	01 15 49.0	+2.2
WHN				LR	LR		
	comp=Z,3µm,13.2s						
WHN				LR	LR		
	comp=Z,2µm,13.5s						
WHN				LR	LR		
	comp=Z,5µm,17.8s						
LZH	Lanzhou	124.17	338	ePKP	PKPdf	00 57 14.7	+0.3
LZH				LR	LR		
	comp=Z,2µm,16.3s						
LZH				LR	LR		
	comp=Z,2µm,18.4s						
LZH				LR	LR		
	comp=Z,3µm,18.9s						
NACB	Ninganchiao	124.23	315	IAMs_20	IAMs_20	01 57 05.3	
	comp=Z,2µm,19.0s						
CHGR	Chuyangaron	124.47	12		PKiKP	00 57 15.3	+0.2
SSLB	Suanglung	124.92	315	IAMs_20	IAMs_20	01 54 52.0	
	comp=Z,2µm,18.0s						
CASY	Casey	126.15	194	IAMs_20	IAMs_20	01 42 45.7	
	comp=Z,2µm,20.0s						
KNMB	Chin-men Tao	126.17	317	IAMs_20	IAMs_20	02 00 12.2	
	comp=Z,2µm,18.0s						
HRA	Herat	126.69	20	IAMs_20	IAMs_20	01 59 48.7	
	comp=Z,2µm,20.0s						
ENH	Enshi	126.81	330	IAMs_20	IAMs_20	01 54 44.1	
	comp=Z,2µm,20.0s						
RAYN	Ar Rayn	127.25	43	IAMs_20	IAMs_20	01 58 37.2	
	comp=Z,1µm,20.0s						
BBOO	Buckleboo	128.19	241	IAMs_20	IAMs_20	01 50 08.8	
	comp=Z,1µm,18.0s						
KBL	Kabul	128.42	13	IAMs_20	IAMs_20	01 57 56.0	
	comp=Z,2µm,22.0s						
FAKI	Fak Fak	128.56	279	IAMs_20	IAMs_20	01 44 24.8	
	comp=Z,2µm,19.0s						
CD2	Chengdu	128.81	335	PKP	PKPdf	00 57 19.1	-4.1
CD2				PP	PP	00 59 27.8	-0.6
CD2				SS	SS	01 16 47.0	+1.7
CD2				AMB	AMB		
	comp=Z,2µm,9.9s						
CD2				LR	LR		
	comp=Z,6µm,16.2s						
WR8	Warramunga Arr	129.69	257	IAMs_20	IAMs_20	01 53 49.3	
	comp=Z,1µm,18.0s						
WR6	Warramunga Arr	129.74	257	IAMs_20	IAMs_20	01 44 40.2	
	comp=Z,1µm,20.0s						
WB0	Warramunga Arr	129.78	257	IAMs_20	IAMs_20	01 45 02.3	
	comp=Z,1µm,21.0s						
WB8	Warramunga Arr	129.79	257	IAMs_20	IAMs_20	01 49 52.7	
	comp=Z,1µm,19.0s						
WR3	Warramunga Arr	129.80	257	IAMs_20	IAMs_20	01 52 48.7	
	comp=Z,1µm,19.0s						
WB4	Warramunga Arr	129.82	257	IAMs_20	IAMs_20	01 44 34.4	
	comp=Z,1µm,20.0s						
WB2	Warramunga Arr	129.83	257	IAMs_20	IAMs_20	01 50 03.9	
	comp=Z,2µm,22.0s						
WR1	Warramunga Arr	129.84	257	IAMs_20	IAMs_20	01 44 33.6	
	comp=Z,1µm,20.0s						
WRA	Warramunga Arr	129.84	257	PKP	PKiKP	00 57 26.7	+0.6
	comp=Z,11nm,1.2s,baz=92,slow=1.2,SNR=6.0						
WRA	Warramunga Arr	129.84	257	PKIKP	PKiKP	00 57 27.4	+1.2
WRA	Warramunga Arr	129.84	257		PKiKP	00 57 27.4	+1.2
WC4	Warramunga Arr	129.84	257	IAMs_20	IAMs_20	01 55 41.7	
	comp=Z,1µm,21.0s						
ASAR	Alice Springs	130.43	252	PKP	PKiKP	00 57 27.8	+0.5
	comp=Z,3.0nm,0.7s,baz=90,slow=2.0,SNR=8.6						
HKPS	Hong Kong Po S	130.45	319	IAMs_20	IAMs_20	02 05 34.3	
	comp=Z,1µm,19.0s						
FURI	Furi	130.85	63	IAMs_20	IAMs_20	01 55 26.7	
	comp=Z,2µm,19.0s						
GYA	Guiyang	131.35	330	PKP	PKiKP	00 57 36.1	+6.9
GYA				PP	PP	01 00 17.6	+32
GYA				SKKS		01 07 04.0	
GYA	Guiyang	131.35	330	SS	SS	01 17 56.5	+39
MTN	Manton Dam	132.03	267	IAMs_20	IAMs_20	01 46 54.4	
	comp=Z,1µm,20.0s						
DAMY	Dhamar	132.35	52	IAMs_20	IAMs_20	02 02 28.8	
	comp=Z,1µm,19.0s						
UOSS	Minazif	132.42	32	IAMs_20	IAMs_20	02 01 37.8	
	comp=Z,1µm,22.0s						
ATD	Arta Tunnel	132.93	57	IAMs_20	IAMs_20	01 53 42.8	
	comp=Z,2µm,20.0s						
KMBO	Kilima Mbogo	133.87	76	PKP	PKiKP	00 57 34.9	+0.1
	comp=Z,1.2nm,0.8s,baz=208,slow=2.2,SNR=5.7						
KMBO	Kilima Mbogo	133.87	76	PKIKP	PKiKP	00 57 34.9	+0.1
KMBO				MLR	MLR		
	comp=Z,2µm,20.0s						
KMBO	Kilima Mbogo	133.87	76	IAMs_20	IAMs_20	01 55 07.3	
	comp=Z,2µm,20.0s						
KMI	Kunming	134.31	333	PKP	PKPdf	00 57 30.7	-3.3
KMI				PP	PP	01 00 05.9	+1.7
KMI				PKS	PKSdf	01 01 06.4	-4.4
KMI				SKS	SKSdf	01 04 38.3	-6.8
KMI				SKKS	SKKSac	01 06 56.8	-4.1
KMI				SS	SS	01 17 52.6	-0.5
KMI				AMB	AMB		
	comp=Z,630nm,6.9s						
KMI				LR	LR		
	comp=Z,1µm,19.9s						
KMI				LR	LR		
	comp=Z,2µm,17.7s						
KMI				LR	LR		
	comp=Z,2µm,19.3s						
KMI	Kunming	134.31	333	IAMs_20	IAMs_20	02 01 00.4	
	comp=Z,2µm,19.0s						
KNRA	Kununurra	134.72	264	IAMs_20	IAMs_20	01 59 45.6	
	comp=Z,1µm,18.0s						
QIZ	Qiongzhong	135.54	320	PKP	PKPdf	00 57 34.6	-1.5
QIZ				PP	PP	01 00 10.1	-2.1
QIZ				SS	SS	01 18 08.4	+0.2
QIZ				AMB	AMB		
	comp=Z,560nm,3.6s						
QIZ				LR	LR		
	comp=Z,1µm,16.5s						
QIZ				LR	LR		
	comp=Z,880nm,13.7s						
QIZ				LR	LR		
	comp=Z,1µm,15.0s						
QIZ	Qiongzhong	135.54	320	IAMs_20	IAMs_20	02 07 25.9	
	comp=Z,1µm,18.0s						
FITZ	Fitzroy Crossi	137.92	260	IAMs_20	IAMs_20	01 49 32.4	
	comp=Z,1µm,21.0s						
SOEI	Soe	138.03	273	IAMs_20	IAMs_20	01 51 50.3	
	comp=Z,1µm,20.0s						
SOCY	Socotra	140.92	46	IAMs_20	IAMs_20	01 59 36.7	
	comp=Z,1µm,22.0s						
CHTO	Chiang Mai	141.51	333	IAMs_20	IAMs_20	02 05 12.1	
	comp=Z,2µm,20.0s						
CMAR	Chiang Mai Arr	141.82	333	PKP	PKPdf	00 57 48.2	+0.5
	comp=Z,1.3nm,0.3s,baz=330,slow=2.7,SNR=11						
CMAR	Chiang Mai Arr	141.82	333	PKIKP	PKPdf	00 57 46.7	-1.0
CMAR	Chiang Mai Arr	141.82	333		PKPdf	00 57 46.7	-1.0
PBKT	Sadao Pong	142.50	329		PKPdf	00 57 50.1	+1.3
PBKT				IAMs_20	IAMs_20	02 08 51.0	
	comp=Z,1µm,20.0s						
SRSP	Sriramsagar	145.22	5	ePKPab	PKPbc	00 57 51.8	-1.4
RPR	Rampur	145.37	4	ePKPab	PKPbc	00 57 52.3	-1.3
CHLP	Challavanipeta	145.71	356	ePKPab	PKPdf	00 57 53.7	-0.7
MORW	Morawa	145.75	242		PKPab	00 57 56.0	+1.0
KLRI	Killari	145.87	9	ePKPbc	PKPdf	00 57 53.7	-1.1
KAD	Karad	146.18	13	i P	PKPbc	00 57 56.3	0.0
GGR	Gangavaram	146.44	2	ePKPbc	PKPdf	00 57 55.5	-0.3
HYBB	Hyderabad (bro	146.74	5	ePKPbc	PKPdf	00 57 56.7	+0.4
HYB	Hyderabad	146.74	5	i PKP	PKPdf	00 57 56.0	-0.3
HYB				e		00 58 48.0	
PVM	Polavaram	147.04	360	ePKPbc	PKPdf	00 57 57.5	+0.8
ABPO	Ambohimpanom	147.08	100	PKP2	PKPab	00 58 00.2	-0.4
ABPO				MLR	MLR		
	comp=Z,1µm,20.0s						
ABPO	Ambohimpanom	147.08	100		PKPab	00 58 00.2	-0.4
ABPO	Ambohimpanom	147.08	100	IAMs_20	IAMs_20	02 01 20.1	
	comp=Z,1µm,20.0s						
JAGI	Jajag, Banyuwa	147.39	279		PKPbc	00 57 59.6	-0.3
MYLAV	Mylavaram	147.53	2	ePKPbc	PKPdf	00 57 58.5	+1.0
NJS	Nagarjunasagar	147.66	4	ePKPbc	PKPdf	00 57 59.1	+1.4
SRLM	Srisailam	148.07	5	ePKPdf	PKPdf	00 57 57.6	-0.9
ADKI	Addanki	148.40	3	ePKPdf	PKPdf	00 57 58.6	-0.4
URV	Uravakonda	149.03	8	ePKPdf	PKPdf	00 57 59.0	-1.1
SKHT	Srikalahasti	150.47	4	ePKPdf	PKPdf	00 58 02.3	0.0
PBA	Port Blair	150.48	337		PKPbc	00 58 08.3	+0.7
MSEY	Mahe Island	152.00	69	IAMs_20	IAMs_20	02 17 56.1	
	comp=Z,2µm,19.0s						
CISI	Cisompet, Garu	153.07	285		PKPbc	00 58 13.3	-0.4
PSI	Prapat	154.73	316	PKIKP	PKPdf	00 58 10.6	+1.8
PSI						00 58 17.4	
PSI						00 58 29.6	
RPSI	Rantau Prapat	154.81	316		PKPdf	00 58 10.6	+1.8
RPSI				PKPbc	PKPbc	00 58 17.4	0.0
RPSI				PKPab	PKPab	00 58 29.6	-2.8
RPSI				IAMs_20	IAMs_20	02 16 24.5	
	comp=Z,1µm,20.0s						
BKNI	Bangkinang	154.94	308	IAMs_20	IAMs_20	02 22 10.4	
	comp=Z,1µm,18.0s						
MNAI	Manna	156.10	296	IAMs_20	IAMs_20	02 19 57.2	
	comp=Z,1µm,22.0s						

IDC 10 00:41:37.9±3.6**,3°.51S**×**134°.62E,h0^{km},mb3.2**/2**,
mb1 3.4**/3**,mb1mx3.3**/21**,mbtmp3.2**/3**,ML2.9**/1**,Error
ellipse: s-maj=168.0km s-min=32.9km az=78.0,Irian
Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.33	181	Pn	Pn	00 45 29.9	+1.1
	0.0nm,0.3s,baz=360,slow=12,SNR=3.0						
ASAR	Alice Springs	20.05	182	P	P	00 46 12.3	-0.5
	0.6nm,0.6s,baz=6.6,slow=12,SNR=5.7						
MKAR	Makanchi Array	67.98	324	P	P	00 52 39.0	0.0
	0.2nm,0.6s,baz=112,slow=7.0,SNR=3.4						

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*HLW **10** 00:44:36.7,27°.70N×36°.88E,h24^{km}±17^{km},Md3.4,Ml3.8*
*GII **10** 00:44:36.0±0.0,27°.18N×36°.09E,h1^{km},MD2.8/4,Mm3.0/2*
ISC 10 00:44:35.5±2.2**,27°.68N**±0°.07×**36°.8E**±0°.1**,h10^{km},n16,
σ1^{s}.42**/25**,Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HDHB	Dhahab	2.16	299	P	Pn	00 45 11.7	+0.2
	baz=298						
HBST	Basata	2.35	311	P	Pn	00 45 14.9	+0.7
	baz=310						
HBST				AMP		00 45 00.0	
	baz=310						
AQBJ	Aqaba	2.53	324	Pn	Pb	00 45 21.1	0.0
EIL	Elat	2.54	322	Pn	Pb	00 45 19.6	-1.6
EIL				Sn	Sb	00 45 53.6	+1.1
HKAT	Jabal Katrina	2.58	290	P	Pn	00 45 17.7	+0.2
	baz=289						
HKAT				S	Sn	00 45 48.7	-0.5
	baz=289						
MBRI	Mt Berech	2.66	323	Pn	Pb	00 45 22.5	-0.7
HRFI	Mount Harif	2.79	328	Pn	Pb	00 45 24.5	-1.0
HRFI				Sn	Sb	00 46 00.6	+0.8
HHRG	Al Ghardaqah	2.87	262	P	Pn	00 45 22.1	+0.7
	baz=259						
HHRG				S	Sn	00 45 55.3	-0.7
	baz=259						
KRMI	Paran Flat	3.01	324	Pn	Pb	00 45 26.5	-2.8
KRMI				Sn	Sb	00 46 06.3	+0.2
PRNI	Paran	3.07	330	Pn	Pb	00 45 29.6	-0.7
PRNI				Sn	Sb	00 46 10.2	+2.3
NADB	Abo Dabab	3.09	221	P	Pn	00 45 25.3	+1.0
	baz=223						
ZFRI	Zfri	3.18	335	Pn	Pb	00 45 31.4	-0.7
ZFRI				Sn	Sb	00 46 13.1	+2.2
GRB	Gharib	3.56	280	P	Pn	00 45 31.2	+0.3
	baz=280						
DAMI2	DAM2	3.66	342	Pn	Pb	00 45 38.6	-1.7
GHAJ	Ghor Haditha	3.76	344	Pn	Pb	00 45 40.5	-1.4
GHAJ				Sn	Sb	00 46 29.5	+2.0
YTIR	Yattir	3.94	339	Pn	Pb	00 45 42.5	-2.6
YTIR				Sn	Sb	00 46 33.9	+1.0

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*IDC **10** 00:49:02.6±2.5,6°.56S×129°.78E,h146^{km}±26^{km},mb3.8/7,
mb1 4.0/11,mb1mx3.8/28,mbtmp4.4/11,Error ellipse:
s-maj=32.2km s-min=13.2km az=72.0*
*NEIC **10** 00:49:03.0±2.9,6°.52S±0°.04×129°.99E±0°.07,h160^{km}±9^{km},
mb4.4/12,Error ellipse: s-maj=10.8km s-min=6.1km
az=102.0*
*DJA **10** 00:49:04.6±0.2,7°S±3°×13°0E±°,h177^{km}±8^{km},M4.4/12,
mB5.0/7,mb4.3/8,MLv4.5/12,Mw(mB)4.4/7*
ISC 10 00:49:02.7±0.5**,6°.56S**±0°.04×**130°.00E**±0°.06**,h150^{km},n55,
σ2^{s}.05**/60**,mb4.4**/11**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.92	138	P	Pn	00 49 41.6	+4.7
SAUI	Saumlaki	1.92	138		Pn	00 49 39.4	+2.5
SAUI				Sn	Sn	00 50 03.2	0.0
BNDI	Bandanaira	2.02	357	P	Pn	00 49 42.1	+3.9
MSAI	Masohi	3.36	341	P	Pn	00 49 58.2	+3.4
AAI	Ambon	3.37	328	P	Pn	00 49 58.2	+3.3
FAKI	Fak Fak	4.25	32	P	Pn	00 50 07.0	+0.6
FAKI	Fak Fak	4.25	32		Pn	00 50 06.9	+0.6
FAKI				Sn	Sn	00 50 53.0	-2.8
NLAI	Namlea	4.38	319	P	Pn	00 50 10.4	+2.4
SIJI	Sorong	5.79	13	P	Pn	00 50 27.0	+0.3
	11nm,0.3s,baz=42,slow=14,SNR=37						
SIJI				S	Sn	00 51 28.7	-3.7
	24nm,0.3s,baz=242,slow=23,SNR=10						
SWI	Sorong	5.79	13	P	Pn	00 50 26.9	+0.2
	0.8nm3µm38nm,0.7s						
SANI	Sanana	6.00	318	P	Pn	00 50 31.9	+2.4
MTN	Manton Dam	6.35	170		Pn	00 50 35.4	+1.3
MTN				Sn	Sn	00 51 43.7	-2.0
SOEI	Soe	6.50	240	P	Pn	00 50 38.2	+1.9
	0.3nm1µm29nm,1.3s						
SOEI	Soe	6.50	240	Pn	Pn	00 50 38.0	+1.7
SOEI				Sn	Sn	00 51 50.1	+0.5
RKPI	Ransiki, Papua	6.52	40	P	Pn	00 50 38.2	+1.8
	2.5nm11µm594nm,0.5s						
BAKI	Biak	8.09	49	P	Pn	00 51 00.3	+2.9
	222nm,1.0s						
EDFI	Ende, Flores	8.52	255	P	Pn	00 51 06.6	+3.4
	714nm6.0nm,0.6s						
LUWI	Luwuk	9.05	307	Pn	Pn	00 51 10.4	+0.1
KNRA	Kununurra	9.15	188		Pn	00 51 11.2	-0.2
MRSI	Marisa	10.65	311	P	Pn	00 51 34.1	+2.6
	928nm58nm,1.0s						
FITZ	Fitzroy Crossi	12.24	200	P	Pn	00 51 50.7	-1.4
	1.8nm,0.3s,baz=32,slow=7.6,SNR=47						
FITZ				S	Sn	00 53 59.3	-8.1
	4.1nm,0.3s,baz=95,slow=20,SNR=11						
FITZ	Fitzroy Crossi	12.24	200		Pn	00 51 51.5	-0.6
WB0	Warramunga Arr	13.81	162		Pn	00 52 10.6	-1.7
WRAB	Tennant Creek	13.95	163	Pn	Pn	00 52 13.2	-0.9
WRA	Warramunga Arr	13.96	163	P	Pn	00 52 13.8	-0.5
	2.5nm,0.3s,baz=346,slow=11,SNR=17						
WRA				S	Sn	00 54 40.2	-8.7
	5.6nm,0.3s,baz=338,slow=22,SNR=12						
WB2	Warramunga Arr	13.96	163	Pn	Pn	00 52 13.0	-1.3
WR0	Warramunga Arr	14.04	162	Pn	Pn	00 52 13.6	-1.5
COEN	Coen	14.90	121	Pn	Pn	00 52 25.4	-0.6
JAGI	Jajag, Banyuwa	15.83	262	Pn	Pn	00 52 34.8	-2.7
JAGI				IAmb	IAmb	00 52 36.8	
	comp=Z,8.1nm,0.6s						
AS31	Alice Springs	17.42	168	P	P	00 52 56.8	+1.1
ASAR	Alice Springs	17.42	168	P	P	00 52 57.4	+1.6
	comp=Z,2.7nm,0.3s,baz=343,slow=9.1,SNR=86						
ASAR				S	S	00 56 04.1	-5.5
	comp=Z,1.2nm,0.3s,baz=352,slow=26,SNR=6.5						
ASAR	Alice Springs	17.42	168	P	P	00 52 57.2	+1.4
PSA00	Pilbara Seismi	17.87	212		P	00 53 01.0	+0.4
PSA00	Pilbara Seismi	17.87	212	P	P	00 53 00.3	-0.4
PSA00				IAmb	IAmb	00 53 18.0	
	comp=Z,5.6nm,0.7s						
CTA	Charters Tower	20.73	132	P	P	00 53 34.4	+2.7
	comp=Z,8.3nm,0.7s,baz=318,slow=9.2,SNR=7.9						
FORT	Forrest	24.17	184	P	P	00 54 04.6	-0.5
FORT				IAmb	IAmb	00 54 06.4	
	comp=Z,13nm,0.7s						
BBOO	Buckleboo	26.72	169	P	P	00 54 28.3	+0.1
BBOO				IAmb	IAmb	00 54 29.0	
	comp=Z,6.5nm,0.7s						
STKA	Stephens Creek	27.42	158	P	P	00 54 35.2	+0.7
	comp=Z,2.6nm,0.3s,baz=336,slow=8.8,SNR=14						
STKA	Stephens Creek	27.42	158	P	P	00 54 35.1	+0.7
CMAR	Chiang Mai Arr	39.45	310	P	P	00 56 17.9	-0.7
	comp=Z,1.2nm,0.6s,baz=132,slow=6.8,SNR=6.8						
WHN	Wuhan	39.82	339	P	P	00 56 25.9	+4.5
USRK	Ussuriysk Ar.	50.55	2	P	P	00 57 45.7	-0.1
	comp=Z,1.0nm,0.5s,baz=190,slow=6.8,SNR=4.7						
SONM	Songino Array	58.02	341	P	P	00 58 40.4	+0.4
	comp=Z,0.3nm,0.3s,baz=166,slow=6.0,SNR=2.7						
SONM	Songino Array	58.02	341	IAmb	IAmb	00 58 46.6	
	comp=Z,1.3nm,1.2s						
KSH	Kashi	67.69	317	P	P	00 59 46.5	+2.4
KSH				pP	pwP	01 00 24.8	+0.1
KSH				PcS		01 04 15.3	
KSH				S	S	01 08 28.4	-1.4
KSH	Kashi	67.69	317	SS	SS	01 12 55.4	+1.3
MK31	Makanchi Array	67.86	327	P	P	00 59 44.7	-0.2
MK31				IAmb	IAmb	00 59 45.4	
	comp=Z,4.5nm,0.7s						
MKAR	Makanchi Array	67.86	327	P	P	00 59 44.8	-0.1
	comp=Z,6.4nm,0.5s,baz=114,slow=8.7,SNR=190						
MKAR	Makanchi Array	67.86	327	P	P	00 59 44.5	-0.4
ZALV	Zalesovo Beam	71.19	334	P	P	01 00 04.0	-1.0
	comp=Z,1.1nm,0.5s,baz=138,slow=6.2,SNR=5.2						
GAR	Garm	71.36	315	P	P	01 00 05.4	-1.2
CHGR	Chuyangaron	72.03	314	P	P	01 00 09.9	-0.8
CHGR				IAmb	IAmb	01 00 10.8	
	comp=Z,6.6nm,0.7s						
KURK	Kurchatov	72.14	329	P	P	01 00 10.2	-0.7
KURK				IAmb	IAmb	01 00 10.7	
	comp=Z,2.3nm,0.8s						
KKAR	Karatay Array	73.01	319	P	P	01 00 15.0	-1.2
TORD	Torodi Ar. Bea	128.72	282	PKP	PKPdf	01 07 52.2	-1.1
	comp=Z,0.2nm,0.5s,baz=151,slow=1.5,SNR=2.9						

MAN 10 00:54:03.6, 5°.83N×125°.22E, h12^{km}, mb4.4, ML3.2, MS3.0, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	General Santos	0.37	313⇑	*e*P	Pg	00 54 11.1	0.0
GSPH				*i* S	Sb	00 54 20.9	+3.0
DDMP	Don Marcelino,	0.56	61	*e*P	Pg	00 54 14.5	-0.1
DDMP				*e*S	Sn	00 54 27.1	+0.4
SKMP	Bagumbayan, Su	0.96	315	*e*P	Pg	00 54 21.3	-0.8
SKMP				*e*S	Sb	00 54 35.6	+0.8
CTBH	Cotabato--PC H	1.68	325⇑	*i*P	Pg	00 54 35.4	-0.6
CTBH				*i* S	Sg	00 54 59.2	+1.4
BUKP	Musuan	2.04	356	*e*P	Pn	00 54 38.8	+1.0
BUKP				*e*S	Sg	00 55 12.4	+3.1
PAGZ	Pagadian	2.71	318	*e*P	Pn	00 54 48.0	+0.9
PAGZ				*e*S	Sn	00 55 20.2	+0.5

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*THE **10** 00:54:18.1, 38°.18N×20°.39E, h8^{km}, ML2.7/3, Error ellipse: s-maj=0.9km s-min=0.5km az=243.0*
*ATH **10** 00:54:18.1, 38°.19N×20°.39E, h9^{km}±1^{km}, ML2.7/4, Error ellipse: s-maj=2.1km s-min=1.1km az=237.0*
ISC 10 00:54:17.8±1.3, **38°.19N**±0°.04×**20°.40E**±0°.05, **h10**^{km}±5^{km}, **n33, σ0^{s}.43**/49, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHV1	Chavriata, Kef	0.01	233	P	Pg	00 54 19.7	+0.2
CHV1				S	Sg	00 54 20.9	+0.3
LXRA	Lixouri, Kepha	0.03	76	P	Pg	00 54 19.6	0.0
LXRA				S	Sg	00 54 20.7	-0.2
LXR1	Lixouri, Cepha	0.04	75	P	Pg	00 54 19.6	0.0
LXR1				S	Sg	00 54 20.6	-0.3
KEF3	Kipouria, Keph	0.04	287	P	Pg	00 54 20.1	+0.4
KEF3				S	Sg	00 54 21.5	+0.5
ARGA	Argostoli. Kep	0.07	103	P	Pg	00 54 20.2	+0.3
KEF4	Livadi, Kephal	0.07	19	P	Pg	00 54 20.3	+0.3
KEF4				S	Sg	00 54 21.7	+0.2
ARG2	Argostoli	0.07	100	P	Pg	00 54 20.2	+0.2
KEF2	Argostoli. Kep	0.08	110	P	Pg	00 54 20.4	+0.3
KEF2				S	Sg	00 54 21.6	0.0
KEF1	Kardakata, Kep	0.10	35	P	Pg	00 54 20.7	+0.2
KEF1				S	Sg	00 54 22.4	+0.2
VLS	Valsamata	0.15	95	P	Pg	00 54 21.4	+0.2
VLS				S	Sg	00 54 23.7	+0.2
	10μm,0.2s						
VLS	Valsamata	0.15	95	P	Pg	00 54 21.4	+0.2
VLS				S	Sg	00 54 23.9	+0.3
VLS				AML	AML	00 54 23.9	
	comp=N,21746μm,0.2s						
VLS				AML	AML	00 54 24.4	
	comp=E,18133μm,0.1s						
KONA	Konidatara, Ke	0.27	31	P	Pg	00 54 23.6	+0.3
KONA				S	Sg	00 54 28.0	+1.0
KONA				AML	AML	00 54 28.2	
	comp=N,3836μm,0.3s						
KONA				AML	AML	00 54 31.5	
	comp=E,2737μm,0.4s						
FSK	Fiskardo	0.30	26	P	Pg	00 54 24.0	+0.2
FSK				S	Sg	00 54 28.7	+0.9
	comp=E,612nm,0.3s						
FSK	Fiskardo	0.30	26	P	Pg	00 54 24.0	+0.2
FSK				S	Sg	00 54 28.8	+0.9
FSK				AML	AML	00 54 34.3	
	comp=N,1866μm,0.5s						
FSK				AML	AML	00 54 36.4	
	comp=E,1464μm,0.5s						
KFL	Anninata	0.32	105	P	Pg	00 54 24.4	+0.3
KFL				S	Sg	00 54 29.5	+1.1
	comp=E,4μm,0.3s						
KFL	Anninata	0.32	105	P	Pg	00 54 24.5	+0.3
KFL				S	Sg	00 54 29.6	+1.1
KFL				AML	AML	00 54 30.0	
	comp=E,10176μm,0.3s						
KFL				AML	AML	00 54 30.4	
	comp=N,4820μm,0.3s						
EVGI	Lefkada island	0.47	25	P	Pg	00 54 27.3	+0.2
EVGI				S	Sb	00 54 35.0	-0.5
EVGI	Lefkada island	0.47	25	P	Pg	00 54 27.4	+0.2
EVGI				S	Sb	00 54 34.9	-0.5
MGNA	Meganis	0.56	34	P	Pg	00 54 28.7	0.0
LKD2	Lefkada island	0.63	19	P	Pg	00 54 30.0	-0.1
LKD2	Lefkada island	0.63	19	P	Pg	00 54 29.9	-0.1
TSLK	Tsoukalades, L	0.66	18	P	Pg	00 54 30.7	+0.1
TSLK	Tsoukalades, L	0.66	18	P	Pg	00 54 30.8	+0.1
VTN	Vitineika	0.68	114	P	Pg	00 54 31.6	+0.6
PDO	Prodromos	0.74	56	P	Pg	00 54 32.1	0.0
PDO	Prodromos	0.74	56	P	Pg	00 54 32.2	0.0
RLS	Riolos of Patr	0.85	99	P	Pg	00 54 34.2	-0.1
PVO	Paravola	0.98	64	P	Pg	00 54 36.7	0.0
PVO	Paravola	0.98	64	P	Pg	00 54 36.8	+0.1
DRO	Drossia	1.06	103	P	Pg	00 54 38.1	-0.2
ANX	Ano Chora	1.26	71	P	Pn	00 54 41.5	-0.2
SERG	Sergoula	1.32	80	P	Pn	00 54 42.0	-0.5
KALE	Kalithea	1.39	81	P	Pn	00 54 42.8	-0.5

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*JMA **10** 01:17:35.6±0.1, 24°.78N×122°.32E, h8^{km}±3^{km}, M2.5*
*TAP **10** 01:17:35.5, 24°.86N×122°.28E, h10^{km}, ML3.1, C*
ISC 10 01:17:35.3±1.0, **24°.83N**±0°.02×**122°.33E**±0°.02, **h10**^{km}±9^{km}, **n59, σ0^{s}.38**/112, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	EOS1	0.33	213	*i* P	Pb	01 17 43.0	-0.4
	baz=217						
EOS1				S	Sb	01 17 48.9	+0.2
	baz=217						
TWB1	Santiao Chiao	0.36	300	*i* P	Pg	01 17 42.3	0.0
	baz=300						
TWB1				S	Sg	01 17 46.8	-0.3
	baz=300						
NTC	Toucheng	0.45	273	P	Pg	01 17 44.5	+0.4
	baz=270						
NTC				*e*S	Sb	01 17 51.2	-1.0
	baz=270						
TIPB	Shuangxi	0.48	287	P	Pg	01 17 44.9	+0.3
	baz=285						
TIPB				*e*S	Sg	01 17 50.9	-0.1
	baz=285						
TWC	Suao	0.49	243	P	Pg	01 17 44.9	+0.1
	baz=239						
TWC				S	Sg	01 17 51.3	+0.1
	baz=239						
ILA	Ilan	0.53	263	*e*S	Sb	01 17 53.9	-0.6
	baz=249						
NWF	Wu-fen Shan	0.55	296	*e*P	Pb	01 17 46.8	-0.3
	baz=294						
NWF				S	Sb	01 17 54.4	-0.7
	baz=294						
WFSB	Wu-fen Shan	0.55	296	*i* P	Pb	01 17 46.8	-0.3
	baz=294						
WFSB				*e*S	Sb	01 17 54.5	-0.5
	baz=294						
TWE	Neicheng	0.61	260	*e*P	Pg	01 17 47.5	+0.4
	baz=249						
TWE				*e*S	Sg	01 17 55.2	+0.1
	baz=249						
SLBB	Yuanshan	0.63	263	P	Pg	01 17 47.5	0.0
	baz=251						
SLBB				*e*S	Sb	01 17 57.1	-0.4
	baz=251						
ENA	Nanau	0.67	233	*i* P	Pg	01 17 48.0	-0.2
	baz=230						
ENA				S	Sg	01 17 56.6	-0.4
	baz=230						
JYNG	Yonagunijimaku	0.68	124	P	Pg	01 17 48.4	0.0
JYNG				S	Sg	01 17 57.4	+0.2
TWA	Mucha	0.69	283	*e*P	Pb	01 17 49.0	-0.4
	baz=281						
TWA				*e*S	Sb	01 17 58.8	-0.3
	baz=281						
ENTT	Nioudou	0.72	255	P	Pg	01 17 49.3	+0.2
	baz=252						
ENTT				*e*S	Sg	01 17 58.5	-0.1
	baz=252						
YOJ	Yonaguni jima	0.72	120	P	Pg	01 17 49.5	+0.3
	baz=120						
YOJ	Yonaguni jima	0.72	120	P	Pg	01 17 49.1	-0.1
YOJ				*e*S	Sg	01 17 58.7	+0.1
NHDH	Xindian Distri	0.74	280	P	Pb	01 17 50.3	0.0
	baz=279						
NHDH				*e*S	Sg	01 17 59.5	+0.3
	baz=279						
NWLT	Wulai	0.75	266	P	Pb	01 17 50.4	-0.1
	baz=256						
NWLT				*e*S	Sg	01 17 59.7	+0.1
	baz=256						
YM01	YM01	0.76	295	*i* P	Pg	01 17 50.2	+0.3
	baz=293						
YM01				S	Sb	01 18 00.6	-0.4
	baz=293						
YM08	YM08	0.76	298	P	Pg	01 17 50.1	+0.2
	baz=297						
YM08				*e*S	Sg	01 18 00.3	+0.5
	baz=297						
YM11	YM11	0.76	296	P	Pg	01 17 50.2	+0.3
	baz=295						
YM11				S	Sb	01 18 00.9	-0.2
	baz=295						
YM05	YM05	0.77	296	P	Pg	01 17 50.4	+0.3
	baz=294						
YM05				*e*S	Sb	01 18 00.9	-0.4
	baz=294						
YM10	YM10	0.77	295	P	Pg	01 17 50.1	0.0
	baz=294						
YM10				S	Sb	01 18 01.1	-0.3
	baz=294						
NDT	Datong Townshi	0.78	253	P	Pb	01 17 50.8	-0.1
	baz=251						
NDT				S	Sb	01 18 01.1	-0.4
	baz=251						
TATO	Taipei	0.78	281	*e*P	Pg	01 17 50.1	-0.1
	baz=279						
TATO				S	Sb	01 18 01.5	0.0
	baz=279						
YM04	YM04	0.79	294	P	Pg	01 17 50.6	+0.1
	baz=293						
YM04				S	Sg	01 18 00.9	+0.2
	baz=293						
YM03	YM03	0.80	296	*e*P	Pg	01 17 50.4	-0.2
	baz=295						
YM03				S	Sb	01 18 02.1	0.0
	baz=295						
TWY	Chenhua	0.80	304	*e*P	Pb	01 17 51.1	-0.2
	baz=290						
TWY				*e*S	Sb	01 18 01.9	-0.1
	baz=290						
ANP	Anpu	0.81	296	*e*P	Pg	01 17 51.2	+0.2
	baz=295						
ANP				S	Sb	01 18 02.3	-0.4
	baz=295						
PCYT	Pengchaiyu	0.83	344	*e*P	Pg	01 17 51.0	-0.3
	baz=345						
TWS1	Kuangyinshan	0.87	288	*e*P	Pb	01 17 52.4	-0.1
	baz=299						
TWS1				*e*S	Sb	01 18 04.7	+0.5
	baz=299						
YHNB	Yeheng	0.88	260	P	Pg	01 17 52.4	+0.1
	baz=252						
YHNB				*e*S	Sg	01 18 03.8	+0.1
	baz=252						
NSK	Sanguang	0.90	260	*e*P	Pg	01 17 52.6	+0.1
	baz=258						
NSK				*e*S	Sg	01 18 04.2	-0.1
	baz=258						
NACB	Ninganchiao	0.94	226	*e*P	Pg	01 17 53.1	-0.2
	baz=224						
NACB				*e*S	Sg	01 18 04.9	-0.5
	baz=224						
NNSB	Datong	0.95	245	*e*P	Pg	01 17 53.5	-0.1
	baz=234						
NNSB				*e*S	Sb	01 18 06.7	+0.1
	baz=234						
NNSH	Datong	0.95	245	P	Pg	01 17 53.6	0.0
	baz=234						
NNSH				*e*S	Sb	01 18 06.1	-0.5
	baz=234						
NNS	Nan Shan	0.95	246	P	Pg	01 17 53.6	-0.1
	baz=235						
NNS				S	Sb	01 18 06.8	+0.1
	baz=235						
ETLH	Xiulin Townshi	0.99	231	*e*P	Pb	01 17 54.5	-0.1
	baz=230						
ETLH				*e*S	Sb	01 18 07.7	-0.1
	baz=230						
TWD	Chiawan	1.00	222	*e*P	Pb	01 17 54.7	0.0
	baz=228						
TWD				*e*S	Sb	01 18 08.2	+0.2
	baz=228						
WHF	Hehuan Shan	1.19	235	*e*P	Pg	01 17 57.8	-0.3
	baz=234						
WHF				*e*S	Sg	01 18 13.3	-0.2
	baz=234						
TWT	Tachien	1.20	242	P	Pn	01 17 59.6	+1.3
	baz=230						
TWT				S	Sn	01 18 15.5	+0.8
	baz=230						
LIOB	Emei	1.21	261	*e*P	Pb	01 17 57.5	-0.8
	baz=278						
LIOB				*e*S	Sg	01 18 14.2	0.0
	baz=278						
TDCB	Techi	1.21	242	*e*P	Pb	01 17 58.2	-0.2
	baz=230						
TDCB				*e*S	Sb	01 18 13.9	-0.3
	baz=230						
ESL	Shilin	1.30	219	*e*P	Pg	01 18 00.5	+0.2
	baz=237						
ESL				*e*S	Sn	01 18 18.1	+1.1
	baz=237						
CHGB	Renai	1.30	234	*e*P	Pg	01 18 00.1	-0.2
	baz=234						
CHGB				*e*S	Sb	01 18 16.8	0.0
	baz=234						
OWD	Renai	1.37	231	P	Pn	01 18 00.6	+0.1
	baz=224						
OWD				S	Sg	01 18 19.6	+0.4
	baz=224						
IRIF	Iriomote-Funau	1.37	111	P	Pb	01 18 01.3	+0.3
IRIF				*e*S	Sb	01 18 18.2	-0.4
WHP	Taichung City	1.37	247	P	Pb	01 18 01.2	+0.1
	baz=246						
WHP				S	Sn	01 18 18.9	-0.1
	baz=246						
TWQ1	Liyutan	1.50	252	*e*S	Sg	01 18 22.8	-0.6
	baz=268						
VWDT	VWDT	1.52	226	*e*P	Pg	01 18 04.2	-0.3
	baz=227						
VWDT				*e*S	Sg	01 18 24.4	+0.1
	baz=227						
HGSD	Ruisui	1.57	212	*e*P	Pn	01 18 03.5	+0.3
	baz=198						
HGSD				*e*S	Sg	01 18 25.0	-0.7
	baz=198						
EHY	Hungye	1.61	215	*e*P	Pn	01 18 03.8	0.0
	baz=219						
SMLT	Sun Moon Lake	1.61	234	P	Pg	01 18 05.6	-0.5
	baz=235						
SMLT				*e*S	Sg	01 18 26.5	-0.5
	baz=235						
SSLB	Suanglung	1.63	231	*e*P	Pb	01 18 05.9	+0.5
	baz=232						
SSLB				*e*S	Sg	01 18 26.7	-1.0
	baz=232						
TYC	Yuchr	1.63	236	*e*P	Pb	01 18 05.5	0.0
	baz=237						
TYC				*e*S	Sb	01 18 26.4	+0.3
	baz=237						
JKRS	Kuro-shima	1.64	111	P	Pn	01 18 04.6	+0.4
JKRS				*e*S	Sb	01 18 26.7	+0.3
YULB	Yu-li	1.71	214	*e*P	Pn	01 18 04.7	-0.6
	baz=217						
YULB				*e*S	Sb	01 18 28.2	-0.4
	baz=217						
JIJ	Ishigaki jima	1.72	105	*e*S	Sn	01 18 26.6	-0.7
JISG	Ishigakijimahi	1.82	97	P	Pb	01 18 08.1	-0.6
JISG				*e*S	Sb	01 18 31.3	-0.3

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*PAS **10** 01:58:11.5±1.1, 34°.454N±0°.007×118°.58W±0°.02, h0^{km}±2^{km}, ML1.9, Error ellipse: s-maj=3.0km s-min=2.1km az=239.0*
NEIC 10 01:58:11.8±0.8, **34°.467N**±0°.007×**118°.57W**±0°.01, **h6**^{km}±5^{km}, **Error ellipse: s-maj=1.8km s-min=1.1km az=89.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OAT	Oat Mountain	0.13	197		Pg	01 58 14.2	-0.2
IR2C	Iron Canyon	0.16	119		Pg	01 58 14.9	-0.1
PYR	Pyramid	0.17	305		Pg	01 58 15.1	-0.2
OSI	Osito Audit: C	0.20	319		Pg	01 58 15.6	0.0
BTPC	Burnt Peak	0.21	359		Pg	01 58 16.1	0.0
LEOC	Leona Valley	0.27	53		Pg	01 58 17.1	0.0
DECC	Green Verdugo	0.29	138		Pg	01 58 17.8	+0.4
DJJ	Donna J Jenkin	0.37	165		Pg	01 58 19.1	+0.1
PASC	Pasadena Art C	0.43	133		Pg	01 58 20.1	0.0
CHFC	Chilao Flat St	0.47	106		Pg	01 58 20.9	+0.1
MWC	Mount Wilson	0.49	120		Pg	01 58 21.5	+0.3
MPI	Mount Pinos, F	0.59	306		Pg	01 58 23.1	0.0
HOLC	Holcomb Ridge	0.60	91		Pg	01 58 22.7	-0.5
EDW2	Edwards Air Fo	0.63	49		Pg	01 58 23.5	-0.3
ARVC	Arvin	0.69	342		Pg	01 58 24.8	-0.3
HYS	Haystack Butte	0.91	64		Pg	01 58 28.8	-0.5
ISA	Isabella, Lake	1.20	4		Pn	01 58 35.1	0.0
GSC	Goldstone, Bar	1.67	60	Pn	Pb	01 58 42.9	-0.2
GSC				Sn	Sg	01 59 05.4	-0.1
MPMC	Manual Prospec	1.82	29		Pn	01 58 42.8	-1.0
PFO	Pinyon Flats O	1.95	115	Pn	Pn	01 58 45.4	-0.2
XPFO	Pion Flat	1.95	115	Pn	Pn	01 58 45.3	-0.2

IDC 10 02:20:27.6±2.1, **55°.93S**×**146°.68E, h0**^{km}, **mb3.7**/4, **mb1 3.9**/4, **mb1mx3.8**/24, **mbtmp3.7**/4, **Error ellipse: s-maj=247.8km s-min=26.6km az=78.0, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	Vanda	22.34	171	P	P	02 25 26.6	0.0
	4.2nm,1.1s,baz=338,slow=11,SNR=3.6						
STKA	Stephens Creek	24.31	349	P	P	02 25 47.1	+0.4
	2.1nm,0.9s,baz=190,slow=12,SNR=2.7						
H01W1	Cape Leeuwin H	30.59	300	T	T	02 59 13.4	
	baz=143,slow=75,SNR=35						
H01W2	Cape Leeuwin H	30.60	300	T	T	02 59 17.5	
	baz=143,slow=75,SNR=40						
H01W3	Cape Leeuwin H	30.61	300	T	T	02 59 14.6	
	baz=143,slow=75,SNR=29						
ASAR	Alice Springs	33.57	338	P	P	02 27 09.2	0.0
	0.3nm,0.4s,baz=163,slow=9.5,SNR=4.1						
WRA	Warramunga Arr	37.11	341	P	P	02 27 39.2	-0.5
	3.6nm,1.3s,baz=165,slow=7.3,SNR=6.1						

SSNC 10 02:23:08.8±2.7, **23°.42N**×**80°.61W, h5**^{km}, **MD3.6, ML2.5, MW3.3, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MGV	Manicaragua	1.43	156	*e*P	Pn	02 23 31.7	-3.7
MGV				*e*S	Sb	02 23 49.9	-4.5
MGV				IAML		02 23 51.0	
	comp=N,53nm,0.2s						
MGV				IAML		02 23 51.6	
	comp=E,76nm,0.4s						
SOR	Soroa	2.30	255	*e*P	Pn	02 23 44.5	-2.9
SOR				*e*S	Sn	02 24 12.0	-4.0
SOR				IAML		02 24 17.4	
	comp=E,26nm,0.3s						
SOR				IAML		02 24 23.4	
	comp=N,16nm,0.3s						
CCCC	Cccc	3.44	130	*e*P	Pn	02 24 04.1	+1.1
CCCC				*e*S	Sn	02 24 46.2	+2.1
CCCC				IAML		02 24 54.0	
	comp=N,6.9nm,0.5s						
CCCC				IAML		02 25 16.9	
	comp=E,7.2nm,0.6s						
LMGC	Las Mercedes	4.73	134	*e*P	Pn	02 24 16.7	-4.1
LMGC				*e*S	Sn	02 25 08.2	-7.9
RCC	Rio Carpintero	5.70	126	*e*P	Pn	02 24 31.9	-2.2
RCC				*e*S	Sn	02 25 30.1	-10
RCC				IAML		02 25 38.6	
	comp=N,1.9nm,0.5s						
RCC				IAML		02 25 41.4	
	comp=E,1.9nm,0.7s						

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*MOS **10** 02:26:53.8±0.8, 50°.92N×158°.02E, h58^{km}, mb4.3/11, Error ellipse: s-maj=11.7km s-min=3.6km az=84.5*
MOS Felt (II) at Severo-Kuril'sk.
*KRSC **10** 02:26:53.4±1.1, 51°.01N×158°.13E, h44^{km}±14^{km}, ML4.7, FELT [II] at Severo-Kurilsk.*
*NEIC **10** 02:26:59.7±1.7, 51°.2N±0°.1×157°.9E±0°.2, h82^{km}±9^{km}, mb4.2/27, Error ellipse: s-maj=18.6km s-min=13.4km az=119.0*
*IDC **10** 02:27:00.9±2.9, 51°.34N×157°.83E, h88^{km}±22^{km}, mb3.6/20, mb1 3.8/21, mb1mx3.6/57, mbtmp3.9/21, Error ellipse: s-maj=27.3km s-min=12.3km az=169.0*
ISC 10 02:26:55.8±1.0, **51°.01N**±0°.06×**158°.05E**±0°.05, **h53**^{km}±8^{km}, **n164, σ1^{s}.33**/191, **mb4.2**/43, **9C-3D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDTR	Khodutka, Kamc	0.80	1	*i* P	Pn	02 27 09.8	-1.1
KDTR				*e*S	Sn	02 27 20.8	-1.2
KDTR	Khodutka, Kamc	0.80	1	PN	Pn	02 27 09.8	-1.1
KDTR				S	Sn	02 27 20.8	-1.2
PAU	Pauzhetka	0.90	301	*e*P	Pn	02 27 12.2	-0.1
PAU				*e*S	Sn	02 27 24.7	+0.3
PAU	Pauzhetka	0.90	301	PN	Pn	02 27 12.2	-0.1
PAU				S	Sn	02 27 24.7	+0.3
SKR	Severo-Kuril’s	1.27	256	*e*P	Pn	02 27 16.7	-0.4
SKR				*e*S	Sn	02 27 33.2	+0.1
SKR	Severo-Kuril’s	1.27	256	PN	Pn	02 27 16.7	-0.4
SKR				S	Sn	02 27 33.2	+0.1
ASAK	Asacha	1.38	356	*i* P	Pn	02 27 18.4	-0.4
ASAK	Asacha	1.38	356	PN	Pn	02 27 18.4	-0.4
RUS	Russkaya	1.46	11	*e*P	Pn	02 27 18.6	-1.1
RUS				*e*S	Sn	02 27 36.6	-1.0
RUS	Russkaya	1.46	11	PN	Pn	02 27 18.6	-1.1
RUS				S	Sn	02 27 36.6	-1.0
MTVR	Mutnovka	1.48	3	*e*P	Pn	02 27 19.5	-0.7
MTVR				*e*S	Sn	02 27 38.4	-0.1
MTVR	Mutnovka	1.48	3	PN	Pn	02 27 19.5	-0.7
MTVR				S	Sn	02 27 38.4	-0.1
MIPR	Malaya Ipel'ka	1.50	328	*e*P	Pn	02 27 20.8	+0.4
MIPR	Malaya Ipel'ka	1.50	328	PN	Pn	02 27 20.8	+0.4
GRL	Gorelyy	1.54	1	*i* P	Pn	02 27 20.9	-0.2
GRL				*e*S	Sn	02 27 39.7	-0.4
GRL	Gorelyy	1.54	1	PN	Pn	02 27 20.9	-0.2
GRL				S	Sn	02 27 39.7	-0.4
ALID	Alaid	1.59	266	*i* P	Pn	02 27 21.9	+0.3
ALID				*e*S	Sn	02 27 41.6	+0.5
ALID	Alaid	1.59	266	PN	Pn	02 27 21.9	+0.3
ALID				S	Sn	02 27 41.6	+0.5
KRMR	Karymshinskiy	1.82	2	*e*P	Pn	02 27 24.0	-0.7
KRMR				*e*S	Sn	02 27 45.6	-1.1
KRMR	Karymshinskiy	1.82	2	PN	Pn	02 27 24.0	-0.7
KRMR				S	Sn	02 27 45.6	-1.1
APC	Apacha	2.00	344	*e*P	Pn	02 27 27.7	+0.6
APC	Apacha	2.00	344	PN	Pn	02 27 27.7	+0.6
PET	Petropavlovsk	2.05	10	PN	Pn	02 27 27.3	-0.5
PET				S	Sn	02 27 51.6	-0.6
PET	Petropavlovsk	2.05	10		Pn	02 27 27.5	-0.3
PET					Sn	02 27 52.2	0.0
DALK	Dalny	2.07	12	*e*P	Pn	02 27 27.6	-0.5
DALK				*e*S	Sn	02 27 52.5	-0.2
DALK	Dalny	2.07	12	PN	Pn	02 27 27.6	-0.5
DALK				S	Sn	02 27 52.5	-0.2
PEA0B	Petropavlovsk-	2.11	354*c*	*i*PN	Pn	02 27 28.7	0.0
PEA0B	Petropavlovsk-	2.11	354		Pn	02 27 29.4	+0.8
PETK	Petropavlovsk-	2.11	354	P	Pn	02 27 29.6	+0.9
	44nm,0.3s,baz=160,slow=15,SNR=949						
PETK				S	Sn	02 27 56.1	+2.4
	15nm,0.3s,baz=164,slow=18,SNR=6.0						
PETK				LR	LR	02 28 29.8	
	comp=Z,576nm,19.4s,baz=230,slow=50						
PETK	Petropavlovsk-	2.11	354	PN	Pn	02 27 29.2	+0.5
PETK	Petropavlovsk-	2.11	354		Pn	02 27 29.2	+0.5
UGLR	Uglovaya	2.25	12	*e*P	Pn	02 27 30.8	+0.1
UGLR	Uglovaya	2.25	12	PN	Pn	02 27 30.8	+0.1
AVH	Avacha	2.30	10	*i* P	Pn	02 27 32.1	+0.8
AVH	Avacha	2.30	10	PN	Pn	02 27 32.1	+0.8
SMAR	Somma	2.31	11	*e*P	Pn	02 27 31.3	-0.2
SMAR	Somma	2.31	11	PN	Pn	02 27 31.3	-0.2
NLC	Nalytchevo	2.31	20	*e*P	Pn	02 27 29.7	-1.6
NLC				*e*S	Sn	02 27 57.7	-0.8
NLC	Nalytchevo	2.31	20	PN	Pn	02 27 29.7	-1.6
NLC				S	Sn	02 27 57.7	-0.8
KOK	Koryaka	2.31	9	*e*P	Pn	02 27 32.4	+0.9

KOK	Koryaka	2.31	9	PN	Pn	02 27 32.4	+0.9
KRER	Koryakskii	2.34	10	*e*P	Pn	02 27 31.9	0.0
KRER	Koryakskii	2.34	10	PN	Pn	02 27 31.9	0.0
KRX	Arik	2.38	9	*e*P	Pn	02 27 33.0	+0.5
KRX	Arik	2.38	9	PN	Pn	02 27 33.0	+0.5
SPN	Mys Shipunski	2.42	29	*e*P	Pn	02 27 32.6	-0.3
SPN	Mys Shipunski	2.42	29	PN	Pn	02 27 32.6	-0.3
KII	Karymskiy	3.15	15	*e*P	Pn	02 27 44.5	+1.6
KII				*e*S	Sn	02 28 21.1	+1.8
KII	Karymskiy	3.15	15	PN	Pn	02 27 44.5	+1.6
KII				S	Sn	02 28 21.1	+1.8
KZV	Kizimen	4.33	17	*e*P	Pn	02 28 01.2	+2.1
KZV	Kizimen	4.33	17	PN	Pn	02 28 01.2	+2.1
TUMD	Tumrok D	4.43	18	*e*P	Pn	02 28 02.9	+2.5
TUMR	Tumrok	4.46	16	*e*P	Pn	02 28 02.8	+1.9
TUMR				*e*S	Sn	02 28 52.9	+1.3
TUMR	Tumrok	4.46	16	PN	Pn	02 28 02.8	+1.9
TUMR				S	Sn	02 28 52.9	+1.3
KMNR	Kamenistaya	4.93	15	*e*P	Pn	02 28 09.3	+2.0
KMNR				*e*S	Sn	02 29 04.4	+1.3
KMNR	Kamenistaya	4.93	15	PN	Pn	02 28 09.3	+2.0
KMNR				S	Sn	02 29 04.4	+1.3
ESO	Esso	4.94	4	*e*P	Pn	02 28 08.5	+1.1
ESO	Esso	4.94	4	PN	Pn	02 28 08.5	+1.1
KOZ	Kozyrevsk	5.17	11	*e*P	Pn	02 28 12.8	+2.2
KOZ	Kozyrevsk	5.17	11	PN	Pn	02 28 12.8	+2.2
ZLN	Zelenaya	5.28	17	*e*P	Pn	02 28 13.6	+1.5
ZLN	Zelenaya	5.28	17	PN	Pn	02 28 13.6	+1.5
LGNR	Loginova	5.32	16	*e*P	Pn	02 28 16.0	+3.2
LGNR	Loginova	5.32	16	PN	Pn	02 28 16.0	+3.2
SRDR	Sredinnyy	5.41	10	*e*P	Pn	02 28 15.5	+1.7
SRDR	Sredinnyy	5.41	10	PN	Pn	02 28 15.5	+1.7
KBTR	Krutoberegovo	5.93	27	*e*P	Pn	02 28 21.4	+0.5
KBTR				*e*S	Sn	02 29 30.9	+3.5
KBTR	Krutoberegovo	5.93	27	PN	Pn	02 28 21.4	+0.5
KBTR				S	Sn	02 29 30.9	+3.5
SRKR	Sorokina	5.95	17	*e*P	Pn	02 28 22.9	+1.7
SRKR	Sorokina	5.95	17	PN	Pn	02 28 22.9	+1.7
SHO	Shikotan	10.42	231	*e*PN	Pn	02 29 21.6	-0.8
SHO				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SHO				pmax	pmax		
	comp=N,6.0nm,0.3s						
SHO				pmax	pmax		
	comp=E,4.0nm,0.3s						
NMR	Nemuro--Hokkai	11.33	232	*e*PN	Pn	02 29 33.0	-1.8
SEY	Seymchan	12.34	348	P	Pn	02 29 49.9	+1.5
	comp=E,0.1nm,0.3s,baz=156,slow=10,SNR=5.9						
SEY	Seymchan	12.34	348	⇓*e*PN	Pn	02 29 52.1	+3.6
KLR	Kul'dur	16.93	274	P	P	02 30 53.2	+3.1
	comp=E,0.2nm,0.3s,baz=82,slow=10,SNR=9.1						
KLR	Kul'dur	16.93	274	⇓*e*P	P	02 30 54.1	+4.0
KLR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BILL	Bilibino	17.55	10	⇓*e*P	Pn	02 30 56.2	-0.1
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ANM	Nome	23.33	41	P	P	02 31 59.5	+0.7
ANM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ANM	Nome	23.33	41	P	P	02 31 59.5	+0.7
HIA	Hailar	24.43	281	⇑*e*P	P	02 32 08.6	-0.6
HIA	Hailar	24.43	281	P	P	02 32 08.1	-1.1
TIXI	Tiksi	24.50	338	P	P	02 32 08.4	-1.2
	comp=Z,4.0nm,0.6s,baz=119,slow=7.9,SNR=8.1						
TIXI	Tiksi	24.50	338	⇑*e*P	P	02 32 08.7	-0.8
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TIXI	Tiksi	24.50	338	P	P	02 32 07.7	-1.8
KSRS	Korea Array	25.28	249	P	P	02 32 18.4	+1.5
	comp=Z,1.3nm,0.6s,baz=50,slow=12,SNR=3.9						
RDOG	Red Dog Mine	25.48	33	P	P	02 32 18.5	0.0
RDOG				IAmb	IAmb	02 32 21.4	
	comp=Z,4.6nm,0.6s						
CHGN	Chignik	25.99	61	P	P	02 32 20.6	-2.5
SII	Sitkinak Islan	28.28	60	P	P	02 32 41.8	-2.0
IMAR	Indian Mountai	28.40	40	P	P	02 32 43.6	-1.1
BPAW	Bear Paw Mtn.	29.41	44	P	P	02 32 53.9	+0.2
KTH	Kantishna Hill	29.42	45	P	P	02 32 54.4	+0.5
KTH				IAmb	IAmb	02 33 10.8	
	comp=Z,11nm,1.3s						
MLY	Manley	29.56	42	P	P	02 32 55.6	+0.5
MLY				IAmb	IAmb	02 33 09.4	
	comp=Z,5.4nm,1.4s						
TRF	Thorofare Moun	29.70	45	P	P	02 32 56.5	0.0
TRF				IAmb	IAmb	02 33 12.1	
	comp=Z,10.0nm,1.4s						
RND	Reindeer	30.35	45	P	P	02 33 01.9	-0.2
RND				pmax	pmax		
	comp=Z,2.0nm,0.8s						
RND	Reindeer	30.35	45	P	P	02 33 01.9	-0.2
TOLK	Toolik Lake Re	30.39	35	P	P	02 33 02.9	+0.5
KNK	Knik Glacier	30.64	49	P	P	02 33 04.7	+0.1
SML	Sawmill	30.67	49	P	P	02 33 05.5	+0.6
WRH	Wood River Hil	30.68	43	P	P	02 33 04.8	-0.1
WRH				IAmb	IAmb	02 33 13.9	
	comp=Z,4.6nm,1.2s						
CCB	Clear Creek Bu	30.80	43	P	P	02 33 06.8	+0.9
CCB				IAmb	IAmb	02 33 22.4	
	comp=Z,4.4nm,1.4s						
SCM	Sheep Creek Mo	31.14	48	P	P	02 33 09.7	+0.6
SCM				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SCM	Sheep Creek Mo	31.14	48	P	P	02 33 09.7	+0.6
SCM				IAmb	IAmb	02 33 13.9	
	comp=Z,8.0nm,1.1s						
HDA	Harding Lake	31.17	43	P	P	02 33 09.3	+0.1
HDA				IAmb	IAmb	02 33 26.3	
	comp=Z,6.5nm,1.2s						
IL31		31.19	43	P	P	02 33 10.1	+0.7
IL31				IAmb	IAmb	02 33 21.3	
	comp=Z,6.6nm,1.5s						
ILAR	Eielson Array	31.19	43	P	P	02 33 09.3	-0.1
	comp=Z,0.9nm,0.7s,baz=258,slow=7.1,SNR=14						
H11N2	WAKE ISLAND Hy	31.99	164	T	T	03 07 05.1	
	baz=349,slow=76,SNR=357						
H11N3	WAKE ISLAND Hy	32.00	164	T	T	03 07 06.2	
	baz=349,slow=76,SNR=327						
H11N1	WAKE ISLAND Hy	32.00	164	T	T	03 07 13.7	
	baz=349,slow=76,SNR=185						
RIDG	Independent Ri	32.12	45	P	P	02 33 17.5	-0.2
RIDG				IAmb	IAmb	02 33 21.2	
	comp=Z,6.8nm,1.3s						
BMAR	Burnt Mountain	32.16	38	P	P	02 33 18.7	+0.8
DOT	Dot Lake	32.48	45	P	P	02 33 20.0	-0.7
SCRK	Sand Creek	32.49	44	P	P	02 33 21.4	+0.4
SCRK				IAmb	IAmb	02 33 30.0	
	comp=Z,4.6nm,1.3s						
H11S1	WAKE ISLAND Hy	33.15	165	T	T	03 08 32.1	
	baz=350,slow=76,SNR=151						
H11S3	WAKE ISLAND Hy	33.16	165	T	T	03 08 35.0	
	baz=350,slow=76,SNR=189						
H11S2	WAKE ISLAND Hy	33.17	165	T	T	03 08 38.9	
	baz=350,slow=76,SNR=86						
HHC	Hu-ho-hao-te	33.38	271	*e*P	P	02 33 30.1	+1.1
BCAR	Beaver Creek A	33.56	46	P	P	02 33 31.1	+0.9
BARN	Barnard Glacie	33.94	49	P	P	02 33 35.0	+1.2
INK	Inuvik	36.30	36	P	P	02 33 54.2	+0.7
	comp=Z,3.1nm,0.6s,baz=288,slow=7.8,SNR=14						
INK	Inuvik	36.30	36	P	P	02 33 54.3	+0.7
INK				IAmb	IAmb	02 33 55.1	
	comp=Z,3.2nm,0.7s						
C36M	Paulatuk	39.48	33	P	P	02 34 20.9	+0.4
C36M				IAmb	IAmb	02 34 22.2	
	comp=Z,3.8nm,0.8s						
GTA	Gaotai	41.60	277	*e*P	P	02 34 40.4	+2.0
GTA				pP	pP	02 34 54.3	+2.0
GTA				sP	sP	02 34 59.2	+0.7
ZALV	Zalesovo Beam	42.86	304	P	P	02 34 47.4	-0.9
	comp=Z,0.5nm,0.4s,baz=57,slow=5.1,SNR=3.3						
YKA	Yellowknife Ar	45.56	41	P	P	02 35 10.2	+0.4
	comp=Z,0.8nm,0.7s,baz=299,slow=7.5,SNR=11						
WMQ	Urumqi	46.48	290	*e*P	P	02 35 18.2	+0.8
KURK	Kurchatov	47.77	302	⇑*e*P	P	02 35 26.7	-0.6
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MK31	Makanchi Array	47.93	296	⇑*e*P	P	02 35 27.9	-0.7
MKAR	Makanchi Array	47.93	296	P	P	02 35 27.6	-1.0
	comp=Z,0.4nm,0.4s,baz=61,slow=6.4,SNR=9.8						
MKAR	Makanchi Array	47.93	296	*ce*P	P	02 35 29.5	+0.9
BVAR	Borovoye Array	50.70	309	P	P	02 35 48.3	-1.3
	comp=Z,1.6nm,0.6s,baz=62,slow=8.7,SNR=15						
BRVK	Borovoye	50.74	309	⇑*e*P	P	02 35 48.4	-1.4
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRVK	Borovoye	50.74	309	P	P	02 35 48.6	-1.2
BRVK				IAmb	IAmb	02 35 49.3	
	comp=Z,2.0nm,0.6s						
ARU	Arti	54.08	317	P	P	02 36 13.3	-1.2
	comp=Z,1.2nm,0.2s,baz=71,slow=9.0,SNR=3.8						
AAK	Ala-Archa	54.87	296	P	P	02 36 20.0	-0.7
	comp=Z,1.2nm,0.6s,baz=140,slow=9.4,SNR=4.3						
AAK	Ala-Archa	54.87	296	P	P	02 36 20.0	-0.7
KSH	Kashi	56.04	293	P	P	02 36 30.2	+1.1
KSH				pP	pP	02 36 46.2	+2.7
KSH				S	S	02 44 11.5	-2.1
KSH				ScS	ScS	02 46 09.9	-3.6
CMAR	Chiang Mai Arr	56.51	258	P	P	02 36 34.1	+1.6
	comp=Z,1.7nm,0.4s,baz=26,slow=6.7,SNR=11						
CMAR	Chiang Mai Arr	56.51	258	*ce*P	P	02 36 34.4	+1.9
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
NVAR	Mina Array Bea	57.67	67	P	P	02 36 42.3	+1.5
	comp=Z,0.4nm,0.6s,baz=296,slow=8.0,SNR=5.4						
PDAR	Pinedale Array	59.67	58	P	P	02 36 55.5	+0.9
	comp=Z,0.7nm,0.8s,baz=352,slow=3.0,SNR=7.2						
PDAR	Pinedale Array	59.67	58	P	P	02 36 53.9	-0.7
FINES	FINESS Array B	61.52	336	P	P	02 37 05.6	-1.0
	comp=Z,2.3nm,0.8s,baz=40,slow=5.7,SNR=3.6						
FINES	FINESS Array B	61.52	336	*i* P	P	02 37 05.9	-0.7
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NB2	NORSAR Subarra	65.18	343	P	P	02 37 30.0	-0.9
	comp=Z,0.5nm,0.6s,baz=22,slow=6.9						
NOA	NORSAR Array B	65.18	343	P	P	02 37 29.9	-0.9
	comp=Z,0.7nm,0.6s,baz=22,slow=6.4,SNR=3.7						
SCHQ	Schefferville	68.08	26	P	P	02 37 49.0	-0.4
	comp=Z,2.0nm,0.8s,baz=351,slow=7.9,SNR=4.7						
SCHQ	Schefferville	68.08	26	P	P	02 37 49.5	+0.1
SCHQ				IAmb	IAmb	02 37 50.6	
	comp=Z,2.1nm,0.8s						
AKASG	Malin Array Be	69.73	328	P	P	02 37 58.1	-1.5
	comp=Z,0.3nm,0.3s,baz=31,slow=6.7,SNR=3.7						
TXAR	Lajitas Array	72.64	65	P	P	02 38 18.8	+1.1
	comp=Z,1.0nm,0.6s,baz=298,slow=4.6,SNR=20						
CLL	Collm	73.83	338	*e*P	P	02 38 24.0	-0.3
CLL	Collm	73.83	338	*e*P	P	02 38 24.0	-0.3
GERES	GERESS Array B	75.95	337	P	P	02 38 36.0	-0.7
	comp=Z,0.5nm,0.5s,baz=27,slow=5.8,SNR=8.6						
GERES	GERESS Array B	75.95	337	P	P	02 38 36.0	-0.7
GERES	GERESS Array B	75.95	337	P	P	02 38 35.8	-0.9
BRTR	Keskin Array B	77.40	319	P	P	02 38 44.7	-0.4
	comp=Z,0.8nm,0.8s,baz=45,slow=3.6,SNR=5.0						
BRTR	Keskin Array B	77.40	319	*ce*P	P	02 38 47.5	+2.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	Keskin Array B	77.40	319	P	P	02 38 44.0	-1.1
SOKA	Soboth	77.60	335	*i* P	P	02 38 42.9	-3.1
	comp=Z,6.2nm,1.5s						
KBA	Koelnbreinsper	77.67	336	*i* P	P	02 38 43.0	-3.5
	comp=Z,0.1nm,0.1s						
WATA	Walderalm	77.88	337	*i* P	P	02 38 46.0	-1.6
	comp=Z,9.9nm,2.2s						
WTTA	Wattenberg	77.93	337	*i* P	P	02 38 47.3	-0.6
	comp=Z,4.4nm,0.9s						
MOTA	Moosalm	77.98	338	*i* P	P	02 38 46.8	-1.4
	comp=Z,1.9nm,0.7s						
ABTA	Abfaltersbach	78.19	337	*i* P	P	02 38 46.7	-2.6
	comp=Z,6.5nm,1.3s						
FETA	Feichten	78.37	338	*i* P	P	02 38 48.8	-1.5
	comp=Z,5.1nm,1.1s						

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*IDC **10** 02:29:50.4±3.3, 17°.34S×174°.39W, h89^{km}±32^{km}, mb3.7/6, mb1 4.0/7, mb1mx3.7/29, mbtmp4.1/7, Error ellipse: s-maj=45.1km s-min=17.8km az=136.0*

*NEIC **10** 02:29:52.5±1.0, 17°.29S±0°.10×173°.7W±0°.2, h161^{km}±11^{km}, mb4.1/4, Error ellipse: s-maj=22.7km s-min=12.7km az=72.0*

ISC 10 02:29:53.4±1.0**, 17°.5S**±0°.1×**173°.8W**±0°.1**, h150**^{km}**, n18,** σ**1^{s}.80**/13**, mb4.0**/8**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	3.98	114		Pn	02 30 53.6	+0.3
NIUE					Sn	02 31 38.2	-1.7
AFI	Afiamalu	4.04	29	P	Pn	02 30 52.7	-1.5
	7.0nm,0.3s,baz=219,slow=13,SNR=4.1						
AFI				S	Sn	02 31 33.1	-8.3
	70nm,0.3s,baz=37,slow=23,SNR=17						
AFI	Afiamalu	4.04	29		Pn	02 30 51.3	-3.0
AFI					Sn	02 31 33.3	-8.2
URZ	Urewera	22.19	199	P	P	02 34 38.7	+1.4
	4.0nm,0.4s,baz=27,slow=4.5,SNR=4.9						
URZ	Urewera	22.19	199	P	P	02 34 37.2	-0.1
BKZ	Black Stump Fm	23.21	199	P	P	02 34 45.6	-1.5
BKZ				IAmb	IAmb	02 34 50.0	
	comp=Z,5.4nm,0.7s						
BHW	Baring Head	25.77	200		pP	02 35 46.8	+5.8
WR0	Warramunga Arr	48.87	259	P	P	02 38 23.1	-1.1
WB0	Warramunga Arr	49.02	259	P	P	02 38 24.1	-1.3
WB2	Warramunga Arr	49.04	259		pwP	02 39 02.0	-0.3
WRA	Warramunga Arr	49.05	259	P	P	02 38 24.4	-1.3
	comp=Z,0.9nm,0.4s,baz=97,slow=7.1,SNR=3.0						
AS31	Alice Springs	49.16	254	P	P	02 38 25.5	-0.9
AS31				IAmb	IAmb	02 38 26.0	
	comp=Z,2.2nm,0.5s						
ASAR	Alice Springs	49.16	254	P	P	02 38 25.6	-0.8
	comp=Z,8.2nm,0.6s,baz=90,slow=8.1,SNR=78						
ASAR	Alice Springs	49.16	254	P	P	02 38 24.7	-1.7
MDPB	Devils Postpil	75.14	42		pP	02 41 54.8	-1.1
NVAR	Mina Array Bea	76.11	42	P	P	02 41 30.9	+6.0
	comp=Z,0.2nm,0.6s,baz=214,slow=7.7,SNR=4.5						
PDAR	Pinedale Array	84.04	42	P	P	02 42 12.9	+5.4
	comp=Z,1.1nm,0.6s,baz=215,slow=3.5,SNR=13						
ILAR	Eielson Array	84.55	11	P	P	02 42 12.9	+3.8
	comp=Z,0.2nm,0.5s,baz=219,slow=5.3,SNR=4.4						

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*SOF **10** 02:37:25.1, 40°.78N×25°.61E, h9^{km}, MD2.9*

*DDA **10** 02:37:25.8, 40°.76N×25°.58E, h10^{km}±3^{km}, ML2.6*

*ISK **10** 02:37:25.9, 40°.76N×25°.61E, h4^{km}, ML3.0/21*

*ATH **10** 02:37:25.7, 40°.75N×25°.56E, h22^{km}±1^{km}, ML2.5/4, Error ellipse: s-maj=1.9km s-min=1.2km az=62.0*

*THE **10** 02:37:26.2, 40°.75N×25°.55E, h5^{km}±1^{km}, ML2.6/6, Error ellipse: s-maj=1.1km s-min=0.5km az=109.0*

ISC 10 02:37:26.0±0.9**, 40°.76N**±0°.02×**25°.57E**±0°.02**, h13**^{km}±7^{km}**, n76,** σ**0^{s}.87**/111**, 9C-6D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMTH	Samothraki Isl	0.29	185	P	Pg	02 37 32.1	+0.1
SMTH				S	Sg	02 37 35.8	-0.2
SMTH	Samothraki Isl	0.29	185	P	Pg	02 37 32.1	+0.1
SMTH				S	Sb	02 37 36.8	-1.1
SMTH				AML	AML	02 37 37.5	
	comp=E,2280µm,0.1s						
SMTH				AML	AML	02 37 42.3	
	comp=N,1029µm,0.2s						
RDO	Rodhopi	0.39	357	P	Pg	02 37 33.8	0.0
RDO				S	Sg	02 37 39.1	+0.1
	comp=N,588nm,0.2s						
RDO	Rodhopi	0.39	357	P	Pg	02 37 33.7	0.0
RDO				S	Sb	02 37 40.6	-0.1
RDO				AML	AML	02 37 45.6	
	comp=E,1107µm,0.2s						
RDO				AML	AML	02 37 46.0	
	comp=N,912µm,0.3s						
RDO	Rodhopi	0.39	357	PG	Pg	02 37 34.2	+0.4
ALN	Alexandroupoli	0.39	69	P	Pg	02 37 33.9	+0.1
ALN				S	Sb	02 37 39.6	-1.1
	comp=N,1µm,0.5s						
ALN	Alexandroupoli	0.39	69	P	Pg	02 37 33.9	+0.1
ALN				S	Sb	02 37 39.7	-1.0
ALN				AML	AML	02 37 40.2	
	comp=E,2393µm,0.6s						
ALN				AML	AML	02 37 40.3	
	comp=N,2696µm,0.5s						
ALN	Alexandroupoli	0.39	69	PG	Pg	02 37 33.9	+0.1
ALN				SG	Sg	02 37 39.4	+0.3
ENEZ	Enez	0.45	93	PG	Pg	02 37 34.7	-0.2
ENEZ				SG	Sb	02 37 41.3	-1.1
GOKC	Gokceada-Canak	0.62	154	PG	Pb	02 37 38.4	-0.3
GOKC				SG	Sb	02 37 47.4	+0.1
THAS	Thassos island	0.66	257	P	Pg	02 37 38.9	0.0
THAS				S	Sg	02 37 47.7	+0.1
	comp=N,572nm,0.3s						
THAS	Thassos island	0.66	257	P	Pg	02 37 39.0	0.0
THAS				S	Sg	02 37 47.6	+0.1
THAS				AML	AML	02 37 48.1	
	comp=N,1210µm,0.4s						
THAS				AML	AML	02 37 49.1	
	comp=E,1068µm,0.2s						
ERIK	Erikli-Kesan	0.73	97	PG	Pg	02 37 39.4	-0.7
ERIK				SG	Sb	02 37 49.7	-0.7
GELI	Tayfur-Gelibol	0.78	117	PG	Pb	02 37 41.1	-0.4
GELI				SG	Sb	02 37 52.2	+0.2
KAVA	Kavala	0.83	287	P	Pg	02 37 41.9	-0.2
KAVA				S	Sb	02 37 53.7	+0.2
	comp=E,675nm,0.4s						
KAVA	Kavala	0.83	287	P	Pg	02 37 41.9	-0.2
KESN	Edirne-Kesan	0.85	85	*i* P	Pn	02 37 44.1	0.0
KESN				*i* S	Sb	02 37 53.7	-0.6
KESN				IAML		02 37 57.0	
	comp=N,712nm,0.3s						
KESN				IAML		02 37 57.0	
	comp=E,500nm,0.2s						
UKOP	Uzunkopru-Edir	0.89	65	PG	Pb	02 37 43.3	0.0
KDZ	Kurdzhali	0.90	353	Pg	Pg	02 37 42.7	-0.7
KDZ	Kurdzhali	0.90	353	PG	Pb	02 37 43.7	+0.2
LIA	Limnos Island	0.91	199	P	Pg	02 37 43.4	-0.2
LIA				S	Sb	02 37 55.8	+0.2
LIA	Limnos Island	0.91	199	P	Pg	02 37 43.4	-0.2
LIA				S	Sb	02 37 55.7	0.0
KVLA	Kavala	0.91	282	P	Pg	02 37 43.4	-0.2
BOZC	Bozcaada	0.99	158	PG	Pb	02 37 44.9	-0.1
BOZC	Bozcaada	0.99	158	*i* P	Pb	02 37 45.1	+0.1
BOZC				*i* S	Sb	02 37 58.4	+0.4
BOZC				IAML		02 38 00.0	
	comp=N,221nm,0.4s						
BOZC				IAML		02 38 00.0	
	comp=E,337nm,0.3s						
LPK	Lapseki	0.99	113	PG	Pb	02 37 44.9	-0.1
EZN	Ezine	1.10	148	PG	Pn	02 37 47.4	+0.3
RZN	Rozhen	1.13	326	Pg	Pg	02 37 47.5	-0.3
RKY	Sarkoy-Tekirda	1.23	93	PN	Pb	02 37 48.8	-0.3
SART	Tekirdag	1.23	93	*i* P	Pg	02 37 49.5	-0.2
SART				*i* S	Sn	02 38 06.8	+1.3
SART				IAML		02 38 07.0	
	comp=N,201nm,0.8s						
SART				IAML		02 38 36.0	
	comp=E,102nm,1.3s						
BAYC	CANAKKALE_Bayr	1.26	143	*i* P	Pg	02 37 50.0	-0.3
BAYC				*i* S	Sn	02 38 07.3	+1.0
BAYC				IAML		02 38 08.0	
	comp=N,204nm,0.4s						
BAYC				IAML		02 38 09.0	
	comp=E,236nm,0.4s						
OUR	Ouranopolis	1.28	251	P	Pn	02 37 49.1	-0.5
OUR				S	Sn	02 38 07.9	+1.3
	comp=E,535nm,0.3s						
OUR	Ouranopolis	1.28	251	P	Pn	02 37 49.7	+0.1
DIM	Dimitrovgrad	1.29	359	*i* Pg	Pb	02 37 50.3	+0.1
KRBG	Karabiga-Canak	1.37	105	PN	Pb	02 37 51.3	-0.2
EDRB	Edirne	1.40	39	PN	Pb	02 37 52.4	+0.3
NVR	Nevrokopi	1.42	295	P	Pn	02 37 51.9	+0.3
NVR				S	Sg	02 38 11.3	-0.4
	comp=E,82nm,0.2s						
NVR	Nevrokopi	1.42	295	P	Pn	02 37 51.8	+0.3
PLD	Plovdiv	1.49	335	Pg	Pg	02 37 55.1	+0.4
TKR	Tekirdag	1.51	81	PN	Pb	02 37 53.9	0.0
SRS	Serrai	1.54	284	P	Pn	02 37 53.2	0.0
SRS				S	Sn	02 38 13.9	+0.8
KIRK	Kırklareli	1.54	48	*i* P	Pn	02 37 53.5	+0.2
KIRK				*i* S	Sg	02 38 15.4	-0.3
KIRK				IAML		02 38 22.0	
	comp=N,29nm,0.4s						
MRMT	Marmara Adasi	1.55	95	PN	Pb	02 37 54.4	-0.3
SIGR	SIGRI	1.56	172	P	Pb	02 37 54.5	-0.3
SIGR	SIGRI	1.56	172	PN	Pb	02 37 54.9	+0.1
PRK	Paraskevi	1.60	160	P	Pb	02 37 55.8	+0.3
MMB	Musomiste	1.62	301	P	Pn	02 37 55.2	+0.9
PAIG	Paliouri	1.66	241	P	Pn	02 37 54.5	-0.4
SOH	Sokhos	1.68	273	P	Pn	02 37 55.5	+0.3
AYVA	Ayvalik	1.69	149	*i* P	Pg	02 37 57.6	-0.7
AYVA				*i* S	Sg	02 38 20.4	+0.2
AYVA				IAML		02 38 21.0	
	comp=E,100nm,0.4s						
AYVA				IAML		02 38 22.0	
	comp=N,258nm,0.5s						
GONE	Gonen-Balikesi	1.77	113	PN	Pb	02 37 57.6	-0.7
EDC	Edincik	1.80	102	PN	Pb	02 37 57.9	-0.9
JMB	Yambol	1.87	24	P	Pg	02 38 01.5	-0.4
DKL	Dikili	1.98	148	PN	Pb	02 38 00.7	-1.1
SLVT	Silivri	2.06	76	PN	Pb	02 38 01.9	-1.3
KNT	Kendrikon	2.06	282	P	Pn	02 38 01.0	+0.6
KNT	Kendrikon	2.06	282	P	Pn	02 38 01.1	+0.7
BALB	Balikesir	2.10	121	PN	Pb	02 38 02.4	-1.5
STEP	BALIKESIR_Sava	2.15	129	*i* P	Pb	02 38 05.7	+0.8
STEP				*i* S	Sg	02 38 35.0	-0.3
STEP				IAML		02 38 38.0	
	comp=E,81nm,0.6s						
STEP				IAML		02 38 41.0	
	comp=N,94nm,0.7s						
KKB	Krupnik	2.17	301	P	Pb	02 38 05.7	+0.5
ELND	Elena	2.18	6	⇑P	Pn	02 38 03.4	+1.4
ELND				⇑S	Sg	02 38 35.0	-1.1
CTKS	Kestanelik-??a	2.28	77	PN	Pn	02 38 04.8	+1.5
VAY	Valandovo	2.33	285	*i* Pn	Pb	02 38 07.4	-0.6
BGKT	Bogazkoy	2.46	79	PN	Pn	02 38 07.7	+1.8
ARMT	Armutlu	2.52	93	PN	Pn	02 38 08.3	+1.6
VTS	Vitosha	2.55	318	⇓P	Pb	02 38 11.6	-0.1
VTS				⇑S	Sg	02 38 47.5	-0.5
STIP	Stip	2.71	291	*i* Pn	Pn	02 38 08.3	-1.1
PLVB	Pleven	2.72	345	⇑P	Pg	02 38 18.2	+0.1
PLVB				⇑S	Sg	02 38 54.3	+0.9
MANT	Manisa	3.23	133	*i* P	Pg	02 38 27.4	-0.7
MANT				*i* S	Sg	02 39 08.8	-1.2
MANT				IAML		02 39 14.0	
	comp=E,9.3nm,0.5s						
MANT				IAML		02 40 28.0	
	comp=N,12nm,2.8s						
VLAD	Vladila	3.35	345	⇓S	Sg	02 39 12.8	-0.8
USAK	Uak-Merkez	3.35	126	*i* P	Pn	02 38 20.2	+2.0
USAK				IAML		02 39 01.0	
	comp=E,10nm,2.6s						
USAK				IAML		02 40 19.0	
	comp=N,15nm,4.8s						
GDZ	Gediz	3.44	118	*i* P	Pn	02 38 20.9	+1.4
GDZ				*i* S	Sg	02 39 15.7	-0.9
GDZ				IAML		02 39 30.0	
	comp=E,5.5nm,2.3s						
GDZ				IAML		02 40 09.0	
	comp=N,6.3nm,2.4s						
HERR	Herculane	4.73	332	⇑P	Pn	02 38 39.9	+2.9
HERR				⇑S	Sg	02 39 55.8	-2.0
MDVR	Moldovita	4.92	326	⇓P	Pn	02 38 41.6	+1.9
MDVR				⇓S	Sg	02 40 02.1	-1.9
GZR	Gura Zlata	5.06	337	⇓P	Pn	02 38 43.1	+1.4
GZR				⇓S	Sn	02 39 38.2	-1.9
BZS	Buzias	5.65	331	⇑P	Pn	02 38 51.1	+1.5
BZS				⇑S	Sg	02 40 24.8	-2.5

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*NEIC **10** 02:50:00.1±2.0, 4°.17N±0°.06×124°.49E±0°.08, h317^{km}±5^{km}, mb4.8/92, Error ellipse: s-maj=11.0km s-min=9.2km az=80.0*

*BJI **10** 02:50:00.0±0.0, 4°.30N×124°.60E, h315^{km}, mB4.8/44, mb4.7/63*

*KLM **10** 02:50:01.0, 4°.08N×124°.63E, h333^{km}, mb5.0*

*DJA **10** 02:50:02.0±0.2, 4°N±2°×12°5E±°, h316^{km}±2^{km}, M4.8/61, mb5.0/61, mB5.3/27, MLv5.7/17, Mw(mB)4.7/27, Mwp6.4/1*

*IDC **10** 02:50:02.0±0.7, 4°.13N×124°.54E, h331^{km}±6^{km}, mb4.3/35, mb1 4.4/38, mb1mx4.3/45, mbtmp5.0/38, Error ellipse: s-maj=10.9km s-min=5.4km az=76.0*

ISC 10 02:50:01.3±0.5**, 4°.13N**±0°.03×**124°.57E**±0°.05**, h326**^{km}±4^{km}**, n261,** σ**1^{s}.29**/286**, mb4.7**/86**, 11C-8D, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	General Santos	1.98	11	⇓*i*P	Pn	02 50 50.7	+0.3
GSPH				*i* S	S	02 51 31.8	+2.2
DDMP	Don Marcelino,	2.26	30	*e*P	Pn	02 50 52.4	-0.1
DDMP				*e*S	S	02 51 31.9	-1.5
SKMP	Bagumbayan, Su	2.37	359	*e*P	Pn	02 50 53.4	+0.1
SKMP				*e*S	S	02 51 33.6	-1.4
DMPH	Davao City--Mi	3.08	18	⇑*i*P	Pn	02 51 00.7	+1.1
DMPH				*i* S	S	02 51 44.6	-1.8

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CTBH  Cotabato--PC H     3.08 354⇓iP   Pn     02 51 00.7 +1.0
DAV   Davao City (W)     3.08  19  P   Pn     02 51 02.4 +2.7
      102nm,0.3s,baz=1.1,slow=3.0,SNR=7.5
DAV                                S   S      02 51 47.0 +0.4
      207nm,0.3s,baz=290,slow=6.9,SNR=16
DAV   Davao City (W)     3.08  19⇑eP   Pn     02 50 49.2  -10
DAV   Davao City (W)     3.08  19  Pn  Pn     02 50 57.4 -2.3
DAV                                S   S      02 51 46.1 -0.5
MATI  Mati               3.26  31 eP   Pn     02 51 01.4 -0.1
MATI                              eS   S      02 51 46.1 -3.5
KMSI  Cibinong           3.58 189  P   Pn     02 51 04.9 +0.2
KMSI                               S   S      02 51 56.0 +0.5
BUKP  Musuan             3.75   7 eP   Pn     02 51 07.5 +1.1
BUKP                              eS   S      02 52 00.9 +2.2
TNTI  Ternate            4.35 140  P   Pn     02 51 11.9 -0.8
TNTI  Ternate            4.35 140      Pn     02 51 12.0 -0.8
TNTI                               S   S      02 52 06.3 -3.9
MRSI  Marisa             4.48 216  P   Pn     02 51 14.6 +0.4
MRSI                               S   S      02 52 11.8 -1.0
BUTP  Butuan             4.92  12 eP   Pn     02 51 19.4 +0.4
BUTP                              eS   S      02 52 31.0 +9.4
LUWI  Luwuk              5.45 199  P   Pn     02 51 25.4 +0.4
      6.5nm9µm707nm,0.7s
LUWI  Luwuk              5.45 199      Pn     02 51 25.0  0.0
LUWI                               S   S      02 52 30.3 -2.3
APSI  Ampana             5.80 210  P   Pn     02 51 29.6 +0.5
      2.4nm7µm713nm,0.7s
MSLP  Maasin             5.97   3 eP   Pn     02 51 31.8 +0.8
MPSI  Mapaga             6.00 231  P   Pn     02 51 31.5 +0.1
      1.1nm4µm343nm,0.9s
LLP   Lapu-Lapu          6.17 354 eP   Pn     02 51 34.0 +0.6
SANI  Sanana             6.30 167  P   Pn     02 51 32.1 -2.9
      7.7nm22µm2µm,0.7s
RCP   Roxas              7.60 346⇓eP   Pn     02 51 50.5 +0.2
NLAI  Namlea             7.75 161  P   Pn     02 51 51.7 -0.5
      9.0nm12µm798nm,0.8s
SPMM  Sapulut            8.10 274  P   Pn     02 51 58.0 +1.5
SWI   Sorong             8.32 126  P   P      02 52 01.4 -1.7
      0.3nm95nm,1.1s
SIJI  Sorong             8.33 126  P   Pn     02 52 00.9 +1.6
      6.4nm,0.3s,baz=315,slow=9.2,SNR=14
SIJI                               S   S      02 53 37.5 +2.2
      baz=294,slow=20,SNR=2.2
TTSI  Tana Toraja        8.57 214  P   Pn     02 52 03.2 +1.1
      0.5nm1µm146nm,0.9s
AAI   Ambon              8.57 155  P   Pn     02 52 04.0 +1.9
      2.2nm230nm,0.5s
MSAI  Masohi             8.61 150  P   Pn     02 52 04.1 +1.5
      1.4nm3µm180nm,0.7s
SMKI  Samarinda          8.65 238  P   P      02 52 05.4 -1.5
      2.7nm7µm751nm,0.9s
BKB   Balikpapan         9.36 235  P   P      02 52 13.4 -1.3
      448nm,1.0s
BKB   Balikpapan         9.36 235      Pn     02 52 07.7 -3.9
SPSI  Sidrap Palu        9.37 211  P   P      02 52 13.6 -1.2
      1µm155nm,0.7s
PVCP  Virac              9.41 358 eP   Pn     02 52 12.5 +0.2
BNSI  Bone               9.58 208  P   P      02 52 16.5 -0.7
      254µm3µm115nm,1.1s
BBSI  Bau Bau            9.76 192  P   Pn     02 52 17.7 +1.2
      467nm36nm,0.8s
BNDI  Bandanaira        10.12 148  P   Pn     02 52 21.8 +1.0
      20µm570nm,0.6s
KAPI  Kappang           10.28 208  P   Pn     02 52 23.7 +0.9
      7.0nm,0.3s,baz=11,slow=3.4,SNR=31
FAKI  Fak Fak           10.39 132  P   P      02 52 25.4 -0.8
      2µm207nm,0.7s
FAKI  Fak Fak           10.39 132  P   Pn     02 52 25.3 +1.1
FAKI                               S   S      02 54 21.8 +0.6
BKSI  Bulukumba         10.39 205  P   P      02 52 25.5 -0.7
      689nm73nm,0.7s
TGY   Tagaytay City     10.54 340  P   Pn     02 52 26.7 +0.8
      63nm,0.3s,baz=222,slow=4.8,SNR=15
RKPI  Ransiki, Papua    11.12 120  P   P      02 52 35.5 +1.2
      336nm,0.7s
KBKI  Kotabaru          11.18 229  P   P      02 52 36.4 +1.4
      826nm116nm,0.8s
MMRI  Maumere           12.90 190  P   Pn     02 52 56.5 +2.3
      136nm,0.6s
MMRI  Maumere           12.90 190  P   Pn     02 52 54.5 +0.3
EDFI  Ende, Flores      13.12 193  P   Pn     02 52 57.7 +0.8
      106nm,0.8s
SOEI  Soe               13.80 181  P   Pn     02 53 06.8 +1.7
      4µm466nm,0.8s
SOEI  Soe               13.80 181  P   Pn     02 53 05.9 +0.8
SZP   Santa             13.93 343  P   Pn     02 53 08.0 +1.6
PLAI  Plampang          14.55 208  P   Pn     02 53 14.4 +0.6
      1µm88nm,0.7s
WBSI  Waikabubak, Su    14.62 201  P   P      02 53 13.8 +0.7
      62nm,0.7s
SRBI  Singaraja         15.31 218  P   Pn     02 53 22.5 -0.2
      65nm,0.7s
SMPI  Sarmi             15.38 113  P   Pn     02 53 24.5 +1.0
      4µm502nm,0.7s
IGBI  Denpasar          15.93 216  P   Pn     02 53 29.1 -0.8
      235nm,0.8s
JAGI  Jajag, Banyuwa    16.27 220  P   Pn     02 53 33.3 -0.5
      48nm,0.6s
JAGI  Jajag, Banyuwa    16.27 220  P   P      02 53 31.7 +0.6
JAGI                               IAmb IAmb  02 53 48.3
      comp=Z,45nm,0.7s
GMJI  Gumukmas          16.59 222  P   Pn     02 53 37.3 -0.2
      comp=Z,49nm,0.7s
GENI  Genyem            16.96 113  P   Pn     02 53 41.0 -0.9
      comp=Z,4µmcomp=Z,403nm,0.9s
DLV   T  Lat            17.71 297  P   P      02 53 47.4 +0.7
DLV                                IAmb IAmb  02 53 48.5
      comp=Z,44nm,0.6s
MTN   Manton Dam        18.08 159  P   P      02 53 51.0 +0.5
UGM   Wanagama          18.43 230  P   P      02 53 55.8 +1.5
TWG   Pinlang           18.88 350  P   P      02 53 57.1 -2.0
KPJI  Karang Pucung     19.32 234  P   P      02 54 06.1 +2.3
      comp=Z,34nm,0.9s
YULB  Yu-li             19.41 351  P   P      02 54 02.2 -2.5
YULB                               IAmb IAmb  02 54 07.9
      comp=Z,59nm,0.9s
TPUB  Ta-pu             19.43 349  P   P      02 54 03.8 -1.1
SSLB  Suanglung         19.85 350  P   P      02 54 07.6 -1.7
KNRA  Kununurra         20.11 168  P   P      02 54 11.2 -0.8
KNRA                               IAmb IAmb  02 54 36.2
      comp=Z,46nm,0.6s
NACB  Ninganchiao       20.13 352  P   P      02 54 11.2 -0.9
NACB                               IAmb IAmb  02 54 25.9
      comp=Z,33nm,0.7s
QIZ   Qiongzhong        20.64 317  P   P      02 54 14.7 -2.4
QIZ                                S   S      02 57 49.7 +3.1
QIZ                                pmax pmax
      comp=Z,31nm,1.4s
QIZ   Qiongzhong        20.64 317  P   P      02 54 16.3 -0.8
QIZ                                IAmb IAmb  02 54 18.2
      comp=Z,63nm,0.8s
YHNB  Yeheng            20.65 352  P   P      02 54 16.6 -0.6
KNMB  Chin-men Tao      21.07 344  P   P      02 54 18.8 -2.2
QZH   Quanzhou          21.48 345⇓iP   P      02 54 25.3 +0.7
QZH                                pmax pmax
      comp=Z,170nm,0.8s
MDSI  Maura Dua         22.10 247  P   P      02 54 32.1 +1.6
      comp=Z,17nm,0.7s
FITZ  Fitzroy Crossi    22.11 177  P   P      02 54 30.7 +0.2
      comp=Z,21nm,0.6s,baz=5.1,slow=7.4,SNR=92
JOW   Kunigami          22.85   9  P   P      02 54 37.8 +0.7
      comp=Z,3.7nm,0.5s,baz=152,slow=14,SNR=4.9
JOW   Kunigami          22.85   9  IAmb IAmb  02 54 43.4
      comp=Z,33nm,0.6s
MANU  Manus Island      23.59 105  P   P      02 54 45.5 +1.4
SDSI  Sungai Dareh      23.67 258  P   P      02 54 55.4  +11
WB0   Warramunga Arr    25.64 158  P   P      02 55 01.9 -0.5
WB0                                IAmb IAmb  02 55 03.0
      comp=Z,26nm,0.5s
RPSI  Rantau Prapat     25.64 268  P   P      02 55 03.0 +0.6
COEN  Coen              25.76 135  P   P      02 55 02.9 -0.6
COEN                               IAmb IAmb  02 55 05.0
      comp=Z,63nm,1.4s
WRAB  Tennant Creek     25.77 158  P   P      02 55 03.4 -0.1
WRAB                               IAmb IAmb  02 55 04.4
      comp=Z,27nm,0.5s
WRA   Warramunga Arr    25.78 158  P   P      02 55 03.4 -0.2
      comp=Z,17nm,0.4s,baz=334,slow=10,SNR=133
WRA                                S   S      02 59 08.9 +0.5
      comp=Z,2.3nm,0.9s,baz=278,slow=9.4,SNR=4.7
WRA   Warramunga Arr    25.78 158  P   P      02 55 02.6 -1.0
WB2   Warramunga Arr    25.78 158  IAmb IAmb  02 55 04.5
      comp=Z,29nm,0.6s
WR0   Warramunga Arr    25.87 158  P   P      02 55 04.1 -0.3
PMG   Port Moresby      26.22 121  P   P      02 55 07.9 +0.3
PMG                                IAmb IAmb  02 55 09.1
      comp=Z,48nm,0.9s
PBKT  Sadao Pong        26.26 300  P   P      02 55 07.9  0.0
SLVN  Son La            26.37 312  P   P      02 55 07.9 -1.0
WHN   Wuhan             27.99 341  P   P      02 55 24.4 +1.4
WHN                                pmax pmax
      comp=Z,90nm,0.6s
GYA   Guiyang           28.05 324⇑iP   P      02 55 24.8 +1.0
GYA                                pP  pP     02 56 20.3 -3.5
GYA                                S   S      02 59 41.2 -3.0
GYA                                ScP ScP    03 01 39.1 +0.2
GYA                                pmax pmax
      comp=Z,20nm,0.6s
GYA                                pmax pmax
      comp=Z,110nm,4.6s
NJ2   Nanjing           28.29 350 eP   P      02 55 27.1 +1.5
NJ2                                pmax pmax
      comp=Z,32nm,0.7s
RABL  Rabaul            28.78 106  P   P      02 55 32.4 +2.1
CM31  Chiang Mai Arr    28.82 302  P   P      02 55 31.3 +0.7
CM31                               IAmb IAmb  02 55 33.0
      comp=Z,29nm,0.9s
CM31                               ScP ScP    03 01 41.9 +0.5
CMAR  Chiang Mai Arr    28.82 302  P   P      02 55 31.4 +0.8
      comp=Z,19nm,0.9s,baz=115,slow=7.1,SNR=76
CMAR                               ScP ScP    03 01 41.2 -0.2
      comp=Z,5.3nm,0.8s,baz=152,slow=2.1,SNR=24
CMAR  Chiang Mai Arr    28.82 302  P   P      02 55 31.2 +0.6
CMAR                               ScP ScP    03 01 41.5 +0.1
CHTO  Chiang Mai        28.98 302  P   P      02 55 32.5 +0.5
CHTO                               IAmb IAmb  02 55 33.6
      comp=Z,33nm,0.8s
CHTO                               ScP ScP    03 01 42.1 +0.2
AS31  Alice Springs     29.09 162  P   P      02 55 32.4 -0.5
ASAR  Alice Springs     29.09 162  P   P      02 55 33.0 +0.1
      comp=Z,5.1nm,0.5s,baz=340,slow=7.2,SNR=102
ASAR                               S   S      02 59 59.1 -1.3
      comp=Z,5.0nm,0.9s,baz=348,slow=23,SNR=8.5
ASAR                               ScP ScP    03 01 41.3 -0.9
      comp=Z,2.7nm,0.8s,baz=4.4,slow=3.3,SNR=8.4
ASAR  Alice Springs     29.09 162  P   P      02 55 32.1 -0.8
ASAR                                   ScP    03 01 41.2 -1.0
JNU   Nakatsue          29.44  11  P   P      02 55 36.8 +0.9
      comp=Z,13nm,0.9s,baz=270,slow=5.1,SNR=4.2
JNU   Nakatsue          29.44  11  IAmb IAmb  02 56 28.8
      comp=Z,97nm,1.7s
KMI   Kunming           29.59 317  P   P      02 55 39.2 +1.6
KMI                                pmax pmax
      comp=Z,25nm,1.4s
ENH   Enshi             29.65 333  P   P      02 55 37.4 -0.3
ENH                                ScP ScP    03 01 43.8 -0.1
CTA   Charters Tower    32.14 139  P   P      02 56 00.6 +1.0
      comp=Z,20nm,0.7s,baz=329,slow=11,SNR=14
TIA   Tai'an            32.65 349  P   P      02 56 04.1 +0.3
TIA                                pmax pmax
      comp=Z,24nm,1.0s
CD2   Chengdu           33.08 326⇑iP   P      02 56 07.5 -0.1
CD2                                S   S      03 01 10.7 +8.6
CD2                                pmax pmax
      comp=Z,70nm,0.7s
CD2                                pmax pmax
      comp=Z,320nm,6.9s
XAN   Xi'an             33.13 336  P   P      02 56 07.7 -0.3
XAN                                pmax pmax
      comp=Z,31nm,0.6s
XAN   Xi'an             33.13 336  P   P      02 56 07.2 -0.8
KSAR  Wonju Array Be    33.29   5  P   P      02 56 08.3 -0.9
KSAR                               PcP PcP    02 58 44.4 +1.4
KSAR                               ScP ScP    03 01 56.6 +0.7
KSRS  Korea Array       33.30   5  P   P      02 56 09.7 +0.4
      comp=Z,7.2nm,0.7s,baz=186,slow=9.9,SNR=15
KSRS                               PcP PcP    02 58 43.7 +0.8
      comp=Z,2.6nm,0.7s,baz=190,slow=3.0,SNR=5.2
KSRS                               ScP ScP    03 01 55.1 -0.9
      comp=Z,7.4nm,0.8s,baz=191,slow=3.8,SNR=16
MAJO  Matsushiro        34.61  20  P   P      02 56 19.8 -0.7
MAT   Matsushiro        34.61  20  P   P      02 56 19.9 -0.6
MJAR  Matsushiro Arr    34.61  20  P   P      02 56 20.2 -0.4
      comp=Z,9.3nm,0.6s,baz=189,slow=9.4,SNR=27
MJAR                               ScP ScP    03 01 59.7 -1.0
      comp=Z,4.5nm,0.9s,baz=192,slow=5.4,SNR=5.0
MJAR  Matsushiro Arr    34.61  20  P   P      02 56 19.3 -1.3
MJB9  Matsu-Tunnel      34.61  20  P   P      02 56 19.8 -0.8
FORT  Forrest           34.88 175  P   P      02 56 22.2 -0.6
TIY   Taiyuan           35.22 343 eP   P      02 56 27.1 +1.3
BJI   Beijing           36.54 349⇓eP   P      02 56 37.3 +0.5
BJI                                pP  pP     02 57 37.0 -3.2
BJI                                ScP ScP    03 02 08.0 +0.3
BJI                                pmax pmax
      comp=Z,56nm,1.1s
BRDH  Bariadhala        36.80 303  P   P      02 56 39.8 +0.6
      comp=Z,82nm,0.4s,baz=91,slow=8.0,SNR=7.7
LZH   Lanzhou           37.10 332 eP   P      02 56 42.2 +0.5
LZH                                pP  pP     02 57 46.0 +2.1
LZH                                sP  sP     02 58 22.3 +1.5
LZH                                pmax pmax
      comp=Z,26nm,1.0s
LZH                                pmax pmax
      comp=Z,160nm,4.1s
NWAO  Narrogin (SRO)    37.51 190  P   P      02 56 45.0  0.0
      comp=Z,5.1nm,0.5s,baz=34,slow=8.5,SNR=8.5
BBOO  Buckleboo         38.32 164  IAmb IAmb  02 56 53.7
      comp=Z,116nm,1.6s
HHC   Hu-ho-hao-te      38.38 344 eP   P      02 56 52.3 +0.1
HHC                                sP  PP     02 58 26.3 -1.9
HHC                                S   S      03 02 24.0 +1.7
HHC                                sS  sS     03 04 13.3 -2.3
HHC                                ScS ScS    03 06 28.9 +3.0
HHC                                pmax pmax
      comp=Z,90nm,0.8s
HHC                                pmax pmax
      comp=Z,320nm,4.7s
STKA  Stephens Creek    39.31 157  P   P      02 57 01.1 +1.2
      comp=Z,40nm,0.6s,baz=332,slow=8.7,SNR=132
STKA                               ScP ScP    03 02 17.2 -1.2
      comp=Z,8.1nm,0.7s,baz=346,slow=6.3,SNR=9.9
STKA  Stephens Creek    39.31 157  P   P      02 57 01.1 +1.2
STKA                                   ScP    03 02 18.2 -0.2
USRK  Ussuriysk Ar.     40.44   8  P   P      02 57 09.1 +0.3
      comp=Z,4.8nm,0.6s,baz=189,slow=6.6,SNR=9.0
USRK  Ussuriysk Ar.     40.44   8  P   P      02 57 07.7 -1.2
MDJ   Mudanjiang        40.56   6  P   P      02 57 10.0 +0.1
MDJ                                pmax pmax
      comp=Z,17nm,0.9s
MDJ                                pmax pmax
      comp=Z,360nm,4.3s
LSA   Lhasa             40.57 313  P   P      02 57 12.0 +1.2
LSA                                pmax pmax
      comp=Z,94nm,0.6s
LSA   Lhasa             40.57 313  IAmb IAmb  02 57 13.7
      comp=Z,45nm,0.6s
GTA   Gaotai            41.67 331 ⇑P   P      02 57 19.5 +0.4
GTA                                pP  pP     02 58 24.8 +2.0
GTA                                sP  sP     02 59 00.7 +1.3
GTA                                PcP PcP    02 59 09.1  0.0
GTA                                ScP ScP    03 02 27.7 -0.1
GTA                                pmax pmax
      comp=Z,9.0nm,1.1s
GTA                                pmax pmax
      comp=Z,450nm,7.8s
GTA                                LR  LR
      comp=Z,180nm,17.1s
GTA                                LR  LR
      comp=Z,560nm,17.8s
GTA                                LR  LR
      comp=Z,320nm,17.5s
TAPN  Taplejung         42.05 307 eP   P      02 57 22.7 +0.1
      comp=Z,47nm,0.7s
ODAN  Odare             42.09 306 eP   P      02 57 22.9 +0.1
      comp=Z,80nm,0.7s
RAMN  Ramite            42.77 306 eP   P      02 57 28.5 +0.3
      comp=Z,63nm,0.7s
ASAJ  Asahikawa         42.88  19  P   P      02 57 29.7 +1.2
      comp=Z,33nm,0.7s,baz=217,slow=9.7,SNR=32
ARMA  Armidale          43.01 145  P   P      02 57 31.5 +1.6
JIRN  Jiri              43.40 307 eP   P      02 57 33.5 +0.1
      comp=Z,109nm,0.6s
GUN   Gumba             43.76 307 eP   P      02 57 36.3 +0.1
      comp=Z,101nm,0.6s
PKI   Pulchoki          43.99 306 eP   P      02 57 37.6 -0.4
      comp=Z,23nm,0.6s
PKIN  Phulchoki         44.00 306 eP   P      02 57 37.6 -0.4
      comp=Z,16nm,0.6s
DMN   Daman             44.25 306 eP   P      02 57 39.8 -0.2
      comp=Z,42nm,0.8s
KLR   Kul'dur           45.35   7  P   P      02 57 47.5 -0.4
      comp=Z,8.9nm,0.5s,baz=194,slow=6.0,SNR=48
KLR                                ScP ScP    03 02 41.1 -1.2
      comp=Z,1.4nm,0.6s,baz=219,slow=6.7,SNR=4.1
CAN   Canberra          45.46 152  P   P      02 57 50.9 +1.8
CAN                                IAmb IAmb  02 57 52.2
      comp=Z,37nm,0.6s
YSS   Yuzh-Sakhalins    45.47  17  P   P      02 57 49.4 +0.6
DANN  Dangsing          45.64 306 eP   P      02 57 50.7 -0.1
      comp=Z,129nm,0.6s
ULN   Ulaanbaatar       46.10 344  P   P      02 57 53.6 -0.3
ULN                                IAmb IAmb  02 57 56.0
      comp=Z,74nm,1.3s
SONM  Songino Array     46.26 343  P   P      02 57 55.3 +0.1
      comp=Z,12nm,0.5s,baz=162,slow=8.7,SNR=54
SONM                               PcP PcP    02 59 24.3 -0.3
      comp=Z,1.9nm,0.8s,baz=163,slow=2.4,SNR=2.6
SONM                               ScP ScP    03 02 44.9 -1.5
      comp=Z,1.8nm,0.8s,baz=168,slow=3.9,SNR=4.6
SONM  Songino Array     46.26 343  P   P      02 57 55.1  0.0
SONM                               PcP PcP    02 59 24.6  0.0
HYB   Hyderabad         46.95 290 i P  P      02 58 02.0 +1.1
TLY   Talaya            50.50 343  P   P      02 58 27.3 +0.3
      comp=Z,14nm,0.5s,baz=143,slow=4.4,SNR=14
TLY   Talaya            50.50 343  P   P      02 58 27.1 +0.1
TLY                                IAmb IAmb  02 58 29.5
      comp=Z,37nm,1.1s
WMQ   Urumqi            51.18 326  P   P      02 58 32.9 +0.7
WMQ                                pP  PcP    02 59 43.7 +1.1
WMQ                                pmax pmax
      comp=Z,22nm,1.1s
WMQ                                pmax pmax
      comp=Z,270nm,3.9s
WMQ                                LR  LR
      comp=Z,500nm,15.5s
WMQ                                LR  LR
      comp=Z,160nm,19.7s
WMQ                                LR  LR
      comp=Z,130nm,19.7s
PETK  Petropavlovsk-    55.90  23  P   P      02 59 07.1 +1.1
      comp=Z,8.6nm,0.5s,baz=198,slow=4.6,SNR=37
PETK  Petropavlovsk-    55.90  23  P   P      02 59 05.1 -0.8
NIL   Nilore            55.98 308  P   P      02 59 05.4 -1.6
MK31  Makanchi Array    56.01 326  IAmb IAmb  02 59 08.8
      comp=Z,21nm,0.6s
MKAR  Makanchi Array    56.01 326  P   P      02 59 07.1 +0.2
      comp=Z,40nm,0.6s,baz=122,slow=8.4,SNR=389
MKAR                               PcP PcP    03 00 00.5 -0.5
      comp=Z,5.7nm,0.6s,baz=111,slow=4.9,SNR=5.6
MKAR                               ScP ScP    03 03 26.7 -1.7
      comp=Z,2.3nm,0.7s,baz=119,slow=5.0,SNR=5.0
MKAR  Makanchi Array    56.01 326  P   P      02 59 06.7 -0.3
MKAR  Makanchi Array    56.01 326      ScP    03 03 26.9 -1.5
MAKZ  Makanchi          56.19 326  P   P      02 59 08.2  0.0
MAKZ                               IAmb IAmb  02 59 09.9
      comp=Z,35nm,0.5s
MAKZ                               PcP PcP    03 00 00.5 -1.2
KSH   Kashi             56.25 316  P   P      02 59 10.3 +1.4
KSH                                PP  PP     03 01 20.7 +2.4
KSH                                S   S      03 06 29.7 -3.2
KSH                                pmax pmax
      comp=Z,41nm,1.2s
KSH                                pmax pmax
      comp=Z,380nm,7.3s
KSH                                LR  LR
      comp=Z,590nm,10.0s
KSH                                LR  LR
      comp=Z,570nm,11.8s
KSH                                LR  LR
      comp=Z,310nm,13.6s
KZA   Kyzart            57.87 318  P   P      02 59 19.1 -1.3
      SNR=7.2
YAK   Yakutsk           57.89   3  P   P      02 59 19.7  0.0
      comp=Z,39nm,0.7s,baz=191,slow=1.3,SNR=14
YAK   Yakutsk           57.89   3  P   P      02 59 19.6  0.0
KBK   Karagaybulak      58.33 319  P   P      02 59 24.0 +0.7
      SNR=9.6
UCH   Uchtor            58.43 318  P   P      02 59 25.3 +0.9
      SNR=22
CHMS  Chumysh           58.62 319  P   P      02 59 25.4 +0.2
      SNR=8.5
AAK   Ala-Archa         58.62 318  P   P      02 59 25.6 +0.3
      comp=Z,7.9nm,0.6s,baz=112,slow=6.4,SNR=26
AAK                                PcP PcP    03 00 11.2 -0.4
      comp=Z,3.3nm,0.5s,baz=138,slow=4.5,SNR=4.4
AAK   Ala-Archa         58.62 318  P   P      02 59 25.8 +0.5
      SNR=7.2
AAK   Ala-Archa         58.62 318  P   P      02 59 25.1 -0.2
MA2   Magadan           58.86  15  P   P      02 59 27.5 +1.1
USP   Ospenovka         58.90 319  P   P      02 59 27.3 +0.2
      SNR=22
AML   Almayashu         58.94 318  P   P      02 59 28.4 +0.6
      SNR=24
ARSB  Arslanbob         59.08 317  IAmb IAmb  02 59 29.6
      comp=Z,17nm,0.8s
EKS2  Erkin-Say         59.11 318  P   P      02 59 29.1 +0.5
      SNR=14
ZALV  Zalesovo Beam     59.27 334  P   P      02 59 28.2 -1.0
      comp=Z,11nm,0.5s,baz=133,slow=6.1,SNR=47
ZALV  Zalesovo Beam     59.27 334  P   P      02 59 28.1 -1.2
KBL   Kabul             59.57 308  P   P      02 59 30.0 -2.0
KBL                                IAmb IAmb  02 59 32.5
      comp=Z,17nm,0.8s
KURBB Kurchatov Arra    60.25 328  P   P      02 59 36.1 +0.1
      comp=Z,76nm,0.5s,baz=129,slow=6.2,SNR=538
KURK  Kurchatov         60.26 328  P   P      02 59 35.6 -0.4
CHGR  Chuyangaron       60.80 312  IAmb IAmb  02 59 41.2
      comp=Z,28nm,0.8s
KK31  Karatay Array     61.48 318  IAmb IAmb  02 59 45.1
      comp=Z,21nm,0.8s
KKAR  Karatay Array     61.48 318  P   P      02 59 43.8 -0.6
KKAR  Karatay Array     61.48 318  IAmb IAmb  02 59 45.1
      comp=Z,21nm,0.8s
SEY   Seymchan          62.14  14  P   P      02 59 49.4 +1.1
      comp=Z,5.8nm,0.7s,baz=236,slow=7.2,SNR=16
LBZ   Lake Benmore      63.23 145  P   P      02 59 56.4 +0.5
LBZ                                IAmb IAmb  02 59 57.7
      comp=Z,21nm,0.6s
THZ   Tophouse          63.35 141  IAmb IAmb  02 59 58.5
      comp=Z,27nm,0.7s
LTZ   Lake Taylor       63.53 143  P   P      02 59 58.4 +0.6
LTZ                                IAmb IAmb  02 59 59.7
      comp=Z,18nm,0.9s
URZ   Urewera           64.31 136  P   P      03 00 04.1 +1.1
URZ                                IAmb IAmb  03 00 04.8
      comp=Z,22nm,0.9s
BKZ   Black Stump Fm    64.33 137  IAmb IAmb  03 00 05.4
      comp=Z,31nm,0.9s
HRA   Herat             64.95 306  IAmb IAmb  03 00 07.7
      comp=Z,9.6nm,0.7s
BVAR  Borovoye Array    65.82 328  P   P      03 00 12.6 +0.3
      comp=Z,23nm,0.7s,baz=134,slow=8.5,SNR=114
BRVK  Borovoye          65.89 328  P   P      03 00 11.7 -1.1
TIXI  Tiksi             67.48   1  P   P      03 00 21.7 -0.7
      comp=Z,14nm,0.7s,baz=197,slow=4.6,SNR=20
TIXI  Tiksi             67.48   1  P   P      03 00 21.1 -1.3
TIXI                               IAmb IAmb  03 00 23.8
      comp=Z,14nm,0.8s
UOSS  Minazif           68.66 295  P   P      03 00 29.3 -1.3
GEYT  Alibeck           68.97 309  P   P      03 00 32.6 +0.3
      comp=Z,10nm,0.7s,baz=141,slow=5.2,SNR=22
GEYT  Alibeck           68.97 309  P   P      03 00 31.0 -1.2
NRIK  Noril'sk          69.54 347  P   P      03 00 34.7 -0.3
      comp=Z,36nm,0.7s,baz=131,slow=6.7,SNR=36
ABKAR Akbulak array     70.48 321  P   P      03 00 40.2 -0.9
ARU   Arti              73.45 328  P   P      03 00 57.2 -1.3
RAYN  Ar Rayn           78.34 293  P   P      03 01 25.6 -1.1
RAYN                               IAmb IAmb  03 01 27.0
      comp=Z,18nm,0.8s
TBLG  Delisi            79.67 312  IAmb IAmb  03 01 34.8
      comp=Z,14nm,0.9s
AKH   Akhalkalaki       80.59 311  IAmb IAmb  03 01 40.5
      comp=Z,16nm,1.0s
KBZ   Khabaz            81.14 313  P   P      03 01 40.7 -0.4
      comp=Z,4.0nm,0.8s,baz=124,slow=6.7,SNR=7.1
IMAR  Indian Mountai    82.85  24  P   P      03 01 50.8 +1.2
BPAW  Bear Paw Mtn.     83.87  26  IAmb IAmb  03 04 02.4
      comp=Z,22nm,1.8s
KLMR  Klimovskoe        84.00 331 eP   P      03 01 54.0 -1.4
KLMR                               AMP        03 01 55.8
      comp=Z,57nm,0.6s
VNDA  Vanda             84.10 172  P   P      03 01 55.8 +0.2
      comp=Z,2.4nm,0.6s,baz=323,slow=7.3,SNR=11
GAZ   Gaziantep         85.42 307  IAmb IAmb  03 02 04.5
      comp=Z,16nm,0.8s
OBN   Obninsk           85.49 325 ⇑P   P      03 02 02.6 -0.3
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OBN	Obninsk	85.49	325	P	P	03 02 02.4	-0.5
IL31		85.67	25	IAmb	IAmb	03 02 16.6	
	comp=Z,26nm,2.0s						
ILAR	Eielson Array	85.67	25	P	P	03 02 02.7	-0.9
	comp=Z,0.4nm,0.4s,baz=251,slow=4.4,SNR=15						
BMAR	Burnt Mountain	86.54	23	P	P	03 02 09.0	+1.2
KMBO	Kilima Mbogo	87.41	269	P	P	03 02 13.6	+0.2
	comp=Z,4.6nm,0.9s,baz=60,slow=7.9,SNR=13						
BR131	Keskin Array S	88.11	310	IAmb	IAmb	03 02 17.1	
	comp=Z,8.2nm,0.9s						
BRTR	Keskin Array B	88.11	310	P	P	03 02 14.4	-1.5
	comp=Z,5.6nm,0.8s,baz=137,slow=5.2,SNR=25						
BRTR	Keskin Array B	88.11	310	P	P	03 02 13.9	-2.0
ARCES	ARCESS Array B	89.33	340	P	P	03 02 20.5	-0.4
	comp=Z,4.9nm,0.5s,baz=96,slow=5.4,SNR=20						
ARCES	ARCESS Array B	89.33	340	P	P	03 02 19.4	-1.5
AKASG	Malin Array Be	90.22	321	P	P	03 02 24.0	-1.4
	comp=Z,3.7nm,0.7s,baz=66,slow=5.0,SNR=19						
AKASG	Malin Array Be	90.22	321	P	P	03 02 23.4	-2.0
FINES	FINESS Array B	90.46	332	P	P	03 02 24.8	-1.4
	comp=Z,11nm,0.6s,baz=64,slow=5.1,SNR=43						
SYO	Syowa Base	92.03	201	⇑ePcP	PcP	03 02 35.8	+1.9
SYO	Syowa Base	92.03	201	⇑epP	pP	03 03 48.0	-0.9
TESR	Tescani	92.47	317	⇑P	P	03 02 34.9	-1.0
VRI	Vrincioaia	92.52	316	⇑P	P	03 02 36.5	+0.3
BURAR	Bucovina Array	93.27	318	⇓P	P	03 02 39.7	0.0
BURAR	Bucovina Array	93.27	318	P	P	03 02 39.0	-0.6
BUR08	Bucovina Ar. S	93.27	318	IAmb	IAmb	03 02 40.2	
	comp=Z,8.9nm,0.7s						
C36M	Paulatuk	93.55	19	IAmb	IAmb	03 02 53.9	
	comp=Z,22nm,1.9s						
DRGR		95.10	318	⇓P	P	03 02 47.0	-1.0
CRVS	Cervenica-Dubn	95.48	320	eP	P	03 02 49.5	-0.1
VTS	Vitosha	95.53	313	⇓P	P	03 02 48.9	-1.3
HERR	Herculane	95.68	316	⇑P	P	03 02 50.1	-0.5
VYHS	Vyhne	97.27	320	eP	P	03 02 56.9	-0.8
NB2	NORSAR Subarra	97.47	333	P	P	03 02 55.5	-2.9
	comp=Z,2.6nm,0.6s,baz=68,slow=4.6						
NB2	NORSAR Subarra	97.47	333	P	P	03 02 55.5	-2.9
	baz=68,slow=4.6						
NOA	NORSAR Array B	97.47	333	P	P	03 02 56.3	-2.1
	comp=Z,2.5nm,0.6s,baz=68,slow=4.4,SNR=9.7						
RES	Resolute Bay	97.79	10	IAmb	IAmb	03 03 00.2	
	comp=Z,2.6nm,0.8s						
BRG	Berggiesshubel	99.63	323	eP	Pdif	03 03 07.9	-0.2
	comp=Z,2.7nm,0.8s						
YKA	Yellowknife Ar	100.01	24	P	Pdif	03 03 10.0	+0.4
	comp=Z,0.2nm,0.6s,baz=304,slow=4.0,SNR=3.4						
CLL	Collm	100.05	324	ePdif	Pdif	03 03 09.0	-1.0
GERES	GERESS Array B	100.43	321	P	Pdif	03 03 11.5	-0.4
	comp=Z,1.5nm,0.9s,baz=72,slow=5.7,SNR=8.2						
SCHQ	Schefferville	120.48	8	PKP	PKiKP	03 08 14.4	-0.1
	comp=Z,1.7nm,0.5s,baz=282,slow=3.0,SNR=10						
TORD	Torodi Ar. Bea	120.75	288	PKP	PKPdf	03 08 15.2	-0.7
	comp=Z,2.9nm,0.6s,baz=92,slow=1.9,SNR=24						
TXAR	Lajitas Array	123.04	51	PKP	PKPdf	03 08 20.1	-0.1
	comp=Z,0.8nm,0.6s,baz=228,slow=1.0,SNR=12						
KIC	Kosan Boka	128.33	281	ePKIKP	PKPdf	03 08 30.7	+0.2
	comp=Z,32nm,1.4s						
KIC	Kosan Boka	128.33	281		PKPdf	03 08 30.7	+0.2
DBIC	Dimbokro	128.39	282	PKP	PKPdf	03 08 29.8	-0.8
	comp=Z,2.1nm,0.6s,baz=75,slow=0.8,SNR=4.7						
TIC	Toumodi	128.55	282	ePKIKP	PKPdf	03 08 30.5	-0.5
TIC	Toumodi	128.55	282		PKPdf	03 08 30.5	-0.5
LIC	Lamto	128.64	281	ePKIKP	PKPdf	03 08 30.7	-0.4
	comp=Z,9.9nm,0.7s						
LIC	Lamto	128.64	281		PKPdf	03 08 30.7	-0.4
ROC1	El Roble	147.82	155		PKiKP	03 09 10.0	-0.7
CPUP	Villa Florida	157.85	175	PKPab	PKPab	03 09 54.7	+0.3
	comp=Z,1.9nm,0.8s,baz=320,slow=4.0,SNR=4.8						

*IDC **10** 03:47:37.0±2.0,2°.72N×128°.63E,h235^{km}±21^{km},mb3.6/12,mb1 3.8/13,mb1mx3.6/42,mbtmp4.2/13,Error ellipse: s-maj=25.6km s-min=9.3km az=78.0*

*DJA **10** 03:47:40.5±1.0,2°N±14°×12°8E±°,h208^{km}±5^{km},M4.7/7,mB5.1/3,mb4.7/5,MLv4.7/7,Mw(mB)4.5/3*

ISC 10 03:47:38.3±0.6,**2°.64N**±0°.08×**128°.47E**±0°.10,**h250**^{km}**,n25,**σ**1^s.33**/24,**mb4.0**/11,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.15	211	P	Pn	03 48 19.6	-2.7
SWI	Sorong	4.46	141	P	Pn	03 48 46.3	-1.3
SIJI	Sorong	4.47	141	P	Pn	03 48 46.1	-1.7
	7.9nm,0.3s,baz=331,slow=15,SNR=11						
KMSI	Cibinong	4.93	246	P	Pn	03 48 51.3	-2.0
SANI	Sanana	5.28	208	P	Pn	03 48 54.7	-2.9
	2.0nm9μm424nm,0.8s						
LUWI	Luwuk	6.77	237	P	Pn	03 49 15.8	-0.3
	0.5nm3μm113nm,0.6s						
MRSI	Marisa	6.87	252	P	Pn	03 49 17.1	-0.3
	0.2nm1μm26nm,0.5s						
TTSI	Tana Toraja	10.32	237	P	Pn	03 50 00.5	-0.6
	23nm,0.5s						
GENI	Genyem	12.80	114	P	P	03 50 35.8	+1.9
FITZ	Fitzroy Crossi	20.79	188	P	P	03 52 00.7	-0.2
	0.8nm,0.3s,baz=17,slow=6.8,SNR=9.0						
WRA	Warramunga Arr	23.17	166	P	P	03 52 23.3	+0.2
	2.3nm,0.6s,baz=333,slow=11,SNR=19						
ASAR	Alice Springs	26.68	169	P	P	03 52 55.1	+0.4
	2.1nm,0.5s,baz=353,slow=7.9,SNR=42						
ASAR				PcP	PcP	03 56 12.4	+0.8
	1.8nm,0.6s,baz=354,slow=2.3,SNR=16						
CMAR	Chiang Mai Arr	32.92	301	P	P	03 53 51.0	+1.3
	2.8nm,0.3s,baz=122,slow=7.8,SNR=8.8						
KSRS	Korea Array	34.65	359	P	P	03 54 03.7	-0.6
	3.0nm,0.6s,baz=176,slow=9.9,SNR=8.8						
MJAR	Matsushiro Arr	34.92	14	P	P	03 54 04.6	-2.0
	2.5nm,0.6s,baz=181,slow=9.7,SNR=6.9						
STKA	Stephens Creek	36.52	161	P	P	03 54 20.9	+0.7
	3.6nm,0.4s,baz=347,slow=8.0,SNR=20						
STKA				PcP	PcP	03 56 38.7	+0.5
	1.1nm,0.5s,baz=330,slow=5.7,SNR=3.4						
H11N1	WAKE ISLAND Hy	41.18	63	T	T	04 39 47.6	
	baz=249,slow=75						
H11N2	WAKE ISLAND Hy	41.19	63	T	T	04 39 47.3	
	baz=249						
H11N3	WAKE ISLAND Hy	41.20	63	T	T	04 39 47.0	
	baz=249,slow=75						
USRK	Ussuriysk Ar.	41.50	4	P	P	03 55 00.8	-0.4
	2.6nm,0.7s,baz=209,slow=11,SNR=4.7						
SONM	Songino Array	48.89	340	P	P	03 55 59.2	0.0
	1.4nm,0.6s,baz=158,slow=8.7,SNR=6.5						
MKAR	Makanchi Array	59.44	325	P	P	03 57 15.4	+0.4
	1.1nm,0.5s,baz=117,slow=8.2,SNR=28						
VNDA	Vanda	82.14	173	P	P	03 59 31.4	+0.8
	1.6nm,1.0s,baz=342,slow=6.9,SNR=4.0						
ARCES	ARCESS Array B	92.06	340	P	P	04 00 18.2	-0.6
	2.6nm,0.9s,baz=97,slow=6.5,SNR=3.3						
TORD	Torodi Ar. Bea	124.90	288	PKP	PKiKP	04 06 09.8	-0.2
	0.4nm,0.4s,baz=90,slow=1.2,SNR=6.4						

*NEIC **10** 03:52:04.1±2.0,25°.36S±0°.10×179°.7E±0°.1,h482^{km}±7^{km},mb4.6/51,Error ellipse: s-maj=16.0km s-min=13.9km az=119.0*

*IDC **10** 03:52:06.2±1.1,25°.28S×179°.60E,h501^{km}±11^{km},mb3.9/15,mb1 4.1/17,mb1mx4.0/23,mbtmp4.7/17,Error ellipse: s-maj=12.4km s-min=11.0km az=170.0*

ISC 10 03:52:05.7±0.4,**25°.32S**±0°.05×**179°.71E**±0°.07,**h507**^{km}**,n128,**σ**1^s.84**/147,**mb4.5**/35,**2C,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	4.44	152	P	P	03 53 29.0	+0.9
RAO	Raoul Island	4.45	152	P	P	03 53 30.0	+1.8
	632nm,0.3s,baz=85,slow=11,SNR=15						
RAO				S	S	03 54 32.4	-3.1
	19nm,0.3s,baz=270,slow=20,SNR=1.7						
RAO	Raoul Island	4.45	152	P	P	03 53 28.9	+0.7
GLKZ	Green Lake	4.46	152	P	P	03 53 29.1	+0.9
GLKZ				S	S	03 54 37.9	+2.2
MSVF	Nonsavu	7.70	348	P	P	03 53 55.5	-3.9
MXZ	Matakaoa Point	12.27	185	P	P	03 54 45.4	-1.4
MXZ	Matakaoa Point	12.27	185	P	P	03 54 48.8	+1.9
MXZ				S	S	03 56 56.3	-3.4
DZM	Mont Dzumac	12.58	282	P	P	03 54 51.7	+1.2
	1.0nm,0.3s,baz=72,slow=18,SNR=7.6						
DZM	Mont Dzumac	12.58	282	P	P	03 54 49.2	-1.3
URZ	Urewera	13.09	189	P	P	03 54 53.9	-1.6
	3.7nm,0.3s,baz=266,slow=3.7,SNR=28						
URZ				S	S	03 57 12.8	-2.8
	3.1nm,0.3s,baz=181,slow=18,SNR=7.3						
MWZ	Matawai	13.11	188	P	P	03 54 58.4	+2.6
MWZ				S	S	03 57 17.6	+1.5
RAGZ	Rawiri	13.28	188	P	P	03 55 00.0	+2.4
RAGZ				S	S	03 57 20.9	+1.5
MUGZ	Murupara	13.36	190	P	P	03 55 01.7	+3.3
MUGZ				S	S	03 57 21.7	+1.0
HIZ	Hauiti	13.78	196	P	P	03 55 04.5	+1.7
AFI	Afiamalu	13.89	37	P	P	03 55 01.4	-2.9
BKZ	Black Stump Fm	14.07	190	P	P	03 55 04.2	-1.8
BKZ				S	S	03 57 34.7	+0.1
KRHZ	Kereru	14.56	190	S	S	03 57 42.8	-1.1
PRWZ	Pori Road	15.51	191	P	P	03 55 20.3	-0.7
PRWZ				S	S	03 57 59.6	-2.3
BFZ	Birch Farm	15.59	190	P	P	03 55 20.2	-1.6
BFZ				IAmb	IAmb	03 55 23.3	
	comp=Z,14nm,0.5s						
BFZ	Birch Farm	15.59	190	P	P	03 55 19.5	-2.3
MRZ	Mangatainoka R	15.69	192	P	P	03 55 20.1	-2.7
MRZ				S	S	03 58 02.7	-2.4
OGWZ	Otaki Gorge	15.91	193	P	P	03 55 23.5	-1.6
HOWZ	Holdsworth Sta	15.93	192	P	P	03 55 23.6	-1.7
KIW	Kapiti Island	16.01	193	P	P	03 55 24.3	-1.8
TRWZ	Traveller	16.38	191	P	P	03 55 28.2	-1.8
PAWZ	Paruwai Farm	16.41	191	P	P	03 55 28.9	-1.4
MSWZ	Moikau Station	16.48	192	P	P	03 55 28.4	-2.6
MSWZ				S	S	03 58 14.0	-5.5
MSWZ	Moikau Station	16.48	192	P	P	03 55 29.7	-1.3
SNZO	South Karori	16.48	193	P	P	03 55 30.7	-0.3
SNZO					S	03 58 17.8	-1.7
QRZ	Quartz Range	16.58	199	P	P	03 55 31.8	-0.3
PLWZ	Palliser	16.62	192	P	P	03 55 30.1	-2.5
PLWZ					S	03 58 16.9	-5.3
PLWZ	Palliser	16.62	192	P	P	03 55 30.0	-2.5
PLWZ				S	S	03 58 19.4	-2.8
NNZ	Nelson	16.71	197	P	P	03 55 31.8	-1.5
TUWZ	Tuamarina	16.77	195	P	P	03 55 32.1	-1.7
TUWZ					S	03 58 22.0	-2.5
BSWZ	Blackbirch Sta	17.05	195	P	P	03 55 35.7	-1.0
BSWZ					S	03 58 29.5	+0.1
THZ	Tophouse	17.34	197	P	P	03 55 38.3	-1.3
THZ				IAmb	IAmb	03 55 40.0	
	comp=Z,17nm,1.1s						
KHZ	Kahutara	17.80	195	P	P	03 55 41.3	-2.3
KHZ				IAmb	IAmb	03 55 45.2	
	comp=Z,34nm,1.5s						
KHZ					S	03 58 38.5	-3.0
LTZ	Lake Taylor	18.46	198	IAmb	IAmb	03 55 50.8	
	comp=Z,12nm,0.8s						
OXZ	Oxford	19.03	197	IAmb	IAmb	03 55 54.5	
	comp=Z,15nm,0.9s						
MQZ	McQueen's Vall	19.23	196	P	P	03 55 55.1	-1.6
MQZ				IAmb	IAmb	03 56 10.4	
	comp=Z,24nm,1.1s						
RPZ	Rata Peaks	19.67	199	P	P	03 56 02.1	+1.3
	comp=Z,1.3nm,0.3s,baz=226,slow=4.0,SNR=5.6						
RPZ	Rata Peaks	19.67	199	P	P	03 55 59.6	-1.2
RPZ				IAmb	IAmb	03 56 10.2	
	comp=Z,9.2nm,0.9s						
FOZ	Fox Glacier	19.89	202	P	P	03 56 01.4	-1.4
FOZ				IAmb	IAmb	03 56 15.0	
	comp=Z,18nm,1.2s						
WKZ	Wanaka	21.30	201	P	P	03 56 14.3	-1.3
WKZ				IAmb	IAmb	03 56 27.9	
	comp=Z,20nm,1.1s						
HNR	Honiara	24.55	307	P	P	03 56 44.2	-0.8
	comp=Z,115nm,0.5s,baz=220,slow=7.9,SNR=4.3						
HNR	Honiara	24.55	307	P	P	03 56 44.0	-1.0
ARMA	Armidale	25.31	252	P	P	03 56 52.3	+0.6
ARMA				IAmb	IAmb	03 56 54.2	
	comp=Z,26nm,0.7s						
CAN	Canberra	28.22	242	P	P	03 57 18.4	+1.2
CAN				IAmb	IAmb	03 57 20.4	
	comp=Z,20nm,1.3s						
CTA	Charters Tower	31.25	273	P	P	03 57 44.4	+0.9
	comp=Z,94nm,0.6s,baz=97,slow=11,SNR=119						
TOO	Toolangi	31.48	239	P	P	03 57 46.4	+1.1
TOO				IAmb	IAmb	03 57 47.2	
	comp=Z,13nm,0.8s						
STKA	Stephens Creek	33.97	250	P	P	03 58 07.0	+0.5
	comp=Z,6.4nm,0.5s,baz=94,slow=9.8,SNR=24						
COEN	Coen	36.10	281	P	P	03 58 25.4	+0.8
BBOO	Buckleboo	38.66	249	P	P	03 58 44.9	-0.5
BBOO				IAmb	IAmb	03 58 45.9	
	comp=Z,14nm,0.9s						
AS31	Alice Springs	41.56	262	IAmb	IAmb	03 59 10.2	
	comp=Z,14nm,1.1s						
ASAR	Alice Springs	41.56	262	P	P	03 59 09.0	+0.2
	comp=Z,32nm,0.8s,baz=101,slow=8.3,SNR=173						
ASAR				S	S	04 04 48.4	+0.4
	comp=Z,1.7nm,0.7s,baz=96,slow=16,SNR=9.1						
ASAR	Alice Springs	41.56	262	P	P	03 59 08.7	-0.1
WRA	Warramunga Arr	42.07	268	P	P	03 59 12.5	-0.3
	comp=Z,35nm,0.8s,baz=103,slow=8.0,SNR=14						
WRA				ScP	ScP	04 04 00.3	+2.2
	comp=Z,1.7nm,0.8s,baz=106,slow=3.8,SNR=4.6						
WRA				S	S	04 04 53.9	-1.4
	comp=Z,4.3nm,1.0s,baz=102,slow=13,SNR=5.3						
PTCN	Pitcairn Islan	45.20	101	P	P	03 59 38.0	+0.8
FORT	Forrest	45.59	251	P	P	03 59 39.1	-0.9
FORT				IAmb	IAmb	03 59 58.0	
	comp=Z,32nm,1.1s						
FITZ	Fitzroy Crossi	50.47	267	IAmb	IAmb	04 00 17.9	
	comp=Z,15nm,0.7s						
SWI	Sorong	52.66	290	P	P	04 00 32.5	-0.1
	comp=Z,102nm,0.8s						
VNDA	Vanda	52.95	185	P	P	04 00 34.6	+0.9
	comp=Z,1.0nm,0.5s,baz=16,slow=8.0,SNR=6.6						
SOEI	Soe	54.72	276	P	P	04 00 46.2	-1.2
SOEI	Soe	54.72	276	P	P	04 00 47.4	+0.1
SOEI				IAmb	IAmb	04 01 04.4	
	comp=Z,26nm,0.8s						
EDFI	Ende, Flores	57.45	276	P	P	04 01 06.3	0.0
	comp=Z,13nm,1.0s						
BKSI	Bulukumba	60.30	279	P	P	04 01 25.2	-0.2
	comp=Z,32nm,0.8s						
PLAI	Plampang	60.94	274	P	P	04 01 29.9	+0.3
	comp=Z,52nm,0.8s						
QSPA	South Pole Qui	64.77	180	P	P	04 01 54.9	+1.3
	comp=Z,8.9nm,0.6s,baz=280,slow=0.8,SNR=65						
QSPA	South Pole Qui	64.77	180	P	P	04 01 54.7	+1.1
QSPA				IAmb	IAmb	04 01 55.7	
	comp=Z,10nm,0.8s						
MJAR	Matsushiro Arr	72.92	326	P	P	04 02 43.3	+0.2
	comp=Z,13nm,0.8s,baz=152,slow=5.6,SNR=19						
MJAR	Matsushiro Arr	72.92	326	P	P	04 02 41.6	-1.4
MAT	Matsushiro	72.92	326	P	P	04 02 42.7	-0.3
MDSI	Maura Dua	75.02	272	P	P	04 02 54.2	-1.3
	comp=Z,28nm,0.7s						
KSRS	Korea Array	79.16	320	P	P	04 03 18.5	+1.0
	comp=Z,6.2nm,0.7s,baz=137,slow=5.8,SNR=21						
KSAR	Wonju Array Be	79.18	320	P	P	04 03 17.9	+0.3
PETK	Petropavlovsk-	80.41	347	P	P	04 03 24.4	+0.6
	comp=Z,7.9nm,0.8s,baz=139,slow=7.8,SNR=7.7						
PETK	Petropavlovsk-	80.41	347	P	P	04 03 23.9	+0.2
NJ2	Nanjing	81.39	311	eP	P	04 03 31.8	+2.5
SYO	Syowa Base	81.58	194	⇑eP	P	04 03 28.2	-1.4
SYO	Syowa Base	81.58	194	⇑ePcP	PcP	04 03 34.0	0.0
USRK	Ussuriysk Ar.	81.81	327	P	P	04 03 32.5	+1.3
	comp=Z,3.0nm,0.6s,baz=133,slow=6.1,SNR=5.7						
USRK	Ussuriysk Ar.	81.81	327	P	P	04 03 31.6	+0.5
SNAA	Sanae	83.26	179	P	P	04 03 38.1	-0.1
VNA3	Neumayer Olymp	83.48	177	P	P	04 03 39.7	+0.4
WHN	Wuhan	83.66	308	P	P	04 03 39.9	-0.9
VNA2	Neumayer--Watz	83.89	178	P	P	04 03 41.9	+0.6
	baz=182,slow=4.5						
CN2	Changchun	84.87	324	eP	P	04 03 47.0	+0.6
TIA	Tai'an	85.02	314	P	P	04 03 48.7	+1.3
NVAR	Mina Array Bea	85.95	44	P	P	04 03 53.4	+1.3
	comp=Z,2.1nm,0.8s,baz=222,slow=8.6,SNR=18						
NVAR	Mina Array Bea	85.95	44	P	P	04 03 53.1	+1.0
PBKT	Sadao Pong	87.19	290	P	P	04 03 59.0	+0.9
PBKT				IAmb	IAmb	04 04 00.8	
	comp=Z,11nm,1.1s						
TUC	Tucson	87.59	53	P	P	04 04 00.9	+1.1
319A	Douglas	88.19	54	IAmb	IAmb	04 04 06.0	
	comp=Z,11nm,1.1s						
XAN	Xi'an	89.41	308	P	P	04 04 09.8	+1.6
XAN				IAmb	IAmb	04 04 10.4	
	comp=Z,14nm,1.1s						
KMI	Kunming	89.69	298	P	P	04 04 11.8	+1.9
G08A	Pilot Rock	89.70	38	P	P	04 04 11.3	+2.0
CMAR	Chiang Mai Arr	89.77	290	P	P	04 04 12.3	+2.1
	comp=Z,1.2nm,0.3s,baz=141,slow=3.3,SNR=15						
CMAR				PP	PP	04 07 52.2	+0.4
	comp=Z,1.0nm,0.3s,baz=134,slow=6.5,SNR=5.1						
CMAR	Chiang Mai Arr	89.77	290	P	P	04 04 11.4	+1.2
SKT	Skwentna	90.01	13	P	P	04 04 11.8	+1.5
SKT				IAmb	IAmb	04 04 13.7	
	comp=Z,6.9nm,0.7s						
HHC	Hu-ho-hao-te	91.23	315	eP	P	04 04 18.6	+2.0
TX31	Lajitas Ar. Si	91.40	58	IAmb	IAmb	04 04 20.1	
	comp=Z,4.2nm,1.0s						
TXAR	Lajitas Array	91.40	58	P	P	04 04 19.4	+1.7
	comp=Z,2.1nm,0.8s,baz=211,slow=6.0,SNR=22						
TXAR	Lajitas Array	91.40	58	P	P	04 04 19.1	+1.5
CD2	Chengdu	91.64	303	P	P	04 04 19.3	+0.7
ILAR	Eielson Array	93.47	14	P	P	04 04 25.6	-0.4
	comp=Z,0.5nm,0.9s,baz=224,slow=5.0,SNR=4.3						
PDAR	Pinedale Array	93.89	44	P	P	04 04 29.8	+0.9
	comp=Z,0.3nm,0.7s,baz=212,slow=5.3,SNR=3.7						
KSH	Kashi	115.83	303	PKP	PKPdf	04 09 48.7	-1.9
KSH				PP	PP	04 11 10.9	+7.1
KSH				sPKP		04 12 47.2	
KSH				SKS	SKSdf	04 16 09.9	-4.6
KSH				SKKS	SKKSac	04 17 05.3	-6.2
ARCES	ARCESS Array B	133.21	348	PKP	PKiKP	04 10 23.6	-0.5
	comp=Z,2.0nm,0.8s,baz=79,slow=1.9,SNR=2.7						
ARCES				SKPbc	SKPab	04 13 05.1	-0.8
	comp=Z,2.2nm,0.6s,baz=39,slow=3.7,SNR=14						
FINES	FINESS Array B	139.69	341	PKhKP	PKPpre	04 10 27.7	
	comp=Z,1.6nm,0.7s,baz=4.8,slow=4.6,SNR=5.6						
FINES				PKP	sPdif	04 10 36.1	+1.1
	comp=Z,5.0nm,1.0s,baz=45,slow=3.0,SNR=3.7						
FINES				SKPbc	SKiKP	04 13 24.0	-1.2
	comp=Z,6.9nm,0.8s,baz=47,slow=3.5,SNR=12						
FINES	FINESS Array B	139.69	341		PKPpre	04 10 27.3	
FINES					PKiKP	04 10 36.4	-1.0
NB2	NORSAR Subarra	143.43	351	PKP	PKPab	04 10 39.3	-0.6
	comp=Z,3.4nm,0.7s,baz=18,slow=3.6						
NOA	NORSAR Array B	143.43	351	PKP	PKPab	04 10 39.9	0.0
	comp=Z,6.0nm,0.8s,baz=16,slow=5.0,SNR=18						
AKASG	Malin Array Be	146.00	326	PKPbc	PKPbc	04 10 47.9	-0.3
	comp=Z,2.9nm,0.5s,baz=43,slow=4.6,SNR=18						
AKASG	Malin Array Be	146.00	326		PKPbc	04 10 47.3	-0.8
AKBB	Malin Array Si	146.00	326		PKPbc	04 10 47.8	-0.3
BRTR	Keskin Array B	148.20	305	PKPbc	PKPbc	04 10 54.6	+0.1
	comp=Z,1.5nm,0.7s,baz=142,slow=3.0,SNR=10						
BURAR	Bucovina Array	149.98	324		PKiKP	04 11 00.5	+1.3
KOLS	Kolonicke sedl	150.56	329	ePKP	PKiKP	04 11 00.6	+0.4
KOLS				e		04 11 08.6	
CRVS	Cervenica-Dubn	150.96	330	ePKP	PKiKP	04 11 01.5	+0.4
CLL	Collm	152.12	342	ePKPbc	PKiKP	04 11 04.0	+0.7
	comp=Z,5.0nm,0.9s						
CLL				i PKPab	PKPab	04 11 16.4	+1.2
	comp=Z,7.0nm,0.8s						
CLL				i pPKPab	pPKPab	04 13 05.5	-3.1
BRG	Berggiesshubel	152.24	340	ePKP	PKPab	04 11 16.1	+0.4
	comp=Z,2.8nm,0.6s						
MEM	Membach	154.28	351	PKiKP	PKPbc	04 11 09.1	+1.3
BCLA	Clavier	154.57	352	PKiKP	PKPbc	04 11 08.5	0.0
SOKA	Soboth	155.43	334	i PKPab	PKPab	04 11 30.2	+0.6
	comp=Z,5.6nm,1.2s						
OBKA	Obir	155.76	334	i PKPab	PKPab	04 11 30.4	-0.6
	comp=Z,8.4nm,1.2s						
RETA	Reutte	156.20	341	i PKPab	PKPab	04 11 32.4	-0.5
	comp=Z,8.5nm,1.8s						
DAVA	Damuels	156.63	342	i PKPab	PKPab	04 11 34.5	-0.4
	comp=Z,3.0nm,0.6s						
TORD	Torodi Ar. Bea	167.75	189	PKPab	PKPab	04 12 23.9	-0.2
	comp=Z,1.0nm,0.6s,baz=161,slow=4.5,SNR=6.7						

*ISK **10** 04:30:41.6,35°.89N×36°.36E,h11^{km},ML2.6/12*

*DDA **10** 04:30:43.4,36°.04N×36°.18E,h25^{km}±1^{km},ML2.2*

ISC 10 04:30:43.6±1.7,**36°.00N**±0°.09×**36°.28E**±0°.05,**h14**^{km}±7^{km}**,n19,**σ**1^s.26**/29,**Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YAYL	Yayladag	0.15	285	i P	Pg	04 30 47.8	+0.3
YAYL				IAML		04 30 51.0	
	comp=N,2μm,0.2s						
YAYL				IAML		04 30 51.0	
	comp=E,2μm,0.2s						
YAYL				i S	Sg	04 30 51.6	+1.4
TAHT	Tahtakopru-Hat	0.39	348	PG	Pb	04 30 51.8	-0.4
TAHT				SG	Sb	04 30 59.3	+1.3
KRTD	Karatas-Adana	0.92	311	PG	Pn	04 31 01.9	-0.2
KRTD				SG	Sn	04 31 16.7	+1.7
KRTS	Karatas	0.93	308	PG	Pn	04 31 02.1	-0.1
KRTS				SG	Sn	04 31 17.1	+1.7
KUZU	Kuzuini	1.00	39	i P	Pg	04 31 02.7	-0.3
KUZU				i S	Sn	04 31 17.8	+0.5
KUZU				IAML		04 31 20.0	
	comp=E,355nm,0.2s						
KUZU				IAML		04 31 21.0	
	comp=N,291nm,0.2s						
CEYT	Ceyhan	1.10	337	PN	Pn	04 31 05.1	+0.6
CEYT				SN	Sn	04 31 22.2	+2.7
GAZ	Gaziantep	1.39	32	PN	Pn	04 31 08.5	-0.1
GAZ				SN	Sg	04 31 27.9	-0.6
KMRS	Kahramanmaras	1.58	18	PN	Pn	04 31 11.5	+0.2
KARA	Karaisali	1.60	322	PN	Pn	04 31 11.8	+0.3
MERS	Mersin	1.67	302	PN	Pn	04 31 13.1	+0.7
KIZK	Mersin	1.80	286	PN	Pn	04 31 14.6	+0.5
KIZK	Mersin	1.80	286	i P	Pn	04 31 15.2	+1.1
KIZK				i S	Sg	04 31 39.1	-2.3
KIZK				IAML		04 31 41.0	
	comp=N,25nm,0.2s						
KIZK				IAML		04 31 44.0	
	comp=E,20nm,0.3s						
SILI	Silifke-Mersin	1.94	282	PN	Pn	04 31 16.6	+0.5
CMRD	Camardi-Nigde	1.96	328	PN	Pb	04 31 17.5	-1.6
IKL	Isikli	2.12	277	PN	Pn	04 31 18.4	-0.1
KEBE	Keben-Mersin	2.13	283	PN	Pn	04 31 19.1	+0.4
GULN	MERSIN_Gulnar	2.23	276	i P	Pn	04 31 19.8	-0.2
GULN				i S	Sn	04 31 47.5	+0.2
GULN				IAML		04 31 51.0	
	comp=N,7.9nm,0.3s						
GULN				IAML		04 32 15.0	
	comp=E,13nm,1.2s						
KERG	Konya-Eregli	2.24	310	i P	Pb	04 31 23.1	-0.8
KERG				i S	Sg	04 31 52.4	-3.2
KERG				IAML		04 31 54.0	
	comp=E,19nm,0.4s						
KERG				IAML		04 32 02.0	
	comp=N,12nm,0.3s						
TEVE	Tevekalti-Mers	2.34	282	PN	Pn	04 31 22.1	+0.4

IDC 10 04:43:03.9±2.3,**6°.63S**×**130°.03E,h147**^{km}±31^{km}**,mb4.0**/1,**mb1 3.6**/5,**mb1mx3.3**/38,**mbtmp4.0**/5,**Error ellipse: s-maj=61.3km s-min=15.8km az=91.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.86	12	P	Pn	04 44 30.6	+1.8
	4.9nm,0.3s,baz=197,slow=19,SNR=22						
SIJI				S	Sn	04 45 34.6	-0.5
	2.3nm,0.3s,baz=227,slow=22,SNR=6.8						
FITZ	Fitzroy Crossi	12.17	200	P	Pn	04 45 50.9	-1.8
	0.4nm,0.3s,baz=21,slow=14,SNR=17						
FITZ				S	Sn	04 47 58.6	-8.6
	0.6nm,0.3s,baz=215,slow=18,SNR=7.1						
WRA	Warramunga Arr	13.87	163	P	Pn	04 46 13.7	-0.8
	0.8nm,0.3s,baz=345,slow=10,SNR=14						
WRA				S	Sn	04 48 39.6	-8.6
	0.9nm,0.3s,baz=346,slow=21,SNR=7.7						
ASAR	Alice Springs	17.34	168	P	Pn	04 46 58.2	+1.0
	0.5nm,0.3s,baz=337,slow=9.6,SNR=27						
ASAR				S	S	04 50 04.3	-5.2
	0.2nm,0.3s,baz=353,slow=27,SNR=5.1						
MKAR	Makanchi Array	67.94	327	P	P	04 53 46.9	-0.1
	2.0nm,0.4s,baz=117,slow=7.4,SNR=52						

*SJA **10** 04:49:46.4±0.5,21°.90S×68°.70W,h102^{km}±6^{km},ML3.1,MW3.2*

*GUC **10** 04:49:46.8±0.5,21°.92S×68°.69W,h109^{km}±3^{km},ML3.0*

ISC 10 04:49:47.8±1.5,**21°.90S**±0°.04×**68°.74W**±0°.05,**h103**^{km}±12^{km}**,n25,**σ**0^s.53**/40,**9C-2D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.47	283	⇑i P	Pn	04 50 03.8	-0.1
PB09				i S	Sn	04 50 16.4	+0.4
PB09				IAML		04 50 19.1	
	comp=E,326nm,0.5s						
PB09	IPOC Station P	0.47	283	i P	Pn	04 50 03.6	-0.3

PB09					IAML	04 50 19.0	
	comp=Z,338nm,0.2s						
LVC	**Limon Verde**	**0.72**	**192**	⇓*e*P	**Pn**	**04 50 05.3**	**-0.7**
LVC				*i* S	**Sn**	**04 50 19.4**	**-0.4**
LVC	**Limon Verde**	**0.72**	**192**	*i* P	**Pn**	**04 50 05.4**	**-0.7**
PB03	**IPOC Station P**	**0.95**	**261**	⇑*i*P	**Pn**	**04 50 07.8**	**-0.3**
PB03				*i* S	**Sn**	**04 50 24.1**	**+0.8**
PB03					IAML	04 50 25.2	
	comp=E,470nm,0.5s						
PB03	**IPOC Station P**	**0.95**	**261**	*i* P	**Pn**	**04 50 07.9**	**-0.1**
PB03				⇓*i*S	**Sn**	**04 50 23.7**	**+0.4**
PB03					IAML	04 50 25.1	
	comp=Z,413nm,0.3s						
PB07	**IPOC Station P**	**1.08**	**279**	⇑*i*P	**Pn**	**04 50 09.3**	**-0.2**
PB07				*i* S	**Sn**	**04 50 26.6**	**+0.8**
PB07					IAML	04 50 27.9	
	comp=E,519nm,0.3s						
PB07	**IPOC Station P**	**1.08**	**279**	*i* P	**Pn**	**04 50 09.4**	**-0.1**
PB07					IAML	04 50 31.4	
	comp=Z,222nm,0.3s						
PB01	**IPOC Station P**	**1.10**	**321**	*e*P	**Pn**	**04 50 08.9**	**-0.7**
PB01				*i* S	**Sn**	**04 50 26.3**	**+0.2**
PB01					IAML	04 50 28.4	
	comp=N,325nm,0.2s						
PB06	**IPOC Station P**	**1.11**	**224**	*e*P	**Pn**	**04 50 09.3**	**-0.5**
PB06				*i* S	**Sn**	**04 50 26.5**	**+0.1**
PB06					IAML	04 50 28.4	
	comp=E,268nm,0.3s						
PB06	**IPOC Station P**	**1.11**	**224**	*i* P	**Pn**	**04 50 09.7**	**0.0**
PB06					IAML	04 50 29.1	
	comp=Z,174nm,0.5s						
PB02	**IPOC Station P**	**1.22**	**298**	⇑*i*P	**Pn**	**04 50 10.5**	**-0.5**
PB02				*i* S	**Sn**	**04 50 29.4**	**+0.9**
PB02					IAML	04 50 30.7	
	comp=E,418nm,0.2s						
PB04	**IPOC Station P**	**1.37**	**252**	⇑*e*P	**Pn**	**04 50 12.4**	**-0.5**
PB04				*i* S	**Sn**	**04 50 31.9**	**+0.1**
PB04					IAML	04 50 35.2	
	comp=N,240nm,0.2s						
PB04	**IPOC Station P**	**1.37**	**252**	*i* P	**Pn**	**04 50 12.6**	**-0.2**
PB15	**IPOC Station P**	**1.46**	**207**	*e*P	**Pn**	**04 50 13.8**	**-0.2**
PB15				*i* S	**Sn**	**04 50 34.0**	**+0.2**
PB15	**IPOC Station P**	**1.46**	**207**	*i* P	**Pn**	**04 50 14.1**	**+0.1**
PB15					IAML	04 50 38.4	
	comp=Z,526nm,0.2s						
PB05	**IPOC Station P**	**1.65**	**235**	⇑*e*P	**Pn**	**04 50 15.6**	**-0.5**
PB05				*i* S	**Sn**	**04 50 37.8**	**+0.1**
PB05					IAML	04 50 43.0	
	comp=N,138nm,0.4s						
PB05	**IPOC Station P**	**1.65**	**235**	*i* P	**Pn**	**04 50 16.5**	**+0.3**
PATCX	**Punta Patache**	**1.70**	**309**	⇑*i*P	**Pn**	**04 50 16.2**	**-0.5**
PATCX				*i* S	**Sn**	**04 50 39.5**	**+0.7**
PATCX					IAML	04 50 47.6	
	comp=E,282nm,0.2s						
PB08	**IPOC Station P**	**1.79**	**348**	⇑*i*P	**Pn**	**04 50 18.4**	**+0.1**
PB08				*i* S	**Sn**	**04 50 42.6**	**+1.2**
PB08					IAML	04 50 45.1	
	comp=E,134nm,0.3s						
TA01	**Diego Aracena**	**1.89**	**315**	*e*P	**Pn**	**04 50 18.6**	**-0.5**
TA01				*i* S	**Sn**	**04 50 43.1**	**+0.2**
TA01					IAML	04 50 44.8	
	comp=E,284nm,0.4s						
PB11	**IPOC Station P**	**2.30**	**338**	⇑*i*P	**Pn**	**04 50 23.2**	**-1.3**
PB11				*i* S	**Sn**	**04 50 52.3**	**-0.3**
PB11					IAML	04 50 53.9	
	comp=E,223nm,0.2s						
YJA	**Yavi**	**3.01**	**96**	*i* P	**Pn**	**04 50 34.2**	**+0.1**
HJA	**Humahuaca**	**3.34**	**113**	*i* P	**Pn**	**04 50 38.7**	**+0.2**
AZAP	**Zapla**	**4.10**	**125**	*i* P	**Pn**	**04 50 48.2**	**-0.4**

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*NEIC **10** 05:04:10.6±1.2, 40°.82N±0°.04×125°.10W±0°.08, h14^{km}±5^{km}, Error ellipse: s-maj=9.6km s-min=5.6km az=72.0*

*IDC **10** 05:04:10.9±2.6, 40°.85N×124°.89W, h0^{km}, mb2.7/2, mb1 3.5/4, mb1mx3.3/37, mbtmp3.1/4, ML3.5/2, Error ellipse: s-maj=30.4km s-min=16.4km az=97.0*

*NCEDC **10** 05:04:12.5±1.6, 40°.81N±0°.04×125°.11W±0°.07, h23^{km}±6^{km}, ML3.1/17, Error ellipse: s-maj=9.0km s-min=5.5km az=59.0*

*ANF **10** 05:04:13.6±1.0, 40°.94N×124°.72W, h5^{km}, ML3.0/10, Error ellipse: s-maj=10.3km s-min=6.5km az=65.0*

ISC 10 05:04:10.2±1.9**, 40°.81N**±0°.04×**124°.98W**±0°.07**, h7**^{km}±12^{km}**, n104, σ1^{s}15**/117**, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCC	**Jacoby Creek,**	**0.72**	**89**		**Pn**	**05 04 26.4**	**-0.3**
JCC					**Sn**	**05 04 37.1**	**-0.9**
KMPM	**Mount Pierce**	**0.76**	**121**		**Pn**	**05 04 27.4**	**0.0**
KMPM					**Sn**	**05 04 38.8**	**-0.5**
KRPM	**Rodgers**	**0.80**	**64**		**Pn**	**05 04 27.6**	**-0.4**
KRPM					**Sn**	**05 04 39.5**	**-0.8**
KHMM	**Horse Mountain**	**0.95**	**86**		**Pn**	**05 04 30.1**	**+0.1**
KHMM					**Sn**	**05 04 43.7**	**-0.2**
KCRM	**Chalk Rock**	**0.96**	**113**		**Pn**	**05 04 30.4**	**+0.2**
KRMB	**Red Mountain**	**1.08**	**48**		**Pg**	**05 04 31.0**	**+0.1**
KMRM	**Mail Ridge**	**1.13**	**121**		**Pn**	**05 04 33.1**	**+0.5**
KCSM	**Cold Springs**	**1.15**	**103**		**Pn**	**05 04 33.3**	**+0.5**
KOMM	**Orleans Mounta**	**1.25**	**67**		**Pg**	**05 04 34.1**	**0.0**
KPPM	**Pickett Peak**	**1.31**	**110**		**Pg**	**05 04 35.7**	**+0.3**
KSXB	**Camp Six Broad**	**1.31**	**39**		**Pn**	**05 04 34.3**	**-0.7**
KHBM	**Hayfork Bally**	**1.34**	**96**		**Pn**	**05 04 35.7**	**+0.2**
KBSM	**Bell Springs**	**1.38**	**130**		**Pn**	**05 04 36.3**	**+0.3**
KBO	**Bosley Butte**	**1.51**	**22**		**Pn**	**05 04 37.0**	**-0.8**
KIPM	**Iron Peak**	**1.52**	**131**		**Pn**	**05 04 38.3**	**+0.4**
KCPM	**Cahto Peak**	**1.55**	**136**		**Pn**	**05 04 38.2**	**-0.1**
KTRM	**Thompson Ridge**	**1.63**	**47**		**Pn**	**05 04 39.2**	**-0.2**
LGPM	**Granite Peak**	**1.63**	**86**		**Pn**	**05 04 39.7**	**+0.2**
KBNM	**Bluenose Ridge**	**1.64**	**123**		**Pn**	**05 04 40.6**	**+1.0**
KFPM	**Farley Peak**	**1.67**	**134**		**Pn**	**05 04 39.8**	**0.0**
LBPM	**Beegum Peak**	**1.67**	**106**		**Pn**	**05 04 40.4**	**+0.4**
L02E	**Cave Junction**	**1.70**	**37**		**Pn**	**05 04 40.1**	**-0.1**
L02E	**Cave Junction**	**1.70**	**37**	P	**Pn**	**05 04 40.3**	**+0.1**
	baz=221,SNR=28						
L02E				S	**Sn**	**05 05 00.3**	**-2.0**
	baz=221						
M02C	**Callahan**	**1.71**	**69**		**Pn**	**05 04 40.6**	**+0.1**
M02C	**Callahan**	**1.71**	**69**	P	**Pn**	**05 04 40.6**	**+0.1**
	baz=252,SNR=60						
M02C				S	**Sn**	**05 05 02.3**	**-0.3**
	baz=252						
N02D	**Trinity Center**	**1.73**	**84**		**Pn**	**05 04 41.5**	**+0.7**
N02D	**Trinity Center**	**1.73**	**84**	P	**Pn**	**05 04 40.9**	**+0.1**
	baz=266,SNR=11						
N02D				S	**Sb**	**05 05 03.4**	**-1.0**
	baz=266						
LBKM	**Bonanza King**	**1.77**	**80**		**Pn**	**05 04 41.9**	**+0.5**
GTC	**Three Chop Rid**	**1.78**	**142**		**Pn**	**05 04 41.1**	**-0.3**
O02D	**Mt. Diablo Mer**	**1.79**	**110**		**Pn**	**05 04 42.1**	**+0.6**
O02D	**Mt. Diablo Mer**	**1.79**	**110**	P	**Pn**	**05 04 42.0**	**+0.5**
	baz=291,SNR=14						
KRKM	**Rackout Spring**	**1.86**	**132**		**Pn**	**05 04 42.7**	**+0.2**
WDC	**Whiskeytown Da**	**1.87**	**96**		**Pn**	**05 04 43.3**	**+0.8**
GNAM	**Navarro Ridge**	**1.91**	**147**		**Pn**	**05 04 42.7**	**-0.5**
YBH	**Yreka Blue Hor**	**1.94**	**61**	Pn	**Pn**	**05 04 44.3**	**+0.6**
	1.1nm,0.3s,baz=277,slow=11,SNR=40						
YBH				Sn	**Sn**	**05 05 08.4**	**0.0**
	12nm,0.3s,baz=286,slow=9.4,SNR=22						
LAMM	**Antelope Mount**	**1.95**	**65**		**Pn**	**05 04 44.6**	**+0.8**
GROM	**Round Mountain**	**1.98**	**116**		**Pn**	**05 04 45.1**	**+1.0**
GVV	**Valley View**	**2.04**	**120**		**Pn**	**05 04 46.1**	**+1.0**
GHMM	**Hull Mountain**	**2.04**	**129**		**Pn**	**05 04 45.4**	**+0.3**
GASB	**Alder Springs**	**2.08**	**123**		**Pn**	**05 04 46.2**	**+0.6**
GHOM	**Hamilton Openi**	**2.08**	**147**		**Pn**	**05 04 45.0**	**-0.5**
KEBM	**Edson Butte**	**2.12**	**13**		**Pn**	**05 04 45.1**	**-0.9**
K02D	**Willamette Mer**	**2.13**	**27**	P	**Pn**	**05 04 46.0**	**-0.2**
	baz=210,SNR=207						
K02D				S	**Sn**	**05 05 11.8**	**-1.1**
	baz=210						
LGBM	**Gray Butte**	**2.17**	**75**		**Pn**	**05 04 48.3**	**+1.3**
B040	**Montague**	**2.18**	**61**		**Pn**	**05 04 48.1**	**+1.2**
M03C	**McCloud**	**2.21**	**77**		**Pn**	**05 04 49.2**	**+1.8**
LSHM	**Sage Hen Hill**	**2.23**	**89**		**Pn**	**05 04 48.6**	**+1.0**
LMPM	**Military Pass**	**2.23**	**71**		**Pb**	**05 04 49.6**	**-1.3**
LHEM	**Herd Peak**	**2.24**	**68**		**Pn**	**05 04 49.5**	**+1.6**
LTCM	**Tuscan Springs**	**2.26**	**104**		**Pn**	**05 04 49.0**	**+1.0**
GGUM	**Gualala**	**2.26**	**149**		**Pn**	**05 04 47.5**	**-0.4**
GSNM	**Snow Mountain**	**2.32**	**143**		**Pn**	**05 04 48.8**	**0.0**
GCK	**Clark Valley**	**2.32**	**122**		**Pn**	**05 04 50.4**	**+1.6**
GHLM	**Highland Sprin**	**2.32**	**139**		**Pn**	**05 04 48.7**	**-0.2**
HOPS	**Hopland Field**	**2.33**	**140**		**Pn**	**05 04 48.7**	**-0.2**
HUMO	**Hull Mountain**	**2.35**	**39**		**Pn**	**05 04 50.2**	**+1.0**
GTSM	**Trough Springs**	**2.36**	**129**		**Pn**	**05 04 50.0**	**+0.6**
LBFM	**Black Fox Moun**	**2.40**	**76**		**Pn**	**05 04 52.0**	**+1.9**
L04D	**Klamath Falls**	**2.45**	**54**		**Pn**	**05 04 53.0**	**+2.3**
L04D	**Klamath Falls**	**2.45**	**54**	P	**Pn**	**05 04 52.8**	**+2.1**
	baz=237,SNR=60						
L04D				S	**Sb**	**05 05 23.9**	**-1.2**
	baz=237						
O03E	**Paynes Creek**	**2.47**	**101**		**Pn**	**05 04 51.5**	**+0.5**
O03E	**Paynes Creek**	**2.47**	**101**	P	**Pn**	**05 04 51.4**	**+0.5**
	baz=283,SNR=11						
J01E	**Myrtle Point**	**2.48**	**18**	P	**Pn**	**05 04 50.6**	**-0.4**
	baz=201						
GFC	**Funks Creek**	**2.54**	**125**		**Pn**	**05 04 53.3**	**+1.5**
M04C	**Macdoel**	**2.56**	**67**	P	**Pb**	**05 04 55.0**	**-1.4**
	baz=250						
LBCM	**Butte Creek Ri**	**2.75**	**88**		**Pn**	**05 04 55.8**	**+0.9**
MGL	**Magalia**	**2.80**	**110**		**Pn**	**05 04 55.9**	**+0.4**
SUTB	**Sutter Butte**	**2.92**	**122**		**Pn**	**05 04 56.7**	**-0.3**
ORV	**Oroville**	**2.94**	**114**		**Pn**	**05 04 57.3**	**-0.1**
K04D	**Chiloquin, OR**	**3.02**	**52**	P	**Pn**	**05 05 00.9**	**+2.4**
	baz=235						
K04D				S	**Sn**	**05 05 35.4**	**+0.4**
	baz=235						
I03D	**Drain, OR**	**3.13**	**22**	P	**Pn**	**05 05 00.1**	**+0.2**
	baz=205						
J04D	**Umpqua Nationa**	**3.24**	**40**	P	**Pn**	**05 05 03.6**	**+2.1**
	baz=224,SNR=9.7						
I02D	**Swisshome**	**3.40**	**14**	P	**Pn**	**05 05 04.2**	**+0.6**
	baz=196						
I04A	**Tendick Farm,**	**3.54**	**32**	P	**Pn**	**05 05 07.6**	**+2.0**
	baz=215,SNR=22						
I04A				S	**Sn**	**05 05 47.1**	**-0.7**
	baz=215						
AFDM	**Forest Hills D**	**3.60**	**120**		**Pn**	**05 05 07.0**	**+0.6**
BEKR	**Beckworth**	**3.65**	**103**		**Pn**	**05 05 09.1**	**+1.8**
MOD	**Modoc Plateau**	**3.69**	**71**	Pn	**Pn**	**05 05 08.2**	**+0.5**
J05D	**Fort Rock, OR**	**3.73**	**47**	P	**Pn**	**05 05 10.3**	**+2.1**
	baz=231,SNR=9.8						
H04D	**Lebanon**	**4.06**	**23**	P	**Pn**	**05 05 14.2**	**+1.4**
	baz=206,SNR=55						
H04D				S	**Sn**	**05 06 00.2**	**-0.4**
	baz=206						
PINE	**Pine Mountain**	**4.22**	**44**		**Pn**	**05 05 17.0**	**+1.9**
VCNR	**Virginia City**	**4.36**	**109**		**Pn**	**05 05 18.2**	**+1.2**
I05D	**Terrebonne, OR**	**4.43**	**36**	P	**Pn**	**05 05 20.0**	**+2.1**
	baz=220						
PNTR	**Pine Nut**	**4.48**	**111**		**Pn**	**05 05 19.4**	**+0.7**
CMB	**Columbia Colle**	**4.51**	**126**		**Pn**	**05 05 20.5**	**+1.6**
G03D	**McMinnville, O**	**4.58**	**15**	P	**Pn**	**05 05 22.3**	**+2.5**
	baz=198,SNR=6.4						
G03D				S	**Sn**	**05 06 13.7**	**+0.5**
	baz=198						
YERR	**Yerington**	**4.77**	**111**	Pn	**Pn**	**05 05 23.8**	**+1.0**
G05D	**Wamic, OR**	**5.18**	**30**	P	**Pn**	**05 05 30.8**	**+2.7**
	baz=213,SNR=13						
RYN	**Ryan**	**5.43**	**112**	Pn	**Pn**	**05 05 31.6**	**-0.2**
KVN	**Kaiserville**	**5.57**	**106**		**Pn**	**05 05 34.7**	**+1.1**
NVAR	**Mina Array Bea**	**5.67**	**113**	Pn	**Pn**	**05 05 36.8**	**+1.6**
	0.5nm,0.3s,baz=288,slow=15,SNR=15						
NVAR	**Mina Array Bea**	**5.67**	**113**		**Pn**	**05 05 36.4**	**+1.3**
E04D	**Cinebar**	**6.00**	**16**	P	**Pn**	**05 05 41.2**	**+1.8**
	baz=199,SNR=10.0						
HAWA	**Hanford**	**6.84**	**33**	Pn	**Pn**	**05 05 50.7**	**-0.2**
E08A	**Dider Farm, El**	**7.12**	**35**	Pn	**Pn**	**05 05 57.1**	**+2.5**
ISA	**Isabella, Lake**	**7.25**	**133**		**Pn**	**05 05 57.9**	**+1.3**
R11A	**Troy Canyon, C**	**7.66**	**106**	Pn	**Pn**	**05 06 04.7**	**+2.4**
B08A	**Colville Reser**	**8.55**	**26**	Pn	**Pn**	**05 06 16.6**	**+2.2**
MCMT	**McKenzie Canyo**	**9.77**	**62**	Pn	**Pn**	**05 06 30.2**	**-1.2**
PFO	**Pinyon Flats O**	**9.88**	**134**	Pn	**Pn**	**05 06 35.3**	**+2.5**
	0.3nm,0.3s,baz=328,slow=8.9,SNR=4.1						
PFO	**Pinyon Flats O**	**9.88**	**134**		**Pn**	**05 06 35.0**	**+2.2**
MSU	**Marysvale**	**10.13**	**99**	Pn	**Pn**	**05 06 37.0**	**+0.7**
TXAR	**Lajitas Array**	**20.81**	**117**	P	Pn	05 08 54.8	+0.1
	0.4nm,0.8s,baz=303,slow=12,SNR=4.6						
TXAR	**Lajitas Array**	**20.81**	**117**	P	**P**	**05 08 52.1**	**-0.1**
YKA	**Yellowknife Ar**	**22.59**	**13**	P	**P**	**05 09 11.8**	**+0.9**
	0.3nm,1.0s,baz=201,slow=10,SNR=3.3						

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*NEIC **10** 05:03:55.9±4.1, 16°N±1°×146°.5W±0°.5, h15^{km}±10^{km}, Error ellipse: s-maj=160.9km s-min=24.5km az=204.0*

HVO 10 05:06:03±0.9**, 19°.4N**±0°.1×**155°.24W**±0°.04**, h3**^{km}±10^{km}**, ML2.8**/17**, Error ellipse: s-maj=15.8km s-min=1.2km az=200.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUH	**Pauahi**	**0.02**	**93**	Pg	Pg	05 06 04.6	+0.8
PUH				Sg	Sg	05 06 05.2	+0.9
KKO	**Keanakako`i**	**0.04**	**311**	Pg	Pg	05 06 05.0	+1.0
KKO				Sg	Sg	05 06 06.0	+1.5
RIM	**Rim**	**0.04**	**301**	Pg	Pg	05 06 05.1	+1.1
RIM				Sg	Sg	05 06 06.1	+1.4
HATHI	**Halema‘uma‘u T**	**0.05**	**336**	Pg	Pg	05 06 05.4	+1.2
HATHI				Sg	Sg	05 06 06.7	+1.6
NPH	**North Pit**	**0.06**	**312**	Pg	Pg	05 06 05.1	+0.9
NPH				Sg	Sg	05 06 06.4	+1.3
SDHHI	**Sand Hill**	**0.06**	**285**	Pg	Pg	05 06 05.5	+1.3
SDHHI				Sg	Sg	05 06 07.0	+1.9
UWB	**Uwekahuna B**	**0.06**	**323**	Pg	Pg	05 06 05.5	+1.2
UWB				Sg	Sg	05 06 06.9	+1.6
WRMHI	**West Rim**	**0.07**	**298**	Pg	Pg	05 06 05.8	+1.4
WRMHI				Sg	Sg	05 06 07.6	+2.2
UWE	**Uwekahuna**	**0.07**	**311**	Pg	Pg	05 06 05.9	+1.4
HLP	**Hilina Pali**	**0.10**	**220**	Pg	Pg	05 06 06.7	+1.6
STCH	**Steam Cracks**	**0.11**	**84**	Pg	Pg	05 06 06.5	+1.3
STCH				Sg	Sg	05 06 08.9	+2.3
NPOC	**North of Pu‘u**	**0.12**	**82**	Pg	Pg	05 06 06.8	+1.4
JCUZ	**Jacuzzi**	**0.13**	**86**	Pg	Pg	05 06 06.5	+0.9
MLH	**Mauna Loa**	**0.18**	**310**	Pg	Pg	05 06 08.0	+1.4
AIN	**Ainahou**	**0.21**	**269**	Pg	Pg	05 06 08.8	+1.7
HMH	**Humu‘ula Sheep**	**0.32**	**314**	Pg	Pb	05 06 10.6	-1.1
MWH	**Moku‘aweowe**	**0.36**	**288**	Pg	Pb	05 06 11.9	-0.4
MLOA	**Mauna Loa Obse**	**0.36**	**297**	Pg	Pb	05 06 12.0	-0.3
KHU	**Kahuku**	**0.38**	**250**	Pg	Pb	05 06 12.2	-0.3
POHA	**Pohakuloa**	**0.47**	**324**	Pg	Pb	05 06 14.2	0.0
HUH	**Hualalai**	**0.64**	**299**	Pg	Pb	05 06 17.7	+0.6
KHLU	**Kahalu`u**	**0.66**	**289**	Pg	Pb	05 06 16.6	-0.6

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*NEIC **10** 05:18:12.4, 40°.82N×125°.13W, h17^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}-0.10; $M_{\theta\theta}$-2.32; $M_{\phi\phi}$2.42; $M_{r\theta}$0.26; $M_{\theta\phi}$0.15; $M_{\phi r}$-0.03; Fault plane solution: $M_0$2.39000×10^{19} NP1:ϕ_s226.62000°, δ85.05000°, λ-4.22000°. NP2:ϕ_s316.99000°, δ85.79000°, λ-175.04000°. Principal axes: T 2.4237, Plg1.0000°, Azm92.0000°; N -0.0711, Plg83.0000°, Azm357.0000°; P -2.3526, Plg6.0000°, Azm182.0000°;*

*MOS **10** 05:18:12.7±1.1, 40°.79N×124°.95W, h11^{km}, mb6.5/103, MS6.9/79 Error ellipse: s-maj=4.8km s-min=3.8km az=102.3*

*NCEDC **10** 05:18:13.4±3.0, 40°.83N±0°.02×125°.13W±0°.05, h17^{km}±2^{km}, Mwr6.8/5, mb6.5/535(NEIC), Ms_20 6.9/745(NEIC), Mwb6.9/65(NEIC), Mwc7.0(GCMT), Mww6.9(NEIC), Error ellipse: s-maj=6.0km s-min=2.7km az=79.0*

*BGR **10** 05:18:13.9±0.0, 40°.62N×125°.95W, h15^{km}±1^{km}, mb6.2, mB_BB6.7, Ms7.0*

*IDC **10** 05:18:13.3±0.3, 40°.91N×124°.93W, h0^{km}, mb5.6/57, mb1 5.6/63, mb1mx5.6/67, mbtmp5.6/63, ML5.3/5, MS6.7/42, Ms1 6.7/42, ms1mx6.7/45, Error ellipse: s-maj=9.1km s-min=6.3km az=25.0*

*NEIC **10** 05:18:13.4, 40°.83N×125°.13W, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}-0.08; $M_{\theta\theta}$-1.91; $M_{\phi\phi}$1.99; $M_{r\theta}$0.29; $M_{\theta\phi}$0.21; $M_{\phi r}$-0.24; Fault plane solution: $M_0$2.00000×10^{19} NP1:ϕ_s318.23000°, δ87.85000°, λ-169.09000°. NP2:ϕ_s227.82000°, δ79.10000°, λ-2.19000°. Principal axes: T 2.0229, Plg6.0000°, Azm93.0000°; N -0.0494, Plg79.0000°, Azm329.0000°; P -1.9735, Plg9.0000°, Azm184.0000°;*

*BJI **10** 05:18:13.0±0.0, 40°.82N×125°.06W, h5^{km}, mB6.5/72, mb6.6/14, Ms7.0/87, Ms7 6.8/78*

*NEIC **10** 05:18:13.0±2.8, 40°.84N±0°.02×125°.09W±0°.04, h11^{km}±1^{km}, Error ellipse: s-maj=5.4km s-min=3.8km az=264.0*

*ANF **10** 05:18:13.3±1.3, 40°.90N×124°.85W, h0^{km}, ML6.2/20, Error ellipse: s-maj=11.4km s-min=6.3km az=55.0*

*UCR **10** 05:18:13.9±2.8, 40°.83N×125°.13W, h17^{km}, mb6.8(NEIC)*

*GCMT **10** 05:18:21.4±0.0, 40°.80N×125°.23W, h15^{km}, MW6.9/174, Moment Tensor Solution. s169,c451; s174,c849; Duration: 7^{s}0 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.06±.01; $M_{\theta\theta}$-2.84±.01; $M_{\phi\phi}$2.90±.01; $M_{r\theta}$0.21±.03; $M_{\theta\phi}$0.48±.01; $M_{\phi r}$-0.08±.03; Best double couple: $M_0$2.91900×10^{19} NP1:ϕ_s230.00000°, δ86.00000°, λ-2.00000°. NP2:ϕ_s320.00000°, δ88.00000°, λ-176.00000°. Principal axes: T 2.9420, Plg1.0000°, Azm95.0000°; N -0.0480, Plg85.0000°, Azm349.0000°; P -2.8970, Plg4.0000°, Azm185.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **10** 05:18:21, 40°.80N×125°.25W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}-0.07; $M_{\theta\theta}$-2.92; $M_{\phi\phi}$2.99; $M_{r\theta}$0.54; $M_{\theta\phi}$0.51; $M_{\phi r}$0.35; Fault plane solution: $M_0$3.07000×10^{19} NP1:ϕ_s230.00000°, δ88.00000°, λ-12.00000°. NP2:ϕ_s320.00000°, δ78.00000°, λ-178.00000°. Principal axes: T 3.0838, Plg7.0000°, Azm276.0000°; N -0.0335, Plg78.0000°, Azm41.0000°; P -3.0503, Plg10.0000°, Azm184.0000°;*

*NEIC **10** 05:18:24, 41°.12N×125°.13W, h22^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}0.05; $M_{\theta\theta}$-2.94; $M_{\phi\phi}$2.90; $M_{r\theta}$0.95; $M_{\theta\phi}$0.43; $M_{\phi r}$0.18; Fault plane solution: $M_0$3.10000×10^{19} NP1:ϕ_s228.00000°, δ82.00000°, λ-14.00000°. NP2:ϕ_s320.00000°, δ75.00000°, λ-172.00000°. Principal axes: T 2.9492, Plg5.0000°, Azm275.0000°; N 0.2888, Plg73.0000°, Azm22.0000°; P -3.2380, Plg16.0000°, Azm184.0000°;*

ISC 10 05:18:13.6±0.4**, 40°.72N**±0°.02×**125°.09W**±0°.02**, h6**^{km}±1^{km}**, h6**^{km}**:pP-P, n2490, σ2^{s}02**/2898**, mb6.3**/465**, MS6.9**/511**, 66C-29D, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMPM	**Mount Pierce**	**0.80**	**112**		**Pb**	**05 18 29.1**	**-0.8**
JCC	**Jacoby Creek,**	**0.81**	**83**		**Pg**	**05 18 28.3**	**-0.9**
JCC				Sg	**Sb**	**05 18 39.7**	**-1.5**
KRPM	**Rodgers**	**0.92**	**61**		**Pg**	**05 18 29.5**	**-1.7**
KCRM	**Chalk Rock**	**1.01**	**107**		**Pg**	**05 18 32.0**	**-0.9**
KHMM	**Horse Mountain**	**1.04**	**81**		**Pg**	**05 18 32.2**	**-1.4**
KHMM				Sg	**Sg**	**05 18 46.8**	**-0.3**
KMRM	**Mail Ridge**	**1.17**	**115**		**Pg**	**05 18 35.0**	**-0.9**
KRMB	**Red Mountain**	**1.20**	**48**		**Pg**	**05 18 33.2**	**-3.4**
KRMB				Sn	**Sg**	**05 18 47.5**	**-4.5**
KCSM	**Cold Springs**	**1.21**	**98**		**Pg**	**05 18 35.0**	**-1.9**
KOMM	**Orleans Mounta**	**1.36**	**65**		**Pn**	**05 18 35.8**	**-3.3**
KBSM	**Bell Springs**	**1.40**	**125**		**Pn**	**05 18 38.0**	**-1.7**
KHBM	**Hayfork Bally**	**1.42**	**92**		**Pn**	**05 18 37.5**	**-2.7**
KSXB	**Camp Six Broad**	**1.43**	**39**		**Pn**	**05 18 36.3**	**-3.9**
KIPM	**Iron Peak**	**1.53**	**126**		**Pn**	**05 18 39.8**	**-1.8**
KCPM	**Cahto Peak**	**1.55**	**131**		**Pn**	**05 18 40.2**	**-1.6**
KCPM				Sn	**Sn**	**05 19 01.7**	**-0.6**
KBO	**Bosley Butte**	**1.62**	**23**		**Pn**	**05 18 38.8**	**-4.1**
KBO				Sn	**Sn**	**05 18 56.5**	**-7.6**
KBNM	**Bluenose Ridge**	**1.67**	**119**		**Pn**	**05 18 42.3**	**-1.2**
KFPM	**Farley Peak**	**1.67**	**130**		**Pn**	**05 18 41.5**	**-1.9**
LGPM	**Granite Peak**	**1.72**	**83**		**Pn**	**05 18 41.4**	**-2.9**
LBPM	**Beegum Peak**	**1.73**	**103**		**Pn**	**05 18 42.1**	**-2.2**
KTRM	**Thompson Ridge**	**1.75**	**47**		**Pn**	**05 18 41.0**	**-3.7**
GTC	**Three Chop Rid**	**1.77**	**138**		**Pn**	**05 18 42.8**	**-1.9**
L02E	**Cave Junction**	**1.82**	**37**		**Pn**	**05 18 41.8**	**-3.6**
L02E	**Cave Junction**	**1.82**	**37**	P	**Pn**	**05 18 41.6**	**-3.8**
	baz=221,SNR=1000						
L02E				S	**Sn**	**05 19 02.8**	**-6.0**
	baz=221						
M02C	**Callahan**	**1.82**	**68**		**Pn**	**05 18 42.2**	**-3.3**
M02C	**Callahan**	**1.82**	**68**	P	**Pn**	**05 18 42.2**	**-3.3**
	baz=252,SNR=1000						
M02C				S	**Sn**	**05 19 04.6**	**-4.2**
	baz=252						
N02D	**Trinity Center**	**1.82**	**81**		**Pn**	**05 18 43.2**	**-2.4**
N02D	**Trinity Center**	**1.82**	**81**	P	**Pn**	**05 18 42.7**	**-2.9**
	baz=266,SNR=1000						
N02D				S	**Sn**	**05 19 05.7**	**-3.4**
	baz=266						
O02D	**Mt. Diablo Mer**	**1.84**	**107**		**Pn**	**05 18 43.7**	**-2.0**
O02D	**Mt. Diablo Mer**	**1.84**	**107**	P	**Pn**	**05 18 43.7**	**-2.0**
	baz=291,SNR=1000						
KRKM	**Rackout Spring**	**1.86**	**128**		**Pn**	**05 18 44.4**	**-1.8**
LBKM	**Bonanza King**	**1.87**	**78**		**Pn**	**05 18 43.3**	**-3.0**
GNAM	**Navarro Ridge**	**1.89**	**143**		**Pn**	**05 18 44.4**	**-2.1**
WDC	**Whiskeytown Da**	**1.94**	**93**		**Pn**	**05 18 45.5**	**-1.7**
WDC				Sn	**Sn**	**05 19 09.6**	**-2.2**
GROM	**Round Mountain**	**2.02**	**113**		**Pn**	**05 18 46.8**	**-1.4**
GHOM	**Hamilton Openi**	**2.06**	**144**		**Pn**	**05 18 46.6**	**-2.1**
YBH	**Yreka Blue Hor**	**2.06**	**60**	Pn	**Pn**	**05 18 47.9**	**-0.9**
	329nm,0.3s,baz=259,slow=13,SNR=1573						
YBH	**Yreka Blue Hor**	**2.06**	**60**		**Pn**	**05 18 46.3**	**-2.5**
YBH				Sn	**Sn**	**05 19 10.5**	**-4.2**
LAMM	**Antelope Mount**	**2.06**	**64**		**Pn**	**05 18 46.2**	**-2.7**
GHMM	**Hull Mountain**	**2.06**	**126**		**Pn**	**05 18 47.0**	**-1.8**
GVV	**Valley View**	**2.07**	**116**		**Pn**	**05 18 47.8**	**-1.3**
GASB	**Alder Springs**	**2.11**	**120**		**Pn**	**05 18 47.9**	**-1.6**
LCSM	**College of the**	**2.15**	**70**		**Pn**	**05 18 46.5**	**-3.6**
KEBM	**Edson Butte**	**2.22**	**14**		**Pn**	**05 18 47.0**	**-4.1**
KEBM				Sn	**Sn**	**05 19 14.2**	**-4.6**
GGUM	**Gualala**	**2.23**	**146**		**Pn**	**05 18 48.8**	**-2.3**
K02D	**Willamette Mer**	**2.24**	**28**	P	**Pn**	**05 18 47.7**	**-3.6**
	baz=211,SNR=1000						
K02D				S	**Sn**	**05 19 12.9**	**-6.4**
	baz=211						
B040	**Montague**	**2.29**	**60**		**Pn**	**05 18 49.8**	**-2.2**
GSNM	**Snow Mountain**	**2.30**	**140**		**Pn**	**05 18 50.3**	**-1.9**
M03C	**McCloud**	**2.31**	**75**		**Pn**	**05 18 50.7**	**-1.6**
GHLM	**Highland Sprin**	**2.31**	**136**		**Pn**	**05 18 50.4**	**-1.9**
LSHM	**Sage Hen Hill**	**2.32**	**87**		**Pn**	**05 18 50.2**	**-2.1**
LTCM	**Tuscan Springs**	**2.32**	**102**		**Pn**	**05 18 50.6**	**-1.7**
HOPS	**Hopland Field**	**2.32**	**137**		**Pn**	**05 18 51.1**	**-1.2**
LMPM	**Military Pass**	**2.34**	**70**		**Pn**	**05 18 51.2**	**-1.5**
LHEM	**Herd Peak**	**2.35**	**66**		**Pn**	**05 18 50.9**	**-2.0**
GCK	**Clark Valley**	**2.35**	**119**		**Pn**	**05 18 52.0**	**-0.7**
GTSM	**Trough Springs**	**2.37**	**126**		**Pn**	**05 18 51.6**	**-1.5**
GDCM	**Dry Creek**	**2.42**	**143**		**Pn**	**05 18 51.9**	**-1.9**
HUMO	**Hull Mountain**	**2.47**	**40**		**Pn**	**05 18 51.6**	**-2.7**
GPMM	**Pine Mountain**	**2.50**	**138**		**Pn**	**05 18 53.4**	**-1.4**
LBFM	**Black Fox Moun**	**2.50**	**75**		**Pn**	**05 18 53.2**	**-1.7**
GACM	**Adobe Creek**	**2.52**	**136**		**Pn**	**05 18 53.3**	**-1.8**
GCVM	**Cloverdale**	**2.52**	**140**		**Pn**	**05 18 53.3**	**-1.8**
LDBM	**Digger Butte**	**2.53**	**96**		**Pn**	**05 18 52.8**	**-2.5**
O03E	**Paynes Creek**	**2.54**	**99**		**Pn**	**05 18 53.1**	**-2.3**
O03E	**Paynes Creek**	**2.54**	**99**	P	**Pn**	**05 18 53.1**	**-2.3**
	baz=283,SNR=1000						
O03E				S	**Sn**	**05 19 26.3**	**-0.4**
	baz=283						
GBMM	**Baldy Mountain**	**2.54**	**128**		**Pn**	**05 18 54.1**	**-1.4**
GFC	**Funks Creek**	**2.56**	**122**		**Pn**	**05 18 54.6**	**-1.0**
L04D	**Klamath Falls**	**2.57**	**54**		**Pn**	**05 18 54.2**	**-1.6**
L04D	**Klamath Falls**	**2.57**	**54**	P	**Pn**	**05 18 54.4**	**-1.5**
	baz=238,SNR=1000						
L04D				S	**Sn**	**05 19 26.1**	**-1.4**
	baz=238						
GSSM	**Skaggs Springs**	**2.58**	**141**		**Pn**	**05 18 54.1**	**-1.7**
J01E	**Myrtle Point**	**2.58**	**19**	P	**Pn**	**05 18 52.3**	**-3.7**
	baz=201,SNR=1000						
J01E				S	**Sn**	**05 19 26.2**	**-1.5**
	baz=201						
GWKM	**Walker Ridge**	**2.60**	**129**		**Pn**	**05 18 54.8**	**-1.5**
GDXM	**Geysers**	**2.60**	**137**		**Pn**	**05 18 55.3**	**-1.0**
GSGM	**Seigler Mounta**	**2.61**	**135**		**Pn**	**05 18 54.8**	**-1.4**
LGMM	**Garner Mountai**	**2.61**	**69**		**Pn**	**05 18 54.9**	**-1.5**
GBGM	**Boggs Mountain**	**2.66**	**135**		**Pn**	**05 18 56.2**	**-0.9**
M04C	**Macdoel**	**2.67**	**66**		**Pn**	**05 18 55.5**	**-1.7**
M04C	**Macdoel**	**2.67**	**66**	P	**Pn**	**05 18 55.4**	**-1.8**
	baz=250,SNR=1000						
M04C				S	**Sn**	**05 19 27.5**	**-2.4**
	baz=250						
LMEM	**Manzanita Entr**	**2.68**	**93**		**Pn**	**05 18 55.8**	**-1.7**
NMCNC	**Mill Creek, So**	**2.71**	**141**		**Pn**	**05 18 56.2**	**-1.5**
LMHM	**Little Mount H**	**2.73**	**71**		**Pn**	**05 18 56.4**	**-1.8**
MNRC	**McLaughlin Min**	**2.75**	**131**		**Pn**	**05 18 57.0**	**-1.2**
HATC	**Hat Creek Radi**	**2.75**	**87**		**Pn**	**05 18 56.8**	**-1.6**
DBO	**Dodson Butte**	**2.76**	**29**		**Pn**	**05 18 55.8**	**-2.7**
LTIM	**Timbered Crate**	**2.76**	**79**		**Pn**	**05 18 56.5**	**-2.0**
LRDM	**Redding Peak**	**2.77**	**94**		**Pn**	**05 18 57.2**	**-1.4**
LCMM	**Colby Mountain**	**2.78**	**101**		**Pn**	**05 18 57.8**	**-1.0**
LASM	**Arnica Sink**	**2.79**	**71**		**Pn**	**05 18 57.1**	**-1.9**
NMTM	**Middletown**	**2.79**	**132**		**Pn**	**05 18 57.2**	**-1.6**
NHSM	**Mount Saint He**	**2.81**	**136**		**Pn**	**05 18 57.9**	**-1.3**
BBOR	**Butler Butte**	**2.81**	**39**		**Pn**	**05 18 57.6**	**-1.7**
MAC	**Mark West Spri**	**2.84**	**139**		**Pn**	**05 18 57.6**	**-1.8**
NSHM	**Saint Helena R**	**2.92**	**138**		**Pn**	**05 18 59.0**	**-1.6**

SUTB	Sutter Butte	2.94	119		Pn	05 18 58.3	-2.6
ORV	Oroville	2.99	112	P	Pn	05 19 00.0	-1.5
ORV	Oroville	2.99	112		Pn	05 19 00.0	-1.5
NTYM	Taylor	2.99	140		Pn	05 19 00.3	-1.2
PAM	Palermo	3.02	114		Pn	05 18 59.6	-2.3
NBPM	Berryessa Peak	3.03	132		Pn	05 19 02.3	+0.2
MCCM	Marconi Confer	3.09	146		Pn	05 19 01.6	-1.3
OHCM	Honcut	3.09	115		Pn	05 19 00.6	-2.4
CVS	Carmenet Viney	3.13	139		Pn	05 19 01.7	-1.7
K04D	Chiloquin, OR	3.14	52		Pn	05 19 01.8	-1.9
K04D	Chiloquin, OR	3.14	52	P	Pn	05 19 01.7	-1.9
	baz=236,SNR=1000						
NPRM	Point Reyes	3.16	149		Pn	05 19 02.4	-1.5
NAPC	Atlas Peak	3.16	135		Pn	05 19 02.7	-1.2
NOLM	Olema	3.22	146		Pn	05 19 03.2	-1.4
I03D	Drain, OR	3.24	23	P	Pn	05 19 01.8	-3.1
	baz=205						
SNT	Sears Point	3.25	140		Pn	05 19 03.4	-1.7
J04D	Umpqua Nationa	3.35	40	P	Pn	05 19 05.1	-1.6
	baz=224,SNR=1000						
M08C	M08C	3.40	2	P	Pb	05 19 16.3	+1.9
CPMM	Point Molate	3.46	142		Pn	05 19 06.3	-1.7
CSPM	San Pablo Ridg	3.50	141		Pn	05 19 07.4	-1.1
I02D	Swisshome	3.50	15	P	Pn	05 19 05.3	-3.2
	baz=196						
CPIM	Pinole Ridge	3.52	140		Pn	05 19 07.9	-1.0
JPRM	Presidio of Sa	3.56	144		Pn	05 19 07.9	-1.4
BL67	Building 67, L	3.59	141		Pn	05 19 09.2	-0.7
VAK	Adit at Lawren	3.59	141		Pn	05 19 08.0	-1.8
CYBM	Yerba Buena Is	3.60	143		Pn	05 19 08.6	-1.3
BKS	Berkeley--Byer	3.60	141		Pn	05 19 08.0	-1.9
CVPM	Vollmer Peak	3.60	141		Pn	05 19 08.9	-1.1
BRIB	Briones	3.61	140		Pn	05 19 09.0	-1.0
AFDM	Forest Hills D	3.63	118		Pn	05 19 08.9	-1.5
I04A	Tendick Farm,	3.66	32	P	Pn	05 19 08.4	-2.3
	baz=215,SNR=1000						
CMCM	Mills College	3.71	142		Pn	05 19 10.0	-1.3
BEKR	Beckworth	3.71	102		Pn	05 19 10.8	-0.9
BGC	Bolinger Road	3.73	140		Pn	05 19 10.9	-0.8
CRHM	Round Hill Res	3.73	139		Pn	05 19 11.7	-0.1
CRPB	Russellman Par	3.74	138		Pn	05 19 12.4	+0.6
SAC	San Andreas	3.76	146		Pn	05 19 10.4	-1.7
J25C	J25C	3.76	5	P	Pn	05 19 15.5	+3.2
CSLM	San Leandro Hi	3.78	141		Pn	05 19 11.2	-1.1
MOD	Modoc Plateau	3.79	70		Pn	05 19 10.6	-2.1
CLCB	Lake Chabot	3.79	141		Pn	05 19 11.6	-1.0
AASM	Arroyo Seco	3.83	125		Pn	05 19 11.2	-1.8
J05D	Fort Rock, OR	3.85	47	P	Pn	05 19 11.8	-1.7
	baz=231,SNR=1000						
CMOB	Morgan Territo	3.87	138		Pn	05 19 13.8	+0.1
ASMM	Slate Mountain	3.89	118		Pn	05 19 12.9	-1.1
IND	Independence	3.90	108		Pn	05 19 14.1	-0.1
DONR	Donner Summit	3.91	109		Pn	05 19 13.9	-0.4
JHPM	Huddart Park	3.93	146		Pn	05 19 12.7	-1.7
CBSNC	Byron Hot Spri	3.95	136		Pn	05 19 14.7	+0.1
CNIC	Niles Canyon	3.95	141		Pn	05 19 14.1	-0.6
BABR	Babbit Peak	3.98	105		Pn	05 19 14.2	-1.2
JRSC	Jasper Ridge	3.99	145		Pn	05 19 13.1	-2.1
JSFB	Stanford Teles	4.01	145		Pn	05 19 14.1	-1.5
WENL	Wente Vineyard	4.04	139		Pn	05 19 15.7	-0.2
JFP	Foothills Park	4.04	145		Pn	05 19 14.2	-1.8
JJRM	Joaquin Road	4.05	145		Pn	05 19 14.5	-1.6
COR	Corvallis	4.08	18	P	Pn	05 19 14.3	-2.1
COR	Corvallis	4.08	18		Pn	05 19 14.3	-2.1
PEAR	Peavine Mounta	4.08	104		Pn	05 19 15.9	-0.9
TAHR	Tahoe	4.10	111		Pn	05 19 17.2	+0.2
JPSM		4.12	148		Pn	05 19 15.5	-1.5
MPK	Martis Peak	4.14	109		Pn	05 19 18.4	+0.9
RUBR	Rubicon Trail	4.14	112		Pn	05 19 17.3	-0.3
H04D	Lebanon	4.17	24	P	Pn	05 19 15.4	-2.4
	baz=206,SNR=1000						
MNHB	New Hogan Dam	4.19	127		Pn	05 19 16.6	-1.4
CMLM	Mount Lewis	4.20	139		Pn	05 19 17.5	-0.8
EMB	Emerald Bay	4.21	113		Pn	05 19 18.3	-0.3
JBNB	Ben Lomond Mou	4.26	147		Pn	05 19 17.1	-1.9
CMMM	Mount Mocho	4.30	138		Pn	05 19 18.9	-0.7
MHC	Mount Hamilton	4.31	140	P	Pn	05 19 18.4	-1.4
MHC	Mount Hamilton	4.31	140		Pn	05 19 18.4	-1.4
JUMM	Mount Umunhum	4.34	144		Pn	05 19 18.7	-1.4
PINE	Pine Mountain	4.34	44		Pn	05 19 18.7	-1.6
JSTM	Santa Teresa H	4.35	143		Pn	05 19 18.1	-2.1
ARN	Arnold Ranch	4.36	139		Pn	05 19 19.6	-0.8
CCOB	Coe Ranch Numb	4.36	141		Pn	05 19 19.8	-0.6
AMC	Almaden	4.37	144		Pn	05 19 18.6	-1.8
J21C	J21C	4.39	331	P	Pn	05 19 23.9	+3.1
J21C				S	Sn	05 20 16.0	+3.8
J33C	J33C	4.40	5	P	Pn	05 19 18.9	-2.0
J33C				S	Sg	05 20 39.0	+3.9
VCNR	Virginia City	4.41	107		Pn	05 19 21.0	-0.3
JRGM	Rodeo Gulch Ro	4.41	146		Pn	05 19 19.2	-1.8
MCUB	Copperopolis B	4.42	127		Pn	05 19 20.2	-0.9
JLAB	Laurel Hill	4.42	143		Pn	05 19 19.5	-1.7
JTGM	Trout Gulch Ro	4.46	145		Pn	05 19 20.3	-1.4
CADM	Anderson Res.	4.46	142		Pn	05 19 20.7	-1.1
PAHR	Pah Rah Range	4.48	101		Pn	05 19 21.1	-1.1
CMB	Columbia Colle	4.53	125	P	Pn	05 19 22.6	-0.1
CMB	Columbia Colle	4.53	125		Pn	05 19 22.6	-0.1
PNTR	Pine Nut	4.53	109		Pn	05 19 23.0	+0.1
I05D	Terrebonne, OR	4.55	36	P	Pn	05 19 20.9	-2.1
	baz=220,SNR=1000						
HSPM	Sheep	4.55	141		Pn	05 19 21.9	-1.2
JELB	Ellicott, Sant	4.56	145		Pn	05 19 21.5	-1.6
J28C	J28C	4.59	341	P	Pn	05 19 21.4	-2.1
J28C				S	Sb	05 20 24.8	-5.6
CDC	Canada Road	4.64	142		Pn	05 19 24.1	-0.2
HCOM	Corn Cob Canyo	4.65	144		Pn	05 19 22.5	-1.8
G03D	McMinnville, O	4.68	16	P	Pn	05 19 22.0	-2.7
	baz=198,SNR=1000						
ANZ	Anzar Road	4.71	143		Pn	05 19 23.5	-1.6
HFEM	San Felipe	4.71	141		Pn	05 19 23.8	-1.4
HPCM	Pacheco Lake	4.71	140		Pn	05 19 24.1	-1.2
OCR	O’Connell Ranc	4.72	143		Pn	05 19 23.7	-1.6
HERM	Elkhorn Road	4.72	145		Pn	05 19 23.7	-1.6
SLD	San Luis Dam	4.73	139		Pn	05 19 24.7	-0.7
HTUM	Tustin Road	4.73	144		Pn	05 19 23.5	-1.9
PACP	Pacheco Peak	4.75	140		Pn	05 19 25.0	-0.8
HBTM	San Juan Bauti	4.75	143		Pn	05 19 24.4	-1.4
SFJWR	San Luis Fatjo	4.77	139		Pn	05 19 25.1	-0.9
HJGM	San Juan Grade	4.79	144		Pn	05 19 24.4	-1.8
HMOM	Monterey	4.81	148		Pn	05 19 24.5	-2.0
YERR	Yerington	4.82	109		Pn	05 19 26.4	-0.6
M04C7	M04C7	4.83	359	P	Pg	05 20 00.7	+14
M04C7				S	Sg	05 21 29.3	+40
HLTM	Lone Tree Road	4.84	141		Pn	05 19 25.7	-1.2
J35C	J35C	4.85	350	P	Pn	05 19 25.9	-1.1
J35C				S	Sb	05 20 34.5	-3.2
SAO	San Andreas Ge	4.87	143	P	Pn	05 19 25.2	-2.2
SAO	San Andreas Ge	4.87	143		Pn	05 19 25.2	-2.2
HJSM	John Smith Roa	4.90	142		Pn	05 19 26.9	-0.9
BVYM	Vineyard	4.90	143		Pn	05 19 25.9	-1.9
BSLM	Silva Ranch	4.91	142		Pn	05 19 27.9	0.0
BSRM	Salinas Radio	4.92	144		Pn	05 19 26.0	-2.0
MYLM	Yosemite Lake	4.93	131		Pn	05 19 28.8	+0.7
J29C	J29C	4.94	335	P	Pn	05 19 28.4	+0.1
J29C				S	Sn	05 20 24.8	-0.9
BPCNC	Pine Canyon	4.95	146		Pn	05 19 26.0	-2.5
BCGM	Cienega Road	4.96	143		Pn	05 19 27.4	-1.3
BHRM	Hodges Ranch	4.99	142		Pn	05 19 27.5	-1.4
SCZ	Santa Cruz	5.03	144		Pn	05 19 27.7	-1.9
BLRM	Lewis Ranch	5.03	142		Pn	05 19 28.2	-1.4
BJOM	Mount Johnson	5.04	143		Pn	05 19 27.9	-1.8
BJCM	Johnson Can.	5.08	144		Pn	05 19 27.9	-2.3
BRMM	Rolling Bench	5.12	138		Pn	05 19 30.4	-0.3
BEMM	Emmet	5.12	141		Pn	05 19 28.9	-1.9
WVOR	Wild Horse Val	5.13	68	P	Pn	05 19 28.9	-2.2
WVOR	Wild Horse Val	5.13	68		Pn	05 19 28.9	-2.2
HAST	Hastings Reser	5.14	146		Pn	05 19 28.8	-2.3
BVL	Bear Valley	5.14	142		Pn	05 19 29.0	-2.2
BAVM	Antelope Valle	5.16	141		Pn	05 19 29.6	-1.8
J36C	J36C	5.18	344	P	Pn	05 19 28.9	-2.7
J36C				S	Sn	05 20 35.4	+3.8
BPOM	Post Ranch	5.19	149		Pn	05 19 29.4	-2.4
BBGB	Big Mountain B	5.21	141		Pn	05 19 30.4	-1.7
BSGM	Shirttail Gulc	5.25	144		Pn	05 19 30.6	-2.0
G05D	Wamic, OR	5.29	30	P	Pn	05 19 31.4	-1.9
	baz=214,SNR=1000						
F03A	Seaside	5.32	12		Pn	05 19 31.1	-2.4
I07A	Izee	5.32	49		Pn	05 19 33.0	-0.7
J23C	J23C	5.33	322	P	Pn	05 19 32.4	-1.4
J23C				S	Sn	05 20 37.2	+1.7
M05C7	M05C7	5.45	1	P	Pn	05 19 34.9	-0.5
M05C7				S	Sb	05 20 55.9	+1.0
J43C	J43C	5.47	352	P	Pn	05 19 35.4	-0.2
J43C				S	Sb	05 20 47.8	-7.6
J30C	J30C	5.47	330	P	Pn	05 19 36.8	+1.2
J30C				S	Sn	05 20 41.6	+2.7
RYN	Ryan	5.48	110		Pn	05 19 35.9	0.0
J37C	J37C	5.56	339	P	Pn	05 19 34.4	-2.4
J37C				S	Sn	05 20 40.5	-0.4
F04A	Amboy	5.56	20		Pn	05 19 34.1	-2.6
F04D	Rainier, OR	5.57	15	P	Pn	05 19 35.0	-2.0
	baz=197,SNR=225						
G06A	Carlson Farm,	5.57	34		Pn	05 19 35.6	-1.4
J08A	Circle Bar Ran	5.58	60		Pn	05 19 35.4	-1.9
MDPB	Devils Postpil	5.60	122		Pn	05 19 38.3	+0.7
PMPB	Monarch Peak	5.62	142		Pn	05 19 37.2	-0.5
KVN	Kaiserville	5.63	105	P	Pn	05 19 37.1	-0.9
KVN	Kaiserville	5.63	105		Pn	05 19 37.0	-0.9
OMMB	Old Mammoth Mi	5.66	121		Pn	05 19 39.1	+0.6
NVAR	Mina Array Bea	5.72	111	Pn	Pn	05 19 39.7	+0.5
	265nm,0.3s,baz=290,slow=14,SNR=1570						
NVAR				Lg	Lg	05 21 14.1	
	baz=296,slow=31,SNR=2.7						
NVAR				LR	LR	05 22 23.7	
	comp=Z,2194µm,20.0s,baz=302,slow=43						
NVAR	Mina Array Bea	5.72	111		Pn	05 19 38.9	-0.3
MLAC	Mammoth, Mammo	5.75	120	P	Pn	05 19 40.5	+0.8
	baz=305						
J44C	J44C	5.78	346	P	Pn	05 19 38.3	-1.4
J44C				S	Sn	05 20 47.8	+1.6
F05D	White Salmon	5.80	26	P	Pn	05 19 38.4	-1.8
	baz=209,SNR=891						
NV11	Mina Array Sit	5.82	111		Pn	05 19 40.9	+0.3
J31C	J31C	5.88	327	P	Pn	05 19 39.8	-1.5
J31C				S	Sb	05 21 01.1	-6.4
E03A	Lebam	5.92	10		Pn	05 19 39.2	-2.6
J38C	J38C	5.98	334	P	Pn	05 19 42.8	+0.2
J38C				S	Sn	05 20 55.9	+4.5
E04D	Cinebar	6.11	17	P	Pn	05 19 42.2	-2.2
	baz=199,SNR=471						
J45C	J45C	6.14	342	P	Pn	05 19 45.3	+0.4
J45C				S	Sn	05 20 58.9	+3.5
VOG	Valley Oaks Go	6.27	133	P	Pn	05 19 46.9	+0.4
	baz=317						
PAGB	Antelope Grade	6.27	141		Pn	05 19 45.9	-0.8
J39C	J39C	6.38	330	P	Pn	05 19 51.8	+3.6
J39C				S	Sn	05 21 08.4	+7.1
F07A	Phinny Hill Vi	6.39	34		Pn	05 19 47.3	-1.0
G08A	Pilot Rock	6.40	43		Pn	05 19 47.9	-0.6
J32C	J32C	6.41	323	P	Pn	05 19 49.3	+0.6
J32C				S	Sn	05 21 05.5	+3.3
J52C	J52C	6.42	348	P	Pn	05 19 47.8	-0.8
J52C				S	Sn	05 21 06.4	+4.3
LON	Longmire	6.47	20	P	Pn	05 19 47.6	-1.9
LON	Longmire	6.47	20		Pn	05 19 47.6	-1.9
TIN	Tinemaha, Big	6.48	122	P	Pn	05 19 50.6	+1.0
	baz=307						
J46C	J46C	6.52	337	P	Pn	05 19 49.3	-0.7
J46C				S	Sn	05 21 07.9	+3.3
D04E	Lakebay	6.67	14	P	Pn	05 19 50.7	-1.2
	baz=196,SNR=311						
NLWA	Neilton Lookou	6.72	7		Pn	05 19 50.5	-2.4
SMMC	Simmler	6.73	142	P	Pn	05 19 51.5	-1.4
	baz=325						
J53C	J53C	6.76	343	P	Pn	05 19 51.3	-2.0
J53C				S	Sn	05 21 13.3	+2.9
VES	Vestal, Richgr	6.79	134	P	Pn	05 19 53.7	0.0
	baz=318						
D05A	Enumclaw	6.84	18		Pn	05 19 52.9	-1.5
HAWA	Hanford	6.95	34		Pn	05 19 54.2	-1.8
CWC	Cottonwood Cre	6.96	126	P	Pn	05 19 57.5	+1.4
	baz=311						
E07A	Sunnyside	6.96	31		Pn	05 19 54.8	-1.2
D03D	Eldon	6.96	11	P	Pn	05 19 53.3	-2.8
	baz=193,SNR=487						
D03D				S	Sn	05 21 08.2	-7.2
	baz=193						
J47C	J47C	6.97	333	P	Pn	05 19 58.2	+1.9
J47C				S	Sn	05 21 26.3	+10
BMO	Blue Mountains	7.05	52	P	Pn	05 19 56.6	-0.8
BMO	Blue Mountains	7.05	52		Pn	05 19 56.6	-0.8
GRAC	Grapevine Rang	7.08	119	P	Pn	05 19 58.7	+0.9
	baz=305						
J54C	J54C	7.13	339	P	Pn	05 19 59.2	+0.8
J54C				S	Sn	05 21 25.8	+6.0
WASM	Alta Sierra Ca	7.15	132		Pb	05 20 20.3	+2.0
PKM	Mcpherson Peak	7.17	143	P	Pn	05 19 57.8	-1.3
	baz=326						
PKM				S	Sn	05 21 23.1	+2.2
	baz=326						
J65C	J65C	7.17	360	S	Sb	05 21 40.0	-4.4
M03C7	M03C7	7.20	355	P	Pn	05 19 56.7	-2.6
M03C7				S	Sb	05 21 44.7	-0.5
E08A	Dider Farm, El	7.24	35		Pn	05 19 59.1	-0.7
ISA	Isabella, Lake	7.25	132	P	Pn	05 20 01.8	+1.6
ISA	Isabella, Lake	7.25	132		Pn	05 20 01.8	+1.6
ISA	Isabella, Lake	7.25	132	P	Pn	05 20 01.1	+0.9
	baz=317						
LTY	Liberty	7.27	25		Pn	05 19 58.7	-1.6
MFID	Camas Ranch	7.39	66		Pn	05 20 00.1	-2.0
ARVC	Arvin	7.46	137	P	Pn	05 20 03.2	+0.3
	baz=321						
ELK	Elko	7.48	87	Pn	Pn	05 20 02.8	-0.7
	11nm,0.3s,baz=288,slow=15,SNR=89						
ELK				Lg	Lg	05 22 03.4	
	9.5nm,0.3s,baz=322,slow=19,SNR=1.7						
J61C	J61C	7.49	344	P	Pn	05 20 04.2	+0.9
J61C				S	Sn	05 21 25.8	-2.6
J48C	J48C	7.56	330	P	Pn	05 20 10.7	+6.4
J48C				S	Sn	05 21 33.7	+3.5
J67C	J67C	7.56	350	P	Pn	05 20 04.2	-0.1
J67C				S	Sn	05 21 29.4	-0.8
MPMC	Manual Prospec	7.57	126	P	Pn	05 20 05.5	+0.9
	baz=311						
J55C	J55C	7.57	336	P	Pn	05 20 05.7	+1.2
J55C				S	Sb	05 21 49.2	-6.9
SBC	Santa Barbara	7.58	144	P	Pn	05 20 04.0	-0.6
	baz=328						
SBC				S	Sn	05 21 34.2	+3.3
	baz=328						
M02C7	M02C7	7.59	357	P	Pn	05 20 00.7	-4.2
M02C7				S	Sb	05 21 47.9	-8.7
E09A	Wood Farm, Sta	7.67	39		Pn	05 20 04.3	-1.5
FURC	Furnace Creek,	7.71	121	P	Pn	05 20 07.7	+1.3
	baz=306						
R11A	Troy Canyon, C	7.72	105		Pn	05 20 06.4	-0.3
R11A	Troy Canyon, C	7.72	105	P	Pn	05 20 06.1	-0.5
	baz=292						
D08A	Wollman Farm,	7.74	33		Pn	05 20 05.0	-1.7
F10A	Beach Ranch, E	7.76	45		Pn	05 20 06.7	-0.5
C06D	Leavenworth	7.80	21	P	Pn	05 20 06.1	-1.4
	baz=205,SNR=202						
B05A	Bryant	7.84	15	P	Pn	05 20 05.9	-2.1
	baz=197,SNR=456						
B05A				S	Sn	05 21 31.3	-5.7
	baz=197						
LRMC	Laurel Mtn Rad	7.84	130	P	Pn	05 20 08.9	+0.6
	baz=315						
TPNV	Topopah Spring	7.86	116	P	Pn	05 20 09.4	+0.8
TPNV	Topopah Spring	7.86	116		Pn	05 20 09.4	+0.8
TPNV	Topopah Spring	7.86	116	P	Pn	05 20 09.0	+0.5
	baz=302						
OSI	Osito Audit: C	7.91	138		Pn	05 20 10.9	+1.7
OSI	Osito Audit: C	7.91	138	P	Pn	05 20 09.6	+0.4
	baz=323						
SCZ2	Santa Cruz Isl	7.99	145	P	Pn	05 20 09.0	-1.3
	baz=329						
SCZ2				S	Sn	05 21 43.1	+2.0
	baz=329						
J68C	J68C	8.00	347	P	Pn	05 20 11.7	+1.4
J68C				S	Sn	05 21 40.9	-0.1
PGC	Sidney	8.01	8		Pn	05 20 08.4	-2.0
J73C	J73C	8.08	355	P	Pn	05 20 04.2	-7.4
J73C				S	Sn	05 21 43.5	+0.2
EDW2	Edwards Air Fo	8.09	134	P	Pn	05 20 12.2	+0.5
	baz=319						
BLG	Laguna Peak, P	8.16	142	P	Pn	05 20 11.7	-0.8
	baz=326						
BLG				S	Sn	05 21 44.1	-0.9
	baz=326						
A04D	Lummi Island	8.17	11	P	Pn	05 20 10.7	-2.0
	baz=193,SNR=265						
A04D				S	Sn	05 21 39.0	-6.2
	baz=193						
B06A	Marblemount	8.21	17	Pn	Pn	05 20 11.7	-1.4
J63C	J63C	8.26	336	P	Pn	05 20 15.1	+1.2
J63C				S	Sn	05 21 53.1	+5.6
J69C	J69C	8.32	343	P	Pn	05 20 14.6	0.0
J69C				S	Sn	05 21 55.9	+7.0
DECC	Green Verdugo	8.39	138	P	Pn	05 20 16.2	+0.4
	baz=323						
SHOC	Shoshone, Teco	8.43	122	P	Pn	05 20 17.2	+0.9
	baz=308						
GSC	Goldstone, Bar	8.48	127	P	Pn	05 20 18.6	+1.5
GSC	Goldstone, Bar	8.48	127		Pn	05 20 18.6	+1.5
GSC	Goldstone, Bar	8.48	127	P	Pn	05 20 17.9	+0.8
	baz=313						
M01C7	M01C7	8.51	353	S	Sn	05 22 18.0	+24
M01C7				P	Pn	05 20 27.4	+10
PASC	Pasadena Art C	8.54	138		Pn	05 20 17.4	-0.3
MWC	Mount Wilson	8.56	137	P	Pn	05 20 18.2	0.0
MWC	Mount Wilson	8.56	137		Pn	05 20 18.2	0.0
C09A	Chrisman Ranch	8.60	32		Pn	05 20 15.9	-2.6
RRX	Edison Barstow	8.66	130	P	Pn	05 20 20.6	+1.1
	baz=315						
B08A	Colville Reser	8.67	26		Pn	05 20 17.6	-1.9
SNCC	San Nicolas Is	8.69	147		Pn	05 20 19.1	-0.6
SNCC	San Nicolas Is	8.69	147	P	Pn	05 20 20.5	+0.7
	baz=331						
SNCC				S	Sn	05 21 57.4	-0.7
	baz=331						
BFSC	Mount Baldy Ra	8.76	135	P	Pn	05 20 21.3	+0.4
	baz=320						
BFSC				S	Sn	05 22 01.0	+1.1
	baz=320						
SHPR	Sheep Range	8.84	115		Pn	05 20 22.6	+0.6
FMP	Fort Macarthur	8.85	140	P	Pn	05 20 21.6	-0.4
	baz=325						
FMP				S	Sn	05 22 02.6	+0.7
	baz=325						
PSUT	Pine Spring	8.94	101		Pn	05 20 23.4	0.0
TUQ	Turquoise Moun	8.95	123	P	Pn	05 20 24.2	+0.7
	baz=309						
CIS	Catalina Islan	9.04	142	P	Pn	05 20 23.3	-1.4
	baz=326						
CIS				S	Sn	05 22 04.1	-2.8
	baz=326						
HEC	Hector,Ludlow	9.09	128	P	Pn	05 20 26.1	+0.8
	baz=313						
BGU	Big Grassy Mou	9.14	85		Pn	05 20 26.1	-0.1
BBRC	Big Bear Solar	9.15	132	P	Pn	05 20 26.4	+0.1
	baz=318						
SCI2	San Clemente I	9.33	144	P	Pn	05 20 31.8	+3.1
	baz=328						
SCI2				S	Sn	05 22 14.2	+0.3
	baz=328						
HVU	Hansel Valley	9.34	79	P	Pn	05 20 29.7	+0.9
HVU	Hansel Valley	9.34	79		Pn	05 20 29.7	+0.9
DUG	Dugway, Tooele	9.37	89	P	Pn	05 20 28.5	-0.8
DUG	Dugway, Tooele	9.37	89		Pn	05 20 28.5	-0.8
DUG	Dugway, Tooele	9.37	89	P	Pn	05 20 28.8	-0.5
	baz=278						
NEW	Newport	9.44	34	Pn	Pn	05 20 28.5	-1.6
	15nm,0.3s,baz=203,slow=14,SNR=72						
NEW				LR	LR	05 24 16.3	
	comp=Z,468µm,20.1s,baz=276,slow=39						
NEW	Newport	9.44	34	P	Pn	05 20 27.5	-2.6
NEW	Newport	9.44	34		Pn	05 20 27.5	-2.6
NEW	Newport	9.44	34	P	Pn	05 20 27.2	-2.9
	baz=220						
MURC	Murrieta	9.49	136	P	Pn	05 20 30.6	-0.3
	baz=321						
MURC				S	Sn	05 22 19.0	+1.0
	baz=321						
GMRC	Granite Mounta	9.53	125	P	Pn	05 20 32.6	+1.2
	baz=312						
SPUT	South Promonto	9.57	82		Pn	05 20 31.8	-0.3
BELC	Belle Mtn. Jos	9.86	130	P	Pn	05 20 36.3	+0.3
	baz=316						
PFO	Pinyon Flats O	9.88	133	Pn	Pn	05 20 37.5	+1.2
	152nm,0.3s,baz=320,slow=10,SNR=493						
PFO				LR	LR	05 24 36.9	
	comp=Z,340µm,20.4s,baz=312,slow=39						
PFO	Pinyon Flats O	9.88	133*c*	*i*P	Pn	05 20 36.8	+0.5
PFO				pmax	pmax		
	comp=Z,733nm,0.8s						
PFO	Pinyon Flats O	9.88	133		Pn	05 20 37.2	+0.9
PFO	Pinyon Flats O	9.88	133	P	Pn	05 20 36.6	+0.3
	baz=319						
MCMT	McKenzie Canyo	9.89	61		Pn	05 20 37.2	+0.8
XPFO	Pion Flat	9.89	133		Pn	05 20 37.3	+1.0
LCMT	Little Creek M	9.95	108		Pn	05 20 38.1	+0.9
NLU	North Lily Min	9.97	90		Pn	05 20 39.5	+2.0
TCRU	Three Creeks R	9.97	98		Pn	05 20 39.4	+1.8
109C	Camp Elliot, M	10.10	138		Pn	05 20 39.2	0.0
109C	Camp Elliot, M	10.10	138	P	Pn	05 20 39.3	+0.2
	baz=323						
MSO	Missoula	10.11	49		Pn	05 20 38.1	-1.2
MSO	Missoula	10.11	49	P	Pn	05 20 39.2	0.0
	baz=237						
CTU	Camp Tracy	10.13	86		Pn	05 20 39.3	-0.4
LLLB	Lillooet	10.14	12		Pn	05 20 38.0	-1.6
NEE2	Needles Airpor	10.20	122	P	Pn	05 20 42.3	+1.8
	baz=309						
MSU	Marysvale	10.20	98	P	Pn	05 20 42.6	+1.8
MSU	Marysvale	10.20	98		Pn	05 20 42.5	+1.8
HWUT	Hardware Ranch	10.24	81		Pn	05 20 42.3	+1.1
DLMT	Dillon	10.25	59		Pn	05 20 41.0	-0.3
KNB	Kanab	10.25	107	P	Pn	05 20 42.5	+1.1
KNB	Kanab	10.25	107		Pn	05 20 42.5	+1.1
IRM	Iron Mountain	10.26	127	P	Pn	05 20 42.3	+0.9
	baz=313						
MPU	Maple Canyon	10.29	90		Pn	05 20 43.4	+1.4
MTPU	Mount Pierson	10.34	101		Pn	05 20 43.6	+0.8
TCUT	Toone Canyon	10.36	83		Pn	05 20 43.9	+0.9
BC3	Big Chuckawall	10.43	130	P	Pn	05 20 44.1	+0.4
	baz=316						
MONP2	Monument Peak	10.45	136	P	Pn	05 20 44.7	+0.5
	baz=321						
JTMT	Jette	10.45	44		Pn	05 20 42.8	-1.2
PKCU	Pink Cliffs	10.46	104		Pn	05 20 46.2	+1.8
W13A	Hualapai Mount	10.48	119		Pn	05 20 45.0	+0.5
BAR	Barrett	10.49	137		Pn	05 20 44.1	-0.3
LRM	Limekiln Ridge	10.53	57		Pn	05 20 44.3	-0.8
AHID	Auburn Hatcher	10.65	74		Pn	05 20 46.7	-0.1
TMUT	Trail Mountain	10.74	93		Pn	05 20 50.4	+2.1
SWSC	Sam W. Stewart	10.75	133	P	Pn	05 20 48.0	0.0
	baz=319						
PDMCI	Parker Dam,Lak	10.79	123	P	Pn	05 20 51.0	+2.3
	baz=310						
IKP	In-Ko-Pah, Jac	10.80	135	P	Pn	05 20 49.4	+0.6
	baz=321						
FXWY	Fox Creek	10.83	70		Pn	05 20 50.1	+0.7
QLMT	Earthquake Lak	10.84	63		Pn	05 20 49.6	+0.1
Q16A	Castle Valley	10.86	95		Pn	05 20 52.7	+3.0
U15A	North Rim	10.89	109		Pn	05 20 52.1	+1.8
REDW	Red Top Meadow	10.91	71		Pn	05 20 50.2	-0.2
Y12C	Blythe	10.92	126		Pn	05 20 51.4	+1.1
Y12C	Blythe	10.92	126	P	Pn	05 20 51.3	+0.9
	baz=313						
YHB	Horse Butte	10.98	64		Pn	05 20 53.5	+2.1
SNOW	Snow King Moun	11.00	71		Pn	05 20 53.4	+1.8
YHL	Hebgen Lake	11.02	63		Pn	05 20 53.4	+1.4
P17A	Butcher Ranch,	11.06	92		Pn	05 20 54.0	+1.5
YMR	Madison River	11.12	65		Pn	05 20 54.2	+1.0
YPP	Pitchstone Pla	11.12	67		Pn	05 20 54.4	+1.0
GLA	Glamis	11.22	130	P	Pn	05 20 54.9	+0.3
GLA	Glamis	11.22	130		Pn	05 20 54.9	+0.3
GLA	Glamis	11.22	130	P	Pn	05 20 55.2	+0.6
	baz=316						
SRU	San Rafael Swe	11.30	93	P	Pn	05 20 56.0	+0.2
SRU	San Rafael Swe	11.30	93		Pn	05 20 56.0	+0.2
H17A	Grant Village	11.31	66		Pn	05 20 57.7	+1.7
H17A	Grant Village	11.31	66	P	Pn	05 20 58.1	+2.1
	baz=257						
YUF	Upper Falls	11.44	65		Pn	05 20 59.1	+1.4
LKWY	Lake	11.48	66	P	Pn	05 21 00.8	+2.6
LKWY	Lake	11.48	66		Pn	05 21 00.8	+2.6
WALA	Waterton Lakes	11.49	40		Pn	05 20 57.2	-1.0
BBB	Bella Bella	11.65	351	Pn	Pn	05 21 00.7	+0.4
	comp=Z,5.3nm,0.3s,baz=184,slow=12,SNR=34						
BBB	Bella Bella	11.65	351		Pn	05 21 01.4	+1.2
YMP	Mirror Lake Pl	11.69	65	Pn	Pn	05 20 57.9	-3.3
Y14A	Wickenburg	11.76	121		Pn	05 21 02.6	+0.7
BW06	Boulder Array	11.78	75		Pn	05 21 02.7	+0.4
BW06	Boulder Array	11.78	75	P	Pn	05 21 02.4	0.0
	baz=266						
PD31	Pinedale Array	11.78	75		Pn	05 21 04.0	+1.6

PDAR	**Pinedale Array**	**11.78**	**75**	Pn	**Pn**	**05 21 04.1**	**+1.8**
	comp=Z,2.9nm,0.3s,baz=253,slow=12,SNR=184						
PDAR				Lg	Lg	05 24 17.4	
	baz=254,slow=22,SNR=2.0						
PDAR				LR	LR	05 25 56.7	
	comp=Z,473µm,18.8s,baz=266,slow=40						
RDMU	**Red Mountain**	**11.79**	**86**		**Pn**	**05 21 05.1**	**+2.6**
YNE	**Yellowstone No**	**11.86**	**64**		**Pn**	**05 21 03.6**	**+0.1**
WUAZ	**Wupatki**	**11.98**	**111**		**Pn**	**05 21 06.2**	**+1.2**
WUAZ	**Wupatki**	**11.98**	**111**	P	**Pn**	**05 21 07.7**	**+2.6**
	baz=300						
113A	**Mohawk Valley,**	**12.05**	**128**		**Pn**	**05 21 06.9**	**+1.0**
GCMT	**Greycliff**	**12.32**	**61**		**Pn**	**05 21 09.0**	**-0.7**
RLMT	**Red Lodge**	**12.40**	**64**		**Pn**	**05 21 12.4**	**+1.6**
RLMT	**Red Lodge**	**12.40**	**64**	P	**Pn**	**05 21 11.2**	**+0.4**
	baz=255						
X16A	**Lo Mia Camp, P**	**12.52**	**116**		**Pn**	**05 21 14.9**	**+2.5**
O20A	**White River Ci**	**12.85**	**87**		**Pn**	**05 21 16.2**	**-0.8**
O20A	**White River Ci**	**12.85**	**87**	P	**Pn**	**05 21 17.6**	**+0.7**
	baz=278						
EGMT	**Eagleton**	**13.16**	**51**		**Pn**	**05 21 19.5**	**-1.6**
EGMT	**Eagleton**	**13.16**	**51**	P	**Pn**	**05 21 19.4**	**-1.6**
	baz=242						
214A	**Organ Pipe Nat**	**13.20**	**128**		**Pn**	**05 21 21.9**	**+0.4**
214A	**Organ Pipe Nat**	**13.20**	**128**	P	**Pn**	**05 21 23.3**	**+1.8**
	baz=315						
MOBC	**Moresby Island**	**13.28**	**342**		**Pn**	**05 21 23.4**	**+0.9**
W18A	**Petrified Fore**	**13.34**	**110**		**Pn**	**05 21 25.8**	**+2.1**
W18A	**Petrified Fore**	**13.34**	**110**	P	**Pn**	**05 21 25.8**	**+2.1**
	baz=300						
MVCO	**Mesa Verde**	**13.38**	**100**	P	**Pn**	**05 21 25.3**	**+1.2**
	baz=291						
DIB	**Dawson Inlet,**	**13.45**	**341**		**Pn**	**05 21 26.6**	**+1.7**
H02S1	**DAWSON INLET T**	**13.45**	**341**	Pn	**Pn**	**05 21 26.6**	**+1.8**
RWWY	**Rawlins**	**13.50**	**80**		**Pn**	**05 21 24.5**	**-1.3**
H02N1	**VAN INLET T-PH**	**13.52**	**341**	Pn	**Pn**	**05 21 28.1**	**+2.3**
K22A	**Casper**	**14.01**	**76**		**Pn**	**05 21 31.8**	**-0.9**
K22A	**Casper**	**14.01**	**76**	P	**Pn**	**05 21 30.8**	**-1.9**
	baz=269						
TUC	**Tucson**	**14.23**	**122**	P	**P**	**05 21 39.4**	**-3.8**
TUC	**Tucson**	**14.23**	**122**		**P**	**05 21 39.4**	**-3.8**
TUC	**Tucson**	**14.23**	**122**	P	**Pn**	**05 21 38.0**	**+2.4**
	baz=311						
S22A	**4UR Ranch, Cre**	**14.46**	**96**	P	**Pn**	**05 21 39.7**	**+0.6**
	baz=288						
N23A	**Red Feather La**	**14.50**	**83**		**Pn**	**05 21 39.8**	**+0.2**
N23A	**Red Feather La**	**14.50**	**83**	P	**Pn**	**05 21 38.0**	**-1.5**
	baz=276						
LAO	**LASA Array**	**14.88**	**60**		**Pn**	**05 21 42.5**	**-2.0**
LAO	**LASA Array**	**14.88**	**60**	P	**Pn**	**05 21 42.3**	**-2.1**
	baz=254						
ISCO	**Idaho Springs**	**14.90**	**87**	P	**Pn**	**05 21 46.1**	**+1.1**
ISCO	**Idaho Springs**	**14.90**	**87**		**Pn**	**05 21 46.1**	**+1.1**
ISCO	**Idaho Springs**	**14.90**	**87**	P	**Pn**	**05 21 43.9**	**-1.1**
	baz=280						
Q24A	**Divide**	**15.42**	**90**		**Pn**	**05 21 50.9**	**-1.0**
Q24A	**Divide**	**15.42**	**90**	P	**Pn**	**05 21 51.6**	**-0.3**
	baz=283						
SDCO	**Great Sand Dun**	**15.46**	**95**	P	**Pn**	**05 21 54.2**	**+1.6**
SDCO				IAmb	IAmb	05 22 09.8	
	comp=Z,5µm,1.2s						
SDCO	**Great Sand Dun**	**15.46**	**95**	P	**Pn**	**05 21 52.9**	**+0.4**
	baz=288						
ANMO	**Albuquerque**	**15.80**	**105**	Pn	**Pn**	**05 21 57.0**	**+0.2**
	comp=Z,5.4nm,0.3s,baz=304,slow=12,SNR=171						
ANMO				Lg	Lg	05 26 36.2	
	comp=Z,0.1nm,0.3s,baz=76,slow=14,SNR=3.6						
ANMO				LR	LR	05 29 12.7	
	comp=Z,503µm,18.2s,baz=195,slow=42						
ANMO	**Albuquerque**	**15.80**	**105***ce*	P	**Pn**	**05 21 57.2**	**+0.4**
ANMO				pmax	pmax		
	comp=Z,876nm,1.7s						
ANMO	**Albuquerque**	**15.80**	**105**	P	**Pn**	**05 21 57.2**	**+0.4**
	baz=297						
319A	**Douglas**	**15.80**	**121**	IAmb	IAmb	05 22 16.7	
	comp=Z,5µm,1.6s						
Y22D	**IRIS PASSCAL I**	**15.88**	**109**		**P**	**05 22 01.5**	**-0.1**
Y22D				IAmb	IAmb	05 22 20.0	
	comp=Z,6µm,1.4s						
Y22D	**IRIS PASSCAL I**	**15.88**	**109**	P	**P**	**05 21 59.8**	**-1.7**
	baz=300						
RSSD	**Black Hills**	**15.91**	**71**	P	**Pn**	**05 21 55.0**	**-3.2**
RSSD				pmax	pmax		
	comp=Z,927nm,1.2s						
RSSD	**Black Hills**	**15.91**	**71**		**Pn**	**05 21 55.0**	**-3.2**
RSSD	**Black Hills**	**15.91**	**71**	P	**Pn**	**05 21 54.1**	**-4.1**
	baz=265						
121A	**Cookes Peak, D**	**16.10**	**115**	P	**P**	**05 22 03.5**	**-0.6**
121A	**Cookes Peak, D**	**16.10**	**115**	P	**P**	**05 22 03.0**	**-1.0**
	baz=306						
WRAK	**Wrangell Islan**	**16.41**	**346**		**Pn**	**05 22 04.4**	**+0.1**
WRAK				IAmb	IAmb	05 22 25.2	
	comp=Z,6µm,1.8s						
HSIG		**16.43**	**131**		**P**	**05 22 06.6**	**-1.0**
T25A	**Trinidad**	**16.48**	**96**		**Pn**	**05 22 05.9**	**+0.4**
T25A				IAmb	IAmb	05 22 22.4	
	comp=Z,6µm,1.3s						
T25A	**Trinidad**	**16.48**	**96**	P	**Pn**	**05 22 06.2**	**+0.7**
	baz=289						
DGMT	**Dagmar**	**16.74**	**55**		**Pn**	**05 22 06.3**	**-2.3**
DGMT				IAmb	IAmb	05 22 30.5	
	comp=Z,5µm,1.8s						
DGMT	**Dagmar**	**16.74**	**55**	P	**Pn**	**05 22 05.7**	**-2.9**
	baz=250						
SRIG	**Santa Rosalia**	**17.07**	**138**	P	**P**	**05 22 16.9**	**+2.3**
SRIG				IAmb	IAmb	05 22 33.3	
	comp=Z,3µm,1.4s						
KSCO	**Kaye Shedlock'**	**17.32**	**88**	P	**Pn**	**05 22 15.9**	**-0.2**
KSCO				IAmb	IAmb	05 22 20.4	
	comp=Z,6µm,1.1s						
KSCO	**Kaye Shedlock'**	**17.32**	**88**	P	**Pn**	**05 22 15.0**	**-1.1**
	baz=283						
OGNE	**Ogallala**	**17.44**	**82**		**Pn**	**05 22 15.5**	**-2.0**
OGNE	**Ogallala**	**17.44**	**82**	P	**Pn**	**05 22 14.9**	**-2.7**
	baz=277						
SIT	**Sitka**	**17.64**	**341**	P	**Pn**	**05 22 16.2**	**-3.6**
SIT				pmax	pmax		
	comp=Z,2µm,1.4s						
SIT	**Sitka**	**17.64**	**341**	Pn	**Pn**	**05 22 16.2**	**-3.6**
DLBC	**Dease Lake**	**18.01**	**352**	P	**P**	**05 22 25.5**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=177,slow=11,SNR=66						
DLBC	**Dease Lake**	**18.01**	**352**	P	**Pn**	**05 22 22.9**	**-1.4**
DLBC				IAmb	IAmb	05 22 34.3	
	comp=Z,7µm,1.9s						
MNTX	**Cornudas Mount**	**18.24**	**113**	P	**P**	**05 22 28.8**	**+1.1**
MNTX	**Cornudas Mount**	**18.24**	**113**	P	**P**	**05 22 28.8**	**+1.1**
	baz=305						
MNTX				S	**S**	**05 26 05.1**	**+8.4**
	baz=305						
JIS	**Juneau Island**	**18.55**	**344**	P	**P**	**05 22 28.1**	**-2.6**
BESE	**Bessie Mountai**	**18.92**	**344**	P	**P**	**05 22 33.8**	**-1.1**
MSTX	**Muleshoe**	**18.95**	**104**	P	**P**	**05 22 34.6**	**-1.0**
MSTX				IAmb	IAmb	05 23 10.5	
	comp=Z,4µm,2.0s						
MSTX	**Muleshoe**	**18.95**	**104**	P	**P**	**05 22 34.0**	**-1.6**
	baz=298						
MSTX				S	**S**	**05 26 18.5**	**+7.4**
	baz=298						
AMTX	**Amarillo**	**19.37**	**100**	P	**P**	**05 22 39.2**	**-0.8**
AMTX	**Amarillo**	**19.37**	**100**	P	**P**	**05 22 38.5**	**-1.6**
	baz=295						
AMTX				S	**S**	**05 26 23.5**	**+4.0**
	baz=295						
MDND	**Maddock**	**19.53**	**60**	P	**P**	**05 22 39.5**	**-2.1**
MDND				IAmb	IAmb	05 23 00.1	
	comp=Z,4µm,1.4s						
MDND	**Maddock**	**19.53**	**60**	P	**P**	**05 22 39.1**	**-2.5**
	baz=258						
MDND				S	**Sn**	**05 26 16.5**	**-5.7**
	baz=258						
CBKS	**Cedar Bluff**	**19.56**	**87**	P	**P**	**05 22 40.8**	**-1.3**
CBKS				pmax	pmax		
	comp=Z,5µm,1.0s						
CBKS	**Cedar Bluff**	**19.56**	**87**	P	**P**	**05 22 40.8**	**-1.3**
CBKS				IAmb	IAmb	05 22 58.8	
	comp=Z,5µm,0.9s						
CBKS	**Cedar Bluff**	**19.56**	**87**	P	**P**	**05 22 39.2**	**-2.9**
	baz=284						
CBKS				S	**Sn**	**05 26 21.8**	**-1.4**
	baz=284						
SUSD	**Miller**	**19.57**	**70**	P	**P**	**05 22 39.2**	**-2.9**
SUSD				IAmb	IAmb	05 22 56.8	
	comp=Z,3µm,1.0s						
SUSD	**Miller**	**19.57**	**70**	P	**P**	**05 22 38.1**	**-3.9**
	baz=268						
SUSD				S	**S**	**05 26 22.8**	**-0.4**
	baz=268						
SKAG	**Skagway**	**19.83**	**344**	P	**P**	**05 22 42.4**	**-2.4**
SKAG				IAmb	IAmb	05 23 04.4	
	comp=Z,5µm,1.5s						
DHAK	**Deception Hill**	**20.17**	**340**	P	**P**	**05 22 46.3**	**-2.2**
BGNE	**Belgrade**	**20.30**	**79**	P	**P**	**05 22 47.2**	**-2.9**
BGNE				IAmb	IAmb	05 23 07.2	
	comp=Z,2µm,1.0s						
BGNE	**Belgrade**	**20.30**	**79**	P	**P**	**05 22 46.4**	**-3.7**
	baz=277						
BGNE				S	**S**	**05 26 33.6**	**-4.3**
	baz=277						
R32A	**Long Quarter,**	**20.44**	**88**	P	**P**	**05 22 50.5**	**-1.2**
R32A				IAMs_20	IAMs_20	05 31 26.1	
	comp=Z,442µm,19.0s						
LPIG	**La Paz**	**20.70**	**139**	P	Pn	05 22 56.7	0.0
	comp=Z,217nm,0.9s,baz=24,slow=3.3,SNR=11						
LPIG				LR	LR	05 30 53.2	
	comp=Z,426µm,18.3s,baz=329,slow=37						
FFC	**Flin Flon**	**20.79**	**40**	P	**P**	**05 22 53.6**	**-1.7**
FFC				pmax	pmax		
	comp=Z,1µm,1.1s						
FFC				MLR	MLR		
	comp=Z,204µm,18.0s						
FFC	**Flin Flon**	**20.79**	**40**	P	**P**	**05 22 53.6**	**-1.7**
FFC				IAmb	IAmb	05 23 03.9	
	comp=Z,1µm,1.1s						
U32A	**Winter Ranch,**	**20.83**	**94**	IAMs_20	IAMs_20	05 31 45.8	
	comp=Z,435µm,21.0s						
TX31	**Lajitas Ar. Si**	**20.84**	**116**	P	**P**	**05 22 55.8**	**-0.3**
TX31				IAmb	IAmb	05 23 05.3	
	comp=Z,1µm,1.1s						
TX32	**Lajitas Array**	**20.84**	**116**	P	**P**	**05 22 56.4**	**+0.3**
TX32				IAmb	IAmb	05 23 05.3	
	comp=Z,1µm,1.1s						
TXAR	**Lajitas Array**	**20.84**	**116**	P	Pn	05 22 57.5	-1.1
	comp=Z,225nm,0.7s,baz=300,slow=7.7,SNR=760						
TXAR				LR	LR	05 31 09.7	
	comp=Z,125µm,21.3s,baz=0.0,slow=37						
TXAR	**Lajitas Array**	**20.84**	**116**	P	**P**	**05 22 57.0**	**+0.9**
TXAR	**Lajitas Array**	**20.84**	**116**	P	**P**	**05 22 57.0**	**+0.9**
WHY	**Whitehorse**	**20.86**	**346**	P	**P**	**05 22 54.3**	**-1.8**
HPIG		**21.14**	**125**	P	**P**	**05 22 59.1**	**-0.3**
D32A	**Dogwood Acres,**	**21.14**	**63**	P	**P**	**05 22 57.4**	**-1.7**
ECSD	**EROS Data Cent**	**21.25**	**72**	P	**P**	**05 22 57.1**	**-3.3**
ECSD	**EROS Data Cent**	**21.25**	**72**	P	**P**	**05 22 56.0**	**-4.4**
	baz=272						
ECSD				S	**S**	**05 26 52.6**	**-4.2**
	baz=272						
HYT	**Haines Junctio**	**21.53**	**343**	P	**P**	**05 23 00.5**	**-2.8**
PCA	**Pinnacle**	**21.57**	**339**	P	**P**	**05 23 04.4**	**+0.7**
PCA				IAmb	IAmb	05 23 31.8	
	comp=Z,2µm,1.5s						
WMOK	**Wichita Mounta**	**21.61**	**98**	P	**P**	**05 23 02.7**	**-1.5**
WMOK				pmax	pmax		
	comp=Z,573nm,0.9s						
WMOK				MLR	MLR		
	comp=Z,424µm,20.0s						
WMOK	**Wichita Mounta**	**21.61**	**98**	P	**P**	**05 23 02.7**	**-1.5**
WMOK	**Wichita Mounta**	**21.61**	**98**	IAMs_20	IAMs_20	05 32 18.5	
	comp=Z,424µm,20.0s						
WMOK	**Wichita Mounta**	**21.61**	**98**	P	**P**	**05 23 01.8**	**-2.4**
	baz=294						
WMOK				S	**S**	**05 27 04.7**	**+0.8**
	baz=294						
KSU1	**Kansas State U**	**21.87**	**85**	P	**P**	**05 23 03.9**	**-3.1**
	baz=284						
KSU1				S	**S**	**05 27 09.8**	**+0.9**
	baz=284						
ABTX	**Abilene, Hawle**	**21.90**	**104**	P	**P**	**05 23 05.9**	**-1.5**
ABTX				IAmb	IAmb	05 23 17.9	
	comp=Z,5µm,1.6s						
ABTX	**Abilene, Hawle**	**21.90**	**104**	P	**P**	**05 23 05.5**	**-1.9**
	baz=299						
ABTX				S	**S**	**05 27 13.7**	**+4.1**
	baz=299						
AGMN	**Agassiz Nation**	**22.08**	**60**	P	**P**	**05 23 06.8**	**-2.3**
AGMN				IAmb	IAmb	05 23 31.6	
	comp=Z,4µm,1.9s						
AGMN	**Agassiz Nation**	**22.08**	**60**	P	**P**	**05 23 05.8**	**-3.4**
	baz=261						
AGMN				S	**S**	**05 27 08.3**	**-4.5**
	baz=261						
ADOK	**Arcadia Dam**	**22.32**	**94**	P	**P**	**05 23 10.9**	**-0.9**
OKCFA	**Oklahoma City**	**22.35**	**95**	P	**P**	**05 23 10.0**	**-2.2**
OKCFA				IAMs_20	IAMs_20	05 32 45.0	
	comp=Z,536µm,20.0s						
OKCSW	**OKLAHOMA CITY**	**22.36**	**95**	P	**P**	**05 23 10.2**	**-2.1**
X34A	**Smith Ranch, M**	**22.38**	**97**	P	**P**	**05 23 11.3**	**-1.2**
X34A				IAmb	IAmb	05 23 23.5	
	comp=Z,910nm,0.9s						
FNO	**Franklin**	**22.45**	**95**	P	**P**	**05 23 11.7**	**-1.5**
ULM	**Lac du Bonnet**	**22.46**	**55**	P	**P**	**05 23 11.5**	**-1.7**
	comp=Z,356nm,0.9s,baz=263,slow=10,SNR=175						
ULM				S	**S**	**05 27 24.1**	**+4.1**
	comp=Z,70nm,1.0s,baz=343,slow=19,SNR=2.4						
ULM				Lg	Lg	05 30 01.8	
	comp=Z,20nm,1.1s,baz=315,slow=4.3,SNR=2.6						
ULM				LR	LR	05 32 35.3	
	comp=Z,349µm,18.8s,baz=259,slow=39						
ULM	**Lac du Bonnet**	**22.46**	**55***de*	P	**P**	**05 23 11.3**	**-1.9**
ULM	**Lac du Bonnet**	**22.46**	**55**	P	**P**	**05 23 10.6**	**-2.6**
ULM				IAMs_20	IAMs_20	05 32 24.9	
	comp=Z,361µm,19.0s						
T35A	**Sooner Cattle**	**22.54**	**90**	P	**P**	**05 23 12.5**	**-1.8**
T35A				IAmb	IAmb	05 23 25.4	
	comp=Z,2µm,1.0s						
T35A				IAMs_20	IAMs_20	05 32 21.9	
	comp=Z,523µm,21.0s						
CTGM	**Chitina Glacie**	**22.59**	**339**	P	**P**	**05 23 11.4**	**-3.3**
CTGM				IAmb	IAmb	05 23 35.7	
	comp=Z,2µm,1.5s						
YKA	**Yellowknife Ar**	**22.69**	**13**	P	**P**	**05 23 13.3**	**-2.3**
	comp=Z,420nm,1.0s,baz=198,slow=11,SNR=404						
YKA				LR	LR	05 32 34.1	
	comp=Z,253µm,19.5s,baz=0.0,slow=38						
BARN	**Barnard Glacie**	**22.76**	**339**	P	**P**	**05 23 14.3**	**-2.2**
TGL	**Tana Glacier**	**22.84**	**337**	IAmb	IAmb	05 23 58.3	
	comp=Z,2µm,1.6s						
W35A	**Tecumseh**	**22.88**	**95**	P	**P**	**05 23 15.5**	**-2.3**
JCT	**Junction City**	**22.89**	**109**	P	**P**	**05 23 17.5**	**-0.5**
JCT				pmax	pmax		
	comp=Z,3µm,1.3s						
JCT				MLR	MLR		
	comp=Z,754µm,19.0s						
JCT	**Junction City**	**22.89**	**109**	P	**P**	**05 23 17.4**	**-0.5**
JCT				IAmb	IAmb	05 23 32.2	
	comp=Z,3µm,1.3s						
JCT	**Junction City**	**22.89**	**109**	P	**P**	**05 23 16.6**	**-1.4**
	baz=304						
JCT				S	**S**	**05 27 31.2**	**+3.0**
	baz=304						
BALM	**Baldy**	**22.93**	**338**	IAmb	IAmb	05 24 03.0	
	comp=Z,2µm,1.6s						
CRQM	**Cirque**	**22.93**	**337**	IAmb	IAmb	05 23 49.0	
	comp=Z,2µm,1.5s						
Z35A	**Perchaven, San**	**23.35**	**100**	P	**P**	**05 23 20.8**	**-1.9**
Z35A				IAmb	IAmb	05 23 33.9	
	comp=Z,1µm,1.0s						
Z35A				IAMs_20	IAMs_20	05 33 22.8	
	comp=Z,515µm,18.0s						
VRDI	**Verde Repeater**	**23.40**	**337**	P	**P**	**05 23 19.6**	**-3.6**
MCARA	**McCarthy VSAT**	**23.40**	**338**	P	**P**	**05 23 20.7**	**-2.2**
MCARA				IAmb	IAmb	05 23 59.7	
	comp=Z,2µm,1.5s						
TUL1	**Leonard**	**23.43**	**92**	P	**P**	**05 23 21.4**	**-2.0**
TUL1				IAmb	IAmb	05 23 42.8	
	comp=Z,1µm,0.9s						
TUL1				IAMs_20	IAMs_20	05 33 26.4	
	comp=Z,417µm,19.0s						
TUL1	**Leonard**	**23.43**	**92**	P	**P**	**05 23 20.3**	**-3.1**
	baz=291						
TUL1				S	**S**	**05 27 35.6**	**-1.5**
	baz=291						
EYAK	**Cordova Ski Ar**	**23.59**	**334**	P	**P**	**05 23 22.3**	**-2.5**
EYAK				IAmb	IAmb	05 23 55.8	
	comp=Z,2µm,1.8s						
GLB	**Gilahina Butte**	**23.68**	**337**	P	**P**	**05 23 23.4**	**-2.3**
WHTX	**Lake Whitney,**	**23.82**	**103**	P	**P**	**05 23 25.8**	**-1.6**
WHTX				IAmb	IAmb	05 23 36.6	
	comp=Z,3µm,1.5s						
WHTX				IAMs_20	IAMs_20	05 34 08.4	
	comp=Z,467µm,22.0s						
WHTX	**Lake Whitney,**	**23.82**	**103**	P	**P**	**05 23 25.3**	**-2.0**
	baz=300						
WHTX				S	**S**	**05 27 47.6**	**+4.1**
	baz=300						
SCIA	**State Center**	**23.90**	**77**	P	**P**	**05 23 26.6**	**-1.4**
SCIA				IAmb	IAmb	05 23 55.6	
	comp=Z,1µm,1.1s						
SCIA	**State Center**	**23.90**	**77**	P	**P**	**05 23 24.2**	**-3.8**
	baz=278						
SCIA				S	**S**	**05 27 41.3**	**-3.3**
	baz=278						
SPMN	**Marine on St.**	**23.95**	**68**	P	**P**	**05 23 25.8**	**-2.7**
SPMN				IAmb	IAmb	05 23 42.9	
	comp=Z,636nm,0.7s						
SPMN	**Marine on St.**	**23.95**	**68**	P	**P**	**05 23 25.2**	**-3.3**
	baz=271						
SPMN				S	**S**	**05 27 47.0**	**+1.6**
	baz=271						
U38A	**Gravette**	**24.31**	**90**	P	**P**	**05 23 30.4**	**-1.5**
U38A				IAMs_20	IAMs_20	05 33 25.8	
	comp=Z,436µm,21.0s						
435B	**Jarrell**	**24.34**	**105**	P	**P**	**05 23 31.0**	**-1.2**
435B				IAmb	IAmb	05 23 48.7	
	comp=Z,2µm,1.1s						
435B				IAMs_20	IAMs_20	05 33 03.2	
	comp=Z,282µm,18.0s						
435B	**Jarrell**	**24.34**	**105**	P	**P**	**05 23 31.0**	**-1.2**
	baz=302						
435B				S	**S**	**05 27 54.0**	**+2.3**
	baz=302						
833A	**Chaparral WMA,**	**24.42**	**112**	P	**P**	**05 23 31.3**	**-1.7**
833A				IAmb	IAmb	05 23 47.1	
	comp=Z,2µm,1.4s						
833A	**Chaparral WMA,**	**24.42**	**112**	P	**P**	**05 23 31.4**	**-1.5**
	baz=308						
833A				S	S	05 28 03.7	+11
	baz=308						
BCAR	**Beaver Creek A**	**24.48**	**342**	P	**P**	**05 23 33.8**	**+0.6**
KDAK	**Kodiak Island**	**24.50**	**323**	P	**P**	**05 23 34.3**	**+0.9**
	comp=Z,127nm,0.9s,baz=124,slow=5.7,SNR=24						
KDAK				LR	LR	05 31 00.4	
	comp=Z,220µm,19.4s,baz=128,slow=31						
KDAK	**Kodiak Island**	**24.50**	**323**	P	**P**	**05 23 32.3**	**-1.1**
KDAK				pmax	pmax		
	comp=Z,595nm,1.5s						
KDAK	**Kodiak Island**	**24.50**	**323**	P	**P**	**05 23 32.3**	**-1.1**
OHAK	**Old Harbor**	**24.54**	**322**	P	**P**	**05 23 34.6**	**+0.9**
SEW	**Seward**	**24.59**	**330**	P	**P**	**05 23 30.9**	**-3.2**
SEW				IAmb	IAmb	05 24 05.3	
	comp=Z,1µm,1.3s						
SII	**Sitkinak Islan**	**24.65**	**320**	P	**P**	**05 23 33.1**	**-1.6**
SII				IAmb	IAmb	05 23 45.6	
	comp=Z,2µm,1.5s						
HHAR	**Hobbs**	**24.70**	**90**	P	**P**	**05 23 34.0**	**-1.5**
HHAR				IAmb	IAmb	05 23 59.3	
	comp=Z,734nm,0.9s						
HHAR				IAMs_20	IAMs_20	05 33 38.2	
	comp=Z,359µm,21.0s						
S39A	**Bolivar**	**24.73**	**87**	P	**P**	**05 23 33.8**	**-1.9**
S39A				IAmb	IAmb	05 24 16.1	
	comp=Z,733nm,0.9s						
S39A				IAMs_20	IAMs_20	05 33 26.6	
	comp=Z,381µm,22.0s						
DAWY	**Dawson**	**24.83**	**345**	IAmb	IAmb	05 23 44.5	
	comp=Z,2µm,1.6s						
E38A	**The Farm, Brul**	**24.83**	**65**	P	**P**	**05 23 35.5**	**-1.0**
E38A				IAmb	IAmb	05 23 45.1	
	comp=Z,2µm,1.4s						
H06N1	**SOCORRO T-PHAS**	**24.92**	**147**	P	**P**	**05 23 41.5**	**+4.1**
CNPM	**China Poot**	**24.92**	**328**	P	**P**	**05 23 34.5**	**-2.7**
BRLK	**Bradley Lake**	**24.93**	**328**	P	**P**	**05 23 35.4**	**-1.9**
EYMN	**Ely**	**24.94**	**62**	P	**P**	**05 23 36.5**	**-1.1**
EYMN	**Ely**	**24.94**	**62**	P	**P**	**05 23 35.2**	**-2.3**
	baz=266						
EYMN				S	**S**	**05 28 01.9**	**+0.6**
	baz=266						
H06E1	**SOCORRO T-PHAS**	**25.02**	**147**	P	**P**	**05 23 41.5**	**+3.1**
237A	**Washetta, Mont**	**25.04**	**101**	P	**P**	**05 23 37.8**	**-0.7**
H06S1	**SOCORRO T**	**25.05**	**147**	P	**P**	**05 23 42.3**	**+3.7**
CHIR	**Chirikof Islan**	**25.05**	**317**	IAMs_20	IAMs_20	05 30 31.6	
	comp=Z,381µm,19.0s						
SCM	**Sheep Creek Mo**	**25.06**	**335**	IAmb	IAmb	05 23 55.0	
	comp=Z,2µm,1.4s						
Z38A	**Mt. Pleasant**	**25.09**	**98**	P	**P**	**05 23 38.4**	**-0.5**
Z38A				IAmb	IAmb	05 23 48.2	
	comp=Z,3µm,1.6s						
Z38A				IAMs_20	IAMs_20	05 34 28.6	
	comp=Z,416µm,20.0s						
KNK	**Knik Glacier**	**25.13**	**333**	P	**P**	**05 23 34.4**	**-4.7**
KNK				IAmb	IAmb	05 23 59.5	
	comp=Z,3µm,1.9s						
W39A	**Magazine**	**25.21**	**93**	P	**P**	**05 23 38.9**	**-1.1**
W39A				IAmb	IAmb	05 23 50.8	
	comp=Z,2µm,1.4s						
W39A				IAMs_20	IAMs_20	05 33 44.7	
	comp=Z,468µm,21.0s						
W39A	**Magazine**	**25.21**	**93**	P	**P**	**05 23 38.5**	**-1.5**
	baz=292						
W39A				S	**S**	**05 28 08.3**	**+2.6**
	baz=292						
L40A	**Anamosa**	**25.35**	**76**	P	**P**	**05 23 39.3**	**-1.9**
L40A				IAmb	IAmb	05 23 48.9	
	comp=Z,1µm,1.0s						
PMR	**Palmer**	**25.49**	**333**	P	**P**	**05 23 42.5**	**+0.3**
PMR				pmax	pmax		
	comp=Z,3µm,1.8s						
PMR	**Palmer**	**25.49**	**333**	P	**P**	**05 23 42.5**	**+0.3**
PMR				IAmb	IAmb	05 24 04.5	
	comp=Z,3µm,1.8s						
U40A	**Yellville**	**25.50**	**89**	P	**P**	**05 23 41.3**	**-1.4**
U40A				IAMs_20	IAMs_20	05 34 02.3	
	comp=Z,359µm,22.0s						
U40A	**Yellville**	**25.50**	**89**	P	**P**	**05 23 41.0**	**-1.7**
	baz=290						
U40A				S	**S**	**05 28 12.9**	**+2.5**
	baz=290						
DOT	**Dot Lake**	**25.53**	**340**	P	**P**	**05 23 42.2**	**-0.5**
GHO	**Glory Hole Cre**	**25.54**	**334**	P	**P**	**05 23 43.3**	**+0.4**
I40A	**Norwalk**	**25.58**	**71**	P	**P**	**05 23 41.3**	**-2.0**
MIAR	**Mount Ida**	**25.62**	**94**	P	**P**	**05 23 42.4**	**-1.3**
MIAR				pmax	pmax		
	comp=Z,2µm,1.4s						
MIAR				MLR	MLR		
	comp=Z,617µm,19.0s						
MIAR	**Mount Ida**	**25.62**	**94**	P	**P**	**05 23 42.4**	**-1.3**
MIAR				IAmb	IAmb	05 23 54.7	
	comp=Z,2µm,1.4s						
MIAR	**Mount Ida**	**25.62**	**94**	P	**P**	**05 23 42.5**	**-1.2**
	baz=294						
MGMO	**Mountain Grove**	**25.69**	**87**	P	**P**	**05 23 42.8**	**-1.6**
MGMO				IAmb	IAmb	05 24 39.0	
	comp=Z,785nm,1.1s						
MGMO				IAMs_20	IAMs_20	05 35 03.1	
	comp=Z,351µm,22.0s						
SCRK	**Sand Creek**	**25.79**	**341**	P	**P**	**05 23 44.8**	**-0.3**
SCRK				IAmb	IAmb	05 24 12.7	
	comp=Z,1µm,1.9s						
G40A	**Rib Lake**	**25.79**	**68**	P	**P**	**05 23 43.6**	**-1.6**
G40A				IAmb	IAmb	05 24 08.8	
	comp=Z,937nm,1.4s						
N41A	**Harden Midland**	**25.85**	**79**	P	**P**	**05 23 43.5**	**-2.3**
N41A				IAmb	IAmb	05 23 53.1	
	comp=Z,1µm,0.9s						
N41A				IAMs_20	IAMs_20	05 34 10.0	
	comp=Z,306µm,22.0s						
JFWS	**Jewell Farm**	**25.95**	**74**	P	**P**	**05 23 44.5**	**-2.1**
JFWS				pmax	pmax		
	comp=Z,2µm,1.1s						
JFWS				MLR	MLR		
	comp=Z,248µm,22.0s						
JFWS	**Jewell Farm**	**25.95**	**74**	P	**P**	**05 23 44.5**	**-2.1**
JFWS				IAmb	IAmb	05 23 54.8	
	comp=Z,2µm,1.1s						
JFWS	**Jewell Farm**	**25.95**	**74**	P	**P**	**05 23 44.6**	**-2.0**
	baz=277						
JFWS				S	**S**	**05 28 19.3**	**+2.0**
	baz=277						
DHY	**Denali Highway**	**26.00**	**337**	IAmb	IAmb	05 24 06.4	
	comp=Z,1µm,1.3s						
NATX	**Nacogdoches**	**26.02**	**100**	IAmb	IAmb	05 23 57.9	
	comp=Z,3µm,1.8s						
NATX	**Nacogdoches**	**26.02**	**100**	P	**P**	**05 23 47.6**	**+0.2**
	baz=299						
NATX				S	**S**	**05 28 23.1**	**+4.6**
	baz=299						
ZAIG	**Zacatecas**	**26.09**	**127**	P	**P**	**05 23 47.8**	**-0.6**
ZAIG				IAMs_20	IAMs_20	05 33 56.5	
	comp=Z,356µm,20.0s						
CCM	**Cathedral Cave**	**26.20**	**85**	P	**P**	**05 23 46.2**	**-2.8**

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CCM                                  pmax     pmax
      comp=Z,2µm,1.8s
CCM                                  MLR      MLR
      comp=Z,237µm,18.0s
CCM   Cathedral Cave      26.20  85  P        P        05 23 46.2 -2.8
CCM                                  IAmb     IAmb     05 23 57.5
      comp=Z,2µm,1.8s
CCM   Cathedral Cave      26.20  85  IAMs_20  IAMs_20  05 34 44.4
      comp=Z,237µm,18.0s
CCM   Cathedral Cave      26.20  85  P        P        05 23 46.7 -2.3
      baz=287
CCM                                  S        S        05 28 20.6 -0.7
      baz=287
X40A  Basin Creek Fa      26.20  93  P        P        05 23 47.2 -1.9
X40A                                 IAMs_20  IAMs_20  05 35 17.0
      comp=Z,457µm,20.0s
X40A  Basin Creek Fa      26.20  93  P        P        05 23 47.6 -1.5
      baz=294
X40A                                 S        S        05 28 22.1 +0.7
      baz=294
FCAR  Ozark Folk Cen      26.22  90  P        P        05 23 48.1 -1.1
FCAR                                 IAmb     IAmb     05 24 00.6
      comp=Z,1µm,1.8s
FCAR                                 IAMs_20  IAMs_20  05 34 34.3
      comp=Z,351µm,21.0s
WHAR  Wooly Hollow        26.31  91  P        P        05 23 49.8 -0.2
WHAR                                 IAMs_20  IAMs_20  05 34 27.8
      comp=Z,416µm,20.0s
WLAR  White Oak Lake      26.32  95  P        P        05 23 49.4 -0.7
W41B  Gary Mavity, V      26.39  91  P        P        05 23 49.9 -0.7
W41B                                 IAmb     IAmb     05 23 59.5
      comp=Z,4µm,1.9s
W41B                                 IAMs_20  IAMs_20  05 34 29.7
      comp=Z,455µm,20.0s
W41B  Gary Mavity, V      26.39  91  P        P        05 23 48.9 -1.7
      baz=292
W41B                                 S        S        05 28 22.8 -1.5
      baz=292
UALR  University of       26.46  92  P        P        05 23 49.9 -1.5
UALR                                 IAMs_20  IAMs_20  05 34 33.9
      comp=Z,374µm,22.0s
L42A  Oliver, Polo        26.50  75  P        P        05 23 50.5 -1.2
COWI  Conover             26.51  66  P        P        05 23 51.1 -0.7
COWI                                 IAmb     IAmb     05 23 59.8
      comp=Z,955nm,1.4s
COWI                                 IAMs_20  IAMs_20  05 34 42.6
      comp=Z,290µm,22.0s
EPYK  Eagle Plains        26.52 350  P        P        05 23 49.5 -2.1
EPYK                                 IAmb     IAmb     05 24 02.9
      comp=Z,3µm,1.9s
EPYK  Eagle Plains        26.52 350  P        P        05 23 51.2 -0.4
      baz=160
EPYK                                 S        S        05 28 32.0 +6.2
      baz=160
SKT   Skwentna            26.59 332  P        P        05 23 50.6 -1.7
FCC   Fort Churchill      26.60  37  P        P        05 23 51.4 -0.9
FCC                                  pmax     pmax
      comp=Z,604nm,1.1s
FCC   Fort Churchill      26.60  37  P        P        05 23 51.4 -0.9
CHGN  Chignik             26.68 317  P        P        05 23 50.2 -2.9
CHGN                                 IAmb     IAmb     05 24 19.7
      comp=Z,1µm,1.5s
RND   Reindeer            26.70 336  P        P        05 23 51.3 -2.0
RND                                  pmax     pmax
      comp=Z,340nm,1.1s
RND   Reindeer            26.70 336  P        P        05 23 51.3 -2.0
Z41A  Richland Creek      26.73  96  P        P        05 23 53.0 -0.8
Z41A                                 IAmb     IAmb     05 24 03.5
      comp=Z,2µm,1.5s
Z41A  Richland Creek      26.73  96  P        P        05 23 53.2 -0.6
      baz=296
Z41A                                 S        S        05 28 33.4 +3.5
      baz=296
SLM   Saint Louis         26.80  83  P        P        05 23 53.2 -1.2
SLM                                  pmax     pmax
      comp=Z,1µm,1.0s
SLM                                  MLR      MLR
      comp=Z,253µm,22.0s
SLM   Saint Louis         26.80  83  P        P        05 23 53.2 -1.2
SLM                                  IAmb     IAmb     05 24 04.2
      comp=Z,1µm,0.9s
I42A  Draeger Farm,       26.80  71  P        P        05 23 53.7 -0.7
I42A                                 IAmb     IAmb     05 24 11.3
      comp=Z,2µm,1.4s
D41A  Chassel             26.89  64  P        P        05 23 54.8 -0.4
LCAR  Lake Charles        26.89  89  P        P        05 23 54.9 -0.4
LCAR                                 IAmb     IAmb     05 24 19.1
      comp=Z,2µm,1.9s
LCAR                                 IAMs_20  IAMs_20  05 35 06.1
      comp=Z,347µm,19.0s
HDA   Harding Lake        26.91 339  P        P        05 23 55.5 +0.4
      baz=141
HDA                                  S        S        05 28 41.3 +9.2
      baz=141
HDA                                  S        S        05 28 41.3 +9.2
      baz=141
MCK   McKinley            26.96 337  P        P        05 23 53.2 -2.4
MCK                                  pmax     pmax
      comp=Z,987nm,1.6s
MCK   McKinley            26.96 337  P        P        05 23 53.1 -2.4
HDIL  Hopedale            27.05  79  P        P        05 23 55.2 -1.4
HDIL                                 IAmb     IAmb     05 24 03.9
      comp=Z,1µm,1.1s
HDIL                                 IAMs_20  IAMs_20  05 34 45.6
      comp=Z,286µm,21.0s
HDIL  Hopedale            27.05  79  P        P        05 23 54.4 -2.2
      baz=282
HDIL                                 S        S        05 28 33.0 -1.7
      baz=282
P43A  Skaggs, Pawnee      27.08  81  P        P        05 23 55.4 -1.5
P43A                                 IAMs_20  IAMs_20  05 35 10.6
      comp=Z,276µm,19.0s
IL31                      27.18 340  P        P        05 23 55.4 -2.1
ILAR  Eielson Array       27.18 340  P        P        05 23 57.8 +0.2
      comp=Z,55nm,1.0s,baz=157,slow=7.6,SNR=56
ILAR                                 LR       LR       05 32 50.1
      comp=Z,46µm,20.6s,baz=154,slow=32
ILAR  Eielson Array       27.18 340  P        P        05 23 55.7 -1.8
ILAR  Eielson Array       27.18 340  P        P        05 23 55.7 -1.8
TRF   Thorofare Moun      27.18 335  P        P        05 23 55.4 -2.3
TRF                                  IAmb     IAmb     05 24 19.4
      comp=Z,2µm,1.8s
PBMO  Poplar Bluff        27.21  87  P        P        05 23 56.9 -1.2
PBMO                                 IAmb     IAmb     05 24 12.6
      comp=Z,1µm,1.6s
PBMO                                 IAMs_20  IAMs_20  05 35 27.2
      comp=Z,280µm,19.0s
F42A  Maple Grove Fa      27.22  67  P        P        05 23 58.0 -0.1
F42A                                 IAmb     IAmb     05 24 14.7
      comp=Z,1µm,1.3s
F42A                                 IAMs_20  IAMs_20  05 34 24.4
      comp=Z,263µm,18.0s
CCAR  Cane Creek          27.24  94  P        P        05 23 57.7 -0.6
WRH   Wood River Hil      27.27 338  P        P        05 23 54.6 -3.8
CCB   Clear Creek Bu      27.33 339  P        P        05 23 57.5 -1.3
K43A  Burlington          27.37  74  P        P        05 23 58.8 -0.7
K43A                                 IAMs_20  IAMs_20  05 35 07.9
      comp=Z,272µm,22.0s
PRP   Porcupine Dome      27.43 342  P        P        05 23 57.7 -2.3
BWN   Browne              27.44 337  P        P        05 23 57.7 -2.2
BWN                                  IAmb     IAmb     05 24 18.6
      comp=Z,2µm,1.5s
HBAR  Harrisburg          27.45  90  P        P        05 23 58.8 -1.4
HBAR                                 IAmb     IAmb     05 24 58.1
      comp=Z,543nm,0.5s
HBAR                                 IAMs_20  IAMs_20  05 35 23.9
      comp=Z,315µm,21.0s
SDPT  Sand Point          27.46 314  P        P        05 23 58.2 -1.9
COLA  College             27.51 339  P        P        05 24 02.1 +1.6
COLA                                 pmax     pmax
      comp=Z,216nm,1.1s
COLA                                 MLR      MLR
      comp=Z,70µm,19.0s
COLA  College             27.51 339  P        P        05 24 02.1 +1.6
TCOL  CIGO, UAF Yank      27.52 339  P        P        05 24 00.7 +0.2
      baz=140
TCOL                                 S        S        05 28 43.8 +2.3
      baz=140
H43A  Windswept, Lux      27.57  70  P        P        05 24 00.9 -0.3
H43A                                 IAmb     IAmb     05 24 17.3
      comp=Z,2µm,1.4s
POKR  Poker Plat Res      27.59 340  P        P        05 24 01.7 +0.5
      baz=141
POKR                                 S        S        05 28 46.0 +3.2
      baz=141
NEA   Nenana              27.63 338  IAmb     IAmb     05 24 20.1
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      comp=Z,826nm,1.3s
X43A  Marvell             27.67  92  P        P        05 24 01.4 -0.8
X43A                                 IAmb     IAmb     05 24 42.8
      comp=Z,1µm,1.2s
X43A                                 IAMs_20  IAMs_20  05 35 21.9
      comp=Z,270µm,20.0s
X43A  Marvell             27.67  92  P        P        05 24 00.3 -2.0
      baz=293
X43A                                 S        S        05 28 51.1 +6.5
      baz=293
LPAR  Lepanto             27.71  89  P        P        05 24 02.0 -0.6
LPAR                                 IAMs_20  IAMs_20  05 36 33.6
      comp=Z,313µm,18.0s
O44A  Mansfield           27.75  79  P        P        05 24 00.8 -2.1
O44A                                 IAMs_20  IAMs_20  05 35 30.3
      comp=Z,241µm,20.0s
PARMO Parma               27.76  87  P        P        05 24 02.7 -0.3
PARMO                                IAmb     IAmb     05 24 13.1
      comp=Z,912nm,1.0s
PARMO                                IAMs_20  IAMs_20  05 35 53.8
      comp=Z,293µm,18.0s
L44A  Lake County Fo      27.76  75  P        P        05 24 02.1 -0.8
L44A  Lake County Fo      27.76  75  P        P        05 24 01.2 -1.8
      baz=280
L44A                                 S        S        05 28 48.4 +2.4
      baz=280
GNAR  Gosnell             27.79  88  P        P        05 24 03.6 +0.3
GNAR                                 IAmb     IAmb     05 24 19.3
      comp=Z,807nm,1.3s
GNAR                                 IAMs_20  IAMs_20  05 35 33.9
      comp=Z,309µm,20.0s
M44A  Midewin, Midew      27.81  76  P        P        05 24 02.9 -0.6
S44A  Carbondale          27.81  84  P        P        05 24 01.9 -1.5
S44A                                 IAmb     IAmb     05 24 18.8
      comp=Z,841nm,1.3s
S44A                                 IAMs_20  IAMs_20  05 35 36.1
      comp=Z,302µm,22.0s
PVMO  Portageville        27.88  87  IAmb     IAmb     05 24 19.8
      comp=Z,2µm,1.3s
PVMO                                 IAMs_20  IAMs_20  05 37 05.1
      comp=Z,384µm,18.0s
PENMO Penman              27.92  87  IAmb     IAmb     05 24 20.2
      comp=Z,1µm,1.2s
PENMO                                IAMs_20  IAMs_20  05 37 07.2
      comp=Z,389µm,19.0s
HENM  Henderson Moun      27.95  87  P        P        05 24 05.0 +0.3
HENM                                 IAmb     IAmb     05 24 19.6
      comp=Z,1µm,1.1s
HENM                                 IAMs_20  IAMs_20  05 35 27.0
      comp=Z,297µm,21.0s
E43A  Lone Tree Farm      27.98  66  P        P        05 24 04.4 -0.5
E43A                                 IAmb     IAmb     05 24 12.9
      comp=Z,3µm,2.0s
E43A                                 IAMs_20  IAMs_20  05 35 37.6
      comp=Z,234µm,19.0s
INK   Inuvik              28.02 353  P        P        05 24 04.8 -0.2
      comp=Z,115nm,1.2s,baz=160,slow=9.9,SNR=80
INK                                  LR       LR       05 35 52.7
      comp=Z,297µm,19.0s,baz=154,slow=38
INK   Inuvik              28.02 353  IAmb     IAmb     05 24 33.8
      comp=Z,1µm,1.6s
INK                                  IAMs_20  IAMs_20  05 35 34.7
      comp=Z,410µm,22.0s
143A  Socs Landing,       28.03  96  P        P        05 24 05.2 -0.2
143A                                 IAmb     IAmb     05 24 15.5
      comp=Z,2µm,1.9s
HDBT  Hernando Brdge      28.06  90  IAMs_20  IAMs_20  05 35 42.0
      comp=Z,235µm,20.0s
LNXT  Lenox               28.15  88  P        P        05 24 05.5 -0.9
LNXT                                 IAmb     IAmb     05 24 22.7
      comp=Z,1µm,1.5s
LNXT                                 IAMs_20  IAMs_20  05 35 45.2
      comp=Z,311µm,20.0s
MET   Memphis--Engin      28.16  90  IAMs_20  IAMs_20  05 35 53.7
      comp=Z,308µm,20.0s
HICK  Hickman             28.20  87  P        P        05 24 06.1 -0.8
HICK                                 IAmb     IAmb     05 24 17.3
      comp=Z,1µm,1.2s
HICK                                 IAMs_20  IAMs_20  05 36 07.4
      comp=Z,345µm,19.0s
FYU   Fort Yukon          28.23 343  IAmb     IAmb     05 24 42.6
      comp=Z,2µm,1.7s
GLAT  Glass               28.24  87  IAMs_20  IAMs_20  05 37 16.7
      comp=Z,337µm,19.0s
HALT  Halls               28.33  88  IAmb     IAmb     05 24 23.3
      comp=Z,2µm,1.7s
HALT                                 IAMs_20  IAMs_20  05 35 51.0
      comp=Z,297µm,20.0s
OLIL  Olney               28.39  82  P        P        05 24 08.0 -0.6
OLIL                                 IAmb     IAmb     05 24 25.1
      comp=Z,2µm,1.5s
OLIL                                 IAMs_20  IAMs_20  05 35 52.1
      comp=Z,249µm,20.0s
T45A  Paducah             28.48  86  P        P        05 24 08.9 -0.5
T45A                                 IAmb     IAmb     05 24 26.1
      comp=Z,2µm,1.8s
T45A                                 IAMs_20  IAMs_20  05 36 15.9
      comp=Z,236µm,20.0s
J45A  Montague            28.68  72  P        P        05 24 10.5 -0.7
J45A  Montague            28.68  72  P        P        05 24 10.1 -1.1
      baz=278
J45A                                 S        S        05 29 03.8 +3.5
      baz=278
C36M  Paulatuk            28.69   1  P        P        05 24 09.5 -1.5
C36M                                 IAmb     IAmb     05 24 29.1
      comp=Z,1µm,1.9s
C36M  Paulatuk            28.69   1  P        P        05 24 09.3 -1.6
      baz=182
C36M                                 S        S        05 29 00.5 +0.6
      baz=182
I45A  Fountain            28.71  70  P        P        05 24 10.8 -0.6
I45A                                 IAMs_20  IAMs_20  05 35 59.1
      comp=Z,278µm,20.0s
I45A  Fountain            28.71  70  P        P        05 24 10.6 -0.8
      baz=277
I45A                                 S        S        05 29 00.7 -0.1
      baz=277
E44A  Grand Marais A      28.72  65  P        P        05 24 11.5 +0.1
E44A                                 IAMs_20  IAMs_20  05 36 10.9
      comp=Z,362µm,19.0s
E44A  Grand Marais A      28.72  65  P        P        05 24 11.7 +0.2
      baz=273
E44A                                 S        S        05 29 02.4 +1.5
      baz=273
W45A  Hickory Valley      28.72  89  P        P        05 24 10.8 -0.8
W45A                                 IAmb     IAmb     05 24 28.2
      comp=Z,636nm,0.9s
W45A                                 IAMs_20  IAMs_20  05 36 11.4
      comp=Z,305µm,20.0s
SFIN  Lafayette           28.72  78  P        P        05 24 10.6 -0.9
SFIN  Lafayette           28.72  78  P        P        05 24 09.5 -2.1
      baz=284
SFIN                                 S        S        05 28 58.8 -2.3
      baz=284
H45A  Beulah              28.78  69  P        P        05 24 11.8 -0.2
      baz=276
H45A                                 S        S        05 29 02.2 +0.4
      baz=276
OXF   Oxford              28.80  91  P        P        05 24 11.5 -0.8
OXF                                  pmax     pmax
      comp=Z,1µm,1.1s
OXF                                  MLR      MLR
      comp=Z,217µm,18.0s
OXF   Oxford              28.80  91  P        P        05 24 11.5 -0.8
OXF                                  IAmb     IAmb     05 25 04.3
      comp=Z,1µm,1.1s
OXF                                  IAMs_20  IAMs_20  05 37 17.5
      comp=Z,217µm,18.0s
OXF   Oxford              28.80  91  P        P        05 24 11.2 -1.0
      baz=293
OXF                                  S        S        05 29 02.9 +0.6
      baz=293
P46A  Rosedale            28.82  80  P        P        05 24 10.7 -1.8
P46A                                 IAMs_20  IAMs_20  05 36 04.6
      comp=Z,240µm,21.0s
VBMS  Vicksburg           28.92  96  P        P        05 24 13.6 +0.2
      baz=297
VBMS                                 S        S        05 29 08.4 +4.1
      baz=297
USIN  University of       28.93  83  IAmb     IAmb     05 24 21.8
      comp=Z,2µm,1.4s
L46A  Eue Claire          28.98  75  P        P        05 24 13.4 -0.4
L46A  Eue Claire          28.98  75  P        P        05 24 12.6 -1.2
      baz=281
L46A                                 S        S        05 29 02.8 -2.2
      baz=281
G45A  Suttons Bay         29.01  68  P        P        05 24 13.8 -0.3
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G45A                                 IAMs_20  IAMs_20  05 36 17.9
      comp=Z,211µm,19.0s
G45A  Suttons Bay         29.01  68  P        P        05 24 13.8 -0.3
      baz=276
G45A                                 S        S        05 29 05.9 +0.3
      baz=276
F45A  CMU Biological      29.05  67  P        P        05 24 14.2 -0.3
      baz=275
F45A                                 S        S        05 29 07.8 +1.7
      baz=275
344A  Westbrook Farm      29.11  98  IAMs_20  IAMs_20  05 36 22.2
      comp=Z,397µm,21.0s
J46A  Howard City         29.23  72  P        P        05 24 15.1 -0.9
      baz=279
J46A                                 S        S        05 29 08.2 -0.8
      baz=279
K46A  Dorr                29.23  73  P        P        05 24 14.8 -1.3
      baz=280
K46A                                 S        S        05 29 07.5 -1.5
      baz=280
I46A  Reed City           29.29  70  P        P        05 24 15.8 -0.7
      baz=278
I46A                                 S        S        05 29 10.2 +0.3
      baz=278
H46A  Fife Lake           29.39  69  P        P        05 24 17.4  0.0
      baz=277
H46A                                 S        S        05 29 13.0 +1.6
      baz=277
WVT   Waverly             29.40  87  P        P        05 24 16.4 -1.2
WVT                                  pmax     pmax
      comp=Z,2µm,1.9s
WVT                                  MLR      MLR
      comp=Z,348µm,18.0s
WVT   Waverly             29.40  87  P        P        05 24 16.4 -1.2
WVT                                  IAmb     IAmb     05 24 33.6
      comp=Z,2µm,1.9s
WVT   Waverly             29.40  87  IAMs_20  IAMs_20  05 36 52.2
      comp=Z,348µm,18.0s
WVT   Waverly             29.40  87  P        P        05 24 15.8 -1.8
      baz=291
WVT                                  S        S        05 29 11.9 +0.2
      baz=291
BLO   Bloomington         29.45  80  P        P        05 24 16.0 -2.1
BLO                                  pmax     pmax
      comp=Z,895nm,0.9s
BLO                                  MLR      MLR
      comp=Z,302µm,19.0s
BLO   Bloomington         29.45  80  P        P        05 24 16.0 -2.1
BLO                                  IAmb     IAmb     05 24 27.9
      comp=Z,895nm,0.8s
BLO                                  IAMs_20  IAMs_20  05 36 34.2
      comp=Z,302µm,19.0s
G46A  Petoskey            29.54  68  P        P        05 24 18.5 -0.3
      baz=276
G46A                                 S        S        05 29 15.2 +1.3
      baz=276
M47A  Cromwell            29.60  76  P        P        05 24 18.3 -1.1
      baz=282
M47A                                 S        S        05 29 19.0 +4.1
      baz=282
PLAL  Pickwick Lake       29.63  89  P        P        05 24 18.2 -1.5
PLAL                                 IAmb     IAmb     05 24 28.4
      comp=Z,2µm,1.6s
PLAL                                 IAMs_20  IAMs_20  05 36 40.4
      comp=Z,324µm,20.0s
N47A  Urbana              29.65  77  P        P        05 24 17.5 -2.3
N47A                                 IAmb     IAmb     05 24 26.9
      comp=Z,578nm,1.0s
N47A                                 IAMs_20  IAMs_20  05 37 43.3
      comp=Z,198µm,18.0s
N47A  Urbana              29.65  77  P        P        05 24 18.1 -1.7
      baz=283
N47A                                 S        S        05 29 13.3 -2.3
      baz=283
T47A  Sharon Grove        29.66  85  IAmb     IAmb     05 24 35.9
      comp=Z,664nm,1.2s
T47A                                 IAMs_20  IAMs_20  05 36 41.0
      comp=Z,251µm,22.0s
GLMI  Grayling            29.77  68  IAMs_20  IAMs_20  05 36 41.0
      comp=Z,219µm,20.0s
GLMI  Grayling            29.77  68  P        P        05 24 20.6 -0.2
      baz=277
GLMI                                 S        S        05 29 18.8 +1.3
      baz=277
L47A  Sherwood            29.78  74  P        P        05 24 19.6 -1.4
      baz=281
L47A                                 S        S        05 29 15.9 -1.9
      baz=281
K47A  Vermontville        29.80  73  P        P        05 24 19.8 -1.3
      baz=280
K47A                                 S        S        05 29 19.4 +1.4
      baz=280
J47A  Sunmer              29.84  72  P        P        05 24 21.3 -0.1
J47A  Sunmer              29.84  72  P        P        05 24 20.6 -0.9
      baz=279
J47A                                 S        S        05 29 20.8 +2.3
      baz=279
E46A  Sault Ste Mari      29.84  65  IAmb     IAmb     05 24 37.8
      comp=Z,968nm,1.3s
E46A                                 IAMs_20  IAMs_20  05 36 54.8
      comp=Z,254µm,18.0s
WCI   Wyandotte Cave      29.89  82  P        P        05 24 20.4 -1.5
WCI                                  pmax     pmax
      comp=Z,2µm,1.6s
WCI                                  MLR      MLR
      comp=Z,250µm,20.0s
WCI   Wyandotte Cave      29.89  82  P        P        05 24 20.4 -1.5
WCI   Wyandotte Cave      29.89  82  IAMs_20  IAMs_20  05 37 42.9
      comp=Z,250µm,20.0s
WCI   Wyandotte Cave      29.89  82  P        P        05 24 20.0 -1.9
      baz=287
WCI                                  S        S        05 29 18.0 -1.4
      baz=287
I47A  Gladwin             29.95  70  P        P        05 24 21.0 -1.4
I47A  Gladwin             29.95  70  P        P        05 24 22.0 -0.4
      baz=278
I47A                                 S        S        05 29 21.1 +0.9
      baz=278
D46A  Sault St. Mari      30.00  64  P        P        05 24 22.8  0.0
      baz=274
D46A                                 S        S        05 29 21.7 +0.7
      baz=274
IMAR  Indian Mountai      30.01 337  P        P        05 24 21.4 -1.4
H47A  Mio                 30.09  69  P        P        05 24 23.8 +0.1
      baz=277
H47A                                 S        S        05 29 23.5 +1.1
      baz=277
346A  Big Creek Wild      30.10  97  IAMs_20  IAMs_20  05 38 07.3
      comp=Z,235µm,21.0s
Q48A  North Vernon        30.11  80  P        P        05 24 22.0 -1.8
      baz=286
Q48A                                 S        S        05 29 20.4 -2.4
      baz=286
N48A  Decatur             30.15  76  P        P        05 24 22.1 -2.1
      baz=283
N48A                                 S        S        05 29 21.4 -2.1
      baz=283
AKUT  Akutan              30.16 310  P        P        05 24 22.4 -1.7
AKUT                                 IAmb     IAmb     05 24 43.7
      comp=Z,1µm,2.0s
O48A  Farmland            30.19  78  P        P        05 24 22.2 -2.4
      baz=284
O48A                                 S        S        05 29 21.4 -2.8
      baz=284
P48A  Milroy              30.19  79  P        P        05 24 23.7 -0.9
P48A  Milroy              30.19  79  P        P        05 24 22.3 -2.3
      baz=286
P48A                                 S        S        05 29 22.3 -1.9
      baz=286
M48A  Edgerton            30.24  75  IAmb     IAmb     05 24 40.4
      comp=Z,1µm,1.3s
M48A                                 IAMs_20  IAMs_20  05 36 46.8
      comp=Z,231µm,21.0s
M48A  Edgerton            30.24  75  P        P        05 24 22.8 -2.2
      baz=282
M48A                                 S        S        05 29 23.2 -1.7
      baz=282
G47A  Hillman             30.27  68  P        P        05 24 25.1 -0.1
      baz=277
G47A                                 S        S        05 29 26.7 +1.5
      baz=277
V48A  Smith Brothers      30.30  87  P        P        05 24 24.5 -1.1
V48A                                 IAMs_20  IAMs_20  05 37 00.1
      comp=Z,293µm,22.0s
L48A  N Adams             30.35  74  P        P        05 24 24.8 -1.2
      baz=282
L48A                                 S        S        05 29 25.0 -1.7
      baz=282
```

K48A	**Perry**	**30.42**	**72**	P	**P**	**05 24 25.5**	**-1.0**
	baz=280						
K48A				S	**S**	**05 29 26.4**	**-1.3**
	baz=280						
I48A	**Sherman Twp**	**30.50**	**70**	P	**P**	**05 24 27.0**	**-0.3**
	baz=278						
I48A				S	**S**	**05 29 30.5**	**+1.7**
	baz=278						
UNV	**Unalaska Valle**	**30.55**	**310**	P	**P**	**05 24 27.4**	**-0.1**
UNV				IAmb	IAmb	05 24 34.7	
	comp=Z,551nm,1.0s						
CLTN	**Cedars of Leba**	**30.55**	**86**	P	**P**	**05 24 28.3**	**+0.5**
CLTN				IAmb	IAmb	05 24 44.1	
	comp=Z,1µm,1.6s						
CLTN				IAMs_20	IAMs_20	05 37 19.6	
	comp=Z,272µm,18.0s						
E47A	**Iron Bridge**	**30.55**	**65**	P	**P**	**05 24 27.3**	**-0.4**
	baz=275						
E47A				S	**S**	**05 29 30.3**	**+0.8**
	baz=275						
J48A	**Bridge Port**	**30.58**	**71**	P	**P**	**05 24 27.8**	**-0.1**
J48A				IAMs_20	IAMs_20	05 37 06.5	
	comp=Z,222µm,21.0s						
J48A	**Bridge Port**	**30.58**	**71**	P	**P**	**05 24 27.6**	**-0.3**
	baz=280						
J48A				S	**S**	**05 29 30.7**	**+0.6**
	baz=280						
X48A	**Hartselle**	**30.61**	**89**	P	**P**	**05 24 27.5**	**-0.9**
X48A				IAMs_20	IAMs_20	05 37 18.6	
	comp=Z,292µm,19.0s						
D47A	**Chapleau**	**30.62**	**64**	P	**P**	**05 24 27.9**	**-0.5**
	baz=274						
D47A				S	**S**	**05 29 31.2**	**+0.4**
	baz=274						
H48A	**Harrisville**	**30.70**	**69**	P	**P**	**05 24 29.1**	**0.0**
H48A	**Harrisville**	**30.70**	**69**	P	**P**	**05 24 29.0**	**0.0**
	baz=278						
H48A				S	**S**	**05 29 34.0**	**+2.0**
	baz=278						
P49A	**Miami Univ. Ec**	**30.70**	**79**	P	**P**	**05 24 27.3**	**-1.8**
	baz=286						
P49A				S	**S**	**05 29 29.2**	**-3.0**
	baz=286						
R49A	**Shelbyville**	**30.71**	**81**	P	**P**	**05 24 28.7**	**-0.6**
R49A				IAmb	IAmb	05 24 36.8	
	comp=Z,2µm,1.9s						
R49A				IAMs_20	IAMs_20	05 37 15.7	
	comp=Z,246µm,22.0s						
R49A	**Shelbyville**	**30.71**	**81**	P	**P**	**05 24 27.0**	**-2.2**
	baz=288						
R49A				S	**S**	**05 29 30.9**	**-1.4**
	baz=288						
Q49A	**Aurora**	**30.71**	**80**	P	**P**	**05 24 27.1**	**-2.1**
	baz=286						
Q49A				S	**S**	**05 29 30.7**	**-1.7**
	baz=286						
N49A	**Columbus Grove**	**30.76**	**76**	P	**P**	**05 24 28.4**	**-1.2**
N49A				IAMs_20	IAMs_20	05 38 00.6	
	comp=Z,264µm,19.0s						
N49A	**Columbus Grove**	**30.76**	**76**	P	**P**	**05 24 27.7**	**-1.9**
	baz=284						
N49A				S	**S**	**05 29 30.7**	**-2.3**
	baz=284						
S49A	**Springfield**	**30.78**	**82**	P	**P**	**05 24 28.0**	**-1.8**
	baz=288						
S49A				S	**S**	**05 29 31.7**	**-1.6**
	baz=288						
M49A	**Liberty Center**	**30.79**	**75**	P	**P**	**05 24 28.3**	**-1.5**
	baz=283						
M49A				S	**S**	**05 29 32.1**	**-1.3**
	baz=283						
L49A	**Milan**	**30.81**	**74**	P	**P**	**05 24 29.2**	**-0.8**
	baz=282						
L49A				S	**S**	**05 29 32.3**	**-1.4**
	baz=282						
T49A	**Edmonton**	**30.81**	**84**	IAMs_20	IAMs_20	05 37 18.4	
	comp=Z,262µm,21.0s						
T49A	**Edmonton**	**30.81**	**84**	P	**P**	**05 24 28.8**	**-1.3**
	baz=289						
T49A				S	**S**	**05 29 33.8**	**-0.1**
	baz=289						
O49A	**Covington**	**30.82**	**77**	P	**P**	**05 24 28.8**	**-1.3**
O49A	**Covington**	**30.82**	**77**	P	**P**	**05 24 28.4**	**-1.7**
	baz=285						
O49A				S	**S**	**05 29 31.6**	**-2.4**
	baz=285						
U49A	**Red Boiling Sp**	**30.82**	**85**	P	**P**	**05 24 30.3**	**+0.1**
U49A				IAmb	IAmb	05 24 47.6	
	comp=Z,2µm,1.7s						
U49A				IAMs_20	IAMs_20	05 38 04.8	
	comp=Z,262µm,22.0s						
AAM	**Ann Arbor**	**30.85**	**73**	IAmb	IAmb	05 24 38.1	
	comp=Z,2µm,1.9s						
AAM				IAMs_20	IAMs_20	05 37 14.8	
	comp=Z,257µm,20.0s						
AAM	**Ann Arbor**	**30.85**	**73**	P	**P**	**05 24 29.3**	**-1.0**
	baz=282						
AAM				S	**S**	**05 29 36.9**	**+2.5**
	baz=282						
TOLK	**Toolik Lake Re**	**30.90**	**343**	P	**P**	**05 24 30.3**	**-0.3**
TOLK				IAmb	IAmb	05 24 38.1	
	comp=Z,555nm,1.3s						
TOLK	**Toolik Lake Re**	**30.90**	**343**	P	**P**	**05 24 31.7**	**+1.1**
	baz=142						
TOLK				S	**S**	**05 29 39.5**	**+4.8**
	baz=142						
K49A	**Clarkson**	**30.90**	**72**	P	**P**	**05 24 30.2**	**-0.7**
	baz=281						
K49A				S	**S**	**05 29 34.3**	**-0.9**
	baz=281						
J49A	**Marlette**	**31.03**	**71**	P	**P**	**05 24 31.5**	**-0.5**
	baz=280						
J49A				S	**S**	**05 29 38.1**	**+0.9**
	baz=280						
F48A	**Evansville**	**31.06**	**66**	P	**P**	**05 24 31.8**	**-0.4**
	baz=276						
F48A				S	**S**	**05 29 38.9**	**+1.3**
	baz=276						
I49A	**Point Hope**	**31.16**	**70**	IAMs_20	IAMs_20	05 37 24.9	
	comp=Z,220µm,18.0s						
I49A	**Point Hope**	**31.16**	**70**	P	**P**	**05 24 32.6**	**-0.5**
	baz=279						
I49A				S	**S**	**05 29 39.7**	**+0.4**
	baz=279						
SWET	**Sewanee**	**31.17**	**87**	IAmb	IAmb	05 24 40.9	
	comp=Z,993nm,1.7s						
SWET				IAMs_20	IAMs_20	05 37 15.1	
	comp=Z,384µm,22.0s						
LRAL	**Lakeview Retre**	**31.23**	**92**	P	**P**	**05 24 32.4**	**-1.5**
LRAL				IAmb	IAmb	05 24 53.7	
	comp=Z,398nm,1.0s						
LRAL	**Lakeview Retre**	**31.23**	**92**	P	**P**	**05 24 32.3**	**-1.5**
	baz=296						
LRAL				S	**S**	**05 29 40.7**	**+0.1**
	baz=296						
E48A	**Lockeyer**	**31.31**	**65**	P	**P**	**05 24 34.2**	**-0.2**
	baz=275						
E48A				S	**S**	**05 29 42.2**	**+0.7**
	baz=275						
Y49A	**Blount Mountai**	**31.33**	**90**	IAMs_20	IAMs_20	05 38 35.7	
	comp=Z,288µm,18.0s						
R50A	**Paris**	**31.35**	**81**	P	**P**	**05 24 33.8**	**-1.0**
R50A				IAmb	IAmb	05 24 50.5	
	comp=Z,799nm,1.5s						
R50A				IAMs_20	IAMs_20	05 37 44.5	
	comp=Z,277µm,18.0s						
R50A	**Paris**	**31.35**	**81**	P	**P**	**05 24 33.9**	**-0.9**
	baz=288						
R50A				S	**S**	**05 29 39.8**	**-2.5**
	baz=288						
O50A	**Cable**	**31.36**	**77**	P	**P**	**05 24 33.5**	**-1.4**
	baz=285						
O50A				S	**S**	**05 29 38.9**	**-3.6**
	baz=285						
T50A	**Nancy**	**31.36**	**84**	P	**P**	**05 24 33.0**	**-1.9**
	baz=290						
T50A				S	**S**	**05 29 41.9**	**-0.6**
	baz=290						
P50A	**Jamestown**	**31.37**	**78**	P	**P**	**05 24 33.6**	**-1.4**
	baz=286						
P50A				S	**S**	**05 29 39.8**	**-2.8**
	baz=286						
Q50A	**Georgetown**	**31.45**	**80**	P	**P**	**05 24 33.5**	**-2.2**
	baz=287						
Q50A				S	**S**	**05 29 42.5**	**-1.3**
	baz=287						
F49A	**Sandfield**	**31.47**	**66**	P	**P**	**05 24 35.7**	**-0.1**
	baz=277						
F49A				S	**S**	**05 29 45.1**	**+1.1**
	baz=277						
S50A	**Richmond**	**31.48**	**82**	P	**P**	**05 24 34.2**	**-1.8**
	baz=289						
S50A				S	**S**	**05 29 43.5**	**-0.8**
	baz=289						
M50A	**Fremont**	**31.48**	**75**	P	**P**	**05 24 35.3**	**-0.7**
M50A				IAmb	IAmb	05 24 45.4	
	comp=Z,450nm,0.9s						
M50A	**Fremont**	**31.48**	**75**	P	**P**	**05 24 34.9**	**-1.1**
	baz=283						
M50A				S	**S**	**05 29 42.6**	**-1.8**
	baz=283						
D48A	**Paudash Townsh**	**31.50**	**64**	P	**P**	**05 24 35.7**	**-0.4**
	baz=274						
D48A				S	**S**	**05 29 44.6**	**0.0**
	baz=274						
K50A	**Casco**	**31.51**	**72**	IAMs_20	IAMs_20	05 37 11.2	
	comp=Z,261µm,21.0s						
K50A	**Casco**	**31.51**	**72**	P	**P**	**05 24 35.4**	**-0.7**
	baz=281						
K50A				S	**S**	**05 29 44.5**	**-0.1**
	baz=281						
L50A	**Kingsville**	**31.52**	**73**	P	**P**	**05 24 35.2**	**-1.0**
	baz=282						
L50A				S	**S**	**05 29 43.4**	**-1.5**
	baz=282						
N50A	**Nevada**	**31.55**	**76**	P	**P**	**05 24 35.2**	**-1.4**
	baz=284						
N50A				S	**S**	**05 29 43.7**	**-1.8**
	baz=284						
FPAL	**Fort Paine**	**31.67**	**88**	IAmb	IAmb	05 24 45.4	
	comp=Z,759nm,1.4s						
FPAL				IAMs_20	IAMs_20	05 37 52.5	
	comp=Z,323µm,21.0s						
D49A	**Beulah Townshi**	**31.80**	**63**	P	**P**	**05 24 38.3**	**-0.4**
	baz=275						
D49A				S	**S**	**05 29 49.2**	**0.0**
	baz=275						
ACSO	**Alum Creek Sta**	**31.81**	**77**	P	**P**	**05 24 37.9**	**-1.0**
ACSO				IAmb	IAmb	05 24 46.4	
	comp=Z,673nm,0.9s						
ACSO				IAMs_20	IAMs_20	05 38 42.5	
	comp=Z,226µm,19.0s						
ACSO	**Alum Creek Sta**	**31.81**	**77**	P	**P**	**05 24 37.8**	**-1.1**
	baz=285						
ACSO				S	**S**	**05 29 47.5**	**-2.0**
	baz=285						
Q51A	**Peebles**	**31.87**	**79**	P	**P**	**05 24 38.6**	**-0.8**
Q51A				IAmb	IAmb	05 24 47.9	
	comp=Z,853nm,1.3s						
Q51A	**Peebles**	**31.87**	**79**	P	**P**	**05 24 37.9**	**-1.5**
	baz=287						
Q51A				S	**S**	**05 29 49.4**	**-1.0**
	baz=287						
R51A	**Hillsboro**	**31.90**	**81**	P	**P**	**05 24 38.3**	**-1.4**
	baz=288						
R51A				S	**S**	**05 29 50.4**	**-0.5**
	baz=288						
P51A	**Williamsport**	**31.95**	**78**	P	**P**	**05 24 38.9**	**-1.2**
P51A	**Williamsport**	**31.95**	**78**	P	**P**	**05 24 38.4**	**-1.8**
	baz=286						
P51A				S	**S**	**05 29 50.6**	**-1.1**
	baz=286						
Z50A	**Ashland**	**31.95**	**91**	IAmb	IAmb	05 24 48.1	
	comp=Z,1µm,1.8s						
Z50A				IAMs_20	IAMs_20	05 39 04.2	
	comp=Z,240µm,19.0s						
Z50A	**Ashland**	**31.95**	**91**	P	**P**	**05 24 39.5**	**-0.8**
	baz=295						
Z50A				S	**S**	**05 29 52.8**	**+0.9**
	baz=295						
BRAL	**Brewton**	**32.02**	**95**	P	**P**	**05 24 40.2**	**-0.6**
BRAL	**Brewton**	**32.02**	**95**	P	**P**	**05 24 41.2**	**+0.4**
	baz=298						
BRAL				S	**S**	**05 29 56.7**	**+3.8**
	baz=298						
T51A	**Gray**	**32.05**	**83**	P	**P**	**05 24 39.2**	**-1.9**
	baz=290						
T51A				S	**S**	**05 29 52.8**	**-0.6**
	baz=290						
N51A	**Ashland**	**32.09**	**75**	P	**P**	**05 24 40.3**	**-1.0**
N51A				IAMs_20	IAMs_20	05 37 54.8	
	comp=Z,269µm,22.0s						
N51A	**Ashland**	**32.09**	**75**	P	**P**	**05 24 39.9**	**-1.5**
	baz=284						
N51A				S	**S**	**05 29 51.2**	**-2.6**
	baz=284						
S51A	**Beattyville**	**32.10**	**82**	IAmb	IAmb	05 24 49.0	
	comp=Z,582nm,1.2s						
S51A				IAMs_20	IAMs_20	05 38 08.4	
	comp=Z,296µm,18.0s						
S51A	**Beattyville**	**32.10**	**82**	P	**P**	**05 24 40.3**	**-1.2**
	baz=289,SNR=6.3						
S51A				S	**S**	**05 29 52.8**	**-1.3**
	baz=289						
O51A	**Pataskala**	**32.11**	**77**	P	**P**	**05 24 40.1**	**-1.5**
	baz=285						
O51A				S	**S**	**05 29 51.7**	**-2.5**
	baz=285						
M51A	**Elyria**	**32.13**	**75**	P	**P**	**05 24 40.2**	**-1.5**
	baz=284						
M51A				S	**S**	**05 29 52.1**	**-2.3**
	baz=284						
CPCT	**Cooper Cave**	**32.15**	**86**	IAmb	IAmb	05 24 51.0	
	comp=Z,1µm,1.3s						
CPCT				IAMs_20	IAMs_20	05 39 08.1	
	comp=Z,306µm,19.0s						
V51A	**Loudon**	**32.15**	**85**	IAMs_20	IAMs_20	05 39 13.1	
	comp=Z,220µm,20.0s						
V51A	**Loudon**	**32.15**	**85**	P	**P**	**05 24 41.2**	**-0.7**
	baz=292						
V51A				S	**S**	**05 29 55.9**	**+1.0**
	baz=292						
X51A	**Calhoun**	**32.23**	**88**	IAMs_20	IAMs_20	05 38 22.3	
	comp=Z,295µm,22.0s						
X51A	**Calhoun**	**32.23**	**88**	P	**P**	**05 24 42.0**	**-0.7**
	baz=293						
X51A				S	**S**	**05 29 56.7**	**+0.6**
	baz=293						
250A	**Grady**	**32.25**	**93**	P	**P**	**05 24 42.2**	**-0.6**
K51A	**Iona Station**	**32.32**	**72**	P	**P**	**05 24 42.6**	**-0.8**
	baz=282						
K51A				S	**S**	**05 29 57.6**	**+0.2**
	baz=282						
I51A	**Listowel**	**32.47**	**70**	P	**P**	**05 24 45.2**	**+0.6**
	baz=280						
I51A				S	**S**	**05 30 01.3**	**+1.6**
	baz=280						
S52A	**Salyersville**	**32.47**	**81**	P	**P**	**05 24 43.2**	**-1.6**
	baz=289						
S52A				S	**S**	**05 29 59.9**	**0.0**
	baz=289						
TZTN	**Tazewell**	**32.50**	**84**	P	**P**	**05 24 44.4**	**-0.6**
TZTN				IAmb	IAmb	05 24 53.9	
	comp=Z,1µm,1.4s						
TZTN	**Tazewell**	**32.50**	**84**	P	**P**	**05 24 42.7**	**-2.2**
	baz=290						
TZTN				S	**S**	**05 29 59.8**	**-0.5**
	baz=290						
R52A	**Catlettsburg**	**32.59**	**80**	P	**P**	**05 24 43.7**	**-2.1**
	baz=288						
R52A				S	**S**	**05 30 01.1**	**-0.6**
	baz=288						
P52A	**Corning**	**32.60**	**78**	P	**P**	**05 24 43.1**	**-2.7**
	baz=286						
P52A				S	**S**	**05 29 59.4**	**-2.4**
	baz=286						
N52A	**McGinn's Farm,**	**32.62**	**75**	P	**P**	**05 24 43.1**	**-2.8**
	baz=285						
N52A				S	**S**	**05 29 58.7**	**-3.4**
	baz=285						
TKL	**Tuckaleechee C**	**32.64**	**85**	P	**P**	**05 24 45.0**	**-1.3**
	comp=Z,288nm,1.2s,baz=272,slow=3.4,SNR=88						
TKL	**Tuckaleechee C**	**32.64**	**85**	P	**P**	**05 24 45.0**	**-1.3**
TKL	**Tuckaleechee C**	**32.64**	**85**	P	**P**	**05 24 45.3**	**-0.9**
TKL				IAmb	IAmb	05 24 54.9	
	comp=Z,2µm,1.4s						
TKL				IAMs_20	IAMs_20	05 39 28.0	
	comp=Z,228µm,19.0s						
M52A	**Chesterland**	**32.69**	**74**	P	**P**	**05 24 44.7**	**-1.8**
M52A				IAMs_20	IAMs_20	05 38 11.5	
	comp=Z,246µm,22.0s						
M52A	**Chesterland**	**32.69**	**74**	P	**P**	**05 24 44.8**	**-1.8**
	baz=284						
M52A				S	**S**	**05 30 01.4**	**-1.7**
	baz=284						
O52A	**Adamsville**	**32.69**	**77**	P	**P**	**05 24 45.4**	**-1.2**
O52A				IAmb	IAmb	05 25 01.6	
	comp=Z,618nm,1.1s						
O52A				IAMs_20	IAMs_20	05 39 10.7	
	comp=Z,273µm,19.0s						
O52A	**Adamsville**	**32.69**	**77**	P	**P**	**05 24 44.3**	**-2.2**
	baz=286						
O52A				S	**S**	**05 30 00.3**	**-2.9**
	baz=286						
Q52A	**Bidwell**	**32.69**	**79**	P	**P**	**05 24 44.8**	**-1.8**
	baz=287						
Q52A				S	**S**	**05 30 02.1**	**-1.1**
	baz=287						
T52A	**Hallie**	**32.73**	**82**	P	**P**	**05 24 46.6**	**-0.4**
T52A				IAMs_20	IAMs_20	05 38 30.2	
	comp=Z,374µm,22.0s						
T52A	**Hallie**	**32.73**	**82**	P	**P**	**05 24 45.4**	**-1.6**
	baz=290						
T52A				S	**S**	**05 30 03.8**	**-0.1**
	baz=290						
W52A	**Murphy**	**32.74**	**86**	IAmb	IAmb	05 24 56.1	
	comp=Z,1µm,1.2s						
W52A				IAMs_20	IAMs_20	05 39 33.6	
	comp=Z,262µm,20.0s						
W52A	**Murphy**	**32.74**	**86**	P	**P**	**05 24 45.6**	**-1.4**
	baz=293						
W52A				S	**S**	**05 30 04.7**	**+0.6**
	baz=293						
D50A	**G1974 Best Tow**	**32.84**	**63**	P	**P**	**05 24 45.5**	**-2.3**
	baz=276						
D50A				S	**S**	**05 30 05.3**	**-0.1**
	baz=276						
K52A	**Tillsonburg**	**32.88**	**71**	P	**P**	**05 24 47.9**	**-0.4**
	baz=282						
K52A				S	**S**	**05 30 05.7**	**-0.4**
	baz=282						
F51A	**Arnstein**	**32.93**	**66**	P	**P**	**05 24 48.3**	**-0.3**
	baz=278						
F51A				S	**S**	**05 30 07.5**	**+0.8**
	baz=278						
J52A	**Paris**	**32.96**	**71**	P	**P**	**05 24 48.8**	**-0.2**
	baz=281						
J52A				S	**S**	**05 30 07.6**	**+0.3**
	baz=281						
I52A	**Shelburne**	**33.02**	**69**	P	**P**	**05 24 49.8**	**+0.3**
	baz=280						
I52A				S	**S**	**05 30 09.5**	**+1.1**
	baz=280						
T53A	**Wise**	**33.11**	**82**	P	**P**	**05 24 48.6**	**-1.8**
	baz=290,SNR=9.5						
T53A				S	**S**	**05 30 09.3**	**-0.6**
	baz=290						
O53A	**New Philadelph**	**33.11**	**76**	P	**P**	**05 24 49.0**	**-1.3**
	baz=286						
O53A				S	**S**	**05 30 07.3**	**-2.5**
	baz=286						
R53A	**Hurricane**	**33.11**	**80**	P	**P**	**05 24 48.7**	**-1.6**
R53A				IAMs_20	IAMs_20	05 38 48.2	
	comp=Z,236µm,19.0s						
R53A	**Hurricane**	**33.11**	**80**	P	**P**	**05 24 48.9**	**-1.5**
	baz=288						
R53A				S	**S**	**05 30 09.6**	**-0.3**
	baz=288						
Y52A	**Lilburn**	**33.12**	**89**	P	**P**	**05 24 49.0**	**-1.4**
Y52A				IAMs_20	IAMs_20	05 38 37.8	
	comp=Z,286µm,20.0s						
Y52A	**Lilburn**	**33.12**	**89**	P	**P**	**05 24 49.3**	**-1.1**
	baz=294						
Y52A				S	**S**	**05 30 10.9**	**+1.0**
	baz=294						
152A	**Waverly Hall**	**33.12**	**91**	P	**P**	**05 24 49.7**	**-0.7**
152A				IAmb	IAmb	05 24 59.2	
	comp=Z,573nm,1.4s						
152A				IAMs_20	IAMs_20	05 39 51.0	
	comp=Z,280µm,18.0s						
H52A	**Wyevale**	**33.13**	**68**	P	**P**	**05 24 50.1**	**-0.3**
	baz=280						
H52A				S	**S**	**05 30 10.6**	**+0.6**
	baz=280						
KHLH	**Kahului Airpor**	**33.13**	**243**	IAMs_20	IAMs_20	05 33 58.2	
	comp=Z,230µm,22.0s						
E51A	**G1948 Merrick**	**33.14**	**64**	P	**P**	**05 24 49.9**	**-0.6**
	baz=277						
E51A				S	**S**	**05 30 10.7**	**+0.6**
	baz=277						
D51A	**Lot 18 Range I**	**33.16**	**63**	P	**P**	**05 24 50.1**	**-0.5**
	baz=276						
D51A				S	**S**	**05 30 09.9**	**-0.5**
	baz=276						
SPIA	**Saint Paul Isl**	**33.18**	**315**	IAMs_20	IAMs_20	05 35 50.8	
	comp=Z,182µm,18.0s						
S53A	**Williamson**	**33.19**	**81**	P	**P**	**05 24 50.0**	**-1.1**
	baz=289						
S53A				S	**S**	**05 30 10.1**	**-1.0**
	baz=289						
P53A	**Whipple**	**33.19**	**78**	P	**P**	**05 24 50.1**	**-0.8**
P53A				IAmb	IAmb	05 24 58.2	
	comp=Z,600nm,1.1s						
P53A	**Whipple**	**33.19**	**78**	P	**P**	**05 24 49.4**	**-1.6**
	baz=287						
P53A				S	**S**	**05 30 09.7**	**-1.3**
	baz=287						
M53A	**WI Miller and**	**33.21**	**74**	P	**P**	**05 24 49.7**	**-1.4**
	baz=284						
M53A				S	**S**	**05 30 09.0**	**-2.3**
	baz=284						
ANM	**Nome**	**33.22**	**329**	P	**P**	**05 24 49.7**	**-1.3**
ANM				pmax	pmax		
	comp=Z,245nm,1.4s						
ANM				MLR	MLR		
	comp=Z,74µm,18.0s						
ANM	**Nome**	**33.22**	**329**	P	**P**	**05 24 49.6**	**-1.3**
N53A	**Lisbon**	**33.25**	**75**	P	**P**	**05 24 50.9**	**-0.6**
N53A				IAmb	IAmb	05 25 07.8	
	comp=Z,940nm,1.4s						
N53A				IAMs_20	IAMs_20	05 38 29.4	
	comp=Z,230µm,22.0s						
N53A	**Lisbon**	**33.25**	**75**	P	**P**	**05 24 49.9**	**-1.5**
	baz=285						
N53A				S	**S**	**05 30 11.0**	**-0.9**
	baz=285						
451A	**Vernon**	**33.27**	**95**	P	**P**	**05 24 51.8**	**+0.1**
451A				IAmb	IAmb	05 25 04.0	
	comp=Z,717nm,1.0s						
Q53A	**Leroy**	**33.27**	**79**	P	**P**	**05 24 50.5**	**-1.3**
	baz=288						
Q53A				S	**S**	**05 30 12.0**	**-0.3**
	baz=288						
POHA	**Pohakuloa**	**33.33**	**240**	IAMs_20	IAMs_20	05 33 37.6	
	comp=Z,190µm,20.0s						
F52A	**Sundridge**	**33.35**	**66**	P	**P**	**05 24 51.8**	**-0.5**
	baz=278						
F52A				S	**S**	**05 30 13.8**	**+0.4**
	baz=278						
V53A	**Saluda**	**33.37**	**85**	IAMs_20	IAMs_20	05 39 19.2	
	comp=Z,308µm,19.0s						
V53A	**Saluda**	**33.37**	**85**	P	**P**	**05 24 52.5**	**-0.1**
	baz=292						
V53A				S	**S**	**05 30 14.8**	**+0.9**
	baz=292						
L53A	**Girard**	**33.39**	**73**	P	**P**	**05 24 51.8**	**-0.9**
	baz=283						
L53A				S	**S**	**05 30 11.6**	**-2.4**
	baz=283						
X53A	**Estanollee**	**33.44**	**87**	P	**P**	**05 24 52.1**	**-1.1**
	baz=294						
X53A				S	**S**	**05 30 15.5**	**+0.6**
	baz=294						
I53A	**Kortright Cn E**	**33.48**	**69**	P	**P**	**05 24 53.5**	**0.0**
	baz=281						
I53A				S	**S**	**05 30 15.9**	**+0.5**
	baz=281						
352A	**Blakely**	**33.49**	**93**	P	**P**	**05 24 52.0**	**-1.7**
352A				IAmb	IAmb	05 25 01.8	
	comp=Z,1µm,1.5s						
352A				IAMs_20	IAMs_20	05 38 53.9	
	comp=Z,356µm,22.0s						
MLOA	**Mauna Loa Obse**	**33.52**	**240**	P	**P**	**05 24 52.4**	**-2.1**
MLOA				IAmb	IAmb	05 25 14.1	
	comp=Z,571nm,1.1s						
MLOA				IAMs_20	IAMs_20	05 35 03.6	
	comp=Z,164µm,18.0s						
BG3	**Lake Jocassee**	**33.53**	**86**	P	**P**	**05 24 53.0**	**-1.0**
BG3				IAmb	IAmb	05 25 09.5	
	comp=Z,570nm,1.1s						
ALLY	**Alegheny Colle**	**33.55**	**73**	IAMs_20	IAMs_20	05 40 43.2	
	comp=Z,205µm,19.0s						
ERPA	**Erie**	**33.55**	**72**	P	**P**	**05 24 53.3**	**-0.8**
ERPA				IAmb	IAmb	05 25 01.9	

	comp=Z,961nm,1.3s						
ERPA				IAMs_20	IAMs_20	05 38 48.3	
	comp=Z,216µm,21.0s						
ERPA	Erie	33.55	72	P	P	05 24 53.3	-0.8
	baz=283						
ERPA				S	S	05 30 15.8	-0.7
	baz=283						
SADO	Sadowa	33.64	68	P	P	05 24 54.3	-0.5
	comp=Z,308nm,1.0s,baz=278,slow=9.3,SNR=99						
SADO	Sadowa	33.64	68	P	P	05 24 53.7	-1.1
SADO				IAMs_20	IAMs_20	05 37 44.2	
	comp=Z,203µm,22.0s						
E52A	Mattawa	33.75	65	P	P	05 24 55.3	-0.5
	baz=278						
E52A				S	S	05 30 20.3	+0.8
	baz=278						
O54A	Avella	33.75	76	P	P	05 24 55.1	-0.8
O54A				IAmb	IAmb	05 25 11.2	
	comp=Z,2µm,1.8s						
O54A				IAMs_20	IAMs_20	05 39 53.7	
	comp=Z,211µm,20.0s						
O54A	Avella	33.75	76	P	P	05 24 53.8	-2.0
	baz=286						
O54A				S	S	05 30 18.7	-1.0
	baz=286						
Q54A	Coxs Mills	33.75	78	P	P	05 24 54.0	-1.8
Q54A				IAMs_20	IAMs_20	05 38 16.9	
	comp=Z,239µm,22.0s						
Q54A	Coxs Mills	33.75	78	P	P	05 24 54.5	-1.4
	baz=288						
Q54A				S	S	05 30 18.8	-0.9
	baz=288						
GOGA	Godfrey	33.76	89	P	P	05 24 55.5	-0.5
GOGA				pmax	pmax		
	comp=Z,1µm,1.6s						
GOGA				MLR	MLR		
	comp=Z,216µm,22.0s						
GOGA	Godfrey	33.76	89	P	P	05 24 55.5	-0.5
GOGA				IAmb	IAmb	05 25 04.8	
	comp=Z,1µm,1.6s						
GOGA	Godfrey	33.76	89	IAMs_20	IAMs_20	05 38 57.7	
	comp=Z,216µm,22.0s						
GOGA	Godfrey	33.76	89	P	P	05 24 55.5	-0.5
	baz=295						
GOGA				S	S	05 30 19.7	-0.1
	baz=295						
S54A	Dingess, Beckl	33.76	80	P	P	05 24 55.4	-0.6
S54A				IAMs_20	IAMs_20	05 39 08.4	
	comp=Z,224µm,21.0s						
S54A	Dingess, Beckl	33.76	80	P	P	05 24 55.1	-0.9
	baz=289						
S54A				S	S	05 30 18.7	-1.3
	baz=289						
T54A	Tazewell	33.81	82	P	P	05 24 55.6	-0.9
	baz=290,SNR=11						
T54A				S	S	05 30 20.5	-0.2
	baz=290						
U54A	Nelsons Funny	33.81	83	P	P	05 24 55.9	-0.6
U54A				IAMs_20	IAMs_20	05 39 12.8	
	comp=Z,269µm,19.0s						
U54A	Nelsons Funny	33.81	83	P	P	05 24 55.3	-1.2
	baz=291						
U54A				S	S	05 30 20.9	+0.1
	baz=291						
N54A	Moraine State	33.83	74	P	P	05 24 56.0	-0.6
N54A	Moraine State	33.83	74	P	P	05 24 55.5	-1.0
	baz=285						
N54A				S	S	05 30 20.2	-0.7
	baz=285						
P54A	Burton	33.83	77	P	P	05 24 55.6	-1.0
	baz=287						
P54A				S	S	05 30 19.4	-1.7
	baz=287						
KIP	Kipapa	33.86	245	IAMs_20	IAMs_20	05 34 35.4	
	comp=Z,229µm,18.0s						
R54A	Victor	33.88	80	P	P	05 24 55.7	-1.4
	baz=289,SNR=8.9						
R54A				S	S	05 30 20.6	-1.1
	baz=289						
HON	Honolulu	33.92	245	IAMs_20	IAMs_20	05 34 56.0	
	comp=Z,179µm,18.0s						
M54A	Oil Creek Stat	33.93	73	P	P	05 24 56.6	-0.9
M54A				IAMs_20	IAMs_20	05 39 00.4	
	comp=Z,195µm,21.0s						
M54A	Oil Creek Stat	33.93	73	P	P	05 24 56.5	-0.9
	baz=284,SNR=6.6						
M54A				S	S	05 30 21.1	-1.4
	baz=284						
G53A	Haliburton	33.94	67	P	P	05 24 57.1	-0.4
	baz=280						
G53A				S	S	05 30 23.2	+0.7
	baz=280						
V54A	Nebo	33.98	84	P	P	05 24 57.2	-0.7
	baz=292						
V54A				S	S	05 30 23.8	+0.5
	baz=292						
L54A	Sinclairville	34.01	72	P	P	05 24 57.9	-0.2
	baz=283,SNR=11						
L54A				S	S	05 30 22.6	-1.0
	baz=283						
W54A	Cherokee Point	34.06	85	P	P	05 24 57.9	-0.7
	baz=293						
W54A				S	S	05 30 25.1	+0.6
	baz=293						
H53A	Bobcaygeon	34.06	68	P	P	05 24 58.1	-0.4
	baz=280						
H53A				S	S	05 30 25.0	+0.6
	baz=280						
MATQ	Matagami	34.11	58	P	P	05 24 58.7	-0.1
	baz=273						
MATQ				S	S	05 30 25.9	+1.0
	baz=273						
X54A	Belton	34.12	86	P	P	05 24 58.3	-0.9
	baz=294						
X54A				S	S	05 30 26.5	+1.0
	baz=294						
ALGO	Algonquin Park	34.21	65	P	P	05 24 59.4	-0.4
	baz=279						
ALGO				S	S	05 30 28.0	+1.4
	baz=279						
G54A	Lake Saint Pet	34.27	66	P	P	05 24 59.7	-0.6
	baz=279						
G54A				S	S	05 30 28.4	+0.8
	baz=279						
J54A	Appleton	34.27	70	IAmb	IAmb	05 25 08.4	
	comp=Z,959nm,1.1s						
J54A				IAMs_20	IAMs_20	05 39 19.2	
	comp=Z,198µm,20.0s						
J54A	Appleton	34.27	70	P	P	05 25 00.0	-0.3
	baz=282						
J54A				S	S	05 30 28.2	+0.6
	baz=282						
MCWV	Mont Chateau	34.29	77	IAmb	IAmb	05 25 17.1	
	comp=Z,1µm,1.9s						
MCWV	Mont Chateau	34.29	77	P	P	05 24 59.4	-1.1
	baz=287						
MCWV				S	S	05 30 26.5	-1.5
	baz=287						
D53A	Lac Vacive, Po	34.30	63	IAmb	IAmb	05 25 18.9	
	comp=Z,632nm,1.0s						
D53A				IAMs_20	IAMs_20	05 39 07.5	
	comp=Z,186µm,18.0s						
D53A	Lac Vacive, Po	34.30	63	P	P	05 25 00.3	-0.3
	baz=277						
D53A				S	S	05 30 28.1	+0.1
	baz=277						
Q55A	Buckhannon	34.31	78	P	P	05 25 00.1	-0.7
	baz=288						
Q55A				S	S	05 30 28.2	-0.2
	baz=288						
HODGE	Hodges	34.34	87	P	P	05 25 00.1	-0.9
HODGE				IAmb	IAmb	05 25 17.1	
	comp=Z,921nm,1.4s						
P55A	Reedsville	34.34	77	P	P	05 25 00.2	-0.8
	baz=287						
P55A				S	S	05 30 27.6	-1.4
	baz=287						
VLDQ	Val d'Or	34.35	61	IAmb	IAmb	05 25 16.7	
	comp=Z,593nm,1.2s						
VLDQ				IAMs_20	IAMs_20	05 38 18.3	
	comp=Z,243µm,19.0s						
S55A	Lewisburg	34.38	80	P	P	05 25 00.8	-0.6
	baz=289,SNR=12						
S55A				S	S	05 30 28.1	-1.4
	baz=289						
K54A	Basiliko Farm,	34.38	71	P	P	05 25 00.8	-0.5
	baz=283,SNR=11						
K54A				S	S	05 30 29.6	+0.3
	baz=283						
T55A	Pulaski	34.38	81	P	P	05 25 01.2	-0.2
	baz=290,SNR=26						
T55A				S	S	05 30 29.7	+0.1
	baz=290						
U55A	TA2, Sparta	34.40	83	P	P	05 25 01.3	-0.3
	baz=291						
U55A				S	S	05 30 30.3	+0.4
	baz=291						
E53A	Dumoine, Ponti	34.42	64	P	P	05 25 01.5	-0.1
	baz=278						
E53A				S	S	05 30 30.9	+1.1
	baz=278						
MEDO	Medina	34.43	70	IAMs_20	IAMs_20	05 39 24.3	
	comp=Z,198µm,20.0s						
PAULI	Pauline	34.44	86	P	P	05 25 00.4	-1.5
PAULI				IAMs_20	IAMs_20	05 39 08.7	
	comp=Z,321µm,22.0s						
553A	Crawfordville	34.47	95	P	P	05 25 00.5	-1.7
553A				IAmb	IAmb	05 25 14.3	
	comp=Z,938nm,1.2s						
WVNY	West Valley, N	34.49	72	IAMs_20	IAMs_20	05 39 40.0	
	comp=Z,213µm,22.0s						
R55A	Marlinton	34.50	79	P	P	05 25 01.9	-0.5
	baz=289						
R55A				S	S	05 30 30.5	-0.9
	baz=289						
V55A	Taylorsville	34.51	84	P	P	05 25 01.0	-1.5
V55A				IAMs_20	IAMs_20	05 39 48.3	
	comp=Z,216µm,21.0s						
V55A	Taylorsville	34.51	84	P	P	05 25 01.0	-1.5
	baz=292						
V55A				S	S	05 30 31.0	-0.4
	baz=292						
TIGA	Tifton	34.52	92	P	P	05 25 00.8	-1.8
TIGA				IAMs_20	IAMs_20	05 39 15.3	
	comp=Z,259µm,22.0s						
TIGA	Tifton	34.52	92	P	P	05 25 01.8	-0.8
	baz=298						
TIGA				S	S	05 30 33.1	+1.3
	baz=298						
O55A	Ligonier	34.53	76	P	P	05 25 01.7	-0.9
	baz=286						
O55A				S	S	05 30 31.1	-0.7
	baz=286						
LSQQ	Lebel-sur-Quev	34.58	60	P	P	05 25 02.8	-0.2
	baz=275						
LSQQ				S	S	05 30 32.4	+0.1
	baz=275						
M55A	Ridgway	34.59	73	P	P	05 25 02.3	-0.9
	baz=285						
M55A				S	S	05 30 32.7	0.0
	baz=285						
N55A	Marion Center	34.61	74	P	P	05 25 02.3	-1.0
	baz=286,SNR=14						
N55A				S	S	05 30 32.3	-0.7
	baz=286						
BLA	Blacksburg	34.62	81	IAMs_20	IAMs_20	05 39 38.3	
	comp=Z,249µm,21.0s						
BLA	Blacksburg	34.62	81	P	P	05 25 02.0	-1.5
	baz=290,SNR=14						
BLA				S	S	05 30 33.4	+0.1
	baz=290						
L55A	Hinsdale	34.66	72	P	P	05 25 03.3	-0.5
	baz=284,SNR=50						
L55A				S	S	05 30 34.1	+0.4
	baz=284						
KEKH	Kekaha	34.68	248	P	P	05 25 06.6	+2.6
KEKH				IAMs_20	IAMs_20	05 34 10.9	
	comp=Z,202µm,18.0s						
KMSC	Kings Mountain	34.68	85	P	P	05 25 03.2	-0.8
	baz=293						
KMSC				S	S	05 30 33.3	-0.8
	baz=293						
X55A	Gracelyn & Ava	34.72	86	P	P	05 25 02.9	-1.4
	baz=294						
X55A				S	S	05 30 33.8	-0.8
	baz=294						
E54A	Lac Daplat, Po	34.73	64	P	P	05 25 03.9	-0.4
	baz=278						
E54A				S	S	05 30 35.0	+0.3
	baz=278						
DELO	Deloro Mine	34.75	68	IAmb	IAmb	05 25 19.5	
	comp=Z,550nm,1.1s						
Y55A	Saluda	34.76	87	P	P	05 25 03.0	-1.6
	baz=294						
Y55A				S	S	05 30 34.4	-0.9
	baz=294						
I55A	Frankford	34.76	68	P	P	05 25 03.8	-0.8
	baz=281						
I55A				S	S	05 30 35.4	+0.2
	baz=281						
K55A	Perry	34.80	71	P	P	05 25 04.4	-0.5
	baz=283,SNR=13						
K55A				S	S	05 30 35.5	-0.4
	baz=283						
J55A	Hilton	34.86	70	P	P	05 25 03.6	-1.8
J55A				IAMs_20	IAMs_20	05 39 36.8	
	comp=Z,205µm,22.0s						
J55A	Hilton	34.86	70	P	P	05 25 04.8	-0.6
	baz=283						
J55A				S	S	05 30 36.9	+0.2
	baz=283						
U56A	King	34.95	82	IAmb	IAmb	05 25 15.2	
	comp=Z,1µm,1.4s						
U56A	King	34.95	82	P	P	05 25 05.4	-0.9
	baz=291						
U56A				S	S	05 30 38.3	-0.1
	baz=291						
Q56A	Snyder Ridge,	34.96	77	P	P	05 25 03.8	-2.5
Q56A				IAMs_20	IAMs_20	05 41 09.8	
	comp=Z,222µm,20.0s						
Q56A	Snyder Ridge,	34.96	77	P	P	05 25 05.1	-1.2
	baz=288						
Q56A				S	S	05 30 37.8	-0.6
	baz=288						
T56A	Rocky Mt	34.98	81	P	P	05 25 06.1	-0.5
	baz=290						
T56A				S	S	05 30 39.2	+0.4
	baz=290						
R56A	Bull Pasture M	34.99	79	P	P	05 25 05.9	-0.8
	baz=289						
R56A				S	S	05 30 39.5	+0.4
	baz=289						
D54A	Lac Fusel, La	35.00	63	P	P	05 25 05.8	-0.8
	baz=278						
D54A				S	S	05 30 38.9	+0.1
	baz=278						
M56A	Emporium	35.01	73	P	P	05 25 04.6	-2.2
M56A				IAMs_20	IAMs_20	05 41 26.1	
	comp=Z,178µm,21.0s						
M56A	Emporium	35.01	73	P	P	05 25 06.0	-0.8
	baz=285,SNR=22						
M56A				S	S	05 30 39.0	-0.2
	baz=285						
PLVO	Plevna	35.04	67	P	P	05 25 05.8	-1.1
PLVO				IAmb	IAmb	05 25 22.3	
	comp=Z,808nm,1.0s						
PLVO				IAMs_20	IAMs_20	05 38 55.2	
	comp=Z,181µm,21.0s						
H55A	Tweed	35.05	67	P	P	05 25 06.7	-0.3
	baz=281						
H55A				S	S	05 30 40.7	+1.1
	baz=281						
O56A	Blue Knob Stat	35.06	75	IAMs_20	IAMs_20	05 39 47.3	
	comp=Z,218µm,21.0s						
O56A	Blue Knob Stat	35.06	75	P	P	05 25 05.9	-1.3
	baz=286						
O56A				S	S	05 30 39.0	-0.9
	baz=286						
V56A	Mocksville	35.06	83	P	P	05 25 05.9	-1.4
	baz=292						
V56A				S	S	05 30 38.5	-1.5
	baz=292						
ATKA	Atka Island	35.07	306	IAmb	IAmb	05 25 13.0	
	comp=Z,440nm,1.1s						
JSC	Jenkinsville	35.08	86	P	P	05 25 05.9	-1.5
JSC				pmax	pmax		
	comp=Z,2µm,2.0s						
JSC				MLR	MLR		
	comp=Z,154µm,21.0s						
JSC	Jenkinsville	35.08	86	P	P	05 25 05.9	-1.5
JSC				IAmb	IAmb	05 25 23.3	
	comp=Z,2µm,2.0s						
P56A	Dayton Farm, R	35.08	77	P	P	05 25 06.2	-1.1
	baz=287						
P56A				S	S	05 30 39.7	-0.5
	baz=287						
N56A	West Decatur	35.08	74	P	P	05 25 06.0	-1.4
	baz=286						
N56A				S	S	05 30 39.6	-0.6
	baz=286						
S56A	Natural Bridge	35.11	80	P	P	05 25 06.7	-0.9
	baz=290						
S56A				S	S	05 30 40.2	-0.5
	baz=290						
255A	Hazlehurst	35.15	91	IAmb	IAmb	05 25 15.7	
	comp=Z,1µm,1.5s						
X56A	White Oak	35.16	86	P	P	05 25 06.8	-1.3
	baz=294						
X56A				S	S	05 30 40.4	-1.2
	baz=294						
Y56A	Pelion	35.24	87	P	P	05 25 07.2	-1.6
	baz=295						
Y56A				S	S	05 30 41.4	-1.4
	baz=295						
G55A	Calabogie	35.25	66	P	P	05 25 08.4	-0.3
	baz=280						
G55A				S	S	05 30 42.9	+0.3
	baz=280						
W56A	Indian Trail	35.25	84	P	P	05 25 07.5	-1.4
	baz=293						
W56A				S	S	05 30 41.5	-1.4
	baz=293						
L56A	Greenwood	35.30	72	P	P	05 25 08.7	-0.7
L56A				IAMs_20	IAMs_20	05 39 27.6	
	comp=Z,264µm,22.0s						
L56A	Greenwood	35.30	72	P	P	05 25 09.0	-0.3
	baz=284						
L56A				S	S	05 30 43.9	+0.2
	baz=284						
PECO	Prince Edward	35.30	68	IAmb	IAmb	05 25 27.0	
	comp=Z,831nm,1.2s						
PECO				IAMs_20	IAMs_20	05 38 46.5	
	comp=Z,204µm,20.0s						
K56A	Middlesex	35.34	71	P	P	05 25 08.8	-0.8
	baz=284,SNR=35						
K56A				S	S	05 30 44.6	+0.4
	baz=284						
Z56A	Williston	35.38	88	P	P	05 25 08.0	-2.0
Z56A				IAMs_20	IAMs_20	05 40 17.8	
	comp=Z,266µm,19.0s						
Z56A	Williston	35.38	88	P	P	05 25 09.3	-0.7
	baz=295						
Z56A				S	S	05 30 44.0	-1.0
	baz=295						
F55A	Otter Lake	35.40	65	P	P	05 25 09.3	-0.7
	baz=280						
F55A				S	S	05 30 45.9	+0.9
	baz=280						
SSPA	Standing Stone	35.45	74	P	P	05 25 09.6	-0.9
SSPA				IAmb	IAmb	05 25 20.3	
	comp=Z,624nm,1.0s						
SSPA	Standing Stone	35.45	74	P	P	05 25 09.5	-1.1
	baz=286						
SSPA				S	S	05 30 45.5	-0.4
	baz=286						
E55A	Montcerf-Lytto	35.51	64	P	P	05 25 10.6	-0.4
	baz=279						
E55A				S	S	05 30 46.7	+0.2
	baz=279						
Q57A	Strasburg	35.53	77	P	P	05 25 10.6	-0.7
	baz=288						
Q57A				S	S	05 30 46.8	-0.4
	baz=288						
BIRD	Birdtown, Kers	35.54	85	P	P	05 25 09.9	-1.4
S57A	Dark Hollow, R	35.54	79	P	P	05 25 10.4	-1.0
S57A				IAMs_20	IAMs_20	05 40 04.3	
	comp=Z,159µm,20.0s						
S57A	Dark Hollow, R	35.54	79	P	P	05 25 10.7	-0.7
	baz=290						
S57A				S	S	05 30 47.8	+0.5
	baz=290						
J56A	Wolcott	35.54	70	P	P	05 25 09.6	-1.7
J56A				IAmb	IAmb	05 25 28.8	
	comp=Z,1µm,1.1s						
J56A				IAMs_20	IAMs_20	05 40 09.8	
	comp=Z,163µm,20.0s						
J56A	Wolcott	35.54	70	P	P	05 25 10.9	-0.4
	baz=283,SNR=11						
J56A				S	S	05 30 46.9	-0.3
	baz=283						
T57A	Hurt	35.57	81	IAmb	IAmb	05 25 19.5	
	comp=Z,1µm,1.6s						
T57A	Hurt	35.57	81	P	P	05 25 10.9	-0.7
	baz=291						
T57A				S	S	05 30 48.0	+0.2
	baz=291						
V57A	Coltrane Farms	35.58	83	P	P	05 25 10.5	-1.3
	baz=292						
V57A				S	S	05 30 46.8	-1.2
	baz=292						
R57A	Stanardsville	35.68	78	P	P	05 25 12.2	-0.4
	baz=289						
R57A				S	S	05 30 50.8	+1.3
	baz=289						
H56A	Elgin	35.69	67	P	P	05 25 12.4	-0.1
	baz=282						
H56A				S	S	05 30 50.2	+0.8
	baz=282						
P57A	Homestead Farm	35.69	76	IAMs_20	IAMs_20	05 40 56.2	
	comp=Z,269µm,19.0s						
P57A	Homestead Farm	35.69	76	P	P	05 25 12.2	-0.5
	baz=288						
P57A				S	S	05 30 49.4	-0.2
	baz=288						
W57A	Gilead	35.69	84	P	P	05 25 11.6	-1.0
W57A				IAMs_20	IAMs_20	05 40 33.7	
	comp=Z,182µm,18.0s						
W57A	Gilead	35.69	84	P	P	05 25 11.9	-0.8
	baz=293						
W57A				S	S	05 30 48.6	-1.1
	baz=293						
U57A	Blanch	35.71	82	P	P	05 25 12.0	-0.8
	baz=291						
U57A				S	S	05 30 49.7	-0.3
	baz=291						
O57A	Amberson	35.76	75	P	P	05 25 12.6	-0.6
	baz=287,SNR=34						
O57A				S	S	05 30 51.0	+0.4
	baz=287						
D55A	Sainte-Anne-du	35.82	63	P	P	05 25 13.0	-0.7
	baz=279						
D55A				S	S	05 30 51.2	-0.2
	baz=279						
M57A	Sunshine Farm,	35.82	73	IAmb	IAmb	05 25 21.9	
	comp=Z,1µm,1.4s						
M57A				IAMs_20	IAMs_20	05 40 09.3	
	comp=Z,192µm,20.0s						
M57A	Sunshine Farm,	35.82	73	P	P	05 25 13.3	-0.4
	baz=286						
M57A				S	S	05 30 51.7	+0.2
	baz=286						
Y57A	Sumter	35.84	86	P	P	05 25 11.9	-2.1
Y57A				IAmb	IAmb	05 25 28.4	
	comp=Z,420nm,0.9s						
Y57A	Sumter	35.84	86	P	P	05 25 12.9	-1.1
	baz=294						
Y57A				S	S	05 30 50.5	-1.4
	baz=294						
L57A	Andrews Acres	35.85	72	P	P	05 25 13.3	-0.7
	baz=285						
L57A				S	S	05 30 52.6	+0.5
	baz=285						
X57A	Johnson Farm,	35.89	85	P	P	05 25 13.5	-0.8
	baz=294						
X57A				S	S	05 30 51.9	-0.7
	baz=294						
Z57A	Bowman	35.90	87	P	P	05 25 13.4	-1.1
	baz=295						
Z57A				S	S	05 30 52.1	-0.8
	baz=295						
K57A	Scipio Center	35.91	70	P	P	05 25 13.8	-0.7
	baz=284,SNR=15						
K57A				S	S	05 30 53.2	+0.3
	baz=284						
157A	Early Branch	35.94	89	P	P	05 25 14.5	-0.4
	baz=296						
157A				S	S	05 30 53.4	-0.1
	baz=296						
456A	Hilliard	36.05	92	IAMs_20	IAMs_20	05 41 47.6	
	comp=Z,228µm,19.0s						
R58A	Rapidan	36.07	78	P	P	05 25 15.8	-0.1
	baz=289						
R58A				S	S	05 30 56.9	+1.5
	baz=289						

Q58A	**Fox Den Farm,**	36.10	77	P	P	05 25 15.4	-0.8
	baz=288						
Q58A				S	S	05 30 56.1	+0.2
	baz=288						
V58A	**Windy Hill, Pi**	36.11	83	IAMs_20	IAMs_20	05 41 28.8	
	comp=Z,231µm,21.0s						
V58A	**Windy Hill, Pi**	36.11	83	P	P	05 25 15.7	-0.6
	baz=292						
V58A				S	S	05 30 54.9	-1.2
	baz=292						
J57A	**Williamstown**	36.12	69	IAmb	IAmb	05 25 31.1	
	comp=Z,519nm,1.1s						
J57A				IAMs_20	IAMs_20	05 40 16.2	
	comp=Z,188µm,18.0s						
J57A	**Williamstown**	36.12	69	P	P	05 25 15.6	-0.7
	baz=283						
J57A				S	S	05 30 56.3	+0.2
	baz=283						
T58A	**Grand View Acr**	36.13	81	P	P	05 25 15.4	-1.1
	baz=291						
T58A				S	S	05 30 55.4	-0.9
	baz=291						
E56A	**St. Veronique**	36.19	64	P	P	05 25 16.4	-0.4
	baz=280						
E56A				S	S	05 30 57.2	+0.1
	baz=280						
P58A	**Pank, Wackersv**	36.22	76	P	P	05 25 16.4	-0.7
	baz=288						
P58A				S	S	05 30 57.9	+0.3
	baz=288						
257A	**Skidaway Islan**	36.23	90	P	P	05 25 15.1	-2.2
I57A	**Carthage**	36.25	68	P	P	05 25 16.7	-0.7
	baz=283						
I57A				S	S	05 30 58.1	+0.1
	baz=283						
N58A	**Sunbury**	36.25	74	IAmb	IAmb	05 25 25.3	
	comp=Z,1µm,1.4s						
N58A				IAMs_20	IAMs_20	05 40 32.9	
	comp=Z,175µm,20.0s						
N58A	**Sunbury**	36.25	74	P	P	05 25 16.7	-0.7
	baz=286,SNR=13						
N58A				S	S	05 30 57.7	-0.4
	baz=286						
S58A	**Poland Farm, P**	36.26	79	IAmb	IAmb	05 25 25.3	
	comp=Z,475nm,0.9s						
S58A				IAMs_20	IAMs_20	05 41 04.5	
	comp=Z,161µm,18.0s						
S58A	**Poland Farm, P**	36.26	79	P	P	05 25 16.8	-0.8
	baz=290						
S58A				S	S	05 30 58.1	-0.2
	baz=290						
R58B	**Mineral**	36.27	79	P	P	05 25 16.8	-0.8
R58B				IAMs_20	IAMs_20	05 40 49.8	
	comp=Z,172µm,22.0s						
R58B	**Mineral**	36.27	79	P	P	05 25 17.4	-0.2
	baz=290						
R58B				S	S	05 30 58.7	+0.2
	baz=290						
M58A	**Price's Panora**	36.29	73	P	P	05 25 17.4	-0.4
	baz=286						
M58A				S	S	05 30 58.8	-0.1
	baz=286						
D56A	**ZEC Mazanza, M**	36.30	63	P	P	05 25 16.9	-0.8
	baz=279						
D56A				S	S	05 30 59.0	+0.2
	baz=279						
O58A	**Lewisberry**	36.30	75	P	P	05 25 17.0	-0.9
	baz=287						
O58A				S	S	05 30 59.5	+0.5
	baz=287						
656A	**Willston**	36.31	95	P	P	05 25 17.2	-0.8
656A				IAmb	IAmb	05 25 29.8	
	comp=Z,1µm,1.4s						
U58A	**Oxford**	36.32	81	P	P	05 25 17.3	-0.8
	baz=292						
U58A				S	S	05 30 58.1	-1.1
	baz=292						
W58A	**Raeford**	36.32	84	P	P	05 25 17.6	-0.4
	baz=293						
W58A				S	S	05 30 58.8	-0.4
	baz=293						
H57A	**Richville**	36.33	67	P	P	05 25 17.5	-0.5
	baz=282						
H57A				S	S	05 31 00.2	+1.1
	baz=282						
NHSC	**New Hope**	36.38	87	P	P	05 25 17.7	-0.9
NHSC				IAMs_20	IAMs_20	05 40 58.2	
	comp=Z,243µm,18.0s						
NHSC	**New Hope**	36.38	87	P	P	05 25 17.9	-0.7
	baz=296						
NHSC				S	S	05 30 60.0	-0.3
	baz=296						
BINY	**Binghamton**	36.42	71	IAMs_20	IAMs_20	05 40 37.2	
	comp=Z,243µm,22.0s						
BINY	**Binghamton**	36.42	71	P	P	05 25 18.6	-0.3
	baz=285						
BINY				S	S	05 31 00.3	-0.5
	baz=285						
PAGS	**Pennsylvania G**	36.42	75	P	P	05 25 17.5	-1.4
PAGS				IAmb	IAmb	05 25 26.5	
	comp=Z,1µm,1.6s						
PAGS				IAMs_20	IAMs_20	05 40 29.5	
	comp=Z,224µm,22.0s						
X58A	**Rowland**	36.42	85	IAMs_20	IAMs_20	05 41 53.1	
	comp=Z,235µm,22.0s						
X58A	**Rowland**	36.42	85	P	P	05 25 18.3	-0.6
	baz=294						
X58A				S	S	05 31 00.3	-0.5
	baz=294						
Y58A	**Scranton**	36.44	86	IAmb	IAmb	05 25 27.5	
	comp=Z,724nm,0.9s						
Y58A	**Scranton**	36.44	86	P	P	05 25 18.0	-1.1
	baz=295						
Y58A				S	S	05 31 00.1	-1.0
	baz=295						
RGRS	**Roger Stewart**	36.45	88	P	P	05 25 18.2	-1.0
G57A	**Newington**	36.48	66	P	P	05 25 18.6	-0.7
	baz=282						
G57A				S	S	05 31 02.1	+0.6
	baz=282						
CSU	**Charleston Sou**	36.52	88	P	P	05 25 17.6	-2.1
K58A	**Earlville**	36.52	70	P	P	05 25 17.2	-2.6
K58A				IAMs_20	IAMs_20	05 40 39.8	
	comp=Z,181µm,19.0s						
K58A	**Earlville**	36.52	70	P	P	05 25 19.2	-0.5
	baz=284						
K58A				S	S	05 31 01.8	-0.5
	baz=284						
158A	**Hollywood**	36.53	88	P	P	05 25 19.0	-0.9
	baz=296						
F57A	**Harrington**	36.55	65	P	P	05 25 19.8	0.0
	baz=281						
F57A				S	S	05 31 03.3	+0.8
	baz=281						
L58A	**Harry Jones Me**	36.56	71	P	P	05 25 20.1	+0.1
	baz=285,SNR=59						
L58A				S	S	05 31 02.8	-0.1
	baz=285						
Z58A	**St. Stephen**	36.56	87	P	P	05 25 19.5	-0.6
	baz=295						
Z58A				S	S	05 31 02.3	-0.7
	baz=295						
CBN	**Corbin Frederi**	36.57	78	P	P	05 25 20.1	0.0
	baz=290						
CBN				S	S	05 31 04.9	+1.9
	baz=290						
TRQ	**Mont Tremblant**	36.57	64	P	P	05 25 19.5	-0.7
ADK	**Adak**	36.62	305	P	P	05 25 18.0	-2.4
ADK				pmax	pmax		
	comp=Z,298nm,1.0s						
ADK				MLR	MLR		
	comp=Z,52µm,20.0s						
ADK	**Adak**	36.62	305	P	P	05 25 18.0	-2.4
J58A	**Remsen**	36.64	69	P	P	05 25 18.5	-2.2
J58A				IAMs_20	IAMs_20	05 40 40.9	
	comp=Z,196µm,20.0s						
J58A	**Remsen**	36.64	69	P	P	05 25 20.5	-0.2
	baz=284						
J58A				S	S	05 31 04.8	+0.8
	baz=284						
MVL	**Millersville**	36.76	75	IAmb	IAmb	05 25 29.6	
	comp=Z,1µm,1.5s						
MVL				IAMs_20	IAMs_20	05 40 39.4	
	comp=Z,229µm,22.0s						
R59A	**King George, V**	36.76	78	P	P	05 25 21.8	+0.1
	baz=290						
R59A				S	S	05 31 08.2	+2.3
	baz=290						
RES	**Resolute Bay**	36.76	13	P	P	05 25 21.1	-0.3
	comp=Z,120nm,1.0s,baz=217,slow=10,SNR=240						
RES				PP	PnPn	05 26 43.4	-1.3
	comp=Z,67nm,1.0s,baz=226,slow=14,SNR=4.3						
RES				LR	LR	05 40 46.8	
	comp=Z,163µm,18.4s,baz=224,slow=37						
RES	**Resolute Bay**	36.76	13	P	P	05 25 20.3	-1.0
RES				pmax	pmax		
	comp=Z,1µm,1.9s						
RES				MLR	MLR		
	comp=Z,174µm,18.0s						
RES	**Resolute Bay**	36.76	13	P	P	05 25 20.3	-1.0
RES				IAmb	IAmb	05 25 32.7	
	comp=Z,1µm,1.9s						
RES				IAMs_20	IAMs_20	05 41 15.3	
	comp=Z,174µm,18.0s						
S59A	**Mechanicsville**	36.78	79	P	P	05 25 21.4	-0.5
	baz=290						
S59A				S	S	05 31 07.5	+1.3
	baz=290						
V59A	**Middlesex**	36.78	82	P	P	05 25 21.6	-0.4
	baz=292						
V59A				S	S	05 31 05.7	-0.6
	baz=292						
I58A	**Old Forge**	36.79	68	P	P	05 25 21.6	-0.4
	baz=283						
I58A				S	S	05 31 06.9	+0.5
	baz=283						
O59A	**Robesonia**	36.79	74	P	P	05 25 21.2	-0.8
	baz=287						
O59A				S	S	05 31 07.2	+0.8
	baz=287						
E57A	**Chemin Saint G**	36.81	64	P	P	05 25 21.8	-0.4
	baz=280						
E57A				S	S	05 31 06.7	0.0
	baz=280						
P59A	**Jarrettsville**	36.82	75	P	P	05 25 21.7	-0.6
	baz=288						
P59A				S	S	05 31 06.9	+0.1
	baz=288						
LONY	**Lake Ozonia**	36.86	67	IAmb	IAmb	05 25 30.4	
	comp=Z,636nm,1.4s						
LONY				IAMs_20	IAMs_20	05 40 00.4	
	comp=Z,188µm,18.0s						
LONY	**Lake Ozonia**	36.86	67	P	P	05 25 22.1	-0.4
	baz=282						
LONY				S	S	05 31 08.3	+1.0
	baz=282						
T59A	**Double "B" Far**	36.86	80	IAmb	IAmb	05 25 31.5	
	comp=Z,2µm,1.2s						
T59A				IAMs_20	IAMs_20	05 42 43.3	
	comp=Z,187µm,18.0s						
T59A	**Double "B" Far**	36.86	80	P	P	05 25 22.3	-0.3
	baz=291						
T59A				S	S	05 31 07.1	-0.3
	baz=291						
W59A	**Clinton**	36.86	83	P	P	05 25 22.5	-0.1
	baz=293						
W59A				S	S	05 31 07.9	+0.5
	baz=293						
Q59A	**Harwood**	36.89	77	P	P	05 25 22.4	-0.4
	baz=289						
Q59A				S	S	05 31 09.1	+1.3
	baz=289						
D57A	**Chemin Vers le**	36.89	63	P	P	05 25 22.1	-0.7
	baz=280						
D57A				S	S	05 31 07.7	-0.1
	baz=280						
U59A	**Littleton**	36.90	81	P	P	05 25 22.5	-0.5
	baz=292						
U59A				S	S	05 31 07.9	-0.2
	baz=292						
N59A	**State Game Lan**	36.92	73	IAmb	IAmb	05 25 31.2	
	comp=Z,2µm,1.6s						
N59A				IAMs_20	IAMs_20	05 40 43.5	
	comp=Z,211µm,22.0s						
N59A	**State Game Lan**	36.92	73	P	P	05 25 22.7	-0.5
	baz=287						
N59A				S	S	05 31 07.7	-0.7
	baz=287						
X59A	**McDuffie Farm,**	36.97	84	P	P	05 25 23.2	-0.4
	baz=294						
X59A				S	S	05 31 08.6	-0.6
	baz=294						
M59A	**Waymart**	36.99	72	P	P	05 25 23.2	-0.6
	baz=286						
M59A				S	S	05 31 08.3	-1.2
	baz=286						
Y59A	**Loris**	37.00	85	IAmb	IAmb	05 25 34.5	
	comp=Z,896nm,0.8s						
Y59A				IAMs_20	IAMs_20	05 41 10.5	
	comp=Z,241µm,20.0s						
Y59A	**Loris**	37.00	85	P	P	05 25 23.3	-0.6
	baz=294						
Y59A				S	S	05 31 08.5	-1.2
	baz=294						
Z59A	**Georgetown, SC**	37.01	87	P	P	05 25 23.0	-0.9
	baz=295						
Z59A				S	S	05 31 08.4	-1.3
	baz=295						
K59A	**Cooperstown**	37.09	70	P	P	05 25 24.0	-0.6
	baz=285,SNR=24						
K59A				S	S	05 31 10.9	-0.1
	baz=285						
L59A	**Walton**	37.10	71	IAMs_20	IAMs_20	05 40 58.2	
	comp=Z,196µm,20.0s						
L59A	**Walton**	37.10	71	P	P	05 25 24.5	-0.2
	baz=285						
L59A				S	S	05 31 11.3	+0.2
	baz=285						
G58A	**Ormstown**	37.12	66	P	P	05 25 24.1	-0.6
	baz=282						
G58A				S	S	05 31 11.6	+0.4
	baz=282						
R60A	**Leonardtown, M**	37.14	78	P	P	05 25 24.9	0.0
	baz=290						
R60A				S	S	05 31 13.5	+1.8
	baz=290						
F58A	**St-Lin Laurent**	37.14	65	P	P	05 25 24.6	-0.3
	baz=281						
F58A				S	S	05 31 11.8	+0.3
	baz=281						
J59A	**Piesco**	37.17	69	IAmb	IAmb	05 25 36.2	
	comp=Z,620nm,1.1s						
J59A				IAMs_20	IAMs_20	05 39 52.8	
	comp=Z,182µm,20.0s						
J59A	**Piesco**	37.17	69	P	P	05 25 24.8	-0.5
	baz=284						
J59A				S	S	05 31 12.6	+0.4
	baz=284						
H58A	**Gabriels**	37.18	67	P	P	05 25 24.9	-0.4
	baz=283						
H58A				S	S	05 31 14.2	+1.9
	baz=283						
CNNC	**Cliffs of the**	37.25	83	P	P	05 25 26.0	0.0
	baz=293						
CNNC				S	S	05 31 13.1	-0.3
	baz=293						
NCB	**Newcomb**	37.25	68	IAmb	IAmb	05 25 35.0	
	comp=Z,1µm,1.8s						
NCB				IAMs_20	IAMs_20	05 41 37.9	
	comp=Z,140µm,18.0s						
S60A	**Water View**	37.27	78	P	P	05 25 25.8	-0.3
	baz=290						
S60A				S	S	05 31 15.1	+1.3
	baz=290						
U60A	**Pendleton**	37.33	81	P	P	05 25 26.3	-0.4
	baz=292						
U60A				S	S	05 31 15.2	+0.6
	baz=292						
P60A	**Greenville**	37.34	75	IAmb	IAmb	05 25 34.7	
	comp=Z,922nm,1.4s						
P60A				IAMs_20	IAMs_20	05 41 18.8	
	comp=Z,190µm,21.0s						
P60A	**Greenville**	37.34	75	P	P	05 25 26.1	-0.6
	baz=288						
P60A				S	S	05 31 14.8	+0.1
	baz=288						
O60A	**Telford**	37.36	74	P	P	05 25 26.3	-0.5
	baz=288						
O60A				S	S	05 31 15.7	+0.7
	baz=288						
TEIG	**Tepich**	37.37	112	P	P	05 25 26.3	-0.8
TEIG				IAmb	IAmb	05 25 45.2	
	comp=Z,942nm,1.2s						
TEIG	**Tepich**	37.37	112	IAMs_20	IAMs_20	05 42 53.6	
	comp=Z,148µm,20.0s						
T60A	**Surry**	37.41	79	IAmb	IAmb	05 25 37.6	
	comp=Z,1µm,1.0s						
T60A	**Surry**	37.41	79	P	P	05 25 26.8	-0.5
	baz=291						
T60A				S	S	05 31 17.7	+1.9
	baz=291						
E58A	**La Victoria**	37.41	64	P	P	05 25 26.7	-0.5
	baz=281						
E58A				S	S	05 31 16.1	+0.4
	baz=281						
N60A	**Cedar Hill Far**	37.42	73	P	P	05 25 27.0	-0.4
	baz=287						
N60A				S	S	05 31 16.5	+0.5
	baz=287						
PSUB	**Penn St. - Bra**	37.44	75	IAmb	IAmb	05 25 35.4	
	comp=Z,973nm,1.6s						
PSUB				IAMs_20	IAMs_20	05 41 22.5	
	comp=Z,200µm,21.0s						
Q60A	**Greensboro**	37.44	76	IAMs_20	IAMs_20	05 42 00.6	
	comp=Z,226µm,18.0s						
Q60A	**Greensboro**	37.44	76	P	P	05 25 27.0	-0.5
	baz=289						
Q60A				S	S	05 31 17.8	+1.5
	baz=289						
X60A	**Albert Glenn T**	37.44	84	P	P	05 25 27.2	-0.4
	baz=294						
X60A				S	S	05 31 16.2	-0.2
	baz=294						
W60A	**Pink Hill**	37.45	83	P	P	05 25 27.4	-0.3
	baz=293						
W60A				S	S	05 31 16.4	-0.1
	baz=293						
H59A	**Cadyville**	37.47	66	P	P	05 25 27.5	-0.3
	baz=283						
H59A				S	S	05 31 18.0	+1.3
	baz=283						
CCIG	**Comitan**	37.48	121	IAmb	IAmb	05 25 49.4	
	comp=Z,3µm,2.0s						
CCIG				IAMs_20	IAMs_20	05 43 47.2	
	comp=Z,246µm,19.0s						
Y60A	**Bolivia**	37.49	85	IAMs_20	IAMs_20	05 40 49.5	
	comp=Z,282µm,22.0s						
Y60A	**Bolivia**	37.49	85	P	P	05 25 27.3	-0.7
	baz=295						
Y60A				S	S	05 31 16.8	-0.4
	baz=295						
FRNY	**Flat Rock**	37.51	66	IAmb	IAmb	05 25 46.6	
	comp=Z,514nm,1.1s						
V60A	**Jim Taylor Roa**	37.52	82	IAmb	IAmb	05 25 37.3	
	comp=Z,1µm,1.2s						
V60A	**Jim Taylor Roa**	37.52	82	P	P	05 25 27.7	-0.5
	baz=293						
V60A				S	S	05 31 17.3	-0.2
	baz=293						
I59A	**Olmsteadville**	37.54	68	P	P	05 25 27.6	-0.7
	baz=284						
I59A				S	S	05 31 18.4	+0.7
	baz=284						
D58A	**Chemin du LacG**	37.55	62	P	P	05 25 28.2	-0.3
	baz=280						
D58A				S	S	05 31 17.6	-0.3
	baz=280						
LATQ	**La Tuque**	37.57	62	P	P	05 25 28.2	-0.3
	baz=280						
LATQ				S	S	05 31 17.7	-0.4
	baz=280						
M60A	**Port Jervis**	37.63	72	P	P	05 25 29.0	-0.2
	baz=286,SNR=12						
M60A				S	S	05 31 19.8	+0.6
	baz=286						
ODNJ	**Ogdensburg**	37.72	72	IAmb	IAmb	05 25 47.5	
	comp=Z,1µm,1.2s						
G59A	**Clarenceville**	37.73	66	P	P	05 25 29.5	-0.4
	baz=282						
G59A				S	S	05 31 21.3	+0.7
	baz=282						
L60A	**Shokan**	37.74	71	P	P	05 25 29.7	-0.4
	baz=286,SNR=38						
L60A				S	S	05 31 20.5	-0.4
	baz=286						
ACCN	**Adirondack Com**	37.78	68	IAmb	IAmb	05 25 47.3	
	comp=Z,1µm,1.4s						
DWPF	**Disney Wildern**	37.78	96	P	P	05 25 29.6	-1.0
DWPF				IAmb	IAmb	05 25 43.5	
	comp=Z,2µm,1.6s						
DWPF	**Disney Wildern**	37.78	96	P	P	05 25 31.0	+0.5
	baz=301						
DWPF				S	S	05 31 23.3	+1.7
	baz=301						
K60A	**Five Rivers En**	37.82	70	P	P	05 25 30.1	-0.5
	baz=285						
K60A				S	S	05 31 22.7	+0.8
	baz=285						
F59A	**Saint Guilaume**	37.85	64	P	P	05 25 30.8	-0.1
	baz=282						
F59A				S	S	05 31 23.1	+0.8
	baz=282						
BRNJ	**Basking Ridge**	37.86	73	IAmb	IAmb	05 25 39.3	
	comp=Z,1µm,1.4s						
BRNJ				IAMs_20	IAMs_20	05 41 23.4	
	comp=Z,201µm,22.0s						
Q61A	**Milford**	37.86	76	P	P	05 25 31.3	+0.2
	baz=289						
Q61A				S	S	05 31 24.4	+1.7
	baz=289						
E59A	**St. Maurice**	37.91	63	P	P	05 25 31.3	-0.1
	baz=281						
E59A				S	S	05 31 23.4	+0.1
	baz=281						
U61A	**Possum Corner**	37.92	80	IAMs_20	IAMs_20	05 41 37.4	
	comp=Z,207µm,19.0s						
U61A	**Possum Corner**	37.92	80	P	P	05 25 31.7	+0.1
	baz=292						
U61A				S	S	05 31 26.3	+2.8
	baz=292						
I60A	**Shoreham**	37.94	68	P	P	05 25 31.5	-0.2
	baz=284						
I60A				S	S	05 31 24.9	+1.3
	baz=284						
TRY	**Troy**	37.95	70	IAmb	IAmb	05 25 49.6	
	comp=Z,857nm,1.0s						
TRY				IAMs_20	IAMs_20	05 40 56.4	
	comp=Z,163µm,21.0s						
W61A	**Ground Anchor**	37.95	82	P	P	05 25 32.0	+0.1
	baz=293						
W61A				S	S	05 31 25.8	+1.8
	baz=293						
J60A	**Lant Hill Farm**	37.99	69	P	P	05 25 31.9	-0.3
	baz=285						
J60A				S	S	05 31 25.2	+0.7
	baz=285						
P61A	**Hammonton**	38.00	75	IAMs_20	IAMs_20	05 42 20.3	
	comp=Z,192µm,18.0s						
P61A	**Hammonton**	38.00	75	P	P	05 25 31.9	-0.3
	baz=288						
P61A				S	S	05 31 26.4	+1.6
	baz=288						
S61A	**Accomac**	38.01	78	IAMs_20	IAMs_20	05 40 23.7	
	comp=Z,198µm,22.0s						
S61A	**Accomac**	38.01	78	P	P	05 25 32.7	+0.3
	baz=291						
S61A				S	S	05 31 28.7	+3.7
	baz=291						
V61A	**Roper**	38.02	81	IAMs_20	IAMs_20	05 41 41.3	
	comp=Z,244µm,21.0s						
V61A	**Roper**	38.02	81	P	P	05 25 32.2	-0.3
	baz=293						
V61A				S	S	05 31 26.8	+1.6
	baz=293						
R61A	**Willards**	38.04	77	IAMs_20	IAMs_20	05 42 38.3	
	comp=Z,167µm,18.0s						
R61A	**Willards**	38.04	77	P	P	05 25 32.9	+0.3
	baz=290						
R61A				S	S	05 31 27.6	+2.3
	baz=290						
N61A	**South Mountain**	38.04	73	P	P	05 25 32.4	-0.1
	baz=287						
N61A				S	S	05 31 25.3	0.0
	baz=287						
O61A	**Allentown**	38.05	74	P	P	05 25 32.1	-0.5
	baz=288						
O61A				S	S	05 31 26.5	+1.1
	baz=288						
L61A	**Hillsdale 1, H**	38.17	70	P	P	05 25 33.1	-0.5
	baz=286						
L61A				S	S	05 31 27.8	+0.6
	baz=286						
H60A	**Morristown**	38.18	66	P	P	05 25 33.7	-0.2
	baz=283						

H60A				S	S	05 31 28.9	+1.4
	baz=283						
VT1	Waterbury	38.20	67	IAmb	IAmb	05 25 53.0	
	comp=Z,1µm,1.1s						
VT1				IAMs_20	IAMs_20	05 41 50.0	
	comp=Z,155µm,21.0s						
K61A	Williamstown	38.24	69	P	P	05 25 34.3	0.0
	baz=285						
K61A				S	S	05 31 30.6	+2.1
	baz=285						
PAL	Palisades	38.24	72	IAMs_20	IAMs_20	05 41 58.5	
	comp=Z,188µm,22.0s						
PAL	Palisades	38.24	72	P	P	05 25 33.6	-0.7
	baz=287,SNR=5.3						
PAL				S	S	05 31 28.8	+0.3
	baz=287						
M61A	Granite Spring	38.26	72	P	P	05 25 33.9	-0.6
	baz=287						
M61A				S	S	05 31 29.7	+1.0
	baz=287						
CPNY	Central Park	38.27	73	IAmb	IAmb	05 25 42.7	
	comp=Z,1µm,1.4s						
D59A	Saint-Raymond	38.27	62	P	P	05 25 34.1	-0.4
	baz=281						
D59A				S	S	05 31 28.9	+0.2
	baz=281						
G60A	Masonville	38.32	65	P	P	05 25 34.5	-0.4
	baz=283						
G60A				S	S	05 31 30.4	+0.9
	baz=283						
KSCT	Kent School, K	38.34	71	IAmb	IAmb	05 25 52.4	
	comp=Z,1µm,1.4s						
KSCT				IAMs_20	IAMs_20	05 41 47.1	
	comp=Z,206µm,20.0s						
F60A	Warwick	38.40	64	P	P	05 25 34.8	-0.8
	baz=282						
F60A				S	S	05 31 31.5	+0.8
	baz=282						
J61A	Chester	38.58	68	P	P	05 25 37.1	0.0
	baz=285						
J61A				S	S	05 31 35.4	+2.0
	baz=285						
V62A	Hyde County Ai	38.58	81	P	P	05 25 38.0	+0.8
	baz=293						
V62A				S	S	05 31 36.1	+2.6
	baz=293						
N62A	Caumsett State	38.59	72	P	P	05 25 36.3	-0.8
	baz=287						
N62A				S	S	05 31 33.7	+0.2
	baz=287						
E60A	Ste Agathe de	38.66	63	P	P	05 25 37.7	0.0
	baz=282						
E60A				S	S	05 31 35.1	+0.6
	baz=282						
I61A	Oroboro, Fairl	38.67	67	P	P	05 25 38.6	+0.7
	baz=284						
I61A				S	S	05 31 36.2	+1.3
	baz=284						
HNH	Hanover	38.68	68	IAmb	IAmb	05 25 54.5	
	comp=Z,1µm,1.4s						
HNH				IAMs_20	IAMs_20	05 42 15.6	
	comp=Z,162µm,22.0s						
L61B	Northampton	38.72	70	P	P	05 25 39.0	+0.6
	baz=286						
L61B				S	S	05 31 37.7	+2.1
	baz=286						
H61A	Lyndonville	38.73	66	P	P	05 25 38.5	+0.2
	baz=284						
H61A				S	S	05 31 37.7	+2.0
	baz=284						
LBNH	Lisbon	38.80	67	IAmb	IAmb	05 25 53.4	
	comp=Z,720nm,1.1s						
LBNH	Lisbon	38.80	67	P	P	05 25 39.5	+0.5
	baz=284						
LBNH				S	S	05 31 42.5	+5.7
	baz=284						
G61A	St-Isidore-de-	38.83	65	P	P	05 25 39.2	0.0
	baz=283						
G61A				S	S	05 31 38.5	+1.3
	baz=283						
L62A	Suffield	38.85	70	P	P	05 25 39.4	0.0
	baz=286						
L62A				S	S	05 31 39.2	+1.7
	baz=286						
M62A	Hamden	38.85	71	P	P	05 25 39.2	-0.2
	baz=287						
M62A				S	S	05 31 38.2	+0.7
	baz=287						
YLE	Yale	38.86	71	IAmb	IAmb	05 25 56.6	
	comp=Z,3µm,1.8s						
YLE				IAMs_20	IAMs_20	05 42 02.7	
	comp=Z,196µm,21.0s						
D60A	Saint Jean D'O	38.91	62	P	P	05 25 39.5	-0.3
	baz=281,SNR=25						
D60A				S	S	05 31 37.8	-0.4
	baz=281						
K62A	Royalston	38.98	69	IAMs_20	IAMs_20	05 40 58.8	
	comp=Z,158µm,20.0s						
K62A	Royalston	38.98	69	P	P	05 25 40.6	+0.1
	baz=286						
K62A				S	S	05 31 41.2	+1.6
	baz=286						
QUA2	Belchertown	39.00	70	IAMs_20	IAMs_20	05 42 04.4	
	comp=Z,156µm,21.0s						
F61A	St Evariste	39.05	64	P	P	05 25 41.5	+0.4
	baz=282,SNR=65						
F61A				S	S	05 31 41.6	+1.1
	baz=282						
J62A	Henniker	39.13	68	P	P	05 25 42.4	+0.6
	baz=285						
J62A				S	S	05 31 43.2	+1.4
	baz=285						
FFD	Franklin Falls	39.18	68	IAmb	IAmb	05 25 54.0	
	comp=Z,1µm,1.5s						
FFD				IAMs_20	IAMs_20	05 42 32.0	
	comp=Z,159µm,22.0s						
H62A	Milan	39.25	66	IAMs_20	IAMs_20	05 42 12.8	
	comp=Z,154µm,18.0s						
H62A	Milan	39.25	66	P	P	05 25 43.0	+0.2
	baz=284						
H62A				S	S	05 31 45.2	+1.6
	baz=284						
N63A	Mattituck	39.25	72	P	P	05 25 42.7	-0.1
	baz=288						
N63A				S	S	05 31 45.4	+1.8
	baz=288						
E61A	Lac Etchemin	39.30	63	P	P	05 25 43.2	+0.1
	baz=282						
E61A				S	S	05 31 44.0	-0.2
	baz=282						
I62A	Tamworth	39.30	67	P	P	05 25 43.2	0.0
	baz=285						
I62A				S	S	05 31 46.1	+1.8
	baz=285						
D61A	St Aubert, Com	39.34	62	P	P	05 25 43.0	-0.4
	baz=281,SNR=50						
D61A				S	S	05 31 45.2	+0.4
	baz=281						
M63A	Gales Ferry	39.47	71	P	P	05 25 44.4	-0.1
	baz=287						
M63A				S	S	05 31 48.1	+1.2
	baz=287						
K63A	Dunstable	39.48	69	P	P	05 25 44.7	+0.1
	baz=286						
K63A				S	S	05 31 48.9	+1.9
	baz=286						
APG	El Apazote	39.50	120	P	P	05 25 46.5	+1.2
	comp=Z,242nm,1.1s,baz=328,slow=15,SNR=38						
HRV	Adam Dziewonsk	39.51	69	P	P	05 25 43.0	-1.9
HRV				pmax	pmax		
	comp=Z,548nm,1.4s						
HRV				MLR	MLR		
	comp=Z,123µm,19.0s						
HRV	Adam Dziewonsk	39.51	69	P	P	05 25 43.0	-1.9
HRV	Adam Dziewonsk	39.51	69	P	P	05 25 45.2	+0.3
	baz=286						
HRV				S	S	05 31 49.3	+1.9
	baz=286						
G62A	West of Eustis	39.53	65	P	P	05 25 44.3	-0.8
G62A	West of Eustis	39.53	65	P	P	05 25 44.2	-0.8
	baz=284						
G62A				S	S	05 31 49.0	+1.2
	baz=284						
J63A	Strafford	39.63	68	P	P	05 25 46.5	+0.6
	baz=286						
J63A				S	S	05 31 51.4	+2.1
	baz=286						
L63A	North Scituate	39.65	70	P	P	05 25 46.6	+0.6
	baz=287						
L63A				S	S	05 31 52.0	+2.5
	baz=287						
BRYW	Bryant College	39.69	70	IAMs_20	IAMs_20	05 42 36.5	
	comp=Z,165µm,20.0s						
WES	Weston	39.71	69	P	P	05 25 44.7	-1.8
WES				pmax	pmax		
	comp=Z,474nm,1.6s						
WES				MLR	MLR		
	comp=Z,154µm,21.0s						
WES	Weston	39.71	69	P	P	05 25 44.7	-1.8
WES				IAMs_20	IAMs_20	05 41 21.0	
	comp=Z,154µm,21.0s						
I63A	Otisfield	39.78	67	P	P	05 25 45.4	-1.8
I63A				IAMs_20	IAMs_20	05 41 38.8	
	comp=Z,256µm,22.0s						
I63A	Otisfield	39.78	67	P	P	05 25 47.6	+0.5
	baz=285						
I63A				S	S	05 31 53.9	+2.4
	baz=285						
FRB	Frobisher Bay	39.79	35	P	P	05 25 46.4	-0.5
	comp=Z,104nm,0.8s,baz=263,slow=8.0,SNR=122						
FRB				PP	PP	05 27 17.8	-0.2
	comp=Z,106nm,1.1s,baz=260,slow=13,SNR=4.8						
BCX	Boston College	39.83	69	IAMs_20	IAMs_20	05 41 25.2	
	comp=Z,154µm,22.0s						
H63A	New Sharon	40.01	65	P	P	05 25 49.1	+0.1
	baz=284						
H63A				S	S	05 31 56.4	+1.5
	baz=284						
M64A	Tiverton	40.03	71	P	P	05 25 49.0	-0.2
	baz=288						
M64A				S	S	05 31 57.1	+1.9
	baz=288						
D62A	Allapoint, All	40.13	62	IAMs_20	IAMs_20	05 41 49.6	
	comp=Z,142µm,19.0s						
D62A	Allapoint, All	40.13	62	P	P	05 25 50.0	0.0
	baz=282						
D62A				S	S	05 31 56.2	-0.4
	baz=282						
L64A	Middleborough	40.18	70	P	P	05 25 51.3	+0.9
	baz=287						
L64A				S	S	05 31 59.4	+1.9
	baz=287						
G63A	Kingsbury	40.19	65	P	P	05 25 50.9	+0.4
	baz=284						
G63A				S	S	05 31 58.9	+1.3
	baz=284						
PKME	Peaks-Kenny Pk	40.37	64	P	P	05 25 52.5	+0.5
	baz=284,SNR=11						
PKME				S	S	05 32 01.2	+0.9
	baz=284						
F63A	Nahmakanta, Br	40.40	64	IAmb	IAmb	05 26 17.1	
	comp=Z,1µm,1.9s						
F63A				IAMs_20	IAMs_20	05 41 09.9	
	comp=Z,192µm,20.0s						
F63A	Nahmakanta, Br	40.40	64	P	P	05 25 52.8	+0.5
	baz=284						
F63A				S	S	05 32 01.9	+1.1
	baz=284						
SCHQ	Schefferville	40.41	49	P	P	05 25 50.6	-1.6
	comp=Z,240nm,0.9s,baz=285,slow=7.7,SNR=90						
SCHQ				LR	LR	05 43 01.2	
	comp=Z,238µm,20.7s,baz=276,slow=37						
SCHQ	Schefferville	40.41	49	P	P	05 25 50.8	-1.5
M65A	Busby, Falmout	40.43	70	IAmb	IAmb	05 26 02.7	
	comp=Z,1µm,1.2s						
M65A				IAMs_20	IAMs_20	05 42 58.2	
	comp=Z,194µm,20.0s						
M65A	Busby, Falmout	40.43	70	P	P	05 25 53.1	+0.6
	baz=288						
M65A				S	S	05 32 03.4	+2.2
	baz=288						
I64A	Boothbay	40.48	66	P	P	05 25 53.7	+0.8
	baz=286						
I64A				S	S	05 32 03.8	+2.0
	baz=286						
H64A	Troy	40.58	65	P	P	05 25 54.3	+0.6
	baz=285						
H64A				S	S	05 32 04.2	+0.8
	baz=285						
E63A	Oxbow	40.69	62	IAMs_20	IAMs_20	05 41 16.6	
	comp=Z,158µm,22.0s						
E63A	Oxbow	40.69	62	P	P	05 25 54.2	-0.5
	baz=283,SNR=25						
E63A				S	S	05 32 05.1	0.0
	baz=283						
G64A	Maxfield	40.74	64	P	P	05 25 55.5	+0.4
	baz=284,SNR=9.9						
G64A				S	S	05 32 06.8	+1.0
	baz=284						
D63A	Stockholm	40.77	61	P	P	05 25 55.3	0.0
	baz=283,SNR=7.2						
D63A				S	S	05 32 06.1	-0.1
	baz=283						
F64A	Sherman	40.87	63	IAMs_20	IAMs_20	05 42 59.4	
	comp=Z,151µm,20.0s						
F64A	Sherman	40.87	63	P	P	05 25 56.5	+0.3
	baz=284,SNR=14						
F64A				S	S	05 32 07.7	-0.1
	baz=284						
PQI	Presque Isle	40.91	62	IAMs_20	IAMs_20	05 43 00.3	
	comp=Z,148µm,19.0s						
E64A	Bridgewater	41.09	62	P	P	05 25 58.0	0.0
	baz=284,SNR=36						
E64A				S	S	05 32 11.6	+0.5
	baz=284						
H65A	Eastbrook	41.23	65	P	P	05 25 59.5	+0.3
	baz=285						
H65A				S	S	05 32 14.3	+1.1
	baz=285						
G65A	Princeton	41.57	64	IAMs_20	IAMs_20	05 44 60.0	
	comp=Z,181µm,20.0s						
G65A	Princeton	41.57	64	P	P	05 26 02.4	+0.5
	baz=285						
G65A				S	S	05 32 20.2	+2.0
	baz=285						
H66A	Whiting	41.85	65	P	P	05 26 04.7	+0.4
	baz=286						
H66A				S	S	05 32 24.0	+1.7
	baz=286						
GGN	Saint George	42.09	64	IAmb	IAmb	05 26 30.1	
	comp=Z,927nm,1.6s						
GGN				IAMs_20	IAMs_20	05 44 07.0	
	comp=Z,198µm,18.0s						
TGUH	Tegucigalpa,Un	42.31	118	IAmb	IAmb	05 26 29.2	
	comp=Z,1µm,1.2s						
LMN	Caledonia Moun	43.27	62	IAMs_20	IAMs_20	05 45 29.8	
	comp=Z,187µm,18.0s						
HAL	Halifax	44.44	64	IAmb	IAmb	05 26 49.5	
	comp=Z,543nm,1.3s						
HAL				IAMs_20	IAMs_20	05 47 04.8	
	comp=Z,104µm,19.0s						
BILL	Bilibino	45.07	330	*d i*P	P	05 26 29.3	-0.6
BILL				pmax	pmax		
	comp=Z,293nm,1.6s						
BILL				MLR	MLR		
	comp=Z,36µm,16.0s						
ACON	Acoyapa	45.22	118	IAmb	IAmb	05 26 50.8	
	comp=Z,1µm,1.9s						
ACON				IAMs_20	IAMs_20	05 46 54.3	
	comp=Z,167µm,20.0s						
KULLO	Kullorsuaq	45.35	20	*i* P	P	05 26 31.4	-0.6
	comp=Z,1µm,1.8s						
KULLO				*i*		05 28 18.9	
KULLO	Kullorsuaq	45.35	20	*i* P	P	05 26 31.4	-0.6
KULLO				*i*		05 28 18.9	
KULLO				pmax	pmax		
	comp=Z,1µm,1.8s						
KULLO				MLR	MLR		
	comp=Z,260µm,20.0s						
GBN	Guysborough	45.61	62	P	P	05 26 34.1	-0.4
GBN				IAmb	IAmb	05 26 56.5	
	comp=Z,842nm,1.6s						
GBN				IAMs_20	IAMs_20	05 45 56.7	
	comp=Z,167µm,20.0s						
ESPN	Las Esperanzas	45.65	117	IAmb	IAmb	05 26 55.6	
	comp=Z,1µm,1.1s						
ESPN				IAMs_20	IAMs_20	05 45 13.6	
	comp=Z,206µm,22.0s						
GBS3	Finca Las Img	45.90	119	*e*P	P	05 26 35.8	-1.3
GB1A	Borinquen Arri	45.91	119	*e*P	P	05 26 37.7	+0.4
BUAI	Buenos Aires	45.91	119	*e*P	P	05 26 34.7	-2.5
BUEV	Buena Vista	45.92	119	*e*P	P	05 26 35.8	-1.5
LAPC	Finca la Perla	45.92	119	*e*P	P	05 26 35.5	-1.8
NY14	Universidad de	45.94	119	*e*P	P	05 26 36.4	-1.0
GPS1	Guardaparques	45.97	119	*e*P	P	05 26 36.9	-0.9
GPS3	Bodega del ICE	45.98	119	*e*P	P	05 26 38.5	+0.7
GPS2	Hotel Rincn d	45.99	119	*e*P	P	05 26 37.9	0.0
LIM1	Limonal	46.09	119	*e*P	P	05 26 40.3	+1.7
MESS	Mesas	46.10	119	*e*P	P	05 26 37.9	-0.8
GUAB	Guayabo de Bag	46.10	119	*e*P	P	05 26 37.7	-1.0
COLC	Colonia	46.15	119	*e*P	P	05 26 38.0	-1.1
CUI	Cuipilapa	46.18	119	*e*P	P	05 26 39.3	0.0
GUAI	GUAI	46.24	120	*e*P	P	05 26 39.0	-0.7
PTEN	Parque Tenorio	46.26	119	*e*P	P	05 26 39.0	-1.0
ACAL	Aguas Claras	46.29	119	*e*P	P	05 26 40.7	+0.5
PLVR	Palo Verde	46.29	120	*e*P	P	05 26 38.2	-2.2
MCJ	Malvern	46.48	105	⇓*i*P	P	05 26 45.7	+4.0
BBJ	Bamboo Saint A	46.50	104	*i* P	P	05 26 43.6	+1.8
JTS	Las Juntas de	46.59	119	P	P	05 26 41.4	-1.1
JTS				pmax	pmax		
	comp=Z,127nm,0.7s						
JTS				MLR	MLR		
	comp=Z,116µm,20.0s						
JTS	Las Juntas de	46.59	119	*e*P	P	05 26 40.0	-2.5
JTS	Las Juntas de	46.59	119	P	P	05 26 41.4	-1.1
JTS	Las Juntas de	46.59	119	IAMs_20	IAMs_20	05 48 26.4	
	comp=Z,116µm,20.0s						
CEDE	Laguna Cedeo	46.61	119	*e*P	P	05 26 43.0	+0.2
FORC	Fortuna	46.65	119	*e*P	P	05 26 43.4	+0.4
PCJ	Portland Cotta	46.99	105	⇓*i*P	P	05 26 49.8	+4.2
ILULI	Ilulissat	47.01	28	*i* P	P	05 26 44.8	-0.3
	comp=Z,570nm,1.4s						
ILULI	Ilulissat	47.01	28	*i* P	P	05 26 44.8	-0.3
ILULI				pmax	pmax		
	comp=Z,570nm,1.4s						
ILULI				MLR	MLR		
	comp=Z,200µm,15.0s						
ILULI	Ilulissat	47.01	28	IAmb	IAmb	05 27 03.7	
	comp=Z,859nm,1.6s						
ILULI				IAMs_20	IAMs_20	05 46 59.4	
	comp=Z,132µm,19.0s						
STH	Stony Hill	47.03	104	⇓*i*P	P	05 26 46.9	+0.9
DRLN	Deer Lake	47.09	56	IAmb	IAmb	05 27 11.3	
	comp=Z,745nm,1.2s						
HOJ	Hope	47.12	104	⇓*i*P	P	05 26 48.6	+1.9
GTBY	Guantanamo Bay	47.15	101	*i* P	P	05 26 45.6	-1.2
GTBY				IAML		05 34 16.1	
	comp=Z,8.4nm,0.7s						
GTBY	Guantanamo Bay	47.15	101	IAMs_20	IAMs_20	05 48 05.3	
	comp=Z,96µm,19.0s						
SFJD	Kangerlussuaq	47.34	31	*i* P	P	05 26 47.0	-0.8
SFJD	Kangerlussuaq	47.34	31	*i* P	P	05 26 47.0	-0.8
SFJD				MLR	MLR		
	comp=Z,17µm,15.0s						
SFJD	Kangerlussuaq	47.34	31	P	P	05 26 47.2	-0.5
SFJD				IAmb	IAmb	05 27 05.5	
	comp=Z,598nm,1.3s						
SFJD	Kangerlussuaq	47.34	31	IAMs_20	IAMs_20	05 47 01.5	
	comp=Z,107µm,19.0s						
HDC	Heredia	47.36	119	*e*P	P	05 26 46.4	-2.3
HDC	Heredia	47.36	119	IAMs_20	IAMs_20	05 47 30.8	
	comp=Z,162µm,22.0s						
LCR2	La Lucha 2	47.62	119	*e*P	P	05 26 48.6	-2.2
BBSR	BB Station	48.39	80	P	P	05 26 58.3	+1.9
BBSR				IAmb	IAmb	05 27 15.7	
	comp=Z,876nm,1.4s						
BBSR	BB Station	48.39	80	IAMs_20	IAMs_20	05 49 06.6	
	comp=Z,98µm,20.0s						
BRU2	Volcan	49.20	118	*e*P	P	05 27 02.5	-0.4
GRTK	Grand Turk	49.20	96	IAMs_20	IAMs_20	05 47 46.5	
	comp=Z,169µm,22.0s						
LGNH	Logne	49.89	100	*i* P	P	05 27 08.9	+1.0
SDDR	Presa de Saban	50.59	99	*i* P	P	05 27 13.5	+0.2
SDDR				IAML		05 35 58.9	
	comp=Z,3.1nm,0.8s						
SDDR	Presa de Saban	50.59	99	IAmb	IAmb	05 27 31.9	
	comp=Z,1µm,1.2s						
NRS	Narsarsuaq	50.62	38	*i* P	P	05 27 13.8	+0.9
NRS	Narsarsuaq	50.62	38	*i* P	P	05 27 13.8	+0.9
NRS				MLR	MLR		
	comp=Z,170µm,16.0s						
SUMG	Summit	50.72	23	⇓*i*P	P	05 27 13.1	-0.9
	comp=Z,2µm,1.3s						
SUMG	Summit	50.72	23	⇓*i*P	P	05 27 13.1	-0.9
SUMG				pmax	pmax		
	comp=Z,2µm,1.3s						
SUMG				MLR	MLR		
	comp=Z,470µm,18.0s						
SUMG	Summit	50.72	23	IAmb	IAmb	05 27 25.3	
	comp=Z,373nm,1.0s						
BCIP	Isla Barro Col	50.86	115	*e*P	P	05 27 15.2	-0.1
BCIP	Isla Barro Col	50.86	115	*e*P	P	05 27 14.0	-1.4
BCIP	Isla Barro Col	50.86	115	IAmb	IAmb	05 27 34.5	
	comp=Z,1µm,1.6s						
BCIP				IAMs_20	IAMs_20	05 49 14.4	
	comp=Z,133µm,22.0s						
PET	Petropavlovsk	51.17	311	P	P	05 27 15.9	-1.3
PET				pmax	pmax		
	comp=Z,319nm,1.2s						
PET	Petropavlovsk	51.17	311	P	P	05 27 15.9	-1.3
TAOE	Nuku Hiva Isla	51.25	199	*e*P	P	05 27 18.1	-0.2
	comp=Z,908nm,1.5s						
TAOE				*e*S	S	05 34 35.3	-2.2
	comp=Z,70µm,24.7s						
TAOE				*e*LQ	LQ	05 39 36.0	
	comp=Z,144µm,23.1s						
TAOE				*e*LR	LR	05 41 52.4	
	comp=Z,494µm,28.1s,baz=22						
TAOE	Nuku Hiva Isla	51.25	199	*e*T	T	06 21 58.2	
	comp=Z,1µm,0.2s						
TAOE	Nuku Hiva Isla	51.25	199	P	P	05 27 17.0	-1.3
TAOE				IAmb	IAmb	05 27 31.2	
	comp=Z,1µm,2.0s						
SEY	Seymchan	51.46	325	P	P	05 27 19.2	0.0
	comp=Z,56nm,1.0s,baz=95,slow=7.8,SNR=7.6						
SEY				LR	LR	05 46 54.0	
	comp=Z,55µm,20.1s,baz=86,slow=34						
SEY	Seymchan	51.46	325	⇓*e*P	P	05 27 19.1	-0.1
BANI	BANI	51.64	99	P	P	05 27 19.9	-1.4
PEA0B	Petropavlovsk-	51.69	311	*de*P	P	05 27 22.2	+1.0
PEA0B	Petropavlovsk-	51.69	311	P	P	05 27 18.9	-2.2
PETK	Petropavlovsk-	51.69	311	P	P	05 27 21.2	0.0
	comp=Z,30nm,0.8s,baz=89,slow=10,SNR=31						
PETK				LR	LR	05 45 12.3	
	comp=Z,46µm,21.6s,baz=84,slow=31						
PETK	Petropavlovsk-	51.69	311		P	05 27 20.6	-0.6
SDD	Santo Domingo	51.94	98	*i* P	P	05 27 22.5	-0.9
SDD				IAML		05 34 07.9	
	comp=Z,6.2nm,0.5s						
SDD	Santo Domingo	51.94	98	P	P	05 27 23.2	-0.2
PAYG	Puerto Ayora	51.94	134	*e*P	P	05 27 29.8	+6.4
DR12	Loma Pena Alta	52.14	98	P	P	05 27 25.4	+0.4
NOR	Nord	52.59	10	⇓*i*P	P	05 27 26.9	-0.5
NOR	Nord	52.59	10	⇓*i*P	P	05 27 26.9	-0.5
NOR				MLR	MLR		
	comp=Z,160µm,22.0s						
ANGG	Ammassalik, Gr	52.75	31	P	P	05 27 29.7	+0.9
ANGG				IAMs_20	IAMs_20	05 50 08.5	
	comp=Z,121µm,18.0s						
CAPC	Capurgana	52.96	114	*e*P	P	05 27 35.5	+4.5
PCDR	Punta Cana, DR	53.06	97	P	P	05 27 29.8	-1.9
MA2	Magadan	53.21	321	P	P	05 27 32.9	+0.6
	comp=Z,24nm,0.8s,baz=89,slow=8.9,SNR=16						
MA2				LR	LR	05 49 35.7	
	comp=Z,58µm,18.5s,baz=80,slow=35						
MA2	Magadan	53.21	321	*de*P	P	05 27 33.1	+0.8
MA2				pmax	pmax		
	comp=Z,144nm,1.3s						
MA2	Magadan	53.21	321	P	P	05 27 32.2	-0.1
SMRC	Santa Marta, M	53.43	109	*e*P	P	05 27 44.0	+9.5
SKR	Severo-Kuril's	53.46	309	⇑*e*P	P	05 27 33.8	-0.4
SJCC	San Jacinto, C	53.61	111	*e*P	P	05 27 42.0	+6.1
PTAC	Punta Ardita,	53.70	115	*e*P	P	05 27 37.6	+1.2
AGPR	Aguadilla, PR	54.05	96	IAML		05 36 08.2	
	comp=Z,32nm,0.3s						
AGPR	Aguadilla, PR	54.05	96	P	P	05 27 38.6	-0.3
CRPR	Cabo Rojo, PR	54.33	97	P	P	05 27 40.6	-0.4
DAG	Danmarks Havn	54.35	16	*i* P	P	05 27 39.2	-1.2
DAG	Danmarks Havn	54.35	16	*i* P	P	05 27 39.2	-1.2
DAG				MLR	MLR		
	comp=Z,180µm,23.0s						
AOPR	Arecibo Observ	54.39	96	P	P	05 27 41.3	-0.2
SOLC	Bahia Solano	54.64	116	*e*P	P	05 27 48.6	+5.3
OBIP	Obispado Ponce	54.68	96	IAMs_20	IAMs_20	05 55 28.5	
	comp=Z,147µm,21.0s						
URIC	Uribia, Colomb	54.69	106	*e*P	P	05 27 46.6	+2.9
CODC	Agustn Codazz	54.83	109	*e*P	P	05 27 49.2	+4.6
UREC	San Jos de Ur	54.85	113	*e*P	P	05 27 44.8	-0.1
DBBC	Dabeiba	54.90	114	*e*P	P	05 27 51.6	+6.3
SJG	San Juan	54.99	96	P	P	05 27 46.8	+1.0

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             comp=Z,521nm,1.0s,baz=302,slow=5.1,SNR=28
SJG   San Juan          54.99  96 eP       P        05 27 51.5 +5.7
SJG   San Juan          54.99  96  P       P        05 27 45.5 -0.3
SJG                                pmax    pmax
             comp=Z,2µm,1.5s
SJG                                MLR     MLR
             comp=Z,112µm,19.0s
SJG   San Juan          54.99  96  P       P        05 27 45.5 -0.3
SJG   San Juan          54.99  96  IAMs_20 IAMs_20  05 55 48.6
             comp=Z,112µm,19.0s
PDPR  Patillas Dam,     55.14  96  P       P        05 27 46.0 -0.9
SMLC  San Martn de      55.15 111 eP       P        05 27 48.3 +1.2
ZARC  Zaragoza, Cauc    55.51 112 eP       P        05 27 51.2 +1.6
CUPR  Culebra, Puert    55.52  95  P       P        05 27 49.2 -0.5
PIZC  Pizarro, Choco    55.58 117 eP       P        05 27 52.6 +2.5
CBOC  Ciudad Bolivar    55.86 115 eP       P        05 27 58.1 +5.8
HELC  Santa Helena      55.96 114 eP       P        05 27 58.9 +5.6
OCAC  Ocana             56.08 110 eP       P        05 27 55.5 +1.6
MALC  Bahia Malaga      56.29 117 eP       P        05 27 57.7 +2.5
SCO   Scoresbysund      56.36  23 i P      P        05 27 54.0 -0.9
             comp=Z,392nm,1.3s
SCO   Scoresbysund      56.36  23 i P      P        05 27 54.0 -0.9
SCO                                pmax    pmax
             comp=Z,390nm,1.3s
SCO                                MLR     MLR
             comp=Z,170µm,17.0s
SCO   Scoresbysund      56.36  23  IAmb    IAmb     05 28 06.2
             comp=Z,400nm,1.3s
PLMC  San Jos del P     56.36 116 eP       P        05 27 57.5 +1.7
PTBC  PUERTO BERRIO,    56.46 113 eP       P        05 27 56.1 -0.3
GR1C  Gorgona, Isla     56.48 119 eP       P        05 28 03.5 +7.0
TIXI  Tiksi             56.64 339  P       P        05 27 56.7 -0.3
             comp=Z,112nm,1.1s,baz=98,slow=8.6,SNR=1.9
TIXI                               PKPPKP  P'P'df   05 57 48.5  -11
             comp=Z,1.7nm,0.3s,baz=292,slow=3.0,SNR=3.9
TIXI  Tiksi             56.64 339deP       P        05 27 55.7 -1.2
TIXI                               pmax    pmax
             comp=Z,175nm,1.2s
TIXI                               MLR     MLR
             comp=Z,41µm,17.0s
TIXI  Tiksi             56.64 339  P       P        05 27 56.5 -0.4
NORC  Norcasia          56.86 114 eP       P        05 27 59.3 -0.1
YOTC  Yotoco, Valle     56.98 117 eP       P        05 28 00.1 -0.2
PAMC  Pamplona, Colo    57.14 111 eP       P        05 28 04.5 +2.6
BARC  Barichara         57.32 112 eP       P        05 28 06.7 +3.9
SMRT  St. Maarten       57.35  94 eP       P        05 28 01.0 -1.7
SMRT  St. Maarten       57.35  94  P       P        05 28 01.0 -1.7
SMRT  St. Maarten       57.35  94  IAMs_20 IAMs_20  05 53 56.2
             comp=Z,101µm,22.0s
SPBC  San Pablo de B    57.35 113 eP       P        05 28 02.2 -0.7
SABA  Saba              57.48  94 eP       P        05 28 02.6 -1.0
SABA  Saba              57.48  94  P       P        05 28 02.6 -1.0
SABA  Saba              57.48  94  IAMs_20 IAMs_20  05 54 42.7
             comp=Z,134µm,21.0s
SDV   Santo Domingo     57.56 108 eP       P        05 28 10.0 +5.5
SDV   Santo Domingo     57.56 108  P       P        05 28 04.2 -0.3
SDV                                IAmb    IAmb     05 28 29.3
             comp=Z,683nm,1.2s
SDV   Santo Domingo     57.56 108 eP       P        05 28 04.4 -0.1
CTAB  Cerro Tablazo,    57.72 114 eP       P        05 28 13.6 +7.7
SEUS  St. Eustatius     57.76  94 eP       P        05 28 02.0 -3.6
SEUS  St. Eustatius     57.76  94  P       P        05 28 02.0 -3.6
SEUS  St. Eustatius     57.76  94  IAMs_20 IAMs_20  05 57 25.0
             comp=Z,89µm,20.0s
ROSC  El Rosal          57.76 114  P       P        05 28 07.5 +1.4
             comp=Z,50nm,1.0s,baz=15,slow=6.8,SNR=25
ROSC                               LR      LR       05 58 26.8
             comp=Z,73µm,18.0s,baz=340,slow=42
ROSC  El Rosal          57.76 114 eP       P        05 28 08.2 +2.1
ROSC  El Rosal          57.76 114  P       P        05 28 06.9 +0.8
ROSC                               IAMs_20 IAMs_20  05 55 22.0
             comp=Z,72µm,20.0s
ORTC  Ortega, Tolima    57.79 116 eP       P        05 28 07.4 +1.5
SOCV  Socops            57.81 108 eP       P        05 28 08.2 +2.2
BBAC  Balboa, Cauca     57.82 119 eP       P        05 28 13.1 +6.8
RUSC  La Rusia          57.88 112 eP       P        05 28 08.5 +1.5
RUSC  La Rusia          57.88 112  P       P        05 28 06.9 -0.1
KBS   Kingsbay          57.99   9 eP       P        05 28 06.7 +0.3
KBS                                IVmB_BB          05 28 12.8
             comp=Z,5µm,6.7s
KBS                               eS       S        05 36 08.2 +1.5
KBS                               eSS      SS       05 39 59.0 +2.2
KBS                                IVMs_BB IVMs_BB  05 51 23.1
             comp=Z,48µm,19.4s
KBS   Kingsbay          57.99   9deP       P        05 28 07.1 +0.7
KBS                                pmax    pmax
             comp=Z,1µm,1.3s
KBS   Kingsbay          57.99   9  P       P        05 28 06.6 +0.3
KBS                                IAmb    IAmb     05 28 12.8
             comp=Z,403nm,1.4s
SKI   Saint Kitts       58.04  94 eP       P        05 28 06.2 -1.4
SKI   Saint Kitts       58.04  94  P       P        05 28 06.7 -0.9
SKI                                pmax    pmax
             comp=Z,586nm,0.7s
SKI                                MLR     MLR
             comp=Z,128µm,22.0s
SKI   Saint Kitts       58.04  94  P       P        05 28 06.7 -0.9
SKI                                IAmb    IAmb     05 28 12.6
             comp=Z,586nm,0.7s
SKI                                IAMs_20 IAMs_20  05 55 02.3
             comp=Z,128µm,22.0s
SKOC  St. Kitts, UWI    58.07  94 eP       P        05 28 08.7 +0.9
CVER  Cruz Verde, Cu    58.16 114 eP       P        05 28 15.8 +6.8
PCON  Cinco Dias        58.16 118 eP       P        05 28 11.1 +2.0
CHIC  Chingaza          58.32 114 eP       P        05 28 15.9 +5.9
CRUC  La Cruz           58.35 119 eP       P        05 28 18.3 +8.1
OTAV  Otavalo           58.36 121 eP       P        05 28 12.3 +1.9
OTAV  Otavalo           58.36 121  P       P        05 28 10.4  0.0
OTAV                               pmax    pmax
             comp=Z,1µm,1.7s
OTAV                               MLR     MLR
             comp=Z,60µm,22.0s
OTAV  Otavalo           58.36 121  P       P        05 28 10.4  0.0
OTAV                               IAmb    IAmb     05 28 34.1
             comp=Z,1µm,1.6s
OTAV  Otavalo           58.36 121 eP       P        05 28 11.5 +1.1
CPAS1 Pasto             58.39 120 eP       P        05 28 17.7 +7.2
CPAS2 Pasto             58.41 120 eP       P        05 28 17.7 +7.1
TAMC  Tame, Arauca      58.41 111 eP       P        05 28 14.3 +4.1
TAMC  Tame, Arauca      58.41 111 eP       P        05 28 11.4 +1.1
ANWB  Willy Bob         58.56  93 eP       P        05 28 09.1 -2.1
ANWB  Willy Bob         58.56  93  P       P        05 28 09.1 -2.1
MLYT  Lee's Yard        58.83  94 eP       P        05 28 12.0 -1.1
GARC  Garzon, Huila     58.87 117 eP       P        05 28 19.2 +5.5
GARC                              eP       P        05 28 20.2 +6.5
FLOC  Florencia         59.21 118 eP       P        05 28 22.2 +6.5
PMOR  Pomariorio Ree    59.34 206 eP       P        05 28 17.7 +1.2
             comp=Z,166nm,1.1s
PMOR  Pomariorio Ree    59.34 206 eT       T        06 32 04.2
             comp=Z,346nm,0.3s
BORG  Borgarnes         59.37  29  P       P        05 28 17.0 +0.9
             comp=Z,67nm,1.0s,baz=56,slow=2.5,SNR=5.0
BORG  Borgarnes         59.37  29  P       P        05 28 15.7 -0.5
BORG                               pmax    pmax
             comp=Z,298nm,1.2s
BORG                               MLR     MLR
             comp=Z,71µm,20.0s
BORG  Borgarnes         59.37  29  P       P        05 28 15.7 -0.5
BORG                               IAmb    IAmb     05 28 32.1
             comp=Z,298nm,1.1s
BORG  Borgarnes         59.37  29  IAMs_20 IAMs_20  05 53 37.2
             comp=Z,71µm,20.0s
BAUV  El Baul           59.41 106 eP       P        05 28 13.8 -3.4
VAH   Vaihoa            59.48 205 eP       P        05 28 18.6 +1.2
             comp=Z,543nm,1.3s
VAH   Vaihoa            59.48 205 eT       T        06 32 14.6
             comp=Z,234nm,0.4s
ELOV  Elorza            59.68 108 eP       P        05 28 19.2 +0.2
PTGC  Puerto Gaitan,    59.74 113 eP       P        05 28 20.1 +0.6
JMI   Jan Mayen         59.81  20  IVMs_BB IVMs_BB  05 53 44.3
             comp=Z,52µm,16.8s
JMIC  Jan Mayen         59.83  20 eP       P        05 28 18.9 -0.3
JMIC                              eS       S        05 36 33.7 +3.0
JMIC                              eSS      SS       05 40 31.1 +5.2
JMIC                               IVMs_BB IVMs_BB  05 53 42.0
             comp=Z,45µm,22.1s
H05N1 Guadeloupe/Mar    59.93  94  P       P        05 28 21.3 +0.6
HSPB  Hornsund (broa    60.00  10 eP       P        05 28 23.6 +3.3
HSPB                              eS       S        05 36 28.7 -4.0
HSPB                              eL       L        05 51 17.2
             comp=Z,165µm,23.5s
HSPB  Hornsund (broa    60.00  10 eP       P        05 28 19.8 -0.5
HSPB                               IVmBBB           05 28 27.3
             comp=Z,5µm,4.4s
HSPB                              eS       S        05 36 33.5 +0.8
HSPB                              eSS      SS       05 40 30.9 +2.6
HSPB                               IVMs_BB IVMs_BB  05 51 27.6
             comp=Z,44µm,19.8s
HSPB  Hornsund (broa    60.00  10 eP       P        05 28 23.6 +3.3
HSPB                              eS       S        05 36 28.7 -4.0
MACC  Macarena, Meta    60.02 116 eP       P        05 28 27.4 +6.0
MACC  Macarena, Meta    60.02 116 eP       P        05 28 26.3 +4.9
MDPV  Dominica, Penn    60.08  95 eP       P        05 28 18.7 -3.1
MDPO  Dominica; Chan    60.09  95 eP       P        05 28 23.7 +1.9
DWS   Wesley            60.20  95 eP       P        05 28 15.9 -6.6
DWS   Wesley            60.20  95 e        S        05 36 42.4 +5.6
GUVC  San Jose del G    60.57 115 eP       P        05 28 30.9 +5.7
KNTN  Kanton            60.66 236  IAMs_20 IAMs_20  05 50 48.0
             comp=Z,62µm,18.0s
FDF   Fort de France    60.84  96 eP       P        05 28 22.3 -4.7
FDF   Fort de France    60.84  96 e        S        05 36 47.7 +2.6
FDF   Fort de France    60.84  96  P       P        05 28 22.3 -4.7
FDF                                pmax    pmax
             comp=Z,3µm,1.9s
FDF                                MLR     MLR
             comp=Z,69µm,20.0s
FDF   Fort de France    60.84  96  P       P        05 28 22.3 -4.7
FDF   Fort de France    60.84  96  IAMs_20 IAMs_20  05 55 21.6
             comp=Z,69µm,20.0s
H11N3 WAKE ISLAND Hy    60.91 272  P       P        05 28 29.2 +2.1
H11N3                              T       T        06 35 08.9
             baz=53,slow=75,SNR=3226
H11N2 WAKE ISLAND Hy    60.91 272  P       P        05 28 29.2 +2.1
H11N2                              T       T        06 35 14.8
             baz=53,slow=75,SNR=3915
H11N1 WAKE ISLAND Hy    60.93 272  P       P        05 28 29.3 +2.1
H11N1                              T       T        06 35 15.2
             baz=53,slow=75,SNR=4525
NKL   Nikolayevsk       60.99 317 eP       P        05 28 28.1 +0.7
NKL                               e                 05 29 05.1
NKL                               e                 05 30 46.0
NKL                               eS       S        05 36 54.4 +8.4
NKL                                pmax    pmax
             comp=Z,68nm,1.1s
NKL                                pmax    pmax
             comp=N,10.0nm,1.0s
NKL                                pmax    pmax
             comp=E,4.0nm,1.2s
NKL                                pmax    pmax
             comp=Z,823nm,8.0s
NKL                                smax    smax
             comp=E,37nm,4.9s
NKL                                smax    smax
             comp=N,13nm,5.8s
TYV   Tymovskoe         61.07 314 eP       P        05 28 28.4 +0.4
TYV                               eS       S        05 36 50.4 +3.3
TYV                                pmax    pmax
             comp=Z,2µm,4.4s
TYV                                pmax    pmax
             comp=Z,110nm,1.1s
TYV                                smax    smax
             comp=E,7µm,7.5s
TYV                                smax    smax
             comp=E,27nm,3.0s
PCRV  Puerto La Cruz    61.11 102  P       P        05 28 28.2 -0.7
             comp=E,18nm,1.2s,baz=278,slow=7.1,SNR=2.7
PLCV  Puerto La Cruz    61.16 102  P       P        05 28 28.2 -0.9
YAK   Yakutsk           61.38 329 eP       P        05 28 30.7 +0.8
YAK                               e*PP     pwP      05 28 34.6 -0.1
YAK                               e                 05 29 11.6
YAK                               eS       S        05 36 51.1 +0.4
YAK                               e*SS     sS       05 37 10.2  +18
YAK                               eSS      SS       05 40 54.0 +3.6
YAK                                pmax    pmax
             comp=Z,84nm,0.9s
YAK                                pmax    pmax
             comp=E,26nm,1.1s
YAK                                pmax    pmax
             comp=N,13nm,1.3s
YAK                                smax    smax
             comp=E,3µm,5.1s
YAK                                smax    smax
             comp=N,11µm,12.8s
YAK                                MLR     MLR
             comp=E,42µm,19.0s
YAK                                MLR     MLR
             comp=N,29µm,17.0s
YAK   Yakutsk           61.38 329  P       P        05 28 28.7 -1.2
YAK                                IAmb    IAmb     05 28 49.1
             comp=Z,471nm,1.3s
SLBI  Saint Lucia, B    61.41  96 eP       P        05 28 21.0  -10
SLBI  Saint Lucia, B    61.41  96 e        S        05 36 55.6 +3.3
SLB   Belfond           61.48  96 eP       P        05 28 28.4 -2.9
HOPEN Hopen             61.51   8 eP       P        05 28 30.0 -0.6
HOPEN                              IVmBBB           05 28 33.9
             comp=Z,6µm,3.7s
HOPEN                             eS       S        05 36 52.7 +0.7
HOPEN                             eSS      SS       05 40 54.4 +2.5
SLAC  Saint Lucia, A    61.55  96 eP       P        05 28 29.3 -2.5
MCLT  Moule a Chique    61.63  96 eP       P        05 28 31.1 -1.2
MCLT  Moule a Chique    61.63  96 e        S        05 36 55.6 +0.4
MCLT  Moule a Chique    61.63  96  P       P        05 28 31.1 -1.2
MCLT  Moule a Chique    61.63  96  IAMs_20 IAMs_20  05 56 01.7
             comp=Z,87µm,20.0s
SVV   Soufriere Volc    61.67  97 eP       P        05 28 34.4 +1.8
SVV   Soufriere Volc    61.67  97 e        S        05 36 59.9 +4.2
SVB   Belmont           61.67  97 eP       P        05 28 33.3 +0.7
SVB   Belmont           61.67  97 e        S        05 36 58.7 +3.0
SVB   Belmont           61.67  97  P       P        05 28 33.3 +0.7
SVB   Belmont           61.67  97  IAMs_20 IAMs_20  05 58 47.7
             comp=Z,81µm,20.0s
SSV   Crater Summit     61.68  97 eP       P        05 28 33.3 +0.5
SVCV  St. Vincent, C    61.75  97 eP       P        05 28 28.8 -4.4
SVCV  St. Vincent, C    61.75  97 e        S        05 37 01.9 +5.2
H11S1 WAKE ISLAND Hy    61.79 271  T       T        06 36 16.4
             baz=61
H11S2 WAKE ISLAND Hy    61.80 271  P       P        05 28 31.3 -1.8
H11S2                              T       T        06 36 21.6
             baz=61
H11S3 WAKE ISLAND Hy    61.81 271  P       P        05 28 31.4 -1.8
H11S3                              T       T        06 36 22.1
             baz=61
GRSS  Sisters           62.01  98 eP       P        05 28 27.5 -7.4
GRHS  Sauteurs          62.04  98 eP       P        05 28 29.5 -5.6
GRHS  Sauteurs          62.04  98 e        S        05 36 52.6 -7.7
GRGR  Grenville         62.09  98 eP       P        05 28 33.2 -2.2
GRGR  Grenville         62.09  98 e        S        05 36 55.6 -5.3
GRGR  Grenville         62.09  98  IAMs_20 IAMs_20  05 56 45.8
             comp=Z,113µm,21.0s
MEH   Mehetia           62.09 205 eP       P        05 28 36.0 +0.8
             comp=Z,102nm,1.2s
MEH   Mehetia           62.09 205 eT       T        06 35 30.6
             comp=Z,388nm,0.3s
TIAR  Tiarei            62.21 206 eP       P        05 28 37.2 +1.2
             comp=Z,100nm,1.1s
TIAR  Tiarei            62.21 206 eT       T        06 35 40.0
             comp=Z,52nm,0.2s
PPT   Papeete           62.30 207  P       P        05 28 40.1 +3.5
             comp=Z,141nm,0.9s,baz=8.1,slow=5.4,SNR=5.2
PPT                                LR      LR       05 48 05.9
             comp=Z,94µm,20.0s,baz=17,slow=29
PPTF  Pamatai, Papee    62.32 207  P       P        05 28 34.0 -2.8
PPTF                               IAmb    IAmb     05 29 01.3
             comp=Z,436nm,1.3s
PPT2  Papeete2          62.32 207 eP       P        05 28 38.1 +1.3
             comp=Z,276nm,1.3s
PPT2                              eS       S        05 37 02.0 -1.6
             comp=Z,200µm,27.2s
PPT2                              eLQ      LQ       05 44 18.4
             comp=Z,316µm,33.0s
PPT2                              eLR      LR       05 46 56.5
             comp=Z,402µm,28.2s,baz=16
PPT2  Papeete2          62.32 207 eT       T        06 35 47.5
             comp=Z,70nm,0.3s
PAE   Paea              62.39 206 eP       P        05 28 38.3 +1.1
             comp=Z,89nm,1.2s
PAE   Paea              62.39 206 eT       T        06 35 53.0
             comp=Z,22nm,0.3s
TVO   Taravao           62.39 206 eT       T        06 35 53.8
             comp=Z,32nm,0.3s
BJO1  Bjornoya          62.59  10 eP       P        05 28 37.5 -0.4
BJO1                              eS       S        05 37 09.6 +4.0
BJO1                              eSS      SS       05 41 10.7 +1.9
BJO1                               IVMs_BB IVMs_BB  05 52 29.1
             comp=Z,29µm,23.9s
YUK   Yuzh-Kuril'sk     62.66 306 eP       P        05 28 36.4 -2.4
YUK                               e                 05 29 15.0
YUK                               e                 05 30 54.2
YUK                               eS       S        05 37 06.0 -1.5
YUK                               eSS      SS       05 41 10.3 -0.9
YUK                               eSSS     SSS      05 44 02.4
YUK                                pmax    pmax
             comp=Z,526nm,0.8s
YUK                                pmax    pmax
             comp=E,284nm,0.9s
YUK                                pmax    pmax
             comp=N,141nm,0.6s
YUK                                pmax    pmax
             comp=Z,680nm,1.3s
ORIV  Oritupano         62.75 102 eP       P        05 28 34.1 -5.7
ORIV  Oritupano         62.75 102 e        S        05 37 03.6 -5.7
BCHC  Barbados, Cave    62.98  96 eP       P        05 28 42.4 +1.0
BCHC  Barbados, Cave    62.98  96 e        S        05 37 20.4 +8.3
YSS   Yuzh-Sakhalins    63.01 310  P       P        05 28 39.6 -1.5
YSS                                pmax    pmax
             comp=Z,195nm,1.1s
YSS   Yuzh-Sakhalins    63.01 310  P       P        05 28 39.6 -1.5
BBGH  Gun Hill          63.03  96 eP       P        05 28 34.7 -7.0
BBGH  Gun Hill          63.03  96 e        S        05 37 15.6 +2.8
TRN   Trinidad (W)      63.22  99 eP       P        05 28 38.4 -4.6
TRN   Trinidad (W)      63.22  99 e        S        05 37 07.6 -7.6
TPP   Pointe-a-Pierr    63.40 100 eP       P        05 28 44.9 +0.7
TOSP  Speyside          63.46  98 eP       P        05 28 38.9 -5.7
TOSP  Speyside          63.46  98  P       P        05 28 41.1 -3.4
TBH   Brigand Hill      63.58  99 eP       P        05 28 45.3 -0.1
GRNR  Gornyy            64.48 316⇓iP       P        05 28 51.4 +0.6
GRNR                              eS       S        05 37 34.1 +4.1
GRNR                               pmax    pmax
             comp=Z,90nm,1.3s
GRNR                               MLR     MLR
             comp=Z,16µm,17.0s
JKA   Kamikawa-asahi    64.61 307  P       P        05 28 52.6 +0.9
ASAJ  Asahikawa         64.61 307  P       P        05 28 52.6 +0.9
             comp=Z,78nm,1.0s,baz=329,slow=2.6,SNR=28
ERM   Erimo             65.42 305deP       P        05 28 58.1 +1.1
ERM                                pmax    pmax
             comp=Z,291nm,1.3s
ERM   Erimo             65.42 305  P       P        05 28 54.1 -2.9
ERM                                IAmb    IAmb     05 29 03.5
             comp=Z,212nm,1.0s
HAMF  Hammerfest        66.67  11 eP       P        05 29 03.5 -1.1
HAMF                               IVmBBB           05 29 15.6
             comp=Z,9µm,3.7s
HAMF                              eS       S        05 37 58.7 +2.6
HAMF                              eSS      SS       05 42 14.1 +1.6
HAMF                               IVMsBB           05 55 19.3
             comp=Z,29µm,22.6s
TRO   Tromso            66.83  13 eP       P        05 29 05.0 -0.6
TRO                                IVmB_BB          05 29 11.1
             comp=Z,10µm,6.5s
TRO                               eS       S        05 38 01.4 +3.4
TRO                               eSS      SS       05 42 16.7 +1.8
LOF   Lofoten           67.12  16 eP       P        05 29 07.4 -0.1
LOF                                IVmB_BB          05 29 12.4
             comp=Z,10µm,6.8s
LOF                               eS       S        05 38 05.6 +4.0
LOF                               eSS      SS       05 42 19.9 +0.5
ZEA   Zeya              67.31 322 eP       P        05 29 07.9 -1.0
ZEA                               e                 05 31 39.0
ZEA                               eS       S        05 38 02.0 -2.3
ZEA                                pmax    pmax
             comp=E,2µm,9.0s
ZEA                                pmax    pmax
             comp=Z,6µm,9.0s
ZEA                                pmax    pmax
             comp=N,1µm,8.0s
ZEA                                pmax    pmax
             comp=E,170nm,1.6s
ZEA                                pmax    pmax
             comp=Z,400nm,1.6s
ZEA                                pmax    pmax
             comp=Z,3µm,14.0s
ZEA                                pmax    pmax
             comp=N,1µm,9.0s
ZEA                                smax    smax
             comp=N,20µm,18.0s
ZEA                                MLR     MLR
             comp=Z,44µm,18.0s
ZEA                                MLR     MLR
             comp=E,35µm,17.0s
STEI  Steigen           67.63  15 eP       P        05 29 10.3 -0.4
STEI                              eS       S        05 38 09.5 +1.8
STEI                              eSS      SS       05 42 33.0 +5.7
STEI                               IVMs_BB IVMs_BB  05 57 19.2
             comp=Z,46µm,22.6s
NRIK  Noril'sk          67.64 348  P       P        05 29 10.8  0.0
             comp=Z,110nm,1.1s,baz=24,slow=6.1,SNR=23
NRIK                               PKP2bc           05 57 38.3
             comp=Z,2.9nm,0.4s,baz=237,slow=3.9,SNR=4.2
NRIK                               LR      LR       06 01 07.3
             comp=Z,56µm,18.5s,baz=39,slow=38
TEY   Ternei            67.64 311⇑iP       P        05 29 11.2  0.0
TEY                               eS       S        05 38 02.4 -6.2
TEY                                pmax    pmax
             comp=E,30nm,0.9s
TEY                                pmax    pmax
             comp=Z,80nm,1.0s
TEY                                pmax    pmax
             comp=N,20nm,0.9s
TEY                                pmax    pmax
             comp=E,600nm,4.7s
KLR   Kul'dur           67.83 316  P       P        05 29 12.1 -0.2
             comp=E,23nm,1.0s,baz=23,slow=4.1,SNR=14
KLR                                PKP2bc           05 57 36.6
             comp=E,6.8nm,1.0s,baz=240,slow=4.8,SNR=3.4
KLR   Kul'dur           67.83 316c iP      P        05 29 11.4 -0.9
KLR                                pmax    pmax
             comp=Z,242nm,1.8s
KLR                                MLR     MLR
             comp=Z,38µm,19.0s
ARCES ARCESS Array B    67.95  11  P       P        05 29 11.6 -1.1
             comp=Z,153nm,1.2s,baz=4.2,slow=3.8,SNR=21
ARCES                              PKP2bc           05 57 37.5
             comp=Z,11nm,1.1s,baz=195,slow=3.6,SNR=5.4
ARCES                              LR      LR       05 58 01.0
             comp=Z,61µm,21.7s,baz=336,slow=35
ARCES ARCESS Array B    67.95  11  P       P        05 29 11.0 -1.7
ARCES ARCESS Array B    67.95  11  P       P        05 29 11.0 -1.7
ARE0  ARCESS Array S    67.95  11 eP       P        05 29 11.8 -0.9
ARE0                               IVmB_BB          05 29 18.9
             comp=Z,6µm,4.1s
ARE0                              eS       S        05 38 12.6 +1.0
ARE0                              eSS      SS       05 42 35.9 +3.6
ARE0                               IVMs_BB IVMs_BB  05 55 42.7
             comp=Z,26µm,26.9s
ARE0  ARCESS Array S    67.95  11  P       P        05 29 08.9 -3.8
KEV   Kevo              67.95  10  P       P        05 29 11.7 -1.0
KEV                                pmax    pmax
             comp=Z,292nm,1.3s
KEV   Kevo              67.95  10  P       P        05 29 11.7 -1.0
KEV                                IAmb    IAmb     05 29 17.4
             comp=Z,292nm,1.3s
KEV                                IAMs_20 IAMs_20  05 57 38.9
             comp=Z,77µm,21.0s
KTK1  Kautokeino        68.09  12 eP       P        05 29 13.2 -0.4
KTK1                               IVmB_BB          05 29 24.7
             comp=Z,6µm,4.3s
KTK1                              eS       S        05 38 15.7 +2.5
KONS  Konsvik           68.40  17 eP       P        05 29 15.2 -0.4
STOK  Stokkvaagen       68.52  17 eP       P        05 29 15.8 -0.4
STOK                              eS       S        05 38 21.5 +3.1
NNA   Nana              68.83 128ceP       P        05 29 18.5 -0.5
NNA                                pmax    pmax
             comp=Z,474nm,1.4s
NNA                                MLR     MLR
             comp=Z,50µm,17.0s
NNA   Nana              68.83 128  P       P        05 29 18.4 -0.5
NNA                                IAmb    IAmb     05 29 40.2
             comp=Z,329nm,1.4s
MOR8  Moi Rana          68.97  16 eS       S        05 38 23.8  0.0
AFI   Afiamalu          69.45 229  P       P        05 29 23.6 +0.8
             comp=Z,88nm,0.9s,baz=222,slow=4.9,SNR=9.2
AFI   Afiamalu          69.45 229  IAmb    IAmb     05 29 34.0
             comp=Z,317nm,1.1s
LRW   Lerwick           69.49  26 eP       P        05 29 22.0 -0.4
LRW                                IAMs_20 IAMs_20  06 01 41.5
             comp=Z,89µm,13.8s
RAR   Rarotonga         69.55 215  LR      LR       05 52 02.2
             comp=Z,71µm,20.7s,baz=24,slow=29
BIGH  Upper Bighouse    69.73  29  IAMs_20 IAMs_20  05 56 43.8
             comp=Z,77µm,24.2s
NSS   Namsos            69.79  18 eP       P        05 29 23.4 -0.8
NSS                                IVmB_BB          05 29 39.0
             comp=Z,9µm,4.5s
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NSS				*e*S	**S**	**05 38 34.0**	**+0.5**
NSS				*e*SS	**SS**	**05 42 59.5**	**-1.3**
NSS				IVMs_BB	IVMs_BB	05 58 31.6	
	comp=Z,36µm,22.9s						
KPL	**Plockton**	**69.91**	**30**	*e*P	**P**	**05 29 24.7**	**-0.4**
KPL				IAmb	IAmb	05 29 30.4	
	comp=Z,282nm,1.2s						
KPL				IAMs_20	IAMs_20	06 02 48.6	
	comp=Z,79µm,13.7s						
KAC	**Achnashellach**	**69.93**	**30**⇑	*e*P	**P**	**05 29 24.9**	**-0.4**
MLA1	**Latheron**	**70.07**	**29**	*e*P	**P**	**05 29 25.8**	**-0.3**
BOD	**Bodaibo**	**70.12**	**331**	*e*P	**P**	**05 29 24.7**	**-1.7**
MOL	**Molde**	**70.27**	**21**	*e*P	**P**	**05 29 25.2**	**-2.0**
MOL				IVmBBB		05 29 32.6	
	comp=Z,6µm,2.6s						
MOL				IVmBBB		05 31 09.8	
	comp=Z,8µm,6.9s						
MOL				*e*S	**S**	**05 38 40.9**	**+1.7**
MOL				*e*SS	**SS**	**05 43 09.6**	**+1.4**
MOL				IVMs_BB	IVMs_BB	05 58 55.4	
	comp=Z,26µm,21.4s						
MDO	**Dochfour**	**70.32**	**30**⇑	*e*P	**P**	**05 29 27.3**	**-0.4**
FOO	**Floro**	**70.33**	**23**	*e*P	**P**	**05 29 27.1**	**-0.5**
FOO				*e*S	**S**	**05 38 41.3**	**+1.4**
FOO				*e*SS	**SS**	**05 43 14.6**	**+5.5**
FOO				IVMs_BB	IVMs_BB	05 59 49.6	
	comp=Z,47µm,21.5s						
AKN	**Aaknes**	**70.43**	**22**	*e*P	**P**	**05 29 27.9**	**-0.4**
AKN				*e*S	**S**	**05 38 42.3**	**+1.1**
AKN				*e*SS	**SS**	**05 43 12.8**	**+2.0**
AKN				IVMs_BB	IVMs_BB	05 59 48.7	
	comp=Z,25µm,22.0s						
TBLU	**Trondheim**	**70.43**	**20**	*e*P	**P**	**05 29 26.6**	**-1.6**
TBLU				IVmBBB		05 29 38.6	
	comp=Z,6µm,4.2s						
TBLU				*e*S	**S**	**05 38 43.6**	**+2.6**
TBLU				*e*SS	**SS**	**05 43 11.9**	**+1.2**
TBLU				IVMsBB		05 58 57.3	
	comp=Z,63µm,22.6s						
PGRA	**Graciosa**	**70.47**	**55**	*e*P	**P**	**05 29 31.9**	**+3.0**
PGRA				*e*S	**S**	**05 38 40.9**	**-1.4**
PGRA				*e*P	SS	05 43 01.4	-11
PGRA				*e*LQ	LQ	05 46 18.9	
PGRA				*e*LR	LR	05 52 07.3	
	comp=Z,24µm,20.6s						
ROSA	**Rosais**	**70.49**	**55**	*e*P	**P**	**05 29 29.7**	**+0.7**
ROSA	**Rosais**	**70.49**	**55**	*e*LQ	LQ	05 46 24.0	
ROSA				*e*LR	LR	05 52 05.6	
	comp=Z,13µm,19.9s						
PPNO	**Prainha do Nor**	**70.62**	**56**	*e*P	P	05 29 38.9	+9.0
LVZ	**Lovozero**	**70.63**	**8***d*	*i*P	**P**	**05 29 28.7**	**-0.7**
LVZ				pmax	pmax		
	comp=Z,440nm,1.3s						
LVZ				MLR	MLR		
	comp=Z,69µm,17.0s						
LVZ	**Lovozero**	**70.63**	**8**	P	**P**	**05 29 28.0**	**-1.4**
LVZ				IAmb	IAmb	05 29 34.5	
	comp=Z,607nm,1.3s						
LVZ				IAMs_20	IAMs_20	06 00 20.7	
	comp=Z,79µm,19.0s						
MCD	**Coleburn Disti**	**70.63**	**29**⇑	*e*P	**P**	**05 29 28.7**	**-0.8**
SUE	**Sulen**	**70.68**	**23**	*e*P	**P**	**05 29 29.2**	**-0.4**
SUE				*e*S	**S**	**05 38 45.7**	**+1.9**
SUE				*e*SS	**SS**	**05 43 17.8**	**+3.3**
USA0B	**Ussuriysk Arra**	**70.78**	**312**	P	**P**	**05 29 29.1**	**-1.5**
USA0B				pmax	pmax		
	comp=Z,196nm,1.1s						
USA0B	**Ussuriysk Arra**	**70.78**	**312**	P	**P**	**05 29 29.1**	**-1.5**
USRK	**Ussuriysk Ar.**	**70.78**	**312**	P	**P**	**05 29 30.5**	**-0.1**
	comp=Z,48nm,0.9s,baz=49,slow=5.2,SNR=44						
USRK				LR	LR	05 58 11.6	
	comp=Z,24µm,20.1s,baz=47,slow=34						
USRK	**Ussuriysk Ar.**	**70.78**	**312**	P	**P**	**05 29 30.0**	**-0.7**
USRK	**Ussuriysk Ar.**	**70.78**	**312**	P	**P**	**05 29 30.0**	**-0.7**
APA	**Apatity**	**70.81**	**9**⇓	*i*P	**P**	**05 29 29.1**	**-1.3**
APA				*i*		05 29 50.0	
APA				*i*		05 32 10.0	
APA				*i* S	**S**	**05 38 43.0**	**-2.3**
APA				*i*		05 39 23.0	
APA				*i* SS	**SS**	**05 43 23.0**	**+6.8**
APA				pmax	pmax		
	comp=Z,62nm,1.0s						
HYA	**Hoyanger**	**71.01**	**23**	*e*P	**P**	**05 29 31.3**	**-0.4**
DOMB	**Dombas**	**71.11**	**21**	*e*P	**P**	**05 29 31.7**	**-0.7**
DOMB				IVmB_BB		05 29 37.5	
	comp=Z,5µm,6.9s						
DOMB				*e*S	**S**	**05 38 50.1**	**+1.0**
DOMB				*e*SS	**SS**	**05 43 24.7**	**+3.4**
DOMB				IVMs_BB	IVMs_BB	05 58 29.8	
	comp=Z,24µm,24.0s						
ASK	**Askoy**	**71.26**	**24**	*e*P	**P**	**05 29 32.8**	**-0.5**
ASK				*e*S	**S**	**05 38 51.4**	**+0.7**
BER	**Bergen**	**71.38**	**24**	*e*P	**P**	**05 29 33.4**	**-0.6**
BER				IVmBBB		05 29 39.6	
	comp=Z,5µm,5.9s						
BER				*e*S	**S**	**05 38 55.2**	**+3.1**
BER				*e*SS	**SS**	**05 43 27.2**	**+1.9**
BER				IVMs_BB	IVMs_BB	06 00 37.5	
	comp=Z,28µm,19.7s						
DRUM	**Mains of Drumt**	**71.41**	**29**	*e*P	**P**	**05 29 33.0**	**-1.2**
DRUM				IAmb	IAmb	05 29 38.8	
	comp=Z,524nm,1.1s						
DRUM				IAMs_20	IAMs_20	05 58 31.5	
	comp=Z,72µm,20.9s						
PGBU	**Glenifferbraes**	**71.46**	**31**	*e*P	**P**	**05 29 33.3**	**-1.3**
PGBU				IAmb	IAmb	05 29 39.2	
	comp=Z,557nm,1.3s						
PGBU				IAMs_20	IAMs_20	06 02 20.6	
	comp=Z,63µm,15.9s						
VLA	**Vladivostok**	**71.51**	**311***c*	*e*P	**P**	**05 29 34.9**	**-0.2**
VLA				pmax	pmax		
	comp=Z,193nm,1.2s						
MJAR	**Matsushiro Arr**	**71.71**	**303**	P	**P**	**05 29 35.7**	**-0.7**
	comp=Z,27nm,0.8s,baz=50,slow=6.0,SNR=34						
MJAR				LR	LR	05 55 22.4	
	comp=Z,54µm,21.9s,baz=75,slow=31						
MJAR	**Matsushiro Arr**	**71.71**	**303**	P	**P**	**05 29 35.8**	**-0.7**
MAJO	**Matsushiro**	**71.71**	**303***d*	*i*P	**P**	**05 29 36.9**	**+0.4**
MAJO				pmax	pmax		
	comp=Z,155nm,0.9s						
MAJO	**Matsushiro**	**71.71**	**303**	P	**P**	**05 29 35.5**	**-0.9**
MAJO	**Matsushiro**	**71.71**	**303**	IAMs_20	IAMs_20	05 55 00.7	
	comp=Z,62µm,22.0s						
MAT	**Matsushiro**	**71.71**	**303**	P	**P**	**05 29 35.5**	**-1.0**
MAT				S	**S**	**05 38 58.0**	**+1.2**
MJB9	**Matsu-Tunnel**	**71.71**	**303**	IAMs_20	IAMs_20	05 55 01.5	
	comp=Z,67µm,22.0s						
PTGA	**Pitinga**	**71.85**	**107**	P	**P**	**05 29 37.0**	**-0.6**
PTGA				IAmb	IAmb	05 30 00.4	
	comp=Z,352nm,1.1s						
PTGA	**Pitinga**	**71.85**	**107**	*e*P	**P**	**05 29 37.3**	**-0.2**
MDJ	**Mudanjiang**	**71.85**	**314**	P	**P**	**05 29 34.6**	**-2.5**
MDJ				pP	pwP	05 29 41.4	-0.5
MDJ				PcP	**PcP**	**05 29 53.7**	**-2.3**
MDJ				S	**S**	**05 38 53.8**	**-4.3**
MDJ				pmax	pmax		
	comp=Z,7µm,7.0s						
MDJ				LR	LR		
	comp=Z,38µm,19.0s						
MDJ				LR	LR		
	comp=Z,58µm,22.2s						
MDJ				LR	LR		
	comp=Z,77µm,35.3s						
EDI	**Edinburgh**	**71.88**	**30**⇑	*e*P	**P**	**05 29 36.9**	**-0.2**
EDI				IAmb	IAmb	05 29 41.9	
	comp=Z,459nm,1.3s						
EDI				IAMs_20	IAMs_20	06 00 28.4	
	comp=Z,94µm,18.3s						
SKAR	**Skarslia**	**72.02**	**22**	*e*P	**P**	**05 29 37.0**	**-0.9**
SKAR				IVmBBB		05 29 44.7	
	comp=Z,4µm,3.1s						
SKAR				*e*S	**S**	**05 39 00.5**	**+0.9**
SKAR				*e*SS	**SS**	**05 43 40.2**	**+5.0**
SKAR				IVMs_BB	IVMs_BB	06 04 24.9	
	comp=Z,20µm,12.4s						
EBL	**Broad Law**	**72.04**	**30**	*e*P	**P**	**05 29 37.4**	**-0.6**
GAL1	**Galloway**	**72.05**	**32**	*e*P	**P**	**05 29 36.8**	**-1.4**
GAL1				IAMs_20	IAMs_20	05 59 52.0	
	comp=Z,66µm,18.4s						
ESY	**Stoneypath**	**72.10**	**30**	*e*P	**P**	**05 29 37.9**	**-0.6**
ODD1	**Odda**	**72.15**	**23**	*e*P	**P**	**05 29 38.2**	**-0.6**
ODD1				*e*S	**S**	**05 39 00.7**	**-0.5**
NC204	**NORSAR Array S**	**72.21**	**21**	P	**P**	**05 29 35.0**	**-4.0**
NC204				IAmb	IAmb	05 29 45.2	
	comp=Z,683nm,1.6s						
MSHR	**Mys Shultsa**	**72.26**	**311**⇑	*e*P	**P**	**05 29 40.7**	**+1.1**
KMY	**Karmoy**	**72.29**	**24**	*e*P	**P**	**05 29 39.0**	**-0.4**
KMY				*e*S	**S**	**05 39 06.1**	**+3.5**
ESK	**Eskdalemuir**	**72.32**	**31**	*e*P	**P**	**05 29 38.4**	**-1.3**
ESK				IAmb	IAmb	05 29 44.9	
	comp=Z,223nm,1.3s						
ESK				IAMs_20	IAMs_20	06 02 55.9	
	comp=Z,82µm,15.4s						
ESK	**Eskdalemuir**	**72.32**	**31**	P	**P**	**05 29 36.5**	**-3.2**
ESK				pmax	pmax		
	comp=Z,200nm,1.3s						
ESK				MLR	MLR		
	comp=Z,70µm,18.0s						
ESK	**Eskdalemuir**	**72.32**	**31**	P	**P**	**05 29 36.5**	**-3.2**
ESK	**Eskdalemuir**	**72.32**	**31**	IAMs_20	IAMs_20	06 01 13.6	
	comp=Z,70µm,18.0s						
EKA	**Eskdalemuir Ar**	**72.32**	**31**	P	**P**	**05 29 38.8**	**-1.0**
	comp=Z,65nm,1.1s,baz=321,slow=4.4,SNR=19						
NC303	**NORSAR Array S**	**72.41**	**20**	P	**P**	**05 29 37.1**	**-3.1**
NC303				IAmb	IAmb	05 29 45.6	
	comp=Z,778nm,1.4s						
NBO00	**NORSAR Array S**	**72.42**	**21**	P	**P**	**05 29 37.8**	**-2.5**
NBO00				IAmb	IAmb	05 29 45.7	
	comp=Z,712nm,1.4s						
BLS5	**Blasjo**	**72.49**	**24**	*e*P	**P**	**05 29 40.1**	**-0.6**
BLS5				IVmBBB		05 29 46.2	
	comp=Z,3µm,1.4s						
BLS5				*e*S	**S**	**05 39 06.4**	**+1.3**
BLS5				*e*SS	**SS**	**05 43 43.3**	**+0.8**
BLS5				IVMs_BB	IVMs_BB	06 04 53.5	
	comp=Z,27µm,14.8s						
NB2	**NORSAR Subarra**	**72.53**	**21**	P	**P**	**05 29 40.4**	**-0.5**
	comp=Z,7.1nm,0.7s,baz=326,slow=6.2						
NB2	**NORSAR Subarra**	**72.53**	**21**	P	**P**	**05 29 40.4**	**-0.5**
	baz=326,slow=6.2						
NOA	**NORSAR Array B**	**72.53**	**21**	P	**P**	**05 29 40.0**	**-1.0**
	comp=Z,72nm,1.0s,baz=327,slow=5.9,SNR=36						
NOA				LR	LR	06 00 51.0	
	comp=Z,73µm,21.5s,baz=325,slow=35						
NOA	**NORSAR Array B**	**72.53**	**21**	P	**P**	**05 29 40.0**	**-1.0**
NB201	**NORSAR Array S**	**72.54**	**21**	IAmb	IAmb	05 29 46.5	
	comp=Z,730nm,1.6s						
DSB	**Dublin**	**72.54**	**34**	IAMs_20	IAMs_20	06 00 24.8	
	comp=Z,81µm,19.0s						
IOMK	**Kirk Michael**	**72.55**	**32**	*e*P	**P**	**05 29 39.8**	**-1.4**
IOMK				IAmb	IAmb	05 29 45.8	
	comp=Z,719nm,1.4s						
IOMK				IAMs_20	IAMs_20	05 59 56.3	
	comp=Z,171µm,18.6s						
WIM	**Isle of Man**	**72.59**	**32**	*e*P	**P**	**05 29 41.0**	**-0.4**
NC405	**NORSAR Array S**	**72.60**	**20**	IAmb	IAmb	05 29 46.7	
	comp=Z,1µm,1.9s						
NAO01	**NORSAR Array S**	**72.60**	**21**	IAmb	IAmb	05 29 46.8	
	comp=Z,767nm,1.2s						
PSET	**Sete Cidades**	**72.61**	**55**	*e*P	**P**	**05 29 46.3**	**+4.5**
PSET				*e*S	**S**	**05 39 05.9**	**-1.2**
PSET				*e*LQ	LQ	05 46 49.5	
PSET				*e*LR	LR	05 52 12.4	
	comp=Z,14µm,18.3s						
NIUE	**Niue**	**72.63**	**224**	IAMs_20	IAMs_20	05 55 00.9	
	comp=Z,58µm,20.0s						
STAV	**Stavanger**	**72.65**	**24**	*e*P	**P**	**05 29 41.1**	**-0.5**
STAV				*e*S	**S**	**05 39 10.4**	**+3.7**
STAV				*e*SS	**SS**	**05 43 48.5**	**+3.7**
STAV				IVMs_BB	IVMs_BB	06 00 25.0	
	comp=Z,28µm,17.1s						
CMLA	**Cha da Macela**	**72.77**	**55**	*e*P	**P**	**05 29 42.4**	**-0.4**
CMLA				*e*S	**SKiKP**	**05 39 13.5**	**-3.5**
CMLA				*e*P	**SS**	**05 43 57.8**	**+10**
CMLA				*e*LQ	LQ	05 46 49.5	
CMLA				*e*LR	LR	05 52 02.2	
	comp=Z,10µm,20.6s						
PCALD	**Caldeiras da R**	**72.77**	**55**	*e*P	P	05 29 50.7	+7.9
NC602	**NORSAR Array S**	**72.87**	**21**	*e*P	**P**	**05 29 42.1**	**-0.9**
NC602				IVmB_BB		05 29 49.8	
	comp=Z,5µm,4.2s						
NC602				*e*S	**S**	**05 39 10.0**	**+0.7**
NC602				*e*SS	**SS**	**05 43 50.5**	**+2.4**
NC602				IVMs_BB	IVMs_BB	06 00 49.0	
	comp=Z,27µm,18.5s						
NC602	**NORSAR Array S**	**72.87**	**21**	IAmb	IAmb	05 29 48.5	
	comp=Z,553nm,1.5s						
KESW	**Keswick, Cumbr**	**72.89**	**31**	*e*P	**P**	**05 29 42.6**	**-0.5**
KESW				IAmb	IAmb	05 29 47.8	
	comp=Z,374nm,1.6s						
EDMD	**Edmundbyers**	**73.16**	**30**	*e*P	**P**	**05 29 43.0**	**-1.7**
EDMD				IAmb	IAmb	05 29 49.7	
	comp=Z,623nm,1.3s						
EDMD				IAMs_20	IAMs_20	06 03 30.4	
	comp=Z,75µm,15.5s						
WPS	**Cemaes, Angles**	**73.21**	**33**	*e*P	**P**	**05 29 44.8**	**-0.2**
WPS				IAmb	IAmb	05 29 49.9	
	comp=Z,696nm,1.5s						
WPS				IAMs_20	IAMs_20	06 01 55.4	
	comp=Z,68µm,16.5s						
KONO	**Kongsberg**	**73.24**	**22**	*e*P	**P**	**05 29 43.9**	**-1.2**
KONO				IVmB_BB		05 29 57.0	
	comp=Z,5µm,5.6s						
KONO				*e*S	**S**	**05 39 14.8**	**+1.4**
KONO				*e*SS	**SS**	**05 43 56.2**	**+2.5**
KONO				IVMs_BB	IVMs_BB	06 01 27.5	
	comp=Z,28µm,22.9s						
KONO	**Kongsberg**	**73.24**	**22***d*	*i*P	**P**	**05 29 44.7**	**-0.4**
KONO				pmax	pmax		
	comp=Z,229nm,1.4s						
KONO	**Kongsberg**	**73.24**	**22**	P	**P**	**05 29 44.8**	**-0.4**
KONO	**Kongsberg**	**73.24**	**22**	IAMs_20	IAMs_20	06 01 30.4	
	comp=Z,88µm,20.0s						
YRC	**Rhoscolyn**	**73.29**	**33**⇑	*e*P	**P**	**05 29 45.2**	**-0.3**
OSL	**Oslo**	**73.31**	**21**	*e*P	**P**	**05 29 45.3**	**-0.3**
OSL				*e*S	**S**	**05 39 15.0**	**+0.7**
OSL				*e*SS	**SS**	**05 43 57.3**	**+2.5**
WLF1	**Llynfaes**	**73.33**	**33**	*e*P	**P**	**05 29 44.4**	**-1.3**
WLF1				IAmb	IAmb	05 29 50.6	
	comp=Z,576nm,1.4s						
WLF1				IAMs_20	IAMs_20	06 01 59.2	
	comp=Z,145µm,16.4s						
MDP	**Montagnes des**	**73.40**	**98**	PP	PP	05 32 32.2	+1.9
	comp=Z,32nm,1.1s,baz=326,slow=11,SNR=4.8						
PSMA	**Santa Maria**	**73.49**	**55**	*e*P	P	05 29 51.6	+4.6
PSMN	**Pico do Norte,**	**73.53**	**55**	*e*P	P	05 29 54.2	+7.0
PSMN				*e*S	**S**	**05 39 16.7**	**-0.8**
PSMN				*e*P	SS	05 44 20.6	+21
PSMN				*e*LR	LR	05 52 12.4	
	comp=Z,18µm,19.9s						
YLL	**Llanberis**	**73.53**	**33**⇑	*e*P	**P**	**05 29 45.9**	**-1.1**
SNART	**Snartemo**	**73.60**	**24**	*e*P	**P**	**05 29 46.7**	**-0.5**
SNART				*e*S	**SKiKP**	**05 39 20.4**	**+2.7**
HIA	**Hailar**	**73.78**	**322**	P	**P**	**05 29 47.7**	**-0.9**
HIA				pmax	pmax		
	comp=Z,374nm,1.6s						
HIA				MLR	MLR		
	comp=Z,36µm,21.0s						
HIA	**Hailar**	**73.78**	**322**	P	**P**	**05 29 47.7**	**-0.9**
GDLE	**Glaisdale, N Y**	**73.91**	**30**	*e*P	**P**	**05 29 48.4**	**-0.7**
GDLE				IAmb	IAmb	05 29 54.3	
	comp=Z,359nm,1.1s						
GDLE				IAMs_20	IAMs_20	06 01 40.2	
	comp=Z,74µm,17.8s						
HPK	**Haverah Park**	**73.94**	**31**⇑	*e*P	**P**	**05 29 48.7**	**-0.7**
HPK				IAmb	IAmb	05 29 54.6	
	comp=Z,702nm,1.4s						
HPK				IAMs_20	IAMs_20	05 56 59.4	
	comp=Z,77µm,27.7s						
HFS	**Hagfors**	**73.95**	**20**	P	**P**	**05 29 48.2**	**-1.1**
	comp=Z,43nm,0.8s,baz=336,slow=3.2,SNR=46						
LLW	**Llanuwychllyn**	**73.95**	**33**	*e*P	**P**	**05 29 48.5**	**-1.0**
LLW				IAMs_20	IAMs_20	05 59 01.8	
	comp=Z,34µm,20.4s						
HOMB	**Homborsund**	**74.05**	**23**	*e*P	**P**	**05 29 49.5**	**-0.3**
HOMB				IVmB_BB		05 29 53.3	
	comp=Z,4µm,3.0s						
HOMB				*e*S	**S**	**05 39 23.0**	**+0.4**
HOMB				*e*SS	**SS**	**05 44 08.7**	**+2.6**
FOEL	**Foel Wylfa**	**74.11**	**32**	*e*P	**P**	**05 29 49.5**	**-0.9**
FOEL				IAmb	IAmb	05 29 55.3	
	comp=Z,773nm,1.8s						
FOEL				IAMs_20	IAMs_20	06 02 32.1	
	comp=Z,63µm,17.0s						
RSBS	**Rosebush, Pemb**	**74.17**	**34**	*e*P	**P**	**05 29 49.9**	**-0.9**
RSBS				IAmb	IAmb	05 29 55.7	
	comp=Z,470nm,1.6s						
RSBS				IAMs_20	IAMs_20	06 02 09.1	
	comp=Z,86µm,16.8s						
LBWR	**Ladybower, Pea**	**74.32**	**31**⇑	*e*P	**P**	**05 29 51.0**	**-0.7**
LBWR				IAmb	IAmb	05 29 56.8	
	comp=Z,626nm,1.2s						
LBWR				IAMs_20	IAMs_20	06 04 49.7	
	comp=Z,70µm,13.8s						
HLM1	**Long Mynd**	**74.52**	**32**	*e*P	**P**	**05 29 52.1**	**-0.7**
HLM1				IAMs_20	IAMs_20	05 59 29.8	
	comp=Z,66µm,20.9s						
CIT	**Chita**	**74.54**	**327**	*e*P	**P**	**05 29 57.5**	**+4.5**
CIT				pmax	pmax		
	comp=Z,755nm,1.9s						
TMCR	**Tamitsa**	**74.60**	**8**	*e*P	**P**	**05 29 51.6**	**-1.4**
TMCR				*e*S	**S**	**05 39 26.4**	**-2.2**
TMCR				pmax	pmax		
	comp=Z,428nm,1.5s						
CN2	**Changchun**	**74.64**	**315**	*e*P	**P**	**05 29 52.6**	**-1.0**
CN2				*e*sP	pwP	05 29 59.6	+1.2
CN2				*e*S	**S**	**05 39 27.6**	**-2.2**
CN2				*e*SS	**SS**	**05 44 17.5**	**+1.6**
CN2				LR	LR		
	comp=Z,25µm,29.0s						
CN2				LR	LR		
	comp=Z,34µm,29.0s						
CN2				LR	LR		
	comp=Z,20µm,25.0s						
LMK	**Market Rasen**	**74.83**	**31**	*e*P	**P**	**05 29 54.0**	**-0.5**
LMK				IAMs_20	IAMs_20	06 04 38.5	
	comp=Z,73µm,16.3s						
MCH1	**Michaelchurch**	**74.86**	**33**⇑	*e*P	**P**	**05 29 53.7**	**-1.1**
MCH1				IAmb	IAmb	05 29 59.7	
	comp=Z,379nm,1.5s						
MCH1				IAMs_20	IAMs_20	06 03 54.0	
	comp=Z,91µm,14.5s						
CWF	**Charnwood Fore**	**74.99**	**32**	*e*P	**P**	**05 29 54.8**	**-0.6**
CWF				IAmb	IAmb	05 30 00.7	
	comp=Z,717nm,1.8s						
CWF				IAMs_20	IAMs_20	06 01 30.7	
	comp=Z,70µm,18.4s						
MONM	**Monmouth**	**75.06**	**33**	*e*P	**P**	**05 29 54.4**	**-1.5**
MONM				IAmb	IAmb	05 30 00.8	
	comp=Z,517nm,1.7s						
MONM				IAMs_20	IAMs_20	06 04 00.4	
	comp=Z,94µm,14.3s						
CCA1	**Carnmenellis**	**75.25**	**35**⇑	*e*P	**P**	**05 29 56.3**	**-0.7**
CCA1				IAmb	IAmb	05 30 02.1	
	comp=Z,339nm,1.3s						
CCA1				IAMs_20	IAMs_20	06 02 12.7	
	comp=Z,95µm,16.9s						
SAML	**Samuel**	**75.33**	**116**	*e*P	**P**	**05 29 58.2**	**+0.3**
SAML	**Samuel**	**75.33**	**116**	P	**P**	**05 29 56.1**	**-1.8**
SAML				pmax	pmax		
	comp=Z,106nm,1.1s						
SAML				MLR	MLR		
	comp=Z,64µm,21.0s						
SAML	**Samuel**	**75.33**	**116**	P	**P**	**05 29 56.1**	**-1.8**
SAML	**Samuel**	**75.33**	**116**	IAMs_20	IAMs_20	06 06 02.2	
	comp=Z,65µm,21.0s						
SAML	**Samuel**	**75.33**	**116**	*e*P	**P**	**05 29 56.1**	**-1.8**
STRD	**Stroud**	**75.37**	**33**	*e*P	**P**	**05 29 57.0**	**-0.7**
STRD				IAmb	IAmb	05 30 02.9	
	comp=Z,720nm,1.4s						
STRD				IAMs_20	IAMs_20	06 04 18.1	
	comp=Z,70µm,14.1s						
FIA1	**FINESS Array S**	**75.52**	**14**	P	**P**	**05 29 56.9**	**-1.5**
FIA1				IAmb	IAmb	05 30 03.4	
	comp=Z,403nm,1.4s						
FINES	**FINESS Array B**	**75.52**	**14**	P	**P**	**05 29 57.2**	**-1.1**
	comp=Z,28nm,0.9s,baz=350,slow=5.8,SNR=36						
FINES				LR	LR	06 03 02.6	
	comp=Z,72µm,20.5s,baz=330,slow=36						
FINES	**FINESS Array B**	**75.52**	**14**	P	**P**	**05 29 56.9**	**-1.5**
FINES	**FINESS Array B**	**75.52**	**14**	P	**P**	**05 29 56.9**	**-1.5**
BATH	**Bath**	**75.55**	**33**	*e*P	**P**	**05 29 58.2**	**-0.5**
BATH				IAMs_20	IAMs_20	06 04 23.4	
	comp=Z,95µm,14.4s						
MUD	**Monsted U'grnd**	**75.76**	**24**	*i* P	**P**	**05 29 59.0**	**-0.8**
	comp=Z,733nm,1.7s						
MUD	**Monsted U'grnd**	**75.76**	**24**	*i* P	**P**	**05 29 59.0**	**-0.8**
MUD				pmax	pmax		
	comp=Z,730nm,1.7s						
MUD				MLR	MLR		
	comp=Z,69µm,18.0s						
WACR	**West Acre**	**75.76**	**31**	*e*P	**P**	**05 29 59.7**	**-0.2**
WACR				IAmb	IAmb	05 30 04.7	
	comp=Z,459nm,1.1s						
WACR				IAMs_20	IAMs_20	06 05 15.3	
	comp=Z,70µm,15.4s						
WOL	**Wolverton**	**76.11**	**32**	*e*P	**P**	**05 30 01.2**	**-0.7**
WOL				IAMs_20	IAMs_20	06 04 44.0	
	comp=Z,59µm,14.1s						
SNY	**Shenyang**	**76.99**	**314**	⇓P	**P**	**05 30 08.0**	**+0.9**
SNY				PP	**PP**	**05 33 04.1**	**+4.4**
SNY				S	**S**	**05 39 57.6**	**+1.9**
SNY				pmax	pmax		
	comp=Z,3µm,4.9s						
SNY				LR	LR		
	comp=Z,33µm,20.6s						
SNY				LR	LR		
	comp=Z,38µm,23.0s						
SNY				LR	LR		
	comp=Z,73µm,28.4s						
HMNX	**Herstmonceux**	**77.08**	**32**	IAMs_20	IAMs_20	06 04 34.1	
	comp=Z,62µm,16.8s						
ELSH	**Elham, Standar**	**77.18**	**31**	*e*P	**P**	**05 30 07.8**	**-0.2**
ELSH				IAmb	IAmb	05 30 13.6	
	comp=Z,838nm,1.3s						
ELSH				IAMs_20	IAMs_20	06 06 37.8	
	comp=Z,70µm,14.4s						
HLG	**Helgoland**	**77.22**	**26**	*e*P	**P**	**05 30 08.8**	**+0.7**
	comp=Z,410nm,1.3s,baz=329,slow=5.3						
HLG				*e*pP	**pwP**	**05 30 13.2**	**+0.5**
	baz=328,slow=5.3						
COP	**Copenhagen**	**77.40**	**23**	*i* P	**P**	**05 30 08.5**	**-0.6**
	comp=Z,352nm,1.5s						
COP	**Copenhagen**	**77.40**	**23**	*i* P	**P**	**05 30 08.5**	**-0.6**
COP				pmax	pmax		
	comp=Z,350nm,1.5s						
COP				MLR	MLR		
	comp=Z,62µm,19.0s						
KSRS	**Korea Array**	**77.48**	**309**	P	**P**	**05 30 10.1**	**+0.2**
	comp=Z,22nm,0.8s,baz=54,slow=5.6,SNR=55						
KSRS				LR	LR	06 01 35.3	
	comp=Z,23µm,21.3s,baz=62,slow=34						
KS19	**Wonju Array Si**	**77.48**	**309**	P	**P**	**05 30 09.7**	**-0.2**
KSAR	**Wonju Array Be**	**77.51**	**309**	P	**P**	**05 30 09.3**	**-0.8**
KSAR	**Wonju Array Be**	**77.51**	**309**	P	**P**	**05 30 09.3**	**-0.8**
PRGR	**Permogore**	**77.71**	**5**	*e*P	**P**	**05 30 09.9**	**-0.8**
PRGR				pmax	pmax		
	comp=Z,509nm,0.9s						
PUL	**Pulkovo**	**77.83**	**12**	*e*P	**P**	**05 30 11.8**	**+0.4**
PUL				pmax	pmax		
	comp=Z,215nm,1.5s						
IRK	**Irkutsk**	**77.99**	**332**	*e*P	**P**	**05 30 13.9**	**+1.4**
IRK				*e*S	**S**	**05 40 11.5**	**+5.2**
IRK				pmax	pmax		
	comp=Z,651nm,2.0s						
KLMR	**Klimovskoe**	**78.00**	**8**	*e*P	**P**	**05 30 11.8**	**-0.5**
KLMR						05 33 09.2	
KLMR				S	**S**	**05 40 04.0**	**-2.0**
KLMR				pmax	pmax		
	comp=Z,876nm,1.4s						
KLMR	**Klimovskoe**	**78.00**	**8**	*e*P	**P**	**05 30 11.9**	**-0.4**
KLMR				*e*P	**P**	**05 30 11.9**	**-0.4**
KLMR				*e*P	**P**	**05 30 11.9**	**-0.4**
KLMR				AMP		05 30 18.1	
	comp=Z,876nm,1.4s						
KLMR				PP	**PP**	**05 33 09.2**	**+1.7**
KLMR				S	**S**	**05 40 04.0**	**-2.0**
KLMR				S	**S**	**05 40 04.0**	**-2.0**
KLMR				SS	SS	05 44 35.6	-30
KLMR				SS	SS	05 44 35.6	-30
KLMR				SSS	SSS	05 48 49.7	
KLMR				SSS	SSS	05 48 49.7	
KLMR				LQ	LQ	05 55 09.5	
KLMR				LQ	LQ	05 55 09.5	
KLMR				LR	LR	05 56 08.2	
KLMR				AMP		06 03 23.3	
	comp=Z,63µm,21.7s						
INCN	**Inchon**	**78.22**	**310**	P	**P**	**05 30 14.8**	**+0.7**
INCN				pmax	pmax		
	comp=Z,108nm,1.0s						
INCN	**Inchon**	**78.22**	**310**	P	**P**	**05 30 14.8**	**+0.7**
BSEG	**Bad Segeberg**	**78.22**	**25**	*e*P	**P**	**05 30 14.6**	**+0.9**
	comp=Z,657nm,1.6s,baz=329,slow=5.3						
BSEG				*e*pP	**pwP**	**05 30 18.9**	**+0.6**

	baz=328,slow=5.3						
SLIT	**Slitere, Latvi**	**78.26**	**17**	*e*P	**P**	**05 30 17.7**	**+3.8**
VSU	**Vasula**	**78.42**	**15**	*e*P	**P**	**05 30 18.2**	**+3.5**
VSU	**Vasula**	**78.42**	**15**⇑	*e*P	**P**	**05 30 14.6**	**-0.1**
VSU				pmax	pmax		
	comp=Z,675nm,1.3s						
MSVF	**Nonsavu**	**78.51**	**235**	IAMs_20	IAMs_20	06 00 12.4	
	comp=Z,42µm,19.0s						
TJN	**Taejon**	**78.53**	**308**	*de*P	**P**	**05 30 16.1**	**+0.3**
JNU	**Nakatsue**	**78.54**	**304**	P	**P**	**05 30 15.7**	**-0.3**
	comp=Z,33nm,0.9s,baz=65,slow=2.2,SNR=6.5						
JNU	**Nakatsue**	**78.54**	**304**	P	**P**	**05 30 14.5**	**-1.4**
BSD	**Bornholm Skovb**	**78.62**	**22**	*i* P	**P**	**05 30 17.2**	**+1.3**
	comp=Z,347nm,1.3s						
BSD	**Bornholm Skovb**	**78.62**	**22**	*i* P	**P**	**05 30 17.2**	**+1.3**
BSD				pmax	pmax		
	comp=Z,350nm,1.3s						
BSD				MLR	MLR		
	comp=Z,72µm,21.0s						
BDSL	**Dessel**	**78.64**	**29**	P	**P**	**05 30 15.7**	**-0.3**
BDSL				pP	**pwP**	**05 30 19.3**	**-1.3**
BDSL				sP	**PcP**	**05 30 21.2**	**-3.8**
BDSL				PcP	sP	05 30 25.6	+8.0
BDSL				x	x	05 30 35.9	
RGN	**Rugen**	**78.64**	**23**	*e*P	**P**	**05 30 20.1**	**+4.1**
RGN	**Rugen**	**78.64**	**23**	*e*P	**P**	**05 30 17.1**	**+1.1**
	comp=Z,846nm,1.6s,baz=329,slow=5.3						
RGN				*e*pP	**pwP**	**05 30 21.5**	**+0.9**
	baz=328,slow=5.3						
BMOL	**Mol**	**78.65**	**29**	P	**P**	**05 30 15.7**	**-0.4**
BMOL				pP	**pwP**	**05 30 19.2**	**-1.5**
BMOL				sP	**sP**	**05 30 20.7**	**+3.1**
BMOL				PcP	**PcP**	**05 30 23.0**	**-2.1**
BMOL	**Mol**	**78.65**	**29**	S	**S**	**05 40 16.0**	**+2.7**
BMOL	**Mol**	**78.65**	**29**	x	**SKSac**	**05 40 27.1**	**-4.5**
TLY	**Talaya**	**78.67**	**331**	LR	LR	06 04 22.4	
	comp=Z,42µm,21.6s,baz=32,slow=35						
TLY	**Talaya**	**78.67**	**331**	*e*P	**P**	**05 30 15.4**	**-0.9**
TLY				*e*S	**S**	**05 40 14.0**	**+0.3**
TLY				*e*		05 40 33.1	
TLY				pmax	pmax		
	comp=Z,479nm,1.2s						
TLY				MLR	MLR		
	comp=Z,67µm,18.0s						
TLY	**Talaya**	**78.67**	**331**	P	**P**	**05 30 15.9**	**-0.4**
UCC	**Uccle**	**78.71**	**30**	P	**P**	**05 30 15.7**	**-0.7**
UCC				pP	**sP**	**05 30 19.3**	**+1.3**
UCC				sP	**pwP**	**05 30 20.9**	**-0.2**
UCC				PcP	**PcP**	**05 30 26.1**	**+0.8**
UCC				x	x	05 30 36.1	
UCC	**Uccle**	**78.71**	**30**	IAMs_20	IAMs_20	06 03 14.7	
	comp=Z,74µm,21.0s						
IBBN	**Ibbenburen**	**78.72**	**27**	*e*P	**P**	**05 30 17.7**	**+1.2**
	comp=Z,507nm,1.4s,baz=329,slow=5.3						
IBBN				*e*pP	**pwP**	**05 30 21.7**	**+0.6**
	baz=328,slow=5.3						
BSKQ	**Steenkerk**	**78.72**	**30**	P	**P**	**05 30 16.5**	**0.0**
BSKQ				pP	**pwP**	**05 30 20.1**	**-1.1**
BSKQ				x	x	05 30 34.0	
MNMC	**Minye Minye**	**78.73**	**127**	P	**P**	**05 30 17.5**	**+0.2**
MNMC				IAmb	IAmb	05 30 42.3	
	comp=Z,1µm,1.9s						
BBOU	**Bougnies**	**78.88**	**30**	P	**P**	**05 30 17.9**	**+0.5**
	comp=Z,225nm,2.2s						
BBOU				pP	**pwP**	**05 30 22.5**	**+0.5**
BBOU				PcP	**PcP**	**05 30 25.8**	**-0.3**
BBOU				x	x	05 30 52.5	
HKB	**Herkenbosch**	**79.07**	**29**	P	**P**	**05 30 17.6**	**-0.8**
HKB				sP	**pwP**	**05 30 23.4**	**+0.3**
HKB				x	x	05 30 38.3	
HKB				PP	**PP**	**05 33 18.8**	**+2.1**
PB11	**IPOC Station P**	**79.18**	**128**	P	**P**	**05 30 17.4**	**-2.2**
BEBN	**Eben Emael**	**79.20**	**29**	P	**P**	**05 30 19.6**	**+0.4**
BEBN				pP	**sP**	**05 30 22.1**	**+1.3**
BEBN				x	x	05 30 35.5	
BEBN				x	x	05 30 46.2	
BEBN				x	x	05 30 53.8	
BEBN				PP	**PP**	**05 33 18.1**	**+0.2**
BMRD	**Maredsous**	**79.26**	**30**	P	**P**	**05 30 19.2**	**-0.3**
BMRD				pP	**pwP**	**05 30 24.4**	**+0.3**
BMRD				PcP	**PcP**	**05 30 26.7**	**-1.1**
BMRD				x	x	05 30 54.3	
BMRD	**Maredsous**	**79.26**	**30**	S	**S**	**05 40 27.7**	**+7.8**
BLCH	**La Chartreuse**	**79.30**	**29**	P	**P**	**05 30 20.2**	**+0.5**
BLCH				sP	**pwP**	**05 30 24.6**	**+0.3**
BLCH				x	x	05 30 33.3	
BLCH				x	x	05 30 52.4	
BGES	**Gesves**	**79.32**	**30**	P	**P**	**05 30 19.9**	**+0.1**
BGES				pP	**sP**	**05 30 22.4**	**+0.9**
BGES				sP	**pwP**	**05 30 24.6**	**+0.1**
BGES				x	x	05 30 42.3	
BSTI	**Sart Tilman**	**79.34**	**29**	P	**P**	**05 30 20.5**	**+0.6**
BSTI				pP	**pwP**	**05 30 24.9**	**+0.3**
BSTI				x	x	05 30 33.5	
BSTI				x	x	05 30 43.1	
DOU	**Dourbes**	**79.36**	**30**	P	**P**	**05 30 20.5**	**+0.4**
DOU				pP	**pwP**	**05 30 24.2**	**-0.5**
DOU				x	x	05 30 54.9	
DOU	**Dourbes**	**79.36**	**30**	S	**S**	**05 40 27.2**	**+6.2**
DOU	**Dourbes**	**79.36**	**30**	x	**SKSac**	**05 40 41.2**	**+4.5**
NRDL	**Niedersach Rie**	**79.36**	**26**	*e*P	**P**	**05 30 20.9**	**+0.9**
	comp=Z,431nm,1.5s,baz=329,slow=5.3						
NRDL				*e*pP	**pwP**	**05 30 25.1**	**+0.5**
	baz=328,slow=5.3						
BCLA	**Clavier**	**79.37**	**30**	P	**P**	**05 30 19.8**	**-0.3**
	comp=Z,189nm,1.5s						
BCLA				pP	**sP**	**05 30 22.6**	**+0.9**
BCLA				sP	**pwP**	**05 30 24.9**	**+0.2**
BCLA				x	x	05 30 54.9	
BCLA				PP	**PP**	**05 33 21.3**	**+2.0**
BCLA	**Clavier**	**79.37**	**30**	S	**S**	**05 40 28.6**	**+7.5**
GO01	**Chusmiza**	**79.39**	**127**	IAmb	IAmb	05 30 41.3	
	comp=Z,586nm,1.9s						
MEM	**Membach**	**79.48**	**29**	P	**P**	**05 30 21.0**	**+0.3**
MEM				pP	**pwP**	**05 30 25.5**	**+0.2**
MEM				x	x	05 30 55.4	
MEM				PP	**PP**	**05 33 21.6**	**+1.4**
BTNL	**Ternell**	**79.54**	**29**	P	**P**	**05 30 21.5**	**+0.4**
BTNL				pP	**pwP**	**05 30 25.8**	**+0.1**
BTNL				sP	**PcP**	**05 30 28.2**	**-0.8**
RCHB	**Rochefort**	**79.56**	**30**	P	**P**	**05 30 20.2**	**-0.9**
RCHB				pP	**sP**	**05 30 23.8**	**+1.1**
RCHB				sP	**pwP**	**05 30 25.8**	**+0.1**
RCHB				x	x	05 30 42.8	
RCHB				PP	**PP**	**05 33 22.4**	**+1.6**
MOY	**Mondy**	**79.62**	**333**	*e*P	**P**	**05 30 23.6**	**+1.9**
MOY				pmax	pmax		
	comp=Z,467nm,2.2s						
PBUR	**Paburge**	**79.64**	**18**	*e*P	**P**	**05 30 24.8**	**+3.3**
BHOU	**Houvegnez**	**79.69**	**29**	S	**S**	**05 40 27.2**	**+2.7**
ASSE	**Asse, Remlinge**	**79.86**	**26**	*e*P	**P**	**05 30 23.5**	**+0.8**
	comp=Z,521nm,1.5s,baz=329,slow=5.3						
ASSE				*e*pP	**pwP**	**05 30 27.9**	**+0.6**
	baz=328,slow=5.3						
ZAK	**Zakamensk**	**79.86**	**331**	*e*P	**P**	**05 30 23.3**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,88nm,1.3s						
AHRW	**Bad Neuenahr-A**	**79.93**	**29**	*e*P	**P**	**05 30 24.0**	**+0.8**
	comp=Z,268nm,1.5s,baz=329,slow=5.3						
AHRW				*e*pP	**pwP**	**05 30 28.2**	**+0.4**
	baz=328,slow=5.3						
LKLB	**Kalborn**	**79.93**	**29**	S	**SKSac**	**05 40 44.2**	**+3.4**
CLZ	**Clausthal**	**80.00**	**26**	*e*P	**P**	**05 30 24.7**	**+1.1**
	comp=Z,612nm,1.5s,baz=329,slow=5.3						
CLZ				*e*pP	**pwP**	**05 30 29.0**	**+0.8**
	baz=328,slow=5.3						
CLF	**Chambon-Foret**	**80.08**	**33**	IAmb	IAmb	05 30 30.0	
	comp=Z,431nm,1.4s						
CLF				IAMs_20	IAMs_20	06 05 18.3	
	comp=Z,69µm,19.0s						
DL2	**Dalian**	**80.09**	**313**⇑	*i*P	**P**	**05 30 23.0**	**-1.2**
DL2				PP	**PP**	**05 33 27.6**	**+1.9**
DL2				S	**S**	**05 40 30.2**	**+1.1**
DL2				SS	**SS**	**05 45 41.6**	**+3.4**
DL2				pmax	pmax		
	comp=Z,3µm,8.6s						
DL2				LR	LR		
	comp=Z,33µm,22.4s						
DL2				LR	LR		
	comp=Z,32µm,22.6s						
DL2				LR	LR		
	comp=Z,37µm,42.6s						
PCAB	**Cabril**	**80.10**	**43**	*e*P	**P**	**05 30 27.7**	**+3.4**
	comp=Z,187nm,1.9s						
GTTG	**Gottingen**	**80.11**	**27**	*e*P	**P**	**05 30 25.0**	**+0.8**
	comp=Z,303nm,1.6s,baz=329,slow=5.3						
GTTG				*e*pP	**pwP**	**05 30 29.4**	**+0.6**
	baz=328,slow=5.3						
PB01	**IPOC Station P**	**80.26**	**129**	P	**P**	**05 30 23.7**	**-1.7**
PB01				IAmb	IAmb	05 30 48.0	
	comp=Z,579nm,1.7s						
WLF	**Walferdange**	**80.30**	**30**	P	**P**	**05 30 25.9**	**+0.7**
WLF				x	x	05 30 57.9	
WLF				PP	**PP**	**05 33 28.6**	**+1.5**
WLF	**Walferdange**	**80.30**	**30**	*e*P	**P**	**05 30 26.2**	**+0.9**
	comp=Z,243nm,1.4s,baz=329,slow=5.3						
WLF				*e*pP	**pwP**	**05 30 30.5**	**+0.7**
	baz=328,slow=5.3						
WLF	**Walferdange**	**80.30**	**30**	IAMs_20	IAMs_20	06 03 53.8	
	comp=Z,64µm,21.0s						
ULN	**Ulaanbaatar**	**80.42**	**327**	P	**P**	**05 30 26.5**	**+0.4**
ULN				pmax	pmax		
	comp=Z,579nm,1.9s						
ULN	**Ulaanbaatar**	**80.42**	**327**	P	**P**	**05 30 26.5**	**+0.4**
ULN				IAmb	IAmb	05 30 47.7	
	comp=Z,579nm,1.9s						
ULN	**Ulaanbaatar**	**80.42**	**327**	IAMs_20	IAMs_20	06 04 40.1	
	comp=Z,83µm,22.0s						
KLNR	**Kaliningrad**	**80.50**	**20**	*e*P	**P**	**05 30 26.5**	**+0.4**
KLNR				pmax	pmax		
	comp=Z,693nm,1.5s						
KLNR				MLR	MLR		
	comp=Z,109µm,21.0s						
RUE	**Ruedersdorf**	**80.56**	**24**	*e*P	**P**	**05 30 27.0**	**+0.5**
	comp=Z,403nm,1.5s,baz=329,slow=5.3						
RUE				*e*pP	**pwP**	**05 30 31.5**	**+0.4**
	baz=328,slow=5.3						
PVRL	**Vila Real**	**80.58**	**43**	*e*P	**P**	**05 30 27.1**	**+0.2**
	comp=Z,312nm,1.7s						
PABE	**Paberze**	**80.58**	**17**	*e*P	**P**	**05 30 28.4**	**+1.9**
PBRG	**Braganca**	**80.69**	**42**	*e*P	**P**	**05 30 30.5**	**+3.0**
	comp=Z,160nm,1.6s						
PBRG	**Braganca**	**80.69**	**42**	*e*S	**S**	**05 40 33.9**	**-1.5**
PBRG				*e*SS	**SS**	**05 45 48.7**	**+1.6**
TNS	**Taunus Mts**	**80.69**	**28**	*e*P	**P**	**05 30 28.0**	**+0.7**
	comp=Z,262nm,1.6s,baz=329,slow=5.3						
TNS				*e*pP	**pwP**	**05 30 32.1**	**+0.2**
	baz=328,slow=5.3						
SONM	**Songino Array**	**80.72**	**328**	P	**P**	**05 30 28.0**	**+0.3**
	comp=Z,27nm,0.9s,baz=36,slow=2.3,SNR=43						
SONM				PKKPbc	**PKKPbc**	**05 49 04.0**	**-1.9**
	comp=Z,1.0nm,0.7s,baz=180,slow=2.3,SNR=3.2						
SONM				PKPPKP		05 57 15.1	
	comp=Z,0.9nm,0.7s,baz=168,slow=1.3,SNR=3.0						
SONM				LR	LR	06 05 34.5	
	comp=Z,60µm,21.0s,baz=38,slow=35						
SONM	**Songino Array**	**80.72**	**328**	P	**P**	**05 30 27.2**	**-0.5**
SONM						05 49 04.0	
SONM				pmax	pmax		
	comp=Z,136nm,1.2s						
SONM	**Songino Array**	**80.72**	**328**	P	**P**	**05 30 27.2**	**-0.5**
UBBA	**Unterbreizbach**	**80.74**	**27**	*e*P	**P**	**05 30 28.1**	**+0.7**
	comp=Z,399nm,1.8s,baz=329,slow=5.3						
IZAR	**Zarasai**	**80.85**	**16**	*e*P	**P**	**05 30 30.8**	**+2.8**
PB04	**IPOC Station P**	**80.87**	**130**	P	**P**	**05 30 27.4**	**-1.3**
PB04				IAmb	IAmb	05 30 47.4	
	comp=Z,504nm,1.4s						
GKP	**Gorka Klasztor**	**80.89**	**22**	*e*P	**P**	**05 30 31.2**	**+2.9**
GKP				*e*SS	SS	05 46 18.5	+29
GKP				*e*L	L	06 06 36.4	
	comp=Z,89µm,19.0s						
GKP	**Gorka Klasztor**	**80.89**	**22**	*e*P	**P**	**05 30 31.2**	**+2.9**
GKP				MLR	MLR		
	comp=Z,89µm,19.0s						
PVIS	**Viseu**	**80.89**	**43**	*e*P	**P**	**05 30 28.4**	**-0.2**
	comp=Z,234nm,1.6s						
COI	**Coimbra**	**80.99**	**44**	IAMs_20	IAMs_20	06 03 35.3	
	comp=Z,61µm,19.0s						
COI	**Coimbra**	**80.99**	**44**	*e*P	**P**	**05 30 27.3**	**-1.8**
	comp=Z,305nm,1.6s						
COI	**Coimbra**	**80.99**	**44**	*e*S	**S**	**05 40 39.0**	**+0.5**
COI				*e*SS	**SS**	**05 45 55.2**	**+3.6**
ISAL	**Salakas**	**80.99**	**16**	*e*P	**P**	**05 30 29.8**	**+1.0**
NEUB	**Neuenburg**	**81.01**	**26**	*e*P	**P**	**05 30 29.4**	**+0.4**
	comp=Z,340nm,1.4s,baz=329,slow=5.3						
NEUB				*e*pP	**pwP**	**05 30 33.8**	**+0.2**
	baz=328,slow=5.3						
MVO	**Moncorvo**	**81.01**	**42**	*e*P	**P**	**05 30 28.6**	**-0.7**
	comp=Z,236nm,1.6s						
MVO	**Moncorvo**	**81.01**	**42**	*e*S	**S**	**05 40 39.5**	**+0.6**
MVO				*e*SS	**SS**	**05 45 58.4**	**+6.4**
MVO				*e*LQ	LQ	05 51 17.4	
MVO				*e*LR	LR	05 55 20.4	
	comp=Z,58µm,20.0s						
PCAS	**Casmilo, Conde**	**81.06**	**44**	*e*P	**P**	**05 30 32.3**	**+2.9**
	comp=Z,246nm,1.6s						
PCAS	**Casmilo, Conde**	**81.06**	**44**	*e*S	**S**	**05 40 40.2**	**+0.9**
PCAS				*e*SS	**SS**	**05 45 55.3**	**+2.7**
PMOZ	**Porto Moniz, M**	**81.14**	**54**	*e*S	**S**	**05 40 43.3**	**+2.8**
PMOZ	**Porto Moniz, M**	**81.14**	**54**	*e*LQ	LQ	05 51 44.0	
PMOZ				*e*LR	LR	05 57 07.7	
	comp=Z,44µm,18.0s						
GUMO	**Guam**	**81.31**	**280**	P	**P**	**05 30 33.0**	**+1.9**
	comp=Z,81nm,0.8s,baz=70,slow=23,SNR=4.3						
GUMO	**Guam**	**81.31**	**280**	P	P	05 30 35.8	+4.7
GUMO				IAmb	IAmb	05 30 51.1	
	comp=Z,405nm,1.1s						
MTE	**Manteigas**	**81.31**	**43**	IAMs_20	IAMs_20	06 02 24.6	
	comp=Z,55µm,20.0s						
MTE	**Manteigas**	**81.31**	**43**	*e*P	**P**	**05 30 33.3**	**+2.5**
	comp=Z,221nm,1.9s						
MTE	**Manteigas**	**81.31**	**43**	*e*S	**S**	**05 40 43.5**	**+1.6**
MTE				*e*SS	**SS**	**05 45 57.0**	**+0.6**
MTE				*e*LQ	LQ	05 51 19.3	
MTE				*e*LR	LR	05 54 47.6	
	comp=Z,49µm,22.0s						
CLL	**Collm**	**81.32**	**25**	*e*P	**P**	**05 30 32.0**	**+1.4**
	comp=Z,34nm,0.9s						
CLL				*i* P(2)		05 30 34.4	
	comp=Z,322nm,1.4s						
CLL				*e*Pmax		05 30 35.0	
CLL				*i* pP(2)		05 30 40.5	
CLL				*i*		05 30 43.4	
CLL				*e*PP	**PP**	**05 33 39.0**	**+3.6**
CLL				*e*PPP	PPP	05 35 24.0	
CLL				*e*PPPP		05 36 50.0	
CLL				*e*S	**S**	**05 40 45.0**	**+3.4**
	comp=N,16µm,29.8s						
CLL				*e*S	**S**	**05 40 45.0**	**+3.4**
	comp=E,8µm,24.0s						
CLL				*e*PS		05 41 29.0	
CLL				*e*SS	**SS**	**05 45 57.0**	**+1.2**
CLL				*e*PKKPbc	**PKKPbc**	**05 49 03.0**	**-1.5**
CLL				*e*SSS	SSS	05 49 48.0	
CLL				Lmax		06 09 00.0	
CLL				L	L	06 27 00.0	
	comp=N,18µm,19.2s						
CLL				L	L	06 27 00.0	
	comp=E,28µm,20.0s						
CLL				L	L	06 27 00.0	
	comp=Z,31µm,21.6s						
CLL	**Collm**	**81.32**	**25**	*e*P	**P**	**05 30 32.0**	**+1.4**
	comp=Z,322nm,1.4s,baz=329,slow=5.3						
CLL				*e*pP	**PcP**	**05 30 36.4**	**-0.4**
	baz=328,slow=5.3						
CLL	**Collm**	**81.32**	**25**	*e*P	**P**	**05 30 32.0**	**+1.4**
CLL				*e*		05 33 39.0	
CLL				*e*S	**S**	**05 40 45.0**	**+3.4**
CLL				pmax	pmax		
	comp=Z,322nm,1.4s						
CLL				MLR	MLR		
	comp=Z,31µm,21.6s						
PMAR	**Madeira**	**81.38**	**54**	*e*P	P	05 30 36.7	+5.2
	comp=Z,871nm,1.2s						
PTOM	**Tomar**	**81.42**	**44**	*e*P	**P**	**05 30 31.5**	**+0.1**
	comp=Z,237nm,1.5s						
PMAFR	**Mafra**	**81.43**	**45**	*e*P	**P**	**05 30 34.6**	**+3.1**
	comp=Z,308nm,1.5s						
PMAFR	**Mafra**	**81.43**	**45**	*e*S	**S**	**05 40 42.9**	**-0.3**
PMAFR				*e*SS	**SS**	**05 45 59.9**	**+1.6**
MOX	**Moxa**	**81.43**	**26**	*e*P	**P**	**05 30 31.7**	**+0.4**
	comp=Z,207nm,1.3s,baz=329,slow=5.3						
MOX				*e*pP	**pwP**	**05 30 36.0**	**+0.1**
	baz=328,slow=5.3						
MOX				*e*L	L	06 08 27.5	
	comp=Z,57µm,19.1s						
FUL	**Funchal**	**81.45**	**54**	*e*P	P	05 30 36.4	+4.8
	comp=Z,439nm,2.3s						
PMPST	**Porto Santo, M**	**81.50**	**54**	*e*S	**S**	**05 40 48.0**	**+4.0**
PMPST				*e*SS	**SS**	**05 46 02.9**	**+3.3**
LIS	**Lisbon**	**81.68**	**45**	*e*P	**P**	**05 30 31.0**	**-1.8**
LIS				*e*S	**S**	**05 40 43.0**	**-2.6**
LIS				AMS	AMS	06 02 57.5	
	comp=N,75µm,24.5s						
LIS	**Lisbon**	**81.68**	**45**	*e*P	**P**	**05 30 30.9**	**-1.8**
LIS				*e*S	**S**	**05 40 43.0**	**-2.6**
LIS	**Lisbon**	**81.68**	**45**	*e*P	**P**	**05 30 35.8**	**+3.1**
	comp=N,374nm,1.5s						
PCBR	**Castelo Branco**	**81.75**	**44**	*e*P	**P**	**05 30 32.9**	**-0.2**
	comp=N,157nm,1.5s						
PLN	**Plauen**	**81.75**	**26**	*e*P	**P**	**05 30 33.2**	**+0.3**
	comp=N,151nm,1.3s,baz=329,slow=5.3						
PLN				*e*pP	**pwP**	**05 30 37.4**	**-0.1**
	baz=328,slow=5.3						
NACGM	**Naroch**	**81.75**	**16**	*e*P	**P**	**05 30 32.0**	**-0.8**
NACGM				*e*PPP	PPP	05 35 40.0	
NACGM				*e*S	**S**	**05 40 46.0**	**+0.1**
NACGM				*e*PS		05 41 34.0	
NACGM				*e*SS	SS	05 46 28.0	+26
NACGM				*e*SSS	SSS	05 49 55.0	
NACGM				*e*LQ	LQ	05 54 10.0	
NACGM				*e*LR	LR	06 02 12.0	
NACGM				LRM	MLR	06 05 23.0	
	comp=Z,192nm,22.0s						
FBE	**Freiberg**	**81.77**	**25**	*e*P	**P**	**05 30 33.8**	**+0.8**
	comp=Z,303nm,1.4s,baz=329,slow=5.3						
SUW	**Suwalki**	**81.77**	**18**	*e*P	**P**	**05 30 32.9**	**0.0**
SUW				*e*S	**S**	**05 40 50.5**	**+4.4**
SUW				*e*L	L	06 02 44.3	
	comp=Z,123µm,27.8s						
SUW	**Suwalki**	**81.77**	**18**	*e*P	**P**	**05 30 32.9**	**0.0**
SUW				*e*S	**S**	**05 40 50.5**	**+4.4**
SUW	**Suwalki**	**81.77**	**18**	IAmb	IAmb	05 30 38.0	
	comp=Z,578nm,1.2s						
LVC	**Limon Verde**	**81.81**	**129**	P	**P**	**05 30 32.0**	**-1.9**
LVC				pmax	pmax		
	comp=Z,477nm,1.7s						
LVC	**Limon Verde**	**81.81**	**129**	P	**P**	**05 30 32.0**	**-1.9**
LVC				IAmb	IAmb	05 30 56.8	
	comp=Z,477nm,1.7s						
LVC	**Limon Verde**	**81.81**	**129**	*e*P	**P**	**05 30 35.1**	**+1.2**
CLDB	**Colider**	**81.82**	**112**	*e*P	**P**	**05 30 32.2**	**-1.6**
ECH	**Echery**	**81.87**	**30**	IAMs_20	IAMs_20	06 04 51.3	
	comp=Z,47µm,20.0s						
TANN	**Tannenbergstha**	**81.91**	**26**	*e*P	**P**	**05 30 34.2**	**+0.3**
	comp=Z,293nm,1.3s,baz=329,slow=5.3						
TANN				*e*pP	**pwP**	**05 30 38.4**	**0.0**
	baz=328,slow=5.3						
GUNZ	**Gunzen**	**81.91**	**26**	*e*P	**P**	**05 30 34.3**	**+0.5**
	comp=Z,167nm,1.4s,baz=329,slow=5.3						
GUNZ				*e*pP	**pwP**	**05 30 38.5**	**+0.1**
	baz=328,slow=5.3						
PMTG	**Montargil**	**81.92**	**45**	*e*P	**P**	**05 30 34.8**	**+0.8**
	comp=Z,159nm,1.6s						
PMTG	**Montargil**	**81.92**	**45**	*e*S	**S**	**05 40 49.0**	**+0.8**
PMTG				*e*SS	**SS**	**05 46 09.8**	**+4.4**
WERN	**Wernitzgruen**	**81.99**	**26**	*e*P	**P**	**05 30 34.7**	**+0.4**
	comp=Z,215nm,1.4s,baz=329,slow=5.3						
WERN				*e*pP	**pwP**	**05 30 39.0**	**+0.2**
	baz=328,slow=5.3						
BRG	**Berggiesshubel**	**82.00**	**25**	*i* P	**P**	**05 30 33.8**	**-0.4**
	comp=Z,52nm,0.9s						
BRG				*i*		05 30 38.5	
	comp=Z,348nm,1.2s						
BRG				*i*		05 30 52.2	
	comp=Z,94nm,1.0s						
BRG				PP	PP	05 33 21.0	-20
BRG				S	**S**	**05 40 54.0**	**+5.4**
BRG				SS	**SS**	**05 45 58.0**	**-7.9**
BRG				*e*PKPPKP		05 57 14.7	
	comp=Z,4.3nm,0.9s						
BRG	**Berggiesshubel**	**82.00**	**25**	*e*P	**P**	**05 30 34.8**	**+0.6**
	comp=Z,349nm,1.2s,baz=329,slow=5.3						
BRG				*e*pP	**PcP**	**05 30 39.1**	**-0.6**
	baz=328,slow=5.3						
BRG	**Berggiesshubel**	**82.00**	**25**	*i* P	**P**	**05 30 33.8**	**-0.4**
BRG				*i*		05 30 38.5	
BRG				S	**S**	**05 40 54.0**	**+5.4**
BRG				pmax	pmax		
	comp=Z,52nm,0.9s						
BRG				MLR	MLR		
	comp=N,56µm,17.1s						
BRG				MLR	MLR		
	comp=E,36µm,16.5s						
BRG				MLR	MLR		
	comp=Z,71µm,17.4s						
NKC	**Novy Kostel**	**82.06**	**26**	*e*P	**P**	**05 30 34.6**	**0.0**
NKC				*e*pP	**pwP**	**05 30 39.3**	**+0.1**
NKC				*e*S	**S**	**05 40 51.4**	**+2.1**
NKC				AMS	AMS	06 07 30.0	
	comp=Z,57µm,20.0s						
NKC	**Novy Kostel**	**82.06**	**26**	*e*P	**P**	**05 30 34.6**	**0.0**
NKC				*e*		05 30 39.3	
NKC				*e*S	**S**	**05 40 51.4**	**+2.1**
NKC				MLR	MLR		
	comp=Z,57µm,20.0s						
PMRV	**Marv??o**	**82.10**	**44**	*e*P	**P**	**05 30 34.8**	**-0.2**
	comp=Z,216nm,1.8s						
PMRV	**Marv??o**	**82.10**	**44**	*e*S	**S**	**05 40 47.5**	**-2.5**
PMRV				*e*SS	**SS**	**05 46 09.7**	**+1.6**
PMRV				*e*LQ	LQ	05 51 29.8	
PMRV				*e*LR	LR	05 56 18.3	
	comp=Z,41µm,18.0s						
GRA1	**Grafenberg Arr**	**82.11**	**27**	P	**P**	**05 30 33.9**	**-0.9**
GRA1				IAMs_20	IAMs_20	06 08 44.4	
	comp=Z,63µm,19.0s						
GRF	**Grafenberg Arr**	**82.11**	**27**	*e*P	**P**	**05 30 35.8**	**+1.0**
	comp=Z,388nm,1.4s,baz=329,slow=5.3						
GRF				*e*pP	**PcP**	**05 30 40.2**	**-0.1**
	baz=328,slow=5.3						
GRF				*e*L	L	06 08 45.0	
	comp=Z,63µm,18.8s						
GRF	**Grafenberg Arr**	**82.11**	**27**	P	**P**	**05 30 33.9**	**-0.9**
GRF				pmax	pmax		
	comp=Z,329nm,1.3s						
GRF				MLR	MLR		
	comp=Z,63µm,19.0s						
MANZ	**Manzenberg**	**82.16**	**26**	*e*P	**P**	**05 30 35.6**	**+0.4**
	comp=Z,246nm,1.7s,baz=329,slow=5.3						
MANZ				*e*pP	**pwP**	**05 30 39.8**	**+0.1**
	baz=328,slow=5.3						
STU	**Stuttgart**	**82.17**	**29**	*e*P	**P**	**05 30 35.9**	**+0.8**
	comp=Z,249nm,1.7s,baz=329,slow=5.3						
STU				*e*pP	**PcP**	**05 30 40.1**	**-0.5**
	baz=328,slow=5.3						
STU	**Stuttgart**	**82.17**	**29**	IAMs_20	IAMs_20	06 05 50.0	
	comp=Z,55µm,22.0s						
BJI	**Beijing**	**82.19**	**317**	P	**P**	**05 30 34.6**	**-0.8**
BJI				S	**S**	**05 40 43.6**	**-7.3**
BJI				pmax	pmax		
	comp=Z,10.0nm,2.9s						
BJI				LR	LR		
	comp=Z,47µm,28.2s						
BJI				LR	LR		
	comp=Z,37µm,27.3s						
BFO	**Black Forest**	**82.22**	**29**	*e*P	**P**	**05 30 36.0**	**+0.6**
	comp=Z,294nm,1.5s,baz=329,slow=5.3						
BFO				*e*pP	**PcP**	**05 30 40.4**	**-0.4**
	baz=328,slow=5.3						
BFO	**Black Forest**	**82.22**	**29**	P	**P**	**05 30 34.6**	**-0.9**
BFO				pmax	pmax		
	comp=Z,292nm,1.5s						
BFO				MLR	MLR		
	comp=Z,58µm,18.0s						
BFO	**Black Forest**	**82.22**	**29**	P	**P**	**05 30 34.5**	**-0.9**
BFO				IAMs_20	IAMs_20	06 10 32.4	
	comp=Z,58µm,18.0s						
ZAA0	**Zalesovo Array**	**82.26**	**343**	IAmb	IAmb	05 30 59.0	
	comp=Z,422nm,1.6s						
ZAA0				IAMs_20	IAMs_20	06 10 45.1	
	comp=Z,46µm,19.0s						
ZALV	**Zalesovo Beam**	**82.26**	**343**	P	**P**	**05 30 35.2**	**-0.3**
	comp=Z,94nm,1.1s,baz=18,slow=4.2,SNR=33						
ZALV				PKPPKP		05 57 08.2	
	comp=Z,0.3nm,0.3s,baz=17,slow=2.5,SNR=4.5						
ZALV				LR	LR	06 10 55.5	
	comp=Z,38µm,18.7s,baz=24,slow=38						
ZALV	**Zalesovo Beam**	**82.26**	**343**	P	**P**	**05 30 34.2**	**-1.3**
ZALV	**Zalesovo Beam**	**82.26**	**343**	P	**P**	**05 30 34.2**	**-1.3**
MNK	**Minsk**	**82.36**	**16**	*e*P	**P**	**05 30 36.0**	**0.0**
ROTZ	**Rotzenmuhle**	**82.38**	**26**	*e*P	**P**	**05 30 36.8**	**+0.5**
	comp=Z,184nm,1.5s,baz=329,slow=5.3						
ROTZ				*e*pP	**PcP**	**05 30 41.0**	**-0.4**
	baz=328,slow=5.3						
PESTR	**Estremoz**	**82.40**	**44**	P	**P**	**05 30 39.3**	**+2.8**

	SNR=7.7						
PESTR	**Estremoz**	**82.40**	**44**	*e*S	**S**	**05 40 51.5**	**-1.7**
PESTR				*e*SS	**SS**	**05 46 17.2**	**+4.5**
PNCL	**Nicolau / Gran**	**82.45**	**45**	*e*P	**P**	**05 30 37.3**	**+0.5**
	comp=Z,166nm,1.9s						
PNCL	**Nicolau / Gran**	**82.45**	**45**	*e*S	**S**	**05 40 53.5**	**-0.1**
PNCL				*e*SS	**SS**	**05 46 16.6**	**+3.2**
PVCC	**Panska Ves**	**82.50**	**25**	*e*P	**P**	**05 30 37.0**	**+0.2**
PVCC				*e*pP	**pwP**	**05 30 40.0**	**-1.4**
PVCC				*e*S	**S**	**05 40 56.5**	**+2.8**
PVCC				AMS	AMS	06 09 30.0	
	comp=Z,55µm,17.9s						
PVCC	**Panska Ves**	**82.50**	**25**	*e*P	**P**	**05 30 37.0**	**+0.2**
PVCC				*e*		05 30 40.0	
PVCC				*e*S	**S**	**05 40 56.5**	**+2.8**
PVCC				MLR	MLR		
	comp=Z,55µm,17.9s						
SVE	**Sverdlovsk**	**82.70**	**357**	*e*P	**P**	**05 30 37.3**	**-0.4**
SVE				*e*S	**S**	**05 40 53.3**	**-2.2**
SVE				*e*		05 49 38.1	
SVE				pmax	pmax		
	comp=Z,261nm,1.5s						
SVE				MLR	MLR		
	comp=Z,50µm,25.0s						
PTEO	**Sao Teotonio**	**82.76**	**46**	*e*P	**P**	**05 30 40.3**	**+1.9**
	comp=Z,249nm,1.7s						
KSP	**Ksiaz**	**82.76**	**24**	*e*P	**P**	**05 30 41.6**	**+3.4**
KSP				*e*S	**S**	**05 41 02.8**	**+6.4**
KSP				*e*L	L	06 07 07.3	
	comp=Z,87µm,21.8s						
KSP	**Ksiaz**	**82.76**	**24**	*e*P	**P**	**05 30 41.6**	**+3.4**
KSP				MLR	MLR		
	comp=Z,87µm,21.8s						
MOS	**Moscow**	**82.79**	**10**	*e*P	**P**	**05 30 38.2**	**0.0**
MOS				*e*S	**S**	**05 40 55.3**	**-1.1**
MOS				pmax	pmax		
	comp=Z,302nm,1.3s						
MESJ	**Messejana**	**82.82**	**45**	*e*P	**P**	**05 30 36.7**	**-2.1**
MESJ				*e*S	**S**	**05 40 54.7**	**-2.7**
MESJ				AMS	AMS	06 03 25.3	
	comp=N,38µm,27.8s						
MESJ	**Messejana**	**82.82**	**45**	*e*P	**P**	**05 30 36.6**	**-2.1**
MESJ				*e*S	**S**	**05 40 54.6**	**-2.7**
PRA	**Prague**	**82.85**	**25**	AMS	AMS	06 10 40.0	
	comp=N,68µm,15.4s						
PBEJ	**Beja**	**82.87**	**45**	*e*P	**P**	**05 30 40.8**	**+1.8**
	comp=N,121nm,1.7s						
CHVC	**Chvalec**	**82.91**	**24**	*e*P	**P**	**05 30 39.4**	**+0.4**
CHVC				*e*x	x	05 30 43.1	
CHVC				*e*S	**S**	**05 41 01.1**	**+3.1**
CHVC				AMS	AMS	06 08 10.0	
	comp=N,62µm,18.8s						
PRU	**Pruhonice**	**82.96**	**25**	*e*P	**P**	**05 30 39.1**	**-0.1**
PRU				*e*pP	**PcP**	**05 30 43.6**	**-0.4**
PRU				*e*S	**S**	**05 41 01.3**	**+2.9**
PRU				AMS	AMS	06 10 20.0	
	comp=N,71µm,15.4s						
PRU	**Pruhonice**	**82.96**	**25**	*e*P	**P**	**05 30 39.1**	**-0.1**
PRU				*e*		05 30 43.6	
PRU				*e*S	**S**	**05 41 01.3**	**+2.9**
PRU				MLR	MLR		
	comp=Z,71µm,15.4s						
UPC	**Upice**	**82.97**	**24**	*e*P	**P**	**05 30 39.5**	**+0.2**
UPC				*e*SKS	**S**	**05 40 59.7**	**+1.2**
UPC				AMS	AMS	06 08 10.0	
	comp=Z,72µm,18.7s						
UPC	**Upice**	**82.97**	**24**	*e*P	**P**	**05 30 39.5**	**+0.2**
UPC				*e*S	**S**	**05 40 59.7**	**+1.2**
UPC				MLR	MLR		
	comp=Z,72µm,18.7s						
MORF	**Marmelete**	**82.97**	**46**	*e*P	**P**	**05 30 37.4**	**-2.3**
MORF				*e*S	**S**	**05 40 56.2**	**-2.9**
MORF				AMS	AMS	06 01 36.3	
	comp=N,38µm,15.1s						
MORF	**Marmelete**	**82.97**	**46**	*e*P	**P**	**05 30 37.3**	**-2.3**
MORF				*e*S	**S**	**05 40 56.2**	**-2.9**
MORF	**Marmelete**	**82.97**	**46**	*e*P	**P**	**05 30 41.1**	**+1.5**
	comp=N,238nm,1.8s						
MORF	**Marmelete**	**82.97**	**46**	*e*S	**S**	**05 41 03.5**	**+4.4**
OSTC	**Ostas**	**82.98**	**24**	*e*P	**P**	**05 30 39.8**	**+0.4**
OSTC				*e*x	x	05 30 43.8	
OSTC				*e*S	**S**	**05 41 01.7**	**+3.0**
OSTC				AMS	AMS	06 07 00.0	
	comp=N,67µm,21.8s						
PFVI	**Vila Bisbo**	**83.00**	**46**	IAMs_20	IAMs_20	06 04 12.7	
	comp=Z,39µm,20.0s						
PFVI	**Vila Bisbo**	**83.00**	**46**	*e*P	**P**	**05 30 42.3**	**+2.6**
	comp=Z,302nm,1.7s						
PFVI	**Vila Bisbo**	**83.00**	**46**	*e*S	**S**	**05 41 01.6**	**+2.3**
PFVI				*e*SS	**SS**	**05 46 25.8**	**+4.2**
PCVE	**Castro Verde**	**83.07**	**45**	*e*P	**P**	**05 30 42.6**	**+2.6**
	comp=Z,157nm,1.8s						
PCVE	**Castro Verde**	**83.07**	**45**	*e*S	**S**	**05 40 57.5**	**-2.5**
PCVE				*e*SS	**SS**	**05 46 23.6**	**+1.1**
GOPC	**GO Pecny, Ondr**	**83.10**	**25**	*e*P	**P**	**05 30 39.5**	**-0.5**
GOPC				AMS	AMS	06 10 20.0	
	comp=Z,73µm,15.9s						
GOPC	**GO Pecny, Ondr**	**83.10**	**25**	*e*P	**P**	**05 30 39.5**	**-0.5**
GOPC				MLR	MLR		
	comp=Z,73µm,15.9s						
WET	**Wettzell**	**83.14**	**26**	*e*P	**P**	**05 30 40.8**	**+0.6**
	comp=Z,280nm,1.9s,baz=329,slow=5.3						
WET				*e*pP	**pwP**	**05 30 45.0**	**+0.2**
	baz=328,slow=5.3						
BEL	**Belsk**	**83.15**	**21**	*e*P	**P**	**05 30 43.0**	**+2.8**
BEL				*e*S	S	05 41 12.4	+12
BEL				*e*L	L	06 07 07.3	
	comp=Z,112µm,21.1s						
BEL	**Belsk**	**83.15**	**21**	*e*P	**P**	**05 30 43.0**	**+2.8**
BEL				MLR	MLR		
	comp=Z,112µm,21.1s						
ARU	**Arti**	**83.17**	**358***c*	*i*P	**P**	**05 30 39.7**	**-0.5**
ARU						05 33 51.0	
ARU				PPP	PPP	05 35 43.5	
ARU				S	**S**	**05 41 00.9**	**+0.6**
ARU				SSS	SSS	05 49 50.1	
ARU				pmax	pmax		
	comp=Z,165nm,1.2s						
ARU				pmax	pmax		
	comp=Z,744nm,5.6s						
ARU				MLR	MLR		
	comp=Z,30µm,19.0s						
ARU	**Arti**	**83.17**	**358**	P	**P**	**05 30 39.3**	**-0.9**
ARU				IAmb	IAmb	05 30 44.9	
	comp=Z,354nm,1.3s						
DPC	**Dobruska-Polom**	**83.20**	**24**	*e*P	**P**	**05 30 40.7**	**+0.2**
DPC				*e*pP	**PcP**	**05 30 44.8**	**-0.3**
DPC				*e*S	**S**	**05 41 04.1**	**+3.1**
DPC				AMS	AMS	06 08 20.0	
	comp=Z,61µm,17.7s						
DPC	**Dobruska-Polom**	**83.20**	**24**	*e*P	**P**	**05 30 40.7**	**+0.2**
DPC				*e*		05 30 44.8	
DPC				*e*S	**S**	**05 41 04.1**	**+3.1**
DPC				MLR	MLR		
	comp=Z,61µm,17.7s						
SSB	**Saint Sauveur**	**83.22**	**33**	P	**P**	**05 30 40.0**	**-0.8**
SSB				pmax	pmax		
	comp=Z,310nm,2.0s						
SSB				MLR	MLR		
	comp=Z,60µm,19.0s						
SSB	**Saint Sauveur**	**83.22**	**33**	P	**P**	**05 30 40.0**	**-0.8**
SSB	**Saint Sauveur**	**83.22**	**33**	IAMs_20	IAMs_20	06 08 12.4	
	comp=Z,60µm,19.0s						
OBN	**Obninsk**	**83.26**	**10**	P	**P**	**05 30 40.1**	**-0.5**
	comp=Z,28nm,0.9s,baz=129,slow=6.5,SNR=5.8						
OBN				LR	LR	06 08 15.2	
	comp=Z,13µm,19.7s,baz=348,slow=36						
OBN	**Obninsk**	**83.26**	**10**	⇑P	**P**	**05 30 44.0**	**+3.4**
OBN	**Obninsk**	**83.26**	**10**	P	**P**	**05 30 38.7**	**-1.9**
OBN				IAmb	IAmb	05 30 45.6	
	comp=Z,532nm,1.4s						
OBN				IAMs_20	IAMs_20	06 05 59.6	
	comp=Z,52µm,20.0s						
GO02	**Mina Guanaco**	**83.38**	**131**	IAmb	IAmb	05 31 04.6	
	comp=Z,976nm,1.9s						
KHC	**Kasperske Hory**	**83.39**	**26**	*e*P	**P**	**05 30 41.2**	**-0.3**
KHC				*e*pP	**sP**	**05 30 44.2**	**+1.1**
KHC				*e*x	x	05 31 03.5	
KHC				*e*S	**S**	**05 41 08.4**	**+5.5**
KHC				AMS	AMS	06 08 10.0	
	comp=Z,61µm,19.4s						
KHC	**Kasperske Hory**	**83.39**	**26**	*e*P	**P**	**05 30 41.2**	**-0.3**
KHC				*e*		05 30 44.2	
KHC				*e*S	**S**	**05 41 08.4**	**+5.5**
KHC				MLR	MLR		
	comp=Z,61µm,19.4s						
PVAQ	**Vaqueiros**	**83.41**	**45**	IAMs_20	IAMs_20	06 13 06.4	
	comp=Z,43µm,18.0s						
PVAQ	**Vaqueiros**	**83.41**	**45**	*e*P	**P**	**05 30 45.4**	**+3.6**
	comp=Z,223nm,1.6s						
PVAQ	**Vaqueiros**	**83.41**	**45**	*e*S	**S**	**05 41 03.8**	**+0.4**
PVAQ				*e*SS	**SS**	**05 46 32.8**	**+5.2**
PVAQ				*e*LQ	LQ	05 52 10.8	
PVAQ				*e*LR	LR	05 56 13.3	
	comp=Z,32µm,18.0s						
PBDV	**Barranco-do-Ve**	**83.41**	**46**	*e*P	**P**	**05 30 45.5**	**+3.7**
	comp=Z,275nm,1.6s						
PBDV	**Barranco-do-Ve**	**83.41**	**46**	*e*S	**S**	**05 41 05.7**	**+2.2**
PBDV				*e*SS	**SS**	**05 46 32.9**	**+5.2**
UBR	**Ueberruh**	**83.42**	**29**	*e*P	**P**	**05 30 42.9**	**+1.2**
	comp=Z,612nm,1.8s,baz=329,slow=5.3						
UBR				*e*pP	**pwP**	**05 30 47.1**	**+0.8**
	baz=328,slow=5.3						
FUR	**Furstenfeldbru**	**83.42**	**28**	*e*P	**P**	**05 30 42.8**	**+1.1**
	comp=Z,604nm,1.7s,baz=329,slow=5.3						
FUR				*e*pP	**pwP**	**05 30 46.9**	**+0.5**
	baz=328,slow=5.3						
UCM	**Universidad Co**	**83.56**	**41**	⇑*i*P	**P**	**05 30 43.2**	**+0.6**
UCM				*i* S	**S**	**05 41 04.7**	**-0.3**
KRLC	**Kraliky**	**83.58**	**24**	*e*P	**P**	**05 30 42.7**	**+0.2**
KRLC				*e*pP	**PcP**	**05 30 46.7**	**-0.1**
KRLC				*e*S	**S**	**05 41 07.9**	**+3.0**
KRLC				AMS	AMS	06 07 10.0	
	comp=Z,50µm,19.2s						
KRLC	**Kraliky**	**83.58**	**24**	*e*P	**P**	**05 30 42.7**	**+0.2**
KRLC				*e*		05 30 46.7	
KRLC				*e*S	**S**	**05 41 07.9**	**+3.0**
KRLC				MLR	MLR		
	comp=Z,50µm,19.2s						
PAB	**San Pablo**	**83.58**	**42**	P	**P**	**05 30 41.8**	**-1.0**
PAB				pmax	pmax		
	comp=Z,333nm,1.6s						
PAB	**San Pablo**	**83.58**	**42**	P	**P**	**05 30 41.8**	**-1.0**
PAB				IAmb	IAmb	05 30 48.5	
	comp=Z,332nm,1.6s						
PAB	**San Pablo**	**83.58**	**42**	IAMs_20	IAMs_20	06 03 55.8	
	comp=Z,62µm,22.0s						
DAVA	**Damuels**	**83.67**	**29**	*i* PcP	**P**	**05 30 43.4**	**+0.2**
	comp=Z,155nm,1.5s,SNR=40						
DAVA				*i* PKKPbc	**PKKPbc**	**05 48 59.0**	**-0.3**
	comp=Z,6.5nm,1.2s						
GEC2	**GERESS Array S**	**83.67**	**26**	*e*P	**P**	**05 30 43.5**	**+0.4**
	comp=Z,281nm,1.6s,baz=329,slow=5.3						
GEC2				*e*pP	**pwP**	**05 30 47.7**	**0.0**
	baz=328,slow=5.3						
GEC2	**GERESS Array S**	**83.67**	**26**	P	**P**	**05 30 42.7**	**-0.4**
GEC2				IAMs_20	IAMs_20	06 08 47.7	
	comp=Z,65µm,20.0s						
GERES	**GERESS Array B**	**83.67**	**26**	P	**P**	**05 30 43.2**	**+0.1**
	comp=Z,22nm,1.1s,baz=344,slow=4.4,SNR=24						
GERES				PKKPbc	**PKKPbc**	**05 49 03.4**	**+4.2**
	comp=Z,0.7nm,0.7s,baz=150,slow=5.6,SNR=3.7						
GERES				PKPPKP	**P'P'df**	**05 57 09.8**	**-2.6**
	comp=Z,1.7nm,0.9s,baz=116,slow=3.1,SNR=5.8						
GERES				LR	LR	06 09 07.1	
	comp=Z,58µm,19.2s,baz=326,slow=37						
GERES	**GERESS Array B**	**83.67**	**26**	P	**P**	**05 30 41.6**	**-1.5**
ESBB	**Sonseca Array**	**83.68**	**42**	P	**P**	**05 30 41.0**	**-2.3**
ESBB				IAmb	IAmb	05 30 48.9	
	comp=Z,325nm,1.6s						
ESBB				IAMs_20	IAMs_20	06 04 00.3	
	comp=Z,60µm,22.0s						
ESDC	**Sonseca Array**	**83.68**	**42**	P	**P**	**05 30 43.1**	**-0.2**
	comp=Z,40nm,0.9s,baz=312,slow=4.8,SNR=46						
ESDC				PKPPKP		05 57 07.0	
	comp=Z,0.4nm,0.6s,baz=117,slow=1.7,SNR=4.1						
ESDC	**Sonseca Array**	**83.68**	**42**	P	**P**	**05 30 42.0**	**-1.2**
RETA	**Reutte**	**83.82**	**28**	*i* pP	**P**	**05 30 44.7**	**+0.9**
	comp=Z,96nm,1.3s,SNR=20						
RETA				*i* PKKPbc	**PKKPbc**	**05 48 59.5**	**+0.6**
	comp=Z,13nm,1.4s						
RETA				*i* P'P'df	P'P'df	05 57 03.7	-8.4
	comp=Z,7.7nm,1.2s						
TREC	**Trest**	**83.86**	**25**	*e*P	**P**	**05 30 44.1**	**+0.1**
TREC				*e*S	**S**	**05 41 10.8**	**+3.1**
TREC				AMS	AMS	06 11 40.0	
	comp=Z,69µm,15.6s						
TREC	**Trest**	**83.86**	**25**	*e*P	**P**	**05 30 44.1**	**+0.1**
TREC				*e*S	**S**	**05 41 10.8**	**+3.1**
TREC				MLR	MLR		
	comp=Z,69µm,15.6s						
HHC	**Hu-ho-hao-te**	**83.89**	**320**	*e*P	**P**	**05 30 44.0**	**-0.3**
HHC				sP	pwP	05 30 49.5	+0.4
HHC				PP	**PP**	**05 33 55.1**	**-1.9**
HHC				S	**S**	**05 41 09.0**	**+0.6**
HHC				SS	**SS**	**05 46 35.6**	**+0.9**
HHC				pmax	pmax		
	comp=Z,5µm,1.2s						
HHC				pmax	pmax		
	comp=Z,28µm,6.9s						
HHC				LR	LR		
	comp=Z,52µm,17.8s						
HHC				LR	LR		
	comp=Z,65µm,17.0s						
MOTA	**Moosalm**	**84.06**	**28**	*i* pP	**P**	**05 30 45.5**	**+0.3**
	comp=Z,206nm,1.6s,SNR=46						
MOTA				*i* PKKPbc	**PKKPbc**	**05 48 58.5**	**+0.1**
	comp=Z,4.8nm,1.0s						
MOTA				*i* P'P'df	P'P'df	05 57 03.7	-8.0
	comp=Z,6.9nm,1.2s						
MORC	**Moravsky Berou**	**84.08**	**23**	⇑P	**P**	**05 30 45.3**	**+0.2**
MORC	**Moravsky Berou**	**84.08**	**23**	*e*P	**P**	**05 30 44.7**	**-0.3**
MORC				*e*PP	**PP**	**05 33 57.9**	**-0.2**
MORC				*e*S	**S**	**05 41 08.2**	**-1.6**
MORC				*e*SS	**SS**	**05 46 30.7**	**-6.0**
MORC	**Moravsky Berou**	**84.08**	**23**	IAmb	IAmb	05 30 50.9	
	comp=Z,308nm,1.5s						
MORC				IAMs_20	IAMs_20	06 08 09.1	
	comp=Z,63µm,20.0s						
DAVOX	**Davos/Dischmat**	**84.09**	**29**	P	**P**	**05 30 46.6**	**+1.3**
	comp=Z,38nm,0.9s,baz=326,slow=6.2,SNR=27						
FETA	**Feichten**	**84.20**	**29**	*i* PcP	**P**	**05 30 45.9**	**0.0**
	comp=Z,138nm,1.2s,SNR=48						
FETA				*i* PKKPbc	**PKKPbc**	**05 48 58.4**	**+0.3**
	comp=Z,5.8nm,1.3s						
FETA				*i* P'P'df	**P'P'df**	**05 57 05.2**	**-6.2**
	comp=Z,1.3nm,1.0s						
VRAC	**Vranov**	**84.20**	**24**	P	**P**	**05 30 46.3**	**+0.7**
	comp=Z,149nm,1.1s,baz=322,slow=5.0,SNR=29						
VRAC	**Vranov**	**84.20**	**24**	⇑P	**P**	**05 30 45.6**	**-0.1**
VRAC	**Vranov**	**84.20**	**24**	*e*P	**P**	**05 30 45.4**	**-0.2**
VRAC				*e*PP	**PP**	**05 33 59.4**	**+0.3**
VRAC				*e*S	**S**	**05 41 10.5**	**-0.5**
VRAC				*e*SS	**SS**	**05 46 38.4**	**-0.1**
OKC	**Ostrava-Krasne**	**84.20**	**23**	*e*P	**P**	**05 30 45.5**	**-0.1**
OKC				AMS	AMS	06 07 50.0	
	comp=Z,62µm,19.5s						
OKC	**Ostrava-Krasne**	**84.20**	**23**	*e*P	**P**	**05 30 45.5**	**-0.1**
OKC				MLR	MLR		
	comp=Z,62µm,19.5s						
SQTA	**Sankt Quirin**	**84.20**	**28**	*i* PcP	**P**	**05 30 46.1**	**+0.3**
	comp=Z,239nm,1.5s,SNR=57						
SQTA				*i* PKKPbc	**PKKPbc**	**05 48 57.4**	**-0.6**
	comp=Z,3.8nm,0.8s						
SQTA				*i* P'P'df	P'P'df	05 57 04.6	-6.8
	comp=Z,4.3nm,0.9s						
WATA	**Walderalm**	**84.24**	**28**	*i* PcP	**P**	**05 30 45.6**	**-0.4**
	comp=Z,139nm,1.2s,SNR=55						
WATA				*i* P'P'df	P'P'df	05 57 03.4	-8.0
	comp=Z,13nm,1.4s						
BNI	**Bardonecchia**	**84.29**	**32**	IAmb	IAmb	05 30 53.0	
	comp=Z,376nm,1.5s						
WTTA	**Wattenberg**	**84.32**	**28**	*i* pP	**P**	**05 30 46.7**	**+0.2**
	comp=Z,229nm,1.4s,SNR=63						
WTTA				*i* P'P'df	P'P'df	05 57 03.5	-7.8
	comp=Z,12nm,1.5s						
RJOB	**Jochberg**	**84.32**	**27**	*e*P	**P**	**05 30 47.0**	**+0.7**
	comp=Z,200nm,1.4s,baz=329,slow=5.3						
RJOB				*e*pP	**pwP**	**05 30 51.3**	**+0.3**
	baz=328,slow=5.3						
OJC	**Ojcow**	**84.34**	**22**	*e*P	**P**	**05 30 49.5**	**+3.2**
OJC				*e*S	**S**	**05 41 08.8**	**-3.5**
OJC				*e*L	L	06 08 40.8	
	comp=Z,78µm,20.0s						
OJC	**Ojcow**	**84.34**	**22**	*e*P	**P**	**05 30 49.5**	**+3.2**
OJC				*e*S	**S**	**05 41 08.8**	**-3.5**
OJC				MLR	MLR		
	comp=Z,78µm,20.0s						
OJC	**Ojcow**	**84.34**	**22**	IAmb	IAmb	05 30 52.0	
	comp=Z,416nm,1.3s						
KRUC	**Moravsky**	**84.36**	**24**	*e*P	**P**	**05 30 46.0**	**-0.4**
KRUC				*e*PP	**PP**	**05 34 00.5**	**+0.2**
KRUC				*e*S	**S**	**05 41 11.3**	**-1.3**
KRUC				*e*SS	**SS**	**05 46 40.9**	**+0.1**
TIA	**Tai'an**	**84.51**	**314**	P	**P**	**05 30 47.0**	**-0.5**
TIA				pP	**pwP**	**05 30 59.2**	**+7.0**
TIA				S	**S**	**05 41 14.2**	**-0.4**
TIA				SS	**SS**	**05 46 46.3**	**+2.3**
TIA				LR	LR		
	comp=Z,32µm,17.1s						
TIA				LR	LR		
	comp=Z,22µm,17.1s						
TIA				LR	LR		
	comp=Z,30µm,22.1s						
MOA	**Molln**	**84.73**	**26**	*i* PcP	**P**	**05 30 48.2**	**-0.1**
	comp=Z,147nm,1.4s,SNR=40						
MOA				*i* PKKPbc	**PKKPbc**	**05 48 56.2**	**-0.5**
	comp=Z,8.3nm,1.6s						
MOA				*i* P'P'df	P'P'df	05 57 02.5	-7.9
BTO	**Baotou**	**84.82**	**321**	*e*P	**P**	**05 30 48.2**	**-0.9**
BTO				S	S	05 41 07.1	-11
HNR	**Honiara**	**84.91**	**253**	P	**P**	**05 30 52.8**	**+3.2**
	comp=Z,45nm,0.5s,baz=320,slow=7.9,SNR=3.0						
HNR	**Honiara**	**84.91**	**253**	IAMs_20	IAMs_20	06 02 39.9	
	comp=Z,47µm,20.0s						
SFS	**San Fernando**	**84.92**	**45**	⇑*i*P	**P**	**05 30 50.2**	**+0.8**
SFS				*i* S	**S**	**05 41 21.8**	**+3.3**
JAVC	**Velka Javorina**	**84.93**	**24**	*e*P	**P**	**05 30 50.1**	**+0.7**
JAVC	**Velka Javorina**	**84.93**	**24**	*e*S	**S**	**05 41 20.2**	**+1.8**
JAVC				*e*SS	**SS**	**05 46 47.6**	**-1.8**
LIJA	**Lijar**	**85.02**	**44**	*e*P	**P**	**05 30 54.0**	**+3.9**
ABTA	**Abfaltersbach**	**85.07**	**28**	*i* pP	**P**	**05 30 50.8**	**+0.6**
	comp=Z,174nm,1.1s,SNR=65						
ABTA				*i* PKKPbc	**PKKPbc**	**05 48 55.9**	**-0.1**
	comp=Z,13nm,1.7s						
ABTA				*i* P'P'df	P'P'df	05 57 01.8	-7.9
	comp=Z,6.1nm,1.2s						
KBA	**Koelnbreinsper**	**85.08**	**27**	*i* pP	**P**	**05 30 50.4**	**+0.1**
	comp=Z,150nm,1.1s,SNR=46						
KBA				*i* PKKPbc	**PKKPbc**	**05 48 56.5**	**+0.4**
	comp=Z,7.6nm,1.1s						
SMOL	**Smolenice**	**85.16**	**24**	*e*P	**P**	**05 30 51.3**	**+0.8**
SMOL				pmax	pmax		
	comp=Z,241nm,1.5s						
SMOL	**Smolenice**	**85.16**	**24**	*e*P	**P**	**05 30 51.3**	**+0.8**
CONA	**Conrad Observa**	**85.18**	**25**	*i* PcP	**P**	**05 30 50.2**	**-0.5**
	comp=Z,138nm,1.0s,SNR=66						
CONA				*i* P'P'df	P'P'df	05 56 59.3	-10
	comp=Z,6.3nm,1.6s						
NIE	**Niedzica**	**85.20**	**22**	*e*P	**P**	**05 30 51.5**	**+0.8**
NIE				*e*S	**S**	**05 41 19.8**	**-1.3**
NIE				*e*SS	**SS**	**05 46 59.9**	**+6.6**
NIE				*e*L	L	06 09 22.5	
	comp=Z,49µm,20.0s						
NIE	**Niedzica**	**85.20**	**22**	*e*P	**P**	**05 30 51.5**	**+0.8**
NIE				*e*S	**S**	**05 41 19.8**	**-1.3**
NIE				*e*SS	**SS**	**05 46 59.9**	**+6.6**
NIE				MLR	MLR		
	comp=Z,49µm,20.0s						
LANS	**Liptovska Anna**	**85.20**	**22**	*e*P	**P**	**05 30 51.1**	**+0.3**
LANS				pmax	pmax		
	comp=Z,144nm,1.4s						
LANS	**Liptovska Anna**	**85.20**	**22**	*e*P	**P**	**05 30 51.1**	**+0.3**
MODS	**Modra-Piesok**	**85.24**	**24**	*e*P	**P**	**05 30 50.4**	**-0.5**
MODS				pmax	pmax		
	comp=Z,651nm,1.3s						
MODS	**Modra-Piesok**	**85.24**	**24**	*e*P	**P**	**05 30 50.4**	**-0.5**
SALO	**Salr**	**85.31**	**30**	IAmb	IAmb	05 30 57.1	
	comp=Z,443nm,1.1s						
ZST	**Bratislava**	**85.34**	**24**	*e*P	**P**	**05 30 51.1**	**-0.3**
ZST				pmax	pmax		
	comp=Z,631nm,1.6s						
ZST	**Bratislava**	**85.34**	**24**	*e*P	**P**	**05 30 51.1**	**-0.3**
CTI	**Castel Tesino**	**85.36**	**29**	IAmb	IAmb	05 30 57.2	
	comp=Z,246nm,1.3s						
SALV	**Santo Antonio**	**85.39**	**115**	*e*P	**P**	**05 30 52.3**	**+0.4**
STHS	**Stebnicka Huta**	**85.47**	**21**	*e*P	**P**	**05 30 52.3**	**+0.3**
STHS				pmax	pmax		
	comp=Z,144nm,1.4s						
STHS	**Stebnicka Huta**	**85.47**	**21**	*e*P	**P**	**05 30 52.3**	**+0.3**
MYKA	**Terra Mystica**	**85.57**	**27**	*i* P	P	05 30 45.1	-7.6
	comp=Z,95nm,1.2s,SNR=10						
MYKA				*i* P'P'df	**P'P'df**	**05 57 01.8**	**-7.0**
	comp=Z,10nm,1.1s						
SESP	**Santiago Espad**	**85.58**	**42**	P	P	05 30 58.1	+5.1
	SNR=11						
VYHS	**Vyhne**	**85.61**	**23**	*e*P	**P**	**05 30 53.2**	**+0.5**
VYHS				pmax	pmax		
	comp=Z,434nm,1.7s						
VYHS	**Vyhne**	**85.61**	**23**	*e*P	**P**	**05 30 53.2**	**+0.5**
EMAL	**Malaga-Limoner**	**85.64**	**44**	⇑*i*P	**P**	**05 30 54.1**	**+1.0**
EMAL				*i* S	**S**	**05 41 24.6**	**-1.1**
BRVK	**Borovoye**	**85.65**	**351**	P	**P**	**05 30 52.1**	**-0.7**
BRVK	**Borovoye**	**85.65**	**351**	P	**P**	**05 30 52.2**	**-0.7**
BRVK				IAmb	IAmb	05 30 58.8	
	comp=Z,479nm,1.4s						
ARSA	**Arzberg**	**85.67**	**26**	*i* PcP	**P**	**05 30 52.2**	**-0.9**
	comp=Z,104nm,1.0s,SNR=54						
ARSA				*i* PKKPbc	**PKKPbc**	**05 48 54.9**	**+0.4**
	comp=Z,6.5nm,1.1s						
ARSA				*i* P'P'df	P'P'df	05 57 03.0	-5.6
	comp=Z,7.2nm,1.3s						
KWP	**Kalwaria Pacla**	**85.67**	**20**	*e*P	**P**	**05 30 55.1**	**+2.1**
KWP				*e*S	**S**	**05 41 26.7**	**+1.2**
KWP				*e*SS	SS	05 47 17.7	+18
KWP				*e*L	L	06 04 12.8	
	comp=Z,81µm,29.3s						
KWP	**Kalwaria Pacla**	**85.67**	**20**	P	**P**	**05 30 49.7**	**-3.3**
KWP				pmax	pmax		
	comp=Z,887nm,1.7s						
KWP				MLR	MLR		
	comp=Z,94µm,19.0s						
KWP	**Kalwaria Pacla**	**85.67**	**20**	P	**P**	**05 30 49.7**	**-3.3**
KWP				IAmb	IAmb	05 31 07.7	
	comp=Z,887nm,1.7s						
BVAR	**Borovoye Array**	**85.67**	**351**	PKPPKP		05 57 03.4	
	comp=Z,1.5nm,0.9s,baz=190,slow=4.2,SNR=5.9						
CEU	**Ceuta**	**85.78**	**45**	*e*P	**P**	**05 30 54.9**	**+1.1**
CEU				*e*S	**S**	**05 41 30.7**	**+3.6**
LVV	**L'vov**	**85.84**	**19**	*e*P	**P**	**05 30 53.2**	**-0.6**
LVV				*e*		05 34 13.8	
LVV				*i* S	**S**	**05 41 24.2**	**-3.0**
LVV				pmax	pmax		
	comp=Z,3µm,3.8s						
LVV				smax	smax		
	comp=E,1µm,3.6s						
LVV				smax	smax		
	comp=N,2µm,4.1s						
LVV				MLR	MLR		
	comp=Z,99µm,21.0s						
LVV				MLR	MLR		
	comp=E,33µm,20.0s						
LVV				MLR	MLR		
	comp=N,73µm,21.0s						
ROBS	**Robic**	**85.86**	**27**	*e*P	**P**	**05 30 53.5**	**-0.5**
ROBS				*e*PcP	**PcP**	**05 30 56.6**	**-0.2**
TIY	**Taiyuan**	**85.86**	**318**	*e*P	**P**	**05 30 55.1**	**+0.8**
TIY				pP	**pwP**	**05 30 58.3**	**-0.8**
TIY				sP	**PcP**	**05 31 00.0**	**+2.9**
TIY				PP	**PP**	**05 34 13.1**	**0.0**
TIY				S	**S**	**05 41 24.9**	**-3.1**
TIY				sS	**sS**	**05 41 32.4**	**+2.5**
TIY				SS	**SS**	**05 47 04.4**	**+0.6**
TIY				pmax	pmax		
	comp=N,700nm,4.6s						
TIY				LR	LR		
	comp=N,8µm,12.8s						
TIY				LR	LR		
	comp=N,26µm,15.2s						
TIY				LR	LR		
	comp=N,25µm,21.3s						
SSE	**Sheshan**	**85.89**	**308**	P	**P**	**05 30 52.2**	**-2.2**
SSE				S	**S**	**05 41 25.6**	**-2.7**
TEOL	**Teolo**	**85.96**	**29**	P	**P**	**05 30 52.9**	**-1.7**
TEOL				IAmb	IAmb	05 31 00.4	
	comp=Z,307nm,1.0s						
TEOL				IAMs_20	IAMs_20	06 09 50.3	
	comp=Z,57µm,20.0s						
OBKA	**Obir**	**85.99**	**27**	*i* PcP	**P**	**05 30 53.8**	**-1.0**
	comp=Z,269nm,1.6s,SNR=46						
OBKA				*i* P'P'df	P'P'df	05 56 57.7	-10
	comp=Z,12nm,1.4s						
CRVS	**Cervenica-Dubn**	**85.99**	**21**	*e*P	**P**	**05 30 54.6**	**-0.1**
CRVS				pmax	pmax		
	comp=Z,588nm,1.7s						

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CRVS  Cervenica-Dubn  85.99  21 eP       P         05 30 54.6 -0.1
SOKA  Soboth          86.00  26 i PcP    P         05 30 53.8 -1.1
      comp=Z,228nm,1.2s,SNR=80
SOKA                            i PKKPbc PKKPbc    05 48 53.6 -0.2
      comp=Z,3.3nm,0.5s
SOKA                            i P'P'df P'P'df    05 57 00.5 -7.5
      comp=Z,4.6nm,1.0s
LPSR  Galich'ya Gora  86.02  10 eP       P         05 30 54.7  0.0
LPSR                            eS       S         05 41 25.0 -3.9
LPSR                            eSS      SS        05 47 13.2 +8.2
LPSR                              pmax   pmax
      comp=Z,460nm,1.2s
LPSR                              pmax   pmax
      comp=Z,800nm,1.3s
LPSR                              smax   smax
      comp=N,10µm,14.7s
LPSR                              MLR    MLR
      comp=Z,35µm,17.0s
MSSA  Maissana        86.02  31   P      P         05 30 54.2 -0.8
MSSA                              IAmb   IAmb      05 31 00.1
      comp=Z,320nm,1.2s
PERS  Pernice         86.07  26 i P      P         05 30 55.0 -0.1
PERS                            ePcP     PcP       05 30 57.8  0.0
PERS                            eS       S         05 41 24.7 -5.0
PERS                            eSS      SS        05 47 01.9 -4.3
KECS  Kecovo          86.10  22 eP       P         05 30 56.6 +1.4
KECS                              pmax   pmax
      comp=Z,111nm,1.4s
KECS  Kecovo          86.10  22 eP       P         05 30 56.6 +1.4
KOLS  Kolonicke sedl  86.19  21 eP       P         05 30 56.1 +0.5
KOLS                              pmax   pmax
      comp=Z,175nm,1.6s
KOLS  Kolonicke sedl  86.19  21 eP       P         05 30 56.1 +0.5
AKASG Malin Array Be  86.22  16   P      P         05 30 54.5 -1.2
      comp=Z,49nm,0.8s,baz=343,slow=4.5,SNR=15
AKASG                             PP     PP        05 34 15.4 +0.1
      comp=Z,7.2nm,0.9s,baz=344,slow=8.5,SNR=4.6
AKASG                             PKPPKP           05 57 04.1
      comp=Z,0.4nm,0.3s,baz=131,slow=1.1,SNR=5.2
AKASG                             LR     LR        06 08 40.5
      comp=Z,51µm,21.9s,baz=325,slow=35
AKASG Malin Array Be  86.22  16   P      P         05 30 53.8 -1.8
AKBB  Malin Array Si  86.22  16   IAmb   IAmb      05 31 00.4
      comp=Z,400nm,1.4s
SMTB  Santa Maria do  86.38 105 eP       P         05 30 57.7 +0.7
LJU   Ljubljana       86.38  27 eP       P         05 30 56.8 +0.2
LJU                             eS       S         05 41 27.6 -5.1
LJU                             eSS      SS        05 47 08.7 -2.1
LJU                             e                  05 51 33.2
LJU   Ljubljana       86.38  27 ePn      P         05 30 59.7 +3.1
RTC   Rabat Centre    86.39  47   P      P         05 31 01.6 +4.8
      SNR=12
TRI   Trieste         86.41  28   IAMs_20 IAMs_20  06 08 41.1
      comp=Z,60µm,22.0s
PSZ   Piszkesteto     86.44  23 ⇑P       P         05 30 58.1 +1.2
PSZ   Piszkesteto     86.44  23   IAmb   IAmb      05 31 04.2
      comp=Z,393nm,1.4s
PSZ                               IAMs_20 IAMs_20  06 09 37.5
      comp=Z,56µm,20.0s
UZH   Uzhgorod        86.47  21 eP       P         05 30 57.0 +0.1
UZH                             e                  05 31 01.4
UZH                             eS       S         05 41 31.0 -2.4
UZH                             ePS      PnS       05 42 38.8 +8.6
UZH                               MLR    MLR
      comp=N,16µm,18.0s
UZH                               MLR    MLR
      comp=E,15µm,18.0s
UZH                               MLR    MLR
      comp=Z,8µm,18.0s
VLC   Villacollemand  86.49  30   IAmb   IAmb      05 31 30.6
      comp=Z,312nm,1.4s
EAH   EAH             86.55  50   P      P         05 31 03.2 +5.5
      SNR=8.4
EAH                               P      P         05 31 03.2 +5.5
      SNR=8.4
SEM   Semipalatinsk   86.57 344 eP       P         05 30 59.6 +1.9
SEM                             eS       S         05 41 33.3 -1.6
SEM                             eLR      LR        06 15 09.4
SEM   Semipalatinsk   86.57 344 eP       P         05 30 59.6 +1.9
SEM                             eS       S         05 41 33.2 -1.6
NJ2   Nanjing         86.58 310 eP       P         05 30 55.8 -2.0
NJ2                               sP     pwP       05 31 02.2 -0.4
NJ2                               PP     PP        05 34 19.0 +0.1
NJ2                               S      S         05 41 28.6 -6.4
NJ2                               sS     ScS       05 41 42.0 -1.3
NJ2                               pmax   pmax
      comp=Z,5µm,6.5s
NJ2                               LR     LR
      comp=Z,40µm,24.0s
NJ2                               LR     LR
      comp=Z,43µm,23.1s
NJ2                               LR     LR
      comp=Z,28µm,24.5s
AVE   Averroes        86.59  48   P      P         05 31 01.8 +3.9
      SNR=10
AVE   Averroes        86.59  48⇑iP       P         05 30 58.0 +0.1
AVE                             i S      S         05 41 34.8 -0.4
KURK  Kurchatov       86.60 345ceP       P         05 30 57.1 -0.5
KURK                              pmax   pmax
      comp=Z,322nm,1.4s
KURK  Kurchatov       86.60 345   P      P         05 30 56.9 -0.7
KURK                              IAmb   IAmb      05 31 20.1
      comp=Z,354nm,1.3s
KURK  Kurchatov       86.60 345   IAMs_20 IAMs_20  06 12 27.0
      comp=Z,45µm,20.0s
GO04  Tololo Observa  86.61 135   P      P         05 30 55.8 -2.2
GO04                              IAmb   IAmb      05 31 15.4
      comp=Z,309nm,1.1s
CEY   Cerknica        86.61  27 ePn      P         05 30 58.3 +0.5
KURBB Kurchatov Arra  86.71 345   PKPPKP P'P'df    05 57 03.3 -3.5
      comp=Z,1.2nm,1.0s,baz=194,slow=1.7,SNR=5.8
KURBB Kurchatov Arra  86.71 345   P      P         05 30 57.3 -0.8
BEHE  Becsehely       86.76  25 ePn      P         05 31 02.4 +3.9
CART  Cartagena       86.77  41⇑iP       P         05 30 59.0 +0.4
CART                            i S      S         05 41 35.6 -1.1
CART  Cartagena       86.77  41   IAMs_20 IAMs_20  06 05 57.0
      comp=Z,45µm,20.0s
CRES  Cresnjev        86.89  26 ePn      P         05 31 02.9 +3.8
PVLZ  Peæn de         86.91  45⇑iP       P         05 30 59.0 -0.4
PVLZ                            i S      S         05 41 35.2 -2.8
SRHM  Skhour des Reh  86.92  49   P      P         05 31 04.0 +4.4
      SNR=15
SRHM                              P      P         05 31 04.0 +4.4
      SNR=15
VORR  Voronezh        86.97  10 eP       P         05 30 56.0 -3.3
VORR                              pmax   pmax
      comp=Z,800nm,1.4s
TRPA  Tarpa           86.99  21 ⇑P       P         05 31 01.0 +1.5
RIY   Rijeka          86.99  27 ePn      P         05 31 02.5 +2.9
OSSC  Osservatorio P  87.36  30   P      P         05 30 59.4 -2.1
VSR   Storozhevoye    87.41  10 eP       P         05 31 00.9 -0.6
VSR                             e                  05 31 02.9
VSR                             eS       SKSac     05 41 30.7 +1.2
VSR                             eSS      SS        05 47 21.8 -3.5
VSR                               pmax   pmax
      comp=Z,480nm,1.4s
VSR                               smax   smax
      comp=N,9µm,13.1s
VSR                               MLR    MLR
      comp=Z,59µm,19.0s
MAHO  Mahon           87.45  37⇑iP       P         05 31 03.0 +1.1
MAHO                            i S      S         05 41 40.6 -2.6
BMR   Baia Mare       87.67  21 ⇑P       P         05 31 04.4 +1.5
VRH   Novokhopyorsk   87.73   8 eP       P         05 31 02.8 -0.2
VRH                             e                  05 31 04.8
VRH                             eS       SKSac     05 41 27.8 -3.6
VRH                             eSS      SS        05 47 32.2 +2.2
VRH                               pmax   pmax
      comp=Z,290nm,1.3s
VRH                               smax   smax
      comp=N,8µm,12.7s
VRH                               MLR    MLR
      comp=Z,38µm,16.0s
CASP  Castiglione de  87.84  31   IAMs_20 IAMs_20  06 11 55.2
      comp=Z,42µm,20.0s
OUK   Oukaimeden      87.87  50   P      P         05 31 10.0 +5.4
      SNR=8.0
OUK                               P      P         05 31 10.0 +5.4
      SNR=8.0
ARAG  Araguaiana, MT  87.95 113 eP       P         05 31 04.5  0.0
NBPS  Pedro II - PI   88.02  97 eP       P         05 31 05.3 +0.2
CZD   Col de Zad      88.11  47   P      P         05 31 10.0 +4.4
      SNR=15
BUR08 Bucovina Ar. S  88.14  20   P      P         05 31 04.7 -0.6
BURAR Bucovina Array  88.17  20 ⇑P       P         05 31 06.8 +1.5
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BURAR Bucovina Array  88.17  20   P      P         05 31 04.3 -1.1
ZSN   Zaisan          88.26 340 eP       P         05 31 04.3 -1.5
ZSN                             eS       S         05 41 39.9  -11
ZSN   Zaisan          88.26 340 eP       P         05 31 04.2 -1.5
ZSN                             eS       S         05 41 39.8  -11
DRGR                  88.27  21 ⇑P       P         05 31 07.0 +1.2
BRZS  Berezniki       88.33 349 eP       P         05 31 05.7 -0.3
      comp=Z,482nm,2.3s
BRZS                            eS       S         05 41 43.7 -7.6
BRZS                            eLR      LR        06 15 06.8
BRZS  Berezniki       88.33 349 eP       P         05 31 05.6 -0.3
BRZS                            eS       S         05 41 43.7 -7.6
BRZS                              pmax   pmax
      comp=Z,482nm,2.3s
NBMO  Morrinhos-CE    88.38  96 eP       P         05 31 07.8 +1.1
BLY   Banja Luka      88.42  26 ePn      P         05 31 06.7 +0.3
BLY   Banja Luka      88.42  26   IAMs_20 IAMs_20  06 11 55.2
      comp=Z,52µm,19.0s
ARCR  ARCALIA         88.44  20 ⇑P       P         05 31 08.2 +1.6
SIRR  Siria           88.44  22 ⇑P       P         05 31 07.1 +0.6
SORM  Soroca          88.44  17 ⇑P       P         05 31 05.5 -0.9
MDT   Midelt          88.52  47   P      P         05 31 08.1 +0.8
      comp=Z,35nm,1.2s,baz=321,slow=3.6,SNR=18
AQDB  Aquidauana      88.57 119 eP       P         05 31 06.2 -1.2
MGRS  Mrkonjic Grad   88.68  26 ePn      P         05 31 08.9 +1.2
SACV  Santiago Islan  88.82  71   IAMs_20 IAMs_20  06 07 51.7
      comp=Z,56µm,21.0s
FRGS  Fruska Gora     88.89  24 ePn      P         05 31 03.1 -5.6
PEL   Peldehue        89.00 137   IAMs_20 IAMs_20  06 05 53.8
      comp=Z,43µm,20.0s
BZS   Buzias          89.02  23 ⇑P       P         05 31 09.9 +0.6
DZM   Mont Dzumac     89.09 240   P      P         05 31 12.2 +2.3
      comp=Z,83nm,1.1s,baz=81,slow=11,SNR=11
DZM   Mont Dzumac     89.09 240 eP       P         05 31 10.5 +0.6
      comp=Z,425nm,1.5s
DZM   Mont Dzumac     89.09 240 eS       S         05 41 56.4 -2.8
      comp=Z,30µm,29.2s
DZM                             eSS      SS        05 47 46.3 -6.8
      comp=Z,53µm,28.1s
DZM   Mont Dzumac     89.09 240 eLR      LR        05 59 23.8
      comp=Z,111µm,23.4s,baz=49
DZM   Mont Dzumac     89.09 240   IAMs_20 IAMs_20  06 03 52.3
      comp=Z,63µm,20.0s
DEV   Deva            89.15  22 ⇑P       P         05 31 11.9 +2.1
AQU   L'Aquila        89.18  29   IAMs_20 IAMs_20  06 11 59.6
      comp=Z,66µm,21.0s
AKTO  Aktyubinsk      89.18 358   P      P         05 31 09.1 -0.8
C2SB  Chapadao do Su  89.33 116 eP       P         05 31 11.9 +1.0
MANU  Manus Island    89.46 267   IAMs_20 IAMs_20  06 03 03.2
      comp=Z,55µm,21.0s
YOJ   Yonaguni jima   89.47 302   IAMs_20 IAMs_20  06 09 24.9
      comp=Z,40µm,20.0s
MK31  Makanchi Array  89.51 342 i P      P         05 31 10.6 -1.0
MKAR  Makanchi Array  89.51 342   P      P         05 31 11.1 -0.6
      comp=Z,9.2nm,0.8s,baz=21,slow=3.6,SNR=23
MKAR                              PKKPbc PKKPbc    05 48 47.6 +2.3
      comp=Z,1.5nm,1.0s,baz=230,slow=3.4,SNR=4.7
MKAR                              LR     LR        06 13 30.2
      comp=Z,33µm,21.0s,baz=13,slow=37
MKAR  Makanchi Array  89.51 342   P      P         05 31 10.4 -1.2
MKAR  Makanchi Array  89.51 342   P      P         05 31 10.4 -1.2
TESR  Tescani         89.56  19 ⇑P       P         05 31 13.7 +1.9
GZR   Gura Zlata      89.56  22 ⇑P       P         05 31 11.9  0.0
MAKZ  Makanchi        89.58 342   P      P         05 31 10.2 -1.7
MAKZ                              pmax   pmax
      comp=Z,213nm,1.3s
MAKZ                              MLR    MLR
      comp=Z,42µm,20.0s
MAKZ  Makanchi        89.58 342   P      P         05 31 10.2 -1.7
MAKZ                              IAmb   IAmb      05 31 17.1
      comp=Z,213nm,1.2s
MAKZ                              IAMs_20 IAMs_20  06 13 32.7
      comp=Z,42µm,20.0s
HAPS  Han Pijesak,BI  89.58  25 ePn      P         05 31 11.1 -1.0
KIS   Kishinev        89.62  18 eP       P         05 31 11.0 -1.0
      comp=Z,380nm,1.8s
KIS   Kishinev        89.62  18 ePP      PP        05 34 44.0 +1.3
KIS   Kishinev        89.62  18 ePS      PS        05 43 08.0 -0.5
DOPR  Dopca           89.75  20 ⇑P       P         05 31 14.8 +2.1
MDVR  Moldovita       89.81  23 ⇑P       P         05 31 14.1 +1.0
GO05  Huala           89.83 139   IAMs_20 IAMs_20  06 05 39.8
      comp=Z,39µm,19.0s
DIVS  Divibare        89.90  24 ePn      P         05 31 16.7 +3.1
HERR  Herculane       89.93  22 ⇑P       P         05 31 14.8 +1.3
BBLS  Lazi&#263;i     89.93  25 ePn      P         05 31 13.7 +0.1
LEOM  Leova           89.98  18 ⇑P       P         05 31 15.9 +2.2
TATO  Taipei          90.08 304   IAMs_20 IAMs_20  06 05 19.8
      comp=Z,56µm,22.0s
ARR   Arges           90.10  21 ⇑P       P         05 31 14.8 +0.3
RUDO  Rudo            90.14  25 ePn      P         05 31 14.7 +0.1
VOIR                  90.15  21 ⇑P       P         05 31 15.7 +1.1
NBPB  Pedra_Branca-C  90.17  97 eP       P         05 31 15.7 +0.6
PLOR  Plostina        90.18  19 ⇑P       P         05 31 16.7 +2.0
VRI   Vrincioaia      90.18  19 ⇑P       P         05 31 16.2 +1.4
STON  Ston            90.25  26 ePn      P         05 31 14.4 -0.6
WHN   Wuhan           90.28 312   P      P         05 31 14.9 -0.5
WHN                               SKS    SKSac     05 41 49.0 +1.7
WHN                               S      S         05 42 07.5 -2.6
WHN                               SS     SS        05 48 11.8 +3.5
WHN                               pmax   pmax
      comp=Z,8µm,9.0s
WHN                               LR     LR
      comp=Z,35µm,17.0s
WHN                               LR     LR
      comp=Z,36µm,15.8s
WHN                               LR     LR
      comp=Z,79µm,18.4s
AB31  Akbulak array   90.29 357 i P      P         05 31 14.9 -0.2
ABKAR Akbulak array   90.29 357   P      P         05 31 13.8 -1.3
ABKAR                             IAmb   IAmb      05 31 21.9
      comp=Z,340nm,1.3s
ABKAR Akbulak array   90.29 357   P      P         05 31 14.3 -0.8
NBCL  Cascavel-CE     90.30  95 eP       P         05 31 16.5 +0.8
MLR   Muntele Rosu    90.33  20   P      P         05 31 15.1 -0.5
      comp=Z,6.9nm,0.8s,baz=130,slow=13,SNR=4.8
MLR                               PP     PP        05 34 48.9 +0.3
      comp=Z,8.6nm,1.1s,baz=308,slow=4.8,SNR=3.3
MLR   Muntele Rosu    90.33  20 ⇑P       P         05 31 16.1 +0.5
MLR   Muntele Rosu    90.33  20   P      P         05 31 13.4 -2.2
MLR                               pmax   pmax
      comp=Z,155nm,1.9s
MLR                               MLR    MLR
      comp=Z,208µm,20.0s
MLR   Muntele Rosu    90.33  20   P      P         05 31 13.4 -2.2
GTA   Gaotai          90.35 327 ⇑P       P         05 31 15.5 -0.3
GTA                               pP     pwP       05 31 20.2 -0.4
GTA                               sP     sP        05 31 23.0 +5.7
GTA                               SKS    SKSac     05 41 44.1 -3.7
GTA                               S      SKKSac    05 42 04.0 +2.5
GTA                               sS     ScS       05 42 15.0 +0.3
GTA                               pmax   pmax
      comp=Z,740nm,7.9s
GTA                               LR     LR
      comp=Z,32µm,21.9s
GTA                               LR     LR
      comp=Z,40µm,20.3s
GTA                               LR     LR
      comp=Z,61µm,22.9s
UPM   Unac-Piva       90.36  25 ePn      P         05 31 14.9 -0.9
YHNB  Yeheng          90.37 303   IAMs_20 IAMs_20  06 12 28.7
      comp=Z,35µm,20.0s
XAN   Xi'an           90.50 318   P      P         05 31 16.3 -0.2
XAN                               pmax   pmax
      comp=Z,1µm,5.3s
XAN                               LR     LR
      comp=Z,24µm,21.7s
XAN                               LR     LR
      comp=Z,38µm,24.9s
XAN                               LR     LR
      comp=Z,35µm,20.6s
XAN   Xi'an           90.50 318   P      P         05 31 13.8 -2.7
XAN                               pmax   pmax
      comp=Z,649nm,1.9s
XAN                               MLR    MLR
      comp=Z,39µm,21.0s
XAN   Xi'an           90.50 318   P      P         05 31 13.8 -2.7
XAN                               IAmb   IAmb      05 31 33.9
      comp=Z,649nm,1.9s
XAN   Xi'an           90.50 318   IAMs_20 IAMs_20  06 12 11.0
      comp=Z,39µm,21.0s
BRY   Bratogost       90.51  26 ePn      P         05 31 16.2 -0.3
NACB  Ninganchiao     90.58 303   IAMs_20 IAMs_20  06 10 48.4
      comp=Z,46µm,20.0s
BDFB  Brasilia        90.59 110   P      P         05 31 18.4 +1.3
      comp=Z,22nm,1.1s,baz=289,slow=5.4,SNR=19
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BDFB                              PP     PP        05 34 57.6 +5.3
      comp=Z,13nm,1.1s,baz=293,slow=13,SNR=2.8
BDFB                              LR     LR        06 14 33.4
      comp=Z,60µm,22.0s,baz=308,slow=37
BDFB  Brasilia        90.59 110   P      P         05 31 15.3 -1.8
BDFB                              pmax   pmax
      comp=Z,97nm,1.2s
BDFB                              MLR    MLR
      comp=Z,62µm,20.0s
BDFB  Brasilia        90.59 110   P      P         05 31 15.3 -1.8
BDFB                              IAMs_20 IAMs_20  06 15 05.1
      comp=Z,62µm,20.0s
TREB  Trebinje        90.61  26 ePn      P         05 31 12.0 -4.8
PAOL  Paolisi         90.76  29   IAMs_20 IAMs_20  06 10 58.4
      comp=Z,57µm,20.0s
WMQ   Urumqi          90.81 337   P      P         05 31 18.2 +0.4
WMQ                               sP     pwP       05 31 22.9 +0.4
WMQ                               sS     sS        05 42 22.8 +6.2
WMQ                               SS     SS        05 48 20.3 +5.1
WMQ                               pmax   pmax
      comp=Z,800nm,4.7s
WMQ                               LR     LR
      comp=Z,20µm,21.3s
WMQ                               LR     LR
      comp=Z,21µm,23.1s
WMQ                               LR     LR
      comp=Z,32µm,23.1s
WMQ   Urumqi          90.81 337   IAMs_20 IAMs_20  06 19 47.7
      comp=Z,36µm,20.0s
PDG   Podgorica       91.17  26 ⇑P       P         05 31 19.0 -0.3
PDG   Podgorica       91.17  26 ePn      P         05 31 18.2 -1.1
CFR   Carcaliu        91.17  19 ⇑P       P         05 31 19.7 +0.4
SSLB  Suanglung       91.27 303   IAMs_20 IAMs_20  06 13 27.5
      comp=Z,35µm,20.0s
LZH   Lanzhou         91.34 322 eP       P         05 31 21.0 +0.5
LZH                               pP     pwP       05 31 25.9 +0.6
LZH                               sP     sP        05 31 30.0 +8.0
LZH                               PP     PP        05 35 05.0 +8.0
LZH                               S      S         05 42 26.1 +6.0
LZH                               SS     SS        05 48 23.0 -0.6
LZH                               pmax   pmax
      comp=Z,3µm,7.1s
LZH                               LR     LR
      comp=Z,33µm,16.8s
LZH                               LR     LR
      comp=Z,33µm,19.0s
LZH                               LR     LR
      comp=Z,26µm,19.2s
CPUP  Villa Florida   91.63 124   P      P         05 31 21.3 -0.3
      comp=Z,12nm,1.0s,baz=301,slow=5.3,SNR=14
CPUP                              PP     PP        05 35 07.6 +7.3
      comp=Z,6.5nm,1.2s,baz=15,slow=11,SNR=3.8
CPUP                              LR     LR        06 16 04.0
      comp=Z,17µm,19.3s,baz=334,slow=38
CPUP  Villa Florida   91.63 124   P      P         05 31 19.7 -1.9
CPUP                              pmax   pmax
      comp=Z,106nm,1.3s
CPUP  Villa Florida   91.63 124   P      P         05 31 19.7 -1.9
CPUP  Villa Florida   91.63 124 eP       P         05 31 20.7 -0.8
ITRB  Iturama         91.67 115 eP       P         05 31 21.8 -0.1
MATE  Matera          91.87  28 ⇑P       P         05 31 22.4 -0.2
QZH   Quanzhou        91.91 305⇑iP       P         05 31 23.8 +0.7
QZH                               PP     PP        05 35 04.0 +2.3
QZH                               SKS    SKSac     05 41 55.4 -1.4
QZH                               S      S         05 42 22.8 -2.4
QZH                               SS     SS        05 48 28.9 -3.4
QZH                               pmax   pmax
      comp=Z,3µm,7.3s
QZH                               LR     LR
      comp=Z,9µm,22.7s
QZH                               LR     LR
      comp=Z,25µm,20.4s
QZH                               LR     LR
      comp=Z,27µm,19.4s
PLVB  Pleven          91.93  22 ⇓P       P         05 31 24.7 +1.9
NBMA  Muriti-CE       91.97  98 eP       P         05 31 24.0 +0.5
IPMB  Ipameri, GO     92.02 112 eP       P         05 31 24.4 +0.8
TDK   Taldyqorghan    92.09 344 eP       P         05 31 25.1 +1.5
      comp=Z,339nm,1.9s
TDK                             eS       SKSac     05 42 02.3 +5.0
TDK   Taldyqorghan    92.09 344 eP       P         05 31 25.1 +1.5
TDK                               pmax   pmax
      comp=Z,339nm,1.9s
NBPA  Parau_RN        92.17  96 eP       P         05 31 24.9 +0.5
TAR1  Taranto         92.19  28 eP       P         05 31 26.1 +2.0
PHP   Peshkopia       92.22  25   P      P         05 31 26.2 +1.9
TRCB  Terra Rica      92.23 118 eP       P         05 31 25.6 +1.1
VTS   Vitosha         92.24  23 ⇑P       P         05 31 24.6 +0.1
VTS   Vitosha         92.24  23   P      P         05 31 22.3 -2.2
VTS                               pmax   pmax
      comp=Z,37nm,1.1s
VTS                               MLR    MLR
      comp=Z,67µm,21.0s
VTS   Vitosha         92.24  23   P      P         05 31 22.3 -2.2
RAZG  Razgrad         92.27  20 ⇑P       P         05 31 24.1 -0.4
SKO   Skopje          92.28  24 i P      P         05 31 28.3 +3.7
PCMB  Pacaembu        92.34 117 eP       P         05 31 25.9 +0.9
STIP  Stip            92.76  24 i P      P         05 31 30.1 +3.3
OHR   Ohrid           92.86  25 i P      P         05 31 31.6 +4.3
JANB  Januaria        92.87 107 eP       P         05 31 28.1 +0.5
RCBR  Riachuelo       93.14  95   P      P         05 31 31.7 +2.8
      comp=Z,20nm,1.1s,baz=302,slow=1.1,SNR=2.7
RCBR                              PP     PP        05 35 17.3 +5.1
      comp=Z,20nm,1.1s,baz=284,slow=7.1,SNR=4.0
RCBR  Riachuelo       93.14  95   P      P         05 31 26.9 -2.0
RCBR                              pmax   pmax
      comp=Z,79nm,1.4s
RCBR  Riachuelo       93.14  95   P      P         05 31 26.9 -2.0
RCBR  Riachuelo       93.14  95   IAMs_20 IAMs_20  06 17 59.7
      comp=Z,42µm,19.0s
RCBR  Riachuelo       93.14  95 eP       P         05 31 28.6 -0.3
NBPN  Ponto Novo - B  93.15 101 eP       P         05 31 28.8 -0.1
KEST  Kesra           93.16  36   P      P         05 31 30.2 +1.4
      comp=Z,30nm,1.2s,baz=109,slow=4.1,SNR=11
KEST                              PP     PP        05 35 13.6 +2.4
      comp=Z,11nm,1.0s,baz=241,slow=5.4,SNR=5.1
KEST                              LR     LR        06 12 40.6
      comp=Z,17µm,19.0s,baz=284,slow=35
KEST  Kesra           93.16  36   IAMs_20 IAMs_20  06 15 25.5
      comp=Z,41µm,18.0s
ENH   Enshi           93.16 315   P      P         05 31 25.8 -3.0
ENH                               IAmb   IAmb      05 32 16.8
      comp=Z,193nm,1.6s
ENH                               IAMs_20 IAMs_20  06 07 17.3
      comp=Z,36µm,22.0s
TIP   Timpagrande     93.19  29   P      P         05 31 30.9 +2.0
VAY   Valandovo       93.22  24 i P      P         05 31 33.2 +4.3
CLTB  Caltabellotta   93.22  32   IAMs_20 IAMs_20  06 11 32.9
      comp=Z,50µm,21.0s
FNA   Florina         93.34  25   P      P         05 31 31.4 +1.9
NBLI  Livramento-PB   93.34  97 eP       P         05 31 30.3 +0.5
ANN   Anapa           93.42  12 eP       P         05 31 30.6 +0.9
ANN                             e                  05 35 13.5
ANN                             ePPP     PPP       05 37 14.7
ANN                             eS       SKSac     05 42 05.3 +0.8
ANN                             eSP      SP        05 43 48.6 -1.1
ANN                             eSS      SS        05 48 52.9 +0.5
ANN                               pmax   pmax
      comp=E,78nm,1.6s
ANN                               pmax   pmax
      comp=Z,212nm,1.7s
ANN                               pmax   pmax
      comp=N,43nm,0.8s
ANN                               pmax   pmax
      comp=E,405nm,9.1s
ANN                               pmax   pmax
      comp=Z,3µm,9.0s
ANN                               pmax   pmax
      comp=N,2µm,9.1s
ANN                               smax   smax
      comp=E,1µm,7.1s
ANN                               MLR    MLR
      comp=N,129µm,22.0s
ANN                               MLR    MLR
      comp=Z,90µm,22.0s
ANN                               MLR    MLR
      comp=E,41µm,22.0s
KNT   Kendrikon       93.47  24   P      P         05 31 29.1 -0.9
CHKK  Chushkaly       93.49 344 eP       P         05 31 31.4 +1.2
CHKK  Chushkaly       93.49 344 eP       P         05 31 31.3 +1.2
KPKS  Kokpek          93.50 343 eP       P         05 31 30.5 +0.3
      comp=E,251nm,4.3s
KPKS                            eS       SKSac     05 42 14.0 +8.7
KPKS                            eLR      LR        06 15 05.8
KPKS  Kokpek          93.50 343 eP       P         05 31 30.5 +0.3
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Code	Station	Dist	Azi	Phase	ISC phase	Time	Res
GRG	Griva	93.50	24	P	P	05 31 32.9	+2.7
MXZ	Matakaoa Point	93.56	222	IAMs_20	IAMs_20	06 03 41.4	
	comp=Z,58µm,21.0s						
KUU	Kurty	93.58	345	eP	P	05 31 28.9	-1.7
	comp=Z,277nm,4.4s						
KUU				eS	SKSac	05 42 09.7	+4.1
KUU				eLR	LR	06 16 34.5	
	comp=Z,12µm,15.8s						
KUU	Kurty	93.58	345	eP	P	05 31 28.8	-1.7
KUU				eS	SKSac	05 42 09.6	+4.1
NVR	Nevrokopi	93.58	23	P	P	05 31 33.0	+2.4
SHLS	Shalkode	93.61	342	eP	P	05 31 30.7	-0.1
SHLS				eS	SKSac	05 42 03.1	-2.9
SHLS				eLR	LR	06 18 43.8	
SHLS	Shalkode	93.61	342	eP	P	05 31 30.7	-0.1
SHLS				eS	SKSac	05 42 03.0	-2.9
NBTA	Tacaratu-PE	93.63	99	eP	P	05 31 31.4	+0.2
CEL	Celeste	93.68	30	IAMs_20	IAMs_20	06 12 53.7	
	comp=Z,59µm,21.0s						
SRS	Serrai	93.72	23	P	P	05 31 31.2	0.0
UZB	Uzynbulak	93.72	343	i P	P	05 31 32.7	+1.4
UZB				eS	SKSac	05 42 11.7	+5.0
UZB	Uzynbulak	93.72	343	i P	P	05 31 32.7	+1.4
KEK	Kerkira	93.78	26	P	P	05 31 35.9	+4.4
ZHN	Zhinishke	93.83	343	i P	P	05 31 29.0	-2.9
ZHN				eLR	LR	06 15 07.8	
ZHN	Zhinishke	93.83	343	i P	P	05 31 28.9	-2.9
BB19B	Bebedouro	93.86	114	eP	P	05 31 32.4	+0.4
KZN	Kozani	93.89	25	P	P	05 31 36.1	+4.0
SOH	Sokhos	93.92	23	P	P	05 31 34.8	+2.7
PTGB	Pitanga	93.92	119	eP	P	05 31 32.6	+0.3
GOF	Gofitskoye	93.94	8	⇑eP	P	05 31 35.7	+3.6
GOF				pmax	pmax		
	comp=Z,227nm,1.5s						
SATY	Saty	93.94	343	eP	P	05 31 35.8	+3.4
SATY				eS	SKSac	05 42 05.4	-2.4
SATY	Saty	93.94	343	eP	P	05 31 35.7	+3.4
SATY				eS	SKSac	05 42 05.4	-2.4
NBPV	Pedro Velho	93.98	95	eP	P	05 31 33.6	+0.9
HORT	Hortiatis	94.05	24	P	P	05 31 36.5	+3.7
KPRO	Kipourio	94.08	25	P	P	05 31 37.1	+4.2
KAVA	Kavala	94.10	23	P	P	05 31 36.8	+3.9
AAA	Alma-Ata	94.12	344	eP	P	05 31 33.9	+0.8
AAA				eS	SKSac	05 42 16.5	+7.9
AAA				eLR	LR	06 14 06.8	
	comp=Z,16µm,20.4s						
AAA	Alma-Ata	94.12	344	eP	P	05 31 33.8	+0.8
AAA				MLR	MLR		
	comp=Z,16µm,20.0s						
MDOK	Medeo	94.14	344	i P	P	05 31 31.0	-2.2
	comp=Z,2µm,7.4s						
MDOK				eS	SKSac	05 42 06.9	-2.1
MDOK				eSS	SS	05 49 03.3	+0.3
MDOK				eLR	LR	06 18 04.0	
	comp=Z,16µm,18.6s						
MDOK	Medeo	94.14	344	i P	P	05 31 31.0	-2.2
MDOK				eS	SKSac	05 42 06.8	-2.1
MDOK				eSS	SS	05 49 03.3	+0.3
RDO	Rodhopi	94.26	22	P	P	05 31 34.8	+1.2
OUZ	Omahuta	94.27	226	IAMs_20	IAMs_20	06 06 16.0	
	comp=Z,34µm,20.0s						
TNSS	Tian-Shan	94.28	344	eP	P	05 31 34.4	+0.1
TNSS	Tian-Shan	94.28	344	eP	P	05 31 34.3	+0.1
LIT	Litokhoron	94.31	24	P	P	05 31 37.4	+3.5
LIT	Litokhoron	94.31	24	IAMs_20	IAMs_20	06 14 26.0	
	comp=Z,33µm,20.0s						
SGDS	Sogindy	94.34	346	i P	P	05 31 34.1	0.0
SGDS				eS	SKSac	05 42 07.3	-2.5
SGDS				eLR	LR	06 17 56.9	
ITQB	Itaqui	94.43	126	eP	P	05 31 35.3	+0.9
PRZ	Przheval'sk	94.49	343	IAMs_20	IAMs_20	06 16 10.2	
	comp=Z,38µm,21.0s						
THAS	Thassos island	94.52	23	P	P	05 31 38.7	+3.9
USP	Ospenovka	94.54	346	P	P	05 31 39.8	+4.9
	SNR=14						
ALN	Alexandroupoli	94.63	22	P	P	05 31 36.4	+1.1
ALN	Alexandroupoli	94.63	22	IAMs_20	IAMs_20	06 16 48.3	
	comp=Z,32µm,18.0s						
THL	Klokotos Trika	94.65	25	P	P	05 31 37.0	+1.6
FRTB	Fartura	94.67	117	eP	P	05 31 36.9	+1.2
URZ	Urewera	94.70	222	IAMs_20	IAMs_20	06 06 53.6	
	comp=Z,48µm,19.0s						
CHMS	Chumysh	94.76	346	P	P	05 31 40.7	+4.8
	SNR=10						
JAY	Jayapura	94.82	271	P	P	05 31 37.5	+0.8
	comp=Z,1µmcomp=Z,36nm,1.9s						
PAIG	Paliouri	94.84	24	P	P	05 31 38.2	+1.9
LKD2	Lefkada island	94.91	26	P	P	05 31 40.7	+4.0
FRU1	Bishkek	94.96	346	IAMs_20	IAMs_20	06 19 12.1	
	comp=Z,48µm,18.0s						
SOC	Sochi	94.97	11	i P	P	05 31 38.5	+1.7
KIV	Kislovodsk	94.99	9	⇑P	P	05 31 41.5	+4.4
KIV	Kislovodsk	94.99	9	eP	P	05 31 36.1	-0.9
KIV				e		05 35 25.4	
KIV				eSS	SS	05 49 16.8	+1.9
KIV				pmax	pmax		
	comp=Z,189nm,1.1s						
KIV				pmax	pmax		
	comp=Z,818nm,4.9s						
KIV				MLR	MLR		
	comp=Z,89µm,21.0s						
KIV	Kislovodsk	94.99	9	P	P	05 31 34.4	-2.6
KIV				IAMs_20	IAMs_20	06 17 47.0	
	comp=Z,32µm,19.0s						
KVAR	Kislovodsk Arr	94.99	9	P	P	05 31 37.7	+0.6
	comp=Z,23nm,1.0s,baz=270,slow=20,SNR=9.9						
PLCA	Paso Flores	95.01	142	P	P	05 31 38.3	+1.4
	comp=Z,10nm,1.1s,baz=3.1,slow=5.8,SNR=11						
PLCA				PP	PP	05 35 30.6	+3.8
	comp=Z,2.7nm,1.1s,baz=323,slow=11,SNR=1.9						
PLCA				LR	LR	06 08 34.1	
	comp=Z,49µm,18.2s,baz=1.0,slow=32						
PLCA	Paso Flores	95.01	142	eP	P	05 31 38.0	+1.1
BOOM	Boomskoye usch	95.01	345	IAMs_20	IAMs_20	06 18 06.5	
	comp=Z,45µm,20.0s						
NBLA	Lagarto - SE	95.05	100	eP	P	05 31 37.5	-0.1
KBK	Karagaybulak	95.05	345	P	P	05 31 40.6	+3.1
	SNR=10						
AAK	Ala-Archa	95.15	346	P	P	05 31 42.6	+4.7
	SNR=8.8						
AAK	Ala-Archa	95.15	346	eP	P	05 31 37.8	-0.1
AAK				pmax	pmax		
	comp=Z,41nm,1.3s						
AAK	Ala-Archa	95.15	346	IAMs_20	IAMs_20	06 19 24.2	
	comp=Z,33µm,18.0s						
EVR	Evrytania	95.17	25	P	P	05 31 50.0	+12
MAKR	Makrakomi, Fth	95.19	25	P	P	05 31 42.3	+4.3
KBZ	Khabaz	95.24	9	P	P	05 31 38.2	+0.2
	comp=Z,37nm,1.0s,baz=316,slow=5.1,SNR=12						
KBZ				PP	PP	05 35 29.3	+2.5
	comp=Z,13nm,1.1s,baz=318,slow=16,SNR=3.7						
KBZ				LR	LR	06 15 06.6	
	comp=Z,46µm,20.7s,baz=327,slow=36						
KBZ	Khabaz	95.24	9	⇓eP	P	05 31 37.9	-0.1
AGG	Agios Georgios	95.24	25	IAMs_20	IAMs_20	06 18 44.8	
	comp=Z,39µm,20.0s						
WDD	Wied Dalam	95.25	32	IAMs_20	IAMs_20	06 15 46.6	
	comp=Z,36µm,20.0s						
EKS2	Erkin-Say	95.26	346	P	P	05 31 43.4	+5.0
	SNR=13						
GENI	Genyem	95.28	271	P	P	05 31 43.0	+4.3
	comp=Z,8µmcomp=Z,5µmcomp=Z,130nm,2.4s						
NBAN	Anadia - AL	95.33	98	eP	P	05 31 39.4	+0.5
KK31	Karatay Array	95.38	349	P	P	05 31 36.0	-2.8
KK31				pmax	pmax		
	comp=Z,52nm,1.3s						
KK31	Karatay Array	95.38	349	P	P	05 31 36.0	-2.8
KKAR	Karatay Array	95.38	349	P	P	05 31 36.1	-2.7
KKAR				pmax	pmax		
	comp=Z,52nm,1.3s						
KKAR	Karatay Array	95.38	349	P	P	05 31 36.1	-2.7
KKAR	Karatay Array	95.38	349	P	P	05 31 36.4	-2.4
DZA	Taraz	95.46	348	eP	P	05 31 41.6	+2.4
DZA	Taraz	95.46	348	eP	P	05 31 41.5	+2.4
ANX	Ano Chora	95.50	25	P	P	05 31 43.6	+4.1
NCK	Nalchik	95.55	8	i P	P	05 31 38.2	-1.3
NCK				pmax	pmax		
	comp=Z,9.0nm,0.2s						
NCK				MLR	MLR		
	comp=Z,31µm,19.0s						
NBRF	Rio Formoso -	95.56	97	eP	P	05 31 40.6	+0.7
AOS	Alonnisos	95.59	24	P	P	05 31 42.6	+2.8
ITAB	Concordia	95.59	121	eP	P	05 31 40.7	+0.9
CD2	Chengdu	95.61	319	⇓iP	P	05 31 47.0	+6.9
CD2				sP	pwP	05 31 51.7	+6.8
CD2				PP	PP	05 35 34.8	+4.4
CD2	Chengdu	95.61	319	SKS	SKSac	05 42 23.6	+6.6
CD2	Chengdu	95.61	319	S	S	05 42 58.2	+0.5
CD2	Chengdu	95.61	319	SS	SS	05 49 29.3	+4.6
NEY	Neytrino	95.69	9	i P	P	05 31 37.7	-2.7
NEY				pmax	pmax		
	comp=Z,20nm,1.2s						
NEY				MLR	MLR		
	comp=Z,13µm,16.0s						
AML	Almayashu	95.79	346	P	P	05 31 44.8	+3.6
	SNR=8.2						
SMPI	Sarmi	96.00	273	P	P	05 31 47.0	+5.0
	comp=Z,4µmcomp=Z,126nm,2.0s						
DRO	Drossia	96.01	26	P	P	05 31 46.3	+4.6
NRN	Naryn	96.02	344	IAMs_20	IAMs_20	06 16 39.5	
	comp=Z,41µm,21.0s						
SZP	Santa	96.05	299	IAMs_20	IAMs_20	06 18 09.7	
	comp=Z,44µm,20.0s						
GROC	Groznyy	96.05	7	eP	P	05 31 41.1	-0.7
GROC				e		05 35 35.8	
GROC				pmax	pmax		
	comp=Z,73nm,1.3s						
KLV	Kalavryta, Ach	96.07	25	P	P	05 31 44.6	+2.5
DIKM	Dikmen	96.09	15	⇑P	P	05 31 44.9	+2.9
VAO	Valinhos	96.22	115	eP	P	05 31 43.4	+0.6
CHM	Chimkent	96.28	349	eP	P	05 31 45.5	+2.6
CHM				eS	SKSac	05 42 25.8	+5.7
ZEI	Tsey	96.28	8	eP	P	05 31 43.8	+0.7
ZEI				pmax	pmax		
	comp=Z,29nm,1.3s						
SPB	Sao Paulo	96.29	116	IAMs_20	IAMs_20	06 19 32.4	
	comp=Z,44µm,22.0s						
ILGA	Ilgaz	96.36	16	IAMs_20	IAMs_20	06 16 27.6	
	comp=Z,51µm,21.0s						
IUG	Iuzhnay	96.38	349	i P	P	05 31 48.5	+5.0
IUG				eS	SKSac	05 42 19.9	-0.9
IUG				eLR	LR	06 19 28.4	
BSCB	Bom Sucesso	96.43	112	eP	P	05 31 43.8	0.0
MAK	Makhachkala	96.43	5	eP	P	05 31 38.7	-4.8
MAK				e		05 35 33.4	
MAK				e		05 42 12.1	
MAK				eSS	SS	05 49 31.3	-3.8
MAK				eSSS	SSS	05 53 14.8	
MAK				pmax	pmax		
	comp=Z,491nm,1.1s						
MAK				pmax	pmax		
	comp=Z,933nm,1.6s						
MAK				MLR	MLR		
	comp=Z,37µm,19.0s						
MAK				MLR	MLR		
	comp=N,74µm,19.0s						
MAK				MLR	MLR		
	comp=E,44µm,19.0s						
GZH	Guangzhou	96.49	308	P	P	05 31 46.2	+2.1
GZH				SKS	SKSac	05 42 22.4	+0.8
GZH				LR	LR		
	comp=E,19µm,21.0s						
GZH				LR	LR		
	comp=E,54µm,21.8s						
CPSB	Cacapava Do Su	96.92	124	eP	P	05 31 46.8	+1.1
BFZ	Birch Farm	96.97	221	IAMs_20	IAMs_20	06 16 33.7	
	comp=Z,42µm,18.0s						
TAS	Tashkent	97.30	349	IAMs_20	IAMs_20	06 22 24.7	
	comp=Z,32µm,20.0s						
LPA	La Plata	97.34	130	eP	P	05 31 44.6	-2.9
LPA				sP	pwP	05 32 00.7	+8.6
LPA				PP	PP	05 35 43.5	-1.2
LPA				PPP	PPP	05 37 51.2	
LPA				PKIKS		05 40 01.7	
LPA				SKS	SKSac	05 42 18.7	-6.3
LPA				S	S	05 43 07.0	-4.8
LPA				PS	PS	05 44 32.0	-2.8
LPA				PSP	PSP	05 45 10.5	
LPA				SS	SS	05 49 47.5	-3.4
LPA				SSS	SSS	05 53 32.6	
PARB	Paraibuna	97.37	114	eP	Pdif	05 31 48.9	+0.7
CORM	Corum	97.39	16	P	Pdif	05 31 51.6	+3.5
SJMB	Sao Joao De Ma	97.50	108	eP	Pdif	05 31 48.9	+0.1
CHOM	Cayeli-Rize	97.55	11	P	Pdif	05 31 51.6	+2.9
AKH	Akhalkalaki	97.59	9	⇑P	Pdif	05 31 53.1	+4.0
AKH	Akhalkalaki	97.59	9	IAMs_20	IAMs_20	06 20 04.9	
	comp=Z,35µm,22.0s						
BRTR	Keskin Array B	97.62	16	P	P	05 31 48.8	-0.3
	comp=Z,7.6nm,1.0s,baz=353,slow=5.8,SNR=6.2						
BRTR				PP	PP	05 35 45.1	-0.4
	comp=Z,2.7nm,1.0s,baz=316,slow=4.0,SNR=3.0						
BRTR				PKKPbc	PKKPbc	05 48 23.9	-0.5
	comp=Z,1.0nm,0.8s,baz=130,slow=4.5,SNR=3.0						
BRTR				LR	LR	06 16 38.9	
	comp=Z,53µm,21.9s,baz=324,slow=36						
BRTR	Keskin Array B	97.62	16	P	P	05 31 46.3	-2.8
BRTR	Keskin Array B	97.62	16	P	P	05 31 46.3	-2.8
TOKT	Tokat	97.62	14	P	Pdif	05 31 50.0	+0.9
RSDY	Resadiye-TOKAT	97.69	13	P	Pdif	05 31 52.4	+3.0
GYA	Guiyang	97.69	315	⇑iP	Pdif	05 31 53.8	+4.1
GYA				PP	PP	05 35 55.2	+8.5
GYA				SKS	SKSac	05 42 30.1	+2.0
GYA				S	ScS	05 43 19.5	+3.3
GYA				pmax	pmax		
	comp=Z,20nm,0.6s						
GYA				pmax	pmax		
	comp=Z,370nm,7.4s						
GYA				LR	LR		
	comp=Z,17µm,17.3s						
GYA				LR	LR		
	comp=Z,20µm,18.2s						
GYA				LR	LR		
	comp=Z,24µm,22.3s						
PLTB	Pedras Altas	97.75	125	eP	Pdif	05 31 50.9	+1.4
CNLB	Canela	97.83	122	eP	Pdif	05 31 50.3	+0.3
BSFB	Barra de Sao F	97.83	108	eP	Pdif	05 31 50.3	+0.2
KSH	Kashi	97.86	344	P	Pdif	05 32 04.5	+14
KSH				sP	pwP	05 32 11.2	+16
KSH	Kashi	97.86	344	SKS	SKSac	05 42 34.9	+6.3
KSH	Kashi	97.86	344	S	S	05 43 02.6	-14
KSH	Kashi	97.86	344	P	P	05 31 49.9	-0.3
KSH				PP	PP	05 35 52.1	+4.7
KSH				S	S	05 43 12.8	-4.2
KSH				pmax	pmax		
	comp=Z,160nm,4.6s						
KSH				LR	LR		
	comp=Z,23µm,16.4s						
KSH				LR	LR		
	comp=Z,27µm,15.8s						
KSH				LR	LR		
	comp=Z,42µm,19.4s						
AKT	Akhty	97.92	5	eP	Pdif	05 31 54.0	+3.5
AKT				e		05 35 52.6	
AKT				pmax	pmax		
	comp=Z,110nm,1.3s						
ESAR	Angra dos Reis	97.98	113	eP	Pdif	05 31 51.7	+1.0
YOZ	Yozgat	98.05	15	P	Pdif	05 31 53.6	+2.5
SVSK	Karacayir	98.10	14	P	Pdif	05 31 53.2	+2.1
TGY	Tagaytay City	98.18	296	LR	LR	06 08 40.8	
	comp=Z,90µm,21.9s,baz=38,slow=31						
SENK	Senkaya-Erzuru	98.29	10	P	Pdif	05 31 55.2	+2.9
ISP	Isparta	98.70	19	IAMs_20	IAMs_20	06 17 36.3	
	comp=Z,51µm,22.0s						
KOPR	Koprukoy-ERZUR	98.79	10	P	Pdif	05 31 56.8	+2.4
NNZ	Nelson	98.82	222	IAMs_20	IAMs_20	06 18 45.6	
	comp=Z,29µm,18.0s						
BNN	Bunyan	98.91	15	P	Pdif	05 31 56.6	+1.6
QRZ	Quartz Range	98.97	223	IAMs_20	IAMs_20	06 09 51.5	
	comp=Z,40µm,20.0s						
GNI	Garni	98.98	8	IAMs_20	IAMs_20	06 19 34.5	
	comp=Z,35µm,21.0s						
TASB	TASBURUN-IGDIR	99.09	8	P	Pdif	05 31 56.9	+1.3
YEDI	Yedisu-Bingol	99.15	11	P	Pdif	05 31 57.9	+1.9
AGRB	Hanur-Agry	99.34	9	P	Pdif	05 31 59.4	+2.5
GAR	Garm	99.42	348	P	Pdif	05 31 53.8	-3.4
SARI	SarD1z-Kayseri	99.45	15	P	Pdif	05 31 59.9	+2.5
IDI	Anoyia	99.47	25	P	Pdif	05 31 58.3	+0.8
	comp=Z,45nm,1.2s,baz=19,slow=6.1,SNR=2.9						
DARE	Darende-Malaty	99.49	14	P	Pdif	05 31 54.4	-3.1
VRTB	Varto-Mus	99.55	11	P	Pdif	05 32 01.2	+3.4
BNGB	Bingl	99.61	11	P	Pdif	05 32 00.9	+2.9
KHZ	Kahutara	99.62	221	IAMs_20	IAMs_20	06 19 13.8	
	comp=Z,41µm,18.0s						
MLAZ	Malazgirt-MUS	99.72	10	P	Pdif	05 32 01.2	+2.6
DAV	Davao City (W)	99.80	288	LR	LR	06 09 51.6	
	comp=Z,82µm,21.1s,baz=64,slow=31						
CLDR	Caldiran	99.88	9	P	Pdif	05 32 01.9	+2.5
KARP	Karpathos	99.93	23	IAMs_20	IAMs_20	06 18 24.5	
	comp=Z,50µm,22.0s						
SVRC	Sivrice-ELAZID	99.99	12	P	Pdif	05 32 03.8	+4.0
GURO	Guroymak-BITLI	100.23	10	P	Pdif	05 32 03.2	+2.4
KARA	Karaisali	100.29	16	P	Pdif	05 32 01.8	+0.9
VANB	Van	100.36	9	P	Pdif	05 32 03.9	+2.5
KMRS	Kahramanmaras	100.42	14	P	Pdif	05 32 02.8	+1.2
SVAN	Silvan-Diyarba	100.51	11	P	Pdif	05 32 05.4	+3.4
LTZ	Lake Taylor	100.52	222	IAMs_20	IAMs_20	06 07 55.7	
	comp=Z,37µm,22.0s						
DYBB	Diyarbakir	100.54	12	P	Pdif	05 32 04.6	+2.5
AKDM	Akdamar-Van	100.57	10	P	Pdif	05 32 04.4	+2.0
GAZ	Gaziantep	100.80	14	P	Pdif	05 32 04.2	+0.9
GAZ	Gaziantep	100.80	14	IAMs_20	IAMs_20	06 17 56.0	
	comp=Z,50µm,22.0s						
URFA	Urfa	100.83	13	P	Pdif	05 32 05.6	+2.2
KIZK	Mersin	100.84	17	P	Pdif	05 32 03.9	+0.5
KMI	Kunming	100.84	317	P	Pdif	05 32 08.6	+4.7
KMI				PP	PP	05 36 14.9	+4.1
KMI				SKS		05 42 43.6	
KMI				LR	LR		
	comp=Z,31µm,23.7s						
KMI				LR	LR		
	comp=Z,21µm,24.4s						
KMI				LR	LR		
	comp=Z,37µm,39.2s						
MQZ	McQueen's Vall	101.00	221	IAMs_20	IAMs_20	06 09 39.5	
	comp=Z,39µm,20.0s						
ASHT	Ashkhabad	101.65	357	IAMs_20	IAMs_20	06 22 57.9	
	comp=Z,45µm,19.0s						
GEYT	Alibeck	101.67	357	P	Pdif	05 32 07.7	+0.5
	comp=Z,0.9nm,0.4s,baz=318,slow=5.8,SNR=2.6						
GEYT				PP	PP	05 36 15.9	-0.3
	comp=Z,6.8nm,1.0s,baz=282,slow=7.4,SNR=5.3						
QIZ	Qiongzhong	101.68	308	P	Pdif	05 32 09.0	+1.6
QIZ				SKS		05 42 49.1	
QIZ				S	Sdif	05 43 40.8	-8.6
QIZ				pmax	pmax		
	comp=Z,530nm,8.0s						
QIZ				LR	LR		
	comp=Z,20µm,28.6s						
QIZ				LR	LR		
	comp=Z,30µm,22.8s						
QIZ				LR	LR		
	comp=Z,25µm,24.6s						
QIZ	Qiongzhong	101.68	308	IAMs_20	IAMs_20	06 17 32.0	
	comp=Z,31µm,21.0s						
EIDS	Eidsvold	101.71	247	IAMs_20	IAMs_20	06 20 55.4	
	comp=Z,30µm,18.0s						
RPZ	Rata Peaks	101.81	222	IAMs_20	IAMs_20	06 07 32.8	
	comp=Z,33µm,22.0s						
TAM	Tamanrasset	101.90	46	IAMs_20	IAMs_20	06 19 27.3	
	comp=Z,37µm,21.0s						
CSS	Mathiatis	102.11	18	P	Pdif	05 32 11.1	+2.0
LSA	Lhasa	102.30	328	P	Pdif	05 32 13.8	+3.2
LSA				LR	LR		
	comp=Z,54µm,18.5s						
LSA	Lhasa	102.30	328	IAMs_20	IAMs_20	06 19 07.5	
	comp=Z,44µm,21.0s						
FOZ	Fox Glacier	102.31	222	IAMs_20	IAMs_20	06 09 15.1	
	comp=Z,35µm,21.0s						
LKP	Lekhapani	102.36	323	IAMs_20	IAMs_20	06 11 35.7	
	comp=Z,26µm,29.0s						
GO09	Cerro Castillo	102.51	149	IAMs_20	IAMs_20	06 14 29.3	
	comp=Z,36µm,18.0s						
LBZ	Lake Benmore	102.73	222	IAMs_20	IAMs_20	06 11 35.1	
	comp=Z,43µm,19.0s						
ODZ	Otahua Downs	102.97	221	IAMs_20	IAMs_20	06 09 53.4	
	comp=Z,43µm,20.0s						
ITAN	ITANAGAR	103.46	325	eP	Pdif	05 32 13.3	-2.0
ITAN				i PP	PP	05 36 29.2	-0.8
WKZ	Wanaka	103.63	222	IAMs_20	IAMs_20	06 10 55.0	
	comp=Z,36µm,22.0s						
KBL	Kabul	103.98	348	IAMs_20	IAMs_20	06 27 29.8	
	comp=Z,35µm,19.0s						
NIL	Nilore	104.08	344	IAMs_20	IAMs_20	06 23 42.6	
	comp=Z,30µm,20.0s						
TEZP	TEZPUR	104.32	325	i x	PKiKP	05 36 31.4	-4.2
MMAI	Mount Meron Ar	104.45	17	PP	PP	05 36 37.7	+0.6
	comp=Z,5.7nm,0.9s,baz=332,slow=8.2,SNR=3.7						
MLZ	Mavora Lakes	104.47	222	IAMs_20	IAMs_20	06 12 20.0	
	comp=Z,39µm,20.0s						
GO10	Punta Arenas	104.48	150	IAMs_20	IAMs_20	06 09 51.3	
	comp=Z,32µm,21.0s						
ARMA	Armidale	104.51	242	IAMs_20	IAMs_20	06 15 58.8	
	comp=Z,45µm,20.0s						
DHRM	DHARAMSHALA	104.75	341	eP	Pdif	05 32 19.2	-1.9
DHRM				i x	x	05 36 48.8	
DHRM				IAMs_20	IAMs_20	06 11 16.8	
	comp=Z,49µm,52.5s						
WHZ	Wether Hill Ro	104.92	222	IAMs_20	IAMs_20	06 10 57.0	
	comp=Z,32µm,21.0s						
HRA	Herat	104.96	354	IAMs_20	IAMs_20	06 24 40.5	
	comp=Z,37µm,21.0s						
GTK	Tadong	105.42	329	eP	Pdif	05 32 24.5	+0.3
ASF	Jabal al Asfar	105.58	16	Pdiff	Pdif	05 32 28.1	+3.4
	comp=Z,1.8nm,0.8s,baz=182,slow=12,SNR=4.2						
ASF				PP	PP	05 36 47.8	+2.3
	comp=Z,4.1nm,0.9s,baz=341,slow=2.5,SNR=2.6						
SHL	Shillong	105.64	326	eP	Pdif	05 32 25.2	0.0
SHL				i x	x	05 36 49.4	
SHL	Shillong	105.64	326	IAMs_20	IAMs_20	06 22 00.2	
	comp=Z,33µm,21.0s						
PYZ	Puysegur Point	105.75	222	IAMs_20	IAMs_20	06 12 38.9	
	comp=Z,35µm,20.0s						
TORD	Torodi Ar. Bea	107.24	55	Pdiff	Pdif	05 32 36.1	+3.9
	comp=Z,0.9nm,1.1s,baz=289,slow=4.4,SNR=3.1						
TORD				PP	PP	05 36 57.7	-0.9
	comp=Z,14nm,1.1s,baz=323,slow=6.8,SNR=5.9						
TORD				PKKPbc	PKKPbc	05 47 56.4	+0.7
	comp=Z,1.4nm,0.9s,baz=129,slow=2.7,SNR=2.7						
TORD				PKKP	PKKPdf	05 48 08.7	+0.9
	comp=Z,1.6nm,0.8s,baz=127,slow=3.7,SNR=4.3						
TORD				PKKPab	PKKPab	05 48 15.2	+1.6
	comp=Z,1.4nm,0.7s,baz=107,slow=2.3,SNR=3.4						
LUWI	Luwuk	107.35	284	IAMs_20	IAMs_20	06 17 55.7	
	comp=Z,44µm,20.0s						
EIL	Elat	107.56	18	PP	PP	05 36 58.6	-1.4
	comp=Z,4.3nm,0.7s,baz=12,slow=9.5,SNR=2.9						
DBIC	Dimbokro	107.77	64	PP	PP	05 37 02.7	0.0
	comp=Z,11nm,1.1s,baz=323,slow=7.7,SNR=2.9						
BELO	BELONIA	107.86	325	i x	PP	05 37 12.8	+10
DLV	T Lat	107.94	304	IAMs_20	IAMs_20	06 26 47.1	
	comp=Z,31µm,18.0s						
CMAR	Chiang Mai Arr	108.31	316	Pdiff	Pdif	05 32 41.6	+4.7
	comp=Z,0.6nm,0.3s,baz=28,slow=4.1,SNR=5.4						
CMAR				PKiKP	PKiKP	05 36 43.1	-0.1
	comp=Z,0.5nm,0.3s,baz=2.9,slow=6.7,SNR=4.2						
CMAR				PP	PP	05 37 13.8	+7.7
	comp=Z,2.7nm,0.8s,baz=358,slow=1.7,SNR=4.3						
CMAR				PKKPbc	PKKPbc	05 47 54.0	+1.5
	comp=Z,1.2nm,0.3s,baz=189,slow=3.4,SNR=5.7						
CMAR				PKKP	PKKPdf	05 48 05.0	-0.6
	comp=Z,1.2nm,0.3s,baz=227,slow=4.2,SNR=5.5						
EFI	East Falkland	108.89	143	IAMs_20	IAMs_20	06 14 21.2	
	comp=Z,31µm,20.0s						
CAN	Canberra	109.25	240	IAMs_20	IAMs_20	06 16 42.4	
	comp=Z,34µm,20.0s						
WB7	Warramunga Arr	110.49	261	IAMs_20	IAMs_20	06 20 53.0	
	comp=Z,44µm,21.0s						
WR2	Warramunga Arr	110.57	261	IAMs_20	IAMs_20	06 21 07.1	
	comp=Z,44µm,21.0s						
WRA	Warramunga Arr	110.58	261	Pdiff	Pdif	05 32 51.0	+4.2
	comp=Z,1.8nm,1.1s,baz=51,slow=4.3,SNR=4.5						
WRA				PKiKP	PKiKP	05 36 47.4	0.0
	comp=Z,4.0nm,0.8s,baz=48,slow=1.8,SNR=14						
WRA				PP	PP	05 37 23.7	0.0
	comp=Z,6.6nm,1.2s,baz=42,slow=6.4,SNR=5.2						
WRA				PKKPbc	PKKPbc	05 47 46.1	+0.9
	comp=Z,1.0nm,1.0s,baz=241,slow=3.1,SNR=3.2						
WRA				PKKP	PKKPab	05 47 54.0	-2.0
	comp=Z,2.5nm,1.0s,baz=245,slow=2.5,SNR=6.0						
WRA	Warramunga Arr	110.58	261	i PKIKP	PKiKP	05 36 46.2	-1.1
WRA	Warramunga Arr	110.58	261	PKiKP	PKiKP	05 36 46.2	-1.1
STKA	Stephens Creek	112.27	247	PKiKP	PKiKP	05 36 50.8	+0.6
	comp=Z,8.3nm,0.8s,baz=3.8,slow=3.9,SNR=6.2						
STKA				PP	PP	05 37 38.1	+2.5
	comp=Z,11nm,1.0s,baz=23,slow=3.9,SNR=3.0						
SBUM	Sibu	112.49	294	IAMs_20	IAMs_20	06 17 31.8	
	comp=Z,27µm,22.0s						
MMRI	Maumere	112.75	278	IAMs_20	IAMs_20	06 19 31.4	
	comp=Z,36µm,20.0s						
BWNR	Bhubaneshwar	112.84	328	ex	Pdif	05 33 03.5	+6.5
BWNR				i x	x	05 37 31.6	
BHPL	Bhopal	113.01	338	ex	PKiKP	05 36 43.4	-8.6
BHPL				i x	x	05 47 19.1	
ASAR	Alice Springs	113.11	258	Pdiff	Pdif	05 33 07.2	+9.1
	comp=Z,2.1nm,0.9s,baz=62,slow=3.8,SNR=8.0						

ASAR				PKiKP	PKiKP	05 36 52.1	0.0
	comp=Z,3.1nm,0.9s,baz=44,slow=4.0,SNR=10.0						
ASAR				PKKPbc	PKKPbc	05 47 39.3	+2.3
	comp=Z,3.4nm,0.9s,baz=218,slow=2.6,SNR=9.0						
ASAR				PKKP	PKKPdf	05 47 55.4	-2.8
	comp=Z,5.9nm,0.9s,baz=233,slow=3.1,SNR=10						
BANOM	Banah	113.68	359	PP	PP	05 37 43.8	-0.3
KSM	Kuching	114.51	295	IAMs_20	IAMs_20	06 20 14.2	
	comp=Z,39µm,22.0s						
UOSS	Minazif	114.66	359	PP	PP	05 37 50.7	-0.3
TAU	Tasmania Unive	114.67	234	IAMs_20	IAMs_20	06 32 32.9	
	comp=Z,35µm,18.0s						
HATD	Hatta, Dubai	114.78	359	PP	PP	05 37 50.9	-1.0
	SNR=5.3						
MCQ	Macquarie Isla	114.85	219	IAMs_20	IAMs_20	06 23 23.8	
	comp=Z,29µm,18.0s						
BHUJ	Bhuj	114.89	345	ex	PP	05 37 54.7	+2.0
BHUJ				i x	x	05 47 46.6	
CHLP	Challavanipeta	115.14	329	ePdif	Pdif	05 33 04.0	-3.3
CHLP				ePP	PP	05 37 53.9	-0.9
CHLP				IVMs_BB	IVMs_BB	06 18 19.5	
	comp=Z,3µm,45.8s						
PMSA	Palmer Station	115.43	155	IAMs_20	IAMs_20	06 13 47.9	
	comp=Z,46µm,22.0s						
SOHO	SOHO	115.46	358	PP	PP	05 37 56.6	0.0
	SNR=5.2						
HOQ	Hoqain	115.99	358	PKiKP	PKiKP	05 36 56.7	-1.0
BIDO	Bidbid	116.02	357	PP	PP	05 37 40.3	-20
FITZ	Fitzroy Crossi	116.06	268		PKPdf	05 36 56.0	-1.8
RPR	Rampur	116.54	334	ePdif	Pdif	05 33 08.3	-5.2
RPR				ePP	PP	05 38 05.0	+0.5
RPR				IVMs_BB	IVMs_BB	06 27 22.7	
	comp=Z,4µm,22.6s						
SRSP	Sriramsagar	116.78	335	ePdif	Pdif	05 33 11.6	-3.0
SRSP				ePKPdf	PKPdf	05 36 55.8	-3.5
SRSP				ePP	PP	05 38 03.3	-2.9
SRSP				IVMs_BB	IVMs_BB	06 23 44.3	
	comp=Z,3µm,27.2s						
GGR	Gangavaram	117.19	333	ePdif	Pdif	05 33 13.3	-3.2
GGR				ePP	PP	05 38 07.3	-1.9
GGR				IVMs_BB	IVMs_BB	06 28 27.1	
	comp=Z,5µm,20.3s						
PVM	Polavaram	117.21	331	ePdif	Pdif	05 33 15.4	-1.1
PVM				ePKPdf	PKPdf	05 36 54.9	-5.2
PVM				ePP	PP	05 38 08.8	-0.5
PVM				IVMs_BB	IVMs_BB	06 26 53.4	
	comp=Z,5µm,22.7s						
PBA	Port Blair	117.23	317	IAMs_20	IAMs_20	06 37 05.0	
	comp=Z,29µm,20.0s						
KULM	Kulim	117.95	306	IAMs_20	IAMs_20	06 21 15.1	
	comp=Z,36µm,22.0s						
MYLAV	Mylavaram	118.03	332	ePdif	Pdif	05 33 13.8	-6.3
MYLAV				ePP	PP	05 38 14.7	-0.3
MYLAV				IVMs_BB	IVMs_BB	06 26 57.1	
	comp=Z,4µm,25.0s						
HYBB	Hyderabad (bro	118.12	334	ePdif	Pdif	05 33 15.7	-5.0
HYBB				ePKPdf	PKPdf	05 36 58.6	-3.3
HYBB				ePP	PP	05 38 13.7	-1.9
HYBB				eSKSac	SKSac	05 43 50.7	-5.8
HYBB				IVMs_BB	IVMs_BB	06 29 16.6	
	comp=Z,6µm,21.6s						
HYB	Hyderabad	118.12	334	i PKP	PKiKP	05 37 04.0	+2.0
HYB				ePP	PP	05 38 16.0	+0.4
HYB				e		05 46 04.0	
HYB				e		05 47 20.0	
HYB				e		05 52 50.0	
HYB				eSS	SS	05 54 36.0	+5.8
HYB				eLR	LR		
	comp=Z,21nm,22.0s						
HYB	Hyderabad	118.12	334	eP	PKiKP	05 37 02.8	+0.8
HYB				IAmb	IAmb	05 37 21.9	
	comp=Z,18nm,1.3s						
HYB				IAMs_20	IAMs_20	06 17 39.8	
	comp=Z,23µm,29.6s						
KLRI	Killari	118.13	337	ePdif	Pdif	05 33 16.4	-4.2
KLRI				ePP	PP	05 38 14.4	-1.2
KLRI				IVMs_BB	IVMs_BB	06 27 46.6	
	comp=Z,6µm,23.2s						
IPM	Ipoh	118.35	305	IAMs_20	IAMs_20	06 25 15.8	
	comp=Z,28µm,21.0s						
POO	Poona	118.48	339	eP	PKPdf	05 36 58.5	-4.1
POO				i PP	PP	05 38 19.1	+1.1
POO	Poona	118.48	339	eP	PKiKP	05 37 09.5	+6.8
MHTO	MHTO	118.54	357	PKPdf	PKPdf	05 36 55.2	-7.5
	SNR=9.3						
JAGI	Jajag, Banyuwa	118.66	284	IAMs_20	IAMs_20	06 23 04.6	
	comp=Z,31µm,21.0s						
NJS	Nagarjunasagar	118.67	333	IVMs_BB	IVMs_BB	06 27 37.2	
	comp=Z,3µm,25.0s						
ADKI	Addanki	119.10	332	ePdif	Pdif	05 33 20.4	-4.5
ADKI				ePP	PP	05 38 21.8	-0.5
ADKI				IVMs_BB	IVMs_BB	06 29 02.2	
	comp=Z,4µm,20.5s						
SRLM	Srisailam	119.24	333	ePKPdf	PKPdf	05 37 00.8	-3.4
SRLM				ePKiKP	PKiKP	05 37 01.3	-2.9
SRLM				ePP	PP	05 38 23.5	+0.1
SRLM				IVMs_BB	IVMs_BB	06 27 43.0	
	comp=Z,5µm,23.2s						
DQM	DQM	119.61	357	pPKiKP	PKiKP	05 37 08.7	+3.9
SMRI	Semarang	120.41	288	IAMs_20	IAMs_20	06 21 43.5	
	comp=Z,31µm,22.0s						
CMBY	CAMPBELL BAY	120.49	314	ex	PP	05 38 33.5	+1.0
CMBY				IAmb	IAmb	05 39 04.1	
	comp=Z,105nm,0.7s						
URV	Uravakonda	120.86	335	ePdif	Pdif	05 33 25.6	-7.2
URV				ePP	PP	05 38 33.7	-0.7
URV				IVMs_BB	IVMs_BB	06 30 55.6	
	comp=Z,10µm,22.4s						
UGM	Wanagama	120.94	288	IAMs_20	IAMs_20	06 21 11.6	
	comp=Z,36µm,22.0s						
HOPE	Hope Point	121.03	137	IAMs_20	IAMs_20	06 25 59.4	
	comp=Z,24µm,19.0s						
SKHT	Srikalahasti	121.14	332	ePdif	Pdif	05 33 31.1	-2.9
SKHT				ePKPdf	PKPdf	05 37 04.2	-3.6
SKHT				ePP	PP	05 38 37.2	+0.8
SKHT				IVMs_BB	IVMs_BB	06 31 28.6	
	comp=Z,4µm,20.8s						
PMBI	Palembang	121.49	296	IAMs_20	IAMs_20	06 24 43.0	
	comp=Z,26µm,22.0s						
SHAO	Shalim	121.55	359	pPKiKP	PKiKP	05 37 11.0	+2.3
MDRS	Chennai	121.56	331	eP	PKPdf	05 37 06.1	-2.5
MDRS				i x	x	05 38 42.8	
WHFO	Wadi Hawf	121.65	1	pPKiKP	PKiKP	05 37 12.3	+3.4
	SNR=5.2						
DMTO	DMTO	121.86	360	pPKPdf	PKiKP	05 37 11.4	+2.2
RBK	Rabkut	122.07	1	pPKiKP	PKiKP	05 37 14.0	+4.2
	SNR=7.2						
ABTO	Aybut	122.20	2	pPKiKP	PKiKP	05 37 14.1	+4.1
MBWA	Marble Bar	122.35	269	IAMs_20	IAMs_20	06 23 07.7	
	comp=Z,42µm,22.0s						
SHEL	Horse Pasture	122.40	83	IAMs_20	IAMs_20	06 31 40.0	
	comp=Z,26µm,21.0s						
PSA00	Pilbara Seismi	122.50	269		PKPdf	05 37 06.5	-3.6
CISI	Cisompet, Garu	122.64	290	IAMs_20	IAMs_20	06 24 38.5	
	comp=Z,38µm,21.0s						
KASI	Kota Agung	123.55	295	PKP	PKiKP	05 37 15.1	+2.5
MNAI	Manna	123.76	297	PKP	PKiKP	05 37 18.1	+5.0
MNAI	Manna	123.76	297	IAMs_20	IAMs_20	06 24 06.4	
	comp=Z,33µm,21.0s						
SISI	Saibi	124.05	303	PKP	PKiKP	05 37 17.1	+3.5
DAMY	Dhamar	124.13	12	IAMs_20	IAMs_20	06 37 55.8	
	comp=Z,21µm,20.0s						
PPSI	Pulau Pagai	124.54	301	PKP	PKiKP	05 37 18.1	+3.5
VNDA	Vanda	125.88	195	PKP	PKiKP	05 37 16.7	+1.3
	comp=Z,7.9nm,1.0s,baz=27,slow=2.6,SNR=6.2						
VNDA	Vanda	125.88	195	PKIKP	PKPdf	05 37 13.5	-1.4
VNDA	Vanda	125.88	195		PKPdf	05 37 13.5	-1.4
PALK	Pallekele	126.67	327	IAMs_20	IAMs_20	06 42 09.1	
	comp=Z,21µm,19.0s						
SOCY	Socotra	127.35	1	PKiKP	PKPdf	05 37 15.9	-3.8
FURI	Furi	128.41	21	IAMs_20	IAMs_20	06 38 24.8	
	comp=Z,22µm,22.0s						
MNCI	Minicoy	128.45	337	IAMs_20	IAMs_20	06 37 12.5	
	comp=Z,27µm,22.0s						
NWAO	Narrogin (SRO)	130.43	258	IAMs_20	IAMs_20	06 29 41.4	
	comp=Z,35µm,21.0s						
QSPA	South Pole Qui	130.53	180		PKPdf	05 37 21.4	-2.8
LODK	Lodwar	132.56	27	pPKiKP	PKiKP	05 37 35.5	+4.6
	SNR=16						
COCO	West Island	133.57	296	IAMs_20	IAMs_20	06 27 29.5	
	comp=Z,26µm,22.0s						
MBAR	Mbarara	134.44	35	IAMs_20	IAMs_20	06 45 15.1	
	comp=Z,29µm,20.0s						
VNA3	Neumayer Olymp	136.09	155	PKPdf	PKiKP	05 37 35.4	-0.7
VNA1	Neumayer--Stat	136.64	154	PKPdf	PKPdf	05 37 35.3	-0.1
VNA2	Neumayer--Watz	136.88	155	PKPdf	PKPdf	05 37 35.7	-0.2
	baz=268,slow=1.6						
KMBO	Kilima Mbogo	137.46	27	PKhKP	PKPdf	05 37 34.6	-4.4
	comp=Z,4.6nm,1.0s,baz=11,slow=3.8,SNR=6.5						
KMBO	Kilima Mbogo	137.46	27	PKIKP	PKPdf	05 37 35.1	-3.9
KMBO	Kilima Mbogo	137.46	27		PKPdf	05 37 35.1	-3.9
KMBO	Kilima Mbogo	137.46	27	IAMs_20	IAMs_20	06 46 08.3	
	comp=Z,27µm,21.0s						
SNAA	Sanae	138.14	156	PKhKP	PKPdf	05 37 34.5	-3.8
	comp=Z,6.2nm,1.1s,baz=233,slow=10,SNR=4.5						
SNAA				PKP	PKiKP	05 37 40.3	-0.1
	comp=Z,51nm,1.0s,baz=280,slow=0.6,SNR=26						
SNAA	Sanae	138.14	156	PKIKP	PKPdf	05 37 35.9	-2.4
SNAA	Sanae	138.14	156		PKPdf	05 37 35.9	-2.4
SNAA				IAMs_20	IAMs_20	06 26 40.0	
	comp=Z,32µm,22.0s						
KIBK	Kibwezi	138.86	26	PKiKP	PKPdf	05 37 40.7	-0.8
	SNR=7.0						
TSUM	Tsumeb	141.59	67	i P	PKPdf	05 37 45.5	-0.8
TSUM	Tsumeb	141.59	67	i P	PKPdf	05 37 45.5	-0.8
TSUM	Tsumeb	141.59	67		PKPdf	05 37 43.8	-2.4
NVL	N'lazarevskaya	142.86	158	ePKIKP	PKPdf	05 37 47.9	+1.2
NVL				e		05 41 05.0	
NVL				ePPP	PPP	05 44 11.0	
NVL				e		05 44 53.5	
NVL				eSS	SS	05 59 39.5	+5.5
DGAR	Diego Garcia	143.32	330	IAMs_20	IAMs_20	06 55 04.0	
	comp=Z,16µm,19.0s						
MSEY	Mahe Island	144.11	359	IAMs_20	IAMs_20	06 51 10.9	
	comp=Z,23µm,22.0s						
ITZ	Itezhi-Tezhi	144.69	54	i P	PKPab	05 37 48.6	-1.8
ITZ	Itezhi-Tezhi	144.69	54	i P	PKPab	05 37 49.2	-1.2
ITZ				i S	SS	05 59 37.2	-19
ITZ	Itezhi-Tezhi	144.69	54	i P	PKPdf	05 37 50.9	-0.8
ITZ	Itezhi-Tezhi	144.69	54	i P	PKPab	05 37 49.2	-1.2
ITZ				i S	SS	05 59 37.2	-19
LSZ	Lusaka	145.62	50	i P	PKPdf	05 37 51.9	-1.4
LSZ	Lusaka	145.62	50	i P	PKPdf	05 37 51.9	-1.4
MATP	Matopo	149.75	56	i P	PKPdf	05 37 59.0	-1.1
MATP	Matopo	149.75	56	i P	PKPdf	05 37 59.0	-1.1
SYO	Syowa Base	150.50	169	⇓iPKPdf	PKPdf	05 37 57.0	-2.6
SYO	Syowa Base	150.50	169	⇑iPKPbc	PKPbc	05 38 03.0	-1.9
SYO	Syowa Base	150.50	169	⇓ipPKPdf	PKPbc	05 38 04.6	-0.3
SYO	Syowa Base	150.50	169	⇓iPKPab	PKPab	05 38 10.0	-1.6
SUR	Sutherland	151.51	84		PKPbc	05 38 06.2	-2.6
MAW	Mawson	152.71	187	IAMs_20	IAMs_20	06 41 07.1	
	comp=Z,14µm,18.0s						
BOSA	Boshof	152.91	73	i P	PKPbc	05 38 08.7	-3.2
BOSA	Boshof	152.91	73	PKPbc	PKPbc	05 38 11.0	-0.9
	comp=Z,17nm,0.9s,baz=277,slow=2.2,SNR=18						
BOSA	Boshof	152.91	73	i P	PKPbc	05 38 08.7	-3.2
BOSA	Boshof	152.91	73	PKIKP	PKPbc	05 38 10.0	-1.9
BOSA	Boshof	152.91	73		PKPbc	05 38 10.0	-1.9

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*THE **10** 05:21:16.6, 38.°25N×20.°39E, h11^{km}, ML2.5/3, Error ellipse: s-maj=1.0km s-min=0.3km az=224.0*
*ATH **10** 05:21:16.2, 38.°25N×20.°40E, h13^{km}±1^{km}, ML2.4/2, Error ellipse: s-maj=2.0km s-min=0.9km az=243.0*
ISC 10 05:21:16.3±1.3, **38.°25N**±0.°03×**20.°39E**±0.°05, **h13**^{km}±6^{km}, **n26**, σ**0.^{s}26**/43, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.03	79	P	Pg	05 21 18.5	-0.1
KEF4				S	Sg	05 21 20.0	-0.1
KEF3	Kipouria, Keph	0.06	212	P	Pg	05 21 18.8	0.0
KEF3				S	Sg	05 21 20.5	0.0
LXR1	Lixouri, Cepha	0.07	142	P	Pg	05 21 18.9	+0.1
LXR1				S	Sg	05 21 20.8	+0.2
LXRA	Lixouri, Kepha	0.07	142	P	Pg	05 21 18.9	+0.1
LXRA				S	Sg	05 21 20.7	+0.1
CHV1	Chavriata, Kef	0.07	183	P	Pg	05 21 18.9	+0.1
CHV1				S	Sg	05 21 20.9	+0.2
KEF1	Kardakata, Kep	0.07	69	P	Pg	05 21 18.8	-0.1
KEF1				S	Sg	05 21 20.5	-0.2
ARGA	Argostoli. Kep	0.10	136	P	Pg	05 21 19.3	+0.1
ARGA				S	Sg	05 21 21.3	-0.1
ARG2	Argostoli	0.11	133	P	Pg	05 21 19.4	+0.1
ARG2				S	Sg	05 21 21.3	-0.1
KEF2	Argostoli. Kep	0.12	138	P	Pg	05 21 19.5	+0.1
KEF2				S	Sg	05 21 21.6	0.0
VLS	Valsamata	0.18	115	P	Pg	05 21 20.2	-0.1
VLS				S	Sg	05 21 23.2	+0.1
	2µm,0.1s						
VLS	Valsamata	0.18	115	P	Pg	05 21 20.2	-0.1
VLS				S	Sg	05 21 22.9	-0.3
VLS				AML	AML	05 21 23.3	
	comp=N,4609µm,0.1s						
VLS				AML	AML	05 21 23.3	
	comp=E,4997µm,0.1s						
VSK1	VASILIKIADES	0.21	42	P	Pg	05 21 21.0	+0.1
VSK1				S	Sg	05 21 24.4	+0.4
KONA	Konidatara, Ke	0.23	40	P	Pg	05 21 21.2	+0.1
KONA				S	Sg	05 21 24.8	+0.3
KONA				AML	AML	05 21 25.1	
	comp=E,1801µm,0.2s						
KONA				AML	AML	05 21 25.3	
	comp=N,2369µm,0.3s						
FSK	Fiskardo	0.25	34	P	Pg	05 21 21.5	0.0
FSK				S	Sg	05 21 25.7	+0.6
	comp=N,2µm,0.2s						
KFL	Anninata	0.35	114	P	Pg	05 21 23.2	-0.1
KFL				S	Sg	05 21 28.7	+0.7
	comp=N,1µm,0.3s						
EVGI	Lefkada island	0.42	30	P	Pg	05 21 24.6	-0.1
EVGI				S	Sb	05 21 31.5	-0.5
EVGI	Lefkada island	0.42	30	P	Pg	05 21 24.6	-0.1
EVGI				S	Sg	05 21 30.9	+0.5
MGNA	Meganis	0.51	38	P	Pg	05 21 26.1	-0.3
LKD2	Lefkada island	0.58	22	P	Pg	05 21 27.3	-0.2
LKD2	Lefkada island	0.58	22	P	Pg	05 21 27.4	-0.2
TSLK	Tsoukalades, L	0.61	20	P	Pg	05 21 28.4	+0.2
TSLK	Tsoukalades, L	0.61	20	P	Pg	05 21 27.9	-0.3
PDO	Prodromos	0.71	61	P	Pg	05 21 30.0	-0.2
PVO	Paravola	0.97	68	P	Pg	05 21 35.0	+0.1
KALE	Kalithea	1.39	84	P	Pn	05 21 41.7	+0.3
KLV	Kalavryta, Ach	1.41	98	P	Pb	05 21 42.3	-0.2

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*NEIC **10** 05:27:40.7±2.5, 40.°66N±0.°03×125.°20W±0.°05, h10^{km}±2^{km}, ML4.3/48, Error ellipse: s-maj=7.6km s-min=4.5km az=236.0*
*ANF **10** 05:27:44.5±1.5, 40.°91N×124.°86W, h0^{km}, ML4.2/1, Error ellipse: s-maj=15.0km s-min=8.9km az=64.0*
ISC 10 05:27:39.5±2.2, **40.°67N**±0.°06×**125.°26W**±0.°09, **h12**^{km}±13^{km}, **n67**, σ**1.^{s}79**/76, **Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCC	Jacoby Creek,	0.94	81		Pn	05 27 58.4	-0.3
JCC				Sg	Sb	05 28 10.8	+0.6
KHMM	Horse Mountain	1.18	80		Pn	05 28 02.0	0.0
KHMM				Sg	Sb	05 28 17.4	+0.3
KHMM				IAML		05 28 19.4	
	comp=N,4µm,3.8s						
KMRM	Mail Ridge	1.26	110		Pg	05 28 04.1	+0.3
KMRM				Sn	Sg	05 28 20.0	-0.2
KMRM				IAML		05 28 36.5	
	comp=N,3µm,4.7s						
KRMB	Red Mountain	1.33	50	Pn	Pn	05 28 03.7	-0.3
KRMB				Sn	Sb	05 28 20.6	-0.9
KCPM	Cahto Peak	1.61	127		Pn	05 28 08.2	+0.2
KCPM				IAML		05 28 53.8	
	comp=E,2µm,3.8s						
KCPM				IAML		05 28 56.4	
	comp=N,2µm,4.8s						
KBO	Bosley Butte	1.72	26	Pn	Pn	05 28 09.6	+0.1
KBO				IAML		05 28 53.2	
	comp=E,3µm,4.8s						
KBO				IAML		05 28 55.0	
	comp=N,3µm,4.8s						
L02E	Cave Junction	1.94	39	P	Pn	05 28 12.8	+0.5
	baz=217,SNR=28						
L02E				S	Sn	05 28 35.4	-1.2
	baz=217						
O02D	Mt. Diablo Mer	1.95	104	P	Pn	05 28 13.3	+0.7
	baz=296						
M02C	Callahan	1.95	68	P	Pb	05 28 13.9	-1.3
	baz=253						
M02C				S	Sn	05 28 37.1	-0.1
	baz=253						
N02D	Trinity Center	1.96	80	P	Pn	05 28 13.8	+1.1
	baz=268						
WDC	Whiskeytown Da	2.07	92		Pn	05 28 15.1	+1.0
WDC				IAML		05 28 29.0	
	comp=N,1µm,4.9s						
YBH	Yreka Blue Hor	2.19	60		Pn	05 28 16.6	+0.6
KEBM	Edson Butte	2.31	17	Pn	Pn	05 28 17.7	+0.2
KEBM				IAML		05 28 34.6	
	comp=N,2µm,4.2s						
KEBM				IAML		05 29 38.9	
	comp=E,2µm,4.2s						
K02D	Willamette Mer	2.35	30	P	Pn	05 28 18.8	+0.7
	baz=207						
K02D				S	Sn	05 28 45.0	-1.9
	baz=207						
HOPS	Hopland Field	2.37	134	Pn	Pn	05 28 18.5	+0.2
HOPS				IAML		05 28 38.0	
	comp=E,1µm,4.0s						
HOPS				IAML		05 29 31.9	
	comp=N,1µm,4.2s						
HUMO	Hull Mountain	2.59	41		Pn	05 28 22.1	+0.8
HUMO				IAML		05 29 41.6	
	comp=N,1µm,5.0s						
GDXM	Geysers	2.66	134	Pn	Pn	05 28 22.0	-0.3
GDXM				IAML		05 29 19.4	
	comp=N,700nm,4.6s						
O03E	Paynes Creek	2.66	97	S	Sn	05 28 54.2	-0.4
	baz=286						
J01E	Myrtle Point	2.68	21	P	Pn	05 28 23.0	+0.5
	baz=197						
L04D	Klamath Falls	2.70	54	Pb	Pb	05 28 26.7	-1.2
	baz=236,SNR=63						
M04C	Macdoel	2.81	66	P	Pb	05 28 27.5	-2.2
	baz=250						
ORV	Oroville	3.09	110		Pn	05 28 25.9	-2.2
ORV				IAML		05 29 23.8	
	comp=N,444nm,4.9s						
K04D	Chiloquin, OR	3.27	52	P	Pn	05 28 33.6	+2.8
	baz=234,SNR=7.5						
I03D	Drain, OR	3.34	24	P	Pn	05 28 33.4	+1.8
	baz=202						
J04D	Umpqua Nationa	3.48	41	P	Pn	05 28 36.9	+3.2
	baz=222,SNR=44						
I02D	Swisshome	3.59	16	P	Pn	05 28 36.1	+1.1
	baz=194						
I02D				S	Sn	05 29 15.3	-2.0
	baz=194						
AFDM	Forest Hills D	3.72	116		Pn	05 28 35.5	-1.4
AFDM				IAML		05 30 10.1	
	comp=N,629nm,4.9s						
I04A	Tendick Farm,	3.77	33	P	Pn	05 28 40.0	+2.4
	baz=213,SNR=25						
BEKR	Beckworth	3.83	101		Pn	05 28 40.6	+2.1
BEKR				IAML		05 29 09.1	
	comp=N,653nm,4.6s						
BEKR				IAML		05 30 48.2	
	comp=E,623nm,5.0s						
MOD	Modoc Plateau	3.93	70	Pn	Pn	05 28 40.3	+0.5
MOD				IAML		05 29 52.1	
	comp=N,752nm,4.7s						
MOD				IAML		05 31 01.1	
	comp=E,663nm,5.0s						
J05D	Fort Rock, OR	3.98	48	P	Pn	05 28 43.4	+2.9
	baz=230,SNR=43						
H04D	Lebanon	4.28	25	P	Pn	05 28 46.7	+2.3
	baz=204,SNR=26						
H04D				S	Sn	05 29 34.6	+0.3
	baz=204						
PINE	Pine Mountain	4.47	44		Pn	05 28 49.9	+2.6
VCNR	Virginia City	4.52	106	Pn	Pn	05 28 50.7	+2.7
PAHR	Pah Rah Range	4.60	100	Pn	Pn	05 28 50.6	+1.6
CMB	Columbia Colle	4.60	123	Pn	Pn	05 28 49.2	+0.2
CMB				IAML		05 29 51.9	
	comp=N,334nm,4.8s						
CMB				IAML		05 31 02.5	
	comp=E,202nm,3.9s						
PNTR	Pine Nut	4.63	108	Pn	Pn	05 28 49.7	+0.2
PNTR				IAML		05 29 51.3	
	comp=E,423nm,4.9s						
PNTR				IAML		05 31 12.3	
	comp=N,476nm,4.6s						
I05D	Terrebonne, OR	4.67	37	P	Pn	05 28 52.7	+2.8
	baz=218,SNR=23						
G03D	McMinnville, O	4.77	17	P	Pn	05 28 54.5	+3.2
	baz=196,SNR=6.4						
YERR	Yerington	4.93	108	Pn	Pn	05 28 54.4	+0.8
YERR				IAML		05 31 22.1	
	comp=N,314nm,4.7s						
WVOR	Wild Horse Val	5.27	68		Pn	05 28 58.8	+0.6
F03A	Seaside	5.40	13	Pn	Pn	05 29 01.3	+1.4
I07A	Izee	5.46	49		Pn	05 29 03.8	+3.0
G06A	Carlson Farm,	5.68	35	Pn	Pn	05 29 04.0	+0.2
J08A	Circle Bar Ran	5.72	60	Pn	Pn	05 29 04.6	+0.2
KVN	Kaiserville	5.74	104	Pn	Pn	05 29 05.5	+0.8
OMMB	Old Mammoth Mi	5.74	120	Pn	Pn	05 29 08.0	+3.1
NVAR	Mina Array Bea	5.82	110	Pn	Pn	05 29 07.4	+1.5
F05D	White Salmon	5.90	27	P	Pn	05 29 09.9	+3.1
	baz=208						
NV11	Mina Array Sit	5.92	110	Pn	Pn	05 29 04.8	-2.4
E03A	Lebam	6.00	11	Pn	Pn	05 29 10.5	+2.4
F07A	Phinny Hill Vi	6.51	35	Pn	Pn	05 29 18.4	+3.3
G08A	Pilot Rock	6.53	43	Pn	Pn	05 29 18.9	+3.4
LON	Longmire	6.57	21	Pn	Pn	05 29 17.5	+1.5
E07A	Sunnyside	7.07	32	Pn	Pn	05 29 25.5	+2.6
HAWA	Hanford	7.07	34	Pn	Pn	05 29 25.7	+2.9
BMO	Blue Mountains	7.19	52		Pn	05 29 26.7	+2.2
ISA	Isabella, Lake	7.31	131	Pn	Pn	05 29 28.1	+1.8
E08A	Dider Farm, El	7.35	36	Pn	Pn	05 29 29.0	+2.3
LTY	Liberty	7.37	25	Pn	Pn	05 29 27.1	+0.1
MFID	Camas Ranch	7.53	66		Pn	05 29 29.9	+0.5
D08A	Wollman Farm,	7.85	34	Pn	Pn	05 29 34.2	+0.6
GSC	Goldstone, Bar	8.55	126	Pn	Pn	05 29 44.0	+0.6
B08A	Colville Reser	8.77	27	Pn	Pn	05 29 49.2	+3.0
PFO	Pinyon Flats O	9.94	132	Pn	Pn	05 30 05.0	+2.6
XPFO	Pion Flat	9.95	132	Pn	Pn	05 30 03.3	+0.9
LLLB	Lillooet	10.21	12	Pn	Pn	05 30 07.6	+1.7

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*NEIC **10** 05:32:14.3±1.6, 40.°65N±0.°05×125.°30W±0.°06, h14^{km}±5^{km}, Error ellipse: s-maj=8.0km s-min=5.5km az=225.0*
*NCEDC **10** 05:32:14.2±1.9, 40.°65N±0.°05×125.°41W±0.°06, h11^{km}±6^{km}, ML3.4/19, Error ellipse: s-maj=7.8km s-min=5.3km az=212.0*
*ANF **10** 05:32:16.5±1.0, 40.°80N×124.°97W, h0^{km}, ML5.5/1, Error ellipse: s-maj=10.4km s-min=5.6km az=77.0*
*IDC **10** 05:32:16.8±2.7, 40.°65N×124.°86W, h0^{km}, mb3.2/2, mb1 3.8/4, mb1mx3.5/62, mbtmp3.4/4, ML3.6/2, Error ellipse: s-maj=32.4km s-min=16.5km az=95.0*
ISC 10 05:32:14.3±2.0, **40.°67N**±0.°05×**125.°30W**±0.°08, **h10**^{km}±12^{km}, **n124**, σ**1.^{s}23**/135, **Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMPM	Mount Pierce	0.93	105		Pg	05 32 32.3	+0.1
KMPM					Sg	05 32 44.6	+0.3
JCC	Jacoby Creek,	0.97	81		Pg	05 32 32.7	-0.3
KCRM	Chalk Rock	1.15	102		Pb	05 32 35.6	-0.8
KHMM	Horse Mountain	1.21	80		Pb	05 32 36.6	-0.8
KMRM	Mail Ridge	1.29	110		Pn	05 32 37.9	-0.6
KRMB	Red Mountain	1.35	50		Pn	05 32 37.8	-1.6
KCSM	Cold Springs	1.36	95		Pn	05 32 38.8	-0.8
KBSM	Bell Springs	1.50	119		Pn	05 32 40.4	-1.0
KOMM	Orleans Mounta	1.52	66		Pn	05 32 40.5	-1.2
KHBM	Hayfork Bally	1.58	90		Pn	05 32 41.6	-1.0
KSXB	Camp Six Broad	1.58	42		Pn	05 32 40.7	-1.8
KIPM	Iron Peak	1.63	121		Pn	05 32 42.3	-0.9
KCPM	Cahto Peak	1.64	126		Pn	05 32 42.2	-1.1
KBO	Bosley Butte	1.74	27	Pn	Pn	05 32 43.1	-1.6
KFPM	Farley Peak	1.76	125		Pn	05 32 43.9	-1.1
KBNM	Bluenose Ridge	1.79	115		Pn	05 32 44.9	-0.5
GTC	Three Chop Rid	1.84	133		Pn	05 32 45.0	-1.0
LBPM	Beegum Peak	1.88	100		Pn	05 32 45.7	-0.8
LGPM	Granite Peak	1.89	82		Pn	05 32 45.8	-1.0
GNAM	Navarro Ridge	1.95	138		Pn	05 32 46.5	-0.9
L02E	Cave Junction	1.96	40		Pn	05 32 46.6	-1.1
L02E	Cave Junction	1.96	40	P	Pn	05 32 46.6	-1.1
	baz=215,SNR=19						
L02E				S	Sn	05 33 09.0	-3.3
	baz=215						
KRKM	Rackout Spring	1.96	124		Pn	05 32 46.8	-1.0
O02D	Mt. Diablo Mer	1.98	104		Pn	05 32 47.4	-0.6

O02D	Mt. Diablo Mer	1.98	104	P	Pn	05 32 47.4	-0.6
	baz=283						
M02C	Callahan	1.98	68		Pn	05 32 47.7	-0.4
M02C	Callahan	1.98	68	S	Sn	05 33 10.7	-2.3
	baz=244						
N02D	Trinity Center	1.99	80		Pn	05 32 47.5	-0.6
N02D	Trinity Center	1.99	80	P	Pn	05 32 48.3	+0.2
	baz=257						
N02D				S	Sn	05 33 11.5	-1.7
	baz=257						
LBKM	Bonanza King	2.04	77		Pn	05 32 48.2	-0.6
WDC	Whiskeytown Da	2.10	91		Pn	05 32 49.0	-0.6
WDC	Whiskeytown Da	2.10	91	Pn	Pn	05 32 48.6	-1.0
GHOM	Hamilton Openi	2.11	140		Pn	05 32 49.0	-0.8
GROM	Round Mountain	2.14	110		Pn	05 32 50.2	-0.1
GHMM	Hull Mountain	2.16	122		Pn	05 32 49.4	-1.1
GVV	Valley View	2.19	113		Pn	05 32 50.7	-0.3
GASB	Alder Springs	2.22	116		Pn	05 32 50.8	-0.6
YBH	Yreka Blue Hor	2.22	61	Pn	Pn	05 32 50.4	-0.9
	3.9nm,0.3s,baz=239,slow=16,SNR=4.2						
YBH				Sn	Sn	05 33 17.5	-1.5
	24nm,0.3s,baz=165,slow=18,SNR=11						
YBH	Yreka Blue Hor	2.22	61		Pn	05 32 50.9	-0.4
GGUM	Gualala	2.28	142		Pn	05 32 51.2	-0.8
KEBM	Edson Butte	2.32	18	Pn	Pn	05 32 51.4	-1.2
GSNM	Snow Mountain	2.37	136		Pn	05 32 52.7	-0.6
K02D	Willamette Mer	2.37	31	P	Pn	05 32 52.5	-0.8
	baz=206,SNR=19						
K02D				S	Sn	05 33 20.1	-2.3
	baz=206						
GHLM	Highland Sprin	2.39	132		Pn	05 32 52.7	-0.9
HOPS	Hopland Field	2.39	134		Pn	05 32 52.6	-1.0
HOPS	Hopland Field	2.39	134		Pn	05 32 53.0	-0.6
B040	Montague	2.46	61		Pn	05 32 56.1	+1.6
LTCM	Tuscan Springs	2.46	100		Pn	05 32 54.0	-0.5
GTSM	Trough Springs	2.47	122		Pn	05 32 54.1	-0.6
M03C	McCloud	2.48	75		Pn	05 32 55.6	+0.8
LMPM	Military Pass	2.51	70		Pb	05 32 57.6	-2.0
LHEM	Herd Peak	2.52	67		Pn	05 32 56.3	+0.8
GPMM	Pine Mountain	2.57	134		Pn	05 32 55.2	-0.8
GCVM	Cloverdale	2.59	136		Pn	05 32 55.8	-0.4
GACM	Adobe Creek	2.59	133		Pn	05 32 55.7	-0.7
HUMO	Hull Mountain	2.61	41		Pn	05 32 55.5	-1.1
LBFM	Black Fox Moun	2.67	74		Pn	05 32 59.1	+1.6
O03E	Paynes Creek	2.69	97		Pn	05 32 57.1	-0.6
O03E	Paynes Creek	2.69	97	P	Pn	05 32 57.5	-0.3
	baz=277						
O03E				S	Sn	05 33 28.8	-1.6
	baz=277						
J01E	Myrtle Point	2.69	22	P	Pn	05 32 57.0	-0.7
	baz=198						
FTR	Fort Ross	2.70	142		Pn	05 32 57.1	-0.8
L04D	Klamath Falls	2.73	54	P	Pn	05 32 59.4	+1.1
	baz=232,SNR=50						
L04D				S	Sn	05 33 32.3	+0.8
	baz=232						
NMCNC	Mill Creek, So	2.77	138		Pn	05 32 58.1	-0.7
MNRC	McLaughlin Min	2.83	128		Pn	05 32 59.8	+0.1
M04C	Macdoel	2.84	66		Pn	05 33 01.5	+1.7
M04C	Macdoel	2.84	66	P	Pn	05 33 01.5	+1.7
	baz=244						
M04C				S	Sn	05 33 34.4	+0.3
	baz=244						
NHSM	Mount Saint He	2.88	133		Pn	05 32 59.8	-0.6
LRDM	Redding Peak	2.93	93		Pn	05 33 01.9	+0.8
SUTB	Sutter Butte	3.06	117		Pn	05 33 01.0	-1.7
ORV	Oroville	3.12	110		Pn	05 33 02.6	-0.9
ORV	Oroville	3.12	110		Pn	05 33 02.9	-0.6
K04D	Chiloquin, OR	3.30	52	P	Pn	05 33 07.4	+1.2
	baz=231,SNR=26						
I03D	Drain, OR	3.36	25	P	Pn	05 33 07.1	+0.3
	baz=203						
I03D				S	Sn	05 33 46.3	-0.4
	baz=203						
J04D	Umpqua Nationa	3.50	42	P	Pn	05 33 10.7	+1.7
	baz=220,SNR=18						
I02D	Swisshome	3.60	17	P	Pn	05 33 10.1	0.0
	baz=195						
I02D				S	Sn	05 33 50.7	-2.0
	baz=195						
I04A	Tendick Farm,	3.79	33	P	Pn	05 33 14.1	+1.2
	baz=212,SNR=10						
I04A				S	Sn	05 33 56.3	-1.2
	baz=212						
BEKR	Beckworth	3.86	100		Pn	05 33 14.7	+0.8
J05D	Fort Rock, OR	4.00	48	P	Pn	05 33 17.2	+1.3
	baz=228,SNR=17						
H04D	Lebanon	4.29	25	P	Pn	05 33 20.5	+0.9
	baz=204,SNR=14						
H04D				S	Sn	05 34 10.0	+0.2
	baz=204						
VCNR	Virginia City	4.55	106		Pn	05 33 22.5	-0.9
CMB	Columbia Colle	4.62	123	Pn	Pn	05 33 24.9	+0.6
PAHR	Pah Rah Range	4.63	100	Pn	Pn	05 33 22.8	-1.7
PNTR	Pine Nut	4.66	108		Pn	05 33 26.2	+1.3
I05D	Terrebonne, OR	4.69	37	P	Pn	05 33 26.4	+1.2
	baz=217,SNR=9.7						
G03D	McMinnville, O	4.78	18	P	Pn	05 33 27.9	+1.5
	baz=196						
SAO	San Andreas Ge	4.92	141	Pn	Pn	05 33 28.6	+0.2
YERR	Yerington	4.96	108		Pn	05 33 30.1	+1.1
F03A	Seaside	5.41	13	Pn	Pn	05 33 35.9	+0.8
G05D	Wamic, OR	5.42	31	P	Pn	05 33 37.1	+1.9
	baz=212,SNR=7.2						
I07A	Izee	5.48	50	Pn	Pn	05 33 37.1	+0.9
RYN	Ryan	5.61	109	Pn	Pn	05 33 37.2	-0.7
PMPB	Monarch Peak	5.67	140	Pn	Pn	05 33 37.7	-1.0
MDPB	Devils Postpil	5.70	120	Pn	Pn	05 33 40.9	+1.6
G06A	Carlson Farm,	5.71	35	Pn	Pn	05 33 38.9	-0.3
J08A	Circle Bar Ran	5.75	60		Pn	05 33 40.5	+0.7
OMMB	Old Mammoth Mi	5.77	120	Pn	Pn	05 33 40.3	+0.1
KVN	Kaiserville	5.77	104	Pn	Pn	05 33 39.0	-1.1
NVAR	Mina Array Bea	5.85	110	Pn	Pn	05 33 41.3	0.0
	0.4nm,0.3s,baz=291,slow=12,SNR=6.5						
NVAR	Mina Array Bea	5.85	110		Pn	05 33 39.9	-1.4
NV11	Mina Array Sit	5.95	110	Pn	Pn	05 33 40.4	-2.3
E03A	Lebam	6.01	12	Pn	Pn	05 33 43.4	+0.2
F07A	Phinny Hill Vi	6.53	35	Pn	Pn	05 33 52.1	+1.7
G08A	Pilot Rock	6.55	43	Pn	Pn	05 33 53.5	+2.7
LON	Longmire	6.58	21	Pn	Pn	05 33 52.3	+1.1
NLWA	Neilton Lookou	6.80	8	Pn	Pn	05 33 55.1	+0.9
D05A	Enumclaw	6.94	19	Pn	Pn	05 33 57.7	+1.6
E07A	Sunnyside	7.09	32	Pn	Pn	05 33 59.8	+1.7
HAWA	Hanford	7.09	34	Pn	Pn	05 33 59.0	+0.9
BMO	Blue Mountains	7.21	52	Pn	Pn	05 34 02.3	+2.4
ISA	Isabella, Lake	7.34	131		Pn	05 34 03.6	+2.0
ISA	Isabella, Lake	7.34	131	P	Pn	05 34 03.6	+2.0
	baz=315						
E08A	Dider Farm, El	7.37	36	Pn	Pn	05 34 03.4	+1.4
LTY	Liberty	7.38	25	Pn	Pn	05 34 03.4	+1.2
MFID	Camas Ranch	7.56	66	Pn	Pn	05 34 05.1	+0.4
R11A	Troy Canyon, C	7.86	104	Pn	Pn	05 34 09.2	+0.4
EDW2	Edwards Air Fo	8.17	133	P	Pn	05 34 14.7	+1.7
	baz=318						
B08A	Colville Reser	8.79	27	Pn	Pn	05 34 23.0	+1.6
BELC	Belle Mtn. Jos	9.95	129	P	Pn	05 34 38.7	+1.2
	baz=315						
PFO	Pinyon Flats O	9.96	132	Pn	Pn	05 34 39.0	+1.4
	0.5nm,0.3s,baz=329,slow=12,SNR=4.9						
PFO	Pinyon Flats O	9.96	132		Pn	05 34 38.0	+0.4
PFO	Pinyon Flats O	9.96	132	P	Pn	05 34 39.1	+1.4
	baz=318						
XPFO	Pion Flat	9.97	132	Pn	Pn	05 34 38.6	+0.9
TXAR	Lajitas Array	20.96	116	P	Pn	05 36 59.9	-0.3
	1.8nm,1.1s,baz=309,slow=10,SNR=2.6						
YKA	Yellowknife Ar	22.78	13	P	P	05 37 20.5	+3.8
	0.6nm,0.8s,baz=202,slow=11,SNR=2.9						

IDC ***10*** *05:36:38.9±1.3, 40°.61N×125°.21W, h0^{km}, mb3.8/5, mb1 4.1/10, mb1mx3.8/56, mbtmp3.8/10, ML3.6/5, Error ellipse: s-maj=17.1km s-min=14.1km az=53.0*

ANF ***10*** *05:36:38.7±1.1, 40°.67N×125°.14W, h0^{km}, ML4.0/1, Error ellipse: s-maj=10.4km s-min=5.0km az=75.0*

NEIC ***10*** *05:36:38.9±2.3, 40°.62N±0°.03×125°.25W±0°.05, h10^{km}±1^{km}, Error ellipse: s-maj=6.3km s-min=4.7km az=264.0*

NCEDC ***10*** *05:36:39.5±2.2, 40°.57N±0°.03×125°.35W±0°.07, h17^{km}±6^{km}, ML3.8/40, Error ellipse: s-maj=7.5km s-min=4.5km az=80.0*

ISC 10 05:36:38.8±2.4, **40°.62N**±0°.04×**125°.31W**±0°.06, **h10**^{km}±15^{km}, **n161**, σ1^{s}**41**/183, **mb3.9**/4, **Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMPM	Mount Pierce	0.93	102		Pb	05 36 55.6	-1.5
KMPM					Sg	05 37 10.3	+1.4
JCC	Jacoby Creek,	1.00	78	Pn	Pb	05 36 56.2	-2.0
JCC				Sn	Sb	05 37 11.2	-0.2
KRPM	Rodgers	1.12	61		Pn	05 36 58.7	-1.9
KRPM					Sb	05 37 13.6	-1.4
KCRM	Chalk Rock	1.16	99		Pn	05 37 00.1	-1.1
KHMM	Horse Mountain	1.23	77	Pn	Pn	05 37 00.9	-1.4
KHMM					Sb	05 37 17.6	-0.6
KMRM	Mail Ridge	1.29	107	Pn	Pn	05 37 02.9	-0.1
KMRM				Sn	Sn	05 37 19.5	-0.8
KCSM	Cold Springs	1.37	93		Pn	05 37 03.0	-1.2
KRMB	Red Mountain	1.40	49	Pn	Pn	05 37 02.8	-1.7
KRMB				Sn	Sn	05 37 20.7	-2.4
KBSM	Bell Springs	1.49	117		Pn	05 37 04.5	-1.2
KOMM	Orleans Mounta	1.56	64		Pn	05 37 05.7	-1.1
KHBM	Hayfork Bally	1.59	88		Pn	05 37 06.1	-1.2
KIPM	Iron Peak	1.62	119		Pn	05 37 06.3	-1.2
KCPM	Cahto Peak	1.62	124	Pn	Pn	05 37 06.6	-1.0
KCPM				Sn	Sn	05 37 27.5	-1.1
KSXB	Camp Six Broad	1.63	41		Pn	05 37 06.4	-1.3
KFPM	Farley Peak	1.75	123		Pn	05 37 07.5	-1.8
KBNM	Bluenose Ridge	1.78	113		Pn	05 37 09.1	-0.6
KBO	Bosley Butte	1.79	27		Pn	05 37 08.2	-1.7
KBO				Sn	Sn	05 37 30.3	-2.4
GTC	Three Chop Rid	1.82	131		Pn	05 37 08.0	-2.2
LBPM	Beegum Peak	1.88	98		Pn	05 37 10.1	-1.0
LGPM	Granite Peak	1.91	80		Pn	05 37 10.2	-1.4
GNAM	Navarro Ridge	1.92	137		Pn	05 37 09.6	-2.0
KRKM	Rackout Spring	1.94	122		Pn	05 37 10.8	-1.2
KTRM	Thompson Ridge	1.95	48		Pn	05 37 12.9	+0.8
O02D	Mt. Diablo Mer	1.98	102		Pn	05 37 11.2	-1.3
O02D	Mt. Diablo Mer	1.98	102	P	Pn	05 37 12.1	-0.4
	baz=282,SNR=17						
O02D				S	Sn	05 37 37.4	0.0
	baz=282						
L02E	Cave Junction	2.01	39		Pn	05 37 12.2	-0.6
L02E	Cave Junction	2.01	39	P	Pn	05 37 12.2	-0.6
	baz=220						
L02E				S	Sn	05 37 36.5	-1.5
	baz=220						
N02D	Trinity Center	2.01	79		Pn	05 37 12.2	-0.8
N02D	Trinity Center	2.01	79	P	Pn	05 37 12.7	-0.3
	baz=260,SNR=9.5						
N02D				S	Sn	05 37 38.2	-0.1
	baz=260						
M02C	Callahan	2.02	67		Pn	05 37 12.7	-0.3
M02C	Callahan	2.02	67	P	Pn	05 37 13.2	+0.2
	baz=247,SNR=12						
M02C				S	Sn	05 37 37.5	-0.8
	baz=247						
LBKM	Bonanza King	2.06	76		Pn	05 37 12.9	-0.8
GHOM	Hamilton Openi	2.08	138		Pn	05 37 11.9	-1.9
WDC	Whiskeytown Da	2.11	90		Pn	05 37 13.5	-0.7
WDC				Sn	Sn	05 37 40.0	-0.5
GROM	Round Mountain	2.14	108		Pn	05 37 14.2	-0.5
GHMM	Hull Mountain	2.14	121		Pn	05 37 13.3	-1.5
GVV	Valley View	2.19	112		Pn	05 37 15.1	-0.3
GASB	Alder Springs	2.21	115		Pn	05 37 14.8	-0.9
GGUM	Gualala	2.25	141		Pn	05 37 14.1	-2.1
YBH	Yreka Blue Hor	2.26	60	Pn	Pn	05 37 17.2	+0.9
	7.1nm,0.3s,baz=271,slow=12,SNR=10.0						
YBH				Sn	Sn	05 37 43.7	-0.6
	26nm,0.3s,baz=175,slow=16,SNR=11						
YBH	Yreka Blue Hor	2.26	60		Pn	05 37 16.9	+0.5
LAMM	Antelope Mount	2.26	63		Pn	05 37 16.8	+0.3
GSNM	Snow Mountain	2.34	135		Pn	05 37 15.6	-1.8
LCSM	College of the	2.35	69		Pn	05 37 17.4	-0.3
GHLM	Highland Sprin	2.37	131		Pn	05 37 16.3	-1.5
HOPS	Hopland Field	2.37	132	Pn	Pn	05 37 15.9	-1.8
KEBM	Edson Butte	2.37	18	Pn	Pn	05 37 17.3	-0.6
K02D	Willamette Mer	2.42	30	P	Pn	05 37 17.9	-0.6
	baz=211,SNR=10.0						
K02D				S	Sn	05 37 46.6	-1.6
	baz=211						
GDCM	Dry Creek	2.44	138		Pn	05 37 16.9	-2.0
GCK	Clark Valley	2.45	115		Pn	05 37 19.9	+1.0
GTSM	Trough Springs	2.46	121		Pn	05 37 18.5	-0.6
LTCM	Tuscan Springs	2.47	98		Pn	05 37 19.4	+0.2
LSHM	Sage Hen Hill	2.50	85		Pn	05 37 20.2	+0.7
B040	Montague	2.50	60		Pn	05 37 20.3	+0.7
M03C	McCloud	2.50	74		Pn	05 37 19.6	-0.2
GPMM	Pine Mountain	2.54	133		Pn	05 37 19.1	-1.1
GCVM	Cloverdale	2.56	135		Pn	05 37 18.6	-1.8
GSSM	Skaggs Springs	2.61	136		Pn	05 37 19.2	-1.9
GDXM	Geysers	2.65	132		Pn	05 37 20.3	-1.5
HUMO	Hull Mountain	2.66	41	Pn	Pn	05 37 21.6	-0.2
O03E	Paynes Creek	2.70	96	P	Pn	05 37 22.2	-0.2
	baz=277,SNR=17						
O03E				S	Sn	05 37 55.7	+0.5
	baz=277						
J01E	Myrtle Point	2.74	22	P	Pn	05 37 23.4	+0.5
	baz=203						
J01E				S	Sn	05 37 55.7	-0.4
	baz=203						
L04D	Klamath Falls	2.77	54	P	Pn	05 37 25.3	+1.9
	baz=235,SNR=13						
M04C	Macdoel	2.87	65	P	Pn	05 37 26.4	+1.6
	baz=247,SNR=9.6						
MCCM	Marconi Confer	3.11	142		Pn	05 37 25.8	-2.1
ORV	Oroville	3.11	109	Pn	Pn	05 37 27.6	-0.4
K04D	Chiloquin, OR	3.34	52	P	Pn	05 37 32.2	+1.0
	baz=234,SNR=7.5						
I03D	Drain, OR	3.41	25	P	Pn	05 37 32.1	+0.1
	baz=206						
I03D				S	Sn	05 38 11.3	-1.2
	baz=206						
J04D	Umpqua Nationa	3.55	41	P	Pn	05 37 35.8	+1.6
	baz=223						
I02D	Swisshome	3.65	17	P	Pn	05 37 35.8	+0.4
	baz=198						
I02D				S	Sn	05 38 16.1	-2.4
	baz=198						
AFDM	Forest Hills D	3.74	115		Pn	05 37 36.8	+0.2
I04A	Tendick Farm,	3.84	33	P	Pn	05 37 39.3	+1.3
	baz=215,SNR=8.6						
I04A				S	Sn	05 38 22.8	-0.4
	baz=215						
BEKR	Beckworth	3.86	100	Pn	Pn	05 37 40.0	+1.5
MOD	Modoc Plateau	3.99	70		Pn	05 37 39.3	-0.9
J05D	Fort Rock, OR	4.04	47	P	Pn	05 37 42.0	+1.1
	baz=230,SNR=11						
J05D				S	Sn	05 38 28.9	+0.4
	baz=230						
COR	Corvallis	4.23	20	Pn	Pn	05 37 44.0	+0.6
RUBR	Rubicon Trail	4.27	110		Pn	05 37 45.8	+1.7
H04D	Lebanon	4.34	25	P	Pn	05 37 46.4	+1.5
	baz=207						
H04D				S	Sn	05 38 36.3	+0.7
	baz=207						
PINE	Pine Mountain	4.54	44		Pn	05 37 48.8	+1.0
VCNR	Virginia City	4.55	105	Pn	Pn	05 37 47.9	0.0
CMB	Columbia Colle	4.61	122		Pn	05 37 49.4	+0.8
PAHR	Pah Rah Range	4.63	99		Pn	05 37 49.0	-0.1
PNTR	Pine Nut	4.65	107		Pn	05 37 49.7	+0.3
I05D	Terrebonne, OR	4.74	37	P	Pn	05 37 51.4	+1.0
	baz=220						
SAO	San Andreas Ge	4.89	141	Pn	Pn	05 37 50.3	-2.2
YERR	Yerington	4.95	107		Pn	05 37 53.8	+0.3
WVOR	Wild Horse Val	5.33	68		Pn	05 37 58.3	-0.3
G05D	Wamic, OR	5.47	31	P	Pn	05 38 01.9	+1.4
	baz=214						
I07A	Izee	5.52	49		Pn	05 38 01.9	+0.7
RYN	Ryan	5.61	109		Pn	05 38 02.5	+0.1
PMPB	Monarch Peak	5.64	140		Pn	05 38 01.2	-1.6
MDPB	Devils Postpil	5.69	120		Pn	05 38 06.1	+2.4
F04A	Amboy	5.72	21	Pn	Pn	05 38 03.3	-0.5
G06A	Carlson Farm,	5.75	35		Pn	05 38 03.6	-0.7
OMMB	Old Mammoth Mi	5.75	119		Pn	05 38 03.8	-0.8
KVN	Kaiserville	5.77	103		Pn	05 38 04.3	-0.4
J08A	Circle Bar Ran	5.79	60		Pn	05 38 05.7	+0.8
NVAR	Mina Array Bea	5.84	110	Pn	Pn	05 38 06.3	+0.6
	1.3nm,0.3s,baz=291,slow=14,SNR=16						
NVAR	Mina Array Bea	5.84	110		Pn	05 38 05.7	-0.1
NV11	Mina Array Sit	5.95	109		Pn	05 38 07.0	-0.1
PAGB	Antelope Grade	6.30	139	Pn	Pn	05 38 10.7	-1.1
F07A	Phinny Hill Vi	6.58	35		Pn	05 38 16.1	+0.5
G08A	Pilot Rock	6.60	43		Pn	05 38 17.4	+1.5
VES	Vestal, Richgr	6.84	132	P	Pn	05 38 20.0	+0.8
	baz=316						
NLWA	Neilton Lookou	6.85	8	Pn	Pn	05 38 19.6	+0.2
E07A	Sunnyside	7.14	32	Pn	Pn	05 38 22.8	-0.5
HAWA	Hanford	7.14	34		Pn	05 38 24.5	+1.2
PKM	Mcpherson Peak	7.19	141	P	Pn	05 38 23.9	-0.3
	baz=324						
PKM				S	Sn	05 39 43.2	-2.8
	baz=324						
BMO	Blue Mountains	7.25	52		Pn	05 38 25.2	+0.2
ISA	Isabella, Lake	7.31	130		Pn	05 38 25.4	-0.3
ISA	Isabella, Lake	7.31	130	P	Pn	05 38 28.0	+2.2
	baz=314						
MFID	Camas Ranch	7.60	65	Pn	Pn	05 38 31.6	+1.9
MPMC	Manual Prospec	7.65	124	P	Pn	05 38 32.7	+2.2
	baz=309						
ELK	Elko	7.66	86	Pn	Pn	05 38 33.5	+2.8
	0.1nm,0.3s,baz=180,slow=17,SNR=2.1						
ELK	Elko	7.66	86		Pn	05 38 29.9	-0.7
R11A	Troy Canyon, C	7.86	104	Pn	Pn	05 38 34.4	+1.0
R11A	Troy Canyon, C	7.86	104	P	Pn	05 38 34.5	+1.2
	baz=290						
D08A	Wollman Farm,	7.92	34	Pn	Pn	05 38 34.7	+0.7
F10A	Beach Ranch, E	7.96	45		Pn	05 38 38.5	+3.8
TPNV	Topopah Spring	7.97	114	Pn	Pn	05 38 35.8	+1.0
TPNV	Topopah Spring	7.97	114	P	Pn	05 38 37.8	+3.0
	baz=300						
EDW2	Edwards Air Fo	8.15	132	P	Pn	05 38 38.2	+1.0
	baz=317						
GSC	Goldstone, Bar	8.56	126		Pn	05 38 43.6	+0.7
GSC	Goldstone, Bar	8.56	126	P	Pn	05 38 44.0	+1.1
	baz=311						
B08A	Colville Reser	8.84	27	Pn	Pn	05 38 46.2	-0.4
TUQ	Turquoise Moun	9.03	122	P	Pn	05 38 51.6	+2.2
	baz=308						
HEC	Hector,Ludlow	9.16	126	P	Pn	05 38 52.1	+1.0
	baz=312						
BGU	Big Grassy Mou	9.33	84		Pn	05 38 56.3	+2.8
GMRC	Granite Mounta	9.61	124	P	Pn	05 38 58.0	+0.7
	baz=310						
BELC	Belle Mtn. Jos	9.93	129	P	Pn	05 39 01.7	0.0
	baz=314						
PFO	Pinyon Flats O	9.94	132	Pn	Pn	05 39 03.0	+1.2
	0.7nm,0.3s,baz=311,slow=10,SNR=6.6						
PFO	Pinyon Flats O	9.94	132		Pn	05 39 02.8	+1.0
PFO	Pinyon Flats O	9.94	132	P	Pn	05 39 02.8	+1.0
	baz=317						
XPFO	Pion Flat	9.94	132	Pn	Pn	05 39 02.8	+0.9
MCMT	McKenzie Canyo	10.09	61	Pn	Pn	05 39 05.5	+1.5
MSO	Missoula	10.30	49	P	Pn	05 39 11.5	+4.7
	baz=237						
IRM	Iron Mountain	10.34	125	P	Pn	05 39 07.8	+0.6
	baz=311						
MSU	Marysvale	10.36	97	Pn	Pn	05 39 08.7	+1.0
MONP2	Monument Peak	10.50	134	P	Pn	05 39 11.6	+2.0
	baz=320						
YHL	Hebgen Lake	11.22	63		Pn	05 39 19.9	+0.4
SRU	San Rafael Swe	11.47	93		Pn	05 39 21.6	-1.2
PDAR	Pinedale Array	11.97	75	Pn	Pn	05 39 33.7	+3.9
	0.1nm,0.3s,baz=267,slow=16,SNR=4.1						
PDAR	Pinedale Array	11.97	75		Pn	05 39 30.0	+0.3
S22A	4UR Ranch, Cre	14.62	95	P	P	05 40 10.1	-2.4
	baz=287						
SDCO	Great Sand Dun	15.63	94	Pn	Pn	05 40 18.0	-1.4
SDCO	Great Sand Dun	15.63	94	P	P	05 40 22.5	-1.2
	baz=287						
T25A	Trinidad	16.64	95	P	P	05 40 35.4	+0.6
	baz=288						
TXAR	Lajitas Array	20.95	116	P	Pn	05 41 24.2	-0.4
	3.6nm,1.0s,baz=295,slow=8.5,SNR=9.6						
TXAR	Lajitas Array	20.95	116	P	P	05 41 20.4	-1.7
ECSD	EROS Data Cent	21.45	72	P	P	05 41 25.6	-1.6
ECSD	EROS Data Cent	21.45	72	P	P	05 41 31.2	+4.0
	baz=272						
AGMN	Agassiz Nation	22.28	60	P	P	05 41 36.8	+0.7
	baz=261						
CTGM	Chitina Glacie	22.63	340	P	P	05 41 38.5	-1.4
ULM	Lac du Bonnet	22.66	55	P	P	05 41 40.4	+0.3
	9.0nm,0.8s,baz=293,slow=16,SNR=8.5						
ULM	Lac du Bonnet	22.66	55	P	P	05 41 40.7	+0.6
YKA	Yellowknife Ar	22.84	13	P	P	05 41 43.4	+1.6
	2.7nm,1.0s,baz=199,slow=10,SNR=6.3						
EYMN	Ely	25.14	62	P	P	05 42 03.4	-0.6
W39A	Magazine	25.38	92	P	P	05 42 07.0	+0.8
W39A	Magazine	25.38	92	P	P	05 42 09.5	+3.3
	baz=292						
ILAR	Eielson Array	27.21	340	P	P	05 42 24.2	+1.7
	0.7nm,1.0s,baz=144,slow=8.6,SNR=4.1						
PETK	Petropavlovsk-	51.63	311	P	P	05 45 47.1	+1.8
	1.6nm,0.8s,baz=98,slow=12,SNR=2.9						

IDC ***10*** *05:38:03.5±4.6, 53°.42N×165°.10W, h0^{km}, mb3.3/3, mb1 3.6/5, mb1mx3.3/62, mbtmp3.3/5, ML3.0/2, Error ellipse: s-maj=83.2km s-min=37.8km az=101.0*

AEIC ***10*** *05:38:07.6±2.5, 53°.58N±0°.07×165°.90W±0°.09, h53^{km}±8^{km}, ML3.4/31, Error ellipse: s-maj=12.1km s-min=5.4km az=147.0*

NEIC ***10*** *05:38:07.4±2.1, 53°.59N±0°.07×165°.93W±0°.04, h60^{km}±8^{km}, Error ellipse: s-maj=10.5km s-min=2.8km az=171.0*

ISC 10 05:38:07.2±1.2, **53°.6N**±0°.1×**165°.83W**±0°.09, **h61**^{km}±16^{km}, **n71**, σ1^{s}**57**/72, **mb3.3**/3, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UNV	Unalaska Valle	0.50	307		Pn	05 38 18.8	-0.4
UNV	Unalaska Valle	0.50	307		Sn	05 38 27.2	-0.7
AKMO	Akutan Morgan	0.55	349		Pn	05 38 19.8	0.0
AKMO					Sn	05 38 29.1	+0.1
AKBBA	Akutan Broad B	0.55	354		Pn	05 38 19.8	-0.1
AKBBA					Sn	05 38 29.3	+0.2
AKUT	Akutan	0.59	3	Pn	Pn	05 38 20.1	0.0
AKUT					Sn	05 38 29.5	-0.1
AKRB	Akutan Reef Bi	0.60	347		Pn	05 38 20.3	-0.1
AKRB					Sn	05 38 30.3	+0.4
MREP	Makushin Rep't	0.60	296		Pn	05 38 20.4	0.0
MNAT	Makushin Natee	0.61	304		Pn	05 38 20.1	-0.4
AKLV	Akutan Long Va	0.62	353		Pn	05 38 20.3	-0.3
AKLV					Sn	05 38 29.7	-0.6
AKGG	Akutan Green G	0.66	352		Pn	05 38 20.9	-0.1
AKGG					Sn	05 38 31.4	+0.3
MGOD	Makushin Gods	0.67	292		Pn	05 38 21.1	0.0
MSW	Makushin Switc	0.67	303		Pn	05 38 20.6	-0.6
WESP	Westdahl Peak	1.15	34		Pn	05 38 28.0	+0.7
WESE	West Dahl East	1.18	38		Pn	05 38 28.5	+0.8
WEBT	Westdahl Beart	1.22	31		Pn	05 38 28.7	+0.6
OKFG	Magazine Ridge	1.25	264		Pn	05 38 28.9	+0.4
SSBA	Shishaldin	1.58	39		Pn	05 38 33.2	+0.2
NIKH	Nikolski High	1.91	253		Pn	05 38 38.0	+0.7
NIKH	Nikolski High	1.91	253		Sn	05 39 01.3	+1.1
FALS	False Pass	1.93	46		Pn	05 38 38.9	+1.3
FALS	False Pass	1.93	46		Sn	05 39 04.5	+3.7
DT1	Dutton Round H	2.60	52		Pn	05 38 47.9	+1.1
DOL	Dolgoi Island	2.82	54		Pn	05 38 51.1	+1.3
SDPT	Sand Point	3.61	58		Pn	05 39 01.5	+1.0
CHGN	Chignik	5.09	54	Pn	Pn	05 39 21.9	+1.2
ADK	Adak	6.80	260	Pn	Pn	05 39 43.4	-0.8
SII	Sitkinak Islan	7.34	61	Pn	Pn	05 39 50.1	-1.5
OHAK	Old Harbor	8.03	58	Pn	Pn	05 40 00.2	-0.8
KDAK	Kodiak Island	8.60	55	Pn	Pn	05 40 07.7	-1.1
	0.3nm,0.3s,baz=252,slow=13,SNR=6.6						
KDAK				Sn	Sn	05 41 36.4	-7.8
	0.2nm,0.3s,baz=332,slow=18,SNR=2.3						
KDAK	Kodiak Island	8.60	55		Pn	05 40 07.1	-1.7
SVW2	Sparrevohn	9.37	32	Pn	Pn	05 40 18.6	-0.7
CNPM	China Poot	10.03	48	Pn	Pn	05 40 27.3	-1.0
SEW	Seward	11.10	47	Pn	Pn	05 40 41.9	-0.9
KNK	Knik Glacier	12.19	43	Pn	Pn	05 40 56.0	-1.8
GHO	Glory Hole Cre	12.20	41	Pn	Pn	05 40 55.4	-2.6
HIN	Hinchinbrook I	12.54	49	Pn	Pn	05 41 00.3	-2.3
FID	Port Fidalgo	12.71	48	Pn	Pn	05 41 04.0	-0.8
SCM	Sheep Creek Mo	12.87	43	Pn	Pn	05 41 04.8	-2.3
GLB	Gilahina Butte	14.17	47	Pn	Pn	05 41 24.6	0.0
CRQM	Cirque	14.22	50	Pn	Pn	05 41 25.8	+0.6
VRDI	Verde Repeater	14.25	48	Pn	Pn	05 41 21.4	-4.3
MCARA	McCarthy VSAT	14.50	48	Pn	Pn	05 41 29.2	+0.4
BALM	Baldy	14.68	50	Pn	Pn	05 41 30.9	-0.3
ILAR	Eielson Array	14.78	33	Pn	Pn	05 41 31.0	-1.4
	0.0nm,0.3s,baz=222,slow=12,SNR=2.9						
ILAR	Eielson Array	14.78	33		Pn	05 41 31.9	-0.5
RIDG	Independent Ri	14.87	38	Pn	Pn	05 41 32.0	-1.6
BARN	Barnard Glacie	15.00	50	Pn	Pn	05 41 34.8	-0.6
DOT	Dot Lake	15.11	39	Pn	Pn	05 41 35.6	-1.1
HYT	Haines Junctio	16.88	53		P	05 42 00.5	+0.1
DAWY	Dawson	17.13	42		P	05 42 03.2	+0.3

WHY	Whitehorse	18.12	55	P	Pn	05 42 14.4	+0.1
YKA	Yellowknife Ar	27.84	51	P	P	05 43 50.9	+0.5
	0.1nm,0.4s,baz=275,slow=8.0,SNR=4.8						
KEBM	Edson Butte	29.24	94	P	P	05 44 02.4	-0.7
MCMT	McKenzie Canyo	34.97	82	P	P	05 44 55.5	+2.1
KVN	Kaiserville	35.31	95	P	P	05 44 56.9	+0.6
RYN	Ryan	35.34	95	P	P	05 44 56.0	-0.6
NV11	Mina Array Sit	35.68	95	P	P	05 44 57.8	-1.7
YHL	Hebgen Lake	35.94	81	P	P	05 45 04.1	+2.3
YHH	Holmes Hill	36.17	81	P	P	05 45 05.9	+2.1
PDAR	Pinedale Array	38.10	83	P	P	05 45 20.9	+0.8
	0.2nm,0.5s,baz=330,slow=5.4,SNR=4.3						
PDAR	Pinedale Array	38.10	83	P	P	05 45 20.6	+0.5
H11N2	WAKE ISLAND Hy	39.74	222	T	T	06 27 45.3	
	baz=25,slow=76,SNR=32						
H11N3	WAKE ISLAND Hy	39.75	222	T	T	06 27 51.7	
	baz=25,slow=76,SNR=31						
H11N1	WAKE ISLAND Hy	39.76	222	T	T	06 27 47.3	
	baz=25,slow=76,SNR=23						
RSSD	Black Hills	40.55	77	P	P	05 45 42.4	+1.9
H11S1	WAKE ISLAND Hy	40.92	222	T	T	06 29 22.0	
	baz=24,slow=76,SNR=30						
H11S2	WAKE ISLAND Hy	40.94	222	T	T	06 29 01.0	
	baz=24,slow=76,SNR=21						
H11S3	WAKE ISLAND Hy	40.94	222	T	T	06 29 09.7	
	baz=24,slow=76,SNR=13						
TXAR	Lajitas Array	50.62	93	P	P	05 47 00.6	+0.6
	0.2nm,0.6s,baz=308,slow=6.4,SNR=4.4						
TXAR	Lajitas Array	50.62	93	P	P	05 47 00.8	+0.8
OXF	Oxford	55.37	77	P	P	05 47 34.4	-0.3

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*NEIC **10** 05:41:45.5±2.1, 40°.73N±0°.05×125°.28W±0°.07, h20^{km}±11^{km}, Error ellipse: s-maj=8.6km s-min=6.2km az=62.0*

*ANF **10** 05:41:47.3±0.9, 40°.87N×124°.91W, h0^{km}, ML4.3/1, Error ellipse: s-maj=8.8km s-min=5.2km az=71.0*

*NCEDC **10** 05:41:47.8±1.8, 40°.74N±0°.04×125°.21W±0°.07, h25^{km}±7^{km}, ML3.0/16, Error ellipse: s-maj=8.5km s-min=5.2km az=55.0*

ISC 10 05:41:44.1±2.2**, 40°.74N**±0°.04×**125°.29W**±0°.09**, h10**^{km}±11^{km}**, n94, σ1^{s}.22**/105**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMPM	Mount Pierce	0.94	110		Pb	05 42 03.1	+0.5
KMPM					Sb	05 42 14.7	-0.5
JCC	Jacoby Creek,	0.96	85		Pb	05 42 02.6	-0.1
JCC					Sg	05 42 14.4	-0.6
KRPM	Rodgers	1.04	66		Pg	05 42 04.1	-0.1
KCRM	Chalk Rock	1.16	105		Pb	05 42 06.0	-0.2
KHMM	Horse Mountain	1.19	83		Pb	05 42 06.3	-0.4
KRMB	Red Mountain	1.30	53		Pn	05 42 07.6	-0.8
KMRM	Mail Ridge	1.31	113		Pg	05 42 09.2	-0.1
KMRM	Mail Ridge	1.31	113		Sb	05 42 24.3	-1.4
KCSM	Cold Springs	1.36	98		Pn	05 42 09.3	-0.1
KOMM	Orleans Mounta	1.49	68		Pn	05 42 10.7	-0.3
KSXB	Camp Six Broad	1.52	44		Pn	05 42 11.0	-0.5
KBSM	Bell Springs	1.53	122		Pn	05 42 11.7	+0.1
KHBM	Hayfork Bally	1.57	92		Pn	05 42 12.0	-0.3
KIPM	Iron Peak	1.67	123		Pn	05 42 13.8	+0.3
KBO	Bosley Butte	1.67	28		Pn	05 42 13.2	-0.3
KCPM	Cahto Peak	1.68	128	Pn	Pn	05 42 13.5	-0.1
KFPM	Farley Peak	1.80	127		Pn	05 42 15.2	0.0
KBNM	Bluenose Ridge	1.81	117		Pn	05 42 16.0	+0.6
KTRM	Thompson Ridge	1.85	50		Pn	05 42 16.2	+0.1
LGPM	Granite Peak	1.87	84		Pn	05 42 16.4	+0.1
LBPM	Beegum Peak	1.88	102		Pn	05 42 16.3	-0.1
GTC	Three Chop Rid	1.89	135		Pn	05 42 16.2	-0.1
L02E	Cave Junction	1.90	41		Pn	05 42 16.8	+0.3
L02E	Cave Junction	1.90	41	P	Pn	05 42 16.9	+0.4
	baz=221,SNR=9.9						
L02E				S	Sn	05 42 38.0	-2.5
	baz=221						
M02C	Callahan	1.95	70		Pn	05 42 17.8	+0.5
M02C	Callahan	1.95	70	P	Pn	05 42 17.8	+0.5
	baz=251,SNR=7.1						
M02C				S	Sn	05 42 40.1	-1.8
	baz=251						
N02D	Trinity Center	1.97	82		Pn	05 42 17.9	+0.3
N02D	Trinity Center	1.97	82	P	Pn	05 42 18.0	+0.4
	baz=264						
N02D				S	Sn	05 42 41.2	-1.3
	baz=264						
O02D	Mt. Diablo Mer	1.99	106		Pn	05 42 18.2	+0.4
O02D	Mt. Diablo Mer	1.99	106	P	Pn	05 42 18.5	+0.6
	baz=288,SNR=13						
KRKM	Rackout Spring	2.00	125		Pn	05 42 18.0	0.0
GNAM	Navarro Ridge	2.00	140		Pn	05 42 17.8	0.0
LBKM	Bonanza King	2.02	79		Pn	05 42 18.7	+0.4
WDC	Whiskeytown Da	2.10	93		Pn	05 42 19.5	+0.3
WDC	Whiskeytown Da	2.10	93		Pn	05 42 19.8	+0.6
GHOM	Hamilton Openi	2.16	141		Pn	05 42 20.0	-0.2
GROM	Round Mountain	2.16	111		Pn	05 42 21.1	+0.8
YBH	Yreka Blue Hor	2.18	62		Pn	05 42 20.9	+0.4
YBH	Yreka Blue Hor	2.18	62		Pn	05 42 22.1	+1.6
LAMM	Antelope Mount	2.19	66		Pn	05 42 21.1	+0.4
GHMM	Hull Mountain	2.19	124		Pn	05 42 20.6	-0.1
GVV	Valley View	2.22	115		Pn	05 42 21.8	+0.8
GASB	Alder Springs	2.25	118		Pn	05 42 21.9	+0.5
KEBM	Edson Butte	2.25	18		Pn	05 42 21.5	+0.2
LCSM	College of the	2.29	72		Pn	05 42 23.0	+1.0
K02D	Willamette Mer	2.30	31	P	Pn	05 42 22.7	+0.5
	baz=211,SNR=17						
K02D				S	Sn	05 42 49.6	-0.9
	baz=211						
GGUM	Gualala	2.33	143		Pn	05 42 22.0	-0.5
GSNM	Snow Mountain	2.41	137		Pn	05 42 24.0	+0.3
B040	Montague	2.42	62		Pn	05 42 24.7	+1.0
GHLM	Highland Sprin	2.43	133		Pn	05 42 23.8	-0.2
HOPS	Hopland Field	2.44	135		Pn	05 42 24.0	0.0
LSHM	Sage Hen Hill	2.47	88		Pn	05 42 24.8	+0.4
LTCM	Tuscan Springs	2.47	101		Pn	05 42 25.0	+0.6
LHEM	Herd Peak	2.48	68		Pn	05 42 25.9	+1.1
GCK	Clark Valley	2.49	118		Pn	05 42 26.2	+1.6
GTSM	Trough Springs	2.51	124		Pn	05 42 25.5	+0.5
GDCM	Dry Creek	2.52	141		Pn	05 42 25.4	+0.2
HUMO	Hull Mountain	2.56	42		Pn	05 42 26.5	+0.9
GPMM	Pine Mountain	2.61	136		Pn	05 42 26.6	+0.2
J01E	Myrtle Point	2.62	22	P	Pn	05 42 27.2	+0.7
	baz=202						
J01E				S	Sn	05 42 58.0	-0.3
	baz=202						
GACM	Adobe Creek	2.64	134		Pn	05 42 27.0	+0.2
LBFM	Black Fox Moun	2.64	76		Pn	05 42 28.9	+2.0
L04D	Klamath Falls	2.68	56	P	Pn	05 42 29.8	+2.3
	baz=237						
L04D				S	Sn	05 43 00.3	+0.3
	baz=237						
GSSM	Skaggs Springs	2.69	139		Pn	05 42 27.5	+0.1
O03E	Paynes Creek	2.69	98		Pn	05 42 28.1	+0.6
O03E	Paynes Creek	2.69	98	P	Pn	05 42 28.1	+0.6
	baz=281						
GFC	Funks Creek	2.70	121		Pn	05 42 28.6	+1.1
M04C	Macdoel	2.80	67	P	Pn	05 42 30.7	+1.6
	baz=249						
M04C				S	Sn	05 43 04.0	+1.1
	baz=249						
ORV	Oroville	3.13	111	Pn	Pn	05 42 33.3	-0.2
K04D	Chiloquin, OR	3.25	53	S	Sn	05 43 13.3	-0.7
	baz=235						
I03D	Drain, OR	3.29	25	P	Pn	05 42 37.4	+1.8
	baz=206						
J04D	Umpqua Nationa	3.44	42	P	Pn	05 42 40.9	+2.9
	baz=224,SNR=8.3						
J04D				S	Sn	05 43 20.0	+1.1
	baz=224						
I02D	Swisshome	3.53	17	P	Pn	05 42 40.6	+1.7
	baz=197						
I04A	Tendick Farm,	3.72	34	P	Pn	05 42 44.2	+2.6
	baz=215,SNR=8.0						
AFDM	Forest Hills D	3.77	117	Pn	Pn	05 42 42.7	+0.4
BEKR	Beckworth	3.87	101		Pn	05 42 45.3	+1.6
J05D	Fort Rock, OR	3.95	49	P	Pn	05 42 46.9	+2.0
	baz=231						
J05D				S	Sn	05 43 30.0	-1.3
	baz=231						
H04D	Lebanon	4.22	26	P	Pn	05 42 50.8	+2.3
	baz=206,SNR=15						
RUBR	Rubicon Trail	4.29	111	Pn	Pn	05 42 51.8	+2.2
PINE	Pine Mountain	4.44	45	Pn	Pn	05 42 54.5	+2.9
VCNR	Virginia City	4.56	107	Pn	Pn	05 42 56.3	+3.0
CMB	Columbia Colle	4.66	124	Pn	Pn	05 42 55.6	+1.1
PNTR	Pine Nut	4.67	109	Pn	Pn	05 42 55.4	+0.5
WVOR	Wild Horse Val	5.27	69	Pn	Pn	05 43 02.5	-0.5
RYN	Ryan	5.63	110	Pn	Pn	05 43 10.1	+2.2
KVN	Kaiserville	5.78	105	Pn	Pn	05 43 11.1	+1.1
NVAR	Mina Array Bea	5.87	111	Pn	Pn	05 43 13.2	+1.9
NV11	Mina Array Sit	5.97	110	Pn	Pn	05 43 14.6	+2.0
BMO	Blue Mountains	7.17	52	Pn	Pn	05 43 30.4	+1.4
ISA	Isabella, Lake	7.38	131	Pn	Pn	05 43 34.4	+2.5
EDW2	Edwards Air Fo	8.21	133	P	Pn	05 43 46.2	+2.8
	baz=318						
SNCC	San Nicolas Is	8.78	147	Pn	Pn	05 43 52.0	+0.9
PFO	Pinyon Flats O	10.01	133	Pn	Pn	05 44 10.5	+2.6
XPFO	Pion Flat	10.01	133	Pn	Pn	05 44 10.4	+2.4

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*LDG **10** 05:43:12.1±0.2, 36°.78N×5°.15E, h10^{km}, Ml3.0/16, Error ellipse: s-maj=5.9km s-min=4.8km az=66.0*

*CRAAG **10** 05:43:13.4, 36°.61N×5°.38E, Ml3.3*

*MDD **10** 05:43:13.0±1.2, 36°.80N×5°.34E, h6^{km}±15^{km}, mb4.0/5, Error ellipse: s-maj=9.9km s-min=5.9km az=157.0, PRXIMO*

ISC 10 05:43:10.6±0.4**, 36°.90N**±0°.02×**5°.32E**±0°.02**, h18**^{km}**, n73, σ2^{s}.08**/87**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DFRA	Djebel Bou Aff	0.57	129	P	Pb	05 43 22.5	+0.4
DFRA	Djebel Bou Aff	0.57	129	P	Pb	05 43 22.5	+0.4
DFRA	Djebel Bou Aff	0.57	129	P	Pb	05 43 22.5	+0.4
SET	Setif	0.71	175	P	Pg	05 43 23.0	-1.5
SET	Setif	0.71	175	P	Pg	05 43 23.0	-1.5
SET	Setif	0.71	175	P	Pg	05 43 23.0	-1.5
CKHR	Kef el Ahmar	0.90	170	P	Pn	05 43 27.8	-0.7
CKHR	Kef el Ahmar	0.90	170	P	Pn	05 43 27.8	-0.7
CKHR	Kef el Ahmar	0.90	170	P	Pn	05 43 27.8	-0.7
CASM	Ain Smara	1.14	124	P	Pg	05 43 32.0	-0.6
CASM	Ain Smara	1.14	124	P	Pg	05 43 32.0	-0.6
CASM	Ain Smara	1.14	124	P	Pg	05 43 32.0	-0.6
CTEI	Djebel Teioual	1.21	134	P	Pg	05 43 33.1	-0.9
CTEI	Djebel Teioual	1.21	134	P	Pg	05 43 33.1	-0.9
CTEI	Djebel Teioual	1.21	134	P	Pg	05 43 33.1	-0.9
CAEH	'Ain El Ouahch	1.23	95	P	Pg	05 43 36.4	+2.0
CAEH	'Ain El Ouahch	1.23	95	P	Pg	05 43 36.4	+2.0
CAEH	'Ain El Ouahch	1.23	95	P	Pg	05 43 36.4	+2.0
CKFL	Kef-Lekhel	1.23	114	P	Pg	05 43 35.0	+0.6
CKFL	Kef-Lekhel	1.23	114	P	Pg	05 43 35.0	+0.6
CKFL	Kef-Lekhel	1.23	114	P	Pg	05 43 35.0	+0.6
AKET	Djebel Ketaf	1.44	234	P	Pb	05 43 37.3	+0.3
AKET	Djebel Ketaf	1.44	234	P	Pb	05 43 37.3	+0.3
AKET	Djebel Ketaf	1.44	234	P	Pb	05 43 37.3	+0.3
ADJB	Djebel Djouab	1.69	244	P	Pg	05 43 42.5	-0.6
ADJB	Djebel Djouab	1.69	244	P	Pg	05 43 42.5	-0.6
ADJB	Djebel Djouab	1.69	244	P	Pg	05 43 42.5	-0.6
ABA	Alger-Bouzarea	1.84	267	P	Pn	05 43 41.0	-0.3
ABA	Alger-Bouzarea	1.84	267	P	Pn	05 43 41.0	-0.3
ABA	Alger-Bouzarea	1.84	267	P	Pn	05 43 41.0	-0.3
ETOS	Mallorca	3.47	326	P	Pn	05 44 07.5	+3.7
	5.7nm,0.3s,SNR=24						
ETOS				S	Sn	05 44 46.2	+1.8
	1.6nm,0.2s,SNR=12						
EIBI	Ibiza	3.79	305	P	Pn	05 44 12.0	+3.9
	2.6nm,0.2s,SNR=12						
EIBI				S	Sn	05 44 54.6	+2.4
	12nm,0.8s						
EBEN2	Beniarda presa	4.71	294	P	Pn	05 44 25.7	+5.0
	1.1nm,0.2s,SNR=7.9						
EBEN2				S	Sn	05 45 16.4	+1.5
	1.4nm,0.2s,SNR=7.9						
CFON	Fontmartina	5.34	336	P	Pn	05 44 32.9	+3.4
	0.8nm,0.1s,SNR=7.9						
CFON				S	Sn	05 45 32.2	+1.6
	3.4nm,0.4s,SNR=7.9						
EPOB	Poblet	5.53	325	P	Pn	05 44 35.8	+3.7
	0.4nm,0.1s,SNR=7.9						
EPOB				S	Sn	05 45 34.5	-0.8
	9.7nm,1.0s,SNR=7.9						
ECHE	Chera	5.63	300	P	Pn	05 44 37.8	+4.4
	0.8nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	5.70	309	P	Pn	05 44 38.7	+4.2
	0.3nm,0.1s,SNR=7.9						
EMOS				S	Sn	05 45 40.4	+0.8
	0.3nm,0.2s,SNR=7.9						
ETOB	Tobarra	5.71	290	P	Pn	05 44 39.3	+4.8
	0.6nm,0.1s,SNR=5.9						
ETOB				S	Sn	05 45 41.2	+1.5
	36nm,1.6s						
EMIR	Miracle	5.80	331	P	Pn	05 44 40.9	+5.1
	1.9nm,0.2s,SNR=8.2						
CLLI	Llivia	6.14	336	P	Pn	05 44 45.5	+5.1
	0.4nm,0.1s,SNR=7.9						
CLLI				S	Sn	05 45 51.5	+1.2
	0.5nm,0.3s,SNR=7.9						
PGF	Pioggiola	6.31	26	*e*Pn	Pn	05 44 47.9	+5.1
PGF				*e*Sn	Sn	05 45 55.9	+1.5
	3.0nm,0.3s						
PGF	Pioggiola	6.31	26	Pn	Pn	05 44 47.9	+5.1
PGF				Sn	Sn	05 45 55.9	+1.5
	1.5nm,0.3s						
CSOR	Sort	6.35	331	P	Pn	05 44 48.6	+5.3
	0.8nm,0.2s,SNR=6.9						
CSOR				S	Sn	05 45 54.8	-0.6
	26nm,1.2s						
SESP	Santiago Espad	6.37	283	P	Pn	05 44 48.6	+4.9
	1.4nm,0.3s,SNR=7.9						
LMR	La Mourre	6.49	8	*e*Pn	Pn	05 44 48.2	+3.1
LMR				*e*Sn	Sn	05 45 58.6	0.0
	2.5nm,0.2s						
LMR	La Mourre	6.49	8	Pn	Pn	05 44 48.2	+3.1
LMR				Sn	Sn	05 45 58.6	0.0
	1.2nm,0.2s						
FRF	La Foret Royal	6.72	8	*e*Pn	Pn	05 44 52.7	+4.3
FRF				*e*Sn	Sn	05 46 04.7	+0.2
	2.4nm,0.3s						
FRF	La Foret Royal	6.72	8	Pn	Pn	05 44 52.7	+4.3
FRF				Sn	Sn	05 46 04.7	+0.2
	1.2nm,0.3s						
EQES	Quesada	6.75	280	P	Pn	05 44 53.7	+4.9
	0.4nm,0.2s,SNR=7.9						
EQES				S	Sn	05 46 06.2	+1.0
	4.6nm,0.9s,SNR=7.9						
MTLF	Montolieu	6.86	341	*e*Pn	Pn	05 44 51.7	+1.5
MTLF				*e*Sn	Sn	05 46 02.9	-4.8
	0.5nm,0.2s						
MTLF	Montolieu	6.86	341	Pn	Pn	05 44 51.7	+1.5
MTLF				Sn	Sn	05 46 02.9	-4.8
	0.2nm,0.2s						
SMRF	Simiane la Rot	7.07	1	*e*Pn	Pn	05 44 55.1	+2.0
SMRF				*e*Sn	Sn	05 46 11.5	-1.5
	0.6nm,0.2s						
SMRF	Simiane la Rot	7.07	1	Pn	Pn	05 44 55.1	+2.0
SMRF				Sn	Sn	05 46 11.5	-1.5
	0.6nm,0.2s						
SBF	Sospel	7.13	12	*e*Pn	Pn	05 44 57.9	+3.8
SBF				*e*Sn	Sn	05 46 13.7	-1.0
	4.6nm,0.3s						
SBF	Sospel	7.13	12	Pn	Pn	05 44 57.9	+3.8
SBF				Sn	Sn	05 46 13.7	-1.0
	2.3nm,0.3s						
EPF	Esparros	7.21	330	*e*Pn	Pn	05 44 55.3	+0.1
EPF	Esparros	7.21	330	*e*P	Pn	05 45 00.5	+5.3
EPF				*e*Sn	Sn	05 46 12.3	-4.4
	1.0nm,0.3s						
EPF	Esparros	7.21	330	Pn	Pn	05 44 55.3	+0.1
EPF				Sn	Sn	05 46 12.3	-4.4
	0.0nm,0.3s						
LASF	Ste Croix	7.25	352	*e*Pn	Pn	05 44 58.0	+2.4
LASF				*e*Sn	Sn	05 46 14.3	-3.2
	0.5nm,0.3s						
LASF	Ste Croix	7.25	352	Pn	Pn	05 44 58.0	+2.4
LASF				Sn	Sn	05 46 14.3	-3.2
	0.2nm,0.3s						
MBDF	Montbardon	7.89	8	*e*Pn	Pn	05 45 07.6	+3.1
MBDF	Montbardon	7.89	8	*e*P	Pn	05 45 11.4	+6.9
MBDF				*e*Sn	Sn	05 46 31.3	-2.1
	0.6nm,0.3s						
MBDF	Montbardon	7.89	8	Pn	Pn	05 45 07.6	+3.1
MBDF				Sn	Sn	05 46 31.3	-2.1
	0.3nm,0.3s						
VIVF	Saint-Julien-l	7.96	357	*e*Pn	Pn	05 45 07.5	+2.1
VIVF				*e*Sn	Sn	05 46 32.0	-2.9
	0.9nm,0.3s						
VIVF	Saint-Julien-l	7.96	357	Pn	Pn	05 45 07.5	+2.1
VIVF				Sn	Sn	05 46 32.0	-2.9
	0.4nm,0.3s						
ORIF	Oris-en-Rattie	8.02	3	*e*Pn	Pn	05 45 10.1	+3.9
ORIF	Oris-en-Rattie	8.02	3	*e*P	Pn	05 45 11.9	+5.7
ORIF				*e*Sn	Sn	05 46 34.7	-1.7
	1.9nm,0.5s						
ORIF	Oris-en-Rattie	8.02	3	Pn	Pn	05 45 10.1	+3.9
ORIF				Sn	Sn	05 46 34.7	-1.7
	0.9nm,0.5s						
LPG	La Plagne	8.65	7	*e*Pn	Pn	05 45 17.0	+1.9
LPG				*e*Sn	Sn	05 46 50.5	-1.8
	1.0nm,0.4s						
LPG	La Plagne	8.65	7	Pn	Pn	05 45 17.0	+1.9
LPG				Sn	Sn	05 46 50.5	-1.8
	0.0nm,0.4s						
LPL	La Plagne	8.67	7	*e*Pn	Pn	05 45 19.6	+4.3
LPL	La Plagne	8.67	7	*e*P	Pn	05 45 22.0	+6.7
LPL				*e*Sn	Sn	05 46 50.3	-2.3
	4.1nm,0.3s						
LPL	La Plagne	8.67	7	Pn	Pn	05 45 19.6	+4.3
LPL				Sn	Sn	05 46 50.3	-2.3
	2.0nm,0.3s						

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*ANF **10** 05:43:24.8±1.1, 40°.61N×125°.11W, h1^{km}, ML4.1/3, Error ellipse: s-maj=12.9km s-min=5.8km az=50.0*

NCEDC 10 05:43:26.3, 40°.48N×125°.11W, h2^{km}**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
O02D	Mt. Diablo Mer	1.82	103	P	Pn	05 43 57.6	+0.2
	baz=280,SNR=13						
O02D				S	Sn	05 44 21.4	+0.3
	baz=280						
N02D	Trinity Center	1.86	78	S	Sn	05 44 22.5	+0.5
	baz=256						
M02C	Callahan	1.87	65	P	Pb	05 43 59.8	-0.1
	baz=243,SNR=7.3						
M02C				S	Sn	05 44 21.8	-0.6
	baz=243						
L02E	Cave Junction	1.91	36	P	Pn	05 43 57.6	-0.9
	baz=214,SNR=6.2						
K02D	Willamette Mer	2.34	27	P	Pn	05 44 03.4	-1.1
	baz=206,SNR=16						
O03E	Paynes Creek	2.54	96	P	Pn	05 44 07.6	+0.3
	baz=275						
O03E				S	Sn	05 44 40.1	+1.2
	baz=275						
L04D	Klamath Falls	2.65	52	P	Pb	05 44 11.4	-1.7
	baz=231,SNR=8.6						
L04D				S	Sn	05 44 43.8	+2.3
	baz=231						
K04D	Chiloquin, OR	3.22	50	P	Pn	05 44 18.2	+1.6
	baz=231						
I03D	Drain, OR	3.35	22	P	Pn	05 44 18.1	-0.1
	baz=203						
J04D	Umpqua Nationa	3.45	39	P	Pn	05 44 21.8	+2.0
	baz=220						
J04D				S	Sn	05 45 04.1	+2.7
	baz=220						
I02D	Swisshome	3.61	15	P	Pn	05 44 21.2	-0.6
	baz=195						
I04A	Tendick Farm,	3.75	31	P	Pn	05 44 25.1	+1.2
	baz=212,SNR=5.9						
J05D	Fort Rock, OR	3.93	46	P	Pn	05 44 28.3	+1.8
	baz=227						
H04D	Lebanon	4.28	23	P	Pn	05 44 31.6	+0.6
	baz=204,SNR=7.2						
G05D	Wamic, OR	5.40	30	P	Pn	05 44 48.1	+1.7
	baz=212						
PKM	Mcpherson Peak	7.09	142	P	Pn	05 45 08.6	-1.2
	baz=325						
ISA	Isabella, Lake	7.19	131	P	Pn	05 45 12.5	+1.3
	baz=315						

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*BJI **10** 05:51:07.0±0.0, 40°.50N×125°.30W, h5^{km}, mb4.9/23*

*NEIC **10** 05:51:09.5±2.5, 40°.62N±0°.03×125°.33W±0°.04, h10^{km}±1^{km}, Error ellipse: s-maj=6.3km s-min=4.4km az=225.0*

*IDC **10** 05:51:09.7±0.5, 40°.70N×125°.15W, h0^{km}, mb4.3/26, mb1 4.4/33, mb1mx4.4/56, mbtmp4.3/33, ML4.3/7, Error ellipse: s-maj=12.1km s-min=7.6km az=19.0*

*NCEDC **10** 05:51:10.9±2.9, 40°.62N±0°.03×125°.36W±0°.07, h19^{km}±4^{km}, ML4.4/60, mb4.8/198(NEIC), Error ellipse: s-maj=7.3km s-min=4.4km az=72.0*

*ANF **10** 05:51:11.4±1.0, 40°.75N×125°.04W, h2^{km}, ML4.5/17, Error ellipse: s-maj=9.0km s-min=4.4km az=64.0*

ISC 10 05:51:10.1±1.6**, 40°.65N**±0°.04×**125°.24W**±0°.05**, h6**^{km}±9^{km}**, n638, σ1^{s}.44**/607**, mb4.8**/124**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMPM	Mount Pierce	0.88	105		Pg	05 51 27.7	+0.7
KMPM					Sb	05 51 40.6	+0.7
JCC	Jacoby Creek,	0.94	79		Pg	05 51 28.1	+0.1
JCC				Sg	Sb	05 51 41.2	-0.1
KRPM	Rodgers	1.05	61		Pg	05 51 30.0	-0.3
KRPM					Sb	05 51 45.1	+0.2
KCRM	Chalk Rock	1.10	101		Pg	05 51 31.1	-0.2
KHMM	Horse Mountain	1.17	78		Pg	05 51 32.0	-0.5
KHMM				Sn	Sb	05 51 48.4	+0.2
KMRM	Mail Ridge	1.24	109		Pn	05 51 33.4	-0.7
KMRM				Sn	Sg	05 51 50.7	+0.7
KCSM	Cold Springs	1.32	94		Pn	05 51 34.4	-0.8
KRMB	Red Mountain	1.33	48		Pn	05 51 33.8	-1.6
KRMB				Sn	Sb	05 51 51.0	-2.0
KBSM	Bell Springs	1.45	120		Pn	05 51 35.6	-1.4
KOMM	Orleans Mounta	1.49	64		Pn	05 51 36.3	-1.3
KHBM	Hayfork Bally	1.54	89		Pn	05 51 37.2	-1.1
KSXB	Camp Six Broad	1.57	41		Pn	05 51 36.9	-1.6
KIPM	Iron Peak	1.58	121		Pn	05 51 37.4	-1.4
KCPM	Cahto Peak	1.59	127		Pn	05 51 37.5	-1.4
KCPM				Sn	Sn	05 51 58.2	-1.7
KFPM	Farley Peak	1.72	125		Pn	05 51 39.0	-1.6
KBNM	Bluenose Ridge	1.74	115		Pn	05 51 39.9	-1.0
KBO	Bosley Butte	1.74	26		Pn	05 51 39.6	-1.4
KBO				Sn	Sn	05 52 00.2	-3.3
GTC	Three Chop Rid	1.79	133		Pn	05 51 39.5	-2.1
LBPM	Beegum Peak	1.83	100		Pn	05 51 41.2	-0.9
LGPM	Granite Peak	1.85	81		Pn	05 51 41.4	-1.1
KTRM	Thompson Ridge	1.89	47		Pn	05 51 41.7	-1.3
GNAM	Navarro Ridge	1.90	139		Pn	05 51 40.9	-2.2
KRKM	Rackout Spring	1.91	124		Pn	05 51 41.9	-1.4
O02D	Mt. Diablo Mer	1.93	103		Pn	05 51 42.7	-0.7
O02D	Mt. Diablo Mer	1.93	103	P	Pn	05 51 42.8	-0.7
	baz=284,SNR=535						
O02D				S	Sn	05 52 08.1	0.0
	baz=284						
L02E	Cave Junction	1.95	39		Pn	05 51 42.8	-1.0
L02E	Cave Junction	1.95	39	P	Pn	05 51 42.6	-1.1
	baz=218,SNR=76						
L02E				S	Sn	05 52 06.4	-2.2
	baz=218						
N02D	Trinity Center	1.95	79		Pn	05 51 42.9	-0.9
N02D	Trinity Center	1.95	79	P	Pn	05 51 42.7	-1.1
	baz=259,SNR=267						
N02D				S	Sn	05 52 08.2	-0.5
	baz=259						
M02C	Callahan	1.95	67		Pn	05 51 42.9	-0.9
M02C	Callahan	1.95	67	P	Pn	05 51 42.5	-1.3
	baz=246,SNR=93						
M02C				S	Sn	05 52 08.2	-0.5
	baz=246						
LBKM	Bonanza King	2.00	77		Pn	05 51 43.5	-1.1
WDC	Whiskeytown Da	2.05	91	Pn	Pn	05 51 44.3	-0.8
WDC				Sn	Sn	05 52 10.7	-0.4
GHOM	Hamilton Openi	2.07	140		Pn	05 51 43.3	-2.1
GROM	Round Mountain	2.10	110		Pn	05 51 45.4	-0.5
GHMM	Hull Mountain	2.11	122		Pn	05 51 44.6	-1.5
GVV	Valley View	2.15	113		Pn	05 51 45.5	-1.1
GASB	Alder Springs	2.17	116		Pn	05 51 45.7	-1.2
YBH	Yreka Blue Hor	2.19	60	Pn	Pn	05 51 46.5	-0.7
	62nm,0.3s,baz=255,slow=12,SNR=46						
YBH				Sn	Sn	05 52 13.9	-0.8
	162nm,0.3s,baz=100,slow=16,SNR=14						
YBH	Yreka Blue Hor	2.19	60		Pn	05 51 46.7	-0.5
YBH	Yreka Blue Hor	2.19	60		Pn	05 51 47.0	-0.2
LAMM	Antelope Mount	2.20	63		Pn	05 51 46.5	-0.8
GGUM	Gualala	2.23	143		Pn	05 51 44.1	-3.6
GSNM	Snow Mountain	2.32	137		Pn	05 51 47.3	-1.6
KEBM	Edson Butte	2.33	17		Pn	05 51 48.2	-0.8

HOPS	Hopland Field	2.35	134		Pn	05 51 46.9	-2.3
HOPS	Hopland Field	2.35	134		Pn	05 51 48.0	-1.1
K02D	Willamette Mer	2.36	29	P	Pn	05 51 48.7	-0.8
	baz=209,SNR=217						
K02D				S	Sn	05 52 16.1	-2.8
	baz=209						
GCK	Clark Valley	2.42	116		Pn	05 51 50.1	0.0
LTCM	Tuscan Springs	2.42	99		Pn	05 51 49.7	-0.5
GTSM	Trough Springs	2.42	122		Pn	05 51 49.1	-1.2
GDCM	Dry Creek	2.43	140		Pn	05 51 48.4	-2.0
B040	Montague	2.43	60		Pn	05 51 50.1	-0.3
LSHM	Sage Hen Hill	2.44	85		Pn	05 51 49.9	-0.6
M03C	McCloud	2.44	74		Pn	05 51 51.0	+0.5
LMPM	Military Pass	2.47	69		Pn	05 51 51.5	+0.4
LHEM	Herd Peak	2.48	66		Pn	05 51 51.3	0.0
GPMM	Pine Mountain	2.52	135		Pn	05 51 50.8	-0.8
GCVM	Cloverdale	2.54	137		Pn	05 51 50.0	-1.8
GACM	Adobe Creek	2.55	133		Pn	05 51 50.7	-1.4
GBMM	Baldy Mountain	2.59	125		Pn	05 51 52.2	-0.4
GSSM	Skaggs Springs	2.59	138		Pn	05 51 49.7	-2.9
HUMO	Hull Mountain	2.60	40		Pn	05 51 52.5	-0.2
GDXM	Geysers	2.63	133		Pn	05 51 52.1	-1.1
O03E	Paynes Creek	2.65	97	P	Pn	05 51 52.3	-1.0
	baz=278,SNR=356						
J01E	Myrtle Point	2.70	21	P	Pn	05 51 53.9	-0.1
	baz=200,SNR=16						
L04D	Klamath Falls	2.71	54	P	Pn	05 51 54.9	+0.6
	baz=234,SNR=465						
M04C	Macdoel	2.81	65	P	Pn	05 51 56.0	+0.4
	baz=246,SNR=221						
ORV	Oroville	3.07	110		Pn	05 51 58.0	-1.0
MCCM	Marconi Confer	3.09	143		Pn	05 51 57.4	-2.0
K04D	Chiloquin, OR	3.28	52	P	Pn	05 52 02.3	+0.3
	baz=233,SNR=354						
I03D	Drain, OR	3.36	24	P	Pn	05 52 03.4	+0.3
	baz=204						
I03D				S	Sn	05 52 42.2	-1.0
	baz=204						
J04D	Umpqua Nationa	3.49	41	P	Pn	05 52 06.0	+0.9
	baz=222,SNR=201						
I02D	Swisshome	3.61	16	P	Pn	05 52 06.6	+0.1
	baz=196						
I02D				S	Sn	05 52 47.9	-1.5
	baz=196						
AFDM	Forest Hills D	3.70	116		Pn	05 52 07.4	-0.4
I04A	Tendick Farm,	3.78	33	P	Pn	05 52 10.4	+1.5
	baz=214,SNR=119						
I04A				S	Sn	05 52 53.2	-0.6
	baz=214						
BEKR	Beckworth	3.81	100		Pn	05 52 09.8	+0.3
MOD	Modoc Plateau	3.93	70		Pn	05 52 11.1	0.0
J05D	Fort Rock, OR	3.98	47	P	Pn	05 52 12.3	+0.5
	baz=229,SNR=308						
COR	Corvallis	4.19	19		Pn	05 52 15.8	+1.3
RUBR	Rubicon Trail	4.22	110		Pn	05 52 16.2	+1.0
H04D	Lebanon	4.29	25	P	Pn	05 52 16.7	+0.8
	baz=205,SNR=39						
H04D				S	Sn	05 53 06.2	-0.1
	baz=205						
PINE	Pine Mountain	4.48	44		Pn	05 52 20.2	+1.5
VCNR	Virginia City	4.50	106		Pn	05 52 19.9	+1.0
CMB	Columbia Colle	4.58	123		Pn	05 52 20.6	+0.7
PAHR	Pah Rah Range	4.58	100		Pn	05 52 19.7	-0.3
PNTR	Pine Nut	4.61	108		Pn	05 52 20.9	+0.4
I05D	Terrebonne, OR	4.68	37	P	Pn	05 52 22.6	+1.3
	baz=218,SNR=70						
G03D	McMinnville, O	4.79	17	P	Pn	05 52 23.5	+0.8
	baz=197,SNR=6.1						
SAO	San Andreas Ge	4.88	141		Pn	05 52 21.5	-2.5
YERR	Yerington	4.91	108		Pn	05 52 24.9	+0.3
WVOR	Wild Horse Val	5.27	68		Pn	05 52 28.8	-0.6
G05D	Wamic, OR	5.42	31	P	Pn	05 52 33.0	+1.6
	baz=213,SNR=39						
F03A	Seaside	5.42	13		Pn	05 52 31.1	-0.3
I07A	Izee	5.46	49		Pn	05 52 34.2	+2.1
RYN	Ryan	5.56	109		Pn	05 52 33.7	+0.2
PMPB	Monarch Peak	5.63	140		Pn	05 52 32.9	-1.4
MDPB	Devils Postpil	5.66	120		Pn	05 52 36.3	+1.4
F04A	Amboy	5.67	20		Pn	05 52 35.0	+0.2
F04D	Rainier, OR	5.67	16	S	Sn	05 53 40.3	+0.1
	baz=197						
G06A	Carlson Farm,	5.70	35		Pn	05 52 36.5	+1.2
OMMB	Old Mammoth Mi	5.72	120		Pn	05 52 36.2	+0.4
KVN	Kaiserville	5.72	104		Pn	05 52 35.7	0.0
J08A	Circle Bar Ran	5.72	60		Pn	05 52 36.0	+0.4
NVAR	Mina Array Bea	5.80	110	Pn	Pn	05 52 37.4	+0.6
	9.6nm,0.3s,baz=292,slow=14,SNR=175						
MLAC	Mammoth, Mammo	5.82	119	P	Pn	05 52 40.2	+3.1
	baz=303						
NV11	Mina Array Sit	5.90	110		Pn	05 52 38.5	+0.3
F05D	White Salmon	5.92	27	P	Pn	05 52 39.8	+1.5
	baz=208,SNR=17						
E03A	Lebam	6.02	11		Pn	05 52 39.0	-0.7
E04D	Cinebar	6.22	17	P	Pn	05 52 43.9	+1.5
	baz=198,SNR=11						
E04D				S	Sn	05 53 51.8	-2.0
	baz=198						
PAGB	Antelope Grade	6.29	140		Pn	05 52 41.5	-1.8
VOG	Valley Oaks Go	6.30	131	P	Pn	05 52 44.5	+1.0
	baz=315						
F07A	Phinny Hill Vi	6.52	35		Pn	05 52 48.1	+1.5
G08A	Pilot Rock	6.54	43		Pn	05 52 49.3	+2.5
LON	Longmire	6.59	21		Pn	05 52 47.8	+0.3
SMMC	Simmler	6.74	140	P	Pn	05 52 49.0	-0.6
	baz=324						
SMMC				S	Sn	05 54 03.5	-3.3
	baz=324						
D04E	Lakebay	6.77	14	S	Sn	05 54 07.9	+0.7
	baz=196						
VES	Vestal, Richgr	6.81	133	P	Pn	05 52 51.6	+1.0
	baz=317						
NLWA	Neilton Lookou	6.82	8	Pn	Pn	05 52 50.1	-0.5
D05A	Enumclaw	6.95	19		Pn	05 52 53.5	+1.1
CWC	Cottonwood Cre	7.01	125	P	Pn	05 52 56.4	+3.0
	baz=309						
D03D	Eldon	7.06	12	P	Pn	05 52 54.7	+0.8
	baz=193						
D03D				S	Sn	05 54 11.2	-3.2
	baz=193						
HAWA	Hanford	7.08	34		Pn	05 52 55.9	+1.6
E07A	Sunnyside	7.08	32		Pn	05 52 55.2	+1.0
GRAC	Grapevine Rang	7.14	118	P	Pn	05 52 52.0	-3.2
	baz=303						
PKM	Mcpherson Peak	7.17	142	P	Pn	05 52 53.6	-2.0
	baz=325						
BMO	Blue Mountains	7.19	52		Pn	05 52 58.5	+2.6
ISA	Isabella, Lake	7.29	131		Pn	05 52 57.9	+0.8
ISA	Isabella, Lake	7.29	131	P	Pn	05 52 58.2	+1.0
	baz=315						
E08A	Dider Farm, El	7.37	35		Pn	05 52 58.5	+0.4
LTY	Liberty	7.38	25		Pn	05 52 59.9	+1.5
ARVC	Arvin	7.48	135	P	Pn	05 53 01.2	+1.5
	baz=320						
MFID	Camas Ranch	7.53	65		Pn	05 53 01.4	+0.8
ELK	Elko	7.60	86	Pn	Pn	05 53 02.6	+1.1
	0.8nm,0.3s,baz=284,slow=16,SNR=15						
ELK	Elko	7.60	86		Pn	05 53 02.0	+0.4
MPMC	Manual Prospec	7.62	124	P	Pn	05 53 03.4	+1.6
	baz=309						
FURC	Furnace Creek,	7.78	120	P	Pn	05 53 08.1	+4.4
	baz=305						
R11A	Troy Canyon, C	7.81	104	P	Pn	05 53 04.7	+0.3
	baz=290						
LRMC	Laurel Mtn Rad	7.88	128	P	Pn	05 53 06.4	+1.0
	baz=313						
F10A	Beach Ranch, E	7.90	45		Pn	05 53 06.6	+1.1
TPNV	Topopah Spring	7.93	115		Pn	05 53 07.0	+1.0
TPNV	Topopah Spring	7.93	115	P	Pn	05 53 08.0	+1.9
	baz=300						
OSI	Osito Audit: C	7.93	137		Pn	05 53 05.9	-0.1
OSI	Osito Audit: C	7.93	137	P	Pn	05 53 08.6	+2.6
	baz=322						
B05A	Bryant	7.94	15	P	Pn	05 53 08.4	+2.4
	baz=197,SNR=13						
B05A				S	Sn	05 54 33.3	-2.7
	baz=197						
PGC	Sidney	8.10	8		Pn	05 53 09.1	+0.9
EDW2	Edwards Air Fo	8.12	133	P	Pn	05 53 09.7	+1.1
	baz=317						
A04D	Lummi Island	8.27	12	P	Pn	05 53 14.2	+3.7
	baz=193						
A04D				S	Sn	05 54 42.8	-1.3
	baz=193						
SHOC	Shoshone, Teco	8.49	121	P	Pn	05 53 16.0	+2.4
	baz=307						
GSC	Goldstone, Bar	8.53	126		Pn	05 53 15.4	+1.2
GSC	Goldstone, Bar	8.53	126	P	Pn	05 53 15.5	+1.3
	baz=311						
PASC	Pasadena Art C	8.56	137		Pn	05 53 15.3	+0.8
RRX	Edison Barstow	8.70	129	P	Pn	05 53 18.0	+1.5
	baz=314						
BFSC	Mount Baldy Ra	8.79	134	P	Pn	05 53 18.2	+0.4
	baz=319						
TUQ	Turquoise Moun	9.00	122	P	Pn	05 53 23.2	+2.5
	baz=308						
HEC	Hector,Ludlow	9.13	127	P	Pn	05 53 23.5	+1.0
	baz=312						
BBRC	Big Bear Solar	9.18	131	P	Pn	05 53 24.2	+1.0
	baz=316						
DUG	Dugway, Tooele	9.49	89	P	Pn	05 53 30.1	+2.8
	baz=276						
MURC	Murrieta	9.52	135	P	Pn	05 53 29.3	+1.6
	baz=320						
NEW	Newport	9.57	35	Pn	Pn	05 53 29.6	+1.2
	0.8nm,0.3s,baz=203,slow=12,SNR=14						
NEW	Newport	9.57	35	P	Pn	05 53 30.2	+1.8
	baz=220						
GMRC	Granite Mounta	9.58	125	P	Pn	05 53 29.5	+0.8
	baz=310						
BELC	Belle Mtn. Jos	9.90	129	P	Pn	05 53 33.3	+0.2
	baz=315						
PFO	Pinyon Flats O	9.92	132	Pn	Pn	05 53 34.4	+1.1
	3.5nm,0.3s,baz=326,slow=11,SNR=50						
PFO	Pinyon Flats O	9.92	132		Pn	05 53 33.1	-0.1
PFO	Pinyon Flats O	9.92	132	P	Pn	05 53 34.4	+1.1
	baz=318						
XPFO	Pion Flat	9.92	132		Pn	05 53 33.2	-0.1
MCMT	McKenzie Canyo	10.03	61		Pn	05 53 35.5	+0.7
LCMT	Little Creek M	10.04	107		Pn	05 53 36.2	+1.3
LLLB	Lillooet	10.24	12		Pn	05 53 37.6	+0.1
MSO	Missoula	10.24	49	P	Pn	05 53 40.6	+2.9
	baz=236						
CTU	Camp Tracy	10.25	85		Pn	05 53 38.2	+0.4
MSU	Marysvale	10.31	98		Pn	05 53 40.6	+1.9
IRM	Iron Mountain	10.31	126	P	Pn	05 53 39.3	+0.7
	baz=312						
KNB	Kanab	10.34	107		Pn	05 53 41.1	+2.0
HWUT	Hardware Ranch	10.36	80		Pn	05 53 41.0	+1.6
MPU	Maple Canyon	10.41	89		Pn	05 53 42.4	+2.4
MTPU	Mount Pierson	10.44	100		Pn	05 53 40.9	+0.2
BC3	Big Chuckawall	10.47	129	P	Pn	05 53 41.2	+0.4
	baz=315						
MONP2	Monument Peak	10.48	135	P	Pn	05 53 42.5	+1.5
	baz=320						
TCUT	Toone Canyon	10.49	83		Pn	05 53 42.3	+1.2
BAR	Barrett	10.51	136		Pn	05 53 41.9	+0.6
W13A	Hualapai Mount	10.54	118		Pn	05 53 41.8	-0.1
JTMT	Jette	10.59	44		Pn	05 53 43.7	+1.3
Y12C	Blythe	10.97	125	P	Pn	05 53 48.6	+1.1
	baz=312						
P17A	Butcher Ranch,	11.18	91		Pn	05 53 50.7	+0.1
GLA	Glamis	11.26	129		Pn	05 53 51.3	-0.3
GLA	Glamis	11.26	129	P	Pn	05 53 52.1	+0.5
	baz=315						
YHH	Holmes Hill	11.36	64		Pn	05 53 54.8	+1.6
SRU	San Rafael Swe	11.41	93		Pn	05 53 54.8	+1.0
H17A	Grant Village	11.45	66	P	Pn	05 53 59.2	+4.9
	baz=256						
BBB	Bella Bella	11.71	351	Pn	Pn	05 54 01.1	+3.5
	0.2nm,0.3s,baz=202,slow=12,SNR=3.2						
BW06	Boulder Array	11.91	75	P	Pn	05 54 03.2	+2.6
	baz=265						
PDAR	Pinedale Array	11.91	75	Pn	Pn	05 54 03.1	+2.5
	0.5nm,0.3s,baz=252,slow=12,SNR=24						
PDAR	Pinedale Array	11.91	75		Pn	05 54 02.0	+1.4
WUAZ	Wupatki	12.06	111		Pn	05 54 01.9	-0.7
WUAZ	Wupatki	12.06	111	P	Pn	05 54 06.9	+4.3
	baz=299						
GCMT	Greycliff	12.46	60		Pn	05 54 08.1	0.0
O20A	White River Ci	12.97	87	P	Pn	05 54 18.2	+3.1
	baz=278						
214A	Organ Pipe Nat	13.24	127	P	Pn	05 54 22.1	+3.5
	baz=314						
EGMT	Eagleton	13.30	51	P	Pn	05 54 20.4	+1.0
	baz=242						
MVCO	Mesa Verde	13.48	99	P	Pn	05 54 25.3	+3.3
	baz=290						
K22A	Casper	14.14	76	P	Pn	05 54 32.4	+1.5
	baz=268						
TUC	Tucson	14.28	121	Pn	Pn	05 54 31.8	-1.2
TUC	Tucson	14.28	121	P	Pn	05 54 36.2	+3.3
	baz=310						
S22A	4UR Ranch, Cre	14.57	96		Pn	05 54 37.1	+0.1
S22A	4UR Ranch, Cre	14.57	96	P	P	05 54 40.6	-3.1
	baz=287						
N23A	Red Feather La	14.63	83	P	Pn	05 54 38.1	+0.4
	baz=275						
LAO	LASA Array	15.01	60	IAmb	IAmb	05 54 52.3	
	comp=Z,31nm,0.9s						
LAO	LASA Array	15.01	60	P	Pn	05 54 43.0	+0.2
	baz=253						
ISCO	Idaho Springs	15.02	87		Pn	05 54 43.1	0.0
ISCO	Idaho Springs	15.02	87	P	Pn	05 54 44.1	+1.0
	baz=279						
SDCO	Great Sand Dun	15.57	94	IAmb	IAmb	05 54 54.1	
	comp=Z,45nm,0.9s						
SDCO	Great Sand Dun	15.57	94	P	P	05 54 53.2	-1.6
	baz=287						
319A	Douglas	15.86	121	IAmb	IAmb	05 55 09.2	
	comp=Z,61nm,1.0s						
ANMO	Albuquerque	15.89	105	Pn	Pn	05 54 55.6	+1.1
	comp=Z,0.1nm,0.3s,baz=307,slow=12,SNR=5.3						
ANMO	Albuquerque	15.89	105	Pn	Pn	05 54 53.3	-1.2
Y22D	IRIS PASSCAL I	15.96	108		P	05 54 57.6	-1.4
RSSD	Black Hills	16.04	71		Pn	05 54 53.9	-2.5
RSSD	Black Hills	16.04	71	P	Pn	05 54 55.9	-0.5
	baz=265						
121A	Cookes Peak, D	16.17	115		Pn	05 54 58.3	+0.2
HSIG		16.47	130		Pn	05 55 00.3	-1.5
T25A	Trinidad	16.59	95		Pn	05 55 03.4	0.0
T25A	Trinidad	16.59	95	P	P	05 55 05.8	-0.2
	baz=288						
DGMT	Dagmar	16.88	55		Pn	05 55 06.7	-0.2
DGMT	Dagmar	16.88	55	P	Pn	05 55 06.2	-0.7
	baz=250						
SRIG	Santa Rosalia	17.09	137		Pn	05 55 09.9	+0.4
SRIG				IAmb	IAmb	05 55 18.7	
	comp=Z,47nm,0.9s						
KSCO	Kaye Shedlock’	17.44	88	IAmb	IAmb	05 55 25.3	
	comp=Z,116nm,1.2s						
KSCO	Kaye Shedlock’	17.44	88	P	P	05 55 15.5	+0.1
	baz=282						
OGNE	Ogallala	17.57	81	IAmb	IAmb	05 55 19.4	
	comp=Z,120nm,1.5s						
DLBC	Dease Lake	18.07	352	P	P	05 55 24.2	+2.1
	comp=Z,0.3nm,0.3s,baz=183,slow=11,SNR=12						
DLBC	Dease Lake	18.07	352	P	Pn	05 55 20.8	-0.9
MNTX	Cornudas Mount	18.32	113	P	Pn	05 55 23.5	-1.3
MNTX	Cornudas Mount	18.32	113	P	P	05 55 27.5	+2.6
	baz=305						
JIS	Juneau Island	18.59	345	P	P	05 55 26.3	-1.4
CBKS	Cedar Bluff	19.68	87	P	P	05 55 39.2	-0.7
CBKS	Cedar Bluff	19.68	87	P	Pn	05 55 41.0	-0.3
	baz=283						
BGNE	Belgrade	20.43	79	P	P	05 55 47.8	-0.2
BGNE				IAmb	IAmb	05 56 02.3	
	comp=Z,38nm,0.8s						
BGNE	Belgrade	20.43	79	P	Pn	05 55 49.3	-0.7
	baz=277						
R32A	Long Quarter,	20.56	88	P	P	05 55 49.7	+0.3
WHY	Whitehorse	20.91	347	P	P	05 55 52.3	-0.8
TX31	Lajitas Ar. Si	20.91	116	P	P	05 55 53.3	-0.1
TXAR	Lajitas Array	20.91	116	P	Pn	05 55 54.9	-1.0
	comp=Z,5.0nm,0.8s,baz=299,slow=8.5,SNR=47						
FFC	Flin Flon	20.93	40	P	P	05 55 53.7	+0.5
FFC				IAmb	IAmb	05 56 04.7	
	comp=Z,53nm,1.1s						
HPIG		21.19	124	P	P	05 55 56.4	-0.1
ECSD	EROS Data Cent	21.39	72	P	P	05 55 56.5	-1.8
ECSD				IAmb	IAmb	05 56 03.2	
	comp=Z,33nm,0.9s						
ECSD	EROS Data Cent	21.39	72	P	P	05 55 57.0	-1.4
	baz=271						
HYT	Haines Junctio	21.57	344	P	P	05 55 59.2	-1.1
HYT				IAmb	IAmb	05 56 10.1	
	comp=Z,34nm,1.2s						
WMOK	Wichita Mounta	21.71	97	P	P	05 56 01.0	-0.9
WMOK	Wichita Mounta	21.71	97	P	P	05 56 01.3	-0.5
	baz=294						
KSU1	Kansas State U	21.99	85	P	P	05 56 08.5	+3.7
	baz=283						
ABTX	Abilene, Hawle	21.99	103	IAmb	IAmb	05 56 09.5	
	comp=Z,38nm,1.1s						
ABTX	Abilene, Hawle	21.99	103	P	P	05 56 06.6	+1.7
	baz=299						
AGMN	Agassiz Nation	22.22	60	P	P	05 56 07.0	-0.1
	baz=261						
OKCFA	Oklahoma City	22.45	94	P	P	05 56 09.4	-0.4
X34A	Smith Ranch, M	22.48	97	P	P	05 56 09.6	-0.5
X34A				IAmb	IAmb	05 56 22.4	
	comp=Z,32nm,1.1s						
ULM	Lac du Bonnet	22.60	55	P	P	05 56 10.2	-1.0
	comp=Z,82nm,0.9s,baz=261,slow=10.0,SNR=124						
CTGM	Chitina Glacie	22.62	339	IAmb	IAmb	05 56 16.7	
	comp=Z,28nm,1.2s						
T35A	Sooner Cattle	22.66	90	IAmb	IAmb	05 56 14.6	
	comp=Z,38nm,0.9s						
BARN	Barnard Glacie	22.79	339	IAmb	IAmb	05 56 27.9	
	comp=Z,23nm,1.0s						
YKA	Yellowknife Ar	22.79	13	P	P	05 56 13.8	+0.7
	comp=Z,7.5nm,1.0s,baz=198,slow=9.9,SNR=38						
TGL	Tana Glacier	22.87	338	P	P	05 56 13.0	-1.1
BALM	Baldy	22.96	338	P	P	05 56 13.5	-1.6
CRQM	Cirque	22.96	337	P	P	05 56 10.4	-4.7
CRQM				IAmb	IAmb	05 56 24.7	
	comp=Z,31nm,1.4s						
JCT	Junction City	22.97	108	P	P	05 56 15.4	+0.1
	baz=303						
W35A	Tecumseh	22.99	95	P	P	05 56 14.3	-1.2
RAGM	Ragged Mountai	23.14	335	P	P	05 56 17.0	+0.2
MCARA	McCarthy VSAT	23.43	338	IAmb	IAmb	05 56 23.4	
	comp=Z,43nm,1.3s						
Z35A	Perchaven, San	23.45	99	IAmb	IAmb	05 56 23.5	
	comp=Z,27nm,0.8s						
TUL1	Leonard	23.54	92	P	P	05 56 18.0	-3.0
TUL1				IAmb	IAmb	05 56 23.1	
	comp=Z,24nm,0.8s						
TUL1	Leonard	23.54	92	P	P	05 56 20.0	-1.0
	baz=290						
GLB	Gilahina Butte	23.70	338	P	P	05 56 22.8	+0.3
WHTX	Lake Whitney,	23.92	102	P	P	05 56 23.6	-1.2
WHTX				IAmb	IAmb	05 56 26.9	
	comp=Z,41nm,0.9s						
WHTX	Lake Whitney,	23.92	102	P	P	05 56 24.8	+0.1
	baz=299						
SPMN	Marine on St.	24.09	68	IAmb	IAmb	05 56 28.9	
	comp=Z,59nm,1.4s						
435B	Jarrell	24.43	105	P	P	05 56 28.8	-0.7
U38A	Gravette	24.43	90	P	P	05 56 29.2	-0.3
833A	Chaparral WMA,	24.50	112	IAmb	IAmb	05 56 35.1	
	comp=Z,23nm,1.1s						
KDAK	Kodiak Island	24.50	324	P	P	05 56 31.9	+2.0
	comp=Z,3.3nm,0.7s,baz=135,slow=5.9,SNR=4.2						
KDAK	Kodiak Island	24.50	324	P	P	05 56 27.4	-2.4
BCAR	Beaver Creek A	24.52	342	P	P	05 56 31.3	+1.2
S39A	Bolivar	24.85	86	IAmb	IAmb	05 56 35.7	
	comp=Z,21nm,1.2s						
DAWY	Dawson	24.88	345	IAmb	IAmb	05 56 36.3	
	comp=Z,32nm,1.2s						
MENT	Mentasta	24.89	340	IAmb	IAmb	05 56 36.9	
	comp=Z,21nm,1.2s						
E38A	The Farm, Brul	24.97	65	P	P	05 56 35.0	+0.7
E38A				IAmb	IAmb	05 56 52.2	
	comp=Z,27nm,1.4s						
CHIR	Chirikof Islan	25.03	318	P	P	05 56 33.8	-0.9
EYMN	Ely	25.08	62	P	P	05 56 34.5	-0.7
EYMN	Ely	25.08	62	P	P	05 56 37.0	+1.8
	baz=266						
SCM	Sheep Creek Mo	25.08	335	P	P	05 56 34.7	-0.5
SCM				IAmb	IAmb	05 56 52.6	
	comp=Z,42nm,1.2s						
237A	Washetta, Mont	25.14	101	P	P	05 56 35.4	-0.5
237A				IAmb	IAmb	05 56 45.9	
	comp=Z,32nm,1.1s						
KNK	Knik Glacier	25.15	333	P	P	05 56 33.7	-2.0
KNK				IAmb	IAmb	05 56 40.3	
	comp=Z,24nm,1.0s						
735A	Kenedy	25.32	109	P	P	05 56 34.9	-2.6
W39A	Magazine	25.32	92	P	P	05 56 37.6	+0.1
W39A	Magazine	25.32	92	P	P	05 56 38.2	+0.7
	baz=292						
SML	Sawmill	25.39	334	P	P	05 56 39.4	+1.5
SML				IAmb	IAmb	05 56 40.7	
	comp=Z,25nm,1.0s						
L40A	Anamosa	25.48	76	P	P	05 56 39.4	+0.5
L40A				IAmb	IAmb	05 56 55.9	
	comp=Z,24nm,0.9s						
PMR	Palmer	25.50	333	IAmb	IAmb	05 56 42.0	
	comp=Z,18nm,1.0s						
GHO	Glory Hole Cre	25.56	334	P	P	05 56 38.0	-1.5
GHO				IAmb	IAmb	05 56 54.1	
	comp=Z,20nm,1.0s						
U40A	Yellville	25.62	89	P	P	05 56 41.3	+1.1
U40A				IAmb	IAmb	05 56 44.4	
	comp=Z,20nm,1.1s						
U40A	Yellville	25.62	89	P	P	05 56 41.8	+1.6
	baz=290						
I40A	Norwalk	25.71	71	P	P	05 56 41.5	+0.5
I40A				IAmb	IAmb	05 56 43.8	
	comp=Z,26nm,0.9s						
MIAR	Mount Ida	25.73	93	P	P	05 56 41.6	+0.4
MIAR				IAmb	IAmb	05 56 45.8	
	comp=Z,17nm,0.8s						
MIAR	Mount Ida	25.73	93	P	P	05 56 43.1	+1.9
	baz=293						
MGMO	Mountain Grove	25.81	87	P	P	05 56 41.0	-1.0
MGMO				IAmb	IAmb	05 56 45.6	
	comp=Z,14nm,0.8s						
SCRK	Sand Creek	25.82	341	P	P	05 56 42.5	+0.6
EGAK	Eagle	25.87	344	P	P	05 56 40.6	-1.5
G40A	Rib Lake	25.93	68	P	P	05 56 42.7	-0.2
G40A				IAmb	IAmb	05 56 46.0	
	comp=Z,19nm,0.9s						
N41A	Harden Midland	25.98	79	P	P	05 56 43.1	-0.4
DHY	Denali Highway	26.03	337	P	P	05 56 44.3	+0.5
DHY				IAmb	IAmb	05 56 49.2	
	comp=Z,39nm,1.1s						
JFWS	Jewell Farm	26.08	73	P	P	05 56 43.7	-0.6
JFWS				IAmb	IAmb	05 56 47.5	
	comp=Z,42nm,1.1s						
JFWS	Jewell Farm	26.08	73	P	P	05 56 46.5	+2.1
	baz=277						
NATX	Nacogdoches	26.11	100	P	P	05 56 43.4	-1.3
NATX				IAmb	IAmb	05 57 01.5	
	comp=Z,20nm,1.0s						
ZAIG	Zacatecas	26.14	126	P	P	05 56 43.7	-1.7
HKT	Hockley	26.15	105	P	P	05 56 43.6	-1.4
X40A	Basin Creek Fa	26.31	93	P	P	05 56 44.6	-1.9
FCAR	Ozark Folk Cen	26.34	90	P	P	05 56 43.7	-3.0
FCAR				IAmb	IAmb	05 56 55.7	
	comp=Z,24nm,1.5s						
WHAR	Wooly Hollow	26.43	91	P	P	05 56 46.4	-1.1
WHAR				IAmb	IAmb	05 56 52.0	
	comp=Z,22nm,0.9s						
WLAR	White Oak Lake	26.43	95	P	P	05 56 46.3	-1.3
W41B	Gary Mavity, V	26.50	91	P	P	05 56 46.2	-1.9
W41B				IAmb	IAmb	05 56 52.3	
	comp=Z,20nm,0.9s						
W41B	Gary Mavity, V	26.50	91	P	P	05 56 50.4	+2.3
	baz=292						
EPYK	Eagle Plains	26.57	350	P	P	05 56 45.9	-2.7
EPYK				IAmb	IAmb	05 56 52.1	
	comp=Z,18nm,1.1s						
L42A	Oliver, Polo	26.63	75	P	P	05 56 49.0	-0.3
COWI	Conover	26.64	66	P	P	05 56 47.2	-2.3
RND	Reindeer	26.72	336	P	P	05 56 50.0	0.0
FCC	Fort Churchill	26.73	37	P	P	05 56 48.5	-1.5
FCC				IAmb	IAmb	05 57 03.7	
	comp=Z,28nm,1.4s						
Z41A	Richland Creek	26.84	96	P	P	05 56 49.2	-2.1
Z41A				IAmb	IAmb	05 57 02.6	
	comp=Z,28nm,1.2s						
SLM	Saint Louis	26.93	83	P	P	05 56 50.0	-2.0
I42A	Draeger Farm,	26.94	71	P	P	05 56 51.5	-0.6
I42A				IAmb	IAmb	05 57 08.5	
	comp=Z,35nm,1.2s						
MCK	McKinley	26.99	337	P	P	05 56 53.2	+0.9
D41A	Chassel	27.03	64	IAmb	IAmb	05 57 12.4	
	comp=Z,28nm,0.8s						
ILAR	Eielson Array	27.21	340	P	P	05 56 55.5	+1.2
	comp=Z,4.2nm,0.9s,baz=156,slow=7.6,SNR=28						
ILAR				PcP	PcP	06 00 14.7	+0.5
	comp=Z,0.6nm,0.7s,baz=177,slow=2.2,SNR=4.7						
ILAR	Eielson Array	27.21	340	P	P	05 56 51.8	-2.5
P43A	Skaggs, Pawnee	27.21	80	P	P	05 56 52.5	-2.0
PBMO	Poplar Bluff	27.33	87	P	P	05 56 54.4	-1.2

PBMO	comp=Z,20nm,1.2s			IAmb	IAmb	05 57 04.6	
F42A	Maple Grove Fa comp=Z,18nm,0.8s	27.36	67	IAmb	IAmb	05 56 59.5	
PPLA	Purkeypile comp=Z,27nm,1.1s	27.44	333	IAmb	IAmb	05 56 59.4	
BWN	Browne comp=Z,43nm,1.3s	27.47	337	IAmb	IAmb	05 56 59.6	
KTH	Kantishna Hill	27.47	335	P	P	05 56 54.2	-2.5
K43A	Burlington	27.51	73	P	P	05 56 56.3	-0.9
K43A	comp=Z,21nm,0.8s			IAmb	IAmb	05 57 00.0	
S44A	Carbondale comp=Z,28nm,1.1s	27.93	84	IAmb	IAmb	05 57 02.6	
E43A	Lone Tree Farm comp=Z,19nm,1.0s	28.12	65	IAmb	IAmb	05 57 05.4	
MLY	Manley comp=Z,13nm,1.0s	28.48	337	IAmb	IAmb	05 57 08.2	
E44A	Grand Marais A baz=272	28.85	65	P	P	05 57 11.6	+2.4
BMAR	Burnt Mountain	28.87	345	P	P	05 57 09.0	-0.1
OXF	Oxford comp=Z,31nm,1.1s	28.91	91	IAmb	IAmb	05 57 18.7	
G45A	Suttons Bay baz=275	29.15	68	P	P	05 57 13.6	+1.8
F45A	CMU Biological baz=274	29.19	67	P	P	05 57 13.9	+1.7
WVT	Waverly	29.52	87	P	P	05 57 13.3	-1.8
WVT	Waverly baz=290	29.52	87	P	P	05 57 16.3	+1.1
PLAL	Pickwick Lake	29.74	89	P	P	05 57 14.3	-2.9
PLAL	comp=Z,11nm,0.9s			IAmb	IAmb	05 57 19.3	
K47A	Vermontville baz=280	29.94	73	P	P	05 57 19.8	+1.0
E46A	Sault Ste Mari	29.98	65	P	P	05 57 18.1	-1.0
E46A	comp=Z,12nm,0.9s			IAmb	IAmb	05 57 21.9	
WCI	Wyandotte Cave	30.01	82	P	P	05 57 18.6	-1.0
WCI	comp=Z,8.7nm,0.8s			IAmb	IAmb	05 57 26.9	
WCI	Wyandotte Cave baz=287	30.01	82	P	P	05 57 20.5	+1.0
IMAR	Indian Mountai	30.04	337	P	P	05 57 17.8	-1.7
I47A	Gladwin baz=278	30.08	70	P	P	05 57 21.7	+1.6
D46A	Sault St. Mari baz=273	30.14	64	P	P	05 57 22.5	+2.0
H47A	Mio baz=277	30.22	69	P	P	05 57 23.6	+2.2
G47A	Hillman baz=276	30.40	68	P	P	05 57 24.7	+1.8
L48A	N Adams baz=281	30.48	74	P	P	05 57 25.2	+1.5
I48A	Sherman Twp baz=278	30.63	69	P	P	05 57 26.6	+1.7
E47A	Iron Bridge baz=274	30.68	65	P	P	05 57 27.0	+1.6
J48A	Bridge Port comp=Z,16nm,0.8s	30.71	71	IAmb	IAmb	05 57 29.5	
J48A	Bridge Port baz=279	30.71	71	P	P	05 57 27.9	+2.3
D47A	Chapleau baz=274	30.76	64	P	P	05 57 27.5	+1.4
P49A	Miami Univ. Ec baz=285	30.83	79	P	P	05 57 27.0	+0.2
H48A	Harrisville comp=Z,10nm,0.8s	30.83	68	IAmb	IAmb	05 57 48.4	
N49A	Columbus Grove baz=283	30.89	76	P	P	05 57 27.8	+0.5
T49A	Edmonton comp=Z,17nm,0.9s	30.93	84	IAmb	IAmb	05 57 30.4	
T49A	Edmonton baz=289	30.93	84	P	P	05 57 29.4	+1.7
TOLK	Toolik Lake Re comp=Z,15nm,1.1s	30.94	343	IAmb	IAmb	05 57 30.6	
TOLK	Toolik Lake Re baz=142	30.94	343	P	P	05 57 30.0	+2.5
J49A	Marlette baz=280	31.16	71	P	P	05 57 31.2	+1.6
F48A	Evansville baz=276	31.20	66	P	P	05 57 31.6	+1.7
LRAL	Lakeview Retre baz=295	31.34	92	P	P	05 57 32.6	+1.2
E48A	Lockeyer baz=275	31.45	65	P	P	05 57 33.9	+1.8
T50A	Nancy baz=289	31.48	83	P	P	05 57 33.5	+1.0
S50A	Richmond baz=288	31.60	82	P	P	05 57 34.6	+1.0
F49A	Sandfield baz=276	31.61	66	P	P	05 57 35.1	+1.6
D48A	Paudash Townsh baz=274	31.64	63	P	P	05 57 35.3	+1.5
N50A	Nevada baz=284	31.68	76	P	P	05 57 35.7	+1.4
FPAL	Fort Paine comp=Z,20nm,1.3s	31.79	88	IAmb	IAmb	05 57 47.9	
D49A	Beulah Townshi baz=274	31.94	63	P	P	05 57 37.7	+1.2
ACSO	Alum Creek Sta baz=285	31.94	77	P	P	05 57 37.4	+0.9
R51A	Hillsboro baz=288	32.03	80	P	P	05 57 39.0	+1.7
Z50A	Ashland	32.07	91	P	P	05 57 38.0	+0.2
Z50A	Ashland baz=295	32.07	91	P	P	05 57 38.7	+1.0
P51A	Williamsport	32.08	78	P	P	05 57 37.6	-0.1
P51A	Williamsport baz=286	32.08	78	P	P	05 57 38.3	+0.6
N51A	Ashland	32.22	75	P	P	05 57 38.4	-0.5
N51A	comp=Z,20nm,1.0s			IAmb	IAmb	05 57 41.3	
N51A	Ashland baz=284	32.22	75	P	P	05 57 39.8	+0.8
S51A	Beattyville baz=288	32.22	82	P	P	05 57 39.0	0.0
M51A	Elyria baz=283	32.26	74	P	P	05 57 39.8	+0.5
CPCT	Cooper Cave comp=Z,9.3nm,1.0s	32.27	86	IAmb	IAmb	05 57 44.3	
V51A	Loudon baz=291	32.27	85	P	P	05 57 40.5	+1.1
X51A	Calhoun comp=Z,16nm,1.0s	32.35	88	IAmb	IAmb	05 57 41.9	
X51A	Calhoun baz=293	32.35	88	P	P	05 57 41.6	+1.4
250A	Grady	32.36	93	P	P	05 57 37.6	-2.6
I51A	Listowel baz=280	32.60	70	P	P	05 57 44.8	+2.5
TZTN	Tazewell baz=290	32.62	84	P	P	05 57 43.6	+1.1
P52A	Corning baz=286	32.73	77	P	P	05 57 44.2	+0.8
N52A	McGinn’s Farm, baz=284	32.75	75	P	P	05 57 44.4	+0.8
Q52A	Bidwell baz=287	32.82	79	P	P	05 57 45.1	+0.8
O52A	Adamsville baz=285	32.82	76	P	P	05 57 44.8	+0.6
M52A	Chesterland baz=283	32.82	74	P	P	05 57 45.0	+0.8
T52A	Hallie baz=289	32.85	82	P	P	05 57 45.6	+1.0
W52A	Murphy baz=292	32.85	86	P	P	05 57 46.1	+1.4
D50A	G1974 Best Tow baz=275	32.97	63	P	P	05 57 46.7	+1.2
F51A	Arnstein baz=277	33.06	65	P	P	05 57 47.8	+1.6
Y52A	Lilburn comp=Z,9.4nm,0.8s	33.23	88	IAmb	IAmb	05 58 01.6	
Y52A	Lilburn baz=294	33.23	88	P	P	05 57 49.1	+1.1
O53A	New Philadelph baz=285	33.24	76	P	P	05 57 48.8	+0.9
H52A	Wyevale baz=279	33.27	68	P	P	05 57 49.9	+1.8
E51A	G1948 Merrick baz=277	33.28	64	P	P	05 57 49.6	+1.4
D51A	Lot 18 Range I baz=276	33.30	63	P	P	05 57 49.7	+1.3
S53A	Williamson baz=289	33.31	81	P	P	05 57 49.7	+1.1
P53A	Whipple baz=286	33.32	77	P	P	05 57 49.6	+1.0
M53A	WI Miller and baz=284	33.34	74	P	P	05 57 49.7	+1.0
N53A	Lisbon baz=284	33.38	75	P	P	05 57 49.7	+0.6
Q53A	Leroy baz=287	33.40	79	P	P	05 57 51.1	+1.8
V53A	Saluda baz=292	33.49	85	P	P	05 57 51.4	+1.2
F52A	Sundridge baz=278	33.49	66	P	P	05 57 51.5	+1.5
L53A	Girard baz=283	33.52	73	P	P	05 57 51.6	+1.2
X53A	Estanollee baz=293	33.56	87	P	P	05 57 52.7	+2.0
I53A	Kortright Cn E baz=281	33.62	69	P	P	05 57 53.4	+2.2
ERPA	Erie baz=283	33.68	72	P	P	05 57 52.9	+1.1
GOGA	Godfrey baz=295	33.87	89	P	P	05 57 54.5	+1.0
E52A	Mattawa baz=277	33.88	65	P	P	05 57 54.4	+0.9
T54A	Tazewell baz=290	33.93	82	P	P	05 57 55.3	+1.3
N54A	Moraine State comp=Z,31nm,1.5s	33.96	74	IAmb	IAmb	05 58 09.7	
N54A	Moraine State baz=285	33.96	74	P	P	05 57 55.1	+1.0
P54A	Burton baz=286	33.96	77	P	P	05 57 55.1	+0.8
M54A	Oil Creek Stat baz=284	34.06	73	P	P	05 57 56.0	+0.9
G53A	Haliburton baz=279	34.08	67	P	P	05 57 56.3	+1.2
V54A	Nebo baz=292	34.10	84	P	P	05 57 56.8	+1.3
L54A	Sinclairville baz=283	34.15	72	P	P	05 57 57.1	+1.3
W54A	Cherokee Point baz=292	34.18	85	P	P	05 57 57.5	+1.3
H53A	Bobcaygeon baz=280	34.20	68	P	P	05 57 57.8	+1.6
MATQ	Matagami baz=273	34.24	58	P	P	05 57 57.7	+1.2
X54A	Belton baz=293	34.24	86	P	P	05 57 58.1	+1.4
ALGO	Algonquin Park baz=278	34.35	65	P	P	05 57 58.9	+1.5
G54A	Lake Saint Pet baz=279	34.41	66	P	P	05 57 59.3	+1.3
J54A	Appleton baz=282	34.41	70	P	P	05 58 00.4	+2.4
MCWV	Mont Chateau baz=286	34.42	77	P	P	05 57 59.1	+1.0
Q55A	Buckhannon baz=287	34.44	78	P	P	05 57 59.3	+0.9
D53A	Lac Vacive, Po baz=277	34.44	63	P	P	05 57 59.7	+1.5
P55A	Reedsville baz=287	34.47	77	P	P	05 57 59.6	+0.9
K54A	Basiliko Farm, baz=283	34.51	71	P	P	05 57 59.9	+0.9
U55A	TA2, Sparta baz=291	34.52	82	P	P	05 58 00.2	+1.0
E53A	Dumoine, Ponti baz=278	34.55	64	P	P	05 58 00.6	+1.3
PAULI	Pauline comp=Z,16nm,0.9s	34.56	85	IAmb	IAmb	05 58 01.6	
WVNY	West Valley, N comp=Z,18nm,0.8s	34.62	71	IAmb	IAmb	05 58 02.6	
R55A	Marlinton baz=288	34.63	79	P	P	05 58 01.3	+1.2
V55A	Taylorsville comp=Z,8.1nm,0.8s	34.63	83	IAmb	IAmb	05 58 13.4	
V55A	Taylorsville baz=292	34.63	83	P	P	05 58 01.1	+1.0
O55A	Ligonier baz=286	34.66	75	P	P	05 58 01.3	+1.0
LSQQ	Lebel-sur-Quev baz=274	34.72	60	P	P	05 58 01.9	+1.3
M55A	Ridgway baz=284	34.73	73	P	P	05 58 01.8	+0.9
N55A	Marion Center baz=285	34.74	74	P	P	05 58 02.1	+1.1
BLA	Blacksburg comp=Z,18nm,1.0s	34.75	81	IAmb	IAmb	05 58 06.0	
BLA	Blacksburg baz=290	34.75	81	P	P	05 58 02.6	+1.5
L55A	Hinsdale baz=284	34.79	72	P	P	05 58 03.0	+1.6
KMSC	Kings Mountain comp=Z,12nm,0.9s	34.80	85	IAmb	IAmb	05 58 14.5	
KMSC	Kings Mountain baz=292	34.80	85	P	P	05 58 02.6	+1.1
E54A	Lac Daplat, Po baz=278	34.87	64	P	P	05 58 03.3	+1.3
Y55A	Saluda baz=294	34.88	87	P	P	05 58 03.0	+0.8
DELO	Deloro Mine comp=Z,20nm,0.9s	34.89	68	IAmb	IAmb	05 58 05.1	
K55A	Perry baz=283	34.93	71	P	P	05 58 04.1	+1.5
J55A	Hilton baz=282	34.99	70	P	P	05 58 04.8	+1.7
Q56A	Snyder Ridge, comp=Z,26nm,1.3s	35.09	77	IAmb	IAmb	05 58 07.2	
Q56A	Snyder Ridge, baz=288	35.09	77	P	P	05 58 05.2	+1.2
T56A	Rocky Mt baz=290	35.10	81	P	P	05 58 05.1	+1.0
R56A	Bull Pasture M baz=288	35.12	78	P	P	05 58 06.7	+2.4
D54A	Lac Fusel, La baz=277	35.13	63	P	P	05 58 05.3	+1.0
M56A	Emporium comp=Z,9.8nm,0.8s	35.15	73	IAmb	IAmb	05 58 06.7	
M56A	Emporium baz=285	35.15	73	P	P	05 58 05.6	+1.1
H55A	Tweed baz=281	35.19	67	P	P	05 58 06.3	+1.6
P56A	Dayton Farm, R baz=287	35.21	76	P	P	05 58 06.3	+1.3
N56A	West Decatur baz=285	35.21	74	P	P	05 58 06.0	+1.0
W56A	Indian Trail baz=292	35.38	84	P	P	05 58 07.1	+0.6
G55A	Calabogie baz=280	35.38	66	P	P	05 58 07.8	+1.3
L56A	Greenwood baz=284	35.44	72	P	P	05 58 08.5	+1.5
K56A	Middlesex baz=283	35.47	71	P	P	05 58 08.4	+1.1
GAMB	Gambell comp=Z,9.7nm,1.1s	35.50	326	IAmb	IAmb	05 58 09.5	
F55A	Otter Lake baz=279	35.54	65	P	P	05 58 09.3	+1.5
SSPA	Standing Stone	35.59	74	P	P	05 58 07.4	-0.8
SSPA	comp=Z,10nm,0.9s			IAmb	IAmb	05 58 20.0	
SSPA	Standing Stone baz=286	35.59	74	P	P	05 58 09.1	+0.9
Q57A	Strasburg baz=288	35.66	77	P	P	05 58 10.1	+1.2
S57A	Dark Hollow, R comp=Z,11nm,1.1s	35.67	79	IAmb	IAmb	05 58 11.0	
S57A	Dark Hollow, R baz=289	35.67	79	P	P	05 58 10.7	+1.7
J56A	Wolcott	35.68	69	P	P	05 58 08.2	-0.8
J56A	Wolcott baz=283	35.68	69	P	P	05 58 09.5	+0.5
R57A	Stanardsville baz=289	35.81	78	P	P	05 58 11.9	+1.7
W57A	Gilead baz=293	35.82	84	P	P	05 58 11.4	+1.2
P57A	Homestead Farm comp=Z,14nm,0.8s	35.82	76	IAmb	IAmb	05 58 13.2	
P57A	Homestead Farm baz=287	35.82	76	P	P	05 58 12.0	+1.7
H56A	Elgin baz=281	35.83	67	P	P	05 58 11.9	+1.7
U57A	Blanch baz=291	35.84	82	P	P	05 58 11.6	+1.2
O57A	Amberson baz=286	35.89	75	P	P	05 58 12.0	+1.2
M57A	Sunshine Farm, baz=285	35.95	73	P	P	05 58 13.6	+2.3
D55A	Sainte-Anne-du baz=278	35.95	63	P	P	05 58 12.6	+1.2
L57A	Andrews Acres baz=284	35.98	72	P	P	05 58 12.6	+1.0
K57A	Scipio Center baz=284	36.05	70	P	P	05 58 13.0	+0.9
R58A	Rapidan baz=289	36.20	78	P	P	05 58 15.1	+1.6
Q58A	Fox Den Farm, baz=288	36.23	77	P	P	05 58 14.8	+1.1
T58A	Grand View Acr baz=290	36.26	80	P	P	05 58 15.2	+1.2
J57A	Williamstown baz=283	36.26	69	P	P	05 58 15.0	+1.0
E56A	St. Veronique baz=279	36.33	64	P	P	05 58 15.7	+1.2
P58A	Pank, Wackersv baz=288	36.35	76	P	P	05 58 15.8	+1.1
I57A	Carthage baz=282	36.38	68	P	P	05 58 16.4	+1.4
N58A	Sunbury comp=Z,17nm,0.9s	36.38	73	IAmb	IAmb	05 58 19.0	
N58A	Sunbury baz=286	36.38	73	P	P	05 58 16.3	+1.2
S58A	Poland Farm, P baz=290	36.39	79	P	P	05 58 16.0	+0.9
M58A	Price’s Panora baz=285	36.43	72	P	P	05 58 16.9	+1.4
D56A	ZEC Mazanza, M baz=279	36.44	63	P	P	05 58 16.2	+0.8
O58A	Lewisberry baz=287	36.44	75	P	P	05 58 16.2	+0.7
W58A	Raeford baz=293	36.44	84	P	P	05 58 17.0	+1.4
H57A	Richville baz=282	36.46	67	P	P	05 58 17.0	+1.4
BINY	Binghamton baz=284	36.55	71	P	P	05 58 17.9	+1.4
G57A	Newington baz=281	36.62	66	P	P	05 58 18.1	+1.1
K58A	Earlville baz=284	36.66	70	P	P	05 58 18.7	+1.3
F57A	Harrington baz=280	36.69	65	P	P	05 58 19.0	+1.5
L58A	Harry Jones Me baz=285	36.69	71	P	P	05 58 19.2	+1.5
CBN	Corbin Frederi baz=289	36.70	78	P	P	05 58 19.5	+1.8
RES	Resolute Bay comp=Z,6.1nm,1.0s,baz=225,slow=11,SNR=15	36.87	13	P	P	05 58 19.8	+1.1
R59A	King George, V baz=289	36.89	78	P	P	05 58 21.4	+2.1
V59A	Middlesex baz=292	36.91	82	P	P	05 58 20.8	+1.3
I58A	Old Forge baz=283	36.92	68	P	P	05 58 21.1	+1.4
O59A	Robesonia baz=287	36.92	74	P	P	05 58 21.0	+1.3
P59A	Jarrettsville baz=288	36.95	75	P	P	05 58 22.0	+2.1
E57A	Chemin Saint G baz=280	36.95	64	P	P	05 58 21.1	+1.2
T59A	Double "B" Far comp=Z,22nm,1.1s	36.98	80	IAmb	IAmb	05 58 23.3	
T59A	Double "B" Far baz=291	36.98	80	P	P	05 58 21.6	+1.4
Q59A	Harwood baz=289	37.02	77	P	P	05 58 22.5	+2.1
D57A	Chemin Vers le baz=279	37.03	63	P	P	05 58 21.5	+1.1
M59A	Waymart baz=286	37.13	72	P	P	05 58 22.6	+1.2
K59A	Cooperstown baz=284	37.22	70	P	P	05 58 23.5	+1.3
L59A	Walton comp=Z,28nm,1.1s	37.23	71	IAmb	IAmb	05 58 24.9	
L59A	Walton baz=285	37.23	71	P	P	05 58 23.6	+1.3
G58A	Ormstown baz=282	37.25	66	P	P	05 58 23.6	+1.3
J59A	Piesco baz=284	37.30	68	P	P	05 58 25.1	+2.2
H58A	Gabriels baz=282	37.32	67	P	P	05 58 24.5	+1.5
E58A	La Victoria baz=280	37.55	63	P	P	05 58 25.8	+0.9
N60A	Cedar Hill Far baz=287	37.55	73	P	P	05 58 26.4	+1.4
Q60A	Greensboro baz=289	37.57	76	P	P	05 58 27.3	+2.1
H59A	Cadyville baz=282	37.61	66	P	P	05 58 26.5	+1.1
FRNY	Flat Rock comp=Z,14nm,0.9s	37.64	66	IAmb	IAmb	05 58 28.6	
D58A	Chemin du LacG baz=280	37.69	62	P	P	05 58 26.6	+0.5
LATQ	La Tuque baz=279	37.71	62	P	P	05 58 27.1	+0.9
M60A	Port Jervis baz=286	37.77	72	P	P	05 58 28.1	+1.2
ODNJ	Ogdensburg comp=Z,14nm,0.9s	37.85	72	IAmb	IAmb	05 58 29.7	
L60A	Shokan baz=286	37.88	71	P	P	05 58 29.2	+1.5
F59A	Saint Guilaume baz=281	37.99	64	P	P	05 58 29.8	+1.2
I60A	Shoreham baz=284	38.07	68	P	P	05 58 30.9	+1.5
TRY	Troy comp=Z,26nm,1.3s	38.08	69	IAmb	IAmb	05 58 36.4	
J60A	Lant Hill Farm baz=284	38.12	68	P	P	05 58 31.2	+1.4
H60A	Morristown baz=283	38.32	66	P	P	05 58 33.0	+1.5
D59A	Saint-Raymond baz=280	38.41	62	P	P	05 58 33.0	+0.9
G60A	Masonville baz=282	38.45	65	P	P	05 58 33.6	+1.0
F60A	Warwick baz=282	38.53	64	P	P	05 58 33.8	+0.7
E60A	Ste Agathe de baz=281	38.80	63	P	P	05 58 36.5	+1.1
H61A	Lyndonville baz=283	38.86	66	P	P	05 58 37.8	+1.8
LBNH	Lisbon baz=284	38.93	67	P	P	05 58 38.6	+2.0
G61A	St-Isidore-de- baz=283	38.97	65	P	P	05 58 38.2	+1.3
M62A	Hamden baz=287	38.98	71	P	P	05 58 38.4	+1.3
D60A	Saint Jean D’O baz=281	39.04	62	P	P	05 58 38.4	+1.0
F61A	St Evariste baz=282	39.19	64	P	P	05 58 40.5	+1.8
H62A	Milan baz=284	39.39	66	P	P	05 58 42.0	+1.5
E61A	Lac Etchemin baz=282	39.43	63	P	P	05 58 41.4	+0.7
D61A	St Aubert, Com baz=281	39.48	62	P	P	05 58 42.6	+1.5
PKME	Peaks-Kenny Pk baz=284	40.51	64	P	P	05 58 51.4	+1.7
F63A	Nahmakanta, Br baz=284	40.53	64	P	P	05 58 52.5	+2.5
SCHQ	Schefferville comp=Z,5.3nm,0.7s,baz=273,slow=7.3,SNR=12	40.55	49	P	P	05 58 49.9	0.0
E63A	Oxbow baz=283	40.83	62	P	P	05 58 53.7	+1.4
BATG	Bathurst New B	42.21	60	P	P	05 59 04.0	+0.3
BATG	comp=Z,11nm,0.8s			IAmb	IAmb	05 59 05.5	
SUMG	Summit	50.83	23	*i* P	P	06 00 12.5	+1.1
SUMG	Summit	50.83	23	P	P	06 00 11.5	+0.1
SEY	Seymchan comp=Z,3.0nm,0.7s,baz=37,slow=4.4,SNR=8.1	51.45	325	P	P	06 00 15.9	+0.2
PETK	Petropavlovsk- comp=Z,12nm,0.7s,baz=87,slow=12,SNR=23	51.66	311	P	P	06 00 17.9	+0.5
PETK	Petropavlovsk-	51.66	311	P	P	06 00 17.2	-0.1
TIXI	Tiksi comp=Z,2.8nm,0.7s,baz=77,slow=8.6,SNR=6.9	56.67	339	P	P	06 00 53.9	+0.2
TIXI	Tiksi	56.67	339	P	P	06 00 53.2	-0.5
TIXI	comp=Z,9.4nm,1.4s			IAmb	IAmb	06 01 12.9	
H11N3	WAKE ISLAND Hy baz=57	60.80	272	T	T	07 07 12.2	
H11N2	WAKE ISLAND Hy baz=57	60.80	272	T	T	07 07 06.2	
H11N1	WAKE ISLAND Hy baz=57	60.82	272	T	T	07 07 15.8	
KLR	Kul'dur comp=Z,2.1nm,0.9s,baz=301,slow=5.4,SNR=4.7	67.81	316	P	P	06 02 08.8	+0.1
ARCES	ARCESS Array B	68.04	11	P	P	06 02 10.4	+0.6

	comp=Z,4.8nm,0.9s,baz=326,slow=9.0,SNR=3.4						
ARCES	ARCESS Array B	68.04	11	P	P	06 02 08.9	-0.9
USRK	Ussuriysk Ar.	70.74	312	P	P	06 02 27.2	+0.2
	comp=Z,8.6nm,0.8s,baz=63,slow=5.3,SNR=13						
USRK	Ussuriysk Ar.	70.74	312	P	P	06 02 24.2	-2.7
NOA	NORSAR Array B	72.64	21	P	P	06 02 39.8	+1.7
	comp=Z,1.6nm,0.9s,baz=331,slow=5.6,SNR=2.9						
SAML	Samuel	75.40	116	P	P	06 02 53.3	-1.6
FINES	FINESS Array B	75.62	14	P	P	06 02 55.9	+0.4
	comp=Z,1.5nm,0.8s,baz=347,slow=4.1,SNR=5.1						
FINES	FINESS Array B	75.62	14	P	P	06 02 54.6	-0.8
KSRS	Korea Array	77.44	309	P	P	06 03 06.5	+0.3
	comp=Z,2.1nm,0.7s,baz=44,slow=7.4,SNR=5.8						
KSAR	Wonju Array Be	77.47	309	P	P	06 03 03.4	-2.9
TLY	Talaya	78.68	331	P	P	06 03 13.9	+1.0
	comp=Z,3.0nm,0.5s,baz=332,slow=5.4,SNR=3.2						
TLY	Talaya	78.68	331	P	P	06 03 10.0	-2.9
TLY				IAmb	IAmb	06 03 14.3	
	comp=Z,5.2nm,0.7s						
SONM	Songino Array	80.72	328	P	P	06 03 24.8	+0.6
	comp=Z,2.3nm,0.7s,baz=40,slow=4.0,SNR=8.2						
SONM	Songino Array	80.72	328	P	P	06 03 24.8	+0.6
ZALV	Zalesovo Beam	82.30	343	P	P	06 03 32.3	+0.1
	comp=Z,2.5nm,0.8s,baz=21,slow=5.1,SNR=12						
ZALV	Zalesovo Beam	82.30	343	P	P	06 03 31.0	-1.2
DAVA	Damuels	83.79	29	*i* PcP	P	06 03 41.2	+0.9
	comp=Z,7.9nm,1.3s						
GERES	GERESS Array B	83.79	26	P	P	06 03 41.2	+1.0
	comp=Z,0.2nm,0.3s,baz=345,slow=7.4,SNR=2.2						
GERES	GERESS Array B	83.79	26	P	P	06 03 40.6	+0.4
ESDC	Sonseca Array	83.82	42	P	P	06 03 39.6	-0.9
	comp=Z,0.3nm,0.4s,baz=302,slow=3.0,SNR=4.4						
ESDC	Sonseca Array	83.82	42	P	P	06 03 39.7	-0.7
HHC	Hu-ho-hao-te	83.87	320	*e*P	P	06 03 43.0	+2.2
HHC				pmax	pmax		
	comp=Z,54nm,1.2s						
FETA	Feichten	84.32	29	*i* PcP	P	06 03 43.8	+0.8
	comp=Z,6.9nm,1.3s						
SQTA	Sankt Quirin	84.33	28	*i* PcP	P	06 03 43.7	+0.8
	comp=Z,5.8nm,1.1s						
WATA	Walderalm	84.36	28	*i* PcP	P	06 03 43.0	-0.1
	comp=Z,3.6nm,1.0s						
WTTA	Wattenberg	84.44	28	*i* PcP	P	06 03 44.7	+1.1
	comp=Z,12nm,1.8s						
MOA	Molln	84.84	26	*i* pP	P	06 03 47.5	+2.0
	comp=Z,9.3nm,1.4s						
ABTA	Abfaltersbach	85.19	28	*i* pP	P	06 03 50.2	+2.9
	comp=Z,3.3nm,0.8s						
KBA	Koelnbreinsper	85.20	27	*i* P	P	06 03 44.8	-2.6
	comp=Z,3.7nm,0.7s						
CONA	Conrad Observa	85.30	25	*i* PcP	P	06 03 47.8	-0.1
	comp=Z,4.7nm,1.0s						
BRVK	Borovoye	85.71	351	P	P	06 03 49.6	0.0
BRVK				IAmb	IAmb	06 04 04.4	
	comp=Z,11nm,1.1s						
BVAR	Borovoye Array	85.73	351	P	P	06 03 50.6	+0.9
	comp=Z,2.6nm,0.6s,baz=8.2,slow=3.1,SNR=20						
OBKA	Obir	86.11	27	*i* PcP	P	06 03 52.1	+0.2
	comp=Z,8.8nm,1.1s						
SOKA	Soboth	86.12	26	*i* PcP	P	06 03 52.2	+0.3
	comp=Z,6.9nm,1.6s						
AKASG	Malin Array Be	86.32	16	P	P	06 03 53.0	+0.3
	comp=Z,2.6nm,0.7s,baz=344,slow=4.1,SNR=7.9						
AKASG	Malin Array Be	86.32	16	P	P	06 03 51.0	-1.6
NJ2	Nanjing	86.54	310	*e*P	P	06 03 55.3	+1.2
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
KURK	Kurchatov	86.65	345	P	P	06 03 54.2	-0.1
KURK				IAmb	IAmb	06 03 55.6	
	comp=Z,7.2nm,1.1s						
KURBB	Kurchatov Arra	86.75	345	P	P	06 03 55.0	+0.1
	comp=Z,4.0nm,0.8s,baz=17,slow=4.6,SNR=26						
AKTO	Aktyubinsk	89.25	358	P	P	06 04 06.9	+0.1
	comp=Z,1.7nm,0.7s,baz=356,slow=4.1,SNR=5.2						
MK31	Makanchi Array	89.55	341	P	P	06 04 05.2	-3.0
MKAR	Makanchi Array	89.55	341	P	P	06 04 07.7	-0.6
	comp=Z,0.8nm,0.7s,baz=28,slow=5.5,SNR=8.4						
MKAR	Makanchi Array	89.55	341	P	P	06 04 05.0	-3.3
MAKZ	Makanchi	89.61	342	P	P	06 04 06.5	-2.1
MAKZ				IAmb	IAmb	06 04 18.7	
	comp=Z,5.6nm,0.9s						
WHN	Wuhan	90.24	312	P	P	06 04 15.6	+3.9
ABKAR	Akbulak array	90.36	357	P	P	06 04 12.3	+0.3
WMQ	Urumqi	90.83	337	*e*P	P	06 04 13.4	-1.0
WMQ				pP	pwP	06 04 20.4	+1.3
CD2	Chengdu	95.59	319	P	P	06 04 36.7	+0.2
KSH	Kashi	97.90	344	P	Pdif	06 04 50.0	+3.0
KSH				SKS	SKSac	06 15 27.0	+1.7
KSH				S	ScS	06 16 15.0	+1.0
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MATP	Matopo	149.89	56	PKPbc	PKPbc	06 11 01.6	-0.1
	comp=Z,5.1nm,1.1s,baz=286,slow=5.6,SNR=4.3						
MAW	Mawson	152.62	187	PKPbc	PKiKP	06 11 08.5	+1.9
	comp=Z,34nm,1.1s,baz=0.0,slow=12,SNR=2.9						
BOSA	Boshof	153.05	73	PKPbc	PKiKP	06 11 09.0	+0.1
	comp=Z,1.6nm,0.7s,baz=316,slow=4.5,SNR=2.9						

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*IDC **10** 05:53:18.5±1.8, 40°.74N×125°.01W, h0^{km}, mb3.7/4, mb1 4.1/6, mb1mx3.7/49, mbtmp3.8/6, ML4.6/1, Error ellipse: s-maj=22.5km s-min=16.5km az=81.0*

*ANF **10** 05:53:19.9±0.8, 40°.88N×124°.85W, h0^{km}, Error ellipse: s-maj=8.8km s-min=3.7km az=73.0*

ISC 10 05:53:20.3±1.4**, 40°.87N**±0°.05×**124°.94W**±0°.08**, h10^{km}, n30, σ1^{s}.43**/41**, mb3.7**/3**, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
L02E	Cave Junction	1.63	37	P	Pb	05 53 49.2	-1.3
	baz=216,SNR=10						
L02E				S	Sb	05 54 11.2	+0.1
	baz=216						
M02C	Callahan	1.66	71	P	Pb	05 53 49.7	-1.3
	baz=252						
M02C				S	Sg	05 54 12.8	-0.8
	baz=252						
N02D	Trinity Center	1.69	86	P	Pb	05 53 50.8	-0.8
	baz=267,SNR=5.7						
N02D				S	Sg	05 54 14.1	-0.7
	baz=267						
O02D	Mt. Diablo Mer	1.78	112	P	Pn	05 53 50.2	-0.9
	baz=295,SNR=36						
O02D				S	Sb	05 54 14.1	-1.2
	baz=295						
YBH	Yreka Blue Hor	1.89	62	Pn	Pb	05 53 54.2	-0.7
	baz=232,slow=12,SNR=2.1						
YBH				Sn	Sb	05 54 18.9	+0.4
	15nm,0.3s,baz=156,slow=17,SNR=8.2						
K02D	Willamette Mer	2.06	27	P	Pn	05 53 54.6	-0.4
	baz=206,SNR=14						
K02D				S	Sb	05 54 22.2	-1.3
	baz=206						
L04D	Klamath Falls	2.39	55	P	Pb	05 54 02.5	-1.0
	baz=236,SNR=13						
J01E	Myrtle Point	2.41	18	P	Pn	05 53 59.7	-0.1
	baz=197						
J01E				S	Sn	05 54 29.3	0.0
	baz=197						
O03E	Paynes Creek	2.46	102	P	Pn	05 54 00.2	-0.3
	baz=285						
O03E				S	Sn	05 54 30.5	-0.1
	baz=285						
K04D	Chiloquin, OR	2.96	53	P	Pb	05 54 09.8	-3.4
	baz=234						
I03D	Drain, OR	3.06	22	P	Pn	05 54 09.2	+0.5
	baz=202						
I03D				S	Sn	05 54 47.3	+1.9
	baz=202						
J04D	Umpqua Nationa	3.17	41	P	Pb	05 54 13.3	-3.5
	baz=222						
I02D	Swisshome	3.33	14	P	Pn	05 54 12.3	-0.2
	baz=193						
I02D				S	Sn	05 54 52.1	0.0
	baz=193						
I04A	Tendick Farm,	3.47	32	P	Pn	05 54 16.5	+2.1
	baz=212,SNR=8.2						
J05D	Fort Rock, OR	3.66	48	P	Pn	05 54 19.5	+2.3
	baz=229,SNR=12						
H04D	Lebanon	4.00	23	P	Pn	05 54 22.9	+1.3
	baz=204,SNR=21						
H04D				S	Sn	05 55 10.9	+2.4
	baz=204						
I05D	Terrebonne, OR	4.37	36	P	Pn	05 54 29.9	+3.2
	baz=218						
G03D	McMinnville, O	4.51	15	P	Pn	05 54 29.3	+0.6
	baz=196						
G03D				S	Sn	05 55 22.3	+1.2
	baz=196						
G05D	Wamic, OR	5.11	30	P	Pn	05 54 39.4	+2.4
	baz=212						
NVAR	Mina Array Bea	5.67	113	Pn	Pn	05 54 45.6	+0.9
	baz=291,slow=13,SNR=1.4						
ISA	Isabella, Lake	7.27	134	P	Pn	05 55 07.5	+0.9
	baz=318						
EDW2	Edwards Air Fo	8.11	135	P	Pn	05 55 17.9	-0.3
	baz=320						
HEC	Hector,Ludlow	9.09	129	P	Pn	05 55 31.9	+0.4
	baz=315						
BELC	Belle Mtn. Jos	9.87	131	P	Pn	05 55 41.8	-0.5
	baz=317						
PFO	Pinyon Flats O	9.90	134	Pn	Pn	05 55 42.5	-0.2
	1.7nm,0.3s,baz=320,slow=12,SNR=6.6						
PFO	Pinyon Flats O	9.90	134	P	Pn	05 55 43.2	+0.4
	baz=320						
TXAR	Lajitas Array	20.80	117	P	Pn	05 58 01.8	-2.4
	2.2nm,0.9s,baz=310,slow=11,SNR=3.7						
ULM	Lac du Bonnet	22.28	55	P	P	05 58 18.2	+0.7
	4.6nm,0.8s,baz=261,slow=14,SNR=3.5						
YKA	Yellowknife Ar	22.53	13	P	P	05 58 21.1	+1.2
	3.2nm,1.1s,baz=198,slow=11,SNR=2.7						
ILAR	Eielson Array	27.08	339	P	P	05 59 03.1	+0.4
	0.5nm,0.7s,baz=152,slow=8.1,SNR=3.2						

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*IDC **10** 05:54:40.0±2.9, 40°.82N×124°.96W, h0^{km}, mb3.5/2, mb1 4.0/4, mb1mx3.6/48, mbtmp3.6/4, ML3.6/2, Error ellipse: s-maj=34.1km s-min=19.4km az=96.0*

*ANF **10** 05:54:40.8±1.4, 40°.89N×124°.92W, h0^{km}, Error ellipse: s-maj=14.0km s-min=7.3km az=73.0*

ISC 10 05:54:41.0±1.9**, 40°.87N**±0°.07×**124°.95W**±0°.10**, h10^{km}, n20, σ1^{s}.52**/27**, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
L02E	Cave Junction	1.64	38	P	Pb	05 55 10.1	-1.3
	baz=218,SNR=11						
L02E				S	Sb	05 55 32.4	+0.4
	baz=218						
M02C	Callahan	1.67	71	P	Pn	05 55 10.5	+0.1
	baz=253						
M02C				S	Sg	05 55 34.0	-0.7
	baz=253						
N02D	Trinity Center	1.71	86	P	Pn	05 55 10.8	-0.1
	baz=268						
O02D	Mt. Diablo Mer	1.79	112	P	Pn	05 55 11.2	-0.7
	baz=295,SNR=15						
YBH	Yreka Blue Hor	1.90	62	Pn	Pb	05 55 14.3	-1.4
	baz=118,slow=18,SNR=1.3						
YBH				Sn	Sb	05 55 38.4	-1.1
	3.3nm,0.3s,baz=55,slow=22,SNR=2.6						
K02D	Willamette Mer	2.06	27	P	Pn	05 55 15.4	-0.4
	baz=208,SNR=18						
K02D				S	Sb	05 55 42.9	-1.5
	baz=208						
L04D	Klamath Falls	2.40	55	P	Pb	05 55 23.6	-0.8
	baz=237						
J01E	Myrtle Point	2.42	18	P	Pn	05 55 21.0	+0.5
	baz=198						
J01E				S	Sb	05 55 51.7	-2.6
	baz=198						
O03E	Paynes Creek	2.46	102	P	Pn	05 55 20.9	-0.4
	baz=285						
I03D	Drain, OR	3.07	22	P	Pn	05 55 30.0	+0.5
	baz=203						
I03D				S	Sn	05 56 08.3	+2.1
	baz=203						
I02D	Swisshome	3.34	14	P	Pn	05 55 32.9	-0.3
	baz=194						
I02D				S	Sn	05 56 12.4	-0.5
	baz=194						
I04A	Tendick Farm,	3.48	32	P	Pn	05 55 37.2	+2.0
	baz=213,SNR=8.9						
J05D	Fort Rock, OR	3.67	48	P	Pn	05 55 40.8	+2.9
	baz=230,SNR=13						
H04D	Lebanon	4.00	23	P	Pn	05 55 43.7	+1.3
	baz=205,SNR=9.9						
H04D				S	Sn	05 56 32.1	+2.9
	baz=205						
I05D	Terrebonne, OR	4.37	36	P	Pn	05 55 50.3	+2.8
	baz=219						
G03D	McMinnville, O	4.51	15	S	Sn	05 56 42.8	+0.8
	baz=196						
NVAR	Mina Array Bea	5.68	113	Pn	Pn	05 56 07.5	+1.9
	0.4nm,0.3s,baz=273,slow=15,SNR=3.2						
PFO	Pinyon Flats O	9.91	134	Pn	Pn	05 57 03.6	0.0
	0.4nm,0.3s,baz=316,slow=12,SNR=3.5						
TXAR	Lajitas Array	20.82	117	P	Pn	05 59 24.4	-0.7
	2.4nm,0.8s,baz=305,slow=8.6,SNR=5.1						
YKA	Yellowknife Ar	22.53	13	P	P	05 59 41.3	+0.6
	1.1nm,0.7s,baz=196,slow=10,SNR=4.2						

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*IDC **10** 05:58:46.5±1.2, 4°.90S×104°.45E, h0^{km}, mb3.9/5, mb1 4.1/5, mb1mx3.7/46, mbtmp3.9/5, Error ellipse: s-maj=72.0km s-min=23.3km az=45.0*

*NEIC **10** 05:59:01.6±2.7, 5°.42S±0°.08×104°.49E±0°.09, h122^{km}±6^{km}, mb4.2/8, Error ellipse: s-maj=16.8km s-min=3.8km az=224.0*

*DJA **10** 05:59:02.9±0.5, 5°S±7°×10°5E±°, h109^{km}±5^{km}, M4.3/8, mb5.0/1, MLv4.0/8*

ISC 10 05:59:01.6±0.7**, 5°.38S**±0°.07×**104°.46E**±0°.06**, h124^{km}**±6^{km}**, n39, σ1^{s}.83**/46**, mb4.1**/9**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	Kota Agung	0.15	167	P	Pn	05 59 19.9	+1.3
KASI				S	Sn	05 59 33.5	+2.0
LWLI	Liwa	0.54	312	P	Pn	05 59 21.0	+0.6
BLSI	Bandar Lampung	0.78	89	P	Pn	05 59 22.3	+0.3
BLSI				S	Sn	05 59 36.8	-0.6
MDSI	Maura Dua	0.93	342	P	Pn	05 59 22.3	-1.0
MDSI				S	Sn	05 59 37.6	-2.2
MNAI	Manna	1.81	304	P	Pn	05 59 34.0	+1.0
MNAI	Manna	1.81	304		Pn	05 59 34.0	+1.0
MNAI				Sn	Sn	05 59 58.5	+1.6
SBJI	Serang	1.82	114	P	Pn	05 59 34.8	+1.8
KSI	Kapahiang	2.53	313	P	Pn	05 59 45.4	+3.4
DBJI	Dramaga	2.56	117	P	Pn	05 59 44.8	+2.5
SKJI	Sukabumi	2.64	128	P	Pn	05 59 45.8	+2.5
CNJI	Cibinong	3.27	126	P	Pn	05 59 52.8	+1.2
CISI	Cisompet, Garu	3.97	123	P	Pn	06 00 02.4	+1.5
CISI	Cisompet, Garu	3.97	123	Pn	Pn	05 59 58.5	-2.4
CISI					Sn	06 00 45.7	-1.3
KRJI	Kerinci	4.43	317	P	Pn	06 00 08.9	+1.8
PPSI	Pulau Pagai	5.14	300	P	Pn	06 00 16.2	-0.4
XMIS	Christmas Isla	5.21	167	Pn	Pn	06 00 15.8	-1.6
XMIS				Sn	Sn	06 01 10.6	-5.9
UGM	Wanagama	6.53	113	Pn	Pn	06 00 36.2	+1.0
UGM				Sn	Sn	06 01 48.2	-0.1
FITZ	Fitzroy Crossi	24.25	123	P	P	06 04 07.2	+0.1
	0.7nm,0.5s,baz=311,slow=9.3,SNR=5.3						
FITZ	Fitzroy Crossi	24.25	123	P	P	06 04 06.8	-0.4
WB0	Warramunga Arr	32.44	119	P	P	06 05 20.8	+0.6
WB0				IAmb	IAmb	06 05 38.4	
	comp=Z,9.1nm,1.4s						
WRA	Warramunga Arr	32.46	119	P	P	06 05 21.1	+0.7
	comp=Z,1.0nm,0.3s,baz=305,slow=8.9,SNR=22						
WRA	Warramunga Arr	32.46	119	P	P	06 05 20.4	-0.1
WB2	Warramunga Arr	32.47	119	P	P	06 05 21.1	+0.6
WB2				IAmb	IAmb	06 05 21.2	
	comp=Z,2.4nm,0.7s						
WR0	Warramunga Arr	32.64	119	P	P	06 05 22.6	+0.6
WR0				IAmb	IAmb	06 05 38.1	
	comp=Z,16nm,1.5s						
ASAR	Alice Springs	33.68	126	P	P	06 05 32.3	+1.3
	comp=Z,0.8nm,0.3s,baz=295,slow=7.6,SNR=16						
ASAR				PcP	PcP	06 08 09.2	+1.0
	comp=Z,0.5nm,0.5s,baz=310,slow=2.5,SNR=5.6						
ASAR	Alice Springs	33.68	126	P	P	06 05 32.0	+1.0
NACB	Ninganchiao	33.79	29	P	P	06 05 29.5	-2.3
STKA	Stephens Creek	43.59	132	P	P	06 06 55.7	+2.1
	comp=Z,4.7nm,0.5s,baz=306,slow=7.0,SNR=17						
STKA	Stephens Creek	43.59	132	P	P	06 06 55.6	+1.9
STKA				IAmb	IAmb	06 06 56.2	
	comp=Z,1.4nm,0.6s						
MKAR	Makanchi Array	55.54	342	P	P	06 08 20.6	-3.3
	comp=Z,0.1nm,0.4s,baz=154,slow=10,SNR=5.7						
MKAR	Makanchi Array	55.54	342	P	P	06 08 23.0	-0.9
ABKAR	Akbulak array	66.75	330	P	P	06 09 36.6	-2.8
QSPA	South Pole Qui	84.60	180	P	P	06 11 22.3	+1.4
QSPA				IAmb	IAmb	06 11 36.5	
	comp=Z,4.3nm,1.2s						
CPUP	Villa Florida	143.87	208	PKP	PKPdf	06 18 23.2	+0.2
	comp=Z,1.3nm,0.6s,baz=72,slow=3.6,SNR=5.8						
CPUP	Villa Florida	143.87	208		PKPdf	06 18 22.9	-0.1
TXAR	Lajitas Array	144.30	45	PKP	PKPbc	06 18 23.4	+1.0
	comp=Z,0.3nm,0.8s,baz=306,slow=0.8,SNR=3.3						
TXAR	Lajitas Array	144.30	45		PKPab	06 18 22.5	+0.4
BDFB	Brasilia	145.66	232	PKPbc	PKPab	06 18 29.2	+1.8
	comp=Z,1.2nm,0.5s,baz=120,slow=7.1,SNR=3.4						
BDFB	Brasilia	145.66	232		PKPdf	06 18 26.4	-0.1

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*IDC **10** 05:59:53.5±2.0, 59°.77N×153°.68W, h112^{km}±31^{km}, mb3.3/2, mb1 3.3/6, mb1mx3.0/50, mbtmp3.5/6, Error ellipse: s-maj=38.4km s-min=18.7km az=108.0*

*NEIC **10** 05:59:54.6±1.4, 59°.77N±0°.04×153°.33W±0°.07, h133^{km}±3^{km}, Error ellipse: s-maj=5.5km s-min=5.4km az=169.0*

*AEIC **10** 05:59:56.0±1.6, 59°.80N±0°.04×153°.37W±0°.09, h128^{km}±3^{km}, ML3.1/106, Error ellipse: s-maj=6.4km s-min=5.4km az=107.0*

ISC 10 05:59:54.5±0.8**, 59°.80N**±0°.04×**153°.35W**±0°.04**, h134^{km}**±6^{km}**, n108, σ0^{s}.86**/126**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILS	Iliamna Low So	0.21	42		Pn	06 00 13.0	0.0
ILS					Sn	06 00 26.5	-0.5
IVE	Iliamna Volcan	0.27	37		Pn	06 00 13.2	-0.1
IVE					Sn	06 00 27.1	-0.3
ILW	Iliamna West	0.28	22		Pn	06 00 13.2	-0.2
AUL	Augustine Lava	0.42	186		Pn	06 00 13.8	+0.1
AUL					Sn	06 00 28.0	-0.1
AU22	Augustine Moun	0.43	181		Pn	06 00 13.7	0.0
AU22					Sn	06 00 27.5	-0.6
AUW	Augustine West	0.44	188		Pn	06 00 13.9	+0.2
AUH	Augustine H	0.44	186		Pn	06 00 13.9	+0.1
AUP	Augustine Pinn	0.44	185		Pn	06 00 14.0	+0.1
RED	Redoubt Volcan	0.68	25		Pn	06 00 15.5	+0.2
RED					Sn	06 00 30.8	-0.4
RSO	Redoubt South	0.73	24		Pn	06 00 15.9	+0.2
RSO				Sn	Sn	06 00 31.6	-0.3
RDWB	Redoubt West	0.73	20		Pn	06 00 15.9	+0.1
RDWB					Sn	06 00 31.4	-0.5
RDJH	Redoubt Jeurge	0.84	19		Pn	06 00 16.9	+0.3
DFR	Drift River	0.86	22		Pn	06 00 17.0	+0.3
DFR					Sn	06 00 33.3	-0.3
HOM	Homer	0.88	99		Pn	06 00 17.1	+0.4
HOM					Sn	06 00 33.7	+0.3
CNPM	China Poot	1.11	103		Pn	06 00 19.1	+0.2
CNPM					Sn	06 00 36.3	-1.0
BRLK	Bradley Lake	1.25	91		Pn	06 00 20.4	+0.2
BRLK					Sn	06 00 38.8	-1.0
BRSE	Bradley Lake S	1.32	91		Pn	06 00 21.2	+0.2
KAHC	Katmai Hardscr	1.44	217		Pn	06 00 22.2	-0.1
KAHG	Katmai Hook Gl	1.45	206		Pn	06 00 22.7	+0.3
CAPN	Captain Cook N	1.46	47		Pn	06 00 24.6	+2.2
SPCR	Spurr Chakacha	1.51	21		Pn	06 00 23.7	+0.6
SPBG	Spurr Blockage	1.54	18		Pn	06 00 24.4	+0.9
SPBG					Sn	06 00 46.8	+1.3
KAWH	Katmai	1.61	208		Pn	06 00 24.1	-0.1
SVW2	Sparrevohn	1.71	321		Pn	06 00 25.2	0.0
SVW2					Sn	06 00 47.4	-1.4
SLKM	Skilak Lake	1.72	64		Pn	06 00 25.7	+0.3
KCG	Knife Ck. Glac	1.75	212		Pn	06 00 26.0	+0.1
KABU	Katmai Buttres	1.83	214		Pn	06 00 27.1	+0.3
KABU					Sn	06 00 50.8	-0.7
STLK	Strandline Lak	1.86	23		Pn	06 00 28.1	+1.0
SEW	Seward	1.98	79		Pn	06 00 29.1	+0.7
KDAK	Kodiak Island	2.06	169	P	Pn	06 00 28.5	-0.9
	2.5nm,0.3s,baz=230,slow=17,SNR=60						
KDAK				S	Sn	06 00 53.7	-2.4
	31nm,0.3s,baz=139,slow=20,SNR=50						
RC01	Rabbit Creek A	2.21	53		Pn	06 00 31.6	+0.4
RC01					Sn	06 00 58.8	-0.6
PLK2	Peulik 2	2.56	218		Pn	06 00 36.4	+0.7
OHAK	Old Harbor	2.59	179		Pn	06 00 34.7	-1.2
PLK3	Peulik 3	2.61	217		Pn	06 00 36.8	+0.6
PWL	Port Wells	2.71	65		Pn	06 00 37.1	-0.4
PMR	Palmer	2.74	47		Pn	06 00 37.5	-0.3
KNK	Knik Glacier	2.90	54		Pn	06 00 39.6	-0.4
GHO	Glory Hole Cre	2.94	46		Pn	06 00 40.1	-0.4
PPLA	Purkeypile	3.16	10		Pn	06 00 44.9	+1.5
SML	Sawmill	3.18	49		Pn	06 00 43.0	-0.5
SII	Sitkinak Islan	3.28	188	Pn	Pn	06 00 44.3	-0.6
GLI	Glacier Island	3.29	68		Pn	06 00 45.5	+0.5
TT01	Tatalina	3.37	339		Pn	06 00 46.2	+0.2
HIN	Hinchinbrook I	3.48	77	Pn	Pn	06 00 48.4	+0.9
FID	Port Fidalgo	3.55	71		Pn	06 00 47.1	-1.3
SCM	Sheep Creek Mo	3.58	53		Pn	06 00 48.5	-0.4
WAT1	Susitna Watana	3.82	35		Pn	06 00 51.9	-0.1
EYAK	Cordova Ski Ar	3.87	76		Pn	06 00 53.0	+0.5
WAT6	Susitna Watana	3.89	42		Pn	06 00 52.6	-0.4
WAT2	Susitna Watana	3.91	34		Pn	06 00 53.1	-0.1
KTH	Kantishna Hill	3.94	16		Pn	06 00 53.9	+0.3
TRF	Thorofare Moun	3.94	20		Pn	06 00 53.9	+0.2
RND	Reindeer	4.21	29		Pn	06 00 57.0	0.0
DHY	Denali Highway	4.36	39		Pn	06 00 59.3	+0.1
GOAT	Goat Mountain	4.37	76		Pn	06 00 59.1	-0.2
CHGN	Chignik	4.42	220	Pn	Pn	06 00 59.7	-0.2
BPAW	Bear Paw Mtn.	4.46	13		Pn	06 01 00.8	+0.4
MCK	McKinley	4.47	26		Pn	06 01 00.9	+0.4
PS11	TAPS Pump St11	4.47	56		Pn	06 01 00.2	-0.3
BWN	Browne	4.75	21		Pn	06 01 05.0	+0.7
PAX	Paxson	4.94	47		Pn	06 01 07.2	+0.3
GLB	Gilahina Butte	4.98	67		Pn	06 01 07.6	+0.3
VRDI	Verde Repeater	5.09	69		Pn	06 01 09.9	+0.9
CRQM	Cirque	5.17	75		Pn	06 01 10.6	+0.6
NEA	Nenana	5.19	21		Pn	06 01 10.2	+0.1
WRH	Wood River Hil	5.30	25		Pn	06 01 11.4	0.0
TGL	Tana Glacier	5.32	75	Pn	Pn	06 01 12.8	+0.9
MCARA	McCarthy VSAT	5.33	68		Pn	06 01 13.1	+1.1
MLY	Manley	5.39	12		Pn	06 01 12.2	-0.5
CCB	Clear Creek Bu	5.51	26		Pn	06 01 14.1	-0.3
HDA	Harding Lake	5.51	30		Pn	06 01 14.2	-0.2
PTPK	Patty Peak	5.56	71		Pn	06 01 16.2	+1.0
KIAG	Kiagna River	5.57	74		Pn	06 01 15.9	+0.6
BALM	Baldy	5.59	72		Pn	06 01 16.6	+1.0
RIDG	Independent Ri	5.65	42		Pn	06 01 16.8	+0.6
PS08	TAPS Pump Stn8	5.66	30		Pn	06 01 15.8	-0.4
MDM	Murphy Dome	5.70	22		Pn	06 01 16.6	-0.3
COLA	College	5.70	24	Pn	Pn	06 01 16.1	-0.7
IL31		5.83	28		Pn	06 01 18.4	-0.1
ILAR	Eielson Array	5.83	28	P	Pn	06 01 18.1	-0.5
	2.1nm,0.3s,baz=217,slow=14,SNR=112						
ILAR				S	Sn	06 02 21.2	-3.0
	0.5nm,0.3s,baz=211,slow=19,SNR=4.2						
ILAR	Eielson Array	5.83	28		Pn	06 01 17.8	-0.8
GRNC	Granite Creek	5.85	76		Pn	06 01 20.1	+1.0
DOT	Dot Lake	5.86	45	Pn	Pn	06 01 18.9	-0.2
BARN	Barnard Glacie	5.92	73		Pn	06 01 21.5	+1.4
CTGM	Chitina Glacie	6.07	74		Pn	06 01 23.6	+1.5
SCRK	Sand Creek	6.09	43		Pn	06 01 21.8	-0.5
IM03		6.21	358		Pn	06 01 24.6	+1.0
IMAR	Indian Mountai	6.21	358		Pn	06 01 24.0	+0.3
YUK2	White River	6.44	67		Pn	06 01 28.2	+1.3
BC03		6.44	54		Pn	06 01 27.2	+0.4
BCAR	Beaver Creek A	6.44	54		Pn	06 01 26.5	-0.4
PCA	Pinnacle	6.58	82		Pn	06 01 30.1	+1.3
YUK3	Moose Creek	6.61	67		Pn	06 01 30.6	+1.3
PNL	Peninsula	7.05	85		Pn	06 01 36.0	+0.9
EGAK	Eagle	7.56	43		Pn	06 01 41.4	-0.4
FYU	Fort Yukon	7.71	25	Pn	Pn	06 01 44.4	+0.5
DAWY	Dawson	7.84	51		Pn	06 01 46.1	+0.4
HYT	Haines Junctio	7.93	76	Pn	Pn	06 01 49.1	+2.0
BM03	Burnt Mountain	8.57	23		Pn	06 01 55.2	-0.3
BMAR	Burnt Mountain	8.58	23	Pn	Pn	06 01 55.1	-0.5
WHY	Whitehorse	9.22	77	Pn	Pn	06 02 06.9	+2.6
UNV	Unalaska Valle	9.35	236	Pn	Pn	06 02 05.8	-0.2
INK	Inuvik	12.10	37	P	Pn	06 02 44.5	+2.2
	0.2nm,0.3s,baz=226,slow=7.4,SNR=5.9						
INK				S	Sn	06 04 52.8	-2.7
	0.2nm,0.3s,baz=3.9,slow=24,SNR=4.8						
INK	Inuvik	12.10	37		Pn	06 02 41.1	-1.2
MOBC	Moresby Island	13.52	110	Pn	Pn	06 03 01.9	+1.1
YKA	Yellowknife Ar	18.69	65	P	Pn	06 04 04.1	+0.1
	0.1nm,0.3s,baz=279,slow=11,SNR=6.2						
ZALV	Zalesovo Beam	57.43	323	P	P	06 09 29.5	+0.9
	1.0nm,0.4s,baz=29,slow=8.0,SNR=4.4						

MKAR	**Makanchi Array**	**64.48**	**321**	P	**P**	**06 10 16.8**	**+0.5**
	0.2nm,0.6s,baz=46,slow=8.3,SNR=3.0						

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*NEIC **10** 06:21:14.0±2.2, 40°.54N±0°.05×125°.37W±0°.03, h2^{km}±8^{km}, Error ellipse: s-maj=7.4km s-min=2.2km az=161.0*
*ANF **10** 06:21:15.2±1.4, 40°.53N×125°.24W, h0^{km}, Error ellipse: s-maj=14.8km s-min=8.9km az=35.0*
*NCEDC **10** 06:21:15.8±2.4, 40°.57N±0°.03×125°.37W±0°.06, h10^{km}±2^{km}, ML3.2/13, Error ellipse: s-maj=7.6km s-min=5.7km az=273.0*
*IDC **10** 06:21:20.1±1.9, 40°.61N×124°.70W, h0^{km}, mb3.3/4, mb1 3.6/5, mb1mx3.4/31, mbtmp3.3/5, ML2.9/1, Error ellipse: s-maj=23.1km s-min=15.4km az=55.0*
ISC 10 06:21:16.0±1.5, **40°.55N**±0°.04×**125°.28W**±0°.08, **h14**^{km}, **n80**, σ1^{s}.**20**/81, **mb3.6**/3, **Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMPM	**Mount Pierce**	**0.89**	**98**		**Pg**	**06 21 33.3**	**0.0**
JCC	**Jacoby Creek,**	**0.99**	**74**		**Pb**	**06 21 34.1**	**-0.8**
JCC					**Sg**	**06 21 47.7**	**-0.3**
KCRM	**Chalk Rock**	**1.12**	**96**		**Pb**	**06 21 36.6**	**-0.5**
KRPM	**Rodgers**	**1.13**	**57**		**Pb**	**06 21 35.8**	**-1.5**
KHMM	**Horse Mountain**	**1.22**	**74**		**Pn**	**06 21 38.2**	**-0.6**
KMRM	**Mail Ridge**	**1.24**	**105**		**Pn**	**06 21 39.3**	**+0.3**
KCSM	**Cold Springs**	**1.35**	**90**		**Pn**	**06 21 40.2**	**-0.3**
KRMB	**Red Mountain**	**1.42**	**46**	Pn	**Pn**	**06 21 40.3**	**-1.2**
KBSM	**Bell Springs**	**1.44**	**116**		**Pn**	**06 21 41.2**	**-0.5**
KCPM	**Cahto Peak**	**1.56**	**123**		**Pn**	**06 21 42.9**	**-0.6**
KIPM	**Iron Peak**	**1.56**	**118**		**Pn**	**06 21 43.1**	**-0.3**
KOMM	**Orleans Mounta**	**1.56**	**62**		**Pn**	**06 21 43.0**	**-0.5**
KHBM	**Hayfork Bally**	**1.57**	**85**		**Pn**	**06 21 42.9**	**-0.8**
KSXB	**Camp Six Broad**	**1.66**	**39**		**Pn**	**06 21 43.3**	**-1.5**
KFPM	**Farley Peak**	**1.69**	**122**		**Pn**	**06 21 44.4**	**-0.7**
KBNM	**Bluenose Ridge**	**1.73**	**112**		**Pn**	**06 21 46.4**	**+0.7**
GTC	**Three Chop Rid**	**1.75**	**130**		**Pn**	**06 21 45.2**	**-0.7**
KBO	**Bosley Butte**	**1.84**	**25**		**Pn**	**06 21 45.4**	**-1.8**
LBPM	**Beegum Peak**	**1.84**	**96**		**Pn**	**06 21 47.0**	**-0.3**
GNAM	**Navarro Ridge**	**1.85**	**136**		**Pn**	**06 21 46.7**	**-0.7**
KRKM	**Rackout Spring**	**1.89**	**121**		**Pn**	**06 21 47.4**	**-0.5**
LGPM	**Granite Peak**	**1.90**	**78**		**Pn**	**06 21 47.3**	**-0.8**
O02D	**Mt. Diablo Mer**	**1.94**	**100**		**Pn**	**06 21 48.6**	**0.0**
O02D	**Mt. Diablo Mer**	**1.94**	**100**	P	**Pn**	**06 21 48.7**	**0.0**
	baz=282,SNR=18						
N02D	**Trinity Center**	**2.00**	**77**	S	**Sb**	**06 22 16.2**	**-0.8**
	baz=260						
GHOM	**Hamilton Openi**	**2.01**	**138**		**Pn**	**06 21 48.7**	**-0.9**
L02E	**Cave Junction**	**2.04**	**38**	P	**Pn**	**06 21 49.1**	**-0.9**
	baz=220						
LBKM	**Bonanza King**	**2.06**	**74**		**Pn**	**06 21 49.9**	**-0.3**
WDC	**Whiskeytown Da**	**2.09**	**88**	Pn	**Pn**	**06 21 50.9**	**+0.4**
GHMM	**Hull Mountain**	**2.09**	**120**		**Pn**	**06 21 50.4**	**-0.3**
GROM	**Round Mountain**	**2.09**	**107**		**Pn**	**06 21 51.2**	**+0.4**
GVV	**Valley View**	**2.14**	**110**		**Pn**	**06 21 52.1**	**+0.7**
GASB	**Alder Springs**	**2.16**	**114**		**Pn**	**06 21 51.8**	**+0.2**
GGUM	**Gualala**	**2.18**	**140**		**Pn**	**06 21 50.9**	**-0.9**
YBH	**Yreka Blue Hor**	**2.27**	**58**	Pn	**Pn**	**06 21 53.2**	**0.0**
	2.1nm,0.3s,baz=143,slow=7.5,SNR=3.9						
YBH				Sn	**Sn**	**06 22 19.8**	**-1.2**
	14nm,0.3s,baz=153,slow=18,SNR=12						
GSNM	**Snow Mountain**	**2.27**	**134**		**Pn**	**06 21 52.5**	**-0.6**
GHLM	**Highland Sprin**	**2.30**	**130**		**Pn**	**06 21 52.9**	**-0.7**
HOPS	**Hopland Field**	**2.30**	**132**		**Pn**	**06 21 52.9**	**-0.6**
LTCM	**Tuscan Springs**	**2.43**	**97**		**Pn**	**06 21 55.5**	**+0.2**
K02D	**Willamette Mer**	**2.46**	**29**	P	**Pn**	**06 21 54.9**	**-0.9**
	baz=212,SNR=12						
GPMM	**Pine Mountain**	**2.48**	**133**		**Pn**	**06 21 55.4**	**-0.5**
O03E	**Paynes Creek**	**2.67**	**94**	P	**Pn**	**06 21 58.6**	**0.0**
	baz=277,SNR=10.0						
HUMO	**Hull Mountain**	**2.69**	**40**	Pn	**Pn**	**06 21 59.1**	**+0.1**
L04D	**Klamath Falls**	**2.79**	**52**	P	**Pn**	**06 22 02.4**	**+2.0**
	baz=235,SNR=13						
L04D				S	**Sb**	**06 22 36.3**	**-3.5**
	baz=235						
M04C	**Macdoel**	**2.88**	**63**	P	**Pn**	**06 22 03.3**	**+1.8**
	baz=247						
ORV	**Oroville**	**3.07**	**108**		**Pn**	**06 22 04.1**	**+0.1**
K04D	**Chiloquin, OR**	**3.36**	**51**	P	**Pn**	**06 22 09.5**	**+1.3**
	baz=234						
I03D	**Drain, OR**	**3.46**	**24**	P	**Pn**	**06 22 09.3**	**-0.1**
	baz=206						
J04D	**Umpqua Nationa**	**3.58**	**40**	P	**Pn**	**06 22 13.1**	**+1.8**
	baz=223						
AFDM	**Forest Hills D**	**3.69**	**114**		**Pn**	**06 22 12.8**	**+0.3**
BEKR	**Beckworth**	**3.83**	**99**		**Pn**	**06 22 16.7**	**+2.1**
I04A	**Tendick Farm,**	**3.88**	**32**	P	**Pn**	**06 22 16.6**	**+1.4**
	baz=215						
J05D	**Fort Rock, OR**	**4.07**	**47**	P	**Pn**	**06 22 19.1**	**+1.1**
	baz=230,SNR=14						
RUBR	**Rubicon Trail**	**4.22**	**109**	Pn	**Pn**	**06 22 22.8**	**+2.7**
H04D	**Lebanon**	**4.39**	**24**	P	**Pn**	**06 22 23.6**	**+1.4**
	baz=207						
VCNR	**Virginia City**	**4.50**	**104**		**Pn**	**06 22 25.5**	**+1.5**
CMB	**Columbia Colle**	**4.55**	**122**		**Pn**	**06 22 25.8**	**+1.3**
PINE	**Pine Mountain**	**4.57**	**43**		**Pn**	**06 22 26.5**	**+1.6**
PAHR	**Pah Rah Range**	**4.60**	**99**		**Pn**	**06 22 25.6**	**+0.5**
PNTR	**Pine Nut**	**4.61**	**107**		**Pn**	**06 22 26.9**	**+1.5**
SAO	**San Andreas Ge**	**4.82**	**140**	Pn	**Pn**	**06 22 25.8**	**-2.4**
YERR	**Yerington**	**4.91**	**107**		**Pn**	**06 22 30.0**	**+0.5**
I07A	**Izee**	**5.55**	**49**		**Pn**	**06 22 40.3**	**+2.1**
RYN	**Ryan**	**5.56**	**108**		**Pn**	**06 22 39.6**	**+1.1**
PMPB	**Monarch Peak**	**5.58**	**139**	Pn	**Pn**	**06 22 38.5**	**-0.1**
MDPB	**Devils Postpil**	**5.63**	**119**		**Pn**	**06 22 40.7**	**+1.2**
KVN	**Kaiserville**	**5.73**	**103**		**Pn**	**06 22 41.4**	**+0.6**
G06A	**Carlson Farm,**	**5.79**	**35**	Pn	**Pn**	**06 22 42.6**	**+1.1**
NVAR	**Mina Array Bea**	**5.80**	**109**	Pn	**Pn**	**06 22 43.2**	**+1.4**
	0.4nm,0.3s,baz=292,slow=15,SNR=12						
NVAR				Lg	Lg	06 24 09.0	
	baz=288,slow=18,SNR=1.8						
NVAR	**Mina Array Bea**	**5.80**	**109**		**Pn**	**06 22 42.1**	**+0.3**
J08A	**Circle Bar Ran**	**5.80**	**59**		**Pn**	**06 22 42.4**	**+0.7**
NV11	**Mina Array Sit**	**5.90**	**109**	Pn	**Pn**	**06 22 44.1**	**+1.0**
G08A	**Pilot Rock**	**6.63**	**42**		**Pn**	**06 22 55.1**	**+2.0**
ISA	**Isabella, Lake**	**7.25**	**130**		**Pn**	**06 23 03.5**	**+2.0**
BMO	**Blue Mountains**	**7.28**	**51**		**Pn**	**06 23 03.8**	**+1.9**
E08A	**Dider Farm, El**	**7.46**	**35**	Pn	**Pn**	**06 23 04.5**	**+0.1**
TXAR	**Lajitas Array**	**20.90**	**116**	P	Pn	06 26 01.1	+0.6
	0.3nm,0.7s,baz=296,slow=8.2,SNR=5.7						
ULM	**Lac du Bonnet**	**22.68**	**55**	P	**P**	**06 26 18.1**	**+1.2**
	2.1nm,0.9s,baz=258,slow=10,SNR=6.6						
YKA	**Yellowknife Ar**	**22.89**	**13**	P	**P**	**06 26 21.6**	**+2.7**
	0.4nm,0.8s,baz=199,slow=10,SNR=3.2						
INK	**Inuvik**	**28.17**	**354**	P	P	06 27 15.1	+7.6
	0.6nm,0.5s,baz=123,slow=8.5,SNR=4.9						

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*NEIC **10** 06:22:43.5±1.5, 40°.73N±0°.04×125°.19W±0°.08, h15^{km}±9^{km}, Error ellipse: s-maj=9.5km s-min=5.5km az=73.0*
*ANF **10** 06:22:45.4±1.2, 40°.91N×124°.92W, h0^{km}, ML3.6/5, Error ellipse: s-maj=12.5km s-min=5.9km az=66.0*
*NCEDC **10** 06:22:45.9±2.6, 40°.72N±0°.04×124°.94W±0°.07, h4^{km}±7^{km}, ML3.3/11, Error ellipse: s-maj=8.5km s-min=4.9km az=56.0*
*IDC **10** 06:22:46.7±1.8, 41°.18N×124°.99W, h0^{km}, mb3.2/4, mb1 3.6/7, mb1mx3.5/33, mbtmp3.2/7, ML3.2/3, Error ellipse: s-maj=23.2km s-min=16.5km az=40.0*
ISC 10 06:22:43.5±2.0, **40°.82N**±0°.04×**125°.10W**±0°.07, **h3**^{km}±12^{km}, **n94**, σ1^{s}.**44**/103, **mb3.2**/3, **Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCC	**Jacoby Creek,**	**0.81**	**89**		**Pb**	**06 23 00.2**	**-0.1**
JCC					**Sb**	**06 23 12.0**	**+0.4**
KMPM	**Mount Pierce**	**0.84**	**118**		**Pg**	**06 23 00.8**	**+1.1**
KMPM					**Sb**	**06 23 12.5**	**-0.2**
KRPM	**Rodgers**	**0.88**	**67**		**Pb**	**06 23 01.8**	**+0.3**
KHMM	**Horse Mountain**	**1.04**	**86**		**Pb**	**06 23 04.1**	**-0.1**
KCRM	**Chalk Rock**	**1.05**	**111**		**Pg**	**06 23 03.9**	**+0.2**
KRMB	**Red Mountain**	**1.14**	**51**		**Pg**	**06 23 05.2**	**-0.3**
KMRM	**Mail Ridge**	**1.21**	**119**	Pg	**Pg**	**06 23 07.0**	**+0.2**
KCSM	**Cold Springs**	**1.24**	**102**		**Pg**	**06 23 06.9**	**-0.4**
KOMM	**Orleans Mounta**	**1.33**	**69**		**Pg**	**06 23 08.3**	**-0.8**
KSXB	**Camp Six Broad**	**1.37**	**42**		**Pg**	**06 23 08.6**	**-1.2**
KHBM	**Hayfork Bally**	**1.44**	**96**		**Pg**	**06 23 09.6**	**-1.5**
KBSM	**Bell Springs**	**1.46**	**127**		**Pn**	**06 23 09.3**	**-1.6**
KBO	**Bosley Butte**	**1.54**	**25**		**Pn**	**06 23 10.9**	**-1.1**
KCPM	**Cahto Peak**	**1.62**	**134**		**Pn**	**06 23 11.1**	**-2.0**
KTRM	**Thompson Ridge**	**1.69**	**49**		**Pn**	**06 23 13.4**	**-0.8**
KBNM	**Bluenose Ridge**	**1.72**	**122**		**Pn**	**06 23 13.8**	**-0.8**
LGPM	**Granite Peak**	**1.72**	**86**		**Pn**	**06 23 13.7**	**-0.9**
KFPM	**Farley Peak**	**1.74**	**132**		**Pn**	**06 23 12.7**	**-1.9**
L02E	**Cave Junction**	**1.75**	**39**		**Pn**	**06 23 14.3**	**-0.5**
L02E	**Cave Junction**	**1.75**	**39**	P	**Pn**	**06 23 14.3**	**-0.5**
	baz=215,SNR=44						
L02E				S	**Sn**	**06 23 36.1**	**-1.5**
	baz=215						
LBPM	**Beegum Peak**	**1.76**	**106**		**Pn**	**06 23 14.1**	**-0.9**
M02C	**Callahan**	**1.79**	**70**		**Pn**	**06 23 15.1**	**-0.4**
M02C	**Callahan**	**1.79**	**70**	P	**Pn**	**06 23 15.0**	**-0.4**
	baz=248,SNR=18						
M02C				S	**Sb**	**06 23 37.7**	**-2.2**
	baz=248						
N02D	**Trinity Center**	**1.82**	**84**		**Pn**	**06 23 15.8**	**0.0**
N02D	**Trinity Center**	**1.82**	**84**	P	**Pn**	**06 23 15.7**	**-0.2**
	baz=262,SNR=24						
N02D				S	**Sn**	**06 23 38.9**	**-0.6**
	baz=262						
GTC	**Three Chop Rid**	**1.84**	**140**		**Pn**	**06 23 13.7**	**-2.4**
LBKM	**Bonanza King**	**1.86**	**81**		**Pn**	**06 23 16.5**	**0.0**
O02D	**Mt. Diablo Mer**	**1.87**	**109**		**Pn**	**06 23 16.1**	**-0.5**
O02D	**Mt. Diablo Mer**	**1.87**	**109**	P	**Pn**	**06 23 16.1**	**-0.5**
	baz=289,SNR=11						
O02D				S	**Sn**	**06 23 39.4**	**-1.4**
	baz=289						
WDC	**Whiskeytown Da**	**1.96**	**96**		**Pn**	**06 23 17.0**	**-0.6**
WDC	**Whiskeytown Da**	**1.96**	**96**		**Pn**	**06 23 17.6**	**0.0**
GNAM	**Navarro Ridge**	**1.97**	**145**		Pn	06 23 15.0	-2.8
YBH	**Yreka Blue Hor**	**2.02**	**62**	Pn	**Pn**	**06 23 18.5**	**-0.1**
	5.5nm,0.3s,baz=299,slow=7.3,SNR=8.4						
YBH				Sn	**Sb**	**06 23 44.1**	**-2.4**
	14nm,0.3s,baz=41,slow=19,SNR=6.3						
YBH	**Yreka Blue Hor**	**2.02**	**62**		**Pn**	**06 23 18.1**	**-0.5**
LAMM	**Antelope Mount**	**2.03**	**66**		**Pn**	**06 23 18.6**	**-0.2**
GROM	**Round Mountain**	**2.06**	**115**		**Pn**	**06 23 18.7**	**-0.5**
GHMM	**Hull Mountain**	**2.12**	**128**		**Pn**	**06 23 18.7**	**-1.4**
GVV	**Valley View**	**2.12**	**118**		**Pn**	**06 23 19.4**	**-0.7**
LCSM	**College of the**	**2.13**	**73**		**Pn**	**06 23 20.5**	**+0.4**
KEBM	**Edson Butte**	**2.13**	**15**		**Pn**	**06 23 19.2**	**-0.9**
GHOM	**Hamilton Openi**	**2.14**	**145**		Pn	06 23 17.5	-2.7
GASB	**Alder Springs**	**2.16**	**122**		**Pn**	**06 23 19.6**	**-1.0**
K02D	**Willamette Mer**	**2.16**	**29**	P	**Pn**	**06 23 20.2**	**-0.3**
	baz=206,SNR=197						
K02D				S	**Sn**	**06 23 45.3**	**-2.6**
	baz=206						
GGUM	**Gualala**	**2.31**	**147**		Pn	06 23 19.7	-2.9
GSNM	**Snow Mountain**	**2.38**	**141**		**Pn**	**06 23 21.2**	**-2.3**
HOPS	**Hopland Field**	**2.40**	**139**	Pn	**Pn**	**06 23 21.8**	**-1.8**
HUMO	**Hull Mountain**	**2.40**	**41**	Pn	**Pn**	**06 23 23.9**	**+0.1**
J01E	**Myrtle Point**	**2.50**	**20**	P	**Pn**	**06 23 24.7**	**-0.4**
	baz=197						
J01E				S	**Sn**	**06 23 56.0**	**0.0**
	baz=197						
L04D	**Klamath Falls**	**2.52**	**55**	P	**Pn**	**06 23 27.1**	**+1.5**
	baz=234,SNR=88						
O03E	**Paynes Creek**	**2.56**	**101**	P	**Pn**	**06 23 25.8**	**-0.3**
	baz=281						
O03E				S	**Sn**	**06 23 56.9**	**-0.9**
	baz=281						
M04C	**Macdoel**	**2.64**	**67**	P	**Pn**	**06 23 28.6**	**+1.5**
	baz=246,SNR=19						
M04C				S	**Sb**	**06 24 02.3**	**-2.0**
	baz=246						
ORV	**Oroville**	**3.03**	**113**	Pn	**Pn**	**06 23 31.3**	**-1.1**
K04D	**Chiloquin, OR**	**3.09**	**53**	P	**Pn**	**06 23 35.1**	**+1.8**
	baz=232,SNR=18						
I03D	**Drain, OR**	**3.16**	**24**	P	**Pn**	**06 23 34.9**	**+0.7**
	baz=202						
I03D				S	**Sn**	**06 24 12.1**	**-0.2**
	baz=202						
MCCM	**Marconi Confer**	**3.17**	**147**	Pn	**Pn**	**06 23 32.2**	**-2.1**
J04D	**Umpqua Nationa**	**3.29**	**42**	P	**Pn**	**06 23 38.5**	**+2.3**
	baz=221,SNR=24						
I02D	**Swisshome**	**3.42**	**15**	P	**Pn**	**06 23 37.7**	**+0.1**
	baz=194						
I02D				S	**Sn**	**06 24 17.0**	**-1.6**
	baz=194						
I04A	**Tendick Farm,**	**3.58**	**33**	P	**Pn**	**06 23 41.6**	**+1.6**
	baz=212,SNR=13						
BEKR	**Beckworth**	**3.74**	**103**	Pn	**Pn**	**06 23 42.3**	**-0.1**
J05D	**Fort Rock, OR**	**3.79**	**48**	P	**Pn**	**06 23 44.9**	**+1.9**
	baz=228,SNR=38						
COR	**Corvallis**	**3.99**	**19**	Pn	**Pn**	**06 23 46.7**	**+1.1**
H04D	**Lebanon**	**4.09**	**24**	P	**Pn**	**06 23 48.2**	**+1.2**
	baz=204,SNR=28						
H04D				S	**Sn**	**06 24 35.4**	**0.0**
	baz=204						
PINE	**Pine Mountain**	**4.28**	**45**		**Pn**	**06 23 51.6**	**+1.8**
I05D	**Terrebonne, OR**	**4.48**	**37**	P	**Pn**	**06 23 54.2**	**+1.8**
	baz=217,SNR=11						
PAHR	**Pah Rah Range**	**4.51**	**102**	Pn	**Pn**	**06 23 53.1**	**+0.3**
G03D	**McMinnville, O**	**4.59**	**16**	P	**Pn**	**06 23 54.6**	**+0.7**
	baz=196,SNR=6.4						
G03D				S	**Sn**	**06 24 46.5**	**-1.3**
	baz=196						
YERR	**Yerington**	**4.86**	**110**	Pn	**Pn**	**06 23 58.4**	**+0.7**
WVOR	**Wild Horse Val**	**5.11**	**69**	Pn	**Pn**	**06 24 00.9**	**-0.1**
G05D	**Wamic, OR**	**5.22**	**31**	P	**Pn**	**06 24 04.7**	**+2.2**
	baz=212,SNR=9.5						
I07A	**Izee**	**5.27**	**50**		**Pn**	**06 24 05.7**	**+2.4**
G06A	**Carlson Farm,**	**5.50**	**35**		**Pn**	**06 24 07.5**	**+1.1**
J08A	**Circle Bar Ran**	**5.54**	**61**		**Pn**	**06 24 07.4**	**+0.4**
KVN	**Kaiserville**	**5.66**	**106**	Pn	**Pn**	**06 24 09.2**	**+0.5**
NVAR	**Mina Array Bea**	**5.76**	**112**	Pn	Pn	06 24 15.2	+5.1
	0.2nm,0.3s,baz=285,slow=15,SNR=2.6						
F07A	**Phinny Hill Vi**	**6.32**	**35**		**Pn**	**06 24 19.8**	**+2.2**
G08A	**Pilot Rock**	**6.34**	**43**		**Pn**	**06 24 21.2**	**+3.2**
LON	**Longmire**	**6.39**	**21**	Pn	**Pn**	**06 24 20.1**	**+1.5**
HAWA	**Hanford**	**6.88**	**34**		**Pn**	**06 24 26.9**	**+1.6**
BMO	**Blue Mountains**	**7.00**	**52**		**Pn**	**06 24 29.4**	**+2.3**
E08A	**Dider Farm, El**	**7.17**	**36**	Pn	**Pn**	**06 24 31.0**	**+1.8**
LTY	**Liberty**	**7.19**	**25**	Pn	**Pn**	**06 24 31.7**	**+2.1**
ISA	**Isabella, Lake**	**7.32**	**133**	Pn	**Pn**	**06 24 32.3**	**+0.9**
ISA	**Isabella, Lake**	**7.32**	**133**	P	**Pn**	**06 24 32.7**	**+1.3**
	baz=317						
D08A	**Wollman Farm,**	**7.67**	**33**	Pn	**Pn**	**06 24 37.9**	**+1.8**
F10A	**Beach Ranch, E**	**7.71**	**45**	Pn	**Pn**	**06 24 41.0**	**+4.3**
GSC	**Goldstone, Bar**	**8.54**	**127**	Pn	**Pn**	**06 24 50.0**	**+1.8**
B08A	**Colville Reser**	**8.59**	**27**	Pn	**Pn**	**06 24 50.5**	**+1.8**
NEW	**Newport**	**9.37**	**35**	Pn	**Pn**	**06 24 59.2**	**-0.2**
	0.1nm,0.3s,baz=30,slow=6.5,SNR=3.1						
MSO	**Missoula**	**10.05**	**50**	Pn	**Pn**	**06 25 13.0**	**+4.1**
PDAR	**Pinedale Array**	**11.77**	**75**	Pn	Pn	06 25 38.1	+5.7
	0.0nm,0.3s,baz=284,slow=7.3,SNR=4.1						
TXAR	**Lajitas Array**	**20.89**	**117**	P	Pn	06 27 31.9	+2.4
	0.5nm,1.1s,baz=292,slow=9.6,SNR=2.5						
ULM	**Lac du Bonnet**	**22.41**	**55**	P	**P**	**06 27 43.4**	**+0.2**
	2.6nm,0.9s,baz=268,slow=8.9,SNR=5.5						
YKA	**Yellowknife Ar**	**22.61**	**13**	P	**P**	**06 27 46.4**	**+1.4**
	0.6nm,0.9s,baz=200,slow=11,SNR=3.0						
ILAR	**Eielson Array**	**27.09**	**340**	P	**P**	**06 28 28.3**	**+1.1**
	0.3nm,0.6s,baz=139,slow=8.4,SNR=3.1						

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*NEIC **10** 06:47:14.9±1.5, 40°.61N±0°.05×125°.3W±0°.1, h17^{km}±13^{km}, Error ellipse: s-maj=11.6km s-min=6.8km az=72.0*
*ANF **10** 06:47:16.0±2.0, 40°.72N×125°.12W, h0^{km}, ML3.0/1, Error ellipse: s-maj=18.8km s-min=12.7km az=84.0*
*NCEDC **10** 06:47:17.6±1.4, 40°.52N±0°.05×125°.24W±0°.08, h21^{km}±8^{km}, ML3.0/7, Error ellipse: s-maj=8.8km s-min=7.2km az=106.0*
*IDC **10** 06:47:23.2±4.0, 40°.46N×124°.46W, h0^{km}, mb2.5/2, mb1 3.0/3, mb1mx3.0/37, mbtmp2.5/3, ML2.5/1, Error ellipse: s-maj=76.7km s-min=21.8km az=43.0*
ISC 10 06:47:15.3±3.7, **40°.55N**±0°.05×**125°.3W**±0°.1, **h16**^{km}±26^{km}, **n56**, σ1^{s}.**47**/61, **Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMPM	**Mount Pierce**	**0.94**	**98**		**Pb**	**06 47 33.1**	**-0.2**
JCC	**Jacoby Creek,**	**1.03**	**75**		**Pb**	**06 47 33.4**	**-1.4**
JCC					**Sb**	**06 47 46.9**	**-1.2**
KCRM	**Chalk Rock**	**1.17**	**96**		**Pn**	**06 47 36.1**	**-0.9**
KHMM	**Horse Mountain**	**1.27**	**75**		**Pn**	**06 47 37.6**	**-0.9**
KMRM	**Mail Ridge**	**1.29**	**104**		**Pn**	**06 47 38.8**	**0.0**
KCSM	**Cold Springs**	**1.39**	**90**		**Pn**	**06 47 39.5**	**-0.8**
KRMB	**Red Mountain**	**1.46**	**48**	Pn	**Pn**	**06 47 39.1**	**-2.0**
KBSM	**Bell Springs**	**1.48**	**115**		**Pn**	**06 47 40.0**	**-1.3**
KCPM	**Cahto Peak**	**1.60**	**122**		**Pn**	**06 47 42.4**	**-0.7**
KOMM	**Orleans Mounta**	**1.60**	**62**		**Pn**	**06 47 42.1**	**-1.0**
KIPM	**Iron Peak**	**1.61**	**117**		**Pn**	**06 47 40.6**	**-2.6**
KHBM	**Hayfork Bally**	**1.62**	**85**		**Pn**	**06 47 42.3**	**-1.1**
KFPM	**Farley Peak**	**1.73**	**121**		**Pn**	**06 47 43.9**	**-0.9**
KBNM	**Bluenose Ridge**	**1.77**	**111**		**Pn**	**06 47 44.5**	**-0.9**
GTC	**Three Chop Rid**	**1.79**	**129**		**Pn**	**06 47 44.6**	**-0.9**
KBO	**Bosley Butte**	**1.86**	**26**	Pn	**Pn**	**06 47 44.9**	**-1.8**
GNAM	**Navarro Ridge**	**1.89**	**135**		**Pn**	**06 47 46.1**	**-0.8**
LBPM	**Beegum Peak**	**1.89**	**96**		**Pn**	**06 47 46.4**	**-0.7**
LGPM	**Granite Peak**	**1.94**	**78**		**Pn**	**06 47 46.7**	**-1.1**
O02D	**Mt. Diablo Mer**	**1.99**	**100**		**Pn**	**06 47 48.0**	**-0.3**
O02D	**Mt. Diablo Mer**	**1.99**	**100**	P	**Pn**	**06 47 48.0**	**-0.3**
	baz=281,SNR=14						
N02D	**Trinity Center**	**2.05**	**77**	P	**Pn**	**06 47 48.0**	**-1.1**
	baz=258						
N02D				S	**Sn**	**06 48 14.0**	**-0.4**
	baz=258						
M02C	**Callahan**	**2.06**	**65**	P	**Pn**	**06 47 50.5**	**+1.2**
	baz=245,SNR=6.0						
M02C				S	**Sn**	**06 48 13.1**	**-1.7**
	baz=245						
L02E	**Cave Junction**	**2.07**	**39**	P	**Pn**	**06 47 48.3**	**-1.2**
	baz=218						
L02E				S	**Sn**	**06 48 11.5**	**-3.5**
	baz=218						
WDC	**Whiskeytown Da**	**2.13**	**88**		**Pn**	**06 47 49.7**	**-0.6**
YBH	**Yreka Blue Hor**	**2.31**	**58**	Pn	**Pn**	**06 47 52.1**	**-0.7**
HOPS	**Hopland Field**	**2.34**	**131**	Pn	**Pn**	**06 47 52.7**	**-0.4**
K02D	**Willamette Mer**	**2.48**	**30**	P	**Pn**	**06 47 54.2**	**-0.9**
	baz=209						
K02D				S	**Sn**	**06 48 21.8**	**-3.4**
	baz=209						
O03E	**Paynes Creek**	**2.71**	**94**	P	**Pn**	**06 47 57.8**	**-0.5**
	baz=276,SNR=14						
HUMO	**Hull Mountain**	**2.72**	**40**	Pn	**Pn**	**06 47 58.5**	**+0.1**
L04D	**Klamath Falls**	**2.83**	**53**	P	**Pn**	**06 48 02.1**	**+2.1**
	baz=233,SNR=14						
L04D				S	**Sn**	**06 48 35.6**	**+1.9**
	baz=233						
M04C	**Macdoel**	**2.92**	**64**	P	**Pn**	**06 48 02.7**	**+1.6**
	baz=245,SNR=6.4						
MCCM	**Marconi Confer**	**3.07**	**141**	Pn	**Pn**	**06 48 02.0**	**-1.1**
ORV	**Oroville**	**3.11**	**107**		**Pn**	**06 48 03.4**	**-0.4**
I03D	**Drain, OR**	**3.48**	**25**	P	**Pn**	**06 48 08.7**	**0.0**
	baz=204						
J04D	**Umpqua Nationa**	**3.61**	**41**	P	**Pn**	**06 48 12.1**	**+1.3**
	baz=222						
AFDM	**Forest Hills D**	**3.73**	**114**		**Pn**	**06 48 13.5**	**+1.3**
BEKR	**Beckworth**	**3.88**	**99**		**Pn**	**06 48 15.2**	**+0.8**
J05D	**Fort Rock, OR**	**4.10**	**47**	P	**Pn**	**06 48 18.8**	**+1.3**
	baz=228,SNR=8.3						
VCNR	**Virginia City**	**4.55**	**104**		**Pn**	**06 48 23.9**	**+0.2**
CMB	**Columbia Colle**	**4.59**	**122**	Pn	**Pn**	**06 48 24.7**	**+0.6**
PINE	**Pine Mountain**	**4.60**	**44**	Pn	**Pn**	**06 48 26.3**	**+1.9**
PAHR	**Pah Rah Range**	**4.64**	**99**	Pn	**Pn**	**06 48 24.7**	**-0.2**
PNTR	**Pine Nut**	**4.66**	**106**	Pn	**Pn**	**06 48 23.5**	**-1.6**
YERR	**Yerington**	**4.95**	**106**	Pn	**Pn**	**06 48 30.3**	**+1.1**
I07A	**Izee**	**5.58**	**49**		**Pn**	**06 48 40.0**	**+2.2**
OMMB	**Old Mammoth Mi**	**5.74**	**119**	Pn	**Pn**	**06 48 39.3**	**-0.9**
KVN	**Kaiserville**	**5.77**	**103**	Pn	**Pn**	**06 48 39.4**	**-1.1**
G06A	**Carlson Farm,**	**5.82**	**35**	Pn	**Pn**	**06 48 41.9**	**+0.9**
J08A	**Circle Bar Ran**	**5.84**	**59**		**Pn**	**06 48 41.9**	**+0.7**
NVAR	**Mina Array Bea**	**5.84**	**109**	Pn	**Pn**	**06 48 42.2**	**+0.7**
	0.2nm,0.3s,baz=287,slow=15,SNR=4.3						
NVAR				Lg	Lg	06 50 06.8	
	baz=303,slow=33,SNR=2.4						
NVAR	**Mina Array Bea**	**5.84**	**109**		**Pn**	**06 48 41.1**	**-0.4**
ISA	**Isabella, Lake**	**7.29**	**130**	Pn	**Pn**	**06 49 00.5**	**-0.7**
BMO	**Blue Mountains**	**7.31**	**51**	Pn	**Pn**	**06 49 03.7**	**+2.2**
TXAR	**Lajitas Array**	**20.94**	**116**	P	**P**	**06 52 02.3**	**+4.8**
	0.1nm,0.6s,baz=314,slow=12,SNR=2.7						
YKA	**Yellowknife Ar**	**22.90**	**13**	P	P	06 52 27.9	+10
	0.1nm,0.6s,baz=208,slow=13,SNR=4.0						

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*INET **10** 06:52:19.4, 12°.46N×87°.70W, h73^{km}, ML3.5*
SNET 10 06:52:18.1±1.9, **12°.42N**×**87°.85W**, **h36**^{km}±983^{km}, **ML2.7**, **1D**, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**0.85**	**1**	*e*P	Pn	06 52 34.2	+0.5
CNCH				*e*S	Sn	06 52 46.8	+1.7
LCND	**La Caada**	**0.89**	**357**	⇓*e*P	Pn	06 52 34.6	+0.5
LCND				*e*S	Sn	06 52 46.7	+0.9
JUCU	**Jucuar¡n**	**0.92**	**335**	*e*P	Pn	06 52 35.0	+0.4
JUCU				*e*S	Sn	06 52 48.0	+1.4
JUCU				IAML		06 52 49.0	
	comp=Z,398nm,0.2s						
BLLM	**Bellamira**	**1.09**	**340**	*e*P	Pn	06 52 37.7	+0.8
BLLM				*e*S	Sn	06 52 51.1	+0.3
LCY	**Lacayo**	**1.09**	**337**	*e*P	Pn	06 52 37.7	+0.7
RANC	**El Ranchito**	**1.10**	**337**	*e*P	Pn	06 52 37.8	+0.7
RANC				*e*S	Sn	06 52 52.9	+1.7
PACA	**Pacayal**	**1.15**	**336**	*e*P	Pn	06 52 38.5	+0.7
PACA				*e*S	Sn	06 52 53.5	+1.2
ALJI	**Alcalda de J**	**1.15**	**322**	*e*P	Pn	06 52 38.2	+0.6
ALJI				*e*S	Sn	06 52 51.9	-0.2
TECA	**Tecapa**	**1.25**	**329**	*e*P	Pn	06 52 39.9	+0.7
TECA				*e*S	Sn	06 52 55.6	+0.8
COEB	**Comit de Eme**	**1.27**	**328**	*e*P	Pn	06 52 40.1	+0.8
COEB				*e*S	Sn	06 52 55.7	+0.5
MOMN	**Momotombo**	**1.28**	**90**	*e*P	Pn	06 52 37.3	-2.2
FAGO	**Alcalda de S**	**1.30**	**349**	*e*P	Pn	06 52 39.9	+0.2
FAGO				*e*S	Sn	06 52 56.5	+0.7
FAGO				IAML		06 52 58.2	
	comp=Z,65nm,0.3s						
COEG	**Centro de Oper**	**1.56**	**320**	*e*P	Pn	06 52 44.3	+0.8
COEG				*e*S	Sn	06 53 02.4	-0.1
COEG				IAML		06 53 06.9	
	comp=Z,119nm,0.3s						
TGUH	**Tegucigalpa,Un**	**1.73**	**19**	*e*P	Pn	06 52 46.0	+0.3

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*BJI **10** 06:53:04.8±0.0, 38°.65N×142°.53E, h59^{km}, mB5.0/3, mb4.5/34, Ms5.1/3, Ms7 5.0/1*
*MOS **10** 06:53:06.3±1.3, 38°.77N×142°.39E, h49^{km}, mb4.6/14, Error ellipse: s-maj=8.4km s-min=5.2km az=91.2*
*JMA **10** 06:53:06.3±0.1, 38°.68N×142°.27E, h38^{km}±1^{km}, M4.3*
JMA Felt II J1.
*NEIC **10** 06:53:08.9±1.5, 38°.70N±0°.07×142°.3E±0°.1, h54^{km}±6^{km}, mb4.5/49, Error ellipse: s-maj=13.5km s-min=7.6km az=124.0*
*IDC **10** 06:53:09.9±1.7, 38°.76N×142°.21E, h64^{km}±15^{km}, mb3.9/25, mb1 4.0/31, mb1mx4.0/46, mbtmp4.2/31, Error ellipse: s-maj=15.7km s-min=9.2km az=120.0*
ISC 10 06:53:06.9±0.6, **38°.69N**±0°.05×**142°.33E**±0°.05, **h40**^{km}±6^{km}, **n182**, σ1^{s}.**61**/199, **mb4.4**/63, **2C-1D**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.65**	**307**	P	**Pn**	**06 53 18.5**	**-1.2**
OFUJ				S	**Sn**	**06 53 27.1**	**-1.7**
JKMT	**Kesennumamotoy**	**0.68**	**281**	P	**Pn**	**06 53 18.8**	**-1.3**
JKMT				S	**Sn**	**06 53 27.2**	**-2.3**
JIKH	**Ishinomakikobu**	**0.78**	**241**	P	**Pn**	**06 53 20.0**	**-1.4**
JIKH				S	**Sn**	**06 53 29.6**	**-2.2**
JIO	**Ouri**	**0.81**	**254**	P	**Pn**	**06 53 20.3**	**-1.4**
JIO				S	**Sn**	**06 53 30.0**	**-2.5**
JMK	**Ichinoseki**	**0.91**	**287**	P	**Pn**	**06 53 22.1**	**-1.1**
JMK				S	**Sn**	**06 53 33.4**	**-1.7**
JOM	**Ohasama**	**1.13**	**314**	P	**Pn**	**06 53 25.7**	**-0.5**
JOM				S	**Sn**	**06 53 39.6**	**-0.9**
JTH	**Tanohata**	**1.30**	**344**	P	**Pn**	**06 53 27.9**	**-0.7**
JTH				*e*S	**Sn**	**06 53 44.0**	**-0.8**
JOU	**Okura**	**1.35**	**257**	P	**Pn**	**06 53 28.5**	**-0.7**
JMM	**Marumori**	**1.46**	**236**	P	**Pn**	**06 53 29.4**	**-1.4**
JMM				*e*S	**Sn**	**06 53 47.0**	**-1.7**
JRG	**Rokugo**	**1.50**	**299**	P	**Pn**	**06 53 31.0**	**-0.3**
JYK	**Kaneyama**	**1.56**	**279**	P	**Pn**	**06 53 31.7**	**-0.4**
ERM	**Erimo**	**3.38**	**10**	c*e*P	**Pn**	**06 53 57.4**	**+0.3**
ERM				pmax	pmax		
	comp=Z,73nm,1.3s						
ERM	**Erimo**	**3.38**	**10**		**Pn**	**06 53 57.7**	**+0.6**
ERM				Sn	**Sn**	**06 54 37.9**	**+1.8**
MJA0	**Matsu Arr-Jizo**	**3.89**	**238**	*e*P	**Pn**	**06 54 07.2**	**+3.1**
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**3.91**	**238**	P	**Pn**	**06 54 06.3**	**+1.9**
	comp=Z,1.0nm,0.3s,baz=40,slow=12,SNR=52						
MJAR				S	**Sn**	**06 54 53.2**	**+4.0**
	comp=Z,0.6nm,0.3s,baz=290,slow=10.0,SNR=5.3						
MJAR	**Matsushiro Arr**	**3.91**	**238**	P	**Pn**	**06 54 06.3**	**+1.9**
MJAR						06 54 50.8	
MJAR	**Matsushiro Arr**	**3.91**	**238**		**Pn**	**06 54 06.3**	**+1.9**
MJAR				Sn	**Sn**	**06 54 50.8**	**+1.7**

MAJO	Matsushiro	3.91	238	P	Pn	06 54 06.2	+1.7
MAJO						06 54 49.2	
MAJO	Matsushiro	3.91	238		Pn	06 54 06.2	+1.7
MAJO				Sn	Sn	06 54 49.1	0.0
MAT	Matsushiro	3.91	238	P	Pn	06 54 06.6	+2.1
MAT				S	Sn	06 54 53.7	+4.5
MJB9	Matsu-Tunnel	3.91	238		Pn	06 54 06.7	+2.2
NMR	Nemuro--Hokkai	5.34	28	*e*P	Pn	06 54 22.7	-1.2
NMR				*e*S	Sn	06 55 19.6	-4.5
INU	Inuyama	5.40	234		Pn	06 54 25.0	+0.1
ASAJ	Asahikawa	5.43	2	P	Pn	06 54 25.8	+0.5
	comp=Z,7.8nm,0.3s,baz=211,slow=8.6,SNR=16						
ASAJ				S	Sn	06 55 27.9	+1.5
	comp=Z,3.2nm,0.3s,baz=252,slow=20,SNR=3.5						
JKA	Kamikawa-asahi	5.43	2		Pn	06 54 25.8	+0.5
JKA					Sn	06 55 27.9	+1.5
GLVR	Golovnino	5.59	24	*e*P	Pn	06 54 26.5	-0.9
GLVR				*e*S	Sn	06 55 27.2	-3.1
GLVR				smax	smax		
	comp=N,819nm,0.3s						
GLVR				smax	smax		
	comp=E,317nm,0.3s						
GRPR	Tuman	5.90	25	*e*P	Pn	06 54 30.9	-0.8
GRPR				*e*S	Sn	06 55 33.6	-4.4
GRPR				pmax	pmax		
	comp=Z,206nm,0.3s						
GRPR				smax	smax		
	comp=N,865nm,0.4s						
GRPR				smax	smax		
	comp=E,645nm,0.3s						
YUK	Yuzh-Kuril'sk	5.96	25	*e*P	Pn	06 54 31.6	-1.0
YUK				*e*S	Sn	06 55 34.9	-4.7
YUK				pmax	pmax		
	comp=Z,111nm,0.4s						
YUK				smax	smax		
	comp=N,519nm,0.6s						
YUK				smax	smax		
	comp=E,205nm,0.2s						
SHO	Shikotan	6.19	32	*e*P	Pn	06 54 34.8	-0.8
SHO				*e*S	Sn	06 55 39.0	-6.0
SHO				pmax	pmax		
	comp=Z,21nm,0.2s						
SHO				smax	smax		
	comp=E,286nm,0.2s						
SHO				smax	smax		
	comp=N,275nm,0.5s						
TEY	Ternei	7.65	328	*e*P	Pn	06 54 59.7	+4.0
YSS	Yuzh-Sakhalins	8.27	2	P	Pn	06 55 05.5	+1.4
YSS	Yuzh-Sakhalins	8.27	2		Pn	06 55 05.5	+1.4
USA0B	Ussuriysk Arra	9.52	309	P	Pn	06 55 25.1	+3.8
USA0B	Ussuriysk Arra	9.52	309		Pn	06 55 25.1	+3.8
USRK	Ussuriysk Ar.	9.52	309	P	Pn	06 55 21.0	-0.3
	baz=116,slow=15,SNR=21						
USRK	Ussuriysk Ar.	9.52	309	P	Pn	06 55 25.7	+4.4
USRK	Ussuriysk Ar.	9.52	309		Pn	06 55 25.7	+4.4
JNU	Nakatsue	10.82	243	P	Pn	06 55 41.4	+2.2
	comp=N,0.6nm,0.3s,baz=0.0,slow=4.0,SNR=3.1						
KSRS	Korea Array	11.43	268	P	Pn	06 55 51.3	+3.8
	baz=81,slow=14,SNR=12						
KSRS	Korea Array	11.43	268	*e*P	Pn	06 55 52.1	+4.7
KLR	Kul'dur	12.99	328	P	Pn	06 56 08.7	-0.1
	comp=N,0.1nm,0.3s,baz=131,slow=13,SNR=5.4						
ZEA	Zeya	18.26	330	*e*P	P	06 57 14.8	-2.0
ZEA				pmax	pmax		
	comp=Z,30nm,0.9s						
NJ2	Nanjing	20.23	258	*e*P	P	06 57 39.3	+0.8
NJ2				pmax	pmax		
	comp=Z,14nm,0.7s						
MA2	Magadan	21.59	12	P	P	06 57 53.0	0.0
	comp=Z,6.8nm,0.6s,baz=176,slow=11,SNR=5.7						
MA2	Magadan	21.59	12	P	P	06 57 53.1	+0.2
MA2				pmax	pmax		
	comp=Z,13nm,1.0s						
MA2	Magadan	21.59	12	P	P	06 57 53.1	+0.2
HHC	Hu-ho-hao-te	23.69	285	*e*P	P	06 58 13.5	-1.5
HHC				pmax	pmax		
	comp=Z,68nm,0.8s						
HHC				pmax	pmax		
	comp=Z,230nm,4.0s						
WHN	Wuhan	24.35	259	P	P	06 58 17.8	-3.2
SEY	Seymchan	25.03	11	P	P	06 58 28.3	+1.4
	comp=Z,12nm,0.8s,baz=191,slow=6.5,SNR=34						
SEY	Seymchan	25.03	11	*i* P	P	06 58 27.1	+0.2
BOD	Bodaibo	26.55	325	*e*P	P	06 58 38.1	-2.6
BOD				pmax	pmax		
	comp=Z,8.0nm,1.6s						
SONM	Songino Array	27.51	301	P	P	06 58 49.6	0.0
	comp=Z,0.9nm,0.4s,baz=106,slow=9.4,SNR=5.3						
SONM	Songino Array	27.51	301	P	P	06 58 49.8	+0.2
SONM				pmax	pmax		
	comp=Z,3.0nm,1.2s						
SONM	Songino Array	27.51	301	P	P	06 58 49.8	+0.2
H11N2	WAKE ISLAND Hy	28.43	125	T	T	07 29 25.7	
	baz=317,slow=75,SNR=523						
H11N1	WAKE ISLAND Hy	28.44	125	T	T	07 29 26.4	
	baz=317,slow=75,SNR=400						
H11N3	WAKE ISLAND Hy	28.45	125	T	T	07 29 27.0	
	baz=317,slow=75,SNR=468						
H11S1	WAKE ISLAND Hy	29.20	127	T	T	07 30 17.2	
	baz=318,slow=76,SNR=41						
H11S3	WAKE ISLAND Hy	29.20	127	T	T	07 30 17.3	
	baz=318,slow=76,SNR=43						
H11S2	WAKE ISLAND Hy	29.22	127	T	T	07 30 18.6	
	baz=318,slow=76,SNR=46						
TLY	Talaya	29.84	309	*e*P	P	06 59 10.8	+0.7
TLY				pmax	pmax		
	comp=Z,17nm,1.0s						
ZAK	Zakamensk	29.85	306	*e*P	P	06 59 09.7	-0.7
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BILL	Bilibino	32.24	17	*i* P	P	06 59 31.6	+0.6
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CD2	Chengdu	32.43	268	P	P	06 59 31.9	-1.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GTA	Gaotai	32.81	285	*e*P	P	06 59 36.5	0.0
GTA				pP	sP	06 59 52.6	+0.4
GTA				sP	pP	07 00 02.4	+15
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TIXI	Tiksi	33.74	352	P	P	06 59 42.6	-1.5
	comp=Z,0.9nm,0.3s,baz=153,slow=7.0,SNR=3.9						
TIXI	Tiksi	33.74	352	*ce*P	P	06 59 42.8	-1.3
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TIXI	Tiksi	33.74	352	P	P	06 59 43.7	-0.4
KMI	Kunming	35.95	260	P	P	07 00 02.8	-1.2
KMI				pmax	pmax		
	comp=Z,18nm,1.5s						
WMQ	Urumqi	40.77	295	*e*P	P	07 00 44.4	+0.3
WMQ				pP	sP	07 00 58.2	-1.7
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WMQ				LR	LR		
	comp=Z,2µm,14.3s						
ZAA0	Zalesovo Array	41.36	311	P	P	07 00 49.1	+0.3
ZAA0				IAmb	IAmb	07 00 49.5	
	comp=Z,6.6nm,0.9s						
ZALV	Zalesovo Beam	41.36	311	P	P	07 00 48.1	-0.6
	comp=Z,5.2nm,0.5s,baz=91,slow=8.2,SNR=24						
ZALV	Zalesovo Beam	41.36	311	*e*P	P	07 00 48.5	-0.2
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.4s						
ZALV	Zalesovo Beam	41.36	311	P	P	07 00 48.3	-0.4
NRIK	Noril'sk	42.08	334	P	P	07 00 53.3	-1.1
	comp=Z,1.2nm,0.3s,baz=106,slow=11,SNR=2.9						
SVW2	Sparrevohn	43.77	38	P	P	07 01 10.4	+2.1
SVW2				IAmb	IAmb	07 01 27.2	
	comp=Z,11nm,1.3s						
MK31	Makanchi Array	43.88	301	P	P	07 01 09.2	-0.1
MK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MK31	Makanchi Array	43.88	301	P	P	07 01 09.2	-0.1
MKAR	Makanchi Array	43.88	301	P	P	07 01 09.0	-0.3
	comp=Z,3.3nm,0.7s,baz=84,slow=10.0,SNR=34						
MAKZ	Makanchi	44.09	301	P	P	07 01 11.1	+0.1
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MAKZ	Makanchi	44.09	301	P	P	07 01 11.1	+0.1
IMAR	Indian Mountai	44.86	31	P	P	07 01 16.3	-0.6
KDAK	Kodiak Island	45.39	43	P	P	07 01 21.9	+0.8
KDAK				pmax	pmax		
	comp=Z,11nm,1.0s						
KDAK	Kodiak Island	45.39	43	P	P	07 01 21.9	+0.8
KDAK				IAmb	IAmb	07 01 39.0	
	comp=Z,11nm,0.9s						
PPLA	Purkeypile	45.40	36	P	P	07 01 21.6	+0.2
PPLA				IAmb	IAmb	07 01 32.5	
	comp=Z,8.2nm,1.4s						
KURK	Kurchatov	45.50	307	P	P	07 01 21.8	-0.4
MLY	Manley	46.07	33	P	P	07 01 28.7	+2.2
MLY				IAmb	IAmb	07 01 44.3	
	comp=Z,8.7nm,1.4s						
TRF	Thorofare Moun	46.26	35	P	P	07 01 29.6	+1.4
TOLK	Toolik Lake Re	46.67	28	P	P	07 01 33.6	+2.4
TOLK				IAmb	IAmb	07 01 49.9	
	comp=Z,3.3nm,0.7s						
RND	Reindeer	46.91	35	P	P	07 01 34.1	+1.0
RND				pmax	pmax		
	comp=Z,4.0nm,1.0s						
RND	Reindeer	46.91	35	P	P	07 01 34.1	+1.0
GHO	Glory Hole Cre	46.96	37	P	P	07 01 34.4	+0.8
GHO				IAmb	IAmb	07 01 35.3	
	comp=Z,11nm,1.1s						
WRH	Wood River Hil	47.21	34	P	P	07 01 35.4	+0.1
WRH				IAmb	IAmb	07 01 52.6	
	comp=Z,4.8nm,1.1s						
IL31		47.71	33	P	P	07 01 39.6	+0.4
ILAR	Eielson Array	47.71	33	P	P	07 01 40.1	+0.8
	comp=Z,1.6nm,0.7s,baz=265,slow=6.1,SNR=20						
PRP	Porcupine Dome	48.25	32	P	P	07 01 45.0	+1.4
PRP				IAmb	IAmb	07 02 02.3	
	comp=Z,2.7nm,0.6s						
FYU	Fort Yukon	48.32	31	P	P	07 01 44.2	+0.3
FYU				IAmb	IAmb	07 01 47.2	
	comp=Z,10nm,1.3s						
BMAR	Burnt Mountain	48.54	30	P	P	07 01 47.6	+2.0
RIDG	Independent Ri	48.67	34	P	P	07 01 46.7	-0.1
RIDG				IAmb	IAmb	07 02 03.5	
	comp=Z,5.9nm,1.2s						
SCRK	Sand Creek	49.03	34	P	P	07 01 50.8	+1.2
SCRK				IAmb	IAmb	07 02 06.2	
	comp=Z,6.0nm,1.3s						
DOT	Dot Lake	49.03	35	P	P	07 01 49.4	-0.1
BOOM	Boomskoye usch	49.40	297	P	P	07 01 52.2	-0.6
BOOM				pmax	pmax		
	comp=Z,38nm,1.4s						
BOOM	Boomskoye usch	49.40	297	P	P	07 01 52.2	-0.6
BRVK	Borovoye	50.07	312	P	P	07 01 57.7	+0.2
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRVK	Borovoye	50.07	312	P	P	07 01 57.7	+0.2
BRVK				IAmb	IAmb	07 01 58.8	
	comp=Z,3.4nm,0.6s						
BCAR	Beaver Creek A	50.12	35	P	P	07 01 58.6	+0.8
EGAK	Eagle	50.16	33	P	P	07 01 58.8	+0.9
EGAK				IAmb	IAmb	07 02 10.2	
	comp=Z,7.8nm,1.5s						
KSH	Kashi	50.41	293	P	P	07 02 03.2	+2.8
KSH				sP	sP	07 02 25.8	+9.4
KSH				S	S	07 09 12.8	+1.7
KSH				ScS	ScS	07 11 45.9	-2.4
KSH				pmax	pmax		
	comp=Z,13nm,0.6s						
EPYK	Eagle Plains	51.73	30	P	P	07 02 10.0	+0.1
INK	Inuvik	52.59	28	P	P	07 02 17.2	+1.2
	comp=Z,1.1nm,0.6s,baz=276,slow=8.8,SNR=7.8						
INK	Inuvik	52.59	28	P	P	07 02 16.1	+0.1
KK31	Karatay Array	52.94	299	P	P	07 02 18.8	-0.3
KK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KK31	Karatay Array	52.94	299	P	P	07 02 18.8	-0.3
KK31				IAmb	IAmb	07 02 19.0	
	comp=Z,2.6nm,0.8s						
KKAR	Karatay Array	52.94	299	P	P	07 02 18.8	-0.3
KKAR	Karatay Array	52.94	299	P	P	07 02 18.8	-0.3
KKAR	Karatay Array	52.94	299	P	P	07 02 18.8	-0.3
KKAR				IAmb	IAmb	07 02 34.6	
	comp=Z,3.3nm,1.0s						
NIL	Nilore	54.80	288	P	P	07 02 33.3	+0.4
NIL				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NIL	Nilore	54.80	288	P	P	07 02 33.3	+0.4
KNRA	Kununurra	55.55	196	P	P	07 02 34.1	-4.1
ARU	Arti	55.61	318	*d i*P	P	07 02 38.5	+0.2
ARU						07 04 38.3	
ARU				S	S	07 10 21.7	+0.6
ARU				SS	SS	07 14 06.6	+0.6
ARU				pmax	pmax		
	comp=Z,22nm,2.1s						
ARU	Arti	55.61	318	P	P	07 02 38.3	0.0
ARU				IAmb	IAmb	07 02 47.1	
	comp=Z,9.7nm,1.0s						
C36M	Paulatuk	55.63	25	P	P	07 02 39.2	+1.1
C36M				IAmb	IAmb	07 02 39.9	
	comp=Z,4.0nm,0.9s						
ABKAR	Akbulak array	57.44	310	P	P	07 02 51.0	-0.5
WB0	Warramunga Arr	58.62	189	P	P	07 02 59.7	-0.2
WB0				IAmb	IAmb	07 03 11.8	
	comp=Z,7.3nm,0.9s						
WR0	Warramunga Arr	58.79	189	P	P	07 03 00.7	-0.4
WB2	Warramunga Arr	58.80	189	P	P	07 02 58.4	-2.8
WRA	Warramunga Arr	58.80	189	P	P	07 03 00.6	-0.6
	comp=Z,2.0nm,0.8s,baz=5.4,slow=7.1,SNR=13						
WRA	Warramunga Arr	58.80	189	*e*P	P	07 03 01.2	0.0
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WRA	Warramunga Arr	58.80	189	P	P	07 03 01.1	-0.1
YKA	Yellowknife Ar	62.02	31	P	P	07 03 22.7	0.0
	comp=Z,0.5nm,0.6s,baz=302,slow=6.5,SNR=10.0						
AS31	Alice Springs	62.52	189	P	P	07 03 26.5	0.0
ASAR	Alice Springs	62.53	189	P	P	07 03 26.4	-0.1
	comp=Z,0.8nm,0.7s,baz=10.0,slow=5.6,SNR=8.8						
ASAR	Alice Springs	62.53	189	P	P	07 03 26.8	+0.3
ASAR	Alice Springs	62.53	189	P	P	07 03 26.8	+0.3
ARCES	ARCESS Array B	62.71	339	P	P	07 03 25.6	-1.6
	comp=Z,2.4nm,0.8s,baz=40,slow=7.2,SNR=6.0						
ARCES	ARCESS Array B	62.71	339	*e*P	P	07 03 27.1	-0.1
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	ARCESS Array B	62.71	339	P	P	07 03 24.9	-2.3
GEYT	Alibeck	63.68	299	P	P	07 03 33.9	-0.3
	comp=Z,1.5nm,0.5s,baz=186,slow=1.5,SNR=4.6						
GEYT	Alibeck	63.68	299	P	P	07 03 33.8	-0.3
FIA1	FINESS Array S	67.69	332	P	P	07 03 59.8	+0.2
FINES	FINESS Array B	67.69	332	P	P	07 03 59.1	-0.5
	comp=Z,4.9nm,0.7s,baz=54,slow=9.7,SNR=8.2						
FINES	FINESS Array B	67.69	332	P	P	07 03 59.7	+0.1
FINES	FINESS Array B	67.69	332	P	P	07 03 59.7	+0.1
JCC	Jacoby Creek,	68.43	55	P	P	07 04 05.8	+1.2
KHMM	Horse Mountain	68.59	54	P	P	07 04 08.0	+2.2
KMRM	Mail Ridge	68.96	55	P	P	07 04 09.3	+1.3
KIV	Kislovodsk	70.38	311	*e*P	P	07 04 15.3	-1.4
KIV				pmax	pmax		
	comp=Z,40nm,1.0s						
KIV				MLR	MLR		
	comp=Z,17µm,18.0s						
KBZ	Khabaz	70.38	311	P	P	07 04 16.8	+0.2
	comp=Z,5.9nm,0.9s,baz=19,slow=3.3,SNR=8.7						
KBZ	Khabaz	70.38	311	*e*P	P	07 04 17.1	+0.5
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
LRM	Limekiln Ridge	72.46	45	P	P	07 04 30.8	+1.4
NC405	NORSAR Array S	72.73	337	P	P	07 04 31.0	+0.5
NC405				IAmb	IAmb	07 04 42.0	
	comp=Z,4.3nm,0.8s						
NB2	NORSAR Subarra	72.94	337	P	P	07 04 31.4	-0.3
	comp=Z,0.9nm,0.5s,baz=36,slow=6.2						
NOA	NORSAR Array B	72.94	337	P	P	07 04 31.5	-0.3
	comp=Z,1.6nm,0.7s,baz=38,slow=6.0,SNR=7.2						
NBO00	NORSAR Array S	73.08	338	P	P	07 04 32.6	0.0
NVAR	Mina Array Bea	73.42	54	P	P	07 04 36.6	+1.3
	comp=Z,0.9nm,0.9s,baz=275,slow=6.4,SNR=5.9						
NVAR	Mina Array Bea	73.42	54	P	P	07 04 36.1	+0.8
AKASG	Malin Array Be	73.44	322	P	P	07 04 34.3	-0.4
	comp=Z,3.2nm,0.6s,baz=47,slow=6.1,SNR=22						
AKASG	Malin Array Be	73.44	322	P	P	07 04 35.6	+0.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	Malin Array Be	73.44	322	P	P	07 04 35.6	+0.8
R11A	Troy Canyon, C	75.18	53	P	P	07 04 47.0	+1.6
PDAR	Pinedale Array	75.99	46	P	P	07 04 51.0	+0.9
	comp=Z,1.2nm,0.6s,baz=257,slow=1.1,SNR=14						
PDAR	Pinedale Array	75.99	46	P	P	07 04 50.7	+0.6
BUR08	Bucovina Ar. S	77.45	322	P	P	07 04 58.7	+0.7
BUR08				IAmb	IAmb	07 04 58.8	
	comp=Z,3.5nm,0.8s						
BURAR	Bucovina Array	77.46	322	P	P	07 04 58.5	+0.3
ULM	Lac du Bonnet	77.73	34	P	P	07 04 59.8	+0.5
	comp=Z,1.1nm,0.6s,baz=262,slow=1.9,SNR=4.2						
SRU	San Rafael Swe	77.78	50	P	P	07 05 01.1	+1.0
SRU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SRU	San Rafael Swe	77.78	50	P	P	07 05 01.1	+1.0
BRTR	Keskin Array B	78.30	312	P	P	07 05 02.9	-0.1
	comp=Z,0.9nm,0.5s,baz=101,slow=3.2,SNR=9.0						
BRTR	Keskin Array B	78.30	312	P	P	07 05 03.1	+0.2
BRTR	Keskin Array B	78.30	312	P	P	07 05 03.1	+0.2
VYHS	Vyhne	79.78	326	*e*P	P	07 05 08.3	-2.4
VYHS	Vyhne	79.78	326	*e*P	P	07 05 08.3	-2.4
CLL	Collm	80.02	330	*e*P	P	07 05 13.0	+1.1
CLL	Collm	80.02	330	*e*P	P	07 05 13.0	+1.1
GERES	GERESS Array B	81.69	329	P	P	07 05 20.8	-0.2
	comp=Z,0.8nm,0.5s,baz=28,slow=3.2,SNR=4.8						
GERES	GERESS Array B	81.69	329	P	P	07 05 21.3	+0.3
GERES	GERESS Array B	81.69	329	P	P	07 05 21.3	+0.3
T25A	Trinidad	82.69	48	P	P	07 05 27.9	+1.3
T25A				IAmb	IAmb	07 05 45.1	
	comp=Z,8.1nm,1.4s						
SCHQ	Schefferville	83.55	16	P	P	07 05 30.8	+0.3
	comp=Z,1.9nm,0.9s,baz=328,slow=9.5,SNR=3.4						
SCHQ	Schefferville	83.55	16	P	P	07 05 30.8	+0.3
SCHQ				IAmb	IAmb	07 05 46.1	
	comp=Z,4.9nm,1.4s						
TXAR	Lajitas Array	88.54	53	P	P	07 05 56.5	+0.9
	comp=Z,0.6nm,0.7s,baz=294,slow=3.2,SNR=11						
TXAR	Lajitas Array	88.54	53	P	P	07 05 56.4	+0.7

THE ***10*** *06:55:02.8, 38.°18N×20.°43E, h14^{km}, ML2.8/3, Error ellipse: s-maj=0.9km s-min=0.4km az=238.0*

ATH ***10*** *06:55:02.7, 38.°18N×20.°44E, h14^{km}±1^{km}, ML3.0/4, Error ellipse: s-maj=2.0km s-min=1.0km az=237.0*

ISC 10 06:55:02.2±1.2**, 38.°17N**±0.°04×**20.°42E**±0.°05**, h17**^{km}±5^{km}**, n36, σ0.^{s}31**/55**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LXRA	Lixouri, Kepha	0.03	21	P	Pg	06 55 05.2	-0.1
LXRA				S	Sg	06 55 07.0	-0.3
CHV1	Chavriata, Kef	0.04	290	P	Pg	06 55 05.2	-0.1
CHV1				S	Sg	06 55 07.3	0.0
ARGA	Argostoli. Kep	0.04	83	P	Pg	06 55 05.3	0.0
ARGA				S	Sg	06 55 07.0	-0.3
KEF2	Argostoli. Kep	0.05	97	P	Pg	06 55 05.2	-0.1
KEF2				S	Sg	06 55 06.8	-0.6
ARG2	Argostoli	0.05	82	P	Pg	06 55 05.3	0.0
ARG2				S	Sg	06 55 07.1	-0.3
KEF3	Kipouria, Keph	0.07	298	P	Pg	06 55 05.3	-0.2
KEF3				S	Sg	06 55 07.0	-0.6
AGT1	Agia Thekli	0.09	339	P	Pg	06 55 05.6	0.0
AGT1				S	Sg	06 55 08.1	+0.2
KEF4	Livadi, Kephal	0.09	1	P	Pg	06 55 05.7	+0.1
KEF4				S	Sg	06 55 08.1	+0.2
KEF1	Kardakata, Kep	0.11	20	P	Pg	06 55 05.8	-0.1
KEF1				S	Sg	06 55 08.3	0.0
VLS	Valsamata	0.13	87	P	Pg	06 55 06.1	-0.1
VLS				S	Sg	06 55 09.0	+0.2
	17µm,0.2s						
VLS	Valsamata	0.13	87	P	Pg	06 55 06.1	-0.1
VLS				S	Sg	06 55 08.4	-0.3
VLS				AML	AML	06 55 09.0	
	comp=N,26708µm,0.1s						
VLS				AML	AML	06 55 09.1	
	comp=E,36372µm,0.1s						
VSK1	VASILIKIADES	0.26	25	P	Pg	06 55 08.3	+0.2
KONA	Konidatara, Ke	0.28	25	P	Pg	06 55 08.4	+0.1
KONA				S	Sg	06 55 12.4	-0.1
KFL	Anninata	0.29	102	P	Pg	06 55 08.6	0.0
KFL				S	Sg	06 55 13.5	+0.6
	comp=E,3µm,0.3s						
KFL	Anninata	0.29	102	P	Pg	06 55 08.4	-0.2
KFL				S	Sg	06 55 13.1	+0.2
KFL				AML	AML	06 55 14.1	
	comp=N,5309µm,0.2s						
KFL				AML	AML	06 55 14.6	
	comp=E,4220µm,0.2s						
FSK	Fiskardo	0.31	21	P	Pg	06 55 08.8	-0.1
FSK				S	Sb	06 55 13.9	-0.2
	comp=E,1µm,0.3s						
FSK	Fiskardo	0.31	21	P	Pg	06 55 08.8	-0.1
FSK				S	Sg	06 55 13.1	-0.2
FSK				AML	AML	06 55 14.9	
	comp=N,1580µm,0.4s						
FSK				AML	AML	06 55 15.7	
	comp=E,3155µm,0.1s						
EVGI	Lefkada island	0.48	22	P	Pg	06 55 11.8	-0.2
EVGI				S	Sb	06 55 19.2	0.0
EVGI	Lefkada island	0.48	22	P	Pg	06 55 12.0	0.0
EVGI				S	Sg	06 55 18.7	+0.1
MGNA	Meganis	0.56	31	P	Pg	06 55 13.5	0.0
MGNA				S	Sg	06 55 20.3	-0.7
LKD2	Lefkada island	0.64	17	P	Pg	06 55 14.7	-0.3
LKD2	Lefkada island	0.64	17	P	Pg	06 55 14.4	-0.5
TSLK	Tsoukalades, L	0.68	16	P	Pg	06 55 15.4	-0.2
TSLK	Tsoukalades, L	0.68	16	P	Pg	06 55 15.3	-0.3
PDO	Prodromos	0.73	54	P	Pg	06 55 16.3	-0.3
PDO	Prodromos	0.73	54	P	Pg	06 55 16.1	-0.6
RLS	Riolos of Patr	0.83	98	P	Pg	06 55 18.1	-0.3
PVO	Paravola	0.97	62	P	Pb	06 55 21.1	+0.4
PVO	Paravola	0.97	62	P	Pb	06 55 20.9	+0.3
DRO	Drossia	1.04	102	P	Pb	06 55 21.6	-0.2
ANX	Ano Chora	1.25	70	P	Pn	06 55 25.2	+0.1
ANX	Ano Chora	1.25	70	P	Pn	06 55 25.8	+0.8
SERG	Sergoula	1.31	79	P	Pn	06 55 26.2	+0.4
SERG	Sergoula	1.31	79	P	Pn	06 55 25.7	0.0
KALE	Kalithea	1.37	80	P	Pn	06 55 26.8	+0.2
AGG	Agios Georgios	1.72	60	P	Pg	06 55 34.8	-0.5

JMA ***10*** *07:11:41.7±0.7, 46.°54N×152.°61E, h30^{km}, M4.4*

SKHL ***10*** *07:11:43.0±0.7, 46.°22N×152.°68E, h73^{km}±7^{km}, mb4.8/6*

MOS ***10*** *07:11:44.2±1.2, 46.°51N×152.°35E, h75^{km}, mb4.6/12, Error ellipse: s-maj=8.5km s-min=5.6km az=66.6*

NEIC ***10*** *07:11:47.7±2.0, 46.°64N±0.°07×152.°1E±0.°1, h86^{km}±4^{km}, mb4.4/44, Error ellipse: s-maj=13.9km s-min=10.0km az=114.0*

IDC ***10*** *07:11:47.9±2.4, 46.°70N×152.°24E, h85^{km}±20^{km}, mb3.7/20, mb1 3.9/26, mb1mx3.7/60, mbtmp4.0/26, Error ellipse: s-maj=20.4km s-min=11.4km az=153.0*

ISC 10 07:11:47.6±0.4**, 46.°40N**±0.°06×**152.°27E**±0.°05**, h100**^{km}**, n204, σ1.^{s}79**/212**, mb4.2**/44**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.29	251	*e*P	Pn	07 12 35.3	-1.8
KUR				AMB	AMB	07 12 38.0	
	130nm,0.6s						
KUR				*e*S	Sn	07 13 15.0	-0.4
KUR				A	A	07 13 23.0	
	370nm,0.4s						
KUR				A	A	07 13 23.0	
	160nm,0.4s						
KUR	Kuril'sk	3.29	251	*e*PN	Pn	07 12 36.2	-0.9
SHO	Shikotan	4.60	239	*e*P	Pn	07 12 52.2	-2.6
SHO				AMB	AMB	07 12 56.8	
	40nm,0.3s						
SHO				*e*S	Sn	07 13 44.2	-2.9
SHO				A	A	07 14 03.0	
	180nm,0.6s						
SHO				A	A	07 14 03.0	
	100nm,0.6s						
SHO	Shikotan	4.60	239	*e*PN	Pn	07 12 52.3	-2.6
SHO				*e*S	Sn	07 13 44.6	-2.5
SHO				pmax	pmax		
	comp=Z,35nm,0.3s						
SHO				smax	smax		
	comp=E,103nm,0.4s						
SHO				smax	smax		
	comp=N,179nm,0.6s						
SKR	Severo-Kuril's	4.99	29	*e*P	Pn	07 12 56.6	-3.5
SKR				*e*S	Sn	07 13 50.7	-5.8
SKR				A	A	07 14 01.2	
	comp=N,80nm,0.3s						
SKR				A	A	07 14 01.2	
	comp=N,70nm,0.3s						
SKR	Severo-Kuril's	4.99	29	*i* PN	Pn	07 12 56.5	-3.5
YUK	Yuzh-Kuril'sk	5.11	245	*e*P	Pn	07 13 00.6	-1.0
YUK				AMB	AMB	07 13 03.7	
	comp=N,130nm,0.6s						

YUK				*e*S	Sn	07 13 59.1	-0.2
YUK				A	A	07 14 12.1	
	comp=N,320nm,0.8s						
YUK				A	A	07 14 12.1	
	comp=N,340nm,0.8s						
YUK	Yuzh-Kuril'sk	5.11	245	*e*PN	Pn	07 13 01.3	-0.3
YUK				*e*S	Sn	07 14 00.7	+1.4
YUK				pmax	pmax		
	comp=Z,128nm,0.6s						
YUK				smax	smax		
	comp=E,341nm,0.5s						
YUK				smax	smax		
	comp=N,315nm,0.7s						
GRPR	Tuman	5.18	245	*e*P	Pn	07 13 01.8	-0.9
GRPR				AMB	AMB	07 13 09.0	
	comp=N,100nm,0.4s						
GRPR				*e*S	Sn	07 14 01.4	+0.2
GRPR				A	A	07 14 19.0	
	comp=N,180nm,0.5s						
GRPR				A	A	07 14 19.0	
	comp=N,190nm,0.5s						
GRPR	Tuman	5.18	245	*e*PN	Pn	07 13 02.4	-0.3
GRPR				*e*S	Sn	07 14 02.4	+1.2
GRPR				pmax	pmax		
	comp=Z,97nm,0.4s						
GRPR				smax	smax		
	comp=N,183nm,0.5s						
GRPR				smax	smax		
	comp=E,193nm,0.5s						
GLVR	Golovnino	5.47	243	*e*P	Pn	07 13 05.2	-1.4
GLVR				*e*S	Sn	07 14 07.8	-0.3
GLVR	Golovnino	5.47	243	*e*PN	Pn	07 13 05.2	-1.4
GLVR				*e*S	Sn	07 14 07.8	-0.3
NEM2	Nemuro 2	5.54	239	P	Pn	07 13 05.0	-2.5
NEM2				*e*S	Sn	07 14 07.0	-2.8
NMR	Nemuro--Hokkai	5.55	239	*e*P	Pn	07 13 05.2	-2.4
NMR				*e*S	Sn	07 14 06.9	-3.1
NMR	Nemuro--Hokkai	5.55	239	*e*PN	Pn	07 13 04.8	-2.8
JRA	Rausu	5.62	247	P	Pn	07 13 09.1	+0.5
JNK	Nakash	6.05	245	P	Pn	07 13 13.8	-0.6
JAK	Akkeshi	6.38	241	P	Pn	07 13 16.7	-2.2
JAK				*e*S	Sn	07 14 26.6	-3.6
JTKR	Abashiri--Toko	6.39	251	P	Pn	07 13 19.4	+0.4
YSS	Yuzh-Sakhalins	6.57	278	*e*P	Pn	07 13 21.6	+0.1
YSS				AMB	AMB	07 13 22.6	
	comp=E,20nm,0.8s						
YSS				*e*S	Sn	07 14 34.8	-0.1
YSS				A	A	07 14 35.0	
	comp=E,20nm,0.7s						
YSS	Yuzh-Sakhalins	6.57	278	PN	Pn	07 13 20.3	-1.2
YSS	Yuzh-Sakhalins	6.57	278		Pn	07 13 20.3	-1.2
JMP	Maruseppu	6.73	252	P	Pn	07 13 24.7	+0.9
JAR	Ashorobuto	6.79	246	P	Pn	07 13 24.2	-0.3
JAR				*e*S	Sn	07 14 40.4	+0.1
JSE	Soyaes	6.94	262	P	Pn	07 13 27.1	+0.6
JOB	Onbets	6.96	243	P	Pn	07 13 25.2	-1.5
JKK2	Kamakawa 2	7.19	253	P	Pn	07 13 30.8	+0.8
JKA	Kamikawa-asahi	7.20	255	*e*P	Pn	07 13 31.6	+1.6
JKA	Kamikawa-asahi	7.20	255		Pn	07 13 31.6	+1.6
ASAJ	Asahikawa	7.20	255	P	Pn	07 13 32.0	+2.0
ASAJ	Asahikawa	7.20	255	P	Pn	07 13 31.6	+1.5
	comp=E,1.7nm,0.3s,baz=86,slow=16,SNR=14						
JWK2	Keihoku	7.32	265	P	Pn	07 13 34.5	+2.8
UGL	Uglegorsk	7.38	295	*e*P	Pn	07 13 32.2	-0.3
UGL				AMB	AMB	07 13 33.2	
	comp=E,70nm,0.9s						
JCH	Churui	7.40	242	P	Pn	07 13 31.4	-1.5
JCH				*e*S	Sn	07 14 52.2	-3.0
PEA0B	Petropavlovsk-	7.58	26	PN	Pn	07 13 33.0	-2.2
PEA0B	Petropavlovsk-	7.58	26	Pn	Pn	07 13 33.0	-2.2
PETK	Petropavlovsk-	7.58	26	P	Pn	07 13 32.8	-2.4
	comp=E,0.9nm,0.3s,baz=189,slow=12,SNR=17						
PETK				S	Sn	07 15 01.9	+2.5
	baz=87,slow=30,SNR=1.8						
PETK	Petropavlovsk-	7.58	26	PN	Pn	07 13 32.9	-2.3
PETK	Petropavlovsk-	7.58	26		Pn	07 13 32.9	-2.3
TYV	Tymovskoe	7.78	309	*e*P	Pn	07 13 37.9	0.0
TYV				AMB	AMB	07 13 40.3	
	comp=E,10.0nm,0.5s						
TYV	Tymovskoe	7.78	309	*e*PN	Pn	07 13 39.3	+1.4
TYV				pmax	pmax		
	comp=Z,17nm,0.8s						
PET	Petropavlovsk	7.82	30	*e*P	Pn	07 13 35.5	-2.9
PET				AMB	AMB	07 13 39.9	
	comp=Z,30nm,0.6s						
PET	Petropavlovsk	7.82	30	*i* PN	Pn	07 13 35.8	-2.6
ERM	Erimo	7.88	239	PN	Pn	07 13 39.0	-0.3
ERM	Erimo	7.88	239	Pn	Pn	07 13 39.0	-0.3
JRBN	Rebuntou	7.88	267	P	Pn	07 13 40.6	+1.4
JBT2	Biratori 2	7.94	246	P	Pn	07 13 39.0	-1.2
JNBK	Urakawa-nobuka	7.96	242	P	Pn	07 13 38.1	-2.4
JNB	Noboribetsu	8.94	248	P	Pn	07 13 52.7	-1.1
JNB				*e*S	Sn	07 15 31.4	-1.2
JKB	Kayabe	9.25	245	P	Pn	07 13 54.9	-3.0
JSH	Shimam	9.50	251	P	Pn	07 14 00.9	-0.5
JYM2	Yakumo 2	9.55	248	P	Pn	07 14 00.6	-1.4
JTM	Tenmabayashi	9.87	239	P	Pn	07 14 02.8	-3.6
JANG	Nango	9.87	236	P	Pn	07 14 01.8	-4.6
JANG				*e*S	Sn	07 15 46.5	-8.8
TEY	Ternei	11.04	269	*e*P	Pn	07 14 21.1	-1.2
MA2	Magadan	13.23	357	P	Pn	07 14 47.9	-3.3
	comp=Z,0.4nm,0.3s,baz=164,slow=9.7,SNR=3.6						
MA2	Magadan	13.23	357	*i* PN	Pn	07 14 47.8	-3.4
MA2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MA2	Magadan	13.23	357		Pn	07 14 48.3	-3.0
KLR	Kul'dur	14.07	289	P	P	07 15 03.4	-3.3
	comp=Z,0.1nm,0.3s,baz=85,slow=14,SNR=5.3						
KLR	Kul'dur	14.07	289	*i* P	P	07 15 03.5	-3.3
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
EKMR	Ekimchan	14.14	305	*e*P	Pn	07 15 03.0	-0.1
MJAR	Matsushiro Arr	14.40	232	P	P	07 15 12.9	+2.3
	comp=Z,0.1nm,0.3s,baz=36,slow=10,SNR=5.4						
MJAR	Matsushiro Arr	14.40	232	P	Pn	07 15 07.4	+0.8
MJAR	Matsushiro Arr	14.40	232	Pn	Pn	07 15 07.4	+0.8
USA0B	Ussuriysk Arra	14.44	269	*i* P	P	07 15 08.6	-2.3
USRK	Ussuriysk Ar.	14.44	269	P	Pn	07 15 06.0	-1.0
	baz=82,slow=12,SNR=6.1						
USRK	Ussuriysk Ar.	14.44	269	P	P	07 15 08.1	-2.8
USRK	Ussuriysk Ar.	14.44	269		P	07 15 08.1	-2.8
SEY	Seymchan	16.57	0	P	Pn	07 15 31.8	-1.7
	comp=Z,0.2nm,0.3s,baz=170,slow=18,SNR=4.6						
SEY	Seymchan	16.57	0	*e*P	Pn	07 15 31.1	-2.5
ZEA	Zeya	17.60	304	*e*P	P	07 15 34.9	-11
KSRS	Korea Array	20.14	252	P	Pn	07 16 16.0	-0.3
	comp=Z,3.5nm,0.7s,baz=56,slow=11,SNR=12						
KSRS	Korea Array	20.14	252	*e*P	Pn	07 16 16.0	-0.2
KSRS	Korea Array	20.14	252	P	Pn	07 16 16.0	-0.2
YAK	Yakutsk	20.31	329	*i* P	P	07 16 14.3	-0.9
YAK				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ADK	Adak	20.94	63	P	Pn	07 16 26.2	+0.7
ADK				pmax	pmax		
	comp=Z,123nm,1.5s						
ADK	Adak	20.94	63	P	Pn	07 16 26.2	+0.7
BILL	Bilibino	22.87	14	*e*P	P	07 16 41.8	-0.3
BILL	Bilibino	22.87	14	*i* P	P	07 16 41.8	-0.3
BILL				pmax	pmax		
	comp=Z,43nm,7.5s						
H11N2	WAKE ISLAND Hy	29.18	151	T	T	07 49 02.2	
	baz=340,slow=76,SNR=2354						
H11N1	WAKE ISLAND Hy	29.20	151	T	T	07 49 05.0	
	baz=340,slow=76,SNR=1383						
H11N3	WAKE ISLAND Hy	29.20	151	T	T	07 48 59.2	
	baz=340,slow=76,SNR=879						
H11S1	WAKE ISLAND Hy	30.26	152	T	T	07 50 19.2	
	baz=340,slow=76,SNR=551						
H11S3	WAKE ISLAND Hy	30.27	152	T	T	07 50 22.6	
	baz=340,slow=76,SNR=445						
H11S2	WAKE ISLAND Hy	30.27	152	T	T	07 50 19.4	
	baz=340,slow=76,SNR=472						
TLY	Talaya	31.83	298	*i* P	P	07 18 02.3	-0.2
TLY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
IMAR	Indian Mountai	34.40	36	P	P	07 18 24.4	-0.2
KDAK	Kodiak Island	34.78	50	P	P	07 18 27.2	-0.8
	comp=Z,4.3nm,0.7s,baz=248,slow=5.5,SNR=4.5						
KDAK	Kodiak Island	34.78	50	P	P	07 18 27.5	-0.5
CNPM	China Poot	35.34	47	P	P	07 18 34.2	+1.3
KTH	Kantishna Hill	35.41	40	P	P	07 18 34.0	+0.5
KTH				IAmb	IAmb	07 18 35.2	
	comp=Z,6.6nm,1.1s						
BWN	Browne	36.07	39	P	P	07 18 40.1	+1.1
CCB	Clear Creek Bu	36.79	38	P	P	07 18 46.0	+0.8
ILAR	Eielson Array	37.19	38	P	P	07 18 48.0	-0.5
	comp=Z,0.4nm,0.6s,baz=256,slow=7.3,SNR=10						
ILAR	Eielson Array	37.19	38	P	P	07 18 48.1	-0.4
PRP	Porcupine Dome	37.76	37	P	P	07 18 53.6	+0.2
PRP				IAmb	IAmb	07 19 06.4	
	comp=Z,7.8nm,1.5s						
FYU	Fort Yukon	37.87	35	P	P	07 18 52.6	-1.6
FYU				IAmb	IAmb	07 18 56.0	
	comp=Z,11nm,1.3s						
BMAR	Burnt Mountain	38.14	34	P	P	07 18 57.0	+0.5
BCAR	Beaver Creek A	39.55	41	P	P	07 19 09.2	+0.8
EGAK	Eagle	39.64	38	P	P	07 19 08.3	-0.7
BARN	Barnard Glacie	39.90	44	P	P	07 19 12.3	+0.9
BARN				IAmb	IAmb	07 19 14.0	
	comp=Z,7.7nm,1.0s						
EPYK	Eagle Plains	41.29	35	P	P	07 19 23.2	+0.5
EPYK				IAmb	IAmb	07 19 31.9	
	comp=Z,5.0nm,1.3s						
HYT	Haines Junctio	41.93	44	P	P	07 19 29.6	+1.5
HYT				IAmb	IAmb	07 19 46.5	
	comp=Z,5.9nm,1.2s						
INK	Inuvik	42.26	32	P	P	07 19 30.6	+0.1
	comp=Z,1.3nm,0.4s,baz=280,slow=7.5,SNR=9.3						
INK	Inuvik	42.26	32	P	P	07 19 30.9	+0.5
INK				IAmb	IAmb	07 19 36.1	
	comp=Z,5.1nm,1.4s						
ZALV	Zalesovo Beam	42.35	306	PcP	PcP	07 21 24.6	+1.8
	comp=Z,1.0nm,0.6s,baz=104,slow=4.1,SNR=6.2						
C36M	Paulatuk	45.41	30	P	P	07 19 55.8	+0.2
C36M				IAmb	IAmb	07 19 56.8	
	comp=Z,5.5nm,1.2s						
MK31	Makanchi Array	46.59	297	P	P	07 20 04.1	-1.1
MK31				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MK31	Makanchi Array	46.59	297	P	P	07 20 04.1	-1.1
MKAR	Makanchi Array	46.59	297	P	P	07 20 04.8	-0.4
	comp=Z,0.8nm,0.6s,baz=68,slow=8.0,SNR=9.7						
MKAR				PcP	PcP	07 21 39.2	+1.6
	comp=Z,0.9nm,0.7s,baz=70,slow=4.3,SNR=6.2						
MKAR	Makanchi Array	46.59	297	*e*P	P	07 20 05.0	-0.2
MKAR	Makanchi Array	46.59	297	P	P	07 20 05.0	-0.2
MKAR	Makanchi Array	46.59	297	P	P	07 20 05.0	-0.2
MKAR				PcP	PcP	07 21 39.4	+1.7
MAKZ	Makanchi	46.77	297	P	P	07 20 07.6	+0.9
MAKZ				pmax	pmax		
	comp=Z,1.0nm,1.1s						
MAKZ	Makanchi	46.77	297	P	P	07 20 07.6	+0.9
KURK	Kurchatov	47.08	304	P	P	07 20 07.2	-1.7
KURK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
KURK	Kurchatov	47.08	304	P	P	07 20 07.2	-1.7
YKA	Yellowknife Ar	51.55	36	P	P	07 20 42.1	-0.7
	comp=Z,0.8nm,0.8s,baz=297,slow=6.7,SNR=8.0						
YKA				PcP	PcP	07 21 56.5	+1.1
	comp=Z,0.3nm,0.6s,baz=308,slow=3.4,SNR=4.0						
CMAR	Chiang Mai Arr	51.72	256	P	P	07 20 47.4	+2.7
	comp=Z,1.0nm,0.3s,baz=32,slow=7.2,SNR=6.6						
TAPN	Taplejung	53.54	273	*e*P	P	07 20 59.8	+1.5
	comp=Z,7.7nm,0.5s						
JIRN	Jiri	54.39	274	*e*P	P	07 21 06.6	+2.0
	comp=Z,32nm,0.5s						
RAMN	Ramite	54.56	273	*e*P	P	07 21 07.4	+1.8
	comp=Z,23nm,0.6s						
DMN	Daman	55.17	275	*e*P	P	07 21 12.2	+2.1
	comp=Z,19nm,0.8s						
GKN	Gorkha	55.25	276	*e*P	P	07 21 12.5	+2.0
DANN	Dangsing	55.64	277	*e*P	P	07 21 15.6	+2.1
	comp=Z,27nm,0.6s						
KKAR	Karatay Array	55.66	299	P	P	07 21 12.6	-0.5
KKAR	Karatay Array	55.66	299	P	P	07 21 12.6	-0.5
PMG	Port Moresby	55.74	186	P	P	07 21 17.9	+4.1
PMG				pmax	pmax		
	comp=Z,18nm,1.2s						
PMG	Port Moresby	55.74	186	P	P	07 21 17.9	+4.1
ABKAR	Akbulak array	58.21	310	P	P	07 21 30.0	-0.9
NIL	Nilore	59.46	288	P	P	07 21 40.5	+0.6
NIL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NIL	Nilore	59.46	288	P	P	07 21 40.5	+0.6
JTMT	Jette	59.70	51	P	P	07 21 41.5	+0.1
JTMT				IAmb	IAmb	07 21 58.7	
	comp=Z,5.4nm,1.2s						
SUMG	Summit	61.09	4	*i* P	P	07 21 50.6	-0.3
	comp=Z,20nm,0.9s						
SUMG	Summit	61.09	4	P	P	07 21 50.6	-0.3
SUMG				pmax	pmax		
	comp=Z,11nm,1.1s						
SUMG	Summit	61.09	4	P	P	07 21 50.6	-0.3
LRM	Limekiln Ridge	61.87	52	P	P	07 21 57.6	+1.2
NVAR	Mina Array Bea	63.11	62	P	P	07 22 06.3	+1.6
	comp=Z,0.1nm,0.3s,baz=297,slow=6.4,SNR=4.0						
NVAR	Mina Array Bea	63.11	62	P	P	07 22 06.2	+1.5
YHB	Horse Butte	63.24	52	P	P	07 22 07.2	+1.8
SCO	Scoresbysund	63.36	358	P	P	07 22 06.4	+0.9
SCO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SCO	Scoresbysund	63.36	358	P	P	07 22 06.4	+0.9
SCO				IAmb	IAmb	07 22 16.1	
	comp=Z,7.8nm,1.1s						
FINES	FINESS Array B	64.11	334	P	P	07 22 10.2	-0.3
	comp=Z,4.1nm,1.0s,baz=39,slow=7.3,SNR=4.5						
FINES	FINESS Array B	64.11	334	*e*P	P	07 22 11.2	+0.7
FINES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
FINES	FINESS Array B	64.11	334	P	P	07 22 10.6	+0.1
BW06	Boulder Array	65.42	53	P	P	07 22 21.0	+1.3
BW06				IAmb	IAmb	07 22 31.0	
	comp=Z,3.6nm,1.3s						
PD31	Pinedale Array	65.42	53	P	P	07 22 20.2	+0.5
PDAR	Pinedale Array	65.42	53	P	P	07 22 20.9	+1.2
	comp=Z,0.8nm,0.6s,baz=302,slow=1.5,SNR=12						
PDAR	Pinedale Array	65.42	53	P	P	07 22 20.7	+1.0
ULM	Lac du Bonnet	67.17	40	P	P	07 22 30.6	+0.2
	comp=Z,1.1nm,0.7s,baz=273,slow=7.0,SNR=3.1						
ULM	Lac du Bonnet	67.17	40	P	P	07 22 30.7	+0.2
ULM				IAmb	IAmb	07 22 32.3	
	comp=Z,3.4nm,1.1s						
RSSD	Black Hills	67.50	49	P	P	07 22 33.7	+0.8
RSSD				pmax	pmax		
	comp=Z,6.0nm,1.5s						
RSSD	Black Hills	67.50	49	P	P	07 22 33.7	+0.8
RSSD				IAmb	IAmb	07 22 47.4	
	comp=Z,5.6nm,1.5s						
WB0	Warramunga Arr	67.81	198	P	P	07 22 37.8	+3.1
MSVF	Nonsavu	67.95	153	P	P	07 22 37.8	+2.1
MSVF				pmax	pmax		
	comp=Z,36nm,1.2s						
MSVF	Nonsavu	67.95	153	P	P	07 22 37.8	+2.1
WR0	Warramunga Arr	67.96	198	P	P	07 22 37.6	+2.0
WR0				IAmb	IAmb	07 22 49.4	
	comp=Z,11nm,1.4s						
NB201	NORSAR Array S	68.35	341	P	P	07 22 37.9	+0.3
NB2	NORSAR Subarra	68.37	341	P	P	07 22 37.6	-0.2
	comp=Z,0.9nm,0.6s,baz=28,slow=6.2						
NOA	NORSAR Array B	68.37	341	P	P	07 22 38.1	+0.3
	comp=Z,2.1nm,0.8s,baz=27,slow=6.4,SNR=6.1						
S22A	4UR Ranch, Cre	70.35	56	P	P	07 22 52.9	+2.2
KBZ	Khabaz	70.69	314	P	P	07 22 54.1	+1.9
	comp=Z,3.4nm,0.9s,baz=228,slow=6.6,SNR=4.0						
AKASG	Malin Array Be	71.52	326	P	P	07 22 57.0	-0.2
	comp=Z,0.5nm,0.3s,baz=35,slow=6.5,SNR=6.1						
AKASG	Malin Array Be	71.52	326	*e*P	P	07 22 57.1	-0.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	71.52	326	P	P	07 22 56.4	-0.8
ASAR	Alice Springs	71.69	198	P	P	07 23 01.7	+3.2
	comp=Z,0.7nm,0.7s,baz=13,slow=5.1,SNR=9.2						
ASAR	Alice Springs	71.69	198	P	P	07 23 01.6	+3.1
ASAR	Alice Springs	71.69	198	P	P	07 23 01.6	+3.1
ANMO	Albuquerque	72.52	58	P	P	07 23 04.7	+1.1
	comp=Z,0.6nm,0.6s,baz=335,slow=9.7,SNR=5.2						
ANMO	Albuquerque	72.52	58	P	P	07 23 04.1	+0.4
ANMO	Albuquerque	72.52	58	P	P	07 23 04.1	+0.4
SCHQ	Schefferville	73.86	22	P	P	07 23 10.5	-0.5
	comp=Z,2.4nm,0.8s,baz=13,slow=2.8,SNR=4.8						
SCHQ	Schefferville	73.86	22	P	P	07 23 11.5	+0.5
SCHQ				IAmb	IAmb	07 23 17.0	
	comp=Z,4.7nm,1.5s						
BUR08	Bucovina Ar. S	75.54	326	P	P	07 23 21.7	+0.7
BUR08				IAmb	IAmb	07 23 22.3	
	comp=Z,3.8nm,0.6s						
BURAR	Bucovina Array	75.56	326	P	P	07 23 22.1	+1.0
CLL	Collm	76.54	335	*e*P	P	07 23 28.0	+1.6
CLL	Collm	76.54	335	*e*P	P	07 23 28.0	+1.6
TX31	Lajitas Ar. Si	78.17	60	P	P	07 23 36.0	0.0
TX32	Lajitas Array	78.17	60	P	P	07 23 37.1	+1.1
TXAR	Lajitas Array	78.17	60	P	P	07 23 37.4	+1.3
	comp=Z,1.3nm,0.7s,baz=301,slow=4.2,SNR=22						
TXAR	Lajitas Array	78.17	60	P	P	07 23 36.4	+0.4
TXAR	Lajitas Array	78.17	60	P	P	07 23 36.4	+0.4
BR131	Keskin Array S	78.25	316	P	P	07 23 37.4	+1.1
BR131				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BR131	Keskin Array S	78.25	316	P	P	07 23 37.4	+1.1
BR131				IAmb	IAmb	07 23 42.3	
	comp=Z,7.7nm,1.2s						
BRTR	Keskin Array B	78.25	316	P	P	07 23 37.5	+1.1
	comp=Z,2.5nm,0.8s,baz=43,slow=3.9,SNR=7.5						
BRTR	Keskin Array B	78.25	316	*e*P	P	07 23 37.8	+1.4
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	Keskin Array B	78.25	316	P	P	07 23 37.7	+1.4
GERES	GERESS Array B	78.52	334	P	P	07 23 38.2	+0.6
	comp=Z,0.8nm,0.6s,baz=72,slow=5.7,SNR=3.7						
GERES	GERESS Array B	78.52	334	*e*P	P	07 23 39.5	+1.9
GERES	GERESS Array B	78.52	334	P	P	07 23 37.0	-0.6
U40A	Yellville	78.99	48	P	P	07 23 40.4	+0.1
U40A				IAmb	IAmb	07 23 41.2	
	comp=Z,2.9nm,0.8s						
FCAR	Ozark Folk Cen	79.72	48	P	P	07 23 43.9	-0.4
M52A	Chesterland	80.28	38	P	P	07 23 46.5	-0.7
M52A				IAmb	IAmb	07 23 48.6	
	comp=Z,8.7nm,1.1s						
LONY	Lake Ozonia	80.37	32	P	P	07 23 47.3	-0.4
VTS	Vitosha	80.49	324	P	P	07 23 49.3	+0.8
VTS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VTS	Vitosha	80.49	324	P	P	07 23 49.3	+0.8
VTS				IAmb	IAmb	07 23 50.5	
	comp=Z,5.8nm,0.9s						
U49A	Red Boiling Sp	82.38	44	P	P	07 23 59.2	+0.8
U49A				IAmb	IAmb	07 23 59.6	
	comp=Z,2.4nm,0.7s						
Z50A	Ashland	84.94	46	P	P	07 24 12.2	+0.7
Z50A				IAmb	IAmb	07 24 12.9	
	comp=Z,3.2nm,0.8s						
PLCA	Paso Flores	148.75	95	PKPbc	PKPab	07 31 24.9	-2.0
	comp=Z,1.0nm,0.6s,baz=330,slow=5.3,SNR=6.4						
PLCA	Paso Flores	148.75	95	PKP2	PKPab	07 31 25.0	-2.0
PLCA	Paso Flores	148.75	95		PKPab	07 31 25.6	-1.3
CPUP	Villa Florida	149.15	60	PKPbc	PKPab	07 31 26.2	-2.5
	comp=Z,1.6nm,0.8s,baz=294,slow=6.9,SNR=5.0						
CPUP	Villa Florida	149.15	60	PKP2	PKPab	07 31 26.1	-2.7
CPUP	Villa Florida	149.15	60		PKPab	07 31 26.1	-2.7

NEIC ***10*** *07:15:35.4±3.1, 40°.75N±0°.01×125°.12W±0°.05, h11*^{km}*±6*^{km}*, Error ellipse: s-maj=5.8km s-min=1.7km az=90.0*

ANF ***10*** *07:15:36.4±1.2, 40°.86N×124°.97W, h0*^{km}*, ML2.9/6, Error ellipse: s-maj=12.8km s-min=7.2km az=82.0*

NCEDC ***10*** *07:15:36.1±2.7, 40°.68N±0°.02×125°.12W±0°.05, h10*^{km}*±5*^{km}*, Md3.0/36, Error ellipse: s-maj=5.4km s-min=3.5km az=85.0*

IDC ***10*** *07:15:36.5±2.6, 40°.77N×124°.89W, h0*^{km}*, mb3.0/3, mb1 3.5/5, mb1mx3.4/50, mbtmp3.2/5, ML3.5/2, Error ellipse: s-maj=32.2km s-min=16.4km az=95.0*

ISC 10 07:15:34.5±2.1**, 40°.74N**±0°.04×**125°.15W**±0°.08**, h8**^{km}±13^{km}**, n65,** σ1^{s}**51**/76**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMPM	Mount Pierce	0.85	112		Pb	07 15 51.8	+0.3
KMPM					Sn	07 16 04.7	-0.7
JCC	Jacoby Creek,	0.85	84		Pb	07 15 51.4	-0.1
JCC					Sn	07 16 04.0	-1.5
KRPM	Rodgers	0.95	63		Pb	07 15 53.0	-0.3
KRPM					Sn	07 16 07.4	-0.6
KCRM	Chalk Rock	1.06	107		Pb	07 15 55.0	-0.1
KHMM	Horse Mountain	1.08	82		Pb	07 15 55.3	-0.3
KHMM					Sn	07 16 10.6	-0.8
KMRM	Mail Ridge	1.21	115		Pb	07 15 57.8	+0.1
KCSM	Cold Springs	1.26	99		Pg	07 15 58.0	-0.6
KOMM	Orleans Mounta	1.39	67		Pn	07 15 59.5	-0.8
KBSM	Bell Springs	1.44	124		Pn	07 16 00.2	-0.8
KIPM	Iron Peak	1.58	125		Pn	07 16 02.3	-0.6
KCPM	Cahto Peak	1.59	131		Pn	07 16 02.2	-0.9
KBNM	Bluenose Ridge	1.72	119		Pn	07 16 04.8	0.0
KFPM	Farley Peak	1.72	129		Pn	07 16 03.7	-1.0
LGPM	Granite Peak	1.77	84		Pn	07 16 04.8	-0.8
LBPM	Beegum Peak	1.78	103		Pn	07 16 05.0	-0.6
GTC	Three Chop Rid	1.81	137		Pn	07 16 04.6	-1.3
L02E	Cave Junction	1.83	39	P	Pn	07 16 05.7	-0.6
	baz=218,SNR=14						
L02E				S	Sn	07 16 27.7	-2.1
	baz=218						
M02C	Callahan	1.85	69	P	Pn	07 16 06.7	+0.1
	baz=248,SNR=10						
M02C				S	Sb	07 16 30.1	-2.0
	baz=248						
N02D	Trinity Center	1.87	82		Pb	07 16 07.6	-1.3
N02D	Trinity Center	1.87	82	P	Pg	07 16 09.0	-1.3
	baz=262,SNR=10						
N02D				S	Sb	07 16 30.8	-1.7
	baz=262						
O02D	Mt. Diablo Mer	1.89	106		Pn	07 16 07.0	-0.1
O02D	Mt. Diablo Mer	1.89	106	P	Pn	07 16 06.8	-0.3
	baz=287,SNR=15						
KRKM	Rackout Spring	1.91	127		Pn	07 16 06.6	-0.8
GNAM	Navarro Ridge	1.93	142		Pn	07 16 06.3	-1.3
WDC	Whiskeytown Da	1.99	94		Pn	07 16 08.3	-0.1
GROM	Round Mountain	2.06	113		Pn	07 16 09.8	+0.2
YBH	Yreka Blue Hor	2.09	61	Pn	Pn	07 16 10.3	+0.4
	1.2nm,0.3s,baz=254,slow=18,SNR=4.0						
YBH				Sn	Sn	07 16 34.7	-1.5
	4.5nm,0.3s,baz=158,slow=12,SNR=7.6						
GHOM	Hamilton Openi	2.10	143		Pn	07 16 08.6	-1.4
GHMM	Hull Mountain	2.10	125		Pn	07 16 09.2	-0.9
GVV	Valley View	2.12	116		Pn	07 16 10.4	0.0
K02D	Willamette Mer	2.25	29	P	Pn	07 16 11.3	-0.8
	baz=209,SNR=59						
K02D				S	Sn	07 16 37.0	-3.1
	baz=209						
GGUM	Gualala	2.27	145		Pn	07 16 10.8	-1.5
GSNM	Snow Mountain	2.34	139		Pn	07 16 12.0	-1.4
GHLM	Highland Sprin	2.36	135		Pn	07 16 12.5	-1.0
HOPS	Hopland Field	2.36	137		Pn	07 16 12.3	-1.3
LTCM	Tuscan Springs	2.37	102		Pn	07 16 13.9	+0.3
HUMO	Hull Mountain	2.49	41		Pn	07 16 15.4	+0.1
O03E	Paynes Creek	2.59	99		Pn	07 16 16.3	-0.4
O03E	Paynes Creek	2.59	99	P	Pn	07 16 17.1	+0.4
	baz=280,SNR=28						
L04D	Klamath Falls	2.60	54	P	Pb	07 16 19.4	-2.0
	baz=235,SNR=18						
M04C	Macdoel	2.71	66	P	Pb	07 16 20.8	-2.5
	baz=247						
M04C				S	Sb	07 16 54.3	-2.2
	baz=247						
LRDM	Redding Peak	2.82	94		Pn	07 16 21.2	+1.3
MGL	Magalia	2.90	107		Pn	07 16 21.2	+0.1
ORV	Oroville	3.04	112		Pn	07 16 22.2	-0.6
K04D	Chiloquin, OR	3.17	52	P	Pn	07 16 26.4	+1.7
	baz=234						
I03D	Drain, OR	3.25	24	P	Pn	07 16 26.0	+0.3
	baz=204						
I03D				S	Sn	07 17 03.7	-0.8
	baz=204						
J04D	Umpqua Nationa	3.38	41	P	Pn	07 16 29.7	+2.0
	baz=222,SNR=6.0						
AFDM	Forest Hills D	3.68	118		Pn	07 16 32.2	+0.6
MOD	Modoc Plateau	3.83	71		Pg	07 16 50.1	+2.2
J05D	Fort Rock, OR	3.87	48	P	Pn	07 16 36.2	+1.8
	baz=229,SNR=12						
H04D	Lebanon	4.18	24	P	Pn	07 16 39.7	+1.1
	baz=205,SNR=13						
H04D				S	Sn	07 17 27.8	+0.2
	baz=205						
PINE	Pine Mountain	4.37	44		Pn	07 16 43.5	+2.2
CMB	Columbia Colle	4.57	125		Pn	07 16 45.1	+1.1
PNTR	Pine Nut	4.57	109		Pn	07 16 48.8	+4.7
NVAR	Mina Array Bea	5.77	111	Pn	Pn	07 17 02.6	+2.0
	0.4nm,0.3s,baz=290,slow=14,SNR=10						
BMO	Blue Mountains	7.08	52		Pn	07 17 22.5	+4.0
ISA	Isabella, Lake	7.30	132		Pn	07 17 23.8	+2.4
ISA	Isabella, Lake	7.30	132	P	Pn	07 17 24.1	+2.6
	baz=316						
EDW2	Edwards Air Fo	8.14	134	P	Pn	07 17 34.6	+1.6
	baz=318						

HEC	Hector,Ludlow	9.13	127	P	Pn	07 17 48.5	+1.9
	baz=313						
BELC	Belle Mtn. Jos	9.91	130	P	Pn	07 17 58.4	+1.1
	baz=315						
PFO	Pinyon Flats O	9.93	133	Pn	Pn	07 17 59.3	+1.7
	0.3nm,0.3s,baz=319,slow=12,SNR=6.5						
TXAR	Lajitas Array	20.89	116	P	Pn	07 20 20.6	+0.9
	0.4nm,0.8s,baz=307,slow=9.8,SNR=3.3						
ULM	Lac du Bonnet	22.49	55	P	P	07 20 36.2	+2.1
	2.3nm,0.9s,baz=202,slow=5.4,SNR=4.6						
YKA	Yellowknife Ar	22.69	13	P	P	07 20 38.1	+1.9
	0.3nm,0.8s,baz=197,slow=10,SNR=4.1						

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*IDC **10** 07:21:11.7±2.8, 14°.65S×177°.67W, h335^{km}±34^{km}, mb3.1/9, mb1 3.4/10, mb1mx3.2/42, mbtmp3.8/10, Error ellipse: s-maj=61.3km s-min=14.7km az=149.0*

*NEIC **10** 07:21:12.4±1.4, 14°.8S±0°.2×177°.6W±0°.1, h344^{km}±7^{km}, mb4.2/31, Error ellipse: s-maj=27.0km s-min=15.0km az=140.0*

ISC 10 07:21:12.6±0.6, **14°.9S**±0°.2×**177°.6W**±0°.1, **h350^{km}, n48, σ0^{s}.79**/48, **mb4.0**/26, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	5.69	81	P	Pn	07 22 39.4	-0.6
	3.0nm,0.3s,baz=70,slow=13,SNR=4.8						
AFI	Afiamalu	5.69	81		Pn	07 22 39.2	-0.8
BKZ	Black Stump Fm	24.73	191	P	P	07 26 03.0	-0.5
BKZ				IAmb	IAmb	07 26 04.7	
	comp=Z,23nm,1.5s						
EIDS	Eidsvold	31.16	246	P	P	07 27 00.0	-0.4
EIDS				IAmb	IAmb	07 27 04.2	
	comp=Z,14nm,1.4s						
STKA	Stephens Creek	40.84	238	P	P	07 28 22.1	+0.4
	comp=Z,1.1nm,0.8s,baz=76,slow=7.8,SNR=4.3						
STKA	Stephens Creek	40.84	238	P	P	07 28 19.8	-1.9
BBOO	Buckleboo	45.62	239	P	P	07 29 00.1	+0.6
BBOO				IAmb	IAmb	07 29 13.2	
	comp=Z,22nm,1.4s						
WR0	Warramunga Arr	45.86	257	P	P	07 29 02.4	+0.8
WB0	Warramunga Arr	46.01	257	P	P	07 29 01.3	-1.3
WB0				IAmb	IAmb	07 29 15.0	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	46.05	257	P	P	07 29 01.9	-1.1
	comp=Z,0.2nm,0.3s,baz=91,slow=7.2,SNR=3.4						
AS31	Alice Springs	46.45	251	P	P	07 29 06.4	+0.3
ASAR	Alice Springs	46.45	251	P	P	07 29 06.7	+0.6
	comp=Z,3.1nm,0.5s,baz=84,slow=8.1,SNR=59						
ASAR	Alice Springs	46.45	251	P	P	07 29 06.0	-0.2
KNRA	Kununurra	51.67	262	P	P	07 29 47.3	+2.0
KNRA				IAmb	IAmb	07 29 51.3	
	comp=Z,7.0nm,1.0s						
FITZ	Fitzroy Crossi	54.38	258	P	P	07 30 06.3	+1.5
JAGI	Jajag, Banyuwa	66.97	267	P	P	07 31 29.0	-0.2
KRMB	Red Mountain	74.84	39	P	P	07 32 16.6	+0.9
QSPA	South Pole Qui	75.14	180	P	P	07 32 18.1	+1.2
NVAR	Mina Array Bea	76.70	44	P	P	07 32 26.2	-0.1
	comp=Z,0.4nm,0.7s,baz=225,slow=7.3,SNR=4.4						
CNPM	China Poot	77.18	13	P	P	07 32 26.8	-1.4
SCM	Sheep Creek Mo	80.13	14	P	P	07 32 44.5	+0.3
GLB	Gilahina Butte	80.67	16	P	P	07 32 47.1	+0.1
BALM	Baldy	80.72	17	P	P	07 32 47.8	+0.4
BALM				IAmb	IAmb	07 32 48.0	
	comp=Z,3.4nm,0.7s						
TRF	Thorofare Moun	80.92	12	P	P	07 32 48.2	-0.2
BARN	Barnard Glacie	80.93	17	P	P	07 32 49.1	+0.6
BARN				IAmb	IAmb	07 33 01.0	
	comp=Z,4.9nm,1.1s						
CTGM	Chitina Glacie	80.94	17	P	P	07 32 48.9	+0.4
CTGM				IAmb	IAmb	07 33 06.5	
	comp=Z,7.8nm,1.4s						
JIS	Juneau Island	81.05	21	P	P	07 32 49.8	+0.9
SEY	Seymchan	81.05	347	P	P	07 32 49.0	+0.1
	comp=Z,1.2nm,0.6s,baz=259,slow=23,SNR=5.2						
RND	Reindeer	81.17	13	P	P	07 32 50.0	+0.4
RND				IAmb	IAmb	07 32 51.0	
	comp=Z,5.1nm,1.0s						
DHY	Denali Highway	81.20	13	P	P	07 32 49.9	0.0
DHY				IAmb	IAmb	07 33 00.9	
	comp=Z,2.4nm,1.2s						
MCK	McKinley	81.44	12	P	P	07 32 50.3	-0.7
MCK				IAmb	IAmb	07 32 54.9	
	comp=Z,7.3nm,1.3s						
MLY	Manley	82.25	11	P	P	07 32 55.0	-0.1
WRH	Wood River Hil	82.27	12	P	P	07 32 55.1	-0.1
WRH				IAmb	IAmb	07 32 55.5	
	comp=Z,6.7nm,1.4s						
RIDG	Independent Ri	82.36	14	P	P	07 32 55.9	+0.2
RIDG				IAmb	IAmb	07 33 03.2	
	comp=Z,9.4nm,1.5s						
DOT	Dot Lake	82.47	14	P	P	07 32 56.7	+0.4
DOT				IAmb	IAmb	07 32 57.3	
	comp=Z,4.4nm,1.3s						
CCB	Clear Creek Bu	82.49	12	P	P	07 32 55.8	-0.5
CCB				IAmb	IAmb	07 33 00.6	
	comp=Z,6.6nm,1.4s						
IMAR	Indian Mountai	82.60	10	P	P	07 32 57.5	+0.6
SCRK	Sand Creek	82.76	14	P	P	07 32 58.1	+0.2
SCRK				IAmb	IAmb	07 33 02.7	
	comp=Z,5.4nm,1.4s						
IL31		82.79	13	P	P	07 32 57.9	+0.1
IL31				IAmb	IAmb	07 33 14.9	
	comp=Z,3.6nm,1.5s						
ILAR	Eielson Array	82.79	13	P	P	07 32 56.8	-1.0
	comp=Z,1.1nm,0.7s,baz=222,slow=4.7,SNR=17						
ILAR	Eielson Array	82.79	13	P	P	07 32 57.0	-0.8
TXAR	Lajitas Array	83.70	58	P	P	07 33 04.5	+1.0
	comp=Z,0.4nm,0.6s,baz=215,slow=7.0,SNR=6.8						
TXAR	Lajitas Array	83.70	58	P	P	07 33 03.8	+0.4
DAWY	Dawson	83.99	16	P	P	07 33 04.5	+0.5
PDAR	Pinedale Array	84.62	43	P	P	07 33 08.2	+0.4
	comp=Z,0.1nm,0.6s,baz=250,slow=4.7,SNR=4.0						
PDAR	Pinedale Array	84.62	43	P	P	07 33 07.6	-0.2
YKA	Yellowknife Ar	91.27	24	P	P	07 33 38.2	-0.4
	comp=Z,0.1nm,0.4s,baz=238,slow=5.4,SNR=3.5						
BRTR	Keskin Array B	143.18	318	PKP	PKPdf	07 40 04.8	-1.1
	comp=Z,0.8nm,0.6s,baz=124,slow=0.4,SNR=3.6						

UCR 10 07:23:43.1±2.0, **9°.06N×84°.20W, h1^{km}**±9^{km}, **MD4.0, MW3.6, 1C-1D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCR2	La Lucha 2	0.71	16	*e*P	Pg	07 23 57.2	+0.5
LCR2				*e*S	Sb	07 24 09.0	+0.3
SJS	Escuela Geolog	0.89	9	⇑*e*P	Pg	07 24 00.4	+0.3
SJS				*e*S	Sb	07 24 14.4	+0.6
HDC	Heredia	0.94	5	⇓*e*P	Pg	07 24 01.2	+0.1
HDC				*e*S	Sb	07 24 15.8	+0.4
JTS	Las Juntas de	1.43	329	*e*P	Pn	07 24 08.3	-2.0
JTS				*e*S	Sg	07 24 27.2	-2.0
FORC	Fortuna	1.47	342	*e*P	Pb	07 24 11.2	-0.2
FORC				*e*S	Sn	07 24 32.6	+1.7
CEDE	Laguna Cedeo	1.50	341	*e*P	Pg	07 24 12.2	+0.3
PLVR	Palo Verde	1.71	319	*e*P	Pb	07 24 15.1	-0.4
GUAI	GUAI	1.77	313	*i* P	Pn	07 24 13.0	-1.9
PTEN	Parque Tenorio	1.82	335	*e*P	Pn	07 24 16.3	+0.6
CUI	Cuipilapa	1.85	329	*e*S	Sn	07 24 40.5	+0.2
COLC	Colonia	1.88	328	*e*P	Pn	07 24 16.2	-0.3
MESS	Mesas	1.94	330	*e*P	Pb	07 24 18.4	-0.9
NY14	Universidad de	2.06	320	*e*P	Pn	07 24 18.4	-0.5
LAPC	Finca la Perla	2.09	324	*e*P	Pn	07 24 18.7	-0.6
GBS3	Finca Las Img	2.11	324	*e*P	Pn	07 24 20.8	+1.1

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*KRNET **10** 07:23:46.6±0.1, 41°.91N×76°.56E, h17^{km}, mb3.3*

*SOME **10** 07:23:46.9, 41°.90N×76°.57E, h15^{km}*

*NNC **10** 07:23:47.1±0.5, 41°.94N×76°.58E, h0^{km}, mb4.0, mpv3.9, Error ellipse: s-maj=3.8km s-min=2.1km az=168.0*

*KNET **10** 07:23:48.4±0.4, 41°.93N×76°.41E, h9^{km}±2^{km}, ml2.8, Error ellipse: s-maj=2.8km s-min=2.5km az=109.0*

ISC 10 07:23:47.3±1.1, **41°.93N**±0°.03×**76°.54E**±0°.02, **h6^{km}**±10^{km}, **n79, σ1^{s}.00**/133, **33C-28D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULHL	Ulahol	0.38	325	⇑*i*P	Pg	07 23 55.1	+0.3
	baz=25						
ULHL				⇑*i*S	Sg	07 24 00.6	+0.7
	baz=25						
ULHL	Ulahol	0.38	325	P	Pg	07 23 55.2	+0.3
	103nm,0.2s,SNR=1134						
ULHL				⇓S	Sg	07 24 01.0	+1.1
	246nm,0.2s						
KDJ	Kajisay	0.52	67	⇓*i*P	Pg	07 23 56.2	-1.2
	baz=65						
KDJ				⇓*i*S	Sg	07 24 03.0	-1.2
	baz=65						
NRN	Naryn	0.64	219	⇑*i*P	Pg	07 23 59.4	-0.3
	baz=23						
NRN				⇑*i*S	Sg	07 24 08.0	-0.1
	baz=23						
BOOM	Boomskoye usch	0.71	322	⇓*i*P	Pg	07 24 01.0	0.0
	baz=22						
BOOM				⇓*i*S	Sg	07 24 10.9	+0.6
	baz=22						
KZA	Kyzart	0.97	279	⇑*i*P	Pg	07 24 05.1	-0.9
	baz=80						
KZA				⇑*i*S	Sg	07 24 18.4	-0.2
	baz=80						
KZA	Kyzart	0.97	279	⇑P	Pg	07 24 05.5	-0.5
	76nm,0.3s,SNR=117						
KZA				⇓S	Sg	07 24 18.8	+0.2
	138nm,0.3s						
IZV	Izvestkoviy	1.10	3	*e*P	Pb	07 24 07.9	-1.1
	28nm,0.1s						
IZV				*e*S	Sg	07 24 23.0	+0.1
	90nm,0.1s						
IZV	Izvestkoviy	1.10	3	P	Pb	07 24 07.9	-1.1
	33nm,0.2s						
IZV				S	Sg	07 24 23.0	+0.1
	90nm,0.1s						
TNSS	Tian-Shan	1.15	15	*e*P	Pb	07 24 08.5	-1.3
	30nm,0.1s						
TNSS				*e*S	Sg	07 24 24.2	0.0
	78nm,0.2s						
TNSS	Tian-Shan	1.15	15	P	Pb	07 24 08.5	-1.3
	33nm,0.3s						
TNSS				S	Sg	07 24 24.2	0.0
	67nm,0.3s						
KST	Kastek	1.19	339	*e*P	Pb	07 24 09.6	-0.7
	59nm,0.3s						
KST				*e*S	Sg	07 24 26.0	+0.4
	133nm,0.3s						
KST	Kastek	1.19	339	P	Pb	07 24 09.6	-0.7
	59nm,0.3s						
KST				S	Sg	07 24 26.0	+0.4
	133nm,0.3s						
ANVS	Anan'yevo	1.19	44	⇑*i*P	Pb	07 24 09.2	-1.3
	baz=43						
ANVS				⇑*i*S	Sb	07 24 25.1	-1.2
	baz=43						
MTBS	Maitube	1.20	356	*e*P	Pn	07 24 09.7	-1.1
	31nm,0.2s						
MTBS				*e*S	Sb	07 24 26.1	-0.3
	86nm,0.3s						
MTBS	Maitube	1.20	356	P	Pn	07 24 09.7	-1.1
	31nm,0.2s						
MTBS				S	Sg	07 24 26.4	+0.5
	86nm,0.3s						
MDOK	Medeo	1.29	17	*e*P	Pn	07 24 10.8	-1.2
	54nm,0.3s						
MDOK				*e*S	Sb	07 24 27.9	-1.0
	150nm,0.4s						
MDOK	Medeo	1.29	17	⇓P	Pn	07 24 10.7	-1.4
	26nm,0.4s						
MDOK				⇓S	Sb	07 24 28.0	-0.9
	116nm,0.7s						
MDOK	Medeo	1.29	17	Pg	Pn	07 24 10.8	-1.2
	54nm,0.3s						
MDOK				Lg	Lg	07 24 27.9	
	150nm,0.4s						
AAA	Alma-Ata	1.31	12	*e*P	Pb	07 24 11.9	-0.5
	55nm,0.2s						
AAA				*e*S	Sg	07 24 29.9	+0.6
	76nm,0.2s						
AAA	Alma-Ata	1.31	12	P	Pb	07 24 11.9	-0.5
	55nm,0.2s						
AAA				S	Sg	07 24 29.9	+0.6
	76nm,0.2s						
KNDC	Almaty	1.32	14	⇑P	Pn	07 24 11.9	-0.6
	22nm,0.3s						
KNDC				⇓S	Sg	07 24 30.0	+0.2
	120nm,0.4s						
KBK	Karagaybulak	1.38	302	⇓*i*P	Pn	07 24 12.8	-0.6
	baz=2.0						
KBK				⇓*i*S	Sn	07 24 31.4	-0.7
	baz=2.0						
KBK	Karagaybulak	1.38	302	⇑P	Pb	07 24 13.6	-0.1
	18nm,0.2s,SNR=9.8						
KBK				⇓S	Sg	07 24 33.0	+1.2
	155nm,0.3s						
DGS	Degeres	1.43	337	*e*P	Pb	07 24 14.0	-0.4
	43nm,0.3s						
DGS				*e*S	Sg	07 24 33.3	+0.1
	73nm,0.3s						
DGS	Degeres	1.43	337	P	Pb	07 24 14.0	-0.4
	43nm,0.3s						
DGS				S	Sg	07 24 33.3	+0.1
	73nm,0.3s						
PRZ	Przheval'sk	1.49	68	⇑*i*P	Pb	07 24 14.5	-1.1
	baz=67						
PRZ				⇑*i*S	Sb	07 24 34.5	-0.3
	baz=67						
UCH	Uchtor	1.53	282	⇓*e*P	Pn	07 24 15.3	-0.4
	baz=82						
UCH				⇓*i*S	Sb	07 24 35.9	-0.4
	baz=82						
UCH	Uchtor	1.53	282	⇑P	Pb	07 24 15.7	-0.8
	30nm,0.3s,SNR=47						
UCH				⇓S	Sg	07 24 37.0	+0.3
	65nm,0.4s						
ARLS	Aral	1.65	268	⇑*i*P	Pb	07 24 17.3	-1.0
	baz=69						
ARLS				⇑*i*S	Sb	07 24 39.2	-0.3
	baz=69						
FRU1	Bishkek	1.66	302	⇑*i*P	Pb	07 24 17.4	-1.0
	baz=3.0						
FRU1				⇑*i*S	Sb	07 24 39.6	-0.1
	baz=3.0						
AAK	Ala-Archa	1.67	296	⇓*e*P	Pb	07 24 17.5	-1.1
	baz=96						
AAK				⇓*i*S	Sb	07 24 39.9	-0.1
	baz=96						
AAK	Ala-Archa	1.67	296	⇓P	Pb	07 24 18.5	-0.2
	56nm,0.4s,SNR=25						
AAK				⇓S	Sg	07 24 40.9	-0.2
	158nm,0.5s						
AAK	Ala-Archa	1.67	296	⇓P	Pb	07 24 18.1	-0.5
	26nm,0.5s						
AAK				⇑S	Sb	07 24 39.9	-0.1
	133nm,0.6s						
CHMS	Chumysh	1.70	309	⇑*i*P	Pb	07 24 18.2	-0.8
	baz=10.0						
CHMS				⇑*i*S	Sb	07 24 40.8	+0.2
	baz=10.0						
CHMS	Chumysh	1.70	309	⇓P	Pb	07 24 18.4	-0.6
	19nm,0.2s,SNR=17						
CHMS				⇓S	Sg	07 24 42.1	+0.3
	54nm,0.3s						
CHMS	Chumysh	1.70	309	⇓P	Pb	07 24 18.4	-0.6
	20nm,0.6s						
CHMS				⇑S	Sg	07 24 41.6	-0.3
	50nm,0.5s						
KTBS	Karatobe	1.78	3	*e*P	Pb	07 24 20.1	-0.4
	64nm,0.3s						
KTBS				*e*S	Sg	07 24 44.0	-0.6
	176nm,0.2s						
KTBS	Karatobe	1.78	3	P	Pb	07 24 20.1	-0.4
	64nm,0.3s						
KTBS				S	Sg	07 24 44.0	-0.6
	176nm,0.2s						
SATY	Saty	1.78	50	*e*P	Pb	07 24 19.4	-1.2
	52nm,0.3s						
SATY				*e*S	Sb	07 24 42.8	-0.4
	437nm,0.3s						
SATY	Saty	1.78	50	P	Pb	07 24 19.3	-1.2
	52nm,0.3s						
SATY				S	Sb	07 24 42.8	-0.4
	437nm,0.3s						
ZHN	Zhinishke	1.87	48	*e*P	Pb	07 24 21.1	-0.9
	21nm,0.2s						
ZHN				*e*S	Sb	07 24 45.4	-0.3
	182nm,0.2s						
ZHN	Zhinishke	1.87	48	P	Pb	07 24 21.1	-0.9
	21nm,0.2s						
ZHN				S	Sb	07 24 45.4	-0.3
	182nm,0.2s						
KRBS	Karabastau	1.87	341	*e*P	Pg	07 24 22.9	-0.4
	37nm,0.3s						
KRBS				*e*S	Sg	07 24 48.7	+1.2
	154nm,0.3s						
KRBS	Karabastau	1.87	341	Pg	Pg	07 24 22.9	-0.4
	37nm,0.3s						
KRBS				Lg	Lg	07 24 48.7	
	154nm,0.3s						
CHKK	Chushkaly	1.95	10	*e*P	Pb	07 24 22.8	-0.5
	32nm,0.3s						
CHKK				*e*S	Sb	07 24 48.5	+0.7
	121nm,0.2s						
CHKK	Chushkaly	1.95	10	Pg	Pb	07 24 22.8	-0.5
	32nm,0.3s						
CHKK				Lg	Lg	07 24 48.5	
	121nm,0.2s						
KUU	Kurty	1.96	356	*e*P	Pb	07 24 23.5	0.0
	52nm,0.2s						
KUU				*e*S	Sg	07 24 49.7	-0.7
	85nm,0.3s						
KUU	Kurty	1.96	356	Pg	Pb	07 24 23.3	-0.3
	69nm,0.2s						
KUU				Lg	Lg	07 24 49.6	
	85nm,0.3s						
KURS	Kuram	1.97	37	*e*P	Pb	07 24 22.9	-0.7
	9.1nm,0.3s						
KURS				*e*S	Sb	07 24 48.5	+0.1
	68nm,0.3s						
KURS	Kuram	1.97	37	Pg	Pb	07 24 22.9	-0.7
	9.1nm,0.3s						
KURS				Lg	Lg	07 24 48.5	
	68nm,0.3s						
USP	Ospenovka	2.01	312	⇑*i*P	Pb	07 24 22.7	-1.6
	baz=12						
USP				⇑*i*S	Sb	07 24 48.7	-0.9
	baz=12						
USP	Ospenovka	2.01	312	⇓P	Pb	07 24 24.3	0.0
	35nm,0.2s,SNR=54						
SGDS	Sogindy	2.07	318	Pg	Pb	07 24 25.4	+0.1
	24nm,0.3s						
SGDS				Lg	Lg	07 24 52.8	
	74nm,0.2s						
AML	Almayashu	2.13	276	⇑*i*P	Pn	07 24 24.5	+0.7
	baz=77						
AML				⇑*i*S	Sb	07 24 51.4	-1.9
	baz=77						
AML	Almayashu	2.13	276	⇑P	Pb	07 24 26.3	-0.3
	36nm,0.2s,SNR=116						
EKS2	Erkin-Say	2.17	291	⇓*i*P	Pn	07 24 24.6	+0.4
	baz=91						
EKS2				⇓*i*S	Sb	07 24 52.3	-2.1
	baz=91						
UZB	Uzynbulak	2.20	56	*e*P	Pb	07 24 26.8	-0.9
	28nm,0.5s						
UZB				*e*S	Sb	07 24 54.7	-0.6
	154nm,0.3s						
UZB	Uzynbulak	2.20	56	Pg	Pb	07 24 26.8	-0.9
	28nm,0.5s						
UZB				Lg	Lg	07 24 54.7	
	154nm,0.3s						
ARXS	Arharly	2.47	22	*e*P	Pb	07 24 31.6	-0.6
	27nm,0.4s						
ARXS				*e*S	Sb	07 25 03.6	+0.7
	123nm,0.5s						
ARXS	Arharly	2.47	22	Pg	Pb	07 24 31.6	-0.6
	27nm,0.4s						
ARXS				Lg	Lg	07 25 03.6	
	123nm,0.5s						
SHLS	Shalkode	2.48	60	*e*P	Pg	07 24 36.9	+2.0
	28nm,0.3s						
SHLS				*e*S	Sg	07 25 12.5	+5.4
	257nm,0.5s						
SHLS	Shalkode	2.48	60	Pg	Pg	07 24 36.0	+1.0
	28nm,0.3s						
SHLS				Lg	Lg	07 25 11.6	
	257nm,0.5s						
MRKS	Merke	2.58	289	*e*P	Pb	07 24 34.5	+0.4
	120nm,0.4s						
MRKS				*e*S	Sg	07 25 08.9	-1.5
	20nm,0.5s						
MRKS	Merke	2.58	289	Pg	Pb	07 24 34.6	+0.4
	120nm,0.4s						
MRKS				Lg	Lg	07 25 08.9	
	20nm,0.5s						
ARSB	Arslanbob	2.73	258	⇑*i*P	Pn	07 24 33.2	+1.3
	baz=59						
ARSB				⇑*i*S	Sn	07 25 07.0	+1.7
	baz=59						
KTMS	Ketmen	3.19	60	*e*P	Pb	07 24 43.4	-1.2
	2.1nm,0.1s						
KTMS				*e*S	Sb	07 25 23.6	-0.2
	42nm,0.4s						
KTMS	Ketmen	3.19	60	Pg	Pb	07 24 43.4	-1.2
	2.1nm,0.1s						
KTMS				Lg	Lg	07 25 23.6	
	42nm,0.4s						
TDK	Taldyqorghan	3.36	23	*e*P	Pb	07 24 47.3	0.0
	58nm,0.4s						
TDK				*e*S	Sb	07 25 30.4	+2.0
	129nm,0.4s						
TDK	Taldyqorghan	3.36	23	Pg	Pb	07 24 47.3	0.0
	58nm,0.4s						
TDK				Lg	Lg	07 25 30.4	
	129nm,0.4s						
DJR	Jarkent	3.38	44	*e*P	Pb	07 24 47.1	-0.6
	2.1nm,0.2s						
DJR				*e*S	Sb	07 25 30.0	+0.9
	29nm,0.5s						
DJR	Jarkent	3.38	44	Pg	Pb	07 24 47.1	-0.6
	2.1nm,0.2s						
DJR				Lg	Lg	07 25 30.0	
	29nm,0.5s						
KAPS	Kapalarasan	3.93	30	*e*P	Pb	07 24 57.2	+0.2
	14nm,0.4s						
KAPS				*e*S	Sb	07 25 47.3	+2.5
	38nm,0.4s						
KAPS	Kapalarasan	3.93	30	Pg	Pb	07 24 57.2	+0.2
	14nm,0.4s						
KAPS				Lg	Lg	07 25 47.3	
	38nm,0.4s						
KK31	Karatay Array	4.60	287	⇑Pg	Pb	07 25 11.7	+3.2
	1.6nm,0.4s,baz=107,slow=16,SNR=13						
KK31				⇓Lg	Lg	07 26 12.7	
	9.1nm,0.5s,baz=105,slow=28,SNR=12						
MAKZ	Makanchi	6.24	37	⇑Lg	Lg	07 27 06.9	
	2.0nm,0.6s						
MK31	Makanchi Array	6.37	38	⇓Lg	Lg	07 27 06.7	
	0.9nm,0.4s,baz=212,slow=27,SNR=4.2						
KURBB	Kurchatov Arra	8.80	8	⇑Lg	Lg	07 28 25.0	
	9.4nm,0.8s						
KURK	Kurchatov	8.90	9	⇑Lg	Lg	07 28 30.6	
	6.9nm,0.8s						

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*ISK **10** 07:41:48.9, 40°.75N×25°.60E, h6^{km}, ML2.7/14*

*DDA **10** 07:41:48.4, 40°.74N×25°.58E, h8^{km}±1^{km}, ML2.9*

*ATH **10** 07:41:48.5, 40°.75N×25°.57E, h20^{km}±2^{km}, ML2.4/5, Error ellipse: s-maj=2.6km s-min=1.2km az=110.0*

*THE **10** 07:41:49.0, 40°.76N×25°.55E, h5^{km}±1^{km}, ML2.2/5, Error ellipse: s-maj=1.9km s-min=0.5km az=104.0*

ISC 10 07:41:49.0±0.9, **40°.75N**±0°.02×**25°.57E**±0°.02, **h12^{km}**±8^{km}, **n50, σ0^{s}.63**/76, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMTH	Samothraki Isl	0.28	185	P	Pg	07 41 54.8	0.0
SMTH				S	Sg	07 41 58.6	-0.1
	465nm,0.1s						
SMTH	Samothraki Isl	0.28	185	P	Pg	07 41 54.9	0.0
SMTH				S	Sg	07 41 59.3	+0.6
SMTH				AML	AML	07 42 00.3	
	comp=E,1161μm,0.1s						
SMTH				AML	AML	07 42 03.3	
	comp=N,660μm,0.1s						
ALN	Alexandroupoli	0.39	68	P	Pg	07 41 56.6	-0.2
ALN				S	Sg	07 42 02.4	+0.3
	comp=N,772nm,0.6s						
ALN	Alexandroupoli	0.39	68	P	Pg	07 41 56.6	-0.2
ALN				S	Sg	07 42 01.6	-0.5
ALN				AML	AML	07 42 02.4	
	comp=E,1223μm,0.4s						
ALN				AML	AML	07 42 03.1	
	comp=N,1642μm,0.5s						
ALN	Alexandroupoli	0.39	68	PG	Pg	07 41 56.6	-0.2
ALN				SG	Sg	07 42 02.4	+0.3
ALN	Alexandroupoli	0.39	68	*i* P	Pg	07 41 56.4	-0.5
ALN				*i* S	Sg	07 42 02.5	+0.3

RDO	Rodhopi	0.39	357	P	Pg	07 41 56.5	-0.4
RDO				S	Sg	07 42 01.9	-0.2
	comp=N,260nm,0.1s						
RDO	Rodhopi	0.39	357	P	Pg	07 41 57.0	+0.1
RDO				S	Sg	07 42 02.0	-0.2
RDO	Rodhopi	0.39	357	PG	Pg	07 41 57.3	+0.4
ENEZ	Enez	0.45	92	PG	Pg	07 41 57.6	-0.2
GOKC	Gokceada-Canak	0.61	154	PG	Pg	07 42 01.1	+0.1
GOKC				SG	Sb	07 42 09.9	-0.4
THAS	Thassos island	0.66	258	P	Pg	07 42 01.6	-0.2
THAS				S	Sg	07 42 10.5	0.0
	comp=N,312nm,0.3s						
THAS	Thassos island	0.66	258	P	Pg	07 42 01.7	-0.2
THAS				S	Sg	07 42 10.2	-0.3
THAS				AML	AML	07 42 11.9	
	comp=E,608μm,0.3s						
THAS				AML	AML	07 42 14.0	
	comp=N,706μm,0.2s						
ERIK	Erikli-Kesan	0.72	96	PG	Pg	07 42 02.4	-0.7
ERIK				SG	Sg	07 42 12.6	0.0
GELI	Tayfur-Gelibol	0.78	117	PG	Pg	07 42 03.9	-0.2
KAVA	Kavala	0.83	287	P	Pg	07 42 04.7	-0.5
KAVA				S	Sg	07 42 16.5	+0.4
	comp=N,425nm,0.3s						
KAVA	Kavala	0.83	287	P	Pg	07 42 04.7	-0.5
KAVA				S	Sg	07 42 15.1	-1.0
KAVA				AML	AML	07 42 19.4	
	comp=N,771μm,0.2s						
KAVA				AML	AML	07 42 20.0	
	comp=E,767μm,0.3s						
KESN	Edirne-Kesan	0.85	85	i P	Pg	07 42 04.5	-1.0
KESN				i S	Sn	07 42 19.7	0.0
KESN				IAML		07 42 20.0	
	comp=N,426nm,0.3s						
KESN				IAML		07 42 20.0	
	comp=E,466nm,0.3s						
UKOP	Uzunkopru-Edir	0.89	65	PG	Pg	07 42 06.1	-0.1
LIA	Limnos Island	0.90	199	P	Pg	07 42 06.2	-0.2
LIA	Limnos Island	0.90	199	P	Pg	07 42 06.0	-0.4
LIA				S	Sg	07 42 17.8	-0.4
KDZ	Kurdzhali	0.90	353	PG	Pb	07 42 06.7	0.0
KVLA	Kavala	0.91	282	P	Pb	07 42 07.0	+0.2
KVLA				S	Sg	07 42 18.7	+0.1
BOZC	Bozcaada	0.98	158	PG	Pb	07 42 08.1	+0.1
BOZC	Bozcaada	0.98	158	i P	Pg	07 42 07.7	-0.3
BOZC				i S	Sb	07 42 21.2	+0.3
LPK	Lapseki	0.99	112	PG	Pg	07 42 07.8	-0.2
EZN	Ezine	1.09	148	PG	Pb	07 42 09.9	+0.1
RKY	Sarkoy-Tekirda	1.23	92	PN	Pb	07 42 12.1	-0.1
BAYC	CANAKKALE_Bayr	1.26	143	i P	Pn	07 42 12.0	-0.4
BAYC				i S	Sn	07 42 29.6	+0.3
OUR	Ouranopolis	1.28	251	P	Pn	07 42 12.1	-0.6
OUR	Ouranopolis	1.28	251	P	Pn	07 42 12.3	-0.3
OUR				S	Sn	07 42 30.7	+1.0
OUR				AML	AML	07 42 32.7	
	comp=E,612μm,0.7s						
OUR				AML	AML	07 42 32.8	
	comp=N,619μm,0.4s						
OUR	Ouranopolis	1.28	251	PN	Pg	07 42 14.1	+0.5
EDRB	Edirne	1.41	39	PN	Pb	07 42 15.3	0.0
NVR	Nevrokopi	1.42	295	P	Pn	07 42 14.4	-0.3
NVR	Nevrokopi	1.42	295	P	Pn	07 42 15.2	+0.5
PLD	Plovdiv	1.50	335	PN	Pb	07 42 16.9	+0.1
SRS	Serrai	1.54	284	P	Pn	07 42 15.5	-0.8
KIRK	Kırklareli	1.55	48	i P	Pn	07 42 14.5	-1.9
KIRK				i S	Sg	07 42 38.8	0.0
SIGR	SIGRI	1.56	172	PN	Pb	07 42 17.6	-0.1
PRK	Paraskevi	1.60	160	P	Pg	07 42 19.1	-0.6
PAIG	Paliouri	1.66	241	P	Pn	07 42 17.8	-0.1
EDC	Edincik	1.80	102	PN	Pn	07 42 20.8	+1.0
DKL	Dikili	1.97	148	PN	Pn	07 42 23.3	+1.1
SLVT	Silivri	2.06	76	PN	Pn	07 42 24.6	+1.2
BALB	Balikesir	2.09	121	PN	Pn	07 42 24.7	+0.8
ZEDA	zmir-Bergama	2.13	146	i P	Pb	07 42 27.0	-0.5
ZEDA				i S	Sg	07 42 56.1	-1.4
STEP	BALIKESIR_Sava	2.15	129	i P	Pn	07 42 24.5	-0.2
STEP				i S	Sg	07 42 57.1	-1.0
DURS	Dursunbey	2.51	116	i P	Pn	07 42 30.0	+0.3
DURS				i S	Sb	07 43 06.8	+1.9
STIP	Stip	2.72	291	i Pn	Pn	07 42 31.3	-1.2
STIP				eSn	Sb	07 43 11.0	+0.2
MANT	Manisa	3.23	133	i P	Pb	07 42 46.7	+0.2
MANT				i S	Sg	07 43 31.1	-1.8

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*INET **10** 07:45:53.4, 12°.50N×87°.74W, h68km, ML3.9*

SNET 10 07:45:54.2±1.2**, 12°.56N×87°.84W, h58**km±13km**, ML3.3, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	0.71	1	eP	Pn	07 46 08.6	-0.1
CNCH				eS	Sn	07 46 21.1	+1.8
LCND	La Caada	0.75	357	eP	Pn	07 46 08.8	-0.2
LCND				eS	Sn	07 46 21.3	+1.5
LCND				IAML		07 46 23.4	
	comp=Z,2μm,0.4s						
JUCU	Jucuar¡n	0.80	330	eP	Pn	07 46 09.3	-0.3
JUCU				eS	Sn	07 46 21.0	+0.1
JUCU				IAML		07 46 26.2	
	comp=Z,1μm,0.3s						
BLLM	Bellamira	0.96	336	eP	Pn	07 46 11.0	-0.7
BLLM				eS	Sn	07 46 25.3	+0.6
LCY	Lacayo	0.97	333	eP	Pn	07 46 11.4	-0.4
LCY				eS	Sn	07 46 26.2	+1.3
PACA	Pacayal	1.02	333	eP	Pn	07 46 13.2	+0.6
PACA				eS	Sn	07 46 27.9	+1.7
ALJI	Alcalda de J	1.04	317	eP	Pn	07 46 12.9	+0.2
ALJI				eS	Sn	07 46 27.3	+0.8
TECA	Tecapa	1.13	326	eP	Pn	07 46 14.5	+0.4
TECA				eS	Sn	07 46 30.6	+1.8
COEB	Comit de Eme	1.15	325	eP	Pn	07 46 14.5	+0.2
COEB				eS	Sn	07 46 30.0	+0.8
COEB				IAML		07 46 35.5	
	comp=Z,555nm,0.4s						
FAGO	Alcalda de S	1.16	347	eP	Pn	07 46 14.4	0.0
FAGO				eS	Sn	07 46 30.1	+0.8
COEG	Centro de Oper	1.46	316	eP	Pn	07 46 18.1	-0.3
COEG				eS	Sn	07 46 38.1	+1.5
TGUH	Tegucigalpa,Un	1.59	20	eP	Pn	07 46 20.3	0.0
TGUH				eS	Sn	07 46 39.9	0.0
LALI	Alcalda de L	1.71	303	eP	Pn	07 46 22.4	+0.7
LALI				eS	Sn	07 46 43.0	+0.4
LALI				IAML		07 46 43.2	
	comp=Z,107nm,0.2s						
LFU	La Fuente	1.71	314	eP	Pn	07 46 22.6	+0.8
SNET	Serv Nac Est T	1.76	310	eP	Pn	07 46 22.9	+0.5
SNET				eS	Sn	07 46 44.6	+0.8
CEVE	Cerro Verde	2.15	306	eP	Pn	07 46 28.6	+0.7

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*NEIC **10** 07:48:58.1±1.9, 40°.78N±0°.02×125°.24W±0°.08, h14km±9km, Error ellipse: s-maj=9.0km s-min=3.5km az=93.0*

*NCEDC **10** 07:49:00.8±1.7, 40°.73N±0°.04×125°.22W±0°.06, h24km±8km, ML3.0/13, Error ellipse: s-maj=8.9km s-min=3.1km az=46.0*

*ANF **10** 07:49:01.3±1.3, 40°.86N×124°.84W, h0km, ML2.8/4, Error ellipse: s-maj=12.5km s-min=6.0km az=59.0*

ISC 10 07:48:57.7±2.1**, 40°.72N**±0°.04×**125°.27W**±0°.09**, h14**km±11km**, n84,** σ**1ˢ35**/93**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMPM	Mount Pierce	0.93	108		Pg	07 49 16.1	+0.5
KMPM					Sg	07 49 28.1	+0.3
JCC	Jacoby Creek,	0.95	83		Pg	07 49 15.7	-0.4
JCC					Sg	07 49 27.6	-0.8
KRPM	Rodgers	1.04	65		Pg	07 49 17.2	-0.7
KCRM	Chalk Rock	1.14	104		Pb	07 49 19.4	0.0
KHMM	Horse Mountain	1.18	82		Pb	07 49 19.4	-0.6
KMRM	Mail Ridge	1.29	112		Pn	07 49 21.9	+0.4
KRMB	Red Mountain	1.31	51		Pn	07 49 20.5	-1.2
KCSM	Cold Springs	1.35	97		Pn	07 49 22.3	-0.1
KOMM	Orleans Mounta	1.49	67		Pn	07 49 23.7	-0.5
KBSM	Bell Springs	1.51	121		Pn	07 49 24.7	+0.2
KSXB	Camp Six Broad	1.53	43		Pn	07 49 23.9	-0.9
KHBM	Hayfork Bally	1.56	91		Pn	07 49 24.9	-0.4
KIPM	Iron Peak	1.64	123		Pn	07 49 26.7	+0.3
KCPM	Cahto Peak	1.65	128		Pn	07 49 26.7	+0.2
KBO	Bosley Butte	1.69	27		Pn	07 49 26.3	-0.7
KFPM	Farley Peak	1.78	127		Pn	07 49 28.1	0.0
KBNM	Bluenose Ridge	1.79	117		Pn	07 49 29.3	+0.9
KTRM	Thompson Ridge	1.86	50		Pn	07 49 28.8	-0.6
GTC	Three Chop Rid	1.86	134		Pn	07 49 29.1	-0.2
LGPM	Granite Peak	1.86	83		Pn	07 49 29.0	-0.4
LBPM	Beegum Peak	1.86	102		Pn	07 49 29.4	0.0
L02E	Cave Junction	1.91	40		Pn	07 49 29.8	-0.2
L02E	Cave Junction	1.91	40	P	Pn	07 49 29.7	-0.2
	baz=221,SNR=29						
L02E				S	Sn	07 49 51.4	-2.4
	baz=221						
M02C	Callahan	1.95	69		Pn	07 49 30.4	-0.2
M02C	Callahan	1.95	69	P	Pn	07 49 30.3	-0.2
	baz=250,SNR=15						
M02C				S	Sn	07 49 53.7	-1.1
	baz=250						
N02D	Trinity Center	1.96	82		Pn	07 49 30.6	-0.1
N02D	Trinity Center	1.96	82	P	Pn	07 49 31.1	+0.3
	baz=264,SNR=23						
N02D				S	Sn	07 49 54.9	-0.4
	baz=264						
O02D	Mt. Diablo Mer	1.97	105		Pn	07 49 31.0	+0.2
O02D	Mt. Diablo Mer	1.97	105	P	Pn	07 49 30.9	+0.2
	baz=287,SNR=85						
O02D				S	Sn	07 49 54.9	-0.4
	baz=287						
GNAM	Navarro Ridge	1.97	140		Pn	07 49 30.5	-0.3
KRKM	Rackout Spring	1.97	125		Pn	07 49 30.1	-0.8
LBKM	Bonanza King	2.01	79		Pn	07 49 31.5	+0.1
WDC	Whiskeytown Da	2.08	93	Pn	Pn	07 49 32.4	+0.2
GHOM	Hamilton Openi	2.13	141		Pn	07 49 32.8	-0.3
GROM	Round Mountain	2.14	111		Pn	07 49 34.0	+0.8
YBH	Yreka Blue Hor	2.18	61		Pn	07 49 33.8	0.0
YBH	Yreka Blue Hor	2.18	61		Pn	07 49 34.2	+0.5
GVV	Valley View	2.20	114		Pn	07 49 34.9	+0.9
GASB	Alder Springs	2.23	118		Pn	07 49 35.0	+0.6
KEBM	Edson Butte	2.27	18	Pn	Pn	07 49 34.5	-0.3
K02D	Willamette Mer	2.31	31	P	Pn	07 49 35.6	+0.1
	baz=211,SNR=5.8						
K02D				S	Sn	07 50 03.2	-0.7
	baz=211						
GHLM	Highland Sprin	2.41	133		Pn	07 49 36.7	-0.1
LGBM	Gray Butte	2.41	74		Pn	07 49 37.9	+0.9
HOPS	Hopland Field	2.41	135	Pn	Pn	07 49 36.9	0.0
B040	Montague	2.42	62		Pn	07 49 37.5	+0.5
LSHM	Sage Hen Hill	2.46	87		Pn	07 49 37.7	+0.2
LHEM	Herd Peak	2.48	67		Pn	07 49 39.0	+1.0
HUMO	Hull Mountain	2.56	42		Pn	07 49 39.4	+0.5
HUMO	Hull Mountain	2.56	42	Pn	Pn	07 49 39.1	+0.2
O03E	Paynes Creek	2.68	98	P	Pn	07 49 40.7	+0.1
	baz=281,SNR=17						
O03E				S	Sn	07 50 12.2	-0.7
	baz=281						
L04D	Klamath Falls	2.69	55		Pn	07 49 42.6	+1.9
L04D	Klamath Falls	2.69	55	P	Pn	07 49 42.5	+1.7
	baz=237,SNR=58						
LGMM	Garner Mountai	2.74	70		Pn	07 49 43.4	+1.9
M04C	Macdoel	2.80	66		Pn	07 49 44.1	+1.9
M04C	Macdoel	2.80	66	P	Pn	07 49 44.1	+1.9
	baz=249,SNR=15						
HOG	Hogback Mounta	3.08	59		Pn	07 49 48.3	+2.0
ORV	Oroville	3.11	111		Pn	07 49 46.6	+0.2
K04D	Chiloquin, OR	3.25	53		Pn	07 49 50.6	+2.1
K04D	Chiloquin, OR	3.25	53	P	Pn	07 49 50.6	+2.1
	baz=235,SNR=11						
I03D	Drain, OR	3.30	25	P	Pn	07 49 50.3	+1.3
	baz=206						
I03D				S	Sn	07 50 27.2	-0.9
	baz=206						
J04D	Umpqua Nationa	3.45	42	P	Pn	07 49 53.1	+1.8
	baz=224,SNR=7.6						
NLHM	Lake Herman	3.54	136		Pn	07 49 50.0	-2.4
I04A	Tendick Farm,	3.74	34	P	Pn	07 49 57.2	+2.2
	baz=215,SNR=7.2						
AFDM	Forest Hills D	3.75	117		Pn	07 49 56.5	+1.2
MOD	Modoc Plateau	3.92	71	Pn	Pn	07 49 58.8	+1.0
J05D	Fort Rock, OR	3.95	48	P	Pn	07 50 00.2	+2.0
	baz=231,SNR=16						
LKVW	Lakeview	3.98	66		Pn	07 49 56.1	-2.5
JFP	Foothills Park	4.12	143		Pn	07 50 00.4	+0.1
H04D	Lebanon	4.24	25	P	Pn	07 50 03.8	+1.9
	baz=207,SNR=8.9						
PINE	Pine Mountain	4.45	45		Pn	07 50 06.9	+1.9
JRGM	Rodeo Gulch Ro	4.49	144		Pn	07 50 05.3	-0.1
PAHR	Pah Rah Range	4.62	101	Pn	Pn	07 50 08.4	+1.1
I05D	Terrebonne, OR	4.64	37	P	Pn	07 50 09.6	+2.1
	baz=220						
WVOR	Wild Horse Val	5.26	69	Pn	Pn	07 50 17.1	+0.9
I07A	Izee	5.43	50	Pn	Pn	07 50 21.1	+2.6
G06A	Carlson Farm,	5.65	35	Pn	Pn	07 50 24.5	+3.1
PMPB	Monarch Peak	5.70	141	Pn	Pn	07 50 23.6	+1.5
J08A	Circle Bar Ran	5.71	60		Pn	07 50 23.3	+1.1
NVAR	Mina Array Bea	5.85	111	Pn	Pn	07 50 26.3	+2.0
NV11	Mina Array Sit	5.95	110	Pn	Pn	07 50 27.9	+2.2
G08A	Pilot Rock	6.50	43	Pn	Pn	07 50 37.1	+3.9
BMO	Blue Mountains	7.17	52		Pn	07 50 44.8	+2.5
ISA	Isabella, Lake	7.35	131	Pn	Pn	07 50 48.1	+3.3
PGC	Sidney	8.04	9	Pn	Pn	07 50 56.5	+2.5

IDC 10 07:57:14.7±10.0**, 1°.77N×98°.13E, h0**km**, mb3.6**/3**, mb1 3.7**/3**, mb1mx3.3**/36**, mbtmp3.6**/3**, Error ellipse: s-maj=520.7km s-min=31.9km az=54.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S2	Diego Garcia H	27.23	250	T	T	08 30 16.1	
	baz=72						
H08S3	Diego Garcia H	27.23	250	T	T	08 30 04.3	
	baz=72						
H08S1	Diego Carcia H	27.25	250	T	T	08 30 01.3	
	baz=72						
WRA	Warramunga Arr	41.55	123	P	P	08 05 04.4	-0.1
	1.2nm,1.1s,baz=301,slow=8.9,SNR=3.6						
MKAR	Makanchi Array	46.93	345	P	P	08 05 47.3	+0.1
	0.7nm,1.0s,baz=157,slow=8.5,SNR=5.1						
ZALV	Zalesovo Beam	53.16	350	P	P	08 06 34.0	-0.4
	0.5nm,0.4s,baz=164,slow=6.0,SNR=3.6						

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*ISK **10** 08:05:39.9, 37°.42N×42°.00E, h2km, ML2.7/6*

*DDA **10** 08:05:42.0, 37°.55N×41°.85E, h11km±8km, ML2.1*

ISC 10 08:05:45.5±1.5**, 37°.56N**±0°.06×**41°.90E**±0°.04**, h23**km±15km**, n13,** σ**1ˢ42**/23**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRTM	Siirt_Merkez	0.43	3	i P	Pb	08 05 53.7	-0.8
SVAN	Silvan-Diyarba	0.81	317	PG	Pb	08 05 59.4	-1.5
SVAN				SG	Sn	08 06 13.5	+0.7
AKDM	Akdamar-Van	1.15	48	PN	Pn	08 06 03.7	-2.7
AKDM				SN	Sb	08 06 21.0	-0.4
MAZI	Mazidag	1.16	265	PN	Pn	08 06 04.3	-2.1
MAZI				SN	Sn	08 06 22.4	+0.8
MUSM	Mu-Merkez	1.20	346	i P	Pn	08 06 05.7	-1.4
MUSM				i S	Sn	08 06 22.5	-0.2
MUSM				IAML		08 06 28.0	
	comp=E,25nm,0.5s						
MUSM				IAML		08 06 29.0	
	comp=N,45nm,0.6s						
ADCV	BITLIS_Adilcev	1.41	27	i P	Pn	08 06 09.0	-0.9
ADCV				i S	Sb	08 06 30.2	+1.5
HAKT	HAKKARI	1.44	90	i P	Pn	08 06 11.0	+0.6
HAKT				i S	Sb	08 06 31.6	+1.9
HAKT				IAML		08 06 35.0	
	comp=E,24nm,0.4s						
HANI	Diyarbakir_Han	1.46	306	i P	Pn	08 06 08.9	-1.5
HANI				i S	Sn	08 06 30.2	+1.3
HANI				IAML		08 06 36.0	
	comp=N,42nm,0.6s						
HANI				IAML		08 06 44.0	
	comp=E,47nm,0.6s						
BNGL	BINGOL	1.51	337	i P	Pn	08 06 10.5	-0.8
BNGL				i S	Sb	08 06 34.1	+2.5
BNGB	Bingl	1.72	327	PN	Pn	08 06 13.9	-0.2
BNGB				SN	Sb	08 06 39.2	+1.6
KARO	Karliova-Bingo	1.87	339	PN	Pn	08 06 16.6	+0.4
SVRC	Sivrice-ELAZID	2.20	293	PN	Pn	08 06 20.6	-0.2
ELZG	Elazig	2.48	293	i P	Pb	08 06 30.0	+0.5
ELZG				i S	Sb	08 06 59.6	0.0

IDC 10 08:24:03.6±5.0**, 12°.24S×167°.25E, h0**km**, mb3.7**/3**, mb1 4.0**/3**, mb1mx3.6**/24**, mbtmp3.7**/3**, Error ellipse: s-maj=256.3km s-min=31.4km az=140.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	32.49	252	P	P	08 30 35.5	-0.7
	0.4nm,0.7s,baz=86,slow=8.6,SNR=4.5						
ASAR	Alice Springs	33.61	246	P	P	08 30 46.4	+0.4
	0.5nm,0.4s,baz=70,slow=9.7,SNR=11						
ILAR	Eielson Array	84.18	18	P	P	08 36 36.4	0.0
	0.7nm,0.6s,baz=237,slow=5.3,SNR=12						

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*PRE **10** 08:24:38.3±1.0, 30°.43S×29°.13E, h5km, ML2.6*

ISC 10 08:24:46.7±2.6**, 29°.4S**±0°.1×**28°.96E**±0°.09**, h10**km**, n10,** σ**2ˢ63**/19**, Lesotho**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRYS	Parys	2.82	330	eP	Pg	08 25 39.2	-1.6
PRYS				eS	Sg	08 26 22.6	+5.3
PRYS				AML	AML	08 26 40.4	
	comp=Z,27nm,0.2s						
BOSA	Boshof	3.33	282	i P	Pn	08 25 40.6	+1.6
BOSA				i S	Sn	08 26 18.8	0.0
BOSA	Boshof	3.33	282	eP	Pn	08 25 38.5	-0.5
BOSA				eS	Sb	08 26 22.8	-3.8
BOSA				AML	AML	08 26 41.7	
	comp=Z,27nm,0.4s						
BOSA	Boshof	3.33	282	i P	Pn	08 25 40.6	+1.6
BOSA				i S	Sn	08 26 18.8	0.0
SWZ	Schweizer	3.87	303	eP	Pn	08 25 49.8	+3.3
SWZ				eS	Sb	08 26 42.2	-0.1
SWZ				AML	AML	08 27 11.8	
	comp=Z,20nm,0.5s						
LBTB	Lobatse	5.27	325	eP	Pn	08 26 11.2	+5.5
LBTB				eS	Sb	08 27 19.6	-2.9
LBTB				AML	AML	08 27 36.3	
	comp=Z,5.5nm,0.3s						
MSNA	Messina	7.06	8	i P	Pn	08 26 32.7	+2.4
MSNA				i S	Sn	08 27 50.6	-0.1
MSNA	Messina	7.06	8	i P	Pn	08 26 32.7	+2.4
MSNA				i S	Sn	08 27 50.6	-0.1
MATP	Matopo	8.92	357	i P	Pn	08 26 56.5	+0.6
MATP				i S	Sn	08 28 32.7	-3.7
MATP	Matopo	8.92	357	i P	Pn	08 26 56.5	+0.6
MATP				i S	Sn	08 28 32.7	-3.7

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*IDC **10** 08:35:53.8±5.2, 21°.58N×143°.12E, h282km±51km, mb3.2/10, mb1 3.3/11, mb1mx3.1/52, mbtmp3.8/11, Error ellipse: s-maj=34.7km s-min=14.7km az=80.0*

*NEIC **10** 08:35:54±1.4, 21°.5N±0°.1×142°.9E±0°.2, h290km±4km, mb4.0/13, Error ellipse: s-maj=20.7km s-min=14.6km az=85.0*

ISC 10 08:35:55.5±0.6**, 21°.46N**±0°.08×**143°.0E**±0°.1**, h311**km**, n33,** σ**1ˢ17**/33**, mb3.6**/15**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	8.03	167	Pn	Pn	08 37 49.1	-0.6
MJAR	Matsushiro Arr	15.59	346	P	P	08 39 18.8	+0.4
	0.1nm,0.3s,baz=160,slow=9.4,SNR=4.4						
MJAR	Matsushiro Arr	15.59	346	P	P	08 39 17.3	-1.1
KSRS	Korea Array	20.58	324	P	P	08 40 11.6	+0.2
	1.7nm,0.6s,baz=144,slow=8.7,SNR=9.1						
USRK	Ussuriysk Ar.	24.44	341	P	P	08 40 45.8	-0.8
	1.4nm,0.7s,baz=150,slow=9.5,SNR=4.0						
KLR	Kul'dur	29.12	345	P	P	08 41 28.4	+0.3
	1.9nm,0.4s,baz=165,slow=6.0,SNR=9.1						
PETK	Petropavlovsk-	33.56	16	P	P	08 42 04.3	-2.4
BKB	Balikpapan	34.04	232	P	P	08 42 09.6	-1.7
DLV	T Lat	34.27	260	P	P	08 42 12.2	-1.3
MTN	Manton Dam	36.01	200	P	P	08 42 28.3	+0.4
WB0	Warramunga Arr	41.82	192	P	P	08 43 15.2	-0.5
WB0				IAmb	IAmb	08 43 23.3	
	comp=Z,5.4nm,1.1s						
WR0	Warramunga Arr	41.98	192	P	P	08 43 17.5	+0.5
WR0				IAmb	IAmb	08 43 27.5	
	comp=Z,11nm,1.3s						
WRAB	Tennant Creek	41.99	192	P	P	08 43 18.5	+1.4
WRAB				IAmb	IAmb	08 43 31.6	
	comp=Z,7.9nm,0.5s						
WB2	Warramunga Arr	42.00	192	P	P	08 43 18.6	+1.5
WB2				IAmb	IAmb	08 43 20.1	
	comp=Z,24nm,1.6s						
WRA	Warramunga Arr	42.00	192	P	P	08 43 19.1	+1.9
	comp=Z,1.3nm,0.7s,baz=14,slow=9.2,SNR=3.6						
FITZ	Fitzroy Crossi	42.81	205	P	P	08 43 25.7	+2.1
FITZ				IAmb	IAmb	08 43 46.8	
	comp=Z,6.2nm,1.4s						
ASAR	Alice Springs	45.71	192	P	P	08 43 48.4	+1.9
	comp=Z,0.2nm,0.5s,baz=14,slow=12,SNR=6.5						
ASAR	Alice Springs	45.71	192	P	P	08 43 47.5	+1.1
ZALV	Zalesovo Beam	54.27	322	P	P	08 44 51.2	+1.3
	comp=Z,0.5nm,0.4s,baz=95,slow=7.2,SNR=2.7						
ZALV	Zalesovo Beam	54.27	322	P	P	08 44 49.7	-0.2
MKAR	Makanchi Array	54.70	313	P	P	08 44 54.8	+1.6
	comp=Z,0.3nm,0.5s,baz=89,slow=9.9,SNR=4.5						
KURK	Kurchatov	57.51	317	P	P	08 45 13.9	+1.1
KURBB	Kurchatov Arra	57.55	317	P	P	08 45 14.0	+0.9
	comp=Z,1.0nm,0.4s,baz=93,slow=7.6,SNR=16						
BVAR	Borovoye Array	62.72	320	P	P	08 45 49.1	+1.3
	comp=Z,1.3nm,0.4s,baz=96,slow=8.0,SNR=12						
KK31	Karatay Array	63.04	308	P	P	08 45 50.6	+0.4
KKAR	Karatay Array	63.04	308	P	P	08 45 50.2	0.0
KKAR	Karatay Array	63.04	308	P	P	08 45 50.5	+0.3
KKAR				IAmb	IAmb	08 45 52.8	
	comp=Z,1.5nm,1.1s						
BCAR	Beaver Creek A	64.42	29	P	P	08 45 58.9	+0.1
ABKAR	Akbulak array	69.58	316	P	P	08 46 32.1	+0.8
YKA	Yellowknife Ar	76.77	28	P	P	08 47 12.8	0.0
	comp=Z,0.4nm,0.6s,baz=292,slow=5.6,SNR=4.4						
LLLB	Lillooet	76.89	41	P	P	08 47 14.8	+1.0
LLLB				IAmb	IAmb	08 47 22.2	
	comp=Z,10.0nm,1.5s						
PLCA	Paso Flores	145.75	132	PKPbc	PKPab	08 54 59.7	+0.3
	comp=Z,0.5nm,0.7s,baz=180,slow=3.0,SNR=3.2						
PLCA	Paso Flores	145.75	132		PKPab	08 54 59.5	+0.1

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*IDC **10** 08:35:53.5±18.0, 38°.01N×20°.23E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.4/52, mbtmp3.7/6, ML3.8/1, Error ellipse: s-maj=354.2km s-min=29.3km az=36.0*

*BEO **10** 08:35:56.8±0.8, 37°.92N×19°.77E, h18km±9km, ML3.7/7*

*THE **10** 08:35:57.1, 37°.99N×20°.24E, h10km±1km, ML3.7/6, Error ellipse: s-maj=2.6km s-min=0.8km az=30.0*

*ATH **10** 08:35:57.4, 37°.98N×20°.34E, h14km±1km, ML3.7/5, Error ellipse: s-maj=2.6km s-min=1.2km az=50.0*

ISC 10 08:35:56.3±1.0**, 37°.99N**±0°.03×**20°.24E**±0°.04**, h18**km±2km**, n84,** σ**1ˢ06**/116**, mb3.7**/5**, 6C-2D, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHV1	Chavriata, Kef	0.22	31	P	Pg	08 36 02.1	+0.5
CHV1				S	Sg	08 36 05.4	+0.2
KEF3	Kipouria, Keph	0.23	23	P	Pg	08 36 02.2	+0.5
KEF3				S	Sb	08 36 05.2	+0.1
LXRA	Lixouri, Kepha	0.26	37	P	Pb	08 36 02.7	+0.3
LXRA				S	Sg	08 36 06.3	0.0
LXR1	Lixouri, Cepha	0.26	38	P	Pb	08 36 02.7	+0.3
KEF2	Argostoli. Kep	0.26	49	P	Pb	08 36 02.5	+0.1
KEF2				S	Sg	08 36 05.6	-0.7
ARGA	Argostoli. Kep	0.27	46	P	Pb	08 36 02.6	+0.1
ARGA				S	Sg	08 36 06.1	-0.3
ARG2	Argostoli	0.27	47	P	Pb	08 36 02.7	+0.1
ARG2				S	Sg	08 36 06.7	+0.1
AGT1	Agia Thekli	0.28	24	P	Pb	08 36 03.0	+0.2
AGT1				S	Sb	08 36 07.2	+0.1
KEF4	Livadi, Kephal	0.30	29	P	Pb	08 36 03.3	+0.1
KEF4				S	Sb	08 36 07.8	0.0
VLS	Valsamata	0.33	57	P	Pg	08 36 03.4	0.0
VLS				S	Sg	08 36 08.0	-0.3
	73μm,0.2s						
VLS	Valsamata	0.33	57	P	Pg	08 36 03.5	0.0
VLS				S	Sg	08 36 07.8	-0.6
VLS				AML	AML	08 36 08.2	
VLS				AML	AML	08 36 08.3	
KEF1	Kardakata, Kep	0.34	33	P	Pg	08 36 03.8	+0.2
KEF1				S	Sg	08 36 08.5	0.0
KFL	Anninata	0.45	75	P	Pg	08 36 05.4	-0.1

KFL				S	Sb	08 36 12.7	+0.6
	26µm,0.4s						
KFL	Anninata	0.45	75	P	Pg	08 36 05.4	-0.1
KFL				S	Sg	08 36 10.0	-1.7
VSK1	VASILIKIADES	0.49	32	P	Pg	08 36 06.1	-0.1
KONA	Konidatara, Ke	0.51	31	P	Pg	08 36 06.2	-0.3
FSK	Fiskardo	0.53	29	P	Pg	08 36 06.6	-0.4
FSK	Fiskardo	0.53	29	P	Pg	08 36 06.4	-0.6
FSK				S	Sg	08 36 14.2	0.0
EVGI	Lefkada island	0.71	28	P	Pb	08 36 10.0	-0.1
EVGI				S	Sg	08 36 20.5	+0.8
MGNA	Meganis	0.79	33	P	Pb	08 36 11.3	-0.2
LKD2	Lefkada island	0.86	23	P	Pb	08 36 12.8	+0.1
LKD2	Lefkada island	0.86	23	P	Pn	08 36 14.0	+0.5
LKD2				S	Sg	08 36 24.7	+0.2
TSLK	Tsoukalades, L	0.89	22	P	Pg	08 36 13.6	-0.1
TSLK	Tsoukalades, L	0.89	22	P	Pg	08 36 13.8	+0.1
TSLK				S	Sn	08 36 26.4	0.0
TSLK				AML	AML	08 36 32.3	
	comp=E,9069µm,0.4s						
TSLK				AML	AML	08 36 35.3	
	comp=N,11439µm,0.4s						
PDO	Prodromos	0.96	51	P	Pb	08 36 14.5	+0.1
PDO	Prodromos	0.96	51	P	Pb	08 36 14.6	+0.2
PDO				S	Sg	08 36 27.4	-0.2
PDO				AML	AML	08 36 35.2	
	comp=N,10446µm,0.4s						
PDO				AML	AML	08 36 35.5	
	comp=E,9240µm,0.5s						
RLS	Riolos of Patr	0.97	86	P	Pn	08 36 15.0	0.0
RLS	Riolos of Patr	0.97	86	P	Pb	08 36 14.3	-0.3
DRO	Drossia	1.17	92	P	Pg	08 36 18.7	-0.1
DRO	Drossia	1.17	92	P	Pg	08 36 18.8	-0.1
DRO				S	Sb	08 36 32.1	-0.5
DRO				AML	AML	08 36 46.6	
	comp=E,8352µm,0.6s						
DRO				AML	AML	08 36 46.6	
	comp=N,3923µm,0.5s						
PVO	Paravola	1.19	58	P	Pb	08 36 18.7	+0.4
PVO	Paravola	1.19	58	P	Pb	08 36 18.7	+0.4
PVO				S	Sb	08 36 33.5	+0.1
PVO				AML	AML	08 36 40.4	
	comp=E,6021µm,0.5s						
PVO				AML	AML	08 36 42.3	
	comp=N,3798µm,0.4s						
AMT	Artemida-Makis	1.25	111	P	Pg	08 36 20.2	-0.3
ANX	Ano Chora	1.46	65	P	Pb	08 36 22.7	-0.2
ANX	Ano Chora	1.46	65	P	Pg	08 36 23.9	-0.5
ANX				S	Sg	08 36 43.6	+0.2
SERG	Sergoula	1.50	73	P	Pb	08 36 23.4	-0.1
SERG	Sergoula	1.50	73	P	Pb	08 36 23.2	-0.3
TRIZ	Trizonia	1.50	75	P	Pb	08 36 23.6	+0.2
ALIK	Aliki, Aigiali	1.50	79	P	Pg	08 36 24.7	-0.6
KLV	Kalavryta, Ach	1.51	87	P	Pb	08 36 24.0	+0.2
KLV	Kalavryta, Ach	1.51	87	P	Pb	08 36 24.3	+0.5
EVR	Evrytania	1.54	53	P	Pg	08 36 25.7	-0.3
KALE	Kalithea	1.55	75	P	Pb	08 36 24.2	-0.3
KALE	Kalithea	1.55	75	P	Pb	08 36 24.8	+0.3
ITM	Ithomi	1.57	121	P	Pb	08 36 24.8	0.0
PYL	PYLOS	1.62	132	P	Pb	08 36 25.3	-0.4
JAN	Janina	1.73	16	P	Pg	08 36 29.1	-0.5
MAKR	Makrakomi, Fth	1.80	55	P	Pg	08 36 30.1	-0.8
AGG	Agios Georgios	1.94	57	P	Pb	08 36 31.3	+0.2
AGG	Agios Georgios	1.94	57	P	Pb	08 36 31.3	+0.2
THL	Klokotos Trika	2.10	41	P	Pb	08 36 33.7	-0.1
FNA	Florina	2.92	17	ePg	Pg	08 36 52.8	+0.4
TIP	Timpagrande	2.97	295	⇑S	Sn	08 37 19.4	+1.7
TIR	Tirane	3.36	355	⇑P	Pn	08 36 46.1	-1.8
TIR				S	Sn	08 37 18.2	-9.1
MATE	Matera	3.81	315	⇓P	Pn	08 36 56.0	+2.0
MATE				⇑S	Sn	08 37 33.6	-4.8
SRS	Serrai	4.06	39	ePn	Pn	08 37 02.3	+4.9
APE	Apeiranthos	4.31	101	⇑P	Pb	08 37 14.4	+2.9
PDG	Podgorica	4.50	351	ePn	Pn	08 37 04.8	+1.4
PDG				eSn	Sn	08 37 55.7	+0.5
PDG	Podgorica	4.50	351	⇑P	Pn	08 37 02.2	-1.3
TREB	Trebinje	4.93	344	ePn	Pn	08 37 08.0	-1.5
TREB				eSn	Sn	08 38 04.1	-1.9
BARS	Barje	4.97	14	ePn	Pn	08 37 13.2	+3.3
VTS	Vitosha	5.16	25	ePn	Pn	08 37 14.2	+1.5
VTS	Vitosha	5.16	25	⇑P	Pn	08 37 12.0	-0.7
STON	Ston	5.24	339	ePn	Pn	08 37 14.1	+0.4
STON				eSn	Sn	08 38 11.1	-2.5
STON				eSn	Sn	08 38 11.2	-2.4
SELS	Selova	5.26	7	ePn	Pn	08 37 16.4	+2.4
SJES	Sjenica	5.27	358	ePn	Pn	08 37 15.7	+1.6
IVAS	Ivanjica	5.58	359	ePn	Pn	08 37 18.9	+0.5
IVAS				eSn	Sn	08 38 20.4	-1.6
BOVS	Bovan	5.75	11	ePn	Pn	08 37 23.9	+3.3
BBLS	Lazići	5.90	354	ePn	Pn	08 37 22.4	-0.4
BBLS				eSn	Sn	08 38 28.8	-1.2
GRUS	Gruza	5.90	3	ePn	Pn	08 37 23.8	+1.1
GRUS				eSn	Sn	08 38 30.4	+0.5
DIVS	Divibare	6.10	358	ePn	Pn	08 37 26.5	+0.9
DIVS				eSn	Sn	08 38 33.7	-1.3
TRUS	Trudelj	6.23	1	ePn	Pn	08 37 28.3	+1.1
TRUS				eSn	Sn	08 38 38.2	+0.3
MDVR	Moldovita	6.87	9	⇓P	Pn	08 37 34.7	-1.5
OBKA	Obir	9.49	335	i Pn	Pn	08 38 14.3	+2.2
	comp=N,1.0nm,0.2s						
OBKA				i Sn	Sn	08 39 58.9	+0.6
	comp=N,3.5nm,0.3s						
ARSA	Arzberg	9.88	341	i Pn	Pn	08 38 22.7	+5.3
	comp=N,1.6nm,0.2s						
MYKA	Terra Mystica	9.91	333	i Pn	Pn	08 38 18.3	+0.5
	comp=N,1.0nm,0.2s						
MYKA				i Sn	Sn	08 40 08.3	-0.3
	comp=N,3.4nm,0.7s						
KBA	Koelnbreinsper	10.40	333	i Pn	Pn	08 38 25.9	+1.3
	comp=N,0.5nm,0.2s						
KBA				i Sn	Sn	08 40 20.8	+0.1
	comp=N,1.2nm,0.4s						
MOA	Molln	10.78	338	i Pn	Pn	08 38 28.5	-1.1
	comp=N,1.2nm,0.2s						
GERES	GERESS Array B	11.84	338	Pn	Pn	08 38 44.3	+0.1
	comp=N,0.3nm,0.3s,baz=168,slow=15,SNR=4.2						
HFS	Hagfors	22.55	351	P	P	08 40 54.9	-0.2
	comp=N,4.1nm,0.8s,baz=156,slow=16,SNR=7.9						
FINES	FINESS Array B	23.76	7	P	P	08 41 07.2	-0.1
	comp=N,1.8nm,0.8s,baz=183,slow=9.5,SNR=5.6						
KURBB	Kurchatov Arra	42.52	53	P	P	08 43 50.3	-0.1
	comp=N,0.3nm,0.7s,baz=276,slow=8.9,SNR=3.5						
MKAR	Makanchi Array	45.59	58	P	P	08 44 15.0	-0.2
	comp=N,0.3nm,0.4s,baz=270,slow=7.6,SNR=16						
ZALV	Zalesovo Beam	45.98	48	P	P	08 44 18.1	0.0
	comp=N,1.8nm,0.4s,baz=269,slow=8.7,SNR=9.3						

ISK ***10*** *08:39:37.4, 43°.21N×41°.58E, h5^{km}, ML2.5/1*
DDA ***10*** *08:39:40.2, 43°.09N×41°.46E, h5^{km}±4^{km}, ML2.2*
ISC 10 08:39:40.7±1.1**, 43°.18N**±0°.03×**41°.73E**±0°.02**, h24**^{km}±15^{km}**,**
n24, σ**1^{s}69**/43**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARXR	Arkhyz	0.50	319	ePg	Pn	08 39 49.2	-3.3
NEY	Neytrino	0.73	85	ePg	Pb	08 39 53.3	-1.5
NEY				i Sg	Sb	08 40 02.8	-1.7
SHA1	Shidzhatmaz	0.87	50	i Pg	Pb	08 39 56.5	-0.9
SHA1				i Sg	Sb	08 40 08.4	-0.4
KBZ	Khabaz	1.01	57	i Pg	Pn	08 39 58.9	-0.4
KBZ				i Sg	Sb	08 40 12.1	-0.2
KIV	Kislovodsk	1.04	42	PN	Pb	08 39 59.6	-0.5
RPOR	Krasnaya Polya	1.18	296	ePg	Pb	08 40 02.5	+0.1
RPOR				eSg	Sn	08 40 19.8	+2.7
TKB	Tkibuli	1.25	131	P	Pb	08 40 04.1	+0.4
TKB				S	Sb	08 40 22.7	+3.4
DIGR	Digorskoe uzhe	1.39	101	i Pg	Pb	08 40 05.5	-0.5
DIGR				eSg	Sb	08 40 24.9	+1.5
ONI	Oni	1.40	115	P	Pb	08 40 06.7	+0.5
ONI				S	Sb	08 40 27.5	+3.9
ONI	Oni	1.40	115	PN	Pb	08 40 06.7	+0.5
ONI				SN	Sb	08 40 27.9	+4.3
ONI	Oni	1.40	115	ePg	Pb	08 40 05.7	-0.5
ONI				eSg	Sb	08 40 24.5	+0.9
GUZR	Guzeripl'	1.42	305	ePg	Pb	08 40 06.2	-0.5
GUZR				eSg	Sb	08 40 27.1	+2.8
SOC	Sochi	1.52	286	i Pg	Pb	08 40 07.8	-0.4
SOC				i Sg	Sb	08 40 29.2	+2.2
LSNR	Lesken	1.54	86	ePg	Pb	08 40 08.2	-0.2
LSNR				eSg	Sb	08 40 28.6	+1.1
BATM	Batumi	1.58	181	P	Pn	08 40 06.7	-0.5
BATM	Batumi	1.58	181	PN	Pb	08 40 07.9	-1.3
BATM				SN	Sb	08 40 30.4	+1.7
BATM	Batumi	1.58	181	ePg	Pb	08 40 08.7	-0.5
BATM	Batumi	1.58	181	i P	Pb	08 40 08.0	-1.3
BATM				i S	Sb	08 40 27.7	-1.1
ZEI	Tsey	1.64	103	ePg	Pb	08 40 10.1	-0.3
ZEI				eSg	Sb	08 40 31.6	+0.9
BCA	Borcka	1.74	183	PN	Pb	08 40 10.3	-1.7
EPOS	Posof	1.84	156	i P	Pb	08 40 11.9	-1.8
EPOS				i S	Sb	08 40 37.1	+0.8
EPOS				IAML		08 40 39.0	
	comp=E,30nm,0.7s						
EPOS				IAML		08 40 40.0	
	comp=N,31nm,0.7s						
DBOC	Borcka	1.84	181	i P	Pn	08 40 10.6	-0.2
DBOC				i S	Sn	08 40 33.2	-0.1
DBOC				IAML		08 40 37.0	
	comp=E,20nm,0.3s						
LZRR	Lazarevskoye	1.86	295	ePg	Pb	08 40 14.0	-0.1
LZRR				eSg	Sb	08 40 37.9	+1.0
DAGI	Agillar	2.11	176	i P	Pb	08 40 15.6	-2.7
DAGI				i S	Sn	08 40 40.3	+0.1

IDC ***10*** *08:43:19.8±0.9, 11°.34N×85°.68W, h0^{km}, mb3.8/7, mb1 4.0/9, mb1mx3.8/31, mbtmp3.7/9, ML2.9/2, MS4.4/1, Ms1 4.4/1, ms1mx3.6/36, Error ellipse: s-maj=43.0km s-min=10.8km az=55.0*
UCR ***10*** *08:43:22.8±1.3, 10°.71N×86°.23W, h24^{km}±3^{km}, MD3.7, MW4.1, mb4.1(NEIC)*
INET ***10*** *08:43:23.3, 10°.69N×86°.19W, h20^{km}, ML4.7*
NEIC ***10*** *08:43:24.5±1.7, 10°.75N±0°.08×86°.15W±0°.06, h57^{km}±10^{km}, mb4.1/53, Error ellipse: s-maj=12.9km s-min=6.3km az=214.0*
ISC 10 08:43:22.7±1.1**, 10°.70N**±0°.05×**86°.25W**±0°.05**, h45**^{km}±11^{km}**,**
n110, σ**1^{s}22**/130**, mb4.1**/31**, 3C-4D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NY14	Universidad de	0.71	94	i P	Pn	08 43 36.8	+0.4
GBS3	Finca Las Img	0.79	84	i P	Pn	08 43 37.5	0.0
GBS3				i S	Sn	08 43 48.2	-0.1
LAPC	Finca la Perla	0.81	85	i P	Pn	08 43 37.7	-0.1
LAPC				i S	Sn	08 43 48.4	-0.4
BUEV	Buena Vista	0.84	83	i P	Pn	08 43 38.3	0.0
BUEV				i S	Sn	08 43 49.8	+0.3
GUAI	GUAI	0.84	120	i P	Pn	08 43 38.0	-0.2
GB1A	Borinquen Arri	0.85	82	i P	Pn	08 43 38.5	+0.1
GPS3	Bodega del ICE	0.88	86	i P	Pn	08 43 38.8	+0.1
GPS3				i S	Sn	08 43 50.4	0.0
GPS2	Hotel Rincn d	0.89	86	i P	Pn	08 43 39.0	+0.2
GPS1	Guardaparques	0.89	85	i P	Pn	08 43 39.1	+0.1
GPS1				i S	Sn	08 43 50.7	-0.1
BUAI	Buenos Aires	0.92	79	i P	Pn	08 43 39.9	+0.6
PLVR	Palo Verde	0.95	111	⇓iP	Pn	08 43 39.8	-0.1
PLVR				eS	Sn	08 43 52.0	-0.4
LIM1	Limonal	0.98	90	i P	Pn	08 43 40.4	+0.2
GUAB	Guayabo de Bag	1.01	89	i P	Pn	08 43 40.7	+0.2
COLC	Colonia	1.03	92	i P	Pn	08 43 41.1	+0.3
MESS	Mesas	1.04	87	i P	Pn	08 43 41.3	+0.3
CUI	Cuipilapa	1.07	92	i P	Pn	08 43 41.8	+0.4
ACAL	Aguas Claras	1.20	93	i P	Pn	08 43 43.9	+0.7
PTEN	Parque Tenorio	1.25	89	i P	Pn	08 43 44.5	+0.8
MASN	Masaya	1.29	4	eP	Pn	08 43 44.5	+0.2
JTS	Las Juntas de	1.34	107	Pg	Pn	08 43 45.2	+0.2
	65nm,0.3s,baz=28,slow=10,SNR=13						
JTS				Lg	Lg	08 44 00.6	
	70nm,0.3s,baz=354,slow=19,SNR=7.8						
JTS	Las Juntas de	1.34	107	⇓iP	Pn	08 43 45.1	+0.2
JTS				eS	Sn	08 44 03.2	+1.5
JTS	Las Juntas de	1.34	107		Pn	08 43 45.3	+0.2
JTS				Sn	Sn	08 44 01.5	-0.3
CEDE	Laguna Cedeo	1.54	98	i P	Pn	08 43 48.6	+0.8
FORC	Fortuna	1.57	98	i P	Pn	08 43 48.9	+0.7
ACON	Acoyapa	1.65	40	⇑iP	Pn	08 43 49.6	+0.4
ACON				eS	Sn	08 44 10.1	+0.9
ACON	Acoyapa	1.65	40		Pn	08 43 49.6	+0.4
ACON				Sn	Sn	08 44 09.5	+0.2
CNGN	Cerro Negro	1.84	346	eP	Pn	08 43 52.5	+0.5
CRIN	San Cristobal	2.14	339	eP	Pn	08 43 55.5	-0.5
CRIN				eS	Sn	08 44 24.2	+2.8
HDC	Heredia	2.22	108	⇓iP	Pn	08 43 58.2	+1.0
HDC	Heredia	2.22	108	Pn	Pn	08 43 58.1	+1.0
MATN	Matagalpa	2.24	8	⇑iP	Pn	08 43 58.2	+0.8
SJS	Escuela Geolog	2.29	109	eP	Pn	08 43 59.2	+1.0
SJS				eS	Sn	08 44 28.2	+3.0
ESTN	Estel	2.39	357	⇑eP	Pn	08 44 00.1	+0.5
ESTN	Estel	2.39	357	Pn	Pn	08 44 00.3	+0.7
ESTN				Sn	Sn	08 44 28.0	+0.3
LCR2	La Lucha 2	2.41	113	⇓eP	Pn	08 44 00.8	+0.9
ESPN	Las Esperanzas	2.43	52	eP	Pn	08 44 02.4	+2.5
ESPN				eS	Sn	08 44 30.0	+1.6
ESPN	Las Esperanzas	2.43	52	Pn	Pn	08 44 01.0	+1.1
ESPN				Sn	Sn	08 44 29.1	+0.7
CSGN	Cosiguina Volc	2.60	331	eP	Pn	08 44 04.0	+1.6
CSGN	Cosiguina Volc	2.60	331		Pn	08 44 04.3	+1.9
CSGN				Sn	Sn	08 44 33.2	+0.4
TGUH	Tegucigalpa,Un	3.48	344		Pn	08 44 15.8	+1.2
TGUH				Sn	Sn	08 44 55.7	+1.0
BRU2	Volcan	3.99	118	eP	Pn	08 44 23.7	+2.1
BRU2				eS	Sn	08 45 06.1	-1.0
SNET	Serv Nac Est T	4.16	316	Pn	Pn	08 44 24.7	+0.9
SNET				Sn	Sn	08 45 10.5	-0.7
APG	El Apazote	5.93	317	Pn	Pn	08 44 50.8	+2.5
	0.2nm,0.3s,baz=94,slow=13,SNR=3.0						
APG				Sn	Sn	08 45 53.6	-1.5
	0.2nm,0.3s,baz=94,slow=14,SNR=3.2						
CMIG	Matias Romero	10.51	308	Pn	Pn	08 45 52.9	+2.0
	0.2nm,0.3s,baz=141,slow=6.2,SNR=3.6						
TLIG	Tlapa	13.75	301	Pn	P	08 46 39.2	-3.6
GRTK	Grand Turk	18.06	52	P	P	08 47 26.6	-3.8
HKT	Hockley	21.14	336	P	P	08 48 05.1	+1.3
HKT				IAmb	IAmb	08 48 08.1	
	comp=Z,14nm,1.5s						
152A	Waverly Hall	21.91	3	P	P	08 48 12.5	+0.3
152A				IAmb	IAmb	08 48 16.2	
	comp=Z,6.2nm,0.7s						
LRAL	Lakeview Retre	22.24	358	P	P	08 48 17.1	+1.4
NATX	Nacogdoches	22.36	341	P	P	08 48 18.1	+1.1
Z50A	Ashland	22.45	1	P	P	08 48 18.9	+0.9
435B	Jarrell	22.59	334	P	P	08 48 20.4	+0.9
435B				IAmb	IAmb	08 48 24.1	
	comp=Z,4.7nm,0.7s						
GOGA	Godfrey	22.75	6	P	P	08 48 22.2	+1.1
Y49A	Blount Mountai	23.05	360	P	P	08 48 24.8	+0.5
Y49A				IAmb	IAmb	08 48 25.8	
	comp=Z,4.9nm,0.7s						
Y52A	Lilburn	23.15	5	P	P	08 48 26.3	+1.1
JCT	Junction City	23.37	329	P	P	08 48 28.1	+0.7
WHTX	Lake Whitney,	23.59	336	P	P	08 48 30.3	+0.9
WHTX				IAmb	IAmb	08 48 31.9	
	comp=Z,4.6nm,0.8s						
HODGE	Hodges	23.71	8	P	P	08 48 30.8	+0.2
HODGE				IAmb	IAmb	08 48 36.9	
	comp=Z,9.1nm,1.4s						
WLAR	White Oak Lake	23.73	346	P	P	08 48 30.4	-0.4
WLAR				IAmb	IAmb	08 48 32.5	
	comp=Z,6.3nm,0.5s						
PLAL	Pickwick Lake	24.23	356	P	P	08 48 37.1	+1.8
PLAL				IAmb	IAmb	08 48 37.4	
	comp=Z,4.0nm,0.8s						
MIAR	Mount Ida	24.66	345	P	P	08 48 39.9	+0.5
MIAR				IAmb	IAmb	08 48 41.0	
	comp=Z,5.1nm,0.6s						
TXAR	Lajitas Array	24.67	321	P	P	08 48 41.0	+1.4
	comp=Z,3.7nm,0.6s,baz=142,slow=9.5,SNR=32						
TXAR	Lajitas Array	24.67	321	P	P	08 48 40.5	+0.9
TX31	Lajitas Ar. Si	24.67	321	P	P	08 48 40.6	+1.1
TX31				IAmb	IAmb	08 48 44.6	
	comp=Z,4.0nm,0.6s						
TX32	Lajitas Array	24.67	321	P	P	08 48 40.8	+1.2
TX32				IAmb	IAmb	08 48 44.6	
	comp=Z,4.2nm,0.6s						
TKL	Tuckaleechee C	24.95	5	P	P	08 48 40.2	-1.7
	comp=Z,2.5nm,0.9s,baz=175,slow=11,SNR=3.2						
TKL	Tuckaleechee C	24.95	5	P	P	08 48 40.6	-1.3
TKL				IAmb	IAmb	08 48 44.1	
	comp=Z,7.3nm,1.1s						
ABTX	Abilene, Hawle	25.07	333	P	P	08 48 43.7	+0.7
ABTX				IAmb	IAmb	08 48 45.9	
	comp=Z,5.1nm,0.6s						
W39A	Magazine	25.34	345	P	P	08 48 46.1	+0.7
WVT	Waverly	25.36	357	P	P	08 48 46.7	+1.1
TZTN	Tazewell	25.85	5	P	P	08 48 50.7	+0.6
TZTN				IAmb	IAmb	08 48 56.5	
	comp=Z,5.7nm,1.1s						
PARMO	Parma	26.05	354	P	P	08 48 53.0	+1.2
HHAR	Hobbs	26.41	346	P	P	08 48 54.1	-1.0
WMOK	Wichita Mounta	26.52	336	P	P	08 48 56.3	+0.1
WMOK				IAmb	IAmb	08 48 59.8	
	comp=Z,4.1nm,0.8s						
TUL1	Leonard	26.55	342	P	P	08 48 57.8	+1.4
U38A	Gravette	26.66	345	P	P	08 48 57.1	-0.3
S51A	Beattyville	26.93	5	P	P	08 48 59.4	-0.4
S51A				IAmb	IAmb	08 49 08.0	
	comp=Z,5.2nm,1.1s						
CCM	Cathedral Cave	27.61	351	P	P	08 49 05.4	-0.5
S39A	Bolivar	27.62	348	P	P	08 49 04.3	-1.7
MSTX	Muleshoe	27.67	329	P	P	08 49 07.0	+0.4
MSTX				IAmb	IAmb	08 49 08.5	
	comp=Z,2.9nm,0.7s						
R55A	Marlinton	28.01	10	P	P	08 49 09.1	-0.6
Q51A	Peebles	28.33	5	P	P	08 49 12.6	+0.2
Q54A	Coxs Mills	28.58	9	P	P	08 49 15.1	+0.6
Q54A				IAmb	IAmb	08 49 20.0	
	comp=Z,5.1nm,1.1s						
P53A	Whipple	29.00	8	P	P	08 49 18.7	+0.5
P53A				IAmb	IAmb	08 49 19.2	
	comp=Z,3.6nm,0.7s						
ACSO	Alum Creek Sta	29.56	5	P	P	08 49 22.8	-0.4
ACSO				IAmb	IAmb	08 49 23.7	
	comp=Z,3.4nm,0.6s						
SAML	Samuel	30.13	130	P	P	08 49 29.4	+0.9
SAML				IAmb	IAmb	08 49 30.2	
	comp=Z,2.6nm,0.8s						
N49A	Columbus Grove	30.16	3	P	P	08 49 28.3	-0.2
N51A	Ashland	30.30	6	P	P	08 49 31.6	+1.8
N51A				IAmb	IAmb	08 49 45.6	
	comp=Z,7.2nm,1.0s						
N53A	Lisbon	30.37	8	P	P	08 49 29.9	-0.5
L42A	Oliver, Polo	31.33	355	P	P	08 49 37.5	-1.4
M56A	Emporium	31.48	12	P	P	08 49 40.4	+0.2
N59A	State Game Lan	31.49	15	P	P	08 49 41.2	+0.9
N59A				IAmb	IAmb	08 49 55.0	
	comp=Z,4.0nm,0.9s						
M57A	Sunshine Farm,	31.56	13	P	P	08 49 41.2	+0.3
M57A				IAmb	IAmb	08 49 47.8	
	comp=Z,4.0nm,0.9s						
SDCO	Great Sand Dun	32.01	330	P	P	08 49 47.3	+2.1
JFWS	Jewell Farm	32.28	355	P	P	08 49 46.5	-0.7
SPMN	Marine on St.	34.86	352	P	P	08 50 07.5	-2.1
E43A	Lone Tree Farm	35.56	359	P	P	08 50 14.8	-0.8
E43A				IAmb	IAmb	08 50 29.9	
	comp=Z,4.6nm,1.4s						
SRU	San Rafael Swe	35.62	327	P	P	08 50 15.0	-1.5
PDAR	Pinedale Array	37.86	332	P	P	08 50 35.6	+0.1
	comp=Z,0.3nm,0.5s,baz=131,slow=12,SNR=4.9						
PDAR	Pinedale Array	37.86	332	P	P	08 50 36.2	+0.6
NVAR	Mina Array Bea	39.79	319	P	P	08 50 54.9	+3.1
	comp=Z,0.6nm,0.6s,baz=127,slow=8.1,SNR=6.6						
NVAR				PcP	PcP	08 53 00.1	+2.7
	comp=Z,0.5nm,0.7s,baz=144,slow=4.7,SNR=4.2						
NVAR	Mina Array Bea	39.79	319	P	P	08 50 52.6	+0.8
BDFB	Brasilia	46.03	124	P	P	08 51 43.7	+1.4
	comp=Z,2.8nm,0.8s,baz=293,slow=11,SNR=4.2						
BDFB	Brasilia	46.03	124	P	P	08 51 43.4	+1.0
BDFB				IAmb	IAmb	08 51 44.7	
	comp=Z,3.5nm,1.0s						
SCHQ	Schefferville	46.63	15	P	P	08 51 44.2	-2.3
	comp=Z,1.6nm,0.9s,baz=235,slow=11,SNR=3.5						
SCHQ	Schefferville	46.63	15	P	P	08 51 44.5	-2.0
BBB	Bella Bella	53.42	329	LR	LR	09 18 19.8	
	comp=Z,318nm,19.2s,baz=178,slow=40						
YKA	Yellowknife Ar	55.60	345	P	P	08 52 52.6	-1.1
	comp=Z,0.2nm,0.4s,baz=142,slow=7.2,SNR=7.9						
NEA	Nenana	68.89	336	P	P	08 54 22.8	+0.2
SKT	Skwentna	69.11	333	P	P	08 54 21.7	-2.3

ATA ***10*** *08:52:02.6±0.7, 38°.12N×38°.41E, h12^{km}±6^{km}, ML3.3, MW3.6*
DDA ***10*** *08:52:03.9, 38°.13N×38°.47E, h13^{km}±1^{km}, MW3.6*
ISK ***10*** *08:52:03.2, 38°.09N×38°.46E, h4^{km}, ML3.3/21*
ISC 10 08:52:04.0±1.1**, 38°.12N**±0°.02×**38°.46E**±0°.02**, h8**^{km}±9^{km}**,**
n61, σ**1^{s}14**/87**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKCD	Akcadag	0.46	292	i P	Pb	08 52 13.3	-1.1
AKCD				i S	Sb	08 52 20.0	-1.5
AKCD				IAML		08 52 21.0	
	comp=N,4µm,0.2s						
AKCD				IAML		08 52 24.0	
	comp=E,2µm,0.3s						
ELZG	Elazig	0.56	48	i P	Pg	08 52 14.7	0.0
ELZG				i S	Sg	08 52 22.2	+0.1
ELZG				IAML		08 52 24.0	
	comp=E,2µm,0.5s						
ELZG				IAML		08 52 30.0	
	comp=N,2µm,0.3s						
SVRC	Sivrice-ELAZID	0.71	69	PG	Pg	08 52 17.7	0.0
URFA	Urfa	0.74	157	PG	Pg	08 52 17.5	-0.7
URFA				SG	Sg	08 52 27.4	-0.4
HEKM	Malatya_Hekimh	0.85	333	i P	Pb	08 52 20.8	-0.4
HEKM				i S	Sb	08 52 32.4	-0.4
HEKM				IAML		08 52 33.0	
	comp=E,3µm,0.3s						
HEKM				IAML		08 52 35.0	
	comp=N,2µm,0.3s						
DARE	Darende-Malaty	0.89	300	PG	Pg	08 52 20.9	-0.2
DARE				SG	Sn	08 52 34.3	-1.8
ARPR	Arapgir-MALATY	0.97	354	PG	Pb	08 52 22.8	-0.4
ARPR				SG	Sn	08 52 37.7	-0.6
GZT	Gaziantep	1.05	223	i P	Pb	08 52 24.0	-0.4
GZT				i S	Sn	08 52 39.7	-0.3
GZT				IAML		08 52 41.0	
	comp=N,1µm,0.5s						
GZT				IAML		08 52 41.0	
	comp=E,2µm,0.2s						
ELBS	KAHRAMANMARAS	1.07	281	i P	Pb	08 52 24.3	-0.5
ELBS				i S	Sn	08 52 41.2	+0.8
ELBS				IAML		08 52 47.0	
	comp=E,868nm,0.7s						
ELBS				IAML		08 52 47.0	
	comp=N,731nm,0.5s						
CUGUR	Gurin_SVAS	1.11	303	i P	Pg	08 52 24.8	-0.5
CUGUR				i S	Sn	08 52 40.8	-0.8
CUGUR				IAML		08 52 48.0	
	comp=N,672nm,0.4s						
CUGUR				IAML		08 52 49.0	
	comp=E,781nm,0.4s						
KEMA	Kemaliye	1.14	1	eP	Pg	08 52 25.1	-0.9
KEMA				eS	Sn	08 52 41.4	-1.0
KEMA				IAML		08 52 44.2	
	comp=Z,118nm,0.5s						
KEMA	Kemaliye	1.14	1	eP	Pg	08 52 25.1	-0.9
KEMA				eS	Sn	08 52 41.7	-0.7
KEMA				IAML		08 52 44.6	
	comp=Z,119nm,0.4s						
SURC	SANLIURFA_SURC	1.25	174	i P	Pg	08 52 28.5	+0.6
SURC				i S	Sn	08 52 44.5	-0.3
SURC				IAML		08 52 47.0	
	comp=N,1µm,0.3s						
SURC				IAML		08 52 50.0	
	comp=E,1µm,0.8s						
KHMN	Narli-Kahraman	1.27	235	PN	Pn	08 52 27.5	-0.6
KHMN				SN	Sn	08 52 45.8	+0.5
REFA	Refahiye_ERZN	1.29	10	eP	Pg	08 52 36.0	+7.2
REFA				eS	Sn	08 53 02.3	+16
REFA				IAML		08 53 15.1	
	comp=Z,66nm,0.8s						
REFA	Refahiye_ERZN	1.29	10	eP	Pg	08 52 37.0	+8.2
REFA				eS	Sn	08 53 03.0	+17
REFA				IAML		08 53 15.0	
	comp=Z,68nm,0.9s						
TNCL	Tunceli-Merkez	1.30	40	eP	Pn	08 52 27.6	-1.0
TNCL				eS	Sn	08 52 46.0	-0.4
TNCL				IAML		08 52 58.9	
	comp=Z,234nm,0.7s						
TNCL	Tunceli-Merkez	1.30	40	eP	Pn	08 52 27.6	-1.0
TNCL				eS	Sn	08 52 48.4	+2.1
TNCL				IAML		08 52 58.8	
	comp=Z,224nm,0.7s						
TNCL	Tunceli-Merkez	1.30	40	i P	Pg	08 52 28.5	-0.5

TNCL				*i*S	Sn	08 52 46.0	-0.3
TNCL				IAML		08 52 51.0	
	comp=E,365nm,0.6s						
TNCL				IAML		08 52 56.0	
	comp=N,417nm,1.1s						
DYBB	Diyarbakir	1.33	97	PN	Pg	08 52 29.4	-0.2
GAZ	Gaziantep	1.37	227	PN	Pb	08 52 29.3	-0.7
KMRS	Kahramanmaras	1.38	244	PN	Pb	08 52 29.5	-0.6
CUKAN	kangal_SIVAS	1.42	327	*i*P	Pg	08 52 30.9	-0.4
CUKAN				*i*S	Sg	08 52 49.7	-0.1
HANI	Diyarbakir_Han	1.55	79	*i*P	Pb	08 52 33.0	0.0
HANI				*i*S	Sg	08 52 53.9	0.0
HANI				IAML		08 52 56.0	
	comp=E,286nm,0.6s						
HANI				IAML		08 52 58.0	
	comp=N,276nm,0.5s						
MAZI	Mazidag	1.71	112	PN	Pb	08 52 34.9	-0.8
KUZU	Kuzuini	1.74	220	*i*P	Pn	08 52 34.5	-0.1
KUZU				*i*S	Sg	08 53 00.6	+0.7
KUZU				IAML		08 53 08.0	
	comp=N,772nm,0.5s						
KUZU				IAML		08 53 16.0	
	comp=E,642nm,0.5s						
ANDN	Andirin	1.76	253	*i*P	Pb	08 52 35.4	-1.2
ANDN				*i*S	Sb	08 52 59.1	+0.2
ANDN				IAML		08 53 08.0	
	comp=E,395nm,0.4s						
ANDN				IAML		08 53 09.0	
	comp=N,261nm,0.7s						
CUALT	Altinyayla-SIV	1.76	311	*i*P	Pg	08 52 37.5	-0.3
CUALT				*i*S	Sg	08 53 01.9	+1.2
CUALT				IAML		08 53 06.0	
	comp=N,189nm,0.6s						
CUALT				IAML		08 53 11.0	
	comp=E,164nm,1.0s						
CUZAR	Zara_SIVAS	1.84	343	*i*P	Pg	08 52 38.8	-0.6
CUZAR				*i*S	Sg	08 53 05.8	+2.6
CUZAR				IAML		08 53 09.0	
	comp=E,218nm,0.6s						
CUZAR				IAML		08 53 11.0	
	comp=N,196nm,0.7s						
EUZM	Uzumlu	1.85	31	*e*P	Pb	08 52 38.1	-0.1
EUZM				*e*S	Sb	08 53 01.9	+0.3
EUZM				IAML		08 53 20.7	
	comp=Z,32nm,0.9s						
EUZM	Uzumlu	1.85	31	*e*P	Pb	08 52 38.1	-0.1
EUZM				*e*S	Sg	08 53 04.8	+1.3
EUZM				IAML		08 53 20.7	
	comp=Z,32nm,0.9s						
SAIM	ADANA	1.89	266	*i*P	Pb	08 52 38.7	0.0
SAIM				*i*S	Sg	08 53 05.2	+0.7
SAIM				IAML		08 53 10.0	
	comp=N,206nm,0.5s						
SAIM				IAML		08 53 13.0	
	comp=E,266nm,0.4s						
BNGB	Bingl	1.94	63	PN	Pb	08 52 38.3	-1.4
YEDI	Yedisu-Bingol	2.09	50	PN	Pb	08 52 40.5	-1.8
KELT	Kelkit	2.12	17	*e*P	Pb	08 52 42.3	-0.4
KELT	Kelkit	2.12	17	*e*P	Pb	08 52 41.7	-1.0
KELT				*e*S	Sg	08 53 13.2	+1.2
KELT				IAML		08 53 24.9	
	comp=Z,109nm,1.2s						
SVSK	Karacayir	2.12	328	PN	Pb	08 52 40.9	-1.8
SVAN	Silvan-Diyarba	2.16	88	PN	Pn	08 52 40.6	+0.3
BNN	Bunyan	2.18	290	PN	Pn	08 52 41.4	+0.7
BNGL	BINGOL	2.26	68	*e*P	Pb	08 52 43.5	-1.7
BNGL				*e*S	Sb	08 53 14.1	+0.5
BNGL				IAML		08 53 23.7	
	comp=Z,291nm,0.8s						
BNGL	BINGOL	2.26	68	*e*P	Pb	08 52 43.2	-2.1
BNGL				*e*S	Sg	08 53 18.0	+1.3
BNGL				IAML		08 53 23.6	
	comp=Z,291nm,0.8s						
KARO	Karliova-Bingo	2.34	59	PN	Pn	08 52 44.2	+1.2
CEYT	Ceyhan	2.43	244	PN	Pn	08 52 44.5	+0.6
KOPT	Kop Dagi	2.47	39	*e*P	Pb	08 52 46.6	-2.2
KOPT	Kop Dagi	2.47	39	*e*P	Pn	08 52 45.8	+1.0
MUSM	Mu-Merkez	2.47	75	*i*P	Pn	08 52 46.1	+1.4
BAYB	BAYBURT	2.55	33	*e*P	Pn	08 52 47.2	+1.4
BAYB	BAYBURT	2.55	33	*e*P	Pb	08 52 47.6	-2.5
BAYT	Aydıntepe-Bayb	2.62	29	PN	Pn	08 52 48.2	+1.5
TOKT	Tokat	2.65	326	PN	Pn	08 52 48.8	+1.7
CMRD	Camardi-Nigde	2.79	262	PN	Pn	08 52 49.8	+0.8
ESPY	Espiye-Giresun	2.80	4	PN	Pn	08 52 50.9	+1.8
KARA	Karaisali	2.84	253	PN	Pn	08 52 50.4	+0.8
GURO	Guroymak-BITLI	2.84	80	PN	Pn	08 52 51.1	+1.3
YOZ	Yozgat	2.88	303	PN	Pn	08 52 51.9	+1.5
KRIK	Erzurum-spir	2.92	40	*e*P	Pb	08 52 53.4	-3.1
KRIK	Erzurum-spir	2.92	40	*e*P	Pb	08 52 55.7	-0.8
GULA	Gulagac	3.33	275	PN	Pn	08 52 57.7	+1.1
EATA	Eleskirt	3.59	60	*e*P	Pn	08 53 00.9	+0.6
CORM	Corum	3.62	306	PN	Pn	08 53 02.2	+1.7
GEVA	Gevas	3.62	86	*e*P	Pn	08 53 02.9	+2.3

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*SJA **10** 08:59:24.9±0.9, 22°.42S×70°.79W, h35^{km}±2^{km}, ML3.3, MW3.5*

*GUC **10** 08:59:26.6±0.8, 22°.40S×70°.74W, h55^{km}±3^{km}, ML3.4*

ISC 10 08:59:25.1±1.7**, 22°.39S**±0°.03×**70°.83W**±0°.07**, h28**^{km}±13^{km}**, n22, σ0^{s}.85**/38**, 1C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB04	IPOC Station P	0.63	85	⇓*i*P	Pn	08 59 38.7	+0.2
PB04				*i*S	Sn	08 59 47.5	-0.3
PB04				IAML		08 59 48.2	
	comp=N,4μm,0.2s						
PB04	IPOC Station P	0.63	85	*i*P	Pn	08 59 38.7	+0.2
PB04				*i*S	Sn	08 59 47.6	-0.1
PB04				IAML		08 59 50.3	
	comp=Z,2μm,0.1s						
PB05	IPOC Station P	0.74	129	⇓*i*P	Pb	08 59 40.2	+0.6
PB05				*i*S	Sb	08 59 49.9	+0.5
PB05				IAML		08 59 50.6	
	comp=E,3μm,0.2s						
PB05	IPOC Station P	0.74	129	*i*P	Pb	08 59 39.3	-0.2
PB05				*i*S	Sb	08 59 49.9	+0.5
PB03	IPOC Station P	1.05	71	⇓*i*P	Pn	08 59 44.8	+0.5
PB03				*i*S	Sn	08 59 57.8	-0.3
PB03				IAML		08 59 58.2	
	comp=N,2μm,0.1s						
PB03	IPOC Station P	1.05	71	*i*P	Pn	08 59 44.8	+0.5
PB03				*i*S	Sn	08 59 57.9	-0.3
PB07	IPOC Station P	1.10	53	⇓*i*P	Pn	08 59 45.4	+0.5
PB07				*i*S	Sn	08 59 59.2	0.0
PB07				IAML		08 59 59.6	
	comp=N,1μm,0.5s						
PB07	IPOC Station P	1.10	53	*i*P	Pn	08 59 45.4	+0.5
PB07				*i*S	Sn	08 59 59.1	0.0
PB10	IPOC Station P	1.15	167	⇑*i*P	Pn	08 59 45.7	+0.3
PB10				*i*S	Sn	08 59 59.4	-0.9
PB10	IPOC Station P	1.15	167	*i*P	Pn	08 59 45.6	+0.3
PB10				*i*S	Sn	08 59 59.2	-1.0
PB06	IPOC Station P	1.21	105	⇓*i*P	Pn	08 59 47.1	+0.7
PB06				*i*S	Sn	09 00 01.9	0.0
PB06				IAML		09 00 02.7	
	comp=E,2μm,0.4s						
PB06	IPOC Station P	1.21	105	*i*P	Pn	08 59 47.1	+0.7
PB06				*i*S	Sn	09 00 01.9	0.0
PB06				IAML		09 00 04.5	
	comp=Z,1μm,0.3s						
PB02	IPOC Station P	1.37	39	*e*P	Pn	08 59 49.4	+0.8
PB02	IPOC Station P	1.37	39	*i*P	Pn	08 59 49.2	+0.6
PB15	IPOC Station P	1.50	123	*i*P	Pn	08 59 51.4	+1.0
PB15				*i*S	Sn	09 00 09.9	+0.8
PB15				IAML		09 00 11.0	
	comp=Z,2μm,0.1s						
PB09	IPOC Station P	1.59	68	*i*P	Pb	08 59 53.4	-0.5
PB09				*i*S	Sb	09 00 13.0	-0.7
PB09				IAML		09 00 21.6	
	comp=Z,173nm,0.7s						
PATCX	Punta Patache	1.68	22	*i*P	Pn	08 59 53.2	+0.3
LVC	Limon Verde	1.79	97	*i*P	Pb	08 59 56.6	-0.9
LVC				*i*S	Sb	09 00 18.1	-1.5
LVC				IAML		09 00 19.2	
	comp=Z,149nm,0.3s						
LVC				IAML		09 00 19.3	
	comp=Z,174nm,0.3s						
PB08	IPOC Station P	2.73	35	*i*P	Pn	09 00 10.2	+2.6
PB11	IPOC Station P	2.84	23	*i*P	Pn	09 00 09.8	+1.1
PB11				*i*S	Sn	09 00 40.6	-1.5
PSGCX	Pisagua	2.86	14	*i*P	Pn	09 00 09.4	+0.4
MNMCX	Minye Minye	3.44	20	*i*P	Pn	09 00 18.5	+1.3

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*ANF **10** 09:41:50.3±1.1, 40°.89N×124°.89W, h0^{km}, ML3.1/11, ML2.6/4, Error ellipse: s-maj=11.2km s-min=6.9km az=78.0*

NCEDC 10 09:41:51.2, 40°.66N×125°.02W, h4^{km}, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
L02E	Cave Junction	1.59	37	P	Pn	09 42 20.2	+0.4
	baz=216						
L02E				S	Sn	09 42 40.8	-0.3
	baz=216						
M02C	Callahan	1.61	71	P	Pb	09 42 20.6	-0.4
	baz=246,SNR=7.6						
M02C				S	Sg	09 42 42.7	+0.5
	baz=246						
N02D	Trinity Center	1.66	86	P	Pn	09 42 21.0	+0.3
	baz=260						
O02D	Mt. Diablo Mer	1.75	113	P	Pn	09 42 21.0	-1.0
	baz=286,SNR=50						
K02D	Willamette Mer	2.02	26	P	Pn	09 42 25.6	-0.2
	baz=207,SNR=31						
K02D				S	Sn	09 42 52.2	+0.4
	baz=207						
L04D	Klamath Falls	2.35	55	S	Sb	09 43 03.7	+0.5
	baz=233						
O03E	Paynes Creek	2.42	103	P	Pn	09 42 30.9	-0.3
	baz=280,SNR=6.4						
I03D	Drain, OR	3.03	22	P	Pn	09 42 40.3	+0.8
	baz=203,SNR=25						

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*NEIC **10** 09:42:40.3±2.1, 40°.80N±0°.04×125°.19W±0°.07, h2^{km}±9^{km}, Error ellipse: s-maj=7.6km s-min=4.9km az=65.0*

*ANF **10** 09:42:41.8±1.1, 40°.83N×124°.90W, h0^{km}, Error ellipse: s-maj=12.1km s-min=5.6km az=73.0*

*NCEDC **10** 09:42:42.8±2.8, 40°.76N±0°.06×125°.21W±0°.07, h25^{km}±7^{km}, Mwr3.6/3, Error ellipse: s-maj=10.0km s-min=5.7km az=223.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}1.87; $M_{\theta\theta}$-3.28; $M_{\phi\phi}$1.41; $M_{r\theta}$1.19; $M_{\theta\phi}$-2.40; $M_{\phi r}$0.03;*

*IDC **10** 09:42:43.4±2.1, 40°.75N×124°.71W, h0^{km}, mb3.2/3, mb1 3.6/6, mb1mx3.4/41, mbtmp3.2/6, ML3.6/3 Error ellipse: s-maj=24.0km s-min=13.7km az=87.0*

ISC 10 09:42:39.5±2.1**, 40°.76N**±0°.04×**125°.19W**±0°.08**, h1**^{km}±13^{km}**, n113, σ1^{s}.36**/119**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCC	Jacoby Creek,	0.88	86		Pb	09 42 57.6	+0.1
JCC					Sb	09 43 09.1	-0.8
KMPM	Mount Pierce	0.88	113		Pb	09 42 58.1	+0.5
KMPM					Sb	09 43 10.0	0.0
KRPM	Rodgers	0.97	65		Pb	09 42 58.9	-0.2
KCRM	Chalk Rock	1.10	107		Pb	09 43 01.3	+0.1
KHMM	Horse Mountain	1.11	84		Pb	09 43 01.4	-0.2
KRMB	Red Mountain	1.23	51		Pg	09 43 02.2	-0.8
KMRM	Mail Ridge	1.25	115		Pb	09 43 03.8	-0.1
KCSM	Cold Springs	1.29	99		Pb	09 43 04.4	-0.3
KOMM	Orleans Mounta	1.41	68		Pg	09 43 05.4	-1.1
KSXB	Camp Six Broad	1.46	42		Pn	09 43 05.6	-1.4
KBSM	Bell Springs	1.48	124		Pn	09 43 06.7	-0.6
KHBM	Hayfork Bally	1.50	93		Pn	09 43 06.9	-0.8
KIPM	Iron Peak	1.62	126		Pn	09 43 08.7	-0.5
KCPM	Cahto Peak	1.63	131		Pn	09 43 08.6	-0.8
KBNM	Bluenose Ridge	1.75	119		Pn	09 43 11.2	0.0
KFPM	Farley Peak	1.76	129		Pn	09 43 10.3	-0.8
KTRM	Thompson Ridge	1.78	49		Pn	09 43 11.2	-0.3
LGPM	Granite Peak	1.80	84		Pn	09 43 10.9	-0.8
LBPM	Beegum Peak	1.81	103		Pn	09 43 11.6	-0.3
L02E	Cave Junction	1.83	40		Pn	09 43 11.6	-0.6
L02E	Cave Junction	1.83	40	P	Pn	09 43 11.5	-0.6
	baz=221						
L02E				S	Sn	09 43 33.2	-2.8
	baz=221						
GTC	Three Chop Rid	1.85	137		Pn	09 43 11.3	-1.0
M02C	Callahan	1.87	70		Pn	09 43 12.1	-0.6
M02C	Callahan	1.87	70	P	Pn	09 43 12.1	-0.6
	baz=251,SNR=43						
M02C				S	Sn	09 43 34.5	-2.6
	baz=251						
N02D	Trinity Center	1.90	83		Pn	09 43 12.7	-0.3
N02D	Trinity Center	1.90	83	P	Pn	09 43 12.7	-0.3
	baz=264,SNR=5.5						
N02D				S	Sn	09 43 35.7	-1.9
	baz=264						
O02D	Mt. Diablo Mer	1.92	107		Pn	09 43 13.4	-0.1
O02D	Mt. Diablo Mer	1.92	107	P	Pn	09 43 13.3	-0.1
	baz=288,SNR=12						
O02D				S	Sn	09 43 36.3	-2.0
	baz=288						
LBKM	Bonanza King	1.94	80		Pn	09 43 13.1	-0.5
KRKM	Rackout Spring	1.95	127		Pn	09 43 13.1	-0.7
GNAM	Navarro Ridge	1.97	142		Pn	09 43 12.7	-1.3
WDC	Whiskeytown Da	2.02	94		Pn	09 43 14.3	-0.4
GROM	Round Mountain	2.10	113		Pn	09 43 15.9	+0.1
YBH	Yreka Blue Hor	2.10	62	Pn	Pn	09 43 15.6	-0.3
	1.7nm,0.3s,baz=248,slow=16,SNR=12						
YBH				Sn	Sn	09 43 39.6	-3.2
	6.0nm,0.3s,baz=245,slow=15,SNR=7.9						
YBH	Yreka Blue Hor	2.10	62		Pn	09 43 15.8	-0.1
LAMM	Antelope Mount	2.11	66		Pn	09 43 15.9	-0.2
GHOM	Hamilton Openi	2.13	143		Pn	09 43 15.1	-1.2
GHMM	Hull Mountain	2.14	125		Pn	09 43 15.8	-0.7
GVV	Valley View	2.16	116		Pn	09 43 16.7	0.0
GASB	Alder Springs	2.19	119		Pn	09 43 17.0	-0.2
KEBM	Edson Butte	2.20	17		Pn	09 43 16.4	-0.8
K02D	Willamette Mer	2.24	30	P	Pn	09 43 17.2	-0.6
	baz=211,SNR=5.6						
K02D				S	Sn	09 43 43.9	-2.3
	baz=211						
B040	Montague	2.34	62		Pn	09 43 19.4	+0.3
M03C	McCloud	2.38	77		Pn	09 43 20.7	+1.1
GSNM	Snow Mountain	2.38	139		Pn	09 43 18.8	-0.9
LSHM	Sage Hen Hill	2.39	88		Pn	09 43 19.9	0.0
GHLM	Highland Sprin	2.40	135		Pn	09 43 19.0	-0.9
LMPM	Military Pass	2.40	71		Pn	09 43 21.1	+1.0
LTCM	Tuscan Springs	2.40	102		Pn	09 43 20.1	+0.2
HOPS	Hopland Field	2.40	137		Pn	09 43 19.0	-0.9
LHEM	Herd Peak	2.40	68		Pn	09 43 20.7	+0.6
GCK	Clark Valley	2.44	119		Pn	09 43 21.1	+0.7
GTSM	Trough Springs	2.46	125		Pn	09 43 20.6	-0.1
HUMO	Hull Mountain	2.49	41		Pn	09 43 20.7	-0.4
GDCM	Dry Creek	2.50	142		Pn	09 43 19.8	-1.5
LBFM	Black Fox Moun	2.56	76		Pn	09 43 23.4	+1.1
J01E	Myrtle Point	2.57	21	P	Pn	09 43 22.3	0.0
	baz=202						
GACM	Adobe Creek	2.60	136		Pn	09 43 22.2	-0.6
GCVM	Cloverdale	2.60	139		Pn	09 43 21.7	-0.9
L04D	Klamath Falls	2.61	55	P	Pn	09 43 24.4	+1.5
	baz=237,SNR=26						
O03E	Paynes Creek	2.62	99	P	Pn	09 43 22.9	-0.2
	baz=281,SNR=21						
O03E				S	Sn	09 43 53.9	-1.7
	baz=281						
M04C	Macdoel	2.72	67	P	Pn	09 43 26.0	+1.5
	baz=249,SNR=6.6						
ORV	Oroville	3.07	112		Pn	09 43 28.4	-0.7
I03D	Drain, OR	3.24	24	P	Pn	09 43 32.1	+0.8
	baz=206,SNR=58						
I03D				S	Sn	09 44 08.8	-1.7
	baz=206						
J04D	Umpqua Nationa	3.38	42	P	Pn	09 43 35.5	+2.0
	baz=224,SNR=9.7						
I02D	Swisshome	3.49	16	S	Sn	09 44 13.0	-3.6
	baz=197						
I04A	Tendick Farm,	3.66	33	P	Pn	09 43 39.0	+1.7
	baz=215,SNR=5.7						
BRIB	Briones	3.69	139		Pn	09 43 37.5	-0.1
AFDM	Forest Hills D	3.72	118		Pn	09 43 37.9	-0.2
BEKR	Beckworth	3.80	102		Pn	09 43 41.2	+1.9
MOD	Modoc Plateau	3.85	71		Pn	09 43 40.4	+0.4
J05D	Fort Rock, OR	3.88	48	P	Pn	09 43 41.4	+1.1
	baz=231,SNR=19						
H04D	Lebanon	4.17	25	P	Pn	09 43 45.7	+1.4
	baz=207,SNR=7.4						
H04D				S	Sn	09 44 33.8	+0.2
	baz=207						
PINE	Pine Mountain	4.37	45		Pn	09 43 48.5	+1.4
VCNR	Virginia City	4.50	107		Pn	09 43 50.9	+2.0
PAHR	Pah Rah Range	4.57	101		Pn	09 43 50.0	+0.2
I05D	Terrebonne, OR	4.57	37	P	Pn	09 43 50.9	+1.2
	baz=220						
CMB	Columbia Colle	4.61	125		Pn	09 43 51.2	+0.9
PNTR	Pine Nut	4.61	109		Pn	09 43 50.9	+0.5
G03D	McMinnville, O	4.67	17	S	Sn	09 44 45.0	-0.8
	baz=198						
YERR	Yerington	4.91	109		Pn	09 43 56.0	+1.4
G05D	Wamic, OR	5.30	31	P	Pn	09 44 02.0	+2.2
	baz=214						
I07A	Izee	5.36	50		Pn	09 44 03.3	+2.7
RYN	Ryan	5.57	110		Pn	09 44 04.5	+0.9
J08A	Circle Bar Ran	5.63	60		Pn	09 44 05.3	+0.9
KVN	Kaiserville	5.71	105		Pn	09 44 06.0	+0.4
NVAR	Mina Array Bea	5.81	111	Pn	Pn	09 44 08.1	+1.1
	0.9nm,0.3s,baz=296,slow=14,SNR=14						
NVAR				Lg	Lg	09 45 31.7	
	0.4nm,0.3s,baz=279,slow=26,SNR=3.4						
NVAR	Mina Array Bea	5.81	111		Pn	09 44 08.2	+1.3
G08A	Pilot Rock	6.43	43		Pn	09 44 18.3	+2.9
VES	Vestal, Richgr	6.87	134	P	Pn	09 44 22.7	+1.4
	baz=318,SNR=14						
BMO	Blue Mountains	7.09	52		Pn	09 44 26.1	+1.6
PKM	Mcpherson Peak	7.24	142	P	Pn	09 44 25.7	-0.9
	baz=326						
ISA	Isabella, Lake	7.34	132		Pn	09 44 30.0	+2.2
ISA	Isabella, Lake	7.34	132	P	Pn	09 44 30.1	+2.2
	baz=316,SNR=21						
MPMC	Manual Prospec	7.65	125	P	Pn	09 44 38.8	+6.5
	baz=310						
EDW2	Edwards Air Fo	8.18	134	P	Pn	09 44 41.1	+1.8
	baz=318						
GSC	Goldstone, Bar	8.57	127	P	Pn	09 44 47.7	+3.0
	baz=312,SNR=8.7						
BFSC	Mount Baldy Ra	8.84	135	P	Pn	09 44 50.2	+1.7
	baz=320						
HEC	Hector,Ludlow	9.17	127	P	Pn	09 44 55.2	+2.2
	baz=313,SNR=8.6						
BBRC	Big Bear Solar	9.23	132	P	Pn	09 44 55.3	+1.4
	baz=317,SNR=9.3						
BELC	Belle Mtn. Jos	9.95	130	P	Pn	09 45 05.2	+1.5
	baz=316,SNR=6.8						
PFO	Pinyon Flats O	9.97	133	Pn	Pn	09 45 05.2	+1.3
	0.7nm,0.3s,baz=319,slow=10,SNR=14						
PFO	Pinyon Flats O	9.97	133		Pn	09 45 05.0	+1.1
PFO	Pinyon Flats O	9.97	133	P	Pn	09 45 05.5	+1.6
	baz=318						
MONP2	Monument Peak	10.53	135	P	Pn	09 45 13.9	+2.2
	baz=321						
PDAR	Pinedale Array	11.85	75	Pn	Pn	09 45 34.3	+4.5
	0.0nm,0.3s,baz=277,slow=15,SNR=2.3						
TXAR	Lajitas Array	20.93	116	P	Pn	09 47 25.3	-0.9
	0.7nm,0.7s,baz=299,slow=8.9,SNR=9.2						
TXAR	Lajitas Array	20.93	116	P	P	09 47 24.5	+0.9
ULM	Lac du Bonnet	22.50	55	P	P	09 47 40.8	+0.6
	0.7nm,0.9s,baz=239,slow=7.9,SNR=4.6						
YKA	Yellowknife Ar	22.67	13	P	P	09 47 43.6	+1.7
	0.6nm,0.9s,baz=196,slow=11,SNR=5.7						
H11N3	WAKE ISLAND Hy	60.83	272	T	T	10 59 33.0	
	baz=55						
H11N2	WAKE ISLAND Hy	60.84	272	T	T	10 59 33.5	
	baz=55						
H11N1	WAKE ISLAND Hy	60.85	272	T	T	10 59 34.7	
	baz=55						

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*NIED **10** 09:50:00, 29°.30N×130°.50E, h32^{km}, Mw3.9 Best double couple: $M_0$7.79000×10^{14} NP1:ϕ_s210.00000°, δ84.00000°, λ-84.00000°. NP2:ϕ_s343.00000°, δ9.00000°, λ-136.00000°.*

JMA 10 09:50:42.4±0.2**, 29°.28N×130°.53E, h21**^{km}±3^{km}**, M3.5, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNN	Nakanoshima	0.80	315	P	Pb	09 50 57.5	-0.1
JNN				*e*S	Sb	09 51 08.7	+0.7
JYAK	Yakushimahirau	0.95	359	P	Pb	09 51 00.3	+0.1
JYAK				*e*S	Sn	09 51 13.1	-0.5
JZK	Kikaishima	1.08	207	P	Pn	09 51 02.2	-0.1
JZK				*e*S	Sb	09 51 16.1	+0.1
JMTN	Minamitane	1.16	16	P	Pn	09 51 03.3	-0.1
JMTN				*e*S	Sn	09 51 18.8	+0.2
JTAJ	Takarajima	1.17	264	P	Pb	09 51 03.7	-0.1
JTAJ				*e*S	Sn	09 51 19.4	+0.6
JAM	Amami Oshima	1.19	223	P	Pn	09 51 03.7	0.0
JAM				*e*S	Sn	09 51 19.2	0.0
JKC	Kuchinoerabu	1.21	346	P	Pn	09 51 04.0	-0.1
JKC				*e*S	Sn	09 51 20.4	+0.5
JTN	Tanegashima 3	1.42	16	P	Pn	09 51 07.1	0.0
JTN				*e*S	Sb	09 51 25.8	-0.2
JAMN	Amaminishikomi	1.58	229	P	Pb	09 51 10.1	-0.7
JAMN				*e*S	Sb	09 51 30.1	-0.2
JTSR	Tashiro 2	1.91	10	P	Pn	09 51 14.1	+0.3
JTSR				*e*S	Sn	09 51 37.9	+0.7
JTK	Tokunoshima	2.04	223	P	Pn	09 51 16.3	+0.8
JOKE	Okinoerabujima	2.58	223	P	Pn	09 51 22.9	0.0
JYRO	Yoronjima	2.90	220	P	Pn	09 51 26.1	-1.2
JOW	Kunigami	3.15	220	P	Pn	09 51 32.3	+1.5
JIH	Iheya	3.18	226	P	Pn	09 51 32.9	+1.7

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*NEIC **10** 09:54:23.7±1.8, 40°.87N±0°.03×125°.145W±0°.009, h5^{km}±9^{km}, Error ellipse: s-maj=4.1km s-min=1.1km az=183.0*

*IDC **10** 09:54:25.8±2.5, 40°.88N×124°.80W, h0^{km}, mb3.4/3, mb1 3.8/6, mb1mx3.5/46, mbtmp3.4/6, ML3.6/3, Error ellipse: s-maj=29.9km s-min=15.6km az=94.0*

*ANF **10** 09:54:26.3±0.9, 40°.92N×124°.77W, h0^{km}, ML3.2/14, Error ellipse: s-maj=9.8km s-min=4.7km az=74.0*

*NCEDC **10** 09:54:26.1±2.3, 40°.83N±0°.04×125°.12W±0°.07, h21^{km}±7^{km}, Mwr3.7/3, Error ellipse: s-maj=7.9km s-min=5.2km az=83.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.30; $M_{\theta\theta}$1.49; $M_{\phi\phi}$-0.19; $M_{r\theta}$-3.06; $M_{\theta\phi}$1.65; $M_{\phi r}$-2.71;*

ISC 10 09:54:23.3±1.9**, 40°.83N**±0°.03×**124°.98W**±0°.06**, h1**^{km}±12^{km}**, n98, σ1^{s}.56**/108**, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCC	Jacoby Creek,	0.72	91		Pn	09 54 40.3	-0.3
JCC					Sn	09 54 50.8	-1.5
KMPM	Mount Pierce	0.77	122		Pn	09 54 41.3	-0.2
KMPM					Sn	09 54 52.9	-0.9
KRPM	Rodgers	0.79	66		Pn	09 54 41.4	-0.3
KHMM	Horse Mountain	0.95	87		Pn	09 54 44.1	+0.1
KHMM					Sn	09 54 57.9	-0.2
KCRM	Chalk Rock	0.97	114		Pn	09 54 44.2	+0.1
KRMB	Red Mountain	1.06	49		Pn	09 54 44.7	-0.8
KMRM	Mail Ridge	1.14	122		Pn	09 54 46.9	+0.4
KCSM	Cold Springs	1.15	104		Pn	09 54 47.2	+0.5
KOMM	Orleans Mounta	1.24	68		Pg	09 54 48.0	+1.0
KSXB	Camp Six Broad	1.29	39		Pb	09 54 48.0	-0.6
KHBM	Hayfork Bally	1.35	97		Pg	09 54 49.7	+0.6
KBSM	Bell Springs	1.40	130		Pg	09 54 50.2	+0.1
KIPM	Iron Peak	1.54	131		Pb	09 54 52.2	-0.5
KCPM	Cahto Peak	1.57	137		Pn	09 54 52.3	-0.1
KTRM	Thompson Ridge	1.61	48		Pb	09 54 52.8	-1.2
LGPM	Granite Peak	1.63	87		Pb	09 54 53.6	-0.7
KBNM	Bluenose Ridge	1.66	124		Pb	09 54 54.5	-0.2
L02E	Cave Junction	1.68	38		Pb	09 54 54.0	-1.0
L02E	Cave Junction	1.68	38	P	Pb	09 54 53.8	-1.2
	baz=221						
L02E				S	Sb	09 55 14.8	-1.9
	baz=221						
LBPM	Beegum Peak	1.68	107		Pb	09 54 54.3	-0.7
KFPM	Farley Peak	1.69	135		Pn	09 54 52.4	-1.6
M02C	Callahan	1.70	70		Pb	09 54 54.5	-0.9
M02C	Callahan	1.70	70	P	Pb	09 54 54.5	-0.9
	baz=252,SNR=108						
M02C				S	Sb	09 55 15.9	-1.4
	baz=252						
N02D	Trinity Center	1.73	85		Pb	09 54 55.2	-0.6
N02D	Trinity Center	1.73	85	P	Pb	09 54 55.3	-0.6
	baz=266,SNR=19						
N02D				S	Sg	09 55 18.2	-0.6
	baz=266						
LBKM	Bonanza King	1.77	81		Pb	09 54 55.5	-1.1
O02D	Mt. Diablo Mer	1.79	111		Pb	09 54 56.0	-1.0
O02D	Mt. Diablo Mer	1.79	111	P	Pb	09 54 56.0	-1.0
	baz=291,SNR=113						
O02D				S	Sb	09 55 18.9	-1.1
	baz=291						
GTC	Three Chop Rid	1.80	142		Pn	09 54 55.0	-0.5
WDC	Whiskeytown Da	1.87	97		Pb	09 54 57.2	-1.1

YBH	Yreka Blue Hor	1.93	62	Pn	Pb	09 54 58.0	-1.3
	6.5nm,0.3s,baz=235,slow=8.2,SNR=72						
YBH				Sn	Sn	09 55 21.0	-1.4
	11nm,0.3s,baz=167,slow=13,SNR=7.2						
YBH	Yreka Blue Hor	1.93	62		Pb	09 54 58.2	-1.2
GNAM	Navarro Ridge	1.93	147		Pn	09 54 56.7	-0.7
LAMM	Antelope Mount	1.94	66		Pb	09 54 58.4	-1.2
GROM	Round Mountain	1.99	117		Pb	09 54 59.0	-1.3
LCSM	College of the	2.04	73		Pb	09 55 00.4	-0.8
GVV	Valley View	2.05	120		Pn	09 54 59.4	+0.3
GHMM	Hull Mountain	2.06	130		Pn	09 54 59.5	+0.2
GASB	Alder Springs	2.09	124		Pb	09 55 00.5	-1.7
GHOM	Hamilton Openi	2.10	148		Pn	09 54 58.8	-0.9
K02D	Willamette Mer	2.10	27	P	Pn	09 54 59.7	0.0
	baz=211,SNR=7.7						
K02D				S	Sn	09 55 23.8	-2.8
	baz=211						
LGBM	Gray Butte	2.17	75		Pb	09 55 02.4	-1.0
B040	Montague	2.17	62		Pb	09 55 01.9	-1.5
M03C	McCloud	2.20	78		Pb	09 55 03.1	-0.9
LMPM	Military Pass	2.22	72		Pb	09 55 03.6	-0.8
LHEM	Herd Peak	2.23	68		Pb	09 55 03.3	-1.2
LSHM	Sage Hen Hill	2.23	90		Pb	09 55 02.6	-1.8
LTCM	Tuscan Springs	2.26	105		Pb	09 55 03.0	-1.9
HUMO	Hull Mountain	2.33	40		Pn	09 55 03.1	+0.3
GCK	Clark Valley	2.33	123		Pb	09 55 04.3	-1.9
GSNM	Snow Mountain	2.34	143		Pn	09 55 02.8	-0.2
GHLM	Highland Sprin	2.34	139		Pn	09 55 02.7	-0.3
HOPS	Hopland Field	2.35	141		Pn	09 55 02.9	-0.2
GTSM	Trough Springs	2.37	129		Pn	09 55 04.0	+0.5
LBFM	Black Fox Moun	2.39	77		Pb	09 55 05.9	-1.4
L04D	Klamath Falls	2.44	55		Pb	09 55 06.5	-1.5
L04D	Klamath Falls	2.44	55	P	Pb	09 55 06.3	-1.8
	baz=238,SNR=97						
L04D				S	Sb	09 55 37.2	-1.4
	baz=238						
J01E	Myrtle Point	2.45	18	P	Pn	09 55 04.4	-0.1
	baz=201						
J01E				S	Sn	09 55 34.8	-0.3
	baz=201						
O03E	Paynes Creek	2.48	102		Pn	09 55 05.7	+0.8
O03E	Paynes Creek	2.48	102	P	Pn	09 55 05.6	+0.8
	baz=283,SNR=16						
O03E				S	Sn	09 55 35.7	-0.1
	baz=283						
LGMM	Garner Mountai	2.49	71		Pb	09 55 07.2	-1.8
M04C	Macdoel	2.55	67	P	Pb	09 55 07.8	-2.1
	baz=250,SNR=25						
K04D	Chiloquin, OR	3.00	52	P	Pb	09 55 14.8	-2.9
	baz=236,SNR=24						
I03D	Drain, OR	3.11	22	P	Pn	09 55 14.7	+1.3
	baz=205,SNR=32						
I03D				S	Sn	09 55 51.1	-0.1
	baz=205						
J04D	Umpqua Nationa	3.22	41	P	Pb	09 55 17.6	-3.8
	baz=224,SNR=12						
I02D	Swisshome	3.38	14	P	Pn	09 55 18.3	+1.1
	baz=196						
I04A	Tendick Farm,	3.52	32	P	Pn	09 55 21.6	+2.5
	baz=215,SNR=6.0						
J05D	Fort Rock, OR	3.71	47	P	Pn	09 55 23.8	+1.9
	baz=231,SNR=12						
H04D	Lebanon	4.04	23	P	Pn	09 55 28.2	+1.9
	baz=206,SNR=10						
VCNR	Virginia City	4.37	109		Pb	09 55 36.2	-4.8
I05D	Terrebonne, OR	4.41	36	P	Pn	09 55 33.9	+2.5
	baz=220						
PAHR	Pah Rah Range	4.42	103		Pn	09 55 32.8	+1.0
PNTR	Pine Nut	4.49	111		Pn	09 55 35.0	+2.4
CMB	Columbia Colle	4.52	127		Pn	09 55 34.0	+1.0
G03D	McMinnville, O	4.55	15	P	Pn	09 55 36.4	+3.1
	baz=198						
G03D				S	Sn	09 56 26.6	-0.3
	baz=198						
YERR	Yerington	4.78	111		Pn	09 55 38.6	+1.9
G05D	Wamic, OR	5.16	30	P	Pn	09 55 44.7	+3.1
	baz=214,SNR=6.6						
I07A	Izee	5.19	49		Pn	09 55 45.6	+3.4
RYN	Ryan	5.44	112		Pn	09 55 48.7	+3.0
NVAR	Mina Array Bea	5.68	113	Pn	Pn	09 55 51.2	+2.1
	0.7nm,0.3s,baz=288,slow=14,SNR=22						
NVAR	Mina Array Bea	5.68	113		Pn	09 55 51.0	+1.9
E04D	Cinebar	5.98	16	P	Pn	09 55 55.5	+2.5
	baz=199						
G08A	Pilot Rock	6.26	43		Pn	09 55 58.8	+1.9
BMO	Blue Mountains	6.92	52		Pn	09 56 07.5	+1.5
PKM	Mcpherson Peak	7.20	144	P	Pn	09 56 11.1	+1.1
	baz=326						
ISA	Isabella, Lake	7.27	133		Pn	09 56 13.1	+2.4
ISA	Isabella, Lake	7.27	133	P	Pn	09 56 13.9	+3.1
	baz=317						
ARVC	Arvin	7.48	138	P	Pn	09 56 15.9	+2.3
	baz=321						
EDW2	Edwards Air Fo	8.11	135	P	Pn	09 56 24.7	+2.4
	baz=319						
BELC	Belle Mtn. Jos	9.87	131	P	Pn	09 56 49.1	+2.6
	baz=316						
PFO	Pinyon Flats O	9.90	134	Pn	Pn	09 56 49.2	+2.3
	0.3nm,0.3s,baz=303,slow=7.5,SNR=5.1						
PFO	Pinyon Flats O	9.90	134		Pn	09 56 48.4	+1.5
PFO	Pinyon Flats O	9.90	134	P	Pn	09 56 49.2	+2.3
	baz=319						
PDAR	Pinedale Array	11.67	75	Pn	Pn	09 57 16.9	+5.7
	0.0nm,0.3s,baz=256,slow=7.3,SNR=3.1						
TXAR	Lajitas Array	20.82	117	P	Pn	09 59 09.6	+0.8
	1.4nm,0.8s,baz=295,slow=8.2,SNR=16						
TXAR	Lajitas Array	20.82	117	P	Pn	09 59 08.7	0.0
ULM	Lac du Bonnet	22.33	55	P	P	09 59 23.2	+0.9
	1.2nm,0.7s,baz=271,slow=12,SNR=4.3						
YKA	Yellowknife Ar	22.57	13	P	P	09 59 26.3	+1.6
	1.0nm,0.8s,baz=198,slow=11,SNR=9.6						

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*ANF **10** 09:56:23.6±1.5, 40°.74N×124°.95W, h1^{km}, Error ellipse: s-maj=14.3km s-min=7.9km az=59.0*

NCEDC 10 09:56:23.8, 40°.52N×125°.04W, h2^{km}, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
M02C	Callahan	1.71	67	P	Pn	09 56 55.0	+0.3
	baz=243,SNR=17						
M02C				S	Sb	09 57 18.1	+0.1
	baz=243						
N02D	Trinity Center	1.72	81	P	Pb	09 56 55.8	-0.2
	baz=256						
N02D				S	Sg	09 57 18.5	-0.3
	baz=256						
L02E	Cave Junction	1.74	35	P	Pn	09 56 54.2	-0.7
	baz=214						
L02E				S	Sn	09 57 17.3	-0.5
	baz=214						
O02D	Mt. Diablo Mer	1.74	108	P	Pn	09 56 54.1	-0.9
	baz=282,SNR=41						
O02D				S	Sn	09 57 17.9	0.0
	baz=282						
K02D	Willamette Mer	2.18	26	P	Pn	09 56 59.9	-1.1
	baz=206,SNR=145						
K02D				S	Sn	09 57 26.4	-2.3
	baz=206						
O03E	Paynes Creek	2.44	99	P	Pn	09 57 04.4	-0.3
	baz=276,SNR=7.2						
O03E				S	Sn	09 57 35.3	+0.2
	baz=276						
L04D	Klamath Falls	2.48	53	P	Pb	09 57 07.7	-1.3
	baz=231,SNR=29						
L04D				S	Sb	09 57 40.4	+0.4
	baz=231						
K04D	Chiloquin, OR	3.05	51	P	Pn	09 57 14.5	+1.5
	baz=231,SNR=6.2						
I03D	Drain, OR	3.19	21	P	Pn	09 57 14.4	-0.3
	baz=202,SNR=29						
J04D	Umpqua Nationa	3.27	39	P	Pn	09 57 17.8	+1.6
	baz=220						
I04A	Tendick Farm,	3.59	31	P	Pn	09 57 21.5	+1.2
	baz=212						
J05D	Fort Rock, OR	3.76	46	P	Pn	09 57 24.2	+1.4
	baz=227,SNR=8.1						
H04D	Lebanon	4.12	23	P	Pn	09 57 28.1	+0.5
	baz=204,SNR=5.5						

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*NEIC **10** 09:57:22.9±1.4, 40°.72N±0°.04×125°.3W±0°.1, h19^{km}±12^{km}, Error ellipse: s-maj=14.4km s-min=5.8km az=90.0*

*NCEDC **10** 09:57:24.2±1.3, 40°.74N±0°.05×125°.30W±0°.04, h22^{km}±7^{km}, Md3.0/34, Error ellipse: s-maj=7.6km s-min=2.2km az=209.0*

*ANF **10** 09:57:26.1±1.6, 40°.90N×124°.83W, h1^{km}, ML2.5/4, Error ellipse: s-maj=15.6km s-min=7.2km az=66.0*

ISC 10 09:57:22.6±2.1, **40°.69N**±0°.04×**125°.34W**±0°.10, **h29**^{km}±16^{km}**, n45, σ1^{s}.27**/55, **Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMPM	Mount Pierce	0.97	106		Pn	09 57 40.6	+0.3
KMPM					Sb	09 57 52.5	-0.8
JCC	Jacoby Creek,	1.01	82		Pn	09 57 40.1	-0.6
JCC					Sn	09 57 52.0	-1.9
KRPM	Rodgers	1.10	64		Pn	09 57 41.6	-0.5
KCRM	Chalk Rock	1.19	102		Pn	09 57 43.8	+0.5
KHMM	Horse Mountain	1.24	81		Pn	09 57 43.9	-0.2
KHMM					Sn	09 57 58.9	-1.0
KMRM	Mail Ridge	1.33	110		Pn	09 57 46.4	+1.2
KRMB	Red Mountain	1.37	52		Pn	09 57 45.0	-0.9
KCSM	Cold Springs	1.40	96		Pn	09 57 46.9	+0.5
KBSM	Bell Springs	1.54	119		Pn	09 57 49.0	+0.8
KOMM	Orleans Mounta	1.55	67		Pn	09 57 48.1	-0.2
KSXB	Camp Six Broad	1.59	44		Pn	09 57 48.3	-0.6
KHBM	Hayfork Bally	1.62	90		Pn	09 57 49.5	+0.2
KHBM					Sn	09 58 07.9	-1.3
KIPM	Iron Peak	1.67	121		Pn	09 57 51.2	+1.1
KBO	Bosley Butte	1.74	28		Pn	09 57 50.7	-0.2
KFPM	Farley Peak	1.81	125		Pn	09 57 52.5	+0.7
KBNM	Bluenose Ridge	1.82	115		Pn	09 57 53.6	+1.5
GTC	Three Chop Rid	1.88	133		Pn	09 57 53.4	+0.7
LGPM	Granite Peak	1.92	82		Pn	09 57 53.5	0.0
L02E	Cave Junction	1.97	41		Pn	09 57 54.3	+0.4
L02E	Cave Junction	1.97	41	P	Pn	09 57 54.4	+0.4
	baz=222						
L02E				S	Sn	09 58 17.3	-0.5
	baz=222						
GNAM	Navarro Ridge	1.99	138		Pn	09 57 54.9	+0.6
M02C	Callahan	2.01	69	P	Pn	09 57 55.0	+0.3
	baz=251						
M02C				S	Sn	09 58 17.8	-1.0
	baz=251						
O02D	Mt. Diablo Mer	2.02	104		Pn	09 57 55.7	+1.0
O02D	Mt. Diablo Mer	2.02	104	P	Pn	09 57 55.8	+1.0
	baz=287,SNR=24						
O02D				S	Sn	09 58 18.8	-0.2
	baz=287						
N02D	Trinity Center	2.02	81	P	Pn	09 57 57.5	+2.7
	baz=264						
N02D				S	Sn	09 58 18.5	-0.6
	baz=264						
LBKM	Bonanza King	2.07	78		Pn	09 57 56.3	+0.9
WDC	Whiskeytown Da	2.13	92		Pn	09 57 57.3	+1.1
GHOM	Hamilton Openi	2.15	139		Pn	09 57 57.2	+0.7
GROM	Round Mountain	2.18	110		Pn	09 57 58.5	+1.5
GVV	Valley View	2.24	113		Pn	09 57 59.1	+1.4
GASB	Alder Springs	2.26	116		Pn	09 57 59.4	+1.2
K02D	Willamette Mer	2.37	31	P	Pn	09 58 00.1	+0.5
	baz=213,SNR=40						
K02D				S	Sn	09 58 25.3	-2.3
	baz=213						
GSNM	Snow Mountain	2.41	136		Pn	09 58 00.9	+0.8
GHLM	Highland Sprin	2.43	132		Pn	09 58 01.4	+1.0
HOPS	Hopland Field	2.43	133		Pn	09 58 01.2	+0.9
LGBM	Gray Butte	2.47	74		Pb	09 58 07.5	+1.1
LSHM	Sage Hen Hill	2.51	87		Pn	09 58 02.5	+1.0
O03E	Paynes Creek	2.73	97	P	Pn	09 58 06.2	+1.7
	baz=281						
O03E				S	Sn	09 58 36.9	+0.3
	baz=281						
L04D	Klamath Falls	2.75	55	P	Pn	09 58 07.5	+2.7
	baz=238,SNR=26						
K04D	Chiloquin, OR	3.31	53	P	Pn	09 58 15.0	+2.4
	baz=236						
I03D	Drain, OR	3.35	26	P	Pn	09 58 14.7	+1.7
	baz=207,SNR=15						
J04D	Umpqua Nationa	3.51	42	P	Pn	09 58 18.3	+2.9
	baz=225,SNR=6.5						
CYBM	Yerba Buena Is	3.69	140		Pb	09 58 25.7	-1.3
J05D	Fort Rock, OR	4.01	48	P	Pn	09 58 24.6	+2.4
	baz=231,SNR=5.6						
PINE	Pine Mountain	4.51	45		Pn	09 58 30.1	+1.1

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*GUC **10** 10:01:50.7±0.7, 32°.15S×70°.71W, h92^{km}±4^{km}, ML3.4*

*SJA **10** 10:01:50.6±0.9, 32°.08S×70°.66W, h89^{km}±21^{km}, ML2.9, MW3.1*

ISC 10 10:01:51.1±1.7, **32°.12S**±0°.03×**70°.68W**±0°.05, **h101**^{km}±13^{km}**, n29, σ0^{s}.58**/46, **6C-3D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO04	Los Peladeros	0.27	287	⇑*i*P	Pn	10 02 05.8	-0.3
CO04				*i* S	Sn	10 02 17.2	-0.1
CO04				IAML		10 02 17.8	
	comp=N,3µm,0.2s						
ROCH	El Roble	0.89	198	⇓*i*P	Pn	10 02 10.5	-0.3
ROCH				*i* S	Sn	10 02 25.3	-0.3
ROCH				IAML		10 02 26.1	
	comp=E,1µm,0.6s						
ROC1	El Roble	0.90	199	*i* P	Pn	10 02 10.6	-0.2
ROC1				*e*S	Sn	10 02 25.8	+0.2
PEL	Peldehue	1.02	180	*e*P	Pn	10 02 11.2	-0.7
PEL				*e*S	Sn	10 02 27.1	-0.4
PEL				IAML		10 02 28.9	
	comp=N,779nm,0.2s						
MT02	Curacav	1.20	199	⇓*i*P	Pn	10 02 13.5	-0.4
MT02				*i* S	Sn	10 02 30.8	-0.2
RTLS	Leoncito	1.22	75	*i* P	Pn	10 02 14.3	-0.1
RTLS				*e*S	Sn	10 02 32.0	+0.1
RTLS				IAML		10 02 32.4	
	comp=Z,105nm,0.2s						
FCH	Farellones	1.24	165	⇑*i*P	Pn	10 02 15.0	+0.3
FCH				*i* S	Sn	10 02 33.2	+0.6
FCH				IAML		10 02 33.8	
	comp=N,978nm,0.3s						
CLCH	Cerro Calan	1.27	175	⇑*i*P	Pn	10 02 14.8	-0.1
CLCH				*i* S	Sn	10 02 32.8	+0.1
CLCH				IAML		10 02 36.1	
	comp=N,546nm,0.5s						
CO03	El Pedregal	1.28	360	*i* P	Pn	10 02 15.3	+0.3
CO03				*i* S	Sn	10 02 33.7	+0.8
MT03	Universidad Ad	1.37	174	⇑*i*P	Pn	10 02 16.0	0.0
MT03				*i* S	Sn	10 02 35.2	+0.4
MT03				IAML		10 02 38.2	
	comp=N,2µm,0.1s						
ANTU	Antumapu	1.44	179	*e*P	Pn	10 02 17.2	+0.4
ANTU				*i* S	Sn	10 02 37.3	+1.1
ANTU				IAML		10 02 39.6	
	comp=E,717nm,0.2s						
ASAL	Salagasta	1.63	107	*i* P	Pn	10 02 19.7	+0.6
ASAL				*e*S	Sn	10 02 40.5	+0.2
ASAL				IAML		10 02 43.6	
	comp=Z,120nm,0.3s						
ARCO	CERRO ARCO	1.64	116	*i* P	Pn	10 02 19.9	+0.6
ARCO				*e*S	Sn	10 02 41.0	+0.2
ARCO				IAML		10 02 44.1	
	comp=Z,144nm,0.6s						
LMEL	Las Melosas	1.77	167	⇓*i*P	Pn	10 02 21.4	+0.5
LMEL				*i* S	Sn	10 02 44.6	+1.1
LMEL				IAML		10 02 47.4	
	comp=N,816nm,0.1s						
ZON	Zonda	1.80	72	*i* P	Pn	10 02 20.7	-0.4
ZON				*e*S	Sn	10 02 43.4	-0.7
ZON				IAML		10 02 48.6	
	comp=Z,54nm,0.5s						
MT01	Popeta	1.80	195	⇑*i*P	Pn	10 02 21.0	-0.2
MT01				*i* S	Sn	10 02 43.5	-0.6
MT01				IAML		10 02 44.9	
	comp=N,546nm,0.1s						
AAGR	Agrelo	1.83	122	*i* P	Pn	10 02 22.2	+0.6
AAGR				IAML		10 02 48.3	
	comp=Z,148nm,0.9s						
RTCV	Cerro Valdivia	1.83	82	*i* P	Pn	10 02 21.4	-0.2
RTCV				IAML		10 02 46.1	
	comp=Z,124nm,0.2s						
GO04	Tololo Observa	1.95	357	⇑*i*P	Pn	10 02 23.0	-0.3
GO04				*i* S	Sn	10 02 47.4	-0.5
GO04	Tololo Observa	1.95	357	*i* P	Pn	10 02 23.2	-0.2
RTLL	Cerro Villicun	2.04	68	*i* P	Pn	10 02 24.1	-0.2
RTLL				IAML		10 02 52.9	
	comp=Z,62nm,0.5s						
ACCO	Cerro Coronel	2.06	42	*i* P	Pn	10 02 25.1	+0.2
ACCO				IAML		10 02 54.9	
	comp=Z,90nm,0.3s						
CFA	Coronel Fontan	2.14	77	*i* P	Pn	10 02 25.0	-0.5
CFA				IAML		10 02 52.9	
	comp=Z,598nm,0.2s						
CO01	Juntas del Tor	2.20	13	*e*P	Pn	10 02 27.5	+1.0
AROD	Rodeo	2.21	28	*i* P	Pn	10 02 27.9	+1.2
ACDV	Cuesta del Vie	2.36	35	*i* P	Pn	10 02 29.4	+0.8
ACDV				IAML		10 03 02.7	
	comp=Z,29nm,0.1s						
ACAN	Cantantal	2.96	94	*i* P	Pn	10 02 35.3	-1.1
ACAN				IAML		10 03 12.8	
	comp=Z,22nm,0.5s						
APLL	PUNTA DE LOS L	3.95	65	*i* P	Pn	10 02 48.4	-1.3
APLL				IAML		10 03 54.2	
	comp=Z,3.0nm,1.4s						
VCA	Vinchina	3.99	33	*i* P	Pn	10 02 50.1	-0.3
VCA				IAML		10 03 45.4	
	comp=Z,29nm,0.4s						

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*IDC **10** 10:18:04.8±2.2, 40°.85N×125°.14W, h0^{km}, mb3.2/3, mb1 3.6/7, mb1mx3.4/43, mbtmp3.3/7, ML3.4/4, Error ellipse: s-maj=28.0km s-min=13.4km az=88.0*

*NEIC **10** 10:18:05.7±2.4, 40°.73N±0°.02×125°.20W±0°.06, h12^{km}±6^{km}, Error ellipse: s-maj=7.0km s-min=2.4km az=92.0*

*NCEDC **10** 10:18:07.7±2.2, 40°.72N±0°.04×125°.21W±0°.06, h24^{km}±7^{km}, Md3.3/43, Error ellipse: s-maj=7.8km s-min=5.4km az=50.0*

*ANF **10** 10:18:07.8±1.1, 40°.87N×124°.85W, h0^{km}, ML3.0/11, Error ellipse: s-maj=13.4km s-min=4.6km az=80.0*

ISC 10 10:18:05.5±2.1, **40°.74N**±0°.05×**125°.20W**±0°.08, **h10**^{km}±11^{km}**, n92, σ1^{s}.24**/102, **Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMPM	Mount Pierce	0.88	111		Pn	10 18 23.1	-0.9
KMPM					Sn	10 18 35.0	-1.9
JCC	Jacoby Creek,	0.89	84		Pb	10 18 22.7	-0.3
JCC					Sb	10 18 34.5	-0.3
KRPM	Rodgers	0.98	64		Pg	10 18 24.0	-0.4
KCRM	Chalk Rock	1.09	106		Pn	10 18 26.3	-0.6
KHMM	Horse Mountain	1.12	82		Pg	10 18 26.4	-0.6
KHMM					Sg	10 18 41.2	-0.4
KMRM	Mail Ridge	1.25	114		Pn	10 18 28.6	-0.4
KRMB	Red Mountain	1.25	51		Pn	10 18 27.6	-1.6
KCSM	Cold Springs	1.30	98		Pn	10 18 29.3	-0.5
KOMM	Orleans Mounta	1.43	67		Pn	10 18 30.6	-0.9
KBSM	Bell Springs	1.47	123		Pn	10 18 31.4	-0.7
KSXB	Camp Six Broad	1.48	42		Pn	10 18 30.8	-1.5
KHBM	Hayfork Bally	1.51	92		Pn	10 18 31.9	-0.8
KIPM	Iron Peak	1.61	125		Pn	10 18 33.4	-0.7
KCPM	Cahto Peak	1.62	130		Pn	10 18 33.3	-0.9
KBO	Bosley Butte	1.65	26		Pn	10 18 33.3	-1.3
KFPM	Farley Peak	1.75	128		Pn	10 18 35.0	-0.9
KBNM	Bluenose Ridge	1.75	118		Pn	10 18 35.8	-0.1
KTRM	Thompson Ridge	1.80	49		Pn	10 18 35.9	-0.8
LGPM	Granite Peak	1.81	84		Pn	10 18 36.0	-0.8
LBPM	Beegum Peak	1.81	103		Pn	10 18 36.6	-0.3
GTC	Three Chop Rid	1.84	136		Pn	10 18 35.9	-1.1
L02E	Cave Junction	1.86	40		Pn	10 18 36.7	-0.7
L02E	Cave Junction	1.86	40	P	Pn	10 18 36.6	-0.7
	baz=220,SNR=38						
L02E				S	Sn	10 18 58.6	-2.3
	baz=220						
M02C	Callahan	1.89	69		Pn	10 18 37.1	-0.8
M02C	Callahan	1.89	69	P	Pn	10 18 36.9	-1.0
	baz=250,SNR=30						
M02C				S	Sn	10 19 00.2	-1.5
	baz=250						
N02D	Trinity Center	1.91	82		Pn	10 18 37.5	-0.6
N02D	Trinity Center	1.91	82	P	Pn	10 18 37.4	-0.6
	baz=263,SNR=18						
N02D				S	Sn	10 19 00.9	-1.2
	baz=263						
O02D	Mt. Diablo Mer	1.92	106		Pn	10 18 38.2	-0.1
O02D	Mt. Diablo Mer	1.92	106	P	Pn	10 18 38.0	-0.3
	baz=287,SNR=14						
O02D				S	Sn	10 19 01.3	-1.2
	baz=287						
LBKM	Bonanza King	1.95	79		Pn	10 18 38.5	-0.3
GNAM	Navarro Ridge	1.95	141		Pn	10 18 37.4	-1.3
WDC	Whiskeytown Da	2.03	94		Pn	10 18 39.2	-0.5
GROM	Round Mountain	2.10	112		Pn	10 18 40.8	0.0
GHOM	Hamilton Openi	2.12	142		Pn	10 18 39.8	-1.2
YBH	Yreka Blue Hor	2.12	61	Pn	Pn	10 18 40.7	-0.3
	3.4nm,0.3s,baz=285,slow=14,SNR=26						
YBH				Sn	Sn	10 19 06.4	-1.2
	6.6nm,0.3s,baz=159,slow=20,SNR=9.2						
LAMM	Antelope Mount	2.13	65		Pn	10 18 41.0	-0.2
GHMM	Hull Mountain	2.13	125		Pn	10 18 40.9	-0.4
GVV	Valley View	2.15	116		Pn	10 18 41.6	0.0
GASB	Alder Springs	2.19	119		Pn	10 18 41.7	-0.2
K02D	Willamette Mer	2.27	30	P	Pn	10 18 42.5	-0.5
	baz=211,SNR=11						
K02D				S	Sn	10 19 08.0	-3.2
	baz=211						
B040	Montague	2.36	61		Pn	10 18 44.6	+0.3
GSNM	Snow Mountain	2.37	139		Pn	10 18 43.4	-1.0
GHLM	Highland Sprin	2.38	135		Pn	10 18 43.6	-1.0
HOPS	Hopland Field	2.39	136		Pn	10 18 43.7	-0.9
LSHM	Sage Hen Hill	2.40	88		Pn	10 18 44.8	-0.1
LMPM	Military Pass	2.41	71		Pn	10 18 44.8	-0.4
LHEM	Herd Peak	2.42	67		Pn	10 18 45.9	+0.6
GCK	Clark Valley	2.43	118		Pn	10 18 45.9	+0.8
GTSM	Trough Springs	2.45	125		Pn	10 18 45.9	+0.3
HUMO	Hull Mountain	2.51	41		Pn	10 18 45.9	-0.4
J01E	Myrtle Point	2.60	21	P	Pn	10 18 48.0	+0.4
	baz=202						
O03E	Paynes Creek	2.62	99	P	Pn	10 18 48.1	+0.1
	baz=280,SNR=13						
O03E				S	Sn	10 19 19.0	-0.9
	baz=280						
L04D	Klamath Falls	2.63	55		Pn	10 18 49.3	+1.3
L04D	Klamath Falls	2.63	55	P	Pn	10 18 49.4	+1.3
	baz=236,SNR=38						
LGMM	Garner Mountai	2.68	70		Pn	10 18 49.6	+0.7
M04C	Macdoel	2.74	66	P	Pn	10 18 50.6	+1.0
	baz=248,SNR=11						
ORV	Oroville	3.07	111		Pn	10 18 53.2	-0.8
K04D	Chiloquin, OR	3.20	53	P	Pn	10 18 57.6	+1.8
	baz=235,SNR=7.5						
I03D	Drain, OR	3.26	24	P	Pn	10 18 57.2	+0.6
	baz=206,SNR=62						
I03D				S	Sn	10 19 34.6	-0.9
	baz=206						
J04D	Umpqua Nationa	3.40	42	P	Pn	10 19 00.9	+2.2
	baz=224,SNR=10						
I02D	Swisshome	3.51	16	S	Sn	10 19 40.0	-1.7
	baz=197						
I04A	Tendick Farm,	3.69	33	P	Pn	10 19 04.1	+1.5
	baz=215,SNR=7.9						
AFDM	Forest Hills D	3.71	117		Pn	10 19 03.2	+0.4
BEKR	Beckworth	3.80	102		Pn	10 19 05.0	+0.8
MOD	Modoc Plateau	3.87	71		Pn	10 19 05.9	+0.8
J05D	Fort Rock, OR	3.90	48	P	Pn	10 19 06.7	+1.2
	baz=230,SNR=33						
H04D	Lebanon	4.20	25	P	Pn	10 19 10.9	+1.4
	baz=206,SNR=8.1						
PINE	Pine Mountain	4.39	45		Pn	10 19 13.8	+1.4
I05D	Terrebonne, OR	4.59	37	P	Pn	10 19 16.5	+1.5
	baz=220						
CMB	Columbia Colle	4.60	124		Pn	10 19 15.8	+0.7
YERR	Yerington	4.91	109		Pn	10 19 19.9	+0.4
G05D	Wamic, OR	5.33	31	P	Pn	10 19 27.4	+2.4
	baz=214						
I07A	Izee	5.38	50		Pn	10 19 28.6	+2.7
J08A	Circle Bar Ran	5.65	60		Pn	10 19 30.8	+1.2
NVAR	Mina Array Bea	5.80	111	Pn	Pn	10 19 33.5	+1.8
	0.5nm,0.3s,baz=290,slow=14,SNR=12						
NVAR	Mina Array Bea	5.80	111		Pn	10 19 33.1	+1.3
G08A	Pilot Rock	6.45	43		Pn	10 19 43.6	+3.1
VES	Vestal, Richgr	6.85	134	P	Pn	10 19 47.4	+1.4
	baz=317						
BMO	Blue Mountains	7.11	52		Pn	10 19 52.4	+2.7
ISA	Isabella, Lake	7.32	132		Pn	10 19 54.6	+2.1
ISA	Isabella, Lake	7.32	132	P	Pn	10 19 54.7	+2.1
	baz=316						
ARVC	Arvin	7.53	136	P	Pn	10 19 56.8	+1.6
	baz=320						
EDW2	Edwards Air Fo	8.16	133	P	Pn	10 20 05.8	+1.8

	baz=318						
NEW	Newport	9.48	35	Pn	Pn	10 20 22.4	+0.3
	0.1nm,0.3s,baz=158,slow=16,SNR=2.1						
BELC	Belle Mtn. Jos	9.94	130	P	Pn	10 20 29.8	+1.4
	baz=315						
PFO	Pinyon Flats O	9.95	133	Pn	Pn	10 20 30.3	+1.7
	0.8nm,0.3s,baz=319,slow=9.7,SNR=15						
PFO	Pinyon Flats O	9.95	133		Pn	10 20 29.3	+0.6
PFO	Pinyon Flats O	9.95	133	P	Pn	10 20 30.3	+1.7
	baz=318						
MONP2	Monument Peak	10.52	135	P	Pn	10 20 38.7	+2.2
	baz=321						
TXAR	Lajitas Array	20.92	116	P	Pn	10 22 50.5	-0.3
	0.8nm,0.8s,baz=297,slow=8.0,SNR=8.9						
ULM	Lac du Bonnet	22.52	55	P	P	10 23 05.8	+0.6
	1.8nm,0.8s,baz=261,slow=11,SNR=5.2						
YKA	Yellowknife Ar	22.70	13	P	P	10 23 08.2	+1.2
	0.6nm,1.0s,baz=199,slow=10,SNR=4.4						

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*NEIC **10** 10:28:16.5, 40°.76N×125°.24W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.17; M$_{\theta\theta}$-5.50; M$_{\phi\phi}$4.33; M$_{r\theta}$-0.04; M$_{\theta\phi}$-2.71; M$_{\phi r}$2.45; Fault plane solution: M$_0$6.21000×10^{15} NP1:ϕ_s33.44000°, δ75.67000°, λ22.04000°. NP2:ϕ_s297.72000°, δ68.68000°, λ164.60000°. Principal axes: T 6.1732, Plg26.0000°, Azm257.0000°; N 0.0764, Plg64.0000°, Azm65.0000°; P -6.2497, Plg5.0000°, Azm165.0000°;*

*IDC **10** 10:28:16.4±0.9, 40°.85N×125°.03W, h0^{km}, mb4.1/9, mb1 4.3/15, mb1mx4.0/59, mbtmp4.1/15, ML3.7/5, MS3.6/6, Ms1 3.6/6, ms1mx3.3/48 Error ellipse: s-maj=11.6km s-min=9.8km az=25.0*

*NEIC **10** 10:28:18.7±3.3, 40°.79N±0°.04×125°.11W±0°.07, h17^{km}±3^{km}, Error ellipse: s-maj=8.8km s-min=4.2km az=67.0*

*NCEDC **10** 10:28:18.5±3.7, 40°.78N±0°.04×125°.19W±0°.09, h19^{km}±6^{km}, Mwr4.5/4, mb4.6/74(NEIC), Error ellipse: s-maj=9.7km s-min=5.0km az=80.0*

*ANF **10** 10:28:18.4±0.9, 40°.91N×124°.93W, h0^{km}, ML4.1/19, Error ellipse: s-maj=11.5km s-min=3.8km az=80.0*

ISC 10 10:28:17.9±1.7, **40°.80N**±0°.04×**125°.09W**±0°.06, **h10**^{km}±9^{km}, **n272,** σ**1^s.48**/264, **mb4.6**/36, **Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCC	Jacoby Creek,	0.80	89		Pg	10 28 33.5	+0.2
JCC					Sb	10 28 45.4	+0.7
KMPM	Mount Pierce	0.83	117		Pb	10 28 34.2	-0.2
KMPM					Sb	10 28 46.0	+0.3
KRPM	Rodgers	0.88	66		Pg	10 28 34.9	0.0
KRPM					Sb	10 28 47.8	+0.7
KHMM	Horse Mountain	1.03	85		Pg	10 28 37.3	-0.4
KCRM	Chalk Rock	1.03	111		Pg	10 28 37.3	-0.5
KRMB	Red Mountain	1.15	51		Pb	10 28 38.1	-1.7
KMRM	Mail Ridge	1.20	118		Pb	10 28 39.8	-0.9
KCSM	Cold Springs	1.23	102		Pb	10 28 40.3	-0.9
KOMM	Orleans Mounta	1.32	68		Pn	10 28 41.5	-1.0
KSXB	Camp Six Broad	1.37	41		Pn	10 28 41.6	-1.5
KHBM	Hayfork Bally	1.43	95		Pn	10 28 42.8	-1.2
KBSM	Bell Springs	1.44	127		Pn	10 28 42.7	-1.4
KIPM	Iron Peak	1.58	128		Pn	10 28 45.0	-1.1
KCPM	Cahto Peak	1.60	134		Pn	10 28 44.6	-1.7
KTRM	Thompson Ridge	1.70	49		Pn	10 28 46.4	-1.3
KBNM	Bluenose Ridge	1.71	122		Pn	10 28 47.1	-0.7
LGPM	Granite Peak	1.71	86		Pn	10 28 46.8	-1.1
KFPM	Farley Peak	1.72	132		Pn	10 28 46.3	-1.6
LBPM	Beegum Peak	1.75	105		Pn	10 28 47.3	-1.0
L02E	Cave Junction	1.75	39		Pn	10 28 47.5	-0.9
L02E	Cave Junction	1.75	39	P	Pn	10 28 47.4	-0.9
	baz=222,SNR=59						
L02E				S	Sn	10 29 08.8	-2.0
	baz=222						
M02C	Callahan	1.79	70		Pn	10 28 47.8	-1.0
M02C	Callahan	1.79	70	P	Pn	10 28 47.9	-1.0
	baz=251,SNR=37						
M02C				S	Sn	10 29 10.6	-1.0
	baz=251						
N02D	Trinity Center	1.81	84		Pn	10 28 48.2	-1.0
N02D	Trinity Center	1.81	84	P	Pn	10 28 48.1	-1.0
	baz=264,SNR=31						
N02D				S	Sn	10 29 11.6	-0.7
	baz=264						
GTC	Three Chop Rid	1.83	140		Pn	10 28 47.4	-1.9
LBKM	Bonanza King	1.85	80		Pn	10 28 48.8	-1.0
O02D	Mt. Diablo Mer	1.86	109		Pn	10 28 49.0	-0.8
O02D	Mt. Diablo Mer	1.86	109	P	Pn	10 28 49.1	-0.8
	baz=288						
O02D				S	Sn	10 29 12.5	-0.9
	baz=288						
KRKM	Rackout Spring	1.91	130		Pn	10 28 49.2	-1.4
WDC	Whiskeytown Da	1.95	96	Pn	Pn	10 28 50.2	-0.8
WDC				Sn	Sn	10 29 14.1	-1.3
GNAM	Navarro Ridge	1.95	145		Pn	10 28 48.6	-2.5
YBH	Yreka Blue Hor	2.02	62	Pn	Pn	10 28 51.4	-0.6
	11nm,0.3s,baz=257,slow=13,SNR=56						
YBH				Lg	Lg	10 29 17.2	
	150nm,0.3s,baz=319,slow=18,SNR=17						
YBH				LR	LR	10 29 47.1	
	comp=Z,1µm,21.5s,baz=254,slow=46						
YBH	Yreka Blue Hor	2.02	62	Pn	Pn	10 28 51.3	-0.7
LAMM	Antelope Mount	2.02	66		Pn	10 28 51.6	-0.6
GROM	Round Mountain	2.05	115		Pn	10 28 51.8	-0.6
GHMM	Hull Mountain	2.10	128		Pn	10 28 51.8	-1.5
GVV	Valley View	2.11	118		Pn	10 28 52.7	-0.6
GHOM	Hamilton Openi	2.12	145		Pn	10 28 50.8	-2.6
LCSM	College of the	2.13	72		Pn	10 28 52.3	-1.2
KEBM	Edson Butte	2.14	15		Pn	10 28 52.5	-1.3
K02D	Willamette Mer	2.17	29	P	Pn	10 28 53.5	-0.6
	baz=212,SNR=94						
K02D				S	Sn	10 29 20.5	-0.5
	baz=212						
B040	Montague	2.26	62		Pn	10 28 55.2	-0.1
M03C	McCloud	2.29	77		Pn	10 28 55.9	+0.1
LMPM	Military Pass	2.31	72		Pn	10 28 56.8	+0.7
LSHM	Sage Hen Hill	2.31	89		Pn	10 28 55.7	-0.4
LHEM	Herd Peak	2.31	68		Pn	10 28 56.6	+0.3
GSNM	Snow Mountain	2.36	141		Pn	10 28 54.8	-2.0
HOPS	Hopland Field	2.38	139		Pn	10 28 55.1	-1.8
HOPS	Hopland Field	2.38	139		Pn	10 28 55.3	-1.6
GCK	Clark Valley	2.39	121		Pn	10 28 56.9	-0.1
HUMO	Hull Mountain	2.41	41		Pn	10 28 56.4	-0.9
HUMO				Sn	Sn	10 29 25.4	-1.4
HUMO	Hull Mountain	2.41	41		Pn	10 28 55.9	-1.4
GTSM	Trough Springs	2.42	127		Pn	10 28 56.5	-1.0
LBFM	Black Fox Moun	2.48	76		Pn	10 28 58.9	+0.4
GDCM	Dry Creek	2.48	144		Pn	10 28 56.0	-2.4
J01E	Myrtle Point	2.51	20	P	Pn	10 28 57.7	-1.0
	baz=202,SNR=15						
J01E				S	Sn	10 29 26.7	-2.6
	baz=202						
L04D	Klamath Falls	2.52	55		Pn	10 28 59.9	+0.9
L04D	Klamath Falls	2.52	55	P	Pn	10 28 60.0	+0.9
	baz=237						
L04D				S	Sb	10 29 32.6	-1.9
	baz=237						
LDBM	Digger Butte	2.54	97		Pn	10 28 58.4	-0.9
O03E	Paynes Creek	2.55	100	P	Pn	10 28 58.6	-0.8
	baz=281						
O03E				S	Sn	10 29 29.7	-0.8
	baz=281						
GPMM	Pine Mountain	2.55	139		Pn	10 28 57.9	-1.5
LGMM	Garner Mountai	2.58	71		Pn	10 29 00.2	+0.4
GBMM	Baldy Mountain	2.59	129		Pn	10 28 59.3	-0.6
GFC	Funks Creek	2.60	124		Pn	10 28 59.7	-0.3
M04C	Macdoel	2.63	67	P	Pn	10 29 00.9	+0.4
	baz=249,SNR=76						
GSGM	Seigler Mounta	2.66	136		Pn	10 28 59.3	-1.5
ORV	Oroville	3.02	113		Pn	10 29 04.4	-1.3
K04D	Chiloquin, OR	3.09	53	P	Pn	10 29 07.3	+0.5
	baz=236,SNR=38						
MCCM	Marconi Confer	3.15	147		Pn	10 29 05.3	-2.2
I03D	Drain, OR	3.17	23	P	Pn	10 29 08.0	+0.3
	baz=206,SNR=59						
I03D				S	Sn	10 29 44.3	-1.2
	baz=206						
J04D	Umpqua Nationa	3.29	41	P	Pn	10 29 10.7	+1.0
	baz=224,SNR=70						
I02D	Swisshome	3.43	15	P	Pn	10 29 10.7	-0.6
	baz=198						
I02D				S	Sn	10 29 48.3	-3.6
	baz=198						
I04A	Tendick Farm,	3.59	33	P	Pn	10 29 14.6	+1.0
	baz=216,SNR=35						
I04A				S	Sn	10 29 55.9	-0.1
	baz=216						
AFDM	Forest Hills D	3.67	119	Pn	Pn	10 29 13.5	-1.2
BEKR	Beckworth	3.73	103	Pn	Pn	10 29 15.6	-0.1
BEKR				Sn	Sn	10 29 59.1	-0.6
MOD	Modoc Plateau	3.77	71		Pn	10 29 15.4	-0.7
J05D	Fort Rock, OR	3.79	48	P	Pn	10 29 17.4	+1.0
	baz=231,SNR=55						
COR	Corvallis	4.00	19		Pn	10 29 18.9	-0.4
H04D	Lebanon	4.10	24	P	Pn	10 29 21.2	+0.6
	baz=207,SNR=58						
H04D				S	Sn	10 30 08.4	-0.2
	baz=207						
RUBR	Rubicon Trail	4.17	113		Pn	10 29 22.7	+0.9
PINE	Pine Mountain	4.29	44	Pn	Pn	10 29 24.3	+1.0
VCNR	Virginia City	4.43	108		Pn	10 29 24.5	-0.8
I05D	Terrebonne, OR	4.49	37	P	Pn	10 29 27.3	+1.4
	baz=220,SNR=14						
PAHR	Pah Rah Range	4.50	102	Pn	Pn	10 29 25.5	-0.6
PNTR	Pine Nut	4.55	110	Pn	Pn	10 29 27.9	+1.0
CMB	Columbia Colle	4.57	126	Pn	Pn	10 29 27.6	+0.5
G03D	McMinnville, O	4.61	16	P	Pn	10 29 27.7	+0.2
	baz=199,SNR=28						
G03D				S	Sn	10 30 20.1	-0.9
	baz=199						
YERR	Yerington	4.85	110	Pn	Pn	10 29 31.1	0.0
WVOR	Wild Horse Val	5.10	69		Pn	10 29 35.0	+0.5
G05D	Wamic, OR	5.23	31	P	Pn	10 29 38.0	+2.0
	baz=214,SNR=16						
F03A	Seaside	5.25	12		Pn	10 29 36.5	+0.2
I07A	Izee	5.27	50	Pn	Pn	10 29 38.7	+1.9
F04A	Amboy	5.48	20		Pn	10 29 40.0	+0.5
G06A	Carlson Farm,	5.50	35		Pn	10 29 41.1	+1.3
J08A	Circle Bar Ran	5.54	60	Pn	Pn	10 29 40.3	-0.2
KVN	Kaiserville	5.65	106		Pn	10 29 40.8	-1.2
OMMB	Old Mammoth Mi	5.70	122		Pn	10 29 44.3	+1.5
F05D	White Salmon	5.73	26	P	Pn	10 29 44.1	+1.2
	baz=210,SNR=13						
NVAR	Mina Array Bea	5.75	112	Pn	Pn	10 29 44.0	+0.6
	3.2nm,0.3s,baz=288,slow=14,SNR=72						
NVAR				Lg	Lg	10 31 05.2	
	2.3nm,0.3s,baz=313,slow=29,SNR=2.8						
NVAR				LR	LR	10 31 56.2	
	comp=Z,354nm,18.2s,baz=5.5,slow=38						
NVAR	Mina Array Bea	5.75	112		Pn	10 29 43.3	-0.1
E03A	Lebam	5.85	10		Pn	10 29 44.3	-0.2
E04D	Cinebar	6.04	17	P	Pn	10 29 48.0	+0.9
	baz=199,SNR=23						
E04D				S	Sn	10 30 54.3	-1.9
	baz=199						
D04E	Lakebay	6.59	14	P	Pn	10 29 56.1	+1.4
	baz=196,SNR=5.1						
SMMC	Simmler	6.79	142	P	Pn	10 29 55.7	-1.9
	baz=324						
VES	Vestal, Richgr	6.84	134	P	Pn	10 29 58.5	+0.3
	baz=317						
D03D	Eldon	6.88	11	P	Pn	10 29 59.3	+0.5
	baz=194,SNR=16						
D03D				S	Sn	10 31 13.2	-3.8
	baz=194						
CWC	Cottonwood Cre	7.00	126	P	Pn	10 30 03.8	+3.2
	baz=310						
LTY	Liberty	7.20	25		Pn	10 30 04.3	+1.2
PKM	Mcpherson Peak	7.23	143	P	Pn	10 30 01.7	-2.0
	baz=326						
PKM				S	Sn	10 31 22.3	-3.6
	baz=326						
ISA	Isabella, Lake	7.31	132	P	Pn	10 30 05.9	+1.2
	baz=316						
ELK	Elko	7.47	87	Pn	Pn	10 30 08.2	+1.1
	0.3nm,0.3s,baz=278,slow=9.8,SNR=16						
ELK				Lg	Lg	10 32 03.1	
	0.2nm,0.3s,baz=212,slow=1.9,SNR=2.6						
ELK				LR	LR	10 33 25.1	
	comp=Z,433nm,20.9s,baz=288,slow=42						
ELK	Elko	7.47	87		Pn	10 30 08.4	+1.2
ARVC	Arvin	7.51	137	P	Pn	10 30 07.7	+0.2
	baz=320						
MPMC	Manual Prospec	7.61	126	P	Pn	10 30 10.3	+1.3
	baz=310						
F10A	Beach Ranch, E	7.71	45		Pn	10 30 12.3	+2.1
R11A	Troy Canyon, C	7.74	105		Pn	10 30 11.5	+0.9
R11A	Troy Canyon, C	7.74	105	P	Pn	10 30 12.0	+1.3
	baz=291						
B05A	Bryant	7.76	15	P	Pn	10 30 11.9	+1.1
	baz=198,SNR=12						
B05A				S	Sn	10 31 35.7	-2.9
	baz=198						
TPNV	Topopah Spring	7.89	116	P	Pn	10 30 15.0	+2.2
	baz=301						
EDW2	Edwards Air Fo	8.15	134	P	Pn	10 30 17.0	+0.8
	baz=318						
GSC	Goldstone, Bar	8.53	127		Pn	10 30 22.7	+1.2
GSC	Goldstone, Bar	8.53	127	P	Pn	10 30 23.0	+1.5
	baz=312						
B08A	Colville Reser	8.60	27		Pn	10 30 22.7	+0.4
RRX	Edison Barstow	8.71	130	P	Pn	10 30 25.7	+1.8
	baz=315						
BFSC	Mount Baldy Ra	8.81	136	P	Pn	10 30 25.7	+0.3
	baz=320						
SHPR	Sheep Range	8.87	116		Pn	10 30 27.8	+1.6
TUQ	Turquoise Moun	8.99	124	P	Pn	10 30 31.3	+3.5
	baz=309						
HEC	Hector,Ludlow	9.13	128	P	Pn	10 30 31.2	+1.5
	baz=313						
BGU	Big Grassy Mou	9.14	85		Pn	10 30 31.6	+1.7
BBRC	Big Bear Solar	9.20	133	P	Pn	10 30 31.4	+0.6
	baz=317						
DUG	Dugway, Tooele	9.37	90		Pn	10 30 35.0	+2.0
DUG	Dugway, Tooele	9.37	90	P	Pn	10 30 35.9	+2.8
	baz=277						
NEW	Newport	9.38	35	Pn	Pn	10 30 34.1	+1.1
	0.5nm,0.3s,baz=203,slow=14,SNR=11						
NEW				LR	LR	10 34 18.6	
	comp=Z,425nm,18.8s,baz=231,slow=39						
NEW	Newport	9.38	35		Pn	10 30 34.5	+1.5
MURC	Murrieta	9.55	136	P	Pn	10 30 35.9	+0.5
	baz=320						
GMRC	Granite Mounta	9.57	126	P	Pn	10 30 37.6	+1.8
	baz=311						
BELC	Belle Mtn. Jos	9.91	130	P	Pn	10 30 41.1	+0.6
	baz=315						
PFO	Pinyon Flats O	9.94	134	Pn	Pn	10 30 41.1	+0.3
	3.7nm,0.3s,baz=322,slow=10,SNR=92						
PFO	Pinyon Flats O	9.94	134		Pn	10 30 40.7	-0.1
PFO	Pinyon Flats O	9.94	134	P	Pn	10 30 41.6	+0.8
	baz=318						
XPFO	Pion Flat	9.94	133		Pn	10 30 40.9	+0.1
NLU	North Lily Min	9.97	91		Pn	10 30 43.2	+1.9
TCRU	Three Creeks R	9.98	99		Pn	10 30 43.1	+1.5
MSO	Missoula	10.05	49	P	Pn	10 30 45.7	+3.4
	baz=237						
LLLB	Lillooet	10.06	12		Pn	10 30 43.1	+0.8
MSU	Marysvale	10.21	99		Pn	10 30 46.5	+1.8
HWUT	Hardware Ranch	10.22	81		Pn	10 30 47.3	+2.5
KNB	Kanab	10.28	108		Pn	10 30 48.6	+3.2
IRM	Iron Mountain	10.31	127	P	Pn	10 30 47.2	+1.3
	baz=312						
MTPU	Mount Pierson	10.36	101		Pn	10 30 48.3	+1.5
JTMT	Jette	10.40	45		Pn	10 30 48.9	+1.8
BC3	Big Chuckawall	10.48	130	P	Pn	10 30 48.4	+0.3
	baz=315						
PKCU	Pink Cliffs	10.48	105		Pn	10 30 50.2	+1.8
MONP2	Monument Peak	10.51	136	P	Pn	10 30 49.8	+1.1
	baz=321						
BAR	Barrett	10.54	138		Pn	10 30 49.9	+0.9
TMUT	Trail Mountain	10.75	94		Pn	10 30 54.5	+2.5
FXWY	Fox Creek	10.81	70		Pn	10 30 55.7	+2.9
Q16A	Castle Valley	10.86	95		Pn	10 30 55.1	+1.6
YHB	Horse Butte	10.95	64		Pn	10 30 56.6	+1.9
Y12C	Blythe	10.96	127	P	Pn	10 30 55.7	+1.0
	baz=313						
GLA	Glamis	11.27	130		Pn	10 30 59.2	+0.1
GLA	Glamis	11.27	130	P	Pn	10 30 59.1	+0.1
	baz=316						
SRU	San Rafael Swe	11.31	94		Pn	10 31 03.5	+3.9
BW06	Boulder Array	11.76	75	P	Pn	10 31 08.5	+2.7
	baz=266						
PDAR	Pinedale Array	11.76	75	Pn	Pn	10 31 08.0	+2.2
	0.1nm,0.3s,baz=254,slow=11,SNR=20						
PDAR				LR	LR	10 35 30.7	
	comp=Z,397nm,20.4s,baz=280,slow=37						
PDAR	Pinedale Array	11.76	75		Pn	10 31 07.5	+1.7
Y14A	Wickenburg	11.80	122		Pn	10 31 09.2	+3.1
WUAZ	Wupatki	12.01	112	Pn	Pn	10 31 07.1	-2.1
GCMT	Greycliff	12.29	61		Pn	10 31 12.4	-0.6
RLMT	Red Lodge	12.36	64		Pn	10 31 16.4	+2.4
RLMT	Red Lodge	12.36	64	P	Pn	10 31 16.9	+2.8
	baz=255						
O20A	White River Ci	12.85	87		Pn	10 31 21.4	+0.7
O20A	White River Ci	12.85	87	P	Pn	10 31 23.7	+3.0
	baz=278						
EGMT	Eagleton	13.11	51		Pn	10 31 24.1	0.0
EGMT	Eagleton	13.11	51	P	Pn	10 31 25.2	+1.1
	baz=242						
MVCO	Mesa Verde	13.39	100		Pn	10 31 30.1	+2.0
MVCO	Mesa Verde	13.39	100	P	Pn	10 31 31.1	+3.0
	baz=290						
RWWY	Rawlins	13.48	80		Pn	10 31 27.8	-1.6
SMCO	Snowmass	13.98	91		Pn	10 31 38.1	+1.8
TUC	Tucson	14.27	122	Pn	Pn	10 31 39.7	-0.3
S22A	4UR Ranch, Cre	14.47	96	Pn	Pn	10 31 46.1	+3.2
N23A	Red Feather La	14.49	83	P	Pn	10 31 43.6	+0.4
	baz=276						
LAO	LASA Array	14.84	60	P	Pn	10 31 48.8	+1.2
	baz=254						
ISCO	Idaho Springs	14.90	87	P	Pn	10 31 50.3	+1.5
	baz=280						
Q24A	Divide	15.42	90	Pn	Pn	10 31 57.2	+1.5
SDCO	Great Sand Dun	15.47	95	IAmb	IAmb	10 32 04.0	
	comp=Z,24nm,1.1s						
SDCO	Great Sand Dun	15.47	95	P	P	10 31 59.1	-1.8
	baz=287						
ANMO	Albuquerque	15.82	106	Pn	Pn	10 32 01.4	+0.6
	comp=Z,0.1nm,0.3s,baz=305,slow=12,SNR=11						
ANMO	Albuquerque	15.82	106	Pn	Pn	10 32 02.5	+1.7
ANMO	Albuquerque	15.82	106	P	P	10 32 03.3	-1.3
	baz=297						
RSSD	Black Hills	15.88	71		Pn	10 31 59.4	-2.1
121A	Cookes Peak, D	16.13	115	Pn	Pn	10 32 04.9	+0.1
T25A	Trinidad	16.48	96	Pn	Pn	10 32 10.0	+0.6
T25A	Trinidad	16.48	96	P	P	10 32 11.7	-0.4
	baz=289						
KSCO	Kaye Shedlock’	17.32	89		P	10 32 20.6	-0.6
KSCO				IAmb	IAmb	10 32 24.2	
	comp=Z,60nm,0.7s						
KSCO	Kaye Shedlock’	17.32	89	P	P	10 32 22.6	+1.4
	baz=283						
OGNE	Ogallala	17.43	82	Pn	Pn	10 32 19.6	-1.6
OGNE	Ogallala	17.43	82	P	Pn	10 32 21.0	-0.1
	baz=277						
DLBC	Dease Lake	17.93	352	P	P	10 32 29.7	+2.0
	comp=Z,0.1nm,0.3s,baz=168,slow=9.2,SNR=7.6						
DLBC	Dease Lake	17.93	352	P	P	10 32 29.3	+1.6
CBKS	Cedar Bluff	19.56	88	P	Pn	10 32 46.6	-0.4
CBKS	Cedar Bluff	19.56	88	P	Pn	10 32 46.7	-0.4
	baz=284						
FFC	Flin Flon	20.73	40	P	P	10 32 59.1	+0.8
FFC				IAmb	IAmb	10 33 08.0	
	comp=Z,36nm,1.1s						
TXAR	Lajitas Array	20.88	117	P	Pn	10 33 01.8	-0.9
	comp=Z,2.0nm,1.0s,baz=284,slow=7.3,SNR=9.9						
ECSD	EROS Data Cent	21.23	73	P	P	10 33 02.1	-1.7
ECSD				IAmb	IAmb	10 33 13.1	
	comp=Z,14nm,0.9s						
ECSD	EROS Data Cent	21.23	73	P	P	10 33 02.4	-1.4
	baz=272						
WMOK	Wichita Mounta	21.61	98	P	P	10 33 07.9	-0.1
	baz=294						
KSU1	Kansas State U	21.86	85	P	P	10 33 14.4	+3.8
	baz=284						
AGMN	Agassiz Nation	22.04	60	P	P	10 33 12.2	-0.3
AGMN	Agassiz Nation	22.04	60	P	P	10 33 13.3	+0.9
	baz=261						
OKCFA	Oklahoma City	22.35	95	P	P	10 33 17.8	+1.9
ULM	Lac du Bonnet	22.41	55	P	P	10 33 16.4	0.0
	comp=Z,10nm,0.7s,baz=264,slow=10,SNR=29						
ULM				LR	LR	10 42 51.4	
	comp=Z,257nm,18.1s,baz=256,slow=39						
ULM	Lac du Bonnet	22.41	55	IAmb	IAmb	10 33 25.6	
	comp=Z,17nm,0.9s						
T35A	Sooner Cattle	22.54	91	IAmb	IAmb	10 33 23.1	
	comp=Z,18nm,0.8s						
YKA	Yellowknife Ar	22.62	13	P	P	10 33 18.5	0.0
	comp=Z,6.0nm,1.0s,baz=198,slow=10,SNR=40						
W35A	Tecumseh	22.89	95	P	P	10 33 21.0	-0.6
JCT	Junction City	22.91	109	P	P	10 33 20.9	-1.0
JCT				IAmb	IAmb	10 33 33.9	
	comp=Z,13nm,1.0s						
JCT	Junction City	22.91	109	P	P	10 33 23.4	+1.4
	baz=304						
TUL1	Leonard	23.43	93	IAmb	IAmb	10 33 40.5	
	comp=Z,9.3nm,0.7s						
SPMN	Marine on St.	23.92	69	P	P	10 33 30.0	-1.8
SPMN				IAmb	IAmb	10 33 42.1	
	comp=Z,9.1nm,0.8s						
U38A	Gravette	24.31	90	IAmb	IAmb	10 33 37.5	
	comp=Z,19nm,0.9s						
BCAR	Beaver Creek A	24.41	342	P	P	10 33 37.2	+1.0
KDAK	Kodiak Island	24.44	323	LR	LR	10 40 48.2	
	comp=Z,87nm,21.7s,baz=298,slow=31						
HHAR	Hobbs	24.70	90	IAmb	IAmb	10 33 49.1	
	comp=Z,10nm,1.1s						
S39A	Bolivar	24.72	87	IAmb	IAmb	10 34 17.8	
	comp=Z,17nm,1.2s						
EYMN	Ely	24.91	62	P	P	10 33 39.8	-1.0
EYMN				IAmb	IAmb	10 33 51.7	
	comp=Z,8.4nm,0.9s						
W39A	Magazine	25.21	93	IAmb	IAmb	10 33 46.5	
	comp=Z,9.9nm,0.7s						
W39A	Magazine	25.21	93	P	P	10 33 45.1	+1.4
	baz=292						
L40A	Anamosa	25.33	76	IAmb	IAmb	10 33 50.9	
	comp=Z,21nm,1.1s						
U40A	Yellville	25.50	90	P	P	10 33 46.7	+0.4
I40A	Norwalk	25.55	72	P	P	10 33 46.8	+0.1
MIAR	Mount Ida	25.62	94	P	P	10 33 49.2	+1.9
	baz=293						
N41A	Harden Midland	25.84	79	IAmb	IAmb	10 33 51.2	
	comp=Z,15nm,1.1s						
JFWS	Jewell Farm	25.93	74	IAmb	IAmb	10 34 00.6	
	comp=Z,17nm,0.9s						
JFWS	Jewell Farm	25.93	74	P	P	10 33 51.9	+1.8
	baz=277						
HKT	Hockley	26.08	105	P	P	10 33 50.9	-0.6
HKT				IAmb	IAmb	10 33 58.3	
	comp=Z,30nm,1.4s						
WHAR	Wooly Hollow	26.31	91	IAmb	IAmb	10 33 56.0	
	comp=Z,10nm,1.0s						
W41B	Gary Mavity, V	26.39	92	IAmb	IAmb	10 34 09.2	
	comp=Z,9.9nm,1.2s						
W41B	Gary Mavity, V	26.39	92	P	P	10 33 55.5	+1.2
	baz=292						
FCC	Fort Churchill	26.54	37	P	P	10 33 55.5	+0.1
FCC				IAmb	IAmb	10 34 08.0	
	comp=Z,11nm,0.8s						
I42A	Draeger Farm,	26.78	71	IAmb	IAmb	10 34 07.7	
	comp=Z,13nm,0.9s						
D41A	Chassel	26.86	64	IAmb	IAmb	10 34 24.3	
	comp=Z,17nm,1.0s						
ILAR	Eielson Array	27.10	340	P	P	10 34 01.6	+1.1
	comp=Z,0.8nm,0.6s,baz=150,slow=8.2,SNR=12						
K43A	Burlington	27.35	74	P	P	10 34 03.9	+1.0
K43A				IAmb	IAmb	10 34 09.7	
	comp=Z,23nm,1.1s						
H43A	Windswept, Lux	27.54	70	IAmb	IAmb	10 34 14.2	
	comp=Z,9.8nm,0.9s						
M44A	Midewin, Midew	27.79	76	P	P	10 34 07.9	+1.0
INK	Inuvik	27.94	353	P	P	10 34 05.9	-2.0
	comp=Z,2.4nm,0.6s,baz=233,slow=11,SNR=9.1						
SFIN	Lafayette	28.70	78	IAmb	IAmb	10 34 25.1	
	comp=Z,16nm,0.9s						
PLAL	Pickwick Lake	29.63	89	IAmb	IAmb	10 34 29.8	
	comp=Z,9.2nm,1.1s						
T49A	Edmonton	30.80	84	P	P	10 34 33.9	+0.2
T49A				IAmb	IAmb	10 34 40.3	
	comp=Z,13nm,1.1s						
ACSO	Alum Creek Sta	31.79	77	IAmb	IAmb	10 34 44.5	
	comp=Z,11nm,0.8s						
CPCT	Cooper Cave	32.15	86	IAmb	IAmb	10 34 51.7	
	comp=Z,12nm,1.1s						
D53A	Lac Vacive, Po	34.26	63	IAmb	IAmb	10 35 13.9	
	comp=Z,16nm,1.1s						
RES	Resolute Bay	36.69	13	P	P	10 35 25.3	+1.0
T59A	Double "B" Far	36.84	80	P	P	10 35 27.7	+1.6
T59A				IAmb	IAmb	10 35 29.1	
	comp=Z,19nm,1.1s						
SCHQ	Schefferville	40.36	49	P	P	10 35 55.3	-0.1
	comp=Z,2.7nm,0.9s,baz=304,slow=5.9,SNR=3.5						

TIXI	Tiksi	56.57	339	P	P	10 37 59.9	-0.2
	comp=Z,0.5nm,0.3s,baz=45,slow=8.0,SNR=4.1						
H11N3	WAKE ISLAND Hy	60.91	272	T	T	11 45 10.2	
	baz=53,slow=75,SNR=4.5						
H11N2	WAKE ISLAND Hy	60.91	272	T	T	11 45 10.5	
	baz=53,slow=75,SNR=7.1						
H11N1	WAKE ISLAND Hy	60.93	272	T	T	11 45 11.6	
	baz=53,slow=75,SNR=7.5						
YAK	Yakutsk	61.31	329	P	P	10 38 33.6	+0.5
	comp=Z,8.4nm,0.5s,baz=72,slow=0.7,SNR=3.7						
H11S1	WAKE ISLAND Hy	61.79	271	T	T	11 46 12.5	
	baz=52,slow=74,SNR=7.0						
H11S2	WAKE ISLAND Hy	61.79	271	T	T	11 46 13.1	
	baz=52						
H11S3	WAKE ISLAND Hy	61.80	271	T	T	11 46 12.8	
	baz=52,slow=74,SNR=4.1						
HHC	Hu-ho-hao-te	83.83	320	eP	P	10 40 47.0	-0.6
KURBB	Kurchatov Arra	86.63	345	P	P	10 41 00.7	-0.6
	comp=Z,1.2nm,0.8s,baz=15,slow=4.7,SNR=8.3						
WHN	Wuhan	90.22	312	P	P	10 41 08.4	-10
WMQ	Urumqi	90.74	337	eP	P	10 41 21.3	+0.3
KSH	Kashi	97.79	344	P	Pdif	10 41 55.2	+1.7
KSH				PP	PP	10 45 55.4	+5.0
KSH	Kashi	97.79	344	S	S	10 53 19.2	-0.2
KSH	Kashi	97.79	344	SS	SS	11 00 03.9	+6.0

IDC ***10*** *10:29:33.2±1.4, 27°.73S×68°.52W, h86^{km}±14^{km}, mb1 3.6/3, mb1mx3.2/32, mbtmp3.7/3, Error ellipse: s-maj=45.4km s-min=10.4km az=87.0*

SJA ***10*** *10:29:33.3±0.6, 27°.76S×68°.61W, h132^{km}±4^{km}, ML3.2, MW3.3*

GUC ***10*** *10:29:34.7±0.7, 27°.71S×68°.74W, h113^{km}±6^{km}, ML4.0*

ISC 10 10:29:33.8±0.9**, 27°.73S**±0°.03×**68°.62W**±0°.05**, h130**^{km}±8^{km}**, n28,** σ**1^{s}.15**/42**, 4C-3D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC02	Maricunga	1.00	333	⇓iP	Pn	10 29 57.8	+0.4
AC02				iS	Sn	10 30 15.0	-0.1
VCA	Vinchina	1.06	160	iP	Pn	10 29 57.6	+0.1
VCA				eS	Sn	10 30 15.5	0.0
VCA				IAML		10 30 16.1	
	comp=Z,294nm,0.3s						
GO03	Copiap	1.44	275	⇑iP	Pn	10 30 01.1	-0.2
GO03				iS	Sn	10 30 20.8	-1.5
GO03				IAML		10 30 22.0	
	comp=E,4μm,0.3s						
AGUA	GUANDACOL	1.75	176	iP	Pn	10 30 05.3	+0.4
AGUA				eS	Sn	10 30 28.4	-0.3
AC05	El Transito	1.83	233	⇑iP	Pn	10 30 06.1	+0.3
AC05				iS	Sn	10 30 29.9	-0.4
AC05				IAML		10 30 31.3	
	comp=E,1μm,0.3s						
AC01	Pan de Azucar	2.37	311	⇓iP	Pn	10 30 12.4	0.0
AC01				iS	Sn	10 30 40.7	-1.3
AC01				IAML		10 30 42.8	
	comp=E,424nm,0.3s						
ACDV	Cuesta del Vie	2.47	190	iP	Pn	10 30 14.7	+0.9
ACDV				eS	Sn	10 30 44.5	0.0
ACDV				IAML		10 30 47.9	
	comp=Z,172nm,0.4s						
AROD	Rodeo	2.54	197	iP	Pn	10 30 15.7	+0.9
AROD				eS	Sn	10 30 46.5	+0.1
CO01	Juntas del Tor	2.58	210	iP	Pn	10 30 16.3	+1.0
CO01				iS	Sn	10 30 48.5	+1.3
GO02	Mina Guanaco	2.71	341	iP	Pn	10 30 18.1	+1.2
GO02				eS	Sn	10 30 50.7	+0.6
ACCO	Cerro Coronel	2.87	188	iP	Pn	10 30 19.9	+0.8
ACCO				IAML		10 30 56.1	
	comp=Z,124nm,0.3s						
AHML	Horco Molle	3.07	73	iP	Pn	10 30 22.1	+0.7
AHML				IAML		10 31 31.5	
	comp=Z,27nm,0.6s						
GO04	Tololo Observa	3.09	218	⇑iP	Pn	10 30 21.2	-0.7
GO04				iS	Sn	10 30 57.8	-1.2
GO04				IAML		10 31 00.7	
	comp=N,825nm,0.5s						
AMOG	MOGNA	3.20	178	iP	Pn	10 30 23.1	0.0
AMOG				IAML		10 31 02.8	
	comp=Z,127nm,0.3s						
APLL	PUNTA DE LOS L	3.22	146	iP	Pn	10 30 23.2	-0.1
APLL				IAML		10 31 01.6	
	comp=Z,17nm,0.6s						
CO03	El Pedregal	3.58	210	⇑iP	Pn	10 30 27.6	-0.5
CO03				iS	Sn	10 31 09.4	-0.9
RTLL	Cerro Villicun	3.59	178	iP	Pn	10 30 28.6	+0.5
CFA	Coronel Fontan	3.87	175	P	Pn	10 30 32.1	+0.2
	comp=Z,4.7nm,0.3s,baz=16,slow=17,SNR=37						
CFA				S	Sn	10 31 14.4	-2.6
	comp=Z,18nm,0.3s,baz=60,slow=7.5,SNR=32						
CFA	Coronel Fontan	3.87	175	⇓iP	Pn	10 30 32.1	+0.2
RTLS	Leoncito	4.09	188	iP	Pn	10 30 35.9	+0.8
RTLS				IAML		10 31 27.2	
	comp=Z,25nm,0.5s						
RTCV	Cerro Valdivia	4.12	179	iP	Pn	10 30 35.4	+0.3
RTCV				IAML		10 31 24.1	
	comp=Z,45nm,0.7s						
ACAN	Cantantal	4.69	165	iP	Pn	10 30 43.0	+0.2
LVC	Limon Verde	5.11	357	P	Pn	10 30 49.3	+0.6
	comp=Z,2.0nm,0.3s,baz=162,slow=6.9,SNR=23						
LVC				S	Sn	10 31 44.7	-2.3
	comp=Z,6.4nm,0.3s,baz=191,slow=6.0,SNR=11						
MRA	San Martin	5.30	152	iP	Pn	10 30 50.7	-0.3
CPUP	Villa Florida	10.16	85	P	Pn	10 31 55.5	-0.8
	comp=Z,0.4nm,0.3s,baz=252,slow=10,SNR=5.4						
AAK	Ala-Archa	146.67	54	PKPbc	PKiKP	10 49 06.2	+3.0
	comp=Z,1.0nm,0.6s,baz=209,slow=19,SNR=4.8						
ZALV	Zalesovo Beam	147.35	29	PKPbc	PKPab	10 49 05.2	+1.2
	comp=Z,1.0nm,0.5s,baz=291,slow=4.0,SNR=4.4						
MKAR	Makanchi Array	150.29	42	PKPbc	PKPab	10 49 12.9	-3.3
	comp=Z,1.6nm,0.7s,baz=301,slow=2.1,SNR=22						

NEIC ***10*** *10:29:39.0±1.3, 17°.85N±0°.05×101°.47W±0°.03, h38^{km}±41^{km}, Error ellipse: s-maj=8.5km s-min=1.6km az=205.0*

MEX ***10*** *10:29:40.4±0.5, 17°.85N×101°.48W, h42^{km}±4^{km}, MD4.0*

ISC 10 10:29:38.9±1.2**, 17°.85N**±0°.04×**101°.48W**±0°.03**, h45**^{km}**, n24,** σ**0^{s}.71**/45**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.24	176	eP	Pn	10 29 46.6	-0.4
ZIIG				eS	Sn	10 29 52.2	-0.5
ZIIG	Zihuatanejo	0.24	176		Pn	10 29 46.6	-0.4
ZIIG					Sn	10 29 52.2	-0.5
UON	La Union	0.34	291	eP	Pn	10 29 48.0	0.0
UON				iS	Sn	10 29 53.3	-1.0
ARIG	Puente Sto Nin	1.16	68	eP	Pn	10 29 58.3	-0.5
ARIG				eS	Sn	10 30 12.8	-0.6
ARIG	Puente Sto Nin	1.16	68		Pn	10 29 58.3	-0.5
ARIG					Sn	10 30 12.8	-0.6
CAIG	El Cayaco	1.41	124	eP	Pn	10 30 01.5	-0.6
CAIG				eS	Sn	10 30 18.4	-1.0
CAIG	El Cayaco	1.41	124		Pn	10 30 01.5	-0.6
CAIG					Sn	10 30 18.4	-1.0
MEIG	Mezcala	1.77	87	eP	Pn	10 30 07.0	-0.2
MEIG				iS	Sn	10 30 28.3	-0.4
MEIG	Mezcala	1.77	87		Pn	10 30 07.0	-0.2
MEIG					Sn	10 30 28.3	-0.4
ACP2	Acapulco	1.81	122	iP	Pn	10 30 08.1	+0.5
ACP2				iS	Sn	10 30 29.1	-0.2
ACP2	Acapulco	1.81	122		Pn	10 30 08.1	+0.5
ACP2					Sn	10 30 29.1	-0.2
MMIG	Aquila	1.82	284	eP	Pn	10 30 08.4	+0.6
MMIG				iS	Sn	10 30 29.7	0.0
MMIG	Aquila	1.82	284		Pn	10 30 08.4	+0.6
MMIG					Sn	10 30 29.7	0.0
MOIG	Morelia	1.84	9	iP	Pn	10 30 08.5	+0.3
MOIG				iS	Sn	10 30 28.9	-1.5
MOIG	Morelia	1.84	9		Pn	10 30 09.7	+1.5
MOIG	Morelia	1.84	9		Pn	10 30 08.5	+0.3
MOIG					Sn	10 30 28.9	-1.5
COIG	Colima	2.48	303	eP	Pn	10 30 17.1	+0.2
COIG				iS	Sn	10 30 45.4	-0.5
TLIG	Tlapa	2.79	95	eP	Pn	10 30 22.0	+0.8
TLIG				iS	Sn	10 30 53.9	+0.2
TLIG	Tlapa	2.79	95		Pn	10 30 22.7	+1.5
TLIG	Tlapa	2.79	95		Pn	10 30 22.0	+0.8
TLIG					Sn	10 30 53.9	+0.2
FTIG	Fresnillo de T	3.19	88	eP	Pn	10 30 27.3	+0.6
FTIG				eS	Sn	10 31 03.4	-0.1
HLIG	Huajuapan de L	3.50	90	eP	Pn	10 30 31.6	+0.5
HLIG				eS	Sn	10 31 11.6	+0.2
YOIG	Yosondua	3.89	104	eP	Pn	10 30 37.0	+0.7
YOIG				iS	Sn	10 31 20.9	0.0
PEIG	Puerto Escondi	4.54	113	eP	Pn	10 30 46.4	+1.3

IDC ***10*** *10:46:20.9±1.6, 40°.69N×125°.10W, h0^{km}, mb3.3/4, mb1 3.7/10, mb1mx3.5/41, mbtmp3.4/10, ML3.6/5, MS2.4/1, Ms1 2.4/1, ms1mx2.3/22, Error ellipse: s-maj=19.8km s-min=14.3km az=75.0*

NEIC ***10*** *10:46:22.5±2.6, 40°.67N±0°.05×125°.15W±0°.08, h17^{km}±10^{km}, Error ellipse: s-maj=10.0km s-min=4.9km az=53.0*

NCEDC ***10*** *10:46:22.6±2.7, 40°.66N±0°.05×125°.30W±0°.06, h22^{km}±7^{km}, Mwr3.5/3, Error ellipse: s-maj=8.6km s-min=5.1km az=214.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.92; $M_{\theta\theta}$-2.13; $M_{\phi\phi}$1.21; $M_{r\theta}$0.40; $M_{\theta\phi}$0.86; $M_{\phi r}$0.18;*

ANF ***10*** *10:46:23.1±1.3, 40°.81N×124°.95W, h0^{km}, ML3.4/15 Error ellipse: s-maj=13.1km s-min=6.1km az=73.0*

ISC 10 10:46:22.0±1.9**, 40°.67N**±0°.04×**125°.20W**±0°.07**, h16**^{km}±10^{km}**, n108,** σ**1^{s}.28**/123**, mb3.0**/3**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMPM	Mount Pierce	0.86	107		Pg	10 46 38.7	0.0
KMPM					Sn	10 46 51.1	-0.7
JCC	Jacoby Creek,	0.90	80		Pb	10 46 38.7	-0.4
JCC					Sg	10 46 51.2	0.0
KRPM	Rodgers	1.01	61		Pb	10 46 40.5	-0.7
KCRM	Chalk Rock	1.08	103		Pb	10 46 42.0	-0.3
KHMM	Horse Mountain	1.13	79		Pb	10 46 42.7	-0.6
KMRM	Mail Ridge	1.22	111		Pn	10 46 44.2	-0.3
KMRM				Sn	Sg	10 47 01.0	-0.5
KCSM	Cold Springs	1.29	95		Pn	10 46 45.2	-0.3
KRMB	Red Mountain	1.29	48		Pn	10 46 44.2	-1.3
KBSM	Bell Springs	1.44	121		Pn	10 46 46.7	-0.8
KOMM	Orleans Mounta	1.45	65		Pn	10 46 46.9	-0.9
KHBM	Hayfork Bally	1.50	90		Pn	10 46 47.8	-0.7
KSXB	Camp Six Broad	1.53	40		Pn	10 46 47.4	-1.4
KIPM	Iron Peak	1.57	123		Pn	10 46 48.5	-0.9
KCPM	Cahto Peak	1.58	128		Pn	10 46 48.4	-1.1
KCPM				Sn	Sn	10 47 07.2	-2.5
KFPM	Farley Peak	1.70	127		Pn	10 46 50.2	-1.0
KBNM	Bluenose Ridge	1.72	116		Pn	10 46 51.1	-0.3
GTC	Three Chop Rid	1.79	135		Pn	10 46 50.8	-1.5
LBPM	Beegum Peak	1.80	101		Pn	10 46 52.0	-0.5
LGPM	Granite Peak	1.81	82		Pn	10 46 52.0	-0.7
KTRM	Thompson Ridge	1.85	47		Pn	10 46 52.4	-0.8
GNAM	Navarro Ridge	1.90	140		Pn	10 46 52.2	-1.5
O02D	Mt. Diablo Mer	1.90	104		Pn	10 46 53.6	-0.3
O02D	Mt. Diablo Mer	1.90	104	P	Pn	10 46 53.6	-0.3
	baz=285,SNR=350						
O02D				S	Sn	10 47 17.6	0.0
	baz=285						
L02E	Cave Junction	1.91	38		Pn	10 46 53.4	-0.6
L02E	Cave Junction	1.91	38	P	Pn	10 46 53.3	-0.6
	baz=221,SNR=40						
L02E				S	Sn	10 47 16.2	-1.5
	baz=221						
M02C	Callahan	1.91	67		Pn	10 46 53.5	-0.6
M02C	Callahan	1.91	67	P	Pn	10 46 53.4	-0.6
	baz=249,SNR=24						
M02C				S	Sn	10 47 17.7	-0.2
	baz=249						
N02D	Trinity Center	1.91	80		Pn	10 46 53.5	-0.6
N02D	Trinity Center	1.91	80	P	Pn	10 46 53.4	-0.6
	baz=262,SNR=50						
LBKM	Bonanza King	1.96	77		Pn	10 46 54.3	-0.4
WDC	Whiskeytown Da	2.02	92		Pn	10 46 55.0	-0.4
GHOM	Hamilton Openi	2.06	141		Pn	10 46 54.6	-1.4
GVV	Valley View	2.13	114		Pn	10 46 56.6	-0.4
GASB	Alder Springs	2.15	117		Pn	10 46 56.7	-0.7
YBH	Yreka Blue Hor	2.15	60	Pn	Pn	10 46 57.1	-0.3
	6.5nm,0.3s,baz=259,slow=12,SNR=76						
YBH				Sn	Sn	10 47 24.0	+0.2
	6.2nm,0.3s,baz=335,slow=21,SNR=6.2						
YBH				LR	LR	10 47 37.3	
	comp=Z,84nm,20.3s,baz=280,slow=37						
YBH	Yreka Blue Hor	2.15	60		Pn	10 46 57.2	-0.2
YBH	Yreka Blue Hor	2.15	60	Pn	Pn	10 46 56.9	-0.5
LAMM	Antelope Mount	2.16	63		Pn	10 46 57.2	-0.2
LCSM	College of the	2.25	70		Pn	10 46 58.7	+0.1
KEBM	Edson Butte	2.29	16		Pn	10 46 58.4	-0.9
GSNM	Snow Mountain	2.32	138		Pn	10 46 58.5	-1.0
K02D	Willamette Mer	2.33	29	P	Pn	10 46 59.3	-0.4
	baz=212,SNR=538						
K02D				S	Sn	10 47 25.6	-2.4
	baz=212						
GHLM	Highland Sprin	2.34	133		Pn	10 46 58.8	-1.0
HOPS	Hopland Field	2.34	135		Pn	10 46 58.7	-1.1
LTCM	Tuscan Springs	2.39	100		Pn	10 47 00.5	0.0
B040	Montague	2.39	60		Pn	10 47 00.8	+0.2
GCK	Clark Valley	2.40	117		Pn	10 47 01.0	+0.4
LSHM	Sage Hen Hill	2.40	86		Pn	10 47 00.7	-0.1
M03C	McCloud	2.40	74		Pn	10 47 01.5	+0.7
LMPM	Military Pass	2.43	69		Pn	10 47 02.6	+1.3
LHEM	Herd Peak	2.44	66		Pn	10 47 02.2	+0.8
GCVM	Cloverdale	2.54	138		Pn	10 47 01.7	-0.8
GACM	Adobe Creek	2.54	134		Pn	10 47 02.0	-0.7
HUMO	Hull Mountain	2.56	40		Pn	10 47 02.5	-0.4
GSSM	Skaggs Springs	2.59	139		Pn	10 47 01.9	-1.3
LBFM	Black Fox Moun	2.59	74		Pn	10 47 04.3	+0.8
GFC	Funks Creek	2.60	120		Pn	10 47 04.1	+0.7
LDBM	Digger Butte	2.61	94		Pn	10 47 03.2	-0.5
O03E	Paynes Creek	2.62	97		Pn	10 47 03.2	-0.5
O03E	Paynes Creek	2.62	97	P	Pn	10 47 03.1	-0.5
	baz=279,SNR=45						
O03E				S	Sn	10 47 35.1	-0.1
	baz=279						
J01E	Myrtle Point	2.66	20	P	Pn	10 47 04.7	+0.5
	baz=203						
J01E				S	Sn	10 47 34.2	-2.0
	baz=203						
L04D	Klamath Falls	2.67	54	P	Pn	10 47 05.7	+1.2
	baz=236,SNR=431						
L04D				S	Sb	10 47 39.3	-2.8
	baz=236						
M04C	Macdoel	2.77	65	P	Pn	10 47 06.9	+1.1
	baz=248,SNR=45						
ORV	Oroville	3.04	110		Pn	10 47 08.5	-1.0
K04D	Chiloquin, OR	3.23	52	P	Pn	10 47 13.9	+1.7
	baz=235,SNR=41						
I03D	Drain, OR	3.32	24	P	Pn	10 47 13.8	+0.5
	baz=206,SNR=64						
I03D				S	Sn	10 47 52.0	-0.5
	baz=206						
J04D	Umpqua Nationa	3.45	41	P	Pn	10 47 17.3	+2.0
	baz=224,SNR=29						
I02D	Swisshome	3.58	16	P	Pn	10 47 17.4	+0.6
	baz=198						
I02D				S	Sn	10 47 56.0	-2.7
	baz=198						
AFDM	Forest Hills D	3.68	117		Pn	10 47 17.8	-0.5
I04A	Tendick Farm,	3.74	33	P	Pn	10 47 20.6	+1.5
	baz=215,SNR=12						
I04A				S	Sn	10 48 03.3	+0.3
	baz=215						
BEKR	Beckworth	3.79	101		Pn	10 47 20.0	+0.1
MOD	Modoc Plateau	3.89	70		Pn	10 47 21.3	0.0
J05D	Fort Rock, OR	3.94	47	P	Pn	10 47 23.9	+1.9
	baz=230,SNR=65						
H04D	Lebanon	4.26	24	P	Pn	10 47 27.5	+1.4
	baz=207,SNR=13						
H04D				S	Sn	10 48 15.6	+0.1
	baz=207						
PINE	Pine Mountain	4.44	44		Pn	10 47 30.2	+1.3
VCNR	Virginia City	4.47	106		Pn	10 47 30.6	+1.2
CMB	Columbia Colle	4.56	124		Pn	10 47 31.4	+1.0
PNTR	Pine Nut	4.58	108		Pn	10 47 32.2	+1.3
I05D	Terrebonne, OR	4.64	37	P	Pn	10 47 33.2	+1.7
	baz=220,SNR=7.8						
G03D	McMinnville, O	4.75	17	S	Sn	10 48 26.9	-0.9
	baz=199						
YERR	Yerington	4.88	108		Pn	10 47 36.0	+1.0
G05D	Wamic, OR	5.38	31	P	Pn	10 47 44.0	+2.4
	baz=214,SNR=6.4						
I07A	Izee	5.42	49		Pn	10 47 44.7	+2.4
G06A	Carlson Farm,	5.66	35		Pn	10 47 48.0	+2.5
NVAR	Mina Array Bea	5.78	111	Pn	Pn	10 47 48.1	+0.9
	1.4nm,0.3s,baz=244,slow=30,SNR=34						
NVAR	Mina Array Bea	5.78	111		Pn	10 47 47.7	+0.4
G08A	Pilot Rock	6.50	43		Pn	10 48 00.1	+3.0
HAWA	Hanford	7.04	34		Pn	10 48 06.6	+2.2
BMO	Blue Mountains	7.15	52		Pn	10 48 08.9	+2.9
ISA	Isabella, Lake	7.28	131		Pn	10 48 09.5	+1.7
ISA	Isabella, Lake	7.28	131	P	Pn	10 48 09.9	+2.1
	baz=315						
MFID	Camas Ranch	7.49	65		Pn	10 48 12.3	+1.6
ELK	Elko	7.56	86	Pn	Pn	10 48 13.6	+1.7
	0.1nm,0.3s,baz=290,slow=15,SNR=3.1						
R11A	Troy Canyon, C	7.78	104	P	Pn	10 48 16.1	+1.3
	baz=290						
F10A	Beach Ranch, E	7.86	45		Pn	10 48 19.3	+3.6
PFO	Pinyon Flats O	9.91	133	Pn	Pn	10 48 44.7	+0.8
	0.4nm,0.3s,baz=327,slow=13,SNR=8.8						
PFO	Pinyon Flats O	9.91	133	P	Pn	10 48 45.3	+1.4
	baz=318						
JTMT	Jette	10.55	44		Pn	10 48 53.4	+0.8
YHL	Hebgen Lake	11.12	63	Pn	Pn	10 49 02.7	+2.2
PDAR	Pinedale Array	11.88	75	Pn	Pn	10 49 13.8	+3.0
	0.1nm,0.3s,baz=290,slow=8.7,SNR=6.8						
PDAR	Pinedale Array	11.88	75		Pn	10 49 12.8	+1.9
ANMO	Albuquerque	15.86	105	Pn	P	10 50 06.7	-1.8
	0.0nm,0.3s,baz=313,slow=9.6,SNR=3.8						
TXAR	Lajitas Array	20.89	116	P	Pn	10 51 06.2	-0.1
	1.1nm,0.9s,baz=306,slow=7.7,SNR=9.9						
TXAR	Lajitas Array	20.89	116	P	P	10 51 04.3	+0.6
ULM	Lac du Bonnet	22.56	55	P	P	10 51 21.6	+0.3
	4.9nm,0.8s,baz=261,slow=9.6,SNR=15						
ULM	Lac du Bonnet	22.56	55	P	P	10 51 22.0	+0.7
YKA	Yellowknife Ar	22.76	13	P	P	10 51 24.1	+0.8
	0.3nm,0.7s,baz=202,slow=10,SNR=5.0						
ILAR	Eielson Array	27.20	340	P	P	10 52 06.1	+1.5
	0.2nm,0.6s,baz=141,slow=5.8,SNR=2.7						

IDC ***10*** *11:17:19.2±0.9, 31°.69N×104°.35E, h0^{km}, mb3.4/7, mb1 3.7/8, mb1mx3.4/66, mbtmp3.5/8, ML3.9/1, MS3.7/1, Ms1 3.7/1, ms1mx2.8/38, Error ellipse: s-maj=37.9km s-min=18.4km az=59.0*

BJI ***10*** *11:17:22.7±0.0, 31°.64N×104°.03E, h22^{km}, ML3.7/12*

ISC 10 11:17:21.2±0.7**, 31°.63N**±0°.05×**104°.09E**±0°.08**, h10**^{km}**, n14,** σ**2^{s}.49**/17**, mb3.5**/6**, 1D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	Chengdu	0.77	201	⇓iPg	Pg	11 17 36.4	+0.3
CD2				Sg	Sg	11 17 47.0	+0.8
CD2				smax	smax		
	comp=N,2μm,0.6s						
CD2				smax	smax		
	comp=E,3μm,0.5s						
XAN	Xi'an	4.73	58	Pn	Pn	11 18 35.1	+2.5
XAN				Sn	Sn	11 19 22.2	-5.3
XAN				Sg	Sb	11 19 46.7	+5.5
XAN				smax	smax		
	comp=N,83nm,0.8s						
XAN				smax	smax		
	comp=E,100nm,0.7s						
GYA	Guiyang	5.63	156	Pn	Pn	11 18 45.0	-0.1
GYA				Pg	Pb	11 19 00.5	+0.9
GYA				Sn	Sn	11 19 48.1	-1.8
GYA				smax	smax		
	comp=N,80nm,0.7s						
GYA				smax	smax		
	comp=E,60nm,0.9s						
WHN	Wuhan	8.87	94	P	Pn	11 19 38.6	+9.1
CMAR	Chiang Mai Arr	13.92	201	Pn	Pn	11 20 40.1	+1.5
	0.2nm,0.3s,baz=9.0,slow=14,SNR=4.4						
WMQ	Urumqi	17.74	318	eP	Pn	11 21 28.1	-0.3
KSRS	Korea Array	20.45	67	P	P	11 21 56.0	-2.9
	0.4nm,0.5s,baz=260,slow=11,SNR=2.5						
MKAR	Makanchi Array	22.57	318	P	P	11 22 23.2	+1.5
	0.4nm,0.5s,baz=123,slow=13,SNR=2.7						
ZALV	Zalesovo Beam	26.24	334	P	P	11 22 56.1	-0.2
	0.5nm,0.3s,baz=122,slow=7.2,SNR=3.9						
KURBB	Kurchatov Arra	26.81	322	P	P	11 23 01.2	-0.2
	0.5nm,0.7s,baz=126,slow=9.4,SNR=3.7						
KLR	Kul'dur	27.21	42	LR	LR	11 35 30.8	
	comp=Z,143nm,18.4s,baz=340,slow=40						
WRA	Warramunga Arr	58.92	146	P	P	11 27 19.8	-1.0
	0.4nm,0.4s,baz=338,slow=7.5,SNR=14						
ASAR	Alice Springs	61.95	149	P	P	11 27 40.4	-1.1
	0.2nm,0.4s,baz=336,slow=6.7,SNR=11						
YKA	Yellowknife Ar	81.19	17	P	P	11 29 35.4	-1.4
	0.1nm,0.5s,baz=328,slow=4.6,SNR=3.5						

NEIC ***10*** *11:20:24.5±1.5, 3°.91N±0°.07×96°.96E±0°.08, h109^{km}±7^{km}, mb4.2/19, Error ellipse: s-maj=13.7km s-min=8.1km az=53.0*

DJA ***10*** *11:20:25.5±0.6, 4°N±3°×9°7E±°, h72^{km}±9^{km}, M3.7/7, MLv3.7/7*

IDC ***10*** *11:20:29.1±7.7, 3°.89N×96°.80E, h151^{km}±69^{km}, mb3.7/11, mb1 3.8/12, mb1mx3.4/58, mbtmp4.1/12, MS3.2/1, Ms1 3.2/1, ms1mx2.7/41, Error ellipse: s-maj=48.3km s-min=13.9km az=56.0*

ISC 10 11:20:23.5±0.7**, 3°.83N**±0°.04×**96°.92E**±0°.05**, h104**^{km}±6^{km}**, n55,** σ**1^{s}.04**/57**, mb4.2**/20**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPTI		0.62	155	P	Pn	11 20 40.4	-0.2
TPTI				S	Sn	11 20 52.8	-0.6
MLSI	Meulaboh, Aceh	0.67	310	P	Pn	11 20 40.4	-0.6
KCSI	Kotacane, Aceh	0.91	110	P	Pn	11 20 44.0	+0.8
KCSI				S	Sn	11 20 58.3	+0.2
LHMI	Lhok Sumawe	1.39	1	P	Pn	11 20 49.2	+0.6
LHMI				S	Sn	11 21 08.3	+0.7
LHMI	Lhok Sumawe	1.39	1		Pn	11 20 49.1	+0.4
LHMI				Sn	Sn	11 21 08.2	+0.5
SNSI	Sinabang, Aceh	1.53	203	P	Pn	11 20 50.2	-0.1
SNSI				S	Sn	11 21 10.7	+0.1
KULM	Kulim	4.00	69		Pn	11 21 23.3	+0.7
KULM				Sn	Sn	11 22 07.7	-0.9
IPM	Ipoh	4.15	81	Pn	Pn	11 21 25.9	+1.1
IPM				Sn	Sn	11 22 09.0	-3.4
BKNI	Bangkinang	5.39	130	Pn	Pn	11 21 43.8	+2.2
SDSI	Sungai Dareh	6.54	136	P	Pn	11 21 58.5	+1.4
PBA	Port Blair	8.80	332	Pn	Pn	11 22 28.6	+0.6
MNAI	Manna	10.13	143	Pn	Pn	11 22 45.2	-0.8
MDSI	Maura Dua	10.99	139	P	Pn	11 22 56.0	-1.7
PBKT	Sadao Pong	13.27	17	P	P	11 23 31.7	-2.1
CM31	Chiang Mai Arr	14.67	8	Pn	Pn	11 23 46.0	+0.1
CMAR	Chiang Mai Arr	14.67	8	P	P	11 23 50.8	+1.4
	0.6nm,0.3s,baz=199,slow=11,SNR=20						
CHTO	Chiang Mai	15.02	7	Pn	Pn	11 23 50.7	+0.3
SHL	Shillong	22.15	348	P	P	11 25 08.9	-2.2
SHL				IAmb	IAmb	11 25 11.4	
	comp=Z,7.0nm,0.7s						
H08S2	Diego Garcia H	26.90	245	T	T	11 52 16.0	
	baz=67,slow=76,SNR=9.6						
H08S3	Diego Garcia H	26.90	245	T	T	11 52 13.7	
	baz=67,slow=76,SNR=47						
H08S1	Diego Carcia H	26.92	245	T	T	11 52 16.6	
	baz=67,slow=76,SNR=9.1						
XAN	Xi'an	32.07	19	P	P	11 26 40.6	0.0
XAN				IAmb	IAmb	11 26 45.5	
	comp=Z,4.5nm,0.9s						
FITZ	Fitzroy Crossi	35.73	128	LR	LR	11 43 42.7	
	comp=Z,32nm,18.0s,baz=325,slow=39						
KNRA	Kununurra	37.00	122	P	P	11 27 23.7	+0.4
ARSB	Arslanbob	43.07	333	P	P	11 28 12.2	-1.2
ARSB				IAmb	IAmb	11 28 13.3	
	comp=Z,3.6nm,0.8s						
WB0	Warramunga Arr	43.66	124	P	P	11 28 19.3	+1.1
WB0				IAmb	IAmb	11 28 20.4	
	comp=Z,8.3nm,0.7s						
WRA	Warramunga Arr	43.70	124	P	P	11 28 20.3	+1.8
	comp=Z,4.1nm,0.5s,baz=302,slow=9.2,SNR=54						
WB2	Warramunga Arr	43.71	124	P	P	11 28 19.8	+1.1
WR0	Warramunga Arr	43.87	124	P	P	11 28 21.2	+1.3
SONM	Songino Array	44.59	9	P	P	11 28 26.0	+0.6
	comp=Z,0.6nm,0.3s,baz=187,slow=9.2,SNR=5.3						
SONM	Songino Array	44.59	9	P	P	11 28 25.6	+0.2
MK31	Makanchi Array	44.64	346	P	P	11 28 25.4	-0.3
MKAR	Makanchi Array	44.64	346	P	P	11 28 25.1	-0.6
	comp=Z,0.9nm,0.3s,baz=152,slow=8.8,SNR=43						
MAKZ	Makanchi	44.73	345	P	P	11 28 25.9	-0.5
MAKZ				IAmb	IAmb	11 28 26.4	
	comp=Z,2.5nm,0.4s						

ASAR	Alice Springs	45.23	129	P	P	11 28 32.3	+1.6
	comp=Z,0.6nm,0.7s,baz=303,slow=7.6,SNR=11						
ASAR	Alice Springs	45.23	129	P	P	11 28 32.2	+1.4
AS31	Alice Springs	45.23	129	P	P	11 28 31.9	+1.1
KK31	Karatay Array	45.59	333	P	P	11 28 33.9	+0.6
KKAR	Karatay Array	45.59	333	P	P	11 28 33.8	+0.5
KURBB	Kurchatov Arra	49.13	345	P	P	11 29 00.3	-0.3
	comp=Z,1.0nm,0.4s,baz=165,slow=6.6,SNR=5.5						
ZAA0	Zalesovo Array	50.93	351	P	P	11 29 14.1	0.0
ZAA0				IAmb	IAmb	11 29 17.0	
	comp=Z,4.5nm,1.5s						
ZALV	Zalesovo Beam	50.93	351	P	P	11 29 13.9	-0.2
	comp=Z,1.3nm,0.3s,baz=173,slow=6.0,SNR=5.2						
ZALV	Zalesovo Beam	50.93	351	P	P	11 29 13.7	-0.4
RAYN	Ar Rayn	53.30	297	P	P	11 29 31.7	-0.6
RAYN				IAmb	IAmb	11 29 34.8	
	comp=Z,3.0nm,0.9s						
BVAR	Borovoye Array	53.69	340	P	P	11 29 34.0	-0.5
	comp=Z,0.8nm,0.4s,baz=148,slow=8.7,SNR=7.4						
BRVK	Borovoye	53.75	340	P	P	11 29 34.5	-0.5
BRVK				IAmb	IAmb	11 29 34.6	
	comp=Z,4.7nm,1.5s						
ABKAR	Akbulak array	55.08	331	P	P	11 29 44.7	0.0
BRTR	Keskin Array B	67.15	312	P	P	11 31 06.5	-0.1
	comp=Z,0.8nm,0.7s,baz=130,slow=8.4,SNR=4.5						
BRTR	Keskin Array B	67.15	312	P	P	11 31 07.0	+0.3
TIXI	Tiksi	70.66	10	P	P	11 31 26.5	-1.0
SEY	Seymchan	71.47	23	P	P	11 31 33.0	+0.4
	comp=Z,0.7nm,0.4s,baz=256,slow=19,SNR=7.3						
BUR08	Bucovina Ar. S	74.90	318	P	P	11 31 54.0	+0.8
BUR08				IAmb	IAmb	11 32 04.1	
	comp=Z,3.5nm,1.4s						
LVZ	Lovozero	76.28	340	P	P	11 32 00.4	-0.2
FINES	FINESS Array B	77.55	332	P	P	11 32 07.9	+0.1
	comp=Z,6.0nm,1.0s,baz=90,slow=5.6,SNR=3.3						
ARCES	ARCESS Array B	79.98	340	P	P	11 32 21.5	+0.5
	comp=Z,2.6nm,0.8s,baz=91,slow=5.3,SNR=7.6						

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*IDC **10** 11:31:01.8±3.3, 14°.99S×170°.26E, h650^{km}±29^{km}, mb3.1/6, mb1 3.2/7, mb1mx2.9/34, mbtmp4.2/7, Error ellipse: s-maj=47.0km s-min=21.3km az=24.0*

ISC 10 11:31:01.6±1.7, **14°.9S**±0°.2×**170°.3E**±0°.2, **h650**^{km}, **n9**, σ**0^s.46**/12, **mb4.1**/6, **Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.99	207	P	P	11 33 02.7	+0.1
	1.5nm,0.3s,baz=56,slow=15,SNR=11						
CTA	Charters Tower	23.50	254	P	P	11 35 24.4	0.0
	7.2nm,1.1s,baz=94,slow=11,SNR=3.4						
URZ	Urewera	24.00	167	P	P	11 35 28.4	-0.1
	16nm,1.2s,baz=304,slow=3.6,SNR=2.8						
STKA	Stephens Creek	31.15	232	P	P	11 36 30.7	+0.2
	2.3nm,0.4s,baz=66,slow=9.0,SNR=11						
WRA	Warramunga Arr	34.63	256	P	P	11 36 59.0	-0.9
	0.5nm,0.3s,baz=82,slow=6.7,SNR=14						
WRA				PcP	PcP	11 39 14.3	-0.3
	0.1nm,0.3s,baz=89,slow=3.6,SNR=2.8						
ASAR	Alice Springs	35.36	250	P	P	11 37 05.3	-0.5
	1.9nm,0.4s,baz=76,slow=10.0,SNR=78						
ASAR				PcP	PcP	11 39 16.4	-0.4
	0.3nm,0.9s,baz=80,slow=2.6,SNR=5.0						
ASAR				ScP	ScP	11 42 02.0	-0.3
	0.4nm,0.6s,baz=100,slow=3.6,SNR=7.5						
FITZ	Fitzroy Crossi	42.87	259	P	P	11 38 06.3	+0.6
	0.6nm,0.4s,baz=89,slow=12,SNR=3.8						
ARCES	ARCESS Array B	121.17	346	PKP	PKPdf	11 48 41.9	+0.2
	3.8nm,1.0s,baz=60,slow=2.3,SNR=8.0						
TORD	Torodi Ar. Bea	168.81	262	PKPab	PKPab	11 51 12.6	+0.3
	0.3nm,0.4s,baz=90,slow=2.9,SNR=2.3						

IDC 10 11:45:12.1±2.8, **1°.54N**×**126°.78E**, **h0**^{km}, **mb3.2**/3, **mb1 3.4**/3, **mb1mx3.2**/42, **mbtmp3.2**/3, **MS3.4**/2, **Ms1 3.4**/2, **ms1mx2.8**/18, **Error ellipse: s-maj=266.6km s-min=28.0km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.60	161	P	P	11 50 13.7	-0.9
	0.3nm,0.3s,baz=339,slow=11,SNR=11						
ASAR	Alice Springs	26.00	165	P	P	11 50 47.6	+0.7
	0.4nm,0.9s,baz=344,slow=9.3,SNR=7.5						
KSRS	Korea Array	35.75	2	LR	LR	12 05 04.4	
	comp=Z,52nm,21.9s,baz=346,slow=33						
MJAR	Matsushiro Arr	36.40	16	LR	LR	12 07 36.6	
	comp=Z,55nm,19.3s,baz=55,slow=37						
MKAR	Makanchi Array	59.38	326	P	P	11 55 16.3	-0.1
	0.1nm,0.4s,baz=116,slow=6.6,SNR=2.8						

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*ATA **10** 11:48:52.5±3.1, 39°.19N×41°.75E, h0^{km}±33^{km}, ML2.7, MW4.1*

*ISK **10** 11:49:05.6, 40°.00N×41°.76E, h5^{km}, ML1.9/4*

*DDA **10** 11:49:06.1, 40°.04N×41°.84E, h8^{km}, ML1.5*

ISC 10 11:49:05.8±1.0, **40°.00N**±0°.03×**41°.76E**±0°.03, **h4**^{km}±9^{km}, **n17**, σ**0^s.54**/26, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOPR	Koprukoy-ERZUR	0.07	98	PG	Pg	11 49 07.5	0.0
KOPR				SG	Sg	11 49 09.2	+0.6
HOMI	Horasan	0.12	68	*e*P	Pg	11 49 07.9	-0.4
HOMI				IAML		11 49 11.7	
	comp=Z,640nm,0.2s						
HOMI	Horasan	0.12	68	*i* P	Pg	11 49 08.0	-0.4
HOMI				*i* S	Sg	11 49 09.5	-0.5
HOMI				IAML		11 49 11.0	
	comp=E,2µm,0.3s						
HOMI				IAML		11 49 11.0	
	comp=N,2µm,0.3s						
AKDA	Akdag	0.32	288	*e*P	Pb	11 49 13.9	-0.4
AKDA				IAML		11 49 25.9	
	comp=Z,66nm,0.3s						
AKDA	Akdag	0.32	288	*i* P	Pb	11 49 13.9	-0.4
EATA	Eleskirt	0.58	104	*e*P	Pg	11 49 11.8	-5.2
EATA				*e*S	Sg	11 49 25.4	+0.9
EATA				IAML		11 49 25.5	
	comp=Z,7.0nm,0.4s						
EATA	Eleskirt	0.58	104	*i* P	Pg	11 49 16.4	-0.5
EATA				*i* S	Sg	11 49 24.7	+0.2
EATA				IAML		11 49 25.0	
	comp=E,41nm,0.3s						
EATA				IAML		11 49 27.0	
	comp=N,24nm,0.2s						
SENK	Senkaya-Erzuru	0.72	39	PG	Pg	11 49 20.1	+0.5
SENK				SG	Sb	11 49 30.6	-0.7
KRIK	Erzurum-spir	0.72	298	*e*P	Pg	11 49 19.7	0.0
KRIK				IAML		11 49 37.6	
	comp=Z,390nm,0.3s						
KRIK	Erzurum-spir	0.72	298	*i* P	Pn	11 49 23.6	+0.6
DDEM	Demirkent	0.89	359	*i* P	Pg	11 49 23.1	+0.2
DDEM				IAML		11 49 38.0	
	comp=N,74nm,0.3s						
DDEM				IAML		11 49 39.0	
	comp=E,87nm,0.3s						
DBAD	Bademkaya	1.02	357	*i* P	Pg	11 49 25.4	+0.1
DBAD				*i* S	Sg	11 49 39.0	+0.4
DBAD				IAML		11 49 41.0	
	comp=E,15nm,0.8s						
DBAD				IAML		11 49 46.0	
	comp=N,17nm,0.7s						
AGRB	Hanur-Agry	1.04	114	PG	Pg	11 49 25.9	+0.2
AGRB				SG	Sb	11 49 40.8	+0.3
DAGI	Agillar	1.08	6	*i* P	Pg	11 49 25.8	-0.8
DAGI				*i* S	Sg	11 49 39.6	-1.0
DAGI				IAML		11 49 43.0	
	comp=E,13nm,0.4s						
DAGI				IAML		11 49 43.0	
	comp=N,13nm,0.6s						
MUSM	Mu-Merkez	1.29	189	*i* P	Pg	11 49 30.1	-0.4
MUSM				IAML		11 49 44.0	
	comp=E,2.4nm,1.0s						
MUSM				*i* S	Sn	11 49 48.3	-0.2
CHOM	Cayeli-Rize	1.33	325	PN	Pg	11 49 31.6	+0.2
BCA	Borcka	1.45	356	PN	Pb	11 49 33.2	-0.1
BCA				SN	Sg	11 49 53.2	+0.9

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*IDC **10** 12:00:52.8±6.7, 35°.61N×142°.66E, h0^{km}, mb3.6/2, mb1 3.4/3, mb1mx3.2/49, mbtmp3.4/3, ML2.4/1, Error ellipse: s-maj=163.4km s-min=63.0km az=180.0*

*JMA **10** 12:00:58.2±0.1, 36°.20N×142°.53E, h62^{km}, M3.0*

ISC 10 12:00:59.4±1.7, **36°.23N**±0°.06×**142°.39E**±0°.09, **h18**^{km}, **n21**, σ**1^s.18**/24, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	1.35	247	P	Pn	12 01 22.8	-0.5
JHYU	Hitachinakayam	1.46	275	P	Pn	12 01 24.5	-0.3
JHYU				*e*S	Sb	12 01 44.2	0.0
JHO	Hitachi	1.52	285	P	Pn	12 01 25.2	-0.4
JHO				*e*S	Sb	12 01 45.6	-0.3
ONAJ	Iwakimizuishiy	1.55	305	P	Pn	12 01 25.6	-0.5
ONAJ				*e*S	Sn	12 01 46.1	+0.3
JFK	Kawauchi	1.66	314	P	Pn	12 01 27.0	-0.7
JFK				*e*S	Sn	12 01 48.4	-0.2
BSO1	Boso 1	1.95	217	P	Pn	12 01 30.4	-0.7
JFT	Otama	2.09	309	P	Pn	12 01 34.1	+0.6
JFT				*e*S	Sn	12 02 00.6	+1.5
JAG	Ashikaga	2.38	276	P	Pn	12 01 37.7	+0.2
JAG				S	Sn	12 02 07.0	+0.8
JRY	Ryogami san	2.83	267	P	Pn	12 01 43.5	-0.2
JOD2	Odawara 2	2.85	251	P	Pn	12 01 44.1	+0.1
JOD2				*e*S	Sn	12 02 18.7	+0.8
JMK	Ichinoseki	2.87	342	*e*S	Sn	12 02 17.8	-0.5
MJAR	Matsushiro Arr	3.39	277	Pn	Pn	12 01 52.0	+0.7
	0.3nm,0.3s,baz=106,slow=14,SNR=15						
MJAR				Sn	Sb	12 02 35.5	-4.2
	0.1nm,0.3s,baz=79,slow=12,SNR=3.6						
MAT	Matsushiro	3.39	277	P	Pn	12 01 52.1	+0.7
MAT				*e*S	Sn	12 02 33.0	+1.9
H11N2	WAKE ISLAND Hy	27.06	121	T	T	12 34 44.7	
	baz=313,slow=75,SNR=10						
H11N1	WAKE ISLAND Hy	27.07	121	T	T	12 34 49.9	
	baz=313,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	27.08	121	T	T	12 34 47.3	
	baz=313,slow=75,SNR=7.0						
H11S1	WAKE ISLAND Hy	27.77	123	T	T	12 35 42.2	
	baz=314,slow=76,SNR=8.1						
H11S3	WAKE ISLAND Hy	27.77	123	T	T	12 35 41.0	
	baz=314,slow=76,SNR=5.0						
H11S2	WAKE ISLAND Hy	27.78	123	T	T	12 35 44.0	
	baz=314,slow=76,SNR=4.5						
SONM	Songino Array	28.89	305	P	P	12 06 57.2	+0.1
	0.5nm,0.5s,baz=113,slow=11,SNR=3.6						
MKAR	Makanchi Array	45.21	303	P	P	12 09 16.1	+0.8
	0.5nm,0.7s,baz=79,slow=7.6,SNR=3.6						

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*IDC **10** 12:11:29.0±3.6, 52°.75N×176°.30W, h165^{km}±31^{km}, mb3.6/7, mb1 3.9/8, mb1mx3.3/61, mbtmp4.0/8, Error ellipse: s-maj=44.2km s-min=17.3km az=148.0*

*NEIC **10** 12:11:28.7±1.3, 52°.19N±0°.10×175°.82W±0°.09, h152^{km}±5^{km}, mb4.2/77, ML3.8/23(AEIC), Error ellipse: s-maj=15.1km s-min=5.8km az=157.0*

*AEIC **10** 12:11:30±2.8, 52°.0N±0°.1×175°.73W±0°.09, h147^{km}±4^{km}, Error ellipse: s-maj=19.9km s-min=6.1km az=164.0*

ISC 10 12:11:28.4±0.6, **52°.20N**±0°.10×**175°.76W**±0°.05, **h152**^{km}±5^{km}, **n100**, σ**1^s.16**/92, **mb4.2**/27, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSTR	Great Sitkin T	0.21	240		Pn	12 11 49.2	+0.1
GSTR				Sn	Sn	12 12 04.2	-0.6
GSMY	Great Sitkin M	0.24	229		Pn	12 11 49.0	-0.1
GSTD	Great Sitkin T	0.28	239		Pn	12 11 49.2	-0.1
GSTD					Sn	12 12 04.8	-0.3
ADAG	Mount Adagdak	0.56	247		Pn	12 11 50.6	+0.3
ADK	Adak	0.65	241		Pn	12 11 50.9	0.0
ADK				Sn	Sn	12 12 07.4	-0.5
KIWB	Kanaga Island	0.93	248	Pn	Pn	12 11 52.6	-0.2
KIKV	Kanaga Island	0.93	250		Pn	12 11 53.1	+0.3
KICM	Kanaga Island	0.93	253		Pn	12 11 53.3	+0.5
KOWE	Korovin West	0.94	79		Pn	12 11 53.5	+0.6
ATKA	Atka Island	0.96	89		Pn	12 11 53.3	+0.2
ATKA				Sn	Sn	12 12 12.1	+0.2
KOKL	Mount Kliuchef	0.97	82		Pn	12 11 53.7	+0.5
KIMD	Kanaga Island	1.01	245		Pn	12 11 53.5	+0.1
KIMD					Sn	12 12 11.2	-1.4
KOFP	Korovin Flat P	1.03	85		Pn	12 11 54.3	+0.6
TAPA	Tanaga Point A	1.32	254		Pn	12 11 56.5	+0.1
TAFP	Tanaga Falls P	1.40	259		Pn	12 11 57.3	+0.1
TAFP					Sn	12 12 18.4	-0.7
TASE	Tanaga Southea	1.45	256		Pn	12 11 57.9	+0.2
UNV	Unalaska Valle	5.83	70	Pn	Pn	12 12 53.4	+0.7
UNV				Sn	Sn	12 13 58.3	-0.3
AKUT	Akutan	6.31	68	Pn	Pn	12 12 59.2	+0.1
AKUT				Sn	Sn	12 14 10.4	+0.1
SII	Sitkinak Islan	13.29	62	Pn	Pn	12 14 31.9	+0.9
ANM	Nome	13.52	19		Pn	12 14 34.5	+0.7
SVW2	Sparrevohn	14.18	43	P	P	12 14 45.4	+0.3
KDAK	Kodiak Island	14.39	58	P	Pn	12 14 42.1	-2.8
	1.2nm,0.3s,baz=286,slow=7.4,SNR=21						
KDAK				S	Sn	12 17 19.7	-4.6
	0.1nm,0.3s,baz=353,slow=19,SNR=4.9						
KDAK	Kodiak Island	14.39	58	Pn	Pn	12 14 42.9	-2.0
TTA	Tatalina	15.02	37		Pn	12 14 53.4	+0.6
TTA				IAmb	IAmb	12 14 58.4	
	comp=Z,15nm,1.2s						
RSO	Redoubt South	15.14	48	P	Pn	12 14 55.8	+1.4
CNPM	China Poot	15.53	52	Pn	Pn	12 14 59.1	+0.1
BRLK	Bradley Lake	15.77	52	Pn	Pn	12 15 01.5	-0.4
SKT	Skwentna	16.30	44	P	P	12 15 10.1	+1.5
SUA	Susitna One	16.43	46	P	Pn	12 15 11.1	+1.0
SUA				IAmb	IAmb	12 15 12.6	
	comp=Z,11nm,0.9s						
PPLA	Purkeypile	16.46	40	P	Pn	12 15 11.7	+1.2
PPLA				IAmb	IAmb	12 15 17.3	
	comp=Z,14nm,0.8s						
SEW	Seward	16.56	51		P	12 15 10.2	-1.1
RDOG	Red Dog Mine	17.08	17	P	P	12 15 17.8	+0.8
RDOG				IAmb	IAmb	12 15 21.0	
	comp=Z,9.9nm,1.1s						
KTH	Kantishna Hill	17.29	39	P	P	12 15 20.4	+1.0
TRF	Thorofare Moun	17.49	40	P	P	12 15 22.2	+0.4
TRF				IAmb	IAmb	12 15 28.6	
	comp=Z,14nm,0.8s						
BPAW	Bear Paw Mtn.	17.54	38	IAmb	IAmb	12 15 25.6	
	comp=Z,10nm,0.8s						
IMAR	Indian Mountai	17.70	30	P	P	12 15 24.9	+1.0
RND	Reindeer	18.04	41	IAmb	IAmb	12 15 44.8	
	comp=Z,16nm,1.1s						
BILL	Bilibino	18.10	338	P	P	12 15 28.6	+0.4
MLY	Manley	18.13	35	P	P	12 15 29.2	+0.6
MLY				IAmb	IAmb	12 15 33.6	
	comp=Z,26nm,1.2s						
MCK	McKinley	18.16	40	IAmb	IAmb	12 15 33.0	
	comp=Z,11nm,0.9s						
WRH	Wood River Hil	18.82	39	IAmb	IAmb	12 15 50.3	
	comp=Z,12nm,1.1s						
MDM	Murphy Dome	19.00	37	IAmb	IAmb	12 15 43.3	
	comp=Z,12nm,0.8s						
PAX	Paxson	19.29	44	IAmb	IAmb	12 15 46.5	
	comp=Z,6.2nm,0.6s						
IL31		19.42	38	P	P	12 15 42.7	+0.1
ILAR	Eielson Array	19.42	38	P	P	12 15 39.9	-2.7
	comp=Z,0.2nm,0.3s,baz=240,slow=9.1,SNR=14						
ILAR	Eielson Array	19.42	38	P	P	12 15 42.8	+0.2
RIDG	Independent Ri	19.82	42	IAmb	IAmb	12 16 00.7	
	comp=Z,11nm,1.2s						
DOT	Dot Lake	20.11	43	P	P	12 15 49.8	-0.3
DOT				IAmb	IAmb	12 15 52.1	
	comp=Z,8.4nm,0.6s						
SCRK	Sand Creek	20.26	42	IAmb	IAmb	12 15 53.4	
	comp=Z,6.8nm,0.7s						
BCAR	Beaver Creek A	20.91	45	P	P	12 15 58.2	-0.4
BMAR	Burnt Mountain	21.51	33	P	P	12 16 04.8	-0.2
YKA	Yellowknife Ar	33.29	48	P	P	12 17 48.9	-2.1
	comp=Z,0.7nm,0.8s,baz=282,slow=7.7,SNR=7.7						
YKA				PcP	PcP	12 20 28.1	-1.1
	comp=Z,0.0nm,0.3s,baz=272,slow=2.5,SNR=4.0						
YKA				ScP	ScP	12 23 55.5	-3.5
	comp=Z,0.2nm,0.7s,baz=286,slow=4.1,SNR=4.3						
D08A	Wollman Farm,	36.36	75	IAmb	IAmb	12 18 19.1	
	comp=Z,5.5nm,0.6s						
NEW	Newport	36.83	72	P	P	12 18 21.7	+0.2
NEW				IAmb	IAmb	12 18 23.2	
	comp=Z,6.3nm,0.9s						
I07A	Izee	37.55	79	IAmb	IAmb	12 18 30.3	
	comp=Z,4.8nm,0.9s						
MOD	Modoc Plateau	38.29	83	P	P	12 18 35.8	+1.9
WVOR	Wild Horse Val	39.00	81	P	P	12 18 41.6	+1.7
WVOR				IAmb	IAmb	12 18 42.4	
	comp=Z,4.3nm,0.8s						
NVAR	Mina Array Bea	41.59	86	P	P	12 19 03.2	+1.8
	comp=Z,1.3nm,0.7s,baz=293,slow=7.9,SNR=9.9						
NVAR	Mina Array Bea	41.59	86	P	P	12 19 03.0	+1.6
H17A	Grant Village	42.72	74	IAmb	IAmb	12 19 13.1	
	comp=Z,4.7nm,0.8s						
LKWY	Lake	42.73	73	P	P	12 19 11.2	+0.6
LKWY				IAmb	IAmb	12 19 12.9	
	comp=Z,8.6nm,1.0s						
FLWY	Flagg Ranch	42.83	74	IAmb	IAmb	12 19 13.6	
	comp=Z,5.6nm,0.8s						
TPNV	Topopah Spring	43.79	86	P	P	12 19 20.1	+1.1
TPNV				IAmb	IAmb	12 19 21.5	
	comp=Z,5.2nm,0.8s						
DUG	Dugway, Tooele	43.86	80	P	P	12 19 20.7	+1.2
DUG				IAmb	IAmb	12 19 21.6	
	comp=Z,11nm,1.4s						
BW06	Boulder Array	44.27	75	IAmb	IAmb	12 19 24.0	
	comp=Z,7.8nm,0.7s						
PD31	Pinedale Array	44.27	75	IAmb	IAmb	12 19 24.0	
	comp=Z,7.1nm,0.7s						
PDAR	Pinedale Array	44.27	75	P	P	12 19 23.4	+0.6
	comp=Z,7.0nm,0.6s,baz=306,slow=3.8,SNR=74						
PDAR	Pinedale Array	44.27	75	P	P	12 19 22.7	-0.1
GSC	Goldstone, Bar	44.52	88	P	P	12 19 25.8	+1.1
MSU	Marysvale	45.29	81	P	P	12 19 31.3	+0.4
KNB	Kanab	45.85	83	P	P	12 19 36.5	+1.3
K22A	Casper	46.13	73	IAmb	IAmb	12 19 38.0	
	comp=Z,4.8nm,0.8s						
U15A	North Rim	46.55	84	IAmb	IAmb	12 19 43.5	
	comp=Z,5.9nm,0.7s						
WUAZ	Wupatki	47.71	84	IAmb	IAmb	12 19 52.1	
	comp=Z,3.9nm,0.8s						
S22A	4UR Ranch, Cre	49.02	78	IAmb	IAmb	12 20 02.0	
	comp=Z,5.8nm,1.4s						
HHC	Hu-ho-hao-te	49.26	287	*e*P	P	12 20 01.6	+0.1
SDCO	Great Sand Dun	49.82	78	IAmb	IAmb	12 20 07.8	
	comp=Z,3.5nm,0.8s						
MNTX	Cornudas Mount	53.97	83	IAmb	IAmb	12 20 38.4	
	comp=Z,3.1nm,0.8s						
WHN	Wuhan	54.47	275	P	P	12 20 41.9	+1.9
TXAR	Lajitas Array	56.68	84	P	P	12 20 56.5	+0.7
	comp=Z,1.3nm,0.7s,baz=298,slow=4.6,SNR=22						
TXAR	Lajitas Array	56.68	84	P	P	12 20 56.3	+0.4
MIAR	Mount Ida	59.07	72	IAmb	IAmb	12 21 12.9	
	comp=Z,4.5nm,0.8s						
WLAR	White Oak Lake	59.95	73	P	P	12 21 18.8	+0.4
WMQ	Urumqi	60.46	304	*e*P	P	12 21 23.4	+1.6
WMQ				pP	pwP	12 21 59.4	-1.9
Z50A	Ashland	64.43	68	P	P	12 21 47.4	-0.8
HNR	Honiara	64.84	207	P	P	12 21 50.3	-0.6
KMI	Kunming	65.46	280	P	P	12 21 55.2	-0.1
HODGE	Hodges	65.78	65	P	P	12 21 56.7	-0.2
JSC	Jenkinsville	66.30	64	P	P	12 22 00.2	-0.1
JSC				IAmb	IAmb	12 22 13.7	
	comp=Z,2.5nm,0.9s						
KSH	Kashi	69.49	308	P	P	12 22 22.6	+2.3
KSH				pP	pwP	12 23 00.8	+0.2
KSH				S	S	12 31 14.1	-1.3
KSH				ScS	SKSac	12 32 03.6	-2.5
MTN	Manton Dam	79.26	233	P	P	12 23 16.5	-0.2
WB0	Warramunga Arr	83.75	226	P	P	12 23 39.8	-0.5
WB0				IAmb	IAmb	12 23 43.9	
	comp=Z,6.8nm,1.3s						
WB2	Warramunga Arr	83.92	226	P	P	12 23 40.6	-0.5
WRA	Warramunga Arr	83.93	226	P	P	12 23 40.4	-0.8
	comp=Z,0.8nm,0.5s,baz=32,slow=5.9,SNR=9.8						
FITZ	Fitzroy Crossi	86.46	234	P	P	12 23 53.8	0.0
FITZ				IAmb	IAmb	12 24 11.4	
	comp=Z,8.6nm,1.5s						
AS31	Alice Springs	87.38	225	P	P	12 23 58.2	+0.1
ASAR	Alice Springs	87.39	225	P	P	12 23 58.4	+0.2
	comp=Z,1.5nm,0.6s,baz=23,slow=5.5,SNR=38						
ASAR	Alice Springs	87.39	225	P	P	12 23 58.1	-0.1
STKA	Stephens Creek	91.66	215	P	P	12 24 18.0	+0.1
	comp=Z,0.7nm,0.8s,baz=351,slow=2.8,SNR=2.9						
STKA	Stephens Creek	91.66	215	P	P	12 24 18.1	+0.2

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*KRNET **10** 12:19:20.6±0.1, 41°.34N×71°.85E, h15^{km}, mb2.6*

*NNC **10** 12:19:24.8±2.0, 41°.42N×71°.89E, h3^{km}±13^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=20.0km s-min=8.3km az=175.0*

*SOME **10** 12:19:26.5, 41°.57N×71°.92E, h5^{km}*

ISC 10 12:19:22.9±1.0, **41°.30N**±0°.04×**71°.93E**±0°.03, **h10**^{km}, **n38**, σ**1^s.84**/63, **21C-9D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	Arkit	0.49	3	⇑*e*P	Pg	12 19 29.7	-2.8
	baz=12						
ARK				⇑*i*S	Sg	12 19 36.0	-3.1
	baz=12						
ARSB	Arslanbob	0.79	88	⇑*i*P	Pg	12 19 36.9	-1.3
	baz=91						
ARSB				⇑*i*S	Sg	12 19 49.2	+0.7
	baz=91						
BTK	Batken	1.50	215	⇑*i*P	Pn	12 19 48.6	-1.4
	baz=12						
BTK				⇑*i*S	Sn	12 20 09.8	+0.1
	baz=12						
JBG	Jabagly	1.52	318	P	Pg	12 19 52.8	+0.7
	14nm,0.2s						
JBG				S	Sg	12 20 11.8	-0.1
	50nm,0.2s						
AML	Almayashu	1.56	57	⇑*i*P	Pn	12 19 50.1	-0.9
	baz=60						
AML				⇑*i*S	Sn	12 20 11.9	+0.5
	baz=60						
MRKS	Merke	1.73	33	*e*P	Pg	12 19 55.7	-0.4
	8.4nm,0.2s						
MRKS				*e*S	Sb	12 20 17.0	+0.3
	43nm,0.2s						
MRKS	Merke	1.73	33	P	Pg	12 19 55.6	-0.4
	8.7nm,0.2s						
MRKS				S	Sb	12 20 17.0	+0.3
	42nm,0.4s						
ARLS	Aral	1.88	72	⇓*i*P	Pn	12 19 56.3	+1.1
	baz=73						
ARLS				⇓*i*S	Sb	12 20 22.3	+1.3
	baz=73						
EKS2	Erkin-Say	1.93	45	⇑*i*P	Pn	12 19 56.8	+0.9
	baz=47						
EKS2				⇑*i*S	Sb	12 20 23.4	+0.9
	baz=47						
KK31	Karatay Array	2.08	330	⇑Pn	Pn	12 19 58.7	+0.8
	2.7nm,0.6s,baz=162,slow=17,SNR=40						
KK31				⇑Sn	Sn	12 20 24.4	+0.5
	3.7nm,0.3s,baz=154,slow=27,SNR=14						
UCH	Uchtor	2.14	64	⇑*i*P	Pn	12 19 59.9	+0.8
	baz=65						
UCH				⇑*i*S	Sb	12 20 29.2	+0.4
	baz=65						
AAK	Ala-Archa	2.33	54	⇓*i*P	Pn	12 20 02.4	+1.0
	baz=56						
AAK				⇓*i*S	Sb	12 20 33.1	-0.8
	baz=56						
AAK	Ala-Archa	2.33	54	Pn	Pb	12 20 04.6	-0.4
	3.5nm,0.3s						
AAK				Lg	Lg	12 20 37.8	
	9.3nm,0.7s						
KZA	Kyzart	2.60	72	⇑*i*P	Pn	12 20 06.7	+1.3
	baz=73						
KZA				⇑*i*S	Sb	12 20 40.6	-1.4
	baz=73						
KBK	Karagaybulak	2.62	58	⇓*i*P	Pn	12 20 06.5	+1.0
	baz=59						
KBK				⇓*i*S	Sn	12 20 40.1	+2.6
	baz=59						
CHMS	Chumysh	2.70	50	⇑*i*P	Pn	12 20 07.1	+0.8
	baz=51						
CHMS				⇑*i*S	Sn	12 20 41.1	+2.1
	baz=51						
CHMS	Chumysh	2.70	50	⇓Pg	Pb	12 20 10.0	-1.2
	1.8nm,0.4s						
CHMS				⇑Lg	Lg	12 20 47.7	
	5.4nm,0.5s						
USP	Ospenovka	2.73	43	⇑*e*P	Pn	12 20 07.3	+0.4
	baz=45						
USP				⇑*i*S	Sn	12 20 41.7	+1.7
	baz=45						
SGDS	Sogindy	2.93	42	Pg	Pg	12 20 17.3	-1.7
	2.8nm,0.4s						
SGDS				Lg	Lg	12 20 53.8	
	8.5nm,0.3s						
ULHL	Ulahol	3.36	72	⇓*i*P	Pn	12 20 17.3	+1.7
	baz=73						

ULHL				⇓*i*S	Sn	12 20 58.3	+2.7
	baz=73						
DGS	Degeres	3.45	55	*e*P	Pg	12 20 27.1	-1.8
	0.6nm,0.2s						
DGS				*e*S	Sg	12 21 10.9	-2.6
	12nm,0.3s						
DGS	Degeres	3.45	55	Pg	Pg	12 20 27.7	-1.1
	2.6nm,0.4s						
DGS				Lg	Lg	12 21 11.0	
	12nm,0.5s						
KST	Kastek	3.46	59	*e*P	Pg	12 20 28.0	-1.2
	1.0nm,0.1s						
KST				*e*S	Sg	12 21 12.2	-1.9
	13nm,0.3s						
KST	Kastek	3.46	59	Pg	Pg	12 20 27.8	-1.4
	2.4nm,0.3s						
KST				Lg	Lg	12 21 11.2	
	15nm,0.4s						
KRBS	Karabastau	3.66	48	*e*P	Pb	12 20 30.1	+2.5
	0.6nm,0.1s						
KRBS				*e*S	Sb	12 21 15.9	+3.8
	2.4nm,0.3s						
KRBS	Karabastau	3.66	48	Pg	Pg	12 20 31.2	-1.7
	1.5nm,0.3s						
KRBS				Lg	Lg	12 21 16.9	
	2.5nm,0.4s						
MTBS	Maitube	3.81	60	Pg	Pg	12 20 35.0	-0.8
	2.7nm,0.2s						
MTBS				Lg	Lg	12 21 23.1	
	4.8nm,0.2s						
IZV	Izvestkoviy	3.89	62	*e*P	Pg	12 20 36.1	-1.2
	0.8nm,0.1s						
IZV				*e*S	Sg	12 21 26.1	-1.6
	2.1nm,0.1s						
IZV	Izvestkoviy	3.89	62	Pg	Pg	12 20 36.6	-0.7
	2.0nm,0.4s						
IZV				Lg	Lg	12 21 26.2	
	3.5nm,0.3s						
TNSS	Tian-Shan	4.11	63	*e*P	Pg	12 20 40.9	-0.7
	0.3nm,0.0s						
TNSS				*e*S	Sg	12 21 34.3	-0.6
	7.3nm,0.3s						
TNSS	Tian-Shan	4.11	63	Pg	Pg	12 20 40.5	-1.1
	1.8nm,0.3s						
TNSS				Lg	Lg	12 21 33.2	
	7.7nm,0.4s						
KUU	Kurty	4.16	50	*e*P	Pb	12 20 39.3	+3.2
	0.2nm,0.1s						
KUU				*e*S	Sg	12 21 31.6	-4.7
	5.1nm,0.3s						
KUU	Kurty	4.16	50	Pg	Pg	12 20 40.5	-2.0
	0.8nm,0.3s						
KUU				Lg	Lg	12 21 31.6	
	3.5nm,0.5s						
MDOK	Medeo	4.23	62	Pg	Pg	12 20 42.6	-1.2
	1.7nm,0.3s						
MDOK				Lg	Lg	12 21 35.6	
	3.0nm,0.6s						
KTBS	Karatobe	4.26	54	*e*P	Pg	12 20 41.4	-3.0
	0.3nm,0.2s						
KTBS				*e*S	Sg	12 21 35.4	-4.2
	8.4nm,0.2s						
KTBS	Karatobe	4.26	54	Pg	Pg	12 20 42.0	-2.4
	1.2nm,0.5s						
KTBS				Lg	Lg	12 21 35.5	
	8.4nm,0.4s						
CHKK	Chushkaly	4.52	54	*e*P	Pg	12 20 47.1	-2.3
	0.5nm,0.1s						
CHKK				*e*S	Sg	12 21 44.9	-3.0
	3.7nm,0.2s						
CHKK	Chushkaly	4.52	54	Pg	Pg	12 20 47.4	-2.0
	2.2nm,0.2s						
CHKK				Lg	Lg	12 21 44.5	
	4.5nm,0.3s						

*NEIC **10** 12:40:58.9±1.3, 40°.65N±0°.04×125°.34W±0°.06, h20^{km}±11^{km}, Error ellipse: s-maj=7.1km s-min=5.8km az=64.0*
*ANF **10** 12:40:59.5±1.8, 40°.65N×125°.13W, h0^{km}, ML2.8/5, Error ellipse: s-maj=15.2km s-min=10.3km az=53.0*
*NCEDC **10** 12:41:01.1±1.5, 40°.60N±0°.04×125°.33W±0°.06, h24^{km}±7^{km}, ML3.1/10, Error ellipse: s-maj=7.3km s-min=5.3km az=222.0*
ISC 10 12:40:58.0±3.5, **40°.57N**±0°.04×**125°.39W**±0°.09, **h16**^{km}±25^{km}, **n59**, σ**1^{s}01**/68, **Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMPM	Mount Pierce	0.98	99		Pb	12 41 17.1	+0.5
JCC	Jacoby Creek,	1.06	76		Pb	12 41 17.3	-0.7
JCC	Jacoby Creek,	1.06	76		Sb	12 41 30.1	-1.5
JCC	Jacoby Creek,	1.06	76		Pb	12 41 17.5	-0.4
JCC	Jacoby Creek,	1.06	76	Sn	Sb	12 41 30.7	-0.9
KRPM	Rodgers	1.19	60		Pn	12 41 19.2	-0.9
KCRM	Chalk Rock	1.21	96		Pn	12 41 20.4	+0.2
KHMM	Horse Mountain	1.30	76		Pn	12 41 21.1	-0.4
KHMM				Sn	Sb	12 41 37.2	-1.4
KMRM	Mail Ridge	1.33	105		Pn	12 41 22.9	+0.9
KMRM				Sn	Sb	12 41 39.3	-0.2
KCSM	Cold Springs	1.43	91		Pn	12 41 23.6	+0.2
KRMB	Red Mountain	1.47	49		Pn	12 41 23.3	-0.6
KBSM	Bell Springs	1.52	115		Pn	12 41 24.7	+0.1
KOMM	Orleans Mounta	1.63	64		Pn	12 41 25.7	-0.4
KCPM	Cahto Peak	1.64	122		Pn	12 41 26.6	+0.4
KIPM	Iron Peak	1.65	117		Pn	12 41 26.3	0.0
KHBM	Hayfork Bally	1.66	86		Pn	12 41 26.3	-0.2
KSXB	Camp Six Broad	1.70	42		Pn	12 41 26.3	-0.7
KFPM	Farley Peak	1.77	121		Pn	12 41 28.0	0.0
KBNM	Bluenose Ridge	1.81	111		Pn	12 41 29.2	+0.6
GTC	Three Chop Rid	1.83	129		Pn	12 41 28.6	-0.1
KBO	Bosley Butte	1.86	28	Pn	Pn	12 41 28.9	-0.4
GNAM	Navarro Ridge	1.93	135		Pn	12 41 29.7	-0.4
LBPM	Beegum Peak	1.93	97		Pn	12 41 30.5	+0.3
LGPM	Granite Peak	1.98	79		Pn	12 41 30.5	-0.3
O02D	Mt. Diablo Mer	2.03	100		Pn	12 41 32.0	+0.5
O02D	Mt. Diablo Mer	2.03	100	P	Pn	12 41 32.0	+0.5
	baz=283,SNR=60						
O02D				S	Sn	12 41 56.4	-0.1
	baz=283						
N02D	Trinity Center	2.08	78		Pn	12 41 32.0	-0.3
N02D	Trinity Center	2.08	78	P	Pn	12 41 32.0	-0.3
	baz=260,SNR=12						
N02D				S	Sn	12 41 56.9	-0.9
	baz=260						
L02E	Cave Junction	2.08	40	P	Pn	12 41 32.3	+0.1
	baz=220,SNR=8.9						
L02E				S	Sn	12 41 55.9	-1.9
	baz=220						
GHOM	Hamilton Openi	2.09	136		Pn	12 41 32.4	+0.1
M02C	Callahan	2.09	66	P	Pn	12 41 32.8	+0.5
	baz=248,SNR=94						
M02C				S	Sn	12 41 56.8	-1.3
	baz=248						
LBKM	Bonanza King	2.13	75		Pn	12 41 33.1	+0.1
WDC	Whiskeytown Da	2.17	89		Pn	12 41 33.6	+0.2
GVV	Valley View	2.23	110		Pn	12 41 35.1	+0.8
GASB	Alder Springs	2.25	113		Pn	12 41 35.8	+1.2
YBH	Yreka Blue Hor	2.33	59		Pn	12 41 36.1	+0.3
HOPS	Hopland Field	2.38	131	Pn	Pn	12 41 36.6	+0.3
KEBM	Edson Butte	2.43	19	Pn	Pn	12 41 36.9	-0.1
K02D	Willamette Mer	2.49	31	P	Pn	12 41 38.1	+0.2
	baz=211,SNR=129						
K02D				S	Sn	12 42 07.1	-0.8
	baz=211						
LSHM	Sage Hen Hill	2.56	84		Pn	12 41 39.8	+1.0
HUMO	Hull Mountain	2.73	41		Pn	12 41 41.8	+0.6
O03E	Paynes Creek	2.75	95		Pn	12 41 41.9	+0.4
O03E	Paynes Creek	2.75	95	P	Pn	12 41 42.5	+1.0
	baz=278						
L04D	Klamath Falls	2.85	54	P	Pn	12 41 45.0	+2.2
	baz=236,SNR=12						
L04D				S	Sn	12 42 18.5	+1.7
	baz=236						
M04C	Macdoel	2.94	65	P	Pn	12 41 46.1	+2.0
	baz=247,SNR=8.6						
M04C				S	Sn	12 42 22.2	+3.1
	baz=247						
ORV	Oroville	3.15	108		Pn	12 41 47.3	+0.4
I03D	Drain, OR	3.47	25	P	Pn	12 41 52.9	+1.6
	baz=206,SNR=15						
AFDM	Forest Hills D	3.77	114		Pn	12 41 56.0	+0.6
MOD	Modoc Plateau	4.06	69		Pn	12 42 00.6	+1.1
JFP	Foothills Park	4.06	141		Pn	12 41 59.9	+0.5
J05D	Fort Rock, OR	4.12	47	P	Pn	12 42 02.8	+2.5
	baz=230,SNR=6.2						
JBNB	Ben Lomond Mou	4.27	143		Pn	12 42 02.5	+0.1
PINE	Pine Mountain	4.61	44		Pn	12 42 09.3	+2.1
PAHR	Pah Rah Range	4.68	99		Pn	12 42 09.1	+1.0
PNTR	Pine Nut	4.70	106	Pn	Pn	12 42 09.3	+0.9
I05D	Terrebonne, OR	4.81	37	P	Pn	12 42 11.7	+2.0
	baz=220						
SAO	San Andreas Ge	4.90	140	Pn	Pn	12 42 11.0	+0.2
PMPB	Monarch Peak	5.65	139	Pn	Pn	12 42 21.9	+0.6
BMO	Blue Mountains	7.33	52		Pn	12 42 45.5	+1.1

*SOME **10** 13:00:51.0, 39°.17N×75°.37E, h0^{km}*
*NNC **10** 13:01:03.1±4.5, 39°.54N×75°.62E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=35.9km s-min=27.6km az=140.0*
ISC 10 13:01:07.1±2.9, **39°.7N**±0°.1×**75°.43E**±0°.09, **h10**^{km}, **n16**, σ**2^{s}41**/21, **5C-3D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZA	Kyzart	2.36	357	P	Pg	13 01 51.2	-1.2
	SNR=6.9						
ULHL	Ulahol	2.60	13	P	Pg	13 01 58.8	+1.9
	SNR=14						
UCH	Uchtor	2.60	345	P	Pb	13 01 51.8	-2.3
	SNR=45						
AML	Almayashu	2.75	332	P	Pn	13 01 51.7	+0.1
	SNR=14						
AAK	Ala-Archa	3.00	347	P	Pb	13 01 57.7	-3.0
	SNR=7.1						
AAK	Ala-Archa	3.00	347	⇑Pn	Pn	13 01 56.6	+1.7
	23nm,1.1s						
AAK				⇑Lg	Lg	13 02 47.5	
	17nm,0.9s						
CHMS	Chumysh	3.32	351	P	Pb	13 02 02.1	-4.0
	SNR=5.5						
CHMS	Chumysh	3.32	351	⇓Pn	Pn	13 02 01.0	+1.9
	9.1nm,0.8s						
CHMS				⇑Lg	Lg	13 02 58.9	
	15nm,1.1s						
KST	Kastek	3.35	7	*e*P	Pb	13 02 04.2	-2.4
	5.7nm,0.2s						
KST				*e*S	Sg	13 02 55.8	+1.2
	14nm,0.5s						
KST	Kastek	3.35	7	Pg	Pb	13 02 04.0	-2.7
	5.7nm,0.4s						
KST				Lg	Lg	13 02 53.9	
	14nm,0.5s						
MRKS	Merke	3.45	332	*e*P	Pb	13 02 05.1	-3.3
	2.4nm,0.2s						
MRKS				*e*S	Sg	13 02 57.1	-0.9
	5.5nm,0.3s						
MRKS	Merke	3.45	332	Pg	Pn	13 02 00.5	-0.5
MRKS				Lg	Lg	13 02 47.8	
DGS	Degeres	3.53	4	*e*P	Pb	13 02 08.1	-1.6
	7.1nm,0.4s						
DGS				*e*S	Sg	13 03 02.4	+1.9
	6.6nm,0.6s						
DGS	Degeres	3.53	4	Pg	Pb	13 02 06.5	-3.2
	7.1nm,0.4s						
DGS				Lg	Lg	13 02 58.6	
	8.0nm,0.7s						
USP	Ospenovka	3.62	349	P	Pg	13 02 15.4	-0.9
	SNR=11						
KK31	Karatay Array	5.01	314	⇑Pn	Pn	13 02 22.4	0.0
	0.5nm,0.3s,baz=131,slow=14,SNR=10						
KK31				⇓Pg	Pb	13 02 35.2	+0.3
	2.6nm,0.6s,baz=131,slow=18,SNR=5.7						
KK31				⇓Sn	Sn	13 03 24.6	+4.3
	4.7nm,0.7s						
KK31				⇑Lg	Lg	13 03 49.3	
	2.2nm,0.5s,baz=133,slow=27						

*IDC **10** 13:09:11.3±1.1, 38°.68N×74°.88E, h0^{km}, mb3.5/4, mb1 3.4/10, mb1mx3.3/46, mbtmp3.3/10, ML2.8/6, Error ellipse: s-maj=24.8km s-min=16.1km az=93.0*
*BJI **10** 13:09:11.3±0.0, 38°.85N×74°.74E, h8^{km}, mb3.5/2, ML3.3/5*
*NNC **10** 13:09:13.4±5.3, 38°.97N×75°.36E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=49.8km s-min=33.7km az=129.0*
ISC 10 13:09:14.3±1.0, **38°.98N**±0°.08×**75°.40E**±0°.08, **h10**^{km}, **n20**, σ**3^{s}03**/21, **mb3.5**/4, **3C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	0.70	39	Pg	Pg	13 09 23.1	-4.7
KSH				Sg	Sg	13 09 27.6	-9.4
KSH				smax	smax		
	comp=N,650nm,0.3s						
KSH				smax	smax		
	comp=E,820nm,0.5s						
AAK	Ala-Archa	3.72	350	Pn	Pn	13 10 15.2	+3.3
	0.9nm,0.3s,baz=163,slow=11,SNR=12						
AAK				Sn	Sb	13 11 05.8	+0.5
	1.1nm,0.3s,baz=341,slow=18,SNR=2.2						
AAK	Ala-Archa	3.72	350	⇑Pn	Pn	13 10 13.9	+2.0
	18nm,0.6s						
AAK				⇓Lg	Lg	13 11 10.8	
	32nm,0.8s						
CHMS	Chumysh	4.05	353	⇑Pn	Pn	13 10 18.6	+2.4
	8.8nm,0.6s						
CHMS				⇑Lg	Lg	13 11 24.8	
	22nm,0.9s						
KST	Kastek	4.08	6	Pg	Pb	13 10 22.6	-3.7
	11nm,0.5s						
KST				Lg	Lg	13 11 23.4	
	26nm,0.7s						
MRKS	Merke	4.11	337	Pg	Pn	13 10 19.7	+2.5
	12nm,0.4s						
MRKS				Lg	Lg	13 11 18.5	
	6.9nm,0.6s						
TNSS	Tian-Shan	4.22	16	Pg	Pb	13 10 26.7	-2.1
	15nm,0.6s						
TNSS				Lg	Lg	13 11 30.8	
	14nm,0.6s						
MDOK	Medeo	4.36	16	Pg	Pg	13 10 36.0	-1.8
	7.0nm,0.6s						
MDOK				Lg	Lg	13 11 33.5	
	18nm,0.7s						
KK31	Karatay Array	5.53	320	⇓Pn	Pn	13 10 35.8	-0.9
	1.3nm,0.5s,baz=137,slow=13,SNR=19						
KK31				⇓Pg	Pb	13 10 52.6	+1.7
	2.3nm,0.5s,baz=149,slow=15,SNR=6.8						
KK31				⇓Lg	Lg	13 12 10.1	
	4.6nm,0.5s,baz=151,slow=24,SNR=3.6						
MKAR	Makanchi Array	9.30	31	Pn	Pn	13 11 33.4	+5.0
	0.1nm,0.3s,baz=223,slow=14,SNR=9.4						
WMQ	Urumqi	10.42	58	*e*P	Pn	13 11 51.0	+7.2
WMQ				pP		13 11 53.9	
KURBB	Kurchatov Arra	11.85	10	Pn	Pn	13 12 05.4	+2.2
	0.0nm,0.3s,baz=191,slow=12,SNR=3.2						
KURBB				Sn	Sn	13 14 19.1	+3.7
	0.0nm,0.3s,baz=74,slow=10.0,SNR=2.6						
KURBB				Lg	Lg	13 15 39.0	
	0.0nm,0.3s,baz=170,slow=32,SNR=6.2						
BVAR	Borovoye Array	14.47	348	Pn	Pn	13 12 39.5	+0.5
	0.1nm,0.3s,baz=114,slow=44,SNR=2.6						
ZALV	Zalesovo Beam	16.30	20	Pn	P	13 13 07.3	+1.3
	0.1nm,0.3s,baz=280,slow=17,SNR=2.8						
AKTO	Aktyubinsk	16.80	319	Pn	Pn	13 13 06.1	-3.4
	0.1nm,0.3s,baz=90,slow=13,SNR=3.8						
GTA	Gaotai	18.92	81	*e*P	Pn	13 13 41.1	+5.2
GTA				pP	sP	13 13 49.8	+9.3
GTA				sP	pP	13 13 53.9	+15
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
SONM	Songino Array	24.06	58	P	P	13 14 33.5	+3.8
	0.2nm,0.3s,baz=251,slow=9.0,SNR=2.9						
TORD	Torodi Ar. Bea	69.23	270	P	P	13 20 17.4	-4.2
	0.2nm,0.3s,baz=53,slow=5.5,SNR=6.1						
YKA	Yellowknife Ar	78.55	5	P	P	13 21 15.5	0.0
	0.3nm,0.5s,baz=350,slow=5.4,SNR=11						
ASAR	Alice Springs	82.92	128	P	P	13 21 39.3	-0.1
	0.3nm,0.9s,baz=319,slow=5.5,SNR=2.7						

*IDC **10** 13:14:48.3±2.8, 8°.26S×108°.84E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.4/36, mbtmp3.4/3, MS4.3/2, Ms1 4.3/2, ms1mx3.2/39, Error ellipse: s-maj=100.9km s-min=28.3km az=46.0*
*DJA **10** 13:14:59.8±0.8, 9°S±14°×10°9E±°, h49^{km}±65^{km}, M4.2/12, MLv4.2/12*
*NEIC **10** 13:15:00.4±3.0, 8°.30S±0°.08×109°.20E±0°.06, h89^{km}±9^{km}, mb4.7/3, Error ellipse: s-maj=11.2km s-min=7.9km az=170.0*
ISC 10 13:14:57.8±0.7, **8°.47S**±0°.07×**109°.23E**±0°.04, **h55**^{km}, **n29**, σ**2^{s}62**/29, **1C, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KPJI	Karang Pucung	1.16	345	P	Pn	13 15 20.4	+2.5
KPJI				S	Sn	13 15 36.2	+3.4
UGM	Wanagama	1.39	67	P	Pn	13 15 22.9	+1.9
UGM				S	Sn	13 15 39.1	+0.7
UGM	Wanagama	1.39	67		Pn	13 15 22.7	+1.7
CISI	Cisompet, Garu	1.67	303	P	Pn	13 15 27.1	+2.4
CISI				S	Sn	13 15 47.0	+1.9
CISI	Cisompet, Garu	1.67	303	Pn	Pn	13 15 27.1	+2.4
WOJI	Wonogiri, Jawa	1.79	70	P	Pn	13 15 27.7	+1.4
SMRI	Semarang	1.85	41	P	Pn	13 15 29.7	+2.5
SMRI	Semarang	1.85	41	Pn	Pn	13 15 29.7	+2.5
PCJI	Pacitan	1.95	82	P	Pn	13 15 31.0	+2.5
LEM	Lembang	2.28	315	P	Pn	13 15 36.4	+3.2
CNJI	Cibinong	2.38	299	P	Pn	13 15 36.6	+2.2
PWJI	Pagerwojo	2.59	80	P	Pn	13 15 39.0	+1.8
GRJI	Gresik	3.57	65	P	Pn	13 15 53.0	+2.3
XMIS	Christmas Isla	4.06	240	Pn	Pn	13 15 59.8	+2.4
JAGI	Jajag, Banyuwa	4.87	90	P	Pn	13 16 10.8	+2.2
JAGI	Jajag, Banyuwa	4.87	90	Pn	Pn	13 16 11.4	+2.9
WRA	Warramunga Arr	26.84	118	P	P	13 20 34.1	+0.7
	0.2nm,0.6s,baz=290,slow=7.1,SNR=5.3						
WB2	Warramunga Arr	26.85	118	P	P	13 20 34.6	+1.1
WB2				IAmb	IAmb	13 21 07.9	
	comp=Z,51nm,1.9s						
ASAR	Alice Springs	28.04	125	P	P	13 20 46.0	+1.8
	comp=Z,0.2nm,0.6s,baz=301,slow=8.7,SNR=7.8						
BBOO	Buckleboo	34.69	138	P	P	13 21 43.7	+1.2
PMG	Port Moresby	37.47	94	LR	LR	13 39 27.3	
	comp=Z,436nm,18.5s,baz=0.0,slow=39						
CTA	Charters Tower	37.60	112	LR	LR	13 37 60.0	
	comp=Z,419nm,21.6s,baz=48,slow=37						
WHN	Wuhan	39.10	7	P	P	13 22 32.1	+12
KRVT	Keravat (AS076	42.71	87	P	P	13 22 50.6	+0.7
	comp=Z,51nm,0.9s,baz=233,slow=10,SNR=3.7						
MKAR	Makanchi Array	60.02	339	P	P	13 24 54.6	-4.3
	comp=Z,0.3nm,0.6s,baz=148,slow=8.0,SNR=4.4						
MKAR	Makanchi Array	60.02	339	P	P	13 24 54.3	-4.6
ZALV	Zalesovo Beam	65.51	344	P	P	13 25 31.3	-3.9
ABKAR	Akbulak array	71.80	328	P	P	13 26 10.9	-3.6
SYO	Syowa Base	74.90	200	⇑*e*P	P	13 26 32.1	-0.4

*IDC **10** 13:21:10.6±2.3, 15°.43S×178°.30W, h410^{km}±25^{km}, mb3.5/11, mb1 3.7/12, mb1mx3.5/32, mbtmp4.2/12, Error ellipse: s-maj=20.5km s-min=12.2km az=136.0*
*NEIC **10** 13:21:13.7±1.3, 15°.3S±0°.2×178°.4W±0°.2, h446^{km}±3^{km}, mb4.5/34, Error ellipse: s-maj=30.0km s-min=18.7km az=125.0*
ISC 10 13:21:12.9±0.5, **15°.6S**±0°.1×**178°.2W**±0°.1, **h450**^{km}, **n58**, σ**1^{s}37**/58, **mb4.4**/25, **1C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.23	239	P	P	13 22 30.2	0.0
AFI	Afiamalu	6.39	76	P	P	13 22 49.8	-1.6
	4.5nm,0.3s,baz=293,slow=5.4,SNR=4.3						
OUZ	Omahuta	20.93	199	P	P	13 25 25.3	+2.6
URZ	Urewera	23.00	190	P	P	13 25 40.7	-0.7
	3.5nm,0.3s,baz=351,slow=4.6,SNR=17						
URZ	Urewera	23.00	190	P	P	13 25 40.5	-0.9
URZ				IAmb	IAmb	13 26 38.1	
	comp=Z,36nm,1.4s						
BKZ	Black Stump Fm	23.99	190	P	P	13 25 48.3	-2.0
BKZ				IAmb	IAmb	13 25 50.1	
	comp=Z,33nm,1.6s						
BFZ	Birch Farm	25.51	190	P	P	13 26 02.4	-1.3
SNZO	South Karori	26.40	192	P	P	13 26 10.3	-1.3
QRZ	Quartz Range	26.45	196	P	P	13 26 09.9	-2.2
QRZ				IAmb	IAmb	13 26 57.0	
	comp=Z,44nm,1.3s						
NNZ	Nelson	26.61	194	P	P	13 26 12.4	-1.1
TUWZ	Tuamarina	26.68	193	P	P	13 26 13.8	-0.2
BSWZ	Blackbirch Sta	26.96	193	P	P	13 26 17.4	+0.8
THZ	Tophouse	27.24	195	P	P	13 26 19.1	0.0
THZ				IAmb	IAmb	13 26 34.8	
	comp=Z,49nm,1.9s						
KHZ	Kahutara	27.71	193	P	P	13 26 21.9	-1.2
KHZ				IAmb	IAmb	13 26 32.9	
	comp=Z,65nm,1.9s						
LTZ	Lake Taylor	28.35	195	P	P	13 26 27.5	-1.4
LTZ				IAmb	IAmb	13 26 44.7	
	comp=Z,40nm,1.8s						
OXZ	Oxford	28.92	195	P	P	13 26 33.2	-0.6
MQZ	McQueen's Vall	29.14	194	P	P	13 26 35.0	-0.7
RPZ	Rata Peaks	29.54	196	P	P	13 26 38.4	-0.8
RPZ				IAmb	IAmb	13 27 24.1	
	comp=Z,24nm,1.4s						
FOZ	Fox Glacier	29.72	198	P	P	13 26 39.6	-1.1
FOZ				IAmb	IAmb	13 27 19.8	
	comp=Z,36nm,1.4s						
LBZ	Lake Benmore	30.39	197	P	P	13 26 44.8	-1.8
LBZ				IAmb	IAmb	13 26 55.6	
	comp=Z,56nm,1.9s						
ODZ	Otahua Downs	30.88	196	P	P	13 26 50.5	-0.3
ODZ				IAmb	IAmb	13 27 04.6	
	comp=Z,35nm,1.7s						
WKZ	Wanaka	31.13	198	P	P	13 26 50.7	-2.3
WHZ	Wether Hill Ro	32.42	198	P	P	13 27 03.8	-0.2
STKA	Stephens Creek	40.01	239	P	P	13 28 09.2	+1.8
	comp=Z,1.3nm,0.4s,baz=84,slow=7.8,SNR=8.1						
WR0	Warramunga Arr	45.14	257	P	P	13 28 47.7	-0.5
WR0				IAmb	IAmb	13 29 50.2	
	comp=Z,43nm,1.9s						
WB0	Warramunga Arr	45.29	257	P	P	13 28 49.0	-0.3
WB0				IAmb	IAmb	13 29 16.2	
	comp=Z,35nm,1.8s						
WRA	Warramunga Arr	45.34	257	P	P	13 28 48.6	-1.1
	comp=Z,0.2nm,0.3s,baz=84,slow=6.3,SNR=14						
AS31	Alice Springs	45.70	252	P	P	13 28 52.5	0.0
ASAR	Alice Springs	45.70	252	P	P	13 28 52.7	+0.2
	comp=Z,5.8nm,0.4s,baz=86,slow=8.3,SNR=214						
ASAR	Alice Springs	45.70	252	P	P	13 28 52.2	-0.3
FORT	Forrest	51.26	243	P	P	13 29 33.7	-0.2
FORT				IAmb	IAmb	13 30 37.4	
	comp=Z,17nm,1.0s						
GSTR	Great Sitkin T	67.38	1	P	P	13 31 21.3	-0.7
PETK	Petropavlovsk-	71.47	345	P	P	13 31 47.0	+0.4
	comp=Z,3.3nm,0.7s,baz=109,slow=8.1,SNR=5.9						
PETK	Petropavlovsk-	71.47	345	P	P	13 31 46.5	-0.1
QSPA	South Pole Qui	74.49	180	P	P	13 32 06.7	+2.6
	comp=Z,3.2nm,0.6s,baz=313,slow=1.2,SNR=44						
QSPA	South Pole Qui	74.49	180	P	P	13 32 06.5	+2.4
QSPA				IAmb	IAmb	13 32 09.3	
	comp=Z,23nm,1.6s						
NVAR	Mina Array Bea	77.57	44	P	P	13 32 23.6	+1.8
	comp=Z,0.9nm,0.7s,baz=230,slow=8.3,SNR=8.1						
NV11	Mina Array Sit	77.67	44	P	P	13 32 23.6	+1.3
KVN	Kaiserville	78.03	44	P	P	13 32 25.6	+1.3
MOD	Modoc Plateau	78.14	40	P	P	13 32 26.2	+1.4
MOD				IAmb	IAmb	13 34 58.8	
	comp=Z,16nm,1.8s						
RSO	Redoubt South	78.46	13	P	P	13 32 25.4	-0.6
ANM	Nome	80.47	6	P	P	13 32 34.9	-1.4
TMUT	Trail Mountain	82.84	46	P	P	13 32 50.8	+1.3
HDA	Harding Lake	83.22	13	P	P	13 32 50.6	+0.1
ILAR	Eielson Array	83.55	13	P	P	13 32 51.9	-0.2
	comp=Z,1.9nm,0.5s,baz=230,slow=5.6,SNR=21						
ILAR	Eielson Array	83.55	13	P	P	13 32 51.7	-0.4
TX31	Lajitas Ar. Si	84.54	58	P	P	13 32 59.1	+1.0
TX32	Lajitas Array	84.54	58	P	P	13 32 58.9	+0.9
TX32				IAmb	IAmb	13 34 12.0	
	comp=Z,12nm,2.0s						
TXAR	Lajitas Array	84.54	58	P	P	13 33 00.8	+2.7
	comp=Z,1.1nm,0.7s,baz=222,slow=6.9,SNR=12						
TXAR	Lajitas Array	84.54	58	P	P	13 33 00.2	+2.1
PD31	Pinedale Array	85.49	43	P	P	13 33 02.9	+0.4
PD31				IAmb	IAmb	13 35 08.6	
	comp=Z,13nm,2.0s						
PDAR	Pinedale Array	85.49	43	P	P	13 33 03.8	+1.3
	comp=Z,1.0nm,0.5s,baz=219,slow=3.3,SNR=15						
PDAR	Pinedale Array	85.49	43	P	P	13 33 03.2	+0.7
SYO	Syowa Base	91.49	193	⇑*i*X	P	13 33 27.0	-2.9
YKA	Yellowknife Ar	92.10	25	P	P	13 33 33.2	+0.5
	comp=Z,0.3nm,0.6s,baz=245,slow=4.3,SNR=8.4						
ARCES	ARCESS Array B	124.05	350	PKP	PKiKP	13 39 19.3	+0.3
	comp=Z,18nm,1.3s,baz=340,slow=6.6,SNR=4.7						
GERES	GERESS Array B	145.40	346	PKPbc	PKiKP	13 40 00.6	-2.5
	comp=Z,0.3nm,0.3s,baz=41,slow=4.3,SNR=6.2						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GERES	GERESS Array B	145.40	346		PKPab	13 39 60.0	-0.8

NEIC ***10*** *13:25:25.3±2.2, 20°.1S±0°.1×178°.6W±0°.1, h584^{km}±10^{km}, mb4.7/55, Error ellipse: s-maj=18.8km s-min=15.0km az=162.0*

IDC ***10*** *13:25:25.2±1.9, 20°.11S×178°.50W, h575^{km}±25^{km}, mb3.7/13, mb1 4.0/15, mb1mx3.7/31, mbtmp4.7/15, Error ellipse: s-maj=17.2km s-min=12.0km az=153.0*

ISC 10 13:25:26.8±0.5**, 20°.16S**±0°.08×**178°.49W**±0°.08**, h602**^{km}**, n109, σ1^{s}31**/108**, mb4.6**/27**, 1C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	8.14	84	P	P	13 27 27.1	-0.5
AFI	Afiamalu	8.94	47	P	P	13 27 33.1	-2.3
	16nm,0.3s,baz=152,slow=2.4,SNR=14						
DZM	Mont Dzumac	14.19	260	P	P	13 28 29.2	+1.7
	6.5nm,0.3s,baz=109,slow=22,SNR=56						
DZM	Mont Dzumac	14.19	260	P	P	13 28 28.6	+1.0
OUZ	Omahuta	16.55	203	P	P	13 28 51.3	+2.4
OUZ				IAmb	IAmb	13 28 52.6	
	comp=Z,39nm,0.9s						
MXZ	Matakaoa Point	17.56	188	P	P	13 28 57.4	-0.7
WMGZ	Waiomatatini S	17.80	188	P	P	13 29 00.3	0.0
HAZ	Te Kaha	17.83	190	P	P	13 28 59.5	-1.0
RUGZ	Raukumara Rang	18.05	190	P	P	13 29 01.9	-0.9
TGRZ	Tauranga	18.09	194	P	P	13 29 05.0	+2.0
TOZ	Tahuroa Road	18.27	195	P	P	13 29 06.3	+1.7
KMRZ	Kaimai	18.27	194	P	P	13 29 06.8	+2.1
URZ	Urewera	18.43	191	P	P	13 29 04.4	-1.7
	comp=Z,5.2nm,0.3s,baz=280,slow=3.0,SNR=44						
URZ				S	S	13 31 59.8	-4.2
	comp=Z,0.5nm,0.3s,baz=239,slow=21,SNR=6.0						
URZ	Urewera	18.43	191	P	P	13 29 03.3	-2.8
URZ				IAmb	IAmb	13 29 05.9	
	comp=Z,20nm,0.8s						
URZ	Urewera	18.43	191	P	P	13 29 03.6	-2.5
TKGZ	Te Karaka	18.49	189	P	P	13 29 06.4	-0.2
MUGZ	Murupara	18.71	192	P	P	13 29 07.0	-1.6
RIGZ	Rimuhau	18.76	189	P	P	13 29 09.0	-0.1
RTZ	Ruatahuna	18.80	191	P	P	13 29 00.6	-9.0
TLZ	Tolley Road	18.83	195	P	P	13 29 05.0	-4.7
SNGZ	Shannon Statio	18.90	190	P	P	13 29 10.3	-0.1
PRGZ	Paritu Road	18.96	189	P	P	13 29 11.9	+1.0
MRHZ	Matea Rd	19.12	192	P	P	13 29 11.3	-1.1
NMHZ	Naumai	19.30	191	P	P	13 29 13.7	-0.4
BKZ	Black Stump Fm	19.43	192	P	P	13 29 12.9	-2.3
BKZ				IAmb	IAmb	13 29 36.9	
	comp=Z,22nm,1.4s						
BFZ	Birch Farm	20.94	191	P	P	13 29 27.4	-1.4
BFZ				IAmb	IAmb	13 29 29.3	
	comp=Z,32nm,1.2s						
MSWZ	Moikau Station	21.85	193	P	P	13 29 34.8	-2.0
SNZO	South Karori	21.86	194	P	P	13 29 35.7	-1.2
BHW	Baring Head	21.92	193	P	P	13 29 36.1	-1.3
QRZ	Quartz Range	21.98	198	P	P	13 29 38.0	0.0
PLWZ	Palliser	21.99	193	P	P	13 29 36.4	-1.8
NNZ	Nelson	22.10	196	P	P	13 29 38.0	-1.1
NNZ				IAmb	IAmb	13 29 59.3	
	comp=Z,58nm,1.8s						
TUWZ	Tuamarina	22.16	195	P	P	13 29 37.8	-1.7
BSWZ	Blackbirch Sta	22.44	195	P	P	13 29 41.4	-0.7
THZ	Tophouse	22.74	197	P	P	13 29 43.8	-1.0
KHZ	Kahutara	23.19	195	P	P	13 29 47.0	-1.6
KHZ				IAmb	IAmb	13 29 47.9	
	comp=Z,16nm,1.1s						
HNR	Honiara	23.38	294	P	P	13 29 48.9	-2.0
LTZ	Lake Taylor	23.86	197	P	P	13 29 52.8	-1.9
LTZ				IAmb	IAmb	13 29 56.5	
	comp=Z,9.4nm,0.6s						
OXZ	Oxford	24.43	197	P	P	13 29 57.8	-1.9
OXZ				IAmb	IAmb	13 29 59.2	
	comp=Z,12nm,0.8s						
MQZ	McQueen’s Vall	24.62	196	P	P	13 29 59.4	-1.9
RPZ	Rata Peaks	25.06	198	P	P	13 30 05.6	+0.3
	comp=Z,4.7nm,0.5s,baz=18,slow=3.1,SNR=10						
RPZ	Rata Peaks	25.06	198	P	P	13 30 05.1	-0.2
RPZ				IAmb	IAmb	13 30 31.0	
	comp=Z,56nm,2.0s						
FOZ	Fox Glacier	25.28	200	P	P	13 30 05.8	-1.3
FOZ				IAmb	IAmb	13 30 08.8	
	comp=Z,18nm,0.7s						
LBZ	Lake Benmore	25.93	199	P	P	13 30 11.1	-1.8
LBZ				IAmb	IAmb	13 31 01.2	
	comp=Z,33nm,1.7s						
WKZ	Wanaka	26.69	200	P	P	13 30 18.5	-1.1
WKZ				IAmb	IAmb	13 30 42.3	
	comp=Z,55nm,1.5s						
DCZ	Deep Cove	27.88	202	P	P	13 30 29.7	-0.2
DCZ				IAmb	IAmb	13 30 31.9	
	comp=Z,13nm,1.0s						
WHZ	Wether Hill Ro	27.99	200	P	P	13 30 30.6	-0.2
EIDS	Eidsvold	28.49	254	P	P	13 30 35.4	-0.2
ARMA	Armidale	28.80	243	P	P	13 30 38.8	+0.5
CTA	Charters Tower	33.06	264	P	P	13 31 15.0	+0.4
	comp=Z,34nm,0.3s,baz=88,slow=10,SNR=139						
PMG	Port Moresby	34.82	283	P	P	13 31 29.0	-0.3
	comp=Z,26nm,0.8s,baz=74,slow=5.5,SNR=7.6						
TOO	Toolangi	35.73	233	P	P	13 31 36.9	+0.4
TOO				IAmb	IAmb	13 31 38.0	
	comp=Z,14nm,0.8s						
COEN	Coen	37.10	273	P	P	13 31 48.0	0.0
STKA	Stephens Creek	37.52	244	P	P	13 31 52.0	+0.7
	comp=Z,9.0nm,0.8s,baz=94,slow=11,SNR=17						
STKA	Stephens Creek	37.52	244	P	P	13 31 51.6	+0.4
BBOO	Buckleboo	42.28	243	P	P	13 32 28.9	-0.3
BBOO				IAmb	IAmb	13 32 30.0	
	comp=Z,28nm,0.6s						
AS31	Alice Springs	44.15	256	P	P	13 32 43.1	-0.7
ASAR	Alice Springs	44.15	256	P	P	13 32 43.6	-0.1
	comp=Z,30nm,0.7s,baz=89,slow=7.8,SNR=346						
ASAR	Alice Springs	44.15	256	P	P	13 32 43.0	-0.8
WB0	Warramunga Arr	44.17	262	P	P	13 32 43.2	-0.7
WB2	Warramunga Arr	44.18	262	P	P	13 32 43.3	-0.8
WRAB	Tennant Creek	44.18	262	P	P	13 32 43.2	-0.8
WRA	Warramunga Arr	44.19	262	P	P	13 32 43.4	-0.8
	comp=Z,15nm,0.4s,baz=97,slow=8.0,SNR=354						
WRA	Warramunga Arr	44.19	262	P	P	13 32 43.3	-0.9
PTCN	Pitcairn Islan	44.76	106	P	P	13 32 49.6	+1.2
MTN	Manton Dam	48.70	270	P	P	13 33 17.4	-0.7
FORT	Forrest	49.00	246	P	P	13 33 19.6	-0.6
FORT				IAmb	IAmb	13 33 20.3	
	comp=Z,31nm,0.8s						
KNRA	Kununurra	50.22	266	P	P	13 33 28.8	-0.4
FITZ	Fitzroy Crossi	52.61	262	P	P	13 33 46.5	+0.1
	comp=Z,4.1nm,0.4s,baz=112,slow=3.5,SNR=34						
FITZ	Fitzroy Crossi	52.61	262	P	P	13 33 46.3	-0.1
FITZ				IAmb	IAmb	13 35 41.3	
	comp=Z,34nm,1.1s						
SOEI	Soe	56.03	272	P	P	13 34 11.6	+1.1
SOEI	Soe	56.03	272	P	P	13 34 11.6	+1.1
SOEI				IAmb	IAmb	13 36 12.9	
	comp=Z,37nm,0.9s						
PSA00	Pilbara Seismi	57.29	257	P	P	13 34 18.3	-0.6
PSA00	Pilbara Seismi	57.29	257	P	P	13 34 18.3	-0.6
VNDA	Vanda	58.21	185	P	P	13 34 25.7	+1.6
MORW	Morawa	59.53	248	P	P	13 34 32.6	-1.2
MORW				IAmb	IAmb	13 36 53.6	
	comp=Z,55nm,0.7s						
GIRL	Giralia	62.20	254	P	P	13 34 52.2	+0.9
CASY	Casey	64.07	205	P	P	13 35 03.3	+0.8
CASY				IAmb	IAmb	13 36 32.2	
	comp=Z,24nm,1.0s						
JAGI	Jajag, Banyuwa	65.92	270	P	P	13 35 14.9	-0.1
UGM	Wanagama	69.51	269	P	P	13 35 36.4	-0.5
QSPA	South Pole Qui	69.91	180	P	P	13 35 39.5	+1.2
	comp=Z,1.1nm,0.7s,baz=211,slow=0.3,SNR=9.0						
QSPA	South Pole Qui	69.91	180	P	P	13 35 38.5	+0.2
QSPA				IAmb	IAmb	13 38 13.8	
	comp=Z,33nm,1.9s						
NJ2	Nanjing	79.31	310	*e*P	P	13 36 31.7	+0.4
NVAR	Mina Array Bea	81.10	44	P	P	13 36 41.5	+0.7
	comp=Z,1.1nm,0.6s,baz=223,slow=9.1,SNR=11						
NVAR	Mina Array Bea	81.10	44	P	P	13 36 41.0	+0.3
NV11	Mina Array Sit	81.20	44	P	P	13 36 41.1	0.0
U15A	North Rim	84.08	48	P	P	13 36 56.9	+1.1
BMO	Blue Mountains	85.34	39	P	P	13 37 01.9	+0.4
F10A	Beach Ranch, E	86.02	38	P	P	13 37 04.9	+0.2
MNTX	Cornudas Mount	86.93	55	P	P	13 37 09.9	+0.7
SYO	Syowa Base	86.95	193⇑	*e*pP	pP	13 39 12.4	-4.7
TX31	Lajitas Ar. Si	87.26	58	P	P	13 37 12.1	+1.1
TX32	Lajitas Array	87.26	58	P	P	13 37 12.1	+1.1
TXAR	Lajitas Array	87.26	58	P	P	13 37 12.6	+1.6
	comp=Z,2.6nm,0.8s,baz=219,slow=6.4,SNR=29						
TXAR	Lajitas Array	87.26	58	P	P	13 37 12.1	+1.1
MCMT	McKenzie Canyo	88.00	40	P	P	13 37 14.6	+0.4
ILAR	Eielson Array	88.09	13	P	P	13 37 12.8	-1.0
	comp=Z,0.7nm,0.5s,baz=214,slow=5.5,SNR=12						
KMI	Kunming	88.78	297	P	P	13 37 19.4	+1.1
HHC	Hu-ho-hao-te	88.79	315	*e*P	P	13 37 15.6	-2.2
HHC				pP	pP	13 39 18.9	-7.5
HHC				sP	sP	13 40 30.1	+4.1
HHC				PP	PP	13 41 06.8	+8.1
PD31	Pinedale Array	89.03	43	P	P	13 37 19.2	+0.1
PDAR	Pinedale Array	89.03	43	P	P	13 37 19.4	+0.4
	comp=Z,1.2nm,0.6s,baz=206,slow=3.4,SNR=15						
PDAR	Pinedale Array	89.03	43	P	P	13 37 18.9	-0.1
CMAR	Chiang Mai Arr	89.56	290	P	P	13 37 23.1	+1.3
	comp=Z,0.6nm,0.4s,baz=135,slow=2.9,SNR=7.1						
CMAR	Chiang Mai Arr	89.56	290	P	P	13 37 21.7	-0.1
CD2	Chengdu	90.22	303	P	P	13 37 24.2	-0.4
KSH	Kashi	114.31	305	PKP	PKPdf	13 42 56.6	-2.8
KSH				PP	PP	13 44 09.4	+2.2
KSH				sPKP		13 46 12.4	
KSH				PKS		13 46 33.6	
KSH				SKKS		13 50 02.1	
KOLS	Kolonicke sedl	146.81	335	*e*PKP	PKPbc	13 44 02.9	+0.5
CRVS	Cervenica-Dubn	147.16	335	*e*PKP	PKPab	13 44 06.7	-0.3
VYHS	Vyhne	148.47	338	*e*PKP	PKPbc	13 44 05.8	-0.8

BJI ***10*** *13:28:19.6±0.0, 14°.02S×167°.55E, h175^{km}, mB5.2/47, mb5.3/65*

NEIC ***10*** *13:28:21.8±1.2, 14°.48S±0°.07×167°.44E±0°.08, h196^{km}±2^{km}, mb5.1/258, Error ellipse: s-maj=11.9km s-min=9.5km az=66.0*

IDC ***10*** *13:28:21.3±0.9, 14°.55S×167°.43E, h187^{km}±7^{km}, mb4.9/25, mb1 5.0/28, mb1mx5.0/30, mbtmp5.4/28, MS3.9/8, Ms1 3.9/8, ms1mx3.5/39, Error ellipse: s-maj=7.4km s-min=7.2km az=58.0*

MOS ***10*** *13:28:22.0±1.1, 14°.40S×167°.37E, h203^{km}, mb5.3/61, Error ellipse: s-maj=7.7km s-min=6.1km az=97.0*

GCMT ***10*** *13:28:24.8±0.2, 14°.46S±0°.01×167°.22E±0°.01, h204^{km}±1^{km}, MW5.3/130, Moment Tensor Solution. s74,c99; s130,c221; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}0.56±.02; $M_{\theta\theta}$0.06±.02; $M_{\phi\phi}$-0.62±.02; $M_{r\theta}$0.93±.02; $M_{\theta\phi}$0.72±.02; $M_{\phi r}$-0.20±.02; Best double couple: $M_0$1.33300×10^{17} NP1:ϕ_s3.00000°, δ38.00000°, λ154.00000°. NP2:ϕ_s114.00000°, δ75.00000°, λ55.00000°. Principal axes: T 1.3200, Plg48.0000°, Azm346.0000°; N 0.0270, Plg33.0000°, Azm124.0000°; P -1.3460, Plg22.0000°, Azm229.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 13:28:18.9±0.2**, 14°.44S**±0°.04×**167°.52E**±0°.05**, h170**^{km}**, n851, σ1^{s}37**/904**, mb5.2**/223**, 34C-17D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.66	187	P	Pn	13 30 10.2	+2.4
	22nm,0.3s,baz=47,slow=12,SNR=78						
DZM				S	Sn	13 31 35.5	+1.7
	16nm,0.3s,baz=306,slow=23,SNR=10						
DZM				LR	LR	13 32 06.7	
	comp=Z,977nm,19.2s,baz=28,slow=30						
DZM	Mont Dzumac	7.66	187	*e*Pn	Pn	13 30 12.0	+4.1
	534nm,1.4s						
DZM				*e*Sn	Sn	13 31 35.5	+1.7
	511nm,1.6s						
DZM				*e*LR	LR	13 31 40.9	
	comp=Z,1μm,25.5s						
DZM	Mont Dzumac	7.66	187	Pn	Pn	13 30 11.8	+4.0
HNR	Honiara	8.92	303	P	Pn	13 30 26.8	+2.2
	14nm,0.3s,baz=262,slow=2.6,SNR=12						
HNR				S	Sn	13 32 07.4	+3.4
	baz=248,slow=17,SNR=1.6						
HNR				LR	LR	13 33 43.3	
	comp=Z,382nm,20.5s,baz=144,slow=36						
HNR	Honiara	8.92	303	*e*P	Pn	13 30 28.0	+3.4
HNR	Honiara	8.92	303	Pn	Pn	13 30 26.2	+1.6
RABL	Rabaul	18.24	302	P	Pn	13 32 20.5	-1.1
KRVT	Keravat (AS076	18.29	302	P	P	13 32 20.2	+0.1
	13nm,0.3s,baz=16,slow=7.2,SNR=10						
KRVT				S	S	13 35 43.1	+2.7
	2.4nm,0.3s,baz=285,slow=6.0,SNR=2.0						
LHI	Lord Howe Isla	18.68	203	P	Pn	13 32 26.9	+0.3
	baz=19,SNR=6.7						
LHI	Lord Howe Isla	18.68	203	P	Pn	13 32 26.1	-0.5
EIDS	Eidsvold	18.88	232	P	Pn	13 32 28.7	-0.2
	baz=19,SNR=54						
EIDS	Eidsvold	18.88	232	P	Pn	13 32 28.2	-0.7
PMG	Port Moresby	20.53	282	P	P	13 32 46.1	+1.9
	112nm,0.8s,baz=88,slow=5.9,SNR=25						
PMG				S	S	13 36 25.9	+1.0
	10.0nm,0.9s,baz=166,slow=23,SNR=2.7						
PMG	Port Moresby	20.53	282	IAmb	IAmb	13 32 48.9	
	comp=Z,123nm,0.8s						
CTA	Charters Tower	21.06	252	P	P	13 32 50.1	+0.2
	comp=Z,81nm,0.5s,baz=74,slow=12,SNR=57						
CTA				S	S	13 36 34.4	-0.4
	comp=Z,8.6nm,0.9s,baz=292,slow=17,SNR=2.5						
RMQ	Roma	21.24	233	P	P	13 32 53.6	+1.8
	baz=21,SNR=80						
OUZ	Omahuta	21.40	166	P	P	13 32 55.3	+2.0
OUZ				IAmb	IAmb	13 32 59.0	
	comp=Z,38nm,1.0s						
ARMA	Armidale	21.60	220	P	P	13 32 57.3	+1.6
	baz=22,SNR=100						
ARMA	Armidale	21.60	220	P	P	13 32 57.1	+1.4
ARMA				IAmb	IAmb	13 32 58.1	
	comp=Z,86nm,0.8s						
NIUE	Niue	22.08	105	P	P	13 33 03.2	+2.8
MTSU	Mount Surprise	22.57	257	P	P	13 33 06.1	+1.0
	baz=23,SNR=92						
PATS	Pohnpei	23.03	336	P	P	13 33 10.6	+1.3
	baz=23,SNR=22						
KWAJ	Kwajalein Atol	23.09	0	P	P	13 33 11.3	+1.5
KWAJ				pmax	pmax		
	comp=Z,452nm,0.7s						
KWAJ	Kwajalein Atol	23.09	0	P	P	13 33 11.3	+1.5
MANU	Manus Island	23.41	300	P	P	13 33 13.3	+0.5
COEN	Coen	23.60	268	P	P	13 33 15.9	+1.3
	baz=24,SNR=37						
COEN	Coen	23.60	268	P	P	13 33 15.6	+1.0
COEN				IAmb	IAmb	13 33 18.3	
	comp=Z,57nm,1.0s						
MGCD	Mangrove Creek	23.91	216	P	P	13 33 18.9	+1.8
	baz=24,SNR=69						
TOZ	Tahuroa Road	24.26	164	P	P	13 33 28.9	+8.6
RIV	Riverview	24.34	215	P	P	13 33 22.8	+1.8
	baz=24,SNR=16						
HIZ	Hauiti	24.84	166	P	P	13 33 26.3	+0.7
HIZ				IAmb	IAmb	13 33 34.8	
	comp=Z,84nm,1.5s						
QLP	Quilpie	24.88	237	P	P	13 33 26.6	+0.5
	baz=25,SNR=236						
HAZ	Te Kaha	24.95	160	P	P	13 33 28.2	+1.7
URZ	Urewera	25.20	162	P	P	13 33 28.6	-0.2
	comp=Z,6.7nm,0.6s,baz=314,slow=7.3,SNR=3.5						
URZ				S	S	13 37 41.5	0.0
	comp=Z,4.2nm,0.7s,baz=150,slow=19,SNR=3.1						
URZ				ScP	ScP	13 40 18.5	-2.7
	comp=Z,18nm,1.0s,baz=350,slow=9.2,SNR=4.1						
URZ	Urewera	25.20	162	P	P	13 33 28.9	+0.1
URZ	Urewera	25.20	162	P	P	13 33 29.3	+0.5
WMGZ	Waiomatatini S	25.22	159	P	P	13 33 32.1	+3.1
MUGZ	Murupara	25.30	163	P	P	13 33 29.0	-0.8
MWZ	Matawai	25.40	161	P	P	13 33 31.9	+1.2
MRHZ	Matea Rd	25.54	164	P	P	13 33 33.6	+1.7
MTHZ	Maungataniwha	25.67	163	P	P	13 33 34.2	+1.0
RIGZ	Rimuhau	25.81	161	P	P	13 33 34.6	+0.2
BKZ	Black Stump Fm	25.87	164	P	P	13 33 35.0	+0.1
BKZ	Black Stump Fm	25.87	164	P	P	13 33 35.2	+0.3
BHHZ	Black Hill Sta	26.06	165	P	P	13 33 37.9	+1.2
CMSA	Cobar Meteorol	26.25	226	P	P	13 33 39.0	+0.7
	baz=26,SNR=223						
YNG	Young	26.26	218	P	P	13 33 39.8	+1.3
	baz=26,SNR=33						
KRHZ	Kereru	26.29	164	P	P	13 33 38.9	+0.3
CNB	Canberra Magne	26.43	215	P	P	13 33 41.3	+1.2
	baz=26,SNR=38						
CAN	Canberra	26.64	215	P	P	13 33 42.8	+0.9
CAN				pmax	pmax		
	comp=Z,32nm,1.0s						
CAN	Canberra	26.64	215	P	P	13 33 42.8	+0.9
CAN				IAmb	IAmb	13 33 43.5	
	comp=Z,32nm,1.0s						
QRZ	Quartz Range	26.65	172	P	P	13 33 42.5	+0.7
QRZ				IAmb	IAmb	13 33 51.8	
	comp=Z,69nm,1.4s						
NNZ	Nelson	27.16	170	P	P	13 33 46.1	-0.3
NNZ				IAmb	IAmb	13 34 41.8	
	comp=Z,44nm,1.4s						
BFZ	Birch Farm	27.23	165	P	P	13 33 46.4	-0.6
BFZ				IAmb	IAmb	13 34 34.4	
	comp=Z,155nm,2.0s						
QIS	Mount Isa	27.28	253	P	P	13 33 47.8	0.0
	baz=27,SNR=16						
TUWZ	Tuamarina	27.47	169	P	P	13 33 49.5	+0.4
SNZO	South Karori	27.49	168	P	P	13 33 49.5	+0.2
SNZO				IAmb	IAmb	13 34 37.3	
	comp=Z,51nm,1.1s						
THZ	Tophouse	27.62	171	P	P	13 33 50.6	0.0
MSWZ	Moikau Station	27.71	167	P	P	13 33 49.6	-1.6
BSWZ	Blackbirch Sta	27.73	170	P	P	13 33 52.2	+0.8
MILA	Mila	27.84	213	P	P	13 33 53.6	+1.0
	baz=28,SNR=14						
PLWZ	Palliser	27.85	168	P	P	13 33 52.6	0.0
KHZ	Kahutara	28.36	171	P	P	13 33 56.2	-0.8
LTZ	Lake Taylor	28.54	173	P	P	13 33 58.0	-0.7
LTZ				IAmb	IAmb	13 34 00.4	
	comp=Z,40nm,0.8s						
OXZ	Oxford	29.05	173	P	P	13 34 02.7	-0.4
OXZ				IAmb	IAmb	13 34 04.4	
	comp=Z,32nm,0.6s						
FOZ	Fox Glacier	29.06	177	P	P	13 34 04.0	+0.8
FOZ				IAmb	IAmb	13 34 05.7	
	comp=Z,46nm,0.7s						
RPZ	Rata Peaks	29.33	175	P	P	13 34 05.8	+0.1
	comp=Z,33nm,0.7s,baz=292,slow=2.8,SNR=38						
RPZ				ScP	ScP	13 40 32.7	-1.0
	comp=Z,15nm,0.8s,baz=0.0,slow=4.0,SNR=3.2						
RPZ				LR	LR	13 45 22.3	
	comp=Z,164nm,18.6s,baz=1.0,slow=35						
RPZ	Rata Peaks	29.33	175	P	P	13 34 06.0	+0.4
RPZ				IAmb	IAmb	13 34 07.5	
	comp=Z,34nm,0.7s						
STKA	Stephens Creek	29.36	229	P	P	13 34 07.2	+1.1
	baz=29,SNR=1000						
STKA	Stephens Creek	29.36	229	P	P	13 34 07.1	+1.1
	comp=Z,326nm,0.4s,baz=53,slow=8.9,SNR=1069						
STKA				ScP	ScP	13 40 32.7	-1.3
	comp=Z,6.7nm,0.8s,baz=41,slow=5.0,SNR=5.1						
STKA				LR	LR	13 45 09.4	
	comp=Z,393nm,18.7s,baz=137,slow=34						
STKA	Stephens Creek	29.36	229	P	P	13 34 06.9	+0.8
MQZ	McQueen’s Vall	29.50	172	P	P	13 34 07.1	0.0
MQZ				IAmb	IAmb	13 34 12.7	
	comp=Z,61nm,1.4s						
LBZ	Lake Benmore	29.93	176	P	P	13 34 10.6	-0.3
LBZ				IAmb	IAmb	13 34 12.8	
	comp=Z,32nm,0.7s						
TOO	Toolangi	30.23	216	P	P	13 34 14.6	+0.9
	baz=30,SNR=72						
TOO	Toolangi	30.23	216	P	P	13 34 14.6	+0.9
TOO				pmax	pmax		
	comp=Z,67nm,0.9s						
TOO	Toolangi	30.23	216	P	P	13 34 14.6	+0.9
WKZ	Wanaka	30.32	178	P	P	13 34 15.1	+0.8
WKZ				IAmb	IAmb	13 34 26.4	
	comp=Z,29nm,0.8s						
ODZ	Otahua Downs	30.62	176	P	P	13 34 16.7	-0.2
DCZ	Deep Cove	30.93	180	P	P	13 34 19.8	+0.1
DCZ				IAmb	IAmb	13 34 21.5	
	comp=Z,49nm,1.0s						
SMPI	Sarmi	31.02	291	P	P	13 34 22.4	+1.5
	comp=Z,141nm,1.1s						
WHZ	Wether Hill Ro	31.36	179	P	P	13 34 23.4	0.0
WHZ				IAmb	IAmb	13 34 23.6	
	comp=Z,64nm,1.8s						
ARPS	Mount Arapiles	31.92	221	P	P	13 34 29.7	+1.2
	baz=32,SNR=25						
WB0	Warramunga Arr	32.07	256	P	P	13 34 28.6	-1.4
HTT	Hallett	32.09	229	P	P	13 34 30.9	+0.8
	baz=32,SNR=177						
WB2	Warramunga Arr	32.12	255	P	P	13 34 28.6	-1.9
WB2				IAmb	IAmb	13 34 31.0	
	comp=Z,39nm,0.8s						
WRAB	Tennant Creek	32.12	255	*de*P	P	13 34 29.2	-1.3
WRAB				pmax	pmax		
	comp=Z,29nm,0.7s						
WRAB	Tennant Creek	32.12	255	P	P	13 34 28.3	-2.2
WRAB				IAmb	IAmb	13 34 30.9	
	comp=Z,33nm,0.8s						
WRA	Warramunga Arr	32.13	255	P	P	13 34 29.4	-1.1
	comp=Z,39nm,0.6s,baz=86,slow=8.6,SNR=81						
WRA				S	S	13 39 26.8	-3.9
	comp=Z,7.6nm,1.1s,baz=86,slow=14,SNR=6.2						
WRA				ScP	ScP	13 40 40.9	-2.6
	comp=Z,6.3nm,0.9s,baz=84,slow=3.7,SNR=7.1						
WRA	Warramunga Arr	32.13	255	P	P	13 34 27.8	-2.7
WRA	Warramunga Arr	32.13	255		ScP	13 40 40.3	-3.2
MOO	Moorlands	32.96	208	P	P	13 34 38.9	+1.4
	baz=33,SNR=18						
AS31	Alice Springs	33.00	249	P	P	13 34 36.7	-1.4
AS31				IAmb	IAmb	13 34 40.2	
	comp=Z,32nm,0.6s						
ASAR	Alice Springs	33.00	249	P	P	13 34 37.0	-1.2
	comp=Z,54nm,0.4s,baz=78,slow=9.3,SNR=196						
ASAR				S	S	13 39 37.6	-6.6
	comp=Z,7.6nm,0.9s,baz=80,slow=16,SNR=10.0						
ASAR				ScP	ScP	13 40 44.0	-2.5
	comp=Z,4.7nm,0.8s,baz=91,slow=3.1,SNR=8.0						
ASAR	Alice Springs	33.00	249	P	P	13 34 36.6	-1.6
ASAR	Alice Springs	33.00	249		ScP	13 40 43.3	-3.1
TAU	Tasmania Unive	33.27	208	P	P	13 34 40.6	+0.5
TAU				pmax	pmax		
	comp=Z,41nm,1.0s						
TAU	Tasmania Unive	33.27	208	P	P	13 34 40.6	+0.5
TAU				IAmb	IAmb	13 34 42.1	
	comp=Z,41nm,0.9s						
H11N1	WAKE ISLAND Hy	33.94	359	P	P	13 34 46.9	+1.0
	baz=261,slow=22,SNR=3.4						
BBOO	Buckleboo	33.95	232	P	P	13 34 46.6	+0.4
	baz=34,SNR=292						
BBOO	Buckleboo	33.95	232	P	P	13 34 46.4	+0.2
H11N3	WAKE ISLAND Hy	33.95	359	P	P	13 34 48.1	+2.1
	baz=261,slow=22,SNR=4.2						
H11N2	WAKE ISLAND Hy	33.96	359	P	P	13 34 48.0	+1.9
	baz=261,slow=22,SNR=4.6						
KDU	Kakadu	34.09	269	P	P	13 34 47.3	-0.3
	baz=34,SNR=16						
RKPI	Ransiki, Papua	35.36	288	P	P	13 35 00.4	+1.9
	comp=Z,2μmcomp=Z,286nm,0.9s						
MTN	Manton Dam	35.37	268	P	P	13 34 58.7	+0.1
	baz=35,SNR=11						
MTN	Manton Dam	35.37	268	P	P	13 34 58.4	-0.2
MTN				IAmb	IAmb	13 35 01.6	
	comp=Z,28nm,0.5s						
GUMO	Guam	35.75	320	P	P	13 35 01.9	+0.1
	comp=Z,97nm,0.5s,baz=164,slow=13,SNR=10						
GUMO	Guam	35.75	320	P	P	13 35 01.9	+0.1
GUMO				pmax	pmax		
	comp=Z,221nm,1.2s						
GUMO	Guam	35.75	320	P	P	13 35 01.9	+0.1
FAKI	Fak Fak	36.63	285	P	P	13 35 10.3	+1.0
	comp=Z,109nm,0.9s						
FAKI	Fak Fak	36.63	285	P	P	13 35 09.0	-0.3
KNRA	Kununurra	37.41	263	P	P	13 35 15.1	-0.8
	baz=37,SNR=35						
KNRA	Kununurra	37.41	263	P	P	13 35 15.1	-0.8
KNRA				IAmb	IAmb	13 35 17.4	
	comp=Z,75nm,0.8s						
WRKA	Warakurna	38.27	248	P	P	13 35 22.6	-0.5
	baz=38,SNR=64						
SIJI	Sorong	38.29	287	LR	LR	13 50 58.2	
	comp=Z,148nm,19.8s,baz=138,slow=36						
SWI	Sorong	38.30	287	P	P	13 35 24.0	+0.7
	comp=Z,2μmcomp=Z,247nm,1.0s						
BNDI	Bandanaira	38.33	281	P	P	13 35 24.5	+0.9
	comp=Z,3μmcomp=Z,255nm,1.0s						
FORT	Forrest	39.65	239	P	P	13 35 34.1	-0.2
	baz=40,SNR=116						
FORT	Forrest	39.65	239	P	P	13 35 33.9	-0.5
AAI	Ambon	40.20	282	P	P	13 35 38.4	-0.7
	comp=Z,64nm,0.9s						
FITZ	Fitzroy Crossi	40.30	259	P	P	13 35 40.0	+0.1
	baz=40,SNR=39						
FITZ	Fitzroy Crossi	40.30	259	P	P	13 35 40.0	+0.1
	comp=Z,20nm,0.5s,baz=84,slow=10,SNR=64						

FITZ	Fitzroy Crossi	40.30	259	P	P	13 35 39.5	-0.4
PPT2	Papeete2	41.30	100	eLR	LR	13 46 38.7	
	comp=Z,173nm,25.8s						
NLAI	Namlea	41.38	282	P	P	13 35 50.5	+1.7
	comp=Z,121nm,1.3s						
SOEI	Soe	42.50	271	P	P	13 35 59.1	+1.1
	comp=Z,45nm,0.9s						
SOEI	Soe	42.50	271	P	P	13 35 58.4	+0.4
SOEI				IAmb	IAmb	13 36 23.0	
	comp=Z,34nm,0.8s						
TNTI	Ternate	42.51	287	P	P	13 35 57.8	-0.1
TNTI				IAmb	IAmb	13 36 02.9	
	comp=Z,36nm,1.0s						
SANI	Sanana	42.81	283	P	P	13 36 00.9	+0.5
	comp=Z,836nmcomp=Z,93nm,1.0s						
MMRI	Maumere	44.68	272	P	P	13 36 16.8	+1.5
	comp=Z,66nm,1.1s						
MMRI	Maumere	44.68	272	P	P	13 36 15.2	-0.1
MMRI				IAmb	IAmb	13 36 16.6	
	comp=Z,65nm,1.0s						
KMBL	Kambalda	44.94	240	P	P	13 36 16.6	-0.6
	baz=45,SNR=34						
EDFI	Ende, Flores	45.19	272	P	P	13 36 19.2	-0.2
	comp=Z,367nmcomp=Z,30nm,1.0s						
KMSI	Cibinong	45.59	285	P	P	13 36 23.7	+1.3
	comp=Z,98nm,1.0s						
PSA00	Pilbara Seismi	45.75	254	P	P	13 36 23.2	-0.4
PSA00				IAmb	IAmb	13 36 25.2	
	comp=Z,37nm,0.8s						
PSA00	Pilbara Seismi	45.75	254	P	P	13 36 22.3	-1.3
PSA00				IAmb	IAmb	13 36 24.2	
	comp=Z,17nm,0.6s						
MEEK	Meekatharra	47.12	247	P	P	13 36 33.7	-0.5
	baz=47,SNR=67						
WBSI	Waikabubak, Su	47.24	270	P	P	13 36 36.6	+1.2
	comp=Z,1µmcomp=Z,61nm,0.8s						
APSI	Ampana	47.28	282	P	P	13 36 37.2	+1.6
	comp=Z,39nm,0.8s						
MRSI	Marisa	47.47	284	P	P	13 36 36.7	-0.3
	comp=Z,31nm,0.9s						
BKSI	Bulukumba	47.48	276	P	P	13 36 38.8	+1.6
	comp=Z,22nm,0.8s						
BNSI	Bone	47.73	277	P	P	13 36 39.7	+0.6
	comp=Z,32nm,0.8s						
TTSI	Tana Toraja	48.38	279	P	P	13 36 42.6	-1.5
	comp=Z,23nm,0.9s						
KEKH	Kekaha	48.40	42	P	P	13 36 45.2	+1.1
KLBR	Kellerberrin	48.45	241	P	P	13 36 43.4	-1.1
	baz=48,SNR=40						
PLAI	Plampang	48.96	271	P	P	13 36 47.3	-1.2
	comp=Z,71nm,0.9s						
NWAO	Narrogin (SRO)	49.10	239	P	P	13 36 48.6	-0.8
	baz=49,SNR=37						
NWAO	Narrogin (SRO)	49.10	239	P	P	13 36 48.2	-1.1
	comp=Z,73nm,0.6s,baz=76,slow=6.6,SNR=38						
NWAO				PP	PP	13 38 47.7	+3.1
	comp=Z,30nm,0.8s,baz=78,slow=11,SNR=6.9						
NWAO	Narrogin (SRO)	49.10	239	P	P	13 36 48.6	-0.8
NWAO				pmax	pmax		
	comp=Z,69nm,0.8s						
NWAO	Narrogin (SRO)	49.10	239	P	P	13 36 48.6	-0.8
NWAO				IAmb	IAmb	13 36 50.0	
	comp=Z,88nm,0.8s						
NWAO	Narrogin (SRO)	49.10	239	P	P	13 36 48.6	-0.8
NWAO				IAmb	IAmb	13 36 50.0	
	comp=Z,69nm,0.8s						
BLDU	Ballidu	49.21	242	P	P	13 36 49.2	-0.9
	baz=49,SNR=16						
OPA	Opana	49.32	44	P	P	13 36 52.2	+1.1
OPA				pmax	pmax		
	comp=Z,133nm,1.1s						
OPA	Opana	49.32	44	P	P	13 36 52.2	+1.1
OPA				IAmb	IAmb	13 37 13.1	
	comp=Z,133nm,1.1s						
MPSI	Mapaga	49.34	283	P	P	13 36 51.5	+0.1
	comp=Z,828nmcomp=Z,70nm,1.0s						
AIN	Ainahou	49.57	48	P	P	13 36 55.7	+2.5
MORW	Morawa	49.61	244	P	P	13 36 52.6	-0.7
	baz=50,SNR=38						
MORW	Morawa	49.61	244	P	P	13 36 52.5	-0.7
MORW				IAmb	IAmb	13 36 54.4	
	comp=Z,63nm,0.7s						
RKGY	Rocky Gully	49.61	237	P	P	13 36 53.2	+0.1
	baz=50,SNR=24						
MUN	Mundaring	49.81	240	P	P	13 36 54.1	-0.6
	baz=50,SNR=12						
HPAH	Hawaii Prepara	49.82	47	P	P	13 36 55.1	+0.2
HPAH				IAmb	IAmb	13 36 58.3	
	comp=Z,70nm,0.8s						
HLK	Haleakala	49.91	46	P	P	13 36 58.0	+2.2
GIRL	Giralia	50.95	252	P	P	13 37 04.4	+1.0
	baz=51,SNR=9.8						
GIRL	Giralia	50.95	252	P	P	13 37 04.3	+0.9
IGBI	Denpasar	51.51	270	P	P	13 37 09.1	+1.4
	comp=Z,118nm,1.0s						
SRBI	Singaraja	51.60	271	P	P	13 37 09.0	+0.7
	comp=Z,35nm,0.8s						
JAGI	Jajag, Banyuwa	52.55	270	P	P	13 37 14.9	-0.5
	comp=Z,35nm,0.9s						
JAGI	Jajag, Banyuwa	52.55	270	P	P	13 37 14.3	-1.0
JAGI				IAmb	IAmb	13 37 15.1	
	comp=Z,28nm,0.9s						
SPMM	Sapulut	54.07	287	P	P	13 37 27.0	+0.5
KKM	Kota Kinabalu	54.80	288	P	P	13 37 31.6	-0.2
PWJI	Pagerwojo	54.91	270	P	P	13 37 33.3	+0.8
	comp=Z,37nm,0.9s						
PCJI	Pacitan	55.48	270	P	P	13 37 37.2	+0.6
	comp=Z,121nm,1.0s						
WOJI	Wonogiri, Jawa	55.80	270	P	P	13 37 39.7	+0.8
	comp=Z,48nm,0.9s						
JOW	Kunigami	56.00	317	P	P	13 37 38.8	-1.3
JOW				IAmb	IAmb	13 37 42.1	
	comp=Z,36nm,0.8s						
UGM	Wanagama	56.17	270	P	P	13 37 41.6	0.0
SBUM	Sibu	57.28	282	P	P	13 37 48.0	-1.4
SBUM	Sibu	57.28	282	P	P	13 37 50.0	+0.7
INU	Inuyama	57.34	330	P	P	13 37 49.3	0.0
MJAR	Matsushiro Arr	57.76	332	P	P	13 37 52.2	0.0
	comp=Z,62nm,0.9s,baz=161,slow=7.8,SNR=68						
MJAR	Matsushiro Arr	57.76	332	P	P	13 37 51.8	-0.5
MAJO	Matsushiro	57.76	332	P	P	13 37 52.2	-0.1
MAJO				pmax	pmax		
	comp=Z,70nm,0.6s						
MAJO	Matsushiro	57.76	332	P	P	13 37 52.2	-0.1
MAT	Matsushiro	57.76	332	P	P	13 37 52.5	+0.2
MJB9	Matsu-Tunnel	57.77	332	P	P	13 37 52.3	0.0
KPJI	Karang Pucung	57.84	270	P	P	13 37 54.4	+1.2
	comp=Z,86nm,0.8s						
KSM	Kuching	58.79	281	P	P	13 37 59.5	-0.3
KSM				IAmb	IAmb	13 38 01.1	
	comp=Z,51nm,1.1s						
KSM	Kuching	58.79	281	P	P	13 38 00.0	+0.2
CISI	Cisompet, Garu	58.87	270	P	P	13 37 59.6	-0.9
	comp=Z,69nm,0.9s						
CISI	Cisompet, Garu	58.87	270	P	P	13 37 59.5	-0.9
TPUB	Ta-pu	59.25	309	P	P	13 38 02.2	-0.7
YHNB	Yeheng	59.48	310	P	P	13 38 04.4	0.0
DBJI	Dramaga	60.12	271	P	P	13 38 09.2	+0.2
	comp=Z,58nm,1.2s						
ERM	Erimo	60.50	339	P	P	13 38 12.3	+1.4
ERM				pmax	pmax		
	comp=Z,66nm,0.7s						
ERM	Erimo	60.50	339	P	P	13 38 12.3	+1.4
KASI	Kota Agung	62.54	271	P	P	13 38 24.2	-1.0
	comp=Z,109nm,1.0s						
LWLI	Liwa	63.08	272	P	P	13 38 28.0	-0.9
	comp=Z,15µmcomp=Z,50nm,0.8s						
MDSI	Maura Dua	63.09	272	P	P	13 38 26.7	-2.1
	comp=Z,766nmcomp=Z,20nm,0.9s						
VNDA	Vanda	63.16	181	P	P	13 38 28.0	-0.2
	comp=Z,5.9nm,0.7s,baz=359,slow=5.6,SNR=14						
VNDA	Vanda	63.16	181	P	P	13 38 28.4	+0.2
VNDA				pmax	pmax		
	comp=Z,70nm,2.0s						
VNDA	Vanda	63.16	181	P	P	13 38 28.4	+0.2
VNDA				IAmb	IAmb	13 38 46.2	
	comp=Z,70nm,2.0s						
TJN	Taejon	63.18	324	ceP	P	13 38 29.3	+0.4
SBA	Scott Base	63.42	180	P	P	13 38 31.0	+1.0
SBA				pmax	pmax		
	comp=Z,179nm,1.8s						
SBA	Scott Base	63.42	180	P	P	13 38 30.9	+1.0
KSRS	Korea Array	63.64	326	P	P	13 38 32.6	+0.7
	comp=Z,20nm,0.9s,baz=140,slow=7.1,SNR=65						
KSRS				PcP	PcP	13 39 08.2	+1.6
	comp=Z,9.3nm,0.9s,baz=140,slow=5.3,SNR=6.8						
KSAR	Wonju Array Be	63.65	325	P	P	13 38 32.2	+0.2
KSAR	Wonju Array Be	63.65	325	P	P	13 38 32.2	+0.2
KS19	Wonju Array Si	63.70	326	P	P	13 38 32.5	+0.1
KS19				IAmb	IAmb	13 38 33.7	
	comp=Z,32nm,1.0s						
CASY	Casey	63.88	202	P	P	13 38 33.4	+0.3
CASY				IAmb	IAmb	13 38 34.2	
	comp=Z,30nm,0.8s						
MNAI	Manna	64.30	272	P	P	13 38 36.4	-0.4
INCN	Inchon	64.37	325	P	P	13 38 37.0	+0.2
INCN				pmax	pmax		
	comp=Z,38nm,1.1s						
INCN	Inchon	64.37	325	P	P	13 38 37.0	+0.2
INCN				IAmb	IAmb	13 38 38.6	
	comp=Z,38nm,1.1s						
YSS	Yuzh-Sakhalins	65.03	342	P	P	13 38 41.9	+1.1
YSS				pmax	pmax		
	comp=Z,155nm,0.9s						
YSS	Yuzh-Sakhalins	65.03	342	P	P	13 38 41.9	+1.1
MYKOM	Kota Tinggi	65.05	279	P	P	13 38 42.0	+0.4
TEY	Ternei	65.51	336	⇑eP	P	13 38 45.8	+1.9
TEY				pmax	pmax		
	comp=Z,50nm,0.8s						
TEY				pmax	pmax		
	comp=N,30nm,0.9s						
TEY				pmax	pmax		
	comp=E,20nm,0.9s						
NJ2	Nanjing	65.64	316	⇓iP	P	13 38 45.9	+0.9
NJ2				pmax	pmax		
	comp=E,49nm,0.9s						
QIZ	Qiongzhong	65.81	299	P	P	13 38 47.0	+0.6
SDSI	Sungai Dareh	66.63	275	P	P	13 38 51.6	-0.2
USRK	Ussuriysk Ar.	66.74	333	P	P	13 38 53.4	+1.6
	comp=E,68nm,1.0s,baz=146,slow=5.3,SNR=55						
USRK	Ussuriysk Ar.	66.74	333	P	P	13 38 52.6	+0.8
USA0B	Ussuriysk Arra	66.74	333	P	P	13 38 52.7	+0.9
USA0B				pmax	pmax		
	comp=Z,167nm,1.3s						
USA0B	Ussuriysk Arra	66.74	333	P	P	13 38 52.7	+0.9
BKNI	Bangkinang	67.34	276	P	P	13 38 56.5	+0.2
PDSI	Padang	67.57	275	P	P	13 38 57.8	+0.1
	comp=Z,22nm,0.8s						
PET	Petropavlovsk	67.62	354	P	P	13 38 57.7	+0.6
PET				pmax	pmax		
	comp=Z,211nm,1.6s						
PET	Petropavlovsk	67.62	354	P	P	13 38 57.7	+0.6
PEA0B	Petropavlovsk-	67.80	354	c iP	P	13 38 59.4	+1.1
PEA0B	Petropavlovsk-	67.80	354	P	P	13 38 59.5	+1.3
PETK	Petropavlovsk-	67.80	354	P	P	13 38 59.6	+1.3
	comp=Z,89nm,0.8s,baz=163,slow=5.9,SNR=117						
PETK	Petropavlovsk-	67.80	354	P	P	13 38 58.9	+0.6
WHN	Wuhan	67.93	312	P	P	13 38 57.8	-1.7
MDJ	Mudanjiang	68.14	332	P	P	13 39 01.7	+1.1
MDJ				S	S	13 47 47.0	+0.3
MDJ				pmax	pmax		
	comp=Z,180nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,310nm,3.0s						
MDJ	Mudanjiang	68.14	332	P	P	13 39 01.2	+0.6
ATKA	Atka Island	68.23	12	P	P	13 39 01.8	+0.8
IPM	Ipoh	68.53	281	P	P	13 39 03.0	-0.7
IPM				IAmb	IAmb	13 39 04.9	
	comp=Z,49nm,1.0s						
IPM	Ipoh	68.53	281	P	P	13 39 04.0	+0.3
TYV	Tymovskoe	68.57	343	eP	P	13 39 04.7	+1.6
TYV				eS	S	13 47 51.3	-0.2
TYV				pmax	pmax		
	comp=Z,46nm,1.3s						
TYV				pmax	pmax		
	comp=Z,800nm,7.0s						
TYV				smax	smax		
	comp=N,2µm,8.6s						
SISI	Saibi	68.79	274	P	P	13 39 04.7	-0.6
	comp=N,19nm,0.9s						
KULM	Kulim	69.13	281	P	P	13 39 06.9	-0.4
KULM				IAmb	IAmb	13 39 08.4	
	comp=Z,28nm,1.0s						
KULM	Kulim	69.13	281	P	P	13 39 07.0	-0.4
CN2	Changchun	69.52	329	eP	P	13 39 09.8	+0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NIKH	Nikolski High	70.16	15	P	P	13 39 13.2	+0.4
GRNR	Gornyy	70.41	340	⇑iP	P	13 39 16.1	+1.7
GRNR				eS	S	13 48 14.3	+1.2
GRNR				pmax	pmax		
	comp=Z,120nm,0.9s						
GRNR				smax	smax		
	comp=E,1.0nm,0.9s						
GRNR				MLR	MLR		
	comp=Z,90nm,16.0s						
KLR	Kul'dur	70.84	336	c iP	P	13 39 18.0	+1.0
KLR				pmax	pmax		
	comp=Z,144nm,1.6s						
KCSI	Kotacane, Aceh	71.36	279	P	P	13 39 20.3	-0.7
	comp=Z,25nm,0.9s						
ENH	Enshi	71.37	309	P	P	13 39 20.0	-0.7
UNV	Unalaska Valle	71.55	16	P	P	13 39 21.0	-0.1
GYA	Guiyang	71.75	304	⇑iP	P	13 39 23.4	+0.3
GYA				PP	PP	13 42 07.8	+2.8
GYA				S	S	13 48 28.3	-1.5
GYA				SS	SS	13 53 10.0	+0.4
GYA				pmax	pmax		
	comp=Z,30nm,0.8s						
GYA				pmax	pmax		
	comp=Z,80nm,5.4s						
GYA				LR	LR		
	comp=Z,200nm,17.6s						
GYA				LR	LR		
	comp=Z,170nm,18.0s						
GYA				LR	LR		
	comp=Z,180nm,17.7s						
BJT	Baijiatuau	72.18	321	P	P	13 39 23.7	-1.6
BJT				pmax	pmax		
	comp=Z,30nm,0.9s						
BJT	Baijiatuau	72.18	321	P	P	13 39 23.7	-1.6
BJT				IAmb	IAmb	13 39 27.1	
	comp=Z,30nm,0.9s						
BJI	Beijing	72.19	321	P	P	13 39 25.9	+0.6
BJI				PcP	PcP	13 39 43.6	+1.1
BJI				pmax	pmax		
	comp=Z,35nm,0.9s						
MLSI	Meulaboh, Aceh	72.88	279	P	P	13 39 30.2	+0.3
	comp=Z,168nm,1.0s						
TIY	Taiyuan	73.21	317	eP	P	13 39 32.8	+1.3
TIY				PP	PP	13 42 20.5	+3.3
TIY				S	S	13 48 40.1	-5.8
TIY				SS	SS	13 53 29.1	-2.4
TIY				pmax	pmax		
	comp=Z,59nm,0.9s						
TIY				pmax	pmax		
	comp=Z,110nm,4.0s						
TIY				LR	LR		
	comp=Z,840nm,14.2s						
TIY				LR	LR		
	comp=Z,580nm,11.3s						
TIY				LR	LR		
	comp=Z,1µm,15.1s						
XAN	Xi'an	73.67	312	P	P	13 39 34.8	+0.6
XAN				pmax	pmax		
	comp=Z,46nm,0.8s						
XAN	Xi'an	73.67	312	P	P	13 39 33.7	-0.5
XAN				pmax	pmax		
	comp=Z,42nm,0.9s						
XAN	Xi'an	73.67	312	P	P	13 39 33.7	-0.5
XAN				IAmb	IAmb	13 39 35.8	
	comp=Z,42nm,0.9s						
KMI	Kunming	74.36	302	P	P	13 39 40.1	+1.5
KMI				S	S	13 48 57.3	-2.2
KMI				SS	SS	13 53 52.2	+2.6
KMI				pmax	pmax		
	comp=Z,73nm,1.1s						
KMI				pmax	pmax		
	comp=Z,93nm,4.7s						
KMI				LR	LR		
	comp=Z,150nm,12.8s						
KMI				LR	LR		
	comp=Z,83nm,11.4s						
KMI				LR	LR		
	comp=Z,250nm,27.7s						
KMI	Kunming	74.36	302	P	P	13 39 38.3	-0.3
KMI				pmax	pmax		
	comp=Z,90nm,1.1s						
KMI	Kunming	74.36	302	P	P	13 39 38.3	-0.3
MA2	Magadan	75.00	351	P	P	13 39 41.0	-0.3
MA2				pmax	pmax		
	comp=Z,45nm,0.9s						
MA2	Magadan	75.00	351	P	P	13 39 41.0	-0.3
MA2				IAmb	IAmb	13 39 42.5	
	comp=Z,45nm,0.8s						
CM31	Chiang Mai Arr	75.05	294	P	P	13 39 42.6	+0.1
CM31				IAmb	IAmb	13 39 44.7	
	comp=Z,44nm,0.9s						
CMAR	Chiang Mai Arr	75.05	294	P	P	13 39 43.6	+1.1
	comp=Z,36nm,1.0s,baz=125,slow=4.5,SNR=128						
CMAR	Chiang Mai Arr	75.05	294	P	P	13 39 43.0	+0.5
CHTO	Chiang Mai	75.18	294	P	P	13 39 43.3	+0.1
CHTO				pmax	pmax		
	comp=Z,35nm,0.9s						
CHTO	Chiang Mai	75.18	294	P	P	13 39 43.3	+0.1
CHTO				IAmb	IAmb	13 39 45.1	
	comp=Z,35nm,0.9s						
HHC	Hu-ho-hao-te	75.52	320	eP	P	13 39 45.9	+1.1
HHC				S	S	13 49 09.5	-2.0
HHC				pmax	pmax		
	comp=Z,97nm,1.1s						
HHC				pmax	pmax		
	comp=Z,300nm,6.6s						
QSPA	South Pole Qui	75.59	180	P	P	13 39 44.5	-0.3
CHGN	Chignik	76.02	19	P	P	13 39 46.8	-0.3
CD2	Chengdu	76.03	307	⇓iP	P	13 39 48.8	+1.0
CD2				S	S	13 49 18.6	+1.3
CD2				pmax	pmax		
	comp=Z,120nm,1.0s						
CD2				pmax	pmax		
	comp=Z,530nm,6.1s						
ZEA	Zeya	76.12	337	eP	P	13 39 49.0	+1.2
ZEA				pmax	pmax		
	comp=N,68nm,0.8s						
ZEA				pmax	pmax		
	comp=E,31nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,110nm,0.8s						
HIA	Hailar	76.16	330	P	P	13 39 47.9	-0.2
HIA				pmax	pmax		
	comp=Z,50nm,0.9s						
HIA	Hailar	76.16	330	P	P	13 39 47.9	-0.2
HIA				IAmb	IAmb	13 39 49.8	
	comp=Z,50nm,0.9s						
SII	Sitkinak Islan	77.61	21	P	P	13 39 55.7	-0.3
SEY	Seymchan	78.03	353	i P	P	13 39 58.5	+0.3
LZH	Lanzhou	78.31	312	eP	P	13 40 01.8	+1.2
LZH				pmax	pmax		
	comp=Z,23nm,1.5s						
LZH				pmax	pmax		
	comp=Z,120nm,5.4s						
OHAK	Old Harbor	78.43	21	P	P	13 40 00.8	+0.3
KDAK	Kodiak Island	79.11	20	P	P	13 40 05.2	+1.0
KDAK				pmax	pmax		
	comp=Z,238nm,2.0s						
KDAK	Kodiak Island	79.11	20	P	P	13 40 05.2	+1.0
GAMB	Gambell	79.61	9	P	P	13 40 07.1	+0.4
GAMB				IAmb	IAmb	13 40 08.5	
	comp=Z,26nm,0.8s						
BRLK	Bradley Lake	81.20	20	P	P	13 40 15.3	-0.1
BRLK				IAmb	IAmb	13 40 16.7	
	comp=Z,42nm,0.8s						
ANM	Nome	81.44	11	P	P	13 40 17.0	+0.5
ANM				pmax	pmax		
	comp=Z,26nm,1.0s						
ANM	Nome	81.44	11	P	P	13 40 17.0	+0.5
ANM				IAmb	IAmb	13 40 18.8	
	comp=Z,26nm,1.0s						
YAK	Yakutsk	81.83	343	c iP	P	13 40 18.8	+0.2
YAK				e*PP	sP	13 41 10.2	-7.5
YAK				e		13 43 29.9	
YAK				eS	S	13 50 15.8	-1.5
YAK				eSS	SS	13 55 38.1	-1.7
YAK				pmax	pmax		
	comp=Z,238nm,0.9s						
YAK				pmax	pmax		
	comp=E,39nm,1.3s						
YAK				pmax	pmax		
	comp=N,65nm,1.1s						
YAK				pmax	pmax		
	comp=Z,13nm,0.8s						
YAK				smax	smax		
	comp=N,50nm,2.7s						
YAK				smax	smax		
	comp=E,28nm,2.0s						
YAK	Yakutsk	81.83	343	P	P	13 40 18.6	+0.1
SEW	Seward	81.93	20	P	P	13 40 19.7	+0.5
SEW				IAmb	IAmb	13 40 20.5	
	comp=Z,37nm,0.8s						
ULN	Ulaanbaatar	82.05	324	P	P	13 40 20.1	-0.2
ULN				pmax	pmax		
	comp=Z,102nm,1.0s						
ULN	Ulaanbaatar	82.05	324	P	P	13 40 20.1	-0.2
TTA	Tatalina	82.18	16	P	P	13 40 21.0	+0.5
TTA	Tatalina	82.18	16	P	P	13 40 21.0	+0.5
MAW	Mawson	82.24	202	P	P	13 40 21.5	+0.7
	comp=Z,24nm,1.0s,baz=127,slow=9.7,SNR=3.6						
MAW				LR	LR	14 13 43.0	
	comp=Z,80nm,19.1s,baz=45,slow=33						
MAW	Mawson	82.24	202	P	P	13 40 21.5	+0.7
MAW				pmax	pmax		
	comp=Z,15nm,1.4s						
BILL	Bilibino	82.26	360	ceP	P	13 40 21.0	+0.3
BILL				pmax	pmax		
	comp=Z,68nm,1.3s						
BILL	Bilibino	82.26	360	P	P	13 40 20.8	0.0
BILL				IAmb	IAmb	13 40 22.4	
	comp=Z,97nm,1.4s						
SONM	Songino Array	82.41	323	P	P	13 40 22.8	+0.6
	comp=Z,49nm,1.0s,baz=139,slow=5.1,SNR=137						
SONM	Songino Array	82.41	323	P	P	13 40 21.9	-0.3
SUA	Susitna One	82.54	19	P	P	13 40 22.4	-0.1
SUA				IAmb	IAmb	13 40 24.4	
	comp=Z,71nm,1.0s						
RC01	Rabbit Creek A	82.58	19	P	P	13 40 22.3	-0.3
RC01				IAmb	IAmb	13 40 23.9	
	comp=Z,50nm,0.8s						
GTA	Gaotai	82.64	314	⇑P	P	13 40 24.5	+0.9
GTA				S	S	13 50 22.6	-4.3
GTA				pmax	pmax		
	comp=Z,41nm,1.1s						
GTA				pmax	pmax		
	comp=Z,390nm,8.3s						
GTA				LR	LR		
	comp=Z,140nm,19.7s						
GTA				LR	LR		
	comp=Z,180nm,19.7s						
GTA				LR	LR		
	comp=Z,260nm,18.4s						
SKT	Skwentna	82.70	18	P	P	13 40 22.5	-0.7
PMR	Palmer	83.15	19	P	P	13 40 25.8	+0.3
PMR				pmax	pmax		
	comp=Z,43nm,0.8s						
PMR	Palmer	83.15	19	P	P	13 40 25.8	+0.3
PMR				IAmb	IAmb	13 40 26.7	
	comp=Z,43nm,0.8s						
PPLA	Purkeypile	83.21	17	P	P	13 40 25.8	-0.2
KNK	Knik Glacier	83.23	20	P	P	13 40 26.2	+0.2
KNK				IAmb	IAmb	13 40 27.4	
	comp=Z,46nm,0.7s						
GLI	Glacier Island	83.30	21	P	P	13 40 25.9	-0.4
GHO	Glory Hole Cre	83.35	19	P	P	13 40 26.8	+0.2
GHO				IAmb	IAmb	13 40 28.0	
	comp=Z,55nm,0.9s						
FID	Port Fidalgo	83.42	21	P	P	13 40 26.5	-0.4
FID				IAmb	IAmb	13 40 28.2	
	comp=Z,54nm,0.8s						
SML	Sawmill	83.57	19	P	P	13 40 27.9	+0.2
SML				IAmb	IAmb	13 40 44.3	
	comp=Z,27nm,0.9s						
SHL	Shillong	83.64	298	P	P	13 40 28.8	-0.3
SHL				pmax	pmax		
	comp=Z,122nm,0.9s						
SHL	Shillong	83.64	298	P	P	13 40 28.8	-0.3
KMRM	Mail Ridge	83.73	46	P	P	13 40 29.9	+0.8
KMRM				IAmb	IAmb	13 40 31.5	
	comp=Z,28nm,0.7s						
SCM	Sheep Creek Mo	83.91	20	P	P	13 40 29.6	+0.1
SCM				pmax	pmax		
	comp=Z,55nm,0.8s						
SCM	Sheep Creek Mo	83.91	20	P	P	13 40 29.6	+0.1
SCM				IAmb	IAmb	13 40 31.7	
	comp=Z,55nm,0.8s						
KTH	Kantishna Hill	84.09	17	P	P	13 40 29.3	-1.0
TRF	Thorofare Moun	84.19	18	P	P	13 40 29.9	-1.0
PMPB	Monarch Peak	84.23	50	P	P	13 40 32.6	+0.9

BOD	Bodaibo	84.32	334⇓	iP	P	13 40 31.0	-0.5
BOD				pmax	pmax		
	comp=Z,63nm,1.5s						
O02D	Mt. Diablo Mer	84.35	46	P	P	13 40 34.1	+1.9
	baz=246,SNR=16						
PKM	Mcpherson Peak	84.48	52	P	P	13 40 34.9	+1.8
	baz=248						
BPAW	Bear Paw Mtn.	84.49	17	P	P	13 40 31.5	-0.7
BPAW				IAmb	IAmb	13 40 33.0	
	comp=Z,19nm,0.8s						
RND	Reindeer	84.59	18	P	P	13 40 32.7	-0.1
RND				pmax	pmax		
	comp=Z,59nm,0.8s						
RND	Reindeer	84.59	18	P	P	13 40 32.7	-0.1
RND				IAmb	IAmb	13 40 34.3	
	comp=Z,59nm,0.8s						
CRQM	Cirque	84.60	22	P	P	13 40 33.1	0.0
CRQM				IAmb	IAmb	13 40 34.3	
	comp=Z,33nm,0.8s						
L02E	Cave Junction	84.61	44	P	P	13 40 35.2	+1.8
	baz=245						
WDC	Whiskeytown Da	84.69	46	P	P	13 40 34.0	+0.2
WDC				pmax	pmax		
	comp=Z,11nm,0.9s						
WDC	Whiskeytown Da	84.69	46	P	P	13 40 34.0	+0.2
TGL	Tana Glacier	84.71	22	P	P	13 40 33.5	-0.1
TGL				IAmb	IAmb	13 40 35.2	
	comp=Z,28nm,0.8s						
N02D	Trinity Center	84.74	46	P	P	13 40 35.9	+1.8
	baz=246,SNR=8.0						
K02D	Willamette Mer	84.80	44	P	P	13 40 35.8	+1.4
	baz=245						
DHY	Denali Highway	84.80	19	P	P	13 40 34.3	+0.3
MCK	McKinley	84.81	18	P	P	13 40 33.9	+0.1
MCK				pmax	pmax		
	comp=Z,51nm,0.8s						
MCK	McKinley	84.81	18	P	P	13 40 33.9	+0.1
MCK				IAmb	IAmb	13 40 36.3	
	comp=Z,50nm,0.8s						
M02C	Callahan	84.81	45	P	P	13 40 36.3	+1.9
	baz=246,SNR=8.7						
VRDI	Verde Repeater	84.81	22	P	P	13 40 33.6	-0.5
VRDI				IAmb	IAmb	13 40 35.1	
	comp=Z,17nm,0.7s						
J01E	Myrtle Point	84.82	43	P	P	13 40 36.0	+1.7
	baz=245						
GLB	Gilahina Butte	84.83	21	P	P	13 40 33.9	-0.1
GLB				IAmb	IAmb	13 40 35.6	
	comp=Z,26nm,0.8s						
BWN	Browne	84.98	17	P	P	13 40 35.0	+0.3
RDOG	Red Dog Mine	85.00	11	P	P	13 40 35.4	+0.6
RDOG				IAmb	IAmb	13 40 37.0	
	comp=Z,30nm,0.9s						
ORV	Oroville	85.01	47	P	P	13 40 35.7	+0.3
ORV				pmax	pmax		
	comp=Z,13nm,0.9s						
ORV	Oroville	85.01	47	P	P	13 40 35.7	+0.3
YBH	Yreka Blue Hor	85.04	45	P	P	13 40 36.6	+0.9
YBH				pmax	pmax		
	comp=Z,16nm,0.8s						
YBH	Yreka Blue Hor	85.04	45	P	P	13 40 36.5	+0.9
MCARA	McCarthy VSAT	85.07	22	P	P	13 40 35.7	+0.5
MCARA				IAmb	IAmb	13 40 40.7	
	comp=Z,21nm,1.0s						
BALM	Baldy	85.08	22	P	P	13 40 34.9	-0.5
BALM				IAmb	IAmb	13 40 36.5	
	comp=Z,28nm,0.6s						
O03E	Paynes Creek	85.09	46	P	P	13 40 37.1	+1.2
	baz=246,SNR=7.7						
AFDM	Forest Hills D	85.16	48	P	P	13 40 36.3	+0.1
AFDM				IAmb	IAmb	13 40 38.3	
	comp=Z,20nm,0.8s						
IMAR	Indian Mountai	85.23	15	P	P	13 40 36.4	+0.5
CMB	Columbia Colle	85.23	49	P	P	13 40 36.9	+0.3
CMB				pmax	pmax		
	comp=Z,15nm,0.8s						
CMB	Columbia Colle	85.23	49	P	P	13 40 36.9	+0.3
HUMO	Hull Mountain	85.24	44	P	P	13 40 37.0	+0.5
HUMO				IAmb	IAmb	13 40 39.2	
	comp=Z,20nm,0.8s						
MLY	Manley	85.27	16	P	P	13 40 35.8	-0.3
MLY				IAmb	IAmb	13 40 37.3	
	comp=Z,13nm,0.6s						
ARVC	Arvin	85.32	52	P	P	13 40 38.5	+1.4
	baz=249						
BARN	Barnard Glacie	85.34	22	P	P	13 40 36.7	-0.1
BARN				IAmb	IAmb	13 40 38.7	
	comp=Z,29nm,0.8s						
NEA	Nenana	85.39	17	P	P	13 40 36.2	-0.5
NEA				IAmb	IAmb	13 43 54.1	
	comp=Z,35nm,0.8s						
CTGM	Chitina Glacie	85.40	22	P	P	13 40 37.0	-0.1
CTGM				IAmb	IAmb	13 40 38.8	
	comp=Z,34nm,0.8s						
I03D	Drain, OR	85.43	43	P	P	13 40 38.5	+1.2
	baz=245						
ZAK	Zakamensk	85.46	325	eP	P	13 40 37.6	+0.1
ZAK				pmax	pmax		
	comp=Z,75nm,1.0s						
L04D	Klamath Falls	85.52	45	P	P	13 40 39.3	+1.2
	baz=246,SNR=7.5						
MWC	Mount Wilson	85.59	53	P	P	13 40 38.2	-0.5
MWC				pmax	pmax		
	comp=Z,15nm,0.9s						
MWC	Mount Wilson	85.59	53	P	P	13 40 38.2	-0.5
WRH	Wood River Hil	85.60	18	P	P	13 40 37.0	-0.8
WRH				IAmb	IAmb	13 40 38.9	
	comp=Z,42nm,0.9s						
LSA	Lhasa	85.61	302	P	P	13 40 39.8	+0.6
LSA				pmax	pmax		
	comp=Z,140nm,0.8s						
LSA	Lhasa	85.61	302	P	P	13 40 39.3	+0.1
LSA				pmax	pmax		
	comp=Z,27nm,0.8s						
LSA	Lhasa	85.61	302	P	P	13 40 39.2	+0.1
LSA				IAmb	IAmb	13 40 41.0	
	comp=Z,27nm,0.8s						
M04C	Macdoel	85.66	45	P	P	13 40 40.1	+1.3
	baz=246,SNR=7.2						
ISA	Isabella, Lake	85.78	52	P	P	13 40 39.6	+0.2
ISA				pmax	pmax		
	comp=Z,13nm,0.9s						
ISA	Isabella, Lake	85.78	52	P	P	13 40 39.6	+0.2
ISA	Isabella, Lake	85.78	52	P	P	13 40 40.9	+1.4
	baz=249,SNR=12						
CCB	Clear Creek Bu	85.82	18	P	P	13 40 37.6	-1.2
CCB				IAmb	IAmb	13 40 40.5	
	comp=Z,27nm,0.8s						
IRK	Irkutsk	85.83	327	eP	P	13 40 36.9	-2.3
IRK				pmax	pmax		
	comp=Z,52nm,2.1s						
EDW2	Edwards Air Fo	85.87	53	P	P	13 40 41.3	+1.4
	baz=249,SNR=15						
MENT	Mentasta	85.89	20	P	P	13 40 39.3	+0.1
TLY	Talaya	85.89	326	P	P	13 40 39.4	-0.1
TLY				pmax	pmax		
	comp=Z,48nm,0.9s						
TLY	Talaya	85.89	326	P	P	13 40 39.4	-0.1
TLY				IAmb	IAmb	13 40 40.9	
	comp=Z,48nm,0.9s						
HDA	Harding Lake	85.90	18	P	P	13 40 38.8	-0.4
HDA	Harding Lake	85.90	18	P	P	13 40 39.4	+0.2
	baz=224						
BFSC	Mount Baldy Ra	85.91	53	P	P	13 40 40.9	+0.7
	baz=250,SNR=6.3						
MDM	Murphy Dome	85.92	17	P	P	13 40 38.4	-0.9
MDM				IAmb	IAmb	13 40 40.5	
	comp=Z,34nm,0.8s						
BEKR	Beckworth	85.95	47	P	P	13 40 40.1	-0.1
TCOL	CIGO, UAF Yank	85.97	17	P	P	13 40 39.4	-0.1
	baz=223						
COLA	College	85.97	17	P	P	13 40 38.7	-0.8
COLA				pmax	pmax		
	comp=Z,53nm,0.8s						
COLA	College	85.97	17	P	P	13 40 38.6	-0.8
MDPB	Devils Postpil	86.04	50	P	P	13 40 41.0	+0.1
MDPB				IAmb	IAmb	13 40 43.2	
	comp=Z,22nm,0.9s						
MURC	Murrieta	86.05	54	P	P	13 40 41.5	+0.8
	baz=250						
J04D	Umpqua Nationa	86.06	44	P	P	13 40 41.9	+1.2
	baz=246						
RIDG	Independent Ri	86.07	19	P	P	13 40 39.3	-0.9
RIDG				IAmb	IAmb	13 40 42.0	
	comp=Z,30nm,0.8s						
I04A	Tendick Farm,	86.09	43	P	P	13 40 41.3	+0.6
	baz=246						
BAR	Barrett	86.15	55	P	P	13 40 41.2	0.0
H04D	Lebanon	86.17	42	P	P	13 40 42.3	+1.3
	baz=246						
IL31		86.18	18	P	P	13 40 39.4	-1.2
ILAR	Eielson Array	86.18	18	P	P	13 40 39.6	-0.9
	comp=Z,52nm,0.8s,baz=235,slow=5.4,SNR=210						
ILAR				LR	LR	14 15 27.3	
	comp=Z,65nm,19.4s,baz=258,slow=33						
ILAR	Eielson Array	86.18	18	P	P	13 40 39.2	-1.4
DOT	Dot Lake	86.26	20	P	P	13 40 40.4	-0.7
DOT				IAmb	IAmb	13 40 42.8	
	comp=Z,22nm,0.8s						
POKR	Poker Plat Res	86.27	17	P	P	13 40 40.9	-0.2
	baz=223						
LRMC	Laurel Mtn Rad	86.32	52	P	P	13 40 43.7	+1.5
	baz=250						
CWC	Cottonwood Cre	86.36	51	P	P	13 40 43.6	+1.2
	baz=249						
MONP2	Monument Peak	86.42	55	P	P	13 40 44.3	+1.5
	baz=250,SNR=16						
TIN	Tinemaha, Big	86.46	50	P	P	13 40 44.6	+1.8
	baz=249						
E03A	Lebam	86.49	40	P	P	13 40 43.3	+0.8
SCRK	Sand Creek	86.51	19	P	P	13 40 42.1	-0.3
SCRK				IAmb	IAmb	13 40 44.3	
	comp=Z,24nm,0.8s						
PAHR	Pah Rah Range	86.58	48	P	P	13 40 43.7	+0.4
IKP	In-Ko-Pah, Jac	86.59	55	P	P	13 40 44.7	+1.2
	baz=250,SNR=6.5						
BCAR	Beaver Creek A	86.63	21	P	P	13 40 41.7	-1.2
PFO	Pinyon Flats O	86.63	54	i P	P	13 40 44.1	+0.4
PFO				pmax	pmax		
	comp=Z,18nm,0.9s						
PFO	Pinyon Flats O	86.63	54	P	P	13 40 42.2	-1.5
PFO	Pinyon Flats O	86.63	54	P	P	13 40 44.9	+1.2
	baz=250,SNR=10						
XPFO	Pion Flat	86.63	54	P	P	13 40 42.1	-1.6
J05D	Fort Rock, OR	86.67	44	P	P	13 40 45.0	+1.3
	baz=247,SNR=21						
MPMC	Manual Prospec	86.67	52	P	P	13 40 45.2	+1.3
	baz=250,SNR=19						
MOD	Modoc Plateau	86.76	45	P	P	13 40 44.3	+0.1
HYT	Haines Junctio	86.77	24	P	P	13 40 42.9	-0.8
HYT				IAmb	IAmb	13 40 49.7	
	comp=Z,34nm,1.8s						
RYN	Ryan	86.81	49	P	P	13 40 44.3	-0.2
NVAR	Mina Array Bea	86.90	49	P	P	13 40 46.1	+1.1
	comp=Z,12nm,0.9s,baz=229,slow=8.1,SNR=42						
NVAR				LR	LR	14 16 45.6	
	comp=Z,50nm,18.2s,baz=283,slow=33						
NVAR	Mina Array Bea	86.90	49	P	P	13 40 44.9	-0.1
SWSC	Sam W. Stewart	86.93	55	P	P	13 40 46.3	+1.3
	baz=251,SNR=12						
GSC	Goldstone, Bar	86.93	53	P	P	13 40 45.4	+0.3
GSC				pmax	pmax		
	comp=Z,16nm,1.3s						
GSC	Goldstone, Bar	86.93	53	P	P	13 40 45.4	+0.3
GSC	Goldstone, Bar	86.93	53	P	P	13 40 46.7	+1.6
	baz=250						
NV11	Mina Array Sit	87.01	49	P	P	13 40 45.4	0.0
I05D	Terrebonne, OR	87.01	43	P	P	13 40 46.3	+1.1
	baz=247						
PINE	Pine Mountain	87.06	43	P	P	13 40 46.1	+0.4
PINE				IAmb	IAmb	13 40 47.8	
	comp=Z,23nm,0.8s						
COLD	Coldfoot	87.09	15	P	P	13 40 45.5	+0.6
GRAC	Grapevine Rang	87.09	51	P	P	13 40 47.2	+1.5
	baz=250,SNR=10						
PRP	Porcupine Dome	87.12	18	P	P	13 40 45.1	-0.2
E04D	Cinebar	87.12	40	P	P	13 40 47.0	+1.5
	baz=246						
BELC	Belle Mtn. Jos	87.12	54	P	P	13 40 47.5	+1.4
	baz=250,SNR=22						
HEC	Hector,Ludlow	87.14	53	P	P	13 40 47.1	+1.1
	baz=250,SNR=9.7						
D03D	Eldon	87.20	39	P	P	13 40 47.4	+1.5
	baz=245						
D04E	Lakebay	87.25	40	P	P	13 40 48.3	+2.2
	baz=245						
KVN	Kaiserville	87.27	49	P	P	13 40 47.3	+0.5
KVN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KVN	Kaiserville	87.27	49	P	P	13 40 47.2	+0.5
FURC	Furnace Creek,	87.29	51	P	P	13 40 48.2	+1.6
	baz=250,SNR=14						
MOY	Mondy	87.34	325	eP	P	13 40 46.8	+0.2
MOY				pmax	pmax		
	comp=Z,55nm,2.3s						
G05D	Wamic, OR	87.39	42	P	P	13 40 48.1	+1.2
	baz=247						
BC3	Big Chuckawall	87.44	54	P	P	13 40 49.2	+1.6
	baz=251,SNR=10.0						
PGC	Sidney	87.45	38	P	P	13 40 47.2	+0.2
PGC				IAmb	IAmb	13 40 48.5	
	comp=Z,62nm,1.4s						
SHOC	Shoshone, Teco	87.54	52	P	P	13 40 49.2	+1.3
	baz=250,SNR=12						
F05D	White Salmon	87.55	41	P	P	13 40 48.8	+1.2
	baz=246						
GMRC	Granite Mounta	87.65	53	P	P	13 40 49.9	+1.3
	baz=251,SNR=16						
TUQ	Turquoise Moun	87.66	53	P	P	13 40 50.1	+1.5
	baz=250,SNR=6.3						
LON	Longmire	87.67	40	P	P	13 40 48.6	+0.3
LON				pmax	pmax		
	comp=Z,9.0nm,1.1s						
LON	Longmire	87.67	40	P	P	13 40 48.6	+0.3
GLA	Glamis	87.74	55	P	P	13 40 49.6	+0.7
GLA				pmax	pmax		
	comp=Z,20nm,0.9s						
GLA	Glamis	87.74	55	P	P	13 40 49.6	+0.7
GLA				IAmb	IAmb	13 40 51.6	
	comp=Z,20nm,0.8s						
GLA	Glamis	87.74	55	P	P	13 40 50.9	+2.0
	baz=251,SNR=12						
D05A	Enumclaw	87.74	40	P	P	13 40 49.0	+0.5
D05A				IAmb	IAmb	13 40 50.9	
	comp=Z,30nm,1.0s						
TAPN	Taplejung	87.75	299	eP	P	13 40 49.5	+0.1
	comp=Z,107nm,0.9s						
IRM	Iron Mountain	87.84	54	P	P	13 40 51.0	+1.6
	baz=251,SNR=27						
ODAN	Odare	87.88	298	eP	P	13 40 50.0	+0.1
	comp=Z,169nm,0.8s						
TPNV	Topopah Spring	87.91	51	P	P	13 40 50.1	+0.3
TPNV				pmax	pmax		
	comp=Z,13nm,0.8s						
TPNV	Topopah Spring	87.91	51	P	P	13 40 50.1	+0.3
TPNV	Topopah Spring	87.91	51	P	P	13 40 51.1	+1.3
	baz=250,SNR=8.8						
A04D	Lummi Island	87.93	38	P	P	13 40 50.8	+1.4
	baz=245						
EGAK	Eagle	87.96	20	P	P	13 40 48.3	-0.8
EGAK				IAmb	IAmb	13 40 54.2	
	comp=Z,17nm,0.9s						
DAWY	Dawson	88.09	21	P	P	13 40 48.8	-1.1
WVOR	Wild Horse Val	88.11	45	P	P	13 40 50.9	+0.3
WVOR				pmax	pmax		
	comp=Z,26nm,1.6s						
WVOR	Wild Horse Val	88.11	45	P	P	13 40 50.9	+0.3
B05A	Bryant	88.11	39	P	P	13 40 51.6	+1.3
	baz=246						
I07A	Izee	88.13	44	P	P	13 40 50.9	+0.3
I07A				IAmb	IAmb	13 40 52.7	
	comp=Z,18nm,0.8s						
Y12C	Blythe	88.20	55	P	P	13 40 51.8	+0.8
Y12C				IAmb	IAmb	13 40 54.4	
	comp=Z,18nm,0.9s						
Y12C	Blythe	88.20	55	P	P	13 40 52.8	+1.8
	baz=251,SNR=9.1						
TOLK	Toolik Lake Re	88.32	14	P	P	13 40 51.2	+0.3
TOLK	Toolik Lake Re	88.32	14	P	P	13 40 51.9	+1.1
	baz=221						
NEE2	Needles Airpor	88.45	54	P	P	13 40 53.8	+1.6
	baz=251						
113A	Mohawk Valley,	88.50	56	P	P	13 40 52.8	+0.4
J08A	Circle Bar Ran	88.56	45	P	P	13 40 53.0	+0.4
J08A				IAmb	IAmb	13 40 56.0	
	comp=Z,24nm,0.9s						
RAMN	Ramite	88.58	298	eP	P	13 40 53.2	-0.1
	comp=Z,61nm,0.8s						
LTY	Liberty	88.59	40	P	P	13 40 52.6	0.0
LTY				IAmb	IAmb	13 40 54.1	
	comp=Z,14nm,0.8s						
SHPR	Sheep Range	88.59	52	P	P	13 40 53.3	+0.3
SHPR				IAmb	IAmb	13 40 55.5	
	comp=Z,16nm,1.0s						
PDMCI	Parker Dam,Lak	88.68	54	P	P	13 40 55.0	+1.8
	baz=252,SNR=18						
E07A	Sunnyside	88.84	41	P	P	13 40 54.1	+0.4
E07A				IAmb	IAmb	13 40 56.1	
	comp=Z,27nm,0.7s						
R11A	Troy Canyon, C	88.88	50	P	P	13 40 54.5	+0.2
R11A	Troy Canyon, C	88.88	50	P	P	13 40 55.4	+1.1
	baz=251,SNR=14						
G08A	Pilot Rock	88.94	43	P	P	13 40 54.2	-0.2
G08A				IAmb	IAmb	13 40 56.7	
	comp=Z,27nm,0.8s						
HAWA	Hanford	88.98	41	P	P	13 40 54.7	+0.3
HAWA				IAmb	IAmb	13 40 56.5	
	comp=Z,23nm,0.8s						
214A	Organ Pipe Nat	89.02	57	P	P	13 40 56.7	+1.8
	baz=252,SNR=6.9						
SYO	Syowa Base	89.05	197⇑	eP	P	13 40 53.0	-1.3
SYO	Syowa Base	89.05	197⇓	ePcP	P	13 40 54.4	+0.1
W13A	Hualapai Mount	89.13	54	P	P	13 40 55.4	-0.2
JIRN	Jiri	89.13	299	eP	P	13 40 56.0	0.0
	comp=Z,157nm,1.0s						
LLLB	Lillooet	89.19	37	P	P	13 40 55.7	+0.4
LLLB				IAmb	IAmb	13 40 57.2	
	comp=Z,17nm,1.1s						
E08A	Dider Farm, El	89.32	41	P	P	13 40 56.6	+0.6
E08A				IAmb	IAmb	13 40 58.6	
	comp=Z,29nm,0.8s						
Y14A	Wickenburg	89.46	55	P	P	13 40 57.2	+0.2
GUN	Gumba	89.47	299	eP	P	13 40 57.1	-0.4
	comp=Z,103nm,1.0s						
D08A	Wollman Farm,	89.62	41	P	P	13 40 57.6	+0.2
D08A				IAmb	IAmb	13 40 59.3	
	comp=Z,16nm,0.9s						
TIXI	Tiksi	89.73	349	ceP	P	13 40 57.2	-0.1
TIXI				pmax	pmax		
	comp=Z,26nm,1.1s						
TIXI	Tiksi	89.73	349	P	P	13 40 56.7	-0.6
TIXI				IAmb	IAmb	13 40 58.7	
	comp=Z,21nm,1.0s						
PKI	Pulchoki	89.77	298	eP	P	13 40 58.5	-0.4
	comp=Z,121nm,1.0s						
PKIN	Phulchoki	89.78	298	eP	P	13 40 58.6	-0.3
	comp=Z,81nm,0.9s						
B08A	Colville Reser	89.85	40	P	P	13 40 57.9	-0.5
B08A				IAmb	IAmb	13 40 59.8	
	comp=Z,16nm,0.9s						
BMO	Blue Mountains	89.88	43	P	P	13 40 58.4	-0.3
BMO				pmax	pmax		
	comp=Z,16nm,0.9s						
BMO	Blue Mountains	89.88	43	P	P	13 40 58.4	-0.3
BMO				IAmb	IAmb	13 41 00.4	
	comp=Z,16nm,0.8s						
E09A	Wood Farm, Sta	89.92	42	P	P	13 40 59.1	+0.4
E09A				IAmb	IAmb	13 41 00.5	
	comp=Z,14nm,0.9s						
ELK	Elko	89.92	48	P	P	13 40 58.9	-0.3
ELK				pmax	pmax		
	comp=Z,11nm,0.9s						
ELK	Elko	89.92	48	P	P	13 40 58.9	-0.3
DMN	Daman	90.04	298	eP	P	13 41 00.1	0.0
	comp=Z,164nm,1.0s						
LCMT	Little Creek M	90.21	52	P	P	13 41 00.5	-0.1
PSUT	Pine Spring	90.22	50	P	P	13 41 00.7	0.0
C09A	Chrisman Ranch	90.30	40	P	P	13 41 00.6	+0.1
F10A	Beach Ranch, E	90.32	42	P	P	13 41 00.9	+0.1
F10A				IAmb	IAmb	13 41 02.7	
	comp=Z,34nm,0.8s						
MFID	Camas Ranch	90.39	45	P	P	13 41 00.8	-0.4
MFID				IAmb	IAmb	13 41 03.5	
	comp=Z,12nm,0.8s						
EPYK	Eagle Plains	90.40	19	P	P	13 41 00.4	-0.2
EPYK				IAmb	IAmb	13 41 07.0	
	comp=Z,28nm,1.8s						
EPYK	Eagle Plains	90.40	19	P	P	13 41 00.1	-0.5
	baz=233						
KNB	Kanab	90.54	52	P	P	13 41 02.9	+0.8
KNB				pmax	pmax		
	comp=Z,14nm,1.0s						
KNB	Kanab	90.54	52	P	P	13 41 02.9	+0.8
GKN	Gorkha	90.55	299	eP	P	13 41 01.6	-0.7
TUC	Tucson	90.76	57	P	P	13 41 04.0	+0.8
TUC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TUC	Tucson	90.76	57	P	P	13 41 04.0	+0.8
TUC	Tucson	90.76	57	P	P	13 41 05.0	+1.8
	baz=253						
U15A	North Rim	90.77	53	P	P	13 41 04.2	+0.9
U15A				IAmb	IAmb	13 41 05.9	
	comp=Z,14nm,0.9s						
X16A	Lo Mia Camp, P	90.84	55	P	P	13 41 04.4	+0.8
PKCU	Pink Cliffs	91.05	52	P	P	13 41 05.6	+0.9
NEW	Newport	91.19	40	P	P	13 41 04.6	-0.1
NEW				pmax	pmax		
	comp=Z,13nm,0.8s						
NEW	Newport	91.19	40	P	P	13 41 04.6	-0.1
NEW				IAmb	IAmb	13 41 06.5	
	comp=Z,13nm,0.8s						
NEW	Newport	91.19	40	P	P	13 41 05.3	+0.7
	baz=250						
WUAZ	Wupatki	91.21	54	P	P	13 41 05.8	+0.5
WUAZ	Wupatki	91.21	54	P	P	13 41 06.9	+1.6
	baz=253						
TCRU	Three Creeks R	91.30	51	P	P	13 41 06.5	+0.8
DANN	Dangsing	91.39	299	eP	P	13 41 05.2	-1.2
	comp=Z,29nm,0.7s						
MSU	Marysvale	91.47	51	P	P	13 41 06.9	+0.5
MSU	Marysvale	91.47	51	P	P	13 41 06.9	+0.5
DUG	Dugway, Tooele	91.50	49	P	P	13 41 06.8	+0.3
DUG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DUG	Dugway, Tooele	91.50	49	P	P	13 41 06.8	+0.3
DUG	Dugway, Tooele	91.50	49	P	P	13 41 07.5	+1.0
	baz=252						
BGU	Big Grassy Mou	91.56	48	P	P	13 41 06.9	+0.1
319A	Douglas	91.73	58	P	P	13 41 08.9	+1.2
319A				IAmb	IAmb	13 41 10.7	
	comp=Z,16nm,0.8s						
NLU	North Lily Min	91.97	49	P	P	13 41 09.0	+0.3
X18A	Snowflake	92.06	55	P	P	13 41 10.0	+0.8
SPUT	South Promonto	92.10	48	P	P	13 41 09.6	+0.3
Q16A	Castle Valley	92.34	51	P	P	13 41 11.4	+1.0
W18A	Petrified Fore	92.39	54	P	P	13 41 11.3	+0.6
W18A				IAmb	IAmb	13 41 14.2	
	comp=Z,14nm,0.9s						
W18A	Petrified Fore	92.39	54	P	P	13 41 12.0	+1.3
	baz=254						
TMUT	Trail Mountain	92.42	50	P	P	13 41 11.8	+0.8
CTU	Camp Tracy	92.42	49	P	P	13 41 11.6	+0.9
JLU	Jordanelle	92.62	49	P	P	13 41 12.6	+0.9
WMQ	Urumqi	92.70	315	P	P	13 41 11.9	+0.1
WMQ				pmax	pmax		
	comp=Z,28nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,170nm,3.9s						
WMQ				LR	LR		
	comp=Z,290nm,21.1s						
WMQ				LR	LR		
	comp=Z,630nm,29.1s						
WMQ				LR	LR		
	comp=Z,160nm,21.9s						
WMQ	Urumqi	92.70	315	P	P	13 41 12.3	+0.5
WMQ				pmax	pmax		
	comp=Z,51nm,1.2s						
WMQ	Urumqi	92.70	315	P	P	13 41 12.3	+0.5
TCUT	Toone Canyon	92.79	48	P	P	13 41 13.2	+0.6
JTMT	Jette	92.82	41	P	P	13 41 12.5	+0.2
P17A	Butcher Ranch,	92.82	50	P	P	13 41 13.2	+0.7
HWUT	Hardware Ranch	92.82	48	P	P	13 41 12.8	+0.2
SRU	San Rafael Swe	92.88	50	P	P	13 41 13.2	+0.3
SRU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SRU	San Rafael Swe	92.88	50	P	P	13 41 13.2	+0.3
DLMT	Dillon	93.20	44	P	P	13 41 14.6	+0.4
DLMT				IAmb	IAmb	13 41 16.8	
	comp=Z,7.1nm,0.8s						
121A	Cookes Peak, D	93.27	57	P	P	13 41 16.7	+1.9
	baz=255						
HYB	Hyderabad	93.27	287	i P	P	13 41 14.5	-0.5
LRM	Limekiln Ridge	93.43	44	P	P	13 41 14.9	-0.4
WALA	Waterton Lakes	93.46	40	P	P	13 41 16.0	+0.7
FXWY	Fox Creek	93.78	46	P	P	13 41 17.1	+0.1
SNAA	Sanae	93.85	183	P	P	13 41 15.8	-0.8

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SNAA  Sanae              93.85 183  P         P         13 41 15.5 -1.1
SNAA                                pmax      pmax
      comp=Z,8.0nm,0.8s
SNAA  Sanae              93.85 183  P         P         13 41 15.5 -1.1
SNAA                                IAmb      IAmb      13 41 18.3
      comp=Z,8.2nm,0.8s
H17A  Grant Village      94.30  45  P         P         13 41 20.5 +1.1
H17A  Grant Village      94.30  45  P         P         13 41 22.5 +3.1
      baz=254
VNA3  Neumayer Olymp     94.51 181  P         P         13 41 18.3 -1.3
BW06  Boulder Array      94.57  47  P         P         13 41 23.2 +2.5
      baz=255
PD31  Pinedale Array     94.58  47  P         P         13 41 20.7  0.0
PDAR  Pinedale Array     94.58  47  P         P         13 41 20.4 -0.2
      comp=Z,1.2nm,0.8s,baz=214,slow=4.5,SNR=11
PDAR                                PKKPbc    PKKPdf    13 58 19.6 +0.2
      comp=Z,0.1nm,0.3s,baz=71,slow=6.4,SNR=3.5
PDAR  Pinedale Array     94.58  47  P         P         13 41 20.3 -0.4
VNA2  Neumayer--Watz     94.78 182  P         P         13 41 20.2 -0.6
      baz=172,slow=3.2
O20A  White River Ci     94.85  50  P         P         13 41 22.2 +0.3
O20A                                IAmb      IAmb      13 41 23.9
      comp=Z,7.4nm,0.8s
O20A  White River Ci     94.85  50  P         P         13 41 23.2 +1.2
      baz=255
ANMO  Albuquerque        94.94  55  P         P         13 41 22.7 +0.2
ANMO                                pmax      pmax
      comp=Z,3.0nm,1.0s
ANMO  Albuquerque        94.94  55  P         P         13 41 22.7 +0.2
ANMO  Albuquerque        94.94  55  P         P         13 41 23.6 +1.1
      baz=256
MNTX  Cornudas Mount     95.04  59  P         P         13 41 23.7 +1.0
MNTX  Cornudas Mount     95.04  59  P         P         13 41 23.9 +1.1
      baz=256
S22A  4UR Ranch, Cre     95.33  53  P         P         13 41 25.6 +1.3
      baz=256
SMCO  Snowmass           95.56  51  P         P         13 41 25.5 +0.1
TX31  Lajitas Ar. Si     95.93  61  P         P         13 41 27.3 +0.3
TX32  Lajitas Array      95.93  61  P         P         13 41 27.4 +0.5
TXAR  Lajitas Array      95.93  61  P         P         13 41 27.8 +0.9
      comp=Z,1.3nm,0.7s,baz=221,slow=5.2,SNR=20
TXAR  Lajitas Array      95.93  61  P         P         13 41 27.4 +0.4
C36M  Paulatuk           96.04  19  P         P         13 41 24.9 -1.4
C36M                                IAmb      IAmb      13 41 26.1
      comp=Z,9.5nm,0.8s
C36M  Paulatuk           96.04  19  P         P         13 41 25.4 -0.9
      baz=245
ISCO  Idaho Springs      96.73  51  P         P         13 41 31.4 +0.8
      baz=257
N23A  Red Feather La     96.73  50  P         P         13 41 31.6 +1.0
      baz=257
MK31  Makanchi Array     97.16 316  P         P         13 41 31.4 -0.6
MK31                                pmax      pmax
      comp=Z,27nm,0.9s
MK31  Makanchi Array     97.16 316  P         P         13 41 31.4 -0.6
MKAR  Makanchi Array     97.16 316  P         P         13 41 32.0  0.0
      comp=Z,33nm,0.9s,baz=99,slow=5.5,SNR=240
MKAR                                PP        PP        13 45 30.1 -0.6
      comp=Z,1.8nm,1.0s,baz=96,slow=11,SNR=4.1
MKAR                                PKKPbc    PKKPbc    13 58 10.6 -2.2
      comp=Z,0.4nm,0.6s,baz=277,slow=2.2,SNR=5.8
MKAR                                SKKP                14 01 33.0
      comp=Z,0.4nm,0.8s,baz=48,slow=1.8,SNR=4.0
MKAR  Makanchi Array     97.16 316  P         P         13 41 31.8 -0.2
YKA   Yellowknife Ar     97.18  27  P         P         13 41 31.1 -0.5
      comp=Z,7.3nm,0.7s,baz=253,slow=4.5,SNR=124
YKA                                 SKPbc               13 46 20.2
      comp=Z,0.4nm,0.7s,baz=266,slow=1.6,SNR=4.0
YKA                                 PKKPbc    PKKPbc    13 58 10.0 -3.2
      comp=Z,0.5nm,0.8s,baz=67,slow=2.8,SNR=9.0
ZAA0  Zalesovo Array     97.30 324  P         P         13 41 31.1 -1.4
ZALV  Zalesovo Beam      97.30 324  P         P         13 41 31.9 -0.5
      comp=Z,30nm,0.8s,baz=113,slow=4.6,SNR=95
ZALV  Zalesovo Beam      97.30 324  P         P         13 41 31.1 -1.3
MAKZ  Makanchi           97.37 316  P         P         13 41 32.3 -0.7
MAKZ                                pmax      pmax
      comp=Z,33nm,1.1s
MAKZ  Makanchi           97.37 316  P         P         13 41 32.3 -0.7
NRIK  Noril'sk           99.89 339  P         Pdif      13 41 43.9 +0.2
      comp=Z,16nm,0.8s,baz=108,slow=4.3,SNR=24
NRIK                                PP        PP        13 45 52.3 +1.5
      comp=Z,4.0nm,0.8s,baz=118,slow=12,SNR=4.6
KSH   Kashi             100.21 308  P         Pdif      13 41 47.0 +1.0
KSH                                 PP        PP        13 45 59.1 +4.9
KSH                                 S         Sdif      13 52 59.0 -7.8
KSH                                 sS        sS        13 54 26.8 +6.5
KSH                                 SS        SS        14 00 07.7 +2.2
KSH                                 pmax      pmax
      comp=Z,11nm,0.6s
KSH                                 pmax      pmax
      comp=Z,680nm,7.8s
KSH                                 LR        LR
      comp=Z,580nm,14.6s
KSH                                 LR        LR
      comp=Z,550nm,12.3s
KSH                                 LR        LR
      comp=Z,290nm,10.3s
KURK  Kurchatov         100.34 320 i P        Pdif      13 41 45.0 -1.1
KURK                                pmax      pmax
      comp=Z,12nm,1.3s
KURK  Kurchatov         100.34 320            Pdif      13 41 44.9 -1.1
FFC   Flin Flon         101.93  36  P         Pdif      13 41 52.7 -0.4
FFC   Flin Flon         101.93  36            Pdif      13 41 52.7 -0.4
KKAR  Karatay Array     104.79 311  P         Pdif      13 42 05.2 -0.9
KKAR  Karatay Array     104.79 311            Pdif      13 42 05.2 -0.9
ULM   Lac du Bonnet     105.16  41  PKiKP     PKiKP     13 46 21.3 +0.2
      comp=Z,1.5nm,0.6s,baz=215,slow=2.3,SNR=4.2
BRVK  Borovoye          105.74 322  P         Pdif      13 42 09.7 -0.3
BRVK  Borovoye          105.74 322            Pdif      13 42 09.7 -0.3
ARU   Arti              112.39 325 i PKIKP    PKiKP     13 46 34.4  0.0
ARU                                                     13 47 21.1
ARU                                                     13 53 28.2
ARU                                 SS        SS        14 02 57.6 +8.3
GEYT  Alibeck           113.96 305  PKiKP     PKiKP     13 46 38.6 +0.6
      comp=Z,3.4nm,0.8s,baz=0.0,slow=0.1,SNR=6.0
GEYT                                PKPPKP              14 05 55.9
      comp=Z,1.9nm,0.8s,baz=223,slow=3.5,SNR=4.0
GEYT  Alibeck           113.96 305            PKiKP     13 46 38.3 +0.2
LVZ   Lovozero          118.61 342c iPKIKP    PKPdf     13 46 45.7 -0.4
LVZ                                 pmax      pmax
      comp=Z,86nm,2.5s
SUMG  Summit            119.91   9  PKIKP     PKPdf     13 46 49.0  0.0
SUMG  Summit            119.91   9            PKPdf     13 46 49.0  0.0
ARCES ARCESS Array B    120.03 346  PKP       PKPdf     13 46 48.3 -0.4
      comp=Z,20nm,0.7s,baz=72,slow=1.9,SNR=52
CPUP  Villa Florida     120.47 133  PKP       PKPdf     13 46 50.5 -0.5
      comp=Z,1.3nm,0.6s,baz=86,slow=6.1,SNR=2.9
CPUP                                PKKPbc    PKKPbc    13 56 56.5 -1.2
      comp=Z,2.3nm,0.9s,baz=47,slow=7.2,SNR=4.2
KLMR  Klimovskoe        120.53 333 ePKIKP     PKPdf     13 46 48.7 -1.2
KLMR                                pmax      pmax
      comp=Z,24nm,0.8s
KLMR  Klimovskoe        120.53 333 ePKPdf     PKPdf     13 46 48.8 -1.2
KLMR                                AMP                 13 46 50.4
      comp=Z,24nm,0.8s
SCHQ  Schefferville     121.92  34  PKP       PKPdf     13 46 52.7 -0.1
      comp=Z,2.8nm,0.8s,baz=332,slow=2.5,SNR=6.2
SCHQ                                PKKPbc    PKKPab    13 56 51.6 +0.4
      comp=Z,3.8nm,0.6s,baz=123,slow=3.5,SNR=13
E61A  Lac Etchemin      122.28  44  P         PKPdf     13 46 54.0 +0.2
      baz=284
SDV   Santo Domingo     122.90  89  PKP       PKPdf     13 46 55.8 -0.3
      comp=Z,8.4nm,0.9s,baz=292,slow=5.8
SDV   Santo Domingo     122.90  89            PKPdf     13 46 55.1 -1.1
VRH   Novokhopyorsk     123.31 322 ePKIKP     PKPdf     13 46 54.7 -0.8
VRH                                 pmax      pmax
      comp=Z,60nm,0.8s
SCO   Scoresbysund      123.68   4  PKIKP     PKiKP     13 46 56.1 +0.1
SCO   Scoresbysund      123.68   4            PKiKP     13 46 56.1 +0.1
BOSA  Boshof            123.75 220  PKP       PKiKP     13 46 57.8 +0.1
      comp=Z,3.4nm,0.9s,baz=127,slow=5.1,SNR=3.9
GNI   Garni             124.14 309  PKIKP     PKPdf     13 46 56.7 -1.0
GNI   Garni             124.14 309            PKPdf     13 46 56.7 -1.0
ZEI   Tsey              124.23 312 i PKIKP    PKPdf     13 46 57.7 -0.2
ZEI                                 pmax      pmax
      comp=Z,19nm,1.1s
LPSR  Galich'ya Gora    124.40 325 ePKIKP     PKPdf     13 46 57.4 -0.2
LPSR                                pmax      pmax
      comp=Z,60nm,1.0s
OBN   Obninsk           124.58 328⇑ePKIKP     PKPdf     13 46 56.0 -1.8
OBN                                 pmax      pmax
      comp=Z,57nm,1.3s
OBN   Obninsk           124.58 328            PKPdf     13 46 58.0 +0.1
KBZ   Khabaz            124.73 313  PKP       PKiKP     13 46 59.1 +0.3
      comp=Z,6.9nm,0.8s,baz=140,slow=5.9,SNR=12
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RAYN  Ar Rayn           124.73 289  PKIKP     PKPdf     13 46 58.4 -0.8
RAYN  Ar Rayn           124.73 289            PKPdf     13 46 58.4 -0.8
VSR   Storozhevoye      124.80 323 ePKIKP     PKPdf     13 46 57.4 -1.0
VSR                                 pmax      pmax
      comp=Z,40nm,0.9s
KIV   Kislovodsk        124.82 314 ePKIKP     PKPdf     13 46 58.0 -0.8
KIV                                 pmax      pmax
      comp=Z,38nm,1.1s
AKH   Akhalkalaki       124.82 311 ⇑P         PKiKP     13 47 00.7 +1.3
SHA1  Shidzhatmaz       124.90 314 ePKIKP     PKPdf     13 46 59.0 -0.2
FIA1  FINESS Array S    125.54 338            PKPdf     13 46 59.4 -0.1
FINES FINESS Array B    125.54 338  PKP       PKPdf     13 46 59.5  0.0
      comp=Z,17nm,0.8s,baz=101,slow=3.9,SNR=31
FINES FINESS Array B    125.54 338  PKIKP     PKPdf     13 46 59.3 -0.2
FINES FINESS Array B    125.54 338            PKPdf     13 46 59.3 -0.2
BCA   Borcka            126.19 311 ⇑P         PKiKP     13 47 02.4 +0.5
VSU   Vasula            127.25 335c iPKIKP    PKPdf     13 47 02.3 -0.6
VSU                                 pmax      pmax
      comp=Z,101nm,1.7s
SJG   San Juan          128.50  78  SKPbc     SKPbc     13 50 07.3
      comp=Z,9.8nm,0.2s,baz=348,slow=3.1,SNR=6.4
PDPR  Patillas Dam,     128.61  78            PKPdf     13 47 05.2 -1.4
NB2   NORSAR Subarra    130.41 345  PKPdf     PKPdf     13 47 09.4 +0.5
      comp=Z,55nm,1.7s,baz=31,slow=1.9
NB2   NORSAR Subarra    130.41 345  PKPdf     PKPdf     13 47 09.4 +0.5
      baz=31,slow=1.9
NOA   NORSAR Array B    130.41 345  PKP       PKPdf     13 47 09.2 +0.3
      comp=Z,8.5nm,0.8s,baz=33,slow=2.0,SNR=20
NOA                                 SKPbc     SKPbc     13 50 15.2 -1.3
      comp=Z,37nm,0.8s,baz=32,slow=2.9,SNR=94
NBO00 NORSAR Array S    130.52 345            PKPdf     13 47 09.3 +0.3
NC602 NORSAR Array S    130.59 345            PKPdf     13 47 09.0 -0.2
AKASG Malin Array Be    130.63 326  PKP       PKPdf     13 47 09.4 -0.1
      comp=Z,8.5nm,0.8s,baz=54,slow=2.2,SNR=21
AKASG                               PP        PP        13 49 24.0 -2.4
      comp=Z,0.4nm,0.4s,baz=54,slow=6.7,SNR=4.4
AKASG                               SKPbc     SKPbc     13 50 16.1 -1.5
      comp=Z,19nm,0.8s,baz=46,slow=4.6,SNR=39
AKASG Malin Array Be    130.63 326            PKPdf     13 47 09.1 -0.5
AKASG Malin Array Be    130.63 326            SKPbc     13 50 15.4 -2.1
AKBB  Malin Array Si    130.63 326  PKIKP     PKPdf     13 47 09.4 -0.1
AKBB  Malin Array Si    130.63 326            PKPdf     13 47 09.4 -0.1
PTGA  Pitinga           130.66 104  SKPbc     SKPbc     13 50 16.8 -2.1
      comp=Z,2.2nm,0.6s,baz=225,slow=4.0,SNR=13
PTGA  Pitinga           130.66 104            SKPbc     13 50 16.2 -2.7
BR131 Keskin Array S    132.50 311  PKIKP     PKPdf     13 47 13.2 -0.5
BR131 Keskin Array S    132.50 311            PKPdf     13 47 13.2 -0.5
BRTR  Keskin Array B    132.50 311  PKP       PKPdf     13 47 13.5 -0.2
      comp=Z,6.1nm,0.9s,baz=130,slow=1.3,SNR=16
BRTR                                SKPbc     SKPbc     13 50 24.1 -0.8
      comp=Z,4.3nm,0.9s,baz=96,slow=3.4,SNR=5.2
BRTR  Keskin Array B    132.50 311            PKPdf     13 47 13.1 -0.6
ANTO  Ankara            133.07 312 ⇓P         PKiKP     13 47 16.2 +0.4
ANTO  Ankara            133.07 312 ⇓PKIKP     PKiKP     13 47 16.2 +0.4
ANTO  Ankara            133.07 312            PKPdf     13 47 14.9 +0.2
TLCR                    133.62 320 ⇑P         PKiKP     13 47 17.7 +1.1
TLCR                    133.62 320 ⇑PKIKP     PKiKP     13 47 17.7 +1.1
BDFB  Brasilia          133.88 129  SKPbc     SKPbc     13 50 28.3 -1.9
      comp=Z,14nm,0.8s,baz=246,slow=1.7,SNR=16
BDFB  Brasilia          133.88 129            SKPbc     13 50 27.5 -2.7
MDUB  Mudurnu           134.01 313            PKPdf     13 47 15.4 -1.0
CFR   Carcaliu          134.05 320 ⇓P         PKiKP     13 47 18.5 +1.0
CFR   Carcaliu          134.05 320 ⇓PKIKP     PKiKP     13 47 18.5 +1.0
BEL   Belsk             134.18 332 ePKP       PKiKP     13 47 18.9 +1.3
BEL   Belsk             134.18 332 ePKIKP     PKiKP     13 47 18.9 +1.3
HARR  Harsova           134.41 320 ⇑P         PKiKP     13 47 19.5 +1.2
HARR  Harsova           134.41 320 ⇑PKIKP     PKiKP     13 47 19.5 +1.2
BUR08 Bucovina Ar. S    134.51 325            PKPdf     13 47 17.5 +0.3
BURAR Bucovina Array    134.52 325 ⇓P         PKiKP     13 47 18.8 +0.2
BURAR Bucovina Array    134.52 325 ⇓PKIKP     PKiKP     13 47 18.8 +0.2
BURAR Bucovina Array    134.52 325            PKPdf     13 47 17.1  0.0
PLOR  Plostina          134.62 322 ⇑P         PKPdf     13 47 17.9 +0.6
PLOR  Plostina          134.62 322 ⇑PKIKP     PKPdf     13 47 17.9 +0.6
KWP   Kalwaria Pacla    134.68 328 ePKP       PKiKP     13 47 18.6 -0.1
KWP   Kalwaria Pacla    134.68 328 ePKIKP     PKiKP     13 47 18.6 -0.1
KWP   Kalwaria Pacla    134.68 328            PKPdf     13 47 18.0 +0.8
GKP   Gorka Klasztor    134.71 335 ePKP       PKiKP     13 47 19.7 +1.1
GKP   Gorka Klasztor    134.71 335 ePKIKP     PKiKP     13 47 19.7 +1.1
KOLS  Kolonicke sedl    135.33 328 ePKIKP     PKiKP     13 47 19.9 -0.2
KOLS  Kolonicke sedl    135.33 328 ePKP       PKiKP     13 47 19.9 -0.2
UZH   Uzhgorod          135.51 327 ePKIKP     PKPdf     13 47 11.8 -7.0
TRPA  Tarpa             135.68 327 ⇓P         PKiKP     13 47 20.3 -0.4
OJC   Ojcow             135.73 331 ePKP       PKPdf     13 47 19.9 +0.7
OJC   Ojcow             135.73 331 ePKIKP     PKPdf     13 47 19.9 +0.7
OJC   Ojcow             135.73 331            PKPdf     13 47 19.4 +0.3
CRVS  Cervenica-Dubn    135.77 328 ePKIKP     PKiKP     13 47 20.6 -0.3
CRVS  Cervenica-Dubn    135.77 328 ePKP       PKiKP     13 47 20.6 -0.3
ARR   Arges             136.08 322 ⇑P         PKiKP     13 47 21.9 +0.2
HUMR  Humele            136.32 321 ⇑P         PKPdf     13 47 20.6 +0.2
DRGR                    136.39 325 ⇓P         PKPdf     13 47 20.7 +0.1
DRGR                    136.39 325 ⇓PKIKP     PKPdf     13 47 20.7 +0.1
LANS  Liptovska Anna    136.61 330 ePKIKP     PKiKP     13 47 22.2 -0.5
LANS  Liptovska Anna    136.61 330 ePKP       PKiKP     13 47 22.2 -0.5
MORC  Moravsky Berou    137.09 332 ⇑P         PKiKP     13 47 23.0 -0.6
MORC  Moravsky Berou    137.09 332 ⇑PKIKP     PKiKP     13 47 23.0 -0.6
MORC  Moravsky Berou    137.09 332 ePKIKP     PKPdf     13 47 14.9 -6.9
OSTC  Ostas             137.13 333 ePKPpre    PKPdf     13 47 15.8 -6.0
OSTC                               ePKPDF     PKiKP     13 47 23.4 -0.3
GZR   Gura Zlata        137.16 323 ⇑P         PKPdf     13 47 22.6 +0.5
GZR   Gura Zlata        137.16 323 ⇑PKIKP     PKPdf     13 47 22.6 +0.5
CHVC  Chvalec           137.18 333 ePKPDF     PKPdf     13 47 15.3 -6.6
CHVC                               ex         x         13 47 22.8
PSZ   Piszkesteto       137.20 328  PKIKP     PKPdf     13 47 22.0 -0.1
PSZ   Piszkesteto       137.20 328            PKPdf     13 47 22.0 -0.1
KRLC  Kraliky           137.23 332 ePKPDF     PKiKP     13 47 23.4 -0.5
KRLC  Kraliky           137.23 332 ePKIKP     PKiKP     13 47 23.4 -0.5
DPC   Dobruska-Polom    137.23 333 ePKPDF     PKiKP     13 47 23.2 -0.7
DPC   Dobruska-Polom    137.23 333 ePKIKP     PKiKP     13 47 23.2 -0.7
SIRR  Siria             137.28 325 ⇑P         PKPdf     13 47 23.1 +0.9
VYHS  Vyhne             137.35 329 ePKP       PKPdf     13 47 23.0 +0.7
HERR  Herculane         137.66 323 ⇑P         PKPdf     13 47 23.6 +0.7
JAVC  Velka Javorina    137.67 330 ePKIKP     PKPdf     13 47 17.3 -5.6
BZS   Buzias            137.69 324 ⇓P         PKPdf     13 47 22.7 -0.3
BZS   Buzias            137.69 324 ⇓PKIKP     PKPdf     13 47 22.7 -0.3
BRG   Berggiesshubel    137.85 335 ePKP       PKPdf     13 47 20.6 -2.5
      comp=Z,3.3nm,0.7s
BRG   Berggiesshubel    137.85 335 e(P)       PKiKP     13 47 25.6 +0.5
      comp=Z,15nm,0.9s
BRG                                eSKP                 13 50 40.3
      comp=Z,9.3nm,1.0s
BRG   Berggiesshubel    137.85 335 ePKIKP     PKiKP     13 47 25.6 +0.5
BRG                                 pmax      pmax
      comp=Z,15nm,1.0s
BRG                                 pmax      pmax
      comp=N,9.0nm,1.0s
PVCC  Panska Ves        137.85 334 ePKPDF     PKiKP     13 47 24.8 -0.3
PVCC  Panska Ves        137.85 334 ePKIKP     PKiKP     13 47 24.8 -0.3
CLL   Collm             137.89 336 ePKPpre    PKPpre    13 47 16.0
CLL                                e                    13 47 21.0
CLL                                ePKPdf     PKPdf     13 47 24.0 +0.9
CLL                                i PKiKP    PKiKP     13 47 26.7 +1.6
      comp=Z,22nm,1.0s
CLL                                ePP        PP        13 50 13.0 +1.0
CLL                                eSKPbc     SKPbc     13 50 42.0 +0.8
CLL   Collm             137.89 336 ePKIKP     PKPdf     13 47 24.0 +0.9
CLL                                 pmax      pmax
      comp=Z,22nm,1.0s
MDVR  Moldovita         138.13 323 ⇑P         PKPdf     13 47 24.4 +0.5
KRUC  Moravsky          138.13 332 ePKIKP     PKPdf     13 47 17.3 -6.4
MODS  Modra-Piesok      138.20 330 ePKIKP     PKPdf     13 47 24.3 +0.4
MODS  Modra-Piesok      138.20 330 ePKP       PKPdf     13 47 24.2 +0.4
GOPC  GO Pecny, Ondr    138.22 334 ePKPDF     PKPdf     13 47 24.5 +0.7
GOPC  GO Pecny, Ondr    138.22 334 ePKIKP     PKPdf     13 47 24.5 +0.7
PRU   Pruhonice         138.27 334 ePKPDF     PKPdf     13 47 24.5 +0.6
PRU   Pruhonice         138.27 334 ePKIKP     PKPdf     13 47 24.5 +0.6
VTS   Vitosha           138.40 320 ⇑P         PKPdf     13 47 25.4 +0.9
VTS   Vitosha           138.40 320 ⇑PKIKP     PKPdf     13 47 25.4 +0.9
PBCC  Pribram           138.73 334 ePKP       PKiKP     13 47 26.3 -0.7
NKC   Novy Kostel       138.95 336 ePKPpre    PKPpre    13 47 18.1
NKC                                ePKPDF     PKiKP     13 47 26.6 -0.8
NKC   Novy Kostel       138.95 336 ePKHKP     PKPpre    13 47 18.1
NKC                                e                    13 47 26.6
CONA  Conrad Observa    139.19 331 i PKiKP    PKiKP     13 47 27.2 -0.8
      comp=Z,24nm,1.0s
CONA                               i PP       PP        13 50 22.2 +1.9
      comp=Z,7.0nm,1.1s
CONA                               i Sdiff              13 58 27.2
      comp=Z,6.8nm,1.2s
KHC   Kasperske Hory    139.33 334 ePKPpre    PKPpre    13 47 22.5
KHC                                ePKPDF     PKiKP     13 47 27.2 -1.0
KHC                                eSKP                 13 50 45.0
KHC   Kasperske Hory    139.33 334 ePKIKP     PKPdf     13 47 22.5 -3.4
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KHC   Kasperske Hory    139.33 334            PKPdf     13 47 25.4 -0.5
GEC2  GERESS Array S    139.50 333            PKPdf     13 47 25.6 -0.7
GERES GERESS Array B    139.50 333  PKhKP     PKPpre    13 47 19.9
      comp=Z,2.7nm,0.7s,baz=46,slow=3.9,SNR=7.3
GERES                               PKP       PKPdf     13 47 26.2 -0.1
      comp=Z,9.5nm,0.8s,baz=75,slow=1.5,SNR=18
GERES                               SKPbc     SKPbc     13 50 45.8 -0.2
      comp=Z,3.2nm,0.7s,baz=27,slow=3.3,SNR=8.7
GERES GERESS Array B    139.50 333  PKHKP     PKPpre    13 47 16.3
GERES                                                   13 47 26.2
GERES GERESS Array B    139.50 333            PKPpre    13 47 16.3
ARSA  Arzberg           139.83 330 i PKiKP    PKPdf     13 47 27.5 +0.6
      comp=Z,4.2nm,0.9s
ARSA                               i PP       PP        13 50 24.9 +0.8
      comp=Z,6.5nm,0.9s
GRF   Grafenberg Arr    139.86 336 ePKPdf     PKiKP     13 47 29.5 +0.2
      baz=37,slow=1.5
MOA   Molln             139.99 332 i PKiKP    PKiKP     13 47 30.3 +0.7
      comp=Z,5.2nm,0.6s
SOKA  Soboth            140.47 330 i PKiKP    PKPdf     13 47 28.8 +0.7
      comp=Z,10nm,0.9s
SOKA                               i PP       PP        13 50 29.9 +1.8
      comp=Z,7.6nm,1.2s
FNA   Florina           140.55 318  PKIKP     PKPdf     13 47 28.0 -0.4
FNA   Florina           140.55 318  PKPdf     PKPdf     13 47 28.0 -0.4
MEM   Membach           140.93 341  PKPdf     PKPdf     13 47 23.1 -5.6
MEM                                 x         x         13 47 29.2
MEM                                 x         x         13 47 31.8
KBA   Koelnbreinsper    140.98 332 i PKiKP    PKiKP     13 47 31.6 -0.3
      comp=Z,24nm,0.9s
KBA                                i PP       PP        13 50 32.5 +1.2
      comp=Z,13nm,1.2s
BSTI  Sart Tilman       141.09 342  PKPdf     PKPdf     13 47 24.1 -4.9
BSTI                                x         x         13 47 30.0
BSTI                                x         x         13 47 32.5
MYKA  Terra Mystica     141.17 331 i PKiKP    PKiKP     13 47 31.9 -0.2
      comp=Z,8.9nm,0.7s
WATA  Walderalm         141.57 334 i PKiKP    PKiKP     13 47 32.0 -1.0
      comp=Z,32nm,1.0s
WTTA  Wattenberg        141.60 333 i PKiKP    PKiKP     13 47 33.2 +0.1
      comp=Z,31nm,0.9s
WTTA                               i PP       PP        13 50 39.9 +4.8
      comp=Z,7.1nm,1.0s
WTTA                               i Sdiff              13 58 46.2
      comp=Z,7.8nm,1.1s
ABTA  Abfaltersbach     141.60 332 i PKiKP    PKiKP     13 47 32.8 -0.3
      comp=Z,23nm,0.8s
WLF   Walferdange       141.71 340  PKPdf     PKPdf     13 47 25.6 -4.6
WLF                                 x         x         13 47 34.3
MOTA  Moosalm           141.76 334 i PKiKP    PKiKP     13 47 32.9 -0.6
      comp=Z,28nm,1.2s,SNR=7.2
MOTA                               i PP       PP        13 50 35.7 -0.3
      comp=Z,6.4nm,0.9s
RETA  Reutte            141.80 334 i PKiKP    PKiKP     13 47 32.8 -0.6
      comp=Z,18nm,1.3s
RETA                               i PP       PP        13 50 36.0  0.0
      comp=Z,5.0nm,0.9s
RETA                               i Sdiff              13 58 47.4
      comp=Z,5.9nm,1.3s
DOU   Dourbes           141.81 342  PKPdf     PKPdf     13 47 27.1 -3.2
DOU                                 PKiKP     PKiKP     13 47 29.9 -3.3
DOU                                 x         x         13 47 33.6
SQTA  Sankt Quirin      141.82 334 i PKiKP    PKiKP     13 47 34.1 +0.6
      comp=Z,23nm,1.1s,SNR=5.8
SQTA                               i PP       PP        13 50 38.3 +2.0
      comp=Z,13nm,1.2s
BFO   Black Forest      142.08 337  PKHKP     PKPdf     13 47 26.2 -4.7
BFO   Black Forest      142.08 337            PKPdf     13 47 26.2 -4.7
FETA  Feichten          142.18 334 i PKPdf    PKPdf     13 47 29.0 -2.3
      comp=Z,38nm,1.1s,SNR=10
FETA                               i PP       PP        13 50 38.6 +0.1
      comp=Z,9.0nm,1.5s
FETA                               i Sdiff              13 58 55.8
      comp=Z,7.8nm,1.1s
DAVA  Damuels           142.32 335 i PKPdf    PKPdf     13 47 28.8 -2.7
      comp=Z,24nm,1.1s,SNR=5.0
DAVA                               i Sdiff              13 58 54.1
      comp=Z,15nm,1.1s
CTI   Castel Tesino     142.52 332  PKIKP     PKPdf     13 47 30.5 -1.3
CTI   Castel Tesino     142.52 332            PKPdf     13 47 30.5 -1.3
ECH   Echery            142.61 338  PKHKP     PKPdf     13 47 25.4 -6.4
ECH   Echery            142.61 338  PKPpre    PKPdf     13 47 25.4 -6.4
TEOL  Teolo             143.03 331            PKPbc     13 47 30.5 +0.6
TUE   Stuetta           143.19 335            PKPbc     13 47 30.8 +0.2
SALO  Salr              143.36 333            PKPbc     13 47 31.0 +0.2
SGRT  San Giovanni R    143.43 324            PKPbc     13 47 31.4 +0.2
MATE  Matera            143.55 321 ⇑P         PKPbc     13 47 32.1 +0.6
ACER  Acerenza          143.92 322            PKPab     13 47 32.4 +0.4
SENIN Lac Senin/Sane    144.10 336            PKPbc     13 47 33.4 +0.1
PRMA  PARMA             144.11 332            PKPdf     13 47 34.1 -0.4
ZCCA  Zocca             144.12 331            PKPdf     13 47 34.5 -0.1
NRCA  Norcia            144.15 327            PKPbc     13 47 33.6 +0.3
MURB  Monte Urbino      144.16 328            PKPbc     13 47 33.5 +0.2
INTR  Introdacqua       144.29 325            PKPab     13 47 32.9 -0.5
AQU   L'Aquila          144.33 326  PKIKP     PKPbc     13 47 34.4 +0.6
AQU   L'Aquila          144.33 326            PKPbc     13 47 34.4 +0.5
CLF   Chambon-Foret     144.35 343            PKPbc     13 47 33.9 +0.3
TIP   Timpagrande       144.39 319 ⇓P         PKPdf     13 47 35.5 +0.2
TIP   Timpagrande       144.39 319            PKPbc     13 47 34.6 +0.4
VLC   Villacollemand    144.54 331            PKPab     13 47 33.9 -0.3
PAOL  Paolisi           144.57 324            PKPab     13 47 33.6 -0.8
OSSC  Osservatorio P    144.60 330            PKPab     13 47 34.0 -0.5
MSSA  Maissana          144.82 332            PKPab     13 47 34.5 -0.9
LATE  Laterza           144.99 328            PKPbc     13 47 35.7 -0.1
CASP  Castiglione de    145.33 329            PKPdf     13 47 36.6 -0.1
BNI   Bardonecchia      145.43 336  PKP2      PKPbc     13 47 37.3  0.0
BNI   Bardonecchia      145.43 336            PKPbc     13 47 37.3  0.0
CEL   Celeste           145.47 319            PKPdf     13 47 37.0 -0.2
SSB   Saint Sauveur     146.05 338  PKIKP     PKPdf     13 47 36.3 -1.6
SSB   Saint Sauveur     146.05 338            PKPdf     13 47 36.2 -1.6
CORL  Corleone          147.32 320  PKPbc     PKPbc     13 47 42.3 -0.6
CLTB  Caltabellotta     147.57 320            PKPbc     13 47 43.2 -0.4
WDD   Wied Dalam        147.76 316            PKPbc     13 47 43.0 -1.0
SHEL  Horse Pasture     149.07 193  PKP2      PKiKP     13 47 49.1 -0.1
SHEL  Horse Pasture     149.07 193            PKiKP     13 47 49.1 -0.1
KEST  Kesra             151.14 321  PKPbc     PKiKP     13 47 53.8 +0.8
      comp=Z,94nm,0.8s,baz=284,slow=1.1,SNR=60
KEST                                PKPab     PKPab     13 48 01.2 +0.4
      comp=Z,66nm,1.0s,baz=283,slow=12,SNR=8.1
KEST  Kesra             151.14 321            PKPbc     13 47 51.0 -1.5
CMAH  Djebel Manchou    151.65 325  P         PKiKP     13 47 53.9 -0.1
CMAH  Djebel Manchou    151.65 325  P         PKiKP     13 47 53.9 -0.1
CAEH  'Ain El Ouahch    151.85 326  P         PKiKP     13 47 54.4 +0.1
CAEH  'Ain El Ouahch    151.85 326  P         PKiKP     13 47 54.4 +0.1
ABSA  Djebel Ababsia    151.86 324  P         PKiKP     13 47 54.9 +0.4
ABSA  Djebel Ababsia    151.86 324  P         PKiKP     13 47 54.9 +0.4
CKFL  Kef-Lekhel        152.20 325  P         PKiKP     13 47 55.5 +0.3
CKFL  Kef-Lekhel        152.20 325  P         PKiKP     13 47 55.5 +0.3
PBRG  Braganca          152.28 351 ePKPbc     PKiKP     13 47 55.3 +0.2
PBRG  Braganca          152.28 351 ePKPab     PKPab     13 48 06.5 +1.2
DFRA  Djebel Bou Aff    152.55 327  P         PKiKP     13 47 56.8 +0.9
DFRA  Djebel Bou Aff    152.55 327  P         PKiKP     13 47 56.8 +0.9
PCAB  Cabril            152.55 353 ePKPbc     PKiKP     13 47 55.8 +0.1
CTEI  Djebel Teioual    152.62 325  P         PKiKP     13 47 56.6 +0.5
CTEI  Djebel Teioual    152.62 325  P         PKiKP     13 47 56.6 +0.5
PVRL  Vila Real         152.94 352 ePKPbc     PKiKP     13 47 57.5 +1.0
PVRL  Vila Real         152.94 352 ePKPab     PKPab     13 48 09.3 +1.2
MVO   Moncorvo          152.95 351 ePKPbc     PKiKP     13 47 57.6 +1.0
MVO   Moncorvo          152.95 351 ePKPab     PKPab     13 48 09.6 +1.5
ESBB  Sonseca Array     153.77 345            PKiKP     13 47 58.4 +0.1
ESBB                                          PKPab     13 48 12.1 +0.5
ESDC  Sonseca Array     153.77 345  PKP       PKPdf     13 47 50.1 -0.1
      comp=Z,3.0nm,0.9s,baz=7.1,slow=3.2,SNR=7.2
ESDC                                PKPbc     PKiKP     13 47 59.0 +0.7
      comp=Z,6.0nm,0.8s,baz=14,slow=2.5,SNR=22
ESDC                                PKPab     PKPab     13 48 12.2 +0.6
      comp=Z,17nm,0.8s,baz=15,slow=3.8,SNR=23
ESDC                                PP        PP        13 51 43.0 -2.6
      comp=Z,4.6nm,0.9s,baz=16,slow=6.6,SNR=9.2
ESDC  Sonseca Array     153.77 345            PKPdf     13 47 49.9 -0.3
ESDC                                          PKPbc     13 47 58.1 -0.1
ESDC                                PKPab     PKPab     13 48 11.8 +0.1
MTE   Manteigas         153.78 351            PKPdf     13 47 50.1 -0.1
MTE                                 PKPbc     PKiKP     13 47 58.6 +0.4
MTE   Manteigas         153.78 351 ePKPdf     PKPdf     13 47 50.9 +0.7
MTE   Manteigas         153.78 351 ePKPab     PKPab     13 48 13.5 +1.8
PAB   San Pablo         153.99 346  PKIKP     PKPbc     13 47 58.3 -0.4
PAB                                                     13 48 13.2
PAB   San Pablo         153.99 346            PKPdf     13 47 50.5 -0.1
PAB                                           PKPbc     13 47 58.3 -0.4
PAB                                           PKPab     13 48 13.2 +0.6
PCAS  Casmilo, Conde    154.25 353 ePKPbc     PKPbc     13 47 58.9 -0.2
PCAS  Casmilo, Conde    154.25 353 ePKPab     PKPab     13 48 15.8 +2.2
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PCBR	Castelo Branco	154.32	351	ePKPbc	PKPbc	13 47 59.3	0.0
PCBR	Castelo Branco	154.32	351	ePKPab	PKPab	13 48 15.2	+1.3
PTOM	Tomar	154.66	353	ePKPbc	PKiKP	13 48 00.7	+0.7
PTOM	Tomar	154.66	353	ePKPab	PKPab	13 48 17.1	+1.8
PMRV	Marv??o	154.71	351	ePKPbc	PKiKP	13 48 00.9	+0.7
PMRV	Marv??o	154.71	351	ePKPab	PKPab	13 48 17.2	+1.6
PMTG	Montargil	155.18	352	ePKPbc	PKPdf	13 48 01.9	+10
PMTG	Montargil	155.18	352	ePKPab	PKPab	13 48 18.5	+0.9
PBEJ	Beja	156.15	351	ePKPab	PKPab	13 48 23.2	+1.4
PNCL	Nicolau / Gran	156.16	352	ePKPab	PKPab	13 48 23.8	+2.0
PCVE	Castro Verde	156.57	351	ePKPab	PKPab	13 48 25.3	+1.7
PVAQ	Vaqueiros	156.74	350	ePKPab	PKPab	13 48 26.5	+2.2
PTEO	Sao Teotonio	156.75	352	ePKPab	PKPab	13 48 26.8	+2.5
TOA0	Torodi Ar. Sit	166.17	266		PKPab	13 49 05.3	-1.1
TORD	Torodi Ar. Bea comp=Z,2.3nm,0.9s,baz=252,slow=1.2,SNR=6.7	166.17	266	PKP	PKPdf	13 48 03.8	-0.9
TORD	comp=Z,7.0nm,1.0s,baz=98,slow=3.2,SNR=12			PKPab	sPKPdf	13 49 06.1	+0.3
TORD	Torodi Ar. Bea	166.17	266		PKPdf	13 48 02.7	-2.0
TORD					sPKPdf	13 49 05.2	-0.6
KIC	Kosan Boka comp=Z,11nm,0.8s	168.94	224	ePKP2	PKPab	13 49 18.9	+0.4
LIC	Lamto comp=Z,14nm,0.8s	169.03	223	ePKP2	PKPab	13 49 19.6	+0.7
DBIC	Dimbokro comp=Z,3.9nm,0.9s,baz=30,slow=2.2,SNR=3.2	169.24	225	PKP	PKPdf	13 48 06.3	-0.5
DBIC	comp=Z,2.7nm,0.7s,baz=120,slow=5.5,SNR=4.7			PKPab	PKPab	13 49 19.4	-0.4
TIC	Toumodi comp=Z,4.2nm,0.2s	169.34	224	ePKP2	PKPab	13 49 20.6	+0.3

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*SOME **10** 13:30:05.0, 40°.87N×70°.43E, h0^{km}*

KRNET 10 13:30:06.3±0.1**, 39°.13N×71°.79E, mb2.5, 6C-8D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken baz=21	1.19	321	⇑iP	Pg	13 30 28.3	-0.8
BTK	baz=21			⇑iS	Sg	13 30 44.1	-0.5
ARSB	Arslanbob baz=22	2.37	22	⇓iP	Pn	13 30 44.9	-1.7
ARSB	baz=22			⇓iS	Sn	13 31 13.6	-2.9
ARK	Arkit baz=3.0	2.67	3	⇑iP	Pn	13 30 49.1	-1.5
ARK	baz=3.0			⇑iS	Sn	13 31 20.0	-3.7
AML	Almayashu baz=25	3.33	25	⇓iP	Pn	13 30 58.2	-1.7
AML	baz=25			⇓iS	Sn	13 31 36.2	-4.2
ARLS	Aral baz=34	3.34	34	⇓iP	Pn	13 30 58.5	-1.4
ARLS	baz=34			⇓iS	Sn	13 31 36.6	-3.8
UCH	Uchtor baz=33	3.72	33	⇓iP	Pn	13 31 03.2	-2.2
UCH	baz=33			⇓iS	Sn	13 31 46.5	-3.7
MRKS	Merke 2.2nm,0.1s	3.77	16	eP	Pn	13 30 58.4	-7.4
MRKS	2.2nm,0.2s			eS	Sn	13 31 37.0	-14
KZA	Kyzart baz=41	3.95	41	⇑iP	Pn	13 31 06.2	-2.3
KZA	baz=41			⇑iS	Sn	13 31 51.2	-4.5

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*TAP **10** 13:43:23.9, 24°.63N×122°.59E, h80^{km}, ML2.9, D*

*JMA **10** 13:43:24.3±0.1, 24°.64N×122°.64E, h72^{km}±2^{km}, M2.1*

ISC 10 13:43:25.1±1.3**, 24°.56N**±0°.04×**122°.62E**±0°.02**, h65**^{km}±8^{km}**, n76, σ0^{s}.99**/140**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.31	109	P	Pn	13 43 36.0	+0.2
JYNG				S	Sn	13 43 44.5	+0.9
YOJ	Yonaguni jima	0.37	105	P	Pn	13 43 36.3	+0.1
YOJ				eS	Sn	13 43 45.4	+1.0
EOS1	EOS1 baz=253	0.45	269	eP	Pn	13 43 37.2	+0.2
EOS1	baz=253			eS	Sn	13 43 47.0	+1.4
TWC	Suao baz=270	0.71	275	P	Pn	13 43 39.1	-0.6
TWC	baz=270			S	Sn	13 43 50.0	-0.4
NTC	Toucheng baz=287	0.78	293	eS	Sn	13 43 51.6	-0.4
ENA	Nanau baz=251	0.81	261	i P	Pn	13 43 41.1	+0.1
ENA	baz=251			i S	Sn	13 43 53.9	+1.1
TIPB	Shuangxi baz=291	0.83	300	eP	Pn	13 43 40.3	-1.0
TIPB	baz=291			S	Sn	13 43 52.2	-1.0
TWE	Neicheng baz=272	0.89	281	P	Pn	13 43 41.8	-0.1
TWE	baz=272			S	Sn	13 43 53.9	-0.4
SLBB	Yuanshan baz=279	0.92	283	P	Pn	13 43 41.3	-1.1
SLBB	baz=279			eS	Sn	13 43 54.7	-0.5
ENTT	Nioudou baz=265	0.96	275	P	Pn	13 43 43.1	+0.1
ENTT	baz=265			eS	Sn	13 43 56.1	0.0
NACB	Ninganchiao baz=235	1.01	248	eP	Pn	13 43 42.8	-0.7
NACB	baz=235			eS	Sn	13 43 57.1	-0.1
NDT	Datong Townshi baz=268	1.01	273	P	Pn	13 43 43.2	-0.3
NDT	baz=268			S	Sn	13 43 57.6	+0.4
IRIF	Iriomote-Funau	1.03	102	P	Pn	13 43 43.3	-0.5
IRIF				S	Sn	13 43 57.7	+0.1
TWA	Mucha baz=283	1.03	294	eS	Sn	13 43 56.8	-1.0
NWLT	Wulai baz=284	1.04	283	eP	Pn	13 43 43.2	-0.7
NWLT	baz=284			S	Sn	13 43 56.8	-1.2
TWD	Chiawan baz=230	1.05	243	eS	Sn	13 43 57.4	-0.6
NHDH	Xindian Distri baz=281	1.08	292	eS	Sn	13 43 57.9	-0.8
ETLH	Xiulin Townshi baz=247	1.10	252	P	Pn	13 43 44.4	-0.3
ETLH	baz=247			S	Sn	13 43 58.5	-0.7
YM01	YM01 baz=292	1.12	302	eS	Sn	13 43 59.7	-0.1
YM08	YM08 baz=294	1.13	304	eS	Sn	13 43 59.5	-0.4
YM11	YM11 baz=292	1.13	303	eP	Pn	13 43 45.0	-0.1
YM11	baz=292			eS	Sn	13 43 59.2	-0.8
YM05	YM05 baz=292	1.14	303	P	Pn	13 43 44.4	-0.8
YM05	baz=292			S	Sn	13 43 59.2	-0.9
YM10	YM10 baz=292	1.14	302	eP	Pn	13 43 45.2	0.0
YM10	baz=292			eS	Sn	13 43 59.4	-0.7
NNSB	Datong baz=251	1.14	264	eP	Pn	13 43 45.3	+0.1
NNSB	baz=251			eS	Sn	13 44 00.0	-0.2
NNSH	Datong baz=251	1.14	264	P	Pn	13 43 44.5	-0.7
NNSH	baz=251			S	Sn	13 44 00.2	-0.1
YHNB	Yeheng baz=264	1.14	276	P	Pn	13 43 45.3	+0.1
YHNB	baz=264			eS	Sn	13 43 59.7	-0.6
NNS	Nan Shan baz=251	1.14	265	eP	Pn	13 43 45.2	-0.2
NNS	baz=251			S	Sn	13 44 01.0	+0.6
YM04	YM04 baz=292	1.15	301	P	Pn	13 43 44.8	-0.5
YM04	baz=292			S	Sn	13 43 59.4	-1.1
NSK	Sanguang baz=264	1.16	276	P	Pn	13 43 45.3	-0.1
NSK	baz=264			S	Sn	13 44 00.5	-0.1
TWS1	Kuangyinshan baz=287	1.22	297	eS	Sn	13 44 02.7	+0.7
WHF	Hehuan Shan baz=248	1.30	252	P	Pn	13 43 47.4	-0.3
WHF	baz=248			S	Sn	13 44 03.7	-0.9
JKRS	Kuro-shima	1.30	104	P	Pn	13 43 47.7	+0.4
JKRS				eS	Sn	13 44 04.7	+0.8
ESL	Shilin baz=232	1.31	236	P	Pn	13 43 46.5	-0.9
ESL	baz=232			S	Sn	13 44 03.5	-0.6
TWT	Tachien baz=248	1.35	257	eP	Pn	13 43 48.5	+0.4
TWT	baz=248			S	Sn	13 44 05.8	+0.4
TDCB	Techi baz=248	1.37	258	P	Pn	13 43 47.7	-0.6
TDCB	baz=248			eS	Sn	13 44 06.1	+0.4
JIJ	Ishigaki jima	1.40	98	P	Pn	13 43 47.9	-0.7
JIJ				S	Sn	13 44 05.6	-0.6
EGFH	Guangfu baz=228	1.40	231	eP	Pn	13 43 47.9	-0.7
EGFH	baz=228			S	Sn	13 44 05.2	-1.2
CHGB	Renai baz=238	1.41	250	P	Pn	13 43 48.5	-0.4
CHGB	baz=238			S	Sn	13 44 06.0	-0.8
OWD	Renai baz=235	1.45	246	P	Pn	13 43 48.7	-0.7
OWD	baz=235			eS	Sn	13 44 06.5	-1.2
LIOB	Emei baz=270	1.47	274	P	Pn	13 43 49.7	+0.2
LIOB	baz=270			eS	Sn	13 44 08.1	+0.2
NSTT	Nanjuang baz=269	1.48	273	eS	Sn	13 44 08.1	0.0
HGSD	Ruisui baz=219	1.52	226	P	Pn	13 43 49.4	-0.9
HGSD	baz=219			S	Sn	13 44 09.7	+0.5
JISG	Ishigakijimahi	1.54	88	P	Pn	13 43 50.3	-0.1
JISG				eS	Sn	13 44 09.4	-0.1
WHP	Taichung City baz=252	1.55	260	eP	Pn	13 43 51.9	+1.2
WHP	baz=252			S	Sn	13 44 10.8	+0.8
VWDT	VWDT baz=231	1.57	240	P	Pn	13 43 50.3	-0.5
VWDT	baz=231			S	Sn	13 44 10.2	-0.1
EHY	Hungye baz=226	1.58	229	P	Pn	13 43 50.2	-0.9
EHY	baz=226			eS	Sn	13 44 10.0	-0.6
DPDB	Guoxing baz=244	1.63	252	eP	Pn	13 43 52.6	+0.8
DPDB	baz=244			eS	Sn	13 44 11.9	+0.1
YULB	Yu-li baz=232	1.68	227	eP	Pn	13 43 51.0	-1.3
YULB	baz=232			eS	Sn	13 44 11.0	-1.9
TWQ1	Liyutan baz=260	1.70	263	eP	Pn	13 43 52.9	+0.3
TWQ1	baz=260			eS	Sn	13 44 13.4	0.0
SSLB	Suanglung baz=236	1.70	244	eP	Pn	13 43 52.4	-0.3
SSLB	baz=236			eS	Sn	13 44 12.7	-0.8
TWF1	Yuli baz=231	1.70	226	P	Pn	13 43 51.6	-1.1
TWF1	baz=231			eS	Sn	13 44 13.1	-0.5
SMLT	Sun Moon Lake baz=239	1.71	247	eP	Pn	13 43 53.1	+0.2
SMLT	baz=239			S	Sn	13 44 13.9	+0.1
TYC	Yuchr baz=240	1.74	248	P	Pn	13 43 52.9	-0.2
TYC	baz=240			eS	Sn	13 44 14.5	+0.2
FULB	Fuli baz=213	1.82	222	eP	Pn	13 43 53.1	-1.1
FULB	baz=213			eS	Sn	13 44 17.2	+1.0
WHYT	Xinyi Township baz=236	1.83	242	P	Pn	13 43 55.5	+1.1
WHYT	baz=236			eS	Sn	13 44 17.1	+0.5
YUS	Yu-Shan baz=226	1.86	236	P	Pn	13 43 55.0	-0.2
YUS	baz=226			S	Sn	13 44 16.8	-1.2
WJS	Zhushan baz=255	1.88	248	eP	Pn	13 43 56.3	+1.3
WJS	baz=255			eS	Sn	13 44 19.8	+2.1
WNT	Mingjian baz=256	1.89	250	P	Pn	13 43 56.3	+1.1
WNT	baz=256			S	Sn	13 44 20.3	+2.2
JTJ	Tarama	1.90	87	P	Pn	13 43 55.3	+0.1
JTJ				eS	Sn	13 44 18.1	0.0
ALS	Alishan baz=228	1.96	238	eP	Pn	13 43 56.6	+0.2
ALS	baz=228			S	Sn	13 44 20.3	+0.2
ELDTW	Lidau baz=225	2.00	228	P	Pn	13 43 55.8	-1.0
ELDTW	baz=225			S	Sn	13 44 18.9	-2.0
CHN5	Tsauling baz=231	2.02	242	P	Pn	13 43 57.9	+0.9
CHN5	baz=231			eS	Sn	13 44 23.2	+2.0
WGK	Gukeng baz=243	2.07	246	eS	Sn	13 44 24.4	+2.0
WDLH	Douliu baz=255	2.09	246	eS	Sn	13 44 25.5	+2.6
TWH	Lutao baz=204	2.12	210	eP	Pn	13 43 56.8	-1.4
TWH	baz=204			eS	Sn	13 44 20.5	-3.0
RLNB	Erlin baz=259	2.17	253	eS	Sn	13 44 24.7	-0.1
STYT	Tauyuan baz=229	2.20	231	eP	Pn	13 43 59.0	-0.4
STYT	baz=229			S	Sn	13 44 26.8	+1.2
CHN4	Tsaushan baz=235	2.21	238	P	Pn	13 44 00.8	+1.3
CHN4	baz=235			S	Sn	13 44 27.4	+1.6
TPUB	Ta-pu baz=227	2.21	236	eP	Pn	13 43 60.0	+0.5
TPUB	baz=227			eS	Sn	13 44 27.2	+1.4
TWGBT	Beinan baz=225	2.23	220	eP	Pn	13 43 58.2	-1.6
TWGBT	baz=225			eS	Sn	13 44 25.3	-1.0
TWG	Pinlang baz=225	2.24	220	P	Pn	13 43 58.5	-1.3
TWG	baz=225			S	Sn	13 44 24.7	-1.7
WTP	Ta-pu baz=232	2.25	235	eP	Pn	13 44 01.0	+0.8
WTP	baz=232			S	Sn	13 44 28.2	+1.3
TWK	Hsinying baz=234	2.34	237	i P	Pn	13 44 01.9	+0.7
TWK	baz=234			i S	Sn	13 44 30.8	+1.9
CHN1	Nanshi baz=233	2.35	235	P	Pn	13 44 03.2	+1.8
CHN1	baz=233			S	Sn	13 44 31.3	+2.0
SLGT	Liugui baz=238	2.39	230	eP	Pn	13 44 02.7	+0.8
SLGT	baz=238			eS	Sn	13 44 32.7	+2.7
SSD	Sandimen baz=224	2.56	226	eP	Pn	13 44 05.8	+1.5

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*BJI **10** 13:47:14.3±0.0, 22°.94S×178°.57W, h281^{km}, mB4.9/13, mb4.5/19*

*NEIC **10** 13:47:19.5±1.8, 22°.22S±0°.06×178°.24W±0°.10, h302^{km}±5^{km}, mb4.9/149, Error ellipse: s-maj=15.3km s-min=2.5km az=121.0*

*IDC **10** 13:47:21.1±1.1, 22°.13S×178°.40W, h307^{km}±10^{km}, mb4.1/24, mb1 4.3/27, mb1mx4.2/41, mbtmp4.8/27, Error ellipse: s-maj=12.2km s-min=7.8km az=130.0*

ISC 10 13:47:19.9±0.3**, 22°.22S**±0°.04×**178°.21W**±0°.06**, h300**^{km}**, n309, σ1^{s}.78**/330**, mb4.8**/96**, 16C-1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	7.00	178	P	Pn	13 49 05.7	+4.6
RIZ				S	S	13 50 28.3	+5.2
RAO	Raoul Island 227nm,0.3s,baz=72,slow=16,SNR=7.2	7.01	178	P	Pn	13 49 02.6	+1.4
RAO	167nm,0.3s,baz=332,slow=23,SNR=2.7			S	S	13 50 23.7	+0.4
RAO	Raoul Island	7.01	178		Pn	13 49 02.1	+0.8
GLKZ	Green Lake	7.02	178	P	Pn	13 49 04.0	+2.7
GLKZ				S	S	13 50 27.4	+4.0
NIUE	Niue	8.36	70		Pn	13 49 20.0	+2.0
AFI	Afiamalu 22nm,0.3s,baz=177,slow=1.5,SNR=23	10.28	38	P	Pn	13 49 41.5	-0.1
AFI	36nm,0.3s,baz=55,slow=9.8,SNR=9.2			S	S	13 51 26.5	-11
AFI	Afiamalu	10.28	38		Pn	13 49 40.7	-0.9
DZM	Mont Dzumac 8.9nm,0.3s,baz=83,slow=18,SNR=60	14.22	268	P	Pn	13 50 32.5	+3.2
DZM	Mont Dzumac	14.22	268	P	Pn	13 50 33.6	+4.3
OUZ	Omahuta	14.80	207	P	Pn	13 50 38.2	+2.3
MXZ	Matakaoa Point	15.58	190	P	P	13 50 43.6	+0.3
MXZ	comp=Z,54nm,0.6s			IAmb	IAmb	13 50 46.5	
MXZ	Matakaoa Point	15.58	190	P	Pn	13 50 46.6	+1.6
MXZ				S	S	13 53 27.3	-4.7
WIAZ	Waiheke Island	15.63	200	P	Pn	13 50 47.2	+1.7
RVAZ	Riverhead Bore	15.79	202	P	Pn	13 50 49.4	+1.9
HBAZ	Herne Bay Bore	15.81	201	P	Pn	13 50 49.8	+2.2
WMGZ	Waiomatatini S	15.82	190	P	Pn	13 50 48.6	+0.8
WMGZ				S	S	13 53 32.7	-4.0
HAZ	Te Kaha	15.87	192	P	Pn	13 50 47.4	-0.9
HAZ				S	S	13 53 34.2	-3.5
PKGZ	Pakihiroa	15.94	191	P	Pn	13 50 51.9	+2.6
PKGZ				S	S	13 53 33.5	-5.8
RUGZ	Raukumara Rang	16.09	192	P	Pn	13 50 53.1	+2.1
RUGZ				S	S	13 53 38.2	-4.2
PUZ	Puketiti	16.09	190	P	Pn	13 50 51.3	+0.4
PUZ				S	S	13 53 36.4	-5.9
MWZ	Matawai	16.47	192	P	Pn	13 50 55.9	+0.5
MWZ				S	S	13 53 46.2	-3.8
URZ	Urewera comp=Z,22nm,0.3s,baz=59,slow=5.9,SNR=42	16.48	193	P	P	13 50 52.6	-0.5
URZ	comp=Z,16nm,0.3s,baz=104,slow=20,SNR=18			S	S	13 53 47.8	-2.3
URZ	Urewera	16.48	193	P	P	13 50 52.1	-0.9
URZ	Urewera	16.48	193	P	Pn	13 50 56.4	+0.9
URZ				S	S	13 53 49.2	-0.8
TKGZ	Te Karaka	16.52	191	P	P	13 50 52.0	-1.3
TKGZ				S	S	13 53 44.8	-5.9
MUGZ	Murupara	16.77	194	P	Pn	13 50 57.7	-1.2
RIGZ	Rimuhau	16.79	191	P	P	13 50 56.5	0.0
RIGZ				S	S	13 53 50.1	-6.1
RAR	Rarotonga comp=Z,2.4nm,0.3s,baz=202,slow=6.9,SNR=4.1	17.16	90	P	Pn	13 51 02.7	-0.9
RAR	Rarotonga comp=Z,92nm,1.2s	17.16	90	IAmb	IAmb	13 51 35.0	
HIZ	Hauiti	17.30	199	P	Pn	13 51 04.2	-0.8
HIZ	comp=Z,56nm,0.6s			IAmb	IAmb	13 51 06.7	
BKZ	Black Stump Fm	17.49	194	P	P	13 51 02.5	-1.5
BKZ	comp=Z,26nm,0.5s			IAmb	IAmb	13 51 06.8	
BKZ	Black Stump Fm	17.49	194	P	P	13 51 04.0	0.0
KWHZ	Kaweka Forest	17.75	194	P	P	13 51 08.3	+1.5
BHHZ	Black Hill Sta	17.89	195	P	Pn	13 51 10.3	-1.8
BFZ	Birch Farm	19.00	193	P	P	13 51 19.3	-0.8
BFZ	comp=Z,27nm,0.5s			IAmb	IAmb	13 51 23.4	
MSWZ	Moikau Station	19.92	195	P	P	13 51 28.0	-1.8
SNZO	South Karori	19.95	196	P	P	13 51 29.0	-1.1
SNZO	comp=Z,59nm,0.8s			IAmb	IAmb	13 51 32.6	
BHW	Baring Head	20.00	195	P	P	13 51 29.7	-0.9
PLWZ	Palliser	20.06	194	P	P	13 51 30.1	-1.3
QRZ	Quartz Range	20.14	201	P	P	13 51 32.1	+0.1
NNZ	Nelson	20.23	199	P	P	13 51 31.9	-1.1
NNZ	comp=Z,37nm,0.6s			IAmb	IAmb	13 51 33.9	
TUWZ	Tuamarina	20.26	197	P	P	13 51 31.5	-1.8
CMWZ	Cape Campbell	20.49	196	P	P	13 51 34.5	-1.1
BSWZ	Blackbirch Sta	20.55	197	P	P	13 51 35.4	-0.8
THZ	Tophouse	20.87	199	P	P	13 51 38.5	-0.9
THZ	comp=Z,28nm,0.6s			IAmb	IAmb	13 51 46.1	
KHZ	Kahutara	21.29	197	P	P	13 51 42.2	-1.1
KHZ	comp=Z,57nm,0.9s			IAmb	IAmb	13 51 44.8	
LTZ	Lake Taylor	21.99	199	P	P	13 51 48.5	-1.2
LTZ	comp=Z,63nm,0.8s			IAmb	IAmb	13 51 54.1	
LHI	Lord Howe Isla	22.25	241	P	P	13 51 54.0	+1.8
OXZ	Oxford	22.55	199	P	P	13 51 53.3	-1.5
MQZ	McQueen’s Vall	22.73	197	P	P	13 51 55.1	-1.2
MQZ	comp=Z,37nm,1.1s			IAmb	IAmb	13 51 57.8	
RPZ	Rata Peaks comp=Z,31nm,0.7s,baz=343,slow=0.4,SNR=30	23.21	200	P	P	13 52 01.4	+0.6
RPZ	comp=Z,6.5nm,0.9s,baz=73,slow=21,SNR=3.0			S	S	13 55 52.9	+3.1
RPZ	Rata Peaks	23.21	200	P	P	13 51 59.0	-1.8
RPZ	comp=Z,94nm,1.5s			IAmb	IAmb	13 52 04.6	
FOZ	Fox Glacier	23.46	202	P	P	13 52 01.2	-1.8
FOZ	comp=Z,30nm,0.8s			IAmb	IAmb	13 52 03.8	
LBZ	Lake Benmore	24.09	201	P	P	13 52 06.3	-2.5
ODZ	Otahua Downs	24.54	199	P	P	13 52 10.6	-2.1
WKZ	Wanaka	24.87	202	P	P	13 52 14.2	-1.6
DCZ	Deep Cove	26.09	204	P	P	13 52 26.1	-0.5
WHZ	Wether Hill Ro	26.17	202	P	P	13 52 26.0	-1.3
WHZ	comp=Z,38nm,1.2s			IAmb	IAmb	13 52 30.6	
ARMA	Armidale	28.18	247	P	P	13 52 46.9	+1.4
ARMA	comp=Z,83nm,1.6s			IAmb	IAmb	13 52 48.1	
EIDS	Eidsvold	28.24	258	P	P	13 52 46.9	+0.9
EIDS	comp=Z,21nm,0.9s			IAmb	IAmb	13 52 52.7	
CAN	Canberra	31.42	238	P	P	13 53 14.7	+0.9
CAN	comp=Z,36nm,0.8s			IAmb	IAmb	13 53 16.1	
TOO	Toolangi	34.75	236	P	P	13 53 42.7	+0.3
TOO	comp=Z,32nm,0.8s			IAmb	IAmb	13 53 44.3	
TAU	Tasmania Unive	35.28	226	P	P	13 53 46.9	+0.1
STKA	Stephens Creek comp=Z,17nm,0.6s,baz=97,slow=12,SNR=61	36.89	246	P	P	13 54 01.2	+0.6
STKA	comp=Z,3.3nm,0.5s,baz=83,slow=4.7,SNR=4.5			PcP	PcP	13 56 17.3	+2.2
STKA	comp=Z,2.6nm,0.8s,baz=63,slow=2.3,SNR=2.9			ScP	ScP	13 59 32.9	-0.1
STKA	Stephens Creek	36.89	246	P	P	13 54 00.9	+0.3
COEN	Coen	37.53	276	P	P	13 54 07.1	+1.0
COEN	comp=Z,38nm,0.9s			IAmb	IAmb	13 54 08.3	
BBOO	Buckleboo	41.63	245	P	P	13 54 39.2	-0.4
AS31	Alice Springs	43.96	258	P	P	13 54 58.0	-0.3
ASAR	Alice Springs comp=Z,36nm,0.9s,baz=97,slow=7.7,SNR=293	43.96	258	P	P	13 54 58.1	-0.2

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ASAR                                PcP    PcP      13 56 39.5 +1.1
        comp=Z,3.4nm,0.6s,baz=106,slow=3.6,SNR=5.8
ASAR                                ScP    ScP      14 00 00.5 -0.5
        comp=Z,2.1nm,0.8s,baz=105,slow=4.0,SNR=7.7
ASAR                                S      S        14 01 01.0 -6.1
        comp=Z,1.4nm,0.9s,baz=96,slow=14,SNR=6.2
ASAR  Alice Springs     43.96 258   P      P        13 54 57.9 -0.3
PTCN  Pitcairn Islan    43.99 104   P      P        13 54 58.4  0.0
WB0   Warramunga Arr    44.18 264   P      P        13 54 59.4 -0.6
WB0                                 IAmb   IAmb     13 55 00.2
        comp=Z,22nm,0.6s
WB2   Warramunga Arr    44.19 264   P      P        13 54 59.3 -0.8
WRAB  Tennant Creek     44.19 264   P      P        13 54 59.2 -0.9
WRA   Warramunga Arr    44.20 264   P      P        13 54 59.4 -0.7
        comp=Z,13nm,0.6s,baz=101,slow=8.9,SNR=160
WRA                                 PcP    PcP      13 56 38.2 -1.0
        comp=Z,1.8nm,0.8s,baz=91,slow=5.9,SNR=4.4
WRA                                 ScP    ScP      14 00 02.1 +0.1
        comp=Z,2.7nm,0.8s,baz=97,slow=3.8,SNR=5.6
WRA                                 S      S        14 01 05.6 -4.9
        comp=Z,1.4nm,0.9s,baz=99,slow=12,SNR=5.1
WRA   Warramunga Arr    44.20 264   P      P        13 54 59.2 -0.9
KHLU  Kahalu`u          46.93  29   P      P        13 55 21.8 +0.4
KEKH  Kekaha            47.49  24   P      P        13 55 25.7 +0.2
FORT  Forrest           48.45 248   P      P        13 55 32.0 -0.9
KNRA  Kununurra         50.37 268   P      P        13 55 46.9 -0.6
KNRA                                IAmb   IAmb     13 55 48.0
        comp=Z,42nm,0.6s
FAKI  Fak Fak           51.72 285   P      P        13 55 57.3 -0.1
FAKI                                IAmb   IAmb     13 56 52.8
        comp=Z,66nm,1.4s
FITZ  Fitzroy Crossi    52.63 264   P      P        13 56 03.5 -0.6
FITZ                                IAmb   IAmb     13 56 05.1
        comp=Z,20nm,0.8s
SWI   Sorong            53.52 286   P      P        13 56 10.2 -0.4
        comp=Z,44nm,0.8s
VNDA  Vanda             56.19 185   P      P        13 56 30.4 +1.8
        comp=Z,4.6nm,0.7s,baz=355,slow=7.1,SNR=12
VNDA  Vanda             56.19 185   P      P        13 56 27.6 -1.0
SOEI  Soe               56.38 273   P      P        13 56 30.0 -1.1
        comp=Z,1µmcomp=Z,81nm,1.1s
SOEI  Soe               56.38 273   P      P        13 56 32.1 +1.0
SOEI                                IAmb   IAmb     13 56 33.3
        comp=Z,61nm,0.9s
PSA00 Pilbara Seismi    57.11 258   P      P        13 56 34.5 -1.5
PSA00                               IAmb   IAmb     13 56 36.7
        comp=Z,37nm,0.9s
PSA00 Pilbara Seismi    57.11 258   P      P        13 56 33.8 -2.1
PSA00                               IAmb   IAmb     13 56 35.8
        comp=Z,23nm,1.0s
NWAO  Narrogin (SRO)    57.44 244   P      P        13 56 37.9 -0.1
NWAO                                IAmb   IAmb     13 58 42.4
        comp=Z,68nm,1.5s
NWAO  Narrogin (SRO)    57.44 244   P      P        13 56 37.8 -0.3
NWAO                                IAmb   IAmb     13 56 39.1
        comp=Z,16nm,0.8s
SANI  Sanana            57.73 282   P      P        13 56 40.6 +0.2
        comp=Z,25nm,1.0s
MORW  Morawa            59.01 249   P      P        13 56 47.7 -1.2
MORW                                IAmb   IAmb     13 56 49.2
        comp=Z,36nm,0.9s
EDFI  Ende, Flores      59.11 273   P      P        13 56 49.5 -0.5
        comp=Z,11nm,0.8s
GIRL  Giralia           61.92 255   P      P        13 57 08.6  0.0
SRBI  Singaraja         65.34 271   P      P        13 57 29.7 -1.2
        comp=Z,28nm,0.9s
JAGI  Jajag, Banyuwa    66.19 270   P      P        13 57 35.3 -1.1
        comp=Z,38nm,1.1s
JAGI  Jajag, Banyuwa    66.19 270   P      P        13 57 34.5 -1.9
JAGI                                IAmb   IAmb     13 57 36.3
        comp=Z,48nm,1.2s
BKB   Balikpapan        66.34 279   P      P        13 57 35.6 -1.7
QSPA  South Pole Qui    67.86 180   P      P        13 57 46.6 +0.5
QSPA                                IAmb   IAmb     13 57 53.0
        comp=Z,41nm,1.2s
PWJI  Pagerwojo         68.52 270   P      P        13 57 49.7 -1.2
        comp=Z,18nm,0.9s
WOJI  Wonogiri, Jawa    69.40 270   P      P        13 57 52.7 -3.6
        comp=Z,44nm,1.2s
KPJI  Karang Pucung     71.42 270   P      P        13 58 07.2 -1.3
        comp=Z,26nm,0.9s
MJAR  Matsushiro Arr    71.48 324   P      P        13 58 07.8 -0.5
        comp=Z,4.9nm,0.5s,baz=139,slow=6.1,SNR=12
MJAR  Matsushiro Arr    71.48 324   P      P        13 58 07.3 -1.0
MAJO  Matsushiro        71.48 324   P      P        13 58 08.2 -0.1
MAT   Matsushiro        71.48 324   P      P        13 58 08.2 -0.1
MJB9  Matsu-Tunnel      71.48 324   P      P        13 58 08.3 -0.1
CISI  Cisompet, Garu    72.38 269   P      P        13 58 12.4 -1.8
CISI                                IAmb   IAmb     13 58 13.5
        comp=Z,24nm,0.7s
ERM   Erimo             73.22 331   P      P        13 58 16.8 -1.6
JNU   Nakatsue          73.39 317   P      P        13 58 20.0 +0.3
JNU                                 IAmb   IAmb     13 59 31.6
        comp=Z,68nm,1.8s
KSM   Kuching           73.47 279   P      P        13 58 20.7 +0.2
KSM                                 IAmb   IAmb     13 58 21.7
        comp=Z,12nm,0.8s
ADK   Adak              73.80   1   P      P        13 58 21.2 -0.2
ATKA  Atka Island       74.19   3   P      P        13 58 23.6 -0.1
NACB  Ninganchiao       74.48 305   P      P        13 58 24.5 -1.5
NACB                                IAmb   IAmb     14 00 05.1
        comp=Z,25nm,0.9s
TPUB  Ta-pu             74.75 303   P      P        13 58 26.1 -1.5
NIKH  Nikolski High     75.31   6   P      P        13 58 30.2 +0.1
KASI  Kota Agung        76.18 270   P      P        13 58 34.1 -1.9
        comp=Z,43nm,1.0s
UNV   Unalaska Valle    76.42   7   P      P        13 58 36.0 -0.3
MDSI  Maura Dua         76.86 270   P      P        13 58 38.1 -1.6
        comp=Z,14nm,1.0s
PEA0B Petropavlovsk-    77.88 345   P      P        13 58 43.5 -0.9
PETK  Petropavlovsk-    77.88 345   P      P        13 58 43.9 -0.6
        comp=Z,13nm,0.9s,baz=133,slow=5.7,SNR=14
PETK  Petropavlovsk-    77.88 345   P      P        13 58 43.5 -0.9
KSRS  Korea Array       78.05 319   P      P        13 58 46.8 +1.1
        comp=Z,1.4nm,0.6s,baz=142,slow=6.7,SNR=6.9
KSAR  Wonju Array Be    78.06 319   P      P        13 58 45.5 -0.3
CNBA  Chernabura Isl    78.37  11   P      P        13 58 46.0 -1.0
SDPT  Sand Point        78.73  10   P      P        13 58 48.2 -0.8
KMPM  Mount Pierce      80.09  39   P      P        13 58 56.8  0.0
USRK  Ussuriysk Ar.     80.27 326   P      P        13 58 58.6 +1.1
        comp=Z,4.4nm,0.7s,baz=148,slow=40,SNR=6.1
USRK  Ussuriysk Ar.     80.27 326   P      P        13 58 57.2 -0.3
SDSI  Sungai Dareh      80.72 273   P      P        13 58 55.2 -5.5
        comp=Z,988nmcomp=Z,8.2nm,1.0s
NJ2   Nanjing           80.83 310 ePP      P        13 59 01.0 +0.3
NJ2                                 pmax   pmax
        comp=Z,15nm,0.5s
CMB   Columbia Colle    80.85  43   P      P        13 59 00.1 -0.7
ORV   Oroville          81.10  41   P      P        13 59 02.0  0.0
ORV                                 IAmb   IAmb     14 00 08.7
        comp=Z,20nm,0.7s
YBH   Yreka Blue Hor    81.75  39   P      P        13 59 07.0 +1.5
        comp=Z,9.2nm,0.7s,baz=91,slow=1.3,SNR=14
YBH   Yreka Blue Hor    81.75  39   P      P        13 59 06.5 +1.0
MDJ   Mudanjiang        81.81 325   P      P        13 59 07.1 +1.5
MDJ                                 pmax   pmax
        comp=Z,11nm,1.3s
MDJ                                 pmax   pmax
        comp=Z,230nm,4.9s
HUMO  Hull Mountain     82.17  38   P      P        13 59 08.3 +0.8
RYN   Ryan              82.38  43   P      P        13 59 08.1 -0.8
RYN                                 IAmb   IAmb     13 59 10.5
        comp=Z,23nm,1.8s
NVAR  Mina Array Bea    82.40  43   P      P        13 59 09.8 +0.7
        comp=Z,3.6nm,0.7s,baz=225,slow=8.3,SNR=23
NVAR  Mina Array Bea    82.40  43   P      P        13 59 08.5 -0.6
PAHR  Pah Rah Range     82.48  42   P      P        13 59 09.0 -0.4
NV11  Mina Array Sit    82.50  43   P      P        13 59 09.4 -0.1
TPNV  Topopah Spring    82.88  45   P      P        13 59 11.4 -0.1
KVN   Kaiserville       82.90  43   P      P        13 59 11.4 -0.2
KVN                                 IAmb   IAmb     13 59 12.8
        comp=Z,10nm,1.0s
IPM   Ipoh              83.16 278   P      P        13 59 12.6 -0.7
IPM                                 IAmb   IAmb     13 59 14.4
        comp=Z,17nm,1.0s
MOD   Modoc Plateau     83.26  40   P      P        13 59 13.3  0.0
MOD                                 IAmb   IAmb     14 00 10.4
        comp=Z,15nm,0.9s
Y14A  Wickenburg        83.45  49   P      P        13 59 13.8 -0.5
CN2   Changchun         83.54 323  eP      P        13 59 16.4 +1.9
CN2                                epP     pP       14 00 24.4  0.0
CN2                                eS      S        14 09 12.7 +2.3
CN2                                 pmax   pmax
        comp=Z,10.0nm,0.6s
CN2                                 pmax   pmax
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        comp=Z,200nm,3.0s
CN2                                 LR     LR
        comp=Z,1µm,13.0s
CN2                                 LR     LR
        comp=Z,530nm,13.0s
CN2                                 LR     LR
        comp=Z,2µm,17.0s
PINE  Pine Mountain     84.06  38   P      P        13 59 17.1 -0.3
PINE                                IAmb   IAmb     13 59 51.2
        comp=Z,20nm,0.8s
R11A  Troy Canyon, C    84.11  45   P      P        13 59 17.5 -0.2
WVOR  Wild Horse Val    84.57  40   P      P        13 59 19.9 +0.1
X16A  Lo Mia Camp, P    84.80  50   P      P        13 59 20.7 -0.6
RSO   Redoubt South     84.95  12   P      P        13 59 21.5 +0.1
I07A  Izee              85.05  38   P      P        13 59 22.2  0.0
G06A  Carlson Farm,     85.12  37   P      P        13 59 22.9 +0.4
G06A                                IAmb   IAmb     13 59 23.8
        comp=Z,24nm,1.3s
J08A  Circle Bar Ran    85.22  39   P      P        13 59 23.1 +0.1
ELK   Elko              85.67  43   P      P        13 59 25.7 +0.2
        comp=Z,1.4nm,0.9s,baz=232,slow=4.4,SNR=4.6
ELK   Elko              85.67  43   IAmb   IAmb     13 59 26.5
        comp=Z,5.3nm,1.4s
GAMB  Gambell           85.86   3   P      P        13 59 25.5 +0.1
GAMB                                IAmb   IAmb     13 59 27.5
        comp=Z,8.9nm,0.9s
BBB   Bella Bella       86.00  28   P      P        13 59 26.3 -0.2
        comp=Z,14nm,0.9s,baz=199,slow=9.1,SNR=3.2
G08A  Pilot Rock        86.09  37   P      P        13 59 27.4 +0.1
G08A                                IAmb   IAmb     13 59 28.7
        comp=Z,9.7nm,0.9s
RC01  Rabbit Creek A    86.15  13   P      P        13 59 26.2 -0.8
RC01                                IAmb   IAmb     13 59 29.1
        comp=Z,38nm,1.4s
MTPU  Mount Pierson     86.18  46   P      P        13 59 28.2  0.0
SUA   Susitna One       86.27  13   P      P        13 59 26.5 -1.2
SNAA  Sanae             86.30 179   P      P        13 59 26.2 -1.7
LTY   Liberty           86.36  35   P      P        13 59 28.1 -0.4
LTY                                 IAmb   IAmb     13 59 28.6
        comp=Z,13nm,1.4s
E07A  Sunnyside         86.37  36   P      P        13 59 28.8 +0.4
E07A                                IAmb   IAmb     13 59 30.1
        comp=Z,12nm,0.9s
HAWA  Hanford           86.44  36   P      P        13 59 28.1 -0.7
HAWA                                IAmb   IAmb     13 59 30.4
        comp=Z,15nm,1.1s
VNA3  Neumayer Olymp    86.45 176   P      P        13 59 25.6 -2.9
TTA   Tatalina          86.67  10   P      P        13 59 29.2 -0.4
KNK   Knik Glacier      86.72  14   P      P        13 59 28.2 -1.5
KNK                                 IAmb   IAmb     13 59 33.0
        comp=Z,12nm,0.7s
PMR   Palmer            86.73  13   P      P        13 59 28.6 -1.1
PMR                                 IAmb   IAmb     13 59 29.6
        comp=Z,28nm,1.4s
BMO   Blue Mountains    86.78  38   P      P        13 59 29.8 -0.7
MFID  Camas Ranch       86.82  40   P      P        13 59 30.2 -0.6
VNA2  Neumayer--Watz    86.88 177   P      P        13 59 29.8 -0.8
        baz=192,slow=2.2
GHO   Glory Hole Cre    86.94  13   P      P        13 59 30.0 -0.8
D08A  Wollman Farm,     87.18  36   P      P        13 59 31.1 -1.2
D08A                                IAmb   IAmb     13 59 33.7
        comp=Z,14nm,1.0s
E09A  Wood Farm, Sta    87.28  37   P      P        13 59 32.8  0.0
E09A                                IAmb   IAmb     13 59 34.5
        comp=Z,23nm,1.2s
SCM   Sheep Creek Mo    87.34  14   P      P        13 59 32.0 -0.8
WRAK  Wrangell Islan    87.36  24   P      P        13 59 33.1 +0.2
WRAK                                IAmb   IAmb     13 59 33.8
        comp=Z,23nm,1.0s
F10A  Beach Ranch, E    87.48  38   P      P        13 59 33.4 -0.5
F10A                                IAmb   IAmb     13 59 34.6
        comp=Z,19nm,0.8s
B08A  Colville Reser    87.75  35   P      P        13 59 34.4 -0.6
B08A                                IAmb   IAmb     13 59 35.6
        comp=Z,11nm,0.9s
GLB   Gilahina Butte    87.84  16   P      P        13 59 34.5 -0.7
GLB                                 IAmb   IAmb     13 59 37.0
        comp=Z,14nm,0.7s
LLLB  Lillooet          87.85  32   P      P        13 59 35.3 -0.1
LLLB                                IAmb   IAmb     13 59 36.5
        comp=Z,8.6nm,1.0s
SRU   San Rafael Swe    87.85  46   P      P        13 59 35.7 -0.2
BALM  Baldy             87.88  17   P      P        13 59 34.8 -0.6
BALM                                IAmb   IAmb     13 59 37.5
        comp=Z,13nm,0.7s
MNTX  Cornudas Mount    87.90  55   P      P        13 59 36.2 +0.1
C09A  Chrisman Ranch    87.98  36   P      P        13 59 35.8 -0.2
C09A                                IAmb   IAmb     13 59 37.1
        comp=Z,9.7nm,0.8s
SEY   Seymchan          88.00 347   P      P        13 59 35.1 -0.6
        comp=Z,7.2nm,0.9s,baz=148,slow=4.3,SNR=18
BARN  Barnard Glacie    88.08  17   P      P        13 59 36.2 -0.3
BARN                                IAmb   IAmb     13 59 38.9
        comp=Z,15nm,0.8s
CTGM  Chitina Glacie    88.09  17   P      P        13 59 36.2 -0.2
CTGM                                IAmb   IAmb     13 59 36.9
        comp=Z,16nm,0.8s
KTH   Kantishna Hill    88.14  12   P      P        13 59 34.0 -2.4
KTH                                 IAmb   IAmb     13 59 37.4
        comp=Z,16nm,0.9s
TXAR  Lajitas Array     88.14  57   P      P        13 59 38.4 +1.0
        comp=Z,1.6nm,0.9s,baz=228,slow=5.9,SNR=8.6
TXAR  Lajitas Array     88.14  57   P      P        13 59 36.6 -0.7
TRF   Thorofare Moun    88.16  12   P      P        13 59 35.1 -1.6
RND   Reindeer          88.41  13   P      P        13 59 36.6 -1.2
DHY   Denali Highway    88.43  13   P      P        13 59 37.0 -1.0
ANMO  Albuquerque       88.63  51   P      P        13 59 40.3 +0.6
        comp=Z,1.7nm,0.8s,baz=204,slow=6.0,SNR=3.0
ANMO  Albuquerque       88.63  51   IAmb   IAmb     13 59 40.9
        comp=Z,3.4nm,1.1s
MCK   McKinley          88.69  13   P      P        13 59 37.6 -1.4
MCK                                 IAmb   IAmb     13 59 41.6
        comp=Z,15nm,0.7s
NEW   Newport           88.88  36   P      P        13 59 40.4 +0.1
        comp=Z,2.6nm,0.8s,baz=240,slow=7.1,SNR=5.6
NEW   Newport           88.88  36   P      P        13 59 39.7 -0.6
BWN   Browne            88.97  12   P      P        13 59 39.0 -1.3
MENT  Mentasta          89.14  15   P      P        13 59 39.7 -1.5
MENT                                IAmb   IAmb     13 59 43.3
        comp=Z,12nm,1.0s
MCMT  McKenzie Canyo    89.39  40   P      P        13 59 43.1 +0.1
NEA   Nenana            89.42  12   P      P        13 59 41.3 -1.1
NEA                                 IAmb   IAmb     13 59 46.9
        comp=Z,15nm,0.8s
MLY   Manley            89.51  11   P      P        13 59 41.2 -1.6
MLY                                 IAmb   IAmb     13 59 43.5
        comp=Z,9.1nm,0.6s
WRH   Wood River Hil    89.52  13   P      P        13 59 41.4 -1.4
DOT   Dot Lake          89.67  15   P      P        13 59 42.4 -1.2
DOT                                 IAmb   IAmb     13 59 45.3
        comp=Z,8.4nm,0.7s
HDA   Harding Lake      89.69  13   P      P        13 59 42.4 -1.3
DLBC  Dease Lake        89.70  23   P      P        13 59 43.2 -0.7
        comp=Z,3.3nm,0.8s,baz=268,slow=6.9,SNR=6.0
DLBC  Dease Lake        89.70  23   IAmb   IAmb     14 03 00.9
        comp=Z,35nm,2.0s
CCB   Clear Creek Bu    89.73  13   P      P        13 59 42.2 -1.6
WHY   Whitehorse        89.73  20   P      P        13 59 43.5 -0.5
DLMT  Dillon            89.82  40   P      P        13 59 45.1 +0.2
REDW  Red Top Meadow    89.83  42   P      P        13 59 45.0 -0.1
IMAR  Indian Mountai    89.88  10   P      P        13 59 43.6 -0.8
MDM   Murphy Dome       89.92  12   P      P        13 59 43.5 -1.3
MDM                                 IAmb   IAmb     13 59 46.1
        comp=Z,14nm,0.8s
ILAR  Eielson Array     90.03  13   P      P        13 59 44.1 -1.1
        comp=Z,5.8nm,0.7s,baz=218,slow=5.3,SNR=48
QLMT  Earthquake Lak    90.24  41   P      P        13 59 46.5 -0.4
FLWY  Flagg Ranch       90.30  42   P      P        13 59 47.0 -0.3
FLWY                                IAmb   IAmb     13 59 48.9
        comp=Z,10nm,0.8s
PD31  Pinedale Array    90.34  43   P      P        13 59 46.7 -0.8
PDAR  Pinedale Array    90.34  43   P      P        13 59 47.2 -0.3
        comp=Z,2.6nm,0.8s,baz=186,slow=3.0,SNR=22
YHB   Horse Butte       90.34  41   P      P        13 59 48.0 +0.6
YHL   Hebgen Lake       90.40  41   P      P        13 59 48.5 +0.7
HHC   Hu-ho-hao-te      90.41 314  eP      P        13 59 49.4 +1.7
HHC                                 S      S        14 10 24.4 +8.2
HHC                                 pmax   pmax
        comp=Z,86nm,1.2s
HHC                                 pmax   pmax
        comp=Z,280nm,6.8s
CMAR  Chiang Mai Arr    90.50 290   P      P        13 59 50.0 +1.4
        comp=Z,3.4nm,0.7s,baz=136,slow=3.2,SNR=23
CMAR  Chiang Mai Arr    90.50 290   P      P        13 59 49.5 +1.0
H17A  Grant Village     90.54  42   P      P        13 59 48.7 +0.3
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YHH   Holmes Hill       90.57  41   P      P        13 59 49.0 +0.4
CHTO  Chiang Mai        90.64 290   P      P        13 59 50.2 +1.0
BILL  Bilibino          90.72 354   P      P        13 59 47.4 -1.0
LKWY  Lake              90.73  41   P      P        13 59 50.5 +1.2
WALA  Waterton Lakes    91.08  36   P      P        13 59 50.3 -0.4
CD2   Chengdu           91.55 303   P      P        13 59 52.5 -0.6
CD2                                 pmax   pmax
        comp=Z,20nm,0.5s
BMAR  Burnt Mountain    92.81  12   P      P        13 59 58.0 -0.1
YAK   Yakutsk           93.63 338   P      P        14 00 00.4 -1.4
        comp=Z,2.3nm,0.3s,baz=40,slow=2.9,SNR=5.1
YAK   Yakutsk           93.63 338   IAmb   IAmb     14 00 02.1
        comp=Z,8.3nm,0.9s
INK   Inuvik            95.97  15   P      P        14 00 10.9 -1.5
        comp=Z,2.1nm,0.8s,baz=219,slow=3.7,SNR=4.7
INK   Inuvik            95.97  15   IAmb   IAmb     14 01 57.3
        comp=Z,15nm,1.8s
YKA   Yellowknife Ar    98.15  25   P      Pdif     14 00 21.5 -0.8
        comp=Z,0.8nm,0.8s,baz=239,slow=4.5,SNR=13
ZALV  Zalesovo Beam    111.70 321   PKiKP  PKiKP    14 05 18.2 -0.4
        comp=Z,0.7nm,0.6s,baz=37,slow=1.1,SNR=3.6
MKAR  Makanchi Array   112.23 313   PKiKP  PKiKP    14 05 19.5 -0.4
        comp=Z,0.4nm,0.6s,baz=243,slow=0.2,SNR=5.4
KSH   Kashi            115.70 304   PKP    PKPdf    14 05 23.7 -3.2
KSH                                 PP     PP       14 06 40.5 +5.5
KSH                                 SS     SS       14 22 11.2 -0.5
KSH                                 LR     LR
        comp=Z,310nm,10.4s
KSH                                 LR     LR
        comp=Z,320nm,11.9s
KSH                                 LR     LR
        comp=Z,270nm,12.5s
KKAR  Karatay Array    120.15 308          PKPdf    14 05 33.5 -1.8
BOSA  Boshof           124.62 205   PKP    PKiKP    14 05 47.0 +2.1
        comp=Z,3.5nm,0.8s,baz=108,slow=3.7,SNR=4.0
GEYT  Alibeck          129.53 301   SKPbc  SKPab    14 08 46.0 -0.4
        comp=Z,2.9nm,0.7s,baz=228,slow=1.8,SNR=6.0
ARCES ARCESS Array B   130.57 349   PKP    PKiKP    14 05 55.1 -0.2
        comp=Z,3.7nm,0.6s,baz=24,slow=1.3,SNR=22
ARCES                               SKPbc  SKPbc    14 08 45.6 -3.8
        comp=Z,21nm,0.9s,baz=20,slow=3.9,SNR=4.1
ARCES ARCESS Array B   130.57 349          SKPbc    14 08 47.8 -1.7
FINES FINESS Array B   137.36 343   PKhKP  PKPpre   14 05 58.4
        comp=Z,3.8nm,1.1s,baz=325,slow=2.3,SNR=3.6
FINES                               PKP    PKPdf    14 06 07.3  0.0
        comp=Z,2.4nm,0.7s,baz=126,slow=3.3,SNR=10.0
FINES                               SKPbc  SKPbc    14 09 11.1 -0.8
        comp=Z,3.0nm,0.8s,baz=64,slow=4.4,SNR=4.6
NB2   NORSAR Subarra140.66 353      PKP    PKPdf    14 06 06.9 -6.5
        comp=Z,0.6nm,0.6s,baz=10,slow=3.2
NOA   NORSAR Array B140.66 353      PKhKP  PKPdf    14 06 05.2 -8.2
        comp=Z,1.1nm,0.6s,baz=6.9,slow=2.3,SNR=6.2
NOA                                 PKP    PKiKP    14 06 16.0  0.0
        comp=Z,0.6nm,0.5s,baz=14,slow=3.8,SNR=3.1
MBAR  Mbarara          143.79 235   PKPdf  PKPab    14 06 18.1 -0.3
AKASG Malin Array Be   144.41 330   PKP    PKPab    14 06 18.3 -1.1
        comp=Z,9.4nm,0.5s,baz=42,slow=4.5,SNR=54
AKASG Malin Array Be   144.41 330          PKPab    14 06 17.3 -2.1
AKBB  Malin Array Si   144.41 330   PKPbc  PKPab    14 06 18.6 -0.8
SORM  Soroca           146.55 327 ⇑P       PKPdf    14 06 24.6 +0.6
BR131 Keskin Array S   147.82 310          PKPbc    14 06 28.7 -1.3
BRTR  Keskin Array B   147.82 310   PKPbc  PKPbc    14 06 30.4 +0.5
        comp=Z,3.3nm,0.7s,baz=140,slow=4.7,SNR=12
BUR08 Bucovina Ar. S   148.43 329   PKPab  PKiKP    14 06 33.5 +0.9
BURAR Bucovina Array   148.44 329 ⇑P       PKiKP    14 06 32.3 -0.2
BURAR Bucovina Array   148.44 329          PKPbc    14 06 29.4 -1.8
TESR  Tescani          148.50 326 ⇑P       PKPbc    14 06 29.9 -1.4
DOPR  Dopca            149.51 327 ⇑P       PKiKP    14 06 35.1 +0.4
MLR   Muntele Rosu     149.54 325 ⇑P       PKPbc    14 06 34.5 +0.4
OSTC  Ostas            149.54 342⇑ePKP     PKPbc    14 06 33.5 -0.2
CHVC  Chvalec          149.56 342⇑ePKP     PKPbc    14 06 32.3 -1.5
UPC   Upice            149.64 342⇑ePKP     PKiKP    14 06 35.1 +0.3
CLL   Collm            149.68 346 i PKP    PKPbc    14 06 34.0  0.0
        comp=Z,10.0nm,0.8s
CLL                               i PKPbc  PKiKP    14 06 35.9 +1.1
        comp=Z,20nm,0.7s
CLL                               ePKPab   PKPab    14 06 42.0 +1.7
CLL   Collm            149.68 346          PKPbc    14 06 33.2 -0.8
LANS  Liptovska Anna   149.69 337 ePKP     PKiKP    14 06 36.3 +1.3
DPC   Dobruska-Polom   149.69 341⇑ePKP     PKPbc    14 06 33.8 -0.3
KRLC  Kraliky          149.80 341⇑ePKP     PKPbc    14 06 33.6 -0.8
MORC  Moravsky Berou   149.82 340 ⇑P       PKPbc    14 06 34.4 -0.1
MORC  Moravsky Berou   149.82 340 ePKP     PKPbc    14 06 33.5 -1.0
MORC  Moravsky Berou   149.82 340          PKPbc    14 06 33.0 -1.4
BRG   Berggiesshubel   149.86 345 ePKP     PKPdf    14 06 31.5 +2.2
        comp=Z,8.0nm,1.1s
PVCC  Panska Ves       150.02 344⇑ePKP     PKPbc    14 06 34.3 -0.5
DRGR                   150.22 330 ⇓P       PKPbc    14 06 35.4 -0.1
VYHS  Vyhne            150.47 337 ePKP     PKiKP    14 06 37.1 +0.5
VYHS                              e                 14 06 44.7
PRU   Pruhonice        150.52 343⇑ePKP     PKPbc    14 06 35.2 -0.8
JAVC  Velka Javorina   150.57 338 ePKP     PKPbc    14 06 35.7 -0.6
TREC  Trest            150.88 341⇑ePKP     PKiKP    14 06 37.8 +0.4
SIRR  Siria            151.09 331 ⇑P       PKPbc    14 06 37.3 -0.2
KHC   Kasperske Hory   151.56 344⇑ePKP     PKiKP    14 06 39.4 +0.5
KHC   Kasperske Hory   151.56 344          PKiKP    14 06 39.3 +0.4
GEC2  GERESS Array S   151.79 343          PKPbc    14 06 39.4 +0.2
GERES GERESS Array B   151.79 343   PKPbc  PKPbc    14 06 39.4 +0.2
        comp=Z,5.5nm,0.6s,baz=345,slow=3.2,SNR=26
GERES GERESS Array B   151.79 343          PKPbc    14 06 39.3 +0.1
BMRD  Maredsous        151.88 356   PKiKP  PKiKP    14 06 40.2 +0.8
CONA  Conrad Observa   151.98 340 i PKiKP  PKPbc    14 06 38.7 -0.9
        comp=Z,11nm,0.6s
DOU   Dourbes          152.09 356   PKiKP  PKiKP    14 06 40.4 +0.6
WLF   Walferdange      152.40 354   PKiKP  PKiKP    14 06 42.3 +1.7
MOA   Molln            152.54 342 i PKPdf  PKPdf    14 06 35.2 +1.7
        comp=Z,4.0nm,0.6s
ARSA  Arzberg          152.68 339 i PKPbc  PKPdf    14 06 37.0 +3.3
        comp=Z,3.4nm,0.7s
SOKA  Soboth           153.34 339 i PKPbc  PKPbc    14 06 39.2 -3.4
        comp=Z,6.0nm,1.1s
KBA   Koelnbreinsper   153.50 342 i PKPbc  PKPdf    14 06 39.2 +4.0
        comp=Z,3.5nm,0.8s
OBKA  Obir             153.65 340 i PKPdf  PKPdf    14 06 30.1 -5.2
        comp=Z,14nm,1.3s
WTTA  Wattenberg       153.78 345 i PKPbc  PKPdf    14 06 38.7 +3.2
        comp=Z,7.2nm,0.5s
MYKA  Terra Mystica    153.82 341 i PKPbc  PKPdf    14 06 39.1 +3.7
        comp=Z,3.9nm,0.5s
MOTA  Moosalm          153.83 346 i PKPbc  PKPbc    14 06 39.9 -3.8
        comp=Z,0.6nm,0.3s
ABTA  Abfaltersbach    154.03 343 i PKPbc  PKPdf    14 06 39.7 +3.9
        comp=Z,4.8nm,0.7s
DAVA  Damuels          154.15 347 i PKPbc  PKPdf    14 06 40.2 +4.2
        comp=Z,6.6nm,1.0s
FETA  Feichten         154.22 346 i PKPdf  PKPdf    14 06 36.9 +0.7
        comp=Z,5.0nm,1.0s
ESDC  Sonseca Array    161.92  14   PKPab  PKPab    14 07 33.2 +0.1
        comp=Z,1.5nm,0.7s,baz=352,slow=3.8,SNR=6.5
KEST  Kesra            165.01 336   PKPab  PKPab    14 07 47.4 +0.5
        comp=Z,6.5nm,0.9s,baz=15,slow=10,SNR=3.8
TORD  Torodi Ar. Bea   170.98 179   PKP    PKPdf    14 06 55.0 +1.9
        comp=Z,0.9nm,0.8s,baz=322,slow=1.0,SNR=3.9
TORD                                PKPab  PKPab    14 08 12.8 -0.7
        comp=Z,1.2nm,0.9s,baz=207,slow=3.2,SNR=4.0
TORD  Torodi Ar. Bea   170.98 179          PKPab    14 08 12.2 -1.3
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NEIC ***10*** *13:51:05.6±1.4, 6°.50N±0°.06×71°.65W±0°.06, h55^{km}±5^{km}, mb4.6/120, Error ellipse: s-maj=10.2km s-min=7.6km az=134.0*

RSNC ***10*** *13:51:06.4±0.9, 6°.55N×71°.72W, h37^{km}±4^{km}, ML4.1, Mw4.0*

IDC ***10*** *13:51:06.0±0.7, 6°.52N×71°.58W, h61^{km}±6^{km}, mb3.8/10, mb1 4.1/15, mb1mx3.8/48, mbtmp4.3/15, MS3.2/6, Ms1 3.2/6, ms1mx3.0/36, Error ellipse: s-maj=12.6km s-min=7.4km az=129.0*

ISC 10 13:51:03.2±0.6, **6°.55N**±0°.02×**71°.65W**±0°.03, **h33**^{km}±2^{km}, **n209**, σ**1^{s}.61**/238, **mb4.6**/64, **8C-5D, Northern Colombia**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                      Op      ISC       h  m  s   ISC
TAMC  Tame, Arauca       0.18 232⇑iP      Pb        13 51 12.2 +2.4
TAMC                             eSg      Sb        13 51 17.7 +3.5
TAMC                             i                  13 51 18.5
        comp=Z,27µm,0.3s
PAMC  Pamplona, Colo     1.31 307⇑iP      Pb        13 51 27.0 -0.6
PAMC                             eS       Sb        13 51 43.8 -0.5
BARC  Barichara          1.53 272 eP      Pb        13 51 29.5 -1.6
BARC                             eS       Sb        13 51 49.0 -1.3
RUSC  La Rusia           1.57 246⇓eP      Pb        13 51 30.5 -1.5
RUSC                             eS       Sb        13 51 50.3 -1.5
RUSC                             i                  13 51 54.2
        comp=Z,2µm,0.7s
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RUSC	La Rusia	1.57	246		Pb	13 51 30.5	-1.5
BRRC	Barranca, Sant	2.13	285	eP	Pb	13 51 37.6	-3.5
BRRC				eS	Sb	13 52 03.3	-3.8
BRRC				i		13 52 09.1	
	comp=Z,1μm,0.5s						
ELOV	Elorza	2.19	78	⇓iP	Pb	13 51 41.5	-0.8
OCAC	Ocana	2.36	315	⇑eP	Pb	13 51 41.6	-3.6
OCAC				eS	Sb	13 52 10.3	-3.8
OCAC				i		13 52 18.7	
	comp=Z,4μm,0.4s						
PTGC	Puerto Gaitan,	2.38	192	eP	Pb	13 51 41.7	-3.8
PTGC				eS	Sb	13 52 19.1	+4.5
PTGC				i		13 52 26.9	
	comp=Z,4μm,0.3s						
SDV	Santo Domingo	2.53	23	P	Pb	13 51 45.2	-2.9
	comp=Z,79nm,0.3s,baz=151,slow=7.3,SNR=370						
SDV				S	Sb	13 52 15.8	-3.1
	comp=Z,388nm,0.3s,baz=253,slow=19,SNR=23						
SDV				LR	LR	13 53 04.0	
	comp=Z,216nm,20.7s,baz=263,slow=47						
SDV	Santo Domingo	2.53	23		Pb	13 51 45.1	-3.0
SPBC	San Pablo de B	2.57	250	eP	Pn	13 51 42.7	+0.1
SPBC				eS	Sn	13 52 13.9	+1.0
SPBC				i		13 52 22.6	
	comp=Z,705nm,0.3s						
PTBC	PUERTO BERRIO,	2.79	270	⇑eP	Pn	13 51 45.3	-0.3
PTBC				eS	Sn	13 52 18.9	+0.7
PTBC				i		13 52 26.8	
	comp=Z,1μm,0.3s						
CHIC	Chingaza	2.82	228	⇓eP	Pn	13 51 47.5	+1.1
CHIC				eS	Sn	13 52 19.3	-0.1
CHIC				i		13 52 47.9	
	comp=Z,477nm,0.3s						
ROSC	El Rosal	3.16	238	P	Pb	13 51 53.5	-5.3
	comp=Z,26nm,0.3s,baz=71,slow=12,SNR=16						
ROSC				S	Sb	13 52 32.5	-4.6
	comp=Z,69nm,0.3s,baz=8.6,slow=23,SNR=8.5						
ROSC				LR	LR	13 53 35.8	
	comp=Z,476nm,20.2s,baz=66,slow=47						
ROSC	El Rosal	3.16	238	eP	Pb	13 51 53.7	-5.2
ROSC				eS	Sn	13 52 29.0	+1.3
ROSC				i		13 52 37.4	
	comp=Z,250nm,0.4s						
ROSC	El Rosal	3.16	238		Pb	13 51 53.3	-5.6
VILC	Villavicencio,	3.16	220	eP	Pn	13 51 52.2	+1.4
VILC				eS	Sb	13 52 45.0	+7.9
VILC				i		13 52 51.0	
	comp=Z,1μm,0.4s						
SMLC	San Martn de	3.29	313	⇑iP	Pn	13 51 52.7	+0.3
SMLC				eS	Sb	13 52 42.5	+2.1
SMLC				i		13 52 46.4	
	comp=Z,591nm,0.8s						
ZARC	Zaragoza, Cauc	3.32	287	⇑eP	Pn	13 51 53.6	+0.7
ZARC				eS	Sn	13 52 30.8	-0.6
ZARC				i		13 52 50.4	
	comp=Z,480nm,0.4s						
NORC	Norcasia	3.35	253	eP	Pn	13 51 53.7	+0.4
NORC				eS	Sn	13 52 32.8	+0.7
NORC				i		13 52 38.4	
	comp=Z,363nm,0.2s						
CODC	Agustn Codazz	3.81	332	⇑iP	Pn	13 52 00.3	+0.8
CODC				eS	Sb	13 53 02.0	+6.5
CODC				i		13 53 12.9	
	comp=Z,190nm,0.5s						
HELC	Santa Helena	3.88	265	eP	Pn	13 52 01.0	+0.2
HELC				eS	Sn	13 52 42.5	-2.9
HELC				i		13 53 04.5	
	comp=Z,393nm,0.8s						
GUY2C	Guyana, Caldas	3.93	251	⇓eP	Pn	13 52 03.2	+1.5
GUY2C				eS	Sn	13 52 47.9	+1.0
GUY2C				i		13 52 54.0	
	comp=Z,279nm,0.4s						
UREC	San Jos de Ur	4.04	287	eP	Pn	13 52 04.4	+1.7
UREC				eS	Sn	13 52 51.9	+3.0
UREC				i		13 52 57.9	
	comp=Z,165nm,0.2s						
GUVC	San Jose del G	4.09	194	eP	Pn	13 52 05.2	+1.7
GUVC				eS	Sn	13 52 49.7	-0.7
GUVC				i		13 53 19.1	
	comp=Z,1μm,0.3s						
ARGC	Ariguani, Magd	4.18	322	eP	Pn	13 52 06.1	+1.4
ARGC				eS	Sn	13 52 53.2	+0.8
ARGC				i		13 53 18.9	
	comp=Z,160nm,0.4s						
CBOC	Ciudad Bolivar	4.39	261	eP	Pn	13 52 10.1	+2.3
CBOC				eS	Sn	13 52 59.7	+1.7
CBOC				i		13 53 01.9	
	comp=Z,89nm,0.3s						
ORTC	Ortega, Tolima	4.44	234	eP	Pn	13 52 09.0	+0.6
ORTC				eS	Sn	13 52 59.9	+0.9
ORTC				i		13 53 05.3	
	comp=Z,160nm,0.4s						
DBBC	Dabeiba	4.56	276	eP	Pn	13 52 12.1	+2.2
DBBC				eS	Sn	13 52 57.9	-3.9
DBBC				i		13 53 07.7	
	comp=Z,152nm,0.4s						
SJCC	San Jacinto, C	4.83	314	⇑iP	Pn	13 52 15.4	+1.7
SJCC				eS	Sn	13 53 09.5	+1.0
SJCC				i		13 53 33.5	
	comp=Z,80nm,0.7s						
MACC	Macarena, Meta	4.89	207	eP	Pn	13 52 14.1	-0.5
MACC				eS	Sb	13 53 37.5	+11
MACC				i		13 53 54.5	
	comp=Z,583nm,0.4s						
PLMC	San Jos del P	4.89	251	eP	Pn	13 52 18.1	+3.5
PLMC				eS	Sn	13 53 08.2	-1.9
PLMC				i		13 53 27.7	
	comp=Z,69nm,0.5s						
URIC	Uribia, Colomb	5.13	356		Pn	13 52 18.1	+0.3
YOTC	Yotoco, Valle	5.33	242	eP	Pn	13 52 21.1	+0.5
YOTC				eS	Sn	13 53 21.3	+0.4
YOTC				i		13 53 26.1	
	comp=Z,21nm,0.5s						
GARC	Garzon, Huila	5.79	222	eP	Pn	13 52 27.8	+0.8
GARC				eS	Sb	13 53 58.2	+5.6
GARC				i		13 54 12.9	
	comp=Z,248nm,0.2s						
PCON	Cinco Dias	6.33	229	eP	Pn	13 52 35.5	+0.7
PCON				eS	Sb	13 54 19.9	+11
PCON				i		13 54 26.4	
	comp=Z,95nm,0.4s						
FLOC	Florencia	6.35	219	⇓eP	Pn	13 52 35.0	+0.4
FLOC				eS	Sb	13 54 16.7	+8.2
FLOC				i		13 54 37.2	
	comp=Z,90nm,0.4s						
FLOC	Florencia	6.35	219		Pn	13 52 35.0	+0.4
POPC	Popayan, Colom	6.40	232	eP	Pn	13 52 36.6	+1.1
POPC				eS	Sn	13 53 48.3	+0.7
POPC				i		13 53 50.8	
	comp=Z,14nm,0.4s						
PCRV	Puerto La Cruz	7.82	62	P	Pn	13 52 57.2	+2.5
	comp=Z,13nm,0.3s,baz=288,slow=1.5,SNR=32						
PCRV				S	Sn	13 54 23.8	+1.6
	comp=Z,8.6nm,0.3s,baz=162,slow=23,SNR=4.4						
PLCV	Puerto La Cruz	7.85	62		Pn	13 52 57.2	+2.0
PLCV					Sn	13 54 23.8	+0.8
OTAV	Otavalo	9.24	228	Pn	Pn	13 53 16.6	+1.9
GRGR	Grenville	11.31	60	Pn	Pn	13 53 45.7	+3.1
BANI	BANI	11.84	6	Pn	Pn	13 53 51.9	+1.9
TOSP	Speyside	11.95	66	Pn	Pn	13 53 51.0	-0.3
MLPR	Magueyes Islan	12.21	21	Pn	Pn	13 53 54.2	-0.6
CRPR	Cabo Rojo, PR	12.22	21	Pn	Pn	13 53 54.0	-1.0
ICMP	Isla Caja de M	12.33	23	Pn	Pn	13 53 57.5	+1.0
DR12	Loma Pena Alta	12.36	10	Pn	Pn	13 53 58.8	+1.7
SDDR	Presa de Saban	12.36	2		Pn	13 53 59.3	+2.3
PDPR	Patillas Dam,	12.65	25	Pn	Pn	13 54 01.7	+0.7
AOPR	Arecibo Observ	12.66	22	Pn	Pn	13 54 01.7	+0.7
SJG	San Juan	12.68	25	P	Pn	13 54 03.1	+1.7
	comp=Z,3.8nm,0.3s,baz=232,slow=12,SNR=5.6						
SJG				S	Sn	13 56 18.3	-3.2
	comp=Z,2.2nm,0.3s,baz=8.9,slow=15,SNR=3.6						
SJG				LR	LR	13 59 10.2	
	comp=Z,58nm,20.7s,baz=235,slow=38						
MTDJ	Mount Denham	12.95	334	Pn	Pn	13 54 05.5	+0.4
CUPR	Culebra, Puert	13.23	27	Pn	Pn	13 54 09.5	+0.7
STVI	Saint Thomas	13.42	28	Pn	Pn	13 54 12.6	+1.1
JTS	Las Juntas de	13.68	287	P	P	13 54 22.2	-1.1
	comp=Z,0.3nm,0.3s,baz=154,slow=6.2,SNR=7.0						
PTGA	Pitinga	13.72	121	P	Pn	13 54 13.5	-2.0
	comp=Z,1.1nm,0.3s,baz=315,slow=19,SNR=5.9						
PTGA				S	Sn	13 56 41.2	-5.6
	comp=Z,1.7nm,0.3s,baz=94,slow=4.3,SNR=3.7						
PTGA				LR	LR	13 59 55.2	
	comp=Z,132nm,18.7s,baz=150,slow=39						
PTGA	Pitinga	13.72	121	Pn	Pn	13 54 15.4	-0.2
GTBY	Guantanamo Bay	13.72	346	Pn	Pn	13 54 16.9	+1.4
SABA	Saba	13.73	36	Pn	Pn	13 54 16.1	+0.5
FSCY	Frank Sound, G	15.72	325	Pn	Pn	13 54 43.3	+1.0
SAML	Samuel	17.55	151	P	P	13 55 07.0	+0.6
MDP	Montagnes des	18.96	93	P	Pn	13 55 22.6	-0.1
	comp=Z,0.6nm,0.3s,baz=146,slow=3.8,SNR=3.0						
TEIG	Tepich	21.10	312	P	P	13 55 46.1	+1.0
	comp=Z,5.7nm,0.5s,baz=83,slow=0.0,SNR=5.7						
TEIG	Tepich	21.10	312	IAmb	IAmb	13 55 50.8	
	comp=Z,85nm,1.9s						
061Z	Ochoppi	21.15	336	P	P	13 55 46.8	+1.2
CCIG	Comitan	22.27	297	P	P	13 55 58.3	+0.4
CCIG				IAmb	IAmb	13 56 24.3	
	comp=Z,46nm,1.9s						
LPAZ	La Paz	22.95	171	LR	LR	14 05 09.4	
	comp=Z,66nm,21.9s,baz=40,slow=37						
LPAZ	La Paz	22.95	171	P	P	13 56 06.4	+0.8
SIV	San Ignacio	24.72	155	P	P	13 56 22.3	+0.5
	comp=Z,1.0nm,0.6s,baz=346,slow=11,SNR=6.8						
MNMC	Minye Minye	25.60	176	P	P	13 56 28.4	-1.4
MNMC				IAmb	IAmb	13 56 49.4	
	comp=Z,30nm,1.8s						
GO01	Chusmiza	26.16	175	P	P	13 56 34.1	-1.2
GO01				IAmb	IAmb	13 56 48.1	
	comp=Z,53nm,2.0s						
PB11	IPOC Station P	26.22	176	P	P	13 56 35.1	-0.3
PB11				IAmb	IAmb	13 56 52.5	
	comp=Z,13nm,1.0s						
PB01	IPOC Station P	27.50	176	P	P	13 56 47.2	+0.3
PB01				IAmb	IAmb	13 57 06.1	
	comp=Z,16nm,1.5s						
LVC	Limon Verde	29.10	175	P	P	13 57 02.5	+1.1
	comp=Z,1.8nm,0.4s,baz=260,slow=8.9,SNR=2.4						
LVC	Limon Verde	29.10	175	IAmb	IAmb	13 57 10.8	
	comp=Z,9.9nm,1.1s						
Z50A	Ashland	29.70	335	P	P	13 57 07.6	+1.4
X48A	Hartselle	31.20	335	P	P	13 57 20.1	+0.6
PLAL	Pickwick Lake	32.09	334	P	P	13 57 28.4	+1.0
PLAL				IAmb	IAmb	13 57 29.5	
	comp=Z,8.2nm,0.8s						
V48A	Smith Brothers	32.22	336	P	P	13 57 29.9	+1.4
V48A				IAmb	IAmb	13 57 31.0	
	comp=Z,8.3nm,0.8s						
WVT	Waverly	32.97	336	P	P	13 57 35.7	+0.7
WVT				IAmb	IAmb	13 57 36.4	
	comp=Z,5.6nm,0.7s						
T47A	Sharon Grove	33.42	337	P	P	13 57 39.9	+1.0
T47A				IAmb	IAmb	13 57 41.0	
	comp=Z,7.4nm,0.8s						
GLAT	Glass	33.71	334	P	P	13 57 40.5	-0.9
HBAR	Harrisburg	33.74	331	P	P	13 57 42.5	+0.8
R49A	Shelbyville	33.90	341	P	P	13 57 44.7	+1.7
R49A				IAmb	IAmb	13 58 19.3	
	comp=Z,14nm,1.4s						
833A	Chaparral WMA,	34.04	313	P	P	13 57 46.9	+2.4
LUPA	Lehigh Univers	34.07	355	P	P	13 57 47.0	+2.5
W41B	Gary Mavity, V	34.22	329	P	P	13 57 46.1	+0.2
W41B				IAmb	IAmb	13 57 48.4	
	comp=Z,16nm,1.5s						
Z38A	Mt. Pleasant	34.29	324	P	P	13 57 47.7	+1.2
WHAR	Wooly Hollow	34.33	329	P	P	13 57 47.4	+0.5
WHAR				IAmb	IAmb	13 57 48.3	
	comp=Z,5.1nm,0.7s						
LCAR	Lake Charles	34.40	331	P	P	13 57 48.3	+0.9
MIAR	Mount Ida	34.44	327	P	P	13 57 47.7	-0.1
MIAR				IAmb	IAmb	13 57 48.9	
	comp=Z,5.0nm,0.7s						
FCAR	Ozark Folk Cen	34.72	330	P	P	13 57 50.4	+0.1
FCAR				IAmb	IAmb	13 57 51.5	
	comp=Z,5.5nm,0.7s						
S44A	Carbondale	34.89	335	P	P	13 57 52.3	+0.6
S44A				IAmb	IAmb	13 57 52.9	
	comp=Z,7.6nm,0.7s						
WHTX	Lake Whitney,	34.94	320	P	P	13 57 52.6	+0.5
WHTX				IAmb	IAmb	13 57 53.5	
	comp=Z,8.5nm,1.0s						
W39A	Magazine	35.04	327	P	P	13 57 53.8	+0.8
OLIL	Olney	35.33	337	P	P	13 57 56.1	+0.6
M55A	Ridgway	35.35	351	P	P	13 57 56.3	+0.7
U40A	Yellville	35.45	330	P	P	13 57 57.2	+0.6
X37A	Clayton	35.47	325	P	P	13 57 57.3	+0.6
X37A				IAmb	IAmb	13 57 58.5	
	comp=Z,5.8nm,0.8s						
M54A	Oil Creek Stat	35.54	350	P	P	13 57 59.3	+2.1
P46A	Rosedale	35.78	339	P	P	13 58 00.4	+1.1
L56A	Greenwood	35.83	352	P	P	13 58 01.1	+1.3
HHAR	Hobbs	35.95	329	P	P	13 58 01.1	+0.3
HHAR				IAmb	IAmb	13 58 01.6	
	comp=Z,3.9nm,0.6s						
CCM	Cathedral Cave	36.06	333	P	P	13 58 01.8	+0.1
CCM				IAmb	IAmb	13 58 03.0	
	comp=Z,7.2nm,0.8s						
WVNY	West Valley, N	36.24	351	P	P	13 58 04.8	+1.5
WVNY				IAmb	IAmb	13 58 05.8	
	comp=Z,7.5nm,0.7s						
U38A	Gravette	36.30	328	P	P	13 58 03.5	-0.3
N47A	Urbana	36.42	342	P	P	13 58 05.7	+1.0
N47A				IAmb	IAmb	13 58 08.9	
	comp=Z,7.2nm,0.7s						
SFIN	Lafayette	36.42	340	P	P	13 58 05.3	+0.5
TUL1	Leonard	36.66	326	P	P	13 58 06.8	-0.1
P43A	Skaggs, Pawnee	36.66	337	P	P	13 58 07.1	+0.2
S39A	Bolivar	36.73	331	P	P	13 58 07.8	+0.3
ABTX	Abilene, Hawle	36.77	319	P	P	13 58 08.0	+0.1
ABTX				IAmb	IAmb	13 58 09.0	
	comp=Z,9.0nm,0.8s						
J57A	Williamstown	36.91	355	P	P	13 58 10.0	+1.1
J57A				IAmb	IAmb	13 58 11.6	
	comp=Z,5.5nm,0.8s						
X34A	Smith Ranch, M	36.92	323	P	P	13 58 10.0	+0.9
X34A				IAmb	IAmb	13 58 11.6	
	comp=Z,8.3nm,0.7s						
WMOK	Wichita Mounta	37.59	322	P	P	13 58 14.0	-0.8
WMOK				IAmb	IAmb	13 58 15.1	
	comp=Z,6.1nm,0.6s						
TX32	Lajitas Array	37.74	311	P	P	13 58 16.1	-0.2
TXAR	Lajitas Array	37.74	311	P	P	13 58 16.5	+0.2
	comp=Z,3.4nm,0.7s,baz=127,slow=9.1,SNR=52						
TXAR	Lajitas Array	37.74	311	P	P	13 58 16.2	-0.1
TX31	Lajitas Ar. Si	37.74	311	P	P	13 58 16.2	-0.1
I49A	Point Hope	38.51	347	P	P	13 58 23.2	+0.8
SADO	Sadowa	38.63	351	P	P	13 58 24.1	+0.7
SADO				IAmb	IAmb	13 58 24.9	
	comp=Z,6.6nm,0.6s						
PLVO	Plevna	38.63	354	P	P	13 58 24.3	+0.9
K43A	Burlington	38.91	340	P	P	13 58 25.9	+0.1
K43A				IAmb	IAmb	13 58 26.7	
	comp=Z,7.1nm,0.5s						
AMTX	Amarillo	39.50	320	P	P	13 58 30.7	-0.2
AMTX				IAmb	IAmb	13 58 32.8	
	comp=Z,7.4nm,0.5s						
LMN	Caledonia Moun	39.60	8	P	P	13 58 32.0	+0.4
MSTX	Muleshoe	39.66	318	P	P	13 58 32.0	-0.3
MSTX				IAmb	IAmb	13 58 34.2	
	comp=Z,11nm,0.9s						
JFWS	Jewell Farm	39.77	339	P	P	13 58 33.1	+0.2
I42A	Draeger Farm,	40.16	341	P	P	13 58 36.7	+0.5
I42A				IAmb	IAmb	13 58 37.1	
	comp=Z,7.1nm,0.5s						
MNTX	Cornudas Mount	40.22	313	P	P	13 58 37.1	+0.2
MNTX				IAmb	IAmb	13 58 38.4	
	comp=Z,8.3nm,0.7s						
G45A	Suttons Bay	40.24	345	P	P	13 58 37.8	+1.0
G45A				IAmb	IAmb	13 58 38.8	
	comp=Z,6.4nm,0.6s						
D53A	Lac Vacive, Po	40.72	354	P	P	13 58 42.0	+1.3
D53A				IAmb	IAmb	13 58 42.3	
	comp=Z,20nm,1.7s						
I40A	Norwalk	40.75	339	P	P	13 58 41.5	+0.4
BATG	Bathurst New B	40.86	6	P	P	13 58 43.4	+1.5
BATG				IAmb	IAmb	13 59 52.4	
	comp=Z,29nm,1.8s						
E46A	Sault Ste Mari	41.15	347	P	P	13 58 45.1	+0.8
E46A				IAmb	IAmb	13 58 46.1	
	comp=Z,8.7nm,0.6s						
E43A	Lone Tree Farm	41.83	344	P	P	13 58 50.5	+0.6
COWI	Conover	42.21	342	P	P	13 58 53.3	+0.3
121A	Cookes Peak, D	42.40	312	P	P	13 58 56.0	+1.0
T25A	Trinidad	42.63	320	P	P	13 58 57.7	+0.8
ANMO	Albuquerque	42.72	316	LR	LR	14 19 42.8	
	comp=Z,54nm,18.6s,baz=274,slow=40						
ANMO	Albuquerque	42.72	316	P	P	13 58 57.8	+0.2
319A	Douglas	42.97	310	P	P	13 59 00.6	+1.0
319A				IAmb	IAmb	13 59 27.3	
	comp=Z,7.2nm,0.8s						
ECSD	EROS Data Cent	43.03	333	P	P	13 58 59.4	-0.4
SDCO	Great Sand Dun	43.69	320	P	P	13 59 06.4	+1.0
TUC	Tucson	44.54	310	P	P	13 59 11.7	-0.4
S22A	4UR Ranch, Cre	44.54	319	P	P	13 59 13.3	+0.9
EYMN	Ely	44.59	341	P	P	13 59 12.1	-0.1
EYMN				IAmb	IAmb	13 59 12.6	
	comp=Z,26nm,1.9s						
X18A	Snowflake	44.96	314	P	P	13 59 14.7	-0.9
ISCO	Idaho Springs	45.01	323	P	P	13 59 15.9	-0.1
W18A	Petrified Fore	45.10	314	P	P	13 59 16.8	+0.1
W18A				IAmb	IAmb	13 59 18.7	
	comp=Z,12nm,1.1s						
MVCO	Mesa Verde	45.34	318	P	P	13 59 19.0	+0.4
N23A	Red Feather La	45.88	323	P	P	13 59 23.3	+0.4
N23A				IAmb	IAmb	13 59 24.9	
	comp=Z,16nm,1.5s						
214A	Organ Pipe Nat	45.94	309	P	P	13 59 23.7	+0.5
WUAZ	Wupatki	46.46	314	P	P	13 59 27.5	+0.1
WUAZ				IAmb	IAmb	13 59 29.3	
	comp=Z,8.6nm,0.8s						
Y14A	Wickenburg	46.92	311	P	P	13 59 31.4	+0.4
Y14A				IAmb	IAmb	13 59 32.4	
	comp=Z,4.5nm,0.7s						
RSSD	Black Hills	46.94	328	P	P	13 59 32.0	+0.9
RSSD				IAmb	IAmb	13 59 32.8	
	comp=Z,4.2nm,0.6s						
RWWY	Rawlins	47.12	324	P	P	13 59 32.1	-0.5
RWWY				IAmb	IAmb	14 00 44.7	
	comp=Z,9.2nm,0.9s						
K22A	Casper	47.33	325	P	P	13 59 34.6	+0.5
K22A				IAmb	IAmb	13 59 35.7	
	comp=Z,7.9nm,1.1s						
GLA	Glamis	47.94	309	P	P	13 59 38.9	+0.1
ULM	Lac du Bonnet	48.05	339	P	P	13 59 39.0	-0.3
	comp=Z,3.5nm,0.8s,baz=144,slow=6.9,SNR=8.4						
ULM				pP	sP	13 59 56.0	+2.7
	comp=Z,1.5nm,0.5s,baz=141,slow=5.7,SNR=2.8						
ULM	Lac du Bonnet	48.05	339	P	P	13 59 38.9	-0.3
ULM				IAmb	IAmb	13 59 39.2	
	comp=Z,4.4nm,0.9s						
KNB	Kanab	48.20	315	P	P	13 59 42.0	+1.0
MTPU	Mount Pierson	48.26	317	P	P	13 59 41.9	+0.3
SCHQ	Schefferville	48.30	4	P	P	13 59 41.4	+0.2
	comp=Z,2.0nm,0.7s,baz=202,slow=7.2,SNR=4.4						
SCHQ	Schefferville	48.30	4	P	P	13 59 41.9	+0.7
SCHQ				IAmb	IAmb	13 59 52.2	
	comp=Z,14nm,1.6s						
MSU	Marysvale	48.50	317	P	P	13 59 43.9	+0.6
LCMT	Little Creek M	48.50	315	P	P	13 59 44.0	+0.7
TCRU	Three Creeks R	48.73	317	P	P	13 59 45.7	+0.6
MPU	Maple Canyon	48.91	319	P	P	13 59 46.8	+0.4
NLU	North Lily Min	49.17	319	P	P	13 59 49.3	+0.8
TCUT	Toone Canyon	49.36	320	P	P	13 59 50.6	+0.7
HWUT	Hardware Ranch	49.73	321	P	P	13 59 53.2	+0.6
DGMT	Dagmar	50.07	332	P	P	13 59 55.7	+0.8
SPUT	South Promonto	50.13	320	P	P	13 59 55.8	+0.1
REDW	Red Top Meadow	50.28	323	P	P	13 59 57.3	+0.4
REDW				IAmb	IAmb	13 59 58.3	
	comp=Z,4.5nm,0.8s						
BGU	Big Grassy Mou	50.30	319	P	P	13 59 57.1	+0.2
GSC	Goldstone, Bar	50.34	311	P	P	13 59 57.8	+0.6
GSC				IAmb	IAmb	13 59 58.7	
	comp=Z,3.4nm,0.7s						
RLMT	Red Lodge	50.42	326	P	P	13 59 58.5	+0.7
RLMT				IAmb	IAmb	14 01 27.9	
	comp=Z,12nm,1.4s						
FXWY	Fox Creek	50.55	323	P	P	13 59 59.0	+0.2
TPNV	Topopah Spring	50.62	313	P	P	13 59 59.8	+0.4
R11A	Troy Canyon, C	50.76	315	P	P	14 00 00.7	+0.2
GCMT	Greycliff	51.05	326	P	P	14 00 03.5	+1.0
ELK	Elko	51.66	318	P	P	14 00 07.6	+0.3
MCMT	McKenzie Canyo	52.30	324	P	P	14 00 12.8	+0.8
EGMT	Eagleton	52.50	329	P	P	14 00 13.6	+0.4
EGMT				IAmb	IAmb	14 00 14.8	
	comp=Z,8.1nm,1.1s						
NVAR	Mina Array Bea	52.72	314	P	P	14 00 15.8	+0.6
	comp=Z,1.1nm,0.5s,baz=116,slow=6.1,SNR=5.2						
NVAR	Mina Array Bea	52.72	314	P	P	14 00 15.4	+0.3
HRY	Holter Researc	52.81	326	P	P	14 00 15.6	0.0
JTMT	Jette	54.77	326	P	P	14 00 30.4	+0.5
JTMT				IAmb	IAmb	14 00 31.7	
	comp=Z,4.0nm,0.8s						
NEW	Newport	56.65	325	P	P	14 00 42.9	-0.4
NEW				IAmb	IAmb	14 00 43.9	
	comp=Z,8.8nm,1.5s						
PINE	Pine Mountain	56.81	319	P	P	14 00 45.0	+0.3
YKA	Yellowknife Ar	64.03	339	P	P	14 01 33.0	-0.3
	comp=Z,1.9nm,0.6s,baz=130,slow=7.1,SNR=33						
YKA				pP	sP	14 01 50.4	+2.8
	comp=Z,1.6nm,0.6s,baz=128,slow=6.9,SNR=9.3						
TIC	Toumodi	66.14	86	eP	P	14 02 01.3	+13
LIC	Lamto	66.16	86	eP	P	14 02 02.3	+14
	comp=Z,19nm,0.8s						
DBIC	Dimbokro	66.30	86	pP	pP	14 02 03.5	+4.2
	comp=Z,4.6nm,0.4s,baz=276,slow=5.0,SNR=5.8						
KIC	Kosan Boka	66.43	86	eP	P	14 02 04.4	+15
	comp=Z,18nm,0.6s						
SUMG	Summit	68.99	10	P	P	14 02 06.0	+0.6
SUMG				IAmb	IAmb	14 02 07.0	
	comp=Z,7.0nm,0.8s						
TORD	Torodi Ar. Bea	72.36	78	P	P	14 02 25.9	-0.6
	comp=Z,0.3nm,0.4s,baz=252,slow=1.4,SNR=4.1						
TORD				pP	PcP	14 02 40.8	-3.6
	comp=Z,1.5nm,0.4s,baz=286,slow=6.5,SNR=9.7						
BCAR	Beaver Creek A	75.25	334	P	P	14 02 43.4	+0.8
BMAR	Burnt Mountain	77.46	338	P	P	14 02 55.8	+0.7
ILAR	Eielson Array	77.83	335	P	P	14 02 57.1	0.0
	comp=Z,0.6nm,0.7s,baz=85,slow=4.8,SNR=6.3						
KSH	Kashi	125.26	30	PKP	PKPdf	14 10 01.0	-0.2
KSH				sPKP		14 10 16.2	
KSH				PP	PP	14 11 54.5	+4.2
KSH				PKS	PKSdf	14 13 36.8	-1.1
KSH				SKKS		14 18 43.2	
HHC	Hu-ho-hao-te	132.74	357	eP	PKPdf	14 10 15.4	+0.1
NJ2	Nanjing	140.33	346	eP	PKPdf	14 10 27.6	-1.9
CD2	Chengdu	142.50	6	PKPbc	PKPdf	14 10 31.2	-2.3
ASAR	Alice Springs	150.12	233	PKPbc	PKPbc	14 10 49.5	-2.1
	comp=Z,0.4nm,0.7s,baz=114,slow=3.4,SNR=8.2						
ASAR				PKPab	sPKPdf	14 10 56.9	-4.4
	comp=Z,0.4nm,0.6s,baz=112,slow=4.0,SNR=7.5						
WRA	Warramunga Arr	151.48	240	PKPbc	PKPbc	14 10 53.7	-1.1
	comp=Z,0.5nm,0.6s,baz=108,slow=2.6,SNR=4.7						
WRA				PKPab	pPKPbc	14 11 01.2	-4.6
	comp=Z,0.5nm,0.7s,baz=103,slow=3.3,SNR=4.6						

IDC 10 13:57:30.7±3.9,**19°.29S**×**175°.87W**,**h0km**,**mb3.9**/3, **mb1 4.2**/3,**mb1mx3.7**/37,**mbtmp3.9**/3,**Error ellipse: s-maj=181.0km s-min=38.6km az=144.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	46.75	255	P	P	14 06 03.5	+1.3
	2.0nm,0.6s,baz=88,slow=8.6,SNR=45						
ASAR				PcP	PcP	14 07 32.5	-3.2
	0.2nm,0.5s,baz=99,slow=4.2,SNR=4.7						
WRA	Warramunga Arr	46.76	260	P	P	14 06 01.7	-0.6
	0.4nm,0.3s,baz=92,slow=7.3,SNR=13						
ILAR	Eielson Array	86.71	12	P	P	14 10 17.1	+1.0
	0.6nm,1.0s,baz=216,slow=5.2,SNR=4.9						

NEIC ***10*** *13:58:39.0±1.8, 40°.68N±0°.04×125°.28W±0°.08, h16km±7km, Error ellipse: s-maj=9.4km s-min=4.3km az=66.0*

IDC ***10*** *13:58:40.1±2.0, 40°.79N×125°.09W, h0km, mb3.3/3, mb1 3.8/6, mb1mx3.5/50, mbtmp3.5/6, ML3.4/4, MS3.3/3, Ms1 3.3/3, ms1mx2.8/27, Error ellipse: s-maj=22.5km s-min=14.9km az=73.0*

NCEDC ***10*** *13:58:40.7±1.8, 40°.69N±0°.03×125°.29W±0°.06, h23km±7km, ML3.3/14, Error ellipse: s-maj=7.0km s-min=4.9km az=78.0*

ANF ***10*** *13:58:41.7±1.2, 40°.84N×124°.92W, h0km, ML3.2/15, Error ellipse: s-maj=11.5km s-min=6.3km az=66.0*

ISC 10 13:58:37.8±2.0,**40°.69N**±0°.04×**125°.23W**±0°.07,**h2km**±14km, **n80**,σ1s**23**/86,**Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCTM	Capetown	0.71	107		Pn	13 58 54.7	-0.3
KCTM					Sn	13 59 05.6	-1.0
KMPM	Mount Pierce	0.89	107		Sn	13 59 09.4	-1.5

JCC	Jacoby Creek,	0.92	82	P	Pn	13 58 56.6	-1.2
JCC	Jacoby Creek,	0.92	82		Sb	13 59 08.9	-0.3
JCC	Jacoby Creek,	0.92	82	Pn	Pb	13 58 56.2	-0.3
KRPM	Rodgers	1.03	62		Pn	13 58 58.2	-1.2
KCRM	Chalk Rock	1.11	103		Pn	13 59 00.1	-0.4
KHMM	Horse Mountain	1.15	80	Pn	Pb	13 59 00.0	-0.5
KMRM	Mail Ridge	1.25	111	Pn	Pg	13 59 02.4	+0.6
KRMB	Red Mountain	1.30	50	Pn	Pn	13 59 01.6	-1.5
KOMM	Orleans Mounta	1.47	66		Pn	13 59 04.8	-0.7
KSXB	Camp Six Broad	1.53	41		Pn	13 59 05.2	-1.1
KIPM	Iron Peak	1.60	123		Pb	13 59 06.9	-1.3
KCPM	Cahto Peak	1.61	128	Pn	Pn	13 59 06.6	-0.8
KBO	Bosley Butte	1.70	26	Pn	Pn	13 59 07.3	-1.3
KBNM	Bluenose Ridge	1.75	116		Pb	13 59 09.6	-1.2
GTC	Three Chop Rid	1.82	134		Pn	13 59 09.1	-1.1
LBPM	Beegum Peak	1.83	101		Pn	13 59 10.3	0.0
KTRM	Thompson Ridge	1.85	48		Pn	13 59 10.3	-0.5
L02E	Cave Junction	1.91	39		Pn	13 59 11.3	-0.2
L02E	Cave Junction	1.91	39	P	Pn	13 59 11.2	-0.2
	baz=221,SNR=23						
L02E				S	Sn	13 59 34.0	-2.2
	baz=221						
GNAM	Navarro Ridge	1.93	140		Pn	13 59 10.9	-0.8
M02C	Callahan	1.93	68		Pn	13 59 11.7	-0.1
M02C	Callahan	1.93	68	P	Pn	13 59 11.9	+0.1
	baz=250,SNR=65						
M02C				S	Sn	13 59 35.4	-1.3
	baz=250						
O02D	Mt. Diablo Mer	1.93	105		Pn	13 59 11.8	+0.1
O02D	Mt. Diablo Mer	1.93	105	P	Pn	13 59 11.9	+0.1
	baz=286,SNR=111						
N02D	Trinity Center	1.94	81		Pn	13 59 11.6	-0.3
N02D	Trinity Center	1.94	81	P	Pb	13 59 12.5	-1.4
	baz=262,SNR=22						
N02D				S	Sn	13 59 36.4	-0.4
	baz=262						
LBKM	Bonanza King	1.98	78		Pn	13 59 12.5	-0.1
WDC	Whiskeytown Da	2.05	92	Pn	Pn	13 59 13.2	-0.1
GHOM	Hamilton Openi	2.09	141		Pn	13 59 13.0	-1.0
GROM	Round Mountain	2.10	111		Pb	13 59 14.7	-2.1
GVV	Valley View	2.16	114		Pn	13 59 15.2	+0.3
YBH	Yreka Blue Hor	2.17	60	Pn	Pn	13 59 15.6	+0.5
	1.7nm,0.3s,baz=268,slow=18,SNR=26						
YBH				Sn	Sn	13 59 41.5	-1.1
	8.4nm,0.3s,baz=63,slow=17,SNR=12						
YBH				LR	LR	14 00 13.3	
	comp=Z,200nm,20.8s,baz=144,slow=46						
YBH	Yreka Blue Hor	2.17	60	Pn	Pn	13 59 15.5	+0.4
GASB	Alder Springs	2.19	117		Pn	13 59 15.3	-0.1
KEBM	Edson Butte	2.28	17	Pn	Pn	13 59 15.6	-1.0
K02D	Willamette Mer	2.32	30	P	Pn	13 59 16.7	-0.5
	baz=212,SNR=209						
K02D				S	Sn	13 59 44.9	-1.5
	baz=212						
GSNM	Snow Mountain	2.35	137		Pn	13 59 16.7	-0.8
HOPS	Hopland Field	2.37	135	Pn	Pn	13 59 17.0	-0.8
LSHM	Sage Hen Hill	2.43	86		Pn	13 59 18.9	+0.3
HUMO	Hull Mountain	2.56	41	Pn	Pn	13 59 20.4	0.0
O03E	Paynes Creek	2.64	97	P	Pn	13 59 21.6	0.0
	baz=280,SNR=12						
O03E				S	Sn	13 59 53.7	-0.6
	baz=280						
J01E	Myrtle Point	2.66	21	S	Sn	13 59 52.2	-2.2
	baz=203						
L04D	Klamath Falls	2.68	54	P	Pb	13 59 24.4	-2.2
	baz=237,SNR=61						
M04C	Macdoel	2.78	66	P	Pb	13 59 25.6	-2.8
	baz=248						
ORV	Oroville	3.08	110		Pn	13 59 26.8	-0.6
MCCM	Marconi Confer	3.12	144	Pn	Pn	13 59 28.2	+0.1
K04D	Chiloquin, OR	3.25	52	P	Pn	13 59 31.7	+1.8
	baz=235,SNR=11						
I03D	Drain, OR	3.32	24	P	Pn	13 59 31.3	+0.6
	baz=206,SNR=18						
I03D				S	Sn	14 00 10.2	-0.5
	baz=206						
J04D	Umpqua Nationa	3.45	41	P	Pn	13 59 35.0	+2.2
	baz=224,SNR=11						
AFDM	Forest Hills D	3.71	117		Pn	13 59 36.8	+0.6
I04A	Tendick Farm,	3.74	33	P	Pn	13 59 38.4	+1.8
	baz=215						
BEKR	Beckworth	3.81	101		Pn	13 59 38.6	+0.8
MOD	Modoc Plateau	3.91	70	Pn	Pn	13 59 39.6	+0.6
J05D	Fort Rock, OR	3.95	48	P	Pn	13 59 41.7	+2.1
	baz=231,SNR=14						
CNIC	Niles Canyon	3.99	139		Pb	13 59 48.0	-0.8
H04D	Lebanon	4.25	25	P	Pn	13 59 45.1	+1.5
	baz=207						
H04D				S	Sn	14 00 34.4	+0.5
	baz=207						
PINE	Pine Mountain	4.45	44		Pn	13 59 47.8	+1.3
PAHR	Pah Rah Range	4.58	100	Pn	Pn	13 59 48.5	+0.2
I05D	Terrebonne, OR	4.64	37	P	Pn	13 59 52.0	+2.9
	baz=220						
SAO	San Andreas Ge	4.91	142	Pn	Pn	13 59 51.9	-0.7
YERR	Yerington	4.91	108	Pn	Pn	13 59 52.4	-0.5
I07A	Izee	5.43	49	Pn	Pn	14 00 02.9	+3.0
RYN	Ryan	5.57	110	Pn	Pn	14 00 01.3	-0.6
PMPB	Monarch Peak	5.66	141	Pn	Pn	14 00 04.5	+1.5
G06A	Carlson Farm,	5.66	35	Pn	Pn	14 00 04.3	+1.4
J08A	Circle Bar Ran	5.69	60		Pn	14 00 03.5	0.0
KVN	Kaiserville	5.72	104	Pn	Pn	14 00 04.8	+0.8
NVAR	Mina Array Bea	5.81	111	Pn	Pn	14 00 06.6	+1.4
	0.4nm,0.3s,baz=285,slow=14,SNR=6.2						
NVAR				Sn	Sn	14 01 14.4	+1.9
	0.0nm,0.3s,baz=304,slow=15,SNR=2.1						
G08A	Pilot Rock	6.50	43	Pn	Pn	14 00 15.1	+0.4
BMO	Blue Mountains	7.16	52		Pn	14 00 26.9	+3.2
PFO	Pinyon Flats O	9.94	133	Pn	Pn	14 01 05.6	+3.8
	0.5nm,0.3s,baz=323,slow=8.2,SNR=4.2						
PFO	Pinyon Flats O	9.94	133		Pn	14 01 02.9	+1.1
DLBC	Dease Lake	18.03	352	P	P	14 02 50.9	+0.9
	0.1nm,0.3s,baz=88,slow=5.3,SNR=3.3						
TXAR	Lajitas Array	20.92	116	P	Pn	14 03 25.7	+1.3
	0.4nm,0.8s,baz=300,slow=8.4,SNR=4.5						
ULM	Lac du Bonnet	22.57	55	P	P	14 03 40.5	+1.2
	1.9nm,0.7s,baz=264,slow=10,SNR=4.9						
YKA	Yellowknife Ar	22.75	13	P	P	14 03 42.5	+1.4
	2.1nm,1.1s,baz=198,slow=10,SNR=11						
KDAK	Kodiak Island	24.47	324	LR	LR	14 10 27.5	
	comp=Z,131nm,19.6s,baz=233,slow=29						
RES	Resolute Bay	36.82	13	LR	LR	14 19 48.4	
	comp=Z,107nm,20.6s,baz=230,slow=35						

PGC 10 13:58:51.0±1.2, 65°.12N×140°.84W, h1^{km}, ML2.7/6, 136km northwest of Dawson, Yt Northern Yukon Territory, Canada, Northern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAWY	Dawson	1.23	149	P	Pg	13 59 12.9	-1.7
DAWY				S	Sg	13 59 29.7	-0.8
DOT	Dot Lake	2.04	225	Pn	Pn	13 59 27.1	+0.7
DOT				Sg	Sb	13 59 53.9	-0.6
BVCY	Beaver Creek	2.72	180	Pn	Pn	13 59 34.6	-1.2
BVCY				Sg	Sb	14 00 15.5	+1.2
PAX	Paxson	2.97	225	Pn	Pn	13 59 38.5	-0.8
PAX				Sg	Sb	14 00 23.2	+1.8
PAX	Paxson	2.97	225	P	Pn	13 59 38.9	-0.4
PAX				IAmb	IAmb	14 00 24.5	
	comp=Z,6.7nm,0.8s						
YUK2	White River	3.35	180	Pn	Pn	13 59 43.6	-0.9
YUK2				Sg	Sb	14 00 34.6	+2.2
YUK3	Moose Creek	3.36	177	Pn	Pn	13 59 43.8	-1.1
YUK3				Sg	Sg	14 00 36.3	-2.7
YUK4	Talbot Arm	3.92	164	Pn	Pn	13 59 50.5	-2.0
YUK4				Sg	Sb	14 00 50.3	+1.4
YUK5	Granite Creek	4.23	160	Pn	Pn	13 59 56.1	-0.5

MAN ***10*** *14:03:21.5, 5°.95N×125°.95E, h139^{km}, mb4.4, ML3.3, MS3.1*

IDC ***10*** *14:03:42.8±1.8, 2°.13N×124°.36E, h0^{km}, mb3.2/3, mb1 3.4/3, mb1mx3.2/41, mbtmp3.2/3, Error ellipse: s-maj=196.5km s-min=24.7km az=64.0*

ISC 10 14:03:27.4±1.2, 6°.04N±0°.08×125°.86E±0°.08, h100^{km}, n9, σ2^{s}78/15, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	0.16	294	*e*P	Pn	14 03 42.5	+1.1
DDMP				*e*S	Sn	14 03 57.8	+5.8
GSPH	General Santos	0.91	273	⇑*i*P	Pn	14 03 47.4	+0.5
GSPH				*i*S	Sn	14 04 04.3	+2.6
MATI	Mati	0.98	24	*e*P	Pn	14 03 45.8	-1.8
MATI				*e*S	Sn	14 04 04.2	+1.3
DMPH	Davao City--Mi	1.09	341	⇓*e*P	Pn	14 03 51.6	+2.7
DMPH				*e*S	Sn	14 04 09.0	+3.9
SKMP	Bagumbayan, Su	1.39	290	*e*P	Pn	14 03 50.9	-1.5
SKMP				*e*S	Sn	14 04 10.4	-0.9
CTBH	Cotabato--PC H	1.99	306	⇑*i*P	Pn	14 03 58.5	-1.3
BUKP	Musuan	1.99	337	*e*P	Pn	14 03 57.2	-2.7
BUKP				*e*S	Sn	14 04 26.5	+1.7
WRA	Warramunga Arr	27.13	162	P	P	14 08 58.9	-2.4
	0.1nm,0.3s,baz=334,slow=11,SNR=5.2						
ASAR	Alice Springs	30.55	165	P	P	14 09 30.1	-1.6
	0.3nm,0.4s,baz=337,slow=7.3,SNR=14						

NEIC ***10*** *14:11:20.5±1.5, 36°.14N±0°.04×96°.93W±0°.05, h7^{km}±7^{km}, Error ellipse: s-maj=5.8km s-min=4.9km az=134.0*

TUL ***10*** *14:11:20.2±1.2, 36°.13N±0°.04×96°.91W±0°.06, h4^{km}±7^{km}, ML3.5, Error ellipse: s-maj=7.2km s-min=3.7km az=122.0*

ANF ***10*** *14:11:20.6±0.8, 36°.10N×96°.89W, h2^{km}±5^{km}, ML4.2/12, Error ellipse: s-maj=5.6km s-min=3.4km az=179.0*

IDC ***10*** *14:11:21.4±2.3, 36°.10N×96°.76W, h0^{km}, mb1 3.5/4, mb1mx3.3/58, mbtmp3.3/4, ML3.1/4, Error ellipse: s-maj=30.4km s-min=13.8km az=102.0*

ISC 10 14:11:19.6±0.7, 36°.11N±0°.05×96°.91W±0°.03, h4^{km}, n67, σ1^{s}21/69, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADOK	Arcadia Dam	0.59	220		Pb	14 11 32.2	-0.3
OK001	Jones High Sch	0.63	210	Pg	Pb	14 11 32.9	-0.2
OKCFA	Oklahoma City	0.82	213		Pb	14 11 36.1	-0.3
OKCSW	OKLAHOMA CITY	0.82	212		Pb	14 11 36.1	-0.3
T35A	Sooner Cattle	0.87	21		Pg	14 11 36.5	+0.3
TUL1	Leonard	0.93	102	P	Pb	14 11 37.8	-0.4
	baz=284						
TUL1				S	Sb	14 11 50.3	-0.5
	baz=284						
FNO	Franklin	0.94	206		Pb	14 11 38.5	+0.1
W35A	Tecumseh	0.95	178		Pb	14 11 38.2	-0.4
X34A	Smith Ranch, M	1.68	207		Pb	14 11 51.2	+0.1
X37A	Clayton	1.97	140		Pb	14 11 55.1	-0.9
WMOK	Wichita Mounta	2.05	229		Pn	14 11 56.3	+1.4
WMOK	Wichita Mounta	2.05	229	P	Pn	14 11 56.4	+1.4
	baz=47						
WMOK				S	Sg	14 12 24.7	-0.7
	baz=47						
U38A	Gravette	2.06	80		Pb	14 11 56.7	-1.0
HHAR	Hobbs	2.41	85		Pn	14 12 01.1	+1.3
W39A	Magazine	2.70	109	P	Pn	14 12 05.7	+1.9
	baz=291						
W39A				S	Sb	14 12 39.2	-2.7
	baz=291						
R32A	Long Quarter,	2.72	329		Pn	14 12 02.9	-1.3
Z35A	Perchaven, San	2.78	186	Pn	Pn	14 12 05.4	+0.4
KSU1	Kansas State U	3.00	4	P	Pn	14 12 09.1	+1.2
	baz=185						
MIAR	Mount Ida	3.14	119		Pn	14 12 10.9	+1.1
MIAR	Mount Ida	3.14	119	S	Sn	14 12 49.5	+1.8
	baz=301						
Z38A	Mt. Pleasant	3.25	150	Pn	Pn	14 12 12.7	+1.3
S39A	Bolivar	3.28	60		Pn	14 12 13.3	+1.5
U40A	Yellville	3.29	84	P	Pn	14 12 13.0	+1.1
	baz=267						
CBKS	Cedar Bluff	3.52	321	Pn	Pn	14 12 16.1	+1.0
X40A	Basin Creek Fa	3.70	115	P	Pn	14 12 19.5	+2.0
	baz=297						
WHAR	Wooly Hollow	3.85	101		Pn	14 12 20.4	+0.8
MGMO	Mountain Grove	3.88	73		Pn	14 12 20.7	+0.8
FCAR	Ozark Folk Cen	3.88	92	Pn	Pn	14 12 20.1	+0.1
W41B	Gary Mavity, V	3.91	102	P	Pn	14 12 22.0	+1.6
	baz=286						
W41B				S	Sn	14 13 08.0	+1.3
	baz=286						
WLAR	White Oak Lake	3.94	127	Pn	Pn	14 12 22.4	+1.6
UALR	University of	3.96	108	Pn	Pn	14 12 22.4	+1.4
AMTX	Amarillo	4.08	254		Pn	14 12 24.7	+1.9
ABTX	Abilene, Hawle	4.15	214	S	Sn	14 13 13.7	+1.1
	baz=32						
Z41A	Richland Creek	4.42	129	S	Sn	14 13 19.5	+0.2
	baz=312						
LCAR	Lake Charles	4.66	89	Pn	Pn	14 12 31.4	+0.7
NATX	Nacogdoches	4.72	156	Pn	Pn	14 12 33.1	+1.5
CCAR	Cane Creek	4.75	116	Pn	Pn	14 12 33.8	+1.9
CCM	Cathedral Cave	4.93	65		Pn	14 12 34.8	+0.4
CCM	Cathedral Cave	4.93	65	P	Pn	14 12 35.4	+1.0
	baz=249						
BGNE	Belgrade	5.38	350	P	Pn	14 12 41.3	+0.6
	baz=169						
JCT	Junction City	6.11	204	Pn	Pn	14 12 51.0	+0.2
GLAT	Glass	6.17	86	Pn	Pn	14 12 51.5	+0.2
OGNE	Ogallala	6.28	322	Pn	Pn	14 12 53.9	+0.8
OXF	Oxford	6.33	102	Pn	Pn	14 12 54.9	+1.2
SCIA	State Center	6.47	25		Pn	14 12 56.0	+0.5
N41A	Harden Midland	6.61	44	Pn	Pn	14 12 58.6	+1.1
SDCO	Great Sand Dun	7.08	286		Pn	14 13 05.3	+1.2
L40A	Anamosa	7.41	35		Pn	14 13 07.8	-0.7
HDIL	Hopedale	7.45	51	Pn	Pn	14 13 09.2	+0.2
ECSD	EROS Data Cent	7.62	2		Pn	14 13 10.8	-0.6
ISCO	Idaho Springs	7.80	301		Pn	14 13 13.8	-0.4
ANMO	Albuquerque	7.87	264	Pn	Pn	14 13 18.0	+3.0
	0.1nm,0.3s,baz=84,slow=18,SNR=2.0						
ANMO				Pg	Pg	14 13 48.4	-1.9
	0.6nm,0.3s,baz=78,slow=14,SNR=5.2						
ANMO				Lg	Lg	14 15 29.5	
	1.5nm,0.3s,baz=21,slow=17,SNR=6.4						
T47A	Sharon Grove	7.94	81	Pn	Pn	14 13 16.1	+0.3
MNTX	Cornudas Mount	8.30	240		Pn	14 13 22.0	+1.2
JFWS	Jewell Farm	8.52	35	Pn	Pn	14 13 24.1	+0.4
TX31	Lajitas Ar. Si	8.83	222		Pn	14 13 28.6	+0.5
TX32	Lajitas Array	8.83	222		Pn	14 13 28.7	+0.6
TXAR	Lajitas Array	8.83	222	Pn	Pn	14 13 29.2	+1.1
	0.2nm,0.3s,baz=45,slow=12,SNR=9.9						
TXAR				Pg	Pg	14 13 57.8	-11
	0.4nm,0.3s,baz=42,slow=14,SNR=6.5						
TXAR				Lg	Lg	14 15 58.2	
	0.8nm,0.3s,baz=43,slow=25,SNR=5.4						
TXAR	Lajitas Array	8.83	222	Pn	Pn	14 13 28.3	+0.2
RSSD	Black Hills	9.69	328		Pn	14 13 41.1	+1.2
I42A	Draeger Farm,	9.90	36	Pn	Pn	14 13 42.0	-0.6
G40A	Rib Lake	10.47	27		Pn	14 13 49.1	-1.3
TKL	Tuckaleechee C	10.67	89	Lg	Lg	14 16 51.8	
	2.5nm,0.3s,baz=317,slow=14,SNR=15						
PDAR	Pinedale Array	11.82	308	Pn	Pn	14 14 14.2	+5.0
	0.1nm,0.3s,baz=338,slow=1.6,SNR=2.2						
PDAR				Pg		14 14 58.5	
	0.1nm,0.3s,baz=120,slow=15,SNR=3.8						
PDAR				Lg	Lg	14 17 30.6	
	0.3nm,0.3s,baz=102,slow=34,SNR=5.2						
PDAR	Pinedale Array	11.82	308		Pn	14 14 11.2	+2.1
ULM	Lac du Bonnet	14.16	3	Pn	Pn	14 14 38.2	-2.5
	0.3nm,0.3s,baz=183,slow=15,SNR=4.5						
ULM				Lg	Lg	14 18 36.6	
	0.2nm,0.3s,baz=282,slow=19,SNR=2.5						
SADO	Sadowa	16.03	52	Lg	Lg	14 19 38.3	
	0.3nm,0.3s,baz=325,slow=6.2,SNR=5.9						

NIED ***10*** *14:13:00, 29°.20N×130°.60E, h29^{km}, Mw4.7 Best double couple: M$_0$1.24000×10^{16} NP1:φ$_s$206.00000°, δ83.00000°, λ-69.00000°. NP2:φ$_s$314.00000°, δ22.00000°, λ-161.00000°.*

IDC ***10*** *14:13:22.4±0.5, 29°.27N×130°.48E, h0^{km}, mb4.1/19, mb1 4.2/23, mb1mx4.1/43, mbtmp4.0/23, ML3.3/5, MS4.1/29, Ms1 4.1/29, ms1mx3.9/53, Error ellipse: s-maj=17.2km s-min=11.0km az=90.0*

BJI ***10*** *14:13:23.5±0.0, 29°.03N×130°.84E, h40^{km}, mB4.9/34, mb4.4/40, Ms4.5/37, Ms7 4.4/36*

JMA ***10*** *14:13:27.2, 29°.29N×130°.46E, h44^{km}±2^{km}, M4.5*

JMA Felt I J1.

NEIC ***10*** *14:13:27.8±1.6, 29°.27N±0°.06×130°.5E±0°.1, h35^{km}±7^{km}, mb4.7/23, Error ellipse: s-maj=14.5km s-min=6.6km az=114.0*

ISC 10 14:13:27.9±0.6, 29°.24N±0°.03×130°.52E±0°.04, h37^{km}±1^{km}, n122, σ1^{s}30/131, mb4.3/33, MS4.3/31, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNN	Nakanoshima	0.82	317	P	Pn	14 13 41.5	-1.4
JNN				*e*S	Sn	14 13 51.7	-2.1
JYAK	Yakushimahirau	0.99	360	P	Pn	14 13 44.2	-1.0
JYAK				*e*S	Sn	14 13 56.7	-1.3
JZK	Kikaishima	1.04	207	P	Pn	14 13 46.2	+0.2
JZK				S	Sn	14 13 59.3	0.0
JAM	Amami Oshima	1.15	224	P	Pn	14 13 47.2	-0.3
JAM				*e*S	Sn	14 14 01.9	-0.1
JTAJ	Takarajima	1.15	266	P	Pn	14 13 46.9	-0.6
JTAJ				*e*S	Sn	14 14 00.4	-1.6
JMTN	Minamitane	1.20	16	P	Pn	14 13 47.3	-0.8
JMTN				*e*S	Sn	14 14 02.3	-0.8
JKC	Kuchinoerabu	1.25	347	P	Pn	14 13 47.9	-0.8
JKC				*e*S	Sn	14 14 03.5	-0.8
JTN	Tanegashima 3	1.46	16	P	Pn	14 13 51.1	-0.6
JTN				*e*S	Sn	14 14 09.1	-0.5
JAMN	Amaminishikomi	1.54	230	P	Pn	14 13 52.7	-0.1
JAMN				*e*S	Sn	14 14 11.6	0.0
JTSR	Tashiro 2	1.95	10	P	Pn	14 13 58.2	-0.2
JTSR				*e*S	Sn	14 14 21.3	-0.4
JTK	Tokunoshima	2.00	224	P	Pn	14 13 59.3	+0.1
JTK				*e*S	Sn	14 14 23.2	+0.2
JSU	Suzuyama	2.25	359	P	Pn	14 14 01.8	-0.9
JSU				*e*S	Sn	14 14 28.5	-0.7
JOKE	Okinoerabujima	2.54	223	P	Pn	14 14 06.7	+0.1
JOKE				*e*S	Sn	14 14 37.0	+0.7
JYRO	Yoronjima	2.87	220	P	Pn	14 14 10.6	-0.5
JYRO				*e*S	Sn	14 14 44.7	+0.4
JOW	Kunigami	3.12	220	P	Pn	14 14 14.2	-0.2
JOW	Kunigami	3.12	220	Pn	Pn	14 14 14.3	-0.2
	2.2nm,0.3s,baz=107,slow=16,SNR=31						
JOW				Sn	Sn	14 14 51.4	+0.9
	6.3nm,0.3s,baz=221,slow=22,SNR=6.0						
JOW	Kunigami	3.12	220		Pn	14 14 14.7	+0.2
JIH	Iheya	3.15	226	P	Pn	14 14 14.6	-0.3
JMZ	Minamidaito 2	3.47	169	S	Sn	14 14 55.4	-3.7
JNTH	Nagotoyohara	3.50	220	P	Pn	14 14 19.5	-0.3
JNU	Nakatsue	3.88	4	Pn	Pn	14 14 25.1	+0.1
	6.2nm,0.3s,baz=208,slow=5.4,SNR=87						
JNU				Sn	Sn	14 15 09.4	+0.1
	6.0nm,0.3s,baz=257,slow=9.7,SNR=4.3						
JNU	Nakatsue	3.88	4		Pn	14 14 25.9	+0.9
JKE	Kume jima 2	4.40	230	P	Pn	14 14 31.6	-0.6
INU	Inuyama	8.20	40		Pn	14 15 25.3	+0.9
KSRS	Korea Array	8.47	346	Pn	Pn	14 15 31.8	+3.8
	0.5nm,0.3s,baz=165,slow=14,SNR=11						
KSRS				LR	LR	14 19 02.4	
	comp=Z,1μm,19.3s,baz=164,slow=40						
JHJ	Hachijo jima 2	8.83	62	LR	LR	14 18 54.8	
	comp=Z,688nm,19.7s,baz=62,slow=38						
YHNB	Yeheng	9.34	243	Pn	Pn	14 15 39.7	-0.4
MAJO	Matsushiro	9.73	40	Pn	Pn	14 15 45.7	+0.4
MJAR	Matsushiro Arr	9.73	40	Pn	Pn	14 15 45.7	+0.4
	0.2nm,0.3s,baz=240,slow=14,SNR=9.1						
MJB9	Matsu-Tunnel	9.73	40	Pn	Pn	14 15 45.6	+0.3
SSLB	Suanglung	10.14	240	Pn	Pn	14 15 49.9	-1.1
NJ2	Nanjing	10.43	288	*e*P	Pn	14 15 56.7	+1.9
NJ2				pmax	pmax		
	comp=Z,30nm,0.7s						
NJ2				LR	LR		
	comp=N,720nm,14.4s						
NJ2				LR	LR		
	comp=E,1μm,14.0s						
NJ2				LR	LR		
	comp=Z,2μm,16.4s						
JCJ	Chichijima	10.52	99	LR	LR	14 19 23.3	
	comp=Z,649nm,21.2s,baz=30,slow=34						
TPUB	Ta-pu	10.66	239	Pn	Pn	14 15 56.8	-1.4
WHN	Wuhan	14.09	279	P	P	14 16 56.5	+4.5
WHN				S	S	14 19 36.2	-3.8
SZP	Santa	14.85	221	P	P	14 17 01.5	+1.0
USRK	Ussuriysk Ar.	14.97	4	LR	LR	14 23 21.4	
	comp=Z,490nm,18.0s,baz=168,slow=40						
CN2	Changchun	15.08	346	*e*P	Pn	14 16 58.6	+0.4
CN2				*e*sP	pP	14 17 13.8	+1.4
CN2				*e*S	Sn	14 19 44.0	0.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,1μm,13.0s						
CN2				LR	LR		
	comp=E,420nm,13.0s						
CN2				LR	LR		
	comp=Z,2μm,15.0s						
ASAJ	Asahikawa	17.69	30	P	Pn	14 17 29.8	-1.5
	0.2nm,0.3s,baz=207,slow=9.0,SNR=3.3						
JKA	Kamikawa-asahi	17.70	30	P	Pn	14 17 29.8	-1.5
ENH	Enshi	18.29	278	P	P	14 17 36.4	-2.3
XAN	Xi'an	18.99	290	P	Pn	14 17 50.0	+2.8
XAN				pP	pP	14 17 55.6	-0.1
XAN				pmax	pmax		
	comp=Z,37nm,1.2s						
XAN	Xi'an	18.99	290	P	Pn	14 17 45.9	-1.3
XAN				IAmb	IAmb	14 17 51.0	
	comp=Z,51nm,1.2s						
HHC	Hu-ho-hao-te	19.32	312	*e*P	Pn	14 17 52.1	+0.9
HHC				sP	sP	14 18 06.6	+2.6
HHC				PP	PnPn	14 18 08.6	+4.0
HHC				pmax	pmax		
	comp=Z,100nm,0.7s						
HHC				pmax	pmax		
	comp=Z,380nm,6.7s						
HHC				LR	LR		
	comp=Z,800nm,10.8s						
HHC				LR	LR		
	comp=Z,620nm,9.5s						
HHC				LR	LR		
	comp=Z,800nm,10.1s						
KLR	Kul'dur	19.98	2	P	P	14 17 56.0	-1.0
	comp=Z,0.4nm,0.3s,baz=194,slow=12,SNR=8.8						
KLR				LR	LR	14 25 37.3	
	comp=Z,223nm,20.4s,baz=179,slow=37						
YSS	Yuzh-Sakhalins	20.09	25	P	P	14 17 58.5	+0.4
QIZ	Qiongzhong	21.40	246	P	P	14 18 11.5	-1.0
QIZ				S	S	14 22 07.4	-0.8
QIZ				LR	LR		
	comp=Z,340nm,7.6s						
QIZ				LR	LR		
	comp=Z,230nm,10.5s						
QIZ				LR	LR		
	comp=Z,470nm,14.3s						
DAV	Davao City (W)	22.54	193	LR	LR	14 27 12.3	
	comp=Z,210nm,20.7s,baz=345,slow=37						
CD2	Chengdu	23.20	281	P	P	14 18 31.3	-0.3
CD2				S	S	14 22 38.3	-2.6
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
CD2				pmax	pmax		
	comp=Z,290nm,4.8s						
CD2				LR	LR		
	comp=Z,1μm,11.2s						
CD2				LR	LR		
	comp=Z,2μm,13.0s						
CD2				LR	LR		
	comp=Z,2μm,14.5s						
LZH	Lanzhou	23.43	294	*e*P	P	14 18 36.0	+2.1
LZH				sP	sP	14 18 53.5	+5.1
LZH				S	S	14 22 46.5	+1.8
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH				pmax	pmax		
	comp=Z,200nm,5.0s						
LZH				LR	LR		
	comp=Z,640nm,14.6s						
LZH				LR	LR		
	comp=Z,1μm,15.2s						
LZH				LR	LR		
	comp=Z,1μm,15.7s						
KMI	Kunming	25.02	267	P	P	14 18 48.5	-0.3
KMI				pP	pP	14 18 59.0	+0.3
KMI				sP	sP	14 19 03.4	-0.1
KMI				S	S	14 23 05.1	-5.6
KMI				sS	sS	14 23 26.3	+0.9
KMI				SS		14 24 05.3	
KMI				pmax	pmax		
	comp=Z,19nm,0.8s						
KMI				pmax	pmax		
	comp=Z,83nm,3.7s						
KMI				LR	LR		
	comp=Z,380nm,13.9s						
KMI				LR	LR		
	comp=Z,750nm,14.3s						
KMI				LR	LR		
	comp=Z,910nm,14.2s						

ULN	Ulaanbaatar	25.95	322	P	P	14 18 57.4	+0.5
ULN				IAmb	IAmb	14 19 17.8	
	comp=Z,18nm,1.7s						
SONM	Songino Array	26.29	322	P	P	14 19 00.7	+0.7
	comp=Z,1.4nm,0.4s,baz=139,slow=11,SNR=9.6						
SONM				LR	LR	14 30 38.0	
	comp=Z,794nm,20.4s,baz=128,slow=40						
SONM	Songino Array	26.29	322	P	P	14 19 00.1	+0.2
GTA	Gaotai	27.19	300	eP	P	14 19 12.0	+3.8
GTA				pP	sP	14 19 22.2	-0.8
GTA				sP	pP	14 19 26.2	+7.7
GTA				pmax	pmax		
	comp=Z,6.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,180nm,7.1s						
GTA				LR	LR		
	comp=Z,510nm,15.2s						
GTA				LR	LR		
	comp=Z,810nm,16.2s						
GTA				LR	LR		
	comp=Z,900nm,16.2s						
TLY	Talaya	30.04	326	LR	LR	14 32 56.3	
	comp=Z,470nm,18.9s,baz=124,slow=39						
CMAR	Chiang Mai Arr	30.72	257	P	P	14 19 39.5	0.0
	comp=Z,0.4nm,0.5s,baz=88,slow=6.6,SNR=3.0						
CMAR				LR	LR	14 32 58.9	
	comp=Z,293nm,20.1s,baz=75,slow=38						
FAKI	Fak Fak	32.02	177	P	P	14 19 51.2	+0.2
H11N2	WAKE ISLAND Hy	34.32	98	T	T	14 56 54.4	
	baz=296,slow=75,SNR=8.0						
H11N1	WAKE ISLAND Hy	34.32	98	T	T	14 56 56.7	
	baz=296,slow=75,SNR=3.4						
H11N3	WAKE ISLAND Hy	34.33	98	T	T	14 56 56.5	
	baz=296,slow=75,SNR=6.9						
SEY	Seymchan	36.56	17	P	P	14 20 28.0	-1.8
	comp=Z,1.1nm,0.9s,baz=264,slow=17,SNR=2.7						
WMQ	Urumqi	36.93	305	eP	P	14 20 33.9	+0.6
WMQ				pP	pP	14 20 43.1	-0.7
WMQ				pmax	pmax		
	comp=Z,140nm,3.8s						
WMQ				LR	LR		
	comp=Z,130nm,28.3s						
WMQ				LR	LR		
	comp=Z,450nm,23.3s						
WMQ				LR	LR		
	comp=Z,390nm,20.9s						
ODAN	Odare	37.98	277	eP	P	14 20 42.1	-0.5
	comp=Z,15nm,0.7s						
JIRN	Jiri	38.83	279	eP	P	14 20 49.5	-0.4
	comp=Z,6.3nm,0.5s						
GUN	Gumba	39.05	279	eP	P	14 20 50.8	-0.9
KRVT	Keravat (AS076	39.23	145	P	P	14 20 52.8	-0.1
	comp=Z,42nm,0.4s,baz=222,slow=5.9,SNR=4.5						
KRVT				LR	LR	14 33 51.7	
	comp=Z,102nm,21.9s,baz=309,slow=31						
SOEI	Soe	39.24	190	P	P	14 20 52.9	-0.1
PKI	Pulchoki	39.53	279	eP	P	14 20 55.2	-0.5
PKIN	Phulchoki	39.54	279	eP	P	14 20 55.1	-0.6
	comp=Z,3.3nm,0.4s						
DMN	Daman	39.78	279	eP	P	14 20 57.8	+0.1
GKN	Gorkha	40.10	280	eP	P	14 20 59.5	-0.7
	comp=Z,4.4nm,0.3s						
DANN	Dangsing	40.77	281	eP	P	14 21 05.8	-0.2
	comp=Z,24nm,0.8s						
MK31	Makanchi Array	41.13	309	P	P	14 21 07.0	-1.3
MKAR	Makanchi Array	41.13	309	P	P	14 21 07.8	-0.6
	comp=Z,0.6nm,0.5s,baz=96,slow=9.8,SNR=12						
MKAR				PcP	PcP	14 23 07.9	+0.7
	comp=Z,0.3nm,0.5s,baz=103,slow=6.4,SNR=3.5						
MKAR				ScP	ScP	14 26 55.7	+1.5
	comp=Z,0.8nm,1.0s,baz=93,slow=6.1,SNR=4.1						
MKAR				LR	LR	14 39 56.3	
	comp=Z,174nm,20.2s,baz=108,slow=39						
MKAR	Makanchi Array	41.13	309	P	P	14 21 07.0	-1.3
ZALV	Zalesovo Beam	41.16	320	P	P	14 21 08.5	0.0
	comp=Z,0.7nm,0.3s,baz=120,slow=8.8,SNR=4.6						
ZALV				LR	LR	14 40 06.2	
	comp=Z,520nm,18.3s,baz=110,slow=39						
PMG	Port Moresby	41.64	155	LR	LR	14 35 58.4	
	comp=Z,119nm,21.8s,baz=297,slow=32						
MTN	Manton Dam	41.84	179	P	P	14 21 13.7	-0.7
MTN				IAmb	IAmb	14 21 14.8	
	comp=Z,22nm,0.9s						
TIXI	Tiksi	42.46	359	LR	LR	14 40 19.3	
	comp=Z,203nm,19.4s,baz=168,slow=38						
KURK	Kurchatov	44.11	314	P	P	14 21 31.4	-1.1
KURK				IAmb	IAmb	14 21 50.5	
	comp=Z,14nm,1.4s						
KURBB	Kurchatov Arra	44.15	314	P	P	14 21 31.9	-0.8
	comp=Z,1.8nm,0.5s,baz=101,slow=9.0,SNR=21						
KNRA	Kununurra	44.69	182	P	P	14 21 37.6	+0.3
KSH	Kashi	45.56	298	P	P	14 21 45.7	+1.4
KSH				pP	pP	14 21 58.1	+3.1
KSH				PP	PP	14 23 34.2	+3.0
KSH				S	S	14 28 25.1	+1.0
KSH				sS	sS	14 28 46.2	+6.2
KSH				pmax	pmax		
	comp=Z,12nm,0.5s						
KSH				LR	LR		
	comp=Z,310nm,10.1s						
KSH				LR	LR		
	comp=Z,350nm,8.0s						
KSH				LR	LR		
	comp=Z,700nm,11.4s						
NRIK	Noril'sk	47.05	341	P	P	14 21 54.1	-1.3
	comp=Z,1.6nm,0.4s,baz=122,slow=9.5,SNR=3.3						
NRIK				LR	LR	14 41 17.4	
	comp=Z,177nm,18.9s,baz=348,slow=36						
FITZ	Fitzroy Crossi	47.30	186	P	P	14 21 57.6	-0.2
	comp=Z,3.0nm,0.7s,baz=16,slow=8.3,SNR=9.5						
FITZ				LR	LR	14 42 45.2	
	comp=Z,35nm,18.2s,baz=354,slow=37						
FITZ	Fitzroy Crossi	47.30	186	P	P	14 21 58.4	+0.6
FITZ				IAmb	IAmb	14 23 18.7	
	comp=Z,18nm,1.6s						
WB0	Warramunga Arr	48.87	175	P	P	14 22 09.8	-0.1
WB0				IAmb	IAmb	14 22 42.8	
	comp=Z,40nm,1.9s						
WRA	Warramunga Arr	49.04	175	P	P	14 22 10.8	-0.5
	comp=Z,5.1nm,0.9s,baz=350,slow=8.0,SNR=19						
WRA				LR	LR	14 41 41.5	
	comp=Z,69nm,21.5s,baz=125,slow=35						
WRA	Warramunga Arr	49.04	175	P	P	14 22 11.3	0.0
WB2	Warramunga Arr	49.04	175	P	P	14 22 11.2	-0.1
WB2				IAmb	IAmb	14 22 12.2	
	comp=Z,15nm,1.1s						
KKAR	Karatay Array	49.39	303	P	P	14 22 12.7	-1.2
BRVK	Borovoye	49.51	316	P	P	14 22 13.7	-0.9
BRVK				IAmb	IAmb	14 22 23.8	
	comp=Z,9.8nm,1.1s						
PSA00	Pilbara Seismi	51.56	193	P	P	14 22 30.2	-0.1
PSA00				IAmb	IAmb	14 22 31.2	
	comp=Z,9.1nm,0.8s						
AS31	Alice Springs	52.70	176	P	P	14 22 38.6	-0.2
ASAR	Alice Springs	52.71	176	P	P	14 22 39.4	+0.5
	comp=Z,3.3nm,0.9s,baz=353,slow=6.1,SNR=31						
ASAR				LR	LR	14 43 34.1	
	comp=Z,59nm,21.5s,baz=352,slow=34						
ASAR	Alice Springs	52.71	176	P	P	14 22 38.6	-0.2
FALS	False Pass	53.02	41	P	P	14 22 41.4	+0.6
ABKAR	Akbulak array	56.11	312	P	P	14 23 02.5	-0.9
ARU	Arti	56.32	321	LR	LR	14 50 04.8	
	comp=Z,541nm,20.3s,baz=80,slow=39						
AKTO	Aktyubinsk	57.20	313	LR	LR	14 49 42.0	
	comp=Z,495nm,21.2s,baz=72,slow=38						
IMAR	Indian Mountai	57.88	28	P	P	14 23 16.6	+0.9
PPLA	Purkeypile	58.66	32	P	P	14 23 21.9	+0.5
FORT	Forrest	59.74	182	P	P	14 23 29.1	+0.3
ILAR	Eielson Array	60.83	29	P	P	14 23 37.2	+1.2
	comp=Z,0.8nm,0.9s,baz=296,slow=9.0,SNR=8.4						
KIRV	Kirov	61.00	324	LR	LR	14 52 54.1	
	comp=Z,259nm,19.7s,baz=153,slow=39						
BMAR	Burnt Mountain	61.42	26	P	P	14 23 41.6	+1.5
STKA	Stephens Creek	61.69	169	P	P	14 23 42.4	+0.2
	comp=Z,2.1nm,0.8s,baz=357,slow=7.8,SNR=5.0						
STKA				LR	LR	14 49 55.9	
	comp=Z,78nm,21.6s,baz=20,slow=36						
BCAR	Beaver Creek A	63.34	31	P	P	14 23 53.7	+0.8
ARCES	ARCESS Array B	67.95	338	P	P	14 24 22.0	-0.6
	comp=Z,4.8nm,0.8s,baz=16,slow=9.1,SNR=2.9						
KBZ	Khabaz	68.83	309	P	P	14 24 29.0	+0.6
	comp=Z,2.9nm,0.9s,baz=232,slow=1.8,SNR=4.2						
KBZ				LR	LR	14 56 47.2	
	comp=Z,154nm,18.3s,baz=58,slow=38						
FINES	FINESS Array B	71.25	331	P	P	14 24 42.1	-0.9
	comp=Z,2.0nm,0.8s,baz=26,slow=4.9,SNR=8.6						
FINES				LR	LR	14 58 58.7	
	comp=Z,562nm,20.5s,baz=25,slow=38						
AKASG	Malin Array Be	74.56	320	P	P	14 25 02.5	-0.2
	comp=Z,0.6nm,0.3s,baz=61,slow=6.5,SNR=4.1						
AKASG				LR	LR	15 00 48.5	
	comp=Z,355nm,18.6s,baz=60,slow=38						
YKA	Yellowknife Ar	74.94	26	P	P	14 25 04.6	-0.2
	comp=Z,0.8nm,0.8s,baz=304,slow=5.6,SNR=11						
NOA	NORSAR Array B	77.50	334	LR	LR	15 05 22.9	
	comp=Z,175nm,19.5s,baz=0.0,slow=40						
GERES	GERESS Array B	84.00	324	LR	LR	15 07 04.6	
	comp=Z,307nm,19.3s,baz=41,slow=38						
KVN	Kaiserville	86.74	47	P	P	14 26 08.9	+0.4
KVN				IAmb	IAmb	14 26 10.7	
	comp=Z,3.7nm,1.0s						
NVAR	Mina Array Bea	86.97	47	P	P	14 26 11.0	+1.3
	comp=Z,0.9nm,0.6s,baz=65,slow=28,SNR=7.1						
NVAR	Mina Array Bea	86.97	47	P	P	14 26 10.2	+0.5
PDAR	Pinedale Array	89.55	40	P	P	14 26 22.0	+0.2
	comp=Z,0.5nm,0.9s,baz=0.0,slow=2.1,SNR=3.7						
KEST	Kesra	94.90	316	LR	LR	15 14 44.9	
	comp=Z,185nm,18.6s,baz=312,slow=39						
ESDC	Sonseca Array	99.41	326	LR	LR	15 16 12.4	
	comp=Z,165nm,18.2s,baz=190,slow=38						

SJA ***10*** *14:25:42.3±1.2, 22°.40S×67°.66W, h186^{km}±8^{km}, ML3.5, MW3.3*

GUC ***10*** *14:25:44.1±0.5, 22°.33S×67°.89W, h201^{km}±5^{km}, ML3.6*

ISC 10 14:25:41.6±1.8**, 22°.39S**±0°.05×**67°.70W**±0°.04**, h196**^{km}±14^{km}**, n37, σ1^{s}06**/65**, 5C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.15	258	iP	Pn	14 26 13.0	+0.6
LVC				iS	Sn	14 26 35.4	-0.9
PB09	IPOC Station P	1.55	292	eP	Pn	14 26 16.8	+1.2
PB09				iS	Sn	14 26 41.4	-0.6
PB09				IAML		14 26 44.0	
	comp=N,189nm,0.1s						
PB09	IPOC Station P	1.55	292	iP	Pn	14 26 16.9	+1.2
PB09				IAML		14 26 17.3	
	comp=Z,155nm,0.2s						
PB06	IPOC Station P	1.76	259	eP	Pn	14 26 18.6	+0.9
PB06				iS	Sn	14 26 45.2	-0.4
PB06				IAML		14 26 48.3	
	comp=E,432nm,0.1s						
PB06	IPOC Station P	1.76	259	iP	Pn	14 26 18.8	+1.2
PB06				IAML		14 26 20.7	
	comp=Z,261nm,0.1s						
PB06				iS	Sn	14 26 45.6	0.0
PB15	IPOC Station P	1.83	243	⇓iP	Pn	14 26 19.8	+1.4
PB15				iS	Sn	14 26 46.8	-0.2
PB15	IPOC Station P	1.83	243	eP	Pn	14 26 19.6	+1.3
PB03	IPOC Station P	1.94	280	eP	Pn	14 26 20.3	+1.0
PB03				iS	Sn	14 26 47.3	-1.4
PB03	IPOC Station P	1.94	280	iP	Pn	14 26 20.4	+1.0
PB03				iS	Sn	14 26 48.1	-0.6
YJA	Yavi	2.03	85	iP	Pn	14 26 20.7	0.0
YJA				iS	Sn	14 26 50.6	-0.3
PB01	IPOC Station P	2.13	308	eP	Pn	14 26 22.0	+0.6
PB01				iS	Sn	14 26 51.2	-1.1
PB01	IPOC Station P	2.13	308	eP	Pn	14 26 22.1	+0.7
PB01				iS	Sn	14 26 52.2	-0.1
PB07	IPOC Station P	2.13	287	eP	Pn	14 26 22.4	+1.0
PB07				iS	Sn	14 26 50.9	-1.5
PB07				IAML		14 26 51.8	
	comp=N,581nm,0.3s						
PB07	IPOC Station P	2.13	287	iP	Pn	14 26 22.6	+1.0
PB07				iS	Sn	14 26 51.5	-0.9
PB04	IPOC Station P	2.27	271	eP	Pn	14 26 23.9	+1.0
PB04				iS	Sn	14 26 53.8	-1.2
PB04	IPOC Station P	2.27	271	iP	Pn	14 26 24.0	+1.0
PB04				iS	Sn	14 26 54.5	-0.5
PB02	IPOC Station P	2.30	297	⇑iP	Pn	14 26 23.9	+0.7
PB02				iS	Sn	14 26 53.8	-1.7
PB02	IPOC Station P	2.30	297	iP	Pn	14 26 24.0	+0.7
PB02				iS	Sn	14 26 53.9	-1.6
PB05	IPOC Station P	2.36	258	⇑iP	Pn	14 26 25.0	+1.1
PB05				iS	Sn	14 26 55.3	-1.4
PB05				IAML		14 26 58.3	
	comp=E,299nm,0.5s						
PB05	IPOC Station P	2.36	258	iP	Pn	14 26 25.0	+1.1
PB05				iS	Sn	14 26 55.4	-1.3
PB08	IPOC Station P	2.61	328	eP	Pn	14 26 28.4	+1.4
PB08				iS	Sn	14 27 02.3	-0.1
PB08				IAML		14 27 05.5	
	comp=E,98nm,0.5s						
PB08	IPOC Station P	2.61	328	iP	Pn	14 26 28.5	+1.4
PB08				iS	Sn	14 27 03.0	+0.7
PATCX	Punta Patache	2.77	304	⇑iP	Pn	14 26 28.9	+0.5
PATCX				iS	Sn	14 27 03.0	-1.9
PATCX				IAML		14 27 05.4	
	comp=E,116nm,0.4s						
PB10	IPOC Station P	2.86	246	eP	Pn	14 26 30.5	+1.0
PB10				iS	Sn	14 27 05.7	-1.1
PB10	IPOC Station P	2.86	246	iP	Pn	14 26 30.6	+1.2
TA01	Diego Aracena	2.94	308	eP	Pn	14 26 30.3	0.0
TA01				iS	Sn	14 27 06.5	-1.8
AZAP	Zapla	3.03	128	iP	Pn	14 26 31.7	0.0
AZAP				iS	Sn	14 27 09.6	-1.2
GO01	Chusmiza	3.04	332	eP	Pn	14 26 33.1	+1.0
GO01				iS	Sn	14 27 11.6	+0.1
PB11	IPOC Station P	3.19	325	⇑iP	Pn	14 26 33.8	+0.3
PB11				iS	Sn	14 27 12.5	-1.6
PB11	IPOC Station P	3.19	325	iP	Pn	14 26 33.8	+0.3
PB14	IPOC Station P	3.34	228	iP	Pn	14 26 36.7	+1.3
PB14				IAML		14 27 17.7	
	comp=Z,92nm,0.2s						
PSGCX	Pisagua	3.58	320	iP	Pn	14 26 37.9	-0.3
PSGC	Pisagua	3.58	320	⇓iP	Pn	14 26 37.9	-0.3
MNMC	Minye Minye	3.69	331	⇑iP	Pn	14 26 40.6	+0.9
MNMC				iS	Sn	14 27 24.5	-0.9
MNMCX	Minye Minye	3.69	331	iP	Pn	14 26 40.7	+0.9
MNMCX				iS	Sn	14 27 25.2	-0.1
PB12	IPOC Station P	4.49	326	iP	Pn	14 26 48.8	-0.8
LPAZ	La Paz	6.08	356	iP	Pn	14 27 12.5	+2.0

BJI ***10*** *14:32:44.5±0.0, 52°.37N×158°.24E, h132^{km}, mB5.1/33, mb4.7/43*

KRSC ***10*** *14:32:48.9±1.1, 52°.07N×157°.83E, h136^{km}±6^{km}, ML5.0, FELT [III-IV] at lighthouse Krugliy.*

MOS ***10*** *14:32:49.7±0.8, 52°.18N×157°.50E, h142^{km}, mb4.6/55, Error ellipse: s-maj=7.3km s-min=3.3km az=72.7*

NEIC ***10*** *14:32:51.4±1.5, 52°.29N±0°.08×157°.5E±0°.1, h138^{km}, mb4.8/303, Error ellipse: s-maj=12.0km s-min=9.2km az=148.0*

IDC ***10*** *14:32:52.0±0.5, 52°.34N×157°.45E, h142^{km}±3^{km}, mb4.1/31, mb1 4.2/37, mb1mx4.1/57, mbtmp4.5/37, MS3.8/1, Ms1 3.8/1, ms1mx2.8/41, Error ellipse: s-maj=11.3km s-min=7.3km az=151.0*

ISC 10 14:32:50.4±0.4**, 52°.11N**±0°.04×**157°.74E**±0°.03**, h137**^{km}±3^{km}**, h136**^{km}**:pP-P, n809, σ1^{s}23**/871**, mb4.7**/230**, 3C-8D, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAK	Asacha	0.29	20	eP	Pn	14 33 09.7	+0.3
ASAK	Asacha	0.29	20	PN	Pn	14 33 09.7	+0.3
KDTR	Khodutka, Kamc	0.37	145	iP	Pn	14 33 08.9	-0.6
KDTR				eS	Sn	14 33 22.2	-1.8
KDTR	Khodutka, Kamc	0.37	145	PN	Pn	14 33 08.9	-0.6
KDTR				S	Sn	14 33 22.2	-1.8
MTVR	Mutnovka	0.47	36	eP	Pn	14 33 09.9	-0.3
MTVR				eS	Sn	14 33 25.0	-0.2
MTVR	Mutnovka	0.47	36	PN	Pn	14 33 09.9	-0.3
MTVR				S	Sn	14 33 25.0	-0.2
GRL	Gorelyy	0.49	25	eP	Pn	14 33 10.7	+0.4
GRL				eS	Sn	14 33 25.5	+0.1
GRL	Gorelyy	0.49	25	PN	Pn	14 33 10.7	+0.4
GRL				S	Sn	14 33 25.5	+0.1
RUS	Russkaya	0.58	55	iP	Pn	14 33 10.2	-0.4
RUS				eS	Sn	14 33 24.8	-1.1
RUS	Russkaya	0.58	55	PN	Pn	14 33 10.2	-0.4
RUS				S	Sn	14 33 24.8	-1.1
MIPR	Malaya Ipel'ka	0.62	286	iP	Pn	14 33 11.2	+0.3
MIPR	Malaya Ipel'ka	0.62	286	PN	Pn	14 33 11.2	+0.3
KRMR	Karymshinskiy	0.76	18	eP	Pn	14 33 11.3	-0.5
KRMR				eS	Sn	14 33 27.4	-0.8
KRMR	Karymshinskiy	0.76	18	PN	Pn	14 33 11.3	-0.5
KRMR				S	Sn	14 33 27.4	-0.8
PAU	Pauzhetka	0.86	222	eP	Pn	14 33 13.2	+0.5
PAU				eS	Sn	14 33 30.3	+0.8
PAU	Pauzhetka	0.86	222	PN	Pn	14 33 13.2	+0.5
PAU				S	Sn	14 33 30.3	+0.8
APC	Apacha	0.89	337	iP	Pn	14 33 13.3	+0.4
APC				eS	Sn	14 33 30.4	+0.4
APC	Apacha	0.89	337	PN	Pn	14 33 13.3	+0.4
APC				S	Sn	14 33 30.4	+0.4
PEA0B	Petropavlovsk-	1.00	359	PN	Pn	14 33 14.4	+0.6
PEA0B	Petropavlovsk-	1.00	359		Pn	14 33 14.4	+0.6
PETK	Petropavlovsk-	1.00	359	P	Pn	14 33 14.2	+0.4
	593nm,0.3s,baz=217,slow=12						
PETK				S	Sn	14 33 31.8	0.0
	87nm,0.3s,baz=124,slow=13,SNR=8.3						
PET	Petropavlovsk	1.07	31	PN	Pn	14 33 14.5	0.0
PET				S	Sn	14 33 32.2	-0.7
PET	Petropavlovsk	1.07	31		Pn	14 33 14.5	0.0
PET				Sn	Sn	14 33 32.0	-0.9
DALK	Dalny	1.11	33	eP	Pn	14 33 14.9	0.0
DALK				eS	Sn	14 33 32.9	-0.7
DALK	Dalny	1.11	33	PN	Pn	14 33 14.9	0.0
DALK				S	Sn	14 33 32.9	-0.7
UGLR	Uglovaya	1.29	31	eP	Pn	14 33 17.6	+0.9
UGLR				eS	Sn	14 33 37.5	+0.6
UGLR	Uglovaya	1.29	31	PN	Pn	14 33 17.6	+0.9
UGLR				S	Sn	14 33 37.5	+0.6
KOK	Koryaka	1.31	24	eP	Pn	14 33 17.9	+1.0
KOK	Koryaka	1.31	24	PN	Pn	14 33 17.9	+1.0
AVH	Avacha	1.31	27	eP	Pn	14 33 17.8	+0.9
AVH	Avacha	1.31	27	PN	Pn	14 33 17.8	+0.9
SMAR	Somma	1.33	29	eP	Pn	14 33 18.0	+0.7
SMAR				eS	Sn	14 33 37.9	+0.1
SMAR	Somma	1.33	29	PN	Pn	14 33 18.0	+0.7
SMAR				S	Sn	14 33 37.9	+0.1
KRER	Koryakskii	1.35	27	eP	Pn	14 33 18.2	+0.7
KRER	Koryakskii	1.35	27	PN	Pn	14 33 18.2	+0.7
KRX	Arik	1.37	24	iP	Pn	14 33 18.1	+0.5
KRX				eS	Sn	14 33 38.7	+0.2
KRX	Arik	1.37	24	PN	Pn	14 33 18.1	+0.5
KRX				S	Sn	14 33 38.7	+0.2
NLC	Nalytchevo	1.45	42	eP	Pn	14 33 17.6	-0.7
NLC				eS	Sn	14 33 37.6	-2.0
NLC	Nalytchevo	1.45	42	PN	Pn	14 33 17.6	-0.7
NLC				S	Sn	14 33 37.6	-2.0
SPN	Mys Shipunski	1.71	54	eP	Pn	14 33 20.9	-0.3
SPN				eS	Sn	14 33 42.6	-2.3
SPN	Mys Shipunski	1.71	54	PN	Pn	14 33 20.9	-0.3
SPN				S	Sn	14 33 42.6	-2.3
SKR	Severo-Kuril's	1.75	216	eP	Pn	14 33 22.5	+0.8
SKR				eS	Sn	14 33 46.0	+0.3
SKR	Severo-Kuril's	1.75	216	dePN	Pn	14 33 22.5	+0.8
ALID	Alaid	1.85	229	eP	Pn	14 33 23.9	+0.9
ALID				eS	Sn	14 33 48.6	+0.7
ALID	Alaid	1.85	229	PN	Pn	14 33 23.9	+0.9
ALID				S	Sn	14 33 48.6	+0.7
KII	Karymskiy	2.19	27	eP	Pn	14 33 27.6	+0.6
KII				eS	Sn	14 33 55.1	-0.1
KII	Karymskiy	2.19	27	PN	Pn	14 33 27.6	+0.6
KII				S	Sn	14 33 55.1	-0.1
KZV	Kizimen	3.37	26	eP	Pn	14 33 42.8	+0.7
KZV				eS	Sn	14 34 21.4	-0.8
KZV	Kizimen	3.37	26	PN	Pn	14 33 42.8	+0.7
KZV				S	Sn	14 34 21.4	-0.8
TUMD	Tumrok D	3.48	26	eP	Pn	14 33 44.4	+1.0
TUMD				eS	Sn	14 34 24.0	-0.5
TUMR	Tumrok	3.49	23	eP	Pn	14 33 44.8	+1.2
TUMR				eS	Sn	14 34 24.9	+0.1
TUMR	Tumrok	3.49	23	PN	Pn	14 33 44.8	+1.2
TUMR				S	Sn	14 34 24.9	+0.1
ESO	Esso	3.87	8	eP	Pn	14 33 49.3	+0.9
ESO	Esso	3.87	8	PN	Pn	14 33 49.3	+0.9
KMNR	Kamenistaya	3.94	21	eP	Pn	14 33 51.1	+1.6
KMNR				eS	Sn	14 34 35.5	+0.1
KMNR	Kamenistaya	3.94	21	PN	Pn	14 33 51.1	+1.6
KMNR				S	Sn	14 34 35.5	+0.1
KPT	Kopyto	4.13	20	eP	Pn	14 33 53.3	+1.3
KPT	Kopyto	4.13	20	PN	Pn	14 33 53.3	+1.3
KIRR	Kirishev	4.15	21	eP	Pn	14 33 52.8	+0.5
KIRR	Kirishev	4.15	21	PN	Pn	14 33 52.8	+0.5
KOZ	Kozyrevsk	4.15	17	eP	Pn	14 33 51.7	-0.5
KOZ	Kozyrevsk	4.15	17	PN	Pn	14 33 51.7	-0.5
ZLN	Zelenaya	4.31	24	eP	Pn	14 33 56.6	+2.2
ZLN	Zelenaya	4.31	24	PN	Pn	14 33 56.6	+2.2
LGNR	Loginova	4.34	22	eP	Pn	14 33 56.5	+1.5
LGNR	Loginova	4.34	22	PN	Pn	14 33 56.5	+1.5
SRDR	Sredinnyy	4.38	15	eP	Pn	14 33 55.9	+0.7
SRDR	Sredinnyy	4.38	15	PN	Pn	14 33 55.9	+0.7
CIRR	Tsirk	4.39	23	eP	Pn	14 33 56.3	+0.9
CIRR	Tsirk	4.39	23	PN	Pn	14 33 56.3	+0.9
KLY	Klyuchi	4.55	21	eP	Pn	14 33 59.3	+1.9
KLY	Klyuchi	4.55	21	PN	Pn	14 33 59.3	+1.9
BDR	Baidarnaya	4.91	23	eP	Pn	14 34 02.2	-0.1
BDR	Baidarnaya	4.91	23	PN	Pn	14 34 02.2	-0.1
SRKR	Sorokina	4.98	22	eP	Pn	14 34 03.8	+0.6
SRKR	Sorokina	4.98	22	PN	Pn	14 34 03.8	+0.6
SMKR	Semkarok	4.99	24	P	Pn	14 34 04.6	+1.3
SMKR	Semkarok	4.99	24	PN	Pn	14 34 04.6	+1.3
KBG	Krutoberegovo	5.08	33	eP	Pn	14 34 04.5	+0.1
KBG	Krutoberegovo	5.08	33	PN	Pn	14 34 04.5	+0.1
KBTR	Krutoberegovo	5.08	34	eP	Pn	14 34 04.5	0.0
KBTR				eS	Sn	14 35 02.6	+0.4
KBTR	Krutoberegovo	5.08	34	PN	Pn	14 34 04.5	0.0
KBTR				S	Sn	14 35 02.6	+0.4
BKI	Bering	5.79	54	eP	Pn	14 34 13.2	-0.8
BKI				eS	Sn	14 35 12.2	-7.2
BKI	Bering	5.79	54	PN	Pn	14 34 13.2	-0.8
PALN	Palana	7.11	9	eP	Pn	14 34 32.2	+0.6
PALN	Palana	7.11	9	PN	Pn	14 34 32.2	+0.6
OSSR	Ossora	7.76	21	eP	Pn	14 34 41.5	+1.1
OSSR	Ossora	7.76	21	PN	Pn	14 34 41.5	+1.1
MA2	Magadan	8.44	335	P	Pn	14 34 49.4	-0.1
	1.4nm,0.3s,baz=146,slow=10.0,SNR=30						
MA2	Magadan	8.44	335	d iPN	Pn	14 34 50.1	+0.6
MA2				pmax	pmax		
	comp=Z,31nm,0.7s						
MA2	Magadan	8.44	335		Pn	14 34 49.8	+0.2
TYV	Tymovskoe	9.49	268	ePN	Pn	14 35 06.9	+3.2
TYV				pmax	pmax		
	comp=Z,300nm,3.1s						
TYV				pmax	pmax		
	comp=Z,30nm,1.2s						
TILK	Tilichiki	9.57	26	eP	Pn	14 35 05.2	+0.7
TILK	Tilichiki	9.57	26	PN	Pn	14 35 05.2	+0.7
SMY	Shemya	10.02	80	PN	Pn	14 35 12.8	+2.1
SMY	Shemya	10.02	80	Pn	Pn	14 35 12.8	+2.1
SHO	Shikotan	11.01	226	ePN	Pn	14 35 19.8	-4.0
SHO				pmax	pmax		
	comp=Z,21nm,0.4s						
SHO				pmax	pmax		
	comp=N,19nm,0.3s						
SHO				pmax	pmax		
	comp=E,9.0nm,0.2s						
YSS	Yuzh-Sakhalins	11.01	248	PN	Pn	14 35 26.1	+2.2
YSS	Yuzh-Sakhalins	11.01	248		Pn	14 35 26.1	+2.2
SEY	Seymchan	11.22	347	P	Pn	14 35 26.5	-0.1
	comp=E,0.3nm,0.3s,baz=151,slow=12,SNR=13						
SEY	Seymchan	11.22	347	ePN	Pn	14 35 24.9	-1.7
YUK	Yuzh-Kuril'sk	11.32	229	iPN	Pn	14 35 26.6	-1.4
KMSK	Kamenskaya	11.34	20	eP	Pn	14 35 28.1	+0.1
KMSK	Kamenskaya	11.34	20	PN	Pn	14 35 28.1	+0.1
NMR	Nemuro--Hokkai	11.89	227	ePN	Pn	14 35 31.7	-3.8
JKA	Kamikawa-asahi	12.87	238		Pn	14 35 50.1	+1.8
ASAJ	Asahikawa	12.88	238	P	Pn	14 35 50.1	+1.8
	comp=E,1.7nm,0.3s,baz=47,slow=8.8,SNR=32						
GRNR	Gornyy	13.36	273	⇓iPN	P	14 35 57.0	-2.1
GRNR				eS	Sn	14 38 25.4	+3.5
GRNR				pmax	pmax		
	comp=Z,70nm,0.8s						
GRNR				smax	smax		
	comp=E,2.0nm,1.0s						
GRNR				MLR	MLR		
	comp=Z,110nm,18.0s						
ERM	Erimo	14.14	230	P	Pn	14 36 01.6	-2.8
ERM	Erimo	14.14	230	Pn	Pn	14 36 01.6	-2.8
ADK	Adak	15.74	81	P	P	14 36 27.4	+2.0
ADK				pmax	pmax		
	comp=Z,80nm,1.2s						
ADK	Adak	15.74	81		P	14 36 27.4	+2.0

ADK				IAmb	IAmb	14 36 38.4	
	comp=Z,80nm,1.1s						
BILL	**Bilibino**	**16.51**	**11**	*ce*P	**P**	**14 36 34.0**	**+0.2**
BILL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BILL	**Bilibino**	**16.51**	**11**	P	**Pn**	**14 36 32.7**	**-0.9**
KLR	**Kul'dur**	**16.69**	**270**	P	**P**	**14 36 37.1**	**+1.1**
	comp=Z,1.0nm,0.3s,baz=62,slow=9.2,SNR=32						
KLR	**Kul'dur**	**16.69**	**270**	*i* P	**P**	**14 36 36.2**	**+0.2**
KLR				pmax	pmax		
	comp=Z,22nm,0.9s						
YAK	**Yakutsk**	**18.05**	**314**	P	**P**	**14 36 49.7**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=103,slow=1.7,SNR=60						
YAK	**Yakutsk**	**18.05**	**314**	*d i*P	**P**	**14 36 49.6**	**-1.1**
YAK				*e*SS	S	14 39 54.9	-15
YAK				pmax	pmax		
	comp=Z,92nm,0.9s						
YAK				pmax	pmax		
	comp=E,42nm,1.1s						
YAK				pmax	pmax		
	comp=N,22nm,1.2s						
YAK				pmax	pmax		
	comp=Z,18nm,0.5s						
YAK				pmax	pmax		
	comp=E,114nm,1.4s						
YAK				pmax	pmax		
	comp=N,31nm,0.9s						
YAK	**Yakutsk**	**18.05**	**314**	P	**P**	**14 36 48.5**	**-2.2**
ZEA	**Zeya**	**18.39**	**287**	*e*P	**P**	**14 36 54.2**	**-0.3**
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
USA0B	**Ussuriysk Arra**	**18.84**	**255**	P	**P**	**14 36 59.4**	**-0.1**
USA0B				pmax	pmax		
	comp=Z,41nm,1.6s						
USA0B	**Ussuriysk Arra**	**18.84**	**255**	P	**P**	**14 36 59.4**	**-0.1**
USRK	**Ussuriysk Ar.**	**18.84**	**255**	P	**P**	**14 36 59.3**	**-0.2**
	baz=58,slow=9.8,SNR=8.9						
USRK	**Ussuriysk Ar.**	**18.84**	**255**	P	**P**	**14 36 59.1**	**-0.4**
SPIA	**Saint Paul Isl**	**19.09**	**62**	P	**Pn**	**14 37 04.1**	**-0.4**
GAMB	**Gambell**	**19.75**	**42**	P	**P**	**14 37 10.0**	**+0.8**
MDJ	**Mudanjiang**	**20.05**	**259**	P	**P**	**14 37 11.7**	**-0.9**
MDJ				pmax	pmax		
	comp=Z,14nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,200nm,6.0s						
NIKH	**Nikolski High**	**20.24**	**74**	P	Pn	14 37 16.7	-1.1
MJB9	**Matsu-Tunnel**	**20.81**	**229**	P	**P**	**14 37 21.2**	**+0.4**
MJB9				IAmb	IAmb	14 37 22.7	
	comp=Z,47nm,0.8s						
MAJO	**Matsushiro**	**20.81**	**229**	P	**P**	**14 37 21.2**	**+0.4**
MAJO				pmax	pmax		
	comp=Z,46nm,0.9s						
MAJO	**Matsushiro**	**20.81**	**229**	P	**P**	**14 37 21.2**	**+0.4**
MAJO				IAmb	IAmb	14 37 22.7	
	comp=Z,46nm,0.8s						
MAT	**Matsushiro**	**20.81**	**229**	P	**P**	**14 37 21.6**	**+0.8**
MJAR	**Matsushiro Arr**	**20.81**	**229**	P	**P**	**14 37 22.1**	**+1.3**
	comp=Z,30nm,1.0s,baz=23,slow=11,SNR=38						
MJAR	**Matsushiro Arr**	**20.81**	**229**	P	**P**	**14 37 21.0**	**+0.2**
MJAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MJAR	**Matsushiro Arr**	**20.81**	**229**	P	**P**	**14 37 20.9**	**+0.2**
AKUT	**Akutan**	**21.84**	**70**	P	**P**	**14 37 34.0**	**+2.4**
INU	**Inuyama**	**22.34**	**230**	P	**P**	**14 37 37.8**	**+1.0**
INU				IAmb	IAmb	14 37 42.1	
	comp=Z,30nm,0.9s						
ANM	**Nome**	**22.63**	**42**	P	**P**	**14 37 39.5**	**+0.1**
ANM				pmax	pmax		
	comp=Z,29nm,1.7s						
ANM	**Nome**	**22.63**	**42**	P	**P**	**14 37 39.5**	**+0.1**
JHJ2	**Mitsune**	**23.00**	**221**	P	**P**	**14 37 43.9**	**+0.7**
CN2	**Changchun**	**23.01**	**262**	*e*P	**P**	**14 37 41.5**	**-1.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TIXI	**Tiksi**	**23.41**	**337**	P	**P**	**14 37 45.6**	**-0.8**
	comp=Z,24nm,0.6s,baz=124,slow=11,SNR=90						
TIXI	**Tiksi**	**23.41**	**337**	*ce*P	**P**	**14 37 45.4**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,21nm,0.6s						
TIXI	**Tiksi**	**23.41**	**337**	P	**P**	**14 37 45.2**	**-1.3**
TIXI				IAmb	IAmb	14 37 47.5	
	comp=Z,25nm,0.6s						
HIA	**Hailar**	**24.06**	**278**	P	**P**	**14 37 51.1**	**-1.6**
HIA				pmax	pmax		
	comp=Z,26nm,0.8s						
HIA	**Hailar**	**24.06**	**278**	P	**P**	**14 37 51.1**	**-1.6**
HIA				IAmb	IAmb	14 37 52.8	
	comp=Z,26nm,0.8s						
RDOG	**Red Dog Mine**	**24.67**	**35**	P	**P**	**14 37 58.9**	**+0.8**
CNBA	**Chernabura Isl**	**25.26**	**67**	P	**P**	**14 38 06.2**	**+2.8**
KSRS	**Korea Array**	**25.51**	**247**	P	**P**	**14 38 07.1**	**+1.2**
	comp=Z,1.8nm,0.8s,baz=47,slow=8.4,SNR=7.4						
KSRS				ScP	**ScP**	**14 45 01.9**	**+1.9**
	comp=Z,3.5nm,1.2s,baz=20,slow=4.0,SNR=5.9						
KSAR	**Wonju Array Be**	**25.54**	**247**	P	**P**	**14 38 05.8**	**-0.3**
KSAR	**Wonju Array Be**	**25.54**	**247**	P	**P**	**14 38 05.8**	**-0.3**
SVW2	**Sparrevohn**	**26.67**	**52**	P	**P**	**14 38 17.2**	**+1.1**
SVW2				IAmb	IAmb	14 39 00.5	
	comp=Z,66nm,1.8s						
JNU	**Nakatsue**	**27.15**	**236**	P	**P**	**14 38 21.7**	**+1.0**
	comp=Z,6.0nm,0.8s,baz=11,slow=7.3,SNR=5.1						
JNU	**Nakatsue**	**27.15**	**236**	P	**P**	**14 38 21.6**	**+0.9**
IMAR	**Indian Mountai**	**27.70**	**41**	P	**P**	**14 38 25.3**	**+0.1**
SII	**Sitkinak Islan**	**27.91**	**62**	P	**P**	**14 38 28.9**	**+1.7**
PPLA	**Purkeypile**	**28.23**	**48**	P	**P**	**14 38 31.4**	**+1.2**
PPLA				IAmb	IAmb	14 39 10.7	
	comp=Z,40nm,1.7s						
OHAK	**Old Harbor**	**28.27**	**60**	P	**P**	**14 38 30.0**	**-0.4**
KDAK	**Kodiak Island**	**28.54**	**59**	P	**P**	**14 38 32.4**	**-0.4**
	comp=Z,12nm,0.9s,baz=309,slow=8.1,SNR=5.1						
KDAK	**Kodiak Island**	**28.54**	**59**	P	**P**	**14 38 32.3**	**-0.4**
BPAW	**Bear Paw Mtn.**	**28.76**	**45**	P	**P**	**14 38 34.8**	**+0.1**
KTH	**Kantishna Hill**	**28.79**	**47**	P	**P**	**14 38 35.7**	**+0.7**
KTH				IAmb	IAmb	14 39 42.8	
	comp=Z,37nm,1.8s						
MLY	**Manley**	**28.88**	**43**	P	**P**	**14 38 36.5**	**+0.7**
CNPM	**China Poot**	**28.96**	**55**	P	**P**	**14 38 37.8**	**+1.2**
TRF	**Thorofare Moun**	**29.08**	**47**	P	**P**	**14 38 38.2**	**+0.5**
BRLK	**Bradley Lake**	**29.10**	**54**	P	**P**	**14 38 39.6**	**+1.8**
COLD	**Coldfoot**	**29.23**	**39**	P	**P**	**14 38 39.9**	**+1.2**
BWN	**Browne**	**29.43**	**45**	P	**P**	**14 38 42.7**	**+2.2**
BWN				IAmb	IAmb	14 38 43.2	
	comp=Z,28nm,1.1s						
NEA	**Nenana**	**29.59**	**44**	P	**P**	**14 38 42.5**	**+0.5**
NEA				IAmb	IAmb	14 38 44.8	
	comp=Z,8.7nm,0.7s						
TOLK	**Toolik Lake Re**	**29.61**	**36**	P	**P**	**14 38 42.8**	**+0.6**
TOLK	**Toolik Lake Re**	**29.61**	**36**	P	**P**	**14 38 43.3**	**+1.1**
	baz=264						
MCK	**McKinley**	**29.68**	**46**	P	**P**	**14 38 43.3**	**+0.5**
MCK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MCK	**McKinley**	**29.68**	**46**	P	**P**	**14 38 43.3**	**+0.5**
RND	**Reindeer**	**29.73**	**47**	P	**P**	**14 38 43.0**	**-0.3**
RND				pmax	pmax		
	comp=Z,9.0nm,0.8s						
RND	**Reindeer**	**29.73**	**47**	P	**P**	**14 38 43.0**	**-0.3**
GHO	**Glory Hole Cre**	**29.82**	**50**	P	**P**	**14 38 44.9**	**+0.8**
WRH	**Wood River Hil**	**30.02**	**45**	P	**P**	**14 38 46.0**	**+0.3**
WRH				IAmb	IAmb	14 38 47.5	
	comp=Z,13nm,0.8s						
KNK	**Knik Glacier**	**30.08**	**51**	P	**P**	**14 38 46.4**	**0.0**
KNK				IAmb	IAmb	14 38 47.5	
	comp=Z,19nm,0.8s						
SML	**Sawmill**	**30.10**	**50**	P	**P**	**14 38 46.6**	**0.0**
TCOL	**CIGO, UAF Yank**	**30.11**	**44**	P	**P**	**14 38 47.5**	**+1.0**
	baz=272						
COLA	**College**	**30.11**	**44**	P	**P**	**14 38 47.1**	**+0.6**
COLA				pmax	pmax		
	comp=Z,14nm,0.9s						
COLA	**College**	**30.11**	**44**	P	**P**	**14 38 47.1**	**+0.6**
COLA				IAmb	IAmb	14 38 48.3	
	comp=Z,14nm,0.8s						
CCB	**Clear Creek Bu**	**30.14**	**44**	P	**P**	**14 38 47.0**	**+0.2**
POKR	**Poker Plat Res**	**30.28**	**43**	P	**P**	**14 38 49.5**	**+1.4**
	baz=272						
DHY	**Denali Highway**	**30.42**	**47**	P	**P**	**14 38 49.0**	**-0.5**
DHY				IAmb	IAmb	14 38 50.4	
	comp=Z,31nm,1.6s						
HDA	**Harding Lake**	**30.52**	**45**	P	**P**	**14 38 50.1**	**-0.1**
HDA				IAmb	IAmb	14 38 51.4	
	comp=Z,8.7nm,0.6s						
HDA	**Harding Lake**	**30.52**	**45**	P	**P**	**14 38 50.3**	**+0.1**
	baz=273,SNR=8.1						
IL31		**30.53**	**44**	P	**P**	**14 38 50.3**	**+0.1**
IL31				IAmb	IAmb	14 38 51.8	
	comp=Z,12nm,0.8s						
ILAR	**Eielson Array**	**30.53**	**44**	P	**P**	**14 38 50.4**	**+0.1**
	comp=Z,8.5nm,0.7s,baz=263,slow=7.9,SNR=80						
ILAR	**Eielson Array**	**30.53**	**44**	P	**P**	**14 38 50.0**	**-0.2**
SCM	**Sheep Creek Mo**	**30.57**	**50**	P	**P**	**14 38 51.0**	**+0.3**
SCM				pmax	pmax		
	comp=Z,17nm,0.7s						
SCM	**Sheep Creek Mo**	**30.57**	**50**	P	**P**	**14 38 51.0**	**+0.3**
SCM				IAmb	IAmb	14 38 52.1	
	comp=Z,17nm,0.7s						
PRP	**Porcupine Dome**	**31.07**	**42**	P	**P**	**14 38 56.0**	**+0.8**
PRP				IAmb	IAmb	14 38 57.5	
	comp=Z,20nm,0.8s						
FYU	**Fort Yukon**	**31.16**	**40**	P	**P**	**14 38 57.0**	**+1.2**
FYU				IAmb	IAmb	14 38 58.2	
	comp=Z,11nm,0.8s						
BMAR	**Burnt Mountain**	**31.41**	**39**	P	**P**	**14 38 59.0**	**+0.9**
RIDG	**Independent Ri**	**31.49**	**46**	P	**P**	**14 38 58.3**	**-0.5**
RIDG				IAmb	IAmb	14 38 59.3	
	comp=Z,10.0nm,0.9s						
SCRK	**Sand Creek**	**31.84**	**45**	P	**P**	**14 39 01.3**	**-0.6**
SCRK				IAmb	IAmb	14 39 03.1	
	comp=Z,10.0nm,0.9s						
DOT	**Dot Lake**	**31.85**	**46**	P	**P**	**14 39 01.3**	**-0.6**
MENT	**Mentasta**	**32.09**	**47**	P	**P**	**14 39 04.5**	**+0.5**
SONM	**Songino Array**	**32.73**	**283**	P	**P**	**14 39 09.2**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=58,slow=7.7,SNR=6.5						
SONM				PcP	**PcP**	**14 41 51.4**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=102,slow=1.0,SNR=5.8						
SONM				pPcP		14 42 28.1	
	comp=Z,0.3nm,0.5s,baz=86,slow=2.9,SNR=4.1						
SONM				ScP	**ScP**	**14 45 24.5**	**+1.6**
	comp=Z,2.0nm,1.0s,baz=92,slow=3.4,SNR=5.8						
SONM	**Songino Array**	**32.73**	**283**		**ScP**	**14 45 23.3**	**+0.4**
SONM	**Songino Array**	**32.73**	**283**	P	**P**	**14 39 09.1**	**-0.7**
TLY	**Talaya**	**32.73**	**291**	*e*P	**P**	**14 39 10.3**	**+0.5**
TLY				pmax	pmax		
	comp=Z,11nm,1.1s						
CRQM	**Cirque**	**32.74**	**51**	P	**P**	**14 39 10.9**	**+1.0**
CRQM				IAmb	IAmb	14 39 12.0	
	comp=Z,34nm,1.4s						
TGL	**Tana Glacier**	**32.89**	**51**	P	**P**	**14 39 12.0**	**+0.9**
BCAR	**Beaver Creek A**	**32.94**	**47**	P	**P**	**14 39 12.3**	**+0.8**
EGAK	**Eagle**	**32.97**	**44**	P	**P**	**14 39 11.3**	**-0.3**
EGAK				IAmb	IAmb	14 39 12.4	
	comp=Z,14nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**33.10**	**164**	T	T	15 13 38.9	
	baz=350,slow=76,SNR=161						
H11N3	**WAKE ISLAND Hy**	**33.11**	**164**	T	T	15 13 32.2	
	baz=350,slow=76,SNR=141						
H11N1	**WAKE ISLAND Hy**	**33.12**	**164**	T	T	15 13 40.1	
	baz=350,slow=76,SNR=131						
HHC	**Hu-ho-hao-te**	**33.19**	**269**	*e*P	**P**	**14 39 13.2**	**-0.7**
HHC				pP	pP	14 39 38.2	-5.1
HHC				sP	sP	14 40 03.6	+4.6
HHC				PP	**PnPn**	**14 40 28.6**	**-0.5**
HHC				pmax	pmax		
	comp=Z,320nm,4.4s						
BARN	**Barnard Glacie**	**33.38**	**50**	P	**P**	**14 39 16.6**	**+1.1**
BARN				IAmb	IAmb	14 39 23.2	
	comp=Z,38nm,1.6s						
ZAK	**Zakamensk**	**33.46**	**289**	*e*P	**P**	**14 39 16.5**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CTGM	**Chitina Glacie**	**33.56**	**50**	P	**P**	**14 39 17.9**	**+1.0**
CTGM				IAmb	IAmb	14 39 28.4	
	comp=Z,27nm,1.6s						
DAWY	**Dawson**	**33.84**	**45**	P	**P**	**14 39 19.9**	**+0.7**
H11S1	**WAKE ISLAND Hy**	**34.26**	**165**	T	T	15 14 54.6	
	baz=350,slow=76,SNR=80						
H11S3	**WAKE ISLAND Hy**	**34.27**	**165**	T	T	15 14 50.2	
	baz=350,slow=76,SNR=119						
H11S2	**WAKE ISLAND Hy**	**34.28**	**165**	T	T	15 15 02.9	
	baz=350,slow=76,SNR=64						
PCA	**Pinnacle**	**34.28**	**52**	P	**P**	**14 39 23.9**	**+0.8**
NJ2	**Nanjing**	**34.57**	**250**	*e*P	**P**	**14 39 25.8**	**0.0**
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
HYT	**Haines Junctio**	**35.41**	**50**	P	**P**	**14 39 34.2**	**+1.4**
INK	**Inuvik**	**35.52**	**37**	P	**P**	**14 39 34.9**	**+1.4**
INK	**Inuvik**	**35.52**	**37**	P	**P**	**14 39 34.4**	**+0.9**
INK				pmax	pmax		
	comp=Z,27nm,1.9s						
INK	**Inuvik**	**35.52**	**37**	P	**P**	**14 39 34.4**	**+0.9**
INK				IAmb	IAmb	14 39 43.7	
	comp=Z,27nm,1.9s						
WHY	**Whitehorse**	**36.69**	**50**	P	**P**	**14 39 45.4**	**+1.7**
WHN	**Wuhan**	**38.30**	**253**	P	**P**	**14 39 55.3**	**-2.2**
C36M	**Paulatuk**	**38.67**	**34**	P	**P**	**14 40 00.8**	**+0.7**
C36M	**Paulatuk**	**38.67**	**34**	P	**P**	**14 40 01.1**	**+1.1**
	baz=285,SNR=11						
DLBC	**Dease Lake**	**39.78**	**52**	P	**P**	**14 40 11.7**	**+2.1**
DLBC				IAmb	IAmb	14 40 13.2	
	comp=Z,12nm,1.1s						
LZH	**Lanzhou**	**40.89**	**269**	*e*P	**P**	**14 40 19.1**	**+0.1**
LZH				pP	pP	14 40 50.5	+1.2
LZH				sP	sP	14 41 08.2	+3.5
LZH				pmax	pmax		
	comp=Z,18nm,0.9s						
GTA	**Gaotai**	**41.28**	**276**	⇑P	**P**	**14 40 22.3**	**+0.1**
GTA				pP	pP	14 40 53.3	+0.8
GTA				sP	sP	14 41 10.3	+2.4
GTA				ScP	**ScP**	**14 45 56.6**	**+1.6**
GTA				S	**S**	**14 46 21.9**	**-4.0**
GTA				sS	sS	14 47 19.1	+0.2
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,99nm,5.9s						
GTA				LR	LR		
	comp=Z,220nm,16.2s						
GTA				LR	LR		
	comp=Z,210nm,16.2s						
GTA				LR	LR		
	comp=Z,310nm,16.8s						
ENH	**Enshi**	**41.40**	**257**	P	**P**	**14 40 22.2**	**-0.9**
ENH				IAmb	IAmb	14 40 24.5	
	comp=Z,25nm,0.8s						
ZAA0	**Zalesovo Array**	**42.10**	**303**	P	**P**	**14 40 25.9**	**-2.5**
ZALV	**Zalesovo Beam**	**42.10**	**303**	P	**P**	**14 40 26.2**	**-2.2**
	comp=Z,3.1nm,0.8s,baz=70,slow=6.4,SNR=11						
ZALV				pP	**pP**	**14 40 59.2**	**+0.4**
	comp=Z,3.9nm,0.9s,baz=70,slow=5.6,SNR=5.9						
ZALV				PcP	**PcP**	**14 42 20.3**	**0.0**
	comp=Z,6.5nm,0.5s,baz=76,slow=3.4,SNR=23						
ZALV				LR	LR	14 58 44.0	
	comp=Z,134nm,20.0s,baz=9.5,slow=37						
ZALV	**Zalesovo Beam**	**42.10**	**303**	P	**P**	**14 40 25.8**	**-2.7**
ZALV					**pP**	**14 40 58.2**	**-0.7**
ZALV					**PcP**	**14 42 20.4**	**0.0**
CD2	**Chengdu**	**44.43**	**263**	P	**P**	**14 40 46.1**	**-1.4**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
RES	**Resolute Bay**	**44.77**	**21**	P	**P**	**14 40 50.0**	**+0.4**
RES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
RES	**Resolute Bay**	**44.77**	**21**	P	**P**	**14 40 50.0**	**+0.4**
YKA	**Yellowknife Ar**	**44.86**	**41**	P	**P**	**14 40 51.5**	**+1.2**
	comp=Z,3.0nm,0.7s,baz=297,slow=7.7,SNR=35						
WMQ	**Urumqi**	**45.93**	**289**	*e*P	**P**	**14 40 59.3**	**+0.1**
WMQ				pP	pP	14 41 32.4	+2.3
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,170nm,3.7s						
WMQ				LR	LR		
	comp=Z,640nm,29.2s						
WMQ				LR	LR		
	comp=Z,1µm,28.8s						
WMQ				LR	LR		
	comp=Z,130nm,21.1s						
WMQ	**Urumqi**	**45.93**	**289**	P	**P**	**14 40 59.1**	**-0.1**
WMQ				pmax	pmax		
	comp=Z,15nm,1.0s						
WMQ	**Urumqi**	**45.93**	**289**	P	**P**	**14 40 59.1**	**-0.1**
WMQ				IAmb	IAmb	14 41 00.0	
	comp=Z,15nm,1.0s						
KURK	**Kurchatov**	**47.03**	**301**	*de*P	**P**	**14 41 05.8**	**-1.8**
KURK				pmax	pmax		
	comp=Z,28nm,0.9s						
KURK	**Kurchatov**	**47.03**	**301**	P	**P**	**14 41 05.7**	**-1.8**
KURK				IAmb	IAmb	14 41 06.7	
	comp=Z,25nm,0.9s						
MK31	**Makanchi Array**	**47.28**	**295**	P	**P**	**14 41 07.6**	**-2.0**
MK31				pmax	pmax		
	comp=Z,21nm,1.6s						
MK31	**Makanchi Array**	**47.28**	**295**	P	**P**	**14 41 07.6**	**-2.0**
MK31				IAmb	IAmb	14 41 43.5	
	comp=Z,21nm,1.6s						
MKAR	**Makanchi Array**	**47.28**	**295**	P	**P**	**14 41 07.9**	**-1.7**
	comp=Z,1.8nm,0.5s,baz=54,slow=7.1,SNR=37						
MKAR				pP	**pP**	**14 41 41.8**	**+1.1**
	comp=Z,2.0nm,0.6s,baz=52,slow=7.9,SNR=5.6						
MKAR				PcP	**PcP**	**14 42 37.9**	**-0.5**
	comp=Z,1.7nm,0.8s,baz=57,slow=4.5,SNR=5.5						
MKAR	**Makanchi Array**	**47.28**	**295**	P	**P**	**14 41 07.7**	**-2.0**
MKAR				pP	**pP**	**14 41 41.0**	**+0.3**
MAKZ	**Makanchi**	**47.45**	**295**	P	**P**	**14 41 09.0**	**-1.9**
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MAKZ	**Makanchi**	**47.45**	**295**	P	**P**	**14 41 09.0**	**-1.9**
LLLB	**Lillooet**	**47.75**	**58**	P	**P**	**14 41 14.7**	**+1.5**
PGC	**Sidney**	**48.05**	**61**	P	**P**	**14 41 16.3**	**+0.9**
TULEG	**Thule**	**48.25**	**13**	P	**P**	**14 41 16.1**	**-0.5**
TULEG				IAmb	IAmb	14 41 17.5	
	comp=Z,28nm,1.3s						
D03D	**Eldon**	**48.90**	**62**	P	**P**	**14 41 24.2**	**+2.2**
	baz=307						
B05A	**Bryant**	**49.00**	**61**	P	**P**	**14 41 23.6**	**+0.9**
	baz=307						
KMI	**Kunming**	**49.23**	**259**	P	**P**	**14 41 23.2**	**-1.8**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
E04D	**Cinebar**	**49.77**	**63**	P	**P**	**14 41 30.8**	**+2.1**
	baz=308						
BRVK	**Borovoye**	**49.90**	**308**	*de*P	**P**	**14 41 27.4**	**-2.1**
BRVK				pmax	pmax		
	comp=Z,16nm,0.9s						
BRVK	**Borovoye**	**49.90**	**308**	P	**P**	**14 41 27.2**	**-2.3**
BRVK				IAmb	IAmb	14 41 28.3	
	comp=Z,14nm,0.8s						
BRVK					**PcP**	**14 42 47.3**	**-0.5**
LTY	**Liberty**	**50.38**	**61**	P	**P**	**14 41 34.0**	**+0.7**
B08A	**Colville Reser**	**50.42**	**59**	P	**P**	**14 41 34.4**	**+0.9**
B08A				IAmb	IAmb	14 41 35.8	
	comp=Z,12nm,1.0s						
E07A	**Sunnyside**	**51.25**	**61**	P	**P**	**14 41 41.3**	**+1.5**
E07A				IAmb	IAmb	14 41 42.2	
	comp=Z,13nm,1.0s						
DAG	**Danmarks Havn**	**51.37**	**359**	*i* P	**P**	**14 41 40.1**	**-0.1**
	comp=Z,14nm,1.0s						
DAG	**Danmarks Havn**	**51.37**	**359**	*i* P	**P**	**14 41 40.1**	**-0.1**
DAG				pmax	pmax		
	comp=Z,14nm,1.0s						
KULLO	**Kullorsuaq**	**51.45**	**11**	*i* P	**P**	**14 41 40.6**	**-0.2**
	comp=Z,28nm,0.7s						
KULLO	**Kullorsuaq**	**51.45**	**11**	*i* P	**P**	**14 41 40.6**	**-0.2**
KULLO				pmax	pmax		
	comp=Z,28nm,0.7s						
K02D	**Willamette Mer**	**51.56**	**67**	P	**P**	**14 41 44.5**	**+2.3**
	baz=310						
F07A	**Phinny Hill Vi**	**51.62**	**62**	P	**P**	**14 41 44.2**	**+1.7**
NEW	**Newport**	**51.64**	**58**	P	**P**	**14 41 43.3**	**+0.6**
NEW				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NEW	**Newport**	**51.64**	**58**	P	**P**	**14 41 43.3**	**+0.6**
NEW	**Newport**	**51.64**	**58**	P	**P**	**14 41 43.8**	**+1.1**
	baz=309,SNR=5.1						
L02E	**Cave Junction**	**51.94**	**68**	P	**P**	**14 41 47.7**	**+2.7**
	baz=310						
HUMO	**Hull Mountain**	**52.02**	**67**	P	**P**	**14 41 47.7**	**+2.2**
HUMO				IAmb	IAmb	14 41 49.0	
	comp=Z,15nm,1.2s						
J04D	**Umpqua Nationa**	**52.09**	**66**	P	**P**	**14 41 48.7**	**+2.4**
	baz=310						
E09A	**Wood Farm, Sta**	**52.20**	**60**	P	**P**	**14 41 48.2**	**+1.5**
E09A				IAmb	IAmb	14 41 48.9	
	comp=Z,15nm,1.0s						
PINE	**Pine Mountain**	**52.39**	**65**	P	**P**	**14 41 50.4**	**+1.9**
PINE				IAmb	IAmb	14 41 51.6	
	comp=Z,12nm,0.9s						
G08A	**Pilot Rock**	**52.53**	**62**	P	**P**	**14 41 50.5**	**+1.1**
J05D	**Fort Rock, OR**	**52.55**	**65**	P	**P**	**14 41 52.2**	**+2.5**
	baz=310,SNR=7.1						
L04D	**Klamath Falls**	**52.64**	**67**	P	**P**	**14 41 52.6**	**+2.4**
	baz=311						
YBH	**Yreka Blue Hor**	**52.72**	**68**	P	**P**	**14 41 53.4**	**+2.6**
YBH				pmax	pmax		
	comp=Z,26nm,1.4s						
YBH	**Yreka Blue Hor**	**52.72**	**68**	P	**P**	**14 41 53.4**	**+2.6**
YBH				IAmb	IAmb	14 41 54.5	
	comp=Z,26nm,1.4s						
WALA	**Waterton Lakes**	**52.80**	**56**	P	**P**	**14 41 52.4**	**+1.0**
WALA				IAmb	IAmb	14 41 53.5	
	comp=Z,9.4nm,0.7s						
M02C	**Callahan**	**52.86**	**68**	P	**P**	**14 41 54.7**	**+2.9**
	baz=311,SNR=5.6						
F10A	**Beach Ranch, E**	**53.03**	**60**	P	**P**	**14 41 54.8**	**+1.7**
KDJ	**Kajisay**	**53.03**	**293**	P	**P**	**14 41 52.0**	**-1.2**
KDJ				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KDJ	**Kajisay**	**53.03**	**293**	P	**P**	**14 41 52.0**	**-1.2**
KMRM	**Mail Ridge**	**53.13**	**70**	P	**P**	**14 41 56.5**	**+2.7**
ARU	**Arti**	**53.14**	**317**	*i* P	**P**	**14 41 51.7**	**-1.8**
ARU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARU	**Arti**	**53.14**	**317**		**PcP**	**14 42 59.3**	**-0.5**
M04C	**Macdoel**	**53.18**	**67**	P	**P**	**14 41 56.7**	**+2.4**
	baz=311						
N02D	**Trinity Center**	**53.22**	**68**	P	**P**	**14 41 57.2**	**+2.8**
	baz=311						
JTMT	**Jette**	**53.45**	**57**	P	**P**	**14 41 57.2**	**+1.1**
JTMT				IAmb	IAmb	14 41 58.7	
	comp=Z,17nm,1.1s						
WDC	**Whiskeytown Da**	**53.57**	**69**	P	**P**	**14 41 58.9**	**+2.0**
WDC				pmax	pmax		
	comp=Z,15nm,0.9s						
WDC	**Whiskeytown Da**	**53.57**	**69**	P	**P**	**14 41 58.9**	**+2.0**
WDC				IAmb	IAmb	14 43 43.9	
	comp=Z,15nm,0.8s						
O02D	**Mt. Diablo Mer**	**53.69**	**69**	P	**P**	**14 42 00.6**	**+2.7**
	baz=312						
BMO	**Blue Mountains**	**53.71**	**62**	P	**P**	**14 41 59.2**	**+1.2**
BMO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BMO	**Blue Mountains**	**53.71**	**62**	P	**P**	**14 41 59.2**	**+1.2**
ARCES	**ARCESS Array B**	**53.77**	**341**	P	**P**	**14 41 56.7**	**-1.3**
	comp=Z,3.6nm,0.7s,baz=49,slow=13,SNR=5.5						
ARCES				PcP	**PcP**	**14 43 02.1**	**+0.1**
	comp=Z,8.2nm,1.0s,baz=5.7,slow=4.9,SNR=5.2						
MOD	**Modoc Plateau**	**53.97**	**66**	P	**P**	**14 42 01.8**	**+1.8**
NRN	**Naryn**	**54.16**	**293**		**PcP**	**14 43 04.3**	**-0.1**
O03E	**Paynes Creek**	**54.18**	**68**	P	**P**	**14 42 03.2**	**+1.8**
	baz=312,SNR=7.9						
AAK	**Ala-Archa**	**54.21**	**295**	P	**P**	**14 42 00.6**	**-1.1**
	comp=Z,3.0nm,0.9s,baz=49,slow=3.0,SNR=9.4						
AAK				pP	**pP**	**14 42 34.6**	**+1.0**
	comp=Z,1.8nm,0.7s,baz=144,slow=3.7,SNR=4.0						
AAK				PcP	**PcP**	**14 43 04.4**	**+0.1**
	comp=Z,3.5nm,0.8s,baz=122,slow=3.2,SNR=8.9						
AAK	**Ala-Archa**	**54.21**	**295**	P	**P**	**14 42 00.1**	**-1.6**
MSO	**Missoula**	**54.22**	**58**	P	**P**	**14 42 02.9**	**+1.2**
MSO				IAmb	IAmb	14 42 04.7	
	comp=Z,12nm,1.1s						
MSO	**Missoula**	**54.22**	**58**	P	**P**	**14 42 03.6**	**+1.9**
	baz=311,SNR=6.0						
HOPS	**Hopland Field**	**54.31**	**70**	P	**P**	**14 42 04.2**	**+2.0**
WVOR	**Wild Horse Val**	**54.56**	**65**	P	**P**	**14 42 06.1**	**+1.9**
WVOR				pmax	pmax		
	comp=Z,20nm,0.9s						
WVOR	**Wild Horse Val**	**54.56**	**65**	P	**P**	**14 42 06.1**	**+1.9**
GDXM	**Geysers**	**54.59**	**70**	P	**P**	**14 42 06.5**	**+2.1**
FFC	**Flin Flon**	**54.74**	**44**	P	**P**	**14 42 05.9**	**+0.7**
FFC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
FFC	**Flin Flon**	**54.74**	**44**	P	**P**	**14 42 05.9**	**+0.7**
FFC				IAmb	IAmb	14 42 07.4	
	comp=Z,6.2nm,0.8s						
ORV	**Oroville**	**54.84**	**69**	P	**P**	**14 42 07.4**	**+1.3**
ORV				pmax	pmax		
	comp=Z,13nm,0.9s						
ORV	**Oroville**	**54.84**	**69**	P	**P**	**14 42 07.4**	**+1.3**
ORV				IAmb	IAmb	14 42 08.4	
	comp=Z,13nm,0.9s						
SUMG	**Summit**	**55.10**	**6**	⇓*i*P	**P**	**14 42 08.4**	**+0.4**
	comp=Z,117nm,0.9s						
SUMG	**Summit**	**55.10**	**6**	⇓*i*P	**P**	**14 42 08.4**	**+0.4**
SUMG				pmax	pmax		
	comp=Z,120nm,0.9s						

SUMG	Summit	55.10	6	P	P	14 42 07.7	-0.3
FCC	Fort Churchill	55.14	37	P	P	14 42 08.6	+0.7
FCC				pmax	pmax		
	comp=Z,12nm,1.0s						
FCC	Fort Churchill	55.14	37	P	P	14 42 08.6	+0.7
FCC				IAmb	IAmb	14 42 09.7	
	comp=Z,12nm,0.9s						
BEKR	Beckworth	55.29	68	P	P	14 42 11.1	+1.5
BEKR				IAmb	IAmb	14 42 12.4	
	comp=Z,15nm,1.0s						
KSH	Kashi	55.44	292	P	P	14 42 13.7	+3.1
KSH				sP	sP	14 43 01.6	+4.0
KSH				PcP	PcP	14 43 11.7	+2.6
KSH				PcS	PcS	14 47 09.8	+0.3
KSH				S	S	14 49 45.4	+0.7
KSH				SS	SS	14 53 33.5	+2.7
KSH				pmax	pmax		
	comp=Z,16nm,1.1s						
KSH				pmax	pmax		
	comp=Z,210nm,5.0s						
KSH				LR	LR		
	comp=Z,270nm,10.1s						
KSH				LR	LR		
	comp=Z,1µm,16.0s						
KSH				LR	LR		
	comp=Z,310nm,11.0s						
MFID	Camas Ranch	55.46	62	P	P	14 42 12.1	+1.5
MFID				IAmb	IAmb	14 42 13.4	
	comp=Z,13nm,1.3s						
AFDM	Forest Hills D	55.55	69	P	P	14 42 12.7	+1.4
AFDM				IAmb	IAmb	14 42 14.1	
	comp=Z,9.1nm,1.2s						
EGMT	Eagleton	55.58	54	P	P	14 42 12.2	+0.9
EGMT				IAmb	IAmb	14 42 13.5	
	comp=Z,16nm,1.2s						
EGMT	Eagleton	55.58	54	P	P	14 42 12.5	+1.1
	baz=312,SNR=6.2						
DLMT	Dillon	55.89	58	P	P	14 42 14.6	+0.8
PAHR	Pah Rah Range	55.95	67	P	P	14 42 15.8	+1.6
KK31	Karatay Array	56.09	298	P	P	14 42 13.3	-1.8
KK31				pmax	pmax		
	comp=Z,12nm,1.5s						
KK31	Karatay Array	56.09	298	P	P	14 42 13.3	-1.8
KK31				IAmb	IAmb	14 42 49.2	
	comp=Z,12nm,1.4s						
KKAR	Karatay Array	56.09	298	P	P	14 42 13.3	-1.8
KKAR				pmax	pmax		
	comp=Z,12nm,1.5s						
KKAR	Karatay Array	56.09	298	P	P	14 42 13.0	-2.0
KKAR	Karatay Array	56.09	298	P	P	14 42 13.3	-1.8
KKAR				IAmb	IAmb	14 42 49.2	
	comp=Z,12nm,1.4s						
MCMT	McKenzie Canyo	56.11	59	P	P	14 42 16.3	+0.9
PNTR	Pine Nut	56.25	68	P	P	14 42 17.9	+1.4
CHTO	Chiang Mai	56.29	257	P	P	14 42 17.0	+0.3
CHTO				pmax	pmax		
	comp=Z,28nm,2.0s						
CHTO	Chiang Mai	56.29	257	P	P	14 42 17.0	+0.3
CHTO				IAmb	IAmb	14 42 18.7	
	comp=Z,28nm,1.9s						
CMB	Columbia Colle	56.51	70	P	P	14 42 19.6	+1.5
CMB				pmax	pmax		
	comp=Z,11nm,1.1s						
CMB	Columbia Colle	56.51	70	P	P	14 42 19.6	+1.5
CMB				IAmb	IAmb	14 42 21.2	
	comp=Z,11nm,1.1s						
YERR	Yerington	56.52	68	P	P	14 42 20.8	+2.4
CMAR	Chiang Mai Arr	56.56	257	P	P	14 42 19.6	+1.0
	comp=Z,3.1nm,0.7s,baz=29,slow=6.7,SNR=24						
CMAR	Chiang Mai Arr	56.56	257	P	P	14 42 19.0	+0.4
TAPN	Taplejung	56.83	273	*e*P	P	14 42 20.1	-0.7
QLMT	Earthquake Lak	56.86	58	P	P	14 42 22.5	+1.8
YHL	Hebgen Lake	56.98	58	P	P	14 42 23.1	+1.5
YHB	Horse Butte	57.04	58	P	P	14 42 23.5	+1.6
GCMT	Greycliff	57.12	56	P	P	14 42 24.3	+1.9
KVN	Kaiserville	57.13	67	P	P	14 42 24.6	+1.9
KVN				pmax	pmax		
	comp=Z,25nm,1.3s						
KVN	Kaiserville	57.13	67	P	P	14 42 24.6	+1.9
ILULI	Ilulissat	57.15	12	*i* P	P	14 42 21.4	-0.7
	comp=Z,18nm,0.5s						
ILULI	Ilulissat	57.15	12	P	P	14 42 21.4	-0.7
ILULI				pmax	pmax		
	comp=Z,18nm,0.5s						
ILULI	Ilulissat	57.15	12	P	P	14 42 21.4	-0.7
RYN	Ryan	57.18	68	P	P	14 42 24.8	+1.9
RYN				IAmb	IAmb	14 42 25.9	
	comp=Z,8.6nm,0.8s						
YHH	Holmes Hill	57.19	58	P	P	14 42 24.8	+1.6
YMR	Madison River	57.21	58	P	P	14 42 25.0	+1.8
ABKAR	Akbulak array	57.33	310	P	P	14 42 21.2	-2.4
YNR	Norris Junctio	57.33	58	P	P	14 42 26.4	+2.3
ODAN	Odare	57.38	273	*e*P	P	14 42 24.4	-0.2
AKTO	Aktyubinsk	57.41	312	P	P	14 42 22.5	-1.7
	comp=Z,1.8nm,0.5s,baz=68,slow=11,SNR=6.9						
AKTO				PcP	PcP	14 43 15.9	-0.5
	comp=Z,5.7nm,0.5s,baz=73,slow=5.6,SNR=11						
NVAR	Mina Array Bea	57.44	68	P	P	14 42 26.9	+2.1
	comp=Z,7.8nm,0.7s,baz=298,slow=7.3,SNR=47						
NVAR	Mina Array Bea	57.44	68	P	P	14 42 26.7	+1.8
YNE	Yellowstone No	57.48	57	P	P	14 42 26.8	+1.7
NV11	Mina Array Sit	57.52	68	P	P	14 42 27.2	+1.8
NV11				IAmb	IAmb	14 42 28.4	
	comp=Z,10nm,1.1s						
JIRN	Jiri	57.54	274	*e*P	P	14 42 25.1	-0.8
GUN	Gumba	57.55	275	*e*P	P	14 42 24.9	-1.1
YPP	Pitchstone Pla	57.57	58	P	P	14 42 27.8	+2.0
LKWY	Lake	57.58	58	P	P	14 42 28.3	+2.5
LKWY				pmax	pmax		
	comp=Z,13nm,0.8s						
LKWY	Lake	57.58	58	P	P	14 42 28.3	+2.5
LKWY				IAmb	IAmb	14 42 30.0	
	comp=Z,12nm,0.8s						
ELK	Elko	57.58	64	P	P	14 42 27.9	+2.0
ELK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ELK	Elko	57.58	64	P	P	14 42 27.9	+2.0
ELK				IAmb	IAmb	14 42 28.8	
	comp=Z,4.8nm,0.7s						
H17A	Grant Village	57.60	58	P	P	14 42 28.9	+2.9
H17A	Grant Village	57.60	58	P	P	14 42 29.4	+3.4
	baz=314,SNR=19						
SCO	Scoresbysund	57.72	360	P	P	14 42 26.3	+0.3
SCO				pmax	pmax		
	comp=Z,27nm,1.5s						
SCO	Scoresbysund	57.72	360	P	P	14 42 26.3	+0.3
FLWY	Flagg Ranch	57.75	58	P	P	14 42 29.1	+2.1
FLWY				IAmb	IAmb	14 42 30.7	
	comp=Z,12nm,0.8s						
RLMT	Red Lodge	57.78	57	P	P	14 42 29.1	+1.9
RLMT	Red Lodge	57.78	57	P	P	14 42 29.5	+2.3
	baz=314,SNR=5.9						
RAMN	Ramite	57.80	273	*e*P	P	14 42 26.7	-0.9
	comp=Z,55nm,0.7s						
FXWY	Fox Creek	57.88	59	P	P	14 42 29.9	+2.0
FXWY				IAmb	IAmb	14 42 31.2	
	comp=Z,9.3nm,0.8s						
BTK	Batken	57.99	295	P	P	14 42 27.3	-1.3
BTK				pmax	pmax		
	comp=Z,11nm,1.2s						
BTK	Batken	57.99	295	P	P	14 42 27.2	-1.3
BTK				IAmb	IAmb	14 42 28.2	
	comp=Z,11nm,1.1s						
DGMT	Dagmar	58.00	51	P	P	14 42 30.1	+1.8
DGMT	Dagmar	58.00	51	P	P	14 42 30.6	+2.2
	baz=314						
PKI	Pulchoki	58.09	275	*e*P	P	14 42 28.8	-0.9
	comp=Z,9.7nm,0.6s						
PKIN	Phulchoki	58.09	275	*e*P	P	14 42 28.8	-0.8
	comp=Z,12nm,0.7s						
REDW	Red Top Meadow	58.16	59	P	P	14 42 31.8	+2.0
REDW				IAmb	IAmb	14 42 33.4	
	comp=Z,15nm,0.9s						
DMN	Daman	58.25	275	*e*P	P	14 42 30.2	-0.5
	comp=Z,19nm,0.8s						
LAO	LASA Array	58.25	54	P	P	14 42 31.5	+1.3
LAO	LASA Array	58.25	54	P	P	14 42 32.4	+2.2
	baz=314,SNR=5.2						
GKN	Gorkha	58.25	276	*e*P	P	14 42 29.8	-0.8
AHID	Auburn Hatcher	58.44	60	P	P	14 42 33.3	+1.5
AHID				IAmb	IAmb	14 42 34.8	
	comp=Z,14nm,0.9s						
DANN	Dangsing	58.54	277	*e*P	P	14 42 31.9	-0.8
SPUT	South Promonto	58.73	62	P	P	14 42 35.6	+1.9
CWC	Cottonwood Cre	58.94	69	P	P	14 42 37.0	+1.7
	baz=315						
GRAC	Grapevine Rang	58.96	69	P	P	14 42 37.7	+2.4
	baz=315						
HWUT	Hardware Ranch	59.00	61	P	P	14 42 37.4	+1.8
HWUT				IAmb	IAmb	14 42 38.7	
	comp=Z,13nm,0.8s						
GAR	Garm	59.00	295	P	P	14 42 34.0	-1.6
GAR				IAmb	IAmb	14 43 24.2	
	comp=Z,11nm,0.9s						
PKM	Mcpherson Peak	59.01	72	P	P	14 42 38.0	+2.2
	baz=315						
R11A	Troy Canyon, C	59.04	66	P	P	14 42 37.3	+1.3
R11A	Troy Canyon, C	59.04	66	P	P	14 42 37.7	+1.7
	baz=314,SNR=12						
ISA	Isabella, Lake	59.26	70	P	P	14 42 38.2	+0.9
	baz=315						
BW06	Boulder Array	59.26	59	P	P	14 42 38.9	+1.5
BW06	Boulder Array	59.26	59	P	P	14 42 39.4	+1.9
	baz=315,SNR=32						
PD31	Pinedale Array	59.26	59	P	P	14 42 39.0	+1.5
PDAR	Pinedale Array	59.26	59	P	P	14 42 39.1	+1.7
	comp=Z,14nm,0.7s,baz=317,slow=2.7,SNR=132						
PDAR				pP	pP	14 43 09.7	0.0
	comp=Z,2.0nm,0.7s,baz=304,slow=2.7,SNR=2.8						
PDAR	Pinedale Array	59.26	59	P	P	14 42 39.0	+1.5
DUG	Dugway, Tooele	59.30	63	P	P	14 42 39.6	+1.9
DUG				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DUG	Dugway, Tooele	59.30	63	P	P	14 42 39.6	+1.9
DUG				IAmb	IAmb	14 42 40.7	
	comp=Z,9.5nm,0.9s						
DUG	Dugway, Tooele	59.30	63	P	P	14 42 39.8	+2.1
	baz=314,SNR=7.3						
SFJD	Kangerlussuaq	59.30	13	*i* P	P	14 42 36.4	-0.6
SFJD	Kangerlussuaq	59.30	13	*i* P	P	14 42 36.4	-0.6
SFJD	Kangerlussuaq	59.30	13	P	P	14 42 36.2	-0.8
TCUT	Toone Canyon	59.42	61	P	P	14 42 40.6	+2.0
CTU	Camp Tracy	59.53	62	P	P	14 42 40.9	+1.6
MPMC	Manual Prospec	59.55	69	P	P	14 42 41.4	+1.9
	baz=315,SNR=9.8						
FURC	Furnace Creek,	59.62	69	P	P	14 42 42.1	+2.5
	baz=315,SNR=7.3						
TPNV	Topopah Spring	59.64	68	P	P	14 42 41.5	+1.5
TPNV				pmax	pmax		
	comp=Z,12nm,0.9s						
TPNV	Topopah Spring	59.64	68	P	P	14 42 41.5	+1.5
TPNV				IAmb	IAmb	14 42 42.9	
	comp=Z,12nm,0.9s						
TPNV	Topopah Spring	59.64	68	P	P	14 42 42.0	+1.9
	baz=315,SNR=8.9						
JLU	Jordanelle	59.76	62	P	P	14 42 42.1	+1.2
OSI	Osito Audit: C	59.84	71	P	P	14 42 43.4	+2.0
	baz=315						
NLU	North Lily Min	59.87	63	P	P	14 42 43.1	+1.5
PSUT	Pine Spring	59.88	65	P	P	14 42 43.3	+1.5
MPU	Maple Canyon	60.07	62	P	P	14 42 44.8	+1.8
EDW2	Edwards Air Fo	60.08	71	P	P	14 42 44.9	+1.9
	baz=315,SNR=7.7						
SHOC	Shoshone, Teco	60.36	69	P	P	14 42 47.0	+2.2
	baz=315						
FINES	FINESS Array B	60.44	336	P	P	14 42 43.2	-1.7
	comp=Z,1.9nm,0.6s,baz=41,slow=7.1,SNR=7.4						
FINES				PcP	PcP	14 43 27.5	-0.8
	comp=Z,1.4nm,0.5s,baz=29,slow=8.7,SNR=4.4						
PASC	Pasadena Art C	60.47	71	P	P	14 42 46.7	+1.1
PASC				IAmb	IAmb	14 42 47.4	
	comp=Z,10nm,0.9s						
GSC	Goldstone, Bar	60.48	70	P	P	14 42 47.0	+1.3
GSC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GSC	Goldstone, Bar	60.48	70	P	P	14 42 47.0	+1.3
GSC				IAmb	IAmb	14 42 48.2	
	comp=Z,10nm,1.1s						
GSC	Goldstone, Bar	60.48	70	P	P	14 42 47.3	+1.6
	baz=315,SNR=6.4						
ULM	Lac du Bonnet	60.54	45	P	P	14 42 47.1	+1.3
	comp=Z,2.6nm,0.6s,baz=307,slow=6.2,SNR=7.3						
ULM	Lac du Bonnet	60.54	45	P	P	14 42 46.4	+0.6
ULM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ULM	Lac du Bonnet	60.54	45	P	P	14 42 46.4	+0.6
SHPR	Sheep Range	60.57	68	P	P	14 42 48.1	+1.7
MDND	Maddock	60.61	49	P	P	14 42 48.3	+2.0
TCRU	Three Creeks R	60.61	64	P	P	14 42 48.6	+1.8
BFSC	Mount Baldy Ra	60.73	71	P	P	14 42 49.1	+1.6
	baz=316						
RDMU	Red Mountain	60.80	61	P	P	14 42 49.6	+1.7
TMUT	Trail Mountain	60.81	63	P	P	14 42 49.7	+1.6
MSU	Marysvale	60.83	64	P	P	14 42 49.8	+1.6
MSU	Marysvale	60.83	64	P	P	14 42 49.8	+1.6
TUQ	Turquoise Moun	60.89	69	P	P	14 42 50.7	+2.2
	baz=316						
K22A	Casper	60.93	57	P	P	14 42 50.3	+1.6
K22A				IAmb	IAmb	14 42 52.3	
	comp=Z,14nm,1.2s						
P17A	Butcher Ranch,	60.94	62	P	P	14 42 50.4	+1.5
NIL	Nilore	61.08	288	P	P	14 42 49.0	-0.7
NIL				pmax	pmax		
	comp=Z,21nm,1.1s						
NIL	Nilore	61.08	288	P	P	14 42 49.0	-0.7
HEC	Hector,Ludlow	61.08	70	P	P	14 42 51.5	+1.8
	baz=316,SNR=5.7						
Q16A	Castle Valley	61.10	63	P	P	14 42 51.6	+1.6
RSSD	Black Hills	61.15	54	P	P	14 42 51.5	+1.2
RSSD				pmax	pmax		
	comp=Z,33nm,0.8s						
RSSD	Black Hills	61.15	54	P	P	14 42 51.5	+1.2
RSSD	Black Hills	61.15	54	P	P	14 42 51.8	+1.6
	baz=316						
RWWY	Rawlins	61.26	58	P	P	14 42 51.3	+0.2
RWWY				IAmb	IAmb	14 42 52.3	
	comp=Z,8.1nm,0.8s						
LCMT	Little Creek M	61.30	66	P	P	14 42 52.7	+1.4
SRU	San Rafael Swe	61.32	62	P	P	14 42 53.0	+1.6
SRU				pmax	pmax		
	comp=Z,20nm,0.8s						
SRU	San Rafael Swe	61.32	62	P	P	14 42 53.0	+1.6
MURC	Murrieta	61.46	71	P	P	14 42 53.9	+1.7
	baz=316						
GMRC	Granite Mounta	61.50	69	P	P	14 42 54.5	+1.8
	baz=316,SNR=5.1						
KNB	Kanab	61.53	66	P	P	14 42 54.6	+1.7
KNB				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KNB	Kanab	61.53	66	P	P	14 42 54.6	+1.7
O20A	White River Ci	61.82	60	P	P	14 42 55.9	+1.1
O20A				IAmb	IAmb	14 42 57.3	
	comp=Z,12nm,0.8s						
O20A	White River Ci	61.82	60	P	P	14 42 56.5	+1.7
	baz=316,SNR=7.0						
BELC	Belle Mtn. Jos	61.87	70	P	P	14 42 56.3	+1.2
	baz=316						
PFO	Pinyon Flats O	61.88	71	P	P	14 42 56.2	+1.0
PFO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PFO	Pinyon Flats O	61.88	71	P	P	14 42 56.2	+1.0
PFO				IAmb	IAmb	14 42 56.8	
	comp=Z,5.8nm,0.8s						
PFO	Pinyon Flats O	61.88	71	P	P	14 42 56.2	+1.0
	baz=316						
XPFO	Pion Flat	61.88	71	P	P	14 42 56.2	+1.0
XPFO				IAmb	IAmb	14 42 56.8	
	comp=Z,6.2nm,0.9s						
TPFO	Pinon Flats	61.88	71	P	P	14 42 56.5	+1.3
	baz=316						
AGMN	Agassiz Nation	61.99	47	P	P	14 42 56.5	+1.0
AGMN				IAmb	IAmb	14 42 57.2	
	comp=Z,7.4nm,0.9s						
AGMN	Agassiz Nation	61.99	47	P	P	14 42 56.7	+1.1
	baz=318						
ANGG	Ammassalik, Gr	62.02	7	P	P	14 42 55.2	-0.2
IRM	Iron Mountain	62.25	69	P	P	14 42 59.3	+1.8
	baz=316,SNR=5.9						
U15A	North Rim	62.25	66	P	P	14 42 59.1	+1.3
W13A	Hualapai Mount	62.30	68	P	P	14 42 59.4	+1.3
W13A				IAmb	IAmb	14 43 00.6	
	comp=Z,34nm,2.0s						
BC3	Big Chuckawall	62.43	70	P	P	14 43 00.2	+1.3
	baz=316						
N23A	Red Feather La	62.49	58	P	P	14 43 00.8	+1.5
N23A	Red Feather La	62.49	58	P	P	14 43 01.5	+2.2
	baz=317,SNR=12						
PDMCI	Parker Dam,Lak	62.72	69	P	P	14 43 02.4	+1.8
	baz=316						
IKP	In-Ko-Pah, Jac	62.77	71	P	P	14 43 02.4	+1.4
	baz=317						
Y12C	Blythe	62.90	69	P	P	14 43 03.3	+1.5
	baz=317						
SMCO	Snowmass	63.19	60	P	P	14 43 05.4	+1.2
SMCO				IAmb	IAmb	14 43 06.7	
	comp=Z,12nm,0.8s						
GLA	Glamis	63.23	70	P	P	14 43 05.6	+1.6
GLA				pmax	pmax		
	comp=Z,14nm,0.8s						
GLA	Glamis	63.23	70	P	P	14 43 05.6	+1.6
GLA	Glamis	63.23	70	P	P	14 43 06.1	+2.0
	baz=317						
WUAZ	Wupatki	63.42	66	P	P	14 43 07.2	+1.8
WUAZ				IAmb	IAmb	14 43 08.6	
	comp=Z,17nm,1.4s						
WUAZ	Wupatki	63.42	66	P	P	14 43 07.6	+2.1
	baz=317,SNR=6.2						
ISCO	Idaho Springs	63.46	59	P	P	14 43 07.6	+1.8
ISCO				pmax	pmax		
	comp=Z,19nm,0.9s						
ISCO	Idaho Springs	63.46	59	P	P	14 43 07.5	+1.8
ISCO	Idaho Springs	63.46	59	P	P	14 43 08.2	+2.4
	baz=317,SNR=13						
MVCO	Mesa Verde	63.79	63	P	P	14 43 09.1	+1.1
MVCO				IAmb	IAmb	14 43 10.5	
	comp=Z,9.6nm,0.8s						
MVCO	Mesa Verde	63.79	63	P	P	14 43 09.8	+1.9
	baz=317,SNR=9.5						
NC303	NORSAR Array S	63.87	343	P	P	14 43 07.7	0.0
NB2	NORSAR Subarra	64.07	343	P	P	14 43 08.0	-1.1
	comp=Z,4.5nm,0.7s,baz=22,slow=6.5						
NOA	NORSAR Array B	64.07	343	P	P	14 43 08.2	-0.9
	comp=Z,4.8nm,0.8s,baz=21,slow=6.6,SNR=14						
EYMN	Ely	64.17	44	P	P	14 43 10.2	+0.2
EYMN				IAmb	IAmb	14 43 11.5	
	comp=Z,12nm,0.8s						
EYMN	Ely	64.17	44	P	P	14 43 10.6	+0.6
	baz=320,SNR=8.0						
X16A	Lo Mia Camp, P	64.18	67	P	P	14 43 12.1	+1.7
S22A	4UR Ranch, Cre	64.31	61	P	P	14 43 13.1	+1.7
S22A				IAmb	IAmb	14 43 14.5	
	comp=Z,10nm,1.0s						
S22A	4UR Ranch, Cre	64.31	61	P	P	14 43 13.8	+2.5
	baz=317,SNR=11						
Q24A	Divide	64.31	59	P	P	14 43 12.6	+1.2
Q24A	Divide	64.31	59	P	P	14 43 13.1	+1.7
	baz=318						
OGNE	Ogallala	64.47	56	P	P	14 43 13.6	+1.4
OGNE	Ogallala	64.47	56	P	P	14 43 14.1	+1.9
	baz=318,SNR=7.9						
X18A	Snowflake	64.94	66	P	P	14 43 16.6	+1.3
X18A				IAmb	IAmb	14 43 18.5	
	comp=Z,9.9nm,0.8s						
SDCO	Great Sand Dun	65.02	60	P	P	14 43 17.1	+1.0
SDCO	Great Sand Dun	65.02	60	P	P	14 43 17.7	+1.7
	baz=318,SNR=8.9						
ECSD	EROS Data Cent	65.06	50	P	P	14 43 16.2	+0.4
ECSD	EROS Data Cent	65.06	50	P	P	14 43 16.6	+0.8
	baz=319,SNR=18						
E38A	The Farm, Brul	65.18	45	P	P	14 43 16.9	+0.4
E38A				IAmb	IAmb	14 43 17.8	
	comp=Z,13nm,0.8s						
214A	Organ Pipe Nat	65.19	69	P	P	14 43 18.3	+1.5
214A				IAmb	IAmb	14 43 19.6	
	comp=Z,10nm,1.2s						
214A	Organ Pipe Nat	65.19	69	P	P	14 43 18.5	+1.7
	baz=318						
KSCO	Kaye Shedlock’	65.60	58	P	P	14 43 20.6	+1.1
KSCO				IAmb	IAmb	14 43 21.2	
	comp=Z,9.2nm,0.7s						
T25A	Trinidad	66.05	60	P	P	14 43 23.5	+1.0
T25A				IAmb	IAmb	14 43 24.9	
	comp=Z,8.1nm,0.9s						
T25A	Trinidad	66.05	60	P	P	14 43 23.8	+1.2
	baz=318						
TUC	Tucson	66.09	68	P	P	14 43 24.0	+1.3
TUC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TUC	Tucson	66.09	68	P	P	14 43 24.0	+1.3
TUC	Tucson	66.09	68	P	P	14 43 24.4	+1.7
	baz=318						
D41A	Chassel	66.11	43	P	P	14 43 23.5	+1.0
D41A				IAmb	IAmb	14 43 24.7	
	comp=Z,24nm,1.6s						
GEYT	Alibeck	66.40	302	P	P	14 43 23.3	-1.2
	comp=Z,2.5nm,0.8s,baz=36,slow=8.1,SNR=5.3						
GEYT				pP	pP	14 43 58.3	+0.7
	comp=Z,5.0nm,0.8s,baz=333,slow=1.7,SNR=6.0						
GEYT	Alibeck	66.40	302	P	P	14 43 23.2	-1.3
GYA0B	ALIBECK ARRAY	66.40	302	P	P	14 43 23.2	-1.3
IPM	Ipoh	66.51	245	P	P	14 43 26.3	+0.8
IPM				IAmb	IAmb	14 43 27.4	
	comp=Z,11nm,0.8s						
ANMO	Albuquerque	66.57	63	P	P	14 43 27.4	+1.5
ANMO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ANMO	Albuquerque	66.57	63	P	P	14 43 27.4	+1.5
ANMO	Albuquerque	66.57	63	P	P	14 43 27.6	+1.7
	baz=318						
COWI	Conover	66.62	44	P	P	14 43 25.8	0.0
G40A	Rib Lake	66.81	45	P	P	14 43 27.5	+0.5
SCHQ	Schefferville	67.18	26	P	P	14 43 29.2	+0.1
	comp=Z,2.6nm,0.5s,baz=340,slow=5.5,SNR=10.0						
SCHQ	Schefferville	67.18	26	P	P	14 43 29.0	-0.1
SCHQ				IAmb	IAmb	14 43 34.9	
	comp=Z,27nm,1.9s						
CBKS	Cedar Bluff	67.24	56	P	P	14 43 30.1	+0.3
CBKS				pmax	pmax		
	comp=Z,16nm,0.8s						
CBKS	Cedar Bluff	67.24	56	P	P	14 43 30.1	+0.3
CBKS				IAmb	IAmb	14 43 31.0	
	comp=Z,16nm,0.8s						
CBKS	Cedar Bluff	67.24	56	P	P	14 43 30.2	+0.3
	baz=320						
E43A	Lone Tree Farm	67.31	43	P	P	14 43 30.1	0.0
E44A	Grand Marais A	67.56	42	P	P	14 43 32.4	+0.8
E44A	Grand Marais A	67.56	42	P	P	14 43 32.8	+1.2
	baz=324						
121A	Cookes Peak, D	67.63	66	P	P	14 43 34.2	+1.6
121A				IAmb	IAmb	14 43 35.8	
	comp=Z,11nm,1.3s						
121A	Cookes Peak, D	67.63	66	P	P	14 43 34.3	+1.8
	baz=319						
SCIA	State Center	68.06	50	P	P	14 43 35.6	+0.7
SCIA	State Center	68.06	50	P	P	14 43 36.1	+1.2
	baz=321						
D46A	Sault St. Mari	68.11	41	P	P	14 43 35.1	0.0
	baz=324,SNR=5.4						
D47A	Chapleau	68.35	40	P	P	14 43 36.7	+0.1
	baz=325,SNR=6.3						
E46A	Sault Ste Mari	68.43	41	P	P	14 43 36.7	-0.4
I42A	Draeger Farm,	68.46	46	P	P	14 43 37.6	+0.3
I42A				IAmb	IAmb	14 43 38.5	
	comp=Z,8.1nm,0.8s						
F45A	CMU Biological	68.48	42	P	P	14 43 38.3	+0.9
	baz=324						
H43A	Windswept, Lux	68.50	44	P	P	14 43 37.6	+0.1
JFWS	Jewell Farm	68.64	47	P	P	14 43 40.3	+1.9
	baz=322						
AKASG	Malin Array Be	68.70	328	P	P	14 43 36.9	-1.8
	comp=Z,3.4nm,0.7s,baz=30,slow=6.4,SNR=10.0						
AKASG	Malin Array Be	68.70	328	P	P	14 43 36.9	-1.8
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
D48A	Paudash Townsh	68.76	39	P	P	14 43 38.9	-0.3
	baz=326						
E47A	Iron Bridge	68.77	40	P	P	14 43 39.3	+0.1
	baz=325,SNR=5.6						
D49A	Beulah Townshi	68.86	39	P	P	14 43 39.6	-0.1
	baz=326						
L40A	Anamosa	68.87	48	P	P	14 43 39.7	-0.1
L40A				IAmb	IAmb	14 43 40.7	
	comp=Z,11nm,0.8s						
LSQQ	Lebel-sur-Quev	68.99	35	P	P	14 43 40.9	+0.4
	baz=328						
E48A	Lockeyer	69.19	40	P	P	14 43 41.8	0.0
	baz=326						
AMTX	Amarillo	69.20	60	P	P	14 43 43.0	+0.8
AMTX				IAmb	IAmb	14 43 44.3	
	comp=Z,11nm,1.0s						
AMTX	Amarillo	69.20	60	P	P	14 43 43.5	+1.3
	baz=320						
MSTX	Muleshoe	69.31	61	P	P	14 43 43.4	+0.5
MSTX				IAmb	IAmb	14 43 45.4	
	comp=Z,11nm,0.9s						

MSTX	Muleshoe	69.31	61	P	P	14 43 44.3	+1.4
	baz=320						
D50A	G1974 Best Tow	69.52	38	P	P	14 43 43.6	-0.2
	baz=327						
F48A	Evansville	69.55	40	P	P	14 43 44.0	0.0
	baz=325						
MNTX	Cornudas Mount	69.60	65	P	P	14 43 45.9	+1.4
MNTX	Cornudas Mount	69.60	65	P	P	14 43 46.5	+2.0
	baz=320,SNR=14						
VLDQ	Val d'Or	69.62	36	P	P	14 43 43.3	-1.0
VLDQ				IAmb	IAmb	14 43 44.4	
	comp=Z,10nm,0.8s						
K43A	Burlington	69.66	46	P	P	14 43 44.5	-0.3
K43A				IAmb	IAmb	14 43 45.7	
	comp=Z,17nm,0.8s						
D51A	Lot 18 Range I	69.76	38	P	P	14 43 45.3	0.0
	baz=327						
F49A	Sandfield	69.83	40	P	P	14 43 45.8	+0.1
	baz=326						
MDO	Dochfour	69.83	350	*e*P	P	14 43 45.3	-0.3
KAC	Achnashellach	69.87	350	*e*P	P	14 43 45.2	-0.5
KPL	Plockton	70.07	351	*e*P	P	14 43 46.7	-0.2
KPL				IAmb	IAmb	14 43 47.3	
	comp=Z,61nm,0.9s						
N41A	Harden Midland	70.11	49	P	P	14 43 47.7	+0.2
DRUM	Mains of Drumt	70.13	349	*e*P	P	14 43 46.7	-0.6
E51A	G1948 Merrick	70.18	38	P	P	14 43 47.7	-0.2
	baz=327						
T35A	Sooner Cattle	70.33	55	P	P	14 43 49.3	+0.3
T35A				IAmb	IAmb	14 45 21.8	
	comp=Z,19nm,0.8s						
D53A	Lac Vacive, Po	70.40	37	P	P	14 43 49.0	-0.2
D53A				IAmb	IAmb	14 43 50.0	
	comp=Z,10nm,1.1s						
D53A	Lac Vacive, Po	70.40	37	P	P	14 43 49.2	+0.1
	baz=328						
D54A	Lac Fusel, La	70.72	36	P	P	14 43 51.1	0.0
	baz=328						
WMOK	Wichita Mounta	70.85	58	P	P	14 43 52.6	+0.5
WMOK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WMOK	Wichita Mounta	70.85	58	P	P	14 43 52.6	+0.5
WMOK				IAmb	IAmb	14 43 54.0	
	comp=Z,9.3nm,0.8s						
WMOK	Wichita Mounta	70.85	58	P	P	14 43 53.3	+1.1
	baz=321,SNR=12						
F52A	Sundridge	70.86	38	P	P	14 43 51.8	-0.2
	baz=327						
HDIL	Hopedale	70.95	48	P	P	14 43 52.7	+0.2
E53A	Dumoine, Ponti	71.00	37	P	P	14 43 52.8	0.0
	baz=328						
I49A	Point Hope	71.01	42	P	P	14 43 53.8	+0.9
	baz=326						
EAB	Aberfoyle	71.06	350	*e*P	P	14 43 52.4	-0.6
ESY	Stoneypath	71.12	348	*e*P	P	14 43 52.9	-0.5
E54A	Lac Daplat, Po	71.13	37	P	P	14 43 53.4	-0.2
	baz=328						
D55A	Sainte-Anne-du	71.25	35	P	P	14 43 55.0	+0.7
	baz=329						
S39A	Bolivar	71.31	52	P	P	14 43 54.1	-0.8
K48A	Perry	71.41	43	P	P	14 43 56.3	+1.0
	baz=325						
X34A	Smith Ranch, M	71.45	57	P	P	14 43 56.8	+1.1
X34A				IAmb	IAmb	14 43 58.4	
	comp=Z,14nm,1.0s						
TUL1	Leonard	71.48	55	P	P	14 43 56.9	+1.1
	baz=322						
D56A	ZEC Mazanza, M	71.48	35	P	P	14 43 56.1	+0.4
	baz=329,SNR=6.1						
P43A	Skaggs, Pawnee	71.57	49	P	P	14 43 56.5	+0.2
P43A				IAmb	IAmb	14 43 57.5	
	comp=Z,12nm,0.7s						
G53A	Haliburton	71.70	38	P	P	14 43 57.1	+0.1
	baz=328						
U38A	Gravette	71.77	54	P	P	14 43 57.9	+0.3
U38A				IAmb	IAmb	14 43 58.7	
	comp=Z,9.3nm,0.7s						
ESK	Eskdalemuir	71.78	349	*e*P	P	14 43 56.9	-0.4
ESK				IAmb	IAmb	14 43 57.7	
	comp=Z,21nm,0.7s						
ESK	Eskdalemuir	71.78	349	P	P	14 43 56.9	-0.4
ESK				pmax	pmax		
	comp=Z,22nm,0.6s						
ESK	Eskdalemuir	71.78	349	P	P	14 43 56.9	-0.4
D57A	Chemin Vers le	71.81	34	P	P	14 43 58.5	+0.8
	baz=330,SNR=8.9						
E56A	St. Veronique	71.82	35	P	P	14 43 58.1	+0.3
	baz=329						
I51A	Listowel	71.86	41	P	P	14 43 59.2	+1.1
	baz=327						
LATQ	La Tuque	71.88	33	P	P	14 43 58.7	+0.7
	baz=330						
ABTX	Abilene, Hawle	72.02	60	P	P	14 43 59.9	+0.7
ABTX				IAmb	IAmb	14 44 01.1	
	comp=Z,13nm,0.9s						
ABTX	Abilene, Hawle	72.02	60	P	P	14 44 00.2	+1.0
	baz=321						
CCM	Cathedral Cave	72.03	51	P	P	14 43 59.1	0.0
CCM				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CCM	Cathedral Cave	72.03	51	P	P	14 43 59.1	0.0
CCM	Cathedral Cave	72.03	51	P	P	14 43 59.6	+0.5
	baz=323						
HHAR	Hobbs	72.11	54	P	P	14 43 59.7	0.0
HHAR				IAmb	IAmb	14 44 00.7	
	comp=Z,12nm,0.7s						
E57A	Chemin Saint G	72.25	35	P	P	14 44 00.8	+0.5
	baz=330,SNR=6.5						
MGMO	Mountain Grove	72.25	52	P	P	14 44 00.2	-0.3
TRQ	Mont Tremblant	72.26	35	P	P	14 44 00.4	-0.1
G55A	Calabogie	72.31	37	P	P	14 44 00.5	-0.1
	baz=328						
TX31	Lajitas Ar. Si	72.35	65	P	P	14 44 02.5	+1.2
TX31				IAmb	IAmb	14 44 03.8	
	comp=Z,15nm,0.8s						
TX32	Lajitas Array	72.35	65	P	P	14 44 02.5	+1.2
TX32				IAmb	IAmb	14 44 03.7	
	comp=Z,16nm,0.8s						
TXAR	Lajitas Array	72.35	65	P	P	14 44 02.8	+1.5
	comp=Z,13nm,0.6s,baz=298,slow=4.6,SNR=194						
TXAR	Lajitas Array	72.35	65	P	P	14 44 02.5	+1.2
TXAR	Lajitas Array	72.35	65	P	P	14 44 02.5	+1.2
GAL1	Galloway	72.40	349	*e*P	P	14 44 00.4	-0.6
GAL1				IAmb	IAmb	14 44 01.3	
	comp=Z,24nm,0.7s						
KESW	Keswick, Cumbr	72.48	348	*e*P	P	14 44 01.2	-0.3
KESW				IAmb	IAmb	14 44 02.9	
	comp=Z,92nm,1.4s						
LPIG	La Paz	72.52	73	P	P	14 44 02.7	+0.5
	comp=Z,29nm,0.3s,baz=63,slow=1.8,SNR=4.2						
L50A	Kingsville	72.58	43	P	P	14 44 03.3	+1.0
	baz=326						
E58A	La Victoria	72.58	34	P	P	14 44 02.9	+0.7
	baz=330,SNR=6.0						
U40A	Yellville	72.59	53	P	P	14 44 02.3	-0.2
U40A				IAmb	IAmb	14 44 03.5	
	comp=Z,19nm,0.8s						
U40A	Yellville	72.59	53	P	P	14 44 03.0	+0.5
	baz=323,SNR=15						
N48A	Decatur	72.61	45	P	P	14 44 03.1	+0.6
	baz=325						
P46A	Rosedale	72.65	47	P	P	14 44 03.3	+0.5
P46A				IAmb	IAmb	14 44 04.4	
	comp=Z,16nm,0.7s						
BUR08	Bucovina Ar. S	72.66	329	P	P	14 44 01.8	-1.1
BUR08				IAmb	IAmb	14 45 15.8	
	comp=Z,37nm,1.9s						
BURAR	Bucovina Array	72.68	329	P	P	14 44 01.8	-1.2
CRVS	Cervenica-Dubn	72.70	331	*e*P	P	14 44 02.3	-0.6
CRVS	Cervenica-Dubn	72.70	331	*e*P	P	14 44 02.3	-0.6
CLL	Collm	72.74	338	*i* P	P	14 44 03.2	+0.1
	comp=Z,10.0nm,1.0s						
CLL	Collm	72.74	338	*i* P	P	14 44 03.2	+0.1
CLL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DPC	Dobruska-Polom	72.81	335	*e*P	P	14 44 03.6	0.0
DPC	Dobruska-Polom	72.81	335	*e*P	P	14 44 03.6	0.0
D61A	St Aubert, Com	72.90	32	P	P	14 44 04.9	+0.8
	baz=332						
HPK	Haverah Park	72.91	347	*e*P	P	14 44 03.5	-0.5
HPK				IAmb	IAmb	14 44 04.6	
	comp=Z,43nm,0.7s						
D60A	Saint Jean D'O	72.91	33	P	P	14 44 04.7	+0.5
	baz=331						
IOMK	Kirk Michael	72.98	349	*e*P	P	14 44 03.7	-0.7
IOMK				IAmb	IAmb	14 44 04.7	
	comp=Z,58nm,0.8s						
O48A	Farmland	73.05	45	P	P	14 44 05.4	+0.3
	baz=325						
W39A	Magazine	73.05	54	P	P	14 44 05.9	+0.7
	baz=323						
LANS	Liptovska Anna	73.05	333	*e*P	P	14 44 05.6	+0.6
LANS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LANS	Liptovska Anna	73.05	333	*e*P	P	14 44 05.6	+0.6
G57A	Newington	73.07	36	P	P	14 44 05.4	+0.2
	baz=329						
WIM	Isle of Man	73.10	349	*e*P	P	14 44 04.8	-0.4
F59A	Saint Guilaume	73.21	34	P	P	14 44 06.8	+0.8
	baz=330						
E60A	Ste Agathe de	73.22	33	P	P	14 44 06.5	+0.6
	baz=331						
S44A	Carbondale	73.26	50	P	P	14 44 07.0	+0.6
FCAR	Ozark Folk Cen	73.32	53	P	P	14 44 06.5	-0.3
FCAR				IAmb	IAmb	14 44 07.7	
	comp=Z,9.6nm,0.7s						
D62A	Allapoint, All	73.38	31	P	P	14 44 07.4	+0.5
D62A				IAmb	IAmb	14 44 08.6	
	comp=Z,11nm,0.8s						
D62A	Allapoint, All	73.38	31	P	P	14 44 07.8	+0.8
	baz=332,SNR=6.1						
PBMO	Poplar Bluff	73.44	51	P	P	14 44 07.9	+0.5
PBMO				IAmb	IAmb	14 44 08.9	
	comp=Z,10nm,0.8s						
LBWR	Ladybower, Pea	73.46	347	*e*P	P	14 44 06.8	-0.5
LBWR				IAmb	IAmb	14 44 07.8	
	comp=Z,32nm,0.7s						
H57A	Richville	73.47	37	P	P	14 44 07.7	+0.2
	baz=329						
E61A	Lac Etchemin	73.48	33	P	P	14 44 08.2	+0.6
	baz=332						
P48A	Milroy	73.58	46	P	P	14 44 08.3	+0.1
P48A				IAmb	IAmb	14 44 09.2	
	comp=Z,15nm,0.9s						
P48A	Milroy	73.58	46	P	P	14 44 08.6	+0.4
	baz=325						
JCT	Junction City	73.60	61	P	P	14 44 09.1	+0.5
JCT				pmax	pmax		
	comp=Z,7.0nm,0.9s						
JCT	Junction City	73.60	61	P	P	14 44 09.1	+0.5
JCT	Junction City	73.60	61	P	P	14 44 09.7	+1.1
	baz=322						
MIAR	Mount Ida	73.67	55	P	P	14 44 09.3	+0.5
MIAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MIAR	Mount Ida	73.67	55	P	P	14 44 09.3	+0.5
MIAR	Mount Ida	73.67	55	P	P	14 44 09.4	+0.6
	baz=323						
N51A	Ashland	73.70	43	P	P	14 44 09.5	+0.6
N51A				IAmb	IAmb	14 44 10.2	
	comp=Z,17nm,0.7s						
N51A	Ashland	73.70	43	P	P	14 44 10.0	+1.0
	baz=326						
L53A	Girard	73.71	41	P	P	14 44 10.0	+1.0
	baz=327						
D63A	Stockholm	73.72	31	P	P	14 44 09.5	+0.6
	baz=333						
WHAR	Wooly Hollow	73.72	53	P	P	14 44 09.0	-0.1
G59A	Clarenceville	73.74	35	P	P	14 44 09.3	+0.3
	baz=330						
K54A	Basiliko Farm,	73.79	40	P	P	14 44 10.0	+0.6
	baz=328						
WME	Myndd Eilian	73.80	349	*e*P	P	14 44 08.8	-0.4
VYHS	Vyhne	73.82	333	*e*P	P	14 44 09.1	-0.5
VYHS	Vyhne	73.82	333	*e*P	P	14 44 09.0	-0.5
W41B	Gary Mavity, V	73.83	53	P	P	14 44 10.2	+0.5
W41B				IAmb	IAmb	14 44 11.2	
	comp=Z,14nm,0.9s						
W41B	Gary Mavity, V	73.83	53	P	P	14 44 10.7	+1.0
	baz=323,SNR=6.9						
P49A	Miami Univ. Ec	73.83	46	P	P	14 44 10.3	+0.6
	baz=326						
K55A	Perry	73.93	39	P	P	14 44 10.8	+0.5
	baz=328						
J56A	Wolcott	73.94	38	P	P	14 44 10.2	0.0
J56A	Wolcott	73.94	38	P	P	14 44 10.5	+0.3
	baz=329						
M53A	WI Miller and	73.97	42	P	P	14 44 11.8	+1.3
	baz=327						
YLL	Llanberis	74.03	349	*e*P	P	14 44 09.9	-0.7
T45A	Paducah	74.09	50	P	P	14 44 12.2	+1.0
BATG	Bathurst New B	74.14	29	P	P	14 44 11.9	+0.5
G61A	St-Isidore-de-	74.14	34	P	P	14 44 12.5	+1.1
	baz=331						
J57A	Williamstown	74.15	38	P	P	14 44 11.4	-0.1
J57A				IAmb	IAmb	14 46 42.4	
	comp=Z,42nm,2.0s						
J57A	Williamstown	74.15	38	P	P	14 44 11.7	+0.2
	baz=329						
E63A	Oxbow	74.16	31	P	P	14 44 11.4	-0.1
E63A				IAmb	IAmb	14 45 03.6	
	comp=Z,30nm,1.6s						
E63A	Oxbow	74.16	31	P	P	14 44 11.7	+0.2
	baz=333						
DSB	Dublin	74.18	350	P	P	14 44 11.5	+0.1
O51A	Pataskala	74.24	44	P	P	14 44 13.2	+1.1
	baz=326						
K56A	Middlesex	74.25	39	P	P	14 44 12.7	+0.6
	baz=329						
M54A	Oil Creek Stat	74.33	41	P	P	14 44 13.2	+0.6
M54A				IAmb	IAmb	14 44 14.0	
	comp=Z,9.4nm,0.7s						
M54A	Oil Creek Stat	74.33	41	P	P	14 44 13.5	+0.9
	baz=328						
E64A	Bridgewater	74.36	31	P	P	14 44 13.0	+0.4
	baz=333						
TIRR	Tirgusor	74.36	325	P	P	14 44 11.8	-0.9
TIRR	Tirgusor	74.36	325	P	P	14 44 11.8	-0.9
MODS	Modra-Piesok	74.36	334	*e*P	P	14 44 11.4	-1.3
MODS	Modra-Piesok	74.36	334	*e*P	P	14 44 11.4	-1.3
N53A	Lisbon	74.43	42	P	P	14 44 13.9	+0.7
N53A				IAmb	IAmb	14 44 14.7	
	comp=Z,10nm,0.7s						
N53A	Lisbon	74.43	42	P	P	14 44 14.5	+1.3
	baz=327						
J58A	Remsen	74.46	37	P	P	14 44 13.4	+0.1
J58A	Remsen	74.46	37	P	P	14 44 13.7	+0.4
	baz=330						
O52A	Adamsville	74.59	43	P	P	14 44 14.9	+0.8
	baz=327						
WB2	Warramunga Arr	74.59	203	P	P	14 44 15.4	+1.3
WB2				IAmb	IAmb	14 44 15.7	
	comp=Z,35nm,1.9s						
WRA	Warramunga Arr	74.60	203	P	P	14 44 15.4	+1.2
	comp=Z,2.0nm,0.6s,baz=17,slow=6.4,SNR=19						
WRA	Warramunga Arr	74.60	203	P	P	14 44 15.1	+0.8
I59A	Olmsteadville	74.60	36	P	P	14 44 14.7	+0.5
	baz=330						
KHC	Kasperske Hory	74.62	336	*e*P	P	14 44 14.1	-0.1
KHC	Kasperske Hory	74.62	336	P	P	14 44 14.1	-0.1
KHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KHC	Kasperske Hory	74.62	336	P	P	14 44 14.1	-0.1
L56A	Greenwood	74.63	39	P	P	14 44 14.7	+0.3
L56A				IAmb	IAmb	14 44 15.5	
	comp=Z,12nm,0.6s						
L56A	Greenwood	74.63	39	P	P	14 44 15.1	+0.7
	baz=329,SNR=5.1						
R49A	Shelbyville	74.65	47	P	P	14 44 15.5	+1.1
H61A	Lyndonville	74.65	34	P	P	14 44 15.6	+1.2
	baz=331						
N54A	Moraine State	74.65	42	P	P	14 44 15.4	+1.0
N54A				IAmb	IAmb	14 44 16.4	
	comp=Z,21nm,1.4s						
J59A	Piesco	74.66	37	P	P	14 44 14.4	-0.1
J59A				IAmb	IAmb	14 46 26.4	
	comp=Z,32nm,1.8s						
F64A	Sherman	74.68	31	P	P	14 44 14.7	+0.2
F64A				IAmb	IAmb	14 44 36.0	
	comp=Z,37nm,1.6s						
F64A	Sherman	74.68	31	P	P	14 44 14.9	+0.4
	baz=333						
M55A	Ridgway	74.72	41	P	P	14 44 15.2	+0.3
M55A				IAmb	IAmb	14 44 16.3	
	comp=Z,11nm,0.6s						
M55A	Ridgway	74.72	41	P	P	14 44 15.7	+0.8
	baz=328						
T47A	Sharon Grove	74.83	49	P	P	14 44 16.3	+0.8
T47A				IAmb	IAmb	14 44 17.4	
	comp=Z,12nm,0.8s						
Q51A	Peebles	74.85	45	P	P	14 44 16.0	+0.4
Q51A				IAmb	IAmb	14 44 17.0	
	comp=Z,10.0nm,0.8s						
GERES	GERESS Array B	74.86	336	P	P	14 44 15.2	-0.4
	comp=Z,1.2nm,0.6s,baz=36,slow=7.0,SNR=11						
GERES	GERESS Array B	74.86	336	P	P	14 44 14.9	-0.7
H62A	Milan	74.88	34	P	P	14 44 16.8	+1.0
H62A				IAmb	IAmb	14 44 17.5	
	comp=Z,15nm,0.8s						
H62A	Milan	74.88	34	P	P	14 44 17.1	+1.3
	baz=332						
MEM	Membach	74.89	342	P	P	14 44 15.4	-0.2
	comp=Z,16nm,0.9s						
M56A	Emporium	74.94	40	P	P	14 44 16.2	+0.1
M56A	Emporium	74.94	40	P	P	14 44 16.7	+0.6
	baz=328						
MCH1	Michaelchurch	75.00	348	*e*P	P	14 44 16.2	0.0
MCH1				IAmb	IAmb	14 44 17.2	
	comp=Z,15nm,0.8s						
S49A	Springfield	75.01	47	P	P	14 44 17.7	+1.1
	baz=326						
R50A	Paris	75.03	46	P	P	14 44 17.8	+1.2
R50A	Paris	75.03	46	P	P	14 44 18.0	+1.4
	baz=326						
K59A	Cooperstown	75.12	37	P	P	14 44 17.7	+0.5
	baz=330						
MONM	Monmouth	75.13	348	*e*P	P	14 44 15.5	-1.5
MONM				IAmb	IAmb	14 44 17.7	
	comp=Z,24nm,0.7s						
CONA	Conrad Observa	75.15	335	*e*P	P	14 44 17.7	+0.4
	comp=Z,6.2nm,1.1s						
WVT	Waverly	75.19	50	P	P	14 44 18.3	+0.7
WVT				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WVT	Waverly	75.19	50	P	P	14 44 18.3	+0.7
WVT	Waverly	75.19	50	P	P	14 44 18.5	+0.9
	baz=325						
N55A	Marion Center	75.22	41	P	P	14 44 18.6	+0.9
	baz=328						
RSBS	Rosebush, Pemb	75.27	349	*e*P	P	14 44 17.1	-0.6
FITZ	Fitzroy Crossi	75.29	212	P	P	14 44 19.0	+0.8
L58A	Harry Jones Me	75.37	38	P	P	14 44 19.2	+0.6
	baz=330						
M57A	Sunshine Farm,	75.48	40	P	P	14 44 19.6	+0.4
M57A				IAmb	IAmb	14 44 20.5	
	comp=Z,11nm,0.7s						
M57A	Sunshine Farm,	75.48	40	P	P	14 44 20.0	+0.8
	baz=329						
G65A	Princeton	75.52	31	P	P	14 44 19.9	+0.6
	baz=333						
I63A	Otisfield	75.54	34	P	P	14 44 21.1	+1.6
	baz=332						
L59A	Walton	75.55	38	P	P	14 44 20.1	+0.5
	baz=330						
P54A	Burton	75.59	43	P	P	14 44 21.2	+1.3
	baz=328						
MOA	Molln	75.64	336	*e*P	P	14 44 20.1	+0.1
	comp=Z,1.4nm,0.4s						
M58A	Price's Panora	75.71	39	P	P	14 44 21.1	+0.6
	baz=329						
H65A	Eastbrook	75.75	32	P	P	14 44 21.4	+0.8
	baz=333						
T50A	Nancy	75.84	47	P	P	14 44 22.3	+1.0
	baz=326						
ARSA	Arzberg	75.86	335	*e*P	P	14 44 21.6	+0.3
	comp=Z,5.6nm,0.9s						
M59A	Waymart	75.97	38	P	P	14 44 22.3	+0.4
	baz=330						
L60A	Shokan	76.04	37	P	P	14 44 23.1	+0.8
	baz=330						
PALK	Pallekele	76.33	264	P	P	14 44 24.4	0.0
	comp=Z,15nm,0.8s,baz=45,slow=3.0,SNR=7.5						
PALK	Pallekele	76.33	264	P	P	14 44 24.4	0.0
PALK				pmax	pmax		
	comp=Z,16nm,0.8s						
PALK	Pallekele	76.33	264	IAmb	IAmb	14 44 25.3	
	comp=Z,16nm,0.8s						
BRTR	Keskin Array B	76.44	319	P	P	14 44 23.8	-1.1
	comp=Z,1.8nm,1.0s,baz=26,slow=2.3,SNR=3.2						
SOKA	Soboth	76.52	335	*e*P	P	14 44 25.3	+0.2
	comp=Z,11nm,0.9s						
KBA	Koelnbreinsper	76.59	336	*e*P	P	14 44 26.1	+0.6
	comp=Z,26nm,1.1s						
WATA	Walderalm	76.78	337	*e*P	P	14 44 26.9	+0.3
	comp=Z,12nm,1.2s						
OBKA	Obir	76.81	335	*e*P	P	14 44 26.2	-0.5
	comp=Z,25nm,1.8s						
SWET	Sewanee	76.83	49	P	P	14 44 27.0	0.0
SWET				IAmb	IAmb	14 44 28.1	
	comp=Z,13nm,0.9s						
RETA	Reutte	76.83	338	*e*P	P	14 44 26.5	-0.3
	comp=Z,8.9nm,1.0s						
WTTA	Wattenberg	76.84	337	*e*P	P	14 44 27.1	+0.1
	comp=Z,19nm,1.2s						
MOTA	Moosalm	76.89	337	*e*P	P	14 44 27.4	+0.2
	comp=Z,12nm,0.9s						
SQTA	Sankt Quirin	76.98	337	*e*P	P	14 44 28.2	+0.5
	comp=Z,12nm,1.0s						
PAL	Palisades	77.00	38	P	P	14 44 28.6	+0.8
PAL				pmax	pmax		
	comp=Z,66nm,1.7s						
PAL	Palisades	77.00	38	P	P	14 44 28.6	+0.8
ABTA	Abfaltersbach	77.11	336	*e*P	P	14 44 28.5	+0.2
	comp=Z,18nm,1.2s						
DAVA	Damuels	77.23	338	*e*P	P	14 44 29.1	-0.1
	comp=Z,9.2nm,0.9s						
FETA	Feichten	77.28	338	*e*P	P	14 44 28.6	-0.8
	comp=Z,6.7nm,0.7s						
CPCT	Cooper Cave	77.28	48	P	P	14 44 29.7	+0.3
EIDS	Eidsvold	77.36	186	P	P	14 44 31.5	+1.8
UOSS	Minazif	77.39	294	P	P	14 44 29.4	-0.9
FPAL	Fort Paine	77.53	49	P	P	14 44 31.0	+0.1
Y49A	Blount Mountai	77.72	50	P	P	14 44 32.0	+0.1
VTS	Vitosha	77.76	327	P	P	14 44 31.4	-0.8
VTS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
VTS	Vitosha	77.76	327	P	P	14 44 31.4	-0.8
V53A	Saluda	77.87	46	P	P	14 44 33.8	+1.0
CTI	Castel Tesino	77.97	337	P	P	14 44 32.2	-1.0
CTI				pmax	pmax		
	comp=Z,54nm,2.0s						
CTI	Castel Tesino	77.97	337	P	P	14 44 32.2	-1.0
LRAL	Lakeview Retre	78.11	51	P	P	14 44 34.4	+0.3
LRAL	Lakeview Retre	78.11	51	P	P	14 44 34.4	+0.3
	baz=326						
TUE	Stuetta	78.12	338	P	P	14 44 34.3	+0.1
TUE				IAmb	IAmb	14 44 35.2	
	comp=Z,13nm,0.8s						
AS31	Alice Springs	78.28	202	P	P	14 44 36.4	+1.5
ASAR	Alice Springs	78.28	202	P	P	14 44 36.8	+1.9
	comp=Z,2.0nm,0.6s,baz=13,slow=5.4,SNR=54						
ASAR	Alice Springs	78.28	202	P	P	14 44 36.6	+1.6
ASAR	Alice Springs	78.28	202	P	P	14 44 36.5	+1.6
Z50A	Ashland	78.44	50	P	P	14 44 36.0	+0.1
Z50A				IAmb	IAmb	14 44 37.1	
	comp=Z,11nm,0.8s						
Z50A	Ashland	78.44	50	P	P	14 44 36.2	+0.3
	baz=326,SNR=6.9						
TEOL	Teolo	78.61	336	P	P	14 44 36.2	-0.4
PDG	Podgorica	79.21	330	P	P	14 44 38.6	-1.2
PDG				IAmb	IAmb	14 44 39.0	
	comp=Z,28nm,1.3s						
VLC	Villacollemand	80.05	337	P	P	14 44 44.9	+0.4
BNI	Bardonecchia	80.06	340	P	P	14 44 45.0	+0.3
BNI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BNI	Bardonecchia	80.06	340	P	P	14 44 45.0	+0.3
MSSA	Maissana	80.11	337	P	P	14 44 44.4	-0.5
SSB	Saint Sauveur	80.28	341	P	P	14 44 45.7	0.0
SSB				pmax	pmax		
	comp=Z,24nm,1.4s						
SSB	Saint Sauveur	80.28	341	P	P	14 44 45.7	0.0
SSB				IAmb	IAmb	14 44 47.1	
	comp=Z,24nm,1.4s						
NRCA	Norcia	80.60	334	P	P	14 44 47.6	+0.1
MMAI	Mount Meron Ar	81.39	314	P	P	14 44 50.6	-1.2
	comp=Z,3.1nm,0.6s,baz=28,slow=9.5,SNR=4.3						
STKA	Stephens Creek	84.82	194	P	P	14 45 10.3	+1.3
	comp=Z,1.8nm,0.9s,baz=331,slow=12,SNR=3.4						
STKA	Stephens Creek	84.82	194	P	P	14 45 10.3	+1.3
STKA				pmax	pmax		
	comp=Z,5.0nm,1.9s						
ESBB	Sonseca Array	87.21	346	P	P	14 45 20.5	-0.6
ESBB				IAmb	IAmb	14 45 21.5	
	comp=Z,8.8nm,0.9s						
ESDC	Sonseca Array	87.21	346	P	P	14 45 20.8	-0.3
	comp=Z,7.1nm,0.8s,baz=2.8,slow=4.5,SNR=28						
ESDC	Sonseca Array	87.21	346	P	P	14 45 20.3	-0.8

KEST	Kesra	88.26	335	P	P	14 45 26.0	-0.2
	comp=Z,15nm,0.9s,baz=33,slow=1.4,SNR=11						
KEST	Kesra	88.26	335	P	P	14 45 25.8	-0.3
DBIC	Dimbokro	119.59	340	PKP	PKPdf	14 51 24.2	+0.1
	comp=Z,1.6nm,0.8s,baz=27,slow=4.5,SNR=4.8						
PLCA	Paso Flores	145.44	90	PKPbc	PKPab	14 52 12.7	+0.5
	comp=Z,6.8nm,0.9s,baz=311,slow=2.5,SNR=11						
PLCA				pPKPbc	pPKPab	14 52 46.6	-1.0
	comp=Z,1.9nm,0.8s,baz=289,slow=2.1,SNR=2.9						

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*ATH **10** 14:39:15.8, 38°.22N×20°.72E, h12^{km}±2^{km}, ML3.3/13, Error ellipse: s-maj=2.4km s-min=0.6km az=237.0*
*THE **10** 14:39:16.2, 38°.23N×20°.72E, h9^{km}±2^{km}, ML3.7/9, Error ellipse: s-maj=2.0km s-min=0.4km az=240.0*
ISC 10 14:39:15.7±0.9**, 38°.23N**±0°.02×**20°.73E**±0°.02**, h11**^{km}±7^{km}**, n42, σ0ˢ.51**/69**, 7C-6D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLS	Valsamata	0.12	245	P	Pg	14 39 18.5	-0.2
VLS				S	Sg	14 39 20.7	-0.1
	24µm,0.1s						
VLS	Valsamata	0.12	245	⇓Pd0	Pg	14 39 18.4	-0.2
VLS				S	Sg	14 39 20.7	-0.1
VLS				AML	AML	14 39 21.1	
	comp=E,52199µm,0.1s						
VLS				AML	AML	14 39 21.2	
	comp=N,43321µm,0.2s						
KFL	Anninata	0.13	157	P	Pg	14 39 18.8	0.0
KFL				S	Sg	14 39 21.5	+0.6
	comp=N,37µm,0.5s						
KFL	Anninata	0.13	157	⇑Pc0	Pg	14 39 18.6	-0.1
KFL				S	Sg	14 39 21.2	+0.2
ARG2	Argostoli	0.19	256	P	Pg	14 39 19.8	0.0
ARG2				S	Sg	14 39 23.6	+0.9
	comp=N,45µm,0.3s						
KEF2	Argostoli. Kep	0.20	252	⇓Pd0	Pg	14 39 19.8	-0.1
KEF2				S	Sg	14 39 23.3	+0.4
ARGA	Argostoli. Kep	0.20	256	⇓Pd0	Pg	14 39 19.9	-0.1
ARGA				S	Sg	14 39 23.7	+0.8
KEF1	Kardakata, Kep	0.21	284	⇓Pd0	Pg	14 39 20.1	0.0
KEF1				S	Sg	14 39 23.8	+0.7
VSK1	VASILIKIADES	0.22	325	P	Pg	14 39 20.2	-0.2
VSK1				S	Sg	14 39 24.2	+0.6
	comp=N,10µm,0.4s						
LXR1	Lixouri, Cepha	0.23	264	P	Pg	14 39 20.8	+0.3
LXR1				S	Sg	14 39 24.6	+0.9
	comp=N,133µm,0.3s						
LXRA	Lixouri, Kepha	0.23	263	P	Pg	14 39 20.8	+0.3
LXRA				S	Sg	14 39 24.9	+1.2
KONA	Konidatara, Ke	0.23	328	⇑Pc0	Pg	14 39 20.4	-0.1
KONA				S	Sg	14 39 24.3	+0.5
KONA				AML	AML	14 39 30.6	
	comp=E,13158µm,0.6s						
KONA				AML	AML	14 39 33.4	
	comp=N,23425µm,0.7s						
KEF4	Livadi, Kephal	0.24	278	⇓Pd0	Pg	14 39 20.8	+0.1
KEF4				S	Sg	14 39 25.1	+1.1
FSK	Fiskardo	0.27	331	P	Pg	14 39 21.0	-0.2
FSK				S	Sg	14 39 25.5	+0.7
FSK	Fiskardo	0.27	331	⇑Pc0	Pg	14 39 21.0	-0.2
FSK				S	Sg	14 39 25.2	+0.4
FSK				AML	AML	14 39 27.4	
	comp=N,6670µm,0.2s						
FSK				AML	AML	14 39 30.6	
	comp=E,9150µm,0.5s						
AGT1	Agia Thekli	0.27	275	P	Pg	14 39 21.3	+0.1
AGT1				S	Sg	14 39 25.7	+0.8
	comp=E,39µm,0.2s						
CHV1	Chavriata, Kef	0.28	261	P	Pg	14 39 21.5	+0.2
CHV1				S	Sg	14 39 25.7	+0.7
	comp=E,51µm,0.3s						
KEF3	Kipouria, Keph	0.30	266	⇓Pd0	Pg	14 39 21.8	+0.1
KEF3				S	Sg	14 39 26.6	+0.8
EVGI	Lefkada island	0.40	352	P	Pg	14 39 23.7	+0.1
EVGI	Lefkada island	0.40	352	⇑Pc0	Pg	14 39 23.6	0.0
EVGI				S	Sb	14 39 30.2	-0.7
AST1	Astakos	0.42	42	P	Pg	14 39 24.3	+0.2
AST1				S	Sg	14 39 30.8	+1.1
	comp=E,13µm,0.4s						
MGNA	Meganis	0.43	7	P	Pg	14 39 24.2	0.0
MGNA				S	Sg	14 39 31.0	+1.1
MGNA				AML	AML	14 39 34.0	
	comp=E,11503µm,0.3s						
MGNA				AML	AML	14 39 36.4	
	comp=N,9104µm,0.5s						
ZAK2	Zakynthos	0.46	163	P	Pg	14 39 25.3	+0.6
ZAK2				S	Sb	14 39 32.0	-0.6
	comp=N,24µm,0.3s						
VTN	Vitineika	0.48	130	P	Pb	14 39 26.0	-0.1
VTN	Vitineika	0.48	130	P	Pb	14 39 25.7	-0.4
PDO	Prodromos	0.52	44	P	Pg	14 39 26.3	+0.5
PDO	Prodromos	0.52	44	⇑Pc0	Pg	14 39 26.2	+0.4
PDO				S	Sb	14 39 33.7	-0.6
PDO				AML	AML	14 39 39.0	
	comp=E,14091µm,0.5s						
PDO				AML	AML	14 39 41.7	
	comp=N,17979µm,0.3s						
LKD2	Lefkada island	0.56	355	P	Pg	14 39 26.5	-0.2
LKD2	Lefkada island	0.56	355	⇑Pc0	Pg	14 39 26.5	-0.2
LKD2				S	Sb	14 39 35.3	-0.5
LKD2				AML	AML	14 39 40.3	
	comp=E,6352µm,0.8s						
LKD2				AML	AML	14 39 43.6	
	comp=N,7903µm,0.4s						
KRI1	kERI	0.57	173	P	Pg	14 39 26.5	-0.3
TSLK	Tsoukalades, L	0.60	355	P	Pg	14 39 27.3	-0.1
TSLK	Tsoukalades, L	0.60	355	⇑Pc0	Pg	14 39 27.2	-0.2
TSLK				S	Sb	14 39 36.6	-0.2
TSLK				AML	AML	14 39 45.1	
	comp=N,7157µm,0.8s						
TSLK				AML	AML	14 39 45.3	
	comp=E,10955µm,0.5s						
RLS	Riolos of Patr	0.61	106	P	Pg	14 39 27.9	+0.3
RLS	Riolos of Patr	0.61	106	P	Pg	14 39 27.8	+0.3
RLS				S	Sb	14 39 36.8	-0.1
RLS				AML	AML	14 39 42.0	
	comp=E,2748µm,0.7s						
RLS				AML	AML	14 39 43.6	
	comp=N,2936µm,0.6s						
PVO	Paravola	0.74	58	P	Pb	14 39 30.8	+0.1
PVO	Paravola	0.74	58	P	Pb	14 39 30.7	+0.1
PVO				S	Sb	14 39 41.0	+0.2
PVO				AML	AML	14 39 44.2	
	comp=E,13618µm,0.4s						
PVO				AML	AML	14 39 48.0	
	comp=N,10070µm,0.5s						
DRO	Drossia	0.82	109	P	Pb	14 39 32.0	0.0
DRO				AML	AML	14 39 51.2	
	comp=E,5905µm,0.5s						
DRO				AML	AML	14 39 53.5	
	comp=N,4708µm,0.4s						
ANX	Ano Chora	1.01	68	P	Pg	14 39 34.7	-0.4
ANX				AML	AML	14 40 01.0	
	comp=E,3549µm,0.4s						
ANX				AML	AML	14 40 03.0	
	comp=N,4124µm,0.7s						
SERG	Sergoula	1.06	79	P	Pg	14 39 35.9	-0.3
SERG				AML	AML	14 39 59.5	
	comp=E,2023µm,0.3s						
SERG				AML	AML	14 40 00.8	
	comp=N,2444µm,0.4s						
TRIZ	Trizonia	1.07	82	P	Pb	14 39 35.6	-0.6
EVR	Evrytania	1.09	51	P	Pb	14 39 35.9	-0.8
EVR				AML	AML	14 40 05.0	
	comp=E,1542µm,0.5s						
EVR				AML	AML	14 40 06.0	
	comp=N,1461µm,0.5s						
KALE	Kalithea	1.12	81	P	Pb	14 39 36.5	-0.8

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*NEIC **10** 14:42:54.7±1.2, 40°.68N±0°.04×125°.28W±0°.09, h18^{km}±12^{km}, Error ellipse: s-maj=11.1km s-min=5.3km az=70.0*
*ANF **10** 14:42:55.9±1.4, 40°.74N×124°.99W, h0^{km}, ML2.6/7, Error ellipse: s-maj=13.3km s-min=6.1km az=56.0*
*NCEDC **10** 14:42:56.2±0.9, 40°.66N±0°.04×125°.33W±0°.07, h23^{km}±8^{km}, ML3.0/11, Error ellipse: s-maj=8.4km s-min=5.7km az=60.0*
ISC 10 14:42:55.6±2.1**, 40°.62N**±0°.05×**125°.29W**±0°.10**, h27**^{km}±15^{km}**, n49, σ0ˢ.84**/57**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	0.74	101		Pb	14 43 10.3	+0.3
KCTM					Sn	14 43 21.2	+0.3
KMPM	Mount Pierce	0.92	102		Pb	14 43 12.5	-0.5
KMPM					Sb	14 43 24.7	0.0
JCC	Jacoby Creek,	0.98	78	Pn	Pn	14 43 12.5	-1.1
KRPM	Rodgers	1.10	60		Pn	14 43 14.4	-1.1
KCRM	Chalk Rock	1.14	99		Pn	14 43 15.9	-0.1
KHMM	Horse Mountain	1.21	77		Pn	14 43 16.2	-0.8
KHMM	Horse Mountain	1.21	77		Sn	14 43 32.1	-0.6
KMRM	Mail Ridge	1.27	108		Pn	14 43 18.0	+0.2
KCSM	Cold Springs	1.36	93		Pn	14 43 19.1	0.0
KRMB	Red Mountain	1.38	49		Pn	14 43 18.1	-1.3
KBSM	Bell Springs	1.48	118		Pn	14 43 20.5	-0.1
KOMM	Orleans Mounta	1.54	64		Pn	14 43 20.8	-0.7
KHBM	Hayfork Bally	1.58	88		Pn	14 43 21.7	-0.4
KIPM	Iron Peak	1.61	120		Pn	14 43 22.3	-0.1
KCPM	Cahto Peak	1.61	125		Pn	14 43 22.2	-0.3
KSXB	Camp Six Broad	1.61	41		Sn	14 43 40.4	-2.1
KFPM	Farley Peak	1.73	124		Pn	14 43 23.9	-0.2
KBNM	Bluenose Ridge	1.76	114		Pn	14 43 25.0	+0.4
KBO	Bosley Butte	1.78	26		Pn	14 43 24.4	-0.5
GTC	Three Chop Rid	1.81	132		Pn	14 43 24.8	-0.3
LBPM	Beegum Peak	1.86	98		Pn	14 43 25.8	-0.1
LGPM	Granite Peak	1.89	80		Pn	14 43 25.9	-0.5
GNAM	Navarro Ridge	1.91	137		Pn	14 43 26.3	-0.2
O02D	Mt. Diablo Mer	1.96	102		Pn	14 43 27.4	+0.1
O02D	Mt. Diablo Mer	1.96	102	P	Pn	14 43 27.4	+0.1
	baz=285,SNR=230						
O02D				S	Sn	14 43 51.5	+0.4
	baz=285						
L02E	Cave Junction	2.00	39	P	Pn	14 43 27.3	-0.4
	baz=221,SNR=5.7						
N02D	Trinity Center	2.00	79	P	Pn	14 43 27.3	-0.5
	baz=262,SNR=36						
M02C	Callahan	2.00	66		Pn	14 43 27.3	-0.5
M02C	Callahan	2.00	66	P	Pn	14 43 27.3	-0.5
	baz=249,SNR=137						
M02C				S	Sn	14 43 51.6	-0.4
	baz=249						
LBKM	Bonanza King	2.05	76		Pn	14 43 28.1	-0.3
WDC	Whiskeytown Da	2.10	90		Pn	14 43 28.7	-0.3
GVV	Valley View	2.17	112		Pn	14 43 30.9	+0.6
YBH	Yreka Blue Hor	2.24	59		Pn	14 43 31.5	+0.4
GHLM	Highland Sprin	2.35	131		Pn	14 43 32.3	-0.4
K02D	Willamette Mer	2.41	30	P	Pn	14 43 33.2	-0.2
	baz=212,SNR=152						
LSHM	Sage Hen Hill	2.48	85		Pn	14 43 34.5	+0.1
O03E	Paynes Creek	2.68	96		Pn	14 43 36.9	-0.2
O03E	Paynes Creek	2.68	96	P	Pn	14 43 37.0	-0.2
	baz=279,SNR=24						
O03E				S	Sn	14 44 08.8	0.0
	baz=279						
J01E	Myrtle Point	2.74	21	P	Pn	14 43 38.9	+1.1
	baz=203						
L04D	Klamath Falls	2.76	54		Pn	14 43 39.9	+1.6
L04D	Klamath Falls	2.76	54	P	Pn	14 43 39.9	+1.6
	baz=236,SNR=105						
L04D				S	Sn	14 44 13.3	+2.5
	baz=236						
M04C	Macdoel	2.85	65	P	Pn	14 43 41.8	+2.3
	baz=248,SNR=7.4						
LTIM	Timbered Crate	2.94	78		Pn	14 43 41.8	+1.1
MGL	Magalia	2.97	105		Pn	14 43 41.2	+0.1
SUTB	Sutter Butte	3.03	116		Pn	14 43 41.6	-0.3
ORV	Oroville	3.10	109		Pn	14 43 42.5	-0.3
I03D	Drain, OR	3.40	25	P	Pn	14 43 48.0	+1.1
	baz=206,SNR=14						
I03D				S	Sn	14 44 26.5	+0.1
	baz=206						
I02D	Swisshome	3.65	17	P	Pn	14 43 51.1	+0.8
	baz=198						
I02D				S	Sn	14 44 30.9	-1.6
	baz=198						
BEKR	Beckworth	3.85	100		Pn	14 43 54.0	+0.7

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*TIR **10** 14:51:38.1, 41°.49N×19°.38E, h18^{km}, Md3.3/5*
*THE **10** 14:51:41.0, 41°.46N×19°.45E, h7^{km}, ML2.4/1, Error ellipse: s-maj=3.5km s-min=0.9km az=357.0*
*SKO **10** 14:51:42.0, 41°.54N×19°.53E, h0^{km}*
*BEO **10** 14:51:42.6±0.4, 41°.58N×19°.67E, h3^{km}±2^{km}, ML2.5/10*
ISC 10 14:51:39.4±1.2**, 41°.52N**±0°.03×**19°.46E**±0°.02**, h7**^{km}±10^{km}**, n44, σ1ˢ.10**/68**, Albania**
PDG 10 14:51:41.2±0.3**, 41°.56N×19°.56E, h13**^{km}**, ML2.9**/12**, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.35	119	P	Pb	14 51 47.1	-0.8
TIR				S	Sb	14 51 52.5	-1.1
	1µm,0.2s						
TIR	Tirane	0.35	119	*e*Pg	Pb	14 51 47.1	-0.8
TIR				*e*Sg	Sb	14 51 52.3	-1.3
TIR	Tirane	0.35	119	*i* PG	Pb	14 51 47.2	-0.7
TIR				*i* SG	Sb	14 51 52.3	-1.3
PUK	Puka	0.62	31	*i* PG	Pb	14 51 51.8	-0.8
PUK				*i* SG	Sb	14 52 02.2	+0.7
PHP	Peshkopia	0.75	77	*i* PG	Pg	14 51 53.7	-0.2
PHP				*i* SG	Sb	14 52 06.7	+1.3
PDG	Podgorica	0.93	350	*e*Pg	Pn	14 51 58.7	-0.1
PDG				*e*Sg	Sn	14 52 12.5	+0.1
PDG	Podgorica	0.93	350	*e*Pn	Pn	14 51 58.8	-0.1
BCI	Bajram Curri	0.96	28	*i* PG	Pb	14 51 57.6	-0.9
BCI				*i* SG	Sn	14 52 12.3	-1.1
OHR	Ohrid	1.08	111	*e*Pg	Pg	14 51 60.0	-0.2
OHR				*i* Sg	Sn	14 52 17.2	+0.8
OHR				*e*Lg	Lg	14 52 18.3	
	comp=N,112nm,0.6s						
OHR				*e*Lg	Lg	14 52 18.9	
	comp=E,63nm,0.4s						
HCY	Herceg Novi	1.18	323	*e*Pn	Pn	14 52 02.9	+0.6
TREB	Trebinje	1.46	326	*e*Pn	Pg	14 52 06.6	-0.7
DBRK	Dubrovnik	1.51	320	*e*Pn	Pg	14 52 09.9	+1.5
DBRK				Sg	Sg	14 52 28.8	+0.8
BRY	Bratogost	1.55	334	*e*Pn	Pg	14 52 09.6	+0.6
SKO	Skopje	1.55	72	*e*Pn	Pg	14 52 08.5	-0.5
SKO				*e*Sn	Sn	14 52 27.5	-0.3
SKO	Skopje	1.55	72	*i* Pg	Pg	14 52 08.9	-0.1
SKO				*i* Sg	Sg	14 52 30.8	+1.6
FNA	Florina	1.62	116	P	Pb	14 52 09.6	-0.1
FNA				S	Sg	14 52 31.2	-0.2
FNA	Florina	1.62	116	*i* PN	Pb	14 52 09.5	-0.1
FNA				*i* SN	Sg	14 52 31.5	+0.1
SJES	Sjenica	1.79	12	*e*Pn	Pg	14 52 13.5	-0.1
SJES				*e*Sg	Sg	14 52 37.7	+0.9
KEK	Kerkira	1.82	172	P	Pn	14 52 11.4	+0.3
STON	Ston	1.89	317	*e*Pn	Pb	14 52 14.2	+0.1
STON				Sn	Sb	14 52 37.9	0.0
STON	Ston	1.89	317	*e*Pn	Pn	14 52 12.3	+0.3
STIP	Stip	2.05	84	*i* Pn	Pg	14 52 17.8	-0.9
STIP				*i* Sg	Sg	14 52 46.1	+0.9
SELS	Selova	2.10	35	*e*Pn	Pn	14 52 16.0	+1.0
RUDO	Rudo	2.10	358	*e*Pn	Pn	14 52 12.9	-2.1
IVAS	Ivanjica	2.12	14	*e*Pn	Pb	14 52 17.3	-0.9
IVAS				*e*Sg	Sb	14 52 44.8	0.0
BARS	Barje	2.18	53	*e*Pn	Pn	14 52 16.5	+0.4
SG1	Sgolgore (BA)	2.21	253	*e*Pn	Pn	14 52 16.7	+0.2
VAY	Valandovo	2.34	94	*i* Pn	Pn	14 52 19.1	+0.7
VAY				*i* Sg	Sn	14 52 47.6	+0.2
VAY				*e*Lg	Lg	14 52 56.5	
	comp=N,100nm,1.7s						
VAY				*e*Lg	Lg	14 52 57.7	
	comp=E,19nm,0.7s						
BBLS	Lazići	2.35	359	*e*Pn	Pb	14 52 21.5	-0.6
BBLS				*e*Sn	Sb	14 52 50.1	-1.3
BBLS	Lazići	2.35	359	*e*Pn	Pb	14 52 21.5	-0.6
MAKA	Makarska	2.53	315	Sn	Sn	14 52 52.6	+0.6
GRUS	Gruza	2.55	21	*e*Pn	Pn	14 52 22.6	+1.5
DIVS	Divibare	2.61	8	*e*Pn	Pn	14 52 23.4	+1.3
DIVS				*e*Sn	Sn	14 52 55.9	+1.8
DIVS	Divibare	2.61	8	*e*Pn	Pn	14 52 20.4	-1.7
RICI	Ricice	2.62	320	*e*Pn	Pn	14 52 23.2	+1.0
RICI				Sn	Sb	14 52 57.1	-2.1
BOVS	Bovan	2.69	37	*e*Pn	Pb	14 52 25.1	-2.7
BOVS				*e*Sn	Sn	14 52 56.5	+0.6
HVAR	Hvar	2.78	308	Sn	Sb	14 53 00.8	-3.0
TRUS	Trudelj	2.79	14	*e*Pn	Pb	14 52 27.6	-2.0
ZAPS	Zavoj	2.93	52	*e*Pn	Pn	14 52 28.5	+2.0
ZAPS				*e*Sn	Sn	14 53 03.3	+1.3
VTS	Vitosha	3.02	67	*e*Pn	Pn	14 52 28.5	+0.8
ZAGS	Zajecar	3.07	41	*e*Pn	Pn	14 52 29.4	+1.1
KIJV	Kijevo	3.36	319	*e*Pn	Pn	14 52 33.4	+1.1
KIJV				Sn	Sn	14 53 13.3	+0.9
MORI	Morici	3.63	312	Sn	Sn	14 53 19.8	+0.7
DUGI	Dugi Otok	4.08	309	Sn	Sn	14 53 30.8	+0.6

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*ANF **10** 15:00:13.6±1.4, 40°.66N×125°.18W, h1^{km}, ML2.8/6, Error ellipse: s-maj=14.3km s-min=8.8km az=34.0*
*NCEDC **10** 15:00:14.7±1.9, 40°.49N±0°.02×125°.15W±0°.04, h0^{km}±5^{km}, ML2.9/6, Error ellipse: s-maj=4.9km s-min=2.2km az=81.0*
*NEIC **10** 15:00:14.1±2.0, 40°.63N±0°.04×125°.32W±0°.04, h22^{km}±10^{km}, Error ellipse: s-maj=6.8km s-min=4.4km az=199.0*
ISC 10 15:00:11.7±1.9**, 40°.57N**±0°.04×**125°.41W**±0°.09**, h13**^{km}**, n73, σ1ˢ.40**/77**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	0.82	96		Pb	15 00 29.5	+1.6
KCTM					Sn	15 00 41.7	+0.6
KMPM	Mount Pierce	0.99	98		Pb	15 00 31.6	+0.8
JCC	Jacoby Creek,	1.08	76		Sb	15 00 45.3	-0.9
JCC	Jacoby Creek,	1.08	76		Pg	15 00 31.9	-0.6
KRPM	Rodgers	1.21	60		Pb	15 00 33.8	-0.6
KCRM	Chalk Rock	1.22	96		Pb	15 00 35.0	+0.3
KHMM	Horse Mountain	1.31	76		Pb	15 00 35.7	-0.6
KMRM	Mail Ridge	1.34	104	Pg	Pn	15 00 35.9	-0.3
KCSM	Cold Springs	1.45	91		Pn	15 00 38.4	+0.6
KRMB	Red Mountain	1.48	49		Pn	15 00 37.4	-0.8
KBSM	Bell Springs	1.53	114		Pn	15 00 39.5	+0.6
KOMM	Orleans Mounta	1.65	64		Pn	15 00 41.2	+0.8
KCPM	Cahto Peak	1.65	122		Pn	15 00 41.1	+0.5
KIPM	Iron Peak	1.66	117		Pn	15 00 41.2	+0.6
KHBM	Hayfork Bally	1.67	86		Pn	15 00 41.0	+0.1
KFPM	Farley Peak	1.78	121		Pn	15 00 42.9	+0.6
KBNM	Bluenose Ridge	1.82	111		Pn	15 00 44.0	+1.1
GTC	Three Chop Rid	1.84	129		Pn	15 00 43.3	+0.2
KBO	Bosley Butte	1.87	28	Pn	Pn	15 00 43.0	-0.5
GNAM	Navarro Ridge	1.94	134		Pn	15 00 44.3	0.0
LBPM	Beegum Peak	1.95	97		Pn	15 00 45.2	+0.7
LGPM	Granite Peak	1.99	79		Pn	15 00 45.2	+0.1
O02D	Mt. Diablo Mer	2.04	100		Pn	15 00 46.8	+0.9
O02D	Mt. Diablo Mer	2.04	100	P	Pn	15 00 46.7	+0.9
	baz=280,SNR=88						
L02E	Cave Junction	2.09	40	P	Pn	15 00 46.7	+0.3
	baz=215,SNR=14						
N02D	Trinity Center	2.09	78		Pn	15 00 46.8	+0.3
N02D	Trinity Center	2.09	78	P	Pn	15 00 46.9	+0.3
	baz=256,SNR=17						
N02D				S	Sn	15 01 12.5	0.0
	baz=256						
GHOM	Hamilton Openi	2.10	136		Pn	15 00 47.1	+0.6
M02C	Callahan	2.10	66	P	Pn	15 00 47.4	+0.7
	baz=243,SNR=49						
M02C				S	Sn	15 01 11.9	-0.9
	baz=243						
WDC	Whiskeytown Da	2.19	89		Pn	15 00 48.5	+0.7
WDC	Whiskeytown Da	2.19	89	Pn	Pn	15 00 48.1	+0.4
GROM	Round Mountain	2.19	106		Pn	15 00 49.6	+1.6
GVV	Valley View	2.24	110		Pn	15 00 49.5	+0.9
GASB	Alder Springs	2.26	113		Pn	15 00 49.8	+1.0
YBH	Yreka Blue Hor	2.35	59		Pn	15 00 51.5	+1.5
HOPS	Hopland Field	2.39	130	Pn	Pn	15 00 51.2	+0.7
KEBM	Edson Butte	2.44	19	Pn	Pn	15 00 51.3	0.0
K02D	Willamette Mer	2.50	31	P	Pn	15 00 52.5	+0.3
	baz=207,SNR=123						
LTCM	Tuscan Springs	2.54	97		Pn	15 00 54.1	+1.6
LSHM	Sage Hen Hill	2.57	84		Pn	15 00 53.8	+0.7
GDXM	Geysers	2.68	130	Pn	Pn	15 00 53.8	-0.8
HUMO	Hull Mountain	2.75	41		Pn	15 00 56.4	+0.9
NMCNC	Mill Creek, So	2.76	135		Pn	15 00 57.7	+2.1
LDBM	Digger Butte	2.77	92		Pn	15 00 57.3	+1.5
O03E	Paynes Creek	2.77	94		Pn	15 00 56.4	+0.6
O03E	Paynes Creek	2.77	94	P	Pn	15 00 56.6	+0.8
	baz=275,SNR=6.8						
J01E	Myrtle Point	2.82	23	P	Pn	15 00 56.7	+0.3
	baz=199						
L04D	Klamath Falls	2.86	54	P	Pn	15 01 00.4	+3.2
	baz=232,SNR=12						
L04D				S	Sb	15 01 33.6	-4.0
	baz=232						
LCMM	Colby Mountain	3.00	97		Pn	15 01 00.3	+1.1
LRDM	Redding Peak	3.01	91		Pn	15 01 01.2	+2.0
MGL	Magalia	3.04	103		Pn	15 01 00.5	+0.8
LBCM	Butte Creek Ri	3.10	84		Pn	15 01 02.2	+1.8
MCCM	Marconi Confer	3.11	140	Pn	Pn	15 01 01.2	+0.8
ORV	Oroville	3.17	107		Pn	15 01 01.6	+0.4
NOLM	Olema	3.24	140		Pn	15 01 01.6	-0.6
K04D	Chiloquin, OR	3.43	52	P	Pn	15 01 07.4	+2.5
	baz=231,SNR=6.5						
I03D	Drain, OR	3.48	25	P	Pn	15 01 07.0	+1.4
	baz=203,SNR=10						
AFDM	Forest Hills D	3.78	114		Pn	15 01 11.1	+1.4
BEKR	Beckworth	3.93	99		Pn	15 01 13.7	+1.8
J05D	Fort Rock, OR	4.13	48	P	Pn	15 01 17.2	+2.6
	baz=228,SNR=6.7						
PINE	Pine Mountain	4.63	44		Pn	15 01 24.3	+2.8
PAHR	Pah Rah Range	4.70	99	Pn	Pn	15 01 23.7	+1.3
H04A	Detroit Lake	4.75	29	Pn	Pn	15 01 25.8	+2.7
SAO	San Andreas Ge	4.90	140	Pn	Pn	15 01 26.1	+1.0
YERR	Yerington	5.01	106	Pn	Pn	15 01 26.2	-0.5
WVOR	Wild Horse Val	5.42	68	Pn	Pn	15 01 32.7	+0.4
LUL	Lundy Lake	5.44	115		Pn	15 01 32.2	-0.6
I07A	Izee	5.61	49	Pn	Pn	15 01 38.3	+3.4
RYN	Ryan	5.66	108	Pn	Pn	15 01 37.0	+1.3
KVN	Kaiserville	5.83	103		Pn	15 01 39.4	+1.4
J08A	Circle Bar Ran	5.87	59	Pn	Pn	15 01 41.4	+2.9
NV11	Mina Array Sit	6.00	108	Pn	Pn	15 01 42.3	+2.0
BMO	Blue Mountains	7.34	52		Pn	15 02 01.5	+2.8

MAN 10 15:02:18.3, 6°.70N×124°.63E, h131^{km}**, mb4.2, ML3.0, MS2.7, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKMP	Bagumbayan, Su	0.20	205	*e*P	Pn	15 02 37.4	+1.1
SKMP				*e*S	Sn	15 02 51.5	+1.7
CTBH	Cotabato--PC H	0.64	324	⇓*i*P	Pn	15 02 34.8	-3.5
MATI	Mati	1.64	81	*e*P	Pn	15 02 48.6	+0.6
MATI				*e*S	Sn	15 03 12.1	+1.5
PAGZ	Pagadian	1.68	313	*e*P	Pn	15 02 49.3	+0.8
PAGZ				*e*S	Sn	15 03 08.1	-3.5

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*THE **10** 15:05:39.8, 38°.23N×20°.38E, h10^{km}, ML3.7/6, Error ellipse: s-maj=0.9km s-min=0.4km az=257.0*
*ATH **10** 15:05:39.8, 38°.22N×20°.38E, h10^{km}±1^{km}, ML2.7/9, Error ellipse: s-maj=1.7km s-min=0.7km az=245.0*
ISC 10 15:05:39.7±1.1**, 38°.23N**±0°.02×**20°.39E**±0°.04**, h11**^{km}±5^{km}**, n37, σ0ˢ.37**/67**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGT1	Agia Thekli	0.02	351	P	Pg	15 05 41.6	-0.1
AGT1				S	Sg	15 05 42.9	-0.1
	75µm,0.2s						
KEF3	Kipouria, Keph	0.04	232	P	Pg	15 05 41.9	+0.2
KEF3				S	Sg	15 05 43.3	+0.1
KEF4	Livadi, Kephal	0.04	43	P	Pg	15 05 41.7	-0.1
KEF4				S	Sg	15 05 43.0	-0.2
CHV1	Chavriata, Kef	0.04	187	P	Pg	15 05 41.9	+0.1
CHV1				S	Sg	15 05 43.4	+0.2
	179µm,0.1s						
LXR1	Lixouri, Cepha	0.05	125	P	Pg	15 05 41.9	+0.1
LXR1				S	Sg	15 05 43.4	+0.1
	152µm,0.3s						
LXRA	Lixouri, Kepha	0.05	126	P	Pg	15 05 41.9	+0.1
LXRA				S	Sg	15 05 43.2	0.0
KEF1	Kardakata, Kep	0.08	52	P	Pg	15 05 42.1	-0.1
KEF1				S	Sg	15 05 43.6	-0.4
ARGA	Argostoli. Kep	0.09	125	P	Pg	15 05 42.3	0.0
ARGA				S	Sg	15 05 43.9	-0.1
ARG2	Argostoli	0.09	122	P	Pg	15 05 42.4	+0.1
ARG2				S	Sg	15 05 44.2	+0.1
	68µm,0.2s						
KEF2	Argostoli. Kep	0.10	129	P	Pg	15 05 42.5	+0.1
KEF2				S	Sg	15 05 44.2	-0.1
VLS	Valsamata	0.17	108	P	Pg	15 05 43.3	-0.1

VLS				S	Sg	15 05 46.0	0.0
	20µm,0.1s						
VLS	Valsamata	0.17	108	P	Pg	15 05 43.3	-0.1
VLS				S	Sg	15 05 45.9	-0.1
VSK1	VASILIKIADES	0.23	37	P	Pg	15 05 44.6	+0.1
VSK1				S	Sg	15 05 48.2	+0.5
KONA	Konidatara, Ke	0.24	36	P	Pg	15 05 44.8	0.0
KONA				S	Sg	15 05 48.4	+0.3
KONA				AML	AML	15 05 49.2	
	comp=E,7845µm,0.3s						
KONA				AML	AML	15 05 50.5	
	comp=N,6992µm,0.4s						
FSK	Fiskardo	0.27	31	P	Pg	15 05 45.2	0.0
FSK				S	Sg	15 05 49.4	+0.5
FSK	Fiskardo	0.27	31	P	Pg	15 05 45.2	0.0
FSK				S	Sg	15 05 49.2	+0.3
FSK				AML	AML	15 05 50.1	
	comp=N,2485µm,0.2s						
FSK				AML	AML	15 05 51.0	
	comp=E,4228µm,0.2s						
KFL	Anninata	0.34	110	P	Pg	15 05 46.4	-0.1
KFL				S	Sg	15 05 51.9	+0.9
	comp=E,11µm,0.3s						
KFL	Anninata	0.34	110	P	Pg	15 05 46.3	-0.1
KFL				S	Sg	15 05 51.5	+0.6
EVGI	Lefkada island	0.45	28	P	Pg	15 05 48.4	-0.1
EVGI				S	Sg	15 05 55.0	+0.6
EVGI	Lefkada island	0.45	28	P	Pg	15 05 48.3	-0.1
EVGI				S	Sg	15 05 55.5	+1.1
MGNA	Meganis	0.53	36	P	Pg	15 05 49.8	-0.3
MGNA				S	Sg	15 05 57.7	+0.5
MGNA				AML	AML	15 05 58.8	
	comp=N,1885µm,0.3s						
MGNA				AML	AML	15 05 59.6	
	comp=E,1593µm,0.1s						
LKD2	Lefkada island	0.60	21	P	Pg	15 05 50.9	-0.5
LKD2	Lefkada island	0.60	21	P	Pg	15 05 50.8	-0.5
LKD2				S	Sb	15 06 00.5	-0.3
LKD2				AML	AML	15 06 09.6	
	comp=N,583µm,0.6s						
LKD2				AML	AML	15 06 11.6	
	comp=E,912µm,0.5s						
TSLK	Tsoukalades, L	0.63	19	P	Pg	15 05 51.6	-0.4
TSLK	Tsoukalades, L	0.63	19	P	Pg	15 05 51.8	-0.2
TSLK				S	Sg	15 06 01.0	+0.6
TSLK				AML	AML	15 06 06.6	
	comp=E,714µm,0.7s						
TSLK				AML	AML	15 06 10.2	
	comp=N,859µm,0.4s						
KRI1	kERI	0.66	149	P	Pg	15 05 52.1	-0.4
KRI1				S	Sb	15 06 02.8	+0.3
VTN	Vitineika	0.70	116	P	Pg	15 05 53.5	+0.1
VTN				S	Sg	15 06 02.8	+0.3
PDO	Prodromos	0.73	59	P	Pg	15 05 53.3	-0.5
PDO	Prodromos	0.73	59	P	Pg	15 05 53.4	-0.4
PDO				S	Sb	15 06 04.3	-0.2
RLS	Riolos of Patr	0.87	101	P	Pg	15 05 56.0	-0.5
RLS	Riolos of Patr	0.87	101	P	Pg	15 05 56.0	-0.5
RLS				S	Sg	15 06 07.9	+0.2
RLS				AML	AML	15 06 14.3	
	comp=E,823µm,0.6s						
RLS				AML	AML	15 06 14.8	
	comp=N,584µm,1.0s						
PVO	Paravola	0.97	66	P	Pg	15 05 58.1	-0.4
PVO	Paravola	0.97	66	P	Pg	15 05 58.4	-0.1
PVO				S	Sb	15 06 12.4	+0.8
PVO				AML	AML	15 06 19.6	
	comp=E,1646µm,0.7s						
PVO				AML	AML	15 06 22.1	
	comp=N,1315µm,0.7s						
DRO	Drossia	1.08	104	P	Pg	15 05 59.8	-0.7
DRO	Drossia	1.08	104	P	Pg	15 06 00.2	-0.3
DRO				S	Sn	15 06 15.7	-0.1
DRO				AML	AML	15 06 24.9	
	comp=E,1621µm,0.6s						
DRO				AML	AML	15 06 25.4	
	comp=N,1260µm,0.7s						
ANX	Ano Chora	1.26	73	P	Pn	15 06 02.9	-0.5
ANX				S	Sn	15 06 20.7	+0.3
ANX				AML	AML	15 06 29.0	
	comp=E,866µm,0.5s						
ANX				AML	AML	15 06 33.9	
	comp=N,1328µm,0.6s						
KLV	Kalavryta, Ach	1.40	97	P	Pn	15 06 05.3	0.0

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*NEIC **10** 15:16:28.0±1.2, 40˚47N±0˚03×125˚01W±0˚06, h20^{km}±5^{km}, Error ellipse: s-maj=6.9km s-min=4.8km az=101.0*

*ANF **10** 15:16:28.6±2.9, 40˚61N×124˚81W, h0^{km}, ML3.0/8, Error ellipse: s-maj=32.1km s-min=10.7km az=82.0*

*IDC **10** 15:16:29.6±4.5, 40˚28N×124˚88W, h0^{km}, mb2.7/2, mb1 3.3/4, mb1mx3.2/46, mbtmp2.8/4, ML3.5/2, Error ellipse: s-maj=64.3km s-min=26.4km az=58.0*

*NCEDC **10** 15:16:29.3±1.8, 40˚45N±0˚02×124˚88W±0˚05, h8^{km}±6^{km}, Mwr3.7/4, Error ellipse: s-maj=5.3km s-min=3.3km az=82.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.45; $M_{\theta\theta}$2.91; $M_{\phi\phi}$-3.35; $M_{r\theta}$1.11; $M_{\theta\phi}$-1.52; $M_{\phi r}$0.52;*

ISC 10 15:16:27.9±1.4, **40˚45N**±0˚04×**124˚95W**±0˚08, **h13**^{km}, **n89**, σ**1^{s}04**/91, **Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	0.47	86		Pn	15 16 39.5	-0.7
KCTM					Sn	15 16 47.8	-0.7
KMPM	Mount Pierce	0.63	92		Pn	15 16 42.1	-0.5
KMPM					Sn	15 16 51.8	-0.8
JCC	Jacoby Creek,	0.79	62		Pb	15 16 43.4	-0.1
KCRM	Chalk Rock	0.86	91		Pn	15 16 45.2	-0.6
KMRM	Mail Ridge	0.97	103		Sn	15 17 02.2	+1.3
KMRM	Mail Ridge	0.97	103		Pn	15 16 47.2	-0.1
KRPM	Rodgers	1.00	44		Pb	15 16 46.9	-0.2
KHMM	Horse Mountain	1.02	65		Pg	15 16 47.4	-0.1
KHMM	Horse Mountain	1.02	65		Sn	15 17 01.1	-1.2
KCSM	Cold Springs	1.10	85		Pn	15 16 48.8	-0.3
KBSM	Bell Springs	1.16	117		Pb	15 16 49.5	-0.3
KIPM	Iron Peak	1.29	119		Pn	15 16 51.3	-0.5
KCPM	Cahto Peak	1.29	125		Pn	15 16 51.2	-0.6
KHBM	Hayfork Bally	1.33	80		Pn	15 16 51.9	-0.5
KRMB	Red Mountain	1.33	36		Pn	15 16 51.3	-1.0
KOMM	Orleans Mounta	1.41	53		Pn	15 16 52.7	-0.6
KFPM	Farley Peak	1.42	124		Pn	15 16 53.0	-0.4
KBNM	Bluenose Ridge	1.45	112		Pn	15 16 53.9	0.0
GTC	Three Chop Rid	1.50	134		Pn	15 16 53.8	-0.6
LBPM	Beegum Peak	1.58	94		Pn	15 16 55.4	-0.3
KSXB	Camp Six Broad	1.60	30		Pn	15 16 55.0	-1.0
GNAM	Navarro Ridge	1.60	140		Pn	15 16 55.5	-0.4
O02D	Mt. Diablo Mer	1.67	99		Pn	15 16 57.0	+0.1
O02D	Mt. Diablo Mer	1.67	99	P	Pn	15 16 57.0	+0.1
	baz=280,SNR=41						
LGPM	Granite Peak	1.68	73		Pn	15 16 56.6	-0.4
GHOM	Hamilton Openi	1.77	142		Pn	15 16 57.6	-0.6
N02D	Trinity Center	1.78	72		Pn	15 16 58.1	-0.4
N02D	Trinity Center	1.78	72	P	Pn	15 16 58.1	-0.4
	baz=253,SNR=70						
GROM	Round Mountain	1.82	106		Pn	15 16 59.6	+0.6
WDC	Whiskeytown Da	1.84	85		Pn	15 16 59.0	-0.1
M02C	Callahan	1.85	58		Pn	15 16 58.9	-0.5
M02C	Callahan	1.85	58	P	Pn	15 16 58.8	-0.5
	baz=239,SNR=25						
KBO	Bosley Butte	1.85	17	Pn	Pn	15 16 58.5	-0.8
LBKM	Bonanza King	1.85	69		Pn	15 16 59.1	-0.3
GVV	Valley View	1.86	110		Pn	15 16 59.6	-0.1
GASB	Alder Springs	1.89	114		Pn	15 16 59.6	-0.3
L02E	Cave Junction	1.99	30	S	Sn	15 17 24.4	-1.6
	baz=210						
GSNM	Snow Mountain	2.02	137		Pn	15 17 01.3	-0.4
GHLM	Highland Sprin	2.04	133		Pn	15 17 01.7	-0.3
HOPS	Hopland Field	2.05	134	Pn	Pn	15 17 01.8	-0.2
LAMM	Antelope Mount	2.11	56		Pn	15 17 02.9	-0.1
YBH	Yreka Blue Hor	2.12	52		Pn	15 17 02.8	-0.4
GCK	Clark Valley	2.13	114		Pb	15 17 04.7	-1.6
GTSM	Trough Springs	2.13	121		Pn	15 17 03.2	0.0
LCSM	College of the	2.16	63		Pn	15 17 03.9	+0.1
LTCM	Tuscan Springs	2.17	95		Pn	15 17 04.0	+0.3
LSHM	Sage Hen Hill	2.24	80		Pn	15 17 05.0	+0.2
GACM	Adobe Creek	2.25	134		Pn	15 17 05.4	+0.6
LGBM	Gray Butte	2.27	66		Pn	15 17 06.0	+0.7
GSSM	Skaggs Springs	2.29	139		Pn	15 17 05.2	-0.2
M03C	McCloud	2.30	68		Pn	15 17 06.3	+0.8
GDXM	Geysers	2.33	134	Pn	Pn	15 17 06.2	+0.2
GWKM	Walker Ridge	2.35	126		Pn	15 17 07.6	+1.4
LMPM	Military Pass	2.35	63		Pn	15 17 07.5	+1.1
B040	Montague	2.36	53		Pn	15 17 06.6	+0.3
LHEM	Herd Peak	2.38	59		Pn	15 17 07.5	+0.8
O03E	Paynes Creek	2.41	93		Pn	15 17 07.0	-0.1
O03E	Paynes Creek	2.41	93	P	Pn	15 17 07.0	-0.1
	baz=275,SNR=28						
LDBM	Digger Butte	2.41	89		Pn	15 17 07.2	+0.1
NMCNC	Mill Creek, So	2.43	139		Pn	15 17 07.4	+0.2
K02D	Willamette Mer	2.45	23	P	Pn	15 17 07.9	+0.3
	baz=202,SNR=12						
K02D				S	Sn	15 17 35.0	-2.4
	baz=202						
KEBM	Edson Butte	2.47	10	Pn	Pn	15 17 07.2	-0.6
LBFM	Black Fox Moun	2.49	68		Pn	15 17 09.2	+0.9
MNRC	McLaughlin Min	2.49	128		Pn	15 17 08.8	+0.8
NMTM	Middletown	2.53	129		Pn	15 17 09.6	+1.0
LGMM	Garner Mountai	2.62	63		Pn	15 17 11.2	+1.2
HUMO	Hull Mountain	2.63	34		Pn	15 17 10.4	+0.4
LCMM	Colby Mountain	2.64	95		Pn	15 17 10.4	+0.1
OSUM	Sutter Buttes	2.65	115		Pn	15 17 10.2	-0.2
LRDM	Redding Peak	2.66	88		Pn	15 17 11.2	+0.7
L04D	Klamath Falls	2.66	47		Pn	15 17 12.1	+1.5
L04D	Klamath Falls	2.66	47	P	Pn	15 17 12.0	+1.4
	baz=228,SNR=16						
L04D				S	Sb	15 17 45.4	-2.8
	baz=228						
MGL	Magalia	2.67	103		Pn	15 17 10.0	-0.7
HATC	Hat Creek Radi	2.68	81		Pn	15 17 09.7	-1.1
M04C	Macdoel	2.70	59	P	Pn	15 17 12.4	+1.3
	baz=241,SNR=10						
ORV	Oroville	2.79	107		Pn	15 17 12.1	-0.2
CSPM	San Pablo Ridg	3.22	140		Pn	15 17 14.5	-3.6
AFDM	Forest Hills D	3.41	115		Pn	15 17 21.0	+0.3
BEKR	Beckworth	3.56	98		Pn	15 17 23.5	+0.5
J05D	Fort Rock, OR	3.97	43	P	Pn	15 17 30.5	+2.0
	baz=225,SNR=9.8						
PAHR	Pah Rah Range	4.33	98	Pn	Pn	15 17 34.1	+0.5
PNTR	Pine Nut	4.34	106	Pn	Pn	15 17 34.0	+0.3
PINE	Pine Mountain	4.48	40	Pn	Pn	15 17 35.6	0.0
SAO	San Andreas Ge	4.58	142	Pn	Pn	15 17 37.3	+0.4
KVN	Kaiserville	5.46	103		Pn	15 17 49.8	+0.7
NVAR	Mina Array Bea	5.52	109	Pn	Pn	15 17 52.0	+2.0
	0.4nm,0.3s,baz=287,slow=14,SNR=8.4						
PDAR	Pinedale Array	11.75	74	Pn	Pn	15 19 22.4	+7.0
	0.1nm,0.3s,baz=292,slow=4.8,SNR=3.4						
TXAR	Lajitas Array	20.62	116	P	Pn	15 21 10.6	+1.2
	0.3nm,0.6s,baz=294,slow=8.8,SNR=4.0						
YKA	Yellowknife Ar	22.94	12	P	P	15 21 36.3	+4.9
	0.1nm,0.3s,baz=202,slow=11,SNR=2.6						

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*NEIC **10** 15:26:40.7±1.9, 13˚59N±0˚08×91˚24W±0˚04, h47^{km}±16^{km}, mb4.5/10, Md4.0(SNET), Md4.0/16(MEX), Error ellipse: s-maj=12.0km s-min=4.6km az=193.0*

*GCG **10** 15:26:40.4±0.7, 13˚62N×91˚23W, h14^{km}±999^{km}, MD4.0*

*UCR **10** 15:26:42.7±1.3, 13˚78N×91˚06W, h31^{km}±9^{km}, ML3.8, mb4.5(NEIC)*

*SNET **10** 15:26:42.4±1.5, 13˚75N×91˚00W, h18^{km}±9^{km}, ML4.0*

*MEX **10** 15:26:42.9±0.7, 13˚60N×91˚33W, h18^{km}±18^{km}, MD4.0*

ISC 10 15:26:38.5±1.9, **13˚52N**±0˚08×**91˚29W**±0˚05, **h30**^{km}±14^{km}, **n46**, σ**1^{s}20**/68, **mb4.4**/3, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	1.01	25	*e*P	Pn	15 26 58.1	+1.2
IXG	Ixpaco	1.04	52	*e*P	Pn	15 26 57.9	+0.6
PCG	Pacaya	1.08	37	*e*P	Pb	15 26 58.9	0.0
STG3	Santiaguito 3,	1.21	347	*e*P	Pb	15 27 00.8	-0.1
NBG	Las Nubes	1.40	41	*e*P	Pb	15 27 04.0	-0.2
NBG				*e*S	Sn	15 27 20.6	+0.7
CEVE	Cerro Verde	1.64	79	*e*P	Pn	15 27 06.5	+0.9
CEVE				*e*S	Sn	15 27 25.4	-0.5
CEVE				IAML		15 27 28.2	
	comp=Z,4µm,0.2s						
CEVE	Cerro Verde	1.64	79	*e*P	Pn	15 27 06.5	+0.9
CEVE				*e*S	Sn	15 27 25.4	-0.5
CEVE				IAML		15 27 28.2	
	comp=Z,4µm,0.2s						
THIG		1.67	325	*i* P	Pb	15 27 07.5	-1.2
THIG				*i* S	Sn	15 27 26.2	0.0
THIG		1.67	325		Pb	15 27 07.5	-1.2
THIG					Sn	15 27 26.2	0.0
LALI	Alcalda de L	1.91	91	*e*P	Pn	15 27 10.2	+1.1
LALI				*e*S	Sn	15 27 31.2	-0.9
LALI	Alcalda de L	1.91	91	*e*P	Pn	15 27 10.2	+1.1
LALI				*e*S	Sn	15 27 31.2	-0.9
BOQS	Boqueron	1.96	84	*e*P	Pn	15 27 11.1	+1.1
BOQS				*e*S	Sn	15 27 33.6	-0.2
SNET	Serv Nac Est T	2.00	85	Pn	Pn	15 27 11.6	+1.1
SNET					Sn	15 27 34.3	-0.3
MTO3	Montecristo	2.06	65	*e*P	Pn	15 27 11.3	0.0
MTO3	Montecristo	2.06	65	*e*P	Pn	15 27 11.3	0.0
LFU	La Fuente	2.12	84	*e*P	Pn	15 27 13.8	+1.7
LFU	La Fuente	2.12	84	*e*P	Pn	15 27 13.8	+1.7
LFRS	El Faro	2.17	87	*e*P	Pn	15 27 14.4	+1.7
LFRS				*e*S	Sn	15 27 38.7	+0.1
LBRS	Las Brisas	2.19	84	*e*P	Pn	15 27 14.6	+1.6
COEG	Centro de Oper	2.34	87	*e*P	Pn	15 27 16.7	+1.6
COEG				*e*S	Sn	15 27 43.5	+0.6
COEG	Centro de Oper	2.34	87	*e*P	Pn	15 27 16.7	+1.6
COEG				*e*S	Sn	15 27 43.5	+0.6
CCIG	Comitan	2.86	343	*e*P	Pn	15 27 24.5	+2.1
CCIG				*i* S	Sn	15 27 57.1	+1.1
CCIG	Comitan	2.86	343		Pn	15 27 22.5	+0.1
CCIG	Comitan	2.86	343		Pn	15 27 24.5	+2.1
CCIG					Sn	15 27 57.1	+1.1
PCIG		2.86	319	*e*P	Pn	15 27 24.1	+1.9
PCIG				*i* S	Sn	15 27 56.2	+0.5
PCIG		2.86	319		Pn	15 27 24.1	+1.9
PCIG					Sn	15 27 56.2	+0.5
LCND	La Caada	3.31	93	*e*P	Pn	15 27 30.6	+2.2
LCND				IAML		15 28 11.9	
	comp=Z,202nm,0.4s						
LCND	La Caada	3.31	93	*e*P	Pn	15 27 30.6	+2.2
LCND				IAML		15 28 11.9	
	comp=Z,202nm,0.4s						
CNCH	Conchagua	3.37	94	*e*P	Pn	15 27 30.4	+1.2
CNCH				*e*S	Sn	15 28 08.3	0.0
CNCH				*e*S	Sn	15 28 08.7	+0.3
CNCH				IAML		15 28 15.0	
	comp=Z,472nm,0.3s						
CNCH	Conchagua	3.37	94	*e*P	Pn	15 27 30.4	+1.2
CNCH				*e*S	Sn	15 28 08.3	0.0
CNCH				*e*S	Sn	15 28 08.7	+0.3
CNCH				IAML		15 28 15.0	
	comp=Z,472nm,0.3s						
CSGN	Cosiguina Volc	3.67	98	Pn	Pn	15 27 35.0	+1.7
ESTN	Estel	4.80	94	Pn	Pn	15 27 50.2	+1.3
CMIG	Matias Romero	4.96	316	*e*P	Pn	15 27 52.7	+1.6
CMIG				*e*S	Sn	15 28 47.4	-0.1
CMIG	Matias Romero	4.96	316		Pn	15 27 52.7	+1.6
CMIG					Sn	15 28 47.4	-0.1
ACON	Acoyapa	6.16	104	Pn	Pn	15 28 09.5	+1.9
JTS	Las Juntas de	6.98	117	Pn	Pn	15 28 21.0	+2.1
545A	Edgard	16.46	2		P	15 30 29.1	-0.7
833A	Chaparral WMA,	16.55	334	Pn	Pn	15 30 29.0	+0.5
URIC	Uribia, Colomb	18.92	93	P	P	15 30 55.2	-1.9
X51A	Calhoun	21.74	14	P	P	15 31 27.1	-0.4
X51A				IAmb	IAmb	15 31 33.4	
	comp=Z,35nm,0.9s						
HBAR	Harrisburg	21.94	1	P	P	15 31 30.2	+0.5
HODGE	Hodges	22.18	20	P	P	15 31 31.3	-1.0
HODGE				IAmb	IAmb	15 31 43.4	
	comp=Z,12nm,1.0s						
FCAR	Ozark Folk Cen	22.28	358	P	P	15 31 31.8	-1.5
319A	Douglas	24.27	320	P	P	15 31 54.8	+1.4
319A				IAmb	IAmb	15 31 55.8	
	comp=Z,5.0nm,0.4s						
WCI	Wyandotte Cave	25.00	9		PcP	15 35 34.3	-0.2
TCUT	Toone Canyon	32.62	331	P	P	15 33 06.9	-1.1

WEL 10 15:32:29.0, 38˚S±8˚×**17˚8E**±˚, **h5**^{km}, **ML3.9**/19, **MLv3.5**/19, **Error ellipse: s-maj=0.0km s-min=0.0km az=16.9, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	0.03	213	P	Pg	15 32 31.9	+1.7
PUZ				S	Sg	15 32 33.9	+2.9
PKGZ	Pakihiroa	0.22	314	P	Pg	15 32 34.7	+1.2
PKGZ				S	Sg	15 32 38.6	+2.2
WMGZ	Waiomatatini S	0.25	25	P	Pg	15 32 35.2	+1.3
TWGZ	Tauwhareparae	0.27	241	P	Pb	15 32 36.7	+0.2
CNGZ	Carnagh Statio	0.44	187	P	Pn	15 32 41.3	-0.8
MXZ	Matakaoa Point	0.48	2	P	Pb	15 32 39.7	-0.3
RUGZ	Raukumara Rang	0.48	279	P	Pb	15 32 39.6	-0.5
HAZ	Te Kaha	0.49	306	P	Pb	15 32 39.5	-0.6
HAZ				S	Sb	15 32 46.7	-0.8
TKGZ	Te Karaka	0.52	221	P	Pb	15 32 41.6	+0.9
TKGZ				S	Sn	15 32 51.4	-1.0
MWZ	Matawai	0.66	244	P	Pb	15 32 43.5	+0.4
MWZ				S	Sb	15 32 53.5	+0.9
RIGZ	Rimuhau	0.78	211	P	Pn	15 32 46.9	+0.2
RIGZ				S	Sn	15 33 01.3	+2.5
RAGZ	Rawiri	0.82	236	P	Pn	15 32 46.9	-0.4
RAGZ				S	Sn	15 32 59.5	-0.3
PRGZ	Paritu Road	0.93	199	P	Pn	15 32 48.7	-0.1
URZ	Urewera	0.95	256	P	Pn	15 32 48.5	-0.5
WIZ	White Island	1.01	300	P	Pb	15 32 49.4	+0.4
SNGZ	Shannon Statio	1.04	225	P	Pn	15 32 50.6	+0.3
WHRZ	Whale Island	1.05	280	P	Pn	15 32 50.9	+0.5
KNZ	Kokohu	1.09	206	P	Pb	15 32 50.4	+0.1
MHGZ	Mahia Peninsul	1.15	195	P	Pb	15 32 51.2	-0.1
RTZ	Ruatahuna	1.17	240	P	Pn	15 32 52.9	+0.8
EDRZ	Edgecumbe	1.22	267	P	Pn	15 32 53.5	+0.7
MUGZ	Murupara	1.27	250	P	Pn	15 32 54.3	+0.9
MARZ	Manawahe	1.27	272	P	Pb	15 32 53.4	0.0
RAHZ	Arahi	1.28	227	P	Pb	15 32 56.0	+2.4
WHHZ	Waihua	1.32	218	P	Pn	15 32 54.1	-0.1
OPRZ	Ohinepanea	1.38	278	P	Pn	15 32 54.6	-0.4
MTHZ	Maungataniwha	1.39	234	P	Pg	15 32 56.0	+0.3
TARZ	Mount Tarawera	1.41	262	P	Pg	15 32 56.8	+0.7
RRRZ	Republican Roa	1.42	257	P	Pg	15 32 57.2	+0.8
MKRZ	Makatiti	1.43	266	P	Pg	15 32 59.0	+2.4
OMRZ	Omania	1.51	267	P	Pb	15 32 57.6	+0.1
HLRZ	Highlands Stat	1.53	262	P	Pg	15 32 58.6	+0.1
PRRZ	Plateau Road	1.55	252	P	Pg	15 32 59.3	+0.4
NMHZ	Naumai	1.56	227	P	Pg	15 32 58.9	-0.2
ARHZ	Aropaoanui	1.58	219	P	Pb	15 32 58.6	-0.1
KARZ	Kaharoa	1.61	270	P	Pn	15 32 58.3	+0.2
ALRZ	Allen Road	1.61	251	P	Pg	15 32 59.8	-0.1
HRRZ	Handcock Road	1.61	257	P	Pg	15 32 59.6	-0.3
HSRZ	Hossack Road	1.63	260	P	Pb	15 32 59.6	+0.1
MRHZ	Matea Rd	1.66	241	P	Pb	15 32 59.7	-0.5
WPRZ	Whakapapatarin	1.73	253	P	Pg	15 33 02.2	-0.1
GRRZ	Galatos Road	1.74	259	P	Pb	15 33 00.9	-0.6
BKZ	Black Stump Fm	1.79	231	P	Pn	15 33 01.0	+0.3
KMRZ	Kaimai	1.86	275	P	Pn	15 33 01.4	-0.2
CKHZ	Cape Kidnapper	1.87	210	P	Pn	15 33 00.7	-1.0
HATZ	Hinemaiaia	1.92	243	P	Pb	15 33 03.7	-0.8
KWHZ	Kaweka Forest	2.00	226	P	Pn	15 33 03.3	-0.3
KAHZ	Kahuranaki	2.06	212	P	Pn	15 33 03.2	-1.2
WATZ	Wairara	2.11	251	P	Pb	15 33 06.8	-1.0
RITZ	Rihia Road	2.12	243	P	Pb	15 33 07.7	-0.2
RATZ	Rangitukua	2.13	247	P	Pg	15 33 09.2	-0.7
KRHZ	Kereru	2.19	222	P	Pn	15 33 05.5	-0.6
TOZ	Tahuroa Road	2.22	277	P	Pn	15 33 06.7	+0.2
KATZ	Kakaramea	2.23	245	P	Pb	15 33 09.5	-0.5
BHHZ	Black Hill Sta	2.26	230	P	Pn	15 33 06.9	-0.2
KRVZ	Karewarewa	2.32	242	P	Pb	15 33 10.0	-1.4
WTVZ	West Tongariro	2.37	242	P	Pb	15 33 11.2	-1.0
NGZ	Ngauruhoe	2.38	241	P	Pn	15 33 09.9	+1.0
TUVZ	Tukino	2.39	238	P	Pb	15 33 11.5	-1.2
MOVZ	Moawhango	2.40	235	P	Pn	15 33 10.5	+1.4
KUZ	Kuaotunu	2.42	302	P	Pn	15 33 08.8	-0.4
WHVZ	Whangaehu Hut	2.44	239	P	Pg	15 33 15.8	0.0
TWVZ	Taurewa	2.45	244	P	Pb	15 33 12.3	-1.3
FWVZ	Far West T-bar	2.45	240	P	Pg	15 33 15.8	-0.3
PNHZ	Pukenui	2.47	220	P	Pn	15 33 08.6	-1.4
MTVZ	Mangateitei	2.57	238	P	Pn	15 33 12.1	+0.7
PKVZ	Pokaka	2.61	241	P	Pn	15 33 13.6	+1.6
MKAZ	Moumakai	2.65	290	P	Pn	15 33 12.2	-0.2
TSZ	Takapari Road	2.70	221	P	Pn	15 33 11.5	-1.7
HIZ	Hauiti	2.74	259	P	Pn	15 33 14.8	+1.2
DVHZ	Dannevirke	2.79	215	P	Pn	15 33 12.2	-2.1
ANWZ	Angora Road	2.79	210	P	Pn	15 33 12.3	-2.1
WIAZ	Waiheke Island	2.80	296	P	Pn	15 33 15.1	+0.6
GRZ	Great Barrier	2.88	308	P	Pn	15 33 15.9	+0.3
ETAZ	East Tamaki Re	2.88	291	P	Pn	15 33 15.8	+0.3
VRZ	Vera Road	2.96	248	P	Pn	15 33 18.1	+1.3
MBAZ	Motutapu North	2.98	294	P	Pn	15 33 17.2	+0.3
EPAZ	Eden Park BICE	3.05	291	P	Pn	15 33 18.9	+1.1
AWAZ	Awhitu Peninsu	3.05	288	P	Pn	15 33 18.5	+0.6
HBAZ	Herne Bay Bore	3.07	292	P	Pn	15 33 19.4	+1.3
BFZ	Birch Farm	3.07	210	P	Pn	15 33 16.0	-2.2
PRWZ	Pori Road	3.08	215	P	Pn	15 33 16.9	-1.5
WAZ	Wanganui	3.09	235	P	Pn	15 33 19.2	+0.8
TIWZ	Tintock	3.30	213	P	Pn	15 33 18.9	-2.5
LREZ	Lake Rotokare	3.34	244	P	Pn	15 33 23.0	+1.1
MRZ	Mangatainoka R	3.35	218	P	Pn	15 33 19.7	-2.4
PKE	Pukeiti	3.55	250	P	Pn	15 33 27.4	+2.5
HOWZ	Holdsworth Sta	3.56	216	P	Pn	15 33 22.1	-2.9
KHEZ	Kahui Hut	3.56	248	P	Pn	15 33 26.8	+1.7
TMWZ	Te Maipa	3.57	210	P	Pn	15 33 22.2	-3.0
WCZ	Waipu Caves	3.79	302	P	Pn	15 33 28.8	+0.8
PAWZ	Paruwai Farm	3.99	213	P	Pn	15 33 27.4	-3.5
OUZ	Omahuta	4.70	305	P	Pn	15 33 42.4	+1.8
CTZ	Chatham Island	6.87	147	P	Pn	15 34 09.8	-0.6

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*VIE **10** 15:38:15.0±1.0, 49˚76N×18˚53E, h0^{km}, mb2.3/5, ml2.5/5, Error ellipse: s-maj=9.3km s-min=5.0km az=48.0 22 km ESE of Ostrava Suspected Mining induced.*

*IPEC **10** 15:38:15.9±0.2, 49˚86N×18˚48E, h0^{km}, ML2.2/4, Error ellipse: s-maj=1.6km s-min=1.1km az=152.0*

*PRU **10** 15:38:16.2±0.0, 49˚84N×18˚45E, h0^{km}, Mining Induced Event Karvina, E=7.7e+05*

*IDC **10** 15:38:16.1±1.1, 49˚59N×18˚55E, h0^{km}, mb1 3.1/3, mb1mx2.9/49, mbtmp2.9/3, ML2.6/3, Error ellipse: s-maj=28.8km s-min=8.6km az=162.0*

ISC 10 15:38:14.0±0.9, **49˚86N**±0˚03×**18˚50E**±0˚04, **h0**^{km}, **n33**, σ**0^{s}91**/61, **Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.23	264	*e*PG	Pg	15 38 20.6	+2.2
OKC				*e*SG	Sg	15 38 23.3	+1.9
	comp=Z,662nm,0.3s						
MORC	Moravsky Berou	0.63	263	*e*Pg	Pb	15 38 27.2	-0.7
	baz=82						
MORC				*e*Sg	Sg	15 38 35.2	+1.1
	62nm,0.3s,baz=82						
MORC	Moravsky Berou	0.63	263	*e*PG	Pb	15 38 27.2	-0.7
MORC				*e*SG	Sg	15 38 35.2	+1.1
LANS	Liptovska Anna	0.95	138	*e*PG	Pn	15 38 34.8	+0.1
LANS				*e*SG	Sn	15 38 48.9	-0.1
LANS				*e*LG	Lg	15 38 53.6	
KRLC	Kraliky	1.13	282	*e*PG	Pg	15 38 35.9	+0.2
KRLC				*e*SG	Sb	15 38 52.1	+0.4
	comp=Z,56nm,0.3s						
JAVC	Velka Javorina	1.14	209	*e*Pg	Pn	15 38 37.8	+0.5
	baz=28						
JAVC				*e*Sg	Sb	15 38 51.6	-0.4
	36nm,0.4s,baz=28						
JAVC	Velka Javorina	1.14	209	*e*PG	Pn	15 38 37.9	+0.6
JAVC				*e*SG	Sb	15 38 51.6	-0.4
VRAC	Vranov	1.36	247	Pn	Pb	15 38 40.7	+0.4
	31nm,0.3s,baz=79,slow=16,SNR=92						
VRAC				Lg	Lg	15 38 59.0	
	15nm,0.3s,baz=197,slow=13,SNR=12						
VRAC	Vranov	1.36	247	*e*Pg	Pb	15 38 40.9	+0.6
	baz=65						
VRAC				*e*Sg	Sg	15 38 58.1	+0.5
	39nm,0.3s,baz=65						
VRAC	Vranov	1.36	247	*e*PG	Pb	15 38 40.9	+0.6
VRAC				*e*SG	Sg	15 38 58.1	+0.5
VYHS	Vyhne	1.39	171	*e*PG	Pb	15 38 41.8	+1.0
DPC	Dobruska-Polom	1.48	290	*e*PG	Pb	15 38 42.9	+0.4
DPC				*e*SG	Sn	15 39 02.6	+0.4
	comp=Z,26nm,0.3s						
SMOL	Smolenice	1.52	208	*e*PG	Pg	15 38 43.3	+0.1
SMOL				*e*SG	Sg	15 39 01.9	-1.0
SMOL				*e*LG	Lg	15 39 06.5	
KRUC	Moravsky	1.59	241	*e*Pg	Pb	15 38 44.4	+0.1
	baz=59						
KRUC				*e*Sg	Sg	15 39 05.3	+0.3
	15nm,0.2s,baz=59						
KRUC	Moravsky	1.59	241	*e*PG	Pb	15 38 44.4	+0.1
KRUC				*e*SG	Sg	15 39 05.4	+0.4
OSTC	Ostas	1.62	296	*e*PG	Pg	15 38 45.8	+0.7

OSTC				eSG	Sg	15 39 07.5	+1.3
	comp=Z,60nm,0.9s						
MODS	Modra-Piesok	1.69	209	ePG	Pn	15 38 44.9	+0.1
MODS				eSG	Sn	15 39 06.0	-1.2
MODS				eLG	Lg	15 39 07.8	
KSP	Ksiaz	1.72	306	ePg	Pg	15 38 47.2	+0.2
KSP				eSg	Sg	15 39 10.4	+1.1
UPC	Upice	1.73	293	ePG	Pg	15 38 47.4	+0.3
UPC				eSG	Sg	15 39 09.9	+0.5
	comp=Z,29nm,0.5s						
CHVC	Chvalec	1.73	296	ePG	Pb	15 38 47.1	+0.4
CHVC				eSG	Sg	15 39 10.2	+0.6
	comp=Z,29nm,0.7s						
ZST	Bratislava	1.90	209	ePG	Pn	15 38 47.5	-0.2
ZST				eSG	Sn	15 39 11.8	-0.6
TREC	Trest	2.04	255	ePG	Pb	15 38 52.0	0.0
TREC				eSG	Sb	15 39 19.0	+1.1
GOPC	GO Pecny, Ondr	2.40	273	ePN	Pn	15 38 54.5	-0.1
GOPC				ePG	Pb	15 38 57.9	-0.2
PRU	Pruhonice	2.56	274	ePG	Pb	15 39 00.8	0.0
PRU				eSG	Sg	15 39 35.7	-0.5
CONA	Conrad Observa	2.60	223	ePn	Pn	15 38 57.7	+0.3
	1.2nm,0.2s						
CONA				eSn	Sn	15 39 30.7	+1.0
	6.5nm,0.4s						
PVCC	Panska Ves	2.61	286	eSG	Sg	15 39 37.5	-0.4
	comp=Z,19nm,0.4s						
BRG	Berggiesshubel	3.09	291	PG	Pg	15 39 11.7	-1.4
BRG				SG	Sg	15 39 53.6	+0.4
	8.1nm,0.4s						
ARSA	Arzberg	3.28	218	ePn	Pn	15 39 07.7	+1.1
	1.4nm,0.3s						
KHC	Kasperske Hory	3.29	259	ePN	Pn	15 39 07.4	+0.6
KHC				ePG	Pg	15 39 16.0	-1.1
KHC				eSN	Sn	15 39 43.0	-3.7
KHC				eSG	Sg	15 39 59.4	-0.3
	comp=Z,14nm,0.4s						
GERES	GERESS Array B	3.30	254	Pn	Pn	15 39 07.8	+0.9
	0.4nm,0.3s,baz=62,slow=15,SNR=6.7						
GERES				Pg	Pg	15 39 16.5	-0.7
	3.2nm,0.3s,baz=70,slow=17,SNR=35						
GERES				Lg	Lg	15 39 58.9	
	3.3nm,0.3s,baz=79,slow=29,SNR=7.4						
MOA	Molln	3.44	236	i Pn	Pn	15 39 10.3	+1.3
	1.2nm,0.2s						
AKASG	Malin Array Be	6.92	79	Pn	Pn	15 39 57.0	+0.3
	0.3nm,0.3s,baz=261,slow=13,SNR=2.8						
FINES	FINESS Array B	12.36	17	Pn	Pn	15 41 09.9	-1.1
	0.1nm,0.3s,baz=205,slow=12,SNR=3.7						

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*NEIC **10** 15:44:01.5±1.7, 40°.67N±0°.04×125°.33W±0°.08, h19km±11km, Error ellipse: s-maj=9.2km s-min=5.3km az=72.0*

*NCEDC **10** 15:44:03.6±1.5, 40°.66N±0°.03×125°.30W±0°.05, h24km±7km, Md2.9/24, Error ellipse: s-maj=6.1km s-min=4.0km az=68.0*

*ANF **10** 15:44:03.9±1.1, 40°.86N×124°.93W, h0km, ML2.5/3, Error ellipse: s-maj=11.6km s-min=5.9km az=74.0*

ISC 10 15:44:03.1±2.2**, 40°.70N**±0°.05×**125°.25W**±0°.10**, h25**km±16km**, n49, σ0s.96**/56**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	0.73	107		Pb	15 44 17.4	+0.2
KMPM	Mount Pierce	0.90	108		Pb	15 44 19.6	-0.6
KMPM					Sb	15 44 32.1	+0.2
JCC	Jacoby Creek,	0.93	82		Pn	15 44 19.3	-1.3
JCC					Sb	15 44 32.3	-0.3
JCC	Jacoby Creek,	0.93	82	Pn	Pn	15 44 19.2	-1.4
KRPM	Rodgers	1.04	63		Pn	15 44 21.2	-0.9
KCRM	Chalk Rock	1.12	103		Pn	15 44 22.9	-0.4
KHMM	Horse Mountain	1.17	81		Pn	15 44 23.2	-0.8
KHMM					Sn	15 44 39.1	-0.1
KMRM	Mail Ridge	1.27	111		Pn	15 44 25.4	0.0
KRMB	Red Mountain	1.31	50		Pn	15 44 24.5	-1.4
KCSM	Cold Springs	1.33	96		Pn	15 44 26.0	-0.3
KOMM	Orleans Mounta	1.48	66		Pn	15 44 27.4	-0.9
KBSM	Bell Springs	1.48	121		Pn	15 44 28.1	-0.3
KSXB	Camp Six Broad	1.53	42		Pn	15 44 27.9	-1.1
KIPM	Iron Peak	1.62	123		Pn	15 44 30.1	0.0
KCPM	Cahto Peak	1.63	128		Pn	15 44 29.8	-0.5
KBO	Bosley Butte	1.70	27		Pn	15 44 30.2	-1.1
KFPM	Farley Peak	1.75	126		Pn	15 44 31.5	-0.5
KBNM	Bluenose Ridge	1.76	116		Pn	15 44 32.5	+0.3
LBPM	Beegum Peak	1.84	101		Pn	15 44 33.2	-0.1
LGPM	Granite Peak	1.85	82		Pn	15 44 32.7	-0.6
L02E	Cave Junction	1.91	40	P	Pn	15 44 34.1	-0.1
	baz=221,SNR=8.3						
L02E				S	Sn	15 44 56.0	-1.4
	baz=221						
M02C	Callahan	1.94	68	P	Pn	15 44 34.5	-0.1
	baz=250,SNR=9.6						
M02C				S	Sn	15 44 57.7	-0.5
	baz=250						
O02D	Mt. Diablo Mer	1.95	105		Pn	15 44 34.9	+0.2
O02D	Mt. Diablo Mer	1.95	105	P	Pn	15 44 34.7	0.0
	baz=286,SNR=43						
N02D	Trinity Center	1.95	81		Pn	15 44 34.0	-0.7
N02D	Trinity Center	1.95	81	P	Pn	15 44 34.9	+0.2
	baz=263						
LBKM	Bonanza King	2.00	78		Pn	15 44 35.1	-0.3
WDC	Whiskeytown Da	2.06	92		Pn	15 44 36.1	-0.1
GROM	Round Mountain	2.12	111		Pn	15 44 37.6	+0.6
GHMM	Hull Mountain	2.14	123		Pn	15 44 37.4	-0.1
GVV	Valley View	2.17	114		Pn	15 44 38.3	+0.4
YBH	Yreka Blue Hor	2.18	61	Pn	Pn	15 44 38.4	+0.6
GASB	Alder Springs	2.20	117		Pn	15 44 38.3	+0.1
KEBM	Edson Butte	2.28	17	Pn	Pn	15 44 39.1	-0.1
K02D	Willamette Mer	2.32	30	P	Pn	15 44 39.4	-0.5
	baz=212,SNR=57						
K02D				S	Sn	15 45 06.8	-0.9
	baz=212						
HOPS	Hopland Field	2.39	135	Pn	Pn	15 44 39.8	-0.8
HUMO	Hull Mountain	2.57	41	Pn	Pn	15 44 43.5	+0.3
J01E	Myrtle Point	2.65	21	S	Sn	15 45 15.4	-0.2
	baz=202						
O03E	Paynes Creek	2.66	98	P	Pn	15 44 44.9	+0.5
	baz=280,SNR=6.0						
L04D	Klamath Falls	2.68	55	P	Pn	15 44 47.6	+2.8
	baz=237,SNR=14						
ORV	Oroville	3.09	110		Pn	15 44 49.7	-0.6
I03D	Drain, OR	3.31	25	P	Pn	15 44 54.1	+0.8
	baz=206,SNR=11						
I03D				S	Sn	15 45 32.3	+0.4
	baz=206						
AFDM	Forest Hills D	3.73	117	Pn	Pn	15 44 60.0	+0.9
BEKR	Beckworth	3.83	101	Pn	Pn	15 45 03.6	+3.0
J05D	Fort Rock, OR	3.95	48	P	Pn	15 45 04.2	+1.9
	baz=231						
PINE	Pine Mountain	4.45	45	Pn	Pn	15 45 11.3	+2.1
H04A	Detroit Lake	4.58	28	Pn	Pn	15 45 12.3	+1.5
PAHR	Pah Rah Range	4.60	101	Pn	Pn	15 45 12.3	+1.1
SAO	San Andreas Ge	4.92	142	Pn	Pn	15 45 15.9	+0.4

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*RSPR **10** 15:47:13.7, 19°.61N×67°.90W, h10km±31km, MD3.6/11*

*OSPL **10** 15:47:13.3±3.7, 19°.65N×67°.56W, h8km±57km, ML3.9*

*NEIC **10** 15:47:14.7±1.4, 19°.5N±0°.1×67°.82W±0°.04, h27km±17km, Error ellipse: s-maj=15.0km s-min=5.5km az=173.0*

*IDC **10** 15:47:15.7±1.0, 19°.26N×67°.78W, h0km, mb3.4/5, mb1 3.8/7, mb1mx3.6/41, mbtmp3.7/7, ML3.4/2, MS2.8/1, Ms1 2.8/1, ms1mx2.4/36, Error ellipse: s-maj=34.2km s-min=16.8km az=50.0*

ISC 10 15:47:14.8±0.9**, 19°.38N**±0°.06×**67°.86W**±0°.04**, h10**km**, n60, σ1s.48**/72**, mb3.6**/5**, 10C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.99	210	i P	Pb	15 47 32.7	-1.4
PCDR				eS	Sb	15 47 46.5	-0.7
PCDR				IAML		15 47 54.0	
	comp=Z,2µm,0.4s						
PCDR	Punta Cana, DR	0.99	210	⇓iP	Pb	15 47 32.7	-1.4
PCDR	Punta Cana, DR	0.99	210	⇑eP	Pb	15 47 32.8	-1.3
PCDR				eS	Sb	15 47 48.5	+1.3
PCDR	Punta Cana, DR	0.99	210		Pb	15 47 32.8	-1.3
PCDR					Sb	15 47 48.6	+1.3
IDE	Isla Desecheo	1.05	160	⇑eP	Pn	15 47 32.9	-2.7
IDE	Isla Desecheo	1.05	160		Pn	15 47 32.9	-2.7
MPR	Mayaguez	1.35	150	i P	Pn	15 47 38.2	-1.4
MPR				eS	Sn	15 47 57.5	-0.1
MPR				IAML		15 48 00.8	
	comp=Z,615nm,0.6s						
MPR	Mayaguez	1.35	150		Pn	15 47 38.3	-1.4
LSP	Las Mesas	1.41	148	⇓eP	Pn	15 47 39.6	-0.8
LSP	Las Mesas	1.41	148		Pn	15 47 39.6	-0.8
AOPR	Arecibo Observ	1.47	134	⇑eP	Pn	15 47 40.2	-1.2
AOPR	Arecibo Observ	1.47	134	eS	Sn	15 48 00.2	-0.5
AOPR	Arecibo Observ	1.47	134		Pn	15 47 40.2	-1.2
AOPR					Sn	15 48 00.2	-0.5
CRPR	Cabo Rojo, PR	1.54	152	⇑eP	Pn	15 47 40.9	-1.4
CRPR	Cabo Rojo, PR	1.54	152	eS	Sn	15 48 03.1	+0.7
CRPR	Cabo Rojo, PR	1.54	152		Pn	15 47 40.9	-1.4
CRPR					Sn	15 48 03.1	+0.7
EMPR	Esperanza - Ma	1.55	125	⇓eP	Pn	15 47 40.5	-1.9
EMPR	Esperanza - Ma	1.55	125	eS	Sn	15 48 01.9	-0.6
EMPR	Esperanza - Ma	1.55	125		Sn	15 48 01.9	-0.6
DR12	Loma Pena Alta	1.56	248		Pn	15 47 42.2	-0.3
MLPR	Magueyes Islan	1.60	151	⇑eP	Pn	15 47 43.0	-0.2
MLPR	Magueyes Islan	1.60	151	eS	Sn	15 48 04.4	+0.5
MLPR	Magueyes Islan	1.60	151		Pn	15 47 43.0	-0.2
MLPR					Sn	15 48 04.4	+0.5
GBPR	Guanica, Bosqu	1.68	146	⇑eP	Pn	15 47 44.4	+0.2
GBPR	Guanica, Bosqu	1.68	146	eS	Sn	15 48 06.3	+0.5
GBPR	Guanica, Bosqu	1.68	146		Pn	15 47 44.4	+0.2
GBPR					Sn	15 48 06.3	+0.5
OBIP	Obispado Ponce	1.78	138	⇑eP	Pn	15 47 44.6	-1.0
OBIP	Obispado Ponce	1.78	138	eS	Sn	15 48 07.8	-0.6
OBIP	Obispado Ponce	1.78	138		Pn	15 47 44.6	-1.0
OBIP					Sn	15 48 07.8	-0.6
ICMP	Isla Caja de M	1.95	139	eS	Sn	15 48 13.3	+0.8
ICMP	Isla Caja de M	1.95	139		Pn	15 47 48.0	0.0
ICMP	Isla Caja de M	1.95	139		Sn	15 48 13.3	+0.8
GCPR	Guaynabo City	1.99	122	eS	Sn	15 48 12.5	-1.1
GCPR	Guaynabo City	1.99	122		Pn	15 47 48.3	-0.2
GCPR	Guaynabo City	1.99	122		Sn	15 48 12.5	-1.1
SJG	San Juan	2.05	128	Pn	Pn	15 47 48.6	-0.7
	comp=Z,27nm,0.3s,baz=305,slow=14,SNR=19						
SJG				Sn	Sn	15 48 13.8	-1.2
	comp=Z,158nm,0.3s,baz=350,slow=18,SNR=22						
SJG	San Juan	2.05	128		Pn	15 47 48.5	-0.9
SDD	Santo Domingo	2.15	245	i P	Pb	15 47 52.9	-0.9
SDD	Santo Domingo	2.15	245		Pn	15 47 50.6	-0.1
IGPR	InterUniversit	2.18	130	eS	Sn	15 48 16.9	-1.2
IGPR	InterUniversit	2.18	130	⇑eP	Pn	15 47 50.2	-0.8
IGPR	InterUniversit	2.18	130	eS	Sn	15 48 16.9	-1.2
IGPR	InterUniversit	2.18	130		Pn	15 47 51.8	+0.7
IGPR	InterUniversit	2.18	130		Sn	15 48 16.9	-1.2
PDPR	Patillas Dam,	2.21	128		Pn	15 47 50.1	-1.3
BON1	Bonao	2.44	260	eS	Sb	15 48 27.2	-1.6
CUPR	Culebra, Puert	2.66	113	⇑eP	Pn	15 47 56.1	-1.7
CUPR	Culebra, Puert	2.66	113	eS	Sn	15 48 28.2	-1.9
CUPR	Culebra, Puert	2.66	113		Pn	15 47 56.1	-1.7
CUPR					Sn	15 48 28.2	-1.9
STVI	Saint Thomas	2.94	110	⇑eP	Pn	15 48 00.1	-1.4
STVI	Saint Thomas	2.94	110	eS	Sn	15 48 34.9	-1.9
STVI	Saint Thomas	2.94	110		Pn	15 48 00.1	-1.4
STVI					Sn	15 48 34.9	-1.9
SDDR	Presa de Saban	3.27	264	i P	Pn	15 48 08.2	+2.1
SDDR				eS	Sb	15 48 47.9	-4.8
SDDR				IAML		15 49 06.1	
	comp=Z,239nm,0.7s						
PCRV	Puerto La Cruz	9.67	161	Pn	Pn	15 49 36.6	+2.5
	comp=Z,0.9nm,0.3s,baz=339,slow=12,SNR=3.0						
SDV	Santo Domingo	10.78	195	Pn	Pn	15 49 50.4	+1.0
	comp=Z,1.0nm,0.3s,baz=152,slow=10,SNR=10						
SDV				Sn	Sn	15 51 46.4	-3.9
	comp=Z,0.3nm,0.3s,baz=292,slow=19,SNR=3.0						
SDV				LR	LR	15 55 22.1	
	comp=Z,41nm,18.1s,baz=86,slow=46						
PTGA	Pitinga	21.44	158	P	P	15 52 04.2	+1.0
	comp=Z,1.9nm,0.7s,baz=319,slow=18,SNR=3.6						
TXAR	Lajitas Array	33.98	294	P	P	15 54 01.0	+2.2
	comp=Z,0.2nm,0.6s,baz=97,slow=7.4,SNR=4.1						
YKA	Yellowknife Ar	53.66	335	P	P	15 56 40.3	+4.0
	comp=Z,0.3nm,0.6s,baz=111,slow=8.0,SNR=4.8						
TORD	Torodi Ar. Bea	66.68	84	P	P	15 58 09.0	+2.6
	comp=Z,0.7nm,0.7s,baz=287,slow=6.0,SNR=3.9						
ILAR	Eielson Array	67.97	333	P	P	15 58 17.4	+3.6
	comp=Z,0.3nm,0.7s,baz=115,slow=5.0,SNR=4.7						

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*NNC **10** 15:47:36.0±5.2, 36°.77N×69°.15E, h79km±127km, mb3.6, mpv3.8, Error ellipse: s-maj=40.1km s-min=33.2km az=163.0*

ISC 10 15:47:33.0±3.0**, 36°.7N**±0°.2×**69°.1E**±0°.1**, h37**km**, n12, σ1s.24**/17**, 3C-6D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.53	32	P	Pn	15 49 07.8	+0.9
	SNR=49						
KK31	Karatay Array	6.54	9	⇓P	Pn	15 49 09.7	+3.0
	2.2nm,0.7s,baz=187,slow=13,SNR=27						
KK31				⇓S	Sn	15 50 21.2	+1.3
	7.2nm,0.7s,baz=193,slow=24,SNR=15						
UCH	Uchtor	6.97	35	P	Pn	15 49 13.8	+0.8
	SNR=13						
KZA	Kyzart	7.22	39	P	Pn	15 49 17.0	+0.7
	SNR=5.1						
AAK	Ala-Archa	7.29	33	P	Pn	15 49 18.0	+0.9
	SNR=8.9						
AAK	Ala-Archa	7.29	33	⇓P	Pn	15 49 17.1	0.0
	2.5nm,0.3s						
AAK				⇑S	Sn	15 50 38.3	-0.3
	4.7nm,0.7s						
KBK	Karagaybulak	7.51	35	P	Pn	15 49 20.8	+0.7
	SNR=5.5						
CHMS	Chumysh	7.69	33	P	Pn	15 49 22.9	+0.5
	SNR=5.1						
CHMS	Chumysh	7.69	33	⇓P	Pn	15 49 22.3	-0.2
	8.6nm,0.7s						
CHMS				⇓S	Sn	15 50 47.8	-0.5
	1.9nm,0.7s						
USP	Ospenovka	7.81	30	P	Pn	15 49 24.1	+0.1
	SNR=6.4						
AB31	Akbulak array	14.26	335	P	Pn	15 50 52.1	0.0
	0.8nm,0.5s,baz=157,slow=13,SNR=16						
AB31				⇑S	Sn	15 53 26.5	-2.4
	2.0nm,0.5s,baz=173,slow=20,SNR=4.3						
AKTO	Aktyubinsk	15.92	333	⇑P	P	15 51 16.7	-0.7
	1.2nm,0.6s						
AKTO				⇓S	Sn	15 54 08.6	-0.8
	2.7nm,0.9s						

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*KRSC **10** 16:03:30.7±1.0, 54°.50N×163°.25E, h42km±33km, ML3.9*

*IDC **10** 16:03:30.8±1.7, 54°.79N×163°.01E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.4/64, mbtmp3.6/6, ML2.8/1, MS3.0/3, Ms1 3.0/3, ms1mx2.7/45, Error ellipse: s-maj=48.0km s-min=20.3km az=150.0*

ISC 10 16:03:31.1±0.8**, 54°.64N**±0°.04×**163°.11E**±0°.03**, h15**km**, n42, σ1s.62**/62**, mb3.9**/5**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	1.58	354	P	Pb	16 03 59.2	-0.8
KBTR				S	Sb	16 04 19.7	-0.2
KBG	Krutoberegovo	1.64	352	P	Pb	16 03 59.6	-1.4
TUMD	Tumrok D	1.67	291	P	Pb	16 04 01.2	-0.2
TUMD				S	Sg	16 04 22.9	-1.8
KZV	Kizimen	1.70	288	P	Pb	16 04 01.6	-0.4
KZV				S	Sg	16 04 24.0	-1.7
BKI	Bering	1.75	70	P	Pb	16 04 00.8	-2.0
BKI				S	Sb	16 04 22.4	-2.1
TUMR	Tumrok	1.83	292	P	Pb	16 04 04.1	-0.2
TUMR				S	Sb	16 04 27.5	+0.5
ZLN	Zelenaya	1.91	317	P	Pb	16 04 05.7	0.0
BZMR	Bezymyannaya	1.99	312	P	Pb	16 04 07.0	0.0
KMNR	Kamenistaya	1.99	305	P	Pb	16 04 06.8	-0.3
KMNR				S	Sg	16 04 33.5	-1.7
LGNR	Loginova	2.00	317	P	Pb	16 04 07.1	-0.3
LGNR				S	Sg	16 04 34.0	-1.5
CIRR	Tsirk	2.00	319	P	Pg	16 04 07.5	-2.0
KIRR	Kirishev	2.06	311	P	Pb	16 04 08.3	0.0
KRSR	Krestovskiy	2.15	319	P	Pb	16 04 08.2	-1.5
KLY	Klyuchi	2.19	321	P	Pb	16 04 07.9	-2.4
KLY				S	Sb	16 04 35.7	-1.5
KII	Karymskiy	2.23	256	P	Pn	16 04 08.5	+1.0
KII				S	Sb	16 04 36.2	-2.2
KOZ	Kozyrevsk	2.33	309	P	Pb	16 04 11.9	-0.9
SPN	Mys Shipunski	2.39	231	P	Pn	16 04 09.1	-0.5
SPN				S	Sn	16 04 36.6	-2.1
SRDR	Sredinnyy	2.56	312	P	Pb	16 04 14.0	-2.8
NLC	Nalytchevo	2.67	238	S	Sn	16 04 45.7	+0.3
ESO	Esso	2.83	299	P	Pn	16 04 17.3	+1.5
SMAR	Somma	2.90	243	P	Pn	16 04 18.3	+1.5
SMAR				S	Sn	16 04 52.0	+0.6
KRER	Koryakskii	2.90	244	P	Pn	16 04 18.0	+1.1
KRER				S	Sn	16 04 52.2	+0.7
UGLR	Uglovaya	2.91	242	P	Pn	16 04 18.4	+1.5
AVH	Avacha	2.93	244	P	Pn	16 04 18.7	+1.6
AVH				S	Sn	16 04 53.6	+1.6
KRX	Arik	2.93	246	P	Pn	16 04 18.4	+1.2
KRX				S	Sn	16 04 51.9	-0.2
KOK	Koryaka	2.97	245	P	Pn	16 04 19.1	+1.4
DALK	Dalny	3.04	240	P	Pn	16 04 19.3	+0.7
DALK				S	Sn	16 04 54.3	-0.4
KRMR	Karymshinskiy	3.47	241	P	Pn	16 04 25.5	+1.1
KRMR				S	Sn	16 05 05.0	-0.2
RUS	Russkaya	3.52	233	S	Sn	16 05 04.8	-1.7
PETK	Petropavlovsk-	3.55	247	Pn	Pn	16 04 27.8	+2.2
	3.7nm,0.3s,baz=63,slow=12,SNR=45						
PETK				Sn	Sb	16 05 11.4	-5.0
	1.5nm,0.3s,baz=278,slow=37,SNR=6.7						
PETK				LR	LR	16 05 38.3	
	comp=Z,77nm,18.1s,baz=63,slow=36						
MTVR	Mutnovka	3.65	236	P	Pn	16 04 28.5	+1.5
MTVR				S	Sn	16 05 10.4	+0.6
GRL	Gorelyy	3.66	237	P	Pn	16 04 29.1	+1.9
GRL				S	Sn	16 05 11.9	+1.9
ASAK	Asacha	3.84	236	P	Pn	16 04 31.8	+2.1
ASAK				S	Sn	16 05 16.8	+2.2
APC	Apacha	3.92	247	P	Pn	16 04 33.3	+2.6
APC				S	Sn	16 05 19.7	+3.2
KDTR	Khodutka, Kamc	4.14	229	P	Pn	16 04 34.6	+0.9
KDTR				S	Sn	16 05 21.2	-0.6
MA2	Magadan	8.34	311	LR	LR	16 08 38.2	
	comp=Z,68nm,18.9s,baz=350,slow=38						
TIXI	Tiksi	22.49	332	P	P	16 08 29.8	+0.4
	1.2nm,0.2s,baz=113,slow=7.7,SNR=4.2						
ILAR	Eielson Array	26.45	47	P	P	16 09 09.3	+2.3
	0.8nm,0.9s,baz=257,slow=9.0,SNR=4.3						
YKA	Yellowknife Ar	40.81	45	P	P	16 11 12.3	+1.0
	0.2nm,0.7s,baz=296,slow=7.5,SNR=3.0						
FINES	FINESS Array B	59.39	338	P	P	16 13 32.6	+0.5
	1.1nm,0.7s,baz=32,slow=11,SNR=7.0						
CMAR	Chiang Mai Arr	60.23	260	P	P	16 13 40.5	+1.9
	0.4nm,0.4s,baz=35,slow=7.6,SNR=4.5						
TEIG	Tepich	83.95	64	LR	LR	16 56 16.5	
	comp=Z,32nm,18.5s,baz=344,slow=38						

IDC 10 16:06:18.7±5.8**, 4°.48S**×**133°.63E, h0**km**, mb3.3**/1**, mb1 3.6**/3**, mb1mx3.3**/45**, mbtmp3.4**/3**, ML3.5**/2**, Error ellipse: s-maj=340.3km s-min=30.1km az=77.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.38	178	Pn	Pn	16 09 55.5	-1.7
	0.2nm,0.3s,baz=357,slow=14,SNR=11						
WRA				Sn	Sn	16 12 42.6	-5.9
	0.1nm,0.3s,baz=358,slow=22,SNR=4.6						
ASAR	Alice Springs	19.07	179	P	Pn	16 10 43.7	0.0
	0.2nm,0.3s,baz=4.7,slow=12,SNR=18						
MKAR	Makanchi Array	68.19	325	P	P	16 17 21.1	0.0
	0.2nm,0.6s,baz=128,slow=6.0,SNR=3.3						

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*IDC **10** 16:07:37.5±0.9, 41°.82N×81°.37E, h0km, mb3.7/9, mb1 3.7/15, mb1mx3.5/62, mbtmp3.6/15, ML3.0/6, Error ellipse: s-maj=15.0km s-min=12.5km az=65.0*

*SOME **10** 16:07:37.3, 41°.67N×81°.48E, h10km*

*NNC **10** 16:07:39.0±1.0, 41°.70N×81°.39E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=7.9km s-min=5.1km az=163.0*

ISC 10 16:07:37.2±1.9**, 41°.70N**±0°.05×**81°.43E**±0°.05**, h1**km±11km**, n68, σ2s.07**/93**, mb3.7**/8**, 10C-11D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	1.92	336	eP	Pb	16 08 13.4	+0.4
	10nm,0.1s						
KTMS				eS	Sb	16 08 39.2	+1.6
	374nm,0.3s						
SHLS	Shalkode	2.06	316	eP	Pn	16 08 12.6	-0.4
	113nm,0.2s						
SHLS				eS	Sn	16 08 38.2	-1.1
	907nm,0.3s						
SHLS	Shalkode	2.06	316	Pg	Pn	16 08 12.6	-0.4
	113nm,0.2s						
SHLS				Lg	Lg	16 08 38.2	
	907nm,0.3s						
UZB	Uzynbulak	2.29	310	eP	Pg	16 08 21.1	0.0
	34nm,0.2s						
UZB				eS	Sg	16 08 52.9	+2.0
	270nm,0.2s						
UZB	Uzynbulak	2.29	310	Pg	Pg	16 08 21.1	0.0
	34nm,0.2s						
UZB				Lg	Lg	16 08 52.9	
	270nm,0.2s						
SATY	Saty	2.62	302	eP	Pb	16 08 26.8	+1.9
	17nm,0.1s						
SATY				eS	Sg	16 09 02.9	+1.6
	277nm,0.3s						
SATY	Saty	2.62	302	Pg	Pb	16 08 26.8	+1.9
	17nm,0.1s						
SATY				Lg	Lg	16 09 02.9	
	277nm,0.3s						
ZHN	Zhinishke	2.66	305	eP	Pb	16 08 27.1	+1.5
	16nm,0.0s						
ZHN				eS	Sg	16 09 03.1	+0.5
	74nm,0.1s						
ZHN	Zhinishke	2.66	305	Pg	Pb	16 08 27.1	+1.5
	16nm,0.0s						
ZHN				Lg	Lg	16 09 03.1	
	74nm,0.1s						
DJR	Jarkent	2.90	336	eP	Pb	16 08 30.6	+1.0
	5.5nm,0.3s						
DJR				eS	Sb	16 09 08.4	+2.9
	129nm,0.3s						
DJR	Jarkent	2.90	336	Pg	Pb	16 08 30.6	+1.0
	5.5nm,0.3s						
DJR				Lg	Lg	16 09 08.4	
	129nm,0.3s						
KURS	Kuram	3.00	308	eP	Pb	16 08 33.1	+1.8
	21nm,0.2s						
KURS				eS	Sg	16 09 13.3	-0.2
	96nm,0.4s						
KURS	Kuram	3.00	308	Pg	Pb	16 08 33.1	+1.8
	21nm,0.2s						
KURS				Lg	Lg	16 09 13.3	
	96nm,0.4s						
MDOK	Medeo	3.56	296	eP	Pg	16 08 43.9	-1.4
	14nm,0.3s						
MDOK				eS	Sg	16 09 31.6	+0.2
	80nm,0.6s						
MDOK	Medeo	3.56	296	⇓Pn	Pn	16 08 35.8	+2.2
	4.5nm,0.4s						
MDOK				⇑Pg	Pb	16 08 43.2	+2.3
	18nm,0.4s						
MDOK				⇓Lg	Lg	16 09 32.1	
	63nm,0.6s						
MDOK	Medeo	3.56	296	Pg	Pg	16 08 43.9	-1.4
	14nm,0.3s						
MDOK				Lg	Lg	16 09 31.6	
	80nm,0.6s						
TNSS	Tian-Shan	3.58	293	eP	Pb	16 08 43.7	+2.3
	13nm,0.2s						
TNSS				eS	Sg	16 09 31.2	-1.0
	90nm,0.4s						
TNSS	Tian-Shan	3.58	293	Pg	Pb	16 08 43.7	+2.3
	13nm,0.2s						
TNSS				Lg	Lg	16 09 31.2	
	90nm,0.4s						
KNDC	Almaty	3.63	296	⇓Pg	Pb	16 08 43.0	+0.8
	34nm,0.7s						
KNDC				⇑Lg	Lg	16 09 34.9	
	108nm,0.7s						
ARXS	Arharly	3.65	315	eP	Pb	16 08 44.7	+2.3
	14nm,0.2s						
ARXS				eS	Sg	16 09 32.8	-1.5
	103nm,0.3s						
ARXS	Arharly	3.65	315	Pg	Pb	16 08 44.7	+2.3
	14nm,0.2s						
ARXS				Lg	Lg	16 09 32.8	
	103nm,0.3s						
AAA	Alma-Ata	3.66	296	eP	Pg	16 08 46.4	-1.0

	11nm,0.1s						
AAA				eS	Sg	16 09 36.0	+1.2
	25nm,0.1s						
AAA	Alma-Ata	3.66	296	Pg	Pg	16 08 46.4	-1.0
	11nm,0.1s						
AAA				Lg	Lg	16 09 36.0	
	25nm,0.1s						
IZV	Izvestkoviy	3.81	292	eP	Pb	16 08 47.7	+2.5
	14nm,0.2s						
IZV				eS	Sg	16 09 37.9	-1.6
	114nm,0.4s						
IZV	Izvestkoviy	3.81	292	Pg	Pb	16 08 47.7	+2.5
	14nm,0.2s						
IZV				Lg	Lg	16 09 37.9	
	114nm,0.4s						
CHKK	Chushkaly	3.91	305	eP	Pb	16 08 50.0	+3.1
	18nm,0.2s						
CHKK				eS	Sg	16 09 42.7	-0.2
	95nm,0.2s						
CHKK	Chushkaly	3.91	305	Pg	Pb	16 08 50.0	+3.1
	18nm,0.2s						
CHKK				Lg	Lg	16 09 42.7	
	95nm,0.2s						
MTBS	Maitube	3.97	293	eP	Pb	16 08 50.2	+2.3
	3.7nm,0.1s						
MTBS				eS	Sg	16 09 42.3	-2.3
	42nm,0.4s						
MTBS	Maitube	3.97	293	Pg	Pb	16 08 50.2	+2.3
	3.7nm,0.1s						
MTBS				Lg	Lg	16 09 42.3	
	42nm,0.4s						
TDK	Taldyqorghan	3.97	327	eP	Pg	16 08 51.8	-1.4
	57nm,0.2s						
TDK				eS	Sg	16 09 45.0	+0.4
	185nm,0.4s						
TDK	Taldyqorghan	3.97	327	Pg	Pg	16 08 51.8	-1.4
	57nm,0.2s						
TDK				Lg	Lg	16 09 45.0	
	185nm,0.4s						
KTBS	Karatobe	4.03	302	eP	Pb	16 08 51.6	+2.6
	7.6nm,0.2s						
KTBS				eS	Sg	16 09 44.5	-2.3
	133nm,0.3s						
KTBS	Karatobe	4.03	302	Pg	Pb	16 08 51.6	+2.6
	7.6nm,0.2s						
KTBS				Lg	Lg	16 09 44.5	
	133nm,0.3s						
KST	Kastek	4.26	290	eP	Pb	16 08 55.5	+2.5
	30nm,0.3s						
KST				eS	Sg	16 09 52.1	-2.0
	72nm,0.3s						
KST	Kastek	4.26	290	Pg	Pb	16 08 55.5	+2.5
	30nm,0.3s						
KST				Lg	Lg	16 09 52.1	
	72nm,0.3s						
KUU	Kurty	4.34	302	eP	Pb	16 08 57.8	+3.6
	3.7nm,0.2s						
KUU				eS	Sg	16 09 55.5	-1.1
	56nm,0.4s						
KUU	Kurty	4.34	302	Pg	Pb	16 08 57.8	+3.6
	3.7nm,0.2s						
KUU				Lg	Lg	16 09 55.4	
	56nm,0.4s						
DGS	Degeres	4.46	292	eP	Pg	16 09 00.6	-2.0
	11nm,0.3s						
DGS				eS	Sg	16 10 00.0	-0.3
	67nm,0.3s						
DGS	Degeres	4.46	292	Pg	Pg	16 09 00.6	-2.0
	11nm,0.3s						
DGS				Lg	Lg	16 10 00.0	
	67nm,0.3s						
KRBS	Karabastau	4.69	297	eP	Pb	16 09 03.3	+3.2
	6.0nm,0.3s						
KRBS				eS	Sg	16 10 04.6	-3.0
	33nm,0.4s						
KRBS	Karabastau	4.69	297	Pg	Pb	16 09 03.3	+3.2
	6.0nm,0.3s						
KRBS				Lg	Lg	16 10 04.6	
	33nm,0.4s						
CHMS	Chumysh	5.11	287	⇑Pg	Pg	16 09 12.3	-2.9
	11nm,0.8s						
CHMS				⇓Lg	Lg	16 10 19.7	
	19nm,0.9s						
MAKZ	Makanchi	5.13	4	⇑Pn	Pn	16 08 55.5	+0.5
	7.9nm,0.7s						
MAKZ				⇓Lg	Lg	16 10 18.8	
	10nm,0.6s						
MK31	Makanchi Array	5.13	7	⇑Pn	Pn	16 08 55.8	+0.6
	1.0nm,0.3s,baz=188,slow=12,SNR=49						
MK31				⇓Pg	Pb	16 09 10.0	+2.3
	4.3nm,0.5s,baz=180,slow=14,SNR=3.9						
MK31				⇓Sn	Sn	16 10 00.7	+5.6
	5.0nm,0.5s,baz=159,slow=41,SNR=5.2						
MK31				⇓Lg	Lg	16 10 18.2	
	9.5nm,0.5s,baz=186,slow=30,SNR=4.7						
MKAR	Makanchi Array	5.13	7	Pn	Pn	16 08 55.9	+0.7
	1.6nm,0.3s,baz=186,slow=13,SNR=30						
MKAR				Sn	Sn	16 09 54.9	-0.2
	2.4nm,0.3s,baz=198,slow=19,SNR=5.0						
MKAR				Lg	Lg	16 10 18.2	
	4.5nm,0.3s,baz=183,slow=23,SNR=7.6						
AAK	Ala-Archa	5.24	283	Pn	Pn	16 08 59.9	+3.2
	1.1nm,0.3s,baz=101,slow=8.8,SNR=17						
AAK				Pg	Pb	16 09 11.6	+2.1
	1.0nm,0.3s,baz=99,slow=13,SNR=5.9						
AAK				Lg	Lg	16 10 23.9	
	1.7nm,0.3s,baz=213,slow=17,SNR=8.0						
AAK	Ala-Archa	5.24	283	⇑Pg	Pg	16 09 15.3	-2.2
	7.6nm,0.7s						
AAK				⇓Lg	Lg	16 10 24.7	
	38nm,0.8s						
SGDS	Sogindy	5.32	292	Pg	Pb	16 09 15.3	+4.5
	4.6nm,0.5s						
SGDS				Lg	Lg	16 10 25.4	
	27nm,0.5s						
KK31	Karatay Array	8.20	284	⇑Pg	Pg	16 10 09.5	-4.6
	1.4nm,0.5s,baz=81,slow=16,SNR=3.9						
KK31				⇑Lg	Lg	16 11 57.6	
	2.2nm,0.5s						
KURBB	Kurchatov Arra	9.15	348	Pn	Pn	16 09 49.7	-0.5
	0.1nm,0.3s,baz=173,slow=12,SNR=3.1						
KURBB				Sn	Sn	16 11 31.5	-2.2
	0.1nm,0.3s,baz=186,slow=16,SNR=3.5						
KURBB				Lg	Lg	16 12 23.2	
	0.1nm,0.3s,baz=185,slow=28,SNR=4.5						
KURBB	Kurchatov Arra	9.15	348	⇓Pn	Pn	16 09 55.2	+5.0
	4.3nm,0.9s						
KURBB				⇑Lg	Lg	16 12 29.6	
	11nm,0.6s						
KURK	Kurchatov	9.23	349	⇑Pn	Pn	16 09 54.9	+3.6
	3.4nm,0.9s						
KURK				⇓Lg	Lg	16 12 33.8	
	8.9nm,0.9s						
CHCP	Chirah Chowk	10.30	221	P	Pn	16 10 08.3	+2.2
CEP	Cherat	10.88	227	P	Pn	16 10 14.9	+0.8
CEP				S	Sn	16 12 14.0	-2.5
THW	Thamme Wali	11.76	224	P	Pn	16 10 25.7	-0.3
ZALV	Zalesovo Beam	12.47	9	Pn	Pn	16 10 33.8	-1.8
	0.2nm,0.3s,baz=188,slow=9.0,SNR=4.5						
BVAR	Borovoye Array	13.56	330	Pn	Pn	16 10 49.0	-1.5
	0.1nm,0.3s,baz=223,slow=40,SNR=2.3						
BVAR				Lg	Lg	16 14 45.1	
	0.1nm,0.3s,baz=127,slow=22,SNR=3.2						
SONM	Songino Array	18.72	62	P	Pn	16 11 56.7	-0.7
	0.1nm,0.3s,baz=261,slow=12,SNR=5.5						
ARU	Arti	20.87	323	P	P	16 12 19.2	-1.1
	0.8nm,0.4s,baz=92,slow=14,SNR=4.4						
TIXI	Tiksi	37.91	22	P	P	16 14 53.7	-1.7
	0.3nm,0.4s,baz=262,slow=7.0,SNR=4.0						
ARCES	ARCESS Array B	39.83	333	P	P	16 15 11.2	-0.4
	0.9nm,0.5s,baz=94,slow=8.9,SNR=4.5						
HFS	Hagfors	44.30	318	P	P	16 15 47.6	-0.5
	2.1nm,0.8s,baz=134,slow=11,SNR=4.4						
NB2	NORSAR Subarra	45.39	320	P	P	16 15 55.8	-1.0
	comp=Z,1.0nm,0.5s,baz=82,slow=7.9						
NOA	NORSAR Array B	45.39	320	P	P	16 15 55.9	-1.0
	comp=Z,0.9nm,0.6s,baz=81,slow=7.9,SNR=3.3						
TORD	Torodi Ar. Bea	73.75	273	P	P	16 19 12.0	-1.2
	comp=Z,0.5nm,0.5s,baz=42,slow=6.1,SNR=3.9						
YKA	Yellowknife Ar	75.36	8	P	P	16 19 19.9	-1.8
	comp=Z,0.1nm,0.5s,baz=343,slow=5.3,SNR=5.1						
WRA	Warramunga Arr	78.45	130	P	P	16 19 42.8	+3.1
	comp=Z,0.8nm,1.0s,baz=326,slow=4.9,SNR=4.4						
ASAR	Alice Springs	81.16	133	P	P	16 19 56.2	+1.9
	comp=Z,0.3nm,0.6s,baz=325,slow=5.3,SNR=5.9						

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*UPA **10** 16:08:39.9±0.6, 6°.91N×76°.16W, h1km±5km, MW3.6*

*RSNC **10** 16:08:41.5±1.0, 7°.00N×76°.14W, h0km±7km, ML2.7*

ISC 10 16:08:40.6±1.0**, 6°.96N**±0°.03×**76°.13W**±0°.03**, h5**km±8km**, n16, σ0ˢ.74**/32**, 1C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBBC	Dabeiba	0.10	307	⇑iP	Pg	16 08 42.8	0.0
DBBC				eS	Sg	16 08 44.7	+0.4
DBBC				i		16 08 45.7	
	comp=Z,4μm,0.3s						
DBBC	Dabeiba	0.10	307	eP	Pg	16 08 42.8	0.0
DBBC				eS	Sg	16 08 44.7	+0.4
HELC	Santa Helena	0.97	142	eP	Pg	16 08 59.3	+0.1
HELC				eS	Sb	16 09 13.0	-0.3
HELC				i		16 09 14.3	
	comp=Z,41nm,0.2s						
HELC	Santa Helena	0.97	142	⇓iP	Pg	16 08 59.4	+0.1
HELC				eS	Sb	16 09 13.2	-0.1
UREC	San Jos de Ur	0.99	37	eP	Pg	16 08 57.6	-2.0
UREC				eS	Sg	16 09 12.9	+0.5
UREC				i		16 09 17.1	
	comp=Z,167nm,0.2s						
CBOC	Ciudad Bolivar	1.09	174	eP	Pn	16 09 02.5	-0.3
CBOC				eS	Sn	16 09 18.0	-0.3
CBOC				i		16 09 25.6	
	comp=Z,99nm,0.5s						
ZARC	Zaragoza, Cauc	1.37	67	eP	Pn	16 09 05.5	-0.9
ZARC				eS	Sb	16 09 24.5	0.0
ZARC				i		16 09 27.2	
	comp=Z,144nm,0.3s						
PTBC	PUERTO BERRIO,	1.71	104	eP	Pn	16 09 10.9	-0.3
PTBC				eS	Sg	16 09 35.7	0.0
PTBC				i		16 09 39.3	
	comp=Z,42nm,0.2s						
NORC	Norcasia	1.86	138	eP	Pb	16 09 14.9	-0.4
NORC				eS	Sb	16 09 39.1	+0.1
NORC				i		16 09 46.6	
	comp=Z,20nm,0.4s						
GUY2C	Guyana, Caldas	1.88	156	eP	Pb	16 09 15.4	-0.4
GUY2C				eS	Sg	16 09 41.6	+0.4
GUY2C				i		16 09 48.0	
	comp=Z,17nm,0.6s						
CAP2	Capurgana	2.08	324	eP	Pn	16 09 16.5	+0.3
CAP2				eS	Sn	16 09 43.7	+1.1
UPD2	Meteti	2.45	310	eP	Pn	16 09 20.7	-0.6
UPD2				eS	Sn	16 09 51.5	-0.1
SMLC	San Martn de	2.74	48	eP	Pn	16 09 25.1	-0.2
SMLC				eS	Sn	16 09 59.7	+0.8
SMLC				i		16 10 08.0	
	comp=Z,28nm,0.3s						
SJCC	San Jacinto, C	3.07	18	eP	Pn	16 09 30.9	+1.0
SJCC				eS	Sn	16 10 08.4	+1.4
PAMC	Pamplona, Colo	3.42	83	eP	Pn	16 09 36.0	+0.8
PAMC				eS	Sn	16 10 18.1	+1.7
PAMC				i		16 10 33.5	
	comp=Z,503nm,0.6s						
CHPO	Chepo, Panama	3.69	307	eP	Pn	16 09 38.0	-0.3
CHPO				eS	Sn	16 10 21.8	-0.4

NNC 10 16:43:28.6±6.1**, 37°.79N**×**72°.30E, h0**km**, mb3.9, mpv3.5, 5C-1D, Error ellipse: s-maj=47.7km s-min=42.0km az=149.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.47	13	P	Pn	16 44 39.6	+1.6
	SNR=61						
UCH	Uchtor	4.75	20	P	Pn	16 44 43.3	+1.4
	SNR=7.8						
KZA	Kyzart	4.85	27	P	Pn	16 44 43.9	+0.7
	SNR=5.5						
EKS2	Erkin-Say	5.00	13	P	Pn	16 44 47.0	+2.0
	SNR=7.9						
AAK	Ala-Archa	5.13	18	P	Pn	16 44 48.2	+1.4
	SNR=6.4						
AAK	Ala-Archa	5.13	18	⇑P	Pn	16 44 47.6	+0.8
	4.2nm,0.5s						
AAK				⇑S	Sn	16 45 49.0	+2.2
	3.6nm,0.9s						
ULHL	Ulahol	5.38	33	P	Pn	16 44 50.6	+0.2
	SNR=7.7						
KK31	Karatay Array	5.48	346	⇑P	Pn	16 44 51.0	-0.5
	2.0nm,0.4s,baz=156,slow=11,SNR=28						
KK31				⇑S	Sn	16 45 56.2	+0.8
	2.8nm,0.5s,baz=148,slow=18,SNR=11						
CHMS	Chumysh	5.53	19	⇑P	Pn	16 44 51.6	-0.7
	2.4nm,0.4s						
CHMS				⇓S	Sn	16 45 56.9	+0.4
	2.0nm,0.8s						

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*NCEDC **10** 16:44:45.6±1.5, 40°.75N±0°.03×125°.19W±0°.05, h25km±7km, Md2.8/31, Error ellipse: s-maj=5.6km s-min=3.6km az=118.0*

NEIC 10 16:44:43.9±1.4**, 40°.75N**±0°.04×**125°.22W**±0°.05**, h22**km±10km**, Error ellipse: s-maj=6.3km s-min=5.1km az=56.0, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	0.72	112		Pn	16 44 58.7	0.0
KCTM					Sn	16 45 09.3	+0.1
KMPM	Mount Pierce	0.90	111		Pb	16 45 01.0	+0.2
KMPM					Sn	16 45 13.0	-0.6
JCC	Jacoby Creek,	0.90	85		Sb	16 45 12.1	-0.3
JCC	Jacoby Creek,	0.90	85		Pb	16 45 00.4	-0.4
JCC					Sb	16 45 11.9	-0.5
KRPM	Rodgers	0.99	65		Pb	16 45 02.1	-0.3
KCRM	Chalk Rock	1.11	106		Pn	16 45 04.2	0.0
KHMM	Horse Mountain	1.13	83		Pn	16 45 04.0	-0.5
KHMM				Sn	Sb	16 45 18.8	-0.4
KRMB	Red Mountain	1.25	52		Pn	16 45 05.3	-0.9
KMRM	Mail Ridge	1.27	114		Pn	16 45 06.2	-0.1
KCSM	Cold Springs	1.31	99		Pn	16 45 07.2	+0.2
KOMM	Orleans Mounta	1.44	68		Pn	16 45 08.4	-0.3
KSXB	Camp Six Broad	1.48	43		Pn	16 45 08.6	-0.6
KBSM	Bell Springs	1.49	123		Pn	16 45 09.5	+0.1
KHBM	Hayfork Bally	1.52	93		Pn	16 45 09.7	-0.2
KBO	Bosley Butte	1.64	27		Pn	16 45 10.9	-0.5
KCPM	Cahto Peak	1.64	130		Pn	16 45 11.7	+0.2
KFPM	Farley Peak	1.77	128		Pn	16 45 13.1	0.0
KBNM	Bluenose Ridge	1.77	118		Pn	16 45 14.2	+1.0
LGPM	Granite Peak	1.82	84		Pn	16 45 13.8	-0.1
GTC	Three Chop Rid	1.86	136		Pn	16 45 14.5	+0.1
M02C	Callahan	1.90	69		Pn	16 45 15.0	0.0
N02D	Trinity Center	1.92	82		Pn	16 45 15.1	-0.2
O02D	Mt. Diablo Mer	1.94	106		Pn	16 45 16.2	+0.7
LBKM	Bonanza King	1.96	79		Pn	16 45 16.4	+0.4
GNAM	Navarro Ridge	1.97	141		Pn	16 45 15.8	-0.1
WDC	Whiskeytown Da	2.04	94	Pn	Pn	16 45 17.4	+0.5
GROM	Round Mountain	2.12	112		Pn	16 45 19.0	+1.0
YBH	Yreka Blue Hor	2.13	62	Pn	Pn	16 45 19.5	+1.3
GHOM	Hamilton Openi	2.14	142		Pn	16 45 18.2	-0.1
GVV	Valley View	2.17	116		Pn	16 45 19.7	+0.9
GASB	Alder Springs	2.21	119		Pn	16 45 19.9	+0.7
HOPS	Hopland Field	2.41	136	Pn	Pn	16 45 22.7	+0.7
LSHM	Sage Hen Hill	2.41	88		Pn	16 45 22.6	+0.5
HUMO	Hull Mountain	2.51	42	Pn	Pn	16 45 24.0	+0.7
ORV	Oroville	3.09	112	Pn	Pn	16 45 30.8	-0.4
BEKR	Beckworth	3.82	102		Pn	16 45 42.0	+0.6
H04A	Detroit Lake	4.52	29	Pn	Pn	16 45 52.0	+1.0

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*IDC **10** 16:46:44.8±4.5, 45°.17N×148°.02E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.4/51, mbtmp3.9/4, MS3.9/1, Ms1 3.9/1, ms1mx2.6/50, Error ellipse: s-maj=162.1km s-min=34.3km az=6.0*

*MOS **10** 16:46:52.9±1.3, 44°.53N×147°.77E, h88km, mb4.0/6, Error ellipse: s-maj=17.3km s-min=14.6km az=135.6*

*SKHL **10** 16:46:53.7±0.1, 44°.25N×147°.85E, h104km±9km, mb4.4/3, msh5.4/3*

*JMA **10** 16:46:53.9±0.3, 44°.06N×147°.99E, h63km, M3.9*

*NEIC **10** 16:46:59.6±0.8, 45°.4N±0°.1×147°.9E±0°.1, h115km±6km, mb4.4/7, Error ellipse: s-maj=21.8km s-min=12.5km az=167.0*

ISC 10 16:46:53.3±1.1**, 44°.22N**±0°.06×**147°.92E**±0°.08**, h96**km±8km**, n47, σ1ˢ.19**/58**, mb3.9**/10**, 3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.02	358	i P	Pn	16 47 14.1	+0.5
KUR				AMB	AMB	16 47 14.4	
	110nm,0.3s						
KUR				i S	Sn	16 47 28.7	-0.2
KUR				A	A	16 47 30.2	
	540nm,0.3s						
KUR				A	A	16 47 30.2	
	680nm,0.3s						
KUR	Kuril'sk	1.02	358	i PN	Pn	16 47 14.1	+0.5
KUR				eS	Sn	16 47 28.7	-0.2
YUK	Yuzh-Kuril'sk	1.49	264	i P	Pn	16 47 19.5	+0.3
YUK				AMB	AMB	16 47 20.2	
	210nm,0.5s						
YUK				i S	Sn	16 47 38.3	-0.5
YUK				A	A	16 47 40.0	
	370nm,0.5s						
YUK				A	A	16 47 40.0	
	930nm,0.5s						
YUK	Yuzh-Kuril'sk	1.49	264	d iPN	Pn	16 47 19.5	+0.3
YUK				i S	Sn	16 47 38.3	-0.5
YUK				pmax	pmax		
	comp=Z,209nm,0.2s						
YUK				pmax	pmax		
	comp=N,30nm,0.1s						
YUK				pmax	pmax		
	comp=E,32nm,0.1s						
YUK				smax	smax		
	comp=E,931nm,0.5s						
YUK				smax	smax		
	comp=N,369nm,0.2s						
GRPR	Tuman	1.56	263	i P	Pn	16 47 20.0	-0.1
GRPR				AMB	AMB	16 47 21.0	
	comp=N,90nm,0.4s						
GRPR				i S	Sn	16 47 39.8	-0.6
GRPR				A	A	16 47 41.0	
	comp=N,680nm,0.4s						
GRPR				A	A	16 47 41.0	
	comp=N,330nm,0.4s						
GRPR	Tuman	1.56	263	⇓iPN	Pn	16 47 20.4	+0.3
GRPR				i S	Sn	16 47 39.6	-0.8
GRPR				pmax	pmax		
	comp=Z,86nm,0.4s						
GRPR				pmax	pmax		
	comp=E,78nm,0.2s						
GRPR				pmax	pmax		
	comp=N,92nm,0.4s						
GRPR				smax	smax		
	comp=E,330nm,0.2s						
GRPR				smax	smax		
	comp=N,675nm,0.4s						
NEM2	Nemuro 2	1.79	242	P	Pn	16 47 22.9	-0.1
NEM2				eS	Sn	16 47 44.5	-1.0
NMR	Nemuro--Hokkai	1.80	243	i P	Pn	16 47 22.9	-0.1
NMR				i S	Sn	16 47 44.7	-1.0
NMR	Nemuro--Hokkai	1.80	243	⇓iPN	Pn	16 47 22.9	-0.1
NMR				i S	Sn	16 47 44.5	-1.2
JRA	Rausu	2.04	263	P	Pn	16 47 27.0	+0.9
JRA				eS	Sn	16 47 52.1	+0.9
JNSB	Nemuroshibetsu	2.15	259	P	Pn	16 47 28.9	+1.3
JNSB				eS	Sn	16 47 55.3	+1.5
JKHN	Kushirohamanak	2.30	241	P	Pn	16 47 29.9	+0.3
JKHN				eS	Sn	16 47 56.4	-1.0
JAK	Akkeshi	2.64	244	P	Pn	16 47 34.1	0.0
JAK				eS	Sn	16 48 04.1	-1.3
JTKR	Abashiri--Toko	2.90	267	P	Pn	16 47 38.6	+1.1
JAR	Ashorobuto	3.14	254	P	Pn	16 47 42.3	+1.5
JAR				eS	Sn	16 48 18.4	+0.9
JCH	Churui	3.69	246	P	Pn	16 47 48.3	+0.2
ERM	Erimo	4.12	239	i PN	Pn	16 47 56.1	+2.1
JNBK	Urakawa-nobuka	4.24	245	P	Pn	16 47 55.5	-0.1
YSS	Yuzh-Sakhalins	4.54	309	eP	Pn	16 48 00.6	+0.9
YSS				eS	Sn	16 48 51.3	0.0
YSS	Yuzh-Sakhalins	4.54	309	PN	Pn	16 47 57.8	-1.9
YSS	Yuzh-Sakhalins	4.54	309	Pn	Pn	16 47 57.8	-1.9
JKB	Kayabe	5.55	248	P	Pn	16 48 13.8	+0.4
JKB				eS	Sn	16 49 12.0	-3.9
UGL	Uglegorsk	6.32	322	eP	Pn	16 48 25.3	+1.6
JNU	Nakatsue	17.28	236	Pn	P	16 51 02.8	+14
JNU				IAmb	IAmb	16 51 32.2	
	comp=Z,42nm,1.4s						
YAK	Yakutsk	20.80	335	i P	P	16 51 18.2	-8.2
YAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BILL	Bilibino	25.76	16	eP	P	16 52 13.5	-1.1
BILL	Bilibino	25.76	16	i P	P	16 52 13.5	-1.1
BILL				pmax	pmax		
	comp=Z,1.0nm,1.3s						
NRIK	Noril'sk	39.11	331	LR	LR	17 12 11.8	
	comp=Z,159nm,19.2s,baz=323,slow=40						
MK31	Makanchi Array	44.86	297	P	P	16 54 57.7	-0.1
MK31				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MK31	Makanchi Array	44.86	297	P	P	16 54 57.7	-0.1
MKAR	Makanchi Array	44.86	297	P	P	16 54 57.8	0.0
	comp=Z,0.7nm,0.5s,baz=77,slow=8.9,SNR=11						
MKAR	Makanchi Array	44.86	297	P	P	16 54 57.5	-0.4
MAKZ	Makanchi	45.06	298	P	P	16 54 59.0	-0.3
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.7s						
MAKZ	Makanchi	45.06	298	P	P	16 54 59.0	-0.3
MAKZ				IAmb	IAmb	16 56 03.8	
	comp=Z,4.6nm,1.6s						
KURK	Kurchatov	45.73	304	eP	P	16 55 04.1	-0.4
KURK	Kurchatov	45.73	304	P	P	16 55 04.1	-0.4
KURK	Kurchatov	45.73	304	P	P	16 55 03.8	-0.7
KURK				IAmb	IAmb	16 56 04.2	
	comp=Z,9.8nm,1.8s						
KURBB	Kurchatov Arra	45.82	304	P	P	16 55 04.1	-1.1
	comp=Z,0.5nm,0.5s,baz=72,slow=8.6,SNR=6.7						
CHTO	Chiang Mai	47.95	254	P	P	16 55 28.5	+6.3
CHTO				pmax	pmax		
	comp=Z,16nm,0.7s						
CHTO	Chiang Mai	47.95	254	P	P	16 55 28.4	+6.3
CMAR	Chiang Mai Arr	48.19	254	i P	P	16 55 28.2	+4.1
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ABKAR	Akbulak array	57.20	309	P	P	16 56 29.6	-0.5
FINES	FINESS Array B	64.71	333	P	P	16 57 18.9	-1.7
	comp=Z,7.2nm,1.3s,baz=54,slow=9.7,SNR=4.3						
BEKR	Beckworth	64.72	58	P	P	16 57 21.4	0.0
BEKR				IAmb	IAmb	16 59 35.4	
	comp=Z,7.3nm,0.7s						
YHB	Horse Butte	66.99	49	P	P	16 57 34.8	-1.1
TXAR	Lajitas Array	81.93	57	P	P	16 59 03.5	+1.0
	comp=Z,0.4nm,0.6s,baz=292,slow=4.1,SNR=7.0						
TXAR	Lajitas Array	81.93	57	P	P	16 59 02.9	+0.4

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*IDC **10** 17:04:45.5±2.8, 56°.87N×156°.66W, h51km±24km, mb3.5/16, mb1 3.7/20, mb1mx3.6/42, mbtmp3.8/20, ML3.8/4, Error ellipse: s-maj=23.1km s-min=12.2km az=16.0*

*NEIC **10** 17:04:45.5±1.4, 56°.54N±0°.04×156°.46W±0°.07, h64km±5km, Error ellipse: s-maj=5.7km s-min=4.8km az=46.0*

*AEIC **10** 17:04:46±1.3, 56°.53N±0°.04×156°.44W±0°.06, h58km±9km, ML3.5/55, Error ellipse: s-maj=5.6km s-min=4.9km az=195.0*

ISC 10 17:04:45.8±0.5**, 56°.58N**±0°.05×**156°.53W**±0°.04**, h64**km**, n105, σ1ˢ.05**/110**, mb3.7**/16**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHIR	Chirikof Islan	0.92	146		Pn	17 05 01.7	-1.2
CHIR	Chirikof Islan	0.92	146		Sn	17 05 14.8	-0.7
CHGN	Chignik	1.08	256		Pn	17 05 04.3	-0.7
CHGN	Chignik	1.08	256		Sn	17 05 18.3	-1.0
PLK3	Peulik 3	1.12	7		Pn	17 05 06.2	+0.6
PLK3					Sn	17 05 21.7	+1.4
PLK2	Peulik 2	1.19	5		Pn	17 05 07.2	+0.7
PLK1	Peulik 1	1.22	358		Pn	17 05 07.3	+0.5
SII	Sitkinak Islan	1.30	90		Pn	17 05 07.2	-0.8
VNNF	Veniaminof 3	1.57	260		Pn	17 05 12.5	+0.8
VNSS	Veniaminof 8	1.66	259		Pn	17 05 13.5	+0.6
VNFG	Fog Glacier, M	1.70	261		Pn	17 05 13.5	+0.2
VNFG					Sn	17 05 35.0	+0.8
VNWF	Veniaminof 8	1.74	257		Pn	17 05 14.3	+0.4
OHAK	Old Harbor	1.89	69		Pn	17 05 15.2	-0.6
OHAK	Old Harbor	1.89	69		Sn	17 05 37.2	-1.5
KELA	Mount Kelaz	1.91	13		Pn	17 05 16.6	+0.4
KELA					Sn	17 05 39.4	+0.2
KAHC	Katmai Hardscr	2.23	21		Pn	17 05 21.1	+0.6
KDAK	Kodiak Island	2.46	59	P	Pn	17 05 23.1	-0.5
	53nm,0.3s,baz=222,slow=5.4,SNR=987						
KDAK				S	Sn	17 05 50.6	-1.9
	21nm,0.3s,baz=191,slow=5.0,SNR=5.2						

CNBA	Chernabura Isl	2.47	226		Pn	17 05 23.8	+0.2
SDPT	Sand Point	2.54	242		Pn	17 05 24.9	+0.4
HAG	Hague Volcano	3.27	249		Pn	17 05 35.5	+0.8
DT1	Dutton Round H	3.56	248		Pn	17 05 38.7	+0.2
ILW	Iliamna West	3.92	26		Pn	17 05 44.3	+0.7
HOM	Homer	4.03	38	Pn	Pn	17 05 45.8	+0.9
CNPM	China Poot	4.08	41	Pn	Pn	17 05 45.7	+0.1
FALS	False Pass	4.26	249	Pn	Pn	17 05 48.8	+0.7
RED	Redoubt Volcan	4.32	26		Pn	17 05 50.2	+1.2
RSO	Redoubt South	4.37	25		Pn	17 05 50.4	+0.6
RDWB	Redoubt West	4.37	25		Pn	17 05 50.9	+1.2
BRLK	Bradley Lake	4.37	41		Pn	17 05 49.1	-0.6
BRSE	Bradley Lake S	4.41	42		Pn	17 05 49.8	-0.3
SVW2	Sparrevohn	4.56	6	Pn	Pn	17 05 53.0	+0.8
SEW	Seward	5.14	44	Pn	Pn	17 05 59.2	-0.8
SLKM	Skilak Lake	5.14	37		Pn	17 05 59.6	-0.6
RC01	Rabbit Creek A	5.73	35	Pn	Pn	17 06 08.0	-0.2
SUA	Susitna One	5.74	29		Pn	17 06 08.8	+0.5
PWL	Port Wells	6.05	41		Pn	17 06 11.6	-0.9
TT01	Tatalina	6.35	2		Pn	17 06 17.3	+0.7
KNK	Knik Glacier	6.39	37	Pn	Pn	17 06 16.6	-0.6
GHO	Glory Hole Cre	6.51	34	Pn	Pn	17 06 18.8	-0.1
GLI	Glacier Island	6.53	45	Pn	Pn	17 06 18.2	-1.0
FID	Port Fidalgo	6.70	47	Pn	Pn	17 06 19.9	-1.5
PPLA	Purkeypile	6.70	17	Pn	Pn	17 06 22.9	+1.3
SML	Sawmill	6.72	35	Pn	Pn	17 06 22.1	+0.4
JPK	Jack Peak	6.83	45		Pn	17 06 22.6	-0.7
EYAK	Cordova Ski Ar	6.90	50	Pn	Pn	17 06 22.6	-1.5
SCM	Sheep Creek Mo	7.07	38	Pn	Pn	17 06 26.0	-0.6
GOAT	Goat Mountain	7.36	52		Pn	17 06 29.7	-0.7
WAT1	Susitna Watana	7.45	29		Pn	17 06 30.3	-1.4
WAT6	Susitna Watana	7.49	33		Pn	17 06 31.2	-1.1
KTH	Kantishna Hill	7.53	20	Pn	Pn	17 06 31.9	-1.0
SPIA	Saint Paul Isl	7.54	280	Pn	Pn	17 06 33.7	+0.8
WAT2	Susitna Watana	7.55	29		Pn	17 06 31.6	-1.5
TRF	Thorofare Moun	7.56	22	Pn	Pn	17 06 32.8	-0.5
RND	Reindeer	7.85	26	Pn	Pn	17 06 36.3	-0.9
DHY	Denali Highway	7.97	31	Pn	Pn	17 06 37.9	-1.1
CRQM	Cirque	8.13	54		Pn	17 06 40.8	-0.4
GLB	Gilahina Butte	8.17	48	Pn	Pn	17 06 40.9	-0.7
VRDI	Verde Repeater	8.21	50		Pn	17 06 41.8	-0.5
TGL	Tana Glacier	8.27	54	Pn	Pn	17 06 42.3	-0.7
MCARA	McCarthy VSAT	8.47	50	Pn	Pn	17 06 45.0	-0.6
PAX	Paxson	8.49	36	Pn	Pn	17 06 45.7	-0.2
BALM	Baldy	8.61	53		Pn	17 06 47.2	-0.3
GRNC	Granite Creek	8.75	56		Pn	17 06 48.7	-0.9
NEA	Nenana	8.81	21	Pn	Pn	17 06 52.0	+1.7
BARN	Barnard Glacie	8.92	54	Pn	Pn	17 06 51.9	0.0
MLY	Manley	8.93	16		Pn	17 06 49.4	-2.6
WRH	Wood River Hil	8.93	24		Pn	17 06 49.8	-2.1
CTGM	Chitina Glacie	9.03	55	Pn	Pn	17 06 53.0	-0.4
MENT	Mentasta	9.07	40	Pn	Pn	17 06 53.3	-0.4
ANM	Nome	9.10	335		Pn	17 06 55.2	+0.9
CCB	Clear Creek Bu	9.15	24		Pn	17 06 52.5	-2.3
HDA	Harding Lake	9.15	27	Pn	Pn	17 06 53.3	-1.6
RIDG	Independent Ri	9.23	34	Pn	Pn	17 06 55.7	-0.3
PCA	Pinnacle	9.25	61	Pn	Pn	17 06 56.2	-0.1
MDM	Murphy Dome	9.32	22		Pn	17 06 56.4	-0.9
DOT	Dot Lake	9.42	36	Pn	Pn	17 06 58.0	-0.6
IL31		9.47	26		Pn	17 06 56.7	-2.4
ILAR	Eielson Array	9.47	26	P	Pn	17 06 56.9	-2.3
	0.4nm,0.3s,baz=208,slow=13,SNR=14						
ILAR				S	Sn	17 08 35.5	-8.4
	0.1nm,0.3s,baz=216,slow=20,SNR=2.9						
ILAR	Eielson Array	9.47	26	Pn	Pn	17 06 57.1	-2.2
IMAR	Indian Mountai	9.53	7	Pn	Pn	17 07 00.9	+0.9
SCRK	Sand Creek	9.67	35	Pn	Pn	17 07 01.0	-1.1
BCAR	Beaver Creek A	9.85	43	Pn	Pn	17 07 04.3	-0.2
GAMB	Gambell	10.42	320	Pn	Pn	17 07 12.5	+0.4
HYT	Haines Junctio	10.76	59	Pn	Pn	17 07 17.6	+0.6
DAWY	Dawson	11.30	41	Pn	Pn	17 07 24.1	-0.1
WHY	Whitehorse	11.98	61	Pn	Pn	17 07 33.3	-0.3
DLBC	Dease Lake	14.33	72	P	Pn	17 08 06.6	+1.4
	0.3nm,0.3s,baz=251,slow=7.2,SNR=4.2						
INK	Inuvik	15.72	32	P	Pn	17 08 21.2	-1.6
	0.1nm,0.3s,baz=227,slow=8.0,SNR=2.6						
YKA	Yellowknife Ar	21.74	57	P	P	17 09 31.9	+0.5
	1.9nm,0.7s,baz=272,slow=9.3,SNR=31						
SEY	Seymchan	25.88	305	P	P	17 10 09.4	-1.7
	0.5nm,0.5s,baz=70,slow=16,SNR=5.6						
PETK	Petropavlovsk-	26.20	282	P	P	17 10 13.6	-0.5
	0.8nm,0.4s,baz=78,slow=11,SNR=20						
YBH	Yreka Blue Hor	26.31	110	P	P	17 10 16.7	+1.4
	0.8nm,0.5s,baz=23,slow=13,SNR=2.6						
NVAR	Mina Array Bea	31.02	109	P	P	17 10 59.2	+1.8
	0.8nm,0.6s,baz=307,slow=7.8,SNR=6.6						
PDAR	Pinedale Array	32.70	95	P	P	17 11 14.1	+2.0
	1.4nm,0.5s,baz=320,slow=4.3,SNR=18						
TIXI	Tiksi	33.22	326	P	P	17 11 14.6	-1.4
	0.3nm,0.3s,baz=87,slow=3.6,SNR=3.4						
KLR	Kul'dur	42.03	292	P	P	17 12 29.6	-0.9
	0.8nm,0.5s,baz=44,slow=6.0,SNR=6.3						
TXAR	Lajitas Array	45.76	104	P	P	17 13 03.0	+2.2
	0.6nm,0.8s,baz=311,slow=5.8,SNR=6.6						
SCHQ	Schefferville	47.07	52	P	P	17 13 11.1	+0.4
	1.3nm,0.8s,baz=258,slow=14,SNR=2.3						
KSRS	Korea Array	52.10	282	P	P	17 13 49.1	+0.1
	0.6nm,0.7s,baz=34,slow=7.1,SNR=3.5						
ARCES	ARCESS Array B	54.18	359	P	P	17 14 03.2	-0.7
	6.7nm,1.0s,baz=19,slow=7.7,SNR=4.8						
SONM	Songino Array	55.27	306	P	P	17 14 12.8	+0.5
	0.6nm,0.5s,baz=42,slow=7.3,SNR=3.9						
FINES	FINESS Array B	62.30	359	P	P	17 14 59.7	-0.8
	1.4nm,0.7s,baz=19,slow=8.8,SNR=4.0						
MKAR	Makanchi Array	65.89	320	P	P	17 15 23.7	-0.8
	0.2nm,0.5s,baz=20,slow=7.3,SNR=4.9						
AKASG	Malin Array Be	72.98	356	P	P	17 16 07.0	-1.0
	0.5nm,0.5s,baz=3.5,slow=5.3,SNR=4.1						
BOSA	Boshof	152.02	357	PKPbc	PKPbc	17 24 33.3	-0.1
	3.7nm,1.2s,baz=243,slow=4.5,SNR=2.0						
BOSA				PKPab	PKPab	17 24 42.5	-0.5
	1.9nm,0.7s,baz=224,slow=8.1,SNR=4.3						

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*ISK **10** 17:07:21.5, 35°.02N×33°.52E, h47^{km}, ML2.5/12*
*NIC **10** 17:07:21.8±0.0, 34°.95N×33°.55E, h48^{km}±1^{km}, Ml2.4/3*
*DDA **10** 17:07:22.9, 35°.20N×33°.40E, h35^{km}±5^{km}, ML1.9*
*GII **10** 17:07:23.0±0.0, 34°.84N×33°.71E, h18^{km}±2^{km}, MD1.6/3, Mm2.3/2*
ISC 10 17:07:21.7±1.2, **34°.97N**±0°.03×**33°.53E**±0°.04, **h51**^{km}±5^{km}, **n43,** σ**0^s.82**/68, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKIN	Akıncılar- Kıb	0.07	311	PG	Pn	17 07 29.1	-0.5
AKIN				SG	Sn	17 07 34.9	-0.2
MVOU	Mavrovouni	0.10	63	P	Pn	17 07 29.2	-0.4
MVOU				AML	AML	17 07 34.7	
	1.8nm,0.2s						
MVOU				AML	AML	17 07 34.7	
	1.8nm,0.2s						
MVOU				S	Sn	17 07 35.1	-0.1
MVOU				AML	AML	17 07 35.2	
	2.2nm,0.4s						
MVOU				AML	AML	17 07 35.2	
	2.2nm,0.4s						
CSS	Mathiatis	0.16	267	PG	Pn	17 07 29.6	-0.4
CSS				SG	Sn	17 07 35.6	-0.2
CSS	Mathiatis	0.16	267	Pg	Pn	17 07 29.6	-0.4
CSS				Sg	Sn	17 07 35.7	-0.1
CSS	Mathiatis	0.16	267	P	Pn	17 07 29.7	-0.2
CSS				S	Sn	17 07 36.2	+0.3
ATHAL	Athalassa	0.20	327	P	Pn	17 07 30.1	-0.1
ATHAL				S	Sn	17 07 36.7	+0.5
ASGA	Asgata	0.29	231	P	Pn	17 07 30.9	0.0
ASGA				AML	AML	17 07 39.0	
	0.9nm,0.4s						
ASGA				AML	AML	17 07 39.5	
	1.2nm,0.5s						
PARAL	Paralimni	0.42	87	P	Pn	17 07 32.2	0.0
LEF	Lefka	0.54	286	PG	Pn	17 07 33.9	+0.4
LEF				SG	Sn	17 07 42.9	+0.9
LEF	Lefka	0.54	286	*i* P	Pn	17 07 33.2	-0.3
LEF				*i* S	Sn	17 07 42.4	+0.3
LEF				IAML		17 07 44.0	
	comp=N,82nm,0.2s						
LEF				IAML		17 07 44.0	
	comp=E,80nm,0.2s						
AKDN	Akdeniz- Kıbrı	0.56	305	PG	Pn	17 07 33.5	-0.3
SZAC	Souni	0.57	248	P	Pn	17 07 34.2	+0.3
SZAC				AML	AML	17 07 44.6	
	comp=E,0.7nm,0.7s						
EREN	Erenkoy	0.77	43	*i* P	Pn	17 07 37.1	+0.7
EREN				*i* S	Sn	17 07 49.0	+2.0
EREN				IAML		17 07 50.0	
	comp=N,67nm,0.6s						
EREN				IAML		17 07 50.0	
	comp=E,92nm,0.6s						
AKKU	Akkuyu-Mersin	1.18	1	PN	Pn	17 07 41.5	-0.5
AKKU				SN	Sn	17 07 56.4	-0.6
GULN	MERSIN_Gulnar	1.21	1	*i* P	Pn	17 07 40.6	-1.7
GULN				*i* S	Sn	17 07 56.6	-1.0
GULN				IAML		17 07 58.0	
	comp=E,26nm,0.5s						
GULN				IAML		17 07 58.0	
	comp=N,24nm,0.5s						
TEKE	Tekeli-Mersin	1.22	344	PN	Pn	17 07 41.7	-0.7
TEKE				SN	Sn	17 07 57.1	-0.7
IKL	Isikli	1.27	6	PN	Pn	17 07 42.5	-0.6
IKL				SN	Sn	17 07 58.6	-0.5
TEVE	Tevekalti-Mers	1.46	357	PN	Pn	17 07 45.7	-0.1
KEBE	Keben-Mersin	1.48	6	PN	Pn	17 07 46.0	0.0
KIZK	Mersin	1.59	18	PN	Pn	17 07 47.5	+0.1
KIZK	Mersin	1.59	18	*i* P	Pn	17 07 47.9	+0.5
KIZK				*i* S	Sn	17 08 05.5	-1.3
KIZK				IAML		17 08 13.0	
	comp=E,21nm,1.5s						
GAZI	Gazipasa	1.60	322	PN	Pn	17 07 47.8	+0.2
GAZI	Gazipasa	1.60	322	*i* P	Pn	17 07 47.2	-0.4
GAZI				*i* S	Sn	17 08 05.7	-1.4
GAZI				IAML		17 08 07.0	
	comp=E,31nm,0.6s						
GAZI				IAML		17 08 09.0	
	comp=N,39nm,0.7s						
HDMB	Hadim	2.16	337	PN	Pn	17 07 55.8	+0.3
HNTI	Hanita	2.33	144	Pn	Pn	17 07 58.4	+0.8
HNTI				Sn	Sn	17 08 23.6	-1.4
KERG	Konya-Eregli	2.48	11	*i* P	Pn	17 08 00.7	+0.8
KERG				*i* S	Sn	17 08 30.1	+1.0
KERG				IAML		17 08 33.0	
	comp=N,16nm,0.4s						
KERG				IAML		17 08 35.0	
	comp=E,6.5nm,0.2s						
MMA0B	Mount Meron ar	2.50	141	Pn	Pn	17 08 00.6	+0.6
MMA0B				Sn	Sn	17 08 27.6	-1.7
NATI	Neve Ativ	2.50	132	Pn	Pn	17 08 00.4	+0.5
NATI				Sn	Sn	17 08 27.6	-1.6
KSDI	Kefar Szold	2.51	135	Pn	Pn	17 07 59.8	-0.2
KSDI				Sn	Sn	17 08 27.6	-1.7
KSDI	Kefar Szold	2.51	135	P	Pn	17 07 59.7	-0.2
KSDI				S	Sn	17 08 27.9	-1.5
KARA	Karaisali	2.60	28	PN	Pn	17 08 01.9	+0.6
KSHT	Keshet	2.75	136	Pn	Pn	17 08 04.1	+0.7
SEYD	Seydisehir-KON	2.79	331	PN	Pn	17 08 04.7	+0.7
SHMJ	Saham	2.91	140	Pn	Pn	17 08 06.2	+0.6
CMRD	Camardi-Nigde	2.93	23	PN	Pn	17 08 06.8	+0.8
MMLI	Mount Malkishu	2.98	147	Pn	Pn	17 08 06.6	+0.1
MMLI				Sn	Sn	17 08 40.5	-0.6
HMDT	Nahal Hemdat	3.18	148	Pn	Pn	17 08 10.1	+0.8
HMDT				Sn	Sn	17 08 45.6	-0.4
AMAZ	Amatzia	3.62	161	Pn	Pn	17 08 16.6	+1.3
AMAZ				Sn	Sn	17 08 56.6	-0.2
DSI	Dead Sea	3.73	155	Pn	Pn	17 08 18.1	+1.3
YTIR	Yattir	3.84	159	Pn	Pn	17 08 19.6	+1.2
PRNI	Paran	4.77	164	Pn	Pn	17 08 31.8	+0.7
HRFI	Mount Harif	5.08	165	Pn	Pn	17 08 36.0	+0.6
HRFI				Sn	Sn	17 09 32.2	-0.6
MBRI	Mt Berech	5.29	167	Pn	Pn	17 08 39.0	+0.7

IDC 10 17:18:46.7±2.1, **11°.77S**×**66°.15E, h0**^{km}**, mb3.5**/5, **mb1 3.7**/5, **mb1mx3.4**/51, **mbtmp3.5**/5, **MS3.4**/1, **Ms1 3.4**/1, **ms1mx3.1**/35, **Error ellipse: s-maj=78.7km s-min=27.0km az=50.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	7.46	57	T	T	17 28 27.5	
	baz=237,slow=75,SNR=40						
H08S2	Diego Garcia H	7.48	57	T	T	17 28 38.2	
	baz=237,slow=75,SNR=38						
H08S3	Diego Garcia H	7.48	57	T	T	17 28 29.0	
	baz=237,slow=75,SNR=84						
PALK	Pallekele	23.82	38	LR	LR	17 30 42.9	
	comp=Z,87nm,20.2s,baz=215,slow=30						
H01W3	Cape Leeuwin H	49.15	126	T	T	18 20 29.1	
	baz=286,slow=75,SNR=18						
H01W2	Cape Leeuwin H	49.15	126	T	T	18 20 29.2	
	baz=286,slow=75,SNR=21						
H01W1	Cape Leeuwin H	49.16	126	T	T	18 20 30.8	
	baz=286,slow=75,SNR=16						
MKAR	Makanchi Array	60.06	13	P	P	17 28 55.0	-0.4
	0.2nm,0.7s,baz=206,slow=7.3,SNR=2.6						
ASAR	Alice Springs	65.12	111	P	P	17 29 29.6	-0.2
	1.0nm,1.1s,baz=275,slow=6.0,SNR=3.3						
WRA	Warramunga Arr	65.74	107	P	P	17 29 34.2	+0.3
	0.7nm,1.0s,baz=271,slow=6.1,SNR=4.2						
SONM	Songino Array	69.28	28	P	P	17 29 56.2	+0.4
	0.9nm,0.9s,baz=216,slow=8.9,SNR=4.8						
AKASG	Malin Array Be	70.03	336	P	P	17 30 00.5	+0.3
	0.8nm,0.5s,baz=138,slow=5.8,SNR=7.1						
PDAR	Pinedale Array	148.89	354	PKPbc	PKPbc	17 38 36.1	-0.9
	0.5nm,0.9s,baz=38,slow=4.6,SNR=2.4						

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*IDC **10** 17:21:31.7±2.4, 4°.72N×122°.88E, h0^{km}, mb3.3/3, mb1 3.6/3, mb1mx3.2/45, mbtmp3.3/3, Error ellipse: s-maj=338.8km s-min=27.1km az=63.0*
ISC 10 17:21:17.0±1.8, **7°.5N**±0°.3×**124°.5E**±0°.2, **h19**^{km}**, n5,** σ**2^s.63**/5, **mb3.1**/3, **1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAGZ	Pagadian	1.15	289	*e*P	Pg	17 21 41.6	+2.4
PAGZ				*e*S	Sb	17 21 50.0	-2.7
DCPH	Dipolog City	1.56	315	⇑*e*P	Pn	17 21 43.2	-0.6
WRA	Warramunga Arr	28.92	161	P	P	17 27 15.2	+0.1
	0.2nm,0.3s,baz=335,slow=10.0,SNR=12						
ASAR	Alice Springs	32.29	164	P	P	17 27 44.1	-0.8
	0.1nm,0.4s,baz=340,slow=6.9,SNR=13						
MKAR	Makanchi Array	53.22	325	P	P	17 31 01.9	+28
	0.2nm,0.8s,baz=136,slow=5.4,SNR=4.1						

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*BJI **10** 17:31:22.9±0.0, 7°.78S×130°.35E, h120^{km}, mB5.2/34, mb4.8/48*
*IDC **10** 17:31:27.0±2.8, 6°.97S×129°.86E, h75^{km}±25^{km}, mb4.3/21, mb1 4.4/24, mb1mx4.3/45, mbtmp4.6/24, MS5.0/6, Ms1 5.0/6, ms1mx4.1/47, Error ellipse: s-maj=23.3km s-min=9.8km az=76.0*
*MOS **10** 17:31:27.7±0.8, 6°.98S×130°.05E, h103^{km}, mb4.9/13, Error ellipse: s-maj=14.6km s-min=6.4km az=109.1*
*NEIC **10** 17:31:31.9±1.5, 6°.97S±0°.07×129°.84E±0°.08, h121^{km}±5^{km}, mb5.0/51, Error ellipse: s-maj=11.5km s-min=9.3km az=77.0*
*DJA **10** 17:31:32.0±0.2, 7°S±2°×13°0E±°, h127^{km}±3^{km}, M4.9/46, mb5.0/46, mB5.3/25, MLv5.3/17, Mw(mB)4.8/25, Mwp5.5/4*
ISC 10 17:31:33.8±0.3, **7°.13S**±0°.03×**129°.98E**±0°.05, **h150**^{km}**, n261,** σ**1^s.69**/262, **mb4.7**/69, **3C-2D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.56	123	P	Pn	17 32 03.4	-0.6
SAUI	Saumlaki	1.56	123		Pn	17 32 03.5	-0.6
BNDI	Bandanaira	2.59	358	P	Pn	17 32 13.6	-2.6
AAI	Ambon	3.86	332	P	Pn	17 32 29.8	-2.5
MSAI	Masohi	3.91	344	P	Pn	17 32 31.3	-1.6
FAKI	Fak Fak	4.76	28	P	Pn	17 32 40.1	-4.0
FAKI	Fak Fak	4.76	28		Pn	17 32 40.1	-4.0
NLAI	Namlea	4.82	323	P	Pn	17 32 44.2	-0.7
MTN	Manton Dam	5.79	169		Pn	17 32 56.2	-1.6
MTN				Sn	Sn	17 34 00.7	-2.7
SOEI	Soe	6.22	245	P	Pn	17 33 00.9	-2.8
	6.6nm12μm1μm,0.9s						
SOEI	Soe	6.22	245		Pn	17 33 00.7	-3.1
SIJI	Sorong	6.35	12	P	Pn	17 33 00.7	-4.6
	33nm,0.3s,baz=55,slow=18,SNR=222						
SIJI				S	Sn	17 34 05.7	-11
	31nm,0.3s,baz=240,slow=23,SNR=10						
SWI	Sorong	6.36	12	P	Pn	17 33 01.2	-4.2
	1.9nm6μm165nm,0.6s						
SANI	Sanana	6.43	322	P	Pn	17 33 05.1	-1.2
	0.5nm2μm161nm,1.0s						
RKPI	Ransiki, Papua	6.98	37	P	Pn	17 33 10.8	-2.9
	9.9nm17μm1μm,0.7s						
BBSI	Bau Bau	7.55	282	P	Pn	17 33 21.8	+0.5
	0.1nm317nm25nm,1.2s						
MMRI	Maumere	7.82	258	P	Pn	17 33 21.5	-3.3
	0.7nm2μm96nm,0.9s						
MMRI	Maumere	7.82	258		Pn	17 33 21.6	-3.3
TNTI	Ternate	8.27	342	P	Pn	17 33 30.6	-0.4
	0.2nm2μm50nm,0.7s						
TNTI	Ternate	8.27	342		Pn	17 33 26.1	-4.9
EDFI	Ende, Flores	8.37	258	P	Pn	17 33 29.9	-2.4
	451nm25nm,0.9s						
BAKI	Biak	8.49	46	P	Pn	17 33 32.9	-1.0
	11μm1μm,0.8s						
KNRA	Kununurra	8.58	188		Pn	17 33 31.9	-3.1
WAMI	Wamena	9.27	70	P	Pn	17 33 46.3	+2.1
	3μm442nm,0.8s						
KMSI	Cibinong	9.72	322	P	Pn	17 33 49.3	-0.9
	96nm,0.7s						
BASI	Baing, Sumba	9.79	251	P	Pn	17 33 47.3	-3.8
	2μm240nm,0.8s						
WSI	Waingapu	9.91	255	P	Pn	17 33 49.0	-3.7
	278nm,0.4s						
BKSI	Bulukumba	9.96	280	P	Pn	17 33 54.8	+1.3
	457nm50nm,0.8s						
SMPI	Sarmi	10.09	60	P	Pn	17 33 54.3	-0.8
	76nm,0.9s						
BNSI	Bone	10.19	285	P	Pn	17 33 59.9	+3.4
	58nm,0.9s						
APSI	Ampana	10.36	306	P	Pn	17 33 59.3	+0.7
	1μm95nm,1.2s						
KAPI	Kappang	10.39	281	P	Pn	17 34 00.7	+1.7
	1.6nm,0.3s,baz=117,slow=8.5,SNR=11						
SPSI	Sidrap Palu	10.64	287	P	Pn	17 34 05.1	+2.7
	100nm,0.8s						
WBSI	Waikabubak, Su	10.77	256	P	Pn	17 33 59.4	-4.8
	2μm197nm,0.8s						
TTSI	Tana Toraja	10.90	291	P	Pn	17 34 03.8	-2.1
	722nm80nm,0.9s						
MRSI	Marisa	11.02	313	P	Pn	17 34 05.5	-1.9
	2μm294nm,1.0s						
GENI	Genyem	11.10	67	P	Pn	17 34 08.7	+0.2
	8μm2μm168nm,0.8s						
FITZ	Fitzroy Crossi	11.69	201	P	Pn	17 34 12.1	-4.0
	5.2nm,0.3s,baz=31,slow=9.4,SNR=133						
FITZ				S	Sn	17 36 12.5	-13
	9.7nm,0.3s,baz=111,slow=6.9,SNR=7.4						
FITZ	Fitzroy Crossi	11.69	201		Pn	17 34 11.2	-4.9
PLAI	Plampang	12.21	261	P	Pn	17 34 20.7	-2.2
MPSI	Mapaga	12.50	306	P	Pn	17 34 26.3	-0.4
	538nm22nm,0.9s						
WB0	Warramunga Arr	13.27	162		Pn	17 34 33.5	-3.1
WRAB	Tennant Creek	13.41	162	*i* P	Pn	17 34 37.6	-0.8
WRAB	Tennant Creek	13.41	162		Pn	17 34 34.8	-3.6
WRA	Warramunga Arr	13.42	162	P	Pn	17 34 35.7	-2.8
	4.3nm,0.3s,baz=333,slow=13,SNR=104						
WRA				S	Sn	17 36 56.7	-10
	5.0nm,0.3s,baz=332,slow=23,SNR=9.8						
WRA	Warramunga Arr	13.42	162	P	Pn	17 34 34.6	-3.9
WRA	Warramunga Arr	13.42	162	P	Pn	17 34 34.6	-3.9
WB2	Warramunga Arr	13.42	162	Pn	Pn	17 34 35.5	-3.0
DDMP	Don Marcelino,	13.82	342	*e*P	P	17 34 43.9	-3.2
KBKI	Kotabaru	14.27	285	P	P	17 34 50.3	-1.8
	23nm,0.9s						
MATI	Mati	14.47	345	*e*P	Pn	17 34 48.5	-3.3
SKMP	Bagumbayan, Su	14.61	338	*e*P	P	17 34 55.7	-0.1
COEN	Coen	14.63	119	P	P	17 34 54.7	-1.4
DAV	Davao City (W)	14.78	343	P	P	17 34 60.0	+2.3
CTBH	Cotabato--PC H	15.36	338	⇓*i*P	P	17 35 04.2	0.0
BUKP	Musuan	15.70	342	*e*P	P	17 35 05.9	-2.1
JAGI	Jajag, Banyuwa	15.74	264	Pn	Pn	17 35 03.4	-4.2
PAGZ	Pagadian	16.27	336	*e*P	P	17 35 13.7	-0.6
AS31	Alice Springs	16.86	168	P	Pn	17 35 20.3	-0.9
ASAR	Alice Springs	16.87	168	P	Pn	17 35 20.9	-0.4
	3.2nm,0.3s,baz=335,slow=8.8,SNR=225						
ASAR	Alice Springs	16.87	168	P	Pn	17 35 21.2	0.0
ASAR	Alice Springs	16.87	168	P	Pn	17 35 21.2	0.0
PSA00	Pilbara Seismi	17.38	213	P	Pn	17 35 26.3	-1.1
PSA00				IAmb	IAmb	17 35 32.0	
	comp=Z,118nm,0.8s						
PSA00	Pilbara Seismi	17.38	213	P	Pn	17 35 25.2	-2.2
PSA00				IAmb	IAmb	17 35 36.7	
	comp=Z,22nm,0.9s						
MSLP	Maasin	17.89	343	*e*P	Pn	17 35 32.6	-0.9
KKM	Kota Kinabalu	18.97	313	P	P	17 35 43.2	-0.7
KKM				IAmb	IAmb	17 36 00.6	
	comp=Z,72nm,1.2s						
CUYO	Cuyo Island	19.97	333	*e*P	P	17 35 51.4	-3.2
SBUM	Sibu	20.12	298	P	Pn	17 35 56.3	-3.4
SBUM				IAmb	IAmb	17 35 58.3	
	comp=Z,40nm,0.8s						
KPJI	Karang Pucung	20.89	268	P	P	17 36 04.4	0.0
	comp=Z,28nm,0.7s						
ENPP	El Nido	21.03	330	*e*P	P	17 36 03.5	-2.4
KSM	Kuching	21.41	293	P	P	17 36 08.3	-1.8
KSM				IAmb	IAmb	17 36 12.9	
	comp=Z,50nm,1.2s						
CISI	Cisompet, Garu	21.99	267	P	P	17 36 15.3	-0.9
	comp=Z,104nm,0.8s						
CISI	Cisompet, Garu	21.99	267	P	P	17 36 13.8	-2.4
CISI				IAmb	IAmb	17 36 17.5	
	comp=Z,67nm,0.7s						
BOAC	Boac	22.00	338	*e*P	P	17 36 15.7	-0.5
CNJI	Cibinong	22.67	268	P	P	17 36 19.7	-3.1
	comp=Z,87nm,1.1s						
TGY	Tagaytay City	22.93	337	P	P	17 36 23.6	-1.5
	comp=Z,240nm,0.5s,baz=241,slow=4.6,SNR=6.8						
FORT	Forrest	23.59	184	P	P	17 36 32.5	+1.4
FORT				IAmb	IAmb	17 36 44.0	
	comp=Z,45nm,0.8s						
MORW	Morawa	25.48	209	P	P	17 36 48.5	+0.3
MORW				IAmb	IAmb	17 36 54.4	
	comp=Z,105nm,1.9s						
MDSI	Maura Dua	25.80	274	P	P	17 36 48.5	-2.8
	comp=Z,6.0nm,1.8s						
BBOO	Buckleboo	26.17	168	P	P	17 36 55.7	+1.4
STKA	Stephens Creek	26.90	158	P	P	17 37 03.3	+2.4
	comp=Z,12nm,0.8s,baz=336,slow=9.0,SNR=28						
STKA				LR	LR	17 49 31.7	
	comp=Z,7μm,18.6s,baz=10,slow=40						
STKA	Stephens Creek	26.90	158	P	P	17 37 03.8	+2.9
STKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
STKA	Stephens Creek	26.90	158	P	P	17 37 03.8	+2.9
SDSI	Sungai Dareh	29.13	281	P	P	17 37 20.8	-0.1
	comp=Z,10nm,0.9s						
TPUB	Ta-pu	31.60	343	P	P	17 37 41.0	-1.6
YHNB	Yeheng	32.70	345	P	P	17 37 51.2	-1.1
SLVN	Son La	38.15	318	P	P	17 38 38.2	-0.7
SLVN				IAmb	IAmb	17 38 39.6	
	comp=Z,6.8nm,0.6s						
CMAR	Chiang Mai Arr	39.80	310	P	P	17 38 51.8	-0.9
	comp=Z,9.3nm,0.8s,baz=141,slow=7.4,SNR=56						
CMAR				PcP	PcP	17 40 57.7	+1.8
	comp=Z,2.6nm,0.7s,baz=164,slow=2.7,SNR=11						
CMAR	Chiang Mai Arr	39.80	310	P	P	17 38 52.1	-0.5
CMAR						17 40 57.7	
CMAR	Chiang Mai Arr	39.80	310	P	P	17 38 52.0	-0.5
CHTO	Chiang Mai	40.02	311	P	P	17 38 52.5	-1.9
CHTO				pmax	pmax		
	comp=Z,16nm,0.8s						
CHTO	Chiang Mai	40.02	311	P	P	17 38 52.5	-1.9
CHTO				IAmb	IAmb	17 38 55.4	
	comp=Z,16nm,0.8s						
JNU	Nakatsue	40.04	1	LR	LR	17 56 17.8	
	comp=Z,995nm,18.4s,baz=85,slow=37						
GYA	Guiyang	40.34	327	⇓*i*P	P	17 38 56.9	-0.1
GYA				pP	pP	17 39 22.3	-6.8
GYA				PP	PnPn	17 40 34.5	-3.8
GYA				S	S	17 44 55.4	+1.6
GYA				pmax	pmax		
	comp=Z,20nm,0.6s						
GYA				pmax	pmax		
	comp=Z,50nm,5.6s						
GYA				LR	LR		
	comp=Z,770nm,17.3s						
GYA				LR	LR		
	comp=Z,1μm,17.1s						
GYA				LR	LR		
	comp=Z,250nm,17.8s						
WHN	Wuhan	40.35	339	P	P	17 38 57.3	+0.4
NJ2	Nanjing	40.39	345	*e*P	P	17 38 57.5	+0.3
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
KMI	Kunming	41.61	321	P	P	17 39 08.6	+1.0
KMI				pP	pP	17 39 31.6	-8.3
KMI				pmax	pmax		

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        comp=Z,17nm,0.8s
ENH    Enshi             42.07 333   P       P        17 39 10.1 -0.9
ENH                                  IAmb    IAmb     17 39 11.6
        comp=Z,10.0nm,0.6s
TJN    Taejon            43.35 357 i P       P        17 39 20.9 -0.2
MJAR   Matsushiro Arr    44.12  10   P       P        17 39 25.7 -1.7
        comp=Z,4.6nm,0.8s,baz=190,slow=11,SNR=9.1
MJAR   Matsushiro Arr    44.12  10   P       P        17 39 25.7 -1.7
MJAR                                 pmax    pmax
        comp=Z,81nm,0.9s
MAJO   Matsushiro        44.12  10   P       P        17 39 26.1 -1.3
MAJO                                 pmax    pmax
        comp=Z,477nm,1.1s
MAJO   Matsushiro        44.12  10   P       P        17 39 26.1 -1.3
MAT    Matsushiro        44.12  10   P       P        17 39 26.5 -0.9
MJB9   Matsu-Tunnel      44.13  10   P       P        17 39 26.2 -1.2
KSRS   Korea Array       44.40 358   P       P        17 39 28.6 -0.9
        comp=Z,1.0nm,0.6s,baz=172,slow=8.4,SNR=6.6
KSRS                                 LR      LR       17 59 11.3
        comp=Z,1μm,19.4s,baz=121,slow=38
CD2    Chengdu           45.41 328   P       P        17 39 37.8 +0.1
CD2                                  pmax    pmax
        comp=Z,30nm,0.7s
BJI    Beijing           48.64 346   P       P        17 40 02.4 -0.1
BJI                                  pmax    pmax
        comp=Z,14nm,0.7s
LZH    Lanzhou           49.51 332 eP        P        17 40 09.6 +0.1
LZH                                  pP      pP       17 40 39.6 -3.3
LZH                                  sP      sP       17 40 51.3 -8.0
LZH                                  pmax    pmax
        comp=Z,29nm,1.2s
HHC    Hu-ho-hao-te      50.66 342 eP        P        17 40 16.8 -1.2
USA0B  Ussuriysk Arra    51.12   2 i P       P        17 40 21.2  0.0
USRK   Ussuriysk Ar.     51.12   2   P       P        17 40 21.3 +0.1
        comp=Z,3.1nm,0.7s,baz=196,slow=7.1,SNR=6.3
USRK   Ussuriysk Ar.     51.12   2   P       P        17 40 21.4 +0.2
USRK   Ussuriysk Ar.     51.12   2   P       P        17 40 21.4 +0.2
RPZ    Rata Peaks        51.14 142   P       P        17 40 24.3 +2.8
        comp=Z,14nm,1.0s,baz=264,slow=3.9,SNR=7.2
LSA    Lhasa             52.28 316   P       P        17 40 30.8 +0.1
LSA    Lhasa             52.28 316 i P       P        17 40 30.7 +0.1
        SNR=7.9
LSA    Lhasa             52.28 316 i P       P        17 40 30.7 +0.1
        SNR=7.9
LSA    Lhasa             52.28 316   P       P        17 40 30.2 -0.5
LSA                                  pmax    pmax
        comp=Z,7.0nm,0.7s
LSA    Lhasa             52.28 316   P       P        17 40 30.2 -0.5
LSA                                  IAmb    IAmb     17 40 32.1
        comp=Z,7.3nm,0.7s
ODAN   Odare             53.33 311 eP        P        17 40 37.9 -0.2
        comp=Z,28nm,0.5s
TAPN   Taplejung         53.36 312 eP        P        17 40 37.6 -0.8
        comp=Z,27nm,0.6s
RAMN   Ramite            53.97 311 eP        P        17 40 42.2 -0.6
        comp=Z,61nm,0.6s
GTA    Gaotai            54.08 331 ⇑P        P        17 40 42.9 -0.3
GTA                                  pP      pP       17 41 07.1  -10
GTA                                  sP      sP       17 41 23.2  -10
GTA                                  S       S        17 48 07.7 -0.5
GTA                                  pmax    pmax
        comp=Z,5.0nm,1.1s
GTA                                  pmax    pmax
        comp=Z,85nm,7.5s
GTA                                  LR      LR
        comp=Z,630nm,18.1s
GTA                                  LR      LR
        comp=Z,460nm,19.0s
GTA                                  LR      LR
        comp=Z,700nm,16.5s
JIRN   Jiri              54.66 311 eP        P        17 40 47.1 -0.8
        comp=Z,19nm,0.3s
GUN    Gumba             55.03 311 eP        P        17 40 49.6 -0.9
YSS    Yuzh-Sakhalins    55.03  11 i P       P        17 40 50.0 +0.3
YSS                                  pmax    pmax
        comp=Z,5.0nm,0.3s
PKI    Pulchoki          55.20 311 eP        P        17 40 50.6 -1.2
        comp=Z,17nm,0.6s
PKIN   Phulchoki         55.21 311 eP        P        17 40 50.6 -1.2
        comp=Z,13nm,0.6s
DMN    Daman             55.45 311 eP        P        17 40 52.6 -0.9
        comp=Z,16nm,0.6s
GKN    Gorkha            56.01 311 eP        P        17 40 56.3 -1.0
        comp=Z,27nm,0.3s
KLR    Kul'dur           56.15   1   P       P        17 40 57.1 -0.5
        comp=Z,3.0nm,0.8s,baz=204,slow=6.1
KLR    Kul'dur           56.15   1 i P       P        17 40 57.3 -0.4
KLR                                  pmax    pmax
        comp=Z,7.0nm,1.1s
HYB    Hyderabad         56.36 296 i P       P        17 40 59.0 -0.8
DANN   Dangsing          56.85 311 eP        P        17 41 02.5 -0.9
        comp=Z,27nm,0.7s
ULN    Ulaanbaatar       58.38 342   P       P        17 41 14.2 +0.6
ULN                                  pmax    pmax
        comp=Z,12nm,0.7s
ULN    Ulaanbaatar       58.38 342   P       P        17 41 14.2 +0.6
ULN                                  IAmb    IAmb     17 41 15.3
        comp=Z,12nm,0.7s
SONM   Songino Array     58.56 342   P       P        17 41 15.0 +0.3
        comp=Z,3.7nm,0.7s,baz=153,slow=6.2,SNR=20
SONM                                 LR      LR       18 08 49.7
        comp=Z,1μm,19.1s,baz=150,slow=38
SONM   Songino Array     58.56 342   P       P        17 41 15.1 +0.3
SONM                                 pmax    pmax
        comp=Z,7.0nm,1.2s
SONM   Songino Array     58.56 342   P       P        17 41 15.1 +0.3
ZEA    Zeya              60.68 358 eP        P        17 41 30.2 +1.2
ZEA                                  pmax    pmax
        comp=Z,12nm,1.0s
ZAK    Zakamensk         61.78 341 eP        P        17 41 36.8 +0.1
ZAK                                  pmax    pmax
        comp=Z,4.0nm,1.1s
TLY    Talaya            62.79 342 eP        P        17 41 44.4 +1.1
TLY                                  pmax    pmax
        comp=Z,8.0nm,0.6s
TLY    Talaya            62.79 342   P       P        17 41 43.8 +0.5
WMQ    Urumqi            63.49 327 eP        P        17 41 48.9 +0.8
WMQ                                  pP      pP       17 42 16.5 -6.8
WMQ                                  sP      sP       17 42 32.0 -7.4
WMQ                                  pmax    pmax
        comp=Z,17nm,0.9s
WMQ                                  pmax    pmax
        comp=Z,27nm,4.1s
WMQ                                  LR      LR
        comp=Z,2μm,21.5s
WMQ                                  LR      LR
        comp=Z,960nm,23.1s
WMQ                                  LR      LR
        comp=Z,750nm,25.9s
WMQ    Urumqi            63.49 327   P       P        17 41 48.4 +0.3
WMQ                                  pmax    pmax
        comp=Z,14nm,0.6s
WMQ    Urumqi            63.49 327   P       P        17 41 48.4 +0.3
WMQ                                  IAmb    IAmb     17 41 50.8
        comp=Z,14nm,0.6s
MOY    Mondy             63.63 340 eP        P        17 41 50.1 +1.2
MOY                                  pmax    pmax
        comp=Z,35nm,1.5s
PETK   Petropavlovsk-    64.45  18   P       P        17 41 55.5 +1.4
        comp=Z,4.0nm,0.7s,baz=189,slow=4.8,SNR=6.5
PETK   Petropavlovsk-    64.45  18   P       P        17 41 55.7 +1.6
PETK   Petropavlovsk-    64.45  18   P       P        17 41 55.7 +1.6
BOD    Bodaibo           66.02 351 eP        P        17 42 00.9 -3.2
BOD                                  pmax    pmax
        comp=Z,6.0nm,1.2s
NIL    Nilore            67.29 311   P       P        17 42 13.1 +0.4
NIL                                  pmax    pmax
        comp=Z,15nm,0.6s
NIL    Nilore            67.29 311   P       P        17 42 13.1 +0.4
NIL                                  IAmb    IAmb     17 42 14.6
        comp=Z,15nm,0.6s
KSH    Kashi             68.10 318   P       P        17 42 19.5 +1.7
KSH                                  pP      pP       17 42 50.1 -3.5
KSH                                  PP      PP       17 44 53.2 +3.1
KSH                                  PcS              17 46 46.2
KSH                                  S       S        17 51 07.1 +1.4
KSH                                  SS      SS       17 55 34.1 +2.6
KSH                                  pmax    pmax
        comp=Z,10.0nm,0.8s
KSH                                  pmax    pmax
        comp=Z,620nm,5.7s
KSH                                  LR      LR
        comp=Z,680nm,10.5s
KSH                                  LR      LR
        comp=Z,750nm,11.8s
KSH                                  LR      LR
        comp=Z,640nm,12.3s
MK31   Makanchi Array    68.33 327   P       P        17 42 19.1 +0.2
MK31                                 pmax    pmax
        comp=Z,20nm,1.0s
MK31   Makanchi Array    68.33 327   P       P        17 42 19.1 +0.2
MK31                                 IAmb    IAmb     17 42 21.0
        comp=Z,20nm,0.9s
MKAR   Makanchi Array    68.33 327   P       P        17 42 19.3 +0.4
        comp=Z,23nm,0.7s,baz=120,slow=8.0,SNR=240
MKAR   Makanchi Array    68.33 327 i P       P        17 42 19.2 +0.3
MKAR                                 pmax    pmax
        comp=Z,29nm,0.8s
MKAR   Makanchi Array    68.33 327   P       P        17 42 19.1 +0.2
MAKZ   Makanchi          68.50 327   P       P        17 42 20.1 +0.1
MAKZ                                 pmax    pmax
        comp=Z,16nm,0.8s
MAKZ   Makanchi          68.50 327   P       P        17 42 20.1 +0.1
MAKZ                                 IAmb    IAmb     17 42 21.4
        comp=Z,16nm,0.8s
KDJ    Kajisay           68.66 320   P       P        17 42 22.6 +1.3
KDJ                                  pmax    pmax
        comp=Z,7.0nm,0.8s
KDJ    Kajisay           68.66 320   P       P        17 42 22.6 +1.3
YAK    Yakutsk           68.96 360   P       P        17 42 22.9 +0.5
        comp=Z,9.9nm,0.7s,baz=232,slow=0.6,SNR=13
YAK    Yakutsk           68.96 360 eP        P        17 42 22.5 +0.1
YAK                                  pmax    pmax
        comp=Z,17nm,0.9s
YAK                                  pmax    pmax
        comp=N,5.0nm,0.9s
YAK                                  pmax    pmax
        comp=E,2.0nm,0.9s
YAK    Yakutsk           68.96 360   P       P        17 42 23.2 +0.8
NRN    Naryn             69.06 319   P       P        17 42 24.1 +0.2
NRN                                  pmax    pmax
        comp=Z,5.0nm,1.1s
NRN    Naryn             69.06 319   P       P        17 42 24.1 +0.2
KZA    Kyzart            69.87 320   P       P        17 42 30.7 +1.8
        SNR=6.7
UCH    Uchtor            70.42 320   P       P        17 42 33.9 +1.5
        SNR=12
AAK    Ala-Archa         70.63 320   P       P        17 42 34.3 +1.0
        SNR=8.9
AAK    Ala-Archa         70.63 320 i P       P        17 42 34.4 +1.0
        SNR=16
AAK    Ala-Archa         70.63 320 i P       P        17 42 34.4 +1.0
        SNR=16
AAK    Ala-Archa         70.63 320   P       P        17 42 34.2 +0.9
AAK                                  pmax    pmax
        comp=Z,10.0nm,0.8s
AAK    Ala-Archa         70.63 320   P       P        17 42 34.2 +1.0
AAK                                  IAmb    IAmb     17 42 35.4
        comp=Z,9.8nm,0.8s
AML    Almayashu         70.90 319   P       P        17 42 36.5 +1.3
        SNR=22
USP    Ospenovka         70.94 320   P       P        17 42 35.7 +0.6
        SNR=18
ARSB   Arslanbob         70.98 318   P       P        17 42 36.5 +1.1
ARSB                                 pmax    pmax
        comp=Z,21nm,0.7s
ARSB   Arslanbob         70.98 318   P       P        17 42 36.5 +1.1
ARSB                                 IAmb    IAmb     17 42 37.2
        comp=Z,21nm,0.7s
EKS2   Erkin-Say         71.10 320   P       P        17 42 37.9 +1.7
        SNR=14
ZAA0   Zalesovo Array    71.69 334 i P       P        17 42 38.9 -0.3
ZALV   Zalesovo Beam     71.69 334   P       P        17 42 38.9 -0.3
        comp=Z,10.0nm,0.7s,baz=121,slow=4.7,SNR=47
ZALV   Zalesovo Beam     71.69 334   P       P        17 42 38.8 -0.4
ZALV   Zalesovo Beam     71.69 334   P       P        17 42 38.8 -0.4
GAR    Garm              71.75 315   P       P        17 42 40.1  0.0
GAR                                  IAmb    IAmb     17 42 42.3
        comp=Z,32nm,0.9s
BTK    Batken            71.86 316   P       P        17 42 41.1 +0.4
BTK                                  pmax    pmax
        comp=Z,8.0nm,1.0s
BTK    Batken            71.86 316   P       P        17 42 41.1 +0.4
SEY    Seymchan          71.94  11   P       P        17 42 42.0 +1.5
        comp=Z,7.0nm,0.8s,baz=189,slow=3.8,SNR=30
SEY    Seymchan          71.94  11 i P       P        17 42 41.1 +0.6
VNDA   Vanda             72.32 173   P       P        17 42 45.2 +2.6
        comp=Z,2.4nm,0.9s,baz=303,slow=6.3,SNR=3.7
VNDA                                 LR      LR       18 13 59.9
        comp=Z,1μm,18.9s,baz=6.0,slow=35
VNDA   Vanda             72.32 173   P       P        17 42 44.5 +1.9
VNDA                                 pmax    pmax
        comp=Z,87nm,1.0s
VNDA   Vanda             72.32 173   P       P        17 42 44.5 +1.9
CHGR   Chuyangaron       72.42 314   P       P        17 42 44.0  0.0
CHGR                                 IAmb    IAmb     17 42 45.2
        comp=Z,29nm,0.7s
KURK   Kurchatov         72.62 329c iP       P        17 42 45.2 +0.4
KURK                                 pmax    pmax
        comp=Z,25nm,0.9s
KURK   Kurchatov         72.62 329   P       P        17 42 45.3 +0.4
KK31   Karatay Array     73.43 319   P       P        17 42 50.1 +0.3
KK31                                 pmax    pmax
        comp=Z,14nm,1.2s
KK31   Karatay Array     73.43 319   P       P        17 42 50.1 +0.3
KK31                                 IAmb    IAmb     17 42 51.3
        comp=Z,14nm,1.1s
KKAR   Karatay Array     73.43 319   P       P        17 42 50.0 +0.2
KKAR                                 pmax    pmax
        comp=Z,14nm,1.2s
KKAR   Karatay Array     73.43 319   P       P        17 42 49.6 -0.1
KKAR   Karatay Array     73.43 319   P       P        17 42 50.0 +0.2
KKAR                                 IAmb    IAmb     17 42 51.3
        comp=Z,14nm,1.1s
KEKH   Kekaha            74.66  65   P       P        17 42 57.6 +0.3
HRA    Herat             76.02 308   P       P        17 43 04.9 -0.3
SHAO   Shalim            77.48 290   P       P        17 43 15.9 +2.5
SHAO   Shalim            77.48 290   P       P        17 43 15.9 +2.5
BRVK   Borovoye          78.24 328c iP       P        17 43 17.4 +0.6
BRVK                                 pmax    pmax
        comp=Z,13nm,0.9s
BRVK   Borovoye          78.24 328   P       P        17 43 17.1 +0.3
UOSS   Minazif           78.47 297   P       P        17 43 20.4 +1.7
UOSS   Minazif           78.47 297   P       P        17 43 20.4 +1.7
UOSS   Minazif           78.47 297   P       P        17 43 18.4 -0.3
HATD   Hatta, Dubai      78.50 297   P       P        17 43 20.9 +1.9
HATD   Hatta, Dubai      78.50 297   P       P        17 43 20.9 +1.9
BANOM  Banah             78.61 298 i P       P        17 43 20.7 +1.2
        SNR=15
BANOM  Banah             78.61 298 i P       P        17 43 20.7 +1.2
        SNR=15
TIXI   Tiksi             78.62 360   P       P        17 43 18.8 +0.2
        comp=Z,3.3nm,0.6s,baz=175,slow=3.7,SNR=25
TIXI   Tiksi             78.62 360 i P       P        17 43 19.3 +0.8
TIXI                                 pmax    pmax
        comp=Z,5.0nm,0.8s
TIXI   Tiksi             78.62 360   P       P        17 43 18.8 +0.2
SHME   Shamm             78.78 298 i P       P        17 43 21.7 +1.3
        SNR=8.6
SHME   Shamm             78.78 298 i P       P        17 43 21.7 +1.3
        SNR=8.6
BILL   Bilibino          79.25  13 i P       P        17 43 23.2 +1.2
BILL                                 pmax    pmax
        comp=Z,2.0nm,1.2s
GEYT   Alibeck           80.28 310   P       P        17 43 28.6 +0.3
        comp=Z,4.7nm,0.7s,baz=160,slow=4.7,SNR=10
NRIK   Noril'sk          81.68 346   P       P        17 43 36.3 +1.3
        comp=Z,2.1nm,0.3s,baz=127,slow=8.7,SNR=4.9
NRIK                                 LR      LR       18 22 05.4
        comp=Z,576nm,20.6s,baz=133,slow=37
NRIK   Noril'sk          81.68 346 i P       P        17 43 35.6 +0.6
ABKAR  Akbulak array     82.60 322   P       P        17 43 39.9 -0.3
QSPA   South Pole Qui    82.84 180   P       P        17 43 43.3 +2.0
        comp=Z,3.9nm,0.6s,baz=334,slow=1.1,SNR=27
QSPA   South Pole Qui    82.84 180   P       P        17 43 43.4 +2.0
ARU    Arti              85.81 328   P       P        17 43 56.3 +0.1
ARU                                  pmax    pmax
        comp=Z,23nm,0.9s
ARU    Arti              85.81 328   P       P        17 43 56.3 +0.1
ARU                                  IAmb    IAmb     17 46 18.8
        comp=Z,23nm,0.9s
RAYN   Ar Rayn           87.78 294 i P       P        17 44 07.4 +0.8
        SNR=9.1
RAYN   Ar Rayn           87.78 294 i P       P        17 44 07.4 +0.8
        SNR=9.1
RAYN   Ar Rayn           87.78 294   P       P        17 44 06.6  0.0
RAYN                                 pmax    pmax
        comp=Z,23nm,1.3s
RAYN   Ar Rayn           87.78 294   P       P        17 44 06.6  0.0
RAYN                                 IAmb    IAmb     17 44 08.8
        comp=Z,23nm,1.3s
KMBO   Kilima Mbogo      92.57 269   P       P        17 44 30.3 +0.9
        comp=Z,0.8nm,0.5s,baz=103,slow=3.0,SNR=3.8
KMBO   Kilima Mbogo      92.57 269   P       P        17 44 30.3 +0.9
KMBO                                 pmax    pmax
        comp=Z,5.0nm,1.3s
KMBO   Kilima Mbogo      92.57 269   IAmb    IAmb     17 44 31.9
        comp=Z,4.9nm,1.2s
KBZ    Khabaz            92.77 314   P       P        17 44 30.3 +1.0
        comp=Z,1.8nm,0.8s,baz=97,slow=5.3,SNR=4.2
KIV    Kislovodsk        92.95 314 eP        P        17 44 29.9 -0.4
KIV                                  pmax    pmax
        comp=Z,16nm,1.1s
ILAR   Eielson Array     93.47  25   P       P        17 44 31.6 -0.5
        comp=Z,1.3nm,0.9s,baz=284,slow=4.6,SNR=10
BMAR   Burnt Mountain    94.78  23   P       P        17 44 39.8 +1.7
OBN    Obninsk           97.75 325 i P       Pdif     17 44 51.9 +0.2
OBN                                  pmax    pmax
        comp=Z,5.0nm,1.1s
YKA    Yellowknife Ar   107.88  26   PKiKP   PKiKP    17 49 43.6 +0.4
        comp=Z,0.7nm,0.6s,baz=288,slow=1.5,SNR=4.2
YKA                                  PKKPbc  PKKPbc   18 00 58.8 -0.4
        comp=Z,0.7nm,0.8s,baz=113,slow=3.5,SNR=5.9
GERES  GERESS Array B   112.51 320   PKiKP   PKiKP    17 49 53.7 +1.2
        comp=Z,0.9nm,0.5s,baz=80,slow=2.4,SNR=5.7
LDF    La Druitiere     121.11 324   P       Pdif     17 46 40.8 +5.0
LDF                                  pmax    pmax
        comp=Z,83nm,1.2s
ULM    Lac du Bonnet    122.57  33   PKP     PKiKP    17 50 13.1 +1.2
        comp=Z,1.8nm,0.7s,baz=311,slow=4.1,SNR=4.6
PLCA   Paso Flores      128.76 160   PKP     PKiKP    17 50 27.4 +2.7
        comp=Z,1.3nm,0.6s,baz=314,slow=2.7,SNR=3.9
TORD   Torodi Ar. Bea   128.82 281   PKP     PKiKP    17 50 26.1 +0.9
        comp=Z,2.6nm,0.8s,baz=56,slow=1.8,SNR=11
TORD   Torodi Ar. Bea   128.82 281           PKiKP    17 50 25.5 +0.3
SCHQ   Schefferville    130.56  13   PKP     PKiKP    17 50 29.7 +2.1
        comp=Z,1.3nm,0.7s,baz=187,slow=14,SNR=2.9
CFA    Coronel Fontan   137.73 157   PKP     PKiKP    17 50 43.8 +0.8
        comp=Z,2.2nm,0.5s,baz=233,slow=5.1
R55A   Marlinton        138.74  37           PKPpre   17 50 33.2
LVC    Limon Verde      145.13 148   PKPbc   PKiKP    17 50 58.3 -0.5
        comp=Z,6.5nm,0.5s,baz=260,slow=2.7,SNR=8.2
LVC    Limon Verde      145.13 148   PKIKP   PKiKP    17 50 58.6 -0.2
LVC    Limon Verde      145.13 148           PKiKP    17 50 58.6 -0.2
CPUP   Villa Florida    145.99 168   PKPbc   PKiKP    17 50 59.0 -0.9
        comp=Z,15nm,0.9s,baz=205,slow=2.1,SNR=27
CPUP   Villa Florida    145.99 168   PKP2    PKiKP    17 50 59.3 -0.7
CPUP   Villa Florida    145.99 168           PKiKP    17 50 59.2 -0.7
MNMC   Minye Minye      147.54 144           PKPab    17 51 02.9 -1.2
LPAZ   La Paz           150.62 143   PKPbc   PKiKP    17 51 11.9 +1.4
        comp=Z,3.8nm,0.4s,baz=48,slow=4.6,SNR=21
LPAZ   La Paz           150.62 143   PKIKP   PKPab    17 51 12.6 -4.5
LPAZ   La Paz           150.62 143           PKPab    17 51 12.6 -4.5
SIV    San Ignacio      154.55 155   PKPbc   PKiKP    17 51 20.3 +2.4
        comp=Z,1.2nm,0.8s,baz=136,slow=6.2,SNR=4.3
SIV                                  PKPab   PKPab    17 51 34.9 +2.0
        comp=Z,3.3nm,0.7s,baz=204,slow=3.4,SNR=12
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BJI ***10*** *17:33:25.7±0.0, 5°.74S×148°.25E, h262^{km}, mB5.5/66, mb5.4/66*

DJA ***10*** *17:33:28.8±0.3, 5°S±2°×14°8E±°, h248^{km}±3^{km}, M5.5/81, mB5.8/67, mb5.5/81, MLv6.0/2, Mw(mB)5.3/67, Mwp5.7/37*

MOS ***10*** *17:33:29.3±0.8, 5°.49S×147°.95E, h271^{km}, mb5.5/15, Error ellipse: s-maj=6.8km s-min=4.6km az=98.0*

NEIC ***10*** *17:33:29±1.8, 5°.48S±0°.05×147°.96E±0°.04, h260^{km}±1^{km}, mb5.6/297, Mwb5.9/50, Mww5.9, Mwc6.0(GCMT), Error ellipse: s-maj=9.3km s-min=6.0km az=201.0*

IDC ***10*** *17:33:30.8±0.5, 5°.53S×147°.93E, h271^{km}±4^{km}, mb5.2/41, mb1 5.2/47, mb1mx5.2/53, mbtmp5.8/47, Error ellipse: s-maj=8.1km s-min=5.4km az=77.0*

NEIC ***10*** *17:33:30, 5°.49S×147°.96E, h261^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}3.49; $M_{\theta\theta}$-4.98; $M_{\phi\phi}$1.49; $M_{r\theta}$4.60; $M_{\theta\phi}$0.11; $M_{\phi r}$-4.35; Fault plane solution: $M_0$7.73000×10^{17} NP1:ϕ_s242.76000°, δ27.52000°, λ31.94000°. NP2:ϕ_s123.83000°, δ75.85000°, λ113.85000°. Principal axes: T 7.9861, Plg53.0000°, Azm62.0000°; N -0.5475, Plg23.0000°, Azm298.0000°; P -7.4385, Plg27.0000°, Azm195.0000°;*

GCMT ***10*** *17:33:33.0±0.1, 5°.54S±0°.01×147°.95E±0°.01, h265^{km}, MW6.0/160, Moment Tensor Solution. s156,c327; s160,c499; Duration: 2^{s}3 Moment tensor: Scale 10^{18} Nm; M_{rr}0.50±.01; $M_{\theta\theta}$-0.89±.01; $M_{\phi\phi}$0.39±.01; $M_{r\theta}$0.53±.01; $M_{\theta\phi}$-0.17±.01; $M_{\phi r}$-0.52±.01; Best double couple: $M_0$1.09000×10^{18} NP1:ϕ_s229.00000°, δ41.00000°, λ27.00000°. NP2:ϕ_s117.00000°, δ72.00000°, λ127.00000°. Principal axes: T 1.1060, Plg48.0000°, Azm68.0000°; N -0.0320, Plg35.0000°, Azm284.0000°; P -1.0740, Plg19.0000°, Azm180.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***10*** *17:33:33, 5°.57S×148°.00E, h266^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.51; $M_{\theta\theta}$-0.91; $M_{\phi\phi}$0.40; $M_{r\theta}$0.54; $M_{\theta\phi}$-0.17; $M_{\phi r}$-0.56; Fault plane solution: $M_0$1.12000×10^{18} NP1:ϕ_s118.00000°, δ73.00000°, λ127.00000°. NP2:ϕ_s229.00000°, δ41.00000°, λ27.00000°. Principal axes: T 1.1477, Plg48.0000°, Azm68.0000°; N -0.0559, Plg35.0000°, Azm285.0000°; P -1.0917, Plg19.0000°, Azm181.0000°;*

NEIC ***10*** *17:33:34, 5°.49S×147°.83E, h270^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.52; $M_{\theta\theta}$-0.86; $M_{\phi\phi}$0.34; $M_{r\theta}$0.42; $M_{\theta\phi}$-0.12; $M_{\phi r}$-0.54; Fault plane solution: $M_0$1.02000×10^{18} NP1:ϕ_s119.00000°, δ70.00000°, λ128.00000°. NP2:ϕ_s232.00000°, δ42.00000°, λ31.00000°. Principal axes: T 1.0596, Plg50.0000°, Azm71.0000°; N -0.0750, Plg35.0000°, Azm284.0000°; P -0.9846, Plg16.0000°, Azm182.0000°;*

ISC 10 17:33:29.9±0.2**, 5°.54S**±0°.03×**147°.94E**±0°.03**, h269**^{km}±1^{km}**, h271**^{km}**:pP-P, n1838, σ1^s.23**/2038**, mb5.5**/280**, 39C-31D, Eastern New Guinea region**

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Code   Station Name       Δ°   AZ°   Phase ID           Time     Res
                                     Op      ISC      h  m  s    ISC
MANU   Manus Island       3.52 351           Pn       17 34 29.5 +0.2
PMG    Port Moresby       3.92 191   P       Pn       17 34 33.3 -0.4
        387nm,0.3s,baz=34,slow=5.3,SNR=889
PMG                                  S       S        17 35 20.7 -4.0
        282nm,0.3s,baz=339,slow=11,SNR=6.0
KRVT   Keravat (AS076     4.25  73   P       Pn       17 34 35.7 -1.8
        66nm,0.3s,baz=95,slow=5.1,SNR=106
KRVT                                 S       S        17 35 28.6 -2.8
        48nm,0.3s,baz=106,slow=21,SNR=1.8
RABL   Rabaul             4.41  73           Pn       17 34 38.0 -1.5
GENI   Genyem             8.29 290   P       Pn       17 35 25.0 -2.0
        17μm12μm820nm,0.8s
COEN   Coen               9.59 209   P       Pn       17 35 45.4 +2.1
        baz=9.7,SNR=129
COEN   Coen               9.59 209   Pn      Pn       17 35 44.9 +1.6
SMPI   Sarmi              9.86 291   P       Pn       17 35 43.1 -3.6
        6μm468nm,0.8s
HNR    Honiara           12.51 109   P       Pn       17 36 19.2 -0.3
        209nm,0.3s,baz=278,slow=1.5,SNR=50
HNR                                  S       S        17 38 38.4 -0.4
        baz=112,slow=16,SNR=1.1
HNR    Honiara           12.51 109 i P       Pn       17 36 19.0 -0.5
HNR    Honiara           12.51 109   P       Pn       17 36 19.7 +0.2
HNR                                  S       S        17 38 38.4 -0.4
HNR    Honiara           12.51 109   P       Pn       17 36 19.7 +0.2
MTSU   Mount Surprise    13.01 195   P       P        17 36 27.9 +1.2
        baz=13,SNR=97
CTA    Charters Tower    14.56 186   P       Pn       17 36 45.2 +1.0
        23nm,0.3s,baz=2.2,slow=14,SNR=84
CTA                                  S       S        17 39 26.1 +1.5
        1.8nm,0.3s,baz=335,slow=11,SNR=1.5
FAKI   Fak Fak           15.86 279   P       P        17 36 58.5 +0.2
FAKI                                 IAmb    IAmb     17 37 19.0
        comp=Z,173nm,0.8s
PATS   Pohnpei           16.07  40   P       Pn       17 37 02.2  0.0
        baz=16,SNR=163
PATS   Pohnpei           16.07  40           P        17 37 01.2 +0.7
SAUI   Saumlaki          16.70 261           Pn       17 37 09.7 +0.1
SIJI   Sorong            17.28 285   P       P        17 37 14.5 +0.7
        comp=Z,14nm,0.3s,baz=92,slow=8.3,SNR=20
SIJI                                 S       S        17 40 21.6 +1.9
        baz=149,slow=11,SNR=1.0
SIJI                                 ScP     ScP      17 44 52.1 +0.7
        comp=Z,1.5nm,0.3s,baz=5.5,slow=5.2,SNR=4.4
SWI    Sorong            17.29 285   P       P        17 37 14.0 +0.2
        comp=Z,5μmcomp=Z,446nm,0.7s
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MTN	Manton Dam	18.10	245	P	P	17 37 23.7	+1.1
GUMO	Guam	19.25	351	P	P	17 37 35.0	+0.1
	comp=Z,25nm,0.3s,baz=171,slow=12,SNR=14						
GUMO				S	S	17 40 58.4	+0.2
	baz=37,slow=10,SNR=1.4						
GUMO	Guam	19.25	351	P	P	17 37 35.0	+0.1
GUMO				S	S	17 40 58.4	+0.2
GUMO				pmax	pmax		
	comp=Z,561nm,1.1s						
GUMO	Guam	19.25	351	P	P	17 37 35.0	+0.1
WB0	Warramunga Arr	19.34	222	P	P	17 37 37.0	+1.2
WRAB	Tennant Creek	19.48	222	*de*P	P	17 37 38.0	+0.7
WRAB				pmax	pmax		
	comp=Z,1μm,1.3s						
WRAB	Tennant Creek	19.48	222	P	P	17 37 38.2	+0.9
WB2	Warramunga Arr	19.49	222	P	P	17 37 38.4	+0.9
WB2				S	S	17 41 03.6	+0.7
WRA	Warramunga Arr	19.50	222	P	P	17 37 38.2	+0.7
	comp=Z,78nm,0.3s,baz=49,slow=9.9,SNR=42						
WRA				S	S	17 41 03.3	+0.2
	comp=Z,34nm,0.3s,baz=49,slow=18,SNR=11						
WRA				ScP	ScP	17 44 56.8	+0.6
	comp=Z,2.4nm,0.3s,baz=45,slow=2.5,SNR=6.2						
WRA				P3KPbc		18 11 52.5	
	comp=Z,0.0nm,0.3s,baz=225,slow=2.8,SNR=7.6						
WRA	Warramunga Arr	19.50	222	P	P	17 37 37.8	+0.2
EIDS	Eidsvold	19.95	172	P	P	17 37 43.6	+1.4
	baz=20,SNR=88						
EIDS	Eidsvold	19.95	172	P	P	17 37 43.6	+1.4
RMQ	Roma	20.85	178	P	P	17 37 53.1	+1.5
	baz=21,SNR=115						
NLAI	Namlea	20.91	275	P	P	17 37 52.6	+0.3
	comp=Z,4μmcomp=Z,170nm,0.7s						
QLP	Quilpie	21.23	189	P	P	17 37 56.9	+1.6
	baz=21,SNR=35						
KNRA	Kununurra	21.35	240	P	P	17 37 57.4	+0.8
TNTI	Ternate	21.48	286	P	P	17 37 58.2	+0.3
	comp=Z,2μmcomp=Z,58nm,0.9s						
TNTI	Ternate	21.48	286	P	P	17 37 58.6	+0.8
SANI	Sanana	22.18	278	P	P	17 38 03.9	-0.2
	comp=Z,6μmcomp=Z,4μmcomp=Z,326nm,1.0s						
AS31	Alice Springs	22.53	215	P	P	17 38 08.9	+1.6
ASAR	Alice Springs	22.53	215	P	P	17 38 08.9	+1.6
	comp=Z,1μm,0.8s,baz=50,slow=8.4,SNR=369						
ASAR				S	S	17 41 55.1	+0.9
	comp=Z,24nm,0.8s,baz=29,slow=18,SNR=3.1						
ASAR				ScP	ScP	17 45 03.7	+0.1
	comp=Z,23nm,0.8s,baz=57,slow=2.4,SNR=5.3						
ASAR				ScS	ScS	17 48 50.5	+1.1
	comp=Z,5.4nm,0.9s,baz=28,slow=4.2,SNR=5.1						
ASAR				P3KPbc		18 11 39.1	
	comp=Z,3.9nm,1.0s,baz=208,slow=2.6,SNR=15						
ASAR	Alice Springs	22.53	215	P	P	17 38 08.6	+1.3
SOEI	Soe	23.83	258	P	P	17 38 20.1	+0.7
KWAJ	Kwajalein Atol	24.24	54	P	P	17 38 22.5	-0.4
KWAJ				pmax	pmax		
	comp=Z,3μm,1.2s						
KWAJ	Kwajalein Atol	24.24	54	P	P	17 38 22.5	-0.4
DZM	Mont Dzumac	24.30	134	P	P	17 38 24.3	+0.8
	comp=Z,49nm,0.5s,baz=262,slow=9.4,SNR=66						
DZM				S	S	17 42 23.0	+0.6
	comp=Z,24nm,1.2s,baz=90,slow=15,SNR=1.7						
DZM				ScP	ScP	17 45 10.3	+1.8
	comp=Z,29nm,0.9s,baz=58,slow=14,SNR=5.3						
DZM	Mont Dzumac	24.30	134	*e*P	P	17 38 24.7	+1.2
	comp=Z,229nm,0.9s						
DZM	Mont Dzumac	24.30	134	P	P	17 38 24.3	+0.8
KMSI	Cibinong	24.69	284	P	P	17 38 27.5	+0.5
	comp=Z,3μmcomp=Z,446nm,0.6s						
ARMA	Armidale	24.99	172	P	P	17 38 31.1	+1.5
	baz=25,SNR=66						
ARMA	Armidale	24.99	172	P	P	17 38 31.1	+1.5
DDMP	Don Marcelino,	25.02	297	*e*P	P	17 38 32.1	+2.1
FITZ	Fitzroy Crossi	25.10	238	P	P	17 38 31.7	+1.1
	comp=Z,478nm,0.7s,baz=60,slow=8.4,SNR=15						
FITZ				S	S	17 42 35.6	+0.5
	comp=Z,32nm,0.8s,baz=43,slow=19,SNR=0.8						
FITZ	Fitzroy Crossi	25.10	238	P	P	17 38 31.6	+0.9
BBSI	Bau Bau	25.25	269	P	P	17 38 34.0	+1.9
	comp=Z,2μmcomp=Z,20nm,0.8s						
LUWI	Luwuk	25.52	279	P	P	17 38 34.8	+0.4
	comp=Z,9μmcomp=Z,5μmcomp=Z,109nm,0.8s						
LUWI	Luwuk	25.52	279	P	P	17 38 33.3	-1.1
MMRI	Maumere	25.69	262	P	P	17 38 35.9	-0.1
	comp=Z,9μmcomp=Z,6μmcomp=Z,301nm,0.5s						
MMRI	Maumere	25.69	262	P	P	17 38 35.1	-0.8
CMSA	Cobar Meteorol	25.95	184	P	P	17 38 39.1	+1.0
	baz=26,SNR=17						
EDFI	Ende, Flores	26.24	261	P	P	17 38 40.2	-0.8
	comp=Z,6μmcomp=Z,3μmcomp=Z,62nm,0.8s						
SKMP	Bagumbayan, Su	26.25	297	*e*P	P	17 38 39.8	-1.2
BUKP	Musuan	26.43	300	*e*P	P	17 38 44.9	+2.2
BUTP	Butuan	26.51	303	*e*P	P	17 38 34.2	-9.1
MRSI	Marisa	26.64	282	P	P	17 38 45.9	+1.4
	comp=Z,7μmcomp=Z,2μmcomp=Z,45nm,0.7s						
APSI	Ampana	26.64	279	P	P	17 38 45.8	+1.3
	comp=Z,6μmcomp=Z,2μmcomp=Z,50nm,0.6s						
CTBH	Cotabato--PC H	26.83	298	⇓*i*P	P	17 38 46.3	+0.2
STKA	Stephens Creek	26.87	192	P	P	17 38 47.0	+0.8
	baz=27,SNR=21						
STKA	Stephens Creek	26.87	192	P	P	17 38 46.7	+0.4
	comp=Z,75nm,0.7s,baz=355,slow=8.9,SNR=28						
STKA	Stephens Creek	26.87	192	P	P	17 38 46.6	+0.3
BASI	Baing, Sumba	27.49	259	P	P	17 38 52.8	+0.8
	comp=Z,6μmcomp=Z,7μmcomp=Z,237nm,0.8s						
BKSI	Bulukumba	27.70	269	P	P	17 38 53.5	-0.3
	comp=Z,7μmcomp=Z,3μmcomp=Z,53nm,0.8s						
MSLP	Maasin	27.77	304	*e*P	P	17 38 54.2	-0.3
PAGZ	Pagadian	27.88	298	*e*P	P	17 38 56.6	+1.2
KAPI	Kappang	28.07	270	P	P	17 38 58.4	+1.2
	comp=Z,26nm,0.9s,baz=122,slow=1.8,SNR=12						
KAPI				ScP	ScP	17 45 20.0	+0.3
	comp=Z,12nm,0.6s,baz=134,slow=2.2,SNR=4.4						
TTSI	Tana Toraja	28.15	274	P	P	17 38 58.9	+1.0
	comp=Z,3μmcomp=Z,36nm,1.4s						
RIV	Riverview	28.31	174	P	P	17 39 00.8	+1.8
	baz=28,SNR=12						
WBSI	Waikabubak, Su	28.59	260	P	P	17 39 01.8	0.0
	comp=Z,10μmcomp=Z,7μmcomp=Z,198nm,0.8s						
MPSI	Mapaga	28.60	281	P	P	17 39 01.3	-0.6
	comp=Z,6μmcomp=Z,1μmcomp=Z,37nm,0.8s						
YNG	Young	28.62	179	P	P	17 39 03.3	+1.6
	baz=29,SNR=60						
HTT	Hallett	28.99	196	P	P	17 39 06.0	+0.9
	baz=29,SNR=36						
CNP	Catarman	29.27	308	*e*P	P	17 39 08.4	+0.7
BBOO	Buckleboo	29.31	201	P	P	17 39 08.3	+0.4
	baz=29,SNR=18						
BBOO	Buckleboo	29.31	201	P	P	17 39 08.4	+0.5
CAN	Canberra	29.65	178	P	P	17 39 12.3	+1.4
CAN				pmax	pmax		
	comp=Z,239nm,0.8s						
CAN	Canberra	29.65	178	P	P	17 39 12.3	+1.4
CNB	Canberra Magne	29.66	178	P	P	17 39 12.6	+1.6
	baz=30,SNR=92						
PLAI	Plampang	30.10	262	P	P	17 39 15.0	-0.1
	comp=Z,5μmcomp=Z,2μmcomp=Z,155nm,0.6s						
H11S3	WAKE ISLAND Hy	30.20	37	P	P	17 39 17.8	+2.2
	baz=227,slow=7.1,SNR=5.3						
H11S2	WAKE ISLAND Hy	30.21	37	P	P	17 39 17.6	+1.9
	baz=227,slow=7.1,SNR=5.8						
H11S1	WAKE ISLAND Hy	30.22	37	P	P	17 39 18.0	+2.2
	baz=227,slow=7.1,SNR=7.1						
PVCP	Virac	30.32	309	*e*P	P	17 39 14.3	-2.6
FORT	Forrest	31.30	214	P	P	17 39 26.2	+0.8
	baz=31,SNR=60						
FORT	Forrest	31.30	214	P	P	17 39 26.0	+0.7
OTRP	Odiongan	31.31	305	*e*P	P	17 39 24.3	-1.3
CUYO	Cuyo Island	31.36	301	*e*P	P	17 39 24.8	-1.3
MILA	Mila	31.39	178	P	P	17 39 27.5	+1.4
	baz=32,SNR=77						
PSA00	Pilbara Seismi	31.53	237	P	P	17 39 27.8	+0.2
PSA00	Pilbara Seismi	31.53	237	P	P	17 39 27.5	0.0
PSA00				IAmb	IAmb	17 39 29.2	
	comp=Z,223nm,0.8s						
TOO	Toolangi	31.96	184	P	P	17 39 32.6	+1.5
	baz=32,SNR=44						
TOO	Toolangi	31.96	184	P	P	17 39 32.3	+1.2
TOO				pmax	pmax		
	comp=Z,273nm,1.0s						
TOO	Toolangi	31.96	184	P	P	17 39 32.3	+1.2
BOAC	Boac	32.06	306	*e*P	P	17 39 37.4	+5.3
SJMP	San Jose	32.10	304	*e*P	P	17 39 33.2	+0.7
BUSP	Coron	32.63	302	*e*P	P	17 39 43.1	+6.0
POLP	Polilio Island	32.71	308	*e*P	P	17 39 37.1	-0.7
ENPP	El Nido	32.90	300	*e*P	P	17 39 33.6	-5.8
JCJ	Chichijima	32.92	351	P	P	17 39 40.4	+1.0
	comp=Z,242nm,0.7s,baz=286,slow=14,SNR=4.0						
TGY	Tagaytay City	33.15	306	P	P	17 39 42.1	+0.5
	comp=Z,145nm,0.3s,baz=282,slow=6.5,SNR=6.4						
BATP	Bataraza	33.25	295	*e*P	P	17 39 40.1	-2.4
LUBP	Lubang	33.50	305	*e*P	P	17 39 45.4	+0.7
BALP	Baler	33.59	309	*e*P	P	17 39 45.3	-0.1
JAGI	Jajag, Banyuwa	33.66	263	P	P	17 39 45.0	-1.0
	comp=Z,3μmcomp=Z,1μmcomp=Z,116nm,0.6s						
JAGI	Jajag, Banyuwa	33.66	263	P	P	17 39 44.2	-1.8
JAGI				IAmb	IAmb	17 39 49.2	
	comp=Z,186nm,1.3s						
CAUP	Cauayan	34.14	311	*e*P	P	17 39 49.0	-1.1
SGCP	Mt. Cagua	34.80	313	*e*P	P	17 39 54.7	-1.0
MEEK	Meekatharra	34.97	230	P	P	17 39 58.0	+0.9
	baz=35,SNR=158						
APYP	Conner	35.14	312	*e*P	P	17 39 58.9	+0.3
ABRA	Dolores	35.41	311	*e*P	P	17 39 56.4	-4.5
KMBL	Kambalda	35.46	220	P	P	17 40 01.8	+0.7
	baz=36,SNR=110						
SBUM	Sibu	36.55	282	P	P	17 40 10.8	+0.1
SBUM	Sibu	36.55	282	P	P	17 40 13.0	+2.4
PCJI	Pacitan	36.59	264	P	P	17 40 11.6	+0.7
	comp=Z,2μmcomp=Z,109nm,1.0s						
GIRL	Giralia	36.71	239	P	P	17 40 13.5	+1.7
	baz=37,SNR=29						
GIRL	Giralia	36.71	239	P	P	17 40 12.9	+1.1
MOO	Moorlands	36.76	181	P	P	17 40 14.0	+2.0
	baz=37,SNR=45						
WOJI	Wonogiri, Jawa	36.83	264	P	P	17 40 13.9	+0.9
	comp=Z,84nm,0.9s						
TAU	Tasmania Unive	37.22	181	P	P	17 40 17.2	+1.4
TAU				pmax	pmax		
	comp=Z,205nm,0.9s						
TAU	Tasmania Unive	37.22	181	P	P	17 40 17.2	+1.4
TAU				IAmb	IAmb	17 40 18.9	
	comp=Z,205nm,0.9s						
UGM	Wanagama	37.23	264	P	P	17 40 17.0	+0.7
UGM				IAmb	IAmb	17 41 16.1	
	comp=Z,252nm,1.2s						
JOW	Kunigami	37.39	330	P	P	17 40 18.8	+1.3
OUZ	Omahuta	37.84	145	P	P	17 40 23.4	+2.2
MORW	Morawa	38.18	228	P	P	17 40 24.7	+0.6
	baz=38,SNR=58						
MORW	Morawa	38.18	228	P	P	17 40 24.6	+0.6
KSM	Kuching	38.23	279	P	P	17 40 25.1	+0.5
KLBR	Kellerberrin	38.35	224	P	P	17 40 25.8	+0.3
	baz=38,SNR=55						
YOJ	Yonaguni jima	38.46	322	P	P	17 40 27.5	+1.1
YOJ				pmax	pmax		
	comp=Z,157nm,0.6s						
YOJ	Yonaguni jima	38.46	322	P	P	17 40 27.5	+1.1
YOJ				IAmb	IAmb	17 40 32.2	
	comp=Z,157nm,0.6s						
BLDU	Ballidu	38.52	226	P	P	17 40 27.4	+0.5
	baz=39,SNR=82						
TWG	Pinlang	38.53	318	P	P	17 40 26.5	-0.5
TWG				IAmb	IAmb	17 40 34.5	
	comp=Z,163nm,0.5s						
YULB	Yu-li	38.78	319	P	P	17 40 28.5	-0.6
KPJI	Karang Pucung	38.80	265	P	P	17 40 30.1	+0.7
	comp=Z,2μmcomp=Z,110nm,0.9s						
NACB	Ninganchiao	39.14	320	P	P	17 40 32.6	+0.6
TPUB	Ta-pu	39.16	318	P	P	17 40 31.9	-0.3
SSLB	Suanglung	39.28	319	P	P	17 40 32.7	-0.6
NWAO	Narrogin (SRO)	39.50	222	P	P	17 40 35.5	+0.6
	baz=40,SNR=50						
NWAO	Narrogin (SRO)	39.50	222	P	P	17 40 35.5	+0.6
	comp=Z,121nm,0.6s,baz=55,slow=7.4,SNR=58						
NWAO				PP	PP	17 42 11.4	-0.5
	comp=Z,202nm,0.8s,baz=59,slow=9.2,SNR=10						
NWAO	Narrogin (SRO)	39.50	222	P	P	17 40 35.5	+0.6
NWAO				pmax	pmax		
	comp=Z,192nm,0.9s						
NWAO	Narrogin (SRO)	39.50	222	P	P	17 40 35.5	+0.6
NWAO				IAmb	IAmb	17 42 12.4	
	comp=Z,192nm,0.8s						
NWAO	Narrogin (SRO)	39.50	222	P	P	17 40 35.3	+0.4
NWAO				IAmb	IAmb	17 40 36.7	
	comp=Z,119nm,0.8s						
YHNB	Yeheng	39.63	320	P	P	17 40 37.3	+1.2
MUN	Mundaring	39.65	224	P	P	17 40 36.9	+0.8
	baz=40,SNR=26						
TATO	Taipei	39.78	321	P	P	17 40 37.8	+0.5
TATO				IAmb	IAmb	17 40 41.9	
	comp=Z,181nm,0.9s						
CISI	Cisompet, Garu	39.91	265	P	P	17 40 37.3	-1.3
	comp=Z,3μmcomp=Z,174nm,0.8s						
CISI	Cisompet, Garu	39.91	265	P	P	17 40 37.2	-1.3
CISI				IAmb	IAmb	17 40 44.1	
	comp=Z,139nm,0.8s						
AFI	Afiamalu	40.51	105	P	P	17 40 44.2	+0.7
	comp=Z,300nm,0.9s,baz=277,slow=8.6,SNR=20						
AFI	Afiamalu	40.51	105	P	P	17 40 44.2	+0.7
AFI				pmax	pmax		
	comp=Z,386nm,1.0s						
AFI	Afiamalu	40.51	105	IAmb	IAmb	17 40 47.3	
	comp=Z,386nm,1.0s						
CNJI	Cibinong	40.59	265	P	P	17 40 44.5	+0.4
	comp=Z,4μmcomp=Z,228nm,1.2s						
RKGY	Rocky Gully	40.69	221	P	P	17 40 46.1	+1.4
	baz=41,SNR=150						
CBJI	Citeko	40.87	267	P	P	17 40 55.9	+10
DBJI	Dramaga	40.97	266	P	P	17 40 46.8	-0.4
	comp=Z,9μmcomp=Z,33nm,0.9s						
SKJI	Sukabumi	41.16	266	P	P	17 40 48.7	0.0
	comp=Z,3μmcomp=Z,146nm,0.7s						
KNMB	Chin-men Tao	41.45	317	P	P	17 40 51.9	+1.1
KNMB				IAmb	IAmb	17 40 56.0	
	comp=Z,100nm,0.5s						
OMRZ	Omania	41.46	145	P	P	17 40 54.9	+4.0
QRZ	Quartz Range	41.47	152	P	P	17 40 53.2	+2.4
WATZ	Wairara	41.53	147	P	P	17 40 55.4	+4.0
HSRZ	Hossack Road	41.53	146	P	P	17 40 56.7	+5.3
HLRZ	Highlands Stat	41.55	146	P	P	17 40 48.4	-3.2
TWVZ	Taurewa	41.62	147	P	P	17 40 55.5	+3.3
QZH	Quanzhou	41.63	318	P	P	17 40 52.8	+0.5
QZH				S	S	17 46 49.0	+0.8
QZH				sS	sS	17 48 27.2	+0.1
QZH				ScS	ScS	17 50 28.3	+2.5
QZH				pmax	pmax		
	comp=Z,45nm,0.7s						
QZH				pmax	pmax		
	comp=Z,460nm,6.6s						
KATZ	Kakaramea	41.70	147	P	P	17 40 56.1	+3.2
JNU	Nakatsue	41.72	338	P	P	17 40 54.1	+1.1
	comp=Z,195nm,0.8s,baz=146,slow=3.0,SNR=106						
JNU				ScP	ScP	17 46 06.7	-1.6
	comp=Z,30nm,0.9s,baz=290,slow=4.1,SNR=8.3						
JNU	Nakatsue	41.72	338	P	P	17 40 53.9	+0.9
JNU				IAmb	IAmb	17 40 55.1	
	comp=Z,196nm,0.8s						
JNU					ScP	17 46 08.6	+0.2
WTVZ	West Tongariro	41.74	147	P	P	17 40 56.6	+3.4
KRVZ	Karewarewa	41.75	147	P	P	17 40 56.8	+3.5
MTVZ	Mangateitei	41.87	148	P	P	17 40 57.5	+3.3
INU	Inuyama	41.95	347	P	P	17 40 55.5	+0.7
URZ	Urewera	41.98	145	P	P	17 40 56.5	+1.5
	comp=Z,18nm,0.4s,baz=266,slow=3.0,SNR=11						
URZ				PcP	PcP	17 42 44.2	-0.6
	comp=Z,66nm,0.9s,baz=70,slow=2.4,SNR=5.7						
URZ				ScP	ScP	17 46 11.6	+2.3
	comp=Z,39nm,1.0s,baz=330,slow=3.1,SNR=8.4						
URZ	Urewera	41.98	145	P	P	17 40 55.5	+0.5
URZ					ScP	17 46 11.1	+1.8
URZ	Urewera	41.98	145	P	P	17 40 56.7	+1.7
MRHZ	Matea Rd	41.99	146	P	P	17 40 45.6	-10
MOVZ	Moawhango	42.04	147	P	P	17 40 58.1	+2.6
NNZ	Nelson	42.18	151	P	P	17 40 57.7	+1.2
MXZ	Matakaoa Point	42.21	143	P	P	17 40 57.8	+1.0
BKZ	Black Stump Fm	42.27	146	P	P	17 40 58.6	+1.3
PKGZ	Pakihiroa	42.29	144	P	P	17 41 00.1	+2.6
THZ	Tophouse	42.38	152	P	P	17 40 59.4	+1.2
WVZ	Waitaha Valley	42.47	155	P	P	17 40 59.9	+1.0
FOZ	Fox Glacier	42.47	156	P	P	17 41 00.5	+1.7
TUWZ	Tuamarina	42.61	151	P	P	17 41 01.7	+1.7
H01W1	Cape Leeuwin H	42.72	222	P	P	17 41 02.9	+2.1
	baz=71,slow=6.5,SNR=5.2						
H01W3	Cape Leeuwin H	42.73	222	P	P	17 41 03.1	+2.3
	baz=71,slow=6.5,SNR=5.4						
H01W2	Cape Leeuwin H	42.74	222	P	P	17 41 04.1	+3.2
	baz=71,slow=6.5,SNR=4.5						
BSWZ	Blackbirch Sta	42.80	151	P	P	17 41 02.6	+1.1
MJAR	Matsushiro Arr	42.84	348	P	P	17 41 02.3	+0.4
	comp=Z,255nm,0.9s,baz=164,slow=8.1,SNR=192						
MJAR				PcP	PcP	17 42 48.0	+0.2
	comp=Z,46nm,0.8s,baz=170,slow=3.2,SNR=8.0						
MJAR				ScP	ScP	17 46 11.8	-1.0
	comp=Z,14nm,0.9s,baz=179,slow=4.9,SNR=7.9						
MJAR				S	S	17 47 05.5	-0.1
	comp=Z,2.5nm,0.9s,baz=155,slow=13,SNR=2.5						
MJAR	Matsushiro Arr	42.84	348	P	P	17 41 01.4	-0.5
MJAR				IAmb	IAmb	17 41 03.4	
	comp=Z,81nm,0.8s						
MJAR					ScP	17 46 12.4	-0.4
MAJO	Matsushiro	42.84	348	*c i*P	P	17 41 02.5	+0.6
MAJO				pmax	pmax		
	comp=Z,368nm,1.0s						
MAJO	Matsushiro	42.84	348	P	P	17 41 02.3	+0.4
MAJO				IAmb	IAmb	17 41 03.8	
	comp=Z,477nm,1.1s						
MAT	Matsushiro	42.84	348	P	P	17 41 02.3	+0.4
MAT				S	S	17 47 06.4	+0.8
MJB9	Matsu-Tunnel	42.84	348	P	P	17 41 02.5	+0.5
MJB9				IAmb	IAmb	17 41 03.8	
	comp=Z,483nm,1.1s						
LTZ	Lake Taylor	42.89	154	P	P	17 41 03.8	+1.5
SNZO	South Karori	42.90	150	P	P	17 41 03.6	+1.4
SNZO				IAmb	IAmb	17 41 04.7	
	comp=Z,288nm,1.2s						
DLV	T Lat	42.91	294	P	P	17 41 02.7	-0.3
CMWZ	Cape Campbell	42.99	151	P	P	17 41 04.3	+1.3
BHW	Baring Head	43.05	150	P	P	17 41 04.2	+0.6
HKPS	Hong Kong Po S	43.11	311	P	P	17 41 04.6	+0.3
RPZ	Rata Peaks	43.13	155	P	P	17 41 05.4	+1.3
	comp=Z,200nm,0.9s,baz=351,slow=2.6,SNR=50						
RPZ				ScP	ScP	17 46 12.9	-0.9
	comp=Z,7.9nm,0.8s,baz=56,slow=13,SNR=1.8						
RPZ				S	S	17 47 10.2	+0.6
	comp=Z,8.8nm,1.1s,baz=179,slow=19,SNR=1.4						
RPZ	Rata Peaks	43.13	155	P	P	17 41 05.1	+1.0
RPZ				IAmb	IAmb	17 41 07.9	
	comp=Z,339nm,1.1s						
RPZ	Rata Peaks	43.13	155	P	P	17 41 05.4	+1.3
DCZ	Deep Cove	43.15	160	P	P	17 41 05.5	+1.4
NIUE	Niue	43.17	112	P	P	17 41 04.1	-0.8
	baz=43,SNR=11						
NIUE	Niue	43.17	112	P	P	17 41 06.2	+1.3
KHZ	Kahutara	43.18	152	P	P	17 41 05.0	+0.5
BFZ	Birch Farm	43.22	148	P	P	17 41 06.0	+1.1
OXZ	Oxford	43.23	154	P	P	17 41 05.2	+0.3
KASI	Kota Agung	43.24	268	P	P	17 41 04.2	-1.2
	comp=Z,1μmcomp=Z,71nm,1.1s						
MSWZ	Moikau Station	43.25	150	P	P	17 41 05.7	+0.6
WKZ	Wanaka	43.26	158	P	P	17 41 06.8	+1.6
LBZ	Lake Benmore	43.33	157	P	P	17 41 06.5	+0.8
PLWZ	Palliser	43.36	150	P	P	17 41 06.7	+0.6
MDSI	Maura Dua	43.60	269	P	P	17 41 07.2	-1.1
	comp=Z,1μmcomp=Z,37nm,1.2s						
PYZ	Puysegur Point	43.61	161	P	P	17 41 10.1	+2.2
PYZ				IAmb	IAmb	17 41 11.8	
	comp=Z,188nm,1.0s						
LWLI	Liwa	43.69	269	P	P	17 41 09.8	+0.6
	comp=Z,35nm,1.0s						
WHZ	Wether Hill Ro	43.79	160	P	P	17 41 10.3	+1.0
MQZ	McQueen’s Vall	43.80	154	P	P	17 41 10.4	+1.0
MQZ				IAmb	IAmb	17 41 11.9	
	comp=Z,283nm,1.2s						
ODZ	Otahua Downs	44.06	157	P	P	17 41 12.8	+1.4
GZH	Guangzhou	44.18	311	P	P	17 41 14.1	+1.4
GZH				pP	pwP	17 42 13.7	+3.0
GZH				S	S	17 47 28.4	+3.1
GZH				sS	sS	17 49 12.2	+7.1
SSE	Sheshan	44.50	327	P	P	17 41 16.7	+1.5
SSE				S	S	17 47 31.0	+1.3
SSE				pmax	pmax		
	comp=Z,60nm,0.8s						
SSE				pmax	pmax		
	comp=Z,320nm,4.1s						
SSE				LR	LR		
	comp=Z,2μm,21.9s						
SSE				LR	LR		
	comp=Z,2μm,19.2s						
MYKOM	Kota Tinggi	44.63	278	P	P	17 41 16.3	-0.2
QIZ	Qiongzhong	44.77	304	P	P	17 41 15.8	-1.7
QIZ				S	S	17 47 31.4	-2.5
QIZ				sS	sS	17 49 15.4	+1.5
QIZ				SS	SS	17 50 56.8	-3.6
QIZ				LR	LR		
	comp=Z,1μm,15.1s						
QIZ				LR	LR		
	comp=Z,2μm,12.7s						
QIZ				LR	LR		
	comp=Z,2μm,18.5s						
QIZ	Qiongzhong	44.77	304	P	P	17 41 17.6	+0.1
MNAI	Manna	44.83	269	P	P	17 41 16.3	-1.7
TJN	Taejon	45.94	337	*ce*P	P	17 41 27.0	+0.7
KRJI	Kerinci	46.49	272	P	P	17 41 29.4	-1.7
NJ2	Nanjing	46.53	325	⇓*i*P	P	17 41 32.6	+1.7
NJ2				pP	pP	17 42 26.6	-0.4
NJ2				sP	sP	17 42 55.3	-1.6
NJ2				PcP	PcP	17 43 01.7	+1.2
NJ2				ScP	ScP	17 46 28.1	0.0
NJ2				S	S	17 47 59.6	+1.0
NJ2				sS	sS	17 49 40.1	+0.9
NJ2				ScS	ScS	17 50 58.0	+1.2
NJ2				pmax	pmax		
	comp=Z,95nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,1μm,3.8s						
NJ2				LR	LR		
	comp=Z,2μm,16.9s						
NJ2				LR	LR		
	comp=Z,3μm,16.9s						
NJ2				LR	LR		
	comp=Z,3μm,24.5s						
SDSI	Sungai Dareh	46.65	274	P	P	17 41 31.4	-0.8
	comp=Z,736nmcomp=Z,37nm,0.7s						
KSRS	Korea Array	46.67	338	P	P	17 41 33.4	+1.4
	comp=Z,108nm,0.8s,baz=153,slow=8.6,SNR=290						
KSRS				PcP	PcP	17 43 01.5	+0.7
	comp=Z,28nm,0.9s,baz=160,slow=4.5,SNR=10						
KSRS				ScP	ScP	17 46 28.5	0.0
	comp=Z,16nm,1.1s,baz=143,slow=5.5,SNR=8.0						
KSAR	Wonju Array Be	46.67	338	P	P	17 41 32.3	+0.4
KSAR	Wonju Array Be	46.67	338	P	P	17 41 32.3	+0.4
KS19	Wonju Array Si	46.73	338	P	P	17 41 33.1	+0.6
INCN	Inchon	47.19	337	P	P	17 41 37.1	+1.1
INCN				pmax	pmax		
	comp=Z,158nm,0.9s						
INCN	Inchon	47.19	337	P	P	17 41 37.1	+1.1
INCN				IAmb	IAmb	17 41 39.3	
	comp=Z,158nm,0.8s						
PDSI	Padang	47.61	274	P	P	17 41 37.4	-2.3
	comp=Z,2μmcomp=Z,606nmcomp=Z,31nm,0.6s						
IPM	Ipoh	47.90	281	P	P	17 41 41.5	-0.4
IPM	Ipoh	47.90	281	P	P	17 41 42.0	+0.1
WHN	Wuhan	48.17	320	⇑P	P	17 41 45.4	+1.8
WHN				pP	pwP	17 42 41.7	-0.8
WHN				sP	sP	17 43 08.8	-1.1
WHN				S	S	17 48 22.9	+1.1
WHN				sS	sS	17 50 03.0	-0.1
WHN				pmax	pmax		
	comp=Z,1μm,11.1s						
WHN				LR	LR		
	comp=Z,1μm,13.0s						
WHN				LR	LR		
	comp=Z,840nm,12.4s						
WHN				LR	LR		
	comp=Z,2μm,14.8s						
KULM	Kulim	48.43	282	P	P	17 41 45.3	-0.6
KULM	Kulim	48.43	282	P	P	17 41 46.0	+0.1
SISI	Saibi	48.93	273	P	P	17 41 48.4	-1.3
	comp=Z,24nm,0.8s						
YUK	Yuzh-Kuril'sk	49.38	358	*d i*P	P	17 41 52.2	-0.3
YUK				*i* *PP	pP	17 42 48.0	-1.4
YUK				*i*		17 43 09.5	
YUK				*i*		17 43 48.3	
YUK				*e*PPP	PPP	17 44 52.5	
YUK				*i* S	S	17 48 38.9	+0.8
YUK				*e**SS	sS	17 50 21.2	+1.4
YUK				*e*SS	SS	17 52 13.1	-0.7
YUK				pmax	pmax		
	comp=Z,390nm,3.2s						
YUK				pmax	pmax		
	comp=Z,293nm,1.1s						
YUK				pmax	pmax		
	comp=N,91nm,0.9s						
YUK				pmax	pmax		

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        comp=E,143nm,0.8s
MCQ    Macquarie Isla    49.62 172   P        P        17 41 56.3 +2.2
        baz=50,SNR=4.1
RPSI   Rantau Prapat     49.64 278   P        P        17 41 54.1  -0.9
PSI    Prapat            49.66 278   P        P        17 41 54.1  -1.2
PSI                                  pmax     pmax
        comp=Z,60nm,0.9s
JKA    Kamikawa-asahi    49.66 355   P        P        17 41 56.0 +1.4
JKA                                           ScP      17 46 40.5  -0.5
JKA                                           S        17 48 42.6 +0.6
ASAJ   Asahikawa         49.66 355   P        P        17 41 56.0 +1.4
        comp=Z,218nm,1.1s,baz=233,slow=9.1,SNR=15
ASAJ                                 ScP      ScP      17 46 40.5  -0.5
        comp=Z,23nm,0.8s,baz=248,slow=12,SNR=7.1
ASAJ                                 S        S        17 48 42.6 +0.6
        comp=Z,6.0nm,1.1s,baz=74,slow=14,SNR=1.9
ASAJ   Asahikawa         49.66 355   P        P        17 41 56.0 +1.4
MSHR   Mys Shultsa       50.27 344c iP        P        17 42 00.5 +1.4
DL2    Dalian            50.49 333   P        P        17 42 02.5 +1.6
DL2                                  sP       sP       17 43 26.7  -0.9
DL2                                  S        S        17 48 56.0 +2.4
DL2                                  sS       sS       17 50 35.2  -0.6
DL2                                  pmax     pmax
        comp=Z,87nm,0.8s
DL2                                  pmax     pmax
        comp=Z,540nm,7.8s
KUR    Kuril'sk          50.54 360  i P       P        17 42 02.8 +1.7
TIA    Tai'an            50.58 328   P        P        17 42 02.1 +0.4
TIA                                  pP       pP       17 42 57.0  -1.7
TIA                                  ScP      ScP      17 46 44.9  -0.4
TIA                                  S        S        17 48 48.5  -6.6
TIA                                  sS       sS       17 50 32.2  -5.0
TIA                                  ScS      ScS      17 51 24.5 +0.5
TIA                                  pmax     pmax
        comp=Z,290nm,1.1s
TIA                                  LR       LR
        comp=Z,1μm,18.5s
TIA                                  LR       LR
        comp=Z,820nm,15.0s
TIA                                  LR       LR
        comp=Z,1μm,17.1s
SLVN   Son La            50.77 303   P        P        17 42 04.8 +1.4
GYA    Guiyang           51.09 311⇑iP        P        17 42 07.2 +1.4
GYA                                  pP       pP       17 43 02.5  -0.4
GYA                                  PP       PP       17 44 08.1 +2.6
GYA                                  S        S        17 49 03.9 +1.4
GYA                                  sS       sS       17 50 41.8  -3.1
GYA                                  SS       SS       17 52 42.4 +0.6
GYA                                  LR       LR
        comp=Z,750nm,17.6s
GYA                                  LR       LR
        comp=Z,740nm,17.1s
GYA                                  LR       LR
        comp=Z,740nm,17.8s
ENH    Enshi             51.23 316   P        P        17 42 07.1 +0.5
ENH                                  IAmb     IAmb     17 42 09.0
        comp=Z,261nm,1.7s
TEY    Ternei            51.36 350⇑iP        P        17 42 08.2 +1.0
TEY                                  pmax     pmax
        comp=E,20nm,1.2s
TEY                                  pmax     pmax
        comp=N,40nm,1.0s
TEY                                  pmax     pmax
        comp=Z,70nm,0.9s
TEY                                  pmax     pmax
        comp=Z,200nm,4.2s
USA0B  Ussuriysk Arra    51.55 345   P        P        17 42 10.1 +1.4
USA0B                                pmax     pmax
        comp=Z,127nm,0.7s
USA0B  Ussuriysk Arra    51.55 345   P        P        17 42 10.1 +1.4
USA0B                                IAmb     IAmb     17 42 11.3
        comp=Z,127nm,0.7s
USRK   Ussuriysk Ar.     51.55 345   P        P        17 42 10.2 +1.5
        comp=Z,112nm,0.7s,baz=176,slow=7.1,SNR=170
USRK                                 PcP      PcP      17 43 18.7 +0.1
        comp=Z,28nm,0.7s,baz=181,slow=3.4,SNR=7.5
USRK                                 ScP      ScP      17 46 48.4  -0.8
        comp=Z,5.5nm,0.7s,baz=202,slow=4.1,SNR=6.2
USRK                                 S        S        17 49 10.0 +2.0
        comp=Z,5.2nm,1.2s,baz=157,slow=18,SNR=3.5
USRK   Ussuriysk Ar.     51.55 345   P        P        17 42 09.7 +1.0
SNY    Shenyang          52.12 337 ⇑P        P        17 42 13.8 +0.9
SNY                                  sP       sP       17 43 34.2  -5.7
SNY                                  S        S        17 49 14.4  -1.4
SNY                                  SS       SS       17 52 53.0  -4.3
SNY                                  pmax     pmax
        comp=Z,1μm,2.0s
SNY                                  LR       LR
        comp=Z,2μm,18.6s
SNY                                  LR       LR
        comp=Z,1μm,16.7s
SNY                                  LR       LR
        comp=Z,2μm,20.1s
MLSI   Meulaboh, Aceh    52.38 280   P        P        17 42 13.5  -1.9
        comp=Z,79nm,0.7s
YSS    Yuzh-Sakhalins    52.47 356   P        P        17 42 16.4 +1.1
YSS                                  pmax     pmax
        comp=Z,248nm,1.0s
YSS    Yuzh-Sakhalins    52.47 356   P        P        17 42 16.4 +1.1
YSS                                  IAmb     IAmb     17 42 17.8
        comp=Z,248nm,1.0s
MDJ    Mudanjiang        52.58 344   P        P        17 42 17.4 +1.2
MDJ                                  S        S        17 49 18.7  -3.2
MDJ                                  pmax     pmax
        comp=Z,170nm,0.7s
MDJ                                  pmax     pmax
        comp=Z,880nm,4.0s
MDJ    Mudanjiang        52.58 344   P        P        17 42 17.3 +1.1
MDJ                                  IAmb     IAmb     17 42 18.7
        comp=Z,121nm,0.8s
RAR    Rarotonga         52.94 112   P        P        17 42 20.6 +1.3
        comp=Z,106nm,1.0s,baz=247,slow=6.1,SNR=14
CN2    Changchun         53.15 340  eP        P        17 42 20.8 +0.4
CN2                                 eS        S        17 49 28.1  -1.5
CN2                                  sS       sS       17 51 16.6 +3.9
CN2                                  LR       LR
        comp=Z,890nm,17.0s
CN2                                  LR       LR
        comp=Z,610nm,17.0s
CN2                                  LR       LR
        comp=Z,950nm,15.0s
KMI    Kunming           53.47 307   P        P        17 42 25.2 +1.9
KMI                                  pP       pwP      17 43 22.3  -1.2
KMI                                  sP       sP       17 43 51.1 +0.5
KMI                                  PP       PP       17 44 25.4  -1.6
KMI                                  S        S        17 49 37.6 +2.6
KMI                                  sS       sS       17 51 16.2  -2.0
KMI                                  SS       SS       17 53 18.9  -0.6
KMI                                  pmax     pmax
        comp=Z,84nm,1.2s
KMI                                  pmax     pmax
        comp=Z,620nm,6.3s
KMI                                  LR       LR
        comp=Z,930nm,19.9s
KMI                                  LR       LR
        comp=Z,540nm,19.6s
KMI                                  LR       LR
        comp=Z,940nm,18.8s
KMI    Kunming           53.47 307   P        P        17 42 23.2  -0.1
KMI                                  pmax     pmax
        comp=Z,138nm,1.3s
KMI    Kunming           53.47 307   P        P        17 42 23.1  -0.1
CM31   Chiang Mai Arr    53.86 298   P        P        17 42 27.2 +1.2
CMAR   Chiang Mai Arr    53.86 298   P        P        17 42 27.0 +1.0
        comp=Z,21nm,0.9s,baz=125,slow=5.5,SNR=38
CMAR                                 PcP      PcP      17 43 27.7  -0.3
        comp=Z,26nm,0.9s,baz=116,slow=5.1,SNR=8.8
CMAR                                 S        S        17 49 41.7 +1.6
        comp=Z,0.5nm,0.8s,baz=116,slow=12,SNR=4.0
CMAR                                 PKPPKP            18 12 37.3
        comp=Z,2.2nm,0.9s,baz=293,slow=3.7,SNR=6.5
CMAR   Chiang Mai Arr    53.86 298   P        P        17 42 26.7 +0.6
XAN    Xi'an             53.93 320   P        P        17 42 26.3  0.0
XAN                                  pP       PcP      17 43 29.1 +1.1
XAN                                  S        S        17 49 36.6  -4.0
XAN                                  pmax     pmax
        comp=Z,750nm,6.5s
XAN                                  LR       LR
        comp=Z,860nm,10.8s
XAN                                  LR       LR
        comp=Z,1μm,15.7s
XAN                                  LR       LR
        comp=Z,1μm,18.6s
XAN    Xi'an             53.93 320   P        P        17 42 26.6 +0.3
XAN                                  pmax     pmax
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        comp=Z,59nm,0.7s
XAN    Xi'an             53.93 320   P        P        17 42 26.6 +0.3
BJT    Baijiatuau        53.95 330   P        P        17 42 26.8 +0.5
BJT                                  pmax     pmax
        comp=Z,33nm,0.8s
BJT    Baijiatuau        53.95 330   P        P        17 42 26.8 +0.5
BJI    Beijing           53.97 330   P        P        17 42 27.0 +0.7
BJI                                  PcP      PcP      17 43 28.9 +1.0
BJI                                  S        S        17 49 41.5 +0.8
BJI                                  sS       sS       17 51 23.5  -0.5
BJI                                  ScS      ScS      17 51 49.0 +1.5
BJI                                  LR       LR
        comp=Z,2μm,19.2s
BJI                                  LR       LR
        comp=Z,970nm,16.7s
BJI                                  LR       LR
        comp=Z,1μm,37.3s
BJI    Beijing           53.97 330   ScS      S        17 49 41.3 +0.6
CHTO   Chiang Mai        53.99 298   P        P        17 42 27.7 +0.7
CHTO                                 pmax     pmax
        comp=Z,30nm,0.8s
CHTO   Chiang Mai        53.99 298   P        P        17 42 27.6 +0.7
TIY    Taiyuan           54.25 325  eP        P        17 42 29.4 +0.8
TIY                                  pP       PcP      17 43 29.9 +0.7
TIY                                  PP       PP       17 44 36.1 +2.4
TIY                                  S        S        17 49 44.4  -0.4
TIY                                  sS       sS       17 51 26.5  -1.8
TIY                                  SS       SS       17 53 31.7 +0.5
TIY                                  pmax     pmax
        comp=Z,62nm,1.2s
TIY                                  pmax     pmax
        comp=Z,540nm,4.1s
TIY                                  LR       LR
        comp=Z,2μm,21.8s
TIY                                  LR       LR
        comp=Z,1μm,15.8s
TIY                                  LR       LR
        comp=Z,1μm,25.4s
CD2    Chengdu           55.63 313⇑iP        P        17 42 39.5 +1.0
CD2                                  pP       pwP      17 43 40.5 +1.3
CD2                                  PP       PP       17 44 50.8 +4.8
CD2                                  S        S        17 50 03.8 +0.5
CD2                                  sS       sS       17 51 45.8  -1.4
CD2                                  SS       SS       17 53 54.5 +1.4
CD2                                  pmax     pmax
        comp=Z,140nm,0.7s
CD2                                  pmax     pmax
        comp=Z,1μm,4.3s
KLR    Kul'dur           56.34 347   P        P        17 42 44.5 +1.5
        comp=Z,92nm,0.9s,baz=168,slow=4.8,SNR=133
KLR                                  PcP      PcP      17 43 37.0 +0.2
        comp=Z,18nm,0.4s,baz=192,slow=2.2,SNR=11
KLR                                  ScP      ScP      17 47 09.4  -0.7
        comp=Z,11nm,0.7s,baz=151,slow=3.4,SNR=7.1
KLR                                  S        S        17 50 12.5 +0.6
        comp=Z,2.0nm,1.1s,baz=328,slow=11,SNR=2.0
KLR                                  PKP2bc            18 12 46.6
        comp=Z,3.0nm,0.9s,baz=0.6,slow=1.0,SNR=6.3
KLR    Kul'dur           56.34 347c iP        P        17 42 44.0 +0.9
KLR                                  pmax     pmax
        comp=Z,134nm,0.9s
TYV    Tymovskoe         56.36 356  eP        P        17 42 44.9 +1.7
TYV                                 eS        S        17 50 14.8 +2.8
TYV                                  pmax     pmax
        comp=Z,192nm,1.0s
TYV                                  pmax     pmax
        comp=Z,1μm,4.1s
TYV                                  smax     smax
        comp=E,25nm,2.2s
TYV                                  smax     smax
        comp=E,2μm,8.8s
SKR    Severo-Kuril's    56.44   6ceP        P        17 42 44.7 +1.0
HHC    Hu-ho-hao-te      56.94 328  eP        P        17 42 48.7 +1.1
HHC                                  sP       sP       17 44 13.6  -1.9
HHC                                  PP       PP       17 44 59.1 +1.5
HHC                                  S        S        17 50 20.1  -0.1
HHC                                  SS       SS       17 54 12.0  -1.5
GRNR   Gornyy            56.96 351⇑iP        P        17 42 48.9 +1.5
GRNR                                eS        S        17 50 22.7 +2.9
GRNR                                 pmax     pmax
        comp=Z,50nm,0.9s
GRNR                                 smax     smax
        comp=N,3.0nm,1.1s
GRNR                                 MLR      MLR
        comp=Z,360nm,17.0s
BTO    Baotou            57.61 326  eP        P        17 42 53.4 +1.1
LZH    Lanzhou           58.48 319 ⇑P        P        17 43 00.0 +1.6
LZH                                  pP       pwP      17 44 01.0 +1.2
LZH                                  sP       sP       17 44 27.8 +1.2
LZH                                  S        S        17 50 41.6 +1.1
LZH                                  sS       sS       17 52 23.5  -1.6
LZH                                  pmax     pmax
        comp=Z,92nm,1.2s
LZH                                  pmax     pmax
        comp=Z,980nm,6.5s
LZH                                  LR       LR
        comp=Z,730nm,17.4s
LZH                                  LR       LR
        comp=Z,680nm,17.3s
LZH                                  LR       LR
        comp=Z,600nm,18.0s
NKL    Nikolayevsk       58.79 355  eP        P        17 43 01.4 +1.4
NKL                                 eS        S        17 50 45.1 +1.7
NKL                                  pmax     pmax
        comp=Z,167nm,1.0s
NKL                                  pmax     pmax
        comp=E,2.0nm,0.7s
NKL                                  pmax     pmax
        comp=N,3.0nm,0.8s
NKL                                  pmax     pmax
        comp=Z,115nm,4.3s
NKL                                  smax     smax
        comp=N,10.0nm,4.1s
NKL                                  smax     smax
        comp=E,15nm,4.4s
PEA0B  Petropavlovsk-    59.01   7c iP        P        17 43 02.9 +1.4
PEA0B  Petropavlovsk-    59.01   7   P        P        17 43 03.0 +1.5
PETK   Petropavlovsk-    59.01   7   P        P        17 43 03.0 +1.5
        comp=E,392nm,1.0s,baz=164,slow=6.9,SNR=176
PETK                                 ScP      ScP      17 47 21.6  -0.2
        comp=E,4.3nm,0.8s,baz=163,slow=5.3,SNR=5.1
PETK   Petropavlovsk-    59.01   7   P        P        17 43 03.0 +1.5
PETK   Petropavlovsk-    59.01   7   P        P        17 43 03.0 +1.5
PET    Petropavlovsk     59.04   8   P        P        17 43 02.5 +0.8
PET                                  pmax     pmax
        comp=Z,219nm,0.9s
PET    Petropavlovsk     59.04   8   P        P        17 43 02.5 +0.8
PET                                  IAmb     IAmb     17 43 04.0
        comp=Z,219nm,0.9s
HON    Honolulu          59.33  61   P        P        17 43 04.6 +0.3
HON                                  pmax     pmax
        comp=Z,824nm,1.1s
HON    Honolulu          59.33  61   P        P        17 43 04.6 +0.3
KIP    Kipapa            59.35  61   P        P        17 43 04.6 +0.1
KIP                                  pmax     pmax
        comp=Z,586nm,1.2s
KIP    Kipapa            59.35  61   P        P        17 43 04.6 +0.1
OPA    Opana             59.45  61   P        P        17 43 05.1  0.0
OPA                                  pmax     pmax
        comp=Z,643nm,1.1s
OPA    Opana             59.45  61   P        P        17 43 05.1  0.0
SIMRM  Sittwe            59.81 297   P        P        17 43 09.2 +1.7
HIA    Hailar            59.85 339   P        P        17 43 08.3 +0.9
HIA                                  pmax     pmax
        comp=Z,156nm,0.8s
HIA    Hailar            59.85 339   P        P        17 43 08.3 +0.9
HIA                                  IAmb     IAmb     17 43 09.7
        comp=Z,156nm,0.8s
KKH    Kailua Kona       60.53  64   P        P        17 43 12.2  -0.3
KKH    Kailua Kona       60.53  64   P        P        17 43 12.2  -0.3
KHLH   Kahului Airpor    60.57  62   P        P        17 43 13.1 +0.4
KHLU   Kahalu`u          60.62  64   P        P        17 43 13.5 +0.3
HLK    Haleakala         60.68  63   P        P        17 43 13.2  -0.6
HUH    Hualalai          60.70  64   P        P        17 43 13.3  -0.7
HUH                                  IAmb     IAmb     17 43 17.9
        comp=Z,292nm,1.1s
KHU    Kahuku            60.76  64   P        P        17 43 14.3  0.0
KHU                                  pmax     pmax
        comp=Z,363nm,1.0s
KHU    Kahuku            60.76  64   P        P        17 43 14.3  0.0
MWH    Moku‘aweowe       60.85  64   P        P        17 43 14.0  -1.3
MWH                                  IAmb     IAmb     17 43 19.0
        comp=Z,288nm,1.3s
MLOA   Mauna Loa Obse    60.89  64   P        P        17 43 13.8  -1.7
HPAH   Hawaii Prepara    60.93  64   P        P        17 43 14.3  -1.0
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AIN    Ainahou           60.94  64   P        P        17 43 14.6  -0.9
AIN                                  IAmb     IAmb     17 43 19.5
        comp=Z,280nm,1.1s
HMH    Humu‘ula Sheep    60.99  64   P        P        17 43 15.9  -0.1
POHA   Pohakuloa         60.99  64   P        P        17 43 16.4 +0.5
ZEA    Zeya              61.57 346c iP        P        17 43 20.2 +1.4
ZEA                                 e                  17 44 48.0
ZEA                                 eS        S        17 51 21.5 +2.8
ZEA                                 eSS       SS       17 55 26.0 +0.6
ZEA                                  pmax     pmax
        comp=E,55nm,0.9s
ZEA                                  pmax     pmax
        comp=N,310nm,1.0s
ZEA                                  pmax     pmax
        comp=Z,530nm,1.0s
ZEA                                  pmax     pmax
        comp=Z,1μm,7.0s
ZEA                                  pmax     pmax
        comp=N,1μm,6.0s
ZEA                                  pmax     pmax
        comp=Z,600nm,9.0s
ZEA                                  smax     smax
        comp=E,2μm,7.0s
ZEA                                  MLR      MLR
        comp=Z,900nm,14.0s
ZEA                                  MLR      MLR
        comp=N,800nm,15.0s
PPT2   Papeete2          62.13 107  eP        P        17 43 25.1 +1.8
        comp=N,112nm,1.2s
PAE    Paea              62.13 107  eP        P        17 43 25.3 +2.1
        comp=N,9.1nm,1.0s
SMY    Shemya            62.14  18   P        P        17 43 23.5 +0.9
SMY                                  pmax     pmax
        comp=Z,248nm,1.0s
SMY    Shemya            62.14  18   P        P        17 43 23.5 +0.9
TEZP   TEZPUR            62.19 304  eP        P        17 43 23.9 +0.5
TEZP                                 IAmb     IAmb     17 43 26.4
        comp=Z,70nm,0.5s
TEZP                                i x       x        17 44 05.8
TIAR   Tiarei            62.35 107  eP        P        17 43 26.4 +1.7
        comp=Z,36nm,0.9s
SHL    Shillong          62.56 302  eP        P        17 43 26.8 +0.7
SHL                                  IAmb     IAmb     17 43 32.4
        comp=Z,38nm,0.7s
SHL    Shillong          62.56 302   P        P        17 43 26.4 +0.2
SHL                                  pmax     pmax
        comp=Z,475nm,1.7s
SHL    Shillong          62.56 302   P        P        17 43 26.4 +0.2
GTA    Gaotai            62.99 320 ⇑P        P        17 43 29.8 +1.1
GTA                                  PcP      PcP      17 44 05.1 +1.1
GTA                                  ScP      ScP      17 47 40.0  0.0
GTA                                  S        S        17 51 39.4 +2.1
GTA                                  ScS      SKSac    17 52 54.3  -0.4
GTA                                  sS       SKiKP    17 53 20.9 +0.2
GTA                                  SS       SS       17 55 50.6 +2.2
GTA                                  pmax     pmax
        comp=Z,670nm,9.4s
GTA                                  LR       LR
        comp=Z,590nm,19.7s
GTA                                  LR       LR
        comp=Z,540nm,21.6s
GTA                                  LR       LR
        comp=Z,640nm,21.3s
PMOR   Pomariorio Ree    63.65 104  eP        P        17 43 35.0 +1.8
        comp=Z,373nm,0.9s
VAH    Vaihoa            63.91 104  eP        P        17 43 36.7 +1.8
        comp=Z,177nm,1.1s
ULN    Ulaanbaatar       64.16 331   P        P        17 43 37.5 +1.4
ULN                                  pmax     pmax
        comp=Z,59nm,0.6s
ULN    Ulaanbaatar       64.16 331   P        P        17 43 37.5 +1.4
ULN                                  IAmb     IAmb     17 43 43.0
        comp=Z,58nm,0.6s
CIT    Chita             64.39 337  eP        P        17 43 38.9 +1.5
CIT                                 e                  17 44 10.4
CIT                                 e                  17 44 40.4
CIT                                 e                  17 45 09.5
CIT                                  pmax     pmax
        comp=Z,270nm,2.0s
SONM   Songino Array     64.46 330   P        P        17 43 39.3 +1.2
        comp=Z,34nm,0.7s,baz=145,slow=9.2,SNR=82
SONM                                 PKP2bc            18 12 29.2
        comp=Z,7.5nm,1.0s,baz=310,slow=4.0,SNR=7.0
SONM   Songino Array     64.46 330   P        P        17 43 39.3 +1.2
SONM                                 pmax     pmax
        comp=Z,46nm,0.8s
SONM   Songino Array     64.46 330   P        P        17 43 39.3 +1.2
ADK    Adak              64.67  23   P        P        17 43 39.9 +0.8
ADK                                  pmax     pmax
        comp=Z,227nm,1.0s
ADK    Adak              64.67  23   P        P        17 43 39.9 +0.8
LSA    Lhasa             64.72 306   Pn       P        17 43 41.8 +1.3
LSA    Lhasa             64.72 306   P        P        17 43 41.4 +0.9
LSA    Lhasa             64.72 306   P        P        17 43 41.4 +0.9
LSA                                  IAmb     IAmb     17 43 43.5
        comp=Z,66nm,0.8s
MA2    Magadan           64.95   2   P        P        17 43 41.6 +0.9
        comp=Z,213nm,0.9s,baz=176,slow=7.6,SNR=107
MA2                                  S        S        17 52 04.0 +3.9
        comp=Z,0.9nm,0.4s,baz=224,slow=12,SNR=5.6
MA2    Magadan           64.95   2   P        P        17 43 41.7 +0.9
MA2                                  pmax     pmax
        comp=Z,255nm,1.0s
MA2    Magadan           64.95   2   P        P        17 43 41.7 +0.9
ATKA   Atka Island       65.92  24   P        P        17 43 47.6 +0.5
ATKA                                 IAmb     IAmb     17 43 48.6
        comp=Z,120nm,1.0s
GTK    Tadong            65.93 303  eP        P        17 43 48.8 +0.9
GTK                                  IAmb     IAmb     17 43 53.4
        comp=Z,50nm,0.7s
CASY   Casey             65.95 196   P        P        17 43 47.7 +0.6
CASY                                 IAmb     IAmb     17 43 48.8
        comp=Z,67nm,0.8s
BWNR   Bhubaneshwar      66.19 295  eP        P        17 43 50.1 +0.7
BWNR                                 IAmb     IAmb     17 43 55.5
        comp=Z,39nm,0.6s
BWNR                                i pP      pP       17 44 54.1 +4.0
TAPN   Taplejung         66.69 303  eP        P        17 43 53.4 +0.5
        comp=Z,208nm,1.0s
ODAN   Odare             66.79 302  eP        P        17 43 54.0 +0.5
        comp=Z,151nm,0.7s
BOK    Bokaro            67.12 299  eP        P        17 43 56.8 +1.5
CHLP   Challavanipeta    67.32 293  eP        P        17 43 57.4 +0.8
CHLP                                 IAmb     IAmb     17 44 02.8
        comp=Z,24nm,0.8s
CHLP                                ePcP      PcP      17 44 19.5  -2.8
CHLP                                epP       pP       17 44 57.7 +0.4
CHLP                                esP       sP       17 45 26.3 +0.1
CHLP                                eS        S        17 52 30.9 +0.7
CHLP                                e                  17 53 24.8
CHLP                                esS       sS       17 54 19.5 +1.6
RAMN   Ramite            67.49 302  eP        P        17 43 58.2 +0.4
        comp=Z,57nm,0.5s
ZAK    Zakamensk         67.69 331  eP        P        17 43 59.0 +0.6
ZAK                                  pmax     pmax
        comp=Z,73nm,0.8s
JIRN   Jiri              68.06 303  eP        P        17 44 01.9 +0.4
        comp=Z,207nm,0.7s
SEY    Seymchan          68.36   2   P        P        17 44 03.0 +0.9
        comp=Z,103nm,1.0s,baz=174,slow=5.0,SNR=74
SEY                                  PKP2bc   P'P'bc   18 12 16.0  -5.7
        comp=Z,2.2nm,0.9s,baz=52,slow=2.8,SNR=6.4
SEY    Seymchan          68.36   2c iP        P        17 44 03.3 +1.1
TLY    Talaya            68.38 332   P        P        17 44 03.3 +0.8
        comp=Z,20nm,0.7s,baz=166,slow=4.3,SNR=18
TLY                                  S        S        17 52 44.1 +2.5
        comp=Z,0.8nm,0.3s,baz=263,slow=7.0,SNR=1.8
TLY    Talaya            68.38 332c iP        P        17 44 03.6 +1.1
TLY                                  pmax     pmax
        comp=Z,20nm,0.9s
TLY    Talaya            68.38 332   P        P        17 44 03.5 +1.0
GUN    Gumba             68.40 303  eP        P        17 44 04.0 +0.4
        comp=Z,187nm,0.5s
IRK    Irkutsk           68.46 333  eP        P        17 44 02.7  -0.4
IRK                                 eS        S        17 52 45.6 +3.1
IRK                                  pmax     pmax
        comp=Z,150nm,2.8s
PKI    Pulchoki          68.69 302  eP        P        17 44 05.4  0.0
        comp=Z,209nm,1.1s
PKIN   Phulchoki         68.70 302  eP        P        17 44 05.4  0.0
YAK    Yakutsk           68.83 351   P        P        17 44 06.0 +0.9
        comp=Z,54nm,0.7s,baz=151,slow=1.9,SNR=32
YAK                                  S        S        17 52 46.6 +0.2
        comp=Z,2.1nm,0.4s,baz=270,slow=22,SNR=6.9
YAK    Yakutsk           68.83 351c iP        P        17 44 05.9 +0.9
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YAK				e*PP	pwP	17 45 07.1	-1.3
YAK				eS	S	17 52 47.7	+1.3
YAK				e		17 53 34.1	
YAK				pmax	pmax		
	comp=Z,125nm,1.1s						
YAK				pmax	pmax		
	comp=N,64nm,1.3s						
YAK				pmax	pmax		
	comp=E,14nm,1.3s						
YAK				pmax	pmax		
	comp=Z,41nm,1.1s						
YAK				pmax	pmax		
	comp=N,20nm,1.2s						
YAK				pmax	pmax		
	comp=E,13nm,1.3s						
YAK				smax	smax		
	comp=E,1µm,3.2s						
YAK				smax	smax		
	comp=N,886nm,3.9s						
YAK	**Yakutsk**	68.83	351	P	P	17 44 05.8	+0.8
YAK				IAmb	IAmb	17 44 06.7	
	comp=Z,106nm,0.9s						
BOD	**Bodaibo**	68.84	341	eP	P	17 44 04.9	-0.3
BOD				pmax	pmax		
	comp=Z,447nm,0.9s						
KKN	**Kakani**	68.87	302	eP	P	17 44 07.1	+0.8
DMN	**Daman**	68.96	302	eP	P	17 44 07.4	+0.5
	comp=Z,138nm,0.6s						
PVM	**Polavaram**	69.28	291	eP	P	17 44 08.8	0.0
PVM				IAmb	IAmb	17 44 13.5	
	comp=Z,13nm,0.7s						
PVM				ePcP	PcP	17 44 29.7	-0.8
PVM				epP	pP	17 45 08.5	-1.3
PVM				eS	S	17 52 52.2	-1.1
PVM				esS	sS	17 54 40.6	-1.2
GKN	**Gorkha**	69.47	302	eP	P	17 44 10.2	+0.2
MOY	**Mondy**	69.62	331	eP	P	17 44 11.7	+1.4
MOY				pmax	pmax		
	comp=Z,256nm,2.2s						
MYLAV	**Mylavaram**	70.09	290	eP	P	17 44 13.8	+0.1
MYLAV				IAmb	IAmb	17 44 18.7	
	comp=Z,13nm,0.7s						
MYLAV				ePcP	PcP	17 44 32.1	-1.8
MYLAV				epP	pP	17 45 15.2	+0.3
MYLAV				esP	sP	17 45 42.1	-1.6
MYLAV				eS	S	17 53 00.8	-2.0
MYLAV				eSKSac	SKSac	17 53 46.9	-2.2
MYLAV				esS	sS	17 54 51.7	+0.2
DANN	**Dangsing**	70.32	303	eP	P	17 44 15.2	0.0
	comp=Z,231nm,0.9s						
SKHT	**Srikalahasti**	70.36	287	eP	P	17 44 15.1	-0.3
SKHT				IAmb	IAmb	17 44 20.5	
	comp=Z,7.9nm,0.8s						
SKHT				eS	S	17 53 04.2	-1.7
UNV	**Unalaska Valle**	70.38	27	P	P	17 44 14.5	-0.1
UNV				IAmb	IAmb	17 44 17.6	
	comp=Z,164nm,1.2s						
ADKI	**Addanki**	70.53	289	eP	P	17 44 16.1	-0.3
ADKI				IAmb	IAmb	17 44 21.3	
	comp=Z,14nm,0.8s						
ADKI				ePcP	PcP	17 44 33.7	-2.1
ADKI				eS	S	17 53 06.0	-1.9
ADKI				eSKSac	SKSac	17 53 50.3	-2.0
ADKI				esS	sS	17 54 50.7	-5.9
GGR	**Gangavaram**	70.73	291	eP	P	17 44 17.1	-0.5
GGR				IAmb	IAmb	17 44 18.6	
	comp=Z,43nm,1.7s						
GGR				ePcP	PcP	17 44 34.6	-2.1
GGR				epP	pP	17 45 18.7	-0.3
GGR				eS	S	17 53 08.0	-2.1
GGR				eSKSac	SKSac	17 53 50.5	-3.5
GGR				esS	sS	17 54 59.1	0.0
NJS	**Nagarjunasagar**	71.30	289	eP	P	17 44 20.3	-0.6
NJS				IAmb	IAmb	17 44 21.8	
	comp=Z,31nm,1.5s						
NJS				ePcP	PcP	17 44 37.5	-1.6
NJS				epP	pP	17 45 22.1	-0.4
NJS				eS	S	17 53 13.4	-3.2
NJS				eSKSac	SKSac	17 53 56.5	-1.7
TAOE	**Nuku Hiva Isla**	71.33	97	eP	P	17 44 22.7	+1.4
	comp=Z,448nm,1.0s						
TAOE	**Nuku Hiva Isla**	71.33	97	P	P	17 44 21.5	+0.1
TAOE				IAmb	IAmb	17 44 25.7	
	comp=Z,161nm,0.8s						
SRLM	**Srisailam**	71.60	289	eP	P	17 44 22.2	-0.6
SRLM				IAmb	IAmb	17 44 27.1	
	comp=Z,21nm,0.7s						
SRLM				eS	S	17 53 17.0	-3.2
RPR	**Rampur**	71.80	292	eP	P	17 44 23.4	-0.4
RPR				IAmb	IAmb	17 44 24.9	
	comp=Z,46nm,1.6s						
RPR				eS	S	17 53 20.5	-1.7
HYB	**Hyderabad**	72.18	290	i P	P	17 44 25.0	-1.2
HYB				ePcP	PcP	17 44 43.0	+0.1
HYB				epP	pP	17 45 28.5	+0.6
HYB				eS	S	17 53 23.5	-3.3
HYBB	**Hyderabad (bro**	72.18	290	eP	P	17 44 25.5	-0.8
HYBB				IAmb	IAmb	17 44 26.8	
	comp=Z,24nm,1.3s						
HYBB				ePcP	PcP	17 44 42.3	-0.6
HYBB				epP	pP	17 45 26.9	-1.0
HYBB				ePP	PP	17 47 09.8	-0.9
HYBB				eS	S	17 53 23.6	-3.2
HYBB				eSKSac	SKSac	17 54 02.8	-2.2
HYBB				esS	sS	17 55 11.8	-4.3
VNDA	**Vanda**	72.32	177	P	P	17 44 27.3	+1.4
	comp=Z,69nm,1.0s,baz=326,slow=6.2,SNR=70						
VNDA				S	SKiKP	17 53 30.2	-2.6
	comp=Z,1.2nm,1.0s,baz=124,slow=21,SNR=1.0						
VNDA	**Vanda**	72.32	177	P	P	17 44 27.4	+1.5
VNDA				pmax	pmax		
	comp=Z,87nm,1.0s						
VNDA	**Vanda**	72.32	177	P	P	17 44 27.4	+1.5
VNDA				IAmb	IAmb	17 44 28.5	
	comp=Z,87nm,1.0s						
SRSP	**Sriramsagar**	72.69	292	eP	P	17 44 28.6	-0.6
SRSP				IAmb	IAmb	17 44 33.4	
	comp=Z,11nm,0.8s						
SRSP				eS	S	17 53 29.3	-3.1
URV	**Uravakonda**	72.92	287	eP	P	17 44 30.2	-0.4
URV				IAmb	IAmb	17 44 35.1	
	comp=Z,20nm,0.8s						
URV				eS	S	17 53 31.8	-3.3
WMQ	**Urumqi**	73.06	319	eP	P	17 44 32.0	+1.1
WMQ				pP	pwP	17 45 34.5	-0.6
WMQ				S	S	17 53 37.1	+1.3
WMQ				sS	sS	17 55 24.9	+0.2
WMQ				pmax	pmax		
	comp=Z,54nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,630nm,5.3s						
WMQ				LR	LR		
	comp=Z,600nm,21.3s						
WMQ				LR	LR		
	comp=Z,940nm,29.1s						
WMQ				LR	LR		
	comp=Z,620nm,23.3s						
WMQ	**Urumqi**	73.06	319	P	P	17 44 31.6	+0.7
WMQ				pmax	pmax		
	comp=Z,91nm,0.9s						
WMQ	**Urumqi**	73.06	319	P	P	17 44 31.6	+0.7
WMQ				IAmb	IAmb	17 45 45.0	
	comp=Z,91nm,0.9s						
KLRI	**Killari**	74.14	290	eP	P	17 44 36.7	-0.9
KLRI				IAmb	IAmb	17 44 42.6	
	comp=Z,8.8nm,0.7s						
KLRI				eS	S	17 53 44.2	-4.5
KLRI				eSKSac	SKSac	17 54 18.3	-1.3
CNBA	**Chernabura Isl**	74.17	28	P	P	17 44 36.9	-0.1
CNBA				IAmb	IAmb	17 44 39.1	
	comp=Z,159nm,1.2s						
BHPL	**Bhopal**	74.47	296	eP	P	17 44 38.9	-0.6
BHPL				IAmb	IAmb	17 44 44.4	
	comp=Z,26nm,0.8s						
BILL	**Bilibino**	74.54	7	P	P	17 44 39.8	+0.9
BILL				pmax	pmax		
	comp=Z,103nm,1.1s						
BILL	**Bilibino**	74.54	7	P	P	17 44 39.8	+0.9
BILL				IAmb	IAmb	17 44 42.2	
	comp=Z,103nm,1.1s						
GAMB	**Gambell**	75.46	17	P	P	17 44 44.6	+0.5
GAMB				IAmb	IAmb	17 44 46.0	
	comp=Z,137nm,1.8s						
CHGN	**Chignik**	75.56	28	P	P	17 44 44.8	-0.1
MNCI	**Minicoy**	75.92	280	P	P	17 44 46.8	-1.1
NDI	**New Delhi**	75.94	301	ex	P	17 44 47.0	-0.7
NDI				ex	x	17 45 41.0	
SMLA	**Simla**	76.60	304	eP	P	17 44 51.5	+0.2
SMLA				IAmb	IAmb	17 44 58.2	
	comp=Z,45nm,0.9s						
SMLA				i pP	pwP	17 46 00.8	+4.9
CHIR	**Chirikof Islan**	76.62	29	P	P	17 44 51.0	+0.2
POO	**Poona**	76.79	290	eP	P	17 44 56.1	+3.5
DHRM	**DHARAMSHALA**	77.60	305	eP	P	17 44 56.2	-0.9
SII	**Sitkinak Islan**	77.69	29	P	P	17 44 56.5	-0.3
SII				IAmb	IAmb	17 44 59.7	
	comp=Z,180nm,1.0s						
MK31	**Makanchi Array**	77.74	320	P	P	17 44 57.6	+0.2
MK31				pmax	pmax		
	comp=Z,50nm,1.0s						
MK31	**Makanchi Array**	77.74	320	P	P	17 44 57.6	+0.2
MKAR	**Makanchi Array**	77.74	320	P	P	17 44 58.0	+0.6
	comp=Z,45nm,0.6s,baz=103,slow=6.7,SNR=95						
MKAR				pP	pwP	17 46 01.0	-1.2
	comp=Z,15nm,0.8s,baz=99,slow=8.0,SNR=2.6						
MKAR				S	S	17 54 25.3	-1.6
	comp=Z,5.8nm,1.1s,baz=123,slow=10,SNR=8.0						
MKAR				PKKPbc	PKKPbc	18 03 58.2	-1.7
	comp=Z,1.3nm,0.7s,baz=303,slow=2.1,SNR=9.5						
MKAR				PKPPKP	P'P'df	18 11 57.6	-5.4
	comp=Z,0.8nm,0.8s,baz=296,slow=3.3,SNR=5.0						
MAKZ	**Makanchi**	77.95	320	P	P	17 44 58.5	0.0
MAKZ				pmax	pmax		
	comp=Z,61nm,0.7s						
MAKZ	**Makanchi**	77.95	320	P	P	17 44 58.5	0.0
MAKZ				IAmb	IAmb	17 45 00.1	
	comp=Z,61nm,0.7s						
ANM	**Nome**	77.97	19	P	P	17 44 59.1	+0.9
ANM				pmax	pmax		
	comp=Z,85nm,1.0s						
ANM	**Nome**	77.97	19	P	P	17 44 59.1	+0.9
ANM				IAmb	IAmb	17 45 02.0	
	comp=Z,85nm,1.0s						
TIXI	**Tiksi**	78.05	354	P	P	17 44 57.9	-0.5
	comp=Z,100nm,0.9s,baz=143,slow=5.1,SNR=75						
TIXI				S	S	17 54 26.4	-2.8
	comp=Z,1.0nm,0.6s,baz=25,slow=23,SNR=17						
TIXI	**Tiksi**	78.05	354	P	P	17 44 58.3	-0.1
TIXI				pmax	pmax		
	comp=Z,119nm,1.0s						
TIXI	**Tiksi**	78.05	354	P	P	17 44 58.3	-0.1
TIXI				IAmb	IAmb	17 45 01.1	
	comp=Z,119nm,1.0s						
THN	**Thein Dam**	78.12	305	eP	P	17 44 59.5	-0.2
OHAK	**Old Harbor**	78.45	28	P	P	17 45 01.2	+0.3
OHAK				IAmb	IAmb	17 45 03.1	
	comp=Z,122nm,1.2s						
PRZ	**Przheval'sk**	78.88	315	P	P	17 45 05.2	+1.3
PRZ				pmax	pmax		
	comp=Z,124nm,1.0s						
PRZ	**Przheval'sk**	78.88	315	P	P	17 45 05.2	+1.3
PRZ				IAmb	IAmb	17 46 18.6	
	comp=Z,124nm,0.9s						
KDAK	**Kodiak Island**	79.05	28	P	P	17 45 05.4	+1.3
	comp=Z,107nm,1.0s,baz=199,slow=1.9,SNR=10						
KDAK	**Kodiak Island**	79.05	28	P	P	17 45 05.2	+1.0
KDAK				IAmb	IAmb	17 45 07.1	
	comp=Z,152nm,1.1s						
ZAA0	**Zalesovo Array**	79.12	328	P	P	17 45 04.1	-0.5
ZAA0				IAmb	IAmb	17 45 05.7	
	comp=Z,62nm,0.7s						
ZALV	**Zalesovo Beam**	79.12	328	P	P	17 45 04.1	-0.6
	comp=Z,83nm,0.7s,baz=111,slow=5.2,SNR=145						
ZALV				S	S	17 54 39.1	-2.0
	comp=Z,1.3nm,0.8s,baz=103,slow=4.7,SNR=3.5						
ZALV				PKKPbc	PKKPbc	18 03 55.4	-1.9
	comp=Z,1.6nm,0.4s,baz=295,slow=3.2,SNR=9.7						
ZALV				PKPPKP	P'P'df	18 11 59.5	-1.0
	comp=Z,1.5nm,0.8s,baz=318,slow=1.9,SNR=3.3						
SVW2	**Sparrevohn**	79.44	24	P	P	17 45 07.2	+0.9
SVW2				IAmb	IAmb	17 45 10.2	
	comp=Z,140nm,0.9s						
KDJ	**Kajisay**	79.64	314	P	P	17 45 08.0	+0.1
KDJ	**Kajisay**	79.64	314	P	P	17 45 08.0	+0.1
KSH	**Kashi**	79.77	312	P	P	17 45 10.5	+1.8
KSH				pP	pP	17 46 11.6	+0.2
KSH				PP	PP	17 48 18.6	+4.5
KSH				S	S	17 54 45.0	-3.8
KSH				pmax	pmax		
	comp=Z,54nm,0.8s						
KSH				pmax	pmax		
	comp=Z,2µm,4.7s						
KSH				LR	LR		
	comp=Z,650nm,12.6s						
KSH				LR	LR		
	comp=Z,680nm,10.4s						
KSH				LR	LR		
	comp=Z,880nm,11.5s						
TTA	**Tatalina**	80.26	23	P	P	17 45 11.2	+0.5
TTA	**Tatalina**	80.26	23	P	P	17 45 11.2	+0.5
NRN	**Naryn**	80.28	314	P	P	17 45 11.7	+0.1
NRN				pmax	pmax		
	comp=Z,24nm,0.9s						
NRN	**Naryn**	80.28	314	P	P	17 45 11.7	+0.1
RSO	**Redoubt South**	80.30	26	P	P	17 45 10.8	-0.3
ULHL	**Ulahol**	80.34	314	P	P	17 45 12.8	+1.1
	SNR=9.2						
HOM	**Homer**	80.39	27	P	P	17 45 11.9	+0.6
NIL	**Nilore**	80.42	305	P	P	17 45 12.5	+0.3
NIL	**Nilore**	80.42	305	P	P	17 45 12.1	0.0
NIL				pmax	pmax		
	comp=Z,217nm,0.9s						
NIL	**Nilore**	80.42	305	P	P	17 45 12.1	0.0
CNPM	**China Poot**	80.51	27	P	P	17 45 12.6	+0.6
BRLK	**Bradley Lake**	80.78	27	P	P	17 45 14.0	+0.6
BRLK				IAmb	IAmb	17 45 16.4	
	comp=Z,124nm,0.9s						
KZA	**Kyzart**	81.00	314	P	P	17 45 16.6	+1.2
	SNR=108						
RDOG	**Red Dog Mine**	81.03	17	P	P	17 45 15.3	+0.8
RDOG				IAmb	IAmb	17 45 18.2	
	comp=Z,147nm,1.0s						
KBK	**Karagaybulak**	81.37	314	P	P	17 45 17.9	+0.7
	SNR=25						
KURK	**Kurchatov**	81.41	323	P	P	17 45 17.1	+0.3
KURK	**Kurchatov**	81.41	323	P	P	17 45 17.1	+0.3
KURK				pmax	pmax		
	comp=Z,83nm,1.0s						
KURK	**Kurchatov**	81.41	323	P	P	17 45 17.1	+0.3
KURK				IAmb	IAmb	17 45 19.7	
	comp=Z,83nm,0.9s						
KURBB	**Kurchatov Arra**	81.43	323	P	P	17 45 17.0	0.0
	comp=Z,28nm,0.8s,baz=110,slow=4.2,SNR=86						
KURBB	**Kurchatov Arra**	81.43	323	P	P	17 45 16.3	-0.7
UCH	**Uchtor**	81.57	314	P	P	17 45 19.7	+1.2
	SNR=70						
SEW	**Seward**	81.58	27	P	P	17 45 17.9	+0.4
CHMS	**Chumysh**	81.60	315	P	P	17 45 18.6	+0.5
	SNR=41						
CHMS	**Chumysh**	81.60	315	i P	P	17 45 17.9	-0.2
CHMS				pmax	pmax		
	comp=Z,96nm,1.4s						
FRU1	**Bishkek**	81.64	315	P	P	17 45 18.5	+0.1
FRU1				pmax	pmax		
	comp=Z,65nm,1.3s						
FRU1	**Bishkek**	81.64	315	P	P	17 45 18.4	+0.1
SUA	**Susitna One**	81.64	25	P	P	17 45 17.6	-0.4
SUA				IAmb	IAmb	17 45 20.3	
	comp=Z,85nm,0.8s						
AAK	**Ala-Archa**	81.69	314	P	P	17 45 19.6	+0.9
	SNR=41						
AAK	**Ala-Archa**	81.69	314	P	P	17 45 19.4	+0.7
AAK				pmax	pmax		
	comp=Z,42nm,0.8s						
AAK	**Ala-Archa**	81.69	314	P	P	17 45 19.4	+0.7
PPLA	**Purkeypile**	81.74	24	P	P	17 45 18.1	-0.5
USP	**Ospenovka**	81.85	315	P	P	17 45 20.2	+0.7
	SNR=61						
RC01	**Rabbit Creek A**	81.90	26	P	P	17 45 18.9	-0.4
AML	**Almayashu**	82.13	314	P	P	17 45 22.5	+1.1
	SNR=53						
EKS2	**Erkin-Say**	82.20	314	P	P	17 45 22.4	+1.0
	SNR=54						
PMR	**Palmer**	82.39	25	P	P	17 45 21.4	-0.3
PMR				pmax	pmax		
	comp=Z,122nm,0.9s						
PMR	**Palmer**	82.39	25	P	P	17 45 21.4	-0.3
PMR				IAmb	IAmb	17 45 24.0	
	comp=Z,122nm,0.9s						
ARSB	**Arslanbob**	82.44	313	P	P	17 45 23.2	+0.5
ARSB				pmax	pmax		
	comp=Z,418nm,1.8s						
ARSB	**Arslanbob**	82.44	313	P	P	17 45 23.2	+0.5
GHO	**Glory Hole Cre**	82.56	25	P	P	17 45 23.8	+1.1
GHO				IAmb	IAmb	17 45 25.2	
	comp=Z,103nm,0.9s						
KTH	**Kantishna Hill**	82.56	23	P	P	17 45 21.8	-0.9
KTH				IAmb	IAmb	17 45 24.6	
	comp=Z,101nm,1.0s						
KNK	**Knik Glacier**	82.60	26	P	P	17 45 23.0	+0.2
KNK				IAmb	IAmb	17 45 25.7	
	comp=Z,156nm,1.0s						
IMAR	**Indian Mountai**	82.73	21	P	P	17 45 23.5	+0.1
TRF	**Thorofare Moun**	82.76	24	P	P	17 45 24.0	+0.1
BPAW	**Bear Paw Mtn.**	82.80	23	P	P	17 45 23.2	-0.6
SML	**Sawmill**	82.83	25	P	P	17 45 23.9	-0.2
GLI	**Glacier Island**	82.97	27	P	P	17 45 24.8	0.0
GLI				IAmb	IAmb	17 45 27.4	
	comp=Z,159nm,0.9s						
MAW	**Mawson**	83.03	203	P	P	17 45 25.9	+0.9
	baz=83,SNR=8.1						
MAW	**Mawson**	83.03	203	P	P	17 45 25.5	+0.6
	comp=Z,19nm,0.6s,baz=101,slow=7.2,SNR=16						
MAW	**Mawson**	83.03	203	P	P	17 45 25.8	+0.9
MAW				pmax	pmax		
	comp=Z,40nm,1.7s						
MAW	**Mawson**	83.03	203	P	P	17 45 25.8	+0.8
HIN	**Hinchinbrook I**	83.03	27	P	P	17 45 25.3	+0.2
HIN				IAmb	IAmb	17 45 27.0	
	comp=Z,119nm,1.0s						
FID	**Port Fidalgo**	83.19	27	P	P	17 45 27.0	+1.1
FID				IAmb	IAmb	17 45 28.5	
	comp=Z,139nm,0.9s						
SCM	**Sheep Creek Mo**	83.27	26	P	P	17 45 26.7	+0.4
SCM				pmax	pmax		
	comp=Z,219nm,1.0s						
SCM	**Sheep Creek Mo**	83.27	26	P	P	17 45 26.7	+0.4
RND	**Reindeer**	83.32	24	P	P	17 45 25.6	-1.0
RND				pmax	pmax		
	comp=Z,214nm,1.0s						
RND	**Reindeer**	83.32	24	P	P	17 45 25.6	-1.0
MLY	**Manley**	83.34	22	P	P	17 45 26.7	+0.1
MLY				IAmb	IAmb	17 45 28.9	
	comp=Z,120nm,0.8s						
MCK	**McKinley**	83.43	24	P	P	17 45 26.5	-0.6
MCK				pmax	pmax		
	comp=Z,276nm,1.0s						
MCK	**McKinley**	83.43	24	P	P	17 45 26.5	-0.6
EYAK	**Cordova Ski Ar**	83.44	27	P	P	17 45 27.5	+0.5
BTK	**Batken**	83.75	311	P	P	17 45 29.2	-0.1
BTK				pmax	pmax		
	comp=Z,43nm,1.0s						
BTK	**Batken**	83.75	311	P	P	17 45 29.2	-0.1
NEA	**Nenana**	83.76	23	P	P	17 45 27.7	-0.9
NEA				IAmb	IAmb	17 45 30.7	
	comp=Z,99nm,1.0s						
DHY	**Denali Highway**	83.78	24	P	P	17 45 28.9	-0.1
GAR	**Garm**	83.91	310	P	P	17 45 29.9	-0.3
GAR				IAmb	IAmb	17 45 32.5	
	comp=Z,70nm,1.1s						
KBL	**Kabul**	84.02	305	P	P	17 45 30.2	-0.8
KBL	**Kabul**	84.02	305	P	P	17 45 29.7	-1.3
KBL				pmax	pmax		
	comp=Z,31nm,1.0s						
KBL	**Kabul**	84.02	305	P	P	17 45 29.7	-1.3
WRH	**Wood River Hil**	84.09	23	P	P	17 45 29.4	-0.9
WRH				IAmb	IAmb	17 45 32.2	
	comp=Z,139nm,0.9s						
MDM	**Murphy Dome**	84.25	23	P	P	17 45 30.5	-0.7
CCB	**Clear Creek Bu**	84.28	23	P	P	17 45 30.3	-1.0
CCB				IAmb	IAmb	17 45 32.9	
	comp=Z,119nm,0.9s						
TCOL	**CIGO, UAF Yank**	84.36	23	P	P	17 45 31.3	-0.4
	baz=244						
COLA	**College**	84.36	23	P	P	17 45 30.7	-0.9
COLA				pmax	pmax		
	comp=Z,149nm,0.9s						
COLA	**College**	84.36	23	P	P	17 45 30.7	-0.9
QSPA	**South Pole Qui**	84.43	180	P	P	17 45 32.9	+0.7
	comp=Z,56nm,0.8s,baz=353,slow=1.9,SNR=87						
QSPA				pP	pP	17 46 36.4	+0.8
	comp=Z,47nm,1.0s,baz=294,slow=1.6,SNR=3.5						
QSPA				S	S	17 55 26.8	-8.2
	comp=Z,3.5nm,0.9s,baz=122,slow=22,SNR=16						
QSPA	**South Pole Qui**	84.43	180	P	P	17 45 31.7	-0.5
QSPA				IAmb	IAmb	17 45 34.0	
	comp=Z,86nm,0.9s						
HDA	**Harding Lake**	84.51	23	P	P	17 45 31.5	-1.0
HDA				IAmb	IAmb	17 45 35.9	
	comp=Z,72nm,0.8s						
HDA	**Harding Lake**	84.51	23	P	P	17 45 31.9	-0.5
	baz=245						
PAX	**Paxson**	84.52	25	P	P	17 45 32.6	-0.1
PAX				pmax	pmax		
	comp=Z,96nm,1.4s						
PAX	**Paxson**	84.52	25	P	P	17 45 32.5	-0.1
PAX				IAmb	IAmb	17 45 34.3	
	comp=Z,96nm,1.4s						
COLD	**Coldfoot**	84.58	20	P	P	17 45 33.4	+0.6
POKR	**Poker Plat Res**	84.63	23	P	P	17 45 32.6	-0.4
	baz=245						
KK31	**Karatay Array**	84.64	314	P	P	17 45 33.8	+0.2
KK31				pmax	pmax		
	comp=Z,194nm,1.5s						
KK31	**Karatay Array**	84.64	314	P	P	17 45 33.8	+0.2
KK31				IAmb	IAmb	17 45 36.5	
	comp=Z,194nm,1.5s						
KKAR	**Karatay Array**	84.64	314	P	P	17 45 33.7	+0.1
KKAR				pmax	pmax		
	comp=Z,194nm,1.5s						
KKAR	**Karatay Array**	84.64	314	P	P	17 45 33.5	-0.1
KKAR	**Karatay Array**	84.64	314	P	P	17 45 33.7	+0.1
KKAR				IAmb	IAmb	17 45 36.5	
	comp=Z,194nm,1.5s						
GLB	**Gilahina Butte**	84.65	27	P	P	17 45 33.5	+0.2
GLB				IAmb	IAmb	17 45 35.8	
	comp=Z,140nm,1.1s						
IL31		84.69	23	P	P	17 45 31.9	-1.4
IL31				IAmb	IAmb	17 45 34.6	
	comp=Z,162nm,1.1s						
ILAR	**Eielson Array**	84.69	23	P	P	17 45 32.0	-1.3
	comp=Z,141nm,1.0s,baz=251,slow=4.2,SNR=301						
ILAR				S	SKSac	17 55 26.3	-4.8
	comp=Z,0.7nm,1.0s,baz=227,slow=4.8,SNR=2.8						
ILAR				PKKPbc	PKKPbc	18 03 41.4	-3.6
	comp=Z,0.7nm,0.6s,baz=37,slow=0.5,SNR=9.0						
ILAR				PKPPKP	P'P'df	18 11 47.0	-3.5
	comp=Z,0.8nm,0.9s,baz=14,slow=1.1,SNR=5.3						
ILAR	**Eielson Array**	84.69	23	P	P	17 45 31.8	-1.5
CRQM	**Cirque**	84.70	27	P	P	17 45 34.4	+0.6
CRQM				IAmb	IAmb	17 45 36.9	
	comp=Z,138nm,0.9s						
CHGR	**Chuyangaron**	84.72	310	P	P	17 45 33.9	-0.3
CHGR				IAmb	IAmb	17 45 35.8	
	comp=Z,88nm,0.8s						
VRDI	**Verde Repeater**	84.73	27	P	P	17 45 34.0	+0.1
VRDI				IAmb	IAmb	17 45 36.4	
	comp=Z,104nm,1.1s						
TGL	**Tana Glacier**	84.85	27	P	P	17 45 34.7	+0.4
TGL				IAmb	IAmb	17 45 36.5	
	comp=Z,136nm,1.2s						
MCARA	**McCarthy VSAT**	84.98	27	P	P	17 45 35.5	+0.7
MCARA				IAmb	IAmb	17 45 38.1	
	comp=Z,89nm,0.9s						
RIDG	**Independent Ri**	85.09	24	P	P	17 45 35.4	0.0
RIDG				IAmb	IAmb	17 45 38.0	
	comp=Z,118nm,0.9s						
NRIK	**Noril'sk**	85.13	342	P	P	17 45 35.4	0.0
	comp=Z,166nm,0.8s,baz=118,slow=4.5,SNR=86						
NRIK				pP	pP	17 46 40.1	+1.0
	comp=Z,29nm,0.9s,baz=126,slow=6.1,SNR=1.9						
TAS	**Tashkent**	85.15	312	P	P	17 45 36.8	+0.6
TAS				pmax	pmax		
	comp=Z,86nm,0.9s						
TAS	**Tashkent**	85.15	312	P	P	17 45 36.8	+0.6
TAS				IAmb	IAmb	17 45 38.9	
	comp=Z,86nm,0.9s						
BALM	**Baldy**	85.17	27	P	P	17 45 36.4	+0.5
BALM				IAmb	IAmb	17 45 38.7	
	comp=Z,119nm,1.0s						
MENT	**Mentasta**	85.25	25	P	P	17 45 36.6	+0.5
MENT				IAmb	IAmb	17 45 39.1	
	comp=Z,94nm,1.0s						
DOT	**Dot Lake**	85.37	25	P	P	17 45 36.9	+0.1

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TOLK  Toolik Lake Re   85.45  19  P       P        17 45 37.7 +0.6
TOLK                              IAmb    IAmb     17 45 40.9
      comp=Z,85nm,0.9s
TOLK  Toolik Lake Re   85.45  19          P        17 45 37.8 +0.6
TOLK  Toolik Lake Re   85.45  19  P       P        17 45 38.3 +1.2
      baz=242
BARN  Barnard Glacie   85.49  27  P       P        17 45 38.4 +0.8
PRP   Porcupine Dome   85.52  23  P       P        17 45 36.9 -0.7
SCRK  Sand Creek       85.53  24  P       P        17 45 37.5 -0.1
CTGM  Chitina Glacie   85.61  28  P       P        17 45 38.6 +0.5
PCA   Pinnacle         85.83  29  P       P        17 45 40.0 +0.9
PCA                               IAmb    IAmb     17 45 42.4
      comp=Z,131nm,0.9s
FYU   Fort Yukon       86.06  22  P       P        17 45 40.6 +0.6
FYU                               IAmb    IAmb     17 45 42.8
      comp=Z,129nm,1.0s
BCAR  Beaver Creek A   86.12  25  P       P        17 45 40.7 +0.2
DHAK  Deception Hill   86.51  30  P       P        17 45 43.3 +0.9
DHAK                              IAmb    IAmb     17 45 45.2
      comp=Z,152nm,1.2s
BMAR  Burnt Mountain   86.63  21  P       P        17 45 43.7 +0.8
BVAR  Borovoye Array   86.95 324  P       P        17 45 44.0 -0.7
      comp=Z,78nm,0.7s,baz=107,slow=5.1,SNR=214
BVAR                              pP      pwP      17 46 50.1 -0.8
      comp=Z,26nm,0.8s,baz=111,slow=6.5,SNR=5.2
BVAR  Borovoye Array   86.95 324  P       P        17 45 44.0 -0.7
EGAK  Eagle            86.97  24  P       P        17 45 44.7 +0.3
BRVK  Borovoye         87.02 324  P       P        17 45 44.5 -0.4
BRVK  Borovoye         87.02 324  P       P        17 45 44.3 -0.7
BRVK                              pmax    pmax
      comp=Z,50nm,0.8s
BRVK  Borovoye         87.02 324  P       P        17 45 44.3 -0.7
BRVK                              IAmb    IAmb     17 45 45.6
      comp=Z,50nm,0.8s
HYT   Haines Junctio   87.34  28  P       P        17 45 47.4 +0.9
SIT   Sitka            87.45  32  P       P        17 45 48.2 +1.3
SIT                               pmax    pmax
      comp=Z,58nm,1.0s
SIT   Sitka            87.45  32  P       P        17 45 48.2 +1.3
SIT                               IAmb    IAmb     17 45 49.9
      comp=Z,58nm,1.0s
DAWY  Dawson           87.46  25  P       P        17 45 47.6 +0.7
SKAG  Skagway          88.04  30  P       P        17 45 50.4 +0.9
SKAG                              IAmb    IAmb     17 45 52.8
      comp=Z,151nm,1.1s
BESE  Bessie Mountai   88.06  31  P       P        17 45 50.8 +0.9
H02N1 VAN INLET T-PH   88.16  36  P       P        17 45 51.6 +1.2
DIB   Dawson Inlet,    88.18  36  P       P        17 45 51.6 +1.2
DIB                               IAmb    IAmb     17 45 53.1
      comp=Z,111nm,1.1s
H02S1 DAWSON INLET T   88.18  36  P       P        17 45 52.0 +1.6
      baz=236
JIS   Juneau Island    88.23  31  P       P        17 45 51.4 +0.9
JIS                               IAmb    IAmb     17 45 53.0
      comp=Z,68nm,0.9s
CRAG  Craig            88.28  34  P       P        17 45 52.0 +1.2
MOBC  Moresby Island   88.47  36  P       P        17 45 53.0 +1.1
MOBC                              IAmb    IAmb     17 45 54.2
      comp=Z,73nm,1.1s
WHY   Whitehorse       88.55  29  P       P        17 45 52.6 +0.5
WRAK  Wrangell Islan   88.91  33  P       P        17 45 54.5 +0.8
EPYK  Eagle Plains     89.21  23  P       P        17 45 55.2 +0.1
EPYK  Eagle Plains     89.21  23  P       P        17 45 55.7 +0.7
      baz=254
HRA   Herat            89.55 304  P       P        17 45 56.6 -0.9
DLBC  Dease Lake       90.51  31  P       P        17 46 01.8 +0.5
      comp=Z,34nm,1.1s,baz=256,slow=4.0,SNR=18
DLBC                              PP      PP       17 49 40.5 +0.3
      comp=Z,11nm,1.0s,baz=256,slow=13,SNR=3.7
DLBC                              PKKPbc  PKKPdf   18 03 28.2 +2.3
      comp=Z,1.6nm,0.5s,baz=82,slow=15,SNR=4.7
DLBC  Dease Lake       90.51  31  P       P        17 46 02.0 +0.7
BBB   Bella Bella      90.62  38  P       P        17 46 02.5 +0.7
BBB                               IAmb    IAmb     17 46 04.7
      comp=Z,110nm,1.0s
INK   Inuvik           90.88  21  P       P        17 46 02.5 -0.1
      comp=Z,89nm,1.0s,baz=258,slow=4.8,SNR=79
INK                               PKiKP   PKiKP    17 50 54.1 -0.3
      comp=Z,7.0nm,0.9s,baz=277,slow=8.1,SNR=3.6
INK                               PKKP    PKKPdf   18 03 25.6 +0.4
      comp=Z,1.1nm,0.6s,baz=120,slow=3.3,SNR=3.5
INK   Inuvik           90.88  21  P       P        17 46 02.0 -0.6
INK                               IAmb    IAmb     17 46 05.4
      comp=Z,104nm,1.1s
SYO   Syowa Base       91.35 200⇓iP       P        17 46 04.0 -0.9
SYO   Syowa Base       91.35 200⇑iPcP     P        17 46 05.3 +0.4
KBO   Bosley Butte     92.08  48  P       P        17 46 10.1 +1.2
KBO                               IAmb    IAmb     17 46 13.0
      comp=Z,118nm,1.1s
JCC   Jacoby Creek,    92.09  49  P       P        17 46 10.1 +1.2
KRMB  Red Mountain     92.25  49  P       P        17 46 09.7 -0.1
KRMB                              IAmb    IAmb     17 46 12.7
      comp=Z,90nm,1.1s
KMRM  Mail Ridge       92.28  50  P       P        17 46 11.3 +1.4
KMRM                              IAmb    IAmb     17 46 12.9
      comp=Z,102nm,1.1s
KHMM  Horse Mountain   92.32  49  P       P        17 46 11.5 +1.3
KCPM  Cahto Peak       92.32  51  P       P        17 46 10.4 +0.2
KCPM                              IAmb    IAmb     17 46 12.3
      comp=Z,120nm,1.2s
J01E  Myrtle Point     92.38  47  P       P        17 46 11.1 +1.0
      baz=265
L02E  Cave Junction    92.53  48  P       P        17 46 12.5 +1.6
      baz=265,SNR=9.6
K02D  Willamette Mer   92.53  48  P       P        17 46 12.3 +1.3
      baz=265,SNR=8.9
HOPS  Hopland Field    92.66  51  P       P        17 46 12.0 +0.5
HOPS                              IAmb    IAmb     17 46 15.3
      comp=Z,73nm,1.2s
HOQ   Hoqain           92.76 293  P       P        17 46 12.4  0.0
      SNR=7.2
NLWA  Neilton Lookou   92.81  43  P       P        17 46 12.6 +0.5
NLWA                              IAmb    IAmb     17 46 14.3
      comp=Z,91nm,1.4s
ABKAR Akbulak array    92.85 319  P       P        17 46 11.0 -1.2
I03D  Drain, OR        92.85  47  P       P        17 46 13.6 +1.3
      baz=265
GDXM  Geysers          92.86  51  P       P        17 46 13.5 +0.9
GDXM                              IAmb    IAmb     17 46 15.4
      comp=Z,68nm,1.2s
F03A  Seaside          92.89  44  P       P        17 46 13.1 +0.6
F03A                              IAmb    IAmb     17 46 20.9
      comp=Z,96nm,1.0s
E03A  Lebam            92.94  44  P       P        17 46 13.2 +0.6
E03A                              IAmb    IAmb     17 46 15.7
      comp=Z,84nm,1.0s
O02D  Mt. Diablo Mer   92.97  50  P       P        17 46 14.7 +1.5
      baz=265,SNR=43
M02C  Callahan         93.02  49  P       P        17 46 14.4 +1.1
      baz=265,SNR=51
HUMO  Hull Mountain    93.05  48  P       P        17 46 13.4 +0.1
HUMO                              IAmb    IAmb     17 46 16.6
      comp=Z,92nm,1.1s
N02D  Trinity Center   93.10  49  P       P        17 46 14.9 +1.2
      baz=265,SNR=29
SVE   Sverdlovsk       93.12 327 eP       P        17 46 12.9 -0.3
SVE                               pmax    pmax
      comp=Z,32nm,0.9s
YBH   Yreka Blue Hor   93.16  49  P       P        17 46 13.9  0.0
YBH                               pmax    pmax
      comp=Z,101nm,1.1s
YBH   Yreka Blue Hor   93.16  49  P       P        17 46 13.9  0.0
YBH                               IAmb    IAmb     17 46 17.2
      comp=Z,101nm,1.1s
PGC   Sidney           93.19  42  P       P        17 46 14.4 +0.6
WDC   Whiskeytown Da   93.19  50  P       P        17 46 14.5 +0.5
WDC                               pmax    pmax
      comp=Z,77nm,1.2s
WDC   Whiskeytown Da   93.19  50  P       P        17 46 14.5 +0.5
WDC                               IAmb    IAmb     17 46 16.6
      comp=Z,77nm,1.1s
GEYT  Alibeck          93.23 308  P       P        17 46 13.7 -0.6
      comp=Z,8.0nm,0.7s,baz=153,slow=1.3,SNR=17
GEYT                              pP      pP       17 47 19.6 +0.9
      comp=Z,5.3nm,0.9s,baz=74,slow=6.2,SNR=2.9
D03D  Eldon            93.35  43  P       P        17 46 16.2 +1.6
      baz=266,SNR=9.1
L04D  Klamath Falls    93.50  48  P       P        17 46 16.2 +0.6
      baz=266,SNR=14
D04E  Lakebay          93.53  43  P       P        17 46 17.7 +2.3
      baz=266
I04A  Tendick Farm,    93.54  47  P       P        17 46 16.7 +1.1
      baz=266
E04D  Cinebar          93.63  44  P       P        17 46 17.3 +1.4
      baz=266,SNR=5.3
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A04D  Lummi Island     93.69  42  P       P        17 46 17.5 +1.4
      baz=266,SNR=6.6
J04D  Umpqua Nationa   93.72  47  P       P        17 46 17.9 +1.3
      baz=266,SNR=7.2
O03E  Paynes Creek     93.74  50  P       P        17 46 17.2 +0.5
      baz=266,SNR=35
H04A  Detroit Lake     93.76  46          P        17 46 16.3 -0.3
SAO   San Andreas Ge   93.76  54  P       P        17 46 16.9 +0.1
SAO                               pmax    pmax
      comp=Z,43nm,1.2s
SAO   San Andreas Ge   93.76  54  P       P        17 46 16.9 +0.1
SAO                               IAmb    IAmb     17 46 20.2
      comp=Z,43nm,1.2s
M04C  Macdoel          93.81  49  P       P        17 46 17.9 +0.9
      baz=266,SNR=27
BANOM Banah            93.86 296  P       P        17 46 17.9 +0.4
      SNR=6.6
ORV   Oroville         93.92  51  P       P        17 46 17.1 -0.2
ORV                               pmax    pmax
      comp=Z,82nm,1.1s
ORV   Oroville         93.92  51  P       P        17 46 17.1 -0.2
ORV                               IAmb    IAmb     17 46 19.4
      comp=Z,82nm,1.1s
K04D  Chiloquin, OR    93.93  48  P       P        17 46 18.5 +1.0
      baz=266
B05A  Bryant           94.06  42  P       P        17 46 18.9 +1.2
      baz=266,SNR=15
D05A  Enumclaw         94.07  43  P       P        17 46 17.7 -0.2
D05A                              IAmb    IAmb     17 46 28.0
      comp=Z,51nm,1.0s
LON   Longmire         94.16  44  P       P        17 46 19.0 +0.6
LON                               pmax    pmax
      comp=Z,18nm,1.3s
LON   Longmire         94.16  44  P       P        17 46 19.0 +0.6
AKTO  Aktyubinsk       94.18 320  P       P        17 46 16.9 -1.4
ARU   Arti             94.23 326  P       P        17 46 16.6 -1.8
      comp=Z,6.0nm,0.7s,baz=171,slow=2.4,SNR=20
ARU   Arti             94.23 326d iP      P        17 46 17.2 -1.2
ARU                                                17 50 07.1
ARU                               S       SKSac    17 56 23.8 -3.1
ARU                               pmax    pmax
      comp=Z,24nm,0.9s
ARU   Arti             94.23 326  P       P        17 46 16.6 -1.8
PMPB  Monarch Peak     94.25  54  P       P        17 46 18.9 -0.2
PMPB                              IAmb    IAmb     17 46 21.8
      comp=Z,58nm,1.2s
AFDM  Forest Hills D   94.29  51  P       P        17 46 19.2 +0.1
AFDM                              IAmb    IAmb     17 46 21.4
      comp=Z,80nm,1.1s
I05D  Terrebonne, OR   94.34  46  P       P        17 46 20.0 +0.7
      baz=267
LLLB  Lillooet         94.35  40  P       P        17 46 19.5 +0.4
F05D  White Salmon     94.35  44  P       P        17 46 20.8 +1.6
      baz=267
J05D  Fort Rock, OR    94.36  47  P       P        17 46 20.5 +1.0
      baz=267,SNR=23
G05D  Wamic, OR        94.41  45  P       P        17 46 20.7 +1.2
      baz=267
C36M  Paulatuk         94.43  21  P       P        17 46 18.1 -0.9
C36M                              IAmb    IAmb     17 46 20.6
      comp=Z,30nm,1.1s
C36M  Paulatuk         94.43  21  P       P        17 46 19.3 +0.3
      baz=266
PINE  Pine Mountain    94.60  47  P       P        17 46 21.1 +0.4
PINE                              IAmb    IAmb     17 46 29.1
      comp=Z,50nm,1.1s
PAGB  Antelope Grade   94.66  55  P       P        17 46 21.6 +0.7
CMB   Columbia Colle   94.69  52  P       P        17 46 20.9 -0.1
CMB                               pmax    pmax
      comp=Z,35nm,1.2s
CMB   Columbia Colle   94.69  52  P       P        17 46 20.9 -0.1
CMB                               IAmb    IAmb     17 46 22.5
      comp=Z,35nm,1.2s
BEKR  Beckworth        94.81  51  P       P        17 46 21.8 +0.1
BEKR                              IAmb    IAmb     17 46 23.2
      comp=Z,54nm,1.2s
SMMC  Simmler          94.84  55  P       P        17 46 23.2 +1.5
      baz=267,SNR=7.8
C06D  Leavenworth      94.85  42  P       P        17 46 22.8 +1.3
      baz=267
MOD   Modoc Plateau    94.97  49  P       P        17 46 22.3  0.0
MOD                               IAmb    IAmb     17 46 24.0
      comp=Z,58nm,1.2s
LTY   Liberty          94.97  43  P       P        17 46 22.2 +0.1
LTY                               IAmb    IAmb     17 46 23.5
      comp=Z,46nm,1.3s
PKM   Mcpherson Peak   94.97  56  P       P        17 46 23.8 +1.3
      baz=267,SNR=27
SNCC  San Nicolas Is   95.12  57  P       P        17 46 23.3 +0.3
SNCC  San Nicolas Is   95.12  57  P       P        17 46 25.8 +2.9
      baz=267
VCNR  Virginia City    95.33  51  P       P        17 46 24.0 -0.1
VCNR                              IAmb    IAmb     17 46 27.1
      comp=Z,28nm,1.0s
PNTR  Pine Nut         95.36  51  P       P        17 46 24.9 +0.6
PNTR                              IAmb    IAmb     17 46 28.0
      comp=Z,52nm,1.1s
F07A  Phinny Hill Vi   95.42  45  P       P        17 46 24.6 +0.6
F07A                              IAmb    IAmb     17 46 26.4
      comp=Z,30nm,1.0s
E07A  Sunnyside       95.50  44  P       P        17 46 24.4  0.0
E07A                              IAmb    IAmb     17 46 27.3
      comp=Z,62nm,1.0s
BLG   Laguna Peak, P   95.55  56  P       P        17 46 26.7 +1.8
      baz=267
PAHR  Pah Rah Range    95.56  51  P       P        17 46 25.0  0.0
PAHR                              IAmb    IAmb     17 46 26.7
      comp=Z,38nm,1.2s
VES   Vestal, Richgr   95.61  55  P       P        17 46 25.9 +0.7
      baz=267,SNR=7.4
YERR  Yerington        95.64  51  P       P        17 46 25.6 +0.1
I07A  Izee             95.65  46  P       P        17 46 25.1 -0.2
I07A                              IAmb    IAmb     17 46 27.6
      comp=Z,28nm,1.1s
MDPB  Devils Postpil   95.70  53  P       P        17 46 26.1 +0.2
MDPB                              IAmb    IAmb     17 46 27.6
      comp=Z,42nm,1.2s
HAWA  Hanford          95.71  44  P       P        17 46 25.6 +0.3
PNT   Penticton        95.75  41  P       P        17 46 24.9 -0.6
PNT                               pmax    pmax
      comp=Z,52nm,1.1s
OMMB  Old Mammoth Mi   95.76  53  P       P        17 46 26.5 +0.2
ARVC  Arvin            95.79  55  P       P        17 46 27.5 +1.5
      baz=267
B08A  Colville Reser   95.91  42  P       P        17 46 26.3  0.0
B08A                              IAmb    IAmb     17 46 28.2
      comp=Z,56nm,1.1s
E08A  Dider Farm, El   96.04  44  P       P        17 46 27.5 +0.6
CIS   Catalina Islan   96.05  57  P       P        17 46 28.8 +1.5
      baz=267,SNR=9.3
G08A  Pilot Rock       96.08  45  P       P        17 46 27.3 +0.1
G08A                              IAmb    IAmb     17 46 29.9
      comp=Z,27nm,1.0s
ISA   Isabella, Lake   96.10  55  P       P        17 46 27.6 +0.1
ISA                               pmax    pmax
      comp=Z,32nm,1.1s
ISA   Isabella, Lake   96.10  55  P       P        17 46 27.6 +0.1
ISA                               IAmb    IAmb     17 46 29.4
      comp=Z,32nm,1.1s
ISA   Isabella, Lake   96.10  55  P       P        17 46 28.1 +0.6
      baz=268,SNR=14
D08A  Wollman Farm,    96.15  43  P       P        17 46 27.5 +0.1
D08A                              IAmb    IAmb     17 46 29.1
      comp=Z,46nm,1.2s
RYN   Ryan             96.18  52  P       P        17 46 27.7 -0.2
WVOR  Wild Horse Val   96.22  48  P       P        17 46 28.2 +0.2
WVOR                              pmax    pmax
      comp=Z,30nm,1.1s
WVOR  Wild Horse Val   96.22  48  P       P        17 46 28.2 +0.2
WVOR                              IAmb    IAmb     17 46 30.6
      comp=Z,30nm,1.1s
PASC  Pasadena Art C   96.28  56  P       P        17 46 28.6 +0.3
NVAR  Mina Array Bea   96.35  52  P       P        17 46 28.8 +0.1
      comp=Z,24nm,1.1s,baz=261,slow=5.8,SNR=56
NVAR                              PP      PP       17 50 26.9 +0.6
      comp=Z,11nm,1.0s,baz=269,slow=6.8,SNR=6.2
NVAR  Mina Array Bea   96.35  52  P       P        17 46 28.2 -0.5
TIN   Tinemaha, Big    96.36  53  P       P        17 46 29.9 +1.3
      baz=268,SNR=5.9
J08A  Circle Bar Ran   96.37  47  P       P        17 46 28.3 -0.3
J08A                              IAmb    IAmb     17 46 30.7
      comp=Z,37nm,1.0s
MWC   Mount Wilson     96.39  56  P       P        17 46 28.9 -0.1
MWC                               pmax    pmax
      comp=Z,113nm,1.1s
MWC   Mount Wilson     96.39  56  P       P        17 46 28.9 -0.1
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CWC   Cottonwood Cre   96.45  54  P       P        17 46 30.0 +0.8
      baz=268
NV11  Mina Array Sit   96.46  52  P       P        17 46 29.4 +0.2
NV11                              IAmb    IAmb     17 46 31.0
      comp=Z,25nm,1.1s
EDW2  Edwards Air Fo   96.46  56  P       P        17 46 30.3 +1.2
      baz=268,SNR=23
KVN   Kaiserville      96.53  51  P       P        17 46 30.1 +0.6
KVN                               pmax    pmax
      comp=Z,28nm,1.2s
KVN   Kaiserville      96.53  51  P       P        17 46 30.1 +0.6
KVN                               IAmb    IAmb     17 46 31.1
      comp=Z,28nm,1.2s
C09A  Chrisman Ranch   96.61  43  P       P        17 46 29.5  0.0
C09A                              IAmb    IAmb     17 46 31.4
      comp=Z,49nm,1.1s
E09A  Wood Farm, Sta   96.67  44  P       P        17 46 30.1 +0.4
BFSC  Mount Baldy Ra   96.72  56  P       P        17 46 31.4 +1.0
      baz=268,SNR=13
LRMC  Laurel Mtn Rad   96.74  55  P       P        17 46 31.8 +1.3
      baz=268,SNR=6.3
MPMC  Manual Prospec   96.92  54  P       P        17 46 32.2 +0.9
      baz=268
MURC  Murrieta         97.08  57  P       Pdif     17 46 33.0 +1.0
      baz=268
109C  Camp Elliot, M   97.13  58  P       Pdif     17 46 32.8 +0.7
109C                              IAmb    IAmb     17 46 35.6
      comp=Z,45nm,1.1s
109C  Camp Elliot, M   97.13  58  P       Pdif     17 46 33.8 +1.7
      baz=268
BMO   Blue Mountains   97.24  46  P       Pdif     17 46 32.5  0.0
BMO                               pmax    pmax
      comp=Z,34nm,1.1s
BMO   Blue Mountains   97.24  46  P       P        17 46 32.5  0.0
BMO                               IAmb    IAmb     17 46 33.8
      comp=Z,34nm,1.1s
F10A  Beach Ranch, E   97.31  44          P        17 46 32.7  0.0
NEW   Newport          97.39  42  P       Pdif     17 46 33.0  0.0
NEW                               pmax    pmax
      comp=Z,89nm,1.1s
NEW   Newport          97.39  42  P       P        17 46 33.0  0.0
NEW   Newport          97.39  42  P       Pdif     17 46 33.6 +0.6
      baz=270
FURC  Furnace Creek,   97.43  54  P       Pdif     17 46 34.5 +1.2
      baz=269,SNR=10.0
GSC   Goldstone, Bar   97.45  55  P       Pdif     17 46 33.7 +0.1
GSC                               pmax    pmax
      comp=Z,19nm,1.1s
GSC   Goldstone, Bar   97.45  55  P       Pdif     17 46 33.7 +0.1
GSC   Goldstone, Bar   97.45  55  P       Pdif     17 46 34.6 +1.0
      baz=268,SNR=14
BAR   Barrett          97.49  58  P       P        17 46 33.5 -0.3
BAR                               IAmb    IAmb     17 46 36.6
      comp=Z,25nm,1.2s
PFO   Pinyon Flats O   97.69  57  P       Pdif     17 46 35.3 +0.5
PFO                               pmax    pmax
      comp=Z,31nm,1.1s
PFO   Pinyon Flats O   97.69  57  P       Pdif     17 46 35.3 +0.5
PFO                               IAmb    IAmb     17 46 37.8
      comp=Z,31nm,1.1s
PFO   Pinyon Flats O   97.69  57  Pdiff   Pdif     17 46 35.6 +0.8
      baz=268
XPFO  Pion Flat        97.70  57  P       Pdif     17 46 34.8  0.0
XPFO                              IAmb    IAmb     17 46 37.8
      comp=Z,32nm,1.1s
TPFO  Pinon Flats      97.70  57  Pdiff   Pdif     17 46 35.4 +0.5
      baz=268
MONP2 Monument Peak    97.70  58  Pdiff   Pdif     17 46 36.1 +1.2
      baz=268
HEC   Hector,Ludlow    97.83  56  Pdiff   Pdif     17 46 36.6 +1.3
      baz=269
SHOC  Shoshone, Teco   97.90  55  Pdiff   Pdif     17 46 37.0 +1.4
      baz=269
TPNV  Topopah Spring   97.94  54  P       Pdif     17 46 35.9  0.0
TPNV                              pmax    pmax
      comp=Z,21nm,1.0s
TPNV  Topopah Spring   97.94  54  P       Pdif     17 46 35.9  0.0
TPNV                              IAmb    IAmb     17 46 38.7
      comp=Z,21nm,1.0s
TPNV  Topopah Spring   97.94  54  Pdiff   Pdif     17 46 37.2 +1.3
      baz=269
IKP   In-Ko-Pah, Jac   97.96  58  Pdiff   Pdif     17 46 37.6 +1.7
      baz=269
BELC  Belle Mtn. Jos   98.09  57  Pdiff   Pdif     17 46 38.1 +1.6
      baz=269
SWSC  Sam W. Stewart   98.23  58  Pdiff   Pdif     17 46 38.4 +1.4
      baz=269
MFID  Camas Ranch      98.30  47  P       Pdif     17 46 37.5 +0.3
MFID                              IAmb    IAmb     17 46 40.1
      comp=Z,37nm,1.1s
YKA   Yellowknife Ar   98.33  28  P       P        17 46 36.5 -0.3
      comp=Z,31nm,0.9s,baz=269,slow=4.6,SNR=145
YKA                               PP      PP       17 50 39.3 -1.0
      comp=Z,12nm,1.1s,baz=270,slow=7.4,SNR=5.4
YKA                               PKiKP   PKiKP    17 51 07.9 +0.3
      comp=Z,3.4nm,0.8s,baz=262,slow=1.3,SNR=12
YKA                               PKKP    PKKPbc   18 03 06.3 -3.5
      comp=Z,4.4nm,0.8s,baz=95,slow=3.0,SNR=31
GMRC  Granite Mounta   98.38  56  Pdiff   P        17 46 38.9 +1.0
      baz=269
NVL   N'lazarevskaya   98.47 193 eP       Pdif     17 46 35.7 -1.6
NVL                              eS       SKSac    17 56 47.7 -0.8
NVL                               pmax    pmax
      comp=Z,10.0nm,0.7s
R11A  Troy Canyon, C   98.48  52  P       Pdif     17 46 38.1 -0.2
R11A                              IAmb    IAmb     17 46 41.8
      comp=Z,22nm,1.2s
R11A  Troy Canyon, C   98.48  52  Pdiff   P        17 46 38.8 +0.5
      baz=270
BC3   Big Chuckawall   98.53  57  Pdiff   P        17 46 39.8 +1.3
      baz=269
ELK   Elko             98.75  50  P       Pdif     17 46 39.3 -0.2
ELK                               pmax    pmax
      comp=Z,21nm,1.1s
ELK   Elko             98.75  50  P       Pdif     17 46 39.3 -0.2
ELK                               IAmb    IAmb     17 46 41.6
      comp=Z,20nm,1.1s
IRM   Iron Mountain    98.80  56  Pdiff   P        17 46 40.8 +1.2
      baz=269
SHPR  Sheep Range      98.81  54  P       Pdif     17 46 39.5 -0.3
GLA   Glamis           99.05  58  P       Pdif     17 46 41.3 +0.6
GLA                               pmax    pmax
      comp=Z,26nm,1.1s
GLA   Glamis           99.05  58          Pdif     17 46 41.3 +0.6
GLA                               IAmb    IAmb     17 46 46.3
      comp=Z,26nm,1.1s
GLA   Glamis           99.05  58  Pdiff   Pdif     17 46 42.0 +1.3
      baz=269
JTMT  Jette            99.30  43  Pdif    Pdif     17 46 41.2 -0.4
JTMT                              IAmb    IAmb     17 50 46.8
      comp=Z,29nm,1.3s
Y12C  Blythe           99.31  57  Pdif    Pdif     17 46 41.4 -0.5
Y12C  Blythe           99.31  57  Pdiff   Pdif     17 46 43.8 +2.0
      baz=270
WALA  Waterton Lakes   99.50  41  Pdif    Pdif     17 46 42.0 -0.5
MSO   Missoula         99.57  44  Pdif    Pdif     17 46 41.9 -0.9
MSO                               IAmb    IAmb     17 50 44.7
      comp=Z,18nm,1.2s
MSO   Missoula         99.57  44  Pdiff   Pdif     17 46 43.0 +0.2
      baz=272
PDMCI Parker Dam,Lak   99.63  56  Pdiff   Pdif     17 46 45.1 +1.9
      baz=270
PSUT  Pine Spring      99.84  52  Pdif    Pdif     17 46 43.6 -0.7
W13A  Hualapai Mount   99.84  55  Pdif    Pdif     17 46 44.4  0.0
SNAA  Sanae           100.60 189  P       Pdif     17 46 47.3 +0.4
SNAA  Sanae           100.60 189  PKKPbc  PKKPbc   18 02 57.8 -5.8
      comp=Z,13nm,0.9s,baz=316,slow=1.0,SNR=14
DUG   Dugway, Tooele  100.61  50  Pdiff   Pdif     17 46 48.4 +0.8
      baz=272
PRGR  Permogore       100.70 332 eP       Pdif     17 46 45.3 -2.0
PRGR                              pmax    pmax
      comp=Z,33nm,0.8s
214A  Organ Pipe Nat  100.75  59  Pdiff   Pdif     17 46 50.7 +2.4
      baz=270
WUAZ  Wupatki         101.89  55  Pdiff   Pdif     17 46 55.5 +2.0
      baz=272
VNA2  Neumayer--Watz  101.94 188  P       Pdif     17 46 54.0 +1.3
      baz=145,slow=4.0
VNA3  Neumayer Olymp  101.95 187  P       Pdif     17 46 53.0 +0.2
H17A  Grant Village   102.06  46  Pdiff   Pdif     17 46 56.8 +2.7
      baz=274
RES   Resolute Bay    102.31  14  P       Pdif     17 46 54.6 +0.4
      comp=Z,8.2nm,1.0s,baz=316,slow=5.3,SNR=23
RES                               PKiKP   PKiKP    17 51 14.3 -0.1
      comp=Z,9.2nm,0.8s,baz=218,slow=2.3,SNR=12
RES                               PKKPbc  PKKPbc   18 02 53.4 -5.4
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      comp=Z,2.2nm,0.8s,baz=127,slow=2.3,SNR=9.7
EGMT  Eagleton        102.32  42  Pdiff     Pdif     17 46 55.9 +0.9
      baz=276
TUC   Tucson          102.46  58  Pdiff     Pdif     17 46 59.2 +3.3
      baz=271
BW06  Boulder Array   102.92  48  Pdiff     Pdif     17 46 58.1 +0.1
      baz=274
PDAR  Pinedale Array  102.92  48  P         Pdif     17 46 58.0  0.0
      comp=Z,20nm,1.0s,baz=255,slow=2.9,SNR=62
PDAR                              PP        PP       17 51 12.3 -3.4
      comp=Z,9.2nm,1.1s,baz=258,slow=5.6,SNR=6.4
PDAR                              PKKPbc    PKKPbc   18 02 53.4 -2.8
      comp=Z,0.5nm,0.6s,baz=108,slow=4.6,SNR=3.9
PDAR  Pinedale Array  102.92  48            Pdif     17 46 57.3 -0.6
RLMT  Red Lodge       102.93  45  Pdiff     Pdif     17 46 59.4 +1.4
      baz=275
W18A  Petrified Fore  103.24  55  Pdiff     Pdif     17 47 01.4 +1.8
      baz=273
TMCR  Tamitsa         103.57 335  eP        Pdif     17 46 58.8 -1.2
TMCR                              pmax      pmax
      comp=Z,40nm,0.8s
KLMR  Klimovskoe      103.74 331  eP        Pdif     17 46 58.7 -2.2
KLMR                              pmax      pmax
      comp=Z,38nm,0.8s
KLMR  Klimovskoe      103.74 331  eP        Pdif     17 46 58.7 -2.2
KLMR                              AMP                17 47 00.7
      comp=Z,38nm,0.8s
O20A  White River Ci  104.11  50  Pdiff     Pdif     17 47 04.1 +0.8
      baz=275
MVCO  Mesa Verde      104.12  53  Pdiff     Pdif     17 47 05.0 +1.5
      baz=274
APA   Apatity         104.31 339⇑iP         Pdif     17 47 00.9 -2.4
APA                               pmax      pmax
      comp=Z,15nm,0.8s
APA                               MLR       MLR
      comp=Z,2µm,19.0s
VRH   Novokhopyorsk   104.44 321  eP        Pdif     17 47 01.8 -2.4
VRH                               pmax      pmax
      comp=Z,10.0nm,0.8s
LAO   LASA Array      104.86  43  Pdiff     Pdif     17 47 07.7 +1.4
      baz=278
121A  Cookes Peak, D  104.99  58  Pdiff     Pdif     17 47 10.1 +2.8
      baz=273
K22A  Casper          105.15  47  PKiKP     PKiKP    17 51 25.0 +4.2
      baz=277
N23A  Red Feather La  105.78  49  PKiKP     PKiKP    17 51 22.1 -0.1
      baz=276
LPSR  Galich'ya Gora  105.89 323  eP        Pdif     17 47 08.4 -2.2
LPSR                              pmax      pmax
      comp=Z,20nm,1.1s
ANMO  Albuquerque     105.94  55  PKiKP     PKiKP    17 51 24.2 +1.7
      baz=274
PMSA  Palmer Station  105.97 166  Pdiff     Pdif     17 47 11.6 +0.9
      comp=Z,30nm,0.8s,baz=297,slow=6.8,SNR=3.9
VSR   Storozhevoye    106.02 322  eP        Pdif     17 47 08.5 -2.7
VSR                               pmax      pmax
      comp=Z,7.0nm,0.8s
ARCES ARCESS Array B  106.11 342  Pdiff     Pdif     17 47 11.2 -0.1
      comp=Z,31nm,0.8s,baz=72,slow=8.0,SNR=41
ARCES                             PKiKP     PKiKP    17 51 21.1 -0.5
      comp=Z,3.4nm,0.8s,baz=97,slow=1.6,SNR=11
ARCES                             PKKPbc    PKKPbc   18 02 44.0 -3.3
      comp=Z,2.1nm,0.6s,baz=248,slow=2.9,SNR=7.2
SDCO  Great Sand Dun  106.46  52  PKiKP     PKiKP    17 51 24.9 +1.4
      baz=276
MNTX  Cornudas Mount  107.07  59  PKiKP     PKiKP    17 51 26.2 +1.7
      baz=274
T25A  Trinidad        107.38  53  PKiKP     PKiKP    17 51 26.3 +1.1
      baz=276
DAG   Danmarks Havn   108.44 357  i P       Pdif     17 47 20.0 -1.5
      comp=Z,6.5nm,0.9s
DAG   Danmarks Havn   108.44 357  i P       PKiKP    17 51 25.0 -0.7
      comp=Z,4.5nm,0.9s
DAG   Danmarks Havn   108.44 357  i P       Pdif     17 47 20.0 -1.5
DAG                               pmax      pmax
      comp=Z,7.0nm,0.9s
TXAR  Lajitas Array   108.72  61  Pdiff     Pdif     17 47 25.7 +1.8
      comp=Z,0.8nm,0.9s,baz=282,slow=6.3,SNR=4.4
TXAR                              PKiKP     PKiKP    17 51 28.2 +0.4
      comp=Z,7.3nm,0.9s,baz=264,slow=0.9,SNR=21
TXAR                              PP        PP       17 51 59.2 +0.7
      comp=Z,12nm,1.1s,baz=272,slow=4.5,SNR=10
TXAR                              PKKPbc    PKKPbc   18 02 37.1 -0.7
      comp=Z,1.0nm,1.0s,baz=107,slow=6.1,SNR=3.1
TXAR                              PKKP      PKKPab   18 02 51.3 +0.5
      comp=Z,1.1nm,0.8s,baz=115,slow=6.9,SNR=5.3
MSTX  Muleshoe        109.06  56  PKiKP     PKiKP    17 51 29.4 +1.2
      baz=276
MDND  Maddock         109.08  41  PKiKP     PKiKP    17 51 28.4 +0.6
      baz=283
KULLO Kullorsuaq      109.48   7  i P       PKiKP    17 51 27.4 -0.3
      comp=Z,13nm,0.9s
FINES FINESS Array B  109.67 334  Pdiff     Pdif     17 47 26.1 -1.2
      comp=Z,10nm,0.7s,baz=66,slow=4.8,SNR=23
FINES                             PKiKP     PKiKP    17 51 28.6 +0.2
      comp=Z,2.1nm,0.5s,baz=55,slow=1.5,SNR=7.3
FINES                             PP        PP       17 52 04.1 +0.1
      comp=Z,4.0nm,0.7s,baz=84,slow=5.7,SNR=4.2
AMTX  Amarillo        109.85  55  PKiKP     PKiKP    17 51 31.2 +1.5
      baz=277
SUSD  Miller          110.28  45  PKiKP     PKiKP    17 51 30.9 +0.7
      baz=283
KMBO  Kilima Mbogo    110.47 267  PKiKP     PKiKP    17 51 32.2 +0.5
      comp=Z,1.1nm,0.5s,baz=306,slow=2.5,SNR=5.7
KMBO                              PKKPbc    PKKPbc   18 02 34.5 +2.8
      comp=Z,1.9nm,0.8s,baz=257,slow=4.3,SNR=4.3
ULM   Lac du Bonnet   110.82  38  Pdiff     Pdif     17 47 32.2 -0.4
      comp=Z,1.5nm,0.8s,baz=304,slow=11,SNR=2.8
ULM                               PKiKP     PKiKP    17 51 30.4 -0.6
      comp=Z,23nm,0.8s,baz=309,slow=2.7,SNR=29
ULM                               PP        PP       17 52 11.5 -1.2
      comp=Z,16nm,1.0s,baz=289,slow=7.6,SNR=7.4
ULM   Lac du Bonnet   110.82  38            PKiKP    17 51 30.0 -0.9
AGMN  Agassiz Nation  111.39  40  PKiKP     PKiKP    17 51 32.1  0.0
      baz=286
BGNE  Belgrade        111.51  48  PKiKP     PKiKP    17 51 33.1 +0.6
      baz=282
ABTX  Abilene, Hawle  111.82  57  PKiKP     PKiKP    17 51 35.0 +1.6
      baz=278
JCT   Junction City   111.95  59  PKiKP     PKiKP    17 51 35.0 +1.2
      baz=277
ECSD  EROS Data Cent  112.09  45  PKiKP     PKiKP    17 51 33.7 +0.1
      baz=284
BRTR  Keskin Array B  112.15 311  PKiKP     PKiKP    17 51 34.3 +0.3
      comp=Z,2.0nm,0.8s,baz=97,slow=1.4,SNR=6.1
BRTR                              PKKPbc    PKKPbc   18 02 27.6 +0.4
      comp=Z,3.7nm,0.9s,baz=212,slow=2.8,SNR=9.9
AKASG Malin Array Be  112.22 323  Pdiff     Pdif     17 47 37.5 -1.3
      comp=Z,0.9nm,0.6s,baz=53,slow=5.0,SNR=4.7
AKASG                             PKiKP     PKiKP    17 51 32.9 -0.7
      comp=Z,2.0nm,0.4s,baz=61,slow=2.4,SNR=17
AKASG                             PP        PP       17 52 22.6  0.0
      comp=Z,1.4nm,0.7s,baz=59,slow=7.0,SNR=4.4
AKASG                             PKKPbc    PKKPbc   18 02 25.0 -2.2
      comp=Z,5.5nm,0.9s,baz=263,slow=3.5,SNR=18
AKASG Malin Array Be  112.22 323            PKiKP    17 51 32.1 -1.4
AKASG                                       PKKPbc   18 02 24.5 -2.7
WMOK  Wichita Mounta  112.23  55  PKiKP     PKiKP    17 51 34.7 +0.6
      baz=279
833A  Chaparral WMA,  112.54  62  PKiKP     PKiKP    17 51 36.3 +1.5
      baz=276
USHA  Ushuaia         112.67 158  PKiKP     PKiKP    17 51 35.6 +1.3
      comp=Z,5.4nm,0.7s,baz=243,slow=2.3,SNR=3.2
USHA                              PKKPbc    PKKPbc   18 02 24.5 -1.4
      comp=Z,13nm,1.0s,baz=63,slow=6.8,SNR=4.0
SUMG  Summit          112.92   2  i P       PKiKP    17 51 35.0 +0.2
      comp=Z,48nm,1.0s
SUMG  Summit          112.92   2  i PKIKP   PKiKP    17 51 35.0 +0.2
SUMG                              pmax      pmax
      comp=Z,48nm,1.0s
KSU1  Kansas State U  113.14  50  PKiKP     PKiKP    17 51 36.8 +1.1
      baz=282
SORM  Soroca          113.61 321 ⇓P         PKiKP    17 51 36.5 +0.2
SORM  Soroca          113.61 321 ⇓PKIKP     PKiKP    17 51 36.5 +0.2
WHTX  Lake Whitney,   113.75  58  P         PKiKP    17 51 37.9 +0.9
      baz=279
EYMN  Ely             114.28  39  P         PKiKP    17 51 37.8 +0.1
      baz=290
SPMN  Marine on St.   114.31  43  PKiKP     PKiKP    17 51 38.3 +0.5
      baz=288
TUL1  Leonard         114.43  53  PKiKP     PKiKP    17 51 39.0 +0.7
      baz=282
SCO   Scoresbysund    114.81 356  i P       PKPdf    17 51 38.7 +0.7
SCO   Scoresbysund    114.81 356  i PKIKP   PKPdf    17 51 38.7 +0.7
SCIA  State Center    114.97  46            PKiKP    17 51 39.1 -0.1
SCIA  State Center    114.97  46  PKiKP     PKPdf    17 51 39.5 +0.3
      baz=286
X37A  Clayton         115.02  54            PKPdf    17 51 40.2 +0.8
237A  Washetta, Mont  115.13  57            PKPdf    17 51 40.8 +1.1
ILULI Ilulissat       115.18   7  i P       PKiKP    17 51 38.7  0.0
      comp=Z,41nm,1.1s
ILULI Ilulissat       115.18   7  i PKIKP   PKiKP    17 51 38.7  0.0
ILULI                             pmax      pmax
      comp=Z,41nm,1.1s
ILULI Ilulissat       115.18   7            PKiKP    17 51 38.3 -0.4
BOSA  Boshof          115.27 235  PKP       PKPdf    17 51 40.5 +0.2
      comp=Z,2.4nm,0.5s,baz=81,slow=0.6,SNR=15
BOSA                              PKKPbc    PKKPbc   18 02 17.2 +0.9
      comp=Z,16nm,1.1s,baz=300,slow=6.6,SNR=5.2
HKT   Hockley         115.43  60  PKIKP     PKPdf    17 51 40.0 -0.3
HKT   Hockley         115.43  60            PKPdf    17 51 40.0 -0.3
U38A  Gravette        115.43  52            PKPdf    17 51 39.8 -0.4
HFS   Hagfors         115.51 337  PKKPbc    PKKPbc   18 02 13.9 -2.5
      comp=Z,3.5nm,1.0s,baz=232,slow=7.1,SNR=4.9
Z38A  Mt. Pleasant    115.59  56            PKiKP    17 51 40.8 +0.3
BURAR Bucovina Array  115.77 321 ⇓P         PKiKP    17 51 42.7 +2.1
BURAR Bucovina Array  115.77 321 ⇓PKIKP     PKiKP    17 51 42.7 +2.1
BURAR Bucovina Array  115.77 321            PKiKP    17 51 41.9 +1.3
HHAR  Hobbs           115.82  52            PKPdf    17 51 40.7 -0.3
NB2   NORSAR Subarra115.88 338  PKPdf     PKPdf    17 51 39.1 -1.3
      comp=Z,2.2nm,0.9s,baz=44,slow=1.9
NOA   NORSAR Array B  115.88 338  PKP       PKPdf    17 51 39.7 -0.7
      comp=Z,5.3nm,0.9s,baz=53,slow=2.0,SNR=9.7
NOA                               PP        PP       17 52 48.3 +0.4
      comp=Z,1.9nm,0.9s,baz=47,slow=5.9,SNR=4.7
NOA                               PKKPbc    PKKPbc   18 02 13.4 -1.8
      comp=Z,3.9nm,1.0s,baz=38,slow=3.7,SNR=5.9
S39A  Bolivar         115.98  51            PKPdf    17 51 40.7 -0.5
G40A  Rib Lake        116.03  42            PKPdf    17 51 40.4 -0.8
MLR   Muntele Rosu    116.05 318 ⇓P         PKPdf    17 51 40.1 -1.2
MLR   Muntele Rosu    116.05 318 ⇓PKIKP     PKPdf    17 51 40.1 -1.2
NATX  Nacogdoches     116.13  57            PKiKP    17 51 41.9 +0.2
NATX  Nacogdoches     116.13  57  PKiKP     PKiKP    17 51 42.8 +1.2
      baz=280
W39A  Magazine        116.18  53            PKPdf    17 51 41.6  0.0
W39A  Magazine        116.18  53  PKiKP     PKiKP    17 51 42.2 +0.5
      baz=282
I40A  Norwalk         116.21  43            PKPdf    17 51 40.3 -1.2
DOPR  Dopca           116.25 319 ⇓P         PKiKP    17 51 42.8 +1.3
LBTB  Lobatse         116.29 239  PKKPbc    PKKPbc   18 02 13.8 +1.2
      comp=Z,5.4nm,0.9s,baz=296,slow=4.5,SNR=4.0
LBTB  Lobatse         116.29 239  PKIKP     PKiKP    17 51 42.7 +0.4
LBTB  Lobatse         116.29 239            PKiKP    17 51 42.7 +0.4
L40A  Anamosa         116.35  46            PKPdf    17 51 40.6 -1.2
COWI  Conover         116.44  41            PKPdf    17 51 41.8 -0.1
D41A  Chassel         116.45  40            PKiKP    17 51 42.0 +0.2
MIAR  Mount Ida       116.48  54  PKIKP     PKiKP    17 51 43.3 +1.0
MIAR  Mount Ida       116.48  54            PKiKP    17 51 43.3 +1.0
MIAR  Mount Ida       116.48  54  P         PKiKP    17 51 43.3 +1.0
      baz=282
KWP   Kalwaria Pacla  116.50 324  PKIKP     PKiKP    17 51 42.0 +0.1
KWP   Kalwaria Pacla  116.50 324            PKiKP    17 51 42.0 +0.1
U40A  Yellville       116.66  52            PKPdf    17 51 41.9 -0.7
U40A  Yellville       116.66  52  P         PKiKP    17 51 42.8 +0.2
      baz=284
VOIR                  116.66 319 ⇓P         PKiKP    17 51 44.4 +2.0
VOIR                  116.66 319 ⇓PKIKP     PKiKP    17 51 44.4 +2.0
JFWS  Jewell Farm     116.78  44  PKIKP     PKPdf    17 51 41.8 -0.8
JFWS  Jewell Farm     116.78  44            PKPdf    17 51 41.8 -0.8
JFWS  Jewell Farm     116.78  44  P         PKPdf    17 51 42.2 -0.3
      baz=289
LSZ   Lusaka          116.85 250  PKIKP     PKiKP    17 51 44.3 +0.6
LSZ   Lusaka          116.85 250            PKiKP    17 51 44.2 +0.6
ELND  Elena           116.95 316 ⇓P         PKiKP    17 51 43.9 +1.0
ARR   Arges           116.96 319 ⇑P         PKiKP    17 51 44.0 +1.0
MBAR  Mbarara         117.00 267  PKIKP     PKiKP    17 51 44.8 +0.7
MBAR  Mbarara         117.00 267            PKiKP    17 51 44.8 +0.7
N41A  Harden Midland  117.02  47            PKPdf    17 51 42.6 -0.5
HUMR  Humele          117.02 318 ⇓P         PKiKP    17 51 43.5 +0.5
WLAR  White Oak Lake  117.04  55            PKiKP    17 51 44.1 +0.8
KOLS  Kolonicke sedl  117.05 323  ePKIKP    PKiKP    17 51 43.8 +0.8
KOLS  Kolonicke sedl  117.05 323  ePKP      PKiKP    17 51 43.8 +0.8
X40A  Basin Creek Fa  117.09  54            PKiKP    17 51 43.8 +0.3
F42A  Maple Grove Fa  117.22  41            PKPdf    17 51 42.9 -0.5
TRPA  Tarpa           117.22 322 ⇓P         PKPdf    17 51 42.9 -0.3
SFJD  Kangerlussuaq   117.32   8  i P       PKPdf    17 51 42.5 -0.4
      comp=Z,2.8nm,1.1s
SFJD  Kangerlussuaq   117.32   8  i PKIKP   PKPdf    17 51 42.5 -0.4
SFJD                              pmax      pmax
      comp=Z,3.0nm,1.1s
SFJD  Kangerlussuaq   117.32   8            PKPdf    17 51 42.3 -0.5
FCAR  Ozark Folk Cen  117.34  52            PKPdf    17 51 43.6 -0.3
WHAR  Wooly Hollow    117.35  53            PKiKP    17 51 44.0 +0.1
I42A  Draeger Farm,   117.37  43            PKPdf    17 51 42.6 -1.1
Z41A  Richland Creek  117.38  55            PKiKP    17 51 44.9 +0.8
Z41A  Richland Creek  117.38  55  P         PKiKP    17 51 45.5 +1.4
      baz=282
W41B  Gary Mavity, V  117.41  53            PKPdf    17 51 43.6 -0.4
W41B  Gary Mavity, V  117.41  53  P         PKiKP    17 51 44.7 +0.6
      baz=284
UALR  University of   117.42  54            PKiKP    17 51 44.9 +0.8
L42A  Oliver, Polo    117.47  45            PKPdf    17 51 43.4 -0.6
CCM   Cathedral Cave  117.47  50  PKIKP     PKPdf    17 51 44.1  0.0
CCM   Cathedral Cave  117.47  50            PKPdf    17 51 44.1  0.0
CCM   Cathedral Cave  117.47  50  P         PKiKP    17 51 44.5 +0.4
      baz=286
DRGR                  117.66 321 ⇑P         PKiKP    17 51 44.4 +0.1
DRGR                  117.66 321 ⇑PKIKP     PKiKP    17 51 44.4 +0.1
PLVB  Pleven          117.66 317 ⇑P         PKiKP    17 51 45.0 +0.8
E43A  Lone Tree Farm  117.72  40            PKPdf    17 51 43.6 -0.6
H43A  Windswept, Lux  117.93  42            PKPdf    17 51 43.6 -1.1
OJC   Ojcow           117.93 325  PKIKP     PKiKP    17 51 44.7 +0.1
OJC   Ojcow           117.93 325            PKiKP    17 51 44.7 +0.1
LCAR  Lake Charles    118.06  52            PKPdf    17 51 45.1 -0.2
342A  Flagon Creek P  118.16  57            PKiKP    17 51 46.7 +1.1
GZR   Gura Zlata      118.16 319 ⇓P         PKPdf    17 51 44.8 -0.5
GZR   Gura Zlata      118.16 319 ⇓PKIKP     PKPdf    17 51 44.8 -0.5
K43A  Burlington      118.17  44            PKPdf    17 51 44.4 -0.9
HDIL  Hopedale        118.20  47            PKPdf    17 51 45.4  0.0
HDIL  Hopedale        118.20  47  P         PKiKP    17 51 46.1 +0.7
      baz=288
E44A  Grand Marais A  118.30  39  P         PKiKP    17 51 46.2 +0.8
      baz=294
P43A  Skaggs, Pawnee  118.31  48            PKPdf    17 51 45.5 -0.1
PBMO  Poplar Bluff    118.44  51            PKPdf    17 51 45.4 -0.6
SIRR  Siria           118.53 320 ⇑P         PKiKP    17 51 46.2 +0.3
HERR  Herculane       118.59 319 ⇑P         PKPdf    17 51 45.8 -0.2
LANS  Liptovska Anna  118.61 324  ePKIKP    PKiKP    17 51 47.2 +1.2
LANS  Liptovska Anna  118.61 324  ePKP      PKiKP    17 51 47.2 +1.2
L44A  Lake County Fo  118.65  45            PKPdf    17 51 45.6 -0.6
L44A  Lake County Fo  118.65  45  P         PKiKP    17 51 46.9 +0.6
      baz=290
143A  Socs Landing,   118.65  56            PKPdf    17 51 46.4 -0.1
X43A  Marvell         118.66  54            PKiKP    17 51 46.9 +0.4
X43A  Marvell         118.66  54  P         PKiKP    17 51 47.7 +1.2
      baz=284
BZS   Buzias          118.82 320 ⇑P         PKiKP    17 51 46.6 +0.1
BZS   Buzias          118.82 320 ⇑PKIKP     PKiKP    17 51 46.6 +0.1
M44A  Midewin, Midew  118.82  45            PKPdf    17 51 46.4 -0.2
VTS   Vitosha         118.88 316 ⇓P         PKiKP    17 51 47.7 +0.8
VTS   Vitosha         118.88 316 ⇓PKIKP     PKiKP    17 51 47.7 +0.8
VTS   Vitosha         118.88 316            PKPdf    17 51 46.8 -0.1
PSZ   Piszkesteto     118.92 323 ⇓P         PKPdf    17 51 46.5 -0.2
PSZ   Piszkesteto     118.92 323 ⇓PKIKP     PKPdf    17 51 46.5 -0.2
PSZ   Piszkesteto     118.92 323            PKPdf    17 51 45.9 -0.8
O44A  Mansfield       118.93  47            PKPdf    17 51 46.7 -0.1
F45A  CMU Biological  118.94  40  P         PKiKP    17 51 46.7 +0.1
      baz=294
GNAR  Gosnell         118.98  52            PKPdf    17 51 46.3 -0.7
PARMO Parma           119.00  51            PKiKP    17 51 47.4 +0.3
H45A  Beulah          119.02  41  P         PKiKP    17 51 46.9  0.0
      baz=293
OKC   Ostrava-Krasne  119.05 325  ePKPDF    PKiKP    17 51 47.4 +0.6
OKC   Ostrava-Krasne  119.05 325  ePKIKP    PKiKP    17 51 47.4 +0.6
MDVR  Moldovita       119.09 319 ⇓P         PKPdf    17 51 46.5 -0.5
G45A  Suttons Bay     119.10  41            PKPdf    17 51 46.4 -0.6
G45A  Suttons Bay     119.10  41  P         PKPdf    17 51 47.0 +0.1
      baz=294
I45A  Fountain        119.12  42            PKPdf    17 51 47.0  0.0
I45A  Fountain        119.12  42  P         PKiKP    17 51 47.3 +0.2
      baz=293
VYHS  Vyhne           119.29 324  ePKIKP    PKiKP    17 51 47.5 +0.2
VYHS  Vyhne           119.29 324  ePKP      PKiKP    17 51 47.5 +0.2
D46A  Sault St. Mari  119.36  38  P         PKiKP    17 51 47.7 +0.2
      baz=296
E46A  Sault Ste Mari  119.42  39            PKPdf    17 51 47.2 -0.4
MORC  Moravsky Berou  119.42 325 ⇑P         PKiKP    17 51 48.4 +0.8
MORC  Moravsky Berou  119.42 325 ⇑PKIKP     PKiKP    17 51 48.4 +0.8
MORC  Moravsky Berou  119.42 325  ePKP      PKiKP    17 51 47.6  0.0
MORC  Moravsky Berou  119.42 325            PKPdf    17 51 47.5  0.0
344A  Westbrook Farm  119.48  57            PKPdf    17 51 48.0 -0.1
VBMS  Vicksburg       119.49  56            PKPdf    17 51 48.0 -0.1
VBMS  Vicksburg       119.49  56  P         PKiKP    17 51 49.5 +1.3
      baz=283
G46A  Petoskey        119.51  40  P         PKiKP    17 51 47.9 +0.1
      baz=294
OLIL  Olney           119.64  48            PKPdf    17 51 48.2  0.0
KRLC  Kraliky         119.70 326  ePKPDF    PKPdf    17 51 48.1 +0.1
KRLC  Kraliky         119.70 326  ePKIKP    PKPdf    17 51 48.1 +0.1
T45A  Paducah         119.75  50            PKPdf    17 51 48.0 -0.4
OSTC  Ostas           119.76 327  ePKPDF    PKiKP    17 51 48.8 +0.6
JAVC  Velka Javorina  119.80 325  ePKP      PKiKP    17 51 49.2 +0.8
DPC   Dobruska-Polom  119.81 326  ePKPDF    PKiKP    17 51 48.5 +0.2
DPC   Dobruska-Polom  119.81 326  ePKIKP    PKiKP    17 51 48.5 +0.2
L46A  Eue Claire      119.83  44            PKiKP    17 51 48.6  0.0
L46A  Eue Claire      119.83  44  P         PKiKP    17 51 49.2 +0.6
      baz=292
CHVC  Chvalec         119.83 327  ePKPDF    PKiKP    17 51 48.8 +0.4
OXF   Oxford          119.84  53  PKIKP     PKiKP    17 51 48.8  0.0
OXF   Oxford          119.84  53            PKiKP    17 51 48.8  0.0
OXF   Oxford          119.84  53  P         PKiKP    17 51 49.2 +0.4
      baz=285
SFIN  Lafayette       119.84  46            PKPdf    17 51 48.4 -0.1
SFIN  Lafayette       119.84  46  P         PKiKP    17 51 49.1 +0.5
      baz=290
W45A  Hickory Valley  119.84  53            PKPdf    17 51 48.3 -0.4
D47A  Chapleau        119.86  38  P         PKiKP    17 51 48.8 +0.3
      baz=297
GLMI  Grayling        119.87  41            PKiKP    17 51 48.7 +0.2
GLMI  Grayling        119.87  41  P         PKiKP    17 51 48.9 +0.4
      baz=294
UPC   Upice           119.90 327  ePKPDF    PKiKP    17 51 48.8 +0.3
UPC   Upice           119.90 327  ePKIKP    PKiKP    17 51 48.8 +0.3
K46A  Dorr            119.93  43  P         PKiKP    17 51 49.0 +0.3
      baz=292
P46A  Rosedale        120.02  47            PKPdf    17 51 48.9  0.0
E47A  Iron Bridge     120.02  38  P         PKiKP    17 51 48.8  0.0
      baz=296
SMOL  Smolenice       120.10 324  ePKIKP    PKiKP    17 51 49.5 +0.6
SMOL  Smolenice       120.10 324  ePKP      PKiKP    17 51 49.5 +0.6
VRAC  Vranov          120.19 325  ePKP      PKPdf    17 51 48.7 -0.3
USIN  University of   120.21  49            PKiKP    17 51 49.6 +0.2
G47A  Hillman         120.21  40  P         PKiKP    17 51 49.4 +0.2
      baz=295
H47A  Mio             120.23  41  P         PKiKP    17 51 49.6 +0.3
      baz=295
CCIG  Comitan         120.24  74            PKPdf    17 51 49.0 -1.2
MODS  Modra-Piesok    120.26 324  ePKIKP    PKPdf    17 51 48.7 -0.4
MODS  Modra-Piesok    120.26 324  ePKP      PKPdf    17 51 48.7 -0.4
I47A  Gladwin         120.27  41            PKPdf    17 51 49.3  0.0
I47A  Gladwin         120.27  41  P         PKPdf    17 51 49.3  0.0
      baz=294
J47A  Sunmer          120.37  42            PKPdf    17 51 49.4 -0.1
J47A  Sunmer          120.37  42  P         PKiKP    17 51 49.8 +0.3
      baz=293
KRUC  Moravsky        120.43 325  ePKP      PKPdf    17 51 49.0 -0.4
ZST   Bratislava      120.45 324  ePKIKP    PKPdf    17 51 48.9 -0.6
ZST   Bratislava      120.45 324  ePKP      PKPdf    17 51 48.9 -0.6
K47A  Vermontville    120.47  43  P         PKiKP    17 51 49.8  0.0
      baz=293
M47A  Cromwell        120.54  45  P         PKiKP    17 51 50.5 +0.5
      baz=292
346A  Big Creek Wild  120.55  57            PKiKP    17 51 50.5 +0.2
D48A  Paudash Townsh120.59  37  P         PKPdf    17 51 49.9 +0.1
      baz=298
L47A  Sherwood        120.60  44  P         PKiKP    17 51 50.1  0.0
      baz=292
WVT   Waverly         120.63  51  PKIKP     PKPdf    17 51 49.9 -0.3
WVT   Waverly         120.63  51            PKPdf    17 51 49.9 -0.3
WVT   Waverly         120.63  51  P         PKiKP    17 51 50.4 +0.1
      baz=287
N47A  Urbana          120.66  45            PKPdf    17 51 49.7 -0.4
N47A  Urbana          120.66  45  P         PKiKP    17 51 50.2  0.0
      baz=291
BLO   Bloomington     120.67  47  PKIKP     PKiKP    17 51 50.5 +0.2
BLO   Bloomington     120.67  47            PKiKP    17 51 50.5 +0.2
PVCC  Panska Ves      120.67 327  ePKPDF    PKiKP    17 51 50.1 +0.2
PVCC  Panska Ves      120.67 327  ePKIKP    PKiKP    17 51 50.1 +0.2
E48A  Lockeyer        120.69  38  P         PKiKP    17 51 50.1  0.0
      baz=298
F48A  Evansville      120.71  39  P         PKPdf    17 51 50.0  0.0
      baz=297
I48A  Sherman Twp     120.73  41  P         PKPdf    17 51 50.2 +0.1
      baz=295
H48A  Harrisville     120.75  40            PKPdf    17 51 49.8 -0.4
H48A  Harrisville     120.75  40  P         PKiKP    17 51 50.5 +0.2
      baz=296
PLAL  Pickwick Lake   120.77  52            PKPdf    17 51 49.5 -1.0
BRG   Berggiesshubel  120.81 328  i PKP     PKPdf    17 51 50.0 -0.1
      comp=Z,20nm,1.0s
BRG                               epPKP     pPKPdf   17 52 23.0  -35
      comp=Z,11nm,1.1s
BRG                               ePKS      PKSdf    17 55 26.6  0.0
      comp=Z,4.0nm,0.8s
BRG                               SS        SS       18 10 56.0  +85
BRG   Berggiesshubel  120.81 328  ePKPdf    PKiKP    17 51 50.2  0.0
      baz=54,slow=1.9
BRG   Berggiesshubel  120.81 328  i PKIKP   PKPdf    17 51 50.0 -0.1
BRG                               pmax      pmax
      comp=Z,20nm,1.0s
BRG                               pmax      pmax
      comp=Z,11nm,1.2s
BRG                               pmax      pmax
      comp=Z,4.0nm,0.8s
FNA   Florina         120.84 315  PKIKP     PKPdf    17 51 50.1 -0.5
FNA   Florina         120.84 315            PKPdf    17 51 50.1 -0.5
GOPC  GO Pecny, Ondr  120.88 327  ePKPDF    PKiKP    17 51 50.6 +0.2
GOPC  GO Pecny, Ondr  120.88 327  ePKIKP    PKiKP    17 51 50.6 +0.2
T47A  Sharon Grove    120.93  50            PKPdf    17 51 50.3 -0.4
PRU   Pruhonice       120.98 327  ePKPDF    PKPdf    17 51 50.4  0.0
PRU   Pruhonice       120.98 327  ePKIKP    PKPdf    17 51 50.4  0.0
K48A  Perry           121.02  43  P         PKiKP    17 51 50.9  0.0
      baz=294
J48A  Bridge Port     121.04  42            PKPdf    17 51 50.3 -0.4
J48A  Bridge Port     121.04  42  P         PKiKP    17 51 51.0 +0.1
      baz=294
CLL   Collm           121.06 329⇓iPKiKP     PKiKP    17 51 51.5 +0.8
      comp=Z,22nm,0.9s
CLL                               e                  17 53 03.0
CLL                               ePP       PP       17 53 24.0 +0.3
CLL                               e                  17 53 58.0
CLL                               e                  17 54 36.0
CLL                               eSKKSac   SKKSac   17 59 48.0 -7.7
CLL                               e                  18 01 16.0
CLL                               ePKKPbc   PKKPab   18 01 52.0 -3.8
CLL                               i PKKPab  PKKPbc   18 01 56.5 +0.3
      comp=Z,9.0nm,1.0s
CLL                               e                  18 02 54.0
CLL                               ePS       PS       18 03 12.0 -7.7
CLL                               ePPS      PPS      18 04 19.0
CLL                               eSKKPbc   SKKPbc   18 05 15.0 -3.6
CLL                               e                  18 05 37.0
CLL                               e                  18 06 48.0
CLL                               eSS       SKKSdf   18 09 24.0 +8.2
CLL                               esSS               18 11 18.0
CLL                               eSSSS              18 17 36.0
CLL   Collm           121.06 329  ePKPdf    PKiKP    17 51 51.4 +0.7
      baz=54,slow=1.9
CLL   Collm           121.06 329⇓iPKIKP     PKiKP    17 51 51.5 +0.8
CLL                               pmax      pmax
      comp=Z,22nm,0.9s
CLL                               pmax      pmax
      comp=Z,9.0nm,1.0s
CLL   Collm           121.06 329            PKiKP    17 51 50.9 +0.3
F49A  Sandfield       121.10  39  P         PKPdf    17 51 50.7  0.0
      baz=297
FBE   Freiberg        121.10 328  ePKPdf    PKiKP    17 51 51.0 +0.2
      baz=54,slow=1.9
M48A  Edgerton        121.12  44            PKPdf    17 51 50.8 -0.2
M48A  Edgerton        121.12  44  P         PKiKP    17 51 51.1  0.0
      baz=292
N48A  Decatur         121.14  45  P         PKiKP    17 51 51.4 +0.2
      baz=292
L48A  N Adams         121.14  44  P         PKiKP    17 51 51.4 +0.2
      baz=293
WCI   Wyandotte Cave  121.15  48  PKIKP     PKPdf    17 51 50.8 -0.3
WCI   Wyandotte Cave  121.15  48            PKPdf    17 51 50.8 -0.3
WCI   Wyandotte Cave  121.15  48  P         PKiKP    17 51 51.5 +0.2
      baz=289
O48A  Farmland        121.27  46  P         PKPdf    17 51 51.4  0.0
      baz=292
CONA  Conrad Observa  121.30 324  ePKiKP    PKPdf    17 51 51.1 -0.2
      comp=Z,14nm,1.1s
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CONA				*e*PKKPab	PKKPab	18 01 53.6	-1.3
	comp=Z,6.9nm,1.6s						
Q48A	North Vernon	121.33	47	P	PKiKP	17 51 51.9	+0.3
	baz=290						
P48A	Milroy	121.36	47		PKPdf	17 51 51.1	-0.5
P48A	Milroy	121.36	47	P	PKiKP	17 51 51.9	+0.2
	baz=291						
I49A	Point Hope	121.41	41		PKPdf	17 51 50.9	-0.5
I49A	Point Hope	121.41	41	P	PKPdf	17 51 51.5	+0.1
	baz=296						
PBCC	Pribram	121.44	327	*e*PKPDF	PKiKP	17 51 51.6	+0.1
J49A	Marlette	121.44	42	P	PKPdf	17 51 51.4	-0.1
	baz=295						
K49A	Clarkson	121.47	42	P	PKiKP	17 51 52.0	+0.2
	baz=294						
V48A	Smith Brothers	121.53	51		PKPdf	17 51 51.2	-0.7
AAM	Ann Arbor	121.53	43	PKIKP	PKPdf	17 51 51.3	-0.4
AAM	Ann Arbor	121.53	43		PKPdf	17 51 51.3	-0.4
AAM	Ann Arbor	121.53	43	P	PKiKP	17 51 52.1	+0.2
	baz=294						
L49A	Milan	121.53	43	P	PKiKP	17 51 52.2	+0.3
	baz=294						
M49A	Liberty Center	121.64	44	P	PKiKP	17 51 52.3	+0.2
	baz=293						
MATQ	Matagami	121.66	33	P	PKPdf	17 51 51.2	-0.6
	baz=304						
PDG	Podgorica	121.67	317	⇑P	PKPdf	17 51 52.0	0.0
PDG	Podgorica	121.67	317		PKPdf	17 51 51.5	-0.5
N49A	Columbus Grove	121.71	45		PKPdf	17 51 51.7	-0.4
N49A	Columbus Grove	121.71	45	P	PKiKP	17 51 52.6	+0.3
	baz=293						
X48A	Hartselle	121.73	53		PKPdf	17 51 51.7	-0.6
ASSE	Asse, Remlinge	121.75	331	*e*PKPdf	PKiKP	17 51 52.1	+0.2
	baz=54,slow=1.9						
NEUB	Neuenburg	121.75	329	*e*PKPdf	PKPdf	17 51 51.9	+0.1
	baz=54,slow=1.9						
D50A	G1974 Best Tow	121.77	36	P	PKPdf	17 51 52.0	0.0
	baz=300						
NRDL	Niedersach Rie	121.80	331	*e*PKPdf	PKiKP	17 51 52.4	+0.5
	baz=54,slow=1.9						
CLTN	Cedars of Leba	121.80	51		PKPdf	17 51 52.0	-0.5
ARSA	Arzberg	121.84	324	*e*PKiKP	PKPdf	17 51 52.0	-0.2
	comp=Z,7.0nm,0.8s						
ARSA				*e*PKKPab	PKKPbc	18 01 53.9	+0.7
	comp=Z,11nm,1.2s						
P49A	Miami Univ. Ec	121.85	46	P	PKiKP	17 51 52.7	+0.1
	baz=291						
TANN	Tannenbergstha	121.85	328	*e*PKPdf	PKPdf	17 51 52.3	+0.1
	baz=54,slow=1.9						
O49A	Covington	121.88	46		PKPdf	17 51 52.0	-0.5
O49A	Covington	121.88	46	P	PKiKP	17 51 52.8	+0.2
	baz=292						
Q49A	Aurora	121.91	47	P	PKiKP	17 51 52.9	+0.1
	baz=291						
GUNZ	Gunzen	121.95	328	*e*PKPdf	PKiKP	17 51 52.6	+0.1
	baz=54,slow=1.9						
R49A	Shelbyville	121.96	48		PKPdf	17 51 52.6	-0.1
R49A	Shelbyville	121.96	48	P	PKiKP	17 51 53.3	+0.4
	baz=290						
NKC	Novy Kostel	121.96	328	*e*PKPDF	PKiKP	17 51 52.5	0.0
NKC	Novy Kostel	121.96	328	*e*PKIKP	PKiKP	17 51 52.5	0.0
KHC	Kasperske Hory	121.97	326	*e*PKPDF	PKPdf	17 51 52.3	-0.1
KHC				*e*x	x	17 52 26.0	
KHC	Kasperske Hory	121.97	326	*e*PKIKP	PKPdf	17 51 52.3	-0.1
KHC	Kasperske Hory	121.97	326		PKPdf	17 51 51.8	-0.7
WERN	Wernitzgruen	121.97	328	*e*PKPdf	PKiKP	17 51 52.6	0.0
	baz=54,slow=1.9						
PLN	Plauen	121.97	328	*e*PKPdf	PKPdf	17 51 52.5	+0.1
	baz=54,slow=1.9						
PLCA	Paso Flores	121.99	146	PKP	PKiKP	17 51 53.6	+0.6
	comp=Z,18nm,0.7s,baz=270,slow=2.1,SNR=60						
PLCA				SKP	SKPdf	17 55 02.2	-0.2
	comp=Z,7.3nm,0.9s,baz=220,slow=5.7,SNR=4.4						
PLCA				PKKPbc	PKKPbc	18 01 52.0	-0.6
	comp=Z,10nm,0.8s,baz=64,slow=4.9,SNR=13						
PLCA	Paso Flores	121.99	146		PKKPbc	18 01 51.6	-1.1
PLCA	Paso Flores	121.99	146	*e*P	PKiKP	17 51 53.5	+0.4
BLY	Banja Luka	122.03	320	⇓P	PKPdf	17 51 51.8	-0.8
BLY	Banja Luka	122.03	320		PKPdf	17 51 52.1	-0.5
K50A	Casco	122.03	42		PKPdf	17 51 52.0	-0.7
K50A	Casco	122.03	42	P	PKPdf	17 51 52.2	-0.4
	baz=295						
S49A	Springfield	122.05	48	P	PKiKP	17 51 53.1	0.0
	baz=290						
GEC2	GERESS Array S	122.06	326	*e*PKPdf	PKPdf	17 51 52.6	-0.1
	baz=54,slow=1.9						
GEC2	GERESS Array S	122.06	326		PKPdf	17 51 52.0	-0.6
GERES	GERESS Array B	122.06	326	PKP	PKPdf	17 51 52.5	-0.1
	comp=Z,10.0nm,0.8s,baz=66,slow=1.6,SNR=38						
GERES				PKKPbc	PKKPab	18 01 51.6	-0.1
	comp=Z,2.6nm,0.9s,baz=224,slow=3.5,SNR=9.0						
GERES				PKKP	PKKPdf	18 02 26.9	-0.3
	comp=Z,1.2nm,0.8s,baz=240,slow=0.8,SNR=4.4						
GERES	GERESS Array B	122.06	326		PKPdf	17 51 51.7	-1.0
CLZ	Clausthal	122.07	330	*e*PKPdf	PKiKP	17 51 53.0	+0.3
	baz=54,slow=1.9						
D51A	Lot 18 Range I	122.08	36	P	PKPdf	17 51 52.6	-0.1
	baz=300						
T49A	Edmonton	122.09	49		PKPdf	17 51 52.3	-0.7
T49A	Edmonton	122.09	49	P	PKiKP	17 51 53.2	+0.1
	baz=289						
U49A	Red Boiling Sp	122.09	50		PKPdf	17 51 52.3	-0.7
MOX	Moxa	122.16	329	*e*PKPdf	PKPdf	17 51 52.8	+0.1
	baz=54,slow=1.9						
LRAL	Lakeview Retre	122.16	54		PKPdf	17 51 52.5	-0.8
LRAL	Lakeview Retre	122.16	54	P	PKiKP	17 51 53.6	+0.2
	baz=286						
L50A	Kingsville	122.21	43	P	PKPdf	17 51 53.1	+0.1
	baz=294						
MOA	Molln	122.27	325	*e*PKPdf	PKPdf	17 51 52.3	-0.8
	comp=Z,9.6nm,1.0s						
MOA				*e*PKKPab	PKKPbc	18 01 51.3	-0.4
	comp=Z,6.3nm,0.9s						
MANZ	Manzenberg	122.28	328	*e*PKPdf	PKiKP	17 51 53.2	0.0
	baz=54,slow=1.9						
E51A	G1948 Merrick	122.29	37	P	PKPdf	17 51 53.0	-0.1
	baz=300						
M50A	Fremont	122.31	44	P	PKiKP	17 51 53.5	0.0
	baz=294						
F51A	Arnstein	122.33	38	P	PKPdf	17 51 53.1	-0.1
	baz=299						
WET	Wettzell	122.34	327	*e*PKPdf	PKiKP	17 51 53.3	0.0
	baz=54,slow=1.9						
SWET	Sewanee	122.38	52		PKPdf	17 51 53.1	-0.6
LSQQ	Lebel-sur-Quev	122.40	33	P	PKPdf	17 51 52.7	-0.5
	baz=304						
Y49A	Blount Mountai	122.40	53		PKPdf	17 51 53.1	-0.6
O50A	Cable	122.41	45	P	PKiKP	17 51 53.8	0.0
	baz=293						
SOKA	Soboth	122.42	323	*e*PKiKP	PKPdf	17 51 53.0	-0.4
	comp=Z,12nm,0.8s						
SOKA				*e*PKKPab	PKKPab	18 01 49.8	-0.3
	comp=Z,9.0nm,1.1s						
GTTG	Gottingen	122.45	330	*e*PKPdf	PKiKP	17 51 53.6	+0.2
	baz=54,slow=1.9						
P50A	Jamestown	122.48	46	P	PKPdf	17 51 53.5	-0.1
	baz=292						
N50A	Nevada	122.49	44	P	PKiKP	17 51 54.1	+0.3
	baz=293						
R50A	Paris	122.58	48		PKPdf	17 51 53.6	-0.3
R50A	Paris	122.58	48	P	PKPdf	17 51 53.9	0.0
	baz=291						
BRAL	Brewton	122.61	56		PKPdf	17 51 53.8	-0.4
I51A	Listowel	122.64	40	P	PKiKP	17 51 54.1	0.0
	baz=297						
Q50A	Georgetown	122.64	47	P	PKPdf	17 51 54.0	0.0
	baz=292						
T50A	Nancy	122.64	49	P	PKiKP	17 51 54.3	0.0
	baz=290						
VLDQ	Val d'Or	122.66	35		PKPdf	17 51 52.5	-1.2
S50A	Richmond	122.74	48	P	PKiKP	17 51 54.5	+0.1
	baz=291						
F52A	Sundridge	122.76	38	P	PKiKP	17 51 54.2	0.0
	baz=300						
OBKA	Obir	122.80	323	*e*PKPdf	PKPdf	17 51 53.6	-0.6
	comp=Z,12nm,1.0s						
OBKA				*e*PKKPab	PKKPab	18 01 49.0	+0.5
	comp=Z,13nm,1.0s						
K51A	Iona Station	122.80	42	P	PKiKP	17 51 54.3	0.0
	baz=296						
ACSO	Alum Creek Sta	122.82	45		PKPdf	17 51 53.7	-0.6
ACSO	Alum Creek Sta	122.82	45	P	PKiKP	17 51 54.7	+0.2
	baz=293						
FPAL	Fort Paine	122.84	52		PKPdf	17 51 53.8	-0.8
MLA1	Latheron	122.85	342	*e*P	PKPdf	17 51 53.5	-0.2
E52A	Mattawa	122.91	37	P	PKPdf	17 51 54.4	+0.1
	baz=301						
GRF	Grafenberg Arr	122.92	328	*e*PKPdf	PKPdf	17 51 54.2	0.0
	baz=54,slow=1.9						
M51A	Elyria	122.93	44	P	PKiKP	17 51 54.7	0.0
	baz=295						
H52A	Wyevale	122.97	39	P	PKiKP	17 51 54.6	0.0
	baz=299						
Z50A	Ashland	122.97	54		PKPdf	17 51 54.2	-0.6
Z50A	Ashland	122.97	54	P	PKiKP	17 51 55.1	0.0
	baz=287						
N51A	Ashland	122.97	44		PKPdf	17 51 54.0	-0.6
N51A	Ashland	122.97	44	P	PKiKP	17 51 54.9	+0.1
	baz=294						
Q51A	Peebles	123.03	46		PKPdf	17 51 54.2	-0.5
Q51A	Peebles	123.03	46	P	PKPdf	17 51 54.8	+0.1
	baz=292						
IBBN	Ibbenburen	123.03	332	*e*PKPdf	PKiKP	17 51 54.6	+0.1
	baz=54,slow=1.9						
250A	Grady	123.04	55		PKPdf	17 51 54.5	-0.4
LJU	Ljubljana	123.04	323	*i* PKPdf	PKPdf	17 51 54.6	+0.1
I52A	Shelburne	123.06	40	P	PKiKP	17 51 55.0	+0.1
	baz=298						
P51A	Williamsport	123.06	46		PKPdf	17 51 54.0	-0.7
P51A	Williamsport	123.06	46	P	PKPdf	17 51 54.7	-0.1
	baz=293						
D53A	Lac Vacive, Po	123.06	36	P	PKPdf	17 51 54.6	+0.1
	baz=302						
O51A	Pataskala	123.12	45	P	PKiKP	17 51 55.2	+0.1
	baz=294						
R51A	Hillsboro	123.12	47	P	PKPdf	17 51 54.8	-0.1
	baz=292						
RJOB	Jochberg	123.16	325	*e*PKPdf	PKPdf	17 51 54.4	-0.4
	baz=54,slow=1.9						
KBA	Koelnbreinsper	123.20	324	*e*PKPdf	PKPdf	17 51 54.2	-0.8
	comp=Z,13nm,1.1s						
KBA				*e*PKKPab	PKKPbc	18 01 47.6	-0.6
	comp=Z,7.7nm,1.1s						
J52A	Paris	123.24	41	P	PKPdf	17 51 55.1	+0.1
	baz=297						
MYKA	Terra Mystica	123.27	324	*e*PKPdf	PKPdf	17 51 54.3	-0.7
	comp=Z,12nm,1.2s						
MYKA				*e*PKKPab	PKKPbc	18 01 48.0	+0.2
	comp=Z,7.4nm,0.9s						
T51A	Gray	123.33	49	P	PKiKP	17 51 55.8	+0.2
	baz=290						
S51A	Beattyville	123.36	48		PKPdf	17 51 55.1	-0.3
S51A	Beattyville	123.36	48	P	PKiKP	17 51 55.8	+0.1
	baz=291						
SADO	Sadowa	123.37	39		PKPdf	17 51 54.5	-0.6
CPCT	Cooper Cave	123.40	51		PKPdf	17 51 55.1	-0.4
MCD	Coleburn Disti	123.41	342	*e*P	PKPdf	17 51 54.2	-0.6
M52A	Chesterland	123.41	43		PKPdf	17 51 55.1	-0.3
M52A	Chesterland	123.41	43	P	PKiKP	17 51 55.7	0.0
	baz=295						
V51A	Loudon	123.42	50		PKPdf	17 51 55.6	0.0
V51A	Loudon	123.42	50	P	PKiKP	17 51 56.0	+0.2
	baz=290						
X51A	Calhoun	123.42	52		PKPdf	17 51 54.8	-0.8
X51A	Calhoun	123.42	52	P	PKPdf	17 51 55.3	-0.3
	baz=288						
VOJS	Vojsko	123.44	323	*i* PKPdf	PKPdf	17 51 54.9	-0.5
ALGO	Algonquin Park	123.44	37	P	PKPdf	17 51 55.4	+0.1
	baz=301						
SCHQ	Schefferville	123.45	23	PKP	PKPdf	17 51 54.8	-0.3
	comp=Z,48nm,0.9s,baz=353,slow=2.0,SNR=62						
SCHQ				PKKPbc	PKKPab	18 01 45.6	+0.2
	comp=Z,5.8nm,0.7s,baz=142,slow=2.2,SNR=11						
E53A	Dumoine, Ponti	123.45	36	P	PKPdf	17 51 55.3	0.0
	baz=302						
N52A	McGinn’s Farm,	123.49	44	P	PKiKP	17 51 56.0	+0.2
	baz=295						
G53A	Haliburton	123.52	38	P	PKPdf	17 51 55.5	0.0
	baz=300						
I53A	Kortright Cn E	123.54	40	P	PKiKP	17 51 55.9	+0.1
	baz=298						
Z51A	Franklin	123.55	53		PKPdf	17 51 55.5	-0.4
TEIG	Tepich	123.55	69		PKiKP	17 51 56.5	0.0
NRS	Narsarsuaq	123.60	8	⇓*i*P	PKPdf	17 51 55.0	-0.1
	comp=Z,103nm,0.8s						
NRS	Narsarsuaq	123.60	8	⇓*i*PKIKP	PKPdf	17 51 55.0	-0.1
NRS				pmax	pmax		
	comp=Z,100nm,0.8s						
NRS	Narsarsuaq	123.60	8		PKPdf	17 51 54.1	-1.0
D54A	Lac Fusel, La	123.63	35	P	PKPdf	17 51 55.2	-0.5
	baz=303						
P52A	Corning	123.66	45	P	PKPdf	17 51 55.9	0.0
	baz=294						
O52A	Adamsville	123.67	45		PKPdf	17 51 55.1	-0.9
O52A	Adamsville	123.67	45	P	PKiKP	17 51 56.2	0.0
	baz=294						
G54A	Lake Saint Pet	123.71	38	P	PKPdf	17 51 56.0	+0.1
	baz=301						
E54A	Lac Daplat, Po	123.71	36	P	PKPdf	17 51 55.6	-0.2
	baz=302						
S52A	Salyersville	123.72	48	P	PKiKP	17 51 57.0	+0.6
	baz=292						
FUR	Furstenfeldbru	123.77	326	*e*PKPdf	PKPdf	17 51 55.9	0.0
	baz=54,slow=1.9						
TZTN	Tazewell	123.78	49		PKPdf	17 51 56.2	0.0
TZTN	Tazewell	123.78	49	P	PKiKP	17 51 57.0	+0.5
	baz=291						
R52A	Catlettsburg	123.80	47	P	PKiKP	17 51 56.4	-0.1
	baz=292						
H53A	Bobcaygeon	123.82	39	P	PKiKP	17 51 56.3	-0.1
	baz=300						
BUG	Bochum--Univer	123.83	331	*e*PKPdf	PKiKP	17 51 56.0	-0.1
	baz=54,slow=1.9						
Q52A	Bidwell	123.83	46	P	PKPdf	17 51 56.3	0.0
	baz=293						
451A	Vernon	123.83	57		PKiKP	17 51 56.7	-0.1
ABTA	Abfaltersbach	123.86	324	*e*PKPdf	PKPdf	17 51 55.5	-0.7
	comp=Z,28nm,1.0s,SNR=6.4						
ABTA				*e*PKKPab	PKKPbc	18 01 45.4	-0.1
	comp=Z,14nm,1.3s						
TKL	Tuckaleechee C	123.91	50	PKKPbc	PKKPbc	18 01 41.4	-3.3
	comp=Z,4.4nm,0.7s,baz=120,slow=19,SNR=8.0						
TKL	Tuckaleechee C	123.91	50	PKIKP	PKPdf	17 51 56.0	-0.5
TKL	Tuckaleechee C	123.91	50		PKPdf	17 51 56.0	-0.5
M53A	WI Miller and	123.92	43	P	PKPdf	17 51 56.5	+0.1
	baz=296						
L53A	Girard	123.97	42	P	PKPdf	17 51 56.6	+0.1
	baz=297						
W52A	Murphy	123.98	51		PKPdf	17 51 56.5	-0.2
W52A	Murphy	123.98	51	P	PKiKP	17 51 57.9	+0.9
	baz=289						
T52A	Hallie	124.00	48		PKPdf	17 51 56.0	-0.7
T52A	Hallie	124.00	48	P	PKiKP	17 51 57.4	+0.4
	baz=291						
STAL	STALIGIAL	124.01	324		PKPdf	17 51 55.6	-0.8
TNS	Taunus Mts	124.03	330	*e*PKPdf	PKiKP	17 51 56.6	-0.1
	baz=54,slow=1.9						
O53A	New Philadelph	124.05	44	P	PKiKP	17 51 57.1	+0.1
	baz=295						
ERPA	Erie	124.07	42		PKPdf	17 51 56.2	-0.5
ERPA	Erie	124.07	42	P	PKPdf	17 51 56.7	0.0
	baz=297						
WATA	Walderalm	124.08	325	*e*PKiKP	PKPdf	17 51 56.4	-0.3
	comp=Z,32nm,1.1s,SNR=5.5						
WATA				*e*PKKPab	PKKPbc	18 01 45.6	+0.9
	comp=Z,8.9nm,1.0s						
N53A	Lisbon	124.08	44		PKPdf	17 51 56.2	-0.5
N53A	Lisbon	124.08	44	P	PKiKP	17 51 57.2	+0.2
	baz=295						
WTTA	Wattenberg	124.08	325	*e*PKiKP	PKPdf	17 51 56.4	-0.3
	comp=Z,48nm,1.0s,SNR=9.5						
WTTA				*e*PKKPab	PKKPab	18 01 42.3	-0.8
	comp=Z,11nm,1.0s						
152A	Waverly Hall	124.11	54		PKPdf	17 51 56.2	-0.8
ALLY	Alegheny Colle	124.18	42		PKPdf	17 51 56.3	-0.6
P53A	Whipple	124.24	45		PKPdf	17 51 56.8	-0.3
P53A	Whipple	124.24	45	P	PKiKP	17 51 57.7	+0.3
	baz=294						
Y52A	Lilburn	124.27	53		PKPdf	17 51 57.2	-0.1
Y52A	Lilburn	124.27	53	P	PKiKP	17 51 58.1	+0.5
	baz=288						
352A	Blakely	124.28	56		PKiKP	17 51 57.7	+0.1
R53A	Hurricane	124.30	47		PKPdf	17 51 56.4	-0.8
R53A	Hurricane	124.30	47	P	PKiKP	17 51 58.0	+0.5
	baz=293						
MOTA	Moosalm	124.34	326	*e*PKiKP	PKPdf	17 51 56.9	-0.3
	comp=Z,44nm,1.0s,SNR=14						
MOTA				*e*PKKPab	PKKPab	18 01 42.9	+0.9
	comp=Z,13nm,1.1s						
SQTA	Sankt Quirin	124.35	326	*e*PKiKP	PKPdf	17 51 57.0	-0.1
	comp=Z,25nm,1.0s,SNR=10						
SQTA				*e*PKKPab	PKKPab	18 01 42.4	+0.5
	comp=Z,11nm,0.8s						
E55A	Montcerf-Lytto	124.35	36	P	PKPdf	17 51 57.0	0.0
	baz=303						
D55A	Sainte-Anne-du	124.38	35	P	PKPdf	17 51 56.9	-0.2
	baz=304						
T53A	Wise	124.38	48	P	PKiKP	17 51 58.3	+0.5
	baz=292						
Q53A	Leroy	124.40	46	P	PKiKP	17 51 57.6	-0.1
	baz=294						
J54A	Appleton	124.42	40		PKPdf	17 51 56.6	-0.6
J54A	Appleton	124.42	40	P	PKPdf	17 51 57.3	0.0
	baz=299						
DELO	Deloro Mine	124.44	38		PKPdf	17 51 56.2	-1.1
RETA	Reutte	124.45	326	*i* PKiKP	PKPdf	17 51 57.0	-0.2
	comp=Z,16nm,1.1s						
RETA				*e*PKKPab	PKKPab	18 01 42.0	+0.6
	comp=Z,7.1nm,1.2s						
L54A	Sinclairville	124.47	41	P	PKPdf	17 51 57.5	+0.1
	baz=298						
AHRW	Bad Neuenahr-A	124.50	331	*e*PKPdf	PKiKP	17 51 57.6	+0.1
	baz=54,slow=1.9						
PLVO	Plevna	124.50	37		PKPdf	17 51 56.5	-0.8
F55A	Otter Lake	124.52	36	P	PKPdf	17 51 57.2	-0.2
	baz=303						
STU	Stuttgart	124.54	328	*e*PKPdf	PKPdf	17 51 57.4	+0.1
	baz=54,slow=1.9						
STU	Stuttgart	124.54	328	PKIKP	PKPdf	17 51 56.3	-1.0
STU	Stuttgart	124.54	328		PKPdf	17 51 56.2	-1.0
I55A	Frankford	124.55	39	P	PKPdf	17 51 57.5	0.0
	baz=300						
ESY	Stoneypath	124.56	340	*e*P	PKPdf	17 51 56.6	-0.5
M54A	Oil Creek Stat	124.56	42		PKPdf	17 51 56.6	-1.0
M54A	Oil Creek Stat	124.56	42	P	PKPdf	17 51 57.7	0.0
	baz=297						
MEDO	Medina	124.58	40		PKPdf	17 51 57.2	-0.3
N54A	Moraine State	124.59	43		PKPdf	17 51 57.3	-0.4
N54A	Moraine State	124.59	43	P	PKiKP	17 51 58.0	-0.1
	baz=296						
G55A	Calabogie	124.61	37	P	PKPdf	17 51 57.5	-0.1
	baz=302						
V53A	Saluda	124.64	50		PKPdf	17 51 57.9	-0.1
V53A	Saluda	124.64	50	P	PKiKP	17 51 58.9	+0.6
	baz=291						
X53A	Estanollee	124.66	52	P	PKiKP	17 51 59.0	+0.7
	baz=290						
O54A	Avella	124.66	44		PKPdf	17 51 57.3	-0.5
O54A	Avella	124.66	44	P	PKiKP	17 51 58.7	+0.5
	baz=296						
H55A	Tweed	124.69	38	P	PKPdf	17 51 57.6	-0.1
	baz=301						
UBR	Ueberruh	124.69	327	*e*PKPdf	PKPdf	17 51 57.6	-0.1
	baz=54,slow=1.9						
K54A	Basiliko Farm,	124.70	41	P	PKPdf	17 51 57.9	0.0
	baz=298						
FETA	Feichten	124.73	326	*e*PKiKP	PKPdf	17 51 58.1	+0.2
	comp=Z,26nm,0.8s,SNR=14						
FETA				*e*PKKPab	PKKPbc	18 01 42.1	-0.1
	comp=Z,9.6nm,1.1s						
TIP	Timpagrande	124.73	315	⇑P	PKiKP	17 51 58.6	+0.2
CTI	Castel Tesino	124.75	324	PKIKP	PKPdf	17 51 56.4	-1.5
CTI	Castel Tesino	124.75	324		PKPdf	17 51 56.4	-1.5
D56A	ZEC Mazanza, M	124.76	34	P	PKPdf	17 51 57.6	-0.2
	baz=305						
BG3	Lake Jocassee	124.78	51		PKPdf	17 51 58.0	-0.3
P54A	Burton	124.84	45	P	PKiKP	17 51 58.7	+0.1
	baz=295						
Q54A	Coxs Mills	124.84	46		PKPdf	17 51 58.0	-0.3
Q54A	Coxs Mills	124.84	46	P	PKiKP	17 51 58.7	+0.1
	baz=294						
WVNY	West Valley, N	124.85	41		PKPdf	17 51 57.6	-0.5
GOGA	Godfrey	124.88	53	PKIKP	PKPdf	17 51 57.9	-0.5
GOGA	Godfrey	124.88	53		PKPdf	17 51 57.9	-0.5
GOGA	Godfrey	124.88	53	P	PKiKP	17 51 59.2	+0.4
	baz=289						
E56A	St. Veronique	124.89	35	P	PKPdf	17 51 57.7	-0.3
	baz=304						
J55A	Hilton	124.94	40		PKPdf	17 51 57.7	-0.5
J55A	Hilton	124.94	40	P	PKPdf	17 51 58.3	+0.1
	baz=300						
S54A	Dingess, Beckl	124.97	47		PKPdf	17 51 57.9	-0.6
S54A	Dingess, Beckl	124.97	47	P	PKiKP	17 51 58.9	0.0
	baz=293						
553A	Crawfordville	125.04	57		PKPdf	17 51 58.8	0.0
K55A	Perry	125.04	40	P	PKPdf	17 51 58.6	+0.1
	baz=299						
TGUH	Tegucigalpa,Un	125.05	77		PKPdf	17 51 58.6	-0.7
DAVA	Damuels	125.05	326	*e*PKiKP	PKPdf	17 51 58.3	-0.2
	comp=Z,26nm,0.8s,SNR=6.7						
DAVA				*i* PKKPab	PKKPbc	18 01 41.1	+0.2
	comp=Z,7.3nm,0.9s						
R54A	Victor	125.05	47	P	PKPdf	17 51 58.9	+0.2
	baz=294						
T54A	Tazewell	125.06	48	P	PKiKP	17 51 59.2	0.0
	baz=292						
L55A	Hinsdale	125.07	41	P	PKiKP	17 51 58.8	-0.1
	baz=298						
U54A	Nelsons Funny	125.08	49		PKPdf	17 51 58.4	-0.4
U54A	Nelsons Funny	125.08	49	P	PKiKP	17 51 59.4	+0.2
	baz=292						
TEOL	Teolo	125.11	323		PKPdf	17 51 57.9	-0.7
PECO	Prince Edward	125.12	39		PKPdf	17 51 57.8	-0.7
M55A	Ridgway	125.19	42		PKPdf	17 51 58.1	-0.7
M55A	Ridgway	125.19	42	P	PKiKP	17 51 59.1	-0.1
	baz=298						
EDMD	Edmundbyers	125.20	339	*e*P	PKPdf	17 51 58.2	-0.2
EKA	Eskdalemuir Ar	125.21	340	SKPbc	SKPbc	17 54 48.1	
	comp=Z,1.7nm,0.6s,baz=28,slow=2.7,SNR=3.1						
EKA				PKKPbc	PKKPbc	18 01 38.5	-1.9
	comp=Z,3.1nm,0.8s,baz=227,slow=3.6,SNR=7.6						
H56A	Elgin	125.23	38	P	PKiKP	17 51 59.0	-0.2
	baz=302						
ESK	Eskdalemuir	125.24	340	*e*P	PKPdf	17 51 57.4	-1.1
MCWV	Mont Chateau	125.25	44	PKPdf	PKPdf	17 51 58.6	-0.4
V54A	Nebo	125.26	50	P	PKiKP	17 51 59.7	+0.1
	baz=291						
BFO	Black Forest	125.26	328	*e*PKPdf	PKPdf	17 51 58.5	-0.3
	baz=54,slow=1.9						
BFO	Black Forest	125.26	328	PKIKP	PKPdf	17 51 57.8	-1.0
BFO	Black Forest	125.26	328		PKPdf	17 51 57.8	-1.0
D57A	Chemin Vers le	125.27	34	P	PKPdf	17 51 58.5	-0.3
	baz=306						
TSUM	Tsumeb	125.30	242		PKPdf	17 51 60.0	+0.2
W54A	Cherokee Point	125.32	50	P	PKiKP	17 52 00.2	+0.5
	baz=291						
P55A	Reedsville	125.33	45	P	PKiKP	17 51 59.5	-0.1
	baz=296						
TRQ	Mont Tremblant	125.35	35		PKPdf	17 51 57.8	-1.2
N55A	Marion Center	125.35	43	P	PKPdf	17 51 58.9	-0.2
	baz=297						
X54A	Belton	125.36	51	P	PKiKP	17 52 00.1	+0.3
	baz=290						
Q55A	Buckhannon	125.37	45	P	PKPdf	17 51 58.9	-0.3
	baz=295						
TIGA	Tifton	125.38	55		PKiKP	17 52 00.4	+0.6
TIGA	Tifton	125.38	55	P	PKiKP	17 52 00.1	+0.3
	baz=287						
O55A	Ligonier	125.39	44	P	PKiKP	17 51 59.5	-0.1
	baz=296						
154A	Montrose	125.42	54		PKPdf	17 51 59.2	-0.3
INTR	Introdacqua	125.42	319		PKPdf	17 51 59.0	-0.3
E57A	Chemin Saint G	125.47	35	P	PKPdf	17 51 59.0	-0.2
	baz=305						
WLF	Walferdange	125.53	330	*e*PKPdf	PKiKP	17 52 00.1	+0.6
	baz=54,slow=1.9						
WLF	Walferdange	125.53	330	PKIKP	PKPdf	17 51 59.0	-0.2
WLF	Walferdange	125.53	330		PKPdf	17 51 59.0	-0.2
NRCA	Norcia	125.53	320		PKPdf	17 51 58.6	-0.9
K56A	Middlesex	125.54	40	P	PKPdf	17 51 59.1	-0.3
	baz=300						
J56A	Wolcott	125.55	39		PKPdf	17 51 58.1	-1.2
J56A	Wolcott	125.55	39	P	PKPdf	17 51 59.1	-0.3
	baz=301						
HODGE	Hodges	125.56	51		PKPdf	17 51 59.4	-0.3
M56A	Emporium	125.56	42		PKPdf	17 51 58.5	-1.1
M56A	Emporium	125.56	42	P	PKPdf	17 51 59.6	+0.1
	baz=298						
S55A	Lewisburg	125.57	47	P	PKPdf	17 51 59.4	-0.3
	baz=294						
T55A	Pulaski	125.62	48	P	PKPdf	17 51 59.8	0.0
	baz=293						
R55A	Marlinton	125.64	46		PKPdf	17 51 59.5	-0.4
R55A	Marlinton	125.64	46	P	PKPdf	17 52 00.0	+0.2
	baz=294						
LATQ	La Tuque	125.66	33	P	PKPdf	17 51 59.5	0.0
	baz=307						
L56A	Greenwood	125.66	41		PKPdf	17 51 58.8	-1.0
L56A	Greenwood	125.66	41	P	PKPdf	17 51 59.7	-0.1

	baz=299						
U55A	TA2, Sparta	125.67	48	P	PKPdf	17 52 00.2	+0.2
	baz=292						
PAULI	Pauline	125.70	51		PKPdf	17 51 59.3	-0.7
G57A	Newington	125.72	36	P	PKPdf	17 51 59.5	-0.1
	baz=304						
N56A	West Decatur	125.75	42	P	PKPdf	17 52 00.2	+0.2
	baz=298						
HPK	Haverah Park	125.77	338	*e*P	PKPdf	17 51 59.4	-0.1
D58A	Chemin du LacG	125.78	33	P	PKPdf	17 51 59.2	-0.5
	baz=307						
V55A	Taylorsville	125.78	49		PKPdf	17 51 59.8	-0.4
V55A	Taylorsville	125.78	49	P	PKiKP	17 52 00.6	+0.1
	baz=292						
KESW	Keswick, Cumbr	125.80	340	*e*P	PKPdf	17 51 59.2	-0.3
TUE	Stuetta	125.82	326		PKPdf	17 51 59.2	-0.9
H57A	Richville	125.83	37	P	PKPdf	17 51 59.7	-0.2
	baz=303						
BLA	Blacksburg	125.86	47	PKIKP	PKPdf	17 51 59.3	-0.9
BLA	Blacksburg	125.86	47		PKPdf	17 51 59.3	-0.9
BLA	Blacksburg	125.86	47	P	PKPdf	17 52 00.3	+0.1
	baz=294						
O56A	Blue Knob Stat	125.87	43		PKPdf	17 51 59.8	-0.4
O56A	Blue Knob Stat	125.87	43	P	PKiKP	17 52 00.5	-0.2
	baz=297						
I57A	Carthage	125.95	38	P	PKPdf	17 52 00.1	-0.1
	baz=302						
ECH	Echery	125.95	329	PKIKP	PKPdf	17 51 59.3	-0.8
ECH	Echery	125.95	329		PKPdf	17 51 59.3	-0.8
KMSC	Kings Mountain	125.96	50		PKPdf	17 51 59.9	-0.6
KMSC	Kings Mountain	125.96	50	P	PKiKP	17 52 00.9	0.0
	baz=291						
X55A	Gracelyn & Ava	125.96	51	P	PKiKP	17 52 02.2	+1.3
	baz=291						
Y55A	Saluda	125.97	52	P	PKiKP	17 52 01.2	+0.3
	baz=290						
F58A	St-Lin Laurent	125.97	35	P	PKPdf	17 52 00.1	0.0
	baz=305						
Q56A	Snyder Ridge,	125.98	45		PKPdf	17 51 59.9	-0.6
Q56A	Snyder Ridge,	125.98	45	P	PKPdf	17 52 00.4	0.0
	baz=296						
E58A	La Victoria	125.99	34	P	PKPdf	17 52 00.1	-0.1
	baz=306						
J57A	Williamstown	126.02	39		PKPdf	17 51 60.0	-0.3
J57A	Williamstown	126.02	39	P	PKPdf	17 52 00.4	+0.1
	baz=302						
P56A	Dayton Farm, R	126.02	44	P	PKPdf	17 52 00.4	0.0
	baz=296						
K57A	Scipio Center	126.04	40	P	PKPdf	17 52 00.2	-0.2
	baz=301						
ZCCA	Zocca	126.07	323		PKPdf	17 52 00.6	+0.1
R56A	Bull Pasture M	126.10	46	P	PKPdf	17 52 00.9	+0.2
	baz=295						
GAL1	Galloway	126.11	341	*e*P	PKPdf	17 51 59.7	-0.4
255A	Hazlehurst	126.14	54		PKPdf	17 52 00.8	-0.1
SSPA	Standing Stone	126.16	43		PKPdf	17 52 00.5	-0.1
SSPA	Standing Stone	126.16	43	P	PKPdf	17 52 00.7	+0.1
	baz=298						
L57A	Andrews Acres	126.19	41	P	PKPdf	17 52 00.8	+0.1
	baz=300						
T56A	Rocky Mt	126.21	47	P	PKPdf	17 52 01.0	+0.1
	baz=294						
U56A	King	126.22	48		PKPdf	17 52 00.2	-0.7
U56A	King	126.22	48	P	PKiKP	17 52 01.4	0.0
	baz=293						
LONY	Lake Ozonia	126.23	37		PKPdf	17 52 00.4	-0.3
LONY	Lake Ozonia	126.23	37	P	PKPdf	17 52 00.6	-0.1
	baz=304						
G58A	Ormstown	126.24	36	P	PKPdf	17 52 00.4	-0.3
	baz=304						
S56A	Natural Bridge	126.29	47	P	PKPdf	17 52 01.3	+0.2
	baz=295						
M57A	Sunshine Farm,	126.33	41		PKPdf	17 52 00.7	-0.3
M57A	Sunshine Farm,	126.33	41	P	PKiKP	17 52 01.3	-0.2
	baz=299						
V56A	Mocksville	126.34	49	P	PKiKP	17 52 01.5	-0.1
	baz=292						
E59A	St. Maurice	126.35	34	P	PKPdf	17 52 01.0	+0.2
	baz=307						
D59A	Saint-Raymond	126.40	33	P	PKPdf	17 52 00.9	0.0
	baz=308						
X56A	White Oak	126.42	51	P	PKiKP	17 52 02.1	+0.3
	baz=291						
LATE	Laterza	126.47	320		PKPdf	17 52 00.7	-0.6
J58A	Remsen	126.48	38		PKPdf	17 52 00.9	-0.3
J58A	Remsen	126.48	38	P	PKPdf	17 52 01.4	+0.2
	baz=302						
I58A	Old Forge	126.50	38	P	PKPdf	17 52 01.4	+0.1
	baz=303						
O57A	Amberson	126.53	43	P	PKPdf	17 52 01.6	+0.1
	baz=298						
Q57A	Strasburg	126.53	45	P	PKPdf	17 52 01.6	+0.1
	baz=296						
W56A	Indian Trail	126.53	50	P	PKiKP	17 52 01.9	-0.1
	baz=292						
IOMK	Kirk Michael	126.56	340	*e*P	PKPdf	17 51 59.7	-1.3
K58A	Earlville	126.57	39		PKPdf	17 52 01.0	-0.4
K58A	Earlville	126.57	39	P	PKPdf	17 52 01.5	+0.1
	baz=301						
F59A	Saint Guilaume	126.57	35	P	PKPdf	17 52 01.3	+0.1
	baz=306						
H58A	Gabriels	126.58	37	P	PKPdf	17 52 01.5	+0.1
	baz=304						
P57A	Homestead Farm	126.60	44		PKPdf	17 52 00.7	-0.9
P57A	Homestead Farm	126.60	44	P	PKPdf	17 52 01.6	+0.1
	baz=297						
BINY	Binghamton	126.64	40		PKPdf	17 52 00.8	-0.8
BINY	Binghamton	126.64	40	P	PKPdf	17 52 01.7	+0.1
	baz=301						
WIM	Isle of Man	126.69	340	*e*P	PKPdf	17 52 00.9	-0.4
FRNY	Flat Rock	126.69	36		PKPdf	17 52 00.8	-0.8
S57A	Dark Hollow, R	126.69	46		PKPdf	17 52 01.1	-0.7
S57A	Dark Hollow, R	126.69	46	P	PKPdf	17 52 01.7	-0.1
	baz=295						
H59A	Cadyville	126.74	36	P	PKPdf	17 52 01.6	-0.1
	baz=304						
M58A	Price's Panora	126.75	41	P	PKPdf	17 52 02.0	+0.2
	baz=300						
R57A	Stanardsville	126.77	45	P	PKPdf	17 52 02.1	+0.2
	baz=296						
ROC1	El Roble	126.78	139		PKPdf	17 52 01.6	-0.8
G59A	Clarenceville	126.79	36	P	PKPdf	17 52 01.6	-0.1
	baz=305						
T57A	Hurt	126.79	47		PKPdf	17 52 01.7	-0.3
T57A	Hurt	126.79	47	P	PKPdf	17 52 02.2	+0.2
	baz=294						
NCB	Newcomb	126.80	37		PKPdf	17 52 01.4	-0.5
BIRD	Birdtown, Kers	126.80	50		PKPdf	17 52 01.7	-0.3
L58A	Harry Jones Me	126.81	40	P	PKPdf	17 52 02.2	+0.3
	baz=301						
N58A	Sunbury	126.84	42		PKPdf	17 52 01.4	-0.5
N58A	Sunbury	126.84	42	P	PKPdf	17 52 02.1	+0.2
	baz=299						
656A	Willston	126.85	57		PKPdf	17 52 02.4	+0.1
V57A	Coltrane Farms	126.85	49	P	PKPdf	17 52 02.3	+0.2
	baz=293						
456A	Hilliard	126.88	56		PKiKP	17 52 02.7	-0.1
PEL	Peldehue	126.89	139	PKIKP	PKiKP	17 52 02.9	0.0
PEL	Peldehue	126.89	139		PKiKP	17 52 02.9	0.0
J59A	Piesco	126.91	38		PKPdf	17 52 01.5	-0.5
J59A	Piesco	126.91	38	P	PKPdf	17 52 02.1	+0.1
	baz=303						
D60A	Saint Jean D'O	126.95	33	P	PKPdf	17 52 01.6	-0.3
	baz=309						
U57A	Blanch	126.96	48	P	PKPdf	17 52 02.6	+0.2
	baz=294						
F60A	Warwick	126.97	34	P	PKPdf	17 52 01.9	-0.1
	baz=307						
W57A	Gilead	126.97	50		PKPdf	17 52 01.8	-0.5
W57A	Gilead	126.97	50	P	PKiKP	17 52 02.8	-0.1
	baz=292						
E60A	Ste Agathe de	127.00	33	P	PKPdf	17 52 01.9	-0.2
	baz=308						
SENIN	Lac Senin/Sane	127.02	327		PKPdf	17 52 02.1	-0.4
O58A	Lewisberry	127.05	43	P	PKPdf	17 52 02.4	0.0
	baz=298						
K59A	Cooperstown	127.06	39	P	PKPdf	17 52 02.4	0.0
	baz=302						
Q58A	Fox Den Farm,	127.08	44	P	PKPdf	17 52 02.5	+0.1
	baz=297						
157A	Early Branch	127.08	53	P	PKiKP	17 52 04.3	+1.2
	baz=290						
Y57A	Sumter	127.09	51		PKPdf	17 52 02.0	-0.6
Y57A	Sumter	127.09	51	P	PKiKP	17 52 04.4	+1.2
	baz=291						
P58A	Pank, Wackersv	127.09	44	P	PKPdf	17 52 02.8	+0.3
	baz=298						
Z57A	Bowman	127.10	52	P	PKiKP	17 52 03.6	+0.4
	baz=291						
I59A	Olmsteadville	127.11	37	P	PKPdf	17 52 02.7	+0.3
	baz=304						
PAGS	Pennsylvania G	127.14	42		PKPdf	17 52 01.7	-0.8
R58A	Rapidan	127.14	45	P	PKPdf	17 52 02.6	0.0
	baz=296						
D61A	St Aubert, Com	127.16	32	P	PKPdf	17 52 02.3	-0.1
	baz=310						
ACON	Acoyapa	127.18	79		PKPdf	17 52 02.9	-0.4
FOEL	Foel Wylfa	127.19	338	*e*P	PKPdf	17 52 02.1	-0.2
WPS	Cemaes, Angles	127.24	340	*e*P	PKPdf	17 52 01.7	-0.6
L59A	Walton	127.25	40		PKPdf	17 52 01.9	-0.9
L59A	Walton	127.25	40	P	PKPdf	17 52 02.9	+0.1
	baz=302						
G60A	Masonville	127.27	35	P	PKPdf	17 52 02.6	-0.1
	baz=306						
WLF1	Llynfaes	127.30	339	*e*P	PKPdf	17 52 01.4	-1.0
M59A	Waymart	127.34	40	P	PKiKP	17 52 03.2	-0.2
	baz=301						
T58A	Grand View Acr	127.34	47	P	PKPdf	17 52 03.2	+0.2
	baz=295						
YLL	Llanberis	127.34	339	*e*P	PKPdf	17 52 02.2	-0.3
H60A	Morristown	127.37	36	P	PKiKP	17 52 03.3	-0.2
	baz=306						
R58B	Mineral	127.38	46		PKPdf	17 52 02.1	-1.0
R58B	Mineral	127.38	46	P	PKPdf	17 52 03.0	-0.1
	baz=296						
V58A	Windy Hill, Pi	127.38	49		PKPdf	17 52 02.6	-0.5
V58A	Windy Hill, Pi	127.38	49	P	PKiKP	17 52 03.5	-0.2
	baz=294						
S58A	Poland Farm, P	127.41	46		PKPdf	17 52 03.1	0.0
S58A	Poland Farm, P	127.41	46	P	PKPdf	17 52 03.2	+0.1
	baz=296						
I60A	Shoreham	127.43	37	P	PKiKP	17 52 03.6	+0.1
	baz=304						
N59A	State Game Lan	127.43	41		PKPdf	17 52 03.0	-0.2
N59A	State Game Lan	127.43	41	P	PKiKP	17 52 03.5	-0.2
	baz=300						
SDMD	Soldier's Deli	127.44	43		PKPdf	17 52 02.7	-0.5
JTS	Las Juntas de	127.44	81	SKPbc	SKPbc	17 54 59.7	
	comp=Z,11nm,0.6s,baz=43,slow=13,SNR=6.5						
JTS	Las Juntas de	127.44	81	PKIKP	PKPdf	17 52 03.5	-0.4
JTS	Las Juntas de	127.44	81		PKPdf	17 52 03.5	-0.4
O59A	Robesonia	127.45	42	P	PKPdf	17 52 03.5	+0.3
	baz=299						
ACCN	Adirondack Com	127.46	38		PKPdf	17 52 02.7	-0.4
VT1	Waterbury	127.47	36		PKPdf	17 52 03.0	-0.1
E61A	Lac Etchemin	127.48	33	P	PKiKP	17 52 03.5	-0.1
	baz=309						
F61A	St Evariste	127.50	34	P	PKiKP	17 52 03.6	-0.1
	baz=308						
MVL	Millersville	127.50	43		PKPdf	17 52 03.2	0.0
U58A	Oxford	127.56	48	P	PKiKP	17 52 04.3	+0.3
	baz=294						
NHSC	New Hope	127.58	52		PKiKP	17 52 04.1	0.0
NHSC	New Hope	127.58	52	P	PKiKP	17 52 04.7	+0.5
	baz=291						
W58A	Raeford	127.60	49	P	PKiKP	17 52 04.4	+0.3
	baz=293						
G61A	St-Isidore-de-	127.62	35	P	PKiKP	17 52 03.8	-0.2
	baz=307						
CBN	Corbin Frederi	127.62	45		PKPdf	17 52 03.4	-0.2
P59A	Jarrettsville	127.63	43	P	PKPdf	17 52 03.8	+0.3
	baz=299						
STRD	Stroud	127.68	337	*e*P	PKPdf	17 52 03.4	+0.2
J60A	Lant Hill Farm	127.69	38	P	PKPdf	17 52 03.8	+0.3
	baz=304						
Y58A	Scranton	127.69	51	PKPdf	PKPdf	17 52 03.5	-0.3
Y58A	Scranton	127.69	51	P	PKiKP	17 52 04.9	+0.5
	baz=292						
158A	Hollywood	127.70	52	P	PKiKP	17 52 04.7	+0.3
	baz=291						
X58A	Rowland	127.70	50		PKPdf	17 52 04.1	+0.3
X58A	Rowland	127.70	50	P	PKiKP	17 52 05.3	+0.9
	baz=293						
K60A	Five Rivers En	127.75	39	P	PKiKP	17 52 04.2	0.0
	baz=303						
Z58A	St. Stephen	127.78	52	P	PKiKP	17 52 04.9	+0.4
	baz=291						
R59A	King George, V	127.81	45	P	PKiKP	17 52 04.3	-0.1
	baz=297						
Q59A	Harwood	127.83	44	P	PKiKP	17 52 04.6	+0.2
	baz=298						
MCH1	Michaelchurch	127.83	338	*e*P	PKPdf	17 52 03.0	-0.5
D62A	Allapoint, All	127.83	31		PKPdf	17 52 03.0	-0.6
D62A	Allapoint, All	127.83	31	P	PKPdf	17 52 03.5	-0.2
	baz=311						
H61A	Lyndonville	127.83	35	P	PKiKP	17 52 04.3	-0.1
	baz=306						
LUPA	Lehigh Univers	127.85	41		PKPdf	17 52 03.5	-0.4
L60A	Shokan	127.87	39	P	PKiKP	17 52 04.3	-0.2
	baz=302						
S59A	Mechanicsville	127.88	45	P	PKPdf	17 52 04.3	+0.3
	baz=297						
N60A	Cedar Hill Far	127.89	41	P	PKPdf	17 52 04.1	+0.1
	baz=301						
M60A	Port Jervis	127.97	40	P	PKPdf	17 52 04.2	+0.1
	baz=302						
O60A	Telford	127.97	42	P	PKiKP	17 52 04.6	-0.2
	baz=300						
LBNH	Lisbon	128.01	36	PKIKP	PKPdf	17 52 04.1	0.0
LBNH	Lisbon	128.01	36		PKPdf	17 52 04.1	0.0
LBNH	Lisbon	128.01	36	P	PKiKP	17 52 04.6	-0.1
	baz=306						
I61A	Oroboro, Fairl	128.02	36	P	PKPdf	17 52 04.4	+0.3
	baz=306						
ESPN	Las Esperanzas	128.03	79		PKPdf	17 52 04.2	-0.7
T59A	Double "B" Far	128.04	46		PKPdf	17 52 04.1	-0.2
T59A	Double "B" Far	128.04	46	P	PKPdf	17 52 04.6	+0.3
	baz=296						
V59A	Middlesex	128.04	48	P	PKiKP	17 52 04.8	-0.2
	baz=294						
P60A	Greenville	128.07	42		PKPdf	17 52 03.9	-0.4
P60A	Greenville	128.07	42	P	PKPdf	17 52 04.5	+0.2
	baz=300						
K61A	Williamstown	128.10	38	P	PKiKP	17 52 05.0	0.0
	baz=304						
ODNJ	Ogdensburg	128.10	41		PKPdf	17 52 03.8	-0.6
HNH	Hanover	128.11	37		PKPdf	17 52 04.3	0.0
DWPF	Disney Wildern	128.13	58		PKiKP	17 52 05.2	-0.2
DWPF	Disney Wildern	128.13	58	P	PKiKP	17 52 06.4	+0.9
	baz=286						
U59A	Littleton	128.13	47		PKPdf	17 52 04.2	-0.4
U59A	Littleton	128.13	47	P	PKiKP	17 52 05.7	+0.6
	baz=295						
PSUB	Penn St. - Bra	128.13	42		PKPdf	17 52 04.1	-0.3
W59A	Clinton	128.13	49	P	PKiKP	17 52 05.8	+0.6
	baz=294						
R60A	Leonardtown, M	128.15	45	P	PKiKP	17 52 06.4	+1.3
	baz=298						
J61A	Chester	128.15	37	P	PKiKP	17 52 05.2	+0.1
	baz=305						
BNI	Bardonecchia	128.17	326	PKIKP	PKPdf	17 52 04.2	-0.4
BNI	Bardonecchia	128.17	326	PKPdf	PKPdf	17 52 04.2	-0.4
L61A	Hillsdale 1, H	128.18	39	P	PKPdf	17 52 04.7	+0.2
	baz=303						
G62A	West of Eustis	128.21	34		PKPdf	17 52 04.0	-0.5
G62A	West of Eustis	128.21	34	P	PKPdf	17 52 04.6	+0.1
	baz=308						
X59A	McDuffie Farm,	128.25	50	P	PKiKP	17 52 05.4	0.0
	baz=293						
H62A	Milan	128.25	35		PKiKP	17 52 05.0	-0.2
H62A	Milan	128.25	35	P	PKiKP	17 52 05.2	0.0
	baz=307						
Y59A	Loris	128.27	51		PKPdf	17 52 04.8	-0.1
Y59A	Loris	128.27	51	P	PKiKP	17 52 06.4	+0.9
	baz=293						
Q60A	Greensboro	128.32	43		PKPdf	17 52 05.0	+0.2
Q60A	Greensboro	128.32	43	P	PKiKP	17 52 05.5	+0.1
	baz=299						
BRNJ	Basking Ridge	128.34	41		PKPdf	17 52 04.7	-0.1
D63A	Stockholm	128.34	31	P	PKPdf	17 52 04.5	-0.2
	baz=312						
S60A	Water View	128.36	45	P	PKiKP	17 52 05.4	-0.2
	baz=297						
KSCT	Kent School, K	128.48	39		PKPdf	17 52 04.9	-0.1
M61A	Granite Spring	128.52	40	P	PKiKP	17 52 05.6	-0.2
	baz=302						
CLF	Chambon-Foret	128.53	331		PKiKP	17 52 05.6	0.0
U60A	Pendleton	128.54	47	P	PKPdf	17 52 05.5	+0.2
	baz=296						
T60A	Surry	128.55	46		PKPdf	17 52 05.4	+0.1
T60A	Surry	128.55	46	P	PKPdf	17 52 05.6	+0.3
	baz=297						
I62A	Tamworth	128.57	36		PKPdf	17 52 04.3	-0.8
I62A	Tamworth	128.57	36	P	PKiKP	17 52 05.7	-0.1
	baz=306						
L61B	Northampton	128.58	38	P	PKPdf	17 52 05.5	+0.3
	baz=304						
E63A	Oxbow	128.59	32		PKPdf	17 52 04.0	-1.2
E63A	Oxbow	128.59	32	P	PKPdf	17 52 04.9	-0.2
	baz=311						
PAL	Palisades	128.59	40	PKIKP	PKPdf	17 52 04.7	-0.6
PAL	Palisades	128.59	40		PKPdf	17 52 04.7	-0.6
PAL	Palisades	128.59	40	P	PKPdf	17 52 05.6	+0.3
	baz=302						
FFD	Franklin Falls	128.62	36		PKPdf	17 52 05.5	+0.3
PQI	Presque Isle	128.63	31		PKPdf	17 52 05.0	-0.2
GO04	Tololo Observa	128.64	136		PKPdf	17 52 05.7	-0.3
O61A	Allentown	128.65	42	P	PKiKP	17 52 06.1	0.0
	baz=301						
J62A	Henniker	128.67	37	P	PKiKP	17 52 06.1	+0.1
	baz=306						
CPNY	Central Park	128.67	41		PKPdf	17 52 05.4	0.0
F63A	Nahmakanta, Br	128.69	33	PKPdf	PKPdf	17 52 05.3	0.0
F63A	Nahmakanta, Br	128.69	33	P	PKPdf	17 52 05.6	+0.2
	baz=310						
X60A	Albert Glenn T	128.72	49	P	PKiKP	17 52 07.2	+0.8
	baz=294						
K62A	Royalston	128.73	38		PKPdf	17 52 05.3	-0.3
K62A	Royalston	128.73	38	P	PKiKP	17 52 06.2	0.0
	baz=305						
V60A	Jim Taylor Roa	128.77	48		PKPdf	17 52 05.8	0.0
V60A	Jim Taylor Roa	128.77	48	P	PKiKP	17 52 07.1	+0.6
	baz=295						
G63A	Kingsbury	128.78	34	P	PKPdf	17 52 05.8	+0.2
	baz=309						
H63A	New Sharon	128.84	34	P	PKiKP	17 52 06.9	+0.6
	baz=308						
PKME	Peaks-Kenny Pk	128.87	33		PKPdf	17 52 05.9	+0.2
PKME	Peaks-Kenny Pk	128.87	33	P	PKiKP	17 52 07.0	+0.6
	baz=310						
QUA2	Belchertown	128.88	38		PKPdf	17 52 05.6	-0.2
E64A	Bridgewater	128.90	31	P	PKiKP	17 52 06.3	-0.1
	baz=312						
I63A	Otisfield	128.90	35	P	PKiKP	17 52 06.8	+0.3
	baz=307						
N62A	Caumsett State	128.92	40	P	PKiKP	17 52 07.0	+0.4
	baz=302						
R61A	Willards	128.99	44	P	PKiKP	17 52 07.3	+0.5
	baz=299						
F64A	Sherman	128.99	32		PKPdf	17 52 05.3	-0.6
F64A	Sherman	128.99	32	P	PKiKP	17 52 06.6	0.0
	baz=311						
M62A	Hamden	129.01	39	P	PKiKP	17 52 06.6	-0.2
	baz=303						
YLE	Yale	129.05	39		PKPdf	17 52 05.8	-0.3
S61A	Accomac	129.06	45		PKPdf	17 52 06.6	+0.3
S61A	Accomac	129.06	45	P	PKiKP	17 52 07.2	+0.2
	baz=298						
J63A	Strafford	129.07	36	P	PKiKP	17 52 07.1	+0.3
	baz=306						
WVL	Waterville	129.11	34		PKPdf	17 52 06.4	+0.3
U61A	Possum Corner	129.12	47		PKPdf	17 52 06.4	0.0
U61A	Possum Corner	129.12	47	P	PKiKP	17 52 07.2	0.0
	baz=296						
K63A	Dunstable	129.15	37	P	PKiKP	17 52 07.2	+0.2
	baz=306						
G64A	Maxfield	129.17	33	P	PKPdf	17 52 06.6	+0.3
	baz=310						
061Z	Ochoppi	129.18	61		PKPdf	17 52 07.0	+0.1
BATG	Bathurst New B	129.21	29		PKPdf	17 52 05.6	-0.7
W61A	Ground Anchor	129.22	48	P	PKiKP	17 52 07.2	-0.2
	baz=295						
HRV	Adam Dziewonsk	129.23	37	PKIKP	PKPdf	17 52 06.3	-0.2
HRV	Adam Dziewonsk	129.23	37		PKPdf	17 52 06.3	-0.2
HRV	Adam Dziewonsk	129.23	37	P	PKiKP	17 52 07.1	-0.1
	baz=305						
V61A	Roper	129.26	47		PKPdf	17 52 06.6	-0.1
V61A	Roper	129.26	47	P	PKiKP	17 52 07.4	0.0
	baz=296						
H64A	Troy	129.30	34	P	PKPdf	17 52 06.5	0.0
	baz=309						
WES	Weston	129.45	37	PKIKP	PKPdf	17 52 06.9	0.0
WES	Weston	129.45	37		PKPdf	17 52 06.9	0.0
CFA	Coronel Fontan	129.46	139	PKP	PKiKP	17 52 08.1	0.0
	comp=Z,26nm,0.7s,baz=250,slow=3.4,SNR=30						
CFA				SKPbc	SKPbc	17 55 05.0	+1.6
	comp=Z,49nm,0.9s,baz=250,slow=3.1,SNR=19						
I64A	Boothbay	129.52	35	P	PKiKP	17 52 07.4	-0.3
	baz=308						
M63A	Gales Ferry	129.56	39	P	PKPdf	17 52 07.2	+0.1
	baz=304						
L63A	North Scituate	129.57	38	P	PKPdf	17 52 07.5	+0.3
	baz=305						
BRYW	Bryant College	129.58	38		PKPdf	17 52 07.2	+0.1
H65A	Eastbrook	129.80	33	P	PKiKP	17 52 08.3	0.0
	baz=310						
G65A	Princeton	129.84	32		PKPdf	17 52 07.3	-0.2
G65A	Princeton	129.84	32	P	PKiKP	17 52 08.7	+0.4
	baz=311						
M64A	Tiverton	130.00	38	P	PKiKP	17 52 09.2	+0.5
	baz=305						
L64A	Middleborough	130.00	38	P	PKiKP	17 52 09.2	+0.5
	baz=306						
EMMW	East Machias	130.22	33		PKPdf	17 52 08.2	-0.1
H66A	Whiting	130.25	33	P	PKiKP	17 52 09.5	+0.3
	baz=311						
GGN	Saint George	130.28	32		PKPdf	17 52 08.3	0.0
FSCY	Frank Sound, G	130.29	69		PKPdf	17 52 09.0	-0.1
LMN	Caledonia Moun	130.82	30		PKPdf	17 52 08.5	-0.9
DRLN	Deer Lake	131.40	22		PKPdf	17 52 09.8	-0.6
KEST	Kesra	131.54	314	PKP	PKPdf	17 52 11.5	+0.3
	comp=Z,12nm,0.8s,baz=333,slow=2.0,SNR=11						
KEST				SKPbc	SKPbc	17 55 10.7	-0.3
	comp=Z,9.2nm,0.8s,baz=33,slow=4.6,SNR=7.1						
KEST	Kesra	131.54	314		PKPdf	17 52 10.7	-0.5
CBCY	The Bluff, Cay	131.54	69		PKPdf	17 52 11.1	-0.4
ATAH	Atahualpa	132.08	105	PKP	PKiKP	17 52 14.0	-0.3
	comp=Z,37nm,0.9s,baz=154,slow=4.4,SNR=9.3						
ATAH				SKP		17 55 18.4	
	comp=Z,100nm,0.7s,baz=213,slow=1.2,SNR=21						
NNA	Nana	132.18	112	PKP	PKPdf	17 52 13.0	+0.1
	comp=Z,38nm,1.0s,baz=298,slow=4.7,SNR=7.4						
NNA				SKPbc	SKPab	17 55 15.2	0.0
	comp=Z,25nm,0.7s,baz=268,slow=6.5,SNR=6.8						
NNA	Nana	132.18	112		PKPdf	17 52 12.0	-0.9
HAL	Halifax	132.28	30	PKIKP	PKiKP	17 52 13.0	-0.3
HAL	Halifax	132.28	30		PKiKP	17 52 12.9	-0.3
GO02	Mina Guanaco	132.44	132		PKPdf	17 52 12.4	-1.0
GBN	Guysborough	132.74	28		PKPdf	17 52 12.2	-0.8
TUMC	Tumaco	133.29	93	⇑*e*P	PKPdf	17 52 12.3	-2.6
OTAV	Otavalo	133.39	95	*e*P	PKPdf	17 52 12.3	-3.4
OTAV	Otavalo	133.39	95	PKIKP	PKiKP	17 52 16.5	-0.5
OTAV	Otavalo	133.39	95		PKiKP	17 52 16.5	-0.5
OTAV	Otavalo	133.39	95	*e*P	PKPdf	17 52 15.0	-0.8
GR1C	Gorgona, Isla	133.96	91	*e*P	PKiKP	17 52 17.2	-0.4
GR1C				*e*P	PKPdf	17 52 17.9	+1.6
LVC	Limon Verde	134.38	129	PKP	PKPdf	17 52 16.8	-0.5
	comp=Z,11nm,0.8s,baz=269,slow=4.1,SNR=5.9						
LVC				SKPab	SKPab	17 55 24.4	-0.5
	comp=Z,13nm,0.8s,baz=203,slow=1.8,SNR=6.9						
LVC	Limon Verde	134.38	129	*e*P	PKPdf	17 52 16.7	-0.5
BBAC	Balboa, Cauca	134.79	93	*e*P	PKPdf	17 52 17.9	-0.2
MALC	Bahia Malaga	134.86	90	*e*P	PKPdf	17 52 17.9	0.0
PIZC	Pizarro, Choco	134.89	89	*e*P	PKPdf	17 52 17.2	-0.8
OGAUY	Aigu	134.94	153	*e*P	PKiKP	17 52 18.5	-0.6
CAPC	Capurgana	134.97	83	⇑*e*P	PKiKP	17 52 19.9	+0.3
CRUC	La Cruz	135.03	93	*e*P	PKiKP	17 52 19.9	-0.3
POPC	Popayan, Colom	135.40	92	*e*P	PKPdf	17 52 19.2	0.0
SOTA	Rioblanco	135.43	93	*e*P	PKPdf	17 52 18.6	-1.1
PCON	Cinco Dias	135.66	92	*e*P	PKPdf	17 52 20.6	+0.5
GO01	Chusmiza	135.70	125		PKPdf	17 52 20.0	0.0
YOTC	Yotoco, Valle	135.85	90	*e*P	PKPdf	17 52 19.2	-0.7
LCBC	Los crdobas,	135.94	83	⇑*e*P	PKPdf	17 52 10.3	-10
DBBC	Dabeiba	136.10	86	⇑*e*P	PKPdf	17 52 09.6	-11
CBOC	Ciudad Bolivar	136.27	87	*e*P	PKPdf	17 52 19.2	-1.5
CBOC				*e*P	PKiKP	17 52 22.0	-0.5
FLOC	Florencia	136.32	93	*e*P	PKPdf	17 52 19.2	-1.4
FLOC				*e*P	PKiKP	17 52 19.9	-2.5
FLOC	Florencia	136.32	93		PKPdf	17 52 20.4	-0.3
GARC	Garzon, Huila	136.55	93	*e*P	PKPdf	17 52 19.9	-1.4
HELC	Santa Helena	136.76	87	*e*P	PKPdf	17 52 19.2	-2.7
UREC	San Jos de Ur	136.78	85	*e*P	PKPdf	17 52 19.2	-2.2
GUY2C	Guyana, Caldas	136.89	88	*e*P	PKPdf	17 52 15.1	-7.2
GUY2C				⇑*e*P	PKiKP	17 52 21.3	-2.8
ORTC	Ortega, Tolima	136.94	90	*e*P	PKPdf	17 52 18.6	-3.3
ORTC				*e*P	PKiKP	17 52 23.4	-0.3

SJCC	San Jacinto, C	137.07	81	eP	PKPdf	17 52 19.2	-2.8
NORC	Norcasia	137.40	88	eP	PKPdf	17 52 19.2	-3.4
PBRG	Braganca	137.43	332	ePKPdf	PKiKP	17 52 24.6	+0.7
ESDC	Sonseca Array	137.62	327	PKhKP	PKPpre	17 52 10.1	
	comp=Z,2.6nm,0.8s,baz=32,slow=2.2,SNR=11						
ESDC				PP	PP	17 55 11.4	+0.2
	comp=Z,1.7nm,0.7s,baz=47,slow=6.6,SNR=4.5						
ESDC				SKPbc	SKPbc	17 55 29.4	-1.0
	comp=Z,4.8nm,0.9s,baz=19,slow=4.6,SNR=7.9						
ESDC				SKKPbc	SKKPbc	18 04 21.1	+1.0
	comp=Z,3.1nm,0.9s,baz=238,slow=3.6,SNR=8.7						
ESDC	Sonseca Array	137.62	327		PKPpre	17 52 10.8	
ITQB	Itaqui	137.79	147	eP	PKPdf	17 52 22.4	-0.5
PTBC	PUERTO BERRIO,	137.83	86	eP	PKPdf	17 52 19.2	-4.2
ROSC	El Rosal	137.91	89	PKhKP	PKPpre	17 52 14.9	
	comp=Z,29nm,0.5s,baz=117,slow=5.9,SNR=7.3						
ROSC				PKP	PKPdf	17 52 25.1	+1.0
	comp=Z,90nm,0.8s,baz=148,slow=5.3,SNR=16						
ROSC				PP	PP	17 55 15.5	+0.4
	comp=Z,9.8nm,0.3s,baz=357,slow=3.8,SNR=3.7						
ROSC	El Rosal	137.91	89	eP	PKPdf	17 52 19.2	-4.8
ROSC	El Rosal	137.91	89		PKPpre	17 52 14.2	
SMRC	Santa Marta, M	137.94	80	eP	PKPdf	17 52 20.6	-2.9
ARGC	Ariguani, Magd	138.00	81	eP	PKPdf	17 52 22.7	-1.0
MVO	Moncorvo	138.06	331	ePKPdf	PKiKP	17 52 25.9	+0.6
MVO	Moncorvo	138.06	331	ePP	PP	17 55 33.1	+19
PCAB	Cabril	138.09	333	ePP	PP	17 55 30.9	+17
MACC	Macarena, Meta	138.18	93	eP	PKPdf	17 52 21.3	-2.8
SPBC	San Pablo de B	138.19	88	eP	PKPdf	17 52 19.9	-4.3
SMLC	San Martn de	138.21	83	eP	PKPdf	17 52 20.6	-3.5
LPAZ	La Paz	138.24	122	PKhKP	PKPpre	17 52 16.0	
	comp=Z,11nm,0.6s,baz=274,slow=3.0,SNR=13						
LPAZ				PKP	PKPdf	17 52 25.1	+0.2
	comp=Z,34nm,0.8s,baz=337,slow=3.4,SNR=16						
LPAZ				SKPbc	SKPbc	17 55 35.2	+1.7
	comp=Z,13nm,0.6s,baz=250,slow=3.9,SNR=9.6						
LPAZ	La Paz	138.24	122		PKPpre	17 52 15.5	
LPAZ	La Paz	138.24	122	eP	PKPdf	17 52 23.3	-1.6
PVRL	Vila Real	138.29	332	ePKPdf	PKiKP	17 52 25.2	-0.5
CHIC	Chingaza	138.49	89	eP	PKPdf	17 52 22.7	-2.5
VILC	Villavicencio,	138.49	90⇓	eP	PKPdf	17 52 17.2	-7.6
VILC				eP	PKiKP	17 52 21.3	-5.7
BRRC	Barranca, Sant	138.58	86⇑	eP	PKPdf	17 52 22.7	-2.1
CODC	Agustn Codazz	138.78	81⇑	eP	PKPdf	17 52 24.1	-1.1
CPSB	Cacapava Do Su	138.81	151	eP	PKPdf	17 52 25.1	+0.3
PVIS	Viseu	138.82	332	ePP	PP	17 55 35.2	+17
MTE	Manteigas	138.90	331	ePKPdf	PKiKP	17 52 25.9	-1.1
MTE	Manteigas	138.90	331	ePP	PP	17 55 33.7	+15
OCAC	Ocana	138.96	84	eP	PKPdf	17 52 22.7	-3.0
BARC	Barichara	139.10	86	eP	PKPdf	17 52 17.2	-8.9
RUSC	La Rusia	139.18	87	eP	PKPdf	17 52 18.6	-8.0
RUSC	La Rusia	139.18	87		PKPpre	17 52 16.3	
PCBR	Castelo Branco	139.30	331	ePKPdf	PKPdf	17 52 17.1	-8.3
PCBR	Castelo Branco	139.30	331	ePP	PP	17 55 36.3	+15
SDDR	Presa de Saban	139.52	67		PKPpre	17 52 18.0	
PMRV	Marv??o	139.57	330	ePKPdf	PKPdf	17 52 19.5	-6.4
PMRV	Marv??o	139.57	330	ePP	PP	17 55 37.5	+14
PAMC	Pamplona, Colo	139.59	85	eP	PKPdf	17 52 21.3	-5.9
PCAS	Casmilo, Conde	139.62	332	ePKPdf	PKPdf	17 52 24.6	-1.4
CPUP	Villa Florida	139.95	143	PKhKP	PKPpre	17 52 19.6	
	comp=Z,14nm,0.9s,baz=239,slow=3.8,SNR=8.2						
CPUP				SKPbc	SKPbc	17 55 38.1	+0.9
	comp=Z,12nm,0.8s,baz=265,slow=2.0,SNR=5.3						
CPUP	Villa Florida	139.95	143		PKPpre	17 52 19.1	
URIC	Uribia, Colomb	140.08	78	eP	PKPdf	17 52 26.1	-1.3
URIC	Uribia, Colomb	140.08	78		PKPpre	17 52 18.7	
PMTG	Montargil	140.26	331	ePKPdf	PKPdf	17 52 21.1	-6.0
TAMC	Tame, Arauca	140.48	87	eP	PKPdf	17 52 18.6	-10
PBEJ	Beja	140.88	329	ePKPdf	PKPdf	17 52 24.5	-3.8
PBEJ	Beja	140.88	329	ePP	PP	17 55 29.5	-1.6
CNLB	Canela	140.92	153	eP	PKPdf	17 52 28.6	-0.2
PNCL	Nicolau / Gran	141.15	330	ePKPdf	PKPdf	17 52 23.5	-5.3
PNCL	Nicolau / Gran	141.15	330	ePP	PP	17 55 42.0	+9.4
PCVE	Castro Verde	141.27	329	ePKPdf	PKPdf	17 52 25.1	-3.9
PCVE	Castro Verde	141.27	329	ePP	PP	17 55 42.3	+8.9
SDV	Santo Domingo	141.60	83	SKPbc	SKPbc	17 55 41.3	-0.7
	comp=Z,43nm,0.7s,baz=254,slow=3.2,SNR=8.5						
SDV	Santo Domingo	141.60	83		PKPpre	17 52 25.0	
SDV	Santo Domingo	141.60	83	eP	PKPdf	17 52 27.6	-2.9
MORF	Marmelete	141.83	329	ePKPdf	PKPdf	17 52 28.6	-1.4
PFVI	Vila Bisbo	142.06	329	ePKPdf	PKPdf	17 52 29.6	-0.8
ELOV	Elorza	142.78	86	eP	PKPdf	17 52 24.8	-7.6
CZD	Col de Zad	142.84	321	P	PKPdf	17 52 31.0	-1.3
	SNR=9.9						
ZHG	ZHG	143.54	323	P	PKPbc	17 52 32.0	+0.6
	SNR=12						
GOLM	Goulmima	143.65	319	P	PKPdf	17 52 33.0	-0.6
	SNR=6.4						
AOPR	Arecibo Observ	143.83	66		PKPab	17 52 31.4	-0.4
EMPR	Esperanza - Ma	144.00	66		PKPdf	17 52 34.3	0.0
BAUV	El Baul	144.16	82	e	PKPab	17 52 32.5	-0.7
PTGB	Pitanga	144.17	148	eP	PKPdf	17 52 34.6	0.0
SIV	San Ignacio	144.19	127	PKP	PKPbc	17 52 33.7	0.0
	comp=Z,196nm,0.9s,baz=245,slow=4.0,SNR=216						
SIV				SKPbc	SKPbc	17 55 48.4	+0.4
	comp=Z,18nm,0.9s,baz=270,slow=2.0,SNR=3.6						
SJG	San Juan	144.45	66		PKPab	17 52 33.0	-1.2
GCPR	Guaynabo City	144.46	66		PKPab	17 52 32.9	-1.4
IGPR	InterUniversit	144.53	67		PKPab	17 52 33.4	-1.1
PDPR	Patillas Dam,	144.59	67		PKPab	17 52 33.5	-1.3
SRHM	Skhour des Reh	144.98	323	P	PKPab	17 52 36.2	+0.3
	SNR=22						
ZGR	Zagora	145.10	318	P	PKPab	17 52 37.0	+0.5
	SNR=31						
CUPR	Culebra, Puert	145.18	66		PKPdf	17 52 35.6	-0.8
AQDB	Aquidauana	145.25	139	eP	PKPdf	17 52 36.4	-0.1
OUZM	OUZ	145.34	320	P	PKPab	17 52 38.0	+0.6
	SNR=58						
TRCB	Terra Rica	145.39	145	eP	PKPdf	17 52 36.8	+0.1
STVI	Saint Thomas	145.47	66		PKPdf	17 52 36.1	-0.7
SAML	Samuel	145.80	115	PKIKP	PKPdf	17 52 37.8	+0.2
SAML	Samuel	145.80	115		PKPdf	17 52 37.8	+0.2
SAML	Samuel	145.80	115	eP	PKPdf	17 52 37.5	-0.1
CDVI	St. Croix	145.81	66		PKPbc	17 52 38.2	-0.3
TOA0	Torodi Ar. Sit	145.88	285	P	PKPbc	17 52 38.6	-0.2
	SNR=19						
TOA0	Torodi Ar. Sit	145.88	285		PKPbc	17 52 38.4	-0.4
TORD	Torodi Ar. Bea	145.88	285	PKPbc	PKPbc	17 52 38.5	-0.3
	comp=Z,93nm,0.8s,baz=58,slow=2.9,SNR=178						
TORD				SKPbc	SKPbc	17 55 51.0	-0.9
	comp=Z,11nm,0.7s,baz=71,slow=1.3,SNR=5.2						
TORD				SKKPbc	SKKPbc	18 03 46.4	+0.5
	comp=Z,2.7nm,0.7s,baz=272,slow=3.9,SNR=4.0						
TORD	Torodi Ar. Bea	145.88	285		PKPdf	17 52 36.4	-1.2
H07N1	FLORES T-PHASE	145.99	359	ePKP	PKiKP	17 52 41.1	-0.4
H07S1	FLORES T-PHASE	146.30	359	ePKP	PKPbc	17 52 39.8	+0.4
SRBC	Serra Branca	146.46	354	ePKP	PKPab	17 52 41.2	0.0
PGRA	Graciosa	146.46	354	ePKP	PKPbc	17 52 39.5	-0.3
FRTB	Fartura	146.59	150	eP	PKPdf	17 52 37.9	-0.8
ADH	Angra Heroismo	146.74	353	ePKP	PKPbc	17 52 41.0	+0.4
ROSA	Rosais	146.79	355	ePKP	PKPab	17 52 42.1	-0.5
PMAN	Manadas	146.86	354	ePKP	PKPbc	17 52 41.7	+0.8
PCED	Cedros	146.92	355	ePKP	PKPbc	17 52 40.4	-0.7
HOR	Horta	147.01	355	eP	PKPbc	17 52 40.3	-1.0
PICO	Pico	147.02	355	ePKP	PKPbc	17 52 40.5	-1.0
PPNO	Prainha do Nor	147.04	355	eP	PKPbc	17 52 42.4	+0.9
PCAN	Candelaria	147.06	355	ePKP	PKPdf	17 52 39.8	+0.7
PCMB	Pacaembu	147.10	146	eP	PKPbc	17 52 43.1	+1.0
SABA	Saba	147.24	66	e	PKPbc	17 52 41.3	-1.3
SABA	Saba	147.24	66		PKPbc	17 52 41.7	-0.8
SMRT	St. Maarten	147.26	65	e	PKPdf	17 52 38.6	-1.3
SMRT	St. Maarten	147.26	65		PKPdf	17 52 38.9	-1.0
BART	Pico Bartolome	147.30	350	ePKP	PKPbc	17 52 42.6	+0.3
PCALD	Caldeiras da R	147.34	350	ePKP	PKPdf	17 52 39.6	+0.1
PSET	Sete Cidades	147.35	351	ePKP	PKPbc	17 52 42.9	+0.6
GRON	Grota Negra	147.37	350	ePKP	PKPdf	17 52 40.0	+0.4
CMLA	Cha da Macela	147.38	350	ePKP	PKPbc	17 52 42.2	-0.2
SPB	Sao Paulo	147.39	153		PKiKP	17 52 43.9	-0.9
SPB	Sao Paulo	147.39	153	eP	PKPdf	17 52 40.5	+0.5
PCRV	Puerto La Cruz	147.41	80	PKPbc	PKPbc	17 52 42.8	-0.4
	baz=308,slow=3.9						
PDA	Ponta Delgada	147.41	351	ePKP	PKPdf	17 52 40.4	+0.8
PLCV	Puerto La Cruz	147.46	80		PKPbc	17 52 42.8	-0.5
SEUS	St. Eustatius	147.52	66	e	PKPdf	17 52 41.5	+1.2
SEUS	St. Eustatius	147.52	66		PKPbc	17 52 44.1	+0.8
SKI	Saint Kitts	147.78	66	e	PKPbc	17 52 44.9	+0.8
SKI	Saint Kitts	147.78	66	PKIKP	PKPbc	17 52 43.5	-0.6
SKI	Saint Kitts	147.78	66		PKPbc	17 52 43.5	-0.6
PSMN	Pico do Norte,	148.04	349	ePKP	PKPbc	17 52 43.4	-0.8
PSMA	Santa Maria	148.06	349	ePKP	PKPbc	17 52 44.2	0.0
VAO	Valinhos	148.11	153	eP	PKPdf	17 52 40.0	-1.3
C2SB	Chapadao do Su	148.33	140	eP	PKPdf	17 52 41.2	-0.4
RCLB	Rio Claro- Sao	148.36	152	eP	PKPdf	17 52 41.0	-0.7
SALV	Santo Antonio	148.36	133	eP	PKPdf	17 52 41.0	-0.7
PARB	Paraibuna	148.39	156	eP	PKPdf	17 52 40.4	-1.4
MLYT	Lee's Yard	148.47	67	e	PKPdf	17 52 43.4	+1.5
ANWB	Willy Bob	148.54	65	e	PKPbc	17 52 44.9	-1.1
ANWB	Willy Bob	148.54	65		PKPdf	17 52 41.2	-0.8
ORIV	Oritupano	148.71	82	e	PKPdf	17 52 41.5	-0.9
PMPST	Porto Santo, M	148.93	334	ePKPbc	PKiKP	17 52 48.0	+0.3
PMPS	Porto Santo	148.95	334	ePKPbc	PKiKP	17 52 47.4	-0.3
BB19B	Bebedouro	149.01	149	eP	PKPdf	17 52 42.6	-0.2
ITRB	Iturama	149.12	145	eP	PKPdf	17 52 42.4	-0.5
ESAR	Angra dos Reis	149.14	157	eP	PKPdf	17 52 42.3	-0.5
MDPO	Dominica; Chan	149.47	69	e	PKPbc	17 52 47.9	-0.4
PMAR	Madeira	149.48	334	ePKPbc	PKiKP	17 52 49.2	+0.1
PMOZ	Porto Moniz, M	149.52	335	ePKPbc	PKiKP	17 52 49.3	+0.2
DWS	Wesley	149.60	69	e	PKPdf	17 52 43.0	-0.8
GUIV	Guiria	149.72	78	e	PKPdf	17 52 44.4	+0.4
DLPL	La Plaine	149.73	69	e	PKPbc	17 52 48.1	-0.9
FDF	Fort de France	149.97	70	e	PKPbc	17 52 49.1	-0.5
FDF	Fort de France	149.97	70	PKIKP	PKPdf	17 52 43.2	-1.2
FDF	Fort de France	149.97	70		PKPdf	17 52 43.2	-1.2
GRGR	Grenville	150.05	75	e	PKPbc	17 52 47.4	-2.3
GRGR	Grenville	150.05	75		PKPdf	17 52 44.2	-0.3
GRSS	Sisters	150.06	75	e	PKiKP	17 52 51.5	+0.9
SVB	Belmont	150.22	73	e	PKPbc	17 52 48.7	-1.5
SVV	Soufriere Volc	150.24	73	e	PKiKP	17 52 51.0	+0.1
SSV	Crater Summit	150.26	73	e	PKiKP	17 52 50.8	-0.2
SLB	Belfond	150.29	72	e	PKiKP	17 52 51.1	0.0
SVCV	St. Vincent, C	150.32	73	e	PKPdf	17 52 43.9	-1.0
MCLT	Moule a Chique	150.42	72	e	PKPbc	17 52 50.5	-0.1
TPP	Pointe-a-Pierr	150.51	79	e	PKiKP	17 52 52.2	+0.7
TRN	Trinidad (W)	150.52	78	e	PKPbc	17 52 50.3	-0.5
BSCB	Bom Sucesso	150.82	155	eP	PKPdf	17 52 45.1	-0.6
TBH	Brigand Hill	150.87	78	e	PKPbc	17 52 50.7	-1.0
ARAG	Araguaiana, MT	151.22	137	eP	PKPdf	17 52 45.8	-0.5
TOSP	Speyside	151.27	77	e	PKPdf	17 52 49.3	+3.0
TOSP	Speyside	151.27	77		PKPdf	17 52 48.2	+1.9
CLDB	Colider	151.29	125	eP	PKPdf	17 52 45.6	-0.9
PTGA	Pitinga	151.44	102	PKP	PKPdf	17 52 46.8	+0.1
	comp=Z,28nm,0.9s,baz=262,slow=2.2,SNR=47						
PTGA				PKPbc	PKiKP	17 52 53.6	+0.2
	comp=Z,431nm,1.0s,baz=255,slow=4.1,SNR=113						
PTGA	Pitinga	151.44	102		PKPdf	17 52 47.0	+0.3
PTGA	Pitinga	151.44	102	eP	PKPdf	17 52 46.0	-0.7
IPMB	Ipameri, GO	151.71	146	eP	PKPdf	17 52 46.8	-0.2
KIC	Kosan Boka	152.82	273	ePKIKP	PKPdf	17 52 48.7	0.0
DBIC	Dimbokro	152.93	274	PKP	PKPdf	17 52 48.1	-0.8
	comp=Z,6.9nm,0.9s,baz=109,slow=3.9,SNR=6.2						
DBIC				PKPbc	PKiKP	17 52 56.5	0.0
	comp=Z,14nm,0.4s,baz=74,slow=3.0,SNR=31						
DBIC				pPKPbc	pPKPbc	17 54 06.6	+2.7
	comp=Z,41nm,0.8s,baz=357,slow=0.8,SNR=3.2						
TIC	Toumodi	153.09	274	ePKIKP	PKPdf	17 52 49.0	-0.2
LIC	Lamto	153.10	273	ePKIKP	PKPdf	17 52 49.0	-0.1
	comp=Z,52nm,1.2s						
BDFB	Brasilia	153.68	143	PKP	PKPdf	17 52 50.3	+0.2
	comp=Z,14nm,0.9s,baz=182,slow=2.9,SNR=11						
BDFB				PKPbc	PKiKP	17 52 58.5	+0.4
	comp=Z,60nm,0.9s,baz=261,slow=1.3,SNR=29						
BDFB	Brasilia	153.68	143		PKPdf	17 52 50.7	+0.7
BSFB	Barra de Sao F	154.28	161	eP	PKPdf	17 52 50.3	-0.4
SJMB	Sao Joao De Ma	154.29	160	eP	PKPdf	17 52 50.0	-0.7
JANB	Januaria	156.21	149	eP	PKPdf	17 52 52.9	-0.5
NBIT	Itapeh - BA	158.39	160	eP	PKPdf	17 52 55.5	-0.6
SMTB	Santa Maria do	158.92	133	eP	PKPdf	17 52 56.6	-0.2
MDP	Montagnes des	159.50	90	PKP	PKPdf	17 52 58.4	+0.9
	comp=Z,19nm,0.9s,baz=336,slow=2.1,SNR=4.0						
MDP				PKPab	PKPab	17 53 37.1	0.0
	comp=Z,69nm,1.0s,baz=288,slow=4.2,SNR=10						
NBLA	Lagarto - SE	162.62	161	eP	PKPdf	17 53 00.1	-0.6
NBAN	Anadia - AL	164.32	164	eP	PKPdf	17 53 01.6	-0.7
NBLI	Livramento-PB	166.28	159	eP	PKPdf	17 53 03.5	-0.5
NBPV	Pedro Velho	167.69	165	eP	PKPdf	17 53 04.7	-0.3
RCBR	Riachuelo	168.08	161	PKP	PKPdf	17 53 05.3	0.0
	comp=Z,9.0nm,0.9s,baz=288,slow=3.2						
RCBR				PKPab	PKPab	17 54 14.4	0.0
	comp=Z,8.6nm,1.0s,baz=186,slow=9.2,SNR=3.2						

WEL 10 17:39:20.3, 38°S±1°×17°8E±°, h67^{km}±3^{km}, M2.6/22, ML2.6/21, MLv2.6/22, Error ellipse: s-maj=0.0km s-min=0.0km az=87.4, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MWZ	Matawai	0.11	252	P	Pn	17 39 30.1	-0.1
TKGZ	Te Karaka	0.20	133	P	Pn	17 39 30.6	0.0
RAGZ	Rawiri	0.27	224	P	Pn	17 39 31.4	+0.3
TWGZ	Tauwhareparae	0.28	64	P	Pn	17 39 31.5	+0.3
RUGZ	Raukumara Rang	0.34	3	P	Pn	17 39 31.7	+0.1
RIGZ	Rimuhau	0.41	169	P	Pn	17 39 32.4	+0.3
URZ	Urewera	0.43	275	P	Pn	17 39 32.5	+0.3
CNGZ	Carnagh Statio	0.47	113	P	Pn	17 39 33.4	+0.8
PUZ	Puketiti	0.52	64	P	Pn	17 39 36.1	+3.0
PKGZ	Pakihiroa	0.53	39	P	Pn	17 39 33.6	+0.4
SNGZ	Shannon Statio	0.54	207	P	Pn	17 39 34.2	+0.9
HAZ	Te Kaha	0.55	10	P	Pn	17 39 33.8	+0.4
RTZ	Ruatahuna	0.62	239	P	Pn	17 39 34.6	+0.4
RAHZ	Arahi	0.76	216	P	Pn	17 39 36.5	+0.7
WMGZ	Waiomatatini S	0.77	51	P	Pn	17 39 36.2	+0.5
WHHZ	Waihua	0.84	203	P	Pn	17 39 37.4	+0.7
MTHZ	Maungataniwha	0.84	229	P	Pn	17 39 37.5	+0.8
MHGZ	Mahia Peninsul	0.87	167	P	Pn	17 39 37.5	+0.4
MXZ	Matakaoa Point	0.90	35	P	Pn	17 39 38.1	+0.8
TARZ	Mount Tarawera	0.91	274	P	Pn	17 39 38.5	+0.9
OPRZ	Ohinepanea	0.98	297	P	Pn	17 39 38.6	+0.2
NMHZ	Naumai	1.04	220	P	Pn	17 39 40.3	+1.1
ARHZ	Aropaoanui	1.09	208	P	Pn	17 39 40.6	+0.8
BKZ	Black Stump Fm	1.26	226	P	Pn	17 39 42.7	+0.7
HATZ	Hinemaiaia	1.36	244	P	Pn	17 39 43.7	+0.4
KWHZ	Kaweka Forest	1.48	220	P	Pn	17 39 45.2	+0.3
KAHZ	Kahuranaki	1.61	202	P	Pn	17 39 46.7	0.0
KRHZ	Kereru	1.68	216	P	Pn	17 39 47.3	-0.3
BHHZ	Black Hill Sta	1.72	226	P	Pn	17 39 48.7	+0.6
KRVZ	Karewarewa	1.77	243	P	Pn	17 39 49.4	+0.6
NGZ	Ngauruhoe	1.83	241	P	Pn	17 39 50.3	+0.5
PXZ	Pawanui	1.84	199	P	Pn	17 39 48.3	-1.4
PNHZ	Pukenui	1.97	215	P	Pn	17 39 50.7	-0.8
TSZ	Takapari Road	2.20	216	P	Pn	17 39 53.4	-1.1
HIZ	Hauiti	2.21	264	P	Pn	17 39 56.4	+1.7
BFZ	Birch Farm	2.62	204	P	Pn	17 39 58.7	-1.5

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*NEIC **10** 17:45:38.7±1.4, 31°.7S±0°.3×177°.7W±0°.3, h254^{km}±19^{km}, mb4.5/16, Error ellipse: s-maj=48.1km s-min=22.9km az=149.0*

*IDC **10** 17:45:57.4±4.5, 32°.14S×179°.97E, h282^{km}±44^{km}, mb3.7/3, mb1 4.0/5, mb1mx3.4/54, mbtmp4.6/5, Error ellipse: s-maj=51.4km s-min=38.3km az=12.0*

*WEL **10** 17:46:01.9±0.3, 32°S±4°×18°0W±°, h33^{km}, M5.0/16, mB5.5/10, ML5.2/16, MLv5.0/16, Mw(mB)4.9/10*

ISC 10 17:45:53.2±0.9**, 32°.39S**±0°.06×**179°.3W**±0°.1**, h300**^{km}**, n129,** σ**2ˢ.50**/121**, mb4.2**/7**, 1D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.32	20	P	Pn	17 46 54.7	+2.5
GLKZ				S	S	17 47 36.6	-2.8
MXZ	Matakaoa Point	5.53	201		Pn	17 47 17.4	+0.6
KUZ	Kuaotunu	6.00	222	P	Pn	17 47 25.7	+3.3
RUGZ	Raukumara Rang	6.10	204	P	Pn	17 47 26.3	+2.7
RUGZ				S	S	17 48 34.0	-2.7
WHRZ	Whale Island	6.27	209	P	Pn	17 47 30.5	+4.9
WHRZ				S	S	17 48 39.0	-1.1
OPRZ	Ohinepanea	6.43	211	P	Pn	17 47 31.3	+3.8
TKGZ	Te Karaka	6.48	201	P	Pn	17 47 30.7	+2.6
MWZ	Matawai	6.49	203	P	Pn	17 47 32.5	+4.3
MWZ				S	S	17 48 41.9	-3.0
MARZ	Manawahe	6.50	210	P	Pn	17 47 32.3	+3.9
URZ	Urewera	6.56	206	P	Pn	17 47 32.4	+3.4
	50nm,0.3s,baz=24,slow=13,SNR=44						
URZ				S	S	17 48 42.9	-3.7
	27nm,0.3s,baz=272,slow=22,SNR=17						
URZ	Urewera	6.56	206	Pn	Pn	17 47 30.4	+1.3
URZ	Urewera	6.56	206	P	Pn	17 47 32.5	+3.4
URZ				S	S	17 48 47.2	+0.6
OUZ	Omahuta	6.59	243	P	Pn	17 47 28.9	-0.6
RAGZ	Rawiri	6.67	203	P	Pn	17 47 34.4	+3.9
KMRZ	Kaimai	6.72	215	P	Pn	17 47 34.1	+3.1
KARZ	Kaharoa	6.72	212	P	Pn	17 47 35.0	+4.0
MKRZ	Makatiti	6.72	210	P	Pn	17 47 36.9	+5.9
RIGZ	Rimuhau	6.75	200	P	Pn	17 47 35.9	+4.5
RIGZ				S	S	17 48 49.7	-1.2
TOZ	Tahuroa Road	6.85	217	P	Pn	17 47 36.9	+4.4
RRRZ	Republican Roa	6.87	209	P	Pn	17 47 36.8	+4.0
MUGZ	Murupara	6.88	207	P	Pn	17 47 35.5	+2.5
MUGZ				S	S	17 48 51.9	-1.8
PRGZ	Paritu Road	6.92	199	P	Pn	17 47 37.4	+3.9
SNGZ	Shannon Statio	6.95	203	P	Pn	17 47 37.4	+3.5
SNGZ				S	S	17 48 54.2	-1.0
HRRZ	Handcock Road	7.01	210	P	Pn	17 47 38.9	+4.4
GRRZ	Galatos Road	7.05	211	P	Pn	17 47 39.4	+4.3
PRRZ	Plateau Road	7.05	209	P	Pn	17 47 38.7	+3.6
KNZ	Kokohu	7.07	200	P	Pn	17 47 38.9	+3.7
ALRZ	Allen Road	7.13	209	P	Pn	17 47 39.2	+3.2
MHGZ	Mahia Peninsul	7.13	198	P	Pn	17 47 38.9	+2.9
RAHZ	Arahi	7.16	204	P	Pn	17 47 39.8	+3.5
MTHZ	Maungataniwha	7.19	205	P	Pn	17 47 39.4	+2.7
WHHZ	Waihua	7.25	202	P	Pn	17 47 40.6	+3.1
KUTZ	Kaahu Road	7.29	212	P	Pn	17 47 42.4	+4.4
TLZ	Tolley Road	7.29	214	P	Pn	17 47 42.7	+4.7
WHTZ	Whakaora	7.38	211	P	Pn	17 47 43.4	+4.3
NMHZ	Naumai	7.42	205	P	Pn	17 47 41.3	+1.7
ARHZ	Aropaoanui	7.50	203	P	Pn	17 47 42.8	+2.3
HATZ	Hinemaiaia	7.51	209	P	Pn	17 47 43.2	+2.6
WATZ	Wairara	7.51	212	P	Pn	17 47 44.3	+3.6
BKZ	Black Stump Fm	7.59	206	Pn	Pn	17 47 41.6	-0.1
BKZ	Black Stump Fm	7.59	206	P	Pn	17 47 42.7	+1.0
RATZ	Rangitukua	7.62	211	P	Pn	17 47 45.2	+3.1
RITZ	Rihia Road	7.68	210	P	Pn	17 47 45.9	+3.1
KATZ	Kakaramea	7.75	211	P	Pn	17 47 46.5	+2.8
MCHZ	McNeill Hill	7.76	204	P	Pn	17 47 46.8	+3.0
HIZ	Hauiti	7.77	217	Pn	Pn	17 47 45.2	+1.3
HIZ	Hauiti	7.77	217	P	Pn	17 47 48.1	+4.3
CKHZ	Cape Kidnapper	7.83	201	P	Pn	17 47 45.9	+1.3
KWHZ	Kaweka Forest	7.84	205	P	Pn	17 47 46.9	+2.2
KRVZ	Karewarewa	7.87	210	P	Pn	17 47 48.0	+2.9
WTVZ	West Tongariro	7.91	211	P	Pn	17 47 48.3	+2.7
TWVZ	Taurewa	7.94	211	P	Pn	17 47 48.7	+2.7
TUVZ	Tukino	8.01	210	P	Pn	17 47 49.1	+2.2
BHHZ	Black Hill Sta	8.04	207	P	Pn	17 47 48.1	+1.0
FWVZ	Far West T-bar	8.04	210	P	Pn	17 47 49.7	+2.3
WHVZ	Whangaehu Hut	8.05	210	P	Pn	17 47 49.6	+2.1
KRHZ	Kereru	8.06	205	P	Pn	17 47 47.3	0.0
TRVZ	Turoa	8.08	210	P	Pn	17 47 50.1	+2.2
MOVZ	Moawhango	8.09	209	P	Pn	17 47 49.1	+1.3
PKVZ	Pokaka	8.16	211	P	Pn	17 47 51.0	+2.4
MTVZ	Mangateitei	8.19	210	P	Pn	17 47 51.1	+2.2
PXZ	Pawanui	8.24	201	P	Pn	17 47 51.1	+1.6
VRZ	Vera Road	8.29	214	P	Pn	17 47 53.5	+3.3
PNHZ	Pukenui	8.36	205	P	Pn	17 47 50.8	-0.2
WPHZ	Waipukurau	8.41	203	P	Pn	17 47 53.6	+2.0
MHEZ	Mangahewa	8.47	216	P	Pn	17 47 59.1	+6.7
PRHZ	Porangahau	8.53	202	P	Pn	17 47 53.2	+0.1
TSZ	Takapari Road	8.57	205	P	Pn	17 47 53.3	-0.3
WAZ	Wanganui	8.70	211	P	Pn	17 47 56.7	+1.5
DVHZ	Dannevirke	8.71	204	P	Pn	17 47 56.2	+0.9
LREZ	Lake Rotokare	8.73	214	P	Pn	17 47 58.4	+2.9
PKE	Pukeiti	8.73	217	P	Pn	17 47 59.6	+4.0
ANWZ	Angora Road	8.76	202	P	Pn	17 47 56.8	+1.0
PREZ	Palmer Road	8.76	216	P	Pn	17 47 59.9	+3.9
KHEZ	Kahui Hut	8.79	217	P	Pn	17 48 00.2	+3.8
NBEZ	Newall Road No	8.85	217	P	Pn	17 48 01.5	+4.5
POWZ	Post Office Ro	8.93	205	P	Pn	17 47 59.2	+1.1
PRWZ	Pori Road	9.01	204	P	Pn	17 48 00.1	+1.2
BFZ	Birch Farm	9.03	202	Pn	Pn	17 47 57.3	-1.9
BFZ	Birch Farm	9.03	202	P	Pn	17 47 59.5	+0.3
TIWZ	Tintock	9.23	204	P	Pn	17 48 01.9	+0.1
MRZ	Mangatainoka R	9.24	205	P	Pn	17 48 01.3	-0.5
CPWZ	Castlepoint	9.25	202	P	Pn	17 48 04.6	+2.7
HOWZ	Holdsworth Sta	9.47	205	P	Pn	17 48 04.2	-0.4
OGWZ	Otaki Gorge	9.53	206	P	Pn	17 48 05.7	+0.4
TMWZ	Te Maipa	9.53	203	P	Pn	17 48 05.9	+0.5
MSWZ	Moikau Station	10.02	204	P	Pn	17 48 10.1	-1.3
SNZO	South Karori	10.13	207	P	Pn	17 48 11.1	-1.6
BHW	Baring Head	10.15	206	P	Pn	17 48 10.0	-3.0
PLWZ	Palliser	10.16	204	P	Pn	17 48 12.7	-0.4
TUWZ	Tuamarina	10.53	209		Pn	17 48 16.2	-1.4
NNZ	Nelson	10.60	212	P	Pn	17 48 16.2	-2.3
CMWZ	Cape Campbell	10.69	207	P	Pn	17 48 19.0	-0.7
QRZ	Quartz Range	10.69	216	P	Pn	17 48 18.9	-0.8
BSWZ	Blackbirch Sta	10.80	209	P	Pn	17 48 19.6	-1.3
THZ	Tophouse	11.25	212	P	Pn	17 48 24.6	-1.9
KHZ	Kahutara	11.53	208	P	Pn	17 48 28.7	-1.1
LTZ	Lake Taylor	12.35	211	P	Pn	17 48 38.5	-1.3
OXZ	Oxford	12.89	210	Pn	Pn	17 48 43.6	-2.7
MQZ	McQueen's Vall	12.96	207	P	Pn	17 48 45.2	-1.9
RPZ	Rata Peaks	13.63	211	P	P	17 48 54.2	-0.8
	2.6nm,0.3s,baz=23,slow=2.0,SNR=15						
RPZ				S	S	17 51 15.2	-10
	2.9nm,0.3s,baz=61,slow=17,SNR=19						
RPZ	Rata Peaks	13.63	211		P	17 48 53.3	-1.7
FOZ	Fox Glacier	14.06	215	P	P	17 48 57.0	-2.6
FOZ				IAmb	IAmb	17 49 04.9	
	comp=Z,22nm,1.2s						
LBZ	Lake Benmore	14.54	212	P	P	17 49 05.6	+0.6
LBZ				IAmb	IAmb	17 49 16.2	
	comp=Z,15nm,1.2s						
ODZ	Otahua Downs	14.88	209	P	P	17 49 09.8	+1.1
WKZ	Wanaka	15.41	213	P	P	17 49 14.6	0.0
WKZ				IAmb	IAmb	17 49 39.5	
	comp=Z,63nm,1.8s						
DZM	Mont Dzumac	16.34	305	P	Pn	17 49 23.6	-3.8
	comp=Z,0.6nm,0.3s,baz=129,slow=10,SNR=6.6						
WHZ	Wether Hill Ro	16.71	213	P	P	17 49 31.0	+2.3
WHZ				IAmb	IAmb	17 49 49.1	
	comp=Z,28nm,1.4s						
DCZ	Deep Cove	16.77	215	P	P	17 49 27.9	-1.4
DCZ				IAmb	IAmb	17 49 30.9	
	comp=Z,20nm,1.4s						
STKA	Stephens Creek	33.04	260	P	P	17 52 02.2	+1.2
	comp=Z,1.8nm,0.8s,baz=112,slow=11,SNR=5.1						
STKA	Stephens Creek	33.04	260	P	P	17 52 02.9	+1.8
BBOO	Buckleboo	37.44	257		P	17 52 39.2	+0.8
COEN	Coen	38.85	289	P	P	17 52 50.6	+0.3
AS31	Alice Springs	41.98	270	P	P	17 53 15.8	+0.1
ASAR	Alice Springs	41.98	270	P	P	17 53 15.9	+0.2
	comp=Z,2.2nm,0.3s,baz=107,slow=7.7,SNR=41						
ASAR	Alice Springs	41.98	270	P	P	17 53 15.0	-0.7
WR0	Warramunga Arr	42.98	275	P	P	17 53 23.5	-0.2
WR0				IAmb	IAmb	17 53 42.0	
	comp=Z,24nm,1.4s						
WB2	Warramunga Arr	43.15	275	P	P	17 53 24.8	-0.2
WB2				IAmb	IAmb	17 53 42.3	
	comp=Z,74nm,1.9s						
WRAB	Tennant Creek	43.15	275	P	P	17 53 24.4	-0.6
WRAB				IAmb	IAmb	17 53 26.7	
	comp=Z,30nm,1.4s						
WRA	Warramunga Arr	43.16	275	P	P	17 53 24.9	-0.1
	comp=Z,4.9nm,0.3s,baz=112,slow=8.1,SNR=40						
WRA	Warramunga Arr	43.16	275	P	P	17 53 24.3	-0.8
WB0	Warramunga Arr	43.19	275	P	P	17 53 25.1	-0.2
WB0				IAmb	IAmb	17 53 26.7	
	comp=Z,42nm,1.9s						
FITZ	Fitzroy Crossi	51.33	272	P	P	17 54 28.6	+0.9
SYO	Syowa Base	74.94	194⇓	iP	P	17 56 56.0	-5.0
MK31	Makanchi Array	118.22	310		PKPdf	18 03 56.3	-8.1
MAKZ	Makanchi	118.43	309		PKPdf	18 03 57.2	-7.6
ZAA0	Zalesovo Array	118.80	318		PKPdf	18 03 55.4	-10
K58A	Earlville	120.48	56		PKPdf	18 03 51.9	-17
FINES	FINESS Array B	146.62	338	PKPbc	PKPab	18 05 03.0	+2.3
	comp=Z,3.1nm,0.8s,baz=50,slow=4.3,SNR=7.4						

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*INET **10** 18:00:58.9, 9°.98N×84°.88W, h35^{km}, ML4.4*

*IDC **10** 18:00:58.7±0.5, 10°.24N×84°.88W, h47^{km}±4^{km}, mb3.8/15, mb1 4.0/18, mb1mx3.8/56, mbtmp4.1/18, MS3.9/3, Ms1 3.9/3, ms1mx3.5/28, Error ellipse: s-maj=21.3km s-min=9.2km az=45.0*

*UPA **10** 18:00:58.3±2.5, 10°.20N×85°.03W, h11^{km}±40^{km}, MW4.8*

*UCR **10** 18:00:59.7±2.6, 10°.02N×85°.06W, h25^{km}±6^{km}, MD3.9, MW4.7, mb4.5(NEIC), Fault plane solution: NP1: ϕ_s147.34000°, δ52.84000°, λ-64.59000°.*

*NEIC **10** 18:00:59.5±2.8, 10°.06N±0°.07×84°.99W±0°.07, h47^{km}±5^{km}, Error ellipse: s-maj=12.4km s-min=8.2km az=48.0*

ISC 10 18:00:58.8±0.5**, 10°.07N**±0°.04×**85°.04W**±0°.03**, h43**^{km}±4^{km}**, h43**^{km}**:pP-P, n160,** σ**1ˢ.71**/184**, mb4.5**/32**, 7C-8D, Costa Rica**

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

JTS	Las Juntas de	0.23	22	P	Pn	18 01 07.1	+0.3
	3µm,0.3s,baz=240,slow=1.8,SNR=5009						
JTS				S	Sn	18 01 13.0	+0.6
	5µm,0.3s,baz=149,slow=21,SNR=29						
JTS	Las Juntas de	0.23	22	⇓*i*P	Pn	18 01 07.1	+0.3
JTS				*i*S	Sn	18 01 13.1	+0.8
JTS	Las Juntas de	0.23	22	⇓*i*P	Pn	18 01 07.0	+0.2
JTS				*e*S	Sn	18 01 13.3	+1.0
JTS	Las Juntas de	0.23	22	Pn	Pn	18 01 06.8	0.0
PLVR	Palo Verde	0.41	312	⇓*i*P	Pn	18 01 09.2	+0.4
PLVR				*e*S	Sn	18 01 17.2	+1.5
GUAI	GUAI	0.50	293	*i*P	Pn	18 01 10.2	+0.5
GUAI				*i*S	Sn	18 01 19.1	+1.7
CEDE	Laguna Cedeo	0.53	39	*i*P	Pn	18 01 10.9	+0.8
CEDE				*e*S	Sn	18 01 19.9	+1.7
FORC	Fortuna	0.54	43	*i*P	Pn	18 01 11.2	+1.0
ACAL	Aguas Claras	0.56	1	*i*P	Pn	18 01 11.6	+1.0
ACAL				*i*S	Sn	18 01 20.6	+1.7
CUI	Cuipilapa	0.59	348	*i*P	Pn	18 01 11.9	+0.9
CUI				*i*S	Sn	18 01 21.5	+1.8
COLC	Colonia	0.61	345	*i*P	Pn	18 01 12.1	+0.9
COLC				*i*S	Sn	18 01 21.8	+1.7
PTEN	Parque Tenorio	0.64	5	*i*P	Pn	18 01 12.5	+0.9
LIM1	Limonal	0.66	342	*i*P	Pn	18 01 12.6	+0.8
LIM1				*i*S	Sn	18 01 23.0	+1.8
GUAB	Guayabo de Bag	0.66	344	*i*P	Pn	18 01 12.9	+1.0
MESS	Mesas	0.68	347	*i*P	Pn	18 01 13.2	+1.1
GPS2	Hotel Rincn d	0.74	336	*i*P	Pn	18 01 14.1	+1.1
GPS3	Bodega del ICE	0.75	335	*i*P	Pn	18 01 14.2	+1.2
NY14	Universidad de	0.75	320	*i*P	Pn	18 01 14.3	+1.3
GPS1	Guardaparques	0.76	337	*i*P	Pn	18 01 14.2	+1.0
LAPC	Finca la Perla	0.79	331	*i*P	Pn	18 01 14.3	+0.7
LAPC				*i*S	Sn	18 01 25.8	+1.5
BUEV	Buena Vista	0.81	334	*i*P	Pn	18 01 15.1	+1.2
GBS3	Finca Las Img	0.81	330	*i*P	Pn	18 01 14.8	+0.9
GB1A	Borinquen Arri	0.82	335	*i*P	Pn	18 01 15.0	+1.0
BUAI	Buenos Aires	0.85	340	*i*P	Pn	18 01 15.8	+1.4
HDC	Heredia	0.92	94	⇓*i*P	Pn	18 01 16.1	+0.7
HDC				*i*S	Sn	18 01 28.9	+1.5
HDC	Heredia	0.92	94	⇓*i*P	Pn	18 01 16.1	+0.7
HDC				*e*S	Sn	18 01 29.2	+1.7
HDC	Heredia	0.92	94		Pn	18 01 16.0	+0.7
SJS	Escuela Geolog	0.98	98	⇑*e*P	Pn	18 01 17.2	+0.9
LCR2	La Lucha 2	1.07	108	⇓*i*P	Pn	18 01 18.0	+0.4
LCR2				*e*S	Sn	18 01 32.6	+1.2
EDLM	Las Mercedes	1.63	119	*e*P	Pn	18 01 26.1	+1.0
ACON	Acoyapa	1.89	356	⇑*i*P	Pn	18 01 29.8	+1.2
ACON	Acoyapa	1.89	356	Pn	Pn	18 01 29.7	+1.1
EDPN	Palmar Norte	1.91	125	*e*P	Pn	18 01 29.5	+0.6
EDBA	Buenos Aires	1.96	117	*e*P	Pn	18 01 30.2	+0.6
EDBA				*e*S	Sn	18 01 53.1	+0.1
MASN	Masaya	2.19	330	*e*P	Pn	18 01 33.6	+0.8
ESPN	Las Esperanzas	2.23	19	⇑*i*P	Pn	18 01 34.5	+1.2
ESPN	Las Esperanzas	2.23	19		Pn	18 01 34.5	+1.2
PTJ1	Puerto Jimnez	2.30	131	*i*P	Pn	18 01 36.6	+2.4
PTJ1	Puerto Jimnez	2.30	131	⇑*e*P	Pn	18 01 36.6	+2.4
PTJ1				*e*S	Sn	18 02 02.1	+0.9
PIRO	Carate, Puerto	2.36	134	*e*P	Pn	18 01 36.9	+1.9
EDSV	San Vito	2.39	121	*e*P	Pn	18 01 37.7	+2.2
RGM0	Gandoca	2.45	101	*e*P	Pn	18 01 38.0	+1.8
RGM0				*e*S	Sn	18 02 09.6	+4.7
RGM0	Gandoca	2.45	101	⇑*e*P	Pn	18 01 38.4	+2.1
CNI2	El Empalme, Bo	2.61	104	*e*P	Pn	18 01 39.8	+1.3
BRU2	Volcan	2.64	118	*i*P	Pn	18 01 40.2	+1.1
	baz=297,slow=4.3						
BRU2				*i*S	Sn	18 02 12.1	+2.1
BRU2	Volcan	2.64	118	*e*P	Pn	18 01 40.2	+1.1
BCO2	Palmira	2.82	118	*e*P	Pn	18 01 42.9	+1.3
PTAR3	Potrerillos Ar	2.86	118	*e*P	Pn	18 01 46.0	+4.0
CNGN	Cerro Negro	2.91	326	⇓*e*P	Pn	18 01 45.3	+2.6
BAGA3	Bagala, Chiriq	2.95	123	*e*P	Pn	18 01 46.1	+3.0
DVD	David	3.03	122	*i*P	Pn	18 01 46.8	+2.5
DVD				*i*S	Sn	18 02 23.6	+4.3
LOCO3	Loma Colorada,	3.07	122	*e*P	Pn	18 01 47.3	+2.5
CHGR2	Aguacate	3.07	111	*i*P	Pn	18 01 45.9	+1.1
CHGR2				*i*S	Sn	18 02 21.1	+0.7
LOMA3	Las Lomas, Chi	3.08	122	*i*P	Pn	18 01 48.1	+3.2
PEDE3	Pedregal, Chir	3.08	123	*e*P	Pn	18 01 47.4	+2.4
GUAL3	Gualaca, Chiri	3.11	119	*e*P	Pn	18 01 46.9	+1.5
CHIR3	Chiriqui UPA,	3.15	122	*i*P	Pn	18 01 49.2	+3.3
CRIN	San Cristobal	3.27	323	*e*P	Pn	18 01 48.7	+1.1
ESTN	Estel	3.28	337	⇑*i*P	Pn	18 01 49.4	+1.6
ESTN	Estel	3.28	337	Pn	Pn	18 01 49.2	+1.4
NANC3	Nancito, Chiri	3.74	119	*e*P	Pn	18 01 56.8	+2.8
CSGN	Cosiguina Volc	3.80	320	⇓*e*P	Pn	18 01 58.0	+3.1
CSGN	Cosiguina Volc	3.80	320	Pn	Pn	18 01 58.1	+3.2
PVID3	Puerto Vidal,	3.94	120	*e*P	Pn	18 01 58.5	+1.8
CNAZ3	Canazas, Verag	4.15	114	*e*P	Pn	18 02 04.0	+4.4
GMAL	Guarumal, Vera	4.41	121	*i*P	Pn	18 02 04.1	+0.9
GMAL				*e*S	Sn	18 02 53.9	+0.6
GMAL	Guarumal, Vera	4.41	121	*e*P	Pn	18 02 04.0	+0.8
SFRA3	San Francisco,	4.41	114	*e*P	Pn	18 02 05.4	+2.2
STIA3	Santiago, Vera	4.47	116	*e*P	Pn	18 02 15.8	+12
CALO3	Calobre, Verag	4.50	112	*e*P	Pn	18 02 09.3	+4.8
TGUH	Tegucigalpa,Un	4.52	331	Pn	Pn	18 02 07.2	+2.3
PONU3	Ponuga, Veragu	4.56	118	*i*P	Pn	18 02 02.9	-2.5
MARI3	Mariato, Verag	4.67	121	*e*P	Pn	18 02 09.3	+2.4
OCU3	Ocu, Herrera	4.71	116	*e*P	Pn	18 02 09.9	+2.5
ICCO	Coco Island	4.92	204	⇑*e*P	Pn	18 02 09.5	-0.8
CACAO	El Cacao, Vera	4.94	123	*i*P	Pn	18 02 13.2	+2.7
VTON	El Valle, Cocl	5.08	106	*e*P	Pn	18 02 14.5	+2.1
BCIP	Isla Barro Col	5.21	99	*i*P	Pn	18 02 15.1	+0.9
BCIP	Isla Barro Col	5.21	99		Pn	18 02 15.1	+0.9
ZANG	Zanguenga, Cho	5.22	102	*e*P	Pn	18 02 15.6	+1.2
AZU	Azuero	5.23	115	*e*P	Pn	18 02 16.0	+1.5
AZU	Azuero	5.23	115	*e*P	Pn	18 02 15.4	+0.9
PCRI3	Pocri, Los San	5.42	116	*e*P	Pn	18 02 19.7	+2.6
UPA	Univ. de Panam	5.54	101	*e*P	Pn	18 02 19.8	+1.1
PEDA3	Pedasi	5.56	117	*e*P	Pn	18 02 07.4	-12
CHPO	Chepo, Panama	5.91	98	*e*P	Pn	18 02 15.8	-8.0
APG	El Apazote	7.21	313	P	Pn	18 02 42.9	+1.0
	0.5nm,0.3s,baz=100,slow=6.2,SNR=5.0						
SJCC	San Jacinto, C	9.72	90	*e*P	Pn	18 03 17.9	+1.8
TEIG	Tepich	10.57	343	LR	LR	18 07 42.4	
	comp=Z,342nm,21.5s,baz=78,slow=39						
ROSC	El Rosal	11.83	115	LR	LR	18 08 15.1	
	comp=Z,396nm,20.4s,baz=276,slow=37						
CMIG	Matias Romero	11.84	307	P	Pn	18 03 45.2	+0.1
	0.3nm,0.3s,baz=119,slow=13,SNR=6.3						
URIC	Uribia, Colomb	12.92	82	Pn	Pn	18 03 55.7	-4.2
SDV	Santo Domingo	14.26	94	P	Pn	18 04 17.0	-1.4
	0.8nm,0.3s,baz=253,slow=8.5,SNR=9.2						
SDV	Santo Domingo	14.26	94		P	18 04 19.6	-5.1
TLIG	Tlapa	15.09	301		Pn	18 04 31.8	+2.5
TLIG				IAmb	IAmb	18 04 44.2	
	comp=Z,52nm,1.4s						
HKT	Hockley	22.20	335	P	P	18 05 50.9	-0.5
152A	Waverly Hall	22.49	1	P	P	18 05 56.4	+1.8
152A				IAmb	IAmb	18 06 09.9	
	comp=Z,20nm,1.0s						
833A	Chaparral WMA,	22.62	325	P	P	18 05 55.2	-0.8
833A				IAmb	IAmb	18 06 09.1	
	comp=Z,27nm,1.0s						
LRAL	Lakeview Retre	22.93	356	P	P	18 05 59.4	+0.3
LRAL				IAmb	IAmb	18 06 13.4	
	comp=Z,16nm,0.8s						
Z50A	Ashland	23.09	358	P	P	18 06 01.6	+0.8
Z50A				IAmb	IAmb	18 06 14.9	
	comp=Z,18nm,0.8s						
GOGA	Godfrey	23.27	3	P	P	18 06 03.9	+1.2
Y52A	Lilburn	23.70	2	P	P	18 06 07.7	+1.0
Y49A	Blount Mountai	23.71	357	P	P	18 06 08.3	+1.5
Y49A				IAmb	IAmb	18 06 20.5	
	comp=Z,13nm,0.9s						
HODGE	Hodges	24.18	6	P	P	18 06 12.8	+1.7
HODGE				IAmb	IAmb	18 06 26.1	
	comp=Z,14nm,1.0s						
WHTX	Lake Whitney,	24.66	334	P	P	18 06 16.2	+0.7
BG3	Lake Jocassee	24.88	4	P	P	18 06 19.5	+2.0
CPCT	Cooper Cave	25.27	1	P	P	18 06 22.6	+1.6
CPCT				IAmb	IAmb	18 06 37.2	
	comp=Z,20nm,1.1s						
TKL	Tuckaleechee C	25.50	2	P	P	18 06 22.6	-0.5
	comp=Z,4.1nm,0.8s,baz=182,slow=12,SNR=3.4						
V53A	Saluda	25.56	4	P	P	18 06 25.1	+1.4
V53A				IAmb	IAmb	18 06 42.9	
	comp=Z,20nm,1.4s						
MIAR	Mount Ida	25.58	344	P	P	18 06 24.5	+0.6
MIAR				pP	pP	18 06 34.9	-0.5
V48A	Smith Brothers	25.60	357	P	P	18 06 24.6	+0.5
V51A	Loudon	25.62	1	P	P	18 06 27.3	+3.1
V51A				IAmb	IAmb	18 06 40.8	
	comp=Z,16nm,1.1s						
TXAR	Lajitas Array	25.90	320	P	P	18 06 27.2	+0.2
	comp=Z,1.7nm,0.4s,baz=133,slow=12,SNR=25						
TXAR				PcP	PcP	18 09 55.1	-0.2
	comp=Z,0.5nm,0.8s,baz=132,slow=4.0,SNR=5.4						
TXAR				ScP	ScP	18 13 29.1	-2.4
	comp=Z,0.3nm,0.7s,baz=116,slow=5.7,SNR=3.7						
TXAR	Lajitas Array	25.90	320	P	P	18 06 28.4	+1.4
TX31	Lajitas Ar. Si	25.90	320	P	P	18 06 28.8	+1.8
TX31				IAmb	IAmb	18 06 41.5	
	comp=Z,14nm,1.0s						
TX32	Lajitas Array	25.90	320	P	P	18 06 28.8	+1.9
TX32				IAmb	IAmb	18 06 41.5	
	comp=Z,13nm,0.9s						
WHAR	Wooly Hollow	25.96	346	P	P	18 06 27.8	+0.5
WHAR				IAmb	IAmb	18 06 53.4	
	comp=Z,39nm,1.9s						
ABTX	Abilene, Hawle	26.18	331	P	P	18 06 30.7	+1.3
ABTX				IAmb	IAmb	18 06 43.8	
	comp=Z,17nm,1.0s						
LCAR	Lake Charles	26.47	349	P	P	18 06 33.2	+1.3
PTGA	Pitinga	27.16	112	P	P	18 06 37.7	-0.7
	comp=Z,5.0nm,0.6s,baz=302,slow=9.2,SNR=13						
PTGA	Pitinga	27.16	112	P	P	18 06 39.3	+0.9
PTGA				IAmb	IAmb	18 06 40.6	
	comp=Z,17nm,1.1s						
WMOK	Wichita Mounta	27.58	335	P	P	18 06 44.6	+2.7
MNTX	Cornudas Mount	28.61	322	P	P	18 06 54.4	+3.3
Q51A	Peebles	28.87	3	P	P	18 06 54.2	+0.8
LPAZ	La Paz	31.08	147	P	P	18 07 14.2	+0.4
	comp=Z,1.0nm,0.6s,baz=336,slow=7.3,SNR=4.7						
LPAZ	La Paz	31.08	147	IAmb	IAmb	18 07 15.5	
	comp=Z,2.9nm,1.1s						
X16A	Lo Mia Camp, P	34.21	319	P	P	18 07 41.7	+1.1
X16A				IAmb	IAmb	18 07 54.2	
	comp=Z,5.2nm,0.8s						
H43A	Windswept, Lux	34.35	357	P	P	18 07 41.6	+0.2
BCX	Boston College	34.36	18	P	P	18 07 42.6	+1.1
SADO	Sadowa	34.95	7	P	P	18 07 44.9	-1.6
	comp=Z,3.4nm,0.6s,baz=251,slow=4.9,SNR=4.6						
SADO	Sadowa	34.95	7	IAmb	IAmb	18 07 58.2	
	comp=Z,11nm,1.2s						
GLA	Glamis	35.70	314	P	P	18 07 55.2	+1.9
GLA				IAmb	IAmb	18 08 07.4	
	comp=Z,7.5nm,0.8s						
E43A	Lone Tree Farm	36.22	358	P	P	18 07 59.2	+1.7
E43A				pP	pP	18 08 08.0	-1.3
E43A				IAmb	IAmb	18 08 14.9	
	comp=Z,7.0nm,1.0s						
W13A	Hualapai Mount	36.22	318	P	P	18 07 58.7	+0.8
W13A				pP	pP	18 08 10.6	+0.9
W13A				IAmb	IAmb	18 08 11.8	
	comp=Z,6.4nm,0.9s						
KNB	Kanab	36.72	321	P	P	18 08 02.6	+0.5
SRU	San Rafael Swe	36.80	326	P	P	18 08 02.7	0.0
MTPU	Mount Pierson	37.01	323	P	P	18 08 09.1	+4.4
PFO	Pinyon Flats O	37.15	314	P	P	18 08 04.4	-1.3
	comp=Z,2.6nm,0.9s,baz=98,slow=9.6,SNR=2.8						
PFO				pP	pP	18 08 17.7	+0.1
	comp=Z,3.3nm,0.8s,baz=107,slow=9.0,SNR=4.3						
PFO	Pinyon Flats O	37.15	314	P	P	18 08 05.5	-0.3
PFO					pP	18 08 19.1	+1.6
PFO				IAmb	IAmb	18 08 19.9	
	comp=Z,4.6nm,0.8s						
PDAR	Pinedale Array	38.98	331	P	P	18 08 19.7	-1.5
	comp=Z,0.1nm,0.4s,baz=133,slow=10,SNR=2.5						
PDAR				PcP	PcP	18 10 30.4	-0.6
	comp=Z,0.4nm,0.6s,baz=127,slow=2.4,SNR=4.3						
PDAR				LR	LR	18 27 34.3	
	comp=Z,473nm,19.7s,baz=276,slow=41						
ELK	Elko	40.57	324	P	P	18 08 33.0	-1.4
	comp=Z,0.4nm,0.4s,baz=320,slow=2.5,SNR=3.7						
ELK				pP	pP	18 08 46.6	+0.3
	comp=Z,2.2nm,0.8s,baz=133,slow=3.4,SNR=5.9						
ELK	Elko	40.57	324	P	P	18 08 34.6	+0.2
NVAR	Mina Array Bea	41.04	319	P	P	18 08 38.6	+0.3
	comp=Z,2.6nm,0.7s,baz=134,slow=8.5,SNR=8.7						
NVAR				pP	pP	18 08 51.4	+1.1
	comp=Z,6.5nm,0.7s,baz=130,slow=6.9,SNR=12						
NVAR				PcP	PcP	18 10 36.6	-1.1
	comp=Z,0.9nm,0.6s,baz=131,slow=4.1,SNR=2.7						
NVAR	Mina Array Bea	41.04	319	P	P	18 08 39.0	+0.7
NVAR				pP	pP	18 08 50.9	+0.6
BDFB	Brasilia	44.69	124	P	P	18 09 07.4	-0.6
	comp=Z,8.1nm,0.8s,baz=294,slow=11,SNR=9.7						
BDFB	Brasilia	44.69	124	P	P	18 09 08.3	+0.3
SCHQ	Schefferville	46.93	14	P	P	18 09 22.2	-2.8
	comp=Z,1.0nm,0.5s,baz=223,slow=6.4,SNR=3.5						
SCHQ				pP	pP	18 09 35.5	-1.8
	comp=Z,2.5nm,0.7s,baz=220,slow=6.0,SNR=3.6						
SCHQ	Schefferville	46.93	14	IAmb	IAmb	18 09 32.4	
	comp=Z,18nm,1.6s						
PLCA	Paso Flores	52.29	166	P	P	18 10 06.3	+0.2
	comp=Z,6.0nm,0.8s,baz=6.9,slow=9.5,SNR=8.9						
PLCA				pP	pP	18 10 19.1	+0.7
	comp=Z,7.2nm,0.8s,baz=344,slow=5.4,SNR=6.7						
YKA	Yellowknife Ar	56.52	344	P	P	18 10 33.3	-3.1
	comp=Z,0.3nm,0.5s,baz=142,slow=7.3,SNR=4.0						
ESDC	Sonseca Array	76.80	52	P	P	18 12 43.9	-2.4
	comp=Z,0.8nm,0.6s,baz=280,slow=5.7,SNR=6.1						
ESDC	Sonseca Array	76.80	52	P	P	18 12 44.2	-2.1
TORD	Torodi Ar. Bea	84.61	78	P	P	18 13 25.6	-2.9
	comp=Z,0.3nm,0.5s,baz=266,slow=6.3,SNR=2.7						
KSH	Kashi	127.61	19	PKP	PKiKP	18 20 01.7	+1.3
KSH				sPKP		18 20 15.6	
KSH				PP	PP	18 22 04.7	+4.9
KSH				SKS	SKSdf	18 27 07.3	-1.2
KSH	Kashi	127.61	19	SS	SS	18 39 09.7	+2.4
WHN	Wuhan	135.53	336	PKP	PKiKP	18 20 21.1	+4.6
CD2	Chengdu	138.39	349	PKP	PKPdf	18 20 20.0	-0.3
ASAR	Alice Springs	140.50	245	PKhKP	PKPpre	18 20 16.3	
	comp=Z,0.4nm,0.7s,baz=107,slow=2.6,SNR=3.9						
ASAR				PKP	PKPdf	18 20 23.9	-0.4
	comp=Z,0.9nm,0.8s,baz=103,slow=1.9,SNR=9.9						
ASAR				pPKP	pPKPdf	18 20 37.1	-0.7
	comp=Z,0.6nm,0.5s,baz=101,slow=1.5,SNR=3.7						
WRA	Warramunga Arr	140.81	251	PKhKP	PKPpre	18 20 17.9	
	comp=Z,0.4nm,0.6s,baz=97,slow=3.1,SNR=7.5						
WRA				PKP	PKPdf	18 20 24.8	-0.1
	comp=Z,0.9nm,0.5s,baz=92,slow=2.6,SNR=16						
WRA				pPKP	pPKPdf	18 20 38.6	+0.2
	comp=Z,0.9nm,0.5s,baz=92,slow=2.3,SNR=4.5						
CMAR	Chiang Mai Arr	151.38	352	PKPbc	PKPbc	18 20 46.7	-2.2
	comp=Z,0.4nm,0.7s,baz=352,slow=3.6,SNR=3.1						

BJI ***10*** *18:03:53.8±0.0, 46°.67S×34°.05E, h10^{km}, mb5.2/8, Ms4.9/3, Ms7 4.7/3*

IDC ***10*** *18:03:56.0±0.5, 46°.04S×34°.79E, h0^{km}, mb4.2/19, mb1 4.3/21, mb1mx4.3/34, mbtmp4.2/21, ML4.5/2, MS4.3/8, Ms1 4.3/8, ms1mx3.8/33, Error ellipse: s-maj=21.1km s-min=12.8km az=73.0*

NEIC ***10*** *18:03:58.4±2.0, 46°.1S±0°.1×34°.9E±0°.2, h10^{km}±1^{km}, mb4.8/16, Error ellipse: s-maj=25.6km s-min=19.5km az=37.0*

ISC 10 18:03:57.7±0.4**, 46°.02S**±0°.07×**34°.8E**±0°.1**, h10^{km}, n72,** σ1.^{s}44/67**, mb4.4**/27**, MS4.3**/10**, 2C, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	Sutherland	17.39	317	P	Pn	18 07 58.9	-1.7
	2.1nm,0.3s,baz=136,slow=14,SNR=22						
SUR				S	Sn	18 10 58.7	-16
	0.6nm,0.3s,baz=101,slow=20,SNR=1.5						
SUR				LR	LR	18 13 46.6	
	comp=Z,554nm,18.5s,baz=133,slow=34						
BOSA	Boshof	18.95	333	P	P	18 08 17.4	-1.6
	1.0nm,0.3s,baz=160,slow=11,SNR=15						
BOSA	Boshof	18.95	333	P	P	18 08 17.5	-1.6
LBTB	Lobatse	22.24	337	P	P	18 08 54.6	0.0
	7.3nm,0.8s,baz=164,slow=11,SNR=11						
LBTB				LR	LR	18 16 27.6	
	comp=Z,811nm,18.8s,baz=175,slow=34						
LBTB	Lobatse	22.24	337	P	P	18 08 54.5	-0.2
LBTB				IAmb	IAmb	18 08 57.1	
	comp=Z,92nm,1.9s						
SYO	Syowa Base	23.18	176	⇑*e*P	P	18 09 03.1	-1.0
SYO	Syowa Base	23.18	176	⇑*e*pP	pP	18 09 05.4	-0.3
MATP	Matopo	26.06	346	P	P	18 09 27.6	-3.7
	comp=Z,7.4nm,0.7s,baz=167,slow=9.6,SNR=18						
MATP				LR	LR	18 18 15.3	
	comp=Z,478nm,20.1s,baz=122,slow=33						
MAW	Mawson	26.08	156	P	P	18 09 30.4	-0.6
	comp=Z,6.2nm,0.8s,baz=309,slow=17,SNR=2.1						
ABPO	Ambohimpanom	28.81	25	P	P	18 09 56.5	+0.4
ABPO				IAmb	IAmb	18 10 08.2	
	comp=Z,21nm,1.4s						
OPO	Ambohidratompo	29.22	25	P	P	18 09 58.4	-1.4
	comp=Z,2.1nm,0.7s,baz=141,slow=6.5,SNR=2.9						
TSUM	Tsumeb	30.30	326	P	P	18 10 07.6	-1.7
	comp=Z,2.9nm,0.8s,baz=177,slow=6.7,SNR=3.0						
TSUM				LR	LR	18 21 02.7	
	comp=Z,444nm,21.5s,baz=159,slow=34						
LSZ	Lusaka	31.16	348	P	P	18 10 16.7	-0.2
	comp=Z,14nm,0.8s,baz=174,slow=9.2,SNR=34						
LSZ				LR	LR	18 21 50.8	
	comp=Z,511nm,18.3s,baz=134,slow=34						
LSZ	Lusaka	31.16	348	P	P	18 10 16.8	0.0
LSZ				IAmb	IAmb	18 10 18.0	
	comp=Z,18nm,0.9s						
SNAA	Sanae	31.25	202	P	P	18 10 16.0	-1.2
	comp=Z,3.9nm,0.9s,baz=52,slow=1.0,SNR=5.0						
QSPA	South Pole Qui	44.20	180	P	P	18 12 05.9	-0.7
	comp=Z,3.5nm,0.9s,baz=321,slow=1.3,SNR=6.3						
KMBO	Kilima Mbogo	44.76	3	P	P	18 12 11.8	+0.2
	comp=Z,1.4nm,0.6s,baz=174,slow=4.2,SNR=5.6						
MBAR	Mbarara	45.38	354	P	P	18 12 18.6	+2.1
MBAR				IAmb	IAmb	18 12 36.8	
	comp=Z,14nm,1.5s						
VNDA	Vanda	52.49	167	P	P	18 13 10.4	+0.2
	comp=Z,2.5nm,0.9s,baz=242,slow=9.9,SNR=5.8						
VNDA				LR	LR	18 33 55.2	
	comp=Z,308nm,19.6s,baz=261,slow=34						
TOA0	Torodi Ar. Sit	66.03	324	P	P	18 14 46.2	+1.6
TORD	Torodi Ar. Bea	66.03	324	P	P	18 14 46.2	+1.6
	comp=Z,3.8nm,0.5s,baz=159,slow=7.3,SNR=29						
TORD	Torodi Ar. Bea	66.03	324	P	P	18 14 46.0	+1.5
PALK	Pallekele	66.97	51	LR	LR	18 37 07.8	
	comp=Z,113nm,19.4s,baz=109,slow=30						
CPUP	Villa Florida	72.98	250	P	P	18 15 27.0	-0.5
	comp=Z,5.0nm,0.8s,baz=133,slow=5.4,SNR=12						
CPUP	Villa Florida	72.98	250	P	P	18 15 28.4	+0.8
CPUP				IAmb	IAmb	18 15 38.5	
	comp=Z,12nm,1.1s						
FITZ	Fitzroy Crossi	77.75	103	P	P	18 15 55.7	+0.7
STKA	Stephens Creek	78.11	124	P	P	18 15 57.6	+0.7
	comp=Z,2.7nm,0.8s,baz=247,slow=12,SNR=4.9						
STKA	Stephens Creek	78.11	124	P	P	18 15 58.2	+1.3
ASAR	Alice Springs	79.30	113	P	P	18 16 03.5	-0.1
	comp=Z,0.7nm,0.4s,baz=226,slow=5.6,SNR=34						
ASAR	Alice Springs	79.30	113	P	P	18 16 03.4	-0.3
WRA	Warramunga Arr	82.24	111	P	P	18 16 19.5	+0.1
	comp=Z,0.6nm,0.9s,baz=24,slow=21,SNR=5.6						
HRA	Herat	83.78	23	P	P	18 16 28.3	+1.3
HRA				IAmb	IAmb	18 16 37.4	
	comp=Z,4.8nm,0.8s						
KEST	Kesra	84.57	339	LR	LR	18 54 38.1	
	comp=Z,336nm,20.7s,baz=12,slow=36						
THZ	Tophouse	84.94	150	P	P	18 16 32.3	-0.7
BRTR	Keskin Array B	85.37	359	P	P	18 16 35.8	+0.9
	comp=Z,1.1nm,0.8s,baz=183,slow=9.5,SNR=4.9						
PB11	IPOC Station P	85.60	246	P	P	18 16 38.6	+1.8
GEYT	Alibeck	86.15	18	P	P	18 16 39.2	+0.6
	comp=Z,1.0nm,0.8s,baz=224,slow=6.0,SNR=3.2						
CMAR	Chiang Mai Arr	86.38	59	P	P	18 16 40.7	+0.5
	comp=Z,0.2nm,0.3s,baz=224,slow=6.3,SNR=3.6						
CHTO	Chiang Mai	86.65	59	P	P	18 16 43.6	+2.1
CHTO				IAmb	IAmb	18 16 50.9	
	comp=Z,3.7nm,0.8s						
LPAZ	La Paz	87.15	250	P	P	18 16 45.0	+0.1
	comp=Z,0.4nm,0.4s,baz=108,slow=6.4,SNR=3.2						
LSA	Lhasa	90.99	46	P	P	18 17 01.8	-0.6
LSA				IAmb	IAmb	18 17 12.6	
	comp=Z,5.8nm,0.8s						
ESDC	Sonseca Array	92.12	331	P	P	18 17 07.3	+0.5
	comp=Z,0.1nm,0.3s,baz=153,slow=5.2,SNR=3.1						
ESDC	Sonseca Array	92.12	331	P	P	18 17 08.2	+1.3
KSH	Kashi	92.78	31	P	P	18 17 10.6	+0.6
KSH				pP	pwP	18 17 15.6	-2.4
KSH				SKS	SKSac	18 27 40.2	-3.4
KSH				S	S	18 28 10.0	-5.1
KSH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KSH				LR	LR		
	comp=Z,290nm,10.8s						
KSH				LR	LR		
	comp=Z,390nm,13.1s						
KMI	Kunming	93.74	57	P	P	18 17 17.1	+2.2
KMI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CD2	Chengdu	98.69	54	P	Pdif	18 17 39.8	+2.7
WMQ	Urumqi	100.97	36	*e*P	Pdif	18 17 50.3	+3.4
WMQ				pP	pwP	18 17 53.2	-1.8
WMQ				LR	LR		
	comp=Z,170nm,29.3s						
WMQ				LR	LR		
	comp=Z,98nm,29.0s						
HHC	Hu-ho-hao-te	110.24	52	*e*PKP	PKiKP	18 22 27.0	-2.4
HHC				LR	LR		
	comp=Z,170nm,20.2s						
HHC				LR	LR		
	comp=Z,190nm,19.8s						
VLDQ	Val d'Or	135.20	298		PKiKP	18 23 18.0	-0.1
TXAR	Lajitas Array	143.65	257	PKP	PKPbc	18 23 31.4	+1.2
	comp=Z,1.4nm,0.8s,baz=141,slow=6.0,SNR=14						
TXAR	Lajitas Array	143.65	257		PKPbc	18 23 30.6	+0.4
TX31	Lajitas Ar. Si	143.65	257		PKPbc	18 23 30.5	+0.2
TX32	Lajitas Array	143.65	257		PKPbc	18 23 30.1	-0.2
MSTX	Muleshoe	145.76	265		PKPdf	18 23 35.7	-0.7
ECSD	EROS Data Cent	145.95	284		PKPbc	18 23 36.8	-0.2
MNTX	Cornudas Mount	146.26	259		PKPdf	18 23 37.0	-0.1
AGMN	Agassiz Nation	146.86	292		PKPbc	18 23 39.0	-0.5
BILL	Bilibino	146.93	31		PKPab	18 23 40.4	-0.1
ULM	Lac du Bonnet	147.33	296	PKPbc	PKPbc	18 23 39.9	-0.8
	comp=Z,3.0nm,0.7s,baz=98,slow=3.8,SNR=9.6						
ULM	Lac du Bonnet	147.33	296		PKPbc	18 23 41.2	+0.5
T25A	Trinidad	148.55	268		PKPdf	18 23 42.7	+1.6
319A	Douglas	148.71	255		PKPdf	18 23 42.2	+0.8
ANMO	Albuquerque	148.84	263		PKPdf	18 23 42.2	+0.6
SDCO	Great Sand Dun	149.60	269		PKPdf	18 23 42.5	-0.4
S22A	4UR Ranch, Cre	150.52	268		PKiKP	18 23 50.6	+0.2
RSSD	Black Hills	151.12	281		PKPdf	18 23 44.9	0.0
SMCO	Snowmass	151.28	270		PKPdf	18 23 47.0	+1.4
WUAZ	Wupatki	152.54	260		PKPdf	18 23 47.0	-0.2
PDAR	Pinedale Array	154.49	276	PKP	PKPdf	18 23 49.9	0.0
	comp=Z,0.5nm,1.0s,baz=102,slow=2.1,SNR=2.9						
PDAR				PKPbc	PKPbc	18 23 58.1	-0.2
	comp=Z,0.7nm,0.8s,baz=116,slow=3.4,SNR=5.7						
YKA	Yellowknife Ar	156.05	324	PKP	PKPdf	18 23 49.7	-1.4
	comp=Z,0.7nm,1.0s,baz=62,slow=1.6,SNR=3.6						
PAHR	Pah Rah Range	160.13	261		PKPdf	18 23 58.9	+1.9
BEKR	Beckworth	160.87	260		PKPdf	18 23 58.4	+0.5

IDC 10 18:25:48.1±3.3**, 43°.55N**×**105°.31E, h0^{km}, mb1 2.9**/3**, mb1mx2.8**/48**, mbtmp2.9**/3**, ML2.9**/3**, Error ellipse: s-maj=38.6km s-min=29.3km az=80.0, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	4.35	10	Pn	Pn	18 26 54.6	-1.0
	0.3nm,0.3s,baz=185,slow=15,SNR=5.3						
SONM				Pg	Pb	18 27 08.5	+2.9
	1.0nm,0.3s,baz=195,slow=18,SNR=10						
SONM				Lg	Lg	18 28 06.3	
	2.2nm,0.3s,baz=192,slow=30,SNR=16						
MKAR	Makanchi Array	16.54	289	Pn	Pn	18 29 41.9	+0.5
	0.0nm,0.3s,baz=97,slow=14,SNR=2.0						
KSRS	Korea Array	18.22	102	P	Pn	18 30 02.0	-0.3
	0.2nm,0.3s,baz=281,slow=11,SNR=2.3						

IDC ***10*** *18:32:48.0±1.2, 56°.52S×143°.20W, h0^{km}, mb4.0/3, mb1 4.2/3, mb1mx3.9/28, mbtmp4.0/3, MS4.1/9, Ms1 4.0/9, ms1mx3.9/19, Error ellipse: s-maj=48.8km s-min=39.7km az=32.0*

ISC 10 18:32:50.4±1.2**, 56°.6S**±0°.2×**143°.7W**±0°.4**, h10^{km}, n29,** σ0.^{s}57/9**, mb4.2**/3**, MS4.1**/12**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	28.01	202	LR	LR	18 46 34.4	
	comp=Z,259nm,19.5s,baz=69,slow=29						
RPZ	Rata Peaks	31.12	275	LR	LR	18 48 50.8	
	comp=Z,317nm,19.8s,baz=124,slow=31						
URZ	Urewera	31.65	289	LR	LR	18 49 38.5	
	comp=Z,407nm,20.4s,baz=130,slow=32						
TBI	Tubuai	33.44	350	*e*T	T	19 14 29.6	

	80nm,0.3s						
QSPA	South Pole Qui	33.59	180	P	P	18 39 30.8	+0.3
	3.1nm,1.0s,baz=96,slow=19,SNR=3.9						
MEH	Mehetia	38.76	353	*e*T	T	19 21 05.3	
	42nm,0.3s						
PAE	Paea	39.09	351	*e*T	T	19 21 31.6	
	3.4nm,0.3s						
PPT2	Papeete2	39.16	351	*e*S	S	18 46 18.6	+0.5
	196nm,30.8s						
PPT2				*e*LR	LR	18 50 44.5	
	comp=Z,841nm,27.8s						
PPT	Papeete	39.18	351	LR	LR	18 52 42.8	
	comp=Z,254nm,20.4s,baz=174,slow=30						
VAH	Vaihoa	41.35	354	*e*T	T	19 24 17.9	
	51nm,0.3s						
PMOR	Pomariorio Ree	41.60	354	*e*T	T	19 24 37.6	
	5.2nm,0.3s						
TAOE	Nuku Hiva Isla	47.67	5	*e*LR	LR	18 54 46.5	
	comp=Z,503nm,28.4s						
DZM	Mont Dzumac	50.05	292	*e*LR	LR	18 56 23.6	
	comp=Z,546nm,27.4s						
MAW	Mawson	54.59	192	LR	LR	19 03 21.0	
	comp=Z,118nm,18.8s,baz=138,slow=34						
ASAR	Alice Springs	66.45	262	P	P	18 43 39.9	0.0
	1.8nm,1.0s,baz=139,slow=6.4,SNR=11						
H01W1	Cape Leeuwin H	67.77	240	T	T	19 58 47.0	
	baz=144,slow=76,SNR=45						
H01W2	Cape Leeuwin H	67.77	240	T	T	19 58 50.5	
	baz=144,slow=76,SNR=38						
H01W3	Cape Leeuwin H	67.78	240	T	T	19 58 50.7	
	baz=144,slow=76,SNR=33						
WRA	Warramunga Arr	69.20	265	P	P	18 43 57.0	-0.2
	1.0nm,1.0s,baz=145,slow=5.5,SNR=3.0						
WRA				LR	LR	19 11 36.5	
	comp=Z,83nm,19.7s,baz=225,slow=34						
ATAH	Atahualpa	70.59	73	LR	LR	19 07 46.5	
	comp=Z,95nm,18.2s,baz=204,slow=30						
FITZ	Fitzroy Crossi	75.47	259	LR	LR	19 13 59.8	
	comp=Z,145nm,19.7s,baz=142,slow=33						
BOSA	Boshof	94.64	170	LR	LR	19 25 44.3	
	comp=Z,82nm,18.6s,baz=235,slow=34						
H10N3	ASCENSION HYDR	103.52	128	T	T	20 42 38.7	
	baz=204						
H10N1	ASCENSION HYDR	103.52	128	T	T	20 42 37.7	
	baz=204						
H10N2	ASCENSION HYDR	103.53	128	T	T	20 42 48.4	
	baz=204						
ILAR	Eielson Array	121.03	358	PKP	PKPdf	18 51 40.5	-1.0
	0.4nm,0.9s,baz=196,slow=1.9,SNR=3.3						
ESDC	Sonseca Array	148.82	105	PKPbc	PKPdf	18 52 33.5	0.0
	0.1nm,0.3s,baz=236,slow=2.6,SNR=4.6						
MKAR	Makanchi Array	150.39	271	PKPbc	PKiKP	18 52 41.8	0.0
	2.3nm,1.0s,baz=122,slow=1.9,SNR=7.0						
ZALV	Zalesovo Beam	152.69	285	PKPbc	PKiKP	18 52 46.9	+0.6
	0.2nm,0.3s,baz=135,slow=1.0,SNR=2.5						
ZALV				PKPab	pPKPab	18 52 59.0	-0.3
	1.9nm,0.8s,baz=108,slow=4.7,SNR=3.5						

SJA 10 18:33:08.9±0.9**, 29°.12S**×**72°.35W, h10^{km}, ML4.1, MW3.8, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AROD	Rodeo	2.71	113	*i* P	Pn	18 33 55.1	+2.2
AROD				*i* S	Sn	18 34 27.0	+1.1
ACDV	Cuesta del Vie	3.00	111	*i* P	Pb	18 34 00.1	-2.5
ACDV				*i* S	Sn	18 34 35.2	+2.4
ACDV				IAML		18 34 37.0	
	comp=Z,528nm,0.4s						
ACCO	Cerro Coronel	3.21	118	*i* P	Pn	18 34 02.5	+2.9
ACCO				*i* S	Sb	18 34 43.1	-2.3
AGUA	GUANDACOL	3.39	97	*i* P	Pn	18 34 05.0	+3.0
AGUA				*i* S	Sn	18 34 46.0	+3.7
VCA	Vinchina	3.65	85	*i* P	Pn	18 34 08.9	+3.2
VCA				IAML		18 35 05.7	
	comp=Z,449nm,0.4s						
RTLS	Leoncito	3.75	136	*i* P	Pb	18 34 12.9	-2.6
AMOG	MOGNA	3.80	119	*i* P	Pn	18 34 11.1	+3.5
RTLL	Cerro Villicun	4.01	124	*i* P	Pn	18 34 14.1	+3.6
RTCV	Cerro Valdivia	4.28	131	*i* P	Pb	18 34 20.0	-4.3
ACLC	CERRO LA CRUZ	4.72	95	*i* P	Pn	18 34 21.4	+1.0
APLL	PUNTA DE LOS L	5.22	106	*i* P	Pn	18 34 27.6	+0.5
ACAN	Cantantal	5.45	127	*i* P	Pn	18 34 33.4	+3.2
CYA	Choya	5.79	85	*i* P	Pn	18 34 35.9	+1.1
CYA				IAML		18 35 50.8	
	comp=Z,65nm,0.5s						
MRA	San Martin	6.59	122	*i* P	Pn	18 34 46.5	+0.6

NNC 10 18:38:37.4±6.5**, 37°.18N**×**71°.09E, h0^{km}, mb3.8, mpv3.4, 3C-3D, Error ellipse: s-maj=54.1km s-min=48.2km az=122.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	5.34	21	P	Pn	18 40 00.1	+1.5
	SNR=80						
UCH	Uchtor	5.69	27	P	Pn	18 40 04.5	+1.0
	SNR=19						
EKS2	Erkin-Say	5.85	20	P	Pn	18 40 06.8	+1.3
	SNR=9.3						
KK31	Karatay Array	5.93	356	⇑Pn	Pn	18 40 06.7	+0.3
	0.8nm,0.3s,baz=189,slow=13,SNR=39						
KK31				⇑Sn	Sn	18 41 16.4	+1.2
	3.1nm,0.6s,baz=192,slow=25,SNR=9.6						
AAK	Ala-Archa	6.05	25	P	Pn	18 40 08.9	+0.7
	SNR=7.9						
AAK	Ala-Archa	6.05	25	⇓Pn	Pn	18 40 08.7	+0.5
	1.8nm,0.3s						
AAK				⇓Sn	Sn	18 41 21.2	+3.0
	2.7nm,0.7s						
CHMS	Chumysh	6.45	25	⇓Pn	Pn	18 40 12.8	-0.9
	1.6nm,0.4s						
CHMS				⇑Sn	Sn	18 41 26.9	-1.1
	1.7nm,0.8s						
USP	Ospenovka	6.62	22	P	Pn	18 40 15.3	-0.6
	SNR=5.1						

IDC ***10*** *18:46:42.5±0.8, 0°.98N×27°.15W, h0^{km}, mb3.9/6, mb1 4.0/6, mb1mx3.7/28, mbtmp3.9/6, Error ellipse: s-maj=41.4km s-min=19.3km az=155.0*

ISC 10 18:46:44.7±0.9**, 0°.9N**±0°.3×**27°.1W**±0°.2**, h15^{km}, n12, σ0^{s}.25**/8**, mb3.9**/6**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N3	ASCENSION HYDR	15.29	125	T	T	19 05 50.4	
	baz=303,slow=74,SNR=37						
H10N2	ASCENSION HYDR	15.29	125	T	T	19 05 50.6	
	baz=303,slow=74,SNR=32						
H10N1	ASCENSION HYDR	15.31	125	T	T	19 05 48.3	
	baz=303,slow=74,SNR=43						
H10S3	ASCENSION HYDR	15.81	129	T	T	19 06 22.6	
	baz=306,slow=74,SNR=41						
H10S2	ASCENSION HYDR	15.83	129	T	T	19 06 30.8	
	baz=274,slow=74,SNR=16						
DBIC	Dimbokro	22.93	75	P	P	18 51 48.8	+0.3
	4.5nm,1.0s,baz=247,slow=13,SNR=3.0						
BDFB	Brasilia	26.40	231	P	P	18 52 20.9	-0.2
	4.4nm,0.8s,baz=77,slow=5.8,SNR=5.1						
TORD	Torodi Ar. Bea	31.02	66	P	P	18 53 01.8	-0.4
	2.1nm,0.8s,baz=259,slow=8.6,SNR=8.2						
LPAZ	La Paz	43.94	245	P	P	18 54 52.2	0.0
	1.5nm,0.7s,baz=85,slow=4.1,SNR=5.6						
AKASG	Malin Array Be	68.61	35	P	P	18 57 47.2	0.0
	0.3nm,0.4s,baz=242,slow=6.6,SNR=2.7						
TXAR	Lajitas Array	77.83	300	P	P	18 58 42.4	+0.1
	0.3nm,0.7s,baz=131,slow=6.1,SNR=3.4						
ASAR	Alice Springs	150.84	142	PKPbc	PKiKP	19 06 38.3	0.0
	0.3nm,0.8s,baz=206,slow=2.1,SNR=4.6						
ASAR				PKPab	PKPab	19 06 44.9	+0.2
	0.4nm,0.8s,baz=208,slow=2.8,SNR=6.0						

NCEDC ***10*** *18:59:48.1±1.1, 40°.58N±0°.06×125°.36W±0°.06, h23^{km}±8^{km}, Md2.9/27, Error ellipse: s-maj=8.4km s-min=5.5km az=205.0*

NEIC 10 18:59:45.6±1.0**, 40°.59N**±0°.06×**125°.42W**±0°.03**, h22^{km}**±10^{km}**, Error ellipse: s-maj=8.9km s-min=2.0km az=199.0, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCTM	Capetown	0.84	98		Pn	19 00 02.3	+0.2
KMPM	Mount Pierce	1.01	100		Pn	19 00 04.6	+0.1
KMPM					Sb	19 00 17.6	+0.3
KSMM	Slide Mountain	1.04	113		Pn	19 00 04.5	-0.4
JCC	Jacoby Creek,	1.08	78		Pn	19 00 04.8	-0.6
KRPM	Rodgers	1.20	62		Pn	19 00 07.0	-0.2
KCRM	Chalk Rock	1.23	97		Pn	19 00 07.9	+0.3
KHMM	Horse Mountain	1.32	77		Pn	19 00 08.4	-0.4
KMRM	Mail Ridge	1.36	105		Pb	19 00 10.1	-0.4
KCSM	Cold Springs	1.46	92		Pn	19 00 11.2	+0.5
KRMB	Red Mountain	1.48	51		Pn	19 00 10.3	-0.6
KPPM	Pickett Peak	1.59	98		Pn	19 00 13.3	+0.6
KOMM	Orleans Mounta	1.64	65		Pn	19 00 13.4	+0.1
KCPM	Cahto Peak	1.68	122		Pn	19 00 13.5	-0.2
KHBM	Hayfork Bally	1.68	87		Pn	19 00 13.9	+0.1
KIPM	Iron Peak	1.68	117		Pn	19 00 14.4	+0.5
KFPM	Farley Peak	1.81	121		Pn	19 00 15.9	+0.5
KBNM	Bluenose Ridge	1.84	112		Pn	19 00 16.9	+0.8
LBPM	Beegum Peak	1.96	97		Pn	19 00 18.0	+0.4
LGPM	Granite Peak	2.00	80		Pn	19 00 18.1	0.0
KRKM	Rackout Spring	2.00	120		Pn	19 00 18.5	+0.3
O02D	Mt. Diablo Mer	2.06	101		Pn	19 00 19.7	+0.8
LBKM	Bonanza King	2.15	76		Pn	19 00 20.6	+0.4
WDC	Whiskeytown Da	2.20	89		Pn	19 00 20.9	+0.2
GROM	Round Mountain	2.21	107		Pn	19 00 22.3	+1.2
GVV	Valley View	2.26	110		Pn	19 00 22.8	+1.1
HOPS	Hopland Field	2.42	131	Pn	Pn	19 00 24.0	+0.2
ORV	Oroville	3.19	108		Pn	19 00 33.4	-1.0
AFDM	Forest Hills D	3.80	114	Pn	Pn	19 00 41.6	-1.3

IDC ***10*** *19:26:11.3±0.5, 54°.72N×162°.84E, h0^{km}, mb4.3/27, mb1 4.5/30, mb1mx4.5/35, mbtmp4.3/30, ML4.1/3, MS4.4/42, Ms1 4.4/42, ms1mx4.2/64, Error ellipse: s-maj=15.2km s-min=10.3km az=161.0*

KRSC ***10*** *19:26:12.9±1.0, 54°.61N×163°.18E, h64^{km}±18^{km}, ML5.1*

BJI ***10*** *19:26:14.0±0.0, 54°.70N×162°.80E, h40^{km}, mB5.1/43, mb4.6/45, Ms5.2/41, Ms7 5.0/39*

MOS ***10*** *19:26:16.0±1.2, 54°.65N×162°.90E, h52^{km}, mb5.4/19, MS4.7/7, Error ellipse: s-maj=5.3km s-min=3.4km az=88.0*

NEIC ***10*** *19:26:18.0±2.3, 54°.70N±0°.09×162°.7E±0°.2, h49^{km}±6^{km}, mb4.9/157, Error ellipse: s-maj=14.2km s-min=10.6km az=133.0*

GCMT ***10*** *19:26:18.0±0.3, 54°.61N±0°.03×163°.17E±0°.03, h18^{km}±1^{km}, MW5.0/98, Moment Tensor Solution. s34,c38; s98,c140; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.41±.23; $M_{\theta\theta}$-0.82±.14; $M_{\phi\phi}$-2.59±.14; $M_{r\theta}$3.26±.47; $M_{\theta\phi}$-1.53±.08; $M_{\phi r}$0.01±.30; Best double couple: $M_0$4.60900×10^{16} NP1:ϕ_s191.00000°,δ36.00000°,λ45.00000°. NP2: ϕ_s61.00000°,δ66.00000°,λ117.00000°. Principal axes: T 5.2490, Plg60.0000°, Azm11.0000°; N -1.2800, Plg24.0000°, Azm230.0000°; P -3.9700, Plg17.0000°, Azm132.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***10*** *19:26:24.1±0.0, 55°.56N×163°.21E, h33^{km}, mb5.1, Ms4.4*

ISC 10 19:26:16.5±0.6**, 54°.62N**±0°.03×**163°.07E**±0°.03**, h43^{km}**±4^{km}**, n588, σ1^{s}.56**/631**, mb5.0**/166**, MS4.5**/53**, 12C-13D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	1.59	355	*i* P	Pn	19 26 40.2	-2.0
KBTR				*e*S	Sn	19 27 00.8	-0.8
KBTR	Krutoberegovo	1.59	355	PN	Pn	19 26 40.2	-2.0
KBTR				S	Sn	19 27 00.8	-0.8
TUMD	Tumrok D	1.65	292	*i* P	Pn	19 26 42.5	-0.4
TUMD				*e*S	Sn	19 27 02.6	-0.3
KBG	Krutoberegovo	1.65	353	*i* P	Pn	19 26 41.2	-1.7
KBG				*e*S	Sn	19 27 02.6	-0.2
KBG	Krutoberegovo	1.65	353	PN	Pn	19 26 41.2	-1.7
KBG				S	Sn	19 27 02.6	-0.2
KZV	Kizimen	1.68	288	*i* P	Pn	19 26 43.1	-0.4
KZV	Kizimen	1.68	288	PN	Pn	19 26 43.1	-0.4
BKI	Bering	1.77	70	*e*P	Pn	19 26 42.4	-2.2
BKI				*e*S	Sn	19 27 02.4	-3.5
BKI	Bering	1.77	70	PN	Pn	19 26 42.4	-2.2
BKI				S	Sn	19 27 02.4	-3.5
TUMR	Tumrok	1.81	293	*i* P	Pn	19 26 45.4	+0.1
TUMR				*e*S	Sn	19 27 07.6	+0.5
TUMR	Tumrok	1.81	293	PN	Pn	19 26 45.4	+0.1
TUMR				S	Sn	19 27 07.6	+0.5
ZLN	Zelenaya	1.91	318	*i* P	Pn	19 26 46.5	0.0
ZLN	Zelenaya	1.91	318	PN	Pn	19 26 46.5	0.0
KMNR	Kamenistaya	1.98	306	*i* P	Pn	19 26 47.6	0.0
KMNR	Kamenistaya	1.98	306	PN	Pn	19 26 47.6	0.0
LGNR	Loginova	2.00	318	*i* P	Pn	19 26 48.0	0.0
LGNR	Loginova	2.00	318	PN	Pn	19 26 48.0	0.0
CIRR	Tsirk	2.00	319	*e*P	Pn	19 26 47.9	0.0
CIRR	Tsirk	2.00	319	PN	Pn	19 26 47.9	0.0
KIRR	Kirishev	2.05	312	*i* P	Pn	19 26 48.2	-0.4
KIRR				*e*S	Sn	19 27 15.0	+2.0
KIRR	Kirishev	2.05	312	PN	Pn	19 26 48.2	-0.4
KIRR				S	Sn	19 27 15.0	+2.0
KPT	Kopyto	2.11	311	*e*S	Sn	19 27 14.3	-0.1
KRSR	Krestovskiy	2.14	319	*i* P	Pn	19 26 49.4	-0.4
KRSR	Krestovskiy	2.14	319	PN	Pn	19 26 49.4	-0.4
SMKR	Semkarok	2.16	336	*e*P	Pn	19 26 49.2	-0.9
SMKR	Semkarok	2.16	336	PN	Pn	19 26 49.2	-0.9
KLY	Klyuchi	2.18	322	*i* P	Pn	19 26 48.7	-1.5
KLY				*e*S	Sn	19 27 15.0	-1.0
KLY	Klyuchi	2.18	322	PN	Pn	19 26 48.7	-1.5
KLY				S	Sn	19 27 15.0	-1.0
KII	Karymskiy	2.20	256	*e*P	Pn	19 26 50.4	-0.2
KII				*e*S	Sn	19 27 17.5	+0.9
KII	Karymskiy	2.20	256	PN	Pn	19 26 50.4	-0.2
KII				S	Sn	19 27 17.5	+0.9
BDR	Baidarnaya	2.22	332	*i* P	Pn	19 26 50.6	-0.2
BDR	Baidarnaya	2.22	332	PN	Pn	19 26 50.6	-0.2
SRKR	Sorokina	2.30	333	*i* P	Pn	19 26 51.5	-0.5
SRKR	Sorokina	2.30	333	PN	Pn	19 26 51.5	-0.5
KOZ	Kozyrevsk	2.32	310	*e*P	Pn	19 26 52.3	+0.1
KOZ	Kozyrevsk	2.32	310	PN	Pn	19 26 52.3	+0.1
SPN	Mys Shipunski	2.37	231	*e*P	Pn	19 26 51.3	-1.4
SPN				*e*S	Sn	19 27 19.5	-1.0
SPN	Mys Shipunski	2.37	231	PN	Pn	19 26 51.3	-1.4
SPN				S	Sn	19 27 19.5	-1.0
SRDR	Sredinnyy	2.55	313	*i* P	Pn	19 26 55.0	-0.4
SRDR	Sredinnyy	2.55	313	PN	Pn	19 26 55.0	-0.4
NLC	Nalytchevo	2.64	238	*e*P	Pn	19 26 55.8	-0.7
NLC				*e*S	Sn	19 27 27.8	+0.5
NLC	Nalytchevo	2.64	238	PN	Pn	19 26 55.8	-0.7
NLC				S	Sn	19 27 27.8	+0.5
ESO	Esso	2.82	299	*e*P	Pn	19 26 58.9	-0.1
ESO				*e*S	Sn	19 27 31.9	+0.2
ESO	Esso	2.82	299	PN	Pn	19 26 58.9	-0.1
ESO				S	Sn	19 27 31.9	+0.2
SMAR	Somma	2.87	243	*e*P	Pn	19 27 00.6	+0.8
SMAR	Somma	2.87	243	PN	Pn	19 27 00.6	+0.8
KRER	Koryakskii	2.87	244	*e*P	Pn	19 27 00.2	+0.3
KRER	Koryakskii	2.87	244	PN	Pn	19 27 00.2	+0.3
AVH	Avacha	2.90	244	*e*P	Pn	19 27 00.4	+0.2
AVH				*e*S	Sn	19 27 35.5	+1.7
AVH	Avacha	2.90	244	PN	Pn	19 27 00.4	+0.2
AVH				S	Sn	19 27 35.5	+1.7
KRX	Arik	2.90	246	*e*P	Pn	19 27 00.0	-0.2
KRX				*e*S	Sn	19 27 34.2	+0.3
KRX	Arik	2.90	246	PN	Pn	19 27 00.0	-0.2
KRX				S	Sn	19 27 34.2	+0.3
KOK	Koryaka	2.94	245	*e*P	Pn	19 27 00.2	-0.5
KOK	Koryaka	2.94	245	PN	Pn	19 27 00.2	-0.5
DALK	Dalny	3.02	240	*e*P	Pn	19 27 01.2	-0.4
DALK				*e*S	Sn	19 27 36.4	-0.1
DALK	Dalny	3.02	240	PN	Pn	19 27 01.2	-0.4
DALK				S	Sn	19 27 36.4	-0.1
PET	Petropavlovsk	3.07	240	PN	Pn	19 27 02.6	+0.2
PET				S	Sn	19 27 38.3	+0.5
PET	Petropavlovsk	3.07	240		Pn	19 27 01.4	-1.0
KRMR	Karymshinskiy	3.44	241	*e*P	Pn	19 27 08.6	+1.1
KRMR				*e*S	Sn	19 27 49.7	+2.7
KRMR	Karymshinskiy	3.44	241	PN	Pn	19 27 08.6	+1.1
KRMR				S	Sn	19 27 49.7	+2.7
RUS	Russkaya	3.49	233	*e*P	Pn	19 27 07.5	-0.7
RUS				*e*S	Sn	19 27 47.7	-0.6
RUS	Russkaya	3.49	233	PN	Pn	19 27 07.5	-0.7
RUS				S	Sn	19 27 47.7	-0.6
PEA0B	Petropavlovsk-	3.52	247	PN	Pn	19 27 08.6	-0.1
PEA0B	Petropavlovsk-	3.52	247		Pn	19 27 08.6	-0.1
PETK	Petropavlovsk-	3.52	247	Pn	Pn	19 27 08.7	+0.1
	33nm,0.3s,baz=70,slow=14,SNR=299						
PETK				Sn	Sn	19 27 53.5	+4.5
	25nm,0.3s,baz=80,slow=18,SNR=6.1						
PETK				LR	LR	19 28 16.2	
	comp=Z,2μm,20.7s,baz=78,slow=36						
PETK	Petropavlovsk-	3.52	247		Pn	19 27 08.1	-0.6
MTVR	Mutnovka	3.62	236	*e*P	Pn	19 27 10.2	+0.1
MTVR				*e*S	Sn	19 27 51.3	-0.3
MTVR	Mutnovka	3.62	236	PN	Pn	19 27 10.2	+0.1
MTVR				S	Sn	19 27 51.3	-0.3
GRL	Gorelyy	3.63	237	*e*P	Pn	19 27 10.9	+0.7
GRL				*e*S	Sn	19 27 52.8	+1.0
GRL	Gorelyy	3.63	237	PN	Pn	19 27 10.9	+0.7
GRL				S	Sn	19 27 52.8	+1.0
ASAK	Asacha	3.82	236	*e*P	Pn	19 27 12.5	-0.2
ASAK				*e*S	Sn	19 27 56.8	+0.4
ASAK	Asacha	3.82	236	PN	Pn	19 27 12.5	-0.2
ASAK				S	Sn	19 27 56.8	+0.4
APC	Apacha	3.90	247	*e*P	Pn	19 27 15.0	+1.2
APC				*e*S	Sn	19 27 59.6	+1.4
APC	Apacha	3.90	247	PN	Pn	19 27 15.0	+1.2
APC				S	Sn	19 27 59.6	+1.4
KDTR	Khodutka, Kamc	4.12	229	*e*P	Pn	19 27 15.8	-1.0
KDTR				*e*S	Sn	19 28 01.7	-1.9
KDTR	Khodutka, Kamc	4.12	229	PN	Pn	19 27 15.8	-1.0
KDTR				S	Sn	19 28 01.7	-1.9
MIPR	Malaya Ipel'ka	4.45	241	*e*P	Pn	19 27 23.2	+1.9
MIPR	Malaya Ipel'ka	4.45	241	PN	Pn	19 27 23.2	+1.9
OSSR	Ossora	4.64	360	*e*P	Pn	19 27 22.4	-1.5
OSSR	Ossora	4.64	360	PN	Pn	19 27 22.4	-1.5
PALN	Palana	4.79	340	*e*P	Pn	19 27 26.7	+0.7
PALN				*e*S	Sn	19 28 21.4	+1.3
PALN	Palana	4.79	340	PN	Pn	19 27 26.7	+0.7
PALN				S	Sn	19 28 21.4	+1.3
PAU	Pauzhetka	4.92	233	*e*P	Pn	19 27 28.6	+0.7
PAU	Pauzhetka	4.92	233	PN	Pn	19 27 28.6	+0.7
SKR	Severo-Kuril's	5.79	230	*e*P	Pn	19 27 41.6	+1.9
SKR	Severo-Kuril's	5.79	230	*i* PN	Pn	19 27 39.7	0.0
ALID	Alaid	5.91	234	*e*P	Pn	19 27 42.8	+1.2
ALID	Alaid	5.91	234	PN	Pn	19 27 42.8	+1.2
TILK	Tilichiki	6.07	15	*e*P	Pn	19 27 44.3	+0.8
TILK	Tilichiki	6.07	15	PN	Pn	19 27 44.3	+0.8
SMY	Shemya	6.82	102	PN	Pn	19 27 55.8	+1.9
SMY	Shemya	6.82	102	Pn	Pn	19 27 55.8	+1.9
KMSK	Kamenskaya	8.04	10	*e*P	Pn	19 28 10.5	+0.1
KMSK				*e*S	Sn	19 29 37.9	-1.9
KMSK	Kamenskaya	8.04	10	PN	Pn	19 28 10.5	+0.1
MA2	Magadan	8.33	312	Pn	Pn	19 28 15.0	+0.5
	0.5nm,0.3s,baz=144,slow=8.5,SNR=4.9						
MA2				LR	LR	19 31 50.1	
	comp=Z,3μm,19.9s,baz=125,slow=42						
MA2	Magadan	8.33	312	*i* PN	Pn	19 28 13.3	-1.2
MA2				pmax	pmax		
	comp=Z,15nm,0.9s						
MA2	Magadan	8.33	312	Pn	Pn	19 28 13.8	-0.7
SEY	Seymchan	9.99	331	Pn	Pn	19 28 37.5	+0.3
	comp=Z,0.9nm,0.3s,baz=112,slow=1.0,SNR=24						
SEY	Seymchan	9.99	331	*i* PN	Pn	19 28 39.4	+2.1
OKH	Okha	11.87	273	*d e*PN	Pn	19 28 54.6	-8.3
OKH				MLR	MLR		
	comp=E,5μm,14.0s						
OKH				MLR	MLR		
	comp=Z,4μm,13.0s						
TYV	Tymovskoe	12.92	261	*e*PN	Pn	19 29 19.3	+2.1
TYV				*e*S	Sn	19 31 43.0	+3.6
TYV				pmax	pmax		
	comp=Z,400nm,4.5s						
TYV				pmax	pmax		
	comp=Z,26nm,1.2s						
TYV				smax	smax		
	comp=E,1μm,6.2s						
TYV				MLR	MLR		
	comp=Z,3μm,12.0s						
NKL	Nikolayevsk	13.28	273	*e*PN	Pn	19 29 24.4	+2.3
NKL				pmax	pmax		
	comp=Z,22nm,1.6s						
NKL				pmax	pmax		
	comp=E,4.0nm,1.2s						
NKL				pmax	pmax		
	comp=N,6.0nm,1.1s						
BILL	Bilibino	13.55	5	*c i*P	Pn	19 29 28.3	+2.6
BILL				pmax	pmax		
	comp=Z,83nm,1.2s						
BILL	Bilibino	13.55	5		Pn	19 29 26.2	+0.5
UGL	Uglegorsk	14.09	255	*e*P	P	19 29 39.1	-0.9
UGL				*e*S	Sn	19 32 10.8	+2.7
UGL				pmax	pmax		
	comp=Z,62nm,0.8s						
UGL				MLR	MLR		
	comp=Z,2μm,17.0s						
UGL				MLR	MLR		
	comp=N,1μm,15.0s						
YSS	Yuzh-Sakhalins	14.93	247	P	Pn	19 29 43.2	-1.2
YSS	Yuzh-Sakhalins	14.93	247		Pn	19 29 43.2	-1.2
YUK	Yuzh-Kuril'sk	15.39	234	*e*P	Pn	19 29 47.9	-2.5
YUK				*e*S	Sn	19 32 41.4	+1.9
YUK				pmax	pmax		
	comp=Z,215nm,0.7s						
YUK				pmax	pmax		
	comp=E,111nm,0.8s						
YUK				pmax	pmax		
	comp=N,92nm,0.5s						
YUK				pmax	pmax		
	comp=Z,244nm,1.2s						
GAMB	Gambell	15.73	44	P	Pn	19 29 55.2	+0.5
GRNR	Gornyy	16.56	267	⇓*i*P	P	19 30 08.5	+1.1
GRNR				*e*S	S	19 33 13.2	-4.9
GRNR				pmax	pmax		
	comp=Z,30nm,0.8s						
GRNR				smax	smax		
	comp=E,5.0nm,0.9s						
GRNR				MLR	MLR		
	comp=Z,860nm,17.0s						
JKA	Kamikawa-asahi	16.91	240		Pn	19 30 08.9	-0.9
ASAJ	Asahikawa	16.91	240	Pn	Pn	19 30 08.9	-0.9
	comp=Z,0.8nm,0.3s,baz=61,slow=10,SNR=12						
ERM	Erimo	18.21	234	*i* P	P	19 30 22.3	-3.2
ANM	Nome	18.60	45	P	Pn	19 30 30.7	+0.3
ANM				pmax	pmax		
	comp=Z,18nm,1.2s						
ANM	Nome	18.60	45	P	Pn	19 30 30.7	+0.3
YAK	Yakutsk	18.85	307	P	P	19 30 27.7	-4.8
	comp=Z,0.3nm,0.3s,baz=59,slow=0.2,SNR=18						
YAK				LR	LR	19 38 21.2	
	comp=Z,1μm,20.8s,baz=94,slow=39						
YAK	Yakutsk	18.85	307	*e*P	P	19 30 30.6	-1.9
YAK				*e*S	Sn	19 34 03.3	+0.2
YAK				pmax	pmax		
	comp=Z,19nm,0.8s						
YAK				pmax	pmax		
	comp=E,20nm,1.2s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.6s						
YAK				smax	smax		
	comp=N,64nm,2.0s						
YAK				smax	smax		
	comp=E,23nm,1.3s						
YAK				MLR	MLR		
	comp=Z,2μm,18.0s						
YAK				MLR	MLR		
	comp=E,1μm,15.0s						
YAK				MLR	MLR		
	comp=N,1μm,14.0s						
YAK	Yakutsk	18.85	307	P	P	19 30 27.2	-5.3
TEY	Ternei	19.48	251	*e*P	P	19 30 40.2	+0.8
KLR	Kul'dur	19.95	267	P	P	19 30 42.9	-1.7
	comp=N,0.2nm,0.3s,baz=62,slow=12,SNR=7.2						
KLR				LR	LR	19 39 08.1	
	comp=N,1μm,18.4s,baz=64,slow=39						
KLR	Kul'dur	19.95	267	*i* P	P	19 30 42.6	-2.0
KLR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
RDOG	Red Dog Mine	20.77	36	P	Pn	19 30 55.7	-0.3
ZEA	Zeya	20.85	282	*e*P	P	19 30 55.0	+0.7
ZEA				*e*S	Sn	19 35 14.0	+23
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,400nm,7.0s						
ZEA				MLR	MLR		
	comp=N,2μm,13.0s						
ZEA				MLR	MLR		
	comp=E,2μm,13.0s						
ZEA				MLR	MLR		

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       comp=Z,4µm,13.0s
TIXI   Tiksi              22.49 332   P      P        19 31 10.6 -1.1
       comp=Z,14nm,0.9s,baz=118,slow=12,SNR=42
TIXI                                  PcP    PcP      19 35 05.7 +1.7
       comp=Z,0.9nm,0.5s,baz=27,slow=1.9,SNR=4.9
TIXI                                  LR     LR       19 41 25.5
       comp=Z,2µm,18.9s,baz=116,slow=41
TIXI   Tiksi              22.49 332 i P      P        19 31 10.4 -1.3
TIXI                                  pmax   pmax
       comp=Z,44nm,1.6s
TIXI   Tiksi              22.49 332   P      P        19 31 10.1 -1.6
TIXI                                  IAmb   IAmb     19 31 22.9
       comp=Z,41nm,1.0s
USRK   Ussuriysk Ar.      22.57 255   P      P        19 31 11.7 -1.1
       comp=Z,2.0nm,0.7s,baz=62,slow=13,SNR=3.3
USRK                                  LR     LR       19 40 10.9
       comp=Z,1µm,18.9s,baz=49,slow=37
IMAR   Indian Mountai     23.68  44   P      P        19 31 24.2 +0.5
RSO    Redoubt South      24.04  58   P      P        19 31 30.2 +3.0
PPLA   Purkeypile         24.17  52   P      P        19 31 30.2 +1.8
KDAK   Kodiak Island      24.53  64   P      P        19 31 31.5 -0.1
       comp=Z,10nm,0.7s,baz=267,slow=10,SNR=6.4
KDAK   Kodiak Island      24.53  64   P      P        19 31 31.5 -0.1
KDAK                                  pmax   pmax
       comp=Z,361nm,2.0s
BPAW   Bear Paw Mtn.      24.71  49   P      P        19 31 34.6 +1.4
BPAW                                  IAmb   IAmb     19 32 06.1
       comp=Z,33nm,1.1s
KTH    Kantishna Hill     24.73  50   P      P        19 31 35.2 +1.8
KTH                                   IAmb   IAmb     19 32 06.1
       comp=Z,46nm,1.1s
MLY    Manley             24.84  47   P      P        19 31 36.3 +1.9
MJB9   Matsu-Tunnel       24.88 234   P      P        19 31 35.4 +0.5
MJB9                                  IAmb   IAmb     19 31 46.4
       comp=Z,73nm,1.1s
MAJO   Matsushiro         24.88 234 i P      P        19 31 33.9 -1.0
MAJO   Matsushiro         24.88 234   P      P        19 31 35.5 +0.6
MAJO                                  IAmb   IAmb     19 31 46.4
       comp=Z,72nm,1.1s
MAT    Matsushiro         24.88 234   P      P        19 31 36.7 +1.8
MAT                                   S      S        19 36 10.4  +15
MJAR   Matsushiro Arr     24.88 234   P      P        19 31 35.4 +0.5
       comp=Z,9.5nm,0.7s,baz=31,slow=8.1,SNR=19
MJAR                                  LR     LR       19 42 12.6
       comp=Z,858nm,21.2s,baz=65,slow=39
MJAR   Matsushiro Arr     24.88 234   P      P        19 31 35.4 +0.5
MJAR                                  pmax   pmax
       comp=Z,16nm,1.0s
MJAR   Matsushiro Arr     24.88 234   P      P        19 31 35.4 +0.5
TRF    Thorofare Moun     25.02  51   P      P        19 31 38.2 +2.0
TRF                                   IAmb   IAmb     19 32 03.4
       comp=Z,51nm,1.0s
COLD   Coldfoot           25.24  42   P      P        19 31 39.7 +1.8
NEA    Nenana             25.54  48   P      P        19 31 42.6 +2.0
MCK    McKinley           25.62  50   P      P        19 31 42.7 +1.3
MCK                                   pmax   pmax
       comp=Z,43nm,1.2s
MCK    McKinley           25.62  50   P      P        19 31 42.7 +1.3
MCK                                   IAmb   IAmb     19 31 54.8
       comp=Z,43nm,1.2s
TOLK   Toolik Lake Re     25.67  38   P      P        19 31 42.6 +0.7
TOLK                                  IAmb   IAmb     19 31 56.7
       comp=Z,99nm,1.4s
MDM    Murphy Dome        25.91  47   P      P        19 31 46.5 +2.5
WRH    Wood River Hil     25.97  48   P      P        19 31 46.0 +1.4
WRH                                   IAmb   IAmb     19 31 58.2
       comp=Z,57nm,1.1s
KNK    Knik Glacier       26.01  55   P      P        19 31 47.4 +2.3
KNK                                   IAmb   IAmb     19 32 04.4
       comp=Z,37nm,1.0s
SML    Sawmill            26.03  54   P      P        19 31 48.2 +3.0
SML                                   IAmb   IAmb     19 32 07.4
       comp=Z,39nm,1.0s
COLA   College            26.07  47   P      P        19 31 46.3 +0.9
COLA                                  pmax   pmax
       comp=Z,88nm,1.4s
COLA   College            26.07  47   P      P        19 31 46.3 +0.9
COLA                                  IAmb   IAmb     19 31 59.0
       comp=Z,88nm,1.4s
CCB    Clear Creek Bu     26.09  48   P      P        19 31 47.7 +2.1
CCB                                   IAmb   IAmb     19 31 59.1
       comp=Z,41nm,1.2s
DHY    Denali Highway     26.35  51   P      P        19 31 49.1 +0.8
DHY                                   IAmb   IAmb     19 32 13.7
       comp=Z,80nm,1.8s
HDA    Harding Lake       26.47  48   P      P        19 31 49.6 +0.6
IL31                      26.48  47   P      P        19 31 50.0 +0.9
ILAR   Eielson Array      26.48  47   P      P        19 31 49.9 +0.8
       comp=Z,7.6nm,0.9s,baz=260,slow=8.1,SNR=40
ILAR                                  LR     LR       19 42 25.4
       comp=Z,297nm,19.0s,baz=272,slow=37
ILAR   Eielson Array      26.48  47   P      P        19 31 50.1 +0.9
BOD    Bodaibo            26.98 297 e P      P        19 31 49.7 -4.1
BOD                                   pmax   pmax
       comp=Z,23nm,1.5s
PRP    Porcupine Dome     27.04  46   P      P        19 31 56.3 +1.9
PRP                                   IAmb   IAmb     19 32 08.0
       comp=Z,33nm,0.9s
JHJ    Hachijo jima 2     27.04 227   LR     LR       19 42 55.1
       comp=Z,454nm,18.4s,baz=91,slow=37
FYU    Fort Yukon         27.15  43   P      P        19 31 55.9 +0.7
BMAR   Burnt Mountain     27.43  42   P      P        19 31 58.3 +0.6
RIDG   Independent Ri     27.43  50   P      P        19 31 57.4 -0.4
RIDG                                  IAmb   IAmb     19 32 10.9
       comp=Z,29nm,1.2s
DOT    Dot Lake           27.79  50   P      P        19 32 04.4 +3.5
SCRK   Sand Creek         27.79  49   P      P        19 32 00.7 -0.4
SCRK                                  IAmb   IAmb     19 32 14.2
       comp=Z,35nm,1.4s
BCAR   Beaver Creek A     28.88  51   P      P        19 32 11.4 +0.7
EGAK   Eagle              28.93  47   P      P        19 32 10.8 -0.3
KSRS   Korea Array        29.42 249   P      P        19 32 15.9 +0.3
       comp=Z,1.4nm,0.6s,baz=39,slow=9.3,SNR=8.8
KSAR   Wonju Array Be     29.45 249   P      P        19 32 14.2 -1.7
KSAR   Wonju Array Be     29.45 249   P      P        19 32 14.2 -1.7
DAWY   Dawson             29.79  48   P      P        19 32 20.3 +1.6
EPYK   Eagle Plains       30.57  43   P      P        19 32 27.5 +1.9
EPYK                                  IAmb   IAmb     19 32 39.5
       comp=Z,31nm,1.2s
HYT    Haines Junctio     31.34  54   P      P        19 32 34.4 +1.9
INK    Inuvik             31.57  39   P      P        19 32 35.6 +1.3
       comp=Z,1.8nm,0.5s,baz=275,slow=5.2,SNR=4.7
INK    Inuvik             31.57  39   P      P        19 32 35.0 +0.7
INK                                   pmax   pmax
       comp=Z,44nm,1.8s
INK    Inuvik             31.57  39   P      P        19 32 35.0 +0.7
INK                                   IAmb   IAmb     19 33 01.2
       comp=Z,44nm,1.8s
WHY    Whitehorse         32.62  54   P      P        19 32 45.6 +1.8
WHY                                   IAmb   IAmb     19 32 58.2
       comp=Z,26nm,1.4s
C36M   Paulatuk           34.77  36   P      P        19 33 02.3 +0.1
C36M                                  IAmb   IAmb     19 33 20.0
       comp=Z,12nm,0.8s
TLY    Talaya             34.84 290 i P      P        19 33 00.6 -2.4
TLY    Talaya             34.84 290   P      P        19 33 01.2 -1.8
H11N2  WAKE ISLAND Hy     34.95 174   T      T        20 10 39.4
       baz=355,slow=76,SNR=107
H11N3  WAKE ISLAND Hy     34.97 174   T      T        20 10 32.7
       baz=355,slow=76,SNR=40
H11N1  WAKE ISLAND Hy     34.97 174   T      T        20 10 35.9
       baz=355,slow=76,SNR=92
SONM   Songino Array      35.27 283   P      P        19 33 05.2 -1.7
       comp=Z,0.6nm,0.5s,baz=63,slow=7.3,SNR=5.5
SONM                                  PcP    PcP      19 35 37.7 +1.1
       comp=Z,1.8nm,0.7s,baz=46,slow=2.7,SNR=8.4
SONM                                  LR     LR       19 47 37.7
       comp=Z,377nm,22.0s,baz=56,slow=37
SONM   Songino Array      35.27 283   P      P        19 33 04.1 -2.8
ZAK    Zakamensk          35.68 288 e P      P        19 33 08.1 -2.2
NRIK   Noril'sk           35.69 324   LR     LR       19 49 31.0
       comp=Z,475nm,21.0s,baz=72,slow=39
H11S1  WAKE ISLAND Hy     36.16 174   T      T        20 12 02.0
       baz=352,slow=73
H11S3  WAKE ISLAND Hy     36.17 174   T      T        20 12 14.7
       baz=352,slow=73
H11S2  WAKE ISLAND Hy     36.17 174   T      T        20 12 19.0
       baz=352,slow=73
MOY    Mondy              36.28 292 e P      P        19 33 13.4 -2.1
HHC    Hu-ho-hao-te       36.42 269 e P      P        19 33 17.2 +0.4
HHC                                   PP     PP       19 34 42.8 +2.8
HHC                                   pmax   pmax
       comp=Z,95nm,0.9s
HHC                                   pmax   pmax
       comp=Z,310nm,4.7s
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HHC                                   LR     LR
       comp=Z,620nm,14.2s
HHC                                   LR     LR
       comp=Z,920nm,13.7s
HHC                                   LR     LR
       comp=Z,1µm,13.7s
NJ2    Nanjing            38.41 252 e P      P        19 33 33.2 -0.3
NJ2                                   pmax   pmax
       comp=Z,8.0nm,0.6s
NJ2                                   LR     LR
       comp=Z,2µm,15.9s
NJ2                                   LR     LR
       comp=Z,1µm,14.0s
NJ2                                   LR     LR
       comp=Z,1µm,17.8s
YKA    Yellowknife Ar     40.84  45   P      P        19 33 54.4 +1.0
       comp=Z,2.0nm,0.6s,baz=297,slow=7.6,SNR=25
RES    Resolute Bay       41.23  23   P      P        19 33 56.8 +0.3
RES                                   pmax   pmax
       comp=Z,6.0nm,1.2s
RES    Resolute Bay       41.23  23   P      P        19 33 56.8 +0.3
WHN    Wuhan              42.07 255   P      P        19 34 12.0 +8.2
ZALV   Zalesovo Beam      43.43 303   P      P        19 34 12.6 -2.0
       comp=Z,0.7nm,0.4s,baz=67,slow=7.9,SNR=4.1
ZALV                                  PcP    PcP      19 36 02.7 +0.5
       comp=Z,1.5nm,0.6s,baz=50,slow=4.5,SNR=4.5
ZALV                                  LR     LR       19 54 22.4
       comp=Z,1µm,18.7s,baz=62,slow=39
ZALV   Zalesovo Beam      43.43 303   P      P        19 34 11.3 -3.3
ZALV   Zalesovo Beam      43.43 303   P      P        19 34 11.3 -3.3
GTA    Gaotai             44.18 277 e P      P        19 34 19.8 -1.2
GTA                                   pP     pP       19 34 34.5 +2.6
GTA                                   sP     sP       19 34 39.3 +2.8
GTA                                   S      S        19 40 49.0 -2.1
GTA                                   sS     sS       19 41 11.7 +3.0
GTA                                   SS     SS       19 44 03.3 -6.3
GTA                                   pmax   pmax
       comp=Z,6.0nm,1.0s
GTA                                   pmax   pmax
       comp=Z,140nm,6.5s
GTA                                   LR     LR
       comp=Z,2µm,14.0s
GTA                                   LR     LR
       comp=Z,2µm,14.0s
GTA                                   LR     LR
       comp=Z,3µm,14.3s
ENH    Enshi              45.03 260   P      P        19 34 26.0 -1.8
NEW    Newport            47.62  63   LR     LR       19 54 43.7
       comp=Z,216nm,18.7s,baz=332,slow=36
CD2    Chengdu            47.86 265   P      P        19 34 48.2 -1.7
WMQ    Urumqi             48.12 290 e P      P        19 34 51.1 -0.7
WMQ                                   pP     pwP      19 35 05.9 -1.2
WMQ                                   sP     sP       19 35 11.9 +4.3
WMQ                                   pmax   pmax
       comp=Z,11nm,0.9s
WMQ                                   pmax   pmax
       comp=Z,100nm,3.8s
WMQ                                   LR     LR
       comp=Z,2µm,21.7s
WMQ                                   LR     LR
       comp=Z,1µm,23.1s
WMQ                                   LR     LR
       comp=Z,1µm,18.7s
WMQ    Urumqi             48.12 290   P      P        19 34 49.8 -2.0
WMQ                                   pmax   pmax
       comp=Z,18nm,1.1s
WMQ    Urumqi             48.12 290   P      P        19 34 49.8 -2.0
WMQ                                   IAmb   IAmb     19 35 45.2
       comp=Z,18nm,1.1s
KULLO  Kullorsuaq         48.30  13 i P      P        19 34 53.1 +0.4
       comp=Z,23nm,1.1s
KULLO  Kullorsuaq         48.30  13 i P      P        19 34 53.1 +0.4
KULLO                                 pmax   pmax
       comp=Z,23nm,1.1s
KURK   Kurchatov          48.41 302ceP      P        19 34 52.1 -1.8
KURK                                  pmax   pmax
       comp=Z,163nm,1.7s
KURK   Kurchatov          48.41 302   P      P        19 34 51.5 -2.4
KURK                                  IAmb   IAmb     19 34 53.5
       comp=Z,25nm,1.4s
WALA   Waterton Lakes     48.76  60   P      P        19 34 58.8 +2.1
YBH    Yreka Blue Hor     48.86  73   LR     LR       19 55 24.0
       comp=Z,274nm,18.3s,baz=16,slow=36
DAG    Danmarks Havn      48.87   1 i P      P        19 34 57.3 +0.3
       comp=Z,44nm,1.5s
DAG    Danmarks Havn      48.87   1 i P      P        19 34 57.3 +0.3
DAG                                   pmax   pmax
       comp=Z,44nm,1.5s
MK31   Makanchi Array     49.07 296   P      P        19 34 56.2 -2.8
MK31                                  pmax   pmax
       comp=Z,3.0nm,0.9s
MK31   Makanchi Array     49.07 296   P      P        19 34 56.2 -2.8
MKAR   Makanchi Array     49.07 296   P      P        19 34 56.7 -2.3
       comp=Z,2.1nm,0.6s,baz=59,slow=7.8,SNR=21
MKAR                                  LR     LR       19 56 33.0
       comp=Z,952nm,19.2s,baz=40,slow=37
MKAR   Makanchi Array     49.07 296   P      P        19 34 56.1 -3.0
MAKZ   Makanchi           49.23 296   P      P        19 34 57.4 -2.8
MAKZ                                  pmax   pmax
       comp=Z,14nm,1.5s
MAKZ   Makanchi           49.23 296   P      P        19 34 57.4 -2.8
MAKZ                                  IAmb   IAmb     19 35 00.1
       comp=Z,14nm,1.4s
JTMT   Jette              49.42  62   P      P        19 35 03.8 +2.0
JTMT                                  IAmb   IAmb     19 35 34.0
       comp=Z,10nm,1.1s
BRVK   Borovoye           50.84 309ceP      P        19 35 11.1 -1.2
BRVK                                  pmax   pmax
       comp=Z,56nm,1.7s
BRVK   Borovoye           50.84 309   P      P        19 35 10.3 -2.0
SUMG   Summit             52.21   8 i P      P        19 35 23.7 +0.9
SUMG   Summit             52.21   8 i P      P        19 35 23.7 +0.9
ARCES  ARCESS Array B     52.37 343   P      P        19 35 23.8 +0.3
       comp=Z,8.2nm,1.1s,baz=14,slow=5.6,SNR=4.0
ARCES                                 LR     LR       20 00 16.4
       comp=Z,273nm,18.5s,baz=10.0,slow=39
KMI    Kunming            52.81 261   P      P        19 35 27.1 -0.5
KMI                                   pP     pP       19 35 40.5 +1.7
KMI                                   S      S        19 42 55.6 +2.5
KMI                                   pmax   pmax
       comp=Z,16nm,0.7s
KMI                                   pmax   pmax
       comp=Z,180nm,5.8s
KMI                                   LR     LR
       comp=Z,2µm,19.5s
KMI                                   LR     LR
       comp=Z,1µm,19.9s
KMI                                   LR     LR
       comp=Z,1µm,18.9s
YHH    Holmes Hill        53.17  63   P      P        19 35 32.2 +2.0
KVN    Kaiserville        53.26  72   P      P        19 35 32.9 +2.1
KVN                                   pmax   pmax
       comp=Z,22nm,1.6s
KVN    Kaiserville        53.26  72   P      P        19 35 32.9 +2.1
KVN                                   IAmb   IAmb     19 36 03.8
       comp=Z,22nm,1.6s
YNR    Norris Junctio     53.30  63   P      P        19 35 33.1 +2.0
ARU    Arti               53.45 318   LR     LR       20 00 49.2
       comp=Z,1µm,19.5s,baz=44,slow=39
ARU    Arti               53.45 318   P      P        19 35 29.3 -2.3
ARU                                   pmax   pmax
       comp=Z,31nm,1.4s
ARU    Arti               53.45 318   P      P        19 35 29.3 -2.3
ARU                                   IAmb   IAmb     19 35 33.6
       comp=Z,31nm,1.4s
H17A   Grant Village      53.58  63   P      P        19 35 36.3 +3.2
NVAR   Mina Array Bea     53.59  73   P      P        19 35 35.0 +1.8
       comp=Z,1.6nm,0.8s,baz=295,slow=7.6,SNR=5.8
NVAR                                  LR     LR       19 57 07.0
       comp=Z,174nm,20.4s,baz=329,slow=34
NVAR   Mina Array Bea     53.59  73   P      P        19 35 35.4 +2.3
QIZ    Qiongzhong         53.63 250   P      P        19 35 32.4 -1.0
QIZ                                   S      S        19 43 00.9 -3.0
QIZ                                   LR     LR
       comp=Z,350nm,9.9s
QIZ                                   LR     LR
       comp=Z,760nm,16.8s
QIZ                                   LR     LR
       comp=Z,620nm,15.6s
ELK    Elko               53.65  69   LR     LR       19 59 00.1
       comp=Z,259nm,18.1s,baz=7.5,slow=37
NV11   Mina Array Sit     53.67  73   P      P        19 35 36.7 +3.0
NV11                                  IAmb   IAmb     19 36 01.6
       comp=Z,26nm,1.9s
RLMT   Red Lodge          53.75  61   P      P        19 35 34.2 -0.1
ILULI  Ilulissat          53.97  14   P      P        19 35 34.8 -0.5
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ILULI                                 pmax   pmax
       comp=Z,55nm,1.8s
ILULI  Ilulissat          53.97  14   P      P        19 35 34.8 -0.5
PRGR   Permogore          54.07 328 e P      P        19 35 42.3 +6.2
PRGR                                  pmax   pmax
       comp=Z,16nm,1.0s
LAO    LASA Array         54.19  58   P      P        19 35 39.7 +2.4
LAO                                   IAmb   IAmb     19 36 07.5
       comp=Z,18nm,1.4s
TMCR   Tamitsa            54.20 334 e P      P        19 35 37.1 +0.2
TMCR                                  pmax   pmax
       comp=Z,53nm,1.1s
HWUT   Hardware Ranch     55.01  66   P      P        19 35 46.0 +2.5
HWUT                                  IAmb   IAmb     19 36 33.1
       comp=Z,12nm,1.4s
SLVN   Son La             55.10 257   P      P        19 35 44.7 +0.5
SLVN                                  IAmb   IAmb     19 35 56.7
       comp=Z,9.7nm,0.9s
R11A   Troy Canyon, C     55.15  71   P      P        19 35 45.4 +1.0
KIRV   Kirov              55.20 324   LR     LR       20 02 28.3
       comp=Z,458nm,19.3s,baz=34,slow=40
BW06   Boulder Array      55.25  64   P      P        19 35 47.5 +2.2
PD31   Pinedale Array     55.25  64   P      P        19 35 47.6 +2.4
PDAR   Pinedale Array     55.25  64   P      P        19 35 46.9 +1.6
       comp=Z,1.9nm,0.9s,baz=338,slow=3.2,SNR=11
PDAR   Pinedale Array     55.25  64   P      P        19 35 46.5 +1.3
DUG    Dugway, Tooele     55.34  68   P      P        19 35 47.1 +1.3
DUG                                   pmax   pmax
       comp=Z,5.0nm,0.9s
DUG    Dugway, Tooele     55.34  68   P      P        19 35 47.1 +1.3
FRB    Frobisher Bay      55.38  25   LR     LR       20 03 09.8
       comp=Z,332nm,18.7s,baz=10.0,slow=40
TCUT   Toone Canyon       55.44  66   P      P        19 35 49.5 +2.9
CTU    Camp Tracy         55.56  67   P      P        19 35 49.3 +1.9
FRU1   Bishkek            55.77 297   P      P        19 35 47.3 -1.5
FRU1                                  pmax   pmax
       comp=Z,23nm,1.2s
FRU1   Bishkek            55.77 297   P      P        19 35 47.3 -1.5
FRU1                                  IAmb   IAmb     19 35 49.9
       comp=Z,23nm,1.1s
AAK    Ala-Archa          55.96 297 i P      P        19 35 50.1 -0.2
       SNR=12
AAK    Ala-Archa          55.96 297   P      P        19 35 48.5 -1.8
AAK                                   pmax   pmax
       comp=Z,13nm,1.2s
AAK    Ala-Archa          55.96 297   P      P        19 35 48.5 -1.8
AAK                                   IAmb   IAmb     19 35 51.1
       comp=Z,13nm,1.2s
PSUT   Pine Spring        55.97  70   P      P        19 35 54.1 +3.7
LSA    Lhasa              56.08 275   P      P        19 35 50.6 -1.0
LSA                                   pmax   pmax
       comp=Z,18nm,0.6s
LSA    Lhasa              56.08 275 i P      P        19 35 51.3 -0.3
       SNR=8.6
LSA    Lhasa              56.08 275   P      P        19 35 50.3 -1.3
LSA                                   pmax   pmax
       comp=Z,6.0nm,0.9s
LSA    Lhasa              56.08 275   P      P        19 35 50.2 -1.3
MPU    Maple Canyon       56.11  67   P      P        19 35 53.5 +2.1
ULM    Lac du Bonnet      56.48  49   P      P        19 35 54.9 +1.2
       comp=Z,1.9nm,0.5s,baz=316,slow=8.1,SNR=4.7
ULM                                   LR     LR       20 00 11.5
       comp=Z,194nm,21.6s,baz=3.5,slow=36
ULM    Lac du Bonnet      56.48  49   P      P        19 35 55.3 +1.7
ULM                                   IAmb   IAmb     19 36 08.5
       comp=Z,12nm,1.3s
KLMR   Klimovskoe         56.49 331 e P      P        19 35 51.4 -2.1
KLMR                                  pmax   pmax
       comp=Z,75nm,1.6s
KLMR   Klimovskoe         56.49 331 e P      P        19 35 51.5 -2.1
KLMR                                  AMP             19 35 54.9
       comp=Z,74nm,1.6s
KLMR                                  LQ     LQ       19 56 47.7
KLMR                                  LQ     LQ       19 56 47.7
KLMR                                  LR     LR       19 59 38.5
RDMU   Red Mountain       56.81  65   P      P        19 35 58.7 +2.3
TMUT   Trail Mountain     56.85  68   P      P        19 35 58.8 +2.0
RSSD   Black Hills        57.09  59   P      P        19 36 00.9 +2.6
RSSD                                  pmax   pmax
       comp=Z,9.0nm,1.1s
RSSD   Black Hills        57.09  59   P      P        19 36 00.9 +2.6
RSSD                                  IAmb   IAmb     19 36 28.2
       comp=Z,9.4nm,1.1s
SRU    San Rafael Swe     57.35  67   P      P        19 36 02.5 +2.3
SRU                                   pmax   pmax
       comp=Z,9.0nm,0.9s
SRU    San Rafael Swe     57.35  67   P      P        19 36 02.5 +2.3
KSH    Kashi              57.43 294   P      P        19 36 04.2 +3.6
KSH                                   pP     pwP      19 36 17.7 +0.9
KSH                                   PcP    PcP      19 36 59.0 +5.0
KSH                                   PcS    PcS      19 40 56.7 +1.4
KSH                                   S      S        19 43 55.5 +1.1
KSH                                   pmax   pmax
       comp=Z,170nm,2.1s
KSH                                   pmax   pmax
       comp=Z,420nm,5.7s
KSH                                   LR     LR
       comp=Z,560nm,10.3s
KSH                                   LR     LR
       comp=Z,860nm,13.2s
KK31   Karatay Array      57.66 300   P      P        19 36 00.3 -1.8
KK31                                  pmax   pmax
       comp=Z,6.0nm,0.8s
KK31   Karatay Array      57.66 300   P      P        19 36 00.3 -1.8
KK31                                  IAmb   IAmb     19 36 01.9
       comp=Z,6.3nm,0.8s
KKAR   Karatay Array      57.66 300   P      P        19 35 59.6 -2.5
KKAR   Karatay Array      57.66 300   P      P        19 35 59.6 -2.5
KKAR   Karatay Array      57.66 300   P      P        19 36 00.1 -2.1
KKAR                                  IAmb   IAmb     19 36 01.9
       comp=Z,6.3nm,0.8s
ARSB   Arslanbob          57.69 297   P      P        19 36 02.0 -0.5
ARSB                                  pmax   pmax
       comp=Z,12nm,1.3s
ARSB   Arslanbob          57.69 297   P      P        19 36 02.0 -0.5
ARSB                                  IAmb   IAmb     19 36 57.1
       comp=Z,12nm,1.3s
O20A   White River Ci     57.82  65   P      P        19 36 05.7 +2.1
O20A                                  IAmb   IAmb     19 37 26.0
       comp=Z,25nm,1.5s
AGMN   Agassiz Nation     57.92  51   P      P        19 36 06.4 +2.5
AKTO   Aktyubinsk         58.07 313   LR     LR       20 04 09.8
       comp=Z,615nm,18.3s,baz=19,slow=39
PFO    Pinyon Flats O     58.09  76   LR     LR       19 57 26.8
       comp=Z,207nm,21.1s,baz=316,slow=32
ABKAR  Akbulak array      58.13 311   P      P        19 36 03.3 -1.9
U15A   North Rim          58.34  71   P      P        19 36 07.1 -0.2
W13A   Hualapai Mount     58.44  73   P      P        19 36 08.9 +1.0
N23A   Red Feather La     58.47  63   P      P        19 36 10.9 +2.8
N23A                                  IAmb   IAmb     19 36 23.6
       comp=Z,11nm,1.1s
SHL    Shillong           58.77 271   P      P        19 36 07.1 -3.1
SHL                                   pmax   pmax
       comp=Z,20nm,1.5s
SHL    Shillong           58.77 271   P      P        19 36 07.1 -3.1
SHL                                   IAmb   IAmb     19 36 11.7
       comp=Z,20nm,1.5s
UBPT   Khong Chiam        59.08 252   P      P        19 36 13.8 +1.5
FIA1   FINESS Array S     59.39 338   P      P        19 36 14.2 +0.4
FINES  FINESS Array B     59.40 338   P      P        19 36 13.8  0.0
       comp=Z,10nm,0.7s,baz=34,slow=8.5,SNR=68
FINES                                 LR     LR       20 08 42.5
       comp=Z,326nm,18.9s,baz=24,slow=43
FINES  FINESS Array B     59.40 338   P      P        19 36 11.7 -2.1
FINES  FINESS Array B     59.40 338   P      P        19 36 11.7 -2.1
ISCO   Idaho Springs      59.44  63   P      P        19 36 14.3 -0.6
ISCO                                  pmax   pmax
       comp=Z,14nm,1.4s
ISCO   Idaho Springs      59.44  63   P      P        19 36 14.2 -0.6
ISCO                                  IAmb   IAmb     19 36 51.7
       comp=Z,14nm,1.4s
BTK    Batken             59.74 297   P      P        19 36 15.1 -1.6
BTK                                   pmax   pmax
       comp=Z,9.0nm,0.8s
BTK    Batken             59.74 297   P      P        19 36 15.1 -1.6
BTK                                   IAmb   IAmb     19 36 16.8
       comp=Z,8.8nm,0.8s
TAPN   Taplejung          59.83 276 e P      P        19 36 16.5 -1.2
       comp=Z,24nm,0.9s
CHTO   Chiang Mai         59.92 260   P      P        19 36 18.2 +0.1
CHTO                                  pmax   pmax
       comp=Z,12nm,0.7s
CHTO   Chiang Mai         59.92 260   P      P        19 36 18.2 +0.1
CHTO                                  IAmb   IAmb     19 36 20.1
       comp=Z,12nm,0.7s
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CM31	Chiang Mai Arr	60.21	260	P	P	19 36 21.4	+1.4
	SNR=5.9						
CM31	Chiang Mai Arr	60.21	260	P	P	19 36 20.6	+0.6
CM31				IAmb	IAmb	19 36 22.5	
	comp=Z,10nm,0.7s						
CMAR	Chiang Mai Arr	60.21	260	P	P	19 36 21.1	+1.0
	comp=Z,7.3nm,0.6s,baz=25,slow=6.8,SNR=83						
CMAR				LR	LR	20 05 57.7	
	comp=Z,427nm,18.5s,baz=58,slow=40						
CMAR	Chiang Mai Arr	60.21	260	P	P	19 36 20.6	+0.6
CMAR	Chiang Mai Arr	60.21	260	P	P	19 36 20.6	+0.6
ODAN	Odare	60.39	275	*e*P	P	19 36 19.6	-1.9
GUN	Gumba	60.47	277	*e*P	P	19 36 21.4	-0.7
JIRN	Jiri	60.48	277	*e*P	P	19 36 20.7	-1.5
PBKT	Sadao Pong	60.56	257	P	P	19 36 23.6	+1.3
RAMN	Ramite	60.78	276	*e*P	P	19 36 22.8	-1.3
	comp=Z,11nm,0.4s						
GAR	Garm	60.78	297	P	P	19 36 22.5	-1.4
PKI	Pulchoki	61.00	277	*e*P	P	19 36 24.1	-1.6
	comp=Z,14nm,0.6s						
PKIN	Phulchoki	61.00	277	*e*P	P	19 36 24.3	-1.4
	comp=Z,10nm,0.6s						
GKN	Gorkha	61.11	278	*e*P	P	19 36 24.9	-1.4
DANN	Dangsing	61.35	279	*e*P	P	19 36 25.9	-2.2
CHGR	Chuyangaron	61.64	297	P	P	19 36 27.9	-1.7
OBN	Obninsk	62.15	329	*e*P	P	19 36 32.9	+0.3
OBN				pmax	pmax		
	comp=Z,29nm,1.1s						
OBN	Obninsk	62.15	329	P	P	19 36 32.4	-0.3
NC204	NORSAR Array S	62.38	345	P	P	19 36 33.3	-0.9
NC405	NORSAR Array S	62.40	345	P	P	19 36 34.4	+0.2
NB201	NORSAR Array S	62.52	345	P	P	19 36 34.7	-0.4
NB2	NORSAR Subarra	62.54	345	P	P	19 36 35.3	0.0
	comp=Z,113nm,1.7s,baz=18,slow=6.9						
NB2	NORSAR Subarra	62.54	345	P	P	19 36 35.3	0.0
	baz=18,slow=6.9						
NOA	NORSAR Array B	62.54	345	P	P	19 36 35.5	+0.3
	comp=Z,12nm,1.0s,baz=18,slow=6.8,SNR=16						
ANMO	Albuquerque	62.62	68	LR	LR	20 01 52.0	
	comp=Z,148nm,18.2s,baz=310,slow=34						
DHRM	DHARAMSHALA	62.63	288	*e*P	P	19 36 35.5	-1.0
SMLA	Simla	62.99	286	*e*P	P	19 36 38.0	-0.6
NIL	Nilore	63.24	291	P	P	19 36 37.9	-2.4
NIL				pmax	pmax		
	comp=Z,13nm,1.0s						
NIL	Nilore	63.24	291	P	P	19 36 37.9	-2.4
NIL				IAmb	IAmb	19 36 41.0	
	comp=Z,13nm,1.0s						
SCHQ	Schefferville	63.46	30	P	P	19 36 42.3	+0.9
	comp=Z,2.1nm,0.6s,baz=359,slow=7.9,SNR=9.2						
SCHQ				LR	LR	20 06 26.4	
	comp=Z,197nm,19.2s,baz=338,slow=38						
SCHQ	Schefferville	63.46	30	P	P	19 36 42.6	+1.2
SCHQ				IAmb	IAmb	19 36 50.4	
	comp=Z,14nm,1.5s						
LPSR	Galich'ya Gora	63.54	326	*e*P	P	19 36 41.6	-0.3
LPSR				pmax	pmax		
	comp=Z,60nm,1.6s						
VRH	Novokhopyorsk	63.77	323	*e*P	P	19 36 42.8	-0.6
VRH				pmax	pmax		
	comp=Z,30nm,0.7s						
319A	Douglas	63.78	72	P	P	19 36 45.0	+1.0
319A				IAmb	IAmb	19 37 18.3	
	comp=Z,12nm,1.1s						
VSR	Storozhevoye	64.63	325	*e*P	P	19 36 48.6	-0.5
VSR				pmax	pmax		
	comp=Z,60nm,1.5s						
KBL	Kabul	64.82	295	P	P	19 36 48.3	-2.6
KBL	Kabul	64.82	295	P	P	19 36 48.3	-2.6
KBL				IAmb	IAmb	19 36 49.9	
	comp=Z,7.5nm,0.8s						
VLDQ	Val d'Or	65.67	40	P	P	19 36 55.8	-0.1
VLDQ				IAmb	IAmb	19 37 21.1	
	comp=Z,8.3nm,1.0s						
MNTX	Cornudas Mount	65.67	69	P	P	19 36 59.7	+3.5
MNTX				IAmb	IAmb	19 37 26.8	
	comp=Z,15nm,1.4s						
D53A	Lac Vacive, Po	66.43	41	P	P	19 37 02.8	+1.9
D53A				IAmb	IAmb	19 37 56.6	
	comp=Z,37nm,1.9s						
SUW	Suwalki	66.78	336	P	P	19 37 02.2	-0.7
SUW				pmax	pmax		
	comp=Z,91nm,1.5s						
SUW	Suwalki	66.78	336	P	P	19 37 02.2	-0.7
WMOK	Wichita Mounta	66.82	62	P	P	19 37 05.6	+2.1
WMOK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WMOK	Wichita Mounta	66.82	62	P	P	19 37 05.6	+2.1
GEYT	Alibeck	67.71	304	P	P	19 37 09.1	0.0
	comp=Z,3.4nm,0.6s,baz=339,slow=3.7,SNR=14						
GEYT	Alibeck	67.71	304	P	P	19 37 07.8	-1.3
GYA0B	ALIBECK ARRAY	67.71	304	P	P	19 37 06.2	-3.0
GYA0B				IAmb	IAmb	19 37 10.3	
	comp=Z,25nm,1.4s						
SADO	Sadowa	67.80	43	LR	LR	20 07 17.2	
	comp=Z,150nm,18.3s,baz=354,slow=36						
AKASG	Malin Array Be	68.18	330	P	P	19 37 11.6	-0.2
	comp=Z,19nm,0.9s,baz=30,slow=6.5,SNR=28						
AKASG				LR	LR	20 10 32.6	
	comp=Z,621nm,18.3s,baz=15,slow=39						
AKASG	Malin Array Be	68.18	330	P	P	19 37 11.3	-0.5
AKASG				pmax	pmax		
	comp=Z,13nm,1.3s						
AKASG	Malin Array Be	68.18	330	P	P	19 37 11.3	-0.5
AKBB	Malin Array Si	68.18	330	P	P	19 37 11.6	-0.2
AKBB				pmax	pmax		
	comp=Z,57nm,1.4s						
AKBB	Malin Array Si	68.18	330	P	P	19 37 11.6	-0.2
GOF	Gofitskoye	68.43	319	⇑*e*P	P	19 37 14.4	+0.9
GOF				pmax	pmax		
	comp=Z,157nm,1.4s						
TX31	Lajitas Ar. Si	68.43	70	P	P	19 37 15.9	+2.0
TX32	Lajitas Array	68.43	70	P	P	19 37 15.7	+1.9
TXAR	Lajitas Array	68.43	70	P	P	19 37 15.6	+1.7
	comp=Z,2.4nm,0.7s,baz=301,slow=4.9,SNR=14						
TXAR				LR	LR	20 06 46.0	
	comp=Z,83nm,19.5s,baz=0.0,slow=36						
TXAR	Lajitas Array	68.43	70	P	P	19 37 15.7	+1.9
HRA	Herat	68.47	299	P	P	19 37 12.9	-1.3
HRA				IAmb	IAmb	19 37 15.3	
	comp=Z,16nm,1.4s						
LPIG	La Paz	68.80	78	LR	LR	20 05 43.5	
	comp=Z,77nm,18.3s,baz=218,slow=34						
GKP	Gorka Klasztor	68.81	339	*e*P	P	19 37 16.5	+0.8
GKP	Gorka Klasztor	68.81	339	*e*P	P	19 37 16.5	+0.8
GROC	Groznyy	68.89	316	*e*P	P	19 37 15.9	-0.5
GROC				*e*		19 37 41.0	
GROC				*e*		19 39 47.2	
GROC				S	S	19 46 18.2	+1.0
GROC				pmax	pmax		
	comp=Z,63nm,1.5s						
FCAR	Ozark Folk Cen	69.26	57	P	P	19 37 20.4	+1.6
FCAR				IAmb	IAmb	19 37 51.8	
	comp=Z,25nm,1.6s						
BEL	Belsk	69.36	336	*e*P	P	19 37 21.6	+2.5
BEL	Belsk	69.36	336	*e*P	P	19 37 21.6	+2.5
KIV	Kislovodsk	69.50	318	⇓P	P	19 37 21.5	+1.3
KIV	Kislovodsk	69.50	318	*i* P	P	19 37 21.1	+0.9
	SNR=7.7						
KIV	Kislovodsk	69.50	318	*e*P	P	19 37 20.7	+0.5
KIV				pmax	pmax		
	comp=Z,61nm,1.1s						
KIV	Kislovodsk	69.50	318	P	P	19 37 19.6	-0.6
KIV				IAmb	IAmb	19 37 22.3	
	comp=Z,33nm,1.2s						
KBZ	Khabaz	69.61	318	P	P	19 37 21.6	+0.8
	comp=Z,33nm,1.0s,baz=61,slow=3.8,SNR=38						
KBZ				LR	LR	20 10 26.6	
	comp=Z,437nm,19.9s,baz=16,slow=38						
ESK	Eskdalemuir	69.84	352	P	P	19 37 22.6	+0.6
ESK				pmax	pmax		
	comp=Z,64nm,1.8s						
ESK	Eskdalemuir	69.84	352	P	P	19 37 22.6	+0.6
ZEI	Tsey	70.00	317	*e*P	P	19 37 19.1	-4.4
ZEI				pmax	pmax		
	comp=Z,50nm,1.4s						
LVV	L'vov	70.41	333	*e*P	P	19 37 26.1	+0.5
LVV				MLR	MLR		
	comp=Z,600nm,14.0s						
LVV				MLR	MLR		
	comp=N,600nm,15.0s						
TBLG	Delisi	70.56	316	P	P	19 37 26.6	-0.1
TBLG				pmax	pmax		
	comp=Z,149nm,1.4s						
TBLG	Delisi	70.56	316	P	P	19 37 26.6	-0.1
SORM	Soroca	70.73	330	⇓P	P	19 37 28.1	+0.5
KWP	Kalwaria Pacla	70.92	334	*e*P	P	19 37 30.6	+1.8
KWP	Kalwaria Pacla	70.92	334	P	P	19 37 29.4	+0.7
KWP				pmax	pmax		
	comp=Z,127nm,1.3s						
KWP	Kalwaria Pacla	70.92	334	P	P	19 37 29.4	+0.7
OJC	Ojcow	71.09	336	*e*P	P	19 37 31.0	+1.2
OJC	Ojcow	71.09	336	P	P	19 37 29.9	+0.2
OJC				pmax	pmax		
	comp=Z,44nm,1.4s						
OJC	Ojcow	71.09	336	P	P	19 37 29.9	+0.2
WVT	Waverly	71.12	54	P	P	19 37 32.3	+2.1
WVT				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WVT	Waverly	71.12	54	P	P	19 37 32.3	+2.1
AKH	Akhalkalaki	71.33	316	⇓P	P	19 37 33.3	+1.7
AKH	Akhalkalaki	71.33	316	P	P	19 37 32.2	+0.6
AKH				pmax	pmax		
	comp=Z,43nm,1.2s						
AKH	Akhalkalaki	71.33	316	P	P	19 37 32.2	+0.6
CLZ	Clausthal	71.49	343	*e*P	P	19 37 34.6	+2.4
	comp=Z,32nm,1.4s,baz=16,slow=6.0						
CLL	Collm	71.52	341	⇑*i*P	P	19 37 33.8	+1.5
	comp=Z,31nm,1.3s						
CLL				*i* pP	sP	19 37 48.2	0.0
CLL	Collm	71.52	341	*e*P	P	19 37 35.1	+2.8
	comp=Z,31nm,1.3s,baz=16,slow=6.0						
CLL	Collm	71.52	341	⇑*i*P	P	19 37 33.8	+1.5
CLL				*i* *PP	sP	19 37 48.2	0.0
CLL				pmax	pmax		
	comp=Z,31nm,1.3s						
CLL	Collm	71.52	341	P	P	19 37 33.5	+1.2
CLL				IAmb	IAmb	19 37 35.4	
	comp=Z,30nm,1.3s						
UPC	Upice	71.67	339	AMS	AMS	20 13 40.0	
	comp=Z,900nm,23.2s						
KOLS	Kolonicke sedl	71.67	334	*e*P	P	19 37 34.0	+0.7
KOLS				pmax	pmax		
	comp=Z,17nm,1.4s						
KOLS	Kolonicke sedl	71.67	334	*e*P	P	19 37 34.0	+0.7
NIE	Niedzica	71.72	335	*e*P	P	19 37 34.5	+0.9
NIE	Niedzica	71.72	335	*e*P	P	19 37 34.5	+0.9
BRG	Berggiesshubel	71.75	340	*e*P	P	19 37 34.5	+0.8
	comp=Z,39nm,1.7s						
BRG				*e*		19 37 41.0	
	comp=Z,8.8nm,1.2s						
BRG	Berggiesshubel	71.75	340	*e*P	P	19 37 35.4	+1.7
	comp=Z,39nm,1.7s,baz=16,slow=6.0						
BRG	Berggiesshubel	71.75	340	*e*P	P	19 37 34.5	+0.8
BRG				pmax	pmax		
	comp=Z,39nm,1.7s						
BRG				MLR	MLR		
	comp=N,565nm,13.2s						
BRG				MLR	MLR		
	comp=E,517nm,16.3s						
BRG				MLR	MLR		
	comp=Z,771nm,21.2s						
DPC	Dobruska-Polom	71.75	338	*e*P	P	19 37 35.5	+1.7
DPC				*e*pP	sP	19 37 48.8	-0.9
DPC	Dobruska-Polom	71.75	338	*e*P	P	19 37 35.5	+1.7
DPC				*e*		19 37 48.8	
FBE	Freiberg	71.82	340	*e*P	P	19 37 36.4	+2.3
	comp=Z,27nm,1.2s,baz=16,slow=6.0						
OKC	Ostrava-Krasne	71.83	337	*e*P	P	19 37 36.4	+2.2
OKC	Ostrava-Krasne	71.83	337	*e*P	P	19 37 36.4	+2.2
NEUB	Neuenburg	71.85	341	*e*P	P	19 37 36.3	+2.0
	comp=Z,25nm,1.4s,baz=16,slow=6.0						
BATM	Batumi	71.88	318	⇓P	P	19 37 35.4	+0.7
GNI	Garni	71.88	315	LR	LR	20 13 05.5	
	comp=Z,547nm,18.7s,baz=22,slow=39						
GNI	Garni	71.88	315	*i* P	P	19 37 36.7	+1.8
	SNR=17						
GNI	Garni	71.88	315	P	P	19 37 36.3	+1.4
GNI				pmax	pmax		
	comp=Z,132nm,1.5s						
GNI	Garni	71.88	315	P	P	19 37 36.3	+1.4
KRLC	Kraliky	71.91	338	*e*P	P	19 37 35.8	+1.0
KRLC				*e*x	x	19 37 42.6	
KRLC	Kraliky	71.91	338	*e*P	P	19 37 35.8	+1.0
PLAL	Pickwick Lake	71.94	55	P	P	19 37 37.0	+1.9
MORC	Moravsky Berou	72.03	337	⇓P	P	19 37 37.2	+1.8
MORC	Moravsky Berou	72.03	337	P	P	19 37 35.6	+0.2
MORC				pmax	pmax		
	comp=Z,30nm,1.5s						
MORC	Moravsky Berou	72.03	337	*e*P	P	19 37 36.6	+1.2
MORC	Moravsky Berou	72.03	337	P	P	19 37 35.6	+0.2
MORC				IAmb	IAmb	19 37 38.2	
	comp=Z,30nm,1.5s						
BCA	Borcka	72.04	318	⇓P	P	19 37 36.1	+0.4
BUR08	Bucovina Ar. S	72.08	332	P	P	19 37 36.6	+0.8
BUR08				IAmb	IAmb	19 37 37.9	
	comp=Z,21nm,1.4s						
BURAR	Bucovina Array	72.10	332	⇑P	P	19 37 36.8	+0.8
BURAR	Bucovina Array	72.10	332	P	P	19 37 36.0	-0.1
LANS	Liptovska Anna	72.17	336	*e*P	P	19 37 38.5	+2.2
LANS				pmax	pmax		
	comp=Z,20nm,1.5s						
LANS	Liptovska Anna	72.17	336	*e*P	P	19 37 38.5	+2.2
TRPA	Tarpa	72.35	333	⇓P	P	19 37 38.9	+1.6
MOX	Moxa	72.42	341	*e*P	P	19 37 39.8	+2.1
	comp=Z,22nm,1.3s,baz=16,slow=6.0						
MOX				*e*L	L	20 13 51.5	
	comp=Z,199nm,20.8s						
PLN	Plauen	72.47	341	*e*P	P	19 37 40.3	+2.3
	comp=Z,17nm,1.2s,baz=16,slow=6.0						
PRU	Pruhonice	72.47	339	*e*P	P	19 37 39.3	+1.3
PRU				*e*x	x	19 37 45.9	
PRU	Pruhonice	72.47	339	*e*P	P	19 37 39.3	+1.3
TANN	Tannenbergstha	72.48	341	*e*P	P	19 37 40.4	+2.2
	comp=Z,43nm,1.5s,baz=16,slow=6.0						
GOPC	GO Pecny, Ondr	72.49	339	*e*P	P	19 37 39.9	+1.7
GOPC	GO Pecny, Ondr	72.49	339	*e*P	P	19 37 39.9	+1.7
SENK	Senkaya-Erzuru	72.50	317	*e*P	P	19 37 41.2	+2.5
UBBA	Unterbreizbach	72.54	342	*e*P	P	19 37 40.6	+2.3
	comp=Z,19nm,1.4s,baz=16,slow=6.0						
GUNZ	Gunzen	72.55	341	*e*P	P	19 37 40.9	+2.4
	comp=Z,29nm,1.5s,baz=16,slow=6.0						
WERN	Wernitzgruen	72.61	341	*e*P	P	19 37 41.2	+2.3
	comp=Z,36nm,1.6s,baz=16,slow=6.0						
VRAC	Vranov	72.68	338	⇓P	P	19 37 41.2	+1.9
VRAC	Vranov	72.68	338	*e*P	P	19 37 40.1	+0.8
SWET	Sewanee	72.76	53	P	P	19 37 40.6	+0.5
SWET				IAmb	IAmb	19 37 57.9	
	comp=Z,8.6nm,0.8s						
HYB	Hyderabad	72.84	276	*i* P	P	19 37 39.0	-1.7
HYB				*e*		19 37 51.0	
HYB				*e*		19 37 55.0	
JAVC	Velka Javorina	72.86	337	*e*P	P	19 37 42.4	+2.0
VYHS	Vyhne	72.93	336	*e*P	P	19 37 41.1	+0.3
VYHS				pmax	pmax		
	comp=Z,17nm,1.4s						
VYHS	Vyhne	72.93	336	*e*P	P	19 37 41.1	+0.3
KRUC	Moravsky	72.95	338	*e*P	P	19 37 41.7	+0.8
MANZ	Manzenberg	72.95	341	*e*P	P	19 37 43.0	+2.1
	comp=Z,10nm,1.3s,baz=16,slow=6.0						
CLDR	Caldiran	73.07	315	*e*P	P	19 37 44.1	+2.0
AGRB	Hanur-Agry	73.08	316	*e*P	P	19 37 43.8	+1.7
ROTZ	Rotzenmuhle	73.14	341	*e*P	P	19 37 44.6	+2.5
	comp=Z,35nm,1.6s,baz=16,slow=6.0						
PSZ	Piszkesteto	73.21	335	P	P	19 37 44.2	+1.6
PSZ				pmax	pmax		
	comp=Z,77nm,1.9s						
PSZ	Piszkesteto	73.21	335	P	P	19 37 44.1	+1.6
OZUR		73.33	330	⇑P	P	19 37 45.2	+1.9
TNS	Taunus Mts	73.38	343	*e*P	P	19 37 45.7	+2.2
	comp=Z,15nm,1.4s,baz=16,slow=6.0						
MEM	Membach	73.39	345	P	P	19 37 44.4	+0.9
	comp=Z,19nm,1.4s						
GRA1	Grafenberg Arr	73.40	341	P	P	19 37 44.5	+0.9
GRF	Grafenberg Arr	73.40	341	*e*P	P	19 37 46.2	+2.6
	comp=Z,42nm,1.4s,baz=16,slow=6.0						
GRF				*e*L	L	20 14 30.1	
	comp=Z,188nm,20.6s						
GRF	Grafenberg Arr	73.40	341	P	P	19 37 44.5	+0.9
GRF				pmax	pmax		
	comp=Z,56nm,1.5s						
FPAL	Fort Paine	73.46	53	P	P	19 37 46.2	+2.0
KHC	Kasperske Hory	73.48	340	*e*P	P	19 37 45.7	+1.6
KHC				*e*pP	PcP	19 37 59.2	-0.8
KHC				AMS	AMS	20 15 10.0	
	comp=Z,900nm,17.0s						
KHC	Kasperske Hory	73.48	340	P	P	19 37 45.3	+1.2
KHC				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KHC	Kasperske Hory	73.48	340	P	P	19 37 45.3	+1.2
BSTI	Sart Tilman	73.48	345	P	P	19 37 45.1	+1.1
DRGR		73.54	333	⇓P	P	19 37 45.6	+1.1
WET	Wettzell	73.61	340	*e*P	P	19 37 47.5	+2.7
	comp=Z,23nm,1.4s,baz=16,slow=6.0						
MLAZ	Malazgirt-MUS	73.63	316	*e*P	P	19 37 47.5	+2.2
GEC2	GERESS Array S	73.73	339	*e*P	P	19 37 47.8	+2.2
	comp=Z,18nm,1.4s,baz=16,slow=6.0						
GEC2	GERESS Array S	73.73	339	P	P	19 37 45.9	+0.3
GEC2				IAmb	IAmb	19 37 48.1	
	comp=Z,19nm,1.4s						
GERES	GERESS Array B	73.73	339	P	P	19 37 46.2	+0.5
	comp=Z,3.6nm,1.0s,baz=20,slow=4.3,SNR=15						
GERES				LR	LR	20 15 22.9	
	comp=Z,342nm,18.6s,baz=40,slow=40						
GERES	GERESS Array B	73.73	339	P	P	19 37 45.0	-0.6
GERES	GERESS Array B	73.73	339	P	P	19 37 45.0	-0.6
VANB	Van	73.75	315	*e*P	P	19 37 48.9	+2.9
MLR	Muntele Rosu	73.83	330	⇑P	P	19 37 48.5	+2.1
VOIR		74.14	331	⇓P	P	19 37 49.7	+1.7
CONA	Conrad Observa	74.14	338	*e*P	P	19 37 49.9	+1.9
	comp=Z,15nm,1.4s						
AKDM	Akdamar-Van	74.15	315	*e*P	P	19 37 49.3	+0.9
SIRR	Siria	74.30	333	⇓P	P	19 37 50.3	+1.4
ARR	Arges	74.32	331	⇑P	P	19 37 50.8	+1.7
GURO	Guroymak-BITLI	74.35	316	*e*P	P	19 37 51.2	+1.7
Z50A	Ashland	74.38	54	P	P	19 37 51.2	+1.6
Z50A				IAmb	IAmb	19 38 07.5	
	comp=Z,12nm,1.0s						
BNGB	Bingl	74.51	317	*e*P	P	19 37 52.2	+1.8
MOA	Molln	74.56	339	*e*P	P	19 37 51.4	+1.1
	comp=Z,8.8nm,1.4s						
POO	Poona	74.66	280	*e*P	P	19 37 48.0	-3.4
CUKT	Cukurca	74.81	314	*e*P	P	19 37 52.1	0.0
GZR	Gura Zlata	74.81	332	⇑P	P	19 37 52.7	+0.7
BZS	Buzias	74.91	333	⇑P	P	19 37 52.2	-0.3
RJOB	Jochberg	74.97	340	*e*P	P	19 37 55.4	+2.6
	comp=Z,16nm,1.4s,baz=16,slow=6.0						
SIRT	Sirnak	75.08	315	*e*P	P	19 37 53.9	+0.3
PTK	Pertek	75.11	318	*e*P	P	19 37 55.9	+2.0
BFO	Black Forest	75.23	343	*e*P	P	19 37 56.3	+2.0
	comp=Z,26nm,1.4s,baz=16,slow=6.0						
BFO	Black Forest	75.23	343	P	P	19 37 54.8	+0.5
BFO				pmax	pmax		
	comp=Z,30nm,1.5s						
BFO	Black Forest	75.23	343	P	P	19 37 54.8	+0.5
BFO				IAmb	IAmb	19 37 56.6	
	comp=Z,30nm,1.5s						
ILGA	Ilgaz	75.32	323	P	P	19 37 54.8	-0.4
ILGA				IAmb	IAmb	19 38 13.2	
	comp=Z,27nm,1.0s						
KBA	Koelnbreinsper	75.48	339	*e*P	P	19 37 57.8	+1.8
	comp=Z,31nm,1.2s,SNR=8.0						
SOKA	Soboth	75.51	338	*e*P	P	19 37 57.0	+1.1
	comp=Z,16nm,1.5s						
ECH	Echery	75.54	344	P	P	19 37 56.4	+0.4
ECH				pmax	pmax		
	comp=Z,17nm,1.2s						
ECH	Echery	75.54	344	P	P	19 37 56.4	+0.4
ECH				IAmb	IAmb	19 37 59.5	
	comp=Z,17nm,1.2s						
SVRC	Sivrice-ELAZID	75.58	318	*e*P	P	19 37 58.7	+2.1
WATA	Walderalm	75.59	340	*e*P	P	19 37 58.0	+1.5
	comp=Z,22nm,1.3s,SNR=6.2						
RETA	Reutte	75.61	341	*e*P	P	19 37 57.3	+0.8
	comp=Z,6.3nm,0.9s						
WTTA	Wattenberg	75.65	340	*e*P	P	19 37 58.5	+1.6
	comp=Z,24nm,1.2s,SNR=6.7						
MOTA	Moosalm	75.68	341	*i* P	P	19 37 58.0	+1.0
	comp=Z,21nm,1.2s						
OBKA	Obir	75.77	338	*e*P	P	19 37 58.6	+1.1
	comp=Z,27nm,1.5s						
SQTA	Sankt Quirin	75.78	341	*e*P	P	19 37 59.2	+1.7
	comp=Z,22nm,1.2s,SNR=7.5						
MYKA	Terra Mystica	75.85	339	*e*P	P	19 37 59.1	+1.2
	comp=Z,18nm,1.5s						
DAVA	Damuels	75.96	342	*e*P	P	19 38 00.8	+2.2
	comp=Z,11nm,1.3s						
ABTA	Abfaltersbach	75.97	340	*e*P	P	19 37 59.8	+1.2
	comp=Z,20nm,1.3s,SNR=5.4						
FETA	Feichten	76.06	341	*e*P	P	19 38 00.7	+1.5
	comp=Z,21nm,1.3s,SNR=6.0						
DZM	Mont Dzumac	76.43	177	*e*LR	LR	20 01 51.7	
	comp=Z,304nm,22.6s						
CLF	Chambon-Foret	76.45	347	P	P	19 38 01.9	+0.7
BR131	Keskin Array S	76.53	322	P	P	19 38 01.3	-0.6
BR131				pmax	pmax		
	comp=Z,28nm,1.4s						
BR131	Keskin Array S	76.53	322	P	P	19 38 01.3	-0.6
BR131				IAmb	IAmb	19 38 04.2	
	comp=Z,28nm,1.4s						
BRTR	Keskin Array B	76.53	322	P	P	19 38 02.4	+0.4
	comp=Z,5.3nm,0.9s,baz=33,slow=2.9,SNR=25						
BRTR				LR	LR	20 17 20.0	
	comp=Z,171nm,18.8s,baz=352,slow=40						
BRTR	Keskin Array B	76.53	322	P	P	19 38 02.2	+0.3
BRTR	Keskin Array B	76.53	322	P	P	19 38 02.2	+0.3
ANTO	Ankara	76.70	323	P	P	19 38 03.6	+0.8
ANTO				pmax	pmax		
	comp=Z,27nm,1.1s						
ANTO	Ankara	76.70	323	P	P	19 38 03.6	+0.8
ANTO				IAmb	IAmb	19 38 05.5	
	comp=Z,27nm,1.1s						
BR231	Keskin MP Arra	76.73	323	P	P	19 38 04.0	+0.9
CTI	Castel Tesino	76.81	340	P	P	19 38 04.2	+0.8
CTI				pmax	pmax		
	comp=Z,21nm,1.4s						
CTI	Castel Tesino	76.81	340	P	P	19 38 04.2	+0.8
CTI				IAmb	IAmb	19 38 05.3	
	comp=Z,21nm,1.4s						
SENIN	Lac Senin/Sane	77.31	343	P	P	19 38 05.6	-0.7
SENIN				IAmb	IAmb	19 38 52.4	
	comp=Z,20nm,1.6s						
GAZ	Gaziantep	77.45	318	P	P	19 38 08.1	+1.0
TEOL	Teolo	77.47	340	P	P	19 38 08.9	+1.9
WRA	Warramunga Arr	78.23	208	P	P	19 38 12.4	+1.1
	comp=Z,1.6nm,0.9s,baz=19,slow=5.8,SNR=9.1						
WRA	Warramunga Arr	78.23	208	P	P	19 38 12.8	+1.5
SHME	Shamm	78.29	298	*i* P	P	19 38 11.5	-0.4
	SNR=11						
BANOM	Banah	78.31	298	*i* P	P	19 38 11.9	-0.1
	SNR=16						
BANOM	Banah	78.31	298	P	P	19 38 12.1	+0.1
	SNR=10						
ZCCA	Zocca	78.58	340	P	P	19 38 13.0	-0.2
BNI	Bardonecchia	78.69	343	P	P	19 38 15.7	+1.8
BNI				pmax	pmax		
	comp=Z,41nm,1.8s						
BNI	Bardonecchia	78.69	343	P	P	19 38 15.7	+1.8
BNI				IAmb	IAmb	19 38 34.5	
	comp=Z,41nm,1.8s						
MDH	Madha	78.82	298	P	P	19 38 14.6	-0.1
TAOE	Nuku Hiva Isla	79.02	123	*e*LR	LR	20 02 36.7	
	comp=Z,212nm,22.9s						
UOSS	Minazif	79.16	298	*i* P	P	19 38 15.9	-0.7
	SNR=13						
UOSS	Minazif	79.16	298	P	P	19 38 16.2	-0.4
UOSS				P	P	19 38 16.2	-0.4
UOSS	Minazif	79.16	298	P	P	19 38 15.4	-1.2
WSAR	Wadi Sarin	79.29	295	P	P	19 38 18.0	+0.6
	SNR=6.3						
HATD	Hatta, Dubai	79.30	298	*i* P	P	19 38 17.1	-0.3
	SNR=8.7						
HATD	Hatta, Dubai	79.30	298	P	P	19 38 17.4	+0.1
	SNR=7.7						
HATD				P	P	19 38 17.4	+0.1
	SNR=7.7						
MURB	Monte Urbino	79.30	339	P	P	19 38 19.6	+2.4
OSSC	Osservatorio P	79.32	340	P	P	19 38 17.3	+0.1
NAZ	Nazwa, Dubai	79.40	298	P	P	19 38 17.8	-0.2
NAZ	Nazwa, Dubai	79.40	298	P	P	19 38 18.3	+0.3
	SNR=5.3						
ASHO	Ashiyiah	79.45	298	*i* P	P	19 38 17.7	-0.5
	SNR=12						
ASHO	Ashiyiah	79.45	298	P	P	19 38 18.3	0.0
	SNR=9.7						
NRCA	Norcia	79.58	338	P	P	19 38 20.1	+1.3
WBK	Wadi Bani Khal	79.63	294	P	P	19 38 20.1	+0.8
	SNR=8.4						
WBK				P	P	19 38 20.1	+0.8
	SNR=8.4						
SOHO	SOHO	79.66	297	P	P	19 38 19.4	+0.1
	SNR=6.4						
SOHO				P	P	19 38 19.4	+0.1
	SNR=6.4						

HOQ	Hoqain	79.70	296	P	P	19 38 19.7	+0.1
	SNR=6.9						
HOQ				P	P	19 38 19.7	+0.1
	SNR=6.9						
SMDO	Samad	79.75	295	P	P	19 38 20.5	+0.5
	SNR=7.3						
SMDO				P	P	19 38 20.5	+0.5
	SNR=7.3						
JMDO	Jabal Madar	80.28	295	P	P	19 38 22.6	-0.2
	SNR=11						
JMDO				P	P	19 38 22.6	-0.2
	SNR=11						
ARQ	Araqi	80.32	297	P	P	19 38 23.3	+0.4
	SNR=7.5						
ARQ				P	P	19 38 23.3	+0.4
	SNR=7.5						
BSY	Bisya	80.45	296	P	P	19 38 24.1	+0.5
	SNR=8.7						
BSY				P	P	19 38 24.1	+0.5
	SNR=8.7						
MHTO	MHTO	81.48	294	P	P	19 38 29.4	+0.3
	SNR=12						
MHTO				P	P	19 38 29.4	+0.3
	SNR=12						
MMAI	Mount Meron Ar	81.80	318	LR	LR	20 17 42.7	
	comp=Z,174nm,19.5s,baz=50,slow=38						
AS31	Alice Springs	81.90	207	P	P	19 38 32.5	+1.4
ASAR	Alice Springs	81.90	207	P	P	19 38 33.0	+2.0
	comp=Z,2.2nm,0.9s,baz=21,slow=4.8,SNR=16						
ASAR				LR	LR	20 13 54.8	
	comp=Z,82nm,21.0s,baz=358,slow=35						
ASAR	Alice Springs	81.90	207	P	P	19 38 31.2	+0.1
ASAR	Alice Springs	81.90	207	P	P	19 38 31.2	+0.1
TIP	Timpagrande	82.20	334	P	P	19 38 31.1	-1.6
TIP				IAmb	IAmb	19 38 35.5	
	comp=Z,18nm,1.1s						
PPT	Papeete	82.43	135	LR	LR	20 13 29.6	
	comp=Z,107nm,18.1s,baz=345,slow=34						
PPT2	Papeete2	82.45	135	*e*LR	LR	20 04 05.0	
	comp=Z,377nm,31.0s						
EIL	Elat	84.94	317	LR	LR	20 23 02.0	
	comp=Z,394nm,18.4s,baz=51,slow=40						
ESBB	Sonseca Array	85.41	350	P	P	19 38 50.9	+1.7
ESBB				IAmb	IAmb	19 38 53.0	
	comp=Z,21nm,1.3s						
ESDC	Sonseca Array	85.42	350	P	P	19 38 50.6	+1.4
	comp=Z,5.5nm,0.9s,baz=3.6,slow=4.7,SNR=23						
ESDC	Sonseca Array	85.42	350	P	P	19 38 49.8	+0.6
PAB	San Pablo	85.58	350	P	P	19 38 51.7	+1.7
PAB				pmax	pmax		
	comp=Z,26nm,1.5s						
PAB	San Pablo	85.58	350	P	P	19 38 51.7	+1.7
RAYN	Ar Rayn	85.65	305	*i* P	P	19 38 50.8	+0.3
	SNR=9.8						
RAYN	Ar Rayn	85.65	305	P	P	19 38 50.3	-0.3
RAYN				pmax	pmax		
	comp=Z,15nm,0.9s						
RAYN	Ar Rayn	85.65	305	P	P	19 38 50.3	-0.3
KEST	Kesra	87.21	339	LR	LR	20 22 01.0	
	comp=Z,138nm,18.3s,baz=314,slow=38						
STKA	Stephens Creek	88.12	198	LR	LR	20 21 13.3	
	comp=Z,150nm,18.1s,baz=25,slow=38						
QSPA	South Pole Qui	144.37	180		PKPbc	19 45 44.9	0.0

NCEDC ***10*** *19:44:56±1.2, 40°.59N±0°.04×125°.37W±0°.05, h24^{km}±7^{km}, Md2.9/36, Error ellipse: s-maj=6.6km s-min=4.3km az=54.0*

NEIC 10 19:44:53.6±1.2**, 40°.60N**±0°.04×**125°.4W**±0°.1**, h19**^{km}±12^{km}**, Error ellipse: s-maj=12.4km s-min=5.5km az=88.0, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	0.81	99		Pn	19 45 10.4	+0.2
KMPM	Mount Pierce	0.99	100		Pn	19 45 12.5	-0.1
KMPM					Sb	19 45 25.3	+0.4
KSMM	Slide Mountain	1.02	114		Pb	19 45 12.4	-0.3
JCC	Jacoby Creek,	1.06	78		Pb	19 45 13.0	-0.3
JCC					Sb	19 45 26.6	-0.2
JCC	Jacoby Creek,	1.06	78	Pn	Pb	19 45 12.5	-0.9
KRPM	Rodgers	1.18	61		Pn	19 45 14.7	-0.5
KCRM	Chalk Rock	1.21	98		Pb	19 45 15.9	-0.2
KHMM	Horse Mountain	1.29	77		Pn	19 45 16.4	-0.4
KHMM	Horse Mountain	1.29	77		Sn	19 45 33.1	-0.6
KMRM	Mail Ridge	1.34	106	Pn	Pb	19 45 18.0	-0.2
KCSM	Cold Springs	1.43	92		Pn	19 45 19.2	+0.4
KRMB	Red Mountain	1.45	50		Pn	19 45 18.1	-0.9
KOMM	Orleans Mounta	1.62	65		Pn	19 45 21.3	0.0
KHBM	Hayfork Bally	1.66	87		Pn	19 45 21.7	-0.1
KCPM	Cahto Peak	1.66	123		Pn	19 45 21.6	-0.3
KIPM	Iron Peak	1.67	118		Pn	19 45 22.4	+0.4
KSXB	Camp Six Broad	1.68	43		Pn	19 45 21.7	-0.4
KFPM	Farley Peak	1.79	122		Pn	19 45 23.6	0.0
KBNM	Bluenose Ridge	1.83	112		Pb	19 45 25.4	-1.1
KBO	Bosley Butte	1.83	28		Pn	19 45 23.8	-0.4
GTC	Three Chop Rid	1.85	130		Pn	19 45 24.2	-0.2
LBPM	Beegum Peak	1.94	98		Pn	19 45 26.0	+0.3
GNAM	Navarro Ridge	1.95	135		Pn	19 45 25.6	-0.2
LGPM	Granite Peak	1.97	80		Pn	19 45 26.0	-0.1
M02C	Callahan	2.08	67		Pn	19 45 27.9	+0.4
GHOM	Hamilton Openi	2.11	137		Pn	19 45 27.9	-0.2
LBKM	Bonanza King	2.12	76		Pn	19 45 28.4	+0.2
WDC	Whiskeytown Da	2.17	90		Pn	19 45 28.9	+0.1
WDC	Whiskeytown Da	2.17	90		Pn	19 45 29.3	+0.6
GROM	Round Mountain	2.19	107		Pn	19 45 30.3	+1.1
GASB	Alder Springs	2.26	114		Pn	19 45 31.1	+1.0
YBH	Yreka Blue Hor	2.32	60	Pn	Pn	19 45 29.4	-1.5
GSNM	Snow Mountain	2.37	134		Pn	19 45 31.8	+0.1
LTCM	Tuscan Springs	2.53	98		Pn	19 45 34.9	+1.2
LSHM	Sage Hen Hill	2.56	85		Pn	19 45 35.3	+1.2
HUMO	Hull Mountain	2.71	42	Pn	Pn	19 45 35.2	-1.1
LDBM	Digger Butte	2.76	92		Pn	19 45 37.2	+0.2
O03E	Paynes Creek	2.76	95		Pn	19 45 37.5	+0.6
LRDM	Redding Peak	3.00	91		Pn	19 45 41.8	+1.5
ORV	Oroville	3.17	108	Pn	Pn	19 45 42.1	-0.3

IDC 10 20:11:09.4±2.1**, 6°.42S**×**129°.84E, h0**^{km}**, mb3.4**/1**, mb1 3.7**/3**, mb1mx3.4**/29**, mbtmp3.5**/3**, ML3.6**/2**, Error ellipse: s-maj=111.6km s-min=30.9km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.14	162	Pn	Pn	20 14 31.4	+0.2
	0.2nm,0.3s,baz=343,slow=10.0,SNR=16						
WRA				Sn	Sn	20 16 55.6	-13
	1.2nm,0.3s,baz=333,slow=21,SNR=17						
ASAR	Alice Springs	17.59	168	P	Pn	20 15 15.8	-0.3
	0.4nm,0.3s,baz=337,slow=10,SNR=34						
ASAR				S	Sn	20 18 17.4	-15
	0.4nm,0.3s,baz=347,slow=25,SNR=7.3						
MKAR	Makanchi Array	67.65	327	P	P	20 22 08.4	+0.1
	0.2nm,0.5s,baz=121,slow=7.8,SNR=7.9						

IDC 10 20:30:43.2±8.8**, 20°.74S**×**66°.51W, h267**^{km}±75^{km}**, mb3.1**/1**, mb1 3.0**/2**, mb1mx2.7**/36**, mbtmp3.5**/2**, Error ellipse: s-maj=117.0km s-min=92.2km az=31.0, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	4.69	341	P	Pn	20 31 56.4	0.0
	0.7nm,0.3s,baz=157,slow=8.3,SNR=11						
LPAZ				S	S	20 32 55.4	+0.5
	0.1nm,0.3s,baz=36,slow=5.1,SNR=1.3						
TORD	Torodi Ar. Bea	74.98	69	P	P	20 41 56.0	+0.1
	0.7nm,1.0s,baz=253,slow=6.1,SNR=4.1						
MKAR	Makanchi Array	143.69	37	PKP	PKPdf	20 49 45.7	-0.7
	0.1nm,0.5s,baz=320,slow=2.4,SNR=2.0						

IDC ***10*** *20:39:47.4±2.8, 7°.26S×150°.81E, h44^{km}±23^{km}, mb3.5/8, mb1 3.7/10, mb1mx3.5/48, mbtmp3.8/10, ML1.4/1, MS3.2/2, Ms1 3.2/2, ms1mx2.8/23, Error ellipse: s-maj=37.4km s-min=16.4km az=127.0*

ISC 10 20:39:45.8±1.2**, 7°.2S**±0°.2×**150°.9E**±0°.2**, h31**^{km}**, n12,** σ**0^{s}.97**/13**, mb3.6**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.13	22	P	Pn	20 40 34.7	+1.7
	5.5nm,0.3s,baz=86,slow=8.4,SNR=2.7						
KRVT				S	Sn	20 41 08.4	-0.9
	25nm,0.3s,baz=12,slow=21,SNR=9.9						
PMG	Port Moresby	4.25	239	P	Pn	20 40 49.8	+1.3
	1.7nm,0.3s,baz=42,slow=18,SNR=2.4						
PMG				S	Sn	20 41 37.7	+0.6
	11nm,0.3s,baz=32,slow=9.7,SNR=9.1						
WRA	Warramunga Arr	20.41	230	P	P	20 44 19.1	-1.4
	1.4nm,0.5s,baz=54,slow=10,SNR=20						
SIJI	Sorong	20.53	287	P	P	20 44 21.1	-0.8
	8.2nm,0.9s,baz=25,slow=2.7,SNR=3.8						
ASAR	Alice Springs	23.07	223	P	P	20 44 48.8	-0.2
	0.6nm,0.4s,baz=58,slow=9.9,SNR=16						
STKA	Stephens Creek	26.00	198	P	P	20 45 15.7	-0.3
	1.1nm,0.8s,baz=345,slow=16,SNR=1.7						
FITZ	Fitzroy Crossi	26.83	244	P	P	20 45 22.9	-0.8
	1.3nm,0.5s,baz=50,slow=9.6,SNR=9.2						
FITZ				LR	LR	20 55 51.1	
	comp=Z,63nm,18.4s,baz=112,slow=36						
KSRS	Korea Array	49.35	336	LR	LR	21 07 19.9	
	comp=Z,15nm,19.5s,baz=340,slow=34						
MKAR	Makanchi Array	80.90	320	P	P	20 51 56.8	-0.3
	0.3nm,0.7s,baz=122,slow=5.4,SNR=3.2						
AAK	Ala-Archa	84.94	314	P	P	20 52 18.6	+0.3
	0.9nm,0.7s,baz=76,slow=2.3,SNR=4.1						
ILAR	Eielson Array	85.12	22	P	P	20 52 18.4	0.0
	0.3nm,0.6s,baz=252,slow=5.3,SNR=4.6						
TORD	Torodi Ar. Bea	149.11	283	PKPbc	PKPbc	20 59 32.4	+0.3
	1.0nm,0.6s,baz=64,slow=2.3,SNR=8.1						

IDC 10 20:41:32.4±7.6**, 16°.88S**×**173°.73W, h0**^{km}**, mb4.1**/3**, mb1 4.3**/4**, mb1mx3.8**/47**, mbtmp4.1**/4**, ML3.9**/1**, Error ellipse: s-maj=319.7km s-min=27.8km az=139.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.50	33	Pn	Pn	20 42 27.0	-1.2
	10nm,0.3s,baz=108,slow=6.4,SNR=4.0						
AFI				Sn	Sn	20 43 02.8	-7.6
	15nm,0.3s,baz=14,slow=21,SNR=6.4						
WRA	Warramunga Arr	49.21	258	P	P	20 50 22.9	-0.1
	1.0nm,0.6s,baz=95,slow=7.2,SNR=12						
ASAR	Alice Springs	49.37	253	P	P	20 50 23.7	-0.4
	3.5nm,0.7s,baz=89,slow=8.5,SNR=44						
ILAR	Eielson Array	83.95	11	P	P	20 54 04.7	+0.8
	1.3nm,1.1s,baz=193,slow=3.7,SNR=3.1						

IDC 10 20:44:41.5±2.5**, 13°.87N**×**93°.08E, h0**^{km}**, mb3.3**/2**, mb1 3.3**/3**, mb1mx3.1**/44**, mbtmp3.1**/3**, ML3.0**/1**, Error ellipse: s-maj=66.3km s-min=34.1km az=65.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.25	50	Pn	Pn	20 46 29.0	+0.2
	0.1nm,0.3s,baz=237,slow=15,SNR=1.9						
MKAR	Makanchi Array	34.05	347	P	P	20 51 27.1	-0.4
	0.2nm,0.6s,baz=156,slow=7.9,SNR=3.4						
ASAR	Alice Springs	54.63	133	P	P	20 54 12.5	+0.1
	0.6nm,1.1s,baz=307,slow=5.7,SNR=4.2						

IDC 10 20:52:46.3±566.0**, 30°.89N**×**132°.32E, h0**^{km}**, Error ellipse: s-maj=252.9km s-min=140.5km az=28.0, Southeast of Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I30JP	ISUMI INFRASON	8.02	55	*i*		21 39 00.0	
	baz=240,slow=330,SNR=14						
I45RU	USSURIYSK INFR	13.29	359	*i*		22 10 40.0	
	baz=182,slow=336,SNR=23						
I34MN	SONGINO INFRAS	26.02	318	*i*		23 35 50.0	
	baz=125,slow=334,SNR=1.5						

NCEDC ***10*** *20:54:58.2±3.0, 40°.51N±0°.04×125°.24W±0°.05, h5^{km}±6^{km}, Md2.7/18, Error ellipse: s-maj=6.2km s-min=4.7km az=53.0*

NEIC 10 20:54:55.5±1.2**, 40°.60N**±0°.05×**125°.4W**±0°.2**, h16**^{km}±15^{km}**, Error ellipse: s-maj=19.0km s-min=5.7km az=76.0, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	0.84	98		Pn	20 55 13.1	+0.4
KMPM	Mount Pierce	1.01	100		Pg	20 55 15.1	0.0
KMPM					Sg	20 55 28.6	+0.2
KSMM	Slide Mountain	1.04	113		Pb	20 55 15.0	-0.2
JCC	Jacoby Creek,	1.08	78		Pb	20 55 15.4	-0.4
JCC	Jacoby Creek,	1.08	78	Pg	Pb	20 55 15.3	-0.5
KCRM	Chalk Rock	1.24	98		Pb	20 55 18.5	0.0
KHMM	Horse Mountain	1.32	77		Pn	20 55 18.5	-0.8
KMRM	Mail Ridge	1.36	105		Pb	20 55 20.8	+0.1
KRMB	Red Mountain	1.47	51	Pn	Pn	20 55 20.3	-1.2
KBSM	Bell Springs	1.56	115		Pn	20 55 23.0	+0.4
KCPM	Cahto Peak	1.68	122	Pn	Pn	20 55 24.4	+0.1
KIPM	Iron Peak	1.68	117		Pn	20 55 24.8	+0.4
KFPM	Farley Peak	1.81	121		Pn	20 55 26.4	+0.4
KBNM	Bluenose Ridge	1.85	112		Pb	20 55 28.1	-0.9
KBO	Bosley Butte	1.85	29	Pn	Pn	20 55 26.5	-0.1
O02D	Mt. Diablo Mer	2.06	101		Pn	20 55 30.3	+0.8
WDC	Whiskeytown Da	2.19	90		Pn	20 55 31.2	-0.1
GROM	Round Mountain	2.21	107		Pn	20 55 33.0	+1.3
GVV	Valley View	2.26	110		Pn	20 55 33.6	+1.2
YBH	Yreka Blue Hor	2.34	60	Pn	Pn	20 55 34.7	+1.3
HOPS	Hopland Field	2.42	131	Pn	Pn	20 55 34.9	+0.5
ORV	Oroville	3.19	108		Pn	20 55 44.5	-0.4

IDC 10 21:05:45.1±65.0**, 4°.91N**×**97°.29E, h0**^{km}**, mb3.4**/4**, mb1 3.4**/4**, mb1mx3.2**/44**, mbtmp3.4**/4**, MS3.3**/2**, Ms1 3.3**/2**, ms1mx2.9**/27**, Error ellipse: s-maj=1215.0km s-min=141.8km az=174.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	24.51	113	LR	LR	21 20 48.0	
	comp=Z,41nm,18.7s,baz=358,slow=37						
SONM	Songino Array	43.48	9	P	P	21 13 50.0	-0.3
	0.1nm,0.4s,baz=188,slow=8.7,SNR=2.2						
MKAR	Makanchi Array	43.70	345	P	P	21 13 51.9	0.0
	0.3nm,0.6s,baz=161,slow=8.5,SNR=7.1						
KURBB	Kurchatov Arra	48.20	344	P	P	21 14 26.6	-0.7
	0.3nm,0.7s,baz=160,slow=7.7,SNR=2.4						
MJAR	Matsushiro Arr	48.95	44	LR	LR	21 38 08.7	
	comp=Z,48nm,18.4s,baz=330,slow=40						
ZALV	Zalesovo Beam	49.94	350	P	P	21 14 41.1	+0.5
	0.6nm,0.4s,baz=167,slow=8.4,SNR=3.5						

NEIC ***10*** *21:07:44.7±1.3, 16°.37N±0°.10×146°.1E±0°.2, h153^{km}±10^{km}, mb3.8/5, Error ellipse: s-maj=25.9km s-min=8.5km az=117.0*

IDC ***10*** *21:07:46.2±2.1, 16°.28N×146°.00E, h163^{km}±19^{km}, mb3.2/10, mb1 3.4/11, mb1mx3.2/44, mbtmp3.7/11, Error ellipse: s-maj=28.4km s-min=18.0km az=86.0*

ISC 10 21:07:44.7±0.8**, 16°.39N**±0°.08×**146°.1E**±0°.2**, h150**^{km}**, n28,** σ**0^{s}.95**/22**, mb3.7**/13**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	3.01	203	P	Pn	21 08 33.9	+1.7
	15nm,0.3s,baz=184,slow=11,SNR=6.3						
GUMO				S	Sn	21 09 08.9	-0.1
	35nm,0.3s,baz=139,slow=22,SNR=6.6						
GUMO	Guam	3.01	203		Pn	21 08 32.5	+0.2
H11S3	WAKE ISLAND Hy	19.79	81	T	T	21 33 12.1	
H11S1	WAKE ISLAND Hy	19.80	81	T	T	21 33 12.1	
H11S2	WAKE ISLAND Hy	19.81	81	T	T	21 33 18.7	
	SNR=3.4						
H11N1	WAKE ISLAND Hy	20.08	77	T	T	21 33 39.1	
	baz=253,slow=74,SNR=4.6						
H11N2	WAKE ISLAND Hy	20.09	77	T	T	21 33 34.0	
H11N3	WAKE ISLAND Hy	20.10	77	T	T	21 33 38.1	
	baz=260,slow=74,SNR=4.5						
MJAR	Matsushiro Arr	21.25	342	P	P	21 12 18.1	-1.0
JNU	Nakatsue	21.58	323	P	P	21 12 22.7	+0.1
JNU				IAmb	IAmb	21 12 29.8	
	comp=Z,2.9nm,0.7s						
WB0	Warramunga Arr	37.71	198	P	P	21 14 45.4	-0.6
WB2	Warramunga Arr	37.89	198	P	P	21 14 47.2	-0.3
WB2				IAmb	IAmb	21 14 53.6	
	comp=Z,1.5nm,1.0s						
WRA	Warramunga Arr	37.90	198	P	P	21 14 46.6	-0.9
	comp=Z,0.5nm,0.8s,baz=13,slow=8.7,SNR=7.2						
ASAR	Alice Springs	41.54	197	P	P	21 15 16.8	-0.9
	comp=Z,0.2nm,0.5s,baz=17,slow=13,SNR=6.5						
ASAR	Alice Springs	41.54	197	P	P	21 15 15.9	-1.8
CMAR	Chiang Mai Arr	44.91	280	P	P	21 15 44.9	+0.1
	comp=Z,1.0nm,0.7s,baz=80,slow=6.3,SNR=11						
CMAR	Chiang Mai Arr	44.91	280	P	P	21 15 44.1	-0.8
SONM	Songino Array	45.17	323	P	P	21 15 48.0	+1.4
	comp=Z,0.2nm,0.5s,baz=142,slow=6.5,SNR=2.1						
SONM	Songino Array	45.17	323	IAmb	IAmb	21 15 50.0	
	comp=Z,0.3nm,0.8s						
KIWB	Kanaga Island	45.84	31	P	P	21 15 51.0	-0.6
ZALV	Zalesovo Beam	60.06	323	P	P	21 17 34.9	-0.8
	comp=Z,0.4nm,0.3s,baz=62,slow=6.8,SNR=2.2						
MKAR	Makanchi Array	60.32	315	P	P	21 17 38.3	+0.6
	comp=Z,1.2nm,0.7s,baz=91,slow=7.9,SNR=17						
MKAR	Makanchi Array	60.32	315	P	P	21 17 37.5	-0.2
KURK	Kurchatov	63.22	319	P	P	21 17 56.0	-1.0
KURK				IAmb	IAmb	21 17 57.7	
	comp=Z,2.6nm,1.1s						
KURBB	Kurchatov Arra	63.27	319	P	P	21 17 57.2	-0.1
	comp=Z,1.9nm,0.7s,baz=101,slow=6.5,SNR=18						
ILAR	Eielson Array	65.56	26	P	P	21 18 12.0	0.0
	comp=Z,0.4nm,0.8s,baz=248,slow=4.8,SNR=2.7						
YKA	Yellowknife Ar	79.86	28	P	P	21 19 38.0	+1.7
	comp=Z,0.4nm,0.8s,baz=276,slow=5.0,SNR=4.7						
FINES	FINESS Array B	89.12	335	P	P	21 20 22.2	-0.7
	comp=Z,1.3nm,0.8s,baz=66,slow=4.8,SNR=5.7						

IDC 10 21:32:09.8±45.0**, 16°.76S**×**176°.11W, h0**^{km}**, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.7**/31**, mbtmp4.0**/3**, Error ellipse: s-maj=846.2km s-min=173.6km az=78.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.10	241	P	P	21 39 56.4	+0.7
	1.1nm,0.5s,baz=93,slow=11,SNR=3.0						
WRA	Warramunga Arr	47.01	258	P	P	21 40 42.9	-0.4
	0.4nm,0.5s,baz=96,slow=7.6,SNR=14						
ASAR	Alice Springs	47.22	253	P	P	21 40 44.6	-0.3
	5.1nm,0.6s,baz=89,slow=8.1,SNR=94						

IDC 10 21:38:45.7±6.2**, 4°.24S**×**134°.19E, h0**^{km}**, mb3.4**/1**, mb1 3.7**/3**, mb1mx3.3**/38**, mbtmp3.5**/3**, ML3.6**/2**, Error ellipse: s-maj=343.0km s-min=33.2km az=78.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.61	179	Pn	Pn	21 42 26.0	-1.2
	0.3nm,0.3s,baz=360,slow=13,SNR=12						
WRA				Sn	Sn	21 45 12.0	-9.1
	0.4nm,0.3s,baz=359,slow=23,SNR=17						
ASAR	Alice Springs	19.32	181	P	Pn	21 43 13.2	-0.3
	0.1nm,0.3s,baz=2.0,slow=13,SNR=7.6						
MKAR	Makanchi Array	68.31	324	P	P	21 49 48.8	0.0
	0.3nm,0.8s,baz=124,slow=7.6,SNR=2.9						

NEIC ***10*** *21:41:50.4±2.1, 61°.15N±0°.02×145°.83W±0°.04, h26^{km}±10^{km}, Error ellipse: s-maj=3.6km s-min=1.5km az=217.0*

AEIC 10 21:41:50.6±2.3**, 61°.17N**±0°.04×**145°.84W**±0°.07**, h10**^{km}±6^{km}**, ML2.5**/74**, Error ellipse: s-maj=6.4km s-min=4.7km az=168.0, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMT	TAPS TI Valdez	0.27	252		Pg	21 41 56.7	+0.6
VMT					Sb	21 42 01.3	-0.9
JPK	Jack Peak	0.39	254		Pg	21 41 58.1	-0.1
PS12	TAPS Pump St12	0.46	47		Pg	21 41 59.5	0.0
PS12					Sg	21 42 06.4	+0.9
FID	Port Fidalgo	0.52	217		Pg	21 42 01.2	+0.5
FID					Sb	21 42 09.4	0.0
EYAK	Cordova Ski Ar	0.62	176		Pg	21 42 02.3	-0.3
GLI	Glacier Island	0.68	245		Pg	21 42 02.4	-1.3
GLI					Sg	21 42 11.7	-0.8
GOAT	Goat Mountain	0.80	137		Pg	21 42 05.2	-0.8
HIN	Hinchinbrook I	0.84	203		Pg	21 42 05.6	-1.1
PS11	TAPS Pump St11	0.93	11		Pg	21 42 07.6	-0.9
RAGM	Ragged Mountai	0.97	143		Pg	21 42 08.3	-0.9
SCM	Sheep Creek Mo	0.98	314		Pg	21 42 07.2	-2.2
SCM					Sg	21 42 20.1	-2.1
GLB	Gilahina Butte	1.02	73		Pg	21 42 07.8	-2.3
GLB					Sg	21 42 21.3	-2.0
VRDI	Verde Repeater	1.16	86		Pb	21 42 10.0	-2.7
VRDI					Sg	21 42 25.0	-2.7
PWL	Port Wells	1.26	257		Pn	21 42 11.8	-2.4
KNK	Knik Glacier	1.29	282		Pn	21 42 12.7	-2.0
KNK					Sb	21 42 29.9	-1.7
SML	Sawmill	1.36	299		Pn	21 42 12.9	-2.7
SML					Sb	21 42 30.9	-2.7
MCARA	McCarthy VSAT	1.38	80		Pn	21 42 13.3	-2.5
CRQM	Cirque	1.38	106		Pn	21 42 14.1	-1.9
CRQM	Cirque	1.38	106	Sn	Sb	21 42 33.9	-0.3
TGL	Tana Glacier	1.52	104		Pn	21 42 16.1	-1.8
GHO	Glory Hole Cre	1.60	294		Pn	21 42 17.2	-1.8
PTPK	Patty Peak	1.63	88		Pn	21 42 17.6	-1.9
PMR	Palmer	1.64	287		Pn	21 42 17.7	-1.7
PMR					Sn	21 42 39.1	-1.5
WAT6	Susitna Watana	1.68	328		Pn	21 42 17.8	-2.4
WAT6					Sn	21 42 38.6	-3.3
BALM	Baldy	1.70	93		Pn	21 42 18.3	-2.0
KIAG	Kiagna River	1.71	97		Pn	21 42 18.2	-2.3
PAX	Paxson	1.82	5		Pn	21 42 20.5	-1.5
PAX					Sn	21 42 43.8	-1.3
PAX	Paxson	1.82	5		Sn	21 42 44.0	-1.1
RC01	Rabbit Creek A	1.90	269		Pn	21 42 21.6	-1.3
BARN	Barnard Glacie	2.03	91		Pn	21 42 23.6	-1.3
GRNC	Granite Creek	2.04	101		Pn	21 42 23.3	-1.8
MENT	Mentasta	2.04	28		Pn	21 42 24.2	-0.8
DHY	Denali Highway	2.05	340		Pn	21 42 23.8	-1.4
SEW	Seward	2.08	241		Pn	21 42 23.3	-2.1
WAT1	Susitna Watana	2.10	324		Pn	21 42 24.8	-1.0
CTGM	Chitina Glacie	2.20	93		Sn	21 42 52.5	-2.0
CTGM	Chitina Glacie	2.20	93		Pn	21 42 25.9	-1.3
WAT2	Susitna Watana	2.22	326		Pn	21 42 26.5	-1.0
SLKM	Skilak Lake	2.25	255		Pn	21 42 26.0	-1.8
SUA	Susitna One	2.39	279		Pn	21 42 29.0	-0.8
YUK2	White River	2.48	73		Pn	21 42 30.2	-0.8
RIDG	Independent Ri	2.62	10		Pn	21 42 33.0	+0.1
DOT	Dot Lake	2.62	18	Pn	Pn	21 42 33.1	+0.1
YUK3	Moose Creek	2.65	74		Pn	21 42 32.6	-0.9
BVCY	Beaver Creek	2.67	60		Pn	21 42 33.4	-0.2
BC03		2.69	43		Pn	21 42 33.1	-0.7
BCAR	Beaver Creek A	2.69	43		Pn	21 42 33.1	-0.8
BRSE	Bradley Lake S	2.82	242		Pn	21 42 33.6	-2.1
SKT	Skwentna	2.84	289		Pn	21 42 33.9	-2.1
SCRK	Sand Creek	2.95	16		Pn	21 42 37.2	-0.3
PCA	Pinnacle	2.95	109		Pn	21 42 38.9	+1.4
MCK	McKinley	2.95	332		Pn	21 42 35.7	-1.7
TRF	Thorofare Moun	3.10	320	Pn	Pn	21 42 39.1	-0.5
CNPM	China Poot	3.15	241		Pn	21 42 38.0	-2.2
KTH	Kantishna Hill	3.37	318		Pn	21 42 42.2	-1.1
DFR	Drift River	3.40	263		Pn	21 42 41.3	-2.4
PPLA	Purkeypile	3.46	303		Pn	21 42 43.3	-1.3
RSO	Redoubt South	3.46	261	Pn	Pn	21 42 42.8	-1.9
WRH	Wood River Hil	3.48	344		Pn	21 42 41.9	-2.7
CCB	Clear Creek Bu	3.61	346		Pn	21 42 45.1	-1.3
IL31		3.65	353		Pn	21 42 45.3	-1.6
ILAR	Eielson Array	3.65	353	Pn	Pn	21 42 45.5	-1.6
BPAW	Bear Paw Mtn.	3.79	323		Pn	21 42 47.7	-1.2
MDM	Murphy Dome	3.96	345	Pn	Pn	21 42 52.7	+1.4
DAWY	Dawson	4.16	43	Pn	Pn	21 42 53.6	-0.5
EGAK	Eagle	4.21	28	Pn	Pn	21 42 55.1	+0.4
MLY	Manley	4.47	332		Pn	21 42 56.8	-1.5
MLY				Sn	Sn	21 43 50.7	+0.3
SVW2	Sparrevohn	4.73	273	Pn	Pn	21 42 58.9	-2.9
BM03	Burnt Mountain	6.30	4		Pn	21 43 22.5	-1.0

TAP ***10*** *21:47:15.3, 24°.79N×122°.29E, h12^{km}, ML3.3, C*

JMA ***10*** *21:47:15.4±0.1, 24°.70N×122°.33E, h9^{km}±5^{km}, M2.4*

ISC 10 21:47:14.9±1.0**, 24°.75N**±0°.02×**122°.34E**±0°.02**, h9**^{km}±9^{km}**,**

n88,σ0^{s}70/166,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1 baz=222	0.27	224	P	Pb	21 47 21.8	-0.2
EOS1	baz=222			S	Sb	21 47 27.0	+0.3
TWB1	Santiao Chiao baz=309	0.41	309	P	Pg	21 47 22.9	0.0
TWB1	baz=309			S	Sg	21 47 27.8	-0.5
TWC	Suao baz=254	0.46	253	P	Pg	21 47 24.0	+0.1
TWC	baz=254			*e*S	Sg	21 47 29.9	-0.1
NTC	Toucheng baz=279	0.47	283	*e*P	Pb	21 47 25.3	-0.1
NTC	baz=279			*e*S	Sb	21 47 33.3	+0.8
TIPB	Shuangxi baz=293	0.51	296	P	Pg	21 47 25.2	+0.3
TIPB	baz=293			S	Sg	21 47 31.7	+0.1
ILA	Ilan baz=267	0.54	272	*e*P	Pb	21 47 25.9	-0.6
ILA	baz=267			*e*S	Sb	21 47 34.0	-0.3
NWF	Wu-fen Shan baz=301	0.60	303	*e*P	Pb	21 47 27.3	-0.3
NWF	baz=301			*e*S	Sb	21 47 35.2	-1.0
WFSB	Wu-fen Shan baz=301	0.60	303	P	Pb	21 47 27.4	-0.2
WFSB	baz=301			*e*S	Sb	21 47 35.1	-1.0
TWE	Neicheng baz=255	0.61	268	P	Pg	21 47 26.8	+0.2
TWE	baz=255			*e*S	Sb	21 47 35.6	-0.8
ENA	Nanau baz=233	0.63	240	*e*P	Pg	21 47 27.3	+0.3
ENA	baz=233			*e*S	Sg	21 47 35.5	+0.2
JYNG	Yonagunijimaku	0.63	118	P	Pg	21 47 27.2	+0.2
JYNG				S	Sg	21 47 36.3	+1.0
SLBB	Yuanshan baz=266	0.64	271	*e*P	Pg	21 47 26.9	-0.4
SLBB	baz=266			*e*S	Sb	21 47 36.6	-0.7
YOJ	Yonaguni jima	0.68	115	P	Pg	21 47 28.1	+0.1
YOJ				*e*S	Sg	21 47 37.4	+0.6
ENTT	Nioudou baz=257	0.71	261	*e*P	Pb	21 47 29.5	+0.1
ENTT	baz=257			*e*S	Sb	21 47 38.7	-0.7
TWA	Mucha baz=275	0.72	289	P	Pb	21 47 29.8	+0.1
TWA	baz=275			*e*S	Sb	21 47 39.7	0.0
NWLT	Wulai baz=269	0.76	272	*e*P	Pb	21 47 30.0	-0.3
NWLT	baz=269			S	Sg	21 47 39.4	0.0
NDT	Datong Townshi baz=255	0.76	259	*e*P	Pb	21 47 30.3	-0.1
NDT	baz=255			*e*S	Sb	21 47 40.3	-0.6
NHDH	Xindian Distri baz=273	0.77	286	P	Pb	21 47 30.6	+0.2
NHDH	baz=273			S	Sb	21 47 40.9	-0.1
YM01	YM01 baz=298	0.80	300	*e*P	Pg	21 47 30.7	+0.4
YM01	baz=298			*e*S	Sg	21 47 41.2	+0.4
YM08	YM08 baz=302	0.81	303	*e*P	Pg	21 47 30.7	+0.3
YM08	baz=302			S	Sg	21 47 41.0	0.0
YM11	YM11 baz=300	0.81	301	P	Pb	21 47 31.0	-0.1
YM11	baz=300			S	Sg	21 47 41.0	+0.1
TAP	Taipei baz=289	0.81	291	*e*P	Pg	21 47 30.3	-0.2
TAP	baz=289			*e*S	Sg	21 47 41.1	+0.1
YM10	YM10 baz=299	0.81	300	P	Pg	21 47 31.0	+0.4
YM10	baz=299			*e*S	Sb	21 47 41.7	-0.7
YM05	YM05 baz=299	0.81	301	*e*P	Pg	21 47 30.7	+0.2
YM05	baz=299			*e*S	Sg	21 47 40.7	-0.5
YM04	YM04 baz=298	0.83	299	P	Pg	21 47 31.0	+0.1
YM04	baz=298			S	Sg	21 47 41.9	+0.2
TWY	Chenhua baz=308	0.85	308	P	Pb	21 47 31.8	0.0
TWY	baz=308			S	Sb	21 47 43.2	-0.1
ANP	Anpu baz=299	0.86	301	*e*P	Pg	21 47 31.8	+0.4
ANP	baz=299			*e*S	Sg	21 47 42.1	-0.6
YHNB	Yeheng baz=262	0.88	265	P	Pb	21 47 32.4	+0.1
YHNB	baz=262			S	Sb	21 47 43.6	-0.6
NACB	Ninganchiao baz=236	0.89	230	*e*P	Pg	21 47 31.9	-0.1
NACB	baz=236			*e*S	Sg	21 47 43.6	+0.2
NSK	Sanguang baz=262	0.89	266	P	Pg	21 47 32.0	0.0
NSK	baz=262			*e*S	Sg	21 47 43.4	-0.3
NTST	Danshui baz=306	0.91	297	*e*S	Sg	21 47 43.9	-0.2
TWS1	Kuangyinshan baz=291	0.91	293	*e*P	Pg	21 47 32.2	-0.1
TWS1	baz=291			*e*S	Sb	21 47 44.8	-0.2
PCYT	Pengchaiyu baz=347	0.91	345	P	Pg	21 47 32.0	-0.4
PCYT	baz=347			*e*S	Sg	21 47 44.0	-0.2
NNSB	Datong baz=246	0.93	250	*e*P	Pg	21 47 32.8	+0.1
NNSB	baz=246			*e*S	Sb	21 47 45.4	-0.3
NNSH	Datong baz=238	0.93	250	*e*P	Pg	21 47 32.8	+0.1
NNSH	baz=238			*e*S	Sb	21 47 45.5	-0.1
NNS	Nan Shan baz=247	0.93	251	*e*P	Pb	21 47 33.4	+0.1
NNS	baz=247			*e*S	Sb	21 47 45.2	-0.6
ETLH	Xiulin Townshi baz=238	0.95	235	*e*P	Pg	21 47 33.1	0.0
ETLH	baz=238			*e*S	Sg	21 47 45.0	-0.4
TWD	Chiawan baz=229	0.95	226	*e*P	Pb	21 47 33.7	+0.2
TWD	baz=229			*e*S	Sb	21 47 46.6	+0.4
WLTB	Daxi baz=274	0.99	276	*e*P	Pn	21 47 35.0	0.0
WLTB	baz=274			*e*S	Sn	21 47 48.2	-0.9
HWA	Hwalien baz=194	1.02	221	*e*P	Pn	21 47 36.4	+1.0
HWA	baz=194			*e*S	Sn	21 47 51.0	+1.2
NCUH	Zhongli baz=280	1.07	282	*e*S	Sg	21 47 48.7	-0.6
ENLB	Shoufeng baz=194	1.08	219	*e*P	Pn	21 47 36.9	+0.7
ENLB	baz=194			*e*S	Sn	21 47 52.2	+1.0
WHF	Hehuan Shan baz=235	1.15	239	P	Pb	21 47 37.2	+0.1
WHF	baz=235			*e*S	Sn	21 47 53.0	-0.6
TWT	Tachien baz=242	1.17	245	P	Pn	21 47 38.2	+0.6
TWT	baz=242			*e*S	Sn	21 47 53.9	+0.1
TDCB	Techi baz=243	1.18	246	*e*P	Pn	21 47 37.7	-0.1
TDCB	baz=243			*e*S	Sg	21 47 53.0	+0.1
LIOB	Emei baz=263	1.21	265	*e*P	Pn	21 47 37.9	-0.1
LIOB	baz=263			*e*S	Sn	21 47 55.2	+0.7
NSTT	Nanjuang baz=262	1.22	265	*e*P	Pb	21 47 38.0	-0.1
NSTT	baz=262			*e*S	Sg	21 47 53.9	-0.3
ESL	Shilin baz=198	1.24	222	*e*P	Pg	21 47 39.6	+0.8
ESL	baz=198			*e*S	Sn	21 47 56.1	+0.7
CHGB	Renai baz=234	1.26	237	*e*P	Pg	21 47 39.4	+0.3
CHGB	baz=234			*e*S	Sg	21 47 55.5	-0.1
OWD	Renai baz=247	1.32	233	P	Pg	21 47 40.2	-0.1
OWD	baz=247			*e*S	Sg	21 47 57.2	-0.2
IRIF	Iriomote-Funau	1.33	108	*e*S	Sb	21 47 56.6	-0.7
WHP	Taichung City baz=247	1.35	250	*e*P	Pg	21 47 41.3	+0.4
WHP	baz=247			*e*S	Sg	21 47 58.1	-0.2
EGFH	Guangfu baz=196	1.36	218	*e*P	Pn	21 47 40.2	+0.2
EGFH	baz=196			*e*S	Sg	21 47 58.3	-0.3
NMLH	Miaoli baz=260	1.42	262	*e*P	Pg	21 47 43.3	+1.1
NMLH	baz=260			*e*S	Sg	21 48 02.8	+2.2
DPDB	Guoxing baz=239	1.47	241	P	Pg	21 47 43.5	+0.4
DPDB	baz=239			*e*S	Sg	21 48 02.9	+0.7
NSY	Sanyi baz=256	1.47	257	*e*S	Sg	21 48 03.4	+1.1
VWDT	VWDT baz=206	1.47	228	*e*P	Pg	21 47 43.1	0.0
VWDT	baz=206			*e*S	Sg	21 48 01.6	-0.6
TWQ1	Liyutan baz=253	1.48	255	*e*P	Pg	21 47 44.5	+1.2
TWQ1	baz=253			*e*S	Sg	21 48 03.9	+1.4
HGSD	Ruisui baz=195	1.50	214	*e*P	Pn	21 47 42.1	0.0
HGSD	baz=195			*e*S	Sg	21 48 03.1	-0.1
EHY	Hungye baz=196	1.55	217	*e*P	Pb	21 47 44.0	+0.2
EHY	baz=196			*e*S	Sn	21 48 02.9	0.0
SMLT	Sun Moon Lake baz=234	1.57	237	*e*P	Pg	21 47 45.0	0.0
SMLT	baz=234			*e*S	Sb	21 48 03.7	-0.5
SSLB	Suanglung baz=243	1.58	233	*e*P	Pb	21 47 44.7	+0.3
SSLB	baz=243			*e*S	Sb	21 48 04.3	-0.2
TYC	Yuchr baz=236	1.59	238	*e*P	Pg	21 47 45.1	-0.3
TYC	baz=236			*e*S	Sb	21 48 05.0	+0.3
JKRS	Kuro-shima	1.61	108	P	Pn	21 47 41.6	-1.9
JKRS				*e*S	Sn	21 48 02.0	-2.4
YULB	Yu-li baz=212	1.65	215	*e*P	Pn	21 47 43.6	-0.5
YULB	baz=212			*e*S	Sn	21 48 05.0	-0.4
TWF1	Yuli baz=211	1.68	215	*e*P	Pn	21 47 44.7	+0.2
TWF1	baz=211			*e*S	Sb	21 48 06.8	-0.6
JIJ	Ishigaki jima	1.69	103	P	Pb	21 47 46.2	0.0
WHYT	Xinyi Township baz=243	1.71	233	P	Pg	21 47 47.3	-0.5
WHYT	baz=243			*e*S	Sg	21 48 10.5	+0.5
WJS	Zhushan baz=236	1.73	238	*e*P	Pg	21 47 47.6	-0.5
WJS	baz=236			*e*S	Sg	21 48 10.7	0.0
YUS	Yu-Shan baz=205	1.78	226	*e*P	Pb	21 47 47.2	-0.8
YUS	baz=205			*e*S	Sb	21 48 09.8	-0.9
JISG	Ishigakijimahi	1.80	95	P	Pn	21 47 47.1	+0.9
FULB	Fuli baz=192	1.81	212	*e*P	Pn	21 47 46.4	+0.1
FULB	baz=192			*e*S	Sb	21 48 11.0	-0.2
ALS	Alishan baz=208	1.86	229	*e*P	Pb	21 47 49.0	-0.3
ALS	baz=208			*e*S	Sg	21 48 14.2	-0.7
CHN5	Tsauling baz=231	1.90	233	*e*P	Pb	21 47 50.1	+0.3
CHN5	baz=231			*e*S	Sg	21 48 16.9	+0.9
WDLH	Douliu baz=256	1.95	238	*e*P	Pn	21 47 48.3	+0.1
WDLH	baz=256			*e*S	Sg	21 48 17.6	0.0
ELDTW	Lidau baz=200	1.97	218	*e*P	Pn	21 47 48.9	+0.3
ELDTW	baz=200			*e*S	Sb	21 48 14.3	-1.3
RLNB	Erlin baz=262	2.00	245	*e*S	Sb	21 48 15.5	-0.8
CHN4	Tsaushan baz=209	2.12	229	*e*P	Pb	21 47 53.1	-0.4
CHN4	baz=209			*e*S	Sb	21 48 19.7	-0.1
TPUB	Ta-pu baz=208	2.12	228	*e*P	Pb	21 47 52.6	-1.0
TPUB	baz=208			*e*S	Sg	21 48 22.4	-0.8
STYT	Tauyuan baz=205	2.14	223	*e*S	Sb	21 48 20.1	-0.4
WTP	Ta-pu baz=207	2.17	227	*e*P	Pb	21 47 52.9	-1.5
WTP	baz=207			*e*S	Sg	21 48 23.9	-0.8
TWK	Hsinying baz=209	2.24	229	*e*P	Pb	21 47 54.4	-1.3
TWK	baz=209			*e*S	Sg	21 48 25.3	-1.7
CHN1	Nanshi baz=225	2.27	227	*e*P	Pb	21 47 55.2	-0.9
CHN1	baz=225			*e*S	Sb	21 48 25.6	+1.3
SLGT	Liugui baz=203	2.33	222	*e*P	Pb	21 47 56.0	-1.2
SLGT	baz=203			*e*S	Sb	21 48 25.3	-0.8
MASBT	Mashibuluo baz=199	2.64	217	*e*P	Pn	21 47 59.8	+2.1
MASBT	baz=199			*e*S	Sb	21 48 32.8	-2.2
JMJ	Miyako jima 2 baz=105	2.69	88	*e*P	Pn	21 47 60.0	+1.6
JMJ	baz=105			*e*S	Sn	21 48 32.8	+1.8
PNG	Penghu baz=244	2.80	246	*e*S	Sn	21 48 34.0	+0.2
PHUB	P'eng-hu baz=243	2.81	245	*e*S	Sn	21 48 35.0	+1.0

JMA 10 21:57:48.5,24°.59N×123°.47E,h9km±3km,M2.0, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.35	137	P	Pg	21 57 55.4	0.0
IRIF				S	Sg	21 58 00.2	+0.2
YOJ	Yonaguni jima	0.44	253	P	Pg	21 57 57.1	+0.1
YOJ				S	Sg	21 58 02.8	0.0
JYNG	Yonagunijimaku	0.50	254	P	Pg	21 57 58.3	+0.1
JYNG				*e*S	Sg	21 58 04.9	+0.2
JKRS	Kuro-shima	0.60	125	P	Pg	21 58 00.3	+0.1
JKRS				S	Sg	21 58 08.9	+0.8
HATJ	Hateruma jima	0.61	150	P	Pg	21 58 00.2	-0.2
HATJ				*e*S	Sg	21 58 08.7	+0.3
JIJ	Ishigaki jima	0.65	110	P	Pg	21 58 00.9	-0.2
JIJ				S	Sg	21 58 09.6	-0.1
JISG	Ishigakijimahi	0.77	90	P	Pg	21 58 03.4	+0.1
JISG				S	Sb	21 58 14.1	-0.4
JTJ	Tarama	1.12	87	P	Pg	21 58 09.4	-0.7
JTJ				S	Sb	21 58 24.9	+0.1

TAP 10 21:58:35.5,24°.41N×121°.79E,h22km,ML1.6,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau baz=299	0.05	296	*i* P	Pb	21 58 39.9	+0.5
ENA	baz=299			*i* S	Sb	21 58 42.8	+0.7
TWC	Suao baz=18	0.21	15	*e*P	Pb	21 58 41.4	+0.2
TWC	baz=18			*e*S	Sb	21 58 45.1	0.0
NACB	Ninganchiao baz=217	0.29	217	*e*P	Pb	21 58 42.6	+0.4
NACB	baz=217			*e*S	Sb	21 58 47.5	+0.8
ENTT	Nioudou baz=319	0.31	319	P	Pb	21 58 43.4	+0.9
ENTT	baz=319			S	Sb	21 58 48.3	+1.1
NDT	Datong Townshi baz=307	0.32	308	P	Pb	21 58 43.6	+1.0
NDT	baz=307			S	Sb	21 58 48.7	+1.3
TWE	Neicheng baz=342	0.33	341	*e*P	Pb	21 58 43.4	+0.6
TWE	baz=342			*e*S	Sb	21 58 48.7	+0.9
EOS1	EOS1 baz=65	0.34	65	*e*S	Sb	21 58 49.3	+1.3
ETLH	Xiulin Townshi baz=234	0.34	235	P	Pb	21 58 43.5	+0.5
ETLH	baz=234			*e*S	Sb	21 58 49.3	+1.1
NNSB	Datong baz=273	0.37	273	*e*P	Pb	21 58 43.9	+0.4
NNSB	baz=273			*e*S	Sb	21 58 50.1	+1.2
NNSH	Datong baz=273	0.37	273	P	Pb	21 58 44.3	+0.8
NNSH	baz=273			*e*S	Sb	21 58 49.5	+0.6
TWD	Chiawan baz=207	0.37	208	*e*P	Pb	21 58 43.9	+0.5
TWD	baz=207			S	Sb	21 58 49.9	+1.2
SLBB	Yuanshan baz=338	0.37	338	*e*P	Pb	21 58 43.6	+0.1
SLBB	baz=338			*e*S	Sb	21 58 50.0	+1.0
NNS	Nan Shan baz=274	0.38	275	*e*P	Pb	21 58 44.5	+0.9
NNS	baz=274			*e*S	Sb	21 58 50.2	+1.0
NWLT	Wulai baz=324	0.45	325	*e*P	Pb	21 58 45.8	+0.9
NWLT	baz=324			*e*S	Sb	21 58 52.5	+1.3
YHNB	Yeheng baz=304	0.46	305	*e*P	Pn	21 58 46.1	-0.7
YHNB	baz=304			*e*S	Sb	21 58 52.5	+1.1
NSK	Sanguang baz=304	0.47	304	*e*P	Pn	21 58 46.6	-0.5
NSK	baz=304			*e*S	Sb	21 58 53.2	+1.4
WHF	Hehuan Shan baz=240	0.54	241	*e*P	Pn	21 58 48.2	-0.1
WHF	baz=240			*e*S	Sn	21 58 55.7	-1.3
TIPB	Shuangxi baz=3.0	0.56	3	*e*P	Pn	21 58 48.8	+0.5
TIPB	baz=3.0			*e*S	Sb	21 58 55.2	+0.7
TDCB	Techi baz=254	0.59	255	*e*P	Pn	21 58 49.1	+0.3
TDCB	baz=254			*e*S	Sn	21 58 56.7	-1.2
CHGB	Renai baz=238	0.66	238	*e*P	Pb	21 58 48.9	+0.3
CHGB	baz=238			*e*S	Sn	21 58 59.1	-0.4
OWD	Renai baz=231	0.72	231	*e*P	Pn	21 58 50.4	-0.1
DPDB	Guoxing baz=244	0.87	245	*e*S	Sn	21 59 04.1	-0.5
VWDT	VWDT baz=222	0.88	222	*e*P	Pn	21 58 54.0	+1.5
VWDT	baz=222			*e*S	Sn	21 59 04.5	-0.1

IDC 10 21:59:25.3±2.9,4°.47S×133°.32E,h0km,mb3.0/1, mb1 3.4/5,mb1mx3.2/26,mbtmp3.2/5,ML3.1/4,Error ellipse: s-maj=105.1km s-min=26.9km az=79.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong 0.3nm,0.3s,baz=146,slow=23,SNR=1.2	4.12	330	Pn	Pn	22 00 28.4	-1.2
SIJI	1.8nm,0.3s,baz=89,slow=13,SNR=4.3			Sn	Sn	22 01 09.3	-9.3
WRA	Warramunga Arr 0.1nm,0.3s,baz=356,slow=16,SNR=4.8	15.41	176	Pn	Pn	22 03 03.8	-0.3
WRA	0.0nm,0.3s,baz=322,slow=31,SNR=1.3			Sn	Sn	22 05 44.1	-12
FITZ	Fitzroy Crossi 0.3nm,0.3s,baz=48,slow=13,SNR=2.0	15.48	208	Pn	Pn	22 03 04.1	-1.1
FITZ	baz=211,slow=14,SNR=1.5			Sn	Sn	22 05 51.2	-6.3
ASAR	Alice Springs 0.0nm,0.3s,baz=5.3,slow=13,SNR=3.1	19.09	178	P	P	22 03 50.0	+0.3
MKAR	Makanchi Array 0.1nm,0.4s,baz=129,slow=6.6,SNR=1.5	68.00	325	P	P	22 10 26.9	+0.5

IDC 10 22:28:02.3±1.1,5°.26S×150°.12E,h0km,mb3.9/4, mb1 4.2/5,mb1mx3.8/40,mbtmp3.9/5,ML3.9/1,Error ellipse: s-maj=54.4km s-min=14.4km az=146.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076 40nm,0.3s,baz=184,slow=3.7,SNR=14	2.12	64	Pn	Pn	22 28 37.9	-1.1
KRVT	131nm,0.3s,baz=84,slow=4.4,SNR=8.4			Lg	Lg	22 29 11.3	
WRA	Warramunga Arr 1.7nm,0.6s,baz=53,slow=10,SNR=10	21.19	225	P	P	22 32 50.3	+0.8
ASAR	Alice Springs 1.9nm,0.7s,baz=50,slow=9.2,SNR=14	24.07	219	P	P	22 33 19.4	-0.2
ILAR	Eielson Array 1.0nm,0.7s,baz=246,slow=5.1,SNR=13	83.59	23	P	P	22 40 31.2	-1.0
YKA	Yellowknife Ar 0.2nm,0.5s,baz=260,slow=3.7,SNR=4.1	97.07	28	P	P	22 41 35.5	-0.5
TORD	Torodi Ar. Bea 1.1nm,0.7s,baz=86,slow=2.5,SNR=5.7	147.89	286	PKPbc	PKPbc	22 47 51.2	+0.6

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*BJI **10** 22:30:39.8±0.0,27°.41S×177°.31W,h108km,mB5.5/21, mb5.3/39*

*NEIC **10** 22:30:43.1±2.3,27°.78S±0°.08×177°.9W±0°.1,h122km±5km, mb4.7/94,Error ellipse: s-maj=15.5km s-min=10.4km az=114.0*

*IDC **10** 22:30:48.9±0.9,27°.43S×177°.95W,h156km±9km,mb4.3/19, mb1 4.5/21,mb1mx4.4/37,mbtmp4.8/21,Error ellipse: s-maj=13.6km s-min=12.3km az=110.0*

ISC 10 22:30:47.8±0.3,**27°.50S**±0°.06×**177°.98W**±0°.07,**h150km, n303,**σ1^s**40**/281,**mb4.7**/68,**19C-19D,Kermadec Islands**

Code	region Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.74	178	P	Pn	22 31 22.8	+2.8
	2µm,0.3s,baz=90,slow=9.3,SNR=50						
RAO				S	Sn	22 31 48.2	+3.5
	2µm,0.3s,baz=82,slow=22,SNR=13						
RAO				LR	LR	22 32 04.6	
	comp=Z,2µm,18.8s,baz=138,slow=42						
RAO	Raoul Island	1.74	178		Sn	22 31 22.6	-22
MSVF	Nonsavu	10.39	339		Pn	22 33 15.8	+2.8
MXZ	Matakaoa Point	10.51	196	Pn	Pn	22 33 07.2	-7.2
MXZ					Sn	22 35 01.3	-9.2
OUZ	Omahuta	10.54	221	Pn	Pn	22 33 11.2	-3.5
NIUE	Niue	11.18	43		Pn	22 33 18.5	-4.9
NIUE					Sn	22 35 10.3	-17
URZ	Urewera	11.49	200	P	Pn	22 33 20.7	-6.6
	2.5nm,0.3s,baz=267,slow=4.7,SNR=19						
URZ				S	Sn	22 35 24.5	-10
	9.8nm,0.3s,baz=265,slow=19,SNR=4.0						
URZ	Urewera	11.49	200	Pn	Pn	22 33 20.7	-6.6
URZ					Sn	22 35 23.6	-11
BKZ	Black Stump Fm	12.51	200	Pn	Pn	22 33 32.5	-8.1
HIZ	Hauiti	12.51	207	Pn	Pn	22 33 31.2	-9.3
BFZ	Birch Farm	13.98	198	Pn	Pn	22 33 52.6	-6.8
AFI	Afiamalu	14.71	24	P	Pn	22 34 08.5	-0.2
	15nm,0.3s,baz=70,slow=1.1,SNR=15						
AFI				S	Sn	22 36 27.5	-25
	9.1nm,0.3s,baz=41,slow=23,SNR=10						
AFI	Afiamalu	14.71	24	P	Pn	22 34 01.7	-7.0
AFI					Sn	22 36 29.1	-23
MSWZ	Moikau Station	14.95	200	Pn	Pn	22 34 03.6	-7.9
MSWZ				Sn	Sn	22 36 41.0	-16
SNZO	South Karori	15.03	202	Pn	Pn	22 34 05.6	-6.8
BHW	Baring Head	15.06	201	Pn	Pn	22 34 06.0	-6.8
BHW				S	Sn	22 36 42.8	-17
PLWZ	Palliser	15.09	200	Pn	Pn	22 34 04.5	-8.8
DZM	Mont Dzumac	15.14	288	*e*LR	LR	22 37 22.9	
	comp=Z,269nm,27.7s						
DZM	Mont Dzumac	15.14	288	Pn	Pn	22 34 09.9	-4.2
DZM				IAmb	IAmb	22 34 28.6	
	comp=Z,45nm,0.7s						
TUWZ	Tuamarina	15.40	203	Pn	Pn	22 34 10.0	-6.9
NNZ	Nelson	15.42	205	Pn	Pn	22 34 10.6	-6.6
CMWZ	Cape Campbell	15.59	202		Pn	22 34 13.8	-5.5
BSWZ	Blackbirch Sta	15.67	203		Pn	22 34 15.7	-4.7
THZ	Tophouse	16.07	205		Pn	22 34 19.5	-5.7
THZ				S	S	22 37 09.4	-15
KHZ	Kahutara	16.41	203	Pn	P	22 34 21.8	-7.6
LTZ	Lake Taylor	17.18	205	P	P	22 34 31.1	-6.9
RAR	Rarotonga	17.72	73	P	P	22 34 43.3	-0.7
	comp=Z,2.0nm,0.3s,baz=233,slow=6.4,SNR=7.9						
RAR	Rarotonga	17.72	73	P	P	22 34 41.8	-2.2
OXZ	Oxford	17.74	205	P	P	22 34 39.6	-4.4
OXZ				IAmb	IAmb	22 34 54.8	
	comp=Z,23nm,0.4s						
MQZ	McQueen’s Vall	17.85	203	P	P	22 34 39.5	-5.7
FOZ	Fox Glacier	18.80	209	P	P	22 34 51.1	-4.5
FUNA	Funafuti	19.06	351	P	P	22 34 56.0	-2.6
LBZ	Lake Benmore	19.35	206	P	P	22 34 59.4	-2.1
ODZ	Otahua Downs	19.73	204	P	P	22 35 01.8	-3.8
WKZ	Wanaka	20.18	208	P	P	22 35 08.2	-2.3
KNTN	Kanton	25.31	15	P	P	22 35 58.9	-1.6
EIDS	Eidsvold	27.76	267	P	P	22 36 21.2	-1.3
EIDS				IAmb	IAmb	22 36 35.5	
	comp=Z,20nm,1.3s						
PPT2	Papeete2	27.96	75	*e*S	S	22 40 58.9	+1.3
	comp=Z,80nm,27.8s						
PPT2				*e*LR	LR	22 43 02.9	
	comp=Z,132nm,28.5s						
CTA	Charters Tower	33.47	275	P	P	22 37 13.9	+1.1
	comp=Z,9.4nm,0.7s,baz=103,slow=10,SNR=11						
STKA	Stephens Creek	35.25	253	P	P	22 37 28.8	+0.8
	comp=Z,1.7nm,0.5s,baz=50,slow=14,SNR=3.4						
STKA				PcP	PcP	22 39 54.7	-0.8
	comp=Z,4.4nm,0.6s,baz=94,slow=4.2,SNR=5.2						
STKA	Stephens Creek	35.25	253	P	P	22 37 23.9	-4.1
COEN	Coen	38.58	282	P	P	22 37 58.2	+1.8
COEN				IAmb	IAmb	22 38 13.5	
	comp=Z,28nm,1.5s						
BBOO	Buckleboo	39.86	251	P	P	22 38 04.0	-2.7
BBOO				IAmb	IAmb	22 38 22.0	
	comp=Z,24nm,1.4s						
AS31	Alice Springs	43.36	264	P	P	22 38 32.6	-2.8
ASAR	Alice Springs	43.36	264	P	P	22 38 35.6	+0.2
	comp=Z,1.4nm,0.4s,baz=94,slow=7.2,SNR=16						
ASAR				PcP	PP	22 40 21.5	+2.3
	comp=Z,3.2nm,0.6s,baz=126,slow=4.0,SNR=8.3						
ASAR				ScP	ScP	22 43 57.3	-1.4
	comp=Z,1.8nm,0.9s,baz=135,slow=4.7,SNR=5.3						
ASAR	Alice Springs	43.36	264	P	P	22 38 31.4	-4.0
ASAR					ScP	22 43 57.0	-1.7
WB2	Warramunga Arr	44.08	269	P	P	22 38 40.1	-1.0
WB2				IAmb	IAmb	22 38 41.9	
	comp=Z,13nm,0.9s						
WRA	Warramunga Arr	44.09	269	P	P	22 38 41.1	-0.1
	comp=Z,8.4nm,0.8s,baz=111,slow=6.5,SNR=32						
WRA				PcP	PcP	22 40 24.1	+0.3
	comp=Z,6.4nm,0.7s,baz=105,slow=3.4,SNR=8.9						
WRA	Warramunga Arr	44.09	269	P	P	22 38 40.2	-1.0
WB0	Warramunga Arr	44.10	269	P	P	22 38 39.3	-2.0
WB0				IAmb	IAmb	22 38 41.9	
	comp=Z,13nm,0.8s						
FORT	Forrest	46.87	252	P	P	22 39 02.6	-0.4
FORT				IAmb	IAmb	22 39 02.7	
	comp=Z,16nm,0.8s						
VNDA	Vanda	50.97	186	P	P	22 39 35.8	+2.3
	comp=Z,2.7nm,1.0s,baz=21,slow=8.4,SNR=5.4						
QSPA	South Pole Qui	62.60	180	P	P	22 40 57.4	+1.6
	comp=Z,5.1nm,0.8s,baz=284,slow=1.1,SNR=16						
QSPA	South Pole Qui	62.60	180	P	P	22 40 57.1	+1.3
JHJ	Hachijo jima 2	72.42	324	P	P	22 41 57.4	-0.2
	comp=Z,84nm,0.3s,baz=241,slow=22,SNR=5.3						
MJAR	Matsushiro Arr	75.89	325	P	P	22 42 17.6	0.0
	comp=Z,60nm,0.7s,baz=150,slow=5.7,SNR=114						
MJAR	Matsushiro Arr	75.89	325	P	P	22 42 21.2	+3.5
MAJO	Matsushiro	75.89	325	P	P	22 42 17.7	0.0
MAT	Matsushiro	75.89	325	P	P	22 42 17.5	-0.2
JNU	Nakatsue	77.42	318	P	P	22 42 25.9	-0.4
	comp=Z,22nm,0.7s,baz=267,slow=0.8,SNR=8.3						
JNU	Nakatsue	77.42	318	P	P	22 42 25.8	-0.6
ASAJ	Asahikawa	79.89	332	P	P	22 42 40.8	+1.2
	comp=Z,35nm,0.8s,baz=213,slow=5.5,SNR=29						
SYO	Syowa Base	79.93	193	⇑*e*P	P	22 42 35.5	-4.1
SYO	Syowa Base	79.93	193	⇓*e*PcP	P	22 42 41.0	+1.4
VNA3	Neumayer Olymp	81.18	176	P	P	22 42 46.3	+0.1
VNA2	Neumayer--Watz	81.62	177	P	P	22 42 49.0	+0.4
	baz=182,slow=3.8						
VNA1	Neumayer--Stat	81.85	177	P	P	22 42 50.2	+0.5
KSRS	Korea Array	82.17	319	P	P	22 42 53.0	+1.3
	comp=Z,11nm,0.9s,baz=135,slow=5.6,SNR=32						
KSAR	Wonju Array Be	82.18	319	P	P	22 42 52.8	+0.9
PEA0B	Petropavlovsk-	83.02	346	P	P	22 42 56.1	+0.2
PETK	Petropavlovsk-	83.02	346	P	P	22 42 55.7	-0.1
	comp=Z,14nm,0.7s,baz=142,slow=7.8,SNR=15						
PETK	Petropavlovsk-	83.02	346	P	P	22 42 56.1	+0.3
PFO	Pinyon Flats O	84.24	47	P	P	22 43 01.7	-1.0
XPFO	Pion Flat	84.24	47	P	P	22 43 01.7	-1.0
NJ2	Nanjing	84.39	310	*e*P	P	22 43 04.6	+1.3
NJ2				pmax	pmax		
	comp=Z,26nm,0.8s						
CMB	Columbia Colle	84.60	42	P	P	22 43 04.2	-0.1
CMB				IAmb	IAmb	22 43 05.8	
	comp=Z,11nm,1.1s						
USRK	Ussuriysk Ar.	84.77	326	P	P	22 43 06.3	+1.4
	comp=Z,13nm,0.5s,baz=142,slow=4.2,SNR=34						
USRK	Ussuriysk Ar.	84.77	326	P	P	22 43 05.5	+0.7
ORV	Oroville	84.95	40	P	P	22 43 06.3	+0.3
WDC	Whiskeytown Da	85.06	39	P	P	22 43 06.8	+0.3
WDC				IAmb	IAmb	22 43 08.3	
	comp=Z,12nm,1.1s						
GSC	Goldstone, Bar	85.06	46	P	P	22 43 05.7	-1.0
GSC				IAmb	IAmb	22 43 08.6	
	comp=Z,12nm,1.3s						
YBH	Yreka Blue Hor	85.75	38	P	P	22 43 10.6	+0.6
	comp=Z,5.3nm,0.9s,baz=143,slow=5.0,SNR=6.9						
YBH	Yreka Blue Hor	85.75	38	P	P	22 43 10.2	+0.2
YBH				IAmb	IAmb	22 43 12.4	
	comp=Z,7.7nm,1.1s						
YERR	Yerington	85.90	42	P	P	22 43 09.7	-1.2
YERR				IAmb	IAmb	22 43 12.9	
	comp=Z,14nm,1.3s						
NVAR	Mina Array Bea	86.10	43	P	P	22 43 12.7	+0.7
	comp=Z,2.0nm,0.6s,baz=211,slow=8.4,SNR=7.3						
NVAR	Mina Array Bea	86.10	43	P	P	22 43 10.3	-1.7
NV11	Mina Array Sit	86.19	43	P	P	22 43 11.9	-0.5
MDJ	Mudanjiang	86.26	325	P	P	22 43 13.6	+1.3
MDJ				pmax	pmax		
	comp=Z,36nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,260nm,5.1s						
MDJ	Mudanjiang	86.26	325	P	P	22 43 11.9	-0.4
WHN	Wuhan	86.63	307	P	P	22 43 15.4	+1.0
Y14A	Wickenburg	86.72	49	IAmb	IAmb	22 43 16.9	
	comp=Z,11nm,1.4s						
W13A	Hualapai Mount	86.83	48	P	P	22 43 16.4	+0.8
W13A				IAmb	IAmb	22 43 17.7	
	comp=Z,8.9nm,1.4s						
SHPR	Sheep Range	86.85	46	P	P	22 43 16.2	+0.6
TUC	Tucson	87.29	51	P	P	22 43 19.2	+1.5
TUC				IAmb	IAmb	22 43 20.3	
	comp=Z,7.7nm,1.1s						
319A	Douglas	87.82	53	P	P	22 43 19.9	-0.4
319A				IAmb	IAmb	22 43 22.8	
	comp=Z,9.3nm,1.1s						
CN2	Changchun	87.86	323	*e*P	P	22 43 20.0	0.0
CN2				pmax	pmax		
	comp=Z,30nm,1.1s						
X16A	Lo Mia Camp, P	88.05	49	IAmb	IAmb	22 43 23.9	
	comp=Z,10nm,1.1s						
PINE	Pine Mountain	88.09	37	P	P	22 43 22.5	+1.1
KLR	Kul'dur	88.55	330	P	P	22 43 23.9	+0.8
	comp=Z,14nm,0.7s,baz=124,slow=3.5,SNR=63						
U15A	North Rim	88.66	47	IAmb	IAmb	22 43 26.5	
	comp=Z,14nm,1.4s						
WUAZ	Wupatki	88.73	48	P	P	22 43 25.6	+1.0
WUAZ				IAmb	IAmb	22 43 27.4	
	comp=Z,10.0nm,1.2s						
F04A	Amboy	88.76	35	P	P	22 43 24.3	+0.2
PSUT	Pine Spring	88.91	45	P	P	22 43 24.3	-1.1
I07A	Izee	89.07	38	IAmb	IAmb	22 43 27.7	
	comp=Z,9.9nm,1.2s						
X18A	Snowflake	89.13	50	P	P	22 43 27.4	+1.0
X18A				IAmb	IAmb	22 43 28.7	
	comp=Z,6.0nm,0.9s						
J08A	Circle Bar Ran	89.17	39	P	P	22 43 26.7	+0.4
J08A				IAmb	IAmb	22 43 32.5	
	comp=Z,7.5nm,0.9s						
G06A	Carlson Farm,	89.22	37	P	P	22 43 26.5	+0.1
G06A				IAmb	IAmb	22 43 33.2	
	comp=Z,12nm,1.1s						
121A	Cookes Peak, D	89.52	53	P	P	22 43 27.0	-1.3
W18A	Petrified Fore	89.61	50	IAmb	IAmb	22 43 31.4	
	comp=Z,8.6nm,1.1s						
LON	Longmire	89.62	35	P	P	22 43 28.1	-0.2
SLVN	Son La	89.75	294	P	P	22 43 29.3	-0.2
E07A	Sunnyside	90.50	36	P	P	22 43 31.5	-0.8
E07A				IAmb	IAmb	22 43 34.2	
	comp=Z,8.3nm,0.9s						
HAWA	Hanford	90.56	36	P	P	22 43 32.6	0.0
HAWA				IAmb	IAmb	22 43 34.2	
	comp=Z,7.7nm,0.9s						
MFID	Camas Ranch	90.70	40	IAmb	IAmb	22 43 34.9	
	comp=Z,5.5nm,0.9s						
MNTX	Cornudas Mount	90.78	54	P	P	22 43 34.1	+0.1
MNTX				IAmb	IAmb	22 43 36.2	
	comp=Z,5.1nm,1.1s						
TX31	Lajitas Ar. Si	90.81	57	P	P	22 43 33.1	-1.2
TX31				IAmb	IAmb	22 43 36.0	
	comp=Z,7.6nm,1.4s						
TX32	Lajitas Array	90.81	57	IAmb	IAmb	22 43 36.0	
	comp=Z,7.0nm,1.3s						
TXAR	Lajitas Array	90.81	57	P	P	22 43 34.6	+0.3
	comp=Z,2.4nm,1.1s,baz=205,slow=5.5,SNR=14						
TXAR	Lajitas Array	90.81	57	P	P	22 43 34.8	+0.5
BJI	Beijing	90.88	316	P	P	22 43 34.5	+0.3
BJI				pmax	pmax		
	comp=Z,26nm,0.7s						
MPU	Maple Canyon	91.17	45	P	P	22 43 35.0	-0.9
D08A	Wollman Farm,	91.31	36	P	P	22 43 35.7	-0.4
CTU	Camp Tracy	91.49	44	P	P	22 43 35.6	-1.7
HVU	Hansel Valley	91.50	43	P	P	22 43 37.2	-0.1
F10A	Beach Ranch, E	91.52	37	IAmb	IAmb	22 43 37.9	
	comp=Z,6.5nm,0.8s						
ANMO	Albuquerque	91.75	51	P	P	22 43 39.4	+0.7
ANMO				IAmb	IAmb	22 43 40.9	
	comp=Z,4.3nm,1.1s						
C09A	Chrisman Ranch	92.13	36	P	P	22 43 39.3	-0.5
C09A				IAmb	IAmb	22 43 40.5	
	comp=Z,3.5nm,0.8s						
XAN	Xi'an	92.38	307	P	P	22 43 42.3	+0.9
XAN				pmax	pmax		
	comp=Z,14nm,1.0s						
CMAR	Chiang Mai Arr	92.47	289	P	P	22 43 43.1	+1.1
	comp=Z,1.8nm,0.8s,baz=139,slow=3.8,SNR=13						
CMAR	Chiang Mai Arr	92.47	289	P	P	22 43 42.5	+0.4
KMI	Kunming	92.54	297	P	P	22 43 44.4	+1.8
KMI				pP	pP	22 44 10.9	-8.8
KMI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CHTO	Chiang Mai	92.63	290	P	P	22 43 44.5	+1.7
CHTO				IAmb	IAmb	22 43 45.2	
	comp=Z,4.5nm,0.8s						
AHID	Auburn Hatcher	93.09	43	P	P	22 43 44.5	-0.2
AHID				IAmb	IAmb	22 43 46.1	
	comp=Z,4.6nm,0.8s						
SEY	Seymchan	93.17	347	P	P	22 43 44.4	+0.1
	comp=Z,9.0nm,0.8s,baz=45,slow=2.5,SNR=15						
O20A	White River Ci	93.39	46	P	P	22 43 45.6	-0.5
O20A				IAmb	IAmb	22 43 48.3	
	comp=Z,3.3nm,0.8s						
FXWY	Fox Creek	93.63	42	IAmb	IAmb	22 43 49.4	
	comp=Z,3.4nm,1.0s						
BW06	Boulder Array	94.02	43	IAmb	IAmb	22 43 50.6	
	comp=Z,5.9nm,1.2s						
PD31	Pinedale Array	94.02	43	IAmb	IAmb	22 43 50.6	
	comp=Z,4.9nm,1.2s						
PDAR	Pinedale Array	94.02	43	P	P	22 43 48.8	-0.2
	comp=Z,3.2nm,1.0s,baz=205,slow=3.1,SNR=13						
PDAR	Pinedale Array	94.02	43	P	P	22 43 48.4	-0.6
YPP	Pitchstone Pla	94.13	42	P	P	22 43 47.6	-1.9
YHL	Hebgen Lake	94.24	41	P	P	22 43 49.2	-0.8
HHC	Hu-ho-hao-te	94.24	314	*e*P	P	22 43 50.6	+0.7
HHC				pmax	pmax		
	comp=Z,68nm,1.3s						
HHC				pmax	pmax		
	comp=Z,190nm,7.0s						
JCT	Junction City	94.28	58	P	P	22 43 49.3	-0.9
JCT				IAmb	IAmb	22 43 51.3	
	comp=Z,3.2nm,0.6s						
T25A	Trinidad	94.32	50	P	P	22 43 47.8	-2.7
T25A				IAmb	IAmb	22 43 51.5	
	comp=Z,3.1nm,1.1s						
YNR	Norris Junctio	94.45	41	P	P	22 43 49.8	-1.1
CD2	Chengdu	94.56	302	P	P	22 43 50.5	-1.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BCAR	Beaver Creek A	94.73	16	P	P	22 43 50.7	-0.8
ILAR	Eielson Array	95.11	13	P	P	22 43 52.1	-1.0
	comp=Z,1.1nm,0.7s,baz=226,slow=5.5,SNR=14						
LZH	Lanzhou	97.01	307	*e*P	P	22 44 03.9	+1.2
LZH				pP	pP	22 44 32.9	-7.0
LZH				sP	pwP	22 44 44.6	+1.2
LZH				pmax	pmax		
	comp=Z,12nm,1.3s						
SONM	Songino Array	101.01	318	P	Pdif	22 44 19.6	-0.6
	comp=Z,0.8nm,0.8s,baz=134,slow=4.2,SNR=5.3						
GTA	Gaotai	101.37	308	*e*P	Pdif	22 44 23.0	+1.0
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
WMQ	Urumqi	111.44	309	*e*PKP	PKiKP	22 49 04.0	-0.1
WMQ				LR	LR		
	comp=Z,220nm,28.5s						
WMQ				LR	LR		
	comp=Z,160nm,29.2s						
WMQ				LR	LR		
	comp=Z,28nm,29.2s						
ZALV	Zalesovo Beam	115.87	319	PKP	PKPdf	22 49 10.8	-1.3
	comp=Z,1.3nm,0.5s,baz=180,slow=1.9,SNR=5.9						
MKAR	Makanchi Array	115.91	311	PKP	PKPdf	22 49 11.3	-1.2
	comp=Z,2.0nm,0.7s,baz=190,slow=0.6,SNR=25						
MKAR	Makanchi Array	115.91	311		PKPdf	22 49 11.0	-1.4
MAKZ	Makanchi	116.12	311		PKPdf	22 49 11.7	-1.1
KSH	Kashi	118.76	302	PKP	PKPdf	22 49 19.4	+1.1
KSH				PP	PP	22 50 45.1	+6.0
KSH				PKS	PKSdf	22 52 56.5	+1.4
KSH				SKKS		22 57 23.0	
KSH				AMB	AMB		
	comp=Z,310nm,6.9s						
KSH				LR	LR		
	comp=Z,170nm,10.7s						
KSH				LR	LR		
	comp=Z,140nm,12.6s						
KSH				LR	LR		
	comp=Z,200nm,10.0s						
KURK	Kurchatov	119.05	315		PKPdf	22 49 17.3	-1.0
BOSA	Boshof	119.92	204	PKP	PKPdf	22 49 20.9	-0.1
	comp=Z,1.1nm,0.5s,baz=222,slow=6.5,SNR=1.5						
AAK	Ala-Archa	120.49	305		PKPdf	22 49 21.1	-0.5
KBL	Kabul	123.06	295		PKPdf	22 49 27.1	+0.2
KKAR	Karatay Array	123.46	305		PKPdf	22 49 25.5	-1.6
SCHQ	Schefferville	124.06	41	PKP	PKPdf	22 49 26.4	-1.4
	comp=Z,1.0nm,0.7s,baz=240,slow=11,SNR=3.8						
BRVK	Borovoye	124.39	317		PKPdf	22 49 27.9	-0.6
SFJD	Kangerlussuaq	129.36	24	*i* P	PKPdf	22 49 37.2	-0.4
DAG	Danmarks Havn	129.67	6	*i* P	PKPdf	22 49 36.3	-1.6
SUMG	Summit	129.91	15	*i* P	PKPdf	22 49 39.9	+0.9
ARU	Arti	130.85	322		PKPdf	22 49 39.8	-1.0
ABKAR	Akbulak array	131.01	313		PKPdf	22 49 40.9	-0.3
UOSS	Minazif	131.65	280		PKPdf	22 49 43.0	-0.2
GEYT	Alibeck	132.30	297	PKP	PKPdf	22 49 44.2	0.0
	comp=Z,4.6nm,0.7s,baz=238,slow=2.8,SNR=12						
GEYT	Alibeck	132.30	297		PKPdf	22 49 45.3	+1.1
ARCES	ARCESS Array B	135.77	348	PKhKP	PKPpre	22 49 40.8	
	comp=Z,1.3nm,0.5s,baz=29,slow=2.8,SNR=5.2						
FINES	FINESS Array B	142.43	341	PKhKP	PKPpre	22 49 55.1	
	comp=Z,3.0nm,0.3s,baz=45,slow=3.2,SNR=44						
FINES	FINESS Array B	142.43	341		PKPpre	22 49 57.6	
KBZ	Khabaz	143.45	307	PKhKP	PKPbc	22 50 01.2	-0.8
	comp=Z,6.5nm,0.8s,baz=73,slow=1.5,SNR=14						
AKH	Akhalkalaki	143.45	303	⇑P	PKPab	22 50 02.7	+1.5
KIV	Kislovodsk	143.55	308		PKPab	22 50 02.2	+0.7
VSU	Vasula	144.58	338	*e*P	PKPab	22 50 04.4	-0.4
BATM	Batumi	144.75	304	⇑P	PKPab	22 50 06.5	+0.5
BCA	Borcka	144.83	304	⇓P	PKPab	22 50 06.6	+0.2
DOMB	Dombas	145.15	354	*e*PKP	PKPbc	22 50 05.8	-0.9
AKN	Aaknes	145.17	356	*e*PKP	PKPbc	22 50 06.2	-0.5
NC303	NORSAR Array S	145.70	352	*e*PKP	PKPdf	22 50 07.4	-0.3
FOO	Floro	145.85	357	*e*PKPab	PKPdf	22 50 06.5	-1.3
NB2	NORSAR Subarra	145.90	352	PKP	PKPdf	22 50 07.5	-0.6
	comp=Z,6.4nm,0.8s,baz=17,slow=2.6						
NOA	NORSAR Array B	145.90	352	PKPbc	PKPdf	22 50 08.0	-0.1
	comp=Z,5.6nm,0.6s,baz=15,slow=2.9,SNR=30						
NAO01	NORSAR Array S	146.13	352		PKPdf	22 50 08.3	-0.1
HYA	Hoyanger	146.22	356	*e*PKP	PKPbc	22 50 10.6	+0.8
SKAR	Skarslia	146.56	354	*e*PKPab	PKPdf	22 50 10.3	+1.1
SLIT	Slitere, Latvi	146.67	340	*e*P	PKPdf	22 50 09.9	+0.5
IZAR	Zarasai	146.81	335	*e*P	PKPdf	22 50 11.7	+2.0
ASK	Askoy	146.96	357	*e*PKPab	PKPdf	22 50 11.7	+2.0
ISAL	Salakas	146.99	335	*e*P	PKPbc	22 50 12.3	0.0
OSL	Oslo	147.03	352	*e*PKPab	PKPdf	22 50 11.7	+1.8
BER	Bergen	147.05	357	*e*PKPab	PKPdf	22 50 11.3	+1.3
KONO	Kongsberg	147.44	353	*e*PKPab	PKPdf	22 50 12.8	+2.2
ODD1	Odda	147.45	356	*e*PKPab	PKPdf	22 50 13.0	+2.3
PABE	Paberze	147.83	336	*e*P	PKPbc	22 50 14.3	-0.2
BLS5	Blasjo	147.94	356	*e*PKPab	PKPbc	22 50 14.6	-0.2
PBUR	Paburge	148.11	339	*e*P	PKPdf	22 50 14.5	+2.7
KMY	Karmoy	148.22	357	*e*PKP	PKPdf	22 50 14.3	+2.4
STAV	Stavanger	148.48	356	*e*PKPab	PKPbc	22 50 16.9	+0.8
HOMB	Homborsund	148.91	353	*e*PKP	PKPbc	22 50 17.2	0.0
SNART	Snartemo	148.97	355	*e*PKP	PKPbc	22 50 17.2	-0.2
AKASG	Malin Array Be	148.97	326	PKPbc	PKPbc	22 50 16.9	-0.7
	comp=Z,27nm,0.5s,baz=42,slow=3.8,SNR=137						
SUW	Suwalki	149.29	335	*e*PKP	PKPbc	22 50 18.1	-0.2
KAC	Achnashellach	149.57	8	⇓*e*P	PKPbc	22 50 18.5	-0.4
KPL	Plockton	149.69	8	⇓*e*P	PKPbc	22 50 18.2	-0.9
MCD	Coleburn Disti	149.71	6	⇓*e*P	PKPbc	22 50 18.3	-0.9
MDO	Dochfour	149.74	7	*e*P	PKPbc	22 50 18.7	-0.6
DRUM	Mains of Drumt	150.43	5	*e*P	PKPbc	22 50 20.1	-0.8
MUD	Monsted U'grnd	150.62	352	*i* P	PKPbc	22 50 20.7	-0.7
ILGA	Ilgaz	150.71	306		PKPbc	22 50 22.6	+0.1
EDU	Dundee	150.75	6	*e*P	PKPbc	22 50 20.8	-0.9
COP	Copenhagen	150.85	348	*i* P	PKPbc	22 50 22.5	+0.5
BSD	Bornholm Skovb	150.86	345	*i* P	PKPbc	22 50 21.3	-0.7
SORM	Soroca	150.97	322	⇓P	PKPbc	22 50 22.1	-0.4
EAB	Aberfoyle	150.97	7	⇓*e*P	PKPbc	22 50 21.6	-0.6
BRTR	Keskin Array B	151.14	303	PKPbc	PKPbc	22 50 22.9	-0.6
	comp=Z,9.1nm,0.6s,baz=133,slow=4.1,SNR=57						
BRTR	Keskin Array B	151.14	303		PKPbc	22 50 22.7	-0.7
MILM	Milestii Mici	151.40	320	⇓P	PKPbc	22 50 22.8	-0.8
ESY	Stoneypath	151.41	5	⇓*e*P	PKPbc	22 50 22.5	-0.8
EBL	Broad Law	151.51	6	⇓*e*P	PKPbc	22 50 22.8	-0.8
ANTO	Ankara	151.73	304		PKPbc	22 50 24.8	+0.1
BEL	Belsk	151.90	335	*e*PKP	PKPbc	22 50 25.0	+0.5
GKP	Gorka Klasztor	151.90	340	*e*PKP	PKPbc	22 50 24.7	+0.3
ESK	Eskdalemuir	151.95	6	⇓*e*P	PKPbc	22 50 23.4	-1.1
TLCR		152.31	317	⇓P	PKPbc	22 50 25.9	+0.2
EDMD	Edmundbyers	152.54	5	⇓*e*P	PKPbc	22 50 25.0	-0.9
MDUB	Mudurnu	152.71	306	PKPbc	PKPbc	22 50 27.3	+0.4
KWP	Kalwaria Pacla	152.79	330	*e*PKP	PKPab	22 50 38.2	+0.1
KWP	Kalwaria Pacla	152.79	330		PKPbc	22 50 25.7	-0.9
KWP				PKPab	PKPab	22 50 38.5	+0.4
IOMK	Kirk Michael	152.83	8	*e*P	PKPbc	22 50 25.2	-1.3
TESR	Tescani	152.86	321	⇓P	PKPab	22 50 37.5	-1.1
BURAR	Bucovina Array	152.96	324	⇑P	PKPdf	22 50 19.7	-0.1
BURAR	Bucovina Array	152.96	324		PKPbc	22 50 27.3	+0.1
BURAR				PKPab	PKPab	22 50 40.6	+1.5
VRI	Vrincioaia	153.19	320	⇑P	PKPab	22 50 41.5	+1.5
KOLS	Kolonicke sedl	153.49	329	*e*PKP	PKPbc	22 50 29.0	+0.8
KOLS				*e*		22 50 40.7	
RUE	Ruedersdorf	153.55	344	*e*P	PKPbc	22 50 27.5	-0.6
OJC	Ojcow	153.56	334	*e*PKP	PKPbc	22 50 28.3	0.0
MLR	Muntele Rosu	153.85	320	⇓P	PKPab	22 50 43.0	+0.1
DOPR	Dopca	153.88	321	⇑P	PKPbc	22 50 29.8	+0.7
TRPA	Tarpa	153.94	328	⇓P	PKPbc	22 50 29.2	+0.1
NIE	Niedzica	153.99	332	*e*PKP	PKiKP	22 50 35.4	+6.1
VOIR		154.39	320	⇑P	PKPbc	22 50 30.4	+0.1
OKC	Ostrava-Krasne	154.50	335	*e*PKPAB	PKPab	22 50 45.4	+0.1
LANS	Liptovska Anna	154.54	333	*e*PKP	PKPbc	22 50 31.1	+0.6
LANS				*e*		22 50 45.9	
OSTC	Ostas	154.56	339	⇑*e*PKP	PKPbc	22 50 30.8	+0.4
OSTC				*e*PKPAB	PKPab	22 50 47.2	+1.6
ARR	Arges	154.67	321	⇑P	PKPbc	22 50 31.9	+1.0
DPC	Dobruska-Polom	154.71	338	⇑*e*PKP	PKPbc	22 50 31.3	+0.5
DPC				*e*PKPAB	PKPab	22 50 46.7	+0.4
ELL	Elmali	154.72	298	PKPdf	PKPdf	22 50 20.8	-1.9
MORC	Moravsky Berou	154.77	336	⇑P	PKPab	22 50 45.9	-0.7
MORC	Moravsky Berou	154.77	336	*e*PKP	PKPab	22 50 46.7	+0.2
DRGR		154.78	325	⇓P	PKPbc	22 50 32.0	+0.9
KRLC	Kraliky	154.79	337	⇑*e*PKP	PKPbc	22 50 30.7	-0.3
KRLC				*e*PKPAB	PKPab	22 50 46.8	+0.2
CLL	Collm	154.81	344	*e*PKPdf	PKPdf	22 50 22.0	-0.1
CLL				*e*PKPbc	PKiKP	22 50 32.0	+1.1
	comp=Z,7.0nm,0.8s						
CLL				⇑*i*PKPab	PKPab	22 50 47.1	+0.5
	comp=Z,7.0nm,0.7s						
CLL	Collm	154.81	344		PKPbc	22 50 31.4	+0.5
BRG	Berggiesshubel	154.96	342	*e*PKP	PKPbc	22 50 31.2	0.0
	comp=Z,3.6nm,0.8s						
HUMR	Humele	154.96	319	⇓P	PKPab	22 50 40.8	-6.7
VYHS	Vyhne	155.31	333	*e*PKP	PKPab	22 50 49.1	+0.2
JAVC	Velka Javorina	155.48	335	*e*PKP	PKPab	22 50 50.8	+1.2
VRAC	Vranov	155.50	337	⇑P	PKPab	22 50 50.1	+0.4
VRAC	Vranov	155.50	337	*e*PKP	PKPab	22 50 50.0	+0.4
GOPC	GO Pecny, Ondr	155.57	340	*e*PKPAB	PKPab	22 50 50.2	+0.3
PRU	Pruhonice	155.58	340	*e*PKPAB	PKPab	22 50 49.9	0.0
KRUC	Moravsky	155.78	337	*e*PKP	PKPab	22 50 50.9	+0.1
PLVB	Pleven	155.82	317	⇓P	PKPab	22 50 52.3	+1.1
SMOL	Smolenice	155.85	334	*e*PKP	PKPab	22 50 52.0	+0.8
NKC	Novy Kostel	155.94	343	*e*PKPAB	PKPab	22 50 51.1	-0.4
MODS	Modra-Piesok	156.03	334	*e*PKP	PKPab	22 50 52.3	+0.4
HERR	Herculane	156.20	322	⇑P	PKPab	22 50 44.7	-8.1
KHC	Kasperske Hory	156.63	341	⇑*e*PKP	PKPab	22 50 41.3	-13
KHC				*e*PKPAB	PKPab	22 50 54.6	+0.1
KHC	Kasperske Hory	156.63	341	PKPdf	PKPdf	22 50 23.9	-0.8
KHC					PKPab	22 50 54.2	-0.3
MDVR	Moldovita	156.65	323	⇑P	PKPab	22 50 45.1	-10
GERES	GERESS Array B	156.85	340	PKP	PKPdf	22 50 25.5	+0.4
	comp=Z,0.5nm,0.8s,baz=148,slow=18,SNR=3.6						
GERES				PKPab	PKPab	22 50 55.4	-0.2
	comp=Z,1.7nm,0.6s,baz=32,slow=3.8,SNR=9.9						
GERES	GERESS Array B	156.85	340		PKPdf	22 50 23.1	-1.9
GERES					PKPab	22 50 54.7	-0.9
CONA	Conrad Observa	156.93	336	*e*pPKPdf	PKPab	22 50 56.5	+0.6
	comp=Z,10nm,0.6s,SNR=5.1						
VTS	Vitosha	157.09	317	⇑P	PKPab	22 50 58.2	+1.2
VTS	Vitosha	157.09	317	PKPdf	PKPdf	22 50 21.5	-4.1
VTS				PKPab	PKPab	22 50 57.9	+1.0
MOA	Molln	157.55	338	*e*PKPab	PKPab	22 50 59.1	+0.5
	comp=Z,9.4nm,1.9s						

ARSA	Arzberg	157.62	335	*e*PKPab	PKPab	22 50 58.5	-0.3
	comp=Z,4.2nm,0.6s						
DBIC	Dimbokro	158.27	161	PKP	PKPdf	22 50 27.3	-0.4
	comp=Z,3.5nm,0.9s,baz=126,slow=1.7,SNR=3.6						
SOKA	Soboth	158.28	335	*e*PKPab	PKPab	22 51 01.6	-0.2
	comp=Z,9.7nm,1.1s						
KBA	Koelnbreinsper	158.53	339	*e*PKPab	PKPab	22 51 04.0	+1.0
	comp=Z,3.9nm,0.5s,SNR=5.7						
OBKA	Obir	158.60	336	*e*PKPab	PKPab	22 51 02.9	-0.3
	comp=Z,7.4nm,0.8s						
MYKA	Terra Mystica	158.82	337	*e*PKPab	PKPab	22 51 03.3	-0.8
	comp=Z,10nm,0.6s						
WATA	Walderalm	158.83	342	*i* PKPab	PKPab	22 51 04.1	-0.1
	comp=Z,4.5nm,0.9s						
WTTA	Wattenberg	158.88	342	*i* PKPab	PKPab	22 51 04.6	+0.1
	comp=Z,5.9nm,0.5s						
RETA	Reutte	158.91	343	*e*PKPab	PKPab	22 51 04.2	-0.2
	comp=Z,4.1nm,0.7s						
MOTA	Moosalm	158.95	343	*e*PKPab	PKPab	22 51 04.2	-0.6
	comp=Z,1.9nm,0.5s						
SQTA	Sankt Quirin	159.04	342	*e*PKPab	PKPab	22 51 05.1	0.0
	comp=Z,3.6nm,0.7s						
ABTA	Abfaltersbach	159.09	339	*e*PKPab	PKPab	22 51 05.2	-0.1
	comp=Z,4.3nm,0.7s						
DAVA	Damuels	159.31	345	*i* PKPab	PKPab	22 51 05.8	-0.5
	comp=Z,7.5nm,0.7s						
FETA	Feichten	159.35	343	*e*PKPab	PKPab	22 51 06.4	-0.1
	comp=Z,2.8nm,0.7s						
TIP	Timpagrande	163.08	317	⇑P	PKPab	22 51 23.9	+0.9
TIP	Timpagrande	163.08	317	PKPdf	PKPdf	22 50 29.1	-3.2
TIP					PKPab	22 51 23.9	+0.9
TORD	Torodi Ar. Bea	165.71	179	PKP	PKPdf	22 50 34.2	-1.0
	comp=Z,1.5nm,0.8s,baz=127,slow=0.4,SNR=5.2						
TORD				PKPab	PKPab	22 51 34.9	0.0
	comp=Z,1.1nm,0.6s,baz=164,slow=3.4,SNR=5.7						
TORD	Torodi Ar. Bea	165.71	179	PKPab	PKPab	22 51 34.4	-0.5
ESDC	Sonseca Array	166.88	21	PKPab	PKPab	22 51 39.3	-0.3
	comp=Z,0.5nm,0.5s,baz=323,slow=3.8,SNR=7.3						
ESDC	Sonseca Array	166.88	21	PKPdf	PKPdf	22 50 33.9	-1.7
ESDC					PKPab	22 51 37.9	-1.7
KEST	Kesra	169.70	325	PKPab	PKPab	22 51 52.9	+0.6
	comp=Z,2.1nm,0.7s,baz=322,slow=7.7,SNR=5.1						

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*IDC **10** 22:35:38.0±4.3, 7°.80S×123°.12E, h123^{km}±41^{km}, mb2.9/1, mb1 3.6/4, mb1mx3.3/41, mbtmp3.9/4, Error ellipse: s-maj=100.2km s-min=17.4km az=60.0*

*DJA **10** 22:35:45.5±0.5, 8°S±5°×12°3E±°, h217^{km}±8^{km}, M3.8/8, mB4.8/2, mb4.3/2, MLv3.6/8, Mw(mB)4.0/2*

ISC 10 22:35:45.5±1.1, **8°.09S**±0°.08×**123°.3E**±0°.1, **h200**^{km}, **n10**, σ**3**^{s}.**66**/13, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	Maumere	1.17	243	P	Pn	22 36 18.0	+1.5
EDFI	Ende, Flores	1.71	247	P	Pn	22 36 22.8	+1.5
SOEI	Soe	1.91	150	P	Pn	22 36 25.0	+1.7
BBSI	Bau Bau	2.69	345	P	Pn	22 36 32.6	+1.0
WBSI	Waikabubak, Su	4.15	248	P	Pn	22 36 50.0	+0.8
PLAI	Plampang	5.50	262	P	Pn	22 37 06.7	+0.3
	0.2nm1μm46nm,0.7s						
FITZ	Fitzroy Crossi	10.21	167	P	Pn	22 38 07.2	-0.2
	0.7nm,0.3s,baz=359,slow=12,SNR=11						
FITZ				S	Sn	22 39 58.0	-3.5
	1.8nm,0.3s,baz=129,slow=8.4,SNR=18						
WRA	Warramunga Arr	15.91	139	P	Pn	22 39 19.4	+0.5
	0.6nm,0.3s,baz=316,slow=12,SNR=10						
WRA				S	S	22 42 11.6	-3.9
	0.5nm,0.3s,baz=270,slow=19,SNR=4.7						
ASAR	Alice Springs	18.53	148	P	Pn	22 39 49.1	-0.8
	0.5nm,0.3s,baz=329,slow=12,SNR=16						
ASAR				S	S	22 43 17.8	+10
	0.1nm,0.3s,baz=323,slow=22,SNR=5.3						
MKAR	Makanchi Array	65.68	330	P	P	22 46 06.8	-1.7
	0.2nm,0.6s,baz=133,slow=7.0,SNR=2.1						

ROM 10 22:50:06.6±0.1, **42°.582N**±0°.007×**12°.708E**±0°.010, **h9**^{km}, **ML1.3**/3, **Error ellipse: s-maj=1.0km s-min=0.5km az=41.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARRO	Arrone	0.04	93	P	Pg	22 50 08.3	0.0
ARRO				S	Sg	22 50 10.2	+0.7
ARRO				AML	AML		
	comp=N,2785μm,0.2s						
ARRO				AML	AML		
	comp=E,2030μm,0.2s						
MOMA	Monte Martano	0.24	336	P	Pg	22 50 12.1	+0.6
MOMA				S	Sg	22 50 16.4	+1.5
MOMA				AML	AML		
	comp=N,121μm,1.3s						
MOMA				AML	AML		
	comp=E,103μm,0.6s						
LNSS	Leonessa	0.25	85	P	Pg	22 50 12.3	+0.7
LNSS				S	Sg	22 50 16.7	+1.7
LNSS				AML	AML		
	comp=E,113μm,0.3s						
LNSS				AML	AML		
	comp=N,140μm,1.4s						
SRES	S.Oreste - Sor	0.37	203	P	Pg	22 50 14.1	+0.1
NRCA	Norcia	0.39	50	P	Pg	22 50 14.6	+0.3
NRCA				S	Sb	22 50 21.0	-1.0
FIAM	Fiamignano	0.44	136	P	Pg	22 50 15.8	+0.7
FIAM				S	Sb	22 50 23.1	-0.2
CESI	CESI - Serrava	0.45	19	P	Pg	22 50 15.8	+0.4
CESI				S	Sb	22 50 23.3	-0.3
ASSB	Assisi San Ben	0.46	356	P	Pg	22 50 16.1	+0.5
MGAB	Montegabbione	0.55	307	P	Pb	22 50 18.4	-0.1

ATH 10 22:51:54.5, 36°.80N×21°.57E, h26^{km}±1^{km}, **ML1.8**/3, **Error ellipse: s-maj=3.5km s-min=1.5km az=54.0, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.17	57	P	Pb	22 51 59.8	-0.2
PYL				S	Sb	22 52 03.9	+0.2
PYL				AML	AML	22 52 04.7	
	comp=E,667μm,0.1s						
PYL				AML	AML	22 52 08.1	
	comp=N,552μm,0.3s						
ITM	Ithomi	0.48	37	P	Pb	22 52 04.5	+0.1
ITM				S	Sb	22 52 11.1	0.0
ITM				AML	AML	22 52 17.2	
	comp=N,304μm,0.3s						
ITM				AML	AML	22 52 19.2	
	comp=E,255μm,0.5s						
DYR	Agios Nikonas	0.62	93	P	Pb	22 52 06.8	0.0
DYR				S	Sn	22 52 16.7	0.0
AMT	Artemida-Makis	0.74	9	P	Pn	22 52 09.3	0.0
AMT				AML	AML	22 52 28.9	
	comp=E,174μm,0.3s						
AMT				AML	AML	22 52 32.0	
	comp=N,229μm,0.3s						
VLX	Vlachokerasia	0.86	49	P	Pn	22 52 11.1	0.0
VLX				S	Sn	22 52 24.1	+1.1
VLI	Veliai	1.10	94	P	Pb	22 52 16.1	+1.1
DRO	Drossia	1.15	6	P	Pb	22 52 17.0	+1.2
RLS	Riolos of Patr	1.26	356	P	Pb	22 52 18.8	+1.2
KLV	Kalavryta, Ach	1.32	20	P	Pb	22 52 19.4	+0.6
KRND	KRANIDI	1.39	65	P	Pb	22 52 20.0	+0.1
DID	Didima	1.51	62	P	Pb	22 52 21.4	-0.5
LKD2	Lefkada island	2.11	340	P	Pb	22 52 31.2	-0.9

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*TIR **10** 22:52:12.4, 41°.49N×19°.42E, h19^{km}, Md2.6/4*

*SKO **10** 22:52:14.2, 41°.44N×19°.43E, h14^{km}*

*BEO **10** 22:52:16.1±0.4, 41°.57N×19°.69E, h5^{km}±3^{km}, ML2.1/7*

ISC 10 22:52:12.8±1.5, **41°.44N**±0°.05×**19°.45E**±0°.03, **h8**^{km}±10^{km}, **n31**, σ**1**^{s}.**04**/43, **1C, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.33	106	*e*Pg	Pb	22 52 20.1	-0.8
TIR				*e*Sg	Sb	22 52 25.5	-0.8
TIR	Tirane	0.33	106	*i* PG	Pb	22 52 20.3	-0.6
TIR				*i* SG	Sb	22 52 25.9	-0.4
TIR	Tirane	0.33	106	⇑P	Pb	22 52 20.1	-0.8
PUK	Puka	0.69	29	*i* PG	Pg	22 52 25.8	-0.3
PUK				*i* SG	Sg	22 52 35.9	+0.9
PHP	Peshkopia	0.78	71	*i* PG	Pg	22 52 27.1	-0.8
PHP				*i* SG	Sb	22 52 39.3	-0.2
PDG	Podgorica	1.00	352	*e*Pg	Pn	22 52 33.6	+0.4
PDG				*e*Sg	Sb	22 52 46.5	+0.7
PDG	Podgorica	1.00	352	*e*Pn	Pn	22 52 32.7	-0.5
BCI	Bajram Curri	1.03	26	*i* PG	Pg	22 52 31.4	-1.2
BCI				*i* SG	Sg	22 52 46.7	+0.6
OHR	Ohrid	1.07	107	*e*Pg	Pb	22 52 33.3	-0.3
OHR				*i* Sg	Sn	22 52 49.7	+0.4
OHR				*e*Lg	Lg	22 52 51.1	
	comp=N,37nm,0.8s						
OHR				*e*Lg	Lg	22 52 52.2	
	comp=E,30nm,0.8s						
HCY	Herceg Novi	1.23	325	*e*Pn	Pg	22 52 36.6	+0.1
TREB	Trebinje	1.52	328	*e*Pn	Pg	22 52 43.6	+1.7
TREB				*e*Sg	Sg	22 53 02.5	+0.9
TREB	Trebinje	1.52	328	*e*Pn	Pb	22 52 41.1	-0.1
DBRK	Dubrovnik	1.57	322	*e*Pg	Pg	22 52 43.1	+0.3
DBRK				Sg	Sn	22 53 01.0	-0.4
SKO	Skopje	1.58	70	*e*Pg	Pb	22 52 42.5	+0.1
SJES	Sjenica	1.86	12	*e*Pn	Pb	22 52 46.7	-0.5
SJES				*e*Sg	Sb	22 53 10.8	+0.1
STON	Ston	1.93	318	*e*Pn	Pb	22 52 46.8	-1.5
STON				Sn	Sb	22 53 12.1	-0.5
STON	Ston	1.93	318	*e*Pn	Pn	22 52 46.5	+0.5
STIP	Stip	2.07	82	*e*Pn	Pb	22 52 50.8	+0.1
SELS	Selova	2.17	34	*e*Sg	Pn	22 52 50.1	+0.8
SELS	Selova	2.17	34	*e*Pn	Sn	22 53 16.7	+0.4
RUDO	Rudo	2.18	358	*e*Pn	Pb	22 52 51.4	-1.1
IVAS	Ivanjica	2.20	13	*e*Pn	Pn	22 52 50.9	+1.2
BARS	Barje	2.23	51	*e*Pn	Pn	22 52 50.6	+0.4
BBLS	Lazići	2.42	359	*e*Pn	Pb	22 52 54.7	-2.1
BBLS	Lazići	2.42	359	*e*Pn	Pb	22 52 57.9	+1.1
HAPS	Han Pijesak,Bl	2.67	352	*e*Pn	Pb	22 52 59.2	-1.8
HAPS				*e*Sn	Sn	22 53 29.1	+0.2
HAPS	Han Pijesak,Bl	2.67	352	*e*Pn	Pn	22 52 57.3	+1.0
RICI	Ricice	2.67	321	Sn	Sb	22 53 31.1	-2.9
DIVS	Divibare	2.69	8	*e*Pn	Pb	22 52 59.0	-2.2
DIVS	Divibare	2.69	8	*e*Pn	Pb	22 53 00.6	-0.6
KIJV	Kijevo	3.41	320	Sn	Sn	22 53 47.9	+1.0

ATH 10 22:52:37.6, 38°.42N×20°.47E, h8^{km}±3^{km}, **ML0.9**/2, **Error ellipse: s-maj=3.4km s-min=0.7km az=108.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KONA	Konidatara, Ke	0.08	87	P	Pg	22 52 39.7	-0.1
KONA				S	Sg	22 52 41.0	-0.3
KONA				AML	AML	22 52 41.9	
	comp=E,278μm,0.1s						
KONA				AML	AML	22 52 41.9	
	comp=N,460μm,0.1s						
FSK	Fiskardo	0.09	63	P	Pg	22 52 39.8	0.0
FSK				S	Sg	22 52 41.4	0.0
FSK				AML	AML	22 52 41.7	
	comp=N,116μm,0.2s						
FSK				AML	AML	22 52 42.0	
	comp=E,227μm,0.2s						
KEF1	Kardakata, Kep	0.14	178	P	Pg	22 52 40.6	-0.1
KEF1				S	Sg	22 52 43.2	+0.4
KEF4	Livadi, Kephal	0.17	191	P	Pg	22 52 41.0	0.0
KEF4				S	Sg	22 52 44.0	+0.6
KEF3	Kipouria, Keph	0.24	203	P	Pg	22 52 42.3	0.0
KEF3				S	Sg	22 52 46.4	+0.8
ARGA	Argostoli. Kep	0.24	177	P	Pg	22 52 42.3	-0.2
ARGA				S	Sg	22 52 46.1	+0.4
EVGI	Lefkada island	0.25	37	P	Pg	22 52 42.6	0.0
EVGI				S	Sg	22 52 46.9	+0.9
KEF2	Argostoli. Kep	0.26	176	P	Pg	22 52 42.4	-0.3
KEF2				S	Sg	22 52 46.2	+0.1
VLS	Valsamata	0.26	158	P	Pg	22 52 42.4	-0.4
VLS				S	Sg	22 52 46.6	+0.3
MGNA	Meganis	0.35	47	P	Pg	22 52 44.2	-0.3
MGNA				S	Sg	22 52 49.4	+0.3

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*MDD **10** 22:54:18.9±0.9, 33°.20N×17°.04W, h41^{km}±14^{km}, mb4.3/3, Error ellipse: s-maj=10.6km s-min=7.0km az=127.0, PRXIMO*

*INMG **10** 22:54:20.6±1.6, 33°.27N×17°.15W, h10^{km}, MD3.0, ML3.0, Error ellipse: s-maj=9.4km s-min=3.3km az=112.0*

*CNRM **10** 22:54:39.7±1.5, 33°.16N×15°.32W, h134^{km}±65^{km}, Error ellipse: s-maj=23.5km s-min=10.8km az=174.0*

ISC 10 22:54:16.4±1.4, **33°.25N**±0°.06×**17°.07W**±0°.06, **h10**^{km}, **n46**, σ**2**^{s}.**06**/47, **3C-2D, Madeira Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMOZ	Porto Moniz, M	0.44	194	P	Pb	22 54 28.0	+1.7
	127nm,0.2s,SNR=7.9						
PMOZ				S	Sb	22 54 34.5	+1.6
	3μm,0.3s,SNR=7.9						
PMOZ	Porto Moniz, M	0.44	194	⇑*e*P	Pb	22 54 28.0	+1.7
PMOZ				*e*S	Sg	22 54 32.7	+1.9
PMOZ				A	A	22 54 38.8	
	3μm,0.5s						
PMAR	Madeira	0.54	166	P	Pb	22 54 29.5	+1.4
PMAR				S	Sb	22 54 36.7	+0.7
	554nm,0.4s						
PMAR	Madeira	0.54	166	⇓*e*P	Pb	22 54 29.5	+1.4
PMAR				*e*S	Sb	22 54 36.7	+0.7
PMAR				A	A	22 54 37.9	
	1μm,0.4s						
FUL	Funchal	0.62	166	P	Pg	22 54 30.2	+1.8
FUL				S	Sb	22 54 38.2	+0.2
	282nm,0.2s						
FUL	Funchal	0.62	166	⇓*e*P	Pg	22 54 30.2	+1.8
FUL				*e*S	Sb	22 54 38.2	+0.2
FUL				A	A	22 54 40.1	
	563nm,0.2s						
PMPST	Porto Santo, M	0.64	105	⇑*i*P	Pg	22 54 30.7	+1.8
PMPST				*e*S	Sg	22 54 38.9	+1.6
PMPST				A	A	22 54 40.4	
	422nm,0.2s						
PMPS	Porto Santo	0.65	107	P	Pg	22 54 30.8	+1.8
PMPS				S	Sg	22 54 39.0	+1.5
	167nm,0.1s						
PMPS	Porto Santo	0.65	107	⇑*i*P	Pg	22 54 30.8	+1.8
PMPS				*e*S	Sg	22 54 39.0	+1.5
PMPS				A	A	22 54 39.5	
	333nm,0.1s						
TBT	Taburiente	4.61	189	S	Sn	22 56 08.6	-11
	7.5nm,0.2s,SNR=7.9						
EHIG	Higuera	4.72	188	S	Sn	22 56 14.2	-8.4
	18nm,0.2s,SNR=7.9						
CGUI	Guimar, Teneri	4.94	174	S	Sn	22 56 21.8	-6.3
	26nm,0.3s,SNR=7.9						
MACI	Morro de la Ar	5.00	174	S	Sn	22 56 24.1	-5.7
	9.9nm,0.4s,SNR=7.9						
EGOM	La Gomera	5.07	181	S	Sn	22 56 22.1	-9.1
	49nm,0.3s,SNR=7.9						
CFUE	Fuerteventura	5.32	149	S	Sn	22 56 29.9	-7.4
	13nm,0.2s,SNR=7.9						
EOSO	Osorio	5.32	165	S	Sn	22 56 28.9	-8.6
	2.6nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	7.78	58	P	Pn	22 56 09.2	-0.6
	3.6nm,0.2s,SNR=7.1						
PFVI				S	Sn	22 57 28.2	-10
	1.2nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	7.78	58	*e*P	Pn	22 56 08.9	-0.9
PFVI				*e*S	Sn	22 57 28.3	-10
TTIG	Tnine Tigouga,	7.82	108	P	Pn	22 56 10.3	-0.1
TTIG				S	Sn	22 57 24.7	-14
OUK	Oukaimeden	8.06	102	P	Pn	22 56 15.4	+1.5
OUK				S	Sn	22 57 29.4	-16
PBDV	Barranco-do-Ve	8.47	59	P	Pn	22 56 18.8	-0.5
PBDV	Barranco-do-Ve	8.47	59	*e*P	Pn	22 56 18.8	-0.5
PNCL	Nicolau / Gran	8.48	53	P	Pn	22 56 19.3	0.0
PNCL				S	Sn	22 57 45.1	-10
PNCL	Nicolau / Gran	8.48	53	*e*P	Pn	22 56 19.3	0.0
PNCL				*e*S	Sn	22 57 45.1	-10
PMAFR	Mafra	8.49	46	S	Sn	22 57 45.9	-9.5
	12nm,0.3s,SNR=7.9						
PMAFR	Mafra	8.49	46	*e*S	Sn	22 57 45.2	-10
PCVE	Castro Verde	8.57	57	P	Pn	22 56 19.1	-1.5
PCVE	Castro Verde	8.57	57	*e*P	Pn	22 56 19.1	-1.5
PVAQ	Vaqueiros	8.70	59	P	Pn	22 56 21.9	-0.4
PVAQ				S	Sn	22 57 50.9	-9.5
	2.6nm,0.7s						
PVAQ	Vaqueiros	8.70	59	*e*P	Pn	22 56 21.9	-0.4
PVAQ				*e*S	Sn	22 57 50.9	-9.5
PVAQ				A	A	22 57 54.1	
	2.6nm,0.7s						
ZHG	ZHG	8.73	86	P	Pn	22 56 22.8	-0.1
PMTG	Montargil	9.21	48	S	Sn	22 58 02.8	-10
PMTG	Montargil	9.21	48	*e*S	Sn	22 58 02.8	-10
EMIN	Mina Concepcio	9.60	59	P	Pn	22 56 33.6	-1.1
	1.6nm,0.4s,SNR=5.8						
EMIN				S	Sn	22 58 11.8	-11
	0.3nm,0.4s,SNR=7.9						
EBAD	Badajoz	9.83	53	P	Pn	22 56 37.8	0.0
	0.4nm,0.1s,SNR=7.9						
EBAD				S	Sn	22 58 18.5	-10
	0.4nm,0.2s,SNR=7.9						
ESPR	Espera	9.88	65	P	Pn	22 56 38.5	0.0
	3.3nm,0.3s,SNR=5.0						
ESPR				S	Sn	22 58 20.0	-9.4
	0.8nm,0.3s						
PMRV	Marv??o	9.95	49	P	Pn	22 56 37.8	-1.7
PMRV				S	Sn	22 58 19.8	-11
PMRV	Marv??o	9.95	49	*e*P	Pn	22 56 37.8	-1.7
PMRV				*e*S	Sn	22 58 19.8	-11
TZRR	Tazzarine	10.07	101	P	Pn	22 56 41.5	+0.3
TZRR				S	Sn	22 58 17.6	-17
CZD	Col de Zad	10.09	88	P	Pn	22 56 40.7	-1.0
MD31	MD31	10.34	89	P	Pn	22 56 45.6	+0.7
MD31				S	Sn	22 58 23.9	-17
MDT	Midelt	10.47	89	P	Pn	22 56 46.6	-0.2
MDT				S	Sn	22 58 25.8	-18
ECAB	El Cabril	10.63	60	P	Pn	22 56 48.2	-0.7
	0.8nm,0.3s,SNR=6.2						
ECAB				S	Sn	22 58 39.7	-8.3
	0.2nm,0.2s						
EADA	Adamuz	11.28	61	P	Pn	22 56 56.6	-1.1
	0.9nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	12.34	55	P	Pn	22 57 11.4	-0.8
	0.4nm,0.3s,baz=242,slow=13,SNR=11						
ETOR	Torete	14.17	53	P	Pn	22 57 36.1	-1.1
	2.1nm,0.3s,SNR=7.9						

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*BEO **10** 23:27:44.7±1.4, 37°.95N×20°.00E, h0^{km}, ML4.1/10*

*IDC **10** 23:27:47.5±0.5, 38°.28N×20°.35E, h0^{km}, mb4.1/22, mb1 4.1/34, mb1mx4.0/54, mbtmp4.0/34, ML3.7/11, MS3.3/10, Ms1 3.3/10, ms1mx3.0/51, Error ellipse: s-maj=11.5km s-min=10.3km az=91.0*

*PDG **10** 23:27:48.8±0.5, 38°.24N×20°.28E, h13^{km}, ML4.1/11, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*

*ATH **10** 23:27:48.7, 38°.21N×20°.29E, h13^{km}, ML4.0/31, Error ellipse: s-maj=1.5km s-min=0.7km az=65.0*

*THE **10** 23:27:49.4, 38°.22N×20°.32E, h11^{km}, ML4.2/10, Error ellipse: s-maj=0.8km s-min=0.4km az=259.0*

*HLW **10** 23:27:49.4, 38°.23N×21°.16E, h5^{km}±35^{km}, Md4.7, Ml4.8*

*NEIC **10** 23:27:50.0±2.0, 38°.22N±0°.05×20°.30E±0°.05, h22^{km}±5^{km}, Error ellipse: s-maj=7.3km s-min=6.0km az=178.0*

*MED_RC **10** 23:27:50.0±0.8, 38°.20N×20°.34E, h29^{km}±3^{km}, MW4.3/5, Moment Tensor Solution.Mantle waves: s5,c5; Duration: 1^{s}.0 Moment tensor: Scale 10^{15}Nm; M_{rr}1.52±2.26; $M_{\theta\theta}$0.68±1.19; $M_{\phi\phi}$-2.19±1.22; $M_{r\theta}$1.82±1.02; $M_{\theta\phi}$2.37±.27; $M_{\phi r}$1.12±.88; Best double couple: $M_0$3.72000×10^{15} NP1:ϕ_s114.00000°, δ61.00000°, λ31.00000°. NP2: ϕ_s7.00000°, δ63.00000°, λ147.00000°. Principal axes: T 3.9200, Plg42.0000°, Azm330.0000°; N -0.3800, Plg48.0000°, Azm152.0000°; P -3.5300, Plg1.0000°, Azm61.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*MOS **10** 23:27:50.6±1.2, 38°.32N×20°.26E, h32^{km}, mb4.6/5 Error ellipse: s-maj=7.4km s-min=4.7km az=86.3*

ISC 10 23:27:49.1±0.6, **38°.22N**±0°.02×**20°.31E**±0°.02, **h16**^{km}±3^{km}, **n390**, σ**1**^{s}.**70**/448, **mb4.5**/39, **MS3.0**/5, **11C-8D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.04	126	P	Pg	23 27 51.6	-0.3
KEF3				S	Sg	23 27 53.4	-0.3
AGT1	Agia Thekli	0.06	65	P	Pg	23 27 51.7	-0.4
AGT1				S	Sg	23 27 53.2	-0.9
CHV1	Chavriata, Kef	0.07	126	P	Pg	23 27 51.9	-0.2
CHV1				S	Sg	23 27 53.2	-0.9
KEF4	Livadi, Kephal	0.10	69	P	Pg	23 27 52.0	-0.4
KEF4				S	Sg	23 27 54.1	-0.4
LXR1	Lixouri, Cepha	0.10	103	P	Pg	23 27 52.3	-0.2
LXR1				S	Sg	23 27 54.3	-0.3
LXRA	Lixouri, Kepha	0.10	103	P	Pg	23 27 52.2	-0.3
LXRA				S	Sg	23 27 54.3	-0.4
KEF1	Kardakata, Kep	0.14	67	P	Pg	23 27 52.5	-0.4
KEF1				S	Sb	23 27 56.1	0.0
ARGA	Argostoli. Kep	0.14	110	P	Pg	23 27 52.8	-0.1
ARGA				S	Sg	23 27 55.1	-0.3
ARG2	Argostoli	0.15	108	P	Pg	23 27 52.8	-0.2
ARG2				S	Sg	23 27 54.9	-0.7
KEF2	Argostoli. Kep	0.15	113	P	Pg	23 27 52.9	-0.1
KEF2				S	Sg	23 27 55.4	-0.3
VLS	Valsamata	0.22	102	P	Pg	23 27 53.8	-0.4
VLS				S	Sg	23 27 57.2	-0.5
	201μm,0.2s						
VLS	Valsamata	0.22	102	P	Pg	23 27 53.9	-0.3
VLS				S	Sg	23 27 57.2	-0.5
VLS				AML	AML	23 27 57.4	
VLS				AML	AML	23 27 57.7	
VSK1	VASILIKIADES	0.27	47	P	Pg	23 27 55.0	0.0
VSK1				S	Sg	23 27 59.1	+0.1
	96μm,0.5s						
KONA	Konidatara, Ke	0.29	45	P	Pg	23 27 55.2	-0.1
KONA				S	Sg	23 27 59.7	+0.3
KONA				AML	AML	23 28 00.0	
KONA				AML	AML	23 28 02.5	
	comp=E,83105μm,0.4s						
FSK	Fiskardo	0.31	40	P	Pg	23 27 55.5	-0.1
FSK				S	Sg	23 27 59.7	-0.3
	comp=E,43μm,0.7s						
FSK	Fiskardo	0.31	40	P	Pg	23 27 55.5	-0.1
FSK				S	Sg	23 28 00.2	+0.2
FSK				AML	AML	23 28 00.7	
	comp=E,89761μm,0.6s						
FSK				AML	AML	23 28 00.8	
	comp=N,83168μm,0.7s						
KFL	Anninata	0.39	107	P	Pg	23 27 56.9	-0.1
KFL				S	Sg	23 28 02.4	-0.1
	comp=N,149μm,0.4s						
KFL	Anninata	0.39	107	P	Pg	23 27 57.0	-0.1
KFL				S	Sg	23 28 02.7	+0.2
EVGI	Lefkada island	0.48	34	P	Pg	23 27 58.5	-0.2
EVGI	Lefkada island	0.48	34	P	Pg	23 27 58.6	-0.2
EVGI				S	Sb	23 28 06.2	+0.1
MGNA	Meganis	0.57	41	P	Pg	23 28 00.4	0.0
MGNA				S	Sg	23 28 07.4	-0.7
MGNA				AML	AML	23 28 12.5	
	comp=N,14511μm,0.6s						
MGNA				AML	AML	23 28 15.4	
	comp=E,16277μm,0.7s						
LKD2	Lefkada island	0.63	26	P	Pg	23 28 00.9	-0.5
LKD2	Lefkada island	0.63	26	P	Pg	23 28 00.9	-0.5
LKD2				S	Sg	23 28 09.5	-0.2
LKD2				AML	AML	23 28 19.9	
	comp=N,17150μm,0.9s						
LKD2				AML	AML	23 28 20.3	
	comp=E,15237μm,0.8s						
ZAK2	Zakynthos	0.64	133	P	Pg	23 28 01.5	-0.1
TSLK	Tsoukalades, L	0.66	24	P	Pg	23 28 01.6	-0.4
TSLK	Tsoukalades, L	0.66	24	P	Pg	23 28 01.9	-0.1
TSLK				S	Sb	23 28 12.2	+1.0
TSLK				AML	AML	23 28 19.0	
	comp=E,21739μm,1.0s						
TSLK				AML	AML	23 28 19.6	
	comp=N,21815μm,0.8s						
AST1	Astakos	0.69	62	P	Pg	23 28 02.1	-0.5
KRI1	kERI	0.69	144	P	Pg	23 28 01.8	-0.8
KRI1				S	Sb	23 28 12.7	+0.7
	comp=N,71μm,0.4s						
VTN	Vitineika	0.76	114	P	Pg	23 28 03.6	-0.2
VTN				S	Sb	23 28 14.5	+0.5
PDO	Prodromos	0.78	61	P	Pb	23 28 05.0	+0.7
PDO				AML	AML	23 28 16.9	
	comp=E,26583μm,0.5s						
PDO				AML	AML	23 28 26.3	
	comp=N,31589μm,0.8s						
RLS	Riolos of Patr	0.93	100	P	Pb	23 28 06.0	-0.8
RLS				S	Sn	23 28 20.1	-0.3
	comp=N,9μm,0.5s						
RLS	Riolos of Patr	0.93	100	P	Pb	23 28 06.2	-0.6
RLS				S	Sg	23 28 19.5	+0.3
RLS				AML	AML	23 28 23.6	

	comp=E,14654µm,0.6s						
RLS				AML	AML	23 28 24.9	
	comp=N,21383µm,0.4s						
PVO	Paravola	1.03	67	P	Pb	23 28 08.8	+0.2
PVO				S	Sn	23 28 24.9	+1.8
	comp=N,11µm,0.9s						
PVO	Paravola	1.03	67	P	Pb	23 28 08.7	+0.1
PVO				AML	AML	23 28 29.5	
	comp=E,23148µm,1.0s						
PVO				AML	AML	23 28 31.9	
	comp=N,18569µm,0.8s						
DRO	Drossia	1.14	103	P	Pb	23 28 10.2	-0.2
DRO				S	Sg	23 28 27.4	+1.5
	comp=N,14µm,0.4s						
DRO	Drossia	1.14	103	P	Pb	23 28 10.2	-0.2
DRO				AML	AML	23 28 30.6	
	comp=E,28600µm,0.3s						
DRO				AML	AML	23 28 39.2	
	comp=N,26423µm,0.5s						
UPR	University Cam	1.16	87	P	Pn	23 28 10.5	-0.2
UPR	University Cam	1.16	87	P	Pg	23 28 11.6	+0.1
AMT	Artemida-Makis	1.30	122	P	Pb	23 28 13.5	+0.2
AMT	Artemida-Makis	1.30	122	P	Pb	23 28 13.4	+0.2
AMT				AML	AML	23 28 44.4	
	comp=E,21604µm,0.5s						
AMT				AML	AML	23 28 47.6	
	comp=N,16863µm,0.6s						
LAKA	Lakka	1.31	89	P	Pn	23 28 11.9	-0.9
LAKA				S	Sg	23 28 32.0	+0.5
	comp=N,4µm,0.7s						
LAKA	Lakka	1.31	89	P	Pn	23 28 12.1	-0.8
LAKA				AML	AML	23 28 36.8	
	comp=N,8320µm,0.5s						
LAKA				AML	AML	23 28 38.6	
	comp=E,6511µm,0.8s						
ANX	Ano Chora	1.32	73	P	Pn	23 28 13.2	+0.2
ANX	Ano Chora	1.32	73	P	Pn	23 28 13.3	+0.4
ANX				AML	AML	23 28 37.8	
	comp=E,21270µm,0.6s						
ANX				AML	AML	23 28 38.2	
	comp=N,26792µm,0.6s						
EVR	Evrytania	1.36	59	P	Pn	23 28 14.0	+0.4
EVR				S	Sb	23 28 32.1	+0.5
	comp=N,4µm,1.2s						
EVR	Evrytania	1.36	59	P	Pn	23 28 13.8	+0.2
EVR				AML	AML	23 28 42.9	
	comp=N,7085µm,1.1s						
EVR				AML	AML	23 28 49.8	
	comp=E,6806µm,0.8s						
SERG	Sergoula	1.39	82	P	Pn	23 28 14.2	+0.4
SERG	Sergoula	1.39	82	P	Pn	23 28 14.0	+0.1
SERG				AML	AML	23 28 40.6	
	comp=E,11769µm,0.6s						
SERG				AML	AML	23 28 44.0	
	comp=N,13042µm,0.6s						
TRIZ	Trizonia	1.39	84	P	Pn	23 28 13.9	0.0
TRIZ	Trizonia	1.39	84	P	Pn	23 28 14.1	+0.2
TRIZ				S	Sg	23 28 35.9	+1.9
ALIK	Aliki, Aigiali	1.42	88	P	Pn	23 28 14.6	+0.4
KALE	Kalithea	1.45	83	P	Pn	23 28 14.8	+0.1
KALE	Kalithea	1.45	83	P	Pn	23 28 14.9	+0.1
KALE				AML	AML	23 28 45.3	
	comp=N,7661µm,0.5s						
KALE				AML	AML	23 28 46.2	
	comp=E,7449µm,0.8s						
KLV	Kalavryta, Ach	1.46	97	P	Pb	23 28 15.6	-0.4
KLV	Kalavryta, Ach	1.46	97	P	Pb	23 28 15.8	-0.2
KLV				S	Sg	23 28 36.3	+0.1
KLV				AML	AML	23 28 45.5	
	comp=E,5358µm,0.6s						
KLV				AML	AML	23 28 47.1	
	comp=N,6188µm,0.6s						
JAN	Janina	1.49	16	P	Pg	23 28 17.4	-0.4
JAN	Janina	1.49	16	P	Pg	23 28 17.5	-0.4
JAN				AML	AML	23 28 43.3	
	comp=E,6050µm,0.5s						
JAN				AML	AML	23 28 49.3	
	comp=N,5887µm,0.9s						
KEK	Kerkira	1.54	345	P	Pb	23 28 17.3	0.0
KEK	Kerkira	1.54	345	P	Pb	23 28 17.3	0.0
KEK				AML	AML	23 28 50.4	
	comp=E,3357µm,0.9s						
KEK				AML	AML	23 28 58.3	
	comp=N,3885µm,0.8s						
KASA	Kassiopi	1.55	349	P	Pb	23 28 18.0	+0.6
KASA				AML	AML	23 28 44.5	
	comp=E,4654µm,0.9s						
KASA				AML	AML	23 28 54.1	
	comp=N,2748µm,0.5s						
MAKR	Makrakomi, Fth	1.63	61	P	Pb	23 28 19.0	+0.2
MAKR	Makrakomi, Fth	1.63	61	P	Pb	23 28 19.1	+0.2
MAKR				AML	AML	23 28 47.0	
	comp=N,6285µm,1.1s						
MAKR				AML	AML	23 28 56.1	
	comp=E,10060µm,0.8s						
ITM	Ithomi	1.65	129	P	Pb	23 28 19.3	+0.1
ITM	Ithomi	1.65	129	P	Pb	23 28 19.1	-0.1
ITM				AML	AML	23 28 51.9	
	comp=N,5592µm,0.6s						
ITM				AML	AML	23 28 52.3	
	comp=E,5430µm,0.8s						
ITM	Ithomi	1.65	129		Pn	23 28 17.1	-0.4
MEV	Metsovon	1.71	24	P	Pb	23 28 21.3	+0.9
MEV	Metsovon	1.71	24	P	Pg	23 28 21.8	-0.2
DLFA	Delphi	1.74	81	P	Pb	23 28 20.2	-0.4
PYL	PYLOS	1.75	139	P	Pb	23 28 20.2	-0.6
PYL				AML	AML	23 28 59.4	
	comp=N,2309µm,0.7s						
PYL				AML	AML	23 29 04.5	
	comp=E,3447µm,0.9s						
AGG	Agios Georgios	1.77	63	P	Pb	23 28 21.9	+0.7
AGG	Agios Georgios	1.77	63	P	Pb	23 28 21.4	+0.2
AGG				AML	AML	23 28 54.0	
	comp=E,4332µm,1.3s						
AGG				AML	AML	23 28 56.1	
	comp=N,4320µm,1.1s						
AGG	Agios Georgios	1.77	63	P	Pn	23 28 19.2	0.0
AGG						23 28 40.0	
AGG	Agios Georgios	1.77	63		Pn	23 28 19.2	0.0
AGG				Sn	Sn	23 28 40.0	-1.4
VLX	Vlachokerasia	1.85	117	P	Pb	23 28 23.3	+0.8
VLX				AML	AML	23 29 07.0	
	comp=E,6387µm,1.0s						
VLX				AML	AML	23 29 17.2	
	comp=N,5438µm,0.7s						
THL	Klokotos Trika	1.89	44	P	Pb	23 28 23.8	+0.6
THL	Klokotos Trika	1.89	44	P	Pb	23 28 24.0	+0.8
THL				AML	AML	23 28 57.8	
	comp=E,5516µm,0.9s						
THL				AML	AML	23 28 59.2	
	comp=N,5447µm,0.8s						
KPRO	Kipourio	1.91	25	P	Pb	23 28 24.4	+0.7
AXAR	Agios Charalam	1.92	73	P	Pb	23 28 23.9	+0.1
AXAR	Agios Charalam	1.92	73	P	Pg	23 28 25.3	-0.6
AXAR				AML	AML	23 29 00.8	
	comp=E,11881µm,0.9s						
AXAR				AML	AML	23 29 05.1	
	comp=N,12000µm,1.0s						
PENT	Pentalofos	2.07	18	P	Pb	23 28 26.2	-0.2
LTK	Loutraki	2.10	95	P	Pb	23 28 25.9	-1.0
LOUT	Loutraki	2.11	96	P	Pb	23 28 27.0	-0.1
LKR	Lokris	2.15	78	P	Pb	23 28 27.1	-0.6
LKR	Lokris	2.15	78	P	Pb	23 28 26.9	-0.8
DYR	Agios Nikonas	2.17	132	P	Pb	23 28 27.7	-0.4
LRSO	Larissa Observ	2.17	48	P	Pn	23 28 25.4	+0.8
LRSO				AML	AML	23 29 11.3	
	comp=N,8984µm,1.0s						
LRSO				AML	AML	23 29 18.1	
	comp=E,8176µm,1.0s						
NEST	Nestorio	2.26	14	P	Pb	23 28 29.4	-0.2
VIL2	Platees	2.33	89	P	Pb	23 28 29.9	-0.9
SCTE	Santa Cesarea	2.34	323	P	Pn	23 28 28.4	+1.5
SCTE	Santa Cesarea	2.34	323		Pn	23 28 26.5	-0.4
KZN	Kozani	2.37	28	P	Pb	23 28 30.5	-1.0
KRND	KRANIDI	2.40	110	P	Pb	23 28 30.2	-1.7
KRND	KRANIDI	2.40	110	P	Pb	23 28 30.3	-1.6
DID	Didima	2.42	106	P	Pb	23 28 31.0	-1.3
DID	Didima	2.42	106	P	Pb	23 28 31.1	-1.3
DID				AML	AML	23 29 14.4	
	comp=E,2772µm,0.6s						
DID				AML	AML	23 29 14.7	
	comp=N,3898µm,0.7s						
XOR	Xorichti	2.52	62	P	Pb	23 28 33.8	-0.3
LIT	Litokhoron	2.53	41	P	Pb	23 28 32.4	-1.7
LIT	Litokhoron	2.53	41	P	Pb	23 28 32.7	-1.4
LIT	Litokhoron	2.53	41	P	Pn	23 28 28.0	-1.5
LIT	Litokhoron	2.53	41		Pn	23 28 28.0	-1.5
MRKA	Markates	2.62	78	P	Pn	23 28 32.9	+2.1
SKIA	Skiathos	2.64	68	P	Pb	23 28 34.2	-1.9
FNA	Florina	2.69	18	P	Pn	23 28 34.2	+2.5
FNA	Florina	2.69	18	*e*Pn	Pn	23 28 34.1	+2.3
FNA	Florina	2.69	18	P	Pn	23 28 34.3	+2.5
FNA	Florina	2.69	18	P	Pn	23 28 32.9	+1.1
FNA	Florina	2.69	18		Pn	23 28 32.9	+1.1
ATHU	Athens Univers	2.75	94	P	Pn	23 28 34.7	+2.1
ATHU				AML	AML	23 29 26.3	
	comp=N,784µm,0.7s						
ATHU				AML	AML	23 29 38.1	
	comp=E,514µm,0.8s						
VLY	Voula,Athens	2.77	97	P	Pn	23 28 34.6	+1.7
VLY	Voula,Athens	2.77	97	P	Pn	23 28 35.0	+2.0
PTL	Penteli	2.81	92	P	Pn	23 28 35.4	+2.0
PTL				AML	AML	23 29 12.7	
	comp=N,1896µm,1.0s						
PTL				AML	AML	23 29 18.0	
	comp=E,1635µm,1.2s						
DION	Dionisos Attik	2.86	92	P	Pn	23 28 36.8	+2.7
OHR	Ohrid	2.91	7	*i* Pn	Pb	23 28 38.0	-2.6
TIP	Timpagrande	2.94	290	P	Pn	23 28 37.2	+2.0
TIP				S	Sn	23 29 11.0	+0.7
TIP	Timpagrande	2.94	290	P	Pn	23 28 37.2	+2.0
TIP	Timpagrande	2.94	290	⇑P	Pn	23 28 37.6	+2.3
TIP				⇑S	Sn	23 29 12.5	+2.2
TIP	Timpagrande	2.94	290		Pn	23 28 37.3	+2.0
TIP				Sn	Sn	23 29 07.8	-2.4
KTHA	Kythira Island	2.94	131	P	Pb	23 28 39.1	-2.2
AOS	Alonnisos	2.95	70	P	Pn	23 28 37.9	+2.6
TIR	Tirane	3.14	354	*e*Pn	Pn	23 28 40.4	+2.5
TIR				*e*Sn	Sb	23 29 19.6	-3.0
TIR	Tirane	3.14	354	P	Pn	23 28 40.2	+2.3
TIR	Tirane	3.14	354	⇓P	Pn	23 28 40.2	+2.3
TIR	Tirane	3.14	354	P	Pn	23 28 39.9	+2.0
TIR	Tirane	3.14	354		Pn	23 28 39.9	+2.0
GRG	Griva	3.17	30	P	Pn	23 28 40.1	+1.7
HORT	Hortiatis	3.21	41	P	Pn	23 28 41.1	+2.2
KARY	Karystos	3.26	92	P	Pn	23 28 42.0	+2.4
TAR1	Taranto	3.29	315	*e*Pn	Pn	23 28 41.7	+1.8
ANKY	Antikythira Is	3.35	134	P	Pn	23 28 44.6	+3.8
SERI	Serifos	3.48	106	P	Pn	23 28 44.6	+2.1
CEL	Celeste	3.48	272		Pn	23 28 42.9	+0.2
SOH	Sokhos	3.50	41	P	Pn	23 28 46.0	+3.0
KNT	Kendrikon	3.55	33	P	Pn	23 28 45.5	+1.9
VAY	Valandovo	3.55	29	*e*P	Pn	23 28 46.3	+2.7
VAY	Valandovo	3.55	29	*i* Pn	Pb	23 28 47.8	-3.7
NOCI	Noci	3.59	317	P	Pn	23 28 45.6	+1.5
MATE	Matera	3.70	312	⇓P	Pn	23 28 47.6	+2.0
STIP	Stip	3.75	22	*i* Pn	Pn	23 28 50.6	+4.2
SG1	Sgolgore (BA)	3.84	314	⇓*i*Pn	Pn	23 28 49.2	+1.7
SRS	Serrai	3.84	40	*e*Pn	Pn	23 28 50.8	+3.2
SKO	Skopje	3.84	13	*e*Pn	Pn	23 28 47.9	+0.3
SKO	Skopje	3.84	13	*e*Pn	Pn	23 28 49.6	+2.0
BAI	Bari	3.91	318	⇑*i*Pn	Pn	23 28 49.9	+1.4
CUC	Castrocucco	3.92	298	P	Pn	23 28 51.0	+2.3
IMMV	Iera Moni Meta	4.03	132	P	Pn	23 28 53.3	+3.0
LIA	Limnos Island	4.14	65	P	Pn	23 28 54.3	+2.6
KKB	Krupnik	4.21	29	*e*P	Pn	23 28 54.7	+2.0
ACER	Acerenza	4.24	309		Pn	23 28 55.3	+2.2
KAVA	Kavala	4.27	48	P	Pn	23 28 55.1	+1.7
MMB	Musomiste	4.27	37	*e*P	Pn	23 28 57.3	+3.8
PDG	Podgorica	4.28	349	*e*Pn	Pn	23 28 54.1	+0.5
PDG	Podgorica	4.28	349	⇓P	Pn	23 28 54.4	+0.8
PDG	Podgorica	4.28	349	*e*Pn	Pn	23 28 54.2	+0.6
PDG	Podgorica	4.28	349		Pn	23 28 54.4	+0.8
PDG				Sn	Sn	23 29 44.9	+1.7
APE	Apeiranthos	4.30	104	P	Pn	23 28 58.6	+4.7
APE	Apeiranthos	4.30	104	*i* P	Pn	23 28 55.9	+2.0
HCY	Herceg Novi	4.44	342	*e*Pn	Pn	23 28 55.8	0.0
CHOS	Chios island	4.52	86	P	Pn	23 28 58.3	+1.3
GVD	Gavdhos	4.54	137	P	Pn	23 28 59.6	+2.4
IDI	Anoyia	4.70	127	Pn	Pn	23 29 01.3	+1.9
	comp=E,1.3nm,0.3s,baz=199,slow=9.3,SNR=17						
IDI				Sn	Sn	23 29 51.9	-1.8
	comp=E,5.1nm,0.3s,baz=147,slow=23,SNR=2.0						
IDI	Anoyia	4.70	127	P	Pn	23 29 01.3	+1.9
BARS	Barje	4.73	14	*e*Pn	Pn	23 29 00.7	+0.9
VAE	Valguarnera	4.73	263	Pn	Pn	23 29 01.7	+1.9
	comp=E,3.1nm,0.3s,baz=360,slow=13,SNR=16						
VAE				Sn	Sn	23 29 53.2	-1.2
	comp=E,8.9nm,0.3s,baz=2.7,slow=2.7,SNR=3.2						
TREB	Trebinje	4.73	342	*e*Pn	Pn	23 28 59.6	-0.3
TREB	Trebinje	4.73	342	*e*Pn	Pn	23 28 59.5	-0.3
RZN	Rozhen	4.84	43	*e*P	Pn	23 29 05.3	+3.8
VTS	Vitosha	4.92	26	*e*Pn	Pn	23 29 04.3	+1.7
VTS	Vitosha	4.92	26	⇓P	Pn	23 29 04.6	+2.0
VTS	Vitosha	4.92	26	*e*P	Pn	23 29 04.8	+2.2
VTS	Vitosha	4.92	26	P	Pn	23 29 05.0	+2.4
VTS	Vitosha	4.92	26		Pn	23 29 05.0	+2.4
SGRT	San Giovanni R	4.97	317		Pn	23 29 04.7	+1.5
SGRT					Sn	23 29 59.4	-1.1
SELS	Selova	5.03	7	*e*Pn	Pn	23 29 05.2	+1.3
SJES	Sjenica	5.04	357	*e*Pn	Pn	23 29 05.8	+1.7
STON	Ston	5.05	338	*e*Pn	Pn	23 29 04.3	+0.1
UPM	Unac-Piva	5.09	348	*e*Pn	Pn	23 29 03.1	-1.8
PLD	Plovdiv	5.13	40	*e*P	Pb	23 29 22.3	+3.8
LAST	Lasithi	5.16	125	P	Pn	23 29 07.8	+2.1
ALN	Alexandroupoli	5.17	57	P	Pn	23 29 09.7	+3.8
ALN	Alexandroupoli	5.17	57	P	Pn	23 29 09.3	+3.4
ALN	Alexandroupoli	5.17	57	Pn	Pn	23 29 09.3	+3.4
WDD	Wied Dalam	5.21	245		Pn	23 29 07.1	+0.8
PAOL	Paolisi	5.25	304		Pn	23 29 07.8	+0.9
ZAPS	Zavoj	5.34	19	*e*Pn	Pn	23 29 09.1	+0.8
IVAS	Ivanjica	5.35	359	*e*Pn	Pn	23 29 08.6	+0.2
RUDO	Rudo	5.44	353	*e*Pn	Pn	23 29 07.9	-1.6
BOVS	Bovan	5.51	11	*e*Pn	Pn	23 29 10.9	+0.4
CORL	Corleone	5.54	269		Pn	23 29 12.1	+1.1
CORL				Sn	Sn	23 30 13.2	-1.2
CLTB	Caltabellotta	5.65	266		Pn	23 29 15.2	+2.7
GRUS	Gruza	5.67	3	*e*Pn	Pn	23 29 13.5	+0.8
BBLS	Lazići	5.68	353	*e*Pn	Pn	23 29 12.5	-0.4
BBLS	Lazići	5.68	353	*e*Pn	Pn	23 29 12.8	-0.1
MPEP	Malo Peshtene	5.75	26	*e*P	Pn	23 29 17.1	+3.3
ZAGS	Zajecar	5.77	14	*e*Pn	Pn	23 29 14.7	+0.6
DIVS	Divibare	5.87	358	*e*Pn	Pn	23 29 15.7	+0.1
DIVS	Divibare	5.87	358	*e*Pn	Pn	23 29 15.1	-0.5
HAPS	Han Pijesak,Bl	5.95	350	*e*Pn	Pn	23 29 16.2	-0.4
HAPS	Han Pijesak,Bl	5.95	350	*e*Pn	Pn	23 29 16.0	-0.6
TRUS	Trudelj	6.00	1	*e*Pn	Pn	23 29 16.7	-0.5
KARP	Karpathos	6.11	114	Pn	Pn	23 29 21.8	+3.0
KARP				Sn	Sn	23 30 30.5	+2.2
PLVB	Pleven	6.11	31	⇓P	Pn	23 29 21.3	+2.6
ELND	Elena	6.33	40	⇓P	Pn	23 29 25.1	+3.4
MDVR	Moldovita	6.64	9	⇑P	Pn	23 29 26.5	+0.5
MGRS	Mrkonjic Grad	6.65	340	*e*Pn	Pn	23 29 27.2	+1.1
AQU	L'Aquila	6.70	310	*e*Pn	Pn	23 29 30.6	+3.7
AQU	L'Aquila	6.70	310	P	Pn	23 29 31.0	+4.1
AQU	L'Aquila	6.70	310		Pn	23 29 31.0	+4.1
BLY	Banja Luka	6.93	341	⇑P	Pn	23 29 30.9	+0.9
BLY	Banja Luka	6.93	341	*e*Pn	Pn	23 29 30.3	+0.3
BLY	Banja Luka	6.93	341		Pn	23 29 31.0	+1.0
FRGS	Fruska Gora	6.94	357	*e*Pn	Pn	23 29 23.8	-6.3
GZR	Gura Zlata	7.40	14	⇑P	Pn	23 29 37.5	+1.0
BZS	Buzias	7.45	7	⇑P	Pn	23 29 38.5	+1.4
ELL	Elmali	7.77	98		Pn	23 29 48.6	+6.9
SLUM	Salum	7.83	148	P	Pn	23 29 42.9	+0.5
	baz=152						
SLUM				AMP		23 31 00.0	
	baz=152						
SLUM				S	Sn	23 31 01.4	-9.3
	baz=152						
ARR	Arges	7.83	23	⇑P	Pn	23 29 44.8	+2.3
VOIR		8.03	25	⇑P	Pn	23 29 47.8	+2.6
RIY	Rijeka	8.32	330	*e*Pn	Pn	23 29 49.8	+0.7
MLR	Muntele Rosu	8.39	28	Pn	Pn	23 29 54.9	+4.8
	comp=E,0.2nm,0.3s,baz=175,slow=8.1,SNR=5.8						
MLR				LR	LR	23 33 32.2	
	comp=E,249nm,21.8s,baz=120,slow=41						
MLR	Muntele Rosu	8.39	28	⇑P	Pn	23 29 51.3	+1.1
MLR	Muntele Rosu	8.39	28	P	Pn	23 29 52.4	+2.3
MLR	Muntele Rosu	8.39	28		Pn	23 29 52.4	+2.3
CRES	Cresnjev	8.41	336	*e*Pn	Pn	23 29 50.4	+0.1
DOPR	Dopca	8.61	24	⇑P	Pn	23 29 54.7	+1.6
BEHE	Becsehely	8.64	344	*e*Pn	Pn	23 29 53.1	-0.4
OSSC	Osservatorio P	8.67	310	Pn	Pn	23 29 53.9	0.0
CEY	Cerknica	8.69	332	*e*Pn	Pn	23 29 54.7	+0.5
LJU	Ljubljana	8.91	333	*e*Pn	Pn	23 29 57.7	+0.5
TRI	Trieste	8.93	329	P	Pn	23 29 57.6	+0.3
TRI	Trieste	8.93	329	Pn	Pn	23 29 57.6	+0.3
VRI	Vrincioaia	9.00	30	⇓P	Pn	23 29 57.6	-0.8
KEST	Kesra	9.12	258	Pn	Pn	23 30 00.7	+0.5
	comp=E,0.5nm,0.3s,baz=303,slow=11,SNR=13						
KEST				Sn	Sn	23 31 41.9	-0.7
	comp=E,0.4nm,0.3s,baz=46,slow=23,SNR=1.7						
KEST	Kesra	9.12	258	Pn	Pn	23 30 00.9	+0.8
SOKA	Soboth	9.30	337	Pn	Pn	23 30 02.6	0.0
	comp=E,4.8nm,0.2s,SNR=5.2						
OBKA	Obir	9.31	335	*e*Pn	Pn	23 30 03.5	+0.8
	comp=E,9.3nm,0.3s,SNR=15						
OBKA				*e*Sn	Sn	23 31 47.7	+0.6
	comp=E,16nm,0.6s						
ZCCA	Zocca	9.31	314	Pn	Pn	23 30 06.3	+3.5
VLC	Villacollemand	9.54	312	Pn	Pn	23 30 08.0	+2.1
TEOL	Teolo	9.61	321		Pn	23 30 07.2	+0.4
ARSA	Arzberg	9.68	340	*e*Pn	Pn	23 30 07.4	-0.4
	comp=E,6.1nm,0.5s						
MYKA	Terra Mystica	9.74	332	*i* Pn	Pn	23 30 08.1	-0.4
	comp=E,2.8nm,0.3s						
MYKA				Sn	Sn	23 31 56.3	-1.3
	comp=E,1.6nm,0.3s						
STAL	STALIGIAL	9.81	327		Pn	23 30 09.7	+0.2
STAL				Sn	Sn	23 31 56.9	-2.4
SWA2		9.93	153	P	Pn	23 30 09.6	-1.5
	baz=157						
SWA2				AMP		23 31 00.0	
	baz=157						
SWA2				S	Sn	23 31 53.2	-9.0
	baz=157						
CTI	Castel Tesino	10.12	323		Pn	23 30 14.1	+0.3
CTI				Sn	Sn	23 32 01.8	-5.2
MSSA	Maissana	10.15	310	Pn	Pn	23 30 17.6	+3.4
KBA	Koelnbreinsper	10.22	332	Pn	Pn	23 30 15.6	+0.2
	comp=E,10.0nm,0.7s,SNR=8.1						
KBA				*e*Sn	Sn	23 32 07.4	-2.3
	comp=E,1.1nm,0.2s						
ABTA	Abfaltersbach	10.28	328	*e*Pn	Pn	23 30 17.0	+1.1
	comp=E,1.7nm,0.3s,SNR=6.4						
ABTA				*e*Sn	Sn	23 32 08.9	-1.9
	comp=E,2.8nm,0.3s						
VYHS	Vyhne	10.32	355	*e*P	Pn	23 30 17.0	+0.5
VYHS				*e*		23 32 06.1	
VYHS	Vyhne	10.32	355	*e*PN	Pn	23 30 17.0	+0.5
VYHS				*e*SN	Sn	23 32 06.1	-5.7
SALO	Salr	10.38	319		Pn	23 30 17.8	+0.6
SALO				Sn	Sn	23 32 11.2	-1.9
MODS	Modra-Piesok	10.38	349	*e*SN	Sn	23 32 06.8	-6.5
BRTR	Keskin Array B	10.49	78	Pn	Pn	23 30 23.4	+4.5
	comp=E,0.2nm,0.3s,baz=263,slow=14,SNR=7.1						
BRTR				LR	LR	23 35 18.0	
	comp=E,57nm,19.1s,baz=271,slow=43						
BRTR	Keskin Array B	10.49	78	P	Pn	23 30 21.9	+3.0
BRTR	Keskin Array B	10.49	78		Pn	23 30 21.9	+3.0
MOA	Molln	10.59	337	*e*Pn	Pn	23 30 20.0	-0.1
	comp=E,5.4nm,0.3s,SNR=24						
MOA				*e*Sn	Sn	23 32 15.5	-2.8
	comp=E,4.7nm,0.7s						
CSS	Mathiatis	10.96	103	Pn	Pn	23 30 24.9	-0.4
RJOB	Jochberg	10.98	332	*e*Pn	Pn	23 30 26.9	+1.3
WTTA	Wattenberg	11.05	328	*e*Pn	Pn	23 30 27.9	+1.3
	comp=E,3.4nm,0.3s,SNR=8.4						
WTTA				Sn	Sn	23 32 29.5	-0.5
	comp=E,4.6nm,0.5s						
WATA	Walderalm	11.13	328	*e*Pn	Pn	23 30 29.2	+1.5
	comp=E,3.8nm,0.3s,SNR=8.3						
WATA				*e*Sn	Sn	23 32 31.1	-0.8
	comp=E,7.5nm,0.7s						
SQTA	Sankt Quirin	11.20	326	*i* Pn	Pn	23 30 30.7	+2.1
	comp=E,2.6nm,0.3s						
SQTA				Sn	Sn	23 32 32.7	-0.8
	comp=E,2.2nm,0.4s						
FETA	Feichten	11.27	324	*e*Pn	Pn	23 30 30.5	+1.0
	comp=E,1.3nm,0.4s						
FETA				Sn	Sn	23 32 33.4	-1.8
	comp=E,2.1nm,0.4s						
MOTA	Moosalm	11.34	326	*e*Pn	Pn	23 30 32.7	+2.1
	comp=E,2.5nm,0.3s,SNR=15						
MOTA				*e*Sn	Sn	23 32 35.5	-1.6
	comp=E,5.1nm,0.5s						
VRAC	Vranov	11.40	348	Pn	Pn	23 30 32.1	+0.9
	comp=E,0.1nm,0.3s,baz=176,slow=12,SNR=3.6						
VRAC				LR	LR	23 35 39.6	
	comp=E,118nm,18.9s,baz=158,slow=42						
DAVOX	Davos/Dischmat	11.50	321	Pn	Pn	23 30 33.7	+0.9
	comp=E,0.3nm,0.3s,baz=148,slow=18,SNR=10						
DAVOX				Sn	Sn	23 32 37.1	-3.8
	comp=E,0.3nm,0.3s,baz=322,slow=20,SNR=1.7						
RETA	Reutte	11.60	326	*e*Pn	Pn	23 30 36.6	+2.5
	comp=E,1.3nm,0.3s						
RETA				*e*Sn	Sn	23 32 44.4	+1.1
	comp=E,3.2nm,0.4s						
GEC2	GERESS Array S	11.64	338	*e*Pn	Pn	23 30 34.5	-0.2
GEC2	GERESS Array S	11.64	338		Pn	23 30 34.8	+0.1
GERES	GERESS Array B	11.64	338	Pn	Pn	23 30 34.0	-0.7
	comp=E,0.6nm,0.3s,baz=161,slow=14,SNR=13						
GERES				Sn	Sn	23 32 40.0	-4.4
	comp=E,0.3nm,0.3s,baz=155,slow=23,SNR=1.9						
GERES				LR	LR	23 35 38.8	
	comp=E,63nm,20.9s,baz=104,slow=41						
GERES	GERESS Array B	11.64	338	P	Pn	23 30 34.0	-0.7
GERES	GERESS Array B	11.64	338		Pn	23 30 34.5	-0.2
KHC	Kasperske Hory	11.94	338	*e*PN	Pn	23 30 38.0	-0.6
KHC				*e*x	x	23 30 51.4	
KHC				*e*x	x	23 31 40.0	
KHC	Kasperske Hory	11.94	338	*e*P	Pn	23 30 38.0	-0.6
UBR	Ueberruh	12.04	325	*e*Pn	Pn	23 30 41.9	+1.9
WET	Wettzell	12.16	336	*e*Pn	Pn	23 30 42.3	+0.6
GOPC	GO Pecny, Ondr	12.34	343	*e*PN	Pn	23 30 44.2	+0.1
GOPC	GO Pecny, Ondr	12.34	343	*e*P	Pn	23 30 44.2	+0.1
GLL	Jalalah	12.80	129	P	Pn	23 30 47.7	-2.7
	baz=131						
HFRF	Wahat Farafira	12.93	146	P	Pn	23 30 49.9	-2.3
	baz=149						
STU	Stuttgart	13.26	326	P	Pn	23 30 57.2	+0.6
STU	Stuttgart	13.26	326		Pn	23 30 57.2	+0.6
MMAI	Mount Meron Ar	13.33	108	Pn	Pn	23 30 56.8	-1.0
	comp=E,0.8nm,0.3s,baz=310,slow=12,SNR=6.3						
MMAI				Sn	Sn	23 33 15.4	-10
	comp=E,0.7nm,0.3s,baz=317,slow=17,SNR=1.4						
BRG	Berggiesshubel	13.43	342	*e*P	P	23 31 08.8	+0.5
	comp=E,7.2nm,1.4s						
BRG				*e*		23 31 11.0	
	comp=E,6.3nm,1.1s						
BRG	Berggiesshubel	13.43	342	*e*P	P	23 31 08.8	+0.5
BRG				pmax	pmax		
	comp=Z,7.0nm,1.5s						
BRG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ECH	Echery	13.83	320	P	Pn	23 31 03.7	-0.7
ECH						23 33 33.8	
ECH	Echery	13.83	320	Pn	Pn	23 31 03.6	-0.7
ECH				Sn	Sn	23 33 33.8	-3.7
AKASG	Malin Array Be	13.99	24	Pn	Pn	23 31 06.4	-0.2
	comp=Z,0.6nm,0.3s,baz=211,slow=11,SNR=5.8						
CLL	Collm	14.06	341	*e*P	P	23 31 15.0	-0.3
EIL	Elat	14.83	121	Pn	Pn	23 31 14.7	-3.5
	comp=Z,0.2nm,0.3s,baz=67,slow=14,SNR=4.2						
EIL				Sn	Sn	23 33 48.6	-14
	comp=Z,0.3nm,0.3s,baz=346,slow=14,SNR=2.1						
ASF	Jabal al Asfar	14.84	109	Pn	P	23 31 21.7	-2.4
	comp=Z,0.2nm,0.3s,baz=239,slow=5.9,SNR=1.7						
WLF	Walferdange	15.29	323	P	P	23 31 32.7	+3.7
	comp=Z,38nm,1.0s						
WLF	Walferdange	15.29	323	P	Pn	23 31 24.9	+0.7
WLF				pmax	pmax		
	comp=Z,48nm,1.0s						
WLF	Walferdange	15.29	323	P	Pn	23 31 24.9	+0.7
MEM	Membach	16.02	325	P	P	23 31 40.0	+3.0
BSTI	Sart Tilman	16.20	324	P	P	23 31 43.7	+4.6
SHA1	Shidzhatmaz	17.73	65	*i* P	P	23 31 57.8	+1.5
KIV	Kislovodsk	17.79	64	*e*P	P	23 31 58.4	+1.6
KIV				pmax	pmax		
	comp=Z,34nm,1.1s						
KIV	Kislovodsk	17.79	64	P	Pn	23 31 55.0	-1.1
KBZ	Khabaz	17.90	65	P	P	23 31 59.3	+1.4
	comp=Z,0.2nm,0.3s,baz=261,slow=11,SNR=9.1						
ZEI	Tsey	18.49	68	*e*P	Pn	23 32 11.4	+6.6
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
VSR	Storozhevoye	18.59	40	*e*P	Pn	23 32 07.6	+1.9
VSR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ESBB	Sonseca Array	18.93	282	P	Pn	23 32 09.8	-0.1

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ESDC  Sonseca Array   18.93 282    P      Pn        23 32 10.8 +0.8
        comp=Z,0.1nm,0.3s,baz=75,slow=11,SNR=9.6
ESDC  Sonseca Array   18.93 282    IAmb   IAmb      23 32 16.0
        comp=Z,0.6nm,1.0s
GNI   Garni           19.02  77    P      Pn        23 32 12.3 +1.1
        comp=Z,0.4nm,0.3s,baz=337,slow=5.9,SNR=7.8
GNI                                LR     LR        23 41 01.5
        comp=Z,78nm,19.8s,baz=353,slow=42
GNI   Garni           19.02  77  i P      Pn        23 32 11.9 +0.7
GNI                                pmax   pmax
        comp=Z,52nm,1.0s
GNI   Garni           19.02  77    P      P         23 32 09.8 -0.7
TBLG  Delisi          19.03  72    P      P         23 32 08.4 -2.0
TBLG                               pmax   pmax
        comp=Z,4.0nm,0.7s
TBLG  Delisi          19.03  72    P      P         23 32 08.4 -2.0
LPSR  Galich'ya Gora  19.34  36  eP       Pn        23 32 14.7 -0.1
LPSR                               pmax   pmax
        comp=Z,10.0nm,0.9s
OBN   Obninsk         20.16  28    P      P         23 32 23.0 +0.5
        comp=Z,2.3nm,0.4s,baz=310,slow=15,SNR=3.5
OBN                                LR     LR        23 40 27.8
        comp=Z,35nm,19.9s,baz=192,slow=38
OBN   Obninsk         20.16  28  i P      P         23 32 23.5 +1.0
OBN                                pmax   pmax
        comp=Z,47nm,3.1s
OBN   Obninsk         20.16  28    IAmb   IAmb      23 32 25.8
        comp=Z,9.0nm,0.7s
MDT   Midelt          20.96 263    P      Pn        23 32 33.4 -0.7
        comp=Z,2.7nm,0.8s,baz=69,slow=7.9,SNR=4.3
HFS   Hagfors         22.33 351    P      P         23 32 46.0 +0.1
        comp=Z,7.7nm,0.6s,baz=146,slow=11,SNR=21
EKR10 Eskdalemuir Ar  23.24 325    P      P         23 32 55.8 +0.4
EKR10                              IAmb   IAmb      23 32 57.7
        comp=Z,20nm,1.1s
EKR7  Eskdalemuir Ar  23.26 325    P      P         23 32 55.1 -0.6
EKR7                               IAmb   IAmb      23 32 57.5
        comp=Z,18nm,1.1s
EKR5  Eskdalemuir Ar  23.28 325    P      P         23 32 55.4 -0.5
EKR4  Eskdalemuir Ar  23.28 325    P      P         23 32 56.7 +0.7
EKR4                               IAmb   IAmb      23 32 58.3
        comp=Z,20nm,1.0s
EKB1  Eskdalemuir Ar  23.29 325    P      P         23 32 55.5 -0.4
EKB1                               IAmb   IAmb      23 32 58.2
        comp=Z,21nm,1.1s
EKB2  Eskdalemuir Ar  23.29 325    P      P         23 32 54.2 -1.8
EKB2                               IAmb   IAmb      23 32 58.2
        comp=Z,22nm,1.1s
EKB3  Eskdalemuir Ar  23.30 325    P      P         23 32 55.6 -0.4
EKB3                               IAmb   IAmb      23 32 58.3
        comp=Z,18nm,0.9s
EKA   Eskdalemuir Ar  23.30 325    P      P         23 32 57.0 +1.0
        comp=Z,16nm,1.0s,baz=127,slow=10,SNR=25
EKB5  Eskdalemuir Ar  23.30 325    P      P         23 32 55.6 -0.4
EKB6  Eskdalemuir Ar  23.30 325    P      P         23 32 56.3 +0.2
EKB6                               IAmb   IAmb      23 32 59.9
        comp=Z,23nm,1.1s
EKB8  Eskdalemuir Ar  23.30 325    P      P         23 32 55.8 -0.3
EKB8                               IAmb   IAmb      23 32 58.4
        comp=Z,17nm,0.9s
ESK   Eskdalemuir     23.31 325    P      P         23 32 56.5 +0.4
ESK                                pmax   pmax
        comp=Z,19nm,1.0s
ESK   Eskdalemuir     23.31 325    P      P         23 32 56.5 +0.4
ESK                                IAmb   IAmb      23 32 58.3
        comp=Z,19nm,0.9s
EKB9  Eskdalemuir Ar  23.31 325    P      P         23 32 57.1 +1.0
EKB9                               IAmb   IAmb      23 32 58.4
        comp=Z,19nm,0.9s
EKR1  Eskdalemuir Ar  23.31 325    P      P         23 32 56.5 +0.3
EKR1                               IAmb   IAmb      23 32 58.4
        comp=Z,17nm,0.9s
EKB10 Eskdalemuir Ar  23.31 325    P      P         23 32 56.3 +0.1
NAO01 NORSAR Array S  23.41 348    P      P         23 32 56.8 -0.3
FINES FINESS Array B  23.52   7    P      P         23 32 57.6 -0.5
        comp=Z,5.6nm,0.7s,baz=171,slow=10,SNR=18
FIA1  FINESS Array S  23.52   7    P      P         23 32 57.8 -0.4
NC405 NORSAR Array S  23.54 350    P      P         23 32 58.9 +0.5
NB201 NORSAR Array S  23.54 349    P      P         23 32 58.3 -0.2
NB2   NORSAR Subarra  23.54 349    P      P         23 32 59.1 +0.6
        comp=Z,8.2nm,0.9s,baz=162,slow=9.3
NOA   NORSAR Array B  23.54 349    P      P         23 32 59.2 +0.8
        comp=Z,4.7nm,0.8s,baz=160,slow=8.9,SNR=15
NOA                                LR     LR        23 42 54.0
        comp=Z,44nm,20.1s,baz=30,slow=39
NBO00 NORSAR Array S  23.60 348    P      P         23 32 59.0  0.0
NC303 NORSAR Array S  23.70 349    P      P         23 33 00.2 +0.3
NC303                              IAmb   IAmb      23 33 05.0
        comp=Z,9.9nm,0.8s
KLMR  Klimovskoe      25.66  22  eP       P         23 33 17.3 -0.6
KLMR                               pmax   pmax
        comp=Z,27nm,1.6s
KLMR  Klimovskoe      25.66  22  eP       P         23 33 17.4 -0.5
KLMR                               AMP              23 33 22.5
        comp=Z,27nm,1.6s
PRGR  Permogore       28.19  26  eP       P         23 33 39.6 -1.0
PRGR                               pmax   pmax
        comp=Z,7.0nm,0.7s
GEYT  Alibeck         29.63  79    P      P         23 33 54.8 +1.0
        comp=Z,0.8nm,0.5s,baz=262,slow=10.0,SNR=3.5
GEYT  Alibeck         29.63  79    P      P         23 33 54.0 +0.3
TOA0  Torodi Ar. Sit  29.96 219    P      P         23 33 55.9 -0.9
TOA0                               IAmb   IAmb      23 33 58.3
        comp=Z,5.4nm,1.1s
TORD  Torodi Ar. Bea  29.96 219    P      P         23 33 58.1 +1.3
        comp=Z,2.7nm,0.8s,baz=33,slow=9.3,SNR=13
TORD                               LR     LR        23 46 30.0
        comp=Z,34nm,20.2s,baz=350,slow=37
TORD  Torodi Ar. Bea  29.96 219    P      P         23 33 56.3 -0.5
ARCES ARCESS Array B  31.50   3    P      P         23 34 09.2 -0.6
        comp=Z,2.7nm,0.8s,baz=196,slow=8.3,SNR=7.3
ARCES ARCESS Array B  31.50   3    P      P         23 34 09.9  0.0
KKAR  Karatay Array   37.93  66    P      P         23 35 05.2 -0.5
KKAR  Karatay Array   37.93  66    P      P         23 35 05.2 -0.5
DBIC  Dimbokro        38.81 222    P      P         23 35 14.3 +0.9
        comp=Z,1.5nm,0.5s,baz=8.7,slow=13,SNR=3.3
SCO   Scoresbysund    39.08 339    P      P         23 35 15.7 +0.7
SCO                                pmax   pmax
        comp=Z,17nm,1.1s
SCO   Scoresbysund    39.08 339    P      P         23 35 15.7 +0.7
KSH   Kashi           42.76  70    P      P         23 35 44.9 -1.0
KSH                                sP     pP        23 35 51.7 +0.9
KSH                                PcP    PcP       23 37 36.9 -0.4
KSH                                PcS    PcS       23 41 30.1 +0.6
KSH                                S      S         23 42 07.3 -2.0
KSH                                SS     SS        23 45 09.9  -10
SUMG  Summit          44.72 339  i P      P         23 36 03.9 +2.4
        comp=Z,9.5nm,0.7s
SUMG  Summit          44.72 339    P      P         23 36 03.3 +1.8
SUMG                               pmax   pmax
        comp=Z,3.0nm,0.7s
SUMG  Summit          44.72 339    P      P         23 36 03.3 +1.8
SUMG                               IAmb   IAmb      23 36 07.4
        comp=Z,2.9nm,0.7s
MK31  Makanchi Array  45.42  58    P      P         23 36 07.1 +0.1
MK31                               pmax   pmax
        comp=Z,2.0nm,0.5s
MK31  Makanchi Array  45.42  58    P      P         23 36 07.0 +0.1
MK31                               IAmb   IAmb      23 36 09.9
        comp=Z,2.0nm,0.5s
MKAR  Makanchi Array  45.42  58    P      P         23 36 07.0  0.0
        comp=Z,2.9nm,0.5s,baz=275,slow=7.1,SNR=50
MKAR  Makanchi Array  45.42  58    P      P         23 36 06.8 -0.2
MKAR  Makanchi Array  45.42  58    P      P         23 36 06.8 -0.2
ZAA0  Zalesovo Array  45.78  48    P      P         23 36 10.0 +0.2
ZALV  Zalesovo Beam   45.78  48    P      P         23 36 09.8  0.0
        comp=Z,5.2nm,0.5s,baz=272,slow=9.2,SNR=21
ZALV  Zalesovo Beam   45.78  48    P      P         23 36 09.5 -0.2
ZALV  Zalesovo Beam   45.78  48    P      P         23 36 09.5 -0.2
WMQ   Urumqi          49.88  61  eP       P         23 36 44.7 +2.9
WMQ                                pP     sP        23 36 49.1 +0.5
LSZ   Lusaka          53.73 171    P      P         23 37 13.1 +2.4
        comp=Z,1.2nm,0.7s,baz=38,slow=8.5,SNR=3.9
TLY   Talaya          57.38  47  eP       P         23 37 38.6 +2.1
TLY                                pmax   pmax
        comp=Z,7.0nm,1.1s
SCHQ  Schefferville   58.31 317    P      P         23 37 43.4 +0.3
        comp=Z,0.9nm,0.4s,baz=346,slow=7.5,SNR=4.5
SCHQ  Schefferville   58.31 317    IAmb   IAmb      23 37 45.2
        comp=Z,2.0nm,0.8s
MATP  Matopo          58.84 171    P      P         23 37 46.9 -0.2
        comp=Z,2.0nm,0.8s,baz=355,slow=6.6,SNR=4.2
TIXI  Tiksi           59.66  20    LR     LR        00 07 43.0
        comp=Z,135nm,18.1s,baz=328,slow=40
GTA   Gaotai          59.95  62  eP       P         23 37 55.0 +0.2
GTA                                pP     sP        23 38 04.5 +2.8
GTA                                sP     pP        23 38 08.0 +8.2
SONM  Songino Array   60.56  51    P      P         23 37 58.2 -0.6
        comp=Z,0.5nm,0.6s,baz=287,slow=8.6,SNR=7.0
SONM  Songino Array   60.56  51    P      P         23 37 58.5 -0.3
LBTB  Lobatse         63.10 175    P      P         23 38 18.4 +2.5
        comp=Z,2.9nm,0.9s,baz=0.0,slow=5.1,SNR=3.5
BOSA  Boshof          66.65 175    P      P         23 38 39.5 +0.4
        comp=Z,3.0nm,0.8s,baz=106,slow=3.5,SNR=3.0
HHC   Hu-ho-hao-te    67.14  55  eP       P         23 38 42.5 +0.2
CMAR  Chiang Mai Arr  70.05  82    P      P         23 39 00.5 -0.1
        comp=Z,0.6nm,0.5s,baz=305,slow=6.7,SNR=5.5
CMAR  Chiang Mai Arr  70.05  82    P      P         23 39 00.0 -0.6
CMAR  Chiang Mai Arr  70.05  82    P      P         23 39 00.0 -0.6
YKA   Yellowknife Ar  73.29 340    P      P         23 39 19.9 +0.6
        comp=Z,0.6nm,0.7s,baz=39,slow=5.1,SNR=11
ULM   Lac du Bonnet   75.56 323    P      P         23 39 35.0 +2.1
        comp=Z,2.8nm,1.0s,baz=60,slow=5.1,SNR=5.5
IMAR  Indian Mountai  76.02 357    P      P         23 39 36.7 +1.5
ILAR  Eielson Array   76.85 354    P      P         23 39 42.1 +2.3
        comp=Z,0.7nm,0.8s,baz=345,slow=3.2,SNR=7.8
ILAR  Eielson Array   76.85 354    P      P         23 39 40.1 +0.2
ILAR  Eielson Array   76.85 354    P      P         23 39 40.1 +0.2
PETK  Petropavlovsk-  81.83  24    LR     LR        00 21 12.9
        comp=Z,47nm,18.3s,baz=61,slow=39
ASAR  Alice Springs  122.34  96    PKP    PKPdf     23 46 43.0 -0.7
        comp=Z,0.3nm,0.7s,baz=306,slow=1.6,SNR=3.5
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DDA **10** *23:28:59.6, 39°.20N×43°.40E, h7^{km}±6^{km}, ML1.8*
ATA **10** *23:28:59.0±1.4, 39°.18N×43°.34E, h50^{km}±4^{km}, ML1.5, MW3.6*
ISK **10** *23:28:59.6, 39°.18N×43°.36E, h7^{km}, ML2.0/10*
ISC 10 23:28:59.2±1.0**, 39°.16N**±0°.02×**43°.36E**±0°.02**, h16**^{km}±8^{km}**,**
n27, σ0^{s}.87/42**, Turkey**

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Code  Station Name     Δ°  AZ°     Phase ID          Time     Res
                                   Op     ISC     h  m  s     ISC
VMUR  Van-Muradiye    0.24 136   i P      Pb        23 29 05.4 +0.1
VMUR                             i S      Sg        23 29 09.0 +0.6
VMUR                               IAML             23 29 09.0
        comp=N,257nm,0.4s
VMUR                               IAML             23 29 10.0
        comp=E,292nm,0.3s
CLDR  Caldiran        0.43  92     PG     Pb        23 29 07.9 -0.8
CLDR                               SG     Sb        23 29 15.1  0.0
CLDR  Caldiran        0.43  92   i P      Pb        23 29 08.1 -0.6
CLDR                             i S      Sg        23 29 12.9 -1.1
CLDR                               IAML             23 29 15.0
        comp=E,70nm,0.3s
CLDR                               IAML             23 29 16.0
        comp=N,42nm,0.4s
DYDN  Diyadin         0.46  34   eP       Pb        23 29 09.5 +0.3
DYDN  Diyadin         0.46  34   i P      Pn        23 29 13.9 +2.5
AGRB  Hanur-Agry      0.50 326     PG     Pg        23 29 09.4  0.0
AGRB                               SG     Sg        23 29 16.7 +0.5
VANB  Van             0.57 178     PG     Pn        23 29 13.0 +0.2
MLAZ  Malazgirt-MUS   0.63 268     PG     Pb        23 29 12.5 +0.5
TVAN  Van             0.63 177   eP       Pn        23 29 13.2 -0.6
TVAN                             eS       Sn        23 29 24.0 +0.4
TVAN                               IAML             23 29 26.4
        comp=Z,16nm,0.3s
TVAN  Van             0.63 177   i P      Pn        23 29 13.7 -0.1
TVAN                             i S      Sn        23 29 23.8 +0.2
TVAN                               IAML             23 29 25.0
        comp=N,46nm,0.5s
TVAN                               IAML             23 29 25.0
        comp=E,88nm,0.4s
GEVA  Gevas           0.88 196   eP       Pb        23 29 16.7 +0.4
GEVA                             eS       Sn        23 29 29.7  0.0
GEVA                               IAML             23 29 34.9
        comp=Z,6.5nm,0.5s
GEVA  Gevas           0.88 196   i P      Pn        23 29 17.4 +0.3
GEVA                             i S      Sn        23 29 30.8 +1.1
AKDM  Akdamar-Van     0.88 200     PG     Pn        23 29 17.4 +0.2
IGDI  IGDIR           0.90  38   eP       Pb        23 29 16.1 -0.5
IGDI                             eS       Sn        23 29 29.1 -1.0
IGDI                               IAML             23 29 33.4
        comp=N,2.8nm,0.3s
IGDI  IGDIR           0.90  38   i P      Pb        23 29 16.0 -0.5
IGDI                             i S      Sn        23 29 29.2 -0.8
EATA  Eleskirt        0.97 316   eP       Pg        23 29 16.9 -1.2
EATA                             eS       Sn        23 29 32.6 +0.4
EATA                               IAML             23 29 33.9
        comp=N,6.2nm,0.4s
EATA  Eleskirt        0.97 316   i P      Pg        23 29 17.2 -0.9
EATA                             i S      Sb        23 29 31.6 +1.0
EATA                               IAML             23 29 32.0
        comp=N,32nm,0.5s
EATA                               IAML             23 29 33.0
        comp=E,32nm,0.5s
TASB  TASBURUN-IGDIR  1.07  39     PG     Pn        23 29 20.3 +0.7
TASB                               SG     Sn        23 29 35.5 +1.3
GURO  Guroymak-BITLI  1.20 240     PN     Pg        23 29 23.3 +0.8
BLIS  Bitlis-Merkez   1.23 233   eP       Pn        23 29 20.1 -1.8
BLIS                             eS       Sb        23 29 37.4 -0.4
BLIS                               IAML             23 29 44.3
        comp=Z,4.5nm,0.5s
DIGO  Kars            1.25   0   i P      Pg        23 29 23.9 +0.4
HOMI  Horasan         1.43 309   eP       Pn        23 29 23.3 -1.5
HOMI                             eS       Sn        23 29 41.9 -1.5
HOMI                               IAML             23 29 49.7
        comp=N,9.4nm,0.3s
KOPR  Koprukoy-ERZUR  1.43 306     PN     Pg        23 29 26.5 -0.3
GNI   Garni           1.45  47     PN     Pg        23 29 26.7 -0.5
MUSM  Mu-Merkez       1.51 254   i P      Pn        23 29 25.9 +0.2
SENK  Senkaya-Erzuru  1.60 331     PN     Pb        23 29 28.9 +0.3
AKDA  Akdag           1.81 302   eP       Pb        23 29 32.4 +0.3
```

KRNET **10** *23:37:05.5±0.1, 42°.24N×72°.75E, h17^{km}, mb2.8*
NNC **10** *23:37:05.6±1.0, 42°.22N×72°.77E, h1^{km}±5^{km}, mb3.0, mpv3.3, Error ellipse: s-maj=9.4km s-min=3.2km az=176.0*
SOME **10** *23:37:06.0, 42°.25N×72°.77E, h5^{km}*
KNET **10** *23:37:07.8±0.4, 42°.27N×72°.91E, h11^{km}±1^{km}, ml2.1, Error ellipse: s-maj=2.8km s-min=2.3km az=82.0*
ISC 10 23:37:05.8±1.1**, 42°.25N**±0°.03×**72°.78E**±0°.02**, h4**^{km}±10^{km}**,**
n55, σ1^{s}.06/97**, 38C-14D, Kyrgyzstan**

```
Code  Station Name     Δ°  AZ°     Phase ID          Time     Res
                                   Op     ISC     h  m  s     ISC
MRKS  Merke           0.60  33   eP       Pg        23 37 17.9 +0.6
        baz=35
MRKS                             eS       Sb        23 37 26.6 -1.1
        baz=35
MRKS  Merke           0.60  33   eP       Pg        23 37 17.9 +0.6
        18nm,0.1s
MRKS                             eS       Sb        23 37 26.6 -1.1
        110nm,0.1s
MRKS  Merke           0.60  33     P      Pg        23 37 17.9 +0.6
        18nm,0.1s
MRKS                               S      Sb        23 37 26.6 -1.1
        110nm,0.1s
AML   Almayashu       0.69  99⇑iP      Pg        23 37 19.3 +0.3
        baz=98
AML                             ⇑iS      Sg        23 37 28.9 +0.9
        baz=98
AML   Almayashu       0.69  99 ⇓P      Pg        23 37 19.5 +0.4
        13nm,0.1s,SNR=18
AML                              ⇓S      Sg        23 37 28.9 +0.9
        44nm,0.1s
ARK   Arkit           0.76 234⇑iP      Pg        23 37 19.4 -1.0
        baz=32
ARK                             ⇑iS      Sg        23 37 29.7 -0.5
        baz=32
EKS2  Erkin-Say       0.84  60⇑iP      Pg        23 37 22.0  0.0
        baz=60
EKS2                            ⇑iS      Sg        23 37 33.9 +0.9
        baz=60
EKS2  Erkin-Say       0.84  60 ⇑P      Pg        23 37 22.5 +0.4
        4.3nm,0.1s,SNR=9.1
EKS2                             ⇓S      Sb        23 37 34.3 -0.6
        20nm,0.1s
ARSB  Arslanbob       0.94 171⇑iP      Pg        23 37 23.1 -0.6
        baz=69
ARSB                            ⇑iS      Sg        23 37 35.7 -0.2
        baz=69
ARLS  Aral            1.21 108⇑iP      Pb        23 37 28.9 -0.5
        baz=7.0
ARLS                            ⇑iS      Sg        23 37 45.5 +0.8
        baz=7.0
UCH   Uchtor          1.28  90⇑iP      Pn        23 37 30.0 -1.0
        baz=90
UCH                             ⇑iS      Sg        23 37 48.0 +0.8
        baz=90
UCH   Uchtor          1.28  90 ⇓P      Pb        23 37 30.8 -0.1
        3.4nm,0.1s,SNR=31
UCH                              ⇑S      Sn        23 37 48.9  0.0
        35nm,0.3s
AAK   Ala-Archa       1.32  72⇑iP      Pn        23 37 30.7 -0.6
        baz=72
AAK                             ⇑iS      Sn        23 37 48.9 -0.6
        baz=72
AAK   Ala-Archa       1.32  72    P      Pb        23 37 31.2 -0.2
        5.8nm,0.2s,SNR=5.6
AAK   Ala-Archa       1.32  72 ⇑P      Pn        23 37 30.7 -0.6
        3.2nm,0.5s
AAK                              ⇑S      Sb        23 37 48.1 -0.6
        7.8nm,0.7s
FRU1  Bishkek         1.48  67⇑iP      Pb        23 37 33.4 -0.5
        baz=67
FRU1                            ⇑iS      Sg        23 37 53.6 +0.3
        baz=67
USP   Ospenovka       1.62  51⇑iP      Pb        23 37 35.8 -0.6
        baz=51
USP                             ⇑iS      Sg        23 37 57.8 -0.2
        baz=51
USP   Ospenovka       1.62  51 ⇓P      Pb        23 37 36.2 -0.2
        9.7nm,0.2s,SNR=14
USP                              ⇑S      Sg        23 37 57.9 -0.1
        29nm,0.2s
CHMS  Chumysh         1.64  62⇑iP      Pb        23 37 36.1 -0.4
        baz=62
CHMS                            ⇑iS      Sg        23 37 58.2 -0.2
        baz=62
CHMS  Chumysh         1.64  62 ⇓P      Pb        23 37 36.5 -0.1
        4.6nm,0.2s,SNR=9.7
CHMS                             ⇓S      Sg        23 37 58.6 +0.3
        17nm,0.2s
CHMS  Chumysh         1.64  62 ⇓P      Pb        23 37 36.2 -0.4
        3.4nm,0.5s
CHMS                             ⇓S      Sb        23 37 58.0 +0.4
        11nm,0.6s
KBK   Karagaybulak    1.65  75⇑iP      Pb        23 37 36.5 -0.5
        baz=75
KBK                             ⇑iS      Sg        23 37 59.2 +0.2
        baz=75
KBK   Karagaybulak    1.65  75 ⇓P      Pb        23 37 37.2 +0.2
        9.1nm,0.1s,SNR=22
JBG   Jabagly         1.67 277    P      Pb        23 37 37.1 -0.1
        11nm,0.1s
JBG                                 S      Sg        23 37 59.4 -0.1
        47nm,0.3s
SGDS  Sogindy         1.81  48    P      Pb        23 37 39.9 +0.2
        12nm,0.1s
SGDS                                S      Sg        23 38 03.8 -0.3
        29nm,0.1s
KZA   Kyzart          1.84  94⇑iP      Pb        23 37 39.9 -0.4
        baz=94
KZA                             ⇑iS      Sg        23 38 05.1 +0.1
        baz=94
KZA   Kyzart          1.84  94 ⇓P      Pg        23 37 40.9 -0.2
        8.1nm,0.1s,SNR=10
KK31  Karatay Array   1.88 298 ⇓P      Pn        23 37 39.1 +0.3
        2.3nm,0.3s,baz=127,slow=16,SNR=71
KK31                             ⇑S      Sb        23 38 03.3 -1.3
        7.4nm,0.3s,baz=120,slow=27,SNR=17
IUG   Iuzhnay         2.05 268   eP       Pg        23 37 44.5 -0.6
        5.1nm,0.2s
IUG                              eS       Sg        23 38 13.1 +1.6
        62nm,0.5s
BOOM  Boomskoye usch  2.35  83⇑iP      Pn        23 37 46.8 +1.4
        baz=83
BOOM                            ⇑iS      Sb        23 38 17.5 -0.8
        baz=83
CHM   Chimkent        2.36 273   eP       Pg        23 37 50.7 -0.3
        21nm,0.1s
CHM                              eS       Sg        23 38 22.4 +0.8
        86nm,0.4s
DGS   Degeres         2.42  65   eP       Pb        23 37 51.0 +1.0
        2.2nm,0.2s
DGS                              eS       Sg        23 38 22.9 -0.5
        32nm,0.0s
DGS   Degeres         2.42  65     Pg     Pb        23 37 51.0 +1.0
        2.2nm,0.2s
DGS                                Lg     Lg        23 38 22.9
        32nm,0.0s
KST   Kastek          2.48  70   eP       Pb        23 37 52.1 +1.1
        2.9nm,0.1s
KST                              eS       Sg        23 38 25.1 -0.3
        29nm,0.3s
KST   Kastek          2.48  70     Pg     Pb        23 37 52.1 +1.1
        2.9nm,0.1s
KST                                Lg     Lg        23 38 25.1
        29nm,0.3s
NRN   Naryn           2.54 108⇑iP      Pn        23 37 49.4 +1.3
        baz=8.0
NRN                             ⇑iS      Sb        23 38 21.4 -2.4
        baz=8.0
ULHL  Ulahol          2.57  89⇑iP      Pn        23 37 50.0 +1.6
        baz=89
ULHL                            ⇑iS      Sb        23 38 22.2 -2.4
        baz=89
KRBS  Karabastau      2.57  55   eP       Pb        23 37 53.0 +0.5
        2.2nm,0.2s
KRBS                             eS       Sg        23 38 26.6 -1.7
        8.4nm,0.2s
KRBS  Karabastau      2.57  55     Pg     Pb        23 37 53.0 +0.5
        2.2nm,0.2s
KRBS                               Lg     Lg        23 38 26.7
        8.4nm,0.2s
BTK   Batken          2.64 215⇓iP      Pn        23 37 50.3 +1.0
        baz=14
BTK                             ⇓iS      Sn        23 38 22.9 +1.0
        baz=14
MTBS  Maitube         2.83  71   eP       Pg        23 37 59.0 -1.1
        1.5nm,0.0s
MTBS                             eS       Sg        23 38 36.7  0.0
        12nm,0.2s
MTBS  Maitube         2.83  71     Pg     Pg        23 37 59.0 -1.1
        1.5nm,0.0s
MTBS                               Lg     Lg        23 38 36.7
        12nm,0.2s
IZV   Izvestkoviy     2.93  73   eP       Pg        23 38 00.9 -1.2
        1.9nm,0.1s
IZV                              eS       Sg        23 38 40.0 -0.1
        11nm,0.3s
IZV   Izvestkoviy     2.93  73     Pg     Pg        23 38 00.9 -1.2
        1.9nm,0.1s
IZV                                Lg     Lg        23 38 40.0
        11nm,0.3s
KUU   Kurty           3.08  57   eP       Pb        23 38 02.5 +1.3
        0.5nm,0.2s
KUU                              eS       Sg        23 38 42.9 -1.9
        13nm,0.2s
KUU   Kurty           3.08  57     Pg     Pb        23 38 02.6 +1.3
        0.5nm,0.2s
KUU                                Lg     Lg        23 38 42.9
        13nm,0.2s
TNSS  Tian-Shan       3.17  74   eP       Pb        23 38 04.8 +1.8
        3.3nm,0.2s
TNSS                             eS       Sg        23 38 46.5 -1.2
        11nm,0.3s
TNSS  Tian-Shan       3.17  74     Pg     Pb        23 38 04.8 +1.8
        3.3nm,0.2s
TNSS                               Lg     Lg        23 38 46.5
        11nm,0.3s
KTBS  Karatobe        3.21  62   eP       Pb        23 38 04.7 +1.2
        0.7nm,0.2s
KTBS                             eS       Sg        23 38 46.9 -2.1
        14nm,0.2s
KTBS  Karatobe        3.21  62     Pg     Pb        23 38 04.7 +1.2
        0.7nm,0.2s
KTBS                               Lg     Lg        23 38 46.9
        14nm,0.2s
KDJ   Kajisay         3.27  91⇑iP      Pn        23 38 00.0 +2.0
        baz=90
KDJ                             ⇑iS      Sn        23 38 38.7 +1.2
        baz=90
MDOK  Medeo           3.27  72   eP       Pb        23 38 06.6 +2.1
        2.7nm,0.2s
MDOK                             eS       Sg        23 38 49.8 -1.2
        7.2nm,0.6s
MDOK  Medeo           3.27  72     Pg     Pb        23 38 06.6 +2.1
        2.7nm,0.2s
MDOK                               Lg     Lg        23 38 49.8
        7.2nm,0.6s
CHKK  Chushkaly       3.48  61   eP       Pb        23 38 10.0 +2.1
        0.7nm,0.1s
CHKK                             eS       Sg        23 38 55.6 -1.8
        9.8nm,0.1s
CHKK  Chushkaly       3.48  61     Pg     Pb        23 38 10.0 +2.1
        0.7nm,0.1s
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CHKK				Lg	Lg	23 38 55.6	
	9.8nm,0.1s						

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*KRSC **10** 23:51:06.8±1.3, 54°.34N×164°.08E, h45^{km}±24^{km}, ML4.0*
*IDC **10** 23:51:07.5±1.0, 54°.36N×163°.83E, h0^{km}, mb3.5/8, mb1 3.8/9, mb1mx3.5/35, mbtmp3.5/9, ML2.4/1, Error ellipse: s-maj=33.7km s-min=21.3km az=143.0*
ISC 10 23:51:10.6±0.8, **54°.38N**±0°.04×**164°.07E**±0°.05, **h25**^{km}, **n47**, σ**1**^{s}.**69**/64, **mb3.5**/8, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	1.37	52	eP	Pn	23 51 32.2	-1.9
BKI				eS	Sn	23 51 48.2	-3.3
KBTR	Krutoberegovo	1.97	339	eP	Pn	23 51 39.6	-2.7
KBTR				eS	Sn	23 52 03.1	-3.0
KBG	Krutoberegovo	2.03	338	eP	Pn	23 51 40.8	-2.4
KBG				eS	Sn	23 52 05.2	-2.5
TUMD	Tumrok D	2.28	293	eP	Pn	23 51 46.0	-0.6
TUMD				eS	Sn	23 52 12.9	-1.0
KZV	Kizimen	2.31	290	eP	Pn	23 51 46.4	-0.7
KZV				eS	Sn	23 52 13.7	-1.1
TUMR	Tumrok	2.44	293	eP	Pn	23 51 48.8	-0.2
ZLN	Zelenaya	2.49	312	eP	Pn	23 51 49.3	-0.3
ZLN				eS	Sn	23 52 19.3	+0.1
CIRR	Tsirk	2.58	314	eP	Pn	23 51 50.7	-0.1
LGNR	Loginova	2.58	313	eP	Pn	23 51 51.2	+0.2
LGNR				eS	Sn	23 52 22.2	+0.5
KMNR	Kamenistaya	2.60	304	eP	Pn	23 51 50.3	-0.8
KMNR				eS	Sn	23 52 20.8	-1.1
KIRR	Kirishev	2.66	308	eP	Pn	23 51 51.5	-0.4
KIRR				eS	Sn	23 52 22.6	-0.8
SMKR	Semkarok	2.66	327	eP	Pn	23 51 49.9	-1.9
KPT	Kopyto	2.72	307	eP	Pn	23 51 52.3	-0.4
KRSR	Krestovskiy	2.72	314	eP	Pn	23 51 52.3	-0.4
KRSR				eS	Sn	23 52 24.0	-0.9
SPN	Mys Shipunski	2.73	244	eP	Pn	23 51 50.7	-2.0
SPN				eS	Sn	23 52 21.6	-3.3
KII	Karymskiy	2.74	265	eP	Pn	23 51 51.8	-1.1
KII				eS	Sn	23 52 23.0	-2.2
KLY	Klyuchi	2.75	316	eP	Pn	23 51 50.6	-2.4
KLY				eS	Sn	23 52 21.7	-3.7
SRKR	Sorokina	2.81	325	eP	Pn	23 51 52.6	-1.4
KOZ	Kozyrevsk	2.93	307	eP	Pn	23 51 55.3	-0.3
NLC	Nalytchevo	3.06	249	eP	Pn	23 51 55.6	-1.6
NLC				eS	Sn	23 52 29.7	-3.2
SRDR	Sredinnyy	3.15	310	eP	Pn	23 51 57.6	-1.0
SMAR	Somma	3.32	252	eP	Pn	23 52 00.6	-0.5
UGLR	Uglovaya	3.33	251	eP	Pn	23 52 00.2	-0.9
KRER	Koryakskii	3.33	253	eP	Pn	23 52 01.0	-0.2
AVH	Avacha	3.35	253	eP	Pn	23 52 01.4	0.0
KRX	Arik	3.37	255	eP	Pn	23 52 01.0	-0.7
KOK	Koryaka	3.40	253	eP	Pn	23 52 01.7	-0.4
DALK	Dalny	3.44	249	eP	Pn	23 52 00.2	-2.3
DALK				eS	Sn	23 52 39.2	-3.2
ESO	Esso	3.45	299	eP	Pn	23 52 01.8	-0.9
KRMR	Karymshinskiy	3.87	249	eP	Pn	23 52 07.1	-1.3
KRMR				eS	Sn	23 52 51.2	-1.7
PETK	Petropavlovsk-	3.99	254	Pn	Pn	23 52 10.0	-0.2
	1.4nm,0.3s,baz=71,slow=18,SNR=13						
PETK				Sn	Sn	23 52 53.4	-2.7
	0.4nm,0.3s,baz=91,slow=18,SNR=1.8						
MTVR	Mutnovka	4.00	244	eP	Pn	23 52 10.0	-0.4
MTVR				eS	Sn	23 52 53.7	-2.8
GRL	Gorelyy	4.03	245	eP	Pn	23 52 10.4	-0.3
GRL				eS	Sn	23 52 55.0	-2.1
ASAK	Asacha	4.20	244	eP	Pn	23 52 13.0	-0.1
ASAK				eS	Sn	23 52 59.5	-1.9
APC	Apacha	4.37	253	eS	Sn	23 53 04.7	-0.5
ALID	Alaid	6.27	239	eP	Pn	23 52 41.2	-0.3
ILAR	Eielson Array	26.22	47	P	P	23 56 44.2	+1.2
	0.3nm,0.5s,baz=248,slow=8.1,SNR=5.5						
H11N2	WAKE ISLAND Hy	34.66	175	T	T	00 36 45.6	
	baz=357,slow=74,SNR=8.1						
H11N3	WAKE ISLAND Hy	34.67	175	T	T	00 37 05.8	
	baz=277,slow=74,SNR=5.9						
H11N1	WAKE ISLAND Hy	34.67	175	T	T	00 36 26.5	
	SNR=8.2						
YKA	Yellowknife Ar	40.60	45	P	P	23 58 50.7	+3.0
	0.1nm,0.5s,baz=274,slow=30,SNR=3.7						
MKAR	Makanchi Array	49.70	297	P	P	23 59 58.7	-1.5
	0.2nm,0.5s,baz=57,slow=10,SNR=1.7						
FINES	FINESS Array B	59.84	338	P	P	00 01 13.0	-0.2
	0.7nm,0.6s,baz=0.0,slow=24,SNR=1.3						
NOA	NORSAR Array B	62.92	346	P	P	00 01 36.0	+1.8
	0.3nm,0.8s,baz=21,slow=7.1,SNR=1.3						
TXAR	Lajitas Array	67.97	70	P	P	00 02 08.7	+1.3
	0.2nm,0.5s,baz=241,slow=2.5,SNR=3.5						
WRA	Warramunga Arr	78.30	208	P	P	00 03 08.3	+0.2
	0.9nm,0.8s,baz=20,slow=5.9,SNR=2.8						
ASAR	Alice Springs	81.95	208	P	P	00 03 28.4	+0.6
	0.8nm,0.8s,baz=23,slow=4.8,SNR=5.4						

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*NNC **10** 23:53:10.6±5.9, 39°.61N×75°.92E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=43.1km s-min=33.9km az=164.0*
*SOME **10** 23:53:23.3, 40°.73N×77°.55E, h0^{km}*
*KRNET **10** 23:53:26.1±0.1, 40°.80N×77°.41E, h17^{km}, mb3.1*
ISC 10 23:53:27.1±1.9, **40°.82N**±0°.07×**77°.44E**±0°.04, **h1**^{km}±11^{km}, **n49**, σ**1**^{s}.**37**/87, **30C-12D**, **Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	1.25	300	⇑iP	Pg	23 53 49.0	-2.0
	baz=0.0						
NRN				⇑iS	Sg	23 54 06.4	-0.8
	baz=0.0						
KDJ	Kajisay	1.32	351	⇑iP	Pg	23 53 51.1	-1.3
	baz=53						
KDJ				⇑iS	Sg	23 54 09.5	0.0
	baz=53						
ULHL	Ulahol	1.68	328	⇓iP	Pn	23 53 57.4	-0.4
	baz=29						
ULHL				⇓iS	Sb	23 54 20.2	-0.5
	baz=29						
ULHL	Ulahol	1.68	328	P	Pn	23 53 57.6	-0.3
	SNR=25						
PRZ	Przheval'sk	1.81	23	⇑iP	Pn	23 53 59.7	+0.2
	baz=24						
PRZ				⇑iS	Sb	23 54 24.3	0.0
	baz=24						
ANVS	Anan'yevo	1.97	5	⇑iP	Pn	23 54 02.3	+0.6
	baz=5.0						
ANVS				⇑iS	Sb	23 54 28.6	-0.2
	baz=5.0						
BOOM	Boomskoye usch	2.01	326	⇑iP	Pn	23 54 02.9	+0.6
	baz=27						
BOOM				⇑iS	Sb	23 54 29.6	-0.5
	baz=27						
KZA	Kyzart	2.07	308	⇓iP	Pn	23 54 03.4	0.0
	baz=9.0						
KZA				⇓eS	Sn	23 54 30.6	+0.6
	baz=9.0						
KZA	Kyzart	2.07	308	P	Pn	23 54 04.5	+1.1
	SNR=11						
TNSS	Tian-Shan	2.24	351	eP	Pb	23 54 08.7	+0.1
	33nm,0.4s						
TNSS				eS	Sg	23 54 41.6	+2.4
	48nm,0.2s						
IZV	Izvestkoviy	2.30	345	eP	Pb	23 54 09.5	+0.1
	21nm,0.3s						
IZV				eS	Sg	23 54 42.9	+2.0
	46nm,0.3s						
SATY	Saty	2.35	18	eP	Pn	23 54 09.2	+2.4
	9.7nm,0.1s						
SATY				eS	Sg	23 54 42.5	0.0
	49nm,0.2s						
MDOK	Medeo	2.36	353	eP	Pb	23 54 10.5	+0.1
	16nm,0.2s						
MDOK				eS	Sg	23 54 44.5	+1.7
	56nm,0.3s						
AAA	Alma-Ata	2.42	351	eP	Pb	23 54 12.5	+1.1
	5.4nm,0.1s						
AAA				eS	Sg	23 54 47.6	+2.9
	39nm,0.3s						
KNDC	Almaty	2.42	352	⇑Pn	Pn	23 54 08.2	+0.4
	24nm,0.5s						
KNDC				⇓Sn	Sg	23 54 54.9	+10
	77nm,0.5s						
MTBS	Maitube	2.43	342	eP	Pb	23 54 11.6	0.0
	9.8nm,0.1s						
MTBS				eS	Sg	23 54 46.3	+1.3
	20nm,0.2s						
ZHN	Zhinishke	2.46	17	eP	Pn	23 54 09.5	+1.1
	3.4nm,0.1s						
ZHN				eS	Sb	23 54 42.7	-0.3
	8.6nm,0.2s						
KST	Kastek	2.48	334	eP	Pb	23 54 12.3	-0.2
	10nm,0.2s						
KST				eS	Sg	23 54 47.8	+1.1
	19nm,0.3s						
ARLS	Aral	2.57	295	⇓iP	Pn	23 54 09.9	-0.1
	baz=96						
ARLS				⇓iS	Sn	23 54 41.9	0.0
	baz=96						
UZB	Uzynbulak	2.60	26	eP	Pb	23 54 13.6	-1.0
	6.5nm,0.3s						
UZB				eS	Sg	23 54 49.9	-0.8
	23nm,0.3s						
UCH	Uchtor	2.61	303	⇑eP	Pn	23 54 11.0	+0.2
	baz=4.0						
UCH				⇑iS	Sn	23 54 43.6	+0.3
	baz=4.0						
UCH	Uchtor	2.61	303	P	Pg	23 54 19.5	+2.4
	SNR=5.4						
KBK	Karagaybulak	2.62	315	⇑iP	Pn	23 54 11.0	+0.4
	baz=16						
KBK				⇑iS	Sn	23 54 43.6	+0.5
	baz=16						
KBK	Karagaybulak	2.62	315	P	Pb	23 54 14.5	-0.3
	SNR=12						
KURS	Kuram	2.72	11	eP	Pb	23 54 16.1	-0.4
	8.2nm,0.3s						
KURS				eS	Sg	23 54 54.1	-0.2
	15nm,0.3s						
DGS	Degeres	2.72	333	eP	Pb	23 54 16.8	+0.3
	10nm,0.4s						
DGS				eS	Sg	23 54 55.5	+1.1
	18nm,0.3s						
SHLS	Shalkode	2.78	32	eP	Pg	23 54 20.5	+0.2
	3.8nm,0.2s						
SHLS				eS	Sg	23 55 01.6	+5.4
	52nm,0.5s						
AAK	Ala-Archa	2.86	310	⇓iP	Pn	23 54 14.3	+0.4
	baz=11						
AAK				⇓iS	Sn	23 54 49.1	+0.1
	baz=11						
AAK	Ala-Archa	2.86	310	P	Pb	23 54 18.5	-0.4
	SNR=7.7						
AAK	Ala-Archa	2.86	310	⇑Pg	Pn	23 54 10.3	-3.6
	10nm,0.6s						
AAK				⇑Lg	Lg	23 54 48.6	
	34nm,0.9s						
FRU1	Bishkek	2.89	314	⇑eP	Pn	23 54 14.5	+0.2
	baz=15						
FRU1				⇑iS	Sn	23 54 49.8	+0.1
	baz=15						
KTBS	Karatobe	2.94	349	eP	Pb	23 54 20.4	0.0
	7.7nm,0.2s						
KTBS				eS	Sg	23 55 01.2	-0.4
	30nm,0.4s						
CHMS	Chumysh	2.96	318	⇑iP	Pn	23 54 15.6	+0.4
	baz=19						
CHMS				⇑iS	Sn	23 54 51.5	+0.1
	baz=19						
CHMS	Chumysh	2.96	318	P	Pb	23 54 20.5	-0.1
	SNR=9.0						
CHMS	Chumysh	2.96	318	⇑Pg	Pn	23 54 12.8	-2.4
	6.6nm,0.6s						
CHMS				⇓Lg	Lg	23 55 02.3	
	15nm,0.8s						
CHKK	Chushkaly	3.05	354	eP	Pb	23 54 22.4	+0.3
	10nm,0.2s						
CHKK				eS	Sg	23 55 05.1	+0.1
	18nm,0.2s						
AML	Almayashu	3.10	296	⇑iP	Pn	23 54 17.6	+0.1
	baz=97						
AML				⇑iS	Sn	23 54 55.1	-0.4
	baz=97						
KRBS	Karabastau	3.16	336	eP	Pb	23 54 24.2	+0.2
	4.8nm,0.2s						
KRBS				eS	Sg	23 55 07.7	-0.8
	11nm,0.4s						
KUU	Kurty	3.17	345	eP	Pb	23 54 24.1	-0.2
	1.9nm,0.3s						
KUU				eS	Sg	23 55 07.9	-1.2
	17nm,0.5s						
USP	Ospenovka	3.28	319	⇑iP	Pn	23 54 20.0	+0.4
	baz=20						
USP				⇑iS	Sn	23 54 59.3	0.0
	baz=20						
USP	Ospenovka	3.28	319	P	Pb	23 54 26.3	+0.2
	SNR=11						
EKS2	Erkin-Say	3.30	305	⇑eP	Pn	23 54 20.3	+0.3
	baz=6.0						
EKS2				⇑iS	Sn	23 54 59.8	-0.1
	baz=6.0						
ARXS	Arharly	3.40	5	eP	Pb	23 54 28.9	+0.7
	2.0nm,0.2s						
ARXS				eS	Sg	23 55 15.7	-0.6
	20nm,0.3s						
ARSB	Arslanbob	3.41	280	⇑iP	Pn	23 54 22.0	+0.5
	baz=80						
ARSB				⇑iS	Sn	23 55 02.2	-0.4
	baz=80						
MRKS	Merke	3.69	303	eP	Pb	23 54 35.3	+2.2
	1.4nm,0.1s						
MRKS				eS	Sg	23 55 27.1	+1.4
	3.4nm,0.1s						
DJR	Jarkent	3.91	26	eP	Pb	23 54 36.8	-0.1
	0.7nm,0.2s						
DJR				eS	Sg	23 55 29.7	-3.1
	10nm,0.3s						
TDK	Taldyqorghan	4.24	9	eP	Pb	23 54 43.6	+1.2
	4.2nm,0.1s						
TDK				eS	Sg	23 55 41.2	-1.9
	14nm,0.1s						
KAPS	Kapalarasan	4.67	17	eP	Pb	23 54 50.1	+0.2
	0.3nm,0.1s						
KAPS				eS	Sg	23 55 52.6	-4.6
	3.7nm,0.4s						
KK31	Karatay Array	5.65	296	⇓Pg	Pn	23 54 49.3	-2.8
	0.5nm,0.3s,baz=157,slow=13,SNR=6.9						
KK31				⇓Lg	Lg	23 56 04.4	
	0.7nm,0.3s,baz=168,slow=26						

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*ISK **11** 00:01:09.3, 40°.74N×25°.59E, h8^{km}, ML2.5/13*
*DDA **11** 00:01:09.9, 40°.73N×25°.63E, h25^{km}±1^{km}, ML2.3*
*THE **11** 00:01:09.8, 40°.77N×25°.54E, h2^{km}±1^{km}, ML2.2/5, Error ellipse: s-maj=1.6km s-min=0.5km az=110.0*
*ATH **11** 00:01:09.1, 40°.77N×25°.55E, h20^{km}±2^{km}, ML2.2/3, Error ellipse: s-maj=2.3km s-min=1.3km az=38.0*
ISC 11 00:01:09.1±0.9, **40°.79N**±0°.02×**25°.57E**±0°.02, **h14**^{km}±9^{km}, **n45**, σ**0**^{s}.**66**/76, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMTH	Samothraki Isl	0.32	185	P	Pg	00 01 15.5	-0.1
SMTH				S	Sg	00 01 19.9	-0.1
SMTH	Samothraki Isl	0.32	185	P	Pg	00 01 15.5	-0.1
SMTH				S	Sg	00 01 20.3	+0.3
RDO	Rodhopi	0.36	356	P	Pb	00 01 17.2	-0.1
RDO				S	Sb	00 01 22.3	-0.5
RDO	Rodhopi	0.36	356	P	Pb	00 01 17.2	-0.1
RDO				S	Sb	00 01 22.6	-0.3
ALN	Alexandroupoli	0.38	73	P	Pb	00 01 17.3	-0.3
ALN				S	Sb	00 01 22.7	-0.6
	375nm,0.5s						
ALN	Alexandroupoli	0.38	73	P	Pb	00 01 17.3	-0.3
ALN				S	Sb	00 01 22.8	-0.5
ALN				AML	AML	00 01 23.6	
	comp=E,671µm,0.3s						
ALN				AML	AML	00 01 23.7	
	comp=N,689µm,0.4s						
ENEZ	Enez	0.45	96	PG	Pb	00 01 18.5	-0.2
ENEZ				SG	Sb	00 01 25.3	0.0
THAS	Thassos island	0.67	255	P	Pg	00 01 22.1	-0.1
THAS				S	Sg	00 01 31.2	+0.2
	comp=N,225nm,0.2s						
THAS	Thassos island	0.67	255	P	Pg	00 01 21.9	-0.2
THAS				S	Sg	00 01 30.6	-0.5
THAS				AML	AML	00 01 34.7	
	comp=N,460µm,0.2s						
THAS				AML	AML	00 01 34.9	
	comp=E,427µm,0.3s						
ERIK	Erikli-Kesan	0.73	99	PG	Pb	00 01 23.1	-0.4
ERIK				SG	Sb	00 01 33.2	-0.1
GELI	Tayfur-Gelibol	0.79	119	PG	Pg	00 01 24.6	+0.2
KAVA	Kavala	0.83	285	P	Pg	00 01 25.3	+0.1
KAVA				S	Sg	00 01 36.3	+0.3
	comp=E,282nm,0.4s						
KAVA	Kavala	0.83	285	P	Pg	00 01 25.2	+0.1
KAVA				S	Sg	00 01 36.4	+0.3
KAVA				AML	AML	00 01 40.1	
	comp=N,487µm,0.2s						
KAVA				AML	AML	00 01 40.7	
	comp=E,419µm,0.1s						
KESN	Edirne-Kesan	0.84	87	i P	Pg	00 01 25.6	0.0
KESN				i S	Sg	00 01 37.3	+0.7
KESN				IAML		00 01 41.0	
	comp=N,192nm,0.4s						
KESN				IAML		00 01 43.0	
	comp=E,173nm,0.2s						
KVLA	Kavala	0.91	280	P	Pn	00 01 27.2	-0.3
LIA	Limnos Island	0.94	199	P	Pb	00 01 26.8	-0.3
LIA				S	Sg	00 01 39.7	+0.3
LIA	Limnos Island	0.94	199	P	Pb	00 01 26.8	-0.3
LIA				S	Sb	00 01 39.3	0.0
LPK	Lapseki	1.00	114	PG	Pn	00 01 28.1	-0.6
BOZC	Bozcaada	1.01	158	PG	Pn	00 01 28.5	-0.4
BOZC				SG	Sg	00 01 41.8	-0.1
BOZC	Bozcaada	1.01	158	i P	Pn	00 01 28.5	-0.4
BOZC				i S	Sb	00 01 41.5	0.0
BOZC				IAML		00 01 43.0	
	comp=N,96nm,0.7s						
BOZC				IAML		00 01 44.0	
	comp=E,87nm,0.4s						
EZN	Ezine	1.12	149	PG	Pn	00 01 29.9	-0.4
EZN				SG	Sg	00 01 45.9	+0.6
RKY	Sarkoy-Tekirda	1.23	94	PN	Pg	00 01 32.7	0.0
RKY				SN	Sg	00 01 49.9	+1.2
BAYC	CANAKKALE_Bayr	1.28	144	i P	Pb	00 01 33.2	+0.2
BAYC				i S	Sg	00 01 50.0	-0.5
BAYC				IAML		00 01 52.0	
	comp=N,71nm,0.3s						
BAYC				IAML		00 01 52.0	
	comp=E,90nm,0.4s						
OUR	Ouranopolis	1.29	250	P	Pb	00 01 32.9	-0.3
OUR				S	Sg	00 01 52.0	+1.3
	comp=E,190nm,0.3s						
OUR	Ouranopolis	1.29	250	P	Pb	00 01 32.8	-0.3
KRBG	Karabiga-Canak	1.37	106	PN	Pg	00 01 34.9	-0.6
KRBG				SN	Sg	00 01 53.7	+0.3
EDRB	Edirne	1.38	39	PN	Pg	00 01 35.5	-0.2
EDRB				SN	Sg	00 01 54.9	+1.3
NVR	Nevrokopi	1.41	294	P	Pb	00 01 35.5	+0.2
NVR				S	Sg	00 01 54.8	+0.3
	comp=E,38nm,0.2s						
NVR	Nevrokopi	1.41	294	P	Pb	00 01 35.4	+0.2
KIRK	Kırklareli	1.52	49	i P	Pb	00 01 37.0	-0.1
KIRK				i S	Sb	00 01 55.7	-0.6
KIRK				IAML		00 02 02.0	
	comp=N,18nm,1.2s						
SRS	Serrai	1.53	283	P	Pb	00 01 36.9	-0.5
SRS				S	Sg	00 01 57.7	-0.8
SRS	Serrai	1.53	283	P	Pb	00 01 36.8	-0.5
MRMT	Marmara Adasi	1.55	96	PN	Pb	00 01 37.3	-0.3
MRMT				SN	Sb	00 01 57.5	+0.3
SIGR	SIGRI	1.59	172	P	Pb	00 01 37.6	-0.6
PRK	Paraskevi	1.63	160	P	Pb	00 01 39.1	+0.2
PRK	Paraskevi	1.63	160	P	Pb	00 01 39.2	+0.2
AYVA	Ayvalik	1.71	149	i P	Pb	00 01 40.6	+0.4
AYVA				i S	Sb	00 02 01.7	+0.1
AYVA				IAML		00 02 04.0	
	comp=E,65nm,0.8s						
AYVA				IAML		00 02 06.0	
	comp=N,79nm,0.5s						
EDC	Edincik	1.80	103	PN	Pb	00 01 40.7	-1.2
DKL	Dikili	2.00	149	PN	Pb	00 01 44.3	-0.9
KNT	Kendrikon	2.06	281	P	Pb	00 01 44.5	-1.7
BALB	Balikesir	2.11	122	PN	Pb	00 01 45.3	-1.8
ZEDA	zmir-Bergama	2.16	147	i P	Pb	00 01 49.1	+1.2
ZEDA				i S	Sb	00 02 15.6	+1.1
ZEDA				IAML		00 02 19.0	
	comp=E,16nm,0.7s						
ZEDA				IAML		00 02 19.0	
	comp=N,14nm,0.4s						
STEP	BALIKESIR_Sava	2.17	130	i P	Pb	00 01 46.9	-1.2
STEP				i S	Sb	00 02 15.3	+0.5
STEP				IAML		00 02 18.0	
	comp=N,28nm,0.5s						
STEP				IAML		00 02 18.0	
	comp=E,26nm,0.6s						
DURS	Dursunbey	2.52	117	i P	Pn	00 01 51.4	+1.7
DURS				IAML		00 02 30.0	
	comp=E,9.5nm,0.3s						
DURS				IAML		00 02 31.0	
	comp=N,12nm,1.0s						
STIP	Stip	2.71	291	ePn	Pn	00 01 52.3	+0.1
STIP				eSn	Sb	00 02 32.3	+1.9

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*NEIC **11** 00:13:05.2±2.3, 40°.85N±0°.02×125°.3W±0°.1, h19^{km}±12^{km}, Error ellipse: s-maj=14.3km s-min=2.3km az=84.0*
*NCEDC **11** 00:13:08.4±1.1, 40°.79N±0°.04×125°.16W±0°.07, h24^{km}±7^{km}, Md2.9/32, Error ellipse: s-maj=8.7km s-min=4.9km az=55.0*
*ANF **11** 00:13:08.4±1.0, 40°.91N×124°.76W, h0^{km}, ML2.5/8, Error ellipse: s-maj=9.3km s-min=4.9km az=64.0*
ISC 11 00:13:07.4±2.0, **40°.79N**±0°.04×**125°.14W**±0°.09, **h24**^{km}±14^{km}, **n56**, σ**1**^{s}.**03**/66, **Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	0.69	117		Pb	00 13 21.2	+0.4
KCTM					Sb	00 13 31.3	+1.5
JCC	Jacoby Creek,	0.84	88		Pb	00 13 22.6	-0.8
JCC	Jacoby Creek,	0.84	88		Pb	00 13 22.8	-0.6
JCC				Sg	Sb	00 13 33.8	-0.5
KMPM	Mount Pierce	0.86	115		Pb	00 13 23.5	-0.3
KRPM	Rodgers	0.92	66		Pb	00 13 23.9	-0.9
KSMM	Slide Mountain	0.95	129		Pb	00 13 24.5	-0.8
KCRM	Chalk Rock	1.07	109		Pn	00 13 26.5	-0.4
KHMM	Horse Mountain	1.07	85		Pn	00 13 26.4	-0.7
KRMB	Red Mountain	1.18	51		Pn	00 13 27.3	-1.3
KRMB	Red Mountain	1.18	51		Sn	00 13 41.7	-2.3
KMRM	Mail Ridge	1.23	117		Pn	00 13 29.2	+0.1
KMRM	Mail Ridge	1.23	117		Sn	00 13 45.0	-0.1
KCSM	Cold Springs	1.26	101		Pn	00 13 29.4	-0.3
KOMM	Orleans Mounta	1.37	68		Pn	00 13 30.5	-0.6
KSXB	Camp Six Broad	1.41	42		Pn	00 13 30.5	-1.2
KPPM	Pickett Peak	1.42	108		Pn	00 13 29.1	-2.8
KHBM	Hayfork Bally	1.47	94		Pn	00 13 32.1	-0.5
KBSM	Bell Springs	1.47	126		Pn	00 13 32.4	0.0
KBO	Bosley Butte	1.58	25	Pn	Pn	00 13 33.2	-0.8
KIPM	Iron Peak	1.60	127		Pn	00 13 34.4	+0.1
KCPM	Cahto Peak	1.62	132		Pn	00 13 34.4	-0.2
KBNM	Bluenose Ridge	1.73	120		Pn	00 13 36.8	+0.6
KFPM	Farley Peak	1.75	131		Pn	00 13 35.9	-0.4
LGPM	Granite Peak	1.76	85		Pn	00 13 35.9	-0.5
LBPM	Beegum Peak	1.78	105		Pn	00 13 36.7	-0.1
L02E	Cave Junction	1.79	40	P	Pn	00 13 36.3	-0.5
	baz=221,SNR=31						
L02E				S	Sn	00 13 56.9	-1.9
	baz=221						
M02C	Callahan	1.83	70	P	Pn	00 13 37.2	-0.2
	baz=252,SNR=29						
M02C				S	Sn	00 13 59.0	-0.9
	baz=252						
N02D	Trinity Center	1.85	84		Pn	00 13 37.9	+0.2
N02D	Trinity Center	1.85	84	P	Pn	00 13 37.7	-0.1
	baz=265,SNR=6.8						
N02D				S	Sn	00 14 00.5	0.0
	baz=265						
O02D	Mt. Diablo Mer	1.89	108		Pn	00 13 38.4	+0.1
O02D	Mt. Diablo Mer	1.89	108	P	Pn	00 13 38.8	+0.4
	baz=290						
O02D				S	Sn	00 14 00.9	-0.5
	baz=290						
LBKM	Bonanza King	1.90	80		Pn	00 13 38.7	+0.3
GNAM	Navarro Ridge	1.97	143		Pn	00 13 38.5	-0.8
WDC	Whiskeytown Da	1.99	95		Pn	00 13 39.3	-0.2
WDC	Whiskeytown Da	1.99	95		Pn	00 13 40.0	+0.4
YBH	Yreka Blue Hor	2.06	62		Pn	00 13 41.0	+0.4
GROM	Round Mountain	2.08	114		Pn	00 13 41.4	+0.5
GHMM	Hull Mountain	2.13	127		Pn	00 13 41.7	+0.1
GVV	Valley View	2.14	117		Pn	00 13 42.3	+0.6
KEBM	Edson Butte	2.17	16	Pn	Pn	00 13 41.3	-0.7
K02D	Willamette Mer	2.20	30	P	Pn	00 13 42.2	-0.3

	baz=211,SNR=93						
K02D				S	Sn	00 14 08.5	-0.5
	baz=211						
LSHM	Sage Hen Hill	2.35	89		Pn	00 13 45.0	+0.4
HOPS	Hopland Field	2.40	138	Pn	Pn	00 13 45.0	-0.2
HUMO	Hull Mountain	2.44	41		Pn	00 13 46.1	+0.2
L04D	Klamath Falls	2.56	55	P	Pn	00 13 49.7	+2.1
	baz=237,SNR=24						
L04D				S	Sn	00 14 20.7	+2.6
	baz=237						
O03E	Paynes Creek	2.59	100	P	Pn	00 13 47.9	0.0
	baz=282						
O03E				S	Sn	00 14 18.3	-0.4
	baz=282						
ORV	Oroville	3.05	113		Pn	00 13 54.0	-0.2
I03D	Drain, OR	3.19	24	P	Pn	00 13 57.1	+1.0
	baz=205,SNR=44						
J04D	Umpqua Nationa	3.33	42	P	Pn	00 14 00.6	+2.4
	baz=224,SNR=5.7						
I02D	Swisshome	3.45	16	P	Pn	00 13 60.0	+0.4
	baz=197,SNR=8.5						
I04A	Tendick Farm,	3.62	33	P	Pn	00 14 04.0	+2.0
	baz=215						
I04A				S	Sn	00 14 44.5	+0.5
	baz=215						
AFDM	Forest Hills D	3.70	118	Pn	Pn	00 14 04.5	+1.4
H04D	Lebanon	4.13	25	P	Pn	00 14 10.5	+1.5
	baz=206,SNR=7.2						
PINE	Pine Mountain	4.32	45	Pn	Pn	00 14 13.6	+1.7
H04A	Detroit Lake	4.46	28	Pn	Pn	00 14 15.2	+1.7
YERR	Yerington	4.88	110	Pn	Pn	00 14 20.5	+1.0

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*NCEDC **11** 00:14:29.4±1.0, 40°.55N±0°.04×125°.3W±0°.1, h18^{km}±7^{km}, Md2.8/35, Error ellipse: s-maj=11.2km s-min=6.1km az=81.0*

NEIC 11 00:14:26.2±1.2**, 40°.59N**±0°.03×**125°.40W**±0°.09**, h13**^{km}±9^{km}**, Error ellipse: s-maj=9.7km s-min=4.4km az=76.0, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCTM	Capetown	0.82	97		Pn	00 14 43.4	-0.1
KCTM					Sn	00 14 55.4	0.0
KMPM	Mount Pierce	0.99	99		Pg	00 14 45.6	+0.2
KMPM					Sg	00 14 58.7	+0.4
KSMM	Slide Mountain	1.02	113		Pb	00 14 45.5	-0.3
JCC	Jacoby Creek,	1.07	77		Pb	00 14 45.9	-0.7
JCC	Jacoby Creek,	1.07	77		Sb	00 14 59.6	-0.8
JCC	Jacoby Creek,	1.07	77		Pb	00 14 46.1	-0.4
JCC	Jacoby Creek,	1.07	77		Sb	00 14 59.9	-0.5
KCRM	Chalk Rock	1.22	97		Pn	00 14 49.0	0.0
KHMM	Horse Mountain	1.30	77		Pn	00 14 49.7	-0.6
KHMM	Horse Mountain	1.30	77		Sb	00 15 06.4	-0.9
KMRM	Mail Ridge	1.34	105		Pb	00 14 51.2	-0.1
KCSM	Cold Springs	1.44	91		Pn	00 14 52.3	+0.2
KBSM	Bell Springs	1.54	115		Pn	00 14 53.4	0.0
KCPM	Cahto Peak	1.66	122		Pn	00 14 55.3	+0.2
KHBM	Hayfork Bally	1.66	87		Pn	00 14 54.9	-0.3
KIPM	Iron Peak	1.66	117		Pn	00 14 55.3	+0.1
KSXB	Camp Six Broad	1.69	42		Pn	00 14 54.8	-0.8
KFPM	Farley Peak	1.79	121		Pn	00 14 56.7	-0.2
KBNM	Bluenose Ridge	1.83	112		Pn	00 14 58.0	+0.5
GTC	Three Chop Rid	1.85	129		Pn	00 14 57.4	-0.2
KBO	Bosley Butte	1.85	28	Pn	Pn	00 14 57.5	-0.3
LBPM	Beegum Peak	1.94	97		Pn	00 14 59.0	0.0
GNAM	Navarro Ridge	1.94	135		Pn	00 14 58.9	0.0
LGPM	Granite Peak	1.98	80		Pn	00 14 59.2	-0.3
KTRM	Thompson Ridge	2.02	48		Pn	00 15 00.9	+0.8
O02D	Mt. Diablo Mer	2.04	101		Pn	00 15 00.7	+0.4
N02D	Trinity Center	2.08	78		Pn	00 15 01.4	+0.5
M02C	Callahan	2.09	67		Pn	00 15 01.3	+0.3
GHOM	Hamilton Openi	2.10	136		Pn	00 15 01.1	-0.1
WDC	Whiskeytown Da	2.18	89		Pn	00 15 02.3	+0.1
WDC	Whiskeytown Da	2.18	89		Pn	00 15 02.8	+0.6
GROM	Round Mountain	2.19	107		Pn	00 15 03.5	+1.0
GVV	Valley View	2.24	110		Pn	00 15 04.0	+0.9
GASB	Alder Springs	2.26	113		Pn	00 15 04.1	+0.7
GHLM	Highland Sprin	2.40	129		Pn	00 15 05.1	-0.2
HOPS	Hopland Field	2.40	131		Pn	00 15 05.3	+0.1
LSHM	Sage Hen Hill	2.56	84		Pn	00 15 07.9	+0.4
ORV	Oroville	3.17	108	Pn	Pn	00 15 16.0	+0.3
ORV				Sn	Sn	00 15 51.8	-1.6
BEKR	Beckworth	3.92	99	Pn	Pn	00 15 26.4	+0.1

UPP 11 00:29:56.3±0.1**, 67°.82N**×**20°.16E, h0**^{km}**, ML2.9, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOVU	Salmi	0.41	0	P	Pg	00 30 04.2	+0.1
KOVU				S	Sg	00 30 09.4	+0.1
DUNU	Dundret	0.72	167	P	Pg	00 30 09.9	-0.2
LANU	Lannavaara	0.73	71	P	Pg	00 30 10.1	-0.2
MASU	Masugnsbyn	0.79	116	P	Pg	00 30 11.3	-0.2
PAJU	Pajala	1.39	124	P	Pg	00 30 21.6	-1.3
ERTU	Ertsjaerv	1.50	147	P	Pn	00 30 24.0	-0.4

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*HEL **11** 00:30:04.9, 67°.86N×20°.02E, h0^{km}, ML1.7, Suspected explosion*

UPP 11 00:30:06.0±0.1**, 67°.83N**×**20°.24E, h0**^{km}**, ML2.8, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.13	17	P	Pg	00 30 08.8	+0.3
KUA				S	Sg	00 30 10.8	+0.7
KUA	Kurravaara	0.13	17	*i* P	Pg	00 30 08.8	+0.3
KUA				*i* S	Sg	00 30 10.8	+0.7
KOVU	Salmi	0.40	356	P	Pg	00 30 13.5	0.0
KOVU	Salmi	0.40	356	*i* P	Pg	00 30 13.5	0.0
LANU	Lannavaara	0.70	71	P	Pg	00 30 19.1	-0.2
LANU	Lannavaara	0.70	71	*e*P	Pg	00 30 19.3	-0.1
	baz=253						
LANU				*e*S	Sg	00 30 28.6	+0.2
DUNU	Dundret	0.72	170	P	Pg	00 30 19.7	-0.1
DUNU	Dundret	0.72	170	*i* P	Pg	00 30 19.7	-0.1
KIF	Kilpisjarvi	1.20	10	*e*PB	Pb	00 30 29.5	0.0
KIF				MSG		00 30 42.0	
	comp=Z,6.2nm,0.2s						
KIF				*e*SB	Sb	00 30 45.1	-0.4
PAJU	Pajala	1.38	125	P	Pg	00 30 31.2	-1.1
PAJU	Pajala	1.38	125	*e*P	Pg	00 30 31.2	-1.1
HEF	Hetta	1.41	64	*e*PG	Pn	00 30 32.1	-0.8
HEF				MSG		00 30 49.0	
	comp=Z,5.9nm,0.2s						
HEF				*e*SN	Sn	00 30 54.3	+2.2
ERTU	Ertsjaerv	1.49	148	*e*P	Pn	00 30 33.0	-1.0
ERTU				*e*SN	Sg	00 30 53.7	-0.1
TOF	Tornio	2.38	136	*e*PB	Pn	00 30 47.4	+1.2
	baz=320						
TOF				MSG		00 31 17.7	
	comp=Z,3.9nm,0.2s						
TOF				*e*SG	Sb	00 31 19.5	-0.1
SGF	Sodankyl	2.44	96	*e*PB	Pb	00 30 49.0	-1.6
	baz=282						
SGF				*e*		00 31 26.0	
RNF	Rovaniemi	2.56	116	*e*PB	Pn	00 30 50.4	+1.7
RNF				*e*SG	Sb	00 31 24.9	+0.2
ARE0	ARCESS Array S	2.58	46	*e*P	Pn	00 30 50.1	+1.2
	baz=230						
ARE0				*e*		00 31 16.2	
KEV	Kevo	3.13	49	*e*S	Sn	00 31 35.5	+1.1
KEV				MSG		00 31 37.9	
	comp=Z,2.0nm,0.2s						

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*SJA **11** 00:38:19.4±0.6, 31°.25S×69°.14W, h104^{km}±2^{km}, ML4.2, MW4.2*

*NEIC **11** 00:38:19.7±1.6, 31°.24S±0°.05×69°.11W±0°.06, h112^{km}±4^{km}, Error ellipse: s-maj=7.7km s-min=6.5km az=214.0*

*IDC **11** 00:38:20.2±0.5, 31°.30S×69°.06W, h109^{km}±3^{km}, mb3.9/11, mb1 3.9/15, mb1mx3.8/27, mbtmp4.2/15, Error ellipse: s-maj=16.3km s-min=9.9km az=45.0*

*GUC **11** 00:38:20.1±0.7, 31°.22S×69°.17W, h118^{km}±4^{km}, ML4.4*

ISC 11 00:38:19.6±0.5**, 31°.22S**±0°.04×**69°.13W**±0°.03**, h106**^{km}±4^{km}**, n97, σ1^{s}.34**/129**, mb4.1**/15**, 8C-1D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZON	Zonda	0.51	130	*i* P	Pn	00 38 36.5	+0.4
ZON				*e*S	Sn	00 38 48.6	+0.1
ZON				IAML		00 38 50.7	
	comp=Z,9µm,0.5s						
RTLL	Cerro Villicun	0.57	101	*i* S	Sn	00 38 48.4	-0.9
RTLL	Cerro Villicun	0.57	101	*i* P	Pn	00 38 36.8	+0.2
RTLL				*e*S	Sn	00 38 49.7	+0.4
RTLL				IAML		00 38 51.2	
	comp=Z,5µm,0.4s						
RTLS	Leoncito	0.60	194	*i* P	Pn	00 38 37.6	+0.5
RTLS				*e*S	Sn	00 38 50.8	+0.6
RTLS				IAML		00 38 51.6	
	comp=Z,8µm,0.6s						
AMOG	MOGNA	0.61	63	*i* P	Pn	00 38 37.6	+0.7
ACCO	Cerro Coronel	0.63	5	*i* P	Pn	00 38 38.6	+1.2
RTCV	Cerro Valdivia	0.82	142	*i* P	Pn	00 38 39.1	+0.4
CFA	Coronel Fontan	0.86	117	P	Pn	00 38 39.4	+0.3
	comp=Z,290nm,0.3s,baz=264,slow=7.1,SNR=3500						
CFA				S	Sn	00 38 54.3	+0.6
	comp=Z,2µm,0.3s,baz=129,slow=22,SNR=205						
CFA	Coronel Fontan	0.86	117	*i* P	Pn	00 38 39.6	+0.5
CFA				*e*S	Sn	00 38 54.2	+0.5
AROD	Rodeo	1.09	344	*i* P	Pn	00 38 43.4	+1.6
AROD				*e*S	Sn	00 39 00.4	+1.9
CO03	El Pedregal	1.39	285	⇑ *e*P	Pn	00 38 46.0	+1.1
CO03				*i* S	Sn	00 39 04.8	+0.7
CO03				IAML		00 39 07.2	
	comp=E,8µm,0.4s						
ASAL	Salagasta	1.39	170	*i* P	Pn	00 38 45.7	+0.7
ASAL				*e*S	Sn	00 39 04.4	+0.3
CO02	Combarbal	1.60	270	⇑ *i*P	Pn	00 38 48.1	+0.6
CO02				*i* S	Sn	00 39 09.2	+0.5
CO02				IAML		00 39 13.2	
	comp=N,10µm,0.4s						
ARCO	CERRO ARCO	1.63	174	*i* P	Pn	00 38 48.4	+0.5
ARCO				*e*S	Sn	00 39 09.8	+0.4
ARCO				IAML		00 39 12.9	
	comp=Z,6µm,0.4s						
CO04	Los Peladeros	1.77	242	⇓ *i*P	Pn	00 38 50.1	+0.3
CO04				*i* S	Sn	00 39 13.5	+0.7
CO04				IAML		00 39 15.8	
	comp=N,4µm,0.4s						
GO04	Tololo Observa	1.77	306	⇑ *i*P	Pn	00 38 50.4	+0.6
GO04				*i* S	Sn	00 39 13.2	+0.4
GO04	Tololo Observa	1.77	306		Pn	00 38 50.6	+0.8
GO04					Sn	00 39 14.7	+1.9
AAGR	Agrelo	1.88	172	*i* P	Pn	00 38 51.5	+0.6
ACAN	Cantantal	1.96	123	*i* P	Pn	00 38 52.6	+0.7
PEL	Peldehue	2.33	214	⇑ *i*P	Pn	00 38 57.1	+0.4
PEL				*i* S	Sn	00 39 25.4	+0.3
PEL	Peldehue	2.33	214		Pn	00 38 57.1	+0.4
ROCH	El Roble	2.37	222	⇑ *i*P	Pn	00 38 57.3	-0.1
ROC1	El Roble	2.37	222		Pn	00 38 57.3	-0.1
ROC1				Sn	Sn	00 39 25.6	-0.8
ROC1	El Roble	2.37	222	*i* P	Pn	00 38 57.7	+0.2
APLL	PUNTA DE LOS L	2.39	71	*i* P	Pn	00 38 58.3	+0.9
APLL				IAML		00 39 30.2	
	comp=Z,294nm,0.5s						
CLCH	Cerro Calan	2.48	208	*e*P	Pn	00 38 57.9	-0.7
CLCH				*i* S	Sn	00 39 27.5	-1.1
CLCH				IAML		00 39 34.8	
	comp=E,2µm,0.5s						
MT03	Universidad Ad	2.55	207	⇑ *i*P	Pn	00 39 00.3	+0.7
MT03				*i* S	Sn	00 39 31.2	+0.8
MT03				IAML		00 39 36.8	
	comp=N,3µm,0.5s						
LCO	Las Campanas	2.59	328	Pn	Pn	00 39 01.1	+0.8
VCA	Vinchina	2.60	18	*i* P	Pn	00 39 01.8	+1.4
VCA				IAML		00 39 37.5	
	comp=Z,923nm,0.3s						
LMEL	Las Melosas	2.77	199	*e*P	Pn	00 39 03.7	+1.0
LMEL				*i* S	Sn	00 39 36.2	+0.4
LMEL				IAML		00 39 46.4	
	comp=N,521nm,0.4s						
MRA	San Martin	3.14	113	*i* P	Pn	00 39 07.6	+0.1
MT01	Popeta	3.19	214	⇑ *e*P	Pn	00 39 05.8	-2.2
MT01				*i* S	Sn	00 39 34.9	-10
GO03	Copiap	3.74	345	⇑ *i*P	Pn	00 39 15.8	+0.4
GO03				*i* S	Sn	00 39 57.8	-0.8
GO03				IAML		00 40 40.4	
	comp=N,304nm,0.5s						
GO03	Copiap	3.74	345		Pn	00 39 15.9	+0.4
GO05	Huala	4.45	211		Pn	00 39 22.1	-2.8
GO02	Mina Guanaco	6.05	356		Pn	00 39 46.3	-0.6
PB10	IPOC Station P	7.78	350	Pn	Pn	00 40 07.2	-2.9
LVC	Limon Verde	8.58	1	P	Pn	00 40 18.9	-2.4
	comp=N,3.3nm,0.3s,baz=168,slow=9.2,SNR=26						
LVC				S	Sn	00 41 53.8	-2.7
	comp=N,1.8nm,0.3s,baz=153,slow=16,SNR=2.8						
PB04	IPOC Station P	8.90	354	Pn	Pn	00 40 23.4	-2.1
PLCA	Paso Flores	9.56	187	P	Pn	00 40 32.2	-2.1
	comp=N,0.6nm,0.3s,baz=26,slow=10,SNR=16						
PB01	IPOC Station P	10.14	358		Pn	00 40 38.1	-4.2
PB11	IPOC Station P	11.42	358	Pn	Pn	00 40 55.2	-4.4
CPUP	Villa Florida	11.44	68	P	Pn	00 40 59.0	-0.8
	comp=N,0.1nm,0.3s,baz=236,slow=15,SNR=3.0						
CPUP	Villa Florida	11.44	68	Pn	Pn	00 40 57.4	-2.4
MNMC	Minye Minye	12.04	358		Pn	00 41 04.4	-3.7
LPAZ	La Paz	14.89	4	P	Pn	00 41 46.8	+1.4
	comp=N,0.7nm,0.3s,baz=168,slow=7.9,SNR=48						
LPAZ	La Paz	14.89	4		Pn	00 41 46.0	+0.6
SIV	San Ignacio	16.85	28	P	Pn	00 42 08.8	-0.3
	comp=N,0.3nm,0.3s,baz=218,slow=8.7,SNR=28						
EFI	East Falkland	22.01	161	P	P	00 43 03.9	-1.3
SAML	Samuel	22.84	15	P	P	00 43 11.8	-2.1
USHA	Ushuaia	23.61	179	P	P	00 43 19.9	-0.8
	comp=N,6.2nm,0.8s,baz=271,slow=13,SNR=5.6						
BDFB	Brasilia	24.75	56	P	P	00 43 31.4	-0.1
	comp=N,2.2nm,0.6s,baz=189,slow=11,SNR=4.5						
BDFB	Brasilia	24.75	56	P	P	00 43 31.2	-0.4
PTGA	Pitinga	31.54	18	P	P	00 44 31.7	-0.2
	comp=N,0.7nm,0.3s,baz=170,slow=12,SNR=6.5						
PTGA	Pitinga	31.54	18	IAmb	IAmb	00 44 32.3	
	comp=Z,2.8nm,0.8s						
VNA3	Neumayer Olymp	51.03	159	P	P	00 47 10.6	+0.1
VNA2	Neumayer--Watz	51.65	158	P	P	00 47 15.4	+0.4
	baz=285,slow=8.5						
SNAA	Sanae	53.26	159	P	P	00 47 27.1	+0.1
SNAA	Sanae	53.26	159	P	P	00 47 27.4	+0.4
	comp=Z,3.6nm,0.7s,baz=305,slow=8.9,SNR=4.7						
SNAA	Sanae	53.26	159	P	P	00 47 25.8	-1.2
SNAA				IAmb	IAmb	00 47 27.8	
	comp=Z,7.0nm,1.1s						
QSPA	South Pole Qui	59.01	180	P	P	00 48 08.8	+0.7
TXAR	Lajitas Array	68.60	328	P	P	00 49 12.5	+1.2
	comp=Z,0.6nm,0.7s,baz=158,slow=8.7,SNR=8.9						
TXAR				pP	pP	00 49 39.6	+1.1
	comp=Z,0.9nm,0.8s,baz=147,slow=8.9,SNR=7.5						
TXAR	Lajitas Array	68.60	328	P	P	00 49 11.7	+0.4
WVT	Waverly	69.25	344	P	P	00 49 15.3	+0.3
LIC	Lamto	71.55	71	*e*PKP2	P	00 49 29.5	-0.1
	comp=Z,8.2nm,0.6s						
LIC	Lamto	71.55	71	P	P	00 49 29.5	-0.1
TIC	Toumodi	71.80	70	*e*PKP2	P	00 49 31.0	-0.1
TIC	Toumodi	71.80	70	P	P	00 49 31.0	-0.1
KIC	Kosan Boka	71.86	71	*e*PKP2	P	00 49 30.6	-0.9
	comp=Z,0.7nm,0.2s						
DBIC	Dimbokro	71.95	70	P	P	00 49 32.0	0.0
	comp=Z,7.8nm,0.8s,baz=203,slow=7.5,SNR=12						
DBIC	Dimbokro	71.95	70	IAmb	IAmb	00 49 32.3	
	comp=Z,6.4nm,0.7s						
T25A	Trinidad	75.59	332	P	P	00 49 52.7	-0.3
L40A	Anamosa	75.71	343	P	P	00 49 52.8	-0.5
ECSD	EROS Data Cent	78.72	340	P	P	00 50 09.5	-0.5
E43A	Lone Tree Farm	78.91	348	P	P	00 50 11.4	+0.4
E43A				IAmb	IAmb	00 50 12.1	
	comp=Z,2.9nm,0.7s						
BOSA	Boshof	79.16	117	P	P	00 50 12.8	-0.4
	comp=Z,2.5nm,0.9s,baz=236,slow=3.6,SNR=3.1						
BOSA	Boshof	79.16	117	IAmb	IAmb	00 50 30.4	
	comp=Z,13nm,1.4s						
D41A	Chassel	79.86	347	P	P	00 50 16.3	+0.1
D41A				IAmb	IAmb	00 50 18.0	
	comp=Z,7.1nm,0.7s						
TORD	Torodi Ar. Bea	80.94	69	P	P	00 50 22.6	0.0
	comp=Z,4.5nm,0.7s,baz=282,slow=6.8,SNR=43						
TORD				pP	pP	00 50 50.3	+0.1
	comp=Z,2.0nm,0.7s,baz=264,slow=5.4,SNR=4.8						
TORD	Torodi Ar. Bea	80.94	69	P	P	00 50 22.0	-0.7
PDAR	Pinedale Array	82.45	331	P	P	00 50 31.1	+0.8
	comp=Z,0.2nm,0.6s,baz=116,slow=4.1,SNR=3.1						
PDAR				pP	pP	00 50 59.5	+1.1
	comp=Z,0.4nm,0.6s,baz=122,slow=5.6,SNR=3.9						
ULM	Lac du Bonnet	84.51	343	P	P	00 50 40.3	0.0
	comp=Z,1.5nm,0.7s,baz=180,slow=4.0,SNR=5.3						
ULM				pP	pP	00 51 08.9	+0.4
	comp=Z,0.9nm,0.5s,baz=148,slow=4.8,SNR=3.5						
SCHQ	Schefferville	85.72	1	P	P	00 50 46.4	+0.2
	comp=Z,1.4nm,0.8s,baz=194,slow=4.2,SNR=3.4						
ASAR	Alice Springs	121.13	205	PKP	PKPdf	00 56 59.4	-1.2
	comp=Z,0.6nm,0.6s,baz=150,slow=2.0,SNR=10.0						
WRA	Warramunga Arr	124.36	207	PKP	PKPdf	00 57 06.0	-0.8
	comp=Z,1.6nm,0.4s,baz=153,slow=1.7,SNR=14						
BVAR	Borovoye Array	143.58	41	PKP	PKPbc	00 57 39.7	+0.5
	comp=Z,0.3nm,0.5s,baz=327,slow=2.4,SNR=4.2						
AAK	Ala-Archa	148.99	58	PKPbc	PKiKP	00 57 56.4	-0.2
	comp=Z,5.9nm,0.7s,baz=197,slow=1.9,SNR=23						
AAK				PKPab	PKPab	00 58 00.0	+0.2
	comp=Z,1.4nm,0.6s,baz=270,slow=4.0,SNR=4.2						
AAK	Ala-Archa	148.99	58		PKiKP	00 57 56.0	-0.6
KURBB	Kurchatov Arra	149.17	42	PKPbc	PKPbc	00 57 55.5	+0.3
	comp=Z,1.8nm,0.7s,baz=306,slow=3.4,SNR=13						
KURBB				PKPab	PKPab	00 57 60.0	-0.1
	comp=Z,1.3nm,0.7s,baz=293,slow=4.6,SNR=9.2						
KURBB				pPKPbc	pPKPbc	00 58 25.0	+0.1
	comp=Z,0.5nm,0.7s,baz=302,slow=3.2,SNR=3.2						
KSH	Kashi	150.51	64	PKPbc	PKPbc	00 57 59.3	+0.2
KSH				sPKP		00 58 36.0	
KSH				PP	PP	01 01 42.5	+6.1
KSH				SKS	SKSdf	01 04 56.8	+4.9
ZALV	Zalesovo Beam	150.57	32	PKPbc	PKPbc	00 57 58.8	+0.2
	comp=Z,6.8nm,0.6s,baz=302,slow=3.5,SNR=28						
ZALV				pPKPbc	pPKPbc	00 58 28.1	0.0
	comp=Z,2.8nm,0.6s,baz=304,slow=5.0,SNR=3.3						
ZALV	Zalesovo Beam	150.57	32		PKPbc	00 57 58.2	-0.4
MK31	Makanchi Array	153.08	47	PKPdf	PKPdf	00 57 56.0	-1.1
MK31					PKPbc	00 58 04.4	-0.2
MK31					PKPab	00 58 16.2	-0.3
MKAR	Makanchi Array	153.08	47	PKPbc	PKPbc	00 58 04.5	-0.1
	comp=Z,1.9nm,0.7s,baz=295,slow=1.9,SNR=18						
MKAR				PKPab	PKPab	00 58 16.6	0.0
	comp=Z,2.1nm,0.7s,baz=299,slow=4.0,SNR=16						
MKAR				pPKPbc	pPKPbc	00 58 34.2	-0.1
	comp=Z,1.1nm,0.7s,baz=292,slow=2.2,SNR=4.0						
MKAR	Makanchi Array	153.08	47		PKPbc	00 58 03.9	-0.6
MKAR					PKPab	00 58 16.6	0.0
LZH	Lanzhou	172.40	48	*e*PKP	PKPdf	00 58 16.3	0.0
LZH				pPKP	pPKPdf	00 58 48.5	+2.4
LZH				sPKP		00 59 01.2	
LZH				PKP	PKPab	00 59 43.6	+2.2
CD2	Chengdu	173.89	91	PKP	PKPdf	00 58 15.1	-1.8

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*NEIC **11** 00:43:40.4±1.9, 19°.48N±0°.05×67°.77W±0°.04, h23^{km}±13^{km}, Error ellipse: s-maj=9.4km s-min=2.3km az=216.0*

*RSPR **11** 00:43:41.0, 19°.53N×67°.80W, h85^{km}±10^{km}, MD3.4/4*

ISC 11 00:43:41.4±2.2**, 19°.4N**±0°.1×**67°.85W**±0°.05**, h21**^{km}**, n16, σ0^{s}.43**/22**, 2C-2D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCDR	Punta Cana, DR	1.01	210	Pn	Pb	00 43 59.6	-0.6
PCDR				Sn	Sb	00 44 13.0	0.0
MPR	Mayaguez	1.36	150	Pn	Pn	00 44 04.4	-0.6
AOPR	Arecibo Observ	1.47	135	*e*S	Sb	00 44 26.4	+0.1
AOPR	Arecibo Observ	1.47	135	⇓ *e*P	Pn	00 44 06.3	-0.4
AOPR	Arecibo Observ	1.47	135		Pn	00 44 06.3	-0.4
AOPR					Sb	00 44 26.4	+0.1
CRPR	Cabo Rojo, PR	1.55	153	*e*S	Sb	00 44 28.8	+0.2
CRPR	Cabo Rojo, PR	1.55	153	⇑ *e*P	Pn	00 44 07.8	0.0
CRPR	Cabo Rojo, PR	1.55	153		Pn	00 44 07.8	0.0
CRPR					Sb	00 44 28.8	+0.2
DR12	Loma Pena Alta	1.57	248	Pn	Pn	00 44 08.3	+0.2
DR12					Sn	00 44 27.4	-0.4
MLPR	Magueyes Islan	1.61	152	*e*S	Sb	00 44 30.4	+0.1
MLPR	Magueyes Islan	1.61	152	⇑ *e*P	Pn	00 44 09.1	+0.5
MLPR	Magueyes Islan	1.61	152		Pn	00 44 09.1	+0.5
MLPR					Sb	00 44 30.4	+0.1
OBIP	Obispado Ponce	1.79	139	⇓ *e*P	Pn	00 44 10.7	-0.3
OBIP	Obispado Ponce	1.79	139	*e*S	Sn	00 44 33.9	+0.8
OBIP	Obispado Ponce	1.79	139		Pn	00 44 10.7	-0.3
OBIP					Sn	00 44 33.9	+0.8
SDDR	Presa de Saban	3.28	263	Pn	Pn	00 44 32.0	+0.5

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*ATA **11** 00:51:28.5±1.1, 38°.73N×43°.01E, h11^{km}±69^{km}, ML1.7*

*ISK **11** 00:51:28.3, 38°.72N×43°.03E, h5^{km}, ML2.0/7*

DDA 11 00:51:29.1, 38°.71N×**43°.07E, h7**^{km}±3^{km}**, ML1.6, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	Van	0.28	114	PG	Pb	00 51 36.2	-0.3
VANB				SG	Sb	00 51 41.2	-0.2
ADCV	BITLIS_Adilcev	0.29	291	*i* P	Pg	00 51 35.5	+0.7
ADCV				*i* S	Sg	00 51 40.0	+1.3
ADCV				IAML		00 51 41.0	
	comp=E,111nm,0.2s						
ADCV				IAML		00 51 41.0	
	comp=N,124nm,0.1s						
TVAN	Van	0.32	124	*e*P	Pb	00 51 37.0	-0.3
TVAN				*e*S	Sb	00 51 42.2	-0.6
TVAN				IAML		00 51 42.5	
	comp=Z,69nm,0.3s						
TVAN	Van	0.32	124	*e*P	Pb	00 51 36.5	-0.7
TVAN				*e*S	Sb	00 51 42.2	-0.6
TVAN				IAML		00 51 42.5	
	comp=Z,78nm,0.3s						
TVAN	Van	0.32	124	*i* P	Pg	00 51 36.0	+0.5
TVAN				*i* S	Sb	00 51 41.4	-1.3
TVAN				IAML		00 51 42.0	
	comp=N,150nm,0.3s						
TVAN				IAML		00 51 42.0	
	comp=E,239nm,0.3s						
AKDM	Akdamar-Van	0.38	190	PG	Pg	00 51 36.4	-0.2
GEVA	Gevas	0.39	181	*e*P	Pg	00 51 36.9	0.0
GEVA				*e*S	Sb	00 51 44.5	-0.3
GEVA				IAML		00 51 48.0	
	comp=Z,44nm,0.4s						
GEVA	Gevas	0.39	181	*e*P	Pg	00 51 36.9	+0.1
GEVA	Gevas	0.39	181	*i* P	Pg	00 51 36.6	-0.2
GEVA				IAML		00 51 48.0	
	comp=N,22nm,0.3s						
GEVA				IAML		00 51 49.0	
	comp=E,28nm,0.7s						
VMUR	Van-Muradiye	0.49	54	*i* P	Pg	00 51 38.6	+0.1
VMUR				*i* S	Sg	00 51 45.9	+1.0
VMUR				IAML		00 51 48.0	
	comp=N,41nm,0.3s						
VMUR				IAML		00 51 49.0	
	comp=E,46nm,0.4s						
MLAZ	Malazgirt-MUS	0.59	317	PG	Pg	00 51 40.3	-0.3
CLDR	Caldiran	0.79	56	PG	Pg	00 51 44.4	0.0
CLDR				SG	Sb	00 51 56.1	-0.4
CLDR	Caldiran	0.79	56	*i* P	Pg	00 51 44.4	0.0
CLDR				*i* S	Sg	00 51 55.2	+0.4
CLDR				IAML		00 51 58.0	
	comp=N,9.4nm,0.6s						
CLDR				IAML		00 51 59.0	
	comp=E,17nm,0.3s						
BLIS	Bitlis-Merkez	0.80	249	*e*P	Pg	00 51 44.1	-0.4
BLIS				*e*S	Sg	00 51 55.2	+0.3
BLIS				IAML		00 51 55.9	
	comp=Z,41nm,0.3s						
BLIS	Bitlis-Merkez	0.80	249	*e*P	Pg	00 51 44.0	-0.5
BLIS				*e*S	Sg	00 51 55.1	+0.2
BLIS				IAML		00 51 55.9	
	comp=Z,41nm,0.3s						
BLIS	Bitlis-Merkez	0.80	249	*i* P	Pg	00 51 44.2	-0.3
BLIS				*i* S	Sg	00 51 54.2	-0.7
BLIS				IAML		00 51 57.0	
	comp=N,58nm,0.2s						
BLIS				IAML		00 51 59.0	
	comp=E,62nm,0.6s						
GURO	Guroymak-BITLI	0.82	259	PG	Pg	00 51 44.4	-0.6
GURO				SG	Sg	00 51 55.2	-0.5
AGRB	Hanur-Agry	0.87	356	PG	Pg	00 51 45.2	-0.7
AGRB				SG	Sg	00 51 57.2	0.0
SRTM	Siirt_Merkez	1.15	232	*i* P	Pn	00 51 51.9	+0.2
SRTM				*i* S	Sn	00 52 07.7	0.0
SRTM				IAML		00 52 10.0	
	comp=N,18nm,0.6s						
SRTM				IAML		00 52 14.0	
	comp=E,19nm,0.6s						
MUSM	Mu-Merkez	1.22	271	*i* P	Pg	00 51 51.3	-1.2
MUSM				*i* S	Sg	00 52 08.0	-0.2
MUSM				IAML		00 52 08.0	
	comp=N,5.7nm,0.9s						
CUKT	Cukurca	1.52	163	PN	Pb	00 51 57.6	-0.1

CUKT	**Cukurca**	1.52	163	*i* P	Pg	00 51 59.5	+1.3
CUKT				IAML		00 52 24.0	
	comp=N,14nm,1.0s						
CUKT				IAML		00 52 25.0	
	comp=E,16nm,0.8s						

ARE ***11*** *00:58:05±3.5, 15°.5S±0°.1×73°.6W±0°.1, h74^{km}±10^{km}, ML4.2, Error ellipse: s-maj=0.0km s-min=0.0km az=133.0*

NEIC 11 00:58:03.6±5.1**, 15°.9S**±0°.1×**73°.9W**±0°.1**, h90**^{km}±41^{km}**, Error ellipse: s-maj=19.4km s-min=11.0km az=223.0, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	4.80	323	Pn	Pn	00 59 13.4	-0.3
MNMC	**Minye Minye**	5.23	129		Pn	00 59 19.6	-0.1
LPAZ	**La Paz**	5.56	95	Pn	Pn	00 59 24.6	+0.1
PB11	**IPOC Station P**	5.59	134		Pn	00 59 25.4	+0.8
PB11				Sn	Sn	01 00 24.3	-3.2
GO01	**Chusmiza**	5.86	131	Pn	Pn	00 59 29.8	+1.4
GO01					Sn	01 00 32.2	-2.4
PB01	**IPOC Station P**	6.63	142	Pn	Pn	00 59 40.6	+2.0
PB01				Sn	Sn	01 00 49.5	-3.3
LVC	**Limon Verde**	8.19	146	Pn	Pn	01 00 02.8	+2.7

MEX ***11*** *01:20:56.5±0.7, 13°.67N×92°.62W, h15^{km}, MD4.0*

NEIC ***11*** *01:20:57.4±1.3, 13°.8N±0°.1×92°.62W±0°.06, h34^{km}±22^{km}, Md4.0/18(MEX), Error ellipse: s-maj=22.1km s-min=7.7km az=192.0*

ISC 11 01:20:57.4±3.9**, 13°.8N**±0°.2×**92°.57W**±0°.08**, h35**^{km}**, n11,** σ**0^s.72**/21**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.16	15	*e*P	**Pn**	**01 21 16.4**	**-0.7**
THIG				*i* S	**Sn**	**01 21 31.5**	**-0.3**
THIG		1.16	15		**Pn**	**01 21 16.4**	**-0.7**
THIG					**Sn**	**01 21 31.5**	**-0.3**
PCIG		2.02	342	*i* P	**Pn**	**01 21 28.0**	**-0.9**
PCIG				*i* S	**Sn**	**01 21 52.1**	**-0.8**
PCIG		2.02	342		**Pn**	**01 21 28.0**	**-0.9**
PCIG					**Sn**	**01 21 52.1**	**-0.8**
CCIG	**Comitan**	2.52	9	*i* P	**Pn**	**01 21 35.7**	**-0.4**
CCIG				*i* S	**Sn**	**01 22 07.0**	**+1.3**
CCIG	**Comitan**	2.52	9		**Pn**	**01 21 35.7**	**-0.4**
CCIG					**Sn**	**01 22 07.0**	**+1.3**
TGIG		3.03	350	*i* P	**Pn**	**01 21 42.8**	**-0.1**
TGIG				*i* S	**Sn**	**01 22 18.6**	**+0.6**
TGIG		3.03	350		**Pn**	**01 21 42.8**	**-0.1**
TGIG					**Sn**	**01 22 18.6**	**+0.6**
CMIG	**Matias Romero**	3.98	326	*i* P	**Pn**	**01 21 56.2**	**+0.3**
CMIG				*i* S	**Sn**	**01 22 42.0**	**+0.6**
CMIG	**Matias Romero**	3.98	326		**Pn**	**01 21 56.2**	**+0.3**
CMIG					**Sn**	**01 22 42.0**	**+0.6**
TEIG	**Tepich**	7.61	32	Pn	**Pn**	**01 22 46.2**	**+0.3**

SJA ***11*** *01:38:08.1±0.6, 22°.20S×68°.62W, h128^{km}±4^{km}, ML3.5, MW3.5*

GUC ***11*** *01:38:11.2±0.6, 22°.23S×68°.74W, h117^{km}±3^{km}, ML3.5*

ISC 11 01:38:11.6±1.9**, 22°.23S**±0°.04×**68°.76W**±0°.08**, h113**^{km}±11^{km}**, n24,** σ**0^s.57**/40**, 10C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	0.40	200	*i* P	**Pn**	**01 38 28.0**	**-0.7**
LVC				*i* S	**Sn**	**01 38 40.5**	**-1.0**
LVC	**Limon Verde**	0.40	200	*i* P	**Pn**	**01 38 27.9**	**-0.7**
LVC				*i* S	**Sn**	**01 38 42.7**	**+1.3**
LVC				IAML		01 38 44.4	
	comp=Z,460nm,0.3s						
PB09	**IPOC Station P**	0.62	314	⇑ *i*P	**Pn**	**01 38 29.9**	**0.0**
PB09				*i* S	**Sn**	**01 38 43.5**	**0.0**
PB09				IAML		01 38 46.1	
	comp=N,3µm,0.9s						
PB09	**IPOC Station P**	0.62	314	*i* P	**Pn**	**01 38 29.0**	**-0.8**
PB09				*i* S	**Sn**	**01 38 44.8**	**+1.2**
PB09				IAML		01 38 44.9	
	comp=Z,1µm,0.8s						
PB06	**IPOC Station P**	0.88	238	⇑ *i*P	**Pn**	**01 38 31.9**	**-0.2**
PB06				*i* S	**Sn**	**01 38 47.8**	**+0.3**
PB06				IAML		01 38 50.1	
	comp=N,918nm,0.4s						
PB06	**IPOC Station P**	0.88	238	*i* P	**Pn**	**01 38 31.8**	**-0.2**
PB06				IAML		01 38 54.5	
	comp=Z,547nm,0.2s						
PB03	**IPOC Station P**	0.94	281	⇑ *i*P	**Pn**	**01 38 32.5**	**0.0**
PB03				*i* S	**Sn**	**01 38 48.8**	**+0.4**
PB03				IAML		01 38 50.5	
	comp=N,1µm,0.1s						
PB07	**IPOC Station P**	1.16	296	⇑ *i*P	**Pn**	**01 38 35.0**	**+0.1**
PB07				*i* S	**Sn**	**01 38 52.7**	**+0.3**
PB07				IAML		01 38 53.3	
	comp=N,2µm,0.3s						
PB15	**IPOC Station P**	1.17	214	⇑ *i*P	**Pn**	**01 38 35.0**	**-0.1**
PB15				*i* S	**Sn**	**01 38 53.5**	**+0.7**
PB15	**IPOC Station P**	1.17	214	*i* P	**Pn**	**01 38 35.1**	**+0.1**
PB15				*i* S	**Sn**	**01 38 54.1**	**+1.3**
PB15				IAML		01 38 55.9	
	comp=Z,4µm,0.2s						
PB04	**IPOC Station P**	1.29	265	⇑ *i*P	**Pn**	**01 38 36.2**	**-0.1**
PB04				*i* S	**Sn**	**01 38 54.8**	**-0.2**
PB04				IAML		01 38 56.9	
	comp=N,674nm,0.2s						
PB04	**IPOC Station P**	1.29	265	*i* P	**Pn**	**01 38 36.2**	**-0.1**
PB01	**IPOC Station P**	1.36	330	⇑ *i*P	**Pn**	**01 38 36.6**	**-0.4**
PB01				*i* S	**Sn**	**01 38 56.0**	**-0.3**
PB01				IAML		01 38 57.0	
	comp=E,613nm,0.3s						
PB02	**IPOC Station P**	1.39	311	⇑ *i*P	**Pn**	**01 38 37.3**	**-0.1**
PB02				*i* S	**Sn**	**01 38 56.8**	**-0.2**
PB05	**IPOC Station P**	1.47	245	⇑ *i*P	**Pn**	**01 38 38.1**	**-0.2**
PB05				*i* S	**Sn**	**01 38 58.5**	**-0.1**
PB05				IAML		01 39 03.5	
	comp=E,324nm,0.3s						
PB05	**IPOC Station P**	1.47	245	*i* P	**Pn**	**01 38 38.1**	**-0.2**
PB05				IAML		01 39 02.0	
	comp=Z,172nm,0.5s						
PATCX	**Punta Patache**	1.91	317	⇓ *i*P	**Pn**	**01 38 43.2**	**-0.5**
PATCX				*i* S	**Sn**	**01 39 07.8**	**-0.4**
PATCX				IAML		01 39 10.8	
	comp=N,461nm,0.3s						
PB10	**IPOC Station P**	2.09	232	⇑ *i*P	**Pn**	**01 38 45.8**	**0.0**
PB10	**IPOC Station P**	2.09	232	*i* P	**Pn**	**01 38 45.8**	**0.0**
PB10				IAML		01 39 21.5	
	comp=Z,94nm,0.2s						
PB08	**IPOC Station P**	2.11	350	*i* P	**Pn**	**01 38 46.8**	**+0.2**
PB08				*i* S	**Sn**	**01 39 14.2**	**+1.0**
TA01	**Diego Aracena**	2.12	321	*i* P	**Pn**	**01 38 46.4**	**+0.1**
TA01				*i* S	**Sn**	**01 39 12.1**	**-0.6**
TA01				IAML		01 39 14.3	
	comp=N,222nm,0.5s						
GO01	**Chusmiza**	2.58	351	*e*P	**Pn**	**01 38 52.6**	**-0.1**
GO01				*e*S	**Sn**	**01 39 24.6**	**+0.5**
PB11	**IPOC Station P**	2.60	341	IAML		01 39 27.8	
	comp=E,196nm,0.5s						
PB14	**IPOC Station P**	2.82	212	*i* P	**Pn**	**01 38 54.7**	**-0.9**
PB14				IAML		01 39 37.0	
	comp=Z,89nm,0.5s						

IDC 11 01:42:08.6±432.0**, 38°.84N**×**116°.51W, h0**^{km}**, Error ellipse: s-maj=165.9km s-min=106.5km az=179.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I57US	**PINON FLAT INF**	5.22	179	*i*		02 15 00.0	
	baz=359,slow=317,SNR=0.8						
I56US	**NEWPORT INFRAS**	9.44	357	*i*		02 42 00.0	
	baz=176,slow=332,SNR=1.0						
I10CA	**LAC DU BONNET**	18.44	45	*i*		03 36 30.0	
	baz=240,slow=330,SNR=2.7						

BJI ***11*** *01:52:40.4±0.0, 45°.90N×152°.41E, h25^{km}, mB4.8/12, mb4.6/27, Ms4.2/6, Ms7 4.1/7*

JMA ***11*** *01:52:44.9±0.7, 45°.95N×152°.08E, h30^{km}, M4.8*

SKHL ***11*** *01:52:44.4±0.5, 45°.55N×152°.27E, h51^{km}±6^{km}, mb5.4/4, msh5.1/5*

MOS ***11*** *01:52:46.3±1.0, 45°.85N×151°.86E, h47^{km}, mb4.8/23, MS3.3/5, Error ellipse: s-maj=6.9km s-min=5.5km az=83.6*

NEIC ***11*** *01:52:49.0±1.3, 45°.94N±0°.08×151°.6E±0°.1, h54^{km}±3^{km}, mb4.6/60, Error ellipse: s-maj=11.3km s-min=9.8km az=152.0*

IDC ***11*** *01:52:51.0±2.1, 46°.02N×151°.68E, h65^{km}±18^{km}, mb3.9/23, mb1 4.0/29, mb1mx3.9/47, mbtmp4.1/29, MS3.6/13, Ms1 3.6/13, ms1mx3.3/40, Error ellipse: s-maj=17.0km s-min=10.7km az=151.0*

BGR ***11*** *01:52:55.5±0.0, 47°.32N×151°.80E, h33^{km}, mb4.9*

ISC 11 01:52:46.3±1.0**, 45°.72N**±0°.05×**152°.02E**±0°.05**, h34**^{km}±3^{km}**, n301,** σ**1^s.59**/305**, mb4.6**/83**, MS3.6**/11**, 23C-12D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	2.96	262	*i* P	**Pn**	**01 53 30.8**	**-0.1**
KUR				AMB	AMB	01 53 34.0	
	310nm,0.3s						
KUR				AMB	AMB	01 53 34.0	
	250nm,0.3s						
KUR				AMB	AMB	01 53 34.0	
	640nm,0.3s						
KUR				*e*S	**Sn**	**01 54 06.0**	**+0.7**
KUR				A	A	01 54 11.0	
	3µm,2.0s						
KUR				A	A	01 54 11.0	
	2µm,2.0s						
KUR				A	A	01 54 14.0	
	1µm,0.3s						
KUR				A	A	01 54 14.0	
	440nm,0.3s						
KUR	**Kuril'sk**	2.96	262	c *i*PN	**Pn**	**01 53 31.0**	**+0.1**
KUR				*e*S	**Sn**	**01 54 06.2**	**+0.9**
KUR				pmax	pmax		
	comp=Z,636nm,0.3s						
KUR				pmax	pmax		
	comp=E,239nm,0.2s						
KUR				pmax	pmax		
	comp=N,307nm,0.3s						
KUR				smax	smax		
	comp=N,1µm,0.3s						
KUR				smax	smax		
	comp=E,439nm,0.3s						
SHO	**Shikotan**	4.13	245	*i* P	**Pn**	**01 53 46.9**	**-0.1**
SHO				AMB	AMB	01 53 50.0	
	comp=E,540nm,3.0s						
SHO				AMB	AMB	01 53 50.0	
	comp=E,150nm,0.3s						
SHO				*e*S	**Sn**	**01 54 31.9**	**-2.2**
SHO				A	A	01 54 36.0	
	comp=E,780nm,3.0s						
SHO				A	A	01 54 36.0	
	comp=E,930nm,3.0s						
SHO				A	A	01 54 40.0	
	comp=E,480nm,0.4s						
SHO				A	A	01 54 40.0	
	comp=E,440nm,0.4s						
SHO	**Shikotan**	4.13	245	d *i*PN	**Pn**	**01 53 46.8**	**-0.2**
SHO				pmax	pmax		
	comp=Z,145µm,0.3s						
SHO				pmax	pmax		
	comp=N,63µm,0.2s						
SHO				pmax	pmax		
	comp=E,115µm,0.2s						
YUK	**Yuzh-Kuril'sk**	4.69	251	*e*P	**Pn**	**01 53 55.5**	**+0.8**
YUK				AMB	AMB	01 53 57.0	
	comp=E,340nm,0.3s						
YUK				*e*S	**Sn**	**01 54 48.4**	**+0.5**
YUK				A	A	01 54 52.0	
	comp=E,1µm,2.0s						
YUK				A	A	01 54 52.0	
	comp=E,2µm,2.0s						
YUK				A	A	01 54 58.0	
	comp=E,980nm,0.7s						
YUK	**Yuzh-Kuril'sk**	4.69	251	*i* PN	**Pn**	**01 53 55.5**	**+0.8**
GRPR	**Tuman**	4.77	251	*e*P	**Pn**	**01 53 57.1**	**+1.4**
GRPR				AMB	AMB	01 54 00.0	
	comp=E,190nm,0.2s						
GRPR				*e*S	**Sn**	**01 54 50.0**	**+0.2**
GRPR				A	A	01 54 57.2	
	comp=E,510nm,0.4s						
GRPR				A	A	01 54 57.2	
	comp=E,660nm,0.4s						
GRPR	**Tuman**	4.77	251	*e*PN	**Pn**	**01 53 57.1**	**+1.4**
GRPR				pmax	pmax		
	comp=Z,186µm,0.2s						
GRPR				pmax	pmax		
	comp=E,85µm,0.3s						
GLVR	**Golovnino**	5.04	249	*e*P	**Pn**	**01 54 00.7**	**+1.3**
GLVR				AMB	AMB	01 54 02.0	
	comp=E,210nm,0.4s						
GLVR				*e*S	**Sn**	**01 54 56.5**	**0.0**
GLVR				A	A	01 55 02.0	
	comp=E,660nm,0.5s						
GLVR				A	A	01 55 02.0	
	comp=E,360nm,0.5s						
GLVR	**Golovnino**	5.04	249	*e*PN	**Pn**	**01 54 00.7**	**+1.3**
GLVR				pmax	pmax		
	comp=Z,210nm,0.4s						
NEM2	**Nemuro 2**	5.07	245	P	**Pn**	**01 53 59.6**	**-0.2**
NEM2				*e*S	**Sn**	**01 54 55.9**	**-1.3**
NMR	**Nemuro--Hokkai**	5.08	245	*e*P	**Pn**	**01 53 59.0**	**-0.9**
NMR	**Nemuro--Hokkai**	5.08	245	*e*PN	**Pn**	**01 53 59.7**	**-0.2**
SKR	**Severo-Kuril's**	5.67	27	*e*P	**Pn**	**01 54 08.9**	**+0.9**
SKR				AMB	AMB	01 54 12.0	
	comp=Z,500nm,3.0s						
SKR				AMB	AMB	01 54 13.3	
	comp=Z,110nm,0.5s						
SKR				*e*S	**Sn**	**01 55 10.5**	**-1.3**
SKR				A	A	01 55 15.3	
	comp=Z,240nm,0.4s						
SKR				A	A	01 55 15.3	
	comp=Z,120nm,0.4s						
SKR				A	A	01 55 15.5	
	comp=Z,1µm,3.0s						
SKR				A	A	01 55 15.5	
	comp=Z,600nm,3.0s						
SKR				AMS	AMS	01 56 37.6	
	comp=Z,700nm,16.0s						
SKR	**Severo-Kuril's**	5.67	27	*e*PN	**Pn**	**01 54 09.8**	**+1.8**
SKR				pmax	pmax		
	comp=Z,113nm,0.9s						
SKR				MLR	MLR		
	comp=Z,700nm,16.0s						
SKR				MLR	MLR		
	comp=Z,300nm,15.0s						
JAK	**Akkeshi**	5.92	245	P	**Pn**	**01 54 11.0**	**-0.5**
JAK				*e*S	**Sn**	**01 55 15.6**	**-2.5**
JTKR	**Abashiri--Toko**	6.03	256	P	**Pn**	**01 54 14.7**	**+1.7**
JMP	**Maruseppu**	6.39	258	P	**Pn**	**01 54 20.5**	**+2.5**
JOB	**Onbets**	6.51	247	P	**Pn**	**01 54 20.4**	**+0.7**
JOB				*e*S	**Sn**	**01 55 30.9**	**-1.9**
YSS	**Yuzh-Sakhalins**	6.54	284	*e*P	**Pn**	**01 54 21.3**	**+1.4**
YSS				AMB	AMB	01 54 21.9	
	comp=Z,40nm,0.7s						
YSS	**Yuzh-Sakhalins**	6.54	284	*e*PN	**Pn**	**01 54 20.7**	**+0.8**
YSS				pmax	pmax		
	comp=Z,40nm,0.7s						
YSS				MLR	MLR		
	comp=Z,500nm,15.0s						
YSS				MLR	MLR		
	comp=E,400nm,14.0s						
YSS	**Yuzh-Sakhalins**	6.54	284		**Pn**	**01 54 18.2**	**-1.7**
PAU	**Pauzhetka**	6.57	27	*e*P	**Pn**	**01 54 20.9**	**+0.6**
PAU				*e*S	**Sn**	**01 55 32.4**	**-1.6**
JSE	**Soyaes**	6.70	267	P	**Pn**	**01 54 25.3**	**+3.1**
JKK2	**Kamakawa 2**	6.85	258	P	**Pn**	**01 54 27.1**	**+2.7**
JKA	**Kamikawa-asahi**	6.88	260	*e*P	**Pn**	**01 54 28.2**	**+3.5**
JKA	**Kamikawa-asahi**	6.88	260		**Pn**	**01 54 28.2**	**+3.5**
ASAJ	**Asahikawa**	6.88	260	P	**Pn**	**01 54 27.8**	**+3.1**
ASAJ	**Asahikawa**	6.88	260	P	**Pn**	**01 54 28.2**	**+3.4**
	comp=E,4.3nm,0.3s,baz=86,slow=14,SNR=14						
ASAJ				LR	LR	01 57 02.2	
	comp=E,430nm,20.1s,baz=62,slow=37						
JCH	**Churui**	6.96	247	P	**Pn**	**01 54 25.7**	**-0.1**
JCH				*e*S	**Sn**	**01 55 40.7**	**-3.0**
JWK2	**Keihoku**	7.13	270	P	**Pn**	**01 54 32.2**	**+4.1**
ERM	**Erimo**	7.40	243	*i* PN	**Pn**	**01 54 33.3**	**+1.5**
ERM	**Erimo**	7.40	243		**Pn**	**01 54 32.6**	**+0.8**
ERM				Sn	**Sn**	**01 55 51.7**	**-2.8**
JNBK	**Urakawa-nobuka**	7.52	246	P	**Pn**	**01 54 33.2**	**-0.2**
UGL	**Uglegorsk**	7.54	300	*i* P	**Pn**	**01 54 35.8**	**+2.0**
UGL				AMB	AMB	01 54 40.0	
	comp=E,70nm,0.6s						
UGL				AMB	AMB	01 54 42.2	
	comp=E,400nm,4.0s						
UGL				*e*S	**Sn**	**01 55 58.5**	**+0.5**
UGL				A	A	01 56 04.0	
	comp=E,100nm,0.5s						
UGL				A	A	01 56 04.0	
	comp=E,120nm,0.5s						
UGL				A	A	01 56 08.5	
	comp=E,200nm,3.0s						
UGL				A	A	01 56 08.5	
	comp=E,300nm,3.0s						
UGL	**Uglegorsk**	7.54	300	⇑ *i*PN	**Pn**	**01 54 35.7**	**+2.0**
UGL				pmax	pmax		
	comp=Z,65nm,0.6s						
TYV	**Tymovskoe**	8.09	313	*e*P	**Pn**	**01 54 43.2**	**+2.0**
TYV				AMB	AMB	01 54 43.4	
	comp=Z,10.0nm,0.5s						
TYV				AMB	AMB	01 54 44.2	
	comp=Z,200nm,4.0s						
TYV				A	A	01 56 10.0	
	comp=Z,20nm,0.7s						
TYV				*e*S	**Sn**	**01 56 11.9**	**+0.5**
TYV	**Tymovskoe**	8.09	313	*e*PN	**Pn**	**01 54 43.1**	**+1.9**
TYV				pmax	pmax		
	comp=Z,12nm,0.5s						
TYV				pmax	pmax		
	comp=Z,200nm,3.6s						
PEA0B	**Petropavlovsk-**	8.26	25	*i* PN	**Pn**	**01 54 44.6**	**+0.9**
PEA0B	**Petropavlovsk-**	8.26	25	Pn	**Pn**	**01 54 44.9**	**+1.2**
PETK	**Petropavlovsk-**	8.26	25	P	**Pn**	**01 54 45.0**	**+1.4**
	comp=Z,1.4nm,0.3s,baz=183,slow=12,SNR=14						
PETK	**Petropavlovsk-**	8.26	25		**Pn**	**01 54 44.7**	**+1.1**
PET	**Petropavlovsk**	8.49	28	*e*P	**Pn**	**01 54 47.8**	**+1.1**
PET				AMS	AMS	01 57 14.0	
	comp=Z,600nm,15.0s						
PET	**Petropavlovsk**	8.49	28	*e*PN	Pn	01 54 37.6	-9.1
PET				MLR	MLR		
	comp=Z,600nm,15.0s						
PET				MLR	MLR		
	comp=Z,300nm,13.0s						
JKB	**Kayabe**	8.82	248	P	**Pn**	**01 54 51.1**	**-0.2**
JKB				*e*S	**Sn**	**01 56 23.4**	**-6.1**
JANG	**Nango**	9.37	239	P	**Pn**	**01 54 56.3**	**-2.5**
JTM	**Tenmabayashi**	9.39	242	P	**Pn**	**01 54 58.2**	**-0.9**
OKH	**Okha**	9.80	326	*e*P	**Pn**	**01 55 07.8**	**+3.2**
OKH				AMS	AMS	01 59 23.3	
	comp=Z,400nm,16.0s						
OKH				AMS	AMS	01 59 23.3	
	comp=Z,200nm,16.0s						
TEY	**Ternei**	10.87	272	*e*P	**Pn**	**01 55 20.6**	**+1.2**
TEY				AMB	AMB	01 55 26.0	
	comp=Z,20nm,0.9s						
TEY	**Ternei**	10.87	272	⇑ *e*PN	Pn	01 55 25.1	+5.7
TEY				pmax	pmax		
	comp=E,20nm,0.9s						
GRNR	**Gornyy**	11.56	302	*e*P	**Pn**	**01 55 30.5**	**+1.7**
GRNR				AMB	AMB	01 55 31.0	
	comp=E,10.0nm,0.5s						
GRNR	**Gornyy**	11.56	302	⇑ *i*PN	**Pn**	**01 55 30.5**	**+1.7**
GRNR				*e*S	**Sn**	**01 57 40.6**	**+4.1**
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GRNR				smax	smax		
	comp=N,4.0nm,0.6s						
GRNR				MLR	MLR		
	comp=Z,300nm,15.0s						
MJA0	**Matsu Arr-Jizo**	13.84	233	*e*P	**Pn**	**01 56 00.1**	**+0.1**
MJAR	**Matsushiro Arr**	13.86	233	P	**Pn**	**01 55 59.4**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=30,slow=15,SNR=5.7						
MJAR	**Matsushiro Arr**	13.86	233	P	**Pn**	**01 55 59.5**	**-0.8**
MJAR	**Matsushiro Arr**	13.86	233	P	**Pn**	**01 55 59.5**	**-0.8**
MA2	**Magadan**	13.90	357	LR	LR	02 01 10.4	
	comp=Z,125nm,18.0s,baz=187,slow=37						
MA2	**Magadan**	13.90	357	*e*P	**Pn**	**01 55 59.2**	**-1.4**
MA2	**Magadan**	13.90	357	*i* P	**Pn**	**01 55 59.2**	**-1.4**
MA2				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KLR	**Kul'dur**	14.15	292	P	**Pn**	**01 56 05.3**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=108,slow=15,SNR=8.2						
KLR				LR	LR	02 01 40.8	
	comp=Z,270nm,18.7s,baz=88,slow=38						
KLR	**Kul'dur**	14.15	292	*e*P	**Pn**	**01 56 03.9**	**-0.2**
KLR	**Kul'dur**	14.15	292	*i* P	**Pn**	**01 56 03.9**	**-0.2**
KLR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
USA0B	**Ussuriysk Arra**	14.27	271	*i* P	**Pn**	**01 56 05.1**	**-0.7**
USRK	**Ussuriysk Ar.**	14.27	271	P	**Pn**	**01 56 06.3**	**+0.5**
	baz=82,slow=12,SNR=8.2						
USRK				LR	LR	02 01 37.7	
	comp=Z,251nm,18.5s,baz=37,slow=38						
USRK	**Ussuriysk Ar.**	14.27	271		**Pn**	**01 56 03.1**	**-2.6**
EKMR	**Ekimchan**	14.40	308	*e*P	**Pn**	**01 56 07.5**	**-0.1**
EKMR				AMB	AMB	01 56 20.0	
	comp=Z,7.0nm,0.7s						
SEY	**Seymchan**	17.25	1	P	**Pn**	**01 56 43.7**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=150,slow=10,SNR=5.5						
SEY	**Seymchan**	17.25	1	*e*P	**Pn**	**01 56 42.9**	**-1.3**
SEY	**Seymchan**	17.25	1	*i* P	**Pn**	**01 56 42.9**	**-1.3**
BMKR	**Bomnak**	17.28	310	*e*P	**Pn**	**01 56 44.0**	**-0.7**
BMKR				AMB	AMB	01 56 48.0	
	comp=Z,5.0nm,0.5s						
ZEA	**Zeya**	17.84	306	*e*P	**Pn**	**01 56 51.6**	**0.0**
ZEA	**Zeya**	17.84	306	*e*P	**P**	**01 56 53.2**	**+1.1**
KROS	**Kirovskiy**	18.21	308	*e*P	**P**	**01 56 56.3**	**+0.2**
KROS				AMB	AMB	01 56 58.5	
	comp=Z,5.0nm,0.5s						
CN2	**Changchun**	18.94	274	*e*P	**P**	**01 57 03.6**	**-0.7**
CN2				*e*S	**S**	**02 00 40.3**	**+2.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				LR	LR		
	comp=Z,100nm,15.0s						
CN2				LR	LR		
	comp=Z,240nm,15.0s						
CN2				LR	LR		
	comp=Z,200nm,16.1s						
KSRS	**Korea Array**	19.78	254	P	**Pn**	**01 57 14.8**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=59,slow=11,SNR=12						
KSRS				LR	LR	02 03 50.2	
	comp=Z,108nm,21.4s,baz=30,slow=34						
KSAR	**Wonju Array Be**	19.81	254	P	**P**	**01 57 09.7**	**-4.1**
KSAR	**Wonju Array Be**	19.81	254	P	**P**	**01 57 09.7**	**-4.1**
JNU	**Nakatsue**	20.55	240	P	Pn	01 57 24.0	-0.2
	comp=Z,8.3nm,0.8s,baz=116,slow=12,SNR=3.9						
JNU				LR	LR	02 05 36.8	
	comp=Z,127nm,18.9s,baz=28,slow=37						
JNU	**Nakatsue**	20.55	240	P	**P**	**01 57 21.4**	**-0.5**
JNU				IAmb	IAmb	01 57 27.6	
	comp=Z,15nm,1.0s						
YAK	**Yakutsk**	20.80	330	*e*P	Pn	01 57 28.2	+1.3
YAK				*e*S	**S**	**02 01 15.2**	**+0.8**
YAK				*e**SS	sS	02 01 26.8	-0.3
YAK				*e*SS	**SnSn**	**02 01 41.7**	**+6.4**
YAK				pmax	pmax		
	comp=Z,52nm,0.8s						
YAK				pmax	pmax		
	comp=N,14nm,0.9s						
YAK				pmax	pmax		
	comp=E,13nm,1.1s						
YAK				smax	smax		
	comp=N,45nm,2.8s						
YAK				smax	smax		
	comp=E,81nm,3.0s						
YAK	**Yakutsk**	20.80	330	P	**P**	**01 57 22.9**	**-1.4**
BILL	**Bilibino**	23.57	13	*e*P	**P**	**01 57 53.5**	**+0.2**
BILL	**Bilibino**	23.57	13	*i* P	**P**	**01 57 51.1**	**-2.2**
BILL				*i*		01 58 21.2	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,183nm,23.0s						
TIXI	**Tiksi**	28.25	345	LR	LR	02 09 24.4	
	comp=Z,96nm,20.4s,baz=172,slow=36						
TIXI	**Tiksi**	28.25	345	*i* P	**P**	**01 58 33.4**	**-2.3**
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.0s						
H11N2	**WAKE ISLAND Hy**	28.68	150	T	T	02 29 11.1	
	baz=338,slow=76,SNR=2165						
H11N1	**WAKE ISLAND Hy**	28.70	150	T	T	02 29 11.1	
	baz=338,slow=76,SNR=1801						
H11N3	**WAKE ISLAND Hy**	28.70	150	T	T	02 29 11.1	
	baz=338,slow=76,SNR=1681						
H11S1	**WAKE ISLAND Hy**	29.75	151	T	T	02 30 28.9	
	baz=339,slow=76,SNR=2509						
H11S3	**WAKE ISLAND Hy**	29.75	151	T	T	02 30 29.5	

	baz=339,slow=76,SNR=2632						
H11S2	WAKE ISLAND Hy	29.77	151	T	T	02 30 30.7	
	baz=339,slow=76,SNR=2610						
SONM	Songino Array	30.98	291	P	P	01 58 57.7	-2.7
	comp=Z,0.5nm,0.6s,baz=80,slow=8.3,SNR=6.3						
SONM				LR	LR	02 11 53.6	
	comp=Z,125nm,19.1s,baz=40,slow=37						
SONM	Songino Array	30.98	291	eP	P	01 59 01.4	+1.1
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SONM	Songino Array	30.98	291	P	P	01 58 57.0	-3.3
WHN	Wuhan	32.94	256	P	P	01 59 17.6	0.0
XAN	Xi'an	34.68	266	P	P	01 59 31.8	-0.9
XAN				pP	pP	01 59 39.4	-2.2
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
XAN				LR	LR		
	comp=Z,150nm,17.3s						
XAN				LR	LR		
	comp=Z,170nm,16.3s						
IMAR	Indian Mountai	35.04	35	P	P	01 59 35.9	+0.5
KTH	Kantishna Hill	36.03	40	P	P	01 59 44.9	+0.9
KTH				IAmb	IAmb	01 59 46.8	
	comp=Z,3.6nm,0.8s						
TRF	Thorofare Moun	36.31	40	P	P	01 59 47.5	+0.9
TOLK	Toolik Lake Re	37.02	31	P	P	01 59 53.3	+0.9
SML	Sawmill	37.24	43	P	P	01 59 55.3	+1.0
SML				IAmb	IAmb	02 00 07.9	
	comp=Z,8.0nm,0.6s						
WRH	Wood River Hil	37.30	38	P	P	01 59 55.5	+0.8
CCB	Clear Creek Bu	37.43	38	P	P	01 59 56.8	+1.0
ILAR	Eielson Array	37.82	38	P	P	01 59 59.2	+0.1
	comp=Z,0.5nm,0.6s,baz=261,slow=8.0,SNR=12						
ILAR				LR	LR	02 16 50.8	
	comp=Z,79nm,18.7s,baz=242,slow=38						
ILAR	Eielson Array	37.82	38	eP	P	01 59 57.8	-1.4
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ILAR	Eielson Array	37.82	38	P	P	01 59 58.3	-0.9
GLI	Glacier Island	37.89	44	P	P	02 00 01.5	+1.8
GTA	Gaotai	38.39	280	eP	P	02 00 08.4	+4.0
GTA				pP	pP	02 00 12.7	-0.6
GTA				sP	sP	02 00 15.6	-0.7
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GYA	Guiyang	40.76	258	P	P	02 00 24.4	+0.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZALV	Zalesovo Beam	42.61	306	P	P	02 00 36.9	-1.9
	comp=Z,0.6nm,0.3s,baz=17,slow=12,SNR=3.2						
ZALV				PcP	PcP	02 02 30.8	+0.3
	comp=Z,4.2nm,0.8s,baz=69,slow=2.9,SNR=12						
ZALV				LR	LR	02 19 23.0	
	comp=Z,139nm,18.5s,baz=24,slow=38						
ZALV	Zalesovo Beam	42.61	306	P	P	02 00 37.2	-1.6
INK	Inuvik	42.92	32	P	P	02 00 42.0	+0.8
	comp=Z,3.0nm,0.8s,baz=274,slow=5.2,SNR=9.0						
C36M	Paulatuk	46.09	29	P	P	02 01 07.1	+0.7
C36M				IAmb	IAmb	02 01 07.9	
	comp=Z,3.2nm,0.6s						
MK31	Makanchi Array	46.75	298	P	P	02 01 09.9	-2.1
MK31						02 02 45.1	
MK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MK31	Makanchi Array	46.75	298	P	P	02 01 09.9	-2.1
MK31					PcP	02 02 45.0	+0.1
MKAR	Makanchi Array	46.75	298	P	P	02 01 10.4	-1.6
	comp=Z,1.8nm,0.7s,baz=73,slow=7.1,SNR=18						
MKAR				PcP	PcP	02 02 44.9	-0.1
	comp=Z,2.3nm,0.6s,baz=65,slow=3.1,SNR=16						
MKAR				ScP	ScP	02 06 31.4	-4.4
	comp=Z,0.4nm,0.9s,baz=80,slow=1.8,SNR=2.6						
MKAR				LR	LR	02 21 45.1	
	comp=Z,126nm,18.3s,baz=10,slow=37						
MKAR	Makanchi Array	46.75	298	P	P	02 01 10.2	-1.8
MKAR					PcP	02 02 44.3	-0.6
MKAR					ScP	02 06 31.8	-4.0
BRVK	Borovoye	50.97	310	eP	P	02 01 43.6	-0.7
BRVK	Borovoye	50.97	310	i P	P	02 01 43.6	-0.7
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CHTO	Chiang Mai	51.15	257	P	P	02 01 45.5	-0.5
CHTO				IAmb	IAmb	02 01 47.8	
	comp=Z,8.2nm,1.0s						
CHTO					pP	02 01 57.0	+1.6
CMAR	Chiang Mai Arr	51.39	256	P	P	02 01 48.8	+1.0
	comp=Z,1.5nm,0.3s,baz=36,slow=7.6,SNR=12						
CMAR				LR	LR	02 26 40.5	
	comp=Z,26nm,18.0s,baz=195,slow=40						
CMAR	Chiang Mai Arr	51.39	256	eP	P	02 01 49.2	+1.4
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CMAR	Chiang Mai Arr	51.39	256	P	P	02 01 46.8	-1.0
RES	Resolute Bay	52.05	18	P	P	02 01 52.1	+0.1
RES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
RES	Resolute Bay	52.05	18	P	P	02 01 52.1	+0.1
YKA	Yellowknife Ar	52.20	36	P	P	02 01 54.2	+0.9
	comp=Z,1.5nm,0.6s,baz=294,slow=6.6,SNR=25						
YKA				PcP	PcP	02 03 04.5	+0.1
	comp=Z,0.3nm,0.6s,baz=298,slow=4.9,SNR=2.7						
TAPN	Taplejung	53.40	273	eP	P	02 02 03.2	+0.2
	comp=Z,7.8nm,0.5s						
AAK	Ala-Archa	53.61	296	P	P	02 02 02.0	-2.3
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AAK	Ala-Archa	53.61	296	P	P	02 02 02.0	-2.3
JIRN	Jiri	54.27	275	eP	P	02 02 09.5	0.0
GUN	Gumba	54.34	275	eP	P	02 02 09.7	-0.2
	comp=Z,14nm,0.5s						
KSH	Kashi	54.35	292	P	P	02 02 13.4	+3.8
KSH				sP	pwP	02 02 20.5	-1.0
KSH				S	S	02 09 50.0	+4.7
KSH				SS	SS	02 13 32.9	+5.7
KSH				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KSH				LR	LR		
	comp=Z,280nm,9.9s						
KSH				LR	LR		
	comp=Z,240nm,13.0s						
KSH				LR	LR		
	comp=Z,400nm,14.2s						
RAMN	Ramite	54.42	274	eP	P	02 02 10.3	-0.2
	comp=Z,18nm,0.6s						
KKN	Kakani	54.83	275	eP	P	02 02 13.7	+0.4
PKI	Pulchoki	54.87	275	eP	P	02 02 13.4	-0.4
	comp=Z,9.7nm,0.7s						
PKIN	Phulchoki	54.88	275	eP	P	02 02 13.4	-0.4
DMN	Daman	55.06	275	eP	P	02 02 15.2	+0.1
GKN	Gorkha	55.15	276	eP	P	02 02 15.5	-0.1
DANN	Dangsing	55.55	277	eP	P	02 02 18.9	+0.3
	comp=Z,24nm,0.6s						
KKAR	Karatay Array	55.83	299	P	P	02 02 18.2	-1.9
KKAR	Karatay Array	55.83	299	P	P	02 02 18.2	-1.9
DAG	Danmarks Havn	57.64	357	i P	P	02 02 30.2	-2.2
DAG	Danmarks Havn	57.64	357	i P	P	02 02 30.2	-2.2
KNTN	Kanton	58.00	136	P	P	02 02 39.1	+3.4
ABKAR	Akbulak array	58.50	310	P	P	02 02 36.6	-2.3
NIL	Nilore	59.51	288	P	P	02 02 44.5	-1.7
NIL				pmax	pmax		
	comp=Z,14nm,1.0s						
NIL	Nilore	59.51	288	P	P	02 02 44.5	-1.7
WALA	Waterton Lakes	59.68	49	P	P	02 02 47.8	+0.6
WALA				IAmb	IAmb	02 02 49.5	
	comp=Z,3.4nm,0.8s						
MSO	Missoula	60.99	52	IAmb	IAmb	02 02 58.9	
	comp=Z,6.3nm,0.9s						
KBL	Kabul	61.74	292	P	P	02 02 58.4	-3.1
KBL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KBL	Kabul	61.74	292	P	P	02 02 58.4	-3.1
KBL				IAmb	IAmb	02 03 00.5	
	comp=Z,6.2nm,0.8s						
SUMG	Summit	61.78	4	⇑iP	P	02 03 01.3	-0.1
	comp=Z,36nm,0.8s						
SUMG	Summit	61.78	4	⇑iP	P	02 03 01.3	-0.1
SUMG				pmax	pmax		
	comp=Z,36nm,0.8s						
SUMG	Summit	61.78	4	P	P	02 03 00.9	-0.5
FFC	Flin Flon	62.01	39	P	P	02 03 03.9	+1.1
FFC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FFC	Flin Flon	62.01	39	P	P	02 03 03.9	+1.1
FFC				IAmb	IAmb	02 03 04.3	
	comp=Z,2.6nm,0.8s						
EGMT	Eagleton	62.51	49	IAmb	IAmb	02 03 08.8	
	comp=Z,6.5nm,1.0s						
NVAR	Mina Array Bea	63.59	61	P	P	02 03 16.3	+2.5
	comp=Z,0.9nm,0.6s,baz=293,slow=5.0,SNR=5.1						
NVAR	Mina Array Bea	63.59	61	P	P	02 03 14.6	+0.8
FINES	FINESS Array B	64.64	335	P	P	02 03 18.0	-2.1
	comp=Z,4.5nm,0.7s,baz=32,slow=7.5,SNR=10.0						
FINES				PcP	PcP	02 03 53.4	-0.3
	comp=Z,3.4nm,0.9s,baz=20,slow=4.4,SNR=3.0						
FINES	FINESS Array B	64.64	335	P	P	02 03 17.6	-2.4
FINES					PcP	02 03 53.2	-0.5
LAO	LASA Array	65.20	48	IAmb	IAmb	02 03 26.9	
	comp=Z,8.8nm,1.0s						
OBN	Obninsk	65.73	325	eP	P	02 03 26.6	-0.5
OBN	Obninsk	65.73	325	eP	P	02 03 26.6	-0.5
OBN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PDAR	Pinedale Array	65.97	53	P	P	02 03 31.0	+1.7
	comp=Z,1.9nm,0.8s,baz=274,slow=1.6,SNR=16						
PDAR	Pinedale Array	65.97	53	P	P	02 03 29.9	+0.6
HRA	Herat	66.21	295	IAmb	IAmb	02 03 31.2	
	comp=Z,3.7nm,0.7s						
GEYT	Alibeck	66.48	301	P	P	02 03 31.9	-0.5
	comp=Z,4.2nm,0.7s,baz=48,slow=2.2,SNR=11						
GEYT	Alibeck	66.48	301	P	P	02 03 30.7	-1.7
WRA	Warramunga Arr	67.30	198	P	P	02 03 38.9	+1.3
	comp=Z,1.5nm,1.0s,baz=14,slow=6.6,SNR=9.9						
WRA	Warramunga Arr	67.30	198	eP	P	02 03 39.8	+2.3
WRA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
WRA	Warramunga Arr	67.30	198	P	P	02 03 39.2	+1.6
AFI	Afiamalu	67.76	142	P	P	02 03 43.3	+2.7
AFI				pmax	pmax		
	comp=Z,39nm,1.2s						
AFI	Afiamalu	67.76	142	P	P	02 03 43.3	+2.7
ULM	Lac du Bonnet	67.79	40	P	P	02 03 40.8	+0.3
	comp=Z,1.2nm,0.7s,baz=310,slow=9.8,SNR=4.6						
ULM	Lac du Bonnet	67.79	40	eP	P	02 03 41.1	+0.7
ULM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SRU	San Rafael Swe	67.81	56	P	P	02 03 42.2	+1.2
SRU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SRU	San Rafael Swe	67.81	56	P	P	02 03 42.2	+1.2
RSSD	Black Hills	68.07	49	P	P	02 03 43.4	+0.8
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.7s						
RSSD	Black Hills	68.07	49	P	P	02 03 43.4	+0.8
RSSD				IAmb	IAmb	02 03 44.5	
	comp=Z,3.6nm,0.7s						
NB2	NORSAR Subarra	68.95	341	P	P	02 03 45.9	-1.7
	comp=Z,6.3nm,0.7s,baz=30,slow=6.5						
NOA	NORSAR Array B	68.95	341	P	P	02 03 46.3	-1.2
	comp=Z,1.6nm,0.5s,baz=29,slow=6.7,SNR=19						
KIV	Kislovodsk	70.97	314	eP	P	02 03 57.6	-2.7
KIV				pmax	pmax		
	comp=Z,19nm,1.1s						
ASAR	Alice Springs	71.00	198	P	P	02 04 02.6	+2.2
	comp=Z,0.4nm,0.5s,baz=15,slow=5.9,SNR=4.7						
ASAR	Alice Springs	71.00	198	P	P	02 04 01.8	+1.4
ASAR	Alice Springs	71.00	198	P	P	02 04 01.8	+1.4
KBZ	Khabaz	71.03	314	P	P	02 04 00.6	+0.1
	comp=Z,5.7nm,0.9s,baz=84,slow=2.5,SNR=10.0						
KBZ				LR	LR	02 38 51.9	
	comp=Z,113nm,19.0s,baz=352,slow=39						
TBLG	Delisi	71.49	311	P	P	02 04 01.9	-1.5
TBLG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TBLG	Delisi	71.49	311	P	P	02 04 01.9	-1.5
TBLG				IAmb	IAmb	02 04 04.3	
	comp=Z,7.4nm,0.8s						
AKASG	Malin Array Be	71.98	326	P	P	02 04 03.8	-2.3
	comp=Z,2.5nm,0.5s,baz=34,slow=6.1,SNR=13						
AKASG	Malin Array Be	71.98	326	eP	P	02 04 04.7	-1.4
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKASG	Malin Array Be	71.98	326	P	P	02 04 05.0	-1.1
ECSD	EROS Data Cent	72.14	45	IAmb	IAmb	02 04 08.7	
	comp=Z,5.9nm,1.1s						
SCHQ	Schefferville	74.55	22	P	P	02 04 21.4	+0.2
	comp=Z,0.9nm,0.4s,baz=309,slow=8.1,SNR=6.3						
SCHQ	Schefferville	74.55	22	P	P	02 04 21.5	+0.2
KWP	Kalwaria Pacla	75.31	329	P	P	02 04 25.0	-0.8
KWP				pmax	pmax		
	comp=Z,18nm,0.9s						
KWP	Kalwaria Pacla	75.31	329	P	P	02 04 25.0	-0.8
OJC	Ojcow	75.85	331	P	P	02 04 26.0	-2.8
OJC				pmax	pmax		
	comp=Z,13nm,1.1s						
OJC	Ojcow	75.85	331	P	P	02 04 26.0	-2.8
OJC				IAmb	IAmb	02 04 29.1	
	comp=Z,13nm,1.1s						
BUR08	Bucovina Ar. S	76.01	326	P	P	02 04 28.0	-1.9
BURAR	Bucovina Array	76.02	326	⇑P	P	02 04 29.4	-0.6
BURAR	Bucovina Array	76.02	326	⇑P	P	02 04 29.4	-0.6
BURAR	Bucovina Array	76.02	326	P	P	02 04 28.4	-1.6
KOLS	Kolonicke sedl	76.05	329	eP	P	02 04 29.2	-0.8
KOLS				pmax	pmax		
	comp=Z,14nm,1.4s						
KOLS	Kolonicke sedl	76.05	329	eP	P	02 04 29.2	-0.8
TESR	Tescani	76.35	325	⇓P	P	02 04 31.3	-0.4
TRPA	Tarpa	76.62	328	⇑P	P	02 04 33.1	-0.1
OKC	Ostrava-Krasne	76.74	331	eP	P	02 04 33.1	-0.7
OKC	Ostrava-Krasne	76.74	331	eP	P	02 04 33.1	-0.7
CHVC	Chvalec	76.77	333	eP	P	02 04 33.7	-0.4
LANS	Liptovska Anna	76.87	330	eP	P	02 04 34.9	+0.2
LANS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LANS	Liptovska Anna	76.87	330	eP	P	02 04 34.9	+0.2
DPC	Dobruska-Polom	76.89	333	eP	P	02 04 34.7	-0.1
DPC	Dobruska-Polom	76.89	333	eP	P	02 04 34.7	-0.1
KRLC	Kraliky	76.98	332	eP	P	02 04 34.8	-0.5
KRLC	Kraliky	76.98	332	eP	P	02 04 34.8	-0.5
MORC	Moravsky Berou	76.99	332	⇑P	P	02 04 35.2	-0.1
MORC	Moravsky Berou	76.99	332	⇑P	P	02 04 35.2	-0.1
MORC	Moravsky Berou	76.99	332	eP	P	02 04 34.8	-0.5
MORC	Moravsky Berou	76.99	332	IAmb	IAmb	02 04 35.8	
	comp=Z,8.7nm,0.9s						
OZUR		77.04	325	⇑P	P	02 04 29.1	-6.5
CLL	Collm	77.08	335	⇑iP	P	02 04 35.6	-0.1
	comp=Z,17nm,1.2s						
CLL	Collm	77.08	335	⇑iP	P	02 04 35.6	-0.1
CLL				pmax	pmax		
	comp=Z,17nm,1.2s						
CLL	Collm	77.08	335	IAmb	IAmb	02 04 36.5	
	comp=Z,8.5nm,0.7s						
BRG	Berggiesshubel	77.18	334	eP	P	02 04 35.3	-1.0
	comp=Z,3.6nm,0.9s						
BRG	Berggiesshubel	77.18	334	eP	P	02 04 35.3	-1.0
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MLR	Muntele Rosu	77.47	324	⇓P	P	02 04 38.5	+0.3
MLR	Muntele Rosu	77.47	324	⇓P	P	02 04 38.5	+0.3
VYHS	Vyhne	77.65	330	eP	P	02 04 38.7	-0.3
VYHS				pmax	pmax		
	comp=Z,12nm,1.3s						
VYHS	Vyhne	77.65	330	eP	P	02 04 38.7	-0.3
DRGR		77.67	327	⇑P	P	02 04 38.6	-0.7
DRGR		77.67	327	⇑P	P	02 04 38.6	-0.7
VRAC	Vranov	77.71	332	⇓P	P	02 04 39.5	+0.2
VRAC	Vranov	77.71	332	⇓P	P	02 04 39.5	+0.2
VRAC	Vranov	77.71	332	eP	P	02 04 39.1	-0.2
JAVC	Velka Javorina	77.74	331	eP	P	02 04 40.2	+0.7
GOPC	GO Pecny, Ondr	77.76	333	eP	P	02 04 39.4	-0.2
GOPC	GO Pecny, Ondr	77.76	333	eP	P	02 04 39.4	-0.2
PRU	Pruhonice	77.78	333	eP	P	02 04 39.3	-0.3
PRU	Pruhonice	77.78	333	eP	P	02 04 39.3	-0.3
VOIR		77.87	325	⇑P	P	02 04 40.3	-0.1
VOIR		77.87	325	⇑P	P	02 04 40.3	-0.1
KRUC	Moravsky	77.99	332	eP	P	02 04 40.5	-0.3
ARR	Arges	78.10	325	⇓P	P	02 04 42.1	+0.5
SMOL	Smolenice	78.11	331	eP	P	02 04 41.7	+0.1
SMOL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SMOL	Smolenice	78.11	331	eP	P	02 04 41.7	+0.1
PBCC	Pribram	78.21	334	eP	P	02 04 41.4	-0.7
MODS	Modra-Piesok	78.29	331	eP	P	02 04 42.1	-0.5
MODS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MODS	Modra-Piesok	78.29	331	eP	P	02 04 42.1	-0.5
SIRR	Siria	78.51	327	⇓P	P	02 04 43.3	-0.5
TXAR	Lajitas Array	78.66	60	P	P	02 04 46.6	+1.6
	comp=Z,0.9nm,0.8s,baz=292,slow=4.5,SNR=11						
TXAR	Lajitas Array	78.66	60	P	P	02 04 45.8	+0.8
TXAR	Lajitas Array	78.66	60	P	P	02 04 45.8	+0.8
GZR	Gura Zlata	78.81	326	⇓P	P	02 04 45.1	-0.4
GZR	Gura Zlata	78.81	326	⇓P	P	02 04 45.1	-0.4
KHC	Kasperske Hory	78.83	334	eP	P	02 04 45.4	-0.2
KHC	Kasperske Hory	78.83	334	eP	P	02 04 45.4	-0.2
KHC	Kasperske Hory	78.83	334	IAmb	IAmb	02 04 46.2	
	comp=Z,3.1nm,0.7s						
COPA	Copaceanca	78.87	324	⇑P	P	02 04 45.0	-0.8
GEC2	GERESS Array S	79.04	333	IAmb	IAmb	02 04 46.8	
	comp=Z,3.0nm,0.7s						
GERES	GERESS Array B	79.04	333	P	P	02 04 45.9	-0.9
	comp=Z,2.5nm,0.6s,baz=34,slow=5.6,SNR=22						
GERES	GERESS Array B	79.04	333	eP	P	02 04 46.2	-0.6
GERES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GERES	GERESS Array B	79.04	333	P	P	02 04 45.6	-1.2
GRF	Grafenberg Arr	79.04	335	eP	P	02 04 46.4	-0.3
	comp=Z,8.5nm,0.8s,baz=24,slow=4.7						
BZS	Buzias	79.07	327	⇓P	P	02 04 46.3	-0.6
BZS	Buzias	79.07	327	⇓P	P	02 04 46.3	-0.6
CONA	Conrad Observa	79.15	332	i P	P	02 04 47.5	+0.1
	comp=Z,6.0nm,0.7s						
U40A	Yellville	79.57	48	IAmb	IAmb	02 04 50.9	
	comp=Z,4.1nm,0.8s						
PUNG	Punghina	79.68	325	⇑P	P	02 04 49.6	-0.6
PLVB	Pleven	79.73	324	⇑P	P	02 04 49.6	-0.9
MOA	Molln	79.74	333	i P	P	02 04 50.4	-0.1
	comp=Z,5.9nm,0.9s						
ARSA	Arzberg	79.85	332	i P	P	02 04 51.2	+0.1
	comp=Z,5.4nm,1.0s						
FCAR	Ozark Folk Cen	80.30	48	IAmb	IAmb	02 04 54.6	
	comp=Z,3.6nm,0.8s						
SOKA	Soboth	80.51	332	i P	P	02 04 54.5	-0.3
	comp=Z,12nm,1.1s						
KBA	Koelnbreinsper	80.71	333	i P	P	02 04 55.6	-0.4
	comp=Z,11nm,0.9s						
VTS	Vitosha	80.94	324	⇑P	P	02 04 56.9	-0.3
VTS	Vitosha	80.94	324	⇑P	P	02 04 56.9	-0.3
VTS	Vitosha	80.94	324	IAmb	IAmb	02 04 58.3	
	comp=Z,11nm,0.8s						
MYKA	Terra Mystica	81.02	332	i P	P	02 04 57.5	+0.1
	comp=Z,12nm,1.4s						
WATA	Walderalm	81.04	334	i P	P	02 04 57.3	-0.4
	comp=Z,15nm,1.2s,SNR=4.4						
WTTA	Wattenberg	81.09	334	i P	P	02 04 57.9	-0.1
	comp=Z,10nm,0.8s,SNR=8.0						
BFO	Black Forest	81.10	336	P	P	02 04 56.5	-1.3
BFO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BFO	Black Forest	81.10	336	P	P	02 04 56.5	-1.3
BFO				IAmb	IAmb	02 04 58.3	
	comp=Z,5.8nm,0.8s						
RETA	Reutte	81.15	335	i P	P	02 04 58.1	-0.1
	comp=Z,6.0nm,1.0s,SNR=4.8						
MOTA	Moosalm	81.18	334	i P	P	02 04 58.2	-0.2
	comp=Z,15nm,1.0s						
SQTA	Sankt Quirin	81.26	334	i P	P	02 04 58.7	-0.1
	comp=Z,9.8nm,1.0s						
ECH	Echery	81.53	337	IAmb	IAmb	02 05 00.2	
	comp=Z,5.9nm,0.8s						
H06E1	SOCORRO T-PHAS	81.55	72	T	T	03 35 19.9	
FETA	Feichten	81.58	334	i PcP	P	02 05 00.5	-0.1
	comp=Z,8.8nm,1.1s,SNR=5.2						
DAVA	Damuels	81.60	335	i P	P	02 05 00.1	-0.6
	comp=Z,9.5nm,1.0s						
Z50A	Ashland	85.53	45	IAmb	IAmb	02 05 22.2	
	comp=Z,4.5nm,0.8s						
KEST	Kesra	92.20	330	P	P	02 05 53.4	+0.8
	comp=Z,4.7nm,1.0s,baz=14,slow=8.3,SNR=3.4						
KEST	Kesra	92.20	330	P	P	02 05 50.3	-2.3
ESDC	Sonseca Array	92.30	342	P	P	02 05 53.0	+0.1
	comp=Z,0.2nm,0.6s,baz=16,slow=3.1,SNR=2.9						
ESDC	Sonseca Array	92.30	342	P	P	02 05 51.7	-1.3
TORD	Torodi Ar. Bea	115.57	328	PKP	PKiKP	02 11 24.9	-0.2
	comp=Z,0.3nm,0.9s,baz=23,slow=1.5,SNR=2.8						
PLCA	Paso Flores	148.86	96	PKPbc	PKiKP	02 12 31.4	0.0
	comp=Z,1.5nm,0.7s,baz=288,slow=4.2,SNR=4.3						
PLCA	Paso Flores	148.86	96	PKP2	PKPbc	02 12 30.3	+0.3
PLCA	Paso Flores	148.86	96	PKPbc	PKPbc	02 12 30.3	+0.3
CPUP	Villa Florida	149.63	60	PKPbc	PKiKP	02 12 32.8	-0.4
	comp=Z,0.7nm,0.5s,baz=11,slow=6.0,SNR=3.6						
CPUP	Villa Florida	149.63	60	PKPdf	PKPdf	02 12 26.9	-0.7

LJU 11 02:03:45.6, 45°.75N × 14°.86E, h2^{km}, ML0.1, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
VISS	Visnje	0.05	344	⇓iPg	Pg	02 03 46.6	-0.1
VISS				i Sg	Sg	02 03 47.4	0.0
	comp=Z,12nm,0.1s						

IDC **11** *02:20:59.9±2.1, 59°.42N × 152°.96W, h56^{km}±34^{km}, mb3.3/1, mb1 3.7/5, mb1mx3.1/41, mbtmp3.6/5, ML3.6/4, Error ellipse: s-maj=36.7km s-min=10.2km az=105.0*

AEIC **11** *02:21:01.9±1.3, 59°.35N±0°.03 × 152°.90W±0°.03, h78^{km}±4^{km}, ML2.9/96, Error ellipse: s-maj=4.6km s-min=1.3km az=207.0*

ISC 11 02:21:01.1±0.9, 59°.35N±0°.03 × 152°.86W±0°.03, h85^{km}±6^{km}, n90, σ0^s.78/108, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AU22	Augustine Moun	0.26	274		Pn	02 21 13.3	-0.4
AU22					Sn	02 21 22.2	-0.8
AUJK	Augustine Jueg	0.28	270		Pn	02 21 13.5	-0.4
AUQ	Augustine Qik'	0.28	271		Pn	02 21 13.5	-0.4
AUQ					Sn	02 21 22.8	-0.6
AUL	Augustine Lava	0.30	276		Pn	02 21 14.0	+0.1
AUL					Sn	02 21 23.1	-0.4
AUW	Augustine West	0.31	273		Pn	02 21 13.8	-0.2
ILS	Iliamna Low So	0.62	350		Pn	02 21 15.7	-0.7
IVE	Iliamna Volcan	0.67	353		Pn	02 21 16.3	-0.7
HOM	Homer	0.69	63		Pn	02 21 17.2	+0.1
HOM					Sn	02 21 29.4	+0.5
FOSS	Fourpeaked Sta	0.70	218		Pn	02 21 16.7	-0.6
FOSS					Sn	02 21 28.5	-0.7
ILW	Iliamna West	0.72	349		Pn	02 21 16.7	-0.9
CNPM	China Poot	0.85	78		Pn	02 21 18.6	-0.1
CNPM					Sn	02 21 32.2	+0.4
RED	Redoubt Volcan	1.07	2		Pn	02 21 21.0	-0.4
RED					Sn	02 21 36.1	-0.5
BRLK	Bradley Lake	1.09	67		Pn	02 21 21.6	+0.1
BRLK					Sn	02 21 36.5	-0.3
RSO	Redoubt South	1.11	3		Pn	02 21 21.8	-0.2
RDWB	Redoubt West	1.14	0		Pn	02 21 21.7	-0.5
RDWB					Sn	02 21 37.2	-0.9
BRSE	Bradley Lake S	1.15	69		Pn	02 21 22.5	+0.3
BRSE					Sn	02 21 38.5	+0.5
KAHG	Katmai Hook Gl	1.23	226		Pn	02 21 23.3	0.0
RDJH	Redoubt Jeurge	1.24	1		Pn	02 21 23.1	-0.4
RDJH					Sn	02 21 39.9	-0.4
DFR	Drift River	1.25	4		Pn	02 21 23.1	-0.4
KAHC	Katmai Hardscr	1.32	238		Pn	02 21 24.1	-0.3
KCG	Knife Ck. Glac	1.57	229		Pn	02 21 27.6	0.0
KCG					Sn	02 21 47.2	-0.4
KDAK	Kodiak Island	1.58	175	P	Pn	02 21 27.3	-0.3
	25nm,0.3s,baz=357,slow=14,SNR=298						
KDAK				S	Sn	02 21 46.6	-1.1
	17nm,0.3s,baz=349,slow=19,SNR=16						
KDAK	Kodiak Island	1.58	175		Pn	02 21 27.4	-0.2
KDAK	Kodiak Island	1.58	175	Sn	Sn	02 21 46.2	-1.5
CAPN	Captain Cook N	1.66	30		Pn	02 21 29.9	+1.4
KELA	Mount Kelaz	1.75	240		Pn	02 21 29.8	-0.1
SLKM	Skilak Lake	1.76	48		Pn	02 21 29.8	-0.2
SLKM					Sn	02 21 51.8	-0.2
CKL	Chakachamna La	1.87	8		Pn	02 21 31.6	+0.1
SPCR	Spurr Chakacha	1.88	10		Pn	02 21 31.6	0.0
CKT	Bend	1.88	10		Pn	02 21 31.7	+0.1
SEW	Seward	1.88	65		Pn	02 21 31.3	-0.2
SEW					Sn	02 21 53.3	-1.4
SPBG	Spurr Blockage	1.93	7		Pn	02 21 32.4	+0.2
OHAK	Old Harbor	2.15	186		Pn	02 21 34.5	-0.6
OHAK					Sn	02 21 59.2	-1.8
SVW2	Sparrevohn	2.21	323		Pn	02 21 35.6	-0.4
SVW2					Sn	02 22 01.5	-1.1
RC01	Rabbit Creek A	2.34	40		Pn	02 21 37.4	-0.2
SUA	Susitna One	2.36	25		Pn	02 21 38.5	+0.4
PLK3	Peulik 3	2.45	228		Pn	02 21 39.8	+0.7
PLK1	Peulik 1	2.50	233		Pn	02 21 40.2	+0.4
PWL	Port Wells	2.72	54		Pn	02 21 42.2	-0.6

SII	Sitkinak Islan	2.89	195		Pn	02 21 44.5	-0.5
PMR	Palmer	2.91	38		Pn	02 21 44.4	-0.8
KNK	Knik Glacier	3.01	45		Pn	02 21 45.9	-0.7
GHO	Glory Hole Cre	3.11	37		Pn	02 21 47.4	-0.6
GLI	Glacier Island	3.27	60		Sn	02 22 24.6	-3.3
GLI	Glacier Island	3.27	60		Pn	02 21 48.6	-1.4
SML	Sawmill	3.32	40		Pn	02 21 50.2	-0.7
FID	Port Fidalgo	3.49	64		Pn	02 21 51.7	-1.4
PPLA	Purkeypile	3.57	5		Pn	02 21 54.5	+0.2
SCM	Sheep Creek Mo	3.69	45		Pn	02 21 55.6	-0.3
EYAK	Cordova Ski Ar	3.77	68		Pn	02 21 56.5	-0.4
TT01	Tatalina	3.88	338		Pn	02 21 58.2	-0.1
TTA	Tatalina	3.90	338		Pn	02 21 58.6	-0.2
WAT1	Susitna Watana	4.07	29		Pn	02 22 01.0	0.0
WAT6	Susitna Watana	4.09	35		Pn	02 22 01.0	-0.3
WAT2	Susitna Watana	4.17	28		Pn	02 22 02.5	+0.1
GOAT	Goat Mountain	4.27	70		Pn	02 22 04.2	+0.5
TRF	Thorofare Moun	4.29	16		Pn	02 22 04.8	+0.6
KTH	Kantishna Hill	4.32	12		Pn	02 22 04.6	+0.2
PS12	TAPS Pump St12	4.38	58		Pn	02 22 04.6	-0.6
DHY	Denali Highway	4.58	33		Pn	02 22 07.9	-0.1
MCK	McKinley	4.78	21		Pn	02 22 10.6	0.0
BPAW	Bear Paw Mtn.	4.85	10		Pn	02 22 11.1	-0.4
GLB	Gilahina Butte	4.95	61		Pn	02 22 12.9	-0.1
PAX	Paxson	5.09	41		Pn	02 22 14.8	-0.2
TGL	Tana Glacier	5.22	70		Pn	02 22 16.2	-0.4
WRH	Wood River Hil	5.61	22		Pn	02 22 21.4	-0.4
MLY	Manley	5.78	9		Pn	02 22 24.3	0.0
HDA	Harding Lake	5.79	26		Pn	02 22 24.1	-0.3
CCB	Clear Creek Bu	5.82	22		Pn	02 22 24.1	-0.6
RIDG	Independent Ri	5.83	38		Pn	02 22 24.9	0.0
PS08	TAPS Pump Stn8	5.93	26		Pn	02 22 25.9	-0.4
TCOL	CIGO, UAF Yank	6.01	21		Pn	02 22 27.1	-0.2
COLA	College	6.02	21		Pn	02 22 27.1	-0.2
MDM	Murphy Dome	6.03	19		Pn	02 22 27.6	0.0
IL31		6.12	25		Pn	02 22 28.2	-0.5
ILAR	Eielson Array	6.12	25	P	Pn	02 22 28.1	-0.7
	1.1nm,0.3s,baz=210,slow=14,SNR=68						
ILAR				S	Sn	02 23 34.4	-2.8
	0.5nm,0.3s,baz=208,slow=18,SNR=5.6						
POKR	Poker Plat Res	6.31	21		Pn	02 22 31.0	-0.5
YUK2	White River	6.41	62		Pn	02 22 32.8	0.0
BC03		6.51	50		Pn	02 22 33.6	-0.5
BCAR	Beaver Creek A	6.51	50		Pn	02 22 34.6	+0.4
IM03		6.67	357		Pn	02 22 35.4	-0.8
IMAR	Indian Mountai	6.67	357		Pn	02 22 36.0	-0.3
PNL	Peninsula	6.86	82		Pn	02 22 38.4	-0.5
PRP	Porcupine Dome	7.06	26		Pn	02 22 40.9	-0.8
DLBC	Dease Lake	11.83	85	P	Pn	02 23 48.2	+1.6
	0.4nm,0.3s,baz=291,slow=17,SNR=7.4						
DLBC	Dease Lake	11.83	85		Pn	02 23 48.0	+1.4
INK	Inuvik	12.32	35	P	Pn	02 23 50.8	-2.3
	0.2nm,0.3s,baz=198,slow=6.4,SNR=6.3						
YKA	Yellowknife Ar	18.66	64	P	P	02 25 13.2	+1.3
	0.1nm,0.3s,baz=275,slow=9.8,SNR=12						
SONM	Songino Array	55.23	306	P	P	02 30 26.0	+0.9
	0.4nm,0.5s,baz=51,slow=6.8,SNR=4.0						
SONM	Songino Array	55.23	306	P	P	02 30 25.8	+0.7

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*IDC **11** 02:44:04.2±0.3, 60°.65S×20°.07W, h0^{km}, mb5.5/27, mb1 5.5/27, mb1mx5.5/28, mbtmp5.5/27, MS6.0/27, Ms1 6.0/27, ms1mx5.7/34, Error ellipse: s-maj=11.0km s-min=8.0km az=24.0*

*NEIC **11** 02:44:05.8±1.7, 60°.86S±0°.08×20°.0W±0°.2, h10^{km}±1^{km}, mb5.9/96, Ms_20 6.2/750, Mwb6.4/43, Mwc6.4/88, Mww6.4, Mwc6.4(GCMT), Error ellipse: s-maj=14.1km s-min=11.2km az=43.0*

*NEIC **11** 02:44:05.8, 60°.86S×19°.98W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-1.03; $M_{\theta\theta}$0.14; $M_{\phi\phi}$0.90; $M_{r\theta}$1.04; $M_{\theta\phi}$4.09; $M_{\phi r}$-0.49; Fault plane solution: $M_0$4.36000×10^{18} NP1:ϕ_s359.01000°, δ73.16000°, λ-167.70000°. NP2:ϕ_s265.40000°, δ78.24000°, λ-17.21000°. Principal axes: T 4.6474, Plg3.0000°, Azm313.0000°; N -0.6438, Plg69.0000°, Azm52.0000°; P -4.0036, Plg20.0000°, Azm222.0000°;*

*MOS **11** 02:44:05.5±1.5, 60°.86S×20°.15W, h10^{km}, mb5.9/31, MS6.0/21 Error ellipse: s-maj=20.9km s-min=10.6km az=99.8*

*BJI **11** 02:44:06.6±0.0, 60°.84S×19°.96W, h10^{km}, mB6.1/46, Ms6.3/55, Ms7 6.1/53*

*NEIC **11** 02:44:08, 60°.85S×20°.36W, h20^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.12; $M_{\theta\theta}$-1.02; $M_{\phi\phi}$1.13; $M_{r\theta}$0.11; $M_{\theta\phi}$5.36; $M_{\phi r}$1.76; Fault plane solution: $M_0$5.74000×10^{18} NP1:ϕ_s354.00000°, δ88.00000°, λ162.00000°. NP2:ϕ_s85.00000°, δ72.00000°, λ2.00000°. Principal axes: T 5.8714, Plg14.0000°, Azm308.0000°; N -0.2619, Plg72.0000°, Azm168.0000°; P -5.6095, Plg11.0000°, Azm41.0000°;*

*GCMT **11** 02:44:10.8±0.0, 61°.01S×19°.92W, h18^{km}, MW6.4/170, Moment Tensor Solution. s168,c390; s170,c737; Duration: 3^{s}9 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.28±.02; $M_{\theta\theta}$-0.76±.02; $M_{\phi\phi}$1.03±.02; $M_{r\theta}$0.27±.05; $M_{\theta\phi}$4.85±.02; $M_{\phi r}$0.28±.05; Best double couple: $M_0$4.94600×10^{18} NP1:ϕ_s355.00000°, δ87.00000°, λ177.00000°. NP2:ϕ_s85.00000°, δ87.00000°, λ3.00000°. Principal axes: T 5.0960, Plg4.0000°, Azm310.0000°; N -0.3030, Plg86.0000°, Azm125.0000°; P -4.7960, Plg0.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **11** 02:44:11, 61°.01S×20°.00W, h17^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.32; $M_{\theta\theta}$-0.74; $M_{\phi\phi}$1.06; $M_{r\theta}$0.85; $M_{\theta\phi}$4.83; $M_{\phi r}$-0.30; Fault plane solution: $M_0$5.00000×10^{18} NP1:ϕ_s264.00000°, δ85.00000°, λ-10.00000°. NP2:ϕ_s355.00000°, δ80.00000°, λ-175.00000°. Principal axes: T 5.0897, Plg3.0000°, Azm310.0000°; N -0.1797, Plg79.0000°, Azm58.0000°; P -4.9100, Plg10.0000°, Azm219.0000°;*

*NEIC **11** 02:44:16, 60°.60S×19°.72W, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.52; $M_{\theta\theta}$-0.25; $M_{\phi\phi}$0.77; $M_{r\theta}$2.34; $M_{\theta\phi}$4.88; $M_{\phi r}$0.19; Fault plane solution: $M_0$5.44000×10^{18} NP1:ϕ_s357.28000°, δ64.08000°, λ-177.13000°. NP2:ϕ_s266.02000°, δ87.42000°, λ-25.95000°. Principal axes: T 5.6559, Plg16.0000°, Azm315.0000°; N -0.4238, Plg64.0000°, Azm81.0000°; P -5.2321, Plg20.0000°, Azm219.0000°;*

ISC 11 02:44:06.3±0.2**, 60°.84S**±0°.04×**20°.12W**±0°.04**, h10**^{km}**, n1036, σ2^{s}40**/695**, mb5.8**/81**, MS6.2**/438**, 20C-3D, East of South Sandwich Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	10.96	300		Pn	02 46 43.1	+0.2
HOPE					Sn	02 48 46.6	+1.3
VNA1	Neumayer--Stat	10.96	159	P	Pn	02 46 40.8	-2.0
I27DE	GEORG VON NEUM	10.99	159	Pn	Pn	02 46 40.9	-2.4
	baz=334,slow=12,SNR=1.8						
VNA3	Neumayer Olymp	11.24	162	P	Pn	02 46 43.9	-2.9
VNA2	Neumayer--Watz	11.34	158	P	Pn	02 46 44.9	-3.2
	baz=326,slow=15						
SNAA	Sanae	12.83	155	P	Pn	02 47 05.2	-3.3
SNAA	Sanae	12.83	155	Pn	Pn	02 47 04.7	-3.8
	60nm,0.3s,baz=329,slow=14,SNR=304						
SNAA				Sn	Sn	02 49 13.4	-18
	37nm,0.3s,baz=211,slow=23,SNR=5.3						
SNAA				LR	LR	02 51 10.5	
	comp=Z,94µm,20.7s,baz=314,slow=33						
SNAA	Sanae	12.83	155	c iP	Pn	02 47 04.8	-3.6
NVL	N'lazarevskaya	16.19	141	eP	Pn	02 47 51.8	-1.7
NVL				eS	Sn	02 50 51.9	-1.0
NVL				pmax	pmax		
	comp=Z,480nm,1.0s						
NVL				MLR	MLR		
	comp=Z,39µm,13.0s						
PMSA	Palmer Station	20.13	240	P	Pn	02 48 41.6	-0.2
	comp=Z,362nm,1.1s,baz=80,slow=6.2,SNR=20						
PMSA				LR	LR	02 55 22.7	
	comp=Z,36µm,19.1s,baz=94,slow=34						
PMSA	Palmer Station	20.13	240	P	P	02 48 40.4	+0.4
PMSA				S	Sn	02 52 27.9	-0.1
PMSA	Palmer Station	20.13	240	eP	Pn	02 48 42.3	+0.5
EFI	East Falkland	22.68	277	i P	P	02 49 06.8	-0.7
EFI				pmax	pmax		
	comp=Z,2µm,1.0s						
EFI				MLR	MLR		
	comp=Z,38µm,13.0s						
EFI	East Falkland	22.68	277	P	P	02 49 07.0	-0.5
EFI				S	S	02 53 15.6	+0.2
H09W1	TRISTAN DA CUN	24.27	15	P	P	02 49 23.8	+0.4
	SNR=11						
H09W1				T	T	03 15 02.5	
	SNR=19						
SYO	Syowa Base	25.54	134	⇑eP	P	02 49 29.8	-4.7
SYO	Syowa Base	25.54	134	⇓iP	P	02 49 32.0	-2.5
SYO	Syowa Base	25.54	134	⇓ipP	pP	02 49 38.4	+2.4
USHA	Ushuaia	25.90	262	P	P	02 49 39.0	+1.1
	comp=Z,120nm,0.9s,baz=126,slow=4.5,SNR=28						
USHA				S	S	02 54 09.3	+1.7
	comp=Z,7.4nm,1.0s,baz=83,slow=20,SNR=2.6						
USHA				LR	LR	02 57 39.8	
	comp=Z,48µm,21.5s,baz=115,slow=31						
GO10	Punta Arenas	28.13	263	P	P	02 49 58.6	+0.5
GO10				IAMs_20	IAMs_20	02 57 20.3	
	comp=Z,50µm,20.0s						
QSPA	South Pole Qui	29.39	180	P	P	02 50 10.2	+0.8
	comp=Z,138nm,0.9s,baz=212,slow=3.9,SNR=76						
QSPA				S	S	02 55 02.9	+0.1
	comp=Z,37nm,1.0s,baz=296,slow=19,SNR=5.1						
QSPA				LR	LR	03 00 45.3	
	comp=Z,37µm,18.9s,baz=195,slow=34						
QSPA	South Pole Qui	29.39	180	P	P	02 50 09.1	-0.3
QSPA					S	02 55 01.8	-1.1
GO09	Cerro Castillo	29.91	265	P	P	02 50 13.6	-0.2
MAW	Mawson	34.08	137	P	P	02 50 50.0	-0.2
	baz=34,SNR=18						
MAW	Mawson	34.08	137	P	P	02 50 49.6	-0.7
	comp=Z,94nm,0.8s,baz=235,slow=8.6,SNR=22						
MAW				LR	LR	03 02 59.3	
	comp=Z,37µm,21.5s,baz=250,slow=33						
MAW	Mawson	34.08	137	P	P	02 50 49.5	-0.7
MAW				pmax	pmax		
	comp=Z,56nm,1.2s						
MAW	Mawson	34.08	137	P	P	02 50 49.5	-0.7
OGAUY	Aigu	34.60	304	eP	P	02 50 56.2	+1.0
LPA	La Plata	35.45	300	i P	P	02 50 56.0	-6.4
LPA				PP	PnPn	02 52 11.2	-10
LPA				PCP	PcP	02 53 12.8	-19
LPA				S	S	02 56 31.5	-5.6
LPA				PSP	PSP	02 56 56.2	
LPA				SS	SnSn	02 59 00.3	+4.2
LPA				PKIKP	PKiKP	03 00 33.5	-19
GO07	Milladeo Hill,	36.21	274	P	P	02 51 08.7	-0.2
GO07				IAmb	IAmb	02 51 11.2	
	comp=Z,88nm,0.6s						
PLTB	Pedras Altas	36.42	308	eP	P	02 51 11.3	+0.5
PLCA	Paso Flores	36.51	280	P	P	02 51 11.2	-0.3
	comp=Z,77nm,0.9s,baz=163,slow=7.8,SNR=71						
PLCA				S	S	02 56 48.9	-4.6
	comp=Z,4.1nm,1.0s,baz=53,slow=5.1,SNR=2.8						
PLCA				LR	LR	03 05 03.8	
	comp=Z,26µm,19.4s,baz=158,slow=34						
PLCA				PKP2ab		03 25 44.6	
	comp=Z,2.3nm,1.0s,baz=33,slow=6.8,SNR=2.9						
PLCA	Paso Flores	36.51	280	P	P	02 51 11.1	-0.4
PLCA				IAmb	IAmb	02 51 18.4	
	comp=Z,166nm,1.1s						
PLCA					S	02 56 53.2	-0.3
PLCA	Paso Flores	36.51	280	eP	P	02 51 11.3	-0.3
CPSB	Cacapava Do Su	37.57	309	eP	P	02 51 21.3	+0.7
CNLB	Canela	37.60	313	eP	P	02 51 22.1	+1.2
SUR	Sutherland	38.95	62	P	P	02 51 30.5	-1.8
	comp=Z,99nm,1.1s,baz=218,slow=6.1,SNR=8.5						
SUR	Sutherland	38.95	62	P	P	02 51 30.9	-1.5
ITQB	Itaqui	39.47	305	eP	P	02 51 36.8	+0.3
ITAB	Concordia	39.95	313	eP	P	02 51 41.1	+0.6
ESAR	Angra dos Reis	41.40	325	eP	P	02 51 54.4	+1.9
PARB	Paraibuna	41.44	323	eP	P	02 51 53.1	+0.2
GO05	Huala	41.71	284	P	P	02 51 54.6	-0.5
GO05				IAmb	IAmb	02 52 10.1	
	comp=Z,274nm,1.1s						
SPB	Sao Paulo	41.74	321	P	P	02 51 55.8	+0.5
SPB	Sao Paulo	41.74	321	eP	P	02 51 56.6	+1.3
VNDA	Vanda	41.88	181	P	P	02 51 57.4	+1.5
	comp=Z,25nm,0.8s,baz=195,slow=8.3,SNR=24						
VNDA				S	S	02 58 18.1	+4.8
	comp=Z,2.9nm,0.8s,baz=140,slow=19,SNR=2.8						
VNDA				LR	LR	03 08 05.0	
	comp=Z,28µm,20.1s,baz=174,slow=34						
VNDA	Vanda	41.88	181	P	P	02 51 55.8	-0.1
VNDA				pmax	pmax		
	comp=Z,135nm,1.3s						
VNDA	Vanda	41.88	181	P	P	02 51 55.8	-0.1
VAO	Valinhos	42.15	322	eP	P	02 51 59.7	+0.9
PTGB	Pitanga	42.23	314	eP	P	02 51 59.5	+0.1
FRTB	Fartura	42.65	318	eP	P	02 52 04.4	+1.5
PEL	Peldehue	42.66	287	P	P	02 52 03.0	+0.2
PEL				pmax	pmax		
	comp=Z,844nm,1.2s						
PEL	Peldehue	42.66	287	P	P	02 52 03.0	+0.2
PEL				IAMs_20	IAMs_20	03 08 02.1	
	comp=Z,35µm,20.0s						
CPUP	Villa Florida	42.72	307	P	P	02 52 03.0	-0.3
	comp=Z,161nm,1.1s,baz=157,slow=7.8,SNR=65						
CPUP				S	S	02 58 26.8	+0.1
	comp=Z,0.9nm,0.3s,baz=61,slow=19,SNR=1.8						
CPUP				LR	LR	03 07 31.9	
	comp=Z,12µm,20.2s,baz=144,slow=33						
CPUP	Villa Florida	42.72	307	P	P	02 52 03.4	+0.1
CPUP				S	S	02 58 25.4	-1.3
CPUP				pmax	pmax		
	comp=Z,166nm,1.0s						
CPUP	Villa Florida	42.72	307	P	P	02 52 03.4	+0.1
CPUP				IAmb	IAmb	02 52 07.8	
	comp=Z,166nm,1.0s						
CPUP					S	02 58 25.4	-1.3
CPUP	Villa Florida	42.72	307	eP	P	02 52 03.8	+0.4
CFA	Coronel Fontan	42.81	291	P	P	02 52 02.8	-1.3
	comp=Z,73nm,0.7s,baz=142,slow=9.1,SNR=61						
CFA				LR	LR	03 08 41.8	
	comp=Z,22µm,20.6s,baz=151,slow=35						
RCLB	Rio Claro- Sao	42.87	321	eP	P	02 52 05.5	+0.8
BSCB	Bom Sucesso	43.41	325	eP	P	02 52 09.9	+0.9
BOSA	Boshof	44.12	64	P	P	02 52 11.8	-3.0
	comp=Z,48nm,1.0s,baz=206,slow=7.8,SNR=17						
BOSA				LR	LR	03 06 23.3	
	comp=Z,13µm,22.0s,baz=204,slow=30						
BOSA	Boshof	44.12	64	P	P	02 52 14.1	-0.7
BOSA				pmax	pmax		
	comp=Z,156nm,1.2s						
BOSA	Boshof	44.12	64	P	P	02 52 14.1	-0.7
BOSA				IAmb	IAmb	02 52 26.9	
	comp=Z,156nm,1.2s						
TRCB	Terra Rica	44.20	315	eP	P	02 52 15.7	+0.4
BB19B	Bebedouro	44.45	321	eP	P	02 52 18.3	+1.0
BSFB	Barra de Sao F	44.48	331	eP	P	02 52 18.0	+0.5
SJMB	Sao Joao De Ma	44.68	331	eP	P	02 52 19.5	+0.4
PCMB	Pacaembu	44.83	317	eP	P	02 52 21.1	+0.8
GO04	Tololo Observa	45.19	289	IAMs_20	IAMs_20	03 10 36.4	
	comp=Z,31µm,19.0s						
SHEL	Horse Pasture	46.01	19	P	P	02 52 29.3	-0.4
SHEL				pmax	pmax		
	comp=Z,353nm,1.2s						
SHEL	Horse Pasture	46.01	19	P	P	02 52 29.3	-0.4
ITRB	Iturama	46.31	319	eP	P	02 52 32.8	+0.8
GO03	Copiap	47.12	292	IAmb	IAmb	02 52 44.4	
	comp=Z,142nm,0.9s						
IPMB	Ipameri, GO	47.26	322	eP	P	02 52 40.1	+0.6
LBTB	Lobatse	47.40	62	P	P	02 52 38.3	-2.4
	comp=Z,76nm,1.0s,baz=207,slow=8.4,SNR=25						
LBTB	Lobatse	47.40	62	P	P	02 52 39.3	-1.4
LBTB				pmax	pmax		
	comp=Z,215nm,1.3s						
LBTB	Lobatse	47.40	62	P	P	02 52 39.3	-1.4
LBTB				IAmb	IAmb	02 52 48.6	
	comp=Z,215nm,1.2s						
AQDB	Aquidauana	47.42	312	eP	P	02 52 40.1	-0.6
NBIT	Itapeh - BA	47.94	334	eP	P	02 52 44.7	-0.1
C2SB	Chapadao do Su	47.99	316	eP	P	02 52 46.5	+1.3
CASY	Casey	48.06	156	P	P	02 52 44.9	-0.2
CASY				IAmb	IAmb	02 53 02.9	
	comp=Z,207nm,1.4s						
PAF	Port-aux-Franc	48.87	120	IAMs_20	IAMs_20	03 08 23.4	
	comp=Z,21µm,21.0s						
JANB	Januaria	48.96	328	eP	P	02 52 53.0	+0.4
TSUM	Tsumeb	49.37	50	P	P	02 52 53.4	-2.5
	comp=Z,6.1nm,0.7s,baz=201,slow=9.4,SNR=12						
TSUM	Tsumeb	49.37	50	IAMs_20	IAMs_20	03 09 14.7	
	comp=Z,17µm,20.0s						
BDFB	Brasilia	49.41	324	P	P	02 52 54.4	-1.8
	comp=Z,63nm,1.0s,baz=160,slow=6.5,SNR=31						
BDFB				LR	LR	03 10 06.0	
	comp=Z,27µm,21.9s,baz=156,slow=32						
BDFB	Brasilia	49.41	324	P	P	02 52 56.2	0.0
BDFB				pmax	pmax		
	comp=Z,106nm,0.8s						
BDFB	Brasilia	49.41	324	P	P	02 52 56.2	0.0
BDFB				IAmb	IAmb	02 53 07.0	
	comp=Z,106nm,0.8s						
BDFB				IAMs_20	IAMs_20	03 10 05.6	
	comp=Z,25µm,20.0s						
PB14	IPOC Station P	49.76	293	eP	P	02 53 01.7	+2.6
ARAG	Araguaiana, MT	50.52	319	eP	P	02 53 04.9	+0.4
PB15	IPOC Station P	50.57	295	eP	P	02 53 05.6	+0.5
PB10	IPOC Station P	50.79	294	eP	P	02 53 04.3	-2.2
PB10				eP	P	02 53 06.9	+0.4
PB10				IAmb	IAmb	02 53 21.3	
	comp=Z,857nm,0.9s						
PB10	IPOC Station P	50.79	294	IAmb	IAmb	02 53 20.9	
	comp=Z,231nm,1.1s						
PB10				IAMs_20	IAMs_20	03 13 44.9	
	comp=Z,21µm,19.0s						
LVC	Limon Verde	50.85	296	S	S	03 00 23.1	-0.5
	comp=Z,1.8nm,0.6s,baz=259,slow=5.2,SNR=1.8						
LVC	Limon Verde	50.85	296	P	P	02 53 06.7	-0.7
LVC				IAmb	IAmb	02 53 16.7	
	comp=Z,141nm,0.9s						
LVC				PP	PP	02 54 59.6	-3.8
LVC	Limon Verde	50.85	296	IAMs_20	IAMs_20	03 14 50.3	
	comp=Z,18µm,19.0s						
LVC	Limon Verde	50.85	296	eP	P	02 53 07.8	+0.4
PB06	IPOC Station P	51.05	296	i P	P	02 53 08.3	-0.4
PB06				eP	P	02 53 09.5	+0.8
PB06				eP	P	02 53 09.5	+0.8
PB05	IPOC Station P	51.21	295	eP	P	02 53 08.8	-1.0
PB05				i P	P	02 53 09.4	-0.4
NBLA	Lagarto - SE	51.44	338	eP	P	02 53 11.6	+0.1
PB04	IPOC Station P	51.63	295	⇑iP	P	02 53 12.9	-0.2
PB04				i P	P	02 53 13.1	0.0
SALV	Santo Antonio	51.64	314	eP	P	02 53 12.9	0.0
PB09	IPOC Station P	51.71	296	⇑iP	P	02 53 12.9	-0.7
PB03	IPOC Station P	51.71	296	i P	P	02 53 13.4	-0.2
H10S2	ASCENSION HYDR	51.94	7	T	T	03 49 39.4	
	baz=183,slow=74,SNR=254						
H10S3	ASCENSION HYDR	51.95	7	T	T	03 49 39.8	
	baz=37,slow=74,SNR=276						
PB07	IPOC Station P	52.05	296	eP	P	02 53 16.6	+0.4
NBPN	Ponto Novo - B	52.06	335	eP	P	02 53 14.9	-1.2
PB02	IPOC Station P	52.41	296	⇑iP	P	02 53 19.1	+0.3
PB02				⇑iP	P	02 53 19.3	+0.5
NBAN	Anadia - AL	52.47	340	eP	P	02 53 19.1	+0.1
PB01	IPOC Station P	52.48	297	eP	P	02 53 18.3	-0.9
PB01				⇑iP	P	02 53 18.4	-0.8
PB01	IPOC Station P	52.48	297	IAmb	IAmb	02 53 27.2	
	comp=Z,137nm,1.0s						
PATCX	Punta Patache	52.96	296	⇑iP	P	02 53 23.0	+0.2
H10N1	ASCENSION HYDR	53.05	7	T	T	03 51 00.6	
	baz=190,slow=78,SNR=20						
H10N3	ASCENSION HYDR	53.06	7	T	T	03 50 58.6	
	baz=190,slow=78,SNR=57						
H10N2	ASCENSION HYDR	53.07	7	T	T	03 51 01.6	
	baz=190,slow=78,SNR=37						
PB08	IPOC Station P	53.12	298	eP	P	02 53 24.4	0.0
PB08				i P	P	02 53 25.5	+1.1
TA01	Diego Aracena	53.20	296	eP	P	02 53 23.7	-0.8
NBRF	Rio Formoso -	53.25	341	eP	P	02 53 25.0	+0.2
NBTA	Tacaratu-PE	53.32	338	eP	P	02 53 25.6	+0.3
SIV	San Ignacio	53.53	308	S	S	03 00 58.9	-0.9
	comp=Z,2.2nm,1.0s,baz=70,slow=16,SNR=1.9						
GO01	Chusmiza	53.56	298	⇑iP	P	02 53 28.2	+0.5
GO01	Chusmiza	53.56	298	IAmb	IAmb	02 53 43.4	
	comp=Z,170nm,0.9s						
PB11	IPOC Station P	53.68	297	eP	P	02 53 25.0	-3.1
PB11				⇑iP	P	02 53 27.9	-0.2
PB11	IPOC Station P	53.68	297	IAmb	IAmb	02 53 33.1	
	comp=Z,182nm,0.9s						
PSGC	Pisagua	54.03	297	eP	P	02 53 29.6	-1.1
MNMC	Minye Minye	54.21	298	IAMs_20	IAMs_20	03 16 54.4	
	comp=Z,15µm,20.0s						
MNMCX	Minye Minye	54.21	298	⇑iP	P	02 53 32.7	+0.5
NBLI	Livramento-PB	54.84	339	eP	P	02 53 36.6	+0.1
PB16	IPOC Station P	54.87	298	eP	P	02 53 35.4	-2.0
PB16				⇑iP	P	02 53 38.0	+0.6
PB16				eP	P	02 53 38.0	+0.6
PB12	IPOC Station P	54.98	297	eP	P	02 53 36.7	-0.9
PB12				⇑iP	P	02 53 38.7	+1.1
NBMA	Muriti-CE	55.16	337	eP	P	02 53 38.8	0.0
AP01	Chacalluta	55.20	297	eP	P	02 53 33.3	-5.8
AP01				eP	P	02 53 38.6	-0.4
AP01				IAmb	IAmb	02 53 55.2	
	comp=Z,605nm,0.4s						
NBPV	Pedro Velho	55.49	342	eP	P	02 53 41.3	+0.1
SMTB	Santa Maria do	55.75	327	eP	P	02 53 43.4	+0.3
ITZ	Itezhi-Tezhi	55.81	57	i P	P	02 53 43.1	-0.5
ITZ				i S	S	03 01 30.6	-0.1
ITZ	Itezhi-Tezhi	55.81	57	i P	P	02 53 44.7	+1.1
ITZ				i S	S	03 01 23.4	-7.2
ITZ	Itezhi-Tezhi	55.81	57	i P	P	02 53 41.5	-2.1
ITZ				i		03 01 28.1	
ITZ				i		03 07 17.1	
ITZ	Itezhi-Tezhi	55.81	57	i P	P	02 53 43.3	-0.4
ITZ	Itezhi-Tezhi	55.81	57	i P	P	02 53 43.1	-0.5
ITZ				i S	S	03 01 30.6	-0.1
ITZ	Itezhi-Tezhi	55.81	57	i P	P	02 53 44.7	+1.1
ITZ				i S	S	03 01 23.4	-7.2
ITZ	Itezhi-Tezhi	55.81	57	i P	P	02 53 41.9	-1.7
LPAZ	La Paz	56.11	301	P	P	02 53 46.7	+0.4
	comp=Z,98nm,0.8s,baz=143,slow=4.9,SNR=94						
LPAZ				S	S	03 01 37.0	+1.5
	comp=Z,1.5nm,1.0s,baz=335,slow=19,SNR=3.7						
LPAZ				LR	LR	03 19 16.0	
	comp=Z,14µm,19.6s,baz=174,slow=38						
LPAZ	La Paz	56.11	301	eP	P	02 53 45.8	-0.6
LPAZ	La Paz	56.11	301	P	P	02 53 46.2	-0.1
LPAZ				S	S	03 01 35.1	-0.5
LPAZ				pmax	pmax		
	comp=Z,190nm,1.0s						
LPAZ	La Paz	56.11	301	P	P	02 53 46.2	-0.1
LPAZ				IAmb	IAmb	02 53 53.7	
	comp=Z,190nm,0.9s						
LPAZ					S	03 01 35.1	-0.5
LPAZ	La Paz	56.11	301	eP	P	02 53 47.0	+0.6
RCBR	Riachuelo	56.17	341	S	S	03 01 33.3	-1.9
	comp=Z,6.9nm,0.9s,baz=138,slow=14,SNR=1.9						
RCBR	Riachuelo	56.17	341	P	P	02 53 45.7	-0.3
RCBR				pmax	pmax		
	comp=Z,44nm,1.2s						
RCBR	Riachuelo	56.17	341	P	P	02 53 45.7	-0.3
RCBR	Riachuelo	56.17	341	eP	P	02 53 45.7	-0.3
CLDB	Colider	56.35	317	eP	P	02 53 46.1	-1.2
NBPA	Parau_RN	56.44	340	eP	P	02 53 48.2	+0.3
NBPB	Pedra_Branca-C	57.10	337	eP	P	02 53 52.8	+0.1
LSZ	Lusaka	57.14	59	P	P	02 53 52.3	-0.8
LSZ				pmax	pmax		
	comp=Z,78nm,1.0s						
LSZ	Lusaka	57.14	59	P	P	02 53 52.3	-0.8
LSZ				IAmb	IAmb	02 54 01.5	
	comp=Z,78nm,0.9s						
LSZ	Lusaka	57.14	59	IAMs_20	IAMs_20	03 15 47.4	
	comp=Z,16µm,18.0s						
NBCL	Cascavel-CE	58.14	339	eP	P	02 54 01.6	+1.6
NBPS	Pedro II - PI	58.59	335	eP	P	02 54 03.4	+0.2
NBMO	Morrinhos-CE	59.36	337	eP	P	02 54 08.1	-0.4
SAML	Samuel	60.78	309	P	P	02 54 17.8	-0.4
SAML				pmax	pmax		
	comp=Z,176nm,0.9s						
SAML	Samuel	60.78	309	P	P	02 54 17.8	-0.4
SAML	Samuel	60.78	309	eP	P	02 54 17.9	-0.3
ABPO	Ambohimpanom	62.56	80	P	P	02 54 29.3	-1.1
ABPO				pmax	pmax		
	comp=Z,104nm,1.5s						
ABPO	Ambohimpanom	62.56	80	P	P	02 54 29.3	-1.1
ABPO				IAmb	IAmb	02 54 40.4	
	comp=Z,104nm,1.5s						
ABPO	Ambohimpanom	62.56	80	IAMs_20	IAMs_20	03 17 32.4	
	comp=Z,14µm,19.0s						
NNA	Nana	63.72	294	S	S	03 03 08.3	-4.1
	comp=Z,4.3nm,0.5s,baz=115,slow=9.4,SNR=2.1						
NNA	Nana	63.72	294	i P	P	02 54 38.2	+0.2
NNA				pmax	pmax		
	comp=Z,186nm,0.8s						
NNA	Nana	63.72	294	P	P	02 54 37.4	-0.6
NNA					S	03 03 12.6	+0.2

RPN	Rapa Nui	66.33	257	LR	LR	03 17 07.9	
	comp=Z,3μm,18.4s,baz=144,slow=30						
PTGA	Pitinga	67.23	316	P	P	02 55 00.2	-0.4
	comp=Z,48nm,0.8s,baz=160,slow=6.5,SNR=26						
PTGA				S	S	03 03 49.4	-5.9
	comp=Z,2.0nm,0.8s,baz=233,slow=20,SNR=2.0						
PTGA	Pitinga	67.23	316	P	P	02 55 00.5	-0.1
PTGA				IAmb	IAmb	02 55 04.9	
	comp=Z,62nm,0.9s						
PTGA	Pitinga	67.23	316	eP	P	02 55 00.2	-0.4
LIC	Lamto	67.91	16	eP	P	02 55 03.1	-1.7
	comp=Z,143nm,0.9s						
KIC	Kosan Boka	68.08	17	eP	P	02 55 04.2	-1.7
	comp=Z,365nm,1.3s						
TIC	Toumodi	68.32	16	eP	P	02 55 05.8	-1.6
	comp=Z,181nm,0.9s						
DBIC	Dimbokro	68.37	16	P	P	02 55 06.6	-1.1
	comp=Z,50nm,0.8s,baz=168,slow=7.5,SNR=45						
DBIC				LR	LR	03 19 05.3	
	comp=Z,7μm,18.3s,baz=172,slow=31						
DBIC	Dimbokro	68.37	16	P	P	02 55 06.3	-1.4
DBIC				pmax	pmax		
	comp=Z,122nm,1.2s						
DBIC	Dimbokro	68.37	16	P	P	02 55 06.3	-1.4
DBIC				IAmb	IAmb	02 55 14.2	
	comp=Z,122nm,1.2s						
ATAH	Atahualpa	68.71	295	P	P	02 55 10.5	+0.1
	baz=156,slow=5.0						
ATAH				S	S	03 04 20.6	+6.7
	comp=Z,1.9nm,0.6s,baz=52,slow=19,SNR=3.5						
MDP	Montagnes des	70.47	325	P	P	02 55 20.3	-0.4
	comp=Z,59nm,0.9s,baz=160,slow=6.7,SNR=11						
MDP				S	S	03 04 29.6	-4.0
	comp=Z,5.8nm,0.9s,baz=244,slow=5.1,SNR=1.7						
MBAR	Mbarara	71.45	55	i P	P	02 55 26.2	-0.7
MBAR				pmax	pmax		
	comp=Z,36nm,1.1s						
MBAR				MLR	MLR		
	comp=Z,7μm,15.0s						
MBAR	Mbarara	71.45	55	P	P	02 55 26.5	-0.4
MBAR				IAMs_20	IAMs_20	03 22 13.6	
	comp=Z,12μm,20.0s						
WHZ	Wether Hill Ro	73.42	186	P	P	02 55 37.9	-0.3
WHZ					PcP	02 55 53.5	-0.8
KMBO	Kilima Mbogo	73.68	61	P	P	02 55 39.8	-0.5
	comp=Z,0.5nm,0.3s,baz=176,slow=5.0,SNR=3.3						
KMBO				LR	LR	03 24 47.3	
	comp=Z,8μm,18.9s,baz=186,slow=33						
KMBO	Kilima Mbogo	73.68	61	i P	P	02 55 45.4	+5.1
KMBO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KMBO	Kilima Mbogo	73.68	61	P	P	02 55 39.5	-0.8
KMBO	Kilima Mbogo	73.68	61	IAMs_20	IAMs_20	03 24 25.5	
	comp=Z,9μm,19.0s						
DCZ	Deep Cove	73.88	185	P	P	02 55 40.4	-0.5
LBZ	Lake Benmore	74.79	188	IAmb	IAmb	02 56 03.6	
	comp=Z,146nm,1.3s						
MACC	Macarena, Meta	75.10	304	eP	P	02 55 47.8	-0.5
MQZ	McQueen's Vall	75.29	190	IAMs_20	IAMs_20	03 28 49.0	
	comp=Z,8μm,18.0s						
OTAV	Otavalo	75.32	298	eP	P	02 55 52.3	+2.2
OTAV	Otavalo	75.32	298	IAMs_20	IAMs_20	03 28 42.7	
	comp=Z,11μm,22.0s						
OTAV	Otavalo	75.32	298	eP	P	02 55 50.9	+0.8
FLOC	Florencia	75.34	302	eP	P	02 55 50.0	+0.3
RPZ	Rata Peaks	75.40	188	IAmb	IAmb	02 56 08.9	
	comp=Z,84nm,1.1s						
SACV	Santiago Islan	75.61	357	IAMs_20	IAMs_20	03 21 19.3	
	comp=Z,11μm,20.0s						
OXZ	Oxford	75.71	189	IAmb	IAmb	02 55 59.3	
	comp=Z,82nm,1.1s						
TOC4	Torodi Ar. Sit	75.75	22	IAMs_20	IAMs_20	03 21 18.3	
	comp=Z,11μm,22.0s						
TOC5	Torodi Ar. Sit	75.75	22	IAMs_20	IAMs_20	03 22 12.4	
	comp=Z,10μm,21.0s						
TOC3	Torodi Ar. Sit	75.77	22	IAMs_20	IAMs_20	03 21 19.8	
	comp=Z,11μm,22.0s						
TOA0	Torodi Ar. Sit	75.77	22	P	P	02 55 50.8	-1.2
TOA0				IAmb	IAmb	02 55 58.9	
	comp=Z,136nm,1.1s						
TORD	Torodi Ar. Bea	75.77	22	P	P	02 55 51.0	-1.0
	comp=Z,47nm,0.9s,baz=192,slow=6.1,SNR=49						
TORD				LR	LR	03 22 36.2	
	comp=Z,8μm,21.7s,baz=175,slow=31						
TOB5	Torodi Ar. Sit	75.77	22	IAMs_20	IAMs_20	03 22 14.1	
	comp=Z,9μm,21.0s						
TOA1	Torodi Ar. Sit	75.78	22	IAMs_20	IAMs_20	03 21 20.1	
	comp=Z,10μm,22.0s						
TOC2	Torodi Ar. Sit	75.78	22	IAMs_20	IAMs_20	03 21 19.3	
	comp=Z,11μm,22.0s						
TOC7	Torodi Ar. Sit	75.78	22	IAMs_20	IAMs_20	03 21 19.3	
	comp=Z,11μm,22.0s						
TOC1	Torodi Ar. Sit	75.80	22	IAMs_20	IAMs_20	03 21 18.6	
	comp=Z,13μm,22.0s						
GARC	Garzon, Huila	75.82	302	eP	P	02 55 52.3	-0.4
CRUC	La Cruz	75.87	300	eP	P	02 55 56.4	+3.2
TAU	Tasmania Unive	76.09	171	P	P	02 55 53.1	-0.6
TAU				pmax	pmax		
	comp=Z,105nm,1.3s						
TAU	Tasmania Unive	76.09	171	P	P	02 55 53.1	-0.6
TAU				IAmb	IAmb	02 56 10.5	
	comp=Z,105nm,1.2s						
LTZ	Lake Taylor	76.24	189	IAmb	IAmb	02 56 02.5	
	comp=Z,136nm,1.1s						
SOTA	Rioblanco	76.24	301	eP	P	02 55 57.2	+1.8
PTGC	Puerto Gaitan,	76.28	306	eP	P	02 55 54.5	-0.5
PCON	Cinco Dias	76.32	301	eP	P	02 55 58.0	+2.1
BBAC	Balboa, Cauca	76.40	300	eP	P	02 55 57.2	+1.2
KHZ	Kahutara	76.49	190	IAmb	IAmb	02 56 02.8	
	comp=Z,74nm,1.1s						
KHZ				IAMs_20	IAMs_20	03 29 48.9	
	comp=Z,12μm,18.0s						
MOO	Moorlands	76.55	170	P	P	02 55 58.2	+1.9
	baz=77,SNR=4.2						
TUMC	Tumaco	76.86	299	eP	P	02 56 00.1	+1.8
THZ	Tophouse	77.20	190	IAmb	IAmb	02 56 19.0	
	comp=Z,215nm,1.4s						
THZ				IAMs_20	IAMs_20	03 28 26.3	
	comp=Z,10μm,18.0s						
ORTC	Ortega, Tolima	77.27	303	eP	P	02 56 01.1	+0.4
CHIC	Chingaza	77.31	305	eP	P	02 56 02.0	+0.7
SNZO	South Karori	77.48	191	P	P	02 56 01.2	-0.3
SNZO				IAmb	IAmb	02 56 18.9	
	comp=Z,213nm,1.3s						
H01W2	Cape Leeuwin H	77.54	143	P	P	02 56 02.2	+0.5
	baz=190,slow=6.6,SNR=3.1						
H01W1	Cape Leeuwin H	77.55	143	P	P	02 56 00.6	-1.1
	baz=190,slow=6.6,SNR=3.9						
ORIV	Oritupano	77.56	316	eP	P	02 56 00.9	-1.2
H01W3	Cape Leeuwin H	77.56	143	P	P	02 56 01.9	+0.2
	baz=190,slow=6.6,SNR=3.4						
GR1C	Gorgona, Isla	77.68	300	eP	P	02 56 04.7	+1.9
NNZ	Nelson	77.70	190	IAMs_20	IAMs_20	03 30 35.8	
	comp=Z,8μm,20.0s						
ROSC	El Rosal	77.74	304	P	P	02 56 04.2	+0.5
	comp=Z,47nm,0.7s,baz=163,slow=8.2,SNR=15						
ROSC				S	S	03 05 57.4	+1.2
	comp=Z,4.6nm,0.5s,baz=222,slow=19,SNR=4.1						
ROSC				LR	LR	03 30 02.6	
	comp=Z,23μm,21.0s,baz=178,slow=36						
ROSC	El Rosal	77.74	304	eP	P	02 56 05.0	+1.3
ROSC	El Rosal	77.74	304	IAmb	IAmb	02 56 11.5	
	comp=Z,72nm,0.8s						
YOTC	Yotoco, Valle	77.80	302	eP	P	02 56 03.8	+0.1
ELOV	Elorza	77.82	310	eP	P	02 56 03.4	-0.3
BFZ	Birch Farm	77.95	193	IAMs_20	IAMs_20	03 26 34.3	
	comp=Z,14μm,21.0s						
QRZ	Quartz Range	78.16	190	IAmb	IAmb	02 56 10.3	
	comp=Z,80nm,1.1s						
QRZ				IAMs_20	IAMs_20	03 35 30.9	
	comp=Z,9μm,18.0s						
TAMC	Tame, Arauca	78.19	307	eP	P	02 56 07.2	+1.5
RUSC	La Rusia	78.20	306	eP	P	02 56 06.4	+0.1
MALC	Bahia Malaga	78.23	301	eP	P	02 56 08.5	+2.5
SPBC	San Pablo de B	78.38	305	eP	P	02 56 05.8	-1.1
GUY2C	Guyana, Caldas	78.51	303	eP	P	02 56 07.2	-0.9
PLMC	San Jos del P	78.60	302	eP	P	02 56 08.1	0.0
NORC	Norcasia	78.62	304	eP	P	02 56 07.0	-1.1
GUIV	Guiria	78.63	318	eP	P	02 56 05.6	-2.5
MSEY	Mahe Island	78.93	80	IAMs_20	IAMs_20	03 24 09.3	
	comp=Z,9μm,20.0s						
PCRV	Puerto La Cruz	79.01	315	P	P	02 56 10.0	-0.3
	comp=Z,50nm,0.8s,baz=150,slow=9.2,SNR=10						
BAUV	El Baul	79.07	312	eP	P	02 56 07.3	-3.3
PIZC	Pizarro, Choco	79.10	301	eP	P	02 56 12.6	+1.8
PTBC	PUERTO BERRIO,	79.34	305	eP	P	02 56 10.5	-1.5
CBOC	Ciudad Bolivar	79.36	303	eP	P	02 56 11.7	-0.6
PAMC	Pamplona, Colo	79.37	307	eP	P	02 56 12.8	0.0
BKZ	Black Stump Fm	79.42	193	IAMs_20	IAMs_20	03 26 45.2	
	comp=Z,13μm,22.0s						
HELC	Santa Helena	79.46	304	eP	P	02 56 12.4	-0.7
SOCV	Socops	79.52	309	eP	P	02 56 12.8	-0.3
GRGR	Grenville	79.84	319	eP	P	02 56 08.0	-6.7
GRGR	Grenville	79.84	319	IAMs_20	IAMs_20	03 31 28.6	
	comp=Z,9μm,20.0s						
GRHS	Sauteurs	79.92	319	eP	P	02 56 14.9	-0.2
GRSS	Sisters	79.98	319	eP	P	02 56 11.0	-4.4
SDV	Santo Domingo	79.99	309	P	P	02 56 15.9	+0.1
	comp=Z,53nm,0.8s,baz=186,slow=5.8,SNR=33						
SDV				PP	PP	02 59 16.4	-1.3
	comp=Z,22nm,1.0s,baz=260,slow=7.6,SNR=3.9						
SDV	Santo Domingo	79.99	309	eP	P	02 56 16.0	+0.3
SDV	Santo Domingo	79.99	309	P	P	02 56 14.7	-1.1
SDV				IAmb	IAmb	02 56 20.8	
	comp=Z,69nm,0.8s						
SDV	Santo Domingo	79.99	309	eP	P	02 56 15.9	+0.1
BBGH	Gun Hill	80.13	321	IAMs_20	IAMs_20	03 32 17.3	
	comp=Z,15μm,22.0s						
HIZ	Hauiti	80.24	192	IAmb	IAmb	02 56 23.5	
	comp=Z,144nm,1.1s						
URZ	Urewera	80.24	194	LR	LR	03 27 59.2	
	comp=Z,10μm,21.2s,baz=168,slow=33						
URZ	Urewera	80.24	194	IAMs_20	IAMs_20	03 27 38.1	
	comp=Z,12μm,21.0s						
SOLC	Bahia Solano	80.26	302	eP	P	02 56 19.3	+2.3
NWAO	Narrogin (SRO)	80.28	145	P	P	02 56 14.7	-2.4
	baz=80,SNR=5.1						
NWAO	Narrogin (SRO)	80.28	145	P	P	02 56 16.1	-1.0
NWAO				pmax	pmax		
	comp=Z,64nm,1.0s						
NWAO	Narrogin (SRO)	80.28	145	P	P	02 56 16.1	-1.0
NWAO	Narrogin (SRO)	80.28	145	IAMs_20	IAMs_20	03 27 35.2	
	comp=Z,11μm,22.0s						
DBBC	Dabeiba	80.48	303	eP	P	02 56 19.2	+0.9
SVCV	St. Vincent, C	80.75	320	eP	P	02 56 21.9	+2.3
SVCV	St. Vincent, C	80.75	320	P	P	02 56 21.9	+2.3
SVB	Belmont	80.78	320	eP	P	02 56 19.4	-0.3
SVB	Belmont	80.78	320	P	P	02 56 19.4	-0.3
SVB	Belmont	80.78	320	IAmb	IAmb	02 56 29.5	
	comp=Z,172nm,1.5s						
SVV	Soufriere Volc	80.81	320	eP	P	02 56 22.6	+2.6
SVV	Soufriere Volc	80.81	320	P	P	02 56 22.6	+2.6
SSV	Crater Summit	80.81	320	eP	P	02 56 18.8	-1.2
SSV	Crater Summit	80.81	320	P	P	02 56 18.8	-1.2
UREC	San Jos de Ur	80.87	304	eP	P	02 56 19.7	-0.6
MUN	Mundaring	80.88	144	P	P	02 56 19.7	-0.5
	baz=81,SNR=6.9						
MCLT	Moule a Chique	81.09	320	eP	P	02 56 21.1	-0.4
MCLT	Moule a Chique	81.09	320	P	P	02 56 21.0	-0.4
TOO	Toolangi	81.23	168	P	P	02 56 24.1	+2.0
	baz=81,SNR=4.0						
SLB	Belfond	81.24	320	eP	P	02 56 24.6	+2.4
SLB	Belfond	81.24	320	P	P	02 56 24.6	+2.4
SMLC	San Martn de	81.24	306	eP	P	02 56 20.8	-1.5
SLAC	Saint Lucia, A	81.26	320	eP	P	02 56 20.7	-1.5
SLBI	Saint Lucia, B	81.40	320	eP	P	02 56 23.8	+0.8
SLBI	Saint Lucia, B	81.40	320	P	P	02 56 23.8	+0.8
KLBR	Kellerberrin	81.69	145	P	P	02 56 23.4	-1.2
	baz=82,SNR=7.6						
CODC	Agustn Codazz	82.03	307	eP	P	02 56 23.7	-2.7
MILA	Mila	82.06	171	P	P	02 56 28.5	+2.0
	baz=82,SNR=5.5						
FDF	Fort de France	82.12	320	eP	P	02 56 26.3	-0.6
FDF	Fort de France	82.12	320	P	P	02 56 26.3	-0.6
FDF				pmax	pmax		
	comp=Z,297nm,1.4s						
FDF				MLR	MLR		
	comp=Z,7μm,21.0s						
FDF	Fort de France	82.12	320	P	P	02 56 26.3	-0.6
ARGC	Ariguani, Magd	82.27	306	eP	P	02 56 29.1	+1.4
BLDU	Ballidu	82.30	143	P	P	02 56 26.4	-1.4
	baz=82,SNR=13						
SJCC	San Jacinto, C	82.68	305	eP	P	02 56 29.6	-0.3
MDN	Morne-Daniel	82.75	320	eP	P	02 56 41.1	+11
AZU	Azuero	82.88	300	eP	P	02 56 32.3	+1.5
DWS	Wesley	82.96	320	eP	P	02 56 22.7	-8.4
MDPO	Dominica; Chan	83.01	320	eP	P	02 56 31.9	+0.5
KMBL	Kambalda	83.02	148	P	P	02 56 31.2	-0.4
	baz=83,SNR=11						
MDPV	Dominica, Penn	83.05	320	eP	P	02 56 34.9	+3.3
MDPV	Dominica, Penn	83.05	320	P	P	02 56 34.9	+3.3
FURI	Furi	83.30	58	IAMs_20	IAMs_20	03 28 57.6	
	comp=Z,8μm,20.0s						
MORW	Morawa	83.56	142	P	P	02 56 35.3	+0.9
	baz=83,SNR=3.2						
MORW	Morawa	83.56	142	IAmb	IAmb	02 56 47.8	
	comp=Z,66nm,1.1s						
OUZ	Omahuta	83.62	191	IAmb	IAmb	02 56 41.3	
	comp=Z,115nm,1.1s						
OUZ				IAMs_20	IAMs_20	03 31 03.7	
	comp=Z,11μm,20.0s						
UPA	Univ. de Panam	83.63	301	eP	P	02 56 36.3	+1.6
CAN	Canberra	83.77	171	IAmb	IAmb	02 56 52.3	
	comp=Z,129nm,1.4s						
CNB	Canberra Magne	83.80	171	P	P	02 56 35.3	-0.3
	baz=84,SNR=8.9						
BCIP	Isla Barro Col	83.93	301	eP	P	02 56 36.0	-0.3
MLYT	Lee's Yard	84.32	320	eP	P	02 56 46.6	+8.5
HTT	Hallett	84.51	163	P	P	02 56 38.8	-0.4
	baz=84,SNR=7.3						
BBOO	Buckleboo	84.67	160	P	P	02 56 38.4	-1.6
	baz=85,SNR=12						
BBOO	Buckleboo	84.67	160	P	P	02 56 38.4	-1.6
BBOO				IAmb	IAmb	02 56 53.8	
	comp=Z,33nm,0.7s						
BBOO				IAMs_20	IAMs_20	03 31 38.0	
	comp=Z,9μm,19.0s						
YNG	Young	84.73	170	P	P	02 56 40.1	-0.1
	baz=85,SNR=5.9						
SKI	Saint Kitts	85.07	320	IAmb	IAmb	02 56 52.2	
	comp=Z,150nm,1.2s						
SKI				IAMs_20	IAMs_20	03 31 51.1	
	comp=Z,11μm,22.0s						
FORT	Forrest	85.07	153	IAmb	IAmb	02 56 55.7	
	comp=Z,121nm,1.1s						
FORT				IAMs_20	IAMs_20	03 29 02.9	
	comp=Z,12μm,22.0s						
ANWB	Willy Bob	85.08	320	eP	P	02 56 38.7	-3.3
ANWB	Willy Bob	85.08	320	P	P	02 56 39.9	-2.1
SEUS	St. Eustatius	85.29	319	eP	P	02 56 36.7	-6.3
SEUS	St. Eustatius	85.29	319	IAMs_20	IAMs_20	03 33 31.1	
	comp=Z,9μm,22.0s						
SABA	Saba	85.50	319	eP	P	02 56 48.6	+4.6
SABA	Saba	85.50	319	IAMs_20	IAMs_20	03 31 24.5	
	comp=Z,12μm,21.0s						
SMRT	St. Maarten	85.85	319	eP	P	02 56 38.7	-7.1
SMRT	St. Maarten	85.85	319	IAmb	IAmb	02 56 52.9	
	comp=Z,167nm,1.4s						
SMRT				IAMs_20	IAMs_20	03 38 51.8	
	comp=Z,7μm,20.0s						
TAM	Tamanrasset	85.90	24	P	P	02 56 46.3	+0.2
TAM				pmax	pmax		
	comp=Z,62nm,1.3s						
TAM	Tamanrasset	85.90	24	P	P	02 56 46.3	+0.2
STKA	Stephens Creek	86.41	164	P	P	02 56 47.6	-1.1
	baz=86,SNR=24						
STKA	Stephens Creek	86.41	164	P	P	02 56 47.2	-1.4
	comp=Z,25nm,1.0s,baz=161,slow=5.7,SNR=30						
STKA				LR	LR	03 33 20.2	
	comp=Z,42μm,19.6s,baz=184,slow=34						
STKA	Stephens Creek	86.41	164	P	P	02 56 47.9	-0.7
STKA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
STKA	Stephens Creek	86.41	164	P	P	02 56 47.9	-0.7
STKA				IAMs_20	IAMs_20	03 33 19.1	
	comp=Z,9μm,19.0s						
MEEK	Meekatharra	86.60	144	P	P	02 56 48.6	-1.0
	baz=86,SNR=7.1						
PDPR	Patillas Dam,	86.78	317	IAmb	IAmb	02 56 57.4	
	comp=Z,45nm,0.8s						
SJG	San Juan	86.91	317	P	P	02 56 50.4	-0.5
	comp=Z,16nm,0.8s,baz=43,slow=3.5,SNR=8.3						
SJG	San Juan	86.91	317	P	P	02 56 51.0	0.0
SJG				pmax	pmax		
	comp=Z,44nm,1.0s						
SJG				MLR	MLR		
	comp=Z,7μm,22.0s						
SJG	San Juan	86.91	317	P	P	02 56 51.0	0.0
SJG				IAmb	IAmb	02 57 07.7	
	comp=Z,44nm,0.9s						
SJG	San Juan	86.91	317	IAMs_20	IAMs_20	03 36 50.0	
	comp=Z,7μm,22.0s						
GCPR	Guaynabo City	87.07	317	IAmb	IAmb	02 56 59.0	
	comp=Z,72nm,1.0s						
MLPR	Magueyes Islan	87.08	316	IAmb	IAmb	02 56 58.8	
	comp=Z,116nm,1.4s						
JTS	Las Juntas de	87.12	297	P	P	02 56 50.4	-1.9
	comp=Z,21nm,1.0s,baz=42,slow=2.5,SNR=11						
JTS	Las Juntas de	87.12	297	eP	P	02 56 53.7	+1.5
JTS	Las Juntas de	87.12	297	i P	P	02 56 52.4	+0.2
JTS				pmax	pmax		
	comp=Z,92nm,1.2s						
JTS				MLR	MLR		
	comp=Z,4μm,18.0s						
CMSA	Cobar Meteorol	87.22	168	P	P	02 56 52.0	-0.6
	baz=87,SNR=10.0						
ATD	Arta Tunnel	87.42	61	IAMs_20	IAMs_20	03 32 34.3	
	comp=Z,9μm,20.0s						
RAO	Raoul Island	88.41	199	LR	LR	03 33 38.4	
	comp=Z,2μm,19.2s,baz=161,slow=34						
ESPN	Las Esperanzas	88.54	298	IAmb	IAmb	02 57 05.1	
	comp=Z,45nm,0.8s						
ACON	Acoyapa	88.71	297	IAmb	IAmb	02 57 10.4	
	comp=Z,116nm,1.1s						
GIRL	Giralia	89.00	139	P	P	02 57 01.0	-0.1
	baz=89,SNR=4.1						
SDDR	Presa de Saban	89.50	313	IAmb	IAmb	02 57 24.2	
	comp=Z,65nm,1.1s						
SDDR				IAMs_20	IAMs_20	03 35 54.0	
	comp=Z,12μm,22.0s						
SC01	Santiago de lo	89.71	313	IAMs_20	IAMs_20	03 35 15.5	
	comp=Z,11μm,22.0s						
WRKA	Warakurna	90.66	152	P	P	02 57 07.7	-1.3
	baz=91,SNR=36						
DAMY	Dhamar	90.80	61	IAMs_20	IAMs_20	03 33 37.8	
	comp=Z,6μm,20.0s						
MTDJ	Mount Denham	91.17	307	IAMs_20	IAMs_20	03 40 14.0	
	comp=Z,10μm,20.0s						
MEH	Mehetia	91.19	229	eP	P	02 57 14.4	+2.9
	comp=Z,32nm,1.0s						
PSAD3	Pilbara Seismi	91.65	143	IAMs_20	IAMs_20	03 32 20.2	
	comp=Z,11μm,22.0s						
PSAC3	Pilbara Seismi	91.68	143	IAMs_20	IAMs_20	03 32 32.1	
	comp=Z,11μm,22.0s						
PSAB3	Pilbara Seismi	91.72	143	IAMs_20	IAMs_20	03 32 45.0	
	comp=Z,11μm,22.0s						
PSAA1	Pilbara Seismi	91.73	143	IAMs_20	IAMs_20	03 32 45.3	
	comp=Z,10μm,22.0s						
PSAB1	Pilbara Seismi	91.73	143	IAMs_20	IAMs_20	03 32 34.4	
	comp=Z,11μm,22.0s						
PSA00	Pilbara Seismi	91.73	143	IAmb	IAmb	02 57 27.2	
	comp=Z,36nm,0.9s						
PSA00				IAMs_20	IAMs_20	03 34 18.5	
	comp=Z,8μm,20.0s						
PSAA2	Pilbara Seismi	91.74	143	IAMs_20	IAMs_20	03 32 34.7	
	comp=Z,11μm,22.0s						
PSAB2	Pilbara Seismi	91.75	143	IAMs_20	IAMs_20	03 32 46.0	
	comp=Z,10μm,22.0s						
PSAC2	Pilbara Seismi	91.76	143	IAMs_20	IAMs_20	03 34 18.6	
	comp=Z,10μm,21.0s						
PSAC1	Pilbara Seismi	91.76	143	IAMs_20	IAMs_20	03 32 46.2	
	comp=Z,10μm,22.0s						
GRTK	Grand Turk	91.78	314	IAMs_20	IAMs_20	03 36 54.0	
	comp=Z,7μm,22.0s						
PSAD1	Pilbara Seismi	91.84	143	IAMs_20	IAMs_20	03 32 37.3	
	comp=Z,10μm,22.0s						
COCO	West Island	91.95	119	IAMs_20	IAMs_20	03 30 11.4	
	comp=Z,7μm,21.0s						
RAR	Rarotonga	91.98	217	LR	LR	03 30 02.0	
	comp=Z,4μm,21.2s,baz=192,slow=30						
PPT2	Papeete2	92.00	227	eS	S	03 08 22.0	+4.8
	comp=Z,4μm,25.0s						
PPT2	Papeete2	92.00	227	ePS	PS	03 09 34.6	+7.2
	comp=Z,9μm,29.8s						
PPT2	Papeete2	92.00	227	eLR	LR	03 26 55.0	
	comp=Z,27μm,33.0s,baz=164						
PPT	Papeete	92.02	227	LR	LR	03 30 18.2	
	comp=Z,6μm,21.8s,baz=164,slow=30						
MBWA	Marble Bar	92.09	143	IAMs_20	IAMs_20	03 32 19.9	
	comp=Z,10μm,21.0s						
ASAR	Alice Springs	93.19	156	P	P	02 57 18.8	-1.9
	comp=Z,12nm,0.8s,baz=193,slow=3.9,SNR=92						
ASAR				PP	PP	03 01 02.5	-0.6
	comp=Z,6.4nm,0.9s,baz=186,slow=6.3,SNR=3.1						
ASAR				PKKP	PKKPdf	03 14 20.5	-2.0
	comp=Z,0.2nm,0.4s,baz=202,slow=2.7,SNR=4.1						
ASAR				PKPPKP		03 22 38.0	
	comp=Z,0.8nm,0.9s,baz=12,slow=3.9,SNR=5.0						
ASAR				LR	LR	03 36 01.7	
	comp=Z,9μm,21.1s,baz=186,slow=33						
ASAR	Alice Springs	93.19	156	P	P	02 57 19.0	-1.7
ASAR	Alice Springs	93.19	156	P	P	02 57 18.9	-1.7
PMOZ	Porto Moniz, M	93.36	2	eS	S	03 08 44.2	+16
PMOZ	Porto Moniz, M	93.36	2	eLQ	LQ	03 23 47.9	
PMOZ				eLR	LR	03 26 41.9	
	comp=Z,6μm,20.0s						
VAH	Vaihoa	93.45	230	eP	P	02 57 25.2	+3.4
	comp=Z,154nm,1.4s						
PMPST	Porto Santo, M	93.63	3	eS	S	03 08 47.5	+17
APG	El Apazote	93.74	294	P	P	02 57 22.9	-0.4
	comp=Z,15nm,0.9s,baz=148,slow=4.4,SNR=12						
CCIG	Comitan	95.61	293	IAMs_20	IAMs_20	03 34 29.4	
	comp=Z,7μm,21.0s						
TAOE	Nuku Hiva Isla	96.25	239	eLR	LR	03 29 01.4	
	comp=Z,12μm,27.6s						
TAOE	Nuku Hiva Isla	96.25	239	IAMs_20	IAMs_20	03 31 01.3	
	comp=Z,6μm,20.0s						
FITZ	Fitzroy Crossi	96.65	147	P	P	02 57 36.1	-0.4
	baz=97,SNR=3.6						
FITZ	Fitzroy Crossi	96.65	147	IAMs_20	IAMs_20	03 37 30.5	
	comp=Z,6μm,19.0s						
WC4	Warramunga Arr	96.88	156	IAMs_20	IAMs_20	03 44 47.4	
	comp=Z,10μm,20.0s						
WB1	Warramunga Ar.	96.88	156	IAMs_20	IAMs_20	03 38 04.5	
	comp=Z,9μm,21.0s						
WR1	Warramunga Arr	96.89	156	IAMs_20	IAMs_20	03 38 16.9	
	comp=Z,8μm,21.0s						
WR2	Warramunga Arr	96.89	156	IAMs_20	IAMs_20	03 38 15.9	
	comp=Z,8μm,21.0s						
WRA	Warramunga Arr	96.89	156	P	P	02 57 35.2	-2.4
	comp=Z,5.6nm,0.9s,baz=200,slow=4.5,SNR=16						
WRA				LR	LR	03 38 27.3	
	comp=Z,9μm,21.2s,baz=190,slow=34						
WRA	Warramunga Arr	96.89	156	P	P	02 57 35.9	-1.7
WRA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
WRA	Warramunga Arr	96.89	156	P	P	02 57 35.9	-1.7
WB2	Warramunga Arr	96.90	156	IAMs_20	IAMs_20	03 38 06.0	
	comp=Z,10μm,21.0s						
WR3	Warramunga Arr	96.90	156	IAMs_20	IAMs_20	03 38 16.0	
	comp=Z,10μm,21.0s						
WR4	Warramunga Arr	96.90	156	IAMs_20	IAMs_20	03 38 16.1	
	comp=Z,10μm,21.0s						
WR5	Warramunga Arr	96.90	156	IAMs_20	IAMs_20	03 38 16.1	
	comp=Z,10μm,21.0s						
WRAB	Tennant Creek	96.91	156	i P	P	02 57 36.3	-1.4
WRAB				pmax	pmax		
	comp=Z,23nm,1.3s						
WRAB	Tennant Creek	96.91	156	IAMs_20	IAMs_20	03 38 17.3	
	comp=Z,9μm,21.0s						
WR6	Warramunga Arr	96.91	156	IAMs_20	IAMs_20	03 38 15.2	
	comp=Z,10μm,21.0s						
WC1	Warramunga Arr	96.91	156	IAMs_20	IAMs_20	03 37 44.4	
	comp=Z,8μm,20.0s						
WB3	Warramunga Arr	96.92	156	IAMs_20	IAMs_20	03 37 44.5	
	comp=Z,9μm,20.0s						
WB4	Warramunga Arr	96.94	156	IAMs_20	IAMs_20	03 38 18.0	
	comp=Z,9μm,21.0s						
WB5	Warramunga Arr	96.96	156	IAMs_20	IAMs_20	03 38 17.7	
	comp=Z,9μm,21.0s						
WB6	Warramunga Arr	96.98	156	IAMs_20	IAMs_20	03 38 18.3	
	comp=Z,9μm,21.0s						
WB7	Warramunga Arr	97.00	156	IAMs_20	IAMs_20	03 38 19.3	
	comp=Z,8μm,21.0s						
WB8	Warramunga Arr	97.03	156	IAMs_20	IAMs_20	03 38 19.4	
	comp=Z,9μm,21.0s						
WB9	Warramunga Arr	97.05	156	IAMs_20	IAMs_20	03 38 21.0	
	comp=Z,10μm,21.0s						
WB0	Warramunga Arr	97.08	156	IAMs_20	IAMs_20	03 38 21.6	
	comp=Z,10μm,21.0s						
XMIS	Christmas Isla	97.12	126	IAMs_20	IAMs_20	03 31 04.9	
	comp=Z,7μm,22.0s						
CEU	Ceuta	97.15	12	ePP	PP	03 01 25.9	-8.9
CEU				eS	S	03 09 08.9	+8.1
DZM	Mont Dzumac	97.21	186	LR	LR	03 39 53.4	
	comp=Z,7μm,19.5s,baz=182,slow=34						
DZM	Mont Dzumac	97.21	186	eSKSac	SKSac	03 08 18.8	+2.4
	comp=Z,1μm,28.3s						
DZM				eS	ScS	03 09 06.4	+3.4

	comp=Z,6µm,28.4s						
DZM	**Mont Dzumac**	**97.21**	**186**	*e*PS	PS	03 10 33.3	+9.0
	comp=Z,2µm,27.4s						
DZM				*e*SS	SS	03 15 53.6	+15
	comp=Z,8µm,27.4s						
DZM				*e*LQ	LQ	03 25 26.9	
	comp=Z,29µm,29.8s						
DZM				*e*LR	LR	03 29 27.6	
	comp=Z,12µm,22.1s						
TEIG	**Tepich**	**97.39**	**298**	P	**P**	**02 57 38.6**	**-1.0**
	comp=Z,13nm,0.8s,baz=132,slow=0.0						
TEIG				LR	LR	03 44 57.4	
	comp=Z,4µm,20.2s,baz=253,slow=38						
TEIG	**Tepich**	**97.39**	**298**	P	**P**	**02 57 39.1**	**-0.5**
TEIG				IAmb	IAmb	02 57 56.4	
	comp=Z,46nm,1.1s						
TEIG	**Tepich**	**97.39**	**298**	IAMs_20	IAMs_20	03 42 16.6	
	comp=Z,7µm,22.0s						
CMIG	**Matias Romero**	**97.56**	**291**	P	**P**	**02 57 39.0**	**-1.5**
	comp=Z,3.7nm,1.0s,baz=167,slow=4.0,SNR=4.6						
PFVI	**Vila Bisbo**	**98.07**	**9**	*e*S	S	03 09 21.1	+12
PFVI				*e*SS	**SS**	**03 16 00.7**	**+8.7**
EMAL	**Malaga-Limoner**	**98.11**	**13**	*i* PS	PS	03 10 31.0	-3.2
PBDV	**Barranco-do-Ve**	**98.25**	**10**	*e*S	S	03 09 29.3	+19
PBDV				*e*SS	**SS**	**03 16 00.4**	**+5.8**
CMLA	**Cha da Macela**	**98.36**	**356**	IAMs_20	IAMs_20	03 33 51.9	
	comp=Z,9µm,19.0s						
PVAQ	**Vaqueiros**	**98.42**	**10**	*e*S	S	03 09 28.6	+17
PVAQ				*e*SS	**SS**	**03 16 02.5**	**+5.5**
PVAQ				*e*LQ	LQ	03 25 16.5	
PVAQ				*e*LR	LR	03 31 39.6	
	comp=Z,6µm,20.0s						
PCVE	**Castro Verde**	**98.62**	**10**	*e*S	S	03 09 28.9	+16
PCVE				*e*SS	**SS**	**03 16 09.8**	**+10**
MNCI	**Minicoy**	**98.72**	**89**	IAMs_20	IAMs_20	03 33 22.4	
	comp=Z,9µm,20.0s						
PNCL	**Nicolau / Gran**	**99.06**	**9**	*e*S	S	03 09 36.0	+19
PNCL				*e*SS	**SS**	**03 16 12.9**	**+7.0**
KEST	**Kesra**	**99.21**	**24**	P	**Pdif**	**02 57 48.6**	**+1.1**
	comp=Z,2.5nm,0.8s,baz=234,slow=6.9,SNR=1.5						
KEST				LR	LR	03 39 54.9	
	comp=Z,6µm,18.1s,baz=153,slow=34						
KEST	**Kesra**	**99.21**	**24**	IAMs_20	IAMs_20	03 39 53.0	
	comp=Z,7µm,19.0s						
RAYN	**Ar Rayn**	**99.23**	**58**	IAMs_20	IAMs_20	03 40 05.4	
	comp=Z,6µm,20.0s						
CART	**Cartagena**	**99.32**	**15**	IAMs_20	IAMs_20	03 37 53.9	
	comp=Z,8µm,19.0s						
BBSR	**BB Station**	**99.75**	**323**	IAMs_20	IAMs_20	03 36 51.2	
	comp=Z,7µm,21.0s						
PMAFR	**Mafra**	**99.84**	**9**	*e*Sdif	S	03 09 39.7	+16
PMAFR				*e*SS	SS	03 16 27.9	+11
PESTR	**Estremoz**	**99.89**	**10**	*e*Sdif	S	03 09 40.3	+16
PESTR				*e*SS	**SS**	**03 16 25.7**	**+8.2**
PMTG	**Montargil**	**100.04**	**9**	*e*Sdif	Sdif	03 09 42.2	+17
PMTG				*e*SS	**SS**	**03 16 28.1**	**+8.6**
WDD	**Wied Dalam**	**100.42**	**28**	IAMs_20	IAMs_20	03 46 19.6	
	comp=Z,7µm,19.0s						
PMRV	**Marv??o**	**100.46**	**10**	*e*Sdif	Sdif	03 09 44.9	+16
PMRV				*e*SS	**SS**	**03 16 34.8**	**+9.3**
PMRV				*e*LQ	LQ	03 26 23.5	
PMRV				*e*LR	LR	03 32 37.3	
	comp=Z,7µm,22.0s						
CNJI	**Cibinong**	**100.59**	**127**	P	**Pdif**	**02 57 57.1**	**+2.9**
	comp=Z,2µmcomp=Z,22nm,1.4s						
CISI	**Cisompet, Garu**	**100.64**	**127**	IAMs_20	IAMs_20	03 35 02.0	
	comp=Z,6µm,20.0s						
TRD	**Trivandrum**	**100.83**	**92**	IAMs_20	IAMs_20	03 33 17.5	
	comp=Z,4µm,20.7s						
PCAS	**Casmilo, Conde**	**100.99**	**9**	*e*Sdif	Sdif	03 09 48.9	+16
PCAS				*e*SS	**SS**	**03 16 40.9**	**+8.0**
ESDC	**Sonseca Array**	**101.03**	**13**	P	**Pdif**	**02 57 58.9**	**+3.4**
	comp=Z,0.1nm,0.3s,baz=180,slow=3.9,SNR=2.6						
ESDC	**Sonseca Array**	**101.03**	**13**		**Pdif**	**02 57 55.1**	**-0.4**
COI	**Coimbra**	**101.15**	**9**	*e*SS	SS	03 16 44.6	+10
MTE	**Manteigas**	**101.41**	**10**	*e*Sdif	Sdif	03 09 46.4	+10
MTE				*e*SS	**SS**	**03 16 44.1**	**+5.3**
MTE				*e*LQ	LQ	03 26 30.1	
MTE				*e*LR	LR	03 32 27.2	
	comp=Z,8µm,22.0s						
UNM	**Universidad Na**	**101.48**	**289**	IAMs_20	IAMs_20	03 38 56.9	
	comp=Z,8µm,21.0s						
CORL	**Corleone**	**102.12**	**26**	IAMs_20	IAMs_20	03 44 50.9	
	comp=Z,7µm,21.0s						
JAGI	**Jajag, Banyuwa**	**102.16**	**134**	IAMs_20	IAMs_20	03 35 29.0	
	comp=Z,6µm,22.0s						
MVO	**Moncorvo**	**102.22**	**10**	*e*Sdif	Sdif	03 09 56.3	+13
MVO				*e*SS	**SS**	**03 16 53.3**	**+3.3**
MVO				*e*LQ	LQ	03 26 51.5	
MVO				*e*LR	LR	03 32 20.9	
	comp=Z,7µm,20.0s						
MAHO	**Mahon**	**102.35**	**19**	*e*PP	PP	03 01 57.2	-17
MAHO				*e*S		03 10 04.9	
PBRG	**Braganca**	**102.88**	**10**	*e*Sdif	Sdif	03 10 05.9	+17
PBRG				*e*SS	**SS**	**03 17 06.3**	**+7.3**
MTN	**Manton Dam**	**103.07**	**151**	IAMs_20	IAMs_20	03 41 17.6	
	comp=Z,8µm,22.0s						
KARP	**Karpathos**	**103.52**	**38**	IAMs_20	IAMs_20	03 46 37.2	
	comp=Z,5µm,20.0s						
456A	**Hilliard**	**104.16**	**308**	IAMs_20	IAMs_20	03 45 07.3	
	comp=Z,9µm,21.0s						
RGRI	**Rengat**	**104.92**	**119**	P	**Pdif**	**02 58 14.0**	**+0.6**
BKNI	**Bangkinang**	**104.97**	**118**	IAMs_20	IAMs_20	03 35 52.3	
	comp=Z,7µm,21.0s						
UOSS	**Minazif**	**105.11**	**66**	IAMs_20	IAMs_20	03 42 25.5	
	comp=Z,5µm,21.0s						
GOA	**Goa**	**105.30**	**86**	*i* sP	**PP**	**03 02 42.6**	**+6.2**
GOA				IAMs_20	IAMs_20	03 36 13.1	
	comp=Z,7µm,18.2s						
451A	**Vernon**	**105.52**	**305**	IAMs_20	IAMs_20	03 46 12.4	
	comp=Z,6µm,21.0s						
Y60A	**Bolivia**	**105.69**	**313**	IAMs_20	IAMs_20	03 43 31.7	
	comp=Z,6µm,22.0s						
Y59A	**Loris**	**105.91**	**312**	IAMs_20	IAMs_20	03 44 54.6	
	comp=Z,6µm,22.0s						
ZAIG	**Zacatecas**	**106.03**	**288**	IAMs_20	IAMs_20	03 39 03.3	
	comp=Z,9µm,22.0s						
Y58A	**Scranton**	**106.12**	**312**	IAMs_20	IAMs_20	03 48 10.2	
	comp=Z,6µm,20.0s						
Z56A	**Williston**	**106.23**	**310**	IAMs_20	IAMs_20	03 47 07.2	
	comp=Z,5µm,20.0s						
154A	**Montrose**	**106.26**	**308**	IAMs_20	IAMs_20	03 44 22.8	
	comp=Z,9µm,22.0s						
V62A	**Hyde County Ai**	**106.30**	**315**	IAMs_20	IAMs_20	03 46 23.8	
	comp=Z,5µm,20.0s						
MDRS	**Chennai**	**106.36**	**93**	*i* x	**PP**	**03 02 40.0**	**-4.2**
MDRS				*e*x	x	03 12 06.0	
URV	**Uravakonda**	**106.51**	**89**	*e*PP	**PP**	**03 02 44.9**	**-0.5**
URV				IVMs_BB	IVMs_BB	03 34 29.1	
	comp=Z,1µm,30.7s						
BRAL	**Brewton**	**106.53**	**305**	IAMs_20	IAMs_20	03 50 08.1	
	comp=Z,5µm,20.0s						
X58A	**Rowland**	**106.59**	**312**	IAMs_20	IAMs_20	03 48 28.5	
	comp=Z,5µm,20.0s						
MANT	**Manisa**	**106.66**	**38**	IAMs_20	IAMs_20	03 43 49.4	
	comp=Z,9µm,22.0s						
SKHT	**Srikalahasti**	**106.68**	**92**	*e*PP	**PP**	**03 02 42.2**	**-4.3**
SKHT				IVMs_BB	IVMs_BB	03 35 33.1	
	comp=Z,732nm,19.5s						
CNNC	**Cliffs of the**	**106.68**	**314**	IAMs_20	IAMs_20	03 44 06.0	
	comp=Z,6µm,21.0s						
250A	**Grady**	**106.93**	**306**	IAMs_20	IAMs_20	03 49 03.5	
	comp=Z,8µm,20.0s						
BIRD	**Birdtown, Kers**	**107.08**	**311**	IAMs_20	IAMs_20	03 42 22.4	
	comp=Z,5µm,21.0s						
OSSC	**Osservatorio P**	**107.11**	**23**	IAMs_20	IAMs_20	03 42 05.7	
	comp=Z,6µm,21.0s						
W57A	**Gilead**	**107.36**	**312**	IAMs_20	IAMs_20	03 49 09.9	
	comp=Z,5µm,19.0s						
HODGE	**Hodges**	**107.38**	**310**	IAMs_20	IAMs_20	03 49 58.4	
	comp=Z,5µm,19.0s						
MYKOM	**Kota Tinggi**	**107.49**	**120**	IAMs_20	IAMs_20	03 36 54.1	
	comp=Z,7µm,22.0s						
LHMI	**Lhok Sumawe**	**107.51**	**112**	IAMs_20	IAMs_20	03 35 38.1	
	comp=Z,9µm,22.0s						
SSB	**Saint Sauveur**	**107.65**	**18**	IAMs_20	IAMs_20	03 42 24.5	
	comp=Z,7µm,20.0s						
346A	**Big Creek Wild**	**107.71**	**303**	IAMs_20	IAMs_20	03 47 49.1	
	comp=Z,5µm,22.0s						
BOM	**Bombay**	**107.72**	**83**	*e*x	**PKiKP**	**03 02 36.7**	**+3.4**
BOM				*e*x	x	03 12 02.3	
Y52A	**Lilburn**	**107.73**	**308**	IAMs_20	IAMs_20	03 46 17.9	
	comp=Z,7µm,21.0s						
BNI	**Bardonecchia**	**107.77**	**20**	IAMs_20	IAMs_20	03 44 38.6	
	comp=Z,7µm,18.0s						
KMSC	**Kings Mountain**	**107.84**	**311**	IAMs_20	IAMs_20	03 47 17.7	
	comp=Z,5µm,21.0s						
POO	**Poona**	**107.91**	**84**	*i* x	**PP**	**03 02 58.7**	**+2.9**
S61A	**Accomac**	**108.12**	**316**	IAMs_20	IAMs_20	03 45 28.8	
	comp=Z,7µm,20.0s						
PRMA	**PARMA**	**108.13**	**22**	IAMs_20	IAMs_20	03 42 21.6	
	comp=Z,7µm,20.0s						
344A	**Westbrook Farm**	**108.29**	**302**	IAMs_20	IAMs_20	03 48 04.8	
	comp=Z,7µm,22.0s						
SRLM	**Srisailam**	**108.30**	**90**	*e*PP	**PP**	**03 02 52.2**	**-6.3**
SRLM				IVMs_BB	IVMs_BB	03 37 51.1	
	comp=Z,860nm,22.2s						
BG3	**Lake Jocassee**	**108.31**	**310**	IAMs_20	IAMs_20	03 45 23.0	
	comp=Z,6µm,22.0s						
V55A	**Taylorsville**	**108.43**	**311**	IAMs_20	IAMs_20	03 43 11.2	
	comp=Z,5µm,21.0s						
U56A	**King**	**108.57**	**312**	IAMs_20	IAMs_20	03 48 54.9	
	comp=Z,6µm,21.0s						
R61A	**Willards**	**108.59**	**317**	IAMs_20	IAMs_20	03 44 30.4	
	comp=Z,7µm,21.0s						
ADKI	**Addanki**	**108.61**	**91**	*e*PP	**PP**	**03 02 58.6**	**-2.1**
ADKI				*e*SKSac	**SKSac**	**03 09 09.3**	**-0.1**
ADKI				IVMs_BB	IVMs_BB	03 35 11.1	
	comp=Z,786nm,30.4s						
X51A	**Calhoun**	**108.66**	**308**	IAMs_20	IAMs_20	03 46 12.4	
	comp=Z,6µm,21.0s						
IPM	**Ipoh**	**108.67**	**116**	IAMs_20	IAMs_20	03 39 15.6	
	comp=Z,7µm,21.0s						
W52A	**Murphy**	**108.77**	**309**	IAMs_20	IAMs_20	03 46 18.3	
	comp=Z,8µm,22.0s						
V53A	**Saluda**	**108.86**	**310**	IAMs_20	IAMs_20	03 51 23.7	
	comp=Z,6µm,20.0s						
KLRI	**Killari**	**108.86**	**87**	*e*PP	**PP**	**03 03 00.8**	**-1.8**
KLRI				IVMs_BB	IVMs_BB	03 36 08.8	
	comp=Z,931nm,24.2s						
VBMS	**Vicksburg**	**108.87**	**302**	IAMs_20	IAMs_20	03 48 37.9	
	comp=Z,5µm,21.0s						
S58A	**Poland Farm, P**	**108.87**	**315**	IAMs_20	IAMs_20	03 42 03.9	
	comp=Z,5µm,22.0s						
NJS	**Nagarjunasagar**	**108.89**	**90**	*e*PP	**PP**	**03 02 58.8**	**-4.0**
NJS				IVMs_BB	IVMs_BB	03 38 09.3	
	comp=Z,671nm,18.4s						
R58B	**Mineral**	**109.13**	**315**	IAMs_20	IAMs_20	03 47 02.7	
	comp=Z,5µm,20.0s						
CBN	**Corbin Frederi**	**109.17**	**315**	IAMs_20	IAMs_20	03 49 14.8	
	comp=Z,5µm,19.0s						
TKL	**Tuckaleechee C**	**109.21**	**309**	PP	PP	03 02 56.7	-8.4
	comp=Z,5.8nm,0.9s,baz=169,slow=8.6,SNR=4.6						
TKL	**Tuckaleechee C**	**109.21**	**309**	IAMs_20	IAMs_20	03 50 44.0	
	comp=Z,5µm,20.0s						
KULM	**Kulim**	**109.23**	**115**	IAMs_20	IAMs_20	03 39 11.3	
	comp=Z,8µm,21.0s						
U54A	**Nelsons Funny**	**109.25**	**311**	IAMs_20	IAMs_20	03 45 44.9	
	comp=Z,5µm,22.0s						
HYBB	**Hyderabad (bro**	**109.26**	**89**	*e*PP	**PP**	**03 03 03.2**	**-2.3**
HYBB				*e*SKSac	**SKSac**	**03 09 12.5**	**+0.3**
HYBB				IVMs_BB	IVMs_BB	03 41 10.0	
	comp=Z,916nm,17.6s						
S57A	**Dark Hollow, R**	**109.32**	**314**	IAMs_20	IAMs_20	03 41 43.8	
	comp=Z,5µm,21.0s						
Q60A	**Greensboro**	**109.37**	**317**	IAMs_20	IAMs_20	03 45 29.9	
	comp=Z,8µm,20.0s						
BRTR	**Keskin Array B**	**109.37**	**41**	PP	PP	03 02 56.0	-10
	comp=Z,2.3nm,1.0s,baz=190,slow=6.2,SNR=4.6						
BRTR				PKKPbc	**PKKPab**	**03 13 49.5**	**-0.9**
	comp=Z,2.7nm,1.1s,baz=345,slow=4.9,SNR=3.9						
P61A	**Hammonton**	**109.63**	**318**	IAMs_20	IAMs_20	03 43 40.7	
	comp=Z,7µm,20.0s						
MYLAV	**Mylavaram**	**109.71**	**91**	*e*PP	**PP**	**03 03 05.2**	**-3.5**
MYLAV				IVMs_BB	IVMs_BB	03 35 40.5	
	comp=Z,1µm,35.2s						
BKB	**Balikpapan**	**109.82**	**134**	IAMs_20	IAMs_20	03 52 07.2	
	comp=Z,5µm,19.0s						
TZTN	**Tazewell**	**109.91**	**310**	IAMs_20	IAMs_20	03 48 13.5	
	comp=Z,5µm,20.0s						
CLF	**Chambon-Foret**	**110.02**	**16**	IAMs_20	IAMs_20	03 45 33.1	
	comp=Z,5µm,18.0s						
P60A	**Greenville**	**110.03**	**317**	IAMs_20	IAMs_20	03 44 09.4	
	comp=Z,7µm,21.0s						
M65A	**Busby, Falmout**	**110.04**	**322**	IAMs_20	IAMs_20	03 46 05.7	
	comp=Z,8µm,20.0s						
PSUB	**Penn St. - Bra**	**110.07**	**318**	IAMs_20	IAMs_20	03 43 57.4	
	comp=Z,7µm,20.0s						
CPNY	**Central Park**	**110.37**	**319**	IAMs_20	IAMs_20	03 43 07.5	
	comp=Z,8µm,22.0s						
FETA	**Feichten**	**110.38**	**22**	*i* pPKiKP	**PKiKP**	**03 02 43.9**	**+6.2**
	comp=Z,15nm,1.4s						
FETA				*i* PKKPab	**PKKPab**	**03 13 44.2**	**-1.2**
	comp=Z,4.9nm,1.2s						
OXF	**Oxford**	**110.41**	**304**	IAMs_20	IAMs_20	03 48 41.8	
	comp=Z,7µm,21.0s						
GGR	**Gangavaram**	**110.42**	**90**	*e*PP	**PP**	**03 03 10.8**	**-3.0**
GGR				IVMsBB		03 39 05.2	
	comp=Z,609nm,22.2s						
MVL	**Millersville**	**110.44**	**317**	IAMs_20	IAMs_20	03 44 44.2	
	comp=Z,6µm,20.0s						
SRSP	**Sriramsagar**	**110.45**	**88**	*e*PP	**PP**	**03 03 11.0**	**-3.1**
SRSP				IVMs_BB	IVMs_BB	03 40 18.9	
	comp=Z,796nm,19.5s						
ABTA	**Abfaltersbach**	**110.45**	**23**	*i* PP	**PP**	**03 03 16.9**	**+2.7**
	comp=Z,14nm,1.6s						
ABTA				*i* PKKPab	**PKKPab**	**03 13 44.5**	**-0.5**
	comp=Z,9.5nm,1.8s						
BRNJ	**Basking Ridge**	**110.47**	**319**	IAMs_20	IAMs_20	03 43 27.1	
	comp=Z,8µm,22.0s						
DAVA	**Damuels**	**110.48**	**21**	*i* PP	**PP**	**03 03 13.9**	**-0.5**
	comp=Z,12nm,1.5s						
DAVA				*i* PKKPdf	**PKKPdf**	**03 13 55.0**	**+0.4**
	comp=Z,5.5nm,1.1s						
YLE	**Yale**	**110.52**	**320**	IAMs_20	IAMs_20	03 41 50.5	
	comp=Z,9µm,22.0s						
P57A	**Homestead Farm**	**110.53**	**316**	IAMs_20	IAMs_20	03 46 20.0	
	comp=Z,6µm,20.0s						
PAL	**Palisades**	**110.55**	**319**	IAMs_20	IAMs_20	03 43 01.9	
	comp=Z,7µm,21.0s						
MYKA	**Terra Mystica**	**110.56**	**24**	*i* PP	**PP**	**03 03 17.2**	**+2.3**
	comp=Z,12nm,1.2s						
MYKA				*i* PKKPdf	**PKKPdf**	**03 13 49.6**	**-4.6**
	comp=Z,8.1nm,1.0s						
CLTN	**Cedars of Leba**	**110.57**	**308**	IAMs_20	IAMs_20	03 52 13.0	
	comp=Z,6µm,20.0s						
PVM	**Polavaram**	**110.62**	**92**	*e*PP	**PP**	**03 03 11.6**	**-3.6**
PVM				IVMs_BB	IVMs_BB	03 36 07.0	
	comp=Z,1µm,25.6s						
OBKA	**Obir**	**110.63**	**25**	*i* PKiKP	**PKiKP**	**03 02 36.1**	**-1.9**
	comp=Z,18nm,1.6s						
BRYW	**Bryant College**	**110.64**	**321**	IAMs_20	IAMs_20	03 46 33.5	
	comp=Z,8µm,20.0s						
SQTA	**Sankt Quirin**	**110.66**	**22**	*i* PP	**PP**	**03 03 10.9**	**-4.8**
	comp=Z,10nm,1.1s						
SQTA				*i* PKKPdf	**PKKPdf**	**03 13 53.9**	**-0.3**
	comp=Z,12nm,2.0s						
U49A	**Red Boiling Sp**	**110.73**	**308**	IAMs_20	IAMs_20	03 45 58.2	
	comp=Z,8µm,22.0s						
MOTA	**Moosalm**	**110.76**	**22**	*i* PP	**PP**	**03 03 14.6**	**-1.8**
	comp=Z,5.8nm,1.3s						
MOTA				*i* PKKPdf	**PKKPdf**	**03 13 49.4**	**-4.6**
	comp=Z,9.2nm,1.3s						
PAGS	**Pennsylvania G**	**110.77**	**317**	IAMs_20	IAMs_20	03 45 13.7	
	comp=Z,7µm,20.0s						
WTTA	**Wattenberg**	**110.78**	**23**	*i* PKiKP	**PKiKP**	**03 02 36.4**	**-2.0**
	comp=Z,9.4nm,1.1s						
WTTA				*i* PKKPab	**PKKPab**	**03 13 42.9**	**-0.7**
	comp=Z,12nm,1.6s						
RETA	**Reutte**	**110.84**	**22**	*i* PP	**PP**	**03 03 19.6**	**+2.8**
	comp=Z,12nm,1.5s						
ODNJ	**Ogdensburg**	**110.84**	**319**	IAMs_20	IAMs_20	03 43 37.0	
	comp=Z,7µm,22.0s						
WATA	**Walderalm**	**110.84**	**22**	*i* PP	**PP**	**03 03 16.3**	**-0.7**
	comp=Z,10nm,1.1s						
WATA				*i* PKKPab	**PKKPab**	**03 13 44.6**	**+1.3**
	comp=Z,4.3nm,0.8s						
CCAR	**Cane Creek**	**110.86**	**302**	IAMs_20	IAMs_20	03 50 00.8	
	comp=Z,5µm,21.0s						
W45A	**Hickory Valley**	**110.88**	**305**	IAMs_20	IAMs_20	03 48 13.3	
	comp=Z,8µm,22.0s						
S51A	**Beattyville**	**110.89**	**311**	IAMs_20	IAMs_20	03 48 56.5	
	comp=Z,5µm,20.0s						
SOKA	**Soboth**	**110.89**	**25**	*i* PP	**PP**	**03 03 18.5**	**+1.2**
	comp=Z,5.4nm,1.1s						
SOKA				*i* PKKPab	**PKKPab**	**03 13 45.6**	**+2.5**
	comp=Z,11nm,1.2s						
BCX	**Boston College**	**110.90**	**322**	IAMs_20	IAMs_20	03 46 10.6	
	comp=Z,8µm,20.0s						
KBA	**Koelnbreinsper**	**110.93**	**24**	*i* PP	**PP**	**03 03 18.1**	**+0.4**
	comp=Z,14nm,1.2s						
KBA				*i* PKKPab	**PKKPab**	**03 13 44.3**	**+1.3**
	comp=Z,7.3nm,1.2s						
X43A	**Marvell**	**111.01**	**303**	IAMs_20	IAMs_20	03 48 19.6	
	comp=Z,5µm,22.0s						
KSCT	**Kent School, K**	**111.06**	**320**	IAMs_20	IAMs_20	03 42 30.9	
	comp=Z,7µm,21.0s						
Q54A	**Coxs Mills**	**111.08**	**313**	IAMs_20	IAMs_20	03 50 09.3	
	comp=Z,5µm,20.0s						
MET	**Memphis--Engin**	**111.15**	**304**	IAMs_20	IAMs_20	03 48 40.4	
	comp=Z,8µm,22.0s						
T49A	**Edmonton**	**111.15**	**309**	IAMs_20	IAMs_20	03 48 19.4	
	comp=Z,7µm,21.0s						
QUA2	**Belchertown**	**111.21**	**321**	IAMs_20	IAMs_20	03 47 11.8	
	comp=Z,7µm,20.0s						
N58A	**Sunbury**	**111.31**	**317**	IAMs_20	IAMs_20	03 44 58.4	
	comp=Z,7µm,20.0s						
O56A	**Blue Knob Stat**	**111.43**	**316**	IAMs_20	IAMs_20	03 48 24.6	
	comp=Z,7µm,19.0s						
SBUM	**Sibu**	**111.50**	**127**	IAMs_20	IAMs_20	03 40 12.0	
	comp=Z,5µm,22.0s						
ARSA	**Arzberg**	**111.54**	**25**	*i* PKKPab	PKKPab	03 13 42.3	+2.2
	comp=Z,7.8nm,1.6s						
T47A	**Sharon Grove**	**111.66**	**308**	IAMs_20	IAMs_20	03 52 45.7	
	comp=Z,7µm,19.0s						
LPAR	**Lepanto**	**111.72**	**304**	IAMs_20	IAMs_20	03 47 56.2	
	comp=Z,5µm,22.0s						
R50A	**Paris**	**111.73**	**310**	IAMs_20	IAMs_20	03 49 10.7	
	comp=Z,6µm,21.0s						
X40A	**Basin Creek Fa**	**111.79**	**302**	IAMs_20	IAMs_20	03 51 05.5	
	comp=Z,5µm,21.0s						
STU	**Stuttgart**	**111.80**	**20**	IAMs_20	IAMs_20	03 47 07.2	
	comp=Z,6µm,18.0s						
HBAR	**Harrisburg**	**111.82**	**304**	IAMs_20	IAMs_20	03 49 36.2	
	comp=Z,7µm,21.0s						
MOA	**Molln**	**111.85**	**24**	*i* PP	**PP**	**03 03 23.4**	**-0.7**
	comp=Z,10nm,1.2s						
MOA				*i* PKKPab	**PKKPab**	**03 13 44.9**	**+6.2**
	comp=Z,7.4nm,1.6s						
M57A	**Sunshine Farm,**	**111.89**	**317**	IAMs_20	IAMs_20	03 45 05.8	
	comp=Z,7µm,20.0s						
GNAR	**Gosnell**	**111.92**	**305**	IAMs_20	IAMs_20	03 48 43.8	
	comp=Z,7µm,22.0s						
O54A	**Avella**	**111.98**	**314**	IAMs_20	IAMs_20	03 51 20.2	
	comp=Z,6µm,20.0s						
L59A	**Walton**	**111.98**	**319**	IAMs_20	IAMs_20	03 43 36.2	
	comp=Z,7µm,20.0s						
EMMW	**East Machias**	**112.01**	**326**	IAMs_20	IAMs_20	03 45 38.7	
	comp=Z,7µm,22.0s						
TRY	**Troy**	**112.03**	**320**	IAMs_20	IAMs_20	03 48 08.5	
	comp=Z,6µm,20.0s						
R49A	**Shelbyville**	**112.06**	**310**	IAMs_20	IAMs_20	03 53 52.3	
	comp=Z,5µm,19.0s						
FFD	**Franklin Falls**	**112.08**	**322**	IAMs_20	IAMs_20	03 46 35.8	
	comp=Z,8µm,21.0s						
TXAR	**Lajitas Array**	**112.14**	**290**	Pdiff	**Pdif**	**02 58 55.3**	**+10**
	comp=Z,0.1nm,0.7s,baz=161,slow=8.6,SNR=2.8						
TXAR				PKiKP	**PKiKP**	**03 02 42.7**	**+1.2**
	comp=Z,2.4nm,1.0s,baz=110,slow=2.1,SNR=6.6						
TXAR				PKKPbc	**PKKPbc**	**03 13 32.5**	**+1.8**
	comp=Z,0.4nm,0.8s,baz=270,slow=0.9,SNR=3.2						
CONA	**Conrad Observa**	**112.26**	**25**	*i* pPKiKP	**PKiKP**	**03 02 47.2**	**+6.2**
	comp=Z,17nm,1.7s						
CONA				*i* PKKPdf	**PKKPdf**	**03 13 46.1**	**-4.9**
	comp=Z,4.4nm,0.9s						
BINY	**Binghamton**	**112.29**	**318**	IAMs_20	IAMs_20	03 46 53.3	
	comp=Z,7µm,21.0s						
I63A	**Otisfield**	**112.29**	**323**	IAMs_20	IAMs_20	03 46 09.4	
	comp=Z,7µm,21.0s						
I62A	**Tamworth**	**112.36**	**322**	IAMs_20	IAMs_20	03 46 44.1	
	comp=Z,7µm,20.0s						
MLR	**Muntele Rosu**	**112.38**	**33**	IAMs_20	IAMs_20	03 51 22.9	
	comp=Z,4µm,20.0s						
M56A	**Emporium**	**112.38**	**316**	IAMs_20	IAMs_20	03 46 24.6	
	comp=Z,7µm,21.0s						
LCAR	**Lake Charles**	**112.47**	**304**	IAMs_20	IAMs_20	03 49 54.3	
	comp=Z,8µm,22.0s						
G65A	**Princeton**	**112.49**	**326**	IAMs_20	IAMs_20	03 46 04.5	
	comp=Z,7µm,22.0s						
HNH	**Hanover**	**112.49**	**322**	IAMs_20	IAMs_20	03 47 08.6	
	comp=Z,7µm,20.0s						
WVL	**Waterville**	**112.49**	**324**	IAMs_20	IAMs_20	03 45 51.7	
	comp=Z,6µm,20.0s						
DGPR	**DIGLIPUR**	**112.60**	**104**	*i* x	x	03 12 47.9	
ACCN	**Adirondack Com**	**112.62**	**321**	IAMs_20	IAMs_20	03 48 06.2	
	comp=Z,7µm,21.0s						
K58A	**Earlville**	**112.69**	**319**	IAMs_20	IAMs_20	03 43 58.0	
	comp=Z,7µm,21.0s						
N53A	**Lisbon**	**112.69**	**314**	IAMs_20	IAMs_20	03 48 44.1	
	comp=Z,5µm,20.0s						
GEC2	**GERESS Array S**	**112.69**	**23**	IAMs_20	IAMs_20	03 46 56.8	
	comp=Z,6µm,20.0s						
GERES	**GERESS Array B**	**112.69**	**23**	PKiKP	**PKiKP**	**03 02 41.4**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=153,slow=2.9,SNR=3.2						
GERES				PP	**PP**	**03 03 23.1**	**-7.1**
	comp=Z,2.1nm,1.0s,baz=182,slow=3.5,SNR=3.4						
GERES				PKKP	**PKKPdf**	**03 13 43.5**	**-6.8**
	comp=Z,1.0nm,0.8s,baz=67,slow=4.5,SNR=6.6						
FCAR	**Ozark Folk Cen**	**112.71**	**303**	IAMs_20	IAMs_20	03 50 19.7	
	comp=Z,8µm,21.0s						
L56A	**Greenwood**	**112.75**	**317**	IAMs_20	IAMs_20	03 48 24.5	
	comp=Z,7µm,19.0s						
W39A	**Magazine**	**112.80**	**302**	IAMs_20	IAMs_20	03 51 47.1	
	comp=Z,7µm,20.0s						
CHLP	**Challavanipeta**	**112.88**	**93**	*e*PP	**PP**	**03 03 26.3**	**-5.1**
CHLP				IVMs_BB	IVMs_BB	03 40 32.8	
	comp=Z,851nm,22.2s						
FAKI	**Fak Fak**	**112.90**	**150**	IAMs_20	IAMs_20	03 58 30.5	
	comp=Z,5µm,18.0s						
M54A	**Oil Creek Stat**	**112.91**	**315**	IAMs_20	IAMs_20	03 47 21.8	
	comp=Z,7µm,21.0s						
H62A	**Milan**	**112.94**	**323**	IAMs_20	IAMs_20	03 46 40.5	
	comp=Z,7µm,20.0s						
KHC	**Kasperske Hory**	**112.94**	**23**	*e*PKP	**PKiKP**	**03 02 48.0**	**+5.7**
KHC				*e*PP	**PP**	**03 03 31.0**	**-0.9**
KHC				*e*SP	SP	03 13 04.7	0.0
KHC				*e*PKKP	**PKKPab**	**03 13 38.0**	**+4.1**
KHC				AMS	AMS	03 46 40.0	
	comp=Z,6µm,19.0s						
KHC	**Kasperske Hory**	**112.94**	**23**	*e*PKIKP	**PKiKP**	**03 02 48.0**	**+5.7**
KHC				*e*		03 03 31.0	
KHC				*e*SP	SP	03 13 04.7	0.0
KHC				MLR	MLR		
	comp=Z,6µm,19.0s						
ACSO	**Alum Creek Sta**	**112.95**	**312**	IAMs_20	IAMs_20	03 46 51.0	
	comp=Z,4µm,20.0s						
J59A	**Piesco**	**112.96**	**320**	IAMs_20	IAMs_20	03 44 58.0	
	comp=Z,7µm,21.0s						
MODS	**Modra-Piesok**	**112.98**	**26**	*e*PP	**PP**	**03 03 32.4**	**+0.3**
UCC	**Uccle**	**113.02**	**17**	IAMs_20	IAMs_20	03 47 02.5	
	comp=Z,7µm,20.0s						
PKME	**Peaks-Kenny Pk**	**113.03**	**325**	IAMs_20	IAMs_20	03 46 42.9	
	comp=Z,4µm,20.0s						
GRA1	**Grafenberg Arr**	**113.04**	**22**	IAMs_20	IAMs_20	03 47 04.1	
	comp=Z,4µm,20.0s						
J58A	**Remsen**	**113.11**	**319**	IAMs_20	IAMs_20	03 43 56.1	
	comp=Z,6µm,22.0s						
PSZ	**Piszkesteto**	**113.13**	**28**	IAMs_20	IAMs_20	03 47 50.9	
	comp=Z,4µm,19.0s						
SMOL	**Smolenice**	**113.14**	**26**	*e*PP	**PP**	**03 03 35.8**	**+2.5**
VT1	**Waterbury**	**113.20**	**322**	IAMs_20	IAMs_20	03 47 40.1	
	comp=Z,7µm,20.0s						
F64A	**Sherman**	**113.31**	**325**	IAMs_20	IAMs_20	03 46 38.4	
	comp=Z,6µm,21.0s						
NCB	**Newcomb**	**113.33**	**320**	IAMs_20	IAMs_20	03 44 45.5	
	comp=Z,6µm,21.0s						
BLO	**Bloomington**	**113.34**	**309**	IAMs_20	IAMs_20	03 53 33.2	
	comp=Z,6µm,21.0s						
N51A	**Ashland**	**113.34**	**313**	IAMs_20	IAMs_20	03 48 34.2	
	comp=Z,5µm,22.0s						
G62A	**West of Eustis**	**113.34**	**324**	IAMs_20	IAMs_20	03 46 30.2	
	comp=Z,7µm,20.0s						
WVNY	**West Valley, N**	**113.34**	**317**	IAMs_20	IAMs_20	03 46 13.2	
	comp=Z,8µm,22.0s						
F63A	**Nahmakanta, Br**	**113.38**	**325**	IAMs_20	IAMs_20	03 50 20.1	
	comp=Z,6µm,20.0s						
J57A	**Williamstown**	**113.38**	**319**	IAMs_20	IAMs_20	03 47 01.3	
	comp=Z,7µm,21.0s						
O49A	**Covington**	**113.41**	**311**	IAMs_20	IAMs_20	03 50 06.0	
	comp=Z,5µm,20.0s						
KRUC	**Moravsky**	**113.44**	**25**	*e*PKP	PP	03 03 27.2	-8.2
TREC	**Trest**	**113.48**	**25**	AMS	AMS	03 48 40.0	
	comp=Z,3µm,17.8s						
M52A	**Chesterland**	**113.53**	**314**	IAMs_20	IAMs_20	03 48 22.1	
	comp=Z,5µm,21.0s						
J56A	**Wolcott**	**113.54**	**318**	IAMs_20	IAMs_20	03 47 40.4	
	comp=Z,7µm,22.0s						
ERPA	**Erie**	**113.56**	**315**	IAMs_20	IAMs_20	03 47 29.0	
	comp=Z,7µm,20.0s						
OLIL	**Olney**	**113.56**	**308**	IAMs_20	IAMs_20	03 54 16.0	
	comp=Z,4µm,19.0s						
GNI	**Garni**	**113.61**	**49**	IAMs_20	IAMs_20	03 48 55.7	

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             comp=Z,5µm,18.0s
VRAC  Vranov            113.72  25 ePKP      PP        03 03 28.9  -8.5
NKC   Novy Kostel       113.78  22 eSP       SP        03 13 16.7  +4.4
NKC                                 AMS      AMS       03 47 50.0
             comp=Z,5µm,19.1s
DRLN  Deer Lake         113.81 334  IAMs_20  IAMs_20   03 39 51.4
             comp=Z,8µm,22.0s
E63A  Oxbow             113.85 326  IAMs_20  IAMs_20   03 46 55.4
             comp=Z,7µm,21.0s
MGMO  Mountain Grove    113.86 304  IAMs_20  IAMs_20   03 50 58.1
             comp=Z,8µm,21.0s
FRNY  Flat Rock         113.91 321  IAMs_20  IAMs_20   03 48 33.2
             comp=Z,7µm,21.0s
GOPC  GO Pecny, Ondr    113.93  24 eSP       SP        03 13 14.5  +0.9
GOPC                                AMS      AMS       03 49 30.0
             comp=Z,4µm,18.5s
PRU   Pruhonice         113.95  24 eSP       SP        03 13 17.5  +3.7
PRU                                 AMS      AMS       03 46 10.0
             comp=Z,4µm,17.9s
MEDO  Medina            113.97 317  IAMs_20  IAMs_20   03 45 55.5
             comp=Z,7µm,22.0s
P46A  Rosedale          113.99 309  IAMs_20  IAMs_20   03 54 03.4
             comp=Z,5µm,20.0s
N49A  Columbus Grove    113.99 312  IAMs_20  IAMs_20   03 48 08.2
             comp=Z,5µm,21.0s
M50A  Fremont           114.00 313  IAMs_20  IAMs_20   03 49 03.8
             comp=Z,5µm,20.0s
PRA   Prague            114.01  24  AMS      AMS       03 50 20.0
             comp=Z,4µm,16.0s
LONY  Lake Ozonia       114.02 320  IAMs_20  IAMs_20   03 44 52.8
             comp=Z,7µm,22.0s
J54A  Appleton          114.13 317  IAMs_20  IAMs_20   03 45 21.9
             comp=Z,8µm,22.0s
PECO  Prince Edward     114.17 318  IAMs_20  IAMs_20   03 47 47.9
             comp=Z,7µm,20.0s
AKH   Akhalkalaki       114.26  48  IAMs_20  IAMs_20   03 48 40.8
             comp=Z,6µm,21.0s
UZH   Uzhgorod          114.36  29 i PKIKP   PKiKP     03 02 46.4  +1.5
UZH                                e                   03 03 46.6
UZH                                i                   03 06 18.6
UZH                                e                   03 09 26.2
UZH                                e                   03 14 31.0
UZH                                eSS       SS        03 19 30.5  -3.2
UZH                                 MLR      MLR
             comp=Z,460nm,21.0s
PVCC  Panska Ves        114.47  24 eSP       SP        03 13 25.3  +6.8
PVCC                                AMS      AMS       03 49 00.0
             comp=Z,4µm,18.4s
KRLC  Kraliky           114.49  25 ePKP      PKiKP     03 02 52.3  +7.1
KRLC                               ePKKP     PKKPab    03 13 27.7  +0.5
KRLC                                AMS      AMS       03 50 10.0
             comp=Z,2µm,18.5s
KRLC  Kraliky           114.49  25 ePKIKP    PKiKP     03 02 52.3  +7.1
KRLC                               eSP       SP        03 13 27.7  +8.9
KRLC                                MLR      MLR
             comp=Z,2µm,18.5s
KIS   Kishinev          114.55  35 ePS       PS        03 13 34.0  +14
OKC   Ostrava-Krasne    114.55  26  AMS      AMS       03 49 40.0
             comp=Z,3µm,18.1s
SFIN  Lafayette         114.61 309  IAMs_20  IAMs_20   03 54 51.8
             comp=Z,6µm,19.0s
D62A  Allapoint, All    114.62 325  IAMs_20  IAMs_20   03 47 19.0
             comp=Z,7µm,20.0s
KOLS  Kolonicke sedl    114.64  29 ePP       PP        03 03 42.4  -1.5
DPC   Dobruska-Polom    114.65  25 eSP       SP        03 13 24.8  +4.5
DPC                                 AMS      AMS       03 47 10.0
             comp=Z,5µm,21.6s
BRG   Berggiesshubel    114.68  23 ePKIKP    PKiKP     03 02 56.9  +11
BRG                                 pmax     pmax
             comp=Z,11nm,1.6s
BRG                                 MLR      MLR
             comp=N,5µm,19.9s
BRG                                 MLR      MLR
             comp=E,3µm,19.5s
BRG                                 MLR      MLR
             comp=Z,5µm,20.0s
M48A  Edgerton          114.68 312  IAMs_20  IAMs_20   03 51 17.8
             comp=Z,5µm,20.0s
UPC   Upice             114.74  24 eSP       SP        03 13 23.9  +2.9
UPC                                 AMS      AMS       03 49 40.0
             comp=Z,4µm,18.8s
CHVC  Chvalec           114.82  24 eSP       SP        03 13 25.2  +3.4
CHVC                                AMS      AMS       03 49 40.0
             comp=Z,4µm,18.1s
OSTC  Ostas             114.83  25 eSP       SP        03 13 22.8  +1.0
OSTC                                AMS      AMS       03 48 40.0
             comp=Z,5µm,18.3s
SOC   Sochi             114.84  44 i PKIKP   PKPdf     03 02 40.8  -5.2
SOC                                 MLR      MLR
             comp=Z,2µm,19.0s
DELO  Deloro Mine       114.90 318  IAMs_20  IAMs_20   03 48 09.1
             comp=Z,7µm,20.0s
P43A  Skaggs, Pawnee    114.90 307  IAMs_20  IAMs_20   03 50 14.7
             comp=Z,8µm,22.0s
CLL   Collm             114.92  22 e(sPKiKP)           03 02 53.0
CLL                                ePP       PP        03 03 47.0  +1.2
CLL                                ePPP      PPP       03 06 12.0
CLL                                eSdif     Sdif      03 11 30.0  +1.4
CLL                                ePS       PKKPab    03 13 26.0  +0.9
CLL                                ePPS      PPS       03 14 41.0
CLL                                eSS       SS        03 19 39.0  -1.9
CLL                                eSSS      SSS       03 23 36.0
CLL                                eSSSS               03 27 12.0
CLL                                e                   03 30 42.0
CLL                                 LmV                03 49 00.0
             comp=Z,4µm,19.3s
CLL   Collm             114.92  22 ePKIKP    PKiKP     03 02 53.0  +7.1
CLL                                e                   03 03 47.0
CLL                                 MLR      MLR
             comp=Z,4µm,19.3s
MNTX  Cornudas Mount    114.93 290  IAMs_20  IAMs_20   03 49 04.0
             comp=Z,5µm,20.0s
O44A  Mansfield         114.93 308  IAMs_20  IAMs_20   03 48 24.4
             comp=Z,5µm,21.0s
AAM   Ann Arbor         115.01 313  IAMs_20  IAMs_20   03 49 20.5
             comp=Z,7µm,20.0s
PLVO  Plevna            115.19 319  IAMs_20  IAMs_20   03 46 20.0
             comp=Z,7µm,21.0s
T35A  Sooner Cattle     115.41 300  IAMs_20  IAMs_20   03 53 21.3
             comp=Z,4µm,20.0s
EPT   El Paso           115.50 290  IAMs_20  IAMs_20   03 47 21.3
             comp=Z,7µm,20.0s
HDIL  Hopedale          115.60 308  IAMs_20  IAMs_20   03 48 47.2
             comp=Z,5µm,21.0s
SADO  Sadowa            115.62 317  PP       PP        03 03 51.2  +0.3
             comp=Z,29nm,1.2s,baz=123,slow=3.6,SNR=6.0
SADO                                PKKPab   PKKPab    03 13 26.0  +3.3
             comp=Z,2.2nm,0.8s,baz=305,slow=0.3,SNR=3.8
SADO  Sadowa            115.62 317  IAMs_20  IAMs_20   03 48 48.2
             comp=Z,6µm,20.0s
L46A  Eue Claire        115.72 311  IAMs_20  IAMs_20   03 45 25.3
             comp=Z,5µm,22.0s
M44A  Midewin, Midew    115.84 309  IAMs_20  IAMs_20   03 55 59.4
             comp=Z,5µm,20.0s
HRA   Herat             115.87  66  IAMs_20  IAMs_20   03 51 25.6
             comp=Z,5µm,21.0s
AKT   Akhty             115.89  51 i PKIKP   PKiKP     03 02 55.9  +7.6
AKT                                e                   03 03 56.6
AKT                                 pmax     pmax
             comp=Z,30nm,1.3s
J48A  Bridge Port       115.93 313  IAMs_20  IAMs_20   03 50 41.7
             comp=Z,7µm,19.0s
KBZ   Khabaz            116.07  46  PKP      PKPdf     03 02 47.6  -0.7
             comp=Z,1.2nm,0.9s,baz=207,slow=9.0,SNR=2.1
KBZ                                 PKKPab   PKKPab    03 13 25.2  +4.4
             comp=Z,2.7nm,0.9s,baz=144,slow=6.1,SNR=4.5
NCK   Nalchik           116.12  47 i PKIKP   PKPdf     03 02 47.3  -1.2
NCK                                 MLR      MLR
             comp=Z,3µm,17.0s
I49A  Point Hope        116.15 314  IAMs_20  IAMs_20   03 49 23.6
             comp=Z,6µm,22.0s
KIV   Kislovodsk        116.20  46 i PKIKP   PKiKP     03 02 48.8   0.0
KIV                                e                   03 03 54.7
KIV                                ePS       PKKPdf    03 13 36.9  -6.4
KIV                                eSS       SS        03 20 00.1  +2.0
KIV                                eSSS      SSS       03 24 18.4
KIV                                 pmax     pmax
             comp=Z,30nm,1.1s
KVAR  Kislovodsk Arr    116.20  46  PKKP     PKKPdf    03 13 40.6  -2.7
             comp=Z,1.8nm,0.3s,baz=296,slow=3.6,SNR=2.6
KKM   Kota Kinabalu     116.33 130  IAMs_20  IAMs_20   03 46 46.7
             comp=Z,6µm,21.0s
319A  Douglas           116.46 287  IAMs_20  IAMs_20   03 46 46.6
             comp=Z,5µm,20.0s
L44A  Lake County Fo    116.47 310  IAMs_20  IAMs_20   03 56 01.2
             comp=Z,6µm,19.0s
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MANU  Manus Island      116.54 166  IAMs_20  IAMs_20   03 50 59.6
             comp=Z,4µm,19.0s
GROC  Groznyy           116.66  48 i PKIKP   PKiKP     03 02 50.8  +1.3
GROC                               e                   03 03 57.2
GROC                                pmax     pmax
             comp=Z,8.0nm,0.6s
I47A  Gladwin           116.81 313  IAMs_20  IAMs_20   03 49 48.2
             comp=Z,7µm,22.0s
L42A  Oliver, Polo      116.99 308  IAMs_20  IAMs_20   03 50 23.9
             comp=Z,7µm,22.0s
H48A  Harrisville       116.99 314  IAMs_20  IAMs_20   03 48 11.8
             comp=Z,7µm,22.0s
J45A  Montague          116.99 312  IAMs_20  IAMs_20   03 52 11.8
             comp=Z,5µm,20.0s
GEYT  Alibeck           117.05  60  PKKPbc   PKKPbc    03 13 19.7  +5.8
             comp=Z,1.5nm,0.6s,baz=322,slow=9.4,SNR=4.1
MAK   Makhachkala       117.08  50 eP        Pdif      02 59 05.1  -1.5
MAK                                i                   03 02 49.7
MAK                                e                   03 03 59.6
MAK                                ePS       PKKPdf    03 13 47.7  +6.3
MAK                                 pmax     pmax
             comp=Z,171nm,1.2s
K43A  Burlington        117.08 310  IAMs_20  IAMs_20   03 47 00.2
             comp=Z,6µm,22.0s
D53A  Lac Vacive, Po    117.20 320  IAMs_20  IAMs_20   03 47 04.9
             comp=Z,8µm,22.0s
I45A  Fountain          117.45 312  IAMs_20  IAMs_20   03 50 57.0
             comp=Z,7µm,20.0s
GLMI  Grayling          117.55 314  IAMs_20  IAMs_20   03 50 27.7
             comp=Z,7µm,22.0s
L40A  Anamosa           117.64 307  IAMs_20  IAMs_20   03 51 52.2
             comp=Z,5µm,22.0s
TUC   Tucson            117.94 287  IAMs_20  IAMs_20   03 47 44.8
             comp=Z,5µm,21.0s
JFWS  Jewell Farm       117.99 309  IAMs_20  IAMs_20   03 51 55.4
             comp=Z,6µm,22.0s
AKASG Malin Array Be    118.03  33  PKP      PKPdf     03 02 50.2  -1.8
             comp=Z,1.9nm,0.7s,baz=230,slow=1.3,SNR=6.9
AKASG Malin Array Be    118.03  33  PKIKP    PKPdf     03 02 50.4  -1.5
AKASG Malin Array Be    118.03  33           PKPdf     03 02 50.4  -1.5
VLDQ  Val d'Or          118.04 320  IAMs_20  IAMs_20   03 51 43.7
             comp=Z,7µm,20.0s
RGN   Rugen             118.07  21  IAMs_20  IAMs_20   03 49 58.1
             comp=Z,5µm,20.0s
ANMO  Albuquerque       118.13 292  IAMs_20  IAMs_20   03 49 55.9
             comp=Z,5µm,21.0s
E48A  Lockeyer          118.14 316  P        PKiKP     03 02 54.0  +1.7
             baz=151
BOK   Bokaro            118.26  92 ePP       PP        03 04 08.6  -0.7
I42A  Draeger Farm,     118.31 310  IAMs_20  IAMs_20   03 53 01.1
             comp=Z,5µm,20.0s
CBKS  Cedar Bluff       118.38 299  IAMs_20  IAMs_20   03 52 34.6
             comp=Z,4µm,21.0s
CBKS  Cedar Bluff       118.38 299  P        PKiKP     03 02 54.5  +1.4
             baz=147
H43A  Windswept, Lux    118.39 311  IAMs_20  IAMs_20   03 51 23.9
             comp=Z,6µm,21.0s
E47A  Iron Bridge       118.50 315  P        PKiKP     03 02 54.9  +1.9
             baz=150
DLV   T  Lat            118.57 119  IAMs_20  IAMs_20   03 45 52.0
             comp=Z,7µm,21.0s
F45A  CMU Biological    118.61 313  P        PKiKP     03 02 55.2  +2.0
             baz=150
E46A  Sault Ste Mari    118.78 315  IAMs_20  IAMs_20   03 51 44.1
             comp=Z,5µm,20.0s
D47A  Chapleau          118.96 316  P        PKiKP     03 02 55.4  +1.5
             baz=150
I40A  Norwalk           118.96 309  IAMs_20  IAMs_20   03 53 11.1
             comp=Z,7µm,22.0s
T25A  Trinidad          119.03 295  IAMs_20  IAMs_20   03 53 19.7
             comp=Z,5µm,19.0s
D46A  Sault St. Mari    119.14 315  P        PKiKP     03 02 55.5  +1.3
             baz=150
X18A  Snowflake         119.39 289  IAMs_20  IAMs_20   03 50 26.2
             comp=Z,5µm,19.0s
KLNR  Kaliningrad       119.47  26 i PKIKP   PKiKP     03 02 55.5  +0.9
MATQ  Matagami          119.55 321  P        PKiKP     03 02 57.3  +2.3
             baz=152
E44A  Grand Marais A    119.56 314  IAMs_20  IAMs_20   03 53 30.0
             comp=Z,6µm,21.0s
E44A  Grand Marais A    119.56 314  P        PKiKP     03 02 57.4  +2.3
             baz=149
SUW   Suwalki           119.57  28  IAMs_20  IAMs_20   03 53 15.4
             comp=Z,5µm,20.0s
F42A  Maple Grove Fa    119.62 312  IAMs_20  IAMs_20   03 50 39.6
             comp=Z,6µm,21.0s
E43A  Lone Tree Farm    119.73 313  IAMs_20  IAMs_20   03 51 10.6
             comp=Z,7µm,22.0s
W18A  Petrified Fore    119.78 289  IAMs_20  IAMs_20   03 49 09.4
             comp=Z,7µm,21.0s
KSCO  Kaye Shedlock’    119.79 297  P        PKiKP     03 02 58.0  +2.0
             baz=146
G40A  Rib Lake          119.97 310  IAMs_20  IAMs_20   03 53 08.9
             comp=Z,7µm,20.0s
X16A  Lo Mia Camp, P    119.99 287  IAMs_20  IAMs_20   03 48 24.1
             comp=Z,5µm,22.0s
CMAR  Chiang Mai Arr    120.01 107  PKP      PKPdf     03 02 56.5  -0.3
             comp=Z,1.1nm,0.3s,baz=243,slow=2.9,SNR=2.8
CMAR                                PKKPbc   PKKPab    03 13 08.1  +1.2
             comp=Z,1.7nm,0.3s,baz=11,slow=2.9,SNR=5.3
CMAR  Chiang Mai Arr    120.01 107           PKPdf     03 02 55.8  -1.0
SDCO  Great Sand Dun    120.02 294  IAMs_20  IAMs_20   03 53 50.8
             comp=Z,5µm,19.0s
SDCO  Great Sand Dun    120.02 294  P        PKiKP     03 02 57.9  +1.2
             baz=146
COWI  Conover           120.28 311  IAMs_20  IAMs_20   03 49 37.0
             comp=Z,7µm,22.0s
KCP   Kidapawan         120.32 139⇑iP        PKiKP     03 03 01.5  +3.8
NIL   Nilore            120.32  75  PKIKP    PKPdf     03 02 56.6  -0.4
NIL   Nilore            120.32  75           PKPdf     03 02 56.6  -0.4
S22A  4UR Ranch, Cre    120.61 293  IAMs_20  IAMs_20   03 53 29.9
             comp=Z,4µm,21.0s
SAIH  SAIHA             120.62  99 i x       PP        03 04 26.8  +1.1
SAIH                               ex        x         03 14 10.3
DHRM  DHARAMSHALA       120.62  78 eP        PKPdf     03 02 57.3  -0.6
DHRM                                IAMs_20  IAMs_20   03 43 38.2
             comp=Z,5µm,26.5s
IKP   In-Ko-Pah, Jac    120.75 283  P        PKiKP     03 03 00.5  +2.4
             baz=146
SWSC  Sam W. Stewart    120.84 283  P        PKiKP     03 03 00.5  +2.4
             baz=146
D41A  Chassel           120.89 312  IAMs_20  IAMs_20   03 51 23.1
             comp=Z,5µm,22.0s
SPMN  Marine on St.     120.92 308  IAMs_20  IAMs_20   03 51 55.1
             comp=Z,7µm,22.0s
SPMN  Marine on St.     120.92 308  P        PKiKP     03 02 59.7  +1.9
             baz=147
MVCO  Mesa Verde        120.93 292  IAMs_20  IAMs_20   03 47 32.0
             comp=Z,5µm,21.0s
MVCO  Mesa Verde        120.93 292  P        PKiKP     03 02 59.9  +1.5
             baz=145
DANN  Dangsing          121.02  87 eP        PKPdf     03 02 56.2  -2.6
             comp=Z,111nm,0.8s
DMN   Daman             121.07  88 eP        PKPdf     03 02 56.7  -2.2
SCHQ  Schefferville     121.12 331  PKP      PKPdf     03 02 56.4  -1.4
             comp=Z,5.0nm,0.8s,baz=188,slow=1.6,SNR=8.9
SCHQ  Schefferville     121.12 331           PKiKP     03 02 58.9  +1.0
OGNE  Ogallala          121.13 299  IAMs_20  IAMs_20   03 54 45.7
             comp=Z,4µm,21.0s
OGNE  Ogallala          121.13 299  P        PKiKP     03 03 00.2  +1.7
             baz=146
GKN   Gorkha            121.17  88 eP        PKPdf     03 02 56.2  -2.7
PDMCI Parker Dam,Lak    121.17 285  P        PKiKP     03 03 00.1  +1.4
             baz=145
ECSD  EROS Data Cent    121.18 305  P        PKiKP     03 03 00.1  +1.7
             baz=146
PKIN  Phulchoki         121.18  89 eP        PKPdf     03 02 56.3  -2.8
PKI   Pulchoki          121.18  89 eP        PKPdf     03 02 56.5  -2.7
RAMN  Ramite            121.25  90 eP        PKPdf     03 02 57.1  -2.2
             comp=Z,76nm,0.9s
BC3   Big Chuckawall    121.26 284  P        PKiKP     03 03 01.4  +2.4
             baz=145
VSR   Storozhevoye      121.37  39 ePKIKP    PKPdf     03 02 57.9  -0.4
VSR                                 pmax     pmax
             comp=Z,8.0nm,0.6s
IRM   Iron Mountain     121.53 284  P        PKiKP     03 03 01.5  +2.0
             baz=145
ODAN  Odare             121.56  91 eP        PKPdf     03 02 58.1  -1.7
             comp=Z,97nm,1.0s
E38A  The Farm, Brul    121.61 310  IAMs_20  IAMs_20   03 53 55.1
             comp=Z,7µm,21.0s
JIRN  Jiri              121.64  89 eP        PKPdf     03 02 57.8  -2.3
GUN   Gumba             121.70  89 eP        PKPdf     03 02 57.9  -2.3
             comp=Z,81nm,1.0s
PFO   Pinyon Flats O    121.70 283  PKP      PKPdf     03 02 57.8  -2.0
             comp=Z,1.6nm,0.6s,baz=184,slow=13,SNR=2.8
PFO   Pinyon Flats O    121.70 283  PKIKP    PKPdf     03 02 59.1  -0.6
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PFO   Pinyon Flats O    121.70 283           PKPdf     03 02 59.1  -0.6
ISCO  Idaho Springs     121.75 295  P        PKiKP     03 03 01.7  +1.6
             baz=145
BELC  Belle Mtn. Jos    121.80 283  P        PKiKP     03 03 01.8  +1.7
             baz=145
SMCO  Snowmass          121.85 294  IAMs_20  IAMs_20   03 54 41.4
             comp=Z,5µm,19.0s
U15A  North Rim         122.04 288  IAMs_20  IAMs_20   03 51 50.2
             comp=Z,5µm,21.0s
TAPN  Taplejung         122.13  91 eP        PKPdf     03 02 58.6  -2.4
VRH   Novokhopyorsk     122.16  41 ePKIKP    PKiKP     03 03 00.5  +0.5
VRH                                 pmax     pmax
             comp=Z,10.0nm,0.7s
GMRC  Granite Mounta    122.28 284  P        PKiKP     03 03 03.3  +2.3
             baz=145
LPSR  Galich'ya Gora    122.50  38 ePKIKP    PKiKP     03 03 02.2  +1.6
LPSR                                pmax     pmax
             comp=Z,10.0nm,1.0s
SHL   Shillong          122.68  96 ePP       PP        03 04 38.7  -1.1
SHL   Shillong          122.68  96  IAMs_20  IAMs_20   03 47 53.5
             comp=Z,7µm,21.0s
EYMN  Ely               122.70 311  IAMs_20  IAMs_20   03 52 01.0
             comp=Z,4µm,21.0s
EYMN  Ely               122.70 311  P        PKiKP     03 03 03.0  +1.7
             baz=147
N23A  Red Feather La    122.79 296  P        PKiKP     03 03 03.1  +1.1
             baz=144
GUWA  GUWAHATI          123.11  95 ePP       PP        03 04 42.1  -0.4
O20A  White River Ci    123.20 294  IAMs_20  IAMs_20   03 54 50.0
             comp=Z,5µm,19.0s
GSC   Goldstone, Bar    123.25 284  P        PKiKP     03 03 05.2  +2.4
             baz=144
SRU   San Rafael Swe    123.40 291  PKIKP    PKiKP     03 03 02.9  -0.3
SRU   San Rafael Swe    123.40 291           PKiKP     03 03 02.9  -0.3
EDW2  Edwards Air Fo    123.47 283  P        PKiKP     03 03 05.3  +2.0
             baz=144
SHOC  Shoshone, Teco    123.48 285  P        PKiKP     03 03 04.7  +1.5
             baz=144
NB2   NORSAR Subarra123.92  18  PKPdf    PKPdf     03 03 01.9  -1.1
             comp=Z,14nm,1.0s,baz=198,slow=2.0
NB2   NORSAR Subarra123.92  18  PKPdf    PKPdf     03 03 01.9  -1.1
             baz=198,slow=2.0
NOA   NORSAR Array B 123.92  18  PKP      PKPdf     03 03 01.9  -1.1
             comp=Z,1.5nm,0.6s,baz=184,slow=1.5,SNR=8.5
RWWY  Rawlins           123.99 296  IAMs_20  IAMs_20   03 54 53.1
             comp=Z,4µm,19.0s
OBN   Obninsk           124.00  35⇑ePKIKP    PKiKP     03 03 04.8  +1.3
OBN                                e                   03 04 55.1
OBN                                eSS       SS        03 21 44.9  +7.1
OBN                                 pmax     pmax
             comp=Z,14nm,0.8s
OBN                                 MLR      MLR
             comp=Z,2µm,17.0s
MPMC  Manual Prospec    124.18 284  P        PKiKP     03 03 06.9  +2.1
             baz=144
FURC  Furnace Creek,    124.22 285  P        PKiKP     03 03 07.4  +2.8
             baz=144
TPNV  Topopah Spring    124.32 285  P        PKiKP     03 03 07.4  +2.4
             baz=144
VSU   Vasula            124.45  28 i PKIKP   PKiKP     03 03 05.0  +0.7
VSU                                 MLR      MLR
             comp=Z,7µm,18.0s
RSSD  Black Hills       124.58 300  PKIKP    PKPdf     03 03 04.3  -0.7
RSSD                                MLR      MLR
             comp=Z,11µm,20.0s
RSSD  Black Hills       124.58 300           PKPdf     03 03 04.3  -0.7
RSSD  Black Hills       124.58 300  P        PKPdf     03 03 04.5  -0.6
             baz=144
AGMN  Agassiz Nation    124.65 308  IAMs_20  IAMs_20   03 55 11.6
             comp=Z,7µm,22.0s
AGMN  Agassiz Nation    124.65 308  P        PKiKP     03 03 05.2  +0.2
             baz=145
CWC   Cottonwood Cre    124.77 284  P        PKiKP     03 03 07.1  +1.1
             baz=144
SLVN  Son La            124.81 110  IAMs_20  IAMs_20   03 51 19.4
             comp=Z,4µm,19.0s
MOS   Moscow            124.84  36 ePKIKP    PKiKP     03 03 13.0  +7.9
MOS                                e                   03 04 54.2
MOS                                 MLR      MLR
             comp=N,2µm,20.0s
R11A  Troy Canyon, C    125.13 287  IAMs_20  IAMs_20   03 52 23.1
             comp=Z,4µm,20.0s
R11A  Troy Canyon, C    125.13 287  P        PKiKP     03 03 08.0  +1.4
             baz=144
DUG   Dugway, Tooele    125.32 290  IAMs_20  IAMs_20   03 52 41.2
             comp=Z,6µm,21.0s
DUG   Dugway, Tooele    125.32 290  P        PKiKP     03 03 08.3  +1.4
             baz=143
QIZ   Qiongzhong        125.46 117  PKP      PKPdf     03 03 05.8  -1.4
QIZ                                 PP       PP        03 04 57.1  -0.9
QIZ                                 SS       SS        03 21 57.0  +0.7
QIZ                                 AMB      AMB
             comp=Z,680nm,6.1s
QIZ                                 LR       LR
             comp=Z,3µm,22.2s
QIZ                                 LR       LR
             comp=Z,2µm,19.4s
QIZ                                 LR       LR
             comp=Z,6µm,37.1s
QIZ   Qiongzhong        125.46 117  IAMs_20  IAMs_20   03 47 10.4
             comp=Z,5µm,22.0s
IUG   Iuzhnay           125.72  66 ePKP      PKPdf     03 03 06.6  -0.6
IUG   Iuzhnay           125.72  66 ePKIKP    PKPdf     03 03 06.5  -0.6
HWUT  Hardware Ranch    125.88 292  IAMs_20  IAMs_20   04 01 27.8
             comp=Z,5µm,20.0s
BW06  Boulder Array     125.90 295  P        PKiKP     03 03 08.2  +0.1
             baz=143
PDAR  Pinedale Array    125.90 295  PKP      PKPdf     03 03 05.9  -1.7
             comp=Z,6.7nm,0.9s,baz=126,slow=2.6,SNR=17
PDAR                                PP       PP        03 05 07.8  +6.3
             comp=Z,5.0nm,1.1s,baz=140,slow=7.1,SNR=2.8
PDAR  Pinedale Array    125.90 295           PKPdf     03 03 06.5  -1.1
OMMB  Old Mammoth Mi    126.15 284  IAMs_20  IAMs_20   03 59 50.1
             comp=Z,4µm,19.0s
JBG   Jabagly           126.17  67 ePKIKP    PKiKP     03 03 10.3  +1.8
ULM   Lac du Bonnet     126.24 310  PKP      PKPdf     03 03 06.1  -1.6
             comp=Z,8.8nm,0.9s,baz=167,slow=1.6,SNR=12
ULM                                 PP       PP        03 05 04.8  +1.5
             comp=Z,16nm,1.1s,baz=151,slow=8.0,SNR=3.2
ULM   Lac du Bonnet     126.24 310  IAMs_20  IAMs_20   03 53 59.5
             comp=Z,6µm,21.0s
KSH   Kashi             126.35  73  PKP      PKiKP     03 03 09.3  +0.4
KSH                                 PP       PP        03 05 06.5  +2.1
KSH                                 SKS      SKSdf     03 10 21.1  +1.1
KSH                                 SS       SS        03 22 06.1  -2.1
KSH                                 AMB      AMB
             comp=Z,540nm,7.0s
KSH                                 LR       LR
             comp=Z,3µm,18.5s
KSH                                 LR       LR
             comp=Z,2µm,18.3s
KSH                                 LR       LR
             comp=Z,3µm,18.1s
NVAR  Mina Array Bea    126.47 285  PKP      PKiKP     03 03 09.0  -0.4
             comp=Z,11nm,1.1s,baz=160,slow=2.7,SNR=14
NVAR                                PP       PP        03 05 08.2  +2.9
             comp=Z,1.3nm,0.6s,baz=187,slow=7.0,SNR=2.9
AHID  Auburn Hatcher    126.59 294  IAMs_20  IAMs_20   03 56 33.8
             comp=Z,5µm,18.0s
KK31  Karatay Array     126.70  66 i PKIKP   PKiKP     03 03 09.5  +0.1
KKAR  Karatay Array     126.70  66  PKIKP    PKiKP     03 03 09.3  -0.1
KKAR  Karatay Array     126.70  66           PKiKP     03 03 09.2  -0.1
ELK   Elko              126.88 289  PKP      PKiKP     03 03 10.1  +0.1
             comp=Z,5.6nm,1.0s,baz=117,slow=4.1,SNR=12
ELK   Elko              126.88 289  IAMs_20  IAMs_20   03 57 21.4
             comp=Z,4µm,22.0s
REDW  Red Top Meadow126.95 294  IAMs_20  IAMs_20   03 57 13.3
             comp=Z,5µm,19.0s
SNOW  Snow King Moun 126.98 294  IAMs_20  IAMs_20   03 56 47.3
             comp=Z,5µm,21.0s
FINES FINESS Array B    127.00  26  PKP      PKPdf     03 03 07.0  -1.7
             comp=Z,10nm,0.7s,baz=149,slow=4.0,SNR=11
FINES FINESS Array B    127.00  26           PKPdf     03 03 08.2  -0.5
FIA1  FINESS Array S    127.00  26           PKiKP     03 03 09.6  +0.3
ABKAR Akbulak array     127.11  54           PKPdf     03 03 08.4  -1.0
FXWY  Fox Creek         127.24 294  IAMs_20  IAMs_20   03 56 44.2
             comp=Z,6µm,22.0s
KMI   Kunming           127.52 106  PKP      PKiKP     03 03 16.7  +4.9
KMI                                 sPKP               03 03 22.0
KMI                                 PP       PP        03 05 15.8  +3.7
KMI                                 SS       SS        03 22 27.6  +4.9
KMI                                 AMB      AMB
             comp=Z,490nm,7.3s
KMI                                 LR       LR
             comp=Z,2µm,22.0s
KMI                                 LR       LR
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	comp=Z,3µm,22.8s						
KMI				LR	LR		
	comp=Z,5µm,22.8s						
KMI	Kunming	127.52	106	IAMs_20	IAMs_20	03 48 06.6	
	comp=Z,4µm,22.0s						
LAO	LASA Array	127.55	300	P	PKiKP	03 03 10.5	-0.5
	baz=142						
RLMT	Red Lodge	127.63	297	P	PKiKP	03 03 11.1	-0.4
	baz=142						
DGMT	Dagmar	128.11	303	P	PKiKP	03 03 12.1	+0.1
	baz=142						
AAK	Ala-Archa	128.13	69	*i* PKIKP	PKiKP	03 03 11.9	-0.5
AAK	Ala-Archa	128.13	69		PKiKP	03 03 12.2	-0.3
SGDS	Sogindy	128.83	69	*e*PKP	PKiKP	03 03 15.9	+2.2
HOPS	Hopland Field	129.19	282	IAMs_20	IAMs_20	04 05 26.5	
	comp=Z,4µm,19.0s						
DLMT	Dillon	129.29	294	IAMs_20	IAMs_20	03 59 52.2	
	comp=Z,5µm,19.0s						
SFJD	Kangerlussuaq	129.49	345	*i* P	PKiKP	03 03 16.8	+2.7
SFJD	Kangerlussuaq	129.49	345	*e*PKIKP	PKiKP	03 03 16.8	+2.7
SFJD				MLR	MLR		
	comp=Z,670nm,19.0s						
FRB	Frobisher Bay	129.53	334	PKP	PKPdf	03 03 12.2	-1.3
	comp=Z,16nm,1.0s,baz=148,slow=2.3,SNR=14						
TNSS	Tian-Shan	129.57	71	*e*PKP	PKiKP	03 03 16.6	+0.9
TNSS	Tian-Shan	129.57	71	*e*PKIKP	PKiKP	03 03 16.5	+0.9
O03E	Paynes Creek	129.61	284	P	PKiKP	03 03 17.3	+1.9
	baz=142						
MDOK	Medeo	129.72	71	*e*PKP	PKiKP	03 03 15.8	+0.2
MDOK				*e*PP	PP	03 05 37.6	+11
MDOK	Medeo	129.72	71	*e*PKIKP	PKiKP	03 03 15.7	+0.2
MDOK				*e*		03 05 37.6	
KLMR	Klimovskoe	129.72	33	*e*PKIKP	PKPdf	03 03 13.3	-0.7
KLMR				SS	SS	03 23 17.5	+28
KLMR				pmax	pmax		
	comp=Z,89nm,1.2s						
KLMR				MLR	MLR		
	comp=Z,3µm,19.0s						
KLMR	Klimovskoe	129.72	33	*e*PKPdf	PKPdf	03 03 13.4	-0.6
KLMR				AMP		03 03 22.8	
	comp=Z,89nm,1.2s						
KLMR				PP	PP	03 05 42.1	+16
KLMR				SKKPbc	SKKPbc	03 16 03.5	-16
KLMR				SS	SS	03 23 17.6	+28
KLMR				SS	SS	03 23 17.6	+28
KLMR				LR	LR	03 49 39.8	
KLMR				AMP		04 00 27.8	
	comp=Z,3µm,19.3s						
WVOR	Wild Horse Val	129.78	288	IAMs_20	IAMs_20	03 54 39.2	
	comp=Z,4µm,20.0s						
KUU	Kurty	129.96	70	*e*PKP	PKiKP	03 03 15.4	-0.5
KUU	Kurty	129.96	70	*e*PKIKP	PKiKP	03 03 15.3	-0.5
KCPM	Cahto Peak	129.98	282	IAMs_20	IAMs_20	03 49 44.4	
	comp=Z,4µm,20.0s						
EGMT	Eagleton	130.10	299	P	PKiKP	03 03 17.1	+1.1
	baz=140						
HKPS	Hong Kong Po S	130.18	120	IAMs_20	IAMs_20	03 52 20.6	
	comp=Z,5µm,20.0s						
J08A	Circle Bar Ran	130.42	289	IAMs_20	IAMs_20	03 53 38.2	
	comp=Z,4µm,22.0s						
KMRM	Mail Ridge	130.46	282	IAMs_20	IAMs_20	03 50 11.7	
	comp=Z,6µm,22.0s						
GZH	Guangzhou	130.55	118	*e*PKP	PKiKP	03 03 19.4	+1.8
GZH				PP	PP	03 05 38.5	+7.0
GZH				SKKS		03 12 30.2	
GZH				SS	SS	03 23 09.8	+10
GZH				LR	LR		
	comp=Z,4µm,21.1s						
GZH				LR	LR		
	comp=Z,3µm,22.0s						
N02D	Trinity Center	130.57	283	P	PKiKP	03 03 19.2	+2.0
	baz=141						
UZB	Uzynbulak	130.62	72	*e*PKP	PKPdf	03 03 16.6	+0.1
UZB	Uzynbulak	130.62	72	*e*PKIKP	PKPdf	03 03 16.6	+0.1
KPKS	Kokpek	130.71	72	*e*PKP	PKiKP	03 03 17.0	-0.6
KPKS	Kokpek	130.71	72	*e*PKIKP	PKiKP	03 03 16.9	-0.6
M04C	Macdoel	130.78	285	P	PKiKP	03 03 19.7	+2.0
	baz=141						
SHLS	Shalkode	130.84	72	*e*PKP	PKiKP	03 03 18.8	+0.9
SHLS	Shalkode	130.84	72	*e*PKIKP	PKiKP	03 03 18.7	+0.9
MSO	Missoula	131.02	295	P	PKiKP	03 03 19.8	+1.8
	baz=140						
BMO	Blue Mountains	131.03	291	IAMs_20	IAMs_20	03 56 21.3	
	comp=Z,5µm,22.0s						
YBH	Yreka Blue Hor	131.16	284	PKP	PKPdf	03 03 15.9	-1.6
	comp=Z,2.4nm,1.0s,baz=306,slow=17,SNR=2.7						
YBH	Yreka Blue Hor	131.16	284		PKiKP	03 03 18.0	-0.4
I07A	Izee	131.45	288	IAMs_20	IAMs_20	04 00 58.5	
	comp=Z,4µm,21.0s						
GUMO	Guam	131.56	160	IAMs_20	IAMs_20	03 57 13.7	
	comp=Z,4µm,21.0s						
F10A	Beach Ranch, E	131.85	292	IAMs_20	IAMs_20	04 03 07.8	
	comp=Z,4µm,20.0s						
PINE	Pine Mountain	131.90	287	IAMs_20	IAMs_20	03 55 12.3	
	comp=Z,4µm,22.0s						
FFC	Flin Flon	132.07	309	PKIKP	PKiKP	03 03 20.0	+0.3
FFC				MLR	MLR		
	comp=Z,5µm,22.0s						
FFC	Flin Flon	132.07	309		PKiKP	03 03 20.0	+0.3
FFC	Flin Flon	132.07	309	IAMs_20	IAMs_20	04 00 10.6	
	comp=Z,5µm,22.0s						
PRGR	Permogore	132.07	36	*e*PKIKP	PKiKP	03 03 20.0	+0.6
PRGR				*e*		03 05 50.0	
PRGR				pmax	pmax		
	comp=Z,13nm,0.7s						
TMCR	Tamitsa	132.11	30	*e*PKIKP	PKiKP	03 03 21.1	+1.7
TMCR				pmax	pmax		
	comp=Z,43nm,1.3s						
G08A	Pilot Rock	132.12	290	IAMs_20	IAMs_20	03 57 07.2	
	comp=Z,5µm,21.0s						
ARU	Arti	132.19	47	*i* PKIKP	PKiKP	03 03 19.6	-0.3
ARU						03 05 42.9	
ARU				SS	SS	03 23 14.2	-5.4
E09A	Wood Farm, Sta	132.67	292	IAMs_20	IAMs_20	04 04 04.7	
	comp=Z,3µm,21.0s						
G06A	Carlson Farm,	132.85	289	IAMs_20	IAMs_20	04 00 29.6	
	comp=Z,4µm,22.0s						
CD2	Chengdu	132.87	103	PKP	PKPdf	03 03 18.4	-2.6
CD2				SKS	SKSdf	03 10 35.7	+3.6
CD2				SKKS	SKKSac	03 12 38.3	-3.8
CD2				SS	SS	03 23 26.9	-1.2
CD2				AMB	AMB		
	comp=Z,1µm,6.7s						
CD2				LR	LR		
	comp=Z,5µm,18.2s						
CD2				LR	LR		
	comp=Z,5µm,18.8s						
CD2				LR	LR		
	comp=Z,6µm,20.2s						
BRZS	Berezniki	132.94	62	*e*PKP	PKiKP	03 03 21.9	+0.2
BRZS	Berezniki	132.94	62	*e*PKIKP	PKiKP	03 03 21.8	+0.2
F07A	Phinny Hill Vi	133.02	290	IAMs_20	IAMs_20	03 57 23.1	
	comp=Z,6µm,22.0s						
E08A	Dider Farm, El	133.07	291	IAMs_20	IAMs_20	03 58 29.3	
	comp=Z,5µm,22.0s						
HAWA	Hanford	133.22	290	IAMs_20	IAMs_20	04 03 00.5	
	comp=Z,5µm,21.0s						
SVE	Sverdlovsk	133.24	48	*i* PKIKP	PKiKP	03 03 23.0	+1.0
SVE				*e*		03 23 36.0	
SVE				pmax	pmax		
	comp=Z,34nm,1.6s						
SVE				MLR	MLR		
	comp=Z,5µm,21.0s						
SVE				MLR	MLR		
	comp=E,4µm,21.0s						
D08A	Wollman Farm,	133.43	291	IAMs_20	IAMs_20	03 55 13.9	
	comp=Z,4µm,22.0s						
NEW	Newport	133.52	294	PKP	PKPdf	03 03 21.9	+0.2
	comp=Z,1.8nm,0.7s,baz=145,slow=5.3,SNR=4.4						
SUMG	Summit	133.74	352	*i* P	PKPdf	03 03 21.8	0.0
SUMG	Summit	133.74	352	*e*PKIKP	PKPdf	03 03 21.8	0.0
SUMG				MLR	MLR		
	comp=Z,18µm,23.0s						
SUMG	Summit	133.74	352		PKiKP	03 03 23.2	+0.1
APA	Apatity	133.90	25	⇓*i*PKIKP	PKiKP	03 03 22.4	-0.6
APA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ARCES	ARCESS Array B	134.09	20	PKP	PKPdf	03 03 21.1	-1.0
	comp=Z,3.5nm,0.7s,baz=156,slow=2.4,SNR=9.0						
ARCES	ARCESS Array B	134.09	20	PKIKP	PKPdf	03 03 21.8	-0.3
ARCES	ARCESS Array B	134.09	20		PKPdf	03 03 21.8	-0.3
BRVK	Borovoye	134.21	57	*ce*PKIKP	PKPdf	03 03 17.4	-5.3
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.7s						
BRVK	Borovoye	134.21	57	IAMs_20	IAMs_20	04 07 37.1	
	comp=Z,3µm,19.0s						
LTY	Liberty	134.38	290	IAMs_20	IAMs_20	04 07 08.8	
	comp=Z,4µm,19.0s						
QZH	Quanzhou	134.40	123	*e*PKP	PKPdf	03 03 20.9	-3.1
QZH				PP	PP	03 05 56.1	0.0
QZH				LR	LR		
	comp=Z,880nm,24.6s						
QZH				LR	LR		
	comp=Z,2µm,20.4s						
QZH				LR	LR		
	comp=Z,3µm,19.9s						
LVZ	Lovozero	134.44	26	*i* PKIKP	PKPdf	03 03 22.5	-0.3
LON	Longmire	134.53	289	IAMs_20	IAMs_20	03 59 41.9	
	comp=Z,6µm,22.0s						
MAKZ	Makanchi	134.76	71	PKIKP	PKiKP	03 03 26.3	+0.8
MK31	Makanchi Array	134.90	71	PKIKP	PKiKP	03 03 24.7	-1.1
MKAR	Makanchi Array	134.90	71	PKP	PKPdf	03 03 22.7	-1.6
	comp=Z,1.5nm,0.7s,baz=244,slow=1.9,SNR=9.2						
MKAR	Makanchi Array	134.90	71	*ce*PKIKP	PKPdf	03 03 24.2	-0.1
MKAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MKAR	Makanchi Array	134.90	71	PKPpre	PKPpre	03 03 10.2	
MKAR					PKPdf	03 03 22.6	-1.7
D05A	Enumclaw	134.94	289	IAMs_20	IAMs_20	03 58 40.7	
	comp=Z,5µm,22.0s						
ENH	Enshi	135.02	109	IAMs_20	IAMs_20	03 53 58.5	
	comp=Z,4µm,22.0s						
E03A	Lebam	135.19	288	IAMs_20	IAMs_20	04 04 02.4	
	comp=Z,4µm,22.0s						
WMQ	Urumqi	135.24	78	*e*PKP	PKiKP	03 03 26.2	-0.4
WMQ				PP	PP	03 06 05.8	+4.0
WMQ				PKS	PKSdf	03 06 55.9	-5.4
WMQ				SS	SS	03 24 00.9	+4.0
WMQ				AMB	AMB		
	comp=Z,490nm,8.0s						
WMQ				LR	LR		
	comp=Z,2µm,29.1s						
WMQ				LR	LR		
	comp=Z,1µm,23.9s						
WMQ				LR	LR		
	comp=Z,4µm,29.1s						
YHNB	Yeheng	135.28	126	IAMs_20	IAMs_20	03 53 12.1	
	comp=Z,5µm,22.0s						
TATO	Taipei	135.60	126	IAMs_20	IAMs_20	03 53 42.6	
	comp=Z,4µm,21.0s						
NLWA	Neilton Lookou	135.96	288	IAMs_20	IAMs_20	03 59 17.6	
	comp=Z,5µm,22.0s						
KURBB	Kurchatov Arra	135.97	65	PKIKP	PKPdf	03 03 25.2	-0.9
KURK	Kurchatov	136.08	65	*ce*PKIKP	PKiKP	03 03 29.6	+1.6
KURK				pmax	pmax		
	comp=Z,11nm,1.0s						
KURK	Kurchatov	136.08	65	PKPpre	PKPpre	03 03 12.5	
KURK					PKPdf	03 03 26.7	+0.4
A05A	Maple Falls	136.30	291	IAMs_20	IAMs_20	04 16 53.8	
	comp=Z,3µm,18.0s						
ZSN	Zaisan	136.57	73	*e*PKP	PKiKP	03 03 29.6	+0.5
ZSN	Zaisan	136.57	73	*e*PKIKP	PKiKP	03 03 29.6	+0.5
LZH	Lanzhou	137.13	99	PKP	PKiKP	03 03 30.8	0.0
LZH				sPKP		03 03 35.4	
LZH				PP	PP	03 06 18.1	+4.3
LZH				SKS	SKSdf	03 10 40.8	+1.2
LZH				SS	SS	03 24 21.4	+1.8
LZH				AMB	AMB		
	comp=Z,1µm,9.5s						
LZH				LR	LR		
	comp=Z,2µm,17.9s						
LZH				LR	LR		
	comp=Z,2µm,16.8s						
LZH				LR	LR		
	comp=Z,3µm,20.1s						
DAG	Danmarks Havn	137.37	0	*i* P	PKPdf	03 03 26.0	-2.0
DAG	Danmarks Havn	137.37	0	*i* PKIKP	PKPdf	03 03 26.0	-2.0
DAG				MLR	MLR		
	comp=Z,4µm,22.0s						
WHN	Wuhan	137.46	114	PKPbc	PKiKP	03 03 38.9	+7.5
WHN				PP	PP	03 06 14.7	-0.8
WHN				PKS		03 07 08.6	
WHN				PcP	PcP	03 12 03.7	
WHN				SKKS		03 13 03.1	
GTA	Gaotai	137.78	92	⇑PKP	PKiKP	03 03 31.8	-0.2
GTA				sPKP		03 03 41.2	
GTA				PP	PP	03 06 25.6	+7.8
GTA				SKKS		03 13 14.5	
GTA				SS	SS	03 24 30.0	+2.6
GTA				AMB	AMB		
	comp=Z,510nm,8.3s						
GTA				LR	LR		
	comp=Z,2µm,22.9s						
GTA				LR	LR		
	comp=Z,3µm,21.6s						
GTA				LR	LR		
	comp=Z,3µm,20.9s						
XAN	Xi'an	137.90	106	PKP	PKPdf	03 03 24.8	-5.5
XAN				pPKP	sPKPdf	03 03 45.8	+13
XAN				PP	PP	03 06 21.9	+3.5
XAN				SKS	SKSdf	03 10 44.2	+3.5
XAN				SKKS	SKKSac	03 13 07.3	-4.9
XAN	Xi'an	137.90	106	SS	SS	03 23 51.2	-37
XAN	Xi'an	137.90	106	IAMs_20	IAMs_20	03 54 14.3	
	comp=Z,3µm,22.0s						
TULEG	Thule	140.53	344		PKPpre	03 03 26.9	
NJ2	Nanjing	140.73	118	*e*PKP	PKPdf	03 03 36.3	+0.8
NJ2				PP	PP	03 06 38.2	+2.6
NJ2				SKKS		03 13 27.2	
NJ2				SS	SS	03 25 05.3	+4.0
NJ2				AMB	AMB		
	comp=Z,950nm,8.1s						
NJ2				LR	LR		
	comp=Z,3µm,21.3s						
NJ2				LR	LR		
	comp=Z,1µm,23.7s						
NJ2				LR	LR		
	comp=Z,5µm,24.2s						
SSE	Sheshan	140.89	122	IAMs_20	IAMs_20	03 58 07.0	
	comp=Z,5µm,22.0s						
ZAA0	Zalesovo Array	141.07	65	PKPpre	PKPpre	03 03 31.9	
ZALV	Zalesovo Beam	141.07	65	PKhKP	PKPpre	03 03 28.4	
	comp=Z,1.1nm,0.3s,baz=211,slow=2.5,SNR=3.4						
ZALV				PKP	PKPdf	03 03 32.6	-2.7
	comp=Z,2.4nm,0.5s,baz=239,slow=2.7,SNR=7.2						
ZALV	Zalesovo Beam	141.07	65		PKPpre	03 03 27.8	
BBB	Bella Bella	141.28	291	PKP	PKPdf	03 03 36.3	+0.6
	comp=Z,16nm,0.9s,baz=239,slow=5.9,SNR=3.0						
YKA	Yellowknife Ar	142.19	311	PKhKP	PKPpre	03 03 30.5	
	comp=Z,3.6nm,0.9s,baz=123,slow=4.6,SNR=27						
YKA				PP	PP	03 06 43.6	-0.8
	comp=Z,9.8nm,0.9s,baz=126,slow=7.0,SNR=8.1						
NOR	Nord	142.24	1	*i* P	PKPdf	03 03 31.0	-5.7
TIY	Taiyuan	142.54	106	*e*PKP	PKPdf	03 03 39.1	+0.5
TIY				PP	PP	03 06 49.7	+2.9
TIY				SKS	SKSdf	03 10 45.4	-2.8
TIY				SS	SS	03 25 25.4	+2.7
TIY				AMB	AMB		
	comp=Z,950nm,7.4s						
TIY				LR	LR		
	comp=Z,3µm,17.7s						
TIY				LR	LR		
	comp=Z,510nm,11.3s						
TIY				LR	LR		
	comp=Z,4µm,18.7s						
TIA	Tai'an	143.48	113	PKP	PKiKP	03 03 41.8	-1.8
TIA				AMB	AMB		
	comp=Z,1µm,8.8s						
TIA				LR	LR		
	comp=Z,2µm,18.6s						
TIA				LR	LR		
	comp=Z,2µm,18.6s						
TIA				LR	LR		
	comp=Z,5µm,23.5s						
BTO	Baotou	143.67	101	*e*PKP	PKPab	03 03 35.7	-1.6
RES	Resolute Bay	143.74	334	PKP	PKPbc	03 03 37.7	+0.5
	comp=Z,51nm,0.9s,baz=138,slow=0.8,SNR=149						
RES	Resolute Bay	143.74	334	PKIKP	PKPab	03 03 36.0	-0.4
RES				MLR	MLR		
	comp=Z,6µm,20.0s						
RES	Resolute Bay	143.74	334		PKPab	03 03 36.0	-0.5
H02S1	DAWSON INLET T	143.95	289	PKP	PKPdf	03 03 39.9	-0.6
	SNR=8.5						
H02N1	VAN INLET T-PH	144.02	289	PKP	PKPdf	03 03 40.6	-0.1
HHC	Hu-ho-hao-te	144.60	102	*e*PKP	PKPab	03 03 39.1	-1.7
HHC				pPKP	PKiKP	03 03 46.6	+0.7
HHC				sPKP		03 03 51.3	
HHC				PP	PP	03 06 58.6	-0.7
HHC				SS	SS	03 25 44.3	-2.3
HHC				AMB	AMB		
	comp=Z,3µm,9.2s						
HHC				LR	LR		
	comp=Z,4µm,20.2s						
HHC				LR	LR		
	comp=Z,3µm,19.4s						
HHC				LR	LR		
	comp=Z,5µm,20.1s						
WRAK	Wrangell Islan	145.88	294	IAMs_20	IAMs_20	04 10 47.0	
	comp=Z,5µm,22.0s						
DLBC	Dease Lake	146.02	298	PKPbc	PKPab	03 03 45.6	+0.1
	comp=Z,66nm,0.9s,baz=57,slow=0.6,SNR=48						
BJT	Baijiatuau	146.13	108	PKIKP	PKPdf	03 03 43.4	-1.3
BJT	Baijiatuau	146.13	108		PKPdf	03 03 43.4	-1.3
BJI	Beijing	146.15	108	PKPbc	PKPdf	03 03 44.8	+0.1
BJI				SKKS		03 13 57.2	
BJI				SS	SS	03 26 09.8	+5.9
BJI				LR	LR		
	comp=Z,2µm,27.5s						
BJI				LR	LR		
	comp=Z,820nm,22.6s						
BJI				LR	LR		
	comp=Z,3µm,28.9s						
MOY	Mondy	147.11	79	*e*PKIKP	PKPdf	03 03 45.4	-0.7
MOY				pmax	pmax		
	comp=Z,175nm,2.2s						
SONM	Songino Array	147.20	89	PKPbc	PKPbc	03 03 47.3	-1.4
	comp=Z,7.9nm,0.6s,baz=224,slow=3.3,SNR=54						
SONM	Songino Array	147.20	89	PKIKP	PKPdf	03 03 46.0	-0.4
SONM	Songino Array	147.20	89		PKPdf	03 03 46.0	-0.4
ZAK	Zakamensk	147.39	83	*e*PKIKP	PKPdf	03 03 46.8	+0.2
ZAK				pmax	pmax		
	comp=Z,51nm,1.1s						
ULN	Ulaanbaatar	147.55	89	IAMs_20	IAMs_20	04 24 21.4	
	comp=Z,3µm,19.0s						
DL2	Dalian	147.71	115	PKPbc	PKPdf	03 03 48.4	+1.0
DL2				AMB	AMB		
	comp=Z,970nm,10.4s						
DL2				LR	LR		
	comp=Z,2µm,22.9s						
DL2				LR	LR		
	comp=Z,840nm,22.5s						
DL2				LR	LR		
	comp=Z,2µm,22.4s						
TLY	Talaya	148.40	81	*i* PKIKP	PKPdf	03 03 49.5	+1.4
TLY				*e*		03 03 51.9	
TLY				*e*SS	SS	03 26 37.5	+7.9
TLY				pmax	pmax		
	comp=Z,147nm,0.9s						
TLY	Talaya	148.40	81	PKPdf	PKPdf	03 03 48.2	0.0
TLY				IAMs_20	IAMs_20	04 23 14.2	
	comp=Z,5µm,20.0s						
INCN	Inchon	148.66	123	IAMs_20	IAMs_20	04 02 14.4	
	comp=Z,4µm,21.0s						
SKAG	Skagway	148.89	297	IAMs_20	IAMs_20	04 06 14.6	
	comp=Z,5µm,21.0s						
IRK	Irkutsk	149.06	81	*e*PKIKP	PKPbc	03 03 52.0	-1.3
IRK				pmax	pmax		
	comp=Z,208nm,2.3s						
KSAR	Wonju Array Be	149.13	125	PKIKP	PKPdf	03 03 50.0	+0.3
KSAR	Wonju Array Be	149.13	125		PKPdf	03 03 50.0	+0.3
KSRS	Korea Array	149.16	125	PKPbc	PKPbc	03 03 53.7	-0.3
	comp=Z,36nm,1.0s,baz=211,slow=2.6,SNR=14						
NRIK	Noril'sk	150.22	43	PKPbc	PKPbc	03 03 55.3	-0.3
	comp=Z,27nm,1.0s,baz=210,slow=0.8,SNR=11						
NRIK				PKPab	sPKPbc	03 03 58.5	+0.4
	comp=Z,27nm,1.0s,baz=199,slow=0.8,SNR=18						
SNY	Shenyang	150.95	114	⇑PKPbc	PKPab	03 04 03.9	-1.8
SNY				PP	PP	03 07 32.4	-3.9
INK	Inuvik	151.85	314	PKPbc	PKPbc	03 03 57.6	-1.8
	comp=Z,44nm,0.9s,baz=53,slow=2.4,SNR=22						
MAT	Matsushiro	152.05	141	PKP	PKiKP	03 04 01.0	-0.3
MJAR	Matsushiro Arr	152.05	141	PKPbc	PKiKP	03 04 00.9	-0.4
	comp=Z,53nm,1.1s,baz=181,slow=2.6,SNR=16						
MJAR	Matsushiro Arr	152.05	141	PKPdf	PKPdf	03 03 53.2	-1.1
MJAR					PKiKP	03 04 00.9	-0.4
BCAR	Beaver Creek A	153.29	300		PKPdf	03 03 55.7	+0.3
CN2	Changchun	153.36	114	*e*PKPbc	PKPbc	03 04 00.2	-3.4
SCM	Sheep Creek Mo	155.23	296	IAMs_20	IAMs_20	04 27 51.5	
	comp=Z,4µm,21.0s						
SML	Sawmill	155.67	295	IAMs_20	IAMs_20	04 10 28.9	
	comp=Z,5µm,21.0s						
BMAR	Burnt Mountain	155.68	309		PKPdf	03 03 57.2	-1.3
MDJ	Mudanjiang	155.82	118	P	PKPdf	03 04 07.9	+8.5
MDJ	Mudanjiang	155.82	118	IAMs_20	IAMs_20	04 12 35.0	
	comp=Z,5µm,22.0s						
PMR	Palmer	155.94	294	IAMs_20	IAMs_20	04 11 01.3	
	comp=Z,4µm,21.0s						
KDAK	Kodiak Island	155.97	284	PKPab	PKPab	03 04 27.3	+0.8
	comp=Z,12nm,0.7s,baz=170,slow=11,SNR=5.2						
ILAR	Eielson Array	155.98	303	PKP	PKPdf	03 03 56.0	-3.0
	comp=Z,1.1nm,0.8s,baz=333,slow=1.5,SNR=9.6						
ILAR				PKPab	PKPab	03 04 24.0	-2.4
	comp=Z,21nm,1.0s,baz=126,slow=3.0,SNR=11						
ILAR	Eielson Array	155.98	303		PKPdf	03 03 59.1	+0.1
ILAR					pPKPab	03 04 27.0	-1.3
USA0B	Ussuriysk Arra	156.50	122	IAMs_20	IAMs_20	04 16 19.3	
	comp=Z,4µm,21.0s						
USRK	Ussuriysk Ar.	156.50	122	PKPbc	PKPbc	03 04 11.9	
	comp=Z,2.8nm,0.8s,baz=188,slow=3.9,SNR=4.2						
USRK				PKPab	PKPab	03 04 26.6	-2.5
	comp=Z,8.9nm,1.1s,baz=251,slow=4.4,SNR=5.5						
USRK	Ussuriysk Ar.	156.50	122	PKPdif	PKPbc	03 04 10.5	
USRK					PKPab	03 04 28.8	-0.3
MCK	McKinley	156.55	299	IAMs_20	IAMs_20	04 10 31.2	
	comp=Z,4µm,22.0s						
BOD	Bodaibo	156.78	77	*e*PKIKP	PKPdf	03 04 07.4	+7.2
BOD				pmax	pmax		
	comp=Z,31nm,1.5s						
BWN	Browne	156.90	300	IAMs_20	IAMs_20	04 15 39.5	
	comp=Z,5µm,21.0s						
BPAW	Bear Paw Mtn.	157.52	300	IAMs_20	IAMs_20	04 31 39.1	
	comp=Z,4µm,21.0s						
TOLK	Toolik Lake Re	157.71	312	P	PKPdf	03 04 00.3	-0.9
	baz=94						
ERM	Erimo	158.57	144	IAMs_20	IAMs_20	04 09 31.3	
	comp=Z,4µm,22.0s						
TEY	Ternei	159.03	128	*e*PKP2	PKPab	03 04 38.6	-1.4
ZEA	Zeya	161.15	98	*i* PKIKP	PKPdf	03 04 14.0	+8.5
ZEA				pmax	pmax		
	comp=Z,36nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,800nm,12.0s						
ZEA				pmax	pmax		
	comp=Z,800nm,11.0s						
YUK	Yuzh-Kuril'sk	161.19	147	*e*PKIKP	PKPdf	03 03 57.9	-7.9
YUK				*e*PPP	PPP	03 12 24.2	
YUK				*e*SS	SS	03 28 42.4	-5.0
YUK				*e*SSS	SSS	03 34 57.1	
KUR	Kuril'sk	162.82	150	*e*PKIKP	PKPdf	03 04 08.7	+1.3
KUR				*e*		03 04 56.6	
KUR				*e*		03 08 48.1	
YSS	Yuzh-Sakhalins	162.90	137	*i* PKIKP	PKPdf	03 04 11.1	+3.6
YSS				*e*		03 08 49.3	
YSS				*e*		03 11 02.6	
TIXI	Tiksi	163.73	36	PKP	PKPdf	03 04 08.8	+1.3
	comp=Z,1.8nm,0.3s,baz=288,slow=1.2,SNR=4.3						
TIXI				PKPab	PKPab	03 04 59.8	-0.1
	comp=Z,1.8nm,0.3s,baz=296,slow=1.2,SNR=5.8						
TIXI	Tiksi	163.73	36	PKIKP	PKPdf	03 04 08.4	+0.9
TIXI						03 05 00.3	
TIXI	Tiksi	163.73	36		PKPdf	03 04 08.4	+0.9
TIXI					PKPab	03 05 00.3	+0.3
YAK	Yakutsk	165.57	72	*e*PKIKP	PKPdf	03 04 11.4	+2.0
YAK				*e*		03 08 56.8	
YAK				pmax	pmax		
	comp=Z,314nm,9.7s						
YAK				pmax	pmax		
	comp=N,68nm,7.5s						
YAK				pmax	pmax		
	comp=E,57nm,6.9s						
YAK				pmax	pmax		
	comp=Z,204nm,13.9s						
SKR	Severo-Kuril's	169.60	167	*i* PKIKP	PKPdf	03 04 04.5	-8.1
SKR				pmax	pmax		
	comp=Z,500nm,15.2s						
PET	Petropavlovsk	172.13	175	*i* PKIKP	PKPdf	03 04 16.8	+3.0
PET				*e*		03 09 30.0	
PET				*e*SS	SS	03 30 33.7	-4.1
PET				*e*SSS	SSS	03 37 28.0	
PETK	Petropavlovsk-	172.15	170	PKP	PKPdf	03 04 14.8	+0.9
	comp=Z,3.0nm,0.7s,baz=173,slow=3.6,SNR=2.6						
PETK				PKPab	PKPab	03 05 37.7	+0.1
	comp=Z,5.7nm,0.8s,baz=165,slow=6.2,SNR=3.6						
PETK				PP	PP	03 09 37.6	+8.5
	comp=Z,6.1nm,0.9s,baz=96,slow=9.1,SNR=3.9						

PETK	**Petropavlovsk-**	**172.15**	**170**	PKIKP	**PKPdf**	**03 04 14.6**	**+0.7**
PETK						03 05 37.9	
PETK	**Petropavlovsk-**	**172.15**	**170**		**PKPdf**	**03 04 14.6**	**+0.7**
PETK					**PKPab**	**03 05 37.9**	**+0.3**
BILL	**Bilibino**	**172.27**	**342**	*i* PKIKP	**PKPdf**	**03 04 13.4**	**-0.1**
BILL				*i*		03 09 29.4	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MA2	**Magadan**	**175.28**	**102**	PKPab	**PKPab**	**03 05 53.4**	**+2.0**
	comp=Z,2.2nm,0.3s,baz=239,slow=2.8,SNR=3.6						
MA2				PP	**PP**	**03 09 40.9**	**-4.1**
	comp=Z,2.4nm,0.4s,baz=221,slow=2.8,SNR=4.7						
MA2	**Magadan**	**175.28**	**102**	PKP2	**PKPab**	**03 05 51.7**	**+0.3**
MA2						04 04 13.7	
MA2	**Magadan**	**175.28**	**102**	PKPdf	**PKPdf**	**03 04 13.7**	**-1.1**
MA2					**PKPab**	**03 05 51.7**	**+0.3**
SEY	**Seymchan**	**175.88**	**56**	PKP	**PKPdf**	**03 04 14.2**	**-0.6**
	comp=Z,0.9nm,0.3s,baz=70,slow=6.2,SNR=3.9						
SEY				PKPab	**sPKPab**	**03 05 56.0**	**-0.6**
	comp=Z,3.0nm,0.8s,baz=190,slow=2.9,SNR=2.1						

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*ANF **11** 03:01:53.9±0.3, 34°.10N×106°.94W, h15^{km}±2^{km}, ML3.3/7, Error ellipse: s-maj=3.5km s-min=3.1km az=120.0*

*NEIC **11** 03:01:54.3±1.8, 34°.02N±0°.03×106°.80W±0°.04, h8^{km}±5^{km}, ML3.3/32, Error ellipse: s-maj=5.9km s-min=3.9km az=134.0*

ISC 11 03:01:54.3±0.9, **34°.04N**±0°.03×**106°.83W**±0°.03, **h12**^{km}±5^{km}, **n30**, σ**1^s.23**/42, **New Mexico**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
Y22D	**IRIS PASSCAL I**	**0.08**	**294**		**Pg**	**03 01 57.3**	**+0.1**
Y22D				Sg	**Sg**	**03 01 58.9**	**-0.4**
Y22D				IAML		03 02 00.1	
	comp=N,26µm,0.5s						
Y22D				IAML		03 02 00.2	
	comp=E,19µm,0.6s						
Y22D	**IRIS PASSCAL I**	**0.08**	**294**	P	**Pg**	**03 01 57.3**	**+0.1**
	baz=128						
Y22D				S	**Sg**	**03 01 58.8**	**-0.4**
	baz=128						
ANMO	**Albuquerque**	**0.95**	**19**		**Pg**	**03 02 12.6**	**-0.2**
ANMO				Sg	**Sb**	**03 02 25.4**	**-0.2**
ANMO	**Albuquerque**	**0.95**	**19**	P	**Pb**	**03 02 12.7**	**-0.2**
	baz=197						
ANMO				S	**Sb**	**03 02 25.2**	**-0.3**
	baz=197						
121A	**Cookes Peak, D**	**1.70**	**208**		**Pn**	**03 02 23.6**	**-0.3**
121A				Sn	**Sn**	**03 02 45.6**	**-0.1**
121A				IAML		03 02 53.0	
	comp=N,225nm,0.3s						
121A				IAML		03 02 55.3	
	comp=E,245nm,0.8s						
121A	**Cookes Peak, D**	**1.70**	**208**	P	**Pn**	**03 02 23.8**	**-0.1**
	baz=29						
121A				Sb	**Sb**	**03 02 47.9**	**+0.8**
	baz=29						
W18A	**Petrified Fore**	**2.63**	**295**		**Pn**	**03 02 38.1**	**+1.4**
W18A				IAML		03 03 18.6	
	comp=N,148nm,0.8s						
W18A				IAML		03 03 19.4	
	comp=E,131nm,0.8s						
W18A	**Petrified Fore**	**2.63**	**295**	Pb	**Pn**	**03 02 38.2**	**+1.5**
	baz=114						
W18A				Sg	**Sg**	**03 03 16.8**	**-2.0**
	baz=114						
X18A	**Snowflake**	**2.63**	**282**		**Pn**	**03 02 37.9**	**+1.1**
X18A				IAML		03 03 18.7	
	comp=E,78nm,0.5s						
X18A				IAML		03 03 20.6	
	comp=N,113nm,0.7s						
MNTX	**Cornudas Mount**	**2.63**	**152**		**Pn**	**03 02 37.5**	**+0.9**
MNTX				Sn	**Sn**	**03 03 09.2**	**+0.7**
MNTX				IAML		03 03 18.0	
	comp=N,77nm,0.3s						
MNTX	**Cornudas Mount**	**2.63**	**152**	P	**Pn**	**03 02 37.6**	**+0.9**
	baz=333						
MNTX				S	**Sn**	**03 03 09.3**	**+0.9**
	baz=333						
319A	**Douglas**	**3.37**	**219**	Pn	**Pn**	**03 02 46.4**	**-0.4**
319A				IAML		03 03 52.2	
	comp=E,123nm,1.0s						
MSTX	**Muleshoe**	**3.37**	**90**	Pn	**Pn**	**03 02 46.9**	**+0.1**
MSTX				Sn	**Sn**	**03 03 27.1**	**+0.3**
MSTX	**Muleshoe**	**3.37**	**90**	P	**Pn**	**03 02 48.3**	**+1.4**
	baz=272						
MSTX				Sb	**Sb**	**03 03 38.7**	**+3.7**
	baz=272						
MVCO	**Mesa Verde**	**3.44**	**337**	Pn	**Pn**	**03 02 50.1**	**+2.1**
MVCO				IAML		03 03 47.0	
	comp=E,76nm,0.5s						
MVCO				IAML		03 03 54.1	
	comp=E,65nm,0.8s						
S22A	**4UR Ranch, Cre**	**3.70**	**0**	Pn	**Pn**	**03 02 51.3**	**-0.2**
TUC	**Tucson**	**3.74**	**244**	PKIKP	**Pn**	**03 02 51.1**	**-0.8**
TUC	**Tucson**	**3.74**	**244**		**Pn**	**03 02 51.1**	**-0.8**
TUC	**Tucson**	**3.74**	**244**	P	**Pn**	**03 02 51.3**	**-0.6**
	baz=62						
X16A	**Lo Mia Camp, P**	**3.84**	**277**	Pn	**Pn**	**03 02 54.2**	**+0.9**
X16A				IAML		03 03 58.6	
	comp=E,36nm,0.7s						
SDCO	**Great Sand Dun**	**3.85**	**16**	Pn	**Pn**	**03 02 54.5**	**+0.9**
WUAZ	**Wupatki**	**4.02**	**293**	Pn	**Pn**	**03 02 58.0**	**+2.1**
AMTX	**Amarillo**	**4.34**	**77**	Pn	**Pn**	**03 02 59.1**	**-1.0**
U15A	**North Rim**	**5.07**	**300**	Pn	**Pn**	**03 03 12.0**	**+1.7**
U15A				IAML		03 04 35.8	
	comp=N,42nm,0.9s						
Y14A	**Wickenburg**	**5.13**	**271**	Pn	**Pn**	**03 03 12.1**	**+1.1**
Y14A				IAML		03 04 38.2	
	comp=N,20nm,0.9s						
Y14A				IAML		03 04 41.8	
	comp=E,22nm,0.7s						
TX31	**Lajitas Ar. Si**	**5.41**	**149**	Pn	**Pn**	**03 03 15.2**	**+0.3**
TX32	**Lajitas Array**	**5.41**	**149**	Pn	**Pn**	**03 03 15.4**	**+0.5**
214A	**Organ Pipe Nat**	**5.44**	**249**	Pn	**Pn**	**03 03 14.4**	**-0.8**
214A					**Sn**	**03 04 17.9**	**+0.2**
ABTX	**Abilene, Hawle**	**6.18**	**101**	Pn	**Pn**	**03 03 24.8**	**-0.6**
CBKS	**Cedar Bluff**	**7.44**	**48**		**Pg**	**03 04 13.8**	**-3.0**

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*NEIC **11** 03:16:23.7±1.2, 17°.0N±0°.1×147°.3E±0°.2, h49^{km}±7^{km}, mb4.3/10, Error ellipse: s-maj=24.5km s-min=8.4km az=121.0*

*IDC **11** 03:16:24.4±3.1, 17°.03N×147°.23E, h46^{km}±30^{km}, mb3.9/18, mb1 4.1/19, mb1mx3.8/69, mbtmp4.2/19, ML4.1/1, MS4.5/1, Ms1 4.5/1, ms1mx3.4/48, Error ellipse: s-maj=24.5km s-min=14.5km az=84.0*

ISC 11 03:16:24.1±0.7, **17°.04N**±0°.08×**147°.3E**±0°.1, **h48**^{km}, **n39**, σ**0^s.76**/39, **mb4.3**/21, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.13**	**214**	P	**Pn**	**03 17 25.2**	**+0.5**
	11nm,0.3s,baz=33,slow=11,SNR=3.7						
GUMO				S	**Sn**	**03 18 12.3**	**+0.6**
	25nm,0.3s,baz=0.0,slow=20,SNR=4.5						
GUMO	**Guam**	**4.13**	**214**		**Pn**	**03 17 24.5**	**-0.2**
GUMO					**Sn**	**03 18 11.9**	**+0.2**
INU	**Inuyama**	**20.40**	**335**	P	**P**	**03 20 56.2**	**-0.8**
INU				IAmb	IAmb	03 21 00.7	
	comp=Z,14nm,0.8s						
MJAR	**Matsushiro Arr**	**21.02**	**339**	P	**P**	**03 21 03.5**	**-0.3**
	comp=Z,13nm,1.2s,baz=167,slow=11,SNR=7.3						
MJAR	**Matsushiro Arr**	**21.02**	**339**	P	**P**	**03 21 03.9**	**+0.1**
KSRS	**Korea Array**	**26.53**	**324**	P	**P**	**03 21 57.3**	**0.0**
	comp=Z,1.1nm,0.5s,baz=150,slow=10,SNR=3.6						
KLR	**Kul'dur**	**34.49**	**342**	P	**P**	**03 23 08.2**	**+0.6**
	comp=Z,2.3nm,0.6s,baz=168,slow=5.1,SNR=12						
WRA	**Warramunga Arr**	**38.88**	**200**	P	**P**	**03 23 44.6**	**-0.5**
	comp=Z,3.2nm,0.6s,baz=22,slow=9.0,SNR=10						
ASAR	**Alice Springs**	**42.50**	**198**	P	**P**	**03 24 15.0**	**0.0**
	comp=Z,0.9nm,0.7s,baz=18,slow=9.4,SNR=13						
ASAR	**Alice Springs**	**42.50**	**198**	P	**P**	**03 24 14.8**	**-0.2**
SONM	**Songino Array**	**45.36**	**322**	P	**P**	**03 24 38.1**	**+0.3**
	comp=Z,1.8nm,0.6s,baz=139,slow=7.6,SNR=12						
CMAR	**Chiang Mai Arr**	**45.93**	**279**	P	**P**	**03 24 43.4**	**+0.9**
	comp=Z,2.1nm,0.6s,baz=70,slow=6.6,SNR=13						
CMAR	**Chiang Mai Arr**	**45.93**	**279**	P	**P**	**03 24 41.8**	**-0.8**
TLY	**Talaya**	**48.77**	**325**	LR	LR	03 45 12.7	
	comp=Z,471nm,19.7s,baz=46,slow=35						
ZALV	**Zalesovo Beam**	**60.23**	**323**	P	**P**	**03 26 27.1**	**-0.2**
	comp=Z,1.5nm,0.5s,baz=104,slow=9.6,SNR=6.5						
MK31	**Makanchi Array**	**60.68**	**314**	P	**P**	**03 26 30.3**	**-0.2**
MKAR	**Makanchi Array**	**60.68**	**314**	P	**P**	**03 26 31.1**	**+0.5**
	comp=Z,1.2nm,0.5s,baz=89,slow=7.9,SNR=30						
MKAR	**Makanchi Array**	**60.68**	**314**	P	**P**	**03 26 30.8**	**+0.2**
MAKZ	**Makanchi**	**60.89**	**314**	P	**P**	**03 26 31.6**	**-0.4**
KURK	**Kurchatov**	**63.49**	**319**	P	**P**	**03 26 48.8**	**-0.5**
KURK				IAmb	IAmb	03 27 02.2	
	comp=Z,4.4nm,0.9s						
KURBB	**Kurchatov Arra**	**63.54**	**318**	P	**P**	**03 26 49.6**	**0.0**
	comp=Z,2.7nm,0.4s,baz=94,slow=7.3,SNR=36						
NRIK	**Noril'sk**	**63.67**	**340**	P	**P**	**03 26 51.0**	**+0.8**
	comp=Z,3.9nm,0.6s,baz=100,slow=9.9,SNR=5.8						
ILAR	**Eielson Array**	**64.48**	**26**	P	**P**	**03 26 55.0**	**-0.6**
	comp=Z,1.1nm,1.1s,baz=244,slow=6.9,SNR=4.0						
NIL	**Nilore**	**67.64**	**300**	P	**P**	**03 27 16.0**	**-0.4**
BVAR	**Borovoye Array**	**68.69**	**321**	P	**P**	**03 27 22.9**	**+0.2**
	comp=Z,3.7nm,0.6s,baz=93,slow=7.8,SNR=21						
BRVK	**Borovoye**	**68.76**	**321**	P	**P**	**03 27 23.3**	**+0.2**
BRVK				IAmb	IAmb	03 27 25.4	
	comp=Z,4.2nm,0.8s						
KKAR	**Karatay Array**	**68.97**	**310**	P	**P**	**03 27 23.4**	**-1.2**
KKAR	**Karatay Array**	**68.97**	**310**	IAmb	IAmb	03 27 26.1	
	comp=Z,1.4nm,0.8s						
ABKAR	**Akbulak array**	**75.56**	**317**	P	**P**	**03 28 02.6**	**-1.1**
YKA	**Yellowknife Ar**	**78.76**	**28**	P	**P**	**03 28 23.2**	**+1.8**
	comp=Z,0.3nm,0.7s,baz=284,slow=5.4,SNR=3.4						
NVAR	**Mina Array Bea**	**82.99**	**52**	P	**P**	**03 28 45.0**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=284,slow=4.5,SNR=2.8						
NVAR	**Mina Array Bea**	**82.99**	**52**	P	**P**	**03 28 43.4**	**-1.4**
ARCES	**ARCESS Array B**	**84.52**	**343**	P	**P**	**03 28 53.4**	**+1.6**
	comp=Z,3.3nm,0.7s,baz=29,slow=5.7,SNR=5.8						
P17A	**Butcher Ranch,**	**88.26**	**49**	P	**P**	**03 29 09.1**	**-1.8**
FINES	**FINESS Array B**	**89.00**	**336**	P	**P**	**03 29 13.2**	**-0.5**
	comp=Z,3.2nm,1.0s,baz=85,slow=4.7,SNR=11						
HFS	**Hagfors**	**94.47**	**339**	P	**P**	**03 29 38.7**	**-0.4**
	comp=Z,2.9nm,1.0s,baz=66,slow=8.7,SNR=3.5						
TORD	**Torodi Ar. Bea**	**134.65**	**309**	PKP	**PKiKP**	**03 35 39.3**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=11,slow=2.7,SNR=3.1						
TORD	**Torodi Ar. Bea**	**134.65**	**309**		**PKPdf**	**03 35 37.9**	**-0.4**
LPAZ	**La Paz**	**146.12**	**94**	PKPbc	**PKPbc**	**03 36 01.4**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=298,slow=4.5,SNR=5.0						

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*IDC **11** 03:26:39.9±1.3, 32°.90S×178°.03W, h0^{km}, mb4.5/3, mb1 4.6/5, mb1mx4.0/45, mbtmp4.5/5, ML4.1/2, MS5.5/2, Ms1 5.5/2, ms1mx4.5/26, Error ellipse: s-maj=45.8km s-min=26.6km az=138.0*

*NEIC **11** 03:26:40.5±1.2, 32°.9S±0°.2×178°.1W±0°.2, h10^{km}±2^{km}, mb4.4/9, Error ellipse: s-maj=35.5km s-min=18.0km az=133.0*

ISC 11 03:26:44.2±0.8, **32°.76S**±0°.08×**178°.1W**±0°.2, **h34**^{km}, **n52**, σ**2^s.22**/54, **mb4.5**/7, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.49**	**2**	P	**Pn**	**03 27 34.1**	**-1.9**
GLKZ				S	**Sn**	**03 28 17.3**	**+1.2**
WHRZ	**Whale Island**	**6.51**	**217**	S	**Pn**	**03 28 18.8**	**+1.2**
WHRZ	**Whale Island**	**6.51**	**217**	S	**Sn**	**03 29 34.2**	**+3.5**
TKGZ	**Te Karaka**	**6.58**	**209**	S	**Pn**	**03 28 17.1**	**-1.4**
TKGZ	**Te Karaka**	**6.58**	**209**	S	**Sn**	**03 29 35.9**	**+3.6**
MWZ	**Matawai**	**6.63**	**212**	S	**Pn**	**03 28 18.8**	**-0.4**
MWZ	**Matawai**	**6.63**	**212**	S	**Sn**	**03 29 36.8**	**+3.2**
URZ	**Urewera**	**6.76**	**214**	Pn	**Pn**	**03 28 18.3**	**-2.7**
	3.8nm,0.3s,baz=72,slow=20,SNR=5.8						
URZ				Sn	**Sn**	**03 29 38.3**	**+1.5**
	6.8nm,0.3s,baz=162,slow=20,SNR=5.8						
URZ	**Urewera**	**6.76**	**214**		**Pn**	**03 28 17.7**	**-3.3**
URZ					**Sn**	**03 29 34.2**	**-2.5**
URZ	**Urewera**	**6.76**	**214**	S	**Pn**	**03 28 21.6**	**+0.6**
URZ	**Urewera**	**6.76**	**214**	S	**Sn**	**03 29 39.4**	**+2.6**
RAGZ	**Rawiri**	**6.81**	**212**	S	**Sn**	**03 29 42.8**	**+4.6**
PRGZ	**Paritu Road**	**6.98**	**207**	S	**Pn**	**03 28 23.9**	**-0.2**
TARZ	**Mount Tarawera**	**7.04**	**218**	S	**Pn**	**03 28 26.5**	**+1.5**
MUGZ	**Murupara**	**7.09**	**215**	S	**Pn**	**03 28 28.5**	**+2.8**
KNZ	**Kokohu**	**7.15**	**208**	S	**Pn**	**03 28 30.2**	**+3.8**
RAHZ	**Arahi**	**7.30**	**211**	S	**Pn**	**03 28 31.7**	**+3.1**
BKZ	**Black Stump Fm**	**7.77**	**213**		**Pn**	**03 28 31.7**	**-3.3**
BHHZ	**Black Hill Sta**	**8.23**	**214**	S	**Sn**	**03 30 11.3**	**-1.8**
PXZ	**Pawanui**	**8.34**	**208**	S	**Sn**	**03 30 15.7**	**+0.1**
PLWZ	**Palliser**	**10.29**	**209**	Pn	**Pn**	**03 29 06.2**	**-3.2**
THZ	**Tophouse**	**11.51**	**216**	Pn	**Pn**	**03 29 22.5**	**-3.8**
THZ					**Sn**	**03 31 28.7**	**-4.8**
OXZ	**Oxford**	**13.12**	**214**	Pn	**Pn**	**03 29 43.8**	**-4.3**
RPZ	**Rata Peaks**	**13.88**	**215**	Pn	**Pn**	**03 29 56.7**	**-1.8**
	1.0nm,0.3s,baz=43,slow=19,SNR=5.2						
RPZ				Sn	Sn	03 32 19.2	-12
	0.9nm,0.3s,baz=348,slow=18,SNR=5.8						
RPZ	**Rata Peaks**	**13.88**	**215**		**Pn**	**03 29 55.3**	**-3.2**
CTA	**Charters Tower**	**34.20**	**283**	P	**P**	**03 33 28.3**	**+1.6**
	7.5nm,0.8s,baz=89,slow=9.1,SNR=3.7						
PMG	**Port Moresby**	**39.62**	**298**	LR	LR	03 48 12.0	
	comp=Z,11µm,18.6s,baz=256,slow=32						
AS31	**Alice Springs**	**42.99**	**269**	P	**P**	**03 34 40.1**	**-0.4**
ASAR	**Alice Springs**	**42.99**	**269**	P	**P**	**03 34 41.1**	**+0.6**
	5.0nm,0.8s,baz=106,slow=7.5,SNR=38						
ASAR	**Alice Springs**	**42.99**	**269**	P	**P**	**03 34 40.1**	**-0.4**
WR0	**Warramunga Arr**	**44.02**	**275**	P	**P**	**03 34 48.0**	**-0.8**
WR0				IAmb	IAmb	03 35 03.4	
	comp=Z,5.2nm,0.9s						
WB2	**Warramunga Arr**	**44.18**	**275**	P	**P**	**03 34 48.1**	**-2.0**
WB2				IAmb	IAmb	03 35 02.6	
	comp=Z,8.1nm,0.8s						
WRA	**Warramunga Arr**	**44.19**	**275**	P	**P**	**03 34 50.5**	**+0.3**
	comp=Z,4.4nm,0.5s,baz=117,slow=8.2,SNR=43						
WRA	**Warramunga Arr**	**44.19**	**275**	P	**P**	**03 34 50.3**	**+0.1**
WB0	**Warramunga Arr**	**44.23**	**275**	P	**P**	**03 34 50.4**	**0.0**
FORT	**Forrest**	**45.45**	**257**	P	**P**	**03 34 59.6**	**-0.4**
FITZ	**Fitzroy Crossi**	**52.35**	**272**	LR	LR	03 55 18.1	
	comp=Z,3µm,20.7s,baz=116,slow=33						
FITZ	**Fitzroy Crossi**	**52.35**	**272**	P	**P**	**03 35 52.0**	**-1.2**
FITZ				IAmb	IAmb	03 35 54.1	
	comp=Z,3.7nm,1.1s						
PSAD3	**Pilbara Seismi**	**55.70**	**265**	P	**P**	**03 36 17.2**	**-0.4**
GO01	**Chusmiza**	**94.39**	**117**	P	**P**	**03 40 00.2**	**-1.4**
GO01				IAmb	IAmb	03 40 08.6	
	comp=Z,2.0nm,0.9s						
MKAR	**Makanchi Array**	**119.24**	**309**	PKP	**PKiKP**	**03 45 30.3**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=98,slow=2.9,SNR=3.7						
MKAR	**Makanchi Array**	**119.24**	**309**		**PKiKP**	**03 45 30.0**	**+0.4**
KURBB	**Kurchatov Arra**	**122.66**	**313**	PKP	**PKiKP**	**03 45 37.0**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=110,slow=2.2,SNR=9.5						
KKAR	**Karatay Array**	**126.31**	**302**		**PKiKP**	**03 45 44.1**	**+0.4**
BVAR	**Borovoye Array**	**128.04**	**314**	PKP	**PKiKP**	**03 45 48.0**	**+1.2**
	comp=Z,0.4nm,0.4s,baz=98,slow=2.9,SNR=5.6						
FINES	**FINESS Array B**	**147.33**	**339**	PKPbc	**PKPab**	**03 46 24.7**	**-0.7**
	comp=Z,8.1nm,0.9s,baz=86,slow=4.3,SNR=12						
FINES	**FINESS Array B**	**147.33**	**339**		**PKPab**	**03 46 25.4**	**0.0**
NB2	**NORSAR Subarra**	**151.07**	**351**	PKP	**PKiKP**	**03 46 34.0**	**+0.5**
	comp=Z,2.2nm,1.0s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**151.07**	**351**	PKPbc	**PKiKP**	**03 46 34.4**	**+0.9**
	comp=Z,1.2nm,0.9s,baz=32,slow=1.8,SNR=4.1						
AKASG	**Malin Array Be**	**153.11**	**320**	PKPbc	**PKiKP**	**03 46 38.8**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=61,slow=2.7,SNR=5.0						
AKASG	**Malin Array Be**	**153.11**	**320**		**PKiKP**	**03 46 40.4**	**+2.4**
BRTR	**Keskin Array B**	**153.61**	**294**	PKPbc	**PKiKP**	**03 46 40.1**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=142,slow=3.0,SNR=5.7						

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*IDC **11** 03:51:55.4±1.6, 7°.32S×154°.21E, h0^{km}, mb3.8/8, mb1 4.0/8, mb1mx3.8/32, mbtmp3.9/8, Error ellipse: s-maj=55.9km s-min=20.7km az=116.0*

ISC 11 03:52:00.8±1.6, **7°.4S**±0°.2×**154°.2E**±0°.4, **h35**^{km}, **n9**, σ**0^s.73**/9, **mb3.8**/8, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.94**	**235**	P	**P**	**03 57 01.9**	**-0.3**
	0.9nm,0.5s,baz=59,slow=10.0,SNR=8.0						
ASAR	**Alice Springs**	**25.32**	**228**	P	**P**	**03 57 24.5**	**-0.1**
	1.6nm,0.8s,baz=58,slow=8.9,SNR=13						
STKA	**Stephens Creek**	**27.07**	**204**	P	**P**	**03 57 40.9**	**+0.7**
	2.2nm,0.7s,baz=29,slow=11,SNR=5.6						
FITZ	**Fitzroy Crossi**	**29.76**	**246**	P	**P**	**03 58 04.0**	**-0.3**
	2.0nm,0.8s,baz=59,slow=8.2,SNR=4.6						
SONM	**Songino Array**	**69.19**	**328**	P	**P**	**04 03 05.3**	**+1.2**
	0.4nm,0.7s,baz=109,slow=3.5,SNR=3.3						
MKAR	**Makanchi Array**	**83.13**	**319**	P	**P**	**04 04 23.1**	**-0.1**
	0.6nm,0.8s,baz=94,slow=4.5,SNR=5.0						
ILAR	**Eielson Array**	**84.01**	**22**	P	**P**	**04 04 27.0**	**-0.4**
	0.7nm,1.1s,baz=247,slow=4.8,SNR=2.9						
ZALV	**Zalesovo Beam**	**84.02**	**326**	P	**P**	**04 04 26.7**	**-0.9**
	0.7nm,0.3s,baz=110,slow=6.6,SNR=2.6						
TORD	**Torodi Ar. Bea**	**152.32**	**284**	PKPbc	**PKPbc**	**04 11 54.0**	**-0.2**
	1.1nm,0.8s,baz=34,slow=2.3,SNR=4.0						

IDC 11 04:04:44.3±28.0, **19°.01S**×**168°.61E**, **h253**^{km}±46^{km}, **mb3.5**/3, **mb1 3.5**/4, **mb1mx3.2**/25, **mbtmp3.9**/4, **Error ellipse: s-maj=477.2km s-min=89.9km az=77.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.66**	**213**	P	Pn	04 05 44.4	-0.1
	0.4nm,0.3s,baz=82,slow=19,SNR=3.2						
STKA	**Stephens Creek**	**27.47**	**237**	P	P	04 10 07.6	+0.2
	0.6nm,0.3s,baz=68,slow=8.5,SNR=4.1						
WRA	**Warramunga Arr**	**32.29**	**263**	P	P	04 10 49.6	-0.4
	0.4nm,0.3s,baz=97,slow=8.1,SNR=18						
ASAR	**Alice Springs**	**32.60**	**256**	P	P	04 10 52.5	-0.1
	4.2nm,0.5s,baz=83,slow=9.0,SNR=70						
FITZ	**Fitzroy Crossi**	**40.67**	**264**	P	P	04 12 00.7	+0.2
	baz=99,slow=7.0						

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*TIR **11** 04:11:13.8, 41°.22N×19°.53E, h4^{km}, Md2.7/4*

*THE **11** 04:11:14.8, 41°.44N×19°.52E, h6^{km}±1^{km}, ML2.3/2, Error ellipse: s-maj=3.0km s-min=1.3km az=42.0*

*PDG **11** 04:11:15.6±0.2, 41°.34N×19°.60E, h14^{km}, ML2.5/10, Error ellipse: s-maj=0.6km s-min=0.6km az=0.0*

*BEO **11** 04:11:17.2±0.6, 41°.34N×19°.63E, h11^{km}±2^{km}, ML2.1/9*

ISC 11 04:11:14.8±1.2, **41°.32N**±0°.03×**19°.50E**±0°.03, **h5**^{km}±10^{km}, **n43**, σ**0^s.94**/57, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.28**	**85**	P	**Pg**	**04 11 20.2**	**+0.1**
TIR				S	**Sg**	**04 11 24.3**	**+0.6**
	815nm,0.3s						
TIR	**Tirane**	**0.28**	**85**	*e*Pg	**Pg**	**04 11 20.1**	**0.0**
TIR				*e*Sg	**Sg**	**04 11 24.3**	**+0.6**
TIR	**Tirane**	**0.28**	**85**	*i* PG	**Pg**	**04 11 20.2**	**0.0**
TIR				*i* SG	**Sg**	**04 11 24.6**	**+0.8**
PUK	**Puka**	**0.78**	**22**	*i* PG	**Pb**	**04 11 30.7**	**-0.2**
PUK				*i* SG	**Sn**	**04 11 43.7**	**-1.0**
PHP	**Peshkopia**	**0.79**	**63**	P	**Pg**	**04 11 28.3**	**-1.7**
PHP	**Peshkopia**	**0.79**	**63**	*i* PG	**Pg**	**04 11 29.1**	**-0.9**
PHP				*i* SG	**Sb**	**04 11 42.7**	**+0.5**
OHR	**Ohrid**	**1.00**	**102**	*i* Pg	**Pg**	**04 11 33.5**	**-0.5**
OHR				*i* Sg	**Sb**	**04 11 48.4**	**+0.2**
PDG	**Podgorica**	**1.12**	**351**	*e*Pg	**Pn**	**04 11 38.2**	**+1.0**
PDG				*e*Sg	**Sn**	**04 11 53.8**	**+0.8**
PDG	**Podgorica**	**1.12**	**351**	*e*Pn	**Pb**	**04 11 36.6**	**-0.1**
BCI	**Bajram Curri**	**1.12**	**22**	*i* PG	**Pn**	**04 11 37.7**	**+0.4**
BCI				*i* SG	**Sn**	**04 11 56.0**	**+2.7**
HCY	**Herceg Novi**	**1.35**	**327**	*e*Pn	**Pg**	**04 11 40.6**	**-0.1**
NEST	**Nestorio**	**1.48**	**127**	P	**Pb**	**04 11 42.9**	**0.0**
NEST				S	**Sg**	**04 12 02.9**	**+0.4**
FNA	**Florina**	**1.52**	**110**	P	**Pn**	**04 11 42.9**	**+0.2**
FNA				S	**Sg**	**04 12 03.5**	**0.0**
	108nm,0.5s						
SKO	**Skopje**	**1.59**	**65**	*e*Pg	**Pn**	**04 11 43.4**	**-0.3**
SKO				*e*Sg	**Sb**	**04 12 05.4**	**+0.3**
SKO	**Skopje**	**1.59**	**65**	*i* Pg	Pn	04 11 32.1	-12
KEK	**Kerkira**	**1.62**	**172**	P	**Pn**	**04 11 44.0**	**-0.1**
KEK				S	**Sg**	**04 12 07.0**	**0.0**
TREB	**Trebinje**	**1.64**	**329**	*e*Pn	**Pb**	**04 11 45.6**	**+0.1**
TREB				*e*Sn	**Sg**	**04 12 08.2**	**+0.8**
TREB	**Trebinje**	**1.64**	**329**	*e*Pn	**Pn**	**04 11 43.7**	**-0.6**
DBRK	**Dubrovnik**	**1.68**	**324**	*i* Pn	**Pb**	**04 11 46.5**	**+0.2**
DBRK				Sn	**Sg**	**04 12 11.1**	**+2.2**
KPRO	**Kipourio**	**1.97**	**133**	P	**Pn**	**04 11 49.9**	**+1.0**
SJES	**Sjenica**	**1.97**	**10**	*e*Pn	**Pb**	**04 11 50.4**	**-0.8**
STON	**Ston**	**2.05**	**320**	*e*Pn	**Pb**	**04 11 52.0**	**-0.5**
STON	**Ston**	**2.05**	**320**	*e*Pn	**Pb**	**04 11 52.5**	**+0.1**
STON				Sn	**Sb**	**04 12 17.8**	**-0.5**
STON	**Ston**	**2.05**	**320**	*e*Pn	**Pb**	**04 11 51.6**	**-0.9**
STIP	**Stip**	**2.05**	**79**	*e*Pn	**Pb**	**04 11 52.4**	**-0.1**
SELS	**Selova**	**2.24**	**32**	*e*Pn	**Pn**	**04 11 53.0**	**+0.3**
BARS	**Barje**	**2.28**	**48**	*e*Pn	**Pn**	**04 11 53.2**	**0.0**
RUDO	**Rudo**	**2.29**	**358**	*e*Pn	**Pn**	**04 11 54.6**	**+1.2**
IVAS	**Ivanjica**	**2.30**	**12**	*e*Pn	**Pn**	**04 11 53.6**	**+0.1**
VAY	**Valandovo**	**2.31**	**89**	*e*Pn	**Pn**	**04 11 53.2**	**-0.3**
BOSS	**Bosilegrad**	**2.51**	**61**	*e*Pn	**Pn**	**04 11 55.9**	**-0.5**
BBLS	**Lazići**	**2.54**	**358**	*e*Pn	**Pb**	**04 11 59.3**	**-1.7**
BBLS	**Lazići**	**2.54**	**358**	*e*Pn	**Pn**	**04 11 58.8**	**+2.0**
GRUS	**Gruza**	**2.72**	**19**	*e*Pn	**Pn**	**04 11 59.8**	**+0.7**
RICI	**Ricice**	**2.79**	**322**	Sn	**Sb**	**04 12 37.7**	**-2.0**
HAPS	**Han Pijesak,Bl**	**2.79**	**352**	*e*Pn	**Pb**	**04 12 03.5**	**-1.8**
DIVS	**Divibare**	**2.80**	**7**	*e*Pn	**Pn**	**04 12 00.8**	**+0.5**
DIVS	**Divibare**	**2.80**	**7**	*e*Pn	**Pn**	**04 11 58.2**	**-2.1**
BOVS	**Bovan**	**2.83**	**34**	*e*Pn	**Pn**	**04 12 01.2**	**+0.5**
ZAPS	**Zavoj**	**3.03**	**49**	*e*Pn	**Pn**	**04 12 04.4**	**+0.9**
VTS	**Vitosha**	**3.07**	**64**	*e*Pn	**Pn**	**04 12 04.0**	**-0.2**
ZAGS	**Zajecar**	**3.20**	**38**	*e*Pn	**Pn**	**04 12 05.7**	**-0.1**
MORI	**Morici**	**3.78**	**313**	Sn	**Sn**	**04 12 58.5**	**-0.1**

IDC 11 04:14:33.2±14.0, **19°.13S**×**178°.70W**, **h654**^{km}±188^{km}, **mb3.1**/3, **mb1 3.4**/3, **mb1mx2.9**/23, **mbtmp4.1**/3, **Error ellipse: s-maj=106.8km s-min=47.4km az=132.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**32.99**	**262**	P	P	04 20 18.4	+0.7
	baz=102,slow=9.3						
WRA	**Warramunga Arr**	**44.15**	**261**	P	P	04 21 47.1	+0.1
	1.4nm,0.3s,baz=96,slow=7.6,SNR=35						
ASAR	**Alice Springs**	**44.20**	**255**	P	P	04 21 47.0	-0.4
	3.2nm,0.7s,baz=92,slow=7.7,SNR=26						
TXAR	**Lajitas Array**	**86.88**	**58**	P	P	04 26 11.1	0.0
	0.4nm,0.8s,baz=237,slow=5.0,SNR=5.2						
AKASG	**Malin Array Be**	**141.50**	**331**	PKP	PKPdf	04 32 50.8	-0.8
	0.2nm,0.3s,baz=38,slow=3.8,SNR=5.3						
TORD	**Torodi Ar. Bea**	**174.04**	**184**	PKPab	PKPab	04 35 06.1	-0.2
	0.7nm,0.9s,baz=186,slow=2.9,SNR=2.9						

TIR 11 04:15:20.4, **41°.17N**×**19°.71E**, **h25**^{km}, **Md2.8**/4, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.21**	**33**	*i* PG	Pb	04 15 23.3	-2.9
TIR				*i* SG	Sb	04 15 30.8	+0.7
PHP	**Peshkopia**	**0.75**	**47**	*i* PG	Pn	04 15 35.8	+0.4
PHP				*i* SG	Sn	04 15 46.4	+0.3
PUK	**Puka**	**0.88**	**9**	*i* PG	Pn	04 15 37.5	+0.2
PUK				*i* SG	Sn	04 15 50.5	+1.2
BCI	**Bajram Curri**	**1.23**	**12**	*i* PG	Pb	04 15 43.3	+0.4
BCI				*i* SG	Sb	04 16 01.7	+3.5
DBRK	**Dubrovnik**	**1.90**	**323**	Pg	Pn	04 15 51.3	+0.1
DBRK				Sg	Sb	04 16 16.2	-1.4
STON	**Ston**	**2.27**	**319**	Pg	Pn	04 15 55.0	-1.2
STON				Sg	Sb	04 16 27.3	-0.8

DJA 11 04:40:48.6±2.0, **3°S**±4°×**12°2E**±°, **h13**^{km}±14^{km}, **M3.6**/8, **mb3.6**/1, **MLv3.5**/8, **Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**2.02**	**16**	P	Pn	04 41 23.0	+0.7
LUWI				S	Sb	04 41 49.1	-1.0
TTSI	**Tana Toraja**	**2.39**	**269**	P	Pn	04 41 27.0	-0.5
TTSI				S	Sn	04 41 47.6	-9.0
BNSI	**Bone**	**2.52**	**236**	P	Pn	04 41 28.7	-0.6
SPSI	**Sidrap Palu**	**2.62**	**248**	P	Pn	04 41 30.4	-0.3
BKSI	**Bulukumba**	**3.12**	**222**	P	Pn	04 41 37.9	+0.4
MRSI	**Marisa**	**3.45**	**356**	P	Pn	04 41 41.5	-0.6
MRSI				S	Sn	04 42 22.7	-0.3
EDFI	**Ende, Flores**	**5.75**	**185**	P	Pn	04 42 12.7	-1.1

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*ATA **11** 04:52:42.9±2.3, 38°.87N×42°.69E, h7^{km}±53^{km}, ML1.3, MW2.7*

*ISK **11** 04:52:44.6, 38°.98N×43°.01E, h23^{km}, ML2.1/6*

*DDA **11** 04:52:45.8, 38°.99N×42°.98E, h7^{km}±2^{km}, ML1.5*

ISC 11 04:52:45.5±1.0, **38°.96N**±0°.03×**42°.96E**±0°.03, **h23**^{km}±9^{km}, **n20**, σ**1^s.14**/30, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADCV	**BITLIS_Adilcev**	**0.24**	**231**	*i* P	**Pb**	**04 52 51.4**	**-0.3**
ADCV				IAML		04 52 56.0	
	comp=N,111nm,0.7s						
ADCV				*i* S	**Sb**	**04 52 56.3**	**+0.4**
ADCV				IAML		04 52 57.0	

	comp=E,146nm,0.6s						
MLAZ	**Malazgirt-MUS**	**0.37**	**300**	PG	**Pb**	**04 52 53.5**	**-0.1**
MLAZ				SG	**Sb**	**04 53 00.5**	**+1.3**
VMUR	**Van-Muradiye**	**0.47**	**86**	*i* P	**Pb**	**04 52 55.2**	**-0.2**
VMUR				*i* S	**Sb**	**04 53 02.1**	**+0.1**
VMUR				IAML		04 53 04.0	
	comp=E,32nm,0.5s						
VMUR				IAML		04 53 05.0	
	comp=N,27nm,0.4s						
VANB	**Van**	**0.49**	**137**	PG	**Pn**	**04 52 56.9**	**-0.4**
VANB				SG	**Sn**	**04 53 05.4**	**+0.3**
TVAN	**Van**	**0.55**	**141**	*e*P	**Pb**	**04 52 55.3**	**-1.4**
TVAN	**Van**	**0.55**	**141**	*i* P	**Pb**	**04 52 56.9**	**+0.2**
TVAN				*i* S	**Sb**	**04 53 05.4**	**+1.2**
TVAN				IAML		04 53 06.0	
	comp=N,59nm,0.3s						
TVAN				IAML		04 53 06.0	
	comp=E,76nm,0.3s						
AGRB	**Hanur-Agry**	**0.62**	**2**	PG	**Pb**	**04 52 57.1**	**-0.7**
AGRB				SG	**Sb**	**04 53 05.5**	**-0.7**
AKDM	**Akdamar-Van**	**0.63**	**179**	PG	**Pb**	**04 52 57.9**	**-0.1**
AKDM				SG	**Sb**	**04 53 07.3**	**+0.9**
GEVA	**Gevas**	**0.65**	**173**	*e*P	**Pb**	**04 52 56.4**	**-1.9**
GEVA				IAML		04 53 17.0	
	comp=Z,12nm,0.9s						
GEVA	**Gevas**	**0.65**	**173**	*i* P	**Pn**	**04 52 59.6**	**+0.2**
GEVA				*i* S	**Sn**	**04 53 09.0**	**-0.1**
GEVA				IAML		04 53 10.0	
	comp=N,16nm,1.3s						
GEVA				IAML		04 53 12.0	
	comp=E,14nm,0.6s						
CLDR	**Caldiran**	**0.77**	**76**	PG	**Pb**	**04 52 59.9**	**-0.4**
CLDR	**Caldiran**	**0.77**	**76**	*i* P	**Pb**	**04 52 59.9**	**-0.4**
GURO	**Guroymak-BITLI**	**0.83**	**241**	PG	**Pn**	**04 53 01.9**	**-0.1**
GURO				SG	**Sn**	**04 53 14.4**	**+0.8**
BLIS	**Bitlis-Merkez**	**0.86**	**231**	*e*P	Pb	04 52 54.4	-7.4
BLIS				IAML		04 53 18.6	
	comp=Z,9.0nm,0.5s						
EATA	**Eleskirt**	**0.97**	**338**	*e*P	**Pb**	**04 53 02.4**	**-1.5**
EATA				*e*S	**Sn**	**04 53 17.7**	**+0.3**
EATA				IAML		04 53 19.1	
	comp=Z,6.9nm,0.3s						
EATA	**Eleskirt**	**0.97**	**338**	*i* P	**Pb**	**04 53 03.6**	**-0.3**
EATA				*i* S	**Sn**	**04 53 17.6**	**+0.2**
EATA				IAML		04 53 18.0	
	comp=N,38nm,0.8s						
EATA				IAML		04 53 18.0	
	comp=E,33nm,0.5s						
MUSM	**Mu-Merkez**	**1.16**	**259**	*i* P	**Pb**	**04 53 07.1**	**+0.2**
IGDI	**IGDIR**	**1.25**	**43**	*e*P	**Pb**	**04 53 11.5**	**+2.9**
IGDI				IAML		04 53 28.3	
	comp=Z,1.4nm,0.3s						
BNGL	**BINGOL**	**1.41**	**270**	*e*P	**Pn**	**04 53 07.5**	**-2.6**
BNGL	**BINGOL**	**1.41**	**270**	*i* P	**Pb**	**04 53 13.4**	**+2.1**

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*TIR **11** 05:10:22.9, 41°.20N×19°.69E, h25^{km}, Md2.7/4*
*BEO **11** 05:10:25.0±0.7, 41°.35N×19°.58E, h9^{km}±3^{km}, ML2.3/13*
ISC 11 05:10:23.6±1.1**, 41°.29N**±0°.04×**19°.52E**±0°.02**, h11**^{km}±8^{km}**,**
n49, σ1^{s}.04/70**, 11C-5D, Albania**
PDG 11 05:10:23.5±0.2**, 41°.29N×19°.64E, h20**^{km}**, ML2.6**/11**, Error**
ellipse: s-maj=0.5km s-min=0.5km az=0.0, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.27**	**77**	*e*Pg	**Pg**	**05 10 28.9**	**-0.2**
TIR				*e*Sg	**Sg**	**05 10 33.0**	**+0.2**
TIR	**Tirane**	**0.27**	**77**	*i* PG	**Pg**	**05 10 29.0**	**-0.1**
TIR				*i* SG	**Sg**	**05 10 32.9**	**+0.1**
TIR	**Tirane**	**0.27**	**77**	⇓P	**Pg**	**05 10 29.1**	**-0.1**
TIR				⇑S	**Sg**	**05 10 32.9**	**+0.2**
PHP	**Peshkopia**	**0.80**	**60**	*i* PG	**Pg**	**05 10 37.2**	**-1.9**
PHP				*i* SG	**Sg**	**05 10 48.8**	**-0.7**
PUK	**Puka**	**0.81**	**20**	*i* PG	**Pg**	**05 10 38.0**	**-1.2**
PUK				*i* SG	**Sb**	**05 10 52.1**	**+1.4**
OHR	**Ohrid**	**0.98**	**100**	*i* Pg	**Pb**	**05 10 41.8**	**-1.0**
OHR				*i* Sg	**Sn**	**05 10 57.4**	**0.0**
BCI	**Bajram Curri**	**1.15**	**21**	*i* PG	**Pn**	**05 10 44.6**	**-1.1**
BCI				*i* SG	**Sn**	**05 11 02.1**	**+0.5**
PDG	**Podgorica**	**1.16**	**350**	*e*Pg	**Pb**	**05 10 45.9**	**+0.2**
PDG				*e*Sg	**Sb**	**05 11 00.2**	**-0.5**
PDG	**Podgorica**	**1.16**	**350**	⇑P	**Pg**	**05 10 46.4**	**+0.5**
PDG				⇑S	**Sg**	**05 11 02.7**	**+1.8**
PDG	**Podgorica**	**1.16**	**350**	*e*Pn	**Pn**	**05 10 44.9**	**-0.9**
HCY	**Herceg Novi**	**1.39**	**327**	*e*Pn	**Pb**	**05 10 49.5**	**-0.1**
SKO	**Skopje**	**1.59**	**64**	*e*Pn	**Pn**	**05 10 52.0**	**+0.2**
SKO	**Skopje**	**1.59**	**64**	*i* Pg	**Pn**	**05 10 52.3**	**+0.5**
SKO				*i* Sg	**Sn**	**05 11 12.9**	**+0.4**
TREB	**Trebinje**	**1.67**	**329**	*e*Pn	**Pb**	**05 10 54.7**	**+0.3**
TREB	**Trebinje**	**1.67**	**329**	*e*Pn	**Pb**	**05 10 54.9**	**+0.5**
DBRK	**Dubrovnik**	**1.72**	**324**	*e*Pn	**Pg**	**05 10 56.8**	**+0.2**
DBRK				Sn	**Sg**	**05 11 18.7**	**-0.1**
SJES	**Sjenica**	**2.00**	**10**	*e*Pn	**Pn**	**05 10 57.9**	**+0.4**
SJES				*e*Sg	**Sb**	**05 11 26.7**	**+1.6**
STIP	**Stip**	**2.05**	**78**	*e*Pn	**Pb**	**05 11 01.1**	**+0.3**
STIP				*e*Sn	**Sg**	**05 11 29.0**	**-0.3**
STON	**Ston**	**2.08**	**320**	*e*Pn	**Pn**	**05 10 58.5**	**0.0**
STON	**Ston**	**2.08**	**320**	*e*Pn	**Pb**	**05 11 00.0**	**-1.4**
STON				Sn	**Sn**	**05 11 24.0**	**-0.4**
STON	**Ston**	**2.08**	**320**	*e*Pn	**Pn**	**05 10 58.7**	**+0.2**
MATE	**Matera**	**2.22**	**254**	⇑P	**Pg**	**05 11 06.6**	**+0.4**
MATE				⇑S	**Sg**	**05 11 36.0**	**+0.9**
SELS	**Selova**	**2.27**	**31**	*e*Pn	**Pn**	**05 11 01.1**	**0.0**
BARS	**Barje**	**2.29**	**47**	*e*Pn	**Pn**	**05 11 02.0**	**+0.6**
VAY	**Valandovo**	**2.30**	**88**	*e*Pn	**Pn**	**05 11 02.4**	**+0.9**
VAY				*e*Sn	**Sn**	**05 11 29.1**	**-0.6**
RUDO	**Rudo**	**2.33**	**357**	*e*Pn	**Pn**	**05 11 03.5**	**+1.5**
IVAS	**Ivanjica**	**2.33**	**11**	*e*Pn	**Pn**	**05 11 02.0**	**-0.1**
BOSS	**Bosilegrad**	**2.52**	**60**	*e*Pn	**Pn**	**05 11 04.7**	**+0.2**
BBLS	**Lazići**	**2.58**	**358**	*e*Pn	**Pn**	**05 11 07.6**	**+2.2**
BBLS	**Lazići**	**2.58**	**358**	*e*Pn	**Pb**	**05 11 08.5**	**-1.4**
MAKA	**Makarska**	**2.73**	**318**	Sn	**Sn**	**05 11 38.6**	**-1.6**
GRUS	**Gruza**	**2.75**	**18**	*e*Pn	**Pn**	**05 11 08.3**	**+0.7**
RICI	**Ricice**	**2.83**	**322**	*i* Pn	**Pn**	**05 11 08.2**	**-0.6**
RICI				Sn	**Sn**	**05 11 42.7**	**-0.1**
HAPS	**Han Pijesak,Bl**	**2.83**	**352**	*e*Pn	**Pn**	**05 11 10.3**	**+1.4**
DIVS	**Divibare**	**2.83**	**7**	*e*Pn	**Pn**	**05 11 09.6**	**+0.7**
DIVS	**Divibare**	**2.83**	**7**	*e*Pn	**Pn**	**05 11 09.0**	**+0.1**
BOVS	**Bovan**	**2.85**	**34**	*e*Pn	**Pn**	**05 11 10.0**	**+0.9**
HVAR	**Hvar**	**2.96**	**311**	Sn	**Sn**	**05 11 42.2**	**-3.9**
TRUS	**Trudelj**	**3.01**	**12**	*e*Pn	**Pn**	**05 11 11.4**	**+0.2**
ZAPS	**Zavoj**	**3.05**	**48**	*e*Pn	**Pn**	**05 11 13.2**	**+1.4**
VTS	**Vitosha**	**3.08**	**63**	⇑P	**Pn**	**05 11 13.6**	**+1.3**
VTS				⇓S	**Sn**	**05 11 48.7**	**-0.4**
ZAGS	**Zajecar**	**3.22**	**38**	*e*Pn	**Pn**	**05 11 14.8**	**+0.6**
BLKB	**Belogradchik**	**3.30**	**44**	⇑S	**Sn**	**05 11 53.0**	**-1.6**
ZIRJ	**Zirje**	**3.71**	**311**	Sn	**Sn**	**05 12 03.8**	**-0.8**
MORI	**Morici**	**3.81**	**314**	Sn	**Sn**	**05 12 05.9**	**-1.3**
MDVR	**Moldovita**	**3.84**	**24**	⇑P	**Pn**	**05 11 23.0**	**+0.2**
MDVR				⇓S	**Sn**	**05 12 06.2**	**-1.7**
HERR	**Herculane**	**4.17**	**30**	⇑P	**Pn**	**05 11 28.0**	**+0.8**
BZS	**Buzias**	**4.59**	**19**	⇓P	**Pn**	**05 11 33.2**	**+0.3**
BZS				⇓S	**Sn**	**05 12 27.9**	**+1.6**
GZR	**Gura Zlata**	**4.74**	**29**	⇑P	**Pn**	**05 11 36.0**	**+0.9**
GZR				⇑S	**Sn**	**05 12 31.2**	**+1.1**

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*IDC **11** 05:12:31.3±19.0, 4°.68S×129°.51E, h160^{km}±196^{km},*
mb2.9/1, mb1 3.3/4, mb1mx3.1/36, mbtmp3.7/4, ML3.8/3,
Error ellipse: s-maj=144.8km s-min=53.0km az=48.0
*DJA **11** 05:12:38.7±0.6, 5°S±4°×13°0E±°, h194^{km}±8^{km}, M4.4/7,*
mB5.6/1, mb5.4/1, MLv3.8/7, MLv4.6/1, Mw(mB)5.1/1
ISC 11 05:12:36.5±1.0**, 4°.68S**±0°.07×**129°.53E**±0°.05**, h200**^{km}**, n12,**
σ1^{s}.88/16**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**0.41**	**68**	P	**Pn**	**05 13 05.2**	**+1.9**
MSAI	**Masohi**	**1.45**	**336**	P	**Pn**	**05 13 11.2**	**+1.4**
MSAI				S	**Sn**	**05 13 36.2**	**+0.5**
NLAI	**Namlea**	**2.81**	**300**	P	**Pn**	**05 13 26.2**	**+2.2**
NLAI				S	**Sn**	**05 14 02.9**	**+1.9**
FAKI	**Fak Fak**	**3.23**	**57**	P	**Pn**	**05 13 30.8**	**+1.9**
FAKI				S	**Sn**	**05 14 11.0**	**+1.1**
SAUI	**Saumlaki**	**3.73**	**152**	P	**Pn**	**05 13 37.6**	**+2.6**
SWI	**Sorong**	**4.17**	**25**	P	**Pn**	**05 13 41.2**	**+0.8**
SWI				S	**Sn**	**05 14 30.9**	**+0.2**
SANI	**Sanana**	**4.39**	**306**	P	**Pn**	**05 13 43.8**	**+0.6**
RKPI	**Ransiki, Papua**	**5.61**	**56**	P	**Pn**	**05 14 00.2**	**+1.4**
RKPI				S	**Sn**	**05 15 04.0**	**+0.2**
FITZ	**Fitzroy Crossi**	**13.87**	**196**	P	Pn	05 15 41.6	-3.3
	0.5nm,0.3s,baz=24,slow=7.3,SNR=16						
FITZ				S	S	05 18 07.3	-12
	0.1nm,0.3s,baz=245,slow=19,SNR=3.5						
WRA	**Warramunga Arr**	**15.88**	**163**	P	**P**	**05 16 06.0**	**-3.2**
	0.2nm,0.3s,baz=344,slow=12,SNR=6.0						
WRA				S	S	05 18 55.1	-11
	1.7nm,0.3s,baz=315,slow=30,SNR=12						
ASAR	**Alice Springs**	**19.35**	**168**	P	**P**	**05 16 44.6**	**-2.4**
	0.5nm,0.3s,baz=350,slow=12,SNR=33						
ASAR				S	S	05 20 02.8	-12
	baz=271,slow=25,SNR=2.5						
MKAR	**Makanchi Array**	**66.04**	**326**	P	**P**	**05 23 00.8**	**-1.0**
	0.2nm,0.4s,baz=116,slow=7.4,SNR=6.2						

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*NEIC **11** 05:14:23.4±2.9, 11°.45N±0°.06×87°.18W±0°.06, h35^{km}±2^{km},*
mb4.3/31, Error ellipse: s-maj=12.1km s-min=8.5km
az=227.0
*INET **11** 05:14:23.3, 11°.53N×87°.20W, h2^{km}, ML4.2*
*UCR **11** 05:14:24.4±1.9, 11°.56N×87°.26W, h35^{km}±26^{km}, ML3.8,*
mb4.3(NEIC)
*SNET **11** 05:14:26.1±1.2, 11°.67N×87°.35W, h27^{km}±363^{km}, ML3.8*
*IDC **11** 05:14:26.1±2.1, 11°.53N×87°.11W, h69^{km}±27^{km}, mb3.6/9,*
mb1 3.7/12, mb1mx3.5/45, mbtmp3.8/12, Error ellipse:
s-maj=45.8km s-min=16.9km az=32.0
ISC 11 05:14:25.0±1.1**, 11°.52N**±0°.06×**87°.26W**±0°.06**, h57**^{km}±11^{km}**,**
n81, σ1^{s}.11/83**, mb4.1**/23**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**1.48**	**349**	Pn	**Pn**	**05 14 49.9**	**+0.4**
CSGN				Sn	**Sn**	**05 15 10.0**	**+2.2**
ESTN	**Estel**	**1.80**	**29**	Pn	**Pn**	**05 14 53.8**	**0.0**
ESTN				Sn	**Sn**	**05 15 16.0**	**+0.3**
CNCH	**Conchagua**	**1.84**	**342**	*e*P	**Pn**	**05 14 53.9**	**-0.4**
CNCH				*e*S	**Sn**	**05 15 14.6**	**-2.0**
CNCH				IAML		05 15 22.6	
	comp=Z,2μm,0.6s						
CNCH	**Conchagua**	**1.84**	**342**	*e*P	**Pn**	**05 14 53.9**	**-0.4**
CNCH				*e*S	**Sn**	**05 15 14.6**	**-2.0**
CNCH				IAML		05 15 22.6	
	comp=Z,2μm,0.6s						
LCND	**La Caada**	**1.89**	**341**	*e*P	**Pn**	**05 14 54.2**	**-0.7**
LCND				*e*S	**Sn**	**05 15 16.8**	**-0.8**
LCND				IAML		05 15 29.2	
	comp=Z,668nm,0.4s						
LCND	**La Caada**	**1.89**	**341**	*e*P	**Pn**	**05 14 54.2**	**-0.7**
LCND				*e*S	**Sn**	**05 15 16.8**	**-0.8**
LCND				IAML		05 15 29.2	
	comp=Z,668nm,0.4s						
NY14	**Universidad de**	**1.90**	**117**	*e*P	**Pn**	**05 14 54.3**	**-0.8**
GBS3	**Finca Las Img**	**1.92**	**112**	*e*P	**Pn**	**05 14 54.5**	**-0.8**
LAPC	**Finca la Perla**	**1.94**	**112**	*e*P	**Pn**	**05 14 54.5**	**-1.2**
BUEV	**Buena Vista**	**1.96**	**111**	*e*P	**Pn**	**05 14 55.0**	**-0.9**
JUCU	**Jucuar¡n**	**1.98**	**331**	*e*P	**Pn**	**05 14 54.8**	**-1.4**
JUCU				*e*S	**Sn**	**05 15 19.0**	**-0.9**
JUCU	**Jucuar¡n**	**1.98**	**331**	*e*P	**Pn**	**05 14 54.8**	**-1.4**
JUCU				*e*S	**Sn**	**05 15 19.0**	**-0.9**
BUAI	**Buenos Aires**	**2.00**	**108**	*e*P	**Pn**	**05 14 57.0**	**+0.5**
GPS3	**Bodega del ICE**	**2.01**	**112**	*e*P	**Pn**	**05 14 58.9**	**+2.3**
GPS2	**Hotel Rincn d**	**2.02**	**112**	*e*P	**Pn**	**05 14 56.8**	**0.0**
ACON	**Acoyapa**	**2.10**	**77**		**Pn**	**05 14 56.0**	**-1.8**
GUAI	**GUAI**	**2.12**	**126**	*e*P	**Pn**	**05 14 56.2**	**-1.8**
GUAB	**Guayabo de Bag**	**2.15**	**112**	*e*P	**Pn**	**05 15 01.2**	**+2.6**
RANC	**El Ranchito**	**2.15**	**332**	*e*P	**Pn**	**05 14 58.1**	**-0.5**
RANC	**El Ranchito**	**2.15**	**332**	*e*P	**Pn**	**05 14 58.1**	**-0.5**
MESS	**Mesas**	**2.17**	**111**	*e*P	**Pn**	**05 14 58.4**	**-0.4**
COLC	**Colonia**	**2.19**	**112**	*e*P	**Pn**	**05 14 59.1**	**0.0**
PACA	**Pacayal**	**2.20**	**332**	*e*P	**Pn**	**05 14 59.3**	**0.0**
PACA	**Pacayal**	**2.20**	**332**	*e*P	**Pn**	**05 14 59.3**	**0.0**
CUI	**Cuipilapa**	**2.23**	**112**	*e*P	**Pn**	**05 14 59.7**	**+0.1**
FAGO	**Alcalda de S**	**2.32**	**339**	*e*P	**Pn**	**05 14 59.9**	**-0.9**
FAGO				*e*S	**Sn**	**05 15 26.7**	**-1.4**
FAGO	**Alcalda de S**	**2.32**	**339**	*e*P	**Pn**	**05 14 59.9**	**-0.9**
FAGO				*e*S	**Sn**	**05 15 26.7**	**-1.4**
COEB	**Comit de Eme**	**2.33**	**328**	*e*P	**Pn**	**05 15 00.8**	**-0.2**
COEB	**Comit de Eme**	**2.33**	**328**	*e*P	**Pn**	**05 15 00.8**	**-0.2**
ACAL	**Aguas Claras**	**2.36**	**112**	*e*P	**Pn**	**05 15 02.3**	**+0.9**
PTEN	**Parque Tenorio**	**2.37**	**109**	*e*P	**Pn**	**05 15 00.8**	**-0.8**
TGUH	**Tegucigalpa,Un**	**2.53**	**360**		**Pn**	**05 15 04.0**	**+0.2**
JTS	**Las Juntas de**	**2.58**	**118**	P	**Pn**	**05 15 03.5**	**-0.8**
	comp=Z,2.4nm,0.3s,baz=22,slow=17,SNR=13						
JTS				S	**Sn**	**05 15 33.8**	**-0.7**
	comp=Z,6.3nm,0.3s,baz=120,slow=22,SNR=7.0						
CEDE	**Laguna Cedeo**	**2.71**	**112**	*e*P	Pn	05 15 10.7	+4.4
LFRS	**El Faro**	**2.73**	**320**	*e*P	**Pn**	**05 15 06.6**	**+0.1**
LFRS				*e*S	**Sn**	**05 15 37.3**	**-1.2**
LBRS	**Las Brisas**	**2.81**	**322**	*e*P	**Pn**	**05 15 07.3**	**-0.3**
ESPN	**Las Esperanzas**	**2.98**	**77**	Pn	**Pn**	**05 15 09.6**	**-0.2**
APG	**El Apazote**	**4.66**	**318**	P	Pn	05 15 38.4	+5.3
	comp=Z,0.3nm,0.3s,baz=131,slow=9.3,SNR=2.8						
CMIG	**Matias Romero**	**9.23**	**308**	P	**Pn**	**05 16 36.8**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=147,slow=5.3,SNR=6.4						
TLIG	**Tlapa**	**12.48**	**300**		**Pn**	**05 17 21.8**	**+1.8**
SDV	**Santo Domingo**	**16.57**	**98**	P	**Pn**	**05 18 12.0**	**-1.9**
	comp=Z,0.0nm,0.3s,baz=299,slow=10,SNR=1.5						
152A	**Waverly Hall**	**21.18**	**6**	P	**P**	**05 19 05.3**	**-0.4**
152A				IAmb	IAmb	05 19 11.9	
	comp=Z,11nm,1.1s						
LRAL	**Lakeview Retre**	**21.42**	**1**	P	**P**	**05 19 09.2**	**+1.1**
GOGA	**Godfrey**	**22.07**	**8**	P	**P**	**05 19 16.3**	**+1.1**
Y49A	**Blount Mountai**	**22.25**	**2**	P	**P**	**05 19 18.0**	**+0.8**
Y49A				IAmb	IAmb	05 19 19.9	
	comp=Z,5.3nm,0.6s						
TXAR	**Lajitas Array**	**23.41**	**322**	P	**P**	**05 19 31.0**	**+1.8**
	comp=Z,0.9nm,0.6s,baz=133,slow=10,SNR=23						
TXAR	**Lajitas Array**	**23.41**	**322**	P	**P**	**05 19 31.0**	**+1.8**
TX32	**Lajitas Array**	**23.41**	**322**	P	**P**	**05 19 31.1**	**+1.9**
MIAR	**Mount Ida**	**23.64**	**347**	IAmb	IAmb	05 19 33.3	
	comp=Z,5.2nm,0.8s						
CPCT	**Cooper Cave**	**23.96**	**6**	P	**P**	**05 19 35.2**	**+1.2**
CPCT				IAmb	IAmb	05 19 36.1	
	comp=Z,4.3nm,0.7s						
TKL	**Tuckaleechee C**	**24.24**	**7**	P	**P**	**05 19 37.7**	**+1.1**
	comp=Z,2.5nm,0.5s,baz=184,slow=9.7,SNR=8.6						
CLTN	**Cedars of Leba**	**24.48**	**2**	P	**P**	**05 19 39.5**	**+0.7**
CLTN				IAmb	IAmb	05 19 41.6	
	comp=Z,4.5nm,0.6s						
LCAR	**Lake Charles**	**24.70**	**352**	P	**P**	**05 19 40.9**	**+0.2**
X34A	**Smith Ranch, M**	**24.92**	**339**	P	**P**	**05 19 43.6**	**+0.9**
U40A	**Yellville**	**25.24**	**349**	IAmb	IAmb	05 19 47.0	
	comp=Z,4.0nm,0.7s						
PBMO	**Poplar Bluff**	**25.32**	**354**	P	**P**	**05 19 47.5**	**+1.2**
PBMO				IAmb	IAmb	05 19 54.6	
	comp=Z,11nm,1.3s						
FNO	**Franklin**	**25.37**	**340**	P	**P**	**05 19 48.1**	**+1.3**
WMOK	**Wichita Mounta**	**25.39**	**337**	P	**P**	**05 19 48.5**	**+1.4**
WMOK				IAmb	IAmb	05 19 57.4	
	comp=Z,9.8nm,1.3s						
TUL1	**Leonard**	**25.49**	**344**	P	**P**	**05 19 48.9**	**+1.1**
MSTX	**Muleshoe**	**26.46**	**330**	P	**P**	**05 19 58.3**	**+1.4**
MSTX				IAmb	IAmb	05 20 07.5	
	comp=Z,6.6nm,1.0s						
S39A	**Bolivar**	**26.63**	**349**	P	**P**	**05 19 57.7**	**-0.5**
S39A				IAmb	IAmb	05 19 59.1	
	comp=Z,5.2nm,0.7s						
Q51A	**Peebles**	**27.62**	**7**	P	**P**	**05 20 07.3**	**+0.2**
X16A	**Lo Mia Camp, P**	**31.70**	**320**	P	**P**	**05 20 43.5**	**0.0**
ECSD	**EROS Data Cent**	**33.11**	**348**	P	**P**	**05 20 55.1**	**-0.4**
H48A	**Harrisville**	**33.24**	**5**	P	**P**	**05 20 56.4**	**-0.2**
SADO	**Sadowa**	**33.86**	**10**	P	**P**	**05 21 01.6**	**-0.5**
	comp=Z,1.9nm,0.5s,baz=254,slow=7.6,SNR=5.7						
SADO	**Sadowa**	**33.86**	**10**	IAmb	IAmb	05 21 18.1	
	comp=Z,4.0nm,0.9s						
SPMN	**Marine on St.**	**33.93**	**353**	IAmb	IAmb	05 21 03.5	
	comp=Z,4.5nm,0.7s						
COWI	**Conover**	**34.51**	**358**	IAmb	IAmb	05 21 07.5	
	comp=Z,3.1nm,0.7s						
E43A	**Lone Tree Farm**	**34.74**	**0**	IAmb	IAmb	05 21 09.8	
	comp=Z,4.7nm,0.8s						
PDAR	**Pinedale Array**	**36.68**	**332**	P	**P**	**05 21 27.8**	**+1.2**
	comp=Z,0.6nm,0.5s,baz=133,slow=11,SNR=7.7						
REDW	**Red Top Meadow**	**37.74**	**332**	IAmb	IAmb	05 21 38.8	
	comp=Z,3.8nm,0.6s						
ULM	**Lac du Bonnet**	**39.27**	**351**	P	**P**	**05 21 46.6**	**-1.4**
	comp=Z,2.8nm,0.8s,baz=177,slow=8.2,SNR=8.5						
ULM	**Lac du Bonnet**	**39.27**	**351**	P	**P**	**05 21 47.4**	**-0.5**
ULM				IAmb	IAmb	05 21 55.1	
	comp=Z,5.3nm,1.0s						
SCHQ	**Schefferville**	**46.12**	**16**	P	**P**	**05 22 43.2**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=236,slow=8.5,SNR=2.5						
SCHQ	**Schefferville**	**46.12**	**16**	IAmb	IAmb	05 22 48.1	
	comp=Z,11nm,1.5s						
FRB	**Frobisher Bay**	**53.81**	**10**	P	**P**	**05 23 40.1**	**-1.4**
	comp=Z,0.7nm,0.6s,baz=207,slow=7.0,SNR=5.4						
YKA	**Yellowknife Ar**	**54.56**	**345**	P	**P**	**05 23 47.3**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=148,slow=5.5,SNR=6.9						
ILAR	**Eielson Array**	**66.94**	**336**	P	**P**	**05 25 11.6**	**+0.4**
	comp=Z,0.5nm,1.0s,baz=144,slow=5.3,SNR=4.1						
LZH	**Lanzhou**	**131.51**	**348**	*e*PKP	**PKPdf**	**05 33 30.9**	**-1.0**
LZH				pPKP	pPKPdf	05 33 49.2	+0.5
LZH				sPKP		05 33 56.7	
CMAR	**Chiang Mai Arr**	**149.59**	**348**	PKPbc	**PKPbc**	**05 34 08.0**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=338,slow=1.9,SNR=5.5						

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*MOS **11** 05:24:17.9±1.0, 43°.75N×145°.17E, h162^{km}, mb4.2/7, Error*
ellipse: s-maj=13.2km s-min=8.7km az=84.5
*SKHL **11** 05:24:19.2±0.3, 43°.78N×147°.19E, h143^{km}±12^{km}, mb4.5/5,*
msh5.3/4
*IDC **11** 05:24:19.2±1.5, 43°.84N×145°.10E, h158^{km}±11^{km},*
mb3.7/11, mb1 3.8/12, mb1mx3.5/52, mbtmp4.1/12, MS3.1/1,
Ms1 3.1/1, ms1mx2.7/52, Error ellipse: s-maj=22.5km
s-min=15.6km az=159.0
*JMA **11** 05:24:19.1±0.1, 43°.72N×145°.15E, h154^{km}±1^{km}, M3.7*
JMA Felt I J1.
ISC 11 05:24:18.7±0.6**, 43°.70N**±0°.05×**145°.17E**±0°.03**, h156**^{km}±4^{km}**,**
n74, σ0^{s}.92/97**, mb3.9**/17**, 10C-17D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNSB	**Nemuroshibetsu**	**0.14**	**305**	⇓P	**Pn**	**05 24 39.9**	**+0.4**
JNSB				*e*S	**Sn**	**05 24 55.9**	**+0.4**
JRA	**Rausu**	**0.24**	**353**	P	**Pn**	**05 24 39.9**	**+0.2**
JRA				*e*S	**Sn**	**05 24 55.3**	**-0.6**
GLVR	**Golovnino**	**0.26**	**80**	*i* P	**Pn**	**05 24 40.4**	**+0.6**
GLVR				AMB	AMB	05 24 40.7	
	160nm,0.2s						
GLVR				*i* S	**Sn**	**05 24 56.6**	**+0.7**
GLVR				A	A	05 24 57.0	
	610nm,0.3s						
GLVR				A	A	05 24 57.0	
	920nm,0.3s						
GLVR	**Golovnino**	**0.26**	**80*c***	*i*PN	**Pn**	**05 24 40.4**	**+0.6**
GLVR				*i* S	**Sn**	**05 24 56.6**	**+0.7**
GLVR				pmax	pmax		
	comp=Z,2μm,0.1s						
GLVR				pmax	pmax		
	comp=N,36nm,0.0s						
GLVR				pmax	pmax		
	comp=E,250nm,0.1s						
GLVR				smax	smax		
	comp=N,6127μm,0.5s						
GLVR				smax	smax		
	comp=E,9208μm,0.3s						
JNK	**Nakash**	**0.34**	**251**	⇓P	**Pn**	**05 24 40.3**	**+0.2**
JNK				*e*S	**Sn**	**05 24 56.1**	**-0.2**
NMR	**Nemuro--Hokkai**	**0.52**	**128**	*i* P	**Pn**	**05 24 40.8**	**0.0**
NMR				*i* S	**Sn**	**05 24 56.8**	**-0.8**
NMR	**Nemuro--Hokkai**	**0.52**	**128**	⇑*i*PN	**Pn**	**05 24 40.8**	**0.0**
NMR				*i* S	**Sn**	**05 24 56.8**	**-0.8**
GRPR	**Tuman**	**0.53**	**56**	*i* P	**Pn**	**05 24 41.2**	**+0.4**
GRPR				AMB	AMB	05 24 41.7	
	comp=E,190nm,0.2s						
GRPR				*i* S	**Sn**	**05 24 57.8**	**0.0**
GRPR				A	A	05 25 00.0	
	comp=E,2μm,0.4s						
GRPR				A	A	05 25 00.0	
	comp=E,990nm,0.4s						
GRPR	**Tuman**	**0.53**	**56**	⇓*i*PN	**Pn**	**05 24 41.2**	**+0.4**
GRPR				*i* S	**Sn**	**05 24 57.8**	**0.0**
GRPR				pmax	pmax		
	comp=Z,193nm,0.3s						
GRPR				pmax	pmax		
	comp=N,46nm,0.2s						
GRPR				pmax	pmax		
	comp=E,43nm,0.2s						
GRPR				smax	smax		
	comp=N,2μm,0.4s						
GRPR				smax	smax		
	comp=E,992nm,0.4s						
NEM2	**Nemuro 2**	**0.53**	**128**	P	**Pn**	**05 24 40.8**	**0.0**
NEM2				*e*S	**Sn**	**05 24 56.7**	**-1.0**
YUK	**Yuzh-Kuril'sk**	**0.61**	**56**	*i* P	**Pn**	**05 24 41.7**	**+0.6**
YUK				AMB	AMB	05 24 43.0	
	comp=E,270nm,0.3s						
YUK				*i* S	**Sn**	**05 24 58.7**	**+0.2**
YUK				A	A	05 24 59.9	
	comp=E,700nm,0.5s						
YUK				A	A	05 24 59.9	
	comp=E,1μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**0.61**	**56*d***	*i*PN	**Pn**	**05 24 41.8**	**+0.6**
YUK				*i* S	**Sn**	**05 24 58.7**	**+0.2**
YUK				pmax	pmax		
	comp=N,79μm,0.1s						
YUK				pmax	pmax		
	comp=E,112μm,0.1s						
YUK				pmax	pmax		
	comp=Z,273μm,0.1s						
YUK				smax	smax		
	comp=N,702μm,0.4s						
YUK				smax	smax		
	comp=E,1392μm,0.8s						
JKHN	**Kushirohamanak**	**0.61**	**180**	⇑P	**Pn**	**05 24 41.7**	**+0.4**
JKHN				*e*S	**Sn**	**05 24 58.5**	**0.0**
JAK	**Akkeshi**	**0.78**	**206**	⇑P	**Pn**	**05 24 42.7**	**+0.4**
JAK				*e*S	**Sn**	**05 25 00.2**	**-0.2**
JTKR	**Abashiri--Toko**	**0.95**	**287**	⇓P	**Pn**	**05 24 43.7**	**+0.2**
JTKR				*e*S	**Sn**	**05 25 02.1**	**-0.5**
JAR	**Ashorobuto**	**1.09**	**249**	⇓P	**Pn**	**05 24 45.4**	**+0.6**
JAR				*e*S	**Sn**	**05 25 05.3**	**+0.6**
SHO	**Shikotan**	**1.22**	**81**	*i* P	**Pn**	**05 24 45.7**	**-0.2**
SHO				AMB	AMB	05 24 46.0	
	comp=E,40nm,0.2s						
SHO				*i* S	**Sn**	**05 25 05.5**	**-1.3**
SHO				A	A	05 25 06.0	
	comp=E,290nm,0.5s						
SHO				A	A	05 25 06.0	
	comp=E,280nm,0.5s						
SHO	**Shikotan**	**1.22**	**81*c***	*i*PN	**Pn**	**05 24 45.6**	**-0.3**
SHO				*i* S	**Sn**	**05 25 05.4**	**-1.3**
SHO				pmax	pmax		
	comp=E,169nm,0.1s						
SHO				pmax	pmax		
	comp=Z,417μm,0.1s						
SHO				pmax	pmax		
	comp=N,163μm,0.2s						
SHO				smax	smax		
	comp=N,3μm,0.5s						
SHO				smax	smax		
	comp=E,3μm,0.4s						
JOB	**Onbets**	**1.25**	**231**	⇓P	**Pn**	**05 24 46.9**	**+0.7**
JOB				*e*S	**Sn**	**05 25 07.4**	**+0.1**
JMP	**Maruseppu**	**1.34**	**284**	⇓P	**Pn**	**05 24 47.1**	**0.0**
JMP				*e*S	**Sn**	**05 25 08.0**	**-0.9**
JCH	**Churui**	**1.71**	**231**	⇓P	**Pn**	**05 24 51.1**	**+0.3**
JCH				*e*S	**Sn**	**05 25 14.4**	**-1.1**
JKK2	**Kamakawa 2**	**1.76**	**277**	P	**Pn**	**05 24 51.6**	**+0.2**
JKA	**Kamikawa-asahi**	**1.90**	**284**	*e*P	**Pn**	**05 24 53.5**	**+0.5**
ASAJ	**Asahikawa**	**1.90**	**284**	⇓P	**Pn**	**05 24 53.4**	**+0.4**
ASAJ				*e*S	**Sn**	**05 25 19.8**	**+0.3**
ASAJ	**Asahikawa**	**1.90**	**284**	P	**Pn**	**05 24 53.5**	**+0.4**
	comp=E,69nm,0.3s,baz=104,slow=9.0,SNR=189						
ASAJ				S	**Sn**	**05 25 18.9**	**-0.5**
	comp=E,6.2nm,0.3s,baz=319,slow=26,SNR=8.4						
JFR	**Furan**	**1.95**	**255**	*e*S	**Sn**	**05 25 20.4**	**0.0**
JAB	**Ashibetsu**	**2.15**	**266**	⇓P	**Pn**	**05 24 56.9**	**+1.1**
JAB				*e*S	**Sn**	**05 25 26.1**	**+1.7**
ERM	**Erimo**	**2.24**	**222*c***	*i*PN	**Pn**	**05 24 58.2**	**+1.3**
JSE	**Soyaes**	**2.24**	**305**	⇓P	**Pn**	**05 24 56.3**	**-0.6**
JNBK	**Urakawa-nobuka**	**2.27**	**232**	P	**Pn**	**05 24 56.9**	**-0.3**
KUR	**Kuril'sk**	**2.47**	**51**	*e*P	**Pn**	**05 25 00.0**	**+0.4**
KUR				AMB	AMB	05 25 00.0	
	comp=E,40nm,0.4s						
KUR				*e*S	**Sn**	**05 25 33.0**	**+1.7**
KUR				A	A	05 25 34.0	
	comp=E,120nm,0.2s						
KUR				A	A	05 25 34.0	
	comp=E,100nm,0.2s						
KUR	**Kuril'sk**	**2.47**	**51**	PN	**Pn**	**05 25 00.1**	**+0.4**
KUR				*e*S	**Sn**	**05 25 34.1**	**+2.8**
KUR				pmax	pmax		
	comp=Z,41nm,0.4s						
KUR				smax	smax		
	comp=N,117nm,0.2s						
KUR				smax	smax		

	comp=E,99nm,0.2s						
YSS	**Yuzh-Sakhalins**	**3.67**	**333**	*e*P	**Pn**	**05 25 15.9**	**+1.2**
YSS				AMB	AMB	05 25 16.7	
YSS				*e*S	**Sn**	**05 25 57.9**	**-0.5**
YSS				A	A	05 25 58.5	
	comp=E,40nm,1.0s						
YSS				A	A	05 25 58.5	
	comp=E,30nm,1.0s						
YSS	**Yuzh-Sakhalins**	**3.67**	**333**	*e*PN	**Pn**	**05 25 15.9**	**+1.2**
YSS				*e*S	**Sn**	**05 25 57.9**	**-0.5**
YSS				pmax	pmax		
	comp=Z,20nm,0.2s						
YSS				smax	smax		
	comp=N,40nm,1.0s						
YSS				smax	smax		
	comp=E,30nm,1.3s						
MAJO	**Matsushiro**	**8.91**	**219⇑**	*e*PN	**Pn**	**05 26 25.0**	**+0.9**
PEA0B	**Petropavlovsk-**	**12.55**	**37⇓**	*e*PN	**Pn**	**05 27 11.2**	**-0.5**
MA2	**Magadan**	**16.27**	**10**	*e*P	**P**	**05 27 58.4**	**+0.3**
MA2	**Magadan**	**16.27**	**10⇓**	*e*P	**P**	**05 27 58.4**	**+0.3**
JCJ	**Chichijima**	**16.74**	**189**	LR	LR	05 35 00.2	
	comp=E,66nm,19.4s,baz=292,slow=38						
SEY	**Seymchan**	**19.72**	**10**	P	**P**	**05 28 33.4**	**-2.3**
	comp=E,0.5nm,0.3s,baz=207,slow=9.2,SNR=5.3						
SEY	**Seymchan**	**19.72**	**10⇓**	*e*P	**P**	**05 28 34.7**	**-1.1**
YAK	**Yakutsk**	**20.50**	**339**	*e*P	**P**	**05 28 45.9**	**+1.8**
YAK	**Yakutsk**	**20.50**	**339**	P	**P**	**05 28 45.9**	**+1.8**
SONM	**Songino Array**	**27.16**	**292**	P	**P**	**05 29 47.6**	**+0.2**
	comp=E,6.9nm,0.8s,baz=84,slow=8.1,SNR=48						
H11N2	**WAKE ISLAND Hy**	**30.03**	**136**	T	T	06 01 37.1	
	baz=328,slow=75						
H11N1	**WAKE ISLAND Hy**	**30.05**	**136**	T	T	06 01 35.8	
	baz=328,slow=75						
H11N3	**WAKE ISLAND Hy**	**30.05**	**136**	T	T	06 01 38.9	
	baz=328,slow=75						
H11S1	**WAKE ISLAND Hy**	**30.97**	**137**	T	T	06 02 42.9	
	baz=330,slow=76						
H11S3	**WAKE ISLAND Hy**	**30.97**	**137**	T	T	06 02 45.5	
	baz=330,slow=76						
H11S2	**WAKE ISLAND Hy**	**30.99**	**137**	T	T	06 02 46.0	
	baz=330,slow=76						
ZALV	**Zalesovo Beam**	**39.88**	**307**	P	**P**	**05 31 36.1**	**-0.7**
	comp=E,0.9nm,0.5s,baz=82,slow=9.8,SNR=3.1						
KDAK	**Kodiak Island**	**40.34**	**47**	P	**P**	**05 31 40.3**	**-0.2**
	comp=E,15nm,1.1s,baz=254,slow=7.4,SNR=4.9						
ILAR	**Eielson Array**	**42.38**	**36**	P	**P**	**05 31 57.0**	**-0.1**
	comp=E,2.9nm,1.0s,baz=252,slow=5.3,SNR=11						
ILAR	**Eielson Array**	**42.38**	**36**	P	**P**	**05 31 57.0**	**-0.1**
MKAR	**Makanchi Array**	**43.33**	**297**	P	**P**	**05 32 04.7**	**-0.3**
	comp=E,1.9nm,0.6s,baz=79,slow=8.8,SNR=24						
KURK	**Kurchatov**	**44.36**	**303**	*e*P	**P**	**05 32 12.3**	**-0.8**
KURK	**Kurchatov**	**44.36**	**303⇑**	*e*P	**P**	**05 32 12.3**	**-0.8**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.6s						
INK	**Inuvik**	**47.17**	**30**	P	**P**	**05 32 35.0**	**+0.2**
	comp=Z,1.7nm,0.4s,baz=280,slow=11,SNR=2.7						
INK	**Inuvik**	**47.17**	**30**	P	**P**	**05 32 35.0**	**+0.2**
BRVK	**Borovoye**	**48.47**	**309**	*e*P	**P**	**05 32 45.2**	**+0.2**
BRVK	**Borovoye**	**48.47**	**309⇑**	*e*P	**P**	**05 32 45.2**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
AAK	**Ala-Archa**	**50.08**	**295**	*e*P	**P**	**05 32 57.0**	**-0.6**
AAK	**Ala-Archa**	**50.08**	**295⇑**	*e*P	**P**	**05 32 57.0**	**-0.6**
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ARU	**Arti**	**53.40**	**316**	*d* *i*P	**P**	**05 33 20.5**	**-1.3**
ARU				S	**S**	**05 40 40.2**	**-1.2**
ARU				SS	**SKiKP**	**05 44 18.6**	**-1.9**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WRAB	**Tennant Creek**	**64.09**	**191⇓**	*e*P	**P**	**05 34 39.6**	**+3.7**
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.2s						
WRA	**Warramunga Arr**	**64.10**	**191**	P	**P**	**05 34 36.7**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=8.5,slow=6.7,SNR=6.0						
FINES	**FINESS Array B**	**64.26**	**332**	P	**P**	**05 34 35.6**	**-1.0**
	comp=Z,3.3nm,0.6s,baz=36,slow=7.4,SNR=6.2						
KIV	**Kislovodsk**	**68.72**	**311**	*e*P	**P**	**05 35 06.1**	**+0.8**
KIV	**Kislovodsk**	**68.72**	**311**	*e*P	**P**	**05 35 06.1**	**+0.8**
KIV				pmax	pmax		
	comp=Z,24nm,1.1s						
SHA1	**Shidzhatmaz**	**68.88**	**311**	*i* P	**P**	**05 35 07.6**	**+1.1**
NB2	**NORSAR Subarra**	**69.12**	**338**	P	**P**	**05 35 06.8**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=32,slow=6.9						
NOA	**NORSAR Array B**	**69.12**	**338**	P	**P**	**05 35 06.4**	**-1.1**
	comp=Z,0.8nm,0.9s,baz=36,slow=4.4,SNR=7.2						
AKASG	**Malin Array Be**	**70.76**	**323**	P	**P**	**05 35 16.7**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=37,slow=5.8,SNR=5.3						
PDAR	**Pinedale Array**	**71.03**	**49**	P	**P**	**05 35 19.8**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=146,slow=0.3,SNR=3.9						

BJI ***11*** *05:25:35.2±0.0, 74°.50N×72°.70W, h6km, mB5.2/32, mb5.0/47, Ms4.8/11, Ms7 4.6/12*

IDC ***11*** *05:25:37.9±0.4, 74°.46N×72°.64W, h0km, mb4.4/32, mb1 4.6/34, mb1mx4.5/46, mbtmp4.5/34, ML4.5/2, MS3.9/21, Ms1 3.9/21, ms1mx3.6/64, Error ellipse: s-maj=12.2km s-min=10.2km az=153.0*

OTT ***11*** *05:25:38.3±0.1, 74°.49N×72°.78W, h18km, ML4.9/7, Baffin Bay Seismic Zone. 259km northeast from Pond Inlet, Nu*

DNK ***11*** *05:25:39.3±5.8, 74°.46N×72°.54W, h31km±106km, ML4.4, Hypocentre not reviewed by the ISC*

NEIC ***11*** *05:25:39.8±2.0, 74°.49N±0°.06×72°.7W±0°.2, h10km±1km, mb4.7/73, Error ellipse: s-maj=11.1km s-min=8.9km az=132.0*

ISC 11 05:25:37.4±2.1**, 74°.43N**±0°.04×**72°.81W**±0°.04**, h0**km±12km**, n332, σ2s.15**/324**, mb4.6**/88**, MS4.0**/22**, 13C, Baffin Bay**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TULEG	**Thule**	**2.34**	**23**	PN	**Pn**	**05 26 15.3**	**-1.7**
TULEG				SN	**Sn**	**05 26 41.1**	**-5.4**
TULEG				Trac		05 26 42.7	
	comp=Z,3μm,0.3s						
TULEG	**Thule**	**2.34**	**23**		**Pn**	**05 26 15.4**	**-1.7**
TULEG				Sn	**Sn**	**05 26 40.7**	**-5.8**
TULEG	**Thule**	**2.34**	**23⇑**	*i*P		05 26 15.3	
TULEG				*i* S		05 26 40.8	
TULEG				IAML		05 26 43.0	
	comp=Z,3μm,0.4s						
CLRN	**Clyde River**	**4.17**	**160**	PN	**Pn**	**05 26 41.3**	**-0.9**
CLRN				SN	**Sn**	**05 27 27.2**	**-4.4**
CLRN				Trac		05 27 40.5	
	comp=Z,291nm,0.3s						
KULLO	**Kullorsuaq**	**4.18**	**80**	*i* P	**Pn**	**05 26 41.0**	**-1.3**
KULLO	**Kullorsuaq**	**4.18**	**80**	PN	**Pn**	**05 26 40.8**	**-1.4**
KULLO				SN	**Sn**	**05 27 26.1**	**-5.7**
KULLO				Trac		05 27 28.1	
	comp=Z,3μm,0.6s						
KULLO	**Kullorsuaq**	**4.18**	**80**	*i* P		05 26 41.1	
KULLO				IAML		05 27 28.8	
	comp=Z,1μm,0.4s						
UPNV	**Upernavik**	**5.00**	**101**	*i* P		05 26 51.9	
UPNV				*i* S		05 27 44.6	
UPNV				IAML		05 27 48.6	
	comp=Z,460nm,0.3s						
ILON	**Igloolik, Nuna**	**5.80**	**213**	PN	**Pn**	**05 27 03.5**	**-1.0**
ILON				SN	**Sn**	**05 28 05.8**	**-5.8**
ILON				Trac		05 29 10.3	
	comp=Z,873nm,1.1s						
RES	**Resolute Bay**	**5.89**	**283**	Pn	**Pn**	**05 27 03.9**	**-1.8**
	comp=Z,11nm,0.3s,baz=66,slow=11,SNR=252						
RES				Sn	**Sn**	**05 28 05.5**	**-8.3**
	comp=Z,13nm,0.3s,baz=59,slow=15,SNR=6.9						
RES				Lg	Lg	05 28 30.1	
	comp=Z,10nm,0.3s,baz=1.9,slow=23,SNR=7.0						
RES				LR	LR	05 29 25.6	
	comp=Z,274nm,19.2s,baz=262,slow=38						
RES	**Resolute Bay**	**5.89**	**283**	PN	**Pn**	**05 27 04.0**	**-1.8**
RES				SN	**Sn**	**05 28 07.6**	**-6.2**
RES				Trac		05 29 20.2	
	comp=Z,771nm,1.2s						
RES	**Resolute Bay**	**5.89**	**283**		**Pn**	**05 27 03.6**	**-2.1**
RES				Sn	**Sn**	**05 28 05.9**	**-7.9**
EUNU	**Eureka**	**6.38**	**338**	PN	**Pn**	**05 27 10.6**	**-1.9**
EUNU				SN	**Sn**	**05 28 18.3**	**-7.6**
EUNU				Trac		05 28 30.6	
	comp=Z,114nm,0.6s						
NUUG	**Nuugaatsiaq**	**6.42**	**107**	*i* P		05 27 12.0	
NUUG				IAML		05 28 35.4	
	comp=Z,231nm,0.4s						
ILULI	**Ilulissat**	**8.52**	**117**	*i* P	**Pn**	**05 27 41.7**	**0.0**
ILULI				*e*S	**Sn**	**05 29 10.9**	**-7.4**
ILULI	**Ilulissat**	**8.52**	**117**	PN	**Pn**	**05 27 41.7**	**0.0**
ILULI				SN	**Sn**	**05 29 10.1**	**-8.2**
ILULI				Trac		05 29 33.4	
	comp=Z,67nm,0.5s						
ILULI	**Ilulissat**	**8.52**	**117**		**Pn**	**05 27 42.1**	**+0.4**
ILULI	**Ilulissat**	**8.52**	**117**	*i* P		05 27 41.7	
ILULI				*e*S		05 29 11.0	
ILULI				IAML		05 29 28.2	
	comp=Z,21nm,0.4s						
SUMG	**Summit**	**9.84**	**84**	*i* P	**Pn**	**05 27 55.9**	**-4.4**
SUMG				*e*S	Sn	05 29 38.9	-13
SUMG	**Summit**	**9.84**	**84**	Pn	**Pn**	**05 27 56.8**	**-3.5**
SUMG	**Summit**	**9.84**	**84**	*i* P		05 27 55.9	
SUMG				*e*S		05 29 38.9	
SUMG				IAML		05 29 44.4	
	comp=Z,382nm,0.4s						
SFJD	**Kangerlussuaq**	**10.38**	**125**	PN	**Pn**	**05 28 05.5**	**-1.6**
SFJD				SN	Sn	05 29 50.5	-13
SFJD				Trac		05 30 09.0	
	comp=Z,114nm,3.7s						
SFJD	**Kangerlussuaq**	**10.38**	**125**		**Pn**	**05 28 06.8**	**-0.4**
SFJD	**Kangerlussuaq**	**10.38**	**125**	*i* P		05 28 06.9	
FRB	**Frobisher Bay**	**10.84**	**170**	Pn	**Pn**	**05 28 10.3**	**-3.1**
	comp=Z,3.9nm,0.3s,baz=357,slow=13,SNR=32						
FRB				Sn	Sn	05 30 03.9	-11
	comp=Z,7.3nm,0.3s,baz=91,slow=22,SNR=3.8						
FRB				Lg	Lg	05 30 57.5	
	comp=Z,6.6nm,0.3s,baz=92,slow=14,SNR=3.3						
FRB				LR	LR	05 32 21.1	
	comp=Z,502nm,19.5s,baz=22,slow=37						
FRB	**Frobisher Bay**	**10.84**	**170**	PN	**Pn**	**05 28 11.8**	**-1.7**
FRB				SN	Sn	05 30 05.6	-10
FRB				Trac		05 31 11.9	
	comp=Z,99nm,0.7s						
KNGQ	**Kangiqsujuaq**	**12.91**	**178**	PN	**Pn**	**05 28 38.6**	**-3.1**
KNGQ				SN	Sn	05 30 52.7	-13
KNGQ				Trac		05 32 48.6	
	comp=Z,254nm,1.4s						
NOR	**Nord**	**12.97**	**33**	*i* P	Pn	05 28 36.6	-5.9
NOR	**Nord**	**12.97**	**33**	*i* P		05 28 36.6	
NOR				*e*S		05 30 51.3	
NOR				IAML		05 30 53.3	
	comp=Z,51nm,0.4s						
DAG	**Danmarks Havn**	**13.25**	**55**	*i* P	Pn	05 28 41.7	-4.7
DAG	**Danmarks Havn**	**13.25**	**55**	*e*P		05 28 41.0	
DAG				*i* P		05 28 41.7	
DAG				*i* S		05 30 59.3	
DAG				IAML		05 31 02.5	
	comp=Z,49nm,0.4s						
DBG	**Daneborg**	**13.80**	**65**	*i* P		05 28 47.5	
DBG				*i* P		05 28 48.4	
DBG				IAML		05 31 14.7	
	comp=Z,32nm,0.4s						
DBG				IAML		05 31 29.0	
	comp=Z,27nm,0.4s						
ANGG	**Ammassalik, Gr**	**14.62**	**109**		**Pn**	**05 29 01.5**	**-3.7**
ANGG	**Ammassalik, Gr**	**14.62**	**109**	*i* P		05 29 02.6	
ANGG				IAML		05 31 48.4	
	comp=Z,15nm,0.4s						
SCO	**Scoresbysund**	**15.39**	**79**	Pn	**Pn**	**05 29 08.8**	**-6.7**
SCO				IAmb	IAmb	05 29 17.1	
	comp=Z,55nm,1.2s						
SCO	**Scoresbysund**	**15.39**	**79**	*i* P		05 29 08.8	
C36M	**Paulatuk**	**16.23**	**278**		**Pn**	**05 29 22.5**	**-3.7**
C36M	**Paulatuk**	**16.23**	**278**	P	**Pn**	**05 29 22.9**	**-3.4**
	baz=49,SNR=21						
KBS	**Kingsbay**	**18.30**	**38**	Pn	**Pn**	**05 29 50.0**	**-2.1**
KBS				IAmb	IAmb	05 30 02.2	
	comp=Z,42nm,0.8s						
KBS	**Kingsbay**	**18.30**	**38**	*i* P		05 29 50.1	
YKA	**Yellowknife Ar**	**18.87**	**253**	Pn	**P**	**05 29 53.2**	**-5.5**
	comp=Z,1.7nm,0.3s,baz=28,slow=11,SNR=64						
YKA				Sn	Sn	05 33 09.9	-21
	comp=Z,0.9nm,0.3s,baz=28,slow=22,SNR=5.2						
YKA				Lg	Lg	05 34 55.8	
	comp=Z,0.5nm,0.3s,baz=43,slow=29,SNR=4.1						
YKA				LR	LR	05 36 40.7	
	comp=Z,370nm,20.9s,baz=0.0,slow=35						
INK	**Inuvik**	**19.45**	**283**	P	**P**	**05 30 04.8**	**-0.1**
	comp=Z,1.1nm,0.3s,baz=31,slow=15,SNR=21						
INK				S	Sn	05 33 25.1	-19
	comp=Z,0.9nm,0.3s,baz=333,slow=15,SNR=5.7						
INK	**Inuvik**	**19.45**	**283**	P	**P**	**05 30 05.4**	**+0.4**
BORG	**Borgarnes**	**19.62**	**92**	LR	LR	05 38 00.4	
	comp=Z,273nm,21.2s,baz=324,slow=38						
SCHQ	**Schefferville**	**19.82**	**170**	P	**P**	**05 30 06.1**	**-3.1**
	comp=Z,0.8nm,0.3s,baz=356,slow=10,SNR=12						
SCHQ				S	S	05 33 35.4	-18
	comp=Z,0.4nm,0.3s,baz=254,slow=20,SNR=2.5						
SCHQ	**Schefferville**	**19.82**	**170**	P	**P**	**05 30 06.9**	**-2.3**
SCHQ				IAmb	IAmb	05 30 23.4	
	comp=Z,23nm,0.7s						
EPYK	**Eagle Plains**	**21.72**	**282**	P	**P**	**05 30 30.1**	**+0.5**
EPYK				IAmb	IAmb	05 30 48.2	
	comp=Z,29nm,0.9s						
EPYK	**Eagle Plains**	**21.72**	**282**	P	**P**	**05 30 30.1**	**+0.5**
	baz=41,SNR=17						
FFC	**Flin Flon**	**22.91**	**227**	P	**P**	**05 30 42.8**	**+0.4**
BMAR	**Burnt Mountain**	**22.95**	**290**	P	**P**	**05 30 42.5**	**-0.3**
TOLK	**Toolik Lake Re**	**23.29**	**296**	P	**P**	**05 30 47.3**	**+1.1**
TOLK				IAmb	IAmb	05 30 53.7	
	comp=Z,24nm,1.1s						
TOLK	**Toolik Lake Re**	**23.29**	**296**	P	**P**	**05 30 47.3**	**+1.1**
	baz=42,SNR=11						
DAWY	**Dawson**	**24.22**	**280**	P	**P**	**05 30 56.6**	**+1.3**
MATQ	**Matagami**	**24.85**	**187**	P	**P**	**05 31 01.7**	**+0.7**
	baz=3.1						
LSQQ	**Lebel-sur-Quev**	**25.52**	**186**	P	**P**	**05 31 07.3**	**+0.1**
	baz=2.6						
IL31		**25.62**	**288**	P	**P**	**05 31 09.6**	**+1.8**
IL31				IAmb	IAmb	05 31 28.5	
	comp=Z,19nm,1.3s						
ILAR	**Eielson Array**	**25.62**	**288**	P	**P**	**05 31 08.4**	**+0.5**
	comp=Z,6.0nm,0.8s,baz=36,slow=8.6,SNR=33						
ILAR				PcP	**PcP**	**05 34 38.5**	**+0.2**
	comp=Z,1.9nm,1.0s,baz=357,slow=2.2,SNR=5.4						
ILAR				LR	LR	05 43 09.7	
	comp=Z,178nm,20.2s,baz=50,slow=41						
ILAR	**Eielson Array**	**25.62**	**288**	P	**P**	**05 31 09.5**	**+1.6**
BCAR	**Beaver Creek A**	**25.67**	**281**	P	**P**	**05 31 11.1**	**+2.7**
DOT	**Dot Lake**	**25.79**	**284**	P	**P**	**05 31 12.0**	**+2.5**
DOT				IAmb	IAmb	05 31 13.0	
	comp=Z,16nm,0.8s						
HDA	**Harding Lake**	**25.93**	**287**	P	**P**	**05 31 13.3**	**+2.6**
HDA				IAmb	IAmb	05 31 13.8	
	comp=Z,18nm,0.9s						
HDA	**Harding Lake**	**25.93**	**287**	P	**P**	**05 31 13.0**	**+2.3**
	baz=36,SNR=6.6						
CCB	**Clear Creek Bu**	**25.96**	**288**	IAmb	IAmb	05 31 13.9	
	comp=Z,32nm,1.5s						
ULM	**Lac du Bonnet**	**26.14**	**215**	P	**P**	**05 31 13.1**	**+0.4**
	comp=Z,16nm,0.9s,baz=10,slow=9.4,SNR=8.0						
ULM	**Lac du Bonnet**	**26.14**	**215**	IAmb	IAmb	05 31 16.4	
	comp=Z,25nm,1.0s						
WRH	**Wood River Hil**	**26.17**	**288**	P	**P**	**05 31 15.2**	**+2.3**
WRH				IAmb	IAmb	05 31 18.1	
	comp=Z,17nm,1.2s						
IMAR	**Indian Mountai**	**26.38**	**295**	P	**P**	**05 31 15.8**	**+1.0**
VLDQ	**Val d'Or**	**26.48**	**187**	IAmb	IAmb	05 31 25.3	
	comp=Z,25nm,0.9s						
PAX	**Paxson**	**26.72**	**284**	P	**P**	**05 31 20.2**	**+2.3**
PAX				IAmb	IAmb	05 31 25.7	
	comp=Z,22nm,1.5s						
LATQ	**La Tuque**	**27.14**	**180**	IAmb	IAmb	05 31 31.1	
	comp=Z,15nm,0.9s						
LATQ	**La Tuque**	**27.14**	**180**	P	**P**	**05 31 23.5**	**+1.7**
	baz=0.0,SNR=12						
D61A	**St Aubert, Com**	**27.34**	**176**	P	P	05 31 31.3	+7.7
	baz=358,SNR=6.2						
BATG	**Bathurst New B**	**27.40**	**170**	P	**P**	**05 31 25.1**	**+0.9**
BATG				IAmb	IAmb	05 31 33.3	
	comp=Z,19nm,1.0s						
D54A	**Lac Fusel, La**	**27.42**	**186**	P	**P**	**05 31 27.9**	**+3.6**
	baz=2.3						
D58A	**Chemin du LacG**	**27.43**	**180**	P	**P**	**05 31 25.7**	**+1.3**
	baz=0.1,SNR=6.0						
ARCES	**ARCESS Array B**	**27.43**	**49**	P	**P**	**05 31 22.9**	**-1.2**
	comp=Z,7.9nm,0.7s,baz=321,slow=6.7,SNR=16						
ARCES				LR	LR	05 42 04.7	
	comp=Z,259nm,19.3s,baz=346,slow=36						
ARE0	**ARCESS Array S**	**27.43**	**49**	P	**P**	**05 31 23.6**	**-0.6**
D56A	**ZEC Mazanza, M**	**27.49**	**183**	P	**P**	**05 31 25.8**	**+0.9**
	baz=1.1						
D62A	**Allapoint, All**	**27.49**	**174**	P	**P**	**05 31 26.7**	**+1.8**
D62A	**Allapoint, All**	**27.49**	**174**	P	**P**	**05 31 26.6**	**+1.7**
	baz=358,SNR=8.3						
D57A	**Chemin Vers le**	**27.51**	**182**	P	**P**	**05 31 25.8**	**+0.7**
	baz=0.7,SNR=5.6						
D59A	**Saint-Raymond**	**27.52**	**179**	P	**P**	**05 31 26.3**	**+1.2**
	baz=360,SNR=6.3						
D53A	**Lac Vacive, Po**	**27.53**	**187**	IAmb	IAmb	05 31 39.2	
	comp=Z,11nm,0.9s						
D53A	**Lac Vacive, Po**	**27.53**	**187**	P	**P**	**05 31 26.2**	**+1.0**
	baz=2.9						
D50A	**G1974 Best Tow**	**27.53**	**190**	P	**P**	**05 31 26.4**	**+1.1**
	baz=4.1						
D55A	**Sainte-Anne-du**	**27.53**	**184**	P	**P**	**05 31 28.9**	**+3.6**
	baz=1.6						
D63A	**Stockholm**	**27.56**	**173**	P	**P**	**05 31 27.6**	**+2.0**
	baz=357,SNR=6.4						
D51A	**Lot 18 Range I**	**27.58**	**190**	P	**P**	**05 31 30.7**	**+4.9**
	baz=3.8						
D60A	**Saint Jean D’O**	**27.62**	**177**	P	**P**	**05 31 27.4**	**+1.3**
	baz=359						
D48A	**Paudash Townsh**	**27.63**	**193**	P	**P**	**05 31 27.6**	**+1.5**
	baz=5.2						
EYMN	**Ely**	**27.78**	**208**	P	**P**	**05 31 28.9**	**+1.5**
EYMN				IAmb	IAmb	05 31 40.2	
	comp=Z,9.4nm,0.9s						
EYMN	**Ely**	**27.78**	**208**	P	**P**	**05 31 28.7**	**+1.2**
	baz=11						
D47A	**Chapleau**	**27.83**	**195**	P	**P**	**05 31 30.7**	**+2.7**
	baz=5.9						
PQI	**Presque Isle**	**27.93**	**173**	P	**P**	**05 31 30.2**	**+1.4**
PQI				IAmb	IAmb	05 31 37.6	
	comp=Z,14nm,0.8s						
E56A	**St. Veronique**	**28.00**	**183**	P	**P**	**05 31 30.2**	**+0.8**
	baz=1.3						
AGMN	**Agassiz Nation**	**28.03**	**214**	P	**P**	**05 31 31.2**	**+1.5**
	baz=13,SNR=17						
E61A	**Lac Etchemin**	**28.11**	**177**	P	**P**	**05 31 32.2**	**+1.8**
	baz=359						
E57A	**Chemin Saint G**	**28.12**	**182**	P	**P**	**05 31 31.5**	**+0.9**
	baz=0.8						
E58A	**La Victoria**	**28.15**	**181**	P	**P**	**05 31 32.4**	**+1.6**
	baz=0.3						
E54A	**Lac Daplat, Po**	**28.15**	**186**	P	**P**	**05 31 31.9**	**+1.0**
	baz=2.5						
E60A	**Ste Agathe de**	**28.16**	**178**	P	**P**	**05 31 32.0**	**+1.1**
	baz=359,SNR=6.1						
E63A	**Oxbow**	**28.17**	**174**	P	**P**	**05 31 31.8**	**+0.8**
E63A				IAmb	IAmb	05 31 40.7	
	comp=Z,9.1nm,0.9s						
E63A	**Oxbow**	**28.17**	**174**	P	**P**	**05 31 34.1**	**+3.2**
	baz=358,SNR=5.6						
E53A	**Dumoine, Ponti**	**28.23**	**187**	P	P	05 31 36.9	+5.5
	baz=2.8						
TRQ	**Mont Tremblant**	**28.31**	**183**	P	**P**	**05 31 33.3**	**+0.9**
E48A	**Lockeyer**	**28.34**	**194**	P	**P**	**05 31 33.3**	**+0.7**
	baz=5.3						
E52A	**Mattawa**	**28.36**	**189**	P	**P**	**05 31 36.6**	**+3.9**
	baz=3.3						
SML	**Sawmill**	**28.43**	**285**	P	**P**	**05 31 35.9**	**+2.6**
E47A	**Iron Bridge**	**28.44**	**195**	P	P	05 31 38.9	+5.5
	baz=5.9						
E44A	**Grand Marais A**	**28.49**	**199**	P	**P**	**05 31 36.7**	**+2.9**
	baz=7.3						
F60A	**Warwick**	**28.56**	**179**	P	**P**	**05 31 35.5**	**+1.1**
	baz=360,SNR=7.7						
F61A	**St Evariste**	**28.56**	**177**	P	P	05 31 40.2	+5.7
	baz=359						
F64A	**Sherman**	**28.73**	**174**	P	**P**	**05 31 37.3**	**+1.4**
F64A				IAmb	IAmb	05 31 44.6	
	comp=Z,19nm,0.8s						
F64A	**Sherman**	**28.73**	**174**	P	**P**	**05 31 37.6**	**+1.6**
	baz=358,SNR=5.5						
F55A	**Otter Lake**	**28.73**	**185**	P	**P**	**05 31 36.8**	**+0.8**
	baz=2.0						
F63A	**Nahmakanta, Br**	**28.87**	**175**	P	**P**	**05 31 38.5**	**+1.3**
	baz=358						
F52A	**Sundridge**	**28.87**	**189**	P	**P**	**05 31 39.0**	**+1.8**
	baz=3.6						
F48A	**Evansville**	**29.02**	**194**	P	**P**	**05 31 40.8**	**+2.2**
	baz=5.4						
F49A	**Sandfield**	**29.05**	**193**	P	**P**	**05 31 40.6**	**+1.8**
	baz=5.1						
G61A	**St-Isidore-de-**	**29.25**	**178**	P	**P**	**05 31 42.1**	**+1.5**
	baz=359						
DGMT	**Dagmar**	**29.30**	**225**	P	**P**	**05 31 43.5**	**+2.4**
	baz=17						
PKME	**Peaks-Kenny Pk**	**29.30**	**175**	P	**P**	**05 31 43.5**	**+2.5**
	baz=358						
G64A	**Maxfield**	**29.32**	**174**	P	**P**	**05 31 42.5**	**+1.3**
	baz=358						
G58A	**Ormstown**	**29.38**	**182**	P	**P**	**05 31 43.1**	**+1.4**
	baz=0.7						
PLVO	**Plevna**	**29.54**	**186**	P	**P**	**05 31 45.8**	**+2.6**
H59A	**Cadyville**	**29.88**	**181**	P	**P**	**05 31 47.6**	**+1.4**
	baz=0.5,SNR=10.0						
H62A	**Milan**	**29.96**	**178**	P	**P**	**05 31 50.4**	**+3.5**
	baz=359						
H57A	**Richville**	**30.08**	**184**	P	**P**	**05 31 49.4**	**+1.4**
	baz=1.4						
LBNH	**Lisbon**	**30.29**	**179**	P	**P**	**05 31 50.3**	**+0.5**
	baz=360						
I61A	**Oroboro, Fairl**	**30.59**	**179**	P	**P**	**05 31 54.9**	**+2.4**
	baz=360						
SPMN	**Marine on St.**	**30.62**	**208**	IAmb	IAmb	05 32 01.6	
	comp=Z,15nm,1.2s						
SPMN	**Marine on St.**	**30.62**	**208**	P	**P**	**05 31 54.6**	**+1.9**
	baz=10						
I58A	**Old Forge**	**30.85**	**183**	P	**P**	**05 31 56.5**	**+1.7**
	baz=1.1						
I51A	**Listowel**	**30.94**	**192**	P	**P**	**05 31 59.7**	**+4.1**
	baz=4.3						
J59A	**Piesco**	**31.07**	**182**	P	**P**	**05 31 58.5**	**+1.8**
	baz=0.9						
NC303	**NORSAR Array S**	**31.14**	**69**	P	**P**	**05 31 57.9**	**+0.7**
NB2	**NORSAR Subarra**	**31.26**	**69**	P	**P**	**05 31 58.5**	**+0.2**
	comp=Z,6.3nm,0.8s,baz=321,slow=8.6						
NOA	**NORSAR Array B**	**31.26**	**69**	P	**P**	**05 31 58.2**	**-0.1**
	comp=Z,5.0nm,0.8s,baz=322,slow=8.1,SNR=17						
NOA				LR	LR	05 44 30.9	
	comp=Z,59nm,18.4s,baz=335,slow=36						
J60A	**Lant Hill Farm**	**31.28**	**181**	P	**P**	**05 32 01.5**	**+3.0**
	baz=0.3						
NC405	**NORSAR Array S**	**31.33**	**68**	P	**P**	**05 31 59.4**	**+0.5**
LAO	**LASA Array**	**31.40**	**227**	P	**P**	**05 32 02.2**	**+2.5**
	baz=16,SNR=5.2						
I42A	**Draeger Farm,**	**31.48**	**203**	IAmb	IAmb	05 32 08.2	
	comp=Z,9.3nm,0.9s						
K62A	**Royalston**	**31.86**	**179**	P	**P**	**05 32 05.4**	**+1.7**
	baz=360						
NEW	**Newport**	**32.28**	**241**	P	**P**	**05 32 08.7**	**+1.3**
	comp=Z,1.1nm,0.5s,baz=20,slow=12,SNR=2.8						
L55A	**Hinsdale**	**32.44**	**188**	P	**P**	**05 32 10.9**	**+2.1**
	baz=2.8						
L58A	**Harry Jones Me**	**32.51**	**184**	P	**P**	**05 32 11.5**	**+2.2**
	baz=1.5						
ECSD	**EROS Data Cent**	**32.60**	**213**	IAmb	IAmb	05 32 19.7	
	comp=Z,7.2nm,0.7s						
ECSD	**EROS Data Cent**	**32.60**	**213**	P	**P**	**05 32 12.1**	**+1.9**
	baz=12,SNR=8.0						
BILL	**Bilibino**	**32.87**	**324**	P	**P**	**05 32 13.5**	**+1.2**
MSO	**Missoula**	**32.89**	**236**	IAmb	IAmb	05 32 20.2	
	comp=Z,13nm,1.5s						
MSO	**Missoula**	**32.89**	**236**	P	**P**	**05 32 14.5**	**+1.7**
	baz=19						
GCMT	**Greycliff**	**32.95**	**230**	P	**P**	**05 32 16.2**	**+2.8**
KDAK	**Kodiak Island**	**33.00**	**285**	P	**P**	**05 32 15.0**	**+1.5**
	comp=Z,35nm,1.0s,baz=62,slow=5.4,SNR=5.8						
KDAK	**Kodiak Island**	**33.00**	**285**	P	**P**	**05 32 15.7**	**+2.2**
L47A	**Sherwood**	**33.04**	**197**	P	**P**	**05 32 15.7**	**+1.7**
	baz=6.1						
M58A	**Price’s Panora**	**33.19**	**185**	P	**P**	**05 32 16.4**	**+1.0**
	baz=1.8						
M53A	**WI Miller and**	**33.28**	**191**	P	**P**	**05 32 18.9**	**+2.8**
	baz=3.8						
RSSD	**Black Hills**	**33.45**	**223**	P	**P**	**05 32 20.5**	**+2.6**
RSSD				IAmb	IAmb	05 32 27.9	
	comp=Z,9.1nm,0.8s						
RSSD	**Black Hills**	**33.45**	**223**	P	**P**	**05 32 20.6**	**+2.7**
	baz=15						
RLMT	**Red Lodge**	**33.51**	**230**	P	**P**	**05 32 21.7**	**+3.3**
	baz=17						
TIXI	**Tiksi**	**33.51**	**348**	P	**P**	**05 32 18.3**	**+0.4**
	comp=Z,2.5nm,0.3s,baz=18,slow=8.5,SNR=13						
N54A	**Moraine State**	**33.73**	**190**	P	**P**	**05 32 22.2**	**+2.2**
	baz=3.5						
N55A	**Marion Center**	**33.86**	**188**	P	**P**	**05 32 23.3**	**+2.1**
	baz=3.0						
N51A	**Ashland**	**33.90**	**193**	P	**P**	**05 32 23.8**	**+2.3**
	baz=4.6						

FINES	**FINESS Array B**	**34.48**	**57**	P	**P**	**05 32 25.9**	**-0.3**
	comp=Z,3.6nm,0.8s,baz=0.0,slow=1.9,SNR=5.2						
FINES				PcP	**PcP**	**05 35 01.1**	**0.0**
	comp=Z,4.4nm,0.8s,baz=294,slow=1.4,SNR=4.6						
FINES				LR	LR	05 44 17.9	
	comp=Z,186nm,19.5s,baz=324,slow=32						
FINES	**FINESS Array B**	**34.48**	**57**	P	**P**	**05 32 26.9**	**+0.6**
H17A	**Grant Village**	**34.48**	**231**	P	**P**	**05 32 30.7**	**+3.9**
	baz=17						
ACSO	**Alum Creek Sta**	**34.62**	**194**	P	**P**	**05 32 30.2**	**+2.5**
	baz=4.8						
O51A	**Pataskala**	**34.68**	**193**	P	**P**	**05 32 30.7**	**+2.4**
	baz=4.6						
FXWY	**Fox Creek**	**35.30**	**231**	P	**P**	**05 32 36.0**	**+2.1**
K22A	**Casper**	**35.34**	**225**	P	**P**	**05 32 36.0**	**+1.8**
	baz=15,SNR=8.5						
P48A	**Milroy**	**35.56**	**197**	P	**P**	**05 32 37.2**	**+1.4**
	baz=5.8						
Q54A	**Coxs Mills**	**35.74**	**191**	P	**P**	**05 32 40.5**	**+3.1**
	baz=3.7						
PDAR	**Pinedale Array**	**35.83**	**229**	P	**P**	**05 32 40.0**	**+1.6**
	comp=Z,2.1nm,0.8s,baz=19,slow=6.3,SNR=14						
PDAR				LR	LR	05 46 47.8	
	comp=Z,321nm,18.1s,baz=24,slow=35						
BW06	**Boulder Array**	**35.83**	**229**	P	**P**	**05 32 40.6**	**+2.1**
	baz=16,SNR=9.6						
NRIK	**Noril'sk**	**35.92**	**12**	P	**P**	**05 32 39.3**	**+0.7**
	comp=Z,2.4nm,0.5s,baz=17,slow=4.8,SNR=3.7						
I07A	**Izee**	**36.77**	**241**	P	**P**	**05 32 47.5**	**+1.1**
I07A				IAmb	IAmb	05 33 03.4	
	comp=Z,14nm,1.3s						
N23A	**Red Feather La**	**36.93**	**224**	P	**P**	**05 32 50.2**	**+2.3**
N23A	**Red Feather La**	**36.93**	**224**	P	**P**	**05 32 50.4**	**+2.5**
	baz=14						
KSU1	**Kansas State U**	**37.15**	**211**	P	**P**	**05 32 51.3**	**+1.9**
	baz=10						
S49A	**Springfield**	**37.21**	**196**	P	**P**	**05 32 52.4**	**+2.4**
	baz=5.5						
CCM	**Cathedral Cave**	**37.50**	**204**	P	**P**	**05 32 53.3**	**+0.9**
	baz=8.0						
KLMR	**Klimovskoe**	**37.88**	**48**	*e*P	**P**	**05 32 53.0**	**-2.3**
KLMR				AMP		05 32 55.9	
	comp=Z,39nm,1.3s						
CBKS	**Cedar Bluff**	**37.89**	**215**	P	**P**	**05 32 57.6**	**+1.8**
	baz=11						
T49A	**Edmonton**	**37.91**	**197**	P	**P**	**05 32 57.5**	**+1.6**
	baz=5.5						
ISCO	**Idaho Springs**	**37.93**	**223**	P	**P**	**05 32 59.0**	**+2.5**
	baz=14,SNR=6.6						
T50A	**Nancy**	**37.94**	**196**	P	**P**	**05 32 57.7**	**+1.6**
	baz=5.2						
O20A	**White River Ci**	**38.10**	**226**	P	**P**	**05 32 59.8**	**+2.0**
O20A				IAmb	IAmb	05 33 07.4	
	comp=Z,10nm,0.8s						
O20A	**White River Ci**	**38.10**	**226**	P	**P**	**05 32 60.0**	**+2.2**
	baz=15,SNR=7.3						
S39A	**Bolivar**	**38.10**	**207**	IAmb	IAmb	05 33 06.7	
	comp=Z,9.3nm,0.8s						
MGMO	**Mountain Grove**	**38.51**	**205**	IAmb	IAmb	05 33 10.9	
	comp=Z,12nm,0.8s						
DUG	**Dugway, Tooele**	**38.97**	**232**	IAmb	IAmb	05 33 13.8	
	comp=Z,14nm,0.8s						
DUG	**Dugway, Tooele**	**38.97**	**232**	P	**P**	**05 33 08.0**	**+3.0**
	baz=16,SNR=14						
MOD	**Modoc Plateau**	**39.02**	**241**	P	**P**	**05 33 08.6**	**+3.2**
MOD				IAmb	IAmb	05 33 14.7	
	comp=Z,12nm,0.8s						
WVT	**Waverly**	**39.07**	**199**	P	**P**	**05 33 07.1**	**+1.5**
	baz=6.3						
V53A	**Saluda**	**39.15**	**193**	P	**P**	**05 33 08.4**	**+2.0**
	baz=4.2						
U40A	**Yellville**	**39.37**	**206**	P	**P**	**05 33 08.8**	**+0.6**
	baz=8.3,SNR=6.0						
W57A	**Gilead**	**39.52**	**189**	P	**P**	**05 33 10.9**	**+1.5**
W57A	**Gilead**	**39.52**	**189**	P	**P**	**05 33 11.0**	**+1.7**
	baz=3.0						
SEY	**Seymchan**	**39.73**	**329**	P	**P**	**05 33 11.8**	**+1.0**
	comp=Z,7.7nm,0.7s,baz=6.7,slow=4.9,SNR=18						
SDCO	**Great Sand Dun**	**39.90**	**222**	P	**P**	**05 33 15.0**	**+2.0**
	baz=13,SNR=10						
S22A	**4UR Ranch, Cre**	**40.15**	**223**	P	**P**	**05 33 17.6**	**+2.7**
	baz=13,SNR=7.7						
TUL1	**Leonard**	**40.17**	**209**	P	**P**	**05 33 16.1**	**+1.2**
	baz=9.3						
X53A	**Estanollee**	**40.34**	**193**	P	**P**	**05 33 18.3**	**+2.1**
	baz=4.3						
CLL	**Collm**	**40.37**	**75**	*i* P	**P**	**05 33 17.9**	**+1.6**
CLL				*e*		05 33 26.0	
W41B	**Gary Mavity, V**	**40.46**	**205**	P	**P**	**05 33 18.3**	**+1.0**
	baz=7.9						
W39A	**Magazine**	**40.62**	**207**	P	**P**	**05 33 18.9**	**+0.4**
	baz=8.5						
OXF	**Oxford**	**40.82**	**201**	P	**P**	**05 33 21.3**	**+1.1**
OXF				IAmb	IAmb	05 33 30.4	
	comp=Z,24nm,1.1s						
OXF	**Oxford**	**40.82**	**201**	P	**P**	**05 33 21.4**	**+1.2**
	baz=6.7						
MVCO	**Mesa Verde**	**40.98**	**225**	P	**P**	**05 33 25.3**	**+3.5**
	baz=14,SNR=8.7						
BRG	**Berggiesshubel**	**41.01**	**75**	*e*P	**P**	**05 33 21.1**	**-0.5**
	comp=Z,8.2nm,1.4s						
X40A	**Basin Creek Fa**	**41.21**	**205**	P	**P**	**05 33 24.4**	**+1.0**
	baz=8.0						
MIAR	**Mount Ida**	**41.24**	**206**	P	**P**	**05 33 24.6**	**+1.0**
	baz=8.3						
R11A	**Troy Canyon, C**	**41.34**	**234**	P	**P**	**05 33 26.9**	**+2.2**
	baz=16						
KSP	**Ksiaz**	**41.64**	**73**	*e*P	**P**	**05 33 28.1**	**+1.2**
WMOK	**Wichita Mounta**	**41.74**	**213**	P	**P**	**05 33 29.8**	**+2.0**
	baz=10,SNR=9.9						
Z50A	**Ashland**	**41.76**	**197**	P	**P**	**05 33 30.3**	**+2.3**
	baz=5.2						
NVAR	**Mina Array Bea**	**41.87**	**237**	P	**P**	**05 33 30.4**	**+1.3**
	comp=Z,2.3nm,1.1s,baz=12,slow=5.5,SNR=7.4						
NVAR				PP	**PP**	**05 35 07.4**	**+1.9**
	comp=Z,0.9nm,0.8s,baz=356,slow=6.6,SNR=3.6						
NVAR				LR	LR	05 52 46.3	
	comp=Z,185nm,18.9s,baz=14,slow=39						
PRU	**Pruhonice**	**41.97**	**75**	*e*P	**P**	**05 33 30.9**	**+1.4**
DPC	**Dobruska-Polom**	**42.10**	**73**	*e*P	**P**	**05 33 31.5**	**+0.9**
KRLC	**Kraliky**	**42.47**	**73**	*e*P	**P**	**05 33 34.7**	**+1.0**
KHC	**Kasperske Hory**	**42.51**	**76**	*e*P	**P**	**05 33 35.3**	**+1.4**
KHC				*e*x	x	05 33 42.5	
ANMO	**Albuquerque**	**42.80**	**222**	P	**P**	**05 33 39.3**	**+2.7**
	baz=13						
GERES	**GERESS Array B**	**42.80**	**76**	P	**P**	**05 33 36.8**	**+0.4**
	comp=Z,1.7nm,0.9s,baz=339,slow=7.1,SNR=11						
GERES				LR	LR	05 52 52.0	
	comp=Z,159nm,18.9s,baz=12,slow=38						
MORC	**Moravsky Berou**	**42.94**	**72**	⇑P	**P**	**05 33 37.9**	**+0.4**
MORC	**Moravsky Berou**	**42.94**	**72**	*e*P	**P**	**05 33 38.2**	**+0.7**
OJC	**Ojcow**	**43.11**	**70**	*e*P	**P**	**05 33 39.6**	**+0.9**
VRAC	**Vranov**	**43.13**	**73**	*e*P	**P**	**05 33 40.2**	**+1.3**
MA2	**Magadan**	**43.18**	**329**	P	**P**	**05 33 38.4**	**-0.8**
	comp=Z,4.0nm,0.3s,baz=16,slow=11,SNR=5.7						
DAVA	**Damuels**	**43.23**	**80**	*i* pP	**P**	**05 33 40.6**	**+0.7**
	comp=Z,5.4nm,0.6s						
RETA	**Reutte**	**43.27**	**79**	*i* pP	**P**	**05 33 40.6**	**+0.3**
	comp=Z,5.4nm,0.9s						
KRUC	**Moravsky**	**43.30**	**74**	*e*P	**P**	**05 33 40.9**	**+0.6**
MOTA	**Moosalm**	**43.50**	**79**	*i* pP	**P**	**05 33 43.0**	**+0.9**
	comp=Z,5.3nm,0.8s						
WATA	**Walderalm**	**43.63**	**79**	*i* pP	**P**	**05 33 44.3**	**+1.1**
	comp=Z,7.0nm,0.9s						
SQTA	**Sankt Quirin**	**43.64**	**79**	*i* pP	**P**	**05 33 44.3**	**+1.1**
	comp=Z,6.0nm,1.1s						
FETA	**Feichten**	**43.70**	**80**	*i* pP	**P**	**05 33 45.1**	**+1.3**
	comp=Z,4.6nm,0.9s						
JAVC	**Velka Javorina**	**43.82**	**73**	*e*P	**P**	**05 33 46.1**	**+1.5**
ABTX	**Abilene, Hawle**	**43.95**	**213**	P	**P**	**05 33 47.9**	**+2.2**
	baz=10.0						
NIE	**Niedzica**	**43.98**	**70**	*e*P	**P**	**05 33 46.7**	**+0.9**
LANS	**Liptovska Anna**	**44.01**	**71**	*e*P	**P**	**05 33 47.9**	**+1.8**
MODS	**Modra-Piesok**	**44.17**	**73**	*e*P	**P**	**05 33 47.9**	**+0.6**
CONA	**Conrad Observa**	**44.21**	**75**	*i* pP	**P**	**05 33 48.6**	**+0.8**
	comp=Z,4.9nm,0.9s						
VYHS	**Vyhne**	**44.46**	**72**	*e*P	**P**	**05 33 50.4**	**+0.8**
PVIS	**Viseu**	**44.55**	**101**	*e*P	**P**	**05 33 52.1**	**+1.6**
ISA	**Isabella, Lake**	**44.56**	**236**	P	**P**	**05 33 53.4**	**+2.8**
	baz=16						
ARSA	**Arzberg**	**44.75**	**75**	*i* pP	**P**	**05 33 53.4**	**+1.4**
	comp=Z,5.8nm,0.9s						
MYKA	**Terra Mystica**	**44.83**	**77**	*i* pP	**P**	**05 33 53.8**	**+1.1**
	comp=Z,0.2nm,0.3s						
KOLS	**Kolonicke sedl**	**44.92**	**68**	*e*P	**P**	**05 33 54.2**	**+0.9**
AKASG	**Malin Array Be**	**44.99**	**62**	P	**P**	**05 33 52.8**	**-1.0**
	comp=Z,2.0nm,0.7s,baz=336,slow=8.2,SNR=8.4						
AKASG				PcP	**PcP**	**05 35 34.3**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=339,slow=3.4,SNR=3.9						
AKASG				LR	LR	05 50 50.1	
	comp=Z,163nm,21.3s,baz=30,slow=34						
PCAS	**Casmilo, Conde**	**45.01**	**102**	*e*P	**P**	**05 33 55.8**	**+1.7**
SOKA	**Soboth**	**45.15**	**76**	*i* pP	**P**	**05 33 56.1**	**+0.8**
	comp=Z,8.5nm,1.4s						
OBKA	**Obir**	**45.18**	**77**	*i* pP	**P**	**05 33 56.6**	**+1.1**
	comp=Z,15nm,1.4s						
PSZ	**Piszkesteto**	**45.26**	**71**	⇑P	**P**	**05 33 57.3**	**+1.2**
PCBR	**Castelo Branco**	**45.48**	**101**	*e*P	**P**	**05 33 58.9**	**+1.1**
	comp=Z,28nm,1.7s						
TRPA	**Tarpa**	**45.73**	**69**	⇑P	**P**	**05 33 59.9**	**+0.2**
PMTG	**Montargil**	**46.00**	**102**	*e*P	**P**	**05 34 02.5**	**+0.5**
	comp=Z,30nm,1.9s						
ESDC	**Sonseca Array**	**46.57**	**98**	P	**P**	**05 34 07.5**	**+1.0**
	comp=Z,2.5nm,0.5s,baz=341,slow=8.4,SNR=30						
ESDC				LR	LR	05 53 41.3	
	comp=Z,85nm,18.2s,baz=10.0,slow=36						
PAB	**San Pablo**	**46.59**	**98**	P	**P**	**05 34 08.1**	**+1.4**
PAB				IAmb	IAmb	05 34 08.8	
	comp=Z,6.5nm,0.8s						
PNCL	**Nicolau / Gran**	**46.82**	**103**	*e*P	**P**	**05 34 10.1**	**+1.7**
	comp=Z,49nm,1.6s						
BURAR	**Bucovina Array**	**46.88**	**67**	⇑P	**P**	**05 34 09.6**	**+0.7**
BURAR	**Bucovina Array**	**46.88**	**67**	P	**P**	**05 34 09.3**	**+0.4**
PBEJ	**Beja**	**47.08**	**102**	*e*P	**P**	**05 34 12.1**	**+1.7**
SORM	**Soroca**	**47.17**	**64**	⇑P	**P**	**05 34 10.8**	**-0.2**
TX32	**Lajitas Array**	**47.80**	**217**	P	**P**	**05 34 19.1**	**+2.9**
TX32				IAmb	IAmb	05 34 25.1	
	comp=Z,5.1nm,0.9s						
TXAR	**Lajitas Array**	**47.80**	**217**	P	**P**	**05 34 17.4**	**+1.2**
	comp=Z,0.9nm,0.7s,baz=23,slow=6.6,SNR=14						
TXAR				LR	LR	05 54 35.7	
	comp=Z,116nm,19.8s,baz=0.0,slow=36						
TXAR	**Lajitas Array**	**47.80**	**217**	P	**P**	**05 34 18.2**	**+2.0**
BZS	**Buzias**	**47.84**	**71**	⇑P	**P**	**05 34 17.0**	**+0.7**
GZR	**Gura Zlata**	**48.34**	**70**	⇑P	**P**	**05 34 20.7**	**+0.5**
PETK	**Petropavlovsk-**	**48.35**	**321**	P	**P**	**05 34 20.9**	**+0.7**
	comp=Z,2.0nm,0.7s,baz=74,slow=6.2,SNR=4.5						
PETK	**Petropavlovsk-**	**48.35**	**321**	P	**P**	**05 34 20.5**	**+0.4**
MDVR	**Moldovita**	**48.64**	**71**	⇑P	**P**	**05 34 23.1**	**+0.6**
ARR	**Arges**	**48.83**	**68**	⇑P	**P**	**05 34 25.1**	**+1.1**
CFR	**Carcaliu**	**49.88**	**65**	⇑P	**P**	**05 34 33.4**	**+1.5**
COPA	**Copaceanca**	**50.13**	**68**	⇑P	**P**	**05 34 34.1**	**+0.3**
ZALV	**Zalesovo Beam**	**51.02**	**17**	P	**P**	**05 34 40.8**	**+0.3**
	comp=Z,37nm,0.7s,baz=344,slow=7.4,SNR=119						
ZALV	**Zalesovo Beam**	**51.02**	**17**	P	**P**	**05 34 40.4**	**-0.1**
AKTO	**Aktyubinsk**	**51.15**	**38**	LR	LR	05 59 59.6	
	comp=Z,122nm,18.1s,baz=355,slow=40						
FNA	**Florina**	**52.30**	**73**	P	**P**	**05 34 50.7**	**+0.5**
ABKAR	**Akbulak array**	**52.61**	**37**	P	**P**	**05 34 52.3**	**-0.1**
KURK	**Kurchatov**	**53.67**	**22**	P	**P**	**05 35 00.1**	**0.0**
LPIG	**La Paz**	**54.07**	**223**	LR	LR	05 57 16.0	
	comp=Z,146nm,21.1s,baz=8.0,slow=35						
KBZ	**Khabaz**	**54.67**	**53**	P	**P**	**05 35 08.6**	**+1.1**
	comp=Z,6.3nm,0.8s,baz=358,slow=5.9,SNR=9.9						
KBZ	**Khabaz**	**54.67**	**53**	*i* P	**P**	**05 35 08.6**	**+1.1**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TEIG	**Tepich**	**54.87**	**198**	LR	LR	05 59 05.4	
	comp=Z,186nm,19.4s,baz=258,slow=37						
KLR	**Kul'dur**	**55.52**	**341**	P	**P**	**05 35 14.1**	**+0.4**
	comp=Z,18nm,0.7s,baz=349,slow=7.6,SNR=76						
BRTR	**Keskin Array B**	**56.36**	**63**	P	**P**	**05 35 20.6**	**+0.7**
	comp=Z,2.6nm,0.6s,baz=333,slow=4.1,SNR=13						
BRTR	**Keskin Array B**	**56.36**	**63**	P	**P**	**05 35 20.4**	**+0.5**
MAKZ	**Makanchi**	**57.87**	**20**	P	**P**	**05 35 30.1**	**-0.2**
MAKZ				IAmb	IAmb	05 35 31.1	
	comp=Z,8.1nm,0.8s						
MKAR	**Makanchi Array**	**57.91**	**20**	P	**P**	**05 35 30.3**	**-0.3**
	comp=Z,3.6nm,0.8s,baz=42,slow=5.6,SNR=31						
ULN	**Ulaanbaatar**	**58.00**	**0**	P	**P**	**05 35 32.7**	**+1.3**
SONM	**Songino Array**	**58.03**	**1**	P	**P**	**05 35 32.9**	**+1.3**
	comp=Z,17nm,0.8s,baz=348,slow=6.3,SNR=85						
SONM	**Songino Array**	**58.03**	**1**	P	**P**	**05 35 32.5**	**+0.9**
GNI	**Garni**	**58.49**	**53**	LR	LR	05 59 55.7	
	comp=Z,152nm,21.6s,baz=0.5,slow=35						
CMIG	**Matias Romero**	**58.63**	**205**	LR	LR	06 04 49.9	
	comp=Z,101nm,18.6s,baz=350,slow=40						
KKAR	**Karatay Array**	**60.20**	**30**	P	**P**	**05 35 47.2**	**+0.6**
KKAR	**Karatay Array**	**60.20**	**30**	IAmb	IAmb	05 35 48.6	
	comp=Z,18nm,1.4s						
USA0B	**Ussuriysk Arra**	**60.49**	**340**	P	**P**	**05 35 48.9**	**+0.4**
USRK	**Ussuriysk Ar.**	**60.49**	**340**	P	**P**	**05 35 48.5**	**+0.1**
	comp=Z,15nm,1.0s,baz=351,slow=7.3,SNR=16						
USRK	**Ussuriysk Ar.**	**60.49**	**340**	P	**P**	**05 35 48.3**	**-0.2**
AAK	**Ala-Archa**	**61.18**	**27**	P	**P**	**05 35 54.7**	**+1.3**
WMQ	**Urumqi**	**61.31**	**16**	*e*P	**P**	**05 35 54.8**	**+0.6**
WMQ				sP		05 36 04.2	
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,42nm,4.3s						
WMQ				LR	LR		
	comp=Z,250nm,20.1s						
WMQ				LR	LR		
	comp=Z,150nm,20.1s						
CN2	**Changchun**	**61.42**	**345**	*e*P	**P**	**05 35 54.6**	**-0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BOOM	**Boomskoye usch**	**61.50**	**26**	P	**P**	**05 35 56.6**	**+1.0**
MMAI	**Mount Meron Ar**	**63.18**	**63**	LR	LR	06 04 02.0	
	comp=Z,94nm,19.9s,baz=95,slow=36						
GEYT	**Alibeck**	**63.29**	**42**	P	**P**	**05 36 08.7**	**+1.2**
	comp=Z,7.9nm,1.1s,baz=309,slow=5.0,SNR=7.2						
PCRV	**Puerto La Cruz**	**64.39**	**171**	LR	LR	06 04 41.3	
	comp=Z,230nm,20.2s,slow=36						
KSH	**Kashi**	**64.44**	**26**	P	**P**	**05 36 18.6**	**+3.5**
KSH				pP		05 36 22.8	
KSH				PcP	**PcP**	**05 36 54.0**	**+4.6**
KSH				S	**S**	**05 44 54.3**	**-0.2**
KSH				sS		05 45 02.7	
KSH				ScS	**ScS**	**05 46 09.9**	**-0.3**
KSH				pmax	pmax		
	comp=Z,43nm,1.2s						
KSH				pmax	pmax		
	comp=Z,240nm,4.5s						
KSH				LR	LR		
	comp=Z,160nm,9.3s						
KSH				LR	LR		
	comp=Z,360nm,12.2s						
HHC	**Hu-ho-hao-te**	**64.97**	**356**	*e*P	**P**	**05 36 19.5**	**+0.9**
HHC				PP	**PP**	**05 38 45.5**	**+4.7**
HHC				S	**S**	**05 44 58.6**	**-2.4**
HHC				pmax	pmax		
	comp=Z,76nm,1.0s						
HHC				pmax	pmax		
	comp=Z,260nm,6.0s						
HHC				LR	LR		
	comp=Z,690nm,16.0s						
HHC				LR	LR		
	comp=Z,770nm,16.3s						
HHC				LR	LR		
	comp=Z,690nm,16.9s						
BJI	**Beijing**	**65.66**	**352**	P	**P**	**05 36 23.5**	**+0.7**
BJI				pmax	pmax		
	comp=Z,12nm,1.1s						
GTA	**Gaotai**	**66.34**	**6**	⇑P	**P**	**05 36 28.3**	**+0.9**
GTA				pP		05 36 33.3	
GTA				sP		05 36 35.8	
GTA				pmax	pmax		
	comp=Z,20nm,1.0s						
GTA				pmax	pmax		
	comp=Z,110nm,5.1s						
GTA				LR	LR		
	comp=Z,120nm,18.7s						
GTA				LR	LR		
	comp=Z,120nm,17.8s						
GTA				LR	LR		
	comp=Z,120nm,18.1s						
ZARC	**Zaragoza, Cauc**	**66.90**	**182**	*e*P	**P**	**05 36 32.4**	**+1.3**
MJAR	**Matsushiro Arr**	**67.39**	**333**	P	**P**	**05 36 34.5**	**+0.4**
	comp=Z,2.0nm,0.3s,baz=359,slow=7.9,SNR=9.7						
KSRS	**Korea Array**	**67.54**	**342**	P	**P**	**05 36 34.8**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=354,slow=6.8,SNR=4.8						
PTBC	**PUERTO BERRIO,**	**67.84**	**182**	*e*P	P	05 36 42.3	+5.2
RUSC	**La Rusia**	**68.48**	**180**	*e*P	**P**	**05 36 40.5**	**-1.1**
RUSC	**La Rusia**	**68.48**	**180**	P	**P**	**05 36 42.7**	**+1.1**
CBOC	**Ciudad Bolivar**	**68.53**	**183**	*e*P	**P**	**05 36 42.8**	**+1.3**
NORC	**Norcasia**	**68.81**	**182**	*e*P	**P**	**05 36 43.2**	**0.0**
GUY2C	**Guyana, Caldas**	**69.16**	**183**	*e*P	**P**	**05 36 47.4**	**+1.6**
LZH	**Lanzhou**	**69.74**	**3**	*e*P	**P**	**05 36 49.2**	**+0.3**
LZH				pP		05 36 52.5	
LZH				sP		05 36 54.1	
LZH				*e*PP	**PP**	**05 39 24.6**	**+2.2**
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,140nm,6.2s						
LZH				LR	LR		
	comp=Z,200nm,16.0s						
LZH				LR	LR		
	comp=Z,200nm,16.3s						
LZH				LR	LR		
	comp=Z,320nm,18.2s						
YOTC	**Yotoco, Valle**	**70.40**	**184**	*e*P	**P**	**05 36 52.0**	**-1.1**
XAN	**Xi'an**	**71.80**	**358**	P	P	05 37 06.1	+4.8
XAN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SOTA	**Rioblanco**	**72.25**	**184**	*e*P	**P**	**05 37 06.8**	**+2.1**
TORD	**Torodi Ar. Bea**	**73.27**	**101**	P	**P**	**05 37 09.8**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=336,slow=5.7,SNR=8.1						
NJ2	**Nanjing**	**73.51**	**350**	*e*P	**P**	**05 37 11.6**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,23nm,0.7s						
CD2	**Chengdu**	**74.91**	**3**	P	**P**	**05 37 18.8**	**-0.9**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WHN	**Wuhan**	**75.19**	**354**	P	**P**	**05 37 21.3**	**+0.1**
DANN	**Dangsing**	**76.33**	**21**	*e*P	**P**	**05 37 27.8**	**-0.3**
	comp=Z,98nm,0.8s						
GKN	**Gorkha**	**76.75**	**20**	*e*P	**P**	**05 37 30.1**	**-0.3**
	comp=Z,48nm,0.7s						
GUN	**Gumba**	**76.96**	**19**	*e*P	**P**	**05 37 32.0**	**+0.2**
	comp=Z,95nm,0.9s						
KKN	**Kakani**	**77.02**	**20**	*e*P	**P**	**05 37 32.1**	**+0.1**
	comp=Z,54nm,0.7s						
DMN	**Daman**	**77.19**	**20**	*e*P	**P**	**05 37 33.0**	**0.0**
	comp=Z,31nm,0.9s						
JIRN	**Jiri**	**77.23**	**19**	*e*P	**P**	**05 37 33.9**	**+0.5**
	comp=Z,121nm,0.7s						
PKIN	**Phulchoki**	**77.25**	**20**	*e*P	**P**	**05 37 33.4**	**+0.1**
	comp=Z,11nm,0.5s						
PKI	**Pulchoki**	**77.25**	**20**	*e*P	**P**	**05 37 33.2**	**-0.2**
	comp=Z,14nm,0.6s						
TAPN	**Taplejung**	**77.67**	**18**	*e*P	**P**	**05 37 36.1**	**+0.4**
	comp=Z,75nm,0.9s						
DBIC	**Dimbokro**	**77.77**	**110**	P	**P**	**05 37 36.0**	**0.0**
	comp=Z,1.8nm,0.7s,baz=266,slow=13,SNR=2.8						
RAMN	**Ramite**	**77.97**	**19**	*e*P	**P**	**05 37 37.2**	**-0.2**
	comp=Z,45nm,0.8s						
ODAN	**Odare**	**78.13**	**18**	*e*P	**P**	**05 37 38.5**	**+0.3**
	comp=Z,47nm,0.7s						
CMAR	**Chiang Mai Arr**	**87.18**	**8**	P	**P**	**05 38 24.4**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=350,slow=5.4,SNR=6.1						
LPAZ	**La Paz**	**90.56**	**176**	P	**P**	**05 38 42.2**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=14,slow=4.2,SNR=2.6						
WRA	**Warramunga Arr**	**123.54**	**329**	PKP	**PKPdf**	**05 44 35.7**	**-0.4**
	comp=Z,2.9nm,1.0s,baz=345,slow=2.3,SNR=11						
ASAR	**Alice Springs**	**127.27**	**329**	PKP	**PKPdf**	**05 44 42.5**	**-0.6**
	comp=Z,2.8nm,0.7s,baz=354,slow=2.2,SNR=26						
SNAA	**Sanae**	**152.14**	**140**	PKPbc	**PKiKP**	**05 45 32.7**	**-0.2**
	comp=Z,3.4nm,0.6s,baz=281,slow=3.8,SNR=9.2						
SNAA	**Sanae**	**152.14**	**140**		**PKPbc**	**05 45 32.6**	**0.0**

DJA ***11*** *05:49:18.5±0.5, 8°S±4°×12°0E±°, h165^{km}±6^{km}, M3.8/13, mb4.0/2, MLv3.8/13*

IDC ***11*** *05:49:23.6±3.4, 8°.27S×119°.86E, h250^{km}±36^{km}, mb2.8/2, mb1 2.8/3, mb1mx2.6/46, mbtmp3.3/3, Error ellipse: s-maj=104.0km s-min=15.3km az=50.0*

ISC 11 05:49:17.1±1.0**, 8°.44S**±0°.06×**119°.84E**±0°.05**, h181**^{km}±9^{km}**, n14,** σ**0^{s}95**/20**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**1.27**	**200**	P	**Pn**	**05 49 47.4**	**+0.3**
WBSI				S	**Sn**	**05 50 09.6**	**-0.9**
WSI	**Waingapu**	**1.30**	**160**	P	**Pn**	**05 49 47.1**	**-0.2**
WSI				S	**Sn**	**05 50 10.6**	**-0.2**
EDFI	**Ende, Flores**	**1.86**	**100**	P	**Pn**	**05 49 53.0**	**+0.2**
EDFI				S	**Sn**	**05 50 19.6**	**-0.9**
BASI	**Baing, Sumba**	**1.91**	**158**	P	**Pn**	**05 49 54.4**	**+1.1**
BASI				S	**Sn**	**05 50 21.2**	**-0.3**
PLAI	**Plampang**	**2.07**	**259**	P	**Pn**	**05 49 56.3**	**+1.3**
PLAI				S	**Sn**	**05 50 24.6**	**+0.2**
MMRI	**Maumere**	**2.38**	**95**	P	**Pn**	**05 49 59.7**	**+1.2**
BKSI	**Bulukumba**	**3.11**	**5**	P	**Pn**	**05 50 07.4**	**+0.2**
BNSI	**Bone**	**4.02**	**4**	P	**Pn**	**05 50 19.4**	**+0.8**
SPSI	**Sidrap Palu**	**4.45**	**359**	P	**Pn**	**05 50 25.2**	**+1.2**
SOEI	**Soe**	**4.57**	**107**	P	**Pn**	**05 50 27.2**	**+1.6**
JAGI	**Jajag, Banyuwa**	**5.62**	**269**	P	**Pn**	**05 50 40.0**	**+0.7**
WRA	**Warramunga Arr**	**18.10**	**131**	P	**Pn**	**05 53 18.0**	**+0.5**
	0.2nm,0.3s,baz=310,slow=12,SNR=5.0						
WRA				S	**S**	**05 56 33.9**	**+0.3**
	0.1nm,0.3s,baz=297,slow=23,SNR=5.3						
ASAR	**Alice Springs**	**20.27**	**140**	P	Pn	05 53 42.0	-1.3
	1.0nm,0.4s,baz=314,slow=8.9,SNR=24						
ASAR				S	**S**	**05 57 16.9**	**+0.5**
	0.5nm,0.6s,baz=330,slow=25,SNR=4.0						
MKAR	**Makanchi Array**	**64.34**	**332**	P	**P**	**05 59 31.9**	**-1.6**
	0.4nm,0.8s,baz=141,slow=5.5,SNR=3.6						

IDC 11 06:08:45.8±1.9**, 9°.93S**×**128°.33E, h0**^{km}**, mb3.6**/1**, mb1 3.4**/4**, mb1mx3.2**/35**, mbtmp3.2**/4**, ML3.0**/3**, Error ellipse: s-maj=59.5km s-min=24.4km az=74.0, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**8.53**	**198**	Pn	Pn	06 10 51.9	+1.3
	0.1nm,0.3s,baz=153,slow=22,SNR=2.7						
FITZ				Sn	Sn	06 12 30.4	+2.7
	0.1nm,0.3s,baz=108,slow=20,SNR=1.1						
WRA	**Warramunga Arr**	**11.52**	**150**	Pn	Pn	06 11 30.0	-1.7
	0.1nm,0.3s,baz=320,slow=13,SNR=7.5						
WRA				Sn	Sn	06 13 45.0	+3.8
	0.1nm,0.3s,baz=340,slow=25,SNR=1.3						
ASAR	**Alice Springs**	**14.66**	**159**	Pn	Pn	06 12 13.3	-1.3
	0.1nm,0.3s,baz=333,slow=10,SNR=5.6						
MKAR	**Makanchi Array**	**69.80**	**328**	P	P	06 19 58.1	+0.1
	0.4nm,0.6s,baz=115,slow=7.6,SNR=5.3						

IDC ***11*** *06:10:10.6±1.1, 27°.38N×125°.93E, h0^{km}, mb3.5/6, mb1 3.7/6, mb1mx3.5/41, mbtmp3.6/6, ML2.1/1, MS3.4/1, Ms1 3.4/1, ms1mx2.7/33, Error ellipse: s-maj=35.6km s-min=19.3km az=59.0*

JMA ***11*** *06:10:22.5±0.2, 26°.84N×126°.73E, h25^{km}±3^{km}, M2.3*

ISC 11 06:10:14.3±1.0**, 27°.1N**±0°.1×**126°.16E**±0°.09**, h35**^{km}**, n13,** σ**3^{s}09**/14**, mb3.6**/6**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**0.98**	**145**	P	**Pn**	**06 10 32.6**	**+1.1**
JAGN	**Aguni-jima**	**1.11**	**119**	P	**Pn**	**06 10 32.7**	**-0.6**
JAGN				*e*S	**Sn**	**06 10 40.0**	**-7.3**
JIH	**Iheya**	**1.61**	**93**	P	**Pn**	**06 10 42.7**	**+2.4**
JIH				*e*S	**Sn**	**06 10 58.3**	**-1.5**
JOW	**Kunigami**	**1.91**	**98**	P	**Pn**	**06 10 46.4**	**+2.0**
JOW	**Kunigami**	**1.91**	**98**	Pn	Pn	06 10 48.6	+4.3
	1.0nm,0.3s,baz=228,slow=25,SNR=12						
JOW				Sn	**Sn**	**06 11 08.2**	**+1.1**
	3.2nm,0.3s,baz=93,slow=18,SNR=9.9						
JYRO	**Yoronjima**	**2.04**	**92**	P	**Pn**	**06 10 48.5**	**+2.3**
KLR	**Kul'dur**	**22.49**	**10**	P	**P**	**06 15 08.6**	**-1.9**
	2.4nm,0.9s,baz=201,slow=7.8,SNR=8.3						
SONM	**Songino Array**	**25.81**	**328**	P	**P**	**06 15 41.2**	**-1.0**
	0.2nm,0.3s,baz=145,slow=11,SNR=1.7						
TLY	**Talaya**	**29.83**	**331**	LR	LR	06 30 18.8	
	comp=Z,78nm,19.8s,baz=296,slow=41						
MKAR	**Makanchi Array**	**39.56**	**312**	P	**P**	**06 17 41.2**	**-0.8**
	0.6nm,0.5s,baz=101,slow=8.7,SNR=5.6						
ZALV	**Zalesovo Beam**	**40.41**	**323**	P	**P**	**06 17 46.8**	**-2.1**
	0.5nm,0.3s,baz=117,slow=8.8,SNR=1.7						
WRA	**Warramunga Arr**	**47.46**	**170**	P	**P**	**06 18 48.4**	**+2.7**
	0.5nm,0.8s,baz=352,slow=8.5,SNR=2.1						
ASAR	**Alice Springs**	**51.05**	**171**	P	**P**	**06 19 17.0**	**+3.8**
	0.5nm,0.8s,baz=359,slow=10.0,SNR=5.3						

IDC ***11*** *06:25:10.6±0.8, 3°.46N×82°.72W, h0^{km}, mb3.8/11, mb1 4.2/16, mb1mx4.0/32, mbtmp4.0/16, ML3.9/5, MS3.6/17, Ms1 3.6/17, ms1mx3.5/41, Error ellipse: s-maj=40.3km s-min=12.8km az=60.0*

NEIC ***11*** *06:25:14±2.3, 3°.38N±0°.09×82°.9W±0°.1, h26^{km}±6^{km}, mb4.3/4, Error ellipse: s-maj=19.2km s-min=9.9km*

az=59.0

ISC 11 06:25:14.2±0.6**, 3°.33N**±0°.06×**82°.76W**±0°.06**, h24^{km}, n72,** σ**2^{s}.29**/77**, mb3.9**/12**, MS3.6**/11**, 1D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GR1C	Gorgona, Isla	4.59	94	*e*P	Pn	06 26 22.4	+0.1
GR1C				*e*S	Sn	06 27 11.2	-3.7
AZU	Azuero	5.07	29	*e*P	Pn	06 26 29.9	+1.1
AZU				*e*S	Sn	06 27 25.9	-0.8
OTAV	Otavalo	5.29	125	*e*P	Pn	06 26 31.1	-1.1
OTAV				*e*S	Sn	06 27 27.9	-4.8
OTAV				*i*		06 27 37.1	
	comp=Z,16nm,0.5s						
OTAV	Otavalo	5.29	125		Pn	06 26 31.3	-0.9
MALC	Bahia Malaga	5.45	83	*e*P	Pn	06 26 35.6	+1.5
PIZC	Pizarro, Choco	5.62	73	*e*P	Pn	06 26 38.0	+1.7
PIZC				*e*S	Sn	06 27 36.0	-4.2
BBAC	Balboa, Cauca	5.66	103	*e*P	Pn	06 26 37.5	+0.5
BBAC				*e*S	Sn	06 27 36.8	-4.6
BBAC				*i*		06 27 55.0	
	comp=Z,27nm,0.3s						
SOLC	Bahia Solano	6.05	61	*e*P	Pn	06 26 42.0	-0.4
CRUC	La Cruz	6.06	107	*e*P	Pn	06 26 42.3	-0.4
CRUC				*e*S	Sn	06 27 46.8	-4.8
SOTA	Rioblanco	6.26	101	*e*P	Pn	06 26 46.8	+1.2
PCON	Cinco Dias	6.43	99	*e*P	Pn	06 26 48.2	+0.3
PCON				*e*S	Sn	06 27 56.5	-4.4
PCON				*i*		06 28 16.0	
	comp=Z,37nm,0.5s						
YOTC	Yotoco, Valle	6.43	84	*e*P	Pn	06 26 48.0	+0.4
YOTC				*e*S	Sn	06 27 57.2	-3.2
YOTC				*i*		06 28 03.1	
	comp=Z,14nm,0.5s						
BCIP	Isla Barro Col	6.48	26	*e*P	Pn	06 26 49.5	+1.3
BCIP	Isla Barro Col	6.48	26		Pn	06 26 49.9	+1.7
PLMC	San Jos del P	6.64	76	*e*P	Pn	06 26 51.9	+1.4
PLMC				*e*S	Sn	06 28 02.9	-2.7
PLMC				*i*		06 28 13.5	
	comp=Z,39nm,0.5s						
HDC	Heredia	6.76	349		Pn	06 26 50.0	-2.1
CBOC	Ciudad Bolivar	7.18	69	*e*P	Pn	06 26 59.8	+1.9
CBOC				*e*S	Sn	06 28 16.7	-2.2
CBOC				*i*		06 28 34.8	
	comp=Z,6.1nm,0.6s						
JTS	Las Juntas de	7.25	343	Pn	Pn	06 26 56.5	-2.3
	comp=Z,11nm,0.3s,baz=162,slow=9.9,SNR=70						
JTS				Sn	Sn	06 28 17.2	-3.1
	comp=Z,2.2nm,0.3s,baz=129,slow=22,SNR=5.2						
FLOC	Florencia	7.31	104	*e*P	Pn	06 27 00.7	+1.1
FLOC				*e*S	Sn	06 28 18.4	-3.5
FLOC	Florencia	7.31	104		Pn	06 27 01.1	+1.5
DBBC	Dabeiba	7.48	60	*e*P	Pn	06 27 04.7	+2.8
ORTC	Ortega, Tolima	7.52	85	*e*P	Pn	06 27 04.9	+2.4
GUY2C	Guyana, Caldas	7.61	75	*e*P	Pn	06 27 05.5	+1.4
GUY2C				*e*S	Sn	06 28 28.3	-1.5
HELC	Santa Helena	7.74	68⇓	*e*P	Pn	06 27 08.7	+2.9
HELC				*e*S	Sn	06 28 32.1	-0.9
NORC	Norcasia	8.17	74	*e*P	Pn	06 27 15.2	+3.8
UREC	San Jos de Ur	8.42	58	*e*P	Pn	06 27 17.1	+2.2
ROSC	El Rosal	8.55	80	Pn	Pn	06 27 20.9	+4.0
	comp=Z,2.8nm,0.3s,baz=60,slow=3.7,SNR=11						
PTBC	PUERTO BERRIO,	8.86	69	*e*P	Pn	06 27 24.7	+3.8
ZARC	Zaragoza, Cauc	8.88	62	*e*P	Pn	06 27 24.2	+3.1
ACON	Acoyapa	8.91	345	Pn	Pn	06 27 20.9	-0.5
MACC	Macarena, Meta	8.98	97	*e*P	Pn	06 27 24.1	+1.6
VILC	Villavicencio,	9.08	85	*e*P	Pn	06 27 27.6	+3.6
CHIC	Chingaza	9.10	82	*e*P	Pn	06 27 27.9	+3.5
CHIC				*e*S	Sn	06 29 09.7	+3.4
RUSC	La Rusia	9.97	75		Pn	06 27 40.5	+4.0
SMLC	San Martn de	10.20	57	*e*P	Pn	06 27 40.4	+1.2
OCAC	Ocana	10.58	62	*e*P	Pn	06 27 47.0	+2.5
CSGN	Cosiguina Volc	10.69	334	Pn	Pn	06 27 45.3	-0.8
PAMC	Pamplona, Colo	10.77	68	*e*P	Pn	06 27 50.6	+3.1
ATAH	Atahualpa	11.27	157	Pn	Pn	06 27 55.4	+1.1
	comp=Z,1.1nm,0.3s,baz=349,slow=4.6,SNR=8.2						
ATAH				LR	LR	06 32 07.4	
	comp=Z,784nm,19.9s,baz=331,slow=37						
SDV	Santo Domingo	13.25	65	Pn	Pn	06 28 22.7	+1.5
	comp=Z,0.4nm,0.3s,baz=253,slow=8.9,SNR=10						
SDV				LR	LR	06 33 34.2	
	comp=Z,185nm,18.6s,baz=186,slow=38						
SDV	Santo Domingo	13.25	65		Pn	06 28 22.1	+0.9
APG	El Apazote	13.86	327	Pn	Pn	06 28 29.8	+0.2
	comp=Z,0.2nm,0.3s,baz=106,slow=7.4,SNR=2.3						
APG				LR	LR	06 32 59.4	
	comp=Z,300nm,19.8s,baz=114,slow=34						
CCIG	Comitan	15.83	325		Pn	06 28 57.2	+1.4
NNA	Nana	16.32	159	Pn	Pn	06 29 04.6	+2.6
	comp=Z,0.6nm,0.3s,baz=339,slow=10,SNR=8.5						
NNA				LR	LR	06 35 19.8	
	comp=Z,81nm,20.6s,baz=146,slow=37						
TEIG	Tepich	17.63	343	LR	LR	06 35 35.1	
	comp=Z,209nm,21.6s,baz=84,slow=36						
CMIG	Matias Romero	18.13	320	P	Pn	06 29 23.5	-1.0
	comp=Z,0.1nm,0.3s,baz=133,slow=10,SNR=8.8						
CMIG				LR	LR	06 35 00.6	
	comp=Z,192nm,21.8s,baz=140,slow=33						
SJG	San Juan	21.92	47	LR	LR	06 38 46.6	
	comp=Z,92nm,22.0s,baz=189,slow=37						
SAML	Samuel	23.01	122	P	P	06 30 18.2	+0.5
PTGA	Pitinga	23.14	100	P	P	06 30 20.0	+1.0
	comp=Z,1.9nm,0.7s,baz=284,slow=8.9,SNR=2.7						
PTGA				LR	LR	06 39 29.2	
	comp=Z,209nm,19.5s,baz=83,slow=37						
LPAZ	La Paz	24.27	144	P	P	06 30 31.2	+0.7
	comp=Z,18nm,1.1s,baz=334,slow=11,SNR=28						
LPAZ				LR	LR	06 40 53.9	
	comp=Z,248nm,20.3s,baz=334,slow=39						
LPAZ	La Paz	24.27	144	P	P	06 30 31.6	+1.1
GO01	Chusmiza	26.46	150	P	P	06 30 52.1	+1.9
GO01				IAmb	IAmb	06 30 55.5	
	comp=Z,10nm,1.1s						
LVC	Limon Verde	29.12	153	LR	LR	06 43 51.9	
	comp=Z,111nm,19.2s,baz=321,slow=38						
H06E1	SOCORRO T-PHAS	31.54	301	T	T	07 04 35.9	
	SNR=5.1						
TXAR	Lajitas Array	32.60	325	P	P	06 31 44.2	0.0
	comp=Z,0.2nm,0.8s,baz=138,slow=8.5,SNR=2.7						
TXAR				LR	LR	06 45 07.4	
	comp=Z,39nm,18.0s,baz=0.0,slow=37						
LPIG	La Paz	33.66	310	LR	LR	06 42 05.7	
	comp=Z,92nm,21.6s,baz=160,slow=30						
CFA	Coronel Fontan	37.39	159	P	P	06 32 25.7	+0.3
	comp=Z,1.5nm,0.5s,baz=17,slow=4.9,SNR=3.9						
CPUP	Villa Florida	38.40	142	LR	LR	06 49 52.3	
	comp=Z,90nm,18.1s,baz=354,slow=38						
PFO	Pinyon Flats O	43.54	318	LR	LR	06 50 14.0	
	comp=Z,86nm,21.3s,baz=120,slow=35						
PLCA	Paso Flores	45.25	167	P	P	06 33 29.6	-0.3
	comp=Z,1.6nm,0.8s,baz=52,slow=9.6,SNR=3.1						
PDAR	Pinedale Array	45.95	332	P	P	06 33 35.1	-0.5
	comp=Z,0.8nm,1.0s,baz=147,slow=8.3,SNR=5.4						
ELK	Elko	47.36	326	LR	LR	06 53 31.6	
	comp=Z,96nm,21.1s,baz=129,slow=36						
NVAR	Mina Array Bea	47.65	322	P	P	06 33 49.7	+0.7
	comp=Z,1.8nm,0.7s,baz=138,slow=8.0,SNR=14						
NVAR				LR	LR	06 52 12.7	
	comp=Z,91nm,21.2s,baz=205,slow=34						
NVAR	Mina Array Bea	47.65	322	P	P	06 33 47.9	-1.1
ULM	Lac du Bonnet	48.05	349	P	P	06 33 49.8	-1.7
	comp=Z,2.4nm,0.8s,baz=156,slow=7.8,SNR=6.5						
ULM	Lac du Bonnet	48.05	349	IAmb	IAmb	06 33 50.9	
	comp=Z,2.5nm,0.8s						
YBH	Yreka Blue Hor	52.33	323	LR	LR	06 55 29.2	
	comp=Z,74nm,19.9s,baz=133,slow=35						
YKA	Yellowknife Ar	63.58	344	P	P	06 35 41.0	-1.7
	comp=Z,0.8nm,0.9s,baz=139,slow=6.9,SNR=13						
ILAR	Eielson Array	76.18	337	P	P	06 36 59.7	-0.4
	comp=Z,0.2nm,0.7s,baz=132,slow=5.0,SNR=1.5						
TORD	Torodi Ar. Bea	83.85	77	P	P	06 37 42.7	+0.1
	comp=Z,0.4nm,0.9s,baz=285,slow=4.4,SNR=1.4						
KSH	Kashi	133.08	23	PKP	PKPdf	06 44 31.1	+2.7
KSH				PP	PP	06 47 02.4	+9.0
KSH				PKS	PKSdf	06 48 08.6	+3.6
KSH				SKKS		06 53 53.1	
WRA	Warramunga Arr	140.24	243	PKP	PKPdf	06 44 40.2	-1.9
	comp=Z,0.4nm,0.7s,baz=103,slow=2.7,SNR=1.9						

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*IDC **11** 06:39:46.3±0.6, 11°.61N×87°.02W, h0^{km}, mb4.2/15, mb1 4.4/17, mb1mx4.1/40, mbtmp4.2/17, ML3.6/2, MS3.3/4, Ms1 3.3/4, ms1mx3.0/41, Error ellipse: s-maj=28.4km s-min=12.2km az=58.0*

*SNET **11** 06:39:48.6±1.4, 11°.25N×87°.34W, h35^{km}±999^{km}, ML4.1*

*UCR **11** 06:39:50.3, 11°.49N×87°.29W, h16^{km}, MD4.2, ML3.8, mb4.6(NEIC)*

*INET **11** 06:39:52.1, 11°.53N×87°.20W, h15^{km}, ML5.1*

*NEIC **11** 06:39:53.9±2.1, 11°.60N±0°.07×87°.15W±0°.08, h50^{km}±6^{km}, mb4.6/113, Error ellipse: s-maj=13.1km s-min=7.6km az=47.0*

ISC 11 06:39:49.9±0.5**, 11°.45N**±0°.05×**87°.28W**±0°.05**, h20**^{km}±3^{km}**, n425,** σ**1^{s}.42**/427**, mb4.6**/63**, 1C, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNGN	Cerro Negro	1.19	29	*e*P	Pn	06 40 10.9	-0.4
MASN	Masaya	1.22	64	*e*P	Pn	06 40 11.6	-0.3
CRIN	San Cristobal	1.26	10	*e*P	Pn	06 40 12.6	+0.2
CSGN	Cosiguina Volc	1.54	350	*e*P	Pn	06 40 17.1	+0.9
CSGN	Cosiguina Volc	1.54	350	Pn	Pb	06 40 17.5	-0.3
NY14	Universidad de	1.89	115	*i* P	Pn	06 40 21.3	+0.3
CNCH	Conchagua	1.89	343	*e*P	Pn	06 40 21.2	0.0
CNCH				*e*S	Sb	06 40 47.0	-0.1
CNCH	Conchagua	1.89	343	*e*P	Pn	06 40 21.2	0.0
CNCH				*e*S	Sb	06 40 47.0	-0.1
GBS3	Finca Las Img	1.91	110	*i* P	Pn	06 40 21.7	+0.4
LAPC	Finca la Perla	1.93	110	*e*P	Pn	06 40 22.1	+0.5
LCND	La Caada	1.94	342	*e*P	Pn	06 40 21.7	0.0
LCND				*e*S	Sb	06 40 47.0	-1.4
LCND				IAML		06 40 51.3	
	comp=Z,3µm,0.3s						
LCND	La Caada	1.94	342	*e*P	Pn	06 40 21.7	0.0
LCND				*e*S	Sb	06 40 47.0	-1.4
LCND				IAML		06 40 51.3	
	comp=Z,3µm,0.3s						
BUEV	Buena Vista	1.95	109	*i* P	Pn	06 40 21.4	-0.5
GB1A	Borinquen Arri	1.95	109	*e*P	Pn	06 40 22.8	+0.9
MATN	Matagalpa	1.98	42	*e*P	Pn	06 40 22.2	-0.1
BUAI	Buenos Aires	1.99	106	*e*P	Pb	06 40 25.9	+0.5
GPS3	Bodega del ICE	2.00	110	*i* P	Pn	06 40 24.6	+2.0
GPS3				*i* S	Sn	06 40 45.3	-1.7
GPS1	Guardaparques	2.01	109	*e*P	Pn	06 40 24.3	+1.6
GPS2	Hotel Rincn d	2.01	110	*i* P	Pn	06 40 23.3	+0.5
GUAI	GUAI	2.10	124	*e*P	Pn	06 40 23.9	+0.1
ACON	Acoyapa	2.12	76	*e*P	Pn	06 40 23.7	-0.5
ACON	Acoyapa	2.12	76		Pn	06 40 24.1	-0.1
LIM1	Limonal	2.12	110	*i* P	Pn	06 40 25.1	+0.8
GUAB	Guayabo de Bag	2.14	110	*i* P	Pn	06 40 26.1	+1.6
MESS	Mesas	2.16	109⇑	*e*P	Pn	06 40 25.6	+0.7
COLC	Colonia	2.18	111	*i* P	Pn	06 40 26.4	+1.3
PLVR	Palo Verde	2.19	120	*e*P	Pn	06 40 25.3	+0.1
BLLM	Bellamira	2.19	335	*e*P	Pn	06 40 26.2	+1.0
BLLM	Bellamira	2.19	335	*e*P	Pn	06 40 26.2	+1.0
CUI	Cuipilapa	2.22	111	*i* P	Pn	06 40 26.8	+1.2
PACA	Pacayal	2.25	333	*e*P	Pn	06 40 26.3	+0.2
PACA	Pacayal	2.25	333	*e*P	Pn	06 40 26.3	+0.2
ACAL	Aguas Claras	2.35	110	*i* P	Pn	06 40 28.4	+1.0
ACAL				*e*S	Sn	06 40 56.6	+1.0
TECA	Tecapa	2.36	330	*e*P	Pn	06 40 27.1	-0.5
TECA	Tecapa	2.36	330	*e*P	Pn	06 40 27.1	-0.5
PTEN	Parque Tenorio	2.37	108	*i* P	Pn	06 40 28.0	+0.4
FAGO	Alcalda de S	2.37	340	IAML		06 41 01.9	
	comp=Z,339nm,0.6s						
FAGO	Alcalda de S	2.37	340	IAML		06 41 01.9	
	comp=Z,339nm,0.6s						
COEB	Comit de Eme	2.37	329	*e*P	Pn	06 40 28.0	+0.3
COEB	Comit de Eme	2.37	329	*e*P	Pn	06 40 28.0	+0.3
JTS	Las Juntas de	2.56	117	Pn	Pn	06 40 31.0	+0.8
	comp=Z,9.3nm,0.3s,baz=21,slow=17,SNR=63						
JTS				Sn	Sn	06 40 59.4	-1.4
	comp=Z,32nm,0.3s,baz=292,slow=7.4,SNR=7.7						
JTS	Las Juntas de	2.56	117	*e*P	Pn	06 40 31.0	+0.8
JTS	Las Juntas de	2.56	117		Pn	06 40 31.5	+1.2
TGUH	Tegucigalpa,Un	2.59	0		Pn	06 40 31.4	+0.7
COEG	Centro de Oper	2.66	324	*e*P	Pn	06 40 30.9	-0.8
COEG				*e*S	Sn	06 41 05.4	+2.0
COEG	Centro de Oper	2.66	324	*e*P	Pn	06 40 30.9	-0.8
COEG				*e*S	Sn	06 41 05.4	+2.0
CEDE	Laguna Cedeo	2.70	111	*e*P	Pn	06 40 33.7	+1.4
CEDE				*e*P	Pb	06 40 34.3	-3.3
FORC	Fortuna	2.74	111	*i* P	Pn	06 40 33.5	+0.8
LFRS	El Faro	2.77	321	*e*P	Pn	06 40 33.3	0.0
LFRS				*e*S	Sn	06 41 06.4	+0.2
LOMA	Loma Larga	2.86	320	*e*P	Pn	06 40 34.0	-0.4
LOMA	Loma Larga	2.86	320	*e*P	Pn	06 40 34.0	-0.4
SNET	Serv Nac Est T	2.93	320		Pn	06 40 37.1	+1.7
UEES	Universidad Ev	2.95	320	IAML		06 41 16.9	
	comp=Z,350nm,0.4s						
UEES	Universidad Ev	2.95	320	IAML		06 41 16.9	
	comp=Z,350nm,0.4s						
ESPN	Las Esperanzas	3.01	75	*e*P	Pn	06 40 36.5	+0.2
ESPN	Las Esperanzas	3.01	75		Pn	06 40 36.7	+0.3
CEVE	Cerro Verde	3.29	316	IAML		06 41 30.4	
	comp=Z,650nm,0.4s						
CEVE	Cerro Verde	3.29	316	IAML		06 41 30.4	
	comp=Z,650nm,0.4s						
HDC	Heredia	3.43	115	*e*P	Pn	06 40 46.8	+4.5
HDC	Heredia	3.43	115		Pn	06 40 45.7	+3.4
LCR2	La Lucha 2	3.64	118	*e*P	Pn	06 40 47.7	+2.4
EDLM	Las Mercedes	4.22	120	*e*P	Pn	06 40 55.6	+2.5
APG	El Apazote	4.70	319	Pn	Pn	06 41 01.5	+1.6
	comp=Z,0.6nm,0.3s,baz=23,slow=8.0,SNR=4.5						
EDSV	San Vito	4.98	121	*e*P	Pn	06 41 06.9	+3.3
BRU2	Volcan	5.23	120	*e*P	Pn	06 41 09.4	+2.3
CCIG	Comitan	6.73	316		Pn	06 41 29.5	+1.7
AZU	Azuero	7.80	117	*e*P	Sn	06 43 04.1	-6.0
TEIG	Tepich	8.78	354	Pn	Pn	06 42 01.6	+5.9
	comp=Z,0.5nm,0.3s,baz=102,slow=0.0,SNR=3.5						
TEIG				LR	LR	06 46 02.4	
	comp=Z,210nm,19.4s,baz=246,slow=44						
TEIG	Tepich	8.78	354	*e*P	Sn	06 43 38.4	+4.4
TEIG	Tepich	8.78	354		Pn	06 41 58.4	+2.8
CMIG	Matias Romero	9.26	308	Pn	Pn	06 42 04.1	+1.8
	comp=Z,2.1nm,0.3s,baz=153,slow=8.7,SNR=32						
SJCC	San Jacinto, C	11.99	96	*e*P	Pn	06 42 42.9	+3.1
TLIG	Tlapa	12.50	300		Pn	06 42 50.3	+3.5
HELC	Santa Helena	12.73	113	*e*P	Pn	06 42 54.3	+4.1
SMRC	Santa Marta, M	12.80	90	*e*P	P	06 43 07.7	+5.9
ZARC	Zaragoza, Cauc	12.87	107	*e*P	P	06 43 05.0	+2.6
SMLC	San Martn de	13.27	100	*e*P	P	06 43 06.7	-0.2
GUY2C	Guyana, Caldas	13.31	117	*e*P	Pn	06 43 01.4	+3.3
SOTA	Rioblanco	14.06	130	*e*P	P	06 43 19.7	+3.5
ORTC	Ortega, Tolima	14.08	121	*e*P	P	06 43 19.3	+3.4
OCAC	Ocana	14.12	102	*e*P	P	06 43 17.1	+0.6
OTAV	Otavalo	14.18	141	*e*P	P	06 43 20.5	+3.1
SPBC	San Pablo de B	14.27	113	*e*P	Pn	06 43 14.5	+3.5
ROSC	El Rosal	14.41	116	LR	LR	06 49 13.2	
	comp=Z,75nm,19.9s,baz=210,slow=40						
ROSC	El Rosal	14.41	116	*e*P	P	06 43 23.8	+3.8
PAMC	Pamplona, Colo	14.95	105	*e*P	Pn	06 43 23.1	+2.5
CHIC	Chingaza	15.02	116	*e*P	P	06 43 26.5	-0.3
RUSC	La Rusia	15.08	110	*e*P	P	06 43 28.6	+1.1
RUSC	La Rusia	15.08	110		P	06 43 25.1	-2.4
FLOC	Florencia	15.14	130	*e*P	P	06 43 26.5	-1.2
FLOC	Florencia	15.14	130		P	06 43 26.4	-1.4
TAMC	Tame, Arauca	16.09	107	*e*P	P	06 43 39.4	+1.2
MACC	Macarena, Meta	16.22	124	*e*P	P	06 43 43.0	+3.4
SDV	Santo Domingo	16.58	97	Pn	Pn	06 43 41.9	+0.4
	comp=Z,0.2nm,0.3s,baz=243,slow=3.6,SNR=10						
SDV	Santo Domingo	16.58	97	P	P	06 43 43.2	-0.7
PTGC	Puerto Gaitan,	16.64	114	*e*P	P	06 43 44.9	+0.5
553A	Crawfordville	18.83	8	P	Pn	06 44 08.2	-0.8
553A				IAmb	IAmb	06 44 17.2	
	comp=Z,20nm,0.7s						
BRAL	Brewton	19.62	1	P	Pn	06 44 18.8	+0.2
	baz=180						
344A	Westbrook Farm	20.16	351	P	Pn	06 44 23.8	-1.1
344A				IAmb	IAmb	06 44 29.5	
	comp=Z,26nm,0.8s						
TIGA	Tifton	20.18	9	P	Pn	06 44 25.1	0.0
	baz=190						
833A	Chaparral WMA,	20.26	328	P	P	06 44 24.4	+0.3
	baz=143,SNR=14						
ATAH	Atahualpa	20.47	154	P	Pn	06 44 30.3	+1.2
	comp=Z,5.5nm,0.7s,baz=18,slow=3.2,SNR=3.3						
NATX	Nacogdoches	21.33	342	P	P	06 44 37.3	+1.7
	baz=159						
SJG	San Juan	21.46	70	LR	LR	06 51 56.0	
	comp=Z,45nm,18.3s,baz=168,slow=34						
LRAL	Lakeview Retre	21.48	1	P	P	06 44 38.2	+1.0
	baz=180,SNR=16						
Z50A	Ashland	21.73	3	P	P	06 44 40.1	+0.1
Z50A	Ashland	21.73	3	P	P	06 44 41.0	+1.0
	baz=183,SNR=7.6						
GOGA	Godfrey	22.13	8	P	P	06 44 44.3	+0.1
GOGA				IAmb	IAmb	06 44 47.5	
	comp=Z,25nm,1.1s						
GOGA	Godfrey	22.13	8	P	P	06 44 46.6	+2.3
	baz=190,SNR=10.0						
JCT	Junction City	22.22	330	P	P	06 44 45.7	+0.4
JCT	Junction City	22.22	330	P	P	06 44 46.1	+0.8
	baz=145						
Z41A	Richland Creek	22.29	348	P	P	06 44 47.3	+1.4
	baz=165						
Y49A	Blount Mountai	22.32	2	P	P	06 44 45.9	-0.3
Y49A				IAmb	IAmb	06 44 47.4	
	comp=Z,14nm,0.6s						
WHTX	Lake Whitney,	22.49	337	P	P	06 44 49.6	+1.5
	baz=153						
Y52A	Lilburn	22.50	7	P	P	06 44 50.3	+2.1
	baz=188,SNR=10						
X48A	Hartselle	22.89	0	P	P	06 44 51.5	-0.8
Y55A	Saluda	22.92	12	P	P	06 44 54.0	+1.4
	baz=193						
FPAL	Fort Paine	23.03	4	P	P	06 44 53.8	0.0
OXF	Oxford	23.04	355	P	P	06 44 53.3	-0.5
	baz=174						
X51A	Calhoun	23.11	5	P	P	06 44 55.2	+0.7
X51A	Calhoun	23.11	5	P	P	06 44 55.3	+0.7
	baz=186						
X53A	Estanollee	23.23	8	P	P	06 44 56.0	+0.3
	baz=190						
Y58A	Scranton	23.41	16	P	P	06 44 58.8	+1.3
	baz=199						
X54A	Belton	23.42	10	P	P	06 44 59.4	+1.8
	baz=192						
PLAL	Pickwick Lake	23.43	358	P	P	06 44 56.8	-1.0
TXAR	Lajitas Array	23.45	322	P	P	06 44 58.5	+0.3
	comp=Z,9.1nm,0.9s,baz=132,slow=10,SNR=44						
TXAR				PcP	PcP	06 48 45.4	+1.2
	comp=Z,0.8nm,0.8s,baz=116,slow=5.7,SNR=3.4						
TXAR				ScP	ScP	06 52 25.7	+4.4
	comp=Z,0.9nm,0.8s,baz=154,slow=6.1,SNR=7.8						
TXAR	Lajitas Array	23.45	322	P	P	06 44 58.3	+0.2
TX31	Lajitas Ar. Si	23.45	322	P	P	06 44 58.9	+0.7
TX31				IAmb	IAmb	06 45 12.0	
	comp=Z,14nm,0.7s						
TX32	Lajitas Array	23.45	322	P	P	06 44 58.7	+0.5
TX32				IAmb	IAmb	06 45 12.0	
	comp=Z,14nm,0.7s						
X40A	Basin Creek Fa	23.48	348	P	P	06 44 59.0	+0.7
	baz=166						
Z35A	Perchaven, San	23.62	339	P	P	06 44 58.5	-1.2
Z35A				IAmb	IAmb	06 45 05.3	
	comp=Z,19nm,0.7s						
UALR	University of	23.67	350	P	P	06 44 59.2	-0.9
UALR				IAmb	IAmb	06 45 00.8	
	comp=Z,17nm,1.1s						
SWET	Sewanee	23.69	3	P	P	06 45 00.1	-0.2
SWET				IAmb	IAmb	06 45 01.6	
	comp=Z,9.4nm,0.7s						
MIAR	Mount Ida	23.69	347	P	P	06 44 58.5	-1.8
MIAR				IAmb	IAmb	06 45 08.2	
	comp=Z,22nm,1.1s						
MIAR	Mount Ida	23.69	347	P	P	06 44 59.9	-0.5
	baz=164,SNR=14						
W52A	Murphy	23.73	7	P	P	06 45 01.0	+0.2
W52A				IAmb	IAmb	06 45 02.3	
	comp=Z,14nm,0.8s						
W52A	Murphy	23.73	7	P	P	06 45 00.9	+0.2
	baz=188,SNR=12						
BG3	Lake Jocassee	23.77	9	P	P	06 45 01.3	+0.2
BIRD	Birdtown, Kers	23.91	14	P	P	06 45 02.1	-0.3
H06E1	SOCORRO T-PHAS	23.95	291	T	T	07 09 47.3	
	SNR=57						
W54A	Cherokee Point	23.98	10	P	P	06 45 03.8	+0.7
	baz=192,SNR=6.3						
CPCT	Cooper Cave	24.02	6	P	P	06 45 03.6	+0.2
CPCT				IAmb	IAmb	06 45 05.6	
	comp=Z,24nm,1.3s						
W41B	Gary Mavity, V	24.04	350	P	P	06 45 03.5	-0.2
W41B				IAmb	IAmb	06 45 11.3	
	comp=Z,24nm,1.4s						
W41B	Gary Mavity, V	24.04	350	P	P	06 45 03.2	-0.4
	baz=168,SNR=8.0						
X58A	Rowland	24.11	16	P	P	06 45 03.6	-0.6
X58A				IAmb	IAmb	06 45 07.0	
	comp=Z,10nm,0.6s						
X58A	Rowland	24.11	16	P	P	06 45 03.9	-0.3
	baz=199						
WHAR	Wooly Hollow	24.16	350	P	P	06 45 03.9	-0.8
WHAR				IAmb	IAmb	06 45 13.0	
	comp=Z,12nm,1.0s						
V48A	Smith Brothers	24.18	1	P	P	06 45 04.6	-0.3
KMSC	Kings Mountain	24.19	12	P	P	06 45 05.6	+0.6
	baz=194						
TKL	Tuckaleechee C	24.31	7	P	P	06 45 05.2	-0.9
	comp=Z,6.7nm,0.5s,baz=169,slow=7.6,SNR=18						
TKL	Tuckaleechee C	24.31	7	P	P	06 45 06.3	+0.2
TKL				IAmb	IAmb	06 45 14.2	
	comp=Z,21nm,1.1s						
W39A	Magazine	24.36	347	P	P	06 45 06.3	-0.3
W39A	Magazine	24.36	347	P	P	06 45 06.0	-0.6
	baz=164,SNR=5.2						
V53A	Saluda	24.45	9	P	P	06 45 07.7	+0.3
V53A				IAmb	IAmb	06 45 10.8	
	comp=Z,17nm,1.2s						
V53A	Saluda	24.45	9	P	P	06 45 07.6	+0.2
	baz=190,SNR=5.9						
CLTN	Cedars of Leba	24.55	2	P	P	06 45 07.9	-0.3
CLTN				IAmb	IAmb	06 45 10.0	
	comp=Z,21nm,0.8s						
WVT	Waverly	24.57	359	P	P	06 45 07.5	-1.0
WVT	Waverly	24.57	359	P	P	06 45 07.5	-1.0
	baz=178						
V54A	Nebo	24.69	10	P	P	06 45 10.1	+0.5
	baz=192						
FCAR	Ozark Folk Cen	24.72	351	P	P	06 45 08.6	-1.2
FCAR				IAmb	IAmb	06 45 10.0	
	comp=Z,8.6nm,0.7s						
LCAR	Lake Charles	24.76	352	P	P	06 45 08.8	-1.3
LCAR				IAmb	IAmb	06 45 10.3	
	comp=Z,7.9nm,0.7s						
X34A	Smith Ranch, M	24.97	339	P	P	06 45 13.0	+0.9
U49A	Red Boiling Sp	24.99	3	P	P	06 45 11.6	-0.6
U49A				IAmb	IAmb	06 45 14.6	
	comp=Z,16nm,1.1s						
TZTN	Tazewell	25.21	7	P	P	06 45 14.2	0.0
TZTN	Tazewell	25.21	7	P	P	06 45 14.2	0.0
	baz=188						
V57A	Coltrane Farms	25.26	14	P	P	06 45 15.7	+1.1
	baz=197						
U40A	Yellville	25.30	349	P	P	06 45 14.3	-0.8
U40A				IAmb	IAmb	06 45 15.5	
	comp=Z,12nm,0.9s						
U40A	Yellville	25.30	349	P	P	06 45 14.2	-0.8
	baz=167,SNR=11						
V58A	Windy Hill, Pi	25.34	16	P	P	06 45 15.5	+0.1
V58A				IAmb	IAmb	06 45 24.4	
	comp=Z,22nm,1.0s						
V58A	Windy Hill, Pi	25.34	16	P	P	06 45 15.3	-0.1
	baz=199						
FNO	Franklin	25.42	340	P	P	06 45 15.7	-0.4
T47A	Sharon Grove	25.43	0	P	P	06 45 15.2	-1.0
T47A				IAmb	IAmb	06 45 16.7	
	comp=Z,12nm,0.8s						
WMOK	Wichita Mounta	25.44	338	P	P	06 45 15.8	-0.6
WMOK				IAmb	IAmb	06 45 24.1	
	comp=Z,23nm,1.1s						
WMOK	Wichita Mounta	25.44	338	P	P	06 45 17.6	+1.2
	baz=153,SNR=14						
U54A	Nelsons Funny	25.44	10	P	P	06 45 16.4	-0.1
U54A				IAmb	IAmb	06 45 21.3	
	comp=Z,8.3nm,0.7s						
U54A	Nelsons Funny	25.44	10	P	P	06 45 16.6	+0.2
	baz=192						
HHAR	Hobbs	25.44	347	P	P	06 45 15.4	-1.0
TUL1	Leonard	25.54	344	P	P	06 45 16.4	-0.9
TUL1	Leonard	25.54	344	P	P	06 45 16.6	-0.6
	baz=160,SNR=23						
T51A	Gray	25.58	6	P	P	06 45 17.6	0.0
	baz=187						
T49A	Edmonton	25.59	3	P	P	06 45 17.4	-0.3
	baz=184						
T53A	Wise	25.78	9	P	P	06 45 18.2	-1.3
	baz=190						
U57A	Blanch	25.88	15	P	P	06 45 21.2	+0.8
	baz=198						
T54A	Tazewell	26.01	10	P	P	06 45 21.1	-0.5
	baz=192						
U58A	Oxford	26.05	16	P	P	06 45 22.3	+0.4

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           baz=200
MNTX  Cornudas Mount   26.18 323  P      P       06 45 24.4 +1.3
MNTX  Cornudas Mount   26.18 323  P      P       06 45 26.5 +3.4
           baz=136,SNR=7.6
S50A  Richmond         26.24   5  P      P       06 45 23.0 -0.6
           baz=186
S51A  Beattyville      26.28   7  P      P       06 45 23.7 -0.3
S51A                              IAmb   IAmb    06 45 25.7
           comp=Z,9.1nm,0.8s
S51A  Beattyville      26.28   7  P      P       06 45 23.6 -0.3
           baz=188
BLA   Blacksburg       26.38  12  P      P       06 45 25.4 +0.5
           baz=195
T57A  Hurt             26.44  15  P      P       06 45 26.3 +0.9
           baz=198
MSTX  Muleshoe         26.51 330  P      P       06 45 25.9 -0.3
MSTX                              IAmb   IAmb    06 45 35.5
           comp=Z,17nm,0.9s
MSTX  Muleshoe         26.51 330  P      P       06 45 25.9 -0.3
           baz=144,SNR=13
WCI   Wyandotte Cave   26.68   2  P      P       06 45 26.9 -0.6
WCI   Wyandotte Cave   26.68   2  P      P       06 45 26.6 -0.9
           baz=182
S39A  Bolivar          26.68 349  P      P       06 45 26.1 -1.5
S39A                              IAmb   IAmb    06 45 34.4
           comp=Z,12nm,0.7s
CCM   Cathedral Cave   26.73 353  P      P       06 45 26.6 -1.3
CCM                               IAmb   IAmb    06 45 34.7
           comp=Z,13nm,0.9s
CCM   Cathedral Cave   26.73 353  P      P       06 45 26.9 -1.1
           baz=171
R49A  Shelbyville      26.79   4  P      P       06 45 27.6 -1.0
           baz=184
R50A  Paris            26.85   5  P      P       06 45 29.5 +0.5
           baz=186
S55A  Lewisburg        26.90  12  P      P       06 45 30.0 +0.4
           baz=194
R51A  Hillsboro        26.94   6  P      P       06 45 29.5 -0.3
           baz=188
U32A  Winter Ranch,    26.98 339  P      P       06 45 31.2 +0.8
Q48A  North Vernon     27.40   3  P      P       06 45 33.0 -1.0
           baz=183
Q51A  Peebles          27.68   7  P      P       06 45 36.0 -0.6
Q51A  Peebles          27.68   7  P      P       06 45 36.0 -0.6
           baz=188,SNR=14
Q52A  Bidwell          27.76   8  P      P       06 45 36.8 -0.4
           baz=190
Q53A  Leroy            27.77  10  P      P       06 45 37.1 -0.3
           baz=192
R57A  Stanardsville    27.86  15  P      P       06 45 38.6 +0.5
           baz=198
Q54A  Coxs Mills       28.01  11  P      P       06 45 39.4 -0.1
           baz=193
Q55A  Buckhannon       28.17  12  P      P       06 45 41.4 +0.4
           baz=195
121A  Cookes Peak, D   28.21 321  P      P       06 45 47.7 +6.1
           baz=133
P53A  Whipple          28.41  10  P      P       06 45 42.4 -0.7
P53A  Whipple          28.41  10  P      P       06 45 43.1 +0.1
           baz=192
P52A  Corning          28.44   8  P      P       06 45 41.0 -2.2
           baz=190
O49A  Covington        28.74   5  P      P       06 45 45.3 -0.6
           baz=186
O50A  Cable            28.76   6  P      P       06 45 45.1 -1.1
           baz=187,SNR=14
O51A  Pataskala        28.88   7  P      P       06 45 46.5 -0.7
           baz=189,SNR=5.4
ACSO  Alum Creek Sta   28.91   7  P      P       06 45 47.3 -0.2
           baz=188
P56A  Dayton Farm, R   28.93  14  P      P       06 45 48.0 +0.4
           baz=197
O52A  Adamsville       28.95   9  P      P       06 45 47.2 -0.7
           baz=191
HDIL  Hopedale         29.04 357  P      P       06 45 47.7 -0.9
           baz=176
P57A  Homestead Farm   29.11  15  P      P       06 45 50.2 +1.0
           baz=199,SNR=5.5
ANMO  Albuquerque      29.17 326  P      P       06 45 54.4 +4.3
           comp=Z,1.3nm,0.6s,baz=155,slow=13,SNR=8.7
ANMO  Albuquerque      29.17 326  P      P       06 45 56.1 +5.9
           baz=138
O53A  New Philadelph   29.18  10  P      P       06 45 49.4 -0.5
           baz=192
N50A  Nevada           29.43   6  P      P       06 45 52.0  0.0
           baz=188
N49A  Columbus Grove   29.48   5  P      P       06 45 50.9 -1.6
N49A                              IAmb   IAmb    06 45 52.6
           comp=Z,12nm,0.7s
N49A  Columbus Grove   29.48   5  P      P       06 45 51.4 -1.1
           baz=186,SNR=8.3
N52A  McGinn's Farm,   29.66   9  P      P       06 45 54.3 +0.2
           baz=191
PTGA  Pitinga          29.71 112  P      P       06 45 54.5 -0.4
           comp=Z,0.8nm,0.3s,baz=331,slow=3.0,SNR=4.9
PTGA                              LR     LR      06 58 33.5
           comp=Z,108nm,18.8s,baz=254,slow=38
N53A  Lisbon           29.78  10  P      P       06 45 54.9 -0.4
N53A                              IAmb   IAmb    06 45 56.0
           comp=Z,22nm,1.2s
N53A  Lisbon           29.78  10  P      P       06 45 54.8 -0.4
           baz=192
O57A  Amberson         29.89  15  P      P       06 45 56.8 +0.7
           baz=199
M50A  Fremont          30.07   6  P      P       06 45 56.1 -1.6
           baz=188
N54A  Moraine State    30.09  11  P      P       06 45 57.7 -0.2
           baz=194
SSPA  Standing Stone   30.23  14  P      P       06 45 58.0 -1.1
SSPA                              IAmb   IAmb    06 46 00.2
           comp=Z,12nm,1.1s
SSPA  Standing Stone   30.23  14  P      P       06 45 58.9 -0.2
           baz=198
O59A  Robesonia        30.37  17  P      P       06 46 01.0 +0.6
           baz=202
N56A  West Decatur     30.40  14  P      P       06 46 01.0 +0.4
           baz=197,SNR=5.9
M53A  WI Miller and    30.43  10  P      P       06 46 01.2 +0.3
           baz=193
L47A  Sherwood         30.46   3  P      P       06 45 59.7 -1.5
           baz=184
M54A  Oil Creek Stat   30.68  11  P      P       06 46 02.6 -0.5
M54A                              IAmb   IAmb    06 46 03.8
           comp=Z,16nm,1.4s
M54A  Oil Creek Stat   30.68  11  P      P       06 46 02.6 -0.5
           baz=194
L49A  Milan            30.69   5  P      P       06 46 02.5 -0.8
           baz=186
N58A  Sunbury          30.72  16  P      P       06 46 03.9 +0.4
           baz=200
M55A  Ridgway          30.82  13  P      P       06 46 04.7 +0.3
           baz=196
SDCO  Great Sand Dun   30.86 331  P      P       06 46 06.0 +0.8
SDCO  Great Sand Dun   30.86 331  P      P       06 46 05.9 +0.8
           baz=143
M56A  Emporium         30.96  13  P      P       06 46 05.6 -0.1
M56A                              IAmb   IAmb    06 46 06.5
           comp=Z,12nm,0.9s
M56A  Emporium         30.96  13  P      P       06 46 05.6 -0.1
           baz=197,SNR=6.6
L53A  Girard           31.00  10  P      P       06 46 05.7 -0.2
           baz=193,SNR=8.1
N59A  State Game Lan   31.05  17  P      P       06 46 06.1 -0.4
N59A                              IAmb   IAmb    06 46 07.9
           comp=Z,8.0nm,1.0s
N59A  State Game Lan   31.05  17  P      P       06 46 06.7 +0.3
           baz=202
M57A  Sunshine Farm,   31.08  15  P      P       06 46 06.9 +0.3
M57A  Sunshine Farm,   31.08  15  P      P       06 46 06.9 +0.3
           baz=199,SNR=6.2
K46A  Dorr             31.14   2  P      P       06 46 04.7 -2.5
           baz=183
W18A  Petrified Fore   31.16 323  P      P       06 46 13.9 +6.1
           baz=133
K47A  Vermontville     31.16   3  P      P       06 46 05.7 -1.7
           baz=184,SNR=6.5
ERPA  Erie             31.21  10  P      P       06 46 07.5 -0.3
           baz=194
M58A  Price's Panora   31.28  16  P      P       06 46 08.4 -0.1
           baz=200
K48A  Perry            31.35   4  P      P       06 46 07.6 -1.5
           baz=186,SNR=5.6
SAML  Samuel           31.38 129  P      P       06 46 09.6  0.0
SAML                              IAmb   IAmb    06 46 10.6
           comp=Z,11nm,0.9s
K49A  Clarkson         31.39   5  P      P       06 46 08.0 -1.4
           baz=187,SNR=6.3
L54A  Sinclairville    31.44  11  P      P       06 46 09.2 -0.7
           baz=195
JFWS  Jewell Farm      31.45 356  P      P       06 46 08.6 -1.4
           baz=174
S22A  4UR Ranch, Cre   31.51 329  P      P       06 46 11.8 +0.9
           baz=141
L55A  Hinsdale         31.57  13  P      P       06 46 09.3 -1.8
           baz=196
M59A  Waymart          31.72  17  P      P       06 46 13.3 +0.9
           baz=202
L56A  Greenwood        31.73  14  P      P       06 46 11.2 -1.2
L56A                              IAmb   IAmb    06 46 13.0
           comp=Z,12nm,1.0s
L56A  Greenwood        31.73  14  P      P       06 46 12.6 +0.2
           baz=198
X16A  Lo Mia Camp, P   31.74 320  P      P       06 46 13.8 +1.0
WVNY  West Valley, N   31.75  12  P      P       06 46 12.3 -0.3
WVNY                              IAmb   IAmb    06 46 14.3
           comp=Z,10nm,1.1s
M60A  Port Jervis      31.77  18  P      P       06 46 12.9 +0.2
           baz=204
L57A  Andrews Acres    31.77  15  P      P       06 46 12.7 -0.1
           baz=199
J48A  Bridge Port      31.87   5  P      P       06 46 12.3 -1.3
J48A  Bridge Port      31.87   5  P      P       06 46 12.3 -1.3
           baz=186
MVCO  Mesa Verde       31.96 327  P      P       06 46 16.1 +1.3
MVCO  Mesa Verde       31.96 327  P      P       06 46 16.0 +1.2
           baz=138
J49A  Marlette         31.99   6  P      P       06 46 14.1 -0.6
           baz=187
M61A  Granite Spring   32.02  19  P      P       06 46 14.5 -0.4
           baz=205
L58A  Harry Jones Me   32.07  16  P      P       06 46 15.3 -0.1
           baz=201
BINY  Binghamton       32.18  16  P      P       06 46 14.9 -1.5
BINY  Binghamton       32.18  16  P      P       06 46 16.5 +0.1
           baz=201,SNR=5.9
K56A  Middlesex        32.31  14  P      P       06 46 16.8 -0.8
           baz=198
L59A  Walton           32.43  17  P      P       06 46 17.7 -0.9
L59A  Walton           32.43  17  P      P       06 46 18.9 +0.3
           baz=203,SNR=5.5
I47A  Gladwin          32.54   4  P      P       06 46 17.8 -1.7
I47A  Gladwin          32.54   4  P      P       06 46 17.7 -1.7
           baz=185,SNR=6.5
K57A  Scipio Center    32.54  15  P      P       06 46 19.4 -0.1
           baz=200
I51A  Listowel         32.68   8  P      P       06 46 19.9 -0.8
           baz=191,SNR=6.3
I48A  Sherman Twp      32.76   5  P      P       06 46 20.7 -0.7
           baz=186
K58A  Earlville        32.80  16  P      P       06 46 21.0 -0.8
           baz=201
H43A  Windswept, Lux   32.90 359  P      P       06 46 20.7 -1.9
H43A                              IAmb   IAmb    06 46 21.8
           comp=Z,9.3nm,0.8s
J56A  Wolcott          32.97  14  P      P       06 46 22.6 -0.6
J56A  Wolcott          32.97  14  P      P       06 46 22.3 -0.9
           baz=199,SNR=8.9
K59A  Cooperstown      33.03  17  P      P       06 46 23.1 -0.7
           baz=202
H47A  Mio              33.13   4  P      P       06 46 23.3 -1.3
           baz=185
ECSD  EROS Data Cent   33.16 348  P      P       06 46 22.6 -2.3
ECSD  EROS Data Cent   33.16 348  P      P       06 46 23.4 -1.6
           baz=163,SNR=10
H48A  Harrisville      33.30   5  P      P       06 46 24.5 -1.7
H48A  Harrisville      33.30   5  P      P       06 46 24.9 -1.2
           baz=187,SNR=17
J57A  Williamstown     33.31  15  P      P       06 46 25.7 -0.5
J57A  Williamstown     33.31  15  P      P       06 46 25.6 -0.6
           baz=200,SNR=5.5
GLMI  Grayling         33.33   3  P      P       06 46 24.9 -1.5
           baz=184
L61B  Northampton      33.40  20  P      P       06 46 27.7 +0.6
           baz=206
LPAZ  La Paz           33.44 145  P      P       06 46 28.2 -0.1
           comp=Z,1.4nm,0.9s,baz=348,slow=10,SNR=5.3
J58A  Remsen           33.45  16  P      P       06 46 27.2 -0.3
J58A                              IAmb   IAmb    06 46 28.1
           comp=Z,12nm,1.1s
J58A  Remsen           33.45  16  P      P       06 46 27.1 -0.4
           baz=201
G45A  Suttons Bay      33.50   2  P      P       06 46 26.0 -1.9
G45A  Suttons Bay      33.50   2  P      P       06 46 26.1 -1.7
           baz=183,SNR=7.0
H52A  Wyevale          33.68  10  P      P       06 46 28.2 -1.2
           baz=193,SNR=5.7
G47A  Hillman          33.73   4  P      P       06 46 28.2 -1.6
           baz=186
J59A  Piesco           33.76  17  P      P       06 46 29.5 -0.7
           baz=203
I58A  Old Forge        33.84  16  P      P       06 46 30.1 -0.7
           baz=202
H53A  Bobcaygeon       33.84  11  P      P       06 46 29.7 -1.1
           baz=195,SNR=7.8
SADO  Sadowa           33.93  10  P      P       06 46 30.0 -1.6
           comp=Z,5.4nm,0.5s,baz=239,slow=4.7,SNR=6.1
SADO  Sadowa           33.93  10  IAmb   IAmb    06 46 31.4
           comp=Z,13nm,1.1s
SPMN  Marine on St.    33.99 353  P      P       06 46 30.0 -2.1
SPMN  Marine on St.    33.99 353  P      P       06 46 30.7 -1.4
           baz=170,SNR=5.8
O20A  White River Ci   34.05 331  P      P       06 46 34.0 +1.0
O20A                              IAmb   IAmb    06 46 44.9
           comp=Z,6.9nm,0.7s
O20A  White River Ci   34.05 331  P      P       06 46 34.4 +1.4
           baz=141
F45A  CMU Biological   34.15   2  P      P       06 46 32.2 -1.3
           baz=183
J61A  Chester          34.25  19  P      P       06 46 35.0 +0.6
           baz=206
I59A  Olmsteadville    34.25  17  P      P       06 46 33.7 -0.7
           baz=204
H56A  Elgin            34.36  14  P      P       06 46 34.1 -1.2
           baz=199
G53A  Haliburton       34.36  11  P      P       06 46 33.6 -1.7
           baz=195
H57A  Richville        34.45  15  P      P       06 46 35.1 -1.0
           baz=201
F49A  Sandfield        34.48   6  P      P       06 46 34.8 -1.6
           baz=189,SNR=8.0
F48A  Evansville       34.49   6  P      P       06 46 34.9 -1.5
           baz=188,SNR=10
COWI  Conover          34.57 358  P      P       06 46 34.6 -2.5
PLVO  Plevna           34.59  13  P      P       06 46 36.6 -0.7
PLVO                              IAmb   IAmb    06 46 37.3
           comp=Z,9.7nm,1.0s
MTPU  Mount Pierson    34.60 324  P      P       06 46 37.2 -0.8
G54A  Lake Saint Pet   34.73  11  P      P       06 46 37.3 -1.3
           baz=196,SNR=8.9
H58A  Gabriels         34.73  17  P      P       06 46 37.7 -0.8
           baz=203,SNR=5.2
E43A  Lone Tree Farm   34.81   0  P      P       06 46 37.2 -2.0
P17A  Butcher Ranch,   34.82 327  P      P       06 46 39.6  0.0
G55A  Calabogie        34.88  13  P      P       06 46 38.7 -1.1
           baz=198,SNR=5.8
F52A  Sundridge        34.89  10  P      P       06 46 38.4 -1.5
           baz=194,SNR=6.7
E47A  Iron Bridge      35.05   5  P      P       06 46 40.0 -1.3
           baz=187,SNR=20
E44A  Grand Marais A   35.07   2  P      P       06 46 39.6 -1.8
E44A  Grand Marais A   35.07   2  P      P       06 46 40.2 -1.2
           baz=182,SNR=6.6
E48A  Lockeyer         35.18   6  P      P       06 46 41.0 -1.4
           baz=188,SNR=13
ALGO  Algonquin Park   35.27  11  P      P       06 46 41.8 -1.4
           baz=196,SNR=8.2
D46A  Sault St. Mari   35.43   4  P      P       06 46 42.9 -1.7
           baz=185
E52A  Mattawa          35.48  10  P      P       06 46 43.4 -1.6
           baz=194,SNR=6.1
D41A  Chassel          35.51 358  P      P       06 46 43.4 -1.8
D41A                              IAmb   IAmb    06 46 44.3
           comp=Z,5.5nm,0.8s
F55A  Otter Lake       35.51  13  P      P       06 46 44.6 -0.6
           baz=198
E51A  G1948 Merrick    35.58   9  P      P       06 46 44.6 -1.3
           baz=193,SNR=10
D47A  Chapleau         35.66   5  P      P       06 46 44.7 -1.8
           baz=187,SNR=7.2
E53A  Dumoine, Ponti   35.75  11  P      P       06 46 45.8 -1.6
           baz=196
E54A  Lac Daplat, Po   35.90  12  P      P       06 46 47.2 -1.4
           baz=197,SNR=6.6
D48A  Paudash Townsh   35.90   6  P      P       06 46 46.8 -1.8
           baz=189,SNR=15
D51A  Lot 18 Range I   36.14   9  P      P       06 46 49.0 -1.7
           baz=193
D50A  G1974 Best Tow   36.15   9  P      P       06 46 48.9 -1.7
           baz=192,SNR=6.3
E55A  Montcerf-Lytto   36.16  13  P      P       06 46 49.7 -1.1
           baz=199
D53A  Lac Vacive, Po   36.42  11  P      P       06 46 52.0 -1.1
           baz=196
EYMN  Ely              36.55 355  P      P       06 46 52.6 -1.5
EYMN                              IAmb   IAmb    06 46 59.7
           comp=Z,5.2nm,0.8s
G62A  West of Eustis   36.58  20  P      P       06 46 54.2 -0.2
G62A                              IAmb   IAmb    06 46 55.4
           comp=Z,10nm,0.9s
G62A  West of Eustis   36.58  20  P      P       06 46 53.8 -0.6
           baz=208
E57A  Chemin Saint G   36.58  15  P      P       06 46 52.9 -1.5
           baz=202
MPMC  Manual Prospec   36.67 317  P      P       06 46 52.5 -3.1
           baz=124,SNR=5.8
D54A  Lac Fusel, La    36.70  12  P      P       06 46 54.1 -1.3
           baz=197,SNR=10
BW06  Boulder Array    36.73 332  P      P       06 46 55.7 -0.3
BW06  Boulder Array    36.73 332  P      P       06 46 55.6 -0.3
           baz=141
PD31  Pinedale Array   36.73 332  P      P       06 46 55.7 -0.3
PDAR  Pinedale Array   36.73 332  P      P       06 46 55.5 -0.6
           comp=Z,1.7nm,0.5s,baz=126,slow=11,SNR=17
PDAR                              PcP    PcP     06 49 17.0 -1.4
           comp=Z,0.6nm,0.7s,baz=132,slow=2.2,SNR=3.8
PDAR                              ScP    ScP     06 53 06.3 +2.2
           comp=Z,0.8nm,0.8s,baz=102,slow=6.4,SNR=6.2
PDAR  Pinedale Array   36.73 332  P      P       06 46 55.1 -0.9
E58A  La Victoria      36.78  16  P      P       06 46 55.1 -1.0
           baz=203
HWUT  Hardware Ranch   36.81 329  IAmb   IAmb    06 47 07.5
           comp=Z,7.9nm,0.8s
R11A  Troy Canyon, C   36.82 322  P      P       06 46 59.8 +3.0
           baz=129
D55A  Sainte-Anne-du   36.83  14  P      P       06 46 55.3 -1.2
           baz=199,SNR=9.3
D56A  ZEC Mazanza, M   37.02  14  P      P       06 46 56.9 -1.3
           baz=200
D57A  Chemin Vers le   37.21  15  P      P       06 46 58.6 -1.2
           baz=202
AGMN  Agassiz Nation   37.42 351  P      P       06 46 59.3 -2.3
AGMN  Agassiz Nation   37.42 351  P      P       06 46 59.9 -1.7
           baz=166,SNR=12
AHID  Auburn Hatcher   37.45 331  P      P       06 47 02.2 +0.1
AHID                              IAmb   IAmb    06 47 07.6
           comp=Z,5.8nm,0.6s
D58A  Chemin du LacG   37.55  16  P      P       06 47 01.6 -1.0
           baz=203
MDND  Maddock          37.73 346  P      P       06 47 03.6 -0.6
           baz=160
REDW  Red Top Meadow   37.79 332  P      P       06 47 05.2 +0.2
SNOW  Snow King Moun   37.82 332  P      P       06 47 05.5 +0.2
LATQ  La Tuque         37.84  16  P      P       06 47 03.9 -1.1
           baz=203
D60A  Saint Jean D'O   37.95  18  P      P       06 47 05.1 -0.9
           baz=206
FXWY  Fox Creek        38.08 332  P      P       06 47 09.9 +2.4
ELK   Elko             38.17 325  P      P       06 47 10.6 +2.3
           comp=Z,1.8nm,0.8s,baz=141,slow=7.3,SNR=8.4
FLWY  Flagg Ranch      38.27 332  P      P       06 47 10.6 +1.5
FLWY                              IAmb   IAmb    06 47 17.4
           comp=Z,4.8nm,0.8s
D61A  St Aubert, Com   38.44  19  P      P       06 47 09.6 -0.5
           baz=207
LSQQ  Lebel-sur-Quev   38.46  11  P      P       06 47 08.4 -1.9
           baz=196
RLMT  Red Lodge        38.47 335  P      P       06 47 11.7 +1.0
RLMT  Red Lodge        38.47 335  P      P       06 47 11.0 +0.2
           baz=144
NVAR  Mina Array Bea   38.56 320  P      P       06 47 12.7 +1.1
           comp=Z,1.8nm,0.8s,baz=141,slow=7.7,SNR=4.3
NVAR                              PcP    PcP     06 49 23.7 -0.4
           comp=Z,1.1nm,0.8s,baz=139,slow=4.6,SNR=5.2
LAO   LASA Array       38.61 339  P      P       06 47 14.9 +3.2
           baz=149
YNE   Yellowstone No   38.70 334  P      P       06 47 13.7 +1.0
D62A  Allapoint, All   38.70  20  P      P       06 47 11.8 -0.6
           baz=209
KVN   Kaiserville      38.80 320  P      P       06 47 13.8 +0.2
MATQ  Matagami         39.02  10  P      P       06 47 13.1 -1.9
           baz=195,SNR=12
YHL   Hebgen Lake      39.09 333  P      P       06 47 17.4 +1.4
ULM   Lac du Bonnet    39.33 351  P      P       06 47 15.1 -2.4
           comp=Z,7.1nm,0.6s,baz=167,slow=8.7,SNR=22
ULM                               ScP    ScP     06 53 13.9 +0.4
           comp=Z,1.2nm,0.8s,baz=117,slow=6.8,SNR=3.9
ULM   Lac du Bonnet    39.33 351  P      P       06 47 14.6 -2.9
ULM                               IAmb   IAmb    06 47 22.7
           comp=Z,10nm,0.8s
DGMT  Dagmar           39.52 342  P      P       06 47 18.8 -0.4
           baz=153
EGMT  Eagleton         41.03 337  P      P       06 47 32.2 +0.4
           baz=145
SCHQ  Schefferville    46.18  16  P      P       06 48 10.5 -2.6
           comp=Z,1.8nm,0.4s,baz=228,slow=4.5,SNR=10
SCHQ  Schefferville    46.18  16  P      P       06 48 11.1 -2.0
SCHQ                              IAmb   IAmb    06 48 12.1
           comp=Z,7.6nm,1.1s
BDFB  Brasilia         47.28 124  P      P       06 48 21.2 -1.1
           comp=Z,4.8nm,0.5s,baz=358,slow=3.5,SNR=13
BDFB  Brasilia         47.28 124  P      P       06 48 22.7 +0.4
CPUP  Villa Florida    47.52 143  P      P       06 48 23.2 -0.8
           comp=Z,1.5nm,0.8s,baz=317,slow=6.6,SNR=4.2
PLCA  Paso Flores      54.18 164  P      P       06 49 13.3 -0.7
           comp=Z,4.3nm,0.8s,baz=344,slow=5.6,SNR=3.3
PLCA  Paso Flores      54.18 164  P      P       06 49 14.9 +0.9
PLCA                              IAmb   IAmb    06 49 26.0
           comp=Z,12nm,1.4s
YKA   Yellowknife Ar   54.61 345  P      P       06 49 14.9 -1.8
           comp=Z,1.8nm,0.8s,baz=142,slow=7.7,SNR=34
YKA                               PcP    PcP     06 50 19.2 -0.3
           comp=Z,0.7nm,0.7s,baz=145,slow=4.8,SNR=5.6
YKA                               ScP    ScP     06 54 17.1  0.0
           comp=Z,1.0nm,0.9s,baz=143,slow=4.7,SNR=8.1
SFJD  Kangerlussuaq    60.63  16  P      P       06 49 55.4 -3.6
INK   Inuvik           64.20 343  P      P       06 50 21.5 -1.3
           comp=Z,1.1nm,0.8s,baz=129,slow=8.5,SNR=5.4
ILAR  Eielson Array    67.00 336  P      P       06 50 39.9 -1.1
           comp=Z,0.5nm,0.6s,baz=139,slow=6.0,SNR=11
BOSA  Boshof          115.11 116  PKP    PKPdf   06 58 29.7 -0.7
           comp=Z,1.5nm,0.7s,baz=285,slow=11,SNR=3.3
SONM  Songino Array   119.74 349  PKP    PKPdf   06 58 37.4 -1.4
           comp=Z,0.3nm,0.4s,baz=287,slow=0.7,SNR=6.4
MKAR  Makanchi Array  121.27   8  PKP    PKPdf   06 58 39.0 -2.7
           comp=Z,0.1nm,0.3s,baz=310,slow=3.3,SNR=5.4
KSH   Kashi           126.95  16  PKP    PKiKP   06 58 54.5 +1.0
KSH                               sPKP           06 59 08.3
KSH                               PP     PP      07 00 56.7 +7.2
KSH                               SKS    SKSdf   07 06 01.3 -2.7
KSH   Kashi           126.95  16  SS     SS      07 17 57.8 +2.7
LZH   Lanzhou         131.57 348 ePKP    PKPdf   06 59 00.3 -1.6
LZH                               pPKP   sPKPdf  06 59 16.2 +5.3
LZH                               sPKP           06 59 22.5
CD2   Chengdu         136.57 346  PKP    PKPdf   06 59 09.5 -1.8
ASAR  Alice Springs   139.05 247  PKP    PKPdf   06 59 16.1 +0.1
           comp=Z,1.4nm,0.8s,baz=105,slow=2.2,SNR=11
WRA   Warramunga Arr  139.15 253  PKP    PKPdf   06 59 15.8 -0.3
           comp=Z,1.7nm,0.7s,baz=93,slow=1.1,SNR=12
WRA   Warramunga Arr  139.15 253         PKPdf   06 59 17.0 +0.8
FITZ  Fitzroy Crossi  147.53 254  PKPbc  PKPbc   06 59 33.3 -0.2
           comp=Z,4.2nm,0.8s,baz=85,slow=4.8,SNR=6.5
CMAR  Chiang Mai Arr  149.65 348  PKP    PKPdf   06 59 34.5 +0.1
           comp=Z,1.3nm,0.3s,baz=90,slow=1.4,SNR=9.8
CMAR                              PKPbc  PKiKP   06 59 39.4 -0.7
           comp=Z,0.7nm,0.3s,baz=40,slow=16,SNR=3.0
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*IDC **11** 06:54:37.6±4.9, 6.°88S×127.°27E, h409km±65km, mb3.0/3, mb1 3.0/7, mb1mx2.9/31, mbtmp3.8/7, Error ellipse: s-maj=90.6km s-min=19.1km az=55.0*

ISC 11 06:54:32.4±1.1, **6.°6S**±0.°1×**127.°9E**±0.°2, **h350**km, **n7**, σ**1.s60**/8, **mb3.3**/3, **Banda Sea**

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Code  Station Name      Δ°   AZ°  Phase ID          Time      Res
                                  Op     ISC     h  m  s     ISC
KAPI  Kappang           8.22 281  P      Pn      06 56 29.2  0.0
           1.5nm,0.3s,baz=158,slow=7.6,SNR=4.1
FITZ  Fitzroy Crossi   11.61 191  P      P       06 57 09.4 -0.3
           0.4nm,0.3s,baz=20,slow=9.3,SNR=8.5
WRA   Warramunga Arr   14.66 155  P      Pn      06 57 45.7 +0.3
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	0.4nm,0.3s,baz=325,slow=12,SNR=27						
WRA				S	S	07 00 19.6	-2.1
	0.1nm,0.3s,baz=330,slow=22,SNR=2.0						
ASAR	Alice Springs	17.91	162	P	P	06 58 21.0	+2.5
	0.2nm,0.3s,baz=343,slow=12,SNR=12						
SONM	Songino Array	57.44	343	P	P	07 03 46.3	+0.6
	0.7nm,0.8s,baz=168,slow=7.6,SNR=5.1						
MKAR	Makanchi Array	66.76	328	P	P	07 04 46.3	-0.7
	0.3nm,0.5s,baz=129,slow=7.9,SNR=5.2						
ZALV	Zalesovo Beam	70.32	335	P	P	07 05 07.5	-1.2
	0.8nm,0.3s,baz=126,slow=7.3,SNR=1.7						

WEL 11 06:55:14.6, 42°S±2°×17°3E±°, h79^{km}±2^{km}, M3.9/89, ML3.9/10, MLv3.9/89, Error ellipse: s-maj=0.0km s-min=0.0km az=87.5, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THZ	Tophouse	0.26	191	P	Pn	06 55 27.2	+0.6
THZ				S	Sn	06 55 36.3	+0.8
NNZ	Nelson	0.42	46	P	Pn	06 55 27.9	+0.3
NNZ				S	Sn	06 55 37.5	+0.2
BSWZ	Blackbirch Sta	0.71	107	P	Pn	06 55 31.0	+0.7
BSWZ				S	Sn	06 55 44.1	+2.2
TUWZ	Tuamarina	0.73	84	P	Pn	06 55 31.0	+0.5
QRZ	Quartz Range	0.76	334	P	Pn	06 55 31.3	+0.4
QRZ				S	Sn	06 55 43.6	+0.6
DSZ	Denniston Nort	0.91	255	P	Pn	06 55 32.8	+0.2
DSZ				S	Sn	06 55 47.8	+1.9
CMWZ	Cape Campbell	0.96	105	P	Pn	06 55 33.6	+0.5
KHZ	Kahutara	1.00	155	P	Pn	06 55 34.0	+0.4
DUWZ	D’Urville Isla	1.01	46	P	Pn	06 55 34.2	+0.5
TCW	Tory Channel	1.03	73	P	Pn	06 55 34.4	+0.5
LTZ	Lake Taylor	1.37	202	P	Pn	06 55 38.7	+0.5
BHW	Baring Head	1.43	87	P	Pn	06 55 38.1	-0.8
GVZ	Greta Valley S	1.46	178	P	Pn	06 55 39.4	0.0
KIW	Kapiti Island	1.60	67	P	Pn	06 55 41.0	-0.1
CAW	Cannon Point	1.63	76	P	Pn	06 55 40.8	-0.8
INZ	Inchbonnie	1.66	223	P	Pn	06 55 42.4	+0.4
AMCZ	Amberley	1.68	188	P	Pn	06 55 42.1	-0.1
MSWZ	Moikau Station	1.71	88	P	Pn	06 55 41.3	-1.3
PLWZ	Palliser	1.71	93	P	Pn	06 55 41.2	-1.4
OGWZ	Otaki Gorge	1.80	68	P	Pn	06 55 43.2	-0.6
PAWZ	Paruwai Farm	1.85	87	P	Pn	06 55 42.8	-1.6
MTW	Mount Morrison	1.94	80	P	Pn	06 55 44.0	-1.6
OXZ	Oxford	1.94	201	P	Pn	06 55 44.9	-0.8
HOWZ	Holdsworth Sta	2.01	73	P	Pn	06 55 45.2	-1.5
TRWZ	Traveller	2.04	88	P	Pn	06 55 45.5	-1.5
MRZ	Mangatainoka R	2.14	68	P	Pn	06 55 47.0	-1.3
NMEZ	Namu Road	2.21	19	P	Pn	06 55 50.7	+1.5
MQZ	McQueen’s Vall	2.21	186	P	Pn	06 55 47.4	-1.8
OKCZ	Okains Bay	2.21	178	P	Pn	06 55 48.4	-0.9
TMWZ	Te Maipa	2.23	81	P	Pn	06 55 47.7	-1.9
WVZ	Waitaha Valley	2.28	226	P	Pn	06 55 50.5	+0.4
TIWZ	Tintock	2.32	73	P	Pn	06 55 48.9	-1.8
LREZ	Lake Rotokare	2.32	28	P	Pn	06 55 52.4	+1.7
WAZ	Wanganui	2.33	42	P	Pn	06 55 52.0	+1.1
NBEZ	Newall Road No	2.34	17	P	Pn	06 55 52.2	+1.2
PREZ	Palmer Road	2.35	23	P	Pn	06 55 52.3	+1.2
KHEZ	Kahui Hut	2.35	20	P	Pn	06 55 52.2	+0.9
AKCZ	Akaroa Harbour	2.36	181	P	Pn	06 55 50.3	-1.0
PKE	Pukeiti	2.44	19	P	Pn	06 55 53.4	+1.0
PRWZ	Pori Road	2.46	68	P	Pn	06 55 51.0	-1.6
DREZ	Durham Road	2.50	22	P	Pn	06 55 54.1	+0.9
CPWZ	Castlepoint	2.51	77	P	Pn	06 55 51.8	-1.5
BFZ	Birch Farm	2.61	73	P	Pn	06 55 52.3	-2.3
RPZ	Rata Peaks	2.62	212	P	Pn	06 55 53.8	-1.0
TSZ	Takapari Road	2.69	58	P	Pn	06 55 54.2	-1.6
DVHZ	Dannevirke	2.71	64	P	Pn	06 55 53.8	-2.2
VRZ	Vera Road	2.75	30	P	Pn	06 55 57.6	+1.1
ANWZ	Angora Road	2.85	70	P	Pn	06 55 55.5	-2.3
MTVZ	Mangateitei	2.85	43	P	Pn	06 55 58.2	+0.2
PKVZ	Pokaka	2.87	40	P	Pn	06 55 59.5	+1.3
PNHZ	Pukenui	2.93	58	P	Pn	06 55 56.9	-2.0
TRVZ	Turoa	2.96	42	P	Pn	06 55 59.8	+0.3
WHVZ	Whangaehu Hut	2.99	43	P	Pn	06 55 59.9	-0.1
FWVZ	Far West T-bar	2.99	42	P	Pn	06 56 00.6	+0.6
TUVZ	Tukino	3.04	43	P	Pn	06 56 00.5	-0.1
PRHZ	Porangahau	3.04	67	P	Pn	06 55 58.3	-2.1
NGZ	Ngauruhoe	3.08	42	P	Pn	06 56 01.8	+0.7
TWVZ	Taurewa	3.08	39	P	Pn	06 56 02.7	+1.6
FOZ	Fox Glacier	3.09	228	P	Pn	06 56 01.1	0.0
BHHZ	Black Hill Sta	3.10	50	P	Pn	06 56 00.1	-1.3
WTVZ	West Tongariro	3.12	41	P	Pn	06 56 01.7	0.0
KRVZ	Karewarewa	3.16	41	P	Pn	06 56 02.7	+0.5
KRHZ	Kereru	3.19	55	P	Pn	06 56 00.3	-2.2
KATZ	Kakaramea	3.28	40	P	Pn	06 56 06.4	+2.6
PXZ	Pawanui	3.30	65	P	Pn	06 56 01.3	-2.6
HIZ	Hauiti	3.33	26	P	Pn	06 56 04.6	+0.3
KWHZ	Kaweka Forest	3.36	53	P	Pn	06 56 02.9	-1.9
RITZ	Rihia Road	3.36	42	P	Pn	06 56 06.5	+1.7
RATZ	Rangitukua	3.40	40	P	Pn	06 56 08.3	+2.9
KAHZ	Kahuranaki	3.43	61	P	Pn	06 56 03.4	-2.4
WATZ	Wairara	3.51	38	P	Pn	06 56 08.9	+2.0
MCHZ	McNeill Hill	3.51	55	P	Pn	06 56 05.2	-1.6
LBZ	Lake Benmore	3.53	215	P	Pn	06 56 05.4	-1.7
HATZ	Hinemaiaia	3.54	43	P	Pn	06 56 08.1	+0.8
BKZ	Black Stump Fm	3.57	50	P	Pn	06 56 05.6	-2.0
TLZ	Tolley Road	3.74	33	P	Pn	06 56 10.7	+0.7
NMHZ	Naumai	3.79	52	P	Pn	06 56 08.7	-2.0
ODZ	Otahua Downs	3.92	205	P	Pn	06 56 11.4	-1.0
MTHZ	Maungataniwha	3.98	49	P	Pn	06 56 10.6	-2.6
JCZ	Jackson Bay	4.01	229	P	Pn	06 56 13.0	-0.7
TOZ	Tahuroa Road	4.25	28	P	Pn	06 56 17.1	+0.2
WKZ	Wanaka	4.40	220	P	Pn	06 56 16.7	-2.3
MHGZ	Mahia Peninsul	4.45	60	P	Pn	06 56 16.0	-3.5
EAZ	Earnscleugh	4.58	214	P	Pn	06 56 20.2	-1.1
AWAZ	Awhitu Peninsu	4.63	17	P	Pn	06 56 23.4	+1.4
MKAZ	Moumakai	4.72	22	P	Pn	06 56 23.6	+0.4
WTAZ	Waiatarua	4.74	16	P	Pn	06 56 25.2	+1.6
MSZ	Milford Sound	4.86	228	P	Pn	06 56 25.3	+0.2
RVAZ	Riverhead Bore	4.90	15	P	Pn	06 56 27.6	+1.9
MBAZ	Motutapu North	4.97	18	P	Pn	06 56 25.5	-1.2
WIAZ	Waiheke Island	5.00	20	P	Pn	06 56 27.6	+0.5
RUGZ	Raukumara Rang	5.07	47	P	Pn	06 56 25.5	-2.7
TWGZ	Tauwhareparae	5.09	51	P	Pn	06 56 25.2	-3.2
KUZ	Kuaotunu	5.22	25	P	Pn	06 56 30.1	+0.1
MLZ	Mavora Lakes	5.23	221	P	Pn	06 56 28.8	-1.4
HAZ	Te Kaha	5.28	46	P	Pn	06 56 28.7	-2.2
WCZ	Waipu Caves	5.67	11	P	Pn	06 56 37.2	+1.0
WHZ	Wether Hill Ro	5.70	218	P	Pn	06 56 36.0	-0.6
SYZ	Scrubby Hill	5.73	208	P	Pn	06 56 36.3	-0.7
CTZ	Chatham Island	7.99	110	P	Pn	06 57 05.3	-2.6

*NEIC **11** 07:05:19.6±1.2, 11°.4S±0°.1×13°.0W±0°.1, h10^{km}±1^{km}, mb4.6/13, Error ellipse: s-maj=21.3km s-min=14.3km az=52.0*

*IDC **11** 07:05:19.4±1.2, 11°.33S×13°.04W, h0^{km}, mb4.1/8, mb1 4.2/8, mb1mx3.8/38, mbtmp4.0/8, MS3.9/27, Ms1 3.9/27, ms1mx3.8/45, Error ellipse: s-maj=40.1km s-min=23.1km az=138.0*

ISC 11 07:05:20.5±0.6, **11°.4S**±0°.1×**13°.0W**±0°.1, **h13^{km}, n49,** σ**1^{s}00**/24, **mb4.4**/13, **MS3.9**/26, **Ascension Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	2.93	326	T	T	07 09 20.9	
	baz=146,slow=74,SNR=151						
H10S3	ASCENSION HYDR	2.95	326	T	T	07 09 26.2	
	baz=74,slow=74,SNR=255						
ASCN	Ascension	3.71	339	Pn	Pn	07 06 17.3	-0.3
SHEL	Horse Pasture	8.37	123	Pn	Pn	07 07 20.6	-1.0
DBIC	Dimbokro	19.70	25	LR	LR	07 15 38.3	
	comp=Z,197nm,19.5s,baz=184,slow=32						
RCBR	Riachuelo	23.31	282	LR	LR	07 17 05.1	
	comp=Z,525nm,21.1s,baz=90,slow=30						
TOA0	Torodi Ar. Sit	28.42	31	P	P	07 11 14.7	-0.5
TORD	Torodi Ar. Bea	28.42	31	P	P	07 11 14.2	-0.9
	1.3nm,0.7s,baz=212,slow=9.5,SNR=5.1						
TORD				LR	LR	07 20 53.4	
	comp=Z,282nm,20.1s,baz=230,slow=33						
TORD	Torodi Ar. Bea	28.42	31	P	P	07 11 15.0	-0.1
BDFB	Brasilia	34.28	259	P	P	07 12 07.3	+0.4
	3.7nm,0.9s,baz=70,slow=10,SNR=5.1						
BDFB				LR	LR	07 23 06.1	
	comp=Z,355nm,21.9s,baz=102,slow=31						
BDFB	Brasilia	34.28	259	P	P	07 12 07.0	+0.1
BDFB				IAmb	IAmb	07 12 17.0	
	comp=Z,7.8nm,1.2s						
BOSA	Boshof	39.58	121	LR	LR	07 26 33.0	
	comp=Z,231nm,20.0s,baz=280,slow=32						
MDP	Montagnes des	42.73	290	LR	LR	07 28 37.3	
	comp=Z,101nm,18.2s,baz=88,slow=33						
CPUP	Villa Florida	44.27	244	P	P	07 13 29.3	-0.8
	comp=Z,1.8nm,0.9s,baz=76,slow=12,SNR=3.2						
CPUP				LR	LR	07 29 20.7	
	comp=Z,243nm,18.5s,baz=82,slow=33						
SIV	San Ignacio	46.85	259	P	P	07 13 51.8	+1.0
	comp=Z,1.5nm,0.9s,baz=122,slow=8.9,SNR=9.2						
PAB	San Pablo	51.33	9	P	P	07 14 24.0	-0.7
PAB				IAmb	IAmb	07 14 42.5	
	comp=Z,9.5nm,1.6s						
KEST	Kesra	51.42	23	LR	LR	07 35 42.4	
	comp=Z,97nm,21.6s,baz=201,slow=36						
ESDC	Sonseca Array	51.52	9	LR	LR	07 35 07.5	
	comp=Z,92nm,19.2s,baz=35,slow=35						
LPAZ	La Paz	53.63	258	P	P	07 14 44.3	+1.5
	comp=Z,1.0nm,0.8s,baz=109,slow=9.4,SNR=5.0						
LPAZ				LR	LR	07 36 08.3	
	comp=Z,106nm,20.5s,baz=84,slow=34						
LPAZ	La Paz	53.63	258	P	P	07 14 42.1	-0.7
PB11	IPOC Station P	55.00	254	P	P	07 14 51.8	-0.5
PB11				IAmb	IAmb	07 14 54.9	
	comp=Z,6.9nm,0.9s						
PLCA	Paso Flores	58.16	229	LR	LR	07 35 35.3	
	comp=Z,86nm,22.0s,baz=130,slow=31						
IDI	Anoyia	58.67	36	LR	LR	07 41 00.9	
	comp=Z,49nm,19.8s,baz=241,slow=36						
SJG	San Juan	60.11	299	LR	LR	07 37 33.5	
	comp=Z,60nm,18.9s,baz=90,slow=32						
SNAA	Sanae	60.54	176	P	P	07 15 31.9	+1.7
	comp=Z,2.4nm,0.8s,baz=325,slow=9.3,SNR=4.9						
SNAA	Sanae	60.54	176	P	P	07 15 30.6	+0.4
SNAA				IAmb	IAmb	07 15 33.1	
	comp=Z,10nm,1.3s						
SDV	Santo Domingo	60.77	287	P	P	07 15 33.1	+0.2
SDV				IAmb	IAmb	07 15 38.7	
	comp=Z,4.6nm,1.0s						
DAVOX	Davos/Dischmat	61.45	18	LR	LR	07 41 52.0	
	comp=Z,162nm,18.9s,baz=218,slow=36						
EIL	Elat	61.66	47	LR	LR	07 41 03.7	
	comp=Z,69nm,20.0s,baz=284,slow=35						
ROSC	El Rosal	63.11	281	LR	LR	07 42 47.4	
	comp=Z,166nm,18.5s,baz=74,slow=36						
FLOC	Florencia	63.59	278	P	P	07 15 51.4	-0.3
GERES	GERESS Array B	64.47	19	LR	LR	07 45 06.3	
	comp=Z,145nm,18.1s,baz=258,slow=37						
VRAC	Vranov	65.83	21	LR	LR	07 45 17.5	
	comp=Z,170nm,18.3s,baz=12,slow=36						
OTAV	Otavalo	66.02	275	P	P	07 16 07.7	-0.4
OTAV				IAmb	IAmb	07 16 11.8	
	comp=Z,5.6nm,1.1s						
MLR	Muntele Rosu	66.63	29	P	P	07 16 11.7	+0.9
BRTR	Keskin Array B	66.79	38	LR	LR	07 45 05.3	
	comp=Z,45nm,20.4s,baz=225,slow=36						
AKASG	Malin Array Be	71.94	27	LR	LR	07 48 22.2	
	comp=Z,61nm,20.3s,baz=10.0,slow=36						
GNI	Garni	74.04	42	LR	LR	07 49 03.4	
	comp=Z,47nm,21.9s,baz=276,slow=36						
MAW	Mawson	74.13	157	LR	LR	07 41 55.2	
	comp=Z,92nm,18.7s,baz=246,slow=30						
BORG	Borgarnes	76.20	356	LR	LR	07 46 02.4	
	comp=Z,79nm,19.2s,baz=296,slow=32						
FINES	FINESS Array B	78.85	18	P	P	07 17 25.5	+2.5
	comp=Z,2.0nm,0.8s,baz=176,slow=5.5,SNR=1.8						
GEYT	Alibeck	82.49	49	LR	LR	07 53 26.3	
	comp=Z,52nm,21.8s,baz=180,slow=35						
VNDA	Vanda	91.17	179	LR	LR	07 52 35.3	
	comp=Z,80nm,18.2s,baz=200,slow=31						
AGMN	Agassiz Nation	93.73	318	P	P	07 18 36.1	-1.0
ULM	Lac du Bonnet	94.17	320	LR	LR	07 54 34.7	
	comp=Z,92nm,19.3s,baz=94,slow=31						
AAK	Ala-Archa	95.80	48	LR	LR	08 05 34.7	
	comp=Z,53nm,20.0s,baz=318,slow=38						
TXAR	Lajitas Array	96.08	299	P	P	07 18 48.6	+0.2
	comp=Z,0.4nm,0.9s,baz=130,slow=5.5,SNR=4.2						
TXAR	Lajitas Array	96.08	299	P	P	07 18 47.8	-0.7
TX31	Lajitas Ar. Si	96.08	299	P	P	07 18 47.0	-1.4
TX31				IAmb	IAmb	07 18 51.5	
	comp=Z,5.0nm,1.6s						

*UPA **11** 07:19:56.2±2.9, 10°.31N×83°.00W, h26^{km}±36^{km}, MW3.8*

*UCR **11** 07:19:58.0±1.6, 10°.10N×83°.11W, h24^{km}±3^{km}*

ISC 11 07:19:54.0±1.5, **10°.24N**±0°.05×**83°.03W**±0°.04, **h8^{km}**±11^{km}, **n25,** σ**0^{s}69**/39, **1D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNI2	El Empalme, Bo	0.98	146	eP	Pb	07 20 13.8	+0.6
CNI2				eS	Sg	07 20 25.6	+0.1
SJS	Escuela Geolog	1.05	254	eP	Pn	07 20 15.8	+0.5
SJS				eS	Sb	07 20 29.1	+0.4
LCR2	La Lucha 2	1.08	243	eP	Pb	07 20 15.4	+0.3
LCR2				eS	Sg	07 20 28.5	-0.3
EDBA	Buenos Aires	1.09	193	⇓eP	Pb	07 20 15.3	0.0
EDBA				eS	Sg	07 20 28.8	-0.5
HDC	Heredia	1.10	258	eP	Pn	07 20 16.3	+0.5
HDC				eS	Sb	07 20 29.7	-0.2
HDC	Heredia	1.10	258	eP	Pn	07 20 16.1	+0.2
HDC				eS	Sb	07 20 30.6	+0.7
EDLM	Las Mercedes	1.10	210	eP	Pg	07 20 15.0	-0.2
EDLM				eS	Sg	07 20 28.4	-1.1
EDPN	Palmar Norte	1.34	199	eP	Pg	07 20 20.2	+0.5
EDPN				eS	Sn	07 20 37.4	+0.3
EDSV	San Vito	1.41	178	eP	Pg	07 20 21.1	+0.1
BRU2	Volcan	1.47	167	eP	Pn	07 20 21.4	+0.3
BRU2				eS	Sn	07 20 39.5	-1.1
BRU2	Volcan	1.47	167	eP	Pn	07 20 21.5	+0.5
BRU2				eS	Sn	07 20 39.7	-0.9
CHGR2	Aguacate	1.56	146	eP	Pn	07 20 21.1	-1.0
CHGR2				eS	Sn	07 20 40.9	-1.7
BCO2	Palmira	1.59	162	eP	Pn	07 20 23.3	+0.7
BCO2				eS	Sn	07 20 43.1	-0.4
PTAR3	Potrerillos Ar	1.62	161	eP	Pb	07 20 24.4	+0.1
PTAR3				eS	Sn	07 20 44.2	0.0
CEDE	Laguna Cedeo	1.67	279	eP	Pg	07 20 26.3	+0.3
PTJ1	Puerto Jimnez	1.71	189	eP	Pn	07 20 24.8	+0.6
DVD	David	1.88	162	eP	Pb	07 20 27.9	-0.7
DVD				eS	Sn	07 20 50.5	+0.1
JTS	Las Juntas de	1.90	272	eP	Pb	07 20 28.8	-0.1
LOMA3	Las Lomas, Chi	1.90	161	eS	Sb	07 20 52.3	-0.7
LOCO3	Loma Colorada,	1.91	162	eS	Sb	07 20 54.0	+0.8
PEDE3	Pedregal, Chir	1.94	162	eS	Sb	07 20 53.6	-0.3
ESPN	Las Esperanzas	2.31	327	eP	Pb	07 20 35.3	-0.7
GMAL	Guarumal, Vera	3.03	144	eP	Pn	07 20 43.0	+0.7
GMAL	Guarumal, Vera	3.03	144	eP	Pn	07 20 43.6	+1.2
ZANG	Zanguenga, Cho	3.37	112	eP	Pn	07 20 48.2	+1.2

*IDC **11** 07:22:37.8±1.5, 32°.22N×40°.33W, h0^{km}, mb3.7/7, mb1 3.9/7, mb1mx3.5/57, mbtmp3.7/7, MS3.5/1, Ms1 3.5/1, ms1mx2.8/51, Error ellipse: s-maj=54.9km s-min=22.4km az=10.0*

*NEIC **11** 07:22:40.3±1.1, 32°.3N±0°.2×40°.4W±0°.1, h10^{km}±2^{km}, mb4.5/12, Error ellipse: s-maj=29.8km s-min=19.4km az=170.0*

ISC 11 07:22:39.9±0.9, **32°.2N**±0°.2×**40°.34W**±0°.09, **h10^{km}, n32,** σ**0^{s}77**/26, **mb4.1**/13, **Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMOZ	Porto Moniz, M	19.52	82	P	P	07 27 08.0	+0.5
DRLN	Deer Lake	21.31	328	P	P	07 27 26.5	-0.2
DRLN				IAmb	IAmb	07 27 33.3	
	comp=Z,18nm,1.1s						
SDDR	Presa de Saban	30.75	252	P	P	07 28 56.4	+0.8
J55A	Hilton	31.37	301	P	P	07 29 00.3	-0.3
J55A				IAmb	IAmb	07 29 09.8	
	comp=Z,13nm,0.9s						
R50A	Paris	36.16	292	P	P	07 29 42.5	+0.1
R50A				IAmb	IAmb	07 29 49.3	
	comp=Z,15nm,1.7s						
SFIN	Lafayette	38.17	296	P	P	07 29 59.8	+0.3
SFIN				IAmb	IAmb	07 30 05.2	
	comp=Z,7.3nm,1.1s						
E43A	Lone Tree Farm	38.20	305	P	P	07 30 00.7	+1.1
DBIC	Dimbokro	41.70	120	LR	LR	07 45 33.0	
	comp=Z,59nm,19.6s,baz=349,slow=33						
TORD	Torodi Ar. Bea	42.85	106	P	P	07 30 37.1	-1.3
	comp=Z,2.7nm,1.0s,baz=291,slow=5.2,SNR=8.5						
W41B	Gary Mavity, V	42.88	289	P	P	07 30 38.7	+0.2
H10N2	ASCENSION HYDR	46.87	144	T	T	08 20 59.6	
	baz=329,slow=75,SNR=18						
H10N3	ASCENSION HYDR	46.87	144	T	T	08 20 57.9	
	baz=329,slow=75,SNR=17						
H10N1	ASCENSION HYDR	46.88	144	T	T	08 20 52.0	
	baz=329,slow=75,SNR=20						
H10S3	ASCENSION HYDR	47.74	145	T	T	08 21 56.9	
	baz=329,slow=74,SNR=35						
H10S2	ASCENSION HYDR	47.76	145	T	T	08 21 59.6	
	baz=251,slow=74,SNR=18						
WHTX	Lake Whitney,	47.86	286		P	07 31 19.0	+0.9
WHTX				IAmb	IAmb	07 31 28.1	
	comp=Z,12nm,1.6s						
AKASG	Malin Array Be	53.28	48	P	P	07 31 57.9	-0.7
	comp=Z,0.5nm,0.4s,baz=273,slow=6.6,SNR=6.7						
AKASG	Malin Array Be	53.28	48	P	P	07 31 59.0	+0.3
TXAR	Lajitas Array	53.78	285	P	P	07 32 03.3	+0.5
	comp=Z,0.4nm,0.8s,baz=93,slow=6.8,SNR=4.8						
TXAR	Lajitas Array	53.78	285	P	P	07 32 01.7	-1.1
BW06	Boulder Array	54.50	302	P	P	07 32 07.2	-0.9
BW06				IAmb	IAmb	07 32 13.2	
	comp=Z,4.8nm,1.2s						
PD31	Pinedale Array	54.50	302	P	P	07 32 07.4	-0.8
PD31				IAmb	IAmb	07 32 13.2	
	comp=Z,3.9nm,1.2s						
PDAR	Pinedale Array	54.50	302	P	P	07 32 07.3	-0.8
	comp=Z,0.6nm,0.8s,baz=73,slow=5.0,SNR=6.2						
PDAR	Pinedale Array	54.50	302	P	P	07 32 07.0	-1.1
YKA	Yellowknife Ar	54.76	327	P	P	07 32 08.2	-1.2
	comp=Z,0.2nm,0.9s,baz=98,slow=7.6,SNR=2.3						
BRTR	Keskin Array B	58.78	60	P	P	07 32 39.4	+1.0
	comp=Z,1.8nm,1.1s,baz=297,slow=6.3,SNR=2.7						
J08A	Circle Bar Ran	60.64	305	P	P	07 32 51.2	+0.1
VCNR	Virginia City	62.81	301	P	P	07 33 05.7	-0.3
ABKAR	Akbulak array	72.42	43	P	P	07 34 07.1	+0.8
KURBB	Kurchatov Arra	81.45	34	P	P	07 34 56.6	-0.4
	comp=Z,0.2nm,0.2s,baz=305,slow=5.8,SNR=4.9						
ZAA0	Zalesovo Array	81.96	29	P	P	07 34 60.0	+0.3
ZALV	Zalesovo Beam	81.96	29	P	P	07 34 59.8	+0.1

IDC 11 07:28:36.4±952.0, **53°.26N×33°.75E, h0^{km}, Error ellipse: s-maj=355.0km s-min=108.9km az=33.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	4.01	28	i		07 56 20.6	
	baz=212,slow=262,SNR=1.0						
I31KZ	AKTYUBINSK INF	15.26	91	i		08 55 20.0	
	baz=293,slow=314,SNR=1.3						
I34MN	SONGINO INFRAS	44.67	66	i		11 52 10.0	
	baz=305,slow=333,SNR=0.5						

*SOME **11** 07:29:50.1, 41°.27N×70°.85E, h0^{km}*

*KRNET **11** 07:29:53.2±0.1, 41°.44N×70°.69E, h35^{km}, mb2.5*

ISC 11 07:29:52.0±1.7, **41°.37N**±0°.04×**70°.82E**±0°.05, **h2^{km}**±14^{km}, **n11,** σ**0^{s}92**/20, **15C-3D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARK	Arkit	0.96	63	⇑iP	Pn	07 30 12.5	-0.1
	baz=70						
ARK				⇑iS	Sn	07 30 26.4	-0.5
	baz=70						
IUG	Iuzhnay	0.97	323	eP	Pb	07 30 10.7	-1.0
	1.3nm,0.3s						
IUG				eS	Sb	07 30 24.7	-0.2
BTK	Batken	1.31	180	⇑iP	Pg	07 30 17.4	+0.2
	baz=76						
BTK				⇑iS	Sn	07 30 36.1	+0.6
	baz=76						
ARSB	Arslanbob	1.63	91	⇑iP	Pb	07 30 22.6	-0.3
	baz=93						
ARSB				⇑iS	Sn	07 30 43.6	+0.1
	baz=93						
KK31	Karatay Array	1.75	353	⇑Pn	Pg	07 30 26.4	+0.9
	5.7nm,0.5s,baz=164,slow=14,SNR=56						
KK31				⇑Lg	Lg	07 30 53.1	
	25nm,0.8s,baz=165,slow=28,SNR=23						
MRKS	Merke	2.26	52	eP	Pb	07 30 32.9	-0.6
	3.9nm,0.6s						
MRKS				eS	Sb	07 31 03.2	+1.2
	4.0nm,0.5s						
AML	Almayashu	2.28	70	⇑iP	Pn	07 30 31.3	+0.2
	baz=72						
AML				⇑iS	Sn	07 31 00.9	+1.0
	baz=72						
EKS2	Erkin-Say	2.56	59	⇑iP	Pn	07 30 35.0	+0.4
	baz=61						
EKS2				⇑iS	Sn	07 31 06.5	+0.2
	baz=61						
ARLS	Aral	2.67	78	⇓iP	Pn	07 30 37.1	+0.9
	baz=80						
ARLS				⇓iS	Sn	07 31 08.7	-0.6
	baz=80						
UCH	Uchtor	2.89	72	⇑iP	Pn	07 30 39.7	+0.2
	baz=73						
UCH				⇑iS	Sn	07 31 15.1	0.0
	baz=73						
AAK	Ala-Archa	3.02	64	⇓Pg	Pb	07 30 43.9	-2.6
	2.6nm,0.5s						
AAK				⇑Lg	Lg	07 31 23.5	
	4.1nm,0.6s						

*IDC **11** 07:45:20.0±7.2, 22°.78S×176°.59W, h75^{km}±58^{km}, mb3.2/4, mb1 3.6/5, mb1mx3.4/24, mbtmp3.8/5, ML4.4/1, MS3.3/2, Ms1 3.3/2, ms1mx2.9/11, Error ellipse: s-maj=97.0km s-min=23.1km az=147.0*

ISC 11 07:45:24.7±1.6, **22°.5S**±0°.3×**176°.7W**±0°.3, **h124^{km}, n7,** σ**1^{s}29**/7, **mb3.4**/4, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	9.73	29	P	Pn	07 47 40.4	-1.2
	3.1nm,0.3s,baz=165,slow=6.6,SNR=4.5						
AFI				S	Sn	07 49 30.6	+1.5
	1.0nm,0.3s,baz=304,slow=22,SNR=1.6						
PPT	Papeete	25.90	84	LR	LR	07 58 10.6	
	comp=Z,38nm,19.9s,baz=336,slow=30						
STKA	Stephens Creek	38.09	247	P	P	07 52 32.8	+1.3
	0.3nm,0.3s,baz=83,slow=8.1,SNR=0.8						
ASAR	Alice Springs	45.30	258	P	P	07 53 29.7	-0.7
	0.4nm,0.7s,baz=92,slow=7.4,SNR=6.3						
WRA	Warramunga Arr	45.59	264	P	P	07 53 32.2	-0.5
	0.3nm,0.5s,baz=101,slow=8.2,SNR=5.2						
WRA				LR	LR	08 12 45.8	
	comp=Z,57nm,19.1s,baz=265,slow=36						
TXAR	Lajitas Array	87.10	57	P	P	07 57 57.3	+0.4
	0.4nm,0.9s,baz=193,slow=3.7,SNR=4.4						
AKASG	Malin Array Be	145.36	331	PKPbc	PKiKP	08 04 51.0	-0.7
	0.3nm,0.3s,baz=41,slow=4.1,SNR=1.9						

IDC 11 07:47:58.6±998.0, **53°.12N×33°.37E, h0^{km}, Error ellipse: s-maj=374.1km s-min=117.0km az=36.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	4.24	30	i		08 17 17.0	
	baz=214,slow=261,SNR=1.2						
I31KZ	AKTYUBINSK INF	15.49	90	i		09 15 40.0	
	baz=292,slow=315,SNR=1.4						
I34MN	SONGINO INFRAS	44.94	66	i		12 12 20.0	
	baz=306,slow=332,SNR=0.9						

MAN 11 08:01:40.7, 5°.16N×125°.77E, h29^{km}, mb4.7, ML3.6, MS3.5, Mindanao

*IDC **11** 08:03:21.6±3.2, 4°.26S×102°.62E, h0^{km}, mb3.7/5, mb1 3.8/5, mb1mx3.6/39, mbtmp3.7/5, Error ellipse: s-maj=150.5km s-min=21.7km az=56.0*

*DJA **11** 08:03:27.2±0.6, 4°S±4°×10°2E±°, h27^{km}±4^{km}, M4.3/12, mb4.5/1, MLv4.2/12*

ISC 11 08:03:25.1±1.7, **4°.52S**±0°.07×**102°.46E**±0°.06, **h25^{km}**±13^{km}, **n18,** σ**1^{s}30**/24, **mb3.9**/5, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	Manna	0.52	73	P	Pn	08 03 38.2	+1.2
MNAI				S	Sn	08 03 47.2	+2.1
KSI	Kapahiang	0.87	9	P	Pn	08 03 42.2	+0.4

KSI				S	**Sn**	**08 03 52.6**	**-1.1**
LWLI	**Liwa**	**1.67**	**107**	P	**Pb**	**08 03 55.7**	**+0.4**
LWLI				S	**Sb**	**08 04 16.0**	**0.0**
MDSI	**Maura Dua**	**1.72**	**89**	P	**Pb**	**08 03 55.8**	**-0.2**
MDSI				S	**Sb**	**08 04 17.4**	**+0.2**
KASI	**Kota Agung**	**2.27**	**116**	P	**Pb**	**08 04 03.4**	**-2.0**
KASI				S	**Sn**	**08 04 29.2**	**+1.0**
KRJI	**Kerinci**	**2.60**	**338**	P	**Pn**	**08 04 07.1**	**+1.3**
KRJI				S	**Sn**	**08 04 37.5**	**+0.8**
PMBI	**Palembang**	**2.80**	**56**	P	**Pn**	**08 04 09.4**	**+1.1**
PPSI	**Pulau Pagai**	**3.00**	**305**	P	**Pn**	**08 04 12.8**	**+1.7**
SDSI	**Sungai Dareh**	**3.71**	**344**	P	**Pn**	**08 04 21.4**	**+0.6**
PDSI	**Padang**	**4.10**	**331**	P	**Pn**	**08 04 29.0**	**+2.8**
SISI	**Saibi**	**4.62**	**313**	P	**Pn**	**08 04 34.5**	**+1.1**
PBSI	**Pulau Batu**	**6.09**	**317**	P	**Pn**	**08 04 54.0**	**+0.5**
WRA	**Warramunga Arr**	**34.62**	**119**	P	**P**	**08 10 12.0**	**-0.7**
	0.8nm,0.4s,baz=303,slow=9.0,SNR=13						
ASAR	**Alice Springs**	**35.80**	**125**	P	**P**	**08 10 23.1**	**+0.4**
	0.5nm,0.3s,baz=301,slow=8.1,SNR=11						
STKA	**Stephens Creek**	**45.66**	**131**	P	**P**	**08 11 45.0**	**+1.0**
	0.9nm,0.5s,baz=289,slow=10,SNR=7.2						
SONM	**Songino Array**	**52.24**	**3**	P	**P**	**08 12 33.2**	**-1.1**
	0.3nm,0.6s,baz=205,slow=6.4,SNR=2.3						
MKAR	**Makanchi Array**	**54.12**	**343**	P	**P**	**08 12 46.5**	**-1.5**
	0.3nm,0.4s,baz=147,slow=9.3,SNR=8.6						
TXAR	**Lajitas Array**	**145.06**	**42**	PKP	**PKPdf**	**08 23 00.7**	**-0.6**
	0.2nm,0.8s,baz=276,slow=2.6,SNR=1.3						

ANF 11 08:04:43.4±1.0**,40°.93N×124°.79W,h5km,ML2.6**/4**, ML2.6**/4**,Error ellipse: s-maj=8.9km s-min=4.5km az=54.0,Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
L02E	**Cave Junction**	**1.52**	**36**	P	Pn	08 05 11.0	-0.2
	baz=216,SNR=5.8						
M02C	**Callahan**	**1.53**	**72**	P	Pn	08 05 11.7	+0.1
	baz=253,SNR=15						
M02C				S	Sg	08 05 33.2	+0.5
	baz=253						
N02D	**Trinity Center**	**1.58**	**88**	P	Pb	08 05 13.0	-0.2
	baz=269						
N02D				S	Sg	08 05 34.7	+0.4
	baz=269						
K02D	**Willamette Mer**	**1.95**	**25**	P	Pn	08 05 16.8	-0.6
	baz=206,SNR=79						
K02D				S	Sn	08 05 42.9	+0.6
	baz=206						
L04D	**Klamath Falls**	**2.27**	**55**	P	Pb	08 05 23.8	-1.2
	baz=236,SNR=12						
O03E	**Paynes Creek**	**2.36**	**105**	P	Pn	08 05 22.7	-0.3
	baz=287						
I03D	**Drain, OR**	**2.96**	**21**	P	Pn	08 05 31.7	+0.6
	baz=202,SNR=8.4						

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*NEIC **11** 08:05:09.0±1.9,40°.72N±0°.04×125°.28W±0°.10, h18km±11km,Error ellipse: s-maj=11.1km s-min=5.0km az=77.0*

*NCEDC **11** 08:05:11.0±2.1,40°.69N±0°.03×125°.19W±0°.05,h11km±6km, Md2.9/35,Error ellipse: s-maj=5.4km s-min=4.3km az=71.0*

*ANF **11** 08:05:12.1±1.0,40°.91N×124°.81W,h0km,Error ellipse: s-maj=10.9km s-min=5.0km az=71.0*

ISC 11 08:05:08.2±1.9**,40°.70N**±0°.04**×125°.31W**±0°.08**, h17km**±10km**,n56,σ1s.48**/69**,Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCTM	**Capetown**	**0.78**	**107**		**Pn**	**08 05 24.8**	**+0.4**
KCTM					**Sn**	**08 05 35.4**	**-0.2**
KMPM	**Mount Pierce**	**0.95**	**107**		**Pn**	**08 05 27.0**	**+0.2**
KMPM					**Sg**	**08 05 39.1**	**-0.1**
JCC	**Jacoby Creek,**	**0.98**	**83**	Pg	**Pb**	**08 05 26.7**	**0.0**
JCC				Sg	**Sb**	**08 05 38.5**	**-0.8**
JCC	**Jacoby Creek,**	**0.98**	**83**		**Sb**	**08 05 38.8**	**-0.5**
KSMM	**Slide Mountain**	**1.01**	**120**		**Pg**	**08 05 27.6**	**-0.1**
KRPM	**Rodgers**	**1.08**	**65**		**Pb**	**08 05 28.3**	**-0.1**
KCRM	**Chalk Rock**	**1.17**	**103**		**Pb**	**08 05 30.2**	**+0.2**
KHMM	**Horse Mountain**	**1.21**	**81**		**Pn**	**08 05 30.3**	**-0.2**
KHMM					**Sb**	**08 05 45.7**	**-0.5**
KMRM	**Mail Ridge**	**1.31**	**111**		**Pb**	**08 05 32.8**	**+0.4**
KMRM				Sn	**Sb**	**08 05 49.2**	**+0.2**
KRMB	**Red Mountain**	**1.34**	**52**		**Pg**	**08 05 34.0**	**0.0**
KCSM	**Cold Springs**	**1.38**	**96**		**Pn**	**08 05 33.3**	**+0.5**
KPPM	**Pickett Peak**	**1.53**	**103**		**Pb**	**08 05 35.6**	**-0.5**
KBSM	**Bell Springs**	**1.53**	**120**		**Pn**	**08 05 35.5**	**+0.7**
KSXB	**Camp Six Broad**	**1.56**	**43**		**Pn**	**08 05 35.0**	**-0.2**
KHBM	**Hayfork Bally**	**1.59**	**91**		**Pn**	**08 05 35.8**	**+0.1**
KIPM	**Iron Peak**	**1.66**	**122**		**Pn**	**08 05 37.4**	**+0.7**
KCPM	**Cahto Peak**	**1.67**	**127**		**Pn**	**08 05 37.3**	**+0.6**
KCPM				Sn	**Sn**	**08 05 57.0**	**-0.8**
KFPM	**Farley Peak**	**1.79**	**126**		**Pn**	**08 05 38.8**	**+0.4**
KBNM	**Bluenose Ridge**	**1.81**	**116**		**Pb**	**08 05 40.0**	**-0.9**
GTC	**Three Chop Rid**	**1.88**	**133**		**Pn**	**08 05 39.6**	**+0.2**
LBPM	**Beegum Peak**	**1.89**	**101**		**Pn**	**08 05 40.3**	**+0.5**
LGPM	**Granite Peak**	**1.90**	**83**		**Pn**	**08 05 40.4**	**+0.5**
L02E	**Cave Junction**	**1.94**	**41**	P	**Pn**	**08 05 40.9**	**+0.5**
	baz=220,SNR=13						
L02E				S	**Sn**	**08 06 02.7**	**-1.7**
	baz=220						
GNAM	**Navarro Ridge**	**1.98**	**139**		**Pn**	**08 05 41.4**	**+0.5**
WDC	**Whiskeytown Da**	**2.11**	**92**	Pn	**Pn**	**08 05 43.5**	**+0.8**
WDC				Sn	**Sn**	**08 06 09.0**	**+0.4**
GHOM	**Hamilton Openi**	**2.15**	**140**		**Pn**	**08 05 43.6**	**+0.3**
GROM	**Round Mountain**	**2.17**	**110**		**Pn**	**08 05 44.8**	**+1.3**
GHMM	**Hull Mountain**	**2.19**	**123**		**Pn**	**08 05 44.5**	**+0.6**
GVV	**Valley View**	**2.22**	**114**		**Pn**	**08 05 45.6**	**+1.2**
GASB	**Alder Springs**	**2.25**	**117**		**Pn**	**08 05 45.6**	**+0.9**
KEBM	**Edson Butte**	**2.29**	**18**	Pn	**Pb**	**08 05 47.9**	**-1.1**
KEBM				Sn	**Sn**	**08 06 11.0**	**-2.0**
K02D	**Willamette Mer**	**2.34**	**31**	P	**Pn**	**08 05 46.6**	**+0.7**
	baz=210,SNR=9.5						
K02D				S	**Sn**	**08 06 12.1**	**-2.2**
	baz=210						
HOPS	**Hopland Field**	**2.43**	**134**	Pn	**Pn**	**08 05 49.1**	**+2.1**
HUMO	**Hull Mountain**	**2.59**	**42**		**Pn**	**08 05 50.4**	**+1.0**
O03E	**Paynes Creek**	**2.71**	**98**		**Pn**	**08 05 51.6**	**+0.6**
O03E	**Paynes Creek**	**2.71**	**98**	P	**Pn**	**08 05 52.2**	**+1.2**
	baz=280						
O03E				S	**Sn**	**08 06 23.2**	**-0.1**
	baz=280						
O03E	**Paynes Creek**	**2.71**	**98**	S	**Pn**	**08 05 52.4**	**+1.5**
	baz=287						
L04D	**Klamath Falls**	**2.72**	**55**		**Pb**	**08 05 54.1**	**-2.4**
L04D	**Klamath Falls**	**2.72**	**55**	P	**Pb**	**08 05 54.0**	**-2.4**
	baz=236,SNR=35						
FTR	**Fort Ross**	**2.74**	**142**		**Pn**	**08 05 52.0**	**+0.6**
MGL	**Magalia**	**3.01**	**106**		**Pn**	**08 05 56.4**	**+1.3**
ORV	**Oroville**	**3.14**	**110**		**Pn**	**08 05 57.5**	**+0.7**
ORV				Sn	**Sn**	**08 06 32.5**	**-1.4**
MCCM	**Marconi Confer**	**3.17**	**143**	Pn	**Pn**	**08 05 58.1**	**+0.8**
K04D	**Chiloquin, OR**	**3.28**	**53**	P	**Pn**	**08 06 01.5**	**+2.5**
	baz=234,SNR=9.6						
I03D	**Drain, OR**	**3.33**	**25**	P	**Pn**	**08 06 01.3**	**+1.9**
	baz=205,SNR=21						
I03D				S	**Sn**	**08 06 39.1**	**+0.6**
	baz=205						
J04D	**Umpqua Nationa**	**3.48**	**42**	P	**Pn**	**08 06 04.9**	**+3.2**
	baz=223,SNR=16						
I04A	**Tendick Farm,**	**3.76**	**34**	P	**Pn**	**08 06 08.2**	**+2.7**
	baz=214						
AFDM	**Forest Hills D**	**3.77**	**116**	Pn	**Pn**	**08 06 07.6**	**+2.0**
BEKR	**Beckworth**	**3.88**	**101**		**Pn**	**08 06 09.2**	**+2.1**
MOD	**Modoc Plateau**	**3.96**	**71**	Pn	**Pn**	**08 06 10.2**	**+1.9**
J05D	**Fort Rock, OR**	**3.98**	**48**	P	**Pn**	**08 06 11.5**	**+2.9**
	baz=230,SNR=8.6						
PINE	**Pine Mountain**	**4.48**	**45**		**Pn**	**08 06 18.4**	**+3.0**
VCNR	**Virginia City**	**4.57**	**106**	Pn	**Pn**	**08 06 19.2**	**+2.5**
I07A	**Izee**	**5.47**	**50**	Pn	**Pn**	**08 06 32.5**	**+3.6**
J08A	**Circle Bar Ran**	**5.74**	**60**	Pn	**Pn**	**08 06 34.5**	**+1.9**
BMO	**Blue Mountains**	**7.20**	**52**	Pn	**Pn**	**08 06 56.1**	**+3.4**

IDC 11 08:06:30.8±8.5**,32°.93S×178°.47W,h74km**±67km**,mb3.6**/2**, mb1 3.8**/3**,mb1mx3.5**/26**,mbtmp3.9**/3**,ML3.6**/1**,MS3.4**/2**, Ms1 3.3**/2**,ms1mx2.9**/20**,Error ellipse: s-maj=59.8km s-min=37.7km az=47.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.42**	**213**	P	Pn	08 08 02.7	0.0
	1.4nm,0.3s,baz=235,slow=1.7,SNR=7.5						
URZ				S	Sn	08 09 15.5	+1.0
	0.6nm,0.3s,baz=148,slow=21,SNR=2.3						
DZM	**Mont Dzumac**	**17.19**	**305**	LR	LR	08 15 47.6	
	comp=Z,118nm,19.8s,baz=235,slow=32						
STKA	**Stephens Creek**	**33.60**	**261**	LR	LR	08 26 32.7	
	comp=Z,56nm,18.2s,baz=201,slow=36						
ASAR	**Alice Springs**	**42.64**	**270**	P	P	08 14 20.4	+0.1
	1.4nm,0.8s,baz=108,slow=7.6,SNR=10						
WRA	**Warramunga Arr**	**43.86**	**275**	P	P	08 14 29.3	-0.7
	1.2nm,0.6s,baz=112,slow=7.6,SNR=12						
FINES	**FINESS Array B**	**147.36**	**338**	PKPbc	PKPbc	08 26 05.9	+0.7
	4.4nm,0.9s,baz=100,slow=4.5,SNR=4.4						
TORD	**Torodi Ar. Bea**	**160.31**	**180**	PKPab	PKPab	08 27 01.7	-1.4
	0.9nm,1.1s,baz=195,slow=4.3,SNR=3.1						

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*VAO **11** 08:08:43.6±2.2,15°.91S×74°.63W,h72km±11km,mb4.6*

*NEIC **11** 08:08:44.6±1.8,15°.87S±0°.07×74°.14W±0°.09,h51km±5km, mb4.7/61,Error ellipse: s-maj=15.1km s-min=7.3km az=55.0*

*IDC **11** 08:08:45.1±1.8,15°.85S×74°.19W,h53km±16km,mb3.9/12, mb1 4.0/16,mb1mx4.0/31,mbtmp4.2/16,ML4.3/5,MS3.5/10, Ms1 3.5/10,ms1mx3.3/27,Error ellipse: s-maj=22.0km s-min=10.1km az=54.0*

ISC 11 08:08:44.3±0.4**,15°.95S**±0°.05**×74°.26W**±0°.07**,h49km,n136, σ1s.37**/132**,mb4.7**/35**,MS3.7**/7**,3C,Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**4.67**	**327**	P	**Pn**	**08 09 51.7**	**-0.6**
	25nm,0.3s,baz=126,slow=11,SNR=34						
NNA				S	**Sn**	**08 10 45.3**	**0.0**
	95nm,0.3s,baz=231,slow=16,SNR=5.0						
NNA				LR	LR	08 12 09.6	
	comp=Z,151nm,18.2s,baz=153,slow=44						
NNA	**Nana**	**4.67**	**327**		**Pn**	**08 09 52.4**	**+0.1**
NNA				Sn	**Sn**	**08 10 46.1**	**+0.8**
MNMC	**Minye Minye**	**5.46**	**126**	Pn	**Pn**	**08 10 04.4**	**+0.9**
MNMC				Sn	**Sn**	**08 11 03.2**	**-1.9**
PB11	**IPOC Station P**	**5.79**	**132**		**Pn**	**08 10 08.6**	**+0.6**
PB11				Sn	**Sn**	**08 11 09.9**	**-3.3**
LPAZ	**La Paz**	**5.90**	**94**	P	**Pn**	**08 10 13.5**	**+3.7**
	4.9nm,0.3s,baz=294,slow=7.8,SNR=114						
LPAZ				S	**Sn**	**08 11 21.4**	**+5.0**
	baz=316,slow=20,SNR=0.6						
LPAZ				LR	LR	08 13 09.3	
	comp=Z,230nm,21.4s,baz=261,slow=45						
LPAZ	**La Paz**	**5.90**	**94**	*e*P	Pn	08 10 14.5	+4.7
GO01	**Chusmiza**	**6.08**	**128**		**Pn**	**08 10 13.7**	**+1.6**
GO01				Sn	**Sn**	**08 11 17.8**	**-2.9**
PB01	**IPOC Station P**	**6.79**	**139**		**Pn**	**08 10 22.6**	**+1.0**
PB01				Sn	**Sn**	**08 11 34.3**	**-3.3**
PB04	**IPOC Station P**	**7.44**	**149**		**Pn**	**08 10 30.5**	**-0.1**
PB10	**IPOC Station P**	**8.29**	**156**	Pn	**Pn**	**08 10 42.4**	**+0.3**
LVC	**Limon Verde**	**8.33**	**144**	P	**Pn**	**08 10 45.1**	**+2.2**
	14nm,0.3s,baz=327,slow=7.9,SNR=137						
LVC				S	**Sn**	**08 12 14.9**	**-0.9**
	25nm,0.3s,baz=67,slow=22,SNR=18						
LVC				LR	LR	08 13 24.7	
	comp=Z,79nm,20.3s,baz=319,slow=33						
LVC	**Limon Verde**	**8.33**	**144**		**Pn**	**08 10 44.9**	**+2.0**
LVC					**Sn**	**08 12 15.0**	**-0.8**
LVC	**Limon Verde**	**8.33**	**144**	*e*P	**Pn**	**08 10 44.1**	**+1.3**
ATAH	**Atahualpa**	**9.65**	**335**	P	**Pn**	**08 11 05.0**	**+4.0**
	4.9nm,0.3s,baz=269,slow=0.8,SNR=21						
ATAH				S	**Sn**	**08 12 47.6**	**-0.7**
	baz=10,slow=17,SNR=1.3						
GO02	**Mina Guanaco**	**10.15**	**155**		**Pn**	**08 11 08.7**	**+0.9**
SIV	**San Ignacio**	**12.68**	**92**	P	**Pn**	**08 11 42.9**	**+0.8**
	1.8nm,0.3s,baz=282,slow=10,SNR=29						
SAML	**Samuel**	**12.86**	**59**		**Pn**	**08 11 43.2**	**-1.3**
GO04	**Tololo Observa**	**14.51**	**168**		**Pn**	**08 12 08.7**	**+1.7**
CFA	**Coronel Fontan**	**16.52**	**162**	P	**P**	**08 12 35.5**	**+0.8**
	0.4nm,0.3s,baz=332,slow=12,SNR=7.8						
OTAV	**Otavalo**	**16.61**	**345**	*e*P	**P**	**08 12 36.6**	**+0.4**
OTAV	**Otavalo**	**16.61**	**345**	P	**P**	**08 12 35.8**	**-0.4**
ROC1	**El Roble**	**17.21**	**171**		**P**	**08 12 42.3**	**-0.2**
FLOC	**Florencia**	**17.47**	**355**	*e*P	**Pn**	**08 12 43.7**	**-1.0**
FLOC	**Florencia**	**17.47**	**355**	P	**Pn**	**08 12 44.5**	**-0.2**
SALV	**Santo Antonio**	**17.86**	**92**	*e*P	**P**	**08 12 50.4**	**+0.8**
GARC	**Garzon, Huila**	**18.06**	**356**	*e*P	**Pn**	**08 12 52.3**	**+0.2**
SOTA	**Rioblanco**	**18.12**	**352**	*e*P	**Pn**	**08 12 54.3**	**+1.3**
PCON	**Cinco Dias**	**18.28**	**353**	*e*P	**Pn**	**08 12 59.6**	**+4.5**
CLDB	**Colider**	**18.65**	**77**	*e*P	**P**	**08 12 57.6**	**-0.7**
CPUP	**Villa Florida**	**18.85**	**126**	P	**Pn**	**08 13 02.0**	**+0.7**
	0.2nm,0.3s,baz=290,slow=12,SNR=4.8						
CPUP	**Villa Florida**	**18.85**	**126**	P	**P**	**08 13 00.3**	**0.0**
ORTC	**Ortega, Tolima**	**19.75**	**357**	*e*P	**Pn**	**08 13 12.0**	**-0.2**
VILC	**Villavicencio,**	**19.94**	**2**	*e*P	**Pn**	**08 13 14.7**	**+0.2**
PTGC	**Puerto Gaitan,**	**20.13**	**6**	*e*P	**P**	**08 13 11.1**	**-3.3**
ROSC	**El Rosal**	**20.66**	**360**	P	Pn	08 13 25.2	+2.0
	33nm,0.9s,baz=117,slow=8.2,SNR=16						
ROSC				LR	LR	08 22 21.0	
	comp=Z,187nm,19.2s,baz=204,slow=40						
ROSC	**El Rosal**	**20.66**	**360**	⇑*e*P	Pn	08 13 26.2	+2.9
ROSC	**El Rosal**	**20.66**	**360**	P	**P**	**08 13 21.3**	**+0.8**
ROSC				IAmb	IAmb	08 13 32.2	
	comp=Z,52nm,1.1s						
PTGA	**Pitinga**	**20.67**	**44**	P	**P**	**08 13 19.3**	**-1.0**
	comp=Z,19nm,0.5s,baz=221,slow=12,SNR=46						
PTGA	**Pitinga**	**20.67**	**44**	P	**P**	**08 13 18.7**	**-1.6**
PTGA				IAmb	IAmb	08 13 23.4	
	comp=Z,28nm,0.8s						
NORC	**Norcasia**	**21.38**	**358**	⇑*e*P	**P**	**08 13 28.8**	**+0.8**
SPBC	**San Pablo de B**	**21.46**	**1**	*e*P	**P**	**08 13 29.7**	**+0.8**
TRCB	**Terra Rica**	**21.49**	**112**	*e*P	**P**	**08 13 30.7**	**+1.6**
ARAG	**Araguaiana, MT**	**21.60**	**92**	*e*P	**P**	**08 13 32.2**	**+1.9**
RUSC	**La Rusia**	**21.73**	**3**	*e*P	**P**	**08 13 30.6**	**-1.6**
RUSC	**La Rusia**	**21.73**	**3**	P	**P**	**08 13 32.7**	**+0.5**
PCMB	**Pacaembu**	**22.48**	**108**	*e*P	**P**	**08 13 40.1**	**+0.4**
ITAB	**Concordia**	**23.40**	**122**	*e*P	**P**	**08 13 49.7**	**+0.8**
UREC	**San Jos de Ur**	**23.58**	**357**	*e*P	**P**	**08 13 49.2**	**-1.6**
FRTB	**Fartura**	**24.37**	**111**	*e*P	**P**	**08 13 57.4**	**-0.7**
SMLC	**San Martn de**	**24.59**	**0**	⇑*e*P	**P**	**08 13 58.0**	**-2.0**
PLCA	**Paso Flores**	**24.91**	**173**	P	**P**	**08 14 04.3**	**+1.5**
	comp=Z,3.1nm,0.8s,baz=15,slow=11,SNR=12						
PLCA				LR	LR	08 22 06.0	
	comp=Z,94nm,20.9s,baz=328,slow=32						
PLCA	**Paso Flores**	**24.91**	**173**	P	**P**	**08 14 04.8**	**+2.0**
SDV	**Santo Domingo**	**24.93**	**9**	P	**P**	**08 14 03.2**	**-0.1**
	comp=Z,11nm,0.7s,baz=168,slow=9.2,SNR=14						
SDV	**Santo Domingo**	**24.93**	**9**	P	**P**	**08 14 02.7**	**-0.7**
SDV				IAmb	IAmb	08 14 07.0	
	comp=Z,12nm,0.8s						
IPMB	**Ipameri, GO**	**24.99**	**98**	*e*P	**P**	**08 14 04.4**	**+0.6**
BDFB	**Brasilia**	**25.25**	**93**	P	**P**	**08 14 07.8**	**+1.6**
	comp=Z,2.4nm,0.6s,baz=273,slow=9.7,SNR=5.8						
BDFB				LR	LR	08 25 50.0	
	comp=Z,71nm,18.9s,baz=311,slow=41						
BDFB	**Brasilia**	**25.25**	**93**	P	**P**	**08 14 05.8**	**-0.5**
BCIP	**Isla Barro Col**	**25.56**	**347**	P	**P**	**08 14 10.0**	**+1.2**
BCIP				IAmb	IAmb	08 14 14.1	
	comp=Z,34nm,1.2s						
RCLB	**Rio Claro- Sao**	**26.03**	**108**	*e*P	**P**	**08 14 13.9**	**+0.8**
URIC	**Uribia, Colomb**	**27.56**	**5**	P	**P**	**08 14 26.8**	**-0.1**
JANB	**Januaria**	**28.86**	**92**	*e*P	**P**	**08 14 38.4**	**-0.3**
SVB	**Belmont**	**31.75**	**25**	P	**P**	**08 15 01.6**	**-2.4**
NBPN	**Ponto Novo - B**	**33.49**	**86**	*e*P	**P**	**08 15 19.4**	**+0.1**
NBPS	**Pedro II - PI**	**34.21**	**74**	*e*P	**P**	**08 15 25.2**	**-0.5**
NBPB	**Pedra_Branca-C**	**35.54**	**77**	*e*P	**P**	**08 15 36.8**	**-0.3**
ANWB	**Willy Bob**	**35.59**	**21**	P	**P**	**08 15 34.0**	**-3.4**
NBMA	**Muriti-CE**	**35.74**	**80**	*e*P	**P**	**08 15 38.5**	**-0.4**
NBLA	**Lagarto - SE**	**35.77**	**87**	*e*P	**P**	**08 15 38.9**	**-0.2**
NBAN	**Anadia - AL**	**37.52**	**85**	*e*P	**P**	**08 15 53.8**	**-0.1**
HOPE	**Hope Point**	**48.16**	**151**	P	**P**	**08 17 20.5**	**+1.0**
SWET	**Sewanee**	**52.08**	**348**	P	**P**	**08 17 48.4**	**-1.0**
SWET				IAmb	IAmb	08 18 03.0	
	comp=Z,6.5nm,0.7s						
WHTX	**Lake Whitney,**	**52.60**	**335**	IAmb	IAmb	08 17 54.3	
	comp=Z,7.1nm,0.7s						
V48A	**Smith Brothers**	**52.77**	**347**	P	**P**	**08 17 54.0**	**-0.5**
V48A				pP	**pP**	**08 18 07.7**	**-0.6**
V48A				IAmb	IAmb	08 18 08.2	
	comp=Z,4.4nm,0.6s						
TXAR	**Lajitas Array**	**53.23**	**328**	P	**P**	**08 17 58.6**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=149,slow=8.8,SNR=14						
TXAR	**Lajitas Array**	**53.23**	**328**	P	**P**	**08 17 58.0**	**-0.1**
TXAR					**pP**	**08 18 12.6**	**+1.0**
MIAR	**Mount Ida**	**53.47**	**340**	P	**P**	**08 17 59.1**	**-0.6**
MIAR				IAmb	IAmb	08 18 01.4	
	comp=Z,3.4nm,0.8s						
W41B	**Gary Mavity, V**	**53.63**	**342**	P	**P**	**08 18 00.4**	**-0.4**
W41B				IAmb	IAmb	08 18 15.5	
	comp=Z,4.8nm,0.6s						
T49A	**Edmonton**	**53.83**	**349**	P	**P**	**08 18 01.2**	**-1.0**
T49A					**pP**	**08 18 15.5**	**-0.6**
U40A	**Yellville**	**54.91**	**342**	P	**P**	**08 18 10.0**	**-0.2**
U40A					**pP**	**08 18 23.7**	**-0.4**
U40A				IAmb	IAmb	08 18 24.8	
	comp=Z,8.6nm,0.7s						
WCI	**Wyandotte Cave**	**55.06**	**348**	P	**P**	**08 18 09.8**	**-1.4**
WCI					**pP**	**08 18 24.2**	**-0.8**
SDMD	**Soldier’s Deli**	**55.12**	**358**	IAmb	IAmb	08 18 12.6	
	comp=Z,5.5nm,0.8s						
TUL1	**Leonard**	**55.46**	**339**	IAmb	IAmb	08 18 15.1	
	comp=Z,9.9nm,0.8s						
MGMO	**Mountain Grove**	**55.48**	**343**	P	**P**	**08 18 13.4**	**-0.8**
MGMO					**pP**	**08 18 27.9**	**-0.3**
MGMO				IAmb	IAmb	08 18 28.5	
	comp=Z,4.2nm,0.7s						
S39A	**Bolivar**	**56.29**	**342**	P	**P**	**08 18 19.2**	**-0.8**
S39A					**pP**	**08 18 33.3**	**-0.7**
S39A				IAmb	IAmb	08 18 34.2	
	comp=Z,6.6nm,0.7s						
S39A				sP	**sP**	**08 18 40.1**	**+0.3**
N58A	**Sunbury**	**56.54**	**358**	IAmb	IAmb	08 18 22.9	
	comp=Z,11nm,0.8s						
M57A	**Sunshine Farm,**	**57.05**	**357**	IAmb	IAmb	08 18 26.8	
	comp=Z,9.6nm,0.8s						
L56A	**Greenwood**	**57.87**	**357**	IAmb	IAmb	08 18 31.9	
	comp=Z,8.9nm,0.8s						
K58A	**Earlville**	**58.43**	**359**	IAmb	IAmb	08 18 36.1	
	comp=Z,8.4nm,0.8s						
ANMO	**Albuquerque**	**59.13**	**329**	P	**P**	**08 18 39.6**	**-0.7**
SDCO	**Great Sand Dun**	**60.95**	**332**	P	**P**	**08 18 52.6**	**-0.2**
SDCO				IAmb	IAmb	08 19 08.6	
	comp=Z,3.8nm,0.8s						
D53A	**Lac Vacive, Po**	**62.81**	**357**	IAmb	IAmb	08 19 05.2	
	comp=Z,8.0nm,0.7s						
VLDQ	**Val d'Or**	**63.83**	**358**	IAmb	IAmb	08 19 11.7	
	comp=Z,4.9nm,0.7s						
DUG	**Dugway, Tooele**	**66.38**	**329**	P	**P**	**08 19 28.9**	**+0.5**
PDAR	**Pinedale Array**	**66.83**	**332**	P	**P**	**08 19 31.8**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=165,slow=7.5,SNR=2.4						
PDAR	**Pinedale Array**	**66.83**	**332**	P	**P**	**08 19 31.2**	**-0.2**
VNA3	**Neumayer Olymp**	**66.93**	**161**	P	**P**	**08 19 31.6**	**+0.3**
VNA1	**Neumayer--Stat**	**67.18**	**161**	P	P	08 19 26.5	-6.3
VNA2	**Neumayer--Watz**	**67.53**	**161**	P	**P**	**08 19 33.3**	**-1.9**
	baz=324,slow=16						
NVAR	**Mina Array Bea**	**68.03**	**324**	P	**P**	**08 19 39.1**	**+0.1**
	comp=Z,0.5nm,0.9s,baz=122,slow=6.7,SNR=3.1						
FLWY	**Flagg Ranch**	**68.38**	**333**	P	**P**	**08 19 41.1**	**+0.1**
FLWY					**pP**	**08 19 56.5**	**+1.5**
FLWY				IAmb	IAmb	08 19 57.4	
	comp=Z,4.5nm,0.7s						
ULM	**Lac du Bonnet**	**68.61**	**345**	P	**P**	**08 19 41.1**	**-0.9**
	comp=Z,1.6nm,0.7s,baz=142,slow=8.1,SNR=5.6						
SNAA	**Sanae**	**69.14**	**161**	P	**P**	**08 19 47.2**	**+2.0**
SNAA	**Sanae**	**69.14**	**161**	P	**P**	**08 19 46.2**	**+0.9**
SNAA				IAmb	IAmb	08 19 47.9	
	comp=Z,5.4nm,0.6s						
SCHQ	**Schefferville**	**70.78**	**5**	P	**P**	**08 19 55.0**	**-0.3**
	comp=Z,3.5nm,1.0s,baz=189,slow=6.5,SNR=5.0						
SCHQ	**Schefferville**	**70.78**	**5**	IAmb	IAmb	08 19 55.9	
	comp=Z,4.8nm,1.0s						
LIC	**Lamto**	**71.96**	**78**	*e*PKP1	**P**	**08 20 03.7**	**+0.4**
	comp=Z,14nm,1.1s						
TIC	**Toumodi**	**72.10**	**77**	*e*PKP1	**P**	**08 20 03.6**	**-0.6**
DBIC	**Dimbokro**	**72.26**	**77**	P	**P**	**08 20 03.6**	**-1.6**
	comp=Z,2.3nm,0.5s,baz=232,slow=7.0,SNR=5.3						
DBIC				LR	LR	08 50 19.1	
	comp=Z,43nm,19.4s,baz=259,slow=35						
DBIC	**Dimbokro**	**72.26**	**77**	P	**P**	**08 20 03.5**	**-1.6**
DBIC				IAmb	IAmb	08 20 22.1	
	comp=Z,7.7nm,1.1s						
KIC	**Kosan Boka**	**72.27**	**78**	*e*PKP1	**P**	**08 20 04.6**	**-0.6**
	comp=Z,24nm,1.1s						
QSPA	**South Pole Qui**	**74.21**	**180**	P	**P**	**08 20 17.6**	**+1.7**
TOA0	**Torodi Ar. Sit**	**80.46**	**73**	P	**P**	**08 20 51.1**	**-0.5**
TOA0				IAmb	IAmb	08 20 52.3	
	comp=Z,5.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**80.46**	**73**	P	**P**	**08 20 51.3**	**-0.3**
	comp=Z,5.4nm,0.7s,baz=262,slow=5.3,SNR=28						
TORD				LR	LR	08 54 43.3	
	comp=Z,48nm,18.8s,baz=10.0,slow=34						
TORD	**Torodi Ar. Bea**	**80.46**	**73**	P	**P**	**08 20 50.9**	**-0.7**
VNDA	**Vanda**	**81.38**	**191**	LR	LR	08 48 50.2	
	comp=Z,41nm,20.6s,baz=196,slow=30						
YKA	**Yellowknife Ar**	**84.34**	**342**	P	**P**	**08 21 10.6**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=141,slow=6.1,SNR=16						
PAB	**San Pablo**	**85.28**	**47**	P	**P**	**08 21 16.6**	**+0.4**
PAB				IAmb	IAmb	08 21 17.5	
	comp=Z,3.7nm,0.8s						
INK	**Inuvik**	**94.06**	**341**	LR	LR	09 05 57.8	
	comp=Z,92nm,22.0s,baz=296,slow=36						
H11N3	**WAKE ISLAND Hy**	**121.91**	**284**	T	T	10 41 19.0	
	baz=97,slow=75,SNR=27						
H11N2	**WAKE ISLAND Hy**	**121.93**	**284**	T	T	10 41 25.3	
	baz=97,slow=75,SNR=32						
H11N1	**WAKE ISLAND Hy**	**121.93**	**284**	T	T	10 41 21.9	
	baz=97,slow=75,SNR=28						
H11S2	**WAKE ISLAND Hy**	**121.95**	**282**	T	T	10 41 20.4	
	baz=98,slow=75,SNR=38						
H11S1	**WAKE ISLAND Hy**	**121.96**	**282**	T	T	10 41 32.8	
	baz=98,slow=75,SNR=19						
H11S3	**WAKE ISLAND Hy**	**121.97**	**282**	T	T	10 41 24.1	
	baz=98,slow=75,SNR=27						
ASAR	**Alice Springs**	**131.96**	**216**	PKP	**PKPdf**	**08 27 53.5**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=157,slow=3.6,SNR=5.4						
ASAR	**Alice Springs**	**131.96**	**216**		**PKPdf**	**08 27 53.3**	**+0.1**
WRA	**Warramunga Arr**	**134.59**	**219**	PKP	**PKPdf**	**08 27 58.0**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=139,slow=2.0,SNR=6.1						
WB0	**Warramunga Arr**	**134.69**	**219**	PKPdf	**PKPdf**	**08 27 58.7**	**+0.2**
ZALV	**Zalesovo Beam**	**138.71**	**19**	PKP	**PKiKP**	**08 28 06.0**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=290,slow=4.2,SNR=2.9						
ZALV	**Zalesovo Beam**	**138.71**	**19**		**PKPdf**	**08 28 05.1**	**+0.3**
MKAR	**Makanchi Array**	**143.59**	**27**	PKP	PKPbc	08 28 11.5	+0.3
	comp=Z,0.5nm,0.6s,baz=317,slow=3.2,SNR=6.2						
MKAR	**Makanchi Array**	**143.59**	**27**		PKPbc	08 28 11.4	+0.1
SONM	**Songino Array**	**148.20**	**359**	PKPbc	**PKPbc**	**08 28 25.5**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=305,slow=1.2,SNR=6.3						
SONM	**Songino Array**	**148.20**	**359**		**PKPbc**	**08 28 25.6**	**+0.5**
LZH	**Lanzhou**	**159.87**	**4**	*e*PKP	**PKPdf**	**08 28 37.0**	**-1.6**
LZH				pPKP	pPKPdf	08 28 52.5	-0.8
LZH				sPKP		08 28 58.2	
LZH				PKP	**PKPab**	**08 29 18.3**	**+0.6**
CD2	**Chengdu**	**165.00**	**7**	PKP	**PKPdf**	**08 28 41.6**	**-2.1**

INET 11 08:15:05.9,12°.79N×87°.09W,h15km,ML3.5,Near coast of Nicaragua

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*DNK **11** 08:18:41.6±3.2,79°.05N×4°.09E,h11km±93km,ML2.6, Hypocentre not reviewed by the ISC*

BER 11 08:18:44.8±0.8**,78°.92N×4°.26E,h10km,ML1.9, Confirmed Earthquake,Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**1.48**	**86**	*e*P	Pn	08 19 09.1	-2.4
KBS				*e*S	Sn	08 19 28.4	-2.4
KBS				IAML		08 19 39.8	
	comp=Z,20nm,0.9s						
KBS	**Kingsbay**	**1.48**	**86**	*i* P		08 19 08.2	
KBS				IAML		08 19 35.6	
	comp=Z,25nm,0.3s						
DAG	**Danmarks Havn**	**5.27**	**257**	*i* P	Pn	08 19 57.8	-5.6
DAG	**Danmarks Havn**	**5.27**	**257**	IAML		08 20 55.9	
	comp=Z,4.1nm,0.3s						
DAG	**Danmarks Havn**	**5.27**	**257**	*e*		08 19 57.4	
	baz=57,slow=18						
DAG				*i* P		08 19 57.9	
DAG				*i* S		08 20 53.7	
DAG				IAML		08 20 55.9	
	comp=Z,4.1nm,0.3s						
DBG	**Daneborg**	**7.26**	**243**	*i* P	Pn	08 20 27.6	-3.1
DBG				*i* S	Sn	08 21 43.9	-9.1
DBG				IAML		08 21 48.2	
	comp=Z,2.4nm,0.4s						
DBG	**Daneborg**	**7.26**	**243**	*i* P		08 20 27.6	
DBG				*i* S		08 21 43.9	
DBG				IAML		08 21 48.2	
	comp=Z,2.4nm,0.4s						
SUMG	**Summit**	**11.94**	**261**	*i* P	Pn	08 21 29.5	-5.7
SUMG	**Summit**	**11.94**	**261**	*e*P	Pn	08 21 29.6	-5.6

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUMG				eS	Sn	08 23 31.6	-17
SUMG	Summit	11.95	261	eP		08 21 29.6	
SUMG				eS		08 23 31.6	

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*UCR **11** 08:27:24.4±1.4, 15°.61N×88°.70W, h20^{km}, ML3.9*
*SNET **11** 08:27:24.4±1.2, 15°.60N×88°.69W, h20^{km}, ML4.1*
ISC 11 08:27:24.0±4.5, **15°.8N**±0°.2×**88°.7W**±0°.1, **h35**^{km}, **n14**, σ**0^{s}.71**/16, **Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTO3	Montecristo	1.50	206	eP	Pn	08 27 47.6	-1.1
MTO3	Montecristo	1.50	206	eP	Pn	08 27 47.6	-1.1
LBRS	Las Brisas	2.04	190	eS	Sn	08 28 19.8	-0.4
RTR	El Retiro	2.08	207	eP	Pn	08 27 57.6	+1.1
RTR	El Retiro	2.08	207	eP	Pn	08 27 57.6	+1.1
SNJE	San Jose	2.08	206	eP	Pn	08 27 56.8	+0.1
SNJE	San Jose	2.08	206	eP	Pn	08 27 56.8	+0.1
SBLS	San Blas	2.12	206	eP	Pn	08 27 57.6	+0.5
SBLS	San Blas	2.12	206	eP	Pn	08 27 57.6	+0.5
LFRS	El Faro	2.15	190	eP	Pn	08 27 57.3	-0.2
PACA	Pacayal	2.30	171	eS	Sn	08 28 26.7	-0.1
PACA	Pacayal	2.30	171	eS	Sn	08 28 26.7	-0.1
CNCH	Conchagua	2.60	162	eP	Pn	08 28 03.4	-0.3
CNCH				eS	Sn	08 28 34.8	+0.7
CNCH				IAML		08 28 37.0	
	comp=Z,1µm,0.5s						
CNCH	Conchagua	2.60	162	eP	Pn	08 28 03.4	-0.3
CNCH				eS	Sn	08 28 34.8	+0.7
CNCH				IAML		08 28 37.0	
	comp=Z,1µm,0.5s						

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*TIR **11** 08:28:45.5, 41°.20N×19°.68E, h27^{km}, Md3.1/3*
ISC 11 08:28:47.9±2.8, **41°.36N**±0°.10×**19°.6E**±0°.1, **h17**^{km}±10^{km}, **n5**, σ**1^{s}.30**/10, **Albania**
PDG 11 08:28:47.5±0.1, **41°.38N×19°.63E, h14^{km}, ML2.5**/9, **Error ellipse: s-maj=0.5km s-min=0.6km az=0.0, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.18	95	i PG	Pg	08 28 51.9	-0.5
TIR				i SG	Sb	08 28 56.2	+0.2
PHP	Peshkopia	0.69	62	i PG	Pg	08 29 00.2	-1.3
PHP				i SG	Sn	08 29 11.7	-1.6
PUK	Puka	0.71	16	i PG	Pg	08 29 01.2	-0.6
PUK				i SG	Sn	08 29 14.8	+1.1
OHR	Ohrid	0.92	106	i Pg	Pb	08 29 05.5	+0.2
OHR				i Sg	Sn	08 29 19.0	+0.1
STIP	Stip	1.95	79	i Pn	Pg	08 29 24.6	-0.8
STIP				i Sg	Sg	08 29 52.5	+1.9

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*ANF **11** 08:37:15.0±0.8, 32°.20N×115°.22W, h7^{km}±4^{km}, ML2.6/12, Error ellipse: s-maj=6.2km s-min=3.0km az=7.0*
*SCEDC **11** 08:37:16.9, 32°.17N×115°.20W, h38^{km}*
*MEX **11** 08:37:18.7±0.7, 32°.25N×115°.17W, h14^{km}±62^{km}, MD3.7*
*ECX **11** 08:37:18.1±0.6, 32°.19N×115°.28W, h8^{km}±3^{km}, MD2.5, ML2.7*
ISC 11 08:37:16.4±0.9, **32°.20N**±0°.02×**115°.23W**±0°.03, **h17**^{km}±8^{km}, **n40**, σ**0^{s}.92**/62, **5C-5D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBIG	Mexicali	0.21	7	eP	Pb	08 37 22.4	+0.6
MBIG	Mexicali	0.21	7	eP	Pb	08 37 22.2	+0.3
MBIG				eS	Sg	08 37 24.4	-0.6
CPBX	Cerro Prieto	0.23	344	eP	Pg	08 37 22.2	+0.4
CPBX				eS	Sg	08 37 25.6	0.0
CPBX				⇓e		08 37 30.6	
CPBX				IAML		08 37 30.6	
	comp=N,7µm,0.2s						
POT2	Potabilizadora	0.45	343	eP	Pb	08 37 26.4	+0.5
UABX	UABC, Campus M	0.47	338	⇓eP	Pb	08 37 26.8	+0.5
DREC	Desert Rsrch C	0.64	343	eP	Pb	08 37 29.5	+0.5
ESJX	Sierra Juarez	0.64	253	⇑eP	Pb	08 37 29.5	+0.3
ESJX				eS	Sb	08 37 37.9	0.0
WESC	Westside Schoo	0.70	323	eP	Pg	08 37 30.4	+0.1
ECBX	El Chinero	0.74	168	eP	Pb	08 37 31.3	+0.6
ECBX				eS	Sb	08 37 41.5	+1.1
ERMX	Rumorosa	0.77	298	⇑eP	Pg	08 37 31.2	-0.3
ERMX				eS	Sg	08 37 41.1	-0.6
ERMX				IAML		08 37 41.5	
	comp=E,322nm,0.2s						
ERMX				⇑e		08 37 41.5	
ERMX				IAML		08 37 41.5	
	comp=N,358nm,0.2s						
COK2	Cook Ranch 2	0.78	327	eP	Pb	08 37 31.4	-0.1
IKP	In-Ko-Pah, Jac	0.87	302	⇑eP	Pb	08 37 33.0	-0.1
IKP				eS	Sb	08 37 44.1	-0.4
IKP	In-Ko-Pah, Jac	0.87	302	P	Pb	08 37 32.8	-0.4
	baz=122,SNR=40						
IKP				S	Sb	08 37 44.3	-0.2
	baz=122						
SWSC	Sam W. Stewart	0.89	327	eP	Pb	08 37 32.6	-0.8
SWSC	Sam W. Stewart	0.89	327	P	Pb	08 37 32.3	-1.1
	baz=147,SNR=9.0						
SWSC				S	Sb	08 37 43.6	-1.3
	baz=147						
GLA	Glamis	0.92	22	P	Pb	08 37 33.2	-0.7
	baz=200,SNR=16						
GLA				S	Sb	08 37 44.8	-1.1
	baz=200						
CRR	Carrizo Plain	0.93	318	eP	Pb	08 37 34.1	0.0
SPIG	San Pedro Mart	1.16	190	⇓eP	Pb	08 37 38.2	0.0
SPIG	San Pedro Mart	1.16	190	eP	Pb	08 37 38.3	0.0
SPIG				eS	Sb	08 37 53.5	+0.4
SPX	San Pedro Mart	1.17	190	⇓eP	Pn	08 37 37.3	-1.0
SPX				eS	Sb	08 37 53.2	-0.2
SPX				⇓e		08 37 56.0	
SPX				IAML		08 37 56.0	
	comp=N,62nm,0.2s						
SPX	San Pedro Mart	1.17	190	eP	Pn	08 37 37.3	-1.0
SPX				eS	Sb	08 37 52.5	-0.9
SFX	San Felipe	1.20	164	eP	Pn	08 37 38.7	+0.3
CBX	Cerro Bola	1.22	276	eP	Pn	08 37 38.6	-0.2
CBX				eS	Sb	08 37 54.6	0.0
CBX				⇑e		08 37 57.0	
CBX				IAML		08 37 57.0	
	comp=N,200nm,0.3s						
CBX	Cerro Bola	1.22	276	eP	Pn	08 37 38.6	-0.2
CBX				eS	Sb	08 37 53.3	-1.3
MONP2	Monument Peak	1.22	305	eP	Pn	08 37 39.2	+0.3
MONP2	Monument Peak	1.22	305	P	Pn	08 37 39.2	+0.3
	baz=125,SNR=18						
MONP2				S	Sb	08 37 54.7	-0.1
	baz=125						
TJIG	Tijuana	1.25	281	eP	Pn	08 37 38.8	-0.3
TJIG				eS	Sb	08 37 54.7	-0.5
TJIG	Tijuana	1.25	281	eP	Pn	08 37 38.7	-0.3
TJIG				eS	Sb	08 37 54.1	-1.1
CCX	Cicese	1.26	255	eP	Pn	08 37 38.9	-0.3
BAR	Barrett	1.31	292	eP	Pn	08 37 39.9	-0.1
BC3	Big Chuckawall	1.47	353	P	Pn	08 37 41.3	-0.9
	baz=172,SNR=19						
Y12C	Blythe	1.66	21	Pg	Pb	08 37 47.8	+1.2
	baz=200						
SQX	San Quintin	1.71	199	eP	Pn	08 37 46.5	+1.2
109C	Camp Elliot, M	1.73	294	P	Pn	08 37 46.1	+0.5
	baz=114,SNR=17						
109C				S	Sb	08 38 09.2	+0.1
	baz=114						
PFO	Pinyon Flats O	1.75	324	P	Pn	08 37 45.1	-1.0
	baz=143						
214A	Organ Pipe Nat	2.07	96	P	Pn	08 37 49.9	-0.5
	baz=277						
MURC	Murrieta	2.17	311	Pg	Pb	08 37 56.3	+1.1
	baz=130						
MURC				Sb	Sb	08 38 23.9	+2.1
	baz=130						
BBRC	Big Bear Solar	2.50	326	Pg	Pb	08 38 02.9	+1.9
	baz=145						
BBRC				Sb	Sg	08 38 35.4	-1.5
	baz=145						
BFSC	Mount Baldy Ra	2.88	316	Pg	Pb	08 38 08.9	+1.5
	baz=134						
BFSC				Sb	Sb	08 38 45.0	+2.6
	baz=134						
CIS	Catalina Islan	2.94	295	Pb	Pb	08 38 07.9	-0.5
	baz=114						
CIS				Sb	Sb	08 38 46.7	+2.7
	baz=114						

IDC 11 08:41:17.4±2.3, **4°.77S×153°.84E, h0^{km}, mb3.6**/5, **mb1 3.8**/5, **mb1mx3.5**/37, **mbtmp3.6**/5, **Error ellipse: s-maj=89.1km s-min=28.2km az=123.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.25	230	P	P	08 46 36.4	0.0
	0.3nm,0.3s,baz=55,slow=10,SNR=8.1						
ASAR	Alice Springs	26.88	224	P	P	08 47 00.7	+0.5
	0.1nm,0.2s,baz=56,slow=9.9,SNR=1.8						
FITZ	Fitzroy Crossi	30.58	242	P	P	08 47 32.9	-0.3
	0.8nm,0.5s,baz=53,slow=11,SNR=2.1						
MKAR	Makanchi Array	80.99	319	P	P	08 53 35.0	+0.9
	0.6nm,0.7s,baz=98,slow=6.6,SNR=6.2						
ILAR	Eielson Array	81.75	22	P	P	08 53 36.5	-1.3
	0.5nm,0.9s,baz=258,slow=4.5,SNR=2.5						

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*IDC **11** 08:44:33.7±1.1, 16°.52N×99°.12W, h0^{km}, mb3.9/9, mb1 4.0/13, mb1mx3.9/39, mbtmp3.9/13, ML3.5/3, MS3.2/7, Ms1 3.2/7, ms1mx3.0/29, Error ellipse: s-maj=32.3km s-min=15.7km az=56.0*
*NEIC **11** 08:44:38.7±1.8, 16°.56N±0°.05×99°.03W±0°.02, h26^{km}±6^{km}, mb4.0/39, Md4.0/32(MEX), Error ellipse: s-maj=8.0km s-min=2.7km az=187.0*
*MEX **11** 08:44:38.6±0.6, 16°.44N×99°.01W, h10^{km}±6^{km}, MD4.0*
ISC 11 08:44:35.7±1.4, **16°.48N**±0°.04×**99°.02W**±0°.03, **h9**^{km}±9^{km}, **n94**, σ**1^{s}.16**/117, **mb3.9**/16, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACP2	Acapulco	0.92	295	eP	Pg	08 44 53.5	+0.1
ACP2				eS	Sb	08 45 06.4	+0.3
ACP2	Acapulco	0.92	295		Pg	08 44 53.5	+0.1
ACP2					Sb	08 45 06.4	+0.3
TLIG	Tlapa	1.16	22	eP	Pb	08 44 57.6	-0.4
TLIG				eS	Sg	08 45 12.3	-0.9
TLIG	Tlapa	1.16	22		Pb	08 44 57.7	-0.4
TLIG				Sn	Sg	08 45 11.9	-1.3
TLIG	Tlapa	1.16	22		Pb	08 44 57.6	-0.4
TLIG					Sg	08 45 12.3	-0.9
CAIG	El Cayaco	1.32	295	eP	Pn	08 44 59.3	-1.1
CAIG				eS	Sb	08 45 17.0	-0.8
CAIG	El Cayaco	1.32	295		Pn	08 44 59.3	-1.1
CAIG					Sb	08 45 17.0	-0.8
MEIG	Mezcala	1.55	338	i S	Sn	08 45 22.2	-1.6
MEIG	Mezcala	1.55	338		Sn	08 45 22.2	-1.6
FTIG	Fresnillo de T	1.65	31	eP	Pn	08 45 04.7	-0.4
FTIG				eS	Sn	08 45 25.7	-0.9
HLIG	Huajuapan de L	1.78	41	eP	Pn	08 45 06.3	-0.6
HLIG				i S	Sn	08 45 28.8	-1.0
PEIG	Puerto Escondi	1.86	105	eP	Pn	08 45 07.2	-0.7
PEIG				eS	Sn	08 45 28.5	-3.1
PLIG	Platanillo	1.96	347	eP	Pn	08 45 09.5	+0.3
PLIG				i S	Sn	08 45 32.9	-1.1
PLIG	Platanillo	1.96	347		Pn	08 45 09.5	+0.3
PLIG					Sn	08 45 32.9	-1.1
ARIG	Puente Sto Nin	2.19	325	eP	Pn	08 45 12.9	+0.5
ARIG				i S	Sn	08 45 38.8	-0.9
ARIG	Puente Sto Nin	2.19	325		Pn	08 45 12.9	+0.5
ARIG					Sn	08 45 38.8	-0.9
VHO	Vista Hermosa	2.27	75	eP	Pn	08 45 13.6	0.0
YAIG	Yautepec	2.37	359	i P	Pn	08 45 15.1	+0.1
YAIG				i S	Sn	08 45 43.1	-1.2
YAIG	Yautepec	2.37	359		Pn	08 45 15.1	+0.1
YAIG					Sn	08 45 43.1	-1.2
TPIG	Tehuac#an	2.50	39	eP	Pn	08 45 16.5	-0.2
TPIG				i S	Sn	08 45 46.5	-1.0
TPIG	Tehuac#an	2.50	39		Pn	08 45 16.5	-0.2
TPIG					Sn	08 45 46.5	-1.0
ZIIG	Zihuatanejo	2.59	296	eP	Pn	08 45 17.8	-0.1
ZIIG				i S	Sn	08 45 48.0	-1.5
ZIIG	Zihuatanejo	2.59	296		Pn	08 45 17.8	-0.1
ZIIG					Sn	08 45 48.0	-1.5
UNM	Universidad Na	2.84	357		Pn	08 45 23.7	+2.2
HUIG	Huatulco	2.89	104	eP	Pn	08 45 21.7	-0.3
HUIG				i S	Sn	08 45 55.1	-1.8
HUIG	Huatulco	2.89	104		Pn	08 45 21.7	-0.3
HUIG					Sn	08 45 55.1	-1.8
MOIG	Morelia	3.79	327	i P	Pn	08 45 34.4	-0.2
MOIG				i S	Sn	08 46 18.9	-0.6
MOIG	Morelia	3.79	327		Pn	08 45 36.8	+2.3
MOIG	Morelia	3.79	327		Pn	08 45 34.4	-0.2
MOIG					Sn	08 46 18.9	-0.6
DEIG	Demacu	3.80	360	i P	Pn	08 45 35.4	+0.7
DEIG				i S	Sn	08 46 19.5	-0.2
CMIG	Matias Romero	4.01	81	Pn	Pn	08 45 36.7	-0.7
	5.8nm,0.3s,baz=260,slow=10,SNR=94						
CMIG				Lg	Lg	08 46 41.2	
	48nm,0.3s,baz=311,slow=6.3,SNR=4.7						
CMIG				LR	LR	08 47 27.3	
	comp=Z,183nm,18.6s,baz=251,slow=42						
MMIG	Aquila	4.50	294	i P	Pn	08 45 45.2	+1.0
MMIG				i S	Sn	08 46 36.1	-0.6
MMIG	Aquila	4.50	294		Pn	08 45 45.2	+1.0
MMIG					Sn	08 46 36.1	-0.6
CCIG	Comitan	6.61	91		Pn	08 46 15.4	+2.0
ZAIG	Zacatecas	7.09	332	Pn	Pn	08 46 19.4	-0.6
APG	El Apazote	8.37	99	Pn	Pn	08 46 39.0	+1.5
	0.6nm,0.3s,baz=202,slow=16,SNR=13						
APG				Sn	Sn	08 48 10.4	-2.0
	1.0nm,0.3s,baz=69,slow=5.6,SNR=2.7						
APG				Lg	Lg	08 49 07.0	
	0.9nm,0.3s,baz=310,slow=23,SNR=2.6						
APG				LR	LR	08 49 58.2	
	comp=Z,152nm,19.5s,baz=264,slow=38						
TEIG	Tepich	10.86	68	Pn	Pn	08 47 10.0	-1.5
TEIG				Sn	Sn	08 49 03.3	-10
TEIG				LR	LR	08 52 01.8	
	comp=Z,62nm,18.2s,baz=75,slow=41						
H06E1	SOCORRO T-PHAS	11.58	283	T	T	08 59 35.2	
	SNR=14						
LPIG	La Paz	13.02	307	LR	LR	08 52 13.8	
	comp=Z,135nm,19.3s,baz=114,slow=36						
TX32	Lajitas Array	13.49	342	Pn	Pn	08 47 49.1	+1.6
TXAR	Lajitas Array	13.49	342	Pn	Pn	08 47 45.5	-2.0
	0.0nm,0.3s,baz=325,slow=21,SNR=2.2						
TXAR				Lg	Lg	08 51 39.8	
	0.0nm,0.3s,baz=155,slow=27,SNR=2.1						
TXAR				LR	LR	08 52 58.4	
	comp=Z,36nm,18.9s,baz=0.0,slow=38						
TXAR	Lajitas Array	13.49	342		Pn	08 47 48.8	+1.4
HKT	Hockley	13.72	12	Pn	Pn	08 47 51.2	+0.7
JCT	Junction City	13.95	357	Pn	Pn	08 47 54.3	+0.6
JTS	Las Juntas de	15.00	112	Pn	Pn	08 48 11.4	+3.2
	1.3nm,0.3s,baz=20,slow=18,SNR=9.0						
JTS	Las Juntas de	15.00	112		Pn	08 48 10.1	+2.0
JTS				IAmb	IAmb	08 48 14.1	
	comp=Z,10.0nm,1.1s						
WHTX	Lake Whitney,	15.51	5	P	P	08 48 18.0	-1.1
WHTX				IAmb	IAmb	08 48 29.1	
	comp=Z,12nm,0.9s						
237A	Washetta, Mont	15.73	10		P	08 48 21.8	+0.2
237A				IAmb	IAmb	08 48 39.1	
	comp=Z,13nm,1.1s						
HDC	Heredia	15.87	112	Pn	Pn	08 48 22.1	+2.4
342A	Flagon Creek P	16.03	21		P	08 48 24.9	-0.1
342A				IAmb	IAmb	08 48 40.1	
	comp=Z,11nm,0.8s						
ABTX	Abilene, Hawle	16.08	358		P	08 48 25.1	-0.5
MNTX	Cornudas Mount	16.22	340	P	P	08 48 25.6	-1.5
Z35A	Perchaven, San	16.85	5		Pn	08 48 32.6	+0.6
Z35A				IAmb	IAmb	08 48 45.3	
	comp=Z,8.6nm,0.8s						
Z38A	Mt. Pleasant	17.10	12	Pn	Pn	08 48 34.5	-0.6
Z38A				IAmb	IAmb	08 48 46.4	
	comp=Z,9.6nm,0.7s						
Z41A	Richland Creek	17.62	17	Pn	Pn	08 48 40.4	-1.2
Z41A				IAmb	IAmb	08 48 53.1	
	comp=Z,14nm,0.8s						
MSTX	Muleshoe	17.74	350	P	Pn	08 48 42.9	-0.3
MSTX				IAmb	IAmb	08 48 45.9	
	comp=Z,11nm,1.2s						
MIAR	Mount Ida	18.64	14	P	P	08 48 51.7	-2.1
OKCFA	Oklahoma City	18.91	4	P	P	08 48 56.6	-0.2
TUC	Tucson	19.03	328	P	Pn	08 48 59.0	+0.1
W39A	Magazine	19.22	13	P	P	08 49 00.1	-0.1
W39A				IAmb	IAmb	08 49 13.7	
	comp=Z,5.7nm,0.8s						
ANMO	Albuquerque	19.56	341	P	Pn	08 49 05.4	0.0
	comp=Z,0.1nm,0.3s,baz=156,slow=13,SNR=4.4						
ANMO	Albuquerque	19.56	341	P	P	08 49 04.5	+0.4
TUL1	Leonard	19.56	8	IAmb	IAmb	08 49 15.1	
	comp=Z,9.4nm,0.8s						
FCAR	Ozark Folk Cen	20.28	16	P	P	08 49 12.2	+0.4
Z50A	Ashland	20.46	33	P	P	08 49 14.7	+0.9
Z50A				IAmb	IAmb	08 49 27.8	
	comp=Z,6.8nm,0.9s						
T35A	Sooner Cattle	20.48	6	P	P	08 49 13.7	-0.1
U40A	Yellville	20.54	14	P	P	08 49 13.8	-0.8
PLAL	Pickwick Lake	20.87	26	IAmb	IAmb	08 49 30.5	
	comp=Z,4.6nm,0.8s						
X16A	Lo Mia Camp, P	21.05	330		P	08 49 21.3	+0.9
X16A				IAmb	IAmb	08 49 35.8	
	comp=Z,4.6nm,0.8s						
T25A	Trinidad	21.12	348	P	P	08 49 21.8	+0.7
T25A				IAmb	IAmb	08 49 36.0	
	comp=Z,4.7nm,0.8s						
PBMO	Poplar Bluff	21.61	19	P	P	08 49 26.5	+0.5
PBMO				IAmb	IAmb	08 49 39.2	
	comp=Z,4.2nm,0.8s						
GOGA	Godfrey	21.93	37	P	P	08 49 29.2	-0.3
WVT	Waverly	21.96	25	P	P	08 49 30.7	+0.9
T47A	Sharon Grove	22.99	25	IAmb	IAmb	08 49 52.1	
	comp=Z,5.7nm,0.8s						
U15A	North Rim	23.10	332	P	P	08 49 43.3	+1.0
U15A				IAmb	IAmb	08 49 56.4	
	comp=Z,6.7nm,1.2s						
SMCO	Snowmass	23.66	344	P	P	08 49 48.7	+0.7
N47A	Urbana	26.91	23	P	P	08 50 15.6	-1.7
NVAR	Mina Array Bea	27.65	326	P	P	08 50 22.4	-1.8
	comp=Z,0.1nm,0.3s,baz=142,slow=7.5,SNR=1.6						
NVAR				LR	LR	09 02 22.4	
	comp=Z,75nm,19.0s,baz=318,slow=39						
NVAR	Mina Array Bea	27.65	326	P	P	08 50 24.1	-0.1
BW06	Boulder Array	27.70	343	P	P	08 50 25.2	+0.5
BW06				IAmb	IAmb	08 50 36.0	
	comp=Z,3.6nm,1.1s						
PD31	Pinedale Array	27.70	343	P	P	08 50 24.3	-0.3
PD31				IAmb	IAmb	08 50 36.0	
	comp=Z,3.3nm,1.1s						
PDAR	Pinedale Array	27.70	343	P	P	08 50 23.1	-1.5
	comp=Z,1.0nm,1.0s,baz=150,slow=6.8,SNR=5.1						
PDAR				LR	LR	09 02 50.8	
	comp=Z,92nm,20.2s,baz=166,slow=40						
PDAR	Pinedale Array	27.70	343	P	P	08 50 24.5	-0.1
SDV	Santo Domingo	28.68	102	P	P	08 50 34.2	+0.7
	comp=Z,1.5nm,0.6s,baz=282,slow=8.8,SNR=2.6						
ULM	Lac du Bonnet	33.78	4	P	P	08 51 17.3	-0.5
	comp=Z,0.5nm,0.4s,baz=168,slow=11,SNR=1.9						
SCHQ	Schefferville	45.59	26	P	P	08 52 55.8	-0.3
	comp=Z,0.9nm,0.6s,baz=226,slow=8.5,SNR=2.2						
YKA	Yellowknife Ar	47.25	350	P	P	08 53 08.4	-0.6
	comp=Z,0.9nm,0.9s,baz=160,slow=7.9,SNR=4.3						
INK	Inuvik	56.24	345	P	P	08 54 20.5	+4.4
	comp=Z,3.2nm,1.1s,baz=171,slow=6.9,SNR=4.8						
INK	Inuvik	56.24	345	P	P	08 54 17.4	+1.4
CPUP	Villa Florida	58.77	136	P	P	08 54 34.2	-0.2
	comp=Z,2.1nm,0.8s,baz=0.1,slow=5.5,SNR=4.5						
BDFB	Brasilia	59.60	120	P	P	08 54 40.6	+0.1
	comp=Z,4.6nm,0.6s,baz=284,slow=5.0,SNR=7.8						
BDFB	Brasilia	59.60	120	P	P	08 54 41.3	+0.7
PLCA	Paso Flores	62.77	156	P	P	08 55 01.2	-0.3
	comp=Z,2.0nm,0.8s,baz=316,slow=8.5,SNR=4.7						
PLCA	Paso Flores	62.77	156	P	P	08 55 01.9	+0.4

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*IDC **11** 08:47:00.8±9.4, 2°.13N×124°.27E, h242^{km}±104^{km}, mb3.4/7, mb1 3.6/7, mb1mx3.2/38, mbtmp4.0/7, Error ellipse: s-maj=53.4km s-min=17.7km az=65.0*
*NEIC **11** 08:47:04.0±1.3, 2°.20N±0°.10×124°.55E±0°.05, h277^{km}±10^{km}, mb4.1/19, Error ellipse: s-maj=15.3km s-min=4.6km az=204.0*
ISC 11 08:47:03.4±0.6, **2°.21N**±0°.08×**124°.57E**±0°.10, **h268**^{km}, **n34**, σ**0^{s}.85**/35, **mb3.9**/13, **Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	3.14	117	Pn	Pn	08 47 59.3	+0.7
TNTI				S	S	08 48 41.1	-1.3
LUWI	Luwuk	3.70	209	Pn	Pn	08 48 06.3	+1.6
KKM	Kota Kinabalu	9.16	295	Pn	Pn	08 49 11.8	+0.3
FAKI	Fak Fak	9.21	124	Pn	Pn	08 49 13.0	+1.0
SOEI	Soe	11.89	181		P	08 49 48.0	0.0
MTN	Manton Dam	16.32	157	P	P	08 50 36.5	-0.3
KNRA	Kununurra	18.25	167	P	P	08 50 57.8	0.0
KNRA				IAmb	IAmb	08 50 58.8	
	comp=Z,7.6nm,0.7s						
FITZ	Fitzroy Crossi	20.21	177	P	P	08 51 17.4	-1.3
	comp=Z,3.1nm,0.3s,baz=8.8,slow=9.5,SNR=34						
FITZ	Fitzroy Crossi	20.21	177	P	P	08 51 18.9	+0.3
FITZ				IAmb	IAmb	08 51 19.5	
	comp=Z,3.8nm,0.4s						
WB0	Warramunga Arr	23.88	157	P	P	08 51 52.2	-1.0
WRA	Warramunga Arr	24.01	157	P	P	08 51 53.6	-0.8
	comp=Z,2.8nm,0.4s,baz=331,slow=11,SNR=13						
WRA	Warramunga Arr	24.01	157	P	P	08 51 53.2	-1.2
WB2	Warramunga Arr	24.02	157	P	P	08 51 53.9	-0.6
WB2				IAmb	IAmb	08 51 54.0	
	comp=Z,20nm,1.4s						
WR0	Warramunga Arr	24.11	157	P	P	08 51 54.3	-1.0
WR0				IAmb	IAmb	08 52 01.5	
	comp=Z,4.4nm,1.1s						
AS31	Alice Springs	27.28	161	P	P	08 52 23.7	0.0
ASAR	Alice Springs	27.28	161	P	P	08 52 23.3	-0.4
	comp=Z,0.6nm,0.4s,baz=334,slow=8.3,SNR=18						
MORW	Morawa	32.16	194	P	P	08 53 04.8	-1.7
BBOO	Buckleboo	36.49	164	P	P	08 53 42.8	-0.7
STKA	Stephens Creek	37.56	156	P	P	08 53 52.8	+0.4
	comp=Z,1.0nm,0.3s,baz=331,slow=10,SNR=15						
STKA	Stephens Creek	37.56	156	P	P	08 53 52.5	0.0
CAN	Canberra	43.79	151	P	P	08 54 44.4	+1.2
CAN				IAmb	IAmb	08 54 59.4	
	comp=Z,14nm,1.3s						
TOO	Toolangi	44.08	156	P	P	08 54 45.9	+0.5
TOO				IAmb	IAmb	08 54 49.9	
	comp=Z,11nm,1.3s						
KLR	Kul'dur	47.24	6	P	P	08 55 10.2	+0.4
	comp=Z,0.9nm,0.4s,baz=208,slow=7.8,SNR=5.8						
SONM	Songino Array	48.09	344	P	P	08 55 16.6	+0.1
	comp=Z,0.5nm,0.7s,baz=157,slow=9.3,SNR=3.0						
SONM	Songino Array	48.09	344	P	P	08 55 16.8	+0.3
MK31	Makanchi Array	57.60	327	P	P	08 56 24.8	-0.9
MKAR	Makanchi Array	57.60	327	P	P	08 56 24.9	-0.7
	comp=Z,1.0nm,0.5s,baz=122,slow=7.9,SNR=19						
MKAR	Makanchi Array	57.60	327	P	P	08 56 24.8	-0.9
PETK	Petropavlovsk-	57.65	23	P	P	08 56 26.8	+0.9
MAKZ	Makanchi	57.78	327	P	P	08 56 25.8	-1.1
KURK	Kurchatov	61.88	329	P	P	08 56 53.8	-0.9
KURK				IAmb	IAmb	08 56 55.4	
	comp=Z,3.9nm,0.5s						
KKAR	Karatay Array	62.89	318	P	P	08 57 01.3	-0.2
KKAR	Karatay Array	62.89	318	P	P	08 57 01.0	-0.5
KKAR				IAmb	IAmb	08 57 14.3	
	comp=Z,4.3nm,1.5s						
TIXI	Tiksi	69.39	1	P	P	08 57 41.7	-0.4
TIXI				IAmb	IAmb	08 57 42.9	
	comp=Z,4.5nm,1.4s						

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*IDC **11** 09:09:29.0±1.3, 1°.53N×126°.60E, h0^{km}, mb3.8/6, mb1 3.9/7, mb1mx3.7/31, mbtmp3.8/7, ML3.5/1, Error ellipse: s-maj=123.8km s-min=18.5km az=70.0*
ISC 11 09:09:35.5±1.1, **1°.5N**±0°.2×**126°.7E**±0°.6, **h47**^{km}, **n7**, σ**0^{s}.88**/7, **mb3.9**/6, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.53	183	P	P	09 13 59.4	+0.2
	0.1nm,0.3s,baz=11,slow=10.0,SNR=1.8						
WRA	Warramunga Arr	22.61	161	P	P	09 14 31.8	-0.6
	1.9nm,0.4s,baz=338,slow=10,SNR=35						
ASAR	Alice Springs	26.00	165	P	P	09 15 04.1	-0.1
	0.9nm,0.4s,baz=350,slow=15,SNR=18						
STKA	Stephens Creek	36.09	158	P	P	09 16 32.6	-0.3
	1.0nm,0.4s,baz=330,slow=8.9,SNR=3.2						
SONM	Songino Array	49.38	342	P	P	09 18 21.4	+0.9
	0.2nm,0.5s,baz=118,slow=8.8,SNR=1.9						
MKAR	Makanchi Array	59.36	326	P	P	09 19 31.9	-1.2
	0.5nm,0.3s,baz=119,slow=8.0,SNR=13						
VNDA	Vanda	81.26	173	P	P	09 21 46.8	+0.7
	1.4nm,0.9s,baz=301,slow=5.9,SNR=1.3						

ISC 11 09:22:03.9±1.2**, 50°.10N**±0°.06×**19°.11E**±0°.04**, h0^{km}, n5, σ0^s.65**/10**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	0.46	74	*e*Pg	Pg	09 22 12.6	-0.1
OJC				*e*Sg	Sg	09 22 18.7	+0.1
LANS	**Liptovska Anna**	0.98	166	*e*PG	Pg	09 22 23.0	+0.4
LANS				*e*SG	Sg	09 22 34.5	-0.7
LANS				*e*LG	Lg	09 22 39.3	
NIE	**Niedzica**	1.03	131	*e*Pg	Pb	09 22 24.7	+0.1
NIE				*e*Sg	Sb	09 22 39.8	+1.2
MORC	**Moravsky Berou**	1.06	253	*e*PG	Pg	09 22 24.8	+0.6
MORC				*e*SG	Sb	09 22 39.6	0.0
VYHS	**Vyhne**	1.62	186	*e*PN	Pn	09 22 33.1	-0.5
VYHS				*e*SN	Sn	09 22 54.7	-0.5

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*IDC **11** 09:25:53.2±0.5, 6°.08N×77°.56W, h0^{km}, mb4.3/19, mb1 4.4/22, mb1mx4.2/40, mbtmp4.3/22, ML3.2/3, MS3.7/17, Ms1 3.7/17, ms1mx3.4/46, Error ellipse: s-maj=19.9km s-min=11.4km az=51.0*

*UPA **11** 09:25:54.4±1.0, 6°.11N×77°.69W, h8^{km}±9^{km}, MW4.7*

*NEIC **11** 09:25:55.8±2.1, 6°.15N±0°.06×77°.66W±0°.05, h14^{km}±2^{km}, mb4.5/79, Error ellipse: s-maj=10.1km s-min=6.3km az=214.0*

*RSNC **11** 09:25:55.6±1.7, 6°.11N×77°.64W, h6^{km}±8^{km}, ML3.9, Mw4.5*

ISC 11 09:25:54.5±1.1**, 6°.13N**±0°.03×**77°.68W**±0°.03**, h8**^{km}±6^{km}**, n194, σ1^s.39**/218**, mb4.5**/51**, MS3.7**/8**, 15C-4D, Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOLC	**Bahia Solano**	0.29	70	⇓*i*Pg	Pb	09 26 00.6	-1.3
SOLC				*e*Sg	Sg	09 26 04.4	+0.4
SOLC				*i*		09 26 05.6	
	comp=Z,34μm,0.2s						
SOLC	**Bahia Solano**	0.29	70	⇓*i*P	Pb	09 26 00.6	-1.3
SOLC				*e*S	Sg	09 26 04.5	+0.4
PTAC	**Punta Ardita,**	1.02	353	*e*Pg	Pg	09 26 12.9	-1.2
PTAC				*e*S	Sb	09 26 28.3	+0.3
PTAC	**Punta Ardita,**	1.02	353	*e*P	Pg	09 26 12.9	-1.2
PIZC	**Pizarro, Choco**	1.20	165	⇑*i*Pg	Pg	09 26 16.4	-1.2
PIZC				*e*Sg	Sg	09 26 32.0	-1.1
PIZC				*i*		09 26 49.8	
	comp=Z,3μm,0.7s						
CBOC	**Ciudad Bolivar**	1.68	99	⇑*i*P	Pn	09 26 22.2	-2.1
CBOC				*e*S	Sn	09 26 44.8	-1.4
CBOC				*i*		09 26 48.7	
	comp=Z,3μm,0.7s						
DBBC	**Dabeiba**	1.71	59	⇑*i*P	Pn	09 26 23.7	-1.0
DBBC				*e*S	Sb	09 26 47.5	-0.4
DBBC				*i*		09 26 48.6	
	comp=Z,4μm,1.0s						
DBBC	**Dabeiba**	1.71	59	⇑*i*P	Pn	09 26 23.7	-1.0
DBBC				*e*S	Sb	09 26 47.2	-0.7
PLMC	**San Jos del P**	1.85	131	⇑*i*P	Pn	09 26 24.1	-2.5
	comp=Z,974nm,0.6s						
PLMC				*e*S	Sn	09 26 47.4	-2.8
PLMC				*i*		09 27 01.1	
	comp=Z,974nm,0.6s						
MALC	**Bahia Malaga**	2.13	171	⇑*e*P	Pn	09 26 30.1	-0.3
MALC				*i*		09 27 34.2	
	comp=Z,506nm,0.9s						
HELC	**Santa Helena**	2.14	88	⇑*i*P	Pn	09 26 30.2	-0.7
HELC				*e*S	Sn	09 26 56.6	-1.2
HELC				*i*		09 27 02.2	
	comp=Z,1μm,0.8s						
HELC	**Santa Helena**	2.14	88	⇑*i*P	Pn	09 26 30.2	-0.7
HELC				*e*S	Sn	09 26 55.5	-2.2
UPD2	**Meteti**	2.43	352	*e*P	Pn	09 26 33.5	-1.0
UPD2				*e*S	Sn	09 27 03.1	-1.2
GUY2C	**Guyana, Caldas**	2.47	111	⇑*i*P	Pn	09 26 34.8	-0.7
GUY2C				*i*		09 27 13.9	
	comp=Z,480nm,0.7s						
YOTC	**Yotoco, Valle**	2.51	148	*e*P	Pn	09 26 34.2	-1.6
UREC	**San Jos de Ur**	2.67	53	⇑*i*P	Pn	09 26 38.0	+0.1
UREC				*i* Pg	Pb	09 26 42.1	-0.5
UREC				*e*S	Sn	09 27 09.6	-0.8
UREC				*i*		09 27 23.3	
	comp=Z,630nm,0.8s						
NORC	**Norcasia**	2.85	101	⇑*i*P	Pn	09 26 40.4	0.0
NORC				*e*S	Sn	09 27 13.6	-1.4
NORC				*i*		09 27 22.4	
	comp=Z,514nm,0.9s						
LCBC	**Los crdobas,**	3.01	26	*e*P	Pn	09 26 43.4	+1.0
LCBC				*e*S	Sb	09 27 24.8	-0.4
LCBC				*i*		09 27 45.9	
	comp=Z,462nm,1.0s						
AZU	**Azuero**	3.06	303	⇓*e*P	Pn	09 26 41.5	-1.7
AZU	**Azuero**	3.06	303	*e*P	Pn	09 26 41.1	-2.1
AZU				*e*S	Sn	09 27 17.7	-2.3
ZARC	**Zaragoza, Cauc**	3.11	64	*e*P	Pn	09 26 44.3	+0.4
ZARC				*i* Pg	Pb	09 26 47.8	-2.3
ZARC				*e*S	Sb	09 27 24.8	-3.5
ZARC				*i*		09 27 27.8	
	comp=Z,391nm,0.9s						
PTBC	**PUERTO BERRIO,**	3.23	83	⇑*i*P	Pn	09 26 46.4	+0.8
PTBC				*e*S	Sn	09 27 26.1	+1.8
PTBC				*i*		09 27 32.5	
	comp=Z,544nm,0.8s						
ORTC	**Ortega, Tolima**	3.28	132	⇑*e*P	Pn	09 26 47.0	+0.7
ORTC				*i*		09 27 29.6	
	comp=Z,280nm,0.9s						
CHPO	**Chepo, Panama**	3.34	335	*e*P	Pn	09 26 44.8	-2.2
UPA	**Univ. de Panam**	3.38	327	*e*P	Pn	09 26 45.4	-2.1
UPA				*e*S	Sn	09 27 27.2	-0.7
CACAO	**El Cacao, Vera**	3.38	291	*e*P	Pn	09 26 45.6	-2.0
VTON	**El Valle, Cocl**	3.45	316	*e*P	Pn	09 26 46.8	-1.8
VTON				*e*S	Sn	09 27 27.7	-2.1
ROSC	**El Rosal**	3.58	111	Pn	Pn	09 26 52.0	+1.3
	comp=Z,4.2nm,0.3s,baz=357,slow=14,SNR=24						
ROSC				Sn	Sn	09 27 35.9	+2.5
	comp=Z,10nm,0.3s,baz=9.8,slow=21,SNR=3.9						
ROSC				LR	LR	09 28 31.2	
	comp=Z,2μm,20.4s,baz=193,slow=46						
ROSC	**El Rosal**	3.58	111	*e*P	Pn	09 26 52.8	+2.1
ROSC				*i*		09 27 52.8	
	comp=Z,266nm,1.1s						
ROSC	**El Rosal**	3.58	111		Pn	09 26 52.6	+1.9
ROSC				Sn	Sn	09 27 33.5	+0.1
SPBC	**San Pablo de B**	3.62	97	*e*P	Pn	09 26 51.8	+0.8
SPBC				*e*S	Sb	09 27 39.9	-3.1
SPBC				*i*		09 27 52.9	
	comp=Z,168nm,1.4s						
BCIP	**Isla Barro Col**	3.70	325	*e*P	Pn	09 26 49.4	-2.5
BCIP				*i*		09 28 02.1	
	comp=Z,166nm,1.1s						
BCIP	**Isla Barro Col**	3.70	325	*e*P	Pn	09 26 51.4	-0.6
BCIP	**Isla Barro Col**	3.70	325		Pn	09 26 51.0	-1.0
BCIP				Sn	Sn	09 27 36.6	+0.8
GMAL	**Guarumal, Vera**	3.88	295	*e*P	Pn	09 26 54.0	-0.5
PCON	**Cinco Dias**	3.99	161	*e*P	Pn	09 26 58.5	+2.0
PCON				*i*		09 28 10.5	
	comp=Z,114nm,0.8s						
BBAC	**Balboa, Cauca**	4.10	174	*e*P	Pn	09 26 58.7	+0.9
SOTA	**Rioblanco**	4.11	165	*e*P	Pn	09 26 59.2	+1.2
SOTA				*e*S	Sn	09 27 44.4	-2.2
SOTA				*i*		09 27 50.2	
	comp=Z,168nm,0.6s						
CHIC	**Chingaza**	4.20	111	⇑*e*P	Pn	09 27 01.3	+2.0
CHIC				*i*		09 28 18.0	
	comp=Z,157nm,1.2s						
VILC	**Villavicencio,**	4.45	117	*e*P	Pn	09 27 05.9	+3.5
VILC				*i*		09 28 12.9	
	comp=Z,160nm,0.9s						
SMLC	**San Martn de**	4.46	53	*e*P	Pn	09 27 02.8	+0.4
SMLC				*i*		09 28 00.4	
	comp=Z,141nm,1.2s						
GARC	**Garzon, Huila**	4.48	151	*e*P	Pn	09 27 04.5	+1.5
GARC				*e*P	Pb	09 27 04.7	-8.9
SJCC	**San Jacinto, C**	4.49	33	*e*P	Pn	09 27 02.3	-0.6
SJCC	**San Jacinto, C**	4.49	33	*e*P	Pb	09 27 11.0	-2.6
BARC	**Barichara**	4.50	84	⇓*e*P	Pn	09 27 04.2	+1.0
RUSC	**La Rusia**	4.58	93	*e*P	Pn	09 27 05.9	+1.4
RUSC				*i*		09 28 26.1	
	comp=Z,357nm,1.1s						
RUSC	**La Rusia**	4.58	93		Pn	09 27 04.9	+0.4
OCAC	**Ocana**	4.81	64	*e*P	Pn	09 27 04.0	-3.4
OCAC				*i*		09 28 37.4	
	comp=Z,148nm,0.8s						
FLOC	**Florencia**	4.95	156	*e*P	Pn	09 27 10.5	+1.3
FLOC				*i*		09 28 48.0	
	comp=Z,86nm,1.3s						
FLOC	**Florencia**	4.95	156		Pn	09 27 10.7	+1.4
ARGC	**Ariguani, Magd**	5.03	42	*e*P	Pb	09 27 17.6	-5.2
ARGC				*i*		09 28 45.3	
	comp=Z,80nm,1.0s						
PAMC	**Pamplona, Colo**	5.09	76	*e*P	Pn	09 27 13.2	+1.7
MACC	**Macarena, Meta**	5.50	136	*e*P	Pn	09 27 17.4	+0.6
MACC				*i*		09 28 48.7	
	comp=Z,60nm,0.7s						
CODC	**Agustn Codazz**	5.65	48	*e*P	Pn	09 27 19.7	+0.9
CODC				*e*S	Sn	09 28 22.7	-1.2
CODC				*i*		09 28 45.0	
	comp=Z,42nm,0.9s						
TAMC	**Tame, Arauca**	5.86	87	*e*P	Pn	09 27 22.6	+0.8
TAMC				⇑*i*Pg	Pn	09 27 22.8	+1.1
TAMC				*i*		09 29 03.2	
	comp=Z,156nm,1.2s						
OTAV	**Otavalo**	5.90	188	*e*P	Pn	09 27 23.5	+0.8
OTAV	**Otavalo**	5.90	188		Pn	09 27 23.4	+0.7
SDV	**Santo Domingo**	7.50	68	Pn	Pn	09 27 43.9	-0.6
	comp=Z,1.2nm,0.3s,baz=239,slow=11,SNR=23						
SDV				Sn	Sn	09 29 10.4	+0.5
	comp=Z,1.4nm,0.3s,baz=184,slow=20,SNR=1.9						
SDV				LR	LR	09 30 41.8	
	comp=Z,680nm,20.3s,baz=237,slow=39						
SDV	**Santo Domingo**	7.50	68	*e*P	Pn	09 27 44.9	+0.4
SDV	**Santo Domingo**	7.50	68		Pn	09 27 44.9	+0.4
URIC	**Uribia, Colomb**	7.89	45	*e*P	Pn	09 27 52.2	+2.6
URIC				*i*		09 29 31.9	
	comp=Z,17nm,1.1s						
URIC	**Uribia, Colomb**	7.89	45		Pn	09 27 49.9	+0.3
JTS	**Las Juntas de**	8.30	300	Pn	Pn	09 27 56.2	+0.9
	comp=Z,0.4nm,0.3s,baz=182,slow=7.8,SNR=15						
JTS				LR	LR	09 31 11.6	
	comp=Z,724nm,20.1s,baz=166,slow=38						
JTS	**Las Juntas de**	8.30	300		Pn	09 27 56.6	+1.3
ATAH	**Atahualpa**	13.20	183	Pn	Pn	09 29 06.8	+4.1
	comp=Z,0.3nm,0.3s,baz=56,slow=20,SNR=2.2						
ATAH				LR	LR	09 34 57.7	
	comp=Z,340nm,18.9s,baz=15,slow=41						
LGNH	**Logne**	13.27	21		Pn	09 29 06.4	+3.1
PCRV	**Puerto La Cruz**	13.52	72	Pn	Pn	09 29 09.3	+2.4
	comp=Z,1.0nm,0.3s,baz=255,slow=4.2,SNR=3.6						
PLCV	**Puerto La Cruz**	13.56	72		Pn	09 29 09.3	+1.9
SDDR	**Presa de Saban**	14.21	25		Pn	09 29 17.6	+1.3
DR12	**Loma Pena Alta**	14.96	32		Pn	09 29 27.9	+1.4
APG	**El Apazote**	15.34	306	LR	LR	09 35 57.4	
	comp=Z,230nm,20.3s,baz=106,slow=39						
SJG	**San Juan**	16.39	42	LR	LR	09 38 09.9	
	comp=Z,149nm,18.0s,baz=210,slow=45						
CDVI	**St. Croix**	17.10	46	P	P	09 29 54.9	-0.9
TEIG	**Tepich**	17.39	325	LR	LR	09 37 03.1	
	comp=Z,180nm,20.7s,baz=252,slow=38						
NNA	**Nana**	18.02	177	LR	LR	09 37 52.5	
	comp=Z,105nm,20.9s,baz=360,slow=40						
PTGA	**Pitinga**	18.95	110	P	P	09 30 14.2	-2.1
	comp=Z,0.2nm,0.3s,baz=293,slow=14,SNR=8.6						
PTGA				LR	LR	09 38 04.5	
	comp=Z,394nm,18.5s,baz=293,slow=39						
PTGA	**Pitinga**	18.95	110	P	P	09 30 15.0	-1.3
SAML	**Samuel**	20.81	136	P	P	09 30 34.4	-2.2
SAML				IAmb	IAmb	09 30 35.2	
	comp=Z,24nm,0.8s						
LPAZ	**La Paz**	24.20	157	P	P	09 31 10.1	-2.3
	comp=Z,3.2nm,0.7s,baz=342,slow=10,SNR=12						
LPAZ	**La Paz**	24.20	157		P	09 31 11.5	-0.9
LPAZ	**La Paz**	24.20	157	P	P	09 31 11.0	-1.4
LPAZ				IAmb	IAmb	09 31 13.6	
	comp=Z,4.0nm,0.8s						
MDP	**Montagnes des**	24.94	91	LR	LR	09 41 17.9	
	comp=Z,401nm,18.4s,baz=231,slow=37						
MNMC	**Minye Minye**	26.33	163	P	P	09 31 32.7	+1.3
PB11	**IPOC Station P**	26.91	163	P	P	09 31 37.1	+0.7
GO01	**Chusmiza**	26.96	162	P	P	09 31 37.8	+0.5
GO01				IAmb	IAmb	09 31 39.6	
	comp=Z,8.5nm,0.8s						
SIV	**San Ignacio**	27.45	143	P	P	09 31 39.7	-1.5
	comp=Z,3.6nm,0.5s,baz=332,slow=10,SNR=21						
SIV				LR	LR	09 43 03.2	
	comp=Z,198nm,18.1s,baz=350,slow=38						
PB01	**IPOC Station P**	28.18	164	P	P	09 31 48.3	+0.6
PB01				IAmb	IAmb	09 31 49.8	
	comp=Z,16nm,1.0s						
PB04	**IPOC Station P**	29.23	166	P	P	09 31 55.8	-1.4
LVC	**Limon Verde**	29.82	164	P	P	09 32 01.2	-1.4
	comp=Z,3.0nm,0.8s,baz=90,slow=3.0,SNR=1.7						
LVC				LR	LR	09 46 16.9	
	comp=Z,116nm,21.4s,baz=322,slow=41						
W39A	**Magazine**	32.51	335	P	P	09 32 28.0	+2.1
W39A				IAmb	IAmb	09 32 30.4	
	comp=Z,5.3nm,1.0s						
USIN	**University of**	32.97	345	P	P	09 32 30.0	+0.3
U40A	**Yellville**	33.14	337	P	P	09 32 32.1	+0.7
U40A				IAmb	IAmb	09 32 35.7	
	comp=Z,8.4nm,1.1s						
HHAR	**Hobbs**	33.51	336	P	P	09 32 36.1	+1.6
HHAR				IAmb	IAmb	09 32 38.5	
	comp=Z,12nm,1.4s						
TXAR	**Lajitas Array**	33.68	316	P	P	09 32 35.9	-0.4
	comp=Z,0.4nm,0.8s,baz=138,slow=7.6,SNR=5.6						
TXAR				PcP	PcP	09 35 17.4	+1.2
	comp=Z,0.8nm,0.8s,baz=134,slow=7.1,SNR=7.8						
TXAR				LR	LR	09 47 47.0	
	comp=Z,26nm,18.2s,baz=0.0,slow=39						
TX31	**Lajitas Ar. Si**	33.68	316	P	P	09 32 36.9	+0.7
TX32	**Lajitas Array**	33.68	316	P	P	09 32 36.1	-0.2
HPIG		33.73	311	P	P	09 32 37.3	+0.5
U38A	**Gravette**	33.83	335	P	P	09 32 37.8	+0.5
U38A				IAmb	IAmb	09 32 41.5	
	comp=Z,6.6nm,1.1s						
CCM	**Cathedral Cave**	34.09	341	P	P	09 32 38.9	-0.6
CCM				IAmb	IAmb	09 32 43.3	
	comp=Z,3.5nm,0.8s						
S39A	**Bolivar**	34.49	338	P	P	09 32 44.0	+0.9
S39A				IAmb	IAmb	09 32 48.0	
	comp=Z,7.9nm,1.2s						
WMOK	**Wichita Mounta**	34.50	328	P	P	09 32 44.3	+1.1
MSTX	**Muleshoe**	36.16	323	P	P	09 32 57.9	+0.2
MNTX	**Cornudas Mount**	36.30	318	P	P	09 32 59.6	+0.8
BDFB	**Brasilia**	36.48	127	P	P	09 32 59.1	-1.5
	comp=Z,3.8nm,0.8s,baz=298,slow=10,SNR=5.9						
BDFB				LR	LR	09 48 16.4	
	comp=Z,124nm,19.1s,baz=266,slow=37						
BDFB	**Brasilia**	36.48	127	P	P	09 32 59.5	-1.2
BDFB				IAmb	IAmb	09 33 00.1	
	comp=Z,8.0nm,1.0s						
SADO	**Sadowa**	38.51	358	LR	LR	09 50 40.8	
	comp=Z,59nm,18.7s,baz=146,slow=39						
319A	**Douglas**	38.80	314	P	P	09 33 20.3	+0.2
319A				IAmb	IAmb	09 33 26.5	
	comp=Z,7.3nm,1.1s						
I42A	**Draeger Farm,**	38.88	347	P	P	09 33 19.9	-0.5
ANMO	**Albuquerque**	39.06	321	P	P	09 33 23.6	+1.3
	comp=Z,4.1nm,0.8s,baz=129,slow=12,SNR=6.3						
ANMO	**Albuquerque**	39.06	321	P	P	09 33 23.5	+1.2
T25A	**Trinidad**	39.34	325	P	P	09 33 26.3	+1.7
T25A				IAmb	IAmb	09 33 31.3	
	comp=Z,17nm,1.1s						
KSCO	**Kaye Shedlock’**	39.74	329	P	P	09 33 29.3	+1.4
KSCO				IAmb	IAmb	09 33 33.7	
	comp=Z,13nm,0.9s						
SDCO	**Great Sand Dun**	40.38	325	P	P	09 33 34.5	+1.2
SDCO				IAmb	IAmb	09 33 39.3	
	comp=Z,9.0nm,1.0s						
TUC	**Tucson**	40.38	314	P	P	09 33 34.7	+1.5
E46A	**Sault Ste Mari**	40.49	353	P	P	09 33 33.6	-0.2
ECSD	**EROS Data Cent**	40.99	339	P	P	09 33 37.8	-0.2
X18A	**Snowflake**	41.06	318	P	P	09 33 37.4	-1.5
S22A	**4UR Ranch, Cre**	41.14	324	P	P	09 33 39.5	-0.2
S22A				IAmb	IAmb	09 33 48.1	
	comp=Z,9.2nm,1.4s						
214A	**Organ Pipe Nat**	41.66	313	P	P	09 33 43.9	+0.3
ISCO	**Idaho Springs**	41.89	327	P	P	09 33 45.0	-0.8
SUSD	**Miller**	42.46	337	P	P	09 33 49.8	-0.3
SUSD				IAmb	IAmb	09 33 52.9	
	comp=Z,16nm,0.9s						
N23A	**Red Feather La**	42.85	328	P	P	09 33 55.4	+1.8
N23A				IAmb	IAmb	09 34 01.1	
	comp=Z,8.2nm,1.1s						
RWWY	**Rawlins**	44.09	328	P	P	09 34 03.4	-0.1
SRU	**San Rafael Swe**	44.23	323	P	P	09 34 04.3	-0.3
RSSD	**Black Hills**	44.33	333	P	P	09 34 05.0	-0.4
RSSD				IAmb	IAmb	09 34 10.4	
	comp=Z,13nm,1.1s						
P17A	**Butcher Ranch,**	44.59	323	P	P	09 34 08.1	+0.6
RDMU	**Red Mountain**	44.61	325	P	P	09 34 08.6	+0.9
LCMT	**Little Creek M**	44.68	319	P	P	09 34 04.5	-3.7
AGMN	**Agassiz Nation**	44.78	343	P	P	09 34 08.9	+0.3
AGMN				IAmb	IAmb	09 34 11.5	
	comp=Z,3.5nm,0.8s						
MSU	**Marysvale**	44.87	321	P	P	09 34 10.3	+0.5
TCRU	**Three Creeks R**	45.10	321	P	P	09 34 12.0	+0.3
MPU	**Maple Canyon**	45.46	323	P	P	09 34 14.6	+0.1
MDND	**Maddock**	45.59	339	P	P	09 34 15.1	-0.1
JLU	**Jordanelle**	45.72	324	P	P	09 34 18.5	+1.9
PSUT	**Pine Spring**	45.95	320	P	P	09 34 19.5	+1.2
TCUT	**Toone Canyon**	46.03	324	P	P	09 34 18.4	-0.5
PD31	**Pinedale Array**	46.09	327	P	P	09 34 18.9	-0.5
PD31				IAmb	IAmb	09 34 24.8	
	comp=Z,8.1nm,1.2s						
PDAR	**Pinedale Array**	46.09	327	P	P	09 34 20.6	+1.3
	comp=Z,3.7nm,1.1s,baz=123,slow=11,SNR=17						
PDAR	**Pinedale Array**	46.09	327	P	P	09 34 18.8	-0.6
DUG	**Dugway, Tooele**	46.28	322	P	P	09 34 22.9	+2.0
DUG				IAmb	IAmb	09 34 26.5	
	comp=Z,6.1nm,1.0s						
HWUT	**Hardware Ranch**	46.43	325	P	P	09 34 22.2	+0.1
HWUT				IAmb	IAmb	09 34 32.8	
	comp=Z,4.3nm,0.9s						
ULM	**Lac du Bonnet**	46.55	344	P	P	09 34 21.5	-1.1
	comp=Z,8.7nm,0.9s,baz=159,slow=7.0,SNR=15						
ULM	**Lac du Bonnet**	46.55	344	P	P	09 34 21.9	-0.7
AHID	**Auburn Hatcher**	46.93	326	P	P	09 34 26.1	+0.1
AHID				IAmb	IAmb	09 34 30.6	
	comp=Z,7.3nm,0.9s						
R11A	**Troy Canyon, C**	46.97	319	P	P	09 34 26.6	+0.3
R11A				IAmb	IAmb	09 34 35.6	
	comp=Z,6.0nm,1.4s						
PLCA	**Paso Flores**	47.09	173	P	P	09 34 27.7	+0.7
	comp=Z,2.7nm,0.8s,baz=15,slow=10,SNR=5.9						
PLCA	**Paso Flores**	47.09	173	P	P	09 34 28.1	+1.1
REDW	**Red Top Meadow**	47.19	327	P	P	09 34 29.5	+1.5
SNOW	**Snow King Moun**	47.20	327	P	P	09 34 27.9	-0.2
FXWY	**Fox Creek**	47.47	327	P	P	09 34 30.7	+0.5
FXWY				IAmb	IAmb	09 34 35.0	
	comp=Z,4.6nm,1.1s						
RLMT	**Red Lodge**	47.58	330	P	P	09 34 33.5	+2.5
RLMT				IAmb	IAmb	09 34 35.8	
	comp=Z,4.6nm,0.9s						
DGMT	**Dagmar**	47.83	336	P	P	09 34 33.1	+0.4
YNE	**Yellowstone No**	47.87	329	P	P	09 34 35.2	+1.9
ELK	**Elko**	48.10	322	P	P	09 34 36.6	+1.5
	comp=Z,1.0nm,0.7s,baz=148,slow=4.0,SNR=5.2						
ELK	**Elko**	48.10	322	P	P	09 34 36.4	+1.2
YHH	**Holmes Hill**	48.15	328	P	P	09 34 36.8	+1.3
GCMT	**Greycliff**	48.25	330	P	P	09 34 36.1	0.0
YHB	**Horse Butte**	48.31	328	P	P	09 34 37.6	+0.9
YHL	**Hebgen Lake**	48.37	328	P	P	09 34 37.7	+0.4
QLMT	**Earthquake Lak**	48.48	328	P	P	09 34 38.6	+0.5
NVAR	**Mina Array Bea**	48.82	317	P	P	09 34 42.2	+1.4
	comp=Z,2.0nm,0.7s,baz=130,slow=5.9,SNR=13						
NVAR	**Mina Array Bea**	48.82	317	P	P	09 34 41.5	+0.8
SCHQ	**Schefferville**	49.34	8	P	P	09 34 43.7	-0.5
	comp=Z,6.2nm,0.7s,baz=189,slow=4.9,SNR=8.4						
SCHQ	**Schefferville**	49.34	8	P	P	09 34 44.5	+0.3
SCHQ				IAmb	IAmb	09 34 49.0	
	comp=Z,6.1nm,0.7s						
MFID	**Camas Ranch**	50.02	324	P	P	09 34 50.9	+1.2
MFID				IAmb	IAmb	09 34 54.8	
	comp=Z,5.5nm,1.1s						
WVOR	**Wild Horse Val**	51.15	321	P	P	09 34 58.6	+0.3
J08A	**Circle Bar Ran**	51.56	323	P	P	09 35 01.7	+0.3
J08A				IAmb	IAmb	09 35 06.0	
	comp=Z,3.9nm,0.9s						
FFC	**Flin Flon**	52.26	342	P	P	09 35 06.3	+0.2
FFC				IAmb	IAmb	09 35 10.0	
	comp=Z,3.5nm,0.9s						
YKA	**Yellowknife Ar**	62.42	342	P	P	09 36 17.3	-0.4
	comp=Z,4.6nm,1.0s,baz=134,slow=7.0,SNR=31						
RES	**Resolute Bay**	69.23	355	P	P	09 37 02.5	+1.0
RES				IAmb	IAmb	09 37 06.4	
	comp=Z,2.6nm,1.1s						
SUMG	**Summit**	70.54	12	*i* P	P	09 37 10.1	+0.1
	comp=Z,34nm,0.8s						
SUMG	**Summit**	70.54	12	P	P	09 37 10.2	+0.2
TIC	**Toumodi**	72.15	85	*e*P	P	09 37 19.8	-0.6
LIC	**Lamto**	72.17	85	*e*P	P	09 37 19.7	-0.8
	comp=Z,28nm,0.9s						
DBIC	**Dimbokro**	72.31	85	P	P	09 37 20.2	-1.2
	comp=Z,7.1nm,0.9s,baz=279,slow=5.8,SNR=6.5						
DBIC	**Dimbokro**	72.31	85	P	P	09 37 20.4	-1.0
KIC	**Kosan Boka**	72.44	85	*e*P	P	09 37 21.7	-0.5
	comp=Z,13nm,0.9s						
BCAR	**Beaver Creek A**	73.01	335	P	P	09 37 24.9	+0.3
PPT	**Papeete**	74.75	250	LR	LR	10 03 51.8	
	comp=Z,45nm,19.3s,baz=196,slow=30						
ILAR	**Eielson Array**	75.69	336	P	P	09 37 40.6	+0.4
	comp=Z,0.7nm,0.8s,baz=136,slow=5.1,SNR=7.5						
DAG	**Danmarks Havn**	77.23	12	*i* P	P	09 37 47.4	-1.3
	comp=Z,6.3nm,1.2s						
TOA0	**Torodi Ar. Sit**	78.31	78	P	P	09 37 54.9	-1.0
TOA0				IAmb	IAmb	09 37 57.4	
	comp=Z,7.7nm,1.3s						
TORD	**Torodi Ar. Bea**	78.31	78	P	P	09 37 55.4	-0.5
	comp=Z,2.2nm,0.8s,baz=275,slow=4.8,SNR=9.1						
TORD				LR	LR	10 09 50.9	
	comp=Z,43nm,21.6s,baz=335,slow=34						
TORD	**Torodi Ar. Bea**	78.31	78	P	P	09 37 55.4	-0.5
KEST	**Kesra**	84.05	55	P	P	09 38 27.5	+1.3
	comp=Z,3.6nm,0.5s,baz=288,slow=7.8,SNR=3.7						
GERES	**GERESS Array B**	86.34	41	P	P	09 38 37.4	-0.1
	comp=Z,0.9nm,0.5s,baz=298,slow=2.9,SNR=7.4						
GERES	**GERESS Array B**	86.34	41	P	P	09 38 37.2	-0.3
ARCES	**ARCESS Array B**	88.88	20	P	P	09 38 50.5	+1.5
	comp=Z,4.7nm,1.0s,baz=305,slow=4.3,SNR=3.7						
MKAR	**Makanchi Array**	124.39	17	PKP	PKiKP	09 44 56.1	+1.4
	comp=Z,0.5nm,0.8s,baz=33,slow=2.9,SNR=3.7						
KSH	**Kashi**	128.47	26	PKP	PKiKP	09 45 03.5	+0.2
KSH				PP	PP	09 47 09.5	+3.1
KSH				SKS	SKSdf	09 52 12.9	-2.1
KSH				SKKS	SKKSac	09 54 02.1	-3.4
LZH	**Lanzhou**	137.98	358	*e*PKP	PKPdf	09 45 20.3	-0.4
LZH				pPKP	PKiKP	09 45 23.5	+0.8
LZH				sPKP		09 45 24.9	
CD2	**Chengdu**	143.15	358	PKP	PKPbc	09 45 28.1	+1.4
ASAR	**Alice Springs**	144.98	237	PKPbc	PKPab	09 45 31.9	-0.7
	comp=Z,3.5nm,0.7s,baz=124,slow=3.9,SNR=25						
WRA	**Warramunga Arr**	146.01	243	PKPbc	PKPbc	09 45 35.9	0.0
	comp=Z,3.0nm,0.7s,baz=101,slow=4.0,SNR=11						

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*IDC **11** 09:29:08.1±1.1, 6°.10N×77°.65W, h0^{km}, mb3.9/4, mb1 3.9/5, mb1mx3.5/38, mbtmp3.8/5, ML1.9/1, MS3.5/2, Ms1 3.5/2, ms1mx2.8/39, Error ellipse: s-maj=44.0km s-min=25.3km az=55.0*

*RSNC **11** 09:29:11.4±2.8, 6°.09N×77°.58W, h6^{km}±14^{km}, ML3.2*

ISC 11 09:29:08.9±1.4**, 6°.10N**±0°.03×**77°.69W**±0°.04**, h9**^{km}±9^{km}**, n34, σ1^s.96**/48**, mb3.9**/4**, 1C-1D, Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOLC	**Bahia Solano**	0.31	66	⇓*i*Pg	Pg	09 29 15.7	+0.6
SOLC				*e*Sg	Sg	09 29 19.5	+0.2
PTAC	**Punta Ardita,**	1.04	354	*e*P	Pg	09 29 28.1	-0.9
PTAC				*i* Pg	Pn	09 29 33.4	+3.6
PTAC				*e*S	Sb	09 29 43.9	+0.9
PIZC	**Pizarro, Choco**	1.18	164	*i* Pg	Pb	09 29 29.8	-1.7
PIZC				*e*Sg	Sb	09 29 47.3	+0.4
PIZC				*i*		09 29 55.0	
	comp=Z,531nm,0.4s						
CBOC	**Ciudad Bolivar**	1.69	98	*e*P	Pn	09 29 37.4	-1.5
CBOC				*e*S	Sn	09 29 58.6	-2.1
CBOC				*i*		09 30 03.5	
	comp=Z,482nm,0.8s						
DBBC	**Dabeiba**	1.73	58	*e*P	Pn	09 29 38.9	-0.4
PLMC	**San Jos del P**	1.84	130	*e*P	Pn	09 29 39.1	-1.7
PLMC				*e*S	Sn	09 29 59.3	-5.0
PLMC				*i*		09 30 11.1	
	comp=Z,326nm,0.3s						
MALC	**Bahia Malaga**	2.11	170	*e*P	Pn	09 29 45.2	+0.8
MALC				*e*S	Sn	09 30 10.7	-0.1
MALC				*i*		09 30 16.0	
	comp=Z,152nm,0.4s						
HELC	**Santa Helena**	2.15	88	*e*P	Pn	09 29 45.3	-0.1
HELC				*e*S	Sn	09 30 11.3	-1.2
HELC				*i*		09 30 17.1	
	comp=Z,169nm,0.9s						

GUY2C	Guyana, Caldas	2.48	111	*e*P	Pn	09 29 50.2	+0.2
GUY2C				*e*S	Sn	09 30 20.1	-0.4
GUY2C				*i*		09 30 28.8	
	comp=Z,129nm,0.7s						
YOTC	Yotoco, Valle	2.50	147	*e*P	Pn	09 29 49.3	-0.6
UREC	San Jos de Ur	2.70	53	*e*P	Pn	09 29 53.1	+0.5
UREC				*e*S	Sn	09 30 26.5	+1.0
UREC				*i*		09 30 33.6	
	comp=Z,123nm,0.9s						
NORC	Norcasia	2.86	101	*e*P	Pn	09 29 55.9	+1.0
NORC				*e*S	Sn	09 30 29.4	-0.1
NORC				*i*		09 30 37.2	
	comp=Z,102nm,1.0s						
NORC				*i*		09 30 37.2	
	comp=Z,56nm,0.4s						
LCBC	Los crdobas,	3.04	26	*e*P	Pn	09 29 58.9	+1.7
LCBC				*i*		09 30 54.3	
	comp=Z,132nm,1.1s						
ZARC	Zaragoza, Cauc	3.14	64	*e*P	Pn	09 29 59.6	+1.0
ZARC				*e*S	Sn	09 30 36.8	+0.6
ZARC				*i*		09 30 48.3	
	comp=Z,93nm,0.7s						
PTBC	PUERTO BERRIO,	3.25	82	*e*P	Pn	09 30 01.7	+1.6
PTBC				*e*S	Sb	09 30 43.9	-2.7
PTBC				*i*		09 30 55.2	
	comp=Z,91nm,1.1s						
ORTC	Ortega, Tolima	3.27	132	*e*P	Pn	09 30 02.4	+1.9
ORTC				⇑*e*S	Sn	09 30 39.2	-0.3
ORTC				*i*		09 30 53.0	
	comp=Z,55nm,1.0s						
ROSC	El Rosal	3.58	110	Pn	Pn	09 30 06.9	+1.8
	comp=Z,2.1nm,0.3s,baz=342,slow=19,SNR=0.9						
SPBC	San Pablo de B	3.63	97	*e*P	Pn	09 30 07.3	+1.8
SPBC				*i*		09 31 11.2	
	comp=Z,38nm,0.8s						
BCIP	Isla Barro Col	3.71	325	*e*P	Pn	09 30 05.0	-1.5
BCIP				*e*S	Sn	09 30 47.4	-3.0
BCIP				*i*		09 31 17.1	
	comp=Z,39nm,4.8s						
PCON	Cinco Dias	3.97	161	*e*P	Pn	09 30 14.9	+4.4
SOTA	Rioblanco	4.09	165	*e*P	Pn	09 30 16.9	+4.7
SOTA				*i*		09 31 11.0	
	comp=Z,27nm,0.6s						
SMLC	San Martn de	4.48	53	*e*P	Pn	09 30 18.0	+0.8
SMLC				*i*		09 31 24.8	
	comp=Z,30nm,0.9s						
SJCC	San Jacinto, C	4.52	33	*e*P	Pn	09 30 18.1	+0.5
SJCC				*i*		09 31 20.3	
	comp=Z,27nm,1.7s						
RUSC	La Rusia	4.59	92	*e*P	Pn	09 30 22.7	+3.7
RUSC				*i*		09 31 46.3	
	comp=Z,54nm,0.9s						
PAMC	Pamplona, Colo	5.11	76	*e*P	Pn	09 30 28.3	+2.1
PAMC				*e*S	Sn	09 31 29.3	+3.7
CODC	Agustn Codazz	5.68	48	*e*P	Pn	09 30 33.1	-0.5
CODC				*i*		09 31 49.2	
	comp=Z,12nm,1.6s						
LPAZ	La Paz	24.18	157	LR	LR	09 44 58.7	
	comp=Z,102nm,19.2s,baz=312,slow=39						
SIV	San Ignacio	27.43	143	P	P	09 34 55.0	-0.5
	comp=Z,1.0nm,0.4s,baz=318,slow=8.4,SNR=8.2						
SCHQ	Schefferville	49.37	8	P	P	09 37 59.3	+0.6
	comp=Z,1.4nm,0.7s,baz=206,slow=13,SNR=3.1						
YKA	Yellowknife Ar	62.44	342	P	P	09 39 32.7	+0.5
	comp=Z,0.4nm,0.6s,baz=97,slow=30,SNR=5.4						
JMIC	Jan Mayen	77.55	18	LR	LR	10 09 20.5	
	comp=Z,27nm,21.3s,baz=250,slow=31						
TORD	Torodi Ar. Bea	78.33	78	P	P	09 41 10.3	0.0
	comp=Z,0.3nm,0.5s,baz=297,slow=6.7,SNR=4.8						
ASAR	Alice Springs	144.96	237	PKP	PKPdf	09 48 47.5	-0.1
	comp=Z,0.7nm,0.7s,baz=122,slow=3.7,SNR=9.4						
WRA	Warramunga Arr	145.98	243	PKPbc	PKPab	09 48 50.9	+0.2
	comp=Z,0.6nm,0.6s,baz=101,slow=3.9,SNR=5.9						

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*NEIC **11** 09:46:59.0±1.8, 40°.66N±0°.04×125°.4W±0°.1, h16^{km}±13^{km}, Error ellipse: s-maj=13.4km s-min=5.0km az=81.0*

*ANF **11** 09:47:01.9±0.8, 40°.67N×125°.24W, h18^{km}, ML2.2/1, Error ellipse: s-maj=7.4km s-min=5.2km az=66.0*

*NCEDC **11** 09:47:02.4±1.8, 40°.57N±0°.04×125°.28W±0°.09, h18^{km}±8^{km}, Md2.8/36, Error ellipse: s-maj=10.4km s-min=5.0km az=88.0*

ISC 11 09:46:59.3±3.5**, 40°.62N**±0°.05×**125°.4W**±0°.1**, h10**^{km}±26^{km}**, n53, σ1ˢ.01**/62**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	0.79	100		Pn	09 47 16.3	-0.2
KMPM	Mount Pierce	0.96	102		Pb	09 47 18.5	+0.4
KMPM					Sb	09 47 31.6	+0.8
JCC	Jacoby Creek,	1.02	78	Pn	Pb	09 47 19.0	-0.1
JCC				Sn	Sb	09 47 32.4	-0.3
KRPM	Rodgers	1.14	61		Pn	09 47 20.6	-0.8
KRPM					Sb	09 47 35.9	-0.3
KCRM	Chalk Rock	1.18	99		Pn	09 47 21.8	-0.2
KHMM	Horse Mountain	1.26	78		Pn	09 47 22.7	-0.4
KHMM				Sn	Sb	09 47 39.0	-0.5
KMRM	Mail Ridge	1.31	107		Pb	09 47 24.4	+0.3
KMRM				Sn	Sn	09 47 41.4	-0.1
KCSM	Cold Springs	1.40	93		Pn	09 47 25.1	0.0
KRMB	Red Mountain	1.42	50		Pn	09 47 24.5	-0.8
KBSM	Bell Springs	1.51	117		Pn	09 47 26.3	-0.2
KHBM	Hayfork Bally	1.62	88		Pn	09 47 27.8	-0.4
KCPM	Cahto Peak	1.64	124		Pn	09 47 28.4	0.0
KIPM	Iron Peak	1.64	119		Pn	09 47 28.4	0.0
KSXB	Camp Six Broad	1.64	42		Pn	09 47 27.7	-0.7
KFPM	Farley Peak	1.77	123		Pn	09 47 29.8	-0.3
KBNM	Bluenose Ridge	1.80	113		Pn	09 47 30.9	+0.3
KBO	Bosley Butte	1.80	28	Pn	Pn	09 47 30.2	-0.4
GTC	Three Chop Rid	1.84	131		Pn	09 47 30.1	-0.9
LBPM	Beegum Peak	1.91	98		Pn	09 47 32.0	0.0
LGPM	Granite Peak	1.94	80		Pn	09 47 32.1	-0.3
KRKM	Rackout Spring	1.97	122		Pn	09 47 32.6	-0.3
L02E	Cave Junction	2.02	40	P	Pn	09 47 33.9	+0.4
	baz=219						
L02E				S	Sn	09 47 58.1	-0.8
	baz=219						
N02D	Trinity Center	2.04	79		Pn	09 47 33.4	-0.4
N02D	Trinity Center	2.04	79	P	Pn	09 47 33.4	-0.4
	baz=259						
N02D				S	Sn	09 47 59.5	+0.1
	baz=259						
M02C	Callahan	2.04	67		Pn	09 47 33.8	0.0
M02C	Callahan	2.04	67	P	Pn	09 47 33.8	0.0
	baz=247,SNR=38						
M02C				S	Sn	09 47 58.4	-1.0
	baz=247						
LBKM	Bonanza King	2.09	76		Pn	09 47 34.4	-0.1
GHOM	Hamilton Openi	2.10	138		Pn	09 47 33.8	-0.8
WDC	Whiskeytown Da	2.14	90		Pn	09 47 35.3	+0.2
GROM	Round Mountain	2.17	108		Pn	09 47 36.4	+0.9
GHMM	Hull Mountain	2.17	120		Pn	09 47 35.3	-0.3
GVV	Valley View	2.21	111		Pn	09 47 36.9	+0.7
GASB	Alder Springs	2.24	115		Pn	09 47 37.0	+0.4
YBH	Yreka Blue Hor	2.28	60	Pn	Pn	09 47 37.7	+0.6
GSNM	Snow Mountain	2.36	135		Pn	09 47 37.9	-0.3
GHLM	Highland Sprin	2.39	131		Pn	09 47 38.6	0.0
HOPS	Hopland Field	2.39	132	Pn	Pn	09 47 38.5	0.0
K02D	Willamette Mer	2.43	31	P	Pn	09 47 39.5	+0.3
	baz=210,SNR=40						
K02D				S	Sn	09 48 08.4	-0.6
	baz=210						
LSHM	Sage Hen Hill	2.52	85		Pn	09 47 40.3	-0.1
HUMO	Hull Mountain	2.68	41	Pn	Pn	09 47 43.1	+0.5
O03E	Paynes Creek	2.73	96	P	Pn	09 47 43.4	+0.1
	baz=277,SNR=14						
L04D	Klamath Falls	2.79	54	P	Pb	09 47 46.9	-2.5
	baz=235,SNR=56						
ORV	Oroville	3.14	109		Pn	09 47 48.8	0.0
K04D	Chiloquin, OR	3.36	52	P	Pn	09 47 54.3	+2.3
	baz=233,SNR=9.3						
I03D	Drain, OR	3.42	25	P	Pn	09 47 54.2	+1.5
	baz=205,SNR=12						
J04D	Umpqua Nationa	3.57	42	P	Pn	09 47 57.7	+2.8
	baz=223						
AFDM	Forest Hills D	3.76	115	Pn	Pn	09 47 58.4	+0.9
BEKR	Beckworth	3.89	99		Pn	09 48 01.6	+2.3
PINE	Pine Mountain	4.56	44	Pn	Pn	09 48 10.9	+2.4
VCNR	Virginia City	4.58	105	Pn	Pn	09 48 10.4	+1.7
PNTR	Pine Nut	4.68	107	Pn	Pn	09 48 12.1	+1.8
I07A	Izee	5.54	49	Pn	Pn	09 48 25.1	+3.1
KVN	Kaiserville	5.80	103	Pn	Pn	09 48 26.1	+0.6

IDC 11 09:49:22.9±10.0**, 35°.95N**×**81°.59E, h0**^{km}**, mb3.1**/1**, mb1 3.4**/3**, mb1mx3.1**/65**, mbtmp3.4**/3**, ML3.2**/2**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.5**/32**, Error ellipse: s-maj=149.6km s-min=55.2km az=53.0, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	10.85	3	Pn	Pn	09 52 01.5	+2.0
	0.2nm,0.3s,baz=190,slow=12,SNR=12						
MKAR				Sn	Sn	09 53 58.5	-3.1
	0.1nm,0.3s,baz=186,slow=24,SNR=4.7						
ZALV	Zalesovo Beam	18.14	6	P	Pn	09 53 35.2	-0.9
	0.3nm,0.3s,baz=190,slow=16,SNR=1.4						
ZALV				LR	LR	10 01 10.6	
	comp=Z,60nm,18.9s,baz=60,slow=39						
SONM	Songino Array	21.85	49	P	P	09 54 17.0	-0.2
	0.6nm,0.6s,baz=236,slow=11,SNR=4.9						

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*IDC **11** 10:02:21.1±2.0, 3°.74N×122°.44E, h612^{km}±27^{km}, mb2.9/8, mb1 3.0/8, mb1mx2.7/45, mbtmp3.9/8, Error ellipse: s-maj=75.4km s-min=12.1km az=66.0*

ISC 11 10:02:20.0±0.8**, 3°.7N**±0°.2×**122°.5E**±0°.5**, h602**^{km}**, n9, σ1ˢ.89**/14**, mb3.4**/8**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.90	172	P	P	10 06 30.8	0.0
	1.1nm,0.6s,baz=29,slow=7.2,SNR=2.4						
WRA	Warramunga Arr	26.23	154	P	P	10 07 09.2	+0.2
	2.6nm,0.4s,baz=332,slow=10.0,SNR=10						
WRA				S	S	10 10 55.5	-5.0
	0.5nm,0.7s,baz=337,slow=15,SNR=0.9						
ASAR	Alice Springs	29.40	158	P	P	10 07 37.8	+1.2
	1.3nm,0.5s,baz=333,slow=7.1,SNR=31						
ASAR				S	S	10 11 48.2	-1.4
	0.4nm,0.5s,baz=328,slow=13,SNR=8.5						
ASAR				ScP	ScP	10 13 09.1	+0.6
	0.2nm,0.4s,baz=340,slow=3.2,SNR=6.4						
STKA	Stephens Creek	39.78	154	P	P	10 09 04.5	+1.9
	0.3nm,0.2s,baz=323,slow=8.6,SNR=3.1						
SONM	Songino Array	46.09	345	P	P	10 09 52.4	+1.0
	0.8nm,0.7s,baz=157,slow=7.8,SNR=1.1						
SONM				S	S	10 15 52.3	-1.8
	0.1nm,0.3s,baz=172,slow=14,SNR=4.0						
MKAR	Makanchi Array	55.23	327	P	P	10 10 58.1	+0.5
	0.9nm,0.5s,baz=120,slow=8.8,SNR=15						
MKAR				PcP	PcP	10 11 48.8	-0.4
	0.5nm,0.6s,baz=106,slow=4.9,SNR=5.2						
KURBB	Kurchatov Arra	59.54	329	P	P	10 11 26.7	+0.1
	0.9nm,0.5s,baz=132,slow=6.2,SNR=7.5						
AKTO	Aktyubinsk	71.08	322	P	P	10 12 38.3	-0.4
	0.4nm,0.5s,baz=100,slow=12,SNR=4.2						
TORD	Torodi Ar. Bea	118.94	287	PKP	PKPdf	10 20 00.7	-1.5
	0.2nm,0.3s,baz=118,slow=1.1,SNR=4.2						

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*PAS **11** 10:03:08.6±0.9, 35°.48N±0°.01×118°.28W±0°.02, h5^{km}±6^{km}, ML2.6/123, Error ellipse: s-maj=2.2km s-min=1.7km az=141.0*

NEIC 11 10:03:08.2±0.9**, 35°.47N**±0°.01×**118°.271W**±0°.007**, h6**^{km}±5^{km}**, Error ellipse: s-maj=2.0km s-min=0.8km az=169.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSM	Bird Springs	0.12	59		Pg	10 03 11.2	+0.3
WBSM					Sg	10 03 13.1	+0.4
WORM	Onyx Ranch	0.22	6		Pg	10 03 12.6	0.0
WHFM	Hanning Flat	0.23	344		Pg	10 03 12.8	0.0
ISA	Isabella, Lake	0.25	319	Pg	Pg	10 03 13.1	0.0
ISA				Sg	Sg	10 03 16.4	-0.1
WASM	Alta Sierra Ca	0.35	319		Pg	10 03 15.1	0.0
WOFM	Oak Flat	0.37	280		Sg	10 03 20.2	0.0
DTP	Desert Tortois	0.40	120		Pg	10 03 16.2	+0.2
TEJ	El Tejon	0.42	235		Pg	10 03 16.3	0.0
TEJ					Sg	10 03 21.8	0.0
SRTC	Snort	0.48	63		Pg	10 03 17.9	+0.5
LRMC	Laurel Mtn Rad	0.48	89		Pg	10 03 17.6	+0.1
LRMC					Sg	10 03 24.3	+0.5
JFS	Joseph F. Stat	0.51	104		Sg	10 03 24.9	+0.3
ARVC	Arvin	0.57	233		Sg	10 03 26.9	+0.2
TJR	Tejon Ranch	0.59	221		Pg	10 03 19.3	-0.2
TJR					Sg	10 03 27.1	-0.1
VPEM	Volcano Peak E	0.60	38		Pg	10 03 19.7	-0.1
JRC2	Joshua Ridge	0.63	36		Pg	10 03 20.2	-0.2
JRC2					Sg	10 03 28.5	-0.2
EDW2	Edwards Air Fo	0.63	159		Pg	10 03 20.1	-0.2
EDW2					Sg	10 03 28.8	+0.2
CLC	China Lake	0.65	58		Pg	10 03 20.4	-0.2
CLC					Sg	10 03 28.9	-0.2
THC	Tehachapi Micr	0.65	210		Pg	10 03 20.4	-0.3
WCSM	Coso Springs S	0.69	36		Pg	10 03 21.4	-0.1
BAKC	Calstate	0.69	260		Pg	10 03 21.5	0.0
FOXC	Fox Airport	0.73	178		Pg	10 03 22.4	+0.2
VES	Vestal, Richgr	0.76	299		Pg	10 03 22.5	-0.3
VES					Sg	10 03 32.0	-0.6
LEOC	Leona Valley	0.84	182		Pg	10 03 23.9	-0.5
MPMC	Manual Prospec	0.86	47		Sg	10 03 35.8	-0.2
SBB	Saddle Back Bu	0.86	155		Pg	10 03 24.3	-0.5
OSI	Osito Audit: C	0.93	204		Pb	10 03 27.0	+0.2
OSI				Sg	Sb	10 03 39.9	+0.3
LRRC	Littlerock Res	0.97	168		Pg	10 03 26.6	-0.1
MPI	Mount Pinos, F	0.97	228		Pg	10 03 26.4	-0.5
CWC	Cottonwood Cre	0.98	9		Sg	10 03 39.2	-0.5
HOLC	Holcomb Ridge	1.07	161		Pg	10 03 28.2	-0.5
BCW	Bitter Crk WRg	1.08	241		Pg	10 03 28.2	-0.7
IR2C	Iron Canyon	1.09	186		Pg	10 03 28.4	-0.7
CHFC	Chilao Flat St	1.16	170		Pg	10 03 29.6	-0.7
RRX	Edison Barstow	1.20	119		Pg	10 03 30.9	-0.3
GSC	Goldstone, Bar	1.21	98		Pg	10 03 30.7	-0.7
GSC	Goldstone, Bar	1.21	98		Pg	10 03 30.8	-0.6
GSC				Sg	Sb	10 03 47.5	0.0
VOG	Valley Oaks Go	1.24	313		Pg	10 03 31.0	-0.9
MWC	Mount Wilson	1.26	172		Pg	10 03 31.9	-0.5
MWC				Sg	Sb	10 03 49.0	0.0
PASC	Pasadena Art C	1.30	177	Pn	Pn	10 03 32.6	-0.3
PASC				Sn	Sg	10 03 49.5	-0.4
SSK	Sunset Peak	1.35	159		Pn	10 03 33.5	-0.2
PAGB	Antelope Grade	1.63	280	Pn	Pn	10 03 38.0	+0.5
PMPB	Monarch Peak	2.19	291	Pn	Pn	10 03 45.2	0.0
TPNV	Topopah Spring	2.20	47		Pn	10 03 45.1	-0.3
MLAC	Mammoth, Mammo	2.20	348		Pb	10 03 48.4	-0.2
MDPB	Devils Postpil	2.25	343		Pn	10 03 47.8	+1.5
PFO	Pinyon Flats O	2.38	141		Pn	10 03 47.9	-0.1
XPFO	Pion Flat	2.39	141		Pn	10 03 47.9	-0.1
SHPR	Sheep Range	2.73	67		Pn	10 03 53.1	+0.4
SAO	San Andreas Ge	2.88	298	Pn	Pn	10 03 55.0	+0.4
NVAR	Mina Array Bea	2.95	359		Pn	10 03 57.8	+1.9
BAR	Barrett	3.09	154	Pn	Pn	10 03 57.7	+0.2
W13A	Hualapai Mount	3.61	95	Pn	Pn	10 04 04.4	-0.5
GLA	Glamis	3.74	129	Pn	Pn	10 04 07.0	+0.5

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*IDC **11** 10:23:30.1±1.1, 38°.49N×31°.87E, h0^{km}, mb3.8/8, mb1 3.8/10, mb1mx3.5/50, mbtmp3.8/10, ML3.4/2, MS3.1/2, Ms1 3.1/2, ms1mx2.5/55, Error ellipse: s-maj=27.6km s-min=12.5km az=136.0*

*DDA **11** 10:23:30.8, 38°.46N×31°.82E, h10^{km}±1^{km}, MW3.7*

*ISK **11** 10:23:30.4, 38°.48N×31°.84E, h5^{km}, ML3.7/39*

*NEIC **11** 10:23:33.5±1.4, 38°.39N±0°.04×31°.81E±0°.05, h22^{km}±7^{km}, mb4.2/7, Error ellipse: s-maj=6.2km s-min=4.3km az=127.0*

ISC 11 10:23:31.1±1.0**, 38°.45N**±0°.02×**31°.82E**±0°.02**, h7**^{km}±7^{km}**, n121, σ0ˢ.83**/146**, mb4.0**/12**, 8C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDHN	Kadinhani	0.24	74	*i* P	Pg	10 23 35.9	-0.1
KDHN				*i* S	Sg	10 23 39.6	+0.2
KDHN				IAML		10 23 40.0	
	comp=N,7µm,0.6s						
KDHN				IAML		10 23 40.0	
	comp=E,5µm,0.6s						
DOGA	KONYA_Doganhis	0.37	199	*i* P	Pg	10 23 38.5	+0.1
DOGA				*i* S	Sb	10 23 44.6	-1.3
DOGA				IAML		10 23 45.0	
	comp=N,7µm,0.3s						
DOGA				IAML		10 23 46.0	
	comp=E,4µm,0.3s						
KIZT	Kizilcal	0.43	7	PG	Pg	10 23 38.8	-0.7
LADK	Ladik-KONYA	0.50	120	PG	Pg	10 23 40.8	0.0
LADK				SG	Sg	10 23 47.7	+0.4
KONT	Konya--Tatoy	0.66	140	PG	Pg	10 23 43.8	-0.1
KONT				SG	Sb	10 23 53.3	-1.1
KONT	Konya--Tatoy	0.66	140	*i* P	Pg	10 23 43.8	-0.1
KONT				*i* S	Sb	10 23 53.8	-0.6
KONT				IAML		10 23 58.0	
	comp=E,2µm,0.5s						
KONT				IAML		10 23 58.0	
	comp=N,2µm,0.6s						
BOLV	Bolvadin	0.73	292	*i* P	Pg	10 23 45.0	-0.2
BOLV				*i* S	Sg	10 23 55.4	+0.7
BOLV				IAML		10 23 57.0	
	comp=N,3µm,0.4s						
BOLV				IAML		10 23 58.0	
	comp=E,2µm,0.6s						
KMER	Konya-Meram	0.81	147	*i* P	Pg	10 23 46.5	-0.3
KMER				*i* S	Sb	10 23 59.2	+0.4
KMER				IAML		10 24 01.0	
	comp=N,1µm,0.2s						
KMER				IAML		10 24 05.0	
	comp=E,1µm,0.2s						
CHBY	Cihanbeyli	0.85	81	PG	Pg	10 23 46.9	-0.6
CHBY				SG	Sg	10 23 58.7	+0.1
BAGO	Egridir - ISPA	0.93	241	*i* P	Pg	10 23 48.8	-0.2
BAGO				IAML		10 24 07.0	
	comp=E,606nm,0.4s						
SHUT	Suhut-Afyon	1.00	276	PG	Pg	10 23 49.8	-0.5
AUSIV	SIVRIHISAR	1.01	348	PG	Pg	10 23 49.7	-0.8
AUSIV	SIVRIHISAR	1.01	348	*i* P	Pg	10 23 50.7	+0.2
AUSIV				*i* S	Sg	10 24 04.3	+0.7
AUSIV				IAML		10 24 07.0	
	comp=E,1µm,0.5s						
AUSIV				IAML		10 24 07.0	
	comp=N,1µm,0.6s						
SVRH	Sivrihisar-ESK	1.02	347	PG	Pg	10 23 50.2	-0.5
SEYD	Seydisehir-KON	1.05	179	PG	Pg	10 23 51.1	-0.1
CIFT	Cifteler, Eski	1.08	327	PG	Pg	10 23 50.5	-1.4
CIFT	Cifteler, Eski	1.08	327	*i* P	Pg	10 23 50.2	-1.6
CIFT				*i* S	Sn	10 24 08.0	0.0
KULU	Kulu	1.10	57	PG	Pg	10 23 51.9	-0.3
KKUL	Konya-Kulu	1.12	50	*i* P	Pg	10 23 52.5	-0.1
KKUL				*i* S	Sn	10 24 09.4	+0.4
KKUL				IAML		10 24 17.0	
	comp=E,727nm,0.7s						
KKUL				IAML		10 24 20.0	
	comp=N,351nm,0.7s						
ISP	Isparta	1.20	239	PN	Pb	10 23 53.2	-1.0
ISP	Isparta	1.20	239		Pb	10 23 53.5	-0.7
ISP				Sn	Sg	10 24 09.9	+0.2
AFYO	Afyonkarahisar	1.23	286	*i* P	Pn	10 23 53.6	-1.2
AFYO				*i* S	Sn	10 24 12.0	+0.1
AFYO				IAML		10 24 18.0	
	comp=N,1µm,0.5s						
AFYO				IAML		10 24 21.0	
	comp=E,1µm,0.9s						
AUKIR	Kırka- Seyitga	1.30	310	*i* P	Pn	10 23 55.3	-0.5
AUKIR				IAML		10 24 20.0	
	comp=E,873nm,0.4s						
AUKIR				IAML		10 24 20.0	
	comp=N,990nm,0.7s						
ESKT	Eskisehir	1.30	325	PN	Pn	10 23 55.5	-0.4
KZIL	AFYON_Kizioren	1.33	262	*i* P	Pn	10 23 55.6	-0.6
KZIL				*i* S	Sg	10 24 14.7	+0.8
KZIL				IAML		10 24 17.0	
	comp=E,893nm,0.8s						
KZIL				IAML		10 24 17.0	
	comp=N,573nm,0.7s						
SULT	Sultanhani-AKS	1.36	100	PN	Pn	10 23 56.5	-0.1
BCK	Bucak	1.39	225	PN	Pg	10 23 57.5	-0.2
AFSR	Afar-Bala (An	1.39	44	PN	Pn	10 23 56.5	-0.5
SERE	Sereflikochisa	1.45	70	PN	Pn	10 23 57.7	-0.2
BBAL	Bala	1.49	43	*i* P	Pb	10 23 59.3	+0.1
BBAL				IAML		10 24 23.0	
	comp=E,510nm,0.8s						
BBAL				IAML		10 24 26.0	
	comp=N,325nm,0.7s						
BASM	Basmaki-Afyon	1.49	250	PN	Pb	10 23 59.2	0.0
AKSY	AKSARAY - Alti	1.54	82	*i* P	Pb	10 23 59.6	-0.3
AKSY				*i* S	Sg	10 24 22.1	+1.6
AKSY				IAML		10 24 28.0	
	comp=N,271nm,1.4s						
AKSY				IAML		10 24 40.0	
	comp=E,193nm,1.1s						
KEPZ	Antalya-Kepez	1.56	186	*i* P	Pn	10 23 59.4	+0.2
KEPZ				IAML		10 24 31.0	
	comp=N,643nm,0.7s						
KEPZ				IAML		10 24 37.0	
	comp=E,401nm,0.7s						
BR231	Keskin MP Arra	1.57	28		Pb	10 24 00.6	0.0
BR231				Sn	Sg	10 24 21.8	+0.1
BRDR	BURDUR-Merkez	1.58	242	*i* P	Pn	10 23 59.6	0.0
BRDR				*i* S	Sg	10 24 23.4	+1.6
BRDR				IAML		10 24 25.0	
	comp=E,601nm,0.7s						
BRDR				IAML		10 24 29.0	
	comp=N,371nm,0.5s						
HDMB	Hadim	1.58	160	PN	Pn	10 23 59.8	+0.1
ANTO	Ankara	1.60	28	PN	Pn	10 23 59.5	-0.4
ANTO	Ankara	1.60	28		Pn	10 24 00.3	+0.3
ANTO				Sn	Sb	10 24 22.3	+0.7
LOD	Lodumlu	1.61	27	PN	Pn	10 23 59.2	-0.8
YAYX	Yaylak	1.63	72	PN	Pn	10 24 00.1	-0.3
YESY	Yesilyurt	1.66	113	PN	Pb	10 24 01.3	-0.8
KRMN	Karaman	1.72	138	PN	Pb	10 24 02.3	-0.7
BORA	Eskisehir	1.78	324	PN	Pn	10 24 02.2	-0.1
BORA	Eskisehir	1.78	324	*i* P	Pn	10 24 03.0	+0.7
BORA				*i* S	Sb	10 24 26.9	+0.4
BORA				IAML		10 24 32.0	
	comp=N,214nm,0.5s						
BORA				IAML		10 24 33.0	
	comp=E,162nm,0.4s						
KIRS	Kırehir-Merke	1.78	67	*i* P	Pb	10 24 03.4	-0.6
KIRS				*i* S	Sg	10 24 28.1	-0.1
KIRS				IAML		10 24 29.0	
	comp=N,208nm,1.2s						
KIRS				IAML		10 24 33.0	
	comp=E,209nm,0.7s						
KHL	Karahalli	1.81	267	PN	Pb	10 24 03.6	-1.0
KHAL	Karahalli	1.83	268	*i* P	Pn	10 24 03.5	+0.5
KHAL				IAML		10 24 36.0	
	comp=N,164nm,0.7s						
SRCK	Saricakaya, Es	1.84	330	PN	Pn	10 24 02.9	-0.1
SRCK	Saricakaya, Es	1.84	330	*i* P	Pn	10 24 03.7	+0.7
SRCK				*i* S	Sb	10 24 29.0	+0.8
SRCK				IAML		10 24 33.0	
	comp=E,520nm,0.5s						
SRCK				IAML		10 24 36.0	
	comp=N,430nm,0.8s						
KORT	Korkueli	1.86	219	PN	Pb	10 24 04.6	-0.9
KORT	Korkueli	1.86	219	*i* P	Pb	10 24 05.7	+0.2
KORT				*i* S	Sg	10 24 31.8	+0.9
KORT				IAML		10 24 46.0	
	comp=E,385nm,0.8s						
KORT				IAML		10 24 53.0	
	comp=N,221nm,0.8s						
ALAN	Alanya-ANTALYA	1.90	175	PN	Pb	10 24 05.1	-1.0
BR131	Keskin Array S	1.90	48		Pn	10 24 05.0	+0.9
BR131				Sn	Sn	10 24 29.3	+0.9
BRTR	Keskin Array B	1.90	48	Pg	Pn	10 24 04.8	+0.7
	comp=N,5.4nm,0.3s,baz=221,slow=16,SNR=143						
BRTR				Lg	Lg	10 24 31.1	
	comp=N,13nm,0.3s,baz=218,slow=25,SNR=4.8						
BRTR	Keskin Array B	1.90	48	PN	Pn	10 24 03.9	-0.2
BRTR	Keskin Array B	1.90	48		Pn	10 24 04.5	+0.4
GULA	Gulagac	1.90	93	PN	Pn	10 24 04.4	+0.3
YUVA	Yuva-Kibriscik	1.94	357	PN	Pn	10 24 04.4	-0.1
KIBS	BOLU	1.96	1	*i* P	Pb	10 24 06.9	-0.3
KIBS				*i* S	Sg	10 24 33.8	-0.4
KIBS				IAML		10 24 40.0	
	comp=E,265nm,0.7s						
KIBS				IAML		10 24 40.0	
	comp=N,294nm,0.6s						
GEDZ	Gediz	1.97	288	PN	Pn	10 24 05.7	+0.7
MDUB	Mudurnu	2.07	347	PN	Pn	10 24 06.7	+0.3
MDUB	Mudurnu	2.07	347		Pb	10 24 08.0	-1.1
KERG	Konya-Eregli	2.10	119	*i* P	Pn	10 24 07.7	+1.0
KERG				IAML		10 24 48.0	
	comp=N,149nm,0.9s						
CMDR	Camlidere-ANKA	2.10	14	*i* P	Pn	10 24 07.2	+0.4
CMDR				IAML		10 24 53.0	
	comp=E,197nm,0.7s						
CMDR				IAML		10 24 56.0	
	comp=N,156nm,0.7s						

SHAP	Saphane-Kutahy	2.11	286	PN	Pn	10 24 07.2	+0.3
GULT	Gulveren	2.22	333	PN	Pn	10 24 08.6	+0.2
DELI	KIRIKKALE	2.25	46	*i* P	Pn	10 24 09.3	+0.5
DELI				*i* S	Sb	10 24 40.5	+0.4
DELI				IAML		10 24 44.0	
	comp=E,128nm,0.7s						
GAZI	Gazipasa	2.25	170	PN	Pb	10 24 10.3	-1.7
GAZI	Gazipasa	2.25	170	*i* P	Pb	10 24 10.4	-1.7
GAZI				*i* S	Sb	10 24 40.9	+0.8
GAZI				IAML		10 24 49.0	
	comp=N,258nm,0.6s						
GAZI				IAML		10 24 51.0	
	comp=E,300nm,0.8s						
ELL	Elmali	2.28	222	PN	Pb	10 24 10.8	-1.8
ELL	Elmali	2.28	222		Pb	10 24 10.8	-1.8
SIMA	Simav-Kutahya	2.30	287	PN	Pn	10 24 09.8	+0.3
CDAG	Cicekdag	2.31	59	*i* P	Pn	10 24 10.6	+1.0
CDAG				*i* S	Sb	10 24 40.1	-1.7
CDAG				IAML		10 24 42.0	
	comp=E,224nm,0.7s						
CDAG				IAML		10 24 47.0	
	comp=N,238nm,0.7s						
CAVI	Cavuskoy	2.32	319	PN	Pn	10 24 10.4	+0.7
KULA	Kula-Manisa	2.48	272	PN	Pn	10 24 13.1	+1.2
SPNC	Sapanca-Adapaz	2.52	333	PN	Pn	10 24 12.9	+0.5
ADVT	Abdulvahap	2.55	322	PN	Pn	10 24 13.1	+0.3
SAUV	Serdivan-Sakar	2.56	334	PN	Pn	10 24 13.6	+0.7
MANT	Manisa	2.56	272		Pn	10 24 14.0	+0.8
ORLT	Orhaneli	2.77	306	PN	Pn	10 24 17.1	+1.2
CORM	Corum	2.78	51	PN	Pn	10 24 16.5	+0.4
YLV	Yalova	2.83	319	PN	Pn	10 24 17.3	+0.5
HRT	Hereke	2.89	326	PN	Pn	10 24 17.7	+0.1
ILGA	Ilgaz	2.98	29		Pn	10 24 18.6	-0.4
CSS	Mathiatis	3.69	160		Pn	10 24 28.3	-0.2
KARP	Karpathos	4.72	234	Pn	Pn	10 24 43.6	+0.8
ALN	Alexandroupoli	5.08	301		Pn	10 24 48.6	+1.0
SANT	Santorini	5.47	250	Pn	Pn	10 24 54.8	+1.8
MMAI	Mount Meron Ar	6.16	151	Pn	Pn	10 25 02.6	0.0
	comp=N,1.4nm,0.3s,baz=344,slow=15,SNR=2.8						
ELND	Elena	6.35	317	⇑P	Pn	10 25 05.4	+0.3
IDI	Anoyia	6.39	242	LR	LR	10 28 09.1	
	comp=N,57nm,21.0s,baz=234,slow=43						
CFR	Carcaliu	7.26	339	⇑P	Pn	10 25 17.3	-0.2
LIT	Litokhoron	7.42	286	Pn	Pn	10 25 21.1	+1.3
VTS	Vitosha	7.75	305	⇑P	Pn	10 25 25.5	+1.2
VTS	Vitosha	7.75	305		Pn	10 25 25.7	+1.3
VRI	Vrincioaia	8.31	335	⇑P	Pn	10 25 31.8	-0.2
PLOR	Plostina	8.33	334	⇑P	Pn	10 25 32.0	-0.2
FNA	Florina	8.39	289	Pn	Pn	10 25 35.5	+2.5
VOIR		8.61	326	⇑P	Pn	10 25 37.0	+1.0
ARR	Arges	8.74	325	⇑P	Pn	10 25 39.2	+1.4
EIL	Elat	9.14	163	Pn	Pn	10 25 44.4	+1.0
	comp=N,0.2nm,0.3s,baz=312,slow=16,SNR=1.4						
MDVR	Moldovita	9.86	313	⇑P	Pn	10 25 54.6	+1.5
BURAR	Bucovina Array	10.35	334	Pn	Pn	10 26 01.5	+1.6
CLL	Collm	18.45	320	*e*P	P	10 27 46.0	-1.1
AKTO	Aktyubinsk	22.08	49	P	P	10 28 27.1	+0.5
	comp=N,1.1nm,0.6s,baz=270,slow=7.1,SNR=3.1						
HRA	Herat	24.76	90	P	P	10 28 53.1	-0.5
HRA				IAmb	IAmb	10 29 04.4	
	comp=Z,3.3nm,0.5s						
ARU	Arti	25.25	36	P	P	10 28 58.9	+1.4
	comp=Z,2.0nm,0.2s,baz=231,slow=7.2,SNR=6.9						
ARU	Arti	25.25	36	P	P	10 28 58.5	+1.0
ARCES	ARCESS Array B	31.33	356	P	P	10 29 52.2	+0.6
	comp=Z,2.4nm,0.9s,baz=167,slow=8.3,SNR=4.2						
AAK	Ala-Archa	32.44	69	P	P	10 30 02.5	+0.6
AAK				IAmb	IAmb	10 30 13.8	
	comp=Z,2.2nm,1.1s						
KURBB	Kurchatov Arra	34.88	54	P	P	10 30 22.6	-0.3
	comp=Z,1.7nm,0.7s,baz=276,slow=9.0,SNR=9.0						
KURK	Kurchatov	34.94	54	P	P	10 30 23.0	-0.4
KURK				IAmb	IAmb	10 30 25.0	
	comp=Z,3.7nm,1.1s						
TOA0	Torodi Ar. Sit	36.73	235	P	P	10 30 37.9	-1.1
TOA0				IAmb	IAmb	10 30 38.8	
	comp=Z,3.9nm,1.1s						
TORD	Torodi Ar. Bea	36.73	235	P	P	10 30 38.0	-1.0
	comp=Z,0.7nm,0.8s,baz=35,slow=10,SNR=4.0						
TORD	Torodi Ar. Bea	36.73	235	P	P	10 30 38.4	-0.6
MK31	Makanchi Array	37.50	61	P	P	10 30 44.2	-1.2
MKAR	Makanchi Array	37.50	61	P	P	10 30 46.2	+0.8
	comp=Z,0.6nm,0.7s,baz=271,slow=7.9,SNR=6.2						
MKAR	Makanchi Array	37.50	61	P	P	10 30 43.6	-1.8
ZALV	Zalesovo Beam	38.85	49	P	P	10 30 56.8	+0.2
	comp=Z,0.7nm,0.3s,baz=256,slow=6.8,SNR=1.8						
BOSA	Boshof	67.00	186	LR	LR	11 06 53.2	
	comp=Z,52nm,21.1s,baz=135,slow=39						
YKA	Yellowknife Ar	75.83	345	P	P	10 35 17.4	0.0
	comp=Z,0.2nm,0.8s,baz=39,slow=5.0,SNR=5.4						

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*ISK **11** 10:31:53.7, 38.°48N×31.°85E, h22^{km}, ML1.9/6*
*DDA **11** 10:31:54.3, 38.°46N×31.°81E, h7^{km}±1^{km}, MD2.5*
ISC 11 10:31:53.9±1.2**, 38.°47N**±0.°04×**31.°82E**±0.°04**, h18**^{km}±6^{km}**, n11, σ0.^{s}37**/18**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDHN	Kadinhani	0.24	77	*i* P	Pg	10 31 59.3	-0.3
KDHN				IAML		10 32 03.0	
	comp=N,80nm,0.3s						
KDHN				*i* S	Sg	10 32 03.1	-0.3
DOGA	KONYA_Doganhis	0.38	198	*i* P	Pg	10 32 01.9	0.0
DOGA				*i* S	Sb	10 32 07.9	0.0
DOGA				IAML		10 32 09.0	
	comp=N,63nm,0.3s						
KIZT	Kizilcal	0.42	7	PG	Pg	10 32 02.7	+0.2
LADK	Ladik-KONYA	0.51	121	PG	Pg	10 32 04.2	0.0
LADK				SG	Sb	10 32 11.6	+0.1
KONT	Konya--Tatoy	0.67	140	PG	Pg	10 32 07.2	0.0
KONT				SG	Sn	10 32 17.8	-1.0
KONT	Konya--Tatoy	0.67	140	*i* P	Pb	10 32 07.4	+0.2
KONT				IAML		10 32 16.0	
	comp=E,66nm,0.8s						
KONT				*i* S	Sb	10 32 16.6	+0.4
BOLV	Bolvadin	0.72	291	*i* P	Pb	10 32 08.3	+0.2
KMER	Konya-Meram	0.82	148	*i* P	Pn	10 32 10.8	+0.1
KMER				IAML		10 32 22.0	
	comp=N,21nm,0.6s						
KMER				*i* S	Sn	10 32 22.1	-0.4
CHBY	Cihanbeyli	0.85	82	PG	Pg	10 32 10.7	+0.2
CHBY				SG	Sg	10 32 22.4	+0.6
AUSIV	SIVRIHISAR	0.99	348	PG	Pb	10 32 12.6	-0.1
SVRH	Sivrihisar-ESK	1.00	347	PG	Pb	10 32 12.9	0.0

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*UCR **11** 10:41:12.4±1.1, 12.°56N×90.°38W, h73^{km}±50^{km}, ML3.8, mb4.2(NEIC)*
*SNET **11** 10:41:12.3±1.1, 12.°58N×90.°35W, h22^{km}±108^{km}, ML3.9*
*INET **11** 10:41:15.4, 12.°90N×90.°17W, h20^{km}, ML3.0*
*NEIC **11** 10:41:21.5±1.7, 13.°03N±0.°06×89.°92W±0.°05, h66^{km}±5^{km}, mb4.2/30, Md3.9(SNET), Error ellipse: s-maj=9.2km s-min=7.5km az=198.0*
*IDC **11** 10:41:23.9±1.9, 13.°28N×89.°60W, h71^{km}±14^{km}, mb3.6/6, mb1 3.9/7, mb1mx3.5/38, mbtmp3.9/7, MS3.4/4, Ms1 3.4/4, ms1mx2.8/38, Error ellipse: s-maj=36.8km s-min=10.9km az=45.0*
*GCG **11** 10:41:27.4±0.3, 13.°40N×90.°23W, h45^{km}, MD4.1*
ISC 11 10:41:14.9±1.9**, 12.°78N**±0.°07×**90.°33W**±0.°05**, h24**^{km}±12^{km}**, n92, σ1.^{s}76**/90**, mb4.2**/18**, MS3.2**/3**, 1D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEVE	Cerro Verde	1.25	33	*e*P	Pb	10 41 37.4	-0.6
CEVE				IAML		10 42 01.8	
	comp=Z,3μm,0.3s						
CEVE	Cerro Verde	1.25	33	*e*P	Pb	10 41 37.4	-0.6
CEVE				IAML		10 42 01.8	
	comp=Z,3μm,0.3s						
SBLS	San Blas	1.26	33	*e*P	Pb	10 41 37.8	-0.4
SBLS	San Blas	1.26	33	*e*P	Pb	10 41 37.8	-0.4
SNJE	San Jose	1.29	33	*e*P	Pb	10 41 38.1	-0.6
SNJE	San Jose	1.29	33	*e*P	Pb	10 41 38.1	-0.6
RTR	El Retiro	1.30	31	*e*P	Pb	10 41 38.4	-0.3
RTR	El Retiro	1.30	31	*e*P	Pb	10 41 38.4	-0.3
IXG	Ixpaco	1.39	356	*e*P	Pb	10 41 41.2	+0.9
BOQS	Boqueron	1.40	47	*e*P	Pn	10 41 39.0	-0.1
SNET	Serv Nac Est T	1.40	50	*e*P	Pn	10 41 38.4	-0.6
SNET				IAML		10 42 01.7	
	comp=Z,697nm,0.3s						
SNET	Serv Nac Est T	1.40	50	*e*P	Pn	10 41 38.4	-0.6
SNET				IAML		10 42 01.7	
	comp=Z,697nm,0.3s						
SNET	Serv Nac Est T	1.40	50		Pn	10 41 38.5	-0.6
SNET				Sn	Sn	10 41 51.6	-5.3
UEES	Universidad Ev	1.42	49	*e*P	Pn	10 41 38.9	-0.4
UEES				IAML		10 42 06.3	
	comp=Z,969nm,0.4s						
UEES	Universidad Ev	1.42	49	*e*P	Pn	10 41 38.9	-0.4
UEES				IAML		10 42 06.3	
	comp=Z,969nm,0.4s						
OPAM	Oficina de Pla	1.44	50	*e*S	Sb	10 42 00.7	+1.6
OPAM	Oficina de Pla	1.44	50	*e*S	Sb	10 42 00.7	+1.6
LFRS	El Faro	1.50	56	*e*P	Pn	10 41 39.9	-0.5
LBRS	Las Brisas	1.58	53	*e*P	Pn	10 41 41.5	0.0
COEG	Centro de Oper	1.64	59	*e*P	Pn	10 41 41.6	-0.7
COEG				IAML		10 42 10.8	
	comp=Z,1μm,0.3s						
COEG	Centro de Oper	1.64	59	*e*P	Pn	10 41 41.6	-0.7
COEG				IAML		10 42 10.8	
	comp=Z,1μm,0.3s						
FUG	Fuego 3	1.73	343	*e*P	Pb	10 41 48.3	+2.1
FUG				*e*S	Sn	10 42 04.6	-0.7
NBG	Las Nubes	1.80	360	⇓*e*P	Pb	10 41 48.5	+1.1
ALJI	Alcalda de J	1.80	72	*e*P	Pn	10 41 43.7	-0.8
ALJI	Alcalda de J	1.80	72	*e*P	Pn	10 41 43.7	-0.8
MTO3	Montecristo	1.87	30	*e*P	Pn	10 41 46.7	+1.1
MTO3				*e*S	Sb	10 42 13.3	+1.8
MTO3	Montecristo	1.87	30	*e*P	Pn	10 41 46.7	+1.1
MTO3				*e*S	Sb	10 42 13.3	+1.8
COEB	Comit de Eme	1.90	68	*e*P	Pn	10 41 45.0	-0.9
COEB				IAML		10 42 23.1	
	comp=Z,714nm,0.4s						
COEB	Comit de Eme	1.90	68	*e*P	Pn	10 41 45.0	-0.9
COEB				IAML		10 42 23.1	
	comp=Z,714nm,0.4s						
TECA	Tecapa	1.92	68	*e*P	Pn	10 41 45.4	-0.9
TECA	Tecapa	1.92	68	*e*P	Pn	10 41 45.4	-0.9
JUCU	Jucuar¡n	2.08	77	*e*P	Pn	10 41 47.3	-1.1
JUCU	Jucuar¡n	2.08	77	*e*P	Pn	10 41 47.3	-1.1
APG	El Apazote	2.22	357	P	Pb	10 41 53.4	-1.0
	comp=Z,15nm,0.3s,baz=123,slow=11,SNR=74						
APG				LR	LR	10 42 06.2	
	comp=Z,22nm,20.7s,baz=205,slow=22						
APG				S	Sb	10 42 18.9	-2.7
	comp=Z,13nm,0.3s,baz=1.1,slow=15,SNR=3.3						
FAGO	Alcalda de S	2.35	67	*e*P	Pn	10 41 50.4	-1.6
FAGO	Alcalda de S	2.35	67	*e*P	Pn	10 41 50.4	-1.6
CNCH	Conchagua	2.48	78	IAML		10 42 31.2	
	comp=Z,1μm,0.4s						
CNCH	Conchagua	2.48	78	IAML		10 42 31.2	
	comp=Z,1μm,0.4s						
CSGN	Cosiguina Volc	2.71	85		Pn	10 41 57.0	-0.1
CSGN				Sn	Sn	10 42 25.2	-4.0
TGUH	Tegucigalpa,Un	3.24	66		Pn	10 42 03.9	-0.5
CCIG	Comitan	3.90	334		Pn	10 42 18.6	+5.1
ACON	Acoyapa	5.10	99	Pn	Pn	10 42 30.6	+0.7
JTS	Las Juntas de	5.82	115	P	Pn	10 42 41.4	+1.6
	comp=Z,1.3nm,0.3s,baz=16,slow=19,SNR=7.8						
JTS				S	Sn	10 43 45.0	-0.9
	comp=Z,0.7nm,0.3s,baz=44,slow=19,SNR=1.2						
ESPN	Las Esperanzas	5.92	95	Pn	Pn	10 42 40.6	-0.6
CMIG	Matias Romero	6.14	315	P	Pn	10 42 51.5	+7.2
	comp=Z,0.8nm,0.3s,baz=92,slow=11,SNR=11						
CMIG				S	Sb	10 44 06.2	-8.1
	comp=Z,0.6nm,0.3s,baz=109,slow=15,SNR=1.7						
TEIG	Tepich	7.67	15	LR	LR	10 46 31.8	
	comp=Z,185nm,18.8s,baz=72,slow=44						
TEIG	Tepich	7.67	15	Pn	Pn	10 43 06.7	+1.6
SDV	Santo Domingo	19.73	99	P	P	10 45 44.3	+1.1
	comp=Z,0.2nm,0.3s,baz=276,slow=9.9,SNR=4.5						
TX31	Lajitas Ar. Si	20.61	325	P	Pn	10 45 57.6	+2.6
TX32	Lajitas Array	20.61	325	P	Pn	10 45 57.8	+2.8
TXAR	Lajitas Array	20.61	325	P	Pn	10 45 57.9	+2.8
	comp=Z,2.1nm,0.8s,baz=145,slow=11,SNR=34						
TXAR				PcP	PcP	10 50 05.3	+2.3
	comp=Z,0.2nm,0.7s,baz=157,slow=4.9,SNR=2.4						
TXAR	Lajitas Array	20.61	325	P	Pn	10 45 56.6	+1.5
SWET	Sewanee	22.69	9	P	P	10 46 15.3	+0.4
W35A	Tecumseh	23.05	346	P	P	10 46 19.1	+0.5
FNO	Franklin	23.28	345	P	P	10 46 21.7	+0.9
WVT	Waverly	23.36	5	P	P	10 46 21.9	+0.3
MNTX	Cornudas Mount	23.37	326	P	P	10 46 26.0	+4.1
CLTN	Cedars of Leba	23.49	8	P	P	10 46 24.1	+1.1
TKL	Tuckaleechee C	23.54	13	LR	LR	10 56 30.3	
	comp=Z,80nm,18.2s,baz=201,slow=40						
T45A	Paducah	24.19	3	P	P	10 46 31.3	+1.8
T47A	Sharon Grove	24.28	6	P	P	10 46 31.2	+0.8
T47A				IAmb	IAmb	10 46 33.2	
	comp=Z,5.9nm,0.7s						
AMTX	Amarillo	24.30	337	P	P	10 46 31.5	+0.9
AMTX				IAmb	IAmb	10 46 37.8	
	comp=Z,3.8nm,0.8s						
S44A	Carbondale	24.83	2	P	P	10 46 35.1	-0.3
S44A				IAmb	IAmb	10 46 37.3	
	comp=Z,5.2nm,0.7s						
S39A	Bolivar	24.95	354	P	P	10 46 36.6	+0.1
S39A				IAmb	IAmb	10 46 38.7	
	comp=Z,4.5nm,0.8s						
HSIG		25.08	313	P	P	10 46 40.0	+2.3
HSIG				IAmb	IAmb	10 46 58.5	
	comp=Z,5.1nm,0.7s						
CCM	Cathedral Cave	25.19	358	P	P	10 46 38.8	+0.2
WCI	Wyandotte Cave	25.60	7	P	P	10 46 42.4	0.0
WCI				IAmb	IAmb	10 46 59.5	
	comp=Z,4.8nm,0.8s						
Q56A	Snyder Ridge,	27.96	19	P	P	10 47 03.4	-0.3
ECSD	EROS Data Cent	31.32	351	P	P	10 47 33.3	0.0
ECSD				IAmb	IAmb	10 47 35.0	
	comp=Z,2.2nm,0.8s						
H43A	Windswept, Lux	31.66	3	P	P	10 47 35.8	-0.5
H43A				IAmb	IAmb	10 47 36.8	
	comp=Z,3.6nm,0.7s						
G45A	Suttons Bay	32.40	6	P	P	10 47 42.8	0.0
SPMN	Marine on St.	32.41	357	P	P	10 47 42.9	+0.1
SPMN				IAmb	IAmb	10 47 43.4	
	comp=Z,6.8nm,0.6s						
SUSD	Miller	32.41	348	P	P	10 47 44.2	+1.3
COWI	Conover	33.23	2	P	P	10 47 49.0	-1.1
COWI				IAmb	IAmb	10 47 50.4	
	comp=Z,3.8nm,0.6s						
SADO	Sadowa	33.29	15	LR	LR	11 00 28.8	
	comp=Z,48nm,18.8s,baz=162,slow=35						
PDAR	Pinedale Array	34.21	334	P	P	10 48 01.2	+2.3
	comp=Z,0.2nm,0.7s,baz=127,slow=11,SNR=2.1						
EYMN	Ely	35.08	359	P	P	10 48 05.6	-0.5
EYMN				IAmb	IAmb	10 48 05.7	
	comp=Z,3.0nm,0.7s						
NVAR	Mina Array Bea	35.64	321	P	P	10 48 16.4	+5.1
	comp=Z,1.6nm,0.7s,baz=138,slow=8.2,SNR=14						
NVAR				PcP	PcP	10 50 43.2	+3.5
	comp=Z,0.5nm,0.7s,baz=149,slow=4.3,SNR=4.5						
NVAR	Mina Array Bea	35.64	321	P	P	10 48 16.3	+4.9
NVAR					PcP	10 50 41.2	+1.6
AGMN	Agassiz Nation	35.71	354	P	P	10 48 11.8	+0.3
AGMN				IAmb	IAmb	10 48 12.3	
	comp=Z,6.0nm,0.8s						
MDND	Maddock	35.81	349	P	P	10 48 13.3	+0.9
DLMT	Dillon	37.60	334	P	P	10 48 29.8	+1.9
ULM	Lac du Bonnet	37.64	354	P	P	10 48 27.1	-0.9
	comp=Z,2.8nm,0.8s,baz=172,slow=8.0,SNR=7.6						
ULM	Lac du Bonnet	37.64	354	P	P	10 48 27.6	-0.4
ULM				IAmb	IAmb	10 48 28.0	
	comp=Z,3.9nm,0.8s						
SCHQ	Schefferville	45.83	19	P	P	10 49 33.5	-1.4
	comp=Z,3.6nm,0.6s,baz=215,slow=6.2,SNR=17						
SCHQ	Schefferville	45.83	19	IAmb	IAmb	10 49 33.8	
	comp=Z,3.5nm,0.6s						
YKA	Yellowknife Ar	52.59	346	P	P	10 50 27.1	+0.7
	comp=Z,1.0nm,0.7s,baz=148,slow=8.1,SNR=23						
RES	Resolute Bay	61.95	359	P	P	10 51 31.6	-0.7
RES				IAmb	IAmb	10 51 32.7	
	comp=Z,1.4nm,0.7s						
AFI	Afiamalu	84.93	255	LR	LR	11 21 39.4	
	comp=Z,60nm,21.5s,baz=161,slow=28						
KSH	Kashi	126.44	13	PKP	PKPdf	11 00 13.1	-3.4
KSH				sPKP		11 00 51.9	
KSH				PP	PP	11 02 12.1	+1.5
KSH				PKS	PKSdf	11 03 48.8	-4.4
KSH				SKKS		11 08 53.0	
LZH	Lanzhou	129.59	345	*e*PKP	PKPdf	11 00 21.5	-1.1
LZH				pPKP	sPKPdf	11 00 41.3	+9.2
LZH				sPKP		11 00 50.0	
CMAR	Chiang Mai Arr	147.64	343	PKPbc	PKPab	11 01 00.7	+0.2
	comp=Z,1.3nm,0.6s,baz=337,slow=3.2,SNR=6.9						

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*IDC **11** 10:52:52.7±4.8, 14.°20N×93.°33W, h0^{km}, mb3.5/3, mb1 3.8/7, mb1mx3.6/45, mbtmp3.6/7, ML3.3/3, MS2.8/1, Ms1 2.8/1, ms1mx2.4/28, Error ellipse: s-maj=85.1km s-min=24.4km az=7.0*
*MEX **11** 10:52:54.8±0.8, 14.°15N×93.°46W, h8^{km}±36^{km}, MD4.1*
*NEIC **11** 10:52:55.8±1.9, 14.°47N±0.°02×93.°30W±0.°03, h6^{km}±6^{km}, mb4.2/5, Md4.1/18(MEX), Error ellipse: s-maj=4.3km s-min=2.5km az=131.0*
*GCG **11** 10:52:55.5±0.7, 14.°33N×93.°38W, h34^{km}±999^{km}, MD4.1*
ISC 11 10:52:54.3±2.0**, 14.°31N**±0.°07×**93.°33W**±0.°05**, h8**^{km}±11^{km}**, n29, σ1.^{s}38**/44**, mb3.8**/6**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.19	60	*e*P	Pg	10 53 16.7	-0.5
THIG				*e*S	Sg	10 53 33.6	+1.0
THIG		1.19	60		Pg	10 53 16.7	-0.5
THIG					Sg	10 53 33.6	+1.0
PCIG		1.39	4	*e*P	Pn	10 53 19.3	-0.6
PCIG				*i* S	Sb	10 53 37.9	-0.5
PCIG		1.39	4		Pn	10 53 19.3	-0.6
PCIG					Sb	10 53 37.9	-0.5
STG3	Santiaguito 3,	1.75	77	*e*P	Pn	10 53 24.7	-0.4
STG3				*e*S	Sn	10 53 44.4	-3.2
CCIG	Comitan	2.27	30	*i* P	Pn	10 53 33.4	+1.1
CCIG				*i* S	Sn	10 54 01.8	+1.2
CCIG	Comitan	2.27	30	Pn	Pn	10 53 33.6	+1.3
CCIG					Pb	10 53 35.0	-0.7
CCIG	Comitan	2.27	30		Pn	10 53 33.4	+1.1
CCIG					Sn	10 54 01.8	+1.2
FUG	Fuego 3	2.42	86	*e*P	Pn	10 53 34.4	+0.2
FUG				*e*S	Sn	10 54 04.0	0.0
TGIG		2.46	5	*i* P	Pn	10 53 35.2	+0.5
TGIG				*i* S	Sn	10 54 06.4	+1.3
TGIG		2.46	5		Pn	10 53 35.2	+0.5
TGIG					Sn	10 54 06.4	+1.3
IXG	Ixpaco	2.81	92	*e*P	Pn	10 53 39.3	-0.3
APG	El Apazote	2.86	76	Pn	Pn	10 53 40.9	+0.5
	2.9nm,0.3s,baz=328,slow=11,SNR=18						
APG				Sn	Sn	10 54 17.9	+2.8
	8.3nm,0.3s,baz=59,slow=16,SNR=4.0						
CMIG	Matias Romero	3.14	332	Pn	Pn	10 53 44.6	+0.5
	2.8nm,0.3s,baz=159,slow=14,SNR=48						
CMIG				Sn	Sn	10 54 21.9	+0.1
	8.9nm,0.3s,baz=319,slow=13,SNR=5.6						
CMIG	Matias Romero	3.14	332	*e*P	Pn	10 53 43.4	-0.7
CMIG				*i* S	Sn	10 54 20.5	-1.4
CMIG	Matias Romero	3.14	332		Pn	10 53 43.4	-0.7
CMIG					Sn	10 54 20.5	-1.4
TEIG	Tepich	7.61	39	Pn	Pn	10 54 45.1	-0.4
TEIG				Sn	Sn	10 56 06.9	-5.1
	0.2nm,0.3s,baz=84,slow=0.0,SNR=1.5						
TEIG				LR	LR	10 58 06.5	
	comp=Z,82nm,21.9s,baz=64,slow=41						
TEIG	Tepich	7.61	39		Pn	10 54 44.8	-0.7
H06E1	SOCORRO T-PHAS	17.44	287	T	T	11 14 54.1	
	SNR=4.9						
TXAR	Lajitas Array	17.75	329	P	P	10 57 04.4	+1.6
	0.0nm,0.3s,baz=150,slow=13,SNR=7.4						
S39A	Bolivar	23.29	0	P	P	10 58 01.1	-1.4
S39A				IAmb	IAmb	10 58 03.5	
	comp=Z,2.0nm,0.8s						
ANMO	Albuquerque	23.71	332	P	P	10 58 07.9	+1.0
	comp=Z,0.5nm,0.5s,baz=122,slow=17,SNR=2.0						
W57A	Gilead	23.98	28	P	P	10 58 09.1	-0.1
W57A				IAmb	IAmb	10 58 23.9	
	comp=Z,8.6nm,1.1s						
LCMT	Little Creek M	28.75	325	P	P	10 58 53.3	+0.8
RDMU	Red Mountain	29.76	335	P	P	10 59 02.9	+1.3
NVAR	Mina Array Bea	32.63	322	P	P	10 59 27.6	+0.8
	comp=Z,0.5nm,0.8s,baz=137,slow=8.0,SNR=2.8						
LAO	LASA Array	34.04	344	P	P	10 59 40.5	+1.6
LAO				IAmb	IAmb	10 59 40.9	
	comp=Z,9.5nm,1.0s						
GCMT	Greycliff	34.28	340	P	P	10 59 40.2	-0.8
YKA	Yellowknife Ar	50.44	347	P	P	11 01 51.9	-0.1
	comp=Z,1.1nm,0.7s,baz=152,slow=7.7,SNR=22						

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*IDC **11** 11:01:13.0±1.9, 9.°33S×155.°13E, h0^{km}, mb3.9/7, mb1 4.1/7, mb1mx3.9/32, mbtmp3.9/7, MS3.4/7, Ms1 3.4/7, ms1mx3.0/33, Error ellipse: s-maj=61.9km s-min=23.5km az=117.0*
*NEIC **11** 11:01:13.8±0.7, 9.°23S±0.°06×155.°4E±0.°3, h23^{km}±8^{km}, mb4.2/13, Error ellipse: s-maj=42.2km s-min=8.2km az=91.0*
ISC 11 11:01:16.0±1.2**, 9.°3S**±0.°1×**155.°2E**±0.°3**, h29**^{km}**, n26, σ1.^{s}32**/21**, mb4.0**/11**, MS3.4**/5**, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	5.87	327	LR	LR	11 04 26.6	
	comp=Z,58nm,21.6s,baz=156,slow=33						
EIDS	Eidsvold	16.45	193	Pn	Pn	11 05 04.3	-0.6
EIDS				IAmb	IAmb	11 05 07.1	
	comp=Z,16nm,0.9s						
DZM	Mont Dzumac	16.68	141	LR	LR	11 10 39.1	
	comp=Z,307nm,18.1s,baz=50,slow=34						
ARMA	Armidale	21.27	188	P	P	11 05 60.0	-0.3
ARMA				IAmb	IAmb	11 06 09.5	
	comp=Z,39nm,1.5s						
WR0	Warramunga Arr	22.58	240	P	P	11 06 15.7	+1.3
WR0				IAmb	IAmb	11 06 24.4	
	comp=Z,10.0nm,1.2s						
WB0	Warramunga Arr	22.63	240	P	P	11 06 15.6	+0.7
WB0				IAmb	IAmb	11 06 17.3	
	comp=Z,6.8nm,0.9s						
WB2	Warramunga Arr	22.74	240	P	P	11 06 17.3	+1.3
WB2				IAmb	IAmb	11 06 19.1	
	comp=Z,6.0nm,0.9s						
WRA	Warramunga Arr	22.75	240	P	P	11 06 16.2	+0.1
	comp=Z,4.7nm,0.9s,baz=64,slow=10.0,SNR=13						
WRA				LR	LR	11 15 07.2	
	comp=Z,51nm,18.7s,baz=45,slow=37						
WRA	Warramunga Arr	22.75	240	P	P	11 06 17.0	+0.8
AS31	Alice Springs	24.85	232	P	P	11 06 37.0	+0.6
ASAR	Alice Springs	24.86	232	P	P	11 06 36.8	+0.5
	comp=Z,2.9nm,0.8s,baz=66,slow=9.7,SNR=21						
ASAR	Alice Springs	24.86	232	P	P	11 06 34.2	-2.1
STKA	Stephens Creek	25.76	207	P	P	11 06 45.5	+1.1
	comp=Z,4.7nm,0.8s,baz=15,slow=9.9,SNR=6.3						
STKA				LR	LR	11 16 31.7	
	comp=Z,124nm,19.7s,baz=30,slow=36						
STKA	Stephens Creek	25.76	207	P	P	11 06 45.2	+0.8
FITZ	Fitzroy Crossi	29.97	250	P	P	11 07 22.1	-0.1
	comp=Z,0.9nm,0.6s,baz=56,slow=3.6,SNR=5.8						
FITZ	Fitzroy Crossi	29.97	250	P	P	11 07 21.3	-0.9
FITZ				IAmb	IAmb	11 07 39.4	
	comp=Z,3.8nm,1.1s						
RPZ	Rata Peaks	36.96	161	LR	LR	11 22 33.4	
	comp=Z,92nm,19.0s,baz=316,slow=35						
MJAR	Matsushiro Arr	48.32	342	P	P	11 09 53.2	-1.7
MAJO	Matsushiro	48.32	342	P	P	11 09 53.4	-1.6
MJB9	Matsu-Tunnel	48.32	342	P	P	11 09 53.4	-1.7
PETK	Petropavlovsk-	62.20	2	LR	LR	11 34 19.6	
	comp=Z,24nm,21.7s,baz=245,slow=32						
SONM	Songino Array	71.37	328	P	P	11 12 35.2	+1.7
	comp=Z,1.1nm,0.9s,baz=132,slow=6.6,SNR=7.5						
SONM	Songino Array	71.37	328	P	P	11 12 32.2	-1.3
MKAR	Makanchi Array	85.25	319	P	P	11 13 52.2	+2.1
	comp=Z,0.5nm,0.9s,baz=96,slow=8.1,SNR=3.7						
ILAR	Eielson Array	85.44	21	P	P	11 13 51.6	+1.0
	comp=Z,0.6nm,1.0s,baz=254,slow=6.5,SNR=2.5						
YKA	Yellowknife Ar	98.27	28	LR	LR	11 54 40.2	
	comp=Z,40nm,19.6s,baz=0.0,slow=33						

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*IDC **11** 11:16:25.6±1.0, 15.°23S×168.°67E, h0^{km}, mb4.1/9, mb1 4.3/10, mb1mx4.0/42, mbtmp4.1/10, ML4.1/1, MS3.3/1, Ms1 3.3/1, ms1mx2.7/24, Error ellipse: s-maj=31.1km s-min=21.6km az=136.0*
*NEIC **11** 11:16:28.0±2.0, 15.°3S±0.°1×168.°51E±0.°08, h10^{km}±1^{km}, mb4.4/13, Error ellipse: s-maj=18.0km s-min=12.2km az=344.0*
ISC 11 11:16:30.1±0.7**, 15.°39S**±0.°08×**168.°6E**±0.°1**, h25**^{km}**, n32, σ0.^{s}93**/30**, mb4.3**/13**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.94**	**197**	Pn	**Pn**	**11 18 11.0**	**+0.6**
	3.6nm,0.3s,baz=55,slow=12,SNR=37						
DZM				Sn	**Sn**	**11 19 26.1**	**-2.5**
	0.9nm,0.3s,baz=72,slow=22,SNR=1.2						
DZM	**Mont Dzumac**	**6.94**	**197**		**Pn**	**11 18 10.9**	**+0.6**
DZM					**Sn**	**11 19 29.2**	**+0.6**
MSVF	**Nonsavu**	**9.39**	**106**	Pn	**Pn**	**11 18 45.1**	**+1.2**
PMG	**Port Moresby**	**21.73**	**283**	LR	LR	11 28 06.9	
	comp=Z,78nm,18.8s,baz=334,slow=32						
URZ	**Urewera**	**24.00**	**163**	P	**P**	**11 21 43.4**	**+0.6**
	3.7nm,0.8s,baz=5.2,slow=11,SNR=2.8						
URZ	**Urewera**	**24.00**	**163**	P	**P**	**11 21 41.9**	**-0.9**
BKZ	**Black Stump Fm**	**24.69**	**165**	P	**P**	**11 21 48.7**	**-0.5**
BKZ				IAmb	IAmb	11 21 54.9	
	comp=Z,14nm,1.3s						
LTZ	**Lake Taylor**	**27.48**	**174**	P	**P**	**11 22 13.8**	**-0.6**
LTZ				IAmb	IAmb	11 22 27.9	
	comp=Z,7.2nm,1.1s						
WR0	**Warramunga Arr**	**32.70**	**257**	P	**P**	**11 23 01.3**	**+0.5**
WR0				IAmb	IAmb	11 23 02.8	
	comp=Z,6.9nm,1.4s						
WB0	**Warramunga Arr**	**32.83**	**257**	P	**P**	**11 23 01.7**	**-0.3**
WB0				IAmb	IAmb	11 23 07.9	
	comp=Z,7.7nm,1.2s						
WRA	**Warramunga Arr**	**32.89**	**257**	P	**P**	**11 23 01.9**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=86,slow=9.1,SNR=13						
AS31	**Alice Springs**	**33.62**	**250**	P	**P**	**11 23 09.4**	**+0.5**
ASAR	**Alice Springs**	**33.62**	**250**	P	**P**	**11 23 09.2**	**+0.3**
	comp=Z,2.8nm,0.6s,baz=77,slow=8.9,SNR=33						
ASAR	**Alice Springs**	**33.62**	**250**	P	**P**	**11 23 09.1**	**+0.2**
MTN	**Manton Dam**	**36.36**	**269**	P	**P**	**11 23 32.6**	**+0.1**
KNRA	**Kununurra**	**38.31**	**264**	P	**P**	**11 23 49.0**	**0.0**
KNRA				IAmb	IAmb	11 23 53.8	
	comp=Z,6.1nm,0.8s						
FITZ	**Fitzroy Crossi**	**41.13**	**260**	P	**P**	**11 24 13.3**	**+0.8**
	comp=Z,3.7nm,0.6s,baz=64,slow=6.1,SNR=13						
FITZ	**Fitzroy Crossi**	**41.13**	**260**	P	**P**	**11 24 13.2**	**+0.7**
PSA00	**Pilbara Seismi**	**46.47**	**255**	P	**P**	**11 24 55.9**	**+0.5**
NWAO	**Narrogin (SRO)**	**49.49**	**240**	P	**P**	**11 25 18.6**	**-0.1**
QSPA	**South Pole Qui**	**74.64**	**180**	P	**P**	**11 28 07.0**	**-0.2**
QSPA				IAmb	IAmb	11 28 08.1	
	comp=Z,4.5nm,1.0s						
SONM	**Songino Array**	**83.77**	**323**	P	**P**	**11 28 56.3**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=138,slow=6.9,SNR=6.3						
SONM	**Songino Array**	**83.77**	**323**	P	**P**	**11 28 57.2**	**-0.1**
GTA	**Gaotai**	**84.03**	**313**	*e*P	**P**	**11 29 00.6**	**+1.8**
GTA				pP	pP	11 29 04.7	-1.1
GTA				sP	pwP	11 29 07.6	-2.5
CRQM	**Cirque**	**85.11**	**22**	P	**P**	**11 29 03.1**	**-0.6**
NVAR	**Mina Array Bea**	**86.76**	**49**	P	**P**	**11 29 11.1**	**-1.5**
	comp=Z,0.7nm,0.9s,baz=236,slow=7.5,SNR=3.8						
NVAR	**Mina Array Bea**	**86.76**	**49**	P	**P**	**11 29 12.1**	**-0.5**
ILAR	**Eielson Array**	**86.77**	**18**	P	**P**	**11 29 10.1**	**-1.7**
	comp=Z,0.7nm,0.8s,baz=232,slow=5.0,SNR=7.0						
ILAR	**Eielson Array**	**86.77**	**18**	P	**P**	**11 29 10.9**	**-0.8**
YKA	**Yellowknife Ar**	**97.56**	**27**	P	Pdif	11 30 00.1	-1.8
	comp=Z,0.6nm,0.9s,baz=254,slow=4.6,SNR=7.0						
MKAR	**Makanchi Array**	**98.55**	**316**	P	Pdif	11 30 07.1	+0.4
	comp=Z,0.8nm,0.7s,baz=99,slow=5.7,SNR=11						
MKAR	**Makanchi Array**	**98.55**	**316**	P	Pdif	11 30 07.5	+0.8

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*IDC **11** 11:23:48.7±0.5, 13°.56N×92°.86E, h0km, mb4.4/27, mb1 4.5/29, mb1mx4.4/43, mbtmp4.4/29, ML4.1/2, MS3.9/15, Ms1 3.9/15, ms1mx3.7/31, Error ellipse: s-maj=14.6km s-min=12.1km az=54.0*

*BJI **11** 11:23:51.9±0.0, 13°.50N×92°.86E, h36km, mB4.7/32, mb4.5/41, Ms4.1/27, Ms7 3.9/28*

*NEIC **11** 11:23:54.1±2.2, 13°.70N±0°.06×92°.92E±0°.08, h35km±1km, mb4.8/67, Error ellipse: s-maj=12.6km s-min=9.4km az=101.0*

*DJA **11** 11:23:54.6±1.2, 14°N±2°×9°3E±°, h28km±10km, M4.7/19, mb4.6/19, mB5.7/2, MLv4.8/3, Mw(mB)5.3/2*

*NDI **11** 11:23:55.8±3.3, 13°.78N×92°.74E, h23km±96km, mb4.6, MW4.9, mb4.8(NEIC)*

ISC 11 11:23:54.1±0.9, **13°.67N**±0°.05×**92°.81E**±0°.05, **h34**km±3km, **n205**, σ1s.76/214, **mb4.7**/72, **MS3.8**/20, **12C, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBA	**Port Blair**	**2.00**	**182**		Pn	11 24 26.8	+1.2
SRDT	**SRDT**	**6.16**	**83**	P	**Pn**	**11 25 23.6**	**+0.8**
PHET	**Kaeng Krachan**	**6.68**	**96**	P	**Pn**	**11 25 31.0**	**+1.1**
RNTT	**Ranong**	**6.99**	**127**	P	**Pn**	**11 25 34.6**	**+0.3**
CMAR	**Chiang Mai Arr**	**7.57**	**50**	Pn	**Pn**	**11 25 41.6**	**-0.6**
	0.6nm,0.3s,baz=241,slow=15,SNR=29						
CMAR				Sn	**Sn**	**11 27 01.6**	**-5.3**
	1.6nm,0.3s,baz=238,slow=28,SNR=7.8						
CMAR				LR	LR	11 29 19.5	
	comp=Z,784nm,20.0s,baz=235,slow=43						
CMAR	**Chiang Mai Arr**	**7.57**	**50**		**Pn**	**11 25 39.4**	**-2.8**
CMAR				Sn	**Sn**	**11 27 04.9**	**-2.0**
CM09	**Chiang Mai Arr**	**7.60**	**51**	P	**Pn**	**11 25 42.1**	**-0.5**
CHTO	**Chiang Mai**	**7.80**	**48**		**Pn**	**11 25 42.1**	**-3.2**
CHTO				Sn	**Sn**	**11 27 08.4**	**-4.0**
CMMT	**Chiang Mai**	**7.80**	**48**	P	**Pn**	**11 25 42.3**	**-3.0**
CMMT				S	**Sn**	**11 27 06.5**	**-6.0**
PHIT	**Phitsanulok**	**8.12**	**64**	P	**Pn**	**11 25 47.1**	**-2.7**
LAMP	**Lampang**	**8.14**	**53**	P	Pn	11 25 44.2	-5.8
PBKT	**Sadao Pong**	**8.39**	**69**	P	**Pn**	**11 25 54.3**	**+0.9**
PBKT	**Sadao Pong**	**8.39**	**69**		**Pn**	**11 25 54.0**	**+0.7**
UTTA	**Uttaradit**	**8.48**	**60**	P	**Pn**	**11 25 54.0**	**-0.6**
PHRA	**Phrae**	**8.59**	**55**	P	**Pn**	**11 25 55.7**	**-0.5**
TRTT	**Trang**	**8.90**	**130**	P	**Pn**	**11 26 00.5**	**0.0**
BRDH	**Bariadhala**	**9.03**	**353**	Pn	**Pn**	**11 26 04.6**	**+2.5**
	14nm,0.3s,baz=271,slow=23,SNR=1.3						
BRDH				Sn	**Sn**	**11 27 35.6**	**-6.9**
	35nm,0.3s,baz=273,slow=18,SNR=1.4						
BWNR	**Bhubaneshwar**	**9.40**	**315**	*e*P	**Pn**	**11 26 06.2**	**-1.0**
BWNR				IAmb	IAmb	11 26 14.9	
	comp=Z,138nm,0.8s						
BWNR				*e*S	Sn	11 27 42.3	-9.4
MLSI	**Meulaboh, Aceh**	**9.99**	**159**	P	**Pn**	**11 26 13.6**	**-1.8**
	comp=Z,57nm,0.9s						
KCSI	**Kotacane, Aceh**	**11.21**	**154**	P	**Pn**	**11 26 33.7**	**+1.6**
	comp=Z,29nm,1.4s						
KULM	**Kulim**	**11.36**	**136**		**Pn**	**11 26 34.5**	**+0.4**
KOHI	**KOHIMA**	**12.05**	**6**	*e*P	**Pn**	**11 26 44.4**	**+0.8**
KOHI				*e*S	Sn	11 28 46.9	-10
RPSI	**Rantau Prapat**	**12.47**	**150**		**Pn**	**11 26 50.8**	**+1.5**
TEZP	**TEZPUR**	**12.88**	**360**	*e*P	**Pn**	**11 26 55.6**	**+0.7**
PALK	**Pallekele**	**13.50**	**243**	Pn	**Pn**	**11 27 03.5**	**+0.1**
	comp=Z,1.5nm,0.3s,baz=50,slow=9.6,SNR=5.9						
PALK				Sn	Sn	11 29 20.1	-12
	comp=Z,1.5nm,0.3s,baz=202,slow=4.7,SNR=4.6						
PALK				LR	LR	11 32 09.5	
	comp=Z,588nm,19.4s,baz=79,slow=37						
ODAN	**Odare**	**14.07**	**340**	*e*P	Pn	11 27 06.9	-4.4
GTK	**Tadong**	**14.14**	**344**	*e*P	**Pn**	**11 27 11.9**	**-0.2**
GTK				*e*S	Sn	11 29 36.5	-11
HYB	**Hyderabad**	**14.23**	**287**	*i* P	**Pn**	**11 27 13.0**	**-0.5**
HYB				*e*S	Sn	11 29 40.0	-10
TAPN	**Taplejung**	**14.42**	**341**	*e*P	Pn	11 27 11.9	-4.3
RAMN	**Ramite**	**14.43**	**337**	*e*P	**Pn**	**11 27 12.6**	**-3.7**
	comp=Z,26nm,0.4s						
NGP	**Nagpur**	**15.09**	**301**	*e*P	**Pn**	**11 27 22.1**	**-2.9**
NGP				AMB	AMB	11 27 35.8	
	comp=Z,21nm,0.9s						
NGP				*e*x	x	11 30 04.6	
JIRN	**Jiri**	**15.23**	**337**	*e*P	**Pn**	**11 27 24.5**	**-2.6**
JBP	**Jabalpur**	**15.40**	**310**	*e*P	**P**	**11 27 32.1**	**-1.0**
JBP				*e*x	x	11 30 09.8	
PKI	**Pulchoki**	**15.46**	**335**	*e*P	**Pn**	**11 27 28.0**	**-2.1**
PKIN	**Phulchoki**	**15.47**	**335**	*e*P	**Pn**	**11 27 28.7**	**-1.5**
GUN	**Gumba**	**15.57**	**337**	*e*P	**Pn**	**11 27 29.7**	**-1.9**
DMN	**Daman**	**15.62**	**334**	*e*P	**Pn**	**11 27 30.2**	**-1.9**
GKN	**Gorkha**	**16.17**	**333**	*e*P	**Pn**	**11 27 38.1**	**-0.9**
PDSI	**Padang**	**16.35**	**152**	P	**P**	**11 27 44.3**	**+0.4**
	comp=Z,8.8nm,1.1s						
SDSI	**Sungai Dareh**	**16.84**	**149**	P	**Pn**	**11 27 45.4**	**-2.0**
DANN	**Dangsing**	**16.86**	**331**	*e*P	**Pn**	**11 27 48.3**	**+0.4**
QIZ	**Qiongzhong**	**17.18**	**70**	P	**Pn**	**11 27 50.0**	**-1.7**
QIZ				S	**Sn**	**11 30 59.2**	**-2.8**
QIZ				LR	LR		
	comp=Z,340nm,16.7s						
QIZ				LR	LR		
	comp=Z,500nm,12.9s						
QIZ				LR	LR		
	comp=Z,560nm,14.1s						
POO	**Poona**	**18.85**	**287**	*e*x	**P**	**11 28 11.0**	**-0.4**
	comp=Z,50nm,1.0s						
POO				*i* S	Sn	11 31 26.5	-16
CD2	**Chengdu**	**19.90**	**29**	P	**P**	**11 28 23.8**	**+0.9**
CD2				S	**S**	**11 32 03.5**	**-1.6**
CD2				sS	sS	11 32 19.4	+0.1
CD2				SS	**SnSn**	**11 32 28.0**	**+5.7**
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
CD2				pmax	pmax		
	comp=Z,170nm,4.0s						
CD2				LR	LR		
	comp=Z,670nm,12.9s						
CD2				LR	LR		
	comp=Z,730nm,18.5s						
CD2				LR	LR		
	comp=Z,630nm,16.7s						
NDI	**New Delhi**	**20.81**	**318**	*e*P	Pn	11 28 44.0	+8.7
MDSI	**Maura Dua**	**21.28**	**147**	P	**P**	**11 28 38.2**	**+0.4**
	comp=Z,10.0nm,0.9s						
ENH	**Enshi**	**22.58**	**40**	P	**P**	**11 28 50.6**	**-1.2**
LZH	**Lanzhou**	**24.42**	**22**	*e*P	**P**	**11 29 10.9**	**+1.1**
LZH				pP	pP	11 29 20.2	+0.6
LZH				sP	sP	11 29 28.7	+5.0
LZH				*e*S	**S**	**11 33 30.7**	**+3.1**
LZH				SS	**SnSn**	**11 34 26.5**	**+13**
LZH				pmax	pmax		
	comp=Z,30nm,1.1s						
LZH				pmax	pmax		
	comp=Z,100nm,4.9s						
LZH				LR	LR		
	comp=Z,360nm,12.5s						
LZH				LR	LR		
	comp=Z,480nm,14.3s						
XAN	**Xi'an**	**25.00**	**33**	P	**P**	**11 29 14.0**	**-0.9**
XAN				pP	pP	11 29 23.2	-1.4
XAN				sP	sP	11 29 27.7	-1.0
XAN				pmax	pmax		
	comp=Z,19nm,0.9s						
XAN				LR	LR		
	comp=Z,250nm,14.1s						
XAN				LR	LR		
	comp=Z,200nm,18.4s						
XAN	**Xi'an**	**25.00**	**33**	P	**P**	**11 29 13.4**	**-1.5**
XAN				IAmb	IAmb	11 29 26.4	
	comp=Z,34nm,0.8s						
WHN	**Wuhan**	**26.00**	**46**	P	**P**	**11 29 29.2**	**+5.2**
WHN				S	**S**	**11 33 52.6**	**+0.1**
WHN				LR	LR		
	comp=Z,680nm,15.2s						
GTA	**Gaotai**	**26.37**	**12**	P	**P**	**11 29 28.7**	**+1.3**
GTA				pP	pP	11 29 38.3	+1.1
GTA				sP	sP	11 29 42.8	+1.5
GTA				sS	sS	11 34 16.3	+2.2
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,59nm,5.1s						
GTA				LR	LR		
	comp=Z,160nm,17.1s						
GTA				LR	LR		
	comp=Z,150nm,17.1s						
GTA				LR	LR		
	comp=Z,170nm,16.5s						
NIL	**Nilore**	**26.68**	**322**	P	**P**	**11 29 30.3**	**+0.2**
NIL				IAmb	IAmb	11 29 41.7	
	comp=Z,13nm,0.8s						
H08S3	**Diego Garcia H**	**29.24**	**225**	T	T	12 00 21.6	
	baz=43,slow=76,SNR=32						
H08S2	**Diego Garcia H**	**29.25**	**225**	T	T	12 00 19.8	
	baz=43,slow=76,SNR=29						
H08S1	**Diego Carcia H**	**29.26**	**225**	T	T	12 00 21.5	
	baz=43,slow=76,SNR=26						
KSH	**Kashi**	**29.72**	**333**	P	**P**	**11 29 57.7**	**+0.4**
KSH				pP	pP	11 30 07.7	+0.7
KSH				PP	**PnPn**	**11 30 53.8**	**+0.4**
KSH				S	**S**	**11 34 47.9**	**-3.3**
KSH				PcS	**PcS**	**11 36 45.0**	**+0.9**
KSH				ScS	**ScS**	**11 40 34.2**	**-1.3**
KSH				pmax	pmax		
	comp=Z,19nm,0.7s						
KSH				pmax	pmax		
	comp=Z,220nm,7.2s						
KSH				LR	LR		
	comp=Z,360nm,10.3s						
KSH				LR	LR		
	comp=Z,410nm,16.5s						
KBL	**Kabul**	**29.90**	**318**	P	**P**	**11 29 59.1**	**0.0**
WMQ	**Urumqi**	**30.36**	**353**	*e*P	**P**	**11 30 04.3**	**+1.4**
WMQ				pP	pP	11 30 13.9	+1.2
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				LR	LR		
	comp=Z,110nm,23.3s						
WMQ				LR	LR		
	comp=Z,140nm,22.3s						
WMQ				LR	LR		
	comp=Z,190nm,21.1s						
NRN	**Naryn**	**31.30**	**335**	P	**P**	**11 30 12.5**	**+1.0**
PRZ	**Przheval'sk**	**31.30**	**339**	P	**P**	**11 30 13.9**	**+2.6**
PRZ				IAmb	IAmb	11 30 27.9	
	comp=Z,15nm,1.1s						
HHC	**Hu-ho-hao-te**	**31.65**	**28**	*e*P	**P**	**11 30 15.1**	**+0.8**
HHC				LR	LR		
	comp=Z,800nm,12.8s						
HHC				LR	LR		
	comp=Z,540nm,13.0s						
HHC				LR	LR		
	comp=Z,830nm,12.4s						
GAR	**Garm**	**32.12**	**326**	P	**P**	**11 30 18.5**	**0.0**
CHGR	**Chuyangaron**	**32.52**	**324**	P	**P**	**11 30 20.7**	**-1.3**
ARSB	**Arslanbob**	**32.52**	**332**	P	**P**	**11 30 21.2**	**-0.8**
ARSB				IAmb	IAmb	11 30 38.1	
	comp=Z,18nm,1.1s						
BTK	**Batken**	**32.62**	**328**	P	**P**	**11 30 23.7**	**+0.9**
BTK				IAmb	IAmb	11 30 36.0	
	comp=Z,28nm,1.2s						
AAK	**Ala-Archa**	**32.92**	**335**	P	**P**	**11 30 27.7**	**+2.2**
BJI	**Beijing**	**33.33**	**34**	P	P	11 30 39.1	+10
MK31	**Makanchi Array**	**34.18**	**347**	P	**P**	**11 30 37.0**	**+0.7**
MK31				IAmb	IAmb	11 30 48.0	
	comp=Z,8.7nm,0.9s						
MKAR	**Makanchi Array**	**34.18**	**347**	P	**P**	**11 30 37.0**	**+0.7**
	comp=Z,5.3nm,0.9s,baz=163,slow=9.0,SNR=45						
MKAR				LR	LR	11 48 13.7	
	comp=Z,143nm,19.2s,baz=164,slow=43						
MKAR	**Makanchi Array**	**34.18**	**347**	P	**P**	**11 30 36.6**	**+0.3**
MAKZ	**Makanchi**	**34.26**	**347**	P	**P**	**11 30 37.6**	**+0.6**
KK31	**Karatay Array**	**35.06**	**331**	P	**P**	**11 30 44.7**	**+0.8**
KK31				IAmb	IAmb	11 30 58.6	
	comp=Z,9.7nm,1.2s						
KKAR	**Karatay Array**	**35.06**	**331**	P	**P**	**11 30 44.8**	**+0.9**
KKAR	**Karatay Array**	**35.06**	**331**	P	**P**	**11 30 43.6**	**-0.3**
SONM	**Songino Array**	**35.89**	**16**	P	**P**	**11 30 52.0**	**+0.9**
	comp=Z,3.8nm,1.0s,baz=199,slow=9.1,SNR=20						
SONM				PcP	**PcP**	**11 33 18.4**	**+0.6**
	comp=Z,1.7nm,0.9s,baz=217,slow=4.9,SNR=4.4						
SONM	**Songino Array**	**35.89**	**16**	P	**P**	**11 30 51.3**	**+0.2**
SONM					**PcP**	**11 33 17.7**	**-0.1**
ULN	**Ulaanbaatar**	**36.09**	**16**	P	**P**	**11 30 53.4**	**+0.5**
KURBB	**Kurchatov Arra**	**38.64**	**345**	P	**P**	**11 31 14.8**	**+0.6**
	comp=Z,7.5nm,0.9s,baz=163,slow=8.1,SNR=43						
KURK	**Kurchatov**	**38.71**	**346**	P	**P**	**11 31 15.3**	**+0.6**
KURK				IAmb	IAmb	11 31 27.1	
	comp=Z,23nm,1.2s						
TLY	**Talaya**	**38.90**	**11**	P	**P**	**11 31 18.3**	**+1.8**
	comp=Z,0.7nm,0.3s,baz=148,slow=4.1,SNR=4.3						
TLY	**Talaya**	**38.90**	**11**	P	**P**	**11 31 15.3**	**-1.1**
SOEI	**Soe**	**38.94**	**125**	P	**P**	**11 31 15.0**	**-2.3**
SOEI				IAmb	IAmb	11 31 16.2	
	comp=Z,18nm,1.2s						
GEYT	**Alibeck**	**39.13**	**314**	P	**P**	**11 31 19.9**	**+1.3**
	comp=Z,6.6nm,0.8s,baz=168,slow=8.3,SNR=9.3						
GEYT				LR	LR	11 49 43.7	
	comp=Z,142nm,18.1s,baz=125,slow=40						
GEYT	**Alibeck**	**39.13**	**314**	P	**P**	**11 31 19.7**	**+1.1**
GYA0B	**ALIBECK ARRAY**	**39.13**	**314**	P	**P**	**11 31 19.7**	**+1.1**
GYA0B				IAmb	IAmb	11 31 31.2	
	comp=Z,17nm,1.0s						
KSAR	**Wonju Array Be**	**39.16**	**46**	P	**P**	**11 31 18.6**	**-0.2**
KSRS	**Korea Array**	**39.19**	**46**	P	**P**	**11 31 17.4**	**-1.6**
	comp=Z,2.3nm,0.8s,baz=247,slow=8.7,SNR=5.7						
KSRS				LR	LR	11 49 58.8	
	comp=Z,283nm,19.0s,baz=234,slow=40						
ZAA0	**Zalesovo Array**	**40.67**	**353**	P	**P**	**11 31 31.0**	**-0.1**
ZALV	**Zalesovo Beam**	**40.67**	**353**	P	**P**	**11 31 31.6**	**+0.5**
	comp=Z,5.9nm,0.7s,baz=175,slow=8.3,SNR=22						
ZALV	**Zalesovo Beam**	**40.67**	**353**	P	**P**	**11 31 31.1**	**0.0**
BVAR	**Borovoye Array**	**43.12**	**340**	P	**P**	**11 31 51.4**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=133,slow=6.5,SNR=12						
BRVK	**Borovoye**	**43.18**	**340**	P	**P**	**11 31 51.3**	**-0.3**
ABKAR	**Akbulak array**	**44.57**	**330**	P	**P**	**11 32 03.9**	**+1.0**
USRK	**Ussuriysk Ar.**	**45.16**	**40**	LR	LR	11 53 39.5	
	comp=Z,101nm,18.8s,baz=164,slow=40						
FITZ	**Fitzroy Crossi**	**45.22**	**133**	P	**P**	**11 32 06.9**	**-1.5**
KNRA	**Kununurra**	**45.98**	**128**	P	**P**	**11 32 12.2**	**-2.1**
AKTO	**Aktyubinsk**	**46.29**	**330**	P	**P**	**11 32 17.1**	**+0.6**
	comp=Z,3.1nm,0.7s,baz=131,slow=10,SNR=11						
MJAR	**Matsushiro Arr**	**46.45**	**52**	P	**P**	**11 32 18.4**	**+0.4**
	comp=Z,2.6nm,0.9s,baz=263,slow=10.0,SNR=4.3						
MJAR				PcP	**PcP**	**11 33 52.7**	**+0.4**
	comp=Z,0.9nm,0.4s,baz=255,slow=3.3,SNR=4.3						
MJAR				LR	LR	11 54 07.2	
	comp=Z,110nm,18.6s,baz=225,slow=39						
MJAR	**Matsushiro Arr**	**46.45**	**52**	P	**P**	**11 32 17.7**	**-0.3**
GNI	**Garni**	**49.56**	**311**	P	**P**	**11 32 44.3**	**+2.2**
	comp=Z,7.2nm,0.6s,baz=107,slow=1.4,SNR=5.6						
GNI	**Garni**	**49.56**	**311**	P	**P**	**11 32 41.3**	**-0.8**
TBLG	**Delisi**	**50.07**	**313**	P	**P**	**11 32 46.3**	**+0.5**
TBLG				IAmb	IAmb	11 32 48.8	
	comp=Z,17nm,1.1s						
ARU	**Arti**	**50.09**	**336**	P	**P**	**11 32 45.5**	**-0.2**
ARU				IAmb	IAmb	11 33 02.5	
	comp=Z,18nm,1.4s						
AKH	**Akhalkalaki**	**50.85**	**313**	⇑P	**P**	**11 32 54.2**	**+2.3**
AKH	**Akhalkalaki**	**50.85**	**313**	P	**P**	**11 32 54.7**	**+2.8**
AKH				IAmb	IAmb	11 32 55.3	
	comp=Z,19nm,1.1s						
KBZ	**Khabaz**	**52.01**	**315**	P	**P**	**11 33 01.2**	**+0.9**
	comp=Z,2.9nm,0.9s,baz=113,slow=6.1,SNR=3.6						
KIV	**Kislovodsk**	**52.23**	**315**	P	**P**	**11 33 03.3**	**+1.2**
KIV				IAmb	IAmb	11 33 19.5	
	comp=Z,13nm,0.8s						
WRA	**Warramunga Arr**	**52.77**	**128**	P	**P**	**11 33 05.2**	**-1.1**
	comp=Z,6.2nm,0.7s,baz=296,slow=9.7,SNR=59						
WRA				PcP	**PcP**	**11 34 15.3**	**-0.3**
	comp=Z,1.3nm,0.5s,baz=319,slow=3.0,SNR=5.8						
WRA				LR	LR	11 57 19.4	
	comp=Z,45nm,18.2s,baz=190,slow=38						
WRA	**Warramunga Arr**	**52.77**	**128**	P	**P**	**11 33 05.0**	**-1.3**
WRAB	**Tennant Creek**	**52.78**	**128**	P	**P**	**11 33 05.6**	**-0.7**
WB2	**Warramunga Arr**	**52.78**	**128**	P	**P**	**11 33 05.2**	**-1.2**
WR0	**Warramunga Arr**	**52.94**	**128**	P	**P**	**11 33 06.6**	**-0.9**
WR0				IAmb	IAmb	11 33 07.7	
	comp=Z,9.0nm,0.7s						
GAZ	**Gaziantep**	**54.55**	**306**	P	**P**	**11 33 20.6**	**+1.4**
GAZ				IAmb	IAmb	11 33 21.4	
	comp=Z,19nm,1.1s						
AS31	**Alice Springs**	**54.69**	**132**	P	**P**	**11 33 19.1**	**-1.3**
ASAR	**Alice Springs**	**54.69**	**132**	P	**P**	**11 33 19.1**	**-1.2**
	comp=Z,3.3nm,0.6s,baz=307,slow=6.9,SNR=100						
ASAR				PcP	**PcP**	**11 34 22.6**	**-0.3**
	comp=Z,1.2nm,0.9s,baz=312,slow=5.7,SNR=2.5						
YAK	**Yakutsk**	**54.99**	**20**	P	**P**	**11 33 21.5**	**-0.3**
OPO	**Ambohidratompo**	**55.22**	**236**	P	**P**	**11 33 22.9**	**-1.4**
	comp=Z,3.7nm,1.1s,baz=90,slow=10,SNR=2.3						
KMBO	**Kilima Mbogo**	**56.97**	**260**	P	**P**	**11 33 38.1**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=91,slow=5.5,SNR=4.0						
BR131	**Keskin Array S**	**57.75**	**308**	P	**P**	**11 33 42.1**	**0.0**
BR131				IAmb	IAmb	11 33 43.0	
	comp=Z,11nm,0.9s						
BRTR	**Keskin Array B**	**57.75**	**308**	P	**P**	**11 33 42.0**	**-0.2**
	comp=Z,7.5nm,0.8s,baz=118,slow=7.3,SNR=30						
BRTR				LR	LR	12 02 33.7	
	comp=Z,81nm,18.6s,baz=88,slow=40						
ELL	**Elmali**	**60.30**	**305**	P	**P**	**11 33 59.5**	**-0.3**
KLMR	**Klimovskoe**	**60.71**	**333**	*e*P	**P**	**11 34 00.2**	**-1.8**
KLMR				AMP		11 34 16.1	
	comp=Z,19nm,1.4s						
MANT	**Manisa**	**61.52**	**306**	P	P	11 34 03.2	-5.0
TIXI	**Tiksi**	**61.86**	**12**	P	**P**	**11 34 08.8**	**-0.8**
TIXI				IAmb	IAmb	11 34 09.4	
	comp=Z,5.5nm,0.8s						
CFR	**Carcaliu**	**62.61**	**314**	⇑P	**P**	**11 34 15.3**	**+0.2**
AKASG	**Malin Array Be**	**62.86**	**320**	P	**P**	**11 34 16.0**	**-0.6**
	comp=Z,2.2nm,0.7s,baz=88,slow=5.0,SNR=11						
AKASG				LR	LR	12 05 00.6	
	comp=Z,71nm,19.5s,baz=65,slow=39						
AKASG	**Malin Array Be**	**62.86**	**320**	P	**P**	**11 34 16.4**	**-0.3**
VRI	**Vrincioaia**	**63.68**	**315**	⇑P	**P**	**11 34 23.6**	**+1.3**
PLOR	**Plostina**	**63.73**	**315**	⇑P	**P**	**11 34 24.3**	**+1.7**
PETK	**Petropavlovsk-**	**64.14**	**37**	LR	LR	12 03 53.1	
	comp=Z,87nm,18.2s,baz=241,slow=37						
MLR	**Muntele Rosu**	**64.18**	**314**	P	**P**	**11 34 27.0**	**+1.3**
VOIR		**64.80**	**314**	⇑P	**P**	**11 34 30.1**	**+0.4**
BURAR	**Bucovina Array**	**64.94**	**316**	⇑P	**P**	**11 34 31.4**	**+0.9**
BURAR	**Bucovina Array**	**64.94**	**316**	P	**P**	**11 34 30.7**	**+0.1**
BUR08	**Bucovina Ar. S**	**64.95**	**316**	P	**P**	**11 34 31.3**	**+0.6**
BUR08				IAmb	IAmb	11 34 41.9	
	comp=Z,9.3nm,1.5s						
STKA	**Stephens Creek**	**65.07**	**135**	P	**P**	**11 34 31.2**	**-0.2**
	comp=Z,0.9nm,0.2s,baz=319,slow=5.7,SNR=4.2						
STKA				LR	LR	12 03 59.8	
	comp=Z,67nm,21.9s,baz=279,slow=37						
STKA	**Stephens Creek**	**65.07**	**135**	P	**P**	**11 34 30.9**	**-0.6**
ARR	**Arges**	**65.08**	**314**	⇑P	**P**	**11 34 31.7**	**+0.2**
VTS	**Vitosha**	**65.87**	**311**	⇑P	**P**	**11 34 36.9**	**+0.1**
VTS	**Vitosha**	**65.87**	**311**	P	**P**	**11 34 37.0**	**+0.3**
VTS				IAmb	IAmb	11 34 37.5	
	comp=Z,6.2nm,0.9s						
DRGR		**66.55**	**315**	⇑P	**P**	**11 34 41.7**	**+0.8**
HERR	**Herculane**	**66.61**	**313**	⇑P	**P**	**11 34 41.2**	**-0.1**
TRPA	**Tarpa**	**66.79**	**317**	⇑P	**P**	**11 34 41.5**	**-0.8**
KWP	**Kalwaria Pacla**	**66.83**	**318**	P	**P**	**11 34 43.7**	**+1.2**
FINES	**FINESS Array B**	**67.02**	**331**	P	**P**	**11 34 43.5**	**0.0**
	comp=Z,3.4nm,0.6s,baz=90,slow=6.1,SNR=8.4						
FINES	**FINESS Array B**	**67.02**	**331**	P	**P**	**11 34 43.3**	**-0.2**
VYHS	**Vyhne**	**69.28**	**317**	*e*P	**P**	**11 34 58.4**	**+0.4**
ARCES	**ARCESS Array B**	**69.41**	**340**	P	**P**	**11 34 58.9**	**+0.5**
	comp=Z,6.5nm,0.8s,baz=96,slow=6.9,SNR=16						
ARCES				LR	LR	12 08 45.8	
	comp=Z,200nm,19.1s,baz=120,slow=39						
JAVC	**Velka Javorina**	**70.06**	**317**	*e*P	**P**	**11 35 04.0**	**+1.1**
LSZ	**Lusaka**	**70.09**	**248**	P	**P**	**11 35 02.7**	**-1.0**
LSZ				IAmb	IAmb	11 35 06.2	
	comp=Z,6.1nm,0.9s						
MORC	**Moravsky Berou**	**70.18**	**318**	⇑P	**P**	**11 35 04.4**	**+0.8**
MORC	**Moravsky Berou**	**70.18**	**318**	*e*P	**P**	**11 35 04.2**	**+0.6**
MORC	**Moravsky Berou**	**70.18**	**318**	P	**P**	**11 35 03.9**	**+0.3**
MORC				IAmb	IAmb	11 35 05.3	
	comp=Z,10.0nm,1.0s						
KRLC	**Kraliky**	**70.68**	**319**	*e*P	**P**	**11 35 07.4**	**+0.8**
BILL	**Bilibino**	**71.23**	**22**	P	**P**	**11 35 08.1**	**-1.4**
CONA	**Conrad Observa**	**71.25**	**316**	*i* P	**P**	**11 35 10.9**	**+0.7**
	comp=Z,2.9nm,0.8s						
CEL	**Celeste**	**71.46**	**306**	P	**P**	**11 35 11.2**	**-0.4**
SOKA	**Soboth**	**71.82**	**315**	*i* P	**P**	**11 35 13.8**	**+0.1**
	comp=Z,12nm,1.5s						
MOA	**Molln**	**72.33**	**316**	*i* P	**P**	**11 35 16.6**	**+0.1**
	comp=Z,5.2nm,1.0s						
BRG	**Berggiesshubel**	**72.51**	**319**	*i* P	**P**	**11 35 18.1**	**+0.6**
	comp=Z,7.9nm,0.9s						
GEC2	**GERESS Array S**	**72.69**	**317**	P	**P**	**11 35 18.1**	**-0.6**
GEC2				IAmb	IAmb	11 35 20.3	
	comp=Z,14nm,1.1s						
GERES	**GERESS Array B**	**72.69**	**317**	P	**P**	**11 35 19.5**	**+0.7**
	comp=Z,6.0nm,0.8s,baz=85,slow=5.9,SNR=27						
GERES	**GERESS Array B**	**72.69**	**317**	P	**P**	**11 35 18.7**	**-0.1**
KHC	**Kasperske Hory**	**72.76**	**317**	*e*P	**P**	**11 35 19.3**	**+0.2**
KHC	**Kasperske Hory**	**72.76**	**317**	P	**P**	**11 35 19.4**	**+0.2**
KBA	**Koelnbreinsper**	**72.97**	**315**	*i* P	**P**	**11 35 19.1**	**-1.5**
	comp=Z,7.9nm,1.3s						
CLL	**Collm**	**73.10**	**320**	*i* P	**P**	**11 35 22.2**	**+1.2**
	comp=Z,10.0nm,1.3s						
CLL				*e*sP	**sP**	**11 35 35.0**	**-0.6**
CLL	**Collm**	**73.10**	**320**	P	**P**	**11 35 22.2**	**+1.2**
CLL				IAmb	IAmb	11 35 23.4	
	comp=Z,11nm,1.3s						
STAL	**STALIGIAL**	**73.44**	**315**	P	**P**	**11 35 23.0**	**-0.2**
ABTA	**Abfaltersbach**	**73.55**	**315**	*i* P	**P**	**11 35 23.4**	**-0.5**
	comp=Z,7.8nm,1.5s						
NB2	**NORSAR Subarra**	**74.08**	**330**	P	**P**	**11 35 26.2**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=90,slow=5.6						
NOA	**NORSAR Array B**	**74.08**	**330**	P	**P**	**11 35 26.1**	**-0.6**
	comp=Z,2.4nm,0.7s,baz=90,slow=5.8,SNR=8.3						
NOA				LR	LR	12 11 13.4	
	comp=Z,60nm,19.1s,baz=105,slow=38						
WTTA	**Wattenberg**	**74.13**	**316**	*i* P	**P**	**11 35 26.7**	**-0.7**
	comp=Z,7.2nm,1.0s						
WATA	**Walderalm**	**74.16**	**316**	*i* P	**P**	**11 35 27.5**	**-0.1**

	comp=Z,4.1nm,0.5s						
CTI	Castel Tesino	74.19	314	P	P	11 35 27.4	-0.3
CTI				IAmb	IAmb	11 35 29.0	
	comp=Z,22nm,1.3s						
SQTA	Sankt Quirin	74.42	316	iP	P	11 35 28.1	-0.9
	comp=Z,2.1nm,0.4s						
MOTA	Moosalm	74.48	316	iP	P	11 35 28.6	-0.8
	comp=Z,13nm,1.1s						
RETA	Reutte	74.71	316	iP	P	11 35 30.4	-0.2
	comp=Z,16nm,1.3s						
FETA	Feichten	74.76	315	iP	P	11 35 30.8	-0.2
	comp=Z,11nm,1.5s						
DAVA	Damuels	75.32	316	iP	P	11 35 34.1	-0.2
	comp=Z,11nm,1.0s						
LBTB	Lobatse	75.95	240	P	P	11 35 39.3	+1.1
LBTB				IAmb	IAmb	11 35 40.5	
	comp=Z,13nm,1.2s						
KEST	Kesra	76.91	304	P	P	11 35 43.5	+0.1
	comp=Z,6.2nm,0.9s,baz=303,slow=2.1,SNR=5.8						
KEST	Kesra	76.91	304	P	P	11 35 43.6	+0.2
KEST				IAmb	IAmb	11 35 44.6	
	comp=Z,13nm,1.1s						
BOSA	Boshof	77.62	236	P	P	11 35 47.8	+0.2
	comp=Z,6.2nm,0.6s,baz=73,slow=4.5,SNR=14						
BOSA				LR	LR	12 04 29.6	
	comp=Z,42nm,18.3s,baz=36,slow=32						
BOSA	Boshof	77.62	236	P	P	11 35 48.4	+0.9
BOSA				IAmb	IAmb	11 35 49.5	
	comp=Z,14nm,1.1s						
SSB	Saint Sauveur	79.22	314	P	P	11 35 55.4	-0.6
SSB				IAmb	IAmb	11 35 57.9	
	comp=Z,19nm,1.5s						
EKR4	Eskdalemuir Ar	82.23	325	P	P	11 36 11.8	-0.1
EKR4				IAmb	IAmb	11 36 18.3	
	comp=Z,13nm,1.2s						
EKB5	Eskdalemuir Ar	82.24	325	P	P	11 36 12.0	+0.1
IMAR	Indian Mountai	86.79	22	P	P	11 36 35.2	+0.5
TOLK	Toolik Lake Re	86.94	19	P	P	11 36 35.9	+0.5
TOLK				IAmb	IAmb	11 36 48.6	
	comp=Z,7.2nm,0.9s						
TORD	Torodi Ar. Bea	88.02	283	P	P	11 36 42.0	+0.4
	comp=Z,3.7nm,1.0s,baz=84,slow=4.9,SNR=10						
BPAW	Bear Paw Mtn.	88.71	23	P	P	11 36 44.9	+0.9
ILAR	Eielson Array	89.89	22	P	P	11 36 49.1	-0.3
	comp=Z,1.3nm,0.8s,baz=288,slow=3.8,SNR=12						
YKA	Yellowknife Ar	101.11	13	P	Pdif	11 37 39.5	-1.0
	comp=Z,0.1nm,0.4s,baz=346,slow=4.9,SNR=4.1						
SNOW	Snow King Moun	119.19	19		PKiKP	11 42 41.2	+0.8
PDAR	Pinedale Array	120.20	19	PKP	PKPdf	11 42 41.9	-0.4
	comp=Z,0.4nm,0.5s,baz=54,slow=2.3,SNR=6.5						
PDAR	Pinedale Array	120.20	19		PKPdf	11 42 41.5	-0.8
NVAR	Mina Array Bea	120.55	28	PKP	PKPdf	11 42 42.5	-0.5
	comp=Z,0.9nm,0.8s,baz=291,slow=2.6,SNR=8.1						
NVAR	Mina Array Bea	120.55	28		PKPdf	11 42 42.4	-0.6
TXAR	Lajitas Array	134.38	20	PKP	PKiKP	11 43 11.0	+0.1
	comp=Z,0.4nm,0.5s,baz=182,slow=1.6,SNR=8.2						
TXAR	Lajitas Array	134.38	20		PKPdf	11 43 08.2	-1.3
JCT	Junction City	134.46	15		PKPdf	11 43 10.2	+0.6
CPUP	Villa Florida	149.33	241	PKPbc	PKPdf	11 43 38.2	+2.4
	comp=Z,1.2nm,0.5s,baz=329,slow=1.5,SNR=3.9						
PTGA	Pitinga	150.15	293		PKPbc	11 43 42.1	-0.4

KRNET ***11*** *11:43:23.2±0.1,40°.04N×70°.52E,mb2.5*

ISC 11 11:43:23.2±3.7,**40°.0N**±0°.2×**70°.5E**±0°.1,**h16**^{km}**,n6,**
σ**1**^{s}**.30**/11**,9C-3D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	0.28	68	⇓iP	Pg	11 43 28.4	-1.0
	baz=86						
BTK				⇓iS	Sg	11 43 31.9	-1.6
	baz=86						
ARK	Arkit	2.16	31	⇑iP	Pn	11 43 59.5	+0.8
	baz=32						
ARK				⇑iS	Sn	11 44 25.9	+0.7
	baz=32						
ARSB	Arslanbob	2.34	54	⇑iP	Pn	11 44 01.9	+0.6
	baz=55						
ARSB				⇑iS	Sn	11 44 31.2	+1.4
	baz=55						
KK31	Karatay Array	3.15	0	⇑Pn	Pb	11 44 17.9	-0.9
	0.3nm,0.3s,baz=152,slow=15,SNR=4.6						
KK31				⇓Lg	Lg	11 44 58.3	
	0.5nm,0.4s,baz=157,slow=30,SNR=4.0						
AML	Almayashu	3.26	47	⇑iP	Pn	11 44 15.5	+1.4
	baz=48						
AML				⇑iS	Sn	11 44 53.7	+0.9
	baz=48						
ARLS	Aral	3.48	56	⇑iP	Pn	11 44 18.4	+1.5
	baz=56						
ARLS				⇑iS	Sn	11 44 58.5	+0.7
	baz=56						

IDC ***11*** *12:03:05.9±2.1,14°.23N×93°.32W,h0*^{km}*,mb3.9/7, mb1 4.2/11,mb1mx3.9/36,mbtmp3.9/11,ML3.8/4,MS3.3/3, Ms1 3.3/3,ms1mx2.8/41,Error ellipse: s-maj=51.5km s-min=20.2km az=26.0*

NEIC ***11*** *12:03:07.0±2.3,14°.20N±0°.08×93°.39W±0°.04,h15*^{km}*±6*^{km}*, mb4.0/5,Md4.1/19(MEX),Error ellipse: s-maj=11.8km s-min=5.8km az=188.0*

MEX ***11*** *12:03:08.0±0.9,14°.20N×93°.42W,h0*^{km}*±20*^{km}*,MD4.1*

GCG ***11*** *12:03:11.4±0.7,14°.30N×93°.05W,h107*^{km}*±24*^{km}*,MD4.2*

ISC 11 12:03:05.3±1.9,**14°.22N**±0°.06×**93°.37W**±0°.04,**h2**^{km}±12^{km},
n43,σ**1**^{s}**.40**/57**,mb4.0**/11**,1C,Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.27	57	eP	Pg	12 03 30.0	+0.4
THIG				eS	Sn	12 03 47.1	-0.5
THIG		1.27	57		Pg	12 03 30.0	+0.4
THIG					Sn	12 03 47.1	-0.5
PCIG		1.48	6	eP	Pn	12 03 32.6	-0.3
PCIG				eS	Sb	12 03 52.0	-0.8
PCIG		1.48	6		Pn	12 03 32.6	-0.3
PCIG					Sb	12 03 52.0	-0.8
ERG	Entre ros, C	1.76	83	eP	Pb	12 03 38.0	-0.2
ERG				eS	Sn	12 03 57.5	-2.1
STG3	Santiaguito 3,	1.81	74	⇑eP	Pb	12 03 38.1	-1.1
STG3				eS	Sb	12 04 00.2	-2.2
CCIG	Comitan	2.37	30	iP	Pn	12 03 46.0	+0.7
CCIG				eS	Sn	12 04 14.6	-0.4
CCIG	Comitan	2.37	30		Pb	12 03 47.8	-1.0
CCIG	Comitan	2.37	30		Pn	12 03 46.0	+0.7
CCIG					Sn	12 04 14.6	-0.4
FUG	Fuego 3	2.46	84	eP	Pn	12 03 46.9	+0.4
FUG				eS	Sn	12 04 14.6	-2.6
TGIG		2.55	5	iP	Pn	12 03 47.6	-0.1
TGIG				iS	Sn	12 04 19.3	-0.1
TGIG		2.55	5		Pn	12 03 47.6	-0.1
TGIG					Sn	12 04 19.3	-0.1
IXG	Ixpaco	2.84	91	eP	Pn	12 03 52.1	+0.3
APG	El Apazote	2.92	74	Pn	Pn	12 03 54.1	+1.3
	9.2nm,0.3s,baz=329,slow=10,SNR=45						
APG				LR	LR	12 04 50.5	
	comp=Z,96nm,19.4s,baz=254,slow=36						
NBG	Las Nubes	2.95	83	eP	Pb	12 03 55.6	-3.1
HUIG	Huatulco	3.06	300	eP	Pn	12 03 54.4	-0.3
HUIG				eS	Sn	12 04 30.0	-1.9
HUIG	Huatulco	3.06	300		Pn	12 03 54.4	-0.3
HUIG					Sn	12 04 30.0	-1.9
CMIG	Matias Romero	3.21	333	Pn	Pn	12 03 57.5	+0.9
	6.4nm,0.3s,baz=162,slow=12,SNR=68						
CMIG				Sn	Sn	12 04 31.5	-4.0
	12nm,0.3s,baz=94,slow=14,SNR=6.3						
CMIG	Matias Romero	3.21	333	eP	Pn	12 03 57.0	+0.4
CMIG				iS	Sn	12 04 34.7	-0.7
CMIG	Matias Romero	3.21	333		Pn	12 03 57.0	+0.4
CMIG					Sn	12 04 34.7	-0.7
TGUH	Tegucigalpa,Un	5.91	91	Pn	Pn	12 04 35.9	+1.9
TLIG	Tlapa	6.00	304	Pn	Pn	12 04 36.1	+0.9
TEIG	Tepich	7.70	38	Pn	Pn	12 04 58.6	+0.2
	4.6nm,0.3s,baz=272,slow=0.0,SNR=11						
TEIG				LR	LR	12 08 19.2	
	comp=Z,241nm,22.0s,baz=57,slow=41						
TEIG	Tepich	7.70	38		Pn	12 04 58.8	+0.4
TXAR	Lajitas Array	17.81	329	P	P	12 07 16.9	+1.7
	0.1nm,0.3s,baz=148,slow=12,SNR=15						
SDV	Santo Domingo	22.89	101	P	P	12 08 11.6	+0.9
	4.8nm,0.7s,baz=306,slow=3.5,SNR=7.8						
TKL	Tuckaleechee C	23.02	20	LR	LR	12 16 57.6	
	comp=Z,66nm,19.5s,baz=323,slow=36						
S39A	Bolivar	23.38	0	P	P	12 08 15.9	+0.7
S39A				IAmb	IAmb	12 08 16.0	
	comp=Z,3.0nm,0.7s						
ANMO	Albuquerque	23.77	333	P	P	12 08 19.4	0.0
	comp=Z,0.6nm,0.5s,baz=137,slow=15,SNR=3.5						
TUC	Tucson	24.02	321	P	P	12 08 19.9	-1.9
T25A	Trinidad	24.86	339	P	P	12 08 32.6	+3.1
T25A				IAmb	IAmb	12 08 40.3	
	comp=Z,3.8nm,0.8s						
SDCO	Great Sand Dun	25.79	337	P	P	12 08 40.3	+2.3
SDCO				IAmb	IAmb	12 08 52.5	
	comp=Z,5.0nm,1.3s						
PDAR	Pinedale Array	31.68	337	P	P	12 09 31.8	+1.3
	comp=Z,0.3nm,0.8s,baz=135,slow=12,SNR=2.6						
NVAR	Mina Array Bea	32.67	322	P	P	12 09 41.9	+2.7
	comp=Z,1.2nm,0.8s,baz=142,slow=7.4,SNR=8.2						
SADO	Sadowa	32.76	19	LR	LR	12 22 47.8	
	comp=Z,53nm,18.3s,baz=358,slow=36						
ULM	Lac du Bonnet	35.99	357	P	P	12 10 05.6	-1.8
	comp=Z,1.2nm,0.6s,baz=179,slow=9.5,SNR=3.8						
YKA	Yellowknife Ar	50.52	347	P	P	12 12 05.3	+0.7
	comp=Z,3.3nm,0.7s,baz=152,slow=7.8,SNR=53						
RES	Resolute Bay	60.47	360	P	P	12 13 16.3	+0.3
ILAR	Eielson Array	62.12	337	P	P	12 13 28.1	+0.7
	comp=Z,0.7nm,0.9s,baz=158,slow=4.6,SNR=5.4						
ILAR	Eielson Array	62.12	337	P	P	12 13 29.2	+1.7
ARCES	ARCESS Array B	86.34	18	P	P	12 15 48.4	-0.2
	comp=Z,2.4nm,0.8s,baz=312,slow=4.7,SNR=1.0						
CMAR	Chiang Mai Arr	145.34	339	PKPbc	PKPdf	12 22 45.2	-0.5
	comp=Z,1.1nm,0.6s,baz=345,slow=4.4,SNR=7.6						
CMAR	Chiang Mai Arr	145.34	339	PKPbc	PKPbc	12 22 44.7	-0.7

IDC ***11*** *12:10:47.8±2.6,12°.72N×89°.70W,h0*^{km}*,mb3.6/5, mb1 3.9/5,mb1mx3.6/33,mbtmp3.6/5,Error ellipse: s-maj=57.3km s-min=41.5km az=59.0*

SNET ***11*** *12:10:51.7±1.1,12°.70N×90°.31W,h14*^{km}*±8*^{km}*,ML3.2*

ISC 11 12:10:52.5±1.4,**12°.5N**±0°.1×**89°.91W**±0°.08,**h32**^{km}**,n13,**
σ**2**^{s}**.13**/15**,mb3.5**/5**,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBLS	San Blas	1.32	12	eP	Pn	12 11 15.0	+0.1
SNJE	San Jose	1.35	12	eP	Pn	12 11 15.9	+0.6
RTR	El Retiro	1.37	11	eP	Pb	12 11 16.4	-1.3
PACA	Pacayal	1.80	59	eP	Pb	12 11 27.1	+2.2
MTO3	Montecristo	1.92	16	eP	Pn	12 11 24.7	+1.5
MTO3				IAML		12 11 37.2	
	comp=Z,68nm,0.6s						
MTO3				eS	Sb	12 11 50.0	-0.7
CNCH	Conchagua	2.15	70	eP	Pb	12 11 31.2	+0.5
CNCH				IAML		12 12 05.0	
	comp=Z,287nm,0.3s						
APG	El Apazote	2.51	348	Pg	Pn	12 11 31.1	-0.2
	comp=Z,5.1nm,0.3s,baz=176,slow=9.6,SNR=18						
APG				Lg	Lg	12 11 56.1	
	comp=Z,2.8nm,0.3s,baz=342,slow=19,SNR=2.9						
CMIG	Matias Romero	6.61	314	Pn	Pn	12 12 31.0	+3.6
	comp=Z,0.3nm,0.3s,baz=166,slow=12,SNR=2.7						
CMIG				Sn	Sn	12 13 47.6	+5.9
	comp=Z,0.2nm,0.3s,baz=245,slow=17,SNR=1.7						
TXAR	Lajitas Array	21.05	325	P	P	12 15 33.0	-1.0
	comp=Z,0.9nm,0.8s,baz=148,slow=10,SNR=14						
NVAR	Mina Array Bea	36.08	321	P	P	12 17 52.9	+1.2
	comp=Z,0.4nm,0.6s,baz=148,slow=7.4,SNR=4.3						
NVAR				PcP	PcP	12 20 16.8	-0.5
	comp=Z,0.1nm,0.4s,baz=109,slow=4.1,SNR=1.9						
ULM	Lac du Bonnet	37.92	354	P	P	12 18 05.1	-1.6
	comp=Z,1.4nm,0.8s,baz=205,slow=7.9,SNR=3.7						
SCHQ	Schefferville	45.91	18	P	P	12 19 10.9	-1.1
	comp=Z,1.6nm,0.6s,baz=243,slow=9.7,SNR=5.0						
YKA	Yellowknife Ar	52.92	346	P	P	12 20 03.7	-1.6
	comp=Z,0.4nm,0.8s,baz=151,slow=8.3,SNR=8.7						

IDC ***11*** *12:27:05.0±0.6,34°.34N×4°.67W,h0*^{km}*,mb4.2/28, mb1 4.3/30,mb1mx4.2/58,mbtmp4.2/30,ML5.0/2,MS3.8/22, Ms1 3.8/22,ms1mx3.5/61,Error ellipse: s-maj=13.9km s-min=12.2km az=98.0*

BJI ***11*** *12:27:04.0±0.0,34°.60N×4°.98W,h12*^{km}*,mB5.3/21, mb4.7/30,Ms4.6/4,Ms7 4.4/5*

NEIC ***11*** *12:27:05.0±1.8,34°.21N±0°.05×4°.91W±0°.08,h10*^{km}*±1*^{km}*, mb4.6/76,Error ellipse: s-maj=9.8km s-min=6.4km az=78.0*

SFS ***11*** *12:27:05.0,34°.10N×5°.08W,ML5.1,MOULAY YACOUB (MARRUECOS)*

MDD ***11*** *12:27:06.9±1.0,33°.98N×5°.03W,h90*^{km}*±13*^{km}*,mb4.6/45, Error ellipse: s-maj=10.1km s-min=5.5km az=12.0, PRXIMO*

MED_RC ***11*** *12:27:06.0±0.5,34°.18N×4°.96W,h19*^{km}*,MW4.5/8, Moment Tensor Solution.Mantle waves: s8,c11; Duration: 1*^{s}*.0 Moment tensor: Scale 10*^{15}*Nm;* M_{rr}*1.96±.86;* $M_{\theta\theta}$*1.52±.47;* $M_{\phi\phi}$*-3.48±.59;* $M_{r\theta}$*0.97±.70;* $M_{\theta\phi}$*2.84±.35;* $M_{\phi r}$*-6.57±.66; Best double couple:* M_0*7.59000×10*^{15} *NP1:*ϕ_s*297.00000°,δ21.00000°,λ33.00000°. NP2:* ϕ_s*176.00000°,δ79.00000°,λ108.00000°. Principal axes: T 6.4900, Plg53.0000°, Azm107.0000°; N 2.2100, Plg17.0000°, Azm352.0000°; P -8.7000, Plg32.0000°, Azm251.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

INMG ***11*** *12:27:06.9±2.3,34°.18N×5°.04W,h10*^{km}*±7*^{km}*,ML4.1 Error ellipse: s-maj=4.5km s-min=3.4km az=66.0*

LDG ***11*** *12:27:06.3,34°.11N×4°.88W,h30*^{km}

CRAAG ***11*** *12:27:06.0,34°.18N×4°.96W,Mb4.6*

IGIL ***11*** *12:27:06.4,34°.20N×4°.97W,h1*^{km}*,ML4.1*

CNRM ***11*** *12:27:07.9,34°.06N×4°.93W,h26*^{km}

ISC 11 12:27:08.0±0.9,**34°.28N**±0°.03×**4°.94W**±0°.02,**h29**^{km}±6^{km},
n439,σ**2**^{s}**.48**/569**,mb4.5**/70**,MS4.0**/24**,22C-10D,Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SICH	Sidi Chahed	0.35	241	⇓P	Pb	12 27 14.7	-1.4
SICH				S	Sb	12 27 21.1	-0.5
CHEFC	Chefchaouen	0.89	339	⇓P	Pb	12 27 26.6	+1.7
CHEFC				S	Sn	12 27 42.1	+5.4
AKLM	AKL	0.92	75	⇑P	Pn	12 27 23.8	-1.3
AKLM				S	Sb	12 27 36.5	-0.8
RSA	Sarsar	0.94	310	⇓P	Pb	12 27 27.5	+1.7
RSA				S	Sn	12 27 42.9	+4.9
PVLZ	Peæn de	1.04	30	Pn	Pb	12 27 28.0	+0.7
PVLZ				Sn	Sn	12 27 40.7	+0.5
PVLZ	Peæn de	1.04	30	eP	Pb	12 27 28.0	+0.7
PVLZ				eS	Sn	12 27 40.7	+0.5
CZD	Col de Zad	1.24	184	⇓P	Pn	12 27 29.1	-0.5
CZD				S	Sn	12 27 44.4	-1.2
PALE	Palemas	1.25	41	⇑P	Pb	12 27 31.3	+0.4
PALE				S	Sb	12 27 49.1	+2.4
MD31	MD31	1.41	174	P	Pn	12 27 30.7	-1.2
MD31				S	Sn	12 27 48.1	-1.5
SMIR	Smir Dam	1.45	346	⇓P	Pb	12 27 34.7	+0.4
SMIR				S	Sb	12 27 55.1	+2.8
MDT	Midelt	1.48	169	Pn	Pn	12 27 31.5	-1.3
	69nm,0.3s,baz=30,slow=14,SNR=1004						
MDT				Sn	Sn	12 27 49.5	-1.9
	491nm,0.3s,baz=269,slow=19,SNR=23						
MDT	Midelt	1.48	169	⇑P	Pn	12 27 31.5	-1.3
	SNR=2303						
MDT				S	Sn	12 27 49.8	-1.5
RTC	Rabat Centre	1.61	260	⇓P	Pn	12 27 35.0	+0.5
	SNR=25						
RTC				S	Sb	12 27 56.1	-1.0
RTC	Rabat Centre	1.61	260		Pn	12 27 34.6	+0.1
ZHG	ZHG	1.64	240	⇓P	Pn	12 27 34.5	-0.4
ZHG				S	Sb	12 27 56.1	-1.8
CEU	Ceuta	1.66	348	eP	Pb	12 27 37.8	-0.1
CEU				eS	Sb	12 27 58.8	+0.6
ECEU	Ceuta	1.66	348	Pn	Pb	12 27 38.2	+0.4
	1μm,0.6s,SNR=34						
ECEU				Sn	Sb	12 28 00.2	+1.9
	963nm,0.6s,SNR=8.2						
EMEL	Melilla	1.93	57	Pn	Pn	12 27 40.1	+1.3
	512nm,0.1s,SNR=18						
EMEL				Sn	Sb	12 28 07.3	+1.3
	5μm,0.7s,SNR=10						
JBK	JBK	1.97	88	S	Sn	12 28 01.6	-1.8
REAL	Reales	2.21	354	Pn	Pb	12 27 45.4	-2.0
REAL				Sn	Sn	12 28 09.0	-0.4
REAL	Reales	2.21	354	eP	Pb	12 27 45.4	-2.0
REAL				eS	Sn	12 28 09.0	-0.4
AVE	Averroes	2.28	245	eP	Pb	12 27 49.2	+0.8
AVE				eS	Sb	12 28 16.4	+0.3
CNIL	Conil	2.28	337	Pn	Pb	12 27 46.9	-1.5
CNIL				Sn	Sn	12 28 13.0	+2.2
CNIL	Conil	2.28	337	eP	Pb	12 27 46.9	-1.5
CNIL				eS	Sn	12 28 13.0	+2.2
EALB	Alboran	2.28	43	Pn	Pn	12 27 44.4	+0.7
	373nm,0.4s,SNR=9.7						
EALB				Sn	Sb	12 28 14.1	-2.1
	567nm,0.5s,SNR=6.1						
EMIJ	Mijas	2.29	3	⇑Pn	Pn	12 27 45.0	+1.2
	201nm,0.4s,SNR=18						
EMIJ				Sn	Sb	12 28 14.4	-2.1
	567nm,0.6s,SNR=6.4						
ALJ	Aljibe	2.32	346	Pn	Pn	12 27 45.6	+1.3
ALJ	Aljibe	2.32	346	eP	Pn	12 27 45.6	+1.3
EMAL	Malaga-Limoner	2.52	9	Sn	Sn	12 28 18.3	+1.7
EMAL	Malaga-Limoner	2.52	9	eP	Pn	12 27 47.8	+0.9
EMAL				eS	Sn	12 28 18.3	+1.7
LIJA	Lijar	2.65	352	Pn	Pn	12 27 51.7	+2.8
LIJA				Sn	Sb	12 28 24.0	-3.0
LIJA	Lijar	2.65	352	eP	Pn	12 27 51.7	+2.8
LIJA				eS	Sb	12 28 24.0	-3.0
ESPR	Espera	2.69	344	Pn	Pn	12 27 51.1	+1.7
	117nm,0.4s,SNR=12						
ESPR				Sn	Sn	12 28 23.5	+2.5
	302nm,0.7s,SNR=7.2						
ELGU	Los Guajares,	2.80	22	Pn	Pn	12 27 52.2	+1.3
	514nm,0.6s,SNR=7.9						
ELGU				Sn	Sn	12 28 25.8	+2.0
	969nm,0.5s,SNR=7.9						
EBER	Berja	3.10	32	⇑Pn	Pn	12 27 56.0	+0.8
	314nm,0.6s,SNR=18						
EBER				Sn	Sn	12 28 35.3	+3.9
	423nm,0.4s,SNR=10						
EQUE	Quentar	3.17	22	Pn	Pn	12 27 58.4	+2.4
	317nm,0.6s,SNR=69						
EQUE				Sn	Sn	12 28 36.5	+3.6
	246nm,0.4s,SNR=5.7						
ENIJ	Nijar	3.49	39	Pn	Pn	12 28 00.7	+0.3
	168nm,0.5s,SNR=7.9						
ENIJ				Sn	Sn	12 28 41.6	+0.8
	89nm,0.9s,SNR=7.9						
GORA	Gorafe	3.55	25	Pn	Pn	12 28 04.6	+3.3
	371nm,0.5s,SNR=7.9						
GORA				Sn	Sn	12 28 44.8	+2.6
	824nm,0.6s,SNR=7.9						
EMIN	Mina Concepcio	3.76	339	Pn	Pn	12 28 04.6	+0.6
	37nm,0.3s,SNR=87						
EMIN				Sn	Sn	12 28 48.8	+1.6
	88nm,0.5s,SNR=5.7						
ECAB	El Cabril	3.81	354	Pn	Pn	12 28 05.3	+0.5
	103nm,0.5s,SNR=70						
ECAB				Sn	Sn	12 28 50.9	+2.2
	149nm,0.3s,SNR=7.8						
PBDV	Barranco-do-Ve	3.83	321	Pn	Pn	12 28 05.2	+0.2
PBDV				Sn	Sn	12 28 49.5	+0.4
	161nm,0.6s						
PBDV	Barranco-do-Ve	3.83	321	ePn	Pn	12 28 05.2	+0.2
PBDV				eSn	Sn	12 28 49.5	+0.4
PBDV				A	A	12 28 53.9	
	161nm,0.6s						
EQES	Quesada	3.83	23	Pn	Pn	12 28 08.8	+3.7
	411nm,0.5s,SNR=124						
EQES				Sn	Sn	12 28 54.6	+5.3
	654nm,0.4s,SNR=4.9						
EGRO	El Granado	3.85	328	Pn	Pn	12 28 05.6	+0.3
	127nm,0.2s,SNR=113						
EGRO				Sn	Sn	12 28 49.5	0.0
	109nm,0.3s,SNR=4.6						
PVAQ	Vaqueiros	3.85	325	Pn	Pn	12 28 05.5	+0.2
PVAQ				Sn	Sn	12 28 49.0	-0.5
	352nm,0.4s						
PVAQ	Vaqueiros	3.85	325		Pn	12 28 05.4	+0.2
PVAQ				Sn	Sn	12 28 49.8	+0.3
PVAQ	Vaqueiros	3.85	325	⇓ePn	Pn	12 28 05.5	+0.2
PVAQ				eSn	Sn	12 28 49.0	-0.5
PVAQ				A	A	12 28 58.0	
	352nm,0.4s						
EADA	Adamuz	3.90	4	Pn	Pn	12 28 07.5	+1.6
	131nm,0.6s,SNR=54						
EADA				Sn	Sn	12 28 53.8	+3.1
	106nm,0.4s,SNR=4.7						
PCVE	Castro Verde	4.19	324	Pn	Pn	12 28 10.1	+0.2
PCVE				Sn	Sn	12 28 58.5	+0.7
	180nm,0.5s						
PCVE	Castro Verde	4.19	324	ePn	Pn	12 28 10.1	+0.2
PCVE				eSn	Sn	12 28 58.5	+0.7
PCVE				A	A	12 29 13.1	
	180nm,0.5s						
PBAR	Barrancos	4.24	337	Pn	Pn	12 28 12.3	+1.6
PBAR				Sn	Sn	12 28 59.4	+0.1
	200nm,0.4s						
PBAR	Barrancos	4.24	337	ePn	Pn	12 28 12.3	+1.6
PBAR				eSn	Sn	12 28 59.4	+0.1
PBAR				A	A	12 29 03.2	
	200nm,0.4s						
PFVI	Vila Bisbo	4.26	313	Pn	Pn	12 28 10.5	-0.3
	45nm,0.2s,SNR=29						
PFVI				Sn	Sn	12 28 59.1	-0.5
	117nm,0.4s,SNR=5.5						
PFVI	Vila Bisbo	4.26	313		Pn	12 28 11.0	+0.2
PFVI				Sn	Sn	12 29 00.6	+1.0
PFVI	Vila Bisbo	4.26	313	ePn	Pn	12 28 10.8	0.0
PFVI				eSn	Sn	12 28 59.0	-0.5
PFVI				A	A	12 29 13.4	
	174nm,0.5s						
MORF	Marmelete	4.27	316	eP	Pn	12 28 11.3	+0.2
MORF				eS	Sn	12 28 58.5	-1.5
MORF				AML	AML	12 29 03.7	
	comp=N,320nm,0.5s						
MORF	Marmelete	4.27	316	Pn	Pn	12 28 11.3	+0.2
MORF				Sn	Sn	12 28 58.5	-1.5
	comp=N,320nm,0.5s						
TLOR	Lorca, Murcia	4.28	37	Sn	Sn	12 29 02.4	+2.2
	comp=N,2μm,0.6s,SNR=7.9						
SESP	Santiago Espad	4.30	26	Pn	Pn	12 28 13.9	+2.3
	comp=N,263nm,0.4s,SNR=7.9						
SESP				Sn	Sb	12 29 08.8	-5.5
	comp=N,1μm,0.4s,SNR=7.9						
PBEJ	Beja	4.43	329	Pn	Pn	12 28 13.9	+0.7
PBEJ				Sn	Sn	12 29 03.9	+0.1
	comp=N,68nm,0.4s						
PBEJ	Beja	4.43	329	ePn	Pn	12 28 13.9	+0.7
PBEJ				eSn	Sn	12 29 03.9	+0.1
PBEJ				A	A	12 29 09.5	
	comp=N,135nm,0.4s						
MESJ	Messejana	4.44	324	eP	Pn	12 28 13.4	+0.1
MESJ				eS	Sn	12 29 02.6	-1.5
MESJ				AML	AML	12 29 08.2	
	comp=N,320nm,0.5s						
MESJ	Messejana	4.44	324	Pn	Pn	12 28 13.4	+0.1
MESJ				Sn	Sn	12 29 02.6	-1.5
	comp=N,320nm,0.5s						
PTEO	Sao Teotonio	4.48	318	Pn	Pn	12 28 14.3	+0.4
PTEO				Sn	Sn	12 29 04.6	-0.4
	comp=N,101nm,0.3s						
PTEO	Sao Teotonio	4.48	318	ePn	Pn	12 28 14.3	+0.4
PTEO				eSn	Sn	12 29 04.6	-0.4
PTEO				A	A	12 29 09.2	
	comp=N,202nm,0.3s						
CART	Cartagena	4.60	43	Sn	Sn	12 29 06.1	-1.9
CART	Cartagena	4.60	43	eP	Pn	12 28 16.2	+0.6
CART				eS	Sn	12 29 06.1	-1.9
CART	Cartagena	4.60	43		Pn	12 28 16.5	+1.0
CART				Sn	Sn	12 29 07.8	-0.1
EMUR	La Murta	4.65	39	Pn	Pn	12 28 18.4	+2.1
	comp=N,55nm,0.6s,SNR=14						
EMUR				Sn	Sn	12 29 11.2	+1.8
	comp=N,160nm,0.5s,SNR=5.2						
EBAD	Badajoz	4.77	340	⇓Pn	Pn	12 28 18.9	+1.0
	comp=N,70nm,0.4s,SNR=18						
EBAD				Sn	Sn	12 29 11.4	-0.9
	comp=N,93nm,0.4s,SNR=5.2						
PNCL	Nicolau / Gran	4.80	324	Pn	Pn	12 28 19.0	+0.7
PNCL				Sn	Sn	12 29 12.5	-0.5
	comp=N,131nm,0.5s						
PNCL	Nicolau / Gran	4.80	324	ePn	Pn	12 28 19.0	+0.7
PNCL				eSn	Sn	12 29 12.5	-0.5
PNCL				A	A	12 29 30.5	
	comp=N,131nm,0.5s						
PESTR	Estremoz	5.05	336		Pn	12 28 22.8	+1.0
PESTR				Sn	Sn	12 29 19.6	+0.4
PESTR	Estremoz	5.05	336	ePn	Pn	12 28 23.0	+1.2
PESTR				eSn	Sn	12 29 19.5	+0.3
PESTR				A	A	12 29 35.1	
	comp=N,133nm,0.6s						

ETOB	Tobarra	5.15	31	⇓Pn	Pn	12 28 26.4	+3.2
	comp=N,80nm,0.4s,SNR=18						
ETOB				Sn	Sn	12 29 25.8	+4.1
	comp=N,113nm,0.7s,SNR=4.5						
EANR	'Ain N'Sour	5.23	70	P	Pn	12 28 20.6	-3.6
EANR	'Ain N'Sour	5.23	70	P	Pn	12 28 20.6	-3.6
EANR	'Ain N'Sour	5.23	70	Pn	Pn	12 28 20.6	-3.6
ETRT	Tiaret	5.25	76	P	Pn	12 28 25.4	+0.7
ETRT	Tiaret	5.25	76	P	Pn	12 28 25.4	+0.7
ETRT	Tiaret	5.25	76	Pn	Pn	12 28 25.4	+0.7
PAB	San Pablo	5.28	5	Pn	Pn	12 28 26.0	+1.0
	comp=N,39nm,0.5s,SNR=7.9						
PAB				Sn	Sn	12 29 24.6	-0.3
	comp=N,28nm,0.6s,SNR=7.9						
PAB	San Pablo	5.28	5		Pn	12 28 26.1	+1.1
PAB				Sn	Sn	12 29 25.3	+0.3
ESDC	Sonseca Array	5.45	8	Pn	Pn	12 28 28.0	+0.7
	comp=N,9.7nm,0.3s,baz=197,slow=13,SNR=38						
ESDC				Sn	Sn	12 29 27.9	-1.0
	comp=N,23nm,0.3s,baz=194,slow=23,SNR=1.7						
ESDC				Lg	Lg	12 29 48.0	
	comp=N,24nm,0.3s,baz=190,slow=26,SNR=5.4						
ESDC	Sonseca Array	5.45	8	Pn	Pn	12 28 28.7	+1.5
	comp=N,8.6nm,0.3s,baz=196,slow=13,SNR=29						
ESDC				Sn	Sn	12 29 31.5	+2.6
	comp=N,16nm,0.3s,baz=193,slow=23,SNR=5.4						
ESDC	Sonseca Array	5.45	8	Pn	Pn	12 28 26.8	-0.5
ESDC				Sn	Sn	12 29 29.9	+0.9
ESBB	Sonseca Array	5.45	8		Pn	12 28 28.4	+1.1
PMTG	Montargil	5.46	332	Pn	Pn	12 28 28.3	+0.9
PMTG				Sn	Sn	12 29 29.5	+0.2
	comp=N,100nm,0.4s						
PMTG	Montargil	5.46	332	ePn	Pn	12 28 28.3	+0.9
PMTG				eSn	Sn	12 29 29.5	+0.2
PMTG				A	A	12 29 34.6	
	comp=N,100nm,0.4s						
ECHF	Ech Chlef	5.47	68	Pn	Pn	12 28 29.1	+1.5
ECHA	Ech Chlef	5.49	68	P	Pn	12 28 29.1	+1.3
ECHA	Ech Chlef	5.49	68	P	Pn	12 28 29.1	+1.3
PMRV	Marv??o	5.50	340	Pn	Pn	12 28 29.1	+1.1
PMRV				Sn	Sn	12 29 28.3	-2.1
	comp=N,110nm,0.5s						
PMRV	Marv??o	5.50	340	ePn	Pn	12 28 29.1	+1.1
PMRV				eSn	Sn	12 29 28.3	-2.1
PMRV				A	A	12 29 35.2	
	comp=N,110nm,0.5s						
LIS	Lisbon	5.58	324	Sn	Sn	12 29 34.8	+2.7
	comp=N,115nm,0.4s						
LIS	Lisbon	5.58	324	eSn	Sn	12 29 34.8	+2.7
LIS				A	A	12 29 46.5	
	comp=N,115nm,0.4s						
AFON	Font Roja	5.63	38	⇑Pn	Pn	12 28 33.3	+3.4
	comp=N,56nm,0.4s,SNR=18						
AFON				Sn	Sn	12 29 37.3	+3.6
	comp=N,54nm,0.4s,SNR=6.7						
EBNR	Beni Rached	5.66	67	P	Pn	12 28 33.2	+3.0
EBNR	Beni Rached	5.66	67	P	Pn	12 28 33.2	+3.0
EBEN2	Beniarda presa	5.83	40	Pn	Pn	12 28 35.3	+2.9
	comp=N,42nm,0.4s,SNR=7.9						
PMAFR	Mafra	5.83	324	Pn	Pn	12 28 33.4	+0.9
	comp=N,80nm,0.3s,SNR=9.5						
PMAFR				Sn	Sn	12 29 37.7	-0.7
	comp=N,62nm,0.3s,SNR=6.6						
PMAFR	Mafra	5.83	324	ePn	Pn	12 28 33.6	+1.1
PMAFR				eSn	Sn	12 29 39.3	+0.9
PMAFR				A	A	12 29 55.8	
	comp=N,124nm,0.5s						
EPLA	Plasencia	5.85	351	Pn	Pn	12 28 34.1	+1.4
	comp=N,20nm,0.1s,SNR=33						
EPLA				Sn	Sn	12 29 37.5	-1.4
	comp=N,63nm,0.3s,SNR=6.7						
PCBR	Castelo Branco	5.91	341	Pn	Pn	12 28 34.6	+1.0
PCBR				Sn	Sn	12 29 40.5	+0.2
	comp=N,43nm,0.5s						
PCBR	Castelo Branco	5.91	341	ePn	Pn	12 28 34.6	+1.0
PCBR				eSn	Sn	12 29 40.5	+0.2
PCBR				A	A	12 29 50.5	
	comp=N,87nm,0.5s						
PTOM	Tomar	6.01	333	Pn	Pn	12 28 35.9	+0.9
PTOM				Sn	Sn	12 29 41.0	-1.8
	comp=N,51nm,0.6s						
PTOM	Tomar	6.01	333	ePn	Pn	12 28 35.9	+0.9
PTOM				eSn	Sn	12 29 41.0	-1.8
PTOM				A	A	12 30 01.8	
	comp=N,102nm,0.6s						
PSBE	So Bento	6.07	331	ePn	Pn	12 28 36.8	+1.0
PSBE				eSn	Sn	12 29 44.7	+0.4
PSBE				A	A	12 30 08.1	
	comp=N,84nm,0.5s						
UCM	Universidad Co	6.17	12	Pn	Pn	12 28 40.2	+3.0
UCM				Sn	Sn	12 29 43.8	-3.0
UCM	Universidad Co	6.17	12	eP	Pn	12 28 40.2	+3.0
UCM				eS	Sn	12 29 43.8	-3.0
GUD	Guadarrama	6.39	5	Pn	Pn	12 28 41.5	+1.2
	comp=N,21nm,0.3s,SNR=34						
GUD				Sn	Sn	12 29 48.8	-3.5
	comp=N,53nm,0.4s,SNR=7.1						
PCAS	Casmilo, Conde	6.43	335	Pn	Pn	12 28 41.8	+1.1
PCAS				Sn	Sn	12 29 52.9	-0.2
	comp=N,88nm,0.6s						
PCAS	Casmilo, Conde	6.43	335	ePn	Pn	12 28 41.8	+1.1
PCAS				eSn	Sn	12 29 52.9	-0.2
PCAS				A	A	12 30 10.7	
	comp=N,88nm,0.6s						
MTE	Manteigas	6.45	342	Pn	Pn	12 28 42.5	+1.4
MTE				Sn	Sn	12 29 50.4	-3.4
	comp=N,74nm,0.5s						
MTE	Manteigas	6.45	342		Pn	12 28 42.1	+1.0
MTE				Sn	Sn	12 29 52.5	-1.3
MTE	Manteigas	6.45	342	ePn	Pn	12 28 42.5	+1.4
MTE				eSn	Sn	12 29 50.4	-3.4
MTE				A	A	12 30 14.5	
	comp=N,148nm,0.5s						
COI	Coimbra	6.54	336	Pn	Pn	12 28 43.5	+1.4
COI	Coimbra	6.54	336		Pn	12 28 42.6	+0.4
COI	Coimbra	6.54	336	ePn	Pn	12 28 43.5	+1.4
COI				eSn	Sn	12 29 55.2	-0.5
COI				A	A	12 30 08.0	
	comp=N,111nm,0.4s						
PVIS	Viseu	6.84	341	ePn	Pn	12 28 47.0	+0.6
PVIS				eSn	Sn	12 30 04.0	+0.6
PVIS				A	A	12 30 12.4	
	comp=N,51nm,0.4s						
ETOR	Torete	6.92	18	Pn	Pn	12 28 48.9	+1.4
	comp=N,92nm,0.7s,SNR=24						
ETOR				Sn	Sn	12 30 08.2	+2.9
	comp=N,105nm,0.4s,SNR=5.8						
EIBI	Ibiza	6.93	45	Pn	Pn	12 28 49.1	+1.5
	comp=N,73nm,0.6s,SNR=6.4						
EIBI				Sn	Sn	12 30 05.5	+0.2
	comp=N,39nm,0.6s,SNR=4.6						
EMOS	Mosqueruela	7.04	29	Pn	Pn	12 28 51.5	+2.2
	comp=N,44nm,0.5s,SNR=64						
EMOS				Sn	Sn	12 30 10.8	+2.3
	comp=N,46nm,0.6s,SNR=325						
MVO	Moncorvo	7.07	347	Pn	Pn	12 28 50.6	+1.0
	comp=N,111nm,0.4s,SNR=44						
MVO				Sn	Sn	12 30 07.6	-1.4
	comp=N,77nm,0.6s,SNR=6.3						
MVO	Moncorvo	7.07	347	ePn	Pn	12 28 50.6	+1.0
MVO				eSn	Sn	12 30 07.3	-1.7
MVO				A	A	12 30 28.9	
	comp=N,94nm,0.5s						
PVRL	Vila Real	7.32	343	ePn	Pn	12 28 54.3	+1.3
PVRL				eSn	Sn	12 30 12.7	-2.5
PVRL				A	A	12 30 17.3	
	comp=N,107nm,0.2s						
PBRG	Braganca	7.65	350	ePn	Pn	12 28 58.4	+0.9
PBRG				eSn	Sn	12 30 21.7	-1.5
PBRG				A	A	12 30 49.0	
	comp=N,40nm,0.6s						
ECAL	Calabor	7.78	350	Pn	Pn	12 29 00.4	+1.1
	comp=N,38nm,0.4s,SNR=13						
ECAL				Sn	Sn	12 30 24.7	-1.8
	comp=N,34nm,0.5s,SNR=4.8						
PCAB	Cabril	7.81	343	ePn	Pn	12 29 01.1	+1.4
PCAB				eSn	Sn	12 30 23.4	-3.7
PCAB				A	A	12 30 42.6	
	comp=N,62nm,0.6s						
ERTA	Horta de San J	7.87	31	Pn	Pn	12 29 02.7	+2.2
	comp=N,124nm,0.8s,SNR=61						
ELOB	Lobios	7.97	343	Pn	Pn	12 29 03.0	+1.1
	comp=N,74nm,0.7s,SNR=24						
ELOB				Sn	Sn	12 30 26.9	-4.1
	comp=N,52nm,0.6s,SNR=7.9						
ESAC	San Caprasio	8.23	24	Pn	Pn	12 29 08.8	+3.4
	comp=N,46nm,0.5s,SNR=6.2						
ESAC				Sn	Sn	12 30 37.6	+0.1
	comp=N,38nm,0.4s,SNR=4.8						
ETOS	Mallorca	8.28	46	Pn	Pn	12 29 07.9	+1.8
	comp=N,58nm,0.7s,SNR=33						
ETOS				Sn	Sn	12 30 38.2	-0.4
	comp=N,25nm,0.5s,SNR=10.0						
EZAM	Zamans	8.40	341	Pn	Pn	12 29 09.0	+1.3
	comp=N,37nm,0.6s,SNR=7.9						
EZAM				Sn	Sn	12 30 37.7	-3.8
	comp=N,10nm,1.0s,SNR=7.9						
EPOB	Poblet	8.52	32	Pn	Pn	12 29 11.8	+2.3
	comp=N,15nm,0.6s,SNR=9.1						
EAGO	Agolada(Pontev	8.86	345	Pn	Pn	12 29 16.5	+2.4
	comp=N,17nm,0.4s,SNR=7.9						
EAGO				Sn	Sn	12 30 48.7	-4.3
	comp=N,25nm,0.5s,SNR=7.9						
EARA	Aranguren	8.88	16	Pn	Pn	12 29 17.6	+3.3
	comp=N,26nm,0.5s,SNR=7.9						
EARI	Arriondas	9.01	359	Pn	Pn	12 29 18.6	+2.4
	comp=N,8.6nm,0.4s,SNR=30						
EARI				Sn	Sn	12 30 54.6	-2.1
	comp=N,16nm,0.6s,SNR=7.9						
ELAN	Lanestosa	9.02	7	Pn	Pn	12 29 18.9	+2.6
	comp=N,30nm,0.6s,SNR=4.9						
ELAN				Sn	Sn	12 30 53.6	-3.2
	comp=N,16nm,0.5s,SNR=5.0						
EORO	Oroz-Betelu	9.06	17	Pn	Pn	12 29 21.0	+4.1
	comp=N,36nm,0.5s,SNR=21						
EORO				Sn	Sn	12 30 58.5	+0.6
	comp=N,34nm,0.5s,SNR=16						
EMIR	Miracle	9.17	32	Pn	Pn	12 29 21.0	+2.6
	comp=N,20nm,0.4s,SNR=18						
EPON	Pontenova	9.20	350	Pn	Pn	12 29 19.6	+0.9
	comp=N,7.9nm,0.3s,SNR=6.5						
EPON				Sn	Sn	12 30 57.7	-3.6
	comp=N,6.1nm,0.2s,SNR=7.9						
EMAZ	Mazaricos	9.22	341	Pn	Pn	12 29 19.9	+0.9
	comp=N,18nm,0.5s,SNR=7.9						
EMAZ				Sn	Sn	12 30 56.3	-5.4
	comp=N,49nm,0.7s,SNR=7.9						
MAHO	Mahon	9.25	50	eS	Sn	12 31 51.6	+49
ETSF	Etsaut	9.27	20	ePn	Pn	12 29 17.9	-1.8
ETSF	Etsaut	9.27	20	eP	Pn	12 29 23.1	+3.4
ETSF				eSn	Sn	12 30 56.5	-6.5
	comp=N,13nm,0.5s						
ETSF	Etsaut	9.27	20	Pn	Pn	12 29 17.9	-1.8
ETSF				Sn	Sn	12 30 56.5	-6.5
	comp=N,6.3nm,0.5s						
SJPF	Ste Jean	9.29	17	ePn	Pn	12 29 18.3	-1.6
SJPF	Ste Jean	9.29	17	eP	Pn	12 29 23.1	+3.2
SJPF				eSn	Sn	12 30 56.1	-7.3
	comp=N,25nm,0.6s						
SJPF	Ste Jean	9.29	17	Pn	Pn	12 29 18.3	-1.6
SJPF				Sn	Sn	12 30 56.1	-7.3
	comp=N,13nm,0.6s						
ECHI	Chisagues Biel	9.29	24	Pn	Pn	12 29 25.8	+5.7
	comp=N,14nm,0.6s,SNR=7.9						
EALK	Alkurruntz	9.32	16	Pn	Pn	12 29 24.1	+3.6
	comp=N,72nm,0.5s,SNR=36						
EALK				Sn	Sn	12 31 01.8	-2.5
	comp=N,126nm,0.5s,SNR=7.9						
CSOR	Sort	9.39	29	Pn	Pn	12 29 24.4	+3.0
	comp=N,46nm,0.5s,SNR=102						
ATE	Arette	9.40	19	Pn	Pn	12 29 24.1	+2.6
	comp=N,30nm,0.6s,SNR=7.9						
ATE				Sn	Sn	12 31 06.7	+0.5
	comp=N,21nm,0.5s,SNR=7.9						
CFON	Fontmartina	9.47	36	Pn	Pn	12 29 24.8	+2.3
	comp=N,4.2nm,0.3s,SNR=7.9						
EPF	Esparros	9.66	24	ePn	Pn	12 29 23.4	-1.7
EPF	Esparros	9.66	24	eP	Pn	12 29 28.9	+3.8
EPF				eSn	Sn	12 31 05.3	-7.4
	comp=N,17nm,0.5s						
EPF	Esparros	9.66	24	Pn	Pn	12 29 23.4	-1.7
EPF				Sn	Sn	12 31 05.3	-7.4
	comp=N,8.6nm,0.5s						
CLLI	Llivia	9.82	31	Pn	Pn	12 29 30.2	+2.8
	comp=N,39nm,0.8s,SNR=31						
PMAR	Madeira	10.12	265	ePn	Pn	12 29 31.8	+0.3
PMAR				A	A	12 31 26.1	
	comp=N,57nm,0.3s						
MTLF	Montolieu	10.63	30	ePn	Pn	12 29 36.1	-2.2
MTLF	Montolieu	10.63	30	eP	Pn	12 29 41.3	+3.0
MTLF				eSn	Sn	12 31 27.9	-8.4
	comp=N,5.4nm,0.6s						
MTLF	Montolieu	10.63	30	Pn	Pn	12 29 36.1	-2.2
MTLF				Sn	Sn	12 31 27.9	-8.4
	comp=N,2.7nm,0.6s						
LFF	La Frestale	11.51	21	ePn	Pn	12 29 48.0	-2.3
LFF	La Frestale	11.51	21	eP	Pn	12 29 53.4	+3.1
LFF				eSn	Sn	12 31 49.2	-8.7
	comp=N,10nm,0.4s						
LFF	La Frestale	11.51	21	Pn	Pn	12 29 48.0	-2.3
LFF				Sn	Sn	12 31 49.2	-8.7
	comp=N,5.2nm,0.4s						
KEST	Kesra	11.81	79	Pn	Pn	12 29 58.2	+3.7
	comp=N,0.3nm,0.3s,baz=262,slow=11,SNR=3.6						
KEST				LR	LR	12 34 23.8	
	comp=N,322nm,19.6s,baz=200,slow=38						
CAF	Calviac	11.92	25	eP	Pn	12 29 59.1	+3.1
CAF				eSn	Sn	12 31 58.6	-9.4
	comp=N,3.6nm,0.4s						
LASF	Ste Croix	11.92	32	eP	Pn	12 29 58.8	+2.8
LASF				eSn	Sn	12 31 59.3	-8.7
	comp=N,2.5nm,0.5s						
RJF	Les Rejaudoux	12.08	22	ePg	Pn	12 29 56.2	-1.9
RJF				eSn	Sn	12 32 02.8	-8.9
	comp=N,8.6nm,0.5s						
SMRF	Simiane la Rot	12.66	37	eP	Pn	12 30 07.7	+1.7
SMRF	Simiane la Rot	12.66	37	Pn	Pn	12 30 07.7	+1.7
LMR	La Mourre	12.70	41	ePn	Pn	12 30 03.6	-3.0
LMR	La Mourre	12.70	41	eP	Pn	12 30 09.0	+2.4
LMR	La Mourre	12.70	41	Pn	Pn	12 30 03.6	-3.0
MFF	Saint Martin d	12.84	15	eP	Pn	12 30 11.9	+3.4
MFF				eSn	Sn	12 32 22.4	-7.9
	comp=N,9.2nm,0.6s						
VIVF	Saint-Julien-l	12.90	32	ePn	Pn	12 30 06.8	-2.5
VIVF	Saint-Julien-l	12.90	32	eP	Pn	12 30 11.7	+2.4
VIVF				eSn	Sn	12 32 22.7	-9.1
	comp=N,2.1nm,0.4s						
VIVF	Saint-Julien-l	12.90	32	Pn	Pn	12 30 06.8	-2.5
VIVF				Sn	Sn	12 32 22.7	-9.1
	comp=N,1.1nm,0.4s						
FRF	La Foret Royal	12.93	41	ePn	Pn	12 30 06.6	-3.1
FRF	La Foret Royal	12.93	41	Pn	Pn	12 30 06.6	-3.1
TCF	Toulx Ste Croi	13.17	22	eP	Pn	12 30 15.9	+2.8
TCF				eSn	Sn	12 32 29.0	-10
	comp=N,5.4nm,0.6s						
ORIF	Oris-en-Rattie	13.50	35	ePn	Pn	12 30 15.1	-2.5
ORIF	Oris-en-Rattie	13.50	35	eP	Pn	12 30 19.6	+2.0
ORIF	Oris-en-Rattie	13.50	35	Pn	Pn	12 30 15.1	-2.5
SBF	Sospel	13.55	41	ePn	Pn	12 30 15.3	-3.0
SBF	Sospel	13.55	41	Pn	Pn	12 30 15.3	-3.0
BGF	Bois d'Agland	13.62	23	ePn	Pn	12 30 17.0	-2.1
BGF	Bois d'Agland	13.62	23	eP	Pn	12 30 22.0	+2.9
BGF				eSn	Sn	12 32 39.7	-10
	comp=N,7.2nm,0.4s						
BGF	Bois d'Agland	13.62	23	Pn	Pn	12 30 17.0	-2.1
BGF				Sn	Sn	12 32 39.7	-10
	comp=N,3.6nm,0.4s						
PGF	Pioggiola	13.69	49	eP	Pn	12 30 22.2	+2.0
PGF				eSn	Sn	12 32 40.6	-11
	comp=N,2.8nm,0.5s						
QUIF	Quistinic	13.69	5	ePn	Pn	12 30 18.7	-1.4
QUIF	Quistinic	13.69	5	eP	Pn	12 30 23.7	+3.6
QUIF				eSn	Sn	12 32 43.9	-7.2
	comp=N,8.2nm,0.2s						
QUIF	Quistinic	13.69	5	Pn	Pn	12 30 18.7	-1.4
QUIF				Sn	Sn	12 32 43.9	-7.2
	comp=N,4.1nm,0.2s						
MBDF	Montbardon	13.79	37	ePn	Pn	12 30 18.9	-2.7
MBDF	Montbardon	13.79	37	eP	Pn	12 30 23.8	+2.2
MBDF	Montbardon	13.79	37	Pn	Pn	12 30 18.9	-2.7
BNI	Bardonecchia	13.98	36	Pn	Pn	12 30 23.4	-0.8
AVF	Avril sur Loir	13.99	24	ePn	Pn	12 30 22.1	-2.1
AVF	Avril sur Loir	13.99	24	Pn	Pn	12 30 22.1	-2.1
SMF	Signal de Mont	14.04	26	ePn	Pn	12 30 22.5	-2.3
SMF	Signal de Mont	14.04	26	eP	Pn	12 30 27.1	+2.3
SMF				eSn	Sn	12 32 49.4	-10
	comp=N,2.2nm,0.3s						
SMF	Signal de Mont	14.04	26	Pn	Pn	12 30 22.5	-2.3
SMF				Sn	Sn	12 32 49.4	-10
	comp=N,1.1nm,0.3s						
SGMF	Saint Gilles	14.08	7	ePn	Pn	12 30 23.5	-1.9
SGMF	Saint Gilles	14.08	7	eP	Pn	12 30 28.5	+3.1
SGMF				eSn	Sn	12 32 53.1	-7.4
	comp=N,17nm,0.6s						
SGMF	Saint Gilles	14.08	7	Pn	Pn	12 30 23.5	-1.9
SGMF				Sn	Sn	12 32 53.1	-7.4
	comp=N,8.4nm,0.6s						
ROSF	Rostrenen	14.10	5	ePn	Pn	12 30 24.2	-1.5
ROSF	Rostrenen	14.10	5	eP	Pn	12 30 29.3	+3.6
ROSF				eSn	Sn	12 32 53.8	-7.3
	comp=N,12nm,0.5s						
ROSF	Rostrenen	14.10	5	Pn	Pn	12 30 24.2	-1.5
ROSF				Sn	Sn	12 32 53.8	-7.3
	comp=N,6.2nm,0.5s						
HYF	Humbligny	14.18	22	ePn	Pn	12 30 24.6	-2.2
HYF	Humbligny	14.18	22	Pn	Pn	12 30 24.6	-2.2
SSF	Saint Saulge	14.28	24	eP	Pn	12 30 30.5	+2.4
SSF				eSn	Sn	12 32 56.2	-9.2
	comp=N,2.2nm,0.3s						
GRR	Gorron	14.43	11	ePn	Pn	12 30 28.3	-1.8
GRR				eSn	Sn	12 33 01.2	-7.8
	comp=N,8.8nm,0.5s						
GRR	Gorron	14.43	11	Pn	Pn	12 30 28.3	-1.8
GRR				Sn	Sn	12 33 01.2	-7.8
	comp=N,4.4nm,0.5s						
LOR	Lormes	14.58	24	ePn	Pn	12 30 30.2	-2.0
LOR	Lormes	14.58	24	eP	Pn	12 30 34.8	+2.6
LOR				eSn	Sn	12 33 01.2	-12
	comp=N,3.7nm,0.6s						
LOR	Lormes	14.58	24	Pn	Pn	12 30 30.2	-2.0
LOR				Sn	Sn	12 33 01.2	-12
	comp=N,1.9nm,0.6s						
FLN	La Foliniere	14.85	12	ePn	Pn	12 30 34.3	-1.5
FLN	La Foliniere	14.85	12	eP	Pn	12 30 38.1	+2.3
FLN				eSn	Sn	12 33 08.8	-11
	comp=N,5.4nm,0.4s						
FLN	La Foliniere	14.85	12	Pn	Pn	12 30 34.3	-1.5
FLN				Sn	Sn	12 33 08.8	-11
	comp=N,2.7nm,0.4s						
CABF	La Chapelle	14.89	31	ePn	Pn	12 30 34.0	-2.5
CABF	La Chapelle	14.89	31	eP	Pn	12 30 38.2	+1.7
CABF				eSn	Sn	12 33 11.7	-8.8
CABF	La Chapelle	14.89	31	Pn	Pn	12 30 34.0	-2.5
CABF				Sn	Sn	12 33 11.7	-8.8
SFTF	Sexfontaines	15.79	25	ePn	Pn	12 30 46.4	-1.8
SFTF	Sexfontaines	15.79	25	Pn	Pn	12 30 46.4	-1.8
VAE	Valguarnera	16.01	73	LR	LR	12 37 30.7	
	comp=N,238nm,18.2s,baz=188,slow=40						
MEZF	Maizieres J'vi	16.05	25	ePn	Pn	12 30 50.2	-1.3
MEZF	Maizieres J'vi	16.05	25	Pn	Pn	12 30 50.2	-1.3
HAU	Haudompre	16.11	28	ePn	Pn	12 30 50.9	-1.4
HAU				eSn	Sn	12 33 40.9	-9.2
HAU	Haudompre	16.11	28	Pn	Pn	12 30 50.9	-1.4
HAU				Sn	Sn	12 33 40.9	-9.2
HINF	Hinteralfeld	16.16	30	ePn	Pn	12 30 51.6	-1.4
HINF				eSn	Sn	12 33 42.0	-9.3
HINF	Hinteralfeld	16.16	30	Pn	Pn	12 30 51.6	-1.4
HINF				Sn	Sn	12 33 42.0	-9.3
PAGF	Fort de Pagny	16.33	26	ePn	Pn	12 30 54.0	-1.1
PAGF				eSn	Sn	12 33 45.3	-10
	comp=N,12nm,0.6s						
ECH	Echery	16.61	29	P	P	12 31 00.7	-0.2
DAVOX	Davos/Dischmat	16.79	38	Pn	P	12 31 04.2	+1.1
	comp=N,1.3nm,0.3s,baz=213,slow=21,SNR=9.2						
CDF	Champ du Feu	16.81	29	ePn	Pn	12 31 00.1	-1.1
CDF				eSn	Sn	12 33 57.0	-10
	comp=N,1.0nm,0.2s						
CDF	Champ du Feu	16.81	29	Pn	Pn	12 31 00.1	-1.1
CDF				Sn	Sn	12 33 57.0	-10
	comp=N,0.5nm,0.2s						
DAVA	Damuels	17.13	36	i P	P	12 31 07.1	+0.3
	comp=N,4.6nm,0.5s						
BAIF	Baives	17.15	20	ePn	Pn	12 31 05.3	0.0
BAIF				eSn	Sn	12 34 05.4	-10
	comp=N,2.1nm,0.1s						
BAIF	Baives	17.15	20	Pn	Pn	12 31 05.3	0.0
BAIF				Sn	Sn	12 34 05.4	-10
	comp=N,1.1nm,0.1s						
BFO	Black Forest	17.18	31	P	P	12 31 07.2	-0.1
CTI	Castel Tesino	17.25	42	P	P	12 31 08.8	+0.7
DOU	Dourbes	17.29	21	Pn	Pn	12 31 06.3	-0.8
DOU				x	x	12 31 20.1	
GIVF	Givet	17.37	21	eP	P	12 31 09.8	+0.6
GIVF				eSn	Sn	12 34 09.9	-10
	comp=N,19nm,0.6s						
FETA	Feichten	17.38	38	i Pn	P	12 31 09.9	+0.3
	comp=N,13nm,0.6s,SNR=7.7						
WLF	Walferdange	17.42	25	P	P	12 31 09.6	-0.2
WLF				IAmb	IAmb	12 31 26.0	
	comp=Z,50nm,1.5s						
BGES	Gesves	17.70	22	P	P	12 31 13.3	+0.5
BGES				x	x	12 31 19.2	
RETA	Reutte	17.71	37	i P	P	12 31 13.1	0.0
	comp=Z,6.1nm,0.5s						
SQTA	Sankt Quirin	17.76	38	i P	P	12 31 14.0	+0.3
	comp=Z,21nm,0.6s,SNR=11						
MOTA	Moosalm	17.79	38	i P	P	12 31 13.9	-0.2
	comp=Z,9.9nm,0.9s						
STAL	STALIGIAL	17.97	43	P	P	12 31 17.2	+1.2
WTTA	Wattenberg	18.01	39	i Pn	Pn	12 31 15.6	-0.6
	comp=Z,6.9nm,0.8s						
WATA	Walderalm	18.02	39	i P	Pn	12 31 16.5	+0.1
	comp=Z,5.2nm,0.4s						
TIP	Timpagrande	18.06	68	P	P	12 31 19.1	+2.0
ABTA	Abfaltersbach	18.15	41	i P	P	12 31 20.0	+2.0
	comp=Z,9.0nm,0.6s						
MYKA	Terra Mystica	18.71	43	i pP	Pn	12 31 25.5	+0.8
	comp=Z,9.3nm,0.7s						
KBA	Koelnbreinsper	18.81	42	i pP	Pn	12 31 26.5	+0.6
	comp=Z,9.9nm,0.6s						
LJU	Ljubljana	18.91	46	i P	Pn	12 31 27.5	+0.6
OBKA	Obir	19.17	45	i pP	Pn	12 31 30.7	+0.5
	comp=Z,28nm,0.7s,SNR=9.7						
GRA1	Grafenberg Arr	19.47	33	P	P	12 31 32.2	-0.2
SOKA	Soboth	19.54	45	i Pn	Pn	12 31 34.4	-0.3
	comp=Z,33nm,1.3s,SNR=8.3						
GOLS	Golise	19.55	47	i P	P	12 31 33.5	+0.3
GOLS				eS	Sn	12 35 26.8	+14
GROS	Grobnik	19.70	46	i P	P	12 31 35.5	+0.5
MOA	Molln	19.77	41	i P	P	12 31 35.0	-0.6
	comp=Z,16nm,0.6s						
GEC2	GERESS Array S	20.08	38	P	P	12 31 38.6	-0.5
GEC2				IAmb	IAmb	12 31 39.6	
	comp=Z,16nm,0.6s						
GERES	GERESS Array B	20.08	38	P	P	12 31 38.5	-0.6
	comp=Z,4.3nm,0.3s,baz=223,slow=10,SNR=43						
GERES	GERESS Array B	20.08	38	P	P	12 31 37.8	-1.3
ARSA	Arzberg	20.13	44	i P	P	12 31 38.8	-0.8
	comp=Z,9.0nm,0.8s						
KHC	Kasperske Hory	20.20	37	eP	P	12 31 40.6	+0.2
KHC				AMS	AMS	12 41 30.0	
	comp=Z,700nm,7.8s						
KHC	Kasperske Hory	20.20	37	P	P	12 31 39.7	-0.7
NKC	Novy Kostel	20.41	33	AMS	AMS	12 40 50.0	
	comp=Z,800nm,7.9s						
PDG	Podgorica	20.60	60	⇑P	P	12 31 45.2	+0.5
PDG	Podgorica	20.60	60	P	P	12 31 44.0	-0.7
PDG				IAmb	IAmb	12 31 45.8	
	comp=Z,57nm,1.4s						
CONA	Conrad Observa	20.69	43	i P	P	12 31 44.7	-1.1
	comp=Z,18nm,0.7s,SNR=9.9						
TIR	Tirane	20.79	63	⇑P	P	12 31 47.4	+0.6
TIR	Tirane	20.79	63	P	P	12 31 46.7	-0.1
EKB1	Eskdalemuir Ar	21.07	3	P	P	12 31 50.4	+0.8
EKB1				IAmb	IAmb	12 32 07.0	
	comp=Z,34nm,1.2s						
EKR10	Eskdalemuir Ar	21.07	3	P	P	12 31 50.5	+0.8
EKR8	Eskdalemuir Ar	21.08	3	P	P	12 31 50.4	+0.6
EKR5	Eskdalemuir Ar	21.09	3	P	P	12 31 50.1	+0.3
EKR4	Eskdalemuir Ar	21.09	3	P	P	12 31 50.1	+0.2
EKA	Eskdalemuir Ar	21.09	3	P	P	12 31 51.7	+1.8
	comp=Z,0.7nm,0.4s,baz=167,slow=12,SNR=8.1						
EKR1	Eskdalemuir Ar	21.10	3	P	P	12 31 50.0	+0.1
EKR1				IAmb	IAmb	12 31 53.6	
	comp=Z,32nm,1.4s						
EKB5	Eskdalemuir Ar	21.10	3	P	P	12 31 50.4	+0.5
EKB6	Eskdalemuir Ar	21.11	3	P	P	12 31 50.2	+0.2
EKB6				IAmb	IAmb	12 32 06.2	
	comp=Z,31nm,1.3s						
EKB9	Eskdalemuir Ar	21.13	3	P	P	12 31 50.4	+0.1
EKB9				IAmb	IAmb	12 32 07.3	
	comp=Z,36nm,1.4s						
PRA	Prague	21.24	36	AMS	AMS	12 42 00.0	
	comp=Z,600nm,11.8s						

PRU	Pruhonice	21.24	36	eP	P	12 31 51.0	-0.5
PRU				AMS	AMS	12 42 00.0	
	comp=Z,800nm,7.9s						
TREC	Trest	21.28	39	AMS	AMS	12 41 40.0	
	comp=Z,900nm,7.8s						
GOPC	GO Pecny, Ondr	21.31	37	eP	P	12 31 51.7	-0.7
GOPC				AMS	AMS	12 43 30.0	
	comp=Z,700nm,8.6s						
CLL	Collm	21.42	32	i P	P	12 31 54.1	+0.6
	comp=Z,12nm,1.4s						
CLL				i		12 32 03.4	
CLL				e		12 32 08.0	
CLL				ePPP	PPP	12 32 17.0	
CLL				eS	S	12 35 53.0	+3.4
CLL				eSSS	SSS	12 36 24.0	
ZST	Bratislava	21.54	43	eP	P	12 31 53.5	-1.2
BRG	Berggiesshubel	21.54	34	eP	P	12 31 54.7	0.0
	comp=Z,8.5nm,1.0s						
BRG				e		12 32 08.4	
	comp=Z,32nm,1.7s						
BRG				S	S	12 35 56.0	+4.0
KRUC	Moravsky	21.63	40	eP	P	12 31 54.6	-1.1
MODS	Modra-Piesok	21.73	43	eP	P	12 31 55.6	-1.3
VRAC	Vranov	21.88	40	P	P	12 31 57.4	-1.0
	comp=Z,16nm,0.8s,baz=236,slow=10,SNR=9.9						
VRAC	Vranov	21.88	40	⇑P	P	12 31 57.5	-0.9
VRAC	Vranov	21.88	40	eP	P	12 31 57.2	-1.2
TOA0	Torodi Ar. Sit	21.88	162	P	P	12 31 59.0	+0.4
TORD	Torodi Ar. Bea	21.88	162	P	P	12 31 59.0	+0.4
	comp=Z,16nm,1.1s,baz=348,slow=8.9,SNR=50						
TORD	Torodi Ar. Bea	21.88	162	P	P	12 31 56.8	-1.8
UPC	Upice	22.30	37	eP	P	12 32 02.8	-0.1
AGG	Agios Georgios	22.35	70	P	P	12 32 02.7	-0.9
AGG				IAmb	IAmb	12 32 21.1	
	comp=Z,48nm,1.4s						
DPC	Dobruska-Polom	22.36	38	eP	P	12 32 02.3	-1.3
DPC				AMS	AMS	12 42 50.0	
	comp=Z,700nm,7.1s						
CHVC	Chvalec	22.37	37	eP	P	12 32 03.3	-0.4
KRLC	Kraliky	22.43	39	eP	P	12 32 03.6	-0.7
OSTC	Ostas	22.43	37	eP	P	12 32 03.8	-0.6
LIT	Litokhoron	22.57	67	P	P	12 32 06.2	+0.3
MORC	Moravsky Berou	22.65	40	⇑P	P	12 32 06.5	-0.2
MORC	Moravsky Berou	22.65	40	eP	P	12 32 06.2	-0.5
MORC	Moravsky Berou	22.65	40	P	P	12 32 05.7	-1.0
MORC				IAmb	IAmb	12 32 07.7	
	comp=Z,22nm,0.8s						
MDVR	Moldovita	22.98	55	⇑P	P	12 32 09.6	-0.7
PSZ	Piszkesteto	23.03	46	P	P	12 32 10.4	-0.3
BZS	Buzias	23.19	53	⇑P	P	12 32 12.3	0.0
LANS	Liptovska Anna	23.37	43	ePN	P	12 32 25.1	+11
SIRR	Siria	23.45	51	⇑P	P	12 32 15.1	+0.3
VTS	Vitosha	23.51	61	⇑P	P	12 32 15.2	-0.4
VTS	Vitosha	23.51	61	P	P	12 32 14.3	-1.3
VTS				IAmb	IAmb	12 32 18.1	
	comp=Z,14nm,0.9s						
GZR	Gura Zlata	23.89	54	P	P	12 32 19.5	+0.3
NIE	Niedzica	23.98	43	eP	P	12 32 19.5	-0.4
OJC	Ojcow	24.11	41	eP	P	12 32 20.0	-1.1
OJC	Ojcow	24.11	41	P	P	12 32 20.3	-0.8
OJC				IAmb	IAmb	12 32 20.3	
	comp=Z,9.8nm,0.8s						
DRGR		24.32	51	⇑P	P	12 32 23.3	+0.2
IDI	Anoyia	24.48	79	LR	LR	12 44 04.8	
	comp=Z,126nm,19.3s,baz=279,slow=42						
LOT	Lotru	24.57	54	P	P	12 32 26.2	+0.7
TRPA	Tarpa	24.72	48	P	P	12 32 26.6	0.0
KOLS	Kolonicke sedl	24.90	46	eP	P	12 32 27.9	-0.4
ARR	Arges	25.14	55	⇑P	P	12 32 31.1	+0.6
VOIR		25.44	55	⇑P	P	12 32 34.1	+0.8
KWP	Kalwaria Pacla	25.46	45	P	P	12 32 34.1	+0.7
MLR	Muntele Rosu	26.06	55	P	P	12 32 38.5	-0.5
	comp=Z,17nm,0.7s,baz=234,slow=4.8,SNR=10						
MLR	Muntele Rosu	26.06	55	⇑P	P	12 32 39.8	+0.9
MLR	Muntele Rosu	26.06	55	P	P	12 32 35.7	-3.3
BUR08	Bucovina Ar. S	26.20	50	P	P	12 32 40.3	0.0
BURAR	Bucovina Array	26.20	50	⇑P	P	12 32 41.6	+1.3
BURAR	Bucovina Array	26.20	50	P	P	12 32 40.6	+0.4
PLOR	Plostina	26.63	55	⇑P	P	12 32 45.6	+1.6
VRI	Vrincioaia	26.68	55	⇑P	P	12 32 45.9	+1.4
ICOR	Ion Corvin	27.06	59	⇑P	P	12 32 50.1	+2.3
DBIC	Dimbokro	27.47	180	P	P	12 32 54.2	+2.5
	comp=Z,3.0nm,0.8s,baz=2.1,slow=3.6,SNR=3.5						
DBIC				LR	LR	12 45 43.9	
	comp=Z,119nm,21.0s,baz=346,slow=41						
DBIC	Dimbokro	27.47	180	P	P	12 32 49.5	-2.2
DBIC				IAmb	IAmb	12 33 03.1	
	comp=Z,11nm,1.2s						
HFS	Hagfors	28.59	20	P	P	12 33 01.2	-0.1
	comp=Z,2.1nm,0.6s,baz=224,slow=8.3,SNR=10						
HFS				LR	LR	12 45 54.3	
	comp=Z,308nm,19.0s,baz=210,slow=40						
NOA	NORSAR Array B	28.74	16	P	P	12 33 01.9	-0.8
	comp=Z,0.6nm,0.8s,baz=206,slow=9.2,SNR=2.6						
NOA				LR	LR	12 47 07.3	
	comp=Z,247nm,18.4s,baz=205,slow=42						
AKASG	Malin Array Be	29.73	46	P	P	12 33 08.9	-2.6
	comp=Z,0.8nm,0.3s,baz=245,slow=10,SNR=6.4						
AKASG	Malin Array Be	29.73	46	P	P	12 33 10.1	-1.4
BORG	Borgarnes	32.09	347	LR	LR	12 46 06.8	
	comp=Z,107nm,18.6s,baz=156,slow=36						
FINES	FINESS Array B	33.63	27	P	P	12 33 44.5	-1.1
	comp=Z,3.0nm,0.7s,baz=220,slow=6.7,SNR=12						
FIA1	FINESS Array S	33.63	27	P	P	12 33 43.2	-2.4
EIL	Elat	34.00	87	P	P	12 33 49.0	-0.3
	comp=Z,3.0nm,0.8s,baz=321,slow=7.3,SNR=4.7						
ASF	Jabal al Asfar	34.89	81	P	P	12 33 58.1	+1.0
	comp=Z,2.5nm,0.8s,baz=284,slow=1.2,SNR=4.7						
OBN	Obninsk	35.40	41	LR	LR	12 49 13.6	
	comp=Z,37nm,18.7s,baz=358,slow=38						
KBZ	Khabaz	37.90	61	P	P	12 34 22.1	-0.3
	comp=Z,3.5nm,0.9s,baz=290,slow=7.1,SNR=3.8						
ARCES	ARCESS Array B	39.12	16	P	P	12 34 32.0	-0.4
	comp=Z,2.5nm,0.8s,baz=217,slow=10,SNR=9.2						
ARCES	ARCESS Array B	39.12	16	P	P	12 34 32.5	+0.1
DAG	Danmarks Havn	43.05	355	i P	P	12 35 05.0	+0.4
	comp=Z,4.5nm,0.8s						
KIRV	Kirov	43.09	39	P	P	12 35 04.1	-1.1
	comp=Z,6.6nm,0.6s,baz=275,slow=12,SNR=5.2						
KIRV				LR	LR	12 52 38.3	
	comp=Z,79nm,20.9s,baz=45,slow=36						
SCHQ	Schefferville	46.92	316	P	P	12 35 36.9	+1.1
	comp=Z,3.7nm,0.7s,baz=56,slow=7.8,SNR=9.7						
SCHQ	Schefferville	46.92	316	P	P	12 35 37.1	+1.3
ARU	Arti	47.83	42	LR	LR	12 58 33.8	
	comp=Z,105nm,18.9s,baz=274,slow=40						
FRB	Frobisher Bay	48.25	328	P	P	12 35 47.2	+1.3
	comp=Z,0.8nm,0.4s,baz=58,slow=8.4,SNR=3.7						
ABKAR	Akbulak array	49.17	52	P	P	12 35 52.2	-1.0
GEYT	Alibeck	50.22	67	P	P	12 36 02.0	+0.6
	comp=Z,1.7nm,0.6s,baz=102,slow=14,SNR=2.2						
D53A	Lac Vacive, Po	54.76	307	P	P	12 36 35.0	+0.1
D53A				IAmb	IAmb	12 36 41.8	
	comp=Z,15nm,1.5s						
BRVK	Borovoye	54.94	45	P	P	12 36 35.6	-0.4
BRVK				IAmb	IAmb	12 36 38.3	
	comp=Z,5.6nm,1.2s						
SADO	Sadowa	56.35	305	LR	LR	12 58 56.3	
	comp=Z,186nm,19.6s,baz=56,slow=34						
RES	Resolute Bay	57.27	342	P	P	12 36 54.1	+1.7
	comp=Z,1.8nm,1.0s,baz=80,slow=5.6,SNR=6.1						
RES	Resolute Bay	57.27	342	P	P	12 36 54.7	+2.3
KK31	Karatay Array	57.72	57	P	P	12 36 56.1	0.0
KKAR	Karatay Array	57.72	57	P	P	12 36 55.9	-0.2
KKAR	Karatay Array	57.72	57	P	P	12 36 56.1	0.0
KKAR				IAmb	IAmb	12 37 03.2	
	comp=Z,5.3nm,1.4s						
CHGR	Chuyangaron	58.24	62	P	P	12 37 00.1	+0.2
BTK	Batken	58.96	60	P	P	12 37 05.1	+0.2
BTK				IAmb	IAmb	12 37 06.1	
	comp=Z,4.6nm,0.8s						
GAR	Garm	58.97	62	P	P	12 37 05.8	+0.8
KURK	Kurchatov	60.54	47	P	P	12 37 15.0	-0.4
KURK				IAmb	IAmb	12 37 16.0	
	comp=Z,6.4nm,1.0s						
AAK	Ala-Archa	60.63	56	P	P	12 37 16.5	0.0
AAK				IAmb	IAmb	12 37 20.0	
	comp=Z,4.5nm,1.2s						
NRN	Naryn	62.12	57	P	P	12 37 27.6	+0.9
NRN				IAmb	IAmb	12 37 33.6	
	comp=Z,9.9nm,1.4s						
COWI	Conover	62.55	309	P	P	12 37 29.3	+0.1
COWI				IAmb	IAmb	12 37 37.7	
	comp=Z,5.2nm,1.2s						
KDJ	Kajisay	62.67	56	P	P	12 37 30.7	+0.5
KDJ				IAmb	IAmb	12 37 44.2	
	comp=Z,6.6nm,1.2s						
KSH	Kashi	62.84	59	P	P	12 37 31.7	+0.4
KSH				sP	pP	12 37 39.1	-1.2
KSH				PP	PP	12 39 52.1	+2.6
KSH				PcS	PcS	12 42 11.2	-1.9
KSH				S	S	12 45 57.3	-1.8
KSH				ScS	SKKSac	12 47 19.0	-3.2
KSH				pmax	pmax		
	comp=Z,40nm,1.0s						
KSH				pmax	pmax		
	comp=Z,200nm,4.6s						
KSH				LR	LR		
	comp=Z,170nm,13.2s						
KSH				LR	LR		
	comp=Z,310nm,11.5s						
ZALV	Zalesovo Beam	62.98	42	P	P	12 37 31.9	+0.1
	comp=Z,0.7nm,0.3s,baz=308,slow=7.3,SNR=4.9						
ZALV				LR	LR	13 04 59.0	
	comp=Z,26nm,21.4s,baz=20,slow=36						
ZALV	Zalesovo Beam	62.98	42	P	P	12 37 31.7	-0.2
NIL	Nilore	63.22	66	P	P	12 37 34.2	+0.4
I42A	Draeger Farm,	63.24	306	P	P	12 37 34.5	+0.7
I42A				IAmb	IAmb	12 37 38.5	
	comp=Z,6.3nm,1.2s						
EYMN	Ely	63.35	311	P	P	12 37 33.9	-0.5
G40A	Rib Lake	63.56	308	P	P	12 37 36.6	+0.8
G40A				IAmb	IAmb	12 37 43.0	
	comp=Z,5.3nm,1.1s						
E38A	The Farm, Brul	63.91	310	P	P	12 37 38.9	+0.8
MAKZ	Makanchi	64.02	50	P	P	12 37 38.4	-0.5
MAKZ				IAmb	IAmb	12 37 39.1	
	comp=Z,3.8nm,1.1s						
MK31	Makanchi Array	64.23	50	P	P	12 37 39.5	-0.7
MK31				IAmb	IAmb	12 37 40.9	
	comp=Z,4.0nm,1.1s						
MKAR	Makanchi Array	64.23	50	P	P	12 37 40.1	-0.1
	comp=Z,2.3nm,0.9s,baz=292,slow=4.7,SNR=17						
MKAR	Makanchi Array	64.23	50	P	P	12 37 39.8	-0.4
BDFB	Brasilia	64.37	227	LR	LR	13 03 31.7	
	comp=Z,90nm,18.9s,baz=126,slow=34						
ULM	Lac du Bonnet	65.09	315	P	P	12 37 48.7	+2.9
	comp=Z,1.1nm,0.6s,baz=76,slow=10,SNR=4.3						
ULM				LR	LR	13 03 36.7	
	comp=Z,64nm,20.1s,baz=332,slow=34						
PLAL	Pickwick Lake	66.34	297	P	P	12 37 54.4	+0.3
PLAL				IAmb	IAmb	12 38 00.1	
	comp=Z,5.7nm,0.9s						
FFC	Flin Flon	66.56	321	P	P	12 37 55.4	+0.2
FFC				IAmb	IAmb	12 38 01.5	
	comp=Z,6.6nm,1.4s						
C36M	Paulatuk	67.60	340	P	P	12 38 02.9	+1.4
C36M				IAmb	IAmb	12 38 07.3	
	comp=Z,6.9nm,1.4s						
YKA	Yellowknife Ar	68.46	332	P	P	12 38 08.3	+1.3
	comp=Z,2.8nm,0.9s,baz=64,slow=6.3,SNR=15						
YKA				LR	LR	13 05 58.7	
	comp=Z,121nm,18.9s,baz=0.0,slow=34						
FCAR	Ozark Folk Cen	68.89	300	P	P	12 38 11.3	+1.1
FCAR				IAmb	IAmb	12 38 15.1	
	comp=Z,8.5nm,1.3s						
S39A	Bolivar	68.91	302	P	P	12 38 11.8	+1.5
WMQ	Urumqi	68.95	51	eP	P	12 38 11.5	+1.0
WMQ				pP	pP	12 38 17.0	-2.6
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WMQ				LR	LR		
	comp=Z,560nm,25.5s						
WMQ				LR	LR		
	comp=Z,89nm,24.1s						
U40A	Yellville	69.19	300	P	P	12 38 12.5	+0.4
U40A				IAmb	IAmb	12 38 15.6	
	comp=Z,6.1nm,1.1s						
WHAR	Wooly Hollow	69.28	299	P	P	12 38 11.7	-0.9
WHAR				IAmb	IAmb	12 38 16.7	
	comp=Z,7.4nm,1.2s						
HHAR	Hobbs	70.00	301	P	P	12 38 15.0	-2.0
MIAR	Mount Ida	70.56	299	P	P	12 38 21.1	+0.6
MIAR				IAmb	IAmb	12 38 27.3	
	comp=Z,6.9nm,1.2s						
INK	Inuvik	70.83	342	P	P	12 38 22.2	+0.8
	comp=Z,1.5nm,0.6s,baz=8.5,slow=5.5,SNR=4.9						
TLY	Talaya	74.08	38	P	P	12 38 41.1	-0.1
EGMT	Eagleton	74.13	318	P	P	12 38 40.7	-0.9
EGMT				IAmb	IAmb	12 38 47.3	
	comp=Z,11nm,1.5s						
WMOK	Wichita Mounta	74.20	301	P	P	12 38 42.3	+0.1
WMOK				IAmb	IAmb	12 38 50.0	
	comp=Z,9.5nm,1.4s						
JTS	Las Juntas de	76.06	273	LR	LR	13 11 24.7	
	comp=Z,65nm,19.5s,baz=107,slow=35						
ILAR	Eielson Array	76.88	344	P	P	12 38 58.7	+1.7
	comp=Z,0.8nm,0.6s,baz=20,slow=5.1,SNR=7.6						
ILAR	Eielson Array	76.88	344	P	P	12 38 58.0	+1.0
DLBC	Dease Lake	76.91	334	P	P	12 39 00.3	+2.9
	comp=Z,3.9nm,0.9s,baz=79,slow=8.1,SNR=4.8						
DLBC	Dease Lake	76.91	334	P	P	12 38 57.4	0.0
PDAR	Pinedale Array	76.97	313	P	P	12 39 00.7	+2.4
	comp=Z,1.2nm,0.9s,baz=61,slow=7.0,SNR=7.9						
PDAR	Pinedale Array	76.97	313	P	P	12 38 57.4	-0.8
JCT	Junction City	77.15	298	P	P	12 38 58.9	-0.4
JCT				IAmb	IAmb	12 39 06.0	
	comp=Z,4.9nm,0.9s						
SONM	Songino Array	77.80	40	P	P	12 39 02.3	-0.3
	comp=Z,1.2nm,0.7s,baz=294,slow=5.9,SNR=11						
SONM				LR	LR	13 16 08.3	
	comp=Z,87nm,18.2s,baz=354,slow=38						
SONM	Songino Array	77.80	40	P	P	12 39 02.5	-0.2
CPUP	Villa Florida	78.10	227	P	P	12 39 07.1	+2.8
	comp=Z,1.1nm,0.6s,baz=30,slow=15,SNR=3.0						
CPUP				LR	LR	13 12 42.6	
	comp=Z,64nm,19.0s,baz=64,slow=35						
CPUP	Villa Florida	78.10	227	P	P	12 39 04.9	+0.6
ULN	Ulaanbaatar	78.13	40	P	P	12 39 04.5	0.0
ULN				IAmb	IAmb	12 39 06.5	
	comp=Z,9.7nm,1.4s						
LSA	Lhasa	78.47	62	P	P	12 39 07.1	0.0
LSA				IAmb	IAmb	12 39 09.6	
	comp=Z,4.4nm,0.6s						
GTA	Gaotai	78.98	50	eP	P	12 39 09.6	+0.3
GTA				pP	PcP	12 39 15.1	-2.8
GTA				sP	pP	12 39 17.8	-0.7
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,82nm,4.9s						
GTA				LR	LR		
	comp=Z,69nm,16.8s						
GTA				LR	LR		
	comp=Z,140nm,17.1s						
GTA				LR	LR		
	comp=Z,130nm,17.1s						
B08A	Colville Reser	79.07	322	P	P	12 39 11.5	+2.0
B08A				IAmb	IAmb	12 39 16.3	
	comp=Z,6.4nm,0.9s						
BMO	Blue Mountains	80.22	318	P	P	12 39 16.4	+0.5
TXAR	Lajitas Array	80.59	299	P	P	12 39 22.5	+4.3
	comp=Z,0.5nm,1.0s,baz=76,slow=5.3,SNR=5.1						
TXAR	Lajitas Array	80.59	299	P	P	12 39 20.7	+2.5
MA2	Magadan	84.35	12	P	P	12 39 38.0	+0.9
HHC	Hu-ho-hao-te	85.13	43	eP	P	12 39 40.5	-1.0
CD2	Chengdu	86.65	55	P	P	12 39 47.8	-1.4
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CMAR	Chiang Mai Arr	90.70	67	P	P	12 40 09.7	+1.2
	comp=Z,1.0nm,0.4s,baz=303,slow=5.8,SNR=13						
CMAR	Chiang Mai Arr	90.70	67	P	P	12 40 08.9	+0.5
USRK	Ussuriysk Ar.	92.61	29	LR	LR	13 26 11.6	
	comp=Z,51nm,19.1s,baz=344,slow=38						
WHN	Wuhan	93.79	49	P	P	12 40 28.8	+6.3
NJ2	Nanjing	95.46	45	eP	P	12 40 28.8	-1.4
PLCA	Paso Flores	96.00	224	LR	LR	13 21 57.1	
	comp=Z,64nm,19.2s,baz=56,slow=34						
KSRS	Korea Array	96.25	36	LR	LR	13 28 15.1	
	comp=Z,41nm,20.0s,baz=336,slow=38						
ASAJ	Asahikawa	96.57	23	LR	LR	13 27 25.7	
	comp=Z,73nm,19.5s,baz=360,slow=38						
WRA	Warramunga Arr	141.31	79	PKP	PKPdf	12 46 34.9	-1.5
	comp=Z,0.5nm,1.1s,baz=181,slow=24,SNR=1.5						
ASAR	Alice Springs	142.70	85	PKP	PKPdf	12 46 39.5	+0.7
	comp=Z,0.3nm,0.8s,baz=297,slow=3.2,SNR=4.5						

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*IDC **11** 12:40:09.1±1.8,20°.77S×177°.99W,h515^{km}±21^{km},mb3.3/7, mb1 3.5/10,mb1mx3.2/26,mbtmp4.3/10,Error ellipse: s-maj=32.1km s-min=14.8km az=129.0*

*NEIC **11** 12:40:11.0±1.2,20°.7S±0°.1×178°.2W±0°.1,h536^{km}±12^{km}, mb4.3/15,Error ellipse: s-maj=23.5km s-min=11.3km az=145.0*

ISC 11 12:40:11.9±0.6**,20°.6S**±0°.1×**178°.13W**±0°.09**,h550**^{km}**,n41,** σ1^{s}**53**/44**,mb4.0**/13**,1D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.59	307	P	P	12 41 38.9	+0.4
NIUE	Niue	7.86	80	P	P	12 42 07.9	-0.4
NIUE				S	S	12 43 46.9	+3.1
AFI	Afiamalu	8.99	43	P	P	12 42 17.9	-1.7
	6.2nm,0.3s,baz=41,slow=9.5,SNR=9.8						
AFI				S	S	12 44 00.2	-4.3
	7.6nm,0.3s,baz=214,slow=22,SNR=6.6						
AFI	Afiamalu	8.99	43	P	P	12 42 18.2	-1.5
AFI					S	12 44 00.9	-3.6
DZM	Mont Dzumac	14.45	261	P	P	12 43 14.2	-1.6
	0.8nm,0.3s,baz=97,slow=23,SNR=6.2						
DZM	Mont Dzumac	14.45	261	P	P	12 43 14.5	-1.4
URZ	Urewera	18.10	192	P	P	12 43 48.1	-2.4
	0.9nm,0.3s,baz=286,slow=3.1,SNR=11						
URZ	Urewera	18.10	192	P	P	12 43 49.2	-1.3
URZ				IAmb	IAmb	12 43 54.7	
	comp=Z,5.7nm,0.8s						
BKZ	Black Stump Fm	19.10	193	P	P	12 43 57.6	-2.1
BKZ				IAmb	IAmb	12 44 00.5	
	comp=Z,7.5nm,1.0s						
EIDS	Eidsvold	28.71	255	P	P	12 45 25.1	-0.1
TOO	Toolangi	35.75	234	P	P	12 46 24.5	-0.5
TOO				IAmb	IAmb	12 46 30.1	
	comp=Z,16nm,1.4s						
STKA	Stephens Creek	37.65	244	P	P	12 46 39.9	-0.6
	comp=Z,1.4nm,0.7s,baz=85,slow=12,SNR=4.3						
STKA	Stephens Creek	37.65	244	P	P	12 46 40.0	-0.5
BBOO	Buckleboo	42.41	244	P	P	12 47 17.6	-1.0
BBOO				IAmb	IAmb	12 47 33.1	
	comp=Z,15nm,1.4s						
WR0	Warramunga Arr	44.28	262	P	P	12 47 33.0	-0.4
AS31	Alice Springs	44.38	257	P	P	12 47 34.0	-0.2
ASAR	Alice Springs	44.38	257	P	P	12 47 34.0	-0.2
	comp=Z,0.7nm,0.5s,baz=87,slow=8.5,SNR=36						
ASAR				PcP	PcP	12 49 06.0	-0.1
	comp=Z,0.6nm,0.6s,baz=93,slow=5.8,SNR=6.6						
ASAR	Alice Springs	44.38	257	P	P	12 47 33.6	-0.5
WB0	Warramunga Arr	44.45	262	P	P	12 47 33.8	-0.9
WB0				IAmb	IAmb	12 47 41.0	
	comp=Z,6.2nm,1.3s						
WB2	Warramunga Arr	44.46	262	P	P	12 47 34.0	-0.7
WB2				IAmb	IAmb	12 47 53.0	
	comp=Z,7.8nm,1.4s						
MORW	Morawa	59.69	248	P	P	12 49 23.5	-0.4
MORW				IAmb	IAmb	12 49 28.0	
	comp=Z,29nm,1.4s						
MJAR	Matsushiro Arr	70.20	324	P	P	12 50 30.5	+0.8
	comp=Z,1.2nm,0.5s,baz=138,slow=6.1,SNR=4.6						
MJAR	Matsushiro Arr	70.20	324	P	P	12 50 30.7	+0.9
YULB	Yu-li	73.44	303	P	P	12 50 49.7	+0.8
SSLB	Suanglung	73.92	304	P	P	12 50 51.3	-0.2
SSLB				IAmb	IAmb	12 51 04.2	
	comp=Z,11nm,1.1s						
PEA0B	Petropavlovsk-	76.31	345	P	P	12 51 05.7	+1.5
PETK	Petropavlovsk-	76.31	345	P	P	12 51 05.7	+1.5
	comp=Z,3.7nm,0.6s,baz=139,slow=10,SNR=22						
USRK	Ussuriysk Ar.	78.96	326	P	P	12 51 20.4	+1.6
	comp=Z,2.0nm,0.6s,baz=118,slow=2.1,SNR=5.1						
USRK	Ussuriysk Ar.	78.96	326	P	P	12 51 20.5	+1.8
ILAR	Eielson Array	88.42	13	P	P	12 52 05.9	+0.8
	comp=Z,0.7nm,0.5s,baz=217,slow=5.1,SNR=19						
CMAR	Chiang Mai Arr	90.03	290	P	P	12 52 16.1	+2.4
	comp=Z,1.2nm,0.7s,baz=134,slow=3.5,SNR=8.3						
CMAR	Chiang Mai Arr	90.03	290	P	P	12 52 15.6	+2.0
ARCES	ARCESS Array B	128.97	350	PKP	PKiKP	12 58 17.8	+0.3
	comp=Z,4.4nm,1.0s,baz=93,slow=2.4,SNR=5.8						
ARCES	ARCESS Array B	128.97	350		PKiKP	12 58 18.2	+0.8
AKASG	Malin Array Be	143.02	331	PKP	PKPbc	12 58 41.4	+0.2
	comp=Z,4.3nm,0.4s,baz=43,slow=4.3,SNR=20						
BRTR	Keskin Array B	146.80	312	PKPbc	PKiKP	12 58 53.8	-1.2
	comp=Z,1.3nm,0.6s,baz=133,slow=5.3,SNR=5.4						
BRTR	Keskin Array B	146.80	312		PKiKP	12 58 53.4	-1.5
MMAI	Mount Meron Ar	147.75	300	PKPbc	PKiKP	12 58 57.2	+0.2
	comp=Z,1.9nm,0.4s,baz=75,slow=6.3,SNR=5.9						
CLL	Collm	148.11	347	⇓iPKPbc	PKiKP	12 58 57.9	+0.9
	comp=Z,5.0nm,0.7s						
GERES	GERESS Array B	150.24	344	PKPbc	PKiKP	12 59 02.3	+0.7
	comp=Z,0.9nm,0.5s,baz=339,slow=1.9,SNR=5.4						
GERES	GERESS Array B	150.24	344		PKiKP	12 59 02.2	+0.5

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*IDC **11** 12:49:53.5±1.2,17°.10N×145°.97E,h0^{km},mb3.5/6, mb1 3.7/6,mb1mx3.4/37,mbtmp3.5/6,Error ellipse: s-maj=55.9km s-min=22.6km az=92.0*

*NEIC **11** 12:50:39.2±1.8,16°.6N±0°.1×145°.1E±0°.2,h423^{km}±8^{km}, mb3.9/10,Error ellipse: s-maj=23.5km s-min=13.1km az=63.0*

ISC 11 12:50:37.4±0.9**,16°.73N**±0°.10×**145°.1E**±0°.2**,h400**^{km}**,n19,** σ1^{s}**48**/19**,mb3.6**/10**,Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	3.13	184		Pn	12 51 44.2	+2.4
GUMO					S	12 52 36.2	+2.4
MAJO	Matsushiro	20.67	344	P	P	12 54 48.5	+0.6
MAJO				IAmb	IAmb	12 55 07.3	
	comp=Z,4.4nm,0.9s						
SBUM	Sibu	35.32	250	P	P	12 56 56.4	-0.6
WB0	Warramunga Arr	37.77	197	P	P	12 57 17.4	+0.1
WB0				IAmb	IAmb	12 57 24.9	
	comp=Z,8.6nm,1.4s						
WR0	Warramunga Arr	37.91	196	P	P	12 57 16.9	-1.6
WR0				IAmb	IAmb	12 57 25.5	
	comp=Z,9.0nm,1.5s						
WRAB	Tennant Creek	37.94	197	P	P	12 57 19.0	+0.3
WRAB				IAmb	IAmb	12 57 33.5	
	comp=Z,6.8nm,0.6s						
WRA	Warramunga Arr	37.95	197	P	P	12 57 18.8	-0.1
	comp=Z,0.2nm,0.7s,baz=17,slow=8.0,SNR=5.0						
WRA	Warramunga Arr	37.95	197	P	P	12 57 16.4	-2.4
ASAR	Alice Springs	41.62	196	P	P	12 57 47.1	-1.5
	comp=Z,0.3nm,1.0s,baz=22,slow=7.7,SNR=1.7						
ASAR	Alice Springs	41.62	196	P	P	12 57 46.6	-2.0
STKA	Stephens Creek	48.44	184	P	P	12 58 40.8	-0.6
	comp=Z,3.3nm,0.9s,baz=330,slow=8.1,SNR=4.4						
STKA	Stephens Creek	48.44	184	P	P	12 58 41.3	-0.1
ZALV	Zalesovo Beam	59.25	323	P	P	12 59 57.2	-1.1
	comp=Z,0.6nm,0.3s,baz=96,slow=7.1,SNR=2.6						
MKAR	Makanchi Array	59.44	315	P	P	13 00 00.9	+1.1
	comp=Z,0.1nm,0.4s,baz=88,slow=9.2,SNR=1.2						
MKAR	Makanchi Array	59.44	315	P	P	12 59 59.9	+0.1
RDOG	Red Dog Mine	60.86	20	P	P	13 00 09.8	+0.8
KURK	Kurchatov	62.37	319	P	P	13 00 19.6	+0.4
KURK				IAmb	IAmb	13 00 31.4	
	comp=Z,2.9nm,1.3s						
KHZ	Kahutara	64.42	157	P	P	13 00 30.3	-2.1
ILAR	Eielson Array	65.65	26	P	P	13 00 35.0	-5.1
	comp=Z,0.3nm,0.8s,baz=250,slow=5.5,SNR=4.7						

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*IDC **11** 12:55:27.4±1.9,35°.97N×97°.31W,h0^{km},mb1 3.8/4, mb1mx3.5/39,mbtmp3.5/4,ML3.6/4,Error ellipse: s-maj=25.1km s-min=11.9km az=106.0*

*ANF **11** 12:55:27.4±0.2,35°.87N×97°.28W,h0^{km},ML4.6/12,Error ellipse: s-maj=3.6km s-min=2.1km az=165.0*

*NEIC **11** 12:55:27.8,35°.90N×97°.27W,h4^{km},Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.10; M$_{\theta\theta}$1.30; M$_{\phi\phi}$-1.40; M$_{r\theta}$-0.88; M$_{\theta\phi}$-0.90; M$_{\phi r}$0.25; Fault plane solution: M$_{0}$1.87000×10^{14} NP1:φ$_{s}$334.78000°, δ71.87000°,λ18.38000°. NP2:φ$_{s}$238.88000°,δ72.57000°, λ160.97000°. Principal axes: T 2.0127, Plg26.0000°, Azm197.0000°; N -0.3364, Plg64.0000°, Azm18.0000°; P -1.6763, Plg0.0000°, Azm287.0000°;*

*TUL **11** 12:55:27.7±1.1,35°.89N±0°.02×97°.28W±0°.01,h5^{km}±6^{km}, ML3.8,Mwr3.4/23(NEIC) Error ellipse: s-maj=2.4km s-min=1.2km az=202.0*

*NEIC **11** 12:55:27.8±1.2,35°.90N±0°.02×97°.26W±0°.02,h4^{km}±8^{km}, Error ellipse: s-maj=2.9km s-min=2.4km az=78.0*

ISC 11 12:55:26.5±1.2**,35°.94N**±0°.03×**97°.23W**±0°.03**,h2**^{km}±10^{km}**, n74,**σ1^{s}**29**/83**,Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADOK	Arcadia Dam	0.31	202		Pg	12 55 33.0	+0.4
ADOK				Sg	Sg	12 55 36.7	+0.2
OK001	Jones High Sch	0.38	187	Pg	Pg	12 55 34.5	+0.6
OK001				Sg	Sg	12 55 39.3	+0.5
OKCFA	Oklahoma City	0.56	199		Pg	12 55 37.5	+0.3
OKCFA				Sg	Sg	12 55 44.5	+0.2
OKCSW	OKLAHOMA CITY	0.56	198		Pg	12 55 37.6	+0.3
FNO	Franklin	0.70	192		Pg	12 55 40.4	+0.5
W35A	Tecumseh	0.84	160		Pg	12 55 42.8	+0.2
W35A				Sg	Sg	12 55 53.9	+0.4
T35A	Sooner Cattle	1.13	30	Pg	Pn	12 55 50.1	+0.7
T35A				Sg	Sn	12 56 06.4	+0.8
TUL1	Leonard	1.17	91	Pg	Pg	12 55 49.8	+0.9
TUL1				Sg	Sn	12 56 06.2	-0.1
TUL1	Leonard	1.17	91	P	Pg	12 55 49.8	+0.9
	baz=270						
TUL1				S	Sn	12 56 06.5	+0.2
	baz=270						
X34A	Smith Ranch, M	1.43	200		Pb	12 55 53.3	-0.5
U32A	Winter Ranch,	1.50	287		Pb	12 55 54.7	-0.4
WMOK	Wichita Mounta	1.75	227		Pn	12 55 57.8	-0.1
WMOK	Wichita Mounta	1.75	227	P	Pn	12 55 58.2	+0.3
	baz=46						
WMOK				S	Sb	12 56 21.0	-0.7
	baz=46						
U38A	Gravette	2.35	77		Pb	12 56 08.1	-1.6
Z35A	Perchaven, San	2.60	180		Pn	12 56 10.2	+0.5
HHAR	Hobbs	2.68	82		Pn	12 56 12.6	+1.8
W39A	Magazine	2.91	104		Pn	12 56 15.3	+1.6
W39A	Magazine	2.91	104	P	Pn	12 56 15.4	+1.6
	baz=285						
KSU1	Kansas State U	3.19	9	P	Pn	12 56 20.0	+2.2
	baz=190						
KSU1				Sb	Sg	12 57 09.1	0.0
	baz=190						
Z38A	Mt. Pleasant	3.25	145	Pn	Pn	12 56 19.5	+1.0
MIAR	Mount Ida	3.30	114		Pn	12 56 20.9	+1.7
MIAR	Mount Ida	3.30	114	P	Pn	12 56 21.3	+2.1
	baz=295						
CBKS	Cedar Bluff	3.50	326		Pn	12 56 23.8	+1.9
CBKS	Cedar Bluff	3.50	326	P	Pn	12 56 24.3	+2.4
	baz=145						
U40A	Yellville	3.56	82		Pn	12 56 24.4	+1.5
U40A	Yellville	3.56	82	P	Pn	12 56 24.6	+1.7
	baz=264						
U40A				Sb	Sg	12 57 20.0	-1.1
	baz=264						
S39A	Bolivar	3.59	60	Pn	Pn	12 56 25.3	+2.1
AMTX	Amarillo	3.79	255		Pn	12 56 25.1	-0.9
AMTX	Amarillo	3.79	255	P	Pn	12 56 25.2	-0.9
	baz=73						
AMTX				Sb	Sb	12 57 23.5	+3.0
	baz=73						
ABTX	Abilene, Hawle	3.87	212	Pn	Pn	12 56 26.3	-0.8
X40A	Basin Creek Fa	3.88	111		Pn	12 56 29.0	+1.8
X40A	Basin Creek Fa	3.88	111	P	Pn	12 56 29.0	+1.8
	baz=293						
WHTX	Lake Whitney,	3.94	183		Pn	12 56 28.1	0.0
WHTX	Lake Whitney,	3.94	183	P	Pn	12 56 28.3	+0.3
	baz=2.2						
WLAR	White Oak Lake	4.07	122	Pn	Pn	12 56 31.1	+1.4
WHAR	Wooly Hollow	4.08	98		Pn	12 56 31.5	+1.7
237A	Washetta, Mont	4.10	163		Pn	12 56 29.9	-0.3
W41B	Gary Mavity, V	4.13	99		Pn	12 56 32.4	+1.7
W41B	Gary Mavity, V	4.13	99	P	Pn	12 56 32.4	+1.7
	baz=282						
W41B				S	Sn	12 57 22.0	+2.5
	baz=282						
FCAR	Ozark Folk Cen	4.14	89		Pn	12 56 32.3	+1.5
UALR	University of	4.16	105		Pn	12 56 31.9	+0.9
Z41A	Richland Creek	4.53	125	Pn	Pn	12 56 35.9	-0.1
LCAR	Lake Charles	4.93	87		Pn	12 56 42.4	+0.8
MSTX	Muleshoe	4.96	248	Pn	Pn	12 56 42.4	+0.3
435B	Jarrell	5.15	183	Pn	Pn	12 56 44.8	+0.1
435B	Jarrell	5.15	183	P	Pn	12 56 45.2	+0.5
	baz=2.9						
CCM	Cathedral Cave	5.23	64	Pn	Pn	12 56 47.8	+2.1
KSCO	Kaye Shedlock’	5.28	307	Pn	Pn	12 56 46.9	+0.4
BGNE	Belgrade	5.51	353	Pn	Pn	12 56 49.9	+0.3
143A	Socs Landing,	5.80	122	Pn	Pn	12 56 54.8	+1.2
JCT	Junction City	5.86	202		Pn	12 56 53.1	-1.4
T25A	Trinidad	5.91	284		Pn	12 56 55.6	+0.4
T25A	Trinidad	5.91	284	P	Pn	12 56 55.6	+0.4
	baz=100						
SCIA	State Center	6.73	26	Pn	Pn	12 57 06.9	+0.6
SDCO	Great Sand Dun	6.87	288		Pn	12 57 09.8	+1.2
SDCO	Great Sand Dun	6.87	288	P	Pn	12 57 10.2	+1.6
	baz=103						
ANMO	Albuquerque	7.60	265	Pn	Pn	12 57 24.1	+5.7
	0.3nm,0.3s,baz=103,slow=15,SNR=2.6						
ANMO				Pg	Pg	12 57 46.0	-6.1
	1.6nm,0.3s,baz=81,slow=16,SNR=20						
ANMO				Lg	Lg	12 59 24.0	
	3.9nm,0.3s,baz=316,slow=16,SNR=4.9						
ISCO	Idaho Springs	7.67	303		Pn	12 57 20.2	+0.7
ISCO	Idaho Springs	7.67	303	P	Pn	12 57 20.2	+0.7
	baz=118						
L40A	Anamosa	7.69	36		Pn	12 57 20.1	+0.5
HDIL	Hopedale	7.76	51	Pn	Pn	12 57 21.9	+1.5
ECSD	EROS Data Cent	7.80	3		Pn	12 57 21.0	0.0
ECSD	EROS Data Cent	7.80	3	P	Pn	12 57 21.0	0.0
	baz=184						
S22A	4UR Ranch, Cre	7.91	286		Pn	12 57 24.2	+1.5
N23A	Red Feather La	8.44	308		Pn	12 57 31.4	+1.3
N23A	Red Feather La	8.44	308	P	Pn	12 57 31.8	+1.8
	baz=124						
TXAR	Lajitas Array	8.54	221	Pn	Pn	12 57 30.3	-1.0
	0.2nm,0.3s,baz=19,slow=12,SNR=12						
TXAR				Pg	Pg	12 58 03.5	-6.6
	2.4nm,0.3s,baz=30,slow=16,SNR=8.9						
TXAR				Lg	Lg	12 59 52.5	
	3.7nm,0.3s,baz=40,slow=30,SNR=5.5						
TXAR	Lajitas Array	8.54	221	Pn	Pn	12 57 30.5	-0.7
JFWS	Jewell Farm	8.81	36	Pn	Pn	12 57 35.8	+1.0
TKL	Tuckaleechee C	10.93	88	Lg	Lg	13 01 10.0	
	2.9nm,0.3s,baz=7.5,slow=23,SNR=12						
PDAR	Pinedale Array	11.72	309	Pn	Pn	12 58 15.1	+0.1
	0.4nm,0.3s,baz=127,slow=15,SNR=12						
PDAR				Pg		12 59 06.5	
	0.6nm,0.3s,baz=97,slow=26,SNR=9.3						
PDAR				Lg	Lg	13 01 32.8	
	0.5nm,0.3s,baz=90,slow=18,SNR=2.5						
ULM	Lac du Bonnet	14.34	4	Pn	Pn	12 58 46.2	-4.2
	0.7nm,0.3s,baz=180,slow=11,SNR=6.8						
ULM				Sn	Sn	13 01 17.4	-12
	0.5nm,0.3s,baz=99,slow=22,SNR=2.2						
ULM				Lg	Lg	13 02 53.4	
	baz=267,slow=22,SNR=1.4						
SADO	Sadowa	16.34	52	Lg	Lg	13 03 57.8	
	0.6nm,0.3s,baz=288,slow=12,SNR=3.4						
NVAR	Mina Array Bea	16.98	285	Pn	P	12 59 27.0	-0.3
	0.1nm,0.3s,baz=90,slow=12,SNR=3.4						

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*EAF **11** 13:07:59.7±1.6, 25°.75S×28°.81E, h15^{km}, MD3.5*

ISC 11 13:07:57.6±1.6**, 25°.72S**±0°.08×**28°.8E**±0°.1**, h10^{km}, n8, σ2^{s}.77**/14**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	Lobatse	2.96	283	*i* P	Pn	13 08 47.7	+3.0
LBTB	Lobatse	2.96	283	*i* P	Pn	13 08 47.7	+3.0
MSNA	Messina	3.55	19	*i* P	Pn	13 08 55.1	+2.2
MSNA				*i* S	Sn	13 09 33.4	-1.5
MSNA	Messina	3.55	19	*i* P	Pn	13 08 55.1	+2.2
MSNA				*i* S	Sn	13 09 33.4	-1.5
BOSA	Boshof	4.25	227	*i* P	Pn	13 09 04.2	+1.7
BOSA				*i* S	Sn	13 09 49.4	-3.0
BOSA	Boshof	4.25	227	*i* P	Pn	13 09 04.2	+1.7
BOSA				*i* S	Sn	13 09 49.4	-3.0
MATP	Matopo	5.28	357	*i* P	Pn	13 09 18.1	+1.4
MATP				*i* S	Sn	13 10 14.2	-3.5
MATP	Matopo	5.28	357	*i* P	Pn	13 09 18.1	+1.4
MATP				*i* S	Sn	13 10 14.2	-3.5

KRSC 11 13:24:27.1±1.6**, 49°.53N×156°.60E, h60^{km}**±24^{km}**, ML3.5, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril’s	1.19	345	*e*P	Pn	13 24 48.4	+0.7
SKR				*e*S	Sn	13 25 03.7	+0.7
ALID	Alaid	1.50	334	*e*P	Pn	13 24 52.5	+0.6
ALID				*e*S	Sn	13 25 11.4	+0.9
PAU	Pauzhetka	1.94	4	*e*P	Pn	13 25 00.1	+2.4
PAU				*e*S	Sn	13 25 24.4	+3.4
KDTR	Khodutka, Kamc	2.46	22	*e*P	Pn	13 25 07.3	+2.5
KDTR				*e*S	Sn	13 25 37.0	+3.3
ASAK	Asacha	2.97	16	*e*P	Pn	13 25 15.0	+3.2
ASAK				*e*S	Sn	13 25 49.8	+3.5
MTVR	Mutnovka	3.12	18	*e*P	Pn	13 25 17.1	+3.2
MTVR				*e*S	Sn	13 25 53.8	+3.8
RUS	Russkaya	3.15	22	*e*P	Pn	13 25 17.1	+3.0
RUS				*e*S	Sn	13 25 53.6	+3.2
GRL	Gorelyy	3.16	16	*e*P	Pn	13 25 18.0	+3.5
GRL				*e*S	Sn	13 25 55.9	+4.9
KRMR	Karymshinskiy	3.44	16	*e*P	Pn	13 25 21.2	+3.1
KRMR				*e*S	Sn	13 26 01.4	+3.8
DALK	Dalny	3.75	20	*e*P	Pn	13 25 25.1	+2.7
DALK				*e*S	Sn	13 26 07.9	+2.6
UGLR	Uglovaya	3.94	20	*e*P	Pn	13 25 29.0	+3.9
AVH	Avacha	3.97	19	*e*P	Pn	13 25 29.8	+4.3
KOK	Koryaka	3.97	18	*e*P	Pn	13 25 30.2	+4.6
SMAR	Somma	3.98	19	*e*P	Pn	13 25 28.9	+3.1
KMNR	Kamenistaya	6.61	18	*e*P	Pn	13 26 06.5	+4.8
KBTR	Krutoberegovo	7.67	27	*e*P	Pn	13 26 18.3	+2.3

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*SOME **11** 13:38:30.8, 40°.85N×70°.55E, h5^{km}*

*KRNET **11** 13:38:32.5±0.1, 41°.20N×70°.08E, h13^{km}, mb2.9*

ISC 11 13:38:33.4±1.0**, 41°.16N**±0°.05×**70°.07E**±0°.04**, h10^{km}, n12, σ2^{s}.14**/21**, 9C-8D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAS	Tashkent	0.61	286	⇓*e*P	Pg	13 38 43.7	-1.5
	baz=83						
TAS				⇓*e*S	Sg	13 38 52.6	-0.6
	baz=83						
IUG	Iuzhnay	0.98	358	*e*P	Pn	13 38 56.2	+2.7
	7.5nm,0.2s						
IUG				*e*S	Sn	13 39 16.4	+8.9
	41nm,0.3s						
BTK	Batken	1.24	152	⇑*i*P	Pb	13 38 56.5	-0.5
	baz=53						
BTK				⇑*i*S	Sg	13 39 13.4	0.0
	baz=53						
ARK	Arkit	1.56	65	⇑*e*P	Pb	13 39 01.0	-1.4
	baz=67						
ARK				⇑*i*S	Sg	13 39 21.9	-1.6
	baz=67						
KK31	Karatay Array	1.97	9	Pn	Pg	13 39 11.0	-0.2
	0.9nm,0.3s,baz=190,slow=16,SNR=28						
KK31				⇓Lg	Lg	13 39 38.4	
	1.7nm,0.5s,baz=200,slow=31,SNR=5.1						
ARSB	Arslanbob	2.20	85	⇑*i*P	Pb	13 39 11.6	-1.8
	baz=86						
ARSB				⇑*i*S	Sb	13 39 39.5	-1.3
	baz=86						
MRKS	Merke	2.83	55	*e*P	Pb	13 39 21.8	-2.4
	3.2nm,0.4s						
MRKS				*e*S	Sb	13 39 59.5	+0.5
	2.2nm,0.3s						
AML	Almayashu	2.88	69	⇑*i*P	Pb	13 39 21.3	-3.9
	baz=70						
AML				⇑*i*S	Sb	13 39 57.1	-3.6
	baz=70						
ARLS	Aral	3.27	76	⇓*i*P	Pn	13 39 26.4	+1.5
	baz=77						
ARLS				⇓*i*S	Sn	13 40 06.1	+2.2
	baz=77						
UCH	Uchtor	3.49	71	⇓*i*P	Pn	13 39 30.0	+1.8
	baz=71						
UCH				⇓*i*S	Sn	13 40 11.7	+1.9
	baz=71						
AAK	Ala-Archa	3.62	64	⇓Pg	Pb	13 39 38.6	+1.0
	3.5nm,1.2s						
AAK				⇑Lg	Lg	13 40 24.3	
	1.7nm,0.7s						
DGS	Degeres	4.72	62	*e*P	Pb	13 39 54.5	-1.8
	1.2nm,0.5s						
DGS				*e*S	Sb	13 40 56.4	+3.3
	1.8nm,0.5s						

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*SOME **11** 13:56:55.2, 43°.70N×69°.53E*

NNC 11 13:57:00.4±0.8**, 43°.64N×69°.89E, h0^{km}, mb3.6, mpv3.1, 4C-2D, Error ellipse: s-maj=4.0km s-min=2.6km az=123.0, Suspected Mining explosion., Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	0.70	140	⇑P	Pg	13 57 13.9	0.0
	0.7nm,0.3s,baz=323,slow=16,SNR=132						
KK31				⇓S	Sg	13 57 24.0	+1.0
	16nm,0.5s,baz=321,slow=32,SNR=79						
MRKS	Merke	2.60	109	Pg	Pb	13 57 48.0	+0.1
	4.0nm,0.4s						
MRKS				Lg	Lg	13 58 25.0	
	4.7nm,0.4s						
AAK	Ala-Archa	3.51	105	⇑Pg	Pb	13 58 04.3	+0.8
	2.9nm,0.5s						
AAK				⇓Lg	Lg	13 58 52.4	
	5.1nm,0.7s						
CHMS	Chumysh	3.60	99	⇑Pg	Pb	13 58 04.9	-0.1
	2.3nm,0.5s						
CHMS				⇑Lg	Lg	13 58 55.0	
	8.1nm,0.7s						
KRBS	Karabastau	4.20	87	Pg	Pb	13 58 17.4	+2.3
	3.1nm,0.5s						
KRBS				Lg	Lg	13 59 14.8	
	3.2nm,0.6s						
DGS	Degeres	4.30	93	Pg	Pg	13 58 20.6	-2.2
	2.2nm,0.5s						
DGS				Lg	Lg	13 59 20.5	
	6.8nm,0.6s						
KST	Kastek	4.47	96	Pg	Pg	13 58 23.0	-3.0
	2.9nm,0.6s						
KST				Lg	Lg	13 59 24.4	
	7.5nm,1.0s						
KUU	Kurty	4.68	85	Pg	Pb	13 58 26.4	+3.1
	1.7nm,0.4s						
KUU				Lg	Lg	13 59 30.1	
	10nm,0.5s						
KTBS	Karatobe	4.92	87	Pg	Pb	13 58 30.1	+2.6
	2.1nm,0.5s						
KTBS				Lg	Lg	13 59 36.5	
	7.1nm,0.8s						
IZV	Izvestkoviy	4.94	95	Pg	Pb	13 58 31.0	+3.1
	1.4nm,0.4s						
IZV				Lg	Lg	13 59 38.3	
	6.9nm,0.7s						
TNSS	Tian-Shan	5.18	94	Pg	Pb	13 58 35.9	+3.8
	1.6nm,0.5s						
TNSS				Lg	Lg	13 59 46.4	
	5.8nm,0.5s						
ARXS	Arharly	5.76	82	Pg	Pg	13 58 46.4	-4.4
	2.9nm,0.5s						
ARXS				Lg	Lg	14 00 04.4	
	4.4nm,0.4s						

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*NEIC **11** 13:57:03.0±2.0, 5°.25N±0°.04×72°.80W±0°.04, h10^{km}±1^{km}, mb4.7/17, Error ellipse: s-maj=7.5km s-min=6.5km az=357.0*

*RSNC **11** 13:57:05.6±1.0, 5°.25N×72°.95W, h4^{km}±5^{km}, ML4.4, Mw4.3*

*VAO **11** 13:57:08.2±0.6, 5°.06N×72°.40W, h25^{km}, mb4.6*

*IDC **11** 13:57:08.3±1.2, 5°.27N×72°.85W, h57^{km}±11^{km}, mb3.6/12, mb1 3.8/13, mb1mx3.7/31, mbtmp3.9/13, MS3.2/10, Ms1 3.2/10, ms1mx3.0/34, Error ellipse: s-maj=13.6km s-min=8.0km az=144.0*

ISC 11 13:57:03.2±0.8**, 5°.23N**±0°.02×**72°.89W**±0°.02**, h17^{km}**±5^{km}**, n112, σ2^{s}.46**/156**, mb4.3**/15**, 9C-9D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUSC	La Rusia	0.69	344	⇑*i*Pg	Pb	13 57 17.2	+0.1
RUSC				*e*Sg	Sb	13 57 26.2	-0.3
RUSC	La Rusia	0.69	344		Pb	13 57 17.1	+0.1
CHIC	Chingaza	1.03	235	⇓*i*P	Pg	13 57 22.4	-0.9
CHIC				*e*S	Sg	13 57 36.2	-0.6
CHIC				*i*		13 57 42.8	
	comp=Z,7µm,0.4s						
SPBC	San Pablo de B	1.25	290	⇓*i*P	Pg	13 57 26.7	-0.7
SPBC				*e*S	Sg	13 57 42.9	-0.8
SPBC				*i*		13 57 49.5	
	comp=Z,6µm,0.4s						
PTGC	Puerto Gaitan,	1.27	144	⇑*i*P	Pg	13 57 28.7	+1.0
PTGC				*e*S	Sn	13 57 46.3	+3.5
PTGC				*i*		13 57 53.0	
	comp=Z,5µm,0.4s						
VILC	Villavicencio,	1.37	216	⇓*e*P	Pg	13 57 29.1	-0.5
VILC				*e*S	Sg	13 57 47.8	+0.3
CVER	Cruz Verde, Cu	1.37	239	*e*P	Pg	13 57 31.1	+1.3
CVER				*e*S	Sn	13 57 48.2	+2.2
BARC	Barichara	1.39	348	⇓*i*P	Pg	13 57 29.3	-0.7
BARC				*e*S	Sg	13 57 47.4	-0.8
BARC				*i*		13 57 49.0	
	comp=Z,9µm,0.3s						
ROSC	El Rosal	1.48	255	P	Pg	13 57 32.7	+0.9
	comp=Z,657nm,0.3s,baz=99,slow=8.1,SNR=297						
ROSC				S	Sg	13 57 52.8	+1.8
	comp=Z,609nm,0.3s,baz=14,slow=23,SNR=9.2						
ROSC				LR	LR	13 58 00.7	
	comp=Z,678nm,20.9s,baz=118,slow=34						
ROSC	El Rosal	1.48	255	⇓*i*P	Pg	13 57 32.5	+0.8
ROSC				*e*S	Sg	13 57 50.4	-0.6
ROSC				*i*		13 57 59.9	
	comp=Z,5µm,0.5s						
ROSC	El Rosal	1.48	255		Pg	13 57 32.6	+0.8
TAMC	Tame, Arauca	1.62	42	⇓*i*P	Pg	13 57 34.7	+0.2
TAMC				*e*S	Sg	13 57 55.9	+0.2
TAMC				*i*		13 58 07.3	
	comp=Z,6µm,0.5s						
NORC	Norcasia	2.00	280	⇑*i*P	Pb	13 57 38.2	-0.9
NORC				*e*S	Sb	13 58 03.2	-0.5
NORC				*i*		13 58 06.5	
	comp=Z,4µm,0.5s						
PTBC	PUERTO BERRIO,	2.03	310	⇓*i*P	Pn	13 57 38.2	+1.6
PTBC				*e*S	Sb	13 58 05.7	+1.0
PTBC				*i*		13 58 07.2	
	comp=Z,4µm,0.3s						
BRRC	Barranca, Sant	2.04	336	*e*P	Pb	13 57 40.4	+0.6
BRRC				*e*S	Sb	13 58 04.9	0.0
BRRC				*i*		13 58 11.6	
	comp=Z,3µm,0.4s						
PAMC	Pamplona, Colo	2.11	5	⇓*e*P	Pb	13 57 41.1	-0.2
PAMC				*e*S	Sb	13 58 07.6	+0.3
PAMC				*i*		13 58 18.4	
	comp=Z,2µm,0.4s						
GUY2C	Guyana, Caldas	2.46	270	⇓*e*P	Pb	13 57 45.7	-1.7
GUY2C				*e*S	Sn	13 58 16.0	+3.0
GUY2C				*i*		13 58 25.7	
	comp=Z,3µm,0.5s						
GUVC	San Jose del G	2.68	174	*e*P	Pn	13 57 48.1	+2.5
GUVC				*e*S	Sn	13 58 21.3	+3.7
GUVC				*i*		13 58 25.8	
	comp=Z,2µm,0.4s						
ORTC	Ortega, Tolima	2.69	241	*e*P	Pn	13 57 48.0	+2.3
ORTC				*e*S	Sg	13 58 28.3	-1.5
ORTC				*i*		13 58 35.2	
	comp=Z,2µm,0.6s						
HELC	Santa Helena	2.79	290	⇑*e*P	Pn	13 57 49.9	+2.4
HELC				*e*S	Sb	13 58 27.0	0.0
HELC				*i*		13 58 40.3	
	comp=Z,709nm,0.5s						
ZARC	Zaragoza, Cauc	2.98	319	*e*P	Pn	13 57 51.5	+1.7
ZARC				*e*S	Sb	13 58 29.8	-2.2
ZARC				*i*		13 58 37.6	
	comp=Z,1µm,0.7s						
OCAC	Ocana	3.02	352	*e*P	Pn	13 57 53.3	+2.9
OCAC				*e*S	Sb	13 58 35.3	+1.9
OCAC				*i*		13 58 45.2	
	comp=Z,1µm,0.4s						
CBOC	Ciudad Bolivar	3.17	282	*e*P	Pn	13 57 55.2	+2.8
CBOC				*e*S	Sb	13 58 38.1	+0.4
MACC	Macarena, Meta	3.21	197	*e*P	Pn	13 57 54.3	+1.4
MACC				*e*S	Sg	13 58 43.2	-3.1
UREC	San Jos de Ur	3.63	314	*e*P	Pn	13 58 01.0	+2.3
UREC				*e*S	Sb	13 58 47.4	-3.4
UREC				*i*		13 58 57.3	
	comp=Z,424nm,0.7s						
YOTC	Yotoco, Valle	3.66	250	⇑*e*P	Pn	13 58 01.5	+2.3
YOTC				*e*S	Sn	13 58 46.5	+4.5
SMLC	San Martn de	3.74	342	*e*P	Pn	13 58 01.1	+0.9
SMLC				*e*S	Sb	13 58 56.6	+2.8
SMLC				*i*		13 59 04.5	
	comp=Z,894nm,0.5s						
GARC	Garzon, Huila	3.98	221	⇑*i*P	Pn	13 58 06.1	+2.4
GARC				*e*S	Sb	13 59 06.3	+5.1
GARC				*i*		13 59 12.8	
	comp=Z,1µm,0.3s						
SDV	Santo Domingo	4.27	32	P	Pn	13 58 10.2	+2.7
	comp=Z,118nm,0.3s,baz=223,slow=4.5,SNR=182						
SDV				S	Sn	13 58 59.1	+2.0
	comp=Z,89nm,0.3s,baz=11,slow=11,SNR=7.5						
SDV				LR	LR	14 00 27.5	
	comp=Z,400nm,19.3s,baz=233,slow=47						
SDV	Santo Domingo	4.27	32	*e*P	Pn	13 58 10.0	+2.4
SDV				*e*S	Sn	13 59 00.7	+3.6
SDV				*i*		13 59 30.6	
	comp=Z,632nm,0.5s						
SDV	Santo Domingo	4.27	32		Pn	13 58 10.0	+2.4
SDV	Santo Domingo	4.27	32	*e*P	Pn	13 58 10.3	+2.7
SDV				*e*S	Sn	13 58 59.9	+2.7
PIZC	Pizarro, Choco	4.46	267	*e*P	Pn	13 58 14.8	+4.7
PIZC				*e*S	Sb	13 59 15.5	+0.9
PCON	Cinco Dias	4.53	231	⇑*e*P	Pn	13 58 13.9	+2.4
PCON				*e*S	Sg	13 59 27.0	-2.0
PCON				*i*		13 59 31.6	
	comp=Z,682nm,0.5s						
FLOC	Florencia	4.55	217	*e*P	Pn	13 58 11.4	+0.1
FLOC				*e*S	Sb	13 59 22.1	+4.8
FLOC	Florencia	4.55	217		Pn	13 58 13.2	+1.9
MALC	Bahia Malaga	4.59	255	*e*P	Pn	13 58 15.0	+3.1
MALC				*e*S	Sn	13 59 00.8	-4.1
SOLC	Bahia Solano	4.60	283	*e*P	Pn	13 58 14.1	+2.0
SOLC				*e*S	Sb	13 59 12.7	-6.1
POPC	Popayan, Colom	4.62	235	⇑*i*P	Pn	13 58 15.5	+3.0
POPC				*e*S	Sb	13 59 25.6	+5.9
CODC	Agustn Codazz	4.71	353	*e*P	Pn	13 58 15.8	+2.3
CODC				*e*S	Sn	13 59 13.4	+5.7
CODC				*i*		13 59 56.3	
	comp=Z,141nm,0.7s						
ARGC	Ariguani, Magd	4.79	344	*e*P	Pn	13 58 19.2	+4.5
ARGC				*e*S	Sb	13 59 24.1	-0.1
ARGC				*i*		13 59 40.5	
	comp=Z,198nm,0.5s						
SOTA	Rioblanco	4.82	231	⇑*i*P	Pn	13 58 18.6	+3.2
SOTA				*e*S	Sg	13 59 35.5	-2.5
SOTA				*i*		13 59 43.6	
	comp=Z,237nm,0.5s						
LCBC	Los crdobas,	4.99	316	*e*P	Pn	13 58 19.7	+2.3
LCBC				*e*S	Sn	13 59 22.8	+8.1
SJCC	San Jacinto, C	5.16	334	*e*P	Pn	13 58 21.6	+1.8
SJCC				*e*S	Sn	13 59 23.1	+4.0
SJCC				*i*		13 59 49.8	
	comp=Z,300nm,0.9s						
BBAC	Balboa, Cauca	5.39	234	*e*P	Pn	13 58 25.4	+2.3
BBAC				*e*S	Sg	13 59 54.6	-1.7
CAPC	Capurgana	5.57	308	*e*P	Pn	13 58 26.4	+1.0
CAPC				*e*S	Sn	13 59 31.2	+2.1
GR1C	Gorgona, Isla	5.71	247	*e*P	Pn	13 58 28.6	+1.4
GR1C				*e*S	Sn	13 59 30.8	-1.6
URIC	Uribia, Colomb	6.49	8	*e*P	Pn	13 58 38.4	+0.4
URIC				*e*S	Sn	13 59 47.8	-3.9
URIC				*i*		14 00 43.1	
	comp=Z,68nm,0.6s						
URIC	Uribia, Colomb	6.49	8		Pn	13 58 38.4	+0.4
OTAV	Otavalo	7.44	228		Pn	13 58 56.6	+5.1
BCIP	Isla Barro Col	7.92	300	Pn	Pn	13 59 00.1	+2.4
PCRV	Puerto La Cruz	9.54	58	P	Pn	13 59 20.9	+1.0
	comp=Z,4.8nm,0.3s,baz=259,slow=1.6,SNR=21						
PCRV				LR	LR	14 03 35.4	
	comp=Z,307nm,18.6s,slow=41						
PLCV	Puerto La Cruz	9.57	59		Pn	13 59 20.9	+0.6
JTS	Las Juntas de	12.96	294	LR	LR	14 06 54.0	
	comp=Z,44nm,18.2s,baz=156,slow=45						
SDDR	Presa de Saban	13.76	6		Pn	14 00 18.1	+0.4
DR12	Loma Pena Alta	13.91	14	Pn	Pn	14 00 20.1	+0.5
SVB	Belmont	13.99	54	Pn	Pn	14 00 20.9	+0.1
ICMP	Isla Caja de M	14.04	26	Pn	Pn	14 00 21.3	-0.1
OBIP	Obispado Ponce	14.14	25	Pn	Pn	14 00 23.0	+0.1
PTGA	Pitinga	14.20	114	P	Pn	14 00 20.9	-2.8
	comp=Z,3.0nm,0.3s,baz=311,slow=20,SNR=22						
PTGA				S	Sn	14 02 54.0	-7.0
	comp=Z,4.5nm,0.3s,baz=349,slow=5.5,SNR=12						
PTGA				LR	LR	14 06 57.6	

	comp=Z,18nm,18.3s,baz=187,slow=42						
PTGA	Pitinga	14.20	114	eP	Pn	14 00 20.0	-3.7
PTGA				eS	Sn	14 02 54.3	-6.6
AOPR	Arecibo Observ	14.35	24	Pn	Pn	14 00 25.8	0.0
PDPR	Patillas Dam,	14.38	27		Pn	14 00 25.2	-0.8
SJG	San Juan	14.40	27	P	Pn	14 00 25.8	-0.6
	comp=Z,1.3nm,0.3s,baz=278,slow=8.7,SNR=1.5						
SJG				LR	LR	14 06 53.5	
	comp=Z,180nm,18.4s,baz=242,slow=41						
GCPR	Guaynabo City	14.60	27	Pn	Pn	14 00 28.6	-0.6
CUPR	Culebra, Puert	14.97	29	Pn	Pn	14 00 34.9	+0.7
STVI	Saint Thomas	15.17	30	Pn	Pn	14 00 36.9	+0.1
STVI				IAmb	IAmb	14 00 50.5	
	comp=Z,44nm,1.1s						
CBCY	The Bluff, Cay	15.90	336	Pn	Pn	14 00 47.4	+1.1
GRTK	Grand Turk	16.28	6	P	P	14 00 55.0	+1.0
GRTK				IAmb	IAmb	14 01 25.1	
	comp=Z,57nm,1.1s						
SAML	Samuel	17.09	145		Pn	14 01 00.5	-0.9
SAML	Samuel	17.09	145	eP	Pn	14 00 59.9	-1.5
NNA	Nana	17.55	193	LR	LR	14 09 34.2	
	comp=Z,172nm,21.1s,baz=346,slow=42						
APG	El Apazote	19.82	301	LR	LR	14 11 15.2	
	comp=Z,46nm,19.3s,baz=118,slow=43						
MDP	Montagnes des	20.17	89	P	P	14 01 38.8	+1.8
	comp=Z,14nm,0.4s,baz=261,slow=13,SNR=4.3						
MDP				LR	LR	14 09 03.0	
	comp=Z,54nm,20.8s,baz=204,slow=36						
TEIG	Tepich	21.12	316	LR	LR	14 12 15.2	
	comp=Z,33nm,18.1s,baz=206,slow=43						
TEIG	Tepich	21.12	316	P	P	14 01 49.8	+2.5
TEIG				IAmb	IAmb	14 02 33.6	
	comp=Z,34nm,1.2s						
LPAZ	La Paz	21.89	168	P	P	14 01 57.2	+1.0
	comp=Z,4.5nm,0.7s,baz=343,slow=14,SNR=13						
LPAZ	La Paz	21.89	168	P	P	14 01 57.0	+0.9
CLDB	Colider	23.35	133	eP	P	14 02 11.2	+0.2
SIV	San Ignacio	24.11	151	P	P	14 02 19.2	+0.9
	comp=Z,2.3nm,0.6s,baz=338,slow=9.2,SNR=16						
CMIG	Matias Romero	24.55	300	LR	LR	14 14 40.8	
	comp=Z,48nm,18.4s,baz=111,slow=43						
GO01	Chusmiza	25.00	172	P	P	14 02 27.3	+0.4
GO01				IAmb	IAmb	14 02 51.6	
	comp=Z,32nm,1.9s						
PB11	IPOC Station P	25.04	173	P	P	14 02 26.7	-0.1
PB11				IAmb	IAmb	14 02 49.5	
	comp=Z,9.0nm,0.8s						
456A	Hilliard	26.78	342	P	P	14 02 44.0	+1.6
IPMB	Ipameri, GO	33.54	134	eP	P	14 03 41.6	-0.8
BB19B	Bebedouro	35.41	138	eP	P	14 03 58.8	+0.2
CCM	Cathedral Cave	36.70	335	P	P	14 04 09.4	0.0
CCM				IAmb	IAmb	14 04 16.3	
	comp=Z,9.3nm,0.6s						
TXAR	Lajitas Array	37.70	313	P	P	14 04 18.4	+0.3
	comp=Z,0.2nm,0.5s,baz=131,slow=11,SNR=3.0						
VAO	Valinhos	37.80	139	eP	P	14 04 19.2	+0.2
EYMN	Ely	45.45	342	P	P	14 05 21.0	-0.2
PLCA	Paso Flores	45.79	178	P	P	14 05 24.6	+0.6
	comp=Z,1.7nm,0.9s,baz=39,slow=9.4,SNR=2.4						
PLCA	Paso Flores	45.79	178	IAmb	IAmb	14 06 28.5	
	comp=Z,27nm,1.6s						
TMUT	Trail Mountain	48.44	320	P	P	14 05 44.2	-0.9
ULM	Lac du Bonnet	48.85	341	P	P	14 05 47.1	-0.6
	comp=Z,1.2nm,0.4s,baz=151,slow=4.2,SNR=3.5						
ULM	Lac du Bonnet	48.85	341	P	P	14 05 47.2	-0.6
ULM				IAmb	IAmb	14 06 33.0	
	comp=Z,22nm,2.0s						
PDAR	Pinedale Array	49.50	325	P	P	14 05 54.0	+0.9
	comp=Z,0.1nm,0.5s,baz=125,slow=9.1,SNR=2.0						
SCHQ	Schefferville	49.70	5	P	P	14 05 54.5	+0.4
	comp=Z,1.2nm,0.6s,baz=203,slow=12,SNR=1.9						
NVAR	Mina Array Bea	52.76	315	P	P	14 06 18.5	+0.7
	comp=Z,0.2nm,0.4s,baz=117,slow=7.2,SNR=2.7						
NVAR	Mina Array Bea	52.76	315	P	P	14 06 18.6	+0.9
YKA	Yellowknife Ar	64.83	340	P	P	14 07 40.8	-0.1
	comp=Z,1.4nm,0.5s,baz=136,slow=6.8,SNR=36						
DBIC	Dimbokro	67.64	85	P	P	14 08 00.3	+0.5
	comp=Z,2.6nm,0.7s,baz=271,slow=3.7,SNR=4.3						
DBIC	Dimbokro	67.64	85	P	P	14 08 00.3	+0.5
TORD	Torodi Ar. Bea	73.84	78	P	P	14 08 38.2	+0.5
IL31		78.50	335	P	P	14 09 02.8	-0.3
ILAR	Eielson Array	78.50	335	P	P	14 09 02.6	-0.6
	comp=Z,0.4nm,0.4s,baz=105,slow=4.1,SNR=17						
KSH	Kashi	127.02	30	PKP	PKPdf	14 16 05.1	-1.9
KSH				sPKP		14 16 20.0	
KSH				PP	PP	14 18 07.0	+2.8
KSH				SKS	SKSdf	14 23 12.2	-6.2
KSH				SKKS	SKKSac	14 24 54.7	-7.8
LZH	Lanzhou	138.79	4	ePKP	PKPdf	14 16 28.9	-0.4
LZH				pPKP	sPKPdf	14 16 41.2	+3.2
LZH				sPKP		14 16 45.0	
CD2	Chengdu	143.92	5	PKP	PKPab	14 16 35.3	-0.3
AS31	Alice Springs	148.34	232		PKPdf	14 16 45.8	-0.4
AS31				PKPbc	PKPbc	14 16 48.7	-0.9
ASAR	Alice Springs	148.34	232	PKP	PKPdf	14 16 45.2	-0.9
	comp=Z,3.2nm,0.8s,baz=113,slow=1.6,SNR=20						
ASAR				PKPbc	pPKPdf	14 16 48.6	-4.0
	comp=Z,2.2nm,0.6s,baz=114,slow=3.7,SNR=48						
WB2	Warramunga Arr	149.73	239		PKPdf	14 16 51.8	+3.4
WRA	Warramunga Arr	149.74	239	PKP	PKPdf	14 16 48.1	-0.4
	comp=Z,3.6nm,0.5s,baz=109,slow=2.7,SNR=12						
WRA				PKPbc	pPKPdf	14 16 51.9	-3.0
	comp=Z,4.0nm,0.5s,baz=108,slow=2.8,SNR=31						

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*INET **11** 14:18:24.8, 13°.45N×88°.20W, h0^{km}, ML3.3*
*UCR **11** 14:18:30.6±0.8, 13°.27N×87°.96W, h5^{km}, MD3.7, ML3.7*
*SNET **11** 14:18:30.3±1.0, 13°.29N×87°.97W, h5^{km}±3^{km}, MD3.0, ML3.5*

ISC 11 14:18:30.6±1.2, **13°.30N**±0°.09×**87°.98W**±0°.04, **h8**^{km}±15^{km}, **n13**, σ**0^{s}.44**/26, **7C-2D, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	0.15	98	⇑iP	Pg	14 18 33.6	-0.2
CNCH				eS	Sg	14 18 36.2	+0.2
CNCH				IAML		14 18 38.6	
	comp=Z,19µm,0.5s						
CNCH	Conchagua	0.15	98	⇑iP	Pg	14 18 33.6	-0.2
CNCH				eS	Sg	14 18 36.2	+0.2
CNCH				IAML		14 18 38.6	
	comp=Z,19µm,0.5s						
BLLM	Bellamira	0.29	300	⇑iP	Pb	14 18 37.8	-0.2
BLLM				eS	Sb	14 18 42.2	-0.8
BLLM	Bellamira	0.29	300	⇑iP	Pb	14 18 37.8	-0.2
BLLM				eS	Sb	14 18 42.2	-0.8
LCY	Lacayo	0.33	293	i P	Pb	14 18 38.7	-0.1
LCY				eS	Sb	14 18 44.4	+0.1
LCY	Lacayo	0.33	293	i P	Pb	14 18 38.7	-0.1
LCY				eS	Sb	14 18 44.4	+0.1
PACA	Pacayal	0.37	297	⇓iP	Pb	14 18 39.1	-0.4
PACA				eS	Sb	14 18 45.7	+0.2
PACA				IAML		14 18 54.0	
	comp=Z,5µm,0.2s						
PACA	Pacayal	0.37	297	⇓iP	Pb	14 18 39.1	-0.4
PACA				eS	Sb	14 18 45.7	+0.2
PACA				IAML		14 18 54.0	
	comp=Z,5µm,0.2s						
TGUH	Tegucigalpa,Un	1.02	42	⇑iP	Pg	14 18 49.9	-0.3
TGUH				eS	Sb	14 19 04.9	+0.6
TGUH	Tegucigalpa,Un	1.02	42	⇑iP	Pg	14 18 49.9	-0.3
TGUH				eS	Sb	14 19 04.9	+0.6
LFRS	El Faro	1.10	287	⇑iP	Pg	14 18 51.8	+0.1
LFRS				eS	Sb	14 19 07.4	+0.9
MTO3	Montecristo	1.73	309	eP	Pb	14 19 02.5	-0.3
MTO3				eS	Sg	14 19 26.7	+0.5
MTO3	Montecristo	1.73	309	eP	Pb	14 19 02.5	-0.3
MTO3				eS	Sg	14 19 26.7	+0.5

IDC 11 14:23:10.7±1.9, **3°.95S**×**128°.63E, h0**^{km}, **mb3.2**/2, **mb1 3.3**/3, **mb1mx3.2**/25, **mbtmp3.1**/3, **ML2.7**/1, **Error ellipse: s-maj=194.9km s-min=29.3km az=73.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.84	161	Pn	Pn	14 27 08.7	+0.6
	0.0nm,0.3s,baz=344,slow=12,SNR=1.4						
ASAR	Alice Springs	20.26	166	P	P	14 27 47.5	-0.3
	0.2nm,0.4s,baz=345,slow=12,SNR=6.1						
SONM	Songino Array	55.13	342	P	P	14 32 44.9	-0.1
	0.4nm,0.5s,baz=139,slow=7.7,SNR=4.6						

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*IDC **11** 14:36:39.8±1.6, 43°.66N×105°.50W, h0^{km}, mb1 3.4/5, mb1mx3.3/38, mbtmp3.1/5, ML2.6/4, Error ellipse: s-maj=42.9km s-min=7.9km az=149.0*
*NEIC **11** 14:36:41.4±0.6, 43°.72N±0°.03×105°.28W±0°.06, h0^{km}±2^{km}, ML3.3/60, Error ellipse: s-maj=8.6km s-min=3.9km az=116.0*

ISC 11 14:36:40.7±0.9, **43°.71N**±0°.06×**105°.35W**±0°.06, **h0**^{km}, **n53**, σ**1^{s}.26**/54, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	1.04	66		Pg	14 37 00.3	-0.2
K22A	Casper	1.36	220		Pg	14 37 06.1	-0.6
K22A				IAML		14 37 27.6	
	comp=N,517nm,0.3s						
K22A				IAML		14 37 28.6	
	comp=E,542nm,0.4s						
RWWY	Rawlins	2.44	215		Pn	14 37 22.8	+0.8
N23A	Red Feather La	2.84	189		Pn	14 37 28.5	+0.9
N23A				IAML		14 38 10.2	
	comp=N,138nm,0.6s						
N23A				IAML		14 38 18.0	
	comp=E,87nm,0.7s						
LAO	LASA Array	3.05	349		Pn	14 37 30.1	-0.1
LAO				IAML		14 38 16.5	
	comp=E,121nm,0.7s						
LAO				IAML		14 38 25.4	
	comp=E,119nm,0.7s						
RLMT	Red Lodge	3.15	298		Pn	14 37 32.4	+0.7
RLMT				IAML		14 38 24.7	
	comp=E,54nm,0.4s						
RLMT				IAML		14 38 27.4	
	comp=E,49nm,0.3s						
BW06	Boulder Array	3.22	254		Pn	14 37 33.9	+1.2
BW06				IAML		14 38 22.3	
	comp=N,86nm,0.6s						
PD31	Pinedale Array	3.22	254		Pn	14 37 33.8	+1.1
PDAR	Pinedale Array	3.22	254	Pn	Pn	14 37 33.9	+1.2
	comp=N,2.8nm,0.3s,baz=70,slow=19,SNR=65						
PDAR				Pg	Pb	14 37 37.6	-1.2
	comp=N,7.2nm,0.3s,baz=70,slow=17,SNR=33						
PDAR				Lg	Lg	14 38 17.8	
	comp=N,15nm,0.3s,baz=75,slow=32,SNR=9.6						
YNE	Yellowstone No	3.59	293		Pn	14 37 38.6	+0.8
YMP	Mirror Lake Pl	3.61	288		Pn	14 37 39.4	+1.3
OGNE	Ogallala	3.69	137		Pn	14 37 40.0	+0.9
GCMT	Greycliff	3.72	306		Pn	14 37 40.6	+1.2
LKWY	Lake	3.74	285		Pn	14 37 41.2	+1.4
LKWY				IAML		14 38 48.8	
	comp=N,33nm,0.7s						
H17A	Grant Village	3.83	282		Pn	14 37 42.9	+1.7
H17A				IAML		14 38 45.3	
	comp=N,26nm,0.6s						
H17A				IAML		14 38 45.5	
	comp=E,27nm,0.6s						
FLWY	Flagg Ranch	3.89	277		Pn	14 37 43.2	+1.3
ISCO	Idaho Springs	3.91	183		Pn	14 37 42.5	+0.2
SNOW	Snow King Moun	3.94	268	Pn	Pn	14 37 44.4	+1.8
SNOW				IAML		14 38 58.0	
	comp=E,34nm,0.9s						
SNOW				IAML		14 39 09.5	
	comp=E,27nm,0.8s						
YPP	Pitchstone Pla	3.98	280		Pn	14 37 44.5	+1.4
REDW	Red Top Meadow	4.02	267		Pn	14 37 45.0	+1.4
REDW				IAML		14 38 59.9	
	comp=E,42nm,0.7s						
YHH	Holmes Hill	4.10	287		Pn	14 37 46.2	+1.3
FXWY	Fox Creek	4.12	271		Pn	14 37 46.4	+1.4
YMR	Madison River	4.15	285	Pn	Pn	14 37 47.5	+1.9
O20A	White River Ci	4.17	212		Pn	14 37 47.1	+1.4
O20A				IAML		14 38 57.8	
	comp=E,40nm,0.7s						
O20A				IAML		14 39 06.0	
	comp=N,34nm,0.8s						
AHID	Auburn Hatcher	4.31	259		Pn	14 37 49.2	+1.6
AHID				IAML		14 39 01.6	
	comp=N,37nm,0.8s						
AHID				IAML		14 39 04.0	
	comp=E,29nm,0.7s						
YHB	Horse Butte	4.33	286	Pn	Pn	14 37 49.0	+1.0
YHL	Hebgen Lake	4.34	287		Pn	14 37 49.1	+0.9
RDMU	Red Mountain	4.43	227	Pn	Pn	14 37 50.7	+1.3
QLMT	Earthquake Lak	4.51	287	Pn	Pn	14 37 52.1	+1.7
Q24A	Divide	4.74	178	Pn	Pn	14 37 54.6	+1.0
Q24A				IAML		14 39 12.0	
	comp=N,14nm,0.4s						
DGMT	Dagmar	4.83	9	Pn	Pn	14 37 55.8	+1.2
HWUT	Hardware Ranch	5.04	248		Pn	14 37 58.6	+0.9
HWUT				IAML		14 39 20.8	
	comp=N,15nm,0.6s						
HWUT				IAML		14 39 34.0	
	comp=N,23nm,0.7s						
TCUT	Toone Canyon	5.18	242		Pn	14 38 00.9	+1.2
EGMT	Eagleton	5.30	326		Pn	14 38 01.4	+0.2
LRM	Limekiln Ridge	5.48	295	Pn	Pn	14 38 05.3	+1.5
P17A	Butcher Ranch,	5.85	226		Pn	14 38 10.8	+2.0
SRU	San Rafael Swe	6.02	222		Pn	14 38 12.0	+0.9
NLU	North Lily Min	6.27	236	Pn	Pn	14 38 15.5	+0.9
ECSD	EROS Data Cent	6.33	87	Pn	Pn	14 38 15.3	+0.1
Q16A	Castle Valley	6.49	224	Pn	Pn	14 38 18.8	+1.2
DUG	Dugway, Tooele	6.58	240	Pn	Pn	14 38 20.1	+1.3
MSO	Missoula	6.82	300	Pn	Pn	14 38 23.0	+1.0
MSU	Marysvale	7.31	227	Pn	Pn	14 38 30.3	+1.4
TCRU	Three Creeks R	7.39	229	Pn	Pn	14 38 31.5	+1.5
JTMT	Jette	7.44	306	Pn	Pn	14 38 31.8	+1.2
ELK	Elko	7.91	251	Pn	Pn	14 38 35.9	-1.3
	comp=N,0.1nm,0.3s,baz=79,slow=16,SNR=1.8						
ELK	Elko	7.91	251		Pn	14 38 38.4	+1.2
WALA	Waterton Lakes	7.98	315	Pn	Pn	14 38 37.8	-0.1
AGMN	Agassiz Nation	8.04	52	Pn	Pn	14 38 38.5	-0.2
PSUT	Pine Spring	8.24	234	Pn	Pn	14 38 43.7	+2.1
ULM	Lac du Bonnet	9.20	41	Pn	Pn	14 38 53.1	-1.5
	comp=N,1.4nm,0.3s,baz=230,slow=13,SNR=14						
ULM				Pg		14 39 26.9	
	comp=N,0.1nm,0.3s,baz=271,slow=21,SNR=1.1						
ULM				Lg	Lg	14 41 26.0	
	comp=N,0.3nm,0.3s,baz=148,slow=13,SNR=5.3						
NVAR	Mina Array Bea	11.11	246	Pn	Pn	14 39 22.9	+2.0
	comp=N,0.1nm,0.3s,baz=57,slow=12,SNR=2.5						
YKA	Yellowknife Ar	19.59	347	P	P	14 41 10.1	+0.1
	comp=N,0.0nm,0.3s,baz=160,slow=12,SNR=2.8						

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*IDC **11** 14:53:01.8±2.6, 6°.88S×130°.62E, h83^{km}±32^{km}, mb3.3/4, mb1 3.9/8, mb1mx3.5/47, mbtmp4.0/8, Error ellipse: s-maj=57.9km s-min=22.1km az=89.0*
*DJA **11** 14:53:03.2±0.3, 7°S±2°×13°1E±°, h129^{km}±6^{km}, M4.3/9, mB5.2/3, mb4.0/7, MLv4.4/9, Mw(mB)4.6/3*

ISC 11 14:53:03.6±0.8, **6°.70S**±0°.05×**130°.52E**±0°.07, **h100**^{km}, **n15**, σ**2^{s}.17**/22, **mb3.6**/4, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.49	149	P	Pn	14 53 31.6	+1.9
SAUI				S	Sn	14 53 53.4	+3.9
BNDI	Bandanaira	2.25	344	P	Pn	14 53 41.9	+2.5
BNDI				S	Sn	14 54 08.6	+1.8
FAKI	Fak Fak	4.14	25	P	Pn	14 54 05.6	+1.0
FAKI				S	Sn	14 54 51.9	-0.1
SIJI	Sorong	5.84	7	P	Pn	14 54 28.6	+0.8
	4.6nm,0.3s,baz=46,slow=23,SNR=107						
SIJI				S	Sn	14 55 31.0	-2.5
	4.5nm,0.3s,baz=255,slow=23,SNR=12						
SWI	Sorong	5.85	7	P	Pn	14 54 28.4	+0.6
	0.3nm2µm24nm,0.8s						
SWI				S	Sn	14 55 31.8	-1.8
	0.3nm2µm24nm,0.8s						
RKPI	Ransiki, Papua	6.32	35	P	Pn	14 54 34.9	+0.6
	0.6nm2µm57nm,0.7s						
RKPI				S	Sn	14 55 45.1	0.0
	0.6nm2µm57nm,0.7s						
SANI	Sanana	6.46	315	P	Pn	14 54 37.2	+1.0
	0.1nm8.8nm,0.7s						
SOEI	Soe	6.89	243	P	Pn	14 54 42.8	+0.7
	0.2nm14nm,1.2s						
SOEI				S	Sn	14 55 59.5	+0.4
	0.2nm14nm,1.2s						
FITZ	Fitzroy Crossi	12.28	202	P	Pn	14 55 51.5	-3.5
	2.5nm,0.3s,baz=27,slow=11,SNR=48						
FITZ				S	Sn	14 57 54.6	-16
	0.6nm,0.3s,baz=61,slow=16,SNR=2.3						
WRA	Warramunga Arr	13.68	165	P	Pn	14 56 08.6	-4.8
	1.1nm,0.3s,baz=346,slow=13,SNR=48						
WRA				S	Sn	14 58 28.5	-15
	1.8nm,0.3s,baz=330,slow=25,SNR=6.6						
ASAR	Alice Springs	17.18	169	P	Pn	14 56 55.3	-2.1
	0.9nm,0.3s,baz=0.6,slow=11,SNR=66						
ASAR				S	Sn	14 59 58.0	-11
	0.6nm,0.3s,baz=353,slow=26,SNR=13						
CMAR	Chiang Mai Arr	39.94	309	P	P	15 00 29.7	+1.4
	0.4nm,0.4s,baz=128,slow=5.8,SNR=1.9						
SONM	Songino Array	58.33	341	P	P	15 02 47.8	-0.4
	0.2nm,0.4s,baz=134,slow=8.3,SNR=3.7						
MKAR	Makanchi Array	68.26	327	P	P	15 03 55.8	+2.1
	0.7nm,0.4s,baz=115,slow=8.1,SNR=27						
KURBB	Kurchatov Arra	72.53	328	P	P	15 04 21.3	+1.8
	0.2nm,0.5s,baz=128,slow=5.3,SNR=2.4						

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*IDC **11** 15:10:13.0±1.6, 7°.85S×126°.88E, h0^{km}, mb3.8/2, mb1 3.8/4, mb1mx3.5/38, mbtmp3.7/4, ML3.6/2, Error ellipse: s-maj=217.6km s-min=29.6km az=62.0*
*DJA **11** 15:10:28.1±0.4, 7°S±2°×12°8E±°, h151^{km}±11^{km}, M4.1/11, mB4.5/1, mb4.0/7, MLv4.1/11, Mw(mB)3.7/1*

ISC 11 15:10:27.1±0.8, **7°.63S**±0°.06×**128°.40E**±0°.06, **h150**^{km}, **n11**, σ**2^{s}.60**/17, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	2.90	97	P	Pn	15 11 15.8	+2.6
SAUI				S	Sn	15 11 53.5	+4.8
BNDI	Bandanaira	3.43	26	P	Pn	15 11 17.7	-2.2
AAI	Ambon	3.92	357	P	Pn	15 11 26.7	+0.4
SOEI	Soe	4.60	242	P	Pn	15 11 37.2	+1.8
SOEI				S	Sn	15 12 30.9	+2.3
FAKI	Fak Fak	6.04	40	P	Pn	15 11 54.5	0.0
	0.1nm13nm,0.8s						
EDFI	Ende, Flores	6.74	260	P	Pn	15 12 05.0	+1.2
	0.0nm3.1nm,1.1s						
EDFI				S	Sn	15 13 20.2	+0.7
	0.0nm3.1nm,1.1s						
SWI	Sorong	7.30	23	P	Pn	15 12 12.0	+0.8
	0.1nm24nm,1.0s						
SWI				S	Sn	15 13 31.8	-1.1
	0.1nm24nm,1.0s						
WRA	Warramunga Arr	13.53	155	Pn	Pn	15 13 32.2	-0.9
	0.4nm,0.3s,baz=326,slow=13,SNR=32						
WRA				Sn	Sn	15 15 57.5	-5.5
	1.0nm,0.3s,baz=338,slow=21,SNR=11						
ASAR	Alice Springs	16.80	162	P	Pn	15 14 14.6	+0.9
	0.2nm,0.3s,baz=334,slow=10,SNR=20						
ASAR				S	S	15 17 16.9	-3.8
	0.2nm,0.3s,baz=318,slow=18,SNR=6.4						
MKAR	Makanchi Array	67.89	328	P	P	15 21 09.6	+0.2
	0.3nm,0.5s,baz=134,slow=6.2,SNR=5.4						
KURBB	Kurchatov Arra	72.22	329	P	P	15 21 36.4	+0.7
	0.9nm,0.6s,baz=128,slow=5.2,SNR=13						

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*NEIC **11** 15:11:28.5±1.1, 58°.96N±0°.02×134°.51W±0°.06, h1^{km}±7^{km}, Error ellipse: s-maj=4.5km s-min=2.8km az=70.0*
*AEIC **11** 15:11:28.3±1.1, 58°.97N±0°.02×134°.50W±0°.08, h1^{km}±7^{km}, Error ellipse: s-maj=6.0km s-min=1.7km az=77.0*
*PGC **11** 15:11:29.5±0.0, 58°.97N×134°.54W, h1^{km}, ML3.0/8, 42km Ese of Haines, Ak Southeastern Alaska*

ISC 11 15:11:28.5±0.8, **58°.99N**±0°.03×**134°.56W**±0°.04, **h10**^{km}, **n39**, σ**1^{s}.70**/56, **Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESE	Bessie Mountai	0.44	201	P	Pg	15 11 36.8	-0.4
BESE				S	Sg	15 11 42.6	-0.5
BESE	Bessie Mountai	0.44	201		Pg	15 11 36.7	-0.4
BESE					Sg	15 11 42.5	-0.5
SKAG	Skagway	0.61	320		Pg	15 11 40.3	-0.1
SKAG					Sg	15 11 48.7	+0.2
JIS	Juneau Island	0.72	173		Pg	15 11 41.6	-0.9
JIS					Sg	15 11 50.7	-1.2
WHY	Whitehorse	1.68	355	Pn	Pb	15 11 59.1	-0.5
WHY				Sg	Sg	15 12 23.1	+0.6
WHY	Whitehorse	1.68	355		Pb	15 11 59.0	-0.6
WHY					Sg	15 12 22.8	+0.4
DHAK	Deception Hill	1.89	275		Pn	15 12 02.1	+1.2
DHAK					Sb	15 12 28.6	+1.7
SIT	Sitka	1.98	192		Pn	15 12 02.3	+0.2
HYT	Haines Junctio	2.36	322	Pn	Pb	15 12 09.4	-1.7
HYT				Sg	Sg	15 12 43.1	-1.2
HYT	Haines Junctio	2.36	322		Pn	15 12 09.0	+1.5
YUK7	Dusty Glacier	2.38	312	Pn	Pn	15 12 09.6	+1.9
YUK7				Pg	Pb	15 12 12.5	+1.0
YUK7				Sg	Sg	15 12 44.6	-0.4
YUK7	Dusty Glacier	2.38	312		Pn	15 12 09.3	+1.5
DLBC	Dease Lake	2.43	101	Pn	Pn	15 12 08.9	+0.6
DLBC				Pg	Pb	15 12 12.7	+0.5
DLBC				Sg	Sg	15 12 44.6	-1.8
DLBC	Dease Lake	2.43	101		Pn	15 12 08.8	+0.6
PNL	Peninsula	2.57	287	Pn	Pn	15 12 11.9	+1.7
PNL				Sg	Sg	15 12 49.4	-1.6
PNL	Peninsula	2.57	287		Pn	15 12 11.9	+1.7
YUK5	Granite Creek	2.71	324	Pn	Pb	15 12 14.7	-2.4
YUK5				Pg	Pg	15 12 18.8	-1.6
YUK5				Sg	Sg	15 12 54.1	-1.4
YUK5	Granite Creek	2.71	324		Pn	15 12 13.9	+1.7
YUK6	Outpost Mounta	2.74	317	Pn	Pn	15 12 15.1	+2.5
WRAK	Wrangell Islan	2.84	154		Pn	15 12 14.7	+0.9
PCA	Pinnacle	3.11	293	Pn	Pn	15 12 20.2	+2.6
PCA	Pinnacle	3.11	293		Pn	15 12 18.6	+1.0
YUK4	Talbot Arm	3.12	321	Pn	Pn	15 12 20.8	+2.9
CRAG	Craig	3.62	167		Pn	15 12 24.9	+0.4
CTGM	Chitina Glacie	3.94	303		Pn	15 12 30.1	+1.0
YUK3	Moose Creek	4.05	316	Pn	Pn	15 12 32.7	+2.1
BARN	Barnard Glacie	4.12	303		Pn	15 12 33.7	+2.1
YUK2	White River	4.19	315	Pn	Pn	15 12 34.8	+2.3
KIAG	Kiagna River	4.37	300	Pn	Pn	15 12 36.2	+1.1
MCARA	McCarthy VSAT	4.86	303	Pn	Pn	15 12 44.3	+2.7
BC03		5.39	322		Pn	15 12 51.8	+3.0
BCAR	Beaver Creek A	5.39	322	Pn	Pn	15 12 51.0	+2.1
DAWY	Dawson	5.59	338	Pn	Pn	15 12 53.9	+2.2
DAWY				Sn	Sn	15 13 55.0	-0.9
DAWY				Sg	Sg	15 14 23.6	-4.2
DAWY	Dawson	5.59	338		Pn	15 12 54.0	+2.4
EYAK	Cordova Ski Ar	5.87	290	Pn	Pn	15 12 57.3	+2.0
FNBB	Fort Nelson	5.98	86	Pn	Pn	15 12 57.5	+0.5
EGAK	Eagle	6.59	335		Pn	15 13 07.0	+1.8
DHY	Denali Highway	7.45	309	Pn	Pn	15 13 18.6	+1.4
EPYK	Eagle Plains	7.47	353		Pn	15 13 19.8	+2.4

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*IDC **11** 15:16:30.6±2.1, 13°.50N×50°.25E, h0^{km}, mb3.6/7, mb1 3.6/7, mb1mx3.4/51, mbtmp3.6/7, MS3.0/4, Ms1 3.0/4, ms1mx2.7/34, Error ellipse: s-maj=50.3km s-min=28.4km az=172.0*

ISC 11 15:16:32.1±1.8, **13°.5N**±0°.3×**50°.3E**±0°.2, **h10**^{km}, **n10**, σ**1^{s}.16**/7, **mb3.6**/7, **MS2.7**/3, **Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSAR	Wadi Sarin	12.54	38	LR	LR	15 24 20.1	
	comp=Z,71nm,20.9s,baz=236,slow=37						
EIL	Elat	21.45	321	LR	LR	15 30 04.4	
	comp=Z,24nm,18.3s,baz=84,slow=38						
GEYT	Alibeck	25.33	15	P	P	15 22 00.8	+1.6
	2.2nm,0.9s,baz=202,slow=11,SNR=4.1						
GEYT				LR	LR	15 32 46.3	
	comp=Z,49nm,18.5s,baz=250,slow=38						
BRTR	Keskin Array B	29.95	334	LR	LR	15 34 10.8	
	comp=Z,17nm,18.8s,baz=324,slow=35						
AKASG	Malin Array Be	40.87	340	P	P	15 24 13.0	-1.1
	0.1nm,0.3s,baz=144,slow=7.2,SNR=2.3						
MKAR	Makanchi Array	42.70	33	P	P	15 24 28.3	-1.0
	0.5nm,0.7s,baz=219,slow=5.6,SNR=4.5						
KURBB	Kurchatov Arra	43.59	26	P	P	15 24 36.4	+0.1
	0.2nm,0.3s,baz=224,slow=7.7,SNR=3.0						
CMAR	Chiang Mai Arr	46.96	77	P	P	15 25 03.3	-0.3
	0.3nm,0.3s,baz=278,slow=8.9,SNR=4.5						
TORD	Torodi Ar. Bea	47.19	276	P	P	15 25 05.8	+0.4
	0.7nm,0.7s,baz=97,slow=6.6,SNR=3.9						
SONM	Songino Array	57.56	42	P	P	15 26 22.7	+0.6
	0.5nm,0.9s,baz=253,slow=4.4,SNR=3.2						

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*IDC **11** 15:20:50.5±1.4, 4°.54S×133°.40E, h0^{km}, mb3.3/3, mb1 3.8/8, mb1mx3.5/46, mbtmp3.7/8, ML3.7/5, MS3.0/1, Ms1 3.0/1, ms1mx2.5/26, Error ellipse: s-maj=59.4km s-min=19.9km az=67.0*
*NEIC **11** 15:20:50.2±2.6, 4°.27S±0°.07×133°.6E±0°.2, h10^{km}±2^{km},*

mb4.1/6, Error ellipse: s-maj=30.4km s-min=9.1km az=75.0
*DJA **11** 15:20:54.6±0.8, 5°S±2°×13°4E±°, h24^{km}±7^{km}, M4.4/10, mb4.5/9, mB5.0/2, MLv4.3/10, Mw(mB)4.3/2*
ISC 11 15:20:53.4±0.9, **4°.54S**±0°.06×**133°.59E**±0°.08, **h21**^{km}, **n31**, σ**2^{s}.20**/41, **mb3.4**/3, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.09	320	P	Pn	15 21 28.1	+0.8
FAKI				S	Sn	15 21 52.1	-0.6
FAKI	Fak Fak	2.09	320		Pn	15 21 22.8	-4.5
RKPI	Ransiki, Papua	3.07	11	P	Pn	15 21 34.6	-6.1
BNDI	Bandanaira	3.67	270	P	Pn	15 21 48.9	-0.1
BNDI				S	Sn	15 22 33.7	+2.0
SAUI	Saumlaki	4.11	214	P	Pn	15 21 56.9	+1.9
SIJI	Sorong	4.32	327	Pn	Pn	15 21 54.1	-3.9
	0.9nm,0.3s,baz=226,slow=22,SNR=10						
SIJI				Sn	Sn	15 22 38.5	-9.3
	4.3nm,0.3s,baz=101,slow=16,SNR=4.0						
SIJI				LR	LR	15 23 54.6	
	comp=Z,210nm,21.4s,baz=20,slow=44						
SWI	Sorong	4.33	327	P	Pn	15 22 00.3	+2.2
SWI				S	Sn	15 22 42.3	-5.7
MSAI	Masohi	4.80	284	P	Pn	15 22 08.3	+3.8
MSAI				S	Sn	15 22 59.8	+0.3
AAI	Ambon	5.45	279	P	Pn	15 22 14.5	+1.1
	0.4nm1µm79nm,0.5s						
AAI				S	Sn	15 23 13.1	-2.4
	0.4nm1µm79nm,0.5s						
NLAI	Namlea	6.60	281	P	Pn	15 22 32.3	+3.0
	0.2nm32nm,0.5s						
NLAI				S	Sn	15 23 44.3	+0.3
	0.2nm32nm,0.5s						
SANI	Sanana	7.98	288	P	Pn	15 22 45.9	-2.4
	0.1nm22nm,0.6s						
SANI				S	Sn	15 24 07.5	-10
	0.1nm22nm,0.6s						
MTN	Manton Dam	8.60	196		Pn	15 22 58.9	+2.1
SOEI	Soe	10.60	240	P	Pn	15 23 24.9	+0.6
	20nm,1.1s						
SOEI				S	Sn	15 25 24.8	+2.3
	20nm,1.1s						
SOEI	Soe	10.60	240	Pn	Pn	15 23 26.6	+2.3
KNRA	Kununurra	12.04	203		Pn	15 23 42.8	-1.1
APSI	Ampana	12.46	286	P	Pn	15 23 47.7	-1.9
	10nm,1.0s						
WB0	Warramunga Arr	15.15	177	Pn	Pn	15 24 25.7	-0.7
WB0				IAmb	IAmb	15 24 51.9	
	comp=Z,17nm,1.6s						
WB2	Warramunga Arr	15.33	177	Pn	Pn	15 24 28.1	-0.5
WRA	Warramunga Arr	15.33	177	Pn	Pn	15 24 27.1	-1.6
	comp=Z,0.4nm,0.3s,baz=356,slow=12,SNR=8.6						
WRA				Sn	Sn	15 27 17.2	-0.8
	comp=Z,0.2nm,0.3s,baz=355,slow=22,SNR=4.7						
WRA	Warramunga Arr	15.33	177		Pn	15 24 28.2	-0.5
WR0	Warramunga Arr	15.35	177	Pn	Pn	15 24 28.4	-0.7
WR0				IAmb	IAmb	15 24 52.0	
	comp=Z,16nm,1.4s						
FITZ	Fitzroy Crossi	15.56	209	Pn	Pn	15 24 29.0	-2.6
	comp=Z,0.8nm,0.3s,baz=37,slow=7.6,SNR=15						
FITZ				Sn	Sn	15 27 18.5	-5.0
	comp=Z,0.6nm,0.3s,baz=173,slow=16,SNR=7.1						
FITZ	Fitzroy Crossi	15.56	209		Pn	15 24 31.1	-0.5
AS31	Alice Springs	19.02	179	P	P	15 25 14.1	0.0
ASAR	Alice Springs	19.02	179	P	Pn	15 25 14.7	-0.2
	comp=Z,0.3nm,0.3s,baz=6.2,slow=11,SNR=23						
ASAR				S	Sn	15 28 43.0	-4.4
	comp=Z,0.1nm,0.3s,baz=356,slow=26,SNR=4.5						
ASAR	Alice Springs	19.02	179	P	Pn	15 25 14.8	-0.1
CTA	Charters Tower	19.77	142	P	P	15 25 23.6	+1.2
	comp=Z,0.1nm,0.3s,baz=315,slow=12,SNR=2.8						
CMAR	Chiang Mai Arr	41.09	305	P	P	15 28 35.6	-0.4
	comp=Z,0.2nm,0.5s,baz=115,slow=7.5,SNR=4.4						
MKAR	Makanchi Array	68.22	325	P	P	15 31 51.3	-1.2
	comp=Z,0.2nm,0.5s,baz=120,slow=8.8,SNR=3.8						
KSH	Kashi	68.70	315	P	P	15 31 56.3	+0.4
KSH				sP	pP	15 32 03.4	+1.1
KSH				PP	PP	15 34 30.2	+2.4
KSH				PcS		15 36 25.5	
KSH				S	S	15 40 58.8	+0.6
KSH				ScS	SKiKP	15 41 51.6	+3.9
KURBB	Kurchatov Arra	72.36	327	P	P	15 32 18.7	+1.0
	comp=Z,0.2nm,0.5s,baz=126,slow=6.3,SNR=3.8						

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*NIED **11** 15:30:00, 44°.10N×148°.10E, h53^{km}, Mw3.9 Best double couple: M$_0$7.33000×10^{14} NP1:φ$_s$36.00000°, δ81.00000°, λ74.00000°. NP2:φ$_s$278.00000°, δ19.00000°, λ151.00000°.*
*MOS **11** 15:30:31.9±0.9, 44°.45N×148°.28E, h66^{km}, mb4.1/8, Error ellipse: s-maj=9.8km s-min=7.6km az=51.4*
MOS Felt (II-III) at Gornyy, Goryachiye Klyuchi.
*SKHL **11** 15:30:32.7±0.4, 44°.42N×148°.36E, h65^{km}±4^{km}, mb4.9/13*
SKHL Felt (III) at Gornyy, Goryachie Klyuchi; (II) at Kuril'sk, Kitovyy, Reidovo.
*JMA **11** 15:30:32.2±0.3, 44°.12N×148°.09E, h0^{km}, M4.7*
*IDC **11** 15:30:34.5±2.2, 44°.40N×148°.17E, h84^{km}±20^{km}, mb3.4/14, mb1 3.6/20, mb1mx3.5/52, mbtmp3.7/20, MS2.7/5, Ms1 2.7/5, ms1mx2.6/35, Error ellipse: s-maj=19.2km s-min=12.8km az=134.0*
ISC 11 15:30:32.2±1.1, **44°.36N**±0°.05×**148°.39E**±0°.07, **h53**^{km}±10^{km}, **n95**, σ**1^{s}.48**/108, **mb3.7**/16, **6C-7D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.94	337	*i* P	Pn	15 30 48.3	-0.9
KUR				AMB	AMB	15 30 49.0	
	2µm,0.2s						
KUR				*i* S	Sn	15 31 00.0	-1.7
KUR				A	A	15 31 00.0	
	4µm,0.3s						
KUR				A	A	15 31 00.0	
	6µm,0.3s						
KUR				A	A	15 31 00.0	
	6µm,0.3s						
KUR	Kuril'sk	0.94	337	*d i*PN	Pn	15 30 48.3	-0.9
KUR				*i* S	Sn	15 31 00.0	-1.7
KUR				pmax	pmax		
	comp=N,770nm,0.3s						
KUR				pmax	pmax		
	comp=E,601nm,0.3s						
KUR				pmax	pmax		
	comp=Z,2µm,0.3s						
KUR				smax	smax		
	comp=N,4µm,0.2s						
KUR				smax	smax		
	comp=E,6µm,0.2s						
SHO	Shikotan	1.22	247	*i* P	Pn	15 30 52.9	0.0
SHO				AMB	AMB	15 30 54.0	
	comp=E,2µm,0.2s						
SHO				*i* S	Sn	15 31 06.9	-1.5
SHO				A	A	15 31 12.0	
	comp=E,1µm,0.2s						
SHO				A	A	15 31 12.0	
	comp=E,2µm,0.2s						
SHO	Shikotan	1.22	247	*d i*PN	Pn	15 30 52.9	0.0
SHO				*i* S	Sn	15 31 06.9	-1.5
SHO				pmax	pmax		
	comp=Z,182µm,0.3s						
SHO				pmax	pmax		
	comp=E,132µm,0.1s						
SHO				smax	smax		
	comp=N,1µm,0.2s						
SHO				smax	smax		
	comp=E,2µm,0.2s						
YUK	Yuzh-Kuril'sk	1.84	261	*i* P	Pn	15 31 01.8	+0.4
YUK				AMB	AMB	15 31 03.0	
	comp=E,490nm,0.2s						
YUK				AMB	AMB	15 31 03.0	
	comp=E,470nm,0.2s						
YUK				AMB	AMB	15 31 03.0	
	comp=E,1µm,0.2s						
YUK				*i* S	Sn	15 31 23.2	-0.3
YUK				A	A	15 31 25.0	
	comp=E,2µm,0.3s						
YUK				A	A	15 31 25.0	
	comp=E,2µm,0.3s						
YUK	Yuzh-Kuril'sk	1.84	261	*de*PN	Pn	15 31 01.8	+0.4
GRPR	Tuman	1.92	260	*e*P	Pn	15 31 02.4	+0.1
GRPR				AMB	AMB	15 31 05.0	
	comp=E,570nm,0.2s						
GRPR				*i* S	Sn	15 31 24.4	-0.9
GRPR				A	A	15 31 30.0	
	comp=E,2µm,0.4s						
GRPR				A	A	15 31 30.0	
	comp=E,3µm,0.4s						
GRPR	Tuman	1.92	260	*e*PN	Pn	15 31 02.4	+0.1
GRPR				*i* S	Sn	15 31 24.4	-0.9
GRPR				pmax	pmax		
	comp=Z,567nm,0.3s						
GRPR				pmax	pmax		
	comp=N,447nm,0.2s						
GRPR				smax	smax		
	comp=N,2µm,0.3s						
GRPR				smax	smax		
	comp=E,3µm,0.2s						
NEM2	Nemuro 2	2.16	243	P	Pn	15 31 05.7	+0.1
NEM2				*e*S	Sn	15 31 30.2	-0.9
GLVR	Golovnino	2.16	254	*e*P	Pn	15 31 06.5	+0.9
GLVR				AMB	AMB	15 31 11.0	
	comp=E,430nm,0.2s						
GLVR				*i* S	Sn	15 31 31.7	+0.5
GLVR				A	A	15 31 39.0	
	comp=E,3µm,0.5s						
GLVR				A	A	15 31 39.0	
	comp=E,3µm,0.5s						
GLVR	Golovnino	2.16	254	*e*PN	Pn	15 31 06.5	+0.9
GLVR				*i* S	Sn	15 31 31.7	+0.5
GLVR				pmax	pmax		
	comp=N,191nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,432nm,0.1s						
GLVR				smax	smax		
	comp=N,3µm,0.2s						
GLVR				smax	smax		
	comp=E,3µm,0.3s						
NMR	Nemuro--Hokkai	2.16	244	*i* P	Pn	15 31 05.8	+0.1
NMR				*i* S	Sn	15 31 29.9	-1.4
NMR	Nemuro--Hokkai	2.16	244	⇓*i*PN	Pn	15 31 05.8	+0.1
NMR				*i* S	Sn	15 31 29.9	-1.4
JRA	Rausu	2.39	261	P	Pn	15 31 10.2	+1.4
JRA				*e*S	Sn	15 31 38.2	+1.4
JNSB	Nemuroshibetsu	2.51	258	P	Pn	15 31 11.9	+1.5
JKHN	Kushirohamanak	2.67	242	P	Pn	15 31 13.2	+0.6
JKHN				*e*S	Sn	15 31 43.3	-0.3
JNK	Nakash	2.76	255	P	Pn	15 31 15.1	+1.2
JNK				*e*S	Sn	15 31 46.1	+0.1
JAK	Akkeshi	3.00	244	P	Pn	15 31 17.8	+0.6
JAK				*e*S	Sn	15 31 51.1	-0.9
JTKR	Abashiri--Toko	3.25	265	P	Pn	15 31 21.7	+1.2
JAR	Ashorobuto	3.51	254	P	Pn	15 31 26.0	+1.9
JAR				*e*S	Sn	15 32 06.3	+2.0
JCH	Churui	4.05	246	*e*S	Sn	15 32 17.4	-0.3
JKK2	Kamakawa 2	4.09	265	P	Pn	15 31 34.6	+2.5
JKA	Kamikawa-asahi	4.17	269	*e*P	Pn	15 31 34.8	+1.7
ASAJ	Asahikawa	4.17	269	P	Pn	15 31 34.8	+1.6
	comp=E,4.0nm,0.3s,baz=69,slow=25,SNR=51						
ASAJ				LR	LR	15 33 05.3	
	comp=E,99nm,18.5s,baz=92,slow=38						
JSE	Soyaes	4.18	280	P	Pn	15 31 34.4	+1.1
JFR	Furan	4.36	256	P	Pn	15 31 39.1	+3.2
ERM	Erimo	4.49	240	*ce*PN	Pn	15 31 40.4	+2.9
JNBK	Urakawa-nobuka	4.61	245	P	Pn	15 31 40.1	+0.9
JWK2	Keihoku	4.71	284	P	Pn	15 31 43.0	+2.4
YSS	Yuzh-Sakhalins	4.72	305	*e*P	Pn	15 31 41.1	+0.4
YSS				AMB	AMB	15 31 41.5	
	comp=E,30nm,0.2s						
YSS				*e*S	Sn	15 32 31.7	-2.4
YSS				A	A	15 32 34.7	
	comp=E,20nm,1.0s						
YSS	Yuzh-Sakhalins	4.72	305	⇓*e*PN	Pn	15 31 41.1	+0.4
YSS				*e*S	Sn	15 32 31.2	-2.9
YSS				pmax	pmax		
	comp=Z,30nm,0.6s						
YSS				smax	smax		
	comp=N,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
JRBN	Rebuntou	5.31	284	P	Pn	15 31 50.2	+1.4
JKB	Kayabe	5.92	248	P	Pn	15 31 58.8	+1.6
JKB				*e*S	Sn	15 33 02.8	-0.9
JOT	Ohata	6.16	244	P	Pn	15 32 01.3	+0.8
JOT				*e*S	Sn	15 33 06.9	-2.6
TYV	Tymovskoe	7.57	331	*e*P	Pn	15 32 21.6	+1.9
TYV				AMB	AMB	15 32 22.1	
	comp=Z,5.0nm,0.4s						
TYV	Tymovskoe	7.57	331	*e*PN	Pn	15 32 21.6	+1.9
TYV				pmax	pmax		
	comp=Z,5.0nm,0.4s						
SKR	Severo-Kuril's	8.20	37	*e*P	Pn	15 32 29.6	+1.2
SKR				AMB	AMB	15 32 30.9	
	comp=Z,20nm,0.9s						
SKR	Severo-Kuril's	8.20	37	⇓*e*PN	Pn	15 32 31.2	+2.8
NKL	Nikolayevsk	10.15	333	*e*P	Pn	15 32 56.0	+1.0
PETK	Petropavlovsk-	10.69	32	P	Pn	15 33 04.0	+1.6
	comp=Z,0.3nm,0.3s,baz=204,slow=12,SNR=13						
PETK				LR	LR	15 37 07.2	
	comp=Z,32nm,18.1s,baz=246,slow=37						
PETK	Petropavlovsk-	10.69	32	PN	Pn	15 33 04.0	+1.6
PET	Petropavlovsk	11.00	34	*e*P	Pn	15 33 05.6	-1.0
PET				AMB	AMB	15 33 06.1	
	comp=Z,7.0nm,0.4s						
MAJO	Matsushiro	11.00	228	⇑*e*PN	Pn	15 33 08.6	+1.8
MJAR	Matsushiro Arr	11.00	228	P	Pn	15 33 07.7	+0.9
	comp=Z,0.1nm,0.3s,baz=20,slow=16,SNR=3.9						
MJAR				LR	LR	15 36 13.7	
	comp=Z,8.5nm,21.9s,baz=25,slow=31						
USA0B	Ussuriysk Arra	11.76	275	⇓*e*PN	Pn	15 33 16.1	-1.0
USRK	Ussuriysk Ar.	11.76	275	P	Pn	15 33 17.9	+0.8
	baz=79,slow=13,SNR=6.0						
KLR	Kul'dur	12.39	299	P	Pn	15 33 26.4	+0.7
	comp=Z,0.3nm,0.3s,baz=105,slow=18,SNR=5.3						
KLR	Kul'dur	12.39	299	*e*P	Pn	15 33 25.6	0.0
KLR	Kul'dur	12.39	299	⇑*e*PN	Pn	15 33 25.6	0.0
EKMR	Ekimchan	13.38	316	*e*P	Pn	15 33 39.0	-0.2
EKMR				AMB	AMB	15 33 43.0	
	comp=Z,10.0nm,1.0s						
KSRS	Korea Array	16.92	253	LR	LR	15 40 02.7	
	comp=Z,30nm,20.3s,baz=335,slow=34						
SEY	Seymchan	18.75	6	P	P	15 34 45.3	-1.1
	comp=Z,0.1nm,0.3s,baz=247,slow=21,SNR=7.6						
YAK	Yakutsk	20.80	335	P	P	15 35 07.1	-1.7
	comp=Z,1.5nm,0.2s,baz=143,slow=3.5,SNR=6.4						
YAK	Yakutsk	20.80	335	*e*P	Pn	15 35 12.7	+1.1
TIXI	Tiksi	28.95	347	*e*P	P	15 36 29.9	+4.0
TIXI	Tiksi	28.95	347	⇑*e*P	P	15 36 29.9	+4.0
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.1s						
H11N2	WAKE ISLAND Hy	29.01	142	T	T	16 07 18.0	
	baz=332,slow=75,SNR=245						
H11N1	WAKE ISLAND Hy	29.02	142	T	T	16 07 14.1	
	baz=332,slow=75,SNR=208						
H11N3	WAKE ISLAND Hy	29.02	142	T	T	16 07 19.3	
	baz=332,slow=75,SNR=238						
SONM	Songino Array	29.06	292	P	P	15 36 24.4	-3.0
	comp=Z,0.3nm,0.3s,baz=89,slow=8.5,SNR=5.3						
SONM	Songino Array	29.06	292	*e*P	P	15 36 27.6	+0.2
H11S1	WAKE ISLAND Hy	30.00	143	T	T	16 08 30.4	
	baz=333,slow=76,SNR=521						
H11S3	WAKE ISLAND Hy	30.01	143	T	T	16 08 30.8	
	baz=333,slow=76,SNR=336						
H11S2	WAKE ISLAND Hy	30.02	143	T	T	16 08 36.7	
	baz=333,slow=76,SNR=334						
ILAR	Eielson Array	40.47	37	P	P	15 38 04.3	-0.8
	comp=Z,0.5nm,0.5s,baz=266,slow=8.2,SNR=6.7						
ILAR	Eielson Array	40.47	37	*e*P	P	15 38 05.7	+0.5
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	Zalesovo Beam	41.34	307	PcP	PcP	15 40 08.6	-1.3
	comp=Z,1.0nm,0.3s,baz=90,slow=1.9,SNR=4.4						
MKAR	Makanchi Array	45.09	298	P	P	15 38 41.2	-1.7
	comp=Z,0.4nm,0.6s,baz=77,slow=9.0,SNR=8.7						
MKAR				PcP	PcP	15 40 21.9	-0.8
	comp=Z,0.5nm,0.5s,baz=68,slow=4.0,SNR=6.7						
MKAR				LR	LR	15 57 10.4	
	comp=Z,58nm,18.9s,baz=358,slow=36						
MKAR	Makanchi Array	45.09	298	*e*P	P	15 38 42.7	-0.2
MKAR	Makanchi Array	45.09	298	*e*P	P	15 38 42.7	-0.2
INK	Inuvik	45.42	31	P	P	15 38 45.5	+0.5
	comp=Z,0.6nm,0.4s,baz=300,slow=3.5,SNR=5.1						
CMAR	Chiang Mai Arr	48.55	254	P	P	15 39 08.5	-1.7
	comp=Z,0.7nm,0.8s,baz=40,slow=7.3,SNR=6.0						
CMAR	Chiang Mai Arr	48.55	254	*e*P	P	15 39 11.8	+1.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TAPN	Taplejung	50.88	272	*e*P	P	15 39 28.7	+0.5
JIRN	Jiri	51.79	273	*e*P	P	15 39 35.3	+0.2
	comp=Z,7.5nm,0.3s						
GUN	Gumba	51.87	274	*e*P	P	15 39 35.6	0.0
	comp=Z,10nm,0.4s						
RAMN	Ramite	51.92	272	*e*P	P	15 39 35.8	-0.1
PKI	Pulchoki	52.40	274	*e*P	P	15 39 39.2	-0.4
	comp=Z,5.3nm,0.7s						
PKIN	Phulchoki	52.41	274	*e*P	P	15 39 38.9	-0.6
	comp=Z,4.1nm,0.6s						
DMN	Daman	52.60	274	*e*P	P	15 39 41.2	+0.3
GKN	Gorkha	52.70	275	*e*P	P	15 39 41.4	-0.2
	comp=Z,4.8nm,0.2s						
DANN	Dangsing	53.12	275	*e*P	P	15 39 44.9	+0.1
	comp=Z,7.3nm,0.3s						
ARU	Arti	54.51	317	⇑*e*P	P	15 39 58.3	+4.2
ARU				pmax	pmax		
	comp=Z,2.0nm,0.9s						
YKA	Yellowknife Ar	54.80	34	P	P	15 39 55.1	-1.0
	comp=Z,0.6nm,0.6s,baz=298,slow=6.5,SNR=12						
FINES	FINESS Array B	64.73	333	P	P	15 41 02.1	-2.3
	comp=Z,3.8nm,1.1s,baz=44,slow=8.5,SNR=7.8						
FINES	FINESS Array B	64.73	333	*e*P	P	15 41 04.0	-0.4
FINES				pmax	pmax		
	comp=Z,4.0nm,1.1s						
WRAB	Tennant Creek	65.26	195	⇑*e*P	P	15 41 13.5	+5.3
WRAB				pmax	pmax		
	comp=Z,4.0nm,1.8s						
WRA	Warramunga Arr	65.27	195	P	P	15 41 05.3	-3.0
	comp=Z,0.7nm,0.8s,baz=17,slow=7.2,SNR=4.7						
NVAR	Mina Array Bea	66.50	59	P	P	15 41 16.1	-0.4
	comp=Z,0.2nm,0.5s,baz=308,slow=7.3,SNR=4.4						
PDAR	Pinedale Array	68.83	51	P	P	15 41 31.4	+0.2
	comp=Z,0.2nm,0.4s,baz=333,slow=1.7,SNR=3.5						
ASAR	Alice Springs	68.98	194	P	P	15 41 31.1	-0.7
	comp=Z,0.5nm,0.6s,baz=15,slow=6.3,SNR=11						
NOA	NORSAR Array B	69.35	339	P	P	15 41 31.7	-2.0
	comp=Z,0.6nm,0.6s,baz=38,slow=5.6,SNR=3.0						
KIV	Kislovodsk	70.01	312	*e*P	P	15 41 38.4	+0.2
KIV	Kislovodsk	70.01	312	*e*P	P	15 41 38.4	+0.2
TXAR	Lajitas Array	81.57	57	P	P	15 42 44.9	+0.5
	comp=Z,0.5nm,0.5s,baz=305,slow=3.8,SNR=9.2						

DJA 11 15:45:00.1±0.3, **9°S**±4°×**11°9E**±°, **h126**^{km}±4^{km}, **M3.6**/13, **mb3.6**/2, **MLv3.6**/13, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.82	256	P	Pn	15 45 21.9	+0.9
PLAI				S	Sn	15 45 38.4	+1.6
WBSI	Waikabubak, Su	1.28	142	P	Pn	15 45 26.6	+1.0
WBSI				S	Sn	15 45 45.4	+0.4
WSI	Waingapu	1.98	121	P	Pn	15 45 34.3	+0.6
WSI				S	Sn	15 46 00.1	+0.7
BASI	Baing, Sumba	2.52	129	P	Pn	15 45 38.4	-2.1
BASI				S	Sn	15 46 12.1	+0.6
EDFI	Ende, Flores	3.08	92	P	Pn	15 45 48.7	+1.0
EDFI				S	Sn	15 46 24.7	+0.3
DNP	Denpasar	3.33	269	P	Pn	15 45 52.6	+1.7
DNP				S	Sn	15 46 32.5	+2.3
SRBI	Singaraja	3.38	279	P	Pn	15 45 51.1	-0.4
IGBI	Denpasar	3.40	267	P	Pn	15 45 53.2	+1.4
IGBI				S	Sn	15 46 32.1	+0.3
MMRI	Maumere	3.62	90	P	Pn	15 45 55.6	+0.9
BKSI	Bulukumba	3.63	25	P	Pn	15 45 54.3	-0.5
JAGI	Jajag, Banyuwa	4.38	272	P	Pn	15 46 03.3	-1.6
JAGI				S	Sn	15 46 53.8	-1.4
SOEI	Soe	5.72	102	P	Pn	15 46 23.6	+0.6
	0.1nm22nm,0.8s						
SOEI				S	Sn	15 47 27.7	0.0
	0.1nm22nm,0.8s						

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*NEIC **11** 15:55:43.0±1.0, 22°.7N±0°.2×11°.9W±0°.3, h15^{km}±8^{km}, mb4.0/3, Error ellipse: s-maj=47.4km s-min=21.9km az=57.0*
*IDC **11** 15:55:42.3±3.0, 22°.84N×11°.79W, h0^{km}, mb3.7/3, mb1 3.8/5, mb1mx3.4/47, mbtmp3.7/5, ML3.4/2, Error ellipse: s-maj=103.7km s-min=31.5km az=85.0*
ISC 11 15:55:43.3±2.3, **22°.8N**±0°.1×**11°.8W**±0°.4, **h10**^{km}, **n14**, σ**0^{s}.64**/12, **mb3.9**/4, **Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFS	San Fernando	14.43	18	P	P	15 59 14.1	-0.5
TORD	Torodi Ar. Bea	16.04	125	Pn	Pn	15 59 29.6	+0.4
	0.1nm,0.3s,baz=314,slow=13,SNR=3.5						
TORD	Torodi Ar. Bea	16.04	125	P	P	15 59 31.8	-0.8
DBIC	Dimbokro	17.40	156	P	Pn	15 59 46.3	-0.1
	0.2nm,0.3s,baz=337,slow=15,SNR=3.0						
DBIC	Dimbokro	17.40	156	IAmb	IAmb	16 00 08.4	
	comp=Z,11nm,1.2s						
I48TN	KESRA INFRASON	22.45	50	*i*		18 05 50.0	
	baz=235,slow=314,SNR=3.3						
GERES	GERESS Array B	32.90	32	P	P	16 02 17.8	0.0
	comp=Z,0.5nm,0.7s,baz=231,slow=8.4,SNR=4.3						
FINES	FINESS Array B	46.52	24	P	P	16 04 10.4	-0.2
	comp=Z,1.6nm,0.8s,baz=220,slow=7.4,SNR=4.8						
MK31	Makanchi Array	76.41	45	P	P	16 07 33.8	+0.7
MK31				IAmb	IAmb	16 09 55.1	
	comp=Z,3.3nm,1.5s						
MKAR	Makanchi Array	76.41	45	P	P	16 07 34.3	+1.2
	comp=Z,0.4nm,0.5s,baz=286,slow=6.5,SNR=7.2						
MKAR	Makanchi Array	76.41	45	P	P	16 07 33.8	+0.7
WRA	Warramunga Arr	148.39	91	PKPbc	PKPbc	16 15 31.1	+0.2
	comp=Z,0.5nm,0.6s,baz=290,slow=2.5,SNR=5.0						
ASAR	Alice Springs	148.53	98	PKPbc	PKPbc	16 15 30.9	-0.2
	comp=Z,0.6nm,0.8s,baz=286,slow=1.6,SNR=9.1						
ASAR	Alice Springs	148.53	98		PKPbc	16 15 30.6	-0.6

IDC 11 16:02:12.0±60.0, **15°.96S**×**172°.56W**, **h0**^{km}, **mb4.2**/3, **mb1 4.4**/3, **mb1mx3.7**/21, **mbtmp4.2**/3, **Error ellipse: s-maj=1164.0km s-min=200.4km az=79.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	44.47	241	P	P	16 10 25.6	+0.3
	1.0nm,0.5s,baz=107,slow=11,SNR=2.9						
WRA	Warramunga Arr	50.51	257	P	P	16 11 12.2	-0.2
	0.8nm,0.4s,baz=96,slow=7.0,SNR=25						
ASAR	Alice Springs	50.72	252	P	P	16 11 13.7	-0.3
	6.6nm,0.5s,baz=89,slow=7.8,SNR=215						

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*NEIC **11** 16:13:53.9±1.6, 20°.7S±0°.1×178°.6W±0°.1, h585^{km}±8^{km}, mb4.7/48, Error ellipse: s-maj=17.2km s-min=15.0km az=179.0*
*IDC **11** 16:13:56.6±2.1, 20°.74S×178°.73W, h613^{km}±26^{km}, mb3.5/12, mb1 3.7/13, mb1mx3.5/23, mbtmp4.4/13, Error ellipse: s-maj=19.7km s-min=11.0km az=156.0*
ISC 11 16:13:53.7±0.5, **20°.74S**±0°.06×**178°.51W**±0°.07, **h587**^{km}, **n106**, σ**1^{s}.56**/113, **mb4.6**/31, **2D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.42	312	P	P	16 15 24.3	+2.8
NIUE	Niue	8.24	80	P	P	16 15 55.8	+0.8
GLKZ	Green Lake	8.50	177	P	P	16 15 55.9	-1.5
GLKZ				S	S	16 17 39.4	+0.7
AFI	Afiamalu	9.35	44	P	P	16 16 04.2	-1.8
	9.4nm,0.3s,baz=230,slow=8.2,SNR=12						
AFI				S	S	16 17 49.5	-4.9
	3.3nm,0.3s,baz=31,slow=23,SNR=4.7						
DZM	Mont Dzumac	14.08	262	P	P	16 16 53.2	-0.5
	0.8nm,0.3s,baz=112,slow=17,SNR=7.3						
DZM	Mont Dzumac	14.08	262	P	P	16 16 53.6	-0.2
OUZ	Omahuta	16.01	204	P	P	16 17 13.9	+2.3
OUZ	Omahuta	16.01	204	P	P	16 17 13.1	+1.5
MXZ	Matakaoa Point	16.99	189	P	P	16 17 20.6	+0.1
MXZ				IAmb	IAmb	16 17 37.9	
	comp=Z,24nm,0.9s						
MXZ	Matakaoa Point	16.99	189	P	P	16 17 19.7	-0.8
WMGZ	Waiomatatini S	17.23	188	P	P	16 17 22.0	-0.7
HAZ	Te Kaha	17.26	190	P	P	16 17 21.6	-1.3
HAZ				S	S	16 20 08.0	-5.1
PKGZ	Pakihiroa	17.34	189	P	P	16 17 22.7	-1.1
RUGZ	Raukumara Rang	17.48	190	P	P	16 17 24.4	-0.7
RUGZ				S	S	16 20 20.2	+3.1
PUZ	Puketiti	17.50	189	P	P	16 17 24.4	-0.8
TGRZ	Tauranga	17.53	194	P	P	16 17 26.6	+1.2
TWGZ	Tauwhareparae	17.64	189	P	P	16 17 25.5	-1.0
TWGZ				S	S	16 20 21.2	+1.7
TOZ	Tahuroa Road	17.71	196	P	P	16 17 28.2	+1.1
KMRZ	Kaimai	17.71	195	P	P	16 17 28.6	+1.4
MWZ	Matawai	17.87	190	P	P	16 17 26.3	-2.2

URZ	Urewera	17.87	191	P	P	16 17 25.7	-2.8
	comp=Z,2.0nm,0.3s,baz=267,slow=4.5,SNR=25						
URZ				S	S	16 20 23.2	+0.2
	comp=Z,0.5nm,0.3s,baz=233,slow=20,SNR=6.2						
URZ	Urewera	17.87	191	P	P	16 17 26.0	-2.5
URZ				IAmb	IAmb	16 17 27.6	
	comp=Z,22nm,0.7s						
URZ	Urewera	17.87	191	P	P	16 17 26.3	-2.2
NGRZ	Ngongotaha	17.90	194	P	P	16 17 29.4	+0.5
UTU	Utuhina	17.97	194	P	P	16 17 30.2	+0.7
MUGZ	Murupara	18.14	192	P	P	16 17 29.5	-1.5
RIGZ	Rimuhau	18.19	189	P	P	16 17 30.9	-0.6
TLZ	Tolley Road	18.27	195	P	P	16 17 33.8	+1.6
MHGZ	Mahia Peninsul	18.61	189	P	P	16 17 35.2	0.0
HIZ	Hauiti	18.62	196	P	P	16 17 36.9	+1.6
HIZ				IAmb	IAmb	16 18 12.1	
	comp=Z,44nm,1.2s						
BKZ	Black Stump Fm	18.86	192	P	P	16 17 34.5	-3.2
BKZ				IAmb	IAmb	16 17 54.6	
	comp=Z,32nm,1.6s						
BFZ	Birch Farm	20.38	192	P	P	16 17 49.2	-2.0
MSWZ	Moikau Station	21.28	193	P	P	16 17 58.0	-1.4
SNZO	South Karori	21.30	194	P	P	16 17 57.8	-1.7
BHW	Baring Head	21.36	194	P	P	16 17 58.4	-1.6
QRZ	Quartz Range	21.43	199	P	P	16 18 00.2	-0.5
PLWZ	Palliser	21.43	193	P	P	16 17 58.5	-2.2
NNZ	Nelson	21.55	197	P	P	16 17 59.9	-1.8
TUWZ	Tuamarina	21.60	196	P	P	16 17 59.9	-2.3
BSWZ	Blackbirch Sta	21.88	195	P	P	16 18 04.5	-0.3
THZ	Tophouse	22.18	197	P	P	16 18 06.2	-1.3
THZ				IAmb	IAmb	16 18 08.1	
	comp=Z,11nm,0.6s						
KHZ	Kahutara	22.63	195	P	P	16 18 09.2	-2.1
KHZ				IAmb	IAmb	16 18 10.3	
	comp=Z,11nm,0.7s						
LTZ	Lake Taylor	23.30	197	P	P	16 18 14.7	-2.7
LTZ				IAmb	IAmb	16 18 18.1	
	comp=Z,10.0nm,0.5s						
OXZ	Oxford	23.87	197	P	P	16 18 20.2	-2.2
OXZ				IAmb	IAmb	16 18 21.1	
	comp=Z,14nm,0.8s						
MQZ	McQueen’s Vall	24.06	196	P	P	16 18 22.0	-2.0
MQZ				IAmb	IAmb	16 18 40.6	
	comp=Z,27nm,1.5s						
RPZ	Rata Peaks	24.51	198	P	P	16 18 27.4	-0.7
	comp=Z,4.4nm,0.5s,baz=34,slow=1.6,SNR=10						
RPZ	Rata Peaks	24.51	198	P	P	16 18 26.0	-2.1
RPZ				IAmb	IAmb	16 19 10.0	
	comp=Z,57nm,1.9s						
FOZ	Fox Glacier	24.73	201	P	P	16 18 28.7	-1.3
FOZ				IAmb	IAmb	16 18 30.9	
	comp=Z,14nm,1.1s						
LBZ	Lake Benmore	25.38	199	P	P	16 18 34.7	-1.0
LBZ				IAmb	IAmb	16 19 08.8	
	comp=Z,65nm,1.9s						
WKZ	Wanaka	26.15	200	P	P	16 18 40.9	-1.6
DCZ	Deep Cove	27.34	202	P	P	16 18 52.7	-0.2
DCZ				IAmb	IAmb	16 19 42.6	
	comp=Z,40nm,1.4s						
WHZ	Wether Hill Ro	27.44	201	P	P	16 18 53.7	0.0
EIDS	Eidsvold	28.32	255	P	P	16 19 01.7	-0.1
ARMA	Armidale	28.54	244	P	P	16 19 04.3	+0.7
ARMA				IAmb	IAmb	16 19 20.5	
	comp=Z,34nm,1.6s						
CAN	Canberra	31.98	236	P	P	16 19 33.0	-0.1
CAN				IAmb	IAmb	16 20 42.2	
	comp=Z,32nm,1.5s						
CTA	Charters Tower	32.99	265	P	P	16 19 42.0	+0.2
	comp=Z,9.1nm,0.3s,baz=80,slow=12,SNR=13						
TOO	Toolangi	35.37	234	P	P	16 20 01.5	+0.1
TOO				IAmb	IAmb	16 20 12.8	
	comp=Z,24nm,1.2s						
COEN	Coen	37.12	274	P	P	16 20 16.4	+0.3
STKA	Stephens Creek	37.26	244	P	P	16 20 17.4	+0.5
	comp=Z,5.0nm,0.5s,baz=97,slow=9.7,SNR=10.0						
STKA	Stephens Creek	37.26	244	P	P	16 20 16.7	-0.2
BBOO	Buckleboo	42.02	244	P	P	16 20 54.6	-0.3
BBOO				IAmb	IAmb	16 20 55.4	
	comp=Z,11nm,0.6s						
WR0	Warramunga Arr	43.91	262	P	P	16 21 09.3	-0.5
WR0				IAmb	IAmb	16 21 10.8	
	comp=Z,16nm,1.3s						
AS31	Alice Springs	44.00	257	P	P	16 21 10.3	-0.3
ASAR	Alice Springs	44.00	257	P	P	16 21 10.6	0.0
	comp=Z,13nm,0.6s,baz=91,slow=7.5,SNR=457						
ASAR				S	S	16 26 58.3	-2.8
	comp=Z,2.5nm,0.8s,baz=96,slow=16,SNR=16						
ASAR	Alice Springs	44.00	257	P	P	16 21 10.0	-0.6
WB0	Warramunga Arr	44.08	263	P	P	16 21 10.5	-0.6
WB2	Warramunga Arr	44.09	262	P	P	16 21 10.5	-0.7
WB2				IAmb	IAmb	16 21 11.5	
	comp=Z,14nm,1.0s						
WRA	Warramunga Arr	44.10	262	P	P	16 21 10.8	-0.5
	comp=Z,8.6nm,0.3s,baz=97,slow=7.7,SNR=395						
WRA				S	S	16 26 58.8	-3.6
	comp=Z,0.5nm,0.7s,baz=91,slow=13,SNR=3.5						
WRA	Warramunga Arr	44.10	262	P	P	16 21 10.3	-1.0
MTN	Manton Dam	48.69	271	P	P	16 21 45.1	-0.9
MTN				IAmb	IAmb	16 21 46.1	
	comp=Z,10nm,0.7s						
FORT	Forrest	48.76	247	P	P	16 21 45.6	-0.7
FORT				IAmb	IAmb	16 21 46.5	
	comp=Z,26nm,0.7s						
KNRA	Kununurra	50.17	267	P	P	16 21 56.6	-0.2
KNRA				IAmb	IAmb	16 22 00.7	
	comp=Z,28nm,1.6s						
FITZ	Fitzroy Crossi	52.52	263	P	P	16 22 13.7	0.0
SOEI	Soe	56.03	272	P	P	16 22 39.7	+1.1
PSA00	Pilbara Seismi	57.15	257	P	P	16 22 44.9	-1.1
VNDA	Vanda	57.63	185	P	P	16 22 49.9	+1.6
	comp=Z,1.7nm,0.7s,baz=30,slow=7.7,SNR=4.5						
VNDA	Vanda	57.63	185	P	P	16 22 49.4	+1.2
VNDA				IAmb	IAmb	16 23 50.1	
	comp=Z,59nm,1.9s						
NWAO	Narrogin (SRO)	57.84	243	P	P	16 22 50.4	-0.1
NWAO				IAmb	IAmb	16 23 37.1	
	comp=Z,45nm,1.4s						
MORW	Morawa	59.30	248	P	P	16 22 59.9	-0.5
QSPA	South Pole Qui	69.33	180	P	P	16 24 03.5	+0.4
KSM	Kuching	72.97	278	P	P	16 24 26.2	+1.0
KSM				IAmb	IAmb	16 25 36.2	
	comp=Z,47nm,1.6s						
TPUB	Ta-pu	73.71	303	P	P	16 24 28.9	-0.3
PETK	Petropavlovsk-	76.38	346	P	P	16 24 43.3	0.0
	comp=Z,4.5nm,1.0s,baz=139,slow=6.7,SNR=14						
PETK	Petropavlovsk-	76.38	346	P	P	16 24 44.4	+1.1
NVAR	Mina Array Bea	81.53	44	P	P	16 25 12.9	+1.7
	comp=Z,0.8nm,0.5s,baz=228,slow=7.7,SNR=7.0						
NVAR	Mina Array Bea	81.53	44	P	P	16 25 12.5	+1.4
PINE	Pine Mountain	83.06	38	P	P	16 25 20.4	+1.6
SYO	Syowa Base	86.39	193	⇓*e*X	P	16 25 31.0	-3.2
SYO	Syowa Base	86.39	193	⇓*i*PcP	P	16 25 35.0	+0.8
F10A	Beach Ranch, E	86.48	38	P	P	16 25 36.1	+1.0
TX31	Lajitas Ar. Si	87.58	58	P	P	16 25 41.9	+1.2
TX32	Lajitas Array	87.58	58	P	P	16 25 42.2	+1.5
TXAR	Lajitas Array	87.58	58	P	P	16 25 42.9	+2.2
	comp=Z,1.5nm,0.9s,baz=235,slow=4.4,SNR=11						
TXAR	Lajitas Array	87.58	58	P	P	16 25 42.2	+1.5
ILAR	Eielson Array	88.65	13	P	P	16 25 44.6	-0.1
	comp=Z,0.5nm,0.3s,baz=216,slow=5.2,SNR=16						
PDAR	Pinedale Array	89.46	43	P	P	16 25 50.4	+1.0
	comp=Z,0.9nm,0.7s,baz=195,slow=3.7,SNR=9.6						
PDAR	Pinedale Array	89.46	43	P	P	16 25 49.7	+0.4
CMAR	Chiang Mai Arr	89.75	290	P	P	16 25 51.8	+0.9
	comp=Z,0.7nm,0.6s,baz=134,slow=3.3,SNR=5.1						
CMAR	Chiang Mai Arr	89.75	290	P	P	16 25 52.3	+1.4
MKAR	Makanchi Array	111.02	313	PKiKP	PKiKP	16 31 20.3	-0.8
	comp=Z,0.1nm,0.4s,baz=134,slow=0.6,SNR=5.8						
MKAR	Makanchi Array	111.02	313		PKiKP	16 31 20.7	-0.4
AKASG	Malin Array Be	142.99	331	PKhKP	PKPpre	16 32 18.4	
	comp=Z,1.3nm,0.3s,baz=41,slow=4.2,SNR=9.9						
BRTR	Keskin Array B	146.65	312	PKPbc	PKPbc	16 32 30.3	-0.5
	comp=Z,0.9nm,0.7s,baz=116,slow=2.9,SNR=3.8						
BRTR	Keskin Array B	146.65	312		PKPbc	16 32 29.8	-1.0
GERES	GERESS Array B	150.30	344	PKPbc	PKPbc	16 32 39.5	0.0
	comp=Z,1.0nm,0.8s,baz=45,slow=0.4,SNR=5.4						
GERES	GERESS Array B	150.30	344		PKPbc	16 32 38.9	-0.5

IDC 11 16:53:36.5±30.0, 19°.36S×178°.35W, h0^{km}, mb3.9/4, mb1 4.1/4, mb1mx3.7/39, mbtmp3.9/4, Error ellipse: s-maj=565.0km s-min=146.0km az=87.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.00	243	P	P	17 00 55.6	-0.9
	0.9nm,0.4s,baz=80,slow=6.1,SNR=3.7						
WRA	Warramunga Arr	44.44	261	P	P	17 01 50.4	+0.7
	1.8nm,0.7s,baz=96,slow=7.7,SNR=45						
ASAR	Alice Springs	44.47	256	P	P	17 01 50.0	+0.2
	1.8nm,0.7s,baz=87,slow=8.9,SNR=29						
FITZ	Fitzroy Crossi	52.86	262	P	P	17 02 53.6	-0.8
	0.7nm,0.6s,baz=111,slow=8.6,SNR=2.2						

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*KRNET **11** 17:07:22.2±0.1, 41°.74N×79°.67E, h13^{km}, mb2.5*

*SOME **11** 17:07:22.2, 41°.92N×79°.73E, h5^{km}*

ISC 11 17:07:21.2±2.5, 41°.88N±0°.08×79°.73E±0°.07, h1^{km}±13^{km}, n18, σ1^{s}40/36, 8C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	1.16	302	⇑*i*P	Pn	17 07 44.9	+0.2
	baz=9.0						
PRZ				⇑*i*S	Sn	17 08 01.7	+0.4
	baz=9.0						
SHLS	Shalkode	1.29	351	*e*P	Pg	17 07 46.7	+0.7
	4.2nm,0.1s						
SHLS				*e*S	Sn	17 08 04.5	0.0
	8.1nm,0.2s						
UZB	Uzynbulak	1.37	338	*e*P	Pg	17 07 48.4	+0.9
	2.1nm,0.2s						
UZB				*e*S	Sg	17 08 06.9	+1.6
	4.2nm,0.1s						
KPKS	Kokpek	1.76	334	*e*P	Pg	17 07 55.3	+0.3
	4.6nm,0.1s						
KPKS				*e*S	Sg	17 08 18.9	+1.0
	12nm,0.3s						
ANVS	Anan'yevo	1.78	301	⇓*i*P	Pg	17 07 56.1	+0.8
	baz=6.0						
ANVS				⇓*i*S	Sg	17 08 20.7	+2.4
	baz=6.0						
KDJ	Kajisay	1.92	278	⇑*i*P	Pb	17 07 58.0	+0.9
	baz=83						
KDJ				⇑*i*S	Sg	17 08 23.0	+0.1
	baz=83						
KURS	Kuram	1.98	325	*e*P	Pg	17 07 59.1	0.0
	2.0nm,0.2s						
KURS				*e*S	Sg	17 08 25.9	+1.2
	4.2nm,0.4s						
MDOK	Medeo	2.36	304	*e*P	Pb	17 08 05.5	+0.9
	1.2nm,0.2s						
MDOK				*e*S	Sg	17 08 36.9	-0.3
	4.0nm,0.5s						
TNSS	Tian-Shan	2.36	300	*e*P	Pg	17 08 06.4	-0.1
	1.9nm,0.2s						
TNSS				*e*S	Sg	17 08 38.1	+0.9
	4.5nm,0.3s						
DJR	Jarkent	2.45	1	*e*P	Pb	17 08 06.8	+0.7
	0.4nm,0.1s						
DJR				*e*S	Sg	17 08 38.9	-1.1
	2.6nm,0.2s						
ULHL	Ulahol	2.63	279	⇓*i*P	Pb	17 08 08.1	-1.1
	baz=82						
ULHL				⇓*i*S	Sb	17 08 41.9	-0.1
	baz=82						
ARXS	Arharly	2.72	330	*e*P	Pg	17 08 12.1	-1.2
ARXS				*e*S	Sg	17 08 47.7	-0.8
NRN	Naryn	2.83	262	⇑*i*P	Pn	17 08 10.1	+2.2
	baz=65						
NRN				⇑*i*S	Sb	17 08 45.2	-2.8
	baz=65						
BOOM	Boomskoye usch	2.88	283	⇑*i*P	Pb	17 08 11.3	-2.2
	baz=86						
BOOM				⇑*i*S	Sb	17 08 47.3	-2.1
	baz=86						
KTBS	Karatobe	2.90	310	*e*P	Pg	17 08 15.5	-1.3
	0.6nm,0.3s						
KTBS				*e*S	Sg	17 08 53.7	-0.6
	7.0nm,0.3s						
KST	Kastek	3.02	294	*e*P	Pb	17 08 17.6	+1.7
	2.8nm,0.4s						
KST				*e*S	Sg	17 08 57.3	-1.0
	2.4nm,0.6s						
KUU	Kurty	3.21	310	*e*P	Pb	17 08 20.1	+1.2
	1.1nm,0.6s						
KUU				*e*S	Sg	17 09 01.9	-2.3
	3.1nm,0.4s						
KAPS	Kapalarasan	3.42	356	*e*P	Pg	17 08 24.8	-1.9
	0.1nm,0.1s						
KAPS				*e*S	Sg	17 09 09.0	-1.9
	1.5nm,0.3s						

TAP 11 17:34:10.5, 24°.81N×121°.57E, h79^{km}, ML2.6, 6C, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWLT	Wulai	0.07	246	*i* P	Pn	17 34 22.0	+0.1
	baz=246						
NWLT				*i* S	Sn	17 34 30.1	-0.2
	baz=246						
SLBB	Yuanshan	0.08	132	*i* P	Pn	17 34 21.2	-0.8
	baz=132						
SLBB				S	Sn	17 34 30.0	-0.3
	baz=132						
TWE	Neicheng	0.12	135	⇑*i*P	Pn	17 34 22.4	+0.4
	baz=131						
TWE				*i* S	Sn	17 34 30.9	+0.6
	baz=131						
NHDH	Xindian Distri	0.16	344	P	Pn	17 34 21.9	-0.2
	baz=344						
NHDH				S	Sn	17 34 31.1	+0.5
	baz=344						
ENTT	Nioudou	0.17	182	⇑*i*P	Pn	17 34 22.5	+0.3
	baz=179						
ENTT				*i* S	Sn	17 34 31.5	+0.9
	baz=179						
TWA	Mucha	0.17	3	*i* P	Pn	17 34 22.1	-0.1
	baz=5.0						
TWA				*i* S	Sn	17 34 31.4	+0.7
	baz=5.0						
NDT	Datong Townshi	0.21	195	⇑*i*P	Pn	17 34 22.6	+0.3
	baz=195						
NDT				*i* S	Sn	17 34 31.3	+0.4
	baz=195						
YHNB	Yeheng	0.23	233	⇑P	Pn	17 34 22.4	0.0
	baz=232						
YHNB				S	Sn	17 34 31.1	-0.1
	baz=232						
NSK	Sanguang	0.23	237	⇑*i*P	Pn	17 34 22.4	0.0
	baz=234						
NSK				*i* S	Sn	17 34 31.1	-0.1
	baz=234						
NTC	Toucheng	0.24	78	*e*S	Sn	17 34 31.4	+0.3
	baz=78						
TAP	Taipei	0.24	345	S	Sn	17 34 31.4	+0.3
	baz=346						
TIPB	Shuangxi	0.28	54	P	Pn	17 34 23.0	+0.3
	baz=54						
TIPB				S	Sn	17 34 31.9	+0.3
	baz=54						
WLTB	Daxi	0.29	279	*e*P	Pn	17 34 21.9	-0.7
	baz=279						
WLTB				S	Sn	17 34 32.5	+0.9
	baz=279						
TWC	Suao	0.32	128	⇑*i*P	Pn	17 34 23.2	+0.4
	baz=127						
TWC				*i* S	Sn	17 34 33.1	+1.2
	baz=127						
WFSB	Wu-fen Shan	0.32	36	*e*P	Pn	17 34 22.3	-0.6
	baz=35						
WFSB				*e*S	Sn	17 34 31.7	-0.3
	baz=35						
TWS1	Kuangyinshan	0.33	334	*i* P	Pn	17 34 23.2	+0.4
	baz=335						
TWS1				*i* S	Sn	17 34 32.8	+0.9
	baz=335						
YM01	YM01	0.34	360	P	Pn	17 34 23.4	+0.3
	baz=359						
YM01				*e*S	Sn	17 34 32.3	0.0
	baz=359						
YM04	YM04	0.35	355	P	Pn	17 34 23.6	+0.5
	baz=354						
YM04				S	Sn	17 34 32.0	-0.3
	baz=354						
YM10	YM10	0.35	358	*e*P	Pn	17 34 23.8	+0.6
	baz=358						
YM10				S	Sn	17 34 32.5	+0.1
	baz=358						
YM05	YM05	0.36	359	*e*P	Pn	17 34 23.1	-0.1
	baz=358						
YM05				*e*S	Sn	17 34 32.5	0.0
	baz=358						
YM11	YM11	0.36	0	*e*S	Sn	17 34 32.7	+0.1
YM03	YM03	0.37	355	*e*S	Sn	17 34 32.8	+0.1
	baz=355						
NTST	Danshui	0.37	343	S	Sn	17 34 33.5	+0.9
	baz=342						
ENA	Nanau	0.41	158	P	Pn	17 34 23.4	0.0
	baz=156						
ENA				*e*S	Sn	17 34 32.7	-0.3
	baz=156						
NNS	Nan Shan	0.41	207	P	Pn	17 34 23.9	+0.2
	baz=205						
NNS				S	Sn	17 34 33.5	+0.2
	baz=205						
NNSB	Datong	0.41	205	P	Pn	17 34 24.1	+0.4
	baz=204						
NNSB				S	Sn	17 34 33.4	+0.1
	baz=204						
NNSH	Datong	0.41	205	*e*P	Pn	17 34 24.1	+0.4
	baz=204						
NNSH				*e*S	Sn	17 34 33.4	+0.1
	baz=204						
NHW	Xinwu Township	0.52	293	*e*S	Sn	17 34 35.3	+0.7
	baz=292						
LIOB	Emei	0.53	253	*e*P	Pn	17 34 24.8	+0.3
	baz=252						
LIOB				*e*S	Sn	17 34 34.7	-0.1
	baz=252						
NSTT	Nanjuang	0.55	252	P	Pn	17 34 24.9	+0.2
	baz=251						
NSTT				S	Sn	17 34 35.2	+0.1
	baz=251						
EOS1	EOS1	0.57	117	P	Pn	17 34 25.9	+1.1
	baz=116						
ETLH	Xiulin Townshi	0.60	188	P	Pn	17 34 25.2	0.0
	baz=187						
ETLH				*e*S	Sn	17 34 36.5	+0.4
	baz=187						
NACB	Ninganchiao	0.63	178	P	Pn	17 34 24.4	-1.0
	baz=178						
NACB				S	Sn	17 34 35.9	-0.5
	baz=178						
TWT	Tachien	0.66	213	P	Pn	17 34 26.8	+0.9
	baz=214						
TWT				*e*S	Sn	17 34 37.6	+0.4
	baz=214						
TDCB	Techi	0.67	215	P	Pn	17 34 26.8	+0.8
	baz=214						
TDCB				S	Sn	17 34 38.0	+0.7
	baz=214						
WHF	Hehuan Shan	0.71	203	P	Pn	17 34 27.6	+0.8
	baz=202						
WHF				S	Sn	17 34 39.6	+0.9
	baz=202						
NMLH	Miaoli	0.76	250	*e*P	Pn	17 34 27.1	+0.4
	baz=249						
WHP	Taichung City	0.78	227	P	Pn	17 34 27.5	+0.4
	baz=227						
WHP				S	Sn	17 34 39.9	+0.6
	baz=227						
CHGB	Renai	0.83	206	P	Pn	17 34 28.9	+1.1
	baz=206						
CHGB				S	Sn	17 34 41.9	+1.4
	baz=206						
NSY	Sanyi	0.83	242	P	Pn	17 34 28.1	+0.5
	baz=241						
NSY				S	Sn	17 34 41.5	+1.1
	baz=241						
TWQ1	Liyutan	0.86	238	*i* S	Sn	17 34 41.6	+0.8
	baz=237						
OWD	Renai	0.92	203	*e*P	Pn	17 34 29.6	+0.8
	baz=203						
OWD				*e*S	Sn	17 34 42.9	+0.6
	baz=203						
DPDB	Guoxing	0.97	218	P	Pn	17 34 29.3	0.0
	baz=217						
DPDB				S	Sn	17 34 44.2	+1.1
	baz=217						
SMLT	Sun Moon Lake	1.10	214	P	Pn	17 34 30.9	0.0
	baz=213						
SMLT				S	Sn	17 34 46.7	+0.5
	baz=213						
VWDT	VWDT	1.12	201	P	Pn	17 34 32.2	+1.3
	baz=200						
VWDT				*e*S	Sn	17 34 47.6	+1.3
	baz=200						
EGFH	Guangfu	1.14	187	*e*P	Pn	17 34 31.4	+0.1
	baz=186						
SSLB	Suanglung	1.16	209	P	Pn	17 34 32.0	+0.5
	baz=209						
SSLB				*e*S	Sn	17 34 48.1	+0.8
	baz=209						
WNT	Mingjian	1.23	221	P	Pn	17 34 32.8	+0.5
	baz=220						
WNT				S	Sn	17 34 49.3	+0.5
	baz=220						
WJS	Zhushan	1.25	218	*e*P	Pn	17 34 32.8	+0.3
	baz=218						
WJS				S	Sn	17 34 49.4	+0.3
	baz=218						
WHYT	Xinyi Township	1.29	211	P	Pn	17 34 33.6	+0.5
	baz=210						
WHYT				S	Sn	17 34 51.0	+1.0
	baz=210						
EHY	Hungye	1.31	190	P	Pn	17 34 33.0	-0.5
	baz=189						
EHY				S	Sn	17 34 50.7	+0.1
	baz=189						
HGSD	Ruisui	1.31	186	*e*P	Pn	17 34 32.7	-0.8
	baz=185						
HGSD				*e*S	Sn	17 34 51.0	+0.4
	baz=185						
YUS	Yu-Shan	1.43	204	*e*P	Pn	17 34 36.2	+0.9
	baz=203						
YUS				*e*S	Sn	17 34 54.5	+0.5
	baz=203						
YULB	Yu-li	1.43	190	P	Pn	17 34 33.8	-1.1
	baz=190						
YULB				*e*S	Sn	17 34 52.5	-0.8
	baz=190						
WGK	Gukeng	1.45	220	*e*S	Sn	17 34 54.8	+1.1
	baz=219						
CHN5	Tsauling	1.46	214	P	Pn	17 34 36.2	+0.9
	baz=214						
CHN5				S	Sn	17 34 55.0	+1.0
	baz=214						
ALS	Alishan	1.47	209	*e*P	Pn	17 34 35.9	+0.2
	baz=208						
ALS				*e*S	Sn	17 34 53.3	-1.3
	baz=208						
TWF1	Yuli	1.47	190	*e*P	Pn	17 34 35.1	-0.3
	baz=189						
TWF1				*e*S	Sn	17 34 54.3	+0.1
	baz=189						
WSF	Szhu	1.69	227	*e*S	Sn	17 34 58.4	-1.1
	baz=226						
CHN4	Tsaushan	1.70	212	*e*S	Sn	17 34 59.0	-0.6
	baz=211						

TAP 11 17:34:29.0, 22°.86N×120°.63E, h19^{km}, ML1.6, 1D, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SSD	Sandimen	0.12	181	⇓*i*P	Pg	17 34 33.5	+0.5
	baz=177						
SSD				*i* S	Sg	17 34 36.6	+1.0
	baz=177						
SLGT	Liugui	0.13	5	*i* P	Pg	17 34 33.5	+0.4
	baz=5.0						
SLGT				*i* S	Sg	17 34 37.0	+1.1
	baz=5.0						
TWM1	Shoushan	0.20	258	*e*P	Pg	17 34 34.7	+0.7
	baz=257						
TWM1				*e*S	Sg	17 34 38.1	+0.7
	baz=257						
SGST	Jiashian	0.22	348	*i* P	Pb	17 34 34.0	-0.1
	baz=349						
SGST				*i* S	Sg	17 34 38.2	+0.2
	baz=349						
MASBT	Mashibuluo	0.25	180	P	Pb	17 34 35.3	+0.5
	baz=180						
MASBT				S	Sg	17 34 39.7	+1.0
	baz=180						
SNJT	Kaohsiung City	0.30	248	*e*S	Sb	17 34 41.5	+1.2

	baz=248						
STYT	**Tauyuan**	**0.32**	**21**	*i* P	Pb	17 34 36.6	+0.4
	baz=22						
STYT				*i* S	Sb	17 34 42.5	+1.5
	baz=22						
CHN1	**Nanshi**	**0.33**	**343**	*i* P	Pb	17 34 36.8	+0.3
	baz=343						
CHN1				*i* S	Sb	17 34 42.8	+1.3
	baz=343						
SNST	**Tainan City**	**0.38**	**340**	P	Pb	17 34 37.6	+0.3
	baz=340						
SNST				S	Sb	17 34 43.9	+1.1
	baz=340						
WTP	**Ta-pu**	**0.38**	**357**	*i* P	Pb	17 34 37.5	+0.2
	baz=358						
WTP				*i* S	Sb	17 34 43.9	+1.0
	baz=358						
SSPT	**Xinbi**	**0.38**	**189**	*e*P	Pb	17 34 37.4	+0.1
	baz=189						
ECL	**Taimali**	**0.40**	**132**	*i* P	Pb	17 34 38.2	+0.6
	baz=131						
ECL				*i* S	Sb	17 34 44.4	+1.0
	baz=131						
WSSB	**Gushan**	**0.41**	**237**	*e*P	Pb	17 34 38.5	+0.8
	baz=237						
WSSB				*e*S	Sb	17 34 44.7	+1.0
	baz=237						
TAI1	**Yung-k'ang**	**0.41**	**295**	*e*P	Pb	17 34 38.0	+0.2
	baz=295						
TWGBT	**Beinan**	**0.41**	**96**	*e*P	Pb	17 34 38.5	+0.7
	baz=96						
TWGBT				*e*S	Sb	17 34 44.8	+1.0
	baz=96						
TWK	**Hsinying**	**0.42**	**341**	*i* P	Pb	17 34 38.5	+0.5
	baz=342						
TWK				*i* S	Sb	17 34 44.7	+0.6
	baz=342						
TPUB	**Ta-pu**	**0.43**	**359**	P	Pg	17 34 37.9	-0.1
	baz=359						
TPUB				S	Sb	17 34 45.7	+1.2
	baz=359						
ELDTW	**Lidau**	**0.48**	**47**	*e*P	Pg	17 34 38.7	-0.1
	baz=197						
ELDTW	**Lidau**	**0.48**	**47**	*i* P	Pg	17 34 38.7	-0.1
	baz=48						
ELDTW				*i* S	Sb	17 34 46.8	+1.1
	baz=48						
CHN4	**Tsaushan**	**0.49**	**356**	*i* P	Pb	17 34 39.1	+0.1
	baz=355						
CHN4				*i* S	Sb	17 34 46.9	+1.0
	baz=355						
CHN4	**Tsaushan**	**0.49**	**356**	P	Pb	17 34 39.4	+0.4
	baz=211						
TTN	**Taitung**	**0.49**	**103**	*e*P	Pb	17 34 39.8	+0.8
	baz=103						
TTN				*e*S	Sb	17 34 47.0	+1.2
	baz=103						
SCZT	**Fangliau**	**0.49**	**182**	P	Pb	17 34 40.0	+0.9
	baz=180						
SCZT				*e*S	Sb	17 34 47.0	+1.1
	baz=180						
SCLT	**Jiali**	**0.51**	**307**	*e*S	Sb	17 34 46.8	+0.4
	baz=307						
EAST	**Anshuo**	**0.52**	**158**	*i* P	Pb	17 34 40.3	+0.8
	baz=156						
EAST				S	Sb	17 34 48.0	+1.3
	baz=156						
CHN8	**Yiju**	**0.62**	**321**	*e*S	Sg	17 34 50.2	+0.6
	baz=321						
FULB	**Fuli**	**0.69**	**61**	*e*P	Pn	17 34 43.9	0.0
	baz=61						

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*BJI **11** 17:41:57.5±0.0, 0°.50N×27°.00W, h10^{km}, mb5.3/2, Ms5.2/5, Ms7 4.9/6*

*NEIC **11** 17:42:01.1±1.9, 0°.59N±0°.09×27°.02W±0°.08, h13^{km}±2^{km}, mb5.1/89, Error ellipse: s-maj=13.5km s-min=10.4km az=154.0*

*IDC **11** 17:42:01.4±0.5, 0°.80N×27°.04W, h0^{km}, mb4.2/25, mb1 4.3/25, mb1mx4.2/52, mbtmp4.2/25, MS4.1/26, Ms1 4.1/26, ms1mx4.0/30, Error ellipse: s-maj=15.7km s-min=13.4km az=139.0*

*GCMT **11** 17:42:07.1±0.2, 0°.91N±0°.01×27°.11W±0°.01, h22^{km}±1^{km}, MW5.1/130, Moment Tensor Solution. s68,c82; s130,c189; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.47±.14; $M_{\theta\theta}$0.88±.14; $M_{\phi\phi}$-0.41±.13; $M_{r\theta}$-0.18±.20; $M_{\theta\phi}$-4.77±.11; $M_{\phi r}$0.90±.21; Best double couple: $M_0$4.89900×10^{16} NP1:ϕ_s266.00000°, δ79.00000°, λ-180.00000°. NP2:ϕ_s176.00000°, δ90.00000°, λ-11.00000°. Principal axes: T 5.1410, Plg7.0000°, Azm222.0000°; N -0.4830, Plg79.0000°, Azm355.0000°; P -4.6580, Plg8.0000°, Azm131.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 17:42:01.2±0.3, **0°.72N**±0°.06×**27°.08W**±0°.06, **h10^{km}, n184,** σ**1^s.55**/168, **mb4.9**/61, **MS4.2**/29, **Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**10.95**	**233**	Pn	**Pn**	**17 44 36.4**	**-1.7**
	23nm,0.3s,baz=33,slow=11,SNR=72						
RCBR				Sn	Sn	17 46 29.5	-11
	1.2nm,0.3s,baz=127,slow=20,SNR=2.4						
RCBR				LR	LR	17 47 47.2	
	comp=Z,2μm,21.4s,baz=28,slow=31						
NBLI	**Livramento-PB**	**12.70**	**231**	*e*P	**Pn**	**17 45 02.5**	**+0.4**
NBMO	**Morrinhos-CE**	**13.56**	**253**	*e*P	**Pn**	**17 45 11.6**	**-2.2**
SACV	**Santiago Islan**	**14.57**	**13**		**Pn**	**17 45 27.3**	**-0.4**
H10N3	**ASCENSION HYDR**	**15.15**	**124**	T	T	18 01 19.3	
	baz=302,slow=74,SNR=203						
H10N2	**ASCENSION HYDR**	**15.16**	**124**	T	T	18 01 19.5	
	baz=302,slow=74,SNR=180						
H10N1	**ASCENSION HYDR**	**15.17**	**124**	T	T	18 01 20.7	
	baz=302,slow=74,SNR=245						
ASCN	**Ascension**	**15.32**	**124**	Pn	**Pn**	**17 45 37.5**	**-0.2**
ASCN				IAmb	IAmb	17 45 43.7	
	comp=Z,111nm,1.2s						
H10S3	**ASCENSION HYDR**	**15.66**	**128**	T	T	18 02 16.2	
	baz=274,slow=74,SNR=79						
H10S2	**ASCENSION HYDR**	**15.68**	**128**	T	T	18 02 09.8	
	baz=306,slow=74,SNR=56						
LIC	**Lamto**	**22.67**	**76**	*e*P	**P**	**17 47 06.4**	**+3.3**
	comp=Z,6.2nm,0.6s						
TIC	**Toumodi**	**22.78**	**74**	*e*P	**P**	**17 47 05.1**	**+0.9**
DBIC	**Dimbokro**	**22.94**	**75**	P	**P**	**17 47 05.7**	**-0.3**
	comp=Z,9.2nm,1.0s,baz=244,slow=13,SNR=6.0						
DBIC				LR	LR	17 53 47.6	
	comp=Z,419nm,21.0s,baz=238,slow=31						
DBIC	**Dimbokro**	**22.94**	**75**	P	**P**	**17 47 05.6**	**-0.3**
KIC	**Kosan Boka**	**22.98**	**75**	*e*P	**P**	**17 47 07.1**	**+0.8**
	comp=Z,25nm,1.1s						
JANB	**Januaria**	**23.15**	**227**	*e*P	**P**	**17 47 09.4**	**+1.3**
BSFB	**Barra de Sao F**	**23.67**	**214**	*e*P	**P**	**17 47 15.7**	**+2.5**
SJMB	**Sao Joao De Ma**	**23.76**	**215**	*e*P	**P**	**17 47 15.9**	**+1.8**
MDP	**Montagnes des**	**25.89**	**280**	LR	LR	17 56 27.0	
	comp=Z,180nm,20.6s,baz=103,slow=33						
BDFB	**Brasilia**	**26.30**	**231**	P	**P**	**17 47 40.4**	**+2.9**
	comp=Z,28nm,0.9s,baz=50,slow=11,SNR=26						
BDFB				LR	LR	17 56 58.5	
	comp=Z,1μm,19.3s,baz=71,slow=34						
BDFB	**Brasilia**	**26.30**	**231**	P	**P**	**17 47 37.9**	**+0.4**
BDFB				IAmb	IAmb	17 47 42.0	
	comp=Z,37nm,0.9s						
SHEL	**Horse Pasture**	**26.80**	**129**	P	**P**	**17 47 37.8**	**-4.0**
BSCB	**Bom Sucesso**	**27.66**	**218**	*e*P	**P**	**17 47 51.3**	**+1.7**
IPMB	**Ipameri, GO**	**27.89**	**227**	*e*P	**P**	**17 47 52.3**	**+0.7**
MACI	**Morro de la Ar**	**29.19**	**19**	P	**P**	**17 48 03.8**	**+0.5**
ARAG	**Araguaiana, MT**	**29.38**	**235**	*e*P	**P**	**17 48 04.5**	**-0.4**
PARB	**Paraibuna**	**29.95**	**216**	*e*P	**P**	**17 48 12.5**	**+2.6**
BB19B	**Bebedouro**	**30.14**	**223**	*e*P	**P**	**17 48 13.1**	**+1.5**
VAO	**Valinhos**	**30.50**	**218**	*e*P	**P**	**17 48 17.4**	**+2.5**
CLDB	**Colider**	**30.79**	**247**	*e*P	**P**	**17 48 17.3**	**-0.1**
TOA0	**Torodi Ar. Sit**	**31.07**	**65**	P	**P**	**17 48 20.1**	**+0.3**
TOA0				IAmb	IAmb	17 48 22.5	
	comp=Z,38nm,1.4s						
TORD	**Torodi Ar. Bea**	**31.07**	**65**	P	**P**	**17 48 20.8**	**+0.9**
	comp=Z,7.0nm,0.9s,baz=254,slow=9.3,SNR=27						
TORD				LR	LR	17 59 10.1	
	comp=Z,300nm,18.4s,baz=275,slow=33						
TORD	**Torodi Ar. Bea**	**31.07**	**65**	P	**P**	**17 48 19.7**	**-0.1**
SPB	**Sao Paulo**	**31.23**	**218**	P	**P**	**17 48 20.1**	**-1.0**
C2SB	**Chapadao do Su**	**31.86**	**231**	*e*P	**P**	**17 48 27.8**	**+1.0**
PCMB	**Pacaembu**	**32.40**	**225**	*e*P	**P**	**17 48 32.9**	**+1.4**
SALV	**Santo Antonio**	**32.73**	**238**	*e*P	**P**	**17 48 34.1**	**-0.3**
PTGA	**Pitinga**	**32.92**	**268**	P	**P**	**17 48 36.2**	**0.0**
TRCB	**Terra Rica**	**34.14**	**225**	*e*P	**P**	**17 48 48.0**	**+1.4**
H05S1	**Guadeloupe/Mar**	**36.05**	**294**	T	T	18 26 34.7	
	SNR=8.1						
ITAB	**Concordia**	**36.78**	**219**	*e*P	**P**	**17 49 09.8**	**+0.5**
H05N1	**Guadeloupe/Mar**	**36.90**	**297**	T	T	18 27 41.0	
	SNR=4.7						
SAML	**Samuel**	**37.22**	**254**	P	**P**	**17 49 13.4**	**+0.1**
SAML	**Samuel**	**37.22**	**254**	*e*P	**P**	**17 49 11.8**	**-1.5**
MDT	**Midelt**	**38.30**	**31**	P	**P**	**17 49 24.1**	**+1.9**
	comp=Z,11nm,1.3s,baz=198,slow=16,SNR=4.7						
TAM	**Tamanrasset**	**38.54**	**53**	P	**P**	**17 49 25.4**	**+0.9**
SABA	**Saba**	**39.32**	**297**	P	**P**	**17 49 32.0**	**+1.1**
SABA				IAmb	IAmb	17 49 37.1	
	comp=Z,56nm,1.0s						
CPUP	**Villa Florida**	**39.67**	**225**	P	**P**	**17 49 36.4**	**+2.7**
	comp=Z,1.6nm,0.8s,baz=30,slow=8.7,SNR=3.5						
CPUP				LR	LR	18 05 42.7	
	comp=Z,768nm,18.6s,baz=56,slow=36						
CPUP	**Villa Florida**	**39.67**	**225**	P	**P**	**17 49 33.1**	**-0.7**
CPUP	**Villa Florida**	**39.67**	**225**	*e*P	**P**	**17 49 36.0**	**+2.2**
CPSB	**Cacapava Do Su**	**39.84**	**217**	*e*P	**P**	**17 49 36.9**	**+1.8**
H09W1	**TRISTAN DA CUN**	**40.03**	**162**	T	T	18 32 27.0	
	SNR=2.5						
PLTB	**Pedras Altas**	**40.92**	**216**	*e*P	**P**	**17 49 45.6**	**+1.5**
LPAZ	**La Paz**	**43.88**	**245**	P	**P**	**17 50 10.7**	**+1.6**
	comp=Z,9.0nm,0.8s,baz=70,slow=5.2,SNR=29						
LPAZ				LR	LR	18 07 56.7	
	comp=Z,409nm,19.4s,baz=68,slow=35						
LPAZ	**La Paz**	**43.88**	**245**	P	**P**	**17 50 09.9**	**+0.9**
LPAZ	**La Paz**	**43.88**	**245**	*e*P	**P**	**17 50 07.5**	**-1.6**
SDV	**Santo Domingo**	**44.11**	**282**	*e*P	P	17 50 06.3	-4.1
LVC	**Limon Verde**	**46.86**	**238**	*e*P	**P**	**17 50 31.7**	**-0.7**
ROSC	**El Rosal**	**47.35**	**276**	LR	LR	18 08 38.0	
	comp=Z,345nm,19.1s,baz=120,slow=34						
ROSC	**El Rosal**	**47.35**	**276**	P	**P**	**17 50 36.4**	**+0.1**
ROSC				IAmb	IAmb	17 50 49.9	
	comp=Z,30nm,1.1s						
TSUM	**Tsumeb**	**48.08**	**117**	P	**P**	**17 50 42.0**	**+0.4**
	comp=Z,2.5nm,0.8s,baz=286,slow=8.7,SNR=5.2						
TSUM	**Tsumeb**	**48.08**	**117**	P	P	17 50 37.4	-4.2
GO02	**Mina Guanaco**	**48.49**	**235**	P	**P**	**17 50 45.6**	**+0.7**
KEST	**Kesra**	**48.56**	**40**	P	**P**	**17 50 46.6**	**+1.5**
	comp=Z,1.4nm,0.7s,baz=71,slow=2.8,SNR=3.5						
KEST				LR	LR	18 11 03.6	
	comp=Z,369nm,20.5s,baz=198,slow=36						
TRQA	**Tornquist**	**50.23**	**216**	*e*P	**P**	**17 50 59.4**	**+1.8**
OTAV	**Otavalo**	**51.37**	**270**	P	**P**	**17 51 06.3**	**-0.9**
OTAV				IAmb	IAmb	17 52 24.7	
	comp=Z,21nm,1.1s						
OTAV	**Otavalo**	**51.37**	**270**	*e*P	**P**	**17 51 04.3**	**-2.9**
GO05	**Huala**	**54.91**	**225**	P	**P**	**17 51 30.1**	**-2.3**
LBTB	**Lobatse**	**56.99**	**121**	P	**P**	**17 51 50.5**	**+2.9**
	comp=Z,3.3nm,0.9s,baz=234,slow=7.9,SNR=3.8						
LBTB	**Lobatse**	**56.99**	**121**	P	**P**	**17 51 46.2**	**-1.4**
PLCA	**Paso Flores**	**57.09**	**219**	LR	LR	18 15 57.9	
	comp=Z,184nm,20.1s,baz=74,slow=36						
BOSA	**Boshof**	**57.91**	**125**	P	**P**	**17 51 56.6**	**+2.6**
	comp=Z,2.7nm,0.7s,baz=293,slow=11,SNR=5.4						
BOSA				LR	LR	18 11 48.1	
	comp=Z,190nm,21.8s,baz=290,slow=31						
BOSA	**Boshof**	**57.91**	**125**	P	**P**	**17 51 52.4**	**-1.7**
BOSA				IAmb	IAmb	17 53 47.0	
	comp=Z,49nm,1.9s						
GERES	**GERESS Array B**	**59.37**	**30**	P	**P**	**17 52 04.8**	**+0.9**
	comp=Z,1.9nm,0.9s,baz=226,slow=5.2,SNR=11						
GERES				LR	LR	18 17 11.7	
	comp=Z,102nm,18.5s,baz=276,slow=36						
GERES	**GERESS Array B**	**59.37**	**30**	P	**P**	**17 52 03.8**	**0.0**
KHC	**Kasperske Hory**	**59.50**	**30**	*e*P	**P**	**17 52 06.3**	**+1.7**
R58B	**Mineral**	**59.53**	**315**	P	**P**	**17 52 04.5**	**-0.4**
R58B				IAmb	IAmb	17 52 21.6	
	comp=Z,28nm,1.7s						
CLL	**Collm**	**60.67**	**28**	*e*S	S	18 00 40.0	+11
CLL				*e*SSS	SSS	18 07 00.0	
KMSC	**Kings Mountain**	**60.93**	**310**	P	**P**	**17 52 14.7**	**0.0**
KMSC				IAmb	IAmb	17 52 17.9	
	comp=Z,26nm,1.8s						
VYHS	**Vyhne**	**61.84**	**33**	*e*P	**P**	**17 52 22.7**	**+2.1**
NRS	**Narsarsuaq**	**61.90**	**350**	P	**P**	**17 52 21.3**	**+0.7**
ALLY	**Alegheny Colle**	**62.71**	**318**	P	**P**	**17 52 27.0**	**+0.4**
ALLY				IAmb	IAmb	17 54 23.2	
	comp=Z,15nm,1.1s						
152A	**Waverly Hall**	**62.73**	**307**	P	**P**	**17 52 26.1**	**-0.8**
152A				IAmb	IAmb	17 54 15.8	
	comp=Z,24nm,1.7s						
W52A	**Murphy**	**62.90**	**310**	P	**P**	**17 52 27.4**	**-0.6**
SCHQ	**Schefferville**	**62.94**	**335**	P	**P**	**17 52 28.4**	**+0.5**
	comp=Z,1.2nm,0.6s,baz=172,slow=5.6,SNR=4.1						
SCHQ				LR	LR	18 15 34.0	
	comp=Z,80nm,20.7s,baz=334,slow=32						
SCHQ	**Schefferville**	**62.94**	**335**	P	**P**	**17 52 28.4**	**+0.5**
SCHQ				IAmb	IAmb	17 52 58.5	
	comp=Z,23nm,1.9s						
451A	**Vernon**	**62.96**	**304**	P	**P**	**17 52 29.0**	**+0.6**
TKL	**Tuckaleechee C**	**62.98**	**310**	P	**P**	**17 52 27.8**	**-0.7**
TKL				IAmb	IAmb	17 52 39.1	
	comp=Z,27nm,1.8s						
RGN	**Rugen**	**63.02**	**25**	P	**P**	**17 52 27.5**	**-0.8**
PAYG	**Puerto Ayora**	**63.22**	**269**	P	**P**	**17 52 29.8**	**-0.7**
O52A	**Adamsville**	**63.23**	**315**	P	**P**	**17 52 30.4**	**+0.4**
O52A				IAmb	IAmb	17 52 39.2	
	comp=Z,7.3nm,0.7s						
CPCT	**Cooper Cave**	**63.48**	**310**	P	**P**	**17 52 31.3**	**-0.5**
D53A	**Lac Vacive, Po**	**63.73**	**324**	P	**P**	**17 52 33.8**	**+0.6**
P51A	**Williamsport**	**63.84**	**314**	P	**P**	**17 52 33.3**	**-0.8**
Z50A	**Ashland**	**63.88**	**307**	P	**P**	**17 52 34.6**	**+0.1**
Z50A				IAmb	IAmb	17 52 45.5	
	comp=Z,17nm,1.4s						
N51A	**Ashland**	**63.93**	**316**		**P**	**17 52 35.1**	**+0.4**
N51A				IAmb	IAmb	17 54 15.6	
	comp=Z,9.2nm,0.7s						
FPAL	**Fort Paine**	**64.03**	**308**	P	**P**	**17 52 35.7**	**+0.2**
FPAL				IAmb	IAmb	17 52 47.1	
	comp=Z,9.7nm,0.9s						
ACSO	**Alum Creek Sta**	**64.08**	**315**	P	**P**	**17 52 36.2**	**+0.5**
ACSO				IAmb	IAmb	17 52 44.7	
	comp=Z,7.9nm,0.9s						
R50A	**Paris**	**64.32**	**313**	P	**P**	**17 52 36.5**	**-0.7**
R50A				IAmb	IAmb	17 52 48.5	
	comp=Z,8.4nm,0.9s						
Y49A	**Blount Mountai**	**64.45**	**308**	P	**P**	**17 52 38.3**	**+0.1**
SWET	**Sewanee**	**64.49**	**309**	P	**P**	**17 52 38.0**	**-0.5**
SWET				IAmb	IAmb	17 54 24.7	
	comp=Z,9.5nm,0.6s						
LRAL	**Lakeview Retre**	**64.67**	**306**	P	**P**	**17 52 39.3**	**-0.4**
LRAL				IAmb	IAmb	17 54 16.5	
	comp=Z,22nm,1.8s						
U49A	**Red Boiling Sp**	**64.79**	**310**	P	**P**	**17 52 40.2**	**-0.2**
T49A	**Edmonton**	**64.80**	**311**	P	**P**	**17 52 40.9**	**+0.4**
T49A				IAmb	IAmb	17 54 20.8	
	comp=Z,28nm,1.4s						
GO10	**Punta Arenas**	**64.94**	**207**	P	**P**	**17 52 38.6**	**-2.5**
BURAR	**Bucovina Array**	**64.98**	**36**	P	**P**	**17 52 41.2**	**-0.3**
O49A	**Covington**	**65.02**	**315**	P	**P**	**17 52 41.6**	**-0.2**
CLTN	**Cedars of Leba**	**65.08**	**310**	P	**P**	**17 52 41.5**	**-0.8**
CLTN				IAmb	IAmb	17 55 02.4	
	comp=Z,22nm,1.1s						
X48A	**Hartselle**	**65.13**	**308**	P	**P**	**17 52 42.6**	**0.0**
X48A				IAmb	IAmb	17 54 17.4	
	comp=Z,7.1nm,0.6s						
N49A	**Columbus Grove**	**65.19**	**315**	P	**P**	**17 52 43.0**	**+0.1**
V48A	**Smith Brothers**	**65.35**	**309**	P	**P**	**17 52 43.3**	**-0.7**
V48A				IAmb	IAmb	17 55 02.2	
	comp=Z,19nm,1.2s						
I49A	**Point Hope**	**65.47**	**319**	P	**P**	**17 52 44.7**	**+0.1**
TIRR	**Tirgusor**	**65.52**	**40**	P	**P**	**17 52 43.1**	**-1.9**
T47A	**Sharon Grove**	**65.95**	**311**	P	**P**	**17 52 48.3**	**+0.4**
T47A				IAmb	IAmb	17 54 11.2	
	comp=Z,9.4nm,0.8s						
PLAL	**Pickwick Lake**	**66.10**	**308**	P	**P**	**17 52 48.7**	**-0.2**
PLAL				IAmb	IAmb	17 53 26.1	
	comp=Z,7.4nm,0.6s						
N47A	**Urbana**	**66.24**	**315**	P	**P**	**17 52 48.8**	**-0.9**
N47A				IAmb	IAmb	17 54 52.6	
	comp=Z,21nm,1.1s						
WVT	**Waverly**	**66.25**	**309**	P	**P**	**17 52 49.3**	**-0.5**
WVT				IAmb	IAmb	17 55 15.1	
	comp=Z,24nm,1.3s						
NOA	**NORSAR Array B**	**66.87**	**19**	LR	LR	18 18 22.5	
	comp=Z,56nm,20.0s,baz=225,slow=33						
P46A	**Rosedale**	**66.88**	**313**	P	**P**	**17 52 53.9**	**+0.1**
NC204	**NORSAR Array S**	**66.90**	**19**	P	**P**	**17 52 53.9**	**+0.3**
NB201	**NORSAR Array S**	**66.91**	**19**	P	**P**	**17 52 54.0**	**+0.5**
NC405	**NORSAR Array S**	**67.09**	**19**	P	**P**	**17 52 55.6**	**+0.9**
BRTR	**Keskin Array B**	**67.35**	**47**	P	**P**	**17 52 58.6**	**+1.6**
	comp=Z,1.3nm,0.8s,baz=258,slow=3.7,SNR=5.4						
BRTR				LR	LR	18 23 26.2	
	comp=Z,113nm,21.4s,baz=192,slow=37						
BRTR	**Keskin Array B**	**67.35**	**47**	P	**P**	**17 52 55.6**	**-1.4**
P43A	**Skaggs, Pawnee**	**68.59**	**313**	P	**P**	**17 53 05.0**	**+0.4**
AKASG	**Malin Array Be**	**68.76**	**35**	P	**P**	**17 53 06.5**	**+1.1**
	comp=Z,3.4nm,0.7s,baz=241,slow=6.6,SNR=16						
AKASG	**Malin Array Be**	**68.76**	**35**	P	**P**	**17 53 05.1**	**-0.2**
AKBB	**Malin Array Si**	**68.76**	**35**	P	**P**	**17 53 06.0**	**+0.7**
AKBB				IAmb	IAmb	17 53 17.1	
	comp=Z,9.4nm,1.0s						
FRB	**Frobisher Bay**	**69.86**	**342**	P	**P**	**17 53 12.8**	**+1.0**
	comp=Z,2.1nm,0.6s,baz=174,slow=6.9,SNR=3.2						
L40A	**Anamosa**	**70.55**	**315**	P	**P**	**17 53 17.9**	**+1.3**
HKT	**Hockley**	**71.30**	**301**	P	**P**	**17 53 20.7**	**-0.7**
FINES	**FINESS Array B**	**72.60**	**24**	P	**P**	**17 53 29.9**	**+1.4**
	comp=Z,2.9nm,0.9s,baz=339,slow=4.9,SNR=4.6						
FINES				LR	LR	18 21 29.5	
	comp=Z,136nm,21.8s,baz=244,slow=33						
FINES	**FINESS Array B**	**72.60**	**24**	P	**P**	**17 53 28.8**	**+0.2**
SNAA	**Sanae**	**73.94**	**172**	P	**P**	**17 53 39.8**	**+3.4**
	comp=Z,1.5nm,0.8s,baz=328,slow=10,SNR=3.8						
SNAA	**Sanae**	**73.94**	**172**	P	**P**	**17 53 37.4**	**+1.0**
SNAA				IAmb	IAmb	17 55 02.7	
	comp=Z,34nm,1.9s						
KBZ	**Khabaz**	**75.12**	**45**	P	**P**	**17 53 46.0**	**+2.2**
	comp=Z,3.1nm,0.9s,baz=229,slow=10.0,SNR=4.2						
KBZ				LR	LR	18 27 50.9	
	comp=Z,71nm,21.1s,baz=239,slow=37						
ULM	**Lac du Bonnet**	**76.01**	**322**	P	**P**	**17 53 50.4**	**+1.7**
	comp=Z,1.3nm,0.7s,baz=95,slow=11,SNR=3.4						
ULM				LR	LR	18 21 38.1	
	comp=Z,88nm,18.4s,baz=333,slow=31						
ULM	**Lac du Bonnet**	**76.01**	**322**	P	**P**	**17 53 48.8**	**+0.1**
ARCES	**ARCESS Array B**	**76.98**	**17**	LR	LR	18 23 58.2	
	comp=Z,149nm,19.2s,baz=224,slow=33						
TXAR	**Lajitas Array**	**77.96**	**300**	LR	LR	18 23 16.2	
	comp=Z,24nm,21.9s,baz=0.0,slow=32						
KLMR	**Klimovskoe**	**78.16**	**27**	*e*	**P**	**17 53 58.0**	**-2.5**
KLMR				AMP		17 54 15.1	
	comp=Z,30nm,1.7s						
SMCO	**Snowmass**	**81.71**	**309**	P	**P**	**17 54 21.9**	**+1.1**
SMCO				IAmb	IAmb	17 54 40.8	
	comp=Z,14nm,1.1s						
O20A	**White River Ci**	**82.78**	**310**	P	**P**	**17 54 27.2**	**+1.1**
O20A				IAmb	IAmb	17 54 44.6	
	comp=Z,14nm,1.1s						
RES	**Resolute Bay**	**83.55**	**346**	P	**P**	**17 54 30.3**	**+1.2**
	comp=Z,3.2nm,1.1s,baz=73,slow=5.7,SNR=4.1						
RES	**Resolute Bay**	**83.55**	**346**	P	**P**	**17 54 30.2**	**+1.0**
RLMT	**Red Lodge**	**83.97**	**315**	P	**P**	**17 54 33.8**	**+1.6**
RLMT				IAmb	IAmb	17 56 23.2	
	comp=Z,18nm,1.6s						
PDAR	**Pinedale Array**	**83.98**	**313**	P	**P**	**17 54 35.1**	**+2.8**
	comp=Z,0.4nm,0.7s,baz=28,slow=4.1,SNR=3.3						
PDAR				LR	LR	18 25 57.9	
	comp=Z,145nm,20.8s,baz=111,slow=31						
PDAR	**Pinedale Array**	**83.98**	**313**	P	**P**	**17 54 33.4**	**+1.1**
YNE	**Yellowstone No**	**84.49**	**315**	P	**P**	**17 54 35.6**	**+0.7**
WUAZ	**Wupatki**	**84.94**	**305**	P	**P**	**17 54 36.2**	**-1.0**
WUAZ				IAmb	IAmb	17 54 53.4	
	comp=Z,12nm,1.1s						
X16A	**Lo Mia Camp, P**	**84.94**	**304**	P	**P**	**17 54 36.9**	**-0.4**
REDW	**Red Top Meadow**	**84.97**	**313**	P	**P**	**17 54 37.5**	**+0.2**
REDW				IAmb	IAmb	17 54 55.6	
	comp=Z,16nm,1.5s						
YHH	**Holmes Hill**	**85.07**	**315**	P	**P**	**17 54 37.4**	**-0.5**
FXWY	**Fox Creek**	**85.12**	**314**	P	**P**	**17 54 38.1**	**0.0**
YMR	**Madison River**	**85.14**	**315**	P	**P**	**17 54 37.8**	**-0.3**
YHL	**Hebgen Lake**	**85.31**	**315**	P	**P**	**17 54 39.5**	**+0.4**
QLMT	**Earthquake Lak**	**85.48**	**315**	P	**P**	**17 54 39.2**	**-0.6**
MTPU	**Mount Pierson**	**85.70**	**308**	P	**P**	**17 54 42.0**	**+0.7**
GEYT	**Alibeck**	**85.77**	**52**	LR	LR	18 36 58.8	
	comp=Z,50nm,18.2s,baz=350,slow=38						
SZCU	**Shurtz Canyon**	**86.40**	**307**	P	**P**	**17 54 43.3**	**-1.2**
MCMT	**McKenzie Canyo**	**86.49**	**315**	P	**P**	**17 54 43.5**	**-1.3**
CCUT	**Cedar City**	**86.61**	**307**	P	**P**	**17 54 46.5**	**+0.9**
PSUT	**Pine Spring**	**87.03**	**308**	P	**P**	**17 54 46.7**	**-0.9**
ABKAR	**Akbulak array**	**87.51**	**41**	P	**P**	**17 54 47.7**	**-1.7**
ELK	**Elko**	**88.14**	**311**	P	**P**	**17 54 55.0**	**+2.0**
	comp=Z,0.6nm,0.6s,baz=72,slow=6.4,SNR=2.4						
ELK	**Elko**	**88.14**	**311**	P	**P**	**17 54 52.3**	**-0.6**
YKA	**Yellowknife Ar**	**88.22**	**332**	P	**P**	**17 54 53.1**	**+0.6**
	comp=Z,0.1nm,0.5s,baz=104,slow=5.2,SNR=2.9						
YKA				LR	LR	18 29 40.3	
	comp=Z,100nm,21.5s,baz=0.0,slow=32						
R11A	**Troy Canyon, C**	**88.39**	**308**	P	**P**	**17 54 55.4**	**+1.3**
R11A				IAmb	IAmb	17 55 15.5	
	comp=Z,16nm,1.9s						
BMO	**Blue Mountains**	**89.66**	**315**	P	**P**	**17 55 01.0**	**+1.2**
BMO				IAmb	IAmb	17 55 15.9	
	comp=Z,16nm,1.9s						
NVAR	**Mina Array Bea**	**90.52**	**308**	P	**P**	**17 55 06.3**	**+2.2**
	comp=Z,0.7nm,0.8s,baz=131,slow=4.4,SNR=3.9						
NVAR				LR	LR	18 33 31.3	
	comp=Z,50nm,18.2s,baz=106,slow=34						
MAW	**Mawson**	**90.64**	**157**	LR	LR	18 28 07.1	
	comp=Z,89nm,20.2s,baz=276,slow=30						
QSPA	**South Pole Qui**	**90.78**	**180**	P	**P**	**17 55 06.0**	**+1.4**
	comp=Z,2.1nm,1.0s,baz=195,slow=11,SNR=1.8						
QSPA	**South Pole Qui**	**90.78**	**180**	P	**P**	**17 55 05.3**	**+0.7**
QSPA				IAmb	IAmb	17 55 24.3	
	comp=Z,13nm,1.2s						
NRIK	**Noril'sk**	**97.83**	**19**	LR	LR	18 35 39.7	
	comp=Z,81nm,21.8s,baz=316,slow=33						
KSH	**Kashi**	**99.60**	**50**	P	**Pdif**	**17 55 43.8**	**-1.6**
KSH				PP	**PP**	**17 59 50.9**	**+1.6**
KSH				SKS	**SKSac**	**18 06 22.2**	**-2.4**
KSH				S	**ScS**	**18 07 13.4**	**-5.6**
KSH				SS	**SS**	**18 14 07.0**	**-2.7**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KSH				LR	LR		
	comp=Z,170nm,11.0s						
KSH				LR	LR		
	comp=Z,180nm,10.3s						
KSH				LR	LR		
	comp=Z,170nm,10.8s						
GTA	**Gaotai**	**117.21**	**44**	*e*PKP	**PKPdf**	**18 00 47.0**	**-0.4**
GTA				LR	LR		
	comp=Z,80nm,17.8s						
GTA				LR	LR		
	comp=Z,95nm,17.1s						
GTA				LR	LR		
	comp=Z,62nm,18.7s						
LZH	**Lanzhou**	**121.55**	**46**	*e*PKP	**PKPdf**	**18 00 51.8**	**-4.1**
LZH				sPKP		18 00 54.2	
LZH				LR	LR		
	comp=Z,230nm,18.0s						
LZH				LR	LR		
	comp=Z,300nm,20.0s						
CD2	**Chengdu**	**123.76**	**51**	PKP	**PKPdf**	**18 00 56.7**	**-3.5**
HHC	**Hu-ho-hao-te**	**124.14**	**37**	*e*PKP	**PKPdf**	**18 00 53.9**	**-6.8**
HHC				LR	LR		
	comp=Z,620nm,19.7s						
HHC				LR	LR		
	comp=Z,700nm,20.9s						
NJ2	**Nanjing**	**134.17**	**42**	*e*PKP	**PKPdf**	**18 01 18.0**	**-1.9**
STKA	**Stephens Creek**	**147.21**	**162**	PKPbc	**PKPab**	**18 01 47.6**	**+0.6**
	comp=Z,2.4nm,1.0s,baz=289,slow=9.4,SNR=3.8						
ASAR	**Alice Springs**	**150.66**	**142**	PKPbc	**PKPbc**	**18 01 55.4**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=198,slow=2.0,SNR=15						
ASAR	**Alice Springs**	**150.66**	**142**		**PKPdf**	**18 01 48.3**	**-0.9**
WRA	**Warramunga Arr**	**153.62**	**138**	PKPbc	**PKPbc**	**18 02 01.1**	**-0.2**
	comp=Z,0.6nm,1.0s,baz=243,slow=2.6,SNR=2.9						

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*IDC **11** 17:44:29.4±3.6, 5°.46S×103°.05E, h0^{km}, mb3.4/6, mb1 3.6/6, mb1mx3.4/45, mbtmp3.4/6, Error ellipse: s-maj=155.8km s-min=19.5km az=57.0*

*DJA **11** 17:44:33.8±0.7, 6°S±9°×10°3E±°, h62^{km}±37^{km}, M3.7/10, mb4.1/3, MLv3.9/10, MLv3.3/1*

ISC 11 17:44:32.9±1.0, **5°.83S**±0°.08×**102°.67E**±0°.08, **h35^{km}, n21,** σ**0^s.94**/21, **mb3.4**/6, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	**Manna**	**1.49**	**11**	P	**Pn**	**17 44 57.2**	**0.0**
MNAI				S	**Sn**	**17 45 16.5**	**+1.0**
LWLI	**Liwa**	**1.61**	**60**	P	**Pn**	**17 44 58.6**	**-0.3**
KASI	**Kota Agung**	**1.85**	**80**	P	**Pn**	**17 45 03.0**	**+0.9**

KASI				S	Sn	17 45 23.5	-0.8
MDSI	Maura Dua	2.02	48	P	Pn	17 45 04.4	0.0
MDSI				S	Sn	17 45 27.8	-0.6
KSI	Kapahiang	2.17	358	P	Pn	17 45 07.1	+0.5
KRJI	Kerinci	3.91	342	P	Pn	17 45 30.5	0.0
TNG	Tangerang	3.97	95	P	Pn	17 45 31.3	0.0
PPSI	Pulau Pagai	4.04	319	P	Pn	17 45 31.3	-0.9
CNJI	Cibinong	4.67	109	P	Pn	17 45 41.3	+0.4
SDSI	Sungai Dareh	5.02	346	P	Pn	17 45 46.7	+0.9
	0.1nm6.7nm,0.8s						
PDSI	Padang	5.36	336	P	Pn	17 45 52.1	+1.6
CISI	Cisompet, Garu	5.39	109	P	Pn	17 45 50.0	-0.9
	0.2nm28nm,0.5s						
CMAR	Chiang Mai Arr	24.41	351	P	P	17 49 46.4	-1.9
	0.3nm,0.7s,baz=182,slow=8.8,SNR=4.9						
H08S2	Diego Garcia H	30.01	265	T	T	18 21 57.3	
	baz=88,slow=76,SNR=28						
H08S3	Diego Garcia H	30.02	265	T	T	18 22 05.0	
	baz=88,slow=76,SNR=33						
H08S1	Diego Carcia H	30.03	265	T	T	18 22 04.7	
	baz=88,slow=76,SNR=11						
WRA	Warramunga Arr	33.82	117	P	P	17 51 12.8	+0.7
	0.5nm,0.8s,baz=288,slow=11,SNR=4.0						
ASAR	Alice Springs	34.89	124	P	P	17 51 21.0	-0.3
	0.7nm,0.9s,baz=293,slow=7.6,SNR=12						
STKA	Stephens Creek	44.64	130	P	P	17 52 43.9	+1.6
	1.4nm,0.8s,baz=286,slow=12,SNR=3.5						
SONM	Songino Array	53.54	3	P	P	17 53 49.4	-0.9
	0.2nm,0.5s,baz=182,slow=8.6,SNR=5.7						
MKAR	Makanchi Array	55.43	343	P	P	17 54 04.0	+0.2
	0.2nm,0.7s,baz=151,slow=6.6,SNR=2.8						

ANF ***11*** *17:49:21.3±0.6, 35°.88N×97°.37W, h0^{km}, ML3.5/5, Error ellipse: s-maj=7.6km s-min=2.3km az=157.0*
TUL ***11*** *17:49:21.5±2.2, 35°.95N±0°.02×97°.40W±0°.03, h4^{km}±6^{km}, ML2.9, Error ellipse: s-maj=4.2km s-min=2.4km az=116.0*
NEIC ***11*** *17:49:21.2±1.4, 35°.98N±0°.02×97°.39W±0°.04, h5^{km}±2^{km}, Error ellipse: s-maj=5.6km s-min=3.0km az=110.0*
ISC 11 17:49:21.2±1.3**, 35°.97N**±0°.03×**97°.39W**±0°.04**, h6**^{km}±10^{km}**, n53,** σ**1^{s}05**/65**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.32	177		Pg	17 49 27.5	+0.1
OKCFA	Oklahoma City	0.56	185		Pg	17 49 32.0	+0.1
OKCFA				Sg	Sg	17 49 39.6	+0.5
OKCSW	OKLAHOMA CITY	0.57	184		Pg	17 49 32.1	+0.1
OKCSW				Sg	Sg	17 49 40.0	+0.6
FNO	Franklin	0.71	180		Pg	17 49 35.1	+0.2
FNO				Sg	Sb	17 49 44.9	-1.2
W35A	Tecumseh	0.92	152		Pg	17 49 38.3	-0.6
W35A				Sg	Sg	17 49 50.7	-0.1
T35A	Sooner Cattle	1.18	37		Pg	17 49 44.1	+0.3
T35A				Sg	Sg	17 49 59.9	+0.8
TUL1	Leonard	1.30	92		Pg	17 49 45.1	-1.0
TUL1				Sg	Sg	17 50 03.0	-0.1
TUL1	Leonard	1.30	92	P	Pg	17 49 45.2	-0.9
	baz=272						
TUL1				S	Sb	17 50 03.3	+0.3
	baz=272						
U32A	Winter Ranch,	1.36	288		Pn	17 49 46.6	-0.2
X34A	Smith Ranch, M	1.41	195		Pn	17 49 47.6	+0.2
X34A				Sn	Sn	17 50 06.9	+0.5
WMOK	Wichita Mounta	1.67	223		Pn	17 49 51.3	+0.4
WMOK				Sn	Sb	17 50 13.4	-0.3
WMOK	Wichita Mounta	1.67	223	P	Pn	17 49 51.4	+0.4
	baz=42						
WMOK				S	Sb	17 50 13.4	-0.3
	baz=42						
X37A	Clayton	2.15	129		Pn	17 49 58.3	+0.7
Z35A	Perchaven, San	2.64	177	Pn	Pn	17 50 04.7	+0.5
R32A	Long Quarter,	2.66	337		Pn	17 50 04.1	-0.5
HHAR	Hobbs	2.81	83		Pn	17 50 07.5	+0.8
W39A	Magazine	3.04	104		Pn	17 50 10.7	+0.9
W39A	Magazine	3.04	104	P	Pn	17 50 10.9	+1.1
	baz=286						
Z38A	Mt. Pleasant	3.36	143		Pn	17 50 15.5	+1.4
CBKS	Cedar Bluff	3.40	327	Pn	Pn	17 50 16.6	+1.9
MIAR	Mount Ida	3.43	113		Pn	17 50 14.6	-0.6
MIAR	Mount Ida	3.43	113	P	Pn	17 50 16.8	+1.6
	baz=295						
MIAR				S	Sn	17 50 57.3	+1.1
	baz=295						
AMTX	Amarillo	3.67	254		Pn	17 50 20.3	+1.8
S39A	Bolivar	3.69	61		Pn	17 50 19.8	+1.1
U40A	Yellville	3.69	83		Pn	17 50 19.5	+0.8
ABTX	Abilene, Hawle	3.82	210		Pn	17 50 20.6	0.0
ABTX					Sb	17 51 14.0	-1.6
WHTX	Lake Whitney,	3.97	181	Pn	Pn	17 50 22.4	-0.2
WHTX	Lake Whitney,	3.97	181	Sb	Sb	17 51 21.4	+1.6
	baz=0.7						
X40A	Basin Creek Fa	4.02	110		Pn	17 50 23.8	+0.6
237A	Washetta, Mont	4.17	161	Pn	Pn	17 50 23.1	-2.2
WLAR	White Oak Lake	4.20	122	Pn	Pn	17 50 23.6	-2.0
WHAR	Wooly Hollow	4.21	98		Pn	17 50 24.5	-1.5
WHAR					LR	17 51 33.1	
W41B	Gary Mavity, V	4.27	99		Pn	17 50 27.4	+0.7
MGMO	Mountain Grove	4.29	73		Pn	17 50 26.4	-0.6
UALR	University of	4.30	105	Pn	Pn	17 50 27.0	-0.1
UALR					LR	17 51 36.5	
Z41A	Richland Creek	4.65	124	Pn	Pn	17 50 34.2	+2.3
NATX	Nacogdoches	4.78	151	Pn	Pn	17 50 32.3	-1.4
MSTX	Muleshoe	4.85	247		Pn	17 50 35.4	+0.7
CCAR	Cane Creek	5.05	112	Pn	Pn	17 50 36.4	-1.0
LCAR	Lake Charles	5.06	87		Pn	17 50 35.5	-2.0
CCM	Cathedral Cave	5.34	65		Pn	17 50 42.7	+1.3
HBAR	Harrisburg	5.49	92	Pn	Pn	17 50 42.5	-1.0
PBMO	Poplar Bluff	5.68	80	Pn	Pn	17 50 46.3	+0.3
T25A	Trinidad	5.77	284		Pn	17 50 48.1	+0.7
JCT	Junction City	5.84	201		Pn	17 50 46.4	-1.9
OGNE	Ogallala	6.16	325	Pn	Pn	17 50 52.4	-0.3
SLM	Saint Louis	6.29	63	Pn	Pn	17 50 53.5	-1.0
SDCO	Great Sand Dun	6.74	288		Pn	17 50 59.2	-1.6
N41A	Harden Midland	6.98	45	Pn	Pn	17 51 03.6	-0.3
ANMO	Albuquerque	7.47	265		Pn	17 51 10.5	-0.3
ISCO	Idaho Springs	7.54	303		Pn	17 51 11.7	-0.1
ECSD	EROS Data Cent	7.78	4	Pn	Pn	17 51 13.9	-0.9
N23A	Red Feather La	8.31	309	Pn	Pn	17 51 21.2	-1.3

SJA ***11*** *18:28:04.6±0.4, 26°.38S×70°.95W, h30^{km}, ML3.2, MW3.2*
GUC ***11*** *18:28:04.9±0.9, 26°.37S×70°.92W, h43^{km}±3^{km}, ML3.6*
ISC 11 18:28:05.7±1.8**, 26°.30S**±0°.03×**71°.00W**±0°.09**, h23**^{km}±13^{km}**, n33,** σ**1^{s}49**/42**, 1D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC01	Pan de Azucar	0.39	68	*e*P	Pb	18 28 14.1	0.0
AC01				*i* S	Sb	18 28 19.9	+0.1
AC01				IAML		18 28 20.3	
	comp=E,7μm,0.1s						
GO03	Copiap	1.46	152	*e*P	Pn	18 28 28.4	-2.4
GO03				*i* S	Sn	18 28 46.5	-2.8
GO03				IAML		18 28 48.1	
	comp=N,1μm,0.5s						
GO02	Mina Guanaco	1.70	49	*e*P	Pn	18 28 33.8	-0.5
GO02				*i* S	Sn	18 28 56.3	+0.7
GO02				IAML		18 29 04.1	
	comp=E,819nm,0.4s						
PB14	IPOC Station P	1.75	18	*e*P	Pn	18 28 34.8	-0.2
PB14				*e*S	Sn	18 28 58.2	+1.5
PB14	IPOC Station P	1.75	18	*i* P	Pn	18 28 34.8	-0.2
PB14				*i* S	Sb	18 28 59.0	-0.1
PB14				IAML		18 29 03.4	
	comp=Z,195nm,0.3s						
AC02	Maricunga	1.76	108	*e*P	Pn	18 28 34.1	-1.2
AC02				*i* S	Sn	18 28 55.2	-2.1
AC02				IAML		18 28 57.2	
	comp=E,2μm,0.5s						
PB10	IPOC Station P	2.80	8	*i* P	Pn	18 28 48.3	-0.8
PB15	IPOC Station P	3.38	25	*i* P	Pn	18 28 58.1	+0.8
VCA	Vinchina	3.48	135	*i* P	Pn	18 29 01.3	+2.7
VCA	Vinchina	3.48	135	*i* P	Pn	18 29 01.2	+2.6
VCA				IAML		18 29 56.7	
	comp=Z,76nm,0.3s						
PB05	IPOC Station P	3.51	12	*i* P	Pn	18 28 58.1	-0.9
PB06	IPOC Station P	3.81	20	*i* P	Pn	18 29 02.8	-0.3
PB06				IAML		18 30 17.4	
	comp=Z,56nm,0.5s						
GO04	Tololo Observa	3.87	177	*e*P	Pn	18 29 02.4	-1.6
AGUA	GUANDACOL	3.88	146	*i* P	Pn	18 29 05.8	+1.8
AGUA	GUANDACOL	3.88	146	*i* P	Pn	18 29 05.8	+1.8
PB04	IPOC Station P	4.02	11	*i* P	Pn	18 29 04.9	-1.2
PB04				IAML		18 30 24.3	
	comp=Z,45nm,0.3s						
AROD	Rodeo	4.08	161	*i* P	Pn	18 29 08.6	+1.5
AROD	Rodeo	4.08	161	*i* P	Pn	18 29 08.2	+1.2
ACCO	Cerro Coronel	4.60	159	*i* P	Pn	18 29 15.6	+1.4
ACCO	Cerro Coronel	4.60	159	*i* P	Pn	18 29 15.4	+1.2
ACLC	CERRO LA CRUZ	4.75	132	*i* P	Pn	18 29 16.8	+0.7
ACLC	CERRO LA CRUZ	4.75	132	*i* P	Pn	18 29 16.6	+0.5
CYA	Choya	5.09	116	*i* P	Pn	18 29 21.6	+0.9
CYA				IAML		18 29 24.8	
	comp=Z,9.7nm,0.2s						
AMOG	MOGNA	5.12	155	*i* P	Pn	18 29 21.7	+0.6
AMOG	MOGNA	5.12	155	*i* P	Pn	18 29 21.7	+0.6
AMOG				*i* S	Sn	18 30 18.8	-0.9
RTLL	Cerro Villicun	5.48	157	*i* P	Pn	18 29 26.5	+0.5
RTLL				⇓*i*S	Sn	18 30 33.0	+4.6
RTLL	Cerro Villicun	5.48	157	*e*P	Pn	18 29 26.6	+0.5
APLL	PUNTA DE LOS L	5.68	137	*i* P	Pn	18 29 28.4	-0.3
APLL	PUNTA DE LOS L	5.68	137	*i* P	Pn	18 29 28.1	-0.6
APLL				*i* S	Sn	18 30 32.0	-1.2
RTLS	Leoncito	5.68	165	*i* P	Pn	18 29 29.8	+0.8
RTLS	Leoncito	5.68	165	*i* P	Pn	18 29 29.8	+0.8
RTCV	Cerro Valdivia	5.95	159	*i* P	Pn	18 29 32.9	+0.5
MRA	San Martin	7.65	144	*i* P	Pn	18 29 55.4	-0.4

DSN ***11*** *18:41:43.1±1.7, 26°.53N×58°.03E, h15^{km}, ML3.8/6, Error ellipse: s-maj=21.9km s-min=13.5km az=151.0*
TEH ***11*** *18:41:44.1, 26°.59N×57°.84E, h15^{km}, ML3.5*
OMAN ***11*** *18:41:49.0±1.6, 26°.22N×57°.65E, h5^{km}±239^{km}, ml3.1/7, Error ellipse: s-maj=98.3km s-min=19.9km az=289.0*
ISC 11 18:41:44.2±1.9**, 26°.53N**±0°.04×**57°.85E**±0°.08**, h14**^{km}±12^{km}**, n32,** σ**1^{s}27**/40**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIAN	Nian	1.37	319	*e*		18 42 31.6	
NIAN				*e*Pg	Pb	18 42 09.2	-0.4
KHNJ	Kahnooj	1.42	355	*e*Pg	Pn	18 42 08.5	-1.1
BANOM	Banah	1.52	247	*e*P	Pg	18 42 12.7	-0.7
	SNR=46						
BANOM				S	Sg	18 42 34.5	+1.4
BANOM	Banah	1.52	247	P	Pb	18 42 12.4	+0.3
	SNR=179						
BANOM				S	Sg	18 42 34.7	+1.7
BANOM	Banah	1.52	247	*e*Pn	Pg	18 42 12.9	-0.4
SHME	Shamm	1.61	253	*e*P	Pb	18 42 13.8	+0.2
	SNR=5.8						
SHME	Shamm	1.61	253	*e*Pn	Pg	18 42 14.4	-0.6
GENO	Geno	1.73	300	*e*Pn	Pb	18 42 15.4	-0.5
GENO				*e*Sg	Sg	18 42 38.9	-1.0
GENO				*e*		18 42 44.5	
MDH	Madha	1.86	229	*e*P	Pn	18 42 16.0	+0.4
	SNR=18						
MDH	Madha	1.86	229	P	Pn	18 42 15.9	+0.2
	SNR=18						
MDH				S	Sn	18 42 38.8	-0.1
MDH	Madha	1.86	229	*e*Pn	Pn	18 42 15.8	+0.2
MSFE	Esma-Masafi	1.92	233	P	Pn	18 42 16.5	+0.1
MSFE				S	Sn	18 42 41.2	+0.8
MSFE	Esma-Masafi	1.92	233	*e*Pn	Pn	18 42 16.2	-0.2
UOSS	Minazif	2.17	224	P	Pn	18 42 19.8	-0.1
UOSS	Minazif	2.17	224	*e*Pn	Pn	18 42 19.2	-0.7
HATD	Hatta, Dubai	2.30	223	P	Pn	18 42 22.2	+0.5
HATD	Hatta, Dubai	2.30	223	*e*Pn	Pn	18 42 21.1	-0.6
ASHO	Ashiyiah	2.45	222	*e*P	Pn	18 42 24.6	+0.8
	SNR=12						
ASHO				S	Sb	18 42 57.6	-0.5
ASHO	Ashiyiah	2.45	222	P	Pn	18 42 25.7	+1.9
	SNR=12						
ASHO	Ashiyiah	2.45	222	*e*Pn	Pn	18 42 25.3	+1.5
NAZ	Nazwa, Dubai	2.50	233	*e*Pn	Pn	18 42 25.3	+0.9
SOHO	SOHO	2.67	207	P	Pn	18 42 27.0	+0.3
	SNR=25						
SOHO				S	Sn	18 42 58.3	-0.6
HOQ	Hoqain	2.97	190	P	Pn	18 42 32.0	+1.1
	SNR=15						
HOQ				S	Sn	18 43 03.5	-3.0
ALNE	Al Ain	3.11	218	*e*Pn	Pn	18 42 33.0	+0.1
NGRK	Negar Kerman	3.26	343	*e*Pn	Pn	18 42 37.3	+2.1
NGRK				*e*		18 43 30.4	
CHMN	Cheshme madani	3.33	355	*e*	Pg	18 42 46.8	-1.2
KHGB	Koh Gabri	4.02	343	*e*Pn	Pn	18 42 48.8	+3.2
KHGB				*e*		18 43 55.9	
WBK	Wadi Bani Khal	4.03	165	P	Pn	18 42 48.4	+2.8
	SNR=18						
UMZA	Um Al Zommool	4.52	213	*e*Pn	Pn	18 42 53.3	+1.1
NHDN	Nehbandan	5.22	21	*e*Pn	Pn	18 43 03.6	+1.7
IKAZ	Kazeroun	6.21	303	*e*Pn	Pn	18 43 15.2	-0.6
IRAM	Ramesheh	7.11	319	*e*Pn	Pn	18 43 29.0	+1.0

NEIC ***11*** *18:45:28.0±2.0, 22°.77S±0°.06×68°.55W±0°.09, h118^{km}±2^{km}, mb4.6/8, ML4.0(GUC), Error ellipse: s-maj=12.3km s-min=7.9km az=100.0*
IDC ***11*** *18:45:27.5±0.7, 22°.89S×68°.59W, h112^{km}±6^{km}, mb3.9/5, mb1 3.8/8, mb1mx3.5/32, mbtmp4.1/8, Error ellipse: s-maj=22.5km s-min=17.1km az=64.0*
SJA ***11*** *18:45:28.3±0.8, 22°.70S×68°.63W, h126^{km}±7^{km}, ML3.8, MW3.8*
GUC ***11*** *18:45:28.9±0.6, 22°.67S×68°.66W, h132^{km}±4^{km}, ML4.0*
ISC 11 18:45:28.1±0.6**, 22°.73S**±0°.04×**68°.56W**±0°.04**, h122**^{km}±5^{km}**, n63,** σ**1^{s}74**/100**, mb4.2**/7**, 14C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	0.35	290	P	Pn	18 45 46.0	+0.1
	192nm,0.3s,baz=210,slow=3.7,SNR=227						
LVC				S	Sn	18 45 58.1	-1.3
	1μm,0.3s,baz=300,slow=20,SNR=160						
PB06	IPOC Station P	0.94	271	⇑*i*P	Pn	18 45 50.2	+0.4
PB06				*i* S	Sn	18 46 06.6	+0.2
PB06				IAML		18 46 08.9	
	comp=E,4μm,0.4s						
PB06	IPOC Station P	0.94	271	*i* P	Pn	18 45 50.3	+0.4
PB06				*i* S	Sn	18 46 07.7	+1.3
PB06				IAML		18 46 08.8	
	comp=Z,3μm,0.3s						
PB15	IPOC Station P	0.97	240	⇑*i*P	Pn	18 45 51.1	+0.8
PB15				*i* S	Sn	18 46 08.0	+0.9
PB15	IPOC Station P	0.97	240	*i* P	Pn	18 45 51.1	+0.8
PB15				*i* S	Sn	18 46 08.1	+1.1
PB15				IAML		18 46 09.6	
	comp=Z,11μm,0.2s						
PB09	IPOC Station P	1.12	325	⇑*i*P	Pn	18 45 52.5	+0.7
PB09				*i* S	Sn	18 46 09.8	+0.2
PB09				IAML		18 46 12.8	
	comp=E,3μm,0.6s						
PB09	IPOC Station P	1.12	325	*i* P	Pn	18 45 52.5	+0.7
PB09				*i* S	Sn	18 46 10.5	+0.8
PB09				IAML		18 46 11.6	
	comp=Z,4μm,0.7s						
PB03	IPOC Station P	1.30	301	⇑*i*P	Pn	18 45 53.9	+0.3
PB03				*i* S	Sn	18 46 12.5	-0.4
PB03				IAML		18 46 13.7	
	comp=E,3μm,0.2s						
PB03	IPOC Station P	1.30	301	*i* P	Pn	18 45 53.9	+0.3
PB03				*i* S	Sn	18 46 13.0	+0.1
PB03				IAML		18 46 13.4	
	comp=Z,2μm,0.2s						
PB04	IPOC Station P	1.52	285	⇑*i*P	Pn	18 45 56.5	+0.3
PB04				*i* S	Sn	18 46 17.0	-0.5
PB04				IAML		18 46 21.6	
	comp=N,2μm,0.2s						
PB04	IPOC Station P	1.52	285		Pn	18 45 56.5	+0.3
PB04	IPOC Station P	1.52	285	*i* P	Pn	18 45 56.5	+0.3
PB04				*i* S	Sn	18 46 18.1	+0.6
PB05	IPOC Station P	1.52	265	⇑*i*P	Pn	18 45 56.5	+0.4
PB05				*i* S	Sn	18 46 16.9	-0.5
PB05	IPOC Station P	1.52	265	*i* P	Pn	18 45 56.5	+0.4
PB05				*i* S	Sn	18 46 17.5	+0.2
PB05				IAML		18 46 18.1	
	comp=Z,1μm,0.8s						
PB07	IPOC Station P	1.58	309	⇑*i*P	Pn	18 45 57.2	+0.4
PB07				*i* S	Sn	18 46 18.2	-0.5
PB07				IAML		18 46 19.8	
	comp=E,2μm,0.2s						
PB07	IPOC Station P	1.58	309	*i* P	Pn	18 45 57.3	+0.4
PB07				*i* S	Sn	18 46 18.9	+0.2
PB07				IAML		18 46 27.4	
	comp=Z,1μm,0.3s						
PB02	IPOC Station P	1.87	318	⇑*i*P	Pn	18 46 00.3	+0.1
PB02				*i* S	Sn	18 46 23.7	-1.1
PB02				IAML		18 46 27.3	
	comp=E,2μm,0.3s						
PB02	IPOC Station P	1.87	318	*i* P	Pn	18 46 00.4	+0.1
PB02				*i* S	Sn	18 46 24.6	-0.2
PB02				IAML		18 46 26.3	
	comp=Z,2μm,0.2s						
PB01	IPOC Station P	1.89	333	⇑*i*P	Pn	18 46 00.5	+0.1
PB01				*i* S	Sn	18 46 24.5	-0.5
PB01				IAML		18 46 27.0	
	comp=E,2μm,0.2s						
PB01	IPOC Station P	1.89	333	Pn	Pn	18 46 00.5	+0.1
PB01				Sn	Sn	18 46 25.0	-0.1
PB10	IPOC Station P	2.00	247	⇑*i*P	Pn	18 46 01.8	+0.2
PB10				*i* S	Sn	18 46 25.8	-1.5
PB10	IPOC Station P	2.00	247		Pn	18 46 01.9	+0.2
PB10	IPOC Station P	2.00	247	*i* P	Pn	18 46 01.8	+0.2
PB10				*i* S	Sn	18 46 26.5	-0.9
PB10				IAML		18 46 28.3	
	comp=Z,480nm,0.5s						
PATCX	Punta Patache	2.41	322	⇑*i*P	Pn	18 46 06.3	-0.7
PATCX				*i* S	Sn	18 46 35.3	-1.5
PB14	IPOC Station P	2.54	222	*i* P	Pn	18 46 09.2	+0.4
PB14				⇑*i*S	Sn	18 46 39.5	-0.5
PB14				IAML		18 46 40.8	
	comp=Z,652nm,0.4s						
GO02	Mina Guanaco	2.60	201	⇑*i*P	Pn	18 46 10.4	+0.8
GO02				*i* S	Sn	18 46 43.3	+1.8
GO02	Mina Guanaco	2.60	201		Pn	18 46 10.3	+0.8
TA01	Diego Aracena	2.63	325	⇑*i*P	Pn	18 46 08.7	-1.0
PB08	IPOC Station P	2.63	348	⇓*i*P	Pn	18 46 10.9	+0.8
PB08				*i* S	Sn	18 46 42.9	+0.6
PB08				IAML		18 46 44.8	
	comp=E,548nm,0.6s						
PB08	IPOC Station P	2.63	348	*i* P	Pn	18 46 10.8	+0.7
PB08				IAML		18 46 46.2	
	comp=Z,201nm,0.1s						
YJA	Yavi	2.87	80	*i* P	Pn	18 46 15.5	+2.3
YJA				*i* S	Sn	18 46 51.3	+3.5
YJA				IAML		18 46 52.4	
	comp=Z,34nm,1.2s						
GO01	Chusmiza	3.10	349		Pn	18 46 16.5	+0.2
PB11	IPOC Station P	3.13	341	⇓*i*P	Pn	18 46 15.6	-0.7
PB11				*i* S	Sn	18 46 52.0	-1.5
PB11	IPOC Station P	3.13	341		Pn	18 46 15.4	-0.9
PB11	IPOC Station P	3.13	341	*i* P	Pn	18 46 15.4	-0.9
PB11				*i* S	Sn	18 46 46.9	-6.6
PB11				IAML		18 47 22.9	
	comp=Z,247nm,0.7s						
SLA	San Lorenzo	3.43	126	*i* P	Pn	18 46 23.5	+3.3
SLA				IAML		18 47 07.1	
	comp=Z,14nm,1.8s						
PSGCX	Pisagua	3.44	335	*i* P	Pn	18 46 18.4	-2.0
PSGCX				IAML		18 47 23.5	
	comp=Z,232nm,0.4s						
AZAP	Zapla	3.53	116	*i* P	Pn	18 46 23.1	+1.4
AZAP				*i* S	Sn	18 46 56.8	-6.4
AZAP				IAML		18 47 20.7	
	comp=Z,15nm,1.0s						
MNMC	Minye Minye	3.71	345		Pn	18 46 22.9	-1.2
MNMCX	Minye Minye	3.71	345	*i* P	Pn	18 46 23.2	-0.9
MNMCX				*i* S	Sn	18 47 07.6	+0.2
MNMCX				IAML		18 47 09.8	
	comp=Z,378nm,0.3s						
PB12	IPOC Station P	4.42	338	*i* P	Pn	18 46 32.9	-0.6
PB12				*i* S	Sn	18 47 21.6	-2.5
PB12				IAML		18 47 47.7	
	comp=Z,143nm,0.5s						
PB16	IPOC Station P	4.46	348	*i* P	Pn	18 46 35.0	+0.5
PB16				IAML		18 48 01.5	
	comp=Z,52nm,0.5s						
GO03	Copiap	5.08	197	Pn	Pn	18 46 40.7	-1.5
LPAZ	La Paz	6.42	4	P	Pn	18 47 01.4	+0.6
	comp=Z,0.9nm,0.3s,baz=175,slow=1.5,SNR=14						
LPAZ				S	Sn	18 47 57.3	-16
	comp=Z,0.3nm,0.3s,baz=215,slow=10,SNR=4.2						
LPAZ	La Paz	6.42	4	Pn	Pn	18 47 02.4	+1.5
LPAZ					Pn	18 47 02.6	+1.8
GO04	Tololo Observa	7.68	195	Pn	Pn	18 47 17.6	+0.1
GO04					Sn	18 48 37.5	-5.6
CFA	Coronel Fontan	8.85	178	P	Pn	18 47 31.1	-1.9
	comp=Z,0.4nm,0.3s,baz=338,slow=9.8,SNR=6.2						
CFA				S	Sn	18 49 03.4	-7.6
	baz=236,slow=18						
SIV	San Ignacio	9.73	48	P	Pn	18 47 42.2	-2.9
	comp=Z,1.2nm,0.3s,baz=244,slow=8.3,SNR=25						
SIV				S	Sn	18 49 22.6	-10
	comp=Z,1.8nm,0.3s,baz=322,slow=23,SNR=11						
CPUP	Villa Florida	10.83	112	P	Pn	18 47 58.1	-1.6
	comp=Z,0.4nm,0.3s,baz=29,slow=2.5,SNR=5.9						
BDFB	Brasilia	20.63	74	P	P	18 49 57.6	-0.5
	comp=Z,6.3nm,0.5s,baz=211,slow=23,SNR=6.8						
BDFB	Brasilia	20.63	74	P	P	18 49 58.4	+0.3
RCBR	Riachuelo	35.70	67	P	P	18 52 15.5	+0.4
	comp=Z,3.9nm,0.8s,baz=224,slow=10.0,SNR=2.6						
RCBR	Riachuelo	35.70	67	P	P	18 52 15.5	+0.4
RCBR				IAmb	IAmb	18 52 38.6	
	comp=Z,31nm,1.6s						
ESPN	Las Esperanzas	37.98	334	P	P	18 52 32.4	-1.9
ESPN				IAmb	IAmb	18 52 43.3	
	comp=Z,21nm,1.4s						
ACON	Acoyapa	38.13	333	P	P	18 52 33.7	-1.9
QSPA	South Pole Qui	67.47	180	P	P	18 56 13.0	+2.3
QSPA				IAmb	IAmb	18 56 34.8	
	comp=Z,5.5nm,1.4s						
DBIC	Dimbokro	68.78	73	P	P	18 56 20.7	+1.2
	comp=Z,1.5nm,0.6s,baz=270,slow=9.1,SNR=3.3						
DBIC	Dimbokro	68.78	73	P	P	18 56 20.7	+1.2
DBIC				IAmb	IAmb	18 56 41.2	
	comp=Z,21nm,1.6s						
TOA0	Torodi Ar. Sit	77.46	70	P	P	18 57 11.2	+0.7
TOA0				IAmb	IAmb	18 57 13.8	
	comp=Z,2.0nm,0.6s						
TORD	Torodi Ar. Bea	77.46	70	P	P	18 57 11.0	+0.5
	comp=Z,1.3nm,0.5s,baz=249,slow=5.0,SNR=11						
TORD				pP	pP	18 57 41.9	-0.7
	comp=Z,1.1nm,0.7s,baz=241,slow=5.4,SNR=4.1						
TORD	Torodi Ar. Bea	77.46	70	P	P	18 57 10.7	+0.2
TORD					pP	18 57 42.5	-0.1
YKA	Yellowknife Ar	92.45	340	P	P	18 58 26.2	+1.6
	comp=Z,0.6nm,0.7s,baz=135,slow=5.0,SNR=10						
YKA				pP	pP	18 58 56.9	-0.2
	comp=Z,0.3nm,0.6s,baz=139,slow=5.0,SNR=3.1						
MKAR	Makanchi Array	146.42	37	PKPbc	PKPab	19 04 55.7	-0.3
	comp=Z,0.2nm,0.4s,baz=339,slow=3.0,SNR=3.8						
MKAR				pPKPbc	pPKPdf	19 05 25.9	-1.6
	comp=Z,0.3nm,0.6s,baz=318,slow=1.6,SNR=3.4						

PRU ***11*** *18:50:47.7±0.0, 43°.14N×22°.08E, h0^{km}*
SOF ***11*** *18:50:48.1, 43°.12N×22°.04E, h4^{km}, MD3.5*
PDG ***11*** *18:50:49.0±0.4, 43°.16N×21°.99E, h15^{km}, ML3.0/12, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
SKO ***11*** *18:50:49.8, 43°.12N×22°.00E, h3^{km}*
THE ***11*** *18:50:49.5, 43°.15N×22°.06E, h1^{km}±5^{km}, ML3.0/4, Error ellipse: s-maj=8.9km s-min=0.9km az=4.0*
BEO ***11*** *18:50:49.2±0.2, 43°.17N×21°.99E, h4^{km}±2^{km}, ML3.1/17*
ISC 11 18:50:48.7±1.1**, 43°.16N**±0°.01×**22°.01E**±0°.02**, h3**^{km}±9^{km}**, n125,** σ**1^{s}25**/192**, 46C-19D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARS	Barje	0.38	202	*e*Pg	Pg	18 50 56.0	+0.1
BARS				*e*Sg	Sg	18 51 00.6	-0.2
BARS	Barje	0.38	202	*e*Pg	Pn	18 51 04.9	+3.8
BARS				*e*Sg	Sb	18 51 17.9	+14
ZAPS	Zavoj	0.47	76	*e*Pg	Pg	18 50 58.9	+1.2
ZAPS				*e*Sg	Sb	18 51 05.9	-1.2
BOVS	Bovan	0.52	335	*e*Pg	Pg	18 50 58.9	+0.2
BOVS				*e*Sg	Sg	18 51 06.2	+0.8
SELS	Selova	0.65	275	*e*Pg	Pg	18 51 00.5	-0.7
SELS				*e*Sg	Sg	18 51 09.0	-0.6
BLKB	Belogradchik	0.67	47	⇓S	Sg	18 51 11.9	+1.7
ZAGS	Zajecar	0.67	14	*e*Pg	Pg	18 51 01.7	+0.2
ZAGS				*e*Sg	Sg	18 51 10.9	+0.7
BOSS	Bosilegrad	0.75	152	*e*Pg	Pg	18 51 02.7	-0.4
BOSS				*e*Sg	Sg	18 51 12.4	-0.5
VTS	Vitosha	1.05	121	P	Pg	18 51 08.1	-0.8
VTS				S	Sb	18 51 22.8	-1.1

VTS	Vitosha	1.05	121	ePg	Pg	18 51 08.4	-0.5
VTS				eSg	Sb	18 51 23.2	-0.8
VTS	Vitosha	1.05	121	⇓P	Pg	18 51 08.2	-0.7
VTS				⇑S	Sb	18 51 22.9	-1.1
VTS	Vitosha	1.05	121	i P	Pg	18 51 08.2	-0.7
GRUS	Gruza	1.19	308	ePg	Pg	18 51 11.0	-0.4
GRUS				eSg	Sg	18 51 26.0	-0.8
SVIS	Svilajnac	1.24	333	ePg	Pg	18 51 11.2	-1.3
SVIS				eSg	Sg	18 51 28.4	-0.2
SKO	Skopje	1.26	200	ePg	Pg	18 51 13.2	+0.3
SKO	Skopje	1.26	200	i Pg	Pg	18 51 12.4	-0.5
SKO				i Sg	Sg	18 51 28.3	-0.9
SKO				eLg	Lg	18 51 29.1	
	comp=E,20nm,0.3s						
KUBS	Kucevo	1.27	349	ePg	Pg	18 51 11.6	-1.4
KUBS				eSg	Sg	18 51 28.5	-1.0
BAIL	Bailesti	1.29	48	⇓P	Pg	18 51 13.8	+0.2
BAIL				⇓S	Sn	18 51 32.3	+0.7
PUNG	Punghina	1.30	31	⇑P	Pg	18 51 13.6	0.0
PUNG				⇑S	Sb	18 51 31.6	+0.7
IVAS	Ivanjica	1.41	288	ePg	Pn	18 51 14.4	-1.0
IVAS				eSg	Sg	18 51 34.5	+0.4
STIP	Stip	1.48	175	i Pg	Pn	18 51 14.2	-2.0
STIP				i Sg	Sb	18 51 33.5	-2.4
SJES	Sjenica	1.49	274	ePg	Pn	18 51 16.2	-0.3
SJES				eSg	Sn	18 51 36.1	-0.4
KKB	Krupnik	1.52	148	i P	Pb	18 51 17.4	-0.2
DJES	Djerdap	1.55	14	ePg	Pn	18 51 16.8	-0.4
DJES				eSg	Sn	18 51 37.3	-0.5
TRUS	Trudelj	1.57	313	ePn	Pn	18 51 16.8	-0.7
TRUS				eSg	Sn	18 51 39.5	+1.1
MDVR	Moldovita	1.63	353	⇑P	Pn	18 51 17.7	-0.7
MDVR				⇓S	Sn	18 51 40.4	+0.5
PGB	Panagyurishte	1.70	110	i P	Pb	18 51 20.8	+0.1
SRE	Strehaia	1.73	30	⇓P	Pn	18 51 20.0	+0.3
SRE				⇓S	Sn	18 51 42.8	+0.5
DIVS	Divibare	1.73	303	ePn	Pn	18 51 18.8	-1.1
DIVS				eSg	Sb	18 51 45.0	+1.5
DIVS	Divibare	1.73	303	ePn	Pn	18 51 18.5	-1.4
HERR	Herculane	1.74	10	⇑P	Pn	18 51 19.9	+0.1
HERR				⇑S	Sn	18 51 42.9	+0.3
PHP	Peshkopia	1.88	219	P	Pn	18 51 23.0	+1.2
PHP				S	Sn	18 51 46.9	+0.9
VAY	Valandovo	1.89	167	ePn	Pb	18 51 23.4	-0.4
VAY	Valandovo	1.89	167	i Pn	Pn	18 51 22.2	+0.3
VAY				i Sg	Sg	18 51 48.3	-1.0
VAY				eLg	Lg	18 51 48.5	
	comp=E,239nm,0.6s						
VAY				eLg	Lg	18 51 50.0	
	comp=N,235nm,0.5s						
PLVB	Pleven	1.92	82	⇑P	Pn	18 51 22.8	+0.5
PLVB				⇑S	Sn	18 51 47.4	+0.4
VLAD	Vladila	1.93	64	⇑P	Pn	18 51 22.4	0.0
RUDO	Rudo	1.98	284	ePn	Pn	18 51 21.5	-1.6
BEO	Beograd	1.98	327	ePn	Pn	18 51 22.5	-0.7
BEO				eSg	Sb	18 51 51.9	+1.4
BBLS	Lazići	2.02	291	ePn	Pn	18 51 23.6	-0.1
BBLS				eSg	Sb	18 51 53.4	+1.8
BBLS	Lazići	2.02	291	ePn	Pn	18 51 21.2	-2.5
MMB	Musomiste	2.03	140	i P	Pn	18 51 24.3	+0.5
KNT	Kendrikon	2.11	161	P	Pn	18 51 24.5	-0.4
KNT				S	Sb	18 51 53.5	-0.6
	comp=N,362nm,0.4s						
PDG	Podgorica	2.15	251	⇑P	Pn	18 51 26.5	+1.0
PDG				⇓S	Sn	18 51 52.7	0.0
PDG	Podgorica	2.15	251	ePn	Pn	18 51 26.3	+0.8
GRG	Griva	2.23	172	P	Pn	18 51 26.1	-0.4
GRG				S	Sn	18 51 55.2	+0.6
	comp=N,82nm,0.6s						
OHR	Ohrid	2.24	204	ePn	Pn	18 51 28.1	+1.4
OHR				eSn	Sb	18 51 56.7	-1.2
OHR				eLg	Lg	18 52 03.9	
	comp=E,155nm,0.7s						
OHR				eLg	Lg	18 52 05.8	
	comp=N,106nm,0.9s						
TEKS	Tekeris	2.27	309	ePn	Pn	18 51 26.1	-1.0
TEKS				eSg	Sb	18 52 01.4	+2.7
TEKS	Tekeris	2.27	309	ePn	Pn	18 51 26.3	-0.8
UPM	Unac-Piva	2.27	272	ePn	Pg	18 51 32.8	+0.6
NVR	Nevrokopi	2.28	142	P	Pn	18 51 27.4	+0.2
NVR				S	Sn	18 51 56.0	+0.2
	comp=N,445nm,0.4s						
GZR	Gura Zlata	2.30	14	⇑P	Pn	18 51 27.7	+0.2
GZR				⇑S	Sn	18 51 56.4	0.0
BANR	Banloc	2.30	345	⇑P	Pn	18 51 27.0	-0.6
BANR				⇑S	Sn	18 51 57.0	+0.6
SRS	Serrai	2.36	150	P	Pn	18 51 27.9	-0.5
HAPS	Han Pijesak,Bl	2.40	294	ePn	Pn	18 51 27.5	-1.5
FNA	Florina	2.42	191	P	Pn	18 51 29.4	+0.1
FNA				S	Sn	18 52 00.1	+0.6
	comp=N,88nm,0.8s						
BZS	Buzias	2.47	354	⇑P	Pn	18 51 28.5	-1.3
BZS				⇑S	Sn	18 52 00.5	0.0
COPA	Copaceanca	2.52	66	⇑P	Pn	18 51 30.9	+0.4
FRGS	Fruska Gora	2.54	322	eSg	Sb	18 52 08.9	+2.2
FRGS	Fruska Gora	2.54	322	ePn	Pn	18 51 24.5	-6.4
HUMR	Humele	2.55	57	⇓P	Pn	18 51 30.9	-0.1
HUMR				⇓S	Sn	18 52 01.5	-0.9
SOH	Sokhos	2.55	156	P	Pn	18 51 30.6	-0.4
LOT	Lotru	2.61	28	⇑P	Pn	18 51 31.8	-0.1
LOT				⇑S	Sn	18 52 03.1	-1.0
HCY	Herceg Novi	2.68	256	ePn	Pn	18 51 33.1	+0.3
HORT	Hortiatis	2.69	162	P	Pn	18 51 33.1	+0.1
TREB	Trebinje	2.72	262	ePn	Pn	18 51 33.8	+0.5
KTI	Kastanea	2.77	178	P	Pn	18 51 34.2	+0.1
DEV	Deva	2.79	13	⇑S	Sn	18 52 09.4	+0.9
NEST	Nestorio	2.84	195	P	Pn	18 51 35.2	+0.2
ELND	Elena	2.84	93	⇓P	Pn	18 51 36.1	+1.1
ELND				⇑S	Sn	18 52 10.2	+0.4
KAVA	Kavala	2.86	138	P	Pn	18 51 35.4	+0.2
DBRK	Dubrovnik	2.88	261	ePn	Pn	18 51 37.2	+1.7
DBRK				Sn	Sn	18 52 11.8	+1.2
ARR	Arges	2.90	40	⇑P	Pn	18 51 36.2	+0.4
ARR				⇑S	Sn	18 52 10.7	-0.5
SIRR	Siria	3.11	356	⇓S	Sn	18 52 16.2	-0.2
VOIR		3.15	43	⇑P	Pn	18 51 40.2	+0.9
VOIR				⇓S	Sn	18 52 18.6	+1.1
STON	Ston	3.17	266	ePn	Pn	18 51 40.5	+1.0
STON				Sn	Sn	18 52 19.5	+1.7
STON	Ston	3.17	266	ePn	Pn	18 51 40.8	+1.3
OUR	Ouranopolis	3.19	152	P	Pn	18 51 39.1	-0.6
THAS	Thassos island	3.26	141	P	Pn	18 51 40.2	-0.5
RAZG	Razgrad	3.31	81	⇑P	Pn	18 51 41.8	+0.5
RAZG				⇑S	Sn	18 52 20.0	-1.2
RDO	Rodhopi	3.31	126	P	Pn	18 51 41.8	+0.4
MDB	Medias	3.42	29	⇑P	Pn	18 51 43.2	+0.3
MDB				⇑S	Sn	18 52 25.9	+1.8
RICI	Ricice	3.57	277	i Pn	Pn	18 51 46.7	+1.7
RICI				Sn	Sn	18 52 28.4	+0.7
MAKA	Makarska	3.65	274	ePn	Pn	18 51 47.3	+1.3
MAKA				Sn	Sn	18 52 29.3	-0.2
MLR	Muntele Rosu	3.66	49	⇓P	Pn	18 51 47.3	+0.9
MLR				⇑S	Sn	18 52 29.9	-0.2
DRGR		3.66	8	⇑P	Pn	18 51 46.0	-0.3
DRGR				⇓S	Sn	18 52 28.6	-1.5
DOPR	Dopca	3.70	40	⇑P	Pn	18 51 47.5	+0.7
LEHL	Lehliu	3.72	68	⇓P	Pn	18 51 48.0	+1.0
LEHL				⇑S	Sn	18 52 33.2	+1.9
CJR	Cluj-Napoca	3.72	17	⇑S	Sn	18 52 33.0	+1.4
ALN	Alexandroupoli	3.77	126	P	Pn	18 51 48.3	+0.6
MGRS	Mrkonjic Grad	3.78	291	ePn	Pn	18 51 48.4	+0.5
BLY	Banja Luka	3.83	296	⇑P	Pn	18 51 49.1	+0.6
BLY				⇑S	Sn	18 52 34.4	+0.4
BLY	Banja Luka	3.83	296	ePn	Pn	18 51 48.6	+0.1
OZUR		3.98	41	⇓P	Pn	18 51 51.4	+0.7
KIJV	Kijevo	4.16	284	ePn	Pn	18 51 54.1	+1.0
KIJV				Sn	Sn	18 52 44.3	+2.1
PLOR	Plostina	4.27	49	⇑P	Pn	18 51 56.0	+1.3
ICOR	Ion Corvin	4.31	75	⇑P	Pn	18 51 55.5	+0.3
ICOR				⇓S	Sn	18 52 45.0	-1.0
VRI	Vrincioaia	4.32	50	⇑P	Pn	18 51 56.4	+1.1
VRI				⇑S	Sn	18 52 47.5	+1.3
HARR	Harsova	4.54	68	⇑P	Pn	18 51 58.8	+0.5
MORI	Morici	4.63	281	i Pn	Pn	18 52 00.6	+1.0
MORI				Sn	Sn	18 52 52.7	-1.2
ZIRJ	Zirje	4.66	278	Sn	Sn	18 52 52.7	-1.8
CFR	Carcaliu	4.85	63	⇑P	Pn	18 52 02.4	0.0
BEHE	Becsehely	4.98	313	ePn	Pn	18 52 03.9	-0.4
PSZ	Piszkesteto	4.98	343	⇑P	Pn	18 52 04.0	-0.4
PSZ				⇑S	Sn	18 52 59.0	-3.5
TRPA	Tarpa	4.98	4	⇑S	Sn	18 52 58.3	-4.1
BURAR	Bucovina Array	4.99	26	⇑P	Pn	18 52 06.0	+1.4
BURAR				⇓S	Sn	18 53 04.2	+1.3
DUGI	Dugi Otok	5.12	282	ePn	Pn	18 52 08.1	+1.9
DUGI				Sn	Sn	18 53 05.7	0.0
TLCR		5.30	65	⇑P	Pn	18 52 09.6	+0.9
CRES	Cresnjev	5.39	302	ePn	Pn	18 52 09.7	-0.3
CRVS	Cervenica-Dubn	5.75	356	ePN	Pn	18 52 15.1	+0.1
VYHS	Vyhne	5.77	339	ePN	Pn	18 52 15.4	+0.2
VYHS				eSN	Sn	18 53 20.1	-1.9
KOLS	Kolonicke sedl	5.77	2	ePN	Pn	18 52 15.1	-0.1
KOLS				eSG	Sg	18 53 53.2	-0.8
CEY	Cerknica	6.00	298	ePn	Pn	18 52 18.4	-0.1
SOKA	Soboth	6.07	308	ePn	Pn	18 52 18.1	-1.4
	comp=N,1.1nm,0.2s,SNR=6.7						
SOKA				eSn	Sn	18 53 24.4	-5.0
	comp=N,1.4nm,0.3s						
ARSA	Arzberg	6.14	314	ePn	Pn	18 52 19.9	-0.4
	comp=N,1.8nm,0.2s						
ARSA				eSn	Sn	18 53 29.4	-1.6
	comp=N,2.1nm,0.4s						
MODS	Modra-Piesok	6.17	329	ePN	Pn	18 52 19.0	-1.7
OBKA	Obir	6.27	305	ePn	Pn	18 52 22.6	+0.5
	comp=N,0.5nm,0.2s						
CONA	Conrad Observa	6.43	320	ePn	Pn	18 52 23.1	-1.1
	comp=N,1.9nm,0.3s,SNR=10						
CONA				eSn	Sn	18 53 35.6	-2.5
	comp=N,4.4nm,0.6s						
MYKA	Terra Mystica	6.88	303	ePn	Pn	18 52 31.0	+0.6
	comp=N,1.9nm,0.4s						
MYKA				eSn	Sn	18 53 45.5	-3.7
	comp=N,1.3nm,0.3s						
MOA	Molln	7.18	313	ePn	Pn	18 52 35.4	+0.9
	comp=N,0.7nm,0.3s						
ABTA	Abfaltersbach	7.63	301	ePn	Pn	18 52 41.7	+1.0
	comp=N,2.3nm,0.3s,SNR=4.4						
ABTA				eSn	Sn	18 54 04.8	-3.0
	comp=N,1.8nm,0.3s						
KHC	Kasperske Hory	8.35	318	ePN	Pn	18 52 52.7	+2.0
WTTA	Wattenberg	8.39	303	ePn	Pn	18 52 52.8	+1.5
	comp=N,2.4nm,0.3s						
SQTA	Sankt Quirin	8.63	302	ePn	Pn	18 52 57.7	+3.0
	comp=N,2.3nm,0.3s						
MOTA	Moosalm	8.75	302	ePn	Pn	18 52 58.5	+2.3
	comp=N,1.3nm,0.3s						
FETA	Feichten	8.86	300	ePn	Pn	18 53 00.1	+2.4
	comp=N,2.7nm,0.4s,SNR=8.2						

IDC 11 18:58:40.0±5.7, 18.90S×177.71W, h538km±51km, mb2.6/3, mb1 3.1/4, mb1mx2.8/35, mbtmp3.8/4, Error ellipse: s-maj=239.9km s-min=21.4km az=157.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.55	50	P	P	19 00 34.3	+1.2
	6.4nm,0.3s,baz=345,slow=2.0,SNR=6.5						
AFI				S	S	19 02 04.2	-1.5
	2.4nm,0.3s,baz=171,slow=19,SNR=2.3						
WRA	Warramunga Arr	45.11	260	P	P	19 06 08.7	0.0
	0.3nm,0.4s,baz=97,slow=8.2,SNR=5.3						
ASAR	Alice Springs	45.17	255	P	P	19 06 08.9	-0.1
	0.5nm,0.7s,baz=88,slow=8.1,SNR=6.1						
ASAR				PcP	PcP	19 07 36.9	-1.2
	0.6nm,1.0s,baz=110,slow=5.3,SNR=4.5						
TXAR	Lajitas Array	85.97	57	P	P	19 10 24.1	+0.4
	0.5nm,0.8s,baz=243,slow=6.0,SNR=3.3						

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*IDC **11** 19:07:46.8±1.8, 43.65N×105.35W, h0km, mb1 3.6/3, mb1mx3.3/41, mbtmp3.4/3, ML3.4/3, Error ellipse: s-maj=49.2km s-min=8.7km az=150.0*

*NEIC **11** 19:07:47.7±1.9, 43.64N±0.05×105.19W±0.06, h0km±2km, ML3.4/62, Error ellipse: s-maj=9.4km s-min=6.4km az=140.0*

ISC 11 19:07:46.6±0.9, 43.63N±0.07×105.15W±0.07, h0km, n76, σ1.15/75, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.94	58		Pb	19 08 06.5	+0.5
K22A	Casper	1.41	226		Pn	19 08 12.8	-0.8
K22A				IAML		19 08 36.2	
	comp=N,662nm,0.2s						
K22A				IAML		19 08 40.5	
	comp=E,519nm,0.5s						
RWWY	Rawlins	2.47	219		Pn	19 08 29.4	+1.1
RWWY				IAML		19 09 06.3	
	comp=E,314nm,0.8s						
N23A	Red Feather La	2.80	192		Pn	19 08 34.8	+1.9
N23A				IAML		19 09 20.4	
	comp=N,156nm,0.5s						
N23A				IAML		19 09 27.3	
	comp=E,172nm,1.0s						
LAO	LASA Array	3.15	346		Pn	19 08 38.7	+1.2
LAO				IAML		19 09 40.1	
	comp=E,137nm,0.6s						
LAO				IAML		19 09 49.6	
	comp=E,164nm,0.8s						
RLMT	Red Lodge	3.31	298		Pn	19 08 40.7	+0.9
RLMT				IAML		19 09 39.4	
	comp=E,66nm,0.5s						
BW06	Boulder Array	3.34	256		Pn	19 08 41.6	+1.3
BW06				IAML		19 09 32.0	
	comp=E,58nm,0.5s						
BW06				IAML		19 09 40.2	
	comp=N,69nm,0.7s						
PD31	Pinedale Array	3.34	256		Pn	19 08 41.3	+1.1
PDAR	Pinedale Array	3.34	256	Pn	Pn	19 08 41.4	+1.1
	comp=N,4.3nm,0.3s,baz=78,slow=17,SNR=115						
PDAR				Lg	Lg	19 09 26.4	
	comp=N,8.2nm,0.3s,baz=75,slow=35,SNR=6.2						
PDAR	Pinedale Array	3.34	256		Pn	19 08 41.3	+1.1
OGNE	Ogallala	3.54	138		Pn	19 08 44.0	+1.0
YNE	Yellowstone No	3.75	293		Pn	19 08 46.7	+0.8
YMP	Mirror Lake Pl	3.77	289		Pn	19 08 46.9	+0.7
ISCO	Idaho Springs	3.85	185		Pn	19 08 49.6	+2.2
GCMT	Greycliff	3.87	305		Pn	19 08 48.6	+1.0
LKWY	Lake	3.89	286		Pn	19 08 48.4	+0.5
LKWY				IAML		19 10 05.0	
	comp=N,50nm,1.1s						
H17A	Grant Village	3.99	283		Pn	19 08 51.2	+2.0
H17A				IAML		19 10 03.4	
	comp=N,38nm,0.9s						
YUF	Upper Falls	4.00	287	Pn	Pn	19 08 52.2	+2.7
FLWY	Flagg Ranch	4.04	278		Pn	19 08 51.9	+2.1
FLWY				IAML		19 10 08.5	
	comp=N,71nm,1.1s						
SNOW	Snow King Moun	4.08	270		Pn	19 08 50.1	-0.4
SNOW				IAML		19 09 59.8	
	comp=N,55nm,1.0s						
SNOW				IAML		19 10 02.5	
	comp=N,66nm,1.0s						
YNR	Norris Junctio	4.12	287		Pn	19 08 52.2	+1.1
YPP	Pitchstone Pla	4.13	281		Pn	19 08 52.8	+1.5
REDW	Red Top Meadow	4.16	268		Pn	19 08 53.4	+1.9
REDW				IAML		19 10 12.2	
	comp=N,49nm,0.8s						
O20A	White River Ci	4.19	214		Pn	19 08 53.8	+1.9
O20A				IAML		19 10 04.6	
	comp=E,58nm,0.6s						
O20A				IAML		19 10 22.7	
	comp=N,58nm,1.1s						
YHH	Holmes Hill	4.26	288		Pn	19 08 54.0	+1.0
FXWY	Fox Creek	4.26	272		Pn	19 08 54.3	+1.3
YMR	Madison River	4.31	286		Pn	19 08 54.7	+1.1
AHID	Auburn Hatcher	4.43	261		Pn	19 08 56.4	+1.0
YHB	Horse Butte	4.49	287		Pn	19 08 57.5	+1.4
RDMU	Red Mountain	4.49	229		Pn	19 08 57.4	+1.3
YHL	Hebgen Lake	4.50	288		Pn	19 08 57.7	+1.4
SUSD	Miller	4.54	78	Pn	Pn	19 08 56.8	+0.2
SMCO	Snowmass	4.66	198		Pn	19 08 58.0	-0.6
SMCO				IAML		19 10 18.8	
	comp=N,37nm,1.0s						
SMCO				IAML		19 10 55.8	
	comp=N,27nm,1.1s						
QLMT	Earthquake Lak	4.67	287		Pn	19 08 58.6	+0.1
DGMT	Dagmar	4.88	7		Pn	19 09 01.9	+0.6
HWUT	Hardware Ranch	5.15	249		Pn	19 09 05.9	+0.8
HWUT				IAML		19 10 49.3	
	comp=N,33nm,0.7s						
HWUT				IAML		19 10 56.3	
	comp=N,28nm,1.0s						
TCUT	Toone Canyon	5.27	244		Pn	19 09 07.4	+0.5
EGMT	Eagleton	5.44	325		Pn	19 09 10.2	+1.2
JLU	Jordanelle	5.58	239	Pn	Pn	19 09 11.7	+0.6
DLMT	Dillon	5.60	291		Pn	19 09 11.3	0.0
BGNE	Belgrade	5.63	111	Pn	Pn	19 09 11.3	-0.3
LRM	Limekiln Ridge	5.64	295		Pn	19 09 12.8	+0.9
MCMT	McKenzie Canyo	5.66	285		Pn	19 09 12.5	+0.4
CTU	Camp Tracy	5.72	241	Pn	Pn	19 09 13.2	+0.3
SPUT	South Promonto	5.88	249	Pn	Pn	19 09 16.8	+1.7
SDCO	Great Sand Dun	5.89	183		Pn	19 09 14.8	-0.5
P17A	Butcher Ranch,	5.90	227		Pn	19 09 16.4	+0.9
S22A	4UR Ranch, Cre	6.02	193	Pn	Pn	19 09 17.9	+0.7
MPU	Maple Canyon	6.04	235	Pn	Pn	19 09 18.0	+0.6
SRU	San Rafael Swe	6.06	224		Pn	19 09 17.5	-0.2
ECSD	EROS Data Cent	6.19	86	Pn	Pn	19 09 20.8	+1.5
TMUT	Trail Mountain	6.28	228		Pn	19 09 20.4	-0.3
CBKS	Cedar Bluff	6.31	138	Pn	Pn	19 09 21.4	+0.5
NLU	North Lily Min	6.35	237	Pn	Pn	19 09 22.8	+1.2
BGU	Big Grassy Mou	6.44	248	Pn	Pn	19 09 21.5	-1.3
T25A	Trinidad	6.51	175	Pn	Pn	19 09 24.1	+0.2
Q16A	Castle Valley	6.54	226	Pn	Pn	19 09 25.0	+0.8
DUG	Dugway, Tooele	6.67	242	Pn	Pn	19 09 25.9	-0.1
D32A	Dogwood Acres,	6.71	56	Pn	Pn	19 09 26.6	+0.2
MVCO	Mesa Verde	6.91	203	Pn	Pn	19 09 28.6	-0.7
MSO	Missoula	6.98	300	Pn	Pn	19 09 28.9	-1.2
MSU	Marysvale	7.37	228	Pn	Pn	19 09 37.8	+2.2
JTMT	Jette	7.60	306	Pn	Pn	19 09 39.3	+0.6
MTPU	Mount Pierson	7.72	226	Pn	Pn	19 09 42.1	+1.5
AGMN	Agassiz Nation	7.97	51	Pn	Pn	19 09 44.3	+0.6
ELK	Elko	8.03	252	Pn	Pn	19 09 46.0	+1.3
	comp=N,0.1nm,0.3s,baz=74,slow=15,SNR=3.0						
ELK	Elko	8.03	252	Pn	Pn	19 09 43.0	-1.7
WALA	Waterton Lakes	8.13	315	Pn	Pn	19 09 45.9	0.0
PKCU	Pink Cliffs	8.24	224	Pn	Pn	19 09 48.4	+0.7
PSUT	Pine Spring	8.31	235	Pn	Pn	19 09 48.2	-0.4
I10CA	LAC DU BONNET	9.06	40	i		20 07 30.0	
	baz=223,slow=339,SNR=3.1						
ULM	Lac du Bonnet	9.16	41	Pn	Pn	19 09 58.9	-1.1
	comp=N,1.2nm,0.3s,baz=233,slow=12,SNR=15						
ULM				Pg		19 10 37.3	
	comp=N,0.9nm,0.3s,baz=244,slow=14,SNR=5.0						
ULM				Lg	Lg	19 12 32.5	
	comp=N,0.6nm,0.3s,baz=146,slow=11,SNR=4.6						
ULM	Lac du Bonnet	9.16	41		Pn	19 09 58.5	-1.5
MSTX	Muleshoe	9.83	168		Pn	19 10 10.0	+0.8
MGMO	Mountain Grove	11.76	119		Pn	19 10 35.4	-0.1
PBMO	Poplar Bluff	13.16	116		Pn	19 10 54.1	-0.6

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*NEIC **11** 19:21:39.0±2.2, 40.63N±0.05×125.32W±0.06, h10km±5km, Error ellipse: s-maj=8.2km s-min=5.4km az=209.0*

*NCEDC **11** 19:21:41.4±2.4, 40.65N±0.05×125.31W±0.07, h24km±8km, ML3.1/14, Error ellipse: s-maj=9.2km s-min=5.6km az=221.0*

*ANF **11** 19:21:42.5±1.6, 40.82N×124.95W, h0km, ML3.0/10, Error ellipse: s-maj=13.6km s-min=8.6km az=64.0*

ISC 11 19:21:40.0±1.9, 40.65N±0.04×125.26W±0.08, h16km±10km, n76, σ1.35/87, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	0.73	104		Pg	19 21 55.2	+1.0
KMPM	Mount Pierce	0.90	105		Pg	19 21 57.4	-0.1
KMPM					Sg	19 22 09.6	+0.2
KSMM	Slide Mountain	0.95	119		Pg	19 21 57.5	-1.0
JCC	Jacoby Creek,	0.95	79		Pg	19 21 57.4	-1.0
KRPM	Rodgers	1.07	61		Pb	19 21 59.3	-0.8
KCRM	Chalk Rock	1.12	101		Pb	19 22 00.8	-0.3
KHMM	Horse Mountain	1.18	79		Pb	19 22 01.3	-0.9
KMRM	Mail Ridge	1.26	109		Pn	19 22 03.1	0.0
KMRM	Mail Ridge	1.26	109		Sb	19 22 19.5	+0.1
KCSM	Cold Springs	1.34	94		Pn	19 22 04.0	-0.2
KRMB	Red Mountain	1.34	49		Pn	19 22 03.0	-1.2
KBSM	Bell Springs	1.47	119		Pn	19 22 05.4	-0.5
KHBM	Hayfork Bally	1.55	89		Pn	19 22 06.7	-0.5
KSXB	Camp Six Broad	1.57	41		Pn	19 22 06.3	-1.1
KIPM	Iron Peak	1.60	121		Pn	19 22 07.3	-0.5
KCPM	Cahto Peak	1.61	126		Pn	19 22 07.1	-0.7
KFPM	Farley Peak	1.73	125		Pn	19 22 08.9	-0.6
KBO	Bosley Butte	1.74	26		Sn	19 22 28.9	-2.7
KBO	Bosley Butte	1.74	26		Pn	19 22 08.9	-0.9
KBNM	Bluenose Ridge	1.75	115		Pn	19 22 09.9	0.0
GTC	Three Chop Rid	1.81	133		Pn	19 22 09.4	-1.1
LBPM	Beegum Peak	1.85	100		Pn	19 22 10.8	-0.3
LGPM	Granite Peak	1.87	81		Pn	19 22 10.9	-0.5
L02E	Cave Junction	1.96	39	P	Pn	19 22 12.2	-0.4
	baz=221,SNR=44						
L02E				S	Sn	19 22 35.2	-1.6
	baz=221						
M02C	Callahan	1.97	67		Pn	19 22 12.6	-0.2
M02C	Callahan	1.97	67	P	Pn	19 22 12.6	-0.2
	baz=249,SNR=81						
M02C				S	Sn	19 22 36.5	-0.7
	baz=249						
N02D	Trinity Center	1.97	80		Pn	19 22 12.2	-0.6
N02D	Trinity Center	1.97	80	P	Pn	19 22 12.2	-0.6
	baz=261,SNR=12						
N02D				S	Sn	19 22 36.4	-0.7
	baz=261						
LBKM	Bonanza King	2.02	77		Pn	19 22 13.3	-0.2
WDC	Whiskeytown Da	2.07	91		Pn	19 22 13.8	-0.3
GROM	Round Mountain	2.11	109		Pn	19 22 15.0	+0.2
GVV	Valley View	2.16	113		Pn	19 22 15.8	+0.3
GASB	Alder Springs	2.19	116		Pn	19 22 16.3	+0.5
YBH	Yreka Blue Hor	2.21	60		Pn	19 22 16.4	+0.3
LAMM	Antelope Mount	2.21	63		Pn	19 22 16.4	+0.2
LCSM	College of the	2.30	70		Pn	19 22 17.4	0.0
KEBM	Edson Butte	2.33	17	Pn	Pn	19 22 17.0	-0.7
HOPS	Hopland Field	2.36	134	Pn	Pn	19 22 18.2	0.0
K02D	Willamette Mer	2.37	30	P	Pn	19 22 18.1	-0.2
	baz=211,SNR=400						
K02D				S	Sn	19 22 44.6	-2.5
	baz=211						
B040	Montague	2.45	60		Pn	19 22 19.8	+0.5
HUMO	Hull Mountain	2.61	41		Pn	19 22 21.8	+0.3
GDXM	Geysers	2.65	133	Pn	Pn	19 22 21.6	-0.5
O03E	Paynes Creek	2.66	97	P	Pn	19 22 22.3	-0.1
	baz=279,SNR=28						
O03E				S	Sn	19 22 54.1	-0.2
	baz=279						
J01E	Myrtle Point	2.70	21	P	Pn	19 22 22.4	-0.3
	baz=203						
J01E				S	Sn	19 22 53.3	-1.7
	baz=203						
L04D	Klamath Falls	2.72	54	P	Pn	19 22 25.8	+2.6
	baz=236,SNR=23						
L04D				S	Sn	19 22 58.6	+2.8
	baz=236						
M04C	Macdoel	2.82	65	P	Pn	19 22 26.0	+1.4
	baz=248,SNR=7.1						
ORV	Oroville	3.08	110		Pn	19 22 27.4	-0.7
MCCM	Marconi Confer	3.11	143	Pn	Pn	19 22 29.6	+1.3
I03D	Drain, OR	3.36	24	P	Pn	19 22 32.9	+1.1
	baz=206,SNR=36						
I03D				S	Sn	19 23 11.4	+0.1
	baz=206						
J04D	Umpqua Nationa	3.50	41	P	Pn	19 22 36.3	+2.4
	baz=224						
VAK	Adit at Lawren	3.62	139		Pb	19 22 44.1	+0.4
AFDM	Forest Hills D	3.72	116	Pn	Pn	19 22 37.1	+0.3
I04A	Tendick Farm,	3.79	33	P	Pn	19 22 39.9	+2.1
	baz=215,SNR=7.7						
I04A				S	Sn	19 23 22.6	+0.6
	baz=215						
BEKR	Beckworth	3.83	100		Pn	19 22 39.8	+1.3
MOD	Modoc Plateau	3.94	70	Pn	Pn	19 22 40.5	+0.5
J05D	Fort Rock, OR	3.99	47	P	Pn	19 22 42.8	+2.1
	baz=230,SNR=30						
H04D	Lebanon	4.30	25	P	Pn	19 22 46.4	+1.7
	baz=207,SNR=11						
H04D				S	Sn	19 23 34.6	+0.1
	baz=207						
PINE	Pine Mountain	4.49	44		Pn	19 22 49.8	+2.2
PAHR	Pah Rah Range	4.60	100		Pn	19 22 49.0	-0.1
H04A	Detroit Lake	4.62	28	Pn	Pn	19 22 50.2	+1.0
PNTR	Pine Nut	4.63	108	Pn	Pn	19 22 51.5	+2.0
I05D	Terrebonne, OR	4.69	37	P	Pn	19 22 52.2	+2.0
	baz=220						
YERR	Yerington	4.92	108	Pn	Pn	19 22 55.2	+1.7
WVOR	Wild Horse Val	5.28	68	Pn	Pn	19 22 59.4	+1.0
G05D	Wamic, OR	5.43	31	P	Pn	19 23 02.9	+2.6

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
	baz=214						
I07A	Izee	5.47	49		Pn	19 23 03.5	+2.5
G06A	Carlson Farm,	5.70	35	Pn	Pn	19 23 06.6	+2.5
J08A	Circle Bar Ran	5.73	60		Pn	19 23 03.0	-1.6
KVN	Kaiserville	5.74	104	Pn	Pn	19 23 04.3	-0.4
NVAR	Mina Array Bea	5.82	110	Pn	Pn	19 23 07.0	+1.2
G08A	Pilot Rock	6.55	43		Pn	19 23 19.0	+3.2
LON	Longmire	6.59	21	Pn	Pn	19 23 18.6	+2.3
E07A	Sunnyside	7.09	32	Pn	Pn	19 23 25.9	+2.9
HAWA	Hanford	7.09	34	Pn	Pn	19 23 24.6	+1.5
BMO	Blue Mountains	7.20	52		Pn	19 23 27.3	+2.6
ISA	Isabella, Lake	7.30	131	Pn	Pn	19 23 27.9	+1.7

CNRM 11 19:42:02.7±0.7,35°.35N×5°.78W,h81km±6km,Error ellipse: s-maj=7.0km s-min=4.1km az=68.0
INMG 11 19:42:05.4±1.4,35°.35N×5°.70W,h31km±10km,ML2.0, Error ellipse: s-maj=4.4km s-min=3.0km az=72.0
SFS 11 19:42:05.0,35°.55N×5°.68W,h5km,ML1.8,DAR CHAQUI (MARRUECOS)
MDD 11 19:42:06.6±1.6,35°.38N×5°.73W,h61km±13km,mb3.5/4, Error ellipse: s-maj=15.1km s-min=8.3km az=2.0,PRXIMO
IGIL 11 19:42:07.0,35°.34N×5°.70W,h31km,ML2.1
ISC 11 19:42:04.4±1.2,35°.36N±0°.03×5°.71W±0°.04,h71km±8km, n50,σ1^{s}.28/79,1C,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHEFC	Chefchaouen	0.39	129	P	Pn	19 42 15.6	-0.9
CHEFC				S	Sn	19 42 27.1	+1.8
SMIR	Smir Dam	0.42	39	P	Pn	19 42 15.8	-0.8
SMIR				S	Sn	19 42 24.9	-0.6
RSA	Sarsar	0.48	191	P	Pn	19 42 16.7	-0.5
RSA				S	Sn	19 42 27.8	+1.2
CEU	Ceuta	0.61	27	P	Pn	19 42 18.9	+0.5
CEU				S	Sn	19 42 28.7	+0.1
CEU	Ceuta	0.61	27	eP	Pn	19 42 18.9	+0.5
CEU				eS	Sn	19 42 28.7	+0.1
SICH	Sidi Chahed	1.29	165	P	Pn	19 42 26.5	-0.2
SICH				S	Sn	19 42 42.9	-0.5
ESPR	Espera	1.51	356	S	Sn	19 42 48.0	-0.6
	1.9nm,0.3s,SNR=4.0						
AKLM	AKL	1.74	119	P	Pn	19 42 28.7	-3.9
AKLM				S	Sn	19 42 52.7	-1.3
ZHG	ZHG	2.06	202	P	Pn	19 42 37.4	+0.4
ZHG				S	Sn	19 43 02.6	+0.9
EMIN	Mina Concepcio	2.53	342	P	Pn	19 42 43.6	+0.4
	1.4nm,0.2s,SNR=7.9						
EMIN				S	Sn	19 43 12.0	-0.9
	0.3nm,0.2s,SNR=7.9						
PBDV	Barranco-do-Ve	2.60	317	Pn	Pn	19 42 45.3	+1.1
PBDV				Sn	Sn	19 43 14.0	-0.8
	3.4nm,0.3s						
PBDV	Barranco-do-Ve	2.60	317	ePn	Pn	19 42 45.3	+1.1
PBDV				eSn	Sn	19 43 14.0	-0.8
PBDV				A	A	19 43 19.0	
	3.4nm,0.3s						
EGRO	El Granado	2.60	327	P	Pn	19 42 44.9	+0.7
	0.7nm,0.1s,SNR=7.9						
EGRO				S	Sn	19 43 13.8	-0.9
	3.1nm,0.1s,SNR=5.7						
MD31	MD31	2.60	162	P	Pn	19 42 44.7	+0.3
MD31				S	Sn	19 43 14.1	-0.9
PVAQ	Vaqueiros	2.61	322	Pn	Pn	19 42 45.2	+0.9
PVAQ				Sn	Sn	19 43 13.6	-1.3
	9.0nm,0.2s						
PVAQ	Vaqueiros	2.61	322	P	Pn	19 42 41.4	-2.9
PVAQ				S	Sn	19 43 14.4	-0.5
PVAQ	Vaqueiros	2.61	322	⇑ePn	Pn	19 42 45.2	+0.9
PVAQ				eSn	Sn	19 43 13.6	-1.3
PVAQ				A	A	19 43 15.3	
	9.0nm,0.2s						
MDT	Midelt	2.70	160	P	Pn	19 42 44.9	-0.8
MDT				S	Sn	19 43 16.0	-1.2
ECAB	El Cabril	2.72	5	P	Pn	19 42 46.1	+0.2
	2.2nm,0.4s,SNR=7.9						
ECAB				S	Sn	19 43 16.0	-1.7
	0.3nm,0.2s,SNR=7.9						
PCVE	Castro Verde	2.95	321	Sn	Sn	19 43 22.5	-0.7
	3.1nm,0.5s						
PCVE	Castro Verde	2.95	321	eSn	Sn	19 43 22.5	-0.7
PCVE				A	A	19 43 24.9	
	3.1nm,0.5s						
EADA	Adamuz	2.95	18	P	Pn	19 42 49.9	+0.9
	0.2nm,0.1s,SNR=7.9						
EADA				S	Sn	19 43 22.1	-1.2
	0.2nm,0.2s,SNR=7.9						
MORF	Marmelete	3.07	310	eP	Pn	19 42 51.6	+1.0
MORF				eS	Sn	19 43 24.4	-1.9
MORF				AML	AML	19 43 25.9	
	comp=N,5.9nm,0.4s						
MORF	Marmelete	3.07	310	P	Pn	19 42 51.6	+1.0
MORF				S	Sn	19 43 24.4	-1.9
	comp=N,5.9nm,0.4s						
PFVI	Vila Bisbo	3.08	306	S	Sn	19 43 25.2	-1.2
	comp=N,1.7nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	3.08	306	eSn	Sn	19 43 25.5	-0.9
MESJ	Messejana	3.20	322	eP	Pn	19 42 53.3	+1.0
MESJ				eS	Sn	19 43 27.6	-1.7
MESJ				AML	AML	19 43 29.9	
	comp=E,5.9nm,0.2s						
MESJ	Messejana	3.20	322	P	Pn	19 42 53.3	+1.0
MESJ				S	Sn	19 43 27.6	-1.7
	comp=E,5.9nm,0.2s						
EQES	Quesada	3.23	40	P	Pn	19 42 56.0	+3.0
	comp=E,0.2nm,0.3s,SNR=7.9						
EQES				S	Sn	19 43 29.6	-0.7
	comp=E,0.7nm,0.3s,SNR=7.9						
PTEO	Sao Teotonio	3.27	313	Sn	Sn	19 43 30.4	-0.6
	comp=E,2.8nm,0.9s						
PTEO	Sao Teotonio	3.27	313	eSn	Sn	19 43 30.4	-0.6
PTEO				A	A	19 43 30.5	
	comp=E,5.5nm,0.9s						
EBAD	Badajoz	3.55	343	P	Pn	19 42 57.9	+0.8
	comp=E,0.6nm,0.2s,SNR=4.8						
EBAD				S	Sn	19 43 36.3	-1.5
	comp=E,1.4nm,0.2s,SNR=5.7						
PNCL	Nicolau / Gran	3.56	321	Pn	Pn	19 42 58.3	+1.0
PNCL				Sn	Sn	19 43 37.1	-1.1
	comp=E,2.0nm,0.5s						
PNCL	Nicolau / Gran	3.56	321	ePn	Pn	19 42 58.3	+1.0
PNCL				eSn	Sn	19 43 37.1	-1.1
PNCL				A	A	19 43 38.5	
	comp=E,2.0nm,0.5s						
SESP	Santiago Espad	3.75	42	S	Sn	19 43 41.9	-1.1
	comp=E,0.2nm,0.2s,SNR=7.9						
PESTR	Estremoz	3.81	337	eSn	Sn	19 43 43.4	-0.9
PMTG	Montargil	4.21	332	Pn	Pn	19 43 07.3	+1.1
PMTG				Sn	Sn	19 43 53.3	-0.8
	comp=E,1.4nm,0.6s						
PMTG	Montargil	4.21	332	ePn	Pn	19 43 07.3	+1.1
PMTG				eSn	Sn	19 43 53.3	-0.8
PMTG				A	A	19 43 55.5	
	comp=E,1.4nm,0.6s						
PMRV	Marv??o	4.28	342	Pn	Pn	19 43 08.8	+1.7
PMRV	Marv??o	4.28	342	ePn	Pn	19 43 08.8	+1.7
PAB	San Pablo	4.32	14	P	Pn	19 43 08.0	+0.3
	comp=E,0.0nm,0.3s,SNR=4.0						
PAB				S	Sn	19 43 53.4	-3.4
	comp=E,0.2nm,0.2s,SNR=7.9						
PCBR	Castelo Branco	4.69	343	Pn	Pn	19 43 14.6	+1.9
PCBR	Castelo Branco	4.69	343	ePn	Pn	19 43 14.6	+1.9
EPLA	Plasencia	4.71	357	P	Pn	19 43 13.8	+0.8
	comp=E,2.3nm,0.3s,SNR=7.9						
PSBE	So Bento	4.82	330	ePn	Pn	19 43 16.3	+1.8
MTE	Manteigas	5.24	344	Pn	Pn	19 43 21.9	+1.6
MTE	Manteigas	5.24	344	ePn	Pn	19 43 21.9	+1.6
MVO	Moncorvo	5.89	350	P	Pn	19 43 30.7	+1.5
	comp=E,1.8nm,0.2s,SNR=7.9						
MVO	Moncorvo	5.89	350	ePn	Pn	19 43 31.0	+1.9
ECAL	Calabor	6.62	353	P	Pn	19 43 40.5	+1.3
	comp=E,0.6nm,0.1s,SNR=7.9						

ATH 11 19:49:09.4,36°.31N×21°.16E,h23km±4km,ML1.8/1,Error ellipse: s-maj=6.3km s-min=2.0km az=36.0,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYL	PYLOS	0.75	38	P	Pb	19 49 23.9	+0.1
PYL				S	Sn	19 49 35.3	0.0
PYL				AML	AML	19 49 41.4	
	comp=N,138μm,0.6s						
PYL				AML	AML	19 49 42.1	
	comp=E,195μm,0.6s						
DYR	Agios Nikonas	1.05	64	P	Pb	19 49 28.9	0.0
DYR				S	Sn	19 49 44.3	+1.7
ITM	Ithomi	1.07	35	P	Pb	19 49 30.4	+1.2
ITM				S	Sn	19 49 43.8	+0.7
AMT	Artemida-Makis	1.30	19	P	Pb	19 49 34.1	+0.9
VLX	Vlachokerasia	1.44	42	P	Pb	19 49 36.5	+0.9
VLI	Veliai	1.49	73	P	Pb	19 49 37.3	+1.0
KTHA	Kythira Island	1.53	91	P	Pb	19 49 37.1	0.0
DID	Didima	2.05	54	P	Pn	19 49 44.0	+1.5

MAN 11 19:57:37.0,3°.47N×124°.91E,h476km,mb4.3,ML3.1, MS2.8
NEIC 11 19:57:41.1±1.9,4°.25N±0°.07×124°.0E±0°.2,h460km±10km, mb4.2/18,Error ellipse: s-maj=22.6km s-min=7.1km az=72.0
IDC 11 19:57:43.7±4.7,4°.31N×124°.32E,h499km±77km,mb2.8/5, mb1 3.0/6,mb1mx2.6/64,mbtmp3.8/6,Error ellipse: s-maj=90.2km s-min=17.4km az=74.0
ISC 11 19:57:41.2±0.6,4°.18N±0°.06×123°.91E±0°.10,h450km,n37, σ1^{s}.21/39,mb4.0/11,1C,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKMP	Bagumbayan, Su	2.41	15	eP	P	19 58 44.1	-0.1
DDMP	Don Marcelino,	2.62	43	eP	P	19 58 45.5	-0.2
DDMP				eS	S	19 59 38.6	+0.8
KCP	Kidapawan	3.05	23	⇑eP	P	19 58 50.6	+1.8
KCP				eS	S	19 59 53.5	+10
MATI	Mati	3.61	40	eP	P	19 58 51.9	-1.1
MATI				eS	S	19 59 51.8	+0.3
BUKP	Musuan	3.85	17	eP	P	19 58 45.1	-10
TNTI	Ternate	4.84	134	P	P	19 59 04.5	+0.4
LUWI	Luwuk	5.31	192	P	P	19 59 08.9	+0.2
LUWI				S	S	20 00 17.5	-2.4
KKM	Kota Kinabalu	7.88	284	P	P	19 59 35.8	+0.2
SIJI	Sorong	8.90	124	P	P	19 59 46.6	+0.1
	2.1nm,0.3s,baz=343,slow=23,SNR=6.3						
FAKI	Fak Fak	10.92	130	P	P	20 00 09.5	+1.0
SOEI	Soe	13.85	179	P	P	20 00 41.0	+0.7
JAGI	Jajag, Banyuwa	15.89	218	P	P	20 01 06.1	+4.1
JAGI				IAmb	IAmb	20 01 31.3	
	comp=Z,24nm,1.2s						
MTN	Manton Dam	18.37	157	P	P	20 01 26.8	-0.9
MTN				IAmb	IAmb	20 01 28.4	
	comp=Z,11nm,1.1s						
YOJ	Yonaguni jima	20.18	358	P	P	20 01 42.4	-1.9
KNRA	Kununurra	20.31	166	P	P	20 01 45.7	+0.2
KNRA				IAmb	IAmb	20 01 54.9	
	comp=Z,7.4nm,1.2s						
FITZ	Fitzroy Crossi	22.20	176	P	P	20 02 03.9	+1.2
	comp=Z,3.1nm,1.2s,baz=13,slow=10,SNR=3.5						
WB0	Warramunga Arr	25.94	157	P	P	20 02 34.9	-1.2
WB0				IAmb	IAmb	20 02 53.1	
	comp=Z,9.0nm,1.4s						
WRA	Warramunga Arr	26.07	157	P	P	20 02 36.1	-1.2
	comp=Z,0.2nm,0.3s,baz=333,slow=11,SNR=20						
WRA	Warramunga Arr	26.07	157	P	P	20 02 36.0	-1.3
WB2	Warramunga Arr	26.08	157	P	P	20 02 36.2	-1.2
WB2				IAmb	IAmb	20 03 01.2	
	comp=Z,14nm,1.6s						
WR0	Warramunga Arr	26.17	157	P	P	20 02 36.6	-1.5
WR0				IAmb	IAmb	20 02 37.3	
	comp=Z,11nm,1.6s						
COEN	Coen	26.27	134	P	P	20 02 38.2	-0.9
COEN				IAmb	IAmb	20 02 45.0	
	comp=Z,15nm,1.2s						
ASAR	Alice Springs	29.34	161	P	P	20 03 05.5	-0.6
	comp=Z,0.2nm,0.4s,baz=342,slow=7.0,SNR=9.4						
ASAR	Alice Springs	29.34	161	P	P	20 03 06.0	-0.1
MORW	Morawa	33.91	192	P	P	20 03 44.4	-0.9
NWAO	Narrogin (SRO)	37.44	189	P	P	20 04 14.4	-0.3
TAU	Tasmania Unive	51.44	158	P	P	20 06 03.8	+0.5
MK31	Makanchi Array	55.60	326	P	P	20 06 32.7	-0.3
MKAR	Makanchi Array	55.60	326	P	P	20 06 32.7	-0.4
	comp=Z,1.1nm,0.4s,baz=121,slow=7.8,SNR=44						
MKAR	Makanchi Array	55.60	326	P	P	20 06 32.5	-0.5
MAKZ	Makanchi	55.78	326	P	P	20 06 33.5	-0.8
KDJ	Kajisay	56.15	319	P	P	20 06 37.4	+0.2
GAR	Garm	59.56	313	P	P	20 06 59.7	-0.7
GAR				IAmb	IAmb	20 07 11.7	
	comp=Z,9.0nm,1.5s						
KURBB	Kurchatov Arra	59.86	328	P	P	20 07 00.8	-1.3
	comp=Z,0.5nm,0.3s,baz=127,slow=6.3,SNR=7.0						
KURK	Kurchatov	59.87	329	P	P	20 07 01.2	-0.9
CHGR	Chuyangaron	60.28	313	P	P	20 07 04.3	-1.0
CHGR				IAmb	IAmb	20 07 05.8	
	comp=Z,4.5nm,0.8s						
KKAR	Karatay Array	60.99	318	P	P	20 07 08.8	-1.0

NIED 11 20:04:00,35°.80N×140°.10E,h68km,Mw4.6 Best double couple: $M_0$9.60000×10^{15} NP1:ϕ_s6.00000°,δ65.00000°, λ104.00000°. NP2:ϕ_s155.00000°,δ29.00000°,λ62.00000°.
MOS 11 20:04:29.6±1.3,35°.75N×140°.21E,h58km,mb4.7/19,Error ellipse: s-maj=6.9km s-min=4.2km az=100.7
NEIC 11 20:04:31.4±2.1,35°.72N±0°.06×140°.16E±0°.08,h59km±5km, mb5.0/122,Error ellipse: s-maj=9.9km s-min=8.1km az=79.0
BJI 11 20:04:31.6±0.0,35°.71N×140°.24E,h96km,mB4.9/37, mb4.5/55
JMA 11 20:04:32.7±0.2,35°.80N×140°.10E,h66km±2km,M4.4 Broadband fault plane solution: P waves. NP1: ϕ_s178.00000°,δ21.00000°,λ85.00000°. NP2:ϕ_s4.00000°, δ69.00000°,λ92.00000°. Principal axes: T Plg66.0000°, Azm277.0000°; N Plg2.0000°, Azm183.0000°; P Plg24.0000°, Azm92.0000°;
JMA Felt III J1.
IDC 11 20:04:33.1±1.4,35°.72N×140°.07E,h73km±10km,mb3.9/40, mb1 4.0/43,mb1mx4.0/65,mbtmp4.3/43,MS3.5/16, Ms1 3.5/16,ms1mx3.3/40 Error ellipse: s-maj=11.3km s-min=10.1km az=72.0
GCMT 11 20:04:35.4±0.5,35°.83N±0°.03×140°.25E±0°.04,h59km±2km, MW4.7/57,Moment Tensor Solution. s24,c28; s57,c79; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.62±.11; $M_{\theta\theta}$-0.20±.08; $M_{\phi\phi}$-1.42±.07; $M_{r\theta}$-0.01±.06; $M_{\theta\phi}$-0.04±.05; $M_{\phi r}$0.54±.05; Best double couple: $M_0$1.61400×10^{16} NP1:ϕ_s183.00000°,δ35.00000°,λ92.00000°. NP2: ϕ_s1.00000°,δ55.00000°,λ89.00000°. Principal axes: T 1.7140, Plg80.0000°, Azm266.0000°; N -0.2030, Plg1.0000°, Azm2.0000°; P -1.5150, Plg10.0000°, Azm92.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 11 20:04:31.5±0.5,35°.77N±0°.03×140°.14E±0°.04,h63km±4km, n365,σ1^{s}.69/399,mb4.7/124,19C-23D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSMT	Sammumatsuo	0.28	116	⇑P	Pn	20 04 44.3	+2.5
TOK	Tokyo	0.32	256	⇓P	Pn	20 04 44.5	+2.5
JCN	Nagara	0.35	172	⇑P	Pn	20 04 44.7	+2.4
JIHU	Itakohorinouch	0.37	58	⇑P	Pn	20 04 44.4	+1.9
JAG	Ashikaga	0.86	320	⇓P	Pn	20 04 49.0	+1.1
JOD2	Odawara 2	0.99	240	⇓P	Pn	20 04 50.2	+0.6
JOD2				S	Sn	20 05 03.1	+0.1
BSO3	Boso 3	1.01	162	⇑P	Pn	20 04 50.7	+1.2
JRY	Ryogami san	1.04	284	⇓P	Pn	20 04 51.7	+1.5
JRY				S	Sn	20 05 06.7	+2.7
JIM2	Oshima 3	1.20	209	P	Pn	20 04 52.6	+0.3
JIM2				S	Sn	20 05 07.5	-0.2
JKT	Katashina	1.23	324	⇓P	Pn	20 04 53.8	+1.0
BSO1	Boso 1	1.31	148	⇑P	Pn	20 04 54.2	+1.0
JFNN	Fujinakano	1.32	245	⇓P	Pn	20 04 54.6	+0.8
JFNN				S	Sn	20 05 10.7	+0.2
JYN	Shimob	1.33	259	⇓P	Pn	20 04 55.0	+1.0
JIZS	Izushimoda	1.47	225	⇓P	Pn	20 04 56.4	+0.5
JIZS				S	Sn	20 05 14.0	-0.2
MJAR	Matsushiro Arr	1.74	297	P	Pn	20 05 00.9	+1.3
	26nm,0.3s,baz=101,slow=14,SNR=980						
MJAR				S	Sn	20 05 21.5	+0.7
	19nm,0.3s,baz=129,slow=12,SNR=8.7						
MJAR				LR	LR	20 05 40.8	
	comp=Z,1μm,18.5s,baz=110,slow=40						
MJAR	Matsushiro Arr	1.74	297		Pn	20 05 00.1	+0.5
MAJO	Matsushiro	1.75	297	P	Pn	20 05 01.1	+1.5
MAJO	Matsushiro	1.75	297		Pn	20 05 01.1	+1.5
MAT	Matsushiro	1.75	297	P	Pn	20 05 01.2	+1.6
MAT				S	Sn	20 05 23.3	+2.4
MJB9	Matsu-Tunnel	1.75	297		Pn	20 05 01.2	+1.5
INU	Inuyama	2.58	262		Pn	20 05 12.1	+1.2
JHJ	Hachijo jima 2	2.66	186	P	Pn	20 05 12.5	+0.5
	343nm,0.3s,baz=332,slow=21,SNR=59						
JHJ				S	Sn	20 05 41.3	-1.8
	270nm,0.3s,baz=253,slow=23,SNR=14						
JHJ				LR	LR	20 06 03.6	
	comp=Z,345nm,20.5s,baz=116,slow=35						
JHJ2	Mitsune	2.66	186		Pn	20 05 13.1	+1.0
ERM	Erimo	6.67	20	⇑eP	Pn	20 06 07.2	+0.4
ERM	Erimo	6.67	20		Pn	20 06 06.3	-0.4
ERM					Sn	20 07 18.3	-2.9
JNU	Nakatsue	8.09	254	P	Pn	20 06 28.1	+1.8
	1.0nm,0.3s,baz=46,slow=3.3,SNR=7.8						
JNU				LR	LR	20 09 56.9	
	comp=Z,526nm,20.0s,baz=66,slow=40						
JNU	Nakatsue	8.09	254	Pn	Pn	20 06 26.5	+0.2
ASAJ	Asahikawa	8.55	12	P	Pn	20 06 31.4	-1.1
	3.1nm,0.3s,baz=227,slow=11,SNR=36						
JKA	Kamikawa-asahi	8.55	12		Pn	20 06 31.4	-1.1
NMR	Nemuro--Hokkai	8.73	28	eP	Pn	20 06 32.7	-2.3
NMR				i S	Sn	20 08 03.9	-7.9
JCJ	Chichijima	8.82	168	P	Pn	20 06 34.4	-1.9
	31nm,0.3s,baz=92,slow=19,SNR=9.9						
JCJ				S	Sn	20 08 04.9	-9.2
	18nm,0.3s,baz=345,slow=20,SNR=2.7						
GLVR	Golovnino	8.97	26	eP	Pn	20 06 37.3	-1.0
GLVR				i S	Sn	20 08 11.9	-5.8
GLVR				pmax	pmax		
	comp=Z,118nm,0.6s						
GLVR				pmax	pmax		
	comp=N,87nm,0.3s						
GLVR				pmax	pmax		
	comp=E,58nm,0.4s						
GRPR	Tuman	9.28	26	eP	Pn	20 06 41.7	-0.8
GRPR				i S	Sn	20 08 18.9	-6.5
GRPR				pmax	pmax		
	comp=Z,92nm,0.2s						
YUK	Yuzh-Kuril'sk	9.35	26	eP	Pn	20 06 42.1	-1.4
YUK				i S	Sn	20 08 21.4	-5.6
YUK				pmax	pmax		
	comp=N,49nm,0.3s						
YUK				pmax	pmax		
	comp=Z,94nm,0.3s						
YUK				pmax	pmax		
	comp=Z,111nm,1.3s						
SHO	Shikotan	9.59	30	eP	Pn	20 06 44.8	-1.9
SHO				pmax	pmax		
	comp=Z,16nm,0.5s						
SHO				pmax	pmax		
	comp=N,14nm,0.2s						
SHO				pmax	pmax		
	comp=E,9.0nm,0.3s						
VLA	Vladivostok	9.72	322	⇓eP	Pn	20 06 52.8	+4.2
MSHR	Mys Shultsa	9.74	317	⇑eP	Pn	20 06 51.1	+2.3
KSRS	Korea Array	9.96	283	P	Pn	20 06 56.1	+4.3
	comp=E,0.6nm,0.3s,baz=96,slow=14,SNR=20						
KSRS				LR	LR	20 10 37.4	
	comp=E,357nm,20.4s,baz=114,slow=37						
KSAR	Wonju Array Be	9.99	283	P	Pn	20 06 51.6	-0.7
KSAR	Wonju Array Be	9.99	283		Pn	20 06 51.6	-0.7
KS19	Wonju Array Si	10.02	284	Pn	Pn	20 06 55.1	+2.5
USA0B	Ussuriysk Arra	10.48	326	⇑eP	Pn	20 07 03.0	+4.1
USA0B	Ussuriysk Arra	10.48	326		Pn	20 07 02.3	+3.3
USRK	Ussuriysk Ar.	10.48	326	P	Pn	20 07 02.4	+3.4
	baz=140,slow=12,SNR=10						
USRK	Ussuriysk Ar.	10.48	326	P	Pn	20 07 01.7	+2.8
USRK	Ussuriysk Ar.	10.48	326		Pn	20 07 01.7	+2.8
KUR	Kuril'sk	11.13	29	eP	Pn	20 07 06.3	-1.4
KUR				eS	Sn	20 09 04.6	-5.9
KUR				pmax	pmax		
	comp=Z,28nm,0.4s						
KUR				smax	smax		
	comp=E,52nm,0.6s						
KUR				smax	smax		
	comp=N,35nm,0.5s						
YSS	Yuzh-Sakhalins	11.35	9	eP	Pn	20 07 10.8	+0.1
YSS				MLR	MLR		
	comp=Z,300nm,17.0s						
YSS	Yuzh-Sakhalins	11.35	9	Pn	Pn	20 07 14.6	+3.9
MDJ	Mudanjiang	11.96	321		Pn	20 07 22.0	+3.0
JOW	Kunigami	13.49	232		P	20 07 44.9	-2.3
CN2	Changchun	13.84	310	eP	P	20 07 50.4	-0.6
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KLR	Kul'dur	14.79	338	P	Pn	20 07 55.9	-1.2
	comp=Z,0.2nm,0.3s,baz=152,slow=11,SNR=9.1						
KLR				LR	LR	20 13 53.9	
	comp=Z,48nm,18.4s,baz=152,slow=38						
KLR	Kul'dur	14.79	338	⇑eP	Pn	20 07 58.7	+1.7
KLR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
TYV	Tymovskoe	15.20	6	eP	P	20 08 04.9	-1.1
TYV				pmax	pmax		
	comp=Z,9.0nm,1.2s						
TYV				pmax	pmax		
	comp=Z,200nm,3.5s						
NJ2	Nanjing	18.05	264	eP	P	20 08 38.1	+0.5
NJ2				pmax	pmax		
	comp=Z,11nm,0.7s						
YOJ	Yonaguni jima	18.58	237	P	P	20 08 40.9	-2.7
YOJ				pmax	pmax		
	comp=Z,138nm,1.1s						
YOJ	Yonaguni jima	18.58	237		P	20 08 40.9	-2.7
YOJ				IAmb	IAmb	20 08 48.8	
	comp=Z,138nm,1.1s						
BJI	Beijing	19.37	290	P	P	20 08 52.1	+0.1
BJI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BJT	Baijiatuau	19.37	290	P	P	20 08 50.5	-1.6
BJT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BJT	Baijiatuau	19.37	290		P	20 08 50.5	-1.6
YHNB	Yeheng	19.59	241	P	P	20 08 54.2	-0.5
YHNB				IAmb	IAmb	20 09 25.4	
	comp=Z,114nm,1.6s						
NACB	Ninganchiao	19.75	239	P	P	20 08 54.2	-2.1
NACB				IAmb	IAmb	20 09 14.3	
	comp=Z,50nm,1.2s						
ZEA	Zeya	20.11	337	eP	P	20 08 58.6	-1.3
ZEA				pmax	pmax		
	comp=Z,29nm,0.6s						
ZEA				MLR	MLR		
	comp=Z,200nm,11.0s						
HIA	Hailar	20.12	318	P	P	20 08 57.6	-2.5
HIA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HIA	Hailar	20.12	318	P	P	20 08 57.6	-2.5
SSLB	Suanglung	20.45	240	P	P	20 09 01.8	-2.1
YULB	Yu-li	20.46	238	P	P	20 09 01.6	-2.4
TPUB	Ta-pu	20.99	239	P	P	20 09 08.3	-1.4
TPUB				IAmb	IAmb	20 09 10.8	
	comp=Z,84nm,1.5s						
TWG	Pinlang	21.00	237	P	P	20 09 09.6	-0.2
TWG				IAmb	IAmb	20 09 17.4	
	comp=Z,206nm,1.5s						
PEA0B	Petropavlovsk-	21.30	30	P	P	20 09 15.0	+2.2
PEA0B				pmax	pmax		
	comp=Z,24nm,1.1s						
PEA0B	Petropavlovsk-	21.30	30	P	P	20 09 15.0	+2.2
PETK	Petropavlovsk-	21.30	30	P	P	20 09 13.7	+0.9
	comp=Z,1.0nm,0.5s,baz=218,slow=6.5,SNR=6.5						
PETK				LR	LR	20 18 16.2	
	comp=Z,39nm,18.9s,baz=239,slow=38						
PETK	Petropavlovsk-	21.30	30	P	P	20 09 13.3	+0.6
PETK	Petropavlovsk-	21.30	30	P	P	20 09 13.3	+0.6
PET	Petropavlovsk	21.63	31	eP	P	20 09 10.4	-5.9
PET				eS	S	20 13 02.6	-10
PET				MLR	MLR		
	comp=Z,400nm,13.0s						
PET				MLR	MLR		
	comp=Z,200nm,12.0s						
WHN	Wuhan	22.18	264	⇓iP	P	20 09 23.0	+0.6
WHN				S	S	20 13 23.7	+0.7
WHN				pmax	pmax		
	comp=Z,48nm,0.5s						
WHN				LR	LR		
	comp=Z,660nm,12.5s						
GUMO	Guam	22.49	168	P	P	20 09 26.7	+0.9
GUMO				pmax	pmax		

	comp=Z,401nm,1.2s						
GUMO	Guam	22.49	168	P	P	20 09 26.7	+0.9
HHC	Hu-ho-hao-te	22.94	291	eP	P	20 09 26.8	-3.7
HHC				pP	sP	20 09 51.7	-0.3
HHC				sP	pP	20 10 00.6	+16
HHC				pmax	pmax		
	comp=Z,100nm,0.7s						
HHC				pmax	pmax		
	comp=Z,450nm,3.9s						
HHC				LR	LR		
	comp=Z,560nm,10.7s						
HHC				LR	LR		
	comp=Z,450nm,9.1s						
HHC				LR	LR		
	comp=Z,580nm,8.7s						
MA2	Magadan	24.81	13	P	P	20 09 49.2	+1.8
	comp=Z,10.0nm,0.5s,baz=195,slow=11,SNR=17						
MA2				LR	LR	20 20 53.8	
	comp=Z,74nm,18.6s,baz=171,slow=39						
MA2	Magadan	24.81	13	⇓eP	P	20 09 49.3	+1.8
MA2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MA2	Magadan	24.81	13	P	P	20 09 49.3	+1.8
MA2				IAmb	IAmb	20 09 50.2	
	comp=Z,11nm,0.6s						
ENH	Enshi	26.22	267	P	P	20 09 59.6	-0.9
ENH				IAmb	IAmb	20 10 01.2	
	comp=Z,32nm,0.6s						
YAK	Yakutsk	27.10	349	P	P	20 10 07.8	-0.2
	comp=Z,8.2nm,0.5s,baz=274,slow=1.6,SNR=6.2						
YAK	Yakutsk	27.10	349	eP	P	20 10 09.0	+0.9
YAK				e*PP	pP	20 10 27.9	+4.6
YAK				e		20 11 11.0	
YAK				eS	S	20 14 42.5	+1.0
YAK				e*SS	sS	20 15 08.1	+0.5
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,117nm,3.8s						
YAK				pmax	pmax		
	comp=N,62nm,3.3s						
YAK				pmax	pmax		
	comp=E,71nm,3.8s						
YAK				smax	smax		
	comp=E,73nm,3.4s						
YAK				smax	smax		
	comp=N,53nm,3.2s						
YAK	Yakutsk	27.10	349	P	P	20 10 07.4	-0.7
YAK				IAmb	IAmb	20 10 12.9	
	comp=Z,15nm,0.5s						
ULN	Ulaanbaatar	27.25	307	P	P	20 10 08.5	-1.3
ULN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ULN	Ulaanbaatar	27.25	307	P	P	20 10 08.5	-1.3
SONM	Songino Array	27.67	306	P	P	20 10 13.1	-0.5
	comp=Z,1.7nm,0.7s,baz=106,slow=8.8,SNR=14						
SONM				PcP	PcP	20 13 30.1	+0.9
	comp=Z,0.7nm,0.5s,baz=120,slow=2.1,SNR=7.6						
SONM				LR	LR	20 21 38.1	
	comp=Z,204nm,18.7s,baz=148,slow=37						
SONM	Songino Array	27.67	306	P	P	20 10 12.5	-1.1
SONM						20 13 30.3	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	27.67	306	P	P	20 10 12.5	-1.1
SONM					PcP	20 13 30.3	+1.1
BOD	Bodaibo	28.08	330	eP	P	20 10 15.4	-1.5
BOD				pmax	pmax		
	comp=Z,6.0nm,1.5s						
SEY	Seymchan	28.23	12	P	P	20 10 18.3	+0.1
	comp=Z,0.5nm,0.4s,baz=187,slow=8.1,SNR=4.4						
SEY	Seymchan	28.23	12	⇑eP	P	20 10 18.6	+0.4
H11N2	WAKE ISLAND Hy	28.44	117	T	T	20 39 55.4	
	baz=308,slow=75,SNR=49						
H11N1	WAKE ISLAND Hy	28.44	117	T	T	20 40 07.0	
	baz=308,slow=75,SNR=65						
H11N3	WAKE ISLAND Hy	28.45	117	T	T	20 40 07.9	
	baz=308,slow=75,SNR=63						
H11S3	WAKE ISLAND Hy	29.09	119	T	T	20 40 35.4	
	baz=312,slow=75,SNR=54						
H11S1	WAKE ISLAND Hy	29.09	119	T	T	20 40 35.5	
	baz=312,slow=75,SNR=86						
H11S2	WAKE ISLAND Hy	29.10	119	T	T	20 40 32.9	
	baz=312,slow=75,SNR=54						
LZH	Lanzhou	29.29	281	eP	P	20 10 27.5	-0.6
LZH				pP	pP	20 10 47.6	+4.2
LZH				sP	sP	20 10 58.3	+7.5
LZH				ePP	PnPn	20 11 24.2	+0.2
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
LZH				pmax	pmax		
	comp=Z,100nm,4.9s						
LZH				LR	LR		
	comp=Z,370nm,12.5s						
LZH				LR	LR		
	comp=Z,370nm,13.0s						
LZH				LR	LR		
	comp=Z,510nm,16.3s						
SMY	Shemya	29.29	44	P	P	20 10 27.4	-0.3
SMY				pmax	pmax		
	comp=Z,295nm,1.4s						
SMY	Shemya	29.29	44	P	P	20 10 27.4	-0.3
GYA	Guiyang	30.00	261	⇓iP	P	20 10 33.4	-1.1
GYA				pP	sP	20 10 55.2	-2.0
GYA				PP	PnPn	20 11 34.0	+0.6
GYA				S	S	20 15 22.8	-5.4
GYA				SS	SnSn	20 17 03.8	-1.6
GYA				pmax	pmax		
	comp=Z,20nm,0.5s						
GYA				pmax	pmax		
	comp=Z,110nm,4.9s						
GYA				LR	LR		
	comp=Z,200nm,15.8s						
GYA				LR	LR		
	comp=Z,220nm,15.3s						
GYA				LR	LR		
	comp=Z,120nm,15.7s						
CD2	Chengdu	30.66	271	P	P	20 10 38.5	-1.7
CD2				S	S	20 15 33.9	-4.4
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				pmax	pmax		
	comp=Z,150nm,4.9s						
CD2				LR	LR		
	comp=Z,1µm,11.7s						
CD2				LR	LR		
	comp=Z,800nm,7.9s						
CD2				LR	LR		
	comp=Z,930nm,11.4s						
GTA	Gaotai	31.98	289	⇓P	P	20 10 51.9	+0.2
GTA				pP	sP	20 11 13.4	-1.1
GTA				sP	pP	20 11 25.2	+18
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SLVN	Son La	34.71	255	P	P	20 11 14.3	-1.3
BILL	Bilibino	35.53	17	i P	P	20 11 23.4	+1.4
BILL				i		20 11 38.2	
BILL				i		20 12 40.4	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.3s						
TIXI	Tiksi	36.43	354	⇓eP	P	20 11 30.2	+0.5
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TIXI	Tiksi	36.43	354	P	P	20 11 29.7	0.0
KWAJ	Kwajalein Atol	36.72	130	P	P	20 11 32.6	-0.1
KWAJ				pmax	pmax		
	comp=Z,254nm,1.1s						
KWAJ	Kwajalein Atol	36.72	130	P	P	20 11 32.6	-0.1
UBPT	Khong Chiam	37.07	246	P	P	20 11 35.0	-0.8
DLV	T Lat	37.14	238	P	P	20 11 35.7	-0.9
DLV				IAmb	IAmb	20 12 23.3	
	comp=Z,36nm,1.4s						
FAKI	Fak Fak	39.19	193	P	P	20 11 53.6	+0.1
FAKI				IAmb	IAmb	20 12 03.1	
	comp=Z,16nm,0.9s						
PBKT	Sadao Pong	39.68	252	P	P	20 11 57.2	-0.5
CHTO	Chiang Mai	39.99	256	P	P	20 11 59.3	-0.9
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CHTO	Chiang Mai	39.99	256	P	P	20 11 59.2	-0.9
LUWI	Luwuk	40.04	208	P	P	20 12 00.3	-0.3
LUWI				IAmb	IAmb	20 12 03.7	
	comp=Z,70nm,1.5s						
CM31	Chiang Mai Arr	40.18	256	P	P	20 12 02.0	+0.1
CMAR	Chiang Mai Arr	40.18	256	P	P	20 12 02.2	+0.4
	comp=Z,1.0nm,0.6s,baz=48,slow=8.2,SNR=15						
CMAR				PcP	PcP	20 14 05.6	+0.6
	comp=Z,0.5nm,0.3s,baz=64,slow=2.1,SNR=4.1						
CMAR				LR	LR	20 28 42.4	
	comp=Z,52nm,21.0s,baz=104,slow=36						
CMAR	Chiang Mai Arr	40.18	256	ceP	P	20 12 02.5	+0.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR	Chiang Mai Arr	40.18	256	P	P	20 12 02.0	+0.2
WMQ	Urumqi	40.51	298	eP	P	20 12 06.0	+1.7
WMQ				pP	sP	20 12 26.8	-0.6
WMQ				pmax	pmax		
	comp=Z,11nm,1.7s						
WMQ				LR	LR		
	comp=Z,470nm,23.3s						
WMQ				LR	LR		
	comp=Z,950nm,26.7s						
WMQ				LR	LR		
	comp=Z,19nm,18.9s						
WMQ	Urumqi	40.51	298	P	P	20 12 04.5	+0.1
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.5s						
WMQ	Urumqi	40.51	298	P	P	20 12 04.5	+0.1
WMQ				IAmb	IAmb	20 12 09.8	
	comp=Z,7.5nm,0.5s						
LSA	Lhasa	41.31	276	P	P	20 12 11.9	+0.3
LSA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
LSA	Lhasa	41.31	276	P	P	20 12 11.8	+0.3
ZAA0	Zalesovo Array	42.02	313	P	P	20 12 16.1	-0.4
ZAA0				PcP	PcP	20 14 10.4	0.0
ZALV	Zalesovo Beam	42.02	313	P	P	20 12 16.9	+0.4
	comp=Z,4.4nm,0.5s,baz=90,slow=5.7,SNR=16						
ZALV				PcP	PcP	20 14 10.9	+0.4
	comp=Z,3.8nm,0.6s,baz=117,slow=2.9,SNR=8.9						
ZALV				LR	LR	20 31 14.0	
	comp=Z,65nm,18.3s,baz=32,slow=38						
ZALV	Zalesovo Beam	42.02	313	i P	P	20 12 17.1	+0.6
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ZALV	Zalesovo Beam	42.02	313	P	P	20 12 16.4	-0.1
ZALV					PcP	20 14 09.6	-0.8
SHL	Shillong	42.37	270	P	P	20 12 18.9	-1.0
SHL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SHL	Shillong	42.37	270	P	P	20 12 18.9	-1.0
SHL				IAmb	IAmb	20 12 19.9	
	comp=Z,6.1nm,0.6s						
ANM	Nome	43.21	31	P	P	20 12 28.4	+2.4
ANM				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ANM	Nome	43.21	31	P	P	20 12 28.4	+2.4
MK31	Makanchi Array	43.93	303	P	P	20 12 32.6	+0.5
MK31				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MK31	Makanchi Array	43.93	303	P	P	20 12 32.6	+0.5
MKAR	Makanchi Array	43.93	303	P	P	20 12 32.6	+0.5
	comp=Z,4.3nm,0.7s,baz=89,slow=10.0,SNR=50						
MKAR				PcP	PcP	20 14 17.6	+0.6
	comp=Z,0.8nm,0.6s,baz=64,slow=3.4,SNR=3.7						
MKAR				LR	LR	20 29 51.4	
	comp=Z,90nm,20.5s,baz=72,slow=35						
MKAR	Makanchi Array	43.93	303	i P	P	20 12 32.5	+0.4
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MKAR	Makanchi Array	43.93	303	P	P	20 12 32.5	+0.4
MKAR					PcP	20 14 17.8	+0.8
KSM	Kuching	43.94	226	P	P	20 12 32.2	-0.2
KSM				IAmb	IAmb	20 12 36.7	
	comp=Z,34nm,1.5s						
NRIK	Noril'sk	44.00	336	P	P	20 12 33.9	+1.6
	comp=Z,3.4nm,0.5s,baz=96,slow=6.2,SNR=5.0						
MAKZ	Makanchi	44.15	303	P	P	20 12 34.4	+0.6
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MAKZ	Makanchi	44.15	303	P	P	20 12 34.4	+0.6
TAPN	Taplejung	45.01	275	eP	P	20 12 41.3	0.0
	comp=Z,11nm,0.6s						
RDOG	Red Dog Mine	45.09	26	P	P	20 12 42.6	+1.6
ODAN	Odare	45.47	274	eP	P	20 12 44.7	-0.1
	comp=Z,10nm,0.5s						
KURK	Kurchatov	45.91	309	ceP	P	20 12 47.8	0.0
KURK				pmax	pmax		
	comp=Z,13nm,0.6s						
KURK	Kurchatov	45.91	309	P	P	20 12 47.7	0.0
KURK				IAmb	IAmb	20 12 51.4	
	comp=Z,16nm,0.7s						
KURBB	Kurchatov Arra	45.98	309	P	P	20 12 48.4	+0.2
	comp=Z,10nm,0.6s,baz=85,slow=8.3,SNR=23						
RAMN	Ramite	46.08	275	eP	P	20 12 49.6	0.0
	comp=Z,43nm,0.6s						
JIRN	Jiri	46.11	276	eP	P	20 12 50.6	+0.5
	comp=Z,33nm,0.7s						
GUN	Gumba	46.26	276	eP	P	20 12 51.4	+0.2
	comp=Z,11nm,0.5s						
PKI	Pulchoki	46.78	276	eP	P	20 12 55.1	-0.2
	comp=Z,7.2nm,0.6s						
PKIN	Phulchoki	46.79	276	eP	P	20 12 55.0	-0.2
	comp=Z,8.3nm,0.7s						
KKN	Kakani	46.80	276	eP	P	20 12 55.5	+0.3
	comp=Z,12nm,0.7s						
DMN	Daman	47.01	276	eP	P	20 12 56.9	-0.1
	comp=Z,13nm,1.1s						
GKN	Gorkha	47.23	277	eP	P	20 12 58.7	+0.2
	comp=Z,22nm,0.7s						
KULM	Kulim	47.29	240	P	P	20 12 59.5	+0.6
KULM				IAmb	IAmb	20 13 20.9	
	comp=Z,43nm,1.7s						
PRZ	Przheval'sk	47.44	298	P	P	20 13 01.0	+1.0
PRZ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
PRZ	Przheval'sk	47.44	298	P	P	20 13 00.9	+1.0
PRZ				IAmb	IAmb	20 13 08.7	
	comp=Z,8.7nm,0.7s						
SOEI	Soe	47.69	201	P	P	20 12 58.8	-3.2
	comp=Z,16nm,0.8s						
SOEI	Soe	47.69	201	P	P	20 13 00.4	-1.6
SOEI				IAmb	IAmb	20 13 21.4	
	comp=Z,55nm,1.6s						
DANN	Dangsing	47.80	278	eP	P	20 13 03.7	+0.6
	comp=Z,38nm,0.6s						
SII	Sitkinak Islan	47.93	43	P	P	20 13 03.2	-0.1
IMAR	Indian Mountai	48.26	30	P	P	20 13 07.5	+1.7
IMAR				PcP	PcP	20 14 33.8	+1.9
OHAK	Old Harbor	48.38	42	P	P	20 13 08.7	+1.9
KDJ	Kajisay	48.40	298	P	P	20 13 08.0	+0.5
KDJ				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KDJ	Kajisay	48.40	298	P	P	20 13 08.0	+0.5
KDJ				IAmb	IAmb	20 13 09.2	
	comp=Z,3.9nm,0.6s						
RSO	Redoubt South	48.53	38	P	P	20 13 11.2	+3.0
KDAK	Kodiak Island	48.73	41	P	P	20 13 10.6	+1.1
	comp=Z,3.2nm,0.3s,baz=261,slow=5.1,SNR=6.1						
KDAK	Kodiak Island	48.73	41	P	P	20 13 11.3	+1.8
KDAK				pmax	pmax		
	comp=Z,175nm,1.8s						
KDAK	Kodiak Island	48.73	41	P	P	20 13 11.3	+1.8
PPLA	Purkeypile	48.79	34	P	P	20 13 13.7	+3.6
PPLA				IAmb	IAmb	20 13 32.7	
	comp=Z,40nm,1.4s						
MTN	Manton Dam	49.09	192	P	P	20 13 12.3	-0.3
MTN				IAmb	IAmb	20 13 12.8	
	comp=Z,11nm,0.6s						
BPAW	Bear Paw Mtn.	49.34	33	P	P	20 13 16.4	+2.3
BPAW				IAmb	IAmb	20 13 58.3	
	comp=Z,20nm,1.7s						
KTH	Kantishna Hill	49.37	33	P	P	20 13 15.2	+0.8
KTH				IAmb	IAmb	20 15 08.1	
	comp=Z,48nm,1.8s						
NRN	Naryn	49.43	297	P	P	20 13 15.9	+0.4
NRN				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NRN	Naryn	49.43	297	P	P	20 13 15.9	+0.4
MLY	Manley	49.47	31	P	P	20 13 16.8	+1.7
MLY				IAmb	IAmb	20 13 26.8	
	comp=Z,18nm,1.8s						
MLY				PcP	PcP	20 14 38.9	+2.6
COEN	Coen	49.53	176	P	P	20 13 17.1	+1.0
COEN				IAmb	IAmb	20 13 53.8	
	comp=Z,41nm,1.4s						
KSH	Kashi	49.99	295	P	P	20 13 23.4	+3.8
KSH				pP	sP	20 13 46.7	+3.8
KSH				PcS	PcS	20 18 38.0	+2.1
KSH				S	S	20 20 27.4	+1.7
KSH				SS	SS	20 23 58.6	-0.4
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,250nm,4.9s						
KSH				LR	LR		
	comp=Z,160nm,10.0s						
KSH				LR	LR		
	comp=Z,440nm,14.0s						
KSH				LR	LR		
	comp=Z,140nm,11.4s						
TOLK	Toolik Lake Re	50.06	27	P	P	20 13 22.3	+2.7
TOLK				IAmb	IAmb	20 14 36.4	
	comp=Z,12nm,1.6s						
TOLK				PcP	PcP	20 14 40.7	+2.3
AAK	Ala-Archa	50.19	299	P	P	20 13 21.5	+0.4
	comp=Z,1.0nm,0.4s,baz=92,slow=7.0,SNR=6.1						
AAK	Ala-Archa	50.19	299	ceP	P	20 13 21.6	+0.5
AAK				pmax	pmax		
	comp=Z,10.0nm,2.5s						
AAK	Ala-Archa	50.19	299	P	P	20 13 21.6	+0.5
AAK				PcP	PcP	20 14 40.6	+1.1
PMR	Palmer	50.25	36	P	P	20 13 24.1	+3.1
PMR				pmax	pmax		
	comp=Z,50nm,1.6s						
PMR	Palmer	50.25	36	P	P	20 13 24.1	+3.1
PMR				IAmb	IAmb	20 15 13.6	
	comp=Z,50nm,1.6s						
GHO	Glory Hole Cre	50.34	36	P	P	20 13 24.0	+2.2
MDM	Murphy Dome	50.53	32	P	P	20 13 26.2	+3.1
MDM				IAmb	IAmb	20 13 33.5	
	comp=Z,10nm,1.0s						
KNK	Knik Glacier	50.59	36	P	P	20 13 25.4	+1.9
WRH	Wood River Hil	50.60	32	P	P	20 13 26.2	+2.6
WRH				IAmb	IAmb	20 13 57.9	
	comp=Z,13nm,1.4s						
WRH				PcP	PcP	20 14 41.5	+1.1
SML	Sawmill	50.62	36	P	P	20 13 25.6	+1.8
BVAR	Borovoye Array	50.67	313	P	P	20 13 23.9	-0.5
	comp=Z,1.0nm,0.5s,baz=108,slow=7.7,SNR=8.9						
BVAR				PcP	PcP	20 14 41.3	+0.4
	comp=Z,1.3nm,0.5s,baz=84,slow=3.7,SNR=4.6						
CCB	Clear Creek Bu	50.72	32	P	P	20 13 26.8	+2.2
CCB				IAmb	IAmb	20 13 40.6	
	comp=Z,18nm,1.6s						
CCB				PcP	PcP	20 14 41.7	+0.9
BRVK	Borovoye	50.73	313	⇓eP	P	20 13 27.1	+2.4
BRVK				pmax	pmax		
	comp=Z,10.0nm,2.5s						
BRVK	Borovoye	50.73	313	P	P	20 13 25.5	+0.7
SCM	Sheep Creek Mo	51.09	36	P	P	20 13 30.2	+2.7
SCM				pmax	pmax		
	comp=Z,120nm,1.8s						
SCM	Sheep Creek Mo	51.09	36	P	P	20 13 30.2	+2.7
IL31		51.11	32	P	P	20 13 27.8	+0.4
IL31				IAmb	IAmb	20 13 59.0	
	comp=Z,7.0nm,1.1s						
ILAR	Eielson Array	51.11	32	P	P	20 13 28.7	+1.2
	comp=Z,0.6nm,0.5s,baz=274,slow=6.0,SNR=17						
ILAR	Eielson Array	51.11	32	P	P	20 13 28.4	+0.9
SDSI	Sungai Dareh	51.31	233	P	P	20 13 28.3	-1.2
	comp=Z,11nm,0.6s						
ARSB	Arslanbob	51.64	298	P	P	20 13 33.6	+1.6
ARSB				pmax	pmax		
	comp=Z,39nm,1.7s						
ARSB	Arslanbob	51.64	298	P	P	20 13 33.6	+1.6
ARSB				IAmb	IAmb	20 13 58.5	
	comp=Z,39nm,1.6s						
BMAR	Burnt Mountain	51.93	28	P	P	20 13 36.5	+2.9
EYAK	Cordova Ski Ar	51.98	37	P	P	20 13 34.6	+0.6
KNRA	Kununurra	52.28	194	P	P	20 13 36.9	+0.2
KNRA				IAmb	IAmb	20 13 37.5	
	comp=Z,17nm,0.7s						
MDSI	Maura Dua	52.33	228	P	P	20 13 32.4	-4.7
	comp=Z,8.4nm,0.8s						
DOT	Dot Lake	52.43	33	P	P	20 13 39.4	+2.1
DOT				IAmb	IAmb	20 13 58.8	
	comp=Z,24nm,1.7s						
MENT	Mentasta	52.66	34	P	P	20 13 41.6	+2.6
MENT				IAmb	IAmb	20 13 50.5	
	comp=Z,17nm,1.5s						
KK31	Karatay Array	52.88	301	P	P	20 13 41.3	+0.4
KK31				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KK31	Karatay Array	52.88	301	P	P	20 13 41.3	+0.4
KK31				IAmb	IAmb	20 13 44.8	
	comp=Z,7.7nm,1.2s						
KKAR	Karatay Array	52.88	301	P	P	20 13 41.0	+0.1
KKAR						20 14 50.1	
KKAR				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KKAR	Karatay Array	52.88	301	P	P	20 13 40.8	-0.1
KKAR				PcP	PcP	20 14 50.0	+0.6
KKAR	Karatay Array	52.88	301	P	P	20 13 41.0	+0.1
KKAR				IAmb	IAmb	20 13 44.8	
	comp=Z,7.7nm,1.2s						
KKAR				PcP	PcP	20 14 50.1	+0.8
VRDI	Verde Repeater	53.01	36	P	P	20 13 41.0	-0.8
MCARA	McCarthy VSAT	53.19	36	P	P	20 13 43.8	+0.9
MCARA				IAmb	IAmb	20 14 06.2	
	comp=Z,44nm,1.4s						
BCAR	Beaver Creek A	53.52	34	P	P	20 13 47.4	+2.0
BTK	Batken	53.60	297	P	P	20 13 45.7	-0.7
BTK				pmax	pmax		
	comp=Z,12nm,1.5s						
BTK	Batken	53.60	297	P	P	20 13 45.7	-0.7
BTK				IAmb	IAmb	20 14 12.1	
	comp=Z,12nm,1.4s						
NIL	Nilore	54.04	289	P	P	20 13 47.1	-2.5
NIL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NIL	Nilore	54.04	289	P	P	20 13 47.1	-2.5
NIL				IAmb	IAmb	20 14 09.7	
	comp=Z,6.3nm,0.8s						
CTGM	Chitina Glacie	54.06	36	P	P	20 13 51.7	+2.2
GAR	Garm	54.32	296	P	P	20 13 51.7	+0.1
GAR				IAmb	IAmb	20 14 17.6	
	comp=Z,20nm,1.3s						
EPYK	Eagle Plains	55.13	29	P	P	20 13 59.0	+2.0
EPYK				IAmb	IAmb	20 14 11.7	
	comp=Z,7.5nm,0.8s						
CHGR	Chuyangaron	55.28	296	P	P	20 13 59.1	+0.5
CHGR				IAmb	IAmb	20 14 05.4	
	comp=Z,16nm,0.6s						
FITZ	Fitzroy Crossi	55.30	197	P	P	20 13 58.5	-0.2
FITZ				IAmb	IAmb	20 13 59.9	
	comp=Z,26nm,1.4s						
SVE	Sverdlovsk	55.42	319	eP	P	20 13 59.6	+0.4
WB0	Warramunga Arr	55.50	187	P	P	20 13 59.7	-0.4
WB0				IAmb	IAmb	20 14 01.0	
	comp=Z,10nm,0.6s						
WRAB	Tennant Creek	55.67	187	⇑eP	P	20 14 01.8	+0.5
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.7s						
WRAB	Tennant Creek	55.67	187	P	P	20 14 01.0	-0.3
WRAB				IAmb	IAmb	20 14 25.4	
	comp=Z,16nm,1.2s						
WB2	Warramunga Arr	55.67	187	P	P	20 14 01.0	-0.3
WB2				IAmb	IAmb	20 14 02.4	
	comp=Z,7.1nm,0.7s						
WRA	Warramunga Arr	55.68	187	P	P	20 14 00.6	-0.7
	comp=Z,6.2nm,0.6s,baz=359,slow=7.5,SNR=107						
WRA	Warramunga Arr	55.68	187	i P	P	20 14 00.6	-0.7
WRA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WRA	Warramunga Arr	55.68	187	P	P	20 14 00.6	-0.7
INK	Inuvik	55.98	27	P	P	20 14 03.6	+0.7
	comp=Z,1.1nm,0.5s,baz=313,slow=4.9,SNR=8.2						
INK	Inuvik	55.98	27	P	P	20 14 04.9	+1.9
ARU	Arti	56.63	319	P	P	20 14 07.9	+0.1
	comp=Z,4.1nm,0.6s,baz=73,slow=4.8,SNR=25						
ARU	Arti	56.63	319	c iP	P	20 14 08.1	+0.3
ARU				*PP	sP	20 14 29.0	-2.4
ARU						20 16 12.2	
ARU				S	S	20 21 55.3	+0.2
ARU				SS	SS	20 25 40.9	-1.9
ARU				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ARU	Arti	56.63	319	P	P	20 14 08.2	+0.3
ARU				IAmb	IAmb	20 14 09.0	
	comp=Z,10nm,0.6s						

HYB	Hyderabad	57.14	268	*i* P	P	20 14 11.0	-1.0
ABKAR	Akbulak array	57.97	310	P	P	20 14 17.6	+0.3
AKTO	Aktyubinsk	58.76	312	P	P	20 14 23.1	+0.2
	comp=Z,2.6nm,0.7s,baz=71,slow=6.9,SNR=8.6						
AS31	Alice Springs	59.40	187	P	P	20 14 27.2	-0.3
ASAR	Alice Springs	59.40	187	P	P	20 14 27.2	-0.3
	comp=Z,1.5nm,0.5s,baz=5.3,slow=7.8,SNR=45						
ASAR				LR	LR	20 41 02.4	
	comp=Z,52nm,18.0s,baz=339,slow=37						
ASAR	Alice Springs	59.40	187	P	P	20 14 26.5	-1.0
PSA00	Pilbara Seismi	60.18	202	P	P	20 14 32.8	-0.1
PSA00				IAmb	IAmb	20 14 58.7	
	comp=Z,30nm,1.5s						
KIRV	Kirov	60.64	323	P	P	20 14 35.8	+0.2
	comp=Z,13nm,0.5s,baz=67,slow=3.9,SNR=7.2						
PALK	Pallekele	61.09	257	LR	LR	20 42 01.8	
	comp=Z,34nm,19.6s,baz=70,slow=37						
DZM	Mont Dzumac	62.69	152	*e*LR	LR	20 33 11.5	
	comp=Z,122nm,24.3s						
GEYT	Alibeck	63.55	299	P	P	20 14 55.4	-0.2
	comp=Z,0.8nm,0.6s,baz=101,slow=1.5,SNR=3.5						
RES	Resolute Bay	64.08	14	P	P	20 14 59.6	+1.3
RES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RES	Resolute Bay	64.08	14	P	P	20 14 59.6	+1.3
KEV	Kevo	64.26	339	P	P	20 15 00.7	+1.1
KEV				pmax	pmax		
	comp=Z,96nm,1.5s						
KEV	Kevo	64.26	339	P	P	20 15 00.7	+1.1
ARCES	ARCESS Array B	64.82	339	P	P	20 15 03.5	+0.2
	comp=Z,4.2nm,0.8s,baz=59,slow=10,SNR=9.3						
ARCES	ARCESS Array B	64.82	339	P	P	20 15 03.8	+0.5
ARCES	ARCESS Array B	64.82	339	P	P	20 15 03.8	+0.5
ARE0	ARCESS Array S	64.82	339	P	P	20 15 03.5	+0.2
YKA	Yellowknife Ar	65.42	30	P	P	20 15 07.4	+0.2
	comp=Z,0.2nm,0.5s,baz=302,slow=4.2,SNR=5.5						
DAG	Danmarks Havn	66.94	355	*i* P	P	20 15 17.6	+0.8
	comp=Z,0.8nm,0.4s						
DAG	Danmarks Havn	66.94	355	*i* P	P	20 15 17.6	+0.8
DAG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FORT	Forrest	67.16	191	P	P	20 15 19.2	+0.6
STKA	Stephens Creek	67.30	179	P	P	20 15 19.8	+0.2
	comp=Z,1.3nm,0.4s,baz=352,slow=8.6,SNR=3.6						
STKA	Stephens Creek	67.30	179	P	P	20 15 20.2	+0.7
STKA				pmax	pmax		
	comp=Z,5.0nm,1.8s						
STKA	Stephens Creek	67.30	179	P	P	20 15 20.2	+0.7
BBOO	Buckleboo	68.33	184	P	P	20 15 25.3	-0.7
BBOO				IAmb	IAmb	20 15 41.7	
	comp=Z,47nm,1.6s						
MORW	Morawa	68.37	203	P	P	20 15 27.0	+0.7
MORW				IAmb	IAmb	20 17 19.9	
	comp=Z,39nm,1.4s						
OBN	Obninsk	68.49	323	P	P	20 15 26.8	-0.1
	comp=Z,1.4nm,0.4s,baz=337,slow=20,SNR=4.1						
OBN	Obninsk	68.49	323	P	P	20 15 26.1	-0.7
OBN				IAmb	IAmb	20 15 28.4	
	comp=Z,9.5nm,0.6s						
LHI	Lord Howe Isla	69.25	163	P	P	20 15 31.7	0.0
FIA1	FINESS Array S	69.45	332	P	P	20 15 33.3	+0.6
FIA1				IAmb	IAmb	20 16 57.9	
	comp=Z,48nm,1.6s						
FINES	FINESS Array B	69.45	332	P	P	20 15 33.1	+0.4
	comp=Z,5.4nm,0.6s,baz=100,slow=6.6,SNR=33						
FINES	FINESS Array B	69.45	332	*i* P	P	20 15 33.2	+0.5
FINES				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KBZ	Khabaz	70.94	310	P	P	20 15 43.0	+0.9
	comp=Z,3.0nm,0.9s,baz=340,slow=2.8,SNR=5.6						
KIV	Kislovodsk	70.96	311	*e*P	P	20 15 42.7	+0.3
KIV				pmax	pmax		
	comp=Z,24nm,1.1s						
KIV				MLR	MLR		
	comp=Z,127nm,17.0s						
NWAO	Narrogin (SRO)	71.62	200	P	P	20 15 45.4	-0.8
NWAO				pmax	pmax		
	comp=Z,79nm,1.7s						
NWAO	Narrogin (SRO)	71.62	200	P	P	20 15 46.0	-0.2
NWAO	Narrogin (SRO)	71.62	200	P	P	20 15 45.4	-0.8
NWAO				IAmb	IAmb	20 16 28.7	
	comp=Z,79nm,1.6s						
SUMG	Summit	71.94	360	*i* P	P	20 15 49.2	+1.0
SUMG	Summit	71.94	360	P	P	20 15 49.9	+1.7
SUMG				pmax	pmax		
	comp=Z,13nm,1.3s						
SUMG	Summit	71.94	360	P	P	20 15 49.9	+1.7
SUMG				IAmb	IAmb	20 15 55.5	
	comp=Z,12nm,1.3s						
SCO	Scoresbysund	73.26	354	P	P	20 15 57.0	+1.5
SCO				pmax	pmax		
	comp=Z,37nm,1.6s						
SCO	Scoresbysund	73.26	354	P	P	20 15 57.0	+1.5
SCO				IAmb	IAmb	20 18 08.2	
	comp=Z,37nm,1.6s						
BMO	Blue Mountains	73.54	46	P	P	20 15 59.1	+1.3
BMO				pmax	pmax		
	comp=Z,7.0nm,1.7s						
BMO	Blue Mountains	73.54	46	P	P	20 15 59.1	+1.3
JTMT	Jette	73.62	43	P	P	20 15 59.0	+0.8
AKASG	Malin Array Be	74.67	322	P	P	20 16 04.2	+0.1
	comp=Z,5.3nm,0.5s,baz=49,slow=6.1,SNR=36						
AKASG				LR	LR	20 49 53.2	
	comp=Z,65nm,18.5s,baz=50,slow=36						
AKASG	Malin Array Be	74.67	322	P	P	20 16 04.2	+0.1
AKBB	Malin Array Si	74.67	322	⇓*e*P	P	20 16 04.4	+0.4
AKBB	Malin Array Si	74.67	322	P	P	20 16 04.1	+0.1
AKBB				IAmb	IAmb	20 16 05.0	
	comp=Z,5.9nm,0.6s						
NC405	NORSAR Array S	74.74	337	P	P	20 16 04.8	+0.5
NC405				IAmb	IAmb	20 17 53.9	
	comp=Z,48nm,1.4s						
HFS	Hagfors	74.81	335	P	P	20 16 05.3	+0.6
	comp=Z,1.1nm,0.5s,baz=82,slow=3.1,SNR=10						
NC204	NORSAR Array S	74.92	337	P	P	20 16 06.3	+0.9
NB201	NORSAR Array S	74.92	337	P	P	20 16 06.0	+0.7
NB2	NORSAR Subarra	74.95	337	P	P	20 16 06.3	+0.7
	comp=Z,1.4nm,0.5s,baz=42,slow=5.9						
NOA	NORSAR Array B	74.95	337	P	P	20 16 06.0	+0.4
	comp=Z,1.8nm,0.6s,baz=40,slow=5.8,SNR=12						
NOA				LR	LR	20 51 55.6	
	comp=Z,24nm,20.1s,baz=280,slow=38						
NOA	NORSAR Array B	74.95	337	P	P	20 16 06.0	+0.4
NBO00	NORSAR Array S	75.10	337	P	P	20 16 06.6	+0.2
NAO01	NORSAR Array S	75.20	337	P	P	20 16 07.4	+0.4
NVAR	Mina Array Bea	76.57	52	P	P	20 16 15.7	+0.2
	comp=Z,0.3nm,0.5s,baz=248,slow=3.8,SNR=4.2						
NVAR	Mina Array Bea	76.57	52	P	P	20 16 15.1	-0.4
SORM	Soroca	76.71	320	⇑P	P	20 16 15.8	+0.1
BSD	Bornholm Skovb	78.07	331	*i* P	P	20 16 23.4	+0.2
	comp=Z,1.4nm,0.4s						
BSD	Bornholm Skovb	78.07	331	*i* P	P	20 16 23.4	+0.2
BSD				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KWP	Kalwaria Pacla	78.55	324	P	P	20 16 26.8	+0.7
KWP				pmax	pmax		
	comp=Z,12nm,0.6s						
KWP	Kalwaria Pacla	78.55	324	P	P	20 16 26.8	+0.7
KWP				IAmb	IAmb	20 16 28.2	
	comp=Z,12nm,0.6s						
TESR	Tescani	78.64	320	⇓P	P	20 16 27.3	+0.7
BUR08	Bucovina Ar. S	78.65	321	P	P	20 16 27.4	+0.7
BUR08				IAmb	IAmb	20 16 28.4	
	comp=Z,22nm,1.8s						
BURAR	Bucovina Array	78.66	321	⇑P	P	20 16 27.6	+0.7
BURAR	Bucovina Array	78.66	321	P	P	20 16 27.1	+0.3
BRTR	Keskin Array B	78.92	311	P	P	20 16 29.6	+1.1
	comp=Z,1.0nm,0.5s,baz=139,slow=4.2,SNR=7.3						
BRTR	Keskin Array B	78.92	311	P	P	20 16 29.0	+0.6
VRI	Vrincioaia	79.02	319	⇓P	P	20 16 30.6	+1.9
KOLS	Kolonicke sedl	79.24	324	*e*P	P	20 16 30.7	+0.9
KOLS	Kolonicke sedl	79.24	324	*e*P	P	20 16 30.7	+0.9
PDAR	Pinedale Array	79.29	45	P	P	20 16 32.0	+1.5
	comp=Z,0.6nm,0.5s,baz=44,slow=0.3,SNR=16						
PDAR	Pinedale Array	79.29	45	P	P	20 16 31.3	+0.8
OZUR		79.37	320	⇓P	P	20 16 32.6	+2.0
TRPA	Tarpa	79.65	323	⇓P	P	20 16 33.5	+1.4
DOPR	Dopca	79.66	320	⇓P	P	20 16 34.3	+2.1
RAYN	Ar Rayn	80.18	292	P	P	20 16 35.9	+0.5
RAYN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
RAYN	Ar Rayn	80.18	292	P	P	20 16 35.9	+0.5
ARR	Arges	80.45	320	⇑P	P	20 16 38.2	+1.6
ULM	Lac du Bonnet	81.12	33	P	P	20 16 41.5	+1.5
	comp=Z,0.9nm,0.5s,baz=297,slow=6.8,SNR=2.6						
ULM	Lac du Bonnet	81.12	33	P	P	20 16 40.5	+0.6
ULM				pmax	pmax		
	comp=Z,7.0nm,1.7s						
ULM	Lac du Bonnet	81.12	33	P	P	20 16 40.5	+0.6
VYHS	Vyhne	81.17	325	*e*P	P	20 16 41.3	+1.0
VYHS	Vyhne	81.17	325	*e*P	P	20 16 41.3	+1.0
GZR	Gura Zlata	81.40	321	⇓P	P	20 16 41.9	+0.3
CLL	Collm	81.67	330	*e*P	P	20 16 44.0	+1.2
CLL	Collm	81.67	330	*e*P	P	20 16 44.0	+1.2
MMAI	Mount Meron Ar	81.85	305	P	P	20 16 45.1	+0.9
	comp=Z,4.2nm,0.8s,baz=79,slow=7.5,SNR=4.1						
KHC	Kasperske Hory	83.08	328	*e*P	P	20 16 50.0	-0.2
KHC	Kasperske Hory	83.08	328	⇑*e*P	P	20 16 50.6	+0.4
KHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GERES	GERESS Array B	83.24	328	P	P	20 16 51.5	+0.4
	comp=Z,0.3nm,0.4s,baz=38,slow=5.7,SNR=5.8						
GERES				LR	LR	21 00 21.2	
	comp=Z,45nm,19.2s,baz=3.0,slow=40						
GERES	GERESS Array B	83.24	328	P	P	20 16 50.9	-0.2
EKA	Eskdalemuir Ar	83.97	340	P	P	20 16 55.2	+0.6
	comp=Z,0.4nm,0.4s,baz=39,slow=5.4,SNR=5.8						
EIL	Elat	84.19	302	P	P	20 16 56.2	0.0
	comp=Z,4.2nm,0.7s,baz=352,slow=5.8,SNR=4.3						
PMOR	Pomariorio Ree	84.63	113	*e*T	T	21 49 30.0	
	comp=Z,5.0nm,0.2s						
PPT	Papeete	85.00	116	LR	LR	20 47 08.8	
	comp=Z,49nm,21.5s,baz=308,slow=30						
PPT2	Papeete2	85.01	116	*e*LR	LR	20 43 21.0	
	comp=Z,166nm,32.5s						
PPT2	Papeete2	85.01	116	*e*T	T	21 50 02.8	
	comp=Z,4.6nm,0.2s						
LIT	Litokhoron	85.19	317	P	P	20 17 01.1	0.0
LIT				pmax	pmax		
	comp=Z,7.0nm,0.7s						
LIT	Litokhoron	85.19	317	P	P	20 17 01.1	0.0
LIT				IAmb	IAmb	20 17 02.1	
	comp=Z,7.2nm,0.7s						
SCHQ	Schefferville	86.83	15	P	P	20 17 09.0	+0.1
	comp=Z,1.2nm,0.7s,baz=320,slow=6.6,SNR=4.5						
SCHQ	Schefferville	86.83	15	P	P	20 17 09.5	+0.6
SCHQ				IAmb	IAmb	20 17 54.0	
	comp=Z,25nm,1.8s						
K43A	Burlington	90.24	33	P	P	20 17 27.7	+2.4
I47A	Gladwin	90.83	30	P	P	20 17 29.3	+1.3
TXAR	Lajitas Array	91.71	52	P	P	20 17 33.9	+1.4
	comp=Z,0.4nm,0.6s,baz=295,slow=2.3,SNR=4.1						
TXAR	Lajitas Array	91.71	52	P	P	20 17 34.3	+1.8
P43A	Skaggs, Pawnee	92.11	36	P	P	20 17 34.8	+0.8
J57A	Williamstown	94.60	26	P	P	20 17 43.8	-1.5
NCB	Newcomb	94.71	24	P	P	20 17 45.5	-0.4
J58A	Remsen	94.89	25	P	P	20 17 46.6	-0.1
QUA2	Belchertown	96.84	24	P	P	20 17 54.9	-0.7
TORD	Torodi Ar. Bea	117.47	313	PKP	PKPdf	20 23 10.6	-0.1
	comp=Z,0.8nm,0.5s,baz=1.9,slow=1.8,SNR=7.2						
DBIC	Dimbokro	126.48	315	PKP	PKiKP	20 23 28.4	0.0
	comp=Z,1.6nm,0.5s,baz=359,slow=4.5,SNR=5.1						
DBIC	Dimbokro	126.48	315	PKIKP	PKiKP	20 23 28.6	+0.1
DBIC	Dimbokro	126.48	315		PKiKP	20 23 28.6	+0.1
SYO	Syowa Base	126.62	206	⇓*e*PKPdf	PKiKP	20 23 28.0	+1.0
LPAZ	La Paz	148.22	60	PKPbc	PKiKP	20 24 12.8	-0.5
	comp=Z,0.7nm,0.4s,baz=297,slow=2.3,SNR=3.2						

IPEC ***11*** *20:07:48.9±0.2, 50°.26N×18°.78E, h0^{km}±1^{km}, ML2.6/3, Error ellipse: s-maj=2.3km s-min=1.1km az=168.0*
IDC ***11*** *20:07:49.2±2.1, 50°.14N×18°.83E, h0^{km}, mb1 3.7/4, mb1mx3.2/53, mbtmp3.5/4, ML2.7/4, Error ellipse: s-maj=36.2km s-min=8.5km az=133.0*
PRU ***11*** *20:07:49.6±0.0, 50°.22N×18°.75E, h0^{km}*
BGR ***11*** *20:07:49.7±0.3, 50°.21N×18°.77E, h1^{km}, ML3.0/10, Error ellipse: s-maj=6.7km s-min=3.3km az=0.0*
VIE ***11*** *20:07:53.0±1.3, 50°.23N×18°.26E, h0^{km}, mb2.3/2, ml2.7/3, Error ellipse: s-maj=12.6km s-min=6.8km az=62.0   44 km N of Ostrava Suspected Mining induced.*
ISC 11 20:07:47.9±0.7**, 50°.23N**±0°.03×**18°.77E**±0°.02**, h0^{km}, n56, σ1^{s}20**/98**, 7C-5D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.57	226	*e*Pg	Pb	20 08 00.9	+0.2
OKC	Ostrava-Krasne	0.57	226	*e*PG	Pb	20 08 00.7	0.0
OKC				*e*SG	Sb	20 08 08.5	-0.8
	comp=Z,54nm,0.3s						
OJC	Ojcow	0.66	91	*e*Pg	Pg	20 08 01.5	+1.0
OJC				*e*Sg	Sg	20 08 11.1	+2.1
OJC	Ojcow	0.66	91	*e*Pg	Pg	20 08 01.3	+0.8
OJC				*e*Sg	Sg	20 08 10.9	+1.9
MORC	Moravsky Berou	0.92	241	*e*Pg	Pb	20 08 06.9	+0.3
MORC				*e*Sg	Sb	20 08 19.8	+0.4
MORC	Moravsky Berou	0.92	241	⇑P	Pb	20 08 07.0	+0.3
MORC				⇓S	Sb	20 08 20.1	+0.7
MORC	Moravsky Berou	0.92	241	*e*Pg	Pb	20 08 06.8	+0.1
	baz=58						
MORC				*e*Sg	Sg	20 08 18.1	+0.8
	85nm,0.4s,baz=58						
MORC	Moravsky Berou	0.92	241	*e*PG	Pb	20 08 06.9	+0.3
MORC				*e*SG	Sg	20 08 18.1	+0.8
LANS	Liptovska Anna	1.17	157	*e*PG	Pb	20 08 11.9	+0.8
LANS				*e*SG	Sg	20 08 25.8	+0.3
LANS				*e*LG	Lg	20 08 30.0	
NIE	Niedzica	1.28	129	*e*Pg	Pg	20 08 13.2	+0.8
NIE				*e*Sg	Sn	20 08 31.6	+0.6
KRLC	Kraliky	1.29	264	*e*PG	Pg	20 08 13.0	+0.4
KRLC				*e*SG	Sb	20 08 30.5	+0.3
	comp=Z,45nm,0.3s						
JAVC	Velka Javorina	1.55	208	*e*Pn	Pb	20 08 18.0	+0.5
	baz=27						
JAVC	Velka Javorina	1.55	208	*e*PN	Pb	20 08 18.1	+0.5
DPC	Dobruska-Polom	1.58	275	*e*Pn	Pn	20 08 18.1	+0.9
DPC				*e*Pg	Pg	20 08 18.8	+0.7
DPC				*e*Sg	Sg	20 08 39.6	+1.1
DPC	Dobruska-Polom	1.58	275	*e*PG	Pn	20 08 18.0	+0.8
DPC				*e*SG	Sn	20 08 39.0	+0.7
	comp=Z,28nm,0.4s						
OSTC	Ostas	1.67	282	*e*PG	Pn	20 08 19.1	+0.7
OSTC				*e*SG	Sg	20 08 42.1	+0.6
	comp=Z,20nm,0.3s						
VRAC	Vranov	1.69	238	Pg	Pb	20 08 20.2	+0.4
	3.9nm,0.3s,baz=60,slow=15,SNR=28						
VRAC				Lg	Lg	20 08 42.1	
	9.7nm,0.3s,baz=150,slow=20,SNR=24						
VRAC	Vranov	1.69	238	⇑P	Pb	20 08 20.5	+0.6
VRAC				⇓S	Sg	20 08 42.9	+0.8
VRAC	Vranov	1.69	238	*e*Pn	Pb	20 08 20.0	+0.1
	baz=55						
VRAC				*e*Sg	Sg	20 08 42.4	+0.3
	52nm,0.4s,baz=55						
VRAC	Vranov	1.69	238	*e*PN	Pb	20 08 20.0	+0.1
VRAC				*e*SG	Sg	20 08 42.4	+0.3
KSP	Ksiaz	1.70	292	*e*Pn	Pn	20 08 19.8	+1.0
KSP				*e*Pg	Pg	20 08 21.5	+1.1
KSP				*e*Sg	Sg	20 08 43.3	+0.9
KSP	Ksiaz	1.70	292	*e*Pb	Pn	20 08 19.6	+0.8
KSP				*e*Pg	Pg	20 08 21.5	+1.1
KSP				*e*Sg	Sg	20 08 43.1	+0.7
VYHS	Vyhne	1.74	179	*e*PN	Pn	20 08 19.8	+0.4
VYHS				*e*SN	Sn	20 08 41.8	-0.5
CHVC	Chvalec	1.78	283	*e*PG	Pn	20 08 21.2	+1.3
STHS	Stebnicka Huta	1.80	116	*e*PN	Pb	20 08 21.8	+0.1
STHS				*e*SN	Sg	20 08 46.6	+1.0
STHS				*e*LG	Lg	20 08 52.9	
KRUC	Moravsky	1.94	234	*e*Pn	Pn	20 08 23.4	+1.3
	baz=51						
KRUC				*e*Sg	Sg	20 08 49.9	-0.2
	37nm,0.6s,baz=51						
KRUC	Moravsky	1.94	234	*e*PN	Pn	20 08 23.4	+1.3
KRUC				*e*SG	Sg	20 08 50.0	-0.2
KECS	Kecovo	2.08	147	*e*PG	Pg	20 08 28.2	+0.5
KECS				*e*SN	Sn	20 08 50.1	-0.5
KECS				*e*LG	Lg	20 08 57.2	
MODS	Modra-Piesok	2.10	208	*e*PG	Pg	20 08 28.5	+0.3
MODS				*e*SN	Sn	20 08 51.0	-0.2
CRVS	Cervenica-Dubn	2.20	126	*e*PG	Pb	20 08 29.7	+1.2
CRVS				*e*SG	Sg	20 09 00.1	+1.6
ZST	Bratislava	2.31	209	*e*SN	Sn	20 08 56.1	-0.3
PSZ	Piszkesteto	2.43	162	⇑P	Pb	20 08 32.4	-0.1
PSZ				⇑S	Sg	20 09 07.9	+1.9
GOPC	GO Pecny, Ondr	2.59	264	*e*PN	Pn	20 08 31.5	+0.5
GOPC				*e*PG	Pb	20 08 35.1	-0.1
KOLS	Kolonicke sedl	2.62	118	*e*PG	Pb	20 08 36.8	+1.1
PVCC	Panska Ves	2.71	278	*e*SG	Sg	20 09 16.3	+1.4
	comp=Z,27nm,0.2s						
CONA	Conrad Observa	3.00	221	Pn	Pn	20 08 38.2	+1.5
	0.2nm,0.2s						
CONA				Sn	Sn	20 09 14.6	+1.2
	2.1nm,0.3s						
BRG	Berggiesshubel	3.15	284	PG	Pb	20 08 47.0	+2.3
BRG				SG	Sg	20 09 29.1	+0.1
	12nm,0.6s						
BRG	Berggiesshubel	3.15	284	*e*Pg	Pg	20 08 49.1	+0.9
BRG				*e*Sg	Sg	20 09 29.4	+0.4
TRPA	Tarpa	3.24	129	⇑P	Pn	20 08 40.8	+0.8
FBE	Freiberg	3.52	283	*e*Sg	Sg	20 09 41.8	+0.8
KHC	Kasperske Hory	3.55	254	*e*PN	Pn	20 08 45.0	+0.7
KHC				*e*PG	Pb	20 08 52.9	+1.3
KHC				*e*SG	Sg	20 09 41.9	0.0
	comp=Z,22nm,0.6s						
GEC2	GERESS Array S	3.58	249	*e*Pg	Pg	20 08 55.7	-0.8
GEC2				*e*Sg	Sg	20 09 42.0	-0.9
GERES	GERESS Array B	3.58	249	Pn	Pn	20 08 46.0	+1.2
	0.2nm,0.3s,baz=69,slow=15,SNR=5.7						
GERES				Pg	Pb	20 08 54.6	+2.5
	0.9nm,0.3s,baz=64,slow=17,SNR=16						
GERES				Lg	Lg	20 09 43.7	
	4.3nm,0.3s,baz=66,slow=27,SNR=13						
MOA	Molln	3.81	233	*e*Pn	Pn	20 08 49.7	+1.9
	0.2nm,0.1s						
MOA				Sg	Sg	20 09 48.4	-1.7
	6.0nm,0.4s						
CLL	Collm	3.82	289	*e*Pg	Pg	20 09 03.0	+2.0
CLL				*e*Sn	Sn	20 09 20.0	-13
CLL				*e*		20 09 47.0	
CLL				*e*Sg	Sg	20 09 53.0	+2.5
	comp=Z,71nm,1.9s						
WET	Wettzell	3.98	256	*e*Pg	Pg	20 09 03.5	-0.6
WET				*e*Sg	Sg	20 09 54.9	-0.8
TANN	Tannenbergstha	4.05	275	*e*Sg	Sg	20 09 58.7	+0.8
DRGR		4.32	141	⇓P	Pn	20 08 55.0	0.0
DRGR				⇓S	Sn	20 09 43.4	-2.7
BURAR	Bucovina Array	4.99	119	⇑P	Pn	20 09 05.2	+1.0
BURAR				⇓S	Sn	20 09 59.6	-2.9
BSD	Bornholm Skovb	5.42	336	*i* P	Pn	20 09 09.3	-0.6
BSD				*i* S	Sn	20 10 07.8	-5.2
GZR	Gura Zlata	5.54	149	⇑P	Pn	20 09 11.7	+0.1
AKASG	Malin Array Be	6.69	82	Lg	Lg	20 11 24.1	
	comp=Z,0.5nm,0.3s,baz=281,slow=26,SNR=4.8						
DAVOX	Davos/Dischmat	6.84	243	Pn	Pn	20 09 30.4	+0.7
	comp=Z,0.4nm,0.3s,baz=32,slow=15,SNR=4.3						
DAVOX				Lg	Lg	20 11 26.8	
	comp=Z,0.2nm,0.3s,baz=343,slow=19,SNR=2.9						
HFS	Hagfors	10.34	346	Pn	Pn	20 10 17.4	+0.1
	comp=Z,0.1nm,0.3s,baz=167,slow=13,SNR=2.5						
HFS				Sn	Sn	20 12 05.2	-8.4
	comp=Z,0.1nm,0.3s,baz=170,slow=28,SNR=2.5						
FINES	FINESS Array B	11.95	17	Pn	Pn	20 10 36.8	-2.5
	comp=Z,0.1nm,0.3s,baz=198,slow=12,SNR=8.3						
FINES				Sn	Sn	20 12 42.7	-11
	comp=Z,0.3nm,0.3s,baz=199,slow=21,SNR=7.4						
ARCES	ARCESS Array B	19.63	7	Pn	P	20 12 16.7	-0.9
	comp=Z,0.1nm,0.3s,baz=197,slow=12,SNR=3.1						

BJI ***11*** *20:12:42.8±0.0, 38°.45N×93°.07E, h8^{km}, mB4.6/11, mb4.3/25, ML4.4/13, Ms3.9/23, Ms7 3.8/19*
IDC ***11*** *20:12:42.3±0.6, 38°.41N×93°.13E, h0^{km}, mb4.1/26, mb1 4.2/29, mb1mx4.1/51, mbtmp4.1/29, ML3.2/3, MS2.8/1, Ms1 2.8/1, ms1mx2.5/39, Error ellipse: s-maj=16.2km s-min=12.2km az=38.0*
NEIC ***11*** *20:12:44.1±2.1, 38°.33N±0°.07×92°.8E±0°.1, h15^{km}±3^{km}, mb4.6/65, Error ellipse: s-maj=11.8km s-min=9.7km az=64.0*
MOS ***11*** *20:12:45.1±1.7, 38°.32N×92°.75E, h35^{km}, mb4.7/19, Error ellipse: s-maj=7.7km s-min=5.2km az=119.1*
ISC 11 20:12:43.7±0.3**, 38°.40N**±0°.05×**92°.94E**±0°.04**, h10^{km}, n192, σ1^{s}83**/202**, mb4.4**/54**, 14C-3D, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTA	Gaotai	5.46	77	Pn	Pn	20 14 06.2	+1.0
GTA				Sn	Sn	20 15 08.8	+0.7
GTA				Sg	Sg	20 15 34.9	-3.9
GTA				smax	smax		
	comp=N,170nm,1.1s						
GTA				smax	smax		
	comp=E,57nm,1.1s						
GTA				LR	LR		
	comp=N,870nm,10.8s						
GTA				LR	LR		
	comp=E,980nm,10.2s						
GTA				LR	LR		
	comp=Z,940nm,9.5s						
WMQ	Urumqi	6.71	325	*e*Pn	Pn	20 14 24.4	+2.1
WMQ				Sn	Sn	20 15 39.0	+0.2
WMQ				smax	smax		
	comp=N,93nm,0.9s						
WMQ				smax	smax		
	comp=E,120nm,0.7s						
WMQ				LR	LR		
	comp=N,290nm,4.7s						
WMQ				LR	LR		
	comp=E,100nm,4.7s						
WMQ				LR	LR		
	comp=Z,310nm,6.1s						
WMQ	Urumqi	6.71	325	P	Pn	20 14 21.3	-1.0
WMQ	Urumqi	6.71	325		Pn	20 14 21.3	-1.0
LSA	Lhasa	8.81	190	P	Pn	20 14 54.2	+2.6
LSA	Lhasa	8.81	190		Pn	20 14 54.2	+2.6
LZH	Lanzhou	9.00	102	*e*P	Pn	20 14 57.3	+3.5
LZH				pP	Pg	20 15 00.8	-35
LZH				PP	PnPn	20 15 06.2	+4.9
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
LZH				pmax	pmax		
	comp=Z,67nm,4.3s						
LZH				LR	LR		
	comp=N,520nm,11.4s						
LZH				LR	LR		
	comp=E,620nm,10.8s						
LZH				LR	LR		
	comp=Z,630nm,11.9s						
MK31	Makanchi Array	11.48	320	P	Pn	20 15 27.1	-0.5
MK31	Makanchi Array	11.48	320	Pn	Pn	20 15 27.1	-0.5
MKAR	Makanchi Array	11.48	320	Pn	Pn	20 15 28.3	+0.7
	0.7nm,0.3s,baz=127,slow=14,SNR=15						
MKAR				Sn	Sn	20 17 34.1	-1.7
	0.7nm,0.3s,baz=130,slow=27,SNR=3.8						
MKAR				Lg	Lg	20 18 43.5	
	0.2nm,0.3s,baz=98,slow=26,SNR=2.4						
MKAR	Makanchi Array	11.48	320	P	Pn	20 15 27.0	-0.7
MKAR						20 17 33.3	
MKAR	Makanchi Array	11.48	320		Pn	20 15 26.9	-0.7
MKAR					Sn	20 17 33.3	-2.6
CD2	Chengdu	11.62	127	P	Pn	20 15 31.2	+1.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MAKZ	Makanchi	11.64	320	P	Pn	20 15 29.1	-0.8
MAKZ	Makanchi	11.64	320		Pn	20 15 29.1	-0.8
PRZ	Przheval'sk	11.80	295	P	Pn	20 15 30.3	-2.0
PRZ	Przheval'sk	11.80	295	Pn	Pn	20 15 30.3	-2.0
KDJ	Kajisay	12.60	292	P	Pn	20 15 41.3	-1.9
KDJ	Kajisay	12.60	292	Pn	Pn	20 15 41.3	-1.9
SHL	Shillong	12.83	184	P	Pn	20 15 43.7	-2.7
SHL	Shillong	12.83	184	Pn	Pn	20 15 43.7	-2.7
KSH	Kashi	13.26	280	P	Pn	20 15 55.7	+3.6
KSH				pP	P	20 15 59.8	-2.2
KSH				S	Sn	20 18 25.4	+5.8
KSH				PcP	PcP	20 21 24.0	+1.9
KSH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KSH				LR	LR		
	comp=N,380nm,11.6s						
KSH				LR	LR		
	comp=E,610nm,6.5s						
KSH				LR	LR		
	comp=Z,380nm,11.5s						
NRN	Naryn	13.35	288	P	Pn	20 15 52.8	-0.8
NRN	Naryn	13.35	288	Pn	Pn	20 15 52.8	-0.8
SONM	Songino Array	13.60	42	Pn	Pn	20 15 56.8	+0.1
	0.1nm,0.3s,baz=224,slow=14,SNR=6.7						
SONM				Lg	Lg	20 19 43.1	
	0.2nm,0.3s,baz=237,slow=24,SNR=4.2						
SONM	Songino Array	13.60	42	P	Pn	20 15 58.1	+1.4
SONM	Songino Array	13.60	42		Pn	20 15 58.1	+1.4
XAN	Xi'an	13.61	104	P	P	20 16 05.5	-0.4

ULN	Ulaanbaatar	13.97	43	P	Pn	20 16 03.5	+1.7
ULN	Ulaanbaatar	13.97	43		Pn	20 16 03.5	+1.7
MOY	Mondy	14.42	21	eP	P	20 16 13.0	-1.8
HHC	Hu-ho-hao-te	14.56	74	eP	P	20 16 11.8	-4.7
HHC				LR	LR		
	comp=N,450nm,9.0s						
HHC				LR	LR		
	comp=E,350nm,8.7s						
HHC				LR	LR		
	comp=Z,490nm,7.9s						
AAK	Ala-Archa	14.65	293	Pn	P	20 16 15.1	-2.5
	0.2nm,0.3s,baz=131,slow=9.3,SNR=3.3						
AAK	Ala-Archa	14.65	293	⇑eP	Pn	20 16 10.8	-0.4
AAK	Ala-Archa	14.65	293	Pn	Pn	20 16 09.6	-1.6
TLY	Talaya	15.26	26	Lg	Lg	20 20 46.3	
	0.0nm,0.3s,baz=67,slow=7.9,SNR=8.3						
ENH	Enshi	15.88	116	Pn	Pn	20 16 26.0	-1.3
KURBB	Kurchatov Arra	15.93	325	Pn	Pn	20 16 26.9	-1.0
	0.1nm,0.3s,baz=133,slow=12,SNR=4.3						
KURK	Kurchatov	15.95	325	ceP	Pn	20 16 28.6	+0.5
KURK	Kurchatov	15.95	325		Pn	20 16 26.3	-1.9
KURK				IAmb	IAmb	20 16 53.9	
	comp=Z,13nm,0.8s						
ZAA0	Zalesovo Array	16.52	343	Pn	Pn	20 16 32.0	-3.3
ZALV	Zalesovo Beam	16.52	343	Pn	Pn	20 16 35.1	-0.2
	comp=Z,0.3nm,0.3s,baz=153,slow=12,SNR=5.7						
ZALV				Lg	Lg	20 21 29.7	
	comp=Z,0.1nm,0.3s,baz=154,slow=27,SNR=3.1						
ZALV	Zalesovo Beam	16.52	343	i P	P	20 16 37.4	-0.5
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZALV	Zalesovo Beam	16.52	343	Pn	Pn	20 16 32.3	-3.0
NIL	Nilore	16.61	259	P	Pn	20 16 33.3	-3.4
NIL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NIL	Nilore	16.61	259		Pn	20 16 33.3	-3.4
BTK	Batken	17.22	282	P	Pn	20 16 39.6	-4.8
BTK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BTK	Batken	17.22	282	Pn	Pn	20 16 39.6	-4.8
KK31	Karatay Array	17.62	293	P	Pn	20 16 46.6	-2.6
KK31				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KK31	Karatay Array	17.62	293		Pn	20 16 46.6	-2.6
KKAR	Karatay Array	17.62	293	P	Pn	20 16 46.6	-2.6
KKAR				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KKAR	Karatay Array	17.62	293	P	Pn	20 16 47.3	-2.0
KKAR	Karatay Array	17.62	293	P	Pn	20 16 46.6	-2.6
GAR	Garm	17.67	279	P	Pn	20 16 46.8	-3.2
BJI	Beijing	18.07	78	P	P	20 16 57.1	+1.9
SIMRM	Sittwe	18.21	180	P	Pn	20 16 53.9	-2.7
SIMRM				IAmb	IAmb	20 17 06.5	
	comp=Z,14nm,1.0s						
CHGR	Chuyangaron	18.60	278	P	P	20 16 57.5	-3.7
CHGR				IAmb	IAmb	20 17 09.6	
	comp=Z,12nm,0.8s						
WHN	Wuhan	19.29	108	P	Pn	20 17 10.2	+0.6
SLVN	Son La	19.46	148	P	Pn	20 17 10.8	-1.1
KBL	Kabul	19.59	266	P	P	20 17 08.4	-3.8
KBL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KBL	Kabul	19.59	266	P	P	20 17 08.4	-3.8
CHTO	Chiang Mai	20.21	163	P	P	20 17 18.3	-0.5
CHTO	Chiang Mai	20.21	163	P	P	20 17 18.3	-0.5
CM31	Chiang Mai Arr	20.55	164	P	P	20 17 22.6	0.0
CMAR	Chiang Mai Arr	20.55	164	P	Pn	20 17 22.9	-1.8
	comp=Z,1.6nm,0.7s,baz=337,slow=11,SNR=14						
CMAR	Chiang Mai Arr	20.55	164	ceP	Pn	20 17 23.3	-1.4
CMAR	Chiang Mai Arr	20.55	164	P	P	20 17 20.7	-1.8
BVAR	Borovoye Array	21.36	321	P	P	20 17 31.8	+0.8
	comp=Z,1.8nm,0.6s,baz=123,slow=12,SNR=12						
BRVK	Borovoye	21.43	320	ceP	P	20 17 32.0	+0.2
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BRVK	Borovoye	21.43	320	P	P	20 17 31.1	-0.7
NJ2	Nanjing	22.06	99	eP	P	20 17 41.2	+2.6
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HIA	Hailar	22.06	52	P	P	20 17 40.9	+2.3
HIA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HIA	Hailar	22.06	52	P	P	20 17 40.9	+2.3
HRA	Herat	24.97	270		P	20 18 05.3	-2.4
HRA				IAmb	IAmb	20 18 14.8	
	comp=Z,11nm,1.8s						
ABKAR	Akbulak array	25.96	305	P	P	20 18 15.8	-0.5
GEYT	Alibeck	27.29	280	P	P	20 18 29.7	+1.3
	comp=Z,2.0nm,0.8s,baz=123,slow=10,SNR=3.7						
AKTO	Aktyubinsk	27.43	307	P	P	20 18 30.4	+0.9
	comp=Z,1.6nm,0.6s,baz=103,slow=18,SNR=5.6						
KSRS	Korea Array	27.51	81	LR	LR	20 29 48.2	
	comp=Z,19nm,20.6s,baz=275,slow=38						
YULB	Yu-li	28.42	114	P	P	20 18 38.7	+0.1
YULB				IAmb	IAmb	20 18 59.6	
	comp=Z,34nm,1.4s						
ARU	Arti	29.00	320	P	P	20 18 44.3	+0.9
	comp=Z,1.9nm,0.6s,baz=98,slow=12,SNR=8.2						
ARU	Arti	29.00	320	c iP	P	20 18 44.2	+0.8
ARU						20 19 34.8	
ARU				S	S	20 23 39.0	+4.7
ARU				SS	SnSn	20 25 05.8	+8.7
ARU				pmax	pmax		
	comp=Z,11nm,1.2s						
ARU	Arti	29.00	320	P	P	20 18 43.4	0.0
ARU				IAmb	IAmb	20 18 44.9	
	comp=Z,12nm,1.2s						
USA0B	Ussuriysk Arra	29.70	66	P	P	20 18 51.6	+1.9
USA0B				pmax	pmax		
	comp=Z,33nm,1.8s						
USA0B	Ussuriysk Arra	29.70	66	P	P	20 18 51.6	+1.9
USA0B				IAmb	IAmb	20 19 29.7	
	comp=Z,33nm,1.8s						
USRK	Ussuriysk Ar.	29.70	66	P	P	20 18 51.8	+2.1
USRK	Ussuriysk Ar.	29.70	66	P	P	20 18 51.8	+2.1
KLR	Kul'dur	29.71	56	P	P	20 18 49.0	-0.9
	comp=Z,0.5nm,0.6s,baz=285,slow=9.1,SNR=3.6						
KLR	Kul'dur	29.71	56	P	P	20 18 49.0	-0.9
NRIK	Noril'sk	31.13	356	P	P	20 19 03.6	+1.5
	comp=Z,3.6nm,0.5s,baz=138,slow=3.8,SNR=3.4						
GNI	Garni	36.99	288	P	P	20 19 56.4	+2.9
	comp=Z,5.8nm,1.0s,baz=182,slow=9.7,SNR=2.9						
KBZ	Khabaz	37.64	294	P	P	20 19 59.4	+0.7
	comp=Z,1.5nm,0.9s,baz=195,slow=20,SNR=2.9						
AKH	Akhalkalaki	37.64	291	P	P	20 19 58.9	-0.1
AKH				pmax	pmax		
	comp=Z,19nm,1.6s						
AKH	Akhalkalaki	37.64	291	P	P	20 19 58.9	-0.1
AKH				IAmb	IAmb	20 20 02.9	
	comp=Z,19nm,1.6s						
KIV	Kislovodsk	37.75	295	eP	P	20 19 57.0	-2.8
KIV				pmax	pmax		
	comp=Z,21nm,1.1s						
TIXI	Tiksi	37.97	18	P	P	20 20 00.5	-0.7
	comp=Z,1.5nm,0.3s,baz=310,slow=0.6,SNR=8.3						
TIXI	Tiksi	37.97	18	⇑eP	P	20 20 00.6	-0.6
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TIXI	Tiksi	37.97	18	P	P	20 20 00.7	-0.6
OBN	Obninsk	40.86	313	⇑eP	P	20 20 26.3	+0.8
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SEY	Seymchan	42.88	35	P	P	20 20 41.8	-0.1
	comp=Z,2.0nm,0.7s,baz=265,slow=6.4,SNR=6.0						
SEY	Seymchan	42.88	35	⇓eP	P	20 20 42.0	+0.1
BR131	Keskin Array S	45.32	291	⇓eP	P	20 21 02.1	+0.1
BR131	Keskin Array S	45.32	291	P	P	20 21 02.1	+0.1
BR131				IAmb	IAmb	20 21 04.1	
	comp=Z,5.6nm,0.7s						
BRTR	Keskin Array B	45.32	291	P	P	20 21 03.4	+1.3
	comp=Z,3.9nm,0.7s,baz=105,slow=6.5,SNR=18						
BRTR	Keskin Array B	45.32	291	P	P	20 21 02.5	+0.5
ASF	Jabal al Asfar	45.58	280	P	P	20 21 05.5	+1.5
	comp=Z,1.2nm,0.5s,baz=117,slow=5.7,SNR=3.6						
AKASG	Malin Array Be	45.68	307	P	P	20 21 04.8	+0.3
	comp=Z,0.5nm,0.4s,baz=70,slow=7.4,SNR=5.3						
AKASG	Malin Array Be	45.68	307	ceP	P	20 21 06.0	+1.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	Malin Array Si	45.68	307	⇑eP	P	20 21 04.0	-0.5
FIA1	FINESS Array S	46.30	322	P	P	20 21 09.5	+0.2
FIA1				IAmb	IAmb	20 21 21.0	
	comp=Z,35nm,1.6s						
FINES	FINESS Array B	46.30	322	P	P	20 21 09.7	+0.5
	comp=Z,3.7nm,1.1s,baz=86,slow=8.2,SNR=7.7						
FINES	FINESS Array B	46.30	322	P	P	20 21 09.7	+0.5
FINES				PcP	PcP	20 22 44.6	+0.3
MMAI	Mount Meron Ar	46.39	282	P	P	20 21 12.7	+2.3
	comp=Z,1.3nm,0.6s,baz=74,slow=12,SNR=2.8						
ARCES	ARCESS Array B	46.75	334	P	P	20 21 12.9	+0.2
	comp=Z,4.9nm,0.9s,baz=79,slow=6.2,SNR=11						
ARCES				PcP	PcP	20 22 45.7	-0.2
	comp=Z,3.4nm,0.9s,baz=66,slow=4.1,SNR=6.1						
ARCES	ARCESS Array B	46.75	334	P	P	20 21 13.5	+0.8
ARCES						20 22 46.0	
ARCES	ARCESS Array B	46.75	334	P	P	20 21 13.5	+0.8
ARCES				PcP	PcP	20 22 46.0	+0.2
ARE0	ARCESS Array S	46.75	334	P	P	20 21 13.4	+0.7
ARE0				IAmb	IAmb	20 21 15.2	
	comp=Z,3.8nm,1.5s						
BURAR	Bucovina Array	48.93	304	⇑P	P	20 21 31.4	+1.4
BURAR	Bucovina Array	48.93	304	P	P	20 21 30.5	+0.6
BUR08	Bucovina Ar. S	48.93	304	P	P	20 21 28.4	-1.6
BUR08				IAmb	IAmb	20 22 01.9	
	comp=Z,11nm,1.5s						
MLR	Muntele Rosu	49.03	301	⇑P	P	20 21 34.4	+3.6
MLR	Muntele Rosu	49.03	301	P	P	20 21 32.3	+1.5
MLR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MLR	Muntele Rosu	49.03	301	P	P	20 21 32.3	+1.5
MLR				IAmb	IAmb	20 21 34.6	
	comp=Z,6.5nm,0.9s						
ELL	Elmali	49.10	289	P	P	20 21 32.3	+0.8
ELL				i		20 22 52.0	
ELL				i		20 23 19.5	
ELL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ELL	Elmali	49.10	289	P	P	20 21 32.2	+0.8
ARR	Arges	49.95	301	⇑P	P	20 21 39.1	+1.4
HUMR	Humele	49.97	300	⇑P	P	20 21 36.9	-0.9
VTS	Vitosha	51.79	298	⇑P	P	20 21 53.4	+1.6
VTS	Vitosha	51.79	298	P	P	20 21 53.5	+1.6
VTS				pmax	pmax		
	comp=Z,7.0nm,1.4s						
VTS	Vitosha	51.79	298	P	P	20 21 53.5	+1.6
VTS				IAmb	IAmb	20 21 54.5	
	comp=Z,6.5nm,1.4s						
VYHS	Vyhne	52.77	307	eP	P	20 22 01.0	+2.2
VYHS	Vyhne	52.77	307	eP	P	20 22 01.0	+2.2
NC405	NORSAR Array S	53.20	323	P	P	20 22 01.5	-0.3
NC303	NORSAR Array S	53.34	323	P	P	20 22 02.5	-0.3
NC602	NORSAR Array S	53.38	323	P	P	20 22 03.1	0.0
NC602				IAmb	IAmb	20 22 29.2	
	comp=Z,1.8nm,0.7s						
NB201	NORSAR Array S	53.42	323	P	P	20 22 03.6	+0.2
NB2	NORSAR Subarra	53.46	323	P	P	20 22 03.7	0.0
	comp=Z,1.3nm,0.6s,baz=73,slow=7.4						
NOA	NORSAR Array B	53.46	323	P	P	20 22 03.7	0.0
	comp=Z,2.0nm,0.7s,baz=75,slow=7.4,SNR=7.6						
NC204	NORSAR Array S	53.61	324	P	P	20 22 05.0	+0.2
NAO01	NORSAR Array S	53.66	323	P	P	20 22 04.1	-1.1
PDG	Podgorica	54.60	299	P	P	20 22 12.5	+0.3
PDG				IAmb	IAmb	20 22 40.0	
	comp=Z,25nm,1.5s						
KONO	Kongsberg	54.61	322	P	P	20 22 10.5	-1.5
KONO				pmax	pmax		
	comp=Z,19nm,1.4s						
KONO	Kongsberg	54.61	322	P	P	20 22 10.5	-1.5
KONO				IAmb	IAmb	20 22 35.6	
	comp=Z,19nm,1.4s						
ITM	Ithomi	54.80	292	P	P	20 22 12.3	-1.5
ITM				IAmb	IAmb	20 22 47.1	
	comp=Z,15nm,1.1s						
CLL	Collm	55.41	311	eP	P	20 22 15.0	-3.0
CLL				i sP	sP	20 22 24.6	+1.0
CLL	Collm	55.41	311	eP	P	20 22 15.0	-3.0
CLL				i *SP	sP	20 22 24.6	+1.0
GEC2	GERESS Array S	55.85	308	P	P	20 22 21.0	-0.4
GEC2				IAmb	IAmb	20 22 23.5	
	comp=Z,5.7nm,1.5s						
GERES	GERESS Array B	55.85	308	P	P	20 22 22.3	+0.9
	comp=Z,0.6nm,0.7s,baz=64,slow=11,SNR=3.5						
GERES	GERESS Array B	55.85	308	P	P	20 22 21.8	+0.4
SCTE	Santa Cesarea	56.08	297	P	P	20 22 22.2	-0.7
KNRA	Kununurra	63.41	141	P	P	20 23 13.9	+0.3
KNRA				IAmb	IAmb	20 23 14.4	
	comp=Z,8.2nm,0.8s						
TOLK	Toolik Lake Re	63.72	21	P	P	20 23 15.8	+0.7
TOLK				IAmb	IAmb	20 23 16.0	
	comp=Z,2.2nm,0.7s						
FITZ	Fitzroy Crossi	64.03	145	P	P	20 23 17.8	+0.1
FITZ				IAmb	IAmb	20 23 42.5	
	comp=Z,3.6nm,1.1s						
IMAR	Indian Mountai	64.08	25	P	P	20 23 17.6	+0.2
KEST	Kesra	64.47	296	P	P	20 23 21.8	+1.2
	comp=Z,1.9nm,0.7s,baz=19,slow=18,SNR=3.6						
KEST	Kesra	64.47	296	P	P	20 23 21.0	+0.4
KEST				IAmb	IAmb	20 23 22.5	
	comp=Z,7.1nm,1.1s						
PSA00	Pilbara Seismi	64.78	152	P	P	20 23 21.1	-1.4
PSA00				IAmb	IAmb	20 23 24.4	
	comp=Z,14nm,1.2s						
BMAR	Burnt Mountain	65.93	21	P	P	20 23 30.8	+1.2
PPLA	Purkeypile	66.51	27	P	P	20 23 34.3	+0.8
ILAR	Eielson Array	67.06	24	P	P	20 23 36.5	-0.3
	comp=Z,1.3nm,0.8s,baz=297,slow=5.6,SNR=16						
ILAR	Eielson Array	67.06	24	P	P	20 23 36.9	+0.2
ILAR	Eielson Array	67.06	24	P	P	20 23 36.9	+0.2
INK	Inuvik	68.09	17	P	P	20 23 44.2	+1.0
INK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
INK	Inuvik	68.09	17	P	P	20 23 44.1	+1.0
INK				IAmb	IAmb	20 23 44.4	
	comp=Z,5.5nm,1.2s						
SML	Sawmill	68.59	27	P	P	20 23 46.5	+0.1
DOT	Dot Lake	68.74	24	P	P	20 23 47.0	-0.4
DOT				IAmb	IAmb	20 24 12.2	
	comp=Z,19nm,1.8s						
EGAK	Eagle	68.81	22	P	P	20 23 47.9	+0.2
EGAK				IAmb	IAmb	20 23 48.3	
	comp=Z,28nm,1.8s						
KNK	Knik Glacier	68.81	27	P	P	20 23 48.0	+0.1
SCM	Sheep Creek Mo	68.92	26	P	P	20 23 47.2	-1.4
SCM	Sheep Creek Mo	68.92	26	P	P	20 23 47.2	-1.4
BRLK	Bradley Lake	69.01	29	P	P	20 23 48.9	-0.3
ILULI	Ilulissat	69.46	347	P	P	20 23 51.7	0.0
ILULI	Ilulissat	69.46	347	P	P	20 23 51.7	0.0
KDAK	Kodiak Island	69.64	31	P	P	20 23 52.7	-0.2
KDAK	Kodiak Island	69.64	31	P	P	20 23 52.7	-0.2
OHAK	Old Harbor	69.71	32	P	P	20 23 53.7	+0.4
WB0	Warramunga Arr	69.72	138	P	P	20 23 53.5	-0.4
WB0				IAmb	IAmb	20 24 05.4	
	comp=Z,20nm,1.8s						
WRAB	Tennant Creek	69.83	138	⇓eP	P	20 23 54.1	-0.5
WRAB				pmax	pmax		
	comp=Z,16nm,1.7s						
WRAB	Tennant Creek	69.83	138	P	P	20 23 54.7	+0.1
WRAB				IAmb	IAmb	20 23 59.0	
	comp=Z,20nm,1.5s						
WRA	Warramunga Arr	69.83	138	P	P	20 23 54.2	-0.4
	comp=Z,1.8nm,0.8s,baz=329,slow=5.7,SNR=12						
WRA	Warramunga Arr	69.83	138	P	P	20 23 53.5	-1.2
WB2	Warramunga Arr	69.84	138	P	P	20 23 54.3	-0.3
WB2				IAmb	IAmb	20 24 15.3	
	comp=Z,13nm,1.5s						
BCAR	Beaver Creek A	69.87	23	P	P	20 23 55.3	+0.9
AS31	Alice Springs	72.72	141	P	P	20 24 11.2	-0.9
ASAR	Alice Springs	72.72	141	P	P	20 24 11.8	-0.2
	comp=Z,2.3nm,0.8s,baz=332,slow=6.4,SNR=31						
YKA	Yellowknife Ar	77.03	13	P	P	20 24 36.0	-0.4
	comp=Z,0.4nm,0.5s,baz=339,slow=5.0,SNR=12						
TORD	Torodi Ar. Bea	82.92	281	P	P	20 25 09.5	+0.3
	comp=Z,3.0nm,0.7s,baz=44,slow=5.2,SNR=15						
TORD	Torodi Ar. Bea	82.92	281	P	P	20 25 08.5	-0.7
STKA	Stephens Creek	83.31	140	P	P	20 25 10.2	-0.4
	comp=Z,1.2nm,0.6s,baz=344,slow=7.4,SNR=3.1						
STKA	Stephens Creek	83.31	140	P	P	20 25 09.9	-0.7
STKA				pmax	pmax		
	comp=Z,4.0nm,1.8s						
STKA	Stephens Creek	83.31	140	P	P	20 25 09.9	-0.7
STKA				IAmb	IAmb	20 25 14.7	
	comp=Z,4.2nm,1.8s						
WVOR	Wild Horse Val	94.57	23	P	P	20 26 05.3	+0.6
WVOR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WVOR	Wild Horse Val	94.57	23	P	P	20 26 05.3	+0.6
WVOR				IAmb	IAmb	20 26 07.1	
	comp=Z,3.2nm,0.8s						

ROM 11 20:19:47.9±0.1**, 43°.432N**±0°.002×**12°.509E**±0°.003**, h5^{km}, ML0.6**/2**, 1C-4D, Error ellipse: s-maj=0.2km s-min=0.1km az=95.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ATFO	Monte Foce - G	0.08	145	⇓P	Pg	20 19 50.0	+0.3
ATFO				S	Sg	20 19 51.5	+0.5
ATFO				AML	AML		
	comp=N,74µm,0.2s						
ATFO				AML	AML		
	comp=E,87µm,0.2s						
ATPI	Pietralunga -	0.08	284	⇓P	Pg	20 19 50.1	+0.3
ATPI				S	Sg	20 19 51.5	+0.5
ATVO	AVT- Monte Val	0.09	236	⇑P	Pg	20 19 50.1	+0.3
ATVO				S	Sg	20 19 51.7	+0.5
ATVO				AML	AML		
	comp=E,81µm,0.4s						
ATVO				AML	AML		
	comp=N,51µm,1.2s						
NARO	Abbazia di Nar	0.19	16	⇓P	Pg	20 19 52.1	+0.5
NARO				S	Sg	20 19 55.3	+1.2
MPAG	Monte Paganucc	0.27	43	⇓P	Pg	20 19 53.5	+0.3

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*IDC **11** 20:46:31.0±6.7, 35°.92N×140°.66E, h57^{km}±53^{km}, mb2.9/2, mb1 3.2/3, mb1mx2.9/38, mbtmp3.2/3, ML2.3/1, Error ellipse: s-maj=62.7km s-min=32.6km az=57.0*

*JMA **11** 20:46:34.6±0.2, 35°.81N×140°.12E, h63^{km}±2^{km}, M2.6*

ISC 11 20:46:34.4±1.1**, 35°.74N**±0°.05×**140°.16E**±0°.06**, h73^{km}**±8^{km}**, n14,** σ1^{s}.**25**/22**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JSMT	Sammumatsuo	0.26	113	P	Pn	20 46 45.8	+0.2
JCN	Nagara	0.33	174	P	Pn	20 46 46.3	+0.2
JCN				eS	Sn	20 46 55.5	+0.9
TOK	Tokyo	0.33	260	P	Pn	20 46 46.2	+0.2
JIHU	Itakohorinouch	0.37	53	P	Pn	20 46 45.9	-0.5
JIHU				eS	Sn	20 46 54.6	-0.6
JAG	Ashikaga	0.89	320	P	Pn	20 46 50.8	-0.9
BSO3	Boso 3	0.98	163	P	Pn	20 46 52.4	-0.2
BSO3				eS	Sn	20 47 07.2	+1.1
JOD2	Odawara 2	1.00	242	P	Pn	20 46 52.2	-0.8
JOD2				eS	Sn	20 47 05.0	-1.9
JRY	Ryogami san	1.06	285	P	Pn	20 46 53.6	-0.2
JKT	Katashina	1.26	324	P	Pn	20 46 55.4	-1.0
JKT				eS	Sn	20 47 11.7	-1.2
JFNN	Fujinakano	1.32	246	P	Pn	20 46 56.8	-0.3
JFNN				eS	Sn	20 47 13.2	-1.0
MJAR	Matsushiro Arr	1.77	297	P	Pn	20 47 03.2	+0.1
	1.1nm,0.3s,baz=98,slow=15,SNR=59						
MJAR				S	Sn	20 47 27.9	+3.1
	0.6nm,0.3s,baz=147,slow=11,SNR=5.9						
MAT	Matsushiro	1.77	297	P	Pn	20 47 03.2	+0.1
MAT				S	Sn	20 47 27.3	+2.5
MKAR	Makanchi Array	43.96	303	P	P	20 54 34.8	+0.5
	0.2nm,0.7s,baz=85,slow=9.0,SNR=3.8						
WRA	Warramunga Arr	55.66	187	P	P	20 56 02.5	-0.6
	0.2nm,0.4s,baz=0.4,slow=7.5,SNR=8.0						

IDC 11 21:04:06.4±1.7**, 9°.30S**×**124°.41E, h0^{km}, mb3.3**/1**, mb1 3.7**/4**, mb1mx3.4**/44**, mbtmp3.5**/4**, ML3.6**/3**, Error ellipse: s-maj=110.7km s-min=26.6km az=64.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	8.82	172	Pn	Pn	21 06 15.6	+0.3
	0.5nm,0.3s,baz=349,slow=9.0,SNR=16						
FITZ				Sn	Sn	21 07 49.5	-6.0
	0.4nm,0.3s,baz=197,slow=7.6,SNR=9.0						
WRA	Warramunga Arr	14.28	139	Pn	Pn	21 07 29.4	-0.7
	0.3nm,0.3s,baz=313,slow=14,SNR=17						
WRA				Sn	Sn	21 10 01.6	-7.8
	0.1nm,0.3s,baz=316,slow=25,SNR=4.7						
ASAR	Alice Springs	16.93	149	Pn	Pn	21 08 05.0	+0.1
	0.2nm,0.3s,baz=322,slow=12,SNR=8.4						
ASAR				Sn	Sn	21 11 06.4	-7.3
	0.1nm,0.3s,baz=314,slow=20,SNR=3.1						
MKAR	Makanchi Array	67.27	330	P	P	21 15 02.9	0.0
	0.3nm,0.7s,baz=118,slow=7.7,SNR=2.8						

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*NEIC **11** 21:10:15.7±2.5, 44°.3N±0°.1×129°.1W±0°.2, h10^{km}±2^{km}, ML3.2/20, Error ellipse: s-maj=21.1km s-min=16.4km az=243.0*

*ANF **11** 21:10:21.2±2.8, 44°.41N×128°.52W, h0^{km}, ML3.4/1, Error ellipse: s-maj=31.8km s-min=7.4km az=61.0*

*IDC **11** 21:10:21.9±3.3, 44°.88N×128°.39W, h0^{km}, mb3.3/2, mb1 3.6/6, mb1mx3.4/45, mbtmp3.3/6, ML3.1/3, Error ellipse: s-maj=50.8km s-min=24.0km az=48.0*

ISC 11 21:10:17.2±1.8**, 44°.31N**±0°.09×**128°.9W**±0°.1**, h10^{km}, n39,** σ1^{s}.**54**/34**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KEBM	Edson Butte	3.60	112	Pn	Pn	21 11 10.8	-2.2
I02D	Swisshome	3.62	92	P	Pn	21 11 13.8	+0.6
	baz=277,SNR=5.9						
J01E	Myrtle Point	3.76	106	S	Sn	21 12 00.5	+1.0
	baz=292						
COR	Corvallis	4.00	84	Pn	Pn	21 11 17.8	-0.7
COR				IAML		21 11 55.2	
	25nm,2.8s						
COR				Sn	Sn	21 12 02.6	-2.8
COR				IAML		21 13 44.0	
	34nm,4.0s						
I03D	Drain, OR	4.03	97	P	Pn	21 11 20.7	+1.7
	baz=283,SNR=8.5						
F03A	Seaside	4.09	65	Pn	Pn	21 11 18.8	-1.0
G03D	McMinnville, O	4.09	75	P	Pn	21 11 20.8	+1.0
	baz=260						
E03A	Lebam	4.36	57	Pn	Pn	21 11 23.9	+0.5
E03A				IAML		21 12 46.1	
	comp=N,28nm,3.0s						
H04D	Lebanon	4.40	85	P	Pn	21 11 25.9	+1.9
	baz=270						
HUMO	Hull Mountain	4.63	110	Pn	Pn	21 11 28.2	+1.0
HUMO				Sn	Sn	21 12 22.7	+1.6
NLWA	Neilton Lookou	4.66	47		Pn	21 11 26.8	-0.8
NLWA				IAML		21 14 00.9	
	comp=N,18nm,3.5s						
NLWA				IAML		21 14 10.0	
	comp=N,17nm,4.7s						
H04A	Detroit Lake	4.80	83	Pn	Pn	21 11 31.0	+1.5
H04A				IAML		21 12 08.4	
	comp=N,13nm,0.5s						
F04A	Amboy	4.85	68		Pn	21 11 32.3	+2.2
F04A				IAML		21 12 43.8	
	comp=N,17nm,4.3s						
F04A				IAML		21 12 45.7	
	comp=E,18nm,4.1s						
D04E	Lakebay	5.14	54	P	Pn	21 11 35.9	+1.7
	baz=237						
D03D	Eldon	5.16	49	P	Pn	21 11 35.5	+1.0
	baz=232,SNR=13						
YBH	Yreka Blue Hor	5.20	118	Pn	Pn	21 11 41.7	+6.6
	comp=E,0.2nm,0.3s,baz=290,slow=12,SNR=3.5						
YBH	Yreka Blue Hor	5.20	118		Pn	21 11 35.3	+0.1
YBH				IAML		21 12 53.6	
	comp=E,12nm,5.0s						
YBH				IAML		21 13 34.9	
	comp=N,9.8nm,4.8s						
G05D	Wamic, OR	5.46	78	P	Pn	21 11 41.1	+2.5
	baz=263,SNR=5.2						
LON	Longmire	5.53	61		Pn	21 11 41.0	+1.4
D05A	Enumclaw	5.61	57	Pn	Pn	21 11 42.2	+1.6
PGC	Sidney	5.73	39	Pn	Pn	21 11 42.9	+0.7
PINE	Pine Mountain	5.74	92		Pn	21 11 45.0	+2.4
G06A	Carlson Farm,	5.94	78	Pn	Pn	21 11 47.2	+2.0
A04D	Lummi Island	6.13	42	P	Pn	21 11 48.9	+1.3
	baz=225						
B05A	Bryant	6.14	48	P	Pn	21 11 49.4	+1.6
	baz=231,SNR=29						
LTY	Liberty	6.45	60		Pn	21 11 53.1	+0.9
B06A	Marblemount	6.62	48	Pn	Pn	21 11 53.2	-1.2
G08A	Pilot Rock	7.12	79		Pn	21 12 01.7	+0.2
NEW	Newport	9.04	60	Pn	Pn	21 12 26.6	-1.2
	comp=N,0.1nm,0.3s,baz=270,slow=15,SNR=2.0						
PDAR	Pinedale Array	14.10	90	Pn	P	21 13 43.1	-1.7
	comp=N,0.0nm,0.3s,baz=286,slow=11,SNR=2.2						

YKA	Yellowknife Ar	20.02	20	P	P	21 14 48.8	-1.0
	baz=206,slow=12,SNR=9.9						
ILAR	Eielson Array	22.84	340	P	P	21 15 21.7	+1.5
	comp=N,0.8nm,1.1s,baz=155,slow=8.5,SNR=2.1						
ULM	Lac du Bonnet	23.03	63	P	P	21 15 22.9	+0.6
	comp=N,0.6nm,0.3s,baz=264,slow=9.1,SNR=2.9						
H11N2	WAKE ISLAND Hy	58.15	267	T	T	22 22 33.3	
	baz=49,slow=75,SNR=192						
H11N3	WAKE ISLAND Hy	58.15	267	T	T	22 22 39.4	
	baz=49,slow=75,SNR=244						
H11N1	WAKE ISLAND Hy	58.17	267	T	T	22 22 46.5	
	baz=49,slow=75,SNR=126						
H11S1	WAKE ISLAND Hy	59.09	266	T	T	22 23 43.8	
	baz=49,slow=75,SNR=38						
H11S2	WAKE ISLAND Hy	59.10	266	T	T	22 23 46.3	
	baz=49,slow=75,SNR=21						
H11S3	WAKE ISLAND Hy	59.11	266	T	T	22 23 47.6	
	baz=49,slow=75,SNR=20						

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*GCG **11** 21:12:27.0±1.1, 14°.28N×92°.45W, $h54^{km}\pm37^{km}$, MD3.5*
*MEX **11** 21:12:31.2±0.4, 14°.25N×92°.21W, $h15^{km}$, MD3.7*
ISC 11 21:12:28.0±2.9, **14°.2N**±0°.1×**92°.31W**±0°.09, **h13**$^{km}\pm12^{km}$, **n6**, σ**0ˢ.59**/12, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.67	3	*i* P	Pg	21 12 41.3	+0.1
THIG				*i* S	Sg	21 12 49.6	-0.5
ERG	Entre ros, C	0.74	74	*e*P	Pg	21 12 42.6	+0.1
ERG				*e*S	Sn	21 12 56.1	+0.7
STG3	Santiaguito 3,	0.86	56	*e*P	Pg	21 12 45.1	+0.5
STG3				*e*S	Sn	21 12 58.5	0.0
FUG	Fuego 3	1.43	81	*e*P	Pn	21 12 53.4	-0.5
FUG				*e*S	Sg	21 13 14.1	-0.2
PCIG		1.71	329	*e*P	Pn	21 12 58.2	+0.6
PCIG				*e*S	Sn	21 13 18.4	-0.9
IXG	Ixpaco	1.81	92	*e*P	Pn	21 12 58.6	-0.5
IXG				*e*S	Sn	21 13 22.4	+0.4

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*ATH **11** 21:27:27.7, 37°.96N×20°.09E, $h12^{km}\pm5^{km}$, ML3.1/11, Error ellipse: s-maj=6.1km s-min=1.6km az=48.0*
*THE **11** 21:27:28.0, 37°.98N×20°.07E, $h10^{km}\pm2^{km}$, ML3.3/17, Error ellipse: s-maj=2.8km s-min=0.7km az=63.0*
ISC 11 21:27:27.3±1.4, **37°.97N**±0°.04×**20°.03E**±0°.04, **h15**$^{km}\pm8^{km}$, **n51**, σ**1ˢ.05**/89, **Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.34	48	P	Pg	21 27 34.6	+0.3
KEF3				S	Sg	21 27 39.0	-0.1
AGT1	Agia Thekli	0.39	45	P	Pg	21 27 35.5	+0.2
AGT1				S	Sg	21 27 40.5	-0.2
LXRA	Lixouri, Kepha	0.39	55	P	Pg	21 27 35.4	+0.1
LXRA				S	Sg	21 27 40.5	-0.2
LXR1	Lixouri, Cepha	0.39	55	P	Pg	21 27 35.4	+0.1
LXR1				S	Sb	21 27 41.1	-0.8
	23µm,0.4s						
ARGA	Argostoli. Kep	0.41	60	P	Pg	21 27 35.5	-0.1
ARGA				S	Sg	21 27 40.7	-0.4
KEF2	Argostoli. Kep	0.41	62	P	Pg	21 27 35.4	-0.2
KEF2				S	Sg	21 27 40.5	-0.7
ARG2	Argostoli	0.41	60	P	Pg	21 27 35.6	-0.1
ARG2				S	Sg	21 27 41.0	-0.4
	20µm,0.4s						
KEF1	Kardakata, Kep	0.46	49	P	Pg	21 27 36.5	-0.1
KEF1				S	Sg	21 27 42.0	-0.8
VLS	Valsamata	0.49	65	P	Pg	21 27 36.5	-0.5
VLS				S	Sg	21 27 42.6	-1.0
	6µm,0.5s						
VLS	Valsamata	0.49	65	P	Pg	21 27 36.5	-0.5
VLS				S	Sg	21 27 42.5	-1.0
VLS				AML	AML	21 27 43.1	
	comp=N,17843µm,0.5s						
VLS				AML	AML	21 27 43.7	
	comp=E,6494µm,0.2s						
VSK1	VASILIKIADES	0.60	44	P	Pg	21 27 39.0	-0.2
VSK1				S	Sg	21 27 46.9	-0.4
KFL	Anninata	0.61	77	P	Pg	21 27 38.7	-0.7
KFL				S	Sg	21 27 46.7	-0.9
	comp=E,8µm,0.4s						
KFL	Anninata	0.61	77	P	Pg	21 27 38.6	-0.7
KFL				S	Sg	21 27 46.5	-1.1
KONA	Konidatara, Ke	0.62	43	P	Pg	21 27 39.2	-0.3
KONA				S	Sg	21 27 48.0	+0.2
KONA				AML	AML	21 27 51.0	
	comp=E,3050µm,0.5s						
KONA				AML	AML	21 27 54.5	
	comp=N,4555µm,0.8s						
FSK	Fiskardo	0.64	41	P	Pg	21 27 39.5	-0.4
FSK				S	Sb	21 27 49.0	-0.1
	comp=N,2µm,0.6s						
FSK	Fiskardo	0.64	41	P	Pg	21 27 39.5	-0.4
FSK				S	Sb	21 27 48.9	-0.1
FSK				AML	AML	21 27 52.4	
	comp=N,4331µm,0.7s						
FSK				AML	AML	21 27 52.6	
	comp=E,3809µm,0.5s						
KRI1	kERI	0.70	116	P	Pg	21 27 40.4	-0.6
KRI1				S	Sb	21 27 50.3	-0.3
	comp=E,4µm,0.4s						
ZAK2	Zakynthos	0.71	105	P	Pg	21 27 41.2	-0.1
ZAK2				S	Sb	21 27 51.4	+0.3
	comp=E,18µm,0.4s						
EVGI	Lefkada island	0.81	37	P	Pg	21 27 42.5	-0.6
EVGI				S	Sb	21 27 55.2	+1.2
EVGI	Lefkada island	0.81	37	P	Pg	21 27 42.5	-0.6
MGNA	Meganis	0.91	41	P	Pg	21 27 44.1	-0.8
MGNA				AML	AML	21 28 03.1	
	comp=E,2147µm,0.6s						
MGNA				AML	AML	21 28 07.1	
	comp=N,1312µm,0.6s						
VTN	Vitineika	0.92	93	P	Pg	21 27 44.7	-0.4
VTN				S	Sn	21 27 58.7	+0.1
VTN	Vitineika	0.92	93	P	Pg	21 27 44.7	-0.4
LKD2	Lefkada island	0.95	31	P	Pg	21 27 45.4	-0.4
TSLK	Tsoukalades, L	0.98	30	P	Pg	21 27 46.0	-0.3
TSLK				S	Sb	21 27 59.4	+0.5
	comp=N,2µm,0.6s						
TSLK	Tsoukalades, L	0.98	30	P	Pg	21 27 45.8	-0.5
TSLK				S	Sb	21 27 60.0	+1.1
TSLK				AML	AML	21 28 05.7	
	comp=E,3500µm,0.5s						
TSLK				AML	AML	21 28 09.7	
	comp=N,3629µm,0.6s						
AST1	Astakos	1.01	56	P	Pg	21 27 45.4	-1.4
AST1				S	Sn	21 28 01.4	+0.5
	comp=N,2µm,0.5s						
PDO	Prodromos	1.10	55	P	Pb	21 27 47.7	-0.4
PDO				S	Sn	21 28 03.8	+0.6
	comp=N,2µm,0.6s						
PDO	Prodromos	1.10	55	P	Pb	21 27 47.7	-0.4
PDO				S	Sn	21 28 03.5	+0.3
PDO				AML	AML	21 28 09.1	
	comp=E,3841µm,0.7s						
PDO				AML	AML	21 28 09.6	
	comp=N,2462µm,0.5s						
RLS	Riolos of Patr	1.14	85	P	Pb	21 27 48.2	-0.5
RLS				S	Sn	21 28 04.5	+0.4
	comp=N,460nm,0.4s						
RLS	Riolos of Patr	1.14	85	P	Pb	21 27 48.1	-0.7
RLS				AML	AML	21 28 10.2	
	comp=N,1058µm,0.4s						
RLS				AML	AML	21 28 12.3	
	comp=E,755µm,0.6s						
DRO	Drossia	1.33	90	P	Pn	21 27 51.6	+0.2
DRO				S	Sg	21 28 10.1	-0.1
	comp=E,1µm,0.5s						
DRO	Drossia	1.33	90	P	Pn	21 27 51.7	+0.3
DRO				S	Sg	21 28 09.5	-0.7
DRO				AML	AML	21 28 23.0	
	comp=E,2564µm,0.4s						
DRO				AML	AML	21 28 24.1	
	comp=N,1757µm,0.5s						
PVO	Paravola	1.34	61	P	Pb	21 27 52.3	+0.1
PVO				S	Sg	21 28 09.9	-0.7
	comp=N,1µm,0.6s						
PVO	Paravola	1.34	61	P	Pn	21 27 52.1	+0.6
PVO				S	Sg	21 28 11.1	+0.5
PVO				AML	AML	21 28 20.0	
	comp=E,2283µm,0.6s						
PVO				AML	AML	21 28 20.7	
	comp=N,2600µm,0.7s						
AMT	Artemida-Makis	1.40	108	P	Pb	21 27 53.3	0.0
AMT				S	Sg	21 28 14.5	+1.9
	comp=N,945nm,0.5s						
AMT	Artemida-Makis	1.40	108	P	Pb	21 27 53.5	+0.2
AMT				AML	AML	21 28 20.8	
	comp=E,1826µm,0.5s						
AMT				AML	AML	21 28 21.9	
	comp=N,1732µm,0.8s						
ANX	Ano Chora	1.61	67	P	Pb	21 27 56.8	-0.1
ANX				S	Sg	21 28 20.6	+1.3
	comp=N,620nm,0.6s						
SERG	Sergoula	1.66	74	P	Pn	21 27 56.8	+0.9
SERG				S	Sg	21 28 21.2	+0.5
	comp=N,410nm,0.5s						
TRIZ	Trizonia	1.66	76	P	Pn	21 27 56.9	+1.0
EVR	Evrytania	1.68	55	P	Pg	21 27 59.1	-0.6
EVR				AML	AML	21 28 35.2	
	comp=N,502µm,0.6s						
EVR				AML	AML	21 28 37.5	
	comp=E,519µm,0.9s						
KEK	Kerkira	1.75	354	P	Pb	21 27 59.6	+0.5
KEK				S	Sb	21 28 22.6	+1.8
	comp=E,188nm,0.6s						
DBRK	Dubrovnik	4.91	344	Sn	Sn	21 29 36.1	-0.9
STON	Ston	5.20	341	*i* Pn	Pn	21 28 46.4	+1.7
STON				Sn	Sn	21 29 41.5	-2.9
MAKA	Makarska	5.78	338	Sn	Sn	21 29 56.3	-2.3
HVAR	Hvar	5.87	333	Sn	Sn	21 29 58.9	-1.8
RICI	Ricice	5.94	339	*e*Pn	Pn	21 28 58.0	+3.3
RICI				Sn	Sn	21 30 02.1	-0.4
ZIRJ	Zirje	6.58	331	Sn	Sn	21 30 14.8	-3.3
KIJV	Kijevo	6.62	337	*e*Pn	Pn	21 29 04.9	+0.8
KIJV				Sn	Sn	21 30 18.0	-1.3
MORI	Morici	6.73	332	*e*Pn	Pn	21 29 07.5	+1.9
MORI				Sn	Sn	21 30 20.6	-1.4
DUGI	Dugi Otok	7.09	330	Sn	Sn	21 30 27.5	-3.3

IDC 11 21:59:21.1±5.9, **19°.34S**×**176°.54W**, **h0**^{km}, **mb3.9**/3, **mb1 4.1**/3, **mb1mx3.6**/40, **mbtmp3.9**/3, **MS4.6**/2, **Ms1 4.6**/2, **ms1mx3.6**/41, **Error ellipse: s-maj=269.0km s-min=57.1km az=149.0**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.08	41	Sn	Sn	22 02 23.4	-3.9
	3.6nm,0.3s,baz=60,slow=20,SNR=3.4						
RPZ	Rata Peaks	26.43	200	LR	LR	22 13 45.5	
	comp=Z,2µm,19.0s,baz=222,slow=33						
CTA	Charters Tower	34.98	262	P	P	22 06 15.6	+0.2
	2.0nm,0.4s,baz=100,slow=11,SNR=4.3						
ASAR	Alice Springs	46.12	255	P	P	22 07 47.6	0.0
	0.9nm,0.6s,baz=94,slow=8.5,SNR=18						
WRA	Warramunga Arr	46.13	261	P	P	22 07 47.0	-0.5
	0.3nm,0.3s,baz=95,slow=8.1,SNR=14						
LPIG	La Paz	77.64	59	LR	LR	22 40 50.7	
	comp=Z,283nm,18.1s,baz=50,slow=32						
BRTR	Keskin Array B	147.04	315	PKPbc	PKPbc	22 19 05.5	-0.8
	0.4nm,0.8s,baz=48,slow=4.5,SNR=2.9						

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*NEIC **11** 22:03:09.8±2.5, 3°.09S±0°.07×148°.55E±0°.07, $h7^{km}\pm1^{km}$, mb5.8/167, Ms_20 6.1/783, Mwb6.1/36, Mwc6.1/112, Mww6.1, Mwc6.2(GCMT), Error ellipse: s-maj=13.0km s-min=10.8km az=124.0*
*BJI **11** 22:03:10.2±0.0, 3°.11S×148°.48E, $h10^{km}$, mB6.1/83, mb5.5/88, Ms6.2/99, Ms7 6.1/89*
*IDC **11** 22:03:10.3±0.3, 3°.22S×148°.52E, $h0^{km}$, mb5.3/42, mb1 5.3/48, mb1mx5.3/51, mbtmp5.3/48, ML4.5/4, MS5.8/31, Ms1 5.8/31, ms1mx5.7/35, Error ellipse: s-maj=11.8km s-min=8.3km az=66.0*
*MOS **11** 22:03:12.3±1.1, 3°.24S×148°.57E, $h28^{km}$, mb5.8/41, MS6.1/37, Error ellipse: s-maj=8.8km s-min=4.7km az=112.1*
*NEIC **11** 22:03:12.4, 3°.08S×148°.44E, $h9^{km}$, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.29; $M_{\theta\theta}$0.85; $M_{\phi\phi}$-1.14; $M_{r\theta}$0.13; $M_{\theta\phi}$1.11; $M_{\phi r}$0.27; Fault plane solution: $M_0$1.54000×10^{18} NP1:ϕ_s111.22000°, δ77.61000°, λ4.51000°. NP2:ϕ_s20.25000°, δ85.59000°, λ167.57000°. Principal axes: T 1.3952, Plg12.0000°, Azm335.0000°; N 0.2622, Plg77.0000°, Azm181.0000°; P -1.6573, Plg6.0000°, Azm66.0000°;*
*NEIC **11** 22:03:15, 3°.12S×148°.56E, $h12^{km}$, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.07; $M_{\theta\theta}$1.42; $M_{\phi\phi}$-1.35; $M_{r\theta}$-0.01; $M_{\theta\phi}$1.41; $M_{\phi r}$0.35; Fault plane solution: $M_0$2.01000×10^{18} NP1:ϕ_s203.00000°, δ86.00000°, λ-171.00000°. NP2:ϕ_s112.00000°, δ81.00000°, λ-4.00000°. Principal axes: T 2.0188, Plg4.0000°, Azm337.0000°; N -0.0209, Plg80.0000°, Azm227.0000°; P -1.9979, Plg10.0000°, Azm68.0000°;*
*GCMT **11** 22:03:15.8±0.0, 3°.11S×148°.51E, $h12^{km}$, MW6.1/170, Moment Tensor Solution. s165,c376; s170,c663; Duration: 2ˢ.8 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.07±.01; $M_{\theta\theta}$1.39±.01; $M_{\phi\phi}$-1.32±.01; $M_{r\theta}$0.26±.02; $M_{\theta\phi}$1.36±.01; $M_{\phi r}$0.35±.02; Best double couple: $M_0$1.96800×10^{18} NP1:ϕ_s113.00000°, δ78.00000°, λ2.00000°. NP2:ϕ_s22.00000°, δ88.00000°, λ168.00000°. Principal axes: T 2.0220, Plg10.0000°, Azm337.0000°; N -0.1050, Plg78.0000°, Azm193.0000°; P -1.9130, Plg7.0000°, Azm68.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **11** 22:03:17, 2°.99S×148°.54E, $h12^{km}$, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.14; $M_{\theta\theta}$1.20; $M_{\phi\phi}$-1.05; $M_{r\theta}$0.30; $M_{\theta\phi}$1.31; $M_{\phi r}$-0.54; Fault plane solution: $M_0$1.84000×10^{18} NP1:ϕ_s289.00000°, δ77.00000°, λ-15.00000°. NP2:ϕ_s22.00000°, δ75.00000°, λ-166.00000°. Principal axes: T 1.8001, Plg1.0000°, Azm336.0000°; N 0.0731, Plg70.0000°, Azm70.0000°; P -1.8732, Plg20.0000°, Azm245.0000°;*
*DJA **11** 22:03:21.0±0.5, 3°S±2°×14°8E±°, $h60^{km}\pm4^{km}$, M5.9/91, mB6.3/91, mb5.6/90, Mw(mB)6.1/91, Mwp5.8/55*
*NEIC **11** 22:03:27.6, 3°.06S×148°.44E, $h10^{km}$, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.03; $M_{\theta\theta}$1.34; $M_{\phi\phi}$-1.31; $M_{r\theta}$0.36; $M_{\theta\phi}$1.24; $M_{\phi r}$0.87; Fault plane solution: $M_0$2.04000×10^{18} NP1:ϕ_s203.64000°, δ89.25000°, λ-152.55000°. NP2:ϕ_s113.25000°, δ62.55000°, λ-0.85000°. Principal axes: T 2.0456, Plg18.0000°, Azm335.0000°; N -0.0042, Plg63.0000°, Azm205.0000°; P -2.0414, Plg20.0000°, Azm72.0000°;*
ISC 11 22:03:12.5±0.4, **3°.19S**±0°.03×**148°.60E**±0°.03, **h16**$^{km}\pm2^{km}$, **h17**^{km}**:pP-P**, **n1232**, σ**2ˢ.13**/890, **mb5.7**/242, **MS6.1**/474, **44C-14D**, **Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	1.68	313		Pn	22 03 36.8	-4.4
KRVT	Keravat (AS076	3.59	108	Pn	Pn	22 04 06.9	-0.6
	198nm,0.3s,baz=126,slow=2.9,SNR=73						
KRVT				LR	LR	22 05 27.9	
	comp=Z,195µm,18.5s,baz=290,slow=38						
RABL	Rabaul	3.69	106		Pn	22 04 07.7	-1.2
PMG	Port Moresby	6.34	193	Pn	Pn	22 04 46.0	+0.7
	3.7nm,0.3s,baz=19,slow=9.6,SNR=16						
PMG				Sn	Sn	22 06 00.4	+3.0
	17nm,0.3s,baz=324,slow=23,SNR=5.5						
PMG				LR	LR	22 07 11.6	
	comp=Z,86µm,18.5s,baz=22,slow=38						
PMG	Port Moresby	6.34	193		Pn	22 04 45.2	-0.1
JAY	Jayapura	7.91	275	P	Pn	22 05 07.8	+0.8
	16µm1µm,1.8s						
JAY				S	Sn	22 06 46.2	+10
	16µm1µm,1.8s						
GENI	Genyem	8.44	274	P	Pn	22 05 16.2	+2.0
	86µm77µm5µm,1.4s						
SMPI	Sarmi	9.95	277	P	Pn	22 05 37.4	+2.5
	77µm3µm,1.9s						
COEN	Coen	11.96	206	P	Pn	22 06 05.0	+2.6
	baz=12,SNR=12						
COEN	Coen	11.96	206		Pn	22 06 02.3	-0.2
COEN				Sn	Sn	22 08 16.6	+0.8
BAKI	Biak	12.64	279	P	Pn	22 06 12.9	+1.2
	33µm920nm,1.6s						
HNR	Honiara	12.87	119	Pn	Pn	22 06 15.5	+0.7
	7.4nm,0.3s,baz=203,slow=7.7,SNR=2.2						
HNR				LR	LR	22 11 16.3	
	comp=Z,50µm,18.4s,baz=290,slow=38						
HNR	Honiara	12.87	119	P	P	22 06 22.0	-3.6
HNR	Honiara	12.87	119	Pn	Pn	22 06 14.8	0.0
PATS	Pohnpei	13.90	44	P	Pn	22 06 26.1	-2.8
	baz=14,SNR=3.5						
PATS	Pohnpei	13.90	44	Pn	Pn	22 06 26.1	-2.8
RKPI	Ransiki, Papua	14.51	276	P	Pn	22 06 37.1	-0.2
	24µm17µm596nm,1.6s						
RKPI				S	S	22 09 43.2	+5.8
	24µm17µm596nm,1.6s						
MTSU	Mount Surprise	15.43	195	P	Pn	22 06 50.2	+0.6
	baz=15,SNR=24						
FAKI	Fak Fak	16.33	271	P	Pn	22 07 00.8	-0.5
	30µm38µm1µm,1.8s						
FAKI	Fak Fak	16.33	271		Pn	22 06 60.0	-1.3
FAKI				IAmb	IAmb	22 07 08.9	
	comp=Z,2µm,1.5s						
CTA	Charters Tower	16.95	188	P	P	22 07 10.6	-0.4
	baz=17						
CTA	Charters Tower	16.95	188	Pn	Pn	22 07 09.7	+0.6
	comp=Z,0.6nm,0.3s,baz=11,slow=14,SNR=20						
CTA				LR	LR	22 13 18.0	
	comp=Z,53µm,21.7s,baz=4.5,slow=36						
GUMO	Guam	17.08	348	P	Pn	22 07 10.4	-0.2
	comp=Z,3.3nm,0.3s,baz=209,slow=3.0,SNR=6.2						
GUMO				LR	LR	22 12 55.8	
	comp=Z,27µm,19.1s,baz=130,slow=34						
GUMO	Guam	17.08	348	P	Pn	22 07 08.3	-2.3
GUMO				pmax	pmax		
	comp=Z,2µm,1.6s						
GUMO	Guam	17.08	348	P	Pn	22 07 08.3	-2.3
GUMO				IAmb	IAmb	22 07 22.8	
	comp=Z,2µm,1.6s						
SIJI	Sorong	17.48	277	P	Pn	22 07 14.4	-1.3
	comp=Z,1.1nm,0.3s,baz=78,slow=9.7,SNR=44						
SWI	Sorong	17.48	277	P	P	22 07 16.8	-0.1
	comp=Z,23µmcomp=Z,9µmcomp=Z,524nm,1.5s						
SAUI	Saumlaki	17.86	254	P	P	22 07 21.5	+0.4
	comp=Z,74µmcomp=Z,40µmcomp=Z,1µm,2.2s						
SAUI	Saumlaki	17.86	254	P	Pn	22 07 18.4	-2.0
KDU	Kakadu	18.54	239	P	P	22 07 26.3	-2.2
	baz=18,SNR=69						
BNDI	Bandanaira	18.70	265	P	Pn	22 07 31.7	+1.0
	comp=Z,47µmcomp=Z,50µmcomp=Z,1µm,1.8s						
QIS	Mount Isa	19.36	206	P	Pn	22 07 38.5	-0.2
	baz=19,SNR=56						
MSAI	Masohi	19.64	269	P	P	22 07 40.8	+0.1
	comp=Z,10µmcomp=Z,5µmcomp=Z,115nm,2.2s						
MTN	Manton Dam	19.76	240	P	P	22 07 40.8	-1.2
	baz=20,SNR=31						
MTN	Manton Dam	19.76	240	P	P	22 07 40.4	-1.5
MTN				S	S	22 11 20.1	-4.2
AAI	Ambon	20.38	268	P	P	22 07 47.8	-0.9
	comp=Z,43µmcomp=Z,17µmcomp=Z,498nm,1.3s						
NLAI	Namlea	21.47	269	P	P	22 08 02.3	+1.8
	comp=Z,12µmcomp=Z,400nm,1.4s						
WB0	Warramunga Arr	21.54	219	P	P	22 08 00.2	-1.0
WB9	Warramunga Arr	21.56	219	P	P	22 08 00.4	-1.1
	baz=21						
TNTI	Ternate	21.59	280	P	P	22 08 03.0	+1.3
	comp=Z,15µmcomp=Z,26µmcomp=Z,796nm,1.8s						
TNTI	Ternate	21.59	280	P	P	22 08 00.8	-1.0
WR0	Warramunga Arr	21.59	218	P	P	22 08 00.7	-1.0
WR0				IAmb	IAmb	22 08 09.2	
	comp=Z,456nm,1.1s						
WR8	Warramunga Arr	21.61	218	IAMs_20	IAMs_20	22 17 29.3	
	comp=Z,57µm,19.0s						
WR7	Warramunga Arr	21.63	219	IAMs_20	IAMs_20	22 17 29.7	
	comp=Z,55µm,18.0s						
WR5	Warramunga Arr	21.65	219	IAMs_20	IAMs_20	22 17 30.4	
	comp=Z,55µm,18.0s						
WR3	Warramunga Arr	21.68	219	IAMs_20	IAMs_20	22 17 32.0	
	comp=Z,55µm,18.0s						
WB3	Warramunga Arr	21.68	219	IAMs_20	IAMs_20	22 17 32.0	
	comp=Z,54µm,18.0s						
WRAB	Tennant Creek	21.69	219	*de*P	P	22 08 00.0	-2.8
WRAB				pmax	pmax		
	comp=Z,481nm,1.1s						
WRAB				MLR	MLR		
	comp=Z,50µm,16.0s						
WRAB	Tennant Creek	21.69	219	P	P	22 08 01.6	-1.2
WRAB				IAmb	IAmb	22 08 13.5	
	comp=Z,386nm,0.9s						
WRAB	Tennant Creek	21.69	219	IAMs_20	IAMs_20	22 17 32.2	
	comp=Z,54µm,18.0s						
WC3	Warramunga Arr	21.69	219	IAMs_20	IAMs_20	22 17 31.5	
	comp=Z,56µm,18.0s						
WB2	Warramunga Arr	21.69	219	P	P	22 08 01.3	-1.6
WB2				IAmb	IAmb	22 08 13.6	
	comp=Z,397nm,0.9s						
WB2				IAMs_20	IAMs_20	22 17 31.5	
	comp=Z,56µm,18.0s						
WRA	Warramunga Arr	21.70	219	P	P	22 08 01.5	-1.4
	comp=Z,198nm,1.0s,baz=45,slow=10,SNR=54						
WRA				PcP	PcP	22 12 05.2	+1.3
	comp=Z,15nm,0.9s,baz=26,slow=2.1,SNR=4.6						
WRA				LR	LR	22 17 43.6	
	comp=Z,42µm,19.6s,baz=35,slow=40						
WRA	Warramunga Arr	21.70	219	*i* P	P	22 07 59.7	-3.2
WRA				pmax	pmax		
	comp=Z,168nm,1.0s						
WRA	Warramunga Arr	21.70	219	P	P	22 08 00.8	-2.1
WB1	Warramunga Ar.	21.71	219	IAMs_20	IAMs_20	22 17 32.9	
	comp=Z,56µm,18.0s						
WC4	Warramunga Arr	21.72	219	IAMs_20	IAMs_20	22 17 33.1	
	comp=Z,58µm,18.0s						
EIDS	Eidsvold	22.18	174	P	P	22 08 08.0	0.0
	baz=22,SNR=11						
EIDS	Eidsvold	22.18	174	P	P	22 08 07.5	-0.5
EIDS				IAmb	IAmb	22 08 18.6	
	comp=Z,852nm,1.5s						
SANI	Sanana	22.62	272	P	P	22 08 11.8	-1.0
	comp=Z,19µmcomp=Z,16µmcomp=Z,376nm,1.2s						
KNRA	Kununurra	23.14	236	P	P	22 08 16.2	-2.0
	baz=23,SNR=23						
KNRA	Kununurra	23.14	236	IAMs_20	IAMs_20	22 17 25.7	
	comp=Z,54µm,19.0s						
RMQ	Roma	23.16	180	P	P	22 08 18.2	-0.2
	baz=23,SNR=7.7						
QLP	Quilpie	23.63	190	P	P	22 08 23.4	+0.4
	baz=24,SNR=11						
MATI	Mati	24.47	294	*e*P	P	22 08 31.1	0.0
DDMP	Don Marcelino,	24.65	292	*e*P	P	22 08 34.5	+1.8
AS01	Alice Springs	24.80	214	P	P	22 08 34.0	+0.1
	baz=25						
ASAR	Alice Springs	24.82	214	P	P	22 08 33.7	-0.5
	comp=Z,24nm,0.8s,baz=43,slow=7.8,SNR=163						
ASAR				PcP	PcP	22 12 12.2	+1.7
	comp=Z,7.9nm,0.8s,baz=41,slow=3.3,SNR=5.3						
ASAR				LR	LR	22 18 27.6	
	comp=Z,40µm,21.3s,baz=37,slow=37						
ASAR				P3KPbc		22 41 47.8	
	comp=Z,0.9nm,0.9s,baz=227,slow=5.0,SNR=4.7						
ASAR	Alice Springs	24.82	214	P	P	22 08 33.5	-0.7
ASAR						22 12 08.2	
ASAR	Alice Springs	24.82	214	P	P	22 08 33.5	-0.7
ASAR					PcP	22 12 08.2	-2.3
KMSI	Cibinong	24.89	278	P	P	22 08 34.0	-0.8
	comp=Z,1µmcomp=Z,10µmcomp=Z,660nm,1.2s						
SOEI	Soe	25.03	254	P	P	22 08 36.5	+0.3
	comp=Z,36µmcomp=Z,47µmcomp=Z,969nm,1.6s						
DAV	Davao City (W)	25.14	294	P	P	22 08 37.7	+0.7
	comp=Z,142nm,0.4s,baz=344,slow=2.8,SNR=5.2						
DAV				LR	LR	22 18 26.5	
	comp=Z,13µm,18.5s,baz=120,slow=36						
DAV	Davao City (W)	25.14	294	⇑*e*P	P	22 08 35.9	-1.2
DAV	Davao City (W)	25.14	294	P	P	22 08 34.9	-2.1
DZM	Mont Dzumac	25.54	139	P	P	22 08 41.0	+0.3
	comp=Z,102nm,1.0s,baz=33,slow=9.2,SNR=12						
DZM	Mont Dzumac	25.54	139	*e*P	P	22 08 41.2	+0.5
	comp=Z,254nm,1.1s						
DZM				*e*S	S	22 13 09.9	+1.9
	comp=Z,22µm,23.2s						
DZM				*e*LR	LR	22 15 04.9	
	comp=Z,95µm,26.1s						
DZM	Mont Dzumac	25.54	139	IAMs_20	IAMs_20	22 16 57.4	
	comp=Z,65µm,20.0s						
KCP	Kidapawan	25.56	293	⇑*e*P	P	22 08 42.9	+1.9
SKMP	Bagumbayan, Su	25.88	292	*e*P	P	22 08 45.1	+1.3
BUTP	Butuan	25.90	298	*e*P	P	22 08 47.6	+3.7
LUWI	Luwuk	25.90	274	P	P	22 08 42.4	-1.6
	comp=Z,15µmcomp=Z,21µmcomp=Z,962nm,1.3s						
LUWI	Luwuk	25.90	274	P	P	22 08 41.8	-2.1
BUKP	Musuan	25.93	295	*e*P	P	22 08 46.1	+1.8
BBSI	Bau Bau	26.05	264	P	P	22 08 46.1	+0.7
	comp=Z,4µmcomp=Z,176nm,2.0s						
CTBH	Cotabato--PC H	26.41	293	⇑*i*P	P	22 08 51.1	+2.5

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MMRI  Maumere           26.76 257  P        P        22 08 48.8  -3.0
      comp=Z,21µmcomp=Z,9µmcomp=Z,436nm,1.5s
MMRI  Maumere           26.76 257  P        P        22 08 48.8  -3.0
MRSI  Marisa            26.90 277  P        P        22 08 52.1  -0.9
      comp=Z,11µmcomp=Z,6µmcomp=Z,252nm,1.4s
FITZ  Fitzroy Crossi    26.94 235  P        P        22 08 51.1  -2.2
      baz=27,SNR=238
FITZ  Fitzroy Crossi    26.94 235  P        P        22 08 51.9  -1.4
      comp=Z,229nm,0.9s,baz=57,slow=9.2,SNR=63
FITZ                               LR       LR       22 19 51.9
      comp=Z,38µm,20.0s,baz=59,slow=37
FITZ  Fitzroy Crossi    26.94 235  P        P        22 08 52.3  -1.0
FITZ                               IAMs_20  IAMs_20  22 20 50.5
      comp=Z,43µm,18.0s
APSI  Ampana            27.03 274  P        P        22 08 52.7  -1.5
      comp=Z,7µmcomp=Z,5µmcomp=Z,253nm,1.4s
MSLP  Maasin            27.10 300 eP        P        22 08 55.0  +0.3
ARMA  Armidale          27.23 174  P        P        22 08 55.9   0.0
      baz=27,SNR=14
ARMA  Armidale          27.23 174  IAmb     IAmb     22 09 10.0
      comp=Z,274nm,1.4s
EDFI  Ende, Flores      27.32 257  P        P        22 08 54.6  -2.3
      comp=Z,12µmcomp=Z,3µmcomp=Z,133nm,1.3s
PAGZ  Pagadian          27.44 294 eP        P        22 09 01.9  +4.0
TBP   Tagbilaran        27.77 298 eP        P        22 09 13.3  +12
H11S3 WAKE ISLAND Hy    27.96  39  T        T        22 38 27.1
      baz=221,slow=74
H11S2 WAKE ISLAND Hy    27.97  39  T        T        22 38 26.8
      baz=221,slow=74,SNR=7358
H11S1 WAKE ISLAND Hy    27.98  39  T        T        22 38 31.8
      baz=221,slow=74,SNR=8476
CMSA  Cobar Meteorol    28.33 185  P        P        22 09 04.4  -1.2
      baz=28,SNR=18
BNSI  Bone              28.46 267  P        P        22 09 06.8  -0.2
      comp=Z,9µmcomp=Z,496nm,1.4s
BKSI  Bulukumba         28.48 265  P        P        22 09 06.1  -1.1
      comp=Z,12µmcomp=Z,6µmcomp=Z,182nm,2.7s
BASI  Baing, Sumba      28.68 255  P        P        22 09 10.3  +1.4
      comp=Z,10µmcomp=Z,12µmcomp=Z,789nm,1.4s
TTSI  Tana Toraja       28.74 269  P        P        22 09 15.0  +5.5
SPSI  Sidrap Palu       28.79 268  P        P        22 09 09.6  -0.3
      comp=Z,11µmcomp=Z,6µmcomp=Z,244nm,1.7s
KAPI  Kappang           28.83 265  P        P        22 09 09.6  -0.7
      comp=Z,28nm,0.9s,baz=114,slow=3.1,SNR=4.9
KAPI                               LR       LR       22 21 17.6
      comp=Z,10µm,21.6s,baz=65,slow=38
MPSI  Mapaga            28.90 276  P        P        22 09 09.4  -1.5
      comp=Z,9µmcomp=Z,7µmcomp=Z,113nm,1.1s
H11N1 WAKE ISLAND Hy    29.00  38  T        T        22 39 50.7
      baz=220,slow=76,SNR=2101
H11N3 WAKE ISLAND Hy    29.02  38  T        T        22 39 46.3
      baz=220,slow=76,SNR=2730
H11N2 WAKE ISLAND Hy    29.02  38  T        T        22 39 51.7
      baz=220,slow=76,SNR=3550
WRKA  Warakurna         29.22 220  P        P        22 09 12.3  -1.5
      baz=29,SNR=27
STKA  Stephens Creek    29.29 192  P        P        22 09 12.8  -1.3
      baz=29,SNR=11
STKA  Stephens Creek    29.29 192  P        P        22 09 12.7  -1.5
      comp=Z,12nm,0.7s,baz=353,slow=8.5,SNR=17
STKA                               LR       LR       22 21 49.9
      comp=Z,49µm,19.9s,baz=7.7,slow=38
GUIM  Jordan            29.31 298 eP        P        22 09 15.2  +0.7
WBSI  Waikabubak, Su    29.71 256  P        P        22 09 23.1  +4.9
MGCD  Mangrove Creek    29.96 176  P        P        22 09 20.6  +0.6
      baz=30,SNR=5.4
JCJ   Chichijima        30.74 349  LR       LR       22 21 15.7
      comp=Z,14µm,19.2s,baz=160,slow=35
YNG   Young             30.95 180  P        P        22 09 28.7  -0.1
      baz=31,SNR=12
PLAI  Plampang          31.15 258  P        P        22 09 28.2  -2.6
      comp=Z,7µmcomp=Z,2µmcomp=Z,142nm,1.7s
HTT   Hallett           31.42 196  P        P        22 09 32.3  -0.7
      baz=31,SNR=10
SMKI  Samarinda         31.49 274  P        P        22 09 35.5  +1.6
      comp=Z,10µmcomp=Z,6µmcomp=Z,202nm,0.8s
BBOO  Buckleboo         31.73 200  P        P        22 09 36.1  +0.4
      baz=32,SNR=12
BBOO  Buckleboo         31.73 200  IAMs_20  IAMs_20  22 24 23.5
      comp=Z,36µm,18.0s
BKB   Balikpapan        31.74 273  P        P        22 09 40.7  +4.7
BKB   Balikpapan        31.74 273  P        P        22 09 33.2  -2.8
CNB   Canberra Magne    31.97 179  P        P        22 09 37.8  -0.1
      baz=32,SNR=6.1
MSVF  Nonsavu           32.29 119⇓eP        P        22 09 39.3  -1.6
MSVF                               pmax     pmax
      comp=Z,149nm,2.0s
MSVF                               MLR      MLR
      comp=Z,17µm,18.0s
ENPP  El Nido           32.36 297 eP        P        22 09 40.6  -0.8
TGY   Tagaytay City     32.37 303  P        P        22 09 41.9  +0.3
      comp=Z,110nm,0.3s,baz=293,slow=3.9,SNR=5.3
TGY                                LR       LR       22 23 22.6
      comp=Z,10µm,18.7s,baz=127,slow=38
KBKI  Kotabaru          32.38 269  P        P        22 09 44.8  +3.1
      comp=Z,416nmcomp=Z,22nm,1.6s
LUBP  Lubang            32.77 302 eP        P        22 09 43.1  -1.9
BATP  Bataraza          32.93 291 eP        P        22 09 49.2  +2.7
MBWA  Marble Bar        33.28 235  IAMs_20  IAMs_20  22 23 45.5
      comp=Z,46µm,20.0s
PSA00 Pilbara Seismi    33.39 234  IAmb     IAmb     22 10 08.9
      comp=Z,133nm,1.4s
SRBI  Singaraja         33.57 260  P        P        22 09 50.8  -1.3
      comp=Z,9µmcomp=Z,4µmcomp=Z,116nm,1.7s
FORT  Forrest           33.61 213  P        P        22 09 51.3  -0.9
      baz=34,SNR=18
FORT  Forrest           33.61 213  IAmb     IAmb     22 10 01.7
      comp=Z,165nm,0.8s
KKM   Kota Kinabalu     33.62 286  P        P        22 09 48.1  -4.5
KKM                                IAmb     IAmb     22 10 11.4
      comp=Z,306nm,1.6s
SMPP  San Manuel, Pa    33.63 306 eP        P        22 09 49.1  -3.5
ARPS  Mount Arapiles    33.99 190  P        P        22 09 54.2  -1.2
      baz=34,SNR=8.4
TOO   Toolangi          34.34 184  P        P        22 09 57.8  -0.7
      baz=34,SNR=12
TOO   Toolangi          34.34 184  IAMs_20  IAMs_20  22 24 06.9
      comp=Z,28µm,18.0s
JAGI  Jajag, Banyuwa    34.65 260  P        P        22 10 00.8  -0.7
      comp=Z,5µmcomp=Z,4µmcomp=Z,111nm,2.9s
JAGI  Jajag, Banyuwa    34.65 260  IAmb     IAmb     22 10 18.4
      comp=Z,360nm,1.7s
JOW   Kunigami          35.73 328  P        P        22 10 10.7  +0.1
      comp=Z,4.1nm,0.9s,baz=153,slow=12,SNR=6.8
JOW   Kunigami          35.73 328  P        P        22 10 06.9  -3.7
GRJI  Gresik            36.16 263  P        P        22 10 24.2  +10
SBUM  Sibu              36.79 278  P        P        22 10 19.6  -0.3
SBUM  Sibu              36.79 278  P        P        22 10 20.0  +0.1
MEEK  Meekatharra       36.99 228  P        P        22 10 19.8  -1.7
      baz=37,SNR=15
JHJ2  Mitsune           37.05 348  IAMs_20  IAMs_20  22 25 19.3
      comp=Z,26µm,18.0s
YOJ   Yonaguni jima     37.07 319  P        P        22 10 19.8  -2.3
YOJ                                pmax     pmax
      comp=Z,649nm,1.2s
YOJ                                MLR      MLR
      comp=Z,30µm,20.0s
YOJ   Yonaguni jima     37.07 319  P        P        22 10 19.8  -2.3
YOJ                                IAMs_20  IAMs_20  22 22 21.5
      comp=Z,30µm,20.0s
YULB  Yu-li             37.50 316  P        P        22 10 24.0  -1.8
YULB                               IAmb     IAmb     22 10 32.2
      comp=Z,371nm,1.3s
YULB                               IAMs_20  IAMs_20  22 22 30.9
      comp=Z,28µm,20.0s
PCJI  Pacitan           37.55 261  P        P        22 10 24.8  -1.5
      comp=Z,6µmcomp=Z,235nm,1.2s
KMBL  Kambalda          37.67 219  P        P        22 10 25.9  -1.3
      baz=38,SNR=22
WOJI  Wonogiri, Jawa    37.77 261  P        P        22 10 28.3  +0.1
      comp=Z,3µmcomp=Z,99nm,2.1s
NACB  Ninganchiao       37.82 317  IAmb     IAmb     22 10 34.4
      comp=Z,344nm,1.2s
NACB                               IAMs_20  IAMs_20  22 22 21.2
      comp=Z,30µm,20.0s
TPUB  Ta-pu             37.91 315  P        P        22 10 26.3  -3.0
SSLB  Suanglung         38.00 316  P        P        22 10 27.1  -2.9
SSLB                               IAmb     IAmb     22 10 49.9
      comp=Z,186nm,1.3s
SSLB                               IAMs_20  IAMs_20  22 22 37.2
      comp=Z,33µm,20.0s
UGM   Wanagama          38.17 261  P        P        22 10 34.1  +2.5
      comp=Z,7µmcomp=Z,293nm,1.8s
UGM   Wanagama          38.17 261  P        P        22 10 28.7  -2.9
SMRI  Semarang          38.19 263  P        P        22 10 34.9  +3.1
      comp=Z,8µmcomp=Z,10µmcomp=Z,97nm,1.2s
SMRI  Semarang          38.19 263  IAmb     IAmb     22 11 42.0
      comp=Z,323nm,1.4s
YHNB  Yeheng            38.30 318  IAMs_20  IAMs_20  22 22 49.9
      comp=Z,32µm,21.0s
TATO  Taipei            38.43 318  P        P        22 10 32.1  -1.5
GIRL  Giralia           38.50 237  P        P        22 10 31.5  -2.8
KSM   Kuching           38.56 276  P        P        22 10 33.5  -1.3
KSM                                IAmb     IAmb     22 10 39.3
      comp=Z,220nm,1.2s
KSM   Kuching           38.56 276  P        P        22 10 34.0  -0.8
MOO   Moorlands         39.10 182  P        P        22 10 39.5  +0.5
      baz=39,SNR=4.3
OUZ   Omahuta           39.41 147  P        P        22 10 40.9  -0.7
OUZ                                IAmb     IAmb     22 10 48.1
      comp=Z,294nm,2.0s
OUZ                                IAMs_20  IAMs_20  22 23 32.8
      comp=Z,26µm,22.0s
TAU   Tasmania Unive    39.57 181  P        P        22 10 42.8   0.0
TAU                                pmax     pmax
      comp=Z,216nm,1.6s
TAU                                MLR      MLR
      comp=Z,38µm,18.0s
TAU   Tasmania Unive    39.57 181  P        P        22 10 42.8   0.0
KPJI  Karang Pucung     39.70 262  P        P        22 10 44.1  -0.3
      comp=Z,6µmcomp=Z,165nm,2.3s
JNU   Nakatsue          39.82 336  P        P        22 10 45.0  -0.1
      comp=Z,260nm,1.1s,baz=148,slow=4.3,SNR=47
JNU                                LR       LR       22 26 00.9
      comp=Z,6µm,19.8s,baz=155,slow=34
JNU   Nakatsue          39.82 336  P        P        22 10 43.1  -2.1
JNU                                IAmb     IAmb     22 10 59.1
      comp=Z,329nm,1.1s
INU   Inuyama           39.85 345  P        P        22 10 42.9  -2.4
INU                                IAmb     IAmb     22 11 07.3
      comp=Z,272nm,1.5s
KNMB  Chin-men Tao      40.23 315  P        P        22 10 44.2  -4.4
KNMB                               IAmb     IAmb     22 11 08.2
      comp=Z,234nm,1.3s
MORW  Morawa            40.23 227  P        P        22 10 48.6   0.0
      baz=40,SNR=6.2
MORW  Morawa            40.23 227  P        P        22 10 46.7  -1.9
MORW                               IAmb     IAmb     22 11 04.3
      comp=Z,431nm,1.9s
MORW                               IAMs_20  IAMs_20  22 28 19.0
      comp=Z,37µm,21.0s
QZH   Quanzhou          40.38 316⇓iP        P        22 10 49.9   0.0
QZH                                PP       PnPn     22 12 28.5  +1.7
QZH                                S        S        22 16 56.8  -0.8
QZH                                pmax     pmax
      comp=Z,140nm,1.2s
QZH                                pmax     pmax
      comp=Z,2µm,6.7s
QZH                                LR       LR
      comp=Z,11µm,17.5s
QZH                                LR       LR
      comp=Z,12µm,18.4s
QZH                                LR       LR
      comp=Z,11µm,20.4s
KLBR  Kellerberrin      40.50 222  P        P        22 10 48.9  -2.0
      baz=40,SNR=16
AFI   Afiamalu          40.53 108  P        P        22 10 52.0  +0.6
      comp=Z,16nm,0.7s,baz=184,slow=16,SNR=2.3
AFI   Afiamalu          40.53 108  P        P        22 10 50.8  -0.6
AFI                                pmax     pmax
      comp=Z,92nm,1.3s
AFI   Afiamalu          40.53 108  P        P        22 10 50.8  -0.6
BLDU  Ballidu           40.64 224  P        P        22 10 49.8  -2.2
      baz=40,SNR=10.0
MJAR  Matsushiro Arr    40.70 347  P        P        22 10 50.5  -1.9
      comp=Z,12nm,0.9s,baz=154,slow=8.4,SNR=16
MJAR                               PcP      PcP      22 12 55.8  +2.0
      comp=Z,12nm,0.9s,baz=153,slow=3.9,SNR=5.2
MJAR                               LR       LR       22 27 17.1
      comp=Z,22µm,18.1s,baz=175,slow=36
MJAR  Matsushiro Arr    40.70 347  P        P        22 10 48.9  -3.4
MJAR                               pmax     pmax
      comp=Z,13nm,1.0s
MJAR  Matsushiro Arr    40.70 347  P        P        22 10 48.9  -3.4
MAJO  Matsushiro        40.70 347⇓eP        P        22 10 51.0  -1.4
MAJO                               pmax     pmax
      comp=Z,109nm,1.4s
MAJO                               MLR      MLR
      comp=Z,23µm,17.0s
MAJO  Matsushiro        40.70 347  P        P        22 10 48.6  -3.8
MAJO  Matsushiro        40.70 347  IAMs_20  IAMs_20  22 27 06.9
      comp=Z,24µm,18.0s
MAT   Matsushiro        40.70 347  P        P        22 10 50.8  -1.6
MAT                                S        S        22 16 56.6  -5.5
MJB9  Matsu-Tunnel      40.70 347  P        P        22 10 48.6  -3.8
MJB9                               IAMs_20  IAMs_20  22 26 57.9
      comp=Z,25µm,18.0s
CISI  Cisompet, Garu    40.82 262  P        P        22 10 51.6  -2.2
      comp=Z,4µmcomp=Z,7µmcomp=Z,495nm,1.8s
RAO   Raoul Island      41.01 133  P        P        22 10 53.7  -1.3
      comp=Z,212nm,0.3s,baz=270,slow=20,SNR=2.1
CNJI  Cibinong          41.48 263  P        P        22 10 57.6  -1.5
      comp=Z,9µmcomp=Z,428nm,1.4s
NWAO  Narrogin (SRO)    41.68 221  P        P        22 10 59.9  -0.5
      baz=42,SNR=4.6
NWAO  Narrogin (SRO)    41.68 221  P        P        22 10 59.8  -0.7
      comp=Z,20nm,0.7s,baz=46,slow=8.0,SNR=8.6
NWAO                               PP       PP       22 12 35.1  -1.8
      comp=Z,77nm,1.0s,baz=43,slow=10,SNR=7.2
NWAO  Narrogin (SRO)    41.68 221  P        P        22 10 59.2  -1.3
NWAO                               pmax     pmax
      comp=Z,144nm,1.5s
NWAO                               MLR      MLR
      comp=Z,36µm,18.0s
NWAO  Narrogin (SRO)    41.68 221  P        P        22 10 59.2  -1.3
NWAO  Narrogin (SRO)    41.68 221  P        P        22 10 58.5  -1.9
NWAO                               IAmb     IAmb     22 11 20.9
      comp=Z,116nm,1.5s
DBJI  Dramaga           41.82 264  P        P        22 11 02.5  +0.5
      comp=Z,13µmcomp=Z,118nm,1.3s
SKJI  Sukabumi          42.03 263  P        P        22 11 13.5  +10
HKPS  Hong Kong Po S    42.12 309  IAmb     IAmb     22 11 39.8
      comp=Z,232nm,1.3s
HIZ   Hauiti            42.54 149  IAmb     IAmb     22 11 38.1
      comp=Z,212nm,1.6s
DLV   T  Lat            42.62 291  IAmb     IAmb     22 11 31.5
      comp=Z,189nm,1.4s
RKGY  Rocky Gully       42.90 219  P        P        22 11 09.8  -0.6
      baz=43,SNR=9.3
SSE   Sheshan           42.95 325  P        P        22 11 11.9  +1.1
SSE                                S        S        22 17 37.6  +2.1
SSE                                pmax     pmax
      comp=Z,83nm,1.5s
SSE                                pmax     pmax
      comp=Z,1µm,8.2s
SSE                                LR       LR
      comp=Z,7µm,19.8s
SSE                                LR       LR
      comp=Z,8µm,20.8s
SSE   Sheshan           42.95 325  P        P        22 11 09.4  -1.4
SSE   Sheshan           42.95 325  IAMs_20  IAMs_20  22 26 07.8
      comp=Z,29µm,20.0s
GZH   Guangzhou         43.18 309  P        P        22 11 13.2  +0.4
GZH                                S        S        22 17 39.8  +0.8
GZH                                pmax     pmax
      comp=Z,2µm,7.7s
GZH                                LR       LR
      comp=Z,10µm,17.1s
GZH                                LR       LR
      comp=Z,11µm,20.4s
QRZ   Quartz Range      43.23 153  IAmb     IAmb     22 11 43.4
      comp=Z,200nm,1.6s
NIUE  Niue              43.49 114  P        P        22 11 15.2  -0.2
NIUE                               IAmb     IAmb     22 11 22.5
      comp=Z,320nm,1.2s
URZ   Urewera           43.55 147  P        P        22 11 16.4  +0.9
      comp=Z,30nm,1.0s,baz=7.0,slow=6.4,SNR=10
URZ   Urewera           43.55 147  IAMs_20  IAMs_20  22 26 12.5
      comp=Z,28µm,21.0s
MXZ   Matakaoa Point    43.72 145  IAMs_20  IAMs_20  22 27 09.0
      comp=Z,22µm,22.0s
PMBI  Palembang         43.76 269  P        P        22 11 22.9  +5.2
PMBI  Palembang         43.76 269  P        P        22 11 15.0  -2.7
NNZ   Nelson            43.93 153  IAmb     IAmb     22 12 10.1
      comp=Z,228nm,1.6s
NNZ                                IAMs_20  IAMs_20  22 27 27.5
      comp=Z,23µm,20.0s
QIZ   Qiongzhong        44.05 302  P        P        22 11 18.9  -1.1
QIZ                                PP       PP       22 13 00.6  -2.2
QIZ                                S        S        22 17 50.2  -1.8
QIZ                                pmax     pmax
      comp=Z,21nm,0.7s
QIZ                                pmax     pmax
      comp=Z,1µm,3.7s
QIZ                                LR       LR
      comp=Z,7µm,22.4s
QIZ                                LR       LR
      comp=Z,11µm,23.0s
QIZ                                LR       LR
      comp=Z,19µm,22.7s
QIZ   Qiongzhong        44.05 302  IAmb     IAmb     22 11 26.7
      comp=Z,282nm,1.4s
QIZ   Qiongzhong        44.05 302  IAMs_20  IAMs_20  22 26 23.4
      comp=Z,19µm,20.0s
TJN   Taejon            44.08 335deP        P        22 11 20.3  +0.5
THZ   Tophouse          44.16 154  IAmb     IAmb     22 11 48.5
      comp=Z,203nm,1.7s
TPRI  Tanjung Pinang    44.24 275  P        P        22 11 21.9  +0.3
      comp=Z,129nm,2.2s
MDSI  Maura Dua         44.34 267  P        P        22 11 20.8  -1.5
      comp=Z,3µmcomp=Z,4µmcomp=Z,183nm,2.4s
FOZ   Fox Glacier       44.36 158  P        P        22 11 23.1  +1.1
LWLI  Liwa              44.46 266  P        P        22 11 22.9  -0.5
      comp=Z,84nm,1.9s
SNZO  South Karori      44.62 152  P        P        22 11 23.5  -0.6
SNZO                               IAmb     IAmb     22 11 28.1
      comp=Z,240nm,1.4s
SNZO  South Karori      44.62 152  IAMs_20  IAMs_20  22 27 39.7
      comp=Z,28µm,20.0s
LTZ   Lake Taylor       44.71 155  IAmb     IAmb     22 11 44.6
      comp=Z,210nm,1.6s
KSRS  Korea Array       44.77 336  P        P        22 11 25.8  +0.5
      comp=Z,14nm,0.9s,baz=151,slow=9.3,SNR=31
KSRS                               LR       LR       22 29 34.3
      comp=Z,9µm,19.6s,baz=158,slow=35
KSAR  Wonju Array Be    44.78 336  P        P        22 11 24.0  -1.4
KSAR  Wonju Array Be    44.78 336  P        P        22 11 24.0  -1.4
KS19  Wonju Array Si    44.83 336  IAmb     IAmb     22 12 11.8
      comp=Z,282nm,2.0s
BFZ   Birch Farm        44.88 150  IAmb     IAmb     22 11 31.2
      comp=Z,310nm,1.7s
KHZ   Kahutara          44.96 154  IAmb     IAmb     22 11 32.5
      comp=Z,163nm,1.7s
KHZ                                IAMs_20  IAMs_20  22 29 31.8
      comp=Z,28µm,20.0s
RPZ   Rata Peaks        44.99 157  P        P        22 11 27.1   0.0
      comp=Z,34nm,1.0s,baz=53,slow=5.1,SNR=5.0
RPZ   Rata Peaks        44.99 157  IAmb     IAmb     22 11 32.5
      comp=Z,192nm,1.4s
RPZ                                IAMs_20  IAMs_20  22 29 22.7
      comp=Z,23µm,19.0s
MYKOM Kota Tinggi       45.01 276  IAmb     IAmb     22 11 48.5
      comp=Z,291nm,1.6s
MYKOM Kota Tinggi       45.01 276  P        P        22 11 29.0  +1.4
NJ2   Nanjing           45.01 323 ⇑P        P        22 11 28.3  +0.9
NJ2                                pP       pP       22 11 30.4  -1.5
NJ2                                sP       sP       22 11 32.4  -1.2
NJ2                                PP       PP       22 13 14.4  +1.6
NJ2                                S        S        22 18 08.5  +3.0
NJ2                                sS       sS       22 18 12.8  -0.3
NJ2                                pmax     pmax
      comp=Z,30nm,0.8s
NJ2                                pmax     pmax
      comp=Z,4µm,3.8s
NJ2                                LR       LR
      comp=Z,22µm,19.4s
NJ2                                LR       LR
      comp=Z,21µm,16.6s
NJ2                                LR       LR
      comp=Z,24µm,21.3s
OXZ   Oxford            45.06 156  IAMs_20  IAMs_20  22 29 34.5
      comp=Z,27µm,19.0s
DCZ   Deep Cove         45.14 162  P        P        22 11 27.9  -0.3
DCZ                                IAmb     IAmb     22 11 46.6
      comp=Z,92nm,1.1s
WKZ   Wanaka            45.19 160  P        P        22 11 28.2  -0.5
WKZ                                IAmb     IAmb     22 11 34.1
      comp=Z,273nm,1.7s
LBZ   Lake Benmore      45.23 158  IAmb     IAmb     22 11 33.8
      comp=Z,195nm,1.7s
LBZ                                IAMs_20  IAMs_20  22 30 12.9
      comp=Z,17µm,19.0s
ERM   Erimo             45.26 354deP        P        22 11 31.6  +2.4
ERM                                pmax     pmax
      comp=Z,143nm,2.1s
ERM   Erimo             45.26 354  IAMs_20  IAMs_20  22 27 18.5
      comp=Z,27µm,22.0s
INCN  Inchon            45.32 335  P        P        22 11 28.5  -1.3
INCN                               pmax     pmax
      comp=Z,675nm,1.7s
INCN                               MLR      MLR
      comp=Z,12µm,20.0s
INCN  Inchon            45.32 335  P        P        22 11 28.5  -1.3
MNAI  Manna             45.55 267  P        P        22 11 29.5  -2.5
MQZ   McQueen's Vall    45.63 156  IAmb     IAmb     22 11 36.2
      comp=Z,155nm,1.6s
MQZ                                IAMs_20  IAMs_20  22 27 18.5
      comp=Z,20µm,22.0s
WHZ   Wether Hill Ro    45.77 161  P        P        22 11 33.2   0.0
WHZ                                IAmb     IAmb     22 11 38.0
      comp=Z,158nm,1.5s
ODZ   Otahua Downs      45.97 158  IAmb     IAmb     22 11 39.9
      comp=Z,173nm,1.9s
RGRI  Rengat            46.33 273  P        P        22 11 39.0  +0.9
      comp=Z,16µmcomp=Z,164nm,1.4s
WHN   Wuhan             46.84 318  P        P        22 11 42.5  +0.7
WHN                                S        S        22 18 35.2  +3.4
WHN                                pmax     pmax
      comp=Z,140nm,1.1s
WHN                                pmax     pmax
      comp=Z,4µm,6.1s
WHN                                LR       LR
      comp=Z,20µm,13.9s
WHN                                LR       LR
      comp=Z,27µm,15.8s
WHN                                LR       LR
      comp=Z,62µm,20.8s
YUK   Yuzh-Kuril'sk     47.08 357c iP       P        22 11 44.0  +0.6
YUK                               e                  22 13 35.5
YUK                               i PPP     PPP      22 14 16.2
YUK                               i S       S        22 18 35.1  +0.3
YUK                                pmax     pmax
      comp=N,103nm,1.3s
YUK                                pmax     pmax
      comp=Z,164nm,1.3s
YUK                                pmax     pmax
      comp=E,62nm,0.7s
YUK                                pmax     pmax
      comp=Z,492nm,3.4s
KRJI  Kerinci           47.10 270  P        P        22 11 44.5  +0.2
      comp=Z,10µmcomp=Z,474nm,2.2s
SDSI  Sungai Dareh      47.19 272  P        P        22 11 43.5  -1.4
      comp=Z,5µmcomp=Z,173nm,1.9s
JKA   Kamikawa-asahi    47.40 354  P        P        22 11 46.7  +0.7
ASAJ  Asahikawa         47.40 354  P        P        22 11 46.7  +0.7
      comp=Z,85nm,1.1s,baz=249,slow=16,SNR=12
ASAJ                               LR       LR       22 28 18.3
      comp=Z,11µm,21.6s,baz=183,slow=32
BKNI  Bangkinang        47.67 273  P        P        22 11 51.7  +3.1
      comp=Z,4µmcomp=Z,6µmcomp=Z,344nm,1.4s
BKNI  Bangkinang        47.67 273  P        P        22 11 47.6  -1.0
IPM   Ipoh              48.14 279  IAmb     IAmb     22 13 25.9
      comp=Z,92nm,1.2s
IPM   Ipoh              48.14 279  P        P        22 11 52.0  -0.3
PDSI  Padang            48.16 272  P        P        22 11 50.8  -1.6
      comp=Z,2µmcomp=Z,2µmcomp=Z,42nm,2.7s
KUR   Kuril'sk          48.21 359c iP       P        22 11 53.1  +0.9
KUR                               e                  22 13 18.3
KUR                               e                  22 13 47.0
KUR                               i S       S        22 18 53.6  +2.7
KUR                                pmax     pmax
      comp=N,113nm,1.3s
KUR                                pmax     pmax
      comp=Z,489nm,1.3s
KUR                                pmax     pmax
      comp=E,248nm,1.4s
KUR                                pmax     pmax
      comp=Z,3µm,6.2s
KUR                                MLR      MLR
      comp=Z,5µm,15.0s
KUR                                MLR      MLR
      comp=N,2µm,10.0s
MSHR  Mys Shultsa       48.22 343⇑eP        P        22 11 53.2  +0.9
VLA   Vladivostok       48.51 344ceP        P        22 11 55.8  +1.3
KULM  Kulim             48.63 280  P        P        22 11 54.1  -1.9
KULM                               IAmb     IAmb     22 12 21.7
      comp=Z,237nm,1.9s
DL2   Dalian            48.72 332  P        P        22 11 55.4  -0.9
DL2                                sP       pwP      22 12 09.5  +6.2
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DL2                                 S        S         22 19 00.9 +2.6
DL2                                 pmax     pmax
       comp=Z,91nm,1.3s
DL2                                 pmax     pmax
       comp=Z,2µm,6.8s
DL2                                 LR       LR
       comp=Z,12µm,19.1s
DL2                                 LR       LR
       comp=Z,12µm,21.4s
DL2                                 LR       LR
       comp=Z,20µm,21.4s
TIA    Tai'an             48.99 326 P        P         22 11 58.0 -0.4
TIA                                 S        S         22 19 03.3 +1.0
TIA                                 pmax     pmax
       comp=Z,48nm,1.9s
TIA                                 pmax     pmax
       comp=Z,2µm,7.1s
TIA                                 LR       LR
       comp=Z,12µm,20.1s
TIA                                 LR       LR
       comp=Z,13µm,19.6s
TIA                                 LR       LR
       comp=Z,22µm,20.1s
TEY    Ternei             49.19 349⇑eP       P         22 11 59.8  0.0
TEY                                 pmax     pmax
       comp=Z,20nm,1.3s
USA0B  Ussuriysk Arra     49.48 344ceP       P         22 12 02.1 +0.1
USA0B  Ussuriysk Arra     49.48 344 IAmb     IAmb      22 12 26.0
       comp=Z,151nm,1.4s
USRK   Ussuriysk Ar.      49.48 344 P        P         22 12 02.3 +0.3
       comp=Z,38nm,0.9s,baz=164,slow=7.0,SNR=33
USRK                                LR       LR        22 30 44.5
       comp=Z,15µm,20.8s,baz=140,slow=33
USRK   Ussuriysk Ar.      49.48 344 P        P         22 12 01.6 -0.4
SISI   Saibi              49.50 271 P        P         22 12 01.8 -0.9
       comp=Z,3µmcomp=Z,137nm,2.2s
RPSI   Rantau Prapat      50.00 276 P        P         22 12 05.2 -1.3
RPSI   Rantau Prapat      50.00 276 IAmb     IAmb      22 12 21.4
       comp=Z,375nm,1.9s
PSI    Prapat             50.01 276 P        P         22 12 05.2 -1.6
       comp=Z,17nm,0.8s,baz=104,slow=2.6
SLVN   Son La             50.08 301 IAmb     IAmb      22 12 32.1
       comp=Z,305nm,1.6s
GYA    Guiyang            50.11 309⇓iP       P         22 12 08.0 +0.7
GYA                                 PcP      PcP       22 13 28.3 +1.5
GYA                                 PP       PP        22 14 04.0 +1.4
GYA                                 ScP      ScP       22 17 23.8 +1.6
GYA                                 S        S         22 19 19.6 +1.1
GYA                                 ScS      ScS       22 21 58.3 -0.3
GYA                                 SS       SS        22 22 48.0 -4.0
GYA                                 pmax     pmax
       comp=Z,70nm,0.9s
GYA                                 pmax     pmax
       comp=Z,1µm,5.6s
GYA                                 LR       LR
       comp=Z,4µm,15.1s
GYA                                 LR       LR
       comp=Z,10µm,18.7s
GYA                                 LR       LR
       comp=Z,10µm,18.9s
YSS    Yuzh-Sakhalins     50.20 355ceP       P         22 12 07.6 +0.2
YSS                                e*SP      sP        22 12 13.1 -0.6
YSS                                e                   22 14 00.0
YSS                                eS        S         22 19 14.0 -4.7
YSS                                ePS       pS        22 19 20.8 -3.4
YSS                                eSS       SS        22 22 48.0 -4.4
YSS                                 pmax     pmax
       comp=Z,60nm,1.1s
YSS                                 pmax     pmax
       comp=N,700nm,4.0s
YSS                                 pmax     pmax
       comp=Z,1µm,4.0s
YSS    Yuzh-Sakhalins     50.20 355 P        P         22 12 03.6 -3.8
YSS                                 IAmb     IAmb      22 12 33.2
       comp=Z,275nm,1.6s
SNY    Shenyang           50.25 336 ⇑P       P         22 12 06.8 -1.1
SNY                                 PP       PP        22 14 01.8 -1.6
SNY                                 S        S         22 19 15.9 -3.7
SNY                                 pmax     pmax
       comp=Z,95nm,2.4s
SNY                                 pmax     pmax
       comp=Z,3µm,8.4s
SNY                                 LR       LR
       comp=Z,9µm,20.6s
SNY                                 LR       LR
       comp=Z,7µm,19.5s
SNY                                 LR       LR
       comp=Z,18µm,31.4s
MDJ    Mudanjiang         50.54 342 P        P         22 12 10.7 +0.6
MDJ                                 pP       pP        22 12 13.7 -1.0
MDJ                                 sP       sP        22 12 15.0 -1.4
MDJ                                 S        S         22 19 26.4 +2.7
MDJ                                 sS       sS        22 19 31.2 +0.2
MDJ                                 pmax     pmax
       comp=Z,33nm,1.2s
MDJ                                 pmax     pmax
       comp=Z,2µm,11.1s
MDJ                                 LR       LR
       comp=Z,8µm,26.5s
MDJ                                 LR       LR
       comp=Z,6µm,26.2s
MDJ                                 LR       LR
       comp=Z,18µm,22.4s
CN2    Changchun          51.20 339 eP       P         22 12 14.8 -0.2
CN2                                 eS       S         22 19 34.3 +1.5
CN2                                 sS       pS        22 19 38.9 +0.7
CN2                                 pmax     pmax
       comp=Z,2µm,5.0s
CN2                                 LR       LR
       comp=Z,9µm,22.5s
CN2                                 LR       LR
       comp=Z,9µm,22.5s
CN2                                 LR       LR
       comp=Z,8µm,23.4s
LHMI   Lhok Sumawe        52.27 279 P        P         22 12 25.8 +2.2
       comp=Z,6µmcomp=Z,7µmcomp=Z,139nm,1.5s
BJT    Baijiatuau         52.28 329 IAmb     IAmb      22 12 53.0
       comp=Z,324nm,1.9s
BJT    Baijiatuau         52.28 329 IAMs_20  IAMs_20   22 34 55.8
       comp=Z,14µm,18.0s
BJI    Beijing            52.29 329 P        P         22 12 23.0 -0.3
BJI                                 S        S         22 19 48.6 +0.6
BJI                                 pmax     pmax
       comp=Z,2µm,5.3s
BJI                                 LR       LR
       comp=Z,11µm,20.2s
BJI                                 LR       LR
       comp=Z,6µm,27.5s
BJI                                 LR       LR
       comp=Z,17µm,31.4s
XAN    Xi'an              52.60 318 P        P         22 12 25.2 -0.6
XAN                                 PP       PP        22 14 22.6 -2.4
XAN                                 S        S         22 19 51.0 -1.6
XAN                                 SS       SS        22 23 28.9 -2.3
XAN                                 pmax     pmax
       comp=Z,83nm,1.3s
XAN                                 pmax     pmax
       comp=Z,2µm,8.6s
XAN                                 LR       LR
       comp=Z,11µm,17.3s
XAN                                 LR       LR
       comp=Z,5µm,17.4s
XAN                                 LR       LR
       comp=Z,16µm,20.1s
XAN    Xi'an              52.60 318 IAmb     IAmb      22 12 55.0
       comp=Z,171nm,1.3s
XAN    Xi'an              52.60 318 IAMs_20  IAMs_20   22 32 14.0
       comp=Z,17µm,20.0s
KMI    Kunming            52.63 305 P        P         22 12 27.9 +1.6
KMI                                 S        S         22 19 53.3 -0.2
KMI                                 SS       SS        22 23 28.2 -4.0
KMI                                 pmax     pmax
       comp=Z,64nm,2.0s
KMI                                 pmax     pmax
       comp=Z,2µm,6.8s
KMI                                 LR       LR
       comp=Z,5µm,20.2s
KMI                                 LR       LR
       comp=Z,6µm,19.3s
KMI                                 LR       LR
       comp=Z,10µm,18.4s
MLSI   Meulaboh, Aceh     52.68 278 P        P         22 12 24.8 -1.8
       comp=Z,5µmcomp=Z,196nm,1.1s
TIY    Taiyuan            52.73 324 eP       P         22 12 27.1 +0.4
TIY                                 PP       PP        22 14 25.3 -0.8
TIY                                 S        S         22 19 53.2 -1.0
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TIY                                 SS       SS        22 23 29.9 -3.2
TIY                                 pmax     pmax
       comp=Z,1µm,5.4s
TIY                                 LR       LR
       comp=Z,11µm,17.2s
TIY                                 LR       LR
       comp=Z,4µm,11.0s
TIY                                 LR       LR
       comp=Z,20µm,24.5s
RAR    Rarotonga          53.26 114 P        P         22 12 32.2 +1.5
       comp=Z,90nm,1.1s,baz=221,slow=9.3,SNR=4.4
CM31   Chiang Mai Arr     53.41 296 P        P         22 12 34.5 +2.5
       SNR=72
CM31   Chiang Mai Arr     53.41 296 P        P         22 12 31.3 -0.6
CM31                                IAmb     IAmb      22 12 38.5
       comp=Z,119nm,1.1s
CMAR   Chiang Mai Arr     53.41 296 P        P         22 12 32.9 +1.0
       comp=Z,40nm,0.8s,baz=116,slow=6.1,SNR=84
CMAR                                LR       LR        22 35 24.7
       comp=Z,3µm,18.8s,baz=116,slow=36
CMAR                                PKP2bc             22 43 10.5
       comp=Z,1.9nm,0.7s,baz=289,slow=2.8,SNR=9.7
CMAR   Chiang Mai Arr     53.41 296 P        P         22 12 32.4 +0.5
CHTO   Chiang Mai         53.52 296 P        P         22 12 31.5 -1.2
CHTO                                pmax     pmax
       comp=Z,148nm,1.4s
CHTO                                MLR      MLR
       comp=Z,6µm,22.0s
CHTO   Chiang Mai         53.52 296 P        P         22 12 31.5 -1.2
CHTO                                IAmb     IAmb      22 12 38.9
       comp=Z,148nm,1.4s
SKR    Severo-Kuril’s     54.05   6 eP       P         22 12 33.1 -2.9
SKR                                 ePPP     PPP       22 14 35.3
SKR                                 eS       S         22 20 13.1 +1.6
SKR                                 eSS      ScS       22 22 27.4 +2.7
SKR                                 pmax     pmax
       comp=Z,56nm,1.2s
SKR                                 pmax     pmax
       comp=Z,400nm,5.2s
SKR                                 pmax     pmax
       comp=Z,700nm,4.4s
SKR                                 pmax     pmax
       comp=Z,600nm,6.2s
SKR                                 pmax     pmax
       comp=Z,200nm,5.9s
SKR                                 MLR      MLR
       comp=Z,4µm,17.0s
SKR                                 MLR      MLR
       comp=Z,4µm,18.0s
TYV    Tymovskoe          54.08 355 eP       P         22 12 37.4 +1.1
TYV                                 eS       S         22 20 16.3 +4.3
TYV                                 pmax     pmax
       comp=Z,2µm,5.7s
TYV                                 pmax     pmax
       comp=Z,56nm,1.6s
TYV                                 smax     smax
       comp=E,6µm,7.7s
KLR    Kul'dur            54.22 346 P        P         22 12 37.2 -0.1
       comp=E,37nm,1.0s,baz=170,slow=5.6,SNR=37
KLR    Kul'dur            54.22 346ceP       P         22 12 37.7 +0.4
KLR                                 pmax     pmax
       comp=Z,73nm,1.3s
CD2    Chengdu            54.53 312⇑iP       P         22 12 39.4 -0.6
CD2                                 sP       pwP       22 12 48.9 +1.7
CD2                                 PP       PP        22 14 37.8 -4.7
CD2                                 S        S         22 20 09.7 -9.2
CD2                                 ScS      ScS       22 22 30.2 +1.0
CD2                                 SS       SS        22 23 57.7 -4.1
CD2                                 pmax     pmax
       comp=Z,10.0nm,0.4s
CD2                                 pmax     pmax
       comp=Z,4µm,7.9s
CD2                                 LR       LR
       comp=Z,30µm,17.7s
CD2                                 LR       LR
       comp=Z,36µm,19.6s
CD2                                 LR       LR
       comp=Z,41µm,22.2s
GRNR   Gornyy             54.76 351⇑iP       P         22 12 42.2 +1.0
GRNR                                eS       S         22 20 26.4 +5.3
GRNR                                eSS      ScS       22 22 20.4 -9.4
GRNR                                pmax     pmax
       comp=Z,30nm,1.3s
GRNR                                smax     smax
       comp=N,2.0nm,1.2s
HHC    Hu-ho-hao-te       55.35 326 eP       P         22 12 45.8  0.0
HHC                                 pP       pP        22 12 50.7 +0.3
HHC                                 PP       PP        22 14 49.2 -0.5
HHC                                 S        S         22 20 26.0 -3.6
HHC                                 ScS      ScS       22 22 35.7 +1.0
HHC                                 SS       SS        22 24 13.2 -1.2
HHC                                 pmax     pmax
       comp=N,3µm,5.3s
HHC                                 LR       LR
       comp=N,8µm,16.7s
HHC                                 LR       LR
       comp=N,5µm,16.9s
HHC                                 LR       LR
       comp=N,9µm,16.5s
BTO    Baotou             56.05 325 eP       P         22 12 51.6 +0.8
BTO                                 S        S         22 20 40.3 +1.3
NKL    Nikolayevsk        56.53 354 eP       P         22 12 54.0 +0.2
NKL                                 e                  22 13 50.2
NKL                                 e                  22 15 02.2
NKL                                 pmax     pmax
       comp=Z,49nm,1.3s
NKL                                 pmax     pmax
       comp=N,7.0nm,0.8s
NKL                                 pmax     pmax
       comp=E,4.0nm,0.7s
NKL                                 pmax     pmax
       comp=Z,365nm,3.6s
PEA0B  Petropavlovsk-     56.61   7 P        P         22 12 53.4 -1.1
PEA0B                               pmax     pmax
       comp=Z,334nm,1.6s
PEA0B                               MLR      MLR
       comp=Z,13µm,22.0s
PEA0B  Petropavlovsk-     56.61   7 P        P         22 12 53.4 -1.1
PETK   Petropavlovsk-     56.61   7 P        P         22 12 54.7 +0.2
       comp=Z,38nm,0.9s,baz=169,slow=6.9,SNR=19
PETK                                LR       LR        22 33 43.6
       comp=Z,11µm,22.0s,baz=190,slow=32
PET    Petropavlovsk      56.65   7 eP       P         22 12 57.4 +2.8
PET                                 pmax     pmax
       comp=Z,1µm,11.7s
PET                                 pmax     pmax
       comp=Z,76nm,1.3s
PET                                 MLR      MLR
       comp=Z,8µm,18.0s
PET    Petropavlovsk      56.65   7 P        P         22 12 53.1 -1.5
PET                                 IAmb     IAmb      22 13 07.5
       comp=Z,118nm,1.3s
LZH    Lanzhou            57.19 317 ⇓P       P         22 13 00.0 +0.9
LZH                                 pP       pP        22 13 03.2 -0.5
LZH                                 PP       PP        22 15 07.6 +1.3
LZH                                 S        S         22 20 53.4 -0.9
LZH                                 sS       sS        22 21 01.9 -0.1
LZH                                 SS       SS        22 24 43.7  0.0
LZH                                 pmax     pmax
       comp=Z,120nm,1.3s
LZH                                 pmax     pmax
       comp=Z,2µm,6.8s
LZH                                 LR       LR
       comp=Z,8µm,17.0s
LZH                                 LR       LR
       comp=Z,9µm,17.2s
LZH                                 LR       LR
       comp=Z,12µm,19.0s
PBA    Port Blair         57.46 286 eP       P         22 13 03.1 +2.0
DGPR   DIGLIPUR           57.59 288 ex       P         22 13 00.9 -1.2
DGPR                                IAmb     IAmb      22 13 20.6
       comp=Z,33nm,0.9s
OPA    Opana              57.76  62 IAMs_20  IAMs_20   22 33 45.5
       comp=Z,12µm,20.0s
HIA    Hailar             57.92 338 IAmb     IAmb      22 13 07.8
       comp=Z,178nm,1.2s
KHLH   Kahului Airpor     58.92  63 IAMs_20  IAMs_20   22 35 11.8
       comp=Z,11µm,19.0s
KHLU   Kahalu`u           59.02  65 IAMs_20  IAMs_20   22 35 38.3
       comp=Z,14µm,19.0s
HLK    Haleakala          59.04  64 IAMs_20  IAMs_20   22 36 47.0
       comp=Z,13µm,19.0s
KHU    Kahuku             59.18  65 IAMs_20  IAMs_20   22 34 38.5
       comp=Z,13µm,20.0s
MLOA   Mauna Loa Obse     59.30  65 IAMs_20  IAMs_20   22 35 46.5
       comp=Z,15µm,20.0s
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HPAH   Hawaii Prepara     59.32  65 IAMs_20  IAMs_20   22 33 48.2
       comp=Z,14µm,21.0s
POHA   Pohakuloa          59.40  65 IAMs_20  IAMs_20   22 34 53.2
       comp=Z,16µm,19.0s
ZEA    Zeya               59.47 345 eP       P         22 13 14.4 -0.1
ZEA                                 e                  22 17 02.0
ZEA                                 eS       S         22 21 22.0 -1.1
ZEA                                 ePS                22 21 44.0
ZEA                                 pmax     pmax
       comp=E,29nm,1.2s
ZEA                                 pmax     pmax
       comp=N,130nm,1.4s
ZEA                                 pmax     pmax
       comp=Z,200nm,1.4s
ZEA                                 pmax     pmax
       comp=Z,2µm,8.0s
ZEA                                 pmax     pmax
       comp=E,400nm,7.0s
ZEA                                 pmax     pmax
       comp=Z,1µm,7.0s
ZEA                                 pmax     pmax
       comp=N,500nm,6.0s
ZEA                                 smax     smax
       comp=E,2µm,10.0s
ZEA                                 smax     smax
       comp=N,3µm,13.0s
ZEA                                 MLR      MLR
       comp=Z,7µm,17.0s
ZEA                                 MLR      MLR
       comp=E,2µm,16.0s
ZEA                                 MLR      MLR
       comp=N,5µm,17.0s
KOHI   KOHIMA             60.05 302 eP       P         22 13 17.7 -1.6
KOHI                                IAmb     IAmb      22 13 29.5
       comp=Z,293nm,1.6s
KOHI                                i x      x         22 21 47.6
BRDH   Bariadhala         61.21 298 P        P         22 13 28.3 +1.3
       comp=Z,80nm,0.3s,baz=81,slow=8.8,SNR=11
GTA    Gaotai             61.66 319 ⇑P       P         22 13 30.2 +0.3
GTA                                 pP       pP        22 13 35.3 +0.8
GTA                                 sP       pwP       22 13 38.7 +1.5
GTA                                 PP       PP        22 15 43.7 -2.1
GTA                                 S        S         22 21 52.0  0.0
GTA                                 sS       pS        22 21 57.8 +0.1
GTA                                 SS       SS        22 25 53.4 -0.4
GTA                                 pmax     pmax
       comp=Z,26nm,1.2s
GTA                                 pmax     pmax
       comp=Z,2µm,5.4s
GTA                                 LR       LR
       comp=Z,5µm,20.6s
GTA                                 LR       LR
       comp=Z,8µm,20.6s
GTA                                 LR       LR
       comp=Z,12µm,21.3s
SHL    Shillong           61.89 301 eP       P         22 13 31.7 -0.1
SHL                                 IAmb     IAmb      22 13 41.5
       comp=Z,33nm,0.7s
PPT    Papeete            62.20 108 LR       LR        22 36 28.2
       comp=Z,2µm,18.9s,baz=274,slow=32
PPT2   Papeete2           62.20 108 eP       P         22 13 36.3 +2.4
       comp=Z,94nm,1.3s
PPT2                                eS       S         22 22 01.3 +1.8
       comp=Z,10µm,26.2s
PPT2                                eLQ      LQ        22 29 19.0
       comp=Z,35µm,31.8s
PPT2                                eLR      LR        22 32 10.6
       comp=Z,16µm,28.2s,baz=281
PPT2   Papeete2           62.20 108 eP'P'ab  P'P'ab    22 42 55.0 -4.2
       comp=Z,66nm,1.4s
PAE    Paea               62.21 108 eP       P         22 13 35.9 +2.1
       comp=Z,19nm,1.3s
PAE    Paea               62.21 108 eP'P'ab  P'P'ab    22 42 54.6 -4.4
       comp=Z,19nm,1.4s
ADK    Adak               62.27  24 P        P         22 13 32.2 -1.3
ADK                                 pmax     pmax
       comp=Z,224nm,1.4s
ADK                                 MLR      MLR
       comp=Z,8µm,20.0s
ADK    Adak               62.27  24 P        P         22 13 32.2 -1.3
TIAR   Tiarei             62.42 108 eP       P         22 13 37.6 +2.3
       comp=Z,68nm,1.3s
TIAR   Tiarei             62.42 108 eP'P'ab  P'P'ab    22 42 53.9 -4.3
       comp=Z,32nm,1.3s
ULN    Ulaanbaatar        62.46 330 P        P         22 13 34.9 -0.3
ULN                                 pmax     pmax
       comp=Z,257nm,1.8s
ULN                                 MLR      MLR
       comp=Z,12µm,20.0s
ULN    Ulaanbaatar        62.46 330 P        P         22 13 34.9 -0.3
ULN    Ulaanbaatar        62.46 330 IAMs_20  IAMs_20   22 39 47.4
       comp=Z,12µm,20.0s
TVO    Taravao            62.53 108 eP       P         22 13 38.4 +2.3
       comp=Z,60nm,1.5s
TVO    Taravao            62.53 108 eP'P'ab  P'P'ab    22 42 52.7 -5.1
       comp=Z,33nm,1.1s
MA2    Magadan            62.60   1ceP       P         22 13 36.1 +0.5
MA2                                 pmax     pmax
       comp=Z,92nm,1.3s
MA2    Magadan            62.60   1 P        P         22 13 34.4 -1.2
MA2    Magadan            62.60   1 IAMs_20  IAMs_20   22 35 30.6
       comp=Z,12µm,22.0s
SONM   Songino Array      62.78 329 P        P         22 13 37.9 +0.7
       comp=Z,43nm,0.9s,baz=142,slow=7.4,SNR=66
SONM                                LR       LR        22 41 11.4
       comp=Z,12µm,19.5s,baz=124,slow=36
SONM                                PKP2bc             22 42 47.4
       comp=Z,6.2nm,1.2s,baz=246,slow=1.4,SNR=16
SONM   Songino Array      62.78 329 P        P         22 13 36.5 -0.7
SONM                                pmax     pmax
       comp=Z,33nm,0.8s
SONM   Songino Array      62.78 329 P        P         22 13 36.5 -0.7
PMOR   Pomariorio Ree     63.60 105 eP       P         22 13 45.1 +2.0
       comp=Z,425nm,1.3s
MEH    Mehetia            63.67 108 eP       P         22 13 45.5 +2.0
       comp=Z,41nm,1.2s
VAH    Vaihoa             63.87 105 eP       P         22 13 46.8 +1.9
       comp=Z,153nm,1.2s
LSA    Lhasa              63.89 305 P        P         22 13 46.3 +0.9
LSA    Lhasa              63.89 305 IAmb     IAmb      22 14 04.1
       comp=Z,112nm,1.5s
GTK    Tadong             65.23 302 eP       P         22 13 54.5 +0.7
GTK                                 IAmb     IAmb      22 14 04.1
       comp=Z,53nm,0.8s
BWNR   Bhubaneshwar       65.83 294 eP       P         22 13 58.7 +1.1
BWNR                                IAmb     IAmb      22 14 03.0
       comp=Z,150nm,1.2s
BWNR                                eS       S         22 22 46.1 +1.9
ZAK    Zakamensk          65.98 330 eP       P         22 13 58.4 +0.3
ZAK                                 pmax     pmax
       comp=Z,87nm,1.2s
TAPN   Taplejung          66.00 302 eP       P         22 13 59.7 +0.8
       comp=Z,318nm,1.2s
SEY    Seymchan           66.01   2⇓eP       P         22 13 58.4 +0.5
ODAN   Odare              66.13 301 eP       P         22 14 00.5 +0.8
       comp=Z,185nm,1.1s
BOK    Bokaro             66.60 298 ex       P         22 13 59.8 -2.7
BOK                                 IAmb     IAmb      22 14 09.2
       comp=Z,64nm,1.1s
TLY    Talaya             66.63 331 P        P         22 14 03.6 +1.5
       comp=Z,15nm,0.8s,baz=165,slow=5.1,SNR=12
TLY    Talaya             66.63 331c iP      P         22 14 02.3 +0.1
TLY                                 eS       S         22 22 56.0 +3.1
TLY                                 pmax     pmax
       comp=Z,205nm,1.6s
TLY                                 MLR      MLR
       comp=Z,11µm,15.0s
TLY    Talaya             66.63 331 P        P         22 14 02.8 +0.6
TLY                                 IAmb     IAmb      22 14 21.4
       comp=Z,138nm,1.4s
TLY                                 IAMs_20  IAMs_20   22 41 18.5
       comp=Z,12µm,20.0s
YAK    Yakutsk            66.64 350c iP      P         22 14 02.8 +0.9
YAK                                e*PP      pwP       22 14 10.4 +1.2
YAK                                eS        S         22 22 55.6 +3.1
YAK                                e*SS      sS        22 23 19.3  +19
YAK                                eSSS      SSS       22 30 10.8
YAK                                 pmax     pmax
       comp=Z,91nm,1.3s
YAK                                 pmax     pmax
       comp=N,62nm,1.3s
YAK                                 pmax     pmax
       comp=E,27nm,1.3s
YAK                                 pmax     pmax
       comp=Z,419nm,4.3s
YAK                                 pmax     pmax
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	comp=E,252nm,4.4s						
YAK				pmax	pmax		
	comp=N,410nm,4.3s						
YAK				smax	smax		
	comp=E,1µm,6.8s						
YAK				smax	smax		
	comp=N,1µm,6.3s						
YAK	Yakutsk	66.64	350	P	P	22 14 00.6	-1.3
YAK				IAmb	IAmb	22 14 16.0	
	comp=Z,133nm,1.2s						
IRK	Irkutsk	66.70	332	eP	P	22 14 03.1	+0.5
IRK				pmax	pmax		
	comp=Z,409nm,2.9s						
RAMN	Ramite	66.83	301	eP	P	22 14 04.8	+0.6
	comp=Z,248nm,1.5s						
BOD	Bodaibo	66.85	341	⇑iP	P	22 14 03.4	0.0
BOD				pmax	pmax		
	comp=Z,83nm,1.6s						
CHLP	Challavanipeta	67.06	292	eP	P	22 14 05.3	-0.2
CHLP				IAmb	IAmb	22 14 14.1	
	comp=Z,96nm,1.2s						
CHLP				eS	S	22 23 00.5	+1.3
CHLP				IVMs_BB	IVMs_BB	22 38 54.6	
	comp=Z,570nm,17.8s						
JIRN	Jiri	67.38	302	eP	P	22 14 08.5	+0.7
	comp=Z,128nm,0.9s						
GUN	Gumba	67.71	302	eP	P	22 14 10.2	+0.3
MOY	Mondy	67.91	330	eP	P	22 14 11.4	+1.0
MOY				pmax	pmax		
	comp=Z,757nm,3.2s						
UNV	Unalaska Valle	68.00	27	IAMs_20	IAMs_20	22 43 04.3	
	comp=Z,9µm,20.0s						
PKI	Pulchoki	68.02	301	eP	P	22 14 12.1	+0.3
	comp=Z,119nm,1.0s						
PKIN	Phulchoki	68.03	301	eP	P	22 14 12.4	+0.6
	comp=Z,688nm,2.3s						
KKN	Kakani	68.19	301	eP	P	22 14 13.3	+0.5
	comp=Z,116nm,0.8s						
DMN	Daman	68.29	301	eP	P	22 14 13.2	-0.2
	comp=Z,518nm,1.4s						
PALK	Pallekele	68.55	279	P	P	22 14 14.0	-1.0
	comp=Z,20nm,0.8s,baz=142,slow=3.5,SNR=7.3						
PALK	Pallekele	68.55	279	P	P	22 14 16.8	+1.8
PALK	Pallekele	68.55	279	⇑eP	P	22 14 13.7	-1.3
PALK				pmax	pmax		
	comp=Z,106nm,1.5s						
SPIA	Saint Paul Isl	68.71	23	IAMs_20	IAMs_20	22 38 57.7	
	comp=Z,12µm,21.0s						
GKN	Gorkha	68.79	302	eP	P	22 14 16.9	+0.4
	comp=Z,214nm,1.1s						
PVM	Polavaram	69.09	290	eP	P	22 14 18.1	-0.2
PVM				IAmb	IAmb	22 14 26.1	
	comp=Z,57nm,1.3s						
PVM				eS	S	22 23 24.1	+0.6
PVM				IVMs_BB	IVMs_BB	22 45 40.5	
	comp=Z,667nm,15.5s						
DANN	Dangsing	69.63	302	eP	P	22 14 22.0	+0.1
	comp=Z,145nm,0.9s						
MDRS	Chennai	69.73	285	eP	P	22 14 24.7	+2.5
MDRS				IAmb	IAmb	22 14 30.7	
	comp=Z,126nm,1.6s						
MYLAV	Mylavaram	69.94	289	eP	P	22 14 23.3	-0.2
MYLAV				IAmb	IAmb	22 14 31.4	
	comp=Z,47nm,1.2s						
MYLAV				eS	S	22 23 32.4	-1.1
MYLAV				IVMsBB		22 48 50.7	
	comp=Z,641nm,19.4s						
SKHT	Srikalahasti	70.34	286	eP	P	22 14 26.1	0.0
SKHT				IAmb	IAmb	22 14 29.1	
	comp=E,17nm,1.5s						
SKHT				IAmb	IAmb	22 14 33.6	
	comp=Z,30nm,1.2s						
SKHT				eS	S	22 23 36.4	-1.9
SKHT				IVMs_BB	IVMs_BB	22 42 17.5	
	comp=Z,648nm,25.7s						
ADKI	Addanki	70.42	288	eP	P	22 14 26.7	+0.2
ADKI				IAmb	IAmb	22 14 34.2	
	comp=Z,45nm,1.1s						
ADKI				eS	S	22 23 38.8	-0.3
ADKI				IVMs_BB	IVMs_BB	22 47 04.2	
	comp=Z,654nm,23.0s						
GGR	Gangavaram	70.53	290	eP	P	22 14 26.6	-0.6
GGR				IAmb	IAmb	22 14 34.7	
	comp=Z,52nm,1.2s						
GGR				eS	S	22 23 40.4	-0.1
GGR				IVMsBB		22 41 48.2	
	comp=Z,505nm,23.9s						
NJS	Nagarjunasagar	71.16	289	eP	P	22 14 30.3	-0.7
NJS				IAmb	IAmb	22 14 38.3	
	comp=Z,37nm,1.2s						
NJS				eS	S	22 23 47.5	-0.3
NJS				IVMs_BB	IVMs_BB	22 48 56.3	
	comp=Z,641nm,23.6s						
SRLM	Srisailam	71.48	288	eP	P	22 14 31.4	-1.6
SRLM				IAmb	IAmb	22 14 37.5	
	comp=Z,51nm,1.1s						
SRLM				eS	S	22 23 50.8	-0.8
SRLM				IVMs_BB	IVMs_BB	22 47 47.6	
	comp=Z,652nm,16.4s						
RPR	Rampur	71.56	291	eP	P	22 14 32.1	-1.3
RPR				IAmb	IAmb	22 14 40.9	
	comp=Z,62nm,1.3s						
RPR				eS	S	22 23 52.4	+0.1
JBP	Jabalpur	71.73	296	ex	P	22 14 39.3	+5.0
JBP				ex	x	22 23 57.1	
WMQ	Urumqi	71.74	318	P	P	22 14 34.5	+0.4
WMQ				pP	pP	22 14 37.8	-1.0
WMQ				PcP	PcP	22 14 52.2	-0.9
WMQ				S	S	22 23 54.8	+1.0
WMQ				pmax	pmax		
	comp=Z,210nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,1µm,4.7s						
WMQ				LR	LR		
	comp=Z,4µm,18.5s						
WMQ				LR	LR		
	comp=Z,4µm,18.5s						
WMQ				LR	LR		
	comp=Z,7µm,20.5s						
WMQ	Urumqi	71.74	318	IAMs_20	IAMs_20	22 44 49.5	
	comp=Z,9µm,19.0s						
HYB	Hyderabad	72.01	289	ePcP	PcP	22 14 52.0	-2.7
HYB				eS	S	22 24 00.0	+2.3
HYB	Hyderabad	72.01	289	eP	P	22 14 35.3	-0.8
HYB				IAmb	IAmb	22 14 43.7	
	comp=Z,56nm,1.0s						
HYBB	Hyderabad (bro	72.01	289	eP	P	22 14 35.5	-0.7
HYBB				IAmb	IAmb	22 14 43.2	
	comp=Z,44nm,1.2s						
HYBB				eS	S	22 23 54.7	-3.0
HYBB				IVMs_BB	IVMs_BB	22 46 25.2	
	comp=Z,510nm,19.0s						
BILL	Bilibino	72.14	7	iP	P	22 14 36.2	+0.3
BILL				i		22 14 51.1	
BILL				i		22 17 12.6	
BILL				iS	S	22 23 55.6	-1.7
BILL				iSS	SS	22 28 38.5	+3.6
BILL				pmax	pmax		
	comp=Z,55nm,1.1s						
BILL				MLR	MLR		
	comp=Z,6µm,18.0s						
BILL	Bilibino	72.14	7	P	P	22 14 34.6	-1.3
NGP	Nagpur	72.19	293	eP	P	22 14 39.2	+2.1
NGP				IAmb	IAmb	22 14 44.5	
	comp=Z,178nm,1.9s						
NGP				eS	S	22 24 04.6	+5.0
TRD	Trivandrum	72.37	280	eP	P	22 14 40.8	+2.5
TRD				IAmb	IAmb	22 14 47.1	
	comp=Z,191nm,1.4s						
SRSP	Sriramsagar	72.46	291	eP	P	22 14 37.2	-1.6
SRSP				IAmb	IAmb	22 14 45.9	
	comp=Z,60nm,1.2s						
SRSP				eS	S	22 23 59.9	-2.8
SRSP				IVMs_BB	IVMs_BB	22 47 37.7	
	comp=Z,672nm,20.5s						
URV	Uravakonda	72.87	287	eP	P	22 14 40.0	-1.3
URV				IAmb	IAmb	22 14 48.5	
	comp=Z,60nm,1.1s						
URV				eS	S	22 24 06.4	-1.1
URV				IVMs_BB	IVMs_BB	22 42 36.1	
	comp=Z,1µm,26.0s						
GAMB	Gambell	73.03	17	P	P	22 14 40.0	-1.3
GAMB				IAmb	IAmb	22 14 53.9	
	comp=Z,89nm,1.3s						
KLRI	Killari	73.95	290	eP	P	22 14 47.5	-0.2
KLRI				IAmb	IAmb	22 14 53.8	
	comp=Z,45nm,1.5s						
KLRI				eS	SKiKP	22 24 16.8	+0.5
KLRI				IVMs_BB	IVMs_BB	22 49 34.0	
	comp=Z,753nm,15.5s						
VNDA	Vanda	74.61	177	P	P	22 14 52.1	+1.8
	comp=Z,12nm,0.8s,baz=318,slow=6.0,SNR=9.5						
VNDA				LR	LR	22 43 46.5	
	comp=Z,4µm,20.1s,baz=353,slow=33						
VNDA	Vanda	74.61	177	P	P	22 14 50.0	-0.4
VNDA				pmax	pmax		
	comp=Z,90nm,1.3s						
VNDA	Vanda	74.61	177	P	P	22 14 50.0	-0.4
VNDA				IAmb	IAmb	22 15 05.8	
	comp=Z,90nm,1.2s						
DDI	Dehra Dun	74.94	302	eP	P	22 14 52.7	-0.6
DDI				IAmb	IAmb	22 14 59.0	
	comp=Z,43nm,0.6s						
DDI				iS	S	22 24 33.3	+2.8
ZSN	Zaisan	74.97	321	eP	P	22 14 53.6	+0.5
	comp=Z,359nm,3.5s						
ZSN				eS	S	22 24 33.3	+3.1
ZSN				eLR	LR	22 48 32.4	
ZSN	Zaisan	74.97	321	eP	P	22 14 53.5	+0.5
ZSN				eS	S	22 24 33.2	+3.1
ZSN				pmax	pmax		
	comp=Z,359nm,3.5s						
NDI	New Delhi	75.31	301	ex	P	22 14 57.0	+1.7
ANM	Nome	75.55	19	IAmb	IAmb	22 15 22.7	
	comp=Z,230nm,1.9s						
TIXI	Tiksi	75.80	354	⇓eP	P	22 14 57.4	+0.2
TIXI				pmax	pmax		
	comp=Z,28nm,1.3s						
TIXI	Tiksi	75.80	354	P	P	22 14 55.8	-1.4
SMLA	Simla	75.87	303	eP	P	22 14 58.6	+0.1
SMLA				IAmb	IAmb	22 15 08.5	
	comp=Z,44nm,0.7s						
GOA	Goa	76.22	287	eP	P	22 15 03.1	+2.3
GOA				IAmb	IAmb	22 15 09.4	
	comp=Z,266nm,1.9s						
MK31	Makanchi Array	76.38	320	P	P	22 14 59.3	-1.8
MK31						22 17 49.1	
MK31				pmax	pmax		
	comp=Z,87nm,1.4s						
MK31	Makanchi Array	76.38	320	P	P	22 14 59.3	-1.8
MK31				IAmb	IAmb	22 15 21.6	
	comp=Z,87nm,1.4s						
MK31				PP	PP	22 17 49.0	-3.8
MKAR	Makanchi Array	76.38	320	P	P	22 15 01.5	+0.4
	comp=Z,44nm,1.1s,baz=102,slow=6.2,SNR=61						
MKAR				PP	PP	22 17 48.6	-4.3
	comp=Z,16nm,1.2s,baz=111,slow=9.0,SNR=2.9						
MKAR				PKPPKP	P'P'df	22 42 17.8	+1.3
	comp=Z,0.4nm,0.9s,baz=329,slow=1.7,SNR=3.3						
MKAR				LR	LR	22 49 16.4	
	comp=Z,9µm,18.6s,baz=108,slow=36						
MKAR	Makanchi Array	76.38	320	P	P	22 15 01.1	0.0
MAKZ	Makanchi	76.59	320	P	P	22 15 02.4	+0.1
MAKZ						22 17 51.7	
MAKZ				pmax	pmax		
	comp=Z,212nm,1.8s						
MAKZ				MLR	MLR		
	comp=Z,12µm,20.0s						
MAKZ	Makanchi	76.59	320	P	P	22 15 02.4	+0.1
MAKZ				IAmb	IAmb	22 15 06.5	
	comp=Z,212nm,1.8s						
MAKZ				PP	PP	22 17 51.7	-2.9
MAKZ				IAMs_20	IAMs_20	22 49 02.5	
	comp=Z,11µm,20.0s						
POO	Poona	76.60	290	eP	P	22 15 02.2	-0.8
POO				IAmb	IAmb	22 15 10.3	
	comp=Z,64nm,0.4s						
DHRM	DHARAMSHALA	76.83	304	eP	P	22 15 00.8	-3.4
DHRM				IAmb	IAmb	22 15 09.4	
	comp=Z,57nm,0.6s						
SHLS	Shalkode	77.14	315	eP	P	22 15 04.2	-1.4
	comp=Z,264nm,3.1s						
SHLS				eS	S	22 24 58.7	+4.2
SHLS	Shalkode	77.14	315	eP	P	22 15 04.2	-1.4
SHLS				pmax	pmax		
	comp=Z,264nm,3.1s						
UZB	Uzynbulak	77.45	315	eP	P	22 15 07.5	+0.1
	comp=Z,224nm,2.9s						
UZB				eS	S	22 25 01.3	+3.5
UZB	Uzynbulak	77.45	315	eP	P	22 15 07.5	+0.1
UZB				eS	S	22 25 01.3	+3.5
UZB				pmax	pmax		
	comp=Z,224nm,2.9s						
ZALV	Zalesovo Beam	77.52	327	P	P	22 15 06.8	-0.5
	comp=Z,22nm,0.8s,baz=106,slow=5.3,SNR=43						
ZALV				PP	PP	22 18 03.2	+1.0
	comp=Z,3.4nm,1.0s,baz=128,slow=11,SNR=2.8						
ZALV				PKPPKP		22 42 21.7	
	comp=Z,0.5nm,0.4s,baz=287,slow=2.5,SNR=5.3						
ZALV				LR	LR	22 49 28.9	
	comp=Z,9µm,19.9s,baz=109,slow=36						
PRZ	Przheval'sk	77.70	315	IAMs_20	IAMs_20	22 48 19.1	
	comp=Z,9µm,21.0s						
KPKS	Kokpek	77.78	316	eP	P	22 15 09.4	+0.2
	comp=Z,358nm,3.2s						
KPKS				eS	S	22 25 03.0	+1.8
	comp=Z,326nm,6.1s						
KPKS	Kokpek	77.78	316	eP	P	22 15 09.3	+0.2
KPKS				eS	S	22 25 03.0	+1.8
KPKS				pmax	pmax		
	comp=Z,358nm,3.2s						
KPKS				smax	smax		
	comp=E,327nm,6.1s						
SATY	Saty	77.86	315	eP	P	22 15 10.5	+0.8
	comp=E,241nm,3.1s						
SATY				eS	S	22 25 05.2	+2.9
SATY	Saty	77.86	315	eP	P	22 15 10.4	+0.8
SATY				eS	S	22 25 05.1	+2.9
SATY				pmax	pmax		
	comp=Z,241nm,3.1s						
ZHN	Zhinishke	77.87	315	eP	P	22 15 10.1	+0.4
	comp=Z,139nm,3.0s						
ZHN				eS	S	22 25 05.2	+2.9
ZHN	Zhinishke	77.87	315	eP	P	22 15 10.1	+0.4
ZHN				eS	S	22 25 05.2	+2.9
ZHN				pmax	pmax		
	comp=Z,139nm,3.0s						
HOM	Homer	78.01	27	P	P	22 15 08.1	-1.8
CNPM	China Poot	78.13	27	IAMs_20	IAMs_20	22 46 57.2	
	comp=Z,9µm,20.0s						
TDK	Taldyqorghan	78.40	317	eP	P	22 15 12.5	0.0
	comp=Z,330nm,2.3s						
TDK				eS	S	22 25 07.0	-0.7
	comp=Z,937nm,8.1s						
TDK				eLR	LR	22 47 03.6	
	comp=Z,3µm,18.9s						
TDK	Taldyqorghan	78.40	317	eP	P	22 15 12.4	0.0
TDK				eS	S	22 25 07.0	-0.7
TDK				pmax	pmax		
	comp=Z,330nm,2.3s						
TDK				smax	smax		
	comp=E,937nm,8.1s						
KSH	Kashi	78.72	311	P	P	22 15 17.0	+2.5
KSH				pP	PcP	22 15 22.5	-0.8
KSH				PcP	sP	22 15 26.5	+5.3
KSH				S	S	22 25 14.6	+3.0
KSH				SKS	SKSac	22 25 29.9	+0.4
KSH				SS	SS	22 30 20.5	+4.3
KSH				pmax	pmax		
	comp=E,100nm,1.4s						
KSH				pmax	pmax		
	comp=E,3µm,4.2s						
KSH				LR	LR		
	comp=E,4µm,14.0s						
KSH				LR	LR		
	comp=E,3µm,16.7s						
KSH				LR	LR		
	comp=E,3µm,16.6s						
MDOK	Medeo	78.84	315	eP	P	22 15 15.6	+0.5
MDOK				eS	S	22 25 12.8	-0.1
MDOK				eLR	LR	22 52 51.4	
	comp=E,2µm,17.6s						
MDOK	Medeo	78.84	315	eP	P	22 15 15.6	+0.5
MDOK				eS	S	22 25 12.7	-0.1
MDOK				MLR	MLR		
	comp=Z,2µm,18.0s						
SEM	Semipalatinsk	78.86	323	eP	P	22 15 13.6	-1.6
SEM	Semipalatinsk	78.86	323	eP	P	22 15 13.5	-1.6
TNSS	Tian-Shan	78.88	315	eP	P	22 15 16.6	+1.0
TNSS	Tian-Shan	78.88	315	eP	P	22 15 16.6	+1.0
AAA	Alma-Ata	78.95	315	eP	P	22 15 15.0	-0.6
AAA				eLR	LR	22 53 13.1	
	comp=Z,2µm,18.1s						
AAA	Alma-Ata	78.95	315	iP	P	22 15 19.6	+4.0
AAA				eS	S	22 25 15.8	+2.0
AAA				pmax	pmax		
	comp=Z,800nm,4.4s						
AAA				smax	smax		
	comp=N,900nm,6.2s						
AAA				MLR	MLR		
	comp=Z,2µm,18.0s						
CHKK	Chushkaly	79.06	316	eP	P	22 15 16.1	-0.1
CHKK	Chushkaly	79.06	316	eP	P	22 15 16.0	-0.1
NRN	Naryn	79.16	313	IAMs_20	IAMs_20	22 49 27.5	
	comp=Z,10µm,22.0s						
SEW	Seward	79.20	27	IAMs_20	IAMs_20	22 49 06.4	
	comp=Z,9µm,20.0s						
PPLA	Purkeypile	79.34	24	IAMs_20	IAMs_20	22 48 18.9	
	comp=Z,7µm,19.0s						
KUU	Kurty	79.53	316	eP	P	22 15 18.8	+0.1
	comp=Z,657nm,3.1s						
KUU				eS	S	22 25 22.1	+2.2
	comp=Z,1µm,6.1s						
KUU	Kurty	79.53	316	eP	P	22 15 18.8	+0.1
KUU				eS	S	22 25 22.0	+2.2
KUU				pmax	pmax		
	comp=Z,657nm,3.1s						
KUU				smax	smax		
	comp=E,1µm,6.1s						
NIL	Nilore	79.62	305	P	P	22 15 18.4	-1.0
NIL				pmax	pmax		
	comp=Z,457nm,1.9s						
NIL				MLR	MLR		
	comp=Z,7µm,21.0s						
NIL	Nilore	79.62	305	P	P	22 15 18.4	-1.0
NIL	Nilore	79.62	305	IAMs_20	IAMs_20	22 50 35.9	
	comp=Z,7µm,21.0s						
KZA	Kyzart	79.86	314	P	P	22 15 22.6	+1.5
	SNR=64						
KURK	Kurchatov	79.94	323	ceP	P	22 15 21.3	+0.6
KURK				pmax	pmax		
	comp=Z,140nm,1.3s						
KURK				MLR	MLR		
	comp=Z,10µm,20.0s						
KURK	Kurchatov	79.94	323		PP	22 18 12.4	-10
KURK	Kurchatov	79.94	323	P	P	22 15 20.1	-0.6
KURK				IAmb	IAmb	22 15 41.0	
	comp=Z,158nm,1.3s						
KURK	Kurchatov	79.94	323	IAMs_20	IAMs_20	22 51 02.6	
	comp=Z,10µm,20.0s						
KURBB	Kurchatov Arra	79.97	323	P	P	22 15 20.9	0.0
	comp=Z,17nm,0.8s,baz=108,slow=4.8,SNR=56						
KURBB				PP	PP	22 18 12.4	-10
	comp=Z,4.2nm,1.0s,baz=119,slow=7.5,SNR=3.1						
PMR	Palmer	80.00	25	IAmb	IAmb	22 15 47.7	
	comp=Z,178nm,1.4s						
PMR				IAMs_20	IAMs_20	22 46 28.5	
	comp=Z,9µm,21.0s						
KTH	Kantishna Hill	80.16	23	IAmb	IAmb	22 15 49.0	
	comp=Z,191nm,1.3s						
GHO	Glory Hole Cre	80.17	25	IAmb	IAmb	22 15 50.6	
	comp=Z,224nm,1.6s						
GHO				IAMs_20	IAMs_20	22 46 33.9	
	comp=Z,9µm,22.0s						
KNK	Knik Glacier	80.21	26	IAMs_20	IAMs_20	22 46 14.1	
	comp=Z,8µm,20.0s						
KBK	Karagaybulak	80.21	314	P	P	22 15 24.2	+1.6
	SNR=19						
IMAR	Indian Mountai	80.31	21	P	P	22 15 22.3	-0.2
UCH	Uchtor	80.43	314	P	P	22 15 25.4	+1.3
	SNR=42						
CHMS	Chumysh	80.43	314	P	P	22 15 24.6	+0.9
	SNR=28						
CHMS	Chumysh	80.43	314	iP	P	22 15 23.7	+0.1
CHMS				pmax	pmax		
	comp=Z,72nm,1.2s						
SML	Sawmill	80.44	25	IAmb	IAmb	22 15 50.6	
	comp=Z,221nm,1.4s						
SML				IAMs_20	IAMs_20	22 46 54.0	
	comp=Z,8µm,22.0s						
AAK	Ala-Archa	80.53	314	P	P	22 15 24.9	+0.6
	comp=Z,24nm,0.9s,baz=108,slow=3.0,SNR=37						
AAK	Ala-Archa	80.53	314	P	P	22 15 25.1	+0.7
	SNR=24						
AAK	Ala-Archa	80.53	314	iP	P	22 15 25.1	+0.7
	SNR=61						
AAK	Ala-Archa	80.53	314	ceP	P	22 15 24.3	0.0
AAK				pmax	pmax		
	comp=Z,37nm,1.0s						
AAK				MLR	MLR		
	comp=Z,8µm,20.0s						
AAK	Ala-Archa	80.53	314	P	P	22 15 22.7	-1.7
AAK	Ala-Archa	80.53	314	IAMs_20	IAMs_20	22 50 41.5	
	comp=Z,9µm,20.0s						
GLI	Glacier Island	80.59	27	IAMs_20	IAMs_20	22 45 50.1	
	comp=Z,7µm,21.0s						
SGDS	Sogindy	80.62	315	eP	P	22 15 24.7	0.0
	comp=Z,253nm,3.4s						
HIN	Hinchinbrook I	80.66	27	IAMs_20	IAMs_20	22 48 35.0	
	comp=Z,8µm,19.0s						
USP	Ospenovka	80.67	315	P	P	22 15 25.5	+0.5
	SNR=36						
FID	Port Fidalgo	80.81	27	IAMs_20	IAMs_20	22 50 24.4	
	comp=Z,8µm,19.0s						
SCM	Sheep Creek Mo	80.88	26	IAMs_20	IAMs_20	22 47 16.7	
	comp=Z,8µm,20.0s						
MLY	Manley	80.93	22	IAmb	IAmb	22 15 46.5	
	comp=Z,134nm,1.5s						
AML	Almayashu	81.00	313	P	P	22 15 28.4	+1.2
	SNR=56						
MCK	McKinley	81.03	24	IAMs_20	IAMs_20	22 51 07.5	
	comp=Z,8µm,19.0s						
EKS2	Erkin-Say	81.06	314	P	P	22 15 27.6	+0.5
	SNR=42						
EYAK	Cordova Ski Ar	81.06	27	IAMs_20	IAMs_20	22 48 20.7	
	comp=Z,8µm,19.0s						
BHUJ	Bhuj	81.12	294	ex	P	22 15 21.8	-5.8
BHUJ				IAmb	IAmb	22 15 34.9	
	comp=Z,82nm,0.8s						
DHY	Denali Highway	81.38	24	IAmb	IAmb	22 15 55.6	
	comp=Z,162nm,1.4s						
DHY				IAMs_20	IAMs_20	22 48 23.9	
	comp=Z,8µm,20.0s						
WRH	Wood River Hil	81.69	23	IAmb	IAmb	22 15 56.1	
	comp=Z,144nm,1.4s						
CCB	Clear Creek Bu	81.88	23	IAmb	IAmb	22 15 56.9	
	comp=Z,101nm,1.3s						
TCOL	CIGO, UAF Yank	81.95	23	P	P	22 15 32.0	+0.9
	baz=245						
HDA	Harding Lake	82.11	23	P	P	22 15 34.6	+2.6
	baz=246						
PAX	Paxson	82.13	25	IAmb	IAmb	22 15 59.4	
	comp=Z,187nm,1.9s						
POKR	Poker Plat Res	82.22	23	P	P	22 15 33.7	+1.1
	baz=245						
ILAR	Eielson Array	82.29	23	P	P	22 15 33.0	0.0
	comp=Z,12nm,1.0s,baz=253,slow=4.7,SNR=43						
ILAR				LR	LR	22 52 57.4	
	comp=Z,3µm,18.4s,baz=259,slow=36						
ILAR	Eielson Array	82.29	23	P	P	22 15 31.9	-1.0
ILAR	Eielson Array	82.29	23	P	P	22 15 31.9	-1.0
MENT	Mentasta	82.86	25	IAMs_20	IAMs_20	22 48 51.1	
	comp=Z,8µm,20.0s						
DZA	Taraz	82.86	314	eP	P	22 15 37.0	+0.5
DZA	Taraz	82.86	314	eP	P	22 15 37.0	+0.5
GAR	Garm	82.92	310	IAMs_20	IAMs_20	22 53 38.7	
	comp=Z,12µm,22.0s						
TOLK	Toolik Lake Re	83.03	19	P	P	22 15 38.4	+1.6
	baz=242						
NRIK	Noril'sk	83.11	342	P	P	22 15 37.9	+0.8
	comp=Z,42nm,0.9s,baz=113,slow=5.9,SNR=34						
NRIK				LR	LR	22 53 55.4	
	comp=Z,5µm,18.1s,baz=122,slow=37						
KBL	Kabul	83.21	305	P	P	22 15 36.7	-2.0
KBL				pmax	pmax		
	comp=Z,35nm,1.3s						
KBL				MLR	MLR		
	comp=Z,4µm,22.0s						
KBL	Kabul	83.21	305	P	P	22 15 36.7	-2.0
BRZS	Berezniki	83.42	321	eP	P	22 15 38.4	-0.7
	comp=Z,150nm,1.6s						
BRZS	Berezniki	83.42	321	eP	P	22 15 38.4	-0.7
BRZS				pmax	pmax		
	comp=Z,150nm,1.6s						
KKAR	Karatay Array	83.50	314	P	P	22 15 39.9	+0.2
KKAR						22 18 48.5	
KKAR	Karatay Array	83.50	314	P	P	22 15 39.9	+0.2

KKAR				PP	**PP**	**22 18 48.5**	**-3.6**
IUG	**Iuzhnay**	**83.67**	**313**	*e*P	**P**	**22 15 41.8**	**+1.0**
IUG				*e*S	**S**	**22 26 06.4**	**+3.4**
IUG	**Iuzhnay**	**83.67**	**313**	*e*P	**P**	**22 15 41.7**	**+1.0**
IUG				*e*S	**S**	**22 26 06.4**	**+3.4**
BCAR	**Beaver Creek A**	**83.73**	**25**	P	**P**	**22 15 40.7**	**+0.2**
CHGR	**Chuyangaron**	**83.75**	**309**	IAMs_20	IAMs_20	22 55 53.5	
	comp=Z,11µm,21.0s						
BRLS	**Borolday**	**83.97**	**314**	*e*S	**S**	**22 26 07.0**	**+1.3**
	comp=Z,50nm,5.6s						
CHM	**Chimkent**	**84.02**	**313**	*e*P	**P**	**22 15 43.2**	**+0.8**
CHM	**Chimkent**	**84.02**	**313**	*e*P	**P**	**22 15 43.2**	**+0.8**
BMAR	**Burnt Mountain**	**84.22**	**21**	P	**P**	**22 15 41.8**	**-1.2**
EGAK	**Eagle**	**84.57**	**24**	IAmb	IAmb	22 15 52.6	
	comp=Z,42nm,1.0s						
EGAK				IAMs_20	IAMs_20	22 51 12.0	
	comp=Z,7µm,20.0s						
HYT	**Haines Junctio**	**84.98**	**28**	IAmb	IAmb	22 16 08.4	
	comp=Z,159nm,1.6s						
HYT				IAMs_20	IAMs_20	22 55 09.4	
	comp=Z,6µm,19.0s						
DAWY	**Dawson**	**85.07**	**25**	IAmb	IAmb	22 16 15.9	
	comp=Z,100nm,1.4s						
MAW	**Mawson**	**85.44**	**203**	LR	LR	22 51 25.8	
	comp=Z,11µm,21.9s,baz=78,slow=34						
BVAR	**Borovoye Array**	**85.46**	**324**	P	**P**	**22 15 49.3**	**-0.1**
	comp=Z,14nm,0.7s,baz=110,slow=6.7,SNR=42						
BRVK	**Borovoye**	**85.53**	**324***c*	*e*P	**P**	**22 15 49.2**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,92nm,1.6s						
BRVK				MLR	MLR		
	comp=Z,9µm,20.0s						
BRVK	**Borovoye**	**85.53**	**324**	P	**P**	**22 15 48.2**	**-1.5**
BRVK				IAmb	IAmb	22 16 12.6	
	comp=Z,125nm,1.4s						
BRVK	**Borovoye**	**85.53**	**324**	IAMs_20	IAMs_20	22 54 59.6	
	comp=Z,9µm,21.0s						
QSPA	**South Pole Qui**	**86.76**	**180**	P	**P**	**22 15 54.1**	**-1.6**
	comp=Z,23nm,1.1s,baz=345,slow=1.2,SNR=23						
QSPA	**South Pole Qui**	**86.76**	**180**	P	**P**	**22 15 55.1**	**-0.6**
QSPA				IAmb	IAmb	22 16 17.0	
	comp=Z,53nm,1.1s						
QSPA	**South Pole Qui**	**86.76**	**180**	IAMs_20	IAMs_20	22 54 41.0	
	comp=Z,9µm,19.0s						
EPYK	**Eagle Plains**	**86.80**	**23**	IAMs_20	IAMs_20	22 51 37.1	
	comp=Z,8µm,20.0s						
EPYK	**Eagle Plains**	**86.80**	**23**	P	**P**	**22 15 57.5**	**+1.7**
	baz=255						
DLBC	**Dease Lake**	**88.18**	**31**	IAMs_20	IAMs_20	22 47 20.3	
	comp=Z,7µm,21.0s						
BBB	**Bella Bella**	**88.38**	**38**	IAMs_20	IAMs_20	22 52 19.6	
	comp=Z,7µm,20.0s						
INK	**Inuvik**	**88.47**	**21**	IAmb	IAmb	22 16 11.4	
	comp=Z,41nm,1.0s						
INK				IAMs_20	IAMs_20	22 50 25.1	
	comp=Z,7µm,22.0s						
HRA	**Herat**	**88.77**	**304**	IAmb	IAmb	22 16 13.3	
	comp=Z,111nm,1.4s						
KEBM	**Edson Butte**	**89.99**	**47**	IAMs_20	IAMs_20	22 53 05.5	
	comp=Z,7µm,19.0s						
JCC	**Jacoby Creek,**	**90.07**	**49**	IAMs_20	IAMs_20	22 49 51.8	
	comp=Z,7µm,20.0s						
KHMM	**Horse Mountain**	**90.30**	**49**	IAMs_20	IAMs_20	22 50 00.9	
	comp=Z,8µm,20.0s						
MCCM	**Marconi Confer**	**90.78**	**52**	IAMs_20	IAMs_20	22 47 58.0	
	comp=Z,7µm,22.0s						
E03A	**Lebam**	**90.80**	**44**	IAMs_20	IAMs_20	22 48 46.4	
	comp=Z,6µm,20.0s						
COR	**Corvallis**	**90.86**	**46**	IAMs_20	IAMs_20	22 48 05.2	
	comp=Z,7µm,21.0s						
WBK	**Wadi Bani Khal**	**90.87**	**292**	P	**P**	**22 16 15.8**	**-0.2**
	SNR=6.8						
O02D	**Mt. Diablo Mer**	**90.97**	**50**	P	**P**	**22 16 18.6**	**+2.4**
	baz=267						
HUMO	**Hull Mountain**	**90.99**	**48**	IAMs_20	IAMs_20	22 53 18.9	
	comp=Z,7µm,19.0s						
M02C	**Callahan**	**90.99**	**49**	P	**P**	**22 16 18.6**	**+2.4**
	baz=267						
WSAR	**Wadi Sarin**	**91.22**	**293**	P	**P**	**22 16 17.9**	**+0.4**
	comp=Z,20nm,0.9s,baz=119,slow=7.5,SNR=9.6						
WSAR	**Wadi Sarin**	**91.22**	**293**	P	**P**	**22 16 20.1**	**+2.5**
ABKAR	**Akbulak array**	**91.52**	**319**	P	**P**	**22 16 15.2**	**-3.2**
SVE	**Sverdlovsk**	**91.53**	**327**⇑	*e*P	**P**	**22 16 18.1**	**-0.1**
SVE				*e*		22 19 56.5	
SVE				*e*S	**SKSac**	**22 26 50.7**	**+0.6**
SVE				*e*		22 33 16.8	
SVE				pmax	pmax		
	comp=Z,38nm,1.8s						
SVE				MLR	MLR		
	comp=E,16µm,20.0s						
SVE				MLR	MLR		
	comp=Z,20µm,20.0s						
SVE				MLR	MLR		
	comp=N,2µm,18.0s						
BIDO	**Bidbid**	**91.69**	**293**	P	**P**	**22 16 22.0**	**+2.2**
	SNR=8.3						
MHTO	**MHTO**	**91.72**	**291**	P	**P**	**22 16 20.1**	**+0.2**
	SNR=7.4						
SMDO	**Samad**	**91.74**	**293**	P	**P**	**22 16 21.9**	**+1.8**
	SNR=5.3						
SAO	**San Andreas Ge**	**91.85**	**53**	IAMs_20	IAMs_20	22 54 48.5	
	comp=Z,6µm,19.0s						
ORV	**Oroville**	**91.93**	**51**	P	**P**	**22 16 18.1**	**-2.4**
ORV				pmax	pmax		
	comp=Z,29nm,1.3s						
ORV				MLR	MLR		
	comp=Z,7µm,22.0s						
ORV	**Oroville**	**91.93**	**51**	P	**P**	**22 16 18.1**	**-2.4**
ORV				IAMs_20	IAMs_20	22 48 28.3	
	comp=Z,7µm,22.0s						
C36M	**Paulatuk**	**92.02**	**21**	IAmb	IAmb	22 16 47.2	
	comp=Z,42nm,1.4s						
C36M	**Paulatuk**	**92.02**	**21**	P	**P**	**22 16 20.9**	**+0.8**
	baz=266						
LLLB	**Lillooet**	**92.14**	**40**	IAMs_20	IAMs_20	23 02 11.2	
	comp=Z,6µm,19.0s						
J05D	**Fort Rock, OR**	**92.28**	**47**	P	**P**	**22 16 24.3**	**+2.1**
	baz=268						
AFDM	**Forest Hills D**	**92.32**	**51**	P	**P**	**22 16 18.0**	**-4.4**
AFDM				IAMs_20	IAMs_20	22 48 47.6	
	comp=Z,7µm,22.0s						
GEYT	**Alibeck**	**92.32**	**308**	P	**P**	**22 16 22.8**	**+0.4**
	comp=Z,15nm,1.2s,baz=212,slow=1.4,SNR=13						
GEYT				PP	**PP**	**22 20 05.0**	**+1.8**
	comp=Z,13nm,1.2s,baz=56,slow=8.8,SNR=6.2						
GEYT				LR	LR	23 00 40.5	
	comp=Z,4µm,19.3s,baz=5.0,slow=37						
GEYT	**Alibeck**	**92.32**	**308**	P	**P**	**22 16 20.9**	**-1.5**
PMPB	**Monarch Peak**	**92.35**	**54**	IAMs_20	IAMs_20	22 51 00.7	
	comp=Z,6µm,20.0s						
HOQ	**Hoqain**	**92.44**	**293**	P	**P**	**22 16 25.3**	**+2.1**
	SNR=7.9						
BSY	**Bisya**	**92.51**	**293**	P	**P**	**22 16 22.9**	**-0.6**
PINE	**Pine Mountain**	**92.52**	**46**	IAMs_20	IAMs_20	22 49 51.2	
	comp=Z,8µm,21.0s						
ARU	**Arti**	**92.66**	**326**	P	**P**	**22 16 22.1**	**-1.4**
	comp=Z,5.9nm,0.8s,baz=146,slow=1.1,SNR=16						
ARU	**Arti**	**92.66**	**326***c*	*i*P	**P**	**22 16 22.8**	**-0.6**
ARU						22 20 04.9	
ARU				PPP	PPP	22 22 04.8	
ARU				S	**SKSac**	**22 26 56.3**	**-0.1**
ARU				SP	SPn	22 28 40.6	+1.1
ARU				SS	**SS**	**22 33 43.1**	**+3.3**
ARU				SSS	SSS	22 37 14.4	
ARU				pmax	pmax		
	comp=Z,42nm,1.5s						
ARU				pmax	pmax		
	comp=Z,135nm,4.1s						
ARU				smax	smax		
	comp=E,805nm,7.5s						
ARU				MLR	MLR		
	comp=Z,20µm,22.0s						
ARU	**Arti**	**92.66**	**326**	P	**P**	**22 16 21.5**	**-1.9**
ARU				IAmb	IAmb	22 16 44.7	
	comp=Z,32nm,1.0s						
CMB	**Columbia Colle**	**92.74**	**52**	IAMs_20	IAMs_20	22 50 33.0	
	comp=Z,6µm,21.0s						
G06A	**Carlson Farm,**	**92.78**	**45**	IAMs_20	IAMs_20	22 49 19.0	
	comp=Z,6µm,22.0s						
AKTO	**Aktyubinsk**	**92.81**	**320**	P	**P**	**22 16 24.0**	**-0.3**
	comp=Z,12nm,0.9s,baz=116,slow=3.5,SNR=22						
BEKR	**Beckworth**	**92.82**	**50**	IAMs_20	IAMs_20	22 51 05.6	
	comp=Z,9µm,20.0s						
MOD	**Modoc Plateau**	**92.93**	**48**	IAMs_20	IAMs_20	22 51 32.3	
	comp=Z,9µm,20.0s						
RUBR	**Rubicon Trail**	**92.96**	**51**	IAMs_20	IAMs_20	22 49 07.5	
	comp=Z,9µm,22.0s						
ARQ	**Araqi**	**93.16**	**293**	P	**P**	**22 16 28.2**	**+1.7**
	SNR=9.3						
SOHO	**SOHO**	**93.17**	**294**	P	**P**	**22 16 27.7**	**+1.2**
	SNR=6.4						
SNCC	**San Nicolas Is**	**93.30**	**57**	IAMs_20	IAMs_20	22 49 48.3	
	comp=Z,8µm,20.0s						
VCNR	**Virginia City**	**93.36**	**51**	IAMs_20	IAMs_20	22 51 18.0	
	comp=Z,8µm,21.0s						
PNTR	**Pine Nut**	**93.39**	**51**	IAMs_20	IAMs_20	22 49 20.9	
	comp=Z,8µm,22.0s						
MDH	**Madha**	**93.43**	**295**	*i* P	**P**	**22 16 28.4**	**+0.6**
	SNR=8.7						
BANOM	**Banah**	**93.45**	**296**	*i* P	**P**	**22 16 28.4**	**+0.6**
	SNR=9.9						
UOSS	**Minazif**	**93.50**	**295**	P	**P**	**22 16 28.9**	**+0.8**
UOSS	**Minazif**	**93.50**	**295**	P	**P**	**22 16 29.3**	**+1.2**
MSFE	**Esma-Masafi**	**93.56**	**295**	*i* P	**P**	**22 16 29.3**	**+0.9**
	SNR=9.7						
I07A	**Izee**	**93.56**	**46**	IAMs_20	IAMs_20	22 50 25.8	
	comp=Z,9µm,22.0s						
HATD	**Hatta, Dubai**	**93.56**	**295**	P	**P**	**22 16 30.6**	**+2.3**
	SNR=5.0						
PAHR	**Pah Rah Range**	**93.57**	**51**	IAMs_20	IAMs_20	22 51 26.6	
	comp=Z,8µm,21.0s						
SHME	**Shamm**	**93.59**	**296**	*i* P	**P**	**22 16 29.5**	**+1.0**
	SNR=8.7						
ASHO	**Ashiyiah**	**93.63**	**294**	P	**P**	**22 16 30.0**	**+1.3**
YERR	**Yerington**	**93.67**	**51**	IAMs_20	IAMs_20	22 49 29.3	
	comp=Z,7µm,22.0s						
B08A	**Colville Reser**	**93.74**	**42**	IAmb	IAmb	22 16 56.4	
	comp=Z,80nm,1.8s						
SYO	**Syowa Base**	**93.76**	**200**⇑	*e*P	**P**	**22 16 28.4**	**+0.1**
ALNE	**Al Ain**	**93.89**	**294**	*i* P	**P**	**22 16 30.6**	**+0.8**
	SNR=14						
G08A	**Pilot Rock**	**93.97**	**45**	IAMs_20	IAMs_20	22 50 05.4	
	comp=Z,6µm,21.0s						
NAZ	**Nazwa, Dubai**	**94.00**	**295**	*i* P	**P**	**22 16 32.0**	**+1.7**
	SNR=6.8						
NAZ	**Nazwa, Dubai**	**94.00**	**295**	P	**P**	**22 16 32.5**	**+2.2**
	SNR=8.5						
OSI	**Osito Audit: C**	**94.00**	**56**	IAMs_20	IAMs_20	22 56 24.6	
	comp=Z,6µm,20.0s						
WVOR	**Wild Horse Val**	**94.17**	**48**	IAMs_20	IAMs_20	22 50 17.3	
	comp=Z,9µm,21.0s						
ISA	**Isabella, Lake**	**94.22**	**55**	IAMs_20	IAMs_20	23 00 57.4	
	comp=Z,6µm,18.0s						
RYN	**Ryan**	**94.22**	**52**	IAMs_20	IAMs_20	22 49 46.0	
	comp=Z,7µm,22.0s						
J08A	**Circle Bar Ran**	**94.30**	**47**	IAMs_20	IAMs_20	22 51 29.5	
	comp=Z,7µm,20.0s						
NVAR	**Mina Array Bea**	**94.39**	**52**	P	**P**	**22 16 33.5**	**+1.3**
	comp=Z,1.0nm,0.7s,baz=258,slow=4.5,SNR=8.5						
NVAR				LR	LR	22 52 02.3	
	comp=Z,5µm,20.8s,baz=270,slow=31						
NVAR	**Mina Array Bea**	**94.39**	**52**	P	**P**	**22 16 31.6**	**-0.5**
PASC	**Pasadena Art C**	**94.44**	**56**	IAMs_20	IAMs_20	22 51 45.3	
	comp=Z,6µm,20.0s						
NV11	**Mina Array Sit**	**94.51**	**52**	IAMs_20	IAMs_20	22 50 04.6	
	comp=Z,7µm,22.0s						
MWC	**Mount Wilson**	**94.54**	**56**	IAMs_20	IAMs_20	22 53 06.1	
	comp=Z,6µm,20.0s						
KVN	**Kaiserville**	**94.56**	**51**	IAMs_20	IAMs_20	22 49 57.8	
	comp=Z,7µm,22.0s						
AJN	**Ajban**	**94.60**	**294**	*i* P	**P**	**22 16 33.5**	**+0.4**
	SNR=14						
109C	**Camp Elliot, M**	**95.32**	**57**	IAMs_20	IAMs_20	22 50 36.0	
	comp=Z,8µm,21.0s						
GSC	**Goldstone, Bar**	**95.58**	**55**	P	**P**	**22 16 39.6**	**+2.1**
	baz=270						
BAR	**Barrett**	**95.69**	**58**	IAMs_20	IAMs_20	22 53 06.6	
	comp=Z,8µm,20.0s						
PFO	**Pinyon Flats O**	**95.87**	**57**⇓	*e*P	**P**	**22 16 40.0**	**+1.1**
PFO				pmax	pmax		
	comp=Z,23nm,1.2s						
PFO	**Pinyon Flats O**	**95.87**	**57**	P	**P**	**22 16 41.1**	**+2.2**
	baz=270						
YKA	**Yellowknife Ar**	**95.96**	**28**	P	**P**	**22 16 39.0**	**+0.6**
	comp=Z,4.8nm,0.7s,baz=270,slow=4.6,SNR=63						
YKA				PP	**PP**	**22 20 33.1**	**+2.4**
	comp=Z,1.4nm,1.0s,baz=271,slow=7.1,SNR=4.0						
YKA				PKKPbc	**PKKPbc**	**22 33 27.6**	**-1.8**
	comp=Z,1.4nm,1.0s,baz=97,slow=3.1,SNR=11						
YKA				LR	LR	22 59 32.3	
	comp=Z,3µm,19.5s,baz=0.0,slow=35						
TPNV	**Topopah Spring**	**96.02**	**53**	IAMs_20	IAMs_20	22 53 29.9	
	comp=Z,5µm,20.0s						
MFID	**Camas Ranch**	**96.23**	**47**	IAMs_20	IAMs_20	22 54 18.5	
	comp=Z,7µm,21.0s						
BELC	**Belle Mtn. Jos**	**96.25**	**56**	P	**P**	**22 16 42.8**	**+2.1**
	baz=270						
GMRC	**Granite Mounta**	**96.52**	**56**	P	**P**	**22 16 44.0**	**+2.2**
	baz=271						
ELK	**Elko**	**96.74**	**50**	IAMs_20	IAMs_20	22 53 43.4	
	comp=Z,7µm,20.0s						
SHPR	**Sheep Range**	**96.90**	**54**	IAMs_20	IAMs_20	22 53 46.4	
	comp=Z,5µm,20.0s						
JTMT	**Jette**	**97.14**	**42**	IAMs_20	IAMs_20	22 52 48.0	
	comp=Z,6µm,21.0s						
GLA	**Glamis**	**97.24**	**57**	IAMs_20	IAMs_20	22 52 15.6	
	comp=Z,7µm,20.0s						
WALA	**Waterton Lakes**	**97.31**	**41**	IAmb	IAmb	22 17 03.2	
	comp=Z,60nm,1.5s						
WALA				IAMs_20	IAMs_20	22 55 23.3	
	comp=Z,5µm,20.0s						
MSO	**Missoula**	**97.42**	**43**	IAMs_20	IAMs_20	22 52 52.6	
	comp=Z,6µm,21.0s						
Y12C	**Blythe**	**97.48**	**57**	IAMs_20	IAMs_20	22 53 56.9	
	comp=Z,6µm,20.0s						
KIRV	**Kirov**	**97.50**	**329**	P	**P**	**22 16 44.9**	**-0.6**
	comp=Z,5.8nm,0.4s,baz=138,slow=1.7,SNR=6.8						
DUG	**Dugway, Tooele**	**98.61**	**50**	IAMs_20	IAMs_20	22 54 50.0	
	comp=Z,5µm,20.0s						
Y14A	**Wickenburg**	**98.74**	**56**	IAMs_20	IAMs_20	22 54 47.2	
	comp=Z,6µm,19.0s						
PRGR	**Permogore**	**98.95**	**332**	*e*P	**P**	**22 16 51.2**	**-0.7**
PRGR				*e*		22 20 57.8	
PRGR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
214A	**Organ Pipe Nat**	**98.97**	**58**	IAMs_20	IAMs_20	22 52 36.6	
	comp=Z,8µm,21.0s						
HWUT	**Hardware Ranch**	**99.47**	**49**	IAMs_20	IAMs_20	22 59 14.4	
	comp=Z,7µm,20.0s						
SRIG	**Santa Rosalia**	**99.59**	**63**	IAMs_20	IAMs_20	22 52 32.8	
	comp=Z,5µm,22.0s						
ABPO	**Ambohimpanom**	**99.69**	**250**	IAMs_20	IAMs_20	22 59 19.0	
	comp=Z,6µm,19.0s						
FXWY	**Fox Creek**	**99.70**	**46**	IAMs_20	IAMs_20	22 55 02.4	
	comp=Z,7µm,20.0s						
AHID	**Auburn Hatcher**	**99.72**	**47**	IAMs_20	IAMs_20	22 53 46.0	
	comp=Z,7µm,20.0s						
REDW	**Red Top Meadow**	**99.85**	**47**	IAMs_20	IAMs_20	22 56 24.4	
	comp=Z,6µm,20.0s						
FLWY	**Flagg Ranch**	**99.90**	**46**	IAMs_20	IAMs_20	22 55 31.5	
	comp=Z,6µm,20.0s						
SNOW	**Snow King Moun**	**99.92**	**47**	IAMs_20	IAMs_20	22 55 29.0	
	comp=Z,6µm,20.0s						
X16A	**Lo Mia Camp, P**	**100.01**	**56**	IAMs_20	IAMs_20	22 55 17.9	
	comp=Z,7µm,20.0s						
MAK	**Makhachkala**	**100.29**	**313**	*e*P	**Pdif**	**22 16 51.7**	**-6.6**
MAK				*e*		22 21 04.7	
MAK				*e*		22 27 27.3	
MAK				*e*SS	SS	22 35 21.0	-7.4
MAK				pmax	pmax		
	comp=Z,480nm,1.8s						
HSIG		**100.68**	**61**	IAMs_20	IAMs_20	22 52 21.3	
	comp=Z,6µm,22.0s						
BW06	**Boulder Array**	**100.85**	**47**	IAMs_20	IAMs_20	22 54 42.9	
	comp=Z,8µm,21.0s						
PDAR	**Pinedale Array**	**100.85**	**47**	P	**Pdif**	**22 17 02.6**	**+1.4**
	comp=Z,0.2nm,0.7s,baz=258,slow=3.4,SNR=2.1						
PDAR				PP	**PP**	**22 21 09.7**	**+0.6**
	comp=Z,0.3nm,0.8s,baz=293,slow=14,SNR=2.9						
PDAR	**Pinedale Array**	**100.85**	**47**		**Pdif**	**22 17 00.0**	**-1.2**
H06E1	**SOCORRO T-PHAS**	**100.93**	**72**	T	T	00 10 05.2	
	SNR=2.8						
KBS	**Kingsbay**	**101.22**	**352**	IAMs_20	IAMs_20	23 11 13.3	
	comp=Z,4µm,19.0s						
W18A	**Petrified Fore**	**101.37**	**55**	IAMs_20	IAMs_20	22 54 56.7	
	comp=Z,6µm,20.0s						
GROC	**Groznyy**	**101.51**	**313**	*e*P	**Pdif**	**22 17 00.2**	**-3.6**
GROC				pmax	pmax		
	comp=Z,46nm,1.5s						
PV14	**Lion Creek, Pa**	**101.68**	**52**	IAMs_20	IAMs_20	23 00 27.4	
	comp=Z,7µm,19.0s						
PV19	**Morning Glory**	**101.71**	**52**	IAMs_20	IAMs_20	23 00 17.3	
	comp=Z,5µm,20.0s						
TMCR	**Tamitsa**	**101.73**	**335**	*e*P	**Pdif**	**22 17 05.5**	**+1.2**
TMCR				pmax	pmax		
	comp=Z,20nm,1.0s						
PV11	**David Mesa, Pa**	**101.80**	**52**	IAMs_20	IAMs_20	23 00 30.7	
	comp=Z,6µm,20.0s						
LVZ	**Lovozero**	**101.80**	**339**	IAMs_20	IAMs_20	23 06 50.0	
	comp=Z,7µm,21.0s						
PV03	**Paradox Valley**	**101.83**	**52**	IAMs_20	IAMs_20	23 00 31.3	
	comp=Z,5µm,19.0s						
PV22	**Blue Mesa, Par**	**101.85**	**51**	IAMs_20	IAMs_20	23 00 33.8	
	comp=Z,7µm,20.0s						
PV12	**Saucer Basin,**	**101.86**	**52**	IAMs_20	IAMs_20	23 00 33.1	
	comp=Z,7µm,20.0s						
PV02	**Paradox Valley**	**101.92**	**52**	IAMs_20	IAMs_20	22 57 19.7	
	comp=Z,5µm,22.0s						
PV07	**Paradox Valley**	**101.97**	**52**	IAMs_20	IAMs_20	23 00 55.0	
	comp=Z,6µm,19.0s						
KLMR	**Klimovskoe**	**102.00**	**332**	*e*P	**Pdif**	**22 17 07.1**	**+1.5**
KLMR						22 21 21.1	
KLMR				S	**SKSac**	**22 27 45.4**	**+1.0**
KLMR				SS	SS	22 36 09.2	+18
KLMR				pmax	pmax		
	comp=Z,23nm,1.4s						
KLMR				MLR	MLR		
	comp=Z,6µm,18.0s						
KLMR	**Klimovskoe**	**102.00**	**332**	*e*P	**Pdif**	**22 17 07.1**	**+1.5**
KLMR				*e*P	**Pdif**	**22 17 07.1**	**+1.5**
KLMR				*e*P	**Pdif**	**22 17 07.1**	**+1.5**
KLMR				AMP		22 17 08.8	
	comp=Z,23nm,1.4s						
KLMR				PP	**PP**	**22 21 21.2**	**+4.4**
KLMR				S	**SKSac**	**22 27 45.4**	**+1.0**
KLMR				S	**SKSac**	**22 27 45.4**	**+1.0**
KLMR				SS	SS	22 36 09.3	+18
KLMR				SS	SS	22 36 09.3	+18
KLMR				LQ	LQ	22 51 27.6	
KLMR				LQ	LQ	22 51 27.6	
KLMR				LR	LR	22 54 29.3	
KLMR				AMP		23 05 36.7	
	comp=Z,6µm,18.1s						
O20A	**White River Ci**	**102.11**	**50**	IAMs_20	IAMs_20	22 54 58.5	
	comp=Z,7µm,22.0s						
MVCO	**Mesa Verde**	**102.20**	**53**	IAMs_20	IAMs_20	23 01 48.3	
	comp=Z,4µm,19.0s						
APA	**Apatity**	**102.37**	**339**⇓	*i*P	**Pdif**	**22 16 58.3**	**-8.8**
APA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
RWWY	**Rawlins**	**102.71**	**48**	IAMs_20	IAMs_20	22 58 42.1	
	comp=Z,6µm,20.0s						
ZEI	**Tsey**	**102.94**	**313**	*e*P	**Pdif**	**22 17 10.9**	**+0.4**
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VRH	**Novokhopyorsk**	**103.02**	**322**	*e*P	**Pdif**	**22 17 09.5**	**-0.8**
VRH				*i*		22 21 24.0	
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VRH				pmax	pmax		
	comp=Z,20nm,1.5s						
VRH				MLR	MLR		
	comp=Z,5µm,18.0s						
K22A	**Casper**	**103.09**	**47**	IAMs_20	IAMs_20	22 55 53.0	
	comp=Z,6µm,20.0s						
SMCO	**Snowmass**	**103.19**	**51**	IAMs_20	IAMs_20	22 58 18.2	
	comp=Z,5µm,20.0s						
GOF	**Gofitskoye**	**103.23**	**315**⇑	*e*P	**Pdif**	**22 17 13.7**	**+2.3**
GOF				pmax	pmax		
	comp=Z,45nm,1.6s						
S22A	**4UR Ranch, Cre**	**103.46**	**52**	IAMs_20	IAMs_20	23 00 00.5	
	comp=Z,5µm,21.0s						
KEV	**Kevo**	**103.53**	**342**	IAMs_20	IAMs_20	23 04 30.9	
	comp=Z,6µm,22.0s						
KIV	**Kislovodsk**	**103.65**	**314**	*e*P	**Pdif**	**22 17 12.6**	**-0.8**
KIV				*i*		22 21 31.0	
KIV				*e*		22 27 52.8	
KIV				*e*PS	PS	22 30 39.2	-1.4
KIV				*e*SS	SS	22 36 15.0	-0.1
KIV				pmax	pmax		
	comp=Z,66nm,1.0s						
KIV				MLR	MLR		
	comp=Z,12µm,20.0s						
FFC	**Flin Flon**	**103.75**	**34**	IAMs_20	IAMs_20	22 58 42.1	
	comp=Z,5µm,20.0s						
Y22D	**IRIS PASSCAL I**	**103.77**	**56**	IAMs_20	IAMs_20	22 58 35.4	
	comp=Z,6µm,20.0s						
ISCO	**Idaho Springs**	**104.15**	**50**	IAMs_20	IAMs_20	22 58 13.4	
	comp=Z,6µm,20.0s						
EPT	**El Paso**	**104.33**	**58**	IAMs_20	IAMs_20	22 57 15.6	
	comp=Z,7µm,20.0s						
LPSR	**Galich'ya Gora**	**104.41**	**324**	*e*P	**Pdif**	**22 17 16.2**	**-0.2**
LPSR				*i*		22 21 34.2	
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
LPSR				pmax	pmax		
	comp=Z,30nm,1.9s						
LPSR				MLR	MLR		
	comp=Z,4µm,15.0s						
VSR	**Storozhevoye**	**104.59**	**322**	*e*P	**Pdif**	**22 17 15.3**	**-2.0**
VSR				*i*		22 21 32.8	
VSR				pmax	pmax		
	comp=Z,10.0nm,1.6s						
VSR				pmax	pmax		
	comp=Z,20nm,1.6s						
VSR				MLR	MLR		
	comp=Z,6µm,21.0s						
Q24A	**Divide**	**104.62**	**51**	IAMs_20	IAMs_20	22 59 16.0	
	comp=Z,6µm,21.0s						
RSSD	**Black Hills**	**104.65**	**45**	IAMs_20	IAMs_20	22 59 04.9	
	comp=Z,7µm,20.0s						
MNTX	**Cornudas Mount**	**105.29**	**58**	IAMs_20	IAMs_20	22 57 37.0	
	comp=Z,6µm,20.0s						
HPIG		**105.46**	**63**	IAMs_20	IAMs_20	23 03 18.3	
	comp=Z,7µm,19.0s						
KSCO	**Kaye Shedlock'**	**106.56**	**50**	IAMs_20	IAMs_20	23 00 39.1	
	comp=Z,7µm,20.0s						
OGNE	**Ogallala**	**106.67**	**48**	IAMs_20	IAMs_20	23 01 57.9	
	comp=Z,6µm,20.0s						
MDND	**Maddock**	**106.89**	**41**	IAMs_20	IAMs_20	23 05 48.5	
	comp=Z,5µm,20.0s						
TXAR	**Lajitas Array**	**107.01**	**60**	PKiKP	**PKiKP**	**22 21 39.9**	**+1.5**
	comp=Z,0.2nm,0.7s,baz=305,slow=3.2,SNR=2.5						
TXAR				PP	**PP**	**22 21 58.6**	**+3.4**
	comp=Z,0.9nm,0.9s,baz=289,slow=2.8,SNR=4.9						
ANN	**Anapa**	**107.19**	**316**	*e*P	**Pdif**	**22 17 30.0**	**+1.0**
ANN				*e*		22 21 53.0	
ANN				*e*PPP	PPP	22 24 15.4	
ANN				*e*PS	PS	22 31 11.0	-6.0
ANN				*e*SS	SS	22 36 55.5	-7.6
ANN				pmax	pmax		
	comp=Z,85nm,1.4s						
MSTX	**Muleshoe**	**107.20**	**56**	IAMs_20	IAMs_20	22 59 49.3	
	comp=Z,5µm,20.0s						
AMTX	**Amarillo**	**107.97**	**54**	IAMs_20	IAMs_20	22 59 58.2	
	comp=Z,4µm,19.0s						
SUSD	**Miller**	**108.16**	**44**	IAMs_20	IAMs_20	22 59 12.5	
	comp=Z,6µm,22.0s						
ULM	**Lac du Bonnet**	**108.58**	**38**	PP	**PP**	**22 22 02.9**	**-2.9**
	comp=Z,1.4nm,0.7s,baz=254,slow=9.8,SNR=3.2						
ULM	**Lac du Bonnet**	**108.58**	**38**	IAMs_20	IAMs_20	23 08 25.4	
	comp=Z,5µm,18.0s						
D32A	**Dogwood Acres,**	**108.77**	**41**	IAMs_20	IAMs_20	23 03 23.3	
	comp=Z,5µm,20.0s						
CBKS	**Cedar Bluff**	**108.81**	**50**	IAMs_20	IAMs_20	23 01 00.7	
	comp=Z,7µm,20.0s						
AGMN	**Agassiz Nation**	**109.18**	**40**	IAMs_20	IAMs_20	23 08 10.7	
	comp=Z,5µm,20.0s						
BGNE	**Belgrade**	**109.44**	**47**	IAMs_20	IAMs_20	22 59 34.0	
	comp=Z,7µm,22.0s						
U32A	**Winter Ranch,**	**109.86**	**52**	IAMs_20	IAMs_20	23 03 37.8	
	comp=Z,5µm,20.0s						
ECSD	**EROS Data Cent**	**109.97**	**44**	IAMs_20	IAMs_20	23 02 23.5	
	comp=Z,6µm,20.0s						
ABTX	**Abilene, Hawle**	**110.00**	**57**	IAMs_20	IAMs_20	23 05 18.4	
	comp=Z,5µm,19.0s						
MICGM	**Minsk**	**110.02**	**328**	*e*P	**Pdif**	**22 17 53.0**	**+12**
MICGM				*e*SKSP		22 31 34.0	
MICGM				*e*PS	**PS**	**22 32 00.0**	**+15**
MICGM				*e*SS	SS	22 38 08.0	+27
MICGM				*e*SSS	SSS	22 41 40.0	
MICGM				*e*LQ	LQ	22 52 20.0	
MICGM				*e*LR	LR	23 03 30.0	
MICGM				LRM	MLR	23 08 04.0	
	comp=Z,32nm,20.0s						
MICGM				LRM	MLR	23 08 08.0	
	comp=Z,24nm,20.0s						
MICGM				LRM	MLR	23 08 12.0	
	comp=E,14nm,20.0s						
MNK	**Minsk**	**110.02**	**328**	*e*P	**Pdif**	**22 17 53.0**	**+12**
MNK				*e*		22 31 34.0	

MNK				MLR	MLR		
	comp=Z,24µm,20.0s						
FURI	Furi	110.16	278	IAMs_20	IAMs_20	23 10 29.8	
	comp=Z,5µm,21.0s						
SUMG	Summit	110.56	2	*i* P	PP	22 22 21.0	+1.2
	comp=Z,21nm,1.1s						
AKASG	Malin Array Be	110.74	324	Pdiff	Pdif	22 17 44.1	-0.5
	comp=Z,0.2nm,0.3s,baz=52,slow=5.5,SNR=5.9						
AKASG				PKiKP	PKiKP	22 21 46.2	+1.6
	comp=Z,0.1nm,0.3s,baz=62,slow=2.8,SNR=4.7						
AKBB	Malin Array Si	110.74	324	IAMs_20	IAMs_20	23 10 43.2	
	comp=Z,6µm,20.0s						
833A	Chaparral WMA,	110.85	61	IAMs_20	IAMs_20	23 05 09.6	
	comp=Z,5µm,20.0s						
BRTR	Keskin Array B	111.11	311	PKiKP	PKiKP	22 21 47.0	+1.1
	comp=Z,1.3nm,0.9s,baz=316,slow=4.0,SNR=5.5						
BRTR				PP	PP	22 22 20.5	-4.2
	comp=Z,1.6nm,0.9s,baz=69,slow=7.9,SNR=3.8						
BRTR				PKKPbc	PKKPbc	22 32 46.6	+3.0
	comp=Z,1.3nm,0.9s,baz=201,slow=3.9,SNR=3.8						
KSU1	Kansas State U	111.13	49	IAMs_20	IAMs_20	23 09 50.2	
	comp=Z,4µm,20.0s						
X34A	Smith Ranch, M	111.14	54	IAMs_20	IAMs_20	23 01 10.1	
	comp=Z,6µm,20.0s						
OKCFA	Oklahoma City	111.28	53	IAMs_20	IAMs_20	23 06 54.3	
	comp=Z,5µm,20.0s						
T35A	Sooner Cattle	111.70	51	IAMs_20	IAMs_20	23 03 07.6	
	comp=Z,6µm,20.0s						
Z35A	Perchaven, San	111.85	55	IAMs_20	IAMs_20	23 03 23.3	
	comp=Z,4µm,21.0s						
WHTX	Lake Whitney,	111.93	57	IAMs_20	IAMs_20	23 03 54.6	
	comp=Z,5µm,20.0s						
UNM	Universidad Na	112.01	71	IAMs_20	IAMs_20	23 01 29.7	
	comp=Z,5µm,20.0s						
EYMN	Ely	112.06	39	IAMs_20	IAMs_20	23 05 53.8	
	comp=Z,4µm,20.0s						
SPMN	Marine on St.	112.14	42	IAMs_20	IAMs_20	23 04 36.5	
	comp=Z,5µm,20.0s						
735A	Kenedy	112.15	60	IAMs_20	IAMs_20	22 59 05.0	
	comp=Z,6µm,22.0s						
KVTX	Kingsville	112.27	62	IAMs_20	IAMs_20	23 07 31.4	
	comp=Z,4µm,19.0s						
KIS	Kishinev	112.32	320	*i* PS	PS	22 32 08.0	+1.0
TUL1	Leonard	112.50	52	IAMs_20	IAMs_20	23 07 40.9	
	comp=Z,6µm,20.0s						
E38A	The Farm, Brul	112.50	40	IAMs_20	IAMs_20	23 10 11.9	
	comp=Z,6µm,19.0s						
ILULI	Ilulissat	112.78	8	IAMs_20	IAMs_20	23 10 11.6	
	comp=Z,4µm,21.0s						
SCIA	State Center	112.88	46	IAMs_20	IAMs_20	23 09 51.9	
	comp=Z,4µm,19.0s						
X37A	Clayton	113.12	54	IAMs_20	IAMs_20	23 05 53.7	
	comp=Z,5µm,20.0s						
237A	Washetta, Mont	113.30	57	IAMs_20	IAMs_20	23 04 39.9	
	comp=Z,5µm,19.0s						
U38A	Gravette	113.48	52	IAMs_20	IAMs_20	23 04 10.5	
	comp=Z,5µm,20.0s						
Z38A	Mt. Pleasant	113.72	55	IAMs_20	IAMs_20	23 08 20.8	
	comp=Z,5µm,19.0s						
HHAR	Hobbs	113.87	52	IAMs_20	IAMs_20	23 04 22.8	
	comp=Z,5µm,20.0s						
S39A	Bolivar	113.98	50	IAMs_20	IAMs_20	23 04 48.6	
	comp=Z,6µm,20.0s						
I40A	Norwalk	114.06	43	IAMs_20	IAMs_20	23 11 58.6	
	comp=Z,5µm,19.0s						
D41A	Chassel	114.23	39	IAMs_20	IAMs_20	23 07 58.3	
	comp=Z,4µm,20.0s						
COWI	Conover	114.24	40	IAMs_20	IAMs_20	23 03 27.8	
	comp=Z,6µm,20.0s						
L40A	Anamosa	114.25	45	IAMs_20	IAMs_20	23 04 43.7	
	comp=Z,5µm,20.0s						
W39A	Magazine	114.25	53	IAMs_20	IAMs_20	23 06 00.5	
	comp=Z,4µm,20.0s						
NATX	Nacogdoches	114.31	57	IAMs_20	IAMs_20	23 05 08.5	
	comp=Z,4µm,19.0s						
MIAR	Mount Ida	114.58	53	IAMs_20	IAMs_20	23 01 11.1	
	comp=Z,6µm,22.0s						
JFWS	Jewell Farm	114.64	44	IAMs_20	IAMs_20	23 05 47.1	
	comp=Z,5µm,20.0s						
U40A	Yellville	114.69	51	IAMs_20	IAMs_20	23 04 57.7	
	comp=Z,6µm,20.0s						
ELL	Elmali	114.70	309	IAMs_20	IAMs_20	23 14 25.9	
	comp=Z,6µm,20.0s						
MLR	Muntele Rosu	114.72	319	⇓P	PKPdf	22 21 54.8	+2.2
MLR	Muntele Rosu	114.72	319	⇓PKIKP	PKPdf	22 21 54.8	+2.2
MGMO	Mountain Grove	114.94	50	IAMs_20	IAMs_20	23 02 33.9	
	comp=Z,5µm,22.0s						
N41A	Harden Midland	114.94	46	IAMs_20	IAMs_20	23 02 57.3	
	comp=Z,5µm,21.0s						
F42A	Maple Grove Fa	115.02	40	IAMs_20	IAMs_20	23 04 31.4	
	comp=Z,5µm,21.0s						
X40A	Basin Creek Fa	115.18	53	IAMs_20	IAMs_20	23 01 52.2	
	comp=Z,6µm,22.0s						
I42A	Draeger Farm,	115.21	42	IAMs_20	IAMs_20	23 08 19.0	
	comp=Z,6µm,20.0s						
L42A	Oliver, Polo	115.36	45	IAMs_20	IAMs_20	23 05 18.1	
	comp=Z,6µm,21.0s						
FCAR	Ozark Folk Cen	115.39	52	IAMs_20	IAMs_20	23 03 54.1	
	comp=Z,6µm,21.0s						
MTUR	Matau	115.40	319	⇑P	PKiKP	22 21 47.6	-6.3
MTUR	Matau	115.40	319	⇑PKIKP	PKiKP	22 21 47.6	-6.3
WHAR	Wooly Hollow	115.42	52	IAMs_20	IAMs_20	23 08 24.2	
	comp=Z,4µm,21.0s						
CCM	Cathedral Cave	115.46	49	IAMs_20	IAMs_20	23 03 21.6	
	comp=Z,4µm,21.0s						
W41B	Gary Mavity, V	115.48	52	IAMs_20	IAMs_20	23 03 02.6	
	comp=Z,6µm,22.0s						
KONO	Kongsberg	115.49	338	IAMs_20	IAMs_20	23 10 12.8	
	comp=Z,6µm,22.0s						
E43A	Lone Tree Farm	115.50	39	IAMs_20	IAMs_20	23 04 08.8	
	comp=Z,5µm,21.0s						
Z41A	Richland Creek	115.51	55	IAMs_20	IAMs_20	23 08 15.9	
	comp=Z,4µm,20.0s						
KOLS	Kolonicke sedl	115.57	324	*e*PKIKP	PKPdf	22 21 57.4	+3.4
KOLS	Kolonicke sedl	115.57	324	*e*PKP	PKPdf	22 21 57.4	+3.4
ARR	Arges	115.62	320	⇑P	PKPdf	22 21 57.9	+3.7
UZH	Uzhgorod	115.69	324	*i* PKIKP	PKiKP	22 21 52.3	-1.9
UZH				*e*		22 22 03.2	
UZH				*i*		22 23 00.6	
UZH				*e*		22 28 42.8	
UZH				MLR	MLR		
	comp=Z,900nm,19.0s						
ELND	Elena	115.72	317	⇑P	PKPdf	22 21 57.4	+3.0
HUMR	Humele	115.72	319	⇑P	PKPdf	22 21 55.0	+0.6
441A	DeRidder	115.75	57	IAMs_20	IAMs_20	23 10 51.9	
	comp=Z,5µm,19.0s						
K43A	Burlington	116.04	43	IAMs_20	IAMs_20	23 03 42.9	
	comp=Z,5µm,21.0s						
E44A	Grand Marais A	116.07	39	IAMs_20	IAMs_20	23 09 49.3	
	comp=Z,5µm,19.0s						
HDIL	Hopedale	116.11	46	IAMs_20	IAMs_20	23 11 39.5	
	comp=Z,4µm,20.0s						
CCAR	Cane Creek	116.18	54	IAMs_20	IAMs_20	23 06 03.6	
	comp=Z,5µm,20.0s						
P43A	Skaggs, Pawnee	116.25	47	IAMs_20	IAMs_20	23 03 58.1	
	comp=Z,6µm,22.0s						
DRGR		116.25	322	⇑P	PKiKP	22 21 57.4	+2.0
DRGR		116.25	322	⇑PKIKP	PKiKP	22 21 57.4	+2.0
342A	Flagon Creek P	116.34	57	IAMs_20	IAMs_20	23 13 07.3	
	comp=Z,4µm,19.0s						
PLVB	Pleven	116.40	318	⇑P	PKiKP	22 21 57.4	+1.7
PBMO	Poplar Bluff	116.45	50	IAMs_20	IAMs_20	23 03 18.1	
	comp=Z,5µm,22.0s						
L44A	Lake County Fo	116.52	44	IAMs_20	IAMs_20	23 05 44.7	
	comp=Z,6µm,20.0s						
HBAR	Harrisburg	116.63	52	IAMs_20	IAMs_20	23 06 06.1	
	comp=Z,4µm,20.0s						
X43A	Marvell	116.73	53	IAMs_20	IAMs_20	23 09 40.2	
	comp=Z,5µm,19.0s						
GZR	Gura Zlata	116.81	320	⇑P	PKiKP	22 21 57.5	+1.0
GZR	Gura Zlata	116.81	320	⇑PKIKP	PKiKP	22 21 57.5	+1.0
O44A	Mansfield	116.84	46	IAMs_20	IAMs_20	23 05 29.9	
	comp=Z,5µm,21.0s						
LPAR	Lepanto	116.89	51	IAMs_20	IAMs_20	23 06 15.1	
	comp=Z,4µm,20.0s						
G45A	Suttons Bay	116.90	40	IAMs_20	IAMs_20	23 06 08.3	
	comp=Z,6µm,21.0s						
PARMO	Parma	117.01	50	IAMs_20	IAMs_20	23 06 18.0	
	comp=Z,4µm,20.0s						
GNAR	Gosnell	117.01	51	IAMs_20	IAMs_20	23 05 45.1	
	comp=Z,6µm,20.0s						
S44A	Carbondale	117.07	49	IAMs_20	IAMs_20	23 06 48.4	
	comp=Z,4µm,21.0s						
J45A	Montague	117.08	42	IAMs_20	IAMs_20	23 07 47.4	
	comp=Z,5µm,21.0s						
PEBM	Pemiscott Bayo	117.09	51	IAMs_20	IAMs_20	23 05 26.1	
	comp=Z,6µm,20.0s						
PVMO	Portageville	117.12	50	IAMs_20	IAMs_20	23 12 51.0	
	comp=Z,5µm,19.0s						
PENMO	Penman	117.17	50	IAMs_20	IAMs_20	23 12 44.0	
	comp=Z,5µm,19.0s						
E46A	Sault Ste Mari	117.19	38	IAMs_20	IAMs_20	23 11 35.7	
	comp=Z,5µm,20.0s						
HENM	Henderson Moun	117.21	50	IAMs_20	IAMs_20	23 06 35.2	
	comp=Z,5µm,20.0s						
LNXT	Lenox	117.38	51	IAMs_20	IAMs_20	23 05 45.8	
	comp=Z,5µm,21.0s						
PSZ	Piszkesteto	117.44	324	PKIKP	PKPdf	22 21 56.7	-1.0
PSZ				MLR	MLR		
	comp=Z,8µm,19.0s						
PSZ	Piszkesteto	117.44	324		PKPdf	22 21 56.7	-1.0
HICK	Hickman	117.45	50	IAMs_20	IAMs_20	23 07 44.6	
	comp=Z,4µm,20.0s						
BZS	Buzias	117.45	321	⇑P	PKiKP	22 21 58.7	+1.0
BZS	Buzias	117.45	321	⇑PKIKP	PKiKP	22 21 58.7	+1.0
GLAT	Glass	117.48	50	IAMs_20	IAMs_20	23 04 24.6	
	comp=Z,4µm,21.0s						
OKC	Ostrava-Krasne	117.49	326	AMS	AMS	23 11 40.0	
	comp=Z,8µm,20.5s						
HALT	Halls	117.55	51	IAMs_20	IAMs_20	23 05 38.4	
	comp=Z,4µm,22.0s						
VBMS	Vicksburg	117.63	55	IAMs_20	IAMs_20	23 10 42.2	
	comp=Z,6µm,20.0s						
VTS	Vitosha	117.64	317	⇑P	PKiKP	22 22 00.4	+2.1
VTS	Vitosha	117.64	317	⇑PKIKP	PKiKP	22 22 00.4	+2.1
VTS	Vitosha	117.64	317		PKPdf	22 21 55.3	-3.1
VTS				IAMs_20	IAMs_20	23 18 31.1	
	comp=Z,4µm,21.0s						
344A	Westbrook Farm	117.64	56	IAMs_20	IAMs_20	23 11 49.7	
	comp=Z,5µm,20.0s						
GLMI	Grayling	117.67	40	IAMs_20	IAMs_20	23 05 20.2	
	comp=Z,6µm,22.0s						
L46A	Eue Claire	117.69	44	IAMs_20	IAMs_20	23 12 50.0	
	comp=Z,5µm,19.0s						
T45A	Paducah	117.74	50	IAMs_20	IAMs_20	23 05 11.3	
	comp=Z,6µm,20.0s						
SFIN	Lafayette	117.75	45	IAMs_20	IAMs_20	23 14 43.7	
	comp=Z,4µm,19.0s						
MBAR	Mbarara	117.78	268	IAMs_20	IAMs_20	23 10 36.8	
	comp=Z,4µm,21.0s						
E47A	Iron Bridge	117.78	38	P	PKPdf	22 21 58.2	-0.1
	baz=298						
VYHS	Vyhne	117.78	325	*e*PKIKP	PKiKP	22 22 01.2	+2.9
VYHS	Vyhne	117.78	325	*e*PKP	PKiKP	22 22 01.2	+2.9
MORC	Moravsky Berou	117.86	326	*e*PKP	PKiKP	22 22 01.1	+2.7
W45A	Hickory Valley	117.89	52	IAMs_20	IAMs_20	23 04 49.6	
	comp=Z,5µm,20.0s						
OXF	Oxford	117.90	52	IAMs_20	IAMs_20	23 10 55.1	
	comp=Z,5µm,19.0s						
P46A	Rosedale	117.94	46	IAMs_20	IAMs_20	23 09 19.0	
	comp=Z,4µm,19.0s						
KRLC	Kraliky	118.11	327	*e*PKP	PKiKP	22 22 01.0	+2.1
KRLC				AMS	AMS	23 12 40.0	
	comp=Z,9µm,20.4s						
KRLC	Kraliky	118.11	327	*e*PKIKP	PKiKP	22 22 01.0	+2.1
KRLC				MLR	MLR		
	comp=Z,9µm,20.4s						
OSTC	Ostas	118.16	328	AMS	AMS	23 13 10.0	
	comp=Z,12µm,20.3s						
USIN	University of	118.17	48	IAMs_20	IAMs_20	23 07 27.4	
	comp=Z,5µm,19.0s						
DPC	Dobruska-Polom	118.21	327	*e*PP	PP	22 23 13.0	-1.1
DPC				*e*SP	SP	22 32 53.1	-4.6
DPC				AMS	AMS	23 13 00.0	
	comp=Z,12µm,20.8s						
CHVC	Chvalec	118.23	328	*e*PKP	PKiKP	22 22 02.0	+2.9
CHVC				AMS	AMS	23 13 10.0	
	comp=Z,11µm,20.6s						
LSZ	Lusaka	118.25	251	IAMs_20	IAMs_20	23 17 52.8	
	comp=Z,4µm,19.0s						
JAVC	Velka Javorina	118.26	325	*e*PKP	PKiKP	22 22 03.5	+4.3
UPC	Upice	118.29	328	*e*PP	PP	22 23 13.2	-1.4
UPC				AMS	AMS	23 13 20.0	
	comp=Z,13µm,20.7s						
D48A	Paudash Townsh	118.33	37	P	PKPdf	22 21 58.8	-0.6
	baz=299						
E48A	Lockeyer	118.45	37	P	PKiKP	22 21 59.8	+0.2
	baz=299						
N47A	Urbana	118.55	45	IAMs_20	IAMs_20	23 13 31.8	
	comp=Z,5µm,20.0s						
VRAC	Vranov	118.63	326	*e*PKP	PKiKP	22 22 02.9	+3.0
WVT	Waverly	118.65	50	IAMs_20	IAMs_20	23 04 58.4	
	comp=Z,5µm,22.0s						
MODS	Modra-Piesok	118.74	325	*e*PKIKP	PKiKP	22 22 00.6	+0.5
MODS	Modra-Piesok	118.74	325	*e*PKP	PKiKP	22 22 00.6	+0.5
KRUC	Moravsky	118.87	326	*e*PKP	PKiKP	22 22 02.5	+2.2
T47A	Sharon Grove	118.92	49	IAMs_20	IAMs_20	23 05 46.4	
	comp=Z,5µm,20.0s						
CCIG	Comitan	118.96	73	IAMs_20	IAMs_20	23 08 04.6	
	comp=Z,5µm,19.0s						
M48A	Edgerton	118.99	44	IAMs_20	IAMs_20	23 11 00.3	
	comp=Z,5µm,20.0s						
BSEG	Bad Segeberg	119.03	333	*e*PKPdf	PKiKP	22 22 04.1	+3.6
	baz=52,slow=2.0						
PVCC	Panska Ves	119.04	328	AMS	AMS	23 14 40.0	
	comp=Z,7µm,19.5s						
O48A	Farmland	119.17	45	P	PKiKP	22 22 02.0	+0.8
	baz=293						
BRG	Berggiesshubel	119.17	329	*e*PKPdf	PKiKP	22 22 04.2	+3.3
	baz=52,slow=2.0						
BRG	Berggiesshubel	119.17	329	*e*PKIKP	PKiKP	22 22 02.9	+2.1
BRG				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BRG				MLR	MLR		
	comp=N,5µm,17.9s						
BRG				MLR	MLR		
	comp=E,6µm,19.7s						
BRG				MLR	MLR		
	comp=Z,9µm,18.4s						
BRG	Berggiesshubel	119.17	329	*e*PDIFF	PKiKP	22 22 02.9	+2.1
	comp=Z,9.4nm,1.1s						
BRG				SKS		22 32 51.0	
BRG				SDIFF		22 34 51.0	
I49A	Point Hope	119.21	40	IAMs_20	IAMs_20	23 14 19.5	
	comp=Z,5µm,20.0s						
TREC	Trest	119.25	327	AMS	AMS	23 13 00.0	
	comp=Z,12µm,21.2s						
GOPC	GO Pecny, Ondr	119.28	328	*e*PKP	PKiKP	22 22 06.2	+5.1
GOPC				*e*SP	SP	22 33 07.0	-0.3
GOPC				AMS	AMS	23 14 40.0	
	comp=Z,11µm,19.2s						
GOPC	GO Pecny, Ondr	119.28	328	*e*PKIKP	PKiKP	22 22 06.2	+5.1
GOPC				*e*SP	SP	22 33 07.0	-0.3
GOPC				MLR	MLR		
	comp=Z,11µm,19.2s						
PRU	Pruhonice	119.37	328	*e*PP	PP	22 23 21.4	-0.6
PRU				*e*SP	SP	22 33 09.1	+1.1
PRU				AMS	AMS	23 14 30.0	
	comp=Z,10µm,18.2s						
AAM	Ann Arbor	119.37	42	IAMs_20	IAMs_20	23 05 49.2	
	comp=Z,5µm,21.0s						
PRA	Prague	119.38	328	AMS	AMS	23 14 40.0	
	comp=Z,10µm,19.9s						
CLL	Collm	119.39	330	*e*(PKiKP)	PKiKP	22 22 04.0	+2.7
CLL				*e*		22 23 01.0	
CLL				*e*PP	PP	22 23 21.0	-1.1
CLL				*e*		22 23 38.0	
CLL				*e*		22 24 24.0	
CLL				*e*PPP	PPP	22 25 54.0	
CLL				*e*PPPP		22 27 54.0	
CLL				*e*SKSac	SKSac	22 28 54.0	-2.5
CLL				*e*SKKSac	SKKSac	22 30 24.0	+1.8
CLL				*e*PS	PKKPdf	22 33 01.0	+15
CLL				*e*PPS	PPS	22 34 30.0	
CLL				*e*SS	SS	22 39 50.0	+6.3
CLL				*e*SSS	SSS	22 44 00.0	
CLL				Lm	MLR	23 14 00.0	
	comp=Z,12µm,21.8s						
CLL	Collm	119.39	330	*e*PKPdf	PKiKP	22 22 04.8	+3.5
	baz=52,slow=2.0						
CLL	Collm	119.39	330	*e*PKIKP	PKiKP	22 22 04.0	+2.7
CLL				*e*		22 23 21.0	
CLL				MLR	MLR		
	comp=Z,12µm,21.8s						
D50A	G1974 Best Tow	119.50	36	P	PKiKP	22 22 02.5	+0.9
	baz=301						
V48A	Smith Brothers	119.55	50	IAMs_20	IAMs_20	23 13 49.2	
	comp=Z,4µm,19.0s						
N49A	Columbus Grove	119.58	44	IAMs_20	IAMs_20	23 12 55.1	
	comp=Z,4µm,20.0s						
FNA	Florina	119.64	316	PKIKP	PKPdf	22 21 58.9	-3.2
FNA	Florina	119.64	316		PKPdf	22 21 58.9	-3.2
CONA	Conrad Observa	119.78	325	*e*pPKiKP	PKiKP	22 22 05.0	+2.7
	comp=Z,9.4nm,1.4s						
X48A	Hartselle	119.78	52	IAMs_20	IAMs_20	23 06 05.8	
	comp=Z,5µm,20.0s						
CLTN	Cedars of Leba	119.81	50	IAMs_20	IAMs_20	23 05 33.0	
	comp=Z,5µm,22.0s						
T49A	Edmonton	120.06	48	IAMs_20	IAMs_20	23 14 28.5	
	comp=Z,4µm,20.0s						
U49A	Red Boiling Sp	120.08	49	IAMs_20	IAMs_20	23 08 14.6	
	comp=Z,5µm,21.0s						
LSQQ	Lebel-sur-Quev	120.09	33	P	PKiKP	22 22 02.9	+0.2
	baz=305						
TANN	Tannenbergstha	120.20	329	*e*PKPdf	PKiKP	22 22 06.1	+3.1
	baz=52,slow=2.0						
GO07	Milladeo Hill,	120.23	145	IAMs_20	IAMs_20	23 05 37.9	
	comp=Z,6µm,21.0s						
LRAL	Lakeview Retre	120.26	53	P	PKiKP	22 22 03.9	+0.4
	baz=288						
GUNZ	Gunzen	120.30	329	*e*PKPdf	PKiKP	22 22 06.6	+3.5
	baz=52,slow=2.0						
NKC	Novy Kostel	120.32	329	*e*PP	PP	22 23 29.3	+0.8
NKC				AMS	AMS	23 17 20.0	
	comp=Z,9µm,18.3s						
WERN	Wernitzgruen	120.32	329	*e*PKPdf	PKiKP	22 22 06.2	+3.0
	baz=52,slow=2.0						
ARSA	Arzberg	120.33	325	*e*pPKiKP	PKiKP	22 22 05.6	+2.3
	comp=Z,6.5nm,1.6s						
CLZ	Clausthal	120.35	331	*e*PKPdf	PKiKP	22 22 06.6	+3.4
	baz=52,slow=2.0						
VLDQ	Val d'Or	120.36	34	IAMs_20	IAMs_20	23 12 45.3	
	comp=Z,5µm,19.0s						
KHC	Kasperske Hory	120.37	327	*e*PKP	PKiKP	22 22 04.0	+0.7
KHC				*e*x	x	22 23 24.5	
KHC				AMS	AMS	23 14 30.0	
	comp=Z,11µm,20.9s						
KHC	Kasperske Hory	120.37	327	⇑*i*PKIKP	PKiKP	22 22 04.4	+1.1
KHC				MLR	MLR		
	comp=Z,20µm,20.0s						
KHC	Kasperske Hory	120.37	327	IAMs_20	IAMs_20	23 15 36.7	
	comp=Z,5µm,21.0s						
PDG	Podgorica	120.39	318	IAMs_20	IAMs_20	23 15 29.7	
	comp=Z,6µm,22.0s						
SWET	Sewanee	120.41	51	IAMs_20	IAMs_20	23 05 43.0	
	comp=Z,5µm,22.0s						
TIR	Tirane	120.45	317	IAMs_20	IAMs_20	23 17 00.6	
	comp=Z,5µm,21.0s						
GEC2	GERESS Array S	120.47	327	*e*PKPdf	PKiKP	22 22 06.6	+3.0
	baz=52,slow=2.0						
GERES	GERESS Array B	120.47	327	PKP	PKiKP	22 22 04.3	+0.7
	comp=Z,2.1nm,0.7s,baz=48,slow=2.0,SNR=13						
GERES	GERESS Array B	120.47	327	PKIKP	PKPdf	22 22 03.3	-0.2
GERES	GERESS Array B	120.47	327		PKPdf	22 22 03.3	-0.2
F52A	Sundridge	120.51	37	P	PKiKP	22 22 04.0	+0.3
	baz=301						
T50A	Nancy	120.61	48	P	PKiKP	22 22 05.0	+0.9
	baz=292						
MANZ	Manzenberg	120.64	329	*e*PKPdf	PKiKP	22 22 07.1	+3.3
	baz=52,slow=2.0						
E52A	Mattawa	120.65	36	P	PKiKP	22 22 04.6	+0.7
	baz=302						
ACSO	Alum Creek Sta	120.70	44	IAMs_20	IAMs_20	23 11 13.7	
	comp=Z,5µm,20.0s						
MOA	Molln	120.72	326	*e*pPKiKP	PKiKP	22 22 06.6	+2.5
	comp=Z,5.7nm,1.2s						
WET	Wettzell	120.74	328	*e*PKPdf	PKiKP	22 22 07.1	+3.0
	baz=52,slow=2.0						
BRAL	Brewton	120.76	55	IAMs_20	IAMs_20	23 12 59.1	
	comp=Z,4µm,21.0s						
D53A	Lac Vacive, Po	120.78	35	P	PKiKP	22 22 04.6	+0.4
	baz=303						
SOKA	Soboth	120.92	324	*e*pPKiKP	PKiKP	22 22 06.2	+1.6
	comp=Z,11nm,1.6s						
Q51A	Peebles	120.94	46	IAMs_20	IAMs_20	23 15 43.1	
	comp=Z,4µm,19.0s						
P51A	Williamsport	120.95	45	IAMs_20	IAMs_20	23 13 13.5	
	comp=Z,5µm,21.0s						
SCHQ	Schefferville	121.05	23	IAMs_20	IAMs_20	23 09 20.3	
	comp=Z,4µm,21.0s						
250A	Grady	121.16	54	IAMs_20	IAMs_20	23 09 19.6	
	comp=Z,5µm,19.0s						
ALGO	Algonquin Park	121.18	36	P	PKiKP	22 22 05.3	+0.4
	baz=302						
E53A	Dumoine, Ponti	121.18	36	P	PKiKP	22 22 05.3	+0.3
	baz=303						
M52A	Chesterland	121.25	42	IAMs_20	IAMs_20	23 16 24.8	
	comp=Z,5µm,19.0s						
G53A	Haliburton	121.27	37	P	PKiKP	22 22 05.2	+0.1
	baz=301						
T51A	Gray	121.29	48	P	PKPdf	22 22 05.2	-0.1
	baz=292						
D54A	Lac Fusel, La	121.34	35	P	PKiKP	22 22 05.1	-0.1
	baz=304						
CPCT	Cooper Cave	121.41	50	IAMs_20	IAMs_20	23 14 37.4	
	comp=Z,4µm,19.0s						
E54A	Lac Daplat, Po	121.43	36	P	PKiKP	22 22 05.6	+0.2
	baz=303						
G54A	Lake Saint Pet	121.45	37	P	PKiKP	22 22 05.5	0.0
	baz=302						
P52A	Corning	121.54	45	P	PKiKP	22 22 05.9	0.0
	baz=295						
O52A	Adamsville	121.55	44	IAMs_20	IAMs_20	23 12 08.0	
	comp=Z,4µm,20.0s						
Z51A	Franklin	121.62	52	IAMs_20	IAMs_20	23 13 18.5	
	comp=Z,5µm,20.0s						
KBA	Koelnbreinsper	121.67	326	*e*pPKiKP	PKiKP	22 22 08.0	+1.9
	comp=Z,8.1nm,1.4s						
TZTN	Tazewell	121.75	48	IAMs_20	IAMs_20	23 13 25.1	
	comp=Z,4µm,20.0s						
MYKA	Terra Mystica	121.75	325	*e*pPKiKP	PKiKP	22 22 07.7	+1.5
	comp=Z,4.5nm,1.0s						
ERPA	Erie	121.89	41	IAMs_20	IAMs_20	23 11 50.7	
	comp=Z,5µm,20.0s						
TKL	Tuckaleechee C	121.90	49	PKP	PKiKP	22 22 07.1	+0.4
	comp=Z,5.5nm,0.9s,baz=135,slow=8.6,SNR=3.8						
TKL	Tuckaleechee C	121.90	49		PKPdf	22 22 05.9	-0.7
TKL				IAMs_20	IAMs_20	23 07 18.4	
	comp=Z,5µm,20.0s						
451A	Vernon	121.99	56	IAMs_20	IAMs_20	23 13 57.7	
	comp=Z,4µm,20.0s						
D55A	Sainte-Anne-du	122.08	34	P	PKPdf	22 22 06.0	-0.6
	baz=305						
P53A	Whipple	122.13	44	IAMs_20	IAMs_20	23 12 26.5	
	comp=Z,5µm,21.0s						
FUR	Furstenfeldbru	122.17	328	*e*PKPdf	PKiKP	22 22 09.7	+2.8
	baz=52,slow=2.0						
R53A	Hurricane	122.21	46	IAMs_20	IAMs_20	23 16 30.0	
	comp=Z,4µm,20.0s						
L54A	Sinclairville	122.28	41	P	PKiKP	22 22 07.1	-0.2
	baz=299						
ABTA	Abfaltersbach	122.33	326	*e*pPKiKP	PKiKP	22 22 08.1	+0.8
	comp=Z,9.3nm,1.1s						
TNS	Taunus Mts	122.33	331	*e*PKPdf	PKiKP	22 22 10.6	+3.4
	baz=52,slow=2.0						
352A	Blakely	122.40	54	IAMs_20	IAMs_20	23 14 22.5	
	comp=Z,5µm,19.0s						
N54A	Moraine State	122.43	42	IAMs_20	IAMs_20	23 12 03.1	
	comp=Z,5µm,20.0s						
H55A	Tweed	122.45	37	P	PKiKP	22 22 07.5	+0.1
	baz=302						
D56A	ZEC Mazanza, M	122.47	34	P	PKiKP	22 22 07.5	+0.1
	baz=306						
K54A	Basiliko Farm,	122.50	40	P	PKPdf	22 22 07.1	-0.4
	baz=300						
WATA	Walderalm	122.51	327	*e*pPKiKP	PKiKP	22 22 09.9	+2.2
	comp=Z,16nm,1.6s,SNR=5.5						
WTTA	Wattenberg	122.52	327	*e*pPKiKP	PKiKP	22 22 10.1	+2.3
	comp=Z,18nm,1.2s,SNR=7.6						
E56A	St. Veronique	122.60	34	P	PKiKP	22 22 07.7	-0.1
	baz=305						
V53A	Saluda	122.63	49	IAMs_20	IAMs_20	23 07 52.5	
	comp=Z,5µm,20.0s						
WVNY	West Valley, N	122.65	40	IAMs_20	IAMs_20	23 12 51.7	
	comp=Z,5µm,20.0s						
P54A	Burton	122.71	44	P	PKiKP	22 22 08.9	+0.7
	baz=296						
Q54A	Coxs Mills	122.73	45	P	PKPdf	22 22 07.2	-0.8
	baz=296						
MOTA	Moosalm	122.76	327	*e*pPKiKP	PKiKP	22 22 09.9	+1.6
	comp=Z,12nm,0.9s						
SQTA	Sankt Quirin	122.78	327	*e*pPKiKP	PKiKP	22 22 10.1	+1.9
	comp=Z,9.5nm,1.2s						
RETA	Reutte	122.86	327	*e*pPKiKP	PKiKP	22 22 09.9	+1.6
	comp=Z,5.0nm,1.1s						
STU	Stuttgart	122.89	329	*e*PKPdf	PKiKP	22 22 11.5	+3.2
	baz=52,slow=2.0						
GOGA	Godfrey	122.94	52	IAMs_20	IAMs_20	23 07 45.2	
	comp=Z,5µm,21.0s						
U54A	Nelsons Funny	123.04	48	IAMs_20	IAMs_20	23 09 23.2	
	comp=Z,4µm,21.0s						

FETA	Feichten	123.16	327	ePKiKP	PKiKP	22 22 10.2	+1.1
	comp=Z,9.0nm,1.1s,SNR=7.6						
E57A	Chemin Saint G	123.18	34	P	PKiKP	22 22 09.4	+0.5
	baz=306						
553A	Crawfordville	123.20	56	IAMs_20	IAMs_20	23 13 18.8	
	comp=Z,4µm,20.0s						
CTI	Castel Tesino	123.22	325	PKIKP	PKiKP	22 22 10.3	+1.2
CTI				MLR	MLR		
	comp=Z,7µm,21.0s						
CTI	Castel Tesino	123.22	325		PKiKP	22 22 10.3	+1.2
ESK	Eskdalemuir	123.26	341	IAMs_20	IAMs_20	23 22 04.1	
	comp=Z,4µm,20.0s						
DAVA	Damuels	123.46	327	ePKiKP	PKiKP	22 22 11.3	+1.7
	comp=Z,7.3nm,1.0s						
L56A	Greenwood	123.46	40	IAMs_20	IAMs_20	23 08 46.0	
	comp=Z,5µm,22.0s						
PLCA	Paso Flores	123.54	145	PKP	PKiKP	22 22 10.6	+0.7
	comp=Z,13nm,1.1s,baz=261,slow=2.4,SNR=13						
TIP	Timpagrande	123.54	316	⇑P	PKiKP	22 22 13.0	+3.1
TIP	Timpagrande	123.54	316	IAMs_20	IAMs_20	23 19 21.4	
	comp=Z,4µm,21.0s						
R55A	Marlinton	123.54	45	IAMs_20	IAMs_20	23 16 33.0	
	comp=Z,4µm,19.0s						
R55A	Marlinton	123.54	45	P	PKiKP	22 22 10.0	0.0
	baz=296						
T55A	Pulaski	123.56	47	P	PKPdf	22 22 09.4	-0.4
	baz=295						
HODGE	Hodges	123.58	50	IAMs_20	IAMs_20	23 11 52.1	
	comp=Z,6µm,21.0s						
PAULI	Pauline	123.70	50	IAMs_20	IAMs_20	23 11 46.1	
	comp=Z,5µm,20.0s						
O56A	Blue Knob Stat	123.71	42	IAMs_20	IAMs_20	23 12 43.1	
	comp=Z,6µm,21.0s						
V55A	Taylorsville	123.75	48	IAMs_20	IAMs_20	23 13 30.2	
	comp=Z,5µm,20.0s						
J57A	Williamstown	123.78	38	IAMs_20	IAMs_20	23 11 13.1	
	comp=Z,6µm,21.0s						
BLA	Blacksburg	123.78	46	P	PKPdf	22 22 09.9	-0.2
	baz=295						
WLF	Walferdange	123.81	332	ePKPdf	PKiKP	22 22 13.8	+3.8
	baz=52,slow=2.0						
X55A	Gracelyn & Ava	123.97	50	P	PKiKP	22 22 11.8	+1.0
	baz=292						
L57A	Andrews Acres	123.98	40	P	PKiKP	22 22 10.6	0.0
	baz=301						
SSPA	Standing Stone	123.99	42	P	PKiKP	22 22 11.4	+0.7
	baz=299						
PAOL	Paolisi	124.14	319	IAMs_20	IAMs_20	23 22 13.0	
	comp=Z,4µm,19.0s						
U56A	King	124.17	47	IAMs_20	IAMs_20	23 14 25.1	
	comp=Z,5µm,20.0s						
AQU	L'Aquila	124.21	321	IAMs_20	IAMs_20	23 23 10.8	
	comp=Z,5µm,21.0s						
J58A	Remsen	124.24	38		PKiKP	22 22 11.5	+0.4
J58A	Remsen	124.24	38	P	PKiKP	22 22 11.0	-0.1
	baz=303						
H58A	Gabriels	124.31	36	P	PKiKP	22 22 11.9	+0.6
	baz=305						
Q57A	Strasburg	124.40	44	P	PKiKP	22 22 12.4	+0.8
	baz=298						
FRNY	Flat Rock	124.42	35	IAMs_20	IAMs_20	23 13 53.6	
	comp=Z,5µm,20.0s						
NCB	Newcomb	124.54	37	IAMs_20	IAMs_20	23 18 10.0	
	comp=Z,4µm,19.0s						
CEL	Celeste	124.56	315	IAMs_20	IAMs_20	23 19 46.4	
	comp=Z,4µm,22.0s						
J59A	Piesco	124.66	37	P	PKiKP	22 22 12.5	+0.6
	baz=304						
N58A	Sunbury	124.66	41		PKPdf	22 22 10.7	-1.0
O58A	Lewisberry	124.88	42	P	PKiKP	22 22 12.9	+0.5
	baz=300						
OSSC	Osservatorio P	124.90	323	IAMs_20	IAMs_20	23 18 07.9	
	comp=Z,4µm,22.0s						
PAGS	Pennsylvania G	124.96	42	IAMs_20	IAMs_20	23 16 58.1	
	comp=Z,5µm,20.0s						
456A	Hilliard	125.00	54	IAMs_20	IAMs_20	23 15 52.3	
	comp=Z,5µm,20.0s						
656A	Willston	125.02	56	IAMs_20	IAMs_20	23 22 56.1	
	comp=Z,3µm,20.0s						
Y57A	Sumter	125.10	50	IAMs_20	IAMs_20	23 10 13.1	
	comp=Z,4µm,21.0s						
M59A	Waymart	125.13	40	P	PKiKP	22 22 14.0	+1.1
	baz=302						
I60A	Shoreham	125.17	36	P	PKiKP	22 22 13.9	+1.0
	baz=306						
SDMD	Soldier's Deli	125.29	43	IAMs_20	IAMs_20	23 18 04.8	
	comp=Z,3µm,19.0s						
MVL	Millersville	125.33	42	IAMs_20	IAMs_20	23 17 28.6	
	comp=Z,5µm,20.0s						
V58A	Windy Hill, Pi	125.33	47	IAMs_20	IAMs_20	23 10 52.9	
	comp=Z,5µm,21.0s						
D62A	Allapoint, All	125.49	31	IAMs_20	IAMs_20	23 09 05.0	
	comp=Z,5µm,22.0s						
CBN	Corbin Frederi	125.50	44	IAMs_20	IAMs_20	23 11 34.8	
	comp=Z,5µm,21.0s						
X58A	Rowland	125.68	49	IAMs_20	IAMs_20	23 12 40.4	
	comp=Z,4µm,20.0s						
N60A	Cedar Hill Far	125.69	40	P	PKiKP	22 22 14.4	+0.4
	baz=302						
Y58A	Scranton	125.69	50	IAMs_20	IAMs_20	23 15 32.9	
	comp=Z,4µm,19.0s						
M60A	Port Jervis	125.75	39	P	PKiKP	22 22 16.7	+2.6
	baz=303						
O60A	Telford	125.78	41	P	PKiKP	22 22 14.5	+0.3
	baz=302						
G62A	West of Eustis	125.91	33	IAMs_20	IAMs_20	23 16 02.4	
	comp=Z,5µm,19.0s						
T59A	Double "B" Far	125.95	46	P	PKiKP	22 22 15.0	+0.3
	baz=297						
Q60A	Greensboro	126.16	43	IAMs_20	IAMs_20	23 12 06.0	
	comp=Z,6µm,21.0s						
E63A	Oxbow	126.25	31	IAMs_20	IAMs_20	23 19 52.2	
	comp=Z,4µm,20.0s						
Y59A	Loris	126.26	49	IAMs_20	IAMs_20	23 14 53.9	
	comp=Z,4µm,20.0s						
PQI	Presque Isle	126.30	31	IAMs_20	IAMs_20	23 14 25.2	
	comp=Z,5µm,20.0s						
DWPF	Disney Wildern	126.33	57	IAMs_20	IAMs_20	23 14 30.0	
	comp=Z,4µm,20.0s						
F63A	Nahmakanta, Br	126.37	32	IAMs_20	IAMs_20	23 11 23.5	
	comp=Z,3µm,20.0s						
JTS	Las Juntas de	126.41	80	PKP	PKiKP	22 22 16.7	+0.5
	comp=Z,2.9nm,0.4s,baz=15,slow=20,SNR=3.1						
JTS	Las Juntas de	126.41	80	PKIKP	PKiKP	22 22 16.2	0.0
JTS				MLR	MLR		
	comp=Z,9µm,21.0s						
JTS	Las Juntas de	126.41	80		PKiKP	22 22 16.2	0.0
K62A	Royalston	126.48	37	IAMs_20	IAMs_20	23 12 53.4	
	comp=Z,5µm,20.0s						
PKME	Peaks-Kenny Pk	126.56	33	IAMs_20	IAMs_20	23 20 08.4	
	comp=Z,4µm,20.0s						
QUA2	Belchertown	126.63	37	IAMs_20	IAMs_20	23 14 23.5	
	comp=Z,5µm,20.0s						
F64A	Sherman	126.66	32	IAMs_20	IAMs_20	23 11 04.1	
	comp=Z,4µm,21.0s						
Y60A	Bolivia	126.75	49	IAMs_20	IAMs_20	23 16 52.8	
	comp=Z,4µm,19.0s						
BATG	Bathurst New B	126.85	29	IAMs_20	IAMs_20	23 13 53.6	
	comp=Z,5µm,20.0s						
ESPN	Las Esperanzas	126.90	77	IAMs_20	IAMs_20	23 15 19.6	
	comp=Z,5µm,19.0s						
TSUM	Tsumeb	126.95	243		PKPdf	22 22 13.4	-3.4
HRV	Adam Dziewonsk	126.98	37	IAMs_20	IAMs_20	23 19 52.5	
	comp=Z,4µm,19.0s						
WES	Weston	127.19	37	IAMs_20	IAMs_20	23 19 16.1	
	comp=Z,5µm,19.0s						
BRYW	Bryant College	127.33	37	IAMs_20	IAMs_20	23 13 39.8	
	comp=Z,5µm,20.0s						
061Z	Ochoppi	127.45	60	IAMs_20	IAMs_20	23 18 23.2	
	comp=Z,3µm,19.0s						
G65A	Princeton	127.52	32	IAMs_20	IAMs_20	23 13 09.7	
	comp=Z,5µm,21.0s						
060A	Indiantown	127.57	58	IAMs_20	IAMs_20	23 15 22.0	
	comp=Z,4µm,20.0s						
EMMW	East Machias	127.90	32	IAMs_20	IAMs_20	23 21 07.0	
	comp=Z,5µm,19.0s						
GGN	Saint George	127.95	31	IAMs_20	IAMs_20	23 12 03.4	
	comp=Z,5µm,21.0s						
M65A	Busby, Falmout	128.08	37	IAMs_20	IAMs_20	23 15 46.9	
	comp=Z,5µm,20.0s						
LMN	Caledonia Moun	128.47	29	IAMs_20	IAMs_20	23 12 04.5	
	comp=Z,6µm,22.0s						
PRVC	Isla de Provid	129.63	75	eP	PKiKP	22 22 26.1	+3.5
KEST	Kesra	130.36	316	PKP	PKiKP	22 22 24.1	+0.4
	comp=Z,16nm,1.2s,baz=281,slow=2.9,SNR=8.8						
AZU	Azuero	131.16	82	eP	PKiKP	22 22 28.8	+3.1
MAHO	Mahon	131.25	323	PP	PP	22 24 39.5	-2.0
MTDJ	Mount Denham	132.44	68	IAMs_20	IAMs_20	23 10 32.6	
	comp=Z,4µm,22.0s						
OTAV	Otavalo	132.88	93	eP	PKiKP	22 22 30.4	+0.6
SOLC	Bahia Solano	134.06	84	eP	PKiKP	22 22 32.9	+1.3
PIZC	Pizarro, Choco	134.13	86	eP	PKiKP	22 22 32.1	+0.4
BBAC	Balboa, Cauca	134.19	90	eP	PKiKP	22 22 33.2	+1.1
GTBY	Guantanamo Bay	134.25	65	IAMs_20	IAMs_20	23 20 57.1	
	comp=Z,3µm,19.0s						
PB04	IPOC Station P	134.44	126	IAMs_20	IAMs_20	23 10 56.1	
	comp=Z,4µm,22.0s						
CRUC	La Cruz	134.46	91	eP	PKiKP	22 22 34.4	+1.5
POPC	Popayan, Colom	134.78	90	eP	PKiKP	22 22 35.0	+1.6
SOTA	Rioblanco	134.83	90	eP	PKiKP	22 22 35.0	+1.2
PCON	Cinco Dias	135.05	90	eP	PKiKP	22 22 35.9	+1.5
UCM	Universidad Co	135.14	329	PP	PP	22 24 53.5	-13
YOTC	Yotoco, Valle	135.14	88	eP	PKiKP	22 22 35.0	+1.0
PLMC	San Jos del P	135.20	86	eP	PKPdf	22 22 24.6	-7.9
DBBC	Dabeiba	135.22	83	eP	PKPdf	22 22 31.4	-1.2
LVC	Limon Verde	135.30	127	IAMs_20	IAMs_20	23 13 46.7	
	comp=Z,4µm,21.0s						
CBOC	Ciudad Bolivar	135.46	85	eP	PKiKP	22 22 34.1	-0.5
PBRG	Braganca	135.65	333	ePP	PP	22 25 29.8	+21
PBRG	Braganca	135.65	333	eSS	SS	22 44 10.1	+64
FLOC	Florencia	135.76	91	eP	PKiKP	22 22 35.9	+0.8
UREC	San Jos de Ur	135.85	82	eP	PKiKP	22 22 36.8	+1.5
CART	Cartagena	135.87	325	PP	PP	22 25 09.2	-1.6
CART	Cartagena	135.87	325	IAMs_20	IAMs_20	23 23 09.0	
	comp=Z,5µm,22.0s						
HELC	Santa Helena	135.93	84	eP	PKiKP	22 22 37.6	+1.8
ESBB	Sonseca Array	135.98	329	IAMs_20	IAMs_20	23 29 39.5	
	comp=Z,4µm,20.0s						
ESDC	Sonseca Array	135.98	329	PP	PP	22 25 16.4	+4.9
	comp=Z,0.8nm,0.3s,baz=27,slow=6.2,SNR=8.0						
SJCC	San Jacinto, C	136.03	79	eP	PKiKP	22 22 35.9	+0.2
PB11	IPOC Station P	136.04	123		PKiKP	22 22 35.9	+0.2
GUY2C	Guyana, Caldas	136.11	86	eP	PKiKP	22 22 37.6	+1.3
PGAV	Gavieira, Arco	136.19	335	ePP	PP	22 25 05.9	-6.7
PGAV	Gavieira, Arco	136.19	335	eLQ	LQ	23 02 27.0	
PGAV				eLR	LR	23 09 18.8	
	comp=Z,4µm,20.0s						
ORTC	Ortega, Tolima	136.24	88	eP	PKiKP	22 22 38.5	+2.4
MVO	Moncorvo	136.30	333	ePKPdf	PKPdf	22 22 33.9	+0.1
MVO	Moncorvo	136.30	333	ePP	PP	22 25 32.7	+19
MVO	Moncorvo	136.30	333	eSS	SS	22 44 04.5	+51
MVO	Moncorvo	136.30	333	eLQ	LQ	23 02 27.3	
MVO				eLR	LR	23 08 19.0	
	comp=Z,3µm,22.0s						
GO01	Chusmiza	136.47	123	IAMs_20	IAMs_20	23 13 00.3	
	comp=Z,3µm,19.0s						
PVRL	Vila Real	136.51	334	ePP	PP	22 25 33.5	+19
NORC	Norcasia	136.60	85	eP	PKPdf	22 22 35.0	-0.1
SMRC	Santa Marta, M	136.82	77	eP	PKPdf	22 22 35.1	-0.2
ARGC	Ariguani, Magd	136.95	79	eP	PKPdf	22 22 31.4	-4.3
PTBC	PUERTO BERRIO,	136.98	84	eP	PKPdf	22 22 35.9	+0.1
PVIS	Viseu	137.05	334	ePP	PP	22 25 36.4	+18
MTE	Manteigas	137.14	333	ePP	PP	22 25 24.7	+6.0
MTE	Manteigas	137.14	333	eSS	SS	22 44 31.5	+68
MTE	Manteigas	137.14	333	eLQ	LQ	23 02 55.4	
MTE				eLR	LR	23 09 52.8	
	comp=Z,5µm,22.0s						
ROSC	El Rosal	137.16	86	PKP	PKPdf	22 22 37.3	+0.7
	comp=Z,5.4nm,0.3s,baz=138,slow=8.1,SNR=6.2						
ROSC	El Rosal	137.16	86	eP	PKiKP	22 22 38.9	+0.5
ROSC	El Rosal	137.16	86		PKiKP	22 22 37.4	-1.0
ROSC				IAMs_20	IAMs_20	23 14 13.1	
	comp=Z,4µm,20.0s						
SMLC	San Martn de	137.22	81	eP	PKiKP	22 22 38.5	+0.5
GRTK	Grand Turk	137.32	61	IAMs_20	IAMs_20	23 16 22.3	
	comp=Z,4µm,20.0s						
BBSR	BB Station	137.36	43	IAMs_20	IAMs_20	23 20 46.7	
	comp=Z,3µm,21.0s						
SPBC	San Pablo de B	137.39	85	eP	PKPdf	22 22 34.4	-2.2
PCBR	Castelo Branco	137.56	332	ePKPdf	PKiKP	22 22 41.6	+3.6
PCBR	Castelo Branco	137.56	332	ePP	PP	22 25 18.1	-3.1
MACC	Macarena, Meta	137.59	90	eP	PKiKP	22 22 39.7	+0.8
COI	Coimbra	137.69	334	IAMs_20	IAMs_20	23 31 03.4	
	comp=Z,4µm,18.0s						
COI	Coimbra	137.69	334	ePP	PP	22 25 41.0	+19
BRRC	Barranca, Sant	137.69	83	eP	PKPdf	22 22 35.9	-1.1
CODC	Agustn Codazz	137.73	79	eP	PKPdf	22 22 35.9	-1.2
CHIC	Chingaza	137.75	87	eP	PKPdf	22 22 36.8	-0.9
PMRV	Marv??o	137.85	332	ePP	PP	22 25 21.3	-1.7
PMRV	Marv??o	137.85	332	eSS	SS	22 44 28.2	+56
PMRV	Marv??o	137.85	332	eLQ	LQ	23 04 49.1	
PMRV				eLR	LR	23 09 06.8	
	comp=Z,2µm,22.0s						
PCAS	Casmilo, Conde	137.85	334	ePKPdf	PKPdf	22 22 29.7	-6.9
PCAS	Casmilo, Conde	137.85	334	ePP	PP	22 25 24.6	+1.6
OCAC	Ocana	138.01	81	eP	PKiKP	22 22 40.4	+0.6
BARC	Barichara	138.24	84	eP	PKPdf	22 22 34.0	-4.3
SC01	Santiago de lo	138.35	64	IAMs_20	IAMs_20	23 17 51.5	
	comp=Z,4µm,21.0s						
RUSC	La Rusia	138.37	85	eP	PKiKP	22 22 42.0	+1.1
EMAL	Malaga-Limoner	138.38	327	PKP	PKPdf	22 22 30.6	-7.0
EMAL	Malaga-Limoner	138.38	327	PP	PP	22 25 27.2	+0.7
PESTR	Estremoz	138.39	332	eSS	SS	22 44 17.8	+39
PSBE	So Bento	138.42	333	eSS	SS	22 44 36.1	+57
PMTG	Montargil	138.53	332	ePP	PP	22 25 30.6	+3.4
PMTG	Montargil	138.53	332	eSS	SS	22 44 41.8	+62
PAMC	Pamplona, Colo	138.68	83	eP	PKPdf	22 22 33.6	-5.8
GUVC	San Jose del G	138.82	90	eP	PKPdf	22 22 36.7	-2.5
LPAZ	La Paz	138.86	119	PKhKP	PKPpre	22 22 34.1	
	comp=Z,2.2nm,0.7s,baz=287,slow=0.5,SNR=7.1						
URIC	Uribia, Colomb	138.92	76	eP	PKiKP	22 22 41.9	+0.5
PMAFR	Mafra	139.10	333	ePKPdf	PKiKP	22 22 50.0	+8.8
PMAFR	Mafra	139.10	333	ePP	PP	22 25 35.1	+4.4
PMAFR	Mafra	139.10	333	eSS	SS	22 44 35.6	+49
PBEJ	Beja	139.19	331	ePKPdf	PKiKP	22 22 49.6	+8.2
PTGC	Puerto Gaitan,	139.34	87	eP	PKiKP	22 22 42.7	+0.3
PNCL	Nicolau / Gran	139.44	332	eSS	SS	22 44 31.2	+41
CEU	Ceuta	139.53	327	PP	PP	22 25 33.8	+0.2
SFS	San Fernando	139.56	328	IAMs_20	IAMs_20	23 30 55.3	
	comp=Z,4µm,19.0s						
PCVE	Castro Verde	139.58	331	eSS	SS	22 44 29.4	+37
PVAQ	Vaqueiros	139.60	330	eSS	SS	22 44 30.5	+38
PVAQ	Vaqueiros	139.60	330	eLQ	LQ	23 06 45.5	
PVAQ				eLR	LR	23 11 11.6	
	comp=Z,5µm,20.0s						
TAMC	Tame, Arauca	139.63	84	eP	PKiKP	22 22 47.2	+4.2
PBDV	Barranco-do-Ve	139.84	330	ePP	PP	22 25 39.4	+4.0
PBDV	Barranco-do-Ve	139.84	330	eSS	SS	22 44 38.9	+43
PTEO	Sao Teotonio	139.98	332	ePP	PP	22 25 28.3	-7.9
PFVI	Vila Bisbo	140.36	331	eSS	SS	22 44 25.6	+24
SOCV	Socops	140.44	81	eP	PKiKP	22 22 43.5	-1.1
SDV	Santo Domingo	140.60	80	PKhKP	PKPpre	22 22 36.3	
	comp=Z,1.7nm,0.4s,baz=75,slow=2.4,SNR=3.9						
SDV	Santo Domingo	140.60	80	eP	PKPdf	22 22 37.3	-5.3
SDV	Santo Domingo	140.60	80		PKPdf	22 22 39.6	-3.0
CPUP	Villa Florida	141.40	141	PKhKP	PKPpre	22 22 37.9	
	comp=Z,2.2nm,0.9s,baz=264,slow=3.7,SNR=3.3						
CPUP				PKP	PKiKP	22 22 45.0	-1.2
	comp=Z,47nm,1.2s,baz=244,slow=0.9,SNR=21						
CPUP	Villa Florida	141.40	141	PKIKP	PKiKP	22 22 45.0	-1.2
AVE	Averroes	142.58	326	PKP	PKiKP	22 22 57.8	+9.4
AVE	Averroes	142.58	326	PP	PP	22 25 53.9	+1.7
SJG	San Juan	142.88	64	PKP	PKPdf	22 22 46.8	+0.6
	comp=Z,3.2nm,0.3s,baz=277,slow=4.7,SNR=6.2						
SJG	San Juan	142.88	64	eP	PKPdf	22 22 44.4	-1.8
SJG	San Juan	142.88	64	PKIKP	PKPdf	22 22 43.6	-2.7
SJG				MLR	MLR		
	comp=Z,4µm,21.0s						
SJG	San Juan	142.88	64		PKPdf	22 22 43.6	-2.7
SJG	San Juan	142.88	64	IAMs_20	IAMs_20	23 16 55.9	
	comp=Z,4µm,21.0s						
BAUV	El Baul	143.14	79	eP	PKPbc	22 22 45.2	+1.4
CDVI	St. Croix	144.24	64		PKPbc	22 22 46.9	0.0
ADH	Angra Heroismo	144.50	354	ePKP	PKPdf	22 22 48.1	-0.5
ROSA	Rosais	144.52	356	ePKP	PKiKP	22 22 50.9	-1.4
PMAN	Manadas	144.59	356	ePKP	PKiKP	22 22 50.9	-1.5
SIV	San Ignacio	145.01	124	PKPbc	PKPab	22 22 48.9	-0.5
	baz=245,slow=4.8						
BART	Pico Bartolome	145.11	351	ePKP	PKPdf	22 22 50.9	+1.1
PSET	Sete Cidades	145.14	352	ePKP	PKPdf	22 22 51.1	+1.3
GRON	Grota Negra	145.17	352	ePKP	PKPdf	22 22 51.7	+1.9
CMLA	Cha da Macela	145.17	352	ePKP	PKPbc	22 22 48.5	-0.8
PDA	Ponta Delgada	145.21	352	ePKP	PKiKP	22 22 54.1	+0.4
SMRT	St. Maarten	145.63	62	IAMs_20	IAMs_20	23 28 19.7	
	comp=Z,3µm,20.0s						
SABA	Saba	145.64	63	eP	PKiKP	22 22 54.8	-0.4
TOC3	Torodi Ar. Sit	145.81	289	IAMs_20	IAMs_20	23 34 50.7	
	comp=Z,3µm,20.0s						
TOC1	Torodi Ar. Sit	145.81	289	IAMs_20	IAMs_20	23 34 50.9	
	comp=Z,3µm,20.0s						
TORD	Torodi Ar. Bea	145.83	289	PKPbc	PKPbc	22 22 51.8	-0.2
	comp=Z,127nm,1.0s,baz=62,slow=3.6,SNR=66						
TORD				PP	PP	22 26 15.6	+2.4
	comp=Z,7.0nm,1.1s,baz=64,slow=5.6,SNR=4.5						
TOC4	Torodi Ar. Sit	145.83	289	IAMs_20	IAMs_20	23 34 50.3	
	comp=Z,3µm,21.0s						
PSMN	Pico do Norte,	145.85	351	ePKP	PKPbc	22 22 51.2	-0.3
TOC5	Torodi Ar. Sit	145.85	289	IAMs_20	IAMs_20	23 34 51.9	
	comp=Z,3µm,21.0s						
PSMA	Santa Maria	145.87	351	ePKP	PKPab	22 22 52.7	+0.8
SEUS	St. Eustatius	145.92	63	eP	PKiKP	22 22 56.9	+1.2
SAML	Samuel	146.10	111	eP	PKPab	22 22 53.5	0.0
SAML	Samuel	146.10	111	PKP2	PKPab	22 22 53.1	-0.4
SAML				MLR	MLR		
	comp=Z,4µm,20.0s						
SAML	Samuel	146.10	111		PKPab	22 22 53.1	-0.4
SAML	Samuel	146.10	111	IAMs_20	IAMs_20	23 22 22.5	
	comp=Z,4µm,20.0s						
SKI	Saint Kitts	146.19	63	eP	PKiKP	22 22 57.8	+1.4
SKOC	St. Kitts, UWI	146.21	63	eP	PKiKP	22 23 03.7	+7.4
PCRV	Puerto La Cruz	146.29	76	PKPbc	PKPab	22 22 53.8	-0.5
	comp=Z,12nm,0.7s,baz=29,slow=13,SNR=4.3						
PLCV	Puerto La Cruz	146.34	76		PKPbc	22 22 53.8	+0.2
MLYT	Lee's Yard	146.90	64	eP	PKiKP	22 22 59.6	+1.8
ANWB	Willy Bob	146.92	62	eP	PKPbc	22 22 55.0	-0.1
PMPST	Porto Santo, M	147.09	336	ePKPdf	PKiKP	22 22 57.6	-0.2
PMAR	Madeira	147.63	337	ePKPdf	PKPab	22 23 00.9	+1.8
PMOZ	Porto Moniz, M	147.66	337	eLQ	LQ	23 14 37.9	
PMOZ				eLR	LR	23 20 41.9	
FUL	Funchal	147.69	337	ePKPdf	PKPab	22 23 05.5	+6.4
MDPO	Dominica; Chan	147.96	65	eP	PKiKP	22 22 59.9	-0.1
MDPV	Dominica, Penn	147.97	65	eP	PKPab	22 23 02.1	+1.3
DWS	Wesley	148.09	65	eP	PKPab	22 23 01.0	-0.2
DWS	Wesley	148.09	65	eP	PKPab	22 23 15.3	+14
DLPL	La Plaine	148.22	66	eP	PKPab	22 23 09.0	+7.2
SHEL	Horse Pasture	148.29	232	IAMs_20	IAMs_20	23 28 42.0	
	comp=Z,4µm,20.0s						
FDF	Fort de France	148.51	67	eP	PKPdf	22 22 57.7	+1.7
FDF	Fort de France	148.51	67	IAMs_20	IAMs_20	23 28 30.7	
	comp=Z,3µm,20.0s						
GUIV	Guiria	148.54	75	eP	PKiKP	22 23 01.7	+0.5
GRHS	Sauteurs	148.75	72	eP	PKPdf	22 22 50.8	-5.6
GRSS	Sisters	148.76	71	eP	PKPdf	22 22 53.0	-3.4
GRGR	Grenville	148.76	72	eP	PKPdf	22 22 49.4	-7.0
SVB	Belmont	148.84	70	eP	PKPbc	22 22 59.8	-0.6
SVV	Soufriere Volc	148.87	69	eP	PKPbc	22 22 60.0	-0.6
SLB	Belfond	148.88	68	eP	PKPbc	22 23 01.1	+0.5
SSV	Crater Summit	148.88	69	eP	PKPbc	22 22 59.3	-1.3
SLBI	Saint Lucia, B	148.89	68	eP	PKPbc	22 23 00.3	-0.2
SVCV	St. Vincent, C	148.94	69	eP	PKiKP	22 23 01.5	-0.6
SLAC	Saint Lucia, A	149.00	68	eP	PKPbc	22 23 00.8	0.0
MCLT	Moule a Chique	149.01	69	eP	PKPdf	22 22 54.5	-2.3
SPB	Sao Paulo	149.13	150	IAMs_20	IAMs_20	23 30 24.7	
	comp=Z,3µm,21.0s						
TRN	Trinidad (W)	149.33	75	eP	PKiKP	22 23 03.2	+0.4
TPP	Pointe-a-Pierr	149.35	75	eP	PKiKP	22 23 03.5	+0.6
TOSP	Speyside	150.02	73	eP	PKPdf	22 22 58.7	+0.3
BCHC	Barbados, Cave	150.40	69	eP	PKPab	22 23 13.0	+2.3
BBGH	Gun Hill	150.46	69	eP	PKPab	22 23 08.9	-2.0
BBGH	Gun Hill	150.46	69	IAMs_20	IAMs_20	23 32 16.6	
	comp=Z,4µm,21.0s						
BBSP	Saint Philip	150.57	69	eP	PKPab	22 23 12.0	+0.7
PTGA	Pitinga	151.18	97	PKPbc	PKiKP	22 23 07.0	+0.2
	comp=Z,80nm,1.1s,baz=274,slow=2.4,SNR=16						
PTGA	Pitinga	151.18	97	PKPdf	PKPdf	22 22 58.3	-2.0
PTGA					PKiKP	22 23 06.7	0.0
PTGA				IAMs_20	IAMs_20	23 25 59.3	
	comp=Z,3µm,19.0s						
KIC	Kosan Boka	153.25	278	ePKP1	PKiKP	22 23 12.0	+1.0
	comp=Z,3.6nm,0.2s						
KIC	Kosan Boka	153.25	278	eP	PKPdf	22 23 05.0	+1.6
	comp=Z,44nm,1.4s						
DBIC	Dimbokro	153.33	278	PKP	PKPdf	22 23 04.5	+1.1
	comp=Z,16nm,1.3s,baz=48,slow=6.8,SNR=4.9						
DBIC				PKPbc	PKiKP	22 23 11.6	+0.5
	comp=Z,20nm,0.8s,baz=75,slow=2.5,SNR=14						
DBIC	Dimbokro	153.33	278		PKPdf	22 23 06.2	+2.8
TIC	Toumodi	153.50	278	ePKP1	PKiKP	22 23 13.3	+1.8
TIC	Toumodi	153.50	278	eP	PKPdf	22 23 04.5	+0.8
LIC	Lamto	153.55	278	ePKP1	PKiKP	22 23 11.8	+0.2
	comp=Z,123nm,1.5s						
LIC	Lamto	153.55	278	eP	PKPdf	22 23 02.5	-1.3
	comp=Z,56nm,1.4s						
BDFB	Brasilia	155.09	139	PKP	PKPdf	22 23 06.4	+0.4
	comp=Z,22nm,1.2s,baz=87,slow=1.0,SNR=13						
BDFB				PKPbc	pPKPbc	22 23 17.1	-2.7
	comp=Z,29nm,1.1s,baz=171,slow=0.8,SNR=15						
BDFB	Brasilia	155.09	139		PKPdf	22 23 09.9	+3.9
ASCN	Ascension	159.73	237	IAMs_20	IAMs_20	23 29 10.6	
	comp=Z,4µm,22.0s						

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*IDC **11** 22:05:48.3±4.3, 22°.76N×94°.47E, h98^{km}±39^{km}, mb3.6/7, mb1 3.7/8, mb1mx3.3/50, mbtmp3.9/8, Error ellipse: s-maj=113.2km s-min=16.6km az=57.0*

ISC 11 22:05:48.8±1.5**, 22°.8N**±0°.5×**94°.5E**±0°.6**, h105**^{km}**, n8, σ0^{s}.57**/8**, mb3.8**/7**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	5.97	135	P	Pn	22 07 14.3	-0.4
	0.9nm,0.3s,baz=311,slow=13,SNR=8.8						
MKAR	Makanchi Array	25.93	341	P	P	22 11 11.8	+0.6
	1.1nm,0.5s,baz=147,slow=10,SNR=27						
KURBB	Kurchatov Arra	30.48	340	P	P	22 11 50.8	-0.7
	0.7nm,0.7s,baz=149,slow=7.7,SNR=5.5						
ZALV	Zalesovo Beam	32.00	349	P	P	22 12 05.1	+0.3
	0.6nm,0.3s,baz=182,slow=7.2,SNR=3.8						
AKTO	Aktyubinsk	39.62	323	P	P	22 13 10.1	+0.1
	0.6nm,0.4s,baz=143,slow=10						
WRA	Warramunga Arr	57.56	134	P	P	22 15 28.0	+0.2
	1.0nm,0.5s,baz=321,slow=7.5,SNR=3.1						
ASAR	Alice Springs	59.97	138	P	P	22 15 45.0	+0.6
	1.3nm,0.9s,baz=321,slow=6.6,SNR=3.9						
ARCES	ARCESS Array B	61.55	338	P	P	22 15 54.2	-0.2
	4.1nm,0.9s,baz=87,slow=7.4,SNR=3.0						

IDC 11 22:08:28.9±2.1**, 3°.54N×127°.60E, h0**^{km}**, mb4.0**/4**, mb1 4.2**/4**, mb1mx3.6**/57**, mbtmp4.0**/4**, MS5.1**/3**, Ms1 5.1**/3**, ms1mx4.3**/42**, Error ellipse: s-maj=192.1km s-min=20.9km az=68.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.71	140	LR	LR	22 11 50.5	
	comp=Z,15µm,19.9s,baz=92,slow=35						
WRA	Warramunga Arr	24.26	164	P	P	22 13 46.5	-1.4
	3.0nm,0.9s,baz=344,slow=9.7,SNR=7.8						
ASAR	Alice Springs	27.73	168	P	P	22 14 20.3	+1.0
	2.4nm,1.2s,baz=344,slow=12,SNR=2.2						
MKAR	Makanchi Array	58.21	325	P	P	22 18 24.8	-0.1
	1.9nm,1.0s,baz=123,slow=7.2,SNR=3.4						
KURBB	Kurchatov Arra	62.37	327	P	P	22 18 53.5	+0.2
	2.0nm,1.0s,baz=126,slow=4.8,SNR=2.8						
BRTR	Keskin Array B	90.81	310	LR	LR	23 08 05.8	
	comp=Z,854nm,21.5s,baz=42,slow=39						
AKASG	Malin Array Be	92.58	321	LR	LR	23 08 12.6	
	comp=Z,2µm,20.3s,baz=60,slow=39						

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*IPEC **11** 22:12:07.1±0.2, 49°.86N×18°.56E, h1^{km}±3^{km}, ML2.2/3, Error ellipse: s-maj=1.7km s-min=1.1km az=164.0*

VIE 11 22:12:06.5±1.1**, 49°.72N×18°.60E, h0**^{km}**, mb1.6**/2**, ml2.4**/4**, 1C-1D, Error ellipse: s-maj=10.8km s-min=6.2km az=48.0 28 km ESE of Ostrava Suspected Mining induced., Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.31	292	ePG	Pg	22 12 12.7	+0.2
OKC				eSG	Sg	22 12 15.4	-1.1
	comp=Z,60nm,0.5s						
MORC	Moravsky Berou	0.69	275	ePg	Pg	22 12 19.9	+0.3
	baz=83						
MORC				eSg	Sg	22 12 27.9	-0.6
	46nm,0.4s,baz=83						
MORC	Moravsky Berou	0.69	275	ePG	Pg	22 12 19.9	+0.3
MORC				eSG	Sg	22 12 28.0	-0.5
OJC	Ojcow	0.92	57	ePg	Pg	22 12 23.9	-0.4
OJC				eSg	Sg	22 12 36.1	-0.1
JAVC	Velka Javorina	1.06	215	ePg	Pn	22 12 29.7	+1.1
	baz=30						
JAVC	Velka Javorina	1.06	215	ePG	Pn	22 12 29.8	+1.2
NIE	Niedzica	1.15	105	ePg	Pn	22 12 31.0	+1.1

NIE				eSg	Sn	22 12 48.9	+2.5
KRLC	Kraliky	1.22	287	ePG	Pg	22 12 28.0	-2.0
KRLC				eSG	Sg	22 12 44.0	-1.9
	comp=Z,44nm,0.3s						
VYHS	Vyhne	1.24	173	ePG	Pn	22 12 32.9	+1.8
VYHS				eSG	Sn	22 12 51.0	+2.4
VRAC	Vranov	1.37	253	ePg	Pn	22 12 32.9	0.0
	baz=66						
VRAC				eSg	Sg	22 12 50.7	+0.2
	24nm,0.4s,baz=66						
VRAC	Vranov	1.37	253	ePG	Pb	22 12 33.0	0.0
VRAC				eSG	Sg	22 12 50.7	+0.2
SMOL	Smolenice	1.43	213	eSG	Sn	22 12 55.6	+2.3
KRUC	Moravsky	1.58	246	ePg	Pb	22 12 36.4	-0.2
	baz=60						
KRUC				eSg	Sg	22 12 57.7	+0.4
	24nm,0.2s,baz=60						
KRUC	Moravsky	1.58	246	ePG	Pb	22 12 36.5	-0.1
KRUC				eSG	Sg	22 12 57.8	+0.5
DPC	Dobruska-Polom	1.59	294	ePG	Pn	22 12 34.8	-1.2
DPC				eSG	Sn	22 12 55.1	-2.3
	comp=Z,20nm,0.4s						
MODS	Modra-Piesok	1.60	213	ePG	Pb	22 12 37.1	+0.1
MODS				eSG	Sg	22 12 58.2	+0.1
OSTC	Ostas	1.74	299	ePG	Pn	22 12 37.2	-0.9
OSTC				eSG	Sn	22 13 00.3	-0.7
UPC	Upice	1.84	296	ePG	Pn	22 12 39.3	-0.1
UPC				eSG	Sn	22 13 02.8	-0.5
	comp=Z,14nm,0.4s						
CHVC	Chvalec	1.85	299	eSG	Sn	22 13 02.8	-0.8
	comp=Z,14nm,0.5s						
KSP	Ksiaz	1.85	308	ePg	Pn	22 12 39.5	-0.1
KSP				eSg	Sn	22 13 02.5	-1.2
TREC	Trest	2.07	259	eSG	Sb	22 13 11.0	-0.3
CONA	Conrad Observa	2.55	226	Pn	Pn	22 12 49.9	+0.7
	0.5nm,0.2s						
CONA				Sn	Sn	22 13 20.6	-0.3
PRU	Pruhonice	2.64	277	eSG	Sb	22 13 26.9	-0.6
	comp=Z,5.2nm,0.5s						
BRG	Berggiesshubel	3.20	293	PG	Pb	22 13 04.0	-0.1
BRG				SG	Sb	22 13 45.3	+1.6
	6.1nm,0.5s						
KHC	Kasperske Hory	3.33	262	ePG	Pb	22 13 07.7	+1.3
KHC				eSN	Sn	22 13 39.5	-0.6
KHC				eSG	Sg	22 13 51.1	-2.3
	comp=Z,5.8nm,0.5s						
MOA	Molln	3.42	238	ePn	Pn	22 13 00.8	-0.3
	0.1nm,0.1s						
CLL	Collm	3.91	296	ePg	Pg	22 13 19.0	-2.3
CLL				eSg	Sg	22 14 08.0	-3.9
	comp=Z,4.0nm,0.5s						
DRGR		4.02	135	⇓P	Pn	22 13 11.3	+1.8
DRGR				⇑S	Sn	22 13 55.3	-2.0

LJU 11 22:18:50.6, 45°.34N×14°.50E, h7km, ML0.4, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDS	Knezji Dol	0.20	337	i Pg	Pg	22 18 54.7	0.0
KNDS				i Sg	Sg	22 18 58.0	+0.5
	comp=Z,3.0nm,0.1s						
GBRS	Gornja Briga	0.29	49	i Pg	Pg	22 18 56.6	+0.2
GBRS				i Sg	Sg	22 19 00.6	+0.3
	comp=Z,2.0nm,0.1s						
SKDS	Skadanscina	0.40	301	i Sg	Sg	22 19 04.0	+0.5
	comp=Z,4.0nm,0.2s						
CEY	Cerknica	0.40	353	i Sg	Sg	22 19 04.3	+0.7
	comp=Z,1.0nm,0.1s						
VISS	Visnje	0.52	28	i Pg	Pg	22 19 00.9	+0.2
VISS				i Sg	Sg	22 19 07.4	-0.1

IDC 11 22:18:53.0±1.8, 35°.73N×140°.65E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.4/57, mbtmp3.7/4, ML2.7/1, Error ellipse: s-maj=52.0km s-min=26.0km az=53.0

JMA 11 22:19:03.0±0.1, 35°.79N×140°.10E, h62km±1km, M3.0

ISC 11 22:19:02.7±1.0, 35°.74N±0°.06×140°.17E±0°.06, h67km±9km, n19, σ1^{s}35/18, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSMT	Sammumatsuo	0.25	114	P	Pn	22 19 14.3	+1.1
JIHU	Itakohorinouch	0.36	53	P	Pn	22 19 14.3	+0.2
JYT	Yasato	0.48	2	P	Pn	22 19 14.5	-0.6
JYT				S	Sn	22 19 23.3	-0.9
JAG	Ashikaga	0.89	320	P	Pn	22 19 19.2	-0.6
BSO3	Boso 3	0.98	163	P	Pn	22 19 20.7	+0.1
JOD2	Odawara 2	1.00	242	P	Pn	22 19 20.6	-0.5
JOD2				S	Sn	22 19 33.6	-1.2
JRY	Ryogami san	1.06	285	P	Pn	22 19 22.0	+0.1
JKT	Katashina	1.26	324	P	Pn	22 19 24.0	-0.6
JKT				eS	Sn	22 19 40.4	-0.5
MJAR	Matsushiro Arr	1.77	297	Pn	Pn	22 19 31.5	+0.2
	2.4nm,0.3s,baz=100,slow=14,SNR=119						
MJAR				Sn	Sn	22 19 57.3	+4.4
	1.2nm,0.3s,baz=145,slow=13,SNR=6.5						
MAT	Matsushiro	1.78	297	P	Pn	22 19 31.4	+0.1
MAT				S	Sn	22 19 53.1	+0.1
H11N2	WAKE ISLAND Hy	28.41	117	T	T	22 54 21.5	
	baz=304						
H11N1	WAKE ISLAND Hy	28.41	117	T	T	22 54 31.9	
	baz=304						
H11N3	WAKE ISLAND Hy	28.42	117	T	T	22 54 42.9	
	baz=304						
H11S1	WAKE ISLAND Hy	29.06	119	T	T	22 54 57.1	
	baz=308						
H11S3	WAKE ISLAND Hy	29.06	119	T	T	22 54 56.4	
	baz=308						
H11S2	WAKE ISLAND Hy	29.07	119	T	T	22 55 02.9	
	baz=308						
MKAR	Makanchi Array	43.97	303	P	P	22 27 02.8	-0.4
	0.2nm,0.5s,baz=84,slow=9.9,SNR=5.9						
WRA	Warramunga Arr	55.66	187	P	P	22 28 31.2	-0.8
	0.2nm,0.3s,baz=0.7,slow=7.5,SNR=7.1						
FINES	FINESS Array B	69.48	332	P	P	22 30 04.5	+0.8
	2.7nm,1.0s,baz=64,slow=3.2,SNR=3.3						

ROM 11 22:19:24.6±0.1, 43°.443N±0°.002×12°.488E±0°.004, h6km±1km, ML0.6/1, 1C, Error ellipse: s-maj=0.3km s-min=0.2km az=126.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATPI	Pietralunga -	0.06	277	P	Pg	22 19 26.5	+0.3
ATPI				S	Sg	22 19 27.8	+0.4
ATVO	AVT- Monte Val	0.09	224	P	Pg	22 19 26.7	+0.2
ATVO				S	Sg	22 19 28.4	+0.4
ATVO				AML	AML		
	comp=N,63µm,0.4s						
ATVO				AML	AML		
	comp=E,57µm,0.2s						
ATFO	Monte Foce - G	0.10	141	⇑P	Pg	22 19 27.0	+0.2
ATFO				S	Sg	22 19 28.8	+0.4
NARO	Abbazia di Nar	0.18	22	P	Pg	22 19 28.6	+0.4
NARO				S	Sg	22 19 31.9	+1.3
MURB	Monte Urbino	0.18	171	P	Pg	22 19 28.8	+0.6
MURB				S	Sg	22 19 32.2	+1.5
FRON	Frontone	0.19	67	P	Pg	22 19 28.9	+0.5
FRON				S	Sg	22 19 32.2	+1.3

IDC 11 22:20:26.6±1.2, 4°.94S×153°.10E, h0km, mb3.7/6, mb1 4.0/6, mb1mx3.7/34, mbtmp3.7/6, Error ellipse: s-maj=28.9km s-min=16.8km az=33.0

ISC 11 22:20:33.1±1.5, 4°.9S±0°.2×153°.0E±0°.2, h43km, n8, σ1^{s}05/8, mb3.5/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.11	303	Pg	Pn	22 20 51.5	-0.7
	47nm,0.3s,baz=92,slow=1.7,SNR=24						
KRVT				Lg	Lg	22 21 06.0	
	219nm,0.3s,baz=17,slow=20,SNR=98						
WRA	Warramunga Arr	23.48	229	P	P	22 25 39.9	+0.7
	1.3nm,0.7s,baz=53,slow=9.9,SNR=9.9						
FITZ	Fitzroy Crossi	29.73	242	P	P	22 26 34.8	-0.9
	2.1nm,0.8s,baz=58,slow=6.7,SNR=4.0						
CMAR	Chiang Mai Arr	58.07	295	P	P	22 30 23.4	+0.9
	0.7nm,0.3s,baz=112,slow=5.2,SNR=6.3						
SONM	Songino Array	66.51	328	P	P	22 31 20.0	+1.3
	0.2nm,0.5s,baz=125,slow=5.9,SNR=2.8						
MKAR	Makanchi Array	80.52	319	P	P	22 32 41.0	+0.1
	0.3nm,0.8s,baz=100,slow=7.6,SNR=5.0						
ILAR	Eielson Array	82.21	22	P	P	22 32 48.6	-0.9
	0.3nm,0.7s,baz=262,slow=4.5,SNR=3.3						
TORD	Torodi Ar. Bea	150.49	288	PKPbc	PKiKP	22 40 21.4	-0.5
	1.0nm,0.4s,baz=87,slow=2.1,SNR=13						

IDC 11 22:28:36.3±1.4, 3°.29S×148°.78E, h0km, mb3.9/8, mb1 4.1/8, mb1mx3.9/29, mbtmp3.9/8, Error ellipse: s-maj=45.9km s-min=20.7km az=116.0

ISC 11 22:28:39.3±1.4, 3°.3S±0°.2×148°.8E±0°.3, h19km, n15, σ0^{s}66/9, mb3.9/8, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.70	219	P	P	22 33 28.6	-0.8
	1.5nm,0.6s,baz=42,slow=10,SNR=17						
ASAR	Alice Springs	24.81	214	P	P	22 34 01.1	+0.6
	2.3nm,0.7s,baz=45,slow=7.6,SNR=24						
FITZ	Fitzroy Crossi	26.99	235	P	P	22 34 20.4	+0.2
	2.9nm,0.8s,baz=100,slow=10,SNR=7.0						
H11S3	WAKE ISLAND Hy	27.96	39	T	T	23 03 52.9	
	baz=222,slow=76,SNR=184						
H11S2	WAKE ISLAND Hy	27.97	39	T	T	23 03 54.0	
	baz=222,slow=76,SNR=84						
H11S1	WAKE ISLAND Hy	27.98	39	T	T	23 03 54.8	
	baz=222,slow=76,SNR=72						
H11N1	WAKE ISLAND Hy	29.01	37	T	T	23 05 09.5	
	baz=220,slow=76,SNR=20						
H11N3	WAKE ISLAND Hy	29.02	37	T	T	23 05 10.5	
	baz=220,slow=76,SNR=31						
H11N2	WAKE ISLAND Hy	29.02	37	T	T	23 05 08.8	
	baz=220,slow=76,SNR=32						
CMAR	Chiang Mai Arr	53.59	296	P	P	22 37 59.9	+0.2
	1.6nm,0.7s,baz=123,slow=5.7,SNR=9.7						
SONM	Songino Array	62.96	329	P	P	22 39 05.3	+0.5
	0.8nm,0.7s,baz=153,slow=6.5,SNR=6.5						
MKAR	Makanchi Array	76.57	320	P	P	22 40 27.9	-0.6
	0.5nm,0.9s,baz=106,slow=5.1,SNR=4.3						
ILAR	Eielson Array	82.34	23	P	P	22 40 59.1	-0.5
	0.4nm,0.7s,baz=248,slow=4.8,SNR=3.6						
YKA	Yellowknife Ar	96.00	28	P	P	22 42 05.5	+0.5
	0.3nm,0.6s,baz=270,slow=4.5,SNR=5.7						
TORD	Torodi Ar. Bea	146.01	289	PKPbc	PKPab	22 48 18.9	-0.6
	1.3nm,0.8s,baz=81,slow=3.5,SNR=5.7						

IDC 11 22:32:02.7±6.0, 2°.97S×128°.64E, h0km, mb3.8/2, mb1 3.8/5, mb1mx3.5/30, mbtmp3.7/5, ML3.3/3, Error ellipse: s-maj=126.9km s-min=30.4km az=115.0

DJA 11 22:32:08.9±0.5, 3°S±2°×12°9E±°, h15km±4km, M3.8/10, mb4.3/1, MLv3.6/10

ISC 11 22:32:09.9±0.9, 2°.97S±0°.06×129°.20E±0°.04, h33km, n14, σ1^{s}69/22, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.46	216	P	Pb	22 32 19.2	-0.7
MSAI				S	Sb	22 32 26.8	0.0
AAI	Ambon	1.23	234	P	Pb	22 32 34.2	+1.6
AAI				S	Sb	22 32 50.6	+2.4
BNDI	Bandanaira	1.70	155	P	Pn	22 32 39.4	+2.2
BNDI				S	Sb	22 33 03.4	+1.9
NLAI	Namlea	2.11	263	P	Pn	22 32 45.1	+2.2
NLAI				S	Sn	22 33 08.6	+0.6
SIJI	Sorong	2.94	45	Pn	Pn	22 32 56.6	+2.3
	8.6nm,0.3s,baz=253,slow=19,SNR=52						
SIJI				Sn	Sn	22 33 30.1	+1.7
	6.6nm,0.3s,baz=251,slow=23,SNR=13						
SWI	Sorong	2.94	45	P	Pn	22 32 54.2	-0.1
SWI				S	Sn	22 33 29.0	+0.6
FAKI	Fak Fak	3.05	89	P	Pn	22 32 55.7	-0.1
FAKI				S	Sn	22 33 31.9	+0.7
SANI	Sanana	3.33	286	P	Pn	22 32 59.6	-0.1
SANI				S	Sn	22 33 37.8	-0.4
TNTI	Ternate	4.14	334	P	Pn	22 33 00.5	-10
RKPI	Ransiki, Papua	5.18	74	P	Pn	22 33 26.6	+1.4
RKPI				S	Sn	22 34 24.3	+0.4
FITZ	Fitzroy Crossi	15.44	193	Pn	Pn	22 35 41.7	-3.6
	0.1nm,0.3s,baz=9.5,slow=6.1,SNR=2.1						
WRA	Warramunga Arr	17.60	164	P	Pn	22 36 12.1	-0.7
	0.1nm,0.3s,baz=339,slow=12,SNR=3.9						
ASAR	Alice Springs	21.07	168	P	P	22 36 51.5	0.0
	2.5nm,0.7s,baz=350,slow=10,SNR=20						
STKA	Stephens Creek	31.03	159	P	P	22 38 22.1	-2.6
	1.7nm,0.8s,baz=0.0,slow=10,SNR=3.0						

NNC 11 22:35:05.3±10.0, 38°.09N×72°.68E, h0km, mb4.1, mpv3.6, Error ellipse: s-maj=82.5km s-min=59.0km az=159.0

ISC 11 22:34:58.7±1.4, 37°.43N±0°.09×73°.2E±0°.1, h150km, n18, σ2^{s}41/22, 5C-1D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.71	4	P	Pn	22 36 10.5	+2.0
	SNR=17						
UCH	Uchtor	4.89	11	P	Pn	22 36 13.4	+2.4
	SNR=31						
KZA	Kyzart	4.90	18	P	Pn	22 36 13.2	+2.1
	SNR=8.1						
EKS2	Erkin-Say	5.24	5	P	Pn	22 36 18.1	+2.8
	SNR=43						
AAK	Ala-Archa	5.29	10	P	Pn	22 36 19.0	+3.0
	SNR=8.5						
AAK	Ala-Archa	5.29	10	⇓Pn	Pn	22 36 18.5	+2.5
	4.2nm,0.5s						
AAK				⇑Sn	Sn	22 37 13.7	-2.7
	12nm,1.4s						
ULHL	Ulahol	5.34	25	P	Pn	22 36 18.9	+2.1
	SNR=17						
KBK	Karagaybulak	5.38	14	P	Pn	22 36 20.0	+2.8
	SNR=7.7						
CHMS	Chumysh	5.68	11	P	Pn	22 36 24.2	+3.1
	SNR=5.8						
CHMS	Chumysh	5.68	11	⇑Pn	Pn	22 36 23.5	+2.4
	4.0nm,0.3s						
CHMS				⇑Sn	Sn	22 37 23.8	-1.8
	4.5nm,0.8s						
KK31	Karatay Array	6.03	341	Pn	Pn	22 36 28.0	+2.4
	3.2nm,0.5s,baz=177,slow=13,SNR=53						
KK31				⇑Sn	Sn	22 37 30.3	-3.5
	2.6nm,0.3s,baz=169,slow=23						
DANN	Dangsing	12.66	133	eP	Pn	22 37 53.1	-0.8
GKN	Gorkha	13.44	131	eP	Pn	22 38 01.8	-1.9
DMN	Daman	14.01	131	eP	Pn	22 38 09.4	-1.6
PKIN	Phulchoki	14.21	130	eP	Pn	22 38 13.1	-0.4
PKI	Pulchoki	14.22	130	eP	Pn	22 38 12.8	-0.9
JIRN	Jiri	14.64	128	eP	Pn	22 38 17.8	-1.2
AB31	Akbulak array	15.23	325	Pn	P	22 38 29.1	+1.9
	2.4nm,0.4s,baz=131,slow=13,SNR=26						
AB31				⇑Sn	Sn	22 41 12.6	-2.3
	1.0nm,0.7s						

IDC 11 22:51:02.8±1.0, 3°.23S×148°.73E, h0km, mb3.9/8, mb1 4.2/9, mb1mx3.9/30, mbtmp3.9/9, ML3.6/1, Error ellipse: s-maj=28.9km s-min=21.0km az=122.0

ISC 11 22:51:05.8±0.8, 3°.2S±0°.2×148°.7E±0°.1, h18km, n16, σ0^{s}74/10, mb3.9/8, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.48	108	Pn	Pn	22 51 59.5	+0.5
	6.1nm,0.3s,baz=158,slow=5.4,SNR=3.0						
WRA	Warramunga Arr	21.73	219	P	P	22 55 55.2	-1.1
	3.7nm,0.7s,baz=44,slow=10,SNR=19						
ASAR	Alice Springs	24.85	214	P	P	22 56 27.1	-0.3
	2.8nm,0.7s,baz=44,slow=8.1,SNR=34						
FITZ	Fitzroy Crossi	27.00	235	P	P	22 56 47.5	+0.6
	8.1nm,1.1s,baz=84,slow=8.3,SNR=8.1						
H11S3	WAKE ISLAND Hy	27.93	39	T	T	23 26 16.2	
	baz=222,slow=76,SNR=71						
H11S2	WAKE ISLAND Hy	27.93	39	T	T	23 26 19.2	
	baz=222,slow=76,SNR=26						
H11S1	WAKE ISLAND Hy	27.95	39	T	T	23 26 18.8	
	baz=222,slow=76,SNR=34						
H11N1	WAKE ISLAND Hy	28.97	37	T	T	23 27 34.8	
	baz=220,slow=76,SNR=17						
H11N3	WAKE ISLAND Hy	28.99	37	T	T	23 27 39.4	
	baz=220,slow=76,SNR=18						
H11N2	WAKE ISLAND Hy	28.99	37	T	T	23 27 39.4	
	baz=220,slow=76,SNR=28						
CMAR	Chiang Mai Arr	53.52	296	P	P	23 00 26.2	+0.4
	0.9nm,0.4s,baz=117,slow=6.8,SNR=10						
SONM	Songino Array	62.87	329	P	P	23 01 31.4	+0.5
	0.4nm,0.7s,baz=134,slow=5.8,SNR=3.9						
MKAR	Makanchi Array	76.48	320	P	P	23 02 54.7	0.0
	0.6nm,0.9s,baz=130,slow=4.5,SNR=4.6						
ILAR	Eielson Array	82.29	23	P	P	23 03 24.8	-1.2
	0.7nm,0.9s,baz=258,slow=4.5,SNR=4.6						
YKA	Yellowknife Ar	95.95	28	P	P	23 04 31.4	0.0
	0.4nm,0.8s,baz=272,slow=4.4,SNR=5.4						
TORD	Torodi Ar. Bea	145.94	289	PKPbc	PKPdf	23 10 44.6	-0.1
	7.3nm,1.2s,baz=86,slow=2.1,SNR=14						

IDC 11 23:06:53.5±1.4, 59°.86N×153°.38W, h107km±20km, mb3.4/6, mb1 3.6/10, mb1mx3.3/42, mbtmp3.9/10, Error ellipse: s-maj=24.5km s-min=11.5km az=114.0

NEIC 11 23:06:54.5±1.2, 59°.80N±0°.04×153°.31W±0°.09, h136km±4km, Error ellipse: s-maj=6.4km s-min=5.6km az=70.0

AEIC 11 23:06:55±1.6, 59°.80N±0°.04×153°.28W±0°.06, h129km±3km, ML3.7, mb4.0/3(NEIC), Error ellipse: s-maj=5.8km s-min=4.3km az=181.0

ISC 11 23:06:55.0±0.7, 59°.80N±0°.04×153°.28W±0°.05, h133km±5km, n126, σ0^{s}98/137, mb3.8/6, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILS	Iliamna Low So	0.19	34		Pn	23 07 13.1	-0.2
IVE	Iliamna Volcan	0.25	31		Pn	23 07 13.2	-0.3
IVE					Sn	23 07 27.1	-0.4
ILW	Iliamna West	0.27	15		Pn	23 07 13.4	-0.3
ILW					Sn	23 07 27.5	-0.3
AUL	Augustine Lava	0.43	191		Pn	23 07 14.2	+0.1
AUL					Sn	23 07 28.2	-0.3
AU22	Augustine Moun	0.43	185		Pn	23 07 13.9	-0.2
AU22					Sn	23 07 28.1	-0.3
AUW	Augustine West	0.44	193		Pn	23 07 14.2	0.0
AUH	Augustine H	0.45	191		Pn	23 07 14.2	0.0
AUQ	Augustine Qik’	0.45	189		Pn	23 07 14.2	0.0
AUQ					Sn	23 07 28.4	-0.4
RED	Redoubt Volcan	0.67	22		Pn	23 07 15.3	-0.3
RED					Sn	23 07 30.4	-0.9
RSO	Redoubt South	0.71	21		Pn	23 07 15.4	-0.7
RDWB	Redoubt West	0.72	17		Pn	23 07 15.7	-0.4
RDWB					Sn	23 07 31.2	-0.9
RDJH	Redoubt Jeurge	0.83	16		Pn	23 07 16.7	-0.2
RDJH					Sn	23 07 32.7	-0.7
HOM	Homer	0.84	99		Pn	23 07 16.9	+0.1
DFR	Drift River	0.85	20		Pn	23 07 16.7	-0.3
DFR					Sn	23 07 32.9	-0.8
FOSS	Fourpeaked Sta	1.03	192		Pn	23 07 18.2	-0.3
CNPM	China Poot	1.07	104		Pn	23 07 18.6	-0.2
BRLK	Bradley Lake	1.21	91		Pn	23 07 20.1	-0.2
BRSE	Bradley Lake S	1.28	92		Pn	23 07 21.1	+0.1
KAPH	Katmai Pasha	1.33	205		Pn	23 07 20.2	-1.3
CAPN	Captain Cook N	1.44	47		Pn	23 07 24.3	+1.7
KAHC	Katmai Hardscr	1.46	218		Pn	23 07 22.6	-0.4
KAHG	Katmai Hook Gl	1.46	207		Pn	23 07 22.9	-0.2
KARR	Katmai Rainbow	1.50	210		Pn	23 07 23.4	+0.1
SPCR	Spurr Chakacha	1.50	20		Pn	23 07 23.4	0.0
SPBG	Spurr Blockage	1.53	17		Pn	23 07 24.0	+0.2
SPBG					Sn	23 07 45.8	+0.1
KAWH	Katmai	1.62	210		Pn	23 07 24.5	-0.3
SLKM	Skilak Lake	1.69	64		Pn	23 07 25.2	-0.2
SVW2	Sparrevohn	1.73	320		Pn	23 07 25.3	-0.7
KCG	Knife Ck. Glac	1.77	213		Pn	23 07 26.3	-0.2
STLK	Strandline Lak	1.85	22		Pn	23 07 27.5	+0.2
KELA	Mount Kelaz	1.86	224		Pn	23 07 27.3	-0.3
ACHA	Angle Creek He	1.92	214		Pn	23 07 28.1	-0.1
SEW	Seward	1.95	79		Pn	23 07 28.5	0.0
KDAK	Kodiak Island	2.06	170	P	Pn	23 07 28.4	-1.4
	30nm,0.3s,baz=22,slow=8.5,SNR=571						
KDAK				S	Sn	23 07 54.3	-2.1
	26nm,0.3s,baz=12,slow=12,SNR=5.2						
RC01	Rabbit Creek A	2.18	52		Pn	23 07 31.0	-0.3
SKT	Skwentna	2.35	21		Pn	23 07 33.1	-0.3
OHAK	Old Harbor	2.59	180		Pn	23 07 34.7	-1.7
PWL	Port Wells	2.68	64		Pn	23 07 38.5	+0.9
PMR	Palmer	2.72	47		Pn	23 07 38.3	+0.3
KNK	Knik Glacier	2.88	54		Pn	23 07 39.0	-1.1
GHO	Glory Hole Cre	2.91	45		Pn	23 07 39.5	-1.1
PPLA	Purkeypile	3.15	9		Pn	23 07 44.2	+0.5
SML	Sawmill	3.15	48		Pn	23 07 42.5	-1.2
GLI	Glacier Island	3.26	68		Pn	23 07 45.5	+0.4
SII	Sitkinak Islan	3.29	189		Sn	23 08 22.6	-1.8
SII	Sitkinak Islan	3.29	189		Pn	23 07 43.9	-1.5
TT01	Tatalina	3.38	338		Pn	23 07 46.0	-0.7
TTA	Tatalina	3.41	338		Pn	23 07 46.1	-0.9
HIN	Hinchinbrook I	3.45	77		Sn	23 08 26.7	-1.4
HIN	Hinchinbrook I	3.45	77		Pn	23 07 47.5	0.0
FID	Port Fidalgo	3.52	71		Pn	23 07 47.7	-0.7
JPK	Jack Peak	3.54	66		Pn	23 07 49.2	+0.5
MID	Middleton Isla	3.54	93		Pn	23 07 48.7	-0.1
SCM	Sheep Creek Mo	3.56	52		Pn	23 07 48.0	-1.0
HUR	Hurricane	3.64	27		Pn	23 07 49.5	-0.5
WAT1	Susitna Watana	3.80	35		Pn	23 07 51.3	-0.8
EYAK	Cordova Ski Ar	3.83	75		Sn	23 08 33.0	-4.1
EYAK	Cordova Ski Ar	3.83	75		Pn	23 07 52.5	-0.1
WAT6	Susitna Watana	3.87	41		Pn	23 07 52.0	-1.1
WAT2	Susitna Watana	3.89	33		Pn	23 07 52.5	-0.9
KTH	Kantishna Hill	3.93	16		Pn	23 07 53.5	-0.4
TRF	Thorofare Moun	3.93	20		Pn	23 07 53.5	-0.5
CHUM	Lake Minchumin	4.12	6		Pn	23 07 56.2	-0.2
CHIR	Chirikof Islan	4.18	198		Pn	23 07 55.5	-1.7
DHY	Denali Highway	4.34	38		Pn	23 07 58.5	-0.9
GOAT	Goat Mountain	4.34	76		Pn	23 07 59.4	0.0
PS12	TAPS Pump St12	4.34	64		Pn	23 07 59.1	-0.2
RAGM	Ragged Mountai	4.35	79	Pn	Pn	23 07 60.0	+0.6
CHGN	Chignik	4.44	220	Pn	Pn	23 07 59.5	-1.2
BPAW	Bear Paw Mtn.	4.45	13		Pn	23 07 59.5	-1.2
MCK	McKinley	4.45	26		Pn	23 08 00.5	-0.3
BWN	Browne	4.74	21		Pn	23 08 04.2	-0.4
PAX	Paxson	4.92	46		Pn	23 08 06.5	-0.5
GLB	Gilahina Butte	4.95	66		Pn	23 08 07.3	0.0
VRDI	Verde Repeater	5.06	69		Pn	23 08 09.1	0.0
NEA	Nenana	5.18	20		Pn	23 08 09.5	-0.9
WRH	Wood River Hil	5.28	25		Pn	23 08 10.5	-1.3
MCARA	McCarthy VSAT	5.30	68		Pn	23 08 12.3	+0.3
MLY	Manley	5.38	12		Pn	23 08 11.9	-1.2
CCB	Clear Creek Bu	5.49	25		Pn	23 08 13.2	-1.4
HDA	Harding Lake	5.50	30		Pn	23 08 13.9	-0.7
PTPK	Patty Peak	5.52	71		Pn	23 08 15.7	+0.4
KIAG	Kiagna River	5.54	74		Pn	23 08 15.4	0.0
BALM	Baldy	5.56	72		Pn	23 08 16.0	+0.4
TCOL	CIGO, UAF Yank	5.68	24		Pn	23 08 16.1	-1.0
COLA	College	5.68	24	Pn	Pn	23 08 15.8	-1.3
MDM	Murphy Dome	5.68	22		Pn	23 08 16.1	-1.0
IL31		5.81	28		Pn	23 08 17.5	-1.3
ILAR	Eielson Array	5.81	28	P	Pn	23 08 17.2	-1.6
	7.6nm,0.3s,baz=218,slow=14,SNR=314						
ILAR				S	Sn	23 09 21.3	-3.0
	4.0nm,0.3s,baz=195,slow=16,SNR=7.1						
ILAR	Eielson Array	5.81	28		Pn	23 08 17.0	-1.9
DOT	Dot Lake	5.84	45	Pn	Pn	23 08 18.7	-0.6
BARN	Barnard Glacie	5.89	73		Pn	23 08 20.9	+0.8
POKR	Poker Plat Res	5.98	24		Pn	23 08 20.2	-1.0
PS07	TAPS Pump Stn7	5.99	21		Pn	23 08 20.5	-0.8
CTGM	Chitina Glacie	6.04	74		Pn	23 08 22.6	+0.5
CNBA	Chernabura Isl	6.05	217		Pn	23 08 20.4	-1.7
CHX	Chaix Hills	6.12	82		Pn	23 08 23.3	+0.2
IM03		6.21	358		Pn	23 08 23.9	-0.2
IMAR	Indian Mountai	6.21	358		Pn	23 08 23.7	-0.5
PS06	TAPS Pump Stn6	6.29	13		Pn	23 08 24.8	-0.5
YUK2	White River	6.41	67		Pn	23 08 27.2	+0.2
BC03		6.41	54		Pn	23 08 26.5	-0.4
BCAR	Beaver Creek A	6.41	54		Pn	23 08 26.7	-0.3
PCA	Pinnacle	6.55	82		Pn	23 08 29.2	+0.3
YUK3	Moose Creek	6.58	67		Pn	23 08 29.9	+0.5
PNL	Peninsula	7.02	85		Pn	23 08 35.0	-0.1
COLD	Coldfoot	7.58	9		Pn	23 08 41.7	-0.9
YUK7	Dusty Glacier	7.59	78		Pn	23 08 42.4	-0.5
FYU	Fort Yukon	7.70	25		Pn	23 08 43.3	-0.9
DHAK	Deception Hill	7.71	89	Pn	Pn	23 08 44.7	+0.3
HYT	Haines Junctio	7.90	76	Pn	Pn	23 08 48.4	+1.3
BM03	Burnt Mountain	8.56	23		Pn	23 08 54.7	-1.1
BMAR	Burnt Mountain	8.57	23		Pn	23 08 54.6	-1.3
TOLK	Toolik Lake Re	9.02	9		Pn	23 09 00.6	-1.4
UNV	Unalaska Valle	9.38	236		Pn	23 09 05.5	-1.3
BESE	Bessie Mountai	9.53	89	Pn	Pn	23 09 11.3	+2.5
INK	Inuvik	12.08	37	P	Pn	23 09 41.2	-1.3
	0.3nm,0.3s,baz=220,slow=12,SNR=10						
YKA	Yellowknife Ar	18.66	65	P	P	23 11 03.5	+1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.3nm,0.3s,baz=275,slow=11,SNR=42						
RES	Resolute Bay	25.55	32	P	P	23 12 13.4	+2.6
	0.5nm,0.6s,baz=228,slow=12,SNR=4.6						
RES	Resolute Bay	25.55	32	IAmb	IAmb	23 12 52.3	
	comp=Z,8.1nm,1.8s						
SCHQ	Schefferville	43.79	57	P	P	23 14 46.9	-0.1
	comp=Z,0.7nm,0.5s,baz=302,slow=9.5,SNR=4.5						
KSRS	Korea Array	53.09	282	P	P	23 15 59.3	+1.0
	comp=Z,1.7nm,0.8s,baz=38,slow=5.4,SNR=3.7						
SONM	Songino Array	54.79	306	P	P	23 16 12.0	+1.3
	comp=Z,1.8nm,0.8s,baz=48,slow=7.8,SNR=14						
SONM	Songino Array	54.79	306	P	P	23 16 11.6	+0.8
ZALV	Zalesovo Beam	57.45	323	P	P	23 16 29.6	+0.2
	comp=Z,0.9nm,0.5s,baz=18,slow=6.4,SNR=5.6						
MKAR	Makanchi Array	64.50	321	P	P	23 17 16.5	-0.6
	comp=Z,0.1nm,0.3s,baz=22,slow=7.6,SNR=4.4						

IDC 11 23:10:50.5±1.8**, 56°.33S**×**27°.95W, h0km, mb4.1**/1**, mb1 4.1**/1**, mb1mx3.6**/16**, mbtmp4.1**/1**, Error ellipse: s-maj=102.6km s-min=67.5km az=136.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N1	ASCENSION HYDR	49.51	18	T	T	00 14 09.8	
	baz=203						
H10N3	ASCENSION HYDR	49.51	18	T	T	00 14 05.7	
	baz=203						
H10N2	ASCENSION HYDR	49.53	18	T	T	00 14 06.0	
	baz=203						
TORD	Torodi Ar. Bea	73.51	30	P	P	23 22 24.8	0.0
	1.2nm,0.7s,baz=203,slow=6.8,SNR=12						
YKA	Yellowknife Ar	136.09	318	PKP	PKPdf	23 30 11.1	-0.9
	0.1nm,0.4s,baz=124,slow=2.6,SNR=2.9						
ILAR	Eielson Array	149.98	311	PKPbc	PKPbc	23 30 41.0	-0.3
	0.7nm,0.8s,baz=120,slow=2.4,SNR=5.7						
SONM	Songino Array	151.17	88	PKPbc	PKPbc	23 30 44.5	-0.2
	0.3nm,0.4s,baz=222,slow=3.4,SNR=2.6						

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*NCEDC **11** 23:14:26.8±1.1, 40°.53N±0°.04×125°.26W±0°.07, h24km±8km, Md2.8/32, Error ellipse: s-maj=7.2km s-min=6.2km az=81.0*

NEIC 11 23:14:24.4±1.6**, 40°.56N**±0°.04×**125°.3W**±0°.1**, h17**km±10km**, Error ellipse: s-maj=11.6km s-min=4.2km az=74.0, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	0.72	97		Pn	23 14 40.0	+0.3
KMPM	Mount Pierce	0.89	99		Pn	23 14 42.1	-0.1
KMPM					Sn	23 14 54.7	0.0
KSMM	Slide Mountain	0.92	114		Pb	23 14 41.9	0.0
JCC	Jacoby Creek,	0.98	75	Pn	Pb	23 14 42.4	-0.4
JCC	Jacoby Creek,	0.98	75		Sb	23 14 55.7	+0.3
KCRM	Chalk Rock	1.12	97		Pn	23 14 45.5	+0.2
KRPM	Rodgers	1.12	58		Pb	23 14 44.3	-1.0
KRPM					Sb	23 14 59.0	-0.6
KHMM	Horse Mountain	1.21	75		Pn	23 14 46.3	-0.4
KHMM					Sn	23 15 02.6	-0.2
KMRM	Mail Ridge	1.24	105	Pn	Pb	23 14 47.2	-0.1
KCSM	Cold Springs	1.34	91		Pb	23 14 49.0	-0.2
KRMB	Red Mountain	1.41	47		Pn	23 14 48.2	-1.1
KBSM	Bell Springs	1.44	116		Pn	23 14 50.1	+0.4
KCPM	Cahto Peak	1.56	123	Pn	Pn	23 14 51.5	0.0
KHBM	Hayfork Bally	1.57	86		Pn	23 14 51.4	-0.1
KFPM	Farley Peak	1.69	122		Pn	23 14 53.2	0.0
KBNM	Bluenose Ridge	1.73	112		Pb	23 14 54.9	-0.8
GTC	Three Chop Rid	1.76	131		Pn	23 14 53.6	-0.4
KBO	Bosley Butte	1.83	25		Pn	23 14 54.4	-0.6
LBPM	Beegum Peak	1.84	97		Pn	23 14 55.5	+0.3
GNAM	Navarro Ridge	1.86	137		Pn	23 14 55.0	-0.3
LGPM	Granite Peak	1.89	79		Pn	23 14 55.8	-0.1
O02D	Mt. Diablo Mer	1.94	101		Pn	23 14 57.0	+0.5
M02C	Callahan	2.01	65		Pn	23 14 58.6	+1.1
GHOM	Hamilton Openi	2.02	138		Pn	23 14 57.5	-0.2
WDC	Whiskeytown Da	2.08	89		Pn	23 14 58.5	+0.1
WDC	Whiskeytown Da	2.08	89		Pn	23 14 58.7	+0.2
GROM	Round Mountain	2.09	107		Pn	23 14 59.8	+1.1
GVV	Valley View	2.14	111		Pn	23 15 00.5	+1.1
GGUM	Gualala	2.19	141		Pn	23 14 59.4	-0.5
YBH	Yreka Blue Hor	2.26	58		Pn	23 15 01.6	+0.6
YBH	Yreka Blue Hor	2.26	58		Pn	23 15 02.2	+1.2
GSNM	Snow Mountain	2.28	135		Pn	23 15 01.2	0.0
GHLM	Highland Sprin	2.31	130		Pn	23 15 01.6	-0.1
HOPS	Hopland Field	2.31	132		Pn	23 15 01.4	-0.1
LSHM	Sage Hen Hill	2.47	84		Pn	23 15 04.4	+0.5
ORV	Oroville	3.07	108	Pn	Pn	23 15 13.2	+1.2

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*IDC **11** 23:49:12.2±1.1, 34°.71N×80°.47E, h0km, mb3.7/6, mb1 3.8/8, mb1mx3.5/51, mbtmp3.7/8, ML3.6/2, Error ellipse: s-maj=26.2km s-min=23.4km az=43.0*

*BJI **11** 23:49:13.9±0.0, 34°.97N×80°.84E, h6km, mb3.8/2, ML3.4/3*

ISC 11 23:49:17.3±0.7**, 34°.85N**±0°.09×**80°.6E**±0°.1**, h35**km**, n19, σ0s.96**/18**, mb3.6**/6**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DANN	Dangsing	7.03	156	*e*P	Pn	23 50 57.7	-0.3
	7.5nm,0.4s						
GKN	Gorkha	7.66	152	*e*P	Pn	23 51 06.3	-0.2
	7.9nm,0.3s						
GUN	Gumba	8.28	145	*e*P	Pn	23 51 17.0	+1.9
PKIN	Phulchoki	8.35	149	*e*P	Pn	23 51 16.8	+0.8
	3.6nm,0.3s						
PKI	Pulchoki	8.36	149	*e*P	Pn	23 51 16.8	+0.6
	4.5nm,0.4s						
JIRN	Jiri	8.63	145	*e*P	Pn	23 51 21.8	+1.7
	24nm,0.5s						
AAK	Ala-Archa	9.10	330	Pn	Pn	23 51 34.4	+8.1
	0.2nm,0.3s,baz=144,slow=7.6,SNR=4.6						
AAK				Lg	Lg	23 54 05.8	
	0.0nm,0.3s,baz=346,slow=17,SNR=3.0						
RAMN	Ramite	9.43	145	*e*P	Pn	23 51 30.5	-0.3
ODAN	Odare	9.89	142	*e*P	Pn	23 51 36.8	-0.4
	14nm,0.5s						
WMQ	Urumqi	10.53	30	*e*P	Pn	23 51 44.3	-1.3
MKAR	Makanchi Array	12.01	6	Pn	Pn	23 52 06.1	+0.3
	0.2nm,0.3s,baz=188,slow=13,SNR=11						
KURBB	Kurchatov Arra	15.84	355	Pn	P	23 53 00.9	+0.1
	0.1nm,0.3s,baz=178,slow=9.9,SNR=5.5						
BVAR	Borovoye Array	19.56	341	P	Pn	23 53 42.7	-0.6
	0.3nm,0.3s,baz=164,slow=14,SNR=6.1						
CMAR	Chiang Mai Arr	23.10	130	P	P	23 54 19.4	-0.7
	1.1nm,0.7s,baz=311,slow=11,SNR=9.3						
SONM	Songino Array	23.21	48	P	P	23 54 22.6	+1.4
	1.2nm,1.0s,baz=236,slow=9.7,SNR=7.9						
BRTR	Keskin Array B	37.31	292	P	P	23 56 27.1	+0.9
	0.3nm,0.4s,baz=96,slow=8.7,SNR=4.0						
FINES	FINESS Array B	43.24	325	P	P	23 57 15.1	+0.2
	1.3nm,0.8s,baz=96,slow=13,SNR=3.8						
TORD	Torodi Ar. Bea	73.54	275	P	P	00 00 46.4	-0.6
	0.7nm,0.6s,baz=49,slow=4.7,SNR=4.9						
BOSA	Boshof	81.91	227	P	P	00 01 32.8	-0.5
	3.2nm,0.8s,baz=32,slow=3.8,SNR=4.3						

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*IDC **11** 23:53:22.2±2.0, 3°.36S×149°.04E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.7/31, mbtmp3.7/8, Error ellipse: s-maj=62.6km s-min=23.5km az=107.0*

*NEIC **11** 23:53:25.3±0.9, 3°.3S±0°.1×148°.8E±0°.2, h15km±6km, mb4.0/4, Error ellipse: s-maj=23.3km s-min=20.4km az=90.0*

ISC 11 23:53:26.8±1.4**, 3°.2S**±0°.1×**148°.7E**±0°.2**, h19**km**, n20, σ1s.43**/13**, mb3.7**/9**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	1.71	311	Pn	Pn	23 53 53.5	-2.0
WRA	Warramunga Arr	21.75	219	P	P	23 58 15.1	-2.3
	0.5nm,0.6s,baz=40,slow=12,SNR=3.9						
AS31	Alice Springs	24.87	214	P	P	23 58 48.0	-0.5
AS31				IAmb	IAmb	23 58 59.1	
	comp=Z,0.9nm,0.7s						
ASAR	Alice Springs	24.87	214	P	P	23 58 48.0	-0.5
	comp=Z,1.4nm,0.8s,baz=45,slow=7.9,SNR=13						
FITZ	Fitzroy Crossi	26.99	235	P	P	23 59 08.0	+0.3
	comp=Z,3.1nm,1.0s,baz=36,slow=8.5,SNR=2.9						
FITZ	Fitzroy Crossi	26.99	235	P	P	23 59 08.0	+0.3
FITZ	Fitzroy Crossi	26.99	235	IAmb	IAmb	23 59 10.0	
	comp=Z,12nm,1.6s						
H11S3	WAKE ISLAND Hy	27.91	39	T	T	00 28 31.1	
	baz=220,slow=76,SNR=112						
H11S2	WAKE ISLAND Hy	27.91	39	T	T	00 28 30.6	
	baz=220,slow=76,SNR=47						
H11S1	WAKE ISLAND Hy	27.92	39	T	T	00 28 33.1	
	baz=220,slow=76,SNR=64						
H11N1	WAKE ISLAND Hy	28.95	38	T	T	00 29 50.0	
	baz=219,slow=76,SNR=21						
H11N3	WAKE ISLAND Hy	28.96	38	T	T	00 29 51.0	
	baz=219,slow=76,SNR=18						
H11N2	WAKE ISLAND Hy	28.97	38	T	T	00 29 55.0	
	baz=219,slow=76,SNR=30						
CMAR	Chiang Mai Arr	53.45	296	P	P	00 02 48.8	+2.7
	comp=Z,0.3nm,0.3s,baz=115,slow=6.1,SNR=3.9						
SONM	Songino Array	62.79	329	P	P	00 03 52.2	+1.0
	comp=Z,0.2nm,0.4s,baz=139,slow=8.8,SNR=2.4						
MKAR	Makanchi Array	76.40	320	P	P	00 05 15.4	+0.3
	comp=Z,0.1nm,0.4s,baz=91,slow=6.1,SNR=3.6						
ZAA0	Zalesovo Array	77.53	327	P	P	00 05 21.4	+0.2
ZALV	Zalesovo Beam	77.53	327	P	P	00 05 21.1	-0.1
	comp=Z,0.3nm,0.3s,baz=134,slow=8.3,SNR=3.0						
YKA	Yellowknife Ar	95.91	28	P	P	00 06 50.9	-1.2
	comp=Z,0.3nm,0.7s,baz=273,slow=4.8,SNR=2.9						
TORD	Torodi Ar. Bea	145.87	289	PKPbc	PKPab	00 13 05.9	-0.5
	comp=Z,0.4nm,0.7s,baz=83,slow=3.9,SNR=3.2						

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*SJA **11** 23:57:00.5±0.4, 25°.29S×70°.31W, h28km±2km, ML4.1, MW4.1*

*NEIC **11** 23:57:01.9±1.8, 25°.23S±0°.05×70°.23W±0°.06, h48km±1km, Error ellipse: s-maj=7.6km s-min=7.1km az=71.0*

*GUC **11** 23:57:01.9±0.5, 25°.19S×70°.26W, h54km±2km, ML4.4*

*IDC **11** 23:57:02.8±0.7, 25°.17S×70°.16W, h53km±4km, mb3.9/9, mb1 4.0/13, mb1mx3.9/30, mbtmp4.1/13, Error ellipse: s-maj=20.7km s-min=14.8km az=66.0*

ISC 11 23:57:01.8±0.6**, 25°.24S**±0°.04×**70°.29W**±0°.05**, h50**km±4km**, n76, σ1s.91**/88**, mb4.5**/13**, 1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB14	IPOC Station P	0.62	350	*e*P	Pn	23 57 14.9	0.0
PB14				*i* S	Sn	23 57 24.1	-0.2
PB14	IPOC Station P	0.62	350	*i* P	Pn	23 57 15.1	+0.2
PB14				*e*S	Sn	23 57 24.6	+0.3
PB14				IAML		23 57 27.5	
	comp=Z,5μm,0.3s						
GO02	Mina Guanaco	0.64	83	*e*P	Pn	23 57 15.1	0.0
GO02				*i* S	Sn	23 57 25.2	+0.6
GO02				IAML		23 57 26.6	
	comp=N,31μm,0.1s						
GO02	Mina Guanaco	0.64	83		Pn	23 57 15.4	+0.4
GO02				Sn	Sn	23 57 24.0	-0.6
PB10	IPOC Station P	1.74	352	*e*P	Pn	23 57 29.9	+0.3
PB10				*i* S	Sn	23 57 50.5	0.0
PB10	IPOC Station P	1.74	352		Pn	23 57 29.9	+0.3
PB10	IPOC Station P	1.74	352	*i* P	Pn	23 57 29.9	+0.3
PB10				*e*S	Sn	23 57 54.4	+3.8
PB10				IAML		23 57 59.3	
	comp=Z,857nm,0.7s						
PB15	IPOC Station P	2.16	20	*i* P	Pn	23 57 37.9	+2.4
PB15				*e*S	Sn	23 58 05.7	+4.5
GO03	Copiap	2.34	179	⇓*i*P	Pn	23 57 39.4	+1.4
GO03				*i* S	Sn	23 58 08.6	+3.0
GO03	Copiap	2.34	179		Pn	23 57 39.4	+1.4
PB05	IPOC Station P	2.38	2	*e*P	Pn	23 57 38.5	0.0
PB05				*i* S	Sn	23 58 11.7	+5.2
PB06	IPOC Station P	2.61	15	*e*P	Pn	23 57 42.2	+0.5
PB06				*i* S	Sn	23 58 17.8	+5.6
PB04	IPOC Station P	2.90	3		Pn	23 57 45.4	-0.3
LVC	Limon Verde	2.91	26	P	Pn	23 57 47.3	+1.4
	comp=Z,34nm,0.3s,baz=183,slow=7.6,SNR=160						
LVC				S	Sn	23 58 23.6	+3.8
	comp=Z,216nm,0.3s,baz=22,slow=18,SNR=16						
PB03	IPOC Station P	3.21	9	*e*P	Pn	23 57 49.6	-0.4
PB03				*i* S	Sn	23 58 33.1	+6.0
PB01	IPOC Station P	4.24	10		Pn	23 58 03.8	-0.3
GO04	Tololo Observa	4.94	185		Pn	23 58 13.9	+0.2
CYA	Choya	5.12	130	*i* P	Pn	23 58 18.7	+2.7
CYA				*i* P	Pn	23 58 18.7	+2.7
CYA				*e*S	Sn	23 59 16.6	+2.8
CYA				IAML		23 59 23.5	
	comp=Z,35nm,0.5s						
ACCO	Cerro Coronel	5.44	169	*i* P	Pn	23 58 23.8	+3.2
ACCO				IAML		23 59 53.0	
	comp=Z,80nm,0.6s						
PB11	IPOC Station P	5.48	6		Pn	23 58 19.3	-1.9
GO01	Chusmiza	5.64	11		Pn	23 58 22.9	-0.6
AMOG	MOGNA	5.89	165	*i* P	Pn	23 58 28.8	+2.1
AMOG				IAML		00 00 17.5	
	comp=Z,36nm,0.5s						
MNMC	Minye Minye	6.11	6		Pn	23 58 28.2	-1.6
RTLL	Cerro Villicun	6.27	166	*i* P	Pn	23 58 34.5	+2.7
RTLL				IAML		00 00 37.0	
	comp=Z,66nm,1.3s						
CFA	Coronel Fontan	6.59	165	P	Pn	23 58 38.0	+1.8
	comp=Z,4.5nm,0.3s,baz=344,slow=14,SNR=35						
CFA				S	Sn	23 59 52.5	+2.4
	comp=Z,1.7nm,0.3s,baz=307,slow=20,SNR=3.2						
CFA	Coronel Fontan	6.59	165	*i* P	Pn	23 58 38.2	+2.0
CFA				IAML		00 00 46.8	
	comp=Z,361nm,2.2s						
RTLS	Leoncito	6.59	173	*i* P	Pn	23 58 38.9	+2.4
RTLS				IAML		00 00 31.7	
	comp=Z,41nm,1.1s						
RTCV	Cerro Valdivia	6.77	167	*i* P	Pn	23 58 41.0	+2.4
RTCV				IAML		00 01 05.5	
	comp=Z,39nm,2.1s						
ASAL	Salagasta	7.43	170	*i* P	Pn	23 58 50.2	+2.5
ASAL				IAML		00 01 01.5	
	comp=Z,52nm,1.6s						
ACAN	Cantantal	7.52	160	*i* P	Pn	23 58 50.7	+1.8
ACAN				IAML		00 01 16.4	
	comp=Z,25nm,2.4s						
ROC1	El Roble	7.74	185	Pn	Pn	23 58 52.4	+0.3
MRA	San Martin	8.20	152	*i* P	Pn	23 59 00.2	+2.0
LPAZ	La Paz	9.13	13	P	Pn	23 59 12.1	+0.5
	comp=Z,1.8nm,0.3s,baz=190,slow=6.0,SNR=32						
LPAZ	La Paz	9.13	13		Pn	23 59 11.9	+0.3
CPUP	Villa Florida	11.73	98	P	Pn	23 59 47.0	+0.5
	comp=Z,0.1nm,0.3s,baz=288,slow=20,SNR=3.2						
SIV	San Ignacio	12.61	45	P	Pn	23 59 55.3	-3.3
	comp=Z,1.0nm,0.3s,baz=241,slow=11,SNR=26						
SIV				S	Sn	00 02 13.4	-4.2
	comp=Z,0.5nm,0.3s,baz=235,slow=17,SNR=6.1						
SAML	Samuel	17.56	24		Pn	00 01 02.7	-0.4
SAML				IAmb	IAmb	00 01 04.7	
	comp=Z,14nm,0.8s						
BDFB	Brasilia	22.92	70	P	P	00 01 59.6	-2.2
	comp=Z,3.0nm,0.4s,baz=224,slow=11,SNR=6.6						
BDFB	Brasilia	22.92	70	P	P	00 02 00.3	-1.5
PTGA	Pitinga	26.33	24	P	P	00 02 32.3	-0.8
	comp=Z,7.6nm,0.9s,baz=208,slow=9.7,SNR=8.1						
PTGA	Pitinga	26.33	24	P	P	00 02 32.3	-0.8
PTGA				IAmb	IAmb	00 02 35.4	
	comp=Z,7.8nm,0.9s						
OTAV	Otavalo	26.53	341	P	P	00 02 35.3	-0.1
RUSC	La Rusia	31.07	355	P	P	00 03 16.4	+0.6
RCBR	Riachuelo	38.16	65	P	P	00 04 16.6	0.0
	comp=Z,7.0nm,0.9s,baz=297,slow=9.0,SNR=2.9						
TXAR	Lajitas Array	63.02	327	P	P	00 07 24.6	+0.7
	comp=Z,0.2nm,0.7s,baz=139,slow=8.4,SNR=2.7						
U40A	Yellville	64.86	340	P	P	00 07 35.2	-0.4
U40A				IAmb	IAmb	00 07 36.5	
	comp=Z,3.3nm,0.8s						
MGMO	Mountain Grove	65.42	341	P	P	00 07 38.4	-0.9
S39A	Bolivar	66.24	340	P	P	00 07 44.2	-0.3
S39A				IAmb	IAmb	00 07 59.4	
	comp=Z,3.5nm,0.8s						
LIC	Lamto	70.66	73	*e*P	P	00 08 10.5	-2.2
	comp=Z,7.1nm,0.5s						
LIC	Lamto	70.66	73	*e*P	sP	00 08 32.5	-0.8
	comp=Z,24nm,0.9s						
TIC	Toumodi	70.87	73	*e*P	P	00 08 13.8	-0.2
TIC	Toumodi	70.87	73	*e*P	sP	00 08 34.3	-0.3
KIC	Kosan Boka	70.98	73	*e*P	P	00 08 14.2	-0.4
	comp=Z,9.9nm,0.8s						
KIC	Kosan Boka	70.98	73	*e*P	sP	00 08 34.8	-0.5
	comp=Z,10nm,0.8s						
DBIC	Dimbokro	71.03	73	P	P	00 08 14.4	-0.5
	comp=Z,3.1nm,0.6s,baz=214,slow=6.9,SNR=6.8						
DBIC				sP	sP	00 08 35.8	+0.2
	comp=Z,7.0nm,0.9s,baz=235,slow=6.0,SNR=5.2						
PDAR	Pinedale Array	76.74	331	P	P	00 08 49.0	+1.0
	comp=Z,0.2nm,0.5s,baz=141,slow=9.2,SNR=3.8						
ULM	Lac du Bonnet	78.51	344	P	P	00 08 56.7	-0.7
	comp=Z,0.7nm,0.2s,baz=143,slow=5.1,SNR=5.5						
ULM	Lac du Bonnet	78.51	344	IAmb	IAmb	00 09 38.0	
	comp=Z,16nm,1.9s						
TOA0	Torodi Ar. Sit	79.80	70	P	P	00 09 04.8	-0.5
TORD	Torodi Ar. Bea	79.80	70	P	P	00 09 05.1	-0.2
	comp=Z,5.6nm,0.6s,baz=264,slow=5.1,SNR=74						
TORD				pP	pP	00 09 20.4	+0.2
	comp=Z,2.1nm,0.6s,baz=250,slow=5.4,SNR=5.7						
TORD				sP	sP	00 09 25.9	-0.2
	comp=Z,6.6nm,0.8s,baz=249,slow=4.1,SNR=12						
TORD	Torodi Ar. Bea	79.80	70	P	P	00 09 04.4	-0.8
MCMT	McKenzie Canyo	79.82	331	P	P	00 09 05.2	+0.2
YKA	Yellowknife Ar	94.29	341	P	P	00 10 15.4	+0.3
	comp=Z,0.4nm,0.6s,baz=137,slow=5.0,SNR=12						
YKA				pP	pP	00 10 29.8	-0.4
	comp=Z,0.6nm,0.7s,baz=139,slow=4.8,SNR=5.6						
H11S2	WAKE ISLAND Hy	127.00	275	T	T	02 35 48.2	
	baz=108,slow=75,SNR=32						
H11S1	WAKE ISLAND Hy	127.02	275	T	T	02 35 47.9	
	baz=108,slow=75,SNR=36						
H11S3	WAKE ISLAND Hy	127.02	275	T	T	02 35 48.5	
	baz=108,slow=75,SNR=44						
H11N3	WAKE ISLAND Hy	127.19	276	T	T	02 36 02.2	
	baz=107,slow=75,SNR=6.7						
H11N1	WAKE ISLAND Hy	127.20	276	T	T	02 36 04.1	
	baz=107,slow=75,SNR=4.2						
H11N2	WAKE ISLAND Hy	127.20	276	T	T	02 36 06.9	
	baz=107,slow=75,SNR=6.3						
KURK	Kurchatov	145.12	35		PKPbc	00 16 32.8	-0.2
ZALV	Zalesovo Beam	145.86	26	PKPbc	PKPab	00 16 35.5	-0.1
	comp=Z,3.4nm,0.6s,baz=296,slow=3.9,SNR=15						
ZALV				pPKPbc	pPKPdf	00 16 50.9	+0.6
	comp=Z,2.4nm,0.7s,baz=324,slow=6.7,SNR=4.6						
NRN	Naryn	147.78	52		PKPbc	00 16 40.6	-1.0
MK31	Makanchi Array	149.37	38		PKPbc	00 16 45.0	-0.1
MKAR	Makanchi Array	149.37	38	PKPbc	PKPbc	00 16 45.5	+0.4
	comp=Z,1.2nm,0.5s,baz=313,slow=2.6,SNR=23						
MKAR				pPKPbc	pPKPbc	00 17 01.2	+0.4
	comp=Z,1.1nm,0.8s,baz=330,slow=1.9,SNR=6.1						
MKAR	Makanchi Array	149.37	38		PKPbc	00 16 45.3	+0.2
SONM	Songino Array	157.30	6	PKPab	PKPab	00 17 24.2	+0.8
	comp=Z,0.5nm,0.9s,baz=336,slow=3.2,SNR=3.3						

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*IDC **12** 00:03:56.8±2.5, 19°.37S×175°.69W, h170km±23km, mb4.0/13, mb1 4.3/15, mb1mx4.2/25, mbtmp4.5/15, MS4.3/1, Ms1 4.3/1, ms1mx3.3/32, Error ellipse: s-maj=19.1km s-min=11.7km az=132.0*

*NEIC **12** 00:03:57.3±1.2, 19°.3S±0°.1×175°.8W±0°.1, h175km±3km, mb4.6/30, Error ellipse: s-maj=16.5km s-min=13.3km az=129.0*

ISC 12 00:03:57.3±0.4**, 19°.41S**±0°.06×**175°.69W**±0°.08**, h175**km**, n103, σ1s.87**/114**, mb4.7**/27**, 5C-1D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	5.46	87		Pn	00 05 18.4	+1.2
AFI	Afiamalu	6.63	35	P	Pn	00 05 31.4	-1.3
	23nm,0.3s,baz=196,slow=4.0,SNR=12						
AFI				S	Sn	00 06 37.3	-11
	21nm,0.3s,baz=41,slow=21,SNR=8.6						
GLKZ	Green Lake	10.02	191	S	Sn	00 08 10.2	+1.7
DZM	Mont Dzumac	16.92	258	P	Pn	00 07 48.4	+4.3
	3.8nm,0.3s,baz=81,slow=15,SNR=34						
DZM				LR	LR	00 12 11.8	
	comp=Z,1μm,20.8s,baz=186,slow=29						
DZM	Mont Dzumac	16.92	258	P	P	00 07 43.1	-0.1
OUZ	Omahuta	18.38	209	P	Pn	00 08 08.0	+6.9
MXZ	Matakaoa Point	18.83	195	P	Pn	00 08 07.2	+0.9
MXZ				S	S	00 11 26.4	-2.3
WMGZ	Waiomatatini S	19.05	194	P	Pn	00 08 10.5	+1.5
WMGZ				S	S	00 11 22.8	-10
HAZ	Te Kaha	19.15	196	P	P	00 08 08.7	+1.5
HAZ				S	S	00 11 31.2	-3.6
PKGZ	Pakihiroa	19.20	195	P	Pn	00 08 11.2	+0.4
PKGZ				S	S	00 11 30.3	-5.7
RUGZ	Raukumara Rang	19.37	196	P	P	00 08 12.1	+2.3
TWGZ	Tauwhareparae	19.50	195	P	Pn	00 08 14.3	0.0
TKGZ	Te Karaka	19.78	195	P	Pn	00 08 17.1	-0.4
URZ	Urewera	19.80	197	P	P	00 08 15.5	+1.2
	15nm,0.3s,baz=303,slow=2.1,SNR=30						
RIGZ	Rimuhau	20.05	195	P	P	00 08 19.6	+2.6
SNGZ	Shannon Statio	20.23	196	P	P	00 08 21.8	+2.9
BKZ	Black Stump Fm	20.82	197	P	P	00 08 25.1	0.0
BKZ				IAmb	IAmb	00 08 34.8	
	comp=Z,27nm,1.5s						
BKZ					S	00 12 08.6	+0.9
BFZ	Birch Farm	22.30	196	P	P	00 08 41.3	+0.9
BFZ				IAmb	IAmb	00 08 42.4	
	comp=Z,19nm,0.6s						
TUWZ	Tuamarina	23.66	200	P	P	00 08 53.3	+0.5
RPZ	Rata Peaks	26.66	202	P	P	00 09 19.2	-0.7
	comp=Z,6.9nm,0.4s,baz=277,slow=2.1,SNR=12						
COEN	Coen	39.70	271	P	P	00 11 12.4	-0.5
MANU	Manus Island	40.04	291	P	P	00 11 15.4	-0.2
STKA	Stephens Creek	40.22	243	P	P	00 11 17.8	+0.8
	comp=Z,4.3nm,0.5s,baz=87,slow=11,SNR=15						
STKA	Stephens Creek	40.22	243	P	P	00 11 16.8	-0.2
GENI	Genyem	46.25	286	P	P	00 12 07.6	+2.1
	comp=Z,47nm,0.7s						
AS31	Alice Springs	46.89	255	P	P	00 12 10.3	-0.1
WB0	Warramunga Arr	46.89	261	P	P	00 12 09.7	-0.7
ASAR	Alice Springs	46.89	255	P	P	00 12 09.9	-0.5
	comp=Z,78nm,0.6s,baz=90,slow=8.3,SNR=453						
ASAR				S	S	00 18 41.4	-6.7
	comp=Z,1.1nm,0.6s,baz=92,slow=16,SNR=9.3						
ASAR	Alice Springs	46.89	255	P	P	00 12 09.4	-1.1
WB2	Warramunga Arr	46.90	261	P	P	00 12 09.7	-0.9
WRA	Warramunga Arr	46.91	261	P	P	00 12 09.6	-1.0
	comp=Z,26nm,0.5s,baz=97,slow=6.8,SNR=177						
WRA				S	S	00 18 41.4	-7.1
	comp=Z,1.9nm,0.9s,baz=99,slow=12,SNR=4.7						
MTN	Manton Dam	51.34	269	P	P	00 12 43.3	-1.0
FORT	Forrest	51.72	246	P	P	00 12 46.9	0.0
KNRA	Kununurra	52.91	265	P	P	00 12 55.6	-0.2
SWI	Sorong	55.09	283	P	P	00 13 11.9	+0.2
	comp=Z,86nm,0.8s						
FITZ	Fitzroy Crossi	55.33	261	P	P	00 13 13.3	0.0
FITZ				IAmb	IAmb	00 13 15.2	
	comp=Z,5.4nm,0.7s						
SOEI	Soe	58.65	270	P	P	00 13 38.4	+1.5
	comp=Z,995nmcomp=Z,80nm,0.9s						
SOEI	Soe	58.65	270	P	P	00 13 37.5	+0.6
SANI	Sanana	59.53	279	P	P	00 13 42.3	-0.5
	comp=Z,38nm,0.8s						
EDFI	Ende, Flores	61.38	270	P	P	00 13 54.8	-0.6
	comp=Z,10nm,0.8s						
QSPA	South Pole Qui	70.66	180	P	P	00 14 55.0	+1.2
QSPA				IAmb	IAmb	00 14 55.9	
	comp=Z,13nm,0.8s						
MJAR	Matsushiro Arr	70.66	322	P	P	00 14 53.4	-0.7
	comp=Z,15nm,0.6s,baz=150,slow=6.2,SNR=30						
MJAR	Matsushiro Arr	70.66	322	P	P	00 14 53.3	-0.7
MAJO	Matsushiro	70.66	322	P	P	00 14 53.2	-0.8
MAT	Matsushiro	70.66	322	P	P	00 14 53.6	-0.4
PETK	Petropavlovsk-	75.81	344	P	P	00 15 23.4	-0.4
	comp=Z,4.0nm,0.7s,baz=143,slow=8.2,SNR=5.4						
KSRS	Korea Array	77.54	317	P	P	00 15 34.6	+0.8
	comp=Z,1.2nm,0.5s,baz=231,slow=30,SNR=5.0						
NVAR	Mina Array Bea	78.75	42	P	P	00 15 40.8	0.0
	comp=Z,2.6nm,0.7s,baz=223,slow=9.3,SNR=21						
USRK	Ussuriysk Ar.	79.31	325	P	P	00 15 44.5	+1.1
	comp=Z,2.3nm,0.7s,baz=90,slow=3.8,SNR=5.0						
NJ2	Nanjing	80.88	309	*e*P	P	00 15 51.5	-0.6
MDJ	Mudanjiang	80.90	324	P	P	00 15 52.3	+0.4
MDJ				IAmb	IAmb	00 15 53.7	
	comp=Z,17nm,1.0s						
X16A	Lo Mia Camp, P	81.19	49	P	P	00 15 54.5	+0.5
MSU	Marysvale	82.80	45	P	P	00 16 02.5	+0.2
F10A	Beach Ranch, E	83.83	37	P	P	00 16 07.0	-0.2
F10A				IAmb	IAmb	00 16 07.5	
	comp=Z,2.9nm,0.7s						
MNTX	Cornudas Mount	84.36	54	P	P	00 16 10.6	+0.4
MNTX				IAmb	IAmb	00 16 11.3	
	comp=Z,3.3nm,0.8s						
TXAR	Lajitas Array	84.64	57	P	P	00 16 12.4	+0.6
	comp=Z,1.9nm,0.9s,baz=221,slow=7.0,SNR=18						
TXAR	Lajitas Array	84.64	57	P	P	00 16 12.2	+0.5
DOT	Dot Lake	86.39	14	P	P	00 16 18.4	-1.0
PDAR	Pinedale Array	86.69	42	P	P	00 16 21.0	-0.7
	comp=Z,0.4nm,0.6s,baz=217,slow=3.3,SNR=7.0						
ILAR	Eielson Array	86.79	12	P	P	00 16 20.4	-1.0
	comp=Z,0.5nm,0.7s,baz=235,slow=6.7,SNR=5.4						

ENH	Enshi	87.24	303	P	P	00 16 23.7	-0.6
SYO	Syowa Base	88.25	192	⇑*e*P	P	00 16 26.2	-2.2
SNAA	Sanae	89.02	178	P	P	00 16 32.1	0.0
SNAA	Sanae	89.02	178	P	P	00 16 32.5	+0.4
SNAA				IAmb	IAmb	00 16 58.0	
	comp=Z,13nm,1.4s						
VNA3	Neumayer Olymp	89.07	176	P	P	00 16 32.2	-0.1
XAN	Xi'an	89.22	307	P	P	00 16 32.2	-1.4
XAN				pP	PcP	00 16 42.9	+8.0
XAN	Xi'an	89.22	307	P	P	00 16 32.3	-1.4
XAN				IAmb	IAmb	00 16 35.5	
	comp=Z,11nm,1.0s						
VNA2	Neumayer--Watz	89.53	176	P	P	00 16 34.7	+0.3
	baz=184,slow=3.7						
VNA1	Neumayer--Stat	89.75	176	P	P	00 16 35.8	+0.5
CMAR	Chiang Mai Arr	91.81	289	P	P	00 16 46.9	+0.9
	comp=Z,1.3nm,0.5s,baz=120,slow=2.8,SNR=14						
CMAR	Chiang Mai Arr	91.81	289	P	P	00 16 45.3	-0.6
CD2	Chengdu	92.04	302	P	P	00 16 46.0	-0.8
LZH	Lanzhou	93.85	307	⇑P	P	00 16 57.0	+1.8
LZH				*e*PKP	PcP	00 17 01.8	+6.2
LZH				pPKP	pP	00 17 17.7	-20
LZH				sPKP		00 17 23.5	
LZH				pP	pwP	00 17 43.1	+1.6
LZH				sP	sP	00 18 03.2	+7.2
LZH				PKP		00 18 12.0	
LZH				PP	PP	00 20 48.5	+5.1
YKA	Yellowknife Ar	94.63	24	P	P	00 16 57.1	-0.7
	comp=Z,0.1nm,0.4s,baz=236,slow=4.9,SNR=6.8						
GTA	Gaotai	97.97	309	*e*P	Pdif	00 17 15.3	+1.5
GTA				pP	pP	00 17 54.2	-2.6
GTA				sP	sP	00 18 10.7	-4.0
KSH	Kashi	116.04	305	PKP	PKiKP	00 22 22.0	+2.1
KSH				sPKP		00 23 20.9	
KSH				PP	PP	00 23 34.3	+7.0
KSH				PKS	PKSdf	00 25 59.3	+2.7
KSH				SKKS		00 30 11.6	
BOSA	Boshof	128.14	204	PKP	PKPdf	00 22 43.5	0.0
	comp=Z,2.1nm,0.7s,baz=244,slow=5.2,SNR=6.0						
ARCES	ARCESS Array B	128.22	351	PKP	PKPdf	00 22 41.1	-1.1
	comp=Z,3.1nm,1.0s,baz=7.3,slow=2.2,SNR=13						
FINES	FINESS Array B	135.31	345	PKP	PKPdf	00 22 55.7	0.0
	comp=Z,0.7nm,0.4s,baz=113,slow=4.4,SNR=4.7						
AKASG	Malin Array Be	143.06	334	PKhKP	PKPab	00 23 05.9	-0.1
	comp=Z,0.8nm,0.5s,baz=43,slow=4.2,SNR=6.1						
BUR08	Bucovina Ar. S	147.10	334	PKPbc	PKPbc	00 23 19.9	+0.1
BURAR	Bucovina Array	147.12	334	⇓P	PKPbc	00 23 20.2	+0.4
BRTR	Keskin Array B	147.66	315	PKPbc	PKPbc	00 23 20.8	-0.8
	comp=Z,1.6nm,0.7s,baz=129,slow=4.2,SNR=11						
BRTR	Keskin Array B	147.66	315		PKPbc	00 23 21.0	-0.6
DPC	Dobruska-Polom	147.68	346	⇑*e*PKP	PKiKP	00 23 21.9	-1.2
BRG	Berggiesshubel	147.69	349	*e*PKP	PKPbc	00 23 21.3	+0.2
	comp=Z,2.2nm,0.8s						
KRLC	Kraliky	147.82	345	⇑*e*PKP	PKPbc	00 23 21.4	-0.2
KHC	Kasperske Hory	149.42	348	*e*PKPDF	PKPdf	00 23 18.5	-2.6
KHC				⇑*e*PKP	PKPbc	00 23 25.3	-0.4
KHC				*e*PKPAB	PKPab	00 23 29.3	-1.7
GERES	GERESS Array B	149.67	348	PKPbc	PKPbc	00 23 25.8	-0.5
	comp=Z,0.9nm,0.6s,baz=329,slow=1.6,SNR=6.1						
CONA	Conrad Observa	150.04	344	*e*PKiKP	PKiKP	00 23 27.5	-0.6
	comp=Z,6.0nm,1.6s						
MOA	Molln	150.50	346	*e*PKiKP	PKPbc	00 23 28.0	-0.3
	comp=Z,2.6nm,1.1s						
ARSA	Arzberg	150.76	344	*e*PKiKP	PKiKP	00 23 29.6	+0.1
	comp=Z,3.2nm,1.0s						
KBA	Koelnbreinsper	151.43	347	*e*PKiKP	PKPbc	00 23 29.8	-0.9
	comp=Z,7.8nm,1.8s						
WATA	Walderalm	151.52	350	*e*PKPbc	PKPbc	00 23 29.5	-1.3
	comp=Z,3.1nm,0.5s						
WTTA	Wattenberg	151.58	349	*e*PKiKP	PKPbc	00 23 30.2	-0.8
	comp=Z,4.9nm,0.5s						
OBKA	Obir	151.69	345	*e*PKiKP	PKiKP	00 23 31.4	-0.1
	comp=Z,5.8nm,1.1s						
SQTA	Sankt Quirin	151.69	350	*i* PKiKP	PKPbc	00 23 30.9	-0.3
	comp=Z,3.1nm,0.8s						
MYKA	Terra Mystica	151.79	346	*e*PKPbc	PKPbc	00 23 30.2	-1.2
	comp=Z,2.6nm,0.8s						
DAVA	Damuels	151.82	352	*e*PKiKP	PKiKP	00 23 31.6	-0.3
	comp=Z,5.5nm,1.1s						
ABTA	Abfaltersbach	151.91	348	*e*PKPbc	PKPbc	00 23 30.8	-0.9
	comp=Z,3.1nm,0.5s						
FETA	Feichten	151.96	351	*i* PKiKP	PKPbc	00 23 31.7	-0.2
	comp=Z,4.1nm,1.0s						
TORD	Torodi Ar. Bea	173.29	158	PKP	PKPdf	00 23 44.7	-1.9
	comp=Z,1.0nm,0.8s,baz=317,slow=2.3,SNR=4.9						
TORD				PKPab	PKPab	00 25 15.5	+0.2
	comp=Z,0.5nm,0.6s,baz=194,slow=2.8,SNR=5.0						
TORD	Torodi Ar. Bea	173.29	158		PKPdf	00 23 44.6	-1.9
TORD					PKPab	00 25 15.2	-0.1

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*IDC **12** 00:30:50.4±1.7, 37°.76N×102°.09E, h0^{km}, mb3.6/3, mb1 3.7/6, mb1mx3.4/54, mbtmp3.7/6, ML3.5/3, Error ellipse: s-maj=29.6km s-min=24.4km az=73.0*

*BJI **12** 00:30:50.2±0.0, 37°.61N×102°.25E, h7^{km}, mb3.8/2, ML3.8/18, Ms3.6/8, Ms7 3.4/5*

ISC 12 00:30:50.5±0.8**, 37°.58N**±0°.06×**102°.20E**±0°.05**, h10^{km}, n11, σ2^{s}31**/18**, Gansu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LZH	Lanzhou	1.99	138	Pn	Pn	00 31 24.8	+0.4
LZH				Pg	Pb	00 31 26.9	0.0
LZH				Sg	Sg	00 31 53.8	-0.8
LZH				smax	smax		
	comp=N,2μm,1.0s						
LZH				smax	smax		
	comp=E,2μm,1.0s						
GTA	Gaotai	2.61	315	Pn	Pn	00 31 33.6	+0.7
GTA				Pg	Pb	00 31 36.2	-1.3
GTA				Sg	Sb	00 32 09.9	+0.2
GTA				smax	smax		
	comp=N,560nm,0.6s						
GTA				smax	smax		
	comp=E,480nm,0.6s						
XAN	Xi'an	6.51	121	Pn	Pn	00 32 27.4	+1.1
XAN				Sn	Sn	00 33 40.2	-0.4
XAN				Sg	Sg	00 34 13.8	-5.6
XAN				smax	smax		
	comp=N,46nm,0.8s						
XAN				smax	smax		
	comp=E,50nm,0.8s						
XAN				LR	LR		
	comp=N,400nm,14.1s						
XAN				LR	LR		
	comp=E,350nm,13.0s						
XAN				LR	LR		
	comp=Z,270nm,10.8s						
BTO	Baotou	6.79	61	*e*Pn	Pn	00 32 22.2	-8.1
BTO				*e*Pg	Pb	00 32 48.3	-0.4
BTO				Sn	Sn	00 33 45.6	-2.1
BTO				Sg	Sb	00 34 15.2	+5.3
SONM	Songino Array	10.70	15	Pn	Pn	00 33 22.7	-1.2
	0.9nm,0.3s,baz=198,slow=15,SNR=14						
SONM				Lg	Lg	00 36 25.0	
	0.6nm,0.3s,baz=209,slow=30,SNR=4.5						
WMQ	Urumqi	12.64	304	*e*P	Pn	00 33 52.9	+2.6
MKAR	Makanchi Array	17.35	308	P	Pn	00 34 52.1	-0.6
	0.1nm,0.3s,baz=111,slow=12,SNR=7.0						
CMAR	Chiang Mai Arr	19.27	189	P	Pn	00 35 17.9	+1.6
	0.1nm,0.3s,baz=3.1,slow=10,SNR=6.3						
ZALV	Zalesovo Beam	20.27	329	P	P	00 35 25.1	-0.9
	1.5nm,0.5s,baz=128,slow=12,SNR=7.4						
KSRS	Korea Array	20.39	82	P	Pn	00 35 29.6	+0.1
	3.4nm,0.9s,baz=276,slow=9.9,SNR=8.0						
KURBB	Kurchatov Arra	21.30	315	P	P	00 35 36.6	-0.5
	3.2nm,0.8s,baz=121,slow=10,SNR=22						

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*BJI **12** 00:31:41.8±0.0, 44°.30N×129°.20W, h10^{km}, mB5.4/31, mb4.9/46, Ms4.9/14, Ms7 4.8/15*

*ANF **12** 00:31:42.2±1.7, 44°.12N×129°.24W, h0^{km}, ML4.2/11, Error ellipse: s-maj=19.5km s-min=11.0km az=35.0*

*IDC **12** 00:31:43.1±0.6, 44°.39N×129°.08W, h0^{km}, mb4.6/29, mb1 4.6/37, mb1mx4.5/60, mbtmp4.5/37, ML3.7/8, MS4.4/32, Ms1 4.4/32, ms1mx4.3/45, Error ellipse: s-maj=18.3km s-min=8.5km az=32.0*

*MOS **12** 00:31:43.4±0.9, 44°.31N×129°.08W, h14^{km}, mb5.3/54, MS4.5/7, Error ellipse: s-maj=9.7km s-min=5.7km az=103.4*

*GCMT **12** 00:31:44.5±0.2, 44°.16N±0°.01×129°.45W±0°.01, h14^{km}, MW5.2/140, Moment Tensor Solution. s45,c53; s140,c247; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.58±.03; M$_{\theta\theta}$-0.12±.02; M$_{\phi\phi}$0.70±.02; M$_{r\theta}$0.15±.05; M$_{\theta\phi}$-0.52±.01; M$_{\phi r}$0.07±.04; Best double couple: M$_0$0.81200×10^{17} NP1:ϕ_s180.00000°, δ52.00000°, λ-51.00000°. NP2:ϕ_s308.00000°, δ52.00000°, λ-128.00000°. Principal axes: T 0.9530, Plg0.0000°, Azm64.0000°; N -0.2810, Plg29.0000°, Azm334.0000°; P -0.6720, Plg61.0000°, Azm154.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **12** 00:31:44.5±1.1, 44°.31N±0°.08×129°.1W±0°.1, h10^{km}±1^{km}, mb5.1/321 Error ellipse: s-maj=15.7km s-min=11.4km az=231.0*

*PMR **12** 00:31:46±1.0, 44°.31N±0°.08×129°.1W±0°.1, h12^{km}±1^{km}, Error ellipse: s-maj=15.1km s-min=10.7km az=221.0*

*BGR **12** 00:31:47.0±0.0, 43°.93N×129°.58W, h33^{km}, mb5.2, Ms4.9*

ISC 12 00:31:44.9±0.8**, 44°.25N**±0°.05×**129°.20W**±0°.05**, h14^{km}**±4^{km}**, n784, σ1^{s}04**/655**, mb5.1**/228**, MS4.5**/37**, 13C-13D, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
J23C	J23C	0.69	330	P	Pn	00 32 03.3	+3.2
J21C	J21C	0.88	71	P	Pb	00 31 58.3	-3.0
J30C	J30C	1.20	10	P	Pn	00 32 01.6	-5.0
J30C				S	Sg	00 32 23.8	+0.7
J29C	J29C	1.26	42	P	Pn	00 32 03.8	-3.5
J29C				S	Sg	00 32 30.2	+5.6
J31C	J31C	1.35	346	P	Pn	00 32 03.8	-5.2
J31C				S	Sn	00 32 26.1	-0.2
J28C	J28C	1.67	60	P	Pb	00 32 14.5	-0.2
J28C				S	Sb	00 32 37.0	+2.2
J32C	J32C	1.77	326	P	Pn	00 32 14.5	-0.6
J32C				S	Sn	00 32 37.3	+0.2
J38C	J38C	1.81	8	S	Sg	00 32 43.3	+0.7
J37C	J37C	1.83	28	P	Pn	00 32 11.8	-3.5
J37C				S	Sg	00 32 47.5	+4.5
J39C	J39C	1.96	351	S	Sb	00 32 44.7	+0.8
J36C	J36C	2.06	45	P	Pn	00 32 15.6	-2.7
J36C				S	Sg	00 32 51.2	+1.1
J35C	J35C	2.43	58	P	Pn	00 32 23.5	+0.1
J35C				S	Sg	00 33 01.2	-0.8
J46C	J46C	2.44	7	S	Sb	00 33 00.5	+3.1
J45C	J45C	2.45	21	P	Pb	00 32 27.5	-0.7
J45C				S	Sg	00 33 06.1	+3.2
J44C	J44C	2.58	35	P	Pn	00 32 23.3	-2.2
J44C				S	Sg	00 33 06.1	-0.6
J47C	J47C	2.62	352	S	Sg	00 33 07.9	-1.1
J43C	J43C	2.86	47	P	Pn	00 32 29.4	+0.1
J43C				S	Sg	00 33 13.8	-1.8
J53C	J53C	3.05	17	S	Sb	00 33 17.7	+2.8
J54C	J54C	3.10	5	S	Sb	00 33 18.2	+1.6
J52C	J52C	3.15	28	P	Pn	00 32 32.7	-0.7
J52C				S	Sg	00 33 23.3	-1.8
J55C	J55C	3.31	354	S	Sg	00 33 28.9	-1.9
M05C7	M05C7	3.58	56	S	Sg	00 33 36.3	-2.5
J61C	J61C	3.69	11	S	Sb	00 33 34.0	+0.5
KEBM	Edson Butte	3.79	110		Pn	00 32 40.1	-2.8
I02D	Swisshome	3.85	90	P	Pn	00 32 42.9	-0.8
	baz=275,SNR=17						
J01E	Myrtle Point	3.97	104	P	Pn	00 32 43.9	-1.4
	baz=289,SNR=16						
J01E				S	Sn	00 33 30.2	-1.4
	baz=289						
J63C	J63C	4.00	352	S	Sb	00 33 41.8	-0.8
KBO	Bosley Butte	4.16	117		Pn	00 32 45.7	-2.4
J67C	J67C	4.17	20	P	Pn	00 32 50.2	+2.7
J67C				S	Sb	00 33 43.2	-3.9
M03C7	M03C7	4.23	30	P	Pn	00 32 48.8	+0.5
M03C7				S	Sg	00 33 55.8	-4.0
COR	Corvallis	4.24	83	P	Pn	00 32 48.5	-0.5
COR	Corvallis	4.24	83		Pn	00 32 48.5	-0.5
I03D	Drain, OR	4.26	95	P	Pn	00 32 47.7	-1.6
	baz=280,SNR=45						
I03D				S	Sn	00 33 40.6	+1.9
	baz=280						
K02D	Willamette Mer	4.32	109	P	Pn	00 32 47.7	-2.5
	baz=294						
K02D				S	Sn	00 33 38.6	-1.6
	baz=294						
F03A	Seaside	4.33	65		Pn	00 32 49.2	-1.2
G03D	McMinnville, O	4.34	75	P	Pn	00 32 49.6	-0.7
	baz=260,SNR=28						
J68C	J68C	4.34	12	S	Sg	00 34 01.8	-1.8
J69C	J69C	4.39	4	S	Sg	00 34 03.2	-2.3
E03A	Lebam	4.59	58		Pn	00 32 52.3	-1.4
L02E	Cave Junction	4.59	115	P	Pn	00 32 52.2	-1.7
	baz=300						
H04D	Lebanon	4.64	84	P	Pn	00 32 54.7	+0.2
	baz=270,SNR=75						
KRMB	Red Mountain	4.75	123	Pn	Pn	00 32 56.0	-0.1
F04D	Rainier, OR	4.75	65	P	Pn	00 32 55.8	-0.2
	baz=250,SNR=27						
HUMO	Hull Mountain	4.83	108		Pn	00 32 56.0	-1.2
NLWA	Neilton Lookou	4.88	48		Pn	00 32 56.4	-1.4
I04A	Tendick Farm,	4.92	93	P	Pn	00 32 58.1	-0.3
	baz=279,SNR=45						
I04A				S	Sn	00 33 56.8	+1.7
	baz=279						
H04A	Detroit Lake	5.04	83		Pn	00 32 59.6	-0.4
F04A	Amboy	5.09	68		Pn	00 33 00.0	-0.7
JCC	Jacoby Creek,	5.13	130	Pn	Pn	00 33 01.9	+0.7
E04D	Cinebar	5.21	61	P	Pn	00 33 01.9	-0.4
	baz=247,SNR=48						
J04D	Umpqua Nationa	5.24	99	P	Pn	00 33 03.8	+0.9
	baz=284,SNR=18						
J04D				S	Sn	00 34 08.8	+5.7
	baz=284						
D04E	Lakebay	5.37	55	P	Pn	00 33 04.5	0.0
	baz=240,SNR=68						
YBH	Yreka Blue Hor	5.38	116	Pn	Pn	00 33 04.4	-0.4
	0.6nm,0.3s,baz=302,slow=12,SNR=12						
YBH				Sn	Sn	00 34 07.0	+0.4
	0.3nm,0.3s,baz=134,slow=13,SNR=3.2						
YBH				LR	LR	00 34 55.3	
	comp=Z,2μm,20.9s,baz=306,slow=36						
D03D	Eldon	5.39	50	P	Pn	00 33 03.8	-1.0
	baz=235,SNR=237						
L04D	Klamath Falls	5.43	110	P	Pn	00 33 07.2	+1.7
	baz=295,SNR=24						
L04D				S	Sn	00 34 08.9	+1.1
	baz=295						
I05D	Terrebonne, OR	5.64	86	P	Pn	00 33 08.4	0.0
	baz=273						
K04D	Chiloquin, OR	5.66	104	P	Pn	00 33 08.9	+0.2
	baz=290						
G05D	Wamic, OR	5.70	77	P	Pn	00 33 09.6	+0.4
	baz=263,SNR=73						
F05D	White Salmon	5.72	71	P	Pn	00 33 10.1	+0.7
	baz=257,SNR=160						
J05D	Fort Rock, OR	5.85	97	P	Pn	00 33 11.0	-0.3
	baz=283,SNR=27						
O02D	Mt. Diablo Mer	6.26	128	P	Pn	00 33 18.2	+1.3
	baz=314						
A04D	Lummi Island	6.33	43	P	Pn	00 33 18.1	+0.4
	baz=228,SNR=53						
A04D				S	Sn	00 34 31.3	+1.6
	baz=228						
B05A	Bryant	6.36	48	P	Pn	00 33 18.5	+0.5
	baz=234,SNR=616						
C06D	Leavenworth	6.85	55	P	Pn	00 33 25.2	+0.4
	baz=241,SNR=19						
BBB	Bella Bella	7.98	5	Pn	Pn	00 33 42.4	+2.1
	1.8nm,0.3s,baz=204,slow=4.4,SNR=17						
BBB				Sn	Sn	00 35 11.2	+1.0
	0.2nm,0.3s,baz=35,slow=21,SNR=2.2						
BBB				LR	LR	00 36 00.3	
	comp=Z,2μm,21.7s,baz=171,slow=33						
NEW	Newport	9.28	60	Pn	Pn	00 33 57.0	-1.3
	1.9nm,0.3s,baz=254,slow=12,SNR=18						
NEW				LR	LR	00 37 27.9	
	comp=Z,5μm,21.1s,baz=257,slow=38						
NEW	Newport	9.28	60	P	Pn	00 33 56.9	-1.3
	baz=249,SNR=35						
NVAR	Mina Array Bea	10.04	122	Pn	Pn	00 34 11.0	+2.2
	0.3nm,0.3s,baz=295,slow=13,SNR=22						
NVAR				LR	LR	00 37 40.3	
	comp=Z,957nm,19.8s,baz=260,slow=35						
ELK	Elko	10.89	104	Pn	Pn	00 34 24.1	+3.7
	0.2nm,0.3s,baz=300,slow=12,SNR=18						
ELK				LR	LR	00 38 25.1	
	comp=Z,2μm,18.8s,baz=290,slow=37						
MSO	Missoula	11.01	71	P	Pn	00 34 22.2	+0.3
	baz=262,SNR=36						
VES	Vestal, Richgr	11.42	134	P	Pn	00 34 28.1	+0.7
	baz=321						
R11A	Troy Canyon, C	11.81	115	P	Pn	00 34 37.1	+4.1
	baz=305						
PKM	Mcpherson Peak	11.81	139	P	Pn	00 34 33.9	+0.8
	baz=326						
ISA	Isabella, Lake	11.87	133	P	Pn	00 34 35.8	+2.0
	baz=320						
ARVC	Arvin	12.10	135	P	Pn	00 34 37.1	+0.3
	baz=322,SNR=6.5						
MPMC	Manual Prospec	12.12	128	P	Pn	00 34 40.0	+2.7
	baz=316						
FURC	Furnace Creek,	12.19	125	P	Pn	00 34 42.7	+4.7
	baz=314						
TPNV	Topopah Spring	12.24	122	P	Pn	00 34 44.1	+5.3
	baz=311						
EDW2	Edwards Air Fo	12.72	133	P	Pn	00 34 46.1	+0.7
	baz=321,SNR=18						
DUG	Dugway, Tooele	12.80	103	P	Pn	00 34 50.6	+4.0
	baz=294,SNR=11						
SHOC	Shoshone, Teco	12.93	126	P	Pn	00 34 52.0	+3.9
	baz=315						
GSC	Goldstone, Bar	13.05	129	P	Pn	00 34 52.5	+2.6
	baz=317						
H17A	Grant Village	13.34	83	P	Pn	00 34 58.4	+4.4
	baz=276						
BFSC	Mount Baldy Ra	13.40	134	P	Pn	00 34 55.2	+0.5
	baz=322						
HEC	Hector,Ludlow	13.66	129	P	Pn	00 35 00.1	+1.9
	baz=318,SNR=18						
EGMT	Eagleton	14.00	68	P	Pn	00 35 03.2	+0.5
	baz=262,SNR=20						
GMRC	Granite Mounta	14.07	128	P	Pn	00 35 05.6	+1.7
	baz=317,SNR=19						
MURC	Murrieta	14.14	135	P	Pn	00 35 05.0	+0.3
	baz=323						
RLMT	Red Lodge	14.21	79	P	Pn	00 35 07.4	+1.6
	baz=274,SNR=50						
BW06	Boulder Array	14.33	89	P	Pn	00 35 09.4	+1.9
	baz=283,SNR=22						
PDAR	Pinedale Array	14.33	89	Pn	Pn	00 35 09.4	+1.9
	0.1nm,0.3s,baz=286,slow=12,SNR=27						
PDAR				LR	LR	00 40 38.0	
	comp=Z,3μm,21.3s,baz=281,slow=38						
BELC	Belle Mtn. Jos	14.46	131	P	Pn	00 35 10.5	+1.3
	baz=319						
PFO	Pinyon Flats O	14.51	133	Pn	Pn	00 35 11.6	+1.7
	0.1nm,0.3s,baz=320,slow=12,SNR=8.8						
PFO				LR	LR	00 40 21.7	
	comp=Z,657nm,18.6s,baz=297,slow=36						
PFO	Pinyon Flats O	14.51	133	⇓*e*P	Pn	00 35 11.3	+1.4
PFO	Pinyon Flats O	14.51	133	P	Pn	00 35 11.8	+1.9
	baz=321						
IRM	Iron Mountain	14.82	128	P	Pn	00 35 16.2	+2.3
	baz=317						
BC3	Big Chuckawall	15.02	130	P	Pn	00 35 17.8	+1.1
	baz=319,SNR=13						
U15A	North Rim	15.06	115	Pn	Pn	00 35 17.4	0.0
U15A				IAmb	IAmb	00 35 29.7	
	comp=Z,92nm,1.1s						
MONP2	Monument Peak	15.09	134	P	Pn	00 35 18.4	+0.6
	baz=323,SNR=29						
BAR	Barrett	15.13	136		Pn	00 35 17.9	-0.2
PDMCI	Parker Dam,Lak	15.29	125	P	P	00 35 23.2	-1.8
	baz=315						
SWSC	Sam W. Stewart	15.37	133	P	Pn	00 35 21.5	+0.2
	baz=322,SNR=7.1						
IKP	In-Ko-Pah, Jac	15.44	134	P	Pn	00 35 22.9	+0.5
	baz=323,SNR=8.5						
Y12C	Blythe	15.47	128	Pn	Pn	00 35 22.7	+0.1
Y12C				IAmb	IAmb	00 35 29.8	
	comp=Z,138nm,1.7s						
Y12C	Blythe	15.47	128	P	P	00 35 24.7	-2.2
	baz=317						
SKAG	Skagway	15.69	348	Pn	Pn	00 35 25.6	+0.3
GLA	Glamis	15.82	130	P	Pn	00 35 26.7	-0.4
GLA				pmax	pmax		
	comp=Z,40nm,1.4s						
GLA	Glamis	15.82	130		Pn	00 35 26.7	-0.4
GLA	Glamis	15.82	130	P	Pn	00 35 28.3	+1.2
	baz=320						
O20A	White River Ci	16.06	98	Pn	Pn	00 35 29.1	-1.2
O20A	White River Ci	16.06	98	P	Pn	00 35 31.4	+1.0
	baz=292,SNR=20						
WUAZ	Wupatki	16.20	116	Pn	Pn	00 35 32.6	+0.4
WUAZ				IAmb	IAmb	00 35 45.7	
	comp=Z,249nm,1.7s						
WUAZ	Wupatki	16.20	116	P	P	00 35 35.3	0.0
	baz=308,SNR=40						
RWWY	Rawlins	16.29	91	Pn	Pn	00 35 31.5	-1.9
LAO	LASA Array	16.29	73	Pn	Pn	00 35 32.0	-1.2
LAO				IAmb	IAmb	00 35 59.0	
	comp=Z,296nm,1.6s						
LAO	LASA Array	16.29	73	P	Pn	00 35 34.2	+1.0
	baz=270,SNR=17						
K22A	Casper	16.54	88	P	P	00 35 38.6	-0.4
	baz=284						
MVCO	Mesa Verde	17.17	107	IAmb	IAmb	00 36 02.8	
	comp=Z,292nm,1.6s						
MVCO	Mesa Verde	17.17	107	P	P	00 35 45.9	-0.2
	baz=301,SNR=26						
HYT	Haines Junctio	17.33	346	Pn	Pn	00 35 44.0	-2.3
N23A	Red Feather La	17.44	93	IAmb	IAmb	00 36 07.5	
	comp=Z,366nm,1.9s						
N23A	Red Feather La	17.44	93	P	Pn	00 35 48.4	+0.4
	baz=289,SNR=28						
W18A	Petrified Fore	17.50	115	IAmb	IAmb	00 35 57.6	
	comp=Z,315nm,1.6s						
W18A	Petrified Fore	17.50	115	P	P	00 35 52.4	+2.7
	baz=308,SNR=36						
DGMT	Dagmar	17.74	67		Pn	00 35 50.2	-1.1
DGMT	Dagmar	17.74	67	P	P	00 35 52.0	-0.1
	baz=266,SNR=20						
214A	Organ Pipe Nat	17.76	128	P	P	00 35 52.9	+0.4
	baz=319,SNR=7.8						
RSSD	Black Hills	18.03	82	P	Pn	00 35 53.3	-1.9
RSSD				pmax	pmax		
	comp=Z,94nm,1.4s						
RSSD	Black Hills	18.03	82	Pn	Pn	00 35 53.3	-1.9
RSSD	Black Hills	18.03	82	P	P	00 35 55.8	+0.3
	baz=280						
ISCO	Idaho Springs	18.06	96	P	P	00 35 56.4	+0.4
	baz=292,SNR=28						
S22A	4UR Ranch, Cre	18.07	103	P	P	00 35 56.9	+0.9
	baz=298,SNR=43						
CTGM	Chitina Glacie	18.24	341		Pn	00 35 57.1	-0.4
TUC	Tucson	18.69	123	P	P	00 36 02.2	-0.5
TUC				pmax	pmax		
	comp=Z,91nm,1.8s						
TUC	Tucson	18.69	123	P	P	00 36 02.2	-0.5
TUC	Tucson	18.69	123	P	Pn	00 36 04.2	+1.1
	baz=315						
Q24A	Divide	18.72	98	IAmb	IAmb	00 36 12.5	
	comp=Z,173nm,1.9s						
Q24A	Divide	18.72	98	P	Pn	00 36 06.1	+2.5
	baz=294,SNR=12						
SDCO	Great Sand Dun	19.00	102	P	P	00 36 04.6	-1.7
	baz=298,SNR=43						
GLB	Gilahina Butte	19.27	338	P	P	00 36 08.4	-0.5
ANMO	Albuquerque	19.78	110	P	Pn	00 36 15.9	-0.5
	comp=Z,0.1nm,0.3s,baz=297,slow=12,SNR=12						
ANMO	Albuquerque	19.78	110	P	P	00 36 13.9	-0.9
ANMO				pmax	pmax		
	comp=Z,44nm,1.6s						
ANMO	Albuquerque	19.78	110	P	P	00 36 13.9	-0.9
ANMO	Albuquerque	19.78	110	P	Pn	00 36 16.8	+0.4
	baz=305						
KDAK	Kodiak Island	19.86	321	LR	LR	00 41 49.4	
	comp=Z,2μm,19.9s,baz=131,slow=31						
Y22D	IRIS PASSCAL I	19.98	113	P	P	00 36 15.5	-1.5
Y22D				IAmb	IAmb	00 36 27.4	
	comp=Z,233nm,1.6s						
T25A	Trinidad	20.05	102	IAmb	IAmb	00 36 40.8	
	comp=Z,86nm,1.4s						
T25A	Trinidad	20.05	102	P	Pn	00 36 19.9	+0.4
	baz=299,SNR=27						
YKA	Yellowknife Ar	20.16	20	P	P	00 36 17.7	-0.7
	comp=Z,0.3nm,0.3s,baz=210,slow=11,SNR=68						
YKA				PcP	PcP	00 40 33.2	+0.7
	baz=216,slow=1.6,SNR=5.3						
BCAR	Beaver Creek A	20.20	343	P	P	00 36 19.0	0.0
OGNE	Ogallala	20.23	90	IAmb	IAmb	00 36 23.8	
	comp=Z,160nm,1.5s						
OGNE	Ogallala	20.23	90	P	Pn	00 36 21.5	-0.1
	baz=289,SNR=5.6						
319A	Douglas	20.25	123	P	P	00 36 19.7	-0.1

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319A                                IAmb  IAmb  00 36 45.7
      comp=Z,92nm,1.4s
121A  Cookes Peak, D   20.39 118   IAmb  IAmb  00 36 33.1
      comp=Z,101nm,1.2s
121A  Cookes Peak, D   20.39 118   P     Pn    00 36 24.1 +0.6
      baz=312,SNR=20
FFC   Flin Flon        20.43  49   P     P     00 36 20.8  -0.7
FFC                                pmax  pmax
      comp=Z,184nm,1.2s
FFC   Flin Flon        20.43  49   P     P     00 36 20.8  -0.7
KSCO  Kaye Shedlock’   20.50  96   IAmb  IAmb  00 36 34.3
      comp=Z,152nm,1.4s
KSCO  Kaye Shedlock’   20.50  96   P     Pn    00 36 24.6  -0.1
      baz=294
DAWY  Dawson           20.68 347   IAmb  IAmb  00 36 32.2
      comp=Z,102nm,1.7s
MDND  Maddock          20.80  70   P     Pn    00 36 27.0  -0.9
      baz=271,SNR=21
RC01  Rabbit Creek A   20.81 331   IAmb  IAmb  00 36 33.9
      comp=Z,167nm,1.7s
SML   Sawmill          20.87 334   IAmb  IAmb  00 36 41.5
      comp=Z,124nm,1.3s
PMR   Palmer           20.97 333   P     P     00 36 27.3 +0.1
PMR                                pmax  pmax
      comp=Z,162nm,1.7s
PMR   Palmer           20.97 333   P     P     00 36 27.2 +0.1
PMR                                IAmb  IAmb  00 36 39.0
      comp=Z,162nm,1.7s
HSIG                   21.03 130   P     P     00 36 26.7  -1.5
GHO   Glory Hole Cre   21.04 333   P     P     00 36 28.7 +0.7
GHO                                IAmb  IAmb  00 36 36.8
      comp=Z,162nm,1.4s
DHY   Denali Highway   21.57 337   IAmb  IAmb  00 36 40.4
      comp=Z,65nm,1.2s
SUSD  Miller           21.58  79   P     P     00 36 33.8  -0.1
SUSD                               IAmb  IAmb  00 36 41.3
      comp=Z,85nm,1.0s
SUSD  Miller           21.58  79   P     P     00 36 34.8 +0.9
      baz=280
SRIG  Santa Rosalia    21.71 135   P     P     00 36 35.6 +0.1
MNTX  Cornudas Mount   22.48 116   P     P     00 36 43.4  -0.4
MNTX  Cornudas Mount   22.48 116   P     P     00 36 45.8 +2.0
      baz=311,SNR=14
MCK   McKinley         22.53 337   IAmb  IAmb  00 36 53.5
      comp=Z,53nm,1.2s
HDA   Harding Lake     22.54 340   IAmb  IAmb  00 36 49.2
      comp=Z,98nm,1.5s
HDA   Harding Lake     22.54 340   P     P     00 36 44.3 +0.2
      baz=145,SNR=6.9
EPYK  Eagle Plains     22.55 352   P     P     00 36 45.0 +0.8
      baz=166,SNR=25
D32A  Dogwood Acres,   22.58  71   IAmb  IAmb  00 36 47.1
      comp=Z,76nm,1.2s
CBKS  Cedar Bluff      22.64  94   IAmb  IAmb  00 36 50.0
      comp=Z,46nm,1.1s
CBKS  Cedar Bluff      22.64  94   P     P     00 36 47.5 +2.1
      baz=294
TRF   Thorofare Moun   22.71 335   IAmb  IAmb  00 36 59.8
      comp=Z,110nm,1.5s
IL31                   22.83 340   IAmb  IAmb  00 36 51.7
      comp=Z,78nm,1.4s
ILAR  Eielson Array    22.83 340   P     P     00 36 46.8  -0.3
      comp=Z,18nm,1.1s,baz=152,slow=6.9,SNR=30
ILAR                               PcP   PcP   00 40 38.6 +0.9
      comp=Z,2.3nm,1.0s,baz=181,slow=2.6,SNR=6.2
ILAR  Eielson Array    22.83 340   P     P     00 36 46.8  -0.3
ILAR                                           00 40 38.1
ILAR  Eielson Array    22.83 340   P     P     00 36 46.8  -0.3
ILAR                                     PcP   00 40 38.1 +0.4
BGNE  Belgrade         22.88  86   IAmb  IAmb  00 36 55.9
      comp=Z,43nm,0.7s
BGNE  Belgrade         22.88  86   P     P     00 36 49.2 +1.3
      baz=288
WRH   Wood River Hil   22.88 339   IAmb  IAmb  00 36 57.9
      comp=Z,100nm,1.3s
CCB   Clear Creek Bu   22.95 339   IAmb  IAmb  00 36 52.8
      comp=Z,105nm,1.6s
KTH   Kantishna Hill   22.97 335   IAmb  IAmb  00 37 26.6
      comp=Z,95nm,1.5s
POKR  Poker Plat Res   23.24 340   P     P     00 36 53.2 +1.8
      baz=145,SNR=8.1
ULM   Lac du Bonnet    23.27  63   P     P     00 36 50.6  -1.2
      comp=Z,30nm,0.9s,baz=273,slow=10,SNR=48
ULM                                LR    LR    00 46 04.6
      comp=Z,2µm,18.5s,baz=266,slow=37
ULM   Lac du Bonnet    23.27  63ceP        P     00 36 50.8  -1.0
ULM   Lac du Bonnet    23.27  63   IAmb  IAmb  00 36 53.2
      comp=Z,45nm,0.9s
AGMN  Agassiz Nation   23.29  68   IAmb  IAmb  00 36 59.0
      comp=Z,108nm,1.2s
AGMN  Agassiz Nation   23.29  68   P     P     00 36 52.1 +0.1
      baz=273,SNR=38
MDM   Murphy Dome      23.31 339   IAmb  IAmb  00 37 08.3
      comp=Z,76nm,1.6s
ECSD  EROS Data Cent   23.37  80   IAmb  IAmb  00 36 56.9
      comp=Z,116nm,1.4s
ECSD  EROS Data Cent   23.37  80   P     P     00 36 52.7  -0.1
      baz=283,SNR=62
BPAW  Bear Paw Mtn.    23.40 336   IAmb  IAmb  00 36 56.4
      comp=Z,75nm,1.6s
MLY   Manley           24.03 337   IAmb  IAmb  00 37 02.1
      comp=Z,98nm,1.5s
INK   Inuvik           24.23 356   P     P     00 37 00.0  -0.8
      comp=Z,4.3nm,0.9s,baz=165,slow=10,SNR=11
INK                                LR    LR    00 45 36.8
      comp=Z,837nm,20.5s,baz=169,slow=35
INK   Inuvik           24.23 356   IAmb  IAmb  00 37 05.0
      comp=Z,85nm,1.9s
BMAR  Burnt Mountain   24.64 346   P     P     00 37 04.6  -0.1
KSU1  Kansas State U   24.78  91   P     P     00 37 06.8 +0.7
      baz=293
TX31  Lajitas Ar. Si   25.15 118   IAmb  IAmb  00 37 26.3
      comp=Z,55nm,1.6s
TX32  Lajitas Array    25.15 118   IAmb  IAmb  00 37 26.3
      comp=Z,51nm,1.6s
TXAR  Lajitas Array    25.16 118   P     P     00 37 09.9 +0.2
      comp=Z,4.9nm,1.1s,baz=302,slow=7.2,SNR=21
TXAR                               PcP   PcP   00 40 44.8 +1.3
      comp=Z,2.3nm,1.2s,baz=270,slow=1.3,SNR=3.6
WMOK  Wichita Mounta   25.20 102   IAmb  IAmb  00 37 21.9
      comp=Z,42nm,1.0s
WMOK  Wichita Mounta   25.20 102   P     P     00 37 11.1 +1.1
      baz=302,SNR=16
C36M  Paulatuk         25.30   4   P     P     00 37 10.4  -0.1
C36M  Paulatuk         25.30   4   P     P     00 37 10.2  -0.3
      baz=189,SNR=11
LPIG  La Paz           25.34 136   LR    LR    00 47 17.4
      comp=Z,365nm,18.1s,baz=324,slow=37
IMAR  Indian Mountai   25.58 337   P     P     00 37 13.0  -0.1
IMAR                                     PcP   00 40 44.7 +1.1
HPIG                   25.64 125   P     P     00 37 13.5  -0.7
SPMN  Marine on St.    25.74  75   IAmb  IAmb  00 37 27.1
      comp=Z,118nm,2.0s
SPMN  Marine on St.    25.74  75   P     P     00 37 16.1 +1.3
      baz=281
ABTX  Abilene, Hawle   25.76 107   IAmb  IAmb  00 37 20.2
      comp=Z,55nm,1.6s
ABTX  Abilene, Hawle   25.76 107   P     P     00 37 16.5 +1.4
      baz=306
T35A  Sooner Cattle    25.76  95   IAmb  IAmb  00 37 24.2
      comp=Z,58nm,1.1s
X34A  Smith Ranch, M   25.94 101   IAmb  IAmb  00 37 33.8
      comp=Z,116nm,1.8s
UNV   Unalaska Valle   25.99 305   P     P     00 37 17.8 +0.9
EYMN  Ely              26.23  68   IAmb  IAmb  00 37 20.4
      comp=Z,77nm,1.4s
EYMN  Ely              26.23  68   P     P     00 37 19.7 +0.5
      baz=276,SNR=16
TOLK  Toolik Lake Re   26.64 343   IAmb  IAmb  00 37 32.2
      comp=Z,50nm,1.1s
TOLK  Toolik Lake Re   26.64 343   P     P     00 37 24.5 +1.7
      baz=146
JCT   Junction City    26.94 111   P     P     00 37 25.1  -0.7
JCT                                pmax  pmax
      comp=Z,28nm,1.4s
JCT   Junction City    26.94 111   P     P     00 37 25.1  -0.7
JCT   Junction City    26.94 111   P     P     00 37 29.0 +3.2
      baz=309
I40A  Norwalk          27.56  77   IAmb  IAmb  00 37 32.9
      comp=Z,62nm,1.4s
L40A  Anamosa          27.63  81   IAmb  IAmb  00 37 33.4
      comp=Z,63nm,1.5s
WHTX  Lake Whitney,    27.63 105   IAmb  IAmb  00 37 45.0
      comp=Z,57nm,1.6s
WHTX  Lake Whitney,    27.63 105   P     P     00 37 34.8 +2.9
      baz=306
S39A  Bolivar          27.71  91   IAmb  IAmb  00 37 40.1
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      comp=Z,27nm,1.1s
JFWS  Jewell Farm      28.07  79   IAmb  IAmb  00 37 37.3
      comp=Z,84nm,1.6s
JFWS  Jewell Farm      28.07  79   P     P     00 37 36.2 +0.4
      baz=286,SNR=8.0
COWI  Conover          28.10  72   IAmb  IAmb  00 37 37.4
      comp=Z,74nm,1.8s
W39A  Magazine         28.52  96   P     P     00 37 40.4 +0.6
      baz=300
ANM   Nome             28.64 328   IAmb  IAmb  00 37 48.9
      comp=Z,37nm,1.4s
U40A  Yellville        28.64  93   IAmb  IAmb  00 37 55.2
      comp=Z,43nm,1.6s
U40A  Yellville        28.64  93   P     P     00 37 41.3 +0.4
      baz=298
MGMO  Mountain Grove   28.70  91   IAmb  IAmb  00 37 50.7
      comp=Z,36nm,1.6s
MIAR  Mount Ida        28.99  97   IAmb  IAmb  00 37 59.4
      comp=Z,64nm,1.3s
MIAR  Mount Ida        28.99  97   P     P     00 37 44.8 +0.8
      baz=300
CCM   Cathedral Cave   29.05  89   P     P     00 37 44.3  -0.2
CCM                                pmax  pmax
      comp=Z,37nm,1.3s
CCM   Cathedral Cave   29.05  89   P     P     00 37 44.3  -0.2
CCM                                IAmb  IAmb  00 37 53.3
      comp=Z,37nm,1.2s
CCM   Cathedral Cave   29.05  89   P     P     00 37 44.6   0.0
      baz=295
FCAR  Ozark Folk Cen   29.38  94   IAmb  IAmb  00 38 06.7
      comp=Z,43nm,1.7s
H43A  Windswept, Lux   29.40  75   IAmb  IAmb  00 37 48.9
      comp=Z,25nm,1.0s
K43A  Burlington       29.48  79   IAmb  IAmb  00 37 49.6
      comp=Z,72nm,1.4s
HDIL  Hopedale         29.50  83   P     P     00 37 49.1 +0.6
      baz=291
E43A  Lone Tree Farm   29.51  71   IAmb  IAmb  00 37 49.7
      comp=Z,52nm,1.6s
WHAR  Wooly Hollow     29.54  95   IAmb  IAmb  00 38 07.3
      comp=Z,69nm,1.6s
W41B  Gary Mavity, V   29.63  95   IAmb  IAmb  00 38 08.3
      comp=Z,52nm,1.4s
W41B  Gary Mavity, V   29.63  95   P     P     00 37 50.1 +0.5
      baz=299
HKT   Hockley          29.96 107   P     P     00 37 52.7 +0.1
HKT                                pmax  pmax
      comp=Z,24nm,1.3s
HKT   Hockley          29.96 107   P     P     00 37 52.7 +0.1
LCAR  Lake Charles     29.99  93   IAmb  IAmb  00 38 11.4
      comp=Z,65nm,1.8s
M44A  Midewin, Midew   30.10  81   IAmb  IAmb  00 37 55.1
      comp=Z,46nm,1.4s
E44A  Grand Marais A   30.18  70   IAmb  IAmb  00 37 56.2
      comp=Z,47nm,1.1s
E44A  Grand Marais A   30.18  70   P     P     00 37 55.7 +1.3
      baz=282,SNR=6.0
PBMO  Poplar Bluff     30.19  91   IAmb  IAmb  00 38 12.5
      comp=Z,30nm,1.4s
O44A  Mansfield        30.23  83   IAmb  IAmb  00 37 56.2
      comp=Z,62nm,1.4s
F45A  CMU Biological   30.66  72   P     P     00 37 58.8 +0.1
      baz=283,SNR=14
G45A  Suttons Bay      30.72  73   IAmb  IAmb  00 38 00.4
      comp=Z,21nm,0.8s
G45A  Suttons Bay      30.72  73   P     P     00 37 59.4 +0.3
      baz=284,SNR=8.7
GAMB  Gambell          30.87 324   P     P     00 38 01.2 +0.9
GAMB                               IAmb  IAmb  00 38 03.4
      comp=Z,25nm,1.1s
SFIN  Lafayette        31.12  82   IAmb  IAmb  00 38 04.3
      comp=Z,58nm,1.4s
SFIN  Lafayette        31.12  82   P     P     00 38 03.5 +0.7
      baz=291,SNR=5.3
L46A  Eue Claire       31.13  79   P     P     00 38 03.7 +0.8
      baz=289
I46A  Reed City        31.15  75   P     P     00 38 03.9 +0.9
      baz=286
J46A  Howard City      31.18  76   P     P     00 38 04.1 +0.8
      baz=287
G46A  Petoskey         31.19  72   P     P     00 38 04.2 +0.8
      baz=284
K46A  Dorr             31.28  77   P     P     00 38 04.6 +0.4
      baz=288,SNR=8.6
E46A  Sault Ste Mari   31.33  70   IAmb  IAmb  00 38 05.8
      comp=Z,25nm,1.0s
P46A  Rosedale         31.33  84   IAmb  IAmb  00 38 05.7
      comp=Z,19nm,1.1s
D46A  Sault St. Mari   31.40  69   P     P     00 38 05.5 +0.3
      baz=282,SNR=8.8
GLMI  Grayling         31.48  73   P     P     00 38 07.2 +1.2
      baz=285
I47A  Gladwin          31.78  74   P     P     00 38 09.5 +0.9
      baz=286,SNR=7.8
J47A  Sunmer           31.79  76   P     P     00 38 09.6 +1.0
      baz=288,SNR=9.3
H47A  Mio              31.83  73   P     P     00 38 10.0 +1.0
      baz=286
K47A  Vermontville     31.84  77   P     P     00 38 09.6 +0.5
      baz=288,SNR=13
L47A  Sherwood         31.92  78   P     P     00 38 10.3 +0.5
      baz=289,SNR=6.3
G47A  Hillman          31.92  72   P     P     00 38 10.3 +0.5
      baz=285,SNR=7.2
N47A  Urbana           31.94  81   P     P     00 38 10.2 +0.2
      baz=291
OXF   Oxford           31.99  94   P     P     00 38 11.2 +0.7
      baz=300,SNR=9.3
D47A  Chapleau         31.99  68   P     P     00 38 10.4   0.0
      baz=282,SNR=14
BLO   Bloomington      31.99  84   IAmb  IAmb  00 38 11.4
      comp=Z,55nm,1.4s
E47A  Iron Bridge      32.00  70   P     P     00 38 10.4  -0.1
      baz=283,SNR=8.6
I48A  Sherman Twp      32.29  74   P     P     00 38 14.0 +1.0
      baz=286,SNR=5.4
WVT   Waverly          32.35  90   P     P     00 38 13.5  -0.1
WVT                                pmax  pmax
      comp=Z,14nm,1.2s
WVT   Waverly          32.35  90   P     P     00 38 13.5  -0.1
WVT   Waverly          32.35  90   P     P     00 38 13.7 +0.1
      baz=298
H48A  Harrisville      32.41  73   P     P     00 38 14.9 +0.8
      baz=286,SNR=5.1
K48A  Perry            32.41  76   P     P     00 38 14.9 +0.8
      baz=288,SNR=11
M48A  Edgerton         32.42  79   P     P     00 38 14.6 +0.4
      baz=290
N48A  Decatur          32.42  80   P     P     00 38 14.4 +0.1
      baz=291,SNR=6.9
L48A  N Adams          32.47  78   P     P     00 38 15.3 +0.6
      baz=290,SNR=9.5
T47A  Sharon Grove     32.48  88   IAmb  IAmb  00 38 22.0
      comp=Z,41nm,1.6s
J48A  Bridge Port      32.49  75   P     P     00 38 15.7 +0.8
      baz=288,SNR=11
O48A  Farmland         32.55  81   P     P     00 38 15.5 +0.1
      baz=292,SNR=8.2
F48A  Evansville       32.60  71   P     P     00 38 16.3 +0.6
      baz=284
344A  Westbrook Farm   32.65 100   IAmb  IAmb  00 38 21.8
      comp=Z,43nm,1.2s
PLAL  Pickwick Lake    32.71  92   IAmb  IAmb  00 38 31.6
      comp=Z,22nm,1.1s
E48A  Lockeyer         32.74  69   P     P     00 38 17.2 +0.1
      baz=284,SNR=9.0
D48A  Paudash Townsh   32.83  68   P     P     00 38 17.6  -0.1
      baz=283,SNR=11
L49A  Milan            32.88  78   P     P     00 38 19.5 +1.3
      baz=290,SNR=5.5
J49A  Marlette         32.92  75   P     P     00 38 19.3 +0.7
      baz=288,SNR=6.7
M49A  Liberty Center   32.95  79   P     P     00 38 19.2 +0.3
      baz=290,SNR=12
N49A  Columbus Grove   33.00  80   P     P     00 38 19.7 +0.4
      baz=291,SNR=12
F49A  Sandfield        33.00  70   P     P     00 38 19.4 +0.1
      baz=285,SNR=8.3
P49A  Miami Univ. Ec   33.14  82   P     P     00 38 20.3  -0.2
      baz=293,SNR=6.2
O49A  Covington        33.16  81   IAmb  IAmb  00 38 21.4
      comp=Z,62nm,1.6s
O49A  Covington        33.16  81   P     P     00 38 20.4  -0.3
      baz=292
Q49A  Aurora           33.22  83   P     P     00 38 21.2   0.0
      baz=294
V48A  Smith Brothers   33.25  90   IAmb  IAmb  00 38 22.3
      comp=Z,47nm,1.6s
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U49A  Red Boiling Sp   33.65  88   P     P     00 38 24.6  -0.3
U49A                                     PcP   00 41 06.1 +1.3
O50A  Cable            33.68  81   P     P     00 38 25.5 +0.2
      baz=292,SNR=6.4
X48A  Hartselle        33.71  92   IAmb  IAmb  00 38 40.0
      comp=Z,45nm,1.7s
P50A  Jamestown        33.76  82   P     P     00 38 26.0 +0.1
      baz=293,SNR=7.6
N50A  Nevada           33.78  80   P     P     00 38 26.4 +0.3
      baz=292,SNR=8.8
Q50A  Georgetown       33.94  83   P     P     00 38 27.3  -0.2
      baz=294
RES   Resolute Bay     34.10  15   P     P     00 38 27.9  -0.6
      comp=Z,17nm,1.0s,baz=232,slow=10,SNR=58
RES   Resolute Bay     34.10  15   P     P     00 38 27.9  -0.6
RES                                IAmb  IAmb  00 38 29.4
      comp=Z,17nm,0.9s
ACSO  Alum Creek Sta   34.10  80   P     P     00 38 29.2 +0.3
      baz=292,SNR=6.9
D50A  G1974 Best Tow   34.14  67   P     P     00 38 28.7  -0.4
      baz=284,SNR=8.4
SWET  Sewanee          34.14  90   IAmb  IAmb  00 38 36.4
      comp=Z,29nm,1.4s
I51A  Listowel         34.25  73   P     P     00 38 30.8 +0.6
      baz=288,SNR=20
M51A  Elyria           34.26  78   P     P     00 38 30.5 +0.2
      baz=291
N51A  Ashland          34.28  79   IAmb  IAmb  00 38 31.2
      comp=Z,31nm,1.1s
N51A  Ashland          34.28  79   P     P     00 38 30.9 +0.5
      baz=292,SNR=5.5
Q51A  Peebles          34.31  83   P     P     00 38 31.0 +0.2
      baz=294
P51A  Williamsport     34.34  82   IAmb  IAmb  00 38 31.7
      comp=Z,31nm,1.1s
P51A  Williamsport     34.34  82   P     P     00 38 31.1 +0.2
      baz=294
F51A  Arnstein         34.40  69   P     P     00 38 31.2  -0.2
      baz=286,SNR=6.1
O51A  Pataskala        34.40  80   P     P     00 38 31.5   0.0
      baz=293,SNR=7.1
R51A  Hillsboro        34.44  84   P     P     00 38 31.9   0.0
      baz=295
D51A  Lot 18 Range I   34.46  67   P     P     00 38 31.9  -0.1
      baz=284,SNR=12
LRAL  Lakeview Retre   34.46  94   P     P     00 38 31.8  -0.3
      baz=302
E51A  G1948 Merrick    34.52  68   P     P     00 38 32.0  -0.5
      baz=285,SNR=6.3
FPAL  Fort Paine       34.70  91   IAmb  IAmb  00 38 45.3
      comp=Z,21nm,1.0s
M52A  Chesterland      34.77  77   IAmb  IAmb  00 38 36.5
      comp=Z,53nm,1.6s
M52A  Chesterland      34.77  77   P     P     00 38 35.2 +0.5
      baz=291
H52A  Wyevale          34.77  72   P     P     00 38 34.9 +0.3
      baz=287
K52A  Tillsonburg      34.79  75   P     P     00 38 35.4 +0.6
      baz=290
N52A  McGinn’s Farm,   34.80  79   P     P     00 38 35.1 +0.1
      baz=292
J52A  Paris            34.80  74   P     P     00 38 35.5 +0.5
      baz=289,SNR=8.1
F52A  Sundridge        34.83  70   P     P     00 38 34.8  -0.3
      baz=286,SNR=12
O52A  Adamsville       34.96  80   IAmb  IAmb  00 38 36.9
      comp=Z,27nm,1.2s
O52A  Adamsville       34.96  80   P     P     00 38 36.5 +0.2
      baz=293
MATQ  Matagami         35.01  62   P     P     00 38 36.6   0.0
      baz=281
CPCT  Cooper Cave      35.04  89   IAmb  IAmb  00 38 54.5
      comp=Z,34nm,1.7s
Q52A  Bidwell          35.11  82   P     P     00 38 37.6   0.0
      baz=294
Z50A  Ashland          35.12  93   P     P     00 38 37.7  -0.2
      baz=301,SNR=10
E52A  Mattawa          35.15  68   P     P     00 38 37.6  -0.2
      baz=286,SNR=7.6
I53A  Kortright Cn E   35.23  73   P     P     00 38 39.2 +0.6
      baz=289
X51A  Calhoun          35.23  90   P     P     00 38 39.0 +0.3
      baz=300
TZTN  Tazewell         35.23  87   IAmb  IAmb  00 38 40.5
      comp=Z,36nm,1.6s
SADO  Sadowa           35.24  71   IAmb  IAmb  00 38 39.4
      comp=Z,32nm,1.1s
M53A  WI Miller and    35.28  77   P     P     00 38 39.6 +0.5
      baz=291
O53A  New Philadelph   35.35  79   P     P     00 38 39.9 +0.2
      baz=293,SNR=5.4
T52A  Hallie           35.38  85   IAmb  IAmb  00 38 43.4
      comp=Z,57nm,1.6s
T52A  Hallie           35.38  85   P     P     00 38 40.4 +0.3
      baz=297
L53A  Girard           35.39  76   P     P     00 38 40.5 +0.5
      baz=291,SNR=8.4
N53A  Lisbon           35.40  78   IAmb  IAmb  00 38 41.2
      comp=Z,57nm,1.4s
N53A  Lisbon           35.40  78   P     P     00 38 39.7  -0.4
      baz=292,SNR=7.2
VLDQ  Val d'Or         35.48  65   IAmb  IAmb  00 38 39.5
      comp=Z,25nm,1.4s
G53A  Haliburton       35.49  70   P     P     00 38 40.5  -0.4
      baz=287,SNR=14
ERPA  Erie             35.52  76   IAmb  IAmb  00 38 42.2
      comp=Z,22nm,0.9s
ERPA  Erie             35.52  76   P     P     00 38 41.5 +0.4
      baz=291
P53A  Whipple          35.52  81   IAmb  IAmb  00 38 42.0
      comp=Z,56nm,1.6s
P53A  Whipple          35.52  81   P     P     00 38 41.1   0.0
      baz=294
250A  Grady            35.55  95   IAmb  IAmb  00 38 57.5
      comp=Z,28nm,0.9s
D53A  Lac Vacive, Po   35.57  67   IAmb  IAmb  00 38 42.4
      comp=Z,39nm,1.2s
D53A  Lac Vacive, Po   35.57  67   P     P     00 38 41.5   0.0
      baz=285
LSQQ  Lebel-sur-Quev   35.58  63   P     P     00 38 41.5  -0.1
      baz=283
Z51A  Franklin         35.63  93   IAmb  IAmb  00 38 53.5
      comp=Z,28nm,1.2s
ALGO  Algonquin Park   35.64  69   P     P     00 38 42.0  -0.1
      baz=286
Q53A  Leroy            35.68  82   P     P     00 38 42.2  -0.3
      baz=295
H53A  Bobcaygeon       35.68  71   P     P     00 38 42.5   0.0
      baz=288,SNR=8.7
G54A  Lake Saint Pet   35.77  70   P     P     00 38 42.9  -0.4
      baz=287,SNR=15
E53A  Dumoine, Ponti   35.78  68   P     P     00 38 43.4 +0.1
      baz=286,SNR=8.6
N54A  Moraine State    35.94  78   P     P     00 38 45.1 +0.3
      baz=292,SNR=8.9
L54A  Sinclairville    35.95  75   P     P     00 38 44.7  -0.1
      baz=291,SNR=14
O54A  Avella           35.96  79   IAmb  IAmb  00 38 46.0
      comp=Z,44nm,1.3s
O54A  Avella           35.96  79   P     P     00 38 45.1 +0.2
      baz=293,SNR=5.6
M54A  Oil Creek Stat   35.97  77   IAmb  IAmb  00 38 46.1
      comp=Z,43nm,1.1s
M54A  Oil Creek Stat   35.97  77   P     P     00 38 45.1 +0.1
      baz=292,SNR=8.1
J54A  Appleton         36.06  73   IAmb  IAmb  00 38 46.6
      comp=Z,27nm,0.8s
J54A  Appleton         36.06  73   P     P     00 38 45.3  -0.4
      baz=290
E54A  Lac Daplat, Po   36.09  68   P     P     00 38 45.8  -0.1
      baz=286,SNR=8.0
P54A  Burton           36.12  80   P     P     00 38 46.3   0.0
      baz=294,SNR=12
Q54A  Coxs Mills       36.12  81   IAmb  IAmb  00 38 49.2
      comp=Z,24nm,0.9s
Q54A  Coxs Mills       36.12  81   P     P     00 38 46.2  -0.1
      baz=294,SNR=11
Y52A  Lilburn          36.15  91   P     P     00 38 46.8 +0.2
      baz=300
V53A  Saluda           36.17  87   IAmb  IAmb  00 39 07.3
      comp=Z,48nm,1.7s
V53A  Saluda           36.17  87   P     P     00 38 47.1 +0.3
      baz=298
MEDO  Medina           36.22  73   IAmb  IAmb  00 38 48.0
      comp=Z,24nm,0.9s
D54A  Lac Fusel, La    36.24  66   P     P     00 38 46.6  -0.7
      baz=285,SNR=8.2
K54A  Basiliko Farm,   36.25  74   P     P     00 38 47.0  -0.4
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	baz=290						
S54A	Dingess, Beckl	36.28	83	IAmb	IAmb	00 38 48.6	
	comp=Z,50nm,1.4s						
S54A	Dingess, Beckl	36.28	83	P	P	00 38 48.2	+0.5
	baz=296						
152A	Waverly Hall	36.29	93	IAmb	IAmb	00 38 48.5	
	comp=Z,47nm,1.9s						
R54A	Victor	36.34	83	P	P	00 38 48.2	-0.1
	baz=296						
X53A	Estanollee	36.38	89	P	P	00 38 49.2	+0.7
	baz=300						
I55A	Frankford	36.41	72	P	P	00 38 48.6	-0.1
	baz=289						
T54A	Tazewell	36.41	85	P	P	00 38 49.4	+0.5
	baz=297						
U54A	Nelsons Funny	36.48	86	IAmb	IAmb	00 38 57.8	
	comp=Z,47nm,1.4s						
U54A	Nelsons Funny	36.48	86	P	P	00 38 49.6	+0.1
	baz=297						
L55A	Hinsdale	36.58	75	P	P	00 38 50.4	+0.2
	baz=291,SNR=7.1						
M55A	Ridgway	36.61	76	P	P	00 38 50.5	0.0
	baz=292,SNR=19						
P55A	Reedsville	36.62	80	P	P	00 38 50.6	0.0
	baz=294,SNR=7.0						
J55A	Hilton	36.63	73	IAmb	IAmb	00 38 51.2	
	comp=Z,34nm,0.9s						
J55A	Hilton	36.63	73	P	P	00 38 50.8	+0.2
	baz=290,SNR=10						
K55A	Perry	36.64	74	P	P	00 38 50.4	-0.3
	baz=290						
H55A	Tweed	36.64	71	P	P	00 38 50.2	-0.5
	baz=288,SNR=8.8						
Q55A	Buckhannon	36.65	81	P	P	00 38 51.1	+0.2
	baz=295,SNR=6.2						
O55A	Ligonier	36.71	79	P	P	00 38 51.1	-0.3
	baz=293,SNR=8.5						
N55A	Marion Center	36.71	77	P	P	00 38 50.9	-0.5
	baz=293,SNR=9.2						
V54A	Nebo	36.74	87	P	P	00 38 51.1	-0.6
	baz=298						
G55A	Calabogie	36.74	69	P	P	00 38 51.0	-0.5
	baz=288						
GOGA	Godfrey	36.80	91	IAmb	IAmb	00 38 59.3	
	comp=Z,39nm,1.6s						
GOGA	Godfrey	36.80	91	P	P	00 38 51.3	-0.9
	baz=301						
F55A	Otter Lake	36.81	68	P	P	00 38 52.4	+0.3
	baz=287						
S55A	Lewisburg	36.87	83	P	P	00 38 52.8	0.0
	baz=296,SNR=6.3						
R55A	Marlinton	36.92	82	IAmb	IAmb	00 38 54.5	
	comp=Z,47nm,1.2s						
R55A	Marlinton	36.92	82	P	P	00 38 53.5	+0.3
	baz=296,SNR=7.7						
T55A	Pulaski	36.96	84	P	P	00 38 53.9	+0.4
	baz=297						
PECO	Prince Edward	36.97	72	IAmb	IAmb	00 38 54.5	
	comp=Z,68nm,1.7s						
M56A	Emporium	37.01	76	IAmb	IAmb	00 38 54.9	
	comp=Z,58nm,1.2s						
M56A	Emporium	37.01	76	P	P	00 38 54.1	+0.2
	baz=292,SNR=13						
X54A	Belton	37.02	89	P	P	00 38 54.6	+0.5
	baz=300,SNR=9.4						
U55A	TA2, Sparta	37.05	85	P	P	00 38 54.6	+0.3
	baz=298,SNR=7.0						
D55A	Sainte-Anne-du	37.06	66	P	P	00 38 54.2	0.0
	baz=286,SNR=11						
N56A	West Decatur	37.14	77	P	P	00 38 55.0	-0.1
	baz=293,SNR=8.5						
K56A	Middlesex	37.16	74	P	P	00 38 54.5	-0.7
	baz=291						
BLA	Blacksburg	37.17	84	IAmb	IAmb	00 38 59.3	
	comp=Z,28nm,1.2s						
BLA	Blacksburg	37.17	84	P	P	00 38 55.6	+0.2
	baz=297						
L56A	Greenwood	37.20	75	IAmb	IAmb	00 38 56.2	
	comp=Z,41nm,1.6s						
O56A	Blue Knob Stat	37.20	78	IAmb	IAmb	00 38 57.5	
	comp=Z,79nm,1.8s						
O56A	Blue Knob Stat	37.20	78	P	P	00 38 55.5	-0.1
	baz=293,SNR=6.4						
V55A	Taylorsville	37.23	86	IAmb	IAmb	00 38 56.8	
	comp=Z,39nm,1.6s						
V55A	Taylorsville	37.23	86	P	P	00 38 56.1	+0.3
	baz=298						
H56A	Elgin	37.26	70	P	P	00 38 55.7	-0.2
	baz=289,SNR=10						
Q56A	Snyder Ridge,	37.26	80	P	P	00 38 56.5	+0.5
	baz=295						
J56A	Wolcott	37.28	73	IAmb	IAmb	00 38 56.8	
	comp=Z,35nm,1.0s						
J56A	Wolcott	37.28	73	P	P	00 38 56.1	-0.1
	baz=290,SNR=14						
P56A	Dayton Farm, R	37.32	79	P	P	00 38 57.3	+0.8
	baz=294,SNR=7.4						
R56A	Bull Pasture M	37.38	81	P	P	00 38 57.5	+0.4
	baz=296						
KMSC	Kings Mountain	37.48	87	P	P	00 38 57.2	-0.7
	baz=299						
E56A	St. Veronique	37.48	67	P	P	00 38 57.5	-0.3
	baz=287,SNR=9.3						
D56A	ZEC Mazanza, M	37.52	66	P	P	00 38 57.3	-0.9
	baz=286,SNR=8.5						
T56A	Rocky Mt	37.53	84	P	P	00 38 58.4	+0.1
	baz=297,SNR=8.8						
SSPA	Standing Stone	37.54	77	P	P	00 38 57.7	-0.6
SSPA	Standing Stone	37.54	77	P	P	00 38 58.5	+0.1
	baz=293						
X55A	Gracelyn & Ava	37.59	88	P	P	00 38 58.5	-0.4
	baz=300						
U56A	King	37.59	85	IAmb	IAmb	00 39 14.7	
	comp=Z,58nm,1.8s						
Y55A	Saluda	37.70	89	P	P	00 38 59.8	0.0
	baz=300						
K57A	Scipio Center	37.71	73	P	P	00 38 59.7	-0.1
	baz=291						
L57A	Andrews Acres	37.74	75	P	P	00 38 59.9	-0.2
	baz=292						
V56A	Mocksville	37.76	86	P	P	00 38 59.6	-0.7
	baz=298						
M57A	Sunshine Farm,	37.80	76	IAmb	IAmb	00 39 01.5	
	comp=Z,38nm,1.0s						
M57A	Sunshine Farm,	37.80	76	P	P	00 39 00.2	-0.3
	baz=292,SNR=16						
Q57A	Strasburg	37.82	80	P	P	00 39 01.1	+0.4
	baz=295						
J57A	Williamstown	37.83	72	IAmb	IAmb	00 39 01.4	
	comp=Z,41nm,1.4s						
J57A	Williamstown	37.83	72	P	P	00 39 00.7	-0.1
	baz=290,SNR=9.7						
I57A	Carthage	37.88	71	P	P	00 39 01.0	-0.2
	baz=290,SNR=5.3						
O57A	Amberson	37.88	78	P	P	00 39 01.6	+0.3
	baz=294,SNR=5.8						
H57A	Richville	37.89	70	P	P	00 39 01.3	0.0
	baz=289,SNR=6.4						
P57A	Homestead Farm	37.91	79	IAmb	IAmb	00 39 03.0	
	comp=Z,40nm,1.4s						
P57A	Homestead Farm	37.91	79	P	P	00 39 01.3	-0.2
	baz=294,SNR=6.2						
F57A	Harrington	37.93	68	P	P	00 39 01.8	+0.2
	baz=288						
G57A	Newington	37.95	69	P	P	00 39 01.9	+0.1
	baz=289						
S57A	Dark Hollow, R	37.98	82	IAmb	IAmb	00 39 06.1	
	comp=Z,42nm,1.6s						
S57A	Dark Hollow, R	37.98	82	P	P	00 39 02.8	+0.7
	baz=296						
D57A	Chemin Vers le	38.10	66	P	P	00 39 02.5	-0.6
	baz=287,SNR=14						
T57A	Hurt	38.10	83	P	P	00 39 03.2	+0.1
	baz=297						
E57A	Chemin Saint G	38.11	67	P	P	00 39 02.5	-0.6
	baz=288,SNR=15						
V57A	Coltrane Farms	38.24	85	P	P	00 39 04.1	-0.2
	baz=298						
M58A	Price's Panora	38.25	75	P	P	00 39 04.3	-0.1
	baz=293,SNR=7.8						
N58A	Sunbury	38.28	76	IAmb	IAmb	00 39 05.5	
	comp=Z,45nm,1.1s						
N58A	Sunbury	38.28	76	P	P	00 39 04.8	+0.3
	baz=293,SNR=16						
K58A	Earlville	38.30	73	IAmb	IAmb	00 39 05.4	
	comp=Z,45nm,1.3s						
K58A	Earlville	38.30	73	P	P	00 39 04.6	-0.1
	baz=291,SNR=10						
U57A	Blanch	38.30	84	P	P	00 39 04.8	-0.1
	baz=298,SNR=6.3						
J58A	Remsen	38.33	72	IAmb	IAmb	00 39 05.8	
	comp=Z,48nm,1.4s						
J58A	Remsen	38.33	72	P	P	00 39 04.7	-0.3
	baz=291,SNR=14						
LONY	Lake Ozonia	38.38	70	P	P	00 39 04.7	-0.7
	baz=290,SNR=5.3						
P58A	Pank, Wackersv	38.41	79	P	P	00 39 05.8	+0.1
	baz=295						
O58A	Lewisberry	38.42	77	P	P	00 39 06.2	+0.4
	baz=294,SNR=6.7						
R58A	Rapidan	38.42	81	P	P	00 39 05.9	+0.1
	baz=296,SNR=6.3						
L58A	Harry Jones Me	38.42	74	P	P	00 39 05.8	0.0
	baz=292						
I58A	Old Forge	38.43	71	P	P	00 39 05.9	0.0
	baz=290,SNR=6.0						
W57A	Gilead	38.44	86	P	P	00 39 05.7	-0.3
	baz=299						
PAGS	Pennsylvania G	38.52	77	IAmb	IAmb	00 39 07.4	
	comp=Z,65nm,1.6s						
G58A	Ormstown	38.56	69	P	P	00 39 07.0	+0.1
	baz=289,SNR=5.4						
T58A	Grand View Acr	38.64	83	P	P	00 39 07.4	-0.2
	baz=297						
R58B	Mineral	38.65	81	P	P	00 39 08.5	+0.7
	baz=296						
E58A	La Victoria	38.69	67	P	P	00 39 07.7	-0.3
	baz=288,SNR=5.6						
LATQ	La Tuque	38.72	65	P	P	00 39 07.8	-0.4
	baz=287						
H58A	Gabriels	38.72	70	P	P	00 39 08.0	-0.3
	baz=290,SNR=11						
D58A	Chemin du LacG	38.73	65	P	P	00 39 08.1	-0.3
	baz=287,SNR=5.8						
V58A	Windy Hill, Pi	38.76	85	IAmb	IAmb	00 39 09.6	
	comp=Z,45nm,1.5s						
V58A	Windy Hill, Pi	38.76	85	P	P	00 39 08.8	+0.1
	baz=298						
J59A	Piesco	38.83	71	P	P	00 39 08.9	-0.3
	baz=291,SNR=7.9						
K59A	Cooperstown	38.84	73	P	P	00 39 09.1	-0.2
	baz=292,SNR=16						
O59A	Robesonia	38.86	77	P	P	00 39 09.1	-0.4
	baz=294,SNR=8.2						
U58A	Oxford	38.88	84	P	P	00 39 09.7	0.0
	baz=298						
M59A	Waymart	38.90	75	P	P	00 39 09.7	-0.2
	baz=293,SNR=10						
N59A	State Game Lan	38.91	76	P	P	00 39 10.1	+0.2
	baz=293,SNR=7.9						
L59A	Walton	38.92	74	P	P	00 39 09.9	-0.1
	baz=292						
H59A	Cadyville	38.97	69	P	P	00 39 10.3	-0.1
	baz=290						
P59A	Jarrettsville	38.97	78	P	P	00 39 10.7	+0.3
	baz=295						
I59A	Olmsteadville	39.14	71	P	P	00 39 11.0	-0.8
	baz=291						
G59A	Clarenceville	39.17	68	P	P	00 39 11.2	-0.8
	baz=290						
F59A	Saint Guilaume	39.18	67	P	P	00 39 11.7	-0.4
	baz=289						
T59A	Double "B" Far	39.33	82	P	P	00 39 13.7	+0.3
T59A					PcP	00 41 24.0	+2.2
T59A	Double "B" Far	39.33	82	P	P	00 39 13.6	+0.2
	baz=297,SNR=6.2						
N60A	Cedar Hill Far	39.39	75	P	P	00 39 14.0	+0.1
	baz=294,SNR=11						
V59A	Middlesex	39.40	84	P	P	00 39 14.2	+0.2
	baz=299						
O60A	Telford	39.40	76	P	P	00 39 14.1	+0.1
	baz=294,SNR=6.0						
ACCN	Adirondack Com	39.43	71	IAmb	IAmb	00 39 14.9	
	comp=Z,59nm,1.9s						
U59A	Littleton	39.44	83	P	P	00 39 14.7	+0.3
	baz=298						
D59A	Saint-Raymond	39.44	65	P	P	00 39 14.3	+0.1
	baz=288						
I60A	Shoreham	39.52	70	P	P	00 39 15.2	+0.3
	baz=291,SNR=6.7						
M60A	Port Jervis	39.54	75	P	P	00 39 15.4	+0.2
	baz=293,SNR=8.2						
J60A	Lant Hill Farm	39.64	71	P	P	00 39 15.8	-0.2
	baz=292,SNR=9.5						
H60A	Morristown	39.67	69	P	P	00 39 16.5	+0.3
	baz=290,SNR=10						
F60A	Warwick	39.69	67	P	P	00 39 15.7	-0.7
	baz=289						
G60A	Masonville	39.73	68	P	P	00 39 16.6	-0.1
	baz=290						
T60A	Surry	39.83	82	IAmb	IAmb	00 39 21.9	
	comp=Z,29nm,1.0s						
T60A	Surry	39.83	82	P	P	00 39 18.5	+0.9
	baz=297						
E60A	Ste Agathe de	39.90	66	P	P	00 39 17.7	-0.3
	baz=289						
K61A	Williamstown	39.96	72	P	P	00 39 19.4	+0.7
	baz=292,SNR=5.1						
D60A	Saint Jean D'O	40.07	65	P	P	00 39 18.9	-0.6
	baz=288,SNR=7.0						
M61A	Granite Spring	40.14	74	P	P	00 39 20.1	0.0
	baz=294						
H61A	Lyndonville	40.19	69	P	P	00 39 21.1	+0.5
	baz=291						
G61A	St-Isidore-de-	40.20	68	P	P	00 39 20.7	+0.1
	baz=290						
I61A	Oroboro, Fairl	40.22	70	P	P	00 39 21.5	+0.7
	baz=291						
HNH	Hanover	40.25	70	IAmb	IAmb	00 39 24.9	
	comp=Z,35nm,1.2s						
LBNH	Lisbon	40.30	69	IAmb	IAmb	00 39 22.2	
	comp=Z,42nm,1.5s						
LBNH	Lisbon	40.30	69	P	P	00 39 22.3	+0.8
	baz=291						
F61A	St Evariste	40.33	66	P	P	00 39 22.2	+0.5
	baz=289,SNR=6.5						
U61A	Possum Corner	40.41	83	P	P	00 39 21.7	-0.7
U61A	Possum Corner	40.41	83	P	P	00 39 23.3	+0.8
	baz=298						
L61B	Northampton	40.45	72	P	P	00 39 23.5	+0.8
	baz=293						
D61A	St Aubert, Com	40.45	64	P	P	00 39 22.3	-0.3
	baz=288,SNR=7.8						
BILL	Bilibino	40.49	328	*d i*P	P	00 39 24.1	+1.4
BILL				*e**PP	pwP	00 39 28.6	-1.1
BILL				S	S	00 45 29.0	-1.7
BILL				SSS	SSS	00 49 01.0	
BILL				pmax	pmax		
	comp=Z,60nm,1.7s						
BILL				MLR	MLR		
	comp=Z,313nm,17.0s						
BILL	Bilibino	40.49	328	P	P	00 39 22.4	-0.4
BILL				IAmb	IAmb	00 39 25.9	
	comp=Z,72nm,1.5s						
E61A	Lac Etchemin	40.51	66	P	P	00 39 23.3	+0.1
	baz=289						
SCHQ	Schefferville	40.54	52	P	P	00 39 22.8	-0.5
	comp=Z,12nm,1.1s,baz=287,slow=6.5,SNR=11						
SCHQ				LR	LR	00 55 46.3	
	comp=Z,1µm,20.1s,baz=288,slow=36						
SCHQ	Schefferville	40.54	52	P	P	00 39 22.8	-0.5
TULEG	Thule	40.61	18	P	P	00 39 23.4	-0.1
H62A	Milan	40.70	68	P	P	00 39 24.6	-0.1
	baz=291						
I62A	Tamworth	40.83	70	P	P	00 39 26.3	+0.5
	baz=292						
G62A	West of Eustis	40.88	67	P	P	00 39 26.1	-0.2
	baz=290						
DWPF	Disney Wildern	41.18	97	P	P	00 39 29.1	+0.3
D62A	Allapoint, All	41.23	64	P	P	00 39 27.9	-1.2
D62A	Allapoint, All	41.23	64	P	P	00 39 28.6	-0.5
	baz=289						
F63A	Nahmakanta, Br	41.66	66	P	P	00 39 32.9	+0.3
	baz=290						
WVL	Waterville	41.70	68	IAmb	IAmb	00 39 33.9	
	comp=Z,55nm,1.5s						
D63A	Stockholm	41.85	64	P	P	00 39 34.4	+0.2
	baz=290						
CCIG	Comitan	41.88	120	P	P	00 39 34.5	-0.4
CCIG				IAmb	IAmb	00 39 38.6	
	comp=Z,55nm,1.9s						
G64A	Maxfield	42.05	67	P	P	00 39 36.1	+0.3
	baz=291						
F64A	Sherman	42.10	66	P	P	00 39 35.0	-1.2
F64A				IAmb	IAmb	00 39 37.0	
	comp=Z,62nm,1.5s						
F64A	Sherman	42.10	66	P	P	00 39 36.6	+0.4
	baz=291						
E64A	Bridgewater	42.24	65	P	P	00 39 37.2	-0.2
	baz=290						
BATG	Bathurst New B	43.09	63	IAmb	IAmb	00 40 11.7	
	comp=Z,43nm,1.7s						
KULLO	Kullorsuaq	43.16	22	*i* P	P	00 39 44.7	+0.3
	comp=Z,18nm,1.1s						
KULLO	Kullorsuaq	43.16	22	*i* P	P	00 39 44.7	+0.3
KULLO				pmax	pmax		
	comp=Z,18nm,1.1s						
SFJD	Kangerlussuaq	45.95	32	P	P	00 40 06.9	+0.1
SFJD				pmax	pmax		
	comp=Z,56nm,1.6s						
SFJD	Kangerlussuaq	45.95	32	P	P	00 40 06.9	+0.1
SEY	Seymchan	46.82	322	P	P	00 40 12.9	-0.8
	comp=Z,12nm,1.0s,baz=82,slow=7.9,SNR=25						
SEY	Seymchan	46.82	322	⇓*e*P	P	00 40 14.2	+0.5
PEA0B	Petropavlovsk-	47.10	308	*de*P	P	00 40 16.0	-0.1
PETK	Petropavlovsk-	47.10	308	P	P	00 40 16.2	+0.1
	comp=Z,9.5nm,1.0s,baz=84,slow=14,SNR=7.7						
MA2	Magadan	48.56	318	⇓*e*P	P	00 40 28.0	+0.8
MA2				pmax	pmax		
	comp=Z,19nm,1.3s						
MA2	Magadan	48.56	318	P	P	00 40 27.3	0.0
MA2				IAmb	IAmb	00 40 29.1	
	comp=Z,39nm,1.5s						
SUMG	Summit	48.69	24	*i* P	P	00 40 28.4	-0.1
	comp=Z,68nm,1.0s						
SUMG	Summit	48.69	24	P	P	00 40 27.7	-0.8
SUMG				pmax	pmax		
	comp=Z,31nm,1.1s						
SUMG	Summit	48.69	24	P	P	00 40 27.6	-0.8
DAG	Danmarks Havn	51.79	16	*i* P	P	00 40 50.9	-0.6
	comp=Z,20nm,1.1s						
DAG	Danmarks Havn	51.79	16	*i* P	P	00 40 50.9	-0.6
DAG				pmax	pmax		
	comp=Z,20nm,1.1s						
TIXI	Tiksi	52.23	337	P	P	00 40 54.5	-0.3
	comp=Z,2.6nm,0.3s,baz=68,slow=7.9,SNR=14						
TIXI				PcP	PcP	00 42 06.9	+0.8
	comp=Z,2.9nm,0.4s,baz=71,slow=6.2,SNR=3.1						
TIXI	Tiksi	52.23	337	⇓*e*P	P	00 40 55.7	+0.9
TIXI				pmax	pmax		
	comp=Z,48nm,2.5s						
TIXI	Tiksi	52.23	337	P	P	00 40 55.0	+0.1
TIXI				IAmb	IAmb	00 40 56.5	
	comp=Z,33nm,1.4s						
SDDR	Presa de Saban	54.12	98	P	P	00 41 09.6	+0.1
SDDR				IAmb	IAmb	00 41 13.2	
	comp=Z,20nm,1.1s						
TYV	Tymovskoe	56.45	311	*e*P	P	00 41 21.2	-4.6
TYV				pmax	pmax		
	comp=Z,400nm,4.9s						
YAK	Yakutsk	56.78	326	P	P	00 41 28.1	+0.1
	comp=Z,8.1nm,0.4s,baz=81,slow=3.2,SNR=5.1						
YAK	Yakutsk	56.78	326	*e*P	P	00 41 27.2	-0.8
YAK				*e**PP	sP	00 41 33.2	-0.1
YAK				*e*		00 42 17.7	
YAK				*e*		00 43 32.4	
YAK				*e*S	S	00 49 20.1	0.0
YAK				*e**SS	sS	00 49 39.3	+13
YAK				pmax	pmax		
	comp=Z,38nm,1.4s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,14nm,1.5s						
YAK				pmax	pmax		
	comp=Z,178nm,3.8s						
YAK				pmax	pmax		
	comp=N,104nm,4.6s						
YAK				pmax	pmax		
	comp=E,120nm,4.3s						
YAK				smax	smax		
	comp=E,215nm,5.3s						
YAK				smax	smax		
	comp=N,145nm,4.8s						
YAK				MLR	MLR		
	comp=Z,391nm,20.0s						
YAK				MLR	MLR		
	comp=N,280nm,17.0s						
YAK				MLR	MLR		
	comp=E,163nm,16.0s						
YAK	Yakutsk	56.78	326	P	P	00 41 28.1	+0.1
H11N3	WAKE ISLAND Hy	57.91	267	T	T	01 44 08.8	
	baz=49,slow=75,SNR=9159						
H11N2	WAKE ISLAND Hy	57.92	267	T	T	01 44 04.3	
	baz=49,slow=75,SNR=6562						
H11N1	WAKE ISLAND Hy	57.93	267	T	T	01 44 04.8	
	baz=49,slow=75,SNR=4950						
YSS	Yuzh-Sakhalins	58.44	307	⇑*e*P	P	00 41 39.1	-0.8
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
YSS				MLR	MLR		
	comp=Z,400nm,17.0s						
YSS	Yuzh-Sakhalins	58.44	307	P	P	00 41 40.3	+0.4
H11S1	WAKE ISLAND Hy	58.85	266	T	T	01 45 16.8	
	baz=49,slow=75,SNR=960						
H11S2	WAKE ISLAND Hy	58.86	266	T	T	01 45 11.5	
	baz=49,slow=75,SNR=668						
H11S3	WAKE ISLAND Hy	58.87	266	T	T	01 45 18.1	
	baz=49,slow=75,SNR=696						
GRNR	Gornyy	59.85	313	⇓*i*P	P	00 41 48.3	-1.3
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GRNR				MLR	MLR		
	comp=Z,280nm,17.0s						
ERM	Erimo	60.94	302	⇑*e*P	P	00 41 57.9	+0.7
ERM				pmax	pmax		
	comp=Z,61nm,1.2s						
SDV	Santo Domingo	61.51	106	P	P	00 42 01.1	-0.5
SDV				IAmb	IAmb	00 42 14.2	
	comp=Z,12nm,1.1s						
ROSC	El Rosal	61.95	113	LR	LR	01 10 29.7	
	comp=Z,159nm,21.3s,baz=12,slow=38						
ROSC	El Rosal	61.95	113	P	P	00 42 05.2	+0.4
ROSC				IAmb	IAmb	00 42 19.4	
	comp=Z,23nm,1.2s						
ZEA	Zeya	62.66	319	*e*P	P	00 42 07.8	-0.8
ZEA				pmax	pmax		
	comp=Z,28nm,1.2s						
OTAV	Otavalo	62.77	119	P	P	00 42 10.8	+0.4
OTAV				pmax	pmax		
	comp=Z,11nm,1.3s						
OTAV	Otavalo	62.77	119	P	P	00 42 10.8	+0.4
OTAV				IAmb	IAmb	00 42 40.8	
	comp=Z,11nm,1.2s						
KLR	Kul'dur	63.19	314	P	P	00 42 13.0	+0.7
	comp=Z,4.1nm,1.0s,baz=26,slow=6.2,SNR=6.0						
KLR	Kul'dur	63.19	314	⇓*e*P	P	00 42 12.4	+0.2
KLR				pmax	pmax		
	comp=Z,19nm,2.3s						
NRIK	Noril'sk	63.53	346	P	P	00 42 13.2	-1.0
	comp=Z,22nm,1.1s,baz=33,slow=5.2,SNR=24						
NRIK				LR	LR	01 09 49.8	
	comp=Z,262nm,21.3s,baz=34,slow=36						
PPT	Papeete	64.27	202	LR	LR	01 05 17.8	
	comp=Z,157nm,19.2s,baz=17,slow=31						
ARCES	ARCESS Array B	65.02	10	LR	LR	01 12 39.2	
	comp=Z,229nm,18.3s,baz=348,slow=38						
BOD	Bodaibo	65.55	328	*e*P	P	00 42 27.0	-0.5
BOD				pmax	pmax		
	comp=Z,19nm,1.6s						
USA0B	Ussuriysk Arra	66.18	309	⇑*e*P	P	00 42 32.6	+0.8
USRK	Ussuriysk Ar.	66.18	309	P	P	00 42 32.1	+0.4
	comp=Z,7.5nm,1.1s,baz=60,slow=5.0,SNR=9.1						
USRK				LR	LR	01 11 45.7	
	comp=Z,289nm,18.5s,baz=26,slow=36						
MJAR	Matsushiro Arr	67.29	299	P	P	00 42 39.4	+0.3
	comp=Z,1.0nm,0.3s,baz=27,slow=5.8,SNR=6.9						
MJAR	Matsushiro Arr	67.29	299	P	P	00 42 39.7	+0.6
MJAR				pmax	pmax		
	comp=Z,16nm,1.5s						
MJAR	Matsushiro Arr	67.29	299	P	P	00 42 39.6	+0.6
LVZ	Lovozero	67.52	7	⇑*e*P	P	00 42 39.0	-1.0
LVZ				pmax	pmax		
	comp=Z,50nm,1.1s						
HIA	Hailar	69.13	319	P	P	00 42 51.3	+0.9
HIA				pmax	pmax		
	comp=Z,14nm,1.1s						
HIA	Hailar	69.13	319	P	P	00 42 51.3	+0.9
HIA				IAmb	IAmb	00 42 56.2	
	comp=Z,14nm,1.1s						
NB2	NORSAR Subarra	70.25	19	P	P	00 42 56.4	-0.7
	comp=Z,2.1nm,1.0s,baz=332,slow=6.2						

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NOA   NORSAR Array B   70.25  19   P       P        00 42 56.2  -1.0
           comp=Z,5.8nm,1.0s,baz=332,slow=6.1,SNR=7.4
NOA                                LR      LR       01 12 23.1
           comp=Z,137nm,19.4s,baz=335,slow=35
JCJ   Chichijima       70.70 289   LR      LR       01 07 30.3
           comp=Z,316nm,21.4s,baz=36,slow=30
TMCR  Tamitsa          71.47   6  eP       P        00 43 02.7  -1.6
FINES FINESS Array B   72.78  12   P       P        00 43 11.1  -1.1
           comp=Z,15nm,1.0s,baz=343,slow=4.0,SNR=14
FINES                              LR      LR       01 15 21.6
           comp=Z,316nm,19.0s,baz=348,slow=36
FINES FINESS Array B   72.78  12   P       P        00 43 11.7  -0.5
FINES FINESS Array B   72.78  12   P       P        00 43 11.7  -0.5
KSRS  Korea Array      72.93 306   P       P        00 43 14.3  +0.8
           comp=Z,1.4nm,0.8s,baz=64,slow=5.7,SNR=5.3
KSAR  Wonju Array Be   72.96 306   P       P        00 43 14.0  +0.3
KSAR  Wonju Array Be   72.96 306   P       P        00 43 14.0  +0.3
TLY   Talaya           74.11 329   P       P        00 43 21.9  +1.6
           comp=Z,7.4nm,0.8s,baz=22,slow=5.7,SNR=24
TLY   Talaya           74.11 329ceP        P        00 43 20.8  +0.5
TLY                                pmax    pmax
           comp=Z,22nm,1.2s
TLY   Talaya           74.11 329   P       P        00 43 20.7  +0.4
TLY                                IAmb    IAmb     00 43 27.7
           comp=Z,35nm,1.3s
PRGR  Permogore        74.39   3  eP       P        00 43 20.1  -1.6
PRGR                               pmax    pmax
           comp=Z,45nm,0.9s
KLMR  Klimovskoe       74.86   6  eP       P        00 43 21.4  -3.0
KLMR                               pmax    pmax
           comp=Z,71nm,1.4s
KLMR  Klimovskoe       74.86   6  eP       P        00 43 21.5  -3.0
KLMR                               AMP              00 43 27.2
           comp=Z,71nm,1.4s
MOY   Mondy            75.08 330  eP       P        00 43 28.2  +2.1
ZAK   Zakamensk        75.29 328  eP       P        00 43 28.2  +0.9
ZAK                                pmax    pmax
           comp=Z,8.0nm,1.4s
VSU   Vasula           75.72  13⇓eP        P        00 43 29.8  +0.4
VSU                                pmax    pmax
           comp=Z,78nm,1.2s
PTGA  Pitinga          75.76 105   P       P        00 43 30.9  +0.5
ULN   Ulaanbaatar      75.81 325   P       P        00 43 30.9  +0.5
ULN                                pmax    pmax
           comp=Z,21nm,1.5s
ULN   Ulaanbaatar      75.81 325   P       P        00 43 30.9  +0.5
ULN                                IAmb    IAmb     00 43 32.3
           comp=Z,20nm,1.5s
SONM  Songino Array    76.10 325   P       P        00 43 32.0  -0.1
           comp=Z,9.7nm,1.0s,baz=43,slow=4.2,SNR=37
SONM                               LR      LR       01 16 28.2
           comp=Z,426nm,18.9s,baz=30,slow=35
SONM  Songino Array    76.10 325   P       P        00 43 31.7  -0.3
SONM                               pmax    pmax
           comp=Z,14nm,1.1s
SONM  Songino Array    76.10 325   P       P        00 43 31.6  -0.3
IBBN  Ibbenburen       76.92  25  eP       P        00 43 37.2  +0.9
           comp=Z,63nm,1.7s,baz=332,slow=5.4
GUMO  Guam             77.77 277   LR      LR       01 10 00.4
           comp=Z,458nm,21.8s,baz=98,slow=30
DOU   Dourbes          77.79  28 ⇑P        P        00 43 39.1  -2.2
DOU   Dourbes          77.79  28   PcP     PcP      00 43 49.7  -1.5
ASSE  Asse, Remlinge   77.95  24  eP       P        00 43 42.6  +0.6
           comp=Z,18nm,1.3s,baz=332,slow=5.4
ZALV  Zalesovo Beam    77.95 340   P       P        00 43 41.9  -0.2
           comp=Z,4.5nm,0.8s,baz=24,slow=5.1,SNR=22
ZALV                               LR      LR       01 20 18.1
           comp=Z,159nm,18.2s,baz=327,slow=37
CLZ   Clausthal        78.12  24  eP       P        00 43 44.0  +0.9
           comp=Z,42nm,1.7s,baz=332,slow=5.4
GKP   Gorka Klasztor   78.68  20  eP       P        00 43 46.2   0.0
GKP   Gorka Klasztor   78.68  20  eP       P        00 43 46.2   0.0
CLF   Chambon-Foret    78.70  31   P       P        00 43 46.1  -0.2
UBBA  Unterbreizbach   78.91  25  eP       P        00 43 48.0  +0.7
           comp=Z,49nm,2.3s,baz=332,slow=5.4
SVE   Sverdlovsk       78.96 355  eP       P        00 43 47.3  -0.3
SVE                                pmax    pmax
           comp=Z,44nm,1.6s
NEUB  Neuenburg        79.09  24  eP       P        00 43 48.5  +0.1
           comp=Z,47nm,1.8s,baz=332,slow=5.4
HHC   Hu-ho-hao-te     79.24 318  eP       P        00 43 47.8  -1.8
HHC                                pmax    pmax
           comp=Z,77nm,1.2s
HHC                                pmax    pmax
           comp=Z,280nm,7.1s
SUW   Suwalki          79.31  16  eP       P        00 43 48.9  -0.7
SUW   Suwalki          79.31  16  eP       P        00 43 48.9  -0.7
CLL   Collm            79.35  23  eP       P        00 43 49.0  -0.9
           comp=Z,28nm,1.5s
CLL                               ePP      PP       00 46 48.0  -1.0
CLL   Collm            79.35  23  eP       P        00 43 49.0  -0.9
CLL                               i                 00 43 56.9
CLL                                pmax    pmax
           comp=Z,28nm,1.5s
ARU   Arti             79.48 356c iP       P        00 43 49.3  -1.2
ARU                                S       S        00 53 49.8  -1.2
ARU                                pmax    pmax
           comp=Z,33nm,1.2s
ARU   Arti             79.48 356   P       P        00 43 49.5  -0.9
ARU                                IAmb    IAmb     00 43 52.3
           comp=Z,33nm,1.2s
MOX   Moxa             79.54  24  eL       L        01 21 35.0
           comp=Z,423nm,18.3s
MOS   Moscow           79.77   8  eP       P        00 43 51.4  -0.6
MOS                               e                 00 44 00.5
MOS                               e                 00 54 32.3
MOS                                pmax    pmax
           comp=Z,104nm,2.3s
FBE   Freiberg         79.80  23  eP       P        00 43 53.1  +0.8
           comp=Z,52nm,2.0s,baz=332,slow=5.4
TANN  Tannenbergstha   79.99  24  eP       P        00 43 53.6  +0.1
           comp=Z,49nm,1.9s,baz=332,slow=5.4
BRG   Berggiesshubel   80.00  23  eP       P        00 43 53.3  -0.1
           comp=Z,20nm,1.5s
BRG   Berggiesshubel   80.00  23  eP       P        00 43 53.7  +0.3
           comp=Z,143nm,2.9s,baz=332,slow=5.4
BRG   Berggiesshubel   80.00  23  eP       P        00 43 53.3  -0.1
BRG                                pmax    pmax
           comp=Z,20nm,1.5s
WERN  Wernitzgruen     80.08  24  eP       P        00 43 54.1  +0.1
           comp=Z,40nm,1.9s,baz=332,slow=5.4
GRF   Grafenberg Arr   80.27  25  eL       L        01 21 07.8
           comp=Z,556nm,18.3s
MANZ  Manzenberg       80.27  24  eP       P        00 43 55.1  +0.1
           comp=Z,103nm,3.4s,baz=332,slow=5.4
OBN   Obninsk          80.28   8⇑iP        P        00 43 54.4  -0.4
OBN                               i                 00 44 00.9
OBN                                S       S        00 53 50.0  -9.4
OBN                               e                 00 55 09.8
OBN                                pmax    pmax
           comp=Z,86nm,1.7s
OBN                                MLR     MLR
           comp=Z,161nm,15.0s
OBN   Obninsk          80.28   8   P       P        00 43 54.5  -0.2
PVCC  Panska Ves       80.49  22   AMS     AMS      01 22 10.0
           comp=Z,600nm,22.2s
ROTZ  Rotzenmuhle      80.50  24  eP       P        00 43 56.4  +0.2
           comp=Z,8.1nm,1.5s,baz=332,slow=5.4
KSP   Ksiaz            80.66  21  eP       P        00 43 56.5  -0.5
KSP   Ksiaz            80.66  21  eP       P        00 43 56.5  -0.5
CHVC  Chvalec          80.83  22  eP       P        00 43 57.7  -0.2
OSTC  Ostas            80.91  22  eP       P        00 43 58.6  +0.3
PRU   Pruhonice        80.97  23  eP       P        00 43 58.3  -0.3
PRU                                AMS     AMS      01 22 40.0
           comp=Z,500nm,15.8s
PRU   Pruhonice        80.97  23  eP       P        00 43 58.3  -0.3
PRU                                MLR     MLR
           comp=Z,500nm,15.8s
GOPC  GO Pecny, Ondr   81.10  23  eP       P        00 43 58.9  -0.5
GOPC  GO Pecny, Ondr   81.10  23  eP       P        00 43 58.9  -0.5
DPC   Dobruska-Polom   81.12  22  eP       P        00 43 59.2  -0.3
DPC   Dobruska-Polom   81.12  22  eP       P        00 43 59.2  -0.3
KHC   Kasperske Hory   81.47  24  eP       P        00 44 01.5  +0.1
KHC                                AMS     AMS      01 22 30.0
           comp=Z,500nm,20.5s
KHC   Kasperske Hory   81.47  24⇑eP        P        00 44 00.3  -1.1
KHC                                pmax    pmax
           comp=Z,30nm,1.5s
KHC   Kasperske Hory   81.47  24   P       P        00 44 00.5  -0.9
KRLC  Kraliky          81.49  21  eP       P        00 44 01.9  +0.4
KRLC  Kraliky          81.49  21  eP       P        00 44 01.9  +0.4
BRVK  Borovoye         81.64 348deP        P        00 44 03.5  +1.4
BRVK                               pmax    pmax
           comp=Z,36nm,1.3s
BRVK  Borovoye         81.64 348   P       P        00 44 01.5  -0.7
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BVAR  Borovoye Array   81.66 348   P       P        00 44 01.5  -0.8
           comp=Z,7.7nm,0.9s,baz=29,slow=3.4,SNR=27
GEC2  GERESS Array S   81.76  24  eP       P        00 44 03.1  +0.1
           comp=Z,106nm,2.8s,baz=332,slow=5.4
GEC2  GERESS Array S   81.76  24   IAmb    IAmb     00 44 10.7
           comp=Z,25nm,1.8s
GERES GERESS Array B   81.76  24   P       P        00 44 02.8  -0.2
           comp=Z,1.5nm,0.8s,baz=356,slow=5.4,SNR=8.8
GERES                              LR      LR       01 22 12.7
           comp=Z,273nm,18.4s,baz=328,slow=37
GERES GERESS Array B   81.76  24   P       P        00 44 02.6  -0.4
GERES GERESS Array B   81.76  24   P       P        00 44 02.5  -0.4
LPAZ  La Paz           81.95 122   P       P        00 44 04.1  -0.8
           comp=Z,8.2nm,0.9s,baz=348,slow=5.5,SNR=17
LPAZ  La Paz           81.95 122   P       P        00 44 03.8  -1.1
LPAZ  La Paz           81.95 122   P       P        00 44 03.8  -1.1
MORC  Moravsky Berou   81.97  21  eP       P        00 44 03.6  -0.4
DAVA  Damuels          81.98  27  esP      P        00 44 06.8  +2.5
           comp=Z,5.5nm,1.2s
NJ2   Nanjing          82.00 307  eP       P        00 44 04.2  -0.2
NJ2                                pmax    pmax
           comp=Z,7.0nm,0.8s
OJC   Ojcow            82.12  20   P       P        00 44 04.4  -0.3
OJC                                pmax    pmax
           comp=Z,25nm,1.4s
OJC   Ojcow            82.12  20   P       P        00 44 04.4  -0.3
OJC                                IAmb    IAmb     00 44 07.3
           comp=Z,25nm,1.4s
VRAC  Vranov           82.14  22  eP       P        00 44 04.7  -0.2
MOTA  Moosalm          82.32  26  esP      P        00 44 08.4  +2.4
           comp=Z,16nm,1.6s
KRUC  Moravsky         82.32  22  eP       P        00 44 05.0  -0.8
KURK  Kurchatov        82.38 343⇓eP        P        00 44 05.3  -0.7
KURK                               pmax    pmax
           comp=Z,31nm,1.3s
KURK  Kurchatov        82.38 343   P       P        00 44 05.6  -0.5
SQTA  Sankt Quirin     82.46  26  epP      P        00 44 07.4  +0.6
           comp=Z,8.7nm,1.3s
WATA  Walderalm        82.47  26  epP      P        00 44 07.2  +0.4
           comp=Z,11nm,1.2s
FETA  Feichten         82.48  26  epP      P        00 44 07.8  +0.9
           comp=Z,8.3nm,1.3s
KURBB Kurchatov Arra   82.48 343   P       P        00 44 05.4  -1.2
           comp=Z,15nm,1.1s,baz=19,slow=4.8,SNR=41
WTTA  Wattenberg       82.55  26  epP      P        00 44 08.0  +0.7
           comp=Z,8.9nm,1.0s
MOA   Molln            82.82  24  epP      P        00 44 08.5  +0.1
           comp=Z,8.0nm,1.4s
NIE   Niedzica         82.98  20  eP       P        00 44 12.0  +2.7
NIE   Niedzica         82.98  20  eP       P        00 44 12.0  +2.7
ESDC  Sonseca Array    82.99  39   P       P        00 44 09.3  -0.2
           comp=Z,0.3nm,0.4s,baz=320,slow=3.8,SNR=4.2
ESDC                               LR      LR       01 18 59.2
           comp=Z,216nm,18.5s,baz=120,slow=34
ESDC  Sonseca Array    82.99  39   IAmb    IAmb     00 44 12.0
           comp=Z,2.8nm,1.1s
LPSR  Galich'ya Gora   82.99   7  eP       P        00 44 08.7  -0.5
LPSR                               pmax    pmax
           comp=Z,30nm,1.4s
LANS  Liptovska Anna   83.03  20  eP       P        00 44 10.2  +0.7
LANS                               pmax    pmax
           comp=Z,8.0nm,1.3s
LANS  Liptovska Anna   83.03  20  eP       P        00 44 10.2  +0.7
MODS  Modra-Piesok     83.18  22  eP       P        00 44 09.2  -1.1
MODS                               pmax    pmax
           comp=Z,31nm,1.3s
MODS  Modra-Piesok     83.18  22  eP       P        00 44 09.2  -1.1
CONA  Conrad Observa   83.20  23  epP      P        00 44 11.1  +0.6
           comp=Z,11nm,1.6s
KBA   Koelnbreinsper   83.24  25   pP      P        00 44 11.3  +0.4
           comp=Z,14nm,1.3s
MNMC  Minye Minye      83.26 125   P       P        00 44 11.4  +0.1
ABTA  Abfaltersbach    83.29  25  epP      P        00 44 11.0   0.0
           comp=Z,8.6nm,1.0s
ZST   Bratislava       83.30  22  eP       P        00 44 09.9  -1.0
ZST                                pmax    pmax
           comp=Z,24nm,1.4s
ZST   Bratislava       83.30  22  eP       P        00 44 09.9  -1.0
VYHS  Vyhne            83.48  21  eP       P        00 44 11.3  -0.5
VYHS                               pmax    pmax
           comp=Z,31nm,1.9s
VYHS  Vyhne            83.48  21  eP       P        00 44 11.3  -0.5
AKASG Malin Array Be   83.59  14   P       P        00 44 11.0  -1.3
           comp=Z,4.9nm,0.9s,baz=349,slow=4.7,SNR=19
AKASG                              LR      LR       01 20 32.0
           comp=Z,266nm,20.3s,baz=285,slow=35
AKASG Malin Array Be   83.59  14   P       P        00 44 11.4  -0.9
AKASG                              pmax    pmax
           comp=Z,10.0nm,1.3s
AKASG Malin Array Be   83.59  14   P       P        00 44 11.3  -0.9
AKBB  Malin Array Si   83.59  14⇑eP        P        00 44 10.2  -2.1
PB11  IPOC Station P   83.72 125   P       P        00 44 13.6  +0.1
ARSA  Arzberg          83.72  23  epP      P        00 44 13.8  +0.6
           comp=Z,12nm,1.4s
MYKA  Terra Mystica    83.74  25  epP      P        00 44 13.0  -0.2
           comp=Z,8.5nm,1.3s
CRVS  Cervenica-Dubn   83.74  19  eP       P        00 44 14.0  +0.8
CRVS                               pmax    pmax
           comp=Z,55nm,1.7s
CRVS  Cervenica-Dubn   83.74  19  eP       P        00 44 14.0  +0.8
SRO   Srobarova        83.97  21  eP       P        00 44 16.2  +1.9
SRO   Srobarova        83.97  21  eP       P        00 44 16.2  +1.9
SOKA  Soboth           84.10  24  i pP     P        00 44 15.0  -0.2
           comp=Z,17nm,1.5s
OBKA  Obir             84.11  24  epP      P        00 44 14.9  -0.3
           comp=Z,9.8nm,1.2s
UZH   Uzhgorod         84.19  19  eP       P        00 44 14.2  -1.2
UZH                               i                 00 44 19.9
VSR   Storozhevoye     84.39   7⇓eP        P        00 44 16.5  +0.1
VSR                                pmax    pmax
           comp=Z,45nm,1.2s
VRH   Novokhopyorsk    84.61   6  eP       P        00 44 16.9  -0.6
VRH                                pmax    pmax
           comp=Z,30nm,1.5s
MK31  Makanchi Array   85.17 339   IAmb    IAmb     00 44 22.7
           comp=Z,16nm,1.4s
MKAR  Makanchi Array   85.17 339   P       P        00 44 20.6  +0.1
           comp=Z,7.6nm,1.2s,baz=46,slow=5.2,SNR=27
MKAR                               LR      LR       01 24 47.9
           comp=Z,206nm,19.5s,baz=16,slow=37
MAKZ  Makanchi         85.24 339   P       P        00 44 20.7  -0.1
MAKZ                               pmax    pmax
           comp=Z,28nm,1.2s
MAKZ  Makanchi         85.24 339   P       P        00 44 20.7  -0.1
WHN   Wuhan            85.67 309 ⇑P        P        00 44 36.6  +13
GTA   Gaotai           85.73 324  eP       P        00 44 24.9  +1.4
GTA                                pP      pwP      00 44 29.6  -1.3
GTA                                sP      sP       00 44 31.9  +3.0
GTA                                pmax    pmax
           comp=Z,3.0nm,1.1s
GTA                                pmax    pmax
           comp=Z,64nm,5.2s
GTA                                LR      LR
           comp=Z,190nm,17.5s
GTA                                LR      LR
           comp=Z,350nm,17.8s
BUR08 Bucovina Ar. S   85.76  17   IAmb    IAmb     00 44 28.4
           comp=Z,27nm,1.8s
BURAR Bucovina Array   85.79  17   P       P        00 44 23.1  -0.6
XAN   Xi'an            85.86 315   P       P        00 44 28.5  +4.3
XAN                                pmax    pmax
           comp=Z,7.0nm,1.1s
XAN                                LR      LR
           comp=Z,310nm,20.6s
WMQ   Urumqi           86.35 334  eP       P        00 44 28.3  +1.9
WMQ                                pmax    pmax
           comp=Z,9.0nm,1.3s
WMQ                                pmax    pmax
           comp=Z,170nm,8.1s
WMQ   Urumqi           86.35 334   P       P        00 44 26.1  -0.4
WMQ                                pmax    pmax
           comp=Z,43nm,0.6s
WMQ   Urumqi           86.35 334   P       P        00 44 26.1  -0.4
ABKAR Akbulak array    86.54 354   P       P        00 44 26.4  -0.8
LZH   Lanzhou          86.69 320  eP       P        00 44 28.3  -0.1
LZH                                pP      pP       00 44 31.5  -0.9
LZH                                sP      sP       00 44 33.2  -0.6
LZH                               ePP      PP       00 47 51.5  +1.7
LZH                                pmax    pmax
           comp=Z,23nm,1.4s
LZH                                pmax    pmax
           comp=Z,100nm,5.6s
LZH                                LR      LR
           comp=Z,380nm,16.8s
LZH                                LR      LR
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           comp=Z,530nm,19.3s
ENH   Enshi            88.53 312   P       P        00 44 37.8  +0.7
PRZ   Przheval'sk      90.19 340   P       P        00 44 45.6  +0.7
PRZ                                pmax    pmax
           comp=Z,29nm,1.6s
PRZ   Przheval'sk      90.19 340   P       P        00 44 45.6  +0.7
USP   Ospenovka        90.33 343   P       P        00 44 46.8  +1.4
           SNR=7.7
CHMS  Chumysh          90.54 343   P       P        00 44 47.9  +1.5
           SNR=8.1
FRU1  Bishkek          90.75 343   P       P        00 44 48.1  +0.8
FRU1                               pmax    pmax
           comp=Z,32nm,1.3s
FRU1  Bishkek          90.75 343   P       P        00 44 48.1  +0.8
KDJ   Kajisay          90.82 341   P       P        00 44 48.5  +0.7
KDJ                                pmax    pmax
           comp=Z,26nm,1.8s
KDJ   Kajisay          90.82 341   P       P        00 44 48.5  +0.7
KDJ                                IAmb    IAmb     00 44 53.8
           comp=Z,26nm,1.8s
KBK   Karagaybulak     90.82 342   P       P        00 44 46.2  -1.7
           SNR=9.8
AAK   Ala-Archa        90.94 343   P       P        00 44 49.7  +1.3
           comp=Z,5.9nm,1.1s,baz=34,slow=3.0,SNR=9.7
AAK   Ala-Archa        90.94 343   P       P        00 44 49.7  +1.3
           SNR=5.4
AAK   Ala-Archa        90.94 343deP        P        00 44 49.7  +1.3
AAK                                pmax    pmax
           comp=Z,11nm,1.2s
AAK   Ala-Archa        90.94 343   P       P        00 44 48.7  +0.3
AAK                                IAmb    IAmb     00 44 50.4
           comp=Z,11nm,1.2s
CD2   Chengdu          90.96 317   P       P        00 44 46.7  -1.8
CD2                                pmax    pmax
           comp=Z,20nm,0.5s
EKS2  Erkin-Say        91.07 343   P       P        00 44 50.6  +1.7
           SNR=8.9
KK31  Karatay Array    91.27 346   P       P        00 44 49.9  +0.2
KK31                               pmax    pmax
           comp=Z,13nm,1.2s
KK31  Karatay Array    91.27 346   P       P        00 44 49.9  +0.2
KK31                               IAmb    IAmb     00 44 51.6
           comp=Z,12nm,1.2s
KKAR  Karatay Array    91.27 346   P       P        00 44 49.1  -0.6
KKAR  Karatay Array    91.27 346   P       P        00 44 49.1  -0.6
KZA   Kyzart           91.31 342   P       P        00 44 52.0  +1.6
           SNR=5.9
AML   Almayashu        91.59 343   P       P        00 44 53.6  +1.9
           SNR=9.9
NRN   Naryn            91.75 341   IAmb    IAmb     00 44 54.7
           comp=Z,10nm,1.2s
KIV   Kislovodsk       91.89   6  eP       P        00 44 53.7  +1.1
KIV                                pmax    pmax
           comp=Z,22nm,1.1s
KIV                                MLR     MLR
           comp=Z,395nm,20.0s
KEST  Kesra            91.95  33   LR      LR       01 24 47.7
           comp=Z,102nm,18.9s,baz=276,slow=35
KBZ   Khabaz           92.13   6   LR      LR       01 30 34.2
           comp=Z,136nm,18.1s,baz=348,slow=38
KSH   Kashi            93.58 341   P       P        00 45 01.0  +0.4
KSH                                sP      pwP      00 45 08.3  +0.4
KSH                                PP      PP       00 48 50.1  +5.9
KSH                                S       S        00 56 04.4  -4.4
KSH                                SS      SS       01 02 26.6  +2.4
KSH                                pmax    pmax
           comp=Z,13nm,0.5s
KSH                                LR      LR
           comp=Z,130nm,10.7s
KSH                                LR      LR
           comp=Z,500nm,17.0s
BTK   Batken           94.16 345   P       P        00 45 03.1  -0.1
BTK                                pmax    pmax
           comp=Z,11nm,1.4s
BTK   Batken           94.16 345   P       P        00 45 03.1  -0.1
BTK                                IAmb    IAmb     00 45 10.0
           comp=Z,11nm,1.4s
BDFB  Brasilia         94.60 107   LR      LR       01 31 34.6
           comp=Z,98nm,18.2s,baz=182,slow=38
BRTR  Keskin Array B   94.99  13   P       P        00 45 07.8  +0.7
           comp=Z,1.0nm,0.9s,baz=286,slow=6.3,SNR=5.0
BRTR  Keskin Array B   94.99  13   P       P        00 45 06.9  -0.2
BRTR  Keskin Array B   94.99  13   P       P        00 45 06.9  -0.2
GAR   Garm             95.28 345   P       P        00 45 09.0  +0.6
CPUP  Villa Florida    96.09 121   LR      LR       01 30 33.8
           comp=Z,53nm,18.1s,baz=360,slow=37
GEYT  Alibeck          97.94 354   LR      LR       01 31 20.5
           comp=Z,88nm,21.1s,baz=355,slow=37
QSPA  South Pole Qui  134.05 180           PKiKP    00 51 01.2  -0.7
LSZ   Lusaka          145.32  41   PKIKP   PKPbc    00 51 21.7  -0.7
LSZ   Lusaka          145.32  41           PKPbc    00 51 21.7  -0.7
NVL   N'lazarevskaya  147.27 157  ePKIKP   PKPdf    00 51 22.7  -1.4
NVL                                pmax    pmax
           comp=Z,9.0nm,0.7s
LBTB  Lobatse         151.93  55   PKIKP   PKiKP    00 51 39.7  -0.2
LBTB  Lobatse         151.93  55           PKiKP    00 51 39.7  -0.2
SYO   Syowa Base      154.51 171⇑iPKPbc    PKiKP    00 51 45.0  +1.3
```

IDC 12 00:58:03.8±17.0**, 5°.28S**×**147°.67E, h121**^{km}±143^{km}**,**
mb3.7/3**, mb1 3.9**/4**, mb1mx3.4**/29**, mbtmp4.1**/4**, ML4.3**/1**,**
MS4.0/2**, Ms1 4.0**/2**, ms1mx3.2**/37**, Error ellipse:**
s-maj=117.7km s-min=60.2km az=101.0, Eastern New Guinea region

```
Code  Station Name       Δ°    AZ°    Phase ID          Time      Res
                                      Op      ISC      h  m  s    ISC
WRA   Warramunga Arr   19.51 221   P       P        01 02 22.0  +0.2
           1.0nm,0.3s,baz=49,slow=12,SNR=19
ASAR  Alice Springs    22.58 215   P       P        01 02 54.5  +0.2
           2.0nm,0.5s,baz=49,slow=8.7,SNR=25
FITZ  Fitzroy Crossi   25.01 238   P       P        01 03 16.4  -0.3
           3.3nm,0.5s,baz=46,slow=9.3,SNR=26
CMAR  Chiang Mai Arr   53.51 297   LR      LR       01 30 05.6
           comp=Z,125nm,19.5s,baz=60,slow=36
ZALV  Zalesovo Beam    78.77 328   P       P        01 09 53.0  +0.1
           0.8nm,0.4s,baz=100,slow=7.7,SNR=5.0
YKA   Yellowknife Ar   98.23  28   LR      LR       01 53 18.0
           comp=Z,62nm,20.9s,baz=0.0,slow=34
TORD  Torodi Ar. Bea  145.56 286   PKPbc   PKPdf    01 17 28.4  -0.4
           1.3nm,0.7s,baz=74,slow=3.4,SNR=10
```

IDC 12 01:11:11.9±6.6**, 54°.80S**×**147°.88E, h0**^{km}**, mb4.0**/2**,**
mb1 4.2/2**, mb1mx3.8**/18**, mbtmp4.0**/2**, Error ellipse:**
s-maj=364.7km s-min=57.5km az=83.0, West of Macquarie Island

```
Code  Station Name       Δ°    AZ°    Phase ID          Time      Res
                                      Op      ISC      h  m  s    ISC
H01W1 Cape Leeuwin H   30.67 297   T       T        01 49 45.8
           baz=142,slow=76,SNR=8.5
H01W2 Cape Leeuwin H   30.68 296   T       T        01 49 46.2
           baz=142,slow=76,SNR=7.9
H01W3 Cape Leeuwin H   30.69 296   T       T        01 49 47.1
           baz=142,slow=76,SNR=7.4
ASAR  Alice Springs    32.80 336   P       P        01 17 46.8   0.0
           1.0nm,0.7s,baz=168,slow=10,SNR=8.8
WRA   Warramunga Arr   36.29 338   P       P        01 18 16.9  -0.1
           2.2nm,0.7s,baz=166,slow=7.6,SNR=12
GERES GERESS Array B  151.48 277   PKPbc   PKPbc    01 31 06.7  -0.2
           0.2nm,0.6s,baz=106,slow=2.5,SNR=3.4
```

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*NIC **12** 01:31:05.9±0.0, 37°.00N×28°.69E, h4^{km}±5^{km}, Ml3.5/1*
*DDA **12** 01:31:06.8, 36°.91N×28°.74E, h4^{km}±2^{km}, ML2.5*
*ISK **12** 01:31:06.7, 36°.93N×28°.77E, h6^{km}, ML2.8/11*
ISC 12 01:31:06.8±1.0**, 36°.96N**±0°.02×**28°.71E**±0°.02**, h6**^{km}±8^{km}**,**
n38, σ0^{s}.83/56**, Dodecanese Islands**

```
Code  Station Name       Δ°    AZ°    Phase ID          Time      Res
                                      Op      ISC      h  m  s    ISC
TURN  Turunc            0.12 227   PG      Pg       01 31 15.4  +6.0
TURN                               SG      Sg       01 31 22.9  +12
DALY  Dalyan (Mula)     0.15 199   PG      Pg       01 31 09.9  +0.1
DALY                               SG      Sg       01 31 12.8  +1.0
DALY  Dalyan (Mula)     0.15 199 i P       Pg       01 31 09.7  -0.1
DALY                             i S       Sg       01 31 11.4  -0.4
DALY                               IAML             01 31 13.0
           comp=E,4µm,0.5s
DALY                               IAML             01 31 15.0
           comp=N,5µm,0.6s
YER   Yerkesik          0.39 298   PG      Pb       01 31 15.8  -0.3
FETY  Fethiye           0.44 137   PG      Pg       01 31 14.6  -0.6
FETY                               SG      Sg       01 31 20.7  -0.3
```

FETY	**Fethiye**	**0.44**	**137**	*i* P	**Pg**	**01 31 14.7**	**-0.6**
FETY				*i* S	**Sg**	**01 31 18.6**	**-2.4**
FETY				IAML		01 31 21.0	
	comp=E,395nm,0.3s						
TAVA	**DENIZLI_Tavas**	**0.53**	**17**	*i* P	**Pb**	**01 31 18.3**	**-0.3**
TAVA				*i* S	**Sb**	**01 31 26.2**	**-0.4**
TAVA				IAML		01 31 31.0	
	comp=E,256nm,0.4s						
GOLH	**Golhisar**	**0.73**	**67**	*i* P	**Pg**	**01 31 20.4**	**-0.5**
GOLH				*i* S	**Sg**	**01 31 31.1**	**+0.6**
GOLH				IAML		01 31 34.0	
	comp=E,357nm,1.7s						
GOLH				IAML		01 31 43.0	
	comp=N,177nm,0.8s						
DENT	**Denizli**	**0.84**	**18**	PG	**Pg**	**01 31 23.2**	**+0.3**
ARG	**Arkhangelos**	**0.88**	**213**	P	**Pg**	**01 31 23.2**	**-0.4**
ARG				S	**Sn**	**01 31 38.0**	**-0.7**
DAT	**Datca**	**0.94**	**256**	PG	**Pb**	**01 31 25.9**	**+0.4**
DAT	**Datca**	**0.94**	**256**	*i* P	**Pb**	**01 31 25.8**	**+0.2**
DAT				*i* S	**Sb**	**01 31 39.0**	**+0.8**
DAT				IAML		01 31 45.0	
	comp=N,65nm,0.8s						
AYDN	**Tasoluk**	**0.97**	**317**	*i* P	**Pb**	**01 31 26.4**	**+0.4**
ELL	**Elmali**	**0.98**	**102**	PG	**Pg**	**01 31 24.9**	**-0.7**
ELL	**Elmali**	**0.98**	**102**	P	**Pg**	**01 31 25.1**	**-0.5**
ELL				S	**Sn**	**01 31 40.8**	**-0.6**
AKAS	**Kas**	**1.02**	**135**	PG	**Pg**	**01 31 25.7**	**-0.6**
AKAS	**Kas**	**1.02**	**135**	*i* P	**Pg**	**01 31 26.0**	**-0.4**
AKAS				*i* S	**Sb**	**01 31 41.0**	**+0.5**
AKAS				IAML		01 31 49.0	
	comp=N,218nm,0.5s						
AKAS				IAML		01 31 51.0	
	comp=E,110nm,1.0s						
BODT	**Bodrum**	**1.13**	**276**	PN	**Pn**	**01 31 29.7**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**1.19**	**327**	PN	**Pn**	**01 31 30.9**	**+0.9**
BRDR	**BURDUR-Merkez**	**1.30**	**55**	*i* P	**Pg**	**01 31 32.5**	**+0.6**
BRDR				*i* S	**Sn**	**01 31 49.4**	**+0.1**
BRDR				IAML		01 31 57.0	
	comp=E,60nm,0.5s						
BRDR				IAML		01 32 01.0	
	comp=N,84nm,0.6s						
KORT	**Korkueli**	**1.31**	**88**	PN	**Pg**	**01 31 32.3**	**+0.3**
GCAM	**G?zelcaml?**	**1.40**	**303**	PN	**Pg**	**01 31 34.1**	**+0.5**
GCAM	**G?zelcaml?**	**1.40**	**303**	*i* P	**Pb**	**01 31 33.2**	**-0.1**
GCAM				*i* S	**Sb**	**01 31 49.7**	**-1.5**
GCAM				IAML		01 32 01.0	
	comp=N,89nm,0.6s						
GCAM				IAML		01 32 08.0	
	comp=E,54nm,0.6s						
BASM	**Basmaki-Afyon**	**1.43**	**47**	PN	**Pn**	**01 31 33.5**	**+0.1**
AKUM	**Antalya-Kumluc**	**1.45**	**115**	*i* P	**Pb**	**01 31 34.4**	**+0.1**
AKUM				*i* S	**Sg**	**01 31 54.6**	**+1.0**
MANT	**Manisa**	**1.54**	**355**	*i* P	**Pb**	**01 31 36.0**	**+0.1**
MANT				*i* S	**Sn**	**01 31 55.0**	**-0.4**
KHAL	**Karahalli**	**1.54**	**23**	*i* P	**Pb**	**01 31 35.7**	**-0.1**
KHAL				*i* S	**Sn**	**01 31 52.9**	**-2.4**
ANTB	**Antalya**	**1.56**	**91**	PN	**Pn**	**01 31 35.2**	**+0.2**
KULA	**Kula-Manisa**	**1.56**	**358**	PN	**Pb**	**01 31 35.9**	**-0.2**
KZIL	**AFYON_Kizioren**	**1.73**	**41**	*i* P	**Pb**	**01 31 38.7**	**-0.2**
KZIL				*i* S	**Sb**	**01 32 01.4**	**+0.5**
USAK	**Uak-Merkez**	**1.77**	**8**	*i* P	**Pb**	**01 31 39.2**	**-0.6**
USAK				*i* S	**Sn**	**01 31 59.1**	**-1.8**
KARP	**Karpathos**	**1.88**	**222**	PN	**Pb**	**01 31 40.7**	**-0.9**
KEPZ	**Antalya-Kepez**	**2.32**	**90**	*i* P	**Pb**	**01 31 49.1**	**+0.2**
KEPZ				*i* S	**Sb**	**01 32 18.9**	**+1.0**
AKMS	**Akamas**	**3.52**	**122**	P	**Pn**	**01 32 03.1**	**+1.1**
NATA	**Nata**	**3.81**	**124**	P	**Pn**	**01 32 06.3**	**+0.3**
SZAC	**Souni**	**4.04**	**122**	P	**Pn**	**01 32 09.7**	**+0.6**
SZAC				S	**Sn**	**01 32 58.6**	**+1.9**
SZAC				AML	AML	01 33 06.5	
	comp=E,0.2nm,1.6s						
SZAC				AML	AML	01 33 06.5	
	comp=E,0.2nm,1.6s						
SZAC				AML	AML	01 33 08.0	
	comp=E,0.2nm,1.1s						
SZAC				AML	AML	01 33 08.0	
	comp=E,0.2nm,1.1s						
CSS	**Mathiatis**	**4.24**	**117**	P	**Pn**	**01 32 13.0**	**+1.1**
MVOU	**Mavrovouni**	**4.43**	**114**	P	**Pn**	**01 32 14.6**	**+0.1**

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*TIF **12** 01:40:24.9, 42°.87N×46°.36E, h30^{km}±2^{km}*
*DRS **12** 01:40:26.3±0.0, 43°.23N×45°.29E, h34^{km}*
*NORS **12** 01:40:26.6±0.0, 42°.83N×46°.13E, h84^{km}±2^{km}, MPVA3.8*
*MOS **12** 01:40:27.0±1.0, 42°.94N×46°.19E, h71^{km}, mb3.6/2, Error ellipse: s-maj=7.0km s-min=5.0km az=36.3*
ISC 12 01:40:27.6±0.9, **42°.99N**±0°.03×**46°.22E**±0°.02, **h82**^{km}±5^{km}, **n75**, σ1^{s}.**43**/135, **14C-15D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DLMR	**Dylym**	**0.31**	**75**	*i* Pg	**Pn**	**01 40 39.0**	**-1.2**
	172nm,0.1s						
DLMR				*i* Sg	**Sn**	**01 40 48.5**	**-1.0**
	2µm,0.2s						
DLMR	**Dylym**	**0.31**	**75**	⇑*i*P	**Pn**	**01 40 39.0**	**-1.2**
DLMR				*i* S	**Sn**	**01 40 48.5**	**-1.0**
DLMR				pmax	pmax		
	comp=Z,172nm,0.1s						
BTLR	**Botlikh**	**0.33**	**180**	*e*Pg	**Pn**	**01 40 39.7**	**-0.7**
	comp=Z,234nm,0.6s						
BTLR				*e*Sg	**Sn**	**01 40 49.4**	**-0.4**
	comp=Z,418nm,0.6s						
BTLR	**Botlikh**	**0.33**	**180**	*de*P	**Pn**	**01 40 39.6**	**-0.8**
BTLR				*e*S	**Sn**	**01 40 49.4**	**-0.4**
BTLR				smax	smax		
	comp=E,365nm,0.2s						
GROC	**Groznyy**	**0.38**	**304**	*de*P	**Pn**	**01 40 41.0**	**+0.4**
GROC				*e*S	**Sn**	**01 40 52.2**	**+2.0**
GROC				pmax	pmax		
	comp=Z,54nm,0.4s						
GROC				smax	smax		
	comp=N,348nm,0.4s						
DBC	**Dubki**	**0.45**	**86**	*i* Pg	**Pn**	**01 40 40.1**	**-1.1**
	comp=N,118nm,0.1s						
DBC				*e*Sg	**Sn**	**01 40 50.2**	**-1.1**
	comp=N,322nm,0.2s						
DBC	**Dubki**	**0.45**	**86**	⇑*i*P	**Pn**	**01 40 40.1**	**-1.1**
DBC				*e*S	**Sn**	**01 40 50.2**	**-1.1**
DBC				pmax	pmax		
	comp=Z,118nm,0.1s						
UNCR	**Uncukul**	**0.50**	**123**	*e*Pg	**Pn**	**01 40 41.5**	**-0.1**
	comp=Z,107nm,0.2s						
UNCR				*e*Sg	**Sn**	**01 40 52.0**	**0.0**
	comp=Z,512nm,0.3s						
UNCR	**Uncukul**	**0.50**	**123**	*e*P	**Pn**	**01 40 41.5**	**-0.1**
UNCR				*e*S	**Sn**	**01 40 52.0**	**0.0**
UNCR				pmax	pmax		
	comp=Z,107nm,0.2s						
KRNR	**Karanay**	**0.53**	**108**	*i* Pg	**Pn**	**01 40 41.5**	**-0.4**
	comp=Z,72nm,0.1s						
KRNR				*i* Sg	**Sn**	**01 40 52.5**	**0.0**
	comp=Z,429nm,0.2s						
KRNR	**Karanay**	**0.53**	**108**	*i* P	**Pn**	**01 40 41.5**	**-0.4**
KRNR				*i* S	**Sn**	**01 40 52.5**	**0.0**
KRNR				pmax	pmax		
	comp=Z,72nm,0.1s						
XNZR	**Khunzakh**	**0.57**	**141**	*e*Pg	**Pn**	**01 40 42.4**	**0.0**
XNZR				*e*Sg	**Sn**	**01 40 53.4**	**0.0**
XNZR	**Khunzakh**	**0.57**	**141**	⇓*i*P	**Pn**	**01 40 42.4**	**0.0**
XNZR				*e*S	**Sn**	**01 40 53.3**	**0.0**
BUJR	**Buynaksk**	**0.67**	**104**	*i* Pg	**Pn**	**01 40 43.2**	**0.0**
BUJR				*e*Sg	**Sn**	**01 40 57.0**	**+2.2**
BUJR	**Buynaksk**	**0.67**	**104**	⇑*i*P	**Pn**	**01 40 43.1**	**0.0**
BUJR				*e*S	**Sn**	**01 40 56.9**	**+2.2**
ARKR	**Arakani**	**0.69**	**124**	*i* Pg	**Pn**	**01 40 43.5**	**+0.2**
	comp=Z,57nm,0.3s						
ARKR				*e*Sg	**Sn**	**01 40 56.0**	**+0.9**
	comp=Z,637nm,0.0s						
ARKR	**Arakani**	**0.69**	**124**	⇓*i*P	**Pn**	**01 40 43.5**	**+0.2**
ARKR				*e*S	**Sn**	**01 40 56.0**	**+0.9**
ARKR				pmax	pmax		
	comp=Z,57nm,0.3s						
GNBR	**Gunib**	**0.81**	**137**	*e*Pg	**Pn**	**01 40 44.6**	**-0.1**
	comp=Z,93nm,0.1s						
GNBR				*e*Sg	**Sn**	**01 40 57.8**	**+0.4**
	comp=Z,818nm,0.5s						
GNBR	**Gunib**	**0.81**	**137**	*c* *i*P	**Pn**	**01 40 44.5**	**-0.1**
GNBR				*e*S	**Sn**	**01 40 57.8**	**+0.4**
GNBR				pmax	pmax		
	comp=Z,161nm,0.5s						
GNBR				smax	smax		
	comp=E,818nm,0.3s						
MAK	**Makhachkala**	**0.94**	**91**	*e*P	**Pn**	**01 40 46.5**	**+0.5**
MAK				*e*		01 41 01.7	
MAK				pmax	pmax		
	comp=Z,115nm,0.2s						
MAK				smax	smax		
	comp=N,530nm,0.3s						
MAK				smax	smax		
	comp=N,667nm,0.4s						
KANR	**Karaman**	**0.95**	**77**	*e*Pg	**Pn**	**01 40 47.6**	**+1.5**
KANR				*e*Sg	**Sn**	**01 41 02.8**	**+2.8**
KMGR	**Komgaron**	**1.00**	**274**	⇑*i*P	**Pn**	**01 40 47.7**	**+1.0**
KMGR				*e*S	**Sn**	**01 41 03.5**	**+2.4**
KMKR	**Kumukh**	**1.08**	**143**	*i* Pg	**Pn**	**01 40 48.0**	**+0.1**
	comp=N,59nm,0.2s						
KMKR				*e*Sg	**Sn**	**01 41 03.0**	**0.0**
	comp=N,417nm,0.3s						
KMKR	**Kumukh**	**1.08**	**143**	⇑*i*P	**Pn**	**01 40 48.0**	**+0.1**
KMKR				*e*S	**Sn**	**01 41 03.0**	**0.0**
KMKR				pmax	pmax		
	comp=Z,59nm,0.2s						
VLKR	**Vladikavkaz**	**1.13**	**273**	*e*P	**Pn**	**01 40 49.9**	**+1.5**
VLKR				*e*S	**Sn**	**01 41 03.7**	**-0.3**
BTKR	**Batakoyurt**	**1.29**	**288**	⇑*i*P	**Pn**	**01 40 51.1**	**+0.8**
BTKR				*e*S	**Sn**	**01 41 09.5**	**+2.1**
TRKR	**Terskaya**	**1.31**	**304**	*i* P	**Pn**	**01 40 51.0**	**+0.5**
TRKR				*e*S	**Sn**	**01 41 09.9**	**+2.1**
TRKR				pmax	pmax		
	comp=Z,158nm,0.3s						
TRKR				smax	smax		
	comp=N,476nm,0.2s						
URKR	**Urkarakh**	**1.33**	**128**	*i* Pg	**Pn**	**01 40 51.0**	**+0.1**
URKR				*e*Sg	**Sn**	**01 41 08.7**	**+0.3**
URKR	**Urkarakh**	**1.33**	**128**	*e*P	**Pn**	**01 40 51.0**	**+0.1**
URKR				*e*S	**Sn**	**01 41 10.0**	**+1.5**
GUDG	**Gudauri**	**1.39**	**248**	P	**Pn**	**01 40 51.4**	**-0.4**
GUDG				S	**Sn**	**01 41 10.3**	**+0.3**
GUDG	**Gudauri**	**1.39**	**248**	P	**Pn**	**01 40 51.3**	**-0.4**
GUDG				S	**Sn**	**01 41 10.2**	**+0.3**
LACR	**Lac**	**1.42**	**264**	⇓*i*P	**Pn**	**01 40 50.5**	**-1.6**
LACR				*e*S	**Sn**	**01 41 09.0**	**-1.6**
ARNR	**Ardon**	**1.43**	**278**	⇓*i*P	**Pn**	**01 40 52.5**	**+0.4**
ARNR				*e*S	**Sn**	**01 41 11.7**	**+1.1**
DDFL	**Dedoflistskaro**	**1.55**	**183**	P	**Pn**	**01 40 54.9**	**+1.3**
DDFL				S	**Sn**	**01 41 17.9**	**+4.5**
DDFL	**Dedoflistskaro**	**1.55**	**183**	P	**Pn**	**01 40 54.9**	**+1.3**
DDFL				S	**Sn**	**01 41 17.8**	**+4.5**
KORR	**Kora**	**1.58**	**274**	⇓*i*P	**Pn**	**01 40 54.1**	**+0.1**
KORR				*e*S	**Sn**	**01 41 14.9**	**+0.8**
PRTR	**Priterechnaya**	**1.61**	**299**	⇓*i*P	**Pn**	**01 40 54.9**	**+0.6**
PRTR				*e*S	**Sn**	**01 41 16.5**	**+1.9**
SEAG	**Tbilisi Sea**	**1.61**	**221**	P	**Pn**	**01 40 54.0**	**-0.6**
SEAG				S	**Sn**	**01 41 14.0**	**-0.9**
SEAG	**Tbilisi Sea**	**1.61**	**221**	P	**Pn**	**01 40 53.9**	**-0.6**
SEAG				S	**Sn**	**01 41 13.9**	**-0.9**
STDR	**Stavd-Durt**	**1.62**	**284**	⇑*i*P	**Pn**	**01 40 55.0**	**+0.5**
STDR				*e*S	**Sn**	**01 41 16.8**	**+1.8**
TBLG	**Delisi**	**1.67**	**222**	P	**Pn**	**01 40 53.8**	**-1.4**
TBLG				S	**Sn**	**01 41 15.9**	**-0.3**
TBLG	**Delisi**	**1.67**	**222**	P	**Pn**	**01 40 53.8**	**-1.4**
TBLG				S	**Sn**	**01 41 15.8**	**-0.3**
BTNK	**Botanikuri**	**1.68**	**219**	P	**Pn**	**01 40 54.7**	**-0.7**
BTNK				S	**Sn**	**01 41 16.1**	**-0.2**
BTNK	**Botanikuri**	**1.68**	**219**	P	**Pn**	**01 40 54.6**	**-0.7**
BTNK				S	**Sn**	**01 41 16.1**	**-0.2**
LSNR	**Lesken**	**1.78**	**280**	⇑*i*P	**Pn**	**01 40 56.6**	**0.0**
LSNR				*e*S	**Sn**	**01 41 19.1**	**+0.4**
DRN	**Derbent**	**1.83**	**121**	*i* Pn	**Pn**	**01 40 57.3**	**+0.1**
	comp=N,115nm,0.3s						
DRN				*e*Sn	**Sn**	**01 41 19.9**	**+0.1**
	comp=N,54nm,0.8s						
DRN	**Derbent**	**1.83**	**121**	⇓*i*P	**Pn**	**01 40 57.3**	**+0.1**
DRN				*e*S	**Sn**	**01 41 19.9**	**+0.1**
DRN				pmax	pmax		
	comp=Z,115nm,0.3s						
AKT	**Akhty**	**1.88**	**143**	*e*Pn	**Pn**	**01 40 57.0**	**-1.0**
	comp=Z,79nm,0.2s						
AKT				*e*Sn	**Sn**	**01 41 19.2**	**-1.9**
	comp=Z,153nm,0.3s						
AKT	**Akhty**	**1.88**	**143**	⇓*i*P	**Pn**	**01 40 57.8**	**-0.2**
AKT				*e*S	**Sn**	**01 41 20.1**	**-1.1**
SEKA	**Sheki**	**1.92**	**157**	P	**Pn**	**01 40 57.5**	**-1.1**
DIGR	**Digorskoe uzhe**	**1.94**	**268**	*i* P	**Pn**	**01 40 57.9**	**-1.0**
DIGR				*e*S	**Sn**	**01 41 20.8**	**-2.0**
DIGR				pmax	pmax		
	comp=Z,5.0nm,0.4s						
DIGR				smax	smax		
	comp=E,15nm,0.3s						
KSMR	**Kasumkent**	**1.98**	**134**	*e*Pn	**Pn**	**01 40 59.0**	**-0.3**
KSMR				*e*Sn	**Sn**	**01 41 23.0**	**-0.5**
	comp=E,171nm,0.3s						
KSMR	**Kasumkent**	**1.98**	**134**	*e*P	**Pn**	**01 40 59.0**	**-0.3**
KSMR				*e*S	**Sn**	**01 41 23.0**	**-0.5**
NCK	**Nalchik**	**1.98**	**286**	*c* *i*P	**Pn**	**01 40 59.1**	**-0.2**
ONI	**Oni**	**2.08**	**260**	P	**Pn**	**01 41 01.4**	**+0.7**
ONI				S	**Sn**	**01 41 27.7**	**+1.9**
ONI	**Oni**	**2.08**	**260**	P	**Pn**	**01 41 01.3**	**+0.7**
ONI				S	**Sn**	**01 41 27.7**	**+1.9**
TRLG	**Trialeti**	**2.14**	**228**	P	**Pn**	**01 41 00.7**	**-0.8**
TRLG				S	**Sn**	**01 41 26.9**	**-0.6**
TRLG	**Trialeti**	**2.14**	**228**	P	**Pn**	**01 41 00.7**	**-0.8**
TRLG				S	**Sn**	**01 41 26.8**	**-0.6**
KBTC	**Kuba-Taba**	**2.21**	**293**	⇓*i*P	**Pn**	**01 41 02.2**	**-0.1**
KBTC				*e*S	**Sn**	**01 41 28.4**	**-0.5**
GANJ	**Ganja**	**2.34**	**178**	P	**Pn**	**01 41 02.6**	**-1.5**
KBZ	**Khabaz**	**2.53**	**288**	*e*P	**Pn**	**01 41 05.4**	**-1.2**
KBZ				*e*S	**Sn**	**01 41 34.2**	**-2.3**
NEY	**Neytrino**	**2.58**	**277**	*de*P	**Pn**	**01 41 07.2**	**-0.1**
BEYR	**Belyy Ugol+**	**2.68**	**294**	*e*P	**Pn**	**01 41 07.6**	**-1.0**
BEYR				*e*S	**Sn**	**01 41 37.6**	**-2.6**
SHA1	**Shidzhatmaz**	**2.71**	**287**	*e*P	**Pn**	**01 41 08.1**	**-1.0**
SHA1				*e*S	**Sn**	**01 41 38.4**	**-2.7**
KIV	**Kislovodsk**	**2.75**	**292**	*e*P	**Pn**	**01 41 08.6**	**-1.0**
KIV				*e*S	**Sn**	**01 41 39.4**	**-2.5**
GOF	**Gofitskoye**	**3.09**	**313**	*e*P	**Pn**	**01 41 13.8**	**-0.3**
GOF				*e*S	**Sn**	**01 41 49.1**	**-0.8**
NVNR	**Nevinnomyssk**	**3.48**	**299**	*e*P	**Pn**	**01 41 19.1**	**-0.3**
NVNR				*e*S	**Sn**	**01 41 58.4**	**-1.2**
GUZR	**Guzeripl'**	**4.55**	**285**	*e*P	**Pn**	**01 41 35.8**	**+1.8**
LKRN	**Lenkeran, Azer**	**4.70**	**155**	P	**Pn**	**01 41 33.9**	**-2.0**
AKTO	**Aktyubinsk**	**10.99**	**43**	⇓Pn	Pn	01 42 57.7	-4.0
	comp=E,1.9nm,1.0s						
AKTO				⇓Sn	**Sn**	**01 44 55.1**	**-7.5**
	comp=E,1.8nm,0.6s						
AB31	**Akbulak array**	**11.39**	**52**	Pn	Pn	01 43 02.1	-5.1
	comp=E,0.1nm,0.2s,baz=251,slow=12,SNR=5.3						
AB31				⇑Sn	Sn	01 45 01.1	-11
	comp=E,0.8nm,0.4s,baz=236,slow=22						
ARU	**Arti**	**15.60**	**26**	⇓*e*P	**P**	**01 44 05.5**	**+0.5**
BRVK	**Borovoye**	**18.90**	**49**	⇑*e*P	**Pn**	**01 44 45.4**	**+2.6**
BRVK				pmax	pmax		
	comp=Z,6.0nm,2.3s						
AAK	**Ala-Archa**	**20.71**	**81**	⇑*e*P	Pn	01 45 03.6	-0.7
AAK				pmax	pmax		
	comp=Z,4.0nm,2.0s						
KURK	**Kurchatov**	**23.32**	**59**	⇑*e*P	**P**	**01 45 31.5**	**+3.3**
KURK				pmax	pmax		
	comp=Z,6.0nm,2.6s						

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*MAN **12** 01:56:40.5, 6°.63N×126°.50E, h13^{km}, mb4.6, ML3.5, MS3.4*
*IDC **12** 01:56:41.0±1.1, 6°.20N×125°.04E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.3/49, mbtmp3.4/3, Error ellipse: s-maj=29.7km s-min=11.5km az=114.0*
ISC 12 01:56:40.7±1.2, **6°.58N**±0°.06×**126°.46E**±0°.08, **h10**^{km}, **n11**, σ**2**^{s}.**14**/18, **mb3.4**/3, **2C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.42**	**331**	*e*P	**Pn**	**01 56 51.3**	**-1.5**
MATI				*e*S	**Sb**	**01 56 59.7**	**+3.0**
DDMP	**Don Marcelino,**	**0.88**	**238**	*e*P	**Pg**	**01 56 58.2**	**+0.4**
DDMP				*e*S	**Sb**	**01 57 11.2**	**+1.1**
DAV	**Davao City (W)**	**1.00**	**299**	Pg	**Pn**	**01 57 01.1**	**+0.2**
	83nm,0.3s,baz=258,slow=21,SNR=10						
DAV				Lg	Lg	01 57 14.2	
	76nm,0.3s,baz=275,slow=22,SNR=14						
DMPH	**Davao City--Mi**	**1.07**	**298**	⇑*i*P	**Pn**	**01 57 03.8**	**+1.9**
DMPH				*i* S	**Sn**	**01 57 20.4**	**+3.5**
KCP	**Kidapawan**	**1.43**	**288**	⇑*i*P	**Pn**	**01 57 06.2**	**-0.7**
KCP				*i* S	**Sg**	**01 57 27.1**	**+0.3**
BUKP	**Musuan**	**1.90**	**313**	*e*P	**Pn**	**01 57 11.3**	**-1.9**
BUKP				*e*S	**Sn**	**01 57 34.8**	**-2.5**
SKMP	**Bagumbayan, Su**	**1.91**	**268**	*e*P	**Pn**	**01 57 11.3**	**-2.1**
SKMP				*e*S	**Sn**	**01 57 34.8**	**-2.6**
PAGZ	**Pagadian**	**3.31**	**293**	*e*P	**Pn**	**01 57 30.6**	**-2.0**
PAGZ				*e*S	Sn	01 57 53.8	-18
WRA	**Warramunga Arr**	**27.47**	**164**	P	**P**	**02 02 30.0**	**+2.7**
	0.3nm,0.5s,baz=342,slow=10,SNR=3.6						
ASAR	**Alice Springs**	**30.93**	**167**	P	**P**	**02 02 59.7**	**+1.7**
	0.2nm,0.4s,baz=343,slow=6.7,SNR=3.8						
MKAR	**Makanchi Array**	**55.09**	**324**	P	**P**	**02 06 11.6**	**-1.5**
	0.4nm,0.5s,baz=120,slow=6.7,SNR=8.7						
MKAR				PcP	**PcP**	**02 07 13.0**	**-1.5**
	0.3nm,0.7s,baz=108,slow=4.7,SNR=3.3						

IDC 12 02:16:05.9±2.9, **3°.89S**×**136°.29E, h0**^{km}**, mb3.4**/1, **mb1 3.7**/4, **mb1mx3.5**/27, **mbtmp3.5**/4, **ML3.4**/3, **Error ellipse: s-maj=95.0km s-min=30.1km az=86.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.07**	**187**	Pn	Pn	02 19 51.4	-2.1
	0.1nm,0.3s,baz=7.9,slow=13,SNR=4.3						
WRA				Sn	Sn	02 22 42.6	-10
	0.2nm,0.3s,baz=5.1,slow=23,SNR=4.5						
FITZ	**Fitzroy Crossi**	**17.56**	**216**	P	P	02 20 13.0	-0.4
	0.1nm,0.3s,baz=42,slow=13,SNR=4.1						
ASAR	**Alice Springs**	**19.80**	**186**	P	P	02 20 38.6	+0.5
	0.2nm,0.3s,baz=8.9,slow=11,SNR=18						
MKAR	**Makanchi Array**	**69.27**	**324**	P	P	02 27 15.0	0.0
	0.3nm,0.6s,baz=105,slow=8.0,SNR=4.3						

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*ISK **12** 02:23:51.8, 39°.06N×40°.72E, h5^{km}, ML1.5/4*
*ATA **12** 02:23:54.2±2.0, 39°.20N×41°.27E, h21^{km}±18^{km}, ML1.1, MW2.8*
ISC 12 02:23:51.5±0.9, **39°.04N**±0°.05×**40°.70E**±0°.04, **h10**^{km}±7^{km}, **n9**, σ**0**^{s}.**62**/15, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNGB	**Bingl**	**0.05**	**199**	PG	**Pg**	**02 23 53.7**	**+0.1**
BNGB				SG	**Sg**	**02 23 55.1**	**0.0**
BNGL	**BINGOL**	**0.36**	**104**	*e*P	**Pb**	**02 23 59.8**	**-0.4**
BNGL				*e*S	**Sb**	**02 24 06.6**	**+0.6**
BNGL				IAML		02 24 09.9	
	comp=Z,38nm,0.5s						
KARO	**Karliova-Bingo**	**0.38**	**45**	PG	**Pb**	**02 24 00.0**	**-0.5**
KARO				SG	**Sb**	**02 24 06.1**	**-0.5**
YEDI	**Yedisu-Bingol**	**0.42**	**343**	PG	**Pb**	**02 24 00.7**	**-0.4**
YEDI				SG	**Sb**	**02 24 07.6**	**0.0**
ECAT	**Cat-ERZURUM**	**0.61**	**20**	*e*P	**Pg**	**02 24 03.6**	**+0.3**
ECAT				*e*S	**Sb**	**02 24 12.9**	**-0.2**
ECAT				IAML		02 24 17.7	
	comp=Z,4.9nm,0.3s						
MUSM	**Mu-Merkez**	**0.71**	**116**	*e*P	**Pg**	**02 24 04.6**	**-0.6**
MUSM				*e*S	**Sg**	**02 24 14.4**	**0.0**
MUSM				IAML		02 24 19.1	
	comp=Z,4.6nm,0.5s						
TNCL	**Tunceli-Merkez**	**0.90**	**275**	*e*P	**Sb**	**02 24 20.4**	**-1.1**
TNCL				IAML		02 24 25.2	
	comp=Z,6.9nm,0.5s						
SVAN	**Silvan-Diyarba**	**0.97**	**156**	PG	**Pn**	**02 24 11.9**	**+0.7**
PTK	**Pertek**	**1.03**	**262**	PG	**Pn**	**02 24 13.1**	**+0.9**

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*THE **12** 02:24:59.9, 38°.19N×20°.40E, h7^{km}, ML2.6/5, Error ellipse: s-maj=0.7km s-min=0.4km az=243.0*
*ATH **12** 02:24:59.5, 38°.17N×20°.36E, h7^{km}, ML2.5/19, Error ellipse: s-maj=1.4km s-min=0.9km az=57.0*
ISC 12 02:25:00.2±0.9, **38°.19N**±0°.02×**20°.42E**±0°.03, **h6**^{km}±4^{km}, **n71**, σ**0**^{s}.**73**/104, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LXRA	**Lixouri, Kepha**	**0.02**	**51**	P	**Pg**	**02 25 01.4**	**0.0**
LXRA				S	**Sg**	**02 25 02.4**	**+0.3**
LXR1	**Lixouri, Cepha**	**0.02**	**51**	P	**Pg**	**02 25 01.4**	**+0.1**
LXR1				S	**Sg**	**02 25 02.3**	**+0.2**
CHV1	**Chavriata, Kef**	**0.03**	**260**	P	**Pg**	**02 25 01.5**	**+0.1**
CHV1				S	**Sg**	**02 25 02.2**	**0.0**
ARGA	**Argostoli. Kep**	**0.05**	**103**	P	**Pg**	**02 25 01.9**	**+0.3**
ARGA				S	**Sg**	**02 25 03.1**	**+0.5**
ARG2	**Argostoli**	**0.06**	**100**	P	**Pg**	**02 25 01.9**	**+0.2**
ARG2				S	**Sg**	**02 25 02.8**	**+0.1**
KEF2	**Argostoli. Kep**	**0.06**	**113**	P	**Pg**	**02 25 02.0**	**+0.3**
KEF2				S	**Sg**	**02 25 03.3**	**+0.5**
KEF3	**Kipouria, Keph**	**0.06**	**285**	P	**Pg**	**02 25 01.7**	**-0.1**
KEF3				S	**Sg**	**02 25 02.6**	**-0.2**
AGT1	**Agia Thekli**	**0.07**	**336**	P	**Pg**	**02 25 01.9**	**0.0**
AGT1				S	**Sg**	**02 25 03.2**	**+0.1**
KEF1	**Kardakata, Kep**	**0.10**	**25**	P	**Pg**	**02 25 02.4**	**0.0**
KEF1				S	**Sg**	**02 25 04.5**	**+0.6**
VLS	**Valsamata**	**0.14**	**95**	P	**Pg**	**02 25 03.1**	**+0.1**
VLS				S	**Sg**	**02 25 05.2**	**+0.3**
VLS	**Valsamata**	**0.14**	**95**	P	**Pg**	**02 25 03.1**	**+0.1**
VLS				S	**Sg**	**02 25 05.6**	**+0.7**
VLS				AML	AML	02 25 05.6	
	comp=N,16395µm,0.2s						
VLS				AML	AML	02 25 06.1	
	comp=E,14844µm,0.1s						
VSK1	**VASILIKIADES**	**0.25**	**27**	P	**Pg**	**02 25 05.1**	**0.0**
VSK1				S	**Sg**	**02 25 08.7**	**+0.3**
KONA	**Konidatara, Ke**	**0.27**	**27**	P	**Pg**	**02 25 05.3**	**-0.1**
KONA				S	**Sg**	**02 25 09.6**	**+0.7**
KONA				AML	AML	02 25 10.0	
	comp=N,4639µm,0.2s						
KONA				AML	AML	02 25 12.8	
	comp=E,2606µm,0.3s						
FSK	**Fiskardo**	**0.29**	**23**	P	**Pg**	**02 25 05.5**	**-0.4**
FSK				S	**Sg**	**02 25 10.3**	**+0.5**
	comp=E,960nm,0.2s						
FSK	**Fiskardo**	**0.29**	**23**	P	**Pg**	**02 25 05.7**	**-0.3**
FSK				S	**Sg**	**02 25 10.5**	**+0.7**
FSK				AML	AML	02 25 11.6	
	comp=E,2492µm,0.1s						
FSK				AML	AML	02 25 13.6	
	comp=N,1332µm,0.2s						
KFL	**Anninata**	**0.30**	**105**	P	**Pg**	**02 25 06.2**	**+0.1**
KFL				S	**Sg**	**02 25 10.6**	**+0.5**
	comp=N,3µm,0.3s						
KFL	**Anninata**	**0.30**	**105**	P	**Pg**	**02 25 06.2**	**+0.1**
KFL				S	**Sg**	**02 25 11.5**	**+1.4**
KFL				AML	AML	02 25 11.5	
	comp=N,4516µm,0.4s						
KFL				AML	AML	02 25 12.0	
	comp=E,5645µm,0.3s						
EVGI	**Lefkada island**	**0.47**	**23**	P	**Pg**	**02 25 09.0**	**-0.3**
EVGI				S	**Sg**	**02 25 16.3**	**+0.9**
EVGI	**Lefkada island**	**0.47**	**23**	P	**Pg**	**02 25 09.0**	**-0.3**
EVGI				S	**Sg**	**02 25 16.8**	**+1.3**
MGNA	**Meganis**	**0.55**	**32**	P	**Pg**	**02 25 10.3**	**-0.5**
MGNA				S	**Sg**	**02 25 19.0**	**+1.0**
MGNA				AML	AML	02 25 19.4	
	comp=N,1170µm,0.3s						
MGNA				AML	AML	02 25 19.5	
	comp=E,1125µm,0.2s						
KRI1	**kERI**	**0.61**	**149**	P	**Pg**	**02 25 11.8**	**-0.2**
LKD2	**Lefkada island**	**0.63**	**17**	P	**Pg**	**02 25 11.7**	**-0.6**
LKD2	**Lefkada island**	**0.63**	**17**	P	**Pg**	**02 25 11.6**	**-0.6**
LKD2				S	**Sg**	**02 25 21.3**	**+0.8**
LKD2				AML	AML	02 25 29.3	
	comp=E,538µm,0.2s						
LKD2				AML	AML	02 25 29.6	
	comp=N,542µm,0.4s						
AST1	**Astakos**	**0.63**	**56**	P	**Pg**	**02 25 12.2**	**-0.2**
AST1				S	**Sb**	**02 25 22.3**	**-0.5**
TSLK	**Tsoukalades, L**	**0.66**	**16**	P	**Pg**	**02 25 12.4**	**-0.6**
TSLK	**Tsoukalades, L**	**0.66**	**16**	P	**Pg**	**02 25 12.3**	**-0.6**
TSLK				S	**Sb**	**02 25 23.3**	**-0.3**
TSLK				AML	AML	02 25 29.6	
	comp=E,540µm,0.3s						
TSLK				AML	AML	02 25 37.8	
	comp=N,626µm,0.6s						
VTN	**Vitineika**	**0.66**	**114**	P	**Pg**	**02 25 13.2**	**+0.2**
VTN				S	**Sb**	**02 25 23.2**	**-0.4**
PDO	**Prodromos**	**0.73**	**55**	P	**Pg**	**02 25 13.8**	**-0.4**
PDO				S	**Sb**	**02 25 25.3**	**-0.2**
	comp=N,745nm,0.4s						
PDO	**Prodromos**	**0.73**	**55**	P	**Pg**	**02 25 13.7**	**-0.4**
PDO				S	**Sb**	**02 25 25.8**	**+0.4**
PDO				AML	AML	02 25 28.2	
	comp=E,818µm,0.6s						

PDO				AML	AML	02 25 30.3	
	comp=N,1264μm,0.3s						
RLS	Riolos of Patr	0.84	99	P	Pg	02 25 15.8	-0.5
RLS				S	Sb	02 25 28.8	+0.2
	comp=N,212nm,0.5s						
RLS	Riolos of Patr	0.84	99	P	Pg	02 25 15.7	-0.5
RLS				AML	AML	02 25 31.4	
	comp=E,494μm,0.5s						
RLS				AML	AML	02 25 32.9	
	comp=N,354μm,0.6s						
PVO	Paravola	0.97	63	P	Pg	02 25 18.5	-0.3
PVO				S	Sb	02 25 33.6	+1.2
	comp=N,428nm,0.4s						
PVO	Paravola	0.97	63	P	Pg	02 25 18.6	-0.1
PVO				S	Sb	02 25 33.0	+0.5
PVO				AML	AML	02 25 42.1	
	comp=N,767μm,0.3s						
PVO				AML	AML	02 25 42.5	
	comp=E,971μm,0.5s						
DRO	Drossia	1.05	103	P	Pg	02 25 19.6	-0.7
DRO	Drossia	1.05	103	P	Pg	02 25 19.6	-0.7
DRO				AML	AML	02 25 39.2	
	comp=E,829μm,0.2s						
DRO				AML	AML	02 25 47.9	
	comp=N,804μm,0.4s						
AMT	Artemida-Makis	1.21	122	P	Pg	02 25 23.3	-0.2
AMT	Artemida-Makis	1.21	122	P	Pn	02 25 23.6	-0.1
AMT				AML	AML	02 25 49.0	
	comp=N,452μm,0.5s						
AMT				AML	AML	02 25 51.8	
	comp=E,587μm,1.1s						
LAKA	Lakka	1.23	87	P	Pn	02 25 22.8	-1.2
LAKA				S	Sn	02 25 41.3	+0.4
LAKA				AML	AML	02 25 42.0	
	comp=E,252μm,0.4s						
LAKA				AML	AML	02 25 42.3	
	comp=N,238μm,0.4s						
ANX	Ano Chora	1.25	71	P	Pn	02 25 23.1	-1.2
ANX	Ano Chora	1.25	71	P	Pn	02 25 23.3	-1.0
ANX				AML	AML	02 25 48.4	
	comp=N,638μm,0.4s						
ANX				AML	AML	02 25 48.6	
	comp=E,477μm,0.6s						
SERG	Sergoula	1.31	80	P	Pn	02 25 23.4	-1.6
SERG	Sergoula	1.31	80	P	Pn	02 25 24.1	-0.9
SERG				S	Sn	02 25 44.0	+1.2
SERG				AML	AML	02 25 49.7	
	comp=N,418μm,0.4s						
SERG				AML	AML	02 25 51.3	
	comp=E,293μm,0.3s						
EVR	Evrytania	1.31	56	P	Pn	02 25 23.9	-1.2
TRIZ	Trizonia	1.31	82	P	Pn	02 25 23.7	-1.3
TRIZ	Trizonia	1.31	82	P	Pn	02 25 23.9	-1.1
ALIK	Aliki, Aigiali	1.33	86	P	Pn	02 25 24.3	-1.0
KALE	Kalithea	1.37	81	P	Pn	02 25 24.6	-1.3
KALE	Kalithea	1.37	81	P	Pn	02 25 24.6	-1.3
KALE				AML	AML	02 25 54.2	
	comp=N,304μm,0.5s						
KALE				AML	AML	02 25 58.8	
	comp=E,204μm,0.5s						
KLV	Kalavryta, Ach	1.37	96	P	Pn	02 25 25.1	-0.9
KLV	Kalavryta, Ach	1.37	96	P	Pn	02 25 25.4	-0.6
KLV				S	Sg	02 25 46.4	+2.1
KLV				AML	AML	02 25 53.4	
	comp=E,169μm,0.6s						
KLV				AML	AML	02 25 56.8	
	comp=N,143μm,0.9s						
JAN	Janina	1.50	13	P	Pg	02 25 30.1	+1.1
ITM	Ithomi	1.56	130	P	Pn	02 25 28.5	0.0
MAKR	Makrakomi, Fth	1.57	58	P	Pb	02 25 29.2	-0.5
MAKR	Makrakomi, Fth	1.57	58	P	Pb	02 25 29.7	0.0
MAKR				AML	AML	02 26 01.0	
	comp=N,218μm,0.6s						
MAKR				AML	AML	02 26 03.4	
	comp=E,327μm,0.6s						
KEK	Kerkira	1.60	343	P	Pn	02 25 28.9	-0.1
PYL	PYLOS	1.67	140	P	Pb	02 25 31.2	-0.1
AGG	Agios Georgios	1.71	60	P	Pn	02 25 31.1	+0.5
AGG	Agios Georgios	1.71	60	P	Pg	02 25 32.9	-0.1
VLX	Vlachokerasia	1.75	117	P	Pb	02 25 33.0	+0.1
AXAR	Agios Charalam	1.85	71	P	Pb	02 25 35.1	+0.7
THL	Klokotos Trika	1.85	42	P	Pg	02 25 35.2	-0.5
THL	Klokotos Trika	1.85	42	P	Pg	02 25 35.5	-0.3
THL				AML	AML	02 26 06.5	
	comp=N,105μm,0.5s						
THL				AML	AML	02 26 10.5	
	comp=E,112μm,0.5s						
KPRO	Kipourio	1.91	22	P	Pb	02 25 35.7	+0.2
LTK	Loutraki	2.02	94	P	Pb	02 25 36.3	-1.0
LKR	Lokris	2.08	76	P	Pb	02 25 37.0	-1.3
LKR				S	Sg	02 26 06.6	-0.4
DYR	Agios Nikonas	2.08	132	P	Pb	02 25 38.9	+0.5
VIL2	Platees	2.25	89	P	Pb	02 25 39.9	-1.3
NEST	Nestorio	2.28	12	P	Pb	02 25 40.8	-0.9
KRND	KRANIDI	2.31	110	P	Pb	02 25 40.4	-1.8
DID	Didima	2.33	106	P	Pb	02 25 41.6	-1.0
FNA	Florina	2.70	16	P	Pn	02 25 45.4	+1.3

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*DJA **12** 02:54:20.2±0.3, 8°S±5°×12°1E±°, h183^{km}±4^{km}, M4.2/10, mb4.7/4, MLv4.1/10, MLv4.2/3*

*IDC **12** 02:54:22.9±1.9, 8.°19S×121.°48E, h219^{km}±19^{km}, mb3.3/4, mb1 3.5/8, mb1mx3.2/54, mbtmp4.0/8, Error ellipse: s-maj=40.9km s-min=11.7km az=61.0*

ISC 12 02:54:20.5±0.6, **8.°51S**±0.°05×**121.°38E**±0.°06, **h200**^{km}, **n20**, σ**2**^{s}.**15**/28, **mb3.5**/4, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDFI	Ende, Flores	0.39	127	P	Pn	02 54 46.2	-1.1
EDFI				S	Sn	02 55 05.0	-3.1
MMRI	Maumere	0.86	98	P	Pn	02 54 48.4	-0.9
BASI	Baing, Sumba	1.87	205	P	Pn	02 54 56.6	-1.1
BASI				S	Sn	02 55 25.4	-1.3
WBSI	Waikabubak, Su	2.26	240	P	Pn	02 55 00.9	-0.9
SOEI	Soe	3.11	114	P	Pn	02 55 11.8	+0.3
BKSI	Bulukumba	3.41	338	P	Pn	02 55 13.8	-1.2
PLAI	Plampang	3.58	265	P	Pn	02 55 17.2	+0.2
PLAI				S	Sn	02 55 58.8	-2.5
KAPI	Kappang	3.83	335	P	Pn	02 55 20.4	+0.2
	2.3nm,0.3s,baz=139,slow=11,SNR=14						
JAGI	Jajag, Banyuwa	7.15	270	P	Pn	02 56 01.3	-1.4
FITZ	Fitzroy Crossi	10.39	157	P	Pn	02 56 46.4	+1.7
	0.6nm,0.3s,baz=0.5,slow=10.0,SNR=14						
FITZ				S	Sn	02 58 38.9	-2.0
	2.0nm,0.3s,baz=128,slow=13,SNR=7.6						
SWI	Sorong	12.43	53	P	P	02 57 15.6	+0.6
SIJI	Sorong	12.44	53	P	Pn	02 57 09.9	-1.1
	1.9nm,0.3s,baz=232,slow=19,SNR=4.2						
WRA	Warramunga Arr	16.92	134	P	Pn	02 58 06.5	+0.6
	1.0nm,0.3s,baz=308,slow=13,SNR=7.5						
ASAR	Alice Springs	19.26	143	P	Pn	02 58 33.5	0.0
	0.9nm,0.3s,baz=332,slow=12,SNR=24						
ASAR				S	S	03 01 58.1	+0.6
	baz=323,slow=21,SNR=6.5						
STKA	Stephens Creek	29.89	144	P	P	03 00 12.6	+3.0
	2.3nm,0.3s,baz=318,slow=9.3,SNR=12						
USRK	Ussuriysk Ar.	53.34	10	P	P	03 03 17.0	-2.1
	0.5nm,0.5s,baz=191,slow=6.4,SNR=4.4						
SONM	Songino Array	57.65	348	P	P	03 03 48.4	-1.5
	0.3nm,0.5s,baz=161,slow=8.8,SNR=2.8						
KSH	Kashi	63.64	322	P	P	03 04 34.3	+3.8
KSH				sP	sP	03 05 35.1	-1.4
KSH				PP	PP	03 06 59.6	+6.3
KSH				PcS		03 09 05.7	
KSH				S	S	03 12 48.5	-0.2
KSH				ScS	SKSac	03 14 01.3	-3.2
MKAR	Makanchi Array	65.12	331	P	P	03 04 38.8	-1.1
	0.4nm,0.5s,baz=141,slow=7.6,SNR=8.7						
TORD	Torodi Ar. Bea	120.69	280	PKP	PKiKP	03 12 49.3	-0.4
	0.3nm,0.5s,baz=49,slow=1.5,SNR=4.5						

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*IDC **12** 03:01:57.9±1.5, 32.°50N×48.°35E, h0^{km}, mb3.7/8, mb1 3.8/9, mb1mx3.5/54, mbtmp3.8/9, ML3.7/1, Error ellipse: s-maj=32.4km s-min=23.5km az=169.0*

*THR **12** 03:02:01.7±0.3, 32.°54N×48.°39E, h15^{km}±4^{km}, ML3.2*

*TEH **12** 03:02:01.1, 32.°48N×48.°43E, h15^{km}, ML3.6*

ISC 12 03:02:01.0±0.7, **32.°43N**±0.°04×**48.°35E**±0.°04, **h17**^{km}, **n61**, σ**1**^{s}.**56**/63, **mb3.6**/8, **Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGR	Shooshtar-Gavs	0.50	130	ePg	Pg	03 02 12.5	+1.5
SHGR				IAML		03 02 31.8	
	comp=E,2μm,0.7s						
SHGR	Shooshtar-Gavs	0.50	130	ePg	Pg	03 02 12.5	+1.5
IKMR	Kamar-syah	1.09	2	ePg	Pb	03 02 19.7	-1.6
IKMR				e		03 02 39.9	
AHWZ	Ahwaz	1.12	167	ePg	Pn	03 02 22.5	+0.6
AHWZ				eSg	Sn	03 02 40.0	+3.0
IKFM	Kafar-mosalman	1.17	339	ePg	Pn	03 02 22.1	-0.5
IKFM				e		03 02 42.9	
IDOB	Doab	1.36	354	ePg	Pn	03 02 24.8	-0.6
IDOB				e		03 02 49.0	
BDRS	Dareh Seyedi	1.59	16	ePn	Pn	03 02 29.7	+1.1
BDRS				e		03 02 55.2	
HSAM	Samen	1.79	7	ePn	Pn	03 02 32.2	+0.8
HSAM				e		03 02 35.3	
IKOM	Komasi	1.88	338	ePn	Pn	03 02 34.5	+2.1
IKOM				e		03 03 07.7	
KHMZ	Khomeyn	1.88	46	ePg	Pb	03 02 34.4	-0.6
KHMZ	Khomeyn	1.88	46	ePg	Pb	03 02 34.4	-0.6
JHBN	Jahan bin	1.97	95	ePn	Pn	03 02 34.5	+0.6
JHBN				e		03 03 05.2	
IBZA	Bozab	2.08	349	ePn	Pn	03 02 37.0	+1.7
KCHF	Cheshme Sefid,	2.14	330	ePn	Pn	03 02 38.8	+2.7
IPIR	Pirpir	2.17	83	ePn	Pn	03 02 37.5	+0.9
IPIR				e		03 03 08.9	
KER	Kermanshah	2.20	333	ePn	Pb	03 02 40.2	-0.2
ROKH	ROKH	2.28	91	ePn	Pn	03 02 38.7	+0.7
IGHG	Ghaleghazi	2.41	322	ePn	Pn	03 02 41.7	+1.9
IGHG				e		03 03 26.6	
IVIS	Veis	2.44	330	ePn	Pn	03 02 42.1	+2.0
IVIS				e		03 03 37.8	
HAGD	Aghdareh	2.48	15	ePn	Pn	03 02 42.7	+1.9
HAGD				e		03 03 24.7	
ASAO	Ashtian	2.54	33	ePn	Pn	03 02 43.0	+1.4
ASAO	Ashtian	2.54	33	ePn	Pn	03 02 43.0	+1.4
ILIN	Lien	2.74	335	ePn	Pn	03 02 47.7	+3.3
ILIN				e		03 03 33.4	
SNGE	Sanandaj	2.78	343	ePn	Pn	03 02 46.6	+1.6
SNGE	Sanandaj	2.78	343	ePn	Pn	03 02 46.6	+1.6
IDHR	Dehrash	2.79	325	ePn	Pn	03 02 47.0	+1.9
IDHR				e		03 03 37.3	
HSRG	Sareghieh	2.81	359	ePn	Pn	03 02 47.3	+1.9
HSRG				e		03 03 34.2	
IKLH	Kolahrood	2.86	71	ePn	Pn	03 02 47.3	+1.2
IKLH				e		03 03 46.7	
QAM	Ghamsar	2.92	62	ePn	Pn	03 02 48.9	+2.1
KLNJ	Kolanjah	3.11	116	ePn	Pn	03 02 49.8	+0.2
GHVR	GHOM	3.20	50	ePn	Pn	03 02 51.8	+1.2
GHVR	GHOM	3.20	50	ePn	Pn	03 02 51.8	+1.2
IRAZ	Razeghan	3.25	23	ePn	Pn	03 02 53.5	+2.2
IQOM	Qom	3.31	43	ePn	Pn	03 02 53.1	+0.8
IQOM				e		03 03 02.7	
IZEF	Zefreh	3.39	81	ePn	Pn	03 02 54.1	+0.7
QABG	Abgarm-Qazvin	3.43	17	ePn	Pn	03 02 55.3	+1.4
IRAM	Ramesheh	3.48	99	ePn	Pn	03 02 54.5	-0.1
KRSH	Karshahi	3.53	63	ePn	Pn	03 02 56.6	+1.4
IMHD	Mahdasht	3.78	30	ePn	Pn	03 03 00.9	+2.4
IVRN	Varamin	3.81	47	ePn	Pn	03 03 00.4	+1.5
IHSB	Hasanabad	3.87	38	ePn	Pn	03 03 00.7	+1.0
IDMV	Damavand	4.39	43	ePn	Pn	03 03 08.2	+1.1
QALM	Alamut, Qazvin	4.42	25	ePn	Pn	03 03 08.7	+1.2
ANAR	Anarak	4.60	79	ePn	Pn	03 03 09.8	0.0
ILAS	Lasjerd	4.84	51	ePn	Pn	03 03 14.5	+1.3
IFIR	Firoozkooh	4.86	48	ePn	Pn	03 03 14.7	+1.1
IPRN	Peran	5.04	40	ePn	Pn	03 03 17.9	+2.0
IALA	Alasht	5.19	44	ePn	Pn	03 03 20.2	+2.1
ISHM	Shahmirzad	5.31	49	ePn	Pn	03 03 21.7	+2.0
ISRB	Sarab	5.41	354	ePn	Pn	03 03 22.5	+1.4
IANJ	Anjilo	5.53	55	ePn	Pn	03 03 23.8	+1.0
ASF	Jabal al Asfar	9.69	272	Pn	Pn	03 04 22.3	+2.5
	comp=E,0.3nm,0.3s,baz=27,slow=6.8,SNR=5.8						
ASF				Sn	Sn	03 06 06.4	-2.0
	comp=E,0.2nm,0.3s,baz=156,slow=22,SNR=2.3						
WSAR	Wadi Sarin	12.90	133	Pn	Pn	03 05 02.3	-1.3
	comp=E,0.4nm,0.3s,baz=342,slow=15,SNR=4.1						
BVAR	Borovoye Array	26.00	31	P	P	03 07 31.6	-1.1
	comp=E,0.4nm,0.5s,baz=217,slow=6.2,SNR=3.3						
KURBB	Kurchatov Arra	28.71	42	P	P	03 07 56.9	-0.3
	comp=E,0.5nm,0.6s,baz=242,slow=9.6,SNR=4.7						
MKAR	Makanchi Array	29.57	51	P	P	03 08 04.5	-0.3
	comp=E,0.6nm,0.6s,baz=248,slow=9.2,SNR=9.3						
FINES	FINESS Array B	32.42	340	P	P	03 08 28.9	-0.9
	comp=E,2.3nm,1.0s,baz=145,slow=9.4,SNR=5.1						
ZALV	Zalesovo Beam	33.65	39	P	P	03 08 38.2	-2.4
	comp=E,0.9nm,0.4s,baz=258,slow=7.2,SNR=3.7						
NOA	NORSAR Array B	37.41	331	P	P	03 09 11.0	-1.8
	comp=E,0.6nm,0.8s,baz=128,slow=9.4,SNR=2.5						
ARCES	ARCESS Array B	39.31	348	P	P	03 09 28.0	-0.7
	comp=E,1.7nm,0.7s,baz=150,slow=5.2,SNR=7.2						
TORD	Torodi Ar. Bea	46.68	257	P	P	03 10 28.9	-0.1
	comp=E,0.7nm,1.1s,baz=48,slow=8.2,SNR=4.9						

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*IDC **12** 03:06:49.9±4.2, 12.°25S×166.°86E, h261^{km}±41^{km}, mb3.5/10, mb1 3.7/11, mb1mx3.4/49, mbtmp4.1/11, Error ellipse: s-maj=25.0km s-min=19.9km az=142.0*

ISC 12 03:06:44.9±0.7, **12.°4S**±0.°1×**167.°0E**±0.°2, **h220**^{km}, **n13**, σ**0**^{s}.**86**/13, **mb3.8**/10, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	9.67	183	P	P	03 09 06.5	-0.9
	0.7nm,0.3s,baz=176,slow=19,SNR=5.2						
WRA	Warramunga Arr	32.25	252	P	P	03 12 52.7	-0.4
	1.1nm,0.7s,baz=83,slow=8.6,SNR=7.6						
ASAR	Alice Springs	33.37	246	P	P	03 13 02.5	-0.3
	1.0nm,0.6s,baz=70,slow=9.7,SNR=14						
FITZ	Fitzroy Crossi	40.28	257	P	P	03 14 01.6	+0.6
	1.9nm,0.8s,baz=79,slow=6.2,SNR=8.9						
USRK	Ussuriysk Ar.	64.69	333	P	P	03 16 59.7	+0.4
	1.1nm,0.7s,baz=108,slow=9.3,SNR=3.7						
SEY	Seymchan	75.92	353	P	P	03 18 07.0	+0.1
	2.1nm,0.5s,baz=168,slow=6.3,SNR=8.0						
QSPA	South Pole Qui	77.65	180	P	P	03 18 18.5	+1.5
	1.8nm,0.9s,baz=357,slow=0.8,SNR=5.3						
ILAR	Eielson Array	84.36	18	P	P	03 18 51.2	-0.8
	2.4nm,0.6s,baz=245,slow=5.1,SNR=52						
NVAR	Mina Array Bea	85.91	49	P	P	03 19 01.6	+1.1
	0.3nm,0.5s,baz=211,slow=8.4,SNR=3.8						
MKAR	Makanchi Array	95.34	317	P	P	03 19 44.3	+0.1
	0.5nm,0.5s,baz=95,slow=6.7,SNR=9.4						
YKA	Yellowknife Ar	95.56	27	P	P	03 19 43.3	-1.3
	0.3nm,0.5s,baz=253,slow=4.8,SNR=4.3						
ARCES	ARCESS Array B	117.92	346	PKP	PKiKP	03 25 04.7	-0.1
	3.9nm,0.9s,baz=69,slow=2.0,SNR=10						
NOA	NORSAR Array B	128.29	345	PKP	PKiKP	03 25 25.5	0.0
	0.6nm,0.8s,baz=347,slow=1.9,SNR=2.9						

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*GCG **12** 03:09:39.1±0.6, 13.°07N×89.°94W, h17^{km}±4^{km}, MD3.6*

*SNET **12** 03:09:39.0±0.7, 13.°14N×89.°67W, h46^{km}±12^{km}, ML3.3*

ISC 12 03:09:38.5±1.7, **13.°10N**±0.°08×**89.°72W**±0.°05, **h26**^{km}±14^{km}, **n23**, σ**1**^{s}.**00**/30, **4C-3D**, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.54	45	⇓iP	Pb	03 09 50.1	+0.5
LALI				eS	Sb	03 09 58.0	+0.9
LALI				IAML		03 09 58.4	
	comp=Z,662nm,0.3s						
CEVE	Cerro Verde	0.73	7	⇑iP	Pn	03 09 53.0	-0.4
SBLS	San Blas	0.74	7	⇑iP	Pn	03 09 53.0	-0.5
SNET	Serv Nac Est T	0.75	39	eP	Pn	03 09 52.9	-0.7
SNET				eS	Sn	03 10 03.5	-0.6
SNET				IAML		03 10 07.5	
	comp=Z,1μm,0.3s						
UEES	Universidad Ev	0.77	37	eP	Pn	03 09 53.2	-0.5
OPAM	Oficina de Pla	0.79	40	eP	Pn	03 09 53.5	-0.5
OPAM				IAML		03 10 08.2	
	comp=Z,1μm,0.2s						
RTR	El Retiro	0.80	5	⇑iP	Pn	03 09 53.9	-0.3
COEG	Centro de Oper	0.96	57	⇓iP	Pn	03 09 55.6	-0.8
COEG				IAML		03 10 10.3	
	comp=Z,2μm,0.4s						
ALJI	Alcalda de J	1.14	78	i P	Pn	03 09 58.0	-0.7
COEB	Comit de Eme	1.22	71	eP	Pn	03 09 59.2	-0.8
COEB				IAML		03 10 16.2	
	comp=Z,389nm,0.1s						
TECA	Tecapa	1.24	71	eP	Pn	03 09 59.5	-0.9
IXG	Ixpaco	1.28	327	eP	Pn	03 10 00.8	-0.1
IXG				eS	Sb	03 10 17.7	-0.5
MTO3	Montecristo	1.34	15	⇑iP	Pn	03 10 01.3	-0.4
PACA	Pacayal	1.40	75	eP	Pn	03 10 02.3	-0.3
JUCU	Jucuar¡n	1.44	84	eP	Pn	03 10 01.6	-1.3
JUCU				eS	Sn	03 10 20.0	-1.0
NBG	Las Nubes	1.60	338	eP	Pb	03 10 06.8	-0.8
NBG				eS	Sb	03 10 27.9	+0.4
FUG	Fuego 3	1.73	321	eP	Pn	03 10 07.4	+0.3
FUG				eS	Sb	03 10 29.9	-1.2
LCND	La Caada	1.79	83	eP	Pn	03 10 07.1	-0.6
CNCH	Conchagua	1.84	84	⇓iP	Pn	03 10 07.8	-0.8
CNCH				IAML		03 10 33.3	
	comp=Z,627nm,0.4s						
STG3	Santiaguito 3,	2.41	312	eP	Pn	03 10 15.9	-0.5
STG3				eS	Sn	03 10 45.3	0.0
SOLC	Bahia Solano	13.92	118	eP	Pn	03 12 53.5	-0.7
OTAV	Otavalo	16.97	138	eP	Pn	03 13 34.9	+0.2
SOCV	Socops	19.14	103	eP	Pn	03 14 04.5	+3.6

IDC 12 03:09:49.0±1.4, **1.°64N**×**126.°96E**, **h0**^{km}, **mb3.8**/5, **mb1 3.9**/6, **mb1mx3.5**/47, **mbtmp3.7**/6, **ML3.6**/1, **Error ellipse: s-maj=104.2km s-min=18.3km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	19.66	184	P	Pn	03 14 21.5	+0.5
	0.1nm,0.3s,baz=18,slow=9.6,SNR=3.6						
WRA	Warramunga Arr	22.64	162	P	P	03 14 51.6	-0.2
	2.2nm,0.4s,baz=338,slow=10,SNR=17						
ASAR	Alice Springs	26.04	165	P	P	03 15 23.8	-0.5
	0.4nm,0.4s,baz=350,slow=15,SNR=8.8						
STKA	Stephens Creek	36.11	159	P	P	03 16 52.2	-0.6
	1.2nm,0.7s,baz=316,slow=13,SNR=4.1						
MKAR	Makanchi Array	59.40	326	P	P	03 19 53.7	+0.3
	0.6nm,0.6s,baz=120,slow=8.1,SNR=6.0						
KURBB	Kurchatov Arra	63.62	328	P	P	03 20 21.6	-0.1
	0.5nm,0.5s,baz=130,slow=6.1,SNR=8.7						

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*UPA **12** 03:11:56.2±0.6, 5.°72N×82.°52W, h0^{km}±24^{km}, MW4.0*

*UCR **12** 03:11:57.5±1.5, 5.°67N×82.°76W, h4^{km}±45^{km}, MD4.4*

ISC 12 03:11:58.0±1.2, **5.°61N**±0.°06×**82.°64W**±0.°06, **h15**^{km}, **n61**, σ**1**^{s}.**67**/73, **1D**, **South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CACAO	El Cacao, Vera	2.47	46	eP	Pn	03 12 35.4	-2.3
CACAO				eS	Sn	03 13 04.9	-2.8
GMAL	Guarumal, Vera	2.56	33	eP	Pn	03 12 36.8	-2.2
GMAL				eS	Sn	03 13 07.3	-2.5
CHIR3	Chiriqui UPA,	2.79	6	eP	Pn	03 12 40.7	-1.4
DVD	David	2.82	4	eP	Pn	03 12 41.0	-1.6
DVD				eS	Sn	03 13 14.9	-1.3
PTJ1	Puerto Jimnez	2.98	347	eS	Sn	03 13 19.5	-0.9
PTAR3	Potrerillos Ar	3.07	3	eS	Sn	03 13 21.9	-0.8
BCO2	Palmira	3.09	2	eP	Pn	03 12 44.8	-1.7
BCO2				eS	Sn	03 13 21.8	-1.5
BRU2	Volcan	3.17	359	⇓iP	Pn	03 12 46.2	-1.3
BRU2				eS	Sn	03 13 23.9	-1.2
AZU	Azuero	3.20	47	eP	Pn	03 12 45.3	-2.5
AZU	Azuero	3.20	47	eP	Pn	03 12 45.7	-2.0
AZU				eS	Sn	03 13 22.3	-3.4
CHGR2	Aguacate	3.35	8	eP	Pn	03 12 48.2	-1.6
CHGR2				eS	Sn	03 13 28.6	-0.8
CNI2	El Empalme, Bo	3.80	2	eS	Sn	03 13 41.5	+1.1
ZANG	Zanguenga, Cho	4.32	39	eP	Pn	03 13 04.1	+0.9
ZANG				eS	Sn	03 13 50.3	-3.0
ZANG	Zanguenga, Cho	4.32	39	eP	Pn	03 13 04.3	+1.2
BCIP	Isla Barro Col	4.50	38	eP	Pn	03 13 05.7	0.0
HDC	Heredia	4.61	342	eP	Pn	03 13 06.1	-1.1
HDC				eS	Sn	03 13 59.7	-0.9
HDC	Heredia	4.61	342	eP	Pn	03 13 06.5	-0.8
PTAC	Punta Ardita,	5.04	72	eP	Pn	03 13 13.0	0.0
GR1C	Gorgona, Isla	5.15	120	eP	Pn	03 13 08.7	-5.9
JTS	Las Juntas de	5.19	334	eP	Sn	03 14 14.2	-0.7
JTS	Las Juntas de	5.19	334	eP	Pn	03 13 14.0	-1.2
FORC	Fortuna	5.23	338	i P	Pn	03 13 15.6	-0.1
SOLC	Bahia Solano	5.24	83	eP	Pn	03 13 11.4	-4.4
CEDE	Laguna Cedeo	5.26	337	i P	Pn	03 13 15.3	-0.9
PLVR	Palo Verde	5.42	330	eP	Pn	03 13 17.2	-1.3
PLVR				eS	Sn	03 14 18.0	-2.8
GUAI	GUAI	5.44	329	i P	Pn	03 13 17.0	-1.6
MALC	Bahia Malaga	5.51	106	eP	Pn	03 13 18.0	-1.6
ACAL	Aguas Claras	5.53	335	i P	Pn	03 13 19.1	-0.8
CUI	Cuipilapa	5.61	334	i P	Pn	03 13 20.6	-0.3
CUI				i S	Sn	03 14 24.6	-0.6
COLC	Colonia	5.63	333	i P	Pn	03 13 21.1	-0.2
GUAB	Guayabo de Bag	5.68	333	i P	Pn	03 13 22.3	+0.3
GUAB				i S	Sn	03 14 26.8	-0.3
LIM1	Limonal	5.68	333	i P	Pn	03 13 21.9	-0.1
LIM1				i S	Sn	03 14 26.8	-0.3
MESS	Mesas	5.70	334	i P	Pn	03 13 21.9	-0.3
NY14	Universidad de	5.77	330	i P	Pn	03 13 24.0	+0.9
GPS2	Hotel Rincn d	5.78	332	i P	Pn	03 13 23.4	+0.1
GPS1	Guardaparques	5.79	333	i P	Pn	03 13 24.5	+0.9
CAPC	Capurgana	6.05	60	eP	Pn	03 13 26.8	-0.2
PLMC	San Jos del P	6.37	96	eP	Pn	03 13 30.1	-1.3
YOTC	Yotoco, Valle	6.47	104	eP	Pn	03 13 30.6	-2.4
YOTC	Yotoco, Valle	6.47	104	eP	Pn	03 13 31.2	-1.8
CMBC	Cumbal	6.67	134	eP	Pg	03 14 08.7	+2.8
SOTA	Rioblanco	6.93	120	eP	Pn	03 13 38.7	-0.9
CRUC	La Cruz	6.95	125	eP	Pn	03 13 37.9	-1.8
LCBC	Los crdobas,	7.01	62	eP	Pn	03 13 43.9	+3.8
PCON	Cinco Dias	7.02	117	eP	Pn	03 13 40.5	-0.5
HELC	Santa Helena	7.09	85	eP	Pn	03 13 43.1	+1.4
GUY2C	Guyana, Caldas	7.25	93	eP	Pn	03 13 45.5	+1.6
RREF	El Recreo	7.29	95	eP	Pn	03 13 45.6	+1.0
TOLC	Tolima	7.36	98	eP	Pn	03 13 45.6	+0.4
UREC	San Jos de Ur	7.37	73	eP	Pn	03 13 46.8	+1.7
ORTC	Ortega, Tolima	7.56	103	eP	Pn	03 13 47.7	0.0
NORC	Norcasia	7.73	90	eP	Pn	03 13 52.3	+2.2
ZARC	Zaragoza, Cauc	7.95	76	eP	Pn	03 13 55.0	+1.8
FLOC	Florencia	8.03	120	eP	Pn	03 13 53.3	-1.0
PTBC	PUERTO BERRIO,	8.19	83	eP	Pn	03 13 58.5	+2.1
SJCC	San Jacinto, C	8.53	60	eP	Pn	03 14 00.9	-0.2
CHIC	Chingaza	8.92	96	eP	Pn	03 14 08.3	+1.5
VILC	Villavicencio,	9.03	99	eP	Pn	03 14 10.4	+2.3
SMLC	San Martn de	9.07	69	eP	Pn	03 14 10.4	+1.9
MACC	Macarena, Meta	9.42	111	eP	Pn	03 14 13.8	+0.5
CODC	Agustn Codazz	10.07	64	eP	Pn	03 14 24.6	+2.3

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*SKO **12** 03:36:08.7, 41.°45N×19.°46E, h12^{km}*

*TIR **12** 03:36:08.1, 41.°53N×19.°53E, h7^{km}, Md2.6/4*

ISC 12 03:36:07.1±1.3, **41.°51N**±0.°06×**19.°42E**±0.°04, **h5**^{km}±11^{km}, **n17**, σ**1**^{s}.**54**/30, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.37	116	i PG	Pg	03 36 14.6	+0.3
TIR				i SG	Sg	03 36 20.1	+0.9
PUK	Puka	0.64	33	i PG	Pb	03 36 20.1	-0.7
PUK				i SG	Sn	03 36 39.9	+6.4
PHP	Peshkopia	0.79	77	i PG	Pg	03 36 21.2	-1.0
PHP				i SG	Sg	03 36 32.2	-0.2
BCI	Bajram Curri	0.98	29	i PG	Pb	03 36 25.6	-1.1
BCI				i SG	Sn	03 36 40.6	-1.3
OHR	Ohrid	1.11	111	i Pg	Pg	03 36 27.8	-0.7
OHR				i Sg	Sg	03 36 44.0	+1.1
OHR				eLg	Lg	03 36 46.7	
	comp=N,50nm,0.4s						
OHR				eLg	Lg	03 36 47.4	
	comp=E,33nm,0.4s						
DBRK	Dubrovnik	1.50	321	ePn	Pn	03 36 33.4	-1.2
DBRK				Sg	Sg	03 36 55.9	+0.6
SKO	Skopje	1.58	72	i Sg	Sg	03 36 57.7	-0.2
STON	Ston	1.87	317	ePn	Pb	03 36 41.9	+0.2
STON				Sg	Sb	03 37 05.2	-0.1
STIP	Stip	2.08	84	i Pn	Pb	03 36 45.2	-0.2
STIP				eSn	Sg	03 37 14.5	+0.5
VAY	Valandovo	2.38	94	i Pn	Pn	03 36 46.2	-0.6
VAY				eSn	Sn	03 37 15.4	-0.9
VAY				eLg	Lg	03 37 23.6	
	comp=E,14nm,0.7s						
VAY				eLg	Lg	03 37 23.7	
	comp=N,17nm,0.7s						
MAKA	Makarska	2.51	316	Sn	Sn	03 37 18.8	-0.8
RICI	Ricice	2.61	320	ePn	Pn	03 36 50.8	+0.9
RICI				Sn	Sn	03 37 22.1	+0.1
HVAR	Hvar	2.76	308	ePn	Pn	03 36 52.9	+0.8
HVAR				Sn	Sn	03 37 24.8	-1.0

KIJV	**Kijevo**	**3.34**	**319**	*e*Pn	**Pn**	**03 37 01.0**	**+1.0**
ZIRJ	**Zirje**	**3.52**	**309**	Sn	**Sn**	**03 37 43.4**	**-1.0**
MORI	**Morici**	**3.61**	**312**	*e*Pn	**Pn**	**03 37 05.2**	**+1.5**
MORI				Sn	**Sn**	**03 37 45.9**	**-0.7**
DUGI	**Dugi Otok**	**4.06**	**309**	*e*Pn	**Pn**	**03 37 11.2**	**+1.3**
DUGI				Sn	**Sn**	**03 37 57.0**	**-0.8**

ATH 12 03:37:38.0, 38°.39N×20°.46E, h10^{km}±2^{km}, ML1.7/7, Error ellipse: s-maj=2.4km s-min=0.6km az=154.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KONA	**Konidatara, Ke**	**0.10**	**65**	P	Pg	03 37 40.4	-0.1
KONA				S	Sg	03 37 42.3	0.0
KONA				AML	AML	03 37 42.7	
	comp=E,1067µm,0.1s						
KONA				AML	AML	03 37 42.7	
	comp=N,1558µm,0.1s						
FSK	**Fiskardo**	**0.11**	**47**	P	Pg	03 37 40.6	-0.1
FSK				S	Sg	03 37 42.6	0.0
FSK				AML	AML	03 37 43.1	
	comp=N,1300µm,0.4s						
FSK				AML	AML	03 37 43.2	
	comp=E,2156µm,0.1s						
LXRA	**Lixouri, Kepha**	**0.19**	**186**	P	Pg	03 37 42.1	+0.3
LXRA				S	Sg	03 37 44.9	+0.4
KEF3	**Kipouria, Keph**	**0.20**	**206**	P	Pg	03 37 42.3	+0.1
KEF3				S	Sg	03 37 45.5	+0.4
ARGA	**Argostoli. Kep**	**0.21**	**176**	P	Pg	03 37 42.3	0.0
ARGA				S	Sg	03 37 45.5	+0.3
KEF2	**Argostoli. Kep**	**0.22**	**175**	P	Pg	03 37 42.4	-0.1
KEF2				S	Sg	03 37 46.3	+0.8
VLS	**Valsamata**	**0.23**	**154**	P	Pg	03 37 42.6	-0.1
VLS				S	Sg	03 37 46.2	+0.3
VLS				AML	AML	03 37 47.5	
	comp=E,1251µm,0.1s						
VLS				AML	AML	03 37 47.6	
	comp=N,608µm,0.2s						
EVGI	**Lefkada island**	**0.28**	**33**	P	Pg	03 37 43.7	+0.1
EVGI				S	Sg	03 37 48.3	+0.8
MGNA	**Meganis**	**0.37**	**44**	P	Pg	03 37 45.1	-0.2
MGNA				S	Sg	03 37 51.0	+0.7
MGNA				AML	AML	03 37 51.4	
	comp=N,538µm,0.3s						
MGNA				AML	AML	03 37 51.5	
	comp=E,408µm,0.1s						
KFL	**Anninata**	**0.38**	**137**	P	Pg	03 37 45.2	-0.2
KFL				S	Sg	03 37 51.1	+0.7
KFL				AML	AML	03 37 51.7	
	comp=N,626µm,0.4s						
KFL				AML	AML	03 37 51.8	
	comp=E,432µm,0.3s						
LKD2	**Lefkada island**	**0.43**	**21**	P	Pg	03 37 46.5	0.0
LKD2				S	Sg	03 37 53.0	+0.8
LKD2				AML	AML	03 37 55.4	
	comp=E,68µm,0.2s						
LKD2				AML	AML	03 37 58.2	
	comp=N,112µm,0.3s						
TSLK	**Tsoukalades, L**	**0.46**	**19**	P	Pg	03 37 46.8	-0.2
TSLK				S	Sg	03 37 53.4	+0.2
PDO	**Prodromos**	**0.60**	**69**	P	Pg	03 37 49.4	-0.3
PDO				S	Sg	03 37 57.6	0.0
PDO				AML	AML	03 38 02.4	
	comp=E,93µm,0.3s						
PDO				AML	AML	03 38 02.4	
	comp=N,106µm,0.3s						
RLS	**Riolos of Patr**	**0.86**	**112**	P	Pg	03 37 53.8	-0.7
PVO	**Paravola**	**0.87**	**74**	P	Pg	03 37 54.7	0.0
PVO				S	Sb	03 38 06.8	0.0

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*PDG **12** 03:37:37.8±0.2, 41°.42N×19°.46E, h18^{km}, MD3.3/3, ML3.2/13, Error ellipse: s-maj=0.3km s-min=0.3km az=0.0*
*BEO **12** 03:37:39.2±0.4, 41°.52N×19°.51E, h0^{km}, ML2.8/17*
*TIR **12** 03:37:39.1, 41°.52N×19°.57E, h15^{km}, Md2.9/5*
*SKO **12** 03:37:40.0, 41°.59N×19°.67E, h0^{km}*
ISC 12 03:37:38.7±1.1, **41°.56N**±0°.03×**19°.48E**±0°.02, **h8**^{km}±9^{km}, **n69**, σ**1^s.03**/95, **14C-10D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.36**	**125**	*e*Pg	**Pg**	**03 37 45.3**	**-0.4**
TIR				*e*Sg	**Sg**	**03 37 50.7**	**+0.2**
TIR	**Tirane**	**0.36**	**125**	*i* PG	**Pg**	**03 37 45.4**	**-0.4**
TIR				*i* SG	**Sg**	**03 37 50.2**	**-0.3**
TIR	**Tirane**	**0.36**	**125**	⇓P	**Pg**	**03 37 45.4**	**-0.4**
TIR				⇑S	**Sg**	**03 37 51.0**	**+0.5**
PUK	**Puka**	**0.58**	**32**	*i* PG	**Pb**	**03 37 50.5**	**-0.6**
PUK				*i* SG	**Sb**	**03 37 59.5**	**0.0**
PHP	**Peshkopia**	**0.73**	**80**	*i* PG	**Pg**	**03 37 52.0**	**-0.9**
PHP				*i* SG	**Sg**	**03 38 02.7**	**+0.2**
PDG	**Podgorica**	**0.89**	**349**	*e*Pg	**Pn**	**03 37 57.1**	**-0.4**
PDG				*e*Sg	**Sn**	**03 38 10.1**	**-0.4**
PDG	**Podgorica**	**0.89**	**349**	⇑P	**Pn**	**03 37 57.0**	**-0.5**
PDG				⇓S	**Sn**	**03 38 10.7**	**+0.1**
PDG	**Podgorica**	**0.89**	**349**	*e*Pn	**Pb**	**03 37 55.7**	**-0.7**
BCI	**Bajram Curri**	**0.92**	**28**	*i* PG	**Pg**	**03 37 56.0**	**-0.4**
BCI				*i* SG	**Sn**	**03 38 10.8**	**-0.7**
OHR	**Ohrid**	**1.09**	**114**	*i* Pg	**Pg**	**03 37 58.5**	**-1.2**
OHR				*i* Sg	**Sg**	**03 38 15.4**	**+1.6**
OHR				*e*Lg	Lg	03 38 16.3	
	comp=N,155nm,0.4s						
OHR				*e*Lg	Lg	03 38 17.3	
	comp=E,167nm,0.7s						
HCY	**Herceg Novi**	**1.15**	**321**	*e*Pn	**Pb**	**03 38 01.3**	**+0.4**
TPE	**Tepelena**	**1.32**	**162**	*i* PN	**Pn**	**03 38 04.2**	**+0.8**
TPE				*i* SN	**Sb**	**03 38 21.7**	**+0.9**
TREB	**Trebinje**	**1.43**	**325**	*e*Pn	**Pg**	**03 38 06.1**	**-0.1**
TREB				*e*Sg	**Sn**	**03 38 27.4**	**+3.5**
TREB	**Trebinje**	**1.43**	**325**	*e*Pn	**Pn**	**03 38 05.3**	**+0.4**
DBRK	**Dubrovnik**	**1.49**	**319**	*i* Pn	**Pg**	**03 38 07.0**	**-0.2**
DBRK				Sn	**Sn**	**03 38 26.7**	**+1.4**
BRY	**Bratogost**	**1.52**	**333**	*e*Pn	**Pg**	**03 38 07.2**	**-0.6**
SKO	**Skopje**	**1.53**	**74**	*i* Pg	**Pn**	**03 38 07.2**	**+0.9**
SKO				*i* Sg	**Sg**	**03 38 28.7**	**+0.9**
SJES	**Sjenica**	**1.74**	**12**	*e*Pn	**Pb**	**03 38 10.9**	**-0.1**
SJES				*e*Sg	**Sg**	**03 38 36.2**	**+1.4**
STON	**Ston**	**1.86**	**315**	*e*Pn	**Pn**	**03 38 11.2**	**+0.4**
STON				*e*Sn	**Sg**	**03 38 38.9**	**+0.3**
STON	**Ston**	**1.86**	**315**	*e*Pn	**Pn**	**03 38 12.1**	**+1.2**
STON				Sn	**Sn**	**03 38 33.4**	**-1.2**
STON	**Ston**	**1.86**	**315**	*e*Pn	**Pn**	**03 38 11.4**	**+0.6**
BAI	**Bari**	**2.01**	**258**	*e*Pn	**Pn**	**03 38 11.9**	**-0.9**
STIP	**Stip**	**2.04**	**85**	*i* Pn	**Pb**	**03 38 15.9**	**0.0**
STIP				*i* Sg	**Sg**	**03 38 45.1**	**+1.0**
SELS	**Selova**	**2.06**	**36**	*e*Pn	**Pn**	**03 38 14.2**	**+0.6**
RUDO	**Rudo**	**2.06**	**358**	*e*Pn	**Pb**	**03 38 16.7**	**+0.3**
IVAS	**Ivanjica**	**2.08**	**14**	*e*Pn	**Pn**	**03 38 14.7**	**+0.8**
BARS	**Barje**	**2.15**	**53**	*e*Pn	**Pn**	**03 38 15.4**	**+0.6**
BARS	**Barje**	**2.15**	**53**	*e*Pn	Pg	03 38 29.1	+9.3
MATE	**Matera**	**2.28**	**248**	⇓P	**Pn**	**03 38 16.0**	**-0.5**
BBLS	**Lazići**	**2.31**	**359**	*e*Pn	**Pb**	**03 38 18.8**	**-1.8**
BBLS	**Lazići**	**2.31**	**359**	*e*Pn	**Pb**	**03 38 20.3**	**-0.3**
VAY	**Valandovo**	**2.34**	**95**	*e*Pn	**Pn**	**03 38 17.9**	**+0.5**
VAY	**Valandovo**	**2.34**	**95**	*i* Pn	**Pn**	**03 38 17.9**	**+0.5**
VAY				*e*Sn	**Sn**	**03 38 45.6**	**-0.7**
VAY				*e*Lg	Lg	03 38 54.5	
	comp=N,54nm,0.7s						
VAY				*e*Lg	Lg	03 38 55.1	
	comp=E,46nm,0.7s						
BOSS	**Bosilegrad**	**2.43**	**66**	*e*Pn	**Pn**	**03 38 19.1**	**+0.5**
GRUS	**Gruza**	**2.50**	**21**	*e*Pn	**Pn**	**03 38 20.8**	**+1.1**
MAKA	**Makarska**	**2.51**	**314**	*e*Pn	**Pb**	**03 38 23.8**	**-0.2**
MAKA				Sn	**Sn**	**03 38 50.6**	**+0.1**
HAPS	**Han Pijesak,Bl**	**2.56**	**351**	*e*Pn	**Pn**	**03 38 21.1**	**+0.6**
HAPS	**Han Pijesak,Bl**	**2.56**	**351**	*e*Pn	**Pn**	**03 38 22.0**	**+1.4**
DIVS	**Divibare**	**2.57**	**8**	*e*Pn	**Pn**	**03 38 22.4**	**+1.7**
DIVS	**Divibare**	**2.57**	**8**	*e*Pn	**Pn**	**03 38 21.7**	**+1.0**
RICI	**Ricice**	**2.60**	**319**	*e*Pn	**Pn**	**03 38 21.4**	**+0.4**
BOVS	**Bovan**	**2.65**	**38**	*e*Pn	**Pn**	**03 38 22.7**	**+1.0**
TRUS	**Trudelj**	**2.75**	**14**	*e*Pn	**Pb**	**03 38 26.0**	**-2.1**
HVAR	**Hvar**	**2.77**	**307**	Sn	**Sn**	**03 38 58.9**	**+2.0**
ZAPS	**Zavoj**	**2.90**	**53**	*e*Pn	**Pn**	**03 38 26.8**	**+1.6**
VTS	**Vitosha**	**2.99**	**68**	*e*Pn	**Pn**	**03 38 27.3**	**+0.8**
VTS	**Vitosha**	**2.99**	**68**	⇑P	**Pn**	**03 38 26.7**	**+0.1**
VTS				⇑S	**Sn**	**03 39 02.2**	**-0.4**
ZAGS	**Zajecar**	**3.04**	**41**	*e*Pn	**Pn**	**03 38 27.5**	**+0.5**
BLKB	**Belogradchik**	**3.14**	**48**	⇑S	**Sn**	**03 39 06.6**	**+0.5**
KIJV	**Kijevo**	**3.33**	**318**	*e*Pn	**Pn**	**03 38 32.0**	**+0.9**
KIJV				Sn	**Sn**	**03 39 10.3**	**-0.6**
ZIRJ	**Zirje**	**3.52**	**308**	Sn	**Sn**	**03 39 14.8**	**-0.6**
FRGS	**Fruska Gora**	**3.61**	**4**	*e*Pn	Pn	03 38 28.3	-6.6
MORI	**Morici**	**3.61**	**311**	Sn	**Sn**	**03 39 18.0**	**+0.3**
MDVR	**Moldovita**	**3.62**	**26**	⇓P	**Pn**	**03 38 35.6**	**+0.6**
MDVR				⇑S	**Sn**	**03 39 17.3**	**-0.5**
HERR	**Herculane**	**3.96**	**32**	⇑P	**Pn**	**03 38 40.2**	**+0.6**
HERR				⇓S	**Sn**	**03 39 26.4**	**+0.2**
DUGI	**Dugi Otok**	**4.06**	**308**	Sn	**Sn**	**03 39 28.4**	**-0.5**
SRE	**Strehaia**	**4.13**	**40**	⇑P	**Pn**	**03 38 42.7**	**+0.6**
BZS	**Buzias**	**4.35**	**20**	*e*Pn	**Pn**	**03 38 45.4**	**+0.4**
BZS	**Buzias**	**4.35**	**20**	⇓P	**Pn**	**03 38 45.6**	**+0.6**
BZS				⇓S	**Sn**	**03 39 34.1**	**-1.8**
MOSL	**Moslavina**	**4.51**	**335**	Sn	**Sn**	**03 39 36.1**	**-3.9**
GZR	**Gura Zlata**	**4.53**	**31**	⇑P	**Pn**	**03 38 48.4**	**+0.9**
GZR				⇑S	**Sn**	**03 39 42.1**	**+1.8**
SIRR	**Siria**	**4.97**	**18**	⇑P	**Pn**	**03 38 54.2**	**+0.6**
SIRR				⇓S	**Sn**	**03 39 49.9**	**-1.2**
LOT	**Lotru**	**4.99**	**37**	⇓P	**Pn**	**03 38 54.6**	**+0.7**
CRES	**Cresnjev**	**5.17**	**327**	*e*Pn	**Pn**	**03 38 56.4**	**+0.1**
ARR	**Arges**	**5.35**	**43**	⇑P	**Pn**	**03 38 59.1**	**+0.3**
BRJN	**Brijuni**	**5.36**	**311**	*e*Pn	**Pn**	**03 38 58.5**	**-0.4**
BRJN				Sn	**Sn**	**03 40 00.8**	**+0.1**
CEY	**Cerknica**	**5.56**	**320**	*e*Pn	**Pn**	**03 39 01.8**	**+0.1**
VOIR		**5.61**	**44**	⇑P	**Pn**	**03 39 03.2**	**+0.7**
DRGR		**5.73**	**23**	⇓P	**Pn**	**03 39 05.4**	**+1.3**
DRGR				⇑S	**Sn**	**03 40 07.5**	**-2.4**

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*IDC **12** 03:41:48.6±1.4, 32°.43N×48°.44E, h0^{km}, mb3.8/10, mb1 3.9/14, mb1mx3.7/47, mbtmp3.8/14, ML3.4/4, Error ellipse: s-maj=29.1km s-min=19.1km az=175.0*
*TEH **12** 03:41:52.1, 32°.47N×48°.40E, h13^{km}, ML3.8*
*NEIC **12** 03:41:53.8±1.8, 32°.43N±0°.07×48°.41E±0°.09, h41^{km}±6^{km}, Error ellipse: s-maj=11.6km s-min=9.2km az=54.0*
*THR **12** 03:41:53.9±0.4, 32°.52N×48°.49E, h14^{km}±7^{km}, ML3.6*
*OMAN **12** 03:42:01.8±2.3, 31°.53N×48°.44E, h66^{km}±15^{km}, Error ellipse: s-maj=29.9km s-min=10.2km az=296.0*
ISC 12 03:41:50.2±0.4, **32°.32N**±0°.03×**48°.37E**±0°.03, **h17**^{km}, **n144**, σ**2^s.54**/154, **mb4.2**/18, **8C-14D, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.42**	**120**	*e*Pg	**Pn**	**03 42 03.6**	**+2.1**
SHGR	**Shooshtar-Gavs**	**0.42**	**120**	*e*Pg	**Pn**	**03 42 03.6**	**+2.1**
AHWZ	**Ahwaz**	**1.01**	**167**	*e*Pg	**Pg**	**03 42 13.6**	**+3.8**
IKMR	**Kamar-syah**	**1.20**	**0**	*e*Pg	**Pn**	**03 42 10.9**	**-1.3**
IKMR				*e*		03 42 34.0	
IKFM	**Kafar-mosalman**	**1.28**	**340**	*e*Pg	**Pn**	**03 42 13.6**	**+0.3**
IKFM				*e*		03 42 34.3	
IDOB	**Doab**	**1.47**	**354**	*e*Pg	**Pn**	**03 42 16.8**	**+0.6**
IDOB				*e*		03 42 41.7	
BDRS	**Dareh Seyedi**	**1.69**	**14**	*e*Pn	**Pb**	**03 42 20.6**	**-0.4**
BDRS				*e*		03 42 22.5	
HSAM	**Samen**	**1.90**	**6**	*e*Pn	**Pb**	**03 42 24.5**	**-0.1**
HSAM				*e*		03 42 26.4	
JHBN	**Jahan bin**	**1.94**	**92**	*e*Pn	**Pb**	**03 42 26.0**	**+0.6**
JHBN				*e*		03 42 55.6	
KHMZ	**Khomeyn**	**1.94**	**43**	*e*Pg	**Pb**	**03 42 25.8**	**+0.5**
KHMZ	**Khomeyn**	**1.94**	**43**	*e*Pg	**Pb**	**03 42 25.8**	**+0.5**
IKOM	**Komasi**	**1.99**	**339**	*e*Pn	**Pb**	**03 42 25.9**	**-0.1**
IKOM				*e*		03 42 59.1	
IPIR	**Pirpir**	**2.16**	**80**	*e*Pn	**Pb**	**03 42 28.7**	**-0.3**
IPIR				*e*		03 43 00.8	
IBZA	**Bozab**	**2.19**	**349**	*e*Pn	**Pb**	**03 42 28.4**	**-1.1**
IBZA				*e*		03 43 01.4	
KCHF	**Cheshme Sefid,**	**2.25**	**331**	*e*Pn	**Pb**	**03 42 30.6**	**+0.1**
ROKH	**ROKH**	**2.25**	**89**	*e*Pn	**Pb**	**03 42 30.1**	**-0.5**
ROKH				*e*		03 43 08.2	
KER	**Kermanshah**	**2.31**	**334**	*e*Pn	**Pb**	**03 42 30.5**	**-1.0**
IBRJ	**Brojen**	**2.48**	**99**	*e*Pn	**Pb**	**03 42 33.8**	**-0.8**
IBRJ				*e*		03 43 16.8	
IGHG	**Ghaleghazi**	**2.51**	**323**	*e*Pn	**Pb**	**03 42 33.7**	**-1.3**
IGHG				*e*		03 43 16.5	
IALM	**Almabolaq**	**2.54**	**356**	*e*Pn	**Pb**	**03 42 33.6**	**-1.9**
IVIS	**Veis**	**2.54**	**330**	*e*Pn	**Pn**	**03 42 32.9**	**+2.1**
IVIS				*e*		03 43 29.0	
HAGD	**Aghdareh**	**2.58**	**14**	*e*Pn	**Pn**	**03 42 34.0**	**+2.6**
HAGD				*e*		03 43 11.8	
ASAO	**Ashtian**	**2.62**	**31**	*e*Pn	**Pb**	**03 42 34.9**	**-1.9**
ASAO	**Ashtian**	**2.62**	**31**	*e*Pn	**Pb**	**03 42 34.9**	**-1.9**
ILIN	**Lien**	**2.85**	**336**	*e*Pn	**Pb**	**03 42 38.4**	**-2.4**
ILIN				*e*		03 43 26.4	
IKLH	**Kolahrood**	**2.88**	**69**	*e*Pn	**Pb**	**03 42 39.0**	**-2.3**
IKLH				*e*		03 43 33.0	
SNGE	**Sanandaj**	**2.90**	**343**	IAML		03 43 27.4	
	comp=E,199nm,0.7s						
IDHR	**Dehrash**	**2.90**	**326**	*e*Pn	**Pn**	**03 42 37.9**	**+2.1**
IDHR				*e*		03 43 28.7	
HSRG	**Sareghieh**	**2.92**	**358**	*e*Pn	**Pn**	**03 42 39.1**	**+3.0**
HSRG				*e*		03 43 25.6	
QAM	**Ghamsar**	**2.95**	**60**	*e*Pn	**Pb**	**03 42 40.2**	**-2.3**
KLNJ	**Kolanjah**	**3.04**	**115**	*e*Pn	**Pb**	**03 42 41.2**	**-2.9**
KLNJ				*e*		03 43 36.0	
IGAR	**Gharneh**	**3.10**	**87**	*e*Pn	**Pn**	**03 42 41.5**	**+2.8**
IGAR				*e*		03 43 29.9	
GHVR	**GHOM**	**3.26**	**48**	*e*Pn	**Pn**	**03 42 43.5**	**+2.9**
GHVR	**GHOM**	**3.26**	**48**	*e*Pn	**Pn**	**03 42 43.5**	**+2.9**
IRAZ	**Razeghan**	**3.34**	**22**	*e*Pn	**Pn**	**03 42 45.1**	**+3.2**
IQOM	**Qom**	**3.38**	**41**	*e*Pn	**Pn**	**03 42 45.1**	**+2.7**
IQOM				*e*		03 42 51.2	
IZEF	**Zefreh**	**3.39**	**79**	*e*Pn	**Pn**	**03 42 45.6**	**+3.0**
IRAM	**Ramesheh**	**3.44**	**97**	*e*Pn	**Pn**	**03 42 45.6**	**+2.3**
QABG	**Abgarm-Qazvin**	**3.53**	**16**	*e*Pn	**Pn**	**03 42 46.3**	**+1.8**
KRSH	**Karshahi**	**3.56**	**61**	*e*Pn	**Pn**	**03 42 47.7**	**+2.9**
IMHD	**Mahdasht**	**3.86**	**29**	*e*Pn	**Pn**	**03 42 51.5**	**+2.6**
IVRN	**Varamin**	**3.87**	**45**	*e*Pn	**Pn**	**03 42 51.7**	**+2.7**
IHSB	**Hasanabad**	**3.94**	**37**	*e*Pn	**Pn**	**03 42 52.5**	**+2.5**
IDMV	**Damavand**	**4.45**	**42**	*e*Pn	**Pn**	**03 42 59.1**	**+1.9**
QALM	**Alamut, Qazvin**	**4.51**	**24**	*e*Pn	**Pn**	**03 42 59.6**	**+1.6**
ISAD	**Sadrabad**	**4.53**	**94**	*e*Pn	**Pn**	**03 43 01.1**	**+2.9**
ANAR	**Anarak**	**4.59**	**78**	*e*Pn	**Pn**	**03 43 01.6**	**+2.6**
ILAS	**Lasjerd**	**4.89**	**50**	*e*Pn	**Pn**	**03 43 05.9**	**+2.7**
IFIR	**Firoozkooh**	**4.92**	**46**	*e*Pn	**Pn**	**03 43 06.0**	**+2.3**
MAHB	**Mahabad**	**4.95**	**334**	*e*Pn	**Pn**	**03 43 06.3**	**+2.3**
IPRN	**Peran**	**5.11**	**39**	*e*Pn	**Pn**	**03 43 09.5**	**+3.4**
IALA	**Alasht**	**5.25**	**43**	*e*Pn	**Pn**	**03 43 11.2**	**+3.0**
ISHM	**Shahmirzad**	**5.36**	**48**	*e*Pn	**Pn**	**03 43 12.4**	**+2.7**
IMEH	**Mehriz**	**5.39**	**98**	*e*Pn	**Pn**	**03 43 12.7**	**+2.6**
ISRB	**Sarab**	**5.52**	**354**	*e*Pn	**Pn**	**03 43 14.2**	**+2.3**
IANJ	**Anjilo**	**5.58**	**54**	*e*Pn	**Pn**	**03 43 14.5**	**+1.9**
IHRS	**Heris**	**6.08**	**350**	*e*Pn	**Pn**	**03 43 22.3**	**+2.7**
IGLO	**Ghaloghah**	**6.14**	**46**	*e*Pn	**Pn**	**03 43 23.2**	**+2.8**
TPRV	**Parvadeh(Tabas**	**7.04**	**82**	*e*Pn	**Pn**	**03 43 35.0**	**+2.3**
TKDS	**Koohdasht(Taba**	**7.46**	**78**	*e*Pn	**Pn**	**03 43 40.5**	**+2.0**
GNI	**Garni**	**8.35**	**340**	Pn	**Pn**	**03 43 47.4**	**-3.2**
GNI				Sn	**Sn**	**03 45 19.6**	**-4.9**
RAYN	**Ar Rayn**	**9.12**	**197**		**Pn**	**03 44 03.9**	**+2.7**
RAYN				Sn	**Sn**	**03 45 45.7**	**+2.2**
BANOM	**Banah**	**9.41**	**131**	P	**Pn**	**03 44 05.8**	**+0.6**
	SNR=17						
BANOM				S	**Sn**	**03 45 45.7**	**-4.9**
ASF	**Jabal al Asfar**	**9.72**	**272**	Pn	**Pn**	**03 44 11.5**	**+2.1**
	comp=E,0.2nm,0.3s,baz=46,slow=17,SNR=4.1						
ASF				Sn	**Sn**	**03 45 55.9**	**-2.3**
	comp=E,0.2nm,0.3s,baz=338,slow=20,SNR=3.1						
MDH	**Madha**	**9.86**	**133**	P	**Pn**	**03 44 13.1**	**+1.9**
MDH				S	**Sn**	**03 45 56.4**	**-5.0**
UOSS	**Minazif**	**10.06**	**135**	P	**Pn**	**03 44 15.7**	**+1.7**
UOSS				S	**Sn**	**03 46 00.8**	**-5.7**
UOSS	**Minazif**	**10.06**	**135**	Pn	**Pn**	**03 44 15.9**	**+1.9**
UOSS					**Sn**	**03 46 01.4**	**-5.1**
HATD	**Hatta, Dubai**	**10.11**	**136**	P	**Pn**	**03 44 17.9**	**+3.2**
HATD				S	**Sn**	**03 46 03.7**	**-3.9**
ASHO	**Ashiyiah**	**10.17**	**136**	P	**Pn**	**03 44 17.7**	**+2.2**
ASHO				S	**Sn**	**03 46 04.8**	**-4.5**
ARQ	**Araqi**	**11.49**	**139**	P	**Pn**	**03 44 36.0**	**+2.4**
	SNR=5.0						
ARQ				S	**Sn**	**03 46 37.4**	**-4.1**
BSY	**Bisya**	**12.33**	**138**	P	**Pn**	**03 44 46.4**	**+1.3**
SMDO	**Samad**	**12.59**	**135**	P	**Pn**	**03 44 49.8**	**+1.1**
SMDO				S	**Sn**	**03 47 02.9**	**-5.6**
WSAR	**Wadi Sarin**	**12.81**	**132**	Pn	**Pn**	**03 44 51.5**	**-0.1**
	comp=E,0.9nm,0.3s,baz=326,slow=16,SNR=6.9						
BRTR	**Keskin Array B**	**14.02**	**306**	Pn	**Pn**	**03 45 11.6**	**+3.4**
	comp=E,0.0nm,0.3s,baz=138,slow=15,SNR=3.1						
MHTO	**MHTO**	**14.17**	**140**	P	**Pn**	**03 45 11.2**	**+1.1**
WHFO	**Wadi Hawf**	**15.14**	**160**	P	**Pn**	**03 45 22.7**	**-0.8**
	SNR=7.5						
WHFO				S	**Sn**	**03 48 02.2**	**-8.6**
ABTO	**Aybut**	**15.55**	**162**	S	**Sn**	**03 48 12.8**	**-8.0**
RBK	**Rabkut**	**15.66**	**159**	P	**Pn**	**03 45 30.8**	**+0.5**
RBK				P	**P**	**03 45 30.9**	**-3.4**
SHAO	**Shalim**	**15.67**	**154**	P	**Pn**	**03 45 30.8**	**+0.5**
DMTO	**DMTO**	**15.71**	**156**	P	**Pn**	**03 45 30.1**	**-0.6**
	SNR=6.1						
DMTO				S	**Sn**	**03 48 15.1**	**-9.4**
ABKAR	**Akbulak array**	**19.01**	**24**	P	**P**	**03 46 10.7**	**-0.3**
AKTO	**Aktyubinsk**	**19.46**	**19**	P	**P**	**03 46 16.5**	**+0.6**
	comp=E,0.4nm,0.3s,baz=207,slow=13,SNR=7.5						
CFR	**Carcaliu**	**20.28**	**315**	⇑P	**P**	**03 46 25.3**	**+0.4**
KK31	**Karatay Array**	**20.50**	**52**	P	**P**	**03 46 26.8**	**-0.5**
KK31				IAmb	IAmb	03 46 32.0	
	comp=Z,8.6nm,1.1s						
KKAR	**Karatay Array**	**20.50**	**52**	P	**P**	**03 46 27.3**	**-0.1**
KKAR	**Karatay Array**	**20.50**	**52**	P	**P**	**03 46 27.3**	**-0.1**
KKAR				IAmb	IAmb	03 46 32.0	
	comp=Z,8.6nm,1.1s						
RAZG	**Razgrad**	**20.52**	**309**	⇑P	Pn	03 46 30.2	+0.5
ELND	**Elena**	**20.67**	**307**	⇓P	Pn	03 46 31.2	-0.3
MILM	**Milestii Mici**	**20.89**	**320**	⇓P	**P**	**03 46 32.8**	**+1.3**
NIL	**Nilore**	**20.90**	**80**	P	**P**	**03 46 28.8**	**-3.1**
NIL				IAmb	IAmb	03 46 36.0	
	comp=Z,8.4nm,1.0s						
GHRR		**21.18**	**316**	⇑P	**P**	**03 46 36.5**	**+1.8**
ISR	**Istrita**	**21.21**	**313**	⇓P	**P**	**03 46 36.1**	**+1.0**
VRI	**Vrincioaia**	**21.48**	**315**	⇑P	**P**	**03 46 39.8**	**+1.9**
PLOR	**Plostina**	**21.52**	**315**	⇓P	**P**	**03 46 40.2**	**+1.8**
PLVB	**Pleven**	**21.69**	**307**	⇓P	**P**	**03 46 42.4**	**+2.2**
MLR	**Muntele Rosu**	**21.77**	**314**	⇑P	**P**	**03 46 43.3**	**+2.2**
TESR	**Tescani**	**21.87**	**317**	⇑P	**P**	**03 46 42.9**	**+0.8**
AGG	**Agios Georgios**	**22.15**	**295**	P	**P**	**03 46 46.1**	**+0.9**
AGG				IAmb	IAmb	03 46 49.7	
	comp=Z,14nm,1.2s						
OZUR		**22.16**	**315**	⇓P	**P**	**03 46 47.1**	**+1.8**
ITM	**Ithomi**	**22.23**	**290**	P	**P**	**03 46 47.4**	**+1.3**
ITM				IAmb	IAmb	03 47 04.4	
	comp=Z,17nm,1.2s						
VOIR		**22.29**	**313**	⇓P	**P**	**03 46 49.1**	**+2.3**
DOPR	**Dopca**	**22.34**	**314**	⇓P	**P**	**03 46 49.5**	**+2.4**
ARR	**Arges**	**22.52**	**312**	⇑P	**P**	**03 46 50.8**	**+1.6**
AKASG	**Malin Array Be**	**23.18**	**328**	P	**P**	**03 46 55.5**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=135,slow=9.1,SNR=4.1						
AKASG	**Malin Array Be**	**23.18**	**328**	P	**P**	**03 46 56.5**	**+0.7**
FNA	**Florina**	**23.21**	**299**	P	**P**	**03 46 56.7**	**+0.3**
BURAR	**Bucovina Array**	**23.29**	**318**	⇓P	**P**	**03 46 59.5**	**+2.4**
BURAR	**Bucovina Array**	**23.29**	**318**	P	**P**	**03 46 57.8**	**+0.6**
BUR08	**Bucovina Ar. S**	**23.32**	**318**	P	**P**	**03 46 59.1**	**+1.7**
GZR	**Gura Zlata**	**23.71**	**311**	⇓P	**P**	**03 47 03.3**	**+2.0**
HERR	**Herculane**	**23.74**	**309**	⇓P	**P**	**03 47 03.0**	**+1.5**
NRN	**Naryn**	**23.82**	**60**	IAmb	IAmb	03 47 06.2	
	comp=Z,4.5nm,0.8s						
MDVR	**Moldovita**	**24.16**	**309**	⇓P	**P**	**03 47 07.9**	**+2.3**
DRGR		**24.36**	**314**	⇑P	**P**	**03 47 09.2**	**+1.8**
SIRR	**Siria**	**24.78**	**312**	⇓P	**P**	**03 47 13.5**	**+2.4**
TRPA	**Tarpa**	**25.10**	**317**	⇓P	**P**	**03 47 15.6**	**+1.7**
ARU	**Arti**	**25.13**	**13**	P	**P**	**03 47 13.0**	**-1.1**
KOLS	**Kolonicke sedl**	**25.66**	**318**	*e*P	**P**	**03 47 21.1**	**+2.1**
DBRK	**Dubrovnik**	**25.99**	**302**	Sn	**S**	**03 51 49.1**	**-2.8**
CRVS	**Cervenica-Dubn**	**26.11**	**317**	*e*P	**P**	**03 47 25.4**	**+2.3**
STON	**Ston**	**26.36**	**302**	Sn	**S**	**03 52 00.6**	**+2.9**
LANS	**Liptovska Anna**	**27.38**	**316**	*e*P	**P**	**03 47 36.9**	**+2.3**
VYHS	**Vyhne**	**27.46**	**315**	*e*P	**P**	**03 47 37.6**	**+2.3**
KURBB	**Kurchatov Arra**	**28.78**	**42**	P	**P**	**03 47 44.9**	**-2.0**
	comp=Z,1.1nm,0.7s,baz=244,slow=9.3,SNR=4.9						
MK31	**Makanchi Array**	**29.62**	**51**	P	**P**	**03 47 55.2**	**+0.7**
MKAR	**Makanchi Array**	**29.62**	**51**	P	**P**	**03 47 55.6**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=245,slow=9.2,SNR=11						
MKAR	**Makanchi Array**	**29.62**	**51**	P	**P**	**03 47 54.9**	**+0.4**
WTTA	**Wattenberg**	**31.60**	**309**	*e*P	**P**	**03 48 14.2**	**+2.0**
	comp=Z,4.5nm,1.0s						
SQTA	**Sankt Quirin**	**31.87**	**309**	*i* P	**P**	**03 48 15.7**	**+1.2**
	comp=Z,6.5nm,1.2s						
MOTA	**Moosalm**	**31.97**	**309**	*i* P	**P**	**03 48 17.3**	**+1.9**
	comp=Z,7.5nm,1.4s						
FETA	**Feichten**	**32.14**	**308**	*e*P	**P**	**03 48 18.5**	**+1.5**
	comp=Z,3.0nm,0.9s						
FINES	**FINESS Array B**	**32.54**	**340**	P	**P**	**03 48 20.6**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=142,slow=9.0,SNR=6.2						
FINES	**FINESS Array B**	**32.54**	**340**	P	**P**	**03 48 20.2**	**+0.2**
DAVA	**Damuels**	**32.77**	**308**	*i* P	**P**	**03 48 23.5**	**+1.1**
	comp=Z,7.1nm,1.1s						
ZALV	**Zalesovo Beam**	**33.72**	**39**	P	**P**	**03 48 31.4**	**+1.0**
	comp=Z,1.3nm,0.3s,baz=260,slow=8.9,SNR=6.7						
ZALV	**Zalesovo Beam**	**33.72**	**39**	P	**P**	**03 48 30.6**	**+0.2**
BNI	**Bardonecchia**	**34.57**	**304**	P	**P**	**03 48 38.1**	**0.0**
HFS	**Hagfors**	**35.99**	**331**	P	**P**	**03 48 50.3**	**+0.4**
	comp=Z,2.9nm,0.7s,baz=127,slow=9.9,SNR=15						
NOA	**NORSAR Array B**	**37.51**	**331**	P	**P**	**03 49 02.7**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=124,slow=8.6,SNR=3.1						
ARCES	**ARCESS Array B**	**39.42**	**348**	P	**P**	**03 49 19.3**	**+0.4**
	comp=Z,4.1nm,0.9s,baz=156,slow=7.9,SNR=7.6						
ARCES	**ARCESS Array B**	**39.42**	**348**	P	**P**	**03 49 19.5**	**+0.6**
TORD	**Torodi Ar. Bea**	**46.67**	**257**	P	**P**	**03 50 20.2**	**+2.0**
	comp=Z,1.1nm,0.8s,baz=48,slow=8.7,SNR=5.1						
TORD	**Torodi Ar. Bea**	**46.67**	**257**	P	**P**	**03 50 18.2**	**0.0**
YKA	**Yellowknife Ar**	**84.53**	**352**	P	**P**	**03 54 21.8**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=10,slow=5.1,SNR=4.6						

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*NEIC **12** 04:12:05.9±1.4, 40°.62N±0°.04×125°.33W±0°.08, h16^{km}±12^{km}, Error ellipse: s-maj=9.3km s-min=5.8km az=76.0*
*ANF **12** 04:12:07.8±1.4, 40°.73N×125°.01W, h0^{km}, ML2.4/4, Error ellipse: s-maj=13.2km s-min=6.8km az=76.0*
*NCEDC **12** 04:12:07.8±1.2, 40°.59N±0°.04×125°.34W±0°.03, h24^{km}±7^{km}, Md3.0/31, Error ellipse: s-maj=6.8km s-min=1.9km az=203.0*
ISC 12 04:12:05.5±2.4, **40°.62N**±0°.05×**125°.3W**±0°.1, **h13**^{km}±14^{km}, **n48**, σ**0^s.81**/55, **Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCTM	**Capetown**	**0.77**	**100**		**Pn**	**04 12 21.9**	**-0.2**
KMPM	**Mount Pierce**	**0.94**	**102**		**Pg**	**04 12 24.1**	**+0.4**
KSMM	**Slide Mountain**	**0.98**	**116**		**Pb**	**04 12 24.0**	**-0.4**
JCC	**Jacoby Creek,**	**1.01**	**78**		**Pb**	**04 12 24.4**	**-0.4**
JCC					**Sb**	**04 12 37.7**	**-0.2**
KRPM	**Rodgers**	**1.13**	**61**		**Pb**	**04 12 26.3**	**-0.6**
KCRM	**Chalk Rock**	**1.17**	**99**		**Pn**	**04 12 27.4**	**-0.2**
KHMM	**Horse Mountain**	**1.24**	**77**		**Pn**	**04 12 28.2**	**-0.5**
KHMM					**Sb**	**04 12 44.5**	**-0.3**
KMRM	**Mail Ridge**	**1.30**	**107**		**Pb**	**04 12 30.0**	**+0.2**
KCSM	**Cold Springs**	**1.39**	**93**		**Pn**	**04 12 30.8**	**+0.1**
KRMB	**Red Mountain**	**1.40**	**49**		**Pn**	**04 12 30.0**	**-0.9**
KBSM	**Bell Springs**	**1.50**	**117**		**Pn**	**04 12 32.0**	**-0.2**
KHBM	**Hayfork Bally**	**1.60**	**88**		**Pn**	**04 12 33.5**	**-0.3**
KIPM	**Iron Peak**	**1.63**	**119**		**Pn**	**04 12 34.0**	**0.0**
KCPM	**Cahto Peak**	**1.63**	**124**	Pn	**Pn**	**04 12 34.2**	**+0.2**
KSXB	**Camp Six Broad**	**1.63**	**42**		**Pn**	**04 12 33.3**	**-0.8**
KFPM	**Farley Peak**	**1.76**	**123**		**Pn**	**04 12 35.3**	**-0.4**
KBNM	**Bluenose Ridge**	**1.79**	**113**		**Pn**	**04 12 36.4**	**+0.2**
GTC	**Three Chop Rid**	**1.82**	**131**		**Pn**	**04 12 35.7**	**-0.9**
LBPM	**Beegum Peak**	**1.89**	**98**		**Pn**	**04 12 37.6**	**0.0**
LGPM	**Granite Peak**	**1.92**	**80**		**Pn**	**04 12 37.7**	**-0.3**
KRKM	**Rackout Spring**	**1.95**	**122**		**Pn**	**04 12 38.2**	**-0.3**
O02D	**Mt. Diablo Mer**	**1.99**	**102**		**Pn**	**04 12 39.2**	**+0.3**
O02D	**Mt. Diablo Mer**	**1.99**	**102**	P	**Pn**	**04 12 39.2**	**+0.3**
	baz=283						
O02D				S	**Sn**	**04 13 04.0**	**+0.3**
	baz=283						
L02E	**Cave Junction**	**2.01**	**40**		**Pn**	**04 12 39.6**	**+0.4**
L02E	**Cave Junction**	**2.01**	**40**	P	**Pn**	**04 12 39.3**	**+0.1**
	baz=220,SNR=6.1						
L02E				S	**Sn**	**04 13 03.7**	**-0.5**
	baz=220						
N02D	**Trinity Center**	**2.02**	**79**		**Pn**	**04 12 39.1**	**-0.3**
N02D	**Trinity Center**	**2.02**	**79**	P	**Pn**	**04 12 39.1**	**-0.3**
	baz=260,SNR=16						
M02C	**Callahan**	**2.03**	**67**		**Pn**	**04 12 39.6**	**+0.1**
M02C	**Callahan**	**2.03**	**67**	P	**Pn**	**04 12 40.0**	**+0.6**
	baz=248,SNR=17						
M02C				S	**Sn**	**04 13 04.2**	**-0.5**
	baz=248						
GHOM	**Hamilton Openi**	**2.09**	**138**		**Pn**	**04 12 39.6**	**-0.7**
WDC	**Whiskeytown Da**	**2.12**	**90**		**Pn**	**04 12 40.9**	**+0.2**
GROM	**Round Mountain**	**2.15**	**108**		**Pn**	**04 12 42.0**	**+0.8**
GVV	**Valley View**	**2.20**	**112**		**Pn**	**04 12 42.6**	**+0.7**
YBH	**Yreka Blue Hor**	**2.27**	**60**		**Pn**	**04 12 43.3**	**+0.6**
GSNM	**Snow Mountain**	**2.35**	**135**		**Pn**	**04 12 43.6**	**-0.2**
GHLM	**Highland Sprin**	**2.38**	**131**		**Pn**	**04 12 44.3**	**+0.1**
HOPS	**Hopland Field**	**2.38**	**132**		**Pn**	**04 12 44.6**	**+0.4**
K02D	**Willamette Mer**	**2.42**	**30**	P	**Pn**	**04 12 45.0**	**+0.1**
	baz=211,SNR=31						

K02D				S	Sn	04 13 14.3	-0.1
	baz=211						
GCK	Clark Valley	2.46	115		Pn	04 12 47.0	+1.6
LTCM	Tuscan Springs	2.48	98		Pn	04 12 46.2	+0.6
HUMO	Hull Mountain	2.67	41		Pn	04 12 48.7	+0.5
O03E	Paynes Creek	2.71	96	P	Pn	04 12 49.0	+0.2
	baz=277,SNR=14						
L04D	Klamath Falls	2.78	54	P	Pb	04 12 52.8	-2.4
	baz=235,SNR=7.7						
ORV	Oroville	3.12	109		Pn	04 12 54.4	0.0
K04D	Chiloquin, OR	3.35	52	P	Pn	04 12 59.7	+2.1
	baz=234,SNR=5.5						
I03D	Drain, OR	3.41	25	P	Pn	04 12 59.6	+1.2
	baz=206						
I03D				S	Sn	04 13 40.0	+1.3
	baz=206						
BEKR	Beckworth	3.88	100		Pn	04 13 07.1	+2.2
J05D	Fort Rock, OR	4.05	48	P	Pn	04 13 09.5	+2.2
	baz=230,SNR=9.0						

KRSC 12 04:14:36.8±1.6**, 50°.51N**×**157°.26E, h94**^{km}±26^{km}**, ML3.6, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.75	284	*e*P	Pn	04 14 55.2	+1.2
SKR				*e*S	Sn	04 15 07.8	+0.9
PAU	Pauzhetka	1.00	344	*e*P	Pn	04 14 58.3	+1.6
PAU				*e*S	Sn	04 15 14.0	+2.4
ALID	Alaid	1.15	289	*e*P	Pn	04 14 59.0	+0.5
KDTR	Khodutka, Kamc	1.40	21	*e*S	Sn	04 15 22.2	+2.3
MIPR	Malaya Ipel'ka	1.79	350	*e*P	Pn	04 15 07.9	+1.5
MTVR	Mutnovka	2.06	16	*e*P	Pn	04 15 12.4	+2.5
MTVR				*e*S	Sn	04 15 37.6	+2.4
RUS	Russkaya	2.08	22	*e*P	Pn	04 15 11.6	+1.6
RUS				*e*S	Sn	04 15 37.0	+1.6
GRL	Gorelyy	2.10	14	*e*P	Pn	04 15 13.2	+2.7
GRL				*e*S	Sn	04 15 39.5	+3.2
DALK	Dalny	2.69	20	*e*P	Pn	04 15 20.6	+2.5
DALK				*e*S	Sn	04 15 51.7	+1.8
UGLR	Uglovaya	2.87	19	*e*P	Pn	04 15 23.4	+2.7
AVH	Avacha	2.91	18	*e*P	Pn	04 15 24.5	+3.4
KOK	Koryaka	2.91	16	*e*P	Pn	04 15 24.3	+3.1
SMAR	Somma	2.92	18	*e*P	Pn	04 15 22.1	+0.7
NLC	Nalytchevo	2.96	25	*e*S	Sn	04 15 56.2	-0.2
SPN	Mys Shipunski	3.10	32	*e*P	Pn	04 15 25.8	+2.1
SPN				*e*S	Sn	04 16 00.9	+1.0
KBTR	Krutoberegovo	6.60	28	*e*P	Pn	04 16 13.5	+2.4

IDC 12 04:42:54.8±4.6**, 6°.68S**×**148°.65E, h116**^{km}±37^{km}**, mb3.5**/3**, mb1 3.6**/5**, mb1mx3.3**/36**, mbtmp3.8**/5**, MS3.0**/1**, Ms1 2.9**/1**, ms1mx2.6**/18**, Error ellipse: s-maj=100.7km s-min=35.2km az=114.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.08	208	P	Pn	04 43 43.2	+1.1
	14nm,0.3s,baz=344,slow=7.5,SNR=14						
PMG				S	Sn	04 44 18.8	+0.2
	7.2nm,0.3s,baz=223,slow=22,SNR=8.7						
WRA	Warramunga Arr	19.15	225	P	P	04 47 08.8	-0.4
	0.5nm,0.3s,baz=52,slow=10,SNR=12						
ASAR	Alice Springs	22.05	218	P	P	04 47 41.3	+1.0
	2.6nm,0.4s,baz=53,slow=8.8,SNR=40						
FITZ	Fitzroy Crossi	25.14	241	P	P	04 48 08.6	-0.7
	2.6nm,0.6s,baz=52,slow=12,SNR=15						
STKA	Stephens Creek	25.92	194	LR	LR	05 00 03.5	
	comp=Z,32nm,18.6s,baz=344,slow=40						
MKAR	Makanchi Array	79.06	320	P	P	04 54 46.5	+0.2
	0.2nm,0.5s,baz=113,slow=6.9,SNR=3.6						

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*HLW **12** 04:47:55.5, 34°.33N×25°.09E, h10^{km}±18^{km}, Md4.1, Ml3.0*

*ATH **12** 04:47:55.1, 34°.32N×24°.99E, h29^{km}±1^{km}, ML2.9/7, Error ellipse: s-maj=5.0km s-min=1.7km az=355.0*

*IDC **12** 04:47:56.3±3.2, 34°.37N×24°.99E, h24^{km}±19^{km}, mb3.7/6, mb1 3.7/8, mb1mx3.4/46, mbtmp3.8/8, ML3.7/2, MS2.6/1, Ms1 2.6/1, ms1mx2.1/46, Error ellipse: s-maj=27.2km s-min=22.2km az=151.0*

*THE **12** 04:47:56.0, 34°.37N×24°.96E, h0^{km}±1^{km}, ML2.8/6, Error ellipse: s-maj=2.6km s-min=0.8km az=182.0*

ISC 12 04:47:56.2±1.4**, 34°.31N**±0°.05×**24°.98E**±0°.04**, h27**^{km}±11^{km}**, n33, σ0^{s}.95**/37**, mb3.8**/6**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	Sivas	0.72	349	P	Pb	04 48 09.3	-0.8
SIVA				S	Sn	04 48 19.3	-1.4
	3μm,0.6s						
SIVA	Sivas	0.72	349	P	Pb	04 48 09.4	-0.8
SIVA				S	Sn	04 48 19.7	-1.0
SIVA				AML	AML	04 48 24.9	
	comp=E,7941μm,0.7s						
SIVA				AML	AML	04 48 27.4	
	comp=N,6489μm,0.5s						
GVD	Gavdhos	0.90	306	P	Pb	04 48 12.6	-0.6
GVD				S	Sn	04 48 26.2	+1.0
	comp=N,1μm,0.3s						
GVD	Gavdhos	0.90	306	P	Pb	04 48 12.5	-0.7
GVD				S	Sn	04 48 26.1	+0.8
GVD				AML	AML	04 48 38.8	
	comp=E,2458μm,0.5s						
GVD				AML	AML	04 48 39.0	
	comp=N,2561μm,0.4s						
LAST	Lasithi	0.94	26	P	Pn	04 48 13.2	-0.6
LAST	Lasithi	0.94	26	P	Pn	04 48 13.2	-0.6
LAST				AML	AML	04 48 42.2	
	comp=N,824μm,0.8s						
LAST				AML	AML	04 48 45.7	
	comp=E,621μm,0.8s						
IDI	Anoyia	0.98	356	P	Pn	04 48 13.5	-0.7
IDI	Anoyia	0.98	356	Pg	Pn	04 48 13.6	-0.7
	comp=E,22nm,0.3s,baz=211,slow=10.0,SNR=58						
IDI	Anoyia	0.98	356	P	Pn	04 48 13.6	-0.7
IDI				AML	AML	04 48 34.5	
	comp=E,863μm,0.6s						
IDI				AML	AML	04 48 39.9	
	comp=N,745μm,0.4s						
NPS	Neapolis	1.08	29	P	Pb	04 48 15.7	-0.7
NPS	Neapolis	1.08	29	P	Pb	04 48 15.6	-0.7
VAM	Vamos	1.27	330	P	Pb	04 48 18.5	-0.9
VAM	Vamos	1.27	330	P	Pb	04 48 18.7	-0.7
VAM				AML	AML	04 48 48.7	
	comp=E,1011μm,0.5s						
VAM				AML	AML	04 48 51.6	
	comp=N,760μm,0.8s						
ZKR	Zakros	1.30	52	P	Pb	04 48 19.9	-0.1
ZKR				S	Sb	04 48 38.7	+2.4
	comp=N,208nm,0.5s						
ZKR	Zakros	1.30	52	P	Pb	04 48 19.4	-0.6
ZKR				AML	AML	04 48 45.4	
	comp=N,284μm,0.7s						
ZKR				AML	AML	04 48 50.3	
	comp=E,654μm,0.5s						
IMMV	Iera Moni Meta	1.41	325	P	Pb	04 48 21.1	-0.7
IMMV	Iera Moni Meta	1.41	325	P	Pb	04 48 20.8	-1.0
IMMV				AML	AML	04 48 57.5	
	comp=N,847μm,0.9s						
IMMV				AML	AML	04 49 03.0	
	comp=E,938μm,1.0s						
KTHA	Kythira Island	2.49	322	P	Pn	04 48 36.2	+1.2
SLUM	Salum	2.82	176	P	Pn	04 48 39.7	+0.3
	baz=177						
SLUM				S	Sn	04 49 11.5	-1.0
	baz=177						
VLI	Veliai	2.92	326	P	Pn	04 48 41.6	+0.7
SWA2		5.07	175	P	Pn	04 49 10.0	-0.3
	baz=176						
GLL	Jalalah	7.42	128	P	Pn	04 49 41.4	-1.2
	baz=128						
HFRF	Wahat Farafira	7.69	157	AMP		04 51 00.0	
	baz=158						
NBNS	Bani Suef	7.83	135	P	Pn	04 49 47.8	-0.4
	baz=135						
EIL	Elat	9.65	116	Pn	Pn	04 50 12.2	-1.1
	comp=E,0.7nm,0.3s,baz=304,slow=3.6,SNR=7.3						
GERES	GERESS Array B	16.77	333	Pn	P	04 51 51.6	+0.5
	comp=E,0.1nm,0.3s,baz=144,slow=12,SNR=8.9						
OBN	Obninsk	22.32	18	LR	LR	05 02 49.2	
	comp=E,16nm,21.6s,baz=8.0,slow=40						
TORD	Torodi Ar. Bea	29.83	231	P	P	04 54 02.2	+1.0
	comp=E,0.5nm,0.4s,baz=32,slow=8.4,SNR=10						
ARCES	ARCESS Array B	35.28	0	P	P	04 54 46.6	-1.7
	comp=E,1.6nm,0.9s,baz=174,slow=8.8,SNR=3.4						
MKAR	Makanchi Array	44.37	56	P	P	04 56 04.8	+0.6
	comp=E,0.4nm,0.4s,baz=267,slow=8.0,SNR=10.0						
ZALV	Zalesovo Beam	45.70	46	P	P	04 56 14.4	-0.2
	comp=E,1.1nm,0.4s,baz=266,slow=9.1,SNR=4.0						
SONM	Songino Array	60.14	50	P	P	04 58 02.2	+0.8
	comp=E,0.2nm,0.4s,baz=251,slow=2.6,SNR=3.3						
SCHQ	Schefferville	63.73	320	P	P	04 58 25.3	0.0
	comp=E,0.5nm,0.4s,baz=63,slow=2.3,SNR=3.7						

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*IDC **12** 05:06:46.5±0.9, 60°.82S×19°.90W, h0^{km}, mb4.0/7, mb1 4.2/8, mb1mx4.0/28, mbtmp4.1/8, ML4.9/1, MS3.6/10, Ms1 3.6/10, ms1mx3.5/19, Error ellipse: s-maj=35.0km s-min=22.2km az=49.0*

*NEIC **12** 05:06:48.4±0.5, 60°.9S±0°.2×20°.1W±0°.4, h12^{km}±5^{km}, mb4.4/5, Error ellipse: s-maj=29.0km s-min=19.2km az=50.0*

ISC 12 05:06:47.9±0.8**, 60°.9S**±0°.1×**20°.0W**±0°.2**, h10**^{km}**, n26, σ0^{s}.72**/19**, mb4.0**/8**, MS3.6**/9**, East of South Sandwich Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	10.90	159	P	Pn	05 09 23.8	+0.2
VNA3	Neumayer Olymp	11.19	163	P	Pn	05 09 27.1	-0.6
VNA2	Neumayer--Watz	11.29	159	P	Pn	05 09 28.4	-0.5
	baz=328,slow=16						
SNAA	Sanae	12.77	155	P	Pn	05 09 48.1	-1.0
SNAA	Sanae	12.77	155	Pn	Pn	05 09 48.2	-1.0
	6.4nm,0.3s,baz=318,slow=15,SNR=73						
SNAA				Sn	Sn	05 11 56.8	-14
	0.3nm,0.3s,baz=0.0,slow=20,SNR=4.8						
SNAA				LR	LR	05 14 14.1	
	comp=Z,105nm,18.1s,baz=310,slow=35						
SNAA	Sanae	12.77	155		Pn	05 09 48.4	-0.8
PMSA	Palmer Station	20.18	240	LR	LR	05 18 23.9	
	comp=Z,245nm,18.2s,baz=150,slow=34						
QSPA	South Pole Qui	29.36	180	P	P	05 12 51.7	+1.0
	3.6nm,1.0s,baz=204,slow=6.3,SNR=5.4						
QSPA				LR	LR	05 24 39.7	
	comp=Z,79nm,18.2s,baz=207,slow=36						
QSPA	South Pole Qui	29.36	180	P	P	05 12 51.3	+0.6
MAW	Mawson	34.01	137	LR	LR	05 25 05.1	
	comp=Z,177nm,19.8s,baz=236,slow=32						
PLCA	Paso Flores	36.59	280	P	P	05 13 53.4	-0.4
	1.4nm,0.9s,baz=131,slow=6.4,SNR=3.1						
PLCA	Paso Flores	36.59	280	IAmb	IAmb	05 13 55.1	
	comp=Z,7.3nm,1.4s						
VNDA	Vanda	41.85	181	LR	LR	05 30 46.6	
	comp=Z,124nm,21.8s,baz=180,slow=34						
CPUP	Villa Florida	42.80	307	P	P	05 14 45.5	0.0
	comp=Z,2.4nm,1.0s,baz=109,slow=8.6,SNR=2.8						
CPUP				LR	LR	05 32 36.3	
	comp=Z,76nm,18.3s,baz=202,slow=36						
CFA	Coronel Fontan	42.89	291	P	P	05 14 45.9	-0.4
	comp=Z,1.7nm,0.8s,baz=224,slow=4.9,SNR=4.2						
BOSA	Boshof	44.07	64	LR	LR	05 28 37.6	
	comp=Z,78nm,19.4s,baz=202,slow=30						
LPAZ	La Paz	56.19	301	P	P	05 16 29.8	+1.3
	comp=Z,1.8nm,1.0s,baz=134,slow=4.8,SNR=3.7						
LPAZ				LR	LR	05 42 18.6	
	comp=Z,17nm,19.4s,baz=156,slow=38						
LPAZ	La Paz	56.19	301	P	P	05 16 27.6	-0.9
DBIC	Dimbokro	68.38	16	LR	LR	05 42 29.7	
	comp=Z,48nm,19.5s,baz=142,slow=31						
TOA0	Torodi Ar. Sit	75.77	22	P	P	05 18 34.0	+0.4
TOA0				IAmb	IAmb	05 18 47.5	
	comp=Z,4.7nm,1.4s						
TORD	Torodi Ar. Bea	75.77	22	P	P	05 18 33.1	-0.5
	comp=Z,0.6nm,0.6s,baz=199,slow=4.7,SNR=5.0						
TORD				LR	LR	05 44 32.6	
	comp=Z,43nm,20.6s,baz=345,slow=30						
TORD	Torodi Ar. Bea	75.77	22	P	P	05 18 33.7	+0.1
ASAR	Alice Springs	93.13	156	P	P	05 20 02.4	+0.4
	comp=Z,0.4nm,0.6s,baz=188,slow=3.7,SNR=3.8						
YKA	Yellowknife Ar	142.26	311	PKP	PKPdf	05 26 18.9	+0.1
	comp=Z,0.2nm,0.7s,baz=119,slow=2.2,SNR=3.3						
RES	Resolute Bay	143.81	334	PKP	PKPbc	05 26 19.6	+0.6
	comp=Z,1.1nm,0.7s,baz=150,slow=3.7,SNR=6.2						
SONM	Songino Array	147.13	89	PKPbc	PKPbc	05 26 30.1	0.0
	comp=Z,1.7nm,0.9s,baz=199,slow=3.8,SNR=8.8						

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*BJI **12** 05:29:01.5±0.0, 6°.46S×146°.84E, h134^{km}, mB5.1/40, mb5.1/61*

*IDC **12** 05:29:03.2±1.2, 6°.51S×146°.10E, h113^{km}±12^{km}, mb4.5/26, mb1 4.6/31, mb1mx4.5/45, mbtmp4.8/31, MS3.3/8, Ms1 3.3/8, ms1mx3.1/30, Error ellipse: s-maj=15.0km s-min=8.1km az=97.0*

*NEIC **12** 05:29:04.6±2.0, 6°.56S±0°.05×146°.2E±0°.1, h125^{km}±4^{km}, mb4.9/79, Error ellipse: s-maj=15.2km s-min=7.1km az=94.0*

*DJA **12** 05:29:05.6±0.4, 7°S±3°×14°6E±°, h120^{km}±5^{km}, M4.9/24, mB5.3/6, mb4.8/24, MLv5.2/4, Mw(mB)4.7/6*

ISC 12 05:29:04.4±0.3**, 6°.54S**±0°.04×**146°.19E**±0°.06**, h122**^{km}**, n206, σ1^{s}.11**/209**, mb4.9**/72**, 2C-3D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.00	161	P	Pn	05 29 51.6	+0.8
	128nm,0.3s,baz=355,slow=6.1,SNR=329						
PMG				S	Sn	05 30 26.8	+0.2
	776nm,0.3s,baz=149,slow=19,SNR=38						
MANU	Manus Island	4.62	15		Pn	05 30 13.6	+1.3
KRVT	Keravat (AS076	6.22	69	P	Pn	05 30 34.5	+0.6
	22nm,0.3s,baz=241,slow=1.6,SNR=4.5						
KRVT				LR	LR	05 32 39.2	
	comp=Z,138nm,19.4s,baz=233,slow=34						
RABL	Rabaul	6.39	69	Pn	Pn	05 30 37.3	+1.1
GENI	Genyem	7.17	303	P	Pn	05 30 46.2	-0.4
	0.5nm5μm81nm,1.0s						
COEN	Coen	7.94	202	P	Pn	05 30 59.1	+2.0
	baz=8.0,SNR=120						
COEN	Coen	7.94	202		Pn	05 30 58.9	+1.8
MTSU	Mount Surprise	11.66	189	P	Pn	05 31 49.4	+2.3
	baz=12,SNR=22						
CTA	Charters Tower	13.46	180	P	Pn	05 32 09.8	-0.8
	0.3nm,0.3s,baz=356,slow=12,SNR=6.5						
CTA				S	Sn	05 34 38.7	-0.5
	0.9nm,0.3s,baz=349,slow=10,SNR=4.3						
KDU	Kakadu	14.83	245	P	Pn	05 32 27.7	-0.3
	baz=15,SNR=30						
QIS	Mount Isa	15.32	204	P	Pn	05 32 34.3	+0.1
	baz=15,SNR=9.5						
SIJI	Sorong	15.92	290	P	Pn	05 32 39.8	-1.9
	1.7nm,0.3s,baz=93,slow=9.3,SNR=10						
SWI	Sorong	15.92	290	P	P	05 32 42.5	-0.4
	61nm,0.9s						
MTN	Manton Dam	16.10	246	P	Pn	05 32 43.3	-0.6
	baz=16,SNR=4.5						
MTN	Manton Dam	16.10	246	P	Pn	05 32 43.6	-0.3
WB0	Warramunga Arr	17.44	220	P	P	05 32 59.4	-0.2
WB9	Warramunga Arr	17.46	220	P	P	05 32 59.5	-0.3
	baz=18						
WRAB	Tennant Creek	17.59	220	P	P	05 33 01.0	-0.2
WB2	Warramunga Arr	17.59	220	P	P	05 33 01.2	-0.1
WRA	Warramunga Arr	17.60	220	P	P	05 33 00.9	-0.5
	2.4nm,0.3s,baz=49,slow=13,SNR=79						
WRA				LR	LR	05 40 47.3	
	comp=Z,146nm,20.1s,baz=40,slow=40						
WRA				ScP	ScP	05 40 59.9	+1.1
	baz=30,slow=2.1,SNR=3.0						
WRA	Warramunga Arr	17.60	220	P	P	05 32 59.6	-1.7
EIDS	Eidsvold	19.30	166	P	Pn	05 33 21.7	-0.4
	baz=20,SNR=16						
EIDS	Eidsvold	19.30	166	P	Pn	05 33 21.4	-0.7
EIDS				IAmb	IAmb	05 33 23.0	
	comp=Z,36nm,0.6s						
KNRA	Kununurra	19.34	241	P	P	05 33 19.4	-1.0
	baz=19,SNR=9.0						
KNRA	Kununurra	19.34	241	P	P	05 33 19.0	-1.4
RMQ	Roma	19.98	173	P	Pn	05 33 30.1	0.0
	baz=20,SNR=19						
QLP	Quilpie	20.02	185	P	Pn	05 33 29.2	-1.3
	baz=20,SNR=16						
AS13	Alice Springs	20.71	214	P	P	05 33 35.2	0.0
	baz=21						
AS31	Alice Springs	20.72	213	P	P	05 33 35.4	+0.2
ASAR	Alice Springs	20.72	213	P	P	05 33 35.0	-0.3
	comp=Z,5.4nm,0.3s,baz=50,slow=8.8,SNR=77						
ASAR				S	S	05 37 18.9	-1.2
	comp=Z,3.3nm,0.8s,baz=30,slow=24,SNR=5.9						
ASAR				ScP	ScP	05 41 08.4	+2.6
	comp=Z,1.9nm,1.0s,baz=64,slow=3.2,SNR=5.4						
ASAR				LR	LR	05 42 35.6	
	comp=Z,191nm,18.8s,baz=26,slow=39						
ASAR	Alice Springs	20.72	213	P	P	05 33 34.1	-1.2
FITZ	Fitzroy Crossi	23.09	238	P	P	05 33 57.7	-2.0
	baz=23,SNR=38						
FITZ	Fitzroy Crossi	23.09	238	P	P	05 33 57.7	-2.0
	comp=Z,22nm,0.6s,baz=58,slow=8.9,SNR=52						
FITZ	Fitzroy Crossi	23.09	238	P	P	05 33 57.9	-1.8
ARMA	Armidale	24.30	169	P	P	05 34 12.3	+1.7
	baz=24,SNR=17						
ARMA	Armidale	24.30	169	P	P	05 34 09.6	-1.0
EDFI	Ende, Flores	24.38	263	P	P	05 34 13.3	+1.8
	comp=Z,6.2nm,0.9s						
CMSA	Cobar Meteorol	24.87	181	P	P	05 34 16.7	+1.0
	baz=25,SNR=9.4						
WRKA	Warakurna	25.13	221	P	P	05 34 17.1	-1.1
	baz=25,SNR=48						
STKA	Stephens Creek	25.57	189	P	P	05 34 22.3	+0.3
	baz=26,SNR=79						
STKA	Stephens Creek	25.57	189	P	P	05 34 22.4	+0.3
	comp=Z,33nm,0.6s,baz=358,slow=8.3,SNR=84						
STKA	Stephens Creek	25.57	189	P	P	05 34 22.3	+0.3
HTT	Hallett	27.59	193	P	P	05 34 40.8	+0.6
	baz=28,SNR=26						
YNG	Young	27.70	176	P	P	05 34 42.7	+1.6
	baz=28,SNR=21						
BBOO	Buckleboo	27.78	199	P	P	05 34 41.9	0.0
	baz=28,SNR=6.5						
BBOO	Buckleboo	27.78	199	P	P	05 34 41.9	0.0
FORT	Forrest	29.50	213	P	P	05 34 56.1	-1.1
	baz=30,SNR=7.8						
MEEK	Meekatharra	32.99	230	P	P	05 35 28.0	0.0
	baz=33,SNR=13						
KMBL	Kambalda	33.57	220	P	P	05 35 32.9	+0.1
	baz=34,SNR=9.7						
MORW	Morawa	36.21	228	P	P	05 35 55.6	+0.1
	baz=36,SNR=4.5						
MORW	Morawa	36.21	228	P	P	05 35 55.3	-0.3
MORW				IAmb	IAmb	05 36 01.7	
	comp=Z,18nm,1.2s						
KLBR	Kellerberrin	36.43	223	P	P	05 35 57.0	-0.4
	baz=36,SNR=9.9						
BLDU	Ballidu	36.58	225	P	P	05 35 59.1	+0.4
	baz=37,SNR=11						
YULB	Yu-li	38.43	322	P	P	05 36 13.7	-0.6
YULB				IAmb	IAmb	05 36 18.1	
	comp=Z,24nm,0.8s						
RKGY	Rocky Gully	38.80	220	P	P	05 36 17.2	-0.1
	baz=39,SNR=9.5						
NACB	Ninganchiao	38.83	323	P	P	05 36 17.4	-0.3
SSLB	Suanglung	38.93	322	P	P	05 36 17.6	-0.9
SSLB				IAmb	IAmb	05 36 21.3	
	comp=Z,19nm,0.8s						
YHNB	Yeheng	39.33	323	P	P	05 36 22.2	+0.2
TUWZ	Tuamarina	42.63	149	P	P	05 36 45.3	-3.4
MSWZ	Moikau Station	43.30	148	P	P	05 36 54.5	+0.5
BFZ	Birch Farm	43.32	146	P	P	05 36 55.4	+1.2
MJAR	Matsushiro Arr	43.51	351	P	P	05 36 54.0	-1.8
	comp=Z,9.5nm,0.8s,baz=175,slow=9.0,SNR=20						
MJAR	Matsushiro Arr	43.51	351	P	P	05 36 54.2	-1.5
MAJO	Matsushiro	43.51	351	P	P	05 36 54.3	-1.5
MAJO				IAmb	IAmb	05 36 55.2	
	comp=Z,17nm,0.8s						
MAT	Matsushiro	43.51	351	P	P	05 36 54.2	-1.6
MJB9	Matsu-Tunnel	43.51	351	P	P	05 36 54.7	-1.1
MJB9				IAmb	IAmb	05 36 55.2	
	comp=Z,17nm,0.8s						
NJ2	Nanjing	46.39	327	*e*P	P	05 37 20.4	+1.8
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KSRS	Korea Array	46.98	340	P	P	05 37 22.4	-0.7
	comp=Z,8.6nm,0.8s,baz=158,slow=8.9,SNR=24						
KSRS				LR	LR	05 53 25.1	
	comp=Z,14nm,21.3s,baz=5.0,slow=31						
KSAR	Wonju Array Be	46.98	340	P	P	05 37 21.8	-1.3
WHN	Wuhan	47.86	322	⇑P	P	05 37 31.3	+1.3
SLVN	Son La	49.88	305	P	P	05 37 46.3	+0.6
SLVN				IAmb	IAmb	05 37 48.1	
	comp=Z,15nm,1.0s						
GYA	Guiyang	50.44	312	⇓*i*P	P	05 37 51.3	+1.3
GYA				pP	pP	05 38 20.5	+1.2
GYA				PP	PP	05 39 50.0	+3.1
GYA				S	S	05 44 55.4	+0.8
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,200nm,4.8s						
GYA				LR	LR		
	comp=Z,170nm,18.6s						
GYA				LR	LR		
	comp=Z,170nm,18.4s						
GYA				LR	LR		
	comp=Z,120nm,18.5s						
USA0B	Ussuriysk Arra	52.11	347	P	P	05 38 01.1	-0.8
USRK	Ussuriysk Ar.	52.11	347	P	P	05 38 01.4	-0.5
	comp=Z,15nm,0.5s,baz=166,slow=7.8,SNR=43						
KMI	Kunming	52.69	308	P	P	05 38 08.4	+1.5
KMI				pmax	pmax		
	comp=Z,15nm,1.0s						
CM31	Chiang Mai Arr	52.80	299	P	P	05 38 08.5	+1.0
CMAR	Chiang Mai Arr	52.80	299	P	P	05 38 08.4	+0.9
	comp=Z,13nm,0.6s,baz=123,slow=5.7,SNR=68						
CHTO	Chiang Mai	52.94	299	P	P	05 38 09.3	+0.7
CHTO				IAmb	IAmb	05 38 10.5	
	comp=Z,14nm,0.9s						
MDJ	Mudanjiang	53.07	345	P	P	05 38 08.5	-0.5
MDJ				pmax	pmax		
	comp=Z,14nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,96nm,4.1s						
XAN	Xi'an	53.59	321	P	P	05 38 12.7	-0.4
XAN				pmax	pmax		
	comp=Z,44nm,1.1s						
XAN				pmax	pmax		
	comp=Z,200nm,5.0s						
XAN	Xi'an	53.59	321	P	P	05 38 12.7	-0.4
BJI	Beijing	53.99	332	P	P	05 38 15.3	-0.5
BJI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CD2	Chengdu	55.08	315	⇓*i*P	P	05 38 24.5	+0.6
CD2				pmax	pmax		
	comp=Z,120nm,0.6s						
HHC	Hu-ho-hao-te	56.87	329	*e*P	P	05 38 38.7	+2.1
HHC				pmax	pmax		
	comp=Z,87nm,1.0s						
HHC				pmax	pmax		
	comp=Z,360nm,5.6s						
KLR	Kul'dur	56.96	349	P	P	05 38 36.2	-0.6
	comp=Z,4.1nm,0.7s,baz=167,slow=3.6,SNR=20						
KLR				LR	LR	06 02 04.5	
	comp=Z,31nm,19.4s,baz=81,slow=35						
LZH	Lanzhou	58.10	320	⇑P	P	05 38 47.0	+1.6
LZH				pP	pP	05 39 18.5	+3.6
LZH				sP	PcP	05 39 33.4	-2.4
LZH				PP	PP	05 40 59.2	+3.7
LZH				pmax	pmax		
	comp=Z,26nm,1.3s						
LZH				pmax	pmax		
	comp=Z,93nm,4.8s						
HIA	Hailar	60.18	340	P	P	05 38 58.3	-1.0
HIA				IAmb	IAmb	05 38 59.8	
	comp=Z,18nm,1.1s						
PETK	Petropavlovsk-	60.22	8	P	P	05 38 59.5	+0.1
	comp=Z,13nm,0.7s,baz=180,slow=8.1,SNR=22						
PETK				LR	LR	06 03 22.3	
	comp=Z,38nm,19.2s,baz=226,slow=34						
SHL	Shillong	61.64	304	P	P	05 39 10.1	+0.2
GTA	Gaotai	62.65	321	⇓P	P	05 39 17.0	+0.8
GTA				pP	PcP	05 39 51.6	-2.4
GTA				sP	sP	05 40 01.2	+1.0
GTA				pmax	pmax		
	comp=Z,19nm,1.1s						
GTA				pmax	pmax		
	comp=Z,84nm,5.4s						
GTA				LR	LR		
	comp=Z,110nm,17.5s						
GTA				LR	LR		
	comp=Z,260nm,18.7s						
GTA				LR	LR		
	comp=Z,120nm,17.5s						
PPT	Papeete	63.52	106	LR	LR	06 02 40.1	
	comp=Z,41nm,19.6s,baz=70,slow=32						
LSA	Lhasa	63.92	307	P	P	05 39 26.1	+0.9
LSA				IAmb	IAmb	05 39 27.5	

	comp=Z,14nm,0.7s						
ULN	Ulaanbaatar	64.20	332	P	P	05 39 26.3	0.0
SONM	Songino Array	64.49	331	P	P	05 39 28.0	-0.1
	comp=Z,3.7nm,0.9s,baz=151,slow=8.7,SNR=16						
SONM	Songino Array	64.49	331	P	P	05 39 28.0	-0.1
TAPN	Taplejung	65.78	304	eP	P	05 39 37.9	+0.8
	comp=Z,52nm,1.0s						
ODAN	Odare	65.86	303	eP	P	05 39 38.3	+0.7
	comp=Z,39nm,0.7s						
MA2	Magadan	66.01	3	P	P	05 39 37.0	-0.5
	comp=Z,18nm,0.8s,baz=151,slow=5.8,SNR=16						
MA2	Magadan	66.01	3	P	P	05 39 36.9	-0.6
MA2				IAmb	IAmb	05 39 38.2	
	comp=Z,21nm,0.9s						
RAMN	Ramite	66.55	303	eP	P	05 39 42.5	+0.5
JIRN	Jiri	67.14	304	eP	P	05 39 46.4	+0.5
	comp=Z,26nm,0.7s						
GUN	Gumba	67.49	304	eP	P	05 39 48.8	+0.8
	comp=Z,51nm,0.7s						
PKI	Pulchoki	67.76	303	eP	P	05 39 50.0	+0.3
	comp=Z,26nm,0.9s						
PKIN	Phulchoki	67.77	303	eP	P	05 39 50.0	+0.3
	comp=Z,20nm,0.9s						
KKN	Kakani	67.94	303	eP	P	05 39 51.2	+0.5
	comp=Z,50nm,0.8s						
DMN	Daman	68.03	303	eP	P	05 39 52.0	+0.7
	comp=Z,62nm,0.9s						
TLY	Talaya	68.46	333	LR	LR	06 07 54.8	
	comp=Z,16nm,20.2s,baz=38,slow=34						
GKN	Gorkha	68.55	303	eP	P	05 39 54.9	+0.5
DANN	Dangsing	69.40	303	eP	P	05 39 59.9	+0.1
	comp=Z,50nm,0.7s						
SEY	Seymchan	69.44	3	P	P	05 39 58.8	-0.2
	comp=Z,10.0nm,0.7s,baz=183,slow=5.3,SNR=32						
VNDA	Vanda	71.42	176	P	P	05 40 11.1	+0.2
	comp=Z,11nm,0.9s,baz=345,slow=5.4,SNR=7.7						
WMQ	Urumqi	72.68	320	eP	P	05 40 20.0	+1.0
WMQ				sP	sP	05 41 08.9	+6.0
WMQ				pmax	pmax		
	comp=Z,29nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,520nm,6.1s						
WMQ	Urumqi	72.68	320	P	P	05 40 19.4	+0.4
BILL	Bilibino	75.75	8	P	P	05 40 36.3	+0.1
MKAR	Makanchi Array	77.40	321	P	P	05 40 46.5	+0.4
	comp=Z,14nm,0.8s,baz=110,slow=6.6,SNR=97						
MKAR	Makanchi Array	77.40	321	P	P	05 40 46.1	+0.1
MAKZ	Makanchi	77.61	321	P	P	05 40 47.6	+0.4
MAKZ				IAmb	IAmb	05 40 48.5	
	comp=Z,27nm,0.9s						
PRZ	Przheval'sk	78.36	316	P	P	05 40 53.9	+2.2
TIXI	Tiksi	78.87	354	P	P	05 40 52.0	-1.6
	comp=Z,2.9nm,0.3s,baz=161,slow=2.2,SNR=9.7						
TIXI	Tiksi	78.87	354	P	P	05 40 51.8	-1.8
ZAA0	Zalesovo Array	79.04	328	P	P	05 40 53.8	-1.1
ZALV	Zalesovo Beam	79.04	328	P	P	05 40 54.0	-0.9
	comp=Z,7.4nm,0.5s,baz=116,slow=5.5,SNR=28						
ZALV	Zalesovo Beam	79.04	328	P	P	05 40 53.5	-1.3
KDJ	Kajisay	79.10	315	P	P	05 40 56.6	+0.9
KSH	Kashi	79.14	312	P	P	05 40 58.0	+2.1
KSH				sP	sP	05 41 43.4	+3.0
KSH				PP	PP	05 44 01.9	+4.9
KSH				S	S	05 50 43.1	-2.7
KSH				pmax	pmax		
	comp=Z,32nm,1.0s						
KSH				pmax	pmax		
	comp=Z,350nm,6.4s						
KSH				LR	LR		
	comp=Z,190nm,11.5s						
KSH				LR	LR		
	comp=Z,290nm,10.0s						
KSH				LR	LR		
	comp=Z,250nm,10.1s						
ANM	Nome	79.48	19	P	P	05 40 57.8	+0.7
NIL	Nilore	79.58	306	P	P	05 40 59.0	+0.7
NRN	Naryn	79.71	314	P	P	05 41 00.3	+1.0
ULHL	Ulahol	79.80	315	P	P	05 41 00.8	+1.3
	SNR=8.1						
BOOM	Boomskoye usch	80.08	315	P	P	05 41 02.0	+0.9
KZA	Kyzart	80.44	314	P	P	05 41 04.6	+1.3
	SNR=45						
KDAK	Kodiak Island	80.76	28	P	P	05 41 04.4	+0.4
	comp=Z,14nm,0.9s,baz=257,slow=6.3,SNR=6.6						
KDAK	Kodiak Island	80.76	28	IAmb	IAmb	05 41 07.1	
	comp=Z,43nm,1.1s						
KBK	Karagaybulak	80.83	315	P	P	05 41 06.2	+1.1
	SNR=9.2						
UCH	Uchtor	81.01	314	P	P	05 41 07.5	+1.2
	SNR=31						
SVW2	Sparrevohn	81.07	25	P	P	05 41 06.5	+0.8
SVW2				IAmb	IAmb	05 41 08.0	
	comp=Z,26nm,1.2s						
CHMS	Chumysh	81.08	315	P	P	05 41 07.0	+0.9
	SNR=10						
AAK	Ala-Archa	81.15	315	P	P	05 41 06.9	+0.2
	comp=Z,9.7nm,0.8s,baz=123,slow=4.9,SNR=28						
AAK	Ala-Archa	81.15	315	P	P	05 41 07.6	+0.9
	SNR=10						
AAK	Ala-Archa	81.15	315	P	P	05 41 07.4	+0.8
AAK				IAmb	IAmb	05 41 08.5	
	comp=Z,14nm,0.8s						
KURK	Kurchatov	81.16	324	P	P	05 41 06.6	+0.3
KURK				IAmb	IAmb	05 41 07.5	
	comp=Z,20nm,1.1s						
USP	Ospenovka	81.33	315	P	P	05 41 08.2	+0.7
	SNR=21						
AML	Almayashu	81.57	314	P	P	05 41 10.3	+1.1
	SNR=42						
EKS2	Erkin-Say	81.66	315	P	P	05 41 10.3	+1.0
	SNR=24						
ARSB	Arslanbob	81.85	313	P	P	05 41 11.4	+1.0
RDOG	Red Dog Mine	82.49	17	P	P	05 41 13.8	+0.8
RDOG				IAmb	IAmb	05 41 14.4	
	comp=Z,17nm,0.7s						
SUA	Susitna One	83.29	26	P	P	05 41 16.7	-0.7
SUA				IAmb	IAmb	05 41 17.5	
	comp=Z,12nm,0.7s						
PPLA	Purkeypile	83.36	24	P	P	05 41 17.2	-0.5
PPLA				IAmb	IAmb	05 41 35.1	
	comp=Z,13nm,1.1s						
QSPA	South Pole Qui	83.43	180	P	P	05 41 18.2	+0.1
RC01	Rabbit Creek A	83.56	26	P	P	05 41 18.5	-0.1
CHGR	Chuyangaron	84.02	310	P	P	05 41 21.6	0.0
PMR	Palmer	84.04	26	P	P	05 41 20.1	-0.9
PMR				IAmb	IAmb	05 41 21.2	
	comp=Z,13nm,0.8s						
KK31	Karatay Array	84.09	314	P	P	05 41 22.2	+0.5
KK31				IAmb	IAmb	05 41 23.1	
	comp=Z,30nm,1.3s						
KKAR	Karatay Array	84.09	314	P	P	05 41 21.2	-0.5
KKAR	Karatay Array	84.09	314	P	P	05 41 22.2	+0.5
KKAR				IAmb	IAmb	05 41 23.1	
	comp=Z,30nm,1.3s						
KTH	Kantishna Hill	84.17	24	P	P	05 41 21.0	-0.8
KTH				IAmb	IAmb	05 41 21.6	
	comp=Z,16nm,1.0s						
GHO	Glory Hole Cre	84.21	26	P	P	05 41 21.4	-0.6
GHO				IAmb	IAmb	05 41 22.1	
	comp=Z,13nm,0.8s						
KNK	Knik Glacier	84.26	26	P	P	05 41 22.2	0.0
KNK				IAmb	IAmb	05 41 23.4	
	comp=Z,15nm,0.8s						
IMAR	Indian Mountai	84.28	21	P	P	05 41 22.3	+0.2
TRF	Thorofare Moun	84.38	24	P	P	05 41 21.7	-1.2
TRF				IAmb	IAmb	05 41 24.2	
	comp=Z,12nm,0.8s						
BPAW	Bear Paw Mtn.	84.40	23	P	P	05 41 22.3	-0.5
SML	Sawmill	84.48	26	P	P	05 41 23.4	+0.1
MLY	Manley	84.92	22	P	P	05 41 25.2	-0.3
MLY				IAmb	IAmb	05 41 26.2	
	comp=Z,21nm,0.8s						
SCM	Sheep Creek Mo	84.92	26	P	P	05 41 25.9	+0.3
SCM				IAmb	IAmb	05 41 26.4	
	comp=Z,26nm,0.9s						
MCK	McKinley	85.05	24	P	P	05 41 25.3	-0.8
NEA	Nenana	85.36	23	P	P	05 41 27.1	-0.5
NEA				IAmb	IAmb	05 41 27.5	
	comp=Z,9.3nm,0.7s						
DHY	Denali Highway	85.41	25	P	P	05 41 28.1	0.0
DHY				IAmb	IAmb	05 41 28.7	
	comp=Z,19nm,0.8s						
NRIK	Noril'sk	85.54	342	P	P	05 41 27.4	-1.0
	comp=Z,6.3nm,0.7s,baz=115,slow=4.7,SNR=5.7						
WRH	Wood River Hil	85.70	23	P	P	05 41 28.4	-0.8
WRH				IAmb	IAmb	05 41 29.5	
	comp=Z,21nm,1.1s						
CCB	Clear Creek Bu	85.88	23	P	P	05 41 29.2	-1.0
CCB				IAmb	IAmb	05 41 29.7	
	comp=Z,18nm,0.8s						
HDA	Harding Lake	86.12	24	P	P	05 41 30.3	-1.1
IL31		86.30	23	P	P	05 41 30.8	-1.4
IL31				IAmb	IAmb	05 41 31.5	
	comp=Z,17nm,0.8s						
ILAR	Eielson Array	86.30	23	P	P	05 41 30.4	-1.8
	comp=Z,14nm,0.7s,baz=252,slow=5.2,SNR=124						
ILAR	Eielson Array	86.30	23	P	P	05 41 30.2	-2.0
GLB	Gilahina Butte	86.33	27	P	P	05 41 33.3	+0.7
GLB				IAmb	IAmb	05 41 33.5	
	comp=Z,13nm,0.8s						
BVAR	Borovoye Array	86.73	324	P	P	05 41 33.8	-0.8
	comp=Z,8.4nm,0.8s,baz=104,slow=6.3,SNR=41						
BRVK	Borovoye	86.80	324	P	P	05 41 34.4	-0.5
BRVK				IAmb	IAmb	05 41 35.8	
	comp=Z,9.1nm,1.0s						
MENT	Mentasta	86.90	26	P	P	05 41 35.6	+0.3
MENT				IAmb	IAmb	05 41 36.6	
	comp=Z,7.7nm,0.7s						
TOLK	Toolik Lake Re	86.97	19	P	P	05 41 36.0	+0.5
DOT	Dot Lake	87.01	25	P	P	05 41 35.8	+0.1
DOT				IAmb	IAmb	05 41 36.5	
	comp=Z,18nm,0.9s						
BARN	Barnard Glacie	87.18	28	P	P	05 41 38.1	+1.3
BCAR	Beaver Creek A	87.77	26	P	P	05 41 39.2	-0.2
BMAR	Burnt Mountain	88.19	21	P	P	05 41 41.9	+0.6
EGAK	Eagle	88.59	24	P	P	05 41 43.4	+0.2
EGAK				IAmb	IAmb	05 41 44.1	
	comp=Z,9.4nm,0.9s						
EPYK	Eagle Plains	90.81	23	P	P	05 41 53.7	+0.1
EPYK				IAmb	IAmb	05 41 54.4	
	comp=Z,11nm,1.1s						
INK	Inuvik	92.45	22	P	P	05 42 00.2	-0.8
	comp=Z,2.9nm,1.1s,baz=230,slow=6.0,SNR=5.0						
GEYT	Alibeck	92.45	308	P	P	05 41 59.8	-2.1
	comp=Z,2.3nm,0.7s,baz=180,slow=0.9,SNR=5.2						
ABKAR	Akbulak array	92.46	319	P	P	05 42 00.2	-1.3
AKTO	Aktyubinsk	93.83	320	P	P	05 42 06.1	-1.7
	comp=Z,3.8nm,1.0s,baz=84,slow=3.0,SNR=6.8						
ARU	Arti	94.09	326	P	P	05 42 06.9	-1.9
	comp=Z,0.8nm,0.3s,baz=130,slow=2.7,SNR=5.3						
NVAR	Mina Array Bea	98.34	52	P	Pdif	05 42 29.5	+0.6
	comp=Z,0.3nm,0.6s,baz=246,slow=8.5,SNR=2.3						
YKA	Yellowknife Ar	100.02	28	P	Pdif	05 42 34.8	-0.7
	comp=Z,0.4nm,0.6s,baz=270,slow=4.8,SNR=7.3						
NOA	NORSAR Array B	116.15	337	PKP	PKPdf	05 47 32.8	-0.2
	comp=Z,0.4nm,0.6s,baz=16,slow=17,SNR=2.5						
GERES	GERESS Array B	121.89	325	PKP	PKPdf	05 47 44.1	-0.3
	comp=Z,0.7nm,0.5s,baz=84,slow=1.2,SNR=8.4						
PLCA	Paso Flores	122.11	148	PKP	PKiKP	05 47 46.3	+1.0
	comp=Z,0.5nm,0.6s,baz=281,slow=1.5,SNR=3.8						
SCHQ	Schefferville	125.05	23	PKP	PKPdf	05 47 50.0	-0.2
	comp=Z,2.1nm,0.6s,baz=347,slow=3.4,SNR=10						
SDV	Santo Domingo	143.45	84		PKPdf	05 48 24.8	-1.1
TOA0	Torodi Ar. Sit	144.44	283		PKPbc	05 48 26.6	+0.5
TORD	Torodi Ar. Bea	144.44	283	PKP	PKPbc	05 48 26.1	0.0
	comp=Z,7.9nm,0.7s,baz=77,slow=3.2,SNR=41						
TORD	Torodi Ar. Bea	144.44	283		PKPab	05 48 25.9	0.0
CRPR	Cabo Rojo, PR	145.60	68		PKPdf	05 48 28.8	-0.4
HUMP	Col San Antoni	146.71	67		PKPbc	05 48 33.1	+0.1
MTP	Monte Pirata	147.00	67		PKPbc	05 48 34.5	+0.7
DBIC	Dimbokro	151.24	272	PKPbc	PKiKP	05 48 45.0	0.0
	comp=Z,12nm,0.7s,baz=86,slow=2.1,SNR=30						
DBIC	Dimbokro	151.24	272		PKiKP	05 48 45.4	+0.3
BDFB	Brasilia	153.85	148	PKPbc	PKiKP	05 48 50.5	0.0
	comp=Z,0.8nm,0.3s,baz=175,slow=11,SNR=2.6						

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*NEIC **12** 05:29:28.8±2.3, 44.°22N±0.°09×129.°4W±0.°2, h10km±2km, mb4.0/6, Error ellipse: s-maj=19.4km s-min=15.1km az=258.0*

*IDC **12** 05:29:28.4±1.5, 44.°26N×129.°14W, h0km, mb3.7/6, mb1 3.9/13, mb1mx3.7/55, mbtmp3.7/13, ML3.4/7, MS3.3/10, Ms1 3.3/10, ms1mx3.1/50, Error ellipse: s-maj=29.3km s-min=14.9km az=45.0*

*ANF **12** 05:29:34.0±1.6, 44.°25N×128.°79W, h0km, ML3.5/10, Error ellipse: s-maj=19.5km s-min=10.3km az=47.0*

ISC 12 05:29:30.6±1.0**, 44.°20N**±0.°08×**129.°26W**±0.°09**, h10**km**, n117, σ1.°51**/112**, mb3.8**/5**, MS3.2**/5**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEBM	Edson Butte	3.82	109	Pn	Pn	05 30 26.3	-3.3
I02D	Swisshome	3.90	89	P	Pn	05 30 29.0	-1.5
	baz=274,SNR=11						
J01E	Myrtle Point	4.00	103	P	Pn	05 30 30.0	-2.0
	baz=289						
J01E				S	Sn	05 31 16.4	-2.5
	baz=289						
COR	Corvallis	4.29	83		Pn	05 30 35.2	-0.7
I03D	Drain, OR	4.30	95	P	Pn	05 30 34.8	-1.3
	baz=280						
I03D				S	Sn	05 31 24.0	-2.2
	baz=280						
K02D	Willamette Mer	4.34	108	P	Pn	05 30 33.9	-2.9
	baz=294						
K02D				S	Sn	05 31 24.7	-2.7
	baz=294						
G03D	McMinnville, O	4.39	75	P	Pn	05 30 35.8	-1.6
	baz=258						
F03A	Seaside	4.40	65		Pn	05 30 36.1	-1.3
E03A	Lebam	4.65	58		Pn	05 30 38.7	-2.2
H04D	Lebanon	4.69	84	P	Pn	05 30 41.8	+0.4
	baz=269,SNR=9.6						
KRMB	Red Mountain	4.76	122	Pn	Pn	05 30 41.1	-1.4
HUMO	Hull Mountain	4.86	107		Pn	05 30 42.5	-1.3
HUMO				Sn	Sn	05 31 39.2	-0.9
NLWA	Neilton Lookou	4.94	48		Pn	05 30 43.2	-1.7
I04A	Tendick Farm,	4.96	92	P	Pn	05 30 44.3	-0.9
	baz=278,SNR=11						
H04A	Detroit Lake	5.09	82		Pn	05 30 46.4	-0.6
JCC	Jacoby Creek,	5.13	129	Pn	Pn	05 30 46.2	-1.3
F04A	Amboy	5.15	68		Pn	05 30 47.2	-0.5
J04D	Umpqua Nationa	5.27	98	P	Pn	05 30 49.8	+0.1
	baz=284,SNR=5.6						
E04D	Cinebar	5.27	61	P	Pn	05 30 48.7	-0.7
	baz=244,SNR=10						
YBH	Yreka Blue Hor	5.40	115	Pn	Pn	05 30 50.0	-1.3
	0.3nm,0.3s,baz=312,slow=12,SNR=7.1						
YBH				Sn	Sn	05 31 51.3	-2.2
	0.1nm,0.3s,baz=71,slow=18,SNR=1.6						
YBH				LR	LR	05 32 39.6	
	comp=Z,199nm,19.3s,baz=316,slow=36						
YBH	Yreka Blue Hor	5.40	115		Pn	05 30 50.6	-0.7
D04E	Lakebay	5.44	54	P	Pn	05 30 51.9	+0.2
	baz=237						
D03D	Eldon	5.45	50	P	Pn	05 30 50.4	-1.5
	baz=232,SNR=19						
L04D	Klamath Falls	5.46	109	P	Pn	05 30 52.5	+0.4
	baz=296						
L04D				S	Sn	05 31 55.0	0.0
	baz=296						
K04D	Chiloquin, OR	5.69	103	P	Pn	05 30 55.6	+0.3
	baz=290						
I05D	Terrebonne, OR	5.69	86	P	Pn	05 30 55.4	+0.2
	baz=272						
G05D	Wamic, OR	5.76	77	P	Pn	05 30 56.1	0.0
	baz=262,SNR=6.1						
F05D	White Salmon	5.78	70	S	Sn	05 32 03.2	+0.4
	baz=255						
LON	Longmire	5.83	61		Pn	05 30 55.9	-1.2
J05D	Fort Rock, OR	5.89	96	P	Pn	05 30 58.7	+0.7
	baz=283						
D05A	Enumclaw	5.91	57		Pn	05 30 57.5	-0.7
PINE	Pine Mountain	6.02	91		Pn	05 30 59.8	-0.1
WDC	Whiskeytown Da	6.15	124	Pn	Pn	05 31 02.4	+0.9
G06A	Carlson Farm,	6.24	77		Pn	05 31 02.1	-0.6
A04D	Lummi Island	6.40	43	P	Pn	05 31 03.4	-1.4
	baz=225,SNR=7.7						
B05A	Bryant	6.42	48	P	Pn	05 31 04.3	-0.9
	baz=232,SNR=56						
LTY	Liberty	6.75	60		Pn	05 31 08.1	-1.6
B06A	Marblemount	6.90	48	Pn	Pn	05 31 10.0	-1.7
C06D	Leavenworth	6.91	54	P	Pn	05 31 12.6	+0.7
	baz=239						
HOPS	Hopland Field	6.97	136	Pn	Pn	05 31 11.4	-1.3
I07A	Izee	7.02	88		Pn	05 31 12.1	-1.5
HAWA	Hanford	7.20	69		Pn	05 31 16.1	+0.1
G08A	Pilot Rock	7.42	78		Pn	05 31 18.6	-0.4
ORV	Oroville	7.42	126		Pn	05 31 20.3	+1.4
B08A	Colville Reser	8.04	55		Pn	05 31 26.3	-1.1
LLLB	Lillooet	8.13	35		Pn	05 31 28.5	-0.2
PAHR	Pah Rah Range	8.62	118	Pn	Pn	05 31 37.1	+1.6
F10A	Beach Ranch, E	8.70	74		Pn	05 31 36.9	+0.4
NEW	Newport	9.34	60	Pn	Pn	05 31 43.7	-1.6
	0.2nm,0.3s,baz=225,slow=10,SNR=9.7						
NEW	Newport	9.34	60		Pn	05 31 44.5	-0.8
NEW	Newport	9.34	60	P	Pn	05 31 46.9	+1.6
	baz=248,SNR=6.3						
NVAR	Mina Array Bea	10.05	121	Pn	Pn	05 31 57.4	+2.1
	0.2nm,0.3s,baz=288,slow=13,SNR=12						
NVAR	Mina Array Bea	10.05	121		Pn	05 31 54.8	-0.5
ELK	Elko	10.92	104	Pn	Pn	05 32 08.9	+1.8
	0.1nm,0.3s,baz=304,slow=12,SNR=5.9						
JTMT	Jette	11.01	66	Pn	Pn	05 32 07.9	-0.4
MSO	Missoula	11.07	71	Pn	Pn	05 32 08.3	-0.8
MCMT	McKenzie Canyo	11.74	81	Pn	Pn	05 32 19.0	+0.7
ISA	Isabella, Lake	11.87	132	Pn	Pn	05 32 19.4	-0.7
QLMT	Earthquake Lak	12.75	81	Pn	Pn	05 32 33.9	+1.8
YHB	Horse Butte	12.92	81	Pn	Pn	05 32 34.6	+0.2
YHL	Hebgen Lake	12.92	81	Pn	Pn	05 32 33.0	-1.5
GSC	Goldstone, Bar	13.05	129	Pn	Pn	05 32 37.9	+1.7
YHH	Holmes Hill	13.16	81	Pn	Pn	05 32 37.6	-0.2
FXWY	Fox Creek	13.16	86	Pn	Pn	05 32 38.6	+0.9
HWUT	Hardware Ranch	13.23	95		Pn	05 32 39.5	+0.8
EGMT	Eagleton	14.06	67	P	Pn	05 32 49.2	-0.6
	baz=261						
RLMT	Red Lodge	14.26	79	P	P	05 33 01.9	+1.8
	baz=273,SNR=9.3						
PDAR	Pinedale Array	14.38	89	Pn	Pn	05 32 55.3	+0.9
	0.1nm,0.3s,baz=291,slow=13,SNR=5.3						
PDAR				LR	LR	05 38 40.9	
	comp=Z,129nm,18.8s,baz=298,slow=39						
KNB	Kanab	14.39	114	Pn	Pn	05 32 56.6	+2.1
PFO	Pinyon Flats O	14.51	132	Pn	Pn	05 32 56.9	+0.8
	0.1nm,0.3s,baz=264,slow=9.2,SNR=3.2						
PFO				LR	LR	05 37 28.5	
	comp=Z,121nm,18.9s,baz=349,slow=33						
Q16A	Castle Valley	14.53	105	Pn	Pn	05 32 57.7	+1.3
SRU	San Rafael Swe	14.89	103	Pn	Pn	05 33 01.1	-0.3
MONP2	Monument Peak	15.09	134	P	Pn	05 33 04.4	+0.4
	baz=323,SNR=6.2						
IKP	In-Ko-Pah, Jac	15.44	134	P	P	05 33 14.0	+0.9
	baz=323						
O20A	White River Ci	16.10	97	Pn	Pn	05 33 15.4	-1.7
O20A				IAmb	IAmb	05 33 32.7	
	comp=Z,10nm,0.8s						
O20A	White River Ci	16.10	97	P	P	05 33 21.9	+1.4
	baz=292						
PV09	Paradox Valley	16.14	104	Pn	Pn	05 33 16.0	-1.8
WUAZ	Wupatki	16.22	116	P	P	05 33 23.6	+1.8
	baz=309						
PV23	Carpenter Ridg	16.25	104	Pn	Pn	05 33 18.4	-0.7
PV23				IAmb	IAmb	05 33 29.2	
	comp=Z,17nm,1.1s						
PV20	West Nyswonger	16.33	104	Pn	Pn	05 33 19.4	-0.6
PV20				IAmb	IAmb	05 33 26.9	
	comp=Z,16nm,1.3s						
PV04	Paradox Valley	16.35	104		Pn	05 33 21.7	+1.4
LAO	LASA Array	16.35	73	P	Pn	05 33 22.5	+2.4
	baz=270,SNR=5.4						
PV22	Blue Mesa, Par	16.36	103	Pn	Pn	05 33 20.4	-0.1
PV22				IAmb	IAmb	05 33 35.3	
	comp=Z,14nm,1.2s						
PV16	Nyswonger Mesa	16.38	104		Pn	05 33 21.4	+0.6
N23A	Red Feather La	17.48	93	P	Pn	05 33 35.0	+0.3
	baz=289						
DGMT	Dagmar	17.80	67	P	P	05 33 41.1	+2.0
	baz=265						
S22A	4UR Ranch, Cre	18.10	103	P	P	05 33 43.9	+1.2
	baz=298,SNR=7.0						
ISCO	Idaho Springs	18.10	96	P	P	05 33 44.2	+1.5
	baz=292,SNR=5.2						
ANMO	Albuquerque	19.81	110	P	P	05 33 59.9	-1.5
	comp=Z,0.1nm,0.3s,baz=288,slow=9.6,SNR=2.4						
ANMO				LR	LR	05 42 00.6	
	comp=Z,96nm,22.0s,baz=246,slow=38						
KDAK	Kodiak Island	19.87	321	LR	LR	05 39 26.0	
	comp=Z,147nm,19.6s,baz=126,slow=30						
T25A	Trinidad	20.08	102	P	P	05 34 06.2	+1.8
	baz=299						
YKA	Yellowknife Ar	20.22	20	P	P	05 34 03.8	-1.6
	comp=Z,3.5nm,0.9s,baz=206,slow=12,SNR=28						
121A	Cookes Peak, D	20.41	118	P	Pn	05 34 14.7	+4.6
	baz=312						
EPYK	Eagle Plains	22.59	352	P	P	05 34 32.7	+1.7
	baz=165						
ILAR	Eielson Array	22.86	340	P	P	05 34 33.9	+0.1
	comp=Z,1.2nm,1.0s,baz=149,slow=8.7,SNR=7.2						
AMTX	Amarillo	23.12	104	P	P	05 34 42.9	+6.0
	baz=302						
ULM	Lac du Bonnet	23.33	63	P	P	05 34 37.1	-1.6
	comp=Z,6.1nm,1.0s,baz=279,slow=9.6,SNR=9.7						
ULM				LR	LR	05 43 08.6	
	comp=Z,140nm,20.5s,baz=297,slow=35						
AGMN	Agassiz Nation	23.35	68	P	P	05 34 44.2	+5.2
	baz=272						
ECSD	EROS Data Cent	23.42	80	P	P	05 34 39.6	-0.2
	baz=283						
TXAR	Lajitas Array	25.17	118	P	P	05 34 54.2	-2.0
	comp=Z,0.4nm,0.6s,baz=284,slow=3.6,SNR=3.4						
TXAR				LR	LR	05 44 05.9	
	comp=Z,39nm,21.6s,baz=0.0,slow=35						
LPIG	La Paz	25.34	136	LR	LR	05 43 38.7	
	comp=Z,64nm,18.7s,baz=256,slow=34						
K46A	Dorr	31.34	77	P	P	05 35 50.9	-0.1
	baz=288						
K47A	Vermontville	31.89	77	P	P	05 35 55.9	0.0
	baz=288						
L48A	N Adams	32.52	78	P	P	05 36 01.3	-0.2
	baz=289						
J48A	Bridge Port	32.55	75	P	P	05 36 02.2	+0.5
	baz=288						
LSQQ	Lebel-sur-Quev	35.64	63	P	P	05 36 27.0	-1.5
	baz=282						
D56A	ZEC Mazanza, M	37.58	66	P	P	05 36 45.5	+0.4
	baz=286						
SCHQ	Schefferville	40.60	52	LR	LR	05 54 01.7	
	comp=Z,106nm,18.6s,baz=318,slow=36						
H11N2	WAKE ISLAND Hy	57.87	267	T	T	06 41 52.7	
	baz=49,slow=75,SNR=361						
H11N3	WAKE ISLAND Hy	57.87	267	T	T	06 41 50.9	
	baz=49,slow=75,SNR=670						
H11N1	WAKE ISLAND Hy	57.88	267	T	T	06 41 53.9	
	baz=49,slow=75,SNR=382						
H11S1	WAKE ISLAND Hy	58.80	266	T	T	06 42 59.6	
	baz=48,slow=75,SNR=82						
H11S2	WAKE ISLAND Hy	58.81	266	T	T	06 43 09.1	
	baz=48,slow=75,SNR=64						
H11S3	WAKE ISLAND Hy	58.82	266	T	T	06 43 01.1	
	baz=48,slow=75,SNR=61						
KSRS	Korea Array	72.92	306	LR	LR	06 08 58.3	
	comp=Z,13nm,21.1s,baz=220,slow=32						
SONM	Songino Array	76.11	325	P	P	05 41 17.7	-0.9
	comp=Z,0.8nm,1.0s,baz=105,slow=3.4,SNR=3.4						
LPAZ	La Paz	81.96	122	P	P	05 41 49.9	-1.6
	comp=Z,1.5nm,0.8s,baz=310,slow=3.3,SNR=3.6						

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*IDC **12** 05:42:04.2±2.1, 53.°16N×171.°09E, h0km, mb3.3/5, mb1 3.6/6, mb1mx3.3/48, mbtmp3.3/6, ML2.3/1, Error ellipse: s-maj=87.5km s-min=21.8km az=174.0*

*NEIC **12** 05:42:08±1.1, 53.°2N±0.°3×171.°08E±0.°09, h23km±4km, ML3.6/2, Error ellipse: s-maj=37.1km s-min=7.3km az=182.0*

ISC 12 05:42:07.9±1.0**, 53.°2N**±0.°3×**171.°01E**±0.°07**, h24**km**, n20, σ0.°99**/15**, mb3.4**/5**, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	1.92	103		Pn	05 42 38.8	-0.2
SMY				IAML		05 43 04.8	
	comp=E,482nm,0.6s						
SMY				IAML		05 43 07.9	
	comp=N,552nm,0.5s						
PETK	Petropavlovsk-	8.01	275	Pn	Pn	05 44 04.4	+1.7
	comp=N,0.2nm,0.3s,baz=84,slow=15,SNR=3.8						
PETK				Sn	Sn	05 45 30.4	-2.0
	comp=N,0.4nm,0.3s,baz=99,slow=18,SNR=5.1						
MCK	McKinley	23.04	47	P	P	05 47 10.7	-0.4
WRH	Wood River Hil	23.52	45	P	P	05 47 17.2	+1.4
CCB	Clear Creek Bu	23.67	45	P	P	05 47 17.7	+0.5
TOLK	Toolik Lake Re	24.01	35	P	P	05 47 20.6	+0.1
ILAR	Eielson Array	24.08	45	P	P	05 47 20.6	-0.5
	comp=N,0.4nm,0.4s,baz=246,slow=7.7,SNR=7.3						
KLR	Kul'dur	24.70	277	P	P	05 47 27.2	+0.4
	comp=N,0.3nm,0.3s,baz=116,slow=13,SNR=2.9						
DOT	Dot Lake	25.19	48	P	P	05 47 31.5	+0.3

MENT	**Mentasta**	**25.32**	**49**	P	**P**	**05 47 31.3**	**-1.0**
BMAR	**Burnt Mountain**	**25.48**	**39**	P	**P**	**05 47 34.4**	**+0.5**
H11N2	**WAKE ISLAND Hy**	**33.55**	**187**	T	T	06 23 57.5	
	baz=4.9,slow=76,SNR=61						
H11N3	**WAKE ISLAND Hy**	**33.56**	**187**	T	T	06 24 01.7	
	baz=4.9,slow=76,SNR=20						
H11N1	**WAKE ISLAND Hy**	**33.56**	**187**	T	T	06 24 02.1	
	baz=4.9,slow=76,SNR=25						
H11S1	**WAKE ISLAND Hy**	**34.77**	**187**	T	T	06 25 44.7	
	baz=4.9,slow=76,SNR=93						
H11S3	**WAKE ISLAND Hy**	**34.79**	**187**	T	T	06 25 34.4	
	baz=4.9,slow=76,SNR=61						
H11S2	**WAKE ISLAND Hy**	**34.79**	**187**	T	T	06 25 34.5	
	baz=4.9,slow=76,SNR=53						
PDAR	**Pinedale Array**	**51.56**	**68**	P	**P**	**05 51 11.8**	**-0.3**
	comp=N,0.4nm,0.6s,baz=317,slow=2.2,SNR=4.8						
MKAR	**Makanchi Array**	**53.88**	**302**	P	**P**	**05 51 28.3**	**-0.6**
	comp=N,0.1nm,0.5s,baz=46,slow=6.2,SNR=3.0						
TXAR	**Lajitas Array**	**64.40**	**75**	P	**P**	**05 52 42.0**	**+0.1**
	comp=N,0.2nm,0.4s,baz=304,slow=4.7,SNR=4.4						

IDC 12 05:49:43.5±2.2**, 0°.69N×91°.80E, h0^{km}, mb3.4**/3**, mb1 3.8**/4**, mb1mx3.3**/51**, mbtmp3.7**/4**, ML4.4**/1**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.6**/23**, Error ellipse: s-maj=72.6km s-min=29.2km az=49.0, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	**Pallekele**	**12.85**	**301**	Pn	Pn	05 52 46.5	-1.2
	2.1nm,0.3s,baz=121,slow=12,SNR=6.3						
PALK				LR	LR	05 56 22.7	
	comp=Z,75nm,19.0s,baz=26,slow=31						
WRA	**Warramunga Arr**	**46.45**	**119**	P	P	05 58 12.4	-0.2
	0.9nm,0.6s,baz=295,slow=8.9,SNR=6.1						
MKAR	**Makanchi Array**	**46.66**	**351**	P	P	05 58 14.5	+0.7
	0.1nm,0.4s,baz=176,slow=10,SNR=3.2						
SONM	**Songino Array**	**48.64**	**13**	P	P	05 58 28.7	-0.6
	0.3nm,0.6s,baz=208,slow=8.6,SNR=2.6						
TXAR	**Lajitas Array**	**146.68**	**25**	PKPbc	PKPdf	06 09 27.3	+0.7
	0.1nm,0.4s,baz=286,slow=0.7,SNR=3.6						

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*KRNET **12** 06:01:38.7±0.1, 41°.29N×70°.39E, h30^{km}, mb2.3*
*SOME **12** 06:01:38.2, 40°.92N×70°.78E, h5^{km}*
*NNC **12** 06:01:39.5±3.9, 40°.93N×70°.80E, h0^{km}, mb3.0, mpv3.0, Error ellipse: s-maj=27.9km s-min=14.3km az=12.0*
ISC 12 06:01:42.4±1.5**, 41°.11N**±0°.05×**70°.78E**±0°.04**, h8**^{km}±12^{km}**, n14, σ1^{s}.23**/25**, 8C-7D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	**Batken**	**1.05**	**178**	⇓*i*P	**Pg**	**06 02 02.3**	**-0.2**
	baz=65						
BTK				⇓*i*S	**Sn**	**06 02 19.2**	**+0.8**
	baz=65						
ARK	**Arkit**	**1.12**	**52**	⇑*i*P	**Pb**	**06 02 02.3**	**-1.8**
	baz=67						
ARK				⇑*i*S	**Sn**	**06 02 19.9**	**-0.4**
	baz=67						
IUG	**Iuzhnay**	**1.18**	**332**	*e*P	**Pn**	**06 02 04.2**	**-1.0**
	3.6nm,0.1s						
IUG				*e*S	**Sn**	**06 02 23.0**	**+1.4**
	35nm,0.2s						
IUG	**Iuzhnay**	**1.18**	**332**	P	**Pn**	**06 02 04.2**	**-1.0**
	3.6nm,0.1s						
IUG				S	**Sn**	**06 02 23.0**	**+1.4**
	35nm,0.2s						
ARSB	**Arslanbob**	**1.68**	**82**	⇑*e*P	**Pb**	**06 02 13.2**	**-0.3**
	baz=88						
ARSB				⇑*i*S	**Sg**	**06 02 38.4**	**+2.2**
	baz=88						
KK31	**Karatay Array**	**2.00**	**354**	Pg	**Pb**	**06 02 19.7**	**+0.6**
	0.7nm,0.3s,baz=180,slow=19,SNR=18						
KK31				⇓Lg	Lg	06 02 49.6	
	0.5nm,0.2s,baz=170,slow=26,SNR=5.0						
BRLS	**Borolday**	**2.04**	**340**	*e*P	**Pn**	**06 02 16.7**	**-0.4**
	4.3nm,0.2s						
BRLS				*e*S	**Sn**	**06 02 44.3**	**+1.5**
	5.1nm,0.2s						
BRLS	**Borolday**	**2.04**	**340**	Pg	**Pn**	**06 02 16.7**	**-0.4**
	4.3nm,0.2s						
BRLS				Lg	Lg	06 02 44.3	
	5.1nm,0.2s						
AML	**Almayashu**	**2.41**	**64**	⇓*i*P	**Pn**	**06 02 22.7**	**+0.2**
	baz=70						
AML				⇓*i*S	**Sb**	**06 02 54.9**	**-1.4**
	baz=70						
MRKS	**Merke**	**2.45**	**47**	*e*P	**Pb**	**06 02 26.6**	**-0.1**
	1.1nm,0.1s						
MRKS				*e*S	**Sg**	**06 03 01.5**	**+0.4**
	1.9nm,0.3s						
MRKS	**Merke**	**2.45**	**47**	Pg	**Pb**	**06 02 26.6**	**-0.1**
	2.1nm,0.3s						
MRKS				Lg	Lg	06 03 01.5	
	2.9nm,0.5s						
EKS2	**Erkin-Say**	**2.72**	**54**	⇓*i*P	**Pn**	**06 02 25.8**	**-0.7**
	baz=60						
EKS2				⇓*i*S	**Sn**	**06 03 00.5**	**+0.8**
	baz=60						
ARLS	**Aral**	**2.77**	**73**	⇑*i*P	**Pn**	**06 02 28.0**	**+0.9**
	baz=78						
ARLS				⇑*i*S	**Sb**	**06 03 04.1**	**-2.2**
	baz=78						
UCH	**Uchtor**	**3.01**	**67**	⇑*i*P	**Pn**	**06 02 31.1**	**+0.3**
	baz=72						
UCH				⇑*i*S	**Sn**	**06 03 09.5**	**+2.2**
	baz=72						

BEO 12 06:11:13.6±0.2**, 43°.65N×21°.09E, h0^{km}, ML1.3**/5**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRUS	**Gruza**	**0.36**	**312**	*e*Sg	Sg	06 11 23.6	-1.7
SELS	**Selova**	**0.43**	**177**	*e*Pg	Pg	06 11 20.6	-1.1
SELS				*e*Sg	Sg	06 11 27.9	+0.7
BOVS	**Bovan**	**0.45**	**91**	*e*Pg	Pg	06 11 20.7	-1.4
BOVS				*e*Sg	Sg	06 11 27.0	-0.9
IVAS	**Ivanjica**	**0.69**	**265**	*e*Pg	Pg	06 11 24.4	-2.3
IVAS				*e*Sg	Sg	06 11 34.5	-1.1
TRUS	**Trudelj**	**0.76**	**320**	*e*Pg	Pg	06 11 26.9	-1.3
TRUS				*e*Sg	Sg	06 11 39.1	+1.0
ZAGS	**Zajecar**	**0.84**	**78**	*e*Sg	Pg	06 11 29.1	-0.7
ZAGS	**Zajecar**	**0.84**	**78**	*e*Pg	Sg	06 11 40.7	0.0
SJES	**Sjenica**	**0.90**	**245**	*e*Pg	Pg	06 11 29.4	-1.4
SJES				*e*Sg	Sg	06 11 43.3	+0.8
DIVS	**Divibare**	**0.92**	**300**	*e*Pg	Pg	06 11 30.6	-0.5
DIVS				*e*Sg	Sg	06 11 43.9	+0.9
ZAPS	**Zavoj**	**1.18**	**108**	*e*Pg	Pg	06 11 35.7	-0.6
ZAPS				*e*Sg	Sg	06 11 51.6	0.0
BOSS	**Bosilegrad**	**1.53**	**138**	*e*Pg	Pn	06 11 41.4	-0.9
BOSS				*e*Sg	Sg	06 12 01.8	-1.1

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*STR **12** 06:11:56.2±0.7, 44°N±2°×1°0E±°, h19^{km}±6^{km}, mb3.6/1, MLv2.9/6*
*GEN **12** 06:11:57.9, 44°.68N×9°.56E, h5^{km}±2^{km}, Ml2.6*
*ROM **12** 06:11:57.9±0.1, 44°.634N±0°.008×9°.513E±0°.009, h8^{km}±1^{km}, ML2.6/38, Error ellipse: s-maj=0.7km s-min=0.7km az=219.0*
*LDG **12** 06:11:57.9±0.1, 44°.68N×9°.55E, h5^{km}, Ml2.8/40, Error ellipse: s-maj=1.4km s-min=1.0km az=34.0*
ISC 12 06:11:57.7±0.8**, 44°.67N**±0°.02×**9°.46E**±0°.01**, h20**^{km}±2^{km}**, n126, σ1^{s}.60**/192**, 3C-2D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOB	**Bobbio (Coli)**	**0.10**	**354**	⇓P	**Pb**	**06 12 00.9**	**-0.8**
BOB				S	**Sg**	**06 12 03.4**	**-1.0**
BOB				AML	AML		
	comp=N,15400µm,1.3s						
BOB				AML	AML		
	comp=E,13550µm,0.6s						
BOB				AML	AML		
	comp=N,19150µm,1.3s						
BOB				AML	AML		
	comp=E,15300µm,0.6s						
BOB				AML	AML		
	comp=E,15300µm,0.6s						
BOB				AML	AML		
	comp=N,19150µm,1.3s						
BOB				AML	AML		
	comp=N,15400µm,1.3s						
GORR	**Gorreto**	**0.14**	**242**	⇑*i*P	**Pg**	**06 12 02.3**	**+0.2**
GORR				S	**Sg**	**06 12 05.6**	**+0.6**
GORR				AML	AML		
	comp=N,7820µm,1.5s						
GORR				AML	AML		
	comp=E,7450µm,0.5s						
GORR	**Gorreto**	**0.14**	**242**	P	**Pg**	**06 12 02.3**	**+0.2**
GORR				S	**Sg**	**06 12 05.6**	**+0.6**
MSSA	**Maissana**	**0.36**	**173**	⇑P	**Pg**	**06 12 04.8**	**-0.6**
MSSA				S	**Sb**	**06 12 10.2**	**-0.5**
MSSA				AML	AML		
	comp=N,919µm,0.2s						
MSSA				AML	AML		
	comp=N,920µm,0.2s						
MSSA				AML	AML		
	comp=E,1085µm,0.4s						
MSSA				AML	AML		
	comp=N,918µm,0.2s						
GRAM	**Graiana**	**0.47**	**112**	⇑P	**Pg**	**06 12 06.2**	**-1.1**
GRAM				S	**Sg**	**06 12 13.1**	**-0.7**
GRAM				AML	AML		
	comp=E,1210µm,0.3s						
GRAM				AML	AML		
	comp=N,1148µm,0.2s						
GRAM	**Graiana**	**0.47**	**112**	P	**Pg**	**06 12 06.2**	**-1.1**
GRAM				S	**Sg**	**06 12 11.6**	**-2.2**
CTL8	**Castelleone**	**0.64**	**19**	AML	AML		
	comp=N,2755µm,0.6s						
CTL8				AML	AML		
	comp=E,702µm,1.4s						
CTL8				AML	AML		
	comp=N,654µm,0.6s						
CTL8				AML	AML		
	comp=E,1965µm,0.3s						
CTL8				AML	AML		
	comp=E,702µm,1.4s						
PCP	**Piancastagn**	**0.67**	**259**	⇓P	**Pn**	**06 12 11.7**	**-0.5**
PCP				AML	AML		
	comp=N,500µm,0.2s						
PCP				AML	AML		
	comp=E,270µm,0.2s						
PCP				AML	AML		
	comp=N,501µm,0.2s						
PCP				AML	AML		
	comp=E,271µm,0.2s						
PCP	**Piancastagn**	**0.67**	**259**	P	**Pn**	**06 12 11.6**	**-0.5**
PCP				S	**Sn**	**06 12 21.9**	**-0.1**
PLMA	**Palmaria, Port**	**0.68**	**156**	P	**Pb**	**06 12 10.2**	**-0.7**
PLMA				AML	AML		
	comp=E,375µm,0.3s						
PLMA				AML	AML		
	comp=E,374µm,0.3s						
PLMA				AML	AML		
	comp=N,414µm,0.2s						
EQUI	**Equi**	**0.71**	**135**	P	**Pb**	**06 12 10.3**	**-1.1**
EQUI				S	**Sb**	**06 12 20.2**	**-0.5**
EQUI				AML	AML		
	comp=E,198µm,0.3s						
EQUI				AML	AML		
	comp=N,410µm,0.3s						
EQUI	**Equi**	**0.71**	**135**	P	**Pb**	**06 12 10.3**	**-1.1**
EQUI				S	**Sb**	**06 12 19.6**	**-1.1**
ERBM	**Eremo**	**0.73**	**110**	P	**Pb**	**06 12 11.6**	**-0.1**
ERBM				AML	AML		
	comp=E,156µm,0.8s						
ERBM				AML	AML		
	comp=N,230µm,0.7s						
ERBM				AML	AML		
	comp=E,156µm,0.8s						
ERBM				AML	AML		
	comp=N,230µm,0.7s						
ROTM	**Rocchetta Tana**	**0.81**	**283**	AML	AML		
	comp=N,1180µm,0.4s						
ROTM				AML	AML		
	comp=N,1175µm,0.4s						
ROTM				AML	AML		
	comp=E,812µm,0.7s						
SARO	**Sassorosso**	**0.83**	**126**	P	**Pb**	**06 12 12.8**	**-0.7**
SARO				S	**Sb**	**06 12 24.5**	**+0.2**
SARO				AML	AML		
	comp=E,168µm,0.5s						
SARO				AML	AML		
	comp=N,152µm,0.5s						
SARO				AML	AML		
	comp=N,152µm,0.5s						
SARO	**Sassorosso**	**0.83**	**126**	P	**Pb**	**06 12 12.8**	**-0.7**
SARO				S	**Sb**	**06 12 23.0**	**-1.3**
VLC	**Villacollemand**	**0.84**	**127**	P	**Pb**	**06 12 12.7**	**-0.9**
VLC				S	**Sb**	**06 12 24.6**	**+0.2**
VLC				AML	AML		
	comp=E,151µm,0.5s						
VLC				AML	AML		
	comp=E,151µm,0.5s						
VLC				AML	AML		
	comp=N,146µm,1.2s						
VLC				AML	AML		
	comp=E,147µm,0.6s						
VLC				AML	AML		
	comp=N,137µm,0.5s						
QLNO	**Quiliano**	**0.87**	**247**	P	**Pn**	**06 12 15.6**	**+0.7**
QLNO				S	**Sn**	**06 12 28.0**	**+1.0**
QLNO				AML	AML		
	comp=E,189µm,0.2s						
QLNO				AML	AML		
	comp=N,225µm,0.4s						
QLNO				AML	AML		
	comp=E,190µm,0.2s						
FINB	**Finale Ligure**	**0.95**	**239**	P	**Pb**	**06 12 15.3**	**-0.2**
FINB				AML	AML		
	comp=E,450µm,0.4s						
FINB				AML	AML		
	comp=N,409µm,0.3s						
CARD	**Cardoso**	**0.98**	**131**	P	**Pb**	**06 12 15.8**	**-0.1**
CARD				AML	AML		
	comp=E,432µm,0.4s						
CARD				AML	AML		
	comp=N,546µm,0.5s						
CARD				AML	AML		
	comp=N,545µm,0.5s						
CARD				AML	AML		
	comp=E,431µm,0.4s						
CARD	**Cardoso**	**0.98**	**131**	P	**Pb**	**06 12 15.4**	**-0.6**
CARD				S	**Sb**	**06 12 27.8**	**-0.7**
BDI	**Bagni Di Lucca**	**1.02**	**126**	P	**Pb**	**06 12 16.2**	**-0.5**
BDI				AML	AML		
	comp=N,371µm,0.7s						
BDI				AML	AML		
	comp=E,328µm,1.6s						
BDI				AML	AML		
	comp=N,387µm,1.6s						
BDI				AML	AML		
	comp=E,386µm,1.5s						
MAIM	**Mastiano**	**1.06**	**135**	P	**Pg**	**06 12 17.9**	**-0.3**
MAIM				S	**Sb**	**06 12 30.2**	**-0.6**
MDI	**Monti di Nese**	**1.12**	**9**	P	**Pg**	**06 12 20.3**	**+0.8**
MDI				AML	AML		
	comp=E,848µm,0.5s						
MDI				AML	AML		
	comp=N,902µm,0.5s						
MDI				AML	AML		
	comp=E,917µm,0.5s						
MDI				AML	AML		
	comp=N,895µm,0.4s						
MDI				AML	AML		
	comp=N,894µm,0.4s						
MDI				AML	AML		
	comp=E,918µm,0.5s						
POPM	**Popiglio**	**1.12**	**124**	P	**Pb**	**06 12 18.7**	**+0.3**
POPM				AML	AML		
	comp=N,317µm,0.6s						
POPM				AML	AML		
	comp=E,274µm,0.8s						
ZCCA	**Zocca**	**1.13**	**106**	AML	AML		
	comp=E,157µm,0.4s						
ZCCA				AML	AML		
	comp=N,170µm,1.1s						
ZCCA				AML	AML		
	comp=E,156µm,0.4s						
RORO	**Rocca Rossa**	**1.15**	**241**	P	**Pg**	**06 12 19.3**	**-0.6**
RORO				AML	AML		
	comp=N,172µm,1.4s						
RORO				AML	AML		
	comp=N,172µm,1.4s						
RORO				AML	AML		
	comp=E,191µm,0.8s						
RORO	**Rocca Rossa**	**1.15**	**241**	P	**Pg**	**06 12 19.1**	**-0.8**
RORO				S	**Sg**	**06 12 34.9**	**0.0**
MONC	**Moncucco Torin**	**1.16**	**291**	AML	AML		
	comp=N,372µm,0.4s						
MONC				AML	AML		
	comp=E,300µm,1.2s						
MONC				AML	AML		
	comp=N,373µm,0.4s						
SALO	**Salr**	**1.21**	**38**	P	**Pg**	**06 12 21.3**	**+0.1**
SALO				AML	AML		
	comp=E,340µm,0.7s						
SALO				AML	AML		
	comp=N,532µm,0.6s						
SALO				AML	AML		
	comp=N,514µm,0.6s						
SALO				AML	AML		
	comp=E,386µm,1.6s						
PII	**Pisa**	**1.22**	**141**	P	**Pb**	**06 12 19.6**	**-0.4**
PII				AML	AML		
	comp=N,299µm,1.5s						
PII				AML	AML		
	comp=E,336µm,1.4s						
PII				AML	AML		
	comp=N,300µm,1.5s						
GBOS	**Grotte di Boss**	**1.24**	**250**	P	**Pg**	**06 12 21.3**	**-0.3**
GBOS				S	**Sg**	**06 12 37.8**	**-0.1**
GBOS				AML	AML		
	comp=N,138µm,0.4s						
GBOS				AML	AML		
	comp=E,93µm,0.5s						
GBOS	**Grotte di Boss**	**1.24**	**250**	P	**Pg**	**06 12 21.2**	**-0.5**
GBOS				S	**Sg**	**06 12 37.7**	**-0.2**
MUGIO	**Muggio**	**1.28**	**347**	P	**Pg**	**06 12 22.7**	**+0.1**
MUGIO				AML	AML		
	comp=E,218µm,0.4s						
MUGIO				AML	AML		
	comp=N,228µm,0.5s						
IMI	**Imperia**	**1.36**	**237**	P	**Pb**	**06 12 22.4**	**-0.1**
IMI				AML	AML		
	comp=E,155µm,0.8s						
IMI				AML	AML		
	comp=N,265µm,0.8s						
IMI				AML	AML		
	comp=E,155µm,0.8s						
IMI				AML	AML		
	comp=N,266µm,0.8s						
MAGA	**Magasa**	**1.38**	**36**	P	**Pb**	**06 12 23.3**	**+0.4**
MAGA				AML	AML		
	comp=E,994µm,1.6s						
MAGA				AML	AML		
	comp=N,622µm,0.4s						
MAGA				AML	AML		
	comp=N,622µm,0.4s						
MAGA				AML	AML		
	comp=E,993µm,1.6s						
TRAV	**Traversella**	**1.48**	**305**	P	**Pg**	**06 12 25.7**	**-0.5**
TRAV				AML	AML		
	comp=N,167µm,0.3s						
TRAV				AML	AML		
	comp=E,131µm,0.3s						
NEGI	**Seborga**	**1.51**	**238**	P	**Pb**	**06 12 24.9**	**-0.2**
NEGI				AML	AML		
	comp=E,131µm,1.6s						
NEGI				AML	AML		
	comp=N,126µm,0.5s						
NEGI				AML	AML		
	comp=E,130µm,1.6s						
ENR	**Entracque**	**1.53**	**254**	P	**Pb**	**06 12 25.7**	**+0.3**
ENR				AML	AML		
	comp=N,210µm,0.5s						
ENR				AML	AML		
	comp=E,142µm,1.6s						
ENR				AML	AML		
	comp=N,210µm,0.5s						
SAOF	**Saorge**	**1.53**	**244**	Pn	**Pb**	**06 12 25.5**	**+0.1**
SAOF				Sg	**Sb**	**06 12 44.8**	**+0.4**
SAOF	**Saorge**	**1.53**	**244**	P	**Pb**	**06 12 25.3**	**-0.1**
SAOF				AML	AML		
	comp=E,116µm,0.7s						
SAOF				AML	AML		
	comp=N,116µm,0.7s						
DOI	**San Damiano**	**1.59**	**265**	P	**Pg**	**06 12 27.4**	**-0.9**
DOI				AML	AML		
	comp=E,511µm,0.5s						
DOI				AML	AML		
	comp=N,352µm,0.5s						
CIRO	**Champorcher**	**1.63**	**305**	P	**Pb**	**06 12 27.4**	**+0.1**
CIRO				AML	AML		
	comp=E,68µm,0.6s						
CIRO				AML	AML		
	comp=N,70µm,1.6s						
RSP	**Reno Superiore**	**1.63**	**288**	P	**Pb**	**06 12 27.6**	**+0.4**
RSP				AML	AML		
	comp=E,79µm,0.9s						
RSP				AML	AML		
	comp=N,76µm,1.2s						
TURF	**col de Turini**	**1.64**	**246**	Pn	**Pb**	**06 12 26.6**	**-0.8**
TURF				Sn	**Sb**	**06 12 48.0**	**+0.3**
SBF	**Sospel**	**1.67**	**242**	*e*Pn	**Pb**	**06 12 27.0**	**-0.7**
SBF				*e*Sn	**Sb**	**06 12 48.0**	**-0.3**
SBF				*e*Sg	**Sg**	**06 12 52.4**	**+0.9**
	comp=N,100nm,0.4s						
ESCA	**l'Escarene**	**1.72**	**241**	Pn	**Pb**	**06 12 28.3**	**-0.3**
ISO	**Isola**	**1.79**	**255**	Pn	**Pg**	**06 12 30.9**	**-1.3**
ISO				Sg	**Sb**	**06 12 52.6**	**+0.6**
LSD	**Lago del Serru**	**1.83**	**296**	P	**Pb**	**06 12 30.4**	**-0.2**
LSD				AML	AML		
	comp=E,43µm,1.2s						
LSD				AML	AML		
	comp=N,37µm,0.5s						
SURF	**Saint Ours**	**1.90**	**265**	Pn	**Pb**	**06 12 32.3**	**+0.4**
RRL	**Rocca Remolon**	**1.92**	**278**	P	**Pb**	**06 12 32.9**	**+0.8**
RRL				AML	AML		
	comp=N,74µm,0.8s						
RRL				AML	AML		
	comp=E,65µm,0.7s						
MBDF	**Montbardon**	**1.92**	**273**	*e*P	**Pb**	**06 12 32.3**	**+0.2**
MBDF	**Montbardon**	**1.92**	**273**	*e*Pg	**Pg**	**06 12 35.3**	**+0.7**
MBDF				*e*Sn	**Sb**	**06 12 54.2**	**-1.5**
	comp=E,5.1nm,0.2s						
MBDF				*e*Sg	**Sg**	**06 13 00.8**	**+1.2**
	comp=E,32nm,0.3s						
REMY	**Saint-Rhmy-en**	**2.00**	**306**	AML	AML		
	comp=E,100µm,0.5s						
REMY				AML	AML		
	comp=N,133µm,1.5s						
CALF	**Calern**	**2.04**	**244**	Pn	**Pb**	**06 12 33.1**	**-1.1**
CALF				Sn	**Sb**	**06 12 58.7**	**-0.5**
LPG	**La Plagne**	**2.09**	**294**	*e*P	**Pb**	**06 12 35.0**	**-0.1**
LPG	**La Plagne**	**2.09**	**294**	*e*Pg	**Pg**	**06 12 38.2**	**+0.3**
LPG				*e*Sn	**Sn**	**06 12 58.3**	**+0.8**
	comp=N,10nm,0.4s						
LPG				*e*Sg	**Sg**	**06 13 06.0**	**+0.9**
	comp=N,13nm,0.4s						
MOSI	**Grossmontoni**	**2.09**	**21**	AML	AML		
	comp=N,196µm,0.5s						
MOSI				AML	AML		
	comp=E,187µm,0.9s						
OGAG	**Argentiere**	**2.10**	**265**	Pg	**Pg**	**06 12 36.7**	**-1.3**
LPL	**La Plagne**	**2.11**	**295**	*e*P	**Pb**	**06 12 35.3**	**-0.1**
LPL	**La Plagne**	**2.11**	**295**	*e*Pg	**Pg**	**06 12 38.7**	**+0.5**
LPL				*e*Sn	**Sn**	**06 12 58.6**	**+0.7**
	comp=E,11nm,0.4s						
LPL				*e*Sg	**Sg**	**06 13 06.4**	**+0.7**
	comp=E,24nm,0.5s						
PGF	**Pioggiola**	**2.15**	**189**	*e*Pn	**Pn**	**06 12 33.2**	**+0.7**
PGF				*e*Sn	**Sn**	**06 12 58.4**	**-0.3**
	comp=E,8.5nm,0.3s						
RSL	**Roselend**	**2.25**	**298**	Pn	**Pb**	**06 12 38.7**	**+0.9**
RSL				Sn	**Sg**	**06 13 10.8**	**+0.7**
FRF	**La Foret Royal**	**2.31**	**242**	*e*Pn	**Pn**	**06 12 35.7**	**+1.0**
FRF	**La Foret Royal**	**2.31**	**242**	*e*Pg	**Pg**	**06 12 42.4**	**+0.3**
FRF				*e*Sn	**Sn**	**06 13 03.7**	**+1.2**
	comp=E,18nm,0.3s						
FRF				*e*Sg	**Sg**	**06 13 12.8**	**+0.8**
	comp=E,18nm,0.3s						
BNALP	**Bannalp**	**2.32**	**342**	AML	AML		
	comp=N,50µm,1.1s						
BNALP				AML	AML		
	comp=E,47µm,0.5s						
OGDI	**Digne**	**2.33**	**257**	Pn	**Pb**	**06 12 39.6**	**+0.5**
PLONS	**Plons/SG**	**2.38**	**359**	AML	AML		
	comp=E,58µm,0.5s						
PLONS				AML	AML		
	comp=N,52µm,0.5s						
FETA	**Feichten**	**2.51**	**20**	*e*Pn	**Pb**	**06 12 41.9**	**-0.3**
	comp=N,0.2nm,0.1s						

FETA				Sn	Sb	06 13 12.1	-0.6
	comp=N,6.2nm,0.4s						
LMR	La Mourre	2.52	239	ePn	Pn	06 12 38.4	+1.0
LMR	La Mourre	2.52	239	eP	Pb	06 12 41.0	-1.2
LMR	La Mourre	2.52	239	ePg	Pg	06 12 45.7	-0.2
LMR				eSn	Sn	06 13 08.1	+0.6
	comp=N,14nm,0.2s						
BLAF	les Blancs	2.56	255	Pn	Pb	06 12 40.6	-2.3
BLAF				Sn	Sb	06 13 12.9	-1.0
ORIF	Oris-en-Rattie	2.56	277	eP	Pb	06 12 41.8	-1.2
ORIF				eSn	Sn	06 13 09.6	+0.8
	comp=N,8.4nm,0.3s						
ORIF				eSg	Sg	06 13 20.4	+0.3
	comp=N,16nm,0.3s						
SMPL	Sampolo	2.58	183	Pg	Pn	06 12 40.0	+1.6
SMPL				Sg	Sn	06 13 11.1	+2.0
DAVA	Damuels	2.63	6	ePn	Pb	06 12 43.1	-1.2
	comp=N,1.5nm,0.1s						
DAVA				Sn	Sb	06 13 15.7	-0.5
	comp=N,7.4nm,0.2s						
MLYF	Mely	2.74	257	Pn	Pb	06 12 44.2	-1.9
MLYF				Sn	Sn	06 13 15.3	+2.2
OGSM	Saint Maurice	2.82	291	Pn	Pb	06 12 46.4	-1.0
OGSM				Sn	Sb	06 13 21.5	-0.1
SQTA	Sankt Quirin	2.83	25	Pn	Pb	06 12 45.5	-2.0
	comp=N,1.9nm,0.2s						
SQTA				Sn	Sb	06 13 20.5	-1.3
	comp=N,15nm,0.4s						
ARTF	Artigues	2.85	249	Pn	Pn	06 12 44.1	+2.0
ARTF				Sn	Sn	06 13 18.1	+2.3
BSTF	la Bastide-des	2.85	255	Pn	Pb	06 12 45.5	-2.5
BSTF				Sn	Sb	06 13 19.5	-3.0
SMRF	Simiane la Rot	2.87	257	eP	Pb	06 12 45.6	-2.7
SMRF				eSn	Sn	06 13 17.7	+1.2
	comp=N,10nm,0.3s						
SMRF				eSg	Sg	06 13 30.6	+0.5
	comp=N,11nm,0.4s						
MOTA	Moosalm	2.91	23	ePn	Pb	06 12 47.2	-1.8
	comp=N,0.6nm,0.1s						
MOTA				Sn	Sb	06 13 22.9	-1.3
	comp=N,13nm,0.5s						
GIMEL	St. Georges /	2.92	311	Pn	Pb	06 12 47.4	-1.7
RISI	Rein	2.92	38	AML	AML		
	comp=N,177µm,0.4s						
RISI				AML	AML		
	comp=E,98µm,0.5s						
BALST	Balsthal	2.94	336	Pn	Pb	06 12 47.2	-2.2
RETA	Reutte	2.96	17	i Pn	Pb	06 12 47.2	-2.6
	comp=E,0.7nm,0.1s						
RETA				eSn	Sb	06 13 23.9	-1.7
	comp=E,8.0nm,0.2s						
ABTA	Abfaltersbach	2.98	45	ePn	Pn	06 12 46.7	+2.7
	comp=E,0.6nm,0.2s						
ABTA				Sn	Sn	06 13 22.3	+3.1
	comp=E,5.6nm,0.3s						
WTTA	Wattenberg	3.00	30	i Pn	Pb	06 12 48.4	-2.3
	comp=E,0.9nm,0.2s						
WTTA				eSn	Sb	06 13 25.2	-1.8
	comp=E,9.5nm,0.5s						
SULZ	Cheisacher	3.01	342	Pn	Pn	06 12 47.1	+2.9
ASEAF	Site Antares,	3.04	233	Pn	Pn	06 12 45.7	+1.4
ASEAF				Sn	Sn	06 13 20.2	+0.3
CABF	La Chapelle	3.06	311	eP	Pb	06 12 48.7	-2.8
CABF				eSn	Sn	06 13 21.3	+0.2
	comp=E,5.4nm,0.3s						
CABF				eSg	Sg	06 13 36.0	0.0
	comp=E,3.4nm,0.3s						
OG35	Corcelles	3.07	298	Pn	Pb	06 12 49.2	-2.5
OG35				Sn	Sb	06 13 28.4	-0.3
BRANT	Les Verrieres	3.08	318	Pn	Pb	06 12 49.2	-2.7
CHMF	Charmoille	3.24	324	Pn	Pn	06 12 50.9	+3.4
VIVF	Saint-Julien-l	3.42	275	ePn	Pn	06 12 50.6	+0.7
VIVF	Saint-Julien-l	3.42	275	eP	Pb	06 12 54.6	-2.9
VIVF				eSn	Sn	06 13 29.7	-0.1
	comp=E,2.7nm,0.2s						
VIVF				eSg	Sg	06 13 46.8	-0.6
	comp=E,2.8nm,0.3s						
KIZ	Kirchzarten	3.46	343	Pn	Pn	06 12 52.5	+2.1
SSB	Saint Sauveur	3.54	282	Pn	Pn	06 12 55.5	+3.8
HINF	Hinteralfeld	3.63	331	eP	Pn	06 12 55.9	+3.1
HINF				eSn	Sn	06 13 34.3	-0.8
	comp=E,2.8nm,0.2s						
ECH	Echery	3.89	337	Pn	Pn	06 12 58.8	+2.5
HAU	Haudompre	3.97	328	eP	Pn	06 13 00.6	+3.1
HAU				eSn	Sn	06 13 42.3	-1.2
	comp=E,27nm,0.4s						
WLS	Welschbruch	4.02	340	Pn	Pn	06 13 00.8	+2.7
OBKA	Obir	4.02	61	ePn	Pn	06 13 01.4	+3.2
	comp=E,0.8nm,0.2s						
OBKA				Sg	Sg	06 14 07.5	+0.8
	comp=E,5.3nm,0.5s						
CDF	Champ du Feu	4.03	339	eP	Pn	06 13 00.7	+2.3
CDF				eSn	Sn	06 13 46.6	+1.5
	comp=E,4.6nm,0.4s						
LASF	Ste Croix	4.06	264	ePn	Pn	06 13 01.0	+2.3
LASF				eSn	Sn	06 13 45.3	-0.4
	comp=E,3.9nm,0.4s						
SMF	Signal de Mont	4.41	299	eP	Pn	06 13 07.3	+3.8
SMF				eSn	Sn	06 13 53.1	-1.1
	comp=E,6.1nm,0.4s						
PAGF	Fort de Pagny	4.66	328	eP	Pn	06 13 10.8	+3.9
PAGF				eSn	Sn	06 13 58.8	-1.6
	comp=E,4.3nm,0.2s						
SFTF	Sexfontaines	4.67	321	eP	Pn	06 13 10.6	+3.5
SFTF				eSn	Sn	06 13 59.1	-1.7
	comp=E,4.4nm,0.3s						
SFTF				eSg	Sg	06 14 25.3	-2.3
	comp=E,3.4nm,0.3s						
LOR	Lormes	4.69	306	ePn	Pn	06 13 08.5	+1.1
	baz=124						
LOR				eSn	Sn	06 14 00.2	-1.0
	comp=E,5.5nm,0.3s						
LOR				eSg	Sg	06 14 26.3	-1.9
	comp=E,2.0nm,0.3s						
AVF	Avril sur Loir	4.77	299	ePn	Pn	06 13 08.9	+0.4
AVF	Avril sur Loir	4.77	299	eP	Pn	06 13 12.2	+3.7
AVF				eSn	Sn	06 14 02.0	-1.2
	comp=E,0.6nm,0.3s						
SSF	Saint Saulge	4.80	302	ePn	Pn	06 13 09.9	+1.1
SSF				eSn	Sn	06 14 02.8	-1.0
	comp=E,2.4nm,0.3s						
MEZF	Maizieres J'vi	4.89	323	eP	Pn	06 13 14.0	+3.9
BGF	Bois d'Agland	5.01	294	eP	Pn	06 13 15.4	+3.7
BGF				eSn	Sn	06 14 07.7	-1.4
	comp=E,12nm,0.5s						
CAF	Calviac	5.27	275	ePn	Pn	06 13 15.9	+0.5
CAF	Calviac	5.27	275	eP	Pn	06 13 20.0	+4.6
CAF				eSn	Sn	06 14 14.3	-1.2
	comp=E,1.3nm,0.3s						
KHC	Kasperske Hory	5.28	31	ePN	Pn	06 13 17.0	+1.5
KHC				eSN	Sn	06 14 14.0	-1.7
KHC				eSG	Sb	06 14 35.0	+2.8
TCF	Toulx Ste Croi	5.35	290	ePn	Pn	06 13 17.0	+0.6
TCF	Toulx Ste Croi	5.35	290	eP	Pn	06 13 21.8	+5.4
TCF				eSn	Sn	06 14 16.1	-1.4
	comp=E,1.9nm,0.3s						
MTLF	Montolieu	5.39	258	ePn	Pn	06 13 17.6	+0.6
MTLF	Montolieu	5.39	258	eP	Pn	06 13 21.5	+4.5
MTLF				eSn	Sn	06 14 16.9	-1.6
	comp=E,0.9nm,0.2s						
FNEB	Nbias	5.61	254	Pn	Pn	06 13 22.9	+2.9
BAIF	Baives	6.46	328	eSn	Sn	06 14 42.0	-2.8
	comp=E,2.3nm,0.4s						
MFF	Saint Martin d	7.01	289	eP	Pn	06 13 44.9	+5.8
ETSF	Etsaut	7.46	260	ePn	Pn	06 13 45.8	+0.3

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*IDC **12** 06:36:52.9±0.6, 19°.06N×146°.25E, h0^{km}, mb4.2/19, mb1 4.3/20, mb1mx4.2/40, mbtmp4.1/20, ML3.3/1, MS3.1/5, Ms1 3.1/5, ms1mx2.8/36, Error ellipse: s-maj=23.1km s-min=13.3km az=91.0*

*NEIC **12** 06:37:01.4±1.6, 19°.1N±0°.1×146°.15E±0°.08, h60^{km}±7^{km}, mb4.4/10, Error ellipse: s-maj=19.0km s-min=7.1km az=149.0*

ISC 12 06:37:06.6±0.6**, 19°.11N**±0°.10×**146°.1E**±0°.2**, h109^{km}, n47,** σ**0^{s}.96**/38**, mb4.0**/23**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	18.71	340	P	P	06 41 13.4	-3.1
	0.1nm,0.3s,baz=167,slow=11,SNR=4.8						
MJAR	Matsushiro Arr	18.71	340	P	P	06 41 15.4	-1.2
H11S3	WAKE ISLAND Hy	19.49	88	T	T	07 02 21.0	
	baz=274,slow=74,SNR=45						
H11S1	WAKE ISLAND Hy	19.50	88	T	T	07 02 21.0	
	baz=274,slow=74,SNR=18						
H11S2	WAKE ISLAND Hy	19.50	88	T	T	07 02 11.2	
	baz=274,slow=74,SNR=21						
H11N1	WAKE ISLAND Hy	19.61	85	T	T	07 02 30.4	
	baz=271,slow=75,SNR=10						
H11N2	WAKE ISLAND Hy	19.61	85	T	T	07 02 30.7	
	baz=271,slow=75,SNR=8.3						
H11N3	WAKE ISLAND Hy	19.63	85	T	T	07 02 30.3	
	baz=271,slow=75,SNR=7.4						
DAV	Davao City (W)	23.27	242	LR	LR	06 50 41.2	
	comp=Z,49nm,19.5s,baz=124,slow=36						
KRVT	Keravat (AS076	23.98	165	LR	LR	06 51 56.1	
	comp=Z,36nm,19.0s,baz=262,slow=38						
KSRS	Korea Array	24.23	323	P	P	06 42 12.9	-0.3
	9.3nm,0.9s,baz=146,slow=9.6,SNR=17						
KSRS				LR	LR	06 51 20.0	
	comp=Z,18nm,19.8s,baz=130,slow=36						
JKA	Kamikawa-asahi	25.11	354	P	P	06 42 21.4	+0.3
ASAJ	Asahikawa	25.11	354	P	P	06 42 21.4	+0.3
	1.4nm,0.3s,baz=198,slow=20,SNR=1.9						
USRK	Ussuriysk Ar.	27.67	338	P	P	06 42 43.5	-0.7
	0.8nm,0.6s,baz=229,slow=15,SNR=4.5						
KLR	Kul'dur	32.20	342	PcP	PcP	06 46 11.5	+1.2
	1.6nm,0.7s,baz=183,slow=2.6,SNR=7.0						
PETK	Petropavlovsk-	35.11	12	P	P	06 43 48.2	-1.1
	0.8nm,0.3s,baz=180,slow=3.7,SNR=4.6						
WRAB	Tennant Creek	40.48	197	P	P	06 44 36.4	+1.6
WRA	Warramunga Arr	40.49	197	P	P	06 44 33.8	-1.1
	2.4nm,0.5s,baz=21,slow=8.7,SNR=24						
WRA				PcP	PcP	06 46 35.9	+0.3
	0.6nm,0.5s,baz=13,slow=3.2,SNR=5.2						
WRA	Warramunga Arr	40.49	197	P	P	06 44 33.9	-1.0
SONM	Songino Array	43.07	321	P	P	06 44 56.5	+0.6
	1.1nm,0.4s,baz=126,slow=7.3,SNR=14						
SONM				LR	LR	07 02 13.1	
	comp=Z,88nm,19.1s,baz=193,slow=35						
SONM	Songino Array	43.07	321	P	P	06 44 56.5	+0.6
SEY	Seymchan	44.00	4	P	P	06 45 02.8	-0.1
	0.4nm,0.3s,baz=173,slow=5.9,SNR=7.7						
AS31	Alice Springs	44.15	196	P	P	06 45 05.5	+0.9
AS31				IAmb	IAmb	06 45 08.9	
	comp=Z,1.1nm,0.5s						
ASAR	Alice Springs	44.15	196	P	P	06 45 04.3	-0.3
	comp=Z,1.3nm,0.4s,baz=16,slow=7.0,SNR=34						
ASAR				PcP	PcP	06 46 47.7	-0.1
	comp=Z,0.3nm,0.5s,baz=33,slow=3.5,SNR=3.3						
CMAR	Chiang Mai Arr	44.56	277	LR	LR	07 02 16.0	
	comp=Z,11nm,20.4s,baz=180,slow=34						
STKA	Stephens Creek	50.88	185	P	P	06 45 55.2	-1.3
	comp=Z,1.0nm,0.3s,baz=6.8,slow=8.4,SNR=7.7						
STKA	Stephens Creek	50.88	185	IAmb	IAmb	06 45 55.4	
	comp=Z,0.8nm,1.1s						
ZALV	Zalesovo Beam	57.93	322	P	P	06 46 47.2	-0.2
	comp=Z,1.8nm,0.5s,baz=112,slow=5.0,SNR=7.5						
ZALV	Zalesovo Beam	57.93	322	P	P	06 46 46.6	-0.7
MKAR	Makanchi Array	58.47	314	P	P	06 46 51.3	+0.1
	comp=Z,0.5nm,0.5s,baz=89,slow=9.0,SNR=9.5						
MKAR				PcP	PcP	06 47 41.1	+0.4
	comp=Z,0.3nm,0.4s,baz=80,slow=3.5,SNR=6.6						
KURK	Kurchatov	61.23	318	P	P	06 47 10.2	+0.2
KURK				IAmb	IAmb	06 47 11.0	
	comp=Z,7.5nm,1.4s						
ILAR	Eielson Array	63.11	26	P	P	06 47 21.2	-1.2
	comp=Z,1.0nm,0.7s,baz=250,slow=5.9,SNR=9.1						
BMAR	Burnt Mountain	64.59	24	P	P	06 47 33.3	+1.3
BRVK	Borovoye	66.48	320	P	P	06 47 45.8	+1.4
BRVK				IAmb	IAmb	06 47 46.4	
	comp=Z,4.5nm,0.9s						
KKAR	Karatay Array	66.81	309	P	P	06 47 47.5	+0.8
INK	Inuvik	68.84	23	P	P	06 47 59.3	+0.3
	comp=Z,0.9nm,0.6s,baz=238,slow=4.4,SNR=6.1						
INK	Inuvik	68.84	23	IAmb	IAmb	06 48 00.1	
	comp=Z,1.8nm,0.7s						
ABKAR	Akbulak array	73.31	317	P	P	06 48 26.3	0.0
YKA	Yellowknife Ar	77.44	28	P	P	06 48 49.9	+0.2
	comp=Z,1.3nm,0.6s,baz=286,slow=5.3,SNR=28						
RES	Resolute Bay	78.94	14	IAmb	IAmb	06 49 03.2	
	comp=Z,6.1nm,0.5s						
ARCES	ARCESS Array B	82.23	342	P	P	06 49 16.1	+0.7
	comp=Z,8.9nm,1.0s,baz=64,slow=8.2,SNR=9.9						
NVAR	Mina Array Bea	82.58	52	P	P	06 49 18.6	+0.5
	comp=Z,1.4nm,0.7s,baz=260,slow=6.4,SNR=10						
FINES	FINESS Array B	86.68	335	P	P	06 49 37.5	-0.4
	comp=Z,3.0nm,0.4s,baz=70,slow=4.6,SNR=56						
PDAR	Pinedale Array	87.26	46	P	P	06 49 42.3	+0.8
	comp=Z,0.4nm,0.7s,baz=241,slow=1.9,SNR=3.0						
NOA	NORSAR Array B	92.33	340	P	P	06 50 04.5	0.0
	comp=Z,0.7nm,0.8s,baz=38,slow=4.5,SNR=2.3						
TORD	Torodi Ar. Bea	132.50	310	PKP	PKiKP	06 56 09.8	-0.5
	comp=Z,0.2nm,0.4s,baz=15,slow=2.8,SNR=3.2						
LPAZ	La Paz	147.29	91	PKPbc	PKPbc	06 56 37.9	-1.2
	comp=Z,1.6nm,0.6s,baz=212,slow=2.0,SNR=6.5						

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*TAP **12** 06:42:39.9, 24°.84N×122°.21E, h4^{km}±1^{km}, ML3.6, C*

*JMA **12** 06:42:39.4±0.1, 24°.81N×122°.24E, h47^{km}±4^{km}, M2.7*

ISC 12 06:42:36.8±1.2**, 24°.93N**±0°.04×**122°.31E**±0°.02**, h8^{km}**±10^{km}**, n73,** σ**0^{s}.81**/104**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.30	284	⇑ iP	Pb	06 42 44.6	+0.1
	baz=311						
TWB1				i S	Sb	06 42 48.3	-1.4
	baz=311						
EOS1	EOS1	0.42	204	eP	Pb	06 42 46.2	-0.2
	baz=194						
EOS1				eS	Sg	06 42 51.7	+1.3
	baz=194						
TIPB	Shuangxi	0.44	275	i P	Pb	06 42 47.0	+0.1
	baz=291						
TIPB				eS	Sg	06 42 52.1	+0.9
	baz=291						
NTC	Toucheng	0.45	260	eP	Pb	06 42 46.9	0.0
	baz=273						
NWF	Wu-fen Shan	0.50	286	i P	Pb	06 42 48.6	+0.6
	baz=301						
NWF				i S	Sb	06 42 54.7	-0.8
	baz=301						
WFSB	Wu-fen Shan	0.50	286	i P	Pb	06 42 48.6	+0.7
	baz=301						
WFSB				i S	Sb	06 42 54.7	-0.7
	baz=301						
TWC	Suao	0.53	233	i P	Pg	06 42 47.2	+0.2
	baz=234						
TWC				eS	Sg	06 42 52.5	-1.5
	baz=234						
TWE	Neicheng	0.62	250	i P	Pg	06 42 49.4	+0.5
	baz=256						
SLBB	Yuanshan	0.64	254	eP	Pg	06 42 49.7	+0.6
	baz=261						
TWA	Mucha	0.66	274	P	Pn	06 42 52.1	-0.5
	baz=284						
TWA				eS	Sb	06 43 00.6	+0.5
	baz=284						
YM08	YM08	0.70	291	P	Pn	06 42 52.6	-0.6
	baz=301						
YM01	YM01	0.71	288	P	Pn	06 42 52.7	-0.5
	baz=298						
YM11	YM11	0.71	289	P	Pn	06 42 52.9	-0.4
	baz=299						
NHDH	Xindian Distri	0.72	273	eP	Pn	06 42 52.9	-0.4
	baz=281						
NHDH				eS	Sb	06 43 02.0	+0.4
	baz=281						
YM10	YM10	0.72	288	eP	Pn	06 42 53.0	-0.4
	baz=298						
ENA	Nanau	0.72	226	P	Pg	06 42 50.8	0.0
	baz=225						
ENA				eS	Sg	06 42 58.9	-1.3
	baz=225						
TWY	Chenhua	0.73	298	P	Pn	06 42 53.5	0.0
	baz=308						
TWY				eS	Sb	06 43 03.1	+1.0
	baz=308						
YM04	YM04	0.74	287	eP	Pn	06 42 53.2	-0.4
	baz=297						
YM04				eS	Sb	06 43 02.9	+0.6
	baz=297						
ENTT	Nioudou	0.74	247	P	Pb	06 42 51.9	-0.1
	baz=251						
ENTT				eS	Sg	06 43 00.2	-0.5
	baz=251						
YM03	YM03	0.74	289	eP	Pn	06 42 53.6	-0.2
	baz=299						
JYNG	Yonagunijimaku	0.75	130	P	Pn	06 42 53.3	-0.4
JYNG				eS	Sb	06 43 04.1	+1.6
TATO	Taipei	0.75	273	eP	Pn	06 42 53.4	-0.4
	baz=281						
TATO				eS	Sb	06 43 02.5	-0.1
	baz=281						
NWLT	Wulai	0.75	258	eP	Pb	06 42 52.5	+0.3
	baz=264						
NWLT				eS	Sg	06 43 01.7	+0.6
	baz=264						
ANP	Anpu	0.76	290	eP	Pn	06 42 53.7	-0.3
	baz=299						
YOJ	Yonaguni jima	0.79	126	eP	Pn	06 42 54.5	+0.2
	baz=116						
YOJ				eS	Sb	06 43 05.2	+1.5
	baz=116						
YOJ	Yonaguni jima	0.79	126	P	Pn	06 42 54.3	0.0
YOJ				eS	Sb	06 43 04.8	+1.1
NDT	Datong Townshi	0.80	246	eP	Pb	06 42 53.0	0.0
	baz=249						
TWS1	Kuangyinshan	0.83	282	eP	Pn	06 42 55.7	+0.9
	baz=290						
YHNB	Yeheng	0.89	253	i P	Pb	06 42 54.6	0.0
	baz=257						
NSK	Sanguang	0.91	254	P	Pb	06 42 54.7	-0.2
	baz=258						
NSK				eS	Sg	06 43 05.4	-0.6
	baz=258						
WLTB	Daxi	0.97	265	eP	Pn	06 42 56.8	+0.1
	baz=271						
NNSB	Datong	0.98	239	i P	Pg	06 42 55.8	+0.1
	baz=241						
NNSB				eS	Sg	06 43 08.8	+0.3
	baz=241						
NNSH	Datong	0.98	239	eP	Pg	06 42 56.0	+0.3
	baz=241						
NNSH				S	Sg	06 43 07.6	-0.9
	baz=241						
NNS	Nan Shan	0.99	240	eP	Pg	06 42 56.2	+0.4
	baz=242						
NNS				eS	Sg	06 43 08.3	-0.2
	baz=242						
NACB	Ninganchiao	1.00	221	eP	Pg	06 42 55.8	-0.2
	baz=220						
NACB				eS	Sg	06 43 07.2	-1.8
	baz=220						
ETLH	Xiulin Townshi	1.05	226	eP	Pg	06 42 56.8	-0.1
	baz=226						
ETLH				eS	Sg	06 43 08.2	-2.3
	baz=226						
TWD	Chiawan	1.07	218	i P	Pg	06 42 57.1	-0.3
	baz=216						
TWD				eS	Sg	06 43 10.4	-0.9
	baz=216						
ENLB	Shoufeng	1.21	212	eP	Pg	06 42 59.8	-0.3
	baz=210						
ENLB				eS	Sg	06 43 16.9	+1.0
	baz=210						
LIOB	Emei	1.21	257	eP	Pn	06 43 01.6	+1.4
	baz=260						
NSTT	Nanjuang	1.23	256	eP	Pn	06 43 02.5	+2.1
	baz=259						
WHF	Hehuan Shan	1.23	231	i P	Pg	06 43 00.3	-0.2
	baz=231						
WHF				S	Sg	06 43 15.5	-1.1
	baz=231						
TWT	Tachien	1.24	237	eP	Pn	06 43 01.3	+0.7
	baz=238						
TDCB	Techi	1.25	237	eP	Pn	06 43 01.4	+0.6
	baz=238						
TDCB				S	Sg	06 43 15.6	-1.5
	baz=238						
CHGB	Renai	1.35	230	P	Pn	06 43 02.6	+0.3
	baz=230						
CHGB				i S	Sg	06 43 18.9	-1.4
	baz=230						
ESL	Shilin	1.37	216	eP	Pn	06 43 03.2	+0.9
	baz=214						
WHP	Taichung City	1.41	243	eP	Pg	06 43 04.4	+0.7
	baz=244						
IRIF	Iriomote-Funau	1.42	114	P	Pn	06 43 03.2	+0.2
IRIF				eS	Sg	06 43 21.2	-1.3
OWD	Renai	1.42	227	eP	Pn	06 43 03.8	+0.6
	baz=227						
EGFH	Guangfu	1.50	213	eP	Pb	06 43 05.1	+0.3
	baz=211						
TWQ1	Liyutan	1.52	248	eP	Pg	06 43 07.3	+1.4
	baz=249						
DPDB	Guoxing	1.55	235	eP	Pb	06 43 06.5	+0.7
	baz=235						
VWDT	VWDT	1.59	223	eP	Pb	06 43 06.8	+0.3
	baz=222						
HATJ	Hateruma jima	1.61	122	eS	Sn	06 43 25.0	-1.7
HGSD	Ruisui	1.65	210	eP	Pn	06 43 07.5	+1.4
	baz=208						
SMLT	Sun Moon Lake	1.66	231	eP	Pg	06 43 08.6	-0.1
	baz=231						
TYC	Yuchr	1.68	233	eP	Pg	06 43 09.0	0.0
	baz=232						
TYC				eS	Sb	06 43 30.1	+0.9
	baz=232						
EHY	Hungye	1.68	213	eP	Pb	06 43 08.8	+0.7
	baz=211						
SSLB	Suanglung	1.68	228	eP	Pb	06 43 08.3	+0.2
	baz=227						
SSLB				eS	Sn	06 43 28.2	-0.3
	baz=227						
JKRS	Kuro-shima	1.69	114	P	Pn	06 43 07.3	+0.6
JIJ	Ishigaki jima	1.76	108	S	Sn	06 43 30.5	+0.2
YULB	Yu-li	1.79	211	eP	Pn	06 43 07.9	-0.2
	baz=210						
WHYT	Xinyi Township	1.81	228	eP	Pg	06 43 11.4	-0.2
	baz=227						
TWF1	Yuli	1.83	211	eP	Pn	06 43 08.6	0.0
	baz=209						
JISG	Ishigakijimahi	1.85	100	P	Pb	06 43 10.6	-0.3
YUS	Yu-Shan	1.90	221	eP	Pn	06 43 11.7	+1.6
	baz=220						
FULB	Fuli	1.96	209	eP	Pn	06 43 11.3	+0.9
	baz=207						
ALS	Alishan	1.98	224	eP	Pb	06 43 12.8	-0.4
	baz=223						
CHN5	Tsauling	2.00	229	eP	Pb	06 43 13.4	-0.1
	baz=228						
CHN4	Tsaushan	2.23	225	eP	Pb	06 43 17.5	+0.2
	baz=224						
TPUB	Ta-pu	2.24	224	eP	Pb	06 43 17.2	-0.3
	baz=223						
TWH	Lutao	2.34	199	eP	Pn	06 43 15.4	-0.3
	baz=197						
TWK	Hsinying	2.35	226	eP	Pb	06 43 18.8	-0.8
	baz=224						
CHN1	Nanshi	2.38	224	eP	Pb	06 43 19.1	-0.9
	baz=223						

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*ATA **12** 06:50:59.9±1.2, 41°.26N×43°.94E, h4^{km}±999^{km}, ML2.2, MW3.2*

*ISK **12** 06:51:13.9, 40°.89N×42°.88E, h2^{km}, ML2.0/3*

*DDA **12** 06:51:14.0, 40°.85N×42°.91E, h7^{km}±4^{km}, ML1.4*

ISC 12 06:51:14.0±1.1**, 40°.87N**±0°.04×**42°.93E**±0°.03**, h10^{km}**±11^{km}**, n11,** σ**0^{s}.68**/18**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SENK	Senkaya-Erzuru	0.54	235	PG	Pg	06 51 25.1	+0.5
SENK				SG	Sb	06 51 33.4	-0.2
EAK	Akyaka	0.54	110	eP	Pg	06 51 11.0	-14
EAK				IAML		06 51 57.0	
	comp=Z,20nm,0.6s						
EAK	Akyaka	0.54	110	i P	Pg	06 51 23.8	-0.9
EAK				i S	Sg	06 51 32.6	+0.8
EAK				IAML		06 51 34.0	
	comp=N,27nm,0.6s						
EAK				IAML		06 51 40.0	
	comp=E,22nm,0.5s						
DIGO	Kars	0.57	144	eP	Pg	06 51 19.4	-5.8
DIGO				eS	Sg	06 51 33.3	+0.7
DIGO				IAML		06 51 40.9	
	comp=Z,8.7nm,0.4s						
EPOS	Posof	0.65	346	i P	Pb	06 51 27.1	-0.5
EPOS				i S	Sn	06 51 38.8	-1.0
EPOS				IAML		06 51 39.0	
	comp=N,18nm,0.5s						
AKH	Akhalkalaki	0.68	38	PG	Pb	06 51 28.4	+0.2
AKH				SG	Sb	06 51 38.8	+1.1
EATA	Eleskirt	1.06	199	eP	Pg	06 51 33.9	-0.6
EATA	Eleskirt	1.06	199	i P	Pg	06 51 34.1	-0.4
EATA				i S	Sn	06 51 50.0	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
DBOC	Borcka	1.07	297	*i* P	Pb	06 51 34.6	0.0
DBOC				*i* S	Sg	06 51 48.3	-0.2
DBOC				IAML		06 51 53.0	
	comp=E,12nm,0.8s						
BCA	Borcka	1.14	300	PN	Pn	06 51 36.1	0.0
BCA				SN	Sn	06 51 51.8	0.0
BATM	Batumi	1.19	308	PN	Pg	06 51 36.6	-0.3
BATM				SN	Sn	06 51 53.9	+1.0

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*IDC **12** 07:14:29.6±1.0, 55°.32N×160°.76W, h0^{km}, mb3.8/15, mb1 4.0/19, mb1mx3.9/38, mbtmp3.8/19, ML3.6/4, Error ellipse: s-maj=26.9km s-min=15.5km az=6.0*

*AEIC **12** 07:14:35.1±2.3, 55°.22N±0°.05×160°.27W±0°.08, h13^{km}±5^{km}, ML3.8/67, mb4.0/7(NEIC), Error ellipse: s-maj=9.6km s-min=3.6km az=137.0*

*NEIC **12** 07:14:35.0±2.4, 55°.25N±0°.05×160°.31W±0°.06, h28^{km}±5^{km}, Error ellipse: s-maj=6.8km s-min=4.2km az=162.0*

ISC 12 07:14:35.1±0.6, **55°.30N**±0°.06×**160°.31W**±0°.04, **h35**^{km}, **n111**, σ**1ˢ.53**/117, **mb3.8**/16, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDPT	Sand Point	0.11	297	Pg	Pn	07 14 39.5	-1.7
SDPT				Sg	Sn	07 14 43.2	-2.2
CNBA	Chernabura Isl	0.63	139	Pg	Pn	07 14 45.6	-2.0
CNBA				Sg	Sn	07 14 54.2	-2.2
PVV	Pavlof Volcano	0.85	276		Pn	07 14 50.3	-0.3
HAG	Hague Volcano	0.91	272		Pn	07 14 51.4	0.0
PN6	Pavlof North-6	0.93	280		Pn	07 14 52.4	+0.6
PN6					Sn	07 15 06.1	+2.2
VNWF	Veniaminof 8	0.95	26		Pn	07 14 52.5	+0.4
VNSS	Veniaminof 8	1.05	27		Pn	07 14 54.3	+0.8
VNFG	Fog Glacier, M	1.07	23		Pn	07 14 55.0	+1.3
BLHA	Black Hill	1.08	293		Pn	07 14 54.4	+0.7
VNNF	Veniaminof 3	1.13	29		Pn	07 14 55.7	+1.1
DT1	Dutton Round H	1.15	261		Pn	07 14 54.5	-0.1
CHGN	Chignik	1.47	46	Pn	Pn	07 15 00.9	+1.9
CHGN				Sn	Sn	07 15 18.6	+1.6
FALS	False Pass	1.84	257		Pn	07 15 04.8	+0.6
FALS	False Pass	1.84	257	Sn	Sn	07 15 28.1	+1.8
SSLW	Shishaldin Wes	2.26	258		Pn	07 15 11.0	+1.1
SSBA	Shishaldin	2.26	258		Pn	07 15 10.9	+0.9
SSBA					LR	07 15 38.9	
WESE	West Dahl East	2.61	253		Pn	07 15 16.1	+1.3
WEBT	Westdahl Beart	2.66	256		Pn	07 15 17.1	+1.6
WESP	Westdahl Peak	2.67	254		Pn	07 15 17.1	+1.4
CHIR	Chirikof Islan	2.71	77		Pn	07 15 16.9	+0.8
CHIR	Chirikof Islan	2.71	77		Sn	07 15 49.0	+1.3
PLK1	Peulik 1	3.24	38		Pn	07 15 24.8	+1.4
PLK3	Peulik 3	3.28	41		Pn	07 15 25.9	+1.9
AKSA	Akutan Strait	3.34	252		Pn	07 15 25.8	+1.1
AKUT	Akutan	3.38	252		Pn	07 15 26.1	+0.8
HSB	Akutan Spr’s B	3.44	253		Pn	07 15 26.9	+0.8
AKLV	Akutan Long Va	3.47	253		Pn	07 15 27.2	+0.6
AKBBA	Akutan Broad B	3.48	252		Pn	07 15 27.5	+0.8
AKMO	Akutan Morgan	3.52	252		Pn	07 15 28.3	+0.9
AKRB	Akutan Reef Bi	3.54	253		Pn	07 15 28.7	+1.1
SII	Sitkinak Islan	3.67	67		Pn	07 15 30.1	+0.8
UNV	Unalaska Valle	3.89	251		Pn	07 15 32.6	+0.3
MTBL	Makushin Table	3.94	253		Pn	07 15 33.8	+0.8
MNAT	Makushin Natee	3.97	252		Pn	07 15 33.9	+0.4
MSW	Makushin Switc	4.01	252		Pn	07 15 34.5	+0.5
MREP	Makushin Rep’t	4.04	251		Pn	07 15 34.8	+0.4
KABU	Katmai Buttres	4.06	41		Pn	07 15 36.7	+1.9
MGOD	Makushin Gods	4.11	251		Pn	07 15 35.9	+0.5
OHAK	Old Harbor	4.36	61		Pn	07 15 39.7	+0.8
KAHC	Katmai Hardscr	4.43	39		Pn	07 15 41.4	+1.5
OKTU	Okmok Mt. Tuli	4.92	250		Pn	07 15 47.2	+0.7
KDAK	Kodiak Island	4.95	57	Pn	Pn	07 15 47.7	+0.9
	6.5nm,0.3s,baz=232,slow=5.3,SNR=123						
KDAK				Sn	Sn	07 16 43.0	+0.3
	5.9nm,0.3s,baz=344,slow=23,SNR=10						
NIKH	Nikolski High	5.54	249	Pn	Pn	07 15 56.3	+1.3
SPIA	Saint Paul Isl	5.85	293	Pn	Pn	07 15 58.9	-0.4
SVW2	Sparrevohn	6.33	21		Pn	07 16 07.3	+1.5
CNPM	China Poot	6.47	45	Pn	Pn	07 16 08.8	+1.0
CNPM				Sn	Sn	07 17 19.7	-0.7
RED	Redoubt Volcan	6.52	35		Pn	07 16 09.8	+1.3
RDWB	Redoubt West	6.55	34		Pn	07 16 11.1	+2.2
RSO	Redoubt South	6.56	35		Pn	07 16 12.1	+3.0
DFR	Drift River	6.68	34		Pn	07 16 12.6	+2.0
BRLK	Bradley Lake	6.76	45	Pn	Pn	07 16 13.7	+1.9
BRSE	Bradley Lake S	6.81	45		Pn	07 16 13.3	+0.9
SLKM	Skilak Lake	7.49	42		Pn	07 16 22.0	+0.3
SEW	Seward	7.55	46	Pn	Pn	07 16 24.3	+1.8
TT01	Tatalina	7.94	14		Pn	07 16 28.7	+0.8
SUA	Susitna One	7.96	35		Pn	07 16 30.3	+2.1
TTA	Tatalina	7.96	14		Pn	07 16 28.9	+0.6
RC01	Rabbit Creek A	8.05	40	Pn	Pn	07 16 31.9	+2.5
SKT	Skwentna	8.11	31	Pn	Pn	07 16 33.0	+2.8
PWL	Port Wells	8.44	44		Pn	07 16 35.5	+0.8
PMR	Palmer	8.60	38	Pn	Pn	07 16 38.8	+1.8
PPLA	Purkeypile	8.68	25	Pn	Pn	07 16 41.7	+3.5
KNK	Knik Glacier	8.73	41	Pn	Pn	07 16 41.4	+2.7
GHO	Glory Hole Cre	8.80	38	Pn	Pn	07 16 41.6	+1.9
HIN	Hinchinbrook I	8.95	50	Pn	Pn	07 16 42.5	+0.8
HIN				Sn	Sn	07 18 20.1	-1.2
SML	Sawmill	9.03	39	Pn	Pn	07 16 44.9	+2.0
FID	Port Fidalgo	9.14	48	Pn	Pn	07 16 45.6	+1.3
EYAK	Cordova Ski Ar	9.35	50	Pn	Pn	07 16 47.1	-0.1
SCM	Sheep Creek Mo	9.41	41	Pn	Pn	07 16 49.0	+0.8
KTH	Kantishna Hill	9.55	26	Pn	Pn	07 16 51.9	+2.0
TRF	Thorofare Moun	9.63	28	Pn	Pn	07 16 54.5	+3.4
ANM	Nome	9.63	347		Pn	07 16 52.2	+1.2
GOAT	Goat Mountain	9.82	51		Pn	07 16 54.1	+0.4
BPAW	Bear Paw Mtn.	9.99	24	Pn	Pn	07 16 58.6	+2.6
DHY	Denali Highway	10.22	35	Pn	Pn	07 17 01.1	+1.9
GLB	Gilahina Butte	10.61	48	Pn	Pn	07 17 05.9	+1.5
PAX	Paxson	10.80	39		Pn	07 17 08.4	+1.3
MLY	Manley	10.85	22	Pn	Pn	07 17 10.0	+2.3
MCARA	McCarthy VSAT	10.92	49	Pn	Pn	07 17 11.0	+2.3
WRH	Wood River Hil	11.03	29	Pn	Pn	07 17 10.1	-0.1
BALM	Baldy	11.07	51	Pn	Pn	07 17 11.1	+0.3
IMAR	Indian Mountai	11.18	14	Pn	Pn	07 17 13.4	+1.2
CCB	Clear Creek Bu	11.25	29	Pn	Pn	07 17 12.6	-0.5
HDA	Harding Lake	11.31	31	Pn	Pn	07 17 15.9	+1.9
IL31		11.60	30		Pn	07 17 19.0	+1.1
ILAR	Eielson Array	11.60	30	Pn	Pn	07 17 14.7	-3.2
	0.1nm,0.3s,baz=222,slow=14,SNR=4.1						
ILAR				Sn	Sn	07 19 21.4	-4.5
	0.1nm,0.3s,baz=212,slow=7.9,SNR=3.0						
ILAR	Eielson Array	11.60	30		Pn	07 17 17.8	-0.1
EPYK	Eagle Plains	15.85	36	Pn	Pn	07 18 16.5	+1.3
DLBC	Dease Lake	16.77	67	Pn	P	07 18 29.3	+0.3
	0.1nm,0.3s,baz=287,slow=17,SNR=2.6						
DLBC	Dease Lake	16.77	67	IAmb	IAmb	07 18 38.5	
	comp=Z,7.8nm,0.9s						
INK	Inuvik	17.95	33	P	Pn	07 18 40.9	-0.5
	comp=Z,0.3nm,0.3s,baz=214,slow=7.6,SNR=11						
INK	Inuvik	17.95	33	P	P	07 18 41.6	-0.2
C36M	Paulatuk	21.47	35	P	P	07 19 19.0	-1.0
C36M				IAmb	IAmb	07 19 28.3	
	comp=Z,3.8nm,0.7s						
YKA	Yellowknife Ar	24.22	54	P	P	07 19 48.5	+0.5
	comp=Z,0.4nm,0.5s,baz=270,slow=8.8,SNR=16						
YKA				PcP	PcP	07 23 27.6	+0.2
	comp=Z,0.4nm,0.8s,baz=268,slow=1.8,SNR=4.0						
SEY	Seymchan	24.93	307	P	P	07 19 52.5	-2.1
	comp=Z,0.4nm,0.3s,baz=85,slow=15,SNR=5.7						
NVAR	Mina Array Bea	32.70	103	P	P	07 21 06.8	+2.6
	comp=Z,0.2nm,0.4s,baz=312,slow=8.0,SNR=2.6						
PDAR	Pinedale Array	34.77	90	P	P	07 21 24.7	+2.5
	comp=Z,0.2nm,0.5s,baz=322,slow=5.7,SNR=3.2						
ULM	Lac du Bonnet	38.05	70	P	P	07 21 50.7	+0.8
	comp=Z,1.8nm,0.5s,baz=304,slow=8.9,SNR=5.7						
ULM	Lac du Bonnet	38.05	70	IAmb	IAmb	07 21 51.2	
	comp=Z,2.6nm,0.6s						
TXAR	Lajitas Array	47.59	99	P	P	07 23 08.6	+1.2
	comp=Z,0.3nm,0.6s,baz=310,slow=4.0,SNR=4.8						
SONM	Songino Array	54.26	304	P	P	07 23 56.4	-1.0
	comp=Z,0.6nm,0.7s,baz=44,slow=5.2,SNR=4.5						
SONM	Songino Array	54.26	304	P	P	07 23 57.9	+0.5
ARCES	ARCESS Array B	55.40	358	P	P	07 24 04.0	-1.1
	comp=Z,4.6nm,0.9s,baz=19,slow=7.8,SNR=4.0						
FINES	FINESS Array B	63.49	357	P	P	07 24 59.9	-1.1
	comp=Z,0.9nm,0.5s,baz=24,slow=6.5,SNR=6.8						
NOA	NORSAR Array B	63.81	5	P	P	07 25 01.9	-1.3
	comp=Z,0.3nm,0.6s,baz=345,slow=6.9,SNR=2.3						
MKAR	Makanchi Array	65.47	318	P	P	07 25 12.7	-1.5
	comp=Z,0.3nm,0.7s,baz=37,slow=4.6,SNR=4.4						
AKASG	Malin Array Be	74.07	354	P	P	07 26 06.2	-0.8
	comp=Z,0.9nm,0.3s,baz=11,slow=6.0,SNR=4.9						
CMAR	Chiang Mai Arr	80.97	289	P	P	07 26 45.3	-0.8
	comp=Z,0.8nm,0.3s,baz=12,slow=5.9,SNR=7.8						
ESDC	Sonseca Array	83.26	18	P	P	07 26 58.5	+0.7
	comp=Z,3.4nm,0.7s,baz=338,slow=4.4,SNR=7.4						
ESDC	Sonseca Array	83.26	18	IAmb	IAmb	07 26 59.5	
	comp=Z,2.1nm,0.8s						
BRTR	Keskin Array B	84.60	349	P	P	07 27 04.5	-0.3
	comp=Z,0.6nm,0.8s,baz=350,slow=7.9,SNR=2.6						

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*ATA **12** 07:16:32.1±2.0, 39°.61N×39°.70E, h31^{km}±203^{km}, ML2.1, MW3.3*

*DDA **12** 07:16:50.1, 39°.29N×42°.01E, h27^{km}, ML1.4*

ISC 12 07:16:45.5±1.1, **39°.59N**±0°.06×**41°.60E**±0°.04, **h10**^{km}, **n5**, σ**2ˢ.29**/10, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECAT	Cat-ERZURUM	0.48	272	*e*P	Pg	07 16 52.8	-2.3
ECAT				*e*S	Sb	07 17 05.6	+2.0
ECAT				IAML		07 17 07.5	
	comp=Z,9.6nm,0.3s						
EKAR	Karacoban	0.49	133	*i* P	Pg	07 16 54.9	-0.3
EKAR				*i* S	Sg	07 16 58.6	-3.1
EKAR				IAML		07 16 59.0	
	comp=E,153nm,0.8s						
EKAR				IAML		07 17 04.0	
	comp=N,126nm,1.6s						
BNGL	BINGOL	0.73	209	*e*P	Pg	07 16 57.2	-2.5
BNGL				*e*S	Sn	07 17 15.3	+1.9
BNGL				IAML		07 17 16.9	
	comp=Z,36nm,0.2s						
EATA	Eleskirt	0.74	68	*i* P	Pn	07 17 03.5	+1.2
EATA				*i* S	Sn	07 17 14.0	+0.2
EATA				IAML		07 17 15.0	
	comp=E,9.2nm,0.3s						
EATA				IAML		07 17 15.0	
	comp=N,18nm,0.4s						
MUSM	Mu-Merkez	0.87	185	*i* P	Pn	07 17 06.5	+2.5
MUSM				*i* S	Sb	07 17 14.4	-0.2

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*NNC **12** 07:16:50.2±4.1, 41°.16N×70°.63E, h0^{km}, mb2.9, mpv2.5, Error ellipse: s-maj=33.0km s-min=14.2km az=25.0*

*KRNET **12** 07:16:52.2±0.1, 41°.15N×70°.26E, mb2.4*

*SOME **12** 07:16:52.2, 41°.35N×70°.60E, h0^{km}*

ISC 12 07:16:51.0±1.4, **41°.16N**±0°.04×**70°.21E**±0°.06, **h10**^{km}±11^{km}, **n15**, σ**1ˢ.35**/27, **14C-3D**, **Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	1.00	352	*e*P	Pg	07 17 10.1	-0.2
	0.9nm,0.2s						
IUG				*e*S	Sg	07 17 23.0	-0.3
	12nm,0.3s						
IUG	Iuzhnay	1.00	352	P	Pg	07 17 09.5	-0.8
	0.9nm,0.2s						
IUG				S	Sg	07 17 25.0	+1.7
	12nm,0.3s						
BTK	Batken	1.19	157	⇑*i*P	Pg	07 17 13.9	0.0
	baz=59						
BTK				⇑*i*S	Sg	07 17 29.3	0.0
	baz=59						
ARK	Arkit	1.47	63	⇑*i*P	Pn	07 17 17.8	+0.2
	baz=64						
ARK				⇑*i*S	Sg	07 17 36.8	-1.4
	baz=64						
BRLS	Borolday	1.89	352	*e*P	Pn	07 17 22.9	-0.5
	1.2nm,0.1s						
BRLS				*e*S	Sn	07 17 45.0	-2.3
	1.9nm,0.2s						
BRLS	Borolday	1.89	352	P	Pn	07 17 22.7	-0.7
	1.0nm,0.5s						
BRLS				S	Sn	07 17 48.0	+0.7
	2.5nm,0.2s						
KK31	Karatay Array	1.96	7	Pg	Pn	07 17 26.2	+2.0
	0.4nm,0.2s,baz=44,slow=21,SNR=4.7						
KK31				⇓Lg	Lg	07 17 50.9	
	0.6nm,0.3s						
ARSB	Arslanbob	2.10	84	⇑*i*P	Pn	07 17 26.5	+0.2
	baz=84						
ARSB				⇑*i*S	Sn	07 17 51.8	-0.7
	baz=84						
MRKS	Merke	2.76	54	*e*P	Pn	07 17 37.9	+2.6
	2.5nm,0.3s						
MRKS				*e*S	Sn	07 18 10.6	+2.0
	2.7nm,0.3s						
MRKS	Merke	2.76	54	Pg	Pn	07 17 36.5	+1.2
	3.3nm,0.4s						
MRKS				Lg	Lg	07 18 11.5	
	3.0nm,0.4s						
AML	Almayashu	2.79	68	⇑*i*P	Pn	07 17 36.5	+0.5
	baz=68						
AML				⇑*i*S	Sn	07 18 09.1	-0.8
	baz=68						
EKS2	Erkin-Say	3.06	59	⇑*e*P	Pn	07 17 40.0	+0.5
	baz=59						
EKS2				⇑*e*S	Sn	07 18 15.3	-0.9
	baz=59						
ARLS	Aral	3.17	76	⇑*i*P	Pn	07 17 41.7	+0.7
	baz=75						
ARLS				⇑*i*S	Sn	07 18 17.9	-1.1
	baz=75						
UCH	Uchtor	3.40	70	⇓*e*P	Pn	07 17 44.9	+0.5
	baz=70						
UCH				⇓*i*S	Sn	07 18 23.4	-1.6
	baz=70						
AAK	Ala-Archa	3.53	64	⇑Pg	Pn	07 17 48.5	+2.5
	1.1nm,0.6s						
AAK				⇑Lg	Lg	07 18 30.6	
	2.1nm,1.0s						

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*DNK **12** 07:24:29.2±0.5, 51°.33N×16°.13E, h50^{km}±7^{km}, ML2.1, Hypocentre not reviewed by the ISC*

*VIE **12** 07:24:30.9±1.4, 51°.43N×16°.08E, h0^{km}, mb2.2/4, ml2.9/4, Error ellipse: s-maj=15.9km s-min=7.2km az=17.0 74 km WNW of Wroclaw Suspected Mining induced.*

ISC 12 07:24:29.1±1.0, **51°.59N**±0°.04×**16°.11E**±0°.03, **h0**^{km}, **n24**, σ**0ˢ.71**/52, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.76	171	*i* Pg	Pb	07 24 44.3	-0.9
KSP				*e*Sg	Sg	07 24 53.9	+0.5
CHVC	Chvalec	1.00	182	*e*PG	Pb	07 24 48.9	-0.5
CHVC				*e*SG	Sg	07 25 01.8	+0.5
	comp=Z,50nm,0.3s						
OSTC	Ostas	1.04	176	*e*PG	Pb	07 24 49.6	-0.3
OSTC				*e*SG	Sg	07 25 02.8	+0.4
	comp=Z,52nm,0.3s						
UPC	Upice	1.09	183	*e*PG	Pb	07 24 50.2	-0.5
UPC				*e*SG	Sg	07 25 03.6	-0.4
DPC	Dobruska-Polom	1.25	174	*e*PG	Pg	07 24 53.0	0.0
DPC				*e*SG	Sg	07 25 08.6	-0.6
	comp=Z,34nm,0.2s						
PVCC	Panska Ves	1.44	223	*e*PG	Pb	07 24 56.9	+0.1
PVCC				*e*SG	Sg	07 25 15.3	-0.1
	comp=Z,283nm,0.2s						
BRG	Berggiesshubel	1.54	243	PG	Pb	07 24 58.7	+0.2
BRG				SG	Sn	07 25 18.8	+0.3
	84nm,0.6s						
KRLC	Kraliky	1.58	164	*e*PG	Pb	07 24 58.7	-0.4
PRA	Prague	1.86	216	*e*PG	Pb	07 25 04.2	+0.3
PRA				*e*SG	Sb	07 25 27.5	-0.1
	comp=Z,30nm,0.4s						
GOPC	GO Pecny, Ondr	1.88	207	*e*SG	Sb	07 25 28.0	-0.3
PRU	Pruhonice	1.89	212	*e*PN	Pn	07 25 02.5	-0.1
PRU				*e*PG	Pb	07 25 04.4	0.0
PRU				*e*SG	Sb	07 25 28.2	-0.3
	comp=Z,49nm,0.3s						
CLL	Collm	1.97	263	*e*Pn	Pn	07 25 04.0	+0.4
CLL				*e*Pg	Pg	07 25 07.0	+0.3
CLL				*i*		07 25 11.2	
CLL				*i* Sg	Sg	07 25 32.5	+0.3
	comp=Z,31nm,0.4s						
MORC	Moravsky Berou	2.03	153	*e*PN	Pn	07 25 04.6	0.0
MORC				*e*SG	Sb	07 25 32.9	+0.2
VRAC	Vranov	2.31	172	*e*PN	Pn	07 25 08.6	+0.3
VRAC				*e*SG	Sb	07 25 40.5	-0.1
TREC	Trest	2.33	190	*e*PN	Pn	07 25 09.6	+0.9
TREC				*e*PG	Pb	07 25 12.7	+0.7
TREC				*e*SG	Sg	07 25 43.7	-0.3
	comp=Z,30nm,0.4s						
KRUC	Moravsky	2.54	176	*e*PN	Pn	07 25 12.4	+0.9
KRUC				*e*SG	Sg	07 25 48.7	-1.9
NKC	Novy Kostel	2.69	241	*e*PN	Pn	07 25 13.5	-0.1
NKC				*e*PG	Pg	07 25 20.6	0.0
NKC				*e*SG	Sg	07 25 54.3	-1.1
	comp=Z,48nm,0.3s						
KHC	Kasperske Hory	2.95	214	*e*PN	Pn	07 25 17.2	0.0
KHC				*e*PG	Pb	07 25 23.1	+0.6
KHC				*e*SN	Sn	07 25 52.0	-1.3
KHC				*e*SG	Sb	07 26 01.1	+2.0
	comp=Z,13nm,0.3s						
LANS	Liptovska Anna	3.25	137	*e*PG	Pg	07 25 31.3	-0.1
LANS				*e*SG	Sg	07 26 14.5	+0.9
MODS	Modra-Piesok	3.31	166	*e*PG	Pg	07 25 31.8	-0.6
MODS				*e*SG	Sg	07 26 14.6	-0.7
VYHS	Vyhne	3.56	149	*e*PN	Pn	07 25 25.5	-0.1
VYHS				*e*PG	Pg	07 25 39.2	+1.9
VYHS				*e*SG	Sg	07 26 24.1	+0.6
BSD	Bornholm Skovb	3.60	349	*i* P	Pn	07 25 26.1	0.0
BSD				*i* S	Sn	07 26 08.1	-1.1
BSD	Bornholm Skovb	3.60	349	*e*		07 25 25.5	
	baz=168,slow=12						
BSD				*i* P		07 25 26.1	
BSD				*i* S		07 26 08.1	
BSD				IAML		07 26 28.7	
	comp=Z,1.6nm,0.3s						
CONA	Conrad Observa	3.67	183	*e*Pn	Pn	07 25 28.0	+0.8
	comp=Z,0.5nm,0.2s						
CONA				Sg	Sg	07 26 26.4	-0.5
	comp=Z,17nm,0.6s						
MOA	Molln	3.93	198	*e*Pn	Pn	07 25 30.3	-0.4
	comp=Z,1.8nm,0.3s						

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*DJA **12** 07:35:37.4±0.6, 4°S±3°×13°4E±°, h14^{km}±4^{km}, M4.2/6, mb4.2/5, MLv4.2/6*

*IDC **12** 07:35:41.9±2.8, 4°.95S×133°.39E, h0^{km}, mb3.5/1, mb1 3.9/5, mb1mx3.5/44, mbtmp3.7/5, ML3.4/4, MS2.9/3, Ms1 2.9/3, ms1mx2.7/29, Error ellipse: s-maj=95.9km s-min=25.4km az=82.0*

ISC 12 07:35:34.6±1.0, **4°.55S**±0°.06×**133°.76E**±0°.07, **h21**^{km}, **n14**, σ**3ˢ.74**/17, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.21	317	P	Pn	07 36 10.7	+0.5
RKPI	Ransiki, Papua	3.05	8	P	Pn	07 36 20.9	-0.8
RKPI				S	Sn	07 36 50.3	-7.3
BNDI	Bandanaira	3.84	270	P	Pb	07 36 37.6	-4.1
BNDI				S	Sb	07 37 24.7	-3.1
BAKI	Biak	4.08	35	P	Pn	07 36 36.4	+0.5
SIJI	Sorong	4.42	326	Pn	Pb	07 36 54.4	+2.6
	3.5nm,0.3s,baz=168,slow=19,SNR=3.2						
SWI	Sorong	4.43	326	P	Pn	07 36 43.6	+2.9
MSAI	Masohi	4.96	284	P	Pb	07 36 59.0	-1.9
SANI	Sanana	8.14	288	P	Pn	07 37 36.3	+4.6
	12nm,0.6s						
PMG	Port Moresby	14.15	111	LR	LR	07 44 45.6	
	comp=Z,71nm,19.4s,baz=326,slow=38						
WRA	Warramunga Arr	15.31	178	Pn	P	07 39 14.0	-0.3
	0.1nm,0.3s,baz=356,slow=13,SNR=3.8						
WRA				Sn	Sn	07 41 56.4	-2.3
	0.1nm,0.3s,baz=358,slow=22,SNR=2.8						
WRA				LR	LR	07 45 21.7	
	comp=Z,39nm,20.4s,baz=260,slow=39						
FITZ	Fitzroy Crossi	15.63	210	Pn	P	07 39 17.0	-0.8
	0.2nm,0.3s,baz=31,slow=14,SNR=4.7						
FITZ				Sn	Sn	07 42 04.8	-1.6
	0.2nm,0.3s,baz=46,slow=17,SNR=4.3						
SRBI	Singaraja	18.76	258	P	Pn	07 39 57.6	+4.6
ASAR	Alice Springs	19.00	180	P	Pn	07 40 01.9	+6.0
	0.1nm,0.3s,baz=0.1,slow=12,SNR=28						
ASAR				S	Sn	07 43 25.2	-3.1
	0.1nm,0.3s,baz=360,slow=21,SNR=4.6						
ASAR				LR	LR	07 46 37.4	
	comp=Z,25nm,18.8s,baz=338,slow=35						
MKAR	Makanchi Array	68.32	325	P	P	07 46 44.9	+11
	0.4nm,0.8s,baz=111,slow=7.9,SNR=2.9						

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*IDC **12** 07:38:40.5±1.4, 53°.51N×165°.85W, h0^{km}, mb3.6/9, mb1 3.9/11, mb1mx3.6/56, mbtmp3.6/11, ML3.2/2, Error ellipse: s-maj=33.4km s-min=18.4km az=13.0*

*AEIC **12** 07:38:45±1.2, 53°.23N±0°.06×165°.62W±0°.04, h38^{km}±7^{km}, ML3.5/41, Error ellipse: s-maj=9.2km s-min=3.2km az=177.0*

ISC 12 07:38:47.1±1.5, **53°.3N**±0°.1×**165°.65W**±0°.05, **h56**^{km}±13^{km}, **n49**, σ**1ˢ.43**/52, **mb3.5**/10, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UNV	Unalaska Valle	0.76	318		Pn	07 39 01.0	-0.7
UNV					Sn	07 39 12.1	-0.4
AKBBA	Akutan Broad B	0.83	348		Pn	07 39 02.0	-0.7
AKBBA					Sn	07 39 15.7	+1.4
AKMO	Akutan Morgan	0.83	345		Pn	07 39 02.1	-0.6
AKMO					Sn	07 39 15.2	+0.9
MREP	Makushin Rep’t	0.84	309		Pn	07 39 02.2	-0.8
AKSA	Akutan Strait	0.85	358		Pn	07 39 02.0	-0.9
AKUT	Akutan	0.85	355		Pn	07 39 02.3	-0.7
MNAT	Makushin Natee	0.86	314		Pn	07 39 02.5	-0.6
MNAT					Sn	07 39 15.1	+0.2
AKRB	Akutan Reef Bi	0.88	344		Pn	07 39 03.0	-0.4
MGOD	Makushin Gods	0.89	305		Pn	07 39 02.7	-0.8
MGOD					Sn	07 39 15.4	-0.3
AKLV	Akutan Long Va	0.90	348		Pn	07 39 02.7	-0.9
LVA	Lava Point	0.91	345		Pn	07 39 03.2	-0.6
HSB	Akutan Spr’s B	0.92	350		Pn	07 39 03.0	-0.8
MTBL	Makushin Table	0.92	318		Pn	07 39 03.5	-0.5
MSW	Makushin Switc	0.92	313		Pn	07 39 03.3	-0.7
MSW					Sn	07 39 16.2	-0.2
AKGG	Akutan Green G	0.94	347		Pn	07 39 03.6	-0.5
WESP	Westdahl Peak	1.33	24		Pn	07 39 09.4	0.0
WESP					Sn	07 39 27.4	+1.4
WESE	West Dahl East	1.34	27		Pn	07 39 09.5	-0.1
OKFG	Magazine Ridge	1.36	276		Pn	07 39 09.2	-0.6
WEBT	Westdahl Beart	1.41	22		Pn	07 39 10.6	+0.2
OKSP	Okmok Steeple	1.59	270		Pn	07 39 12.4	-0.5
SSLS	Shishaldin Sou	1.73	34		Sn	07 39 37.0	+1.2
SSBA	Shishaldin	1.74	30		Pn	07 39 15.5	+0.6
SSBA					Sn	07 39 37.5	+1.5
NIKH	Nikolski High	1.96	262		Pn	07 39 17.9	+0.1
FALS	False Pass	2.05	39		Pn	07 39 19.0	-0.1
FALS					Sn	07 39 44.3	+0.9
DT1	Dutton Round H	2.69	46		Pn	07 39 28.1	+0.3
DOL	Dolgoi Island	2.90	48		Pn	07 39 30.8	0.0
SDPT	Sand Point	3.67	54		Pn	07 39 41.2	0.0
CNBA	Chernabura Isl	3.89	64		Pn	07 39 43.5	-0.7
SPIA	Saint Paul Isl	4.70	328		Pn	07 39 56.4	+1.0
ADK	Adak	6.87	263		Pn	07 40 26.2	+1.2
KDAK	Kodiak Island	8.66	53	Pn	Pn	07 40 47.6	-2.0
	0.6nm,0.3s,baz=175,slow=3.4,SNR=31						
KDAK				Sn	Sn	07 42 18.5	-7.1
	0.5nm,0.3s,baz=141,slow=23,SNR=7.2						
ILAR	Eielson Array	14.94	32	Pn	Pn	07 42 09.3	-5.3
	0.0nm,0.3s,baz=179,slow=14,SNR=3.6						
INK	Inuvik	21.34	33	P	P	07 43 27.0	-2.0
	1.3nm,0.5s,baz=240,slow=12,SNR=7.1						
PETK	Petropavlovsk-	21.81	284	P	P	07 43 36.5	+2.4
	1.1nm,0.5s,baz=76,slow=12,SNR=2.9						
PETK	Petropavlovsk-	21.81	284	P	P	07 43 33.9	-0.3
YKA	Yellowknife Ar	27.93	50	P	P	07 44 32.1	+0.6
	0.2nm,0.4s,baz=273,slow=9.0,SNR=8.0						
TIXI	Tiksi	33.13	328	P	P	07 45 16.3	-1.0
	2.6nm,0.3s,baz=348,slow=12,SNR=5.8						
NVAR	Mina Array Bea	35.46	95	P	P	07 45 40.4	+2.4
	0.7nm,0.8s,baz=279,slow=12,SNR=3.9						
PDAR	Pinedale Array	38.03	83	P	P	07 46 01.0	+1.1
	0.3nm,0.6s,baz=305,slow=3.2,SNR=3.3						
H11N2	WAKE ISLAND Hy	39.62	223	T	T	08 28 21.4	
	baz=25,slow=76,SNR=53						
H11N3	WAKE ISLAND Hy	39.63	223	T	T	08 28 34.1	
	baz=25,slow=76,SNR=62						
H11N1	WAKE ISLAND Hy	39.64	223	T	T	08 28 25.2	
	baz=25,slow=76,SNR=42						
H11S1	WAKE ISLAND Hy	40.80	222	T	T	08 30 07.3	
	baz=24,slow=76,SNR=54						
H11S2	WAKE ISLAND Hy	40.82	222	T	T	08 29 55.7	
	baz=24,slow=76,SNR=70						
H11S3	WAKE ISLAND Hy	40.82	222	T	T	08 29 53.0	
	baz=24,slow=76,SNR=44						
TXAR	Lajitas Array	50.50	93	P	P	07 47 40.9	+1.4

	0.8nm,0.6s,baz=299,slow=5.4,SNR=16						
KURBB	**Kurchatov Arra**	**63.26**	**320**	P	**P**	**07 49 08.2**	**-1.1**
	0.2nm,0.5s,baz=46,slow=8.2,SNR=4.0						
BVAR	**Borovoye Array**	**64.23**	**326**	P	**P**	**07 49 15.8**	**+0.1**
	0.5nm,0.4s,baz=51,slow=11,SNR=3.9						
MKAR	**Makanchi Array**	**64.78**	**315**	P	**P**	**07 49 18.2**	**-1.2**
	0.3nm,0.7s,baz=35,slow=4.4,SNR=3.6						

IDC 12 07:56:28.3±1.8**, 22°.89S**×**179°.57W, h0**km**, mb4.1**/3**, mb1 4.4**/4**, mb1mx3.9**/28**, mbtmp4.3**/4**, ML5.3**/2**, Error ellipse: s-maj=41.2km s-min=28.0km az=141.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**6.51**	**167**	Pn	Pn	07 58 05.5	+0.2
	310nm,0.3s,baz=62,slow=23,SNR=7.5						
AFI	**Afiamalu**	**11.59**	**41**	Pn	Pn	07 59 15.6	+0.5
	4.6nm,0.3s,baz=306,slow=16,SNR=5.1						
AFI				Sn	Sn	08 01 25.3	-0.1
	3.3nm,0.3s,baz=301,slow=19,SNR=3.8						
STKA	**Stephens Creek**	**35.48**	**247**	P	P	08 03 25.2	-1.5
	1.4nm,0.4s,baz=96,slow=12,SNR=7.8						
ASAR	**Alice Springs**	**42.60**	**259**	P	P	08 04 27.2	+0.8
	2.0nm,0.4s,baz=91,slow=7.3,SNR=46						
WRA	**Warramunga Arr**	**42.88**	**265**	P	P	08 04 28.8	0.0
	0.7nm,0.3s,baz=99,slow=7.4,SNR=14						

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*NEIC **12** 08:04:04.5±2.4, 25°.4S±0°.1×178°.4E±0°.2, h609km±9km, mb4.6/24, Error ellipse: s-maj=20.1km s-min=16.3km az=97.0*

*IDC **12** 08:04:05.7±1.1, 25°.39S×178°.22E, h612km±13km, mb3.8/14, mb1 3.9/17, mb1mx3.7/28, mbtmp4.7/17, Error ellipse: s-maj=12.8km s-min=11.3km az=12.0*

ISC 12 08:04:03.7±0.4**, 25°.51S**±0°.06×**178°.50E**±0°.07**, h600**km**, n140, σ1^{s}54**/148**, mb4.5**/28**, 31C-3D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.91**	**140**	P	**P**	**08 05 39.4**	**+3.7**
	190nm,0.3s,baz=97,slow=23,SNR=6.4						
RAO				S	**S**	**08 06 45.1**	**-5.9**
	571nm,0.3s,baz=231,slow=21,SNR=6.7						
RAO	**Raoul Island**	**4.91**	**140**	P	P	08 05 41.8	+6.0
MSVF	**Nonsavu**	**7.75**	**357**	P	**P**	**08 05 59.9**	**-1.0**
OUZ	**Omahuta**	**10.56**	**202**	P	**P**	**08 06 31.9**	**+4.1**
DZM	**Mont Dzumac**	**11.55**	**285**	P	**P**	**08 06 37.9**	**-0.3**
	4.8nm,0.3s,baz=101,slow=11,SNR=42						
DZM				S	S	08 08 32.1	-13
	baz=96,slow=5.6,SNR=3.9						
URZ	**Urewera**	**12.77**	**185**	P	**P**	**08 06 51.2**	**+1.3**
	1.7nm,0.3s,baz=271,slow=3.9,SNR=32						
URZ				S	**S**	**08 09 02.1**	**-4.5**
	0.8nm,0.3s,baz=38,slow=16,SNR=10						
URZ	**Urewera**	**12.77**	**185**	P	**P**	**08 06 50.1**	**+0.1**
URZ					**S**	**08 09 05.9**	**-0.8**
HIZ	**Hauiti**	**13.32**	**192**	P	**P**	**08 06 57.8**	**+2.1**
BKZ	**Black Stump Fm**	**13.72**	**187**	P	**P**	**08 06 58.7**	**-1.1**
BKZ					**S**	**08 09 22.0**	**-1.9**
AFI	**Afiamalu**	**14.72**	**40**	P	**P**	**08 07 07.3**	**-2.3**
	4.1nm,0.3s,baz=35,slow=15,SNR=10						
AFI				S	**S**	**08 09 40.6**	**-0.8**
	3.8nm,0.3s,baz=107,slow=19,SNR=4.2						
BFZ	**Birch Farm**	**15.25**	**187**	P	**P**	**08 07 13.8**	**-0.1**
BFZ				IAmb	IAmb	08 07 19.8	
	comp=Z,39nm,1.1s						
QRZ	**Quartz Range**	**16.06**	**197**	P	**P**	**08 07 23.8**	**+2.3**
MSWZ	**Moikau Station**	**16.09**	**189**	P	**P**	**08 07 22.5**	**+0.7**
BHW	**Baring Head**	**16.14**	**190**	P	**P**	**08 07 22.7**	**+0.6**
NNZ	**Nelson**	**16.23**	**194**	P	**P**	**08 07 24.9**	**+2.0**
PLWZ	**Palliser**	**16.24**	**189**	P	**P**	**08 07 24.5**	**+1.4**
THZ	**Tophouse**	**16.86**	**195**	P	**P**	**08 07 30.4**	**+1.6**
THZ				IAmb	IAmb	08 07 32.0	
	comp=Z,21nm,1.0s						
THZ					**S**	**08 10 15.9**	**+0.3**
KHZ	**Kahutara**	**17.35**	**192**	IAmb	IAmb	08 07 36.9	
	comp=Z,26nm,1.0s						
LTZ	**Lake Taylor**	**17.97**	**195**	P	**P**	**08 07 39.9**	**+0.9**
LTZ				IAmb	IAmb	08 07 44.0	
	comp=Z,20nm,0.6s						
RPZ	**Rata Peaks**	**19.15**	**197**	P	**P**	**08 07 51.3**	**+1.7**
	comp=Z,0.8nm,0.3s,baz=19,slow=4.5,SNR=5.9						
RPZ	**Rata Peaks**	**19.15**	**197**	P	**P**	**08 07 51.7**	**+2.1**
FOZ	**Fox Glacier**	**19.33**	**199**	P	**P**	**08 07 52.1**	**+1.0**
FOZ				IAmb	IAmb	08 07 54.0	
	comp=Z,15nm,0.9s						
MLZ	**Mavora Lakes**	**21.51**	**200**	P	**P**	**08 08 13.2**	**+2.5**
MLZ				IAmb	IAmb	08 08 14.5	
	comp=Z,19nm,0.7s						
WHZ	**Wether Hill Ro**	**22.03**	**200**	P	**P**	**08 08 18.2**	**+2.8**
WHZ				IAmb	IAmb	08 08 18.7	
	comp=Z,22nm,0.8s						
ARMA	**Armidale**	**24.20**	**252**	P	**P**	**08 08 36.5**	**+1.4**
EIDS	**Eidsvold**	**24.74**	**264**	P	**P**	**08 08 40.1**	**+0.4**
EIDS				IAmb	IAmb	08 08 58.0	
	comp=Z,12nm,1.1s						
CTA	**Charters Tower**	**30.16**	**274**	P	**P**	**08 09 26.1**	**-1.0**
	comp=Z,14nm,0.4s,baz=97,slow=11,SNR=29						
TOO	**Toolangi**	**30.44**	**239**	P	**P**	**08 09 29.6**	**+0.4**
TOO				IAmb	IAmb	08 09 31.0	
	comp=Z,11nm,0.7s						
STKA	**Stephens Creek**	**32.87**	**250**	P	**P**	**08 09 50.5**	**+0.6**
	comp=Z,4.6nm,0.4s,baz=87,slow=9.4,SNR=13						
STKA				PcP	**PcP**	**08 12 16.1**	**0.0**
	comp=Z,1.6nm,0.3s,baz=146,slow=11,SNR=3.1						
STKA	**Stephens Creek**	**32.87**	**250**	P	**P**	**08 09 50.1**	**+0.2**
PMG	**Port Moresby**	**33.79**	**293**	P	**P**	**08 09 57.1**	**-0.6**
	comp=Z,24nm,0.8s,baz=123,slow=6.3,SNR=15						
AS31	**Alice Springs**	**40.45**	**263**	P	**P**	**08 10 51.7**	**-0.2**
ASAR	**Alice Springs**	**40.45**	**263**	P	**P**	**08 10 51.6**	**-0.4**
	comp=Z,5.7nm,0.5s,baz=89,slow=6.4,SNR=87						
ASAR				PcP	**pwP**	**08 12 38.6**	**+0.1**
	comp=Z,2.2nm,0.9s,baz=99,slow=6.7,SNR=5.3						
ASAR				S	**S**	**08 16 16.2**	**-2.6**
	comp=Z,2.1nm,0.7s,baz=90,slow=16,SNR=9.5						
ASAR	**Alice Springs**	**40.45**	**263**	P	**P**	**08 10 51.1**	**-0.8**
WRAB	**Tennant Creek**	**40.96**	**269**	P	**P**	**08 10 55.0**	**-1.0**
WRAB				IAmb	IAmb	08 10 55.8	
	comp=Z,16nm,0.8s						
WB0	**Warramunga Arr**	**40.96**	**269**	P	**P**	**08 10 55.2**	**-0.8**
WRA	**Warramunga Arr**	**40.96**	**268**	P	**P**	**08 10 55.1**	**-0.9**
	comp=Z,17nm,0.5s,baz=99,slow=6.9,SNR=35						
WRA				PcP	**PcP**	**08 12 41.6**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=110,slow=6.3,SNR=5.0						
WRA				S	**S**	**08 16 21.8**	**-4.5**
	comp=Z,7.4nm,0.9s,baz=100,slow=14,SNR=8.6						
FORT	**Forrest**	**44.48**	**251**	P	**P**	**08 11 22.7**	**-0.5**
FORT				IAmb	IAmb	08 11 26.9	
	comp=Z,15nm,0.8s						
KNRA	**Kununurra**	**47.34**	**272**	P	**P**	**08 11 45.0**	**-0.1**
BAKI	**Biak**	**47.46**	**294**	P	**P**	**08 11 43.8**	**-2.2**
	comp=Z,64nm,0.7s						
FAKI	**Fak Fak**	**49.78**	**289**	P	**P**	**08 12 01.1**	**-2.0**
	comp=Z,16nm,1.4s						
SWI	**Sorong**	**51.69**	**291**	P	**P**	**08 12 15.0**	**-1.9**
	comp=Z,100nm,0.7s						
NLAI	**Namlea**	**54.06**	**285**	P	**P**	**08 12 31.9**	**-1.8**
	comp=Z,26nm,0.7s						
SANI	**Sanana**	**55.61**	**286**	P	**P**	**08 12 42.7**	**-1.8**
	comp=Z,34nm,0.7s						
EDFI	**Ende, Flores**	**56.37**	**277**	P	**P**	**08 12 47.8**	**-2.1**
	comp=Z,20nm,0.8s						
BKSI	**Bulukumba**	**59.25**	**279**	P	**P**	**08 13 07.5**	**-1.7**
	comp=Z,574nmcomp=Z,35nm,0.7s						
BNSI	**Bone**	**59.67**	**280**	P	**P**	**08 13 10.3**	**-1.7**
	comp=Z,24nm,1.3s						
PLAI	**Plampang**	**59.86**	**275**	P	**P**	**08 13 11.6**	**-1.6**
QSPA	**South Pole Qui**	**64.58**	**180**	P	**P**	**08 13 45.4**	**+2.4**
	comp=Z,9.4nm,0.9s,baz=19,slow=0.5,SNR=36						
QSPA	**South Pole Qui**	**64.58**	**180**	P	**P**	**08 13 45.5**	**+2.5**
MJAR	**Matsushiro Arr**	**72.47**	**327**	P	**P**	**08 14 29.5**	**-1.2**
	comp=Z,3.4nm,0.5s,baz=146,slow=5.7,SNR=8.4						
MAT	**Matsushiro**	**72.47**	**327**	P	**P**	**08 14 29.4**	**-1.3**
MAT				*e*S	**SKiKP**	**08 23 04.4**	**+2.4**
KSRS	**Korea Array**	**78.62**	**321**	P	**P**	**08 15 04.1**	**-0.4**
	comp=Z,4.3nm,0.7s,baz=135,slow=5.7,SNR=16						
PETK	**Petropavlovsk-**	**80.35**	**347**	P	**P**	**08 15 13.7**	**+0.4**
	comp=Z,5.9nm,0.7s,baz=138,slow=7.6,SNR=7.9						
PETK	**Petropavlovsk-**	**80.35**	**347**	P	**P**	**08 15 13.4**	**+0.2**
NJ2	**Nanjing**	**80.70**	**312**	*e*P	**P**	**08 15 17.2**	**+1.6**
SYO	**Syowa Base**	**81.13**	**194**	⇑*e*P	**P**	**08 15 15.0**	**-2.2**
SYO	**Syowa Base**	**81.13**	**194**	⇓*e*PcP	**PcP**	**08 15 21.0**	**-0.5**
USA0B	**Ussuriysk Arra**	**81.39**	**328**	P	**P**	**08 15 19.6**	**+0.8**
USA0B				IAmb	IAmb	08 15 20.1	
	comp=Z,16nm,1.1s						
USRK	**Ussuriysk Ar.**	**81.39**	**328**	P	**P**	**08 15 19.1**	**+0.3**
	comp=Z,7.5nm,0.7s,baz=140,slow=3.7,SNR=20						
SNAA	**Sanae**	**83.08**	**180**	P	**P**	**08 15 28.5**	**+1.4**
SNAA	**Sanae**	**83.08**	**180**	P	**P**	**08 15 28.3**	**+1.1**
VNA3	**Neumayer Olymp**	**83.34**	**177**	P	**P**	**08 15 29.1**	**+0.7**
VNA2	**Neumayer--Watz**	**83.74**	**178**	P	**P**	**08 15 31.6**	**+1.2**
	baz=194,slow=4.5						
GDXM	**Geysers**	**84.30**	**42**	P	**P**	**08 15 30.7**	**-2.9**
NVAR	**Mina Array Bea**	**86.86**	**45**	P	**P**	**08 15 47.9**	**+1.9**
	comp=Z,0.6nm,0.6s,baz=231,slow=8.3,SNR=6.5						
XAN	**Xi'an**	**88.67**	**309**	P	**P**	**08 15 55.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**88.81**	**291**	P	**P**	**08 15 56.6**	**+1.3**
	comp=Z,1.8nm,0.4s,baz=134,slow=3.3,SNR=12						
HHC	**Hu-ho-hao-te**	**90.60**	**316**	*e*P	**P**	**08 16 05.2**	**+2.0**
CD2	**Chengdu**	**90.83**	**304**	P	**P**	**08 16 03.8**	**-0.6**
LZH	**Lanzhou**	**93.29**	**309**	⇑P	**P**	**08 16 16.6**	**+0.8**
LZH				pP	pwP	08 18 28.7	-1.5
LZH				sP	sP	08 19 27.9	+4.7
LZH				PP	**PP**	**08 20 14.5**	**+3.7**
ILAR	**Eielson Array**	**93.92**	**14**	P	**P**	**08 16 17.2**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=224,slow=4.6,SNR=6.5						
SONM	**Songino Array**	**97.43**	**320**	P	Pdif	08 16 33.4	-0.7
	comp=Z,0.4nm,0.4s,baz=134,slow=6.2,SNR=2.7						
MKAR	**Makanchi Array**	**112.23**	**312**	PKiKP	**PKiKP**	**08 21 31.9**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=235,slow=1.1,SNR=6.8						
ZALV	**Zalesovo Beam**	**112.32**	**320**	PKiKP	**PKiKP**	**08 21 30.9**	**-1.0**
	comp=Z,0.6nm,0.4s,baz=145,slow=3.6,SNR=3.8						
KSH	**Kashi**	**115.02**	**304**	PKP	PKPdf	08 21 38.2	+0.4
KSH				PP	**PP**	**08 22 54.4**	**+5.2**
KSH				sPKP		08 24 53.1	
KSH				PKS	**PKSdf**	**08 25 14.1**	**-0.5**
KSH				SKKS		08 28 45.6	
KURBB	**Kurchatov Arra**	**115.45**	**316**	PKP	**PKPdf**	**08 21 37.2**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=98,slow=1.8,SNR=12						
KURBB				PP	**PP**	**08 22 52.9**	**+1.2**
	comp=Z,0.4nm,0.9s,baz=98,slow=6.9,SNR=4.3						
AAK	**Ala-Archa**	**116.77**	**307**	PP	PP	08 23 00.6	-0.6
	comp=Z,2.0nm,0.4s,baz=190,slow=16,SNR=5.6						
MATP	**Matopo**	**125.83**	**215**	PKP	**PKPdf**	**08 21 57.1**	**-2.0**
	comp=Z,1.2nm,0.4s,baz=201,slow=4.1,SNR=5.0						
GEYT	**Alibeck**	**128.57**	**299**	PKP	**PKPdf**	**08 22 04.5**	**+0.8**
	comp=Z,1.4nm,0.4s,baz=134,slow=6.4,SNR=3.7						
TSUM	**Tsumeb**	**131.84**	**205**	PKP	**PKPdf**	**08 22 11.8**	**+1.1**
	comp=Z,1.2nm,0.4s,baz=180,slow=14,SNR=3.4						
ARCES	**ARCESS Array B**	**133.16**	**347**	PKhKP	PKPpre	08 22 04.0	
	comp=Z,4.4nm,1.0s,baz=85,slow=2.4,SNR=5.9						
ARCES				PKP	**PKPdf**	**08 22 12.2**	**+0.9**
	comp=Z,2.1nm,0.5s,baz=90,slow=2.4,SNR=13						
FINES	**FINESS Array B**	**139.51**	**340**	PKhKP	PKPpre	08 22 13.8	
	comp=Z,2.4nm,0.6s,baz=58,slow=4.4,SNR=18						
FINES				PKP	**PKPdf**	**08 22 25.0**	**+1.7**
	comp=Z,1.9nm,0.4s,baz=107,slow=3.9,SNR=13						
FINES				SKPbc	**SKPbc**	**08 25 03.4**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=129,slow=3.8,SNR=3.9						
DOMB	**Dombas**	**142.79**	**352**	*e*PKPdf	**PKPdf**	**08 22 26.9**	**-2.3**
AKN	**Aaknes**	**142.90**	**353**	*e*PKPdf	**PKPdf**	**08 22 27.6**	**-1.7**
NB2	**NORSAR Subarra**	**143.43**	**350**	PKP	PKPab	08 22 28.9	-0.2
	comp=Z,9.4nm,0.6s,baz=18,slow=3.2						
NOA	**NORSAR Array B**	**143.43**	**350**	PKP	PKPab	08 22 28.7	-0.4
	comp=Z,6.9nm,0.7s,baz=22,slow=3.8,SNR=51						
FOO	**Floro**	**143.65**	**355**	*e*PKPdf	PKPab	08 22 29.2	-0.6
NC602	**NORSAR Array S**	**143.67**	**349**	*e*PKPdf	PKPab	08 22 29.3	-0.6
HYA	**Hoyanger**	**143.97**	**354**	*e*PKPdf	PKPbc	08 22 30.5	-0.3
SKAR	**Skarslia**	**144.20**	**352**	*e*PKPab	PKPbc	08 22 30.8	-0.8
SUE	**Sulen**	**144.21**	**355**	*e*PKPab	PKPbc	08 22 30.1	-1.3
ASK	**Askoy**	**144.74**	**354**	*e*PKPab	**PKPdf**	**08 22 32.2**	**-0.3**
BER	**Bergen**	**144.82**	**354**	*e*PKPab	**PKPdf**	**08 22 32.6**	**-0.1**
KONO	**Kongsberg**	**145.01**	**350**	*e*PKPab	**PKPdf**	**08 22 33.8**	**+0.8**
ODD1	**Odda**	**145.15**	**353**	*e*PKPab	**PKPdf**	**08 22 34.4**	**+1.0**
AKASG	**Malin Array Be**	**145.54**	**325**	PKPbc	**PKPdf**	**08 22 34.1**	**-0.1**
	comp=Z,5.0nm,0.5s,baz=43,slow=4.2,SNR=28						
BLS5	**Blasjo**	**145.65**	**353**	*e*PKPab	**PKPbc**	**08 22 35.6**	**-0.3**
KMY	**Karmoy**	**145.99**	**354**	*e*PKPab	**PKPbc**	**08 22 36.9**	**+0.1**
HOMB	**Homborsund**	**146.50**	**350**	*e*PKPab	**PKPbc**	**08 22 38.9**	**+0.7**
SNART	**Snartemo**	**146.62**	**352**	*e*PKPab	**PKPbc**	**08 22 39.0**	**+0.5**
BRTR	**Keskin Array B**	**147.41**	**304**	PKPbc	**PKPbc**	**08 22 41.0**	**-0.4**
	comp=Z,3.5nm,0.6s,baz=127,slow=4.6,SNR=11						
SORM	**Soroca**	**147.46**	**322**	⇑P	**PKPbc**	**08 22 41.2**	**+0.2**
EIL	**Elat**	**147.51**	**286**	PKPbc	**PKPbc**	**08 22 42.5**	**+0.7**
	comp=Z,4.1nm,0.6s,baz=268,slow=1.6,SNR=4.2						
TLCR		**148.70**	**317**	⇑P	**PKPbc**	**08 22 44.6**	**+0.4**
GHRR		**149.12**	**319**	⇑P	**PKiKP**	**08 22 46.8**	**+0.7**
CFR	**Carcaliu**	**149.12**	**317**	⇑P	**PKPbc**	**08 22 45.3**	**0.0**
BURAR	**Bucovina Array**	**149.48**	**323**	⇑P	**PKiKP**	**08 22 47.2**	**+0.3**
VRI	**Vrincioaia**	**149.62**	**319**	⇑P	**PKPbc**	**08 22 47.0**	**+0.5**
KOLS	**Kolonicke sedl**	**150.15**	**328**	*e*PKP	**PKPbc**	**08 22 48.4**	**+0.8**
KOLS				*e*		08 22 55.5	
MLR	**Muntele Rosu**	**150.28**	**319**	⇑P	**PKPbc**	**08 22 48.6**	**+0.4**
DOPR	**Dopca**	**150.35**	**320**	⇑P	**PKiKP**	**08 22 49.1**	**+0.4**
TRPA	**Tarpa**	**150.56**	**326**	⇓P	**PKPbc**	**08 22 48.1**	**-0.4**
CRVS	**Cervenica-Dubn**	**150.56**	**328**	*e*PKP	**PKiKP**	**08 22 49.4**	**+0.4**
CRVS				*e*		08 22 58.6	
VOIR		**150.84**	**320**	⇑P	**PKPbc**	**08 22 49.7**	**+0.2**
CJR	**Cluj-Napoca**	**150.91**	**323**	⇑P	**PKPbc**	**08 22 48.4**	**-1.1**
ARR	**Arges**	**151.12**	**320**	⇑P	**PKiKP**	**08 22 50.9**	**+0.5**
LANS	**Liptovska Anna**	**151.29**	**331**	*e*PKP	**PKiKP**	**08 22 51.1**	**+0.6**
LANS				*e*		08 23 01.6	
DRGR		**151.34**	**324**	⇑P	**PKPbc**	**08 22 51.0**	**+0.5**
HUMR	**Humele**	**151.38**	**318**	⇑P	**PKPbc**	**08 22 48.8**	**-1.8**
OSTC	**Ostas**	**151.51**	**336**	⇑*e*PKP	**PKiKP**	**08 22 51.5**	**+0.6**
CHVC	**Chvalec**	**151.54**	**336**	⇑*e*PKP	**PKPbc**	**08 22 51.3**	**+0.5**
MORC	**Moravsky Berou**	**151.62**	**334**	⇑P	**PKiKP**	**08 22 51.8**	**+0.5**
UPC	**Upice**	**151.63**	**336**	⇑*e*PKP	**PKiKP**	**08 22 51.9**	**+0.8**
DPC	**Dobruska-Polom**	**151.64**	**336**	⇑*e*PKP	**PKPbc**	**08 22 51.5**	**+0.5**
KRLC	**Kraliky**	**151.69**	**335**	⇑*e*PKP	**PKPbc**	**08 22 51.7**	**+0.6**
CLL	**Collm**	**151.95**	**340**	⇓*i*PKPbc	**PKiKP**	**08 22 52.9**	**+1.1**
	comp=Z,17nm,0.7s						
CLL				⇑*i*PKPab	**PKPab**	**08 23 04.9**	**+1.0**
	comp=Z,7.0nm,0.7s						
PSZ	**Piszkesteto**	**151.99**	**328**	⇑P	**PKPbc**	**08 22 52.3**	**+0.4**
BRG	**Berggiesshubel**	**152.03**	**339**	*i* PKP	**PKPbc**	**08 22 52.3**	**+0.5**
	comp=Z,12nm,0.5s						
VYHS	**Vyhne**	**152.06**	**330**	*e*PKP	**PKPbc**	**08 22 52.0**	**+0.1**
VYHS				*e*		08 23 04.8	
GZR	**Gura Zlata**	**152.17**	**322**	⇑P	**PKPbc**	**08 22 52.5**	**+0.1**
PLVB	**Pleven**	**152.21**	**316**	⇑P	**PKPbc**	**08 22 51.0**	**-1.4**
SIRR	**Siria**	**152.23**	**324**	⇑P	**PKiKP**	**08 22 53.3**	**+0.7**
GOPC	**GO Pecny, Ondr**	**152.56**	**337**	⇑*e*PKP	**PKiKP**	**08 22 53.6**	**+0.5**
PRU	**Pruhonice**	**152.58**	**337**	⇑*e*PKP	**PKPbc**	**08 22 53.4**	**+0.4**
BZS	**Buzias**	**152.67**	**323**	⇑P	**PKPbc**	**08 22 52.9**	**-0.4**
HERR	**Herculane**	**152.68**	**321**	⇑P	**PKPbc**	**08 22 53.6**	**+0.2**
KHC	**Kasperske Hory**	**153.64**	**337**	⇑*e*PKP	**PKPbc**	**08 22 55.1**	**-0.3**
GERES	**GERESS Array B**	**153.84**	**337**	PKPbc	**PKPbc**	**08 22 56.3**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=45,slow=2.3,SNR=6.6						
GERES				PKPab	**PKPab**	**08 23 12.1**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=30,slow=6.2,SNR=7.1						
TORD	**Torodi Ar. Bea**	**167.34**	**194**	PKP	**PKPdf**	**08 23 02.5**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=312,slow=0.9,SNR=6.2						
TORD				PKPab	**PKPab**	**08 24 12.3**	**+0.5**
	comp=Z,1.4nm,0.4s,baz=163,slow=4.2,SNR=13						

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*ASRS **12** 08:23:24.3, 53°.70N×90°.95E, M2.3, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NNC 12 08:23:36.0±1.9**, 53°.39N**×**90°.45E, h0**km**, mb3.7, mpv3.4, 4C-5D, Error ellipse: s-maj=15.1km s-min=10.0km az=86.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**3.39**	**282**	⇑Pn	Pn	08 24 30.8	+0.6
	2.1nm,0.7s						
ZAA0				⇑Lg	Lg	08 25 23.0	
	15nm,1.1s						
KURBB	**Kurchatov Arra**	**7.86**	**254**	⇓Pn	Pn	08 25 29.6	-1.8
	6.8nm,0.7s						
KURBB				⇓Sn	Sn	08 27 02.3	+1.3
	35nm,0.8s						
KURBB				⇓Lg	Lg	08 27 46.5	
	38nm,0.8s						
MK31	**Makanchi Array**	**8.43**	**222**	Pn	Pn	08 25 39.2	-0.1
	0.5nm,0.5s,baz=38,slow=13,SNR=15						
MK31				⇑Sn	Sn	08 27 16.7	+1.6
	3.2nm,0.8s,baz=38,slow=14,SNR=6.6						
MK31				⇓Lg	Lg	08 28 04.9	
	12nm,0.9s,baz=40,slow=29,SNR=2.6						
MAKZ	**Makanchi**	**8.54**	**223**	⇓Sn	Sn	08 27 19.3	+1.3
	4.2nm,0.9s						
MAKZ				⇑Lg	Lg	08 28 09.0	
	8.7nm,1.0s						

DJA 12 08:30:04.6±0.3**, 10°S**±5°×**11°9E**±°**, h10**km**, M4.2**/12**, mB5.0**/1**, mb4.3**/2**, MLv4.1**/12**, Mw(mB)4.3**/1**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.77**	**100**	P	Pg	08 30 19.1	-0.4
WBSI				S	Sg	08 30 29.0	-0.6
PLAI	**Plampang**	**1.07**	**309**	P	Pg	08 30 24.1	-1.2
PLAI				S	Sg	08 30 38.4	-0.9
BASI	**Baing, Sumba**	**2.05**	**110**	P	Pn	08 30 40.6	+1.4
EDFI	**Ende, Flores**	**3.12**	**76**	P	Pn	08 30 54.0	-0.1
DNP	**Denpasar**	**3.47**	**284**	P	Pn	08 30 59.3	+0.6
IGBI	**Denpasar**	**3.50**	**281**	P	Pn	08 30 58.9	-0.2
SRBI	**Singaraja**	**3.65**	**293**	P	Pn	08 31 02.4	+1.2
MMRI	**Maumere**	**3.68**	**77**	P	Pn	08 31 02.8	+1.2
BKSI	**Bulukumba**	**4.42**	**20**	P	Pn	08 31 12.5	+0.7
JAGI	**Jajag, Banyuwa**	**4.53**	**283**	P	Pn	08 31 12.0	-1.4
GMJI	**Gumukmas**	**5.26**	**283**	P	Pn	08 31 23.0	-0.3
	0.2nm38nm,1.0s						
BNSI	**Bone**	**5.29**	**16**	P	Pg	08 31 44.0	-1.9
SOEI	**Soe**	**5.57**	**93**	P	Pb	08 31 35.7	-6.4

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*IDC **12** 08:43:34.7±0.4, 59°.28N×153°.45W, h83km±4km, mb3.9/31, mb1 4.0/34, mb1mx4.0/61, mbtmp4.2/34, MS3.5/14, Ms1 3.5/14, ms1mx3.3/42, Error ellipse: s-maj=8.3km s-min=5.9km az=71.0*

*NEIC **12** 08:43:34.6±1.7, 59°.28N±0°.04×153°.22W±0°.10, h88km±2km, Error ellipse: s-maj=7.5km s-min=5.8km az=119.0*

*NEIC **12** 08:43:35, 59°.28N×153°.16W, h79km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.21; $M_{\theta\theta}$-0.90; $M_{\phi\phi}$0.69; $M_{r\theta}$0.52; $M_{\theta\phi}$0.52; $M_{\phi r}$0.48; Fault plane solution: $M_0$1.20000×10^{16} NP1:ϕ_s64.66000°, δ79.99000°, λ36.24000°. NP2:ϕ_s327.40000°, δ54.40000°, λ167.66000°. Principal axes: T 1.2333, Plg32.0000°, Azm292.0000°; N -0.0672, Plg53.0000°, Azm78.0000°; P -1.1661, Plg17.0000°, Azm191.0000°;*

*AEIC **12** 08:43:35±1.9, 59°.30N±0°.04×153°.18W±0°.09, h86km±3km, ML4.6/159, mb4.4/8(NEIC), Mwr4.7/43(NEIC) Error ellipse: s-maj=7.0km s-min=5.5km az=108.0*

ISC 12 08:43:34.8±0.4**, 59°.31N**±0°.04×**153°.25W**±0°.04**, h88**km±3km**, n224, σ1^{s}27**/249**, mb4.2**/32**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AU22	**Augustine Moun**	**0.08**	**318**		**Pn**	**08 43 47.2**	**0.0**
AU22					**Sn**	**08 43 56.8**	**+0.3**
AUQ	**Augustine Qik'**	**0.10**	**298**		**Pn**	**08 43 47.7**	**+0.4**
AUQ					**Sn**	**08 43 57.2**	**+0.5**
AUP	**Augustine Pinn**	**0.10**	**301**		**Pn**	**08 43 47.6**	**+0.3**
AUH	**Augustine H**	**0.11**	**299**		**Pn**	**08 43 47.6**	**+0.3**
AUL	**Augustine Lava**	**0.12**	**307**		**Pn**	**08 43 47.6**	**+0.3**
AUL					**Sn**	**08 43 57.2**	**+0.6**
AUW	**Augustine West**	**0.13**	**298**		**Pn**	**08 43 47.7**	**+0.4**
OPT	**Oil Point**	**0.34**	**2**		**Sn**	**08 43 58.8**	**+0.5**
FOSS	**Fourpeaked Sta**	**0.56**	**204**		**Pn**	**08 43 49.8**	**-0.1**
ILS	**Iliamna Low So**	**0.66**	**8**		**Pn**	**08 43 50.6**	**-0.1**
IVE	**Iliamna Volcan**	**0.72**	**9**		**Pn**	**08 43 51.2**	**-0.2**
ILW	**Iliamna West**	**0.75**	**4**		**Pn**	**08 43 51.8**	**-0.1**
HOM	**Homer**	**0.89**	**66**		**Pn**	**08 43 53.8**	**+0.7**
HOM	**Homer**	**0.89**	**66**	Sn	**Sn**	**08 44 07.2**	**+0.4**
CNPM	**China Poot**	**1.05**	**77**		**Sn**	**08 44 09.4**	**-0.6**
KAHG	**Katmai Hook Gl**	**1.06**	**220**		**Pn**	**08 43 55.3**	**+0.2**
KAHC	**Katmai Hardscr**	**1.13**	**235**		**Pn**	**08 43 56.0**	**+0.1**
RED	**Redoubt Volcan**	**1.14**	**12**		**Pn**	**08 43 55.9**	**-0.1**
RED					**Sn**	**08 44 12.1**	**+0.1**
RDWB	**Redoubt West**	**1.20**	**10**		**Pn**	**08 43 56.7**	**-0.1**
RDWB					**Sn**	**08 44 13.6**	**+0.2**
KAWH	**Katmai**	**1.23**	**222**		**Pn**	**08 43 57.1**	**0.0**
BRLK	**Bradley Lake**	**1.29**	**68**		**Pn**	**08 43 57.1**	**-0.7**
BRLK					**Sn**	**08 44 14.4**	**-0.7**
RDJH	**Redoubt Jeurge**	**1.30**	**10**		**Pn**	**08 43 58.2**	**+0.1**
DFR	**Drift River**	**1.32**	**12**		**Pn**	**08 43 58.2**	**0.0**
RDT	**Redoubt**	**1.34**	**18**		**Pn**	**08 43 58.5**	**0.0**
BRSE	**Bradley Lake S**	**1.35**	**70**		**Pn**	**08 43 57.9**	**-0.7**
BRSE					**Sn**	**08 44 16.8**	**+0.3**
KCG	**Knife Ck. Glac**	**1.40**	**225**		**Pn**	**08 43 59.3**	**+0.2**
ACHA	**Angle Creek He**	**1.54**	**225**		**Pn**	**08 44 01.3**	**+0.3**
KELA	**Mount Kelaz**	**1.56**	**237**		**Pn**	**08 44 01.4**	**+0.2**
KDAK	**Kodiak Island**	**1.57**	**167**	P	**Pn**	**08 44 00.7**	**-0.5**
	482nm,0.3s,baz=59,slow=6.2						
KDAK				S	**Sn**	**08 44 19.5**	**-1.8**
	798nm,0.3s,baz=346,slow=14,SNR=29						
KDAK				LR	LR	08 44 51.6	
	comp=Z,1μm,20.8s,baz=261,slow=49						
KDAK	**Kodiak Island**	**1.57**	**167**	Sn	**Sn**	**08 44 18.8**	**-2.6**
CAPN	**Captain Cook N**	**1.80**	**35**		**Pn**	**08 44 05.8**	**+1.6**
SLKM	**Skilak Lake**	**1.94**	**50**		**Pn**	**08 44 05.5**	**-0.6**
SLKM					**Sn**	**08 44 29.6**	**-0.5**
SPCR	**Spurr Chakacha**	**1.97**	**15**		**Pn**	**08 44 06.8**	**+0.3**
SPBG	**Spurr Blockage**	**2.00**	**12**		**Pn**	**08 44 07.5**	**+0.5**
SEW	**Seward**	**2.08**	**66**		**Pn**	**08 44 07.7**	**-0.2**
SEW				Sn	**Sn**	**08 44 31.5**	**-1.8**
OHAK	**Old Harbor**	**2.09**	**181**		**Pn**	**08 44 07.2**	**-0.8**
SVW2	**Sparrevohn**	**2.14**	**328**		**Pn**	**08 44 09.2**	**+0.6**
PLK2	**Peulik 2**	**2.24**	**227**		**Pn**	**08 44 11.0**	**+1.0**
PLK3	**Peulik 3**	**2.27**	**226**		**Pn**	**08 44 11.2**	**+0.8**
PLK1	**Peulik 1**	**2.32**	**231**		**Pn**	**08 44 11.8**	**+0.8**
FIS	**Fire Island**	**2.38**	**38**		**Pn**	**08 44 13.0**	**+1.2**
PLBL	**Peulik Blue Cr**	**2.47**	**231**		**Pn**	**08 44 14.1**	**+1.0**
RC01	**Rabbit Creek A**	**2.50**	**43**		**Pn**	**08 44 13.7**	**+0.2**
RC01				Sn	**Sn**	**08 44 43.1**	**-0.1**
SII	**Sitkinak Islan**	**2.80**	**191**		**Pn**	**08 44 16.6**	**-1.0**
PWL	**Port Wells**	**2.91**	**56**		**Pn**	**08 44 18.1**	**-1.0**
PMR	**Palmer**	**3.07**	**40**		**Pn**	**08 44 20.5**	**-0.5**
KNK	**Knik Glacier**	**3.18**	**46**		**Pn**	**08 44 22.0**	**-0.6**
KNK				Sn	**Sn**	**08 44 56.9**	**-2.7**
GHO	**Glory Hole Cre**	**3.27**	**39**		**Pn**	**08 44 23.4**	**-0.5**
GLI	**Glacier Island**	**3.46**	**60**		**Pn**	**08 44 24.5**	**-1.9**
SML	**Sawmill**	**3.49**	**42**		**Pn**	**08 44 26.3**	**-0.5**
MID	**Middleton Isla**	**3.54**	**85**		**Pn**	**08 44 26.9**	**-0.5**
HIN	**Hinchinbrook I**	**3.58**	**69**		**Pn**	**08 44 27.1**	**-0.9**
PPLA	**Purkeypile**	**3.63**	**8**		**Pn**	**08 44 30.3**	**+1.4**
FID	**Port Fidalgo**	**3.69**	**64**		**Pn**	**08 44 27.4**	**-2.1**
CHIR	**Chirikof Islan**	**3.72**	**201**		**Pn**	**08 44 29.1**	**-0.8**
JPK	**Jack Peak**	**3.75**	**59**		**Pn**	**08 44 29.2**	**-1.2**
TT01	**Tatalina**	**3.85**	**341**		**Pn**	**08 44 32.0**	**+0.4**
SCM	**Sheep Creek Mo**	**3.87**	**47**		**Pn**	**08 44 31.5**	**-0.4**
VMT	**TAPS Tl Valdez**	**3.87**	**60**		**Pn**	**08 44 30.8**	**-1.0**
EYAK	**Cordova Ski Ar**	**3.97**	**69**		**Pn**	**08 44 31.9**	**-1.4**
HUR	**Hurricane**	**4.08**	**24**		**Pn**	**08 44 35.0**	**+0.2**
CHGN	**Chignik**	**4.09**	**225**		**Pn**	**08 44 35.3**	**+0.4**
CAST	**Castle Rocks**	**4.16**	**7**		**Pn**	**08 44 35.6**	**-0.2**
WAT1	**Susitna Watana**	**4.20**	**31**		**Pn**	**08 44 36.0**	**-0.5**
WAT6	**Susitna Watana**	**4.24**	**37**		**Pn**	**08 44 36.3**	**-0.8**
WAT2	**Susitna Watana**	**4.31**	**30**		**Pn**	**08 44 37.6**	**-0.4**
TRF	**Thorofare Moun**	**4.39**	**18**		**Pn**	**08 44 39.5**	**+0.4**
KTH	**Kantishna Hill**	**4.40**	**14**		**Pn**	**08 44 39.5**	**+0.3**
VNHG	**Veniaminof 1**	**4.43**	**228**		**Pn**	**08 44 40.8**	**+1.2**
RAGM	**Ragged Mountai**	**4.46**	**72**		**Pn**	**08 44 39.0**	**-0.9**
GOAT	**Goat Mountain**	**4.47**	**70**		**Pn**	**08 44 39.5**	**-0.7**
VNFG	**Fog Glacier, M**	**4.54**	**231**		**Pn**	**08 44 41.5**	**+0.5**
VNSS	**Veniaminof 8**	**4.54**	**230**		**Pn**	**08 44 41.4**	**+0.2**
PS12	**TAPS Pump St12**	**4.57**	**58**		**Pn**	**08 44 40.5**	**-0.9**
CHUM	**Lake Minchumin**	**4.61**	**5**		**Pn**	**08 44 42.6**	**+0.7**
PS11	**TAPS Pump St11**	**4.72**	**51**		**Pn**	**08 44 43.5**	**0.0**
DHY	**Denali Highway**	**4.73**	**34**		**Pn**	**08 44 43.5**	**-0.2**
MCK	**McKinley**	**4.89**	**23**		**Pn**	**08 44 46.0**	**+0.2**
BPAW	**Bear Paw Mtn.**	**4.93**	**12**		**Pn**	**08 44 45.8**	**-0.4**
BERG	**Berg Lake**	**4.94**	**73**		**Pn**	**08 44 45.8**	**-0.6**
GLB	**Gilahina Butte**	**5.15**	**61**		**Pn**	**08 44 48.2**	**-1.1**
BWN	**Browne**	**5.20**	**19**		**Pn**	**08 44 50.5**	**+0.6**
VRDI	**Verde Repeater**	**5.24**	**64**		**Pn**	**08 44 49.5**	**-1.2**
PAX	**Paxson**	**5.26**	**42**		**Pn**	**08 44 50.5**	**-0.4**
CRQM	**Cirque**	**5.27**	**70**		**Pn**	**08 44 50.7**	**-0.5**
PS10	**TAPS Pump St10**	**5.47**	**38**		**Pn**	**08 44 53.9**	**+0.2**
MCARA	**McCarthy VSAT**	**5.49**	**63**		**Pn**	**08 44 53.5**	**-0.4**
SDPT	**Sand Point**	**5.57**	**228**		**Pn**	**08 44 55.0**	**-0.1**
NEA	**Nenana**	**5.64**	**19**		**Pn**	**08 44 55.6**	**-0.3**
CNBA	**Chernabura Isl**	**5.67**	**220**		**Pn**	**08 44 55.5**	**-0.9**
KIAG	**Kiagna River**	**5.68**	**69**		**Pn**	**08 44 56.1**	**-0.6**
PTPK	**Patty Peak**	**5.69**	**66**		**Pn**	**08 44 56.5**	**-0.3**
BALM	**Baldy**	**5.71**	**68**		**Pn**	**08 44 56.5**	**-0.6**
WRH	**Wood River Hil**	**5.72**	**23**		**Pn**	**08 44 56.5**	**-0.6**
MLY	**Manley**	**5.86**	**10**		**Pn**	**08 44 58.6**	**-0.4**
MENT	**Mentasta**	**5.88**	**48**		**Pn**	**08 44 59.8**	**+0.6**
HDA	**Harding Lake**	**5.92**	**28**		**Pn**	**08 44 59.7**	**0.0**

HDA	Harding Lake	5.92	28	P	Pn	08 44 59.6	-0.2
	baz=213,SNR=130						
CCB	Clear Creek Bu	5.94	23		Pn	08 44 59.2	-0.8
BARN	Barnard Glacie	6.04	68		Pn	08 45 01.0	-0.6
PS08	TAPS Pump Stn8	6.06	27		Pn	08 45 01.6	-0.1
TCOL	CIGO, UAF Yank	6.13	22		Pn	08 45 02.0	-0.5
TCOL	CIGO, UAF Yank	6.13	22	P	Pn	08 45 02.2	-0.4
	baz=206,SNR=146						
COLA	College	6.13	22		Pn	08 45 02.2	-0.3
MDM	Murphy Dome	6.14	20		Pn	08 45 02.5	-0.2
CTGM	Chitina Glacie	6.18	69		Pn	08 45 03.3	-0.1
CHX	Chaix Hills	6.19	78		Pn	08 45 03.6	0.0
IL31		6.24	26	Pn	Pn	08 45 03.5	-0.5
ILAR	Eielson Array	6.24	26	P	Pn	08 45 03.1	-1.0
	23nm,0.3s,baz=211,slow=13,SNR=738						
ILAR				S	Sn	08 46 10.3	-3.6
	4.3nm,0.3s,baz=208,slow=22,SNR=4.2						
ILAR	Eielson Array	6.24	26		Pn	08 45 01.7	-2.4
POKR	Poker Plat Res	6.43	23		Pn	08 45 06.3	-0.3
POKR	Poker Plat Res	6.43	23	P	Pn	08 45 05.9	-0.8
	baz=207,SNR=91						
PS07	TAPS Pump Stn7	6.45	19		Pn	08 45 06.6	-0.3
YUK2	White River	6.60	63		Pn	08 45 08.9	-0.3
BC03		6.70	51		Pn	08 45 09.7	-0.6
BCAR	Beaver Creek A	6.70	51	Pn	Pn	08 45 10.3	0.0
IM03		6.70	358		Pn	08 45 10.9	+0.6
IMAR	Indian Mountai	6.70	358		Pn	08 45 09.1	-1.2
PS06	TAPS Pump Stn6	6.77	12		Pn	08 45 11.3	+0.1
YUK3	Moose Creek	6.78	63		Pn	08 45 11.2	-0.4
PNL	Peninsula	7.07	81		Pn	08 45 14.6	-0.8
FALS	False Pass	7.11	236	Pn	Pn	08 45 15.3	-0.7
PRP	Porcupine Dome	7.18	27		Pn	08 45 17.0	-0.1
SSBA	Shishaldin	7.47	237		Pn	08 45 19.7	-1.3
YUK4	Talbot Arm	7.53	68		Pn	08 45 22.2	+0.3
YUK6	Outpost Mounta	7.61	71		Pn	08 45 23.0	-0.1
PS05	TAPS Pump Stn5	7.62	8		Pn	08 45 23.3	+0.4
YUK7	Dusty Glacier	7.69	74		Pn	08 45 23.8	-0.3
DHAK	Deception Hill	7.72	85	Pn	Pn	08 45 23.4	-0.9
ANM	Nome	7.77	318		Pn	08 45 26.4	+1.6
YUK5	Granite Creek	7.88	70		Pn	08 45 26.8	+0.3
EGAK	Eagle	7.89	41		Pn	08 45 25.5	-1.0
HYT	Haines Junctio	8.02	72		Pn	08 45 28.1	-0.4
COLD	Coldfoot	8.06	8	Pn	Pn	08 45 29.9	+1.0
DAWY	Dawson	8.12	48		Pn	08 45 28.9	-0.9
FYU	Fort Yukon	8.14	23		Pn	08 45 28.9	-1.0
AKLV	Akutan Long Va	8.68	239		Pn	08 45 35.7	-1.6
BM03	Burnt Mountain	9.01	22		Pn	08 45 40.0	-1.8
BMAR	Burnt Mountain	9.02	22		Pn	08 45 39.8	-2.1
UNV	Unalaska Valle	9.13	239	Pn	Pn	08 45 43.2	-0.2
SKAG	Skagway	9.15	81	Pn	Pn	08 45 42.6	-1.1
SKAG				Sn	Sn	08 47 24.7	0.0
MNAT	Makushin Natee	9.18	240		Pn	08 45 42.5	-1.7
MSW	Makushin Switc	9.21	240		Pn	08 45 43.9	-0.6
MREP	Makushin Rep't	9.26	239		Pn	08 45 44.4	-0.9
WHY	Whitehorse	9.30	74		Pn	08 45 45.0	-0.9
MGOD	Makushin Gods	9.32	240		Pn	08 45 45.3	-0.9
TOLK	Toolik Lake Re	9.50	8		Pn	08 45 49.1	+0.5
TOLK	Toolik Lake Re	9.50	8	P	Pn	08 45 49.5	+0.9
	baz=191,SNR=95						
BESE	Bessie Mountai	9.53	86	Pn	Pn	08 45 49.2	+0.2
BESE				Sn	Sn	08 47 31.9	-2.4
SIT	Sitka	9.73	96	Pn	Pn	08 45 49.2	-2.4
JIS	Juneau Island	9.85	88		Pn	08 45 52.2	-1.0
EPYK	Eagle Plains	10.32	40		Pn	08 45 58.9	-0.8
EPYK	Eagle Plains	10.32	40	P	Pn	08 45 59.6	-0.1
	baz=234,SNR=26						
WRAK	Wrangell Islan	11.49	96	Pn	Pn	08 46 14.8	-0.7
CRAG	Craig	11.51	101	Pn	Pn	08 46 13.7	-2.1
DLBC	Dease Lake	12.03	84	P	Pn	08 46 23.2	+0.3
	11nm,0.3s,baz=282,slow=9.9,SNR=81						
DLBC				S	Sn	08 48 33.0	-2.0
	1.7nm,0.3s,baz=169,slow=25,SNR=4.9						
INK	Inuvik	12.47	36	P	Pn	08 46 27.9	-0.7
	1.2nm,0.3s,baz=223,slow=14,SNR=103						
INK				S	S	08 49 02.4	-4.5
	0.0nm,0.3s,baz=103,slow=32,SNR=8.3						
INK				LR	LR	08 51 57.9	
	comp=Z,93nm,19.2s,baz=202,slow=40						
INK	Inuvik	12.47	36		Pn	08 46 27.6	-1.0
ATKA	Atka Island	13.73	248	P	P	08 46 49.1	-1.8
ADK	Adak	15.13	251	P	P	08 47 05.1	-1.4
ADK				IAmb	IAmb	08 47 10.5	
	comp=Z,53nm,1.1s						
BBB	Bella Bella	15.78	106	P	P	08 47 12.8	-0.8
	comp=Z,0.6nm,0.3s,baz=321,slow=14,SNR=3.6						
BBB				LR	LR	08 52 17.6	
	comp=Z,225nm,19.0s,baz=243,slow=33						
C36M	Paulatuk	15.96	39	P	Pn	08 47 10.9	-2.7
	baz=245,SNR=30						
YKA	Yellowknife Ar	18.86	64	P	P	08 47 48.1	+0.6
	comp=Z,1.0nm,0.3s,baz=275,slow=9.9,SNR=66						
YKA				ScP	ScP	08 55 38.5	+1.2
	baz=284,slow=1.6,SNR=4.9						
A04D	Lummi Island	20.65	107	P	Pn	08 48 12.9	+2.9
	baz=312						
B05A	Bryant	21.26	108	P	P	08 48 18.0	+4.5
	baz=313						
NEW	Newport	23.72	102	P	P	08 48 40.2	+1.7
	comp=Z,1.5nm,0.8s,baz=313,slow=6.2,SNR=3.8						
NEW				pP	pP	08 48 59.7	+2.2
	comp=Z,4.2nm,0.8s,baz=324,slow=12,SNR=6.5						
NEW				LR	LR	08 56 31.1	
	comp=Z,169nm,18.9s,baz=279,slow=33						
SEY	Seymchan	25.84	301	P	P	08 48 56.0	-1.4
	comp=Z,3.8nm,0.6s,baz=93,slow=9.2,SNR=20						
SEY				PcP	PcP	08 52 23.6	-0.4
	comp=Z,2.0nm,0.8s,baz=128,slow=5.1,SNR=4.5						
YBH	Yreka Blue Hor	25.85	119	P	P	08 48 59.9	+2.1
	comp=Z,2.1nm,0.9s,baz=52,slow=6.6,SNR=4.4						
YBH				pP	pP	08 49 19.2	+1.5
	comp=Z,6.3nm,0.8s,baz=291,slow=5.8,SNR=13						
RES	Resolute Bay	25.96	31	P	P	08 48 58.5	+0.1
	comp=Z,1.1nm,0.5s,baz=257,slow=14,SNR=8.4						
RES				pP	pP	08 49 18.3	0.0
	comp=Z,4.3nm,0.7s,baz=269,slow=20,SNR=5.4						
RES				LR	LR	09 00 26.6	
	comp=Z,82nm,20.1s,baz=229,slow=39						
RES	Resolute Bay	25.96	31	P	P	08 48 59.7	+1.3
PETK	Petropavlovsk-	27.43	279	P	P	08 49 11.7	-0.2
	comp=Z,4.4nm,0.3s,baz=71,slow=13,SNR=79						
PETK				LR	LR	08 59 12.5	
	comp=Z,43nm,19.7s,baz=57,slow=34						
MA2	Magadan	27.75	295	LR	LR	09 00 37.4	
	comp=Z,82nm,18.4s,baz=58,slow=37						
FCC	Fort Churchill	29.58	65	P	P	08 49 29.9	-0.9
FCC				IAmb	IAmb	08 49 32.6	
	comp=Z,5.9nm,1.2s						
ELK	Elko	30.10	111	P	P	08 49 38.7	+2.8
	comp=Z,0.7nm,0.7s,baz=304,slow=7.3,SNR=3.3						
ELK				pP	pP	08 49 57.8	+1.9
	comp=Z,4.6nm,0.8s,baz=301,slow=9.5,SNR=14						
ELK				LR	LR	09 02 10.9	
	comp=Z,100nm,19.1s,baz=321,slow=37						
NVAR	Mina Array Bea	30.51	118	P	P	08 49 42.5	+3.0
	comp=Z,1.5nm,0.9s,baz=299,slow=9.3,SNR=7.5						
NVAR				pP	pP	08 50 01.4	+1.8
	comp=Z,2.5nm,0.7s,baz=312,slow=8.5,SNR=11						
PDAR	Pinedale Array	31.36	102	P	P	08 49 49.8	+2.7
	comp=Z,0.6nm,0.7s,baz=306,slow=5.1,SNR=5.9						
PDAR				pP	pP	08 50 07.0	-0.2
	comp=Z,1.1nm,0.7s,baz=311,slow=6.8,SNR=5.9						
TIXI	Tiksi	31.97	324	P	P	08 49 51.1	-0.5
	comp=Z,1.5nm,0.3s,baz=94,slow=7.9,SNR=4.1						
ULM	Lac du Bonnet	33.31	80	P	P	08 50 05.0	+1.4
	comp=Z,1.4nm,0.4s,baz=309,slow=9.5,SNR=6.0						
ULM	Lac du Bonnet	33.31	80	IAmb	IAmb	08 50 05.8	
	comp=Z,6.5nm,1.4s						
YAK	Yakutsk	35.79	308	P	P	08 50 24.2	-0.6
	comp=Z,7.8nm,0.3s,baz=247,slow=2.6,SNR=4.7						
JKA	Kamikawa-asahi	40.84	278	P	P	08 51 07.0	-0.4
ASAJ	Asahikawa	40.84	278	P	P	08 51 07.0	-0.4
	comp=Z,6.3nm,0.7s,baz=321,slow=3.3,SNR=11						
KLR	Kul'dur	42.67	291	P	P	08 51 22.2	-0.1
	comp=Z,24nm,0.8s,baz=43,slow=8.3,SNR=84						
SCHQ	Schefferville	44.05	56	P	P	08 51 34.0	+0.7
	comp=Z,1.1nm,0.5s,baz=303,slow=8.0,SNR=9.5						
SCHQ				pP	pP	08 51 54.2	-0.1
	comp=Z,2.1nm,0.5s,baz=308,slow=10,SNR=4.0						
SCHQ	Schefferville	44.05	56	IAmb	IAmb	08 51 48.0	
	comp=Z,6.5nm,1.4s						
NRIK	Noril'sk	44.46	334	P	P	08 51 35.5	-0.8
	comp=Z,2.7nm,0.4s,baz=60,slow=7.6,SNR=6.4						
NRIK				pP	pP	08 51 57.5	0.0
	comp=Z,2.1nm,0.4s,baz=43,slow=6.8,SNR=2.4						
NRIK				LR	LR	09 12 12.0	
	comp=Z,104nm,18.2s,baz=56,slow=39						
TXAR	Lajitas Array	44.87	110	P	P	08 51 42.4	+2.2
	comp=Z,0.8nm,0.4s,baz=341,slow=8.0,SNR=3.9						
TXAR				pP	pP	08 52 02.3	+1.1
	comp=Z,5.6nm,0.8s,baz=326,slow=6.5,SNR=9.9						
TXAR				LR	LR	09 10 40.7	
	comp=Z,66nm,18.1s,baz=0.0,slow=36						
USRK	Ussuriysk Ar.	46.10	286	P	P	08 51 48.5	-1.2
	comp=Z,3.7nm,0.7s,baz=61,slow=8.3,SNR=7.7						
USRK				LR	LR	09 12 00.7	
	comp=Z,34nm,18.8s,baz=94,slow=37						
MDJ	Mudanjiang	46.98	288	P	P	08 51 55.1	-1.4
PLAL	Pickwick Lake	48.18	90	P	P	08 52 07.2	+1.3
PLAL				IAmb	IAmb	08 52 08.1	
	comp=Z,7.4nm,0.6s						
MJAR	Matsushiro Arr	48.70	274	P	P	08 52 10.5	+0.6
	comp=Z,1.8nm,0.7s,baz=9.8,slow=8.1,SNR=5.5						
ARCES	ARCESS Array B	51.45	1	P	P	08 52 30.9	+0.7
	comp=Z,2.0nm,0.8s,baz=15,slow=4.1,SNR=4.2						
TLY	Talaya	53.18	311	LR	LR	09 16 54.0	
	comp=Z,48nm,18.7s,baz=45,slow=38						
KSRS	Korea Array	53.21	283	P	P	08 52 44.2	+0.7
	comp=Z,3.8nm,0.5s,baz=36,slow=6.6,SNR=15						
ULN	Ulaanbaatar	54.80	306	P	P	08 52 55.4	+0.2
SONM	Songino Array	55.09	306	P	P	08 52 57.8	+0.4
	comp=Z,18nm,0.8s,baz=43,slow=6.8,SNR=93						
SONM				pP	pP	08 53 19.6	+0.3
	comp=Z,2.0nm,0.6s,baz=48,slow=7.3,SNR=2.8						
SONM				LR	LR	09 16 16.7	
	comp=Z,74nm,18.2s,baz=358,slow=36						
SONM	Songino Array	55.09	306	P	P	08 52 57.9	+0.6
ZALV	Zalesovo Beam	57.85	324	P	P	08 53 16.9	+0.3
	comp=Z,4.2nm,0.3s,baz=30,slow=6.7,SNR=16						
HHC	Hu-ho-hao-te	58.39	297	eP	P	08 53 20.2	-0.5
NB2	NORSAR Subarra	59.38	9	P	pP	08 53 48.4	-0.9
	comp=Z,0.8nm,0.7s,baz=353,slow=6.9						
NOA	NORSAR Array B	59.38	9	P	P	08 53 28.3	+1.1
	comp=Z,0.4nm,0.7s,baz=167,slow=14,SNR=2.1						
NOA				pP	pP	08 53 48.4	-0.9
	comp=Z,1.0nm,0.7s,baz=352,slow=6.9,SNR=3.7						
FINES	FINESS Array B	59.58	0	P	P	08 53 29.2	+0.7
	comp=Z,0.6nm,0.3s,baz=2.3,slow=7.7,SNR=7.1						
FINES	FINESS Array B	59.58	0	P	P	08 53 29.4	+0.9
KLMR	Klimovskoe	59.76	353	eP	pP	08 53 46.2	-5.6
KLMR				AMP		08 53 55.6	
	comp=Z,51nm,2.2s						
KIRV	Kirov	61.10	347	LR	LR	09 25 02.0	
	comp=Z,88nm,18.2s,baz=224,slow=41						
GTA	Gaotai	64.72	305	eP	P	08 54 02.4	-0.9
GTA				pP	pP	08 54 23.4	-2.4
GTA				sP	sP	08 54 30.5	-5.1
MKAR	Makanchi Array	64.89	321	P	P	08 54 03.3	-0.9
	comp=Z,0.3nm,0.4s,baz=30,slow=6.9,SNR=6.2						
MKAR				PP	PP	08 56 24.0	-3.3
	comp=Z,1.2nm,0.8s,baz=38,slow=6.6,SNR=4.7						
XAN	Xi'an	65.15	295	P	P	08 54 09.2	+3.1
XAN				sP	pP	08 54 21.5	-7.0
WMQ	Urumqi	65.67	316	eP	P	08 54 12.9	+3.6
LZH	Lanzhou	65.76	300	eP	P	08 54 09.7	-0.4
LZH				pP	pP	08 54 31.2	-1.4
LZH				sP	PcP	08 54 40.8	+0.1
LZH				ePP	PP	08 56 36.9	+1.6
ABKAR	Akbulak array	68.45	337	P	P	08 54 25.7	-1.1
CD2	Chengdu	70.14	297	P	P	08 54 35.4	-2.1
AKASG	Malin Array Be	70.33	358	P	P	08 54 37.7	-0.5
	comp=Z,0.5nm,0.3s,baz=359,slow=5.7,SNR=7.7						
GERES	GERESS Array B	71.68	9	P	P	08 54 48.5	+1.9
	comp=Z,0.5nm,0.5s,baz=216,slow=13,SNR=2.8						
KSH	Kashi	73.45	322	P	P	08 54 58.4	+1.1
KSH				pP	pP	08 55 23.0	+2.9
KSH				PP	PP	08 57 46.0	+4.7
KSH				S	SKiKP	09 04 16.1	-2.7
KSH				ScS	SKSac	09 04 52.7	-2.8
KSH	Kashi	73.45	322	sS	sS	09 05 00.3	+1.7
KBZ	Khabaz	76.46	348	P	P	08 55 16.4	+2.1
	comp=Z,2.7nm,0.8s,baz=360,slow=1.9,SNR=4.3						
ESDC	Sonseca Array	78.14	24	P	P	08 55 24.1	+0.2
	comp=Z,0.5nm,0.4s,baz=336,slow=5.9,SNR=4.5						
BRTR	Keskin Array B	81.16	355	LR	LR	09 37 03.4	
	comp=Z,23nm,18.8s,baz=336,slow=40						
CMAR	Chiang Mai Arr	83.03	294	P	P	08 55 49.8	-0.5
	comp=Z,1.4nm,0.3s,baz=8.9,slow=6.6,SNR=8.7						
WRA	Warramunga Arr	98.35	245	P	Pdif	08 57 03.3	+1.0
	comp=Z,0.4nm,0.8s,baz=32,slow=5.9,SNR=3.5						
KMBO	Kilima Mbogo	121.40	348	PKP	PKiKP	09 02 18.1	0.0
	comp=Z,1.0nm,0.3s,baz=232,slow=3.3,SNR=4.9						
LBTB	Lobatse	145.72	2		PKPbc	09 03 03.2	+0.1
QSPA	South Pole Qui	149.11	180		PKPbc	09 03 11.4	+0.3
BOSA	Boshof	149.29	3	PKPbc	PKPbc	09 03 12.8	0.0
	comp=Z,9.3nm,0.7s,baz=352,slow=2.8,SNR=25						

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*SOME **12** 08:46:28.6, 40°.63N×73°.53E, h15^{km}*
*ISU **12** 08:46:29.0, 40°.70N×73°.64E, h20^{km}*
*KRNET **12** 08:46:29.3±0.1, 40°.62N×73°.61E, h19^{km}, mb3.3*
*NNC **12** 08:46:29.2±1.0, 40°.63N×73°.48E, h0^{km}, mb4.0, mpv3.7,*
Error ellipse: s-maj=8.3km s-min=4.2km az=172.0
ISC 12 08:46:30.2±1.3, **40°.56N**±0°.04×**73°.47E**±0°.02, **h5**^{km}±10^{km},
n81, σ1^s.58/126, **38C-13D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.85	334	⇓iP	Pg	08 46 45.5	-1.1
	baz=26						
ARSB				⇓iS	Sg	08 46 57.4	-0.2
	baz=26						
ARSB	Arslanbob	0.85	334	eP	Pg	08 46 44.8	-1.8
ARSB				eS	Sg	08 46 59.9	+2.3
ANR	Andizhan	0.87	283	⇓iP	Pb	08 46 47.7	-0.1
ANR				eS	Sn	08 47 01.2	-0.9
FRG	Fergana	1.30	278	⇓iP	Pg	08 46 56.1	+1.0
FRG				S	Sn	08 47 15.0	+2.3
ARLS	Aral	1.45	26	⇑iP	Pn	08 46 54.8	-2.5
	baz=23						
ARLS				⇑iS	Sn	08 47 13.1	-3.7
	baz=23						
AML	Almayashu	1.58	6	⇑iP	Pn	08 46 57.4	-1.9
	baz=2.0						
AML				⇑iS	Sn	08 47 18.0	-2.3
	baz=2.0						
AML	Almayashu	1.58	6	P	Pn	08 46 57.5	-1.7
	SNR=150						
ARK	Arkit	1.68	318	⇓iP	Pn	08 47 00.1	-0.3
	baz=14						
ARK				⇓eS	Sn	08 47 23.1	+0.7
	baz=14						
ARK	Arkit	1.68	318	eP	Pn	08 46 59.8	-0.6
ARK				eS	Sn	08 47 22.7	+0.3
UCH	Uchtor	1.84	25	⇑iP	Pn	08 47 01.7	-1.2
	baz=23						
UCH				⇑iS	Sn	08 47 25.0	-1.8
	baz=23						
UCH	Uchtor	1.84	25	P	Pn	08 47 02.1	-0.8
	SNR=77						
KZA	Kyzart	2.02	41	⇑iP	Pn	08 47 04.4	-1.0
	baz=40						
KZA				⇑iS	Sn	08 47 30.0	-1.2
	baz=40						
KZA	Kyzart	2.02	41	P	Pn	08 47 04.4	-1.0
	SNR=33						
BTK	Batken	2.09	257	⇑iP	Pg	08 47 08.6	-1.7
	baz=56						
BTK				⇑iS	Sg	08 47 37.1	-0.3
	baz=56						
BTK	Batken	2.09	257	i P	Pg	08 47 08.5	-1.7
BTK				i S	Sg	08 47 39.6	+2.2
NRN	Naryn	2.10	65	⇑iP	Pn	08 47 05.0	-1.4
	baz=65						
NRN				⇑iS	Sn	08 47 31.0	-2.1
	baz=65						
EKS2	Erkin-Say	2.11	6	⇑iP	Pn	08 47 06.2	-0.1
	baz=3.0						
EKS2				⇑iS	Sn	08 47 33.2	+0.2
	baz=3.0						
EKS2	Erkin-Say	2.11	6	P	Pn	08 47 06.8	+0.5
	SNR=21						
MRKS	Merke	2.19	355	⇑eP	Pn	08 47 07.2	-0.2
	26nm,0.2s						
MRKS				eS	Sn	08 47 35.0	+0.1
	201nm,0.4s						
MRKS	Merke	2.19	355	Pg	Pn	08 47 07.2	-0.2
	35nm,0.4s						
MRKS				Lg	Lg	08 47 35.8	
	226nm,0.4s						
AAK	Ala-Archa	2.21	20	⇑iP	Pn	08 47 07.7	-0.1
	baz=18						
AAK				⇑iS	Sn	08 47 35.3	-0.3
	baz=18						
AAK	Ala-Archa	2.21	20	P	Pn	08 47 08.0	+0.2
	SNR=33						
AAK	Ala-Archa	2.21	20	⇑Pn	Pn	08 47 07.7	-0.1
	45nm,0.6s						
AAK				⇓Sn	Sn	08 47 36.1	+0.6
	168nm,0.8s						
KBK	Karagaybulak	2.37	27	⇑iP	Pn	08 47 09.4	-0.5
	baz=26						
KBK				⇑iS	Sn	08 47 38.5	-1.0
	baz=26						
KBK	Karagaybulak	2.37	27	P	Pn	08 47 10.5	+0.6
	SNR=46						
FRU1	Bishkek	2.41	21	⇑iP	Pn	08 47 10.2	-0.2
	baz=19						
FRU1				⇑iS	Sn	08 47 39.8	-0.5
	baz=19						
CHMS	Chumysh	2.62	21	P	Pn	08 47 13.5	+0.3
	SNR=15						
CHMS	Chumysh	2.62	21	⇑Pn	Pn	08 47 13.2	0.0
	11nm,0.3s						
CHMS				⇑Sn	Sn	08 47 46.1	+0.7
	44nm,0.6s						
BOOM	Boomskoye usch	2.67	43	⇑iP	Pn	08 47 13.4	-0.7
	baz=42						
BOOM				⇑iS	Sn	08 47 45.8	-1.2
	baz=42						
ULHL	Ulahol	2.68	50	⇑iP	Pn	08 47 13.3	-0.9
	baz=50						
ULHL				⇑iS	Sn	08 47 45.5	-1.6
	baz=50						
ULHL	Ulahol	2.68	50	P	Pn	08 47 13.4	-0.9
	SNR=23						
USP	Ospenovka	2.81	15	⇓iP	Pn	08 47 15.6	-0.3
	baz=14						
USP				⇓iS	Sn	08 47 49.5	-0.7
	baz=14						
USP	Ospenovka	2.81	15	P	Pn	08 47 16.6	+0.7
	SNR=9.6						
DZA	Taraz	2.83	326	eP	Pb	08 47 19.8	-1.4
	142nm,0.1s						
DZA				eS	Sb	08 47 56.8	+0.7
	121nm,0.2s						
DZA	Taraz	2.83	326	Pg	Pb	08 47 19.8	-1.4
	142nm,0.1s						
DZA				Lg	Lg	08 47 56.8	
	114nm,0.3s						
SGDS	Sogindy	3.02	16	Pg	Pb	08 47 22.5	-1.9
	9.9nm,0.4s						
SGDS				Lg	Lg	08 48 01.5	
	27nm,0.4s						
IUG	Iuzhnay	3.04	303	eP	Pb	08 47 23.5	-1.3
	6.4nm,0.2s						
IUG				eS	Sb	08 48 02.8	+0.6
	91nm,0.4s						
IUG	Iuzhnay	3.04	303	Pg	Pb	08 47 23.5	-1.3
	6.5nm,0.2s						
IUG				Lg	Lg	08 48 02.8	
	91nm,0.4s						
KST	Kastek	3.10	36	eP	Pb	08 47 24.3	-1.6
	10nm,0.3s						
KST				eS	Sb	08 48 04.7	+0.6
	47nm,0.4s						
KST	Kastek	3.10	36	Pg	Pb	08 47 24.3	-1.6
	10nm,0.3s						
KST				Lg	Lg	08 48 04.7	
	47nm,0.4s						
DGS	Degeres	3.18	32	eP	Pb	08 47 25.9	-1.5
	22nm,0.4s						
DGS				eS	Sb	08 48 07.4	+1.0
	74nm,0.6s						
DGS	Degeres	3.18	32	Pg	Pb	08 47 25.9	-1.5
	22nm,0.4s						
DGS				Lg	Lg	08 48 07.4	
	75nm,0.6s						
KDJ	Kajisay	3.20	59	⇑iP	Pn	08 47 20.8	-0.6
	baz=60						
KDJ				⇑iS	Sn	08 47 57.8	-2.2
	baz=60						
KK31	Karatay Array	3.37	320	Pg	Pb	08 47 29.8	-0.6
	1.8nm,0.3s,baz=138,slow=15,SNR=42						
KK31				⇑Lg	Lg	08 48 15.1	
	7.9nm,0.3s,baz=124,slow=29,SNR=8.9						
MTBS	Maitube	3.39	40	eP	Pb	08 47 29.6	-1.2
	6.9nm,0.3s						
MTBS				eS	Sb	08 48 13.3	+1.0
	30nm,0.4s						
MTBS	Maitube	3.39	40	Pg	Pb	08 47 29.5	-1.2
	7.0nm,0.2s						
MTBS				Lg	Lg	08 48 13.3	
	32nm,0.5s						
IZV	Izvestkoviy	3.41	42	eP	Pb	08 47 30.1	-1.2
	4.4nm,0.2s						
IZV				eS	Sb	08 48 14.3	+1.2
	50nm,0.5s						
IZV	Izvestkoviy	3.41	42	Pg	Pb	08 47 29.8	-1.5
	6.5nm,0.3s						
IZV				Lg	Lg	08 48 14.3	
	50nm,0.5s						
KRBS	Karabastau	3.54	27	eP	Pb	08 47 32.1	-1.2
	6.9nm,0.4s						
KRBS				eS	Sb	08 48 17.6	+1.1
	26nm,0.6s						
KRBS	Karabastau	3.54	27	Pg	Pb	08 47 32.2	-1.2
	6.9nm,0.4s						
KRBS				Lg	Lg	08 48 17.6	
	26nm,0.6s						
TNSS	Tian-Shan	3.59	45	eP	Pb	08 47 33.6	-0.8
	13nm,0.4s						
TNSS				⇑iS	Sb	08 48 20.4	+2.0
	38nm,0.4s						
TNSS	Tian-Shan	3.59	45	Pg	Pb	08 47 33.6	-0.8
	15nm,0.4s						
TNSS				Lg	Lg	08 48 20.4	
	35nm,0.8s						
BRLS	Borolday	3.67	313	eP	Pb	08 47 34.5	-1.1
	2.7nm,0.3s						
BRLS				eS	Sb	08 48 21.9	+1.5
	17nm,0.4s						
BRLS	Borolday	3.67	313	Pg	Pb	08 47 34.3	-1.3
	1.7nm,0.2s						
BRLS				Lg	Lg	08 48 21.9	
	17nm,0.4s						
MDOK	Medeo	3.73	45	eP	Pb	08 47 35.9	-0.7
	6.6nm,0.2s						
MDOK				eS	Sb	08 48 24.1	+2.0
	30nm,0.9s						
MDOK	Medeo	3.73	45	⇑Pg	Pb	08 47 35.5	-1.1
MDOK				⇑Lg	Lg	08 48 25.1	
	40nm,0.9s						
MDOK	Medeo	3.73	45	Pg	Pb	08 47 35.6	-1.1
	6.6nm,0.2s						
MDOK				Lg	Lg	08 48 24.1	
	22nm,1.2s						
ANVS	Anan'yevo	3.85	53	⇑iP	Pn	08 47 29.9	-0.4
	baz=53						
ANVS				⇑iS	Sn	08 48 13.9	-2.0
	baz=53						
KTBS	Karatobe	3.95	36	eP	Pb	08 47 40.0	-0.4
	10nm,0.3s						
KTBS				eS	Sb	08 48 31.2	+2.7
	60nm,0.3s						
KTBS	Karatobe	3.95	36	Pg	Pb	08 47 40.0	-0.4
	10nm,0.3s						
KTBS				Lg	Lg	08 48 31.2	
	60nm,0.3s						
KUU	Kurty	3.95	32	eP	Pb	08 47 39.6	-0.7
	14nm,0.4s						
KUU				⇑iS	Sb	08 48 30.5	+2.0
	40nm,0.5s						
KUU	Kurty	3.95	32	Pg	Pb	08 47 39.6	-0.7
	14nm,0.4s						
KUU				Lg	Lg	08 48 30.5	
	33nm,0.4s						
PRZ	Przheval'sk	4.17	61	⇓iP	Pn	08 47 34.1	-0.6
	baz=61						
PRZ				⇓iS	Sn	08 48 21.1	-2.7
	baz=61						
CHKK	Chushkaly	4.20	37	eP	Pb	08 47 44.9	+0.3
	4.0nm,0.3s						
CHKK				⇑iS	Sb	08 48 40.0	+4.4
	20nm,0.3s						
CHKK	Chushkaly	4.20	37	Pg	Pb	08 47 44.9	+0.3
	4.9nm,0.7s						
CHKK				Lg	Lg	08 48 40.0	
	25nm,0.6s						
SATY	Saty	4.45	54	eP	Pb	08 47 49.1	+0.1

	20nm,0.2s						
SATY				*e*S	Sb	08 48 46.9	+3.9
	29nm,0.3s						
SATY	Saty	4.45	54	Pg	Pb	08 47 49.1	+0.1
	20nm,0.2s						
SATY				Lg	Lg	08 48 46.9	
	29nm,0.3s						
BTLS	Baital	4.50	5	*e*P	Pb	08 47 48.9	-0.7
	0.9nm,0.2s						
BTLS				*e*S	Sb	08 48 46.3	+2.2
	19nm,0.2s						
BTLS	Baital	4.50	5	Pg	Pb	08 47 48.6	-1.0
	0.9nm,0.5s						
BTLS				Lg	Lg	08 48 46.3	
	19nm,0.2s						
ZHN	Zhinishke	4.53	53	*e*P	Pb	08 47 50.2	-0.1
	4.4nm,0.1s						
ZHN				*e*S	Sb	08 48 48.7	+3.5
	5.4nm,0.2s						
ZHN	Zhinishke	4.53	53	Pg	Pb	08 47 50.2	-0.1
	4.4nm,0.1s						
ZHN				Lg	Lg	08 48 48.7	
	5.4nm,0.2s						
KURS	Kuram	4.56	49	*e*P	Pb	08 47 50.6	-0.1
	3.5nm,0.4s						
KURS				*e*S	Sb	08 48 49.5	+3.4
	11nm,1.0s						
KURS	Kuram	4.56	49	Pg	Pb	08 47 50.6	-0.1
	3.5nm,0.4s						
KURS				Lg	Lg	08 48 49.4	
	11nm,1.0s						
ARXS	Arharly	4.87	40	*e*P	Pb	08 47 56.8	+0.8
	4.9nm,0.6s						
ARXS				*e*S	Sb	08 49 00.3	+5.3
	18nm,0.5s						
ARXS	Arharly	4.87	40	Pg	Pb	08 47 56.8	+0.8
	4.9nm,0.6s						
ARXS				Lg	Lg	08 49 00.3	
	18nm,0.5s						
UZB	Uzynbulak	4.89	56	*e*P	Pb	08 47 55.7	-0.6
	3.5nm,0.2s						
UZB				*e*S	Sb	08 48 58.5	+3.1
	21nm,0.3s						
UZB	Uzynbulak	4.89	56	Pg	Pb	08 47 55.7	-0.6
	3.5nm,0.2s						
UZB				Lg	Lg	08 48 58.5	
	21nm,0.3s						
SHLS	Shalkode	5.17	58	Pg	Pg	08 48 08.7	-0.6
	8.7nm,0.4s						
SHLS				Lg	Lg	08 49 19.9	
	20nm,0.6s						
DJR	Jarkent	6.00	49	Pg	Pb	08 48 19.1	+3.7
	1.3nm,0.3s						
DJR				Lg	Lg	08 49 38.4	
	5.4nm,0.6s						
KAPS	Kapalarasan	6.40	41	Pg	Pb	08 48 26.0	+4.0
	1.3nm,0.5s						
KAPS				Lg	Lg	08 49 50.0	
	5.4nm,0.6s						
MK31	Makanchi Array	8.92	43	⇓Pn	Pn	08 48 38.6	-1.1
	0.4nm,0.6s,baz=228,slow=13,SNR=5.5						
MK31				⇓Lg	Lg	08 51 11.8	
	0.7nm,0.6s,baz=31,slow=7.5,SNR=6.5						

IDC 12 08:47:05.4±8.4**, 15°.58S**×**176°.87W, h0**^{km}**, mb3.8**/3**, mb1 4.1**/3**, mb1mx3.6**/44**, mbtmp3.8**/3**, Error ellipse: s-maj=376.3km s-min=37.0km az=140.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.54	257	P	P	08 55 34.9	-0.4
	0.2nm,0.4s,baz=92,slow=6.5,SNR=6.4						
ASAR	Alice Springs	46.87	252	P	P	08 55 37.8	0.0
	2.3nm,0.5s,baz=87,slow=7.9,SNR=33						
ILAR	Eielson Array	83.30	12	P	P	08 59 33.8	+0.1
	0.2nm,0.4s,baz=224,slow=5.6,SNR=5.0						

IDC 12 08:50:40.1±1.9**, 5°.19S**×**127°.32E, h0**^{km}**, mb3.8**/1**, mb1 3.8**/3**, mb1mx3.4**/44**, mbtmp3.7**/3**, ML3.8**/2**, Error ellipse: s-maj=159.0km s-min=28.8km az=65.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.18	156	Pn	P	08 54 31.0	-1.4
	0.4nm,0.3s,baz=334,slow=11,SNR=22						
ASAR	Alice Springs	19.44	162	P	P	08 55 07.5	-0.8
	0.2nm,0.3s,baz=346,slow=12,SNR=13						
MKAR	Makanchi Array	65.27	328	P	P	09 01 23.8	0.0
	0.5nm,0.4s,baz=116,slow=7.2,SNR=6.6						

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*NIED **12** 08:51:00, 25°.60N×128°.80E, h11^{km}, Mw4.2 Best double couple: M$_0$2.52000×10^{15} NP1:φ$_s$206.00000°, δ54.00000°, λ-95.00000°. NP2:φ$_s$35.00000°, δ37.00000°, λ-83.00000°.*

*IDC **12** 08:51:06.3±0.6, 25°.51N×128°.77E, h0^{km}, mb4.1/21, mb1 4.2/24, mb1mx4.1/47, mbtmp4.1/24, ML3.5/3, MS3.2/5, Ms1 3.3/5, ms1mx2.9/38, Error ellipse: s-maj=21.3km s-min=13.0km az=79.0*

*NEIC **12** 08:51:09.4±1.8, 25°.57N±0°.06×128°.6E±0°.1, h21^{km}±7^{km}, mb4.0/7, Error ellipse: s-maj=14.7km s-min=8.6km az=106.0*

*JMA **12** 08:51:09.9±0.3, 25°.65N×128°.78E, h55^{km}, M3.9*

ISC 12 08:51:08.4±3.1**, 25°.55N**±0°.05×**128°.79E**±0°.04**, h16**^{km}±19^{km}**, n63, σ1**^{s}**95**/76**, mb4.0**/23**, MS3.4**/3**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJT3	Tamagusuku3	1.08	303	P	Pb	08 51 28.6	-0.2
JJT3				*e*S	Sb	08 51 41.6	-1.1
JNTH	Nagotoyohara	1.19	324	P	Pn	08 51 29.3	-1.1
JNTH				*e*S	Sb	08 51 42.7	-3.0
JOW	Kunigami	1.36	340	P	Pn	08 51 32.0	-0.7
JOW				S	Sn	08 51 47.2	-3.2
JOW	Kunigami	1.36	340	Pn	Pn	08 51 32.1	-0.7
	82nm,0.3s,baz=144,slow=12,SNR=649						
JOW				Sn	Sn	08 51 47.4	-3.0
	283nm,0.3s,baz=105,slow=16,SNR=52						
JOW	Kunigami	1.36	340		Pn	08 51 32.2	-0.5
JYRO	Yoronjima	1.50	348	P	Pn	08 51 33.8	-0.9
JYRO				*e*S	Sn	08 51 50.5	-3.4
JIH	Iheya	1.65	334	P	Pn	08 51 36.4	-0.4
JIH				S	Sn	08 51 55.2	-2.5
JAGN	Aguni-jima	1.73	307	P	Pn	08 51 37.5	-0.4
JAGN				*e*S	Sn	08 51 57.7	-2.0
JOKE	Okinoerabujima	1.81	354	P	Pn	08 51 38.5	-0.5
JOKE				S	Sn	08 51 58.5	-3.2
JKE	Kume jima 2	1.96	294	P	Pn	08 51 40.2	-0.9
JKE				S	Sn	08 52 02.6	-2.8
JMZ	Minamidaito 2	2.21	83	P	Pn	08 51 42.3	-2.1
JMZ				S	Sn	08 52 06.2	-5.2
JTK	Tokunoshima	2.23	4	P	Pn	08 51 44.1	-0.6
JTK				*e*S	Sn	08 52 08.5	-3.4
JKDJ	Kitadaitoujima	2.29	80	P	Pn	08 51 43.7	-1.9
JKDJ				S	Sn	08 52 08.8	-4.7
JAMN	Amaminishikomi	2.70	7	P	Pn	08 51 50.6	-0.6
JAMN				*e*S	Sn	08 52 20.6	-3.0
JAM	Amami Oshima	2.94	14	P	Pn	08 51 53.6	-0.9
JAM				*e*S	Sn	08 52 26.1	-3.3
JZK	Kikaishima	2.95	21	P	Pn	08 51 55.7	+1.1
JZK				S	Sn	08 52 28.0	-1.6
SSLB	Suanglung	7.34	258		Pn	08 52 53.1	-1.9
SSLB				Sn	Sn	08 54 10.5	-7.7
JNU	Nakatsue	7.76	13	Pn	Pn	08 53 01.4	+0.6
	2.2nm,0.3s,baz=1.2,slow=21,SNR=20						
JNU				Sn	Sn	08 54 25.8	-2.5
	1.1nm,0.3s,baz=316,slow=20,SNR=7.5						
JNU				LR	LR	08 56 29.0	
	comp=Z,93nm,19.0s,baz=190,slow=41						
JNU	Nakatsue	7.76	13		Pn	08 53 01.5	+0.8
NJ2	Nanjing	10.85	309	*e*P	Pn	08 53 44.6	+1.5
KSRS	Korea Array	11.89	357	Pn	Pn	08 53 55.8	-1.5
	0.2nm,0.3s,baz=278,slow=26,SNR=3.9						
KSRS				LR	LR	08 58 45.5	
	comp=Z,110nm,19.5s,baz=176,slow=38						
MJAR	Matsushiro Arr	13.60	34	Pn	P	08 54 28.4	-1.2
	0.1nm,0.3s,baz=86,slow=17,SNR=3.3						
USRK	Ussuriysk Ar.	18.79	7	P	Pn	08 55 29.2	+1.7
	baz=172,slow=8.4,SNR=5.5						
USRK	Ussuriysk Ar.	18.79	7	P	P	08 55 28.0	+1.1
ASAJ	Asahikawa	21.66	28	P	P	08 55 58.9	+0.7
	1.4nm,0.4s,baz=331,slow=3.5,SNR=3.6						
JKA	Kamikawa-asahi	21.66	28	P	P	08 55 58.9	+0.7
KLR	Kul'dur	23.75	5	P	P	08 56 21.7	+1.8
	1.2nm,0.8s,baz=220,slow=8.1,SNR=3.7						
SONM	Songino Array	28.39	327	P	P	08 57 04.0	+1.8
	1.2nm,0.5s,baz=142,slow=11,SNR=11						
SONM	Songino Array	28.39	327	P	P	08 57 01.5	-0.7
CMAR	Chiang Mai Arr	28.52	262	LR	LR	09 09 41.0	
	comp=Z,35nm,19.1s,baz=140,slow=39						
SEY	Seymchan	40.52	16	P	P	08 58 47.5	+1.1
	1.2nm,0.4s,baz=232,slow=7.6,SNR=6.1						
MK31	Makanchi Array	42.36	312	P	P	08 59 00.7	-1.2
MKAR	Makanchi Array	42.36	312	P	P	08 59 02.0	+0.1
	1.7nm,0.6s,baz=97,slow=10.0,SNR=14						
MKAR	Makanchi Array	42.36	312	P	P	08 59 01.7	-0.1
ZALV	Zalesovo Beam	43.09	323	P	P	08 59 07.8	+0.2
	1.2nm,0.5s,baz=104,slow=7.5,SNR=4.7						
ZALV				LR	LR	09 16 48.6	
	comp=Z,40nm,18.5s,baz=73,slow=36						
ZALV	Zalesovo Beam	43.09	323	P	P	08 59 07.4	-0.2
WRA	Warramunga Arr	45.54	173	P	P	08 59 27.5	-0.1
	7.0nm,0.7s,baz=353,slow=8.4,SNR=42						
WRA	Warramunga Arr	45.54	173	P	P	08 59 26.7	-0.8
KURK	Kurchatov	45.66	317	P	P	08 59 28.6	+0.4
KURK				IAmb	IAmb	08 59 41.6	
	comp=Z,3.2nm,1.0s						
KURBB	Kurchatov Arra	45.69	317	P	P	08 59 29.6	+1.2
	comp=Z,1.6nm,0.3s,baz=105,slow=9.5,SNR=4.5						
TIXI	Tiksi	46.13	0	LR	LR	09 19 57.3	
	comp=Z,50nm,21.6s,baz=204,slow=38						
AS31	Alice Springs	49.18	174	IAmb	IAmb	08 59 56.9	
	comp=Z,1.2nm,0.6s						
ASAR	Alice Springs	49.18	174	P	P	08 59 56.2	+0.4
	comp=Z,3.0nm,0.8s,baz=2.1,slow=8.6,SNR=39						
ASAR	Alice Springs	49.18	174	P	P	08 59 56.1	+0.3
NRIK	Noril'sk	50.05	342	P	P	09 00 03.0	+1.0
	comp=Z,1.5nm,0.4s,baz=117,slow=6.8,SNR=2.6						
KKAR	Karatay Array	50.21	306	P	P	09 00 04.8	+1.2
BRVK	Borovoye	51.18	319	P	P	09 00 11.8	+1.0
ABKAR	Akbulak array	57.48	314	P	P	09 00 55.5	-1.1
STKA	Stephens Creek	58.40	167	P	P	09 01 03.1	0.0
	comp=Z,1.3nm,0.5s,baz=0.0,slow=11,SNR=5.5						
STKA	Stephens Creek	58.40	167	IAmb	IAmb	09 01 19.2	
	comp=Z,0.8nm,1.0s						
GEYT	Alibeck	60.07	301	P	P	09 01 14.1	-0.8
	comp=Z,0.8nm,0.3s,baz=290,slow=17,SNR=3.3						
ILAR	Eielson Array	64.79	28	P	P	09 01 46.2	+0.2
	comp=Z,0.7nm,0.8s,baz=252,slow=7.0,SNR=8.1						
KBZ	Khabaz	69.98	310	P	P	09 02 20.8	+1.6
	comp=Z,4.7nm,0.8s,baz=103,slow=1.8,SNR=9.0						
FINES	FINESS Array B	73.70	331	P	P	09 02 41.4	+0.2
	comp=Z,1.7nm,0.4s,baz=68,slow=6.5,SNR=12						
AKASG	Malin Array Be	76.37	320	P	P	09 02 58.1	+1.3
	comp=Z,0.3nm,0.3s,baz=62,slow=6.1,SNR=2.9						
BRTR	Keskin Array B	77.85	308	P	P	09 03 06.4	+0.8
	comp=Z,2.0nm,0.9s,baz=74,slow=4.4,SNR=6.7						
BRTR	Keskin Array B	77.85	308	P	P	09 03 06.2	+0.7
YKA	Yellowknife Ar	78.92	25	P	P	09 03 11.4	+0.6
	comp=Z,1.1nm,0.7s,baz=297,slow=4.9,SNR=21						
NB2	NORSAR Subarra	80.14	334	P	P	09 03 17.4	-0.2
	comp=Z,0.8nm,0.6s,baz=51,slow=5.3						
NOA	NORSAR Array B	80.14	334	P	P	09 03 17.1	-0.5
	comp=Z,1.8nm,0.8s,baz=50,slow=5.4,SNR=4.7						
CLL	Collm	84.99	325	*e*P	P	09 03 44.0	+1.0
GERES	GERESS Array B	86.04	323	P	P	09 03 48.8	+0.4
	comp=Z,0.8nm,0.7s,baz=53,slow=6.5,SNR=3.6						
NVAR	Mina Array Bea	90.61	46	P	P	09 04 11.6	+1.0
	comp=Z,0.5nm,0.6s,baz=259,slow=6.9,SNR=4.2						

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*ANF **12** 09:08:07.8±1.1, 40°.86N×124°.88W, h0^{km}, ML2.9/9, Error ellipse: s-maj=10.3km s-min=5.0km az=61.0*

*NCEDC **12** 09:08:08.0±1.8, 40°.75N±0°.04×125°.19W±0°.09, h18^{km}±8^{km}, ML3.0/16, Error ellipse: s-maj=10.3km s-min=5.3km az=83.0*

ISC 12 09:08:05.8±1.9**, 40°.74N**±0°.03×**125°.19W**±0°.08**, h11**^{km}±12^{km}**, n90, σ1**^{s}**28**/105**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	0.70	112		Pb	09 08 21.5	+1.4
KCTM					Sn	09 08 31.8	-0.7
KMPM	Mount Pierce	0.88	111		Pb	09 08 23.7	+0.6
KMPM					Sb	09 08 35.3	+0.5
JCC	Jacoby Creek,	0.89	85	Pg	Pb	09 08 23.1	0.0
JCC	Jacoby Creek,	0.89	85		Sb	09 08 35.0	0.0
JCC	Jacoby Creek,	0.89	85	Sg	Sn	09 08 35.2	-1.8
KSMM	Slide Mountain	0.95	125		Pg	09 08 24.4	+0.2
KRPM	Rodgers	0.98	64		Pb	09 08 24.6	-0.2
KCRM	Chalk Rock	1.09	106		Pg	09 08 26.8	0.0
KHMM	Horse Mountain	1.12	83		Pg	09 08 26.9	-0.4
KHMM				Sg	Sn	09 08 41.9	-1.0
KMRM	Mail Ridge	1.25	114		Pb	09 08 29.3	0.0
KRMB	Red Mountain	1.25	51		Pg	09 08 28.0	-1.8
KCSM	Cold Springs	1.29	98		Pb	09 08 29.9	-0.4
KPPM	Pickett Peak	1.45	105		Pn	09 08 32.2	+0.1
KBSM	Bell Springs	1.47	123		Pn	09 08 32.1	-0.2
KSXB	Camp Six Broad	1.47	42		Pn	09 08 31.5	-0.9
KHBM	Hayfork Bally	1.50	92		Pn	09 08 32.4	-0.5
KIPM	Iron Peak	1.61	125		Pn	09 08 34.2	0.0
KCPM	Cahto Peak	1.62	130		Pn	09 08 34.1	-0.3
KBO	Bosley Butte	1.64	26	Pn	Pn	09 08 33.9	-0.8
KFPM	Farley Peak	1.75	128		Pn	09 08 35.7	-0.3
KBNM	Bluenose Ridge	1.75	118		Pn	09 08 36.7	+0.6
KTRM	Thompson Ridge	1.80	49		Pn	09 08 36.4	-0.5
LGPM	Granite Peak	1.80	84		Pn	09 08 36.5	-0.4
LBPM	Beegum Peak	1.81	103		Pn	09 08 36.9	-0.1
GTC	Three Chop Rid	1.84	136		Pn	09 08 36.7	-0.6
L02E	Cave Junction	1.85	40	P	Pn	09 08 37.1	-0.4
	baz=221,SNR=68						
L02E				S	Sn	09 08 58.7	-2.2
	baz=221						
M02C	Callahan	1.89	69		Pn	09 08 37.8	-0.2
M02C	Callahan	1.89	69	P	Pn	09 08 37.6	-0.4
	baz=251,SNR=149						
M02C				S	Sn	09 09 00.9	-0.9
	baz=251						
N02D	Trinity Center	1.90	82		Pn	09 08 38.1	-0.1
N02D	Trinity Center	1.90	82	P	Pn	09 08 37.9	-0.3
	baz=264,SNR=16						
N02D				S	Sn	09 09 00.6	-1.6
	baz=264						
O02D	Mt. Diablo Mer	1.92	106	P	Pn	09 08 38.4	-0.1
	baz=288,SNR=114						
O02D				S	Sn	09 09 01.7	-0.9
	baz=288						
KRKM	Rackout Spring	1.94	127		Pn	09 08 38.5	-0.2
LBKM	Bonanza King	1.95	79		Pn	09 08 38.8	-0.1
GNAM	Navarro Ridge	1.95	142		Pn	09 08 38.1	-0.8
WDC	Whiskeytown Da	2.02	94		Pn	09 08 39.7	-0.1
WDC	Whiskeytown Da	2.02	94		Pn	09 08 40.1	+0.2
GROM	Round Mountain	2.10	112		Pn	09 08 41.5	+0.5
GHOM	Hamilton Openi	2.12	143		Pn	09 08 40.2	-0.9
YBH	Yreka Blue Hor	2.12	61	Pn	Pn	09 08 41.3	+0.1
LAMM	Antelope Mount	2.12	65		Pn	09 08 41.7	+0.3
GVV	Valley View	2.15	116		Pn	09 08 42.3	+0.6
GASB	Alder Springs	2.19	119		Pn	09 08 42.5	+0.3
KEBM	Edson Butte	2.23	16	Pn	Pn	09 08 42.2	-0.5
K02D	Willamette Mer	2.27	30	P	Pn	09 08 43.1	-0.1
	baz=211,SNR=835						
K02D				S	Sn	09 09 10.1	-1.1
	baz=211						
GGUM	Gualala	2.29	145		Pn	09 08 42.7	-0.9
LGBM	Gray Butte	2.35	74		Pn	09 08 43.7	-0.8
B040	Montague	2.36	62		Pn	09 08 44.9	+0.5
M03C	McCloud	2.38	76		Pn	09 08 46.3	+1.4
HOPS	Hopland Field	2.39	136	Pn	Pn	09 08 44.8	-0.1
LSHM	Sage Hen Hill	2.40	88		Pn	09 08 45.2	+0.2
LHEM	Herd Peak	2.41	67		Pn	09 08 46.2	+0.8
HUMO	Hull Mountain	2.51	41		Pn	09 08 46.5	0.0
HUMO	Hull Mountain	2.51	41		Pn	09 08 46.7	+0.2
HUMO				Sn	Sn	09 09 16.8	-0.3
LBFM	Black Fox Moun	2.57	75		Pn	09 08 49.4	+1.8
J01E	Myrtle Point	2.60	21	P	Pn	09 08 47.6	-0.1
	baz=202						
J01E				S	Sn	09 09 18.9	-0.3
	baz=202						
O03E	Paynes Creek	2.62	99		Pn	09 08 48.0	-0.2
O03E	Paynes Creek	2.62	99	P	Pn	09 08 48.0	-0.2
	baz=281,SNR=20						
O03E				S	Sn	09 09 19.7	-0.3
	baz=281						
L04D	Klamath Falls	2.63	55		Pn	09 08 49.9	+1.6
L04D	Klamath Falls	2.63	55	P	Pn	09 08 49.6	+1.4
	baz=237,SNR=134						
L04D				S	Sb	09 09 22.5	-2.7
	baz=237						
LGMM	Garner Mountai	2.68	70		Pn	09 08 50.8	+1.9
DBO	Dodson Butte	2.79	31		Pn	09 08 50.8	+0.4
LASM	Arnica Sink	2.86	71		Pn	09 08 52.1	+0.6
LBCM	Butte Creek Ri	2.92	87		Pn	09 08 53.0	+0.7
ORV	Oroville	3.07	111		Pn	09 08 53.9	-0.3
I03D	Drain, OR	3.26	24	P	Pn	09 08 57.4	+0.6
	baz=205						
I03D				S	Sn	09 09 34.8	-0.7
	baz=205						
I02D	Swisshome	3.51	16	P	Pn	09 09 00.9	+0.7
	baz=197,SNR=6.2						
I04A	Tendick Farm,	3.69	33	P	Pn	09 09 04.1	+1.4
	baz=215,SNR=14						
I04A				S	Sn	09 09 46.2	+0.1
	baz=215						
AFDM	Forest Hills D	3.71	117	Pn	Pn	09 09 04.3	+1.3
BEKR	Beckworth	3.80	102	Pn	Pn	09 09 07.9	+3.5
MOD	Modoc Plateau	3.86	71	Pn	Pn	09 09 06.2	+0.9
J05D	Fort Rock, OR	3.90	48	P	Pn	09 09 07.4	+1.7
	baz=230,SNR=26						
COR	Corvallis	4.09	19	Pn	Pn	09 09 09.9	+1.7
H04D	Lebanon	4.19	25	P	Pn	09 09 11.5	+1.9
	baz=206,SNR=7.4						
H04D				S	Sn	09 09 59.2	+0.7
	baz=206						
PINE	Pine Mountain	4.39	45		Pn	09 09 15.1	+2.6
VCNR	Virginia City	4.49	107	Pn	Pn	09 09 15.7	+1.7
H04A	Detroit Lake	4.52	28		Pn	09 09 15.6	+1.4
PAHR	Pah Rah Range	4.56	101	Pn	Pn	09 09 16.0	+1.1
I05D	Terrebonne, OR	4.59	37	P	Pn	09 09 17.0	+1.9
	baz=220						
PNTR	Pine Nut	4.61	109	Pn	Pn	09 09 17.7	+2.1
YERR	Yerington	4.90	109		Pn	09 09 20.9	+1.3
WVOR	Wild Horse Val	5.20	69	Pn	Pn	09 09 24.5	+0.9
G05D	Wamic, OR	5.32	31	P	Pn	09 09 27.7	+2.5
	baz=214,SNR=6.0						
I07A	Izee	5.38	50	Pn	Pn	09 09 29.1	+3.1
RYN	Ryan	5.56	110	Pn	Pn	09 09 30.5	+1.9
G06A	Carlson Farm,	5.60	35	Pn	Pn	09 09 31.2	+2.2
J08A	Circle Bar Ran	5.64	60		Pn	09 09 31.6	+1.9
KVN	Kaiserville	5.71	105	Pn	Pn	09 09 31.7	+1.1
HAWA	Hanford	6.99	34	Pn	Pn	09 09 51.0	+3.0
BMO	Blue Mountains	7.11	52		Pn	09 09 53.0	+3.3
F10A	Beach Ranch, E	7.81	45	Pn	Pn	09 10 03.2	+3.8

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*NIED **12** 09:35:00, 36°.20N×141°.40E, h23^{km}, Mw4.0 Best double couple: M$_0$1.03000×10^{15} NP1:φ$_s$33.00000°, δ65.00000°, λ97.00000°. NP2:φ$_s$197.00000°, δ26.00000°, λ75.00000°.*

*IDC **12** 09:35:06.0±0.8, 36°.22N×141°.51E, h0^{km}, mb3.9/11, mb1 4.0/16, mb1mx3.8/39, mbtmp3.9/16, ML3.7/3, MS3.1/6, Ms1 3.1/6, ms1mx2.9/34, Error ellipse: s-maj=20.6km s-min=15.2km az=90.0*

*JMA **12** 09:35:09.0±0.2, 36°.24N×141°.43E, h59^{km}±3^{km}, M3.7*

*NEIC **12** 09:35:10.3±1.4, 36°.20N±0°.06×141°.57E±0°.08, h35^{km}±10^{km}, mb4.2/13, Error ellipse: s-maj=9.7km s-min=8.2km az=99.0*

ISC 12 09:35:08.9±1.6**, 36°.18N**±0°.05×**141°.58E**±0°.06**, h25**^{km}±12^{km}**, n59, σ1**^{s}**54**/62**, mb4.1**/17**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.75	231	P	Pb	09 35 23.4	+0.1
CHOJ				S	Sb	09 35 34.2	+1.1
JHYU	Hitachinakayam	0.82	282	P	Pn	09 35 23.2	-1.6
JHYU				S	Sb	09 35 33.2	-1.8
JIHU	Itakohorinouch	0.88	256	P	Pn	09 35 24.8	-0.8
JIHU				S	Sb	09 35 36.2	-0.5
JHO	Hitachi	0.92	298	P	Pn	09 35 24.1	-2.2
ONAJ	Iwakimizuishiy	1.11	326	P	Pn	09 35 27.2	-1.8
JFK	Kawauchi	1.31	335	P	Pn	09 35 30.1	-1.6
JFT	Otama	1.67	324	P	Pn	09 35 36.0	-0.6
JAG	Ashikaga	1.73	279	P	Pn	09 35 35.9	-1.5
MJAR	Matsushiro Arr	2.74	279	Pn	Pn	09 35 51.5	+0.1
	6.3nm,0.3s,baz=123,slow=8.7,SNR=196						
MJAR				Sn	Sn	09 36 24.2	+0.4
	2.3nm,0.3s,baz=67,slow=11,SNR=7.4						
MJAR				LR	LR	09 36 59.3	
	comp=Z,220nm,19.8s,baz=110,slow=43						
MJAR	Matsushiro Arr	2.74	279		Pn	09 35 51.2	-0.2
MJAR					Sn	09 36 23.6	-0.1
MAJO	Matsushiro	2.74	279		Pn	09 35 51.8	+0.4
MAT	Matsushiro	2.74	279	P	Pn	09 35 51.5	+0.1
MAT				S	Sn	09 36 20.6	-3.1
MJB9	Matsu-Tunnel	2.75	279		Pn	09 35 51.8	+0.4
JHJ2	Mitsune	3.38	206	Pn	Pn	09 36 01.9	+1.7
JHJ	Hachijo jima 2	3.39	206	Pn	Pn	09 36 02.1	+1.9
	40nm,0.3s,baz=337,slow=22,SNR=20						
JHJ				Sn	Sn	09 36 39.2	-0.4
	70nm,0.3s,baz=72,slow=24,SNR=13						
INU	Inuyama	3.80	259		Pn	09 36 07.4	+1.6
ERM	Erimo	5.96	11	Pn	Pn	09 36 35.5	0.0
ERM				Sn	Sn	09 37 43.3	+0.4
ASAJ	Asahikawa	7.97	5	Pn	Pn	09 37 01.9	-1.2
	1.1nm,0.3s,baz=231,slow=7.9,SNR=10						
ASAJ				Sn	Sn	09 38 30.3	-2.1
	0.6nm,0.3s,baz=18,slow=26,SNR=3.1						
ASAJ				LR	LR	09 40 43.8	
	comp=Z,77nm,21.8s,baz=190,slow=43						
JKA	Kamikawa-asahi	7.97	5		Pn	09 37 01.9	-1.2
JKA					Sn	09 38 30.3	-2.1
JCJ	Chichijima	9.07	177	Pn	Pn	09 37 17.8	-0.5
	7.3nm,0.3s,baz=282,slow=23,SNR=6.5						
JCJ				Sn	Sn	09 38 52.1	-7.4
	7.5nm,0.3s,baz=279,slow=23,SNR=4.8						
JNU	Nakatsue	9.32	254	LR	LR	09 41 20.7	
	comp=Z,168nm,19.0s,baz=40,slow=40						
USRK	Ussuriysk Ar.	10.86	320	Pn	Pn	09 37 43.5	+0.9
	baz=140,slow=12,SNR=5.9						
USRK	Ussuriysk Ar.	10.86	320		Pn	09 37 42.3	-0.3
KSRS	Korea Array	11.02	281	Pn	Pn	09 37 48.4	+3.5
	0.2nm,0.3s,baz=92,slow=14,SNR=5.0						
KSRS				LR	LR	09 42 02.3	
	comp=Z,94nm,18.1s,baz=61,slow=38						
PETK	Petropavlovsk-	20.37	29	LR	LR	09 47 40.7	
	comp=Z,28nm,19.9s,baz=60,slow=37						
MA2	Magadan	24.16	11	P	P	09 40 25.0	+2.1
	1.8nm,0.6s,baz=154,slow=7.9,SNR=4.0						
MA2	Magadan	24.16	11	P	P	09 40 22.8	-0.1
XAN	Xi'an	26.73	275	P	P	09 40 45.5	-1.0
XAN				IAmb	IAmb	09 40 47.7	
	comp=Z,8.1nm,1.0s						
H11N2	WAKE ISLAND Hy	27.60	120	T	T	10 10 05.9	
H11N1	WAKE ISLAND Hy	27.61	120	T	T	10 10 08.1	
	baz=203,slow=74,SNR=28						
H11N3	WAKE ISLAND Hy	27.62	120	T	T	10 10 05.1	
	baz=310,slow=74,SNR=32						
H11S1	WAKE ISLAND Hy	28.29	122	T	T	10 10 55.6	
	SNR=70						
H11S3	WAKE ISLAND Hy	28.29	122	T	T	10 10 59.2	
H11S2	WAKE ISLAND Hy	28.31	122	T	T	10 10 56.6	
	SNR=50						
SONM	Songino Array	28.38	305	P	P	09 41 01.0	-0.2
	comp=Z,1.2nm,0.6s,baz=108,slow=8.6,SNR=9.1						
SONM				LR	LR	09 51 19.8	
	comp=Z,63nm,18.1s,baz=66,slow=34						
SONM	Songino Array	28.38	305	P	P	09 41 00.9	-0.3
TLY	Talaya	31.00	312	P	P	09 41 24.6	+0.4
TLY				IAmb	IAmb	09 41 25.7	
	comp=Z,2.9nm,0.8s						
ZAA0	Zalesovo Array	42.59	313	P	P	09 43 02.9	+0.2
ZALV	Zalesovo Beam	42.59	313	P	P	09 43 02.9	+0.2
	comp=Z,1.9nm,0.5s,baz=94,slow=6.6,SNR=8.3						
ZALV	Zalesovo Beam	42.59	313	P	P	09 43 02.3	-0.4
MK31	Makanchi Array	44.69	303	P	P	09 43 19.6	-0.1
MK31				IAmb	IAmb	09 43 21.5	
	comp=Z,2.4nm,0.9s						
MKAR	Makanchi Array	44.69	303	P	P	09 43 20.0	+0.3
	comp=Z,2.4nm,0.8s,baz=86,slow=9.3,SNR=21						
MAKZ	Makanchi	44.90	303	P	P	09 43 20.5	-0.9
MAKZ				IAmb	IAmb	09 43 23.4	
	comp=Z,2.9nm,1.0s						
KURK	Kurchatov	46.57	309	P	P	09 43 34.3	-0.1
ILAR	Eielson Array	50.15	32	P	P	09 44 03.4	+1.5
	comp=Z,0.8nm,0.7s,baz=266,slow=6.5,SNR=9.1						
ILAR	Eielson Array	50.15	32	P	P	09 44 01.6	-0.3
AAK	Ala-Archa	51.02	299	P	P	09 44 09.0	+0.1
DAWY	Dawson	53.45	33	P	P	09 44 27.2	+0.6

KK31	Karatay Array	53.67	301	P	P	09 44 28.6	+0.1
KK31				IAmb	IAmb	09 44 32.8	
	comp=Z,3.5nm,1.2s						
KKAR	Karatay Array	53.67	301	P	P	09 44 28.0	-0.4
KKAR	Karatay Array	53.67	301	P	P	09 44 28.6	+0.1
KKAR				IAmb	IAmb	09 44 32.8	
	comp=Z,3.5nm,1.2s						
CHGR	Chuyangaron	56.16	296	P	P	09 44 47.1	+0.5
WRA	Warramunga Arr	56.23	188	P	P	09 44 47.5	+0.4
	comp=Z,0.4nm,0.5s,baz=3.0,slow=7.4,SNR=5.2						
ABKAR	Akbulak array	58.59	311	P	P	09 45 03.1	-0.3
ASAR	Alice Springs	59.96	188	P	P	09 45 15.1	+1.9
	comp=Z,0.3nm,0.9s,baz=46,slow=51,SNR=3.3						
YKA	Yellowknife Ar	64.48	30	P	P	09 45 44.0	+0.9
	comp=Z,0.3nm,0.9s,baz=300,slow=6.9,SNR=5.4						
FINES	FINESS Array B	69.63	332	P	P	09 46 15.4	-0.3
	comp=Z,2.3nm,0.8s,baz=64,slow=9.4,SNR=4.4						
NOA	NORSAR Array B	75.03	337	P	P	09 46 48.7	+0.7
	comp=Z,0.7nm,0.8s,baz=38,slow=5.9,SNR=3.5						
AKASG	Malin Array Be	75.06	323	P	P	09 46 48.1	-0.2
	comp=Z,1.3nm,0.4s,baz=46,slow=6.0,SNR=10						

*REN **12** 09:44:37.1±2.1, 37°.64N±0°.01×118°.92W±0°.03, h6^{km}±5^{km}, Error ellipse: s-maj=3.3km s-min=1.1km az=116.0*

*NCEDC **12** 09:44:37.1±2.5, 37°.64N±0°.02×118°.91W±0°.04, h8^{km}±5^{km}, Md2.7/57, ML2.1/2(REN), Error ellipse: s-maj=5.0km s-min=2.7km az=109.0*

NEIC 12 09:44:38.5±2.0**, 37°.63N**±0°.02×**118°.96W**±0°.02**, h5**^{km}±4^{km}**, Error ellipse: s-maj=3.1km s-min=1.2km az=132.0, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OMMB	Old Mammoth Mi	0.04	235	Pg	Pg	09 44 39.2	-0.9
OMMB				Sg	Sg	09 44 40.5	-0.6
MCSM	Casa Diablo Ho	0.05	65		Pg	09 44 38.9	-1.3
MCBM	Casa Benchmark	0.05	79		Pg	09 44 40.0	-0.2
MDPB	Devils Postpil	0.09	269		Pg	09 44 40.2	-0.6
MDPB				Sg	Sg	09 44 42.1	-0.1
LMCR	Lookout Mounta	0.10	7		Pg	09 44 39.9	-0.9
MDCM	Deadman Creek	0.10	320		Pg	09 44 40.0	-0.8
MLAC	Mammoth, Mammo	0.10	92		Pg	09 44 41.2	+0.3
MCVM	Convict Lake	0.12	113		Pg	09 44 39.4	-1.7
MLHM	Little Hot Cre	0.12	69		Pg	09 44 39.8	-1.4
WMD		0.32	127		Pg	09 44 43.0	-1.8
KCC	Kaiser Creek	0.42	223		Pg	09 44 45.6	-1.1
MFBM	Five Bridges	0.47	116		Pg	09 44 46.1	-1.5
POCCA	Poleta Canyon	0.61	116		Pg	09 44 48.2	-2.0
FRI	Friant	0.87	223		Pg	09 44 53.8	-1.5
NVAR	Mina Array Bea	0.95	33		Pg	09 44 54.3	-2.5
HELL	Mitchell Peak,	0.95	183		Pg	09 44 54.9	-2.0
NV11	Mina Array Sit	1.02	38		Pg	09 44 55.9	-2.2
RYN	Ryan	1.05	19		Pg	09 44 56.9	-1.9
MYLM	Yosemite Lake	1.19	258		Pg	09 44 59.8	-1.5
CMB	Columbia Colle	1.20	290	Pn	Pg	09 44 59.4	-2.1
CMB					Pb	09 44 59.7	-2.0
MRHM	Rocky Hill	1.35	184		Pn	09 45 01.6	-2.4
YERR	Yerington	1.37	351		Pn	09 45 02.5	-1.9
PNTR	Pine Nut	1.54	341		Pn	09 45 06.5	-0.4
KVN	Kaiserville	1.57	25		Pn	09 45 06.4	-0.8
BRMM	Rolling Bench	1.69	242		Pn	09 45 08.7	+0.1
VCNR	Virginia City	1.75	342		Pn	09 45 10.3	+0.6
BMSM	Mercy Hot Spri	1.76	237		Pn	09 45 10.4	+0.7
SFJWR	San Luis Fatjo	1.86	252		Pn	09 45 11.0	+0.1
BAVM	Antelope Valle	1.92	240		Pn	09 45 12.0	+0.1
HPCM	Pacheco Lake	1.93	253		Pn	09 45 12.1	+0.1
BEMM	Emmet	1.96	241		Pn	09 45 12.8	+0.3
BBGB	Big Mountain B	1.97	238		Pn	09 45 13.0	+0.4
ISA	Isabella, Lake	2.01	169		Pn	09 45 13.3	+0.2
BEHM	Elkhorn Ranch	2.02	242		Pn	09 45 13.6	+0.5
HLTM	Lone Tree Road	2.02	249		Pn	09 45 13.4	+0.3
CTM	Castle Mountai	2.03	213		Pn	09 45 13.8	+0.4
PMPB	Monarch Peak	2.04	227	Pn	Pn	09 45 14.1	+0.5
BHRM	Hodges Ranch	2.05	244		Pn	09 45 14.1	+0.5
HFEM	San Felipe	2.05	252		Pn	09 45 14.4	+0.8
AFDM	Forest Hills D	2.06	310		Pn	09 45 14.6	+0.9
PSRM	Scobie Ranch	2.06	211		Pn	09 45 13.9	+0.1
BVL	Bear Valley	2.07	240		Pn	09 45 14.5	+0.6
BLRM	Lewis Ranch	2.08	243		Pn	09 45 15.3	+1.2
PAHR	Pah Rah Range	2.10	351		Pn	09 45 15.5	+1.1
HSPM	Sheep	2.10	256		Pn	09 45 15.1	+0.7
BPIM	Pinnacles	2.10	238		Pn	09 45 15.0	+0.6
WOFM	Oak Flat	2.10	174		Pn	09 45 14.9	+0.4
PMRM	Maxey Ranch	2.11	209		Pn	09 45 14.4	-0.1
PAGB	Antelope Grade	2.16	209	Pn	Pn	09 45 13.5	-1.7
SAO	San Andreas Ge	2.17	247	Pn	Pn	09 45 15.5	+0.3
PCCM	Crazy Canyon	2.34	230		Pn	09 45 18.1	+0.5
R11A	Troy Canyon, C	2.76	74		Pb	09 45 26.6	-1.8

*NEIC **12** 09:47:04.0±1.9, 7°.11S±0°.07×74°.36W±0°.04, h144^{km}±7^{km}, mb4.4/23, Error ellipse: s-maj=11.7km s-min=2.0km az=208.0*

*IDC **12** 09:47:03.7±1.7, 7°.09S×74°.40W, h146^{km}±20^{km}, mb3.8/7, mb1 3.7/13, mb1mx3.6/33, mbtmp4.2/13, MS3.2/1, Ms1 3.1/1, ms1mx2.7/22, Error ellipse: s-maj=19.2km s-min=12.0km az=55.0*

ISC 12 09:47:04.3±0.5**, 7°.12S**±0°.05×**74°.35W**±0°.07**, h147**^{km}**, n55,** σ**1**^{s}**.01**/58**, mb4.3**/18**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	Atahualpa	4.01	270	P	Pn	09 48 04.9	-0.2
	12nm,0.3s,baz=38,slow=2.9,SNR=198						
ATAH				S	Sn	09 48 50.0	-2.2
	56nm,0.3s,baz=315,slow=19,SNR=6.4						
NNA	Nana	5.42	207	P	Pn	09 48 24.5	+1.1
	3.5nm,0.3s,baz=349,slow=10,SNR=5.6						
NNA				S	Sn	09 49 23.9	-1.3
	12nm,0.3s,baz=144,slow=23,SNR=11						
NNA	Nana	5.42	207		Pn	09 48 22.6	-0.8
NNA					Sn	09 49 24.1	-1.1
OTAV	Otavalo	8.38	331	Pn	Pn	09 49 06.3	+3.1
FLOC	Florencia	8.74	351	*e*P	Pn	09 49 07.3	-0.4
FLOC	Florencia	8.74	351		Pn	09 49 08.3	+0.5
MACC	Macarena, Meta	9.22	3	*e*P	Pn	09 49 13.6	-0.5
GARC	Garzon, Huila	9.31	353	*e*P	Pn	09 49 15.5	-0.1
PCON	Cinco Dias	9.61	348	*e*P	Pn	09 49 19.9	+0.2
LPAZ	La Paz	10.96	147	P	Pn	09 49 38.3	+0.6
	0.2nm,0.3s,baz=340,slow=7.3,SNR=8.8						
LPAZ				S	Sn	09 51 38.2	-0.9
	0.1nm,0.3s,baz=170,slow=15,SNR=3.8						
LPAZ	La Paz	10.96	147		Pn	09 49 37.7	0.0
SAML	Samuel	11.21	100		Pn	09 49 39.8	-0.6
RUSC	La Rusia	12.99	6	*e*P	P	09 50 12.1	+3.1
PB11	IPOC Station P	13.37	161	Pn	Pn	09 50 08.9	+0.4
GO01	Chusmiza	13.44	159	Pn	Pn	09 50 09.7	-0.1
PTBC	PUERTO BERRIO,	13.57	360	*e*P	P	09 50 12.8	-2.2
PB01	IPOC Station P	14.62	162	Pn	Pn	09 50 23.4	-0.9
PTGA	Pitinga	15.68	67	P	Pn	09 50 37.9	+0.4
	1.4nm,0.3s,baz=263,slow=14,SNR=15						
SIV	San Ignacio	15.71	125	P	P	09 50 38.6	-0.1
	0.6nm,0.3s,baz=309,slow=10,SNR=20						
SMLC	San Martn de	15.82	1	*e*P	P	09 50 39.2	-0.7
SDV	Santo Domingo	16.33	13	P	P	09 50 45.7	0.0
	0.6nm,0.3s,baz=178,slow=18,SNR=4.3						
URIC	Uribia, Colomb	18.84	7	P	P	09 51 11.6	-1.5
CPUP	Villa Florida	25.05	142	P	P	09 52 16.2	+1.1
	2.1nm,0.6s,baz=321,slow=11,SNR=7.2						
CPUP	Villa Florida	25.05	142	P	P	09 52 16.2	+1.1
PDPR	Patillas Dam,	26.30	18	P	P	09 52 26.5	+0.2
PDPR				IAmb	IAmb	09 52 27.3	
	comp=Z,11nm,1.2s						
SJG	San Juan	26.34	18	P	P	09 52 26.5	-0.2
	comp=Z,6.4nm,0.4s,baz=204,slow=2.0,SNR=5.7						
AOPR	Arecibo Observ	26.39	16	P	P	09 52 26.2	-1.0
MTP	Monte Pirata	26.52	19	P	P	09 52 28.1	-0.3
MTP				IAmb	IAmb	09 52 34.5	
	comp=Z,21nm,1.3s						
CUPR	Culebra, Puert	26.80	19	P	P	09 52 30.1	-0.8
CUPR				IAmb	IAmb	09 52 47.6	
	comp=Z,15nm,0.9s						
STVI	Saint Thomas	26.95	20	P	P	09 52 31.1	-1.1
BDFB	Brasilia	27.14	110	LR	LR	10 05 25.1	
	comp=Z,45nm,19.2s,baz=125,slow=40						
PLCA	Paso Flores	33.64	175	P	P	09 53 31.9	+0.8
	comp=Z,0.3nm,0.3s,baz=19,slow=12,SNR=2.8						
PLCA	Paso Flores	33.64	175	P	P	09 53 31.9	+0.8
Q54A	Coxs Mills	46.26	353	P	P	09 55 15.6	+0.6
Q54A				IAmb	IAmb	09 55 15.8	
	comp=Z,5.5nm,0.5s						
P53A	Whipple	46.83	353	P	P	09 55 19.7	+0.4
M56A	Emporium	48.49	356	P	P	09 55 32.9	+0.7
M56A				IAmb	IAmb	09 55 44.5	
	comp=Z,10nm,1.4s						
G62A	West of Eustis	52.21	3	P	P	09 56 00.7	+0.6
PKME	Peaks-Kenny Pk	52.34	5	P	P	09 56 01.2	+0.2
PKME				IAmb	IAmb	09 56 04.9	
	comp=Z,11nm,1.3s						
D62A	Allapoint, All	54.17	4	P	P	09 56 14.8	+0.5
D62A				IAmb	IAmb	09 56 33.4	
	comp=Z,12nm,1.4s						
BATG	Bathurst New B	54.66	7	P	P	09 56 17.9	+0.1
BATG				IAmb	IAmb	09 56 25.9	
	comp=Z,8.3nm,1.3s						
VLDQ	Val d'Or	55.06	357	P	P	09 56 20.5	-0.2
VLDQ				IAmb	IAmb	09 56 21.4	
	comp=Z,1.9nm,0.6s						
DRLN	Deer Lake	58.04	13	P	P	09 56 41.7	-0.1
SCHQ	Schefferville	62.04	5	P	P	09 57 08.5	-0.5
	comp=Z,0.8nm,0.6s,baz=210,slow=8.1,SNR=3.5						
SCHQ	Schefferville	62.04	5	P	P	09 57 08.7	-0.3
DBIC	Dimbokro	70.66	80	P	P	09 58 03.9	-0.7
	comp=Z,4.4nm,0.8s,baz=227,slow=4.6,SNR=5.1						
YKA	Yellowknife Ar	75.96	342	P	P	09 58 34.0	-0.7
	comp=Z,0.6nm,0.5s,baz=141,slow=6.2,SNR=11						
SNAA	Sanae	77.50	162	P	P	09 58 43.9	+0.5
TOA0	Torodi Ar. Sit	78.15	75	P	P	09 58 46.9	-1.1
TOA0				IAmb	IAmb	09 58 47.4	
	comp=Z,3.2nm,0.8s						
TORD	Torodi Ar. Bea	78.15	75	P	P	09 58 46.5	-1.5
	comp=Z,2.7nm,0.6s,baz=278,slow=5.0,SNR=17						
TORD	Torodi Ar. Bea	78.15	75	P	P	09 58 46.7	-1.2
PAB	San Pablo	79.38	48	P	P	09 58 55.0	+0.8
PAB				IAmb	IAmb	09 59 00.3	
	comp=Z,6.6nm,1.2s						
QSPA	South Pole Qui	82.98	180	P	P	09 59 13.8	+0.9
ZALV	Zalesovo Beam	130.36	16	PKP	PKiKP	10 05 57.4	-0.6
	comp=Z,0.7nm,0.4s,baz=90,slow=1.5,SNR=3.9						
ZALV	Zalesovo Beam	130.36	16		PKPdf	10 05 57.0	-0.3
MKAR	Makanchi Array	135.68	23	PKP	PKPdf	10 06 07.3	-0.2
	comp=Z,0.3nm,0.5s,baz=300,slow=2.8,SNR=3.5						

*IDC **12** 09:50:24.7±1.9, 37°.34N×98°.00W, h0^{km}, mb1 3.7/3, mb1mx3.4/39, mbtmp3.4/3, ML1.8/1, Error ellipse: s-maj=26.4km s-min=12.9km az=104.0*

*ANF **12** 09:50:25.6±1.3, 37°.18N×97°.91W, h5^{km}±10^{km}, ML4.4/7, Error ellipse: s-maj=7.9km s-min=3.7km az=51.0*

*NEIC **12** 09:50:25.1±0.5, 37°.20N±0°.03×97°.89W±0°.03, h3^{km}±2^{km}, mb_Lg3.3/127, Error ellipse: s-maj=4.4km s-min=3.3km az=171.0*

ISC 12 09:50:24.8±1.5**, 37°.18N**±0°.04×**97°.89W**±0°.03**, h2**^{km}±12^{km}**, n93,** σ**0**^{s}**.54**/65**, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T35A	Sooner Cattle	1.13	103		Pg	09 50 46.4	-0.2
T35A				Sg	Sg	09 51 01.4	+0.1
U32A	Winter Ranch,	1.20	228		Pg	09 50 47.4	-0.5
U32A				Sg	Sg	09 51 04.1	+0.7
R32A	Long Quarter,	1.40	333		Pn	09 50 50.8	-0.6
ADOK	Arcadia Dam	1.58	165	Pn	Pn	09 50 54.4	+0.5
ADOK					Sn	09 51 15.2	+0.3
OKCFA	Oklahoma City	1.80	169		Pn	09 50 57.2	+0.3
OKCFA				IAmb_Lg		09 51 25.1	
	comp=Z,151nm,0.7s						
OKCSW	OKLAHOMA CITY	1.81	168		Pn	09 50 57.5	+0.4
FNO	Franklin	1.96	168		Pn	09 50 59.6	+0.5
TUL1	Leonard	2.11	126		Pn	09 51 01.5	+0.3
TUL1				IAmb_Lg		09 51 34.2	
	comp=Z,133nm,0.8s						
TUL1	Leonard	2.11	126	P	Pn	09 51 01.6	+0.5
	baz=308						
TUL1				S	Sb	09 51 30.9	+0.3
	baz=308						
KSU1	Kansas State U	2.16	27	IAmb_Lg		09 51 34.3	
	comp=Z,131nm,0.7s						
KSU1	Kansas State U	2.16	27	P	Pn	09 51 02.3	+0.5
	baz=208						
KSU1				S	Sb	09 51 31.9	-0.1
	baz=208						
CBKS	Cedar Bluff	2.19	319		Pn	09 51 02.6	+0.5
CBKS	Cedar Bluff	2.19	319	P	Pn	09 51 02.7	+0.5
	baz=137						
CBKS				S	Sn	09 51 31.0	+1.1
	baz=137						
W35A	Tecumseh	2.19	158		Pn	09 51 02.5	+0.3
WMOK	Wichita Mounta	2.55	197		Pn	09 51 07.4	+0.3
X34A	Smith Ranch, M	2.58	179		Pn	09 51 07.9	+0.4
X34A				IAmb_Lg		09 51 54.6	
	comp=Z,151nm,0.8s						
U38A	Gravette	2.91	104		Pn	09 51 12.4	+0.3
U38A				IAmb_Lg		09 51 59.0	
	comp=Z,75nm,0.8s						
HHAR	Hobbs	3.30	105		Pn	09 51 17.8	+0.3
HHAR				IAmb_Lg		09 52 14.2	
	comp=Z,58nm,0.7s						
S39A	Bolivar	3.67	81		Pn	09 51 22.7	+0.2
AMTX	Amarillo	3.83	234		Pn	09 51 24.9	0.0
W39A	Magazine	3.87	120		Pn	09 51 25.5	+0.2
W39A				IAmb_Lg		09 52 29.5	
	comp=Z,112nm,0.9s						
W39A	Magazine	3.87	120	Pb	Pb	09 51 34.6	+0.9
	baz=302						
Z35A	Perchaven, San	3.88	172	IAmb_Lg		09 52 39.3	
	comp=Z,52nm,0.8s						
U40A	Yellville	4.13	100		Pn	09 51 29.5	+0.7
U40A	Yellville	4.13	100	P	Pn	09 51 29.5	+0.7
	baz=283						
U40A				S	Sn	09 52 16.8	-0.8
	baz=283						
KSCO	Kaye Shedlock'	4.16	297		Pn	09 51 29.6	+0.2
KSCO				IAmb_Lg		09 52 40.2	
	comp=Z,54nm,0.8s						
BGNE	Belgrade	4.22	357		Pn	09 51 30.1	0.0
BGNE	Belgrade	4.22	357	P	Pn	09 51 30.2	0.0
	baz=177						
BGNE				S	Sn	09 52 20.8	+0.8
	baz=177						
MIAR	Mount Ida	4.38	126	IAmb_Lg		09 52 44.7	
	comp=Z,54nm,0.8s						
MGMO	Mountain Grove	4.49	89		Pn	09 51 33.6	-0.2
Z38A	Mt. Pleasant	4.58	148	Pn	Pn	09 51 35.0	-0.1
Z38A				IAmb_Lg		09 52 53.8	
	comp=Z,65nm,0.7s						
FCAR	Ozark Folk Cen	4.82	104	Pn	Pn	09 51 37.9	-0.4
FCAR				IAmb_Lg		09 52 59.0	
	comp=Z,76nm,0.8s						
WHAR	Wooly Hollow	4.91	111		Pn	09 51 39.8	+0.3
WHAR				IAmb_Lg		09 53 09.6	
	comp=Z,62nm,0.7s						
X40A	Basin Creek Fa	4.91	122	IAmb_Lg		09 53 02.0	
	comp=Z,43nm,0.8s						
W41B	Gary Mavity, V	4.99	112	IAmb_Lg		09 53 03.6	
	comp=Z,76nm,1.2s						
UALR	University of	5.10	116	Pn	Pn	09 51 42.5	+0.3
UALR				IAmb_Lg		09 53 16.7	
	comp=Z,38nm,0.7s						
MSTX	Muleshoe	5.11	233	Pn	Pn	09 51 42.7	+0.2
WHTX	Lake Whitney,	5.19	176	Pn	Pn	09 51 43.9	+0.4
WHTX	Lake Whitney,	5.19	176	P	Pn	09 51 43.7	+0.2
	baz=356						
T25A	Trinidad	5.21	271	IAmb_Lg		09 53 22.2	
	comp=Z,58nm,0.9s						
WLAR	White Oak Lake	5.23	130	Pn	Pn	09 51 44.3	+0.3
CCM	Cathedral Cave	5.35	79	Pn	Pn	09 51 45.3	-0.3
CCM				IAmb_Lg		09 53 27.2	
	comp=Z,46nm,0.8s						
T42A	Van Buren	5.43	90	IAmb_Lg		09 53 28.2	
	comp=Z,74nm,0.8s						
237A	Washetta, Mont	5.45	161	Pn	Pn	09 51 46.2	-0.7
237A				IAmb_Lg		09 53 27.5	
	comp=Z,56nm,0.9s						
LCAR	Lake Charles	5.53	100	IAmb_Lg		09 53 19.7	
	comp=Z,48nm,0.8s						
Z41A	Richland Creek	5.72	132	IAmb_Lg		09 53 37.4	
	comp=Z,40nm,0.8s						
SCIA	State Center	5.94	36	IAmb_Lg		09 53 47.5	
	comp=Z,53nm,0.7s						
Q24A	Divide	6.00	289	Pn	Pn	09 51 54.5	-0.4
Q24A				IAmb_Lg		09 53 44.3	
	comp=Z,44nm,0.7s						
NATX	Nacogdoches	6.03	153	IAmb_Lg		09 53 45.7	
	comp=Z,28nm,0.9s						
SDCO	Great Sand Dun	6.08	278	IAmb_Lg		09 53 44.8	
	comp=Z,29nm,0.9s						
SLM	Saint Louis	6.22	74	Pn	Pn	09 51 57.2	-0.4
SLM				IAmb_Lg		09 53 41.7	
	comp=Z,63nm,0.7s						
N41A	Harden Midland	6.51	55	Pn	Pn	09 52 01.9	+0.2
N41A				IAmb_Lg		09 54 01.3	
	comp=Z,58nm,0.7s						
ISCO	Idaho Springs	6.60	296		Pn	09 52 03.4	+0.3
ECSD	EROS Data Cent	6.61	8		Pn	09 52 02.2	-0.8
ECSD				IAmb_Lg		09 53 58.5	
	comp=Z,35nm,0.9s						
JCT	Junction City	6.87	194	IAmb_Lg		09 54 14.2	
	comp=Z,46nm,0.8s						
143A	Socs Landing,	6.95	128	IAmb_Lg		09 54 26.1	
	comp=Z,32nm,1.0s						
P43A	Skaggs, Pawnee	7.01	67		Pn	09 52 08.1	-0.4
L40A	Anamosa	7.08	45		Pn	09 52 08.6	-0.9
L40A				IAmb_Lg		09 54 17.0	
	comp=Z,37nm,1.0s						
S22A	4UR Ranch, Cre	7.13	277		Pn	09 52 11.7	+1.3
Q44A	Meyer Farm, Va	7.21	74	Pn	Pn	09 52 12.1	+1.0
Q44A				IAmb_Lg		09 54 26.8	
	comp=Z,55nm,0.7s						
N23A	Red Feather La	7.28	303		Pn	09 52 12.9	+0.4
N23A				IAmb_Lg		09 54 27.3	
	comp=Z,43nm,0.8s						
ANMO	Albuquerque	7.29	255	IAmb_Lg		09 54 24.0	
	comp=Z,17nm,0.9s						
SUSD	Miller	7.30	354	IAmb_Lg		09 54 27.8	
	comp=Z,43nm,0.7s						
W45A	Hickory Valley	7.32	103	IAmb_Lg		09 54 36.7	
	comp=Z,35nm,0.7s						
OXF	Oxford	7.38	109	Pn	Pn	09 52 13.5	0.0
OXF				IAmb_Lg		09 54 27.6	
	comp=Z,44nm,1.0s						
HDIL	Hopedale	7.50	61	Pn	Pn	09 52 15.0	-0.2
L42A	Oliver, Polo	7.96	50	Pn	Pn	09 52 21.2	-0.3
L42A				IAmb_Lg		09 54 47.3	
	comp=Z,34nm,1.1s						
Y22D	IRIS PASSCAL I	7.98	250	IAmb_Lg		09 54 54.1	
	comp=Z,40nm,0.9s						
WVT	Waverly	8.15	94	IAmb_Lg		09 54 58.9	
	comp=Z,26nm,0.8s						
JFWS	Jewell Farm	8.19	43		Pn	09 52 24.0	-0.6
JFWS				IAmb_Lg		09 54 47.9	
	comp=Z,20nm,0.8s						
PLAL	Pickwick Lake	8.24	103	IAmb_Lg		09 54 43.0	
	comp=Z,19nm,0.7s						
RSSD	Black Hills	8.35	328	IAmb_Lg		09 54 59.5	
	comp=Z,19nm,0.7s						
RWWY	Rawlins	8.50	305	IAmb_Lg		09 55 08.3	
	comp=Z,20nm,1.2s						
K22A	Casper	8.59	312	IAmb_Lg		09 55 19.5	
	comp=Z,22nm,1.0s						
M44A	Midewin, Midew	8.71	58	Pn	Pn	09 52 31.3	-0.4
M44A				IAmb_Lg		09 55 01.4	
	comp=Z,35nm,1.1s						
PV13	Radium Mtn., P	8.72	280	IAmb_Lg		09 55 15.1	
	comp=Z,25nm,1.2s						
PV11	David Mesa, Pa	8.77	281	IAmb_Lg		09 55 20.0	
	comp=Z,21nm,1.1s						
PV23	Carpenter Ridg	8.89	282	IAmb_Lg		09 55 15.9	
	comp=Z,17nm,1.0s						
SPMN	Marine on St.	8.90	24	Pn	Pn	09 52 34.1	-0.2
SPMN				IAmb_Lg		09 55 17.5	
	comp=Z,18nm,1.0s						
833A	Chaparral WMA,	8.93	189	IAmb_Lg		09 55 26.0	
	comp=Z,20nm,1.0s						
V48A	Smith Brothers	9.03	96	IAmb_Lg		09 55 14.3	
	comp=Z,32nm,1.0s						
TXAR	Lajitas Array	9.20	213	Pn	Pn	09 52 37.6	-1.0
	comp=Z,0.3nm,0.3s,baz=32,slow=17,SNR=3.5						
TXAR				Pg		09 53 13.4	
	comp=Z,0.6nm,0.3s,baz=30,slow=14,SNR=6.2						
TXAR				Lg	Lg	09 55 13.8	
	comp=Z,0.8nm,0.3s,baz=23,slow=26,SNR=6.9						
X48A	Hartselle	9.22	104	IAmb_Lg		09 55 22.9	
	comp=Z,16nm,0.7s						
WCI	Wyandotte Cave	9.25	80	IAmb_Lg		09 55 18.7	
	comp=Z,35nm,0.7s						
CLTN	Cedars of Leba	9.36	93	IAmb_Lg		09 55 21.1	
	comp=Z,26nm,0.9s						
U49A	Red Boiling Sp	9.73	90	Pn	Pn	09 52 46.3	+0.6
SWET	Sewanee	9.86	98	IAmb_Lg		09 55 36.3	
	comp=Z,16nm,0.8s						
T49A	Edmonton	9.87	87	IAmb_Lg		09 55 42.7	
	comp=Z,28nm,1.0s						
Y49A	Blount Mountai	9.93	106	IAmb_Lg		09 55 50.1	
	comp=Z,16nm,0.8s						
D32A	Dogwood Acres,	9.96	3	IAmb_Lg		09 55 53.2	
	comp=Z,33nm,0.9s						
PD31	Pinedale Array	10.54	306	Pn	Pn	09 52 56.9	-0.2
PDAR	Pinedale Array	10.54	306	Pn	Pn	09 52 56.0	-1.1
	comp=Z,0.3nm,0.3s,baz=120,slow=15,SNR=8.0						
PDAR				Pg		09 53 38.3	
	comp=Z,0.4nm,0.3s,baz=124,slow=14,SNR=8.5						
PDAR				Lg	Lg	09 55 49.3	
	comp=Z,0.2nm,0.3s,baz=118,slow=33,SNR=3.2						
ULM	Lac du Bonnet	13.14	6	Pn	Pn	09 53 26.0	-6.4
	comp=Z,0.1nm,0.3s,baz=187,slow=8.1,SNR=2.1						
ULM				Sn	Sn	09 55 44.0	-15
	comp=Z,0.5nm,0.3s,baz=112,slow=19,SNR=3.9						
ULM				Lg	Lg	09 57 16.4	
	comp=Z,0.4nm,0.3s,baz=111,slow=22,SNR=4.0						

*NSSP **12** 10:19:05.0, 41°.78N×45°.78E, h10^{km}, Ms3.1*

*NORS **12** 10:19:05.9±0.0, 41°.75N×45°.84E, h14^{km}, MPVA4.2*

*MOS **12** 10:19:06.9±0.6, 41°.81N×45°.82E, h12^{km}, mb3.6/1, Error ellipse: s-maj=5.3km s-min=4.5km az=119.2*

*ISK **12** 10:19:06.9, 41°.86N×45°.83E, h10^{km}, ML3.3/4*

*DDA **12** 10:19:06.8, 41°.53N×45°.84E, h8^{km}±1^{km}, ML3.0*

*TIF **12** 10:19:06.6, 41°.84N×45°.84E, h32^{km}±1^{km}*

*DRS **12** 10:19:07.9±0.0, 41°.82N×45°.84E, h16^{km}*

ISC 12 10:19:06.1±1.1**, 41°.81N**±0°.02×**45°.82E**±0°.01**, h4**^{km}±9^{km}**, n90,** σ**1**^{s}**.00**/161**, 5C-2D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDFL	Dedoflistskaro	0.43	148	P	Pn	10 19 19.5	+0.2
DDFL				S	Sb	10 19 31.3	+8.0
DDFL	Dedoflistskaro	0.43	148	⇓PG	Pn	10 19 19.4	+0.2
SEAG	Tbilisi Sea	0.76	267	P	Pb	10 19 21.7	-0.2
SEAG				S	Sb	10 19 33.5	+0.8
SEAG	Tbilisi Sea	0.76	267	PG	Pb	10 19 21.7	-0.2
SEAG				S	Sb	10 19 33.4	+0.8
BTNK	Botanikuri	0.77	261	P	Pb	10 19 22.5	+0.3
BTNK				S	Sn	10 19 34.4	-1.5
BTNK	Botanikuri	0.77	261	*i* P	Pb	10 19 22.4	+0.3
BTNK				*i* S	Sb	10 19 34.0	+1.1
BTNK				IAML		10 19 35.0	
	comp=N,988nm,0.6s						
BTNK				IAML		10 19 36.0	
	comp=E,510nm,0.1s						
BTNK	Botanikuri	0.77	261	PG	Pb	10 19 22.4	+0.3
BTNK				S	Sn	10 19 34.4	-1.5
TBLG	Delisi	0.81	264	P	Pb	10 19 23.2	+0.4
TBLG				S	Sn	10 19 35.6	-1.3
TBLG	Delisi	0.81	264	PG	Pb	10 19 23.4	+0.6
TBLG				SG	Sb	10 19 35.3	+1.2
TBLG	Delisi	0.81	264	*i* P	Pb	10 19 23.2	+0.4
TBLG				*i* S	Sn	10 19 35.7	-1.2
TBLG				IAML		10 19 36.0	
	comp=E,856nm,0.5s						
TBLG				IAML		10 19 36.0	
	comp=N,414nm,0.6s						
TBLG	Delisi	0.81	264	PG	Pb	10 19 23.2	+0.4
TBLG				S	Sn	10 19 35.5	-1.3
BTLR	Botlikh	0.90	19	*e*Pg	Pg	10 19 23.5	0.0
	comp=N,61nm,0.5s						
BTLR				*e*Sg	Sg	10 19 35.4	+0.3
	comp=N,230nm,0.5s						
BTLR	Botlikh	0.90	19	*e*PG	Pg	10 19 23.4	0.0
BTLR				*e*S	Sg	10 19 35.3	+0.3
BTLR				pmax	pmax		
	comp=Z,61nm,0.5s						
XNZR	Khunzakh	0.98	42	*e*Pg	Pn	10 19 27.4	+0.5
XNZR				*e*Sg	Sn	10 19 42.7	+1.3
XNZR	Khunzakh	0.98	42	*e*PG	Pn	10 19 27.3	+0.5
XNZR				*e*S	Sn	10 19 42.6	+1.3
KMKR	Kumukh	1.01	71	*i* Pg	Pg	10 19 25.0	-0.4
	comp=Z,83nm,0.3s						
KMKR				*e*Sg	Sg	10 19 38.0	-0.5
	comp=Z,1µm,0.3s						

KMKR	Kumukh	1.01	71	⇑iPG	Pg	10 19 25.0	-0.4
KMKR				eS	Sg	10 19 38.0	-0.5
KMKR				pmax	pmax		
	comp=Z,83nm,0.3s						
GNBR	Gunib	1.03	56	i Pg	Pg	10 19 25.6	-0.2
	comp=Z,88nm,0.6s						
GNBR				eSg	Sb	10 19 40.0	-0.5
	comp=Z,411nm,0.5s						
GNBR	Gunib	1.03	56	⇑ePG	Pg	10 19 25.6	-0.2
GNBR				e		10 19 40.0	
GNBR				pmax	pmax		
	comp=Z,92nm,0.6s						
GNBR				smax	smax		
	comp=N,272nm,0.4s						
KZRT	Kazreti	1.15	249	P	Pg	10 19 27.7	-0.4
KZRT				S	Sb	10 19 44.0	+0.2
KZRT	Kazreti	1.15	249	i P	Pg	10 19 27.8	-0.2
KZRT				i S	Sg	10 19 43.5	+0.6
KZRT	Kazreti	1.15	249	PG	Pg	10 19 27.6	-0.4
KZRT				S	Sb	10 19 43.9	+0.2
UNCR	Uncukul	1.16	39	ePg	Pg	10 19 28.5	+0.2
	comp=N,500nm,0.2s						
UNCR				eSg	Sg	10 19 43.0	-0.3
	comp=N,833nm,0.3s						
UNCR	Uncukul	1.16	39	ePG	Pg	10 19 28.5	+0.2
UNCR				eS	Sg	10 19 43.0	-0.3
UNCR				pmax	pmax		
	comp=Z,500nm,0.2s						
GUDG	Gudauri	1.19	304	P	Pg	10 19 27.4	-1.5
GUDG				S	Sg	10 19 43.6	-0.8
GUDG	Gudauri	1.19	304	PG	Pg	10 19 27.4	-1.5
GUDG				S	Sg	10 19 43.5	-0.8
SEKA	Sheki	1.20	120	PG	Pg	10 19 28.8	-0.3
GANJ	Ganja	1.23	162	PG	Pb	10 19 29.2	-0.7
KRNR	Karanay	1.30	38	i Pg	Pn	10 19 31.0	-0.1
	comp=Z,62nm,0.2s						
KRNR				eSg	Sg	10 19 48.0	+0.2
	comp=Z,60nm,0.3s						
KRNR	Karanay	1.30	38	i PG	Pn	10 19 31.0	-0.1
KRNR				eS	Sg	10 19 48.0	+0.2
KRNR				pmax	pmax		
	comp=Z,62nm,0.2s						
TRLG	Trialeti	1.31	258	P	Pn	10 19 30.8	-0.6
TRLG				S	Sg	10 19 48.8	+0.5
TRLG	Trialeti	1.31	258	PG	Pn	10 19 30.8	-0.6
TRLG				S	Sg	10 19 48.8	+0.5
STE	Stepanavan	1.36	234	eP	Pn	10 19 31.7	-0.3
STE				eS	Sn	10 19 50.8	+0.2
GROC	Groznyy	1.39	359	ePG	Pg	10 19 33.1	+0.4
GROC				e		10 19 52.5	
GROC				pmax	pmax		
	comp=Z,57nm,0.5s						
GROC				smax	smax		
	comp=N,64nm,0.3s						
GROC				smax	smax		
	comp=E,208nm,0.5s						
GROC				smax	smax		
	comp=E,208nm,0.5s						
DLMR	Dylym	1.39	25	ePg	Pg	10 19 33.0	+0.2
	comp=E,69nm,0.1s						
DLMR				i Sg	Sg	10 19 52.5	+1.7
	comp=E,260nm,0.3s						
DLMR	Dylym	1.39	25	ePG	Pg	10 19 33.0	+0.2
DLMR				i S	Sg	10 19 52.5	+1.7
DLMR				pmax	pmax		
	comp=Z,69nm,0.1s						
URKR	Urkarakh	1.40	75	ePg	Pn	10 19 32.5	-0.1
URKR				eSg	Sn	10 19 51.1	-0.5
URKR	Urkarakh	1.40	75	ePG	Pn	10 19 32.6	0.0
URKR				eS	Sb	10 19 50.8	-0.4
DBC	Dubki	1.42	32	i Pg	Pn	10 19 32.9	+0.1
	comp=Z,35nm,0.2s						
DBC				eSg	Sg	10 19 52.3	+0.6
	comp=Z,172nm,0.6s						
DBC	Dubki	1.42	32	⇓ePG	Pn	10 19 32.6	-0.2
DBC				e		10 19 52.6	
DBC				pmax	pmax		
	comp=Z,66nm,0.6s						
DBC				smax	smax		
	comp=N,126nm,0.6s						
KMGR	Komgaron	1.43	331	ePg	Pg	10 19 34.0	+0.5
KMGR				eSg	Sg	10 19 55.0	+3.0
KMGR	Komgaron	1.43	331	ePG	Pg	10 19 34.0	+0.5
KMGR				eS	Sg	10 19 55.0	+3.0
AKT	Akhty	1.47	102	ePg	Pn	10 19 33.3	-0.3
	comp=N,54nm,0.3s						
AKT				eSg	Sn	10 19 52.1	-1.3
	comp=N,405nm,0.6s						
AKT	Akhty	1.47	102	⇑ePG	Pn	10 19 32.5	-1.1
AKT				e		10 19 51.0	
AKT				pmax	pmax		
	comp=Z,73nm,0.2s						
AKT				smax	smax		
	comp=N,327nm,0.6s						
VLKR	Vladikavkaz	1.49	326	ePG	Pg	10 19 34.9	+0.2
VLKR				eS	Sg	10 19 55.5	+1.5
LACR	Lac	1.51	312	ePg	Pn	10 19 33.8	-0.3
LACR				eSg	Sn	10 19 54.2	-0.2
LACR	Lac	1.51	312	ePG	Pn	10 19 33.8	-0.3
LACR				eS	Sn	10 19 54.2	-0.2
MAK	Makhachkala	1.70	47	ePN	Pn	10 19 36.6	+0.1
MAK				e		10 19 59.6	
MAK				pmax	pmax		
	comp=Z,133nm,0.3s						
MAK				smax	smax		
	comp=E,325nm,0.4s						
MAK				smax	smax		
	comp=E,265nm,0.6s						
KAPZ	Kaputan	1.71	210	eP	Pb	10 19 37.8	-0.4
KAPZ				eS	Sg	10 20 01.1	-0.1
ZEI	Tsey	1.72	305	ePg	Pn	10 19 37.2	+0.1
ZEI				eSg	Sn	10 19 59.8	+0.2
ZEI	Tsey	1.72	305	ePN	Pn	10 19 37.2	+0.1
ZEI				eS	Sn	10 19 59.8	+0.2
KSMR	Kasumkent	1.74	96	ePg	Pb	10 19 38.0	-0.7
KSMR				eSg	Sg	10 20 02.0	-0.1
	comp=E,213nm,0.3s						
KSMR	Kasumkent	1.74	96	ePN	Pb	10 19 38.0	-0.7
KSMR				eS	Sg	10 20 02.0	-0.1
BGD	Bogdanovka	1.75	252	P	Pn	10 19 37.6	+0.1
BGD				S	Sn	10 20 00.8	+0.4
BGD	Bogdanovka	1.75	252	PN	Pn	10 19 37.6	+0.1
BGD				S	Sn	10 20 00.8	+0.4
ARNR	Ardon	1.77	321	ePN	Pn	10 19 37.5	-0.1
ARNR				eS	Sg	10 20 02.7	-0.4
AKH	Akhalkalaki	1.79	258	P	Pn	10 19 38.4	+0.4
AKH				S	Sb	10 20 02.0	-0.4
AKH	Akhalkalaki	1.79	258	PN	Pb	10 19 39.1	-0.4
AKH				SN	Sb	10 20 02.3	-0.1
AKH	Akhalkalaki	1.79	258	ePN	Pb	10 19 39.3	-0.2
KORR	Kora	1.81	315	ePg	Pb	10 19 39.3	-0.6
KORR				eSg	Sg	10 20 04.6	+0.2
KORR	Kora	1.81	315	ePN	Pb	10 19 39.6	-0.3
KORR				eS	Sg	10 20 04.5	+0.2
BTKR	Batakoyurt	1.82	329	ePN	Pn	10 19 39.1	+0.9
GNI	Garni	1.85	206	⇑iP	Pb	10 19 40.6	0.0
GNI				⇑S	Sg	10 20 06.0	+0.4
GNI	Garni	1.85	206	PN	Pb	10 19 40.3	-0.3
GNI	Garni	1.85	206	i PN	Pg	10 19 41.8	+0.2
DRN	Derbent	1.89	83	ePg	Pb	10 19 40.6	-0.5
	comp=E,45nm,0.6s						
DRN				ePg	Pb	10 19 40.6	-0.5
	comp=E,45nm,0.6s						
DRN				eSg	Sb	10 20 05.0	-0.1
	comp=E,146nm,0.5s						
DRN				eSg	Sb	10 20 05.0	-0.1
	comp=E,146nm,0.5s						
DRN	Derbent	1.89	83	ePN	Pb	10 19 40.6	-0.5
DRN				pmax	pmax		
	comp=Z,45nm,0.6s						
ONI	Oni	1.92	295	P	Pn	10 19 39.9	+0.2
ONI				S	Sn	10 20 04.3	0.0
ONI	Oni	1.92	295	PN	Pn	10 19 40.2	+0.6
ONI				SN	Sb	10 20 05.1	-1.0
ONI	Oni	1.92	295	ePN	Pn	10 19 40.2	+0.6
DIGR	Digorskoe uzhe	1.98	304	ePg	Pn	10 19 41.5	+0.9
DIGR				eSg	Sb	10 20 07.5	-0.5
DIGR	Digorskoe uzhe	1.98	304	ePN	Pn	10 19 41.7	+1.1
DIGR				pmax	pmax		
	comp=Z,11nm,0.2s						
ARUZ	Aruch	2.01	221	eP	Pb	10 19 42.6	-0.7
ARUZ				eS	Sb	10 20 09.6	+0.8
EAK	Akyaka	2.01	237	i P	Pb	10 19 43.3	0.0
EAK				i S	Sb	10 20 08.8	+0.1
NRKZ	NAREK	2.01	206	eP	Pb	10 19 43.2	-0.1
NRKZ				eS	Sg	10 20 10.5	-0.3
STDR	Stavd-Durt	2.02	321	ePN	Pb	10 19 42.4	-1.0
STDR				eS	Sg	10 20 11.9	+0.9
LSNR	Lesken	2.07	316	ePN	Pb	10 19 43.7	-0.6
LSNR				eS	Sg	10 20 12.3	-0.4
TKB	Tkibuli	2.17	285	P	Pn	10 19 43.1	+0.1
TKB				S	Sn	10 20 11.2	+0.8
TKB	Tkibuli	2.17	285	PN	Pn	10 19 43.1	+0.1
TKB				S	Sn	10 20 11.2	+0.8
TASB	TASBURUN-IGDIR	2.19	214	PN	Pb	10 19 45.2	-1.0
VNNZ	Vanand	2.28	222	eP	Pb	10 19 47.8	-0.1
VNNZ				eS	Sg	10 20 18.6	-0.8
NCK	Nalchik	2.35	316	i PN	Pn	10 19 46.2	+0.7
NEY	Neytrino	2.70	303	i PN	Pn	10 19 52.0	+1.5
KBZ	Khabaz	2.88	313	ePN	Pb	10 19 55.7	-2.3
KBZ				eS	Sb	10 20 31.8	-1.7
SHA1	Shidzhatmaz	3.02	311	ePn	Pn	10 19 55.9	+1.0
SHA1				eSn	Sn	10 20 32.1	+0.6
SHA1	Shidzhatmaz	3.02	311	ePN	Pn	10 19 56.0	+1.1
SHA1				eS	Sn	10 20 32.2	+0.6
DAGI	Agillar	3.02	257	i P	Pb	10 20 01.5	+0.9
DAGI				i S	Sb	10 20 39.3	+1.4
ARXR	Arkhyz	3.77	299	i PN	Pn	10 20 05.7	+0.5
BRVK	Borovoye	19.90	47	i P	P	10 23 37.7	-0.8
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AAK	Ala-Archa	21.21	78	i P	P	10 23 53.0	0.0
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						

SJA ***12*** *10:35:58.0±0.6, 36°.04S×73°.10W, h6^{km}±11^{km}, ML3.0, MW3.0*

GUC ***12*** *10:36:03.0±0.5, 36°.11S×72°.86W, h26^{km}±10^{km}, ML3.6*

ISC 12 10:36:02.8±1.3**, 36°.14S**±0°.04×**72°.97W**±0°.08**, h28^{km}, n15, σ1^{s}54**/21**, 4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCSP	San Pedro de C	0.71	189	i P	Pb	10 36 16.4	-0.2
CCSP				i S	Sb	10 36 26.4	+0.4
CCSP				IAML		10 36 29.2	
	comp=E,5µm,0.3s						
CCHI	Chillan	0.86	123	⇓iP	Pn	10 36 17.4	-1.7
CCHI				i S	Sb	10 36 27.4	-2.8
CCHI				IAML		10 36 32.7	
	comp=N,4µm,0.4s						
CCHI	Chillan	0.86	123	i P	Pn	10 36 17.4	-1.7
CCHI				⇓iS	Sb	10 36 31.9	+1.6
GO05	Huala	1.42	37	i P	Pn	10 36 25.5	-1.3
GO05				i S	Sn	10 36 42.1	-2.4
CANA	Caviahue	2.32	139	i P	Pn	10 36 41.5	+2.2
LC01	Cunco	2.88	163	eP	Pn	10 36 47.9	+0.9
EDS3	Malargue	2.92	84	i P	Pn	10 36 49.0	+1.3
PUMA	Malargue	2.94	78	i P	Pn	10 36 49.4	+1.7
LMEL	Las Melosas	3.23	46	eP	Pn	10 36 51.5	-0.3
LMEL				eS	Sn	10 37 29.1	-0.3
LMEL				IAML		10 37 44.1	
	comp=N,158nm,0.3s						
LAMA	Las Malvinas	3.30	70	i P	Pn	10 36 54.3	+1.7
PEL	Peldehue	3.54	33	i P	Pn	10 36 56.1	+0.1
ARCO	CERRO ARCO	4.69	47	⇓iP	Pn	10 37 13.0	+1.1
ARCO				IAML		10 37 38.5	
	comp=Z,16nm,0.4s						
ARCO				eS	Sn	10 37 53.5	-12
ASAL	Salagasta	4.93	45	i P	Pn	10 37 16.1	+1.0
ASAL				i S	Sb	10 38 29.1	+1.9
ASAL				IAML		10 39 00.9	
	comp=Z,7.1nm,0.6s						
AROD	Rodeo	6.64	27	i P	Pn	10 37 39.5	+0.6
AGUA	GUANDACOL	7.63	31	⇓iP	Pn	10 37 52.4	+0.1

IDC ***12*** *10:36:53.5±0.6, 15°.25S×173°.10W, h0^{km}, mb4.4/15, mb1 4.6/16, mb1mx4.4/44, mbtmp4.5/16, ML3.8/1, MS3.9/22, Ms1 3.9/22, ms1mx3.8/33, Error ellipse: s-maj=26.0km s-min=13.7km az=133.0*

NEIC ***12*** *10:36:55.2±1.5, 15°.20S±0°.06×173°.1W±0°.1, h10^{km}±1^{km}, mb4.7/89, Error ellipse: s-maj=18.2km s-min=9.1km az=289.0*

GCMT ***12*** *10:37:05.2±0.4, 14°.74S±0°.02×173°.13W±0°.02, h12^{km}, MW5.0/75, Moment Tensor Solution. s12,c13; s75,c89; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.08±.10; $M_{\theta\theta}$1.97±.08; $M_{\phi\phi}$-0.89±.09; $M_{r\theta}$-2.61±.25; $M_{\theta\phi}$0.15±.07; $M_{\phi r}$2.65±.25; Best double couple: $M_0$4.07500×10^{16} NP1:ϕ_s237.00000°, δ22.00000°, λ-161.00000°. NP2: ϕ_s129.00000°, δ83.00000°, λ-69.00000°. Principal axes: T 3.8360, Plg35.0000°, Azm201.0000°; N 0.4770, Plg21.0000°, Azm306.0000°; P -4.3140, Plg48.0000°, Azm61.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 10:36:58.3±0.4**, 15°.15S**±0°.05×**172°.86W**±0°.07**, h29^{km}, n168, σ2^{s}01**/152**, mb4.6**/47**, MS3.9**/25**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	1.62	41	Pn	Pn	10 37 24.8	-0.1
	437nm,0.3s,baz=207,slow=2.9,SNR=495						
AFI				Sn	Sn	10 37 42.4	-2.5
	1µm,0.3s,baz=119,slow=20,SNR=24						
AFI	Afiamalu	1.62	41		Pn	10 37 24.9	-0.1
AFI					Sn	10 37 45.2	+0.3
NIUE	Niue	4.81	145		Pn	10 38 07.2	-1.6
NIUE					Sn	10 39 01.2	-2.3
KNTN	Kanton	12.35	5	Pn	Pn	10 39 50.2	-2.0
RAR	Rarotonga	13.82	118	Pn	Pn	10 40 11.0	-1.3
	5.0nm,0.3s,baz=274,slow=4.2,SNR=5.2						
RAO	Raoul Island	14.79	198	LR	LR	10 44 30.8	
	comp=Z,230nm,19.3s,baz=134,slow=31						
DZM	Mont Dzumac	20.78	248	eP	Pn	10 41 40.6	+0.8
	109nm,1.4s						
DZM				eLR	LR	10 46 37.0	
	comp=Z,963nm,27.3s						
DZM	Mont Dzumac	20.78	248	P	P	10 41 34.3	-3.0
	9.1nm,1.1s,baz=194,slow=20,SNR=2.2						
DZM				LR	LR	10 48 25.8	
	comp=Z,292nm,21.2s,baz=33,slow=34						
DZM	Mont Dzumac	20.78	248	P	P	10 41 35.2	-2.0
DZM				IAmb	IAmb	10 41 44.0	
	comp=Z,26nm,1.0s						
PPT	Papeete	22.47	99	LR	LR	10 49 06.8	
	comp=Z,88nm,18.1s,baz=119,slow=32						
PAE	Paea	22.47	100	eT	T	11 05 12.8	
	comp=Z,3.6nm,0.2s						
PPT2	Papeete2	22.47	99	eLR	LR	10 47 11.1	
	comp=Z,126nm,27.0s						
PPT2	Papeete2	22.47	99	eT	T	11 05 13.6	
	comp=Z,3.0nm,0.2s						
TIAR	Tiarei	22.68	99	eT	T	11 05 29.2	
	comp=Z,3.1nm,0.3s						
TVO	Taravao	22.79	100	eT	T	11 05 36.5	
	comp=Z,2.0nm,0.3s						
OUZ	Omahuta	23.40	209	P	P	10 42 03.9	-0.8
OUZ				IAmb	IAmb	10 42 06.1	
	comp=Z,30nm,0.9s						
MXZ	Matakaoa Point	23.66	198	P	P	10 42 09.8	+2.5
WMGZ	Waiomatatini S	23.87	197	P	P	10 42 09.5	+0.2
WMGZ				S	S	10 46 27.8	+4.3
HAZ	Te Kaha	24.00	198	P	P	10 42 11.2	+0.8
HAZ				S	S	10 46 27.8	+2.2
PKGZ	Pakihiroa	24.03	198	P	P	10 42 12.5	+1.7
PUZ	Puketiti	24.15	197	P	P	10 42 12.3	+0.4
PUZ				S	S	10 46 38.5	+10
RUGZ	Raukumara Rang	24.22	198	P	P	10 42 13.8	+1.1
VAH	Vaihoa	24.35	94	eT	T	11 07 31.0	
	comp=Z,5.7nm,0.2s						
MWZ	Matawai	24.61	198	P	P	10 42 17.3	+1.2
MWZ				S	S	10 46 42.5	+6.9
URZ	Urewera	24.67	199	P	P	10 42 13.8	-2.8
	comp=Z,22nm,0.7s,baz=16,slow=2.7,SNR=24						
URZ	Urewera	24.67	199	P	P	10 42 15.2	-1.4
URZ	Urewera	24.67	199	P	P	10 42 16.8	+0.2
URZ				S	S	10 46 47.1	+11
MUGZ	Murupara	24.98	200	P	P	10 42 20.7	+1.3
HIZ	Hauiti	25.67	203	P	P	10 42 27.2	+1.4
BKZ	Black Stump Fm	25.69	199	P	P	10 42 22.6	-3.4
BKZ				IAmb	IAmb	10 42 30.2	
	comp=Z,32nm,1.4s						
TAOE	Nuku Hiva Isla	32.57	83	eLR	LR	10 52 00.9	
	comp=Z,326nm,26.1s						
TAOE	Nuku Hiva Isla	32.57	83	eT	T	11 17 41.5	
	comp=Z,49nm,0.3s						
ARMA	Armidale	35.92	239	P	P	10 43 55.5	-0.9
H11S2	WAKE ISLAND Hy	39.02	328	T	T	11 25 04.6	
	baz=146,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	39.03	328	T	T	11 25 06.2	
	baz=146,slow=76,SNR=18						
H11S1	WAKE ISLAND Hy	39.04	328	T	T	11 25 06.2	
	baz=146,slow=76,SNR=15						
H11N3	WAKE ISLAND Hy	39.96	330	T	T	11 26 12.4	
	baz=147,slow=76,SNR=18						
H11N1	WAKE ISLAND Hy	39.96	329	T	T	11 26 13.1	
	baz=147,slow=76,SNR=10						
H11N2	WAKE ISLAND Hy	39.97	330	T	T	11 26 13.8	
	baz=147,slow=76,SNR=16						
TOO	Toolangi	43.03	231	P	P	10 44 52.3	-3.2
STKA	Stephens Creek	44.61	240	P	P	10 45 04.2	-4.1
	comp=Z,4.6nm,0.9s,baz=78,slow=8.7,SNR=7.3						
STKA				LR	LR	11 01 00.6	
	comp=Z,201nm,20.0s,baz=37,slow=33						
STKA	Stephens Creek	44.61	240	P	P	10 45 05.7	-2.6
BBOO	Buckleboo	49.39	240	P	P	10 45 43.6	-2.0
WB2	Warramunga Arr	50.40	257	P	P	10 45 50.6	-2.8
WB2				IAmb	IAmb	10 46 01.4	
	comp=Z,10nm,1.2s						
WRA	Warramunga Arr	50.41	257	P	P	10 45 49.9	-3.7
	comp=Z,2.4nm,0.9s,baz=93,slow=7.8,SNR=2.4						
WRA				LR	LR	11 03 48.7	
	comp=Z,84nm,21.0s,baz=220,slow=32						
AS31	Alice Springs	50.68	252	P	P	10 45 52.5	-3.1
ASAR	Alice Springs	50.69	252	P	P	10 45 52.1	-3.5
	comp=Z,6.7nm,0.9s,baz=88,slow=8.2,SNR=57						
ASAR				LR	LR	11 05 51.6	
	comp=Z,210nm,21.1s,baz=90,slow=34						
FORT	Forrest	55.99	243	P	P	10 46 31.1	-3.4
FITZ	Fitzroy Crossi	58.77	258	LR	LR	11 10 14.7	
	comp=Z,90nm,19.7s,baz=106,slow=34						
JCJ	Chichijima	60.56	314	LR	LR	11 08 38.9	
	comp=Z,46nm,18.8s,baz=116,slow=32						
VNDA	Vanda	63.68	186	P	P	10 47 27.1	+0.6
	comp=Z,5.1nm,0.8s,baz=6.3,slow=8.0,SNR=5.2						
VNDA				LR	LR	11 10 42.3	
	comp=Z,58nm,20.8s,baz=346,slow=32						
VNDA	Vanda	63.68	186	P	P	10 47 27.6	+1.1
KAPI	Kappang	66.89	271	LR	LR	11 15 53.8	
	comp=Z,64nm,18.5s,baz=359,slow=35						
MJAR	Matsushiro Arr	69.09	319	LR	LR	11 11 53.3	
	comp=Z,88nm,21.9s,baz=120,slow=30						
ASAJ	Asahikawa	71.61	328	LR	LR	11 17 56.7	
	comp=Z,18nm,19.1s,baz=174,slow=34						
PETK	Petropavlovsk-	72.55	342	P	P	10 48 23.1	+0.7
	comp=Z,4.1nm,0.8s,baz=169,slow=8.5,SNR=5.8						
PETK				LR	LR	11 16 07.2	
	comp=Z,53nm,21.6s,baz=62,slow=32						
PETK	Petropavlovsk-	72.55	342	P	P	10 48 23.5	+1.1
NVAR	Mina Array Bea	73.79	42	P	P	10 48 31.8	+1.4
	comp=Z,0.6nm,0.6s,baz=231,slow=9.0,SNR=6.6						
NVAR				LR	LR	11 12 48.7	
	comp=Z,192nm,22.0s,baz=218,slow=29						
NVAR	Mina Array Bea	73.79	42	P	P	10 48 31.0	+0.6
113A	Mohawk Valley,	73.86	49	P	P	10 48 32.5	+1.9
KDAK	Kodiak Island	74.58	11	P	P	10 48 34.6	+0.4
MOD	Modoc Plateau	74.60	38	P	P	10 48 35.8	+0.9
QSPA	South Pole Qui	74.89	180	P	P	10 48 37.1	+0.9
Y14A	Wickenburg	75.00	48	P	P	10 48 38.9	+1.6
H04A	Detroit Lake	75.25	35	P	P	10 48 38.9	+0.5
TUC	Tucson	75.83	51	P	P	10 48 42.9	+0.8
WVOR	Wild Horse Val	75.91	38	P	P	10 48 42.5	+0.1
X16A	Lo Mia Camp, P	76.36	48	P	P	10 48 45.3	0.0
X16A				IAmb	IAmb	10 48 48.1	
	comp=Z,5.3nm,1.0s						
I07A	Izee	76.39	37	P	P	10 48 45.8	+0.7
319A	Douglas	76.53	52	P	P	10 48 47.6	+1.4
319A				IAmb	IAmb	10 48 48.9	
	comp=Z,4.8nm,0.9s						
J08A	Circle Bar Ran	76.56	38	P	P	10 48 46.4	+0.4
J08A				IAmb	IAmb	10 48 48.0	
	comp=Z,7.3nm,1.2s						
U15A	North Rim	76.75	46	P	P	10 48 48.6	+1.0
ELK	Elko	77.05	41	P	P	10 48 48.8	-0.3
G08A	Pilot Rock	77.43	36	P	P	10 48 51.0	+0.1
G08A				IAmb	IAmb	10 48 53.3	
	comp=Z,9.7nm,1.1s						
USRK	Ussuriysk Ar.	77.50	323	LR	LR	11 16 16.4	
	comp=Z,74nm,21.7s,baz=133,slow=30						
E07A	Sunnyside	77.70	34	P	P	10 48 53.2	+1.0
E07A				IAmb	IAmb	10 48 54.7	
	comp=Z,11nm,1.1s						
HAWA	Hanford	77.77	35	P	P	10 48 53.6	+1.0
MSU	Marysvale	77.88	44	P	P	10 48 55.7	+2.0
BMO	Blue Mountains	78.11	37	P	P	10 48 55.5	+0.8
BMO				IAmb	IAmb	10 48 56.9	
	comp=Z,5.7nm,1.1s						
MFID	Camas Ranch	78.17	39	P	P	10 48 56.3	+1.2
MFID				IAmb	IAmb	10 48 57.3	
	comp=Z,6.6nm,1.1s						
SUA	Susitna One	78.36	11	P	P	10 48 56.5	+0.8
F10A	Beach Ranch, E	78.81	36	P	P	10 48 58.7	+0.2
F10A				IAmb	IAmb	10 48 59.8	
	comp=Z,6.6nm,1.0s						
TMUT	Trail Mountain	78.93	44	P	P	10 49 00.1	+0.5
SRU	San Rafael Swe	79.30	45	P	P	10 49 02.1	+0.6
C09A	Chrisman Ranch	79.31	34	P	P	10 49 01.2	0.0
C09A				IAmb	IAmb	10 49 02.6	
	comp=Z,12nm,1.2s						
P17A	Butcher Ranch,	79.33	44	P	P	10 49 03.2	+1.6
MNTX	Cornudas Mount	79.66	53	P	P	10 49 03.8	+0.4
ANM	Nome	79.67	3	P	P	10 49 03.2	+0.5
TCUT	Toone Canyon	79.71	42	P	P	10 49 05.0	+1.2
TX31	Lajitas Ar. Si	80.04	56	P	P	10 49 06.7	+1.0
TX31				IAmb	IAmb	10 49 08.6	
	comp=Z,9.6nm,1.4s						
TX32	Lajitas Array	80.04	56	P	P	10 49 07.1	+1.5
TX32				IAmb	IAmb	10 49 08.5	
	comp=Z,9.9nm,1.4s						
TXAR	Lajitas Array	80.04	56	P	P	10 49 07.5	+1.9
	comp=Z,1.9nm,0.9s,baz=247,slow=6.5,SNR=6.5						
TXAR				LR	LR	11 18 43.5	
	comp=Z,46nm,18.4s,baz=0.0,slow=31						
TXAR	Lajitas Array	80.04	56	P	P	10 49 07.6	+2.0
MA2	Magadan	80.09	342	LR	LR	11 19 20.9	
	comp=Z,52nm,19.7s,baz=138,slow=32						
ANMO	Albuquerque	80.24	50	P	P	10 49 07.7	+1.0
ANMO				IAmb	IAmb	10 49 09.5	
	comp=Z,9.6nm,1.4s						
TRF	Thorofare Moun	80.29	10	P	P	10 49 06.6	+0.3
NJ2	Nanjing	80.43	307	eP	P	10 49 08.2	+0.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
RDMU	Red Mountain	80.65	44	P	P	10 49 09.4	+0.6
MCMT	McKenzie Canyo	80.73	39	P	P	10 49 10.2	+1.0
AHID	Auburn Hatcher	80.75	41	P	P	10 49 09.7	+0.5
MCK	McKinley	80.78	11	P	P	10 49 08.3	-0.4
DLMT	Dillon	81.17	38	P	P	10 49 12.4	+1.0
DLMT				IAmb	IAmb	10 49 13.9	
	comp=Z,11nm,1.4s						
MSO	Missoula	81.17	37	P	P	10 49 11.6	+0.3
MSO				IAmb	IAmb	10 49 12.8	
	comp=Z,14nm,1.3s						
REDW	Red Top Meadow	81.20	41	P	P	10 49 13.0	+1.3
REDW				IAmb	IAmb	10 49 14.2	
	comp=Z,12nm,1.4s						
S22A	4UR Ranch, Cre	81.22	47	P	P	10 49 13.5	+1.5
S22A				IAmb	IAmb	10 49 15.0	
	comp=Z,12nm,1.4s						
FXWY	Fox Creek	81.23	40	P	P	10 49 12.6	+0.7
FXWY				IAmb	IAmb	10 49 13.9	
	comp=Z,7.6nm,1.4s						
SNOW	Snow King Moun	81.32	41	P	P	10 49 13.6	+1.2
SNOW				IAmb	IAmb	10 49 14.9	
	comp=Z,8.3nm,1.1s						
QLMT	Earthquake Lak	81.59	39	P	P	10 49 16.0	+2.3
WRH	Wood River Hil	81.61	11	P	P	10 49 13.4	+0.4
BCAR	Beaver Creek A	81.64	14	P	P	10 49 13.1	-0.2
FLWY	Flagg Ranch	81.66	40	P	P	10 49 16.1	+1.9
FLWY				IAmb	IAmb	10 49 17.1	
	comp=Z,9.5nm,1.1s						
YHB	Horse Butte	81.70	39	P	P	10 49 16.1	+1.8
PD31	Pinedale Array	81.73	42	P	P	10 49 14.2	-0.4
PD31				IAmb	IAmb	10 49 16.6	
	comp=Z,7.1nm,1.4s						

PDAR	Pinedale Array	81.73	42	P	P	10 49 14.8	+0.3
	comp=Z,2.3nm,1.1s,baz=208,slow=2.5,SNR=11						
PDAR				LR	LR	11 18 02.1	
	comp=Z,96nm,21.7s,baz=300,slow=30						
YHL	Hebgen Lake	81.76	39	P	P	10 49 15.4	+0.7
HDA	Harding Lake	81.76	11	P	P	10 49 14.0	+0.1
SMCO	Snowmass	81.76	46	P	P	10 49 16.3	+1.3
SMCO				IAmb	IAmb	10 49 22.5	
	comp=Z,7.6nm,1.2s						
YMR	Madison River	81.80	39	P	P	10 49 16.3	+1.4
CCB	Clear Creek Bu	81.82	11	P	P	10 49 14.2	0.0
H17A	Grant Village	81.90	40	P	P	10 49 17.5	+2.1
H17A				IAmb	IAmb	10 49 19.2	
	comp=Z,5.9nm,1.3s						
YHH	Holmes Hill	81.93	39	P	P	10 49 17.2	+1.6
YNR	Norris Junctio	82.00	40	P	P	10 49 18.3	+2.4
COLA	College	82.02	11	P	P	10 49 15.9	+0.7
LKWY	Lake	82.09	40	P	P	10 49 17.0	+0.6
LKWY				IAmb	IAmb	10 49 20.2	
	comp=Z,9.6nm,1.1s						
IL31		82.10	11	P	P	10 49 15.5	-0.1
ILAR	Eielson Array	82.10	11	P	P	10 49 15.7	0.0
	comp=Z,2.8nm,0.8s,baz=227,slow=6.1,SNR=31						
ILAR	Eielson Array	82.10	11	P	P	10 49 15.5	-0.2
SDCO	Great Sand Dun	82.16	48	P	P	10 49 18.4	+1.4
SDCO				IAmb	IAmb	10 49 19.5	
	comp=Z,5.9nm,1.2s						
SEY	Seymchan	82.41	345	P	P	10 49 17.7	+0.4
	comp=Z,1.5nm,0.5s,baz=126,slow=5.9,SNR=6.3						
YNE	Yellowstone No	82.56	40	P	P	10 49 20.8	+2.0
MSTX	Muleshoe	82.59	52	P	P	10 49 20.1	+1.0
T25A	Trinidad	82.68	49	P	P	10 49 20.1	+0.5
T25A				IAmb	IAmb	10 49 21.8	
	comp=Z,8.2nm,1.0s						
RWWY	Rawlins	82.75	43	P	P	10 49 20.0	+0.1
ISCO	Idaho Springs	82.98	46	P	P	10 49 21.6	+0.4
DAWY	Dawson	83.05	14	P	P	10 49 21.4	+0.7
RLMT	Red Lodge	83.07	40	P	P	10 49 22.7	+1.2
N23A	Red Feather La	83.24	45	P	P	10 49 23.7	+1.2
RDOG	Red Dog Mine	83.29	4	P	P	10 49 23.1	+1.3
RDOG				IAmb	IAmb	10 49 24.2	
	comp=Z,7.6nm,1.2s						
K22A	Casper	83.65	43	P	P	10 49 25.3	+0.8
AMTX	Amarillo	83.78	52	P	P	10 49 25.6	+0.4
EGMT	Eagleton	84.22	37	P	P	10 49 27.7	+0.6
ABTX	Abilene, Hawle	84.49	54	P	P	10 49 29.9	+1.1
LAO	LASA Array	85.68	39	P	P	10 49 34.8	+0.4
RSSD	Black Hills	85.92	42	P	P	10 49 36.3	+0.4
RSSD				IAmb	IAmb	10 49 37.3	
	comp=Z,5.3nm,0.9s						
DGMT	Dagmar	87.71	38	P	P	10 49 44.1	-0.1
MAW	Mawson	88.19	198	P	P	10 49 45.6	-0.7
	comp=Z,12nm,0.9s,baz=198,slow=4.8,SNR=3.8						
MAW				LR	LR	11 25 49.1	
	comp=Z,108nm,21.3s,baz=65,slow=33						
MAW	Mawson	88.19	198	P	P	10 49 45.7	-0.5
MAW				IAmb	IAmb	10 49 46.6	
	comp=Z,2.6nm,0.8s						
HHC	Hu-ho-hao-te	89.24	313	eP	P	10 49 52.6	+0.8
HHC				pmax	pmax		
	comp=Z,54nm,1.2s						
HHC				pmax	pmax		
	comp=Z,200nm,7.0s						
PLCA	Paso Flores	89.29	132	LR	LR	11 20 26.3	
	comp=Z,56nm,20.1s,baz=236,slow=29						
YKA	Yellowknife Ar	89.66	23	P	P	10 49 53.7	+0.6
	comp=Z,2.5nm,0.8s,baz=233,slow=4.6,SNR=39						
YKA				LR	LR	11 23 37.8	
	comp=Z,107nm,20.5s,baz=0.0,slow=31						
FFC	Flin Flon	91.61	33	P	P	10 50 02.3	0.0
ULM	Lac du Bonnet	93.41	39	P	P	10 50 10.3	-0.5
	comp=Z,1.9nm,0.8s,baz=165,slow=2.2,SNR=3.1						
ULM				LR	LR	11 25 42.3	
	comp=Z,152nm,19.6s,baz=286,slow=31						
ULM	Lac du Bonnet	93.41	39	P	P	10 50 10.6	-0.2
ULM				IAmb	IAmb	10 50 11.5	
	comp=Z,2.4nm,0.9s						
LZH	Lanzhou	93.50	306	eP	P	10 50 10.0	-1.8
LZH				pP	sP	10 50 21.6	+0.1
LZH				sP	pwP	10 50 25.7	-2.1
LZH				ePP	PP	10 53 58.5	+1.8
LZH				pmax	pmax		
	comp=Z,17nm,1.4s						
LZH				pmax	pmax		
	comp=Z,68nm,5.2s						
LZH				LR	LR		
	comp=Z,89nm,17.2s						
LZH				LR	LR		
	comp=Z,95nm,17.0s						
LZH				LR	LR		
	comp=Z,140nm,19.3s						
VNA2	Neumayer--Watz	93.56	175	P	P	10 50 11.5	+0.3
	baz=188,slow=2.2						
GTA	Gaotai	97.43	309	eP	Pdif	10 50 29.9	+0.2
GTA				pP	sP	10 50 38.9	-0.4
GTA				sP	pwP	10 50 43.0	-2.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KSH	Kashi	115.74	307	PKP	PKPdf	10 55 37.7	-0.7
KSH				PP	PP	10 56 47.3	+5.5
KSH				PKS	PKSdf	10 59 12.9	-2.3
KSH				SS	SS	11 12 44.0	+3.1
KSH				LR	LR		
	comp=Z,140nm,10.4s						
KSH				LR	LR		
	comp=Z,260nm,13.8s						
BRG	Berggiesshubel	143.95	353	ePKP	PKiKP	10 56 54.2	+20
	comp=Z,5.9nm,1.1s						
DPC	Dobruska-Polom	144.11	350	ePKP	PKPdf	10 56 30.7	-0.6
VYHS	Vyhne	145.38	346	ePKP	PKPdf	10 56 33.9	+0.4
KHC	Kasperske Hory	145.70	352	ePKP	PKPab	10 56 34.9	+0.2
KHC				ex	x	10 56 48.0	
MODS	Modra-Piesok	145.83	348	ePKP	PKPbc	10 56 35.0	+0.2
GERES	GERESS Array B	145.97	352	PKPbc	PKPbc	10 56 35.5	+0.2
	comp=Z,3.1nm,0.9s,baz=36,slow=2.5,SNR=13						
KMBO	Kilima Mbogo	146.11	244	PKPbc	PKPdf	10 56 36.6	+0.5
	comp=Z,0.9nm,0.3s,baz=29,slow=11,SNR=5.0						
KMBO	Kilima Mbogo	146.11	244		PKPdf	10 56 35.9	-0.2
BRTR	Keskin Array B	146.29	322	PKPbc	PKPab	10 56 37.9	+0.4
	comp=Z,2.7nm,0.8s,baz=86,slow=2.0,SNR=9.5						
BRTR	Keskin Array B	146.29	322		PKPab	10 56 38.1	+0.7
BFO	Black Forest	146.90	359	PKPdf	PKPdf	10 56 35.5	-0.6

WEL 12 10:42:24.4±1.1**,32°S**±21°×**17°9E**±3°4**,h276**^{km}±50^{km}**,**
M3.9/9**,mB4.2**/5**,ML4.4**/8**,MLv4.2**/9**,Mw(mB)3.2**/5**,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	5.23	184	P	Pn	10 43 45.1	+1.5
MXZ				S	S	10 44 47.8	+0.5
HAZ	Te Kaha	5.47	189	P	Pn	10 43 45.7	-0.9
HAZ				S	S	10 44 53.9	+1.4
WMGZ	Waiomatatini S	5.48	183	P	Pn	10 43 47.4	+0.7
WMGZ				S	S	10 44 54.4	+1.7
PKGZ	Pakihiroa	5.57	186	P	Pn	10 43 47.4	-0.4
PKGZ				S	S	10 44 55.3	+0.4
RUGZ	Raukumara Rang	5.69	189	P	Pn	10 43 47.4	-2.0
RUGZ				S	S	10 44 56.9	-0.7
PUZ	Puketiti	5.74	184	P	Pn	10 43 48.9	-1.0
PUZ				S	S	10 44 56.7	-1.8
URZ	Urewera	6.07	193	P	Pn	10 43 53.0	-0.8
MWZ	Matawai	6.07	190	P	Pn	10 43 53.1	-0.9
MUGZ	Murupara	6.35	195	P	Pn	10 43 57.3	0.0
RTZ	Ruatahuna	6.44	193	P	Pn	10 44 00.4	+1.9
SNGZ	Shannon Statio	6.54	190	P	Pn	10 44 01.1	+1.4
NMHZ	Naumai	6.94	193	P	Pn	10 44 06.6	+1.9
ARHZ	Aropaoanui	7.07	192	P	Pn	10 44 08.2	+2.1
BKZ	Black Stump Fm	7.07	195	P	Pn	10 44 07.2	+1.0
TWVZ	Taurewa	7.26	201	P	Pn	10 44 12.4	+3.8
KWHZ	Kaweka Forest	7.33	195	P	Pn	10 44 11.0	+1.5
BHHZ	Black Hill Sta	7.48	197	P	Pn	10 44 13.1	+1.8
KRHZ	Kereru	7.55	194	P	Pn	10 44 13.9	+1.7
KAHZ	Kahuranaki	7.60	191	P	Pn	10 44 14.2	+1.4
PXZ	Pawanui	7.84	191	P	Pn	10 44 16.7	+1.1
PNHZ	Pukenui	7.85	195	P	Pn	10 44 17.0	+1.2
BFZ	Birch Farm	8.58	193	P	Pn	10 44 25.1	+0.1

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*IDC **12** 10:44:15.4±0.8, 27°.43N×140°.08E, h366^{km}±9^{km}, mb3.0/9, mb1 3.2/10, mb1mx2.9/44, mbtmp3.7/10, Error ellipse: s-maj=26.1km s-min=13.1km az=74.0*

ISC 12 10:44:14.5±0.8**,27°.4N**±0°.1×**139°.8E**±0°.1**,h350**^{km}**,n13,**
σ**1**^{s}**29**/14**,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	2.18	97	P	Pn	10 45 09.0	+1.9
	69nm,0.3s,baz=1.7,slow=13,SNR=76						
JCJ				S	S	10 45 49.5	+0.3
	30nm,0.3s,baz=296,slow=23,SNR=10						
MJAR	Matsushiro Arr	9.23	352	P	Pn	10 46 23.8	+0.6
	0.1nm,0.3s,baz=179,slow=11,SNR=3.6						
KLR	Kul'dur	22.68	346	P	P	10 48 48.0	+1.3
	1.2nm,0.5s,baz=171,slow=5.2,SNR=6.3						
SONM	Songino Array	33.03	317	P	P	10 50 19.8	+1.6
	0.5nm,0.6s,baz=116,slow=6.6,SNR=3.5						
WRA	Warramunga Arr	47.33	187	P	P	10 52 15.0	+0.5
	0.3nm,0.5s,baz=3.4,slow=7.6,SNR=4.7						
MKAR	Makanchi Array	48.63	309	P	P	10 52 24.2	+0.1
	0.3nm,0.7s,baz=92,slow=9.7,SNR=3.6						
ASAR	Alice Springs	51.06	187	P	P	10 52 41.8	-0.6
	0.2nm,0.7s,baz=82,slow=8.6,SNR=2.9						
ARCES	ARCESS Array B	72.56	340	P	P	10 55 03.0	-0.8
	3.0nm,0.7s,baz=27,slow=8.4,SNR=4.3						
YKA	Yellowknife Ar	72.91	28	P	P	10 55 03.5	-2.4
	0.4nm,0.5s,baz=291,slow=5.7,SNR=7.7						
FINES	FINESS Array B	76.73	333	P	P	10 55 26.8	-0.9
	0.8nm,0.3s,baz=67,slow=5.8,SNR=8.6						
NOA	NORSAR Array B	82.54	337	P	P	10 55 57.1	-1.5
	0.8nm,0.8s,baz=47,slow=4.9,SNR=3.4						
PLCA	Paso Flores	151.73	126	PKPbc	PKPbc	11 03 27.6	-0.5
	0.8nm,0.5s,baz=322,slow=2.7,SNR=6.8						
LPAZ	La Paz	151.92	73	PKPbc	PKPbc	11 03 29.5	-0.3
	0.5nm,0.4s,baz=284,slow=8.3,SNR=3.7						

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*GUC **12** 10:48:05.7±0.6, 30°.60S×71°.57W, h42^{km}±4^{km}, ML3.5*

*SJA **12** 10:48:06.0±1.0, 30°.53S×71°.62W, h10^{km}, ML3.1, MW3.1*

ISC 12 10:48:03.9±2.1**,30°.56S**±0°.04×**71°.6W**±0°.1**,h7**^{km}±12^{km}**,n19,**
σ**1**^{s}**03**/26**,1C-2D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO04	Tololo Observa	0.78	60⇓	iP	Pn	10 48 21.9	+0.3
GO04				IAML		10 48 36.6	
	comp=E,7μm,0.4s						
GO04	Tololo Observa	0.78	60	i P	Pn	10 48 21.8	+0.3
GO04				i S	Sn	10 48 33.5	-0.2
CO02	Combarbal	0.81	142	i P	Pn	10 48 21.6	-0.3
CO02				i S	Sn	10 48 33.1	-1.1
CO02				IAML		10 48 33.7	
	comp=N,6μm,0.5s						
CO03	El Pedregal	0.82	110	i P	Pn	10 48 22.1	+0.2
CO03				i S	Sn	10 48 34.2	-0.2
CO03				IAML		10 48 35.0	
	comp=E,3μm,0.1s						
CO01	Juntas del Tor	1.41	66	IAML		10 48 54.6	
	comp=N,440nm,0.2s						
CO04	Los Peladeros	1.56	161⇓	iP	Pb	10 48 33.5	+0.2
CO04				i S	Sg	10 48 54.3	+0.1
CO04				IAML		10 48 57.7	
	comp=N,1μm,0.2s						
AROD	Rodeo	1.86	78	i P	Pg	10 48 40.3	+0.7
AROD				IAML		10 49 08.5	
	comp=Z,53nm,0.5s						
AC05	El Transito	2.06	34⇑	iP	Pb	10 48 41.2	-0.6
AC05				i S	Sb	10 49 08.2	+0.5
AC05				IAML		10 49 16.9	
	comp=N,369nm,0.6s						
ACDV	Cuesta del Vie	2.16	80	i P	Pg	10 48 45.4	0.0
ACDV				IAML		10 49 25.5	
	comp=Z,108nm,0.4s						
ACCO	Cerro Coronel	2.17	91	i P	Pb	10 48 45.5	+1.8
ACCO				IAML		10 49 27.3	
	comp=Z,228nm,0.7s						
RTLS	Leoncito	2.31	123	i P	Pb	10 48 46.8	+0.6
RTLS				IAML		10 49 29.0	
	comp=Z,80nm,0.8s						
ROCH	El Roble	2.45	169	eP	Pn	10 48 45.3	+0.8
ROCH				i S	Sb	10 49 16.7	-2.2
ROCH				IAML		10 49 23.8	
	comp=E,358nm,0.3s						
ROC1	El Roble	2.45	169	i P	Pn	10 48 45.9	+1.4
ROC1				eS	Sg	10 49 21.6	-1.1
PEL	Peldehue	2.68	164	eP	Pn	10 48 48.6	+1.0
PEL				eS	Sn	10 49 21.6	+1.3
PEL				IAML		10 49 30.6	
	comp=E,265nm,0.1s						
AGUA	GUANDACOL	2.89	69	i P	Pb	10 48 56.4	+0.6
AGUA				IAML		10 49 41.0	
	comp=Z,20nm,0.5s						
RTCV	Cerro Valdivia	2.91	117	i P	Pb	10 48 55.8	-0.3
RTCV				IAML		10 49 42.0	
	comp=Z,54nm,0.3s						
MT03	Universidad Ad	3.06	163	eP	Pn	10 48 54.0	+1.2
ARCO	CERRO ARCO	3.20	136	i P	Pb	10 49 00.3	-0.9
ARCO				IAML		10 49 53.7	
	comp=Z,90nm,0.5s						
VCA	Vinchina	3.46	59	i P	Pb	10 49 03.7	-1.8
VCA				IAML		10 49 59.2	
	comp=Z,213nm,0.3s						

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*MAN **12** 11:01:46.0, 17°.30N×119°.26E, h12^{km}, mb5.3, ML4.2, MS4.4*

*NEIC **12** 11:01:49.4±1.4, 17°.17N±0°.08×119°.45E±0°.07, h34^{km}±5^{km}, mb4.6/37, Error ellipse: s-maj=12.5km s-min=9.4km az=191.0*

*BJI **12** 11:01:49.6±0.0, 17°.18N×119°.33E, h42^{km}, mB4.9/29, mb4.3/37, Ms4.2/17, Ms7 4.0/17*

*IDC **12** 11:01:53.9±2.7, 17°.21N×119°.54E, h75^{km}±26^{km}, mb3.9/22, mb1 4.0/25, mb1mx3.8/57, mbtmp4.2/25, MS3.7/11, Ms1 3.8/11, ms1mx3.4/49, Error ellipse: s-maj=19.5km s-min=12.4km az=70.0*

ISC 12 11:01:49.7±1.4**,17°.31N**±0°.04×**119°.36E**±0°.05**,h30**^{km}±10^{km}**,**
n115,σ**1**^{s}**55**/121**,mb4.5**/47**,MS3.9**/12**,2C-1D,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOLP	Bolinao	1.07	150	eP	Pn	11 02 05.2	-3.4
BOLP				eS	Sn	11 02 28.0	+5.5
SZP	Santa	1.08	77		Pn	11 02 07.3	-1.4
SZP				Sn	Sb	11 02 19.7	-3.8
SIPP	Brgy, Tapao	1.21	60⇑	eP	Pn	11 02 08.6	-2.0
SIPP				eS	Sb	11 02 43.8	+16
ABRA	Dolores	1.34	75	eP	Pn	11 02 10.2	-2.1
ABRA				eS	Sn	11 02 19.1	-10
SMPP	San Manuel, Pa	1.72	132	eP	Pn	11 02 14.7	-2.8
SMPP				eS	Sn	11 02 37.1	-1.5
APYP	Conner	1.88	73	eP	Pn	11 02 19.6	-0.2
APYP				eS	Sb	11 02 44.7	-1.8
CAUP	Cauayan	2.39	98	eP	Pn	11 02 27.9	+1.1
CAUP				eS	Sb	11 03 06.5	+5.5
PCPH	Palayan	2.41	136⇑	eP	Pn	11 02 27.1	0.0
BALP	Baler	2.64	126	eP	Pn	11 02 30.8	+0.6
BALP				eS	Sn	11 03 03.3	+2.0
SGCP	Mt. Cagua	2.73	70	eP	Pn	11 02 31.8	+0.4
SGCP				eS	Sb	11 03 10.0	-0.7
TGY	Tagaytay City	3.54	154	P	Pn	11 02 46.1	+3.4
	72nm,0.3s,baz=325,slow=3.5,SNR=2.8						
TGY				LR	LR	11 04 11.3	
	comp=Z,798nm,21.2s,baz=272,slow=41						
TGY	Tagaytay City	3.54	154⇓	eP	Pb	11 02 50.5	-1.1
LQP	Lukban	3.81	146	eP	Pn	11 02 45.9	-0.7
TPUB	Ta-pu	6.08	11	Pn	Pn	11 03 16.5	-1.0
YULB	Yu-li	6.32	16	Pn	Pn	11 03 20.8	0.0
SSLB	Suanglung	6.61	13	Pn	Pn	11 03 26.2	+1.3
YHNB	Yeheng	7.56	14	Pn	Pn	11 03 38.0	0.0
QIZ	Qiongzhong	9.20	282	P	Pn	11 04 00.2	-0.2
QIZ				S	Sn	11 05 45.2	+2.2
QIZ				LR	LR		
	comp=N,410nm,4.3s						
QIZ				LR	LR		
	comp=E,260nm,4.4s						
QIZ				LR	LR		
	comp=Z,220nm,10.2s						
NJ2	Nanjing	14.68	358	eP	Pn	11 05 17.6	+2.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ENH	Enshi	15.73	327	Pn	Pn	11 05 29.4	+0.2
KMI	Kunming	17.32	299	P	P	11 05 53.7	+2.9
KMI				pmax	pmax		
	comp=Z,16nm,1.6s						
KMI				LR	LR		
	comp=N,190nm,7.9s						
KMI				LR	LR		
	comp=E,250nm,10.7s						
KMI				LR	LR		
	comp=Z,320nm,19.7s						
PBKT	Sadao Pong	17.61	270		P	11 05 53.1	-0.6
JNU	Nakatsue	18.86	31	P	P	11 06 07.6	+0.2
	0.2nm,0.3s,baz=152,slow=4.5,SNR=7.2						
JNU	Nakatsue	18.86	31	P	Pn	11 06 08.8	+0.7
JNU				IAmb	IAmb	11 06 16.0	
	comp=Z,40nm,1.1s						
XAN	Xi'an	19.11	333	P	Pn	11 06 12.5	+1.4
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
XAN	Xi'an	19.11	333	P	P	11 06 10.3	+0.2
CMAR	Chiang Mai Arr	19.46	276	P	Pn	11 06 15.8	+0.3
	comp=Z,0.5nm,0.3s,baz=86,slow=9.9,SNR=9.6						
CMAR				LR	LR	11 13 35.3	
	comp=Z,91nm,20.2s,baz=95,slow=36						
CMAR	Chiang Mai Arr	19.46	276	P	Pn	11 06 15.2	-0.3
CD2	Chengdu	19.61	316	P	Pn	11 06 17.4	+0.2
CD2				S	S	11 09 56.1	+0.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,250nm,10.5s						
CD2				LR	LR		
	comp=Z,420nm,13.5s						
CD2				LR	LR		
	comp=Z,420nm,12.9s						
CD2				LR	LR		
	comp=Z,460nm,7.6s						
TTSI	Tana Toraja	20.23	179	P	Pn	11 06 23.7	-0.9
	comp=Z,981nmcomp=Z,28nm,1.3s						
SPSI	Sidrap Palu	21.15	179	P	P	11 06 31.5	-0.9
	comp=Z,14nm,1.1s						
KSAR	Wonju Array Be	21.41	19	P	P	11 06 34.6	-0.5
KSRS	Korea Array	21.44	19	P	P	11 06 35.2	-0.1
	comp=Z,7.0nm,0.9s,baz=202,slow=12,SNR=19						
SIJI	Sorong	21.55	146	LR	LR	11 16 01.4	
	comp=Z,82nm,18.7s,baz=64,slow=40						
MSAI	Masohi	22.60	154	P	P	11 06 50.2	+2.2
	comp=Z,1μmcomp=Z,12nm,1.1s						
AAI	Ambon	22.62	157	P	P	11 06 49.2	+1.0
	comp=Z,2μmcomp=Z,74nm,1.1s						
BJT	Baijiatuau	22.79	354	P	P	11 06 50.5	+0.6
INU	Inuyama	23.87	38	P	P	11 07 00.0	-0.6
INU				IAmb	IAmb	11 07 01.3	
	comp=Z,20nm,1.0s						
RGRI	Rengat	24.27	225	P	P	11 07 02.6	-1.9
HHC	Hu-ho-hao-te	24.40	346	eP	P	11 07 06.9	+1.3
HHC				pmax	pmax		
	comp=Z,78nm,0.8s						
HHC				pmax	pmax		
	comp=Z,280nm,4.0s						
GUMO	Guam	24.86	95	LR	LR	11 15 52.8	
	comp=Z,73nm,21.8s,baz=102,slow=34						
EDFI	Ende, Flores	26.00	175	P	P	11 07 22.3	+2.1
	comp=Z,14nm,1.0s						
PLAI	Plampang	26.02	184	P	P	11 07 23.4	+3.1
	comp=Z,42nm,1.1s						
GTA	Gaotai	27.82	326	eP	P	11 07 37.3	+0.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,94nm,5.4s						
GTA				LR	LR		
	comp=Z,150nm,15.2s						
GTA				LR	LR		
	comp=Z,170nm,16.2s						
GTA				LR	LR		
	comp=Z,220nm,16.2s						
SONM	Songino Array	32.24	344	P	P	11 08 15.8	+0.3
	comp=Z,0.8nm,0.6s,baz=170,slow=9.7,SNR=7.3						
SONM	Songino Array	32.24	344	P	P	11 08 16.0	+0.5
KLR	Kul'dur	33.39	15	P	P	11 08 25.9	+0.6
	comp=Z,3.6nm,0.9s,baz=228,slow=5.7,SNR=8.6						
WMQ	Urumqi	37.57	321	eP	P	11 09 03.0	+1.5
WMQ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,120nm,5.9s						
WMQ				LR	LR		
	comp=Z,220nm,19.9s						
WMQ				LR	LR		
	comp=Z,180nm,15.7s						
WMQ				LR	LR		
	comp=Z,220nm,19.7s						
WRAB	Tennant Creek	39.84	158	P	P	11 09 17.9	-2.7
WRA	Warramunga Arr	39.84	158	P	P	11 09 17.4	-3.2
	comp=Z,5.2nm,1.1s,baz=332,slow=9.1,SNR=4.8						
WRA				LR	LR	11 29 26.6	
	comp=Z,45nm,18.1s,baz=175,slow=42						
WB2	Warramunga Arr	39.84	158	P	P	11 09 18.9	-1.8
MK31	Makanchi Array	42.38	322	P	P	11 09 42.5	+1.1
MKAR	Makanchi Array	42.38	322	P	P	11 09 42.8	+1.4
	comp=Z,3.7nm,0.9s,baz=123,slow=8.8,SNR=24						
MKAR				PcP	PcP	11 11 34.0	-0.3
	comp=Z,1.3nm,0.8s,baz=97,slow=4.9,SNR=4.5						
MKAR	Makanchi Array	42.38	322	P	P	11 09 42.6	+1.2
MAKZ	Makanchi	42.58	322	P	P	11 09 43.1	+0.1
ASAR	Alice Springs	43.14	160	P	P	11 09 45.8	-1.9
	comp=Z,0.8nm,0.6s,baz=339,slow=6.9,SNR=6.4						
KSH	Kashi	43.57	310	P	P	11 09 52.6	+1.4
KSH				pP	pwP	11 10 02.5	-0.2
KSH				PcP	PcP	11 11 39.6	+1.0
KSH				PcS	PcS	11 15 32.2	+0.8
KSH				S	S	11 16 19.2	+0.5
KSH				SS	SS	11 19 29.3	-4.7
KSH				pmax	pmax		
	comp=Z,13nm,0.5s						
KSH				pmax	pmax		
	comp=Z,230nm,6.3s						
KSH				LR	LR		
	comp=Z,270nm,14.9s						
KSH				LR	LR		
	comp=Z,210nm,11.6s						
KSH				LR	LR		
	comp=Z,190nm,14.4s						
NRN	Naryn	44.17	312	P	P	11 09 57.0	+0.8
NRN				IAmb	IAmb	11 10 05.8	
	comp=Z,7.7nm,0.8s						
NIL	Nilore	44.31	301	P	P	11 09 56.8	-0.2
NIL				IAmb	IAmb	11 09 57.8	
	comp=Z,5.9nm,0.8s						
ZAA0	Zalesovo Array	45.27	332	P	P	11 10 04.0	-0.5
ZAA0				IAmb	IAmb	11 10 05.7	
	comp=Z,7.0nm,0.9s						
ZALV	Zalesovo Beam	45.27	332	P	P	11 10 04.7	+0.3
	comp=Z,4.0nm,0.7s,baz=125,slow=7.4,SNR=19						
ZALV	Zalesovo Beam	45.27	332	P	P	11 10 04.5	+0.1
AAK	Ala-Archa	45.63	313	P	P	11 10 10.0	+2.3
	comp=Z,0.8nm,0.5s,baz=151,slow=6.8,SNR=3.7						
AAK	Ala-Archa	45.63	313	IAmb	IAmb	11 10 18.3	
	comp=Z,3.2nm,1.0s						
ARSB	Arslanbob	46.29	311	P	P	11 10 13.5	+0.7
ARSB				IAmb	IAmb	11 10 21.6	
	comp=Z,7.3nm,1.0s						
KURK	Kurchatov	46.49	325	P	P	11 10 14.9	+0.9
KURBB	Kurchatov Arra	46.49	325	P	P	11 10 14.9	+0.8
	comp=Z,10nm,0.7s,baz=122,slow=8.6,SNR=52						
GAR	Garm	47.67	307	P	P	11 10 24.4	+0.7
KBL	Kabul	47.89	301	P	P	11 10 25.7	+0.2
KBL				IAmb	IAmb	11 10 26.7	
	comp=Z,6.9nm,1.4s						
CHGR	Chuyangaron	48.49	307	P	P	11 10 29.4	-0.5
KK31	Karatay Array	48.56	313	P	P	11 10 30.8	+0.5
KK31				IAmb	IAmb	11 10 38.6	
	comp=Z,4.6nm,0.8s						
KKAR	Karatay Array	48.56	313	P	P	11 10 31.1	+0.7
KKAR				IAmb	IAmb	11 10 38.6	
	comp=Z,4.6nm,0.8s						
KKAR	Karatay Array	48.56	313	P	P	11 10 30.7	+0.3
SEY	Seymchan	50.99	19	P	P	11 10 48.5	+0.1
	comp=Z,1.1nm,0.7s,baz=212,slow=7.2,SNR=3.8						
BVAR	Borovoye Array	52.08	325	P	P	11 10 57.4	+0.6
	comp=Z,1.0nm,0.6s,baz=98,slow=8.7,SNR=7.9						
BVAR				PcP	PcP	11 12 08.2	-0.4
	comp=Z,1.1nm,0.8s,baz=90,slow=5.8,SNR=2.8						
BRVK	Borovoye	52.15	325	P	P	11 10 58.0	+0.7
BRVK				IAmb	IAmb	11 11 05.9	
	comp=Z,6.0nm,0.8s						
STKA	Stephens Creek	53.36	156	P	P	11 11 04.7	-1.7
	comp=Z,3.6nm,0.7s,baz=355,slow=9.4,SNR=7.2						
STKA	Stephens Creek	53.36	156	IAmb	IAmb	11 11 12.5	
	comp=Z,3.4nm,1.2s						

TIXI	**Tiksi**	**54.62**	**4**	P	**P**	**11 11 14.2**	**-0.9**
	comp=Z,1.0nm,0.4s,baz=157,slow=6.1,SNR=3.4						
TIXI	**Tiksi**	**54.62**	**4**	P	**P**	**11 11 14.4**	**-0.7**
TIXI				IAmb	IAmb	11 11 14.7	
	comp=Z,5.5nm,1.3s						
NRIK	**Noril'sk**	**55.62**	**347**	P	**P**	**11 11 22.5**	**+0.2**
	comp=Z,7.3nm,0.7s,baz=133,slow=7.3,SNR=13						
GEYT	**Alibeck**	**57.01**	**304**	P	**P**	**11 11 33.8**	**+1.0**
	comp=Z,4.3nm,0.7s,baz=116,slow=6.8,SNR=7.6						
GEYT				LR	LR	11 37 33.1	
	comp=Z,71nm,19.1s,baz=355,slow=37						
GEYT	**Alibeck**	**57.01**	**304**	P	**P**	**11 11 33.5**	**+0.6**
GYA0B	**ALIBECK ARRAY**	**57.01**	**304**	P	**P**	**11 11 33.1**	**+0.2**
ABKAR	**Akbulak array**	**57.19**	**318**	P	**P**	**11 11 33.9**	**0.0**
BILL	**Bilibino**	**58.70**	**19**	P	**P**	**11 11 44.6**	**+0.5**
BILL				IAmb	IAmb	11 11 54.2	
	comp=Z,4.3nm,1.0s						
GAMB	**Gambell**	**65.32**	**27**	P	**P**	**11 12 29.6**	**+0.9**
KVAR	**Kislovodsk Arr**	**68.67**	**311**	LR	LR	11 45 00.1	
	comp=Z,228nm,19.4s,baz=89,slow=38						
RAYN	**Ar Rayn**	**68.82**	**289**	P	**P**	**11 12 51.2**	**-0.6**
RAYN				IAmb	IAmb	11 12 59.4	
	comp=Z,5.7nm,0.9s						
IMAR	**Indian Mountai**	**73.08**	**25**	P	**P**	**11 13 16.9**	**+0.2**
TOLK	**Toolik Lake Re**	**74.42**	**22**	P	**P**	**11 13 24.8**	**+0.2**
TOLK				IAmb	IAmb	11 13 25.8	
	comp=Z,8.8nm,1.2s						
MLY	**Manley**	**74.43**	**26**	P	**P**	**11 13 25.1**	**+0.4**
MLY				IAmb	IAmb	11 13 33.4	
	comp=Z,6.9nm,0.8s						
SUA	**Susitna One**	**74.91**	**30**	P	**P**	**11 13 27.3**	**-0.4**
ARCES	**ARCESS Array B**	**75.27**	**339**	P	**P**	**11 13 30.4**	**+1.0**
	comp=Z,4.8nm,1.0s,baz=58,slow=8.6,SNR=2.9						
ILAR	**Eielson Array**	**76.09**	**26**	P	**P**	**11 13 32.8**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=227,slow=8.0,SNR=5.6						
BMAR	**Burnt Mountain**	**76.47**	**23**	P	**P**	**11 13 37.4**	**+1.0**
FINES	**FINESS Array B**	**76.52**	**330**	P	**P**	**11 13 36.6**	**-0.1**
	comp=Z,1.7nm,0.4s,baz=76,slow=8.0,SNR=10						
FINES				LR	LR	11 51 47.0	
	comp=Z,177nm,20.8s,baz=28,slow=39						
AKASG	**Malin Array Be**	**76.89**	**319**	P	**P**	**11 13 38.0**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=64,slow=6.4,SNR=4.4						
AKASG	**Malin Array Be**	**76.89**	**319**	IAmb	IAmb	11 13 38.4	
	comp=Z,0.7nm,0.8s						
RPZ	**Rata Peaks**	**76.96**	**144**	LR	LR	11 49 25.1	
	comp=Z,59nm,18.0s,baz=249,slow=37						
BCAR	**Beaver Creek A**	**78.68**	**27**	P	**P**	**11 13 49.5**	**+0.7**
BURAR	**Bucovina Array**	**80.14**	**317**	P	**P**	**11 13 56.9**	**-0.3**
INK	**Inuvik**	**80.21**	**21**	P	**P**	**11 13 56.7**	**-0.3**
INK				IAmb	IAmb	11 14 04.5	
	comp=Z,4.5nm,0.9s						
DAG	**Danmarks Havn**	**82.86**	**351**	*i* P	**P**	**11 14 09.7**	**-1.1**
DAG				*i*		11 14 17.1	
LANS	**Liptovska Anna**	**83.37**	**319**	*e*P	**P**	**11 14 12.7**	**-1.4**
NB2	**NORSAR Subarra**	**83.47**	**332**	P	**P**	**11 14 12.6**	**-1.8**
	comp=Z,8.3nm,0.9s,baz=65,slow=4.6						
NB2	**NORSAR Subarra**	**83.47**	**332**	P	**P**	**11 14 12.6**	**-1.8**
	baz=65,slow=4.6						
NOA	**NORSAR Array B**	**83.47**	**332**	P	**P**	**11 14 13.0**	**-1.3**
	comp=Z,2.1nm,0.8s,baz=65,slow=4.7,SNR=9.9						
VYHS	**Vyhne**	**83.98**	**319**	*e*P	**P**	**11 14 16.9**	**-0.3**
VRAC	**Vranov**	**85.09**	**320**	LR	LR	11 53 32.7	
	comp=Z,46nm,18.2s,baz=2.5,slow=36						
RES	**Resolute Bay**	**85.68**	**9**	P	**P**	**11 14 25.1**	**-0.1**
RES				IAmb	IAmb	11 14 25.4	
	comp=Z,5.8nm,1.3s						
BRG	**Berggiesshubel**	**86.10**	**322**	*e*P	**P**	**11 14 27.8**	**0.0**
	comp=Z,4.4nm,0.8s						
BRG				*e*		11 14 34.4	
	comp=Z,4.9nm,0.9s						
GERES	**GERESS Array B**	**87.03**	**320**	P	**P**	**11 14 32.0**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=77,slow=4.2,SNR=3.7						
GERES				LR	LR	11 56 58.9	
	comp=Z,137nm,18.1s,baz=76,slow=38						
YKA	**Yellowknife Ar**	**89.94**	**22**	P	**P**	**11 14 46.0**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=314,slow=4.2,SNR=20						
SDV	**Santo Domingo**	**152.16**	**22**	PKPdf	**PKPdf**	**11 21 34.7**	**-2.2**

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*IDC **12** 11:02:03.8±1.3, 6°.00S×152°.02E, h0^{km}, mb4.1/9, mb1 4.3/10, mb1mx3.9/50, mbtmp4.2/10, ML2.1/1, Error ellipse: s-maj=43.9km s-min=14.5km az=112.0*

*NEIC **12** 11:02:05.5±2.0, 6°.00S±0°.05×152°.1E±0°.1, h10^{km}±1^{km}, mb4.5/16, Error ellipse: s-maj=21.6km s-min=6.8km az=104.0*

ISC 12 11:02:05.3±0.7**, 5°.99S**±0°.06×**152°.1E**±0°.1**, h10^{km}, n37, σ0^s.86**/40**, mb4.3**/15**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.68**	**357**	Pn	**Pn**	**11 02 35.5**	**+0.7**
	86nm,0.3s,baz=227,slow=1.9,SNR=41						
KRVT				Sn	**Sb**	**11 02 57.5**	**+0.1**
	72nm,0.3s,baz=102,slow=4.2,SNR=10						
RABL	**Rabaul**	**1.79**	**2**	Pn	**Pb**	**11 02 37.6**	**-0.6**
PMG	**Port Moresby**	**5.96**	**235**	Pn	**Pn**	**11 03 33.1**	**-0.4**
	3.3nm,0.3s,baz=45,slow=8.6,SNR=37						
PMG				Sn	**Sn**	**11 04 40.7**	**-1.2**
	2.3nm,0.3s,baz=59,slow=14,SNR=3.5						
PMG	**Port Moresby**	**5.96**	**235**		**Pn**	**11 03 35.0**	**+1.4**
PMG					**Sn**	**11 04 42.6**	**+0.7**
MANU	**Manus Island**	**6.14**	**310**		**Pn**	**11 03 38.0**	**+1.9**
EIDS	**Eidsvold**	**19.29**	**183**	P	**Pn**	**11 06 33.2**	**+1.8**
EIDS				IAmb	IAmb	11 06 37.1	
	comp=Z,18nm,1.2s						
WR0	**Warramunga Arr**	**22.00**	**229**	P	**P**	**11 06 59.6**	**-0.3**
WRAB	**Tennant Creek**	**22.13**	**230**	P	**P**	**11 07 01.4**	**+0.1**
WRAB				IAmb	IAmb	11 07 04.5	
	comp=Z,7.4nm,0.7s						
WB2	**Warramunga Arr**	**22.13**	**230**	P	**P**	**11 07 00.7**	**-0.6**
WB2				IAmb	IAmb	11 07 04.7	
	comp=Z,6.5nm,0.8s						
WRA	**Warramunga Arr**	**22.14**	**230**	P	**P**	**11 07 00.3**	**-1.0**
	comp=Z,5.8nm,0.8s,baz=54,slow=9.9,SNR=21						
WRA	**Warramunga Arr**	**22.14**	**230**	P	**P**	**11 07 02.1**	**+0.8**
AS31	**Alice Springs**	**24.80**	**223**	P	**P**	**11 07 27.9**	**+0.1**
ASAR	**Alice Springs**	**24.81**	**223**	P	**P**	**11 07 27.2**	**-0.5**
	comp=Z,8.0nm,0.9s,baz=54,slow=7.8,SNR=57						
KNRA	**Kununurra**	**24.83**	**245**	P	**P**	**11 07 27.1**	**-0.9**
STKA	**Stephens Creek**	**27.56**	**200**	P	**P**	**11 07 52.8**	**+0.2**
	comp=Z,3.5nm,0.9s,baz=24,slow=15,SNR=5.2						
STKA	**Stephens Creek**	**27.56**	**200**	IAmb	IAmb	11 07 57.3	
	comp=Z,1.5nm,1.1s						
FITZ	**Fitzroy Crossi**	**28.49**	**243**	P	**P**	**11 07 59.9**	**-1.1**
	comp=Z,5.2nm,0.6s,baz=57,slow=7.9,SNR=22						
FITZ	**Fitzroy Crossi**	**28.49**	**243**	P	**P**	**11 08 00.1**	**-0.9**
FITZ				IAmb	IAmb	11 08 10.0	
	comp=Z,9.3nm,0.8s						
BBOO	**Buckleboo**	**30.58**	**207**	P	**P**	**11 08 19.2**	**-0.2**
SONM	**Songino Array**	**66.96**	**328**	P	**P**	**11 12 57.7**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=145,slow=5.3,SNR=2.9						
SONM	**Songino Array**	**66.96**	**328**	P	**P**	**11 12 58.3**	**0.0**
MKAR	**Makanchi Array**	**80.77**	**319**	P	**P**	**11 14 20.7**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=123,slow=5.3,SNR=2.1						
MKAR	**Makanchi Array**	**80.77**	**319**	P	**P**	**11 14 19.8**	**+0.6**
ZALV	**Zalesovo Beam**	**81.76**	**327**	P	**P**	**11 14 23.7**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=106,slow=3.1,SNR=3.0						
ZALV	**Zalesovo Beam**	**81.76**	**327**	P	**P**	**11 14 23.5**	**-0.7**
WRH	**Wood River Hil**	**82.92**	**22**	P	**P**	**11 14 30.6**	**+0.6**
WRH				IAmb	IAmb	11 14 34.5	
	comp=Z,6.5nm,1.2s						
CCB	**Clear Creek Bu**	**83.11**	**22**	P	**P**	**11 14 31.6**	**+0.6**
CCB				IAmb	IAmb	11 14 35.7	
	comp=Z,3.3nm,1.0s						
HDA	**Harding Lake**	**83.32**	**22**	P	**P**	**11 14 32.4**	**+0.3**
HDA				IAmb	IAmb	11 14 34.9	
	comp=Z,5.7nm,1.3s						
IL31		**83.52**	**22**	P	**P**	**11 14 33.3**	**+0.2**
IL31				IAmb	IAmb	11 14 34.1	
	comp=Z,3.3nm,0.8s						
ILAR	**Eielson Array**	**83.52**	**22**	P	**P**	**11 14 33.1**	**0.0**
	comp=Z,2.7nm,0.7s,baz=248,slow=5.2,SNR=26						
ILAR	**Eielson Array**	**83.52**	**22**	P	**P**	**11 14 33.4**	**+0.3**
QSPA	**South Pole Qui**	**83.97**	**180**	P	**P**	**11 14 36.8**	**+1.1**
BVAR	**Borovoye Array**	**89.78**	**323**	P	**P**	**11 15 03.0**	**-1.0**
	comp=Z,1.1nm,0.8s,baz=108,slow=4.8,SNR=5.6						
656A	**Willston**	**123.58**	**59**		**PKPdf**	**11 21 02.8**	**-0.9**
BRYW	**Bryant College**	**127.32**	**40**		**PKPdf**	**11 21 10.3**	**-0.3**
TORD	**Torodi Ar. Bea**	**149.99**	**286**	PKPbc	**PKPbc**	**11 21 57.1**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=72,slow=2.7,SNR=7.9						
TORD				PKPab	**PKPab**	**11 22 02.6**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=77,slow=3.9,SNR=5.4						
TORD	**Torodi Ar. Bea**	**149.99**	**286**		**PKPbc**	**11 21 55.5**	**-1.6**

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*VIE **12** 11:32:46.8±1.1, 49°.84N×18°.66E, h0^{km}, mb2.3/4, ml2.9/4, Error ellipse: s-maj=14.1km s-min=6.4km az=8.0   30 km E of Ostrava Suspected Mining induced.*

*IPEC **12** 11:32:48.1±0.2, 49°.84N×18°.58E, h0^{km}±3^{km}, ML2.5/3, Error ellipse: s-maj=2.1km s-min=1.1km az=161.0*

ISC 12 11:32:47.5±0.8**, 49°.79N**±0°.03×**18°.53E**±0°.02**, h0^{km}, n33, σ0^s.95**/59**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.25**	**281**	*e*PG	**Pb**	**11 32 53.9**	**+1.6**
OKC				*e*SG	**Sg**	**11 32 56.2**	**+0.7**
	comp=Z,230nm,0.5s						
MORC	**Moravsky Berou**	**0.64**	**269**	*e*Pg	**Pb**	**11 33 00.9**	**-0.6**
	baz=84						
MORC				*e*Sg	**Sg**	**11 33 09.3**	**+1.3**
	96nm,0.2s,baz=84						
MORC	**Moravsky Berou**	**0.64**	**269**	*e*PG	**Pb**	**11 33 01.0**	**-0.6**
MORC				*e*SG	**Sg**	**11 33 09.3**	**+1.3**
LANS	**Liptovska Anna**	**0.89**	**136**	*e*PG	**Pb**	**11 33 05.5**	**-0.3**
LANS				*e*SG	**Sb**	**11 33 18.0**	**-0.2**
LANS				*e*LG	Lg	11 33 23.2	
OJC	**Ojcow**	**0.93**	**62**	*e*Pg	**Pg**	**11 33 04.5**	**-0.7**
OJC				*e*Sg	**Sg**	**11 33 17.1**	**-0.2**
JAVC	**Velka Javorina**	**1.09**	**211**	*e*PG	**Pn**	**11 33 10.6**	**+0.5**
KRLC	**Kraliky**	**1.16**	**285**	*e*PG	**Pg**	**11 33 09.3**	**-0.5**
KRLC				*e*SG	**Sg**	**11 33 25.2**	**+0.4**
	comp=Z,95nm,0.3s						
NIE	**Niedzica**	**1.21**	**107**	*e*Pg	**Pb**	**11 33 11.1**	**-0.2**
NIE				*e*Sg	**Sn**	**11 33 29.0**	**+0.1**
VYHS	**Vyhne**	**1.31**	**171**	*e*PG	**Pn**	**11 33 13.3**	**+0.2**
VYHS				*e*SG	**Sn**	**11 33 31.4**	**0.0**
VRAC	**Vranov**	**1.35**	**250**	*e*Pg	**Pb**	**11 33 13.9**	**+0.3**
	baz=67						
VRAC				*e*Sg	**Sb**	**11 33 32.0**	**+0.5**
	56nm,0.3s,baz=67						
VRAC	**Vranov**	**1.35**	**250**	*e*PG	**Pb**	**11 33 14.0**	**+0.3**
VRAC				*e*SG	**Sb**	**11 33 32.0**	**+0.5**
VRAC	**Vranov**	**1.35**	**250**	*e*PG	Pb	11 33 27.1	+13
VRAC				*e*SG	**Sg**	**11 33 29.1**	**-1.7**
SMOL	**Smolenice**	**1.47**	**210**	*e*SG	**Sg**	**11 33 32.8**	**-1.8**
SMOL				*e*LG	Lg	11 33 37.2	
DPC	**Dobruska-Polom**	**1.53**	**292**	*e*PG	**Pn**	**11 33 16.0**	**-0.1**
DPC				*e*SG	**Sg**	**11 33 36.5**	**0.0**
	comp=Z,40nm,0.3s						
KRUC	**Moravsky**	**1.57**	**243**	*e*Pg	**Pb**	**11 33 17.5**	**+0.1**
	baz=60						
KRUC				*e*Sg	**Sg**	**11 33 39.0**	**+1.1**
	44nm,0.2s,baz=60						
KRUC	**Moravsky**	**1.57**	**243**	*e*PG	**Pb**	**11 33 17.5**	**+0.1**
KRUC				*e*SG	**Sg**	**11 33 39.1**	**+1.1**
KRUC	**Moravsky**	**1.57**	**243**	*e*PG	Pg	11 33 30.1	+12
KRUC				*e*SG	**Sn**	**11 33 34.3**	**-3.4**
MODS	**Modra-Piesok**	**1.64**	**211**	*e*PG	**Pn**	**11 33 17.6**	**0.0**
MODS				*e*SG	**Sn**	**11 33 39.3**	**-0.1**
MODS				*e*LG	Lg	11 33 42.4	
OSTC	**Ostas**	**1.67**	**298**	*e*PG	**Pn**	**11 33 18.4**	**+0.3**
OSTC				*e*SG	**Sb**	**11 33 40.7**	**-0.1**
	comp=Z,43nm,0.6s						
UPC	**Upice**	**1.77**	**295**	*e*PG	**Pb**	**11 33 20.6**	**-0.2**
UPC				*e*SG	**Sn**	**11 33 43.0**	**+0.4**
KSP	**Ksiaz**	**1.78**	**307**	*e*Pb	**Pn**	**11 33 19.2**	**-0.3**
KSP				*e*Pg	**Pg**	**11 33 21.3**	**-0.3**
KSP				*e*Sg	**Sb**	**11 33 43.6**	**-0.1**
CHVC	**Chvalec**	**1.78**	**298**	*e*PG	**Pn**	**11 33 19.5**	**0.0**
CHVC				*e*SG	**Sb**	**11 33 44.3**	**+0.5**
	comp=Z,26nm,0.4s						
STHS	**Stebnicka Huta**	**1.81**	**101**	*e*PN	**Pg**	**11 33 21.7**	**-0.4**
STHS				*e*SN	**Sg**	**11 33 47.2**	**+1.7**
STHS				*e*LG	Lg	11 33 51.1	
KECS	**Kecovo**	**1.84**	**135**	*e*PG	**Pg**	**11 33 23.5**	**+0.8**
KECS				*e*SN	**Sn**	**11 33 44.5**	**+0.3**
KECS				*e*LG	Lg	11 33 48.6	
ZST	**Bratislava**	**1.85**	**211**	*e*PG	**Pn**	**11 33 20.2**	**-0.3**
ZST				*e*SG	**Sn**	**11 33 44.0**	**-0.6**
TREC	**Trest**	**2.04**	**257**	*e*SG	**Sb**	**11 33 52.4**	**+1.0**
	comp=Z,31nm,0.2s						
CRVS	**Cervenica-Dubn**	**2.12**	**114**	*e*PN	**Pg**	**11 33 27.7**	**-0.3**
CONA	**Conrad Observa**	**2.56**	**224**	Pn	**Pn**	**11 33 30.1**	**-0.3**
	0.7nm,0.2s						
PRU	**Pruhonice**	**2.58**	**276**	*e*PG	**Pb**	**11 33 35.3**	**+0.6**
PRU				*e*SG	**Sb**	**11 34 08.9**	**+1.9**
	comp=Z,18nm,0.5s						
BRG	**Berggiesshubel**	**3.13**	**292**	PG	**Pb**	**11 33 44.6**	**+0.6**
BRG				SG	**Sg**	**11 34 25.9**	**-2.1**
	12nm,0.4s						
KHC	**Kasperske Hory**	**3.29**	**260**	*e*PN	**Pn**	**11 33 40.7**	**+0.3**
KHC				*e*PG	**Pb**	**11 33 47.9**	**+1.1**
KHC				*e*SG	**Sg**	**11 34 31.4**	**-1.9**
	comp=Z,17nm,0.4s						
MOA	**Molln**	**3.42**	**237**	*e*Pn	**Pn**	**11 33 42.3**	**+0.2**
	0.8nm,0.2s						
CLL	**Collm**	**3.84**	**295**	*e*Sg	**Sg**	**11 34 50.0**	**-0.7**
	comp=Z,15nm,0.7s						
CLL				LmV		18 27 00.0	
	comp=Z,200nm,20.0s						

MAN 12 11:49:31.2, 5°.98N×126°.86E, h24^{km}, mb4.7, ML3.6, MS3.5, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	**Mati**	**1.13**	**328**	*e*P	Pn	11 49 51.0	-0.6
MATI				*e*S	Sn	11 50 06.2	-0.1
DDMP	**Don Marcelino,**	**1.15**	**276**	*e*P	Pn	11 49 51.1	-0.7
DDMP				*e*S	Sb	11 50 07.5	+0.6
KCP	**Kidapawan**	**2.03**	**300**	⇑*e*P	Pb	11 50 06.6	-0.9
KCP				*i* S	Sn	11 50 29.9	+1.2
SKMP	**Bagumbayan, Su**	**2.36**	**283**	*e*P	Pn	11 50 08.6	0.0
SKMP				*e*S	Sn	11 50 37.5	+0.7
BUKP	**Musuan**	**2.59**	**317**	*e*P	Pn	11 50 12.9	+1.2

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*IDC **12** 11:50:42.3±0.6, 19°.37N×67°.07W, h0^{km}, mb3.9/13, mb1 4.2/18, mb1mx4.0/35, mbtmp4.0/18, ML3.8/5, MS3.5/4, Ms1 3.5/4, ms1mx3.1/31, Error ellipse: s-maj=16.4km s-min=12.4km az=51.0*

*OSPL **12** 11:50:43.5±1.0, 19°.36N×66°.86W, h4^{km}±9^{km}, ML4.2*

*RSPR **12** 11:50:45.5, 19°.39N×67°.07W, h28^{km}±23^{km}, MD4.3/12*

*NEIC **12** 11:50:45.4, 19°.39N×67°.07W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.76; $M_{\theta\theta}$-2.55; $M_{\phi\phi}$1.80; $M_{r\theta}$0.14; $M_{\theta\phi}$1.47; $M_{\phi r}$0.83; Fault plane solution: $M_0$2.83000×10^{15} NP1:ϕ_s64.56000°, δ71.95000°, λ16.32000°. NP2:ϕ_s329.38000°, δ74.50000°, λ161.25000°. Principal axes: T 2.6195, Plg24.0000°, Azm287.0000°; N 0.3869, Plg66.0000°, Azm111.0000°; P -3.0064, Plg2.0000°, Azm17.0000°;*

ISC 12 11:50:46.5±1.2**, 19°.22N**±0°.04×**67°.05W**±0°.03**, h30^{km}**±9^{km}**, n180, σ1^s.77**/186**, mb4.2**/22**, 11C-9D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.74**	**184**	*i* P	**Pb**	**11 50 60.0**	**-1.0**
AGPR				*e*S	**Sn**	**11 51 12.2**	**+0.8**
AGPR				IAML		11 51 14.4	
	comp=Z,7μm,0.6s						
AGPR	**Aguadilla, PR**	**0.74**	**184**	⇓*e*P	**Pb**	**11 50 59.7**	**-1.3**
AGPR	**Aguadilla, PR**	**0.74**	**184**	*e*S	**Sn**	**11 51 12.0**	**+0.6**
AGPR	**Aguadilla, PR**	**0.74**	**184**		**Pb**	**11 50 59.8**	**-1.3**
AGPR					**Sn**	**11 51 12.1**	**+0.8**
AGPR	**Aguadilla, PR**	**0.74**	**184**		**Pb**	**11 51 00.1**	**-0.9**
EMPR	**Esperanza - Ma**	**0.89**	**146**	*e*S	**Sn**	**11 51 16.3**	**+1.5**
EMPR	**Esperanza - Ma**	**0.89**	**146**	⇑*e*P	**Pn**	**11 51 02.5**	**-0.5**
EMPR	**Esperanza - Ma**	**0.89**	**146**		**Pn**	**11 51 03.0**	**+0.1**
AOPR	**Arecibo Observ**	**0.91**	**162**	⇓*e*P	**Pn**	**11 51 02.1**	**-1.2**
AOPR	**Arecibo Observ**	**0.91**	**162**	⇑*e*P	**Pn**	**11 51 02.1**	**-1.2**
AOPR	**Arecibo Observ**	**0.91**	**162**		**Pn**	**11 51 02.3**	**-1.0**
MPR	**Mayaguez**	**1.00**	**185**	*i* P	**Pn**	**11 51 04.8**	**+0.3**
MPR				*e*S	**Sb**	**11 51 19.6**	**+1.4**
MPR				IAML		11 51 19.9	
	comp=Z,4μm,0.6s						
MPR	**Mayaguez**	**1.00**	**185**	⇑*e*P	**Pn**	**11 51 04.4**	**-0.2**
MPR	**Mayaguez**	**1.00**	**185**	⇓*e*P	**Pn**	**11 51 04.8**	**+0.3**
MPR	**Mayaguez**	**1.00**	**185**		**Pn**	**11 51 04.4**	**-0.2**
UUPR	**Utuado, UPR, P**	**1.01**	**162**		**Pn**	**11 51 04.5**	**-0.1**
LSP	**Las Mesas**	**1.03**	**182**	*e*S	**Sb**	**11 51 20.2**	**+1.1**
LSP	**Las Mesas**	**1.03**	**182**	⇓*e*P	**Pn**	**11 51 04.4**	**-0.7**
LSP	**Las Mesas**	**1.03**	**182**		**Pn**	**11 51 04.4**	**-0.7**
LSP					**Sb**	**11 51 20.2**	**+1.1**
CRPR	**Cabo Rojo, PR**	**1.20**	**183**	*e*S	**Sb**	**11 51 24.0**	**+0.1**
CRPR	**Cabo Rojo, PR**	**1.20**	**183**	⇓*e*P	**Pn**	**11 51 06.7**	**-0.7**
CRPR	**Cabo Rojo, PR**	**1.20**	**183**		**Pn**	**11 51 06.9**	**-0.4**
CRPR					**Sb**	**11 51 24.3**	**+0.4**
MLPR	**Magueyes Islan**	**1.24**	**180**	*e*S	**Sn**	**11 51 24.4**	**+0.8**
MLPR	**Magueyes Islan**	**1.24**	**180**	⇓*e*P	**Pn**	**11 51 07.2**	**-0.7**
MLPR	**Magueyes Islan**	**1.24**	**180**		**Pn**	**11 51 07.1**	**-0.7**
OBIP	**Obispado Ponce**	**1.24**	**160**	*e*S	**Sn**	**11 51 24.2**	**+0.6**
OBIP	**Obispado Ponce**	**1.24**	**160**	⇑*e*P	**Pn**	**11 51 06.5**	**-1.3**
OBIP	**Obispado Ponce**	**1.24**	**160**	Pn	**Pn**	**11 51 06.6**	**-1.3**
GBPR	**Guanica, Bosqu**	**1.24**	**172**	⇓*e*P	**Pn**	**11 51 07.7**	**-0.2**
GBPR	**Guanica, Bosqu**	**1.24**	**172**		**Pn**	**11 51 07.7**	**-0.2**
GCPR	**Guaynabo City**	**1.29**	**134**	*e*S	**Sn**	**11 51 24.6**	**-0.1**
GCPR	**Guaynabo City**	**1.29**	**134**	⇑*e*P	**Pn**	**11 51 07.6**	**-0.9**
GCPR	**Guaynabo City**	**1.29**	**134**		**Pn**	**11 51 08.2**	**-0.3**
SJG	**San Juan**	**1.39**	**142**	Pn	**Pn**	**11 51 09.6**	**-0.3**
	comp=Z,119nm,0.3s,baz=318,slow=11,SNR=65						
SJG				Sn	**Sb**	**11 51 30.3**	**+1.0**
	comp=Z,459nm,0.3s,baz=213,slow=20,SNR=21						
SJG				LR	LR	11 52 14.0	
	comp=Z,504nm,19.6s,baz=308,slow=60						
SJG	**San Juan**	**1.39**	**142**	*e*P	**Pn**	**11 51 07.7**	**-2.2**
SJG	**San Juan**	**1.39**	**142**		**Pn**	**11 51 09.5**	**-0.5**
ICMP	**Isla Caja de M**	**1.41**	**159**	⇑*e*P	**Pn**	**11 51 10.4**	**+0.2**
ICMP	**Isla Caja de M**	**1.41**	**159**	*e*S	**Sn**	**11 51 28.6**	**+0.8**
ICMP	**Isla Caja de M**	**1.41**	**159**		**Pn**	**11 51 10.6**	**+0.4**
PCDR	**Punta Cana, DR**	**1.44**	**241**	*i* P	**Pn**	**11 51 10.8**	**+0.2**
PCDR				*e*S	**Sb**	**11 51 32.3**	**+1.7**
PCDR				IAML		11 51 35.8	
	comp=Z,2μm,0.5s						
PCDR	**Punta Cana, DR**	**1.44**	**241**		**Pn**	**11 51 10.6**	**0.0**
IGPR	**InterUniversit**	**1.53**	**144**	⇓*e*P	**Pn**	**11 51 11.7**	**-0.2**
IGPR	**InterUniversit**	**1.53**	**144**	⇑*e*P	**Pn**	**11 51 11.4**	**-0.4**
IGPR	**InterUniversit**	**1.53**	**144**	*e*S	**Sn**	**11 51 31.6**	**+0.8**
IGPR	**InterUniversit**	**1.53**	**144**		**Pn**	**11 51 12.1**	**+0.2**
IGPR				Sn	**Sn**	**11 51 31.7**	**+0.9**
PDPR	**Patillas Dam,**	**1.54**	**140**	⇓*e*P	**Pn**	**11 51 11.4**	**-0.6**
PDPR	**Patillas Dam,**	**1.54**	**140**	*e*S	**Sn**	**11 51 31.2**	**+0.2**
PDPR	**Patillas Dam,**	**1.54**	**140**		**Pn**	**11 51 11.4**	**-0.6**
PDPR				Sn	**Sn**	**11 51 31.2**	**+0.2**
HUMP	**Col San Antoni**	**1.56**	**133**		**Pn**	**11 51 12.4**	**+0.1**
CUPR	**Culebra, Puert**	**1.91**	**118**	⇑*e*P	**Pn**	**11 51 15.9**	**-1.1**
CUPR	**Culebra, Puert**	**1.91**	**118**	*e*S	**Sn**	**11 51 39.3**	**-0.7**
CUPR	**Culebra, Puert**	**1.91**	**118**		**Pn**	**11 51 16.1**	**-0.9**
STVI	**Saint Thomas**	**2.17**	**113**	⇑*e*P	**Pn**	**11 51 19.8**	**-0.8**
STVI	**Saint Thomas**	**2.17**	**113**	*e*S	**Sn**	**11 51 45.4**	**-1.0**
STVI	**Saint Thomas**	**2.17**	**113**		**Pn**	**11 51 19.5**	**-1.1**
DR12	**Loma Pena Alta**	**2.24**	**259**		**Pn**	**11 51 21.2**	**-0.5**
TBVI	**Tortola**	**2.44**	**109**	⇑*e*P	**Pn**	**11 51 23.5**	**-0.8**
TBVI	**Tortola**	**2.44**	**109**	*e*S	**Sn**	**11 51 52.4**	**-0.8**
TBVI	**Tortola**	**2.44**	**109**		**Pn**	**11 51 23.5**	**-0.8**
TBVI					**Sn**	**11 51 52.4**	**-0.8**
CDVI	**St. Croix**	**2.61**	**123**		**Pn**	**11 51 27.4**	**+0.6**
SDD	**Santo Domingo**	**2.81**	**255**	*i* P	**Pn**	**11 51 29.9**	**+0.5**
SDD	**Santo Domingo**	**2.81**	**255**		**Pn**	**11 51 29.6**	**+0.1**
BON1	**Bonao**	**3.17**	**266**	*i* P	**Pn**	**11 51 35.0**	**+0.5**
BANI	**BANI**	**3.23**	**256**		**Pn**	**11 51 36.3**	**+0.9**
SC01	**Santiago de lo**	**3.48**	**274**	*i* P	**Pn**	**11 51 39.4**	**+0.8**
SC01				IAML		11 52 59.3	
	comp=Z,560nm,0.7s						
SC01	**Santiago de lo**	**3.48**	**274**		**Pn**	**11 51 39.0**	**+0.3**
SMRT	**St. Maarten**	**3.95**	**106**	*e*P	**Pn**	**11 51 43.9**	**-1.2**
SMRT	**St. Maarten**	**3.95**	**106**	*e*	**Sn**	**11 52 31.6**	**+1.2**
SMRT	**St. Maarten**	**3.95**	**106**		**Pn**	**11 51 44.2**	**-0.9**
SDDR	**Presa de Saban**	**4.01**	**267**	*i* P	**Pn**	**11 51 46.9**	**+0.8**
SDDR				*e*S	**Sn**	**11 52 33.6**	**+1.5**
SDDR				IAML		11 52 56.8	
	comp=Z,274nm,0.7s						
SDDR	**Presa de Saban**	**4.01**	**267**		**Pn**	**11 51 47.1**	**+1.0**
GRTK	**Grand Turk**	**4.46**	**302**	Pn	**Pn**	**11 51 49.1**	**-3.0**
SKI	**Saint Kitts**	**4.51**	**114**	*e*P	**Pn**	**11 51 53.0**	**+0.2**
SKI	**Saint Kitts**	**4.51**	**114**	*e*	**Sn**	**11 52 45.9**	**+1.6**
SKI	**Saint Kitts**	**4.51**	**114**		**Pn**	**11 51 52.9**	**+0.1**
ANWB	**Willy Bob**	**5.23**	**106**	*e*P	**Pn**	**11 52 01.9**	**-0.8**
ANWB	**Willy Bob**	**5.23**	**106**	*e*S	**Sn**	**11 52 60.0**	**-2.1**
ANWB	**Willy Bob**	**5.23**	**106**	Pn	**Pn**	**11 52 02.4**	**-0.4**
MLYT	**Lee's Yard**	**5.25**	**117**	*e*P	**Pn**	**11 52 07.5**	**+4.5**
MLYT	**Lee's Yard**	**5.25**	**117**	*e*S	**Sn**	**11 53 02.6**	**0.0**
GTBY	**Guantanamo Bay**	**7.63**	**277**	Pn	**Pn**	**11 52 32.1**	**-3.6**
URIC	**Uribia, Colomb**	**8.86**	**213**	*e*P	**Sn**	**11 54 24.8**	**-6.6**
URIC	**Uribia, Colomb**	**8.86**	**213**	Pn	**Pn**	**11 52 51.2**	**-1.4**
DABV	**Dabajuro**	**8.94**	**203**	*e*P	**Pn**	**11 52 58.2**	**+4.5**
PCRV	**Puerto La Cruz**	**9.29**	**165**	Pn	**Pn**	**11 53 01.2**	**+2.7**
	comp=Z,1.1nm,0.3s,baz=301,slow=2.3,SNR=5.9						
PCRV				Sn	**Sn**	**11 54 42.0**	**0.0**
	comp=Z,2.1nm,0.3s,baz=16,slow=16,SNR=3.6						
PLCV	**Puerto La Cruz**	**9.31**	**165**		**Pn**	**11 53 01.2**	**+2.4**
PLCV					**Sn**	**11 54 42.0**	**-0.6**
MTDJ	**Mount Denham**	**9.98**	**266**	Pn	**Pn**	**11 53 06.8**	**-1.3**
BAUV	**El Baul**	**10.26**	**185**	*e*P	Pn	11 53 17.0	+5.2
BAUV	**El Baul**	**10.26**	**185**	*e*S	**Sn**	**11 55 06.7**	**+0.9**
SDV	**Santo Domingo**	**10.84**	**199**	Pn	**Pn**	**11 53 22.5**	**+2.5**
	comp=Z,1.3nm,0.3s,baz=352,slow=15,SNR=7.5						
SDV				Sn	**Sn**	**11 55 19.1**	**-1.3**
	comp=Z,1.1nm,0.3s,baz=330,slow=16,SNR=2.6						
SDV				LR	LR	11 57 45.3	
	comp=Z,134nm,20.0s,baz=61,slow=38						
SDV	**Santo Domingo**	**10.84**	**199**	*e*P	**Pn**	**11 53 22.9**	**+3.0**
SDV	**Santo Domingo**	**10.84**	**199**		**Pn**	**11 53 20.9**	**+0.9**
CODC	**Agustn Codazz**	**11.10**	**215**	*e*P	**Pn**	**11 53 20.3**	**-3.1**
PAMC	**Pamplona, Colo**	**13.02**	**206**	*e*P	**Pn**	**11 53 49.5**	**-0.5**
BBSR	**BB Station**	**13.27**	**9**	Pn	**Pn**	**11 53 50.3**	**-2.6**
BARC	**Barichara**	**13.89**	**206**	⇑*e*P	**Pn**	**11 54 00.1**	**-1.7**
UREC	**San Jos de Ur**	**14.06**	**217**	*e*P	**Pn**	**11 54 01.8**	**-2.0**
RUSC	**La Rusia**	**14.49**	**205**		**Pn**	**11 54 08.7**	**-1.4**
PTBC	**PUERTO BERRIO,**	**14.51**	**211**	*e*P	**Pn**	**11 54 07.1**	**-2.9**
DBBC	**Dabeiba**	**15.04**	**217**	*e*P	**Pn**	**11 54 19.5**	**+2.3**
SPBC	**San Pablo de B**	**15.12**	**208**	*e*P	**Pn**	**11 54 16.0**	**-2.2**
HELC	**Santa Helena**	**15.35**	**214**	*e*P	**Pn**	**11 54 20.4**	**-1.1**
NORC	**Norcasia**	**15.56**	**210**	*e*P	**Pn**	**11 54 23.9**	**0.0**
CBOC	**Ciudad Bolivar**	**15.88**	**214**	*e*P	**Pn**	**11 54 27.5**	**-0.8**
CHIC	**Chingaza**	**15.89**	**205**	*e*P	**P**	**11 54 31.0**	**-1.1**
ROSC	**El Rosal**	**15.95**	**207**	Pn	**P**	**11 54 31.9**	**-0.7**
	comp=Z,2.6nm,0.3s,baz=154,slow=18,SNR=3.4						
ROSC				LR	LR	12 01 08.2	
	comp=Z,166nm,19.3s,baz=22,slow=39						
ROSC	**El Rosal**	**15.95**	**207**		**Pn**	**11 54 29.7**	**+0.4**
ROSC				IAmb	IAmb	11 54 45.6	
	comp=Z,16nm,0.7s						
ORTC	**Ortega, Tolima**	**17.19**	**209**	*e*P	**Pn**	**11 54 43.4**	**-1.3**
YOTC	**Yotoco, Valle**	**17.65**	**212**	*e*P	**Pn**	**11 54 49.6**	**-0.9**
Z59A	**Georgetown, SC**	**17.74**	**324**	P	**P**	**11 54 52.9**	**+1.0**
	baz=139						
Z58A	**St. Stephen**	**18.10**	**323**	P	**P**	**11 54 58.3**	**+2.4**
	baz=138,SNR=8.3						
X60A	**Albert Glenn T**	**18.12**	**330**	P	**P**	**11 54 57.0**	**+0.9**
	baz=145						
NHSC	**New Hope**	**18.14**	**322**	P	**Pn**	**11 54 52.6**	**-3.7**
NHSC	**New Hope**	**18.14**	**322**	P	**P**	**11 54 58.6**	**+2.2**
	baz=136						
V61A	**Roper**	**18.53**	**335**	P	**Pn**	**11 55 02.9**	**+2.0**
	baz=150						
Z57A	**Bowman**	**18.59**	**322**	P	**Pn**	**11 55 05.2**	**+3.5**
	baz=135						
X58A	**Rowland**	**18.77**	**327**	P	**Pn**	**11 55 07.3**	**+3.4**
	baz=141						
255A	**Hazlehurst**	**18.78**	**315**	P	**P**	**11 55 00.3**	**-3.1**
255A				IAmb	IAmb	11 55 12.4	
	comp=Z,30nm,1.0s						
W58A	**Raeford**	**19.09**	**328**	P	**Pn**	**11 55 11.8**	**+4.0**
	baz=142						
V59A	**Middlesex**	**19.22**	**331**	P	**Pn**	**11 55 14.0**	**+4.7**
	baz=146						
Y56A	**Pelion**	**19.29**	**322**	P	**Pn**	**11 55 12.9**	**+2.7**
	baz=135						
SOTA	**Rioblanco**	**19.38**	**210**	*e*P	**P**	**11 55 10.8**	**+0.1**
JTS	**Las Juntas de**	**19.43**	**245**	P	**P**	**11 55 11.4**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=146,slow=12,SNR=5.9						
JTS	**Las Juntas de**	**19.43**	**245**	P	**P**	**11 55 11.1**	**+0.4**
FLOC	**Florencia**	**19.44**	**207**	P	**P**	**11 55 10.9**	**0.0**
W57A	**Gilead**	**19.58**	**327**	P	**Pn**	**11 55 17.7**	**+4.1**
	baz=141						
X56A	**White Oak**	**19.64**	**324**	P	**Pn**	**11 55 17.6**	**+3.3**
	baz=137,SNR=23						
V58A	**Windy Hill, Pi**	**19.65**	**330**	P	**Pn**	**11 55 16.9**	**+2.5**
V58A				IAmb	IAmb	11 55 19.1	
	comp=Z,8.4nm,0.9s						
V58A	**Windy Hill, Pi**	**19.65**	**330**	P	**Pn**	**11 55 17.5**	**+3.1**
	baz=144						
Y55A	**Saluda**	**19.72**	**321**	P	**Pn**	**11 55 18.3**	**+3.0**
	baz=134,SNR=11						
W56A	**Indian Trail**	**19.87**	**326**	P	**Pn**	**11 55 22.4**	**+5.2**
	baz=139						
T59A	**Double "B" Far**	**19.94**	**335**	P	**Pn**	**11 55 21.7**	**+3.8**

	baz=150						
X55A	**Gracelyn & Ava**	**19.97**	**322**	P	**Pn**	**11 55 23.5**	**+5.3**
	baz=136,SNR=9.7						
TEIG	**Tepich**	**20.00**	**276**	P	**P**	**11 55 16.9**	**0.0**
	comp=Z,1.3nm,0.3s,baz=216,slow=0.0,SNR=8.0						
TEIG	**Tepich**	**20.00**	**276**	P	**P**	**11 55 13.1**	**-3.9**
KMSC	**Kings Mountain**	**20.29**	**324**	P	Pn	11 55 27.2	+5.3
	baz=138,SNR=5.8						
V56A	**Mocksville**	**20.34**	**327**	P	Pn	11 55 29.3	+6.7
	baz=141						
GOGA	**Godfrey**	**20.36**	**317**	P	Pn	11 55 27.0	+4.1
	baz=130						
X54A	**Belton**	**20.45**	**321**	P	Pn	11 55 28.6	+4.7
	baz=134						
T57A	**Hurt**	**20.69**	**331**	P	Pn	11 55 27.8	+1.1
	baz=146,SNR=5.4						
PTGA	**Pitinga**	**21.01**	**160**	P	**P**	**11 55 27.5**	**-0.3**
	comp=Z,2.3nm,0.3s,baz=349,slow=15,SNR=6.7						
PTGA	**Pitinga**	**21.01**	**160**	P	**P**	**11 55 27.5**	**-0.3**
PTGA				IAmb	IAmb	11 55 29.1	
	comp=Z,10nm,1.4s						
TKL	**Tuckaleechee C**	**22.05**	**321**	P	P	11 55 51.4	+13
	comp=Z,16nm,0.6s,baz=134,slow=16,SNR=28						
TKL				S	**S**	**11 59 38.8**	**-1.7**
	comp=Z,10nm,0.7s,baz=96,slow=12,SNR=5.0						
APG	**El Apazote**	**22.76**	**263**	P	**P**	**11 55 47.2**	**+0.4**
	comp=Z,6.2nm,0.8s,baz=239,slow=13,SNR=7.0						
CCIG	**Comitan**	**24.06**	**267**	P	**P**	**11 55 59.2**	**-0.4**
CCIG				IAmb	IAmb	11 56 01.4	
	comp=Z,12nm,0.9s						
TLIG	**Tlapa**	**29.93**	**272**	P	**P**	**11 56 49.9**	**-2.4**
TLIG				IAmb	IAmb	11 56 53.3	
	comp=Z,5.8nm,0.7s						
ABTX	**Abilene, Hawle**	**32.07**	**301**	P	**P**	**11 57 11.0**	**+0.1**
TXAR	**Lajitas Array**	**34.74**	**294**	P	**P**	**11 57 34.7**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=109,slow=11,SNR=3.6						
TXAR	**Lajitas Array**	**34.74**	**294**	P	**P**	**11 57 35.4**	**+1.1**
LPAZ	**La Paz**	**35.30**	**182**	P	**P**	**11 57 42.6**	**+2.9**
	comp=Z,1.0nm,0.6s,baz=335,slow=7.0,SNR=2.6						
MNTX	**Cornudas Mount**	**36.59**	**298**	P	**P**	**11 57 50.8**	**+0.7**
MNTX				IAmb	IAmb	11 57 50.9	
	comp=Z,3.7nm,1.0s						
ANMO	**Albuquerque**	**38.15**	**302**	LR	LR	12 17 39.6	
	comp=Z,56nm,18.1s,baz=62,slow=42						
SDCO	**Great Sand Dun**	**38.18**	**307**	P	**P**	**11 58 03.3**	**-0.6**
PV17	**East Wray Mesa**	**40.95**	**307**	P	**P**	**11 58 27.2**	**+0.4**
PV17				IAmb	IAmb	11 58 46.3	
	comp=Z,3.7nm,1.1s						
PDAR	**Pinedale Array**	**42.75**	**313**	P	**P**	**11 58 40.6**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=77,slow=9.4,SNR=4.6						
RLMT	**Red Lodge**	**43.40**	**316**	P	**P**	**11 58 46.9**	**+0.2**
REDW	**Red Top Meadow**	**43.84**	**313**	P	**P**	**11 58 50.5**	**+0.2**
FXWY	**Fox Creek**	**44.05**	**314**	P	**P**	**11 58 52.9**	**+0.9**
DLMT	**Dillon**	**45.68**	**315**	P	**P**	**11 59 05.7**	**+0.8**
DLMT				IAmb	IAmb	11 59 06.4	
	comp=Z,2.2nm,0.8s						
PFO	**Pinyon Flats O**	**46.10**	**298**	LR	LR	12 20 48.6	
	comp=Z,104nm,20.0s,baz=321,slow=39						
CPUP	**Villa Florida**	**46.25**	**168**	P	**P**	**11 59 11.8**	**+2.5**
	comp=Z,0.6nm,0.3s,baz=351,slow=8.9,SNR=3.5						
NVAR	**Mina Array Bea**	**48.16**	**305**	P	**P**	**11 59 24.1**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=115,slow=5.1,SNR=4.0						
NEW	**Newport**	**49.56**	**318**	P	**P**	**11 59 34.7**	**-0.1**
NEW				IAmb	IAmb	11 59 34.8	
	comp=Z,3.9nm,0.8s						
YKA	**Yellowknife Ar**	**54.14**	**335**	P	**P**	**12 00 07.2**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=113,slow=7.8,SNR=7.0						
ESDC	**Sonseca Array**	**57.45**	**55**	P	**P**	**12 00 34.0**	**+1.2**
	comp=Z,2.2nm,0.7s,baz=266,slow=7.5,SNR=8.4						
DBIC	**Dimbokro**	**61.60**	**93**	P	**P**	**12 01 02.4**	**+0.6**
	comp=Z,1.5nm,0.4s,baz=277,slow=5.5,SNR=5.0						
DBIC	**Dimbokro**	**61.60**	**93**	P	**P**	**12 01 02.2**	**+0.4**
JIS	**Juneau Island**	**61.95**	**326**	P	**P**	**12 00 59.8**	**-3.6**
INK	**Inuvik**	**63.64**	**338**	P	**P**	**12 01 14.0**	**-0.5**
INK				IAmb	IAmb	12 01 28.7	
	comp=Z,2.3nm,1.0s						
DAWY	**Dawson**	**65.17**	**333**	P	**P**	**12 01 24.7**	**0.0**
DAWY				IAmb	IAmb	12 01 25.5	
	comp=Z,2.9nm,1.2s						
TORD	**Torodi Ar. Bea**	**65.95**	**84**	P	**P**	**12 01 30.3**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=299,slow=6.1,SNR=4.8						
ILAR	**Eielson Array**	**68.47**	**333**	P	**P**	**12 01 44.9**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=102,slow=4.9,SNR=6.3						
ILAR	**Eielson Array**	**68.47**	**333**	P	**P**	**12 01 45.5**	**-0.1**
BPAW	**Bear Paw Mtn.**	**70.26**	**332**	P	**P**	**12 01 56.2**	**-0.6**
FINES	**FINESS Array B**	**74.81**	**30**	P	**P**	**12 02 24.7**	**+0.9**
	comp=Z,2.4nm,0.8s,baz=278,slow=5.1,SNR=4.1						
LZH	**Lanzhou**	**124.33**	**9**	*e*PKP	**PKPdf**	**12 09 39.7**	**-3.5**
LZH				pPKP	pPKPdf	12 09 49.6	-1.6
LZH				sPKP		12 09 53.5	
STKA	**Stephens Creek**	**151.34**	**238**	PKPbc	**PKPbc**	**12 10 36.6**	**-1.2**
	comp=Z,2.4nm,0.8s,baz=136,slow=3.0,SNR=5.2						
WRA	**Warramunga Arr**	**159.83**	**264**	PKPab	**PKPab**	**12 11 21.9**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=86,slow=4.1,SNR=3.5						
ASAR	**Alice Springs**	**160.00**	**254**	PKPab	**PKPab**	**12 11 22.2**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=102,slow=4.2,SNR=9.3						
ASAR	**Alice Springs**	**160.00**	**254**		**PKPab**	**12 11 22.4**	**-0.9**

IDC 12 12:08:58.9±3.7,32°.05N×85°.49E,h0^{km},mb3.2/2, mb1 3.4/5,mb1mx3.2/48,mbtmp3.3/5,ML3.3/3,Error ellipse: s-maj=80.7km s-min=30.6km az=61.0,Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**14.93**	**351**	Pn	Pn	12 12 30.1	-1.1
	0.0nm,0.3s,baz=169,slow=12,SNR=2.5						
CMAR	**Chiang Mai Arr**	**18.18**	**135**	P	Pn	12 13 12.2	-0.7
	0.2nm,0.3s,baz=329,slow=12,SNR=7.3						
KURBB	**Kurchatov Arra**	**19.26**	**346**	P	P	12 13 23.4	-1.5
	0.0nm,0.3s,baz=166,slow=11,SNR=8.5						
ZALV	**Zalesovo Beam**	**21.89**	**359**	P	P	12 13 53.7	+0.4
	0.5nm,0.3s,baz=182,slow=13,SNR=4.5						
SONM	**Songino Array**	**22.38**	**39**	P	P	12 13 59.9	+1.1
	0.7nm,0.8s,baz=240,slow=12,SNR=5.6						

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*GCG **12** 12:09:04.4±1.0,12°.44N×92°.28W,h24^{km}±999^{km},MD4.2*
*NEIC **12** 12:09:23.8±3.6,13°.62N±0°.06×91°.53W±0°.06,h35^{km}±2^{km}, Error ellipse: s-maj=11.2km s-min=7.7km az=222.0*
*MEX **12** 12:09:24.7±0.5,13°.74N×91°.49W,h74^{km}±21^{km},MD4.1*
*IDC **12** 12:09:25.3±7.0,13°.59N×91°.44W,h57^{km}±38^{km},mb3.4/5, mb1 3.8/8,mb1mx3.5/36,mbtmp3.7/8,ML4.0/3,MS3.4/5, Ms1 3.4/5,ms1mx3.0/26,Error ellipse: s-maj=80.1km s-min=31.0km az=1.0*
ISC 12 12:09:24.3±1.4,13°.65N±0°.09×91°.54W±0°.05,h41^{km}±11^{km}, n60,σ2^{s}.05/73,mb4.0/10,MS3.4/3,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERG	**Entre ros, C**	**0.79**	**358**	*e*P	**Pn**	**12 09 40.2**	**+1.2**
FUG	**Fuego 3**	**1.05**	**40**	*e*P	**Pn**	**12 09 42.8**	**+0.1**
FUG				*e*S	Sn	12 10 13.8	+18
STG3	**Santiaguito 3,**	**1.06**	**359**	*e*P	**Pn**	**12 09 42.7**	**-0.2**
STG3				*e*S	Sn	12 10 11.7	+15
PCG	**Pacaya**	**1.17**	**51**	*e*P	**Pn**	**12 09 44.7**	**+0.2**
IXG	**Ixpaco**	**1.19**	**64**	*e*P	**Pn**	**12 09 43.2**	**-1.4**
THIG		**1.44**	**331**	*i* P	**Pn**	**12 09 47.5**	**-0.4**
THIG				*i* S	**Sn**	**12 10 03.7**	**-1.8**
THIG		**1.44**	**331**		**Pn**	**12 09 47.5**	**-0.4**
THIG					**Sn**	**12 10 03.7**	**-1.8**
NBG	**Las Nubes**	**1.49**	**51**	*e*P	**Pn**	**12 09 49.8**	**+1.0**
APG	**El Apazote**	**1.71**	**38**	P	**Pn**	**12 09 53.1**	**+1.2**
	38nm,0.3s,baz=202,slow=13,SNR=241						
APG				S	**Sn**	**12 10 16.6**	**+4.1**
	35nm,0.3s,baz=323,slow=20,SNR=8.3						
SNET	**Serv Nac Est T**	**2.25**	**89**	Pn	**Pn**	**12 09 56.4**	**-2.7**
SNET					**Sn**	**12 10 23.0**	**-2.7**
MRL	**Marmol**	**2.30**	**51**	*e*P	**Pn**	**12 10 00.6**	**+0.7**
PCIG		**2.61**	**322**	*e*P	**Pn**	**12 10 02.7**	**-1.3**
PCIG				*i* S	**Sn**	**12 10 33.4**	**-1.1**
PCIG		**2.61**	**322**		**Pn**	**12 10 02.7**	**-1.3**
PCIG					**Sn**	**12 10 33.4**	**-1.1**
CCIG	**Comitan**	**2.68**	**348**	*i* P	**Pn**	**12 10 03.8**	**-1.4**
CCIG				*i* S	**Sn**	**12 10 33.7**	**-2.9**
CCIG	**Comitan**	**2.68**	**348**		**Pn**	**12 10 07.8**	**+2.6**
CCIG				Sn	**Sn**	**12 10 32.4**	**-4.2**
CCIG	**Comitan**	**2.68**	**348**		**Pn**	**12 10 03.8**	**-1.4**
CCIG					**Sn**	**12 10 33.7**	**-2.9**
TGIG		**3.47**	**334**	*i* P	**Pn**	**12 10 14.5**	**-1.4**
TGIG				*i* S	**Sn**	**12 10 53.2**	**-2.5**
TGIG		**3.47**	**334**		**Pn**	**12 10 14.5**	**-1.4**
TGIG					**Sn**	**12 10 53.2**	**-2.5**
CSGN	**Cosiguina Volc**	**3.94**	**99**	Pn	**Pn**	**12 10 20.2**	**-2.1**
TGUH	**Tegucigalpa,Un**	**4.17**	**84**		**Pn**	**12 10 26.9**	**+1.4**
CMIG	**Matias Romero**	**4.70**	**317**	P	**Pn**	**12 10 33.5**	**+0.7**
	1.2nm,0.3s,baz=134,slow=9.0,SNR=18						
CMIG				S	**Sn**	**12 11 33.0**	**+6.9**
	1.8nm,0.3s,baz=0.0,slow=20,SNR=3.1						
CMIG	**Matias Romero**	**4.70**	**317**	*e*P	**Pn**	**12 10 32.8**	**0.0**
CMIG				*i* S	**Sn**	**12 11 25.6**	**-0.6**
CMIG	**Matias Romero**	**4.70**	**317**		**Pn**	**12 10 32.8**	**0.0**
CMIG					**Sn**	**12 11 25.6**	**-0.6**
ESPN	**Las Esperanzas**	**7.21**	**101**	Pn	**Pn**	**12 11 05.9**	**-1.3**
TEIG	**Tepich**	**7.25**	**25**	P	**Pn**	**12 11 10.0**	**+2.2**
	3.9nm,0.3s,baz=253,slow=0.0,SNR=4.3						
TEIG				LR	LR	12 14 25.0	
	comp=Z,322nm,18.2s,baz=42,slow=41						
TEIG	**Tepich**	**7.25**	**25**		**Pn**	**12 11 07.3**	**-0.5**
JTS	**Las Juntas de**	**7.26**	**117**	LR	LR	12 13 47.5	
	comp=Z,131nm,19.5s,baz=9.5,slow=37						
JTS	**Las Juntas de**	**7.26**	**117**		**Pn**	**12 11 09.4**	**+1.5**
TLIG	**Tlapa**	**7.81**	**301**	Pn	**Pn**	**12 11 15.5**	**0.0**
BCIP	**Isla Barro Col**	**12.31**	**110**	Pn	**Pn**	**12 12 21.0**	**+3.9**
TXAR	**Lajitas Array**	**19.23**	**326**	P	**Pn**	**12 13 46.6**	**+0.1**
	0.2nm,0.3s,baz=148,slow=11,SNR=3.0						
TX31	**Lajitas Ar. Si**	**19.24**	**326**	P	**P**	**12 13 42.8**	**-2.5**
TX32	**Lajitas Array**	**19.24**	**326**	P	**P**	**12 13 42.7**	**-2.6**
RUSC	**La Rusia**	**19.74**	**111**	P	**P**	**12 13 48.4**	**-2.9**
OXF	**Oxford**	**20.86**	**5**	P	**P**	**12 13 59.7**	**-3.1**
MIAR	**Mount Ida**	**20.89**	**355**	P	**P**	**12 14 00.0**	**-3.0**
MNTX	**Cornudas Mount**	**22.00**	**327**	P	**P**	**12 14 15.6**	**+0.5**
MNTX				IAmb	IAmb	12 14 19.1	
	comp=Z,3.4nm,0.7s						
TKL	**Tuckaleechee C**	**23.01**	**16**	P	**P**	**12 14 25.1**	**-0.6**
	comp=Z,4.0nm,0.8s,baz=174,slow=12,SNR=5.9						
TKL				LR	LR	12 23 39.7	
	comp=Z,142nm,18.8s,baz=150,slow=37						
TKL	**Tuckaleechee C**	**23.01**	**16**	P	**P**	**12 14 25.3**	**-0.4**
TKL				IAmb	IAmb	12 14 26.4	
	comp=Z,5.0nm,0.8s						
CCM	**Cathedral Cave**	**24.31**	**1**	P	**P**	**12 14 37.1**	**-0.9**
CCM				IAmb	IAmb	12 14 37.4	
	comp=Z,5.9nm,0.7s						
SJG	**San Juan**	**24.81**	**76**	LR	LR	12 25 34.9	
	comp=Z,58nm,18.6s,baz=264,slow=39						
MTPU	**Mount Pierson**	**30.44**	**327**	P	**P**	**12 15 37.1**	**+3.7**
BINY	**Binghamton**	**31.48**	**22**	P	**P**	**12 15 43.2**	**+1.1**
BINY				IAmb	IAmb	12 15 53.9	
	comp=Z,6.8nm,0.9s						
PDAR	**Pinedale Array**	**32.92**	**335**	P	**P**	**12 15 55.7**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=127,slow=12,SNR=2.8						
NVAR	**Mina Array Bea**	**34.22**	**321**	P	**P**	**12 16 08.4**	**+1.9**
	comp=Z,0.7nm,0.6s,baz=132,slow=8.5,SNR=7.3						
NVAR	**Mina Array Bea**	**34.22**	**321**	P	**P**	**12 16 07.8**	**+1.3**
MCMT	**McKenzie Canyo**	**35.98**	**334**	P	**P**	**12 16 23.8**	**+2.3**
F10A	**Beach Ranch, E**	**38.83**	**331**	P	**P**	**12 16 46.4**	**+0.9**
SCHQ	**Schefferville**	**45.40**	**20**	LR	LR	12 39 06.3	
	comp=Z,87nm,18.3s,baz=330,slow=39						
YKA	**Yellowknife Ar**	**51.47**	**347**	P	**P**	**12 18 24.4**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=149,slow=8.0,SNR=13						
YKA				PcP	**PcP**	**12 19 38.6**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=150,slow=4.1,SNR=7.8						
BCAR	**Beaver Creek A**	**60.54**	**336**	P	**P**	**12 19 31.1**	**+0.9**
ILAR	**Eielson Array**	**63.34**	**337**	P	**P**	**12 19 48.5**	**-0.4**
	comp=Z,0.3nm,0.9s,baz=165,slow=3.9,SNR=9.5						
ILAR	**Eielson Array**	**63.34**	**337**	P	**P**	**12 19 50.1**	**+1.1**
TRF	**Thorofare Moun**	**64.15**	**335**	P	**P**	**12 19 55.3**	**+0.8**
MLY	**Manley**	**64.94**	**336**	P	**P**	**12 19 59.6**	**+0.1**
MLY				IAmb	IAmb	12 20 00.1	
	comp=Z,2.9nm,0.7s						
TOLK	**Toolik Lake Re**	**66.00**	**340**	P	**P**	**12 20 07.0**	**+0.7**
TOLK				IAmb	IAmb	12 20 18.5	
	comp=Z,4.1nm,1.4s						
KSH	**Kashi**	**125.85**	**12**	PKP	**PKPdf**	**12 28 22.1**	**-0.2**
KSH				sPKP		12 28 37.1	
KSH				PP	**PP**	**12 30 18.6**	**+4.8**
KSH				SKS	**SKSdf**	**12 35 28.9**	**-2.3**
KSH	**Kashi**	**125.85**	**12**	SS	SS	12 47 15.6	+4.6
LZH	**Lanzhou**	**128.44**	**344**	*e*PKP	**PKPdf**	**12 28 27.2**	**-0.2**
LZH				pPKP	pPKPdf	12 28 38.1	-2.3
LZH				sPKP		12 28 41.6	
CMAR	**Chiang Mai Arr**	**146.47**	**342**	PKPbc	**PKPdf**	**12 29 00.2**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=350,slow=4.0,SNR=7.8						

STR 12 12:11:17.0±1.3,50°N±4°×°±°,h20^{km}±6^{km},MLv1.5/4, Germany

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTD	**Kalmit**	**0.32**	**191**	Pg	Pb	12 11 23.3	-0.7
KTD				Sg	Sb	12 11 29.3	+0.5
ABH	**Alteburg**	**0.48**	**301**	Pg	Pb	12 11 26.1	-0.6
LANF	**Langenberg**	**0.70**	**200**	Pg	Pb	12 11 30.9	+0.4
LANF				Sg	Sb	12 11 40.0	+0.3

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*IDC **12** 12:11:15.5±1.1,4°.06S×147°.42E,h0^{km},mb4.2/6, mb1 4.4/8,mb1mx3.9/39,mbtmp4.1/8,ML1.4/1,MS3.5/14, Ms1 3.5/14,ms1mx3.4/33,Error ellipse: s-maj=37.4km s-min=20.5km az=125.0*
*DJA **12** 12:11:16.1±2.5,4°S±3°×14°7E±°,h24^{km}±21^{km},M4.3/6, mb4.4/6,MLv4.3/2*
ISC 12 12:11:17.1±0.9,3°.87S±0°.10×147°.4E±0°.1,h10^{km},n21, σ2^{s}.62/10,mb4.0/5,MS3.4/11,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**4.60**	**96**	Pn	**Pn**	**12 12 24.5**	**-2.3**
	11nm,0.3s,baz=304,slow=6.0,SNR=4.0						
KRVT				LR	LR	12 13 59.8	
	comp=Z,944nm,19.3s,baz=254,slow=36						
PMG	**Port Moresby**	**5.51**	**183**	Pn	**Pn**	**12 12 37.0**	**-2.3**
	0.9nm,0.3s,baz=10,slow=11,SNR=5.6						
PMG				Sn	**Sn**	**12 13 47.2**	**+4.4**
	1.4nm,0.3s,baz=288,slow=20,SNR=2.5						
PMG				LR	LR	12 14 56.9	
	comp=Z,429nm,19.4s,baz=332,slow=42						
HNR	**Honiara**	**13.60**	**115**	LR	LR	12 19 00.4	
	comp=Z,126nm,20.3s,baz=274,slow=34						
WRA	**Warramunga Arr**	**20.46**	**218**	P	**P**	**12 15 53.7**	**-1.4**
	19nm,0.9s,baz=44,slow=11,SNR=94						
WRA				LR	LR	12 24 59.2	
	comp=Z,98nm,18.2s,baz=30,slow=41						
ASAR	**Alice Springs**	**23.63**	**212**	P	**P**	**12 16 27.2**	**-1.4**
	7.2nm,0.8s,baz=44,slow=8.1,SNR=77						
ASAR				LR	LR	12 25 45.8	
	comp=Z,144nm,20.4s,baz=30,slow=37						
DAV	**Davao City (W)**	**24.37**	**296**	LR	LR	12 24 04.0	
	comp=Z,67nm,20.3s,baz=154,slow=31						
FITZ	**Fitzroy Crossi**	**25.60**	**235**	P	**P**	**12 16 44.5**	**-2.3**
	8.2nm,0.8s,baz=64,slow=9.5,SNR=14						
FITZ				LR	LR	12 27 45.6	
	comp=Z,140nm,19.6s,baz=56,slow=39						
DZM	**Mont Dzumac**	**25.84**	**136**	LR	LR	12 25 18.2	
	comp=Z,210nm,19.7s,baz=254,slow=33						
KAPI	**Kappang**	**27.62**	**267**	LR	LR	12 29 49.2	
	comp=Z,74nm,18.1s,baz=185,slow=40						
STKA	**Stephens Creek**	**28.40**	**190**	LR	LR	12 27 59.3	
	comp=Z,91nm,18.7s,baz=20,slow=36						
H11S3	**WAKE ISLAND Hy**	**29.21**	**40**	T	T	12 47 51.8	
	baz=222,slow=75,SNR=16						
H11S2	**WAKE ISLAND Hy**	**29.22**	**40**	T	T	12 47 43.8	
	baz=222,slow=75,SNR=7.0						
H11S1	**WAKE ISLAND Hy**	**29.23**	**40**	T	T	12 47 50.1	
	baz=222,slow=75,SNR=4.0						
CMAR	**Chiang Mai Arr**	**52.66**	**297**	LR	LR	12 44 22.2	
	comp=Z,15nm,19.0s,baz=185,slow=38						
PETK	**Petropavlovsk-**	**57.42**	**7**	LR	LR	12 41 15.6	
	comp=Z,70nm,21.7s,baz=240,slow=31						
BRDH	**Bariadhala**	**60.50**	**299**	LR	LR	12 45 05.2	
	comp=Z,59nm,21.7s,baz=128,slow=34						
PALK	**Pallekele**	**67.51**	**279**	LR	LR	12 53 40.2	
	comp=Z,86nm,19.1s,baz=134,slow=38						
ZALV	**Zalesovo Beam**	**77.45**	**327**	P	**P**	**12 23 13.3**	**+0.7**
	0.3nm,0.2s,baz=109,slow=8.1,SNR=2.2						
ILAR	**Eielson Array**	**83.36**	**23**	P	**P**	**12 23 45.1**	**+0.9**
	0.6nm,1.0s,baz=242,slow=6.2,SNR=4.8						
YKA	**Yellowknife Ar**	**97.09**	**28**	P	**P**	**12 24 51.9**	**+2.6**
	0.3nm,0.8s,baz=268,slow=4.2,SNR=4.1						
TORD	**Torodi Ar. Bea**	**144.93**	**287**	PKP	**PKPdf**	**12 30 54.6**	**-1.1**
	1.1nm,1.1s,baz=80,slow=1.6,SNR=2.9						

NNC 12 12:17:25.0±0.8,51°.06N×73°.99E,h0^{km},mb3.7,mpv3.7, 2C-4D,Error ellipse: s-maj=6.6km s-min=5.1km az=168.0,Suspected Mining explosion.,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRZS	**Berezniki**	**1.36**	**219**	P	Pg	12 17 49.0	-2.1
	13nm,0.2s						
BRZS				S	Sn	12 18 10.2	+0.1
	50nm,1.2s						
KURBB	**Kurchatov Arra**	**2.91**	**97**	⇓Pg	Pg	12 18 19.6	-1.1
	5.1nm,0.5s						
KURBB				⇓Lg	Lg	12 19 00.4	
	119nm,0.8s						
BRVK	**Borovoye**	**3.04**	**313**	⇑Pg	Pb	12 18 20.9	+1.0
	2.6nm,0.6s						
BRVK				⇑Lg	Lg	12 19 01.3	
	61nm,0.8s						
SEM	**Semipalatinsk**	**4.03**	**97**	Pg	Pb	12 18 36.2	-0.7
	5.1nm,0.1s						
SEM				Lg	Lg	12 19 31.7	
	14nm,0.1s						
BTLS	**Baital**	**6.02**	**180**	Pg	Pb	12 19 13.6	+3.0
	1.0nm,0.3s						
BTLS				Lg	Lg	12 20 35.6	
	4.0nm,0.5s						
TDK	**Taldyqorghan**	**6.74**	**152**	Pg	Pg	12 19 28.6	-5.5
	20nm,0.2s						
TDK				Lg	Lg	12 21 00.5	
	45nm,0.5s						
MAKZ	**Makanchi**	**6.76**	**126**	⇓Lg	Lg	12 21 01.5	
	8.4nm,0.8s						
KAPS	**Kapalarasan**	**6.80**	**146**	Pg	Pb	12 19 28.9	+5.0
	0.5nm,0.4s						
KAPS				Lg	Lg	12 21 01.6	
	11nm,0.5s						
MK31	**Makanchi Array**	**6.93**	**125**	⇓Lg	Lg	12 21 06.3	
	4.9nm,0.7s,baz=311,slow=26,SNR=8.0						
ARXS	**Arharly**	**7.32**	**158**	Pg	Pb	12 19 37.9	+5.1
	0.8nm,0.2s						
ARXS				Lg	Lg	12 21 17.5	
	8.2nm,0.4s						
KUU	**Kurty**	**7.34**	**167**	Pg	Pb	12 19 36.5	+3.3
	1.7nm,0.5s						
KUU				Lg	Lg	12 21 16.7	
	6.7nm,0.6s						
KTBS	**Karatobe**	**7.57**	**165**	Pg	Pb	12 19 40.1	+3.0
	0.8nm,0.6s						
KTBS				Lg	Lg	12 21 21.3	
	13nm,0.3s						
DJR	**Jarkent**	**7.78**	**148**	Pg	Pb	12 19 46.6	+5.9
	0.4nm,0.2s						
DJR				Lg	Lg	12 21 32.6	
	2.9nm,0.5s						
ZSN	**Zaisan**	**7.97**	**113**	Pg	Pb	12 19 44.3	+0.3
	3.5nm,0.2s						
ZSN				Lg	Lg	12 21 29.1	
	7.3nm,0.6s						
TNSS	**Tian-Shan**	**8.27**	**165**	Pg	Pb	12 19 54.3	+5.1
	1.0nm,0.0s						
TNSS				Lg	Lg	12 21 45.0	
	4.6nm,0.5s						
UZB	**Uzynbulak**	**8.62**	**155**	Pg	Pg	12 20 04.8	-5.2
	1.0nm,0.2s						
UZB				Lg	Lg	12 22 04.0	
	2.6nm,0.3s						

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*IDC **12** 12:42:22.1±1.2,24°.60N×99°.67E,h0^{km},mb3.5/4, mb1 3.6/5,mb1mx3.4/44,mbtmp3.4/5,ML3.5/1,Error ellipse: s-maj=38.2km s-min=17.3km az=82.0*
*BJI **12** 12:42:24.4±0.0,24°.59N×99°.54E,h5^{km},mb3.7/1,ML3.4/7*
ISC 12 12:42:23.4±1.0,24°.40N±0°.07×99°.62E±0°.08,h10^{km},n24, σ1^{s}.50/27,mb3.5/4,Yunnan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**2.93**	**75**	Pg	**Pg**	**12 43 20.9**	**+1.3**
KMI				Sg	**Sg**	**12 43 56.2**	**-1.4**
KMI				smax	smax		
	comp=N,290nm,0.9s						
KMI				smax	smax		
	comp=E,220nm,1.0s						
CM34	**Chiang Mai Arr**	**5.54**	**185**	P	**Pg**	**12 44 10.6**	**+1.1**
CM33	**Chiang Mai Arr**	**5.59**	**187**	P	**Pg**	**12 44 11.5**	**+1.0**
CMMT	**Chiang Mai**	**5.59**	**187**	P	**Pg**	**12 44 11.5**	**+0.9**
CMMT				S	**Sg**	**12 45 21.2**	**-1.9**
CM35	**Chiang Mai Arr**	**5.71**	**184**	P	**Pg**	**12 44 14.7**	**+1.8**
CM32	**Chiang Mai Arr**	**5.76**	**187**	P	**Pg**	**12 44 15.5**	**+1.7**
LAMP	**Lampang**	**5.85**	**180**	P	**Pg**	**12 44 13.4**	**-2.1**
CM36	**Chiang Mai Arr**	**5.87**	**185**	P	**Pg**	**12 44 17.4**	**+1.5**
CM31	**Chiang Mai Arr**	**5.95**	**186**	P	**Pg**	**12 44 15.7**	**-1.7**
CMAR	**Chiang Mai Arr**	**5.95**	**186**	Pn	**Pn**	**12 43 53.9**	**+2.3**
	0.3nm,0.3s,baz=360,slow=13,SNR=6.6						
CMAR				Pg	**Pg**	**12 44 16.1**	**-1.2**
	1.5nm,0.3s,baz=358,slow=18,SNR=35						
CMAR				Lg	Lg	12 45 39.8	
	1.4nm,0.3s,baz=359,slow=27,SNR=16						
CM15	**Chiang Mai Arr**	**5.95**	**186**	P	**Pg**	**12 44 15.4**	**-2.1**
CM09	**Chiang Mai Arr**	**5.95**	**186**	P	**Pg**	**12 44 18.7**	**+1.2**
CM02	**Chiang Mai Arr**	**5.97**	**186**	P	**Pg**	**12 44 17.4**	**-0.3**
CM01	**Chiang Mai Arr**	**5.98**	**186**	P	**Pg**	**12 44 19.1**	**+1.1**
CM13	**Chiang Mai Arr**	**5.98**	**186**	P	**Pg**	**12 44 15.9**	**-2.2**
CM04	**Chiang Mai Arr**	**6.00**	**186**	P	**Pg**	**12 44 19.5**	**+1.1**
CM05	**Chiang Mai Arr**	**6.00**	**186**	P	**Pg**	**12 44 18.9**	**+0.5**
MHMT	**Maesarieng**	**6.39**	**195**	P	**Pg**	**12 44 27.0**	**+1.2**
UTTA	**Uttaradit**	**6.68**	**172**	P	**Pg**	**12 44 30.4**	**-0.9**
WMQ	**Urumqi**	**21.70**	**336**	*e*P	**P**	**12 47 13.2**	**-1.4**
SONM	**Songino Array**	**24.00**	**11**	P	**P**	**12 47 36.8**	**-1.6**
	0.5nm,0.6s,baz=194,slow=12,SNR=4.0						
MKAR	**Makanchi Array**	**26.30**	**332**	P	**P**	**12 47 58.7**	**-0.5**
	1.2nm,0.8s,baz=142,slow=8.8,SNR=11						
WRA	**Warramunga Arr**	**55.55**	**139**	P	**P**	**12 51 59.0**	**-0.3**
	0.9nm,0.9s,baz=327,slow=7.4,SNR=4.9						
ASAR	**Alice Springs**	**58.22**	**143**	P	**P**	**12 52 19.2**	**+1.1**
	0.4nm,0.9s,baz=316,slow=6.4,SNR=5.3						

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*IDC **12** 12:48:41.3±1.8,2°.27N×96°.57E,h0^{km},mb3.8/4,mb1 3.9/6, mb1mx3.5/45,mbtmp3.7/6,ML3.7/2,Error ellipse: s-maj=53.9km s-min=20.8km az=54.0*
ISC 12 12:48:45.9±1.6,2°.4N±0°.2×96°.7E±0°.1,h30^{km},n9,σ0^{s}.50/7, mb3.8/4,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**2.29**	**79**	Pn	**Pn**	**12 49 21.4**	**-0.3**
	2.5nm,0.3s,baz=305,slow=10,SNR=12						
PSI				Sn	**Sn**	**12 49 49.5**	**+0.5**
	6.6nm,0.3s,baz=357,slow=22,SNR=6.1						
CMAR	**Chiang Mai Arr**	**16.13**	**8**	Pn	**P**	**12 52 33.2**	**-0.5**
	0.4nm,0.3s,baz=199,slow=10,SNR=4.2						
H08S2	**Diego Garcia H**	**26.10**	**247**	T	T	13 21 19.4	
	baz=69,slow=76,SNR=9.9						
H08S3	**Diego Garcia H**	**26.10**	**247**	T	T	13 21 21.9	
	baz=69,slow=76,SNR=15						
H08S1	**Diego Carcia H**	**26.11**	**247**	T	T	13 21 27.3	
	baz=69,slow=76,SNR=5.4						
WRA	**Warramunga Arr**	**43.11**	**123**	P	**P**	**12 56 43.6**	**-0.3**
	1.8nm,0.7s,baz=301,slow=9.2,SNR=11						
ASAR	**Alice Springs**	**44.53**	**128**	P	**P**	**12 56 55.5**	**+0.2**
	0.7nm,0.8s,baz=301,slow=7.8,SNR=9.6						
MKAR	**Makanchi Array**	**45.98**	**346**	P	**P**	**12 57 06.9**	**+0.5**
	0.4nm,0.3s,baz=156,slow=9.3,SNR=15						
ZALV	**Zalesovo Beam**	**52.32**	**351**	P	**P**	**12 57 54.8**	**+0.1**
	1.7nm,0.4s,baz=174,slow=7.1,SNR=8.3						

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*IDC **12** 13:14:36.8±2.3,1°.90N×124°.12E,h330^{km}±27^{km},mb3.2/8, mb1 3.3/11,mb1mx3.1/44,mbtmp3.9/11,Error ellipse: s-maj=22.4km s-min=10.5km az=93.0*
*NEIC **12** 13:14:36.4±1.8,1°.89N±0°.09×124°.11E±0°.09, h325^{km}±10^{km},mb4.5/23,Error ellipse: s-maj=13.8km s-min=12.8km az=53.0*
*DJA **12** 13:14:36.7±0.6,2°N±7°×12°4E±°,h316^{km}±4^{km},M4.3/12, mB4.7/1,mb4.3/5,MLv4.3/12,Mw(mB)3.9/1*
ISC 12 13:14:36.1±0.5,1°.83N±0°.05×124°.13E±0°.06,h323^{km},n59, σ1^{s}.17/64,mb4.4/18,1C-1D,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.26**	**187**	P	**Pn**	**13 15 20.9**	**+0.7**
KMSI				S	**S**	**13 15 55.8**	**+0.3**
MRSI	**Marisa**	**2.57**	**238**	P	**Pn**	**13 15 30.2**	**+0.6**
MRSI				S	**S**	**13 16 11.8**	**-0.6**

LUWI	Luwuk	3.16	205	P	Pn	13 15 34.3	-0.8
LUWI				S	S	13 16 18.4	-3.9
LUWI	Luwuk	3.16	205	Pn	Pn	13 15 34.2	-0.9
TNTI	Ternate	3.40	108	P	Pn	13 15 37.6	+0.2
TNTI				S	S	13 16 26.1	-0.5
TNTI	Ternate	3.40	108		Pn	13 15 37.2	-0.2
APSI	Ampana	3.69	222	P	Pn	13 15 40.2	-0.1
APSI				S	S	13 16 30.7	-1.1
SANI	Sanana	4.28	154	P	Pn	13 15 45.5	-1.1
MPSI	Mapaga	4.48	251	P	Pn	13 15 49.0	+0.2
DDMP	Don Marcelino,	4.53	20	*e*P	Pn	13 15 49.7	+0.3
DDMP				*e*S	S	13 16 45.7	-2.5
SKMP	Bagumbayan, Su	4.67	5	*e*P	Pn	13 15 51.0	0.0
KCP	Kidapawan	5.23	11	⇓*i*P	Pn	13 15 58.6	+1.4
KCP				*i* S	S	13 17 05.9	+3.2
BUKP	Musuan	6.08	9	*e*P	Pn	13 16 07.5	+0.4
TTSI	Tana Toraja	6.49	222	P	Pn	13 16 12.2	+0.4
	0.2nm1µm69nm,0.6s						
SPSI	Sidrap Palu	7.22	217	P	Pn	13 16 20.8	+0.2
	0.1nm29nm,0.7s						
BNSI	Bone	7.38	213	P	Pn	13 16 24.4	+1.8
SIJI	Sorong	7.62	111	P	Pn	13 16 27.4	+1.9
	1.4nm,0.3s,baz=323,slow=12,SNR=5.4						
KAPI	Kappang	8.09	213	P	Pn	13 16 31.9	+0.9
	1.2nm,0.3s,baz=61,slow=2.7,SNR=4.6						
KKM	Kota Kinabalu	8.94	298	Pn	Pn	13 16 41.3	-0.1
FAKI	Fak Fak	9.39	120	Pn	Pn	13 16 47.6	+0.8
SOEI	Soe	11.51	179	P	P	13 17 14.7	+1.0
SBUM	Sibu	11.92	273	P	P	13 17 18.4	+0.3
KSM	Kuching	13.82	269	P	Pn	13 17 41.0	+1.0
JAGI	Jajag, Banyuwa	14.27	224	P	Pn	13 17 46.9	+1.5
SZP	Santa	16.03	347	P	P	13 18 04.2	+0.9
FITZ	Fitzroy Crossi	19.86	176	P	P	13 18 46.2	+1.9
	0.7nm,0.3s,baz=14,slow=9.3,SNR=22						
FITZ	Fitzroy Crossi	19.86	176	P	P	13 18 46.0	+1.6
FITZ				IAmb	IAmb	13 18 59.6	
	comp=Z,29nm,1.8s						
TWG	Pinlang	21.07	352	P	P	13 18 54.8	-1.1
YULB	Yu-li	21.61	353	P	P	13 19 00.6	-0.3
YULB				IAmb	IAmb	13 19 20.0	
	comp=Z,74nm,1.9s						
TPUB	Ta-pu	21.61	351	P	P	13 19 00.8	-0.1
TPUB				IAmb	IAmb	13 19 03.7	
	comp=Z,36nm,0.8s						
YHNB	Yeheng	22.86	354	P	P	13 19 14.1	+1.8
PSA00	Pilbara Seismi	23.64	190	P	P	13 19 19.3	0.0
PSA00				IAmb	IAmb	13 20 08.4	
	comp=Z,42nm,1.9s						
WB0	Warramunga Arr	23.71	155	P	P	13 19 20.2	+0.2
WRA	Warramunga Arr	23.85	156	P	P	13 19 21.1	-0.1
	comp=Z,0.4nm,0.6s,baz=332,slow=11,SNR=12						
WRA	Warramunga Arr	23.85	156	P	P	13 19 22.1	+0.9
WB2	Warramunga Arr	23.85	156	P	P	13 19 18.7	-2.6
WB2				IAmb	IAmb	13 19 19.5	
	comp=Z,16nm,0.5s						
WR0	Warramunga Arr	23.95	155	P	P	13 19 22.8	+0.6
ASAR	Alice Springs	27.07	160	P	P	13 19 50.7	+0.6
	comp=Z,0.1nm,0.3s,baz=339,slow=7.9,SNR=7.9						
JCJ	Chichijima	30.51	33	P	P	13 20 19.2	-1.1
	comp=Z,54nm,0.5s,baz=258,slow=22,SNR=7.7						
MORW	Morawa	31.69	194	P	P	13 20 30.4	-0.1
MORW				IAmb	IAmb	13 21 03.8	
	comp=Z,33nm,1.6s						
FORT	Forrest	32.65	174	P	P	13 20 39.3	+0.5
FORT				IAmb	IAmb	13 21 13.5	
	comp=Z,25nm,1.2s						
NWAO	Narrogin (SRO)	35.18	190	P	P	13 21 00.6	+0.1
	comp=Z,3.6nm,0.7s,baz=352,slow=7.1,SNR=3.7						
NWAO	Narrogin (SRO)	35.18	190	P	P	13 21 00.8	+0.4
NWAO	Narrogin (SRO)	35.18	190	P	P	13 21 00.8	+0.4
NWAO				IAmb	IAmb	13 21 02.8	
	comp=Z,116nm,1.9s						
MJAR	Matsushiro Arr	36.91	19	P	P	13 21 13.5	-1.5
	comp=Z,3.4nm,0.7s,baz=189,slow=9.2,SNR=9.8						
MJAR	Matsushiro Arr	36.91	19	P	P	13 21 13.1	-1.8
USA0B	Ussuriysk Arra	42.76	8	P	P	13 22 02.6	0.0
USA0B				IAmb	IAmb	13 23 01.6	
	comp=Z,41nm,1.9s						
USRK	Ussuriysk Ar.	42.76	8	P	P	13 22 02.6	0.0
	comp=Z,1.7nm,0.4s,baz=194,slow=7.3,SNR=18						
USRK	Ussuriysk Ar.	42.76	8	P	P	13 22 02.4	-0.1
SONM	Songino Array	48.33	344	P	P	13 22 44.8	-1.2
	comp=Z,0.2nm,0.5s,baz=157,slow=7.8,SNR=2.5						
SONM	Songino Array	48.33	344	IAmb	IAmb	13 22 47.9	
	comp=Z,0.9nm,1.2s						
MKAR	Makanchi Array	57.68	327	P	P	13 23 53.3	-0.3
	comp=Z,0.7nm,0.5s,baz=122,slow=8.7,SNR=13						
PEA0B	Petropavlovsk-	58.17	23	P	P	13 23 57.2	+0.4
PEA0B				IAmb	IAmb	13 24 44.3	
	comp=Z,36nm,1.4s						
PETK	Petropavlovsk-	58.17	23	P	P	13 23 57.3	+0.5
	comp=Z,3.1nm,0.9s,baz=236,slow=2.2,SNR=11						
YAK	Yakutsk	60.20	3	P	P	13 24 09.7	-0.7
YAK				IAmb	IAmb	13 24 10.6	
	comp=Z,11nm,0.7s						
MA2	Magadan	61.18	15	P	P	13 24 17.6	+0.6
KURK	Kurchatov	61.98	329	P	P	13 24 22.5	0.0
TIXI	Tiksi	69.78	2	P	P	13 25 10.5	-1.0
SYO	Syowa Base	89.73	201	⇑*e*X	P	13 27 05.5	+7.7

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*BER **12** 13:21:11.8±2.3, 79°.00N×2°.99E, h10^{km}, ML2.7, ML3.4(DNK), Confirmed Earthquake*

*DNK **12** 13:21:12.3±5.2, 79°.40N×3°.18E, h116^{km}±128^{km}, ML3.4, Hypocentre not reviewed by the ISC*

*IDC **12** 13:21:12.3±0.7, 79°.01N×2°.79E, h0^{km}, mb3.6/9, mb1 3.9/12, mb1mx3.6/37, mbtmp3.7/12, ML3.0/3, MS3.3/5, Ms1 3.3/5, ms1mx3.0/42, Error ellipse: s-maj=21.5km s-min=14.3km az=48.0*

*NEIC **12** 13:21:13.3±1.5, 79°.10N±0°.09×2°.9E±0°.3, h10^{km}±1^{km}, mb4.6/9, Error ellipse: s-maj=16.0km s-min=7.7km az=334.0*

*IEPN **12** 13:21:17.0, 79°.09N×5°.04E, h15^{km}*

ISC 12 13:21:12.0±0.5**, 79°.10N**±0°.06×**2°.99E**±0°.04**, h10^{km}, n52, σ3^{s}.39**/58**, mb3.7**/11**, MS3.5**/5**, 1C-1D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.72	91	*e*P	Pn	13 21 40.4	-1.5
KBS				*e*S	Sn	13 21 59.0	-4.9
KBS				IAML		13 22 03.4	
	comp=Z,247nm,0.4s						
KBS	Kingsbay	1.72	91	⇑*i*P	Pn	13 21 40.4	-1.5
KBS				*e*S	Sn	13 21 55.9	-8.0
KBS	Kingsbay	1.72	91	Pn	Pn	13 21 40.3	-1.6
KBS	Kingsbay	1.72	91	*i* P		13 21 40.5	
KBS				IAML		13 22 03.8	
	comp=Z,421nm,0.3s						
HSPB	Hornsund (broa	3.35	123	*e*P	Pn	13 22 02.4	-1.8
HSPB				*e*S	Sn	13 22 38.1	-5.7
HSPB				IAML		13 22 45.8	
	comp=Z,23nm,0.8s						
HSPB	Hornsund (broa	3.35	123	*e*P	Pn	13 22 02.4	-1.8
HSPB				*e*S	Sn	13 22 37.9	-5.9
DAG	Danmarks Havn	5.08	254	*i* P	Pn	13 22 26.1	-1.8
DAG				*i* S	Sn	13 23 19.1	-7.4
DAG	Danmarks Havn	5.08	254	*i* P	Pn	13 22 26.2	-1.8
DAG				*i* S	Sn	13 23 19.1	-7.4
DAG				IAML		13 23 23.0	
	comp=Z,26nm,0.4s						
DAG	Danmarks Havn	5.08	254	*i* P		13 22 26.2	
DAG				*i* S		13 23 19.1	
DAG				IAML		13 23 23.0	
	comp=Z,26nm,0.4s						
HOPEN	Hopen	5.31	108	*e*P	Pn	13 22 29.6	-1.5
HOPEN				*e*S	Sn	13 23 25.3	-6.9
HOPEN				IAML		13 23 29.9	
	comp=Z,24nm,0.4s						
HOPEN	Hopen	5.31	108	*e*P	Pn	13 22 29.4	-1.8
HOPEN				*e*S	Sn	13 23 24.7	-7.6
BJO1	Bjornoya	5.87	134	*e*P	Pn	13 22 39.7	+1.0
BJO1				*e*S	Sn	13 23 41.4	-4.5
DBG	Daneborg	7.13	240	*i* P	Pn	13 22 53.9	-2.2
DBG				*e*S	Sn	13 24 05.4	-12
DBG				IAML		13 24 16.5	
	comp=Z,19nm,0.4s						
DBG	Daneborg	7.13	240	*i* P		13 22 53.9	
DBG				*e*S		13 24 05.4	
DBG				IAML		13 24 16.5	
	comp=Z,19nm,0.4s						
ZFI2	Zemlya Franca-	7.81	56	⇓*i*P	Pn	13 23 04.7	-0.8
ZFI2				*e*S	Sn	13 24 25.0	-8.7
	comp=Z,17nm,0.3s						
SCO	Scoresbysund	10.70	230	*i* P	Pn	13 23 43.4	-1.5
SCO	Scoresbysund	10.70	230	IAML		13 25 44.0	
	comp=Z,1.4nm,0.4s						
SCO	Scoresbysund	10.70	230	Pn	Pn	13 23 43.5	-1.4
SCO	Scoresbysund	10.70	230	*i* P		13 23 43.5	
SCO				IAML		13 25 44.0	
	comp=Z,1.4nm,0.4s						
ARCES	ARCESS Array B	11.23	136	Pn	Pn	13 23 52.4	+0.2
	comp=Z,0.2nm,0.3s,baz=340,slow=12,SNR=5.7						
ARCES	ARCESS Array B	11.23	136		Pn	13 23 53.4	+1.2
ARE0	ARCESS Array S	11.23	136	Pn	Pn	13 23 53.3	+1.0
SUMG	Summit	11.74	259	*i* P	Pn	13 23 57.1	-2.3
SUMG	Summit	11.74	259	*e*P	Pn	13 23 57.2	-2.3
SUMG				IAML		13 26 03.7	
	comp=Z,7.7nm,0.4s						
SUMG	Summit	11.74	259		Pn	13 23 57.7	-1.8
SUMG	Summit	11.74	259	*e*P		13 23 57.2	
SUMG				IAML		13 26 03.7	
	comp=Z,7.7nm,0.4s						
KULLO	Kullorsuaq	13.78	283	*i* P	Pn	13 24 23.4	-3.5
KULLO	Kullorsuaq	13.78	283	*i* P	Pn	13 24 23.4	-3.5
KULLO				IAML		13 27 02.2	
	comp=Z,3.3nm,0.4s						
KULLO	Kullorsuaq	13.78	283	*i* P		13 24 23.4	
KULLO				IAML		13 27 02.2	
	comp=Z,3.3nm,0.4s						
TULEG	Thule	14.46	297	*i* P	Pn	13 24 28.4	-7.9
TULEG	Thule	14.46	297	Pn	Pn	13 24 31.8	-4.5
TULEG	Thule	14.46	297	*i* P		13 24 28.4	
UPNV	Upernavik	14.93	277	*e*P		13 24 36.8	
UPNV				*i*		13 27 11.0	
UPNV				IAML		13 27 14.9	
	comp=Z,7.4nm,0.4s						
NAO01	NORSAR Array S	18.51	168	P	Pn	13 25 29.1	+1.1
NAO01				IAmb	IAmb	13 26 14.5	
	comp=Z,185nm,1.9s						
FIA1	FINESS Array S	19.07	145	P	Pn	13 25 35.4	+0.5
FIA1				IAmb	IAmb	13 26 32.2	
	comp=Z,63nm,1.9s						
FINES	FINESS Array B	19.07	145	P	Pn	13 25 36.2	+1.3
	comp=Z,0.1nm,0.3s,baz=313,slow=11,SNR=3.5						
FINES	FINESS Array B	19.07	145	P	Pn	13 25 35.6	+0.7
HFS	Hagfors	19.35	164	P	Pn	13 25 38.4	+0.2
	comp=Z,0.2nm,0.3s,baz=338,slow=6.2,SNR=5.0						
RES	Resolute Bay	20.04	310	P	P	13 25 43.6	-0.9
	comp=Z,1.4nm,0.8s,baz=51,slow=8.0,SNR=6.3						
RES	Resolute Bay	20.04	310	P	P	13 25 43.7	-0.7
NRIK	Noril'sk	22.45	68	P	P	13 26 12.1	+1.6
	comp=Z,1.9nm,0.3s,baz=344,slow=8.1,SNR=8.0						
NRIK				LR	LR	13 35 08.8	
	comp=Z,23nm,20.4s,baz=306,slow=37						
NRS	Narsarsuaq	23.09	248	P	P	13 26 18.1	+0.8
EKA	Eskdalemuir Ar	23.96	189	P	P	13 26 27.5	+1.6
	comp=Z,0.1nm,0.3s,baz=345,slow=2.9,SNR=4.3						
FRB	Frobisher Bay	25.03	274	P	P	13 26 37.7	+2.2
	comp=Z,1.1nm,0.7s,baz=31,slow=15,SNR=3.2						
YKA	Yellowknife Ar	34.05	313	P	P	13 27 57.5	+1.9
	comp=Z,0.9nm,1.0s,baz=22,slow=8.9,SNR=8.8						
YKA				PcP	PcP	13 30 35.1	+2.4
	comp=Z,0.1nm,0.3s,baz=12,slow=3.2,SNR=3.6						
YKA				LR	LR	13 41 18.4	
	comp=Z,90nm,21.4s,baz=0.0,slow=35						
ILAR	Eielson Array	35.27	338	P	P	13 28 08.9	+2.8
	comp=Z,0.5nm,1.0s,baz=359,slow=10.0,SNR=3.6						
TIRR	Tirgusor	36.07	149	P	P	13 28 16.5	+3.4
BRTR	Keskin Array B	41.30	143	LR	LR	13 49 38.2	
	comp=Z,24nm,18.0s,baz=332,slow=41						
MKAR	Makanchi Array	42.47	89	P	P	13 29 08.9	+2.3
	comp=Z,0.7nm,0.7s,baz=350,slow=6.7,SNR=8.6						
SONM	Songino Array	45.91	66	LR	LR	13 51 17.7	
	comp=Z,62nm,18.2s,baz=186,slow=39						
MSO	Missoula	49.12	306	P	P	13 30 00.9	+1.7
MSO				IAmb	IAmb	13 30 02.4	
	comp=Z,6.7nm,1.0s						
ECSD	EROS Data Cent	49.21	289	P	P	13 30 01.4	+1.6
ECSD				IAmb	IAmb	13 30 03.0	
	comp=Z,4.1nm,1.0s						
LRM	Limekiln Ridge	49.87	304	P	P	13 30 04.5	-0.5
BMO	Blue Mountains	51.56	308	P	P	13 30 19.1	+1.4
PDAR	Pinedale Array	52.38	301	P	P	13 30 26.4	+2.4
	comp=Z,0.4nm,0.9s,baz=21,slow=7.7,SNR=2.9						
PLAL	Pickwick Lake	56.12	279	P	P	13 30 52.1	+1.1
NVAR	Mina Array Bea	57.99	308	P	P	13 31 06.2	+1.7
	comp=Z,0.4nm,0.6s,baz=7.0,slow=4.7,SNR=4.2						
TORD	Torodi Ar. Bea	65.97	181	P	P	13 31 58.6	+0.6
	comp=Z,2.1nm,1.0s,baz=350,slow=7.3,SNR=6.8						
TORD	Torodi Ar. Bea	65.97	181	P	P	13 31 58.1	+0.1
ROSC	El Rosal	82.88	258	LR	LR	14 12 36.1	
	comp=Z,36nm,18.0s,baz=122,slow=37						

BER 12 13:23:10.7±0.6**, 71°.08N**×**8°.61W, h1^{km}**±**8^{km}, ML1.4, Confirmed Earthquake, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNW	Jan Mayen West	0.08	128	*e*P	Pg	13 23 13.6	+1.4
JNW				*e*S	Sg	13 23 15.8	+2.6
JNW				IAML		13 23 15.9	
	comp=Z,43nm,0.3s						
JMIC	Jan Mayen	0.10	158	Pn	Sg	13 23 15.6	+1.8
	comp=Z,9.9nm,0.3s,baz=26,slow=2.6,SNR=6.2						
JMIC	Jan Mayen	0.10	158	*e*P	Pg	13 23 13.4	+0.9
JMIC				*e*S	Sg	13 23 16.1	+2.3
JMIC				IAML		13 23 19.8	
	comp=Z,30nm,0.4s						
JNE	Jan Mayen East	0.14	130	*e*P	Pg	13 23 14.7	+1.4
JNE				*e*S	Sg	13 23 16.8	+1.8
JNE				IAML		13 23 16.9	
	comp=Z,224nm,0.5s						
JMI	Jan Mayen	0.15	195	*e*P	Pg	13 23 14.7	+1.1
JMI				IAML		13 23 15.2	
	comp=Z,54nm,0.4s						
JMI				*e*S	Sg	13 23 17.9	+2.4

IDC 12 13:42:29.1±1.4**, 34°.69N**×**80°.44E, h0^{km}, mb3.4**/3**, mb1 3.4**/6**, mb1mx3.3**/46**, mbtmp3.3**/6**, ML2.6**/3**, Error ellipse: s-maj=28.7km s-min=19.8km az=70.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	9.20	331	Pn	Pn	13 44 47.7	+4.6
	0.0nm,0.3s,baz=204,slow=20,SNR=1.3						
AAK				Lg	Lg	13 47 21.7	
	0.1nm,0.3s,baz=308,slow=17,SNR=2.9						
MKAR	Makanchi Array	12.18	6	Pn	Pn	13 45 23.8	0.0
	0.1nm,0.3s,baz=181,slow=13,SNR=7.2						
MKAR				Sn	Sn	13 47 37.7	-2.5
	0.0nm,0.3s,baz=186,slow=25,SNR=2.2						
MKAR				Lg	Lg	13 48 52.5	
	0.0nm,0.3s,baz=183,slow=24,SNR=2.3						
KURBB	Kurchatov Arra	15.99	356	Pn	Pn	13 46 14.9	-0.3
	0.0nm,0.3s,baz=180,slow=11,SNR=5.8						
CMAR	Chiang Mai Arr	23.07	130	P	P	13 47 36.8	+0.5
	0.4nm,0.3s,baz=315,slow=11,SNR=8.1						
SONM	Songino Array	23.39	48	P	P	13 47 39.2	-0.4
	0.3nm,0.5s,baz=240,slow=9.7,SNR=4.3						
TORD	Torodi Ar. Bea	73.46	275	P	P	13 54 03.2	-0.5
	0.4nm,0.5s,baz=48,slow=6.8,SNR=2.9						

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*IDC **12** 13:48:00.8±1.4, 34°.58N×80°.44E, h0^{km}, mb3.5/3, mb1 3.5/8, mb1mx3.3/52, mbtmp3.4/8, ML2.8/5, MS3.6/3, Ms1 3.6/3, ms1mx2.8/46, Error ellipse: s-maj=28.8km s-min=19.9km az=65.0*

ISC 12 13:48:04.6±1.8**, 34°.8N**±0°.1×**80°.9E**±0°.2**, h10^{km}, n12, σ1^{s}.33**/9**, mb3.4**/3**, MS3.8**/3**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	9.31	330	Pn	Pn	13 50 19.9	+0.9
	0.1nm,0.3s,baz=163,slow=17,SNR=3.2						
AAK				Lg	Lg	13 52 55.9	
	0.1nm,0.3s,baz=25,slow=22,SNR=4.2						
WMQ	Urumqi	10.47	28	*e*P	Pn	13 50 34.3	-0.6
MKAR	Makanchi Array	12.07	5	Pn	Pn	13 50 55.4	-1.2
	0.4nm,0.3s,baz=187,slow=12,SNR=19						
MKAR				Sn	Sn	13 53 11.6	+0.3
	0.1nm,0.3s,baz=207,slow=5.5,SNR=3.1						
KURBB	Kurchatov Arra	15.95	355	Pn	Pn	13 51 48.3	-0.6
	0.0nm,0.3s,baz=180,slow=11,SNR=15						
ZALV	Zalesovo Beam	19.39	7	P	P	13 52 31.1	+0.6
	0.0nm,0.3s,baz=183,slow=9.7,SNR=3.5						
BVAR	Borovoye Array	19.72	341	P	P	13 52 31.9	-2.3
	0.1nm,0.3s,baz=140,slow=9.5,SNR=4.6						
CMAR	Chiang Mai Arr	22.84	131	P	P	13 53 07.7	-0.4
	0.5nm,0.4s,baz=314,slow=12,SNR=8.8						
SONM	Songino Array	23.08	48	P	P	13 53 11.7	+1.3
	0.4nm,0.3s,baz=237,slow=9.7,SNR=6.4						
PALK	Pallekele	27.36	180	LR	LR	14 03 28.8	
	comp=Z,58nm,21.9s,baz=210,slow=34						
VRAC	Vranov	48.47	308	LR	LR	14 18 58.0	
	comp=Z,84nm,18.9s,baz=354,slow=38						
BORG	Borgarnes	64.02	332	LR	LR	14 28 14.8	
	comp=Z,65nm,18.3s,baz=95,slow=38						
TORD	Torodi Ar. Bea	73.81	275	P	P	13 59 35.3	-4.4
	0.8nm,0.9s,baz=60,slow=5.7,SNR=3.9						

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*IDC **12** 13:52:11.5±0.7, 17°.23N×119°.55E, h0^{km}, mb3.9/18, mb1 4.0/19, mb1mx3.8/46, mbtmp3.9/19, ML3.3/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/45, Error ellipse: s-maj=29.7km s-min=14.3km az=63.0*

*NEIC **12** 13:52:13.2±1.6, 17°.2N±0°.1×119°.43E±0°.07, h8^{km}±5^{km}, mb4.7/27, Error ellipse: s-maj=15.5km s-min=8.5km az=191.0*

*MAN **12** 13:52:14.9, 17°.29N×119°.30E, h30^{km}, mb4.9, ML3.8, MS3.8*

ISC 12 13:52:14.1±1.7**, 17°.25N**±0°.03×**119°.45E**±0°.05**, h14^{km}**±11^{km}**, n65, σ0^{s}.99**/71**, mb4.2**/30**, 2C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLP	Bolinao	0.97	153	*e*P	Pn	13 52 33.9	+0.6
BOLP				*e*S	Sn	13 52 47.3	+0.4
SZP	Santa	1.00	73	Pn	Pn	13 52 34.2	+0.4
SIPP	Brgy, Tapao	1.17	55	⇑*e*P	Pb	13 52 35.5	-0.6
SIPP				*e*S	Sn	13 52 52.8	+1.0
ABRA	Dolores	1.27	72	*e*P	Pg	13 52 38.3	-0.3
ABRA				*e*S	Sn	13 52 56.4	+2.2
SCZP	Santa Cruz	1.54	163	*e*P	Pb	13 52 41.9	-0.4
SCZP				*e*S	Sg	13 53 13.9	+10
SMPP	San Manuel, Pa	1.61	133	*e*P	Pn	13 52 41.3	-0.8
SMPP				*e*S	Sn	13 53 02.0	-0.7
APYP	Conner	1.81	70	*e*P	Pb	13 52 46.7	-0.4
APYP				*e*S	Sb	13 53 10.7	+1.0
CAUP	Cauayan	2.29	97	*e*P	Pg	13 52 56.3	-1.8
CAUP				*e*S	Sg	13 53 41.5	+14
PCPH	Palayan	2.31	137	⇑*e*P	Pg	13 53 01.2	+2.8
BALP	Baler	2.53	126	*e*P	Pb	13 52 57.8	-1.5
BALP				*e*S	Sb	13 53 31.4	+1.0
SGCP	Mt. Cagua	2.66	68	*e*P	Pn	13 52 58.8	+2.3
SGCP				*e*S	Sn	13 53 27.2	-1.5
TPUB	Ta-pu	6.12	10	Pn	Pn	13 53 43.8	-0.3
YULB	Yu-li	6.35	16	Pn	Pn	13 53 47.1	-0.2
SSLB	Suanglung	6.65	12	Pn	Pn	13 53 50.8	-0.7
YHNB	Yeheng	7.59	13	Pn	Pn	13 54 05.9	+1.5
DAV	Davao City (W)	11.76	149	LR	LR	13 59 49.7	
	comp=Z,51nm,21.2s,baz=327,slow=39						
CMAR	Chiang Mai Arr	19.56	277	P	P	13 56 41.5	-0.1
	0.0nm,0.3s,baz=90,slow=12,SNR=4.4						
KSRS	Korea Array	21.46	19	P	P	13 57 01.5	-0.6
	2.8nm,0.7s,baz=204,slow=11,SNR=9.6						
SONM	Songino Array	32.33	343	P	P	13 58 43.1	+0.2
	0.3nm,0.5s,baz=157,slow=9.0,SNR=1.7						
WB0	Warramunga Arr	39.61	158	P	P	13 59 44.2	-1.2
WB0				IAmb	IAmb	14 00 02.5	
	comp=Z,17nm,1.5s						
WRA	Warramunga Arr	39.75	158	P	P	13 59 45.2	-1.4
	comp=Z,0.5nm,0.6s,baz=327,slow=11,SNR=8.3						
WB2	Warramunga Arr	39.76	158	P	P	13 59 45.2	-1.4
WB2				IAmb	IAmb	13 59 48.3	
	comp=Z,22nm,1.6s						
WR0	Warramunga Arr	39.84	158	P	P	13 59 45.6	-1.7
WR0				IAmb	IAmb	14 00 56.7	
	comp=Z,33nm,2.0s						
MK31	Makanchi Array	42.49	322	P	P	14 00 09.6	+0.7
MKAR	Makanchi Array	42.49	322	P	P	14 00 09.4	+0.5
	comp=Z,2.1nm,0.9s,baz=129,slow=8.8,SNR=15						
MKAR	Makanchi Array	42.49	322	P	P	14 00 09.6	+0.7
MAKZ	Makanchi	42.68	322	P	P	14 00 11.6	+1.1
ASAR	Alice Springs	43.05	160	P	P	14 00 12.9	-0.8
	comp=Z,0.5nm,0.4s,baz=338,slow=7.1,SNR=21						
NRN	Naryn	44.28	312	P	P	14 00 24.8	+1.0
NRN				IAmb	IAmb	14 00 26.1	
	comp=Z,5.1nm,0.9s						
ZAA0	Zalesovo Array	45.37	332	P	P	14 00 31.8	0.0
ZALV	Zalesovo Beam	45.37	332	P	P	14 00 31.9	+0.1
	comp=Z,2.5nm,0.8s,baz=126,slow=7.3,SNR=9.8						
AAK	Ala-Archa	45.74	313	P	P	14 00 36.4	+1.3
	comp=Z,0.4nm,0.4s,baz=175,slow=11,SNR=3.3						
AAK	Ala-Archa	45.74	313	P	P	14 00 36.3	+1.1
AAK				IAmb	IAmb	14 02 18.7	
	comp=Z,8.7nm,1.9s						
KURK	Kurchatov	46.59	325	P	P	14 00 42.0	+0.4
KURK				IAmb	IAmb	14 00 43.1	
	comp=Z,9.6nm,0.7s						
KURBB	Kurchatov Arra	46.59	325	P	P	14 00 42.4	+0.8
	comp=Z,6.1nm,0.8s,baz=122,slow=8.5,SNR=55						
GAR	Garm	47.78	307	P	P	14 00 51.4	+0.1
GAR				IAmb	IAmb	14 00 54.5	
	comp=Z,8.9nm,1.2s						
KK31	Karatay Array	48.67	313	P	P	14 00 58.0	+0.1
KK31				IAmb	IAmb	14 00 59.2	
	comp=Z,2.6nm,0.9s						
KKAR	Karatay Array	48.67	313	P	P	14 00 58.1	+0.2
KKAR	Karatay Array	48.67	313	P	P	14 00 58.0	+0.2
KKAR				IAmb	IAmb	14 00 59.2	
	comp=Z,2.6nm,0.9s						
BVAR	Borovoye Array	52.18	325	P	P	14 01 24.4	+0.1
	comp=Z,0.8nm,0.7s,baz=124,slow=7.4,SNR=5.5						
BRVK	Borovoye	52.25	325	P	P	14 01 25.5	+0.7
BBOO	Buckleboo	52.26	162	P	P	14 01 24.5	-0.5
STKA	Stephens Creek	53.27	156	P	P	14 01 32.1	-0.3
	comp=Z,1.6nm,0.7s,baz=320,slow=10,SNR=3.6						
NRIK	Noril'sk	55.70	347	P	P	14 01 49.4	-0.3
	comp=Z,1.4nm,0.5s,baz=140,slow=9.1,SNR=6.4						
GEYT	Alibeck	57.12	304	P	P	14 02 01.3	+0.9
	comp=Z,2.1nm,0.7s,baz=117,slow=5.8,SNR=5.1						
GEYT				LR	LR	14 27 21.9	
	comp=Z,59nm,19.8s,baz=25,slow=37						
ABKAR	Akbulak array	57.29	318	P	P	14 02 01.2	-0.1
BILL	Bilibino	58.73	19	P	P	14 02 11.6	+0.5
BILL				IAmb	IAmb	14 03 28.1	
	comp=Z,9.8nm,1.7s						
AKTO	Aktyubinsk	58.75	319	P	P	14 02 11.2	-0.3
	comp=Z,0.6nm,0.3s,baz=76,slow=8.3,SNR=3.4						
ARU	Arti	59.78	326	P	P	14 02 17.9	-0.6
	comp=Z,0.8nm,0.4s,baz=301,slow=22,SNR=3.8						
ARU	Arti	59.78	326	P	P	14 02 17.9	-0.6
ARU				IAmb	IAmb	14 02 22.1	
	comp=Z,34nm,2.0s						
TOLK	Toolik Lake Re	74.44	22	P	P	14 03 52.7	+1.2
TOLK				IAmb	IAmb	14 05 52.3	
	comp=Z,19nm,1.9s						
MLY	Manley	74.44	26	P	P	14 03 52.8	+1.2
MLY				IAmb	IAmb	14 05 41.5	
	comp=Z,9.1nm,1.6s						
BPAW	Bear Paw Mtn.	74.45	27	P	P	14 03 52.6	+0.9
BPAW				IAmb	IAmb	14 04 03.7	
	comp=Z,29nm,1.8s						
TRF	Thorofare Moun	74.85	28	P	P	14 03 55.4	+1.2
SUA	Susitna One	74.92	30	P	P	14 03 55.8	+1.2
WRH	Wood River Hil	75.65	27	P	P	14 03 58.8	+0.3
WRH				IAmb	IAmb	14 05 40.2	
	comp=Z,36nm,1.9s						
KNK	Knik Glacier	76.01	30	P	P	14 04 01.0	+0.3
ILAR	Eielson Array	76.10	26	P	P	14 04 00.7	-0.4
	comp=Z,0.2nm,0.4s,baz=277,slow=5.2,SNR=3.4						
SCM	Sheep Creek Mo	76.47	29	P	P	14 04 04.1	+0.8
BMAR	Burnt Mountain	76.49	23	P	P	14 04 04.7	+1.3
FINES	FINESS Array B	76.61	330	P	P	14 04 03.4	-0.6
	comp=Z,0.8nm,0.4s,baz=59,slow=4.9,SNR=10.0						
CTGM	Chitina Glacie	79.47	29	P	P	14 04 19.4	-0.7
NB2	NORSAR Subarra	83.57	332	P	P	14 04 40.8	-0.9
	comp=Z,1.1nm,0.6s,baz=67,slow=4.8						
NOA	NORSAR Array B	83.57	332	P	P	14 04 40.5	-1.2
	comp=Z,0.8nm,0.7s,baz=61,slow=2.0,SNR=4.1						
YKA	Yellowknife Ar	89.96	22	P	P	14 05 12.9	+0.1
	comp=Z,0.3nm,0.6s,baz=315,slow=4.2,SNR=7.1						

WEL 12 13:54:59.9±0.9**, 35°S**±9°×**18°0E**±2°0**, h33^{km}, M3.6**/12**, ML3.8**/12**, MLv3.6**/12**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	3.33	196	P	Pn	13 55 51.4	+1.8

WMGZ				S	Sn	13 56 32.0	+4.0
HAZ	**Te Kaha**	**3.44**	**204**	P	Pn	13 55 51.8	+0.6
HAZ				S	Sn	13 56 32.8	+2.0
PKGZ	**Pakihiroa**	**3.48**	**199**	P	Pn	13 55 52.6	+0.9
PKGZ				S	Sn	13 56 32.8	+1.1
PUZ	**Puketiti**	**3.60**	**196**	P	Pn	13 55 54.0	+0.6
PUZ				S	Sn	13 56 34.0	-0.9
RUGZ	**Raukumara Rang**	**3.67**	**204**	P	Pn	13 55 54.7	+0.3
RUGZ				S	Sn	13 56 36.6	0.0
TWGZ	**Tauwhareparae**	**3.77**	**199**	P	Pn	13 55 56.7	+1.0
TWGZ				S	Sn	13 56 41.2	+2.2
OPRZ	**Ohinepanea**	**4.03**	**216**	P	Pn	13 55 59.8	+0.5
MWZ	**Matawai**	**4.05**	**203**	P	Pn	13 55 59.5	-0.1
TKGZ	**Te Karaka**	**4.05**	**199**	P	Pn	13 55 59.3	-0.3
URZ	**Urewera**	**4.13**	**208**	P	Pn	13 56 00.1	-0.6
RAGZ	**Rawiri**	**4.24**	**203**	P	Pn	13 56 01.8	-0.4
RIGZ	**Rimuhau**	**4.33**	**199**	P	Pn	13 56 02.4	-1.0
MUGZ	**Murupara**	**4.46**	**209**	P	Pn	13 55 58.4	-6.7
RTZ	**Ruatahuna**	**4.49**	**207**	P	Pn	13 56 04.1	-1.7
SNGZ	**Shannon Statio**	**4.52**	**202**	P	Pn	13 56 04.9	-1.1
KNZ	**Kokohu**	**4.65**	**198**	P	Pn	13 56 06.4	-1.3
MHGZ	**Mahia Peninsul**	**4.72**	**196**	P	Pn	13 56 07.4	-1.3
RAHZ	**Arahi**	**4.73**	**204**	P	Pn	13 56 06.8	-2.0
NMHZ	**Naumai**	**4.98**	**205**	P	Pn	13 56 10.4	-2.1
ARHZ	**Aropaoanui**	**5.07**	**203**	P	Pn	13 56 11.3	-2.3
BKZ	**Black Stump Fm**	**5.16**	**207**	P	Pn	13 56 12.4	-2.4
MCHZ	**McNeill Hill**	**5.33**	**204**	P	Pn	13 56 14.3	-2.9
KWHZ	**Kaweka Forest**	**5.41**	**207**	P	Pn	13 56 14.8	-3.5
KAHZ	**Kahuranaki**	**5.59**	**202**	P	Pn	13 56 17.4	-3.3
BHHZ	**Black Hill Sta**	**5.61**	**209**	P	Pn	13 56 17.4	-3.6
KRHZ	**Kereru**	**5.62**	**206**	P	Pn	13 56 17.1	-4.1

TAP 12 13:56:50.2, 24°.84N×122°.06E, h5km, ML2.4, 2C, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao** baz=341	**0.18**	**339**	⇑*i*P	Pg	13 56 54.5	+0.8
TWB1	baz=341			*i* S	Sg	13 56 57.5	+1.4
NTC	**Toucheng** baz=273	**0.21**	**273**	P	Pg	13 56 55.1	+0.8
NTC	baz=273			S	Sg	13 56 59.0	+2.0
TIPB	**Shuangxi** baz=301	**0.25**	**301**	⇑*i*P	Pg	13 56 56.5	+1.4
TIPB	baz=301			*e*S	Sg	13 57 00.5	+2.2
ILA	**Ilan** baz=253	**0.29**	**255**	*e*P	Pb	13 56 57.0	-0.9
EOS1	**EOS1** baz=167	**0.30**	**167**	P	Pb	13 56 57.3	-0.8
EOS1	baz=167			S	Sb	13 57 02.5	-0.8
TWC	**Suao** baz=217	**0.30**	**219**	P	Pb	13 56 57.1	-1.0
TWC	baz=217			S	Sb	13 57 02.2	-1.1
NWF	**Wu-fen Shan** baz=312	**0.34**	**312**	*e*P	Pb	13 56 58.3	-0.5
WFSB	**Wu-fen Shan** baz=312	**0.34**	**312**	*e*P	Pb	13 56 58.4	-0.4
TWE	**Neicheng** baz=249	**0.38**	**251**	*i* P	Pb	13 56 58.8	-0.6
TWE	baz=249			*e*S	Sb	13 57 04.4	-1.1
SLBB	**Yuanshan** baz=257	**0.39**	**257**	P	Pg	13 56 58.7	+0.9
SLBB	baz=257			*e*S	Sb	13 57 06.1	0.0
TWA	**Mucha** baz=287	**0.45**	**288**	*e*P	Pb	13 57 00.2	-0.5
TWA	baz=287			*e*S	Sb	13 57 07.5	-0.2
ENTT	**Nioudou** baz=245	**0.49**	**246**	P	Pb	13 57 01.1	-0.3
ENTT	baz=245			*e*S	Sb	13 57 08.8	-0.1
ENA	**Nanau** baz=214	**0.50**	**215**	S	Sb	13 57 09.6	+0.4
NWLT	**Wulai** baz=262	**0.51**	**263**	*e*P	Pb	13 57 01.5	-0.2
NWLT	baz=262			*e*S	Sb	13 57 09.4	-0.1
TATO	**Taipei** baz=284	**0.53**	**284**	*e*P	Pg	13 57 01.2	+0.8
TATO	baz=284			S	Sb	13 57 10.3	+0.2
YM01	**YM01** baz=304	**0.54**	**304**	P	Pb	13 57 02.3	+0.2
TAP	**Taipei** baz=291	**0.54**	**291**	*e*S	Sb	13 57 10.1	-0.2
YM11	**YM11** baz=306	**0.54**	**306**	*e*P	Pb	13 57 02.5	+0.1
YM11	baz=306			*e*S	Sb	13 57 10.9	+0.4
YM10	**YM10** baz=304	**0.55**	**305**	*e*P	Pb	13 57 02.5	+0.1
YM05	**YM05** baz=305	**0.55**	**306**	P	Pb	13 57 02.1	-0.4
NDT	**Datong Townshi** baz=244	**0.55**	**244**	*e*P	Pb	13 57 02.2	-0.2
NDT	baz=244			*e*S	Sb	13 57 11.0	+0.4
YM04	**YM04** baz=303	**0.56**	**303**	P	Pb	13 57 02.6	-0.1
ANP	**Anpu** baz=305	**0.59**	**305**	*e*P	Pb	13 57 03.1	-0.1
TWY	**Chenhua** baz=316	**0.60**	**316**	P	Pb	13 57 03.4	+0.2
YHNB	**Yeheng** baz=254	**0.64**	**255**	*e*P	Pb	13 57 03.5	-0.5
NSK	**Sanguang** baz=254	**0.66**	**255**	P	Pb	13 57 03.7	-0.6
NSK	baz=254			S	Sb	13 57 14.0	+0.2
NNSB	**Datong** baz=236	**0.74**	**236**	*e*P	Pb	13 57 05.7	0.0
NNSH	**Datong** baz=236	**0.74**	**236**	*e*P	Pb	13 57 05.8	+0.2
NNSH	baz=236			*e*S	Sb	13 57 17.5	+1.3
NACB	**Ninganchiao** baz=212	**0.79**	**212**	P	Pb	13 57 06.5	+0.1
NACB	baz=212			S	Sb	13 57 17.6	+0.2
NCUH	**Zhongli** baz=278	**0.80**	**279**	*e*P	Pb	13 57 07.2	+0.5
ETLH	**Xiulin Townshi** baz=219	**0.82**	**220**	P	Pb	13 57 07.2	+0.1
ETLH	baz=219			S	Sn	13 57 19.9	-1.3
TWD	**Chiawan** baz=208	**0.87**	**209**	*e*P	Pb	13 57 07.6	-0.2
TWD	baz=208			S	Sb	13 57 20.4	+0.6
YOJ	**Yonaguni jima** baz=113	**0.95**	**113**	P	Pg	13 57 08.6	+0.2
YOJ	baz=113			S	Sn	13 57 23.2	-1.0
HWA	**Hwalien** baz=205	**0.96**	**206**	*e*P	Pb	13 57 09.5	+0.2
LIOB	**Emei** baz=258	**0.97**	**258**	*e*P	Pb	13 57 09.6	+0.1
LIOB	baz=258			*e*S	Sn	13 57 24.4	-0.3
NSTT	**Nanjuang** baz=257	**0.98**	**258**	*e*P	Pb	13 57 09.5	-0.3
NSTT	baz=257			*e*S	Sb	13 57 23.9	+0.8
TWT	**Tachien** baz=234	**0.99**	**234**	*e*P	Pb	13 57 10.2	+0.1
TWT	baz=234			*e*S	Sn	13 57 25.6	+0.1
CHGB	**Renai** baz=225	**1.12**	**226**	P	Pn	13 57 13.0	+0.2
CHGB	baz=225			*e*S	Sn	13 57 28.6	-0.1
ESL	**Shilin** baz=208	**1.17**	**209**	*e*P	Pg	13 57 12.5	-0.2
OWD	**Renai** baz=222	**1.20**	**222**	*e*P	Pn	13 57 14.0	+0.2
OWD	baz=222			*e*S	Sn	13 57 30.8	+0.3
EGFH	**Guangfu** baz=206	**1.30**	**206**	*e*P	Pb	13 57 15.3	+0.1
EGFH	baz=206			*e*S	Sn	13 57 33.9	+1.0
SMLT	**Sun Moon Lake** baz=227	**1.42**	**228**	*e*P	Pn	13 57 17.0	+0.1
SMLT	baz=227			*e*S	Sn	13 57 36.5	+0.4
YUS	**Yu-Shan** baz=216	**1.68**	**217**	*e*S	Sn	13 57 43.1	+0.1
FULB	**Fuli** baz=203	**1.78**	**203**	*e*P	Pn	13 57 21.6	-0.1
FULB	baz=203			*e*S	Sb	13 57 45.8	-0.2

TAP 12 13:56:57.2, 24°.87N×122°.20E, h4km, ML2.6, 1C, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao** baz=305	**0.24**	**305**	⇑*i*P	Pg	13 57 02.6	+0.7
TWB1	baz=305			*i* S	Sg	13 57 06.3	+1.3
EOS1	**EOS1** baz=192	**0.33**	**192**	P	Pg	13 57 04.5	+0.9
EOS1	baz=192			S	Sb	13 57 10.4	-0.8
NTC	**Toucheng** baz=267	**0.34**	**267**	*e*S	Sb	13 57 11.8	+0.2
TIPB	**Shuangxi** baz=286	**0.36**	**286**	*e*P	Pb	13 57 05.9	-0.3
TIPB	baz=286			S	Sb	13 57 11.8	-0.4
TWC	**Suao** baz=230	**0.42**	**231**	*e*P	Pb	13 57 07.0	-0.1
TWC	baz=230			S	Sb	13 57 13.4	-0.4
ILA	**Ilan** baz=255	**0.43**	**256**	*e*S	Sb	13 57 14.3	+0.2
NWF	**Wu-fen Shan** baz=297	**0.43**	**297**	*i* P	Pb	13 57 07.6	+0.1
NWF	baz=297			*i* S	Sb	13 57 14.0	-0.4
WFSB	**Wu-fen Shan** baz=297	**0.43**	**297**	P	Pb	13 57 07.2	-0.3
WFSB	baz=297			S	Sb	13 57 14.6	+0.3
TWE	**Neicheng** baz=252	**0.51**	**253**	P	Pb	13 57 08.3	-0.4
TWE	baz=252			S	Sb	13 57 16.8	+0.2
SLBB	**Yuanshan** baz=257	**0.53**	**257**	*e*P	Pb	13 57 09.1	0.0
SLBB	baz=257			*e*S	Sb	13 57 18.2	+1.0
TWA	**Mucha** baz=280	**0.57**	**281**	P	Pb	13 57 09.8	-0.1
TWA	baz=280			S	Sb	13 57 18.6	+0.2
ENA	**Nanau** baz=223	**0.61**	**224**	P	Pb	13 57 10.7	+0.2
ENA	baz=223			S	Sb	13 57 20.0	+0.6
NHDH	**Xindian Distri** baz=278	**0.62**	**279**	*e*P	Pb	13 57 11.2	+0.5
NHDH	baz=278			*e*S	Sb	13 57 20.3	+0.5
ENTT	**Nioudou** baz=247	**0.62**	**248**	P	Pb	13 57 10.8	+0.1
ENTT	baz=247			S	Sb	13 57 20.3	+0.5
YM01	**YM01** baz=295	**0.64**	**296**	P	Pb	13 57 11.1	+0.2
YM01	baz=295			S	Sb	13 57 20.5	+0.2
YM01	**YM01** baz=304	**0.64**	**296**	S	Pb	13 57 10.9	-0.1
YM11	**YM11** baz=297	**0.64**	**297**	*e*P	Pb	13 57 11.6	+0.5
YM11	baz=297			*e*S	Sb	13 57 21.0	+0.6
NWLT	**Wulai** baz=261	**0.64**	**262**	*e*S	Sb	13 57 20.4	-0.1
YM05	**YM05** baz=296	**0.65**	**297**	*e*P	Pb	13 57 11.9	+0.8
YM05	baz=296			*e*S	Sb	13 57 20.8	+0.1
YM05	**YM05** baz=305	**0.65**	**297**	*e*S	Pb	13 57 11.7	+0.5
YM10	**YM10** baz=295	**0.65**	**296**	*e*P	Pb	13 57 10.7	-0.4
YM10	baz=295			*e*S	Sb	13 57 20.8	+0.2
YM10	**YM10** baz=304	**0.65**	**296**	S	Pb	13 57 10.7	-0.4
TAP	**Taipei** baz=284	**0.66**	**285**	*e*S	Sb	13 57 21.7	+1.0
TATO	**Taipei** baz=278	**0.66**	**279**	P	Pb	13 57 11.8	+0.5
TATO	baz=278			*e*S	Sb	13 57 20.6	-0.2
YM04	**YM04** baz=294	**0.67**	**295**	P	Pb	13 57 11.7	+0.2
YM04	baz=294			S	Sb	13 57 21.3	+0.2
YM04	**YM04** baz=303	**0.67**	**295**	S	Pb	13 57 11.4	-0.1
YM03	**YM03** baz=305	**0.68**	**297**	*e*S	Pb	13 57 11.8	+0.2
YM03	**YM03** baz=296	**0.68**	**297**	*e*P	Pb	13 57 11.9	+0.3
YM03	baz=296			*e*S	Sb	13 57 21.8	+0.4
TWY	**Chenhua** baz=306	**0.68**	**306**	P	Pb	13 57 11.7	0.0
TWY	baz=306			S	Sb	13 57 22.4	+0.9
NDT	**Datong Townshi** baz=246	**0.68**	**247**	*e*P	Pb	13 57 12.3	+0.6
NDT	baz=246			*e*S	Sb	13 57 22.5	+1.0
ANP	**Anpu** baz=296	**0.69**	**297**	*e*P	Pb	13 57 12.3	+0.4
ANP	baz=296			*e*S	Sb	13 57 22.2	+0.3
ANP	**Anpu** baz=305	**0.69**	**297**	*e*S	Pb	13 57 12.5	+0.5
TWS1	**Kuangyinshan** baz=287	**0.75**	**288**	*e*S	Sb	13 57 24.1	+0.7
YHNB	**Yeheng** baz=255	**0.78**	**255**	*e*P	Pb	13 57 13.3	-0.1
YHNB	baz=255			*e*S	Sb	13 57 25.5	+1.1
YHNB	**Yeheng** baz=254	**0.78**	**255**	*e*S	Pb	13 57 13.2	-0.3
NSK	**Sanguang** baz=255	**0.79**	**256**	*e*S	Sb	13 57 25.8	+1.0
YOJ	**Yonaguni jima** baz=118	**0.84**	**119**	P	Pg	13 57 12.8	-0.6
NNSB	**Datong** baz=239	**0.87**	**240**	*e*P	Pb	13 57 14.5	-0.4
NNSB	baz=239			*e*S	Sb	13 57 26.9	-0.1
NNSH	**Datong** baz=239	**0.87**	**240**	*e*P	Pb	13 57 14.7	-0.3
NNSH	baz=239			*e*S	Sb	13 57 27.0	0.0
NNS	**Nan Shan** baz=239	**0.87**	**241**	P	Pb	13 57 15.2	+0.2
NNS	baz=239			S	Sb	13 57 27.3	+0.2
NACB	**Ninganchiao** baz=218	**0.89**	**219**	P	Pg	13 57 14.2	-0.1
NACB	baz=218			S	Sb	13 57 27.7	+0.2
NCUH	**Zhongli** baz=275	**0.93**	**276**	*e*P	Pb	13 57 16.4	+0.5
ETLH	**Xiulin Townshi** baz=224	**0.93**	**225**	P	Pg	13 57 15.5	+0.3
ETLH	baz=224			S	Sb	13 57 28.6	-0.2
TWD	**Chiawan** baz=214	**0.96**	**215**	P	Pb	13 57 16.8	+0.3
TWD	baz=214			S	Sn	13 57 30.9	-0.8
HWA	**Hwalien** baz=211	**1.04**	**212**	*e*P	Pn	13 57 18.6	-0.1
HWA	baz=211			*e*S	Sn	13 57 33.0	-0.7
SBCB	**Hsinchu** baz=265	**1.11**	**266**	*e*P	Pn	13 57 19.5	0.0
NSTT	**Nanjuang** baz=257	**1.12**	**258**	*e*P	Pn	13 57 20.2	+0.5
NSTT	baz=257			*e*S	Sn	13 57 35.5	0.0
TWT	**Tachien** baz=236	**1.12**	**237**	*e*S	Sn	13 57 36.1	+0.2
CHGB	**Renai** baz=229	**1.24**	**229**	P	Pn	13 57 21.7	+0.2
CHGB	baz=229			*e*S	Sn	13 57 38.5	-0.3
ESL	**Shilin** baz=213	**1.27**	**214**	*e*S	Sb	13 57 38.6	+0.3
WHP	**Taichung City** baz=242	**1.29**	**243**	*e*P	Pb	13 57 22.5	+0.4
WHP	baz=242			*e*S	Sn	13 57 40.7	+0.8
OWD	**Renai** baz=225	**1.31**	**226**	*e*P	Pg	13 57 21.8	-0.5
OWD	baz=225			*e*S	Sn	13 57 41.4	+0.9

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*ISK **12** 14:01:31.5, 39°.79N×32°.56E, h4km, ML1.8/8, Suspected Mining explosion.*
*DDA **12** 14:01:33.5, 39°.81N×32°.62E, h1km±5km, MW2.7*
ISC 12 14:01:32.1±0.9**, 39°.70N**±0°.03×**32°.62E**±0°.03**, h0km, n16, σ0ˢ.77**/27**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANTO	**Ankara**	**0.21**	**39**	PG	**Pg**	**14 01 36.4**	**+0.1**
LOD	**Lodumlu**	**0.22**	**31**	PG	**Pg**	**14 01 36.4**	**+0.1**
AFSR	**Afar-Bala (An**	**0.43**	**126**	PG	**Pb**	**14 01 42.3**	**-0.4**
AFSR				SG	**Sb**	**14 01 50.3**	**+0.5**
KKUL	**Konya-Kulu**	**0.58**	**156**	*i* P	**Pb**	**14 01 44.9**	**-0.3**
KKUL				*i* S	**Sn**	**14 01 56.6**	**-1.3**
KKUL	comp=N,20nm,0.4s			IAML		14 01 57.0	
KULU	**Kulu**	**0.72**	**156**	PG	**Pb**	**14 01 47.8**	**+0.2**
KULU				SG	**Sn**	**14 02 00.5**	**-1.0**
BRTR	**Keskin Array B**	**0.79**	**88**	PG	**Pg**	**14 01 47.8**	**+0.6**
SVRH	**Sivrihisar-ESK**	**0.88**	**254**	PG	**Pg**	**14 01 48.9**	**-0.2**
KIBS	**BOLU**	**0.93**	**321**	*i* P	**Pg**	**14 01 50.0**	**+0.1**
KIBS				*i* S	**Sn**	**14 02 06.7**	**0.0**
KIZT	**Kizilcal**	**1.00**	**215**	PG	**Pb**	**14 01 52.4**	**0.0**
DELI	**KIRIKKALE**	**1.04**	**73**	*i* P	**Pg**	**14 01 52.2**	**0.0**
DELI				*i* S	**Sb**	**14 02 07.6**	**+0.2**
KIRS	**Kırehir-Merke**	**1.16**	**119**	*i* P	**Pg**	**14 01 54.2**	**0.0**
KIRS				*i* S	**Sn**	**14 02 11.8**	**-0.3**
KIRS	comp=N,8.0nm,0.6s			IAML		14 02 17.0	
YAYX	**Yaylak**	**1.20**	**129**	PN	**Pn**	**14 01 56.0**	**-0.2**
YAYX				SN	**Sn**	**14 02 15.3**	**+2.0**
KDHN	**Kadinhani**	**1.24**	**199**	*i* P	**Pg**	**14 01 55.8**	**-0.1**
KDHN				*i* S	**Sn**	**14 02 16.5**	**+2.2**
CDAG	**Cicekdag**	**1.36**	**93**	*i* P	**Pn**	**14 01 58.4**	**0.0**
CDAG				*i* S	**Sn**	**14 02 17.7**	**+0.6**
CORM	**Corum**	**1.62**	**72**	PN	**Pn**	**14 02 01.5**	**-0.6**
CORM				SN	**Sb**	**14 02 23.9**	**-0.1**
YOZ	**Yozgat**	**2.09**	**91**	PN	**Pn**	**14 02 08.5**	**0.0**
YOZ				SN	**Sb**	**14 02 36.6**	**-0.8**

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*IDC **12** 14:05:59.3±6.8, 4°.29N×123°.70E, h440km±90km, mb2.9/7, mb1 3.0/7, mb1mx2.8/60, mbtmp3.7/7, Error ellipse: s-maj=61.4km s-min=17.3km az=76.0*
ISC 12 14:05:59.7±0.9**, 4°.3N**±0°.2×**123°.7E**±0°.4**, h450km, n7, σ1ˢ.49**/8**, mb3.4**/7**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 1.4nm,0.9s,baz=350,slow=8.0,SNR=6.8	**22.36**	**175**	P	**P**	**14 10 20.5**	**-2.1**
WRA	**Warramunga Arr** 1.0nm,0.3s,baz=335,slow=9.5,SNR=46	**26.27**	**157**	P	**P**	**14 10 58.1**	**+0.6**
ASAR	**Alice Springs** 0.8nm,0.5s,baz=338,slow=7.3,SNR=28	**29.53**	**161**	P	**P**	**14 11 26.7**	**+0.5**
KSRS	**Korea Array** 0.5nm,0.6s,baz=187,slow=6.6,SNR=1.5	**33.20**	**6**	P	**P**	**14 11 56.7**	**-0.9**
STKA	**Stephens Creek** 0.7nm,0.3s,baz=320,slow=7.9,SNR=3.7	**39.81**	**156**	P	**P**	**14 12 53.5**	**+0.9**
MKAR	**Makanchi Array** 0.3nm,0.4s,baz=128,slow=7.5,SNR=7.8	**55.39**	**326**	P	**P**	**14 14 51.6**	**+1.6**
MKAR	0.4nm,0.6s,baz=144,slow=3.5,SNR=4.8			PcP	**PcP**	**14 15 42.8**	**-1.3**
KURBB	**Kurchatov Arra** 0.5nm,0.6s,baz=131,slow=6.6,SNR=3.7	**59.66**	**328**	P	**P**	**14 15 19.9**	**+0.7**

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*NEIC **12** 14:10:34.3±1.9, 26°.0S±0°.1×179°.4E±0°.2, h487km±9km, mb4.6/25, Error ellipse: s-maj=21.2km s-min=16.7km az=122.0*
*IDC **12** 14:10:37.5±1.4, 25°.89S×179°.26E, h519km±15km, mb3.5/8, mb1 3.6/11, mb1mx3.4/30, mbtmp4.3/11, Error ellipse: s-maj=20.9km s-min=12.8km az=167.0*
ISC 12 14:10:35.7±0.5**, 26°.04S**±0°.06×**179°.35E**±0°.08**, h503km, n99, σ1ˢ.65**/104**, mb4.4**/16**, 1C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island** 182nm,0.3s,baz=264,slow=23,SNR=3.8	**4.01**	**143**	P	**P**	**14 11 58.1**	**+3.8**
GLKZ	**Green Lake**	**4.02**	**144**	P	**P**	**14 11 59.0**	**+4.6**
GLKZ				S	S	14 13 10.4	+12
MSVF	**Nonsavu**	**8.36**	**351**	P	**P**	**14 12 34.5**	**-1.6**
KUZ	**Kuaotunu**	**11.11**	**195**	P	**P**	**14 13 08.2**	**+3.5**
MXZ	**Matakaoa Point**	**11.52**	**184**	P	**P**	**14 13 10.6**	**+1.6**
MXZ	**Matakaoa Point**	**11.52**	**184**	P	**P**	**14 13 10.9**	**+1.9**
MXZ				S	**S**	**14 15 16.6**	**+1.3**
MKAZ	**Moumakai**	**11.59**	**197**	P	**P**	**14 13 13.3**	**+3.6**
HAZ	**Te Kaha**	**11.75**	**186**	P	**P**	**14 13 12.9**	**+1.5**
HAZ				S	**S**	**14 15 17.3**	**-2.5**
WMGZ	**Waiomatatini S**	**11.77**	**184**	P	**P**	**14 13 13.4**	**+1.7**
PKGZ	**Pakihiroa**	**11.86**	**185**	P	**P**	**14 13 13.9**	**+1.2**
RUGZ	**Raukumara Rang**	**11.97**	**186**	P	**P**	**14 13 15.0**	**+1.1**
PUZ	**Puketiti**	**12.03**	**184**	P	**P**	**14 13 15.9**	**+1.5**
PUZ				S	**S**	**14 15 19.0**	**-6.2**
KMRZ	**Kaimai**	**12.12**	**193**	P	**P**	**14 13 18.6**	**+3.3**
TWGZ	**Tauwhareparae**	**12.15**	**185**	P	**P**	**14 13 16.2**	**+0.4**
TWGZ				S	**S**	**14 15 24.9**	**-2.7**
URZ	**Urewera** 4.2nm,0.3s,baz=76,slow=2.8,SNR=22	**12.33**	**188**	P	**P**	**14 13 16.4**	**-1.1**
URZ	0.7nm,0.3s,baz=53,slow=20,SNR=5.6			S	**S**	**14 15 26.1**	**-4.8**
URZ	**Urewera**	**12.33**	**188**	P	**P**	**14 13 16.3**	**-1.2**
URZ	**Urewera**	**12.33**	**188**	P	**P**	**14 13 16.6**	**-0.9**
URZ				S	**S**	**14 15 27.5**	**-3.4**
MWZ	**Matawai**	**12.35**	**187**	P	**P**	**14 13 17.9**	**0.0**
TKGZ	**Te Karaka**	**12.42**	**185**	P	**P**	**14 13 19.0**	**+0.4**
DZM	**Mont Dzumac** 1.0nm,0.3s,baz=119,slow=17,SNR=10	**12.44**	**286**	P	**P**	**14 13 19.9**	**+0.8**
DZM	**Mont Dzumac**	**12.44**	**286**	P	**P**	**14 13 20.8**	**+1.7**
RAGZ	**Rawiri**	**12.52**	**187**	P	**P**	**14 13 19.6**	**-0.1**
TLZ	**Tolley Road**	**12.67**	**194**	P	**P**	**14 13 24.0**	**+2.8**
RIGZ	**Rimuhau**	**12.70**	**186**	P	**P**	**14 13 21.2**	**-0.3**
SNGZ	**Shannon Statio**	**12.81**	**187**	P	**P**	**14 13 22.2**	**-0.6**
PRGZ	**Paritu Road**	**12.90**	**185**	P	**P**	**14 13 25.7**	**+2.1**
MTHZ	**Maungataniwha**	**12.95**	**189**	P	**P**	**14 13 24.5**	**+0.3**
RAHZ	**Arahi**	**12.98**	**188**	P	**P**	**14 13 23.9**	**-0.5**
WATZ	**Wairara**	**12.99**	**193**	P	**P**	**14 13 26.7**	**+2.1**
HIZ	**Hauiti**	**13.00**	**196**	P	**P**	**14 13 27.8**	**+3.1**
MHGZ	**Mahia Peninsul**	**13.13**	**185**	P	**P**	**14 13 27.2**	**+1.1**
RATZ	**Rangitukua**	**13.14**	**192**	P	**P**	**14 13 27.1**	**+1.0**
BKZ	**Black Stump Fm**	**13.30**	**190**	P	**P**	**14 13 26.8**	**-1.2**
BKZ	**Black Stump Fm**	**13.30**	**190**	P	**P**	**14 13 27.0**	**-1.0**
WTVZ	**West Tongariro**	**13.41**	**193**	P	**P**	**14 13 30.9**	**+1.7**
NGZ	**Ngauruhoe**	**13.47**	**193**	P	**P**	**14 13 31.0**	**+1.2**
MCHZ	**McNeill Hill**	**13.55**	**189**	P	**P**	**14 13 30.2**	**-0.3**
VRZ	**Vera Road**	**13.60**	**195**	P	**P**	**14 13 33.0**	**+2.0**
BHHZ	**Black Hill Sta**	**13.69**	**191**	P	**P**	**14 13 30.1**	**-1.9**
KRHZ	**Kereru**	**13.79**	**190**	P	**P**	**14 13 32.6**	**-0.5**
KAHZ	**Kahuranaki**	**13.87**	**188**	P	**P**	**14 13 33.8**	**-0.1**
TSZ	**Takapari Road**	**14.26**	**191**	P	**P**	**14 13 36.5**	**-1.5**
DVHZ	**Dannevirke**	**14.46**	**190**	P	**P**	**14 13 38.8**	**-1.3**
AFI	**Afiamalu** 0.5nm,0.3s,baz=90,slow=18,SNR=3.3	**14.66**	**36**	P	**P**	**14 13 42.0**	**-0.6**
BFZ	**Birch Farm**	**14.83**	**189**	P	**P**	**14 13 42.1**	**-1.8**
MSWZ	**Moikau Station**	**15.70**	**191**	P	**P**	**14 13 51.2**	**-1.8**
BHW	**Baring Head**	**15.77**	**192**	P	**P**	**14 13 53.7**	**0.0**

QRZ	Quartz Range	15.79	199	P	P	14 13 54.7	+0.7
QRZ				IAmb	IAmb	14 13 57.1	
	comp=Z,13nm,0.6s						
NNZ	Nelson	15.92	197	P	P	14 13 54.2	-1.1
TUWZ	Tuamarina	15.98	195	P	P	14 13 55.2	-0.8
CMWZ	Cape Campbell	16.23	194	P	P	14 13 57.7	-0.8
BSWZ	Blackbirch Sta	16.27	195	P	P	14 13 58.2	-0.8
THZ	Tophouse	16.56	197	P	P	14 14 01.8	-0.2
THZ				IAmb	IAmb	14 14 26.1	
	comp=Z,18nm,1.2s						
KHZ	Kahutara	17.02	195	P	P	14 14 06.8	+0.3
FUNA	Funafuti	17.42	359	P	P	14 14 09.2	-1.6
LTZ	Lake Taylor	17.68	197	P	P	14 14 12.4	-0.4
OXZ	Oxford	18.25	197	P	P	14 14 18.4	+0.4
OXZ				IAmb	IAmb	14 14 22.8	
	comp=Z,19nm,0.7s						
RPZ	Rata Peaks	18.88	199	P	P	14 14 25.1	+1.3
	comp=Z,0.7nm,0.3s,baz=12,slow=14,SNR=5.1						
RPZ	Rata Peaks	18.88	199	P	P	14 14 24.8	+1.0
RPZ				IAmb	IAmb	14 14 32.0	
	comp=Z,33nm,1.4s						
EIDS	Eidsvold	25.46	265	P	P	14 15 24.3	+1.0
EIDS				IAmb	IAmb	14 15 28.3	
	comp=Z,47nm,1.8s						
STKA	Stephens Creek	33.42	251	P	P	14 16 33.1	+0.9
	comp=Z,1.6nm,0.6s,baz=99,slow=9.5,SNR=4.7						
STKA	Stephens Creek	33.42	251	P	P	14 16 33.0	+0.8
KRVT	Keravat (AS076	33.94	305	P	P	14 16 36.1	-0.7
	comp=Z,61nm,0.5s,baz=191,slow=1.7,SNR=13						
PMG	Port Moresby	34.70	293	P	P	14 16 42.5	-0.6
	comp=Z,9.3nm,0.8s,baz=262,slow=20,SNR=5.7						
PMG	Port Moresby	34.70	293	IAmb	IAmb	14 16 44.7	
	comp=Z,12nm,0.9s						
COEN	Coen	35.94	282	P	P	14 16 54.3	+0.8
COEN				IAmb	IAmb	14 18 28.7	
	comp=Z,43nm,1.8s						
BBOO	Buckleboo	38.10	249	P	P	14 17 10.8	-0.3
MANU	Manus Island	38.92	303	P	P	14 17 17.7	-0.3
MANU				IAmb	IAmb	14 17 18.7	
	comp=Z,20nm,0.8s						
AS31	Alice Springs	41.15	263	P	P	14 17 36.0	+0.2
ASAR	Alice Springs	41.15	263	P	P	14 17 36.1	+0.2
	comp=Z,3.6nm,0.4s,baz=90,slow=7.6,SNR=154						
ASAR				S	S	14 23 12.2	-0.4
	comp=Z,1.0nm,0.7s,baz=96,slow=18,SNR=7.5						
ASAR	Alice Springs	41.15	263	P	P	14 17 35.5	-0.4
WR0	Warramunga Arr	41.54	269	P	P	14 17 38.6	-0.4
WR0				IAmb	IAmb	14 19 06.8	
	comp=Z,18nm,1.7s						
WB2	Warramunga Arr	41.71	269	P	P	14 17 40.1	-0.2
WRA	Warramunga Arr	41.72	269	P	P	14 17 40.1	-0.3
	comp=Z,4.5nm,0.5s,baz=106,slow=7.2,SNR=56						
WRA				S	S	14 23 18.2	-2.6
	comp=Z,0.7nm,0.8s,baz=101,slow=14,SNR=4.1						
WRA	Warramunga Arr	41.72	269	P	P	14 17 39.9	-0.6
WB0	Warramunga Arr	41.73	269	P	P	14 17 39.9	-0.5
FORT	Forrest	45.05	252		P	14 18 05.7	-0.5
FORT				IAmb	IAmb	14 19 29.2	
	comp=Z,16nm,1.0s						
MTN	Manton Dam	47.07	277	P	P	14 18 21.3	-0.6
MTN				IAmb	IAmb	14 19 30.5	
	comp=Z,22nm,1.4s						
KNRA	Kununurra	48.13	272	P	P	14 18 30.1	+0.4
KNRA				IAmb	IAmb	14 18 30.8	
	comp=Z,24nm,1.1s						
FITZ	Fitzroy Crossi	50.11	268	P	P	14 18 44.9	+0.4
	comp=Z,4.3nm,0.5s,baz=101,slow=6.9,SNR=20						
FITZ	Fitzroy Crossi	50.11	268	P	P	14 18 44.8	+0.4
MORW	Morawa	55.61	251	P	P	14 19 23.6	-0.1
MORW				IAmb	IAmb	14 20 03.2	
	comp=Z,26nm,1.5s						
SYO	Syowa Base	80.80	194	⇑*e*P	P	14 21 57.0	+1.0
SNAA	Sanae	82.54	179	P	P	14 22 05.2	+0.1
VNA3	Neumayer Olymp	82.77	177	P	P	14 22 06.4	+0.2
VNA2	Neumayer--Watz	83.18	178	P	P	14 22 09.2	+1.0
NVAR	Mina Array Bea	86.70	44	P	P	14 22 27.5	+1.5
	comp=Z,0.8nm,0.7s,baz=226,slow=7.4,SNR=6.3						
NVAR	Mina Array Bea	86.70	44	P	P	14 22 26.9	+0.9
TMUT	Trail Mountain	91.74	47	P	P	14 22 51.5	+1.9
ILAR	Eielson Array	94.25	14	P	P	14 22 58.9	-1.2
	comp=Z,0.2nm,0.6s,baz=217,slow=5.7,SNR=3.6						
SONM	Songino Array	98.34	319	P	Pdif	14 23 17.2	-1.8
	comp=Z,0.3nm,0.5s,baz=104,slow=6.1,SNR=2.9						
KURBB	Kurchatov Arra	116.37	316	PKP	PKPdf	14 28 20.8	-0.7
	comp=Z,0.3nm,0.5s,baz=107,slow=1.7,SNR=4.0						
BVAR	Borovoye Array	121.64	318	PKP	PKPdf	14 28 31.3	-0.3
	comp=Z,0.9nm,0.5s,baz=151,slow=1.5,SNR=8.2						
ARCES	ARCESS Array B	133.85	348	PKP	PKPdf	14 28 53.4	-0.9
	comp=Z,4.3nm,1.0s,baz=69,slow=3.0,SNR=3.3						
NOA	NORSAR Array B	144.09	350	PKP	PKPbc	14 29 11.9	-0.7
	comp=Z,0.6nm,0.5s,baz=20,slow=2.6,SNR=8.3						
AKASG	Malin Array Be	146.42	325	PKPbc	PKPdf	14 29 17.6	+0.2
	comp=Z,0.9nm,0.4s,baz=41,slow=3.7,SNR=5.3						
BRTR	Keskin Array B	148.34	304	PKPbc	PKPbc	14 29 25.6	+0.3
	comp=Z,0.7nm,0.7s,baz=350,slow=3.2,SNR=2.8						
EKA	Eskdalemuir Ar	150.68	3	PKPbc	PKPbc	14 29 29.7	-0.5
	comp=Z,0.4nm,0.3s,baz=353,slow=3.2,SNR=2.4						
TORD	Torodi Ar. Bea	166.98	190	PKPab	PKPab	14 30 51.7	+0.6
	comp=Z,0.1nm,0.3s,baz=193,slow=6.1,SNR=4.1						

IDC 12 14:14:24.5±446.0**, 56°.73N**×**36°.29E, h0**^{km}**, Error ellipse: s-maj=201.4km s-min=11.7km az=90.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	0.51	90	*i*		14 17 30.0	
	baz=271,slow=321,SNR=1.0						
I31KZ	AKTYUBINSK INF	14.35	107	*i*		15 40 00.0	
	baz=304,slow=333,SNR=0.9						
I18DK	QAANAAQ INFRAS	38.56	340	*i*		18 09 20.0	
	baz=55,slow=345,SNR=0.6						

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*EAF **12** 14:15:33.8±0.8, 25°.71S×28°.67E, h16^{km}±12^{km}, MD3.7*

ISC 12 14:15:30.9±1.9**, 25°.71S**±0°.07×**28°.7E**±0°.1**, h10**^{km}**, n6, σ2^{s}.07**/12**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	Lobatse	2.91	283	*i* P	Pn	14 16 18.8	+1.4
LBTB				*i* S	Sn	14 16 51.5	-0.9
LBTB	Lobatse	2.91	283	*i* P	Pn	14 16 18.8	+1.4
LBTB				*i* S	Sn	14 16 51.5	-0.9
BOSA	Boshof	4.23	226	*i* P	Pn	14 16 36.5	+0.9
BOSA				*i* S	Sn	14 17 23.4	-1.7
BOSA	Boshof	4.23	226	*i* P	Pn	14 16 36.5	+0.9
BOSA				*i* S	Sn	14 17 23.4	-1.7
MATP	Matopo	5.26	358	*i* P	Pn	14 16 51.9	+2.1
MATP				*i* S	Sn	14 17 47.7	-2.9
MATP	Matopo	5.26	358	*i* P	Pn	14 16 51.9	+2.1
MATP				*i* S	Sn	14 17 47.7	-2.9

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*INET **12** 14:28:16.8, 12°.71N×89°.18W, h7^{km}, ML3.1*

*UCR **12** 14:28:20.4±1.1, 12°.89N×89°.07W, h35^{km}±15^{km}, ML3.8*

*SNET **12** 14:28:20.3±1.0, 12°.88N×89°.07W, h38^{km}±67^{km}, ML3.8*

ISC 12 14:28:19.1±2.9**, 12°.8N**±0°.1×**89°.08W**±0°.06**, h29**^{km}±16^{km}**, n29, σ0^{s}.31**/42**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.72	341	*e*S	Sb	14 28 42.7	+0.1
LALI	Alcalda de L	0.72	341	*e*S	Sb	14 28 42.7	+0.1
LFRS	El Faro	0.81	1	*e*P	Pn	14 28 34.6	-0.2
COEG	Centro de Oper	0.83	14	*e*P	Pn	14 28 34.5	-0.5
COEG				*e*S	Sb	14 28 46.0	+0.1
COEG	Centro de Oper	0.83	14	*e*P	Pn	14 28 34.5	-0.5
COEG				*e*S	Sb	14 28 46.0	+0.1
COEB	Comit de Eme	0.87	38	*e*P	Pn	14 28 35.4	-0.2
COEB				*e*S	Sb	14 28 47.0	-0.1
COEB	Comit de Eme	0.87	38	*e*P	Pn	14 28 35.4	-0.2
COEB				*e*S	Sb	14 28 47.0	-0.1
JUCU	Jucuar¡n	0.92	61	*e*P	Pn	14 28 35.8	-0.4
JUCU				*e*S	Sb	14 28 48.6	+0.1
JUCU	Jucuar¡n	0.92	61	*e*P	Pn	14 28 35.8	-0.4
JUCU				*e*S	Sb	14 28 48.6	+0.1
LBRS	Las Brisas	0.93	2	*e*P	Pb	14 28 36.6	0.0
LFU	La Fuente	0.94	358	*e*P	Pb	14 28 36.8	0.0
LFU	La Fuente	0.94	358	*e*P	Pb	14 28 36.8	0.0
BOQS	Boqueron	0.94	348	*e*P	Pb	14 28 36.9	-0.2
BOQS				*e*S	Sb	14 28 49.2	0.0
LCY	Lacayo	0.98	51	*e*P	Pn	14 28 37.1	0.0
LCY	Lacayo	0.98	51	*e*P	Pn	14 28 37.1	0.0
PACA	Pacayal	0.99	48	*e*P	Pn	14 28 37.3	+0.1
PACA				*e*S	Sb	14 28 51.0	+0.6
PACA	Pacayal	0.99	48	*e*P	Pn	14 28 37.3	+0.1
PACA				*e*S	Sb	14 28 51.0	+0.6
RANC	El Ranchito	0.99	51	*e*P	Pn	14 28 37.2	0.0
RANC	El Ranchito	0.99	51	*e*P	Pn	14 28 37.2	0.0
BLLM	Bellamira	1.04	52	*e*P	Pn	14 28 38.0	+0.2
BLLM	Bellamira	1.04	52	*e*P	Pn	14 28 38.0	+0.2
CEVE	Cerro Verde	1.14	333	*e*P	Pn	14 28 39.8	+0.3
CEVE				*e*S	Sb	14 28 54.4	-0.6
CEVE				IAML		14 29 01.5	
	comp=Z,2µm,0.4s						
CEVE	Cerro Verde	1.14	333	*e*P	Pn	14 28 39.8	+0.3
CEVE				*e*S	Sb	14 28 54.4	-0.6
CEVE				IAML		14 29 01.5	
	comp=Z,2µm,0.4s						
LCND	La Caada	1.26	67	*e*P	Pn	14 28 41.0	+0.1
LCND				*e*S	Sn	14 28 56.8	0.0
LCND	La Caada	1.26	67	*e*P	Pn	14 28 41.0	+0.1
LCND				*e*S	Sn	14 28 56.8	0.0
CNCH	Conchagua	1.30	69	*e*P	Pn	14 28 41.4	-0.1
CNCH				IAML		14 29 03.2	
	comp=Z,2µm,0.2s						
CNCH	Conchagua	1.30	69	*e*P	Pn	14 28 41.4	-0.1
CNCH				IAML		14 29 03.2	
	comp=Z,2µm,0.2s						
MTO3	Montecristo	1.61	350	*e*P	Pn	14 28 46.4	+0.6
MTO3	Montecristo	1.61	350	*e*P	Pn	14 28 46.4	+0.6

DJA 12 14:32:02.6±0.6**, 8°S**±5°×**10°7E**±°**, h10**^{km}**, M4.1**/8**, mb4.9**/1**, MLv3.8**/8**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	0.81	36	P	Pb	14 32 18.8	0.0
CISI				S	Sg	14 32 29.1	+0.2
CNJI	Cibinong	0.93	347	P	Pg	14 32 20.2	-0.3
LEM	Lembang	1.41	11	P	Pn	14 32 28.8	+0.3
LEM				S	Sn	14 32 47.2	-0.1
SKJI	Sukabumi	1.44	327	P	Pn	14 32 27.9	-0.8
DBJI	Dramaga	1.76	340	P	Pn	14 32 33.4	+0.3
KPJI	Karang Pucung	1.81	61	P	Pn	14 32 33.6	-0.2
TNG	Tangerang	2.15	341	P	Sn	14 32 59.7	-5.5
PCJI	Pacitan	3.80	90	P	Pn	14 33 01.1	-0.1
MDSI	Maura Dua	4.86	320	P	Pn	14 33 15.3	-0.6
MNAI	Manna	5.80	311	P	Pn	14 33 28.2	-0.6
RGRI	Rengat	9.28	327	P	Pn	14 34 13.0	-3.5

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*NEIC **12** 15:09:38.7±1.2, 56°.81N±0°.04×152°.95W±0°.09, h19^{km}±4^{km}, Error ellipse: s-maj=8.0km s-min=4.8km az=121.0*

*AEIC **12** 15:09:39.4±1.8, 56°.87N±0°.04×152°.89W±0°.08, h5^{km}±5^{km}, ML3.1/47, Error ellipse: s-maj=6.8km s-min=5.8km az=112.0*

*IDC **12** 15:09:44.4±2.9, 57°.16N×153°.12W, h50^{km}±19^{km}, mb3.5/4, mb1 3.4/6, mb1mx3.2/40, mbtmp3.5/6, ML2.9/2, Error ellipse: s-maj=46.3km s-min=29.5km az=141.0*

ISC 12 15:09:39.1±0.9**, 56°.87N**±0°.05×**152°.91W**±0°.06**, h21**^{km}±3^{km}**, n67, σ1^{s}.19**/75**, mb3.8**/4**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHAK	Old Harbor	0.41	330		Pb	15 09 47.8	+0.2
OHAK					Sb	15 09 53.7	+0.4
SII	Sitkinak Islan	0.77	247		Pb	15 09 53.4	-0.4
SII					Sb	15 10 04.0	+0.2
KDAK	Kodiak Island	0.93	11	P	Pn	15 09 57.3	+0.3
	49nm,0.3s,baz=180,slow=6.2,SNR=3501						
KDAK				S	Sb	15 10 09.5	+1.1
	120nm,0.3s,baz=322,slow=19,SNR=56						
KAWH	Katmai	1.83	327		Pn	15 10 09.5	+0.2
CHIR	Chirikof Islan	1.84	236		Pn	15 10 09.9	+0.5
CHIR					Sb	15 10 34.5	0.0
KAHG	Katmai Hook Gl	1.85	332		Pn	15 10 09.9	+0.2
ACHA	Angle Creek He	1.88	317		Pn	15 10 10.9	+0.9
ACHA					Sb	15 10 35.3	-0.3
KABU	Katmai Buttres	1.90	319		Pn	15 10 10.4	+0.1
FOSS	Fourpeaked Sta	1.98	348		Pn	15 10 11.8	+0.4
PLK3	Peulik 3	2.00	296		Pn	15 10 11.1	-0.6
PLK3					Sb	15 10 38.6	-0.7
PLK2	Peulik 2	2.06	297		Pn	15 10 12.3	-0.2
KAHC	Katmai Hardscr	2.11	329		Pn	15 10 13.3	0.0
KELA	Mount Kelaz	2.19	317		Pn	15 10 14.0	-0.3
PLK1	Peulik 1	2.21	297		Pn	15 10 14.1	-0.4
AUQ	Augustine Qik’	2.51	354		Pn	15 10 19.5	+0.8
AU22	Augustine Moun	2.52	355		Pn	15 10 19.4	+0.7
AU22					Sn	15 10 49.6	+0.8
CNPM	China Poot	2.81	18		Pn	15 10 23.8	+1.0
BRLK	Bradley Lake	3.09	19		Pn	15 10 26.9	+0.3
BRSE	Bradley Lake S	3.10	21		Pn	15 10 27.0	+0.2
ILS	Iliamna Low So	3.10	358		Pn	15 10 28.3	+1.5
RED	Redoubt Volcan	3.56	1		Pn	15 10 33.8	+0.7
RSO	Redoubt South	3.60	1		Pn	15 10 34.7	+0.8
RDWB	Redoubt West	3.63	1		Pn	15 10 34.8	+0.6
SEW	Seward	3.72	28		Pn	15 10 35.0	-0.2
RDT	Redoubt	3.73	4		Pn	15 10 36.5	+1.1
DFR	Drift River	3.74	2		Pn	15 10 36.0	+0.4
SLKM	Skilak Lake	3.91	20		Pn	15 10 38.2	+0.3
CKL	Chakachamna La	4.35	4		Pn	15 10 45.1	+1.1
SVW2	Sparrevohn	4.46	343		Pn	15 10 45.9	+0.4
RC01	Rabbit Creek A	4.54	20	Pn	Pn	15 10 47.0	+0.4
PWL	Port Wells	4.65	29		Pn	15 10 48.0	-0.1
SUA	Susitna One	4.74	13		Pn	15 10 49.8	+0.4
HIN	Hinchinbrook I	4.87	41	Pn	Pn	15 10 50.9	-0.2
KNK	Knik Glacier	5.10	25	Pn	Pn	15 10 56.4	+2.1
FID	Port Fidalgo	5.13	38		Pn	15 10 53.9	-0.7
EYAK	Cordova Ski Ar	5.25	42	Pn	Pn	15 10 58.0	+1.8
GHO	Glory Hole Cre	5.32	21	Pn	Pn	15 10 57.4	0.0
SML	Sawmill	5.48	23		Pn	15 10 59.9	+0.5
RAGM	Ragged Mountai	5.56	47	Pn	Pn	15 11 00.7	+0.1
GOAT	Goat Mountain	5.66	45		Pn	15 11 02.1	+0.3
SCM	Sheep Creek Mo	5.74	27		Pn	15 11 03.6	+0.6
PPLA	Purkeypile	6.06	3	Pn	Pn	15 11 10.1	+2.7
TT01	Tatalina	6.26	347		Pn	15 11 10.5	+0.5
WAT1	Susitna Watana	6.37	18		Pn	15 11 12.2	+0.5
GLB	Gilahina Butte	6.55	42	Pn	Pn	15 11 14.5	+0.4
TRF	Thorofare Moun	6.73	10		Pn	15 11 17.1	+0.4
KTH	Kantishna Hill	6.78	8	Pn	Pn	15 11 18.6	+1.3
MCARA	McCarthy VSAT	6.80	44	Pn	Pn	15 11 19.0	+1.4
BALM	Baldy	6.87	48		Pn	15 11 19.2	+0.5
MCK	McKinley	7.16	14	Pn	Pn	15 11 24.5	+2.0
BPAW	Bear Paw Mtn.	7.32	7	Pn	Pn	15 11 26.2	+1.6
PNL	Peninsula	7.65	63		Pn	15 11 29.6	+0.3
WRH	Wood River Hil	7.98	15	Pn	Pn	15 11 33.9	+0.2
HDA	Harding Lake	8.11	19	Pn	Pn	15 11 37.0	+1.6
CCB	Clear Creek Bu	8.19	16	Pn	Pn	15 11 36.3	-0.2
MLY	Manley	8.26	6	Pn	Pn	15 11 37.6	0.0
IL31		8.45	18		Pn	15 11 41.3	+1.2
ILAR	Eielson Array	8.45	18	P	Pn	15 11 41.1	+1.0
	0.3nm,0.3s,baz=204,slow=14,SNR=31						
ILAR				S	Sn	15 13 08.2	-6.6
	0.1nm,0.3s,baz=201,slow=17,SNR=3.4						
IMAR	Indian Mountai	9.16	358	Pn	Pn	15 11 49.7	-0.1
EGAK	Eagle	9.77	31	Pn	Pn	15 11 59.7	+1.5
BMAR	Burnt Mountain	11.27	17	Pn	Pn	15 12 20.8	+2.0
EPYK	Eagle Plains	12.20	32	Pn	Pn	15 12 33.5	+2.0
YKA	Yellowknife Ar	19.90	58	P	Pn	15 14 11.2	+0.7
	0.0nm,0.3s,baz=273,slow=11,SNR=3.1						
PETK	Petropavlovsk-	28.09	284	P	P	15 15 29.0	+0.1
	0.8nm,0.7s,baz=76,slow=13,SNR=6.2						
SONM	Songino Array	56.71	308	P	P	15 19 21.2	+0.3
	0.7nm,0.7s,baz=40,slow=6.2,SNR=4.8						
ZALV	Zalesovo Beam	59.95	325	P	P	15 19 43.5	+0.3
	0.6nm,0.6s,baz=20,slow=4.6,SNR=3.2						
MKAR	Makanchi Array	66.93	322	P	P	15 20 29.3	-0.2
	0.3nm,0.5s,baz=38,slow=6.8,SNR=6.1						

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*TAP **12** 15:23:23.1, 24°.71N×122°.45E, h100^{km}±1^{km}, ML3.9, D*

*JMA **12** 15:23:23.0±0.1, 24°.66N×122°.42E, h104^{km}±2^{km}, M2.6*

ISC 12 15:23:24.0±1.4**, 24°.69N**±0°.04×**122°.45E**±0°.02**, h96**^{km}±7^{km}**, n97, σ0^{s}.62**/177**, 14C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.33	244	P	Pn	15 23 38.7	+0.5
	baz=242						
EOS1				*e*S	Sn	15 23 50.4	+1.8
	baz=242						
JYNG	Yonagunijimaku	0.51	118	P	Pn	15 23 39.5	+0.1
JYNG				S	Sn	15 23 51.6	+0.7
TWB1	Santiao Chiao	0.53	307	⇑*i*P	Pn	15 23 39.4	-0.1
	baz=305						
TWB1				S	Sn	15 23 51.5	+0.4
	baz=305						
TWC	Suao	0.55	262	⇑*i*P	Pn	15 23 39.4	-0.3
	baz=259						
TWC				*i* S	Sn	15 23 51.0	-0.4
	baz=259						
YOJ	Yonaguni jima	0.56	114	P	Pn	15 23 39.9	+0.1
YOJ				S	Sn	15 23 52.1	+0.6
NTC	Toucheng	0.59	286	*e*P	Pn	15 23 39.7	-0.3
	baz=284						
NTC				*e*S	Sn	15 23 51.2	-0.8
	baz=284						
TIPB	Shuangxi	0.63	296	⇑*i*P	Pn	15 23 40.4	-0.1
	baz=294						
TIPB				*i* S	Sn	15 23 52.5	-0.2
	baz=294						
ILA	Ilan	0.64	277	*i* P	Pn	15 23 40.5	+0.1
	baz=275						
ILA				*i* S	Sn	15 23 53.5	+0.7
	baz=275						
ENA	Nanau	0.70	248	*i* P	Pn	15 23 41.0	0.0
	baz=246						
ENA				*i* S	Sn	15 23 54.5	+0.8
	baz=246						
TWE	Neicheng	0.71	273	⇑*i*P	Pn	15 23 41.1	0.0
	baz=270						
TWE				*i* S	Sn	15 23 54.0	+0.1
	baz=270						
NWF	Wu-fen Shan	0.72	302	⇑*i*P	Pn	15 23 41.1	-0.1
	baz=300						
NWF				*i* S	Sn	15 23 54.5	+0.3
	baz=300						
WFSB	Wu-fen Shan	0.72	302	⇑P	Pn	15 23 41.2	0.0
	baz=300						
WFSB				S	Sn	15 23 54.4	+0.4
	baz=300						
SLBB	Yuanshan	0.74	275	*i* P	Pn	15 23 40.4	-1.0
	baz=273						
ENTT	Nioudou	0.81	267	*i* P	Pn	15 23 42.2	+0.1
	baz=265						
ENTT				S	Sn	15 23 55.9	+0.3
	baz=265						
TWA	Mucha	0.84	290	*i* P	Pn	15 23 42.0	-0.4
	baz=289						
TWA				*i* S	Sn	15 23 55.6	-0.5
	baz=289						
NDT	Datong Townshi	0.86	264	P	Pn	15 23 42.9	+0.3
	baz=263						
NDT				S	Sn	15 23 57.6	+1.1
	baz=263						
NWLT	Wulai	0.87	276	P	Pn	15 23 42.2	-0.5
	baz=274						
NWLT				*e*S	Sn	15 23 57.0	+0.2
	baz=274						
NHDH	Xindian Distri	0.88	288	P	Pn	15 23 42.2	-0.6
	baz=286						
NHDH				*e*S	Sn	15 23 56.1	-0.9
	baz=286						
YM01	YM01	0.92	300	⇑*i*P	Pn	15 23 42.9	-0.3
	baz=298						
YM01				*i* S	Sn	15 23 57.3	-0.4
	baz=298						
YM11	YM11	0.93	301	*i* P	Pn	15 23 43.0	-0.4
	baz=299						
YM11				S	Sn	15 23 56.5	-1.4
	baz=299						
YM10	YM10	0.93	300	⇑*i*P	Pn	15 23 43.0	-0.4
	baz=298						
YM10				S	Sn	15 23 57.0	-1.0
	baz=298						
YM05	YM05	0.93	301	P	Pn	15 23 43.0	-0.4
	baz=299						
YM05				S	Sn	15 23 57.4	-0.6
	baz=299						
NACB	Ninganchiao	0.94	237	P	Pn	15 23 42.8	-0.6
	baz=235						
NACB				S	Sn	15 23 57.3	-0.7
	baz=235						
YM04	YM04	0.95	299	⇑P	Pn	15 23 43.1	-0.5
	baz=298						
YM04				S	Sn	15 23 57.5	-0.8
	baz=298						
YM03	YM03	0.96	301	P	Pn	15 23 43.3	-0.4
	baz=299						
YM03				*e*S	Sn	15 23 58.3	-0.2
	baz=299						
TWY	Chenhua	0.97	307	P	Pn	15 23 43.7	0.0
	baz=306						
TWY				S	Sn	15 23 58.9	+0.4
	baz=306						
ANP	Anpu	0.98	300	*e*P	Pn	15 23 43.1	-0.8
	baz=299						
ANP				S	Sn	15 23 58.8	-0.2
	baz=299						
YHNB	Yeheng	0.98	269	⇑P	Pn	15 23 44.0	0.0
	baz=267						
YHNB				S	Sn	15 23 59.0	0.0
	baz=267						
TWD	Chiawan	0.99	232	*i* P	Pn	15 23 43.4	-0.5
	baz=231						
TWD				*i* S	Sn	15 23 58.3	-0.7
	baz=231						
NSK	Sanguang	0.99	269	⇑*i*P	Pn	15 23 44.1	0.0
	baz=268						
NSK				*i* S	Sn	15 23 59.2	0.0
	baz=268						
ETLH	Xiulin Townshi	1.01	242	P	Pn	15 23 43.7	-0.6
	baz=240						
ETLH				S	Sn	15 23 58.9	-0.6
	baz=240						
NNSB	Datong	1.01	255	⇑P	Pn	15 23 44.2	-0.1
	baz=254						
NNSB				S	Sn	15 23 59.2	-0.3
	baz=254						
NNSH	Datong	1.01	255	*i* P	Pn	15 23 44.4	+0.1
	baz=254						
NNSH				S	Sn	15 23 59.4	-0.2
	baz=254						
NNS	Nan Shan	1.01	256	⇑*i*P	Pn	15 23 44.2	-0.1
	baz=254						
NNS				*i* S	Sn	15 23 59.6	-0.1
	baz=254						
TWS1	Kuangyinshan	1.02	294	⇑*i*P	Pn	15 23 44.0	-0.3
	baz=292						
TWS1				*i* S	Sn	15 23 59.4	-0.2
	baz=292						
NTST	Danshui	1.02	298	P	Pn	15 23 44.3	0.0
	baz=296						
NTST				S	Sn	15 23 59.7	+0.1
	baz=296						
HWA	Hwalien	1.05	228	*e*P	Pn	15 23 44.3	-0.3
	baz=226						
HWA				S	Sn	15 24 01.0	+0.9
	baz=226						
WLTB	Daxi	1.10	279	*i* P	Pn	15 23 45.3	0.0
	baz=277						
WLTB				*i* S	Sn	15 24 02.1	+0.9
	baz=277						
ENLB	Shoufeng	1.10	225	P	Pn	15 23 43.9	-1.4
	baz=224						
ENLB				S	Sn	15 24 00.1	-1.1
	baz=224						
NCU	National Centr	1.18	284	P	Pn	15 23 46.3	+0.2
	baz=282						
NCU				S	Sn	15 24 03.5	+0.7
	baz=282						
NCUH	Zhongli	1.18	284	*e*P	Pn	15 23 46.1	-0.1
	baz=282						
NCUH				*e*S	Sn	15 24 03.3	+0.4
	baz=282						
IRIF	Iriomote-Funau	1.22	107	P	Pn	15 23 46.3	-0.3
IRIF				S	Sn	15 24 03.5	-0.1
TWT	Tachien	1.24	250	P	Pn	15 23 47.5	+0.4
	baz=248						
TWT				*i* S	Sn	15 24 04.8	+0.3
	baz=248						
TDCB	Techi	1.25	250	P	Pn	15 23 47.5	+0.3
	baz=249						
TDCB				S	Sn	15 24 04.5	-0.2
	baz=249						
ESL	Shilin	1.27	227	*i* P	Pn	15 23 46.3	-1.0
	baz=226						
ESL				S	Sn	15 24 04.0	-0.9
	baz=226						

LIOB	**Emei**	**1.31**	**268**	P	**Pn**	**15 23 47.1**	**-0.5**
	baz=267						
LIOB				S	**Sn**	**15 24 05.3**	**-0.2**
	baz=267						
NHW	**Xinwu Township**	**1.31**	**284**	*e*P	**Pn**	**15 23 47.8**	**0.0**
	baz=283						
NHW				*e*S	**Sn**	**15 24 05.8**	**+0.2**
	baz=283						
NSTT	**Nanjuang**	**1.32**	**268**	P	**Pn**	**15 23 47.6**	**-0.3**
	baz=266						
NSTT				S	**Sn**	**15 24 05.4**	**-0.4**
	baz=266						
CHGB	**Renai**	**1.32**	**242**	P	**Pn**	**15 23 48.2**	**+0.1**
	baz=241						
CHGB				S	**Sn**	**15 24 05.7**	**-0.5**
	baz=241						
SBCB	**Hsinchu**	**1.34**	**275**	*e*P	**Pn**	**15 23 47.9**	**-0.1**
	baz=273						
SBCB				S	**Sn**	**15 24 06.3**	**+0.1**
	baz=273						
HSN	**Hsinchu**	**1.35**	**275**	S	**Sn**	**15 24 05.5**	**-0.9**
	baz=275						
OWD	**Renai**	**1.38**	**238**	*e*P	**Pn**	**15 23 48.6**	**-0.1**
	baz=237						
OWD				S	**Sn**	**15 24 06.6**	**-0.6**
	baz=237						
EGFH	**Guangfu**	**1.38**	**223**	*e*P	**Pn**	**15 23 48.0**	**-0.6**
	baz=222						
EGFH				*e*S	**Sn**	**15 24 05.6**	**-1.5**
	baz=222						
HATJ	**Hateruma jima**	**1.39**	**117**	*e*S	**Sn**	**15 24 07.8**	**+0.6**
WHP	**Taichung City**	**1.43**	**254**	P	**Pn**	**15 23 49.9**	**+0.6**
	baz=252						
WHP				S	**Sn**	**15 24 08.9**	**+0.5**
	baz=252						
JKRS	**Kuro-shima**	**1.49**	**107**	P	**Pn**	**15 23 50.1**	**+0.2**
JKRS				S	**Sn**	**15 24 09.8**	**+0.3**
HGSD	**Ruisui**	**1.52**	**218**	P	**Pn**	**15 23 49.1**	**-1.2**
	baz=217						
NMLH	**Miaoli**	**1.52**	**265**	*e*P	**Pn**	**15 23 50.2**	**-0.1**
	baz=263						
NMLH				*e*S	**Sn**	**15 24 09.2**	**-1.0**
	baz=263						
DPDB	**Guoxing**	**1.54**	**245**	P	**Pn**	**15 23 51.0**	**+0.5**
	baz=244						
DPDB				S	**Sn**	**15 24 11.0**	**+0.3**
	baz=244						
NSY	**Sanyi**	**1.56**	**260**	P	**Pn**	**15 23 51.0**	**+0.2**
	baz=259						
NSY				S	**Sn**	**15 24 11.6**	**+0.4**
	baz=259						
EHY	**Hungye**	**1.57**	**221**	*e*P	**Pn**	**15 23 50.7**	**-0.2**
	baz=220						
JIJ	**Ishigaki jima**	**1.57**	**102**	P	**Pn**	**15 23 50.7**	**-0.3**
JIJ				S	**Sn**	**15 24 10.7**	**-0.7**
PTSB	**Yuanli**	**1.61**	**262**	*e*S	**Sn**	**15 24 12.2**	**0.0**
	baz=260						
SMLT	**Sun Moon Lake**	**1.63**	**241**	P	**Pn**	**15 23 52.4**	**+0.6**
	baz=239						
SMLT				S	**Sn**	**15 24 13.2**	**+0.4**
	baz=239						
SSLB	**Suanglung**	**1.64**	**237**	*e*P	**Pn**	**15 23 52.2**	**+0.4**
	baz=236						
SSLB				*e*S	**Sn**	**15 24 13.4**	**+0.5**
	baz=236						
TYC	**Yuchr**	**1.65**	**242**	P	**Pn**	**15 23 52.8**	**+0.9**
	baz=241						
TYC				S	**Sn**	**15 24 13.4**	**+0.2**
	baz=241						
YULB	**Yu-li**	**1.67**	**219**	*e*P	**Pn**	**15 23 51.0**	**-1.2**
	baz=218						
WDJ	**Dajia District**	**1.68**	**259**	*e*S	**Sn**	**15 24 13.5**	**-0.4**
	baz=257						
JISG	**Ishigakijimahi**	**1.70**	**93**	P	**Pn**	**15 23 52.4**	**-0.1**
JISG				S	**Sn**	**15 24 13.9**	**-0.2**
TWF1	**Yuli**	**1.70**	**219**	*e*P	**Pn**	**15 23 51.5**	**-1.1**
	baz=217						
TCU	**Taichung**	**1.71**	**252**	*e*S	**Sn**	**15 24 14.3**	**-0.1**
	baz=250						
WHYT	**Xinyi Township**	**1.76**	**236**	P	**Pn**	**15 23 54.6**	**+1.2**
	baz=235						
WHYT				S	**Sn**	**15 24 17.4**	**+1.6**
	baz=235						
WJS	**Zhushan**	**1.79**	**242**	*e*P	**Pn**	**15 23 54.4**	**+0.7**
	baz=240						
WJS				*e*S	**Sn**	**15 24 17.8**	**+1.4**
	baz=240						
WNT	**Mingjian**	**1.80**	**244**	*e*P	**Pn**	**15 23 54.4**	**+0.6**
	baz=242						
WNT				*e*S	**Sn**	**15 24 16.8**	**+0.2**
	baz=242						
YUS	**Yu-Shan**	**1.82**	**229**	P	**Pn**	**15 23 55.2**	**+0.6**
	baz=228						
YUS				S	**Sn**	**15 24 16.9**	**-0.8**
	baz=228						
FULB	**Fuli**	**1.82**	**216**	*e*P	**Pn**	**15 23 54.7**	**+0.6**
	baz=215						
FULB				S	**Sn**	**15 24 16.6**	**-0.5**
	baz=215						
WCHH	**Zhanghua**	**1.83**	**251**	*e*S	**Sn**	**15 24 16.6**	**-0.5**
	baz=250						
ALS	**Alishan**	**1.91**	**232**	P	**Pn**	**15 23 56.6**	**+1.0**
	baz=231						
ALS				*e*S	**Sn**	**15 24 20.5**	**+1.0**
	baz=231						
CHN5	**Tsauling**	**1.95**	**236**	P	**Pn**	**15 23 56.4**	**+0.5**
	baz=235						
CHN5				S	**Sn**	**15 24 21.3**	**+1.1**
	baz=235						
ELDTW	**Lidau**	**1.99**	**222**	P	**Pn**	**15 23 55.5**	**-0.9**
	baz=220						
ELDTW				*e*S	**Sn**	**15 24 19.6**	**-1.4**
	baz=220						
WGK	**Gukeng**	**1.99**	**240**	*e*P	**Pn**	**15 23 57.4**	**+1.1**
	baz=239						
WGK				*e*S	**Sn**	**15 24 21.7**	**+0.7**
	baz=239						
WDLH	**Douliu**	**2.01**	**241**	*e*P	**Pn**	**15 23 56.8**	**+0.3**
	baz=239						
WDLH				*e*S	**Sn**	**15 24 22.0**	**+0.6**
	baz=239						
JTJ	**Tarama**	**2.05**	**91**	P	**Pn**	**15 23 57.1**	**+0.1**
JTJ				S	**Sn**	**15 24 22.1**	**-0.2**
RLNB	**Erlin**	**2.07**	**248**	*e*S	**Sn**	**15 24 22.3**	**-0.4**
	baz=246						
CHN4	**Tsaushan**	**2.16**	**232**	*e*P	**Pn**	**15 23 59.0**	**+0.5**
	baz=231						
CHN4				*e*S	**Sn**	**15 24 25.6**	**+0.7**
	baz=231						
TWH	**Lutao**	**2.16**	**205**	*e*P	**Pn**	**15 23 57.7**	**-0.8**
	baz=203						
TWH				*e*S	**Sn**	**15 24 24.1**	**-0.9**
	baz=203						
TPUB	**Ta-pu**	**2.17**	**231**	*e*P	**Pn**	**15 23 58.6**	**0.0**
	baz=230						
TPUB				*e*S	**Sn**	**15 24 25.6**	**+0.5**
	baz=230						
STYT	**Tauyuan**	**2.17**	**226**	*e*P	**Pn**	**15 23 59.1**	**+0.3**
	baz=225						
STYT				*e*S	**Sn**	**15 24 25.7**	**+0.5**
	baz=225						
WTP	**Ta-pu**	**2.21**	**230**	*e*P	**Pn**	**15 23 59.4**	**+0.1**
	baz=229						
WTP				*e*S	**Sn**	**15 24 26.9**	**+0.8**
	baz=229						
TWK	**Hsinying**	**2.29**	**232**	*e*P	**Pn**	**15 23 59.7**	**-0.6**
	baz=231						
CHN1	**Nanshi**	**2.31**	**230**	*e*P	**Pn**	**15 24 01.3**	**+0.7**
	baz=229						
SGST	**Jiashian**	**2.34**	**227**	*e*P	**Pn**	**15 24 00.4**	**-0.5**
	baz=226						
SLGT	**Liugui**	**2.36**	**225**	*e*P	**Pn**	**15 24 01.8**	**+0.5**
	baz=224						
SLGT				*e*S	**Sn**	**15 24 30.9**	**+1.3**
	baz=224						
JIRB	**Irabujima**	**2.48**	**86**	*e*S	**Sn**	**15 24 31.5**	**-0.9**
SSD	**Sandimen**	**2.55**	**221**	*e*P	**Pn**	**15 24 03.8**	**+0.1**
	baz=220						
JMJ2	**Miyako jima3**	**2.62**	**88**	P	**Pn**	**15 24 05.0**	**+0.5**
JMJ2				*e*S	**Sn**	**15 24 35.9**	**+0.2**
MASBT	**Mashibuluo**	**2.66**	**219**	*e*P	**Pn**	**15 24 05.3**	**+0.2**
	baz=218						
MASBT				*e*S	**Sn**	**15 24 36.5**	**-0.2**
	baz=218						

WEL 12 15:25:02.5±1.0**,35°S**±6°×**17°9E**±1°1**,h33^{km},M4.0**/15**,mB4.7**/1**,ML4.3**/15**,MLv4.0**/15**,Mw(mB)3.9**/1**,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**3.29**	**194**	P	Pn	15 25 53.8	+2.1
WMGZ				S	Sn	15 26 26.2	-3.5
PKGZ	**Pakihiroa**	**3.43**	**198**	P	Pn	15 25 55.0	+1.3
PKGZ				S	Sn	15 26 33.6	+0.3
PUZ	**Puketiti**	**3.57**	**195**	P	Pn	15 25 56.4	+0.9
PUZ				S	Sn	15 26 36.7	+0.2
KUZ	**Kuaotunu**	**3.68**	**234**	P	Pn	15 25 59.2	+2.1
TWGZ	**Tauwhareparae**	**3.73**	**198**	P	Pn	15 25 58.6	+0.8
TWGZ				S	Sn	15 26 42.0	+1.4
TKGZ	**Te Karaka**	**4.01**	**198**	P	Pn	15 26 01.6	0.0
URZ	**Urewera**	**4.08**	**207**	P	Pn	15 26 02.2	-0.3
RAGZ	**Rawiri**	**4.19**	**202**	P	Pn	15 26 04.0	-0.1
RIGZ	**Rimuhau**	**4.29**	**198**	P	Pn	15 26 04.8	-0.7
MUGZ	**Murupara**	**4.40**	**208**	P	Pn	15 26 06.3	-0.7
TOZ	**Tahuroa Road**	**4.44**	**225**	P	Pn	15 26 05.3	-2.1
RTZ	**Ruatahuna**	**4.44**	**206**	P	Pn	15 26 06.3	-1.3
PRGZ	**Paritu Road**	**4.46**	**196**	P	Pn	15 26 06.8	-1.0
SNGZ	**Shannon Statio**	**4.47**	**201**	P	Pn	15 26 07.2	-0.8
RAHZ	**Arahi**	**4.68**	**203**	P	Pn	15 26 09.6	-1.1
MHGZ	**Mahia Peninsul**	**4.68**	**195**	P	Pn	15 26 09.7	-1.1
MTHZ	**Maungataniwha**	**4.70**	**205**	P	Pn	15 26 10.0	-1.1
WHHZ	**Waihua**	**4.78**	**201**	P	Pn	15 26 10.8	-1.4
KUTZ	**Kaahu Road**	**4.82**	**216**	P	Pn	15 26 13.0	+0.2
MRHZ	**Matea Rd**	**4.84**	**209**	P	Pn	15 26 11.3	-1.8
TLZ	**Tolley Road**	**4.84**	**219**	P	Pn	15 26 13.8	+0.7
NMHZ	**Naumai**	**4.93**	**204**	P	Pn	15 26 12.7	-1.6
ARHZ	**Aropaoanui**	**5.02**	**202**	P	Pn	15 26 13.5	-2.0
WATZ	**Wairara**	**5.04**	**215**	P	Pn	15 26 15.7	0.0
RITZ	**Rihia Road**	**5.20**	**212**	P	Pn	15 26 17.4	-0.6
MCHZ	**McNeill Hill**	**5.28**	**204**	P	Pn	15 26 16.7	-2.3
HIZ	**Hauiti**	**5.35**	**222**	P	Pn	15 26 21.3	+1.3
KWHZ	**Kaweka Forest**	**5.36**	**206**	P	Pn	15 26 17.5	-2.6
WTVZ	**West Tongariro**	**5.43**	**213**	P	Pn	15 26 19.4	-1.9
TWVZ	**Taurewa**	**5.47**	**215**	P	Pn	15 26 20.9	-0.8
NGZ	**Ngauruhoe**	**5.48**	**213**	P	Pn	15 26 20.4	-1.5
BHHZ	**Black Hill Sta**	**5.55**	**208**	P	Pn	15 26 19.9	-2.9
KRHZ	**Kereru**	**5.57**	**205**	P	Pn	15 26 19.4	-3.7
MOVZ	**Moawhango**	**5.60**	**211**	P	Pn	15 26 20.1	-3.5
PXZ	**Pawanui**	**5.77**	**200**	P	Pn	15 26 21.5	-4.2
VRZ	**Vera Road**	**5.84**	**218**	P	Pn	15 26 26.1	-0.7
PNHZ	**Pukenui**	**5.87**	**205**	P	Pn	15 26 22.9	-4.3
PRHZ	**Porangahau**	**6.05**	**201**	P	Pn	15 26 25.4	-4.3
TSZ	**Takapari Road**	**6.08**	**206**	P	Pn	15 26 25.6	-4.6
DVHZ	**Dannevirke**	**6.23**	**204**	P	Pn	15 26 27.2	-4.9
ANWZ	**Angora Road**	**6.28**	**201**	P	Pn	15 26 28.0	-4.8
POWZ	**Post Office Ro**	**6.45**	**206**	P	Pn	15 26 30.7	-4.4
PRWZ	**Pori Road**	**6.52**	**204**	P	Pn	15 26 31.9	-4.2
BFZ	**Birch Farm**	**6.55**	**202**	P	Pn	15 26 31.2	-5.3
MRZ	**Mangatainoka R**	**6.75**	**206**	P	Pn	15 26 33.3	-5.9
HOWZ	**Holdsworth Sta**	**6.99**	**205**	P	Pn	15 26 35.9	-6.6
OGWZ	**Otaki Gorge**	**7.04**	**207**	P	Pn	15 26 37.3	-5.8
TMWZ	**Te Maipa**	**7.05**	**202**	P	Pn	15 26 37.6	-5.7
KIW	**Kapiti Island**	**7.18**	**209**	P	Pn	15 26 39.2	-5.9
MTW	**Mount Morrison**	**7.22**	**204**	P	Pn	15 26 39.2	-6.5
CAW	**Cannon Point**	**7.33**	**207**	P	Pn	15 26 40.4	-6.8

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*IDC **12** 15:25:51.2±1.1, 5°34S×153°08E, h0^{km}, mb3.8/8, mb1 4.0/8, mb1mx3.7/49, mbtmp3.8/8, Error ellipse: s-maj=24.4km s-min=16.2km az=62.0*

*NEIC **12** 15:25:58.9±2.5, 5°15S±0°10×152°9E±0°1, h48^{km}±8^{km}, mb4.3/5, Error ellipse: s-maj=21.0km s-min=13.4km az=101.0*

ISC 12 15:25:58.1±1.1**,5°21S**±0°10×**152°9E**±0°2**,h43^{km},n19,** σ**0^{s}79**/19**,mb3.8**/10**,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.27**	**323**	Pn	**Pn**	**15 26 19.7**	**+0.2**
KRVT	**Keravat (AS076**	**1.28**	**315**	Pg	**Pn**	**15 26 19.6**	**+0.1**
	229nm,0.3s,baz=165,slow=1.4,SNR=326						
KRVT				Lg	Lg	15 26 37.5	
	632nm,0.3s,baz=3.5,slow=19,SNR=50						
PMG	**Port Moresby**	**7.08**	**234**	Pn	**Pn**	**15 27 40.2**	**+0.9**
	0.6nm,0.3s,baz=38,slow=8.5,SNR=6.2						
PMG				Sn	**Sn**	**15 28 57.2**	**-1.3**
	0.6nm,0.3s,baz=24,slow=20,SNR=4.8						
PMG	**Port Moresby**	**7.08**	**234**		**Pn**	**15 27 39.9**	**+0.7**
MTN	**Manton Dam**	**22.81**	**249**	P	**P**	**15 30 58.8**	**+1.3**
MTN				IAmb	IAmb	15 31 18.9	
	comp=Z,23nm,1.6s						
WR0	**Warramunga Arr**	**23.13**	**229**	P	**P**	**15 31 00.7**	**0.0**
WR0				IAmb	IAmb	15 31 17.0	
	comp=Z,11nm,1.5s						
WRA	**Warramunga Arr**	**23.27**	**229**	P	**P**	**15 31 01.3**	**-0.8**
	comp=Z,1.7nm,0.7s,baz=54,slow=9.8,SNR=6.3						
KNRA	**Kununurra**	**25.91**	**245**	P	**P**	**15 31 25.6**	**-0.8**
AS31	**Alice Springs**	**25.93**	**223**	P	**P**	**15 31 26.1**	**-0.5**
ASAR	**Alice Springs**	**25.94**	**223**	P	**P**	**15 31 26.1**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=61,slow=8.6,SNR=21						
FITZ	**Fitzroy Crossi**	**29.58**	**242**	P	**P**	**15 31 58.0**	**-1.3**
	comp=Z,2.4nm,0.7s,baz=64,slow=7.7,SNR=7.1						
FITZ	**Fitzroy Crossi**	**29.58**	**242**	IAmb	IAmb	15 32 49.1	
	comp=Z,20nm,1.6s						
CMAR	**Chiang Mai Arr**	**58.17**	**295**	P	**P**	**15 35 48.6**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=107,slow=5.8,SNR=3.4						
ZALV	**Zalesovo Beam**	**81.57**	**326**	P	**P**	**15 38 11.8**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=98,slow=7.4,SNR=2.3						
ILAR	**Eielson Array**	**82.49**	**22**	P	**P**	**15 38 16.4**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=236,slow=6.4,SNR=2.9						
BVAR	**Borovoye Array**	**89.65**	**323**	P	**P**	**15 38 51.2**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=100,slow=6.2,SNR=3.8						
YKA	**Yellowknife Ar**	**95.73**	**28**	P	**P**	**15 39 18.3**	**-0.9**
	comp=Z,0.1nm,0.4s,baz=260,slow=6.8,SNR=3.9						
TORD	**Torodi Ar. Bea**	**150.56**	**288**	PKPbc	**PKPbc**	**15 45 46.6**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=65,slow=3.0,SNR=5.6						
TORD	**Torodi Ar. Bea**	**150.56**	**288**		**PKPbc**	**15 45 46.3**	**-0.1**

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*BJI **12** 15:30:47.2±0.0, 37°10N×72°05E, h169^{km}, mB4.6/7, mb4.1/11*

*NEIC **12** 15:30:48.4±1.5, 37°25N±0°05×71°99E±0°09, h170^{km}±15^{km}, mb4.0/3, Error ellipse: s-maj=12.2km s-min=4.5km az=61.0*

*IDC **12** 15:30:53.1±4.3, 37°69N×71°60E, h189^{km}±32^{km}, mb2.9/3, mb1 3.0/9, mb1mx2.9/55, mbtmp3.6/9, Error ellipse: s-maj=58.9km s-min=19.6km az=151.0*

*NNC **12** 15:30:55.1±2.2, 37°72N×71°90E, h170^{km}±31^{km}, mb2.8, mpv3.5, Error ellipse: s-maj=21.0km s-min=12.3km az=12.0*

ISC 12 15:30:47.2±0.6**,37°28N**±0°05×**71°93E**±0°05**,h150^{km},n55,** σ**2^{s}41**/65**,3C-6D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.14**	**324**	Pn	**Pn**	**15 31 26.9**	**+2.8**
GAR				Sn	**Sn**	**15 31 53.8**	**+1.2**
CHGR	**Chuyangaron**	**2.59**	**303**		**Pn**	**15 31 31.9**	**+2.4**
BTK	**Batken**	**2.91**	**343**		**Pn**	**15 31 37.8**	**+4.3**
KBL	**Kabul**	**3.60**	**222**		**Pn**	**15 31 45.3**	**+2.9**
NIL	**Nilore**	**3.77**	**163**		**Pn**	**15 31 47.0**	**+2.3**
KSH	**Kashi**	**3.88**	**54**	P	**Pn**	**15 31 44.1**	**-2.0**
KSH				S	**Sn**	**15 32 24.0**	**-7.8**
KSH				smax	smax		
	comp=N,1µm,1.0s						
KSH				smax	smax		
	comp=E,810nm,0.7s						
ARSB	**Arslanbob**	**4.12**	**11**		**Pn**	**15 31 51.1**	**+1.9**
AML	**Almayashu**	**5.04**	**15**	P	**Pn**	**15 32 04.0**	**+2.5**
	SNR=71						
NRN	**Naryn**	**5.21**	**36**		**Pn**	**15 32 04.7**	**+0.9**
UCH	**Uchtor**	**5.33**	**21**	P	**Pn**	**15 32 08.0**	**+2.6**
	SNR=27						
EKS2	**Erkin-Say**	**5.56**	**14**	P	**Pn**	**15 32 11.3**	**+3.1**
	SNR=11						
AAK	**Ala-Archa**	**5.71**	**19**	P	**Pn**	**15 32 13.1**	**+3.0**
	3.1nm,0.3s,baz=170,slow=5.5,SNR=60						
AAK				S	**Sn**	**15 33 15.1**	**+0.2**
	1.0nm,0.3s,baz=318,slow=22,SNR=21						
AAK	**Ala-Archa**	**5.71**	**19**	P	**Pn**	**15 32 13.2**	**+3.0**
	SNR=13						
AAK	**Ala-Archa**	**5.71**	**19**	⇓P	**Pn**	**15 32 12.6**	**+2.5**
	3.6nm,0.3s						
AAK				⇑S	**Sn**	**15 33 14.6**	**-0.2**
AAK	**Ala-Archa**	**5.71**	**19**		**Pn**	**15 32 12.6**	**+2.5**
THN	**Thein Dam**	**5.75**	**146**	*e*P	**Pn**	**15 32 13.0**	**+2.5**
THN				*e*S	**Sn**	**15 33 14.0**	**-1.7**
KK31	**Karatay Array**	**5.92**	**350**	⇑P	**Pn**	**15 32 15.3**	**+2.4**
	1.2nm,0.3s,baz=161,slow=11,SNR=25						
KK31				S	**Sn**	**15 33 19.0**	**-0.8**
	8.7nm,0.5s,baz=169,slow=16,SNR=19						
KK31	**Karatay Array**	**5.92**	**350**		**Pn**	**15 32 15.1**	**+2.3**
KKAR	**Karatay Array**	**5.92**	**350**		**Pn**	**15 32 14.2**	**+1.3**
KKAR	**Karatay Array**	**5.92**	**350**		**Pn**	**15 32 15.1**	**+2.2**
CHMS	**Chumysh**	**6.11**	**20**	P	**Pn**	**15 32 18.1**	**+2.7**
	SNR=5.7						
CHMS	**Chumysh**	**6.11**	**20**	⇓P	**Pn**	**15 32 17.7**	**+2.3**
	6.0nm,0.7s						
CHMS				⇓S	**Sn**	**15 33 23.0**	**-1.3**
	17nm,0.8s						
GEYT	**Alibeck**	**10.98**	**278**	P	**Pn**	**15 33 20.4**	**+0.2**
	0.5nm,0.3s,baz=102,slow=12,SNR=4.3						
GEYT				S	**Sn**	**15 35 15.6**	**-6.0**
	0.7nm,0.3s,baz=77,slow=15,SNR=5.5						
MAKZ	**Makanchi**	**12.09**	**35**	Pn	**Pn**	**15 33 35.5**	**+1.0**
MK31	**Makanchi Array**	**12.23**	**36**	⇓P	**Pn**	**15 33 40.1**	**+3.8**
	0.4nm,0.5s,baz=222,slow=9.1,SNR=3.6						
MKAR	**Makanchi Array**	**12.23**	**36**	P	**Pn**	**15 33 37.6**	**+1.3**
	0.1nm,0.3s,baz=233,slow=14,SNR=4.6						
MKAR	**Makanchi Array**	**12.23**	**36**	Pn	**Pn**	**15 33 36.6**	**+0.3**
DANN	**Dangsing**	**13.34**	**128**	*e*P	**Pn**	**15 33 50.0**	**-1.0**
WMQ	**Urumqi**	**13.64**	**56**	*e*P	**Pn**	**15 33 54.9**	**+0.3**
GKN	**Gorkha**	**14.13**	**127**	*e*P	**Pn**	**15 34 00.2**	**-0.8**
	9.1nm,0.2s						
KURBB	**Kurchatov Arra**	**14.15**	**17**	P	**Pn**	**15 34 02.0**	**+1.2**
	0.1nm,0.3s,baz=206,slow=10,SNR=12						
KURBB	**Kurchatov Arra**	**14.15**	**17**	⇓P	**P**	**15 34 03.9**	**+0.1**
	3.3nm,0.9s						
KURK	**Kurchatov**	**14.26**	**17**	Pn	**Pn**	**15 34 03.2**	**+1.0**
KKN	**Kakani**	**14.69**	**126**	*e*P	**Pn**	**15 34 06.9**	**-1.1**
DMN	**Daman**	**14.71**	**127**	*e*P	**Pn**	**15 34 07.2**	**-1.0**
	5.1nm,0.3s						
AB31	**Akbulak array**	**14.79**	**328**	⇓P	**Pn**	**15 34 10.9**	**+2.0**
	0.6nm,0.6s,baz=145,slow=13,SNR=12						
AB31				S	**Sn**	**15 36 49.5**	**-3.6**
	1.2nm,0.5s,baz=154,slow=22,SNR=5.2						
ABKAR	**Akbulak array**	**14.79**	**328**	P	**Pn**	**15 34 11.1**	**+2.2**
PKIN	**Phulchoki**	**14.91**	**127**	*e*P	**Pn**	**15 34 09.9**	**-0.9**
	5.8nm,0.5s						
PKI	**Pulchoki**	**14.93**	**127**	*e*P	**Pn**	**15 34 09.7**	**-1.3**
	7.6nm,0.5s						
GUN	**Gumba**	**15.00**	**124**	*e*P	**Pn**	**15 34 12.0**	**0.0**
JIRN	**Jiri**	**15.37**	**124**	*e*P	**Pn**	**15 34 17.1**	**+0.5**
	17nm,0.4s						
BVAR	**Borovoye Array**	**15.79**	**357**	P	**Pn**	**15 34 21.8**	**+0.7**
	0.2nm,0.3s,baz=161,slow=14,SNR=7.6						
BRVK	**Borovoye**	**15.82**	**356**	P	**Pn**	**15 34 22.3**	**+0.7**
BRVK				IAmb	IAmb	15 34 40.9	
	comp=Z,8.7nm,1.6s						
AKTO	**Aktyubinsk**	**16.51**	**327**	S	**S**	**15 37 28.1**	**-5.0**
	comp=Z,0.1nm,0.3s,baz=23,slow=15,SNR=2.6						
TAPN	**Taplejung**	**16.59**	**122**	*e*P	**P**	**15 34 31.4**	**+0.1**
	comp=Z,2.8nm,0.3s						
ZAA0	**Zalesovo Array**	**18.90**	**24**	P	**P**	**15 34 57.4**	**+1.3**
ZAA0				IAmb	IAmb	15 34 58.9	
	comp=Z,4.5nm,0.9s						
ZALV	**Zalesovo Beam**	**18.90**	**24**	P	**P**	**15 34 58.1**	**+2.0**
	comp=Z,0.5nm,0.3s,baz=221,slow=11,SNR=15						
ZALV	**Zalesovo Beam**	**18.90**	**24**	P	**P**	**15 34 57.9**	**+1.9**
GTA	**Gaotai**	**21.94**	**76**	*e*P	**P**	**15 35 32.4**	**+3.5**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LZH	**Lanzhou**	**25.56**	**83**	⇑P	**P**	**15 36 01.1**	**-1.3**
LZH				pP	pP	15 36 35.5	+0.5
LZH				PP	**PnPn**	**15 36 49.2**	**+1.2**
LZH				sP	sP	15 36 55.6	+2.7
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH				pmax	pmax		
	comp=Z,66nm,4.5s						
SONM	**Songino Array**	**27.28**	**56**	P	**P**	**15 36 20.1**	**+2.5**
	comp=Z,0.3nm,0.5s,baz=267,slow=9.6,SNR=2.9						
GAZ	**Gaziantep**	**27.56**	**280**	P	**P**	**15 36 19.2**	**-0.9**
GAZ				IAmb	IAmb	15 37 22.4	
	comp=Z,48nm,1.9s						
HHC	**Hu-ho-hao-te**	**30.80**	**71**	*e*P	**P**	**15 36 48.9**	**+0.1**
HHC				pmax	pmax		
	comp=Z,14nm,0.8s						
HHC				pmax	pmax		
	comp=Z,55nm,4.3s						
TORD	**Torodi Ar. Bea**	**66.48**	**269**	P	**P**	**15 41 21.8**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=60,slow=4.8,SNR=2.6						
YKA	**Yellowknife Ar**	**80.43**	**3**	P	**P**	**15 42 39.4**	**-2.3**
	comp=Z,0.1nm,0.5s,baz=355,slow=6.8,SNR=3.6						

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*JMA **12** 15:50:53.1±0.1, 23°05N×121°34E, h37^{km}±2^{km}, M3.0*

*TAP **12** 15:50:54.4, 23°04N×121°35E, h34^{km}, ML3.2, C*

ISC 12 15:50:54.3±0.9**,23°05N**±0°02×**121°42E**±0°02**,h31**^{km}±5^{km}**,n97,** σ**1^{s}07**/179**,7C-10D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.07**	**318**	*i* P	**Pb**	**15 51 00.4**	**+0.8**
	baz=22						
CHKT				*i* S	**Sb**	**15 51 04.6**	**+1.4**
	baz=22						
FULB	**Fuli**	**0.19**	**323**	*i* P	**Pn**	**15 51 01.3**	**+0.2**
	baz=330						
FULB				S	**Sn**	**15 51 05.6**	**+0.4**
	baz=330						
TWF1	**Yuli**	**0.32**	**340**	*i* P	**Pb**	**15 51 01.9**	**-0.2**
	baz=342						
TWF1				*i* S	**Sb**	**15 51 07.3**	**-0.2**
	baz=342						
TWH	**Lutao**	**0.34**	**170**	⇑*i*P	**Pn**	**15 51 03.0**	**-0.1**
	baz=162						
TWH				S	**Sb**	**15 51 08.1**	**+0.3**
	baz=162						
YULB	**Yu-li**	**0.36**	**342**	⇓P	**Pb**	**15 51 02.2**	**-0.4**
	baz=343						
YULB				S	**Sb**	**15 51 07.6**	**-0.8**
	baz=343						
TTN	**Taitung**	**0.38**	**220**	P	**Pb**	**15 51 03.0**	**+0.1**
	baz=212						
TTN				S	**Sn**	**15 51 10.2**	**+0.3**
	baz=212						
TWGBT	**Beinan**	**0.39**	**234**	⇑P	**Pb**	**15 51 02.2**	**-0.8**
	baz=235						
TWGBT				S	**Sb**	**15 51 07.8**	**-1.2**
	baz=235						
TWG	**Pinlang**	**0.39**	**235**	⇑*i*P	**Pb**	**15 51 02.2**	**-0.8**
	baz=235						
TWG				*i* S	**Sb**	**15 51 07.8**	**-1.3**
	baz=235						
ELDTW	**Lidau**	**0.39**	**291**	P	**Pb**	**15 51 02.5**	**-0.7**
	baz=300						
ELDTW				S	**Sb**	**15 51 07.7**	**-1.6**
	baz=300						
HGSD	**Ruisui**	**0.44**	**1**	P	**Pn**	**15 51 04.7**	**+0.2**
	baz=16						
HGSD				S	**Sn**	**15 51 12.5**	**+1.0**
	baz=16						
EHY	**Hungye**	**0.47**	**349**	⇑*i*P	**Pb**	**15 51 03.7**	**-0.5**
	baz=350						
EHY				*i* S	**Sb**	**15 51 10.0**	**-1.0**
	baz=350						
YUS	**Yu-Shan**	**0.61**	**316**	⇓*i*P	**Pb**	**15 51 06.5**	**-0.4**
	baz=324						
YUS				*i* S	**Sb**	**15 51 14.5**	**-1.0**
	baz=324						
STYT	**Tauyuan**	**0.62**	**281**	⇓*i*P	**Pb**	**15 51 06.1**	**-0.6**
	baz=282						
STYT				*i* S	**Sb**	**15 51 14.3**	**-0.9**
	baz=282						
ECL	**Taimali**	**0.62**	**224**	⇑*i*P	**Pb**	**15 51 04.8**	**-1.9**
	baz=219						
ECL				*i* S	**Sb**	**15 51 12.5**	**-2.6**
	baz=219						
EGFH	**Guangfu**	**0.62**	**1**	P	**Pb**	**15 51 06.0**	**-0.8**
	baz=6.0						
EGFH				S	**Sb**	**15 51 14.9**	**-0.3**
	baz=6.0						
SLGT	**Liugui**	**0.71**	**266**	*i* P	**Pn**	**15 51 08.0**	**-0.3**
	baz=270						
SLGT				S	**Sb**	**15 51 16.7**	**-1.0**
	baz=270						
ALS	**Alishan**	**0.73**	**310**	⇓*i*P	**Pb**	**15 51 08.7**	**0.0**
	baz=318						
ALS				*i* S	**Sb**	**15 51 18.6**	**+0.1**
	baz=318						
VWDT	**VWDT**	**0.75**	**340**	P	**Pn**	**15 51 08.4**	**-0.3**
	baz=354						
VWDT				S	**Sb**	**15 51 17.3**	**-1.4**

	baz=354						
ESL	Shilin	0.76	1	*i* P	Pn	15 51 07.7	-1.3
	baz=6.0						
ESL				S	Sb	15 51 16.7	-2.5
	baz=6.0						
WTP	Ta-pu	0.76	285	⇓*i*P	Pn	15 51 09.1	+0.1
	baz=287						
WTP				*i* S	Sn	15 51 19.8	+0.3
	baz=287						
TPUB	Ta-pu	0.77	289	⇓P	Pn	15 51 09.0	0.0
	baz=291						
TPUB				S	Sn	15 51 19.7	+0.2
	baz=291						
SGST	Jiashian	0.77	273	⇓*i*P	Pn	15 51 08.1	-0.9
	baz=277						
SGST				*i* S	Sb	15 51 18.6	-0.7
	baz=277						
SSD	Sandimen	0.78	248	*i* P	Pn	15 51 08.2	-1.0
	baz=245						
SSD				S	Sb	15 51 18.1	-1.7
	baz=245						
CHN4	Tsaushan	0.81	292	⇓*i*P	Pb	15 51 10.1	+0.1
	baz=294						
CHN4				S	Sb	15 51 21.1	+0.4
	baz=294						
WHYT	Xinyi Township	0.83	321	P	Pb	15 51 10.2	0.0
	baz=329						
WHYT				*i* S	Sb	15 51 21.6	+0.5
	baz=329						
CHN1	Nanshi	0.83	280	⇓*i*P	Pb	15 51 10.3	+0.1
	baz=284						
CHN1				S	Sb	15 51 21.7	+0.6
	baz=284						
MASBT	Mashibuluo	0.84	239	⇑P	Pn	15 51 09.1	-0.9
	baz=235						
MASBT				*e*S	Sn	15 51 19.6	-1.8
	baz=235						
EAST	Anshuo	0.84	219	⇑*i*P	Pn	15 51 08.3	-1.8
	baz=211						
EAST				S	Sn	15 51 19.2	-2.2
	baz=211						
SSLB	Suanglung	0.85	330	P	Pn	15 51 10.2	0.0
	baz=339						
SSLB				S	Sn	15 51 20.8	-0.8
	baz=339						
SNST	Tainan City	0.86	282	*i* P	Pb	15 51 10.8	+0.1
	baz=283						
SNST				S	Sb	15 51 22.9	+0.9
	baz=283						
ENLB	Shoufeng	0.87	11	P	Pn	15 51 09.5	-0.9
	baz=5.0						
ENLB				S	Sb	15 51 22.0	-0.2
	baz=5.0						
CHN5	Tsauling	0.87	309	*i* P	Pb	15 51 11.1	+0.2
	baz=312						
CHN5				*i* S	Sb	15 51 23.1	+0.7
	baz=312						
TWK	Hsinying	0.88	285	⇓*i*P	Pb	15 51 11.0	-0.1
	baz=294						
TWK				S	Sb	15 51 23.4	+0.8
	baz=294						
OWD	Renai	0.93	346	*e*P	Pb	15 51 11.6	-0.4
	baz=356						
OWD				*e*S	Sn	15 51 21.9	-1.8
	baz=356						
TWM1	Shoushan	0.94	257	P	Pb	15 51 12.9	+0.8
	baz=255						
TWM1				S	Sb	15 51 27.1	+2.8
	baz=255						
SMLT	Sun Moon Lake	0.96	330	*i* P	Pb	15 51 12.3	-0.1
	baz=338						
SMLT				*i* S	Sb	15 51 24.8	-0.1
	baz=338						
SSPT	Xinbi	0.96	235	P	Pn	15 51 11.8	+0.1
	baz=232						
SSPT				*e*S	Sb	15 51 25.1	+0.3
	baz=232						
CHN3	Shinhua	0.97	272	*i* P	Pb	15 51 13.4	+0.9
	baz=271						
CHN3				*i* S	Sb	15 51 28.1	+3.2
	baz=271						
CHN2	Minshiung	0.99	299	*e*P	Pb	15 51 13.4	+0.5
	baz=302						
TYC	Yuchr	0.99	329	*i* P	Pb	15 51 13.1	+0.1
	baz=342						
TYC				S	Sb	15 51 25.4	-0.3
	baz=342						
SCZT	Fangliau	1.00	228	P	Pn	15 51 11.2	-1.0
	baz=216						
SCZT				*e*S	Sn	15 51 24.7	-0.4
	baz=216						
WJS	Zhushan	1.00	321	*e*P	Pb	15 51 13.5	+0.5
	baz=337						
WJS				*e*S	Sb	15 51 27.3	+1.5
	baz=337						
WGK	Gukeng	1.01	309	P	Pb	15 51 13.7	+0.5
	baz=313						
WGK				S	Sb	15 51 27.9	+1.7
	baz=313						
LAY	Lan-yu	1.01	173	P	Pn	15 51 11.5	-0.9
	baz=170						
LAY				S	Sn	15 51 25.5	-0.1
	baz=170						
CHY	Chiayi	1.02	296	P	Pn	15 51 12.8	+0.4
	baz=299						
CHY				S	Sn	15 51 25.7	+0.1
	baz=299						
WDLH	Douliu	1.03	309	*e*P	Pb	15 51 13.5	0.0
	baz=312						
WDLH				*e*S	Sb	15 51 28.0	+1.3
	baz=312						
CHGB	Renai	1.03	348	P	Pn	15 51 12.8	-0.1
	baz=1.0						
CHGB				S	Sn	15 51 25.0	-1.4
	baz=1.0						
SNJT	Kaohsiung City	1.04	254	*e*P	Pb	15 51 15.3	+1.6
	baz=252						
SNJT				*e*S	Sb	15 51 30.8	+3.9
	baz=252						
TWD	Chiawan	1.04	9	P	Pn	15 51 11.3	-1.5
	baz=4.0						
TWD				S	Sb	15 51 26.8	-0.3
	baz=4.0						
WNT	Mingjian	1.07	321	P	Pb	15 51 14.3	+0.1
	baz=326						
WNT				S	Sb	15 51 29.1	+1.3
	baz=326						
DPDB	Guoxing	1.08	336	P	Pb	15 51 14.0	-0.5
	baz=347						
DPDB				S	Sn	15 51 27.6	+0.2
	baz=347						
WLGB	Puzi	1.11	293	P	Pb	15 51 14.6	-0.3
	baz=295						
WLGB				S	Sb	15 51 29.6	+0.6
	baz=295						
SCLT	Jiali	1.13	277	*e*P	Pb	15 51 15.9	+0.7
	baz=276						
SCLT				*e*S	Sb	15 51 30.7	+1.0
	baz=276						
NACB	Ninganchiao	1.13	8	P	Pn	15 51 12.3	-1.7
	baz=9.0						
WSSB	Gushan	1.14	249	*e*P	Pb	15 51 16.4	+1.0
	baz=264						
WSSB				*e*S	Sb	15 51 32.5	+2.6
	baz=264						
CHN8	Yiju	1.15	285	P	Pb	15 51 15.0	-0.5
	baz=286						
CHN8				S	Sb	15 51 30.5	+0.4
	baz=286						
ETLH	Xiulin Townshi	1.16	3	P	Pn	15 51 13.4	-1.0
	baz=5.0						
ETLH				S	Sn	15 51 27.4	-1.8
	baz=5.0						
WLCH	Liuqiu	1.18	234	*e*P	Pb	15 51 17.7	+1.6
	baz=231						
WLCH				*e*S	Sb	15 51 33.1	+2.0
	baz=231						
TWP	Hsiaoliuchiu	1.20	235	*e*P	Pb	15 51 16.5	+0.2
	baz=232						
HEN	Hengchun	1.21	211	*e*P	Pn	15 51 14.7	-0.4
	baz=197						
HEN				*e*S	Sn	15 51 29.8	-0.7
	baz=197						
TWT	Tachien	1.22	350	P	Pn	15 51 15.6	+0.2
	baz=360						
TWT				S	Sn	15 51 29.8	-1.2
	baz=360						
TDCB	Techi	1.22	349	P	Pn	15 51 15.9	+0.5
	baz=360						
TDCB				*e*S	Sn	15 51 29.9	-1.1
	baz=360						
TWK1	Hengchun	1.23	207	P	Pn	15 51 14.6	-0.8
	baz=194						
TWK1				S	Sn	15 51 30.2	-0.8
	baz=194						
TWKBT	Hengchun	1.23	207	*e*P	Pn	15 51 14.3	-1.1
	baz=194						
TWKBT				*e*S	Sn	15 51 29.9	-1.1
	baz=194						
TSEB	Hengchuen, Pin	1.24	203	*e*S	Sn	15 51 31.3	+0.2
	baz=192						
RLNB	Erlin	1.28	311	*e*S	Sb	15 51 33.5	-0.4
	baz=315						
TCU	Taichung	1.29	328	*e*S	Sb	15 51 34.9	+0.7
	baz=333						
WCHH	Zhanghua	1.29	323	*e*P	Pb	15 51 17.9	-0.1
	baz=338						
WCHH				*e*S	Sb	15 51 35.5	+1.2
	baz=338						
WHP	Taichung City	1.30	341	*e*P	Pb	15 51 18.2	+0.1
	baz=351						
WHP				*e*S	Sb	15 51 36.0	+1.5
	baz=351						
NNSB	Datong	1.38	359	*e*P	Pn	15 51 17.0	-0.5
	baz=8.0						
NNSB				*e*S	Sn	15 51 33.4	-1.3
	baz=8.0						
NNSH	Datong	1.38	359	P	Pn	15 51 17.5	+0.1
	baz=7.0						
NNSH				*e*S	Sn	15 51 33.5	-1.2
	baz=7.0						
NNS	Nan Shan	1.39	358	*e*P	Pn	15 51 17.6	-0.1
	baz=7.0						
NNS				*e*S	Sn	15 51 33.7	-1.3
	baz=7.0						
ENA	Nanau	1.41	12	*e*P	Pn	15 51 17.1	-0.7
	baz=3.0						
TWQ1	Liyutan	1.42	336	*e*P	Pb	15 51 19.2	-1.0
	baz=341						
TWQ1				*e*S	Sb	15 51 37.4	-0.6
	baz=341						
WDJ	Dajia District	1.48	331	*e*P	Pb	15 51 20.1	-1.0
	baz=336						
WDJ				*e*S	Sb	15 51 40.2	+0.7
	baz=336						
NSY	Sanyi	1.49	336	*e*P	Pn	15 51 19.9	+1.0
	baz=341						
NSY				*e*S	Sb	15 51 39.8	-0.1
	baz=341						
NDT	Datong Townshi	1.55	3	*e*P	Pn	15 51 19.9	+0.2
	baz=13						
NMLH	Miaoli	1.59	339	*e*P	Pn	15 51 20.7	+0.4
	baz=344						
ENTT	Nioudou	1.59	5	*e*P	Pn	15 51 20.1	-0.3
	baz=14						
ENTT				*e*S	Sn	15 51 38.3	-1.6
	baz=14						
TWC	Suao	1.60	14	*e*P	Pn	15 51 21.0	+0.5
	baz=6.0						
TWC				*e*S	Sn	15 51 40.7	+0.5
	baz=6.0						
YHNB	Yeheng	1.62	359	P	Pn	15 51 21.5	+0.8
	baz=11						
YHNB				*e*S	Sn	15 51 39.6	-1.0
	baz=11						
NSK	Sanguang	1.62	358	*e*P	Pn	15 51 21.1	+0.3
	baz=11						
NSK				*e*S	Sn	15 51 40.5	-0.2
	baz=11						
NSTT	Nanjuang	1.62	347	*e*P	Pb	15 51 22.0	-1.5
	baz=350						
EOS1	EOS1	1.63	23	*e*P	Pb	15 51 22.0	-1.7
	baz=34						
LIOB	Emei	1.63	347	*e*P	Pn	15 51 21.9	+1.0
	baz=349						
TWE	Neicheng	1.68	8	*e*P	Pn	15 51 21.6	0.0
	baz=8.0						
SLBB	Yuanshan	1.71	7	*e*P	Pn	15 51 21.0	-1.0
	baz=16						
NWLT	Wulai	1.72	3	*e*P	Pn	15 51 22.2	0.0
	baz=15						
TIPB	Shuangxi	1.95	11	P	Pn	15 51 26.9	+1.5
	baz=11						
TIPB				*e*S	Sn	15 51 50.1	+1.2
	baz=11						
JYNG	Yonagunijimaku	1.98	45	P	Pn	15 51 26.5	+0.8
JYNG				S	Sn	15 51 50.7	+1.3
YOJ	Yonaguni jima	2.03	46	P	Pn	15 51 27.9	+1.6
YOJ				*e*S	Sn	15 51 52.3	+1.6
HATJ	Hateruma jima	2.41	65	P	Pn	15 51 31.5	-0.1
HATJ				S	Sn	15 52 00.2	+0.1
IRIF	Iriomote-Funau	2.48	58	P	Pn	15 51 34.1	+1.6
IRIF				S	Sn	15 52 03.4	+1.7
JKRS	Kuro-shima	2.66	63	P	Pn	15 51 36.3	+1.3
JKRS				S	Sn	15 52 07.8	+1.7
JIJ	Ishigaki jima	2.82	62	P	Pn	15 51 38.5	+1.2
JIJ				S	Sn	15 52 10.6	+0.4
JISG	Ishigakijimahi	3.06	59	P	Pn	15 51 41.0	+0.4
JISG				*e*S	Sn	15 52 15.4	-0.8
JTJ	Tarama	3.40	62	P	Pn	15 51 46.3	+1.1
JTJ				S	Sn	15 52 25.4	+0.9

TAP 12 15:54:22.6, 23°.13N×121°.32E, h20^{km}±1^{km}, ML1.6, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	Chengkung	0.05	132	*i* P	Pb	15 54 26.4	+0.2
	baz=128						
CHKT				*i* S	Sb	15 54 29.2	+0.5
	baz=128						
FULB	Fuli	0.07	337	P	Pb	15 54 26.9	+0.5
	baz=337						
FULB				*i* S	Sb	15 54 30.5	+1.5
	baz=337						
TWF1	Yuli	0.22	354	*i* P	Pb	15 54 28.6	+0.3
	baz=355						
TWF1				*i* S	Sb	15 54 32.8	+0.5
	baz=355						
YULB	Yu-li	0.26	355	P	Pb	15 54 29.0	+0.3
	baz=354						
YULB				S	Sb	15 54 33.7	+0.8
	baz=354						
ELDTW	Lidau	0.29	281	P	Pb	15 54 29.5	+0.3
	baz=280						
ELDTW				S	Sb	15 54 34.2	+0.5
	baz=280						
HGSD	Ruisui	0.37	15	*e*P	Pn	15 54 31.6	-1.1
	baz=14						
EHY	Hungye	0.37	360	*e*P	Pb	15 54 30.9	+0.5
	baz=1.0						
EHY				*e*S	Sb	15 54 36.6	+0.9
	baz=1.0						
YUS	Yu-Shan	0.49	316	P	Pb	15 54 32.5	-0.3
	baz=315						
YUS				S	Sb	15 54 40.5	+0.7
	baz=315						
STYT	Tauyuan	0.52	273	P	Pb	15 54 33.4	+0.3
	baz=272						
STYT				S	Sb	15 54 41.1	+0.9
	baz=272						
EGFH	Guangfu	0.54	10	*e*P	Pb	15 54 33.8	+0.4
	baz=10.0						
EGFH				*e*S	Sn	15 54 42.9	-0.7
	baz=10.0						
ALS	Alishan	0.61	308	P	Pb	15 54 35.4	+0.7
	baz=308						
ALS				S	Sb	15 54 42.6	-0.4
	baz=308						
SLGT	Liugui	0.64	257	*e*P	Pb	15 54 34.9	-0.2
	baz=257						
SLGT				*e*S	Sb	15 54 44.8	+1.2
	baz=257						
VWDT	VWDT	0.64	345	*e*S	Sb	15 54 44.2	+0.6
	baz=344						
TPUB	Ta-pu	0.66	285	*e*P	Pn	15 54 36.1	-0.7
	baz=284						
TPUB				*e*S	Sn	15 54 46.3	-0.3
	baz=284						
WTP	Ta-pu	0.66	280	P	Pn	15 54 36.8	0.0
	baz=279						
WTP				S	Sn	15 54 46.4	-0.2
	baz=279						
CHN4	Tsaushan	0.70	288	P	Pn	15 54 37.6	+0.2
	baz=287						
CHN4				*e*S	Sn	15 54 48.3	+0.6
	baz=287						
WHYT	Xinyi Township	0.71	322	*e*P	Pn	15 54 37.1	-0.4
	baz=322						
WHYT				*e*S	Sn	15 54 47.1	-0.7
	baz=322						
WHYT	Xinyi Township	0.71	322	*e*S	Sn	15 54 47.1	-0.7
	baz=205						
CHN1	Nanshi	0.73	274	*e*P	Pn	15 54 37.5	-0.3
	baz=273						
CHN1				*e*S	Sn	15 54 48.5	+0.1
	baz=273						
CHN5	Tsauling	0.75	308	*e*P	Pb	15 54 37.5	+0.5
	baz=307						
CHN5				*e*S	Sn	15 54 48.5	-0.5
	baz=307						

TAP 12 15:54:34.4, 23°.98N×121°.00E, h16^{km}±1^{km}, ML0.9, 1C, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DPDB	Guoxing	0.09	307	⇑*i*P	Pg	15 54 38.1	+0.4
	baz=306						
DPDB				S	Sg	15 54 40.6	+0.6
	baz=306						
SMLT	Sun Moon Lake	0.14	223	*i* P	Pb	15 54 38.8	+0.1
	baz=220						
SMLT				*i* S	Sb	15 54 42.4	+0.9
	baz=220						
TYC	Yuchr	0.15	240	*i* P	Pb	15 54 38.9	0.0
	baz=237						
TYC				*i* S	Sb	15 54 41.9	-0.1
	baz=237						
OWD	Renai	0.16	100	*e*P	Pb	15 54 39.4	+0.2
	baz=99						
OWD				*e*S	Sb	15 54 42.6	+0.3
	baz=99						
CHGB	Renai	0.17	64	P	Pb	15 54 39.5	+0.1
	baz=63						
CHGB				S	Sb	15 54 42.8	0.0
	baz=63						
SSLB	Suanglung	0.20	193	*e*P	Pg	15 54 39.4	+0.2
	baz=192						
SSLB				S	Sb	15 54 42.9	-0.4
	baz=192						
VWDT	VWDT	0.26	151	*e*P	Pb	15 54 41.3	+0.6
	baz=150						
VWDT				*e*S	Sb	15 54 44.8	-0.2
	baz=150						
WJS	Zhushan	0.30	238	*e*S	Sb	15 54 46.3	+0.2
	baz=237						
WHP	Taichung City	0.30	350	*e*P	Pb	15 54 41.8	+0.3
	baz=350						
WHP				*e*S	Sb	15 54 46.3	0.0
	baz=350						
TWT	Tachien	0.31	30	*e*P	Pg	15 54 41.4	+0.3
	baz=28						
TWT				*e*S	Sb	15 54 46.6	-0.1
	baz=28						

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*GCG **12** 15:56:50.6±0.7, 14°.10N×91°.48W, h46^{km}±14^{km}, MD3.8*
*MEX **12** 15:56:50.2±0.4, 14°.02N×91°.61W, h79^{km}±8^{km}, MD4.0*
ISC 12 15:56:49.3±2.3**, 14°.0N**±0°.2×**91°.57W**±0°.07**, h60**^{km}±14^{km}**, n11, σ0^{s}.63**/18**, 1D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERG	Entre ros, C	0.40	0	*e*P	Pn	15 57 01.5	+1.1
ERG				*e*S	Sn	15 57 07.0	-1.3
STG3	Santiaguito 3,	0.67	0	⇓*i*P	Pn	15 57 03.4	0.0
FUG	Fuego 3	0.82	60	*e*P	Pn	15 57 05.0	-0.2
PCG	Pacaya	1.00	69	*e*P	Pn	15 57 07.7	+0.1
PCG				*e*S	Sn	15 57 20.9	-0.2
THIG		1.10	322	*e*P	Pn	15 57 08.8	+0.1
THIG				*e*S	Sn	15 57 23.5	+0.5
IXG	Ixpaco	1.10	83	*e*P	Pn	15 57 08.8	-0.1
NBG	Las Nubes	1.31	65	*e*P	Pn	15 57 12.7	+1.0
CCIG	Comitan	2.30	346	*e*P	Pn	15 57 25.2	+0.1
CCIG				*i* S	Sn	15 57 52.7	+0.3
PCIG		2.30	316	*e*P	Pn	15 57 25.0	+0.1
PCIG				*e*S	Sn	15 57 51.5	-0.6
TGIG		3.11	331	*i* P	Pn	15 57 35.9	-0.2
TGIG				*i* S	Sn	15 58 12.1	0.0
CMIG	Matias Romero	4.41	314	*e*P	Pn	15 57 54.2	+0.5
CMIG				*i* S	Sn	15 58 43.1	-0.8

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*IDC **12** 15:59:53.1±1.7, 4°.62S×137°.43E, h0^{km}, mb3.7/2, mb1 3.9/4, mb1mx3.6/27, mbtmp3.7/4, ML3.4/2, MS3.3/1, Ms1 3.5/1, ms1mx2.6/26, Error ellipse: s-maj=72.0km s-min=30.6km az=102.0*
*NEIC **12** 16:00:01.4±2.4, 4°.95S±0°.09×137°.0E±0°.1, h71^{km}±11^{km}, mb4.1/5, Error ellipse: s-maj=17.0km s-min=13.6km az=83.0*
ISC 12 15:59:58.4±0.9**, 4°.83S**±0°.07×**137°.3E**±0°.1**, h35**^{km}**, n17, σ1^{s}.75**/19**, mb3.7**/3**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	5.34	291	Pn	Pn	16 01 14.5	-1.2
MTN	Manton Dam	10.00	217	Pn	Pn	16 02 21.9	+2.2
COEN	Coen	10.79	148	Pn	Pn	16 02 33.0	+2.6
KNRA	Kununurra	13.64	217	Pn	Pn	16 03 09.5	+0.1
WR0	Warramunga Arr	15.27	190	Pn	Pn	16 03 31.3	-0.3
WR0				IAmb	IAmb	16 03 50.7	
	comp=Z,5.6nm,1.0s						
WRAB	Tennant Creek	15.28	190	Pn	Pn	16 03 29.7	-1.9
WRAB				IAmb	IAmb	16 03 39.3	
	comp=Z,5.1nm,0.7s						
WRA	Warramunga Arr	15.29	190	Pn	Pn	16 03 29.9	-1.9
	comp=Z,0.2nm,0.3s,baz=8.6,slow=13,SNR=8.2						
WRA				Sn	Sn	16 06 16.7	-3.5
	comp=Z,0.1nm,0.3s,baz=358,slow=14,SNR=3.3						
FITZ	Fitzroy Crossi	17.41	220	P	P	16 04 01.2	+1.5
	comp=Z,0.1nm,0.3s,baz=35,slow=16,SNR=2.3						
FITZ				S	Sn	16 07 12.2	+0.7
	comp=Z,0.1nm,0.3s,baz=214,slow=15,SNR=3.1						
AS31	Alice Springs	19.01	189	P	Pn	16 04 18.1	-0.1
ASAR	Alice Springs	19.01	189	P	Pn	16 04 18.9	+0.7
	comp=Z,0.3nm,0.3s,baz=12,slow=11,SNR=53						
ASAR				S	Sn	16 07 47.5	-2.8
	comp=Z,0.0nm,0.3s,baz=4.4,slow=29,SNR=3.5						
ASAR	Alice Springs	19.01	189	P	P	16 04 16.1	-1.2
BBOO	Buckleboo	27.86	182	P	P	16 05 43.2	-1.7
BBOO				IAmb	IAmb	16 06 17.6	
	comp=Z,45nm,1.6s						
CMAR	Chiang Mai Arr	44.28	303	LR	LR	16 28 32.2	
	comp=Z,34nm,19.6s,baz=190,slow=39						
PET	Petropavlovsk	60.41	15	P	P	16 10 04.6	+0.6
MKAR	Makanchi Array	70.59	323	P	P	16 11 09.9	-0.2
	comp=Z,0.4nm,0.6s,baz=115,slow=7.9,SNR=4.7						
MKAR	Makanchi Array	70.59	323	P	P	16 11 09.4	-0.7
ILAR	Eielson Array	88.35	25	P	P	16 12 45.4	-0.9
	comp=Z,0.2nm,0.5s,baz=264,slow=4.1,SNR=5.6						

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*IDC **12** 17:00:40.4±0.7, 18°.07S×66°.95W, h267^{km}±6^{km}, mb3.4/6, mb1 3.7/12, mb1mx3.5/35, mbtmp4.2/12, Error ellipse: s-maj=12.9km s-min=10.2km az=93.0*
*NEIC **12** 17:00:40.9±1.4, 18°.07S±0°.09×66°.9W±0°.1, h276^{km}±4^{km}, mb4.5/2, Error ellipse: s-maj=15.1km s-min=12.5km az=121.0*
ISC 12 17:00:41.2±0.6**, 18°.07S**±0°.07×**66°.96W**±0°.09**, h280**^{km}**, n27, σ1^{s}.10**/29**, mb3.9**/7**, 1D, Central Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	2.10	328	P	Pn	17 01 27.7	-0.1
	50nm,0.3s,baz=128,slow=3.1,SNR=1233						
LPAZ				S	S	17 02 02.0	-2.7
	9.0nm,0.3s,baz=16,slow=24,SNR=22						
GO01	Chusmiza	2.65	233		Pn	17 01 32.7	+0.1
MNMC	Minye Minye	2.71	247		Pn	17 01 32.8	-0.2
PB11	IPOC Station P	3.06	236		Pn	17 01 35.7	-0.6
PB01	IPOC Station P	3.80	218		Pn	17 01 43.8	-0.4
LVC	Limon Verde	4.87	202	P	Pn	17 01 57.1	+0.4
	16nm,0.3s,baz=82,slow=5.5,SNR=134						
LVC				S	S	17 02 54.8	-2.5
	9.1nm,0.3s,baz=107,slow=22,SNR=14						
PB04	IPOC Station P	5.19	215		Pn	17 01 59.6	-0.8
SIV	San Ignacio	6.00	71	P	Pn	17 02 09.4	-0.7
	2.4nm,0.3s,baz=272,slow=9.7,SNR=40						
SIV				S	S	17 03 19.3	-2.2

	0.4nm,0.3s,baz=197,slow=22,SNR=5.1						
PB10	IPOC Station P	6.37	211	Pn	Pn	17 02 14.1	-0.4
GO02	Mina Guanaco	7.47	199		Pn	17 02 27.4	-0.8
CFA	Coronel Fontan	13.52	185	P	P	17 03 43.9	+0.9
	1.3nm,0.3s,baz=19,slow=10,SNR=5.5						
BDFB	Brasilia	18.29	85	P	P	17 04 36.5	+1.1
	1.9nm,0.3s,baz=256,slow=7.7,SNR=8.1						
PTGA	Pitinga	18.55	22	P	P	17 04 37.1	-0.9
	0.5nm,0.3s,baz=311,slow=19,SNR=2.4						
PLCA	Paso Flores	22.79	187	P	P	17 05 19.2	-0.8
	1.6nm,0.9s,baz=38,slow=6.0,SNR=3.5						
RCBR	Riachuelo	32.66	72	P	P	17 06 48.0	+0.3
RCBR				IAmb	IAmb	17 07 13.2	
	comp=Z,14nm,1.1s						
PDAR	Pinedale Array	72.12	328	P	P	17 11 35.9	+0.3
	comp=Z,0.5nm,0.4s,baz=122,slow=8.9,SNR=7.0						
PDAR	Pinedale Array	72.12	328	P	P	17 11 35.3	-0.4
SCHQ	Schefferville	72.61	0	P	P	17 11 38.8	+0.9
	comp=Z,1.6nm,0.7s,baz=227,slow=11,SNR=3.7						
NVAR	Mina Array Bea	73.99	320	P	P	17 11 47.0	+0.3
	comp=Z,0.2nm,0.3s,baz=145,slow=5.4,SNR=4.0						
NVAR	Mina Array Bea	73.99	320	P	P	17 11 47.1	+0.5
TORD	Torodi Ar. Bea	74.48	70	P	P	17 11 49.2	-0.4
	comp=Z,1.4nm,0.5s,baz=260,slow=6.4,SNR=13						
TORD	Torodi Ar. Bea	74.48	70	P	P	17 11 49.3	-0.4
SYO	Syowa Base	79.05	159	⇓eX	P	17 12 25.4	+11
YKA	Yellowknife Ar	88.60	340	P	P	17 13 03.0	+0.9
	comp=Z,1.6nm,0.5s,baz=132,slow=5.0,SNR=30						
ASAR	Alice Springs	133.78	207	PKP	PKPdf	17 19 26.9	+1.2
	comp=Z,0.3nm,0.7s,baz=131,slow=1.8,SNR=7.0						
SONM	Songino Array	149.82	9	PKPbc	PKPbc	17 19 59.5	+1.2
	comp=Z,0.9nm,0.7s,baz=313,slow=1.6,SNR=8.3						
SONM	Songino Array	149.82	9		PKPbc	17 19 59.4	+1.1

DJA 12 17:02:58.1±1.5, **8°S**±5°×**10°9E**±°, **h21**km±16km, **M3.8**/11, **mb4.0**/2, **MLv3.7**/11, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KPJI	Karang Pucung	1.11	7	P	Pb	17 03 18.5	-0.1
KPJI				S	Sn	17 03 32.8	-0.2
CISI	Cisompet, Garu	1.31	312	P	Pn	17 03 20.6	-0.7
UGM	Wanagama	1.79	73	P	Pn	17 03 27.0	-0.7
UGM				S	Sn	17 03 48.4	-1.4
LEM	Lembang	1.99	324	P	Pn	17 03 31.1	+0.5
CNJI	Cibinong	2.00	304	P	Pn	17 03 30.0	-0.7
CNJI				S	Sn	17 03 52.9	-2.2
SMRI	Semarang	2.13	50	P	Pn	17 03 33.2	+0.7
SMRI				S	Sn	17 03 58.9	+0.5
PCJI	Pacitan	2.37	84	P	Pn	17 03 35.8	+0.1
SKJI	Sukabumi	2.64	303	P	Pn	17 03 39.8	+0.3
UWJI	Ujung Watu	2.93	47	P	Pn	17 03 43.3	-0.1
GRJI	Gresik	3.95	68	P	Pn	17 03 57.7	+0.2
GMJI	Gumukmas	4.60	88	P	Pn	17 04 06.1	-0.3
JAGI	Jajag, Banyuwa	5.29	91	P	Pn	17 04 16.1	+0.1
	0.2nm22nm,1.5s						
SRBI	Singaraja	6.36	87	P	Pn	17 04 30.2	-0.4

MEX 12 17:03:05.9±0.4, 14.°28N×92.°12W, h70km±4km, MD4.0
GCG 12 17:03:10.2±0.5, 14.°75N×91.°66W, h54km±6km, MD3.7
ISC 12 17:03:05.8±2.0, **14.°4N**±0.°1×**92.°09W**±0.°09, **h62**km±14km, **n9**, σ**1s01**/17, **1D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERG	Entre ros, C	0.51	81	eP	Pn	17 03 18.8	+0.7
ERG				eS	Sn	17 03 27.5	+0.6
THIG		0.57	343	eP	Pn	17 03 18.4	-0.3
THIG				eS	Sn	17 03 28.2	+0.1
THIG				i S		17 03 28.8	
STG3	Santiaguito 3,	0.61	55	⇓eP	Pn	17 03 19.2	-0.1
FUG	Fuego 3	1.21	86	eP	Pn	17 03 26.9	0.0
FUG				eS	Sn	17 03 39.4	-3.2
IXG	Ixpaco	1.61	96	eP	Pn	17 03 32.8	+0.6
IXG				i S	Sn	17 03 53.0	+0.9
PCIG		1.73	321	eP	Pn	17 03 33.2	-0.4
PCIG				i S	Sn	17 03 54.4	-0.2
CCIG	Comitan	1.91	359	i P	Pn	17 03 36.5	+0.2
CCIG				eS	Sn	17 03 59.8	+0.3
TGIG		2.60	338	i P	Pn	17 03 46.1	+0.5
TGIG				i S	Sn	17 04 16.4	+0.3
CMIG	Matias Romero	3.83	316	i P	Pn	17 04 02.5	+0.3
CMIG				i S	Sn	17 04 45.5	-0.5

GCG 12 17:13:20.9±0.3, 12.°78N×90.°96W, h44km±798km, MD4.4
IDC 12 17:13:24.1±1.1, 13.°27N×90.°59W, h0km, mb3.9/6, mb1 4.1/7, mb1mx3.7/38, mbtmp4.0/7, ML4.0/1, MS3.1/1, Ms1 3.1/1, ms1mx2.6/41, Error ellipse: s-maj=29.1km s-min=14.1km az=76.0
NEIC 12 17:13:29.7±2.3, 13.°40N±0.°07×90.°98W±0.°04, h50km±9km, mb4.3/9, Md4.2(SNET), Md4.1/12(MEX), Error ellipse: s-maj=10.4km s-min=5.9km az=187.0
UCR 12 17:13:30.2±1.0, 13.°46N×90.°84W, h19km±5km, ML4.0, mb4.3(NEIC)
SNET 12 17:13:30.2±1.0, 13.°45N×90.°84W, h19km±5km, ML4.2
ISC 12 17:13:28.0±1.6, **13.°35N**±0.°07×**90.°96W**±0.°04, **h28**km±11km, **n66**, σ**1s55**/89, **mb4.0**/6, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	Ixpaco	0.96	31	eP	Pb	17 13 45.7	-0.5
PCG	Pacaya	1.09	18	eP	Pb	17 13 48.3	-0.1
FUG	Fuego 3	1.10	6	eP	Pb	17 13 48.4	-0.2
ERG	Entre ros, C	1.24	331	eP	Pb	17 13 50.4	-0.3
CEVE	Cerro Verde	1.38	70	eP	Pb	17 13 52.4	-0.9
CEVE				eS	Sb	17 14 10.7	0.0
CEVE				IAML		17 14 14.5	
	comp=Z,6µm,0.3s						
CEVE	Cerro Verde	1.38	70	eP	Pb	17 13 52.4	-0.9
CEVE				eS	Sb	17 14 10.7	0.0
CEVE				IAML		17 14 14.5	
	comp=Z,6µm,0.3s						
STG3	Santiaguito 3,	1.48	336	eP	Pn	17 13 53.1	+0.2
LALI	Alcalda de L	1.60	85	eP	Pb	17 13 55.7	-1.1
LALI				eS	Sn	17 14 14.5	+0.4
LALI	Alcalda de L	1.60	85	eP	Pb	17 13 55.7	-1.1
LALI				eS	Sn	17 14 14.5	+0.4
BOQS	Boqueron	1.68	76	eP	Pn	17 13 56.8	+1.1
BOQS				eS	Sb	17 14 18.4	-0.8
SNET	Serv Nac Est T	1.71	78		Pn	17 13 56.4	+0.4
APG	El Apazote	1.72	16	Pn	Pn	17 13 56.7	+0.4
	comp=Z,32nm,0.3s,baz=203,slow=12,SNR=45						
APG				Lg	Lg	17 14 18.6	
	comp=Z,65nm,0.3s,baz=284,slow=18,SNR=19						
LOMA	Loma Larga	1.76	80	eP	Pn	17 13 57.7	+1.0
LOMA				eS	Sn	17 14 20.0	+1.6
LOMA	Loma Larga	1.76	80	eP	Pn	17 13 57.7	+1.0
LOMA				eS	Sn	17 14 20.0	+1.6
CUSC	Alcaldia de Cu	1.77	77	eP	Pb	17 13 58.2	-1.6
CUSC				eS	Sn	17 14 19.5	+1.0
CUSC	Alcaldia de Cu	1.77	77	eP	Pb	17 13 58.2	-1.6
CUSC				eS	Sn	17 14 19.5	+1.0
LFRS	El Faro	1.86	81	eP	Pn	17 13 59.5	+1.4
MTO3	Montecristo	1.87	56	eP	Pn	17 13 59.0	+0.7
MTO3				eS	Sn	17 14 22.3	+1.2
MTO3	Montecristo	1.87	56	eP	Pn	17 13 59.0	+0.7
MTO3				eS	Sn	17 14 22.3	+1.2
LBRS	Las Brisas	1.90	78	eP	Pn	17 14 00.1	+1.5
THIG		2.00	321		Pn	17 13 58.9	-1.1
THIG					Sn	17 14 24.5	+0.4
COEG	Centro de Oper	2.04	82	eP	Pn	17 14 01.8	+1.2
COEG				eS	Sn	17 14 27.2	+2.1
COEG	Centro de Oper	2.04	82	eP	Pn	17 14 01.8	+1.2
COEG				eS	Sn	17 14 27.2	+2.1
MRL	Marmol	2.12	35	eP	Pb	17 14 04.7	-1.2
MRL				eS	Sb	17 14 33.3	+1.3
COEB	Comit de Eme	2.37	86	eP	Pn	17 14 07.1	+2.0
COEB	Comit de Eme	2.37	86	eP	Pn	17 14 07.1	+2.0
PACA	Pacayal	2.57	87	eP	Pn	17 14 09.4	+1.5
PACA	Pacayal	2.57	87	eP	Pn	17 14 09.4	+1.5
BLLM	Bellamira	2.65	88	eP	Pn	17 14 10.7	+1.8
BLLM	Bellamira	2.65	88	eP	Pn	17 14 10.7	+1.8
LCND	La Caada	2.99	90	eP	Pn	17 14 14.9	+1.5
LCND				eS	Sn	17 14 50.2	+1.8
LCND				IAML		17 15 00.1	
	comp=Z,603nm,0.6s						
LCND	La Caada	2.99	90	eP	Pn	17 14 14.9	+1.5
LCND				eS	Sn	17 14 50.2	+1.8
LCND				IAML		17 15 00.1	
	comp=Z,603nm,0.6s						
CNCH	Conchagua	3.04	91	eP	Pn	17 14 15.9	+1.5
CNCH				eS	Sn	17 14 51.5	+1.5
CNCH	Conchagua	3.04	91	eP	Pn	17 14 15.9	+1.5
CNCH				eS	Sn	17 14 51.5	+1.5
CCIG	Comitan	3.13	339		Pn	17 14 17.6	+1.9
CCIG	Comitan	3.13	339		Pn	17 14 14.8	-0.9
CCIG					Sn	17 14 49.9	-2.4
PCIG		3.21	317		Pn	17 14 16.8	+0.2
PCIG					Sn	17 14 55.5	+1.6
CSGN	Cosiguina Volc	3.33	96		Pn	17 14 20.0	+1.7
TGUH	Tegucigalpa,Un	3.65	78		Pn	17 14 24.1	+1.4
TGIG		4.00	329		Pn	17 14 27.1	-0.4
TGIG					Sn	17 15 13.1	-0.5
CMIG	Matias Romero	5.31	315	Pn	Pn	17 14 45.9	+0.4
	comp=Z,0.8nm,0.3s,baz=107,slow=11,SNR=9.2						
CMIG				Sn	Sn	17 15 52.6	+6.8
	comp=Z,1.2nm,0.3s,baz=284,slow=23,SNR=5.0						
CMIG	Matias Romero	5.31	315		Pn	17 14 46.1	+0.6
CMIG					Sn	17 15 47.1	+1.3
ACON	Acoyapa	5.81	103	Pn	Pn	17 14 53.1	+0.8
ESPN	Las Esperanzas	6.59	99	Pn	Pn	17 15 04.3	+1.2
JTS	Las Juntas de	6.62	117	Pn	Pn	17 15 06.0	+2.5
	comp=Z,1.5nm,0.3s,baz=322,slow=14,SNR=4.6						
JTS				Lg	Lg	17 16 45.3	
	comp=Z,0.8nm,0.3s,baz=137,slow=22,SNR=11						
JTS	Las Juntas de	6.62	117		Pn	17 15 05.2	+1.8
TEIG	Tepich	7.31	20	Pn	Pn	17 15 13.5	+0.6
	comp=Z,2.8nm,0.3s,baz=320,slow=0.0,SNR=11						
TEIG	Tepich	7.31	20		Pn	17 15 12.8	-0.1
TXAR	Lajitas Array	19.80	325	P	Pn	17 17 59.9	+1.9
	comp=Z,0.9nm,0.7s,baz=142,slow=13,SNR=4.0						
TX31	Lajitas Ar. Si	19.80	325	P	P	17 17 56.5	+0.1
SDV	Santo Domingo	20.43	100	P	P	17 18 00.3	-3.1
	comp=Z,3.3nm,0.6s,baz=313,slow=8.5,SNR=5.3						
Z51A	Franklin	20.57	14	P	P	17 18 05.4	+0.8
Z51A				IAmb	IAmb	17 18 18.6	
	comp=Z,10nm,0.7s						
Y49A	Blount Mountai	20.84	11	P	P	17 18 07.4	-0.1
Y49A				IAmb	IAmb	17 18 28.7	
	comp=Z,11nm,0.7s						
LPIG	La Paz	21.19	303	LR	LR	17 25 32.4	
	comp=Z,48nm,19.1s,baz=268,slow=34						
PLAL	Pickwick Lake	21.70	6	P	P	17 18 15.7	-1.0
PLAL				IAmb	IAmb	17 18 18.5	
	comp=Z,21nm,1.2s						
MNTX	Cornudas Mount	22.56	326	P	P	17 18 27.4	+1.3
121A	Cookes Peak, D	24.53	324	P	P	17 18 45.8	+0.3
121A				IAmb	IAmb	17 18 50.6	
	comp=Z,4.2nm,0.9s						
PTGA	Pitinga	33.76	112	P	P	17 20 07.8	+0.2
NVAR	Mina Array Bea	34.81	321	P	P	17 20 19.9	+3.2
	comp=Z,1.3nm,0.7s,baz=137,slow=8.2,SNR=9.3						
SIV	San Ignacio	41.51	134	P	P	17 21 12.6	-0.5
	comp=Z,1.1nm,0.6s,baz=315,slow=9.5,SNR=7.5						
DBIC	Dimbokro	84.71	84	P	P	17 25 58.0	-2.1
	comp=Z,3.2nm,0.7s,baz=272,slow=3.2,SNR=4.7						
TORD	Torodi Ar. Bea	89.54	77	P	P	17 26 21.1	-2.4
	comp=Z,0.5nm,0.8s,baz=277,slow=2.5,SNR=2.4						
MKAR	Makanchi Array	119.83	5	PKP	PKPdf	17 32 15.3	-0.6
	comp=Z,0.2nm,0.7s,baz=294,slow=1.4,SNR=2.8						
LZH	Lanzhou	128.88	345	ePKP	PKPdf	17 32 32.0	-1.7
LZH				pPKP	sPKPdf	17 32 46.5	+0.3
LZH				sPKP		17 32 52.3	
CMAR	Chiang Mai Arr	146.93	343	PKPbc	PKPbc	17 33 09.2	+0.4
	comp=Z,1.7nm,0.7s,baz=344,slow=3.4,SNR=17						
CMAR	Chiang Mai Arr	146.93	343		PKPdf	17 33 07.8	+1.0

IDC 12 17:27:13.9±2.6, 28.°20S×139.°34E, h0km, mb1 2.8/3, mb1mx2.8/26, mbtmp2.6/3, ML2.3/2, Error ellipse: s-maj=80.5km s-min=17.5km az=55.0
AUST 12 17:27:15.8±0.0, 28.°42S×138.°97E, h10km, Error ellipse: s-maj=0.1km s-min=0.1km az=354.0
ISC 12 17:27:14.0±0.8, **28.°39S**±0.°05×**139.°00E**±0.°05, **h10**km, **n12**, σ**2s60**/19, **South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INKA	Innaminka	1.68	68	P	Pg	17 27 46.4	+0.3
	baz=1.7						
INKA				S	Sg	17 28 08.8	+0.9
	baz=1.7						
LCRK	Leigh Creek	2.16	198	P	Pb	17 27 52.6	-0.6
	baz=2.1						
OOD	Oodnadatta	2.98	281	P	Pn	17 28 03.3	+2.0
	baz=3.0						
OOD				S	Sn	17 28 37.5	+0.4
	baz=3.0						
STKA	Stephens Creek	4.14	148	P	Pn	17 28 19.4	+2.2
	baz=4.1						
STKA				S	Sn	17 29 04.0	-1.7
	baz=4.1						
STKA	Stephens Creek	4.14	148	Pn	Pn	17 28 19.5	+2.2
	0.1nm,0.3s,baz=328,slow=14,SNR=4.3						
STKA				Sn	Sn	17 29 02.6	-3.2
	0.5nm,0.3s,baz=282,slow=22,SNR=4.7						
STKA				Lg	Lg	17 29 24.9	
	0.5nm,0.3s,baz=18,slow=15,SNR=3.6						
MULG	Mulgathing	4.71	245	P	Pn	17 28 25.7	+0.6
	baz=4.7						
QLP	Quilpie	4.99	70	P	Pn	17 28 32.2	+3.3
	baz=5.0						
QLP				S	Sn	17 29 26.2	-0.5
	baz=5.0						
HTT	Hallett	5.03	181	P	Pn	17 28 32.6	+3.1
	baz=5.0						
BBOO	Buckleboo	5.08	209	P	Pn	17 28 31.6	+1.4
	baz=5.1						
AS01	Alice Springs	6.54	315	P	Pn	17 28 52.5	+2.3
	baz=6.5						
ASAR	Alice Springs	6.56	315	Pn	Pn	17 28 53.6	+3.0
	0.1nm,0.3s,baz=141,slow=12,SNR=7.2						
ASAR				Sn	Sn	17 30 01.4	-4.2
	0.1nm,0.3s,baz=140,slow=22,SNR=4.4						
ASAR				Lg	Lg	17 30 45.0	
	0.1nm,0.3s,baz=132,slow=26,SNR=4.2						
WRA	Warramunga Arr	9.42	332	Pn	Pn	17 29 30.1	+0.3
WRA				Sn	Sn	17 31 10.8	-5.1

NEIC 12 17:36:10.3±2.8, 28.°75S±0.°05×71.°42W±0.°09, h10km±1km, mb4.6/5, ML4.5(GUC), Error ellipse: s-maj=13.3km s-min=8.0km az=92.0
GUC 12 17:36:14.9±0.5, 28.°80S×71.°02W, h47km±5km, ML4.4
SJA 12 17:36:15.1±0.4, 29.°00S×71.°16W, h17km±16km, ML4.5, MW4.2
IDC 12 17:36:16.1±0.7, 28.°70S×71.°09W, h45km±4km, mb3.6/5, mb1 3.9/10, mb1mx3.8/31, mbtmp4.0/10, ML4.0/5, MS3.4/4, Ms1 3.4/4, ms1mx3.0/32, Error ellipse: s-maj=24.1km s-min=11.3km az=58.0
ISC 12 17:36:14.3±0.5, **28.°75S**±0.°04×**71.°36W**±0.°06, **h35**km, **n69**, σ**1s58**/83, **mb4.1**/9, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	Las Campanas	0.63	115	Pn	Pn	17 36 25.1	-1.9
GO04	Tololo Observa	1.50	161	eP	Pn	17 36 38.6	-0.4
GO04				i S	Sn	17 36 57.1	-0.3
GO04				IAML		17 37 00.2	
	comp=N,15µm,0.4s						
GO04	Tololo Observa	1.50	161		Pn	17 36 38.9	-0.1
GO03	Copiap	1.52	41	eP	Pn	17 36 39.2	+0.1
GO03				i S	Sn	17 36 57.0	-0.6
GO03	Copiap	1.52	41		Pn	17 36 39.3	+0.3
CO03	El Pedregal	2.16	165	eP	Pn	17 36 48.2	+0.2
CO03				i S	Sn	17 37 13.6	0.0
CO03				IAML		17 37 20.2	
	comp=E,3µm,0.4s						
AROD	Rodeo	2.17	131	i P	Pn	17 36 49.1	+0.9
AROD				i S	Sn	17 37 14.7	+0.7
ACDV	Cuesta del Vie	2.41	127	i P	Pn	17 36 52.6	+1.2
AGUA	GUANDACOL	2.61	107	i P	Pn	17 36 56.1	+2.0
ACCO	Cerro Coronel	2.71	133	i P	Pn	17 36 57.0	+1.4
VCA	Vinchina	2.77	91	i P	Pn	17 36 59.1	+2.8
AMOG	MOGNA	3.31	132	i P	Pn	17 37 05.0	+1.3
AMOG				i S	Sn	17 37 45.1	+3.2
RTLS	Leoncito	3.52	150	i P	Pn	17 37 09.3	+2.5
RTLS				i S	Sn	17 37 49.9	+2.4
RTLS				IAML		17 38 09.6	
	comp=Z,452nm,0.4s						
RTLL	Cerro Villicun	3.59	137	i P	Pn	17 37 05.0	-2.5
ZON	Zonda	3.63	141	i P	Pn	17 37 10.7	+2.6
GO02	Mina Guanaco	3.90	24	i P	Pn	17 37 13.0	+1.0
GO02	Mina Guanaco	3.90	24		Pn	17 37 12.5	+0.4
ACLC	CERRO LA CRUZ	3.91	101	i P	Pn	17 37 12.4	+0.3
CFA	Coronel Fontan	3.92	137	P	Pn	17 37 11.4	-0.7
	comp=Z,30nm,0.3s,baz=324,slow=10,SNR=56						
CFA				S	Sn	17 37 57.4	+0.3
	comp=Z,34nm,0.3s,baz=274,slow=23,SNR=8.8						
CFA				LR	LR	17 38 56.4	
	comp=Z,268nm,20.4s,baz=302,slow=42						
RTCV	Cerro Valdivia	3.95	143	i P	Pn	17 37 14.4	+1.9
ROCH	El Roble	4.22	176	eP	Pn	17 37 16.6	+0.2
ROCH				eS	Sn	17 38 05.0	+0.4
ROC1	El Roble	4.23	176		Pn	17 37 16.9	+0.5
ROC1	El Roble	4.23	176	i P	Pn	17 37 16.9	+0.5
PEL	Peldehue	4.42	173	eP	Pn	17 37 20.1	+1.1
PEL	Peldehue	4.42	173		Pn	17 37 18.8	-0.2
PEL	Peldehue	4.42	173	i P	Pn	17 37 21.1	+2.2
APLL	PUNTA DE LOS L	4.52	113	i P	Pn	17 37 19.9	-0.4
ARCO	CERRO ARCO	4.58	154	i P	Pn	17 37 23.3	+2.0
AAGR	Agrelo	4.84	154	i P	Pn	17 37 26.6	+1.8
CYA	Choya	4.89	88	i P	Pn	17 37 25.2	-0.3
CYA				i S	Sn	17 38 18.9	-2.0
ACAN	Cantantal	5.03	135	i P	Pn	17 37 27.5	+0.2
PB10	IPOC Station P	5.26	8	Pn	Pn	17 37 30.6	+0.1
PB15	IPOC Station P	5.77	18	i P	Pn	17 37 38.1	+0.5
PB15				IAML		17 39 18.7	
	comp=Z,310nm,0.4s						
PB05	IPOC Station P	5.96	10	i P	Pn	17 37 39.1	-1.1
MRA	San Martin	6.08	128	i P	Pn	17 37 40.8	-1.1
PB06	IPOC Station P	6.23	15	i P	Pn	17 37 43.8	-0.1
PB06				IAML		17 39 37.9	
	comp=Z,140nm,0.9s						
GO05	Huala	6.26	184		Pn	17 37 42.4	-1.8
PB04	IPOC Station P	6.48	10	Pn	Pn	17 37 46.8	-0.5
LVC	Limon Verde	6.50	20	P	Pn	17 37 47.5	-0.3
	comp=Z,1.4nm,0.3s,baz=208,slow=9.5,SNR=14						
LVC				S	Sn	17 39 08.0	+7.1
	comp=Z,2.9nm,0.3s,baz=190,slow=16,SNR=3.0						
PB01	IPOC Station P	7.86	13	Pn	Pn	17 38 04.5	-1.7
CPUP	Villa Florida	12.68	82	P	Pn	17 39 11.4	-0.7
	comp=Z,0.4nm,0.3s,baz=256,slow=12,SNR=7.2						
CPUP				LR	LR	17 44 19.2	
	comp=Z,132nm,20.0s,baz=238,slow=39						
CPUP	Villa Florida	12.68	82		Pn	17 39 09.2	-3.0
LPAZ	La Paz	12.75	14	P	Pn	17 39 15.5	+1.8
	comp=Z,0.1nm,0.3s,baz=211,slow=8.8,SNR=2.8						
LPAZ	La Paz	12.75	14		Pn	17 39 13.2	-0.6
SIV	San Ignacio	15.85	39	P	Pn	17 39 55.1	+0.2
	comp=Z,0.4nm,0.3s,baz=232,slow=13,SNR=19						
SAML	Samuel	21.14	23	P	P	17 40 56.8	+0.4
SAML				IAmb	IAmb	17 41 18.3	
	comp=Z,4.3nm,0.8s						
BDFB	Brasilia	25.18	64	LR	LR	17 51 19.4	
	comp=Z,59nm,19.0s,baz=12,slow=36						
RUSC	La Rusia	34.48	357	P	P	17 42 58.4	-1.2
SNAA	Sanae	56.25	159	P	P	17 45 52.1	+1.3
	comp=Z,1.8nm,0.9s,baz=267,slow=12,SNR=2.3						
TXAR	Lajitas Array	65.49	329	P	P	17 46 56.4	+2.2
	comp=Z,0.8nm,0.8s,baz=134,slow=3.9,SNR=2.9						
TXAR	Lajitas Array	65.49	329	P	P	17 46 54.1	0.0
DBIC	Dimbokro	72.99	72	P	P	17 47 38.5	-2.3
	comp=Z,2.5nm,1.0s,baz=164,slow=2.9,SNR=3.2						
DBIC				pP	pP	17 47 52.6	+0.6
	comp=Z,3.8nm,0.5s,baz=213,slow=6.8,SNR=5.1						
DBIC	Dimbokro	72.99	72	P	P	17 47 39.4	-1.4
DBIC				IAmb	IAmb	17 47 53.0	
	comp=Z,4.5nm,0.6s						
PDAR	Pinedale Array	79.37	332	P	P	17 48 18.7	+2.0
	comp=Z,0.1nm,0.4s,baz=186,slow=5.4,SNR=3.1						
PDAR				pP	sP	17 48 31.6	-0.1
	comp=Z,0.3nm,0.5s,baz=115,slow=4.1,SNR=3.5						
ULM	Lac du Bonnet	81.60	344	pP	pP	17 48 42.1	+3.0
	comp=Z,1.5nm,0.8s,baz=146,slow=7.3,SNR=2.5						
TORD	Torodi Ar. Bea	81.88	70	P	P	17 48 29.2	-1.3
	comp=Z,1.1nm,0.6s,baz=282,slow=6.5,SNR=6.2						
TORD				pP	pP	17 48 42.0	+0.4
	comp=Z,1.4nm,0.7s,baz=252,slow=4.3,SNR=5.8						
TORD	Torodi Ar. Bea	81.88	70	P	P	17 48 28.8	-1.7
BEKR	Beckworth	82.07	324	P	P	17 48 30.5	-0.7
BEKR				IAmb	IAmb	17 48 37.1	
	comp=Z,5.0nm,0.6s						
AFI	Afiamalu	92.29	253	LR	LR	18 23 26.3	
	comp=Z,78nm,21.2s,baz=182,slow=31						
YKA	Yellowknife Ar	97.28	341	pP	pP	17 49 55.3	+1.1
	comp=Z,0.1nm,0.3s,baz=140,slow=5.7,SNR=1.8						
ASAR	Alice Springs	122.49	208	PKP	PKPdf	17 55 05.7	-0.9
	comp=Z,0.4nm,0.8s,baz=129,slow=1.6,SNR=4.7						
ASAR				pPKP	pPKPdf	17 55 19.4	+1.2
	comp=Z,0.4nm,1.0s,baz=144,slow=1.8,SNR=1.3						
WRA	Warramunga Arr	125.60	210	PKP	PKPdf	17 55 11.8	-0.9
	comp=Z,0.7nm,0.7s,baz=171,slow=1.6,SNR=5.3						
WRA				pPKP	pPKPdf	17 55 26.3	+2.2
	comp=Z,0.7nm,0.7s,baz=161,slow=1.8,SNR=2.1						
KURK	Kurchatov	148.50	38		PKPdf	17 55 52.8	-0.6
KURBB	Kurchatov Arra	148.50	38	PKPbc	PKPbc	17 55 57.1	+0.1
	comp=Z,0.4nm,0.5s,baz=307,slow=3.1,SNR=9.7						
KURBB				pPKPbc	pPKPab	17 56 12.0	+0.1
	comp=Z,0.5nm,0.6s,baz=304,slow=3.0,SNR=3.8						
ZALV	Zalesovo Beam	149.40	28	PKPbc	PKPbc	17 55 59.1	0.0
	comp=Z,1.1nm,0.5s,baz=311,slow=3.6,SNR=7.4						
ZALV				pPKPbc	pPKPbc	17 56 13.0	+2.6
	comp=Z,2.5nm,0.5s,baz=310,slow=3.0,SNR=7.4						
ZALV	Zalesovo Beam	149.40	28		PKPbc	17 55 58.5	-0.6
KSH	Kashi	151.05	60	PKPbc	PKPdf	17 55 57.6	-0.4
KSH				pPKP	pPKPdf	17 56 09.1	-0.5
MKAR	Makanchi Array	152.66	42	PKPbc	PKPbc	17 56 06.8	-0.3
	comp=Z,0.2nm,0.6s,baz=354,slow=2.4,SNR=4.0						
MKAR				pPKPbc	pPKPbc	17 56 20.5	+1.9
	comp=Z,0.4nm,0.6s,baz=288,slow=2.1,SNR=3.9						
MKAR	Makanchi Array	152.66	42		PKPbc	17 56 05.9	-1.2

INET 12 17:42:24.2, 12.°54N×87.°86W, h65km, ML4.0
UCR 12 17:42:24.2±2.1, 12.°57N×87.°83W, h68km±17km, ML4.3
SNET 12 17:42:25.3±0.9, 12.°54N×87.°94W, h32km±4km, ML4.4
GCG 12 17:42:30.8±3.4, 12.°01N×88.°62W, h34km±999km, MD4.2
ISC 12 17:42:25.3±1.3, **12.°57N**±0.°08×**87.°82W**±0.°05, **h63**km±16km, **n53**, σ**0s82**/78, **7D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	0.47	32	⇓iP	Pn	17 42 37.6	+0.1
CSGN				eS	Sn	17 42 47.0	+0.9
CNCH	Conchagua	0.70	358	⇓iP	Pn	17 42 39.5	-0.4
CNCH				eS	Sn	17 42 51.0	+0.4
CNCH				IAML		17 42 54.9	
	comp=Z,24µm,0.4s						
CNCH	Conchagua	0.70	358	⇓iP	Pn	17 42 39.5	-0.4
CNCH				eS	Sn	17 42 51.0	+0.4
CNCH				IAML		17 42 54.9	
	comp=Z,24µm,0.4s						
LCND	La Caada	0.74	354	⇓iP	Pn	17 42 39.9	-0.4
LCND				eS	Sn	17 42 51.6	+0.4
LCND				IAML		17 42 54.0	
	comp=Z,18µm,0.2s						
LCND	La Caada	0.74	354	⇓iP	Pn	17 42 39.9	-0.4
LCND				eS	Sn	17 42 51.6	+0.4
LCND				IAML		17 42 54.0	
	comp=Z,18µm,0.2s						
CRIN	San Cristobal	0.76	80	⇓eP	Pn	17 42 40.5	-0.1
CRIN				eS	Sn	17 42 52.7	+0.9
JUCU	Jucuar¡n	0.80	328	eP	Pn	17 42 40.0	-1.1
JUCU	Jucuar¡n	0.80	328	eP	Pn	17 42 40.0	-1.1
BLLM	Bellamira	0.96	335	eP	Pn	17 42 42.4	-0.6
BLLM				eS	Sn	17 42 56.2	+0.1
BLLM	Bellamira	0.96	335	eP	Pn	17 42 42.4	-0.6
BLLM				eS	Sn	17 42 56.2	+0.1
LCY	Lacayo	0.97	331	eP	Pn	17 42 42.6	-0.6
LCY	Lacayo	0.97	331	eP	Pn	17 42 42.6	-0.6
RANC	El Ranchito	0.97	332	eP	Pn	17 42 43.0	-0.3
RANC				eS	Sn	17 42 56.8	+0.1
RANC	El Ranchito	0.97	332	eP	Pn	17 42 43.0	-0.3
RANC				eS	Sn	17 42 56.8	+0.1
PACA	Pacayal	1.02	331	eP	Pn	17 42 43.5	-0.4
PACA				eS	Sn	17 42 58.1	+0.4
PACA	Pacayal	1.02	331	eP	Pn	17 42 43.5	-0.4
PACA				eS	Sn	17 42 58.1	+0.4
ALJI	Alcalda de J	1.05	316	eS	Sn	17 42 57.2	-0.9
ALJI	Alcalda de J	1.05	316	eS	Sn	17 42 57.2	-0.9
FAGO	Alcalda de S	1.15	346	eP	Pn	17 42 45.4	-0.2
FAGO				eS	Sn	17 43 00.7	+0.1
FAGO	Alcalda de S	1.15	346	eP	Pn	17 42 45.4	-0.2
FAGO				eS	Sn	17 43 00.7	+0.1

COEB	**Comit de Eme**	**1.16**	**323**	*e*P	**Pn**	**17 42 44.3**	**-1.3**
COEB				*e*S	**Sn**	**17 43 00.1**	**-0.7**
COEB	**Comit de Eme**	**1.16**	**323**	*e*P	**Pn**	**17 42 44.3**	**-1.3**
COEB				*e*S	**Sn**	**17 43 00.1**	**-0.7**
COEG	**Centro de Oper**	**1.47**	**315**	*e*P	**Pn**	**17 42 49.2**	**-0.6**
COEG				*e*S	**Sn**	**17 43 07.5**	**-0.7**
COEG	**Centro de Oper**	**1.47**	**315**	*e*P	**Pn**	**17 42 49.2**	**-0.6**
COEG				*e*S	**Sn**	**17 43 07.5**	**-0.7**
LFRS	**El Faro**	**1.60**	**311**	*e*P	**Pn**	**17 42 51.0**	**-0.6**
LBRS	**Las Brisas**	**1.67**	**314**	*e*P	**Pn**	**17 42 52.6**	**+0.1**
LOMA	**Loma Larga**	**1.70**	**309**	*e*P	**Pn**	**17 42 52.4**	**-0.5**
LOMA				*e*S	**Sn**	**17 43 13.2**	**-0.6**
LOMA				IAML		17 43 15.1	
	comp=Z,2μm,0.2s						
LOMA	**Loma Larga**	**1.70**	**309**	*e*P	**Pn**	**17 42 52.4**	**-0.5**
LOMA				*e*S	**Sn**	**17 43 13.2**	**-0.6**
LOMA				IAML		17 43 15.1	
	comp=Z,2μm,0.2s						
MASN	**Masaya**	**1.73**	**110**	*e*P	**Pn**	**17 42 52.2**	**-1.0**
MASN				*e*S	**Sn**	**17 43 13.6**	**-0.8**
BOQS	**Boqueron**	**1.84**	**309**	*e*P	**Pn**	**17 42 54.9**	**+0.1**
BOQS				*e*S	**Sn**	**17 43 16.8**	**-0.4**
MATN	**Matagalpa**	**1.88**	**79**	⇓*i*P	**Pn**	**17 42 54.8**	**-0.5**
MATN				*e*S	**Sn**	**17 43 18.1**	**+0.1**
CEVE	**Cerro Verde**	**2.16**	**306**	*e*P	**Pn**	**17 42 59.0**	**-0.3**
CEVE				IAML		17 43 40.9	
	comp=Z,1μm,0.3s						
CEVE	**Cerro Verde**	**2.16**	**306**	*e*P	**Pn**	**17 42 59.0**	**-0.3**
CEVE				IAML		17 43 40.9	
	comp=Z,1μm,0.3s						
MTO3	**Montecristo**	**2.36**	**321**	*e*P	**Pn**	**17 43 01.9**	**0.0**
MTO3	**Montecristo**	**2.36**	**321**	*e*P	**Pn**	**17 43 01.9**	**0.0**
ACON	**Acoyapa**	**2.65**	**103**	*e*P	**Pn**	**17 43 04.4**	**-1.3**
GBS3	**Finca Las Img**	**2.92**	**127**	*e*P	**Pn**	**17 43 07.0**	**-2.4**
GB1A	**Borinquen Arri**	**2.94**	**126**	*e*P	**Pn**	**17 43 10.3**	**+0.5**
NY14	**Universidad de**	**2.94**	**130**	*e*P	**Pn**	**17 43 10.6**	**+0.9**
LAPC	**Finca la Perla**	**2.94**	**127**	*e*P	**Pn**	**17 43 08.9**	**-0.8**
BUEV	**Buena Vista**	**2.94**	**127**	*e*P	**Pn**	**17 43 09.5**	**-0.3**
IXG	**Ixpaco**	**3.01**	**302**	*e*P	**Pn**	**17 43 11.3**	**+0.5**
MESS	**Mesas**	**3.15**	**125**	*e*P	**Pn**	**17 43 10.8**	**-1.8**
COLC	**Colonia**	**3.18**	**126**	*e*P	**Pn**	**17 43 11.7**	**-1.3**
GUAI	**GUAI**	**3.21**	**135**	*e*P	**Pn**	**17 43 13.5**	**+0.1**
CUI	**Cuipilapa**	**3.22**	**126**	*e*P	**Pn**	**17 43 13.4**	**-0.1**
PLVR	**Palo Verde**	**3.27**	**132**	*e*P	**Pn**	**17 43 14.6**	**+0.2**
PTEN	**Parque Tenorio**	**3.33**	**123**	*e*P	**Pn**	**17 43 14.1**	**-0.9**
ACAL	**Aguas Claras**	**3.34**	**125**	*e*P	**Pn**	**17 43 14.1**	**-1.1**
FUG	**Fuego 3**	**3.48**	**303**	*e*P	**Pn**	**17 43 19.7**	**+2.4**
FUG				*e*S	**Sn**	**17 43 58.1**	**+0.6**
JTS	**Las Juntas de**	**3.61**	**129**	*e*P	**Pn**	**17 43 20.0**	**+1.1**
STG3	**Santiaguito 3,**	**4.22**	**301**	*e*P	**Pn**	**17 43 29.1**	**+1.7**
STG3				*e*S	**Sn**	**17 44 15.1**	**-0.5**
LCR2	**La Lucha 2**	**4.68**	**127**	*e*P	**Pn**	**17 43 35.3**	**+1.6**

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*KRSC **12** 17:43:34.4±0.5, 54°.22N×161°.05E, h71^{km}±15^{km}, ML4.3*
*MOS **12** 17:43:35.7±0.3, 54°.24N×160°.97E, h79^{km}, mb3.9/1, Error ellipse: s-maj=11.3km s-min=4.1km az=78.0*
*IDC **12** 17:43:36.8±0.8, 54°.54N×160°.48E, h81^{km}±8^{km}, mb3.3/10, mb1 3.6/12, mb1mx3.4/47, mbtmp3.7/12, MS2.7/1, Ms1 2.7/1, ms1mx2.4/31, Error ellipse: s-maj=19.1km s-min=9.6km az=142.0*
ISC 12 17:43:35.8±0.7**, 54°.26N**±0°.03×**160°.90E**±0°.04**, h78**^{km}±6^{km}**, n103, **σ**1**^{s}**34**/167**, mb3.6**/10**, 1C-1D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KII	**Karymskiy**	**0.88**	**256**	*e*P	**Pn**	**17 43 53.7**	**+0.3**
KII				*e*S	**Sn**	**17 44 07.1**	**+0.5**
KII	**Karymskiy**	**0.88**	**256**	PN	**Pn**	**17 43 53.7**	**+0.3**
KII				S	**Sn**	**17 44 07.1**	**+0.5**
KZV	**Kizimen**	**0.93**	**338**	*e*P	**Pn**	**17 43 54.4**	**+0.3**
KZV				*e*S	**Sn**	**17 44 08.1**	**+0.4**
KZV	**Kizimen**	**0.93**	**338**	PN	**Pn**	**17 43 54.4**	**+0.3**
KZV				S	**Sn**	**17 44 08.1**	**+0.4**
TUMD	**Tumrok D**	**0.99**	**343**	*e*P	**Pn**	**17 43 54.6**	**-0.1**
TUMD				*e*S	**Sn**	**17 44 08.4**	**-0.4**
TUMR	**Tumrok**	**1.12**	**337**	*e*P	**Pn**	**17 43 57.0**	**+0.7**
TUMR				*e*S	**Sn**	**17 44 13.0**	**+1.3**
TUMR	**Tumrok**	**1.12**	**337**	PN	**Pn**	**17 43 57.0**	**+0.7**
TUMR				S	**Sn**	**17 44 13.0**	**+1.3**
SPN	**Mys Shipunski**	**1.27**	**205**	*e*P	**Pn**	**17 43 58.1**	**0.0**
SPN				*e*S	**Sn**	**17 44 14.5**	**-0.3**
SPN	**Mys Shipunski**	**1.27**	**205**	PN	**Pn**	**17 43 58.1**	**0.0**
SPN				S	**Sn**	**17 44 14.5**	**-0.3**
NLC	**Nalytchevo**	**1.43**	**221**	*e*P	**Pn**	**17 44 00.6**	**+0.5**
NLC				*e*S	**Sn**	**17 44 19.4**	**+1.1**
NLC	**Nalytchevo**	**1.43**	**221**	PN	**Pn**	**17 44 00.6**	**+0.5**
NLC				S	**Sn**	**17 44 19.4**	**+1.1**
SDLR	**Sedlovina**	**1.55**	**232**	*e*P	**Pn**	**17 44 02.5**	**+0.7**
SDLR				*e*S	**Sn**	**17 44 22.8**	**+1.4**
SDLR	**Sedlovina**	**1.55**	**232**	PN	**Pn**	**17 44 02.5**	**+0.7**
SDLR				S	**Sn**	**17 44 22.8**	**+1.4**
KMNR	**Kamenistaya**	**1.55**	**346**	*e*P	**Pn**	**17 44 03.0**	**+1.2**
KMNR				*e*S	**Sn**	**17 44 23.1**	**+1.6**
KMNR	**Kamenistaya**	**1.55**	**346**	PN	**Pn**	**17 44 03.0**	**+1.2**
KMNR				S	**Sn**	**17 44 23.1**	**+1.6**
KRER	**Koryakskii**	**1.59**	**234**	*e*P	**Pn**	**17 44 03.6**	**+1.1**
KRER				*e*S	**Sn**	**17 44 24.6**	**+2.0**
KRER	**Koryakskii**	**1.59**	**234**	PN	**Pn**	**17 44 03.6**	**+1.1**
KRER				S	**Sn**	**17 44 24.6**	**+2.0**
SMAR	**Somma**	**1.59**	**232**	*e*P	**Pn**	**17 44 03.3**	**+0.8**
SMAR				*e*S	**Sn**	**17 44 23.6**	**+1.0**
SMAR	**Somma**	**1.59**	**232**	PN	**Pn**	**17 44 03.3**	**+0.8**
SMAR				S	**Sn**	**17 44 23.6**	**+1.0**
KRX	**Arik**	**1.61**	**237**	*e*P	**Pn**	**17 44 03.7**	**+1.1**
KRX				*e*S	**Sn**	**17 44 24.4**	**+1.5**
KRX	**Arik**	**1.61**	**237**	PN	**Pn**	**17 44 03.7**	**+1.1**
KRX				S	**Sn**	**17 44 24.4**	**+1.5**
UGLR	**Uglovaya**	**1.62**	**231**	*e*P	**Pn**	**17 44 03.7**	**+1.0**
UGLR				*e*S	**Sn**	**17 44 24.6**	**+1.6**
UGLR	**Uglovaya**	**1.62**	**231**	PN	**Pn**	**17 44 03.7**	**+1.0**
UGLR				S	**Sn**	**17 44 24.6**	**+1.6**
AVH	**Avacha**	**1.62**	**233**	*e*P	**Pn**	**17 44 03.8**	**+1.1**
AVH				*e*S	**Sn**	**17 44 24.9**	**+1.8**
AVH	**Avacha**	**1.62**	**233**	PN	**Pn**	**17 44 03.8**	**+1.1**
AVH				S	**Sn**	**17 44 24.9**	**+1.8**
KOK	**Koryaka**	**1.66**	**235**	*e*P	**Pn**	**17 44 04.2**	**+1.0**
KOK				*e*S	**Sn**	**17 44 26.2**	**+2.3**
KOK	**Koryaka**	**1.66**	**235**	PN	**Pn**	**17 44 04.2**	**+1.0**
KOK				S	**Sn**	**17 44 26.2**	**+2.3**
BZGR	**Bezymyannyi-Gr**	**1.69**	**356**	*e*P	**Pn**	**17 44 04.5**	**+0.8**
BZGR				*e*S	**Sn**	**17 44 26.0**	**+1.2**
BZGR	**Bezymyannyi-Gr**	**1.69**	**356**	PN	**Pn**	**17 44 04.5**	**+0.8**
BZGR				S	**Sn**	**17 44 26.0**	**+1.2**
KIRR	**Kirishev**	**1.73**	**350**	*e*P	**Pn**	**17 44 05.2**	**+1.0**
KIRR				*e*S	**Sn**	**17 44 26.8**	**+1.1**
KIRR	**Kirishev**	**1.73**	**350**	PN	**Pn**	**17 44 05.2**	**+1.0**
KIRR				S	**Sn**	**17 44 26.8**	**+1.1**
KPT	**Kopyto**	**1.76**	**347**	*e*P	**Pn**	**17 44 05.3**	**+0.8**
KPT				*e*S	**Sn**	**17 44 27.2**	**+0.9**
KPT	**Kopyto**	**1.76**	**347**	PN	**Pn**	**17 44 05.3**	**+0.8**
KPT				S	**Sn**	**17 44 27.2**	**+0.9**
ZLN	**Zelenaya**	**1.77**	**358**	*e*P	**Pn**	**17 44 05.9**	**+1.3**
ZLN				*e*S	**Sn**	**17 44 28.2**	**+1.7**
ZLN	**Zelenaya**	**1.77**	**358**	PN	**Pn**	**17 44 05.9**	**+1.3**
ZLN				S	**Sn**	**17 44 28.2**	**+1.7**
DALK	**Dalny**	**1.77**	**227**	*e*P	**Pn**	**17 44 05.5**	**+0.9**
DALK				*e*S	**Sn**	**17 44 27.2**	**+0.8**
DALK	**Dalny**	**1.77**	**227**	PN	**Pn**	**17 44 05.5**	**+0.9**
DALK				S	**Sn**	**17 44 27.2**	**+0.8**
PET	**Petropavlovsk**	**1.82**	**228**	*e*P	**Pn**	**17 44 06.1**	**+0.9**
PET				*e*S	**Sn**	**17 44 28.7**	**+1.2**
PET	**Petropavlovsk**	**1.82**	**228**	⇑*i*PN	**Pn**	**17 44 06.2**	**+1.0**
PET				*i* S	**Sn**	**17 44 28.8**	**+1.2**
PET				pmax	pmax		
	comp=Z,142nm,0.4s						
PET				smax	smax		
	comp=E,665nm,0.5s						
PET				smax	smax		
	comp=N,959nm,0.5s						
LGNR	**Loginova**	**1.84**	**356**	*e*P	**Pn**	**17 44 07.3**	**+1.6**
LGNR				*e*S	**Sn**	**17 44 30.9**	**+2.5**
LGNR	**Loginova**	**1.84**	**356**	PN	**Pn**	**17 44 07.3**	**+1.6**
LGNR				S	**Sn**	**17 44 30.9**	**+2.5**
CIRR	**Tsirk**	**1.87**	**357**	*e*P	**Pn**	**17 44 07.4**	**+1.4**
CIRR				*e*S	**Sn**	**17 44 30.7**	**+1.8**
CIRR	**Tsirk**	**1.87**	**357**	PN	**Pn**	**17 44 07.4**	**+1.4**
CIRR				S	**Sn**	**17 44 30.7**	**+1.8**
KOZ	**Kozyrevsk**	**1.90**	**342**	*e*P	**Pn**	**17 44 07.3**	**+1.0**
KOZ	**Kozyrevsk**	**1.90**	**342**	PN	**Pn**	**17 44 07.3**	**+1.0**
KRSR	**Krestovskiy**	**1.98**	**355**	*e*P	**Pn**	**17 44 08.1**	**+0.7**
KRSR				*e*S	**Sn**	**17 44 32.1**	**+0.7**
KRSR	**Krestovskiy**	**1.98**	**355**	PN	**Pn**	**17 44 08.1**	**+0.7**
KRSR				S	**Sn**	**17 44 32.1**	**+0.7**
KLY	**Klyuchi**	**2.07**	**356**	*e*P	**Pn**	**17 44 09.5**	**+1.0**
KLY				*e*S	**Sn**	**17 44 34.6**	**+1.2**
KLY	**Klyuchi**	**2.07**	**356**	PN	**Pn**	**17 44 09.5**	**+1.0**
KLY				S	**Sn**	**17 44 34.6**	**+1.2**
ESO	**Esso**	**2.10**	**324**	*e*P	**Pn**	**17 44 09.4**	**+0.4**
ESO	**Esso**	**2.10**	**324**	PN	**Pn**	**17 44 09.4**	**+0.4**
SRDR	**Sredinnyy**	**2.17**	**342**	*e*P	**Pn**	**17 44 10.3**	**+0.3**
SRDR	**Sredinnyy**	**2.17**	**342**	PN	**Pn**	**17 44 10.3**	**+0.3**
KRMR	**Karymshinskiy**	**2.19**	**230**	*e*P	**Pn**	**17 44 10.9**	**+0.8**
KRMR				*e*S	**Sn**	**17 44 37.1**	**+0.8**
KRMR	**Karymshinskiy**	**2.19**	**230**	PN	**Pn**	**17 44 10.9**	**+0.8**
KRMR				S	**Sn**	**17 44 37.1**	**+0.8**
PETK	**Petropavlovsk-**	**2.23**	**240**	P	**Pn**	**17 44 11.6**	**+1.0**
	comp=N,6.4nm,0.3s,baz=70,slow=17,SNR=199						
PETK				S	**Sn**	**17 44 38.5**	**+1.2**
	comp=N,13nm,0.3s,baz=90,slow=19,SNR=8.2						
KBTR	**Krutoberegovo**	**2.24**	**28**	*e*P	**Pn**	**17 44 11.8**	**+0.9**
KBTR	**Krutoberegovo**	**2.24**	**28**	PN	**Pn**	**17 44 11.8**	**+0.9**
KBG	**Krutoberegovo**	**2.25**	**27**	*e*P	**Pn**	**17 44 11.6**	**+0.6**
KBG				*e*S	**Sn**	**17 44 38.7**	**+0.8**
KBG	**Krutoberegovo**	**2.25**	**27**	PN	**Pn**	**17 44 11.6**	**+0.6**
KBG				S	**Sn**	**17 44 38.7**	**+0.8**
RUS	**Russkaya**	**2.32**	**219**	*e*P	**Pn**	**17 44 12.2**	**+0.3**
RUS				*e*S	**Sn**	**17 44 39.6**	**+0.1**
RUS	**Russkaya**	**2.32**	**219**	PN	**Pn**	**17 44 12.2**	**+0.3**
RUS				S	**Sn**	**17 44 39.6**	**+0.1**
BDR	**Baidarnaya**	**2.33**	**4**	*e*P	**Pn**	**17 44 13.3**	**+1.3**
BDR				*e*S	**Sn**	**17 44 41.1**	**+1.3**
BDR	**Baidarnaya**	**2.33**	**4**	PN	**Pn**	**17 44 13.3**	**+1.3**
BDR				S	**Sn**	**17 44 41.1**	**+1.3**
SMKR	**Semkarok**	**2.35**	**8**	*e*P	**Pn**	**17 44 13.8**	**+1.4**
SMKR	**Semkarok**	**2.35**	**8**	PN	**Pn**	**17 44 13.8**	**+1.4**
GRL	**Gorelyy**	**2.40**	**226**	*e*P	**Pn**	**17 44 14.9**	**+1.7**
GRL				*e*S	**Sn**	**17 44 44.1**	**+2.4**
GRL	**Gorelyy**	**2.40**	**226**	PN	**Pn**	**17 44 14.9**	**+1.7**
GRL				S	**Sn**	**17 44 44.1**	**+2.4**
MTVR	**Mutnovka**	**2.41**	**224**	*e*P	**Pn**	**17 44 14.4**	**+1.2**
MTVR				*e*S	**Sn**	**17 44 43.2**	**+1.3**
MTVR	**Mutnovka**	**2.41**	**224**	PN	**Pn**	**17 44 14.4**	**+1.2**
MTVR				S	**Sn**	**17 44 43.2**	**+1.3**
SRKR	**Sorokina**	**2.41**	**3**	*e*P	**Pn**	**17 44 14.4**	**+1.2**
SRKR				*e*S	**Sn**	**17 44 43.0**	**+1.2**
SRKR	**Sorokina**	**2.41**	**3**	PN	**Pn**	**17 44 14.4**	**+1.2**
SRKR				S	**Sn**	**17 44 43.0**	**+1.2**
APC	**Apacha**	**2.60**	**241**	*e*P	**Pn**	**17 44 17.2**	**+1.6**
APC	**Apacha**	**2.60**	**241**	PN	**Pn**	**17 44 17.2**	**+1.6**
ASAK	**Asacha**	**2.60**	**225**	*e*P	**Pn**	**17 44 17.5**	**+1.7**
ASAK	**Asacha**	**2.60**	**225**	PN	**Pn**	**17 44 17.5**	**+1.7**
KDTR	**Khodutka, Kamc**	**2.98**	**216**	*e*P	**Pn**	**17 44 23.0**	**+2.1**
KDTR	**Khodutka, Kamc**	**2.98**	**216**	PN	**Pn**	**17 44 23.0**	**+2.1**
BKI	**Bering**	**3.09**	**70**	*e*P	**Pn**	**17 44 22.8**	**+0.6**
BKI				*e*S	**Sn**	**17 44 56.9**	**-1.2**
BKI	**Bering**	**3.09**	**70**	PN	**Pn**	**17 44 22.8**	**+0.6**
BKI				S	**Sn**	**17 44 56.9**	**-1.2**
PAU	**Pauzhetka**	**3.73**	**223**	P	**Pn**	**17 44 33.2**	**+2.2**
PAU	**Pauzhetka**	**3.73**	**223**	PN	**Pn**	**17 44 33.2**	**+2.2**
PALN	**Palana**	**4.87**	**354**	P	**Pn**	**17 44 49.0**	**+2.5**
PALN	**Palana**	**4.87**	**354**	PN	**Pn**	**17 44 49.0**	**+2.5**
OSSR	**Ossora**	**5.15**	**12**	P	**Pn**	**17 44 52.6**	**+2.4**
OSSR	**Ossora**	**5.15**	**12**	PN	**Pn**	**17 44 52.6**	**+2.4**
MA2	**Magadan**	**7.69**	**318**	P	**Pn**	**17 45 24.9**	**0.0**
	comp=N,1.0nm,0.3s,baz=125,slow=11,SNR=24						
MA2				LR	LR	17 48 26.5	
	comp=N,51nm,18.5s,baz=120,slow=40						
SEY	**Seymchan**	**9.76**	**336**	P	**Pn**	**17 45 53.6**	**+0.5**
	comp=N,0.0nm,0.3s,baz=156,slow=20,SNR=2.5						
BILL	**Bilibino**	**14.06**	**8**	*de*P	**P**	**17 46 57.5**	**+1.2**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
YAK	**Yakutsk**	**18.07**	**308**	P	**P**	**17 47 38.6**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=138,slow=3.0,SNR=6.4						
TIXI	**Tiksi**	**22.24**	**334**	P	**P**	**17 48 23.2**	**-2.4**
	comp=Z,0.6nm,0.2s,baz=114,slow=13,SNR=6.2						
SONM	**Songino Array**	**34.12**	**282**	P	**P**	**17 50 11.5**	**-1.4**
	comp=Z,0.1nm,0.4s,baz=63,slow=7.4,SNR=2.4						
H11N2	**WAKE ISLAND Hy**	**34.77**	**170**	T	T	18 27 30.7	
	baz=354,slow=76,SNR=156						
H11N3	**WAKE ISLAND Hy**	**34.78**	**170**	T	T	18 27 34.0	
	baz=354,slow=76,SNR=155						
H11N1	**WAKE ISLAND Hy**	**34.78**	**170**	T	T	18 27 34.7	
	baz=354,slow=76,SNR=62						
YKA	**Yellowknife Ar**	**41.98**	**44**	P	**P**	**17 51 19.4**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=298,slow=7.5,SNR=2.9						
YKA				pP	**pP**	**17 51 37.9**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=297,slow=8.0,SNR=3.0						
MKAR	**Makanchi Array**	**48.09**	**295**	P	**P**	**17 52 03.5**	**-3.8**
	comp=Z,0.2nm,0.5s,baz=54,slow=7.3,SNR=4.9						
MKAR				pP	**pP**	**17 52 25.2**	**-1.6**
	comp=Z,0.2nm,0.6s,baz=66,slow=8.5,SNR=2.2						
NVAR	**Mina Array Bea**	**54.90**	**71**	P	**P**	**17 53 00.8**	**+2.4**
	comp=Z,1.1nm,0.6s,baz=298,slow=7.1,SNR=9.7						
PDAR	**Pinedale Array**	**56.54**	**62**	P	**P**	**17 53 11.6**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=314,slow=0.8,SNR=5.6						
FINES	**FINESS Array B**	**59.24**	**337**	P	**P**	**17 53 26.1**	**-2.2**
	comp=Z,3.5nm,1.1s,baz=29,slow=8.8,SNR=3.9						
NOA	**NORSAR Array B**	**62.56**	**344**	P	**P**	**17 53 48.9**	**-2.0**
	comp=Z,1.0nm,0.8s,baz=15,slow=5.8,SNR=2.8						
TXAR	**Lajitas Array**	**69.75**	**68**	P	**P**	**17 54 38.9**	**+1.4**
	comp=Z,1.0nm,0.5s,baz=302,slow=4.7,SNR=5.1						
ASAR	**Alice Springs**	**81.02**	**205**	P	**P**	**17 55 42.4**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=14,slow=4.5,SNR=5.3						
ASAR				pP	**pP**	**17 56 03.6**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=13,slow=5.4,SNR=3.5						

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*IDC **12** 17:49:59.9±0.9, 49°.24S×69°.67E, h0^{km}, mb4.1/8, mb1 4.2/9, mb1mx4.0/41, mbtmp4.1/9, ML4.3/1, Error ellipse: s-maj=25.8km s-min=22.9km az=157.0*
ISC 12 17:50:01.4±0.8**, 49°.2S**±0°.1×**69°.7E**±0°.1**, h10**^{km}**, n10, **σ**0**^{s}**61**/10**, mb4.1**/8**, Kerguelen Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I23FR	**KERGUELEN INFR**	**0.37**	**108**	Pg	**Pn**	**17 50 12.5**	**-0.3**
	baz=280,slow=43,SNR=1.2						
MAW	**Mawson**	**18.74**	**188**	P	**Pn**	**17 54 21.5**	**+1.1**
	1.0nm,0.3s,baz=6.6,slow=13,SNR=12						
QSPA	**South Pole Qui**	**40.94**	**180**	P	**P**	**17 57 43.0**	**-0.8**
	1.9nm,0.7s,baz=135,slow=0.5,SNR=13						
LSZ	**Lusaka**	**47.82**	**300**	P	**P**	**17 58 39.3**	**0.0**
	0.8nm,0.3s,baz=153,slow=4.5,SNR=2.7						
STKA	**Stephens Creek**	**55.23**	**100**	P	**P**	**17 59 34.7**	**+0.2**
	3.5nm,0.8s,baz=245,slow=6.8,SNR=7.6						
ASAR	**Alice Springs**	**55.74**	**87**	P	**P**	**17 59 38.8**	**+0.5**
	1.8nm,0.9s,baz=217,slow=7.0,SNR=16						
WRA	**Warramunga Arr**	**58.65**	**84**	P	**P**	**17 59 58.7**	**-0.3**
	1.6nm,0.9s,baz=210,slow=8.8,SNR=6.0						
CMAR	**Chiang Mai Arr**	**72.23**	**29**	P	**P**	**18 01 27.0**	**+0.4**
	1.0nm,0.9s,baz=211,slow=6.9,SNR=5.4						
TORD	**Torodi Ar. Bea**	**86.08**	**295**	P	**P**	**18 02 42.1**	**-0.3**
	1.0nm,0.9s,baz=122,slow=5.7,SNR=3.8						
CPUP	**Villa Florida**	**91.21**	**226**	P	**P**	**18 03 06.8**	**0.0**
	2.7nm,1.1s,baz=143,slow=1.9,SNR=3.7						

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*IDC **12** 17:54:00.2±0.7, 49°.22S×69°.56E, h0^{km}, mb4.2/8, mb1 4.3/9, mb1mx4.0/38, mbtmp4.2/9, ML4.3/1, MS3.8/7, Ms1 3.8/7, ms1mx3.4/33, Error ellipse: s-maj=23.8km s-min=23.1km az=22.0*
*NEIC **12** 17:54:03.1±2.2, 49°.3S±0°.1×69°.62E±0°.09, h19^{km}±4^{km}, mb4.5/8, Error ellipse: s-maj=16.3km s-min=8.0km az=193.0*
ISC 12 17:54:01.9±0.6**, 49°.3S**±0°.1×**69°.63E**±0°.09**, h10**^{km}**, n38, **σ**1**^{s}**08**/28**, mb4.3**/10**, MS3.9**/6**, 2C, Kerguelen Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAF	**Port-aux-Franc**	**0.39**	**100**	Pg	**Pg**	**17 54 10.2**	**+0.7**
I23FR	**KERGUELEN INFR**	**0.41**	**99**	Pg	**Pn**	**17 54 13.3**	**-0.5**
	baz=281,slow=44,SNR=2.9						
MAW	**Mawson**	**18.69**	**188**	P	**Pn**	**17 58 21.8**	**+1.6**
	1.0nm,0.3s,baz=27,slow=15,SNR=3.3						
MAW				LR	LR	18 03 59.0	
	comp=Z,388nm,21.5s,baz=48,slow=32						
MAW	**Mawson**	**18.69**	**188**	Pn	**Pn**	**17 58 21.4**	**+1.1**
MAW				IAmb	IAmb	17 59 00.6	
	comp=Z,14nm,1.8s						
SYO	**Syowa Base**	**24.60**	**206**	⇑*e*P	**P**	**17 59 21.0**	**-0.8**
SYO	**Syowa Base**	**24.60**	**206**	⇑*e*pP	pP	17 59 28.0	+3.2
H01W2	**Cape Leeuwin H**	**35.48**	**83**	T	T	18 38 00.6	
	baz=232,slow=75,SNR=36						
H01W3	**Cape Leeuwin H**	**35.49**	**83**	T	T	18 38 01.9	
	baz=232,slow=75,SNR=39						
H01W1	**Cape Leeuwin H**	**35.50**	**83**	T	T	18 38 01.8	
	baz=232,slow=75,SNR=37						
BOSA	**Boshof**	**39.50**	**285**	LR	LR	18 15 30.6	
	comp=Z,58nm,18.4s,baz=197,slow=33						
QSPA	**South Pole Qui**	**40.89**	**180**	P	**P**	**18 01 43.7**	**-0.2**
	comp=Z,5.6nm,1.1s,baz=142,slow=1.2,SNR=16						
QSPA	**South Pole Qui**	**40.89**	**180**	P	**P**	**18 01 43.5**	**-0.4**
QSPA				IAmb	IAmb	18 01 45.0	
	comp=Z,14nm,1.2s						
VNDA	**Vanda**	**42.93**	**161**	LR	LR	18 19 28.9	
	comp=Z,224nm,19.4s,baz=258,slow=36						
LSZ	**Lusaka**	**47.80**	**300**	P	**P**	**18 02 38.8**	**-0.9**
	comp=Z,0.7nm,0.2s,baz=165,slow=11,SNR=3.0						
LEM	**Lembang**	**53.01**	**50**	LR	LR	18 21 32.9	
	comp=Z,102nm,19.3s,baz=192,slow=31						
FITZ	**Fitzroy Crossi**	**54.44**	**76**	LR	LR	18 24 36.8	
	comp=Z,69nm,18.2s,baz=258,slow=34						
STKA	**Stephens Creek**	**55.27**	**100**	P	**P**	**18 03 35.9**	**+0.5**
	comp=Z,3.5nm,0.9s,baz=255,slow=7.0,SNR=6.5						
STKA	**Stephens Creek**	**55.27**	**100**	P	**P**	**18 03 35.7**	**+0.4**
STKA				IAmb	IAmb	18 04 32.3	
	comp=Z,6.4nm,1.9s						
ASAR	**Alice Springs**	**55.79**	**87**	P	**P**	**18 03 39.2**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=221,slow=6.2,SNR=11						
ASAR	**Alice Springs**	**55.79**	**87**	P	**P**	**18 03 37.5**	**-1.6**
AS31	**Alice Springs**	**55.79**	**87**	P	**P**	**18 03 37.6**	**-1.5**
WRA	**Warramunga Arr**	**58.70**	**85**	P	**P**	**18 03 59.3**	**-0.4**
	comp=Z,3.4nm,1.1s,baz=214,slow=7.0,SNR=5.7						
DAMY	**Dhamar**	**67.38**	**333**	P	**P**	**18 05 00.5**	**+2.9**
DAMY				IAmb	IAmb	18 05 01.0	
	comp=Z,11nm,1.0s						
CMAR	**Chiang Mai Arr**	**72.29**	**29**	P	**P**	**18 05 28.1**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=218,slow=6.8,SNR=7.9						
CMAR	**Chiang Mai Arr**	**72.29**	**29**	P	**P**	**18 05 27.2**	**-0.2**
BRDH	**Bariadhala**	**74.27**	**21**	LR	LR	18 31 41.7	
	comp=Z,113nm,21.5s,baz=170,slow=30						
LSA	**Lhasa**	**80.94**	**19**	P	**P**	**18 06 15.8**	**-1.0**
LSA				IAmb	IAmb	18 06 18.3	
	comp=Z,8.5nm,1.4s						
KBL	**Kabul**	**83.45**	**360**	P	**P**	**18 06 30.4**	**+1.0**
TORD	**Torodi Ar. Bea**	**86.05**	**295**	P	**P**	**18 06 43.0**	**+0.2**
	comp=Z,1.5nm,1.0s,baz=118,slow=3.5,SNR=5.4						
TORD	**Torodi Ar. Bea**	**86.05**	**295**	P	**P**	**18 06 42.6**	**-0.2**
CPUP	**Villa Florida**	**91.14**	**226**	LR	LR	18 43 18.3	
	comp=Z,36nm,18.6s,baz=196,slow=32						
MKAR	**Makanchi Array**	**96.32**	**9**	P	**P**	**18 07 29.8**	**-0.2**
	comp=Z,1.1nm,1.0s,baz=191,slow=6.8,SNR=4.4						
CMIG	**Matias Romero**	**145.52**	**207**	PKPbc	**PKPdf**	**18 13 40.1**	**-0.3**
	comp=Z,3.6nm,0.9s,baz=257,slow=3.8,SNR=5.0						
TULEG	**Thule**	**148.16**	**343**		**PKPbc**	**18 13 45.2**	**-1.1**
IMAR	**Indian Mountai**	**152.17**	**37**		**PKPdf**	**18 13 49.6**	**0.0**
FRB	**Frobisher Bay**	**153.37**	**319**	PKPbc	**PKPbc**	**18 13 56.8**	**-2.2**
	comp=Z,1.9nm,0.7s,baz=90,slow=4.6,SNR=5.6						
RES	**Resolute Bay**	**153.68**	**351**	PKPbc	**PKPbc**	**18 13 59.0**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=344,slow=3.5,SNR=5.3						
RES	**Resolute Bay**	**153.68**	**351**		**PKiKP**	**18 14 00.1**	**+0.7**

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*MOS **12** 17:55:41.8±1.8, 35°.85N×82°.29E, h10^{km}, mb4.5/12, Error ellipse: s-maj=8.7km s-min=4.8km az=108.7*
*IDC **12** 17:55:41.9±0.6, 35°.75N×82°.28E, h0^{km}, mb4.1/19, mb1 4.2/24, mb1mx4.1/54, mbtmp4.1/24, ML3.8/5, MS3.8/22, Ms1 3.8/22, ms1mx3.6/49, Error ellipse: s-maj=18.3km s-min=12.6km az=42.0*
*BJI **12** 17:55:42.9±0.0, 35°.95N×82°.34E, h10^{km}, mB4.6/18, mb4.2/27, ML4.6/6, Ms4.3/22, Ms7 4.0/21*
*NEIC **12** 17:55:43.4±1.9, 35°.79N±0°.08×82°.35E±0°.10, h10^{km}±1^{km}, mb4.5/24, Error ellipse: s-maj=14.5km s-min=13.0km az=147.0*
*NNC **12** 17:55:46.2±2.0, 36°.28N×82°.33E, h0^{km}, mb4.5, mpv4.5, Error ellipse: s-maj=21.0km s-min=17.1km az=106.0*
ISC 12 17:55:43.6±0.4**, 35°.83N**±0°.04×**82°.28E**±0°.04**, h10**^{km}**, n181, **σ**1**^{s}**96**/173**, mb4.3**/35**, MS3.9**/19**, 17C-8D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DHRM	**DHARAMSHALA**	**6.11**	**236**	*e*P	**Pb**	**17 57 25.9**	**-4.3**
DHRM				*e*S	**Sg**	**17 58 59.1**	**-0.8**
KSH	**Kashi**	**6.21**	**308**	Pn	**Pn**	**17 57 19.9**	**+4.5**
KSH				smax	smax		
	comp=N,2μm,1.1s						
KSH				smax	smax		
	comp=E,1μm,1.0s						
KSH				LR	LR		
	comp=N,760nm,9.9s						
KSH				LR	LR		
	comp=E,580nm,9.4s						
KSH				LR	LR		
	comp=Z,510nm,10.2s						
SMLA	**Simla**	**6.34**	**224**	*e*x	**Sg**	**17 59 02.8**	**-4.3**
PRZ	**Przheval'sk**	**7.29**	**337**	P	**Pn**	**17 57 29.5**	**-0.9**
PRZ	**Przheval'sk**	**7.29**	**337**		**Pn**	**17 57 29.4**	**-0.9**
KDJ	**Kajisay**	**7.44**	**329**	P	**Pn**	**17 57 32.9**	**+0.6**
KDJ	**Kajisay**	**7.44**	**329**		**Pn**	**17 57 32.9**	**+0.6**
NRN	**Naryn**	**7.44**	**321**	P	**Pn**	**17 57 33.8**	**+1.2**
NRN	**Naryn**	**7.44**	**321**		**Pn**	**17 57 33.8**	**+1.2**
DANN	**Dangsing**	**7.56**	**170**	*e*P	**Pn**	**17 57 35.2**	**+1.0**
	43nm,0.5s						
CHCP	**Chirah Chowk**	**7.73**	**256**	P	**Pn**	**17 57 38.5**	**+2.3**
NIL	**Nilore**	**7.74**	**256**	P	**Pn**	**17 57 36.6**	**+0.3**
NIL	**Nilore**	**7.74**	**256**		**Pn**	**17 57 36.6**	**+0.3**
ULHL	**Ulahol**	**7.94**	**326**	P	**Pn**	**17 57 40.5**	**+1.3**
	SNR=12						
GKN	**Gorkha**	**8.06**	**165**	*e*P	**Pn**	**17 57 42.9**	**+2.1**
KZA	**Kyzart**	**8.30**	**321**	P	**Pn**	**17 57 47.4**	**+3.1**
	SNR=10.0						
MDOK	**Medeo**	**8.36**	**333**	⇑Pn	**Pn**	**17 57 45.2**	**+0.2**
	18nm,0.6s						
MDOK				⇓Sn	**Sn**	**17 59 16.6**	**-2.9**
	45nm,0.6s						
MDOK				⇓Lg	Lg	17 59 57.5	
	138nm,1.1s						
KKN	**Kakani**	**8.41**	**162**	*e*P	**Pn**	**17 57 47.4**	**+1.6**
	26nm,0.5s						
GUN	**Gumba**	**8.47**	**158**	*e*P	**Pn**	**17 57 49.3**	**+2.6**
	83nm,0.6s						
DMN	**Daman**	**8.54**	**163**	*e*P	**Pn**	**17 57 50.2**	**+2.6**
	60nm,0.8s						
PKIN	**Phulchoki**	**8.65**	**161**	*e*P	**Pn**	**17 57 51.1**	**+2.1**
PKI	**Pulchoki**	**8.65**	**161**	*e*P	**Pn**	**17 57 50.5**	**+1.3**
	61nm,0.7s						
CEP	**Cherat**	**8.76**	**260**	P	**Pn**	**17 57 53.3**	**+2.9**
UCH	**Uchtor**	**8.79**	**319**	P	**Pn**	**17 57 52.5**	**+1.4**
	SNR=22						
JIRN	**Jiri**	**8.80**	**157**	*e*P	**Pn**	**17 57 53.7**	**+2.5**
	79nm,0.5s						
KBK	**Karagaybulak**	**8.87**	**322**	P	**Pn**	**17 57 50.8**	**-1.2**
	SNR=16						
WMQ	**Urumqi**	**9.00**	**26**	P	**Pn**	**17 57 56.0**	**+2.4**
WMQ				S	**Sn**	**17 59 31.8**	**-3.3**
WMQ				pmax	pmax		
	comp=Z,38nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.9s						
WMQ				smax	smax		
	comp=N,83nm,1.3s						
WMQ				smax	smax		
	comp=E,96nm,1.7s						
WMQ				LR	LR		
	comp=N,860nm,14.3s						
WMQ				LR	LR		
	comp=E,640nm,13.7s						
WMQ				LR	LR		
	comp=Z,630nm,20.7s						
WMQ	**Urumqi**	**9.00**	**26**	P	**Pn**	**17 57 53.2**	**-0.4**
WMQ	**Urumqi**	**9.00**	**26**		**Pn**	**17 57 53.2**	**-0.4**
AAK	**Ala-Archa**	**9.09**	**321**	Pn	**Pn**	**17 57 55.8**	**+0.9**
	0.7nm,0.3s,baz=137,slow=10,SNR=26						
AAK				Lg	Lg	18 00 22.7	
	0.9nm,0.3s,baz=22,slow=24,SNR=4.1						
AAK				LR	LR	18 01 40.2	
	comp=Z,286nm,18.4s,baz=128,slow=39						
AAK	**Ala-Archa**	**9.09**	**321**	P	**Pn**	**17 57 56.6**	**+1.7**
	SNR=12						
AAK	**Ala-Archa**	**9.09**	**321**	⇓Pn	**Pn**	**17 57 55.7**	**+0.8**
	11nm,0.8s						
AAK				⇑Pg		17 58 26.4	
	26nm,0.8s						

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AAK                              ⇓Lg    Lg     18 00 24.8
      170nm,1.2s
AAK   Ala-Archa          9.09 321ceP    Pn     17 57 56.0 +1.1
AAK                               pmax  pmax
      comp=Z,13nm,1.0s
AAK   Ala-Archa          9.09 321       Pn     17 57 56.0 +1.1
ARSB  Arslanbob          9.11 310  P    Pn     17 57 55.4 +0.2
ARSB  Arslanbob          9.11 310       Pn     17 57 55.4 +0.2
FRU1  Bishkek            9.14 322  P    Pn     17 57 57.0 +1.4
FRU1  Bishkek            9.14 322       Pn     17 57 57.0 +1.4
AML   Almayashu          9.17 316  P    Pn     17 57 57.8 +1.4
      SNR=25
CHMS  Chumysh            9.22 323  P    Pn     17 57 57.6 +1.0
      SNR=11
CHMS  Chumysh            9.22 323 ⇑Pn   Pn     17 57 57.5 +0.9
      comp=Z,8.8nm,0.7s
CHMS                              ⇑Pg          17 58 27.8
      comp=Z,11nm,0.5s
CHMS                              ⇑Lg   Lg     18 00 25.3
      comp=Z,119nm,1.2s
THW   Thamme Wali        9.22 254  P    Pn     17 57 58.3 +1.6
EKS2  Erkin-Say          9.48 319  P    Pn     17 58 01.7 +1.4
      SNR=32
RAMN  Ramite             9.59 156 eP    Pn     17 58 02.9 +0.9
      comp=Z,71nm,0.6s
TAPN  Taplejung          9.64 150 eP    Pn     17 58 03.6 +1.0
ODAN  Odare              9.95 153 eP    Pn     17 58 07.6 +0.7
      comp=Z,171nm,1.1s
BTK   Batken             9.98 298  P    Pn     17 58 06.9 -0.3
BTK   Batken             9.98 298       Pn     17 58 06.9 -0.3
GAR   Garm              10.03 292       Pn     17 58 06.9 -0.9
CHGR  Chuyangaron       10.83 289       Pn     17 58 18.0 -0.8
KBL   Kabul             10.91 267  P    Pn     17 58 20.5 +0.5
KBL   Kabul             10.91 267       Pn     17 58 20.5 +0.5
MK31  Makanchi Array    10.95   0  Pn   Pn     17 58 19.3 -1.1
      comp=Z,26nm,0.8s,baz=180,slow=12,SNR=182
MK31                              ⇑Sn   Sn     18 00 17.8 -5.2
      comp=Z,9.8nm,0.7s,baz=232,slow=23,SNR=4.2
MK31  Makanchi Array    10.95   0  P    Pn     17 58 19.1 -1.2
MK31  Makanchi Array    10.95   0       Pn     17 58 19.1 -1.2
MKAR  Makanchi Array    10.95   0  Pn   Pn     17 58 19.6 -0.8
      comp=Z,2.6nm,0.3s,baz=181,slow=13,SNR=118
MKAR                               Sn   Sn     18 00 18.0 -5.0
      comp=Z,1.0nm,0.3s,baz=189,slow=23,SNR=4.0
MKAR                               Lg   Lg     18 01 34.0
      comp=Z,0.2nm,0.3s,baz=193,slow=25,SNR=2.9
MKAR                               LR   LR     18 03 22.4
      comp=Z,431nm,19.0s,baz=173,slow=42
MKAR  Makanchi Array    10.95   0 iP    Pn     17 58 19.6 -0.8
MKAR                               pmax pmax
      comp=Z,23nm,0.8s
MKAR  Makanchi Array    10.95   0       Pn     17 58 18.9 -1.5
MAKZ  Makanchi          10.97 359 ⇓Pn   Pn     17 58 19.5 -1.1
      comp=Z,59nm,0.8s
MAKZ                              ⇓Sn   Sn     18 00 15.7 -7.6
      comp=Z,30nm,1.2s
MAKZ  Makanchi          10.97 359  P    Pn     17 58 19.5 -1.1
MAKZ                                           18 00 15.7
MAKZ  Makanchi          10.97 359       Pn     17 58 19.8 -0.8
KK31  Karatay Array     11.63 312  Pn   Pn     17 58 28.7 -0.9
      comp=Z,1.6nm,0.6s,baz=129,slow=10,SNR=17
KK31                              ⇑Pg          17 59 15.4
      comp=Z,4.8nm,0.6s,baz=128,slow=16,SNR=5.5
KK31                              ⇓Lg   Lg     18 01 45.2
      comp=Z,41nm,1.1s
KK31  Karatay Array     11.63 312  P    Pn     17 58 28.7 -0.9
KK31  Karatay Array     11.63 312       Pn     17 58 29.3 -0.3
KKAR  Karatay Array     11.63 312  P    Pn     17 58 28.7 -0.9
KKAR  Karatay Array     11.63 312       Pn     17 58 28.7 -0.9
KKAR  Karatay Array     11.63 312       Pn     17 58 29.0 -0.6
CHM   Chimkent          11.78 307  P    Pn     17 58 27.7 -4.0
CHM                                pmax pmax
      comp=Z,11nm,0.5s
CHM                                pmax pmax
      comp=Z,119nm,1.2s
BOK   Bokaro            12.39 164 ex    Pn     17 58 34.7 -5.4
SHL   Shillong          13.14 138  P    Pn     17 58 47.9 -2.6
SHL   Shillong          13.14 138  Pn   Pn     17 58 47.9 -2.6
GTA   Gaotai            14.35  70 eP    P      17 59 14.8 +0.8
GTA                                pP   Pn     17 59 18.7  +12
GTA                                sP          17 59 20.9
KURBB Kurchatov Arra    15.03 351  Pn   Pn     17 59 12.6 -3.4
      comp=Z,0.1nm,0.3s,baz=173,slow=12,SNR=28
KURBB                              Lg   Lg     18 03 46.7
      comp=Z,0.1nm,0.3s,baz=185,slow=31,SNR=4.3
KURK  Kurchatov         15.11 351 ⇑Pn   Pn     17 59 13.3 -3.7
      comp=Z,21nm,1.1s
KURK  Kurchatov         15.11 351ceP    Pn     17 59 13.6 -3.4
KURK                               pmax pmax
      comp=Z,17nm,1.7s
KURK  Kurchatov         15.11 351       Pn     17 59 13.2 -3.7
KURK                               IAmb IAmb   17 59 25.1
      comp=Z,20nm,1.1s
BRDH  Bariadhala        15.43 146  LR   LR     18 05 30.1
      comp=Z,155nm,20.6s,baz=352,slow=38
HRA   Herat             16.46 271  Pn   Pn     17 59 33.7 -1.1
LZH   Lanzhou           17.46  83 eP    Pn     17 59 45.4 -2.0
LZH                                pP   pP     17 59 52.3 -0.5
LZH                                sP   sP     17 59 56.5 +1.8
LZH                                PP   PnPn   17 59 59.4 +1.9
LZH                                sS   S      18 03 12.4 +2.2
LZH                                pmax pmax
      comp=Z,21nm,1.0s
LZH                                pmax pmax
      comp=Z,100nm,4.5s
LZH                                LR   LR
      comp=Z,850nm,13.0s
LZH                                LR   LR
      comp=Z,570nm,13.0s
LZH                                LR   LR
      comp=Z,540nm,12.5s
ZAA0  Zalesovo Array    18.20   5 ⇑P    Pn     17 59 52.8 -3.4
      comp=Z,4.3nm,1.1s
ZAA0  Zalesovo Array    18.20   5  P    Pn     17 59 52.6 -3.6
ZAA0                               IAmb IAmb   18 00 00.7
      comp=Z,26nm,1.0s
ZALV  Zalesovo Beam     18.20   5  P    Pn     17 59 53.2 -3.0
      comp=Z,0.3nm,0.3s,baz=191,slow=12,SNR=19
ZALV                               LR   LR     18 07 45.1
      comp=Z,246nm,18.9s,baz=127,slow=40
ZALV  Zalesovo Beam     18.20   5 iP    Pn     17 59 53.2 -3.0
ZALV                               pmax pmax
      comp=Z,15nm,1.0s
ZALV  Zalesovo Beam     18.20   5  P    Pn     17 59 52.9 -3.3
CD2   Chengdu           18.59  99  P    P      17 59 59.3 -1.7
CD2                                pmax pmax
      comp=Z,20nm,0.5s
CD2                                pmax pmax
      comp=Z,170nm,5.3s
CD2                                LR   LR
      comp=Z,670nm,11.4s
CD2                                LR   LR
      comp=Z,710nm,9.0s
CD2                                LR   LR
      comp=Z,910nm,9.4s
HYB   Hyderabad         18.64 191 iP    Pn     18 00 02.0 +0.2
BVAR  Borovoye Array    19.13 338  P    P      18 00 07.2 +0.6
      comp=Z,1.1nm,0.3s,baz=142,slow=9.6,SNR=42
BVAR                               Lg   Lg     18 05 52.9
      comp=Z,0.1nm,0.3s,baz=136,slow=28,SNR=3.7
BRVK  Borovoye          19.19 338 ⇓P    Pn     18 00 08.6 +0.4
      comp=Z,20nm,0.7s
BRVK  Borovoye          19.19 338ceP    P      18 00 06.5 -0.8
BRVK                               pmax pmax
      comp=Z,25nm,0.8s
BRVK  Borovoye          19.19 338  P    P      18 00 07.2 -0.1
BRVK                               IAmb IAmb   18 00 13.6
      comp=Z,22nm,0.8s
GEYT  Alibeck           19.43 283  P    P      18 00 10.6 +0.5
      comp=Z,0.2nm,0.3s,baz=98,slow=11,SNR=13
GEYT                               LR   LR     18 09 40.5
      comp=Z,211nm,18.4s,baz=60,slow=43
KMI   Kunming           20.57 116  P    Pn     18 00 23.0 -2.1
KMI                                pmax pmax
      comp=Z,10.0nm,1.0s
MOY   Mondy             20.72  34 eP    P      18 00 25.0 +0.8
MOY                                pmax pmax
      comp=Z,56nm,2.1s
ZAK   Zakamensk         21.03  40 eP    P      18 00 27.2 -0.3
ZAK                                pmax pmax
      comp=Z,8.0nm,1.0s
AB31  Akbulak array     21.13 316  P    P      18 00 28.0 -0.5
      comp=Z,0.7nm,0.5s,baz=118,slow=12,SNR=58
ABKAR Akbulak array     21.13 316  P    P      18 00 27.8 -0.6
SONM  Songino Array     21.51  49  P    P      18 00 33.7 +1.0
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      comp=Z,33nm,0.9s,baz=241,slow=10,SNR=69
SONM                               LR   LR     18 09 25.1
      comp=Z,327nm,18.9s,baz=202,slow=38
SONM  Songino Array     21.51  49  P    P      18 00 33.4 +0.7
SONM                               pmax pmax
      comp=Z,30nm,1.0s
SONM  Songino Array     21.51  49  P    P      18 00 33.4 +0.7
XAN   Xi'an             21.90  87  P    P      18 00 46.1 +9.2
XAN                                pP   sP     18 00 52.0 +9.0
ULN   Ulaanbaatar       21.92  49  P    P      18 00 37.8 +0.6
ULN                                pmax pmax
      comp=Z,62nm,1.0s
ULN   Ulaanbaatar       21.92  49  P    P      18 00 37.8 +0.6
TLY   Talaya            21.99  37 iP    P      18 00 39.7 +2.0
TLY                                pmax pmax
      comp=Z,2.0nm,0.8s
TLY   Talaya            21.99  37  P    P      18 00 35.9 -1.8
TLY                                IAmb IAmb   18 00 57.8
      comp=Z,30nm,1.8s
BTO   Baotou            22.27  69 eP    P      18 00 43.2 +2.3
CHTO  Chiang Mai        22.45 135  P    P      18 00 42.6 -0.3
CHTO                               pmax pmax
      comp=Z,8.0nm,1.3s
CHTO  Chiang Mai        22.45 135  P    P      18 00 42.5 -0.3
IRK   Irkutsk           22.64  37 eP    P      18 00 49.0 +4.3
IRK                                pmax pmax
      comp=Z,48nm,2.0s
CM31  Chiang Mai Arr    22.73 135  P    P      18 00 45.6 -0.2
CMAR  Chiang Mai Arr    22.73 135  P    P      18 00 45.6 -0.2
      comp=Z,3.1nm,0.8s,baz=315,slow=10,SNR=31
CMAR  Chiang Mai Arr    22.73 135  P    P      18 00 46.1 +0.3
CMAR  Chiang Mai Arr    22.73 135  P    P      18 00 46.1 +0.3
AKTO  Aktyubinsk        22.80 317  P    P      18 00 47.0 +0.6
      comp=Z,6.9nm,1.0s,baz=106,slow=9.4,SNR=12
AKTO                               LR   LR     18 10 40.8
      comp=Z,335nm,18.4s,baz=125,slow=39
AKTO  Aktyubinsk        22.80 317 ⇑P    P      18 00 46.4  0.0
      comp=Z,11nm,1.1s
HHC   Hu-ho-hao-te      23.45  69 eP    P      18 00 54.6 +1.4
HHC                                pmax pmax
      comp=Z,54nm,0.7s
HHC                                pmax pmax
      comp=Z,210nm,4.0s
WSAR  Wadi Sarin        24.03 245  LR   LR     18 12 02.8
      comp=Z,117nm,20.5s,baz=74,slow=41
PBKT  Sadao Pong        25.40 134  P    P      18 01 10.3 -0.9
SVE   Sverdlovsk        25.57 332 eP    P      18 01 14.7 +2.2
ARU   Arti              26.11 329  P    P      18 01 17.7 +0.2
      comp=Z,0.9nm,0.5s,baz=48,slow=3.4,SNR=6.1
ARU   Arti              26.11 329c iP   P      18 01 19.5 +2.1
ARU                                S    S      18 05 47.3 -1.4
ARU                                pmax pmax
      comp=Z,18nm,2.0s
ARU   Arti              26.11 329  P    P      18 01 17.6 +0.2
ARU                                IAmb IAmb   18 02 10.4
      comp=Z,33nm,1.8s
PALK  Pallekele         28.46 183  LR   LR     18 13 35.1
      comp=Z,123nm,18.3s,baz=21,slow=38
QIZ   Qiongzhong        29.50 117  P    P      18 01 46.5 -1.6
QIZ                                S    S      18 06 40.4 -2.3
QIZ                                LR   LR
      comp=Z,290nm,5.1s
QIZ                                LR   LR
      comp=Z,340nm,9.8s
QIZ                                LR   LR
      comp=Z,180nm,14.5s
NJ2   Nanjing           30.46  86 eP    P      18 01 56.3 -0.2
NJ2                                pmax pmax
      comp=Z,10.0nm,0.7s
KBZ   Khabaz            31.04 297  LR   LR     18 15 37.2
      comp=Z,143nm,19.5s,baz=85,slow=38
NRIK  Noril'sk          33.69   3  LR   LR     18 19 04.7
      comp=Z,72nm,18.8s,baz=172,slow=42
KSRS  Korea Array       36.39  74  LR   LR     18 19 32.1
      comp=Z,117nm,18.6s,baz=290,slow=39
KLR   Kul'dur           38.16  54  P    P      18 03 04.8 +1.8
      comp=Z,2.1nm,0.8s,baz=276,slow=8.9,SNR=6.6
KLR   Kul'dur           38.16  54 iP    P      18 03 07.2 +4.2
KLR                                pmax pmax
      comp=Z,3.0nm,0.9s
BRTR  Keskin Array B    38.27 291  P    P      18 03 04.9 +0.7
      comp=Z,0.9nm,0.8s,baz=64,slow=10,SNR=3.3
BRTR                               LR   LR     18 20 46.8
      comp=Z,44nm,20.1s,baz=68,slow=39
BRTR  Keskin Array B    38.27 291 iP    P      18 03 11.3 +7.1
BRTR                               pmax pmax
      comp=Z,1.0nm,0.8s
YAK   Yakutsk           39.35  33 eP    P      18 03 13.5 +0.8
YAK                                pmax pmax
      comp=Z,4.0nm,0.6s
YAK                                pmax pmax
      comp=N,2.0nm,0.9s
YAK                                pmax pmax
      comp=E,4.0nm,1.0s
AKASG Malin Array Be    40.50 309  P    P      18 03 21.9 -0.6
      comp=E,0.3nm,0.5s,baz=74,slow=8.4,SNR=5.1
AKASG                              LR   LR     18 23 04.7
      comp=E,169nm,19.1s,baz=105,slow=40
AKASG Malin Array Be    40.50 309 iP    P      18 03 25.7 +3.2
AKBB  Malin Array Si    40.50 309  P    P      18 03 23.1 +0.6
AKBB                               pmax pmax
      comp=Z,12nm,1.6s
AKBB  Malin Array Si    40.50 309  P    P      18 03 23.1 +0.6
AKBB                               IAmb IAmb   18 03 40.0
      comp=Z,12nm,1.6s
ISP   Isparta           41.04 289  P    P      18 03 28.0 +0.8
ISP                                pmax pmax
      comp=Z,20nm,0.9s
ISP   Isparta           41.04 289  P    P      18 03 28.0 +0.8
TIXI  Tiksi             43.14  20  P    P      18 03 45.0 +1.2
      comp=Z,0.7nm,0.2s,baz=242,slow=5.8,SNR=5.0
TIXI                               LR   LR     18 23 34.7
      comp=Z,346nm,19.1s,baz=236,slow=39
TIXI  Tiksi             43.14  20ceP    P      18 03 45.3 +1.5
TIXI                               pmax pmax
      comp=Z,10.0nm,2.5s
TIXI  Tiksi             43.14  20  IAmb IAmb   18 03 48.9
      comp=Z,6.7nm,1.5s
FINES FINESS Array B    43.25 324  P    P      18 03 45.1 +0.3
      comp=Z,2.9nm,0.8s,baz=98,slow=7.9,SNR=6.7
FINES                              LR   LR     18 21 30.0
      comp=Z,218nm,19.4s,baz=138,slow=36
FINES FINESS Array B    43.25 324 iP    P      18 03 48.0 +3.2
FINES                              pmax pmax
      comp=Z,3.0nm,0.8s
ARCES ARCESS Array B    45.40 336  P    P      18 04 03.4 +1.4
      comp=Z,3.7nm,0.7s,baz=94,slow=7.7,SNR=6.9
ASAJ  Asahikawa         46.04  60  LR   LR     18 23 31.4
      comp=Z,649nm,20.4s,baz=348,slow=36
VYHS  Vyhne             47.40 306 eP    P      18 04 20.2 +2.2
VYHS  Vyhne             47.40 306 eP    P      18 04 20.2 +2.2
MA2   Magadan           49.21  39  LR   LR     18 26 44.0
      comp=Z,123nm,18.4s,baz=273,slow=38
MA2   Magadan           49.21  39ceP    P      18 04 34.3 +2.6
MA2                                pmax pmax
      comp=Z,8.0nm,1.0s
MA2   Magadan           49.21  39  P    P      18 04 32.8 +1.1
MA2                                IAmb IAmb   18 04 36.1
      comp=Z,7.4nm,1.1s
SEY   Seymchan          49.85  34 iP    P      18 04 39.2 +2.6
BRG   Berggiesshubel    50.13 310 eP    P      18 04 42.5 +3.6
      comp=Z,4.1nm,1.0s
BRG   Berggiesshubel    50.13 310 eP    P      18 04 42.5 +3.6
BRG                                pmax pmax
      comp=Z,4.0nm,1.0s
NB2   NORSAR Subarra    50.40 323  P    P      18 04 42.5 +1.7
      comp=Z,1.6nm,0.6s,baz=86,slow=7.4
NOA   NORSAR Array B    50.40 323  P    P      18 04 41.4 +0.6
      comp=Z,1.9nm,0.7s,baz=86,slow=7.5,SNR=12
GERES GERESS Array B    50.68 307  P    P      18 04 44.5 +1.3
      comp=Z,1.8nm,0.9s,baz=79,slow=6.9,SNR=11
GERES                              LR   LR     18 29 38.2
      comp=Z,188nm,19.6s,baz=86,slow=40
GERES GERESS Array B    50.68 307  P    P      18 04 43.6 +0.4
BILL  Bilibino          55.11  27⇑eP    P      18 05 15.9 +0.4
BILL                               e           18 05 18.6
BILL                                           18 06 18.0
BILL                               pmax pmax
      comp=Z,5.0nm,1.3s
BILL                               MLR  MLR
      comp=Z,124nm,16.0s
BILL  Bilibino          55.11  27  P    P      18 05 13.5 -1.9
BILL                               IAmb IAmb   18 05 20.2
      comp=Z,6.1nm,1.2s
DAG   Danmarks Havn     57.88 345 iP    P      18 05 37.2 +2.1
      comp=Z,3.9nm,1.0s
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DAG   Danmarks Havn     57.88 345 iP    P      18 05 37.2 +2.1
DAG                                pmax pmax
      comp=Z,4.0nm,1.0s
SUMG  Summit            64.49 343 iP    P      18 06 26.0 +5.6
SUMG  Summit            64.49 343  P    P      18 06 21.5 +1.1
SUMG                               pmax pmax
      comp=Z,8.0nm,1.1s
SUMG  Summit            64.49 343  P    P      18 06 21.5 +1.1
TOLK  Toolik Lake Re    69.00  18  P    P      18 06 48.5 -0.3
BMAR  Burnt Mountain    71.15  17  P    P      18 07 01.5 -0.5
ILAR  Eielson Array     72.61  20  P    P      18 07 10.2 -0.6
      comp=Z,1.0nm,1.0s,baz=303,slow=6.0,SNR=6.0
INK   Inuvik            72.78  13  P    P      18 07 13.0 +1.3
      comp=Z,1.1nm,0.8s,baz=333,slow=7.1,SNR=4.6
INK   Inuvik            72.78  13  P    P      18 07 13.0 +1.3
INK   Inuvik            72.78  13  IAmb IAmb   18 08 27.2
      comp=Z,16nm,1.9s
WRA   Warramunga Arr    74.19 130  P    P      18 07 19.5 -1.2
      comp=Z,5.5nm,0.9s,baz=326,slow=5.7,SNR=14
WRAB  Tennant Creek     74.19 130  P    P      18 07 18.1 -2.6
WRAB                               pmax pmax
      comp=Z,11nm,1.2s
WRAB  Tennant Creek     74.19 130  P    P      18 07 18.1 -2.6
WRAB                               IAmb IAmb   18 07 21.4
      comp=Z,11nm,1.1s
TORD  Torodi Ar. Bea    74.86 275  P    P      18 07 25.8 +1.0
      comp=Z,0.8nm,0.6s,baz=34,slow=5.6,SNR=4.5
AS31  Alice Springs     76.71 132  P    P      18 07 34.4 -0.7
ASAR  Alice Springs     76.71 132  P    P      18 07 34.8 -0.3
      comp=Z,2.9nm,0.7s,baz=316,slow=5.6,SNR=48
ASAR  Alice Springs     76.71 132  P    P      18 07 34.3 -0.8
YKA   Yellowknife Ar    81.08   8  P    P      18 07 57.4 -1.1
      comp=Z,1.4nm,0.7s,baz=340,slow=4.9,SNR=16
YKA                                LR   LR     18 47 02.9
      comp=Z,89nm,19.4s,baz=0.0,slow=38
BOSA  Boshof            83.61 228  P    P      18 08 10.9 -1.4
      comp=Z,2.2nm,0.7s,baz=9.6,slow=2.0,SNR=4.6
SCHQ  Schefferville     85.88 343  LR   LR     18 51 59.8
      comp=Z,36nm,18.3s,baz=344,slow=39
ULM   Lac du Bonnet     94.28 359  LR   LR     18 54 56.9
      comp=Z,107nm,19.3s,baz=334,slow=38
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IDC ***12*** *18:09:31.9±0.8, 43.°76N×105.°46W, h0km, mb4.0/8, mb1 3.9/15, mb1mx3.7/62, mbtmp3.8/15, ML3.5/7, MS2.5/1, Ms1 2.5/1, ms1mx2.3/45, Error ellipse: s-maj=19.5km s-min=7.1km az=149.0*

NEIC ***12*** *18:09:32.7±1.0, 43.°74N±0.°05×105.°28W±0.°06, h0km±1km, ML3.5/58, Error ellipse: s-maj=9.1km s-min=6.5km az=147.0*

ISC 12 18:09:32.1±0.6**, 43.°75N**±0.°06×**105.°24W**±0.°07**, h0km, n102, σ0.ˢ81**/102**, mb3.9**/8**, Wyoming**

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Code  Station Name         Δ°  AZ°   Phase ID         Time      Res
                                   Op   ISC        h  m  s     ISC
RSSD  Black Hills        0.94  66       Pb     18 09 51.7 +0.2
K22A  Casper             1.44 221       Pn     18 09 57.6 -2.1
K22A                               IAML        18 10 19.8
      comp=E,760nm,0.9s
K22A                               IAML        18 10 23.4
      comp=N,882nm,0.3s
RWWY  Rawlins            2.52 216       Pn     18 10 14.5  0.0
RWWY                               IAML        18 10 50.3
      comp=N,372nm,0.7s
N23A  Red Feather La     2.90 191       Pn     18 10 20.3 +0.6
N23A                               IAML        18 11 04.0
      comp=N,139nm,0.4s
N23A                               IAML        18 11 09.2
      comp=E,167nm,0.7s
LAO   LASA Array         3.02 347       Pn     18 10 21.6 +0.3
RLMT  Red Lodge          3.20 297       Pn     18 10 24.0 +0.2
RLMT                               IAML        18 11 14.0
      comp=E,105nm,0.6s
RLMT                               IAML        18 11 17.7
      comp=E,93nm,0.5s
PD31  Pinedale Array     3.30 254       Pn     18 10 25.2 -0.1
PDAR  Pinedale Array     3.30 254  Pn   Pn     18 10 25.1 -0.1
      comp=E,6.1nm,0.3s,baz=72,slow=16,SNR=68
PDAR                               Lg   Lg     18 11 10.4
      comp=E,20nm,0.3s,baz=73,slow=31,SNR=15
PDAR                               LR   LR     18 12 00.4
      comp=E,76nm,18.1s,baz=90,slow=47
BW06  Boulder Array      3.31 254       Pn     18 10 25.1 -0.1
BW06                               IAML        18 11 12.8
      comp=N,107nm,0.6s
YNE   Yellowstone No     3.65 292       Pn     18 10 29.9 -0.1
YMP   Mirror Lake Pl     3.67 287       Pn     18 10 30.7 +0.4
OGNE  Ogallala           3.67 139       Pn     18 10 31.2 +1.0
GCMT  Greycliff          3.76 304       Pn     18 10 32.2 +0.8
LKWY  Lake               3.80 284       Pn     18 10 33.5 +1.4
LKWY                               IAML        18 10 59.6
      comp=N,89nm,1.0s
H17A  Grant Village      3.90 281       Pn     18 10 35.0 +1.5
H17A                               IAML        18 11 37.9
      comp=E,50nm,0.5s
H17A                               IAML        18 11 39.3
      comp=N,52nm,1.4s
ISCO  Idaho Springs      3.96 184       Pn     18 10 34.8 +0.5
FLWY  Flagg Ranch        3.96 277       Pn     18 10 34.8 +0.5
FLWY                               IAML        18 11 47.4
      comp=N,58nm,1.1s
SNOW  Snow King Moun     4.02 268       Pn     18 10 35.6 +0.5
SNOW                               IAML        18 11 49.0
      comp=N,70nm,1.3s
SNOW                               IAML        18 11 50.2
      comp=N,90nm,1.3s
YNR   Norris Junctio     4.03 286       Pn     18 10 35.5 +0.3
YPP   Pitchstone Pla     4.05 279       Pn     18 10 36.1 +0.6
REDW  Red Top Meadow     4.10 267       Pn     18 10 36.5 +0.3
REDW                               IAML        18 11 50.8
      comp=N,92nm,0.8s
REDW                               IAML        18 11 51.9
      comp=N,93nm,0.8s
YHH   Holmes Hill        4.16 286       Pn     18 10 36.8 -0.4
FXWY  Fox Creek          4.20 271       Pn     18 10 38.2 +0.6
YMR   Madison River      4.22 285       Pn     18 10 37.5 -0.4
O20A  White River Ci     4.25 213       Pn     18 10 38.6 +0.4
O20A                               IAML        18 11 54.1
      comp=N,67nm,1.0s
O20A                               IAML        18 12 02.9
      comp=E,72nm,1.5s
YHB   Horse Butte        4.40 285       Pn     18 10 40.2  0.0
YHL   Hebgen Lake        4.41 287       Pn     18 10 40.2 -0.3
RDMU  Red Mountain       4.52 227       Pn     18 10 43.3 +1.3
QLMT  Earthquake Lak     4.58 286       Pn     18 10 42.3 -0.4
DGMT  Dagmar             4.78   8       Pn     18 10 46.4 +1.1
Q24A  Divide             4.78 179  Pn   Pn     18 10 46.0 +0.4
KSCO  Kaye Shedlock’     5.12 157  Pn   Pn     18 10 49.6 -0.5
HWUT  Hardware Ranch     5.13 248       Pn     18 10 50.0 -0.4
HWUT                               IAML        18 12 10.4
      comp=E,36nm,1.1s
HWUT                               IAML        18 12 21.8
      comp=E,40nm,1.2s
TCUT  Toone Canyon       5.27 242       Pn     18 10 52.0 -0.2
EGMT  Eagleton           5.31 325       Pn     18 10 53.0 +0.3
LRM   Limekiln Ridge     5.54 294       Pn     18 10 54.1 -1.8
MCMT  McKenzie Canyo     5.57 284       Pn     18 10 55.0 -1.4
MDND  Maddock            5.69  42       Pn     18 10 57.6 -0.2
CTU   Camp Tracy         5.72 240       Pn     18 10 57.0 -1.3
BGNE  Belgrade           5.73 112       Pn     18 10 58.0 -0.4
PV22  Blue Mesa, Par     5.86 208  Pn   Pn     18 11 00.7 +0.4
SPUT  South Promonto     5.86 248       Pn     18 11 01.1 +0.8
PV07  Paradox Valley     5.90 207  Pn   Pn     18 11 01.6 +0.8
PV15  Paradox Valley     5.93 206  Pn   Pn     18 11 01.2 -0.1
P17A  Butcher Ranch,     5.94 226       Pn     18 11 01.7 +0.3
SDCO  Great Sand Dun     6.00 182       Pn     18 11 03.1 +0.8
PV23  Carpenter Ridg     6.01 210  Pn   Pn     18 11 03.5 +1.1
PV09  Paradox Valley     6.01 211  Pn   Pn     18 11 03.0 +0.5
PV04  Paradox Valley     6.02 209  Pn   Pn     18 11 03.2 +0.6
MPU   Maple Canyon       6.06 234       Pn     18 11 02.5 -0.5
PV12  Saucer Basin,      6.06 208  Pn   Pn     18 11 03.8 +0.7
PV14  Lion Creek, Pa     6.08 209  Pn   Pn     18 11 03.8 +0.3
PV10  Paradox Valley     6.09 209  Pn   Pn     18 11 05.0 +1.5
PV20  West Nyswonger     6.09 209  Pn   Pn     18 11 03.9 +0.3
PV11  David Mesa, Pa     6.10 208  Pn   Pn     18 11 03.9 +0.2
PV16  Nyswonger Mesa     6.10 208  Pn   Pn     18 11 03.9 +0.2
SRU   San Rafael Swe     6.10 222       Pn     18 11 03.5 -0.1
S22A  4UR Ranch, Cre     6.12 192       Pn     18 11 04.0 +0.1
PV19  Morning Glory      6.12 209  Pn   Pn     18 11 04.0  0.0
PV03  Paradox Valley     6.13 208  Pn   Pn     18 11 04.5 +0.5
PV02  Paradox Valley     6.13 207  Pn   Pn     18 11 05.1 +0.9
PV17  East Wray Mesa     6.14 209  Pn   Pn     18 11 04.5 +0.3
PV18  Skein Mesa, Pa     6.16 208  Pn   Pn     18 11 04.7 +0.3
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PV13	Radium Mtn., P	6.21	207	Pn	Pn	18 11 05.4	+0.3
ECSD	EROS Data Cent	6.25	87		Pn	18 11 06.3	+0.8
TMUT	Trail Mountain	6.31	227		Pn	18 11 06.8	+0.1
NLU	North Lily Min	6.36	236	Pn	Pn	18 11 07.8	+0.6
PV05	Paradox Valley	6.37	209	Pn	Pn	18 11 06.7	-0.8
BGU	Big Grassy Mou	6.42	247	Pn	Pn	18 11 08.0	0.0
Q16A	Castle Valley	6.57	225		Pn	18 11 10.5	+0.3
T25A	Trinidad	6.63	174		Pn	18 11 11.6	+0.6
DUG	Dugway, Tooele	6.67	240		Pn	18 11 11.6	+0.2
MSO	Missoula	6.87	300	Pn	Pn	18 11 15.0	+0.9
MVCO	Mesa Verde	6.99	202		Pn	18 11 17.8	+2.0
MSU	Marysvale	7.40	227		Pn	18 11 21.9	+0.4
JTMT	Jette	7.48	305		Pn	18 11 22.7	+0.2
MFID	Camas Ranch	7.70	271		Pn	18 11 25.7	+0.2
MTPU	Mount Pierson	7.75	225		Pn	18 11 26.4	-0.1
AGMN	Agassiz Nation	7.95	52		Pn	18 11 29.1	+0.3
ELK	Elko	8.00	251	Pn	Pn	18 11 29.7	0.0
	comp=E,0.2nm,0.3s,baz=76,slow=9.8,SNR=6.5						
ELK				Lg	Lg	18 13 38.3	
	comp=E,0.5nm,0.3s,baz=6.4,slow=8.2,SNR=3.1						
WALA	Waterton Lakes	8.01	315	Pn	Pn	18 11 29.1	-0.7
PSUT	Pine Spring	8.33	234		Pn	18 11 34.6	+0.4
CCUT	Cedar City	8.74	228		Pn	18 11 39.6	-0.3
F10A	Beach Ranch, E	8.80	289	Pn	Pn	18 11 41.0	+0.3
ULM	Lac du Bonnet	9.12	41	Pn	Pn	18 11 44.2	-0.6
	comp=E,2.4nm,0.3s,baz=221,slow=12,SNR=19						
ULM				Lg	Lg	18 14 23.5	
	comp=E,0.5nm,0.3s,baz=130,slow=22,SNR=3.6						
ULM	Lac du Bonnet	9.12	41		Pn	18 11 44.5	-0.4
WUAZ	Wupatki	9.48	212		Pn	18 11 49.8	-0.2
FFC	Flin Flon	11.19	10		Pn	18 12 12.7	-0.5
NVAR	Mina Array Bea	11.20	246	Pn	Pn	18 12 13.1	-0.4
	comp=E,0.2nm,0.3s,baz=54,slow=13,SNR=4.4						
CCM	Cathedral Cave	12.01	113		Pn	18 12 23.2	-1.2
YBH	Yreka Blue Hor	13.00	267	Pn	Pn	18 12 41.2	+3.1
	comp=E,0.2nm,0.3s,baz=63,slow=2.3,SNR=3.3						
HBAR	Harrisburg	13.88	121		Pn	18 12 49.9	-0.1
TXAR	Lajitas Array	14.44	174	Pn	Pn	18 13 00.5	+2.8
	comp=E,0.1nm,0.3s,baz=358,slow=15,SNR=2.2						
YKA	Yellowknife Ar	19.56	347	P	P	18 14 01.8	+0.7
	comp=E,0.1nm,0.3s,baz=165,slow=12,SNR=5.5						
SCHQ	Schefferville	27.05	52	P	P	18 15 16.4	+0.5
	comp=E,1.6nm,0.6s,baz=238,slow=16,SNR=3.0						
SEY	Seymchan	57.20	328	P	P	18 19 21.0	+0.5
	comp=E,0.4nm,0.6s,baz=75,slow=20,SNR=4.7						
TIXI	Tiksi	58.74	343	P	P	18 19 30.4	-0.7
	comp=E,0.4nm,0.4s,baz=30,slow=2.9,SNR=3.4						
ARCES	ARCESS Array B	61.40	18	P	P	18 19 48.7	-0.7
	comp=E,4.1nm,0.9s,baz=327,slow=6.4,SNR=11						
FINES	FINESS Array B	68.01	23	P	P	18 20 32.3	-0.3
	comp=E,1.9nm,0.9s,baz=338,slow=4.5,SNR=3.4						
AKASG	Malin Array Be	77.94	28	P	P	18 21 30.3	-1.3
	comp=E,0.5nm,0.5s,baz=324,slow=5.5,SNR=3.0						
ZALV	Zalesovo Beam	82.30	354	P	P	18 21 54.6	-0.5
	comp=E,1.4nm,0.6s,baz=353,slow=6.6,SNR=5.5						
SONM	Songino Array	84.64	339	P	P	18 22 08.1	+0.6
	comp=E,0.4nm,0.6s,baz=19,slow=4.9,SNR=4.7						

IDC 12 18:10:36.4±51.0**, 16°.16S×175°.83W, h0^{km}, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.7**/51**, mbtmp4.1**/3**, Error ellipse: s-maj=965.8km s-min=180.2km az=78.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.63	240	P	P	18 18 26.5	-0.1
	1.7nm,0.9s,baz=72,slow=6.4,SNR=3.5						
WRA	Warramunga Arr	47.40	258	P	P	18 19 12.3	-0.6
	0.8nm,0.7s,baz=92,slow=8.3,SNR=3.3						
ASAR	Alice Springs	47.65	253	P	P	18 19 15.1	+0.2
	5.1nm,0.5s,baz=89,slow=8.2,SNR=66						

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*IDC **12** 18:12:30.2±1.2, 1°.85N×126°.53E, h0^{km}, mb3.8/6, mb1 3.9/7, mb1mx3.6/58, mbtmp3.8/7, ML3.4/1, MS3.1/2, Ms1 3.2/2, ms1mx2.6/38, Error ellipse: s-maj=74.7km s-min=16.8km az=68.0*

*DJA **12** 18:12:36.0±0.5, 2°N±5°×12°7E±°, h10^{km}, M4.2/6, mB4.5/1, mb4.4/1, MLv4.1/6, Mw(mB)3.7/1*

*NEIC **12** 18:12:37.6±0.9, 1°.8N±0°.1×126°.73E±0°.08, h63^{km}±13^{km}, mb4.1/8, Error ellipse: s-maj=16.9km s-min=11.4km az=198.0*

ISC 12 18:12:36.3±0.8**, 1°.89N**±0°.08×**126°.70E**±0°.08**, h47^{km}, n27, σ1^{s}11**/27**, mb4.0**/9**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.30	149	P	Pn	18 12 58.5	+0.5
TNTI	Ternate	1.30	149		Pn	18 12 58.6	+0.5
TNTI				Sn	Sn	18 13 15.1	+0.8
KMSI	Cibinong	3.02	244	P	Pn	18 13 21.4	-0.2
SANI	Sanana	3.98	190	S	Sn	18 14 19.8	-0.5
LUWI	Luwuk	4.89	233	P	Pn	18 13 47.9	+0.5
LUWI	Luwuk	4.89	233		Pn	18 13 48.3	+1.0
MRSI	Marisa	4.96	254	P	Pn	18 13 49.4	+1.1
APSI	Ampana	5.77	241	P	Pn	18 13 59.0	-0.4
FITZ	Fitzroy Crossi	19.89	183	P	P	18 17 03.8	-0.2
	0.1nm,0.3s,baz=4.0,slow=11,SNR=3.3						
FITZ	Fitzroy Crossi	19.89	183	P	P	18 17 03.5	-0.5
FITZ				IAmb	IAmb	18 17 41.8	
	comp=Z,18nm,1.8s						
WB0	Warramunga Arr	22.81	161	P	P	18 17 33.9	-1.5
WB0				IAmb	IAmb	18 17 37.1	
	comp=Z,5.7nm,0.8s						
WRAB	Tennant Creek	22.95	161	P	P	18 17 33.1	-3.8
WRAB				IAmb	IAmb	18 17 37.5	
	comp=Z,27nm,1.9s						
WRA	Warramunga Arr	22.96	161	P	P	18 17 35.4	-1.5
	comp=Z,4.4nm,0.7s,baz=337,slow=11,SNR=35						
WR0	Warramunga Arr	23.04	161	P	P	18 17 35.8	-1.9
AS31	Alice Springs	26.35	165	P	P	18 18 08.5	+0.3
ASAR	Alice Springs	26.36	165	P	P	18 18 08.7	+0.4
	comp=Z,0.9nm,0.5s,baz=346,slow=12,SNR=20						
ASAR	Alice Springs	26.36	165	P	P	18 18 07.5	-0.7
JCJ	Chichijima	29.13	29	LR	LR	18 30 17.1	
	comp=Z,46nm,19.8s,baz=138,slow=36						
CMAR	Chiang Mai Arr	31.80	303	P	P	18 18 56.0	-0.7
	comp=Z,0.3nm,0.6s,baz=121,slow=7.2,SNR=4.6						
CMAR				LR	LR	18 33 04.9	
	comp=Z,29nm,18.6s,baz=225,slow=39						
SONM	Songino Array	49.02	342	P	P	18 21 19.2	+0.5
	comp=Z,0.3nm,0.4s,baz=144,slow=8.9,SNR=4.1						
MK31	Makanchi Array	59.04	326	P	P	18 22 30.8	-0.8
MK31				IAmb	IAmb	18 22 33.5	
	comp=Z,1.3nm,1.0s						
MKAR	Makanchi Array	59.04	326	P	P	18 22 31.9	+0.2
	comp=Z,1.0nm,0.4s,baz=120,slow=7.7,SNR=42						
MKAR	Makanchi Array	59.04	326	P	P	18 22 31.5	-0.1
KDJ	Kajisay	59.70	319	P	P	18 22 36.9	+0.4
KURBB	Kurchatov Arra	63.26	328	P	P	18 22 59.6	-0.5
	comp=Z,0.8nm,0.4s,baz=132,slow=6.9,SNR=12						
KURK	Kurchatov	63.27	328	P	P	18 23 00.3	+0.2
ABKAR	Akbulak array	73.55	321	P	P	18 24 04.4	0.0

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*IDC **12** 18:15:08.0±0.5, 49°.31S×69°.57E, h0^{km}, mb4.6/18, mb1 4.6/19, mb1mx4.4/47, mbtmp4.6/19, ML4.6/1, MS3.9/8, Ms1 3.9/8, ms1mx3.6/22, Error ellipse: s-maj=17.6km s-min=15.2km az=164.0*

*NEIC **12** 18:15:11.4±1.6, 49°.3S±0°.1×69°.55E±0°.07, h20^{km}±2^{km}, mb4.9/23, Error ellipse: s-maj=16.3km s-min=6.2km az=183.0*

ISC 12 18:15:09.7±0.3**, 49°.27S**±0°.08×**69°.52E**±0°.07**, h10^{km}, n87, σ1^{s}44**/84**, mb4.8**/28**, MS4.0**/9**, 2D, Kerguelen Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAF	Port-aux-Franc	0.46	101		Pg	18 15 18.6	-0.1
I23FR	KERGUELEN INFR	0.48	100	Pg	Pn	18 15 22.6	0.0
	baz=276,slow=45,SNR=1.4						
MAW	Mawson	18.70	188	P	Pn	18 19 28.6	+0.4
	1.9nm,0.3s,baz=5.6,slow=15,SNR=15						
MAW				S	Sn	18 22 40.9	-16
	3.8nm,0.3s,baz=280,slow=20,SNR=12						
MAW				LR	LR	18 25 07.0	
	comp=Z,470nm,21.9s,baz=53,slow=32						
MAW	Mawson	18.70	188	P	P	18 19 27.7	-0.1
SYO	Syowa Base	24.58	206⇓	eP	P	18 20 28.4	-1.0
SYO	Syowa Base	24.58	206⇓	epP	pP	18 20 34.0	+1.5
H01W2	Cape Leeuwin H	35.55	83	T	T	18 59 07.7	
	baz=232,slow=75,SNR=40						
H01W3	Cape Leeuwin H	35.56	83	T	T	18 59 08.5	
	baz=232,slow=75,SNR=36						
H01W1	Cape Leeuwin H	35.56	83	T	T	18 59 08.9	
	baz=232,slow=75,SNR=36						
BOSA	Boshof	39.43	285	P	P	18 22 39.7	-0.3
	2.6nm,0.8s,baz=152,slow=18,SNR=3.6						
BOSA	Boshof	39.43	285	IAmb	IAmb	18 23 15.6	
	comp=Z,56nm,1.9s						
QSPA	South Pole Qui	40.91	180	P	P	18 22 51.0	-0.8
	comp=Z,8.8nm,1.1s,baz=123,slow=0.3,SNR=22						
QSPA	South Pole Qui	40.91	180	P	P	18 22 51.8	0.0
VNDA	Vanda	42.97	161	LR	LR	18 40 46.8	
	comp=Z,313nm,18.5s,baz=258,slow=36						
MATP	Matopo	43.48	297	P	P	18 23 14.4	+1.2
	comp=Z,1.9nm,0.7s,baz=190,slow=3.9,SNR=3.7						
FORT	Forrest	47.23	90	P	P	18 23 43.3	+0.5
PSA00	Pilbara Seismi	48.28	74	P	P	18 23 50.9	-0.1
PSA00				IAmb	IAmb	18 23 51.1	
	comp=Z,6.5nm,0.8s						
LEM	Lembang	53.05	50	P	P	18 24 28.1	+0.9
	comp=Z,17nm,1.0s,baz=0.0,slow=20,SNR=3.4						
FITZ	Fitzroy Crossi	54.50	76	P	P	18 24 37.8	+0.1
	comp=Z,3.0nm,0.7s,baz=222,slow=7.9,SNR=11						
FITZ	Fitzroy Crossi	54.50	76	IAmb	IAmb	18 26 11.2	
	comp=Z,26nm,1.8s						
STKA	Stephens Creek	55.34	100	P	P	18 24 43.5	-0.1
	comp=Z,8.5nm,0.8s,baz=237,slow=5.0,SNR=17						
STKA				LR	LR	18 43 08.0	
	comp=Z,88nm,20.3s,baz=288,slow=30						
STKA	Stephens Creek	55.34	100	P	P	18 24 43.7	0.0
ASAR	Alice Springs	55.85	87	P	P	18 24 46.9	-0.6
	comp=Z,7.2nm,1.0s,baz=217,slow=6.8,SNR=36						
AS31	Alice Springs	55.86	87	P	P	18 24 47.0	-0.5
RPSI	Rantau Prapat	57.67	35	P	P	18 25 01.5	+1.3
PSI	Prapat	57.77	35	P	P	18 25 01.5	+0.4
	comp=Z,3.4nm,0.3s,baz=251,slow=3.5,SNR=3.3						
KNRA	Kununurra	58.29	77	P	P	18 25 04.4	-0.3
KNRA				IAmb	IAmb	18 26 41.7	
	comp=Z,22nm,1.4s						
MBAR	Mbarara	58.77	313	P	P	18 25 08.8	+0.6
WRA	Warramunga Arr	58.77	85	P	P	18 25 07.5	-0.6
	comp=Z,1.9nm,0.7s,baz=221,slow=6.2,SNR=11						
WRAB	Tennant Creek	58.79	85	P	P	18 25 07.2	-0.9
WRAB				IAmb	IAmb	18 25 08.2	
	comp=Z,7.2nm,0.9s						
SBUM	Sibu	63.33	49	P	P	18 25 39.0	+0.1
SIJI	Sorong	71.25	68	P	P	18 26 28.4	-0.9
	comp=Z,10nm,0.8s,baz=198,slow=20,SNR=3.1						
URZ	Urewera	71.94	128	P	P	18 26 31.6	-1.5
	comp=Z,8.9nm,0.8s,baz=8.6,slow=2.7,SNR=3.7						
CMAR	Chiang Mai Arr	72.31	29	P	P	18 26 35.6	+0.3
	comp=Z,2.7nm,0.8s,baz=213,slow=5.9,SNR=22						
CMAR				LR	LR	18 53 45.8	
	comp=Z,92nm,19.8s,baz=200,slow=32						
CMAR	Chiang Mai Arr	72.31	29	P	P	18 26 35.2	-0.2
KBL	Kabul	83.44	360	P	P	18 27 38.2	+1.0
HRA	Herat	83.53	354	P	P	18 27 37.0	-0.7
PLCA	Paso Flores	83.72	209	P	P	18 27 38.6	-0.2
	comp=Z,1.4nm,0.8s,baz=192,slow=3.3,SNR=3.1						
PLCA				LR	LR	19 02 23.6	
	comp=Z,48nm,18.6s,baz=197,slow=34						
PLCA	Paso Flores	83.72	209	IAmb	IAmb	18 28 59.1	
	comp=Z,21nm,1.8s						
CD2	Chengdu	85.45	29	P	P	18 27 49.0	+1.7
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
TOA0	Torodi Ar. Sit	85.98	295	P	P	18 27 50.9	+0.6
TOA0				IAmb	IAmb	18 27 51.7	
	comp=Z,5.8nm,1.1s						
TORD	Torodi Ar. Bea	85.98	295	P	P	18 27 50.6	+0.3
	comp=Z,3.7nm,1.0s,baz=127,slow=5.3,SNR=13						
TORD	Torodi Ar. Bea	85.98	295	P	P	18 27 50.1	-0.2
NACB	Ninganchiao	86.56	46	P	P	18 27 52.6	-0.2
GEYT	Alibeck	87.41	351	LR	LR	19 02 06.9	
	comp=Z,41nm,19.4s,baz=5.0,slow=32						
KSH	Kashi	88.59	5	P	P	18 28 02.1	-0.3
KSH				pP	sP	18 28 07.0	+0.1
KSH				PP	PP	18 31 32.2	+0.8
KSH				S	S	18 38 43.2	-5.2
KSH				SS	SS	18 44 35.4	-5.0
KSH				pmax	pmax		
	comp=Z,12nm,0.8s						
KSH				pmax	pmax		
	comp=Z,290nm,5.4s						
KSH				LR	LR		
	comp=Z,240nm,10.0s						
KSH				LR	LR		
	comp=Z,350nm,13.0s						
KSH				LR	LR		
	comp=Z,280nm,13.2s						
CPUP	Villa Florida	91.10	226	P	P	18 28 15.1	+0.5
	comp=Z,5.6nm,1.0s,baz=123,slow=5.5,SNR=7.4						
CPUP	Villa Florida	91.10	226	P	P	18 28 14.1	-0.5
CPUP				IAmb	IAmb	18 28 15.6	
	comp=Z,10nm,1.2s						
KK31	Karatay Array	91.99	1	P	P	18 28 18.4	+0.3
KK31				IAmb	IAmb	18 29 29.4	
	comp=Z,8.2nm,1.2s						
KKAR	Karatay Array	91.99	1	P	P	18 28 18.4	+0.3
KKAR	Karatay Array	91.99	1	P	P	18 28 18.4	+0.3
KKAR				IAmb	IAmb	18 29 29.4	
	comp=Z,8.2nm,1.2s						
NJ2	Nanjing	92.09	40	eP	P	18 28 21.3	+2.5
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GTA	Gaotai	92.27	23	eP	P	18 28 21.4	+1.8
GTA				pP	sP	18 28 25.5	+1.4
GTA				sP	pP	18 28 28.3	+5.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,140nm,4.9s						
GTA				LR	LR		
	comp=Z,97nm,17.8s						
GTA				LR	LR		
	comp=Z,140nm,17.8s						
WMQ	Urumqi	94.06	13	eP	P	18 28 30.3	+2.6
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,140nm,7.7s						
BRTR	Keskin Array B	94.11	333	P	P	18 28 27.6	-0.5
	comp=Z,0.4nm,0.7s,baz=166,slow=9.6,SNR=2.7						
BRTR				LR	LR	19 07 04.4	
	comp=Z,19nm,18.8s,baz=136,slow=33						
KBZ	Khabaz	95.50	341	LR	LR	19 08 08.6	
	comp=Z,88nm,18.4s,baz=160,slow=33						
MKAR	Makanchi Array	96.32	9	P	P	18 28 38.1	+0.2
	comp=Z,3.3nm,1.0s,baz=186,slow=6.0,SNR=5.4						
HHC	Hu-ho-hao-te	97.08	31	eP	Pdif	18 28 44.1	+2.4
KURBB	Kurchatov Arra	99.81	6	P	Pdif	18 28 52.4	-0.9
	comp=Z,2.9nm,0.9s,baz=193,slow=4.4,SNR=5.5						
KURK	Kurchatov	99.91	6		Pdif	18 28 52.4	-1.4
FINES	FINESS Array B	115.73	338	PKP	PKPdf	18 33 49.6	-1.3
	comp=Z,1.3nm,0.7s,baz=186,slow=3.8,SNR=3.5						
NB2	NORSAR Subarra	119.51	332	PKPdf	PKiKP	18 33 58.7	+0.3
	comp=Z,1.6nm,0.8s,baz=68,slow=1.9						
NOA	NORSAR Array B	119.51	332	PKP	PKPdf	18 33 57.2	-1.1
	comp=Z,0.9nm,0.7s,baz=116,slow=3.4,SNR=4.9						
MA2	Magadan	126.84	39	PKP	PKPdf	18 34 11.2	-1.2
	comp=Z,1.3nm,0.4s,baz=119,slow=9.3,SNR=3.5						
SEY	Seymchan	129.39	36	PKP	PKPdf	18 34 17.1	-0.1
	comp=Z,0.8nm,0.7s,baz=100,slow=6.1,SNR=5.4						
SFJD	Kangerlussuaq	145.49	323		PKPbc	18 34 46.7	0.0
GBN	Guysborough	147.06	282		PKPbc	18 34 52.8	+0.8
ANM	Nome	147.58	41		PKiKP	18 34 54.0	-1.0
TULEG	Thule	148.13	343		PKPbc	18 34 54.1	+0.1
LMN	Caledonia Moun	149.35	281		PKPbc	18 34 58.3	+0.2
BATG	Bathurst New B	150.69	283		PKiKP	18 35 01.6	-0.3
G65A	Princeton	150.87	279		PKPbc	18 35 01.7	0.0
PQI	Presque Isle	151.72	281		PKPbc	18 35 03.8	+0.1
F63A	Nahmakanta, Br	152.07	279		PKPbc	18 35 04.5	0.0
IMAR	Indian Mountai	152.20	37		PKPdf	18 34 57.6	+0.1
IMAR					PKiKP	18 35 04.8	+0.3
TOLK	Toolik Lake Re	152.78	30		PKiKP	18 35 06.4	+0.7
SCHQ	Schefferville	152.94	299	PKPbc	PKPbc	18 35 05.5	-0.7
	comp=Z,2.9nm,0.9s,baz=0.0,slow=3.0,SNR=3.3						
SCHQ				PKPab	PKPab	18 35 17.5	0.0
	comp=Z,3.3nm,0.7s,baz=53,slow=6.3,SNR=5.7						
RES	Resolute Bay	153.65	351	PKPbc	PKPbc	18 35 06.9	-0.2
	comp=Z,4.1nm,0.9s,baz=63,slow=1.8,SNR=5.1						
RES	Resolute Bay	153.65	351		PKiKP	18 35 07.8	+0.6
MLY	Manley	153.68	38		PKiKP	18 35 07.8	+0.2
BPAW	Bear Paw Mtn.	153.84	40	PKPbc	PKiKP	18 35 08.6	+0.7
ILAR	Eielson Array	155.31	38	PKPbc	PKPdf	18 35 09.6	+7.7
	comp=Z,0.5nm,0.8s,baz=294,slow=3.1,SNR=3.7						
ILAR				PKPab	PKPab	18 35 26.1	-1.2
	comp=Z,0.6nm,0.8s,baz=290,slow=3.8,SNR=4.6						
TX31	Lajitas Ar. Si	159.43	197	PKPdf	PKPdf	18 35 07.3	-1.0
TXAR	Lajitas Array	159.43	197	PKPab	PKPab	18 35 44.9	-1.2
	comp=Z,0.7nm,0.7s,baz=183,slow=7.5,SNR=4.1						
YKA	Yellowknife Ar	166.54	8	PKP	PKPdf	18 35 12.2	-1.8
	comp=Z,1.0nm,1.0s,baz=357,slow=0.8,SNR=5.3						
YKA				PKPab	PKPab	18 36 15.8	-0.4
	comp=Z,1.0nm,0.9s,baz=339,slow=4.6,SNR=8.0						
PDAR	Pinedale Array	173.47	186	PKP	PKPdf	18 35 17.6	-1.3
	comp=Z,0.9nm,0.9s,baz=101,slow=3.0,SNR=5.4						
PDAR				PKPab	PKPab	18 36 48.5	+0.8
	comp=Z,0.7nm,0.9s,baz=132,slow=2.2,SNR=4.1						
PDAR	Pinedale Array	173.47	186		PKPdf	18 35 18.5	-0.4

MAN 12 18:17:48.3, 14°.88N×120°.00E, h11^{km}, mb4.5, ML3.3, MS3.1, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCZP	Santa Cruz	0.89	355	eP	Pg	18 18 05.2	-0.3
SCZP				eS	Sn	18 18 20.1	+0.3
PCPH	Palayan	1.26	57⇑	eP	Pn	18 18 11.5	-0.4
SMPP	San Manuel, Pa	1.42	28	eP	Pn	18 18 12.7	-1.5
SMPP				eS	Sn	18 18 32.8	-0.1
BALP	Baler	1.75	61	eP	Pn	18 18 18.3	-0.3
BALP				eS	Sn	18 18 41.4	+0.5
CAUP	Cauayan	2.70	40	eP	Pn	18 18 31.7	-0.1
CAUP				eS	Sn	18 19 05.7	+1.3
APYP	Conner	3.19	22	eP	Pn	18 18 39.9	+1.4
APYP				eS	Sn	18 19 18.6	+2.0

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*KRSC **12** 18:18:36.1±1.6, 51°.59N×153°.77E, h469^{km}±24^{km}, ML5.7, FELT [III-IV] at GMS Kronoki.*

*BJI **12** 18:18:38.8±0.0, 52°.16N×153°.11E, h421^{km}, mB4.8/51, mb4.7/64*

*SKHL **12** 18:18:38.5±0.7, 52°.09N×153°.15E, h403^{km}±18^{km}, mb5.6/7, msh5.5/11*

*BGR **12** 18:18:39.5±0.0, 52°.34N×153°.30E, h400^{km}, mb5.1*

*MOS **12** 18:18:39.3±0.8, 52°.12N×153°.10E, h419^{km}, mb4.7/40, Error ellipse: s-maj=5.4km s-min=3.5km az=68.9*

*IDC **12** 18:18:40.9±0.4, 52°.17N×153°.07E, h418^{km}±4^{km}, mb4.1/41, mb1 4.1/49, mb1mx4.1/66, mbtmp4.8/49, Error ellipse: s-maj=7.8km s-min=5.5km az=154.0*

*NEIC **12** 18:18:41.1±1.4, 52°.14N±0°.08×153°.1E±0°.1, h423^{km}±6^{km}, mb4.8/434, Error ellipse: s-maj=11.4km s-min=10.8km az=121.0*

*GCMT **12** 18:18:42.1±0.5, 52°.07N±0°.05×153°.17E±0°.08, h420^{km}±3^{km}, MW5.1/50, Moment Tensor Solution. s50,c65; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.77±.27; $M_{\theta\theta}$0.59±.40; $M_{\phi\phi}$2.18±.36; $M_{r\theta}$0.53±.50; $M_{\theta\phi}$-2.42±.39; $M_{\phi r}$-5.50±.41; Best double couple: $M_0$6.53800×10^{16} NP1:ϕ_s116.00000°, δ23.00000°, λ-142.00000°. NP2:ϕ_s350.00000°, δ76.00000°, λ-72.00000°. Principal axes: T 6.6350, Plg29.0000°, Azm66.0000°; N -0.1950, Plg18.0000°, Azm166.0000°; P -6.4410, Plg55.0000°, Azm283.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 12 18:18:40.1±0.3**, 52°.01N**±0°.04×**153°.20E**±0°.03**, h418^{km}**±2^{km}**, h417^{km}:pP-P, n1274, σ1^{s}13**/1432**, mb4.8**/343**, 36C-30D, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALID	Alaid	1.86	127	eP	P	18 19 36.8	-0.4
ALID	Alaid	1.86	127	PN	P	18 19 36.8	-0.4
MIPR	Malaya Ipel'ka	2.21	82	eP	P	18 19 38.5	-0.5
MIPR	Malaya Ipel'ka	2.21	82	PN	P	18 19 38.5	-0.5
SKR	Severo-Kuril's	2.26	125	eP	P	18 19 38.3	-1.1
SKR				eS	S	18 20 25.7	-1.7
SKR	Severo-Kuril's	2.26	125	i P	P	18 19 38.4	-1.0
SKR				AMB	AMB	18 19 39.0	
	2μm,3.3s						
SKR				AMB	AMB	18 19 39.0	
	1μm,0.6s						
SKR				i S	S	18 20 25.7	-1.7
SKR				A	A	18 20 26.6	
	3μm,3.0s						
SKR				A	A	18 20 26.6	
	4μm,3.0s						
SKR				A	A	18 20 29.0	
	450nm,0.6s						
SKR				A	A	18 20 29.0	
	980nm,0.6s						
SKR	Severo-Kuril's	2.26	125⇓	iPN	P	18 19 38.4	-1.0
SKR				i S	S	18 20 25.7	-1.7
SKR				pmax	pmax		
	comp=Z,2μm,3.3s						
SKR				pmax	pmax		
	comp=Z,1μm,0.7s						
SKR				pmax	pmax		
	comp=Z,700nm,8.3s						
SKR				smax	smax		
	comp=E,1μm,1.0s						
SKR				smax	smax		
	comp=N,451nm,0.6s						
PAU	Pauzhetka	2.31	102	eP	P	18 19 39.0	-0.6
PAU	Pauzhetka	2.31	102	eP	P	18 19 39.1	-0.6
PAU	Pauzhetka	2.31	102	PN	P	18 19 39.0	-0.6
APC	Apacha	2.59	68	eP	P	18 19 40.7	-0.8
APC	Apacha	2.59	68	PN	P	18 19 40.7	-0.8
ASAK	Asacha	2.92	81	eP	P	18 19 43.5	-0.6
ASAK	Asacha	2.92	81	PN	P	18 19 43.5	-0.6
PEA0B	Petropavlovsk-	2.96	66d	iPN	P	18 19 43.6	-0.6
PEA0B	Petropavlovsk-	2.96	66	P	P	18 19 43.6	-0.6
PETK	Petropavlovsk-	2.96	66	P	P	18 19 43.6	-0.6
	comp=N,48nm,0.3s,baz=238,slow=3.3,SNR=1218						
PETK				S	S	18 20 35.5	-1.0
	baz=256,slow=18,SNR=3.3						
PETK	Petropavlovsk-	2.96	66	P	P	18 19 43.5	-0.8
KDTR	Khodutka, Kamc	3.03	92	eP	P	18 19 43.4	-1.4
KDTR				eS	S	18 20 33.8	-3.6
KDTR	Khodutka, Kamc	3.03	92	PN	P	18 19 43.4	-1.4
KDTR				S	S	18 20 33.8	-3.6
GRL	Gorelyy	3.04	78	eP	P	18 19 45.1	0.0
GRL	Gorelyy	3.04	78	PN	P	18 19 45.1	0.0
MTVR	Mutnovka	3.10	79	eP	P	18 19 45.0	-0.6
MTVR				eS	S	18 20 39.6	+0.8
MTVR	Mutnovka	3.10	79	PN	P	18 19 45.0	-0.6
MTVR				S	S	18 20 39.6	+0.8
KRMR	Karymshinskiy	3.13	73	eP	P	18 19 44.2	-1.4
KRMR	Karymshinskiy	3.13	73	PN	P	18 19 44.2	-1.4
RUS	Russkaya	3.30	81	eP	P	18 19 46.4	-0.5
RUS				eS	S	18 20 37.8	-3.6
RUS	Russkaya	3.30	81	eP	P	18 19 46.4	-0.5
RUS	Russkaya	3.30	81	PN	P	18 19 46.4	-0.5
RUS				S	S	18 20 37.8	-3.6
PET	Petropavlovsk	3.49	71	eP	P	18 19 48.2	-0.3
PET				eS	S	18 20 43.7	-0.6
PET	Petropavlovsk	3.49	71	eP	P	18 19 47.9	-0.6
PET				AMB	AMB	18 19 49.1	
	comp=N,5μm,1.7s						
PET				AMB	AMB	18 19 49.4	
	comp=N,2μm,0.7s						
PET				eS	S	18 20 41.5	-2.8
PET				A	A	18 20 44.2	
	comp=N,6μm,2.9s						
PET				A	A	18 20 44.2	
	comp=N,7μm,2.9s						
PET				A	A	18 20 45.8	
	comp=N,2μm,1.0s						
PET				A	A	18 20 45.8	
	comp=N,2μm,1.0s						
PET	Petropavlovsk	3.49	71κ	iPN	P	18 19 47.9	-0.6
PET				eS	S	18 20 41.5	-2.8
PET				pmax	pmax		
	comp=Z,5μm,1.7s						
PET				pmax	pmax		
	comp=Z,2μm,0.8s						
PET				smax	smax		
	comp=N,6μm,2.8s						
PET				smax	smax		
	comp=E,8μm,2.9s						
PET				smax	smax		
	comp=N,2μm,1.0s						
PET				smax	smax		
	comp=E,2μm,0.7s						
PET	Petropavlovsk	3.49	71	P	P	18 19 48.4	-0.1
DALK	Dalny	3.55	71	eP	P	18 19 48.4	-0.6
DALK				eS	S	18 20 42.7	-2.5

DALK	Dalny	3.55	71	PN	P	18 19 48.4	-0.6
DALK				S	S	18 20 42.7	-2.5
KOK	Koryaka	3.55	67	eP	P	18 19 49.7	+0.5
KOK	Koryaka	3.55	67	eP	P	18 19 49.7	+0.5
KOK	Koryaka	3.55	67	PN	P	18 19 49.7	+0.5
KRX	Arik	3.58	66	eP	P	18 19 49.1	-0.4
KRX	Arik	3.58	66	PN	P	18 19 49.1	-0.4
AVH	Avacha	3.60	67	eP	P	18 19 49.5	-0.1
AVH				eS	S	18 20 47.6	+1.3
AVH	Avacha	3.60	67	PN	P	18 19 49.5	-0.1
AVH				S	S	18 20 47.6	+1.3
KRER	Koryakskii	3.62	67	eP	P	18 19 50.1	+0.2
KRER				eS	S	18 20 48.4	+1.5
KRER	Koryakskii	3.62	67	PN	P	18 19 50.1	+0.2
KRER				S	S	18 20 48.4	+1.5
UGLR	Uglovaya	3.64	69	eP	P	18 19 50.3	+0.3
UGLR				eS	S	18 20 46.6	-0.3
UGLR	Uglovaya	3.64	69	PN	P	18 19 50.3	+0.3
UGLR				S	S	18 20 46.6	-0.3
SMAR	Somma	3.64	68	eP	P	18 19 49.9	-0.2
SMAR				eS	S	18 20 46.9	-0.3
SMAR	Somma	3.64	68	PN	P	18 19 49.9	-0.2
SMAR				S	S	18 20 46.9	-0.3
SDLR	Sedlovina	3.69	68	eP	P	18 19 50.1	-0.4
SDLR				eS	S	18 20 46.8	-1.0
SDLR	Sedlovina	3.69	68	PN	P	18 19 50.1	-0.4
SDLR				S	S	18 20 46.8	-1.0
NLC	Nalytchevo	3.93	70	eP	P	18 19 51.6	-0.8
NLC				eS	S	18 20 48.2	-3.2
NLC	Nalytchevo	3.93	70	PN	P	18 19 51.6	-0.8
NLC				S	S	18 20 48.2	-3.2
SPN	Mys Shipunski	4.31	73	eP	P	18 19 54.3	-1.6
SPN				eS	S	18 20 50.7	-7.2
SPN	Mys Shipunski	4.31	73	PN	P	18 19 54.3	-1.6
SPN				S	S	18 20 50.7	-7.2
ESO	Esso	5.09	37	eP	P	18 20 04.5	+0.9
ESO				eS	S	18 21 14.4	+2.4
ESO	Esso	5.09	37	PN	P	18 20 04.5	+0.9
ESO				S	S	18 21 14.4	+2.4
KZV	Kizimen	5.25	51	eP	P	18 20 06.4	+1.0
KZV				eS	S	18 21 13.3	-1.9
KZV	Kizimen	5.25	51	PN	P	18 20 06.4	+1.0
KZV				S	S	18 21 13.3	-1.9
TUMR	Tumrok	5.28	49	eP	P	18 20 07.2	+1.6
TUMR				eS	S	18 21 15.2	-0.4
TUMR	Tumrok	5.28	49	PN	P	18 20 06.4	+0.8
TUMR				S	S	18 21 16.5	+0.9
TUMD	Tumrok D	5.35	50	eP	P	18 20 06.4	+0.2
TUMD				eS	S	18 21 16.5	-0.3
KMNR	Kamenistaya	5.61	45	eP	P	18 20 10.0	+1.1
KMNR				eS	S	18 21 23.3	+1.5
KMNR	Kamenistaya	5.61	45	PN	P	18 20 10.0	+1.1
KMNR				S	S	18 21 23.3	+1.5
KOZ	Kozyrevsk	5.65	42	eP	P	18 20 11.1	+1.8
KOZ				eS	S	18 21 26.2	+3.7
KOZ	Kozyrevsk	5.65	42	PN	P	18 20 11.1	+1.8
KPT	Kopyto	5.73	44	eP	P	18 20 11.4	+1.1
KPT				eS	S	18 21 25.5	+1.3
KPT	Kopyto	5.73	44	PN	P	18 20 11.4	+1.1
KPT				S	S	18 21 25.5	+1.3
KIRR	Kirishev	5.78	44	eP	P	18 20 10.8	0.0
KIRR				eS	S	18 21 23.9	-1.2
KIRR	Kirishev	5.78	44	PN	P	18 20 10.8	0.0
KIRR				S	S	18 21 23.9	-1.2
BZMR	Bezymyannaya	5.83	45	eP	P	18 20 12.4	+1.1
BZMR				eS	S	18 21 25.8	-0.3
BZMR	Bezymyannaya	5.83	45	PN	P	18 20 12.4	+1.1
BZMR				S	S	18 21 25.8	-0.3
BZGR	Bezymyannyi-Gr	5.92	45	eP	P	18 20 12.5	+0.2
BZGR				eS	S	18 21 30.0	+2.1
BZGR	Bezymyannyi-Gr	5.92	45	PN	P	18 20 12.5	+0.2
BZGR				S	S	18 21 30.0	+2.1
LGNR	Loginova	6.01	44	eP	P	18 20 14.7	+1.3
LGNR				eS	S	18 21 31.6	+1.7
LGNR	Loginova	6.01	44	PN	P	18 20 14.7	+1.3
LGNR				S	S	18 21 31.6	+1.7
ZLN	Zelenaya	6.02	45	eP	P	18 20 13.9	+0.6
ZLN				eS	S	18 21 31.6	+1.9
ZLN	Zelenaya	6.02	45	PN	P	18 20 13.9	+0.6
ZLN				S	S	18 21 31.6	+1.9
KRSR	Krestovskiy	6.04	43	eP	P	18 20 14.1	+0.6
KRSR				eS	S	18 21 30.3	+0.1
KRSR	Krestovskiy	6.04	43	PN	P	18 20 14.1	+0.6
KRSR				S	S	18 21 30.3	+0.1
CIRR	Tsirk	6.06	44	eP	P	18 20 15.0	+1.3
CIRR				eS	S	18 21 32.2	+1.7
CIRR	Tsirk	6.06	44	PN	P	18 20 15.0	+1.3
CIRR				S	S	18 21 32.2	+1.7
KLY	Klyuchi	6.14	43	eP	P	18 20 15.8	+1.3
KLY				eS	S	18 21 35.0	+3.1
KLY	Klyuchi	6.14	43	PN	P	18 20 15.8	+1.3
KLY				S	S	18 21 35.0	+3.1
OKH	Okha	6.42	288	i P	P	18 20 16.5	-0.9
OKH				AMB	AMB	18 20 20.3	
	comp=E,2µm,2.0s						
OKH				eS	S	18 21 34.9	-2.4
OKH				A	A	18 21 43.2	
	comp=E,7µm,4.0s						
OKH				A	A	18 21 43.2	
	comp=E,5µm,4.0s						
OKH	Okha	6.42	288c	iPN	P	18 20 18.4	+1.0
OKH				eS	S	18 21 38.4	+1.1
OKH				pmax	pmax		
	comp=Z,300nm,6.4s						
OKH				smax	smax		
	comp=N,2µm,7.5s						
OKH				smax	smax		
	comp=E,2µm,7.7s						
OKH				MLR	MLR		
	comp=E,500nm,14.0s						
OKH				MLR	MLR		
	comp=Z,300nm,7.0s						
OKH				MLR	MLR		
	comp=N,300nm,8.0s						
BDR	Baidarnaya	6.54	43	eP	P	18 20 21.6	+2.2
BDR				eS	S	18 21 41.1	+1.1
BDR	Baidarnaya	6.54	43	PN	P	18 20 21.6	+2.2
BDR				S	S	18 21 41.1	+1.1
SRKR	Sorokina	6.58	42	eP	P	18 20 21.3	+1.5
SRKR				eS	S	18 21 42.5	+1.7
SRKR	Sorokina	6.58	42	PN	P	18 20 21.3	+1.5
SRKR				S	S	18 21 42.5	+1.7
SMKR	Semkarok	6.66	43	eP	P	18 20 21.9	+1.2
SMKR				eS	S	18 21 42.0	-0.4
SMKR	Semkarok	6.66	43	PN	P	18 20 21.9	+1.2
SMKR				S	S	18 21 42.0	-0.4
KBG	Krutoberegovo	7.02	49	eP	P	18 20 22.6	-1.8
KBG	Krutoberegovo	7.02	49	PN	P	18 20 22.6	-1.8
KBTR	Krutoberegovo	7.05	50	eP	P	18 20 22.8	-2.0
KBTR	Krutoberegovo	7.05	50	PN	P	18 20 22.8	-2.0
KUR	Kuril'sk	7.64	210	i P	P	18 20 31.1	-0.4
KUR				AMB	AMB	18 20 32.0	
	comp=N,82nm,0.5s						
KUR				i S	S	18 22 01.0	-1.3
KUR				A	A	18 22 09.0	
	comp=N,60nm,0.4s						
KUR				A	A	18 22 09.0	
	comp=N,23nm,0.4s						
KUR	Kuril'sk	7.64	210d	iPN	P	18 20 30.7	-0.8
KUR				pmax	pmax		
	comp=Z,82nm,0.5s						
KUR				pmax	pmax		
	comp=N,21nm,0.4s						
KUR				pmax	pmax		
	comp=E,15nm,0.4s						
UGL	Uglegorsk	7.67	252	eP	P	18 20 31.4	-0.4
UGL				AMB	AMB	18 20 34.6	
	comp=E,870nm,2.0s						
UGL				AMB	AMB	18 20 35.0	
	comp=E,385nm,0.8s						
UGL				eS	S	18 22 00.9	-1.9
UGL				A	A	18 22 09.0	
	comp=E,2µm,4.0s						
UGL				A	A	18 22 09.0	
	comp=E,530nm,4.0s						
UGL				A	A	18 22 09.0	
	comp=E,240nm,1.2s						
UGL				A	A	18 22 09.0	
	comp=E,530nm,1.2s						
UGL	Uglegorsk	7.67	252	ePN	P	18 20 33.2	+1.4
UGL				pmax	pmax		
	comp=Z,385nm,0.8s						
MA2	Magadan	7.71	351	P	P	18 20 31.7	-0.2
	comp=Z,6.0nm,0.3s,baz=157,slow=9.6,SNR=219						
MA2	Magadan	7.71	351c	ePN	P	18 20 31.4	-0.5
MA2				pmax	pmax		
	comp=Z,176nm,1.0s						
MA2	Magadan	7.71	351	P	P	18 20 31.9	-0.1
NKL	Nikolayevsk	7.71	283	eP	P	18 20 30.0	-2.1
NKL				AMB	AMB	18 20 34.0	
	comp=Z,221nm,0.9s						
NKL				eS	S	18 22 01.1	-2.4
NKL				A	A	18 22 10.0	
	comp=Z,110nm,3.4s						
NKL				A	A	18 22 10.0	
	comp=Z,760nm,3.4s						
NKL	Nikolayevsk	7.71	283	ePN	P	18 20 30.3	-1.8
NKL				pmax	pmax		
	comp=Z,221nm,1.4s						
NKL				pmax	pmax		
	comp=N,7.0nm,1.0s						
NKL				pmax	pmax		
	comp=E,16nm,1.3s						
PALN	Palana	8.06	26	eP	P	18 20 35.6	-0.1
PALN	Palana	8.06	26	PN	P	18 20 35.6	-0.1
BKI	Bering	8.24	62	eP	P	18 20 37.6	-0.2
BKI				eS	S	18 22 08.9	-5.4
BKI	Bering	8.24	62	PN	P	18 20 37.6	-0.2
BKI				S	S	18 22 08.9	-5.4
YSS	Yuzh-Sakhalins	8.47	237	i P	P	18 20 38.9	-1.6
YSS				AMB	AMB	18 20 43.3	
	comp=E,1µm,3.6s						
YSS				AMB	AMB	18 20 45.3	
	comp=E,210nm,0.6s						
YSS				eS	S	18 22 18.0	-1.3
YSS				A	A	18 22 24.7	
	comp=E,3µm,4.4s						
YSS				A	A	18 22 24.7	
	comp=E,2µm,4.4s						
YSS				A	A	18 22 25.0	
	comp=E,60nm,1.2s						
YSS				A	A	18 22 25.0	
	comp=E,100nm,1.2s						
YSS	Yuzh-Sakhalins	8.47	237α	iPN	P	18 20 42.1	+1.6
YSS				eS	S	18 22 21.4	+2.1
YSS				pmax	pmax		
	comp=Z,1µm,3.6s						
YSS				pmax	pmax		
	comp=N,600nm,3.7s						
YSS				pmax	pmax		
	comp=E,700nm,3.7s						
YSS				pmax	pmax		
	comp=Z,210nm,0.6s						
YSS				pmax	pmax		
	comp=N,110nm,0.7s						
YSS				pmax	pmax		
	comp=E,90nm,0.7s						
YSS				smax	smax		
	comp=N,3µm,4.4s						
YSS				smax	smax		
	comp=E,2µm,3.2s						
YSS				smax	smax		
	comp=N,60nm,1.6s						
YSS				smax	smax		
	comp=E,100nm,1.9s						
YSS				MLR	MLR		
	comp=Z,300nm,11.0s						
YSS	Yuzh-Sakhalins	8.47	237	P	P	18 20 42.1	+1.6
OSSR	Ossora	9.14	34	eP	P	18 20 48.5	+0.9
OSSR				eS	S	18 22 32.5	-0.4
OSSR	Ossora	9.14	34	PN	P	18 20 48.5	+0.9
OSSR				S	S	18 22 32.5	-0.4
YUK	Yuzh-Kuril'sk	9.37	214	i P	P	18 20 50.5	+0.1
YUK				AMB	AMB	18 20 52.0	
	comp=Z,240nm,0.4s						
YUK				eS	S	18 22 36.5	-1.3
YUK				A	A	18 22 42.0	
	comp=Z,988nm,1.7s						
YUK				A	A	18 22 42.0	
	comp=Z,595nm,1.7s						
YUK	Yuzh-Kuril'sk	9.37	214c	iPN	P	18 20 50.3	-0.1
YUK				eS	S	18 22 35.3	-2.5
YUK				pmax	pmax		
	comp=Z,240nm,0.4s						
YUK				pmax	pmax		
	comp=N,39nm,0.5s						
YUK				pmax	pmax		
	comp=E,56nm,0.5s						
YUK				smax	smax		
	comp=E,595nm,1.6s						
YUK				smax	smax		
	comp=N,988nm,1.7s						
GRPR	Tuman	9.43	215	i P	P	18 20 51.6	+0.5
GRPR				AMB	AMB	18 20 52.0	
	comp=N,346nm,0.4s						
GRPR				AMB	AMB	18 20 56.0	
	comp=N,283nm,1.6s						
GRPR				i S	S	18 22 38.0	-1.2
GRPR				A	A	18 22 39.0	
	comp=N,489nm,2.2s						
GRPR				A	A	18 22 39.0	
	comp=N,538nm,2.2s						
GRPR	Tuman	9.43	215d	iPN	P	18 20 51.4	+0.3
GRPR				i S	S	18 22 37.6	-1.6
GRPR				pmax	pmax		
	comp=N,93nm,0.4s						
GRPR				pmax	pmax		
	comp=E,143nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,346nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,283nm,1.6s						
GRPR				smax	smax		
	comp=N,489nm,1.7s						
GRPR				smax	smax		
	comp=E,538nm,2.2s						
GLVR	Golovnino	9.74	215	eP	P	18 20 56.0	+1.4
GLVR				AMB	AMB	18 20 57.0	
	comp=E,302nm,0.5s						
GLVR				AMB	AMB	18 20 57.0	
	comp=E,58nm,0.4s						
GLVR				AMB	AMB	18 20 57.0	
	comp=E,110nm,0.4s						
GLVR				eS	S	18 22 45.0	-0.5
GLVR				A	A	18 22 47.0	
	comp=E,1µm,3.4s						
GLVR				A	A	18 22 47.0	
	comp=E,1µm,1.5s						
GLVR	Golovnino	9.74	215	ePN	P	18 20 56.4	+1.8
GLVR				eS	S	18 22 45.8	+0.3
GLVR				pmax	pmax		
	comp=Z,302nm,0.5s						
GLVR				pmax	pmax		
	comp=N,58nm,0.4s						
GLVR				pmax	pmax		
	comp=E,110nm,0.4s						
GLVR				smax	smax		
	comp=N,1µm,3.4s						
GLVR				smax	smax		
	comp=E,1µm,1.5s						
NMR	Nemuro--Hokkai	10.00	213	ePN	P	18 20 54.8	-2.5
NMR				eS	S	18 22 43.7	-6.9
GRNR	Gornyy	10.56	270	i P	P	18 21 05.4	+2.0
GRNR				eS	S	18 23 01.4	-0.4
GRNR	Gornyy	10.56	270⇓	iPN	P	18 21 05.4	+2.0
GRNR				eS	S	18 23 01.4	-0.4
GRNR				pmax	pmax		
	comp=Z,30nm,1.0s						
GRNR				smax	smax		
	comp=N,30nm,1.2s						
GRNR				MLR	MLR		
	comp=Z,150nm,14.0s						
JKA	Kamikawa-asahi	10.61	226	P	P	18 21 05.6	+1.6
ASAJ	Asahikawa	10.61	226	P	P	18 21 05.6	+1.6
	comp=Z,7.7nm,0.3s,baz=62,slow=6.2,SNR=103						
SEY	Seymchan	10.96	358	P	P	18 21 08.2	+0.6
	comp=Z,2.1nm,0.3s,baz=170,slow=8.8,SNR=106						
SEY	Seymchan	10.96	358	eP	P	18 21 06.4	-1.2
SEY	Seymchan	10.96	358⇑	iPN	P	18 21 06.4	-1.2
TILK	Tilichiki	11.09	35	eP	P	18 21 10.6	+1.6
TILK	Tilichiki	11.09	35	PN	P	18 21 10.6	+1.6
ERM	Erimo	12.11	218c	ePN	P	18 21 20.3	-0.3
ERM				pmax	pmax		
	comp=Z,201nm,1.3s						
ERM	Erimo	12.11	218	P	P	18 21 20.3	-0.3
EKMR	Ekimchan	12.37	283	eP	P	18 21 22.7	-0.6
KMSK	Kamenskaya	12.60	29	eP	P	18 21 25.8	+0.2
KMSK	Kamenskaya	12.60	29	PN	P	18 21 25.8	+0.2
SMY	Shemya	12.79	79	PN	P	18 21 29.0	+1.1
SMY	Shemya	12.79	79	P	P	18 21 28.9	+1.1
TEY	Ternei	13.01	244	i P	P	18 21 32.2	+1.9
TEY				AMB	AMB	18 21 33.7	
	comp=Z,60nm,0.6s						
TEY				eS	S	18 23 50.3	-0.7
TEY				A	A	18 23 55.2	
	comp=Z,2µm,4.3s						
TEY				A	A	18 23 55.2	
	comp=Z,2µm,4.3s						
TEY	Ternei	13.01	244⇑	iPN	P	18 21 33.2	+2.9
TEY				eS	S	18 23 50.3	-0.7
TEY				pmax	pmax		
	comp=E,40nm,0.6s						
TEY				pmax	pmax		
	comp=Z,60nm,0.6s						
TEY				pmax	pmax		
	comp=N,20nm,0.6s						
TEY				smax	smax		
	comp=N,2µm,4.3s						
TEY				smax	smax		
	comp=E,2µm,5.6s						
KLR	Kul'dur	13.89	267	P	P	18 21 40.8	+0.9
	comp=E,2.2nm,0.3s,baz=80,slow=9.8,SNR=47						
KLR				S	S	18 24 09.1	+0.6
	baz=23,slow=12,SNR=9.7						
KLR	Kul'dur	13.89	267	eP	P	18 21 41.2	+1.3
KLR	Kul'dur	13.89	267d	iP	P	18 21 41.2	+1.3
BMKR	Bomnak	14.77	290	i P	P	18 21 49.8	+0.5
ZEA	Zeya	15.73	287	eP	P	18 21 59.2	-0.5
ZEA	Zeya	15.73	287	eP	P	18 21 59.2	-0.5
ZEA				eS	S	18 24 44.5	-0.2
ZEA				pmax	pmax		
	comp=N,29nm,1.2s						
ZEA				pmax	pmax		
	comp=E,72nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,78nm,1.2s						
ZEA				smax	smax		
	comp=N,260nm,1.8s						
ZEA				smax	smax		
	comp=Z,210nm,1.8s						
ZEA				smax	smax		
	comp=E,630nm,2.0s						
ZEA				smax	smax		
	comp=E,2µm,4.0s						
KROS	Kirovskiy	15.86	289	eP	P	18 22 00.5	-0.5
USA0B	Ussuriysk Arra	16.14	249	P	P	18 22 03.9	-0.2
USA0B				pmax	pmax		
	comp=Z,51nm,1.5s						
USA0B	Ussuriysk Arra	16.14	249	P	P	18 22 03.9	-0.2
USA0B				IAmb	IAmb	18 22 05.6	
	comp=Z,51nm,1.5s						
USRK	Ussuriysk Ar.	16.14	249	P	P	18 22 03.9	-0.2
	baz=50,slow=10,SNR=19						
USRK	Ussuriysk Ar.	16.14	249	P	P	18 22 03.3	-0.8
USRK	Ussuriysk Ar.	16.14	249	P	P	18 22 03.3	-0.8
YAK	Yakutsk	16.16	317	P	P	18 22 02.5	-1.6
	comp=Z,1.0nm,0.3s,baz=95,slow=3.3,SNR=48						
YAK				S	S	18 24 48.1	-4.8
	comp=Z,0.1nm,0.3s,baz=26,slow=21,SNR=19						
YAK	Yakutsk	16.16	317	eP	P	18 22 02.8	-1.3
YAK	Yakutsk	16.16	317d	iP	P	18 22 02.9	-1.2
YAK				eS	S	18 24 50.1	-2.8
YAK				pmax	pmax		
	comp=Z,66nm,0.9s						
YAK				pmax	pmax		
	comp=N,41nm,1.1s						
YAK				pmax	pmax		
	comp=E,88nm,1.1s						
YAK				smax	smax		
	comp=N,956nm,2.0s						
YAK				smax	smax		
	comp=E,699nm,2.0s						
YAK	Yakutsk	16.16	317	P	P	18 22 02.9	-1.2
VLA	Vladivostok	16.86	247	eP	P	18 22 12.6	+0.9
VLA	Vladivostok	16.86	247	i P	P	18 22 12.6	+0.9
VLA				pmax	pmax		
	comp=Z,24nm,1.1s						
BILL	Bilibino	17.29	17	eP	P	18 22 14.3	-1.7
BILL	Bilibino	17.29	17d	eP	P	18 22 14.3	-1.7
BILL				i S	S	18 25 13.4	-1.1
BILL				pmax	pmax		
	comp=Z,91nm,0.7s						
BILL	Bilibino	17.29	17	P	P	18 22 15.7	-0.3
MDJ	Mudanjiang	17.30	254	P	P	18 22 16.6	+0.1
MDJ				S	S	18 25 13.5	-1.9
MDJ				pmax	pmax		
	comp=Z,19nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,470nm,4.8s						
MDJ	Mudanjiang	17.30	254	P	P	18 22 16.2	-0.3
MSHR	Mys Shultsa	17.61	246	i P	P	18 22 20.7	+0.9
MJB9	Matsu-Tunnel	18.76	220	P	P	18 22 32.2	+0.4
MAJO	Matsushiro	18.76	220	i P	P	18 22 32.1	+0.3
MAJO				pmax	pmax		
	comp=Z,13nm,1.2s						
MAJO	Matsushiro	18.76	220	P	P	18 22 32.6	+0.8
MAT	Matsushiro	18.76	220	P	P	18 22 32.9	+1.1
MAT				S	S	18 25 44.4	+2.7
MJAR	Matsushiro Arr	18.76	220	P	P	18 22 32.7	+0.9
	comp=Z,0.2nm,0.3s,baz=16,slow=9.5,SNR=14						
MJAR	Matsushiro Arr	18.76	220	P	P	18 22 32.9	+1.1
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MJAR	Matsushiro Arr	18.76	220	P	P	18 22 32.9	+1.1
ATKA	Atka Island	19.94	76	P	P	18 22 42.9	+0.4
CN2	Changchun	20.23	257	eP	P	18 22 44.8	-0.6
CN2				pmax	pmax		
	comp=Z,30nm,1.5s						
HIA	Hailar	21.29	276	P	P	18 22 54.4	-0.5
HIA				pmax	pmax		
	comp=Z,71nm,0.9s						
HIA	Hailar	21.29	276	P	P	18 22 54.4	-0.5
SPIA	Saint Paul Isl	21.61	62	P	P	18 22 58.6	+0.9
GAMB	Gambell	21.73	44	P	P	18 22 58.5	-0.2
GAMB				IAmb	IAmb	18 23 01.2	
	comp=Z,48nm,0.9s						
TIXI	Tiksi	22.48	340	P	P	18 23 05.1	-0.3
	comp=Z,40nm,1.0s,baz=134,slow=9.1,SNR=99						
TIXI				ScP	ScP	18 29 41.5	+0.7
	comp=Z,3.2nm,0.8s,baz=95,slow=5.0,SNR=5.1						
TIXI	Tiksi	22.48	340	eP	P	18 23 04.9	-0.5
TIXI	Tiksi	22.48	340c	eP	P	18 23 04.9	-0.5
TIXI				pmax	pmax		
	comp=Z,51nm,1.1s						
TIXI	Tiksi	22.48	340	P	P	18 23 05.1	-0.3
TIXI				IAmb	IAmb	18 23 06.2	
	comp=Z,56nm,1.1s						
KSRS	Korea Array	22.95	241	P	P	18 23 11.2	+1.1
	comp=Z,6.1nm,0.5s,baz=40,slow=9.4,SNR=22						
KSAR	Wonju Array Be	22.98	241	P	P	18 23 11.0	+0.6
KSAR	Wonju Array Be	22.98	241	P	P	18 23 11.0	+0.6
BOD	Bodaibo	23.01	300	eP	P	18 23 09.1	-1.3
BOD	Bodaibo	23.01	300	eP	P	18 23 09.1	-1.3
BOD				pmax	pmax		
	comp=Z,58nm,1.6s						
CIT	Chita	24.19	286	eP	P	18 23 20.7	-0.4
CIT				pmax	pmax		
	comp=Z,80nm,1.4s						
ANM	Nome	24.61	43	P	P	18 23 25.3	+0.7
ANM				pmax	pmax		
	comp=Z,38nm,0.9s						
ANM	Nome	24.61	43	P	P	18 23 25.3	+0.7
ANM				IAmb	IAmb	18 23 26.7	
	comp=Z,38nm,0.9s						
RDOG	Red Dog Mine	26.38	36	P	P	18 23 40.7	+0.4
RDOG				IAmb	IAmb	18 23 41.9	
	comp=Z,50nm,1.0s						
CNBA	Chernabura Isl	27.86	65	P	P	18 23 53.4	-0.1
CNBA				IAmb	IAmb	18 23 53.8	
	comp=Z,52nm,0.7s						
TTA	Tatalina	28.63	48	P	P	18 24 00.6	+0.4
TTA	Tatalina	28.63	48	P	P	18 24 00.6	+0.4
SVW2	Sparrevohn	28.94	52	P	P	18 24 03.6	+0.7
SVW2				IAmb	IAmb	18 24 05.2	
	comp=Z,38nm,0.9s						
IRK	Irkutsk	29.58	290	eP	P	18 24 08.5	-0.1
IRK				pmax	pmax		
	comp=Z,44nm,1.3s						
ULN	Ulaanbaatar	29.59	281	eP	P	18 24 08.5	-0.5
ULN	Ulaanbaatar	29.59	281	P	P	18 24 08.5	-0.5
ULN				pmax	pmax		
	comp=Z,11nm,1.2s						
ULN	Ulaanbaatar	29.59	281	P	P	18 24 08.5	-0.5

IMAR	**Indian Mountai**	**29.62**	**41**	P	**P**	**18 24 08.8**	**0.0**
CHIR	**Chirikof Islan**	**29.82**	**62**	P	**P**	**18 24 10.9**	**+0.3**
SONM	**Songino Array**	**30.01**	**281**	P	**P**	**18 24 12.8**	**+0.3**
	comp=Z,1.1nm,0.4s,baz=60,slow=7.7,SNR=21						
SONM				pP	**pP**	**18 25 27.4**	**+0.2**
	comp=Z,1.0nm,0.9s,baz=72,slow=6.5,SNR=1.5						
SONM				PcP	**PcP**	**18 27 02.5**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=87,slow=1.6,SNR=5.4						
SONM				ScP	**ScP**	**18 30 04.3**	**+0.5**
	comp=Z,2.6nm,0.9s,baz=70,slow=1.6,SNR=8.9						
SONM	**Songino Array**	**30.01**	**281**	P	**P**	**18 24 12.6**	**+0.1**
SONM						18 27 02.5	
SONM				pmax	pmax		
	comp=Z,8.0nm,1.6s						
SONM	**Songino Array**	**30.01**	**281**	P	**P**	**18 24 12.6**	**+0.1**
TLY	**Talaya**	**30.14**	**289**	P	**P**	**18 24 13.2**	**-0.3**
	comp=Z,7.2nm,0.7s,baz=61,slow=6.1,SNR=7.9						
TLY				ScP	**ScP**	**18 30 05.0**	**+1.0**
	comp=Z,1.3nm,0.2s,baz=29,slow=1.4,SNR=7.3						
TLY	**Talaya**	**30.14**	**289**	*e*P	**P**	**18 24 14.0**	**+0.5**
TLY	**Talaya**	**30.14**	**289**	*d i*P	**P**	**18 24 14.0**	**+0.5**
TLY				pmax	pmax		
	comp=Z,25nm,1.2s						
PPLA	**Purkeypile**	**30.38**	**48**	P	**P**	**18 24 16.5**	**+1.0**
HHC	**Hu-ho-hao-te**	**30.38**	**265**	*e*P	**P**	**18 24 15.7**	**-0.2**
HHC				pmax	pmax		
	comp=Z,83nm,0.8s						
HHC				pmax	pmax		
	comp=Z,330nm,4.3s						
RSO	**Redoubt South**	**30.39**	**52**	P	**P**	**18 24 16.9**	**+1.1**
OHAK	**Old Harbor**	**30.73**	**59**	P	**P**	**18 24 18.2**	**-0.3**
OHAK				IAmb	IAmb	18 24 19.3	
	comp=Z,62nm,0.8s						
BPAW	**Bear Paw Mtn.**	**30.82**	**45**	P	**P**	**18 24 20.0**	**+0.7**
BPAW				IAmb	IAmb	18 24 21.3	
	comp=Z,50nm,1.0s						
ZAK	**Zakamensk**	**30.83**	**287**	*e*P	**P**	**18 24 19.5**	**-0.1**
ZAK				*e*		18 25 36.5	
ZAK				pmax	pmax		
	comp=Z,25nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
MLY	**Manley**	**30.88**	**43**	P	**P**	**18 24 20.4**	**+0.5**
MLY				IAmb	IAmb	18 24 21.9	
	comp=Z,58nm,1.2s						
KTH	**Kantishna Hill**	**30.89**	**46**	P	**P**	**18 24 20.6**	**+0.7**
KDAK	**Kodiak Island**	**30.98**	**58**	P	**P**	**18 24 20.0**	**-0.6**
	comp=Z,35nm,0.6s,baz=95,slow=1.5,SNR=50						
KDAK				ScP	**ScP**	**18 30 07.7**	**+1.1**
	comp=Z,15nm,0.8s,baz=158,slow=3.9,SNR=6.0						
KDAK	**Kodiak Island**	**30.98**	**58**	P	**P**	**18 24 20.3**	**-0.3**
KDAK				pmax	pmax		
	comp=Z,134nm,1.5s						
KDAK	**Kodiak Island**	**30.98**	**58**	P	**P**	**18 24 20.3**	**-0.3**
COLD	**Coldfoot**	**31.07**	**39**	P	**P**	**18 24 21.7**	**+0.3**
TRF	**Thorofare Moun**	**31.18**	**46**	P	**P**	**18 24 23.5**	**+0.9**
CNPM	**China Poot**	**31.30**	**54**	P	**P**	**18 24 23.3**	**-0.1**
TOLK	**Toolik Lake Re**	**31.35**	**36**	P	**P**	**18 24 24.2**	**+0.4**
TOLK	**Toolik Lake Re**	**31.35**	**36**	P	**P**	**18 24 24.3**	**+0.4**
	baz=268,SNR=56						
BRLK	**Bradley Lake**	**31.43**	**54**	P	**P**	**18 24 23.9**	**-0.7**
BTO	**Baotou**	**31.48**	**266**	*e*P	**P**	**18 24 23.0**	**-2.4**
BWN	**Browne**	**31.48**	**45**	P	**P**	**18 24 25.8**	**+0.8**
NEA	**Nenana**	**31.62**	**44**	P	**P**	**18 24 26.4**	**+0.2**
NEA				IAmb	IAmb	18 24 27.9	
	comp=Z,74nm,1.1s						
MOY	**Mondy**	**31.68**	**290**	*e*P	**P**	**18 24 27.3**	**+0.3**
MOY				pmax	pmax		
	comp=Z,70nm,1.5s						
RC01	**Rabbit Creek A**	**31.75**	**51**	P	**P**	**18 24 27.3**	**0.0**
RC01				IAmb	IAmb	18 24 28.8	
	comp=Z,46nm,1.0s						
MCK	**McKinley**	**31.76**	**46**	P	**P**	**18 24 28.0**	**+0.6**
MCK				pmax	pmax		
	comp=Z,80nm,1.0s						
MCK	**McKinley**	**31.76**	**46**	P	**P**	**18 24 28.0**	**+0.6**
TIY	**Taiyuan**	**31.77**	**260**	*e*P	**P**	**18 24 29.6**	**+1.7**
RND	**Reindeer**	**31.83**	**46**	P	**P**	**18 24 27.9**	**-0.2**
RND				pmax	pmax		
	comp=Z,86nm,1.0s						
RND	**Reindeer**	**31.83**	**46**	P	**P**	**18 24 27.9**	**-0.2**
NJ2	**Nanjing**	**31.95**	**245**	*e*P	**P**	**18 24 29.8**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,22nm,0.8s						
MDM	**Murphy Dome**	**31.95**	**43**	P	**P**	**18 24 29.9**	**+0.8**
MDM				IAmb	IAmb	18 24 31.6	
	comp=Z,48nm,1.0s						
PMR	**Palmer**	**31.96**	**50**	P	**P**	**18 24 29.0**	**0.0**
PMR				pmax	pmax		
	comp=Z,49nm,1.4s						
PMR	**Palmer**	**31.96**	**50**	P	**P**	**18 24 29.0**	**0.0**
GHO	**Glory Hole Cre**	**32.02**	**49**	P	**P**	**18 24 30.3**	**+0.5**
WRH	**Wood River Hil**	**32.05**	**44**	P	**P**	**18 24 30.6**	**+0.7**
SEW	**Seward**	**32.07**	**53**	P	**P**	**18 24 30.1**	**+0.1**
TCOL	**CIGO, UAF Yank**	**32.11**	**43**	P	**P**	**18 24 31.2**	**+0.8**
	baz=275,SNR=14						
COLA	**College**	**32.12**	**43**	P	**P**	**18 24 31.1**	**+0.7**
COLA				pmax	pmax		
	comp=Z,99nm,0.8s						
COLA	**College**	**32.12**	**43**	P	**P**	**18 24 31.1**	**+0.7**
CCB	**Clear Creek Bu**	**32.16**	**44**	P	**P**	**18 24 30.9**	**+0.1**
POKR	**Poker Plat Res**	**32.27**	**43**	P	**P**	**18 24 32.4**	**+0.7**
	baz=275						
SML	**Sawmill**	**32.30**	**49**	P	**P**	**18 24 32.6**	**+0.5**
KNK	**Knik Glacier**	**32.30**	**50**	P	**P**	**18 24 32.4**	**+0.3**
DHY	**Denali Highway**	**32.54**	**47**	P	**P**	**18 24 34.2**	**0.0**
IL31		**32.54**	**44**	P	**P**	**18 24 34.2**	**+0.3**
IL31				IAmb	IAmb	18 24 35.5	
	comp=Z,63nm,1.0s						
ILAR	**Eielson Array**	**32.54**	**44**	P	**P**	**18 24 34.0**	**0.0**
	comp=Z,30nm,0.8s,baz=268,slow=8.4,SNR=232						
ILAR				pP	**pP**	**18 25 51.0**	**+0.7**
	comp=Z,5.4nm,0.8s,baz=275,slow=11,SNR=3.5						
ILAR				ScP	**ScP**	**18 30 10.9**	**-0.9**
	comp=Z,1.4nm,0.7s,baz=276,slow=3.5,SNR=7.9						
ILAR	**Eielson Array**	**32.54**	**44**		**ScP**	**18 30 10.5**	**-1.4**
ILAR	**Eielson Array**	**32.54**	**44**	P	**P**	**18 24 34.6**	**+0.5**
HDA	**Harding Lake**	**32.55**	**44**	P	**P**	**18 24 34.3**	**+0.1**
HDA				IAmb	IAmb	18 24 37.2	
	comp=Z,33nm,0.9s						
HDA	**Harding Lake**	**32.55**	**44**	P	**P**	**18 24 34.1**	**0.0**
	baz=277,SNR=17						
SCM	**Sheep Creek Mo**	**32.76**	**49**	P	**P**	**18 24 36.5**	**+0.4**
SCM				pmax	pmax		
	comp=Z,102nm,1.0s						
SCM	**Sheep Creek Mo**	**32.76**	**49**	P	**P**	**18 24 36.5**	**+0.4**
PRP	**Porcupine Dome**	**33.03**	**42**	P	**P**	**18 24 39.0**	**+0.6**
FYU	**Fort Yukon**	**33.05**	**40**	P	**P**	**18 24 39.2**	**+0.9**
BMAR	**Burnt Mountain**	**33.24**	**39**	P	**P**	**18 24 40.8**	**+0.7**
FID	**Port Fidalgo**	**33.38**	**51**	P	**P**	**18 24 41.2**	**0.0**
PAX	**Paxson**	**33.41**	**47**	P	**P**	**18 24 41.8**	**+0.2**
PAX				pmax	pmax		
	comp=Z,33nm,1.3s						
PAX	**Paxson**	**33.41**	**47**	P	**P**	**18 24 41.8**	**+0.2**
HIN	**Hinchinbrook I**	**33.45**	**51**	P	**P**	**18 24 42.4**	**+0.6**
EYAK	**Cordova Ski Ar**	**33.77**	**51**	P	**P**	**18 24 44.7**	**+0.1**
EYAK				IAmb	IAmb	18 24 46.5	
	comp=Z,46nm,0.7s						
DOT	**Dot Lake**	**33.92**	**45**	P	**P**	**18 24 45.5**	**-0.4**
DOT				IAmb	IAmb	18 24 47.6	
	comp=Z,35nm,0.8s						
NRIK	**Noril'sk**	**34.37**	**325**	P	**P**	**18 24 49.6**	**+0.1**
	comp=Z,6.3nm,0.4s,baz=97,slow=11,SNR=17						
GLB	**Gilahina Butte**	**34.49**	**49**	P	**P**	**18 24 51.5**	**+0.8**
GLB				IAmb	IAmb	18 24 53.1	
	comp=Z,115nm,1.6s						
VRDI	**Verde Repeater**	**34.70**	**49**	P	**P**	**18 24 53.4**	**+0.7**
VRDI				IAmb	IAmb	18 24 54.8	
	comp=Z,36nm,0.8s						
MCARA	**McCarthy VSAT**	**34.87**	**49**	P	**P**	**18 24 54.1**	**+0.2**
MCARA				IAmb	IAmb	18 24 58.2	
	comp=Z,37nm,0.7s						
EGAK	**Eagle**	**34.97**	**43**	P	**P**	**18 24 54.5**	**-0.1**
BCAR	**Beaver Creek A**	**35.04**	**46**	P	**P**	**18 24 56.1**	**+0.8**
BALM	**Baldy**	**35.27**	**50**	P	**P**	**18 24 58.2**	**+0.8**
BARN	**Barnard Glacie**	**35.59**	**49**	P	**P**	**18 25 00.8**	**+0.7**
WHN	**Wuhan**	**35.63**	**248**	⇓P	**P**	**18 25 01.5**	**+0.9**
CTGM	**Chitina Glacie**	**35.77**	**49**	P	**P**	**18 25 02.7**	**+1.1**
DAWY	**Dawson**	**35.86**	**44**	P	**P**	**18 25 02.5**	**+0.3**
DAWY				IAmb	IAmb	18 25 05.8	
	comp=Z,52nm,1.5s						
XAN	**Xi'an**	**36.34**	**258**	P	**P**	**18 25 06.6**	**0.0**
XAN				pmax	pmax		
	comp=Z,24nm,1.5s						
XAN				pmax	pmax		
	comp=Z,160nm,4.7s						
XAN	**Xi'an**	**36.34**	**258**	P	**P**	**18 25 06.6**	**0.0**
XAN				pmax	pmax		
	comp=Z,62nm,1.5s						
XAN	**Xi'an**	**36.34**	**258**	P	**P**	**18 25 06.6**	**0.0**
XAN				IAmb	IAmb	18 25 08.3	
	comp=Z,62nm,1.5s						
EPYK	**Eagle Plains**	**36.46**	**40**	P	**P**	**18 25 07.7**	**+0.5**
EPYK				IAmb	IAmb	18 25 09.3	
	comp=Z,68nm,0.9s						
EPYK	**Eagle Plains**	**36.46**	**40**	P	**P**	**18 25 08.5**	**+1.3**
	baz=282,SNR=12						
PCA	**Pinnacle**	**36.53**	**51**	P	**P**	**18 25 08.8**	**+1.0**
INK	**Inuvik**	**37.26**	**36**	P	**P**	**18 25 14.3**	**+0.6**
	comp=Z,25nm,0.4s,baz=307,slow=6.5,SNR=176						
INK				PP	**PP**	**18 26 52.9**	**+3.2**
	comp=Z,6.9nm,0.9s,baz=279,slow=15,SNR=5.5						
INK				ScP	**ScP**	**18 30 29.3**	**+0.3**
	comp=Z,6.0nm,0.9s,baz=256,slow=2.2,SNR=9.8						
INK	**Inuvik**	**37.26**	**36**	P	**P**	**18 25 14.3**	**+0.6**
INK				IAmb	IAmb	18 25 15.5	
	comp=Z,42nm,0.6s						
HYT	**Haines Junctio**	**37.60**	**49**	P	**P**	**18 25 18.6**	**+1.9**
TPUB	**Ta-pu**	**37.99**	**234**	P	**P**	**18 25 20.1**	**-0.3**
LZH	**Lanzhou**	**38.08**	**265**	⇑P	**P**	**18 25 22.5**	**+1.4**
LZH				pP	pP	18 26 42.6	+3.7
LZH				PP	**PP**	**18 27 02.7**	**+3.5**
LZH				sP	sP	18 27 29.4	+2.9
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,87nm,5.2s						
GTA	**Gaotai**	**38.49**	**273**	⇓P	**P**	**18 25 24.7**	**+0.3**
GTA				pP	pP	18 26 46.8	+4.5
GTA				sP	sP	18 27 28.2	-1.8
GTA				pmax	pmax		
	comp=Z,21nm,1.8s						
GTA				pmax	pmax		
	comp=Z,240nm,4.1s						
ENH	**Enshi**	**38.66**	**253**	P	**P**	**18 25 25.5**	**-0.3**
WHY	**Whitehorse**	**38.87**	**48**	P	**P**	**18 25 28.8**	**+1.6**
WHY				IAmb	IAmb	18 25 30.2	
	comp=Z,46nm,0.8s						
BESE	**Bessie Mountai**	**39.65**	**51**	P	**P**	**18 25 35.2**	**+1.7**
BESE				IAmb	IAmb	18 25 36.4	
	comp=Z,33nm,0.9s						
ZAA0	**Zalesovo Array**	**39.76**	**301**	P	**P**	**18 25 33.6**	**-0.8**
ZALV	**Zalesovo Beam**	**39.76**	**301**	P	**P**	**18 25 33.6**	**-0.8**
	comp=Z,3.0nm,0.3s,baz=64,slow=6.8,SNR=28						
ZALV				PP	**PP**	**18 27 13.8**	**-2.7**
	comp=Z,2.6nm,0.9s,baz=66,slow=8.6,SNR=3.5						
ZALV				PcP	**PcP**	**18 27 30.7**	**-0.1**
	comp=Z,3.9nm,0.7s,baz=46,slow=4.3,SNR=6.2						
ZALV				ScP	**ScP**	**18 30 38.5**	**-0.4**
	comp=Z,11nm,1.1s,baz=54,slow=3.8,SNR=13						
ZALV	**Zalesovo Beam**	**39.76**	**301**	P	**P**	**18 25 33.8**	**-0.6**
ZALV					**ScP**	**18 30 36.9**	**-2.0**
C36M	**Paulatuk**	**40.30**	**33**	P	**P**	**18 25 38.8**	**+0.3**
C36M				IAmb	IAmb	18 25 39.9	
	comp=Z,47nm,0.7s						
C36M	**Paulatuk**	**40.30**	**33**	P	**P**	**18 25 38.7**	**+0.3**
	baz=289,SNR=49						
CD2	**Chengdu**	**41.65**	**259**	⇑*i*P	**P**	**18 25 50.5**	**+0.6**
CD2				S	**S**	**18 31 31.5**	**-3.3**
CD2				pmax	pmax		
	comp=Z,30nm,0.4s						
CD2				pmax	pmax		
	comp=Z,230nm,7.7s						
DLBC	**Dease Lake**	**42.02**	**50**	P	**P**	**18 25 53.7**	**+1.2**
	comp=Z,28nm,0.8s,baz=292,slow=6.1,SNR=37						
DLBC				ScP	**ScP**	**18 30 47.5**	**-0.3**
	comp=Z,5.3nm,1.1s,baz=88,slow=13,SNR=3.9						
DLBC	**Dease Lake**	**42.02**	**50**	P	**P**	**18 25 54.3**	**+1.8**
DLBC				IAmb	IAmb	18 25 56.1	
	comp=Z,39nm,0.9s						
DLBC					**ScP**	**18 30 48.4**	**+0.6**
WMQ	**Urumqi**	**43.29**	**286**	P	**P**	**18 26 04.0**	**+1.2**
WMQ				pP	pP	18 27 24.6	+1.8
WMQ				PP	**PP**	**18 27 55.5**	**+2.6**
WMQ				pmax	pmax		
	comp=Z,23nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,140nm,5.5s						
WMQ	**Urumqi**	**43.29**	**286**	P	**P**	**18 26 03.4**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,65nm,1.4s						
WMQ	**Urumqi**	**43.29**	**286**	P	**P**	**18 26 03.4**	**+0.6**
WMQ				IAmb	IAmb	18 26 05.1	
	comp=Z,64nm,1.4s						
KURK	**Kurchatov**	**44.66**	**299**	*e*P	**P**	**18 26 13.0**	**-0.3**
KURK	**Kurchatov**	**44.66**	**299**	*ce*P	**P**	**18 26 13.0**	**-0.3**
KURK				pmax	pmax		
	comp=Z,51nm,1.2s						
KURK	**Kurchatov**	**44.66**	**299**	P	**P**	**18 26 12.6**	**-0.7**
KURK				IAmb	IAmb	18 26 14.5	
	comp=Z,67nm,1.1s						
KURK					**ScP**	**18 30 57.2**	**-1.4**
KURBB	**Kurchatov Arra**	**44.76**	**299**	P	**P**	**18 26 13.8**	**-0.2**
	comp=Z,10nm,0.5s,baz=61,slow=7.6,SNR=90						
KURBB				ScP	**ScP**	**18 30 57.6**	**-1.5**
	comp=Z,6.6nm,1.1s,baz=60,slow=3.4,SNR=13						
MK31	**Makanchi Array**	**44.76**	**293**	P	**P**	**18 26 13.8**	**-0.4**
MK31				pmax	pmax		
	comp=Z,23nm,1.2s						
MK31	**Makanchi Array**	**44.76**	**293**	P	**P**	**18 26 13.8**	**-0.4**
MKAR	**Makanchi Array**	**44.76**	**293**	P	**P**	**18 26 13.9**	**-0.2**
	comp=Z,6.8nm,0.4s,baz=61,slow=7.2,SNR=229						
MKAR				pP	**pP**	**18 27 33.5**	**-1.3**
	comp=Z,1.8nm,0.8s,baz=61,slow=10,SNR=1.4						
MKAR				ScP	**ScP**	**18 30 58.2**	**-1.0**
	comp=Z,3.7nm,1.0s,baz=49,slow=4.0,SNR=9.7						
MKAR	**Makanchi Array**	**44.76**	**293**		**ScP**	**18 30 57.7**	**-1.5**
MAKZ	**Makanchi**	**44.93**	**293**	P	**P**	**18 26 15.2**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,30nm,1.4s						
MAKZ	**Makanchi**	**44.93**	**293**	P	**P**	**18 26 15.2**	**-0.3**
RES	**Resolute Bay**	**45.85**	**20**	P	**P**	**18 26 22.2**	**0.0**
	comp=Z,5.4nm,0.4s,baz=338,slow=8.4,SNR=46						
RES				S	**S**	**18 32 32.8**	**-0.8**
	comp=Z,2.6nm,1.0s,baz=287,slow=22,SNR=18						
RES	**Resolute Bay**	**45.85**	**20**	P	**P**	**18 26 21.9**	**-0.3**
RES				pmax	pmax		
	comp=Z,16nm,0.9s						
RES	**Resolute Bay**	**45.85**	**20**	P	**P**	**18 26 21.9**	**-0.3**
YKA	**Yellowknife Ar**	**46.75**	**40**	P	**P**	**18 26 29.5**	**+0.3**
	comp=Z,41nm,0.7s,baz=300,slow=7.0,SNR=450						
YKA				ScP	**ScP**	**18 31 07.8**	**+0.7**
	comp=Z,3.5nm,0.9s,baz=299,slow=3.8,SNR=13						
YKA				S	**S**	**18 32 48.7**	**+2.2**
	comp=Z,3.2nm,1.1s,baz=302,slow=13,SNR=8.9						
BRVK	**Borovoye**	**47.72**	**306**	*e*P	**P**	**18 26 36.3**	**-0.4**
BRVK	**Borovoye**	**47.72**	**306**	*ce*P	**P**	**18 26 36.3**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,27nm,1.0s						
BRVK	**Borovoye**	**47.72**	**306**	P	**P**	**18 26 36.4**	**-0.3**
BRVK				IAmb	IAmb	18 26 37.7	
	comp=Z,47nm,1.2s						
SLVN	**Son La**	**48.69**	**250**	P	**P**	**18 26 45.1**	**+0.6**
TULEG	**Thule**	**48.96**	**12**	P	**P**	**18 26 44.4**	**-1.3**
PRZ	**Przheval'sk**	**49.54**	**290**	P	**P**	**18 26 50.9**	**+0.1**
PRZ				pmax	pmax		
	comp=Z,56nm,1.5s						
PRZ	**Przheval'sk**	**49.54**	**290**	P	**P**	**18 26 50.9**	**+0.1**
PRZ				IAmb	IAmb	18 26 53.1	
	comp=Z,56nm,1.5s						
SVE	**Sverdlovsk**	**50.10**	**314**	*e*P	**P**	**18 26 54.4**	**0.0**
SVE				pmax	pmax		
	comp=Z,60nm,1.4s						
LLLB	**Lillooet**	**50.15**	**56**	P	**P**	**18 26 56.2**	**+1.2**
LSA	**Lhasa**	**50.24**	**269**	*i* P	**P**	**18 26 57.6**	**+1.2**
	SNR=24						
LSA	**Lhasa**	**50.24**	**269**	*e*P	**P**	**18 26 57.3**	**+0.9**
LSA	**Lhasa**	**50.24**	**269**	P	**P**	**18 26 57.4**	**+0.9**
LSA				pmax	pmax		
	comp=Z,24nm,0.8s						
LSA	**Lhasa**	**50.24**	**269**	P	**P**	**18 26 57.4**	**+0.9**
KDJ	**Kajisay**	**50.47**	**291**	P	**P**	**18 26 57.4**	**-0.2**
KDJ				pmax	pmax		
	comp=Z,45nm,1.2s						
KDJ	**Kajisay**	**50.47**	**291**	P	**P**	**18 26 57.4**	**-0.2**
PGC	**Sidney**	**50.52**	**59**	P	**P**	**18 26 57.9**	**+0.3**
PGC				IAmb	IAmb	18 26 59.4	
	comp=Z,68nm,1.6s						
A04D	**Lummi Island**	**50.87**	**58**	P	**P**	**18 27 02.1**	**+1.9**
	baz=308,SNR=8.6						
ULHL	**Ulahol**	**50.94**	**291**	P	**P**	**18 27 01.3**	**+0.2**
	SNR=12						
NLWA	**Neilton Lookou**	**51.06**	**60**	P	**P**	**18 27 02.8**	**+1.0**
NLWA				IAmb	IAmb	18 27 04.5	
	comp=Z,38nm,0.9s						
ARU	**Arti**	**51.25**	**315**	P	**P**	**18 27 02.2**	**-0.8**
	comp=Z,4.1nm,0.4s,baz=54,slow=4.9,SNR=48						
ARU				PP	**PP**	**18 29 05.4**	**+0.9**
	comp=Z,0.6nm,0.5s,baz=5.2,slow=2.0,SNR=3.7						
ARU	**Arti**	**51.25**	**315**	*d i*P	**P**	**18 27 02.1**	**-0.8**
ARU						18 28 09.0	
ARU						18 29 01.0	
ARU				S	**S**	**18 33 49.3**	**+0.6**
ARU				pmax	pmax		
	comp=Z,94nm,1.2s						
ARU	**Arti**	**51.25**	**315**	P	**P**	**18 27 02.3**	**-0.6**
ARU				IAmb	IAmb	18 27 03.5	
	comp=Z,79nm,1.1s						
USP	**Ospenovka**	**51.29**	**293**	P	**P**	**18 27 03.9**	**+0.4**
	SNR=32						
CHMS	**Chumysh**	**51.32**	**293**	P	**P**	**18 27 03.7**	**0.0**
	SNR=13						
DAG	**Danmarks Havn**	**51.39**	**358**	*i* P	**P**	**18 27 02.0**	**-1.6**
	comp=Z,3.8nm,0.8s						
DAG	**Danmarks Havn**	**51.39**	**358**	*i* P	**P**	**18 27 02.0**	**-1.6**
DAG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
D03D	**Eldon**	**51.39**	**60**	P	**P**	**18 27 06.2**	**+2.1**
	baz=308,SNR=11						
KBK	**Karagaybulak**	**51.42**	**293**	P	**P**	**18 27 05.0**	**+0.4**
	SNR=9.6						
B05A	**Bryant**	**51.47**	**58**	P	**P**	**18 27 06.3**	**+1.7**
	baz=308,SNR=10						
FRU1	**Bishkek**	**51.50**	**293**	P	**P**	**18 27 05.3**	**+0.2**
FRU1				pmax	pmax		
	comp=Z,68nm,1.3s						
FRU1	**Bishkek**	**51.50**	**293**	P	**P**	**18 27 05.3**	**+0.2**
FRU1				IAmb	IAmb	18 27 06.8	
	comp=Z,68nm,1.2s						
NRN	**Naryn**	**51.59**	**291**	P	**P**	**18 27 06.1**	**+0.1**
NRN				pmax	pmax		
	comp=Z,13nm,1.4s						
NRN	**Naryn**	**51.59**	**291**	P	**P**	**18 27 06.1**	**+0.1**
KZA	**Kyzart**	**51.61**	**292**	P	**P**	**18 27 07.5**	**+1.2**
	SNR=9.7						
AAK	**Ala-Archa**	**51.69**	**293**	P	**P**	**18 27 06.7**	**+0.1**
	comp=Z,5.3nm,0.5s,baz=77,slow=4.1,SNR=37						
AAK	**Ala-Archa**	**51.69**	**293**	P	**P**	**18 27 06.9**	**+0.3**
	SNR=15						
AAK	**Ala-Archa**	**51.69**	**293**	*i* P	**P**	**18 27 06.7**	**+0.1**
	SNR=29						
AAK	**Ala-Archa**	**51.69**	**293**	*e*P	**P**	**18 27 06.5**	**-0.1**
AAK	**Ala-Archa**	**51.69**	**293**	*ce*P	**P**	**18 27 06.5**	**-0.1**
AAK				pmax	pmax		
	comp=Z,32nm,1.3s						
AAK	**Ala-Archa**	**51.69**	**293**	P	**P**	**18 27 06.7**	**+0.1**
E03A	**Lebam**	**51.75**	**61**	P	**P**	**18 27 08.6**	**+1.9**
E03A				IAmb	IAmb	18 27 09.9	
	comp=Z,55nm,1.0s						
D04E	**Lakebay**	**51.78**	**60**	P	**P**	**18 27 09.5**	**+2.6**
	baz=309						
UCH	**Uchtor**	**51.94**	**292**	P	**P**	**18 27 09.5**	**+0.7**
	SNR=6.2						
LVZ	**Lovozero**	**51.98**	**335**	*i* P	**P**	**18 27 06.9**	**-1.2**
LVZ				pmax	pmax		
	comp=Z,28nm,1.1s						
EKS2	**Erkin-Say**	**52.08**	**293**	P	**P**	**18 27 09.7**	**+0.3**
	SNR=31						
F03A	**Seaside**	**52.14**	**61**	P	**P**	**18 27 11.6**	**+2.1**
F03A				IAmb	IAmb	18 27 12.2	
	comp=Z,53nm,1.0s						
D05A	**Enumclaw**	**52.20**	**59**	P	**P**	**18 27 11.5**	**+1.6**
D05A				IAmb	IAmb	18 27 12.8	
	comp=Z,49nm,1.1s						
E04D	**Cinebar**	**52.28**	**60**	P	**P**	**18 27 12.8**	**+2.3**
	baz=309,SNR=11						
C06D	**Leavenworth**	**52.31**	**58**	P	**P**	**18 27 12.7**	**+1.9**
	baz=309						
AML	**Almayashu**	**52.47**	**293**	P	**P**	**18 27 12.6**	**+0.1**
	SNR=14						
LON	**Longmire**	**52.57**	**60**	P	**P**	**18 27 12.7**	**0.0**
LON	**Longmire**	**52.57**	**60**	P	**P**	**18 27 12.7**	**0.0**
UBPT	**Khong Chiam**	**52.62**	**244**	P	**P**	**18 27 14.5**	**+1.1**
UBPT				IAmb	IAmb	18 27 15.7	
	comp=Z,76nm,1.7s						
SHL	**Shillong**	**52.74**	**265**	P	**P**	**18 27 14.1**	**-0.3**
	SNR=32						
SHL	**Shillong**	**52.74**	**265**	P	**P**	**18 27 14.5**	**+0.1**
SHL				pmax	pmax		
	comp=Z,76nm,0.9s						
SHL	**Shillong**	**52.74**	**265**	P	**P**	**18 27 14.5**	**+0.1**
F04A	**Amboy**	**52.76**	**61**	P	**P**	**18 27 14.9**	**+0.9**
F04A				IAmb	IAmb	18 27 16.2	
	comp=Z,33nm,0.8s						
KSH	**Kashi**	**52.85**	**289**	P	P	18 27 19.3	+4.4
KSH				pP	pP	18 28 44.6	+5.6
KSH				PP	sP	18 29 26.2	+1.2
KSH				S	**S**	**18 34 13.1**	**+2.2**
KSH				SS	**SS**	**18 38 01.6**	**+5.6**
KSH				pmax	pmax		
	comp=Z,300nm,1.8s						
KSH				pmax	pmax		
	comp=Z,580nm,7.6s						
LTY	**Liberty**	**52.85**	**59**	P	**P**	**18 27 15.2**	**+0.4**
B08A	**Colville Reser**	**52.85**	**57**	P	**P**	**18 27 15.1**	**+0.4**
B08A				IAmb	IAmb	18 27 16.8	
	comp=Z,42nm,0.9s						
ARCES	**ARCESS Array B**	**52.92**	**340**	P	**P**	**18 27 13.8**	**-1.0**
	comp=Z,15nm,1.0s,baz=44,slow=8.1,SNR=19						
PRGR	**Permogore**	**53.02**	**325**	*e*P	**P**	**18 27 13.8**	**-1.8**
PRGR				pmax	pmax		
	comp=Z,42nm,1.1s						
I02D	**Swisshome**	**53.14**	**63**	P	**P**	**18 27 19.0**	**+2.2**
	baz=310						
F05D	**White Salmon**	**53.30**	**60**	P	**P**	**18 27 20.3**	**+2.3**
	baz=310						
ARSB	**Arslanbob**	**53.40**	**292**	P	**P**	**18 27 19.1**	**+0.2**
ARSB				pmax	pmax		
	comp=Z,81nm,1.9s						
ARSB	**Arslanbob**	**53.40**	**292**	P	**P**	**18 27 19.1**	**+0.2**
ARSB				IAmb	IAmb	18 27 20.7	
	comp=Z,81nm,1.9s						
H04D	**Lebanon**	**53.48**	**62**	P	**P**	**18 27 21.8**	**+2.6**
	baz=310						
CHTO	**Chiang Mai**	**53.55**	**253**	P	**P**	**18 27 20.6**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,50nm,1.3s						
CHTO	**Chiang Mai**	**53.55**	**253**	P	**P**	**18 27 20.6**	**+0.5**
CHTO				IAmb	IAmb	18 27 22.0	
	comp=Z,50nm,1.3s						
KK31	**Karatay Array**	**53.64**	**296**	P	**P**	**18 27 20.2**	**-0.2**
KK31				pmax	pmax		
	comp=Z,39nm,1.4s						
KK31	**Karatay Array**	**53.64**	**296**	P	**P**	**18 27 20.2**	**-0.2**
KKAR	**Karatay Array**	**53.64**	**296**	P	**P**	**18 27 20.0**	**-0.4**
KKAR				pmax	pmax		
	comp=Z,39nm,1.4s						
KKAR	**Karatay Array**	**53.64**	**296**	P	**P**	**18 27 20.0**	**-0.4**
KKAR	**Karatay Array**	**53.64**	**296**	P	**P**	**18 27 19.6**	**-0.8**
KEBM	**Edson Butte**	**53.67**	**65**	P	**P**	**18 27 22.8**	**+2.1**
KEBM				IAmb	IAmb	18 27 24.1	
	comp=Z,70nm,1.0s						
H04A	**Detroit Lake**	**53.68**	**62**	P	**P**	**18 27 21.3**	**+0.6**
I03D	**Drain, OR**	**53.68**	**63**	P	**P**	**18 27 23.4**	**+2.7**
	baz=311						
J01E	**Myrtle Point**	**53.71**	**64**	P	**P**	**18 27 23.8**	**+3.0**
	baz=311,SNR=5.1						
E07A	**Sunnyside**	**53.73**	**59**	P	**P**	**18 27 22.3**	**+1.3**
TMCR	**Tamitsa**	**53.74**	**331**	*e*P	**P**	**18 27 19.9**	**-0.8**
TMCR				pmax	pmax		
	comp=Z,23nm,1.0s						
C09A	**Chrisman Ranch**	**53.75**	**57**	P	**P**	**18 27 22.0**	**+0.9**
G05D	**Wamic, OR**	**53.79**	**61**	P	**P**	**18 27 23.6**	**+2.1**
	baz=310						
CMAR	**Chiang Mai Arr**	**53.83**	**253**	P	**P**	**18 27 23.3**	**+1.2**
	comp=Z,10nm,1.0s,baz=24,slow=7.5,SNR=46						
CMAR				PcP	**PcP**	**18 28 22.9**	**+1.4**
	comp=Z,2.5nm,0.8s,baz=6.6,slow=2.8,SNR=8.0						
CMAR				pP	**pP**	**18 28 48.6**	**+2.1**
	comp=Z,2.5nm,1.1s,baz=25,slow=7.6,SNR=3.8						
CMAR	**Chiang Mai Arr**	**53.83**	**253**	*i* P	**P**	**18 27 23.2**	**+1.2**
CMAR				pmax	pmax		
	comp=Z,11nm,1.0s						

CMAR	**Chiang Mai Arr**	**53.83**	**253**	P	**P**	**18 27 22.6**	**+0.5**
D08A	**Wollman Farm,**	**53.90**	**58**	P	**P**	**18 27 22.6**	**+0.4**
HAWA	**Hanford**	**54.00**	**59**	P	**P**	**18 27 23.5**	**+0.6**
TAPN	**Taplejung**	**54.03**	**269**	*e*P	**P**	**18 27 24.0**	**+0.2**
NEW	**Newport**	**54.05**	**56**	P	**P**	**18 27 23.7**	**+0.4**
NEW				pmax	pmax		
	comp=Z,34nm,1.2s						
NEW	**Newport**	**54.05**	**56**	P	**P**	**18 27 23.7**	**+0.4**
NEW	**Newport**	**54.05**	**56**	P	**P**	**18 27 24.6**	**+1.3**
	baz=310,SNR=16						
F07A	**Phinny Hill Vi**	**54.12**	**59**	P	**P**	**18 27 24.6**	**+0.9**
F07A				IAmb	IAmb	18 27 26.3	
	comp=Z,43nm,0.8s						
I04A	**Tendick Farm,**	**54.14**	**63**	P	**P**	**18 27 26.3**	**+2.3**
	baz=311,SNR=8.9						
K02D	**Willamette Mer**	**54.16**	**65**	P	**P**	**18 27 26.8**	**+2.6**
	baz=311,SNR=11						
KBO	**Bosley Butte**	**54.16**	**65**	P	**P**	**18 27 26.6**	**+2.4**
E08A	**Dider Farm, El**	**54.19**	**58**	P	**P**	**18 27 24.8**	**+0.6**
I05D	**Terrebonne, OR**	**54.37**	**62**	P	**P**	**18 27 27.9**	**+2.2**
	baz=311						
L02E	**Cave Junction**	**54.55**	**65**	P	**P**	**18 27 29.7**	**+2.8**
	baz=311,SNR=9.7						
ODAN	**Odare**	**54.58**	**269**	*e*P	**P**	**18 27 27.6**	**0.0**
HUMO	**Hull Mountain**	**54.61**	**64**	P	**P**	**18 27 29.3**	**+1.9**
E09A	**Wood Farm, Sta**	**54.65**	**58**	P	**P**	**18 27 28.2**	**+0.7**
E09A				IAmb	IAmb	18 27 29.7	
	comp=Z,37nm,0.9s						
J04D	**Umpqua Nationa**	**54.66**	**63**	P	**P**	**18 27 29.9**	**+2.0**
	baz=311,SNR=19						
JIRN	**Jiri**	**54.75**	**271**	*e*P	**P**	**18 27 29.0**	**+0.1**
	comp=Z,152nm,0.8s						
GUN	**Gumba**	**54.76**	**271**	*e*P	**P**	**18 27 28.9**	**-0.1**
	comp=Z,98nm,0.9s						
KRMB	**Red Mountain**	**54.79**	**66**	P	**P**	**18 27 29.7**	**+1.0**
PINE	**Pine Mountain**	**54.94**	**62**	P	**P**	**18 27 31.0**	**+1.1**
PINE				IAmb	IAmb	18 27 33.2	
	comp=Z,53nm,1.0s						
RAMN	**Ramite**	**55.00**	**270**	*e*P	**P**	**18 27 30.6**	**0.0**
	comp=Z,259nm,0.7s						
BRDH	**Bariadhala**	**55.02**	**262**	P	**P**	**18 27 32.5**	**+2.1**
	comp=Z,120nm,0.3s,baz=78,slow=11,SNR=6.5						
G08A	**Pilot Rock**	**55.02**	**59**	P	**P**	**18 27 31.0**	**+0.7**
J05D	**Fort Rock, OR**	**55.12**	**63**	P	**P**	**18 27 33.3**	**+2.2**
	baz=312,SNR=52						
WALA	**Waterton Lakes**	**55.14**	**53**	P	**P**	**18 27 31.8**	**+0.7**
WALA				IAmb	IAmb	18 27 33.1	
	comp=Z,33nm,0.8s						
ABKAR	**Akbulak array**	**55.19**	**307**	P	**P**	**18 27 31.0**	**-0.2**
KKN	**Kakani**	**55.22**	**272**	*e*P	**P**	**18 27 32.2**	**+0.1**
	comp=Z,89nm,0.5s						
L04D	**Klamath Falls**	**55.23**	**64**	P	**P**	**18 27 33.9**	**+2.1**
	baz=312,SNR=25						
K04D	**Chiloquin, OR**	**55.27**	**63**	P	**P**	**18 27 34.3**	**+2.2**
	baz=312,SNR=5.3						
PKI	**Pulchoki**	**55.29**	**271**	*e*P	**P**	**18 27 32.5**	**-0.2**
PKIN	**Phulchoki**	**55.30**	**271**	*e*P	**P**	**18 27 32.6**	**-0.1**
KHMM	**Horse Mountain**	**55.32**	**66**	P	**P**	**18 27 33.8**	**+1.3**
KHMM				IAmb	IAmb	18 27 36.2	
	comp=Z,54nm,1.0s						
YBH	**Yreka Blue Hor**	**55.33**	**65**	P	**P**	**18 27 34.1**	**+1.6**
	comp=Z,20nm,0.8s,baz=349,slow=3.9,SNR=45						
YBH	**Yreka Blue Hor**	**55.33**	**65**	P	**P**	**18 27 33.5**	**+1.0**
YBH				pmax	pmax		
	comp=Z,28nm,0.9s						
YBH	**Yreka Blue Hor**	**55.33**	**65**	P	**P**	**18 27 33.5**	**+1.0**
SUMG	**Summit**	**55.44**	**4**	*i*P	**P**	**18 27 32.0**	**-1.2**
	comp=Z,37nm,1.1s						
SUMG	**Summit**	**55.44**	**4**	P	**P**	**18 27 32.8**	**-0.4**
SUMG				pmax	pmax		
	comp=Z,26nm,1.6s						
SUMG	**Summit**	**55.44**	**4**	P	**P**	**18 27 32.8**	**-0.4**
DMN	**Daman**	**55.45**	**272**	*e*P	**P**	**18 27 34.2**	**+0.4**
	comp=Z,235nm,0.9s						
GKN	**Gorkha**	**55.46**	**272**	*e*P	**P**	**18 27 33.9**	**+0.2**
BTK	**Batken**	**55.47**	**293**	P	**P**	**18 27 33.2**	**-0.3**
BTK				pmax	pmax		
	comp=Z,68nm,1.3s						
BTK	**Batken**	**55.47**	**293**	P	**P**	**18 27 33.2**	**-0.3**
BTK				IAmb	IAmb	18 27 34.8	
	comp=Z,68nm,1.2s						
M02C	**Callahan**	**55.47**	**65**	P	**P**	**18 27 36.5**	**+3.0**
	baz=312,SNR=8.6						
F10A	**Beach Ranch, E**	**55.49**	**58**	P	**P**	**18 27 34.1**	**+0.5**
I07A	**Izee**	**55.53**	**61**	P	**P**	**18 27 34.1**	**+0.2**
KLMR	**Klimovskoe**	**55.67**	**327**	*e*P	**P**	**18 27 30.3**	**-4.1**
KLMR				pmax	pmax		
	comp=Z,62nm,1.4s						
KLMR	**Klimovskoe**	**55.67**	**327**	*e*P	**P**	**18 27 30.3**	**-4.1**
KLMR				AMP		18 27 35.1	
	comp=Z,62nm,1.4s						
DANN	**Dangsing**	**55.76**	**273**	*e*P	**P**	**18 27 36.2**	**+0.3**
	comp=Z,158nm,0.6s						
KMRM	**Mail Ridge**	**55.77**	**67**	P	**P**	**18 27 36.9**	**+1.3**
KMRM				IAmb	IAmb	18 27 39.2	
	comp=Z,31nm,0.8s						
M04C	**Macdoel**	**55.78**	**64**	P	**P**	**18 27 37.9**	**+2.2**
	baz=312,SNR=14						
JTMT	**Jette**	**55.82**	**55**	P	**P**	**18 27 37.2**	**+1.2**
JTMT				IAmb	IAmb	18 27 38.4	
	comp=Z,38nm,0.9s						
N02D	**Trinity Center**	**55.83**	**66**	P	**P**	**18 27 38.3**	**+2.3**
	baz=312,SNR=9.2						
WDC	**Whiskeytown Da**	**56.19**	**66**	P	**P**	**18 27 39.7**	**+1.3**
WDC				pmax	pmax		
	comp=Z,19nm,1.0s						
WDC	**Whiskeytown Da**	**56.19**	**66**	P	**P**	**18 27 39.7**	**+1.3**
BMO	**Blue Mountains**	**56.19**	**59**	P	**P**	**18 27 39.0**	**+0.5**
BMO				pmax	pmax		
	comp=Z,19nm,1.0s						
BMO	**Blue Mountains**	**56.19**	**59**	P	**P**	**18 27 39.0**	**+0.5**
O02D	**Mt. Diablo Mer**	**56.32**	**66**	P	**P**	**18 27 41.5**	**+2.1**
	baz=313,SNR=14						
GAR	**Garm**	**56.47**	**292**	P	**P**	**18 27 40.4**	**-0.2**
MOD	**Modoc Plateau**	**56.55**	**63**	P	**P**	**18 27 42.4**	**+1.3**
J08A	**Circle Bar Ran**	**56.57**	**61**	P	**P**	**18 27 42.5**	**+1.3**
J08A				IAmb	IAmb	18 27 44.3	
	comp=Z,33nm,0.9s						
MSO	**Missoula**	**56.61**	**55**	P	**P**	**18 27 42.1**	**+0.7**
MSO				IAmb	IAmb	18 27 43.6	
	comp=Z,42nm,0.9s						
MSO	**Missoula**	**56.61**	**55**	P	**P**	**18 27 42.4**	**+0.9**
	baz=313,SNR=29						
FFC	**Flin Flon**	**56.73**	**42**	P	**P**	**18 27 42.2**	**+0.3**
FFC				pmax	pmax		
	comp=Z,42nm,0.8s						
FFC	**Flin Flon**	**56.73**	**42**	P	**P**	**18 27 42.2**	**+0.3**
FFC				IAmb	IAmb	18 27 43.7	
	comp=Z,42nm,0.8s						
O03E	**Paynes Creek**	**56.80**	**66**	P	**P**	**18 27 44.8**	**+2.0**
	baz=313,SNR=10.0						
FCC	**Fort Churchill**	**56.87**	**35**	P	**P**	**18 27 42.5**	**-0.3**
FCC	**Fort Churchill**	**56.87**	**35**	P	**P**	**18 27 42.5**	**-0.3**
WVOR	**Wild Horse Val**	**57.10**	**62**	P	**P**	**18 27 46.4**	**+1.5**
WVOR				pmax	pmax		
	comp=Z,43nm,1.1s						
WVOR	**Wild Horse Val**	**57.10**	**62**	P	**P**	**18 27 46.4**	**+1.5**
WVOR				IAmb	IAmb	18 27 47.9	
	comp=Z,43nm,1.1s						
CHGR	**Chuyangaron**	**57.36**	**292**	P	**P**	**18 27 46.2**	**-0.5**
ORV	**Oroville**	**57.47**	**66**	P	**P**	**18 27 48.0**	**+0.7**
ORV				pmax	pmax		
	comp=Z,20nm,0.9s						
ORV	**Oroville**	**57.47**	**66**	P	**P**	**18 27 48.0**	**+0.7**
MRSI	**Marisa**	**57.66**	**218**	P	**P**	**18 27 49.2**	**+0.3**
	comp=Z,28nm,1.4s						
EGMT	**Eagleton**	**57.88**	**52**	P	**P**	**18 27 50.4**	**+0.3**
EGMT				IAmb	IAmb	18 27 52.1	
	comp=Z,56nm,1.2s						
EGMT	**Eagleton**	**57.88**	**52**	P	**P**	**18 27 51.4**	**+1.4**
	baz=314,SNR=13						
BEKR	**Beckworth**	**57.90**	**65**	P	**P**	**18 27 51.2**	**+0.7**
BEKR				IAmb	IAmb	18 27 53.0	
	comp=Z,30nm,1.0s						
MFID	**Camas Ranch**	**57.95**	**59**	P	**P**	**18 27 51.7**	**+1.0**
MFID				IAmb	IAmb	18 27 53.4	
	comp=Z,54nm,1.4s						
AFDM	**Forest Hills D**	**58.19**	**66**	P	**P**	**18 27 52.8**	**+0.6**
DLMT	**Dillon**	**58.30**	**56**	P	**P**	**18 27 54.6**	**+1.6**
NIL	**Nilore**	**58.43**	**285**	P	**P**	**18 27 54.4**	**+0.4**
NIL				pmax	pmax		
	comp=Z,124nm,1.1s						
NIL	**Nilore**	**58.43**	**285**	P	**P**	**18 27 54.4**	**+0.4**
MCMT	**McKenzie Canyo**	**58.54**	**56**	P	**P**	**18 27 55.8**	**+1.0**
PAHR	**Pah Rah Range**	**58.56**	**65**	P	**P**	**18 27 56.2**	**+1.2**
PAHR				IAmb	IAmb	18 27 57.6	
	comp=Z,37nm,1.0s						
RUBR	**Rubicon Trail**	**58.58**	**66**	P	**P**	**18 27 56.1**	**+1.0**
PNTR	**Pine Nut**	**58.86**	**65**	P	**P**	**18 27 59.3**	**+2.2**
PNTR				IAmb	IAmb	18 28 00.1	
	comp=Z,32nm,0.9s						
YERR	**Yerington**	**59.13**	**65**	P	**P**	**18 28 00.5**	**+1.6**
YERR				IAmb	IAmb	18 28 01.8	
	comp=Z,39nm,0.9s						
CMB	**Columbia Colle**	**59.15**	**67**	P	**P**	**18 28 00.4**	**+1.5**
CMB				pmax	pmax		
	comp=Z,35nm,1.2s						
CMB	**Columbia Colle**	**59.15**	**67**	P	**P**	**18 28 00.3**	**+1.5**
CMB				IAmb	IAmb	18 28 01.6	
	comp=Z,35nm,1.1s						
QLMT	**Earthquake Lak**	**59.26**	**56**	P	**P**	**18 28 01.0**	**+1.3**
FIA1	**FINESS Array S**	**59.32**	**334**	P	**P**	**18 27 58.8**	**-0.7**
FINES	**FINESS Array B**	**59.32**	**334**	P	**P**	**18 27 58.5**	**-1.1**
	comp=Z,5.0nm,0.6s,baz=31,slow=6.5,SNR=28						
FINES	**FINESS Array B**	**59.32**	**334**	P	**P**	**18 27 58.6**	**-0.9**
FINES	**FINESS Array B**	**59.32**	**334**	P	**P**	**18 27 58.6**	**-0.9**
YHL	**Hebgen Lake**	**59.37**	**55**	P	**P**	**18 28 01.6**	**+1.1**
SAO	**San Andreas Ge**	**59.43**	**68**	P	**P**	**18 28 01.7**	**+1.0**
SAO				pmax	pmax		
	comp=Z,19nm,1.2s						
SAO	**San Andreas Ge**	**59.43**	**68**	P	**P**	**18 28 01.7**	**+1.0**
YHB	**Horse Butte**	**59.44**	**55**	P	**P**	**18 28 02.3**	**+1.4**
PUL	**Pulkovo**	**59.45**	**330**	*e*P	**P**	**18 27 59.9**	**-0.5**
PUL	**Pulkovo**	**59.45**	**330**	*i* P	**P**	**18 27 59.9**	**-0.5**
PUL				pmax	pmax		
	comp=Z,50nm,0.8s						
GCMT	**Greycliff**	**59.48**	**54**	P	**P**	**18 28 02.5**	**+1.5**
YHH	**Holmes Hill**	**59.58**	**55**	P	**P**	**18 28 03.2**	**+1.2**
YMR	**Madison River**	**59.61**	**55**	P	**P**	**18 28 03.5**	**+1.5**
YNR	**Norris Junctio**	**59.72**	**55**	P	**P**	**18 28 04.0**	**+1.2**
KVN	**Kaiserville**	**59.73**	**64**	P	**P**	**18 28 04.2**	**+1.3**
KVN				pmax	pmax		
	comp=Z,29nm,0.9s						
KVN	**Kaiserville**	**59.73**	**64**	P	**P**	**18 28 04.2**	**+1.3**
KVN				IAmb	IAmb	18 28 05.8	
	comp=Z,29nm,0.9s						
RYN	**Ryan**	**59.79**	**65**	P	**P**	**18 28 04.5**	**+1.3**
YUF	**Upper Falls**	**59.81**	**55**	P	**P**	**18 28 04.5**	**+1.1**
YNE	**Yellowstone No**	**59.86**	**55**	P	**P**	**18 28 04.7**	**+1.0**
LKWY	**Lake**	**59.97**	**55**	P	**P**	**18 28 05.2**	**+0.7**
LKWY				pmax	pmax		
	comp=Z,25nm,0.9s						
LKWY	**Lake**	**59.97**	**55**	P	**P**	**18 28 05.2**	**+0.7**
YMP	**Mirror Lake Pl**	**59.97**	**55**	P	**P**	**18 28 04.6**	**0.0**
YPP	**Pitchstone Pla**	**59.97**	**56**	P	**P**	**18 28 05.7**	**+1.1**
H17A	**Grant Village**	**60.00**	**55**	P	**P**	**18 28 07.3**	**+2.6**
H17A				IAmb	IAmb	18 28 08.9	
	comp=Z,43nm,1.0s						
H17A	**Grant Village**	**60.00**	**55**	P	**P**	**18 28 07.6**	**+2.9**
	baz=315,SNR=45						
SBUM	**Sibu**	**60.03**	**229**	P	**P**	**18 28 06.2**	**+1.4**
NVAR	**Mina Array Bea**	**60.05**	**65**	P	**P**	**18 28 06.6**	**+1.5**
	comp=Z,15nm,0.8s,baz=298,slow=6.5,SNR=78						
NVAR				pP	**pP**	**18 29 33.1**	**+0.8**
	comp=Z,1.4nm,0.7s,baz=295,slow=6.7,SNR=3.6						
NVAR	**Mina Array Bea**	**60.05**	**65**	P	**P**	**18 28 05.7**	**+0.6**
FRB	**Frobisher Bay**	**60.07**	**20**	P	**P**	**18 28 02.7**	**-1.7**
	comp=Z,2.5nm,0.3s,baz=328,slow=7.6,SNR=8.7						
FRB				pP	**pP**	**18 29 30.6**	**-0.9**
	comp=Z,5.7nm,0.9s,baz=335,slow=9.2,SNR=4.8						
ELK	**Elko**	**60.11**	**61**	P	**P**	**18 28 06.1**	**+0.6**
ELK				pmax	pmax		
	comp=Z,21nm,1.3s						
ELK	**Elko**	**60.11**	**61**	P	**P**	**18 28 06.1**	**+0.6**
NV11	**Mina Array Sit**	**60.13**	**65**	P	**P**	**18 28 06.7**	**+1.2**
RLMT	**Red Lodge**	**60.15**	**54**	P	**P**	**18 28 06.8**	**+1.1**
RLMT				IAmb	IAmb	18 28 08.6	
	comp=Z,69nm,1.2s						
RLMT	**Red Lodge**	**60.15**	**54**	P	**P**	**18 28 07.2**	**+1.6**
	baz=315,SNR=41						
FLWY	**Flagg Ranch**	**60.16**	**56**	P	**P**	**18 28 07.2**	**+1.5**
MOS	**Moscow**	**60.17**	**324**	*e*P	**P**	**18 28 02.7**	**-2.6**
MOS				*e*		18 30 16.0	
DGMT	**Dagmar**	**60.20**	**48**	P	**P**	**18 28 06.2**	**+0.5**
DGMT				IAmb	IAmb	18 28 07.7	
	comp=Z,52nm,0.9s						
DGMT	**Dagmar**	**60.20**	**48**	P	**P**	**18 28 06.8**	**+1.0**
	baz=316,SNR=11						
OMMB	**Old Mammoth Mi**	**60.23**	**66**	P	**P**	**18 28 06.5**	**+0.1**
FXWY	**Fox Creek**	**60.30**	**56**	P	**P**	**18 28 08.4**	**+1.6**
LAO	**LASA Array**	**60.52**	**51**	P	**P**	**18 28 08.3**	**+0.3**
LAO				IAmb	IAmb	18 28 10.6	
	comp=Z,58nm,1.1s						
LAO	**LASA Array**	**60.52**	**51**	P	**P**	**18 28 09.7**	**+1.7**
	baz=316						
SNOW	**Snow King Moun**	**60.57**	**56**	P	**P**	**18 28 09.8**	**+1.2**
SNOW				IAmb	IAmb	18 28 11.9	
	comp=Z,28nm,1.0s						
REDW	**Red Top Meadow**	**60.59**	**56**	P	**P**	**18 28 10.2**	**+1.5**
REDW				IAmb	IAmb	18 28 11.8	
	comp=Z,45nm,1.1s						
HVU	**Hansel Valley**	**60.70**	**59**	P	**P**	**18 28 11.4**	**+2.1**
HVU				pmax	pmax		
	comp=Z,14nm,0.9s						
HVU	**Hansel Valley**	**60.70**	**59**	P	**P**	**18 28 11.4**	**+2.1**
AHID	**Auburn Hatcher**	**60.88**	**57**	P	**P**	**18 28 11.8**	**+1.2**
AHID				IAmb	IAmb	18 28 13.1	
	comp=Z,27nm,1.1s						
OBN	**Obninsk**	**61.03**	**324**	*e*P	**P**	**18 28 09.5**	**-1.5**
OBN	**Obninsk**	**61.03**	**324**	⇓*e*P	**P**	**18 28 09.8**	**-1.2**
OBN						18 28 48.0	
OBN						18 30 31.0	
OBN				*e*S	**S**	**18 35 54.3**	**-1.5**
OBN				*e*		18 36 24.5	
OBN				pmax	pmax		
	comp=Z,28nm,1.4s						
TIN	**Tinemaha, Big**	**61.06**	**66**	P	**P**	**18 28 14.3**	**+2.7**
	baz=315						
BGU	**Big Grassy Mou**	**61.17**	**60**	P	**P**	**18 28 13.8**	**+1.4**
SPUT	**South Promonto**	**61.21**	**59**	P	**P**	**18 28 13.8**	**+1.1**
SMMC	**Simmler**	**61.28**	**69**	P	**P**	**18 28 15.8**	**+2.7**
	baz=316						
PMG	**Port Moresby**	**61.39**	**187**	P	**P**	**18 28 14.8**	**+1.0**
	comp=Z,6.0nm,0.9s,baz=22,slow=4.2,SNR=3.5						
VES	**Vestal, Richgr**	**61.43**	**68**	P	**P**	**18 28 15.5**	**+1.5**
	baz=316						
HWUT	**Hardware Ranch**	**61.47**	**58**	P	**P**	**18 28 15.3**	**+0.9**
HWUT				IAmb	IAmb	18 28 17.2	
	comp=Z,24nm,0.8s						
CWC	**Cottonwood Cre**	**61.58**	**66**	P	**P**	**18 28 17.1**	**+1.9**
	baz=316						
GRAC	**Grapevine Rang**	**61.58**	**66**	P	**P**	**18 28 17.0**	**+1.9**
	baz=316,SNR=8.0						
R11A	**Troy Canyon, C**	**61.62**	**63**	P	**P**	**18 28 16.6**	**+1.1**
	baz=316						
BW06	**Boulder Array**	**61.68**	**56**	P	**P**	**18 28 16.7**	**+0.9**
BW06				IAmb	IAmb	18 28 18.1	
	comp=Z,32nm,0.8s						
BW06	**Boulder Array**	**61.68**	**56**	P	**P**	**18 28 16.9**	**+1.0**
	baz=316,SNR=30						
PD31	**Pinedale Array**	**61.68**	**56**	P	**P**	**18 28 16.6**	**+0.8**
PD31				IAmb	IAmb	18 28 18.1	
	comp=Z,30nm,0.8s						
PDAR	**Pinedale Array**	**61.68**	**56**	P	**P**	**18 28 16.6**	**+0.8**
	comp=Z,27nm,0.8s,baz=300,slow=1.2,SNR=165						
PDAR				pP	**pP**	**18 29 45.3**	**+1.7**
	comp=Z,4.9nm,1.0s,baz=304,slow=2.9,SNR=5.5						
PDAR	**Pinedale Array**	**61.68**	**56**	P	**P**	**18 28 16.5**	**+0.6**
PKM	**Mcpherson Peak**	**61.69**	**69**	P	**P**	**18 28 17.7**	**+1.7**
	baz=316,SNR=5.4						
DUG	**Dugway, Tooele**	**61.81**	**60**	P	**P**	**18 28 18.1**	**+1.4**
DUG				pmax	pmax		
	comp=Z,36nm,1.0s						
DUG	**Dugway, Tooele**	**61.81**	**60**	P	**P**	**18 28 18.1**	**+1.4**
DUG				IAmb	IAmb	18 28 19.6	
	comp=Z,36nm,1.0s						
DUG	**Dugway, Tooele**	**61.81**	**60**	P	**P**	**18 28 18.4**	**+1.8**
	baz=316,SNR=18						
TCUT	**Toone Canyon**	**61.90**	**59**	P	**P**	**18 28 17.6**	**+0.2**
ISA	**Isabella, Lake**	**61.91**	**67**	P	**P**	**18 28 18.1**	**+0.9**
ISA				pmax	pmax		
	comp=Z,13nm,1.0s						
ISA	**Isabella, Lake**	**61.91**	**67**	P	**P**	**18 28 18.1**	**+0.9**
ISA	**Isabella, Lake**	**61.91**	**67**	P	**P**	**18 28 18.5**	**+1.2**
	baz=316,SNR=5.1						
CTU	**Camp Tracy**	**62.02**	**59**	P	**P**	**18 28 19.1**	**+1.0**
VRH	**Novokhopyorsk**	**62.05**	**318**	*e*P	**P**	**18 28 14.7**	**-3.1**
VRH				*e*S	**S**	**18 36 03.7**	**-4.8**
VRH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VRH				smax	smax		
	comp=E,330nm,6.0s						
LPSR	**Galich'ya Gora**	**62.09**	**321**	*e*P	**P**	**18 28 16.1**	**-2.0**
LPSR				*e*S	**S**	**18 36 05.5**	**-3.6**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LPSR				smax	smax		
	comp=E,30nm,1.8s						
MPMC	**Manual Prospec**	**62.18**	**66**	P	**P**	**18 28 20.6**	**+1.3**
	baz=316,SNR=15						
FURC	**Furnace Creek,**	**62.24**	**66**	P	**P**	**18 28 21.2**	**+1.9**
	baz=316,SNR=17						
TPNV	**Topopah Spring**	**62.24**	**65**	P	**P**	**18 28 20.7**	**+1.1**
TPNV				pmax	pmax		
	comp=Z,32nm,0.9s						
TPNV	**Topopah Spring**	**62.24**	**65**	P	**P**	**18 28 20.7**	**+1.1**
TPNV				IAmb	IAmb	18 28 22.3	
	comp=Z,32nm,0.9s						
TPNV	**Topopah Spring**	**62.24**	**65**	P	**P**	**18 28 21.1**	**+1.5**
	baz=316,SNR=22						
JLU	**Jordanelle**	**62.24**	**59**	P	**P**	**18 28 20.8**	**+1.1**
NLU	**North Lily Min**	**62.38**	**60**	P	**P**	**18 28 21.9**	**+1.5**
PSUT	**Pine Spring**	**62.44**	**62**	P	**P**	**18 28 21.6**	**+0.7**
LRMC	**Laurel Mtn Rad**	**62.49**	**67**	P	**P**	**18 28 22.6**	**+1.4**
	baz=316						
ULM	**Lac du Bonnet**	**62.55**	**43**	P	**P**	**18 28 20.7**	**-0.4**
	comp=Z,8.4nm,0.6s,baz=316,slow=7.4,SNR=24						
ULM				S	**S**	**18 36 15.0**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=231,slow=13,SNR=2.2						
ULM	**Lac du Bonnet**	**62.55**	**43**	P	**P**	**18 28 20.5**	**-0.6**
MPU	**Maple Canyon**	**62.57**	**60**	P	**P**	**18 28 22.7**	**+1.0**
SPSI	**Sidrap Palu**	**62.57**	**218**	P	**P**	**18 28 22.6**	**+0.9**
	comp=Z,13nm,1.2s						
EDW2	**Edwards Air Fo**	**62.74**	**68**	P	**P**	**18 28 24.1**	**+1.5**
	baz=316,SNR=8.6						
BNSI	**Bone**	**62.84**	**218**	P	**P**	**18 28 24.0**	**+0.6**
	comp=Z,15nm,1.2s						
VSR	**Storozhevoye**	**63.07**	**320**	*e*P	**P**	**18 28 22.3**	**-2.2**
VSR				*e*S	**S**	**18 36 17.7**	**-3.4**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VSR				smax	smax		
	comp=N,140nm,6.5s						
NC303	**NORSAR Array S**	**63.07**	**340**	P	**P**	**18 28 23.7**	**-0.6**
NC303				IAmb	IAmb	18 28 24.7	
	comp=Z,35nm,1.2s						
NC405	**NORSAR Array S**	**63.10**	**340**	P	**P**	**18 28 23.4**	**-1.1**
GSC	**Goldstone, Bar**	**63.11**	**67**	P	**P**	**18 28 25.9**	**+0.8**
GSC				pmax	pmax		
	comp=Z,19nm,0.6s						
GSC	**Goldstone, Bar**	**63.11**	**67**	P	**P**	**18 28 25.9**	**+0.8**
GSC				IAmb	IAmb	18 29 05.7	
	comp=Z,19nm,0.6s						
GSC	**Goldstone, Bar**	**63.11**	**67**	P	**P**	**18 28 27.1**	**+1.9**
	baz=316,SNR=9.0						
TCRU	**Three Creeks R**	**63.15**	**61**	P	**P**	**18 28 27.4**	**+1.9**
NC204	**NORSAR Array S**	**63.15**	**341**	P	**P**	**18 28 24.1**	**-0.8**
SHPR	**Sheep Range**	**63.17**	**64**	P	**P**	**18 28 26.6**	**+1.0**
NB201	**NORSAR Array S**	**63.25**	**340**	P	**P**	**18 28 24.8**	**-0.7**
RDMU	**Red Mountain**	**63.26**	**58**	P	**P**	**18 28 27.4**	**+1.2**
RDMU					**pP**	**18 29 55.2**	**+0.8**
NB2	**NORSAR Subarra**	**63.27**	**340**	P	**P**	**18 28 24.6**	**-1.1**
	comp=Z,9.0nm,0.8s,baz=28,slow=6.9						
NOA	**NORSAR Array B**	**63.27**	**340**	P	**P**	**18 28 24.8**	**-0.9**
	comp=Z,5.0nm,0.6s,baz=27,slow=6.5,SNR=27						
K22A	**Casper**	**63.30**	**54**	P	**P**	**18 28 26.8**	**+0.5**
K22A				IAmb	IAmb	18 28 29.3	
	comp=Z,20nm,0.8s						
K22A	**Casper**	**63.30**	**54**	P	**P**	**18 28 27.7**	**+1.3**
	baz=317,SNR=12						
TMUT	**Trail Mountain**	**63.31**	**60**	P	**P**	**18 28 27.5**	**+0.8**
MSU	**Marysvale**	**63.36**	**61**	P	**P**	**18 28 28.5**	**+1.6**
MSU	**Marysvale**	**63.36**	**61**	P	**P**	**18 28 28.5**	**+1.6**
NBO00	**NORSAR Array S**	**63.37**	**341**	P	**P**	**18 28 25.4**	**-0.9**
CCUT	**Cedar City**	**63.41**	**63**	P	**P**	**18 28 28.5**	**+1.3**
P17A	**Butcher Ranch,**	**63.44**	**59**	P	**P**	**18 28 28.3**	**+1.0**
RSSD	**Black Hills**	**63.45**	**52**	P	**P**	**18 28 27.8**	**+0.4**
RSSD				pmax	pmax		
	comp=Z,40nm,0.9s						
RSSD	**Black Hills**	**63.45**	**52**	P	**P**	**18 28 27.8**	**+0.4**
RSSD	**Black Hills**	**63.45**	**52**	P	**P**	**18 28 28.7**	**+1.3**
	baz=318						
TUQ	**Turquoise Moun**	**63.51**	**66**	P	**P**	**18 28 29.4**	**+1.6**
	baz=317,SNR=5.8						
SZCU	**Shurtz Canyon**	**63.53**	**62**	P	**P**	**18 28 28.5**	**+0.5**
KAPI	**Kappang**	**63.54**	**218**	P	**P**	**18 28 29.7**	**+1.8**
	comp=Z,12nm,1.0s,baz=194,slow=5.1,SNR=3.5						
Q16A	**Castle Valley**	**63.61**	**60**	P	**P**	**18 28 29.4**	**+1.0**
RWWY	**Rawlins**	**63.66**	**55**	P	**P**	**18 28 28.7**	**-0.1**
RWWY				IAmb	IAmb	18 28 29.7	
	comp=Z,49nm,1.4s						
MTPU	**Mount Pierson**	**63.70**	**61**	P	**P**	**18 28 30.7**	**+1.4**
HEC	**Hector,Ludlow**	**63.72**	**67**	P	**P**	**18 28 30.5**	**+1.4**
	baz=317,SNR=21						
SRU	**San Rafael Swe**	**63.81**	**60**	P	**P**	**18 28 30.7**	**+1.0**
SRU				pmax	pmax		
	comp=Z,31nm,0.9s						
SRU	**San Rafael Swe**	**63.81**	**60**	P	**P**	**18 28 30.7**	**+1.0**
LCMT	**Little Creek M**	**63.87**	**63**	P	**P**	**18 28 30.7**	**+0.6**
IPM	**Ipoh**	**63.96**	**241**	P	**P**	**18 28 31.6**	**+0.8**
GEYT	**Alibeck**	**64.03**	**299**	P	**P**	**18 28 31.1**	**+0.2**
	comp=Z,26nm,1.0s,baz=29,slow=3.4,SNR=40						
GEYT				PP	**PP**	**18 31 00.4**	**+2.7**
	comp=Z,3.7nm,1.0s,baz=42,slow=6.9,SNR=4.0						
AGMN	**Agassiz Nation**	**64.05**	**44**	P	**P**	**18 28 30.3**	**-0.6**
AGMN				IAmb	IAmb	18 28 31.6	
	comp=Z,18nm,0.8s						
AGMN	**Agassiz Nation**	**64.05**	**44**	P	**P**	**18 28 30.5**	**-0.3**
	baz=320,SNR=10						
PKCU	**Pink Cliffs**	**64.06**	**62**	P	**P**	**18 28 31.8**	**+0.3**
KNB	**Kanab**	**64.09**	**63**	P	**P**	**18 28 32.4**	**+0.8**
KNB				pmax	pmax		
	comp=Z,32nm,1.1s						
KNB	**Kanab**	**64.09**	**63**	P	**P**	**18 28 32.4**	**+0.8**
GMRC	**Granite Mounta**	**64.13**	**66**	P	**P**	**18 28 33.3**	**+1.5**
	baz=317,SNR=15						
O20A	**White River Ci**	**64.27**	**57**	P	**P**	**18 28 33.6**	**+1.0**
O20A	**White River Ci**	**64.27**	**57**	P	**P**	**18 28 33.7**	**+1.0**
	baz=318,SNR=23						
HRA	**Herat**	**64.31**	**293**	P	**P**	**18 28 32.9**	**-0.1**
D32A	**Dogwood Acres,**	**64.44**	**45**	P	**P**	**18 28 33.7**	**+0.4**
BELC	**Belle Mtn. Jos**	**64.51**	**67**	P	**P**	**18 28 35.3**	**+1.1**
	baz=317						
PFO	**Pinyon Flats O**	**64.53**	**68**	P	**P**	**18 28 34.7**	**+0.4**
PFO				pmax	pmax		
	comp=Z,22nm,1.3s						
PFO	**Pinyon Flats O**	**64.53**	**68**	P	**P**	**18 28 34.7**	**+0.4**
PFO	**Pinyon Flats O**	**64.53**	**68**	P	**P**	**18 28 35.3**	**+0.9**
	baz=317,SNR=6.4						
XPFO	**Pion Flat**	**64.53**	**68**	P	**P**	**18 28 34.7**	**+0.4**
TPFO	**Pinon Flats**	**64.54**	**68**	P	**P**	**18 28 35.2**	**+0.8**
	baz=317,SNR=6.0						
109C	**Camp Elliot, M**	**64.69**	**69**	P	**P**	**18 28 35.7**	**+0.6**
109C				IAmb	IAmb	18 28 37.6	
	comp=Z,44nm,1.4s						
U15A	**North Rim**	**64.81**	**63**	P	**P**	**18 28 37.3**	**+1.0**
IRM	**Iron Mountain**	**64.88**	**66**	P	**P**	**18 28 37.6**	**+1.2**
	baz=317,SNR=17						
N23A	**Red Feather La**	**64.89**	**55**	P	**P**	**18 28 37.3**	**+0.6**
N23A	**Red Feather La**	**64.89**	**55**	P	**P**	**18 28 37.6**	**+0.9**
	baz=318,SNR=12						
W13A	**Hualapai Mount**	**64.90**	**65**	P	**P**	**18 28 37.8**	**+1.0**
BC3	**Big Chuckawall**	**65.07**	**67**	P	**P**	**18 28 39.2**	**+1.4**
	baz=317						
MONP2	**Monument Peak**	**65.08**	**68**	P	**P**	**18 28 39.2**	**+1.3**
	baz=317,SNR=6.4						
PDMCI	**Parker Dam,Lak**	**65.34**	**65**	P	**P**	**18 28 41.0**	**+1.7**
	baz=318,SNR=6.5						
SWSC	**Sam W. Stewart**	**65.39**	**68**	P	**P**	**18 28 41.4**	**+1.7**
	baz=318						
IKP	**In-Ko-Pah, Jac**	**65.43**	**68**	P	**P**	**18 28 41.9**	**+1.9**
	baz=318,SNR=6.0						
Y12C	**Blythe**	**65.53**	**66**	P	**P**	**18 28 41.5**	**+1.0**
Y12C				IAmb	IAmb	18 28 43.2	
	comp=Z,26nm,0.9s						
Y12C	**Blythe**	**65.53**	**66**	P	**P**	**18 28 42.6**	**+2.1**
	baz=318						
SUSD	**Miller**	**65.62**	**48**	P	**P**	**18 28 41.0**	**+0.1**
SUSD	**Miller**	**65.62**	**48**	P	**P**	**18 28 41.8**	**+0.9**
	baz=320						
SMCO	**Snowmass**	**65.63**	**57**	P	**P**	**18 28 42.2**	**+0.6**
SMCO				IAmb	IAmb	18 28 43.8	
	comp=Z,18nm,0.8s						
GLA	**Glamis**	**65.87**	**67**	P	**P**	**18 28 43.4**	**+0.7**
GLA				pmax	pmax		

	comp=Z,28nm,1.0s						
GLA	Glamis	65.87	67	P	P	18 28 43.4	+0.7
GLA				IAmb	IAmb	18 28 45.4	
	comp=Z,28nm,1.0s						
GLA	Glamis	65.87	67	P	P	18 28 45.0	+2.3
	baz=318,SNR=5.7						
ISCO	Idaho Springs	65.87	56	P	P	18 28 44.1	+1.1
ISCO				pmax	pmax		
	comp=Z,37nm,1.3s						
ISCO	Idaho Springs	65.87	56	P	P	18 28 44.1	+1.1
ISCO				IAmb	IAmb	18 28 45.6	
	comp=Z,36nm,1.2s						
ISCO	Idaho Springs	65.87	56	P	P	18 28 44.8	+1.8
	baz=319,SNR=25						
WUAZ	Wupatki	65.99	63	P	P	18 28 44.7	+1.1
WUAZ				IAmb	IAmb	18 28 46.6	
	comp=Z,34nm,1.1s						
WUAZ	Wupatki	65.99	63	P	P	18 28 45.9	+2.3
	baz=318,SNR=16						
EYMN	Ely	66.15	42	P	P	18 28 43.4	-0.8
EYMN				IAmb	IAmb	18 28 44.9	
	comp=Z,28nm,0.8s						
EYMN					pP	18 30 13.7	+0.3
EYMN	Ely	66.15	42	P	P	18 28 43.8	-0.5
	baz=323,SNR=19						
Y14A	Wickenburg	66.25	65	P	P	18 28 46.1	+1.1
Y14A				IAmb	IAmb	18 28 47.7	
	comp=Z,20nm,0.8s						
MVCO	Mesa Verde	66.29	60	P	P	18 28 46.1	+0.6
MVCO				IAmb	IAmb	18 28 47.9	
	comp=Z,24nm,1.0s						
MVCO	Mesa Verde	66.29	60	P	P	18 28 47.0	+1.5
	baz=318,SNR=12						
SUW	Suwalki	66.42	330	*e*P	P	18 28 44.7	-1.0
SUW	Suwalki	66.42	330	*e*P	P	18 28 44.7	-1.0
PSI	Prapat	66.50	242	P	P	18 28 47.2	+0.2
	comp=Z,3.9nm,0.4s,baz=356,slow=6.6,SNR=6.9						
PSI	Prapat	66.50	242	P	P	18 28 47.6	+0.6
PSI				pmax	pmax		
	comp=Z,41nm,1.8s						
RPSI	Rantau Prapat	66.59	242	P	P	18 28 47.6	+0.2
RPSI				IAmb	IAmb	18 28 48.8	
	comp=Z,41nm,1.8s						
113A	Mohawk Valley,	66.68	66	P	P	18 28 48.6	+0.9
Q24A	Divide	66.74	56	P	P	18 28 49.8	+1.4
	baz=319						
AKT	Akhty	66.74	308	*e*P	P	18 28 46.7	-1.4
AKT				*e*		18 29 11.4	
AKT				*e**SP	sP	18 31 00.8	-1.0
AKT				*e*		18 31 22.1	
AKT				pmax	pmax		
	comp=Z,36nm,1.1s						
X16A	Lo Mia Camp, P	66.76	64	P	P	18 28 49.7	+1.2
X16A				IAmb	IAmb	18 28 52.0	
	comp=Z,21nm,0.8s						
S22A	4UR Ranch, Cre	66.78	58	P	P	18 28 49.6	+1.0
S22A				IAmb	IAmb	18 28 51.4	
	comp=Z,21nm,1.1s						
S22A	4UR Ranch, Cre	66.78	58	P	P	18 28 50.1	+1.4
	baz=319						
OGNE	Ogallala	66.81	53	P	P	18 28 49.3	+0.8
OGNE	Ogallala	66.81	53	P	P	18 28 49.8	+1.3
	baz=320,SNR=7.2						
HYB	Hyderabad	67.04	269	*i* P	P	18 28 50.0	-0.2
NCK	Nalchik	67.15	312	*i* P	P	18 28 49.5	-1.0
NCK				pmax	pmax		
	comp=Z,29nm,1.0s						
W18A	Petrified Fore	67.18	62	P	P	18 28 52.5	+1.4
W18A	Petrified Fore	67.18	62	P	P	18 28 52.8	+1.7
	baz=319						
E38A	The Farm, Brul	67.19	43	P	P	18 28 49.7	-1.0
E38A					pP	18 30 20.5	+0.3
KIV	Kislovodsk	67.21	313	⇓P	P	18 28 50.8	-0.2
KIV	Kislovodsk	67.21	313	*e*P	P	18 28 49.8	-1.2
KIV	Kislovodsk	67.21	313	*e*P	P	18 28 49.8	-1.2
KIV				pmax	pmax		
	comp=Z,52nm,1.1s						
KIV				MLR	MLR		
	comp=Z,217nm,17.0s						
KIV	Kislovodsk	67.21	313	P	P	18 28 50.3	-0.6
KIV				IAmb	IAmb	18 28 53.2	
	comp=Z,35nm,1.4s						
AKASG	Malin Array Be	67.23	325	P	P	18 28 49.2	-1.6
	comp=Z,2.4nm,0.3s,baz=34,slow=6.4,SNR=38						
AKASG	Malin Array Be	67.23	325	P	P	18 28 49.4	-1.4
AKBB	Malin Array Si	67.23	325	P	P	18 28 49.5	-1.3
AKBB				pmax	pmax		
	comp=Z,19nm,1.1s						
AKBB	Malin Array Si	67.23	325	P	P	18 28 49.5	-1.3
AKBB				IAmb	IAmb	18 28 51.2	
	comp=Z,19nm,1.1s						
ECSD	EROS Data Cent	67.24	48	P	P	18 28 50.9	-0.2
ECSD	EROS Data Cent	67.24	48	P	P	18 28 51.2	+0.1
	baz=321,SNR=47						
KBZ	Khabaz	67.29	313	P	P	18 28 51.5	+0.2
	comp=Z,15nm,1.0s,baz=43,slow=7.8,SNR=13						
KBZ	Khabaz	67.29	313	*e*P	P	18 28 50.7	-0.6
KBZ	Khabaz	67.29	313	*d i*P	P	18 28 50.7	-0.6
KBZ				pmax	pmax		
	comp=Z,26nm,1.1s						
MTN	Manton Dam	67.35	203	P	P	18 28 52.4	+0.4
MTN				IAmb	IAmb	18 28 54.5	
	comp=Z,20nm,0.8s						
SHA1	Shidzhatmaz	67.39	313	*i* P	P	18 28 51.5	-0.8
BKNI	Bangkinang	67.44	239	P	P	18 28 53.5	+0.9
SDCO	Great Sand Dun	67.47	57	P	P	18 28 53.7	+0.8
SDCO	Great Sand Dun	67.47	57	P	P	18 28 53.8	+0.8
	baz=319,SNR=28						
X18A	Snowflake	67.50	63	P	P	18 28 54.4	+1.3
X18A				IAmb	IAmb	18 28 56.0	
	comp=Z,22nm,0.9s						
ZEI	Tsey	67.56	311	*e*P	P	18 28 51.5	-1.8
ZEI				pmax	pmax		
	comp=Z,15nm,1.1s						
SPMN	Marine on St.	67.76	44	P	P	18 28 53.6	-0.6
SPMN				IAmb	IAmb	18 28 55.0	
	comp=Z,19nm,0.8s						
SPMN	Marine on St.	67.76	44	P	P	18 28 53.9	-0.3
	baz=323						
214A	Organ Pipe Nat	67.82	66	P	P	18 28 55.9	+1.0
214A				IAmb	IAmb	18 28 57.5	
	comp=Z,25nm,1.1s						
214A	Organ Pipe Nat	67.82	66	P	P	18 28 56.2	+1.3
	baz=319,SNR=9.9						
KSCO	Kaye Shedlock'	67.98	55	P	P	18 28 56.0	+0.1
KSCO				IAmb	IAmb	18 28 57.4	
	comp=Z,17nm,0.7s						
TBLG	Delisi	67.99	310	P	P	18 28 56.1	+0.4
TBLG				pmax	pmax		
	comp=Z,51nm,1.2s						
TBLG	Delisi	67.99	310	P	P	18 28 56.1	+0.4
D41A	Chassel	68.05	40	P	P	18 28 55.3	-0.6
BGNE	Belgrade	68.33	50	P	P	18 28 57.7	-0.1
BGNE	Belgrade	68.33	50	P	P	18 28 58.7	+0.9
	baz=321						
SCHQ	Schefferville	68.45	24	P	P	18 28 57.4	-0.9
	comp=Z,2.9nm,0.3s,baz=355,slow=7.0,SNR=6.2						
SCHQ	Schefferville	68.45	24	P	P	18 28 57.2	-1.1
SCHQ				IAmb	IAmb	18 28 58.0	
	comp=Z,27nm,1.6s						
T25A	Trinidad	68.50	57	P	P	18 28 59.7	+0.5
T25A				IAmb	IAmb	18 29 01.1	
	comp=Z,20nm,1.1s						
T25A	Trinidad	68.50	57	P	P	18 29 00.2	+1.0
	baz=320,SNR=8.4						
COWI	Conover	68.60	41	P	P	18 28 58.5	-0.9
COWI				IAmb	IAmb	18 28 59.8	
	comp=Z,16nm,0.8s						
RGN	Rugen	68.68	336	*e*P	P	18 28 59.7	+0.1
	comp=Z,95nm,1.7s,baz=23,slow=5.8						
RGN	Rugen	68.68	336	P	P	18 28 59.6	+0.1
TUC	Tucson	68.70	65	P	P	18 29 01.2	+0.9
TUC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TUC	Tucson	68.70	65	P	P	18 29 01.1	+0.9
TUC	Tucson	68.70	65	P	P	18 29 01.5	+1.2
	baz=319						
GKP	Gorka Klasztor	68.80	333	*e*P	P	18 28 59.3	-1.1
GKP	Gorka Klasztor	68.80	333	*e*P	P	18 28 59.3	-1.1
AKH	Akhalkalaki	68.82	311	⇓P	P	18 29 01.6	+0.6
AKH	Akhalkalaki	68.82	311	P	P	18 29 01.4	+0.4
AKH				pmax	pmax		
	comp=Z,48nm,1.5s						
AKH	Akhalkalaki	68.82	311	P	P	18 29 01.4	+0.4
AKH				IAmb	IAmb	18 29 02.8	
	comp=Z,48nm,1.5s						
G40A	Rib Lake	68.83	43	P	P	18 29 00.1	-0.7
G40A				IAmb	IAmb	18 29 01.5	
	comp=Z,23nm,1.1s						
BEL	Belsk	69.03	331	*e*P	P	18 29 02.0	+0.2
BEL	Belsk	69.03	331	*e*P	P	18 29 02.0	+0.2
ANMO	Albuquerque	69.08	60	P	P	18 29 03.4	+0.7
ANMO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ANMO	Albuquerque	69.08	60	P	P	18 29 03.4	+0.7
ANMO	Albuquerque	69.08	60	P	P	18 29 04.0	+1.3
	baz=320						
GNI	Garni	69.21	309	P	P	18 29 03.8	+0.5
GNI	Garni	69.21	309	P	P	18 29 04.3	+0.9
GNI	Garni	69.21	309	*i* P	P	18 29 03.7	+0.3
GNI				pmax	pmax		
	comp=Z,27nm,1.5s						
GNI	Garni	69.21	309	P	P	18 29 02.8	-0.6
E43A	Lone Tree Farm	69.24	40	P	P	18 29 02.5	-0.7
E44A	Grand Marais A	69.46	39	P	P	18 29 04.5	-0.1
E44A	Grand Marais A	69.46	39	P	P	18 29 04.4	-0.1
	baz=326						
CBKS	Cedar Bluff	69.57	53	P	P	18 29 04.8	-0.6
CBKS				pmax	pmax		
	comp=Z,65nm,1.5s						
CBKS	Cedar Bluff	69.57	53	P	P	18 29 04.8	-0.6
SORM	Soroca	69.69	324	⇑P	P	18 29 04.6	-1.3
LVV	L'vov	69.75	328	*e*P	P	18 29 05.8	-0.5
I40A	Norwalk	69.76	44	P	P	18 29 05.9	-0.6
I40A				IAmb	IAmb	18 29 07.1	
	comp=Z,26nm,0.7s						
MATQ	Matagami	69.81	32	P	P	18 29 05.8	-0.7
	baz=330						
D46A	Sault St. Mari	69.96	38	P	P	18 29 06.2	-1.3
	baz=327,SNR=8.2						
BSEG	Bad Segeberg	69.97	338	*e*P	P	18 29 07.5	+0.1
	comp=Z,8.7nm,0.8s,baz=23,slow=5.8						
D47A	Chapleau	70.17	37	P	P	18 29 07.8	-1.0
	baz=327,SNR=5.5						
121A	Cookes Peak, D	70.19	62	P	P	18 29 10.3	+0.8
121A				IAmb	IAmb	18 29 12.5	
	comp=Z,28nm,1.1s						
121A	Cookes Peak, D	70.19	62	P	P	18 29 11.5	+2.1
	baz=320,SNR=13						
SCIA	State Center	70.22	47	P	P	18 29 08.4	-0.7
SCIA	State Center	70.22	47	P	P	18 29 10.1	+1.0
	baz=323						
319A	Douglas	70.24	64	P	P	18 29 10.8	+1.1
319A				IAmb	IAmb	18 29 13.0	
	comp=Z,42nm,1.1s						
E46A	Sault Ste Mari	70.30	38	P	P	18 29 08.6	-1.0
KWP	Kalwaria Pacla	70.35	328	*e*P	P	18 29 10.2	+0.3
KWP	Kalwaria Pacla	70.35	328	P	P	18 29 10.0	+0.1
KWP				pmax	pmax		
	comp=Z,83nm,1.1s						
KWP	Kalwaria Pacla	70.35	328	P	P	18 29 10.0	+0.1
R32A	Long Quarter,	70.38	52	P	P	18 29 08.6	-1.7
F45A	CMU Biological	70.39	39	P	P	18 29 09.7	-0.4
	baz=326,SNR=5.8						
I42A	Draeger Farm,	70.48	43	P	P	18 29 10.3	-0.5
I42A				IAmb	IAmb	18 29 11.5	
	comp=Z,18nm,0.8s						
H43A	Windswept, Lux	70.49	42	P	P	18 29 10.4	-0.4
D48A	Paudash Townsh	70.56	36	P	P	18 29 10.3	-0.8
	baz=328						
E47A	Iron Bridge	70.61	38	P	P	18 29 10.4	-1.0
	baz=327,SNR=5.1						
LSQQ	Lebel-sur-Quev	70.63	32	P	P	18 29 10.9	-0.6
	baz=330						
JFWS	Jewell Farm	70.71	44	P	P	18 29 11.6	-0.5
JFWS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
JFWS	Jewell Farm	70.71	44	P	P	18 29 11.6	-0.5
JFWS	Jewell Farm	70.71	44	P	P	18 29 11.6	-0.5
	baz=324						
OJC	Ojcow	70.75	330	*e*P	P	18 29 12.2	-0.1
OJC	Ojcow	70.75	330	P	P	18 29 11.6	-0.6
OJC				pmax	pmax		
	comp=Z,55nm,1.4s						
OJC	Ojcow	70.75	330	P	P	18 29 11.6	-0.6
OJC				IAmb	IAmb	18 29 13.0	
	comp=Z,55nm,1.4s						
KSU1	Kansas State U	70.87	51	P	P	18 29 13.3	+0.2
	baz=322						
G46A	Petoskey	70.95	39	P	P	18 29 13.1	-0.4
	baz=326						
L40A	Anamosa	70.98	45	P	P	18 29 13.2	-0.5
L40A				IAmb	IAmb	18 29 13.9	
	comp=Z,19nm,0.8s						
E48A	Lockeyer	71.01	37	P	P	18 29 13.0	-0.8
	baz=328						
KOLS	Kolonicke sedl	71.10	328	*e*P	P	18 29 13.8	-0.5
KOLS				pmax	pmax		
	comp=Z,20nm,1.3s						
KOLS	Kolonicke sedl	71.10	328	*e*P	P	18 29 13.8	-0.5
BUR08	Bucovina Ar. S	71.22	326	P	P	18 29 14.2	-1.0
BUR08				IAmb	IAmb	18 29 15.7	
	comp=Z,31nm,1.5s						
KSP	Ksiaz	71.23	333	*e*P	P	18 29 15.0	-0.1
KSP	Ksiaz	71.23	333	*e*P	P	18 29 15.0	-0.1
BURAR	Bucovina Array	71.24	326	⇑P	P	18 29 14.4	-0.9
BURAR	Bucovina Array	71.24	326	P	P	18 29 14.3	-1.0
ESK	Eskdalemuir	71.26	346	P	P	18 29 13.6	-1.5
ESK				pmax	pmax		
	comp=Z,37nm,1.6s						
ESK	Eskdalemuir	71.26	346	P	P	18 29 13.6	-1.5
ESK				IAmb	IAmb	18 29 36.3	
	comp=Z,37nm,1.6s						
D50A	G1974 Best Tow	71.27	35	P	P	18 29 14.2	-1.2
	baz=329,SNR=6.5						
VLDQ	Val d'Or	71.29	33	P	P	18 29 13.7	-1.7
VLDQ					pP	18 30 44.9	-1.2
NIE	Niedzica	71.30	330	*e*P	P	18 29 16.0	+0.4
NIE	Niedzica	71.30	330	*e*P	P	18 29 16.0	+0.4
CRVS	Cervenica-Dubn	71.39	329	*e*P	P	18 29 15.1	-0.9
CRVS	Cervenica-Dubn	71.39	329	*e*P	P	18 29 15.1	-0.9
F48A	Evansville	71.39	38	P	P	18 29 15.1	-1.0
	baz=328						
G47A	Hillman	71.47	39	P	P	18 29 16.0	-0.5
	baz=327						
D51A	Lot 18 Range I	71.50	35	P	P	18 29 15.9	-0.8
	baz=329,SNR=7.5						
OSTC	Ostas	71.51	333	*e*P	P	18 29 16.5	-0.2
CHVC	Chvalec	71.52	333	*e*P	P	18 29 16.9	+0.1
OKC	Ostrava-Krasne	71.59	331	*e*P	P	18 29 16.3	-0.9
OKC	Ostrava-Krasne	71.59	331	*e*P	P	18 29 16.3	-0.9
AMTX	Amarillo	71.64	57	P	P	18 29 16.9	-1.0
AMTX				IAmb	IAmb	18 29 19.7	
	comp=Z,34nm,1.1s						
AMTX	Amarillo	71.64	57	P	P	18 29 18.5	+0.7
	baz=321						
F49A	Sandfield	71.66	37	P	P	18 29 16.7	-0.9
	baz=328						
DPC	Dobruska-Polom	71.66	333	*e*P	P	18 29 17.3	-0.4
DPC	Dobruska-Polom	71.66	333	*e*P	P	18 29 17.3	-0.4
TESR	Tescani	71.68	324	⇑P	P	18 29 16.4	-1.4
L42A	Oliver, Polo	71.70	44	P	P	18 29 17.1	-0.9
L42A				IAmb	IAmb	18 29 18.0	
	comp=Z,23nm,0.6s						
CLL	Collm	71.70	335	⇓*i*P	P	18 29 18.0	+0.2
	comp=Z,29nm,1.2s						
CLL	Collm	71.70	335	*e*P	P	18 29 18.1	+0.3
	comp=Z,29nm,1.2s,baz=23,slow=5.8						
CLL	Collm	71.70	335	⇓*i*P	P	18 29 18.0	+0.2
CLL				pmax	pmax		
	comp=Z,29nm,1.2s						
CLL	Collm	71.70	335	P	P	18 29 17.3	-0.5
CLL				IAmb	IAmb	18 29 19.0	
	comp=Z,43nm,1.4s						
TRPA	Tarpa	71.71	328	⇓P	P	18 29 17.5	-0.3
KRLC	Kraliky	71.78	332	*e*P	P	18 29 17.9	-0.4
KRLC	Kraliky	71.78	332	*e*P	P	18 29 17.9	-0.4
MSTX	Muleshoe	71.78	58	P	P	18 29 18.3	-0.5
MSTX				IAmb	IAmb	18 29 20.4	
	comp=Z,23nm,0.9s						
MSTX	Muleshoe	71.78	58	P	P	18 29 20.1	+1.4
	baz=321,SNR=7.3						
LANS	Liptovska Anna	71.80	330	*e*P	P	18 29 19.2	+0.7
LANS				pmax	pmax		
	comp=Z,17nm,1.0s						
LANS	Liptovska Anna	71.80	330	*e*P	P	18 29 19.2	+0.7
MORC	Moravsky Berou	71.82	332	⇓P	P	18 29 18.2	-0.4
MORC	Moravsky Berou	71.82	332	*e*P	P	18 29 18.2	-0.4
U32A	Winter Ranch,	71.84	54	P	P	18 29 19.3	+0.3
U32A				IAmb	IAmb	18 29 21.1	
	comp=Z,58nm,1.6s						
BRG	Berggiesshubel	71.85	334	*e*P	P	18 29 17.7	-1.0
	comp=Z,12nm,1.2s						
BRG	Berggiesshubel	71.85	334	*e*P	P	18 29 18.1	-0.5
	comp=Z,12nm,1.2s,baz=23,slow=5.8						
BRG	Berggiesshubel	71.85	334	*e*P	P	18 29 17.7	-1.0
BRG				pmax	pmax		
	comp=Z,12nm,1.3s						
CLZ	Clausthal	71.88	337	*e*P	P	18 29 19.1	+0.2
	comp=Z,29nm,1.1s,baz=23,slow=5.8						
E51A	G1948 Merrick	71.94	35	P	P	18 29 18.4	-0.9
	baz=329,SNR=7.2						
FBE	Freiberg	71.96	335	*e*P	P	18 29 19.2	-0.2
	comp=Z,24nm,1.2s,baz=23,slow=5.8						
CTA	Charters Tower	72.05	187	P	P	18 29 21.7	+1.6
	comp=Z,11nm,0.9s,baz=6.9,slow=3.7,SNR=5.2						
KECS	Kecovo	72.06	329	*e*P	P	18 29 19.4	-0.6
KECS				pmax	pmax		
	comp=Z,11nm,1.4s						
KECS	Kecovo	72.06	329	*e*P	P	18 29 19.4	-0.6
D53A	Lac Vacive, Po	72.10	34	P	P	18 29 19.7	-0.4
D53A				IAmb	IAmb	18 29 20.6	
	comp=Z,23nm,1.0s						
D53A					pP	18 30 51.1	-0.1
D53A	Lac Vacive, Po	72.10	34	P	P	18 29 19.8	-0.4
	baz=330,SNR=7.7						
NEUB	Neuenburg	72.11	336	*e*P	P	18 29 19.9	-0.3
	comp=Z,27nm,1.3s,baz=23,slow=5.8						
MNTX	Cornudas Mount	72.14	61	P	P	18 29 21.5	+0.8
MNTX	Cornudas Mount	72.14	61	P	P	18 29 22.2	+1.5
	baz=321,SNR=17						
ODBI	Odobesti	72.17	324	⇑P	P	18 29 20.4	-0.2
N41A	Harden Midland	72.23	46	P	P	18 29 20.7	-0.4
N41A				IAmb	IAmb	18 29 21.8	
	comp=Z,28nm,0.9s						
PLOR	Plostina	72.24	324	⇓P	P	18 29 21.0	-0.1
CFR	Carcaliu	72.27	323	⇑P	P	18 29 20.4	-0.8
OZUR		72.35	325	⇑P	P	18 29 21.8	+0.1
D54A	Lac Fusel, La	72.39	33	P	P	18 29 21.4	-0.5
	baz=330,SNR=8.5						
E52A	Mattawa	72.45	35	P	P	18 29 21.3	-1.0
	baz=330						
GOPC	GO Pecny, Ondr	72.49	333	*e*P	P	18 29 22.1	-0.4
GOPC	GO Pecny, Ondr	72.49	333	*e*P	P	18 29 22.1	-0.4
PRU	Pruhonice	72.49	333	*e*P	P	18 29 21.9	-0.5
PRU	Pruhonice	72.49	333	*e*P	P	18 29 21.9	-0.5
VRAC	Vranov	72.52	332	⇑P	P	18 29 22.2	-0.4
VRAC	Vranov	72.52	332	*e*P	P	18 29 22.3	-0.4
VYHS	Vyhne	72.57	330	*e*P	P	18 29 22.6	-0.4
VYHS				pmax	pmax		
	comp=Z,18nm,1.1s						
VYHS	Vyhne	72.57	330	*e*P	P	18 29 22.6	-0.4
CJR	Cluj-Napoca	72.58	326	⇓P	P	18 29 23.4	+0.3
JAVC	Velka Javorina	72.60	331	*e*P	P	18 29 23.8	+0.6
F52A	Sundridge	72.63	36	P	P	18 29 22.8	-0.6
	baz=329,SNR=5.6						
T35A	Sooner Cattle	72.64	52	P	P	18 29 23.9	+0.3
T35A				IAmb	IAmb	18 29 24.7	
	comp=Z,19nm,1.0s						
MOX	Moxa	72.67	336	*e*P	P	18 29 23.2	-0.3
	comp=Z,14nm,1.2s,baz=23,slow=5.8						
PLN	Plauen	72.67	335	*e*P	P	18 29 23.4	-0.1
	comp=Z,12nm,1.1s,baz=23,slow=5.8						
J47A	Sunmer	72.70	40	P	P	18 29 24.1	+0.3
J47A	Sunmer	72.70	40	P	P	18 29 23.9	+0.1
	baz=327						
E53A	Dumoine, Ponti	72.71	34	P	P	18 29 22.8	-1.0
	baz=330,SNR=7.4						
GUNZ	Gunzen	72.74	335	*e*P	P	18 29 23.9	-0.1
	comp=Z,37nm,1.9s,baz=23,slow=5.8						
PSZ	Piszkesteto	72.75	329	⇑P	P	18 29 23.4	-0.7
PSZ	Piszkesteto	72.75	329	P	P	18 29 23.9	-0.2
PSZ				pmax	pmax		
	comp=Z,31nm,1.3s						
PSZ	Piszkesteto	72.75	329	P	P	18 29 23.9	-0.2
PSZ				IAmb	IAmb	18 29 25.2	
	comp=Z,31nm,1.3s						
K46A	Dorr	72.77	41	P	P	18 29 24.1	-0.1
	baz=327						
KRUC	Moravsky	72.80	332	*e*P	P	18 29 23.9	-0.3
WERN	Wernitzgruen	72.80	335	*e*P	P	18 29 24.2	-0.1
	comp=Z,15nm,1.2s,baz=23,slow=5.8						
MLR	Muntele Rosu	72.81	324	⇑P	P	18 29 25.1	+0.5
MLR	Muntele Rosu	72.81	324	P	P	18 29 24.1	-0.4
MLR				pmax	pmax		
	comp=Z,36nm,1.5s						
MLR	Muntele Rosu	72.81	324	P	P	18 29 24.1	-0.4
MLR				IAmb	IAmb	18 29 26.0	
	comp=Z,36nm,1.5s						
DRGR		72.82	327	⇓P	P	18 29 23.5	-1.0
NKC	Novy Kostel	72.83	335	*e*P	P	18 29 23.8	-0.6
NKC	Novy Kostel	72.83	335	*e*P	P	18 29 23.8	-0.6
E54A	Lac Daplat, Po	72.83	34	P	P	18 29 23.8	-0.7
	baz=330						
I49A	Point Hope	72.90	39	P	P	18 29 24.7	-0.3
	baz=328						
D55A	Sainte-Anne-du	72.90	33	P	P	18 29 24.6	-0.3
	baz=331						
M44A	Midewin, Midew	72.90	44	P	P	18 29 24.8	-0.2
M44A				IAmb	IAmb	18 30 15.2	
	comp=Z,55nm,1.4s						
ALGO	Algonquin Park	72.94	35	P	P	18 29 24.0	-1.2
	baz=330						
SMOL	Smolenice	72.98	331	*e*P	P	18 29 25.9	+0.6
SMOL				pmax	pmax		
	comp=Z,12nm,1.3s						
SMOL	Smolenice	72.98	331	*e*P	P	18 29 25.9	+0.6
HDIL	Hopedale	73.05	45	P	P	18 29 26.1	+0.2
HDIL	Hopedale	73.05	45	P	P	18 29 26.2	+0.4
	baz=325						
J48A	Bridge Port	73.06	40	P	P	18 29 25.6	-0.3
J48A				IAmb	IAmb	18 29 26.7	
	comp=Z,35nm,1.2s						
K47A	Vermontville	73.11	41	P	P	18 29 26.5	+0.4
	baz=327						
D56A	ZEC Mazanza, M	73.11	32	P	P	18 29 26.0	-0.1
	baz=332,SNR=12						
L46A	Eue Claire	73.12	42	P	P	18 29 26.7	+0.5
MANZ	Manzenberg	73.14	335	*e*P	P	18 29 26.1	-0.1
	comp=Z,12nm,1.3s,baz=23,slow=5.8						
MODS	Modra-Piesok	73.15	331	*e*P	P	18 29 25.7	-0.6
MODS				pmax	pmax		
	comp=Z,22nm,1.2s						
MODS	Modra-Piesok	73.15	331	*e*P	P	18 29 25.7	-0.6
VOIR		73.17	325	⇓P	P	18 29 26.1	-0.5
WMOK	Wichita Mounta	73.24	55	P	P	18 29 27.1	0.0
WMOK				pmax	pmax		
	comp=Z,18nm,0.9s						
WMOK	Wichita Mounta	73.24	55	P	P	18 29 27.1	0.0
WMOK				IAmb	IAmb	18 29 28.6	
	comp=Z,18nm,0.9s						
WMOK	Wichita Mounta	73.24	55	P	P	18 29 27.5	+0.4
	baz=322,SNR=18						
ICOR	Ion Corvin	73.29	322	⇑P	P	18 29 27.5	+0.3
ROTZ	Rotzenmuhle	73.32	335	*e*P	P	18 29 27.2	0.0
	comp=Z,19nm,1.3s,baz=23,slow=5.8						
K48A	Perry	73.35	40	P	P	18 29 28.1	+0.6
	baz=327,SNR=6.5						
ZST	Bratislava	73.36	331	*e*P	P	18 29 26.9	-0.6
ZST				pmax	pmax		
	comp=Z,19nm,1.2s						
ZST	Bratislava	73.36	331	*e*P	P	18 29 26.9	-0.6
OKCFA	Oklahoma City	73.37	54	P	P	18 29 28.5	+0.7
ARR	Arges	73.38	325	⇑P	P	18 29 28.2	+0.4
G54A	Lake Saint Pet	73.41	35	P	P	18 29 27.1	-0.7
	baz=330						
D57A	Chemin Vers le	73.42	32	P	P	18 29 27.4	-0.5
	baz=332,SNR=11						
LATQ	La Tuque	73.45	31	P	P	18 29 28.1	+0.1
LATQ	La Tuque	73.45	31	P	P	18 29 28.2	+0.2
	baz=333						
G53A	Haliburton	73.46	35	P	P	18 29 27.4	-0.7
	baz=330,SNR=6.4						
E56A	St. Veronique	73.46	32	P	P	18 29 27.8	-0.3
	baz=332,SNR=5.5						
WRAB	Tennant Creek	73.51	198	P	P	18 29 29.7	+1.1
WRAB				pmax	pmax		
	comp=Z,12nm,0.9s						
WRAB	Tennant Creek	73.51	198	P	P	18 29 29.7	+1.1
WRA	Warramunga Arr	73.52	198	P	P	18 29 29.2	+0.6
	comp=Z,8.1nm,0.6s,baz=12,slow=5.7,SNR=77						
FNO	Franklin	73.52	54	P	P	18 29 29.4	+0.7
KHC	Kasperske Hory	73.53	334	*e*P	P	18 29 28.2	-0.3
KHC				*e*x	x	18 29 35.0	
KHC				*e*x	x	18 31 03.5	

KHC	Kasperske Hory	73.53	334	i P	P	18 29 28.0	-0.5
KHC				pmax	pmax		
	comp=Z,33nm,1.1s						
KHC	Kasperske Hory	73.53	334	P	P	18 29 28.2	-0.3
S39A	Bolivar	73.55	49	P	P	18 29 28.6	-0.2
L47A	Sherwood	73.60	41	P	P	18 29 28.7	-0.4
	baz=327,SNR=5.9						
K49A	Clarkson	73.63	40	P	P	18 29 29.4	+0.3
	baz=328						
GRA1	Grafenberg Arr	73.64	335	P	P	18 29 28.8	-0.3
GRA1				IAmb	IAmb	18 29 30.2	
	comp=Z,38nm,1.2s						
GRF	Grafenberg Arr	73.64	335	eP	P	18 29 29.3	+0.2
	comp=Z,42nm,1.3s,baz=23,slow=5.8						
GRF	Grafenberg Arr	73.64	335	P	P	18 29 28.8	-0.3
GRF				pmax	pmax		
	comp=Z,38nm,1.2s						
D58A	Chemin du LacG	73.67	31	P	P	18 29 29.2	-0.2
	baz=333						
P43A	Skaggs, Pawnee	73.70	46	P	P	18 29 29.3	-0.3
P43A				IAmb	IAmb	18 29 30.2	
	comp=Z,20nm,0.8s						
I51A	Listowel	73.71	38	P	P	18 29 30.0	+0.4
	baz=329						
WET	Wettzell	73.71	334	eP	P	18 29 29.8	+0.3
	comp=Z,18nm,1.0s,baz=23,slow=5.8						
GEC2	GERESS Array S	73.76	333	eP	P	18 29 29.6	-0.3
	comp=Z,16nm,1.5s,baz=23,slow=5.8						
GEC2	GERESS Array S	73.76	333	P	P	18 29 29.2	-0.7
GERES	GERESS Array B	73.76	333	P	P	18 29 29.3	-0.6
	comp=Z,2.6nm,0.6s,baz=32,slow=5.5,SNR=22						
GERES	GERESS Array B	73.76	333	P	P	18 29 28.9	-1.0
GERES	GERESS Array B	73.76	333	P	P	18 29 28.9	-1.0
TUL1	Leonard	73.79	52	P	P	18 29 30.9	+0.7
TUL1				IAmb	IAmb	18 29 31.7	
	comp=Z,38nm,0.9s						
TUL1	Leonard	73.79	52	P	P	18 29 31.0	+0.7
	baz=323						
X34A	Smith Ranch, M	73.82	54	P	P	18 29 31.4	+0.9
X34A				IAmb	IAmb	18 29 33.0	
	comp=Z,25nm,0.9s						
W35A	Tecumseh	73.86	53	P	P	18 29 31.7	+1.1
E57A	Chemin Saint G	73.87	32	P	P	18 29 30.0	-0.5
	baz=332,SNR=11						
TRQ	Mont Tremblant	73.91	32	P	P	18 29 30.4	-0.4
TRQ					pP	18 31 03.0	+0.8
L48A	N Adams	73.94	41	P	P	18 29 30.9	-0.1
	baz=327,SNR=8.2						
H53A	Bobcaygeon	73.95	36	P	P	18 29 30.3	-0.7
	baz=330						
AAM	Ann Arbor	73.95	40	P	P	18 29 30.9	-0.1
AAM				pmax	pmax		
	comp=Z,35nm,1.0s						
AAM	Ann Arbor	73.95	40	P	P	18 29 30.9	-0.1
AAM				IAmb	IAmb	18 29 32.0	
	comp=Z,35nm,0.9s						
AAM	Ann Arbor	73.95	40	P	P	18 29 31.1	+0.1
	baz=328						
CONA	Conrad Observa	73.97	332	i P	P	18 29 31.4	+0.2
	comp=Z,18nm,1.0s,SNR=12						
GZR	Gura Zlata	74.01	326	⇑P	P	18 29 30.1	-1.3
G55A	Calabogie	74.02	34	P	P	18 29 30.6	-0.7
	baz=331						
SHME	Shamm	74.03	292	P	P	18 29 31.0	-0.8
BANOM	Banah	74.04	292	P	P	18 29 31.4	-0.4
MEM	Membach	74.04	339	P	P	18 29 30.7	-0.7
	comp=Z,14nm,1.2s						
U38A	Gravette	74.05	51	P	P	18 29 31.9	+0.2
U38A				IAmb	IAmb	18 29 32.6	
	comp=Z,18nm,0.8s						
L49A	Milan	74.07	40	P	P	18 29 32.0	+0.3
	baz=328						
BSTI	Sart Tilman	74.17	339	P	P	18 29 32.1	+0.1
E58A	La Victoria	74.19	31	P	P	18 29 32.1	-0.2
	baz=332						
SLM	Saint Louis	74.20	47	P	P	18 29 32.6	+0.1
SLM				pmax	pmax		
	comp=Z,24nm,0.7s						
SLM	Saint Louis	74.20	47	P	P	18 29 32.6	+0.1
SLM				IAmb	IAmb	18 29 33.4	
	comp=Z,24nm,0.7s						
BZS	Buzias	74.21	327	⇓P	P	18 29 31.2	-1.2
M48A	Edgerton	74.21	41	P	P	18 29 32.1	-0.4
M48A				IAmb	IAmb	18 29 33.7	
	comp=Z,28nm,0.7s						
M48A	Edgerton	74.21	41	P	P	18 29 32.9	+0.4
	baz=327						
CCM	Cathedral Cave	74.22	48	P	P	18 29 32.0	-0.6
CCM				pmax	pmax		
	comp=Z,26nm,1.0s						
CCM	Cathedral Cave	74.22	48	P	P	18 29 32.0	-0.6
CCM				IAmb	IAmb	18 29 33.5	
	comp=Z,26nm,1.0s						
CCM	Cathedral Cave	74.22	48	P	P	18 29 33.1	+0.5
	baz=325						
COPA	Copaceanca	74.24	324	⇑P	P	18 29 31.7	-0.9
BHOU	Houvegnez	74.28	339	P	P	18 29 32.2	-0.6
N47A	Urbana	74.31	42	P	P	18 29 32.8	-0.3
N47A				IAmb	IAmb	18 29 34.0	
	comp=Z,44nm,1.4s						
N47A	Urbana	74.31	42	P	P	18 29 32.8	-0.3
	baz=327						
BCLA	Clavier	74.38	339	P	P	18 29 32.3	-1.0
	comp=Z,10nm,1.4s						
BCLA				PcP	PcP	18 29 45.9	+0.3
J52A	Paris	74.39	38	P	P	18 29 33.6	+0.1
	baz=329						
K51A	Iona Station	74.44	39	P	P	18 29 34.5	+0.7
	baz=329						
BGES	Gesves	74.46	339	⇑P	P	18 29 32.5	-1.2
ABTX	Abilene, Hawle	74.46	57	P	P	18 29 34.7	+0.6
ABTX				IAmb	IAmb	18 29 35.8	
	comp=Z,19nm,0.8s						
ABTX	Abilene, Hawle	74.46	57	P	P	18 29 35.0	+0.8
	baz=322						
H55A	Tweed	74.47	35	P	P	18 29 33.7	-0.2
	baz=331						
MGMO	Mountain Grove	74.47	49	P	P	18 29 33.4	-0.7
MGMO				IAmb	IAmb	18 30 55.1	
	comp=Z,25nm,1.1s						
MOA	Molln	74.50	333	i P	P	18 29 33.6	-0.5
	comp=Z,7.8nm,0.9s						
L50A	Kingsville	74.51	40	P	P	18 29 34.2	0.0
	baz=328						
M49A	Liberty Center	74.52	41	P	P	18 29 34.8	+0.5
	baz=328						
HERR	Herculane	74.58	326	⇑P	P	18 29 33.6	-0.9
BMRD	Maredsous	74.60	340	P	P	18 29 33.9	-0.6
BMRD				PcP	PcP	18 29 46.7	+0.1
N48A	Decatur	74.61	42	P	P	18 29 34.5	-0.3
	baz=327						
BR131	Keskin Array S	74.62	316	P	P	18 29 34.3	-0.7
BR131	Keskin Array S	74.62	316	P	P	18 29 34.7	-0.3
BR131				pmax	pmax		
	comp=Z,14nm,1.1s						
BR131	Keskin Array S	74.62	316	P	P	18 29 34.7	-0.3
BRTR	Keskin Array B	74.62	316	P	P	18 29 34.8	-0.3
	comp=Z,12nm,1.1s,baz=63,slow=3.0,SNR=23						
BRTR	Keskin Array B	74.62	316	P	P	18 29 34.4	-0.6
ARSA	Arzberg	74.68	332	i P	P	18 29 35.1	0.0
	comp=Z,13nm,1.1s,SNR=6.2						
K52A	Tillsonburg	74.70	38	P	P	18 29 35.7	+0.4
	baz=329						
P46A	Rosedale	74.72	44	P	P	18 29 35.5	0.0
P46A				IAmb	IAmb	18 29 36.6	
	comp=Z,25nm,0.8s						
G57A	Newington	74.74	33	P	P	18 29 34.7	-0.7
	baz=332						
E60A	Ste Agathe de	74.77	30	P	P	18 29 35.5	0.0
	baz=334						
DOU	Dourbes	74.83	340	⇑P	P	18 29 35.6	-0.3
DOU				PcP	PcP	18 29 49.6	+2.0
U40A	Yellville	74.84	50	P	P	18 29 35.6	-0.6
U40A					pP	18 31 08.4	+0.3
U40A	Yellville	74.84	50	P	P	18 29 36.1	-0.2
	baz=324,SNR=19						
UOSS	Minazif	74.84	291	i P	P	18 29 35.5	-0.9
	SNR=14						
UOSS	Minazif	74.84	291	P	P	18 29 35.3	-1.1
UOSS				P	P	18 29 35.3	-1.1
UOSS	Minazif	74.84	291	P	P	18 29 35.5	-0.9
D62A	Allapoint, All	74.86	28	P	P	18 29 36.1	+0.1
	baz=335						
TX31	Lajitas Ar. Si	74.90	62	P	P	18 29 37.8	+1.1
TX31				IAmb	IAmb	18 29 39.2	
	comp=Z,18nm,0.8s						
TX32	Lajitas Array	74.90	62	P	P	18 29 37.5	+0.8
TX32				IAmb	IAmb	18 29 39.2	
	comp=Z,19nm,0.8s						
TXAR	Lajitas Array	74.90	62	P	P	18 29 38.1	+1.3
	comp=Z,12nm,0.7s,baz=297,slow=4.3,SNR=50						
TXAR				pP	pP	18 31 08.9	+0.3
	comp=Z,1.1nm,0.7s,baz=300,slow=5.2,SNR=4.5						
TXAR	Lajitas Array	74.90	62	P	P	18 29 37.6	+0.9
N49A	Columbus Grove	74.90	41	P	P	18 29 36.3	-0.1
N49A				IAmb	IAmb	18 29 37.1	
	comp=Z,14nm,0.8s						
N49A	Columbus Grove	74.90	41	P	P	18 29 36.3	-0.1
	baz=328						
MDVR	Moldovita	74.91	326	⇑P	P	18 29 35.5	-1.0
M50A	Fremont	74.96	40		pP	18 31 06.5	-2.1
HATD	Hatta, Dubai	74.98	291	i P	P	18 29 36.8	-0.3
	SNR=12						
HATD	Hatta, Dubai	74.98	291	P	P	18 29 36.4	-0.8
HATD				P	P	18 29 36.4	-0.8
G58A	Ormstown	75.02	33	P	P	18 29 36.8	-0.1
	baz=332,SNR=6.5						
RJOB	Jochberg	75.02	334	eP	P	18 29 37.2	+0.1
	comp=Z,16nm,1.6s,baz=23,slow=5.8						
WBK	Wadi Bani Khal	75.02	287	P	P	18 29 37.3	-0.1
O48A	Farmland	75.06	42	P	P	18 29 36.7	-0.6
	baz=327						
PLVB	Pleven	75.10	324	⇑P	P	18 29 36.9	-0.6
ASHO	Ashiyiah	75.13	291	i P	P	18 29 37.5	-0.5
	SNR=11						
ASHO	Ashiyiah	75.13	291	P	P	18 29 37.1	-0.9
ORH	Orhaniye	75.16	319	eP	P	18 29 36.8	-1.1
SMDO	Samad	75.22	288	P	P	18 29 38.0	-0.6
SMDO				P	P	18 29 38.0	-0.6
F61A	St Evariste	75.27	30	P	P	18 29 39.1	+0.7
	baz=334,SNR=5.2						
W39A	Magazine	75.34	51	P	P	18 29 39.1	+0.1
W39A				IAmb	IAmb	18 29 40.3	
	comp=Z,20nm,1.0s						
W39A	Magazine	75.34	51	P	P	18 29 39.8	+0.8
	baz=324						
SOKA	Soboth	75.34	332	i P	P	18 29 38.8	-0.2
	comp=Z,23nm,1.0s,SNR=14						
PERS	Pernice	75.36	332	eP	P	18 29 38.4	-0.6
KALN	Kalnik	75.41	330	i P	P	18 29 38.1	-1.1
S44A	Carbondale	75.41	47	P	P	18 29 39.4	+0.1
N50A	Nevada	75.45	41	P	P	18 29 39.6	0.0
	baz=328						
KBA	Koelnbreinsper	75.47	333	i P	P	18 29 40.2	+0.4
	comp=Z,55nm,1.0s,SNR=28						
M52A	Chesterland	75.51	39	P	P	18 29 39.6	-0.2
M52A	Chesterland	75.51	39	P	P	18 29 39.8	0.0
	baz=329						
BATG	Bathurst New B	75.53	26	P	P	18 29 39.4	-0.5
BATG				IAmb	IAmb	18 31 27.3	
	comp=Z,37nm,1.8s						
ERPA	Erie	75.54	38	P	P	18 29 39.5	-0.5
ERPA	Erie	75.54	38	P	P	18 29 40.0	0.0
	baz=330						
FCAR	Ozark Folk Cen	75.57	50	P	P	18 29 40.3	0.0
FCAR				IAmb	IAmb	18 29 41.0	
	comp=Z,21nm,0.8s						
L53A	Girard	75.58	38	P	P	18 29 40.1	-0.1
	baz=329,SNR=9.8						
H59A	Cadyville	75.58	33	P	P	18 29 39.8	-0.4
	baz=332						
P48A	Milroy	75.61	43	P	P	18 29 40.3	-0.2
P48A				IAmb	IAmb	18 29 40.9	
	comp=Z,21nm,0.9s						
P48A	Milroy	75.61	43	P	P	18 29 40.3	-0.2
	baz=327						
H58A	Gabriels	75.62	33	P	P	18 29 40.1	-0.4
	baz=332,SNR=5.4						
PBMO	Poplar Bluff	75.63	48	P	P	18 29 40.5	-0.1
PBMO				IAmb	IAmb	18 29 41.8	
	comp=Z,34nm,1.1s						
BFO	Black Forest	75.63	337	eP	P	18 29 40.0	-0.5
	comp=Z,22nm,1.4s,baz=23,slow=5.8						
BFO	Black Forest	75.63	337	P	P	18 29 39.9	-0.5
BFO				pmax	pmax		
	comp=Z,19nm,1.3s						
BFO	Black Forest	75.63	337	P	P	18 29 39.9	-0.5
N51A	Ashland	75.64	40	P	P	18 29 40.3	-0.3
N51A	Ashland	75.64	40	P	P	18 29 40.5	-0.1
	baz=328						
OBKA	Obir	75.64	332	i P	P	18 29 40.4	-0.1
	comp=Z,11nm,0.7s,SNR=5.9						
E63A	Oxbow	75.64	28	P	P	18 29 40.1	-0.3
E63A				IAmb	IAmb	18 30 36.4	
	comp=Z,39nm,1.7s						
HPIG		75.67	65	P	P	18 29 42.1	+0.9
J56A	Wolcott	75.69	35	P	P	18 29 40.0	-0.8
J56A				IAmb	IAmb	18 31 14.4	
	comp=Z,27nm,0.9s						
L54A	Sinclairville	75.69	37	P	P	18 29 41.1	+0.2
	baz=330						
WATA	Walderalm	75.72	334	i P	P	18 29 41.5	+0.4
	comp=Z,26nm,1.2s,SNR=8.7						
G61A	St-Isidore-de-	75.72	31	P	P	18 29 41.3	+0.4
	baz=334						
JMDO	Jabal Madar	75.72	288	P	P	18 29 40.9	-0.5
	SNR=5.1						
K55A	Perry	75.73	36	P	P	18 29 40.7	-0.4
	baz=330						
PTJ	Puntijarka	75.76	331	P	P	18 29 40.5	-0.8
WTTA	Wattenberg	75.77	334	i P	P	18 29 41.6	+0.2
	comp=Z,27nm,0.9s,SNR=10						
UBR	Ueberruh	75.79	335	eP	P	18 29 41.3	-0.1
	comp=Z,12nm,1.2s,baz=23,slow=5.8						
MYKA	Terra Mystica	75.79	333	eP	P	18 29 41.2	-0.2
	comp=Z,14nm,1.1s						
ALNE	Al Ain	75.79	291	i P	P	18 29 41.2	-0.5
	SNR=8.6						
RETA	Reutte	75.79	335	i P	P	18 29 41.2	-0.3
	comp=Z,10nm,1.1s						
WVNY	West Valley, N	75.81	37	P	P	18 29 41.5	0.0
WVNY				IAmb	IAmb	18 29 42.6	
	comp=Z,29nm,1.0s						
MOTA	Moosalm	75.83	334	i P	P	18 29 41.9	+0.1
	comp=Z,28nm,1.1s,SNR=9.2						
P49A	Miami Univ. Ec	75.85	43	P	P	18 29 41.5	-0.3
	baz=328						
M53A	WI Miller and	75.86	39	P	P	18 29 41.8	0.0
	baz=329,SNR=7.5						
LCAR	Lake Charles	75.88	49	P	P	18 29 41.9	-0.1
LCAR				IAmb	IAmb	18 29 43.0	
	comp=Z,26nm,1.5s						
ALLY	Alegheny Colle	75.88	38	P	P	18 29 42.0	0.0
USIN	University of	75.89	45	P	P	18 29 41.7	-0.4
SQTA	Sankt Quirin	75.92	334	i P	P	18 29 42.3	+0.1
	comp=Z,24nm,1.0s,SNR=10						
Q48A	North Vernon	75.93	44	P	P	18 29 42.2	0.0
	baz=327						
BSY	Bisya	75.96	289	P	P	18 29 42.3	-0.4
MIAR	Mount Ida	75.97	51	P	P	18 29 42.6	+0.1
MIAR				pmax	pmax		
	comp=Z,16nm,0.9s						
MIAR	Mount Ida	75.97	51	P	P	18 29 42.6	+0.1
MIAR				IAmb	IAmb	18 29 44.0	
	comp=Z,16nm,0.8s						
MIAR	Mount Ida	75.97	51	P	P	18 29 43.5	+1.0
	baz=324,SNR=6.0						
ACSO	Alum Creek Sta	75.97	41	P	P	18 29 42.5	0.0
ACSO				IAmb	IAmb	18 29 43.3	
	comp=Z,28nm,1.2s						
ACSO	Alum Creek Sta	75.97	41	P	P	18 29 42.4	0.0
	baz=328						
WHAR	Wooly Hollow	75.98	50	P	P	18 29 42.6	+0.1
H60A	Morristown	75.98	32	P	P	18 29 42.8	+0.3
	baz=333						
CRES	Cresnjev	75.99	331	eP	P	18 29 41.6	-0.9
N52A	McGinn's Farm,	76.00	40	P	P	18 29 42.7	+0.2
	baz=329						
ABTA	Abfaltersbach	76.00	333	i P	P	18 29 41.7	-0.9
	comp=Z,21nm,1.2s,SNR=7.8						
NCB	Newcomb	76.00	33	P	P	18 29 42.4	-0.2
ECH	Echery	76.02	337	P	P	18 29 41.9	-0.7
ECH				pmax	pmax		
	comp=Z,13nm,1.0s						
ECH	Echery	76.02	337	P	P	18 29 41.9	-0.7
K56A	Middlesex	76.03	36	P	P	18 29 42.3	-0.5
	baz=331						
L55A	Hinsdale	76.07	37	P	P	18 29 42.8	-0.2
	baz=330						
JCT	Junction City	76.07	58	P	P	18 29 43.9	+0.7
JCT				pmax	pmax		
	comp=Z,20nm,1.0s						
JCT	Junction City	76.07	58	P	P	18 29 43.9	+0.7
JCT				IAmb	IAmb	18 29 44.8	
	comp=Z,20nm,0.9s						
JCT	Junction City	76.07	58	P	P	18 29 44.1	+0.9
	baz=323,SNR=6.3						
WHTX	Lake Whitney,	76.09	56	P	P	18 29 43.5	+0.3
	baz=323						
G62A	West of Eustis	76.09	30	P	P	18 29 43.6	+0.6
G62A				IAmb	IAmb	18 31 21.3	
	comp=Z,51nm,1.9s						
F63A	Nahmakanta, Br	76.09	29	P	P	18 29 43.3	+0.3
F63A				IAmb	IAmb	18 29 44.8	
	comp=Z,48nm,1.8s						
F63A	Nahmakanta, Br	76.09	29	P	P	18 29 43.4	+0.3
	baz=335						
W41B	Gary Mavity, V	76.09	50	P	P	18 29 43.1	-0.1
W41B	Gary Mavity, V	76.09	50	P	P	18 29 43.7	+0.5
	baz=325,SNR=5.5						
F64A	Sherman	76.17	29	P	P	18 29 43.4	0.0
F64A	Sherman	76.17	29	P	P	18 29 43.0	-0.5
	baz=335						
J58A	Remsen	76.17	34	P	P	18 29 42.7	-0.8
J58A					pP	18 31 16.6	+0.9
J58A				IAmb	IAmb	18 31 17.1	
	comp=Z,28nm,1.1s						
J58A	Remsen	76.17	34	P	P	18 29 43.0	-0.5
	baz=332						
M54A	Oil Creek Stat	76.19	38	P	P	18 29 43.5	-0.2
M54A					pP	18 31 16.5	+0.7
M54A				IAmb	IAmb	18 31 17.5	
	comp=Z,27nm,1.1s						
M54A	Oil Creek Stat	76.19	38	P	P	18 29 43.9	+0.3
	baz=330						
DAVA	Damuels	76.21	335	i P	P	18 29 43.8	0.0
	comp=Z,16nm,1.1s,SNR=5.2						
FETA	Feichten	76.23	335	i P	P	18 29 44.1	+0.1
	comp=Z,14nm,0.9s,SNR=6.5						
T45A	Paducah	76.24	47	P	P	18 29 45.1	+1.1
H61A	Lyndonville	76.26	31	P	P	18 29 44.6	+0.6
	baz=333						
VOJS	Vojsko	76.27	332	i P	P	18 29 42.4	-1.7
VTS	Vitosha	76.27	324	⇓P	P	18 29 43.9	-0.4
VTS	Vitosha	76.27	324	eP	P	18 29 42.6	-1.7
VTS	Vitosha	76.27	324	P	P	18 29 43.8	-0.4
VTS				pmax	pmax		
	comp=Z,17nm,0.8s						
VTS	Vitosha	76.27	324	P	P	18 29 43.8	-0.4
VTS				IAmb	IAmb	18 29 45.4	
	comp=Z,17nm,0.8s						
I59A	Olmsteadville	76.27	33	P	P	18 29 43.6	-0.4
	baz=332						
WCI	Wyandotte Cave	76.27	44	P	P	18 29 43.9	-0.3
WCI				pmax	pmax		
	comp=Z,24nm,0.9s						
WCI	Wyandotte Cave	76.27	44	P	P	18 29 43.9	-0.3
WCI				IAmb	IAmb	18 29 45.2	
	comp=Z,24nm,0.8s						
WCI	Wyandotte Cave	76.27	44	P	P	18 29 44.6	+0.4
	baz=327						
Z38A	Mt. Pleasant	76.31	53	P	P	18 29 44.5	0.0
Z38A				IAmb	IAmb	18 29 46.0	
	comp=Z,27nm,0.8s						
N53A	Lisbon	76.34	39	P	P	18 29 44.5	0.0
N53A				IAmb	IAmb	18 29 45.3	
	comp=Z,24nm,0.9s						
N53A	Lisbon	76.34	39	P	P	18 29 44.7	+0.2
	baz=329						
J59A	Piesco	76.35	34	P	P	18 29 44.3	-0.3
J59A	Piesco	76.35	34	P	P	18 29 44.0	-0.5
	baz=332						
X40A	Basin Creek Fa	76.37	51	P	P	18 29 44.7	-0.1
X40A				IAmb	IAmb	18 29 46.8	
	comp=Z,25nm,1.1s						
X40A	Basin Creek Fa	76.37	51	P	P	18 29 45.9	+1.1
	baz=325,SNR=6.5						
STAL	STALIGIAL	76.39	333	P	P	18 29 43.2	-1.5
I60A	Shoreham	76.42	33	P	P	18 29 44.8	0.0
	baz=333						
L56A	Greenwood	76.43	36	P	P	18 29 44.7	-0.3
L56A	Greenwood	76.43	36	P	P	18 29 44.6	-0.5
	baz=331						
H62A	Milan	76.47	31	P	P	18 29 44.6	-0.5
H62A				IAmb	IAmb	18 31 20.0	
	comp=Z,53nm,1.6s						
H62A	Milan	76.47	31	P	P	18 29 44.8	-0.3
	baz=334						
LBNH	Lisbon	76.52	32	P	P	18 29 46.2	+0.8
LBNH				pmax	pmax		
	comp=Z,22nm,1.3s						
LBNH	Lisbon	76.52	32	P	P	18 29 46.2	+0.8
LBNH				IAmb	IAmb	18 31 20.3	
	comp=Z,22nm,1.2s						
LBNH	Lisbon	76.52	32	P	P	18 29 46.0	+0.6
	baz=333						
O52A	Adamsville	76.53	40	P	P	18 29 45.1	-0.5
O52A				IAmb	IAmb	18 29 46.2	
	comp=Z,23nm,0.8s						
O52A	Adamsville	76.53	40	P	P	18 29 45.8	+0.3
	baz=329						
N54A	Moraine State	76.53	39	P	P	18 29 45.2	-0.3
N54A				IAmb	IAmb	18 29 46.5	
	comp=Z,23nm,0.9s						
N54A					pP	18 31 18.4	+0.5
N54A	Moraine State	76.53	39	P	P	18 29 46.0	+0.4
	baz=330,SNR=5.9						
M55A	Ridgway	76.56	37	P	P	18 29 45.1	-0.7
M55A					pP	18 31 18.7	+0.7
M55A				IAmb	IAmb	18 31 20.3	
	comp=Z,32nm,1.2s						
M55A	Ridgway	76.56	37	P	P	18 29 45.9	+0.2
	baz=330,SNR=6.3						
K58A	Earlville	76.57	35	P	P	18 29 45.5	-0.3
K58A					pP	18 31 18.2	+0.2
K58A				IAmb	IAmb	18 31 19.6	
	comp=Z,18nm,1.0s						
K58A	Earlville	76.57	35	P	P	18 29 45.1	-0.7
	baz=332						
G64A	Maxfield	76.60	29	P	P	18 29 46.0	+0.2
	baz=335						
O53A	New Philadelph	76.67	40	P	P	18 29 46.3	0.0
	baz=329						
ACCN	Adirondack Com	76.71	33	P	P	18 29 45.8	-0.6
ACCN				IAmb	IAmb	18 29 47.0	
	comp=Z,20nm,1.1s						
Q50A	Georgetown	76.74	42	P	P	18 29 47.4	+0.6
	baz=328						
M56A	Emporium	76.77	37	P	P	18 29 46.2	-0.6
	baz=330						
K59A	Cooperstown	76.84	34	P	P	18 29 46.9	-0.3
	baz=332,SNR=5.5						
Q51A	Peebles	76.85	42	P	P	18 29 47.5	+0.2
Q51A				IAmb	IAmb	18 29 48.2	
	comp=Z,22nm,0.8s						
Q51A	Peebles	76.85	42	P	P	18 29 47.6	+0.2
	baz=328						
MHTO	MHTO	76.86	287	P	P	18 29 47.3	-0.3
	SNR=17						
CTI	Castel Tesino	76.88	334	P	P	18 29 46.4	-1.1
CTI				pmax	pmax		
	comp=Z,19nm,1.2s						
CTI	Castel Tesino	76.88	334	P	P	18 29 46.4	-1.1
BINY	Binghamton	76.95	35	P	P	18 29 48.0	+0.2
	baz=332						
T47A	Sharon Grove	76.95	46	P	P	18 29 48.0	0.0
T47A				IAmb	IAmb	18 29 49.2	
	comp=Z,22nm,0.7s						
T47A					pP	18 31 21.6	+1.3
MMB	Musomiste	76.99	324	eP	P	18 29 47.4	-0.7
R50A	Paris	77.07	43	P	P	18 29 48.4	-0.1
R50A	Paris	77.07	43	P	P	18 29 49.5	+1.0
	baz=328						
N55A	Marion Center	77.08	38	P	P	18 29 48.8	+0.2
	baz=330,SNR=6.8						
S49A	Springfield	77.08	44	P	P	18 29 49.2	+0.6
	baz=328						
TUE	Stuetta	77.10	335	P	P	18 29 48.6	-0.2
TUE				IAmb	IAmb	18 29 49.9	
	comp=Z,20nm,1.1s						
J61A	Chester	77.11	32	P	P	18 29 49.1	+0.4
	baz=333						
L58A	Harry Jones Me	77.13	35	P	P	18 29 48.6	-0.3
	baz=332						
LMN	Caledonia Moun	77.18	26	P	P	18 29 48.8	-0.2
LMN				IAmb	IAmb	18 31 14.5	
	comp=Z,57nm,1.7s						
N56A	West Decatur	77.22	37	P	P	18 29 49.8	+0.4

	baz=330						
AS31	Alice Springs	77.22	198	P	P	18 29 50.7	+1.2
ASAR	Alice Springs	77.22	198	P	P	18 29 50.7	+1.3
	comp=Z,9.5nm,0.7s,baz=12,slow=5.0,SNR=134						
ASAR				pP	pP	18 31 25.1	+3.5
	comp=Z,1.7nm,0.9s,baz=18,slow=6.6,SNR=2.5						
ASAR	Alice Springs	77.22	198	P	P	18 29 50.4	+0.9
M57A	Sunshine Farm,	77.29	36	P	P	18 29 49.1	-0.6
M57A				IAmb	IAmb	18 29 50.2	
	comp=Z,15nm,0.8s						
M57A	Sunshine Farm,	77.29	36	P	P	18 29 49.5	-0.2
	baz=331						
L59A	Walton	77.29	35	P	P	18 29 49.0	-0.8
L59A				IAmb	IAmb	18 31 24.3	
	comp=Z,24nm,1.0s						
L59A	Walton	77.29	35	P	P	18 29 49.8	0.0
	baz=332						
CLF	Chambon-Foret	77.29	340	P	P	18 29 49.4	-0.2
CLF				IAmb	IAmb	18 29 50.8	
	comp=Z,50nm,1.5s						
NVLJ	Novalja	77.31	331	*i* P	P	18 29 47.6	-2.1
KIJV	Kijevo	77.34	330	*i* P	P	18 29 48.8	-1.2
Q52A	Bidwell	77.34	41	P	P	18 29 50.2	+0.2
	baz=329						
WVT	Waverly	77.35	47	P	P	18 29 50.1	0.0
WVT				pmax	pmax		
	comp=Z,13nm,0.8s						
WVT	Waverly	77.35	47	P	P	18 29 50.1	0.0
WVT				IAmb	IAmb	18 29 51.4	
	comp=Z,13nm,0.8s						
WVT	Waverly	77.35	47	P	P	18 29 50.8	+0.8
	baz=327						
R51A	Hillsboro	77.36	42	P	P	18 29 50.8	+0.6
	baz=328,SNR=5.2						
O55A	Ligonier	77.45	38	P	P	18 29 50.5	-0.1
	baz=330						
K61A	Williamstown	77.48	33	P	P	18 29 50.6	-0.1
	baz=333						
M58A	Price's Panora	77.50	36	P	P	18 29 50.6	-0.2
	baz=331						
TEOL	Teolo	77.51	333	P	P	18 29 50.4	-0.5
TEOL				IAmb	IAmb	18 29 51.8	
	comp=Z,42nm,1.2s						
P54A	Burton	77.51	40	P	P	18 29 51.3	+0.3
	baz=330						
W45A	Hickory Valley	77.54	48	P	P	18 29 51.1	0.0
T49A	Edmonton	77.54	44	P	P	18 29 51.0	-0.2
T49A				IAmb	IAmb	18 29 52.2	
	comp=Z,17nm,0.7s						
T49A	Edmonton	77.54	44	P	P	18 29 51.1	-0.2
	baz=328,SNR=7.3						
S50A	Richmond	77.55	43	P	P	18 29 51.6	+0.4
	baz=328						
RICI	Ricice	77.57	329	P	P	18 29 49.7	-1.5
SALO	Salr	77.58	334	P	P	18 29 50.0	-1.2
SSPA	Standing Stone	77.61	37	P	P	18 29 51.0	-0.5
VAY	Valandovo	77.64	324	*e*P	P	18 29 51.2	-0.4
O56A	Blue Knob Stat	77.68	38	P	P	18 29 51.8	-0.1
	baz=330						
SENIN	Lac Senin/Sane	77.72	337	P	P	18 29 52.0	-0.3
M59A	Waymart	77.72	35	P	P	18 29 51.3	-0.8
	baz=332						
R52A	Catlettsburg	77.72	42	P	P	18 29 52.1	-0.1
	baz=329						
Q53A	Leroy	77.73	41	P	P	18 29 52.4	+0.3
	baz=329,SNR=5.9						
L60A	Shokan	77.75	34	P	P	18 29 52.2	-0.1
	baz=332						
MANT	Manisa	77.79	319	P	P	18 29 51.8	-1.0
PDG	Podgorica	77.82	327	⇓P	P	18 29 51.3	-1.2
PDG	Podgorica	77.82	327	P	P	18 29 51.1	-1.5
PDG				IAmb	IAmb	18 29 53.1	
	comp=Z,40nm,1.2s						
P55A	Reedsville	77.85	39	P	P	18 29 53.2	+0.4
	baz=330,SNR=7.4						
N58A	Sunbury	77.87	36	P	P	18 29 52.6	-0.3
N58A	Sunbury	77.87	36	P	P	18 29 53.0	+0.1
	baz=331						
Q54A	Coxs Mills	77.90	40	P	P	18 29 53.7	+0.6
Q54A				IAmb	IAmb	18 29 54.1	
	comp=Z,26nm,1.1s						
Q54A	Coxs Mills	77.90	40	P	P	18 29 53.4	+0.4
	baz=330						
T50A	Nancy	77.91	44	P	P	18 29 53.6	+0.4
	baz=328,SNR=6.7						
S51A	Beattyville	77.92	43	P	P	18 29 53.5	+0.3
S51A				IAmb	IAmb	18 29 54.0	
	comp=Z,15nm,0.8s						
S51A	Beattyville	77.92	43	P	P	18 29 53.6	+0.4
	baz=328						
U49A	Red Boiling Sp	77.93	45	P	P	18 29 53.2	0.0
U49A				IAmb	IAmb	18 29 54.3	
	comp=Z,18nm,0.8s						
CLTN	Cedars of Leba	78.04	46	P	P	18 29 54.5	+0.6
CLTN				IAmb	IAmb	18 29 55.0	
	comp=Z,21nm,0.8s						
O57A	Amberson	78.08	37	P	P	18 29 53.9	-0.1
	baz=331						
V48A	Smith Brothers	78.12	46	P	P	18 29 54.0	-0.3
V48A				IAmb	IAmb	18 29 55.3	
	comp=Z,14nm,0.8s						
V48A					pP	18 31 28.5	+1.4
N59A	State Game Lan	78.15	36	P	P	18 29 54.1	-0.3
N59A	State Game Lan	78.15	36	P	P	18 29 54.3	-0.1
	baz=332						
PLAL	Pickwick Lake	78.19	47	P	P	18 29 54.2	-0.4
PLAL				IAmb	IAmb	18 29 55.5	
	comp=Z,16nm,0.8s						
PLAL					pP	18 31 26.4	-1.0
Q55A	Buckhannon	78.19	40	P	P	18 29 54.7	-0.1
	baz=330						
M60A	Port Jervis	78.20	35	P	P	18 29 54.3	-0.3
	baz=332						
P56A	Dayton Farm, R	78.24	39	P	P	18 29 55.5	+0.7
	baz=330,SNR=7.7						
T51A	Gray	78.34	43	P	P	18 29 55.7	+0.2
	baz=328						
Q56A	Snyder Ridge,	78.50	39	P	P	18 29 55.3	-1.1
Q56A				IAmb	IAmb	18 31 31.7	
	comp=Z,40nm,1.7s						
Q56A	Snyder Ridge,	78.50	39	P	P	18 29 55.7	-0.6
	baz=330						
R54A	Victor	78.53	41	P	P	18 29 57.2	+0.7
	baz=330						
ZCCA	Zocca	78.63	333	P	P	18 29 57.3	+0.4
ZCCA				IAmb	IAmb	18 30 00.0	
	comp=Z,44nm,1.4s						
S54A	Dingess, Beckl	78.73	41	P	P	18 29 58.1	+0.5
	baz=329						
LIT	Litokhoron	78.75	324	P	P	18 29 56.3	-1.4
LIT	Litokhoron	78.75	324	P	P	18 29 56.2	-1.4
R55A	Marlinton	78.79	40	P	P	18 29 57.5	-0.5
R55A				IAmb	IAmb	18 29 59.1	
	comp=Z,20nm,0.9s						
R55A	Marlinton	78.79	40	P	P	18 29 58.8	+0.8
	baz=330						
PSA00	Pilbara Seismi	78.86	211	P	P	18 29 59.1	+0.8
TZTN	Tazewell	78.87	43	P	P	18 29 58.4	0.0
	baz=328						
T53A	Wise	78.92	42	P	P	18 29 59.4	+0.7
	baz=329						
SWET	Sewanee	78.95	46	P	P	18 29 57.7	-1.2
SWET				IAmb	IAmb	18 29 59.5	
	comp=Z,21nm,0.8s						
SWET					pP	18 31 32.9	+1.1
R56A	Bull Pasture M	78.97	39	P	P	18 29 59.6	+0.7
	baz=330						
MSSA	Maissana	79.06	334	P	P	18 29 58.0	-1.3
MSSA				IAmb	IAmb	18 29 59.4	
	comp=Z,26nm,1.1s						
S55A	Lewisburg	79.08	41	P	P	18 29 59.9	+0.4
	baz=330						
X48A	Hartselle	79.10	47	P	P	18 29 59.4	-0.2
BNI	Bardonecchia	79.10	337	P	P	18 29 59.1	-0.5
BNI				pmax	pmax		
	comp=Z,16nm,1.2s						
BNI	Bardonecchia	79.10	337	P	P	18 29 59.1	-0.5
Q58A	Fox Den Farm,	79.17	38	P	P	18 30 00.0	+0.1
	baz=331						
MURB	Monte Urbino	79.19	332	P	P	18 29 59.9	-0.1
MURB				IAmb	IAmb	18 30 02.4	
	comp=Z,36nm,1.0s						
T54A	Tazewell	79.25	42	P	P	18 30 01.2	+0.7
	baz=329						
OSSC	Osservatorio P	79.31	333	P	P	18 29 59.9	-0.7
CPCT	Cooper Cave	79.38	45	P	P	18 30 00.9	-0.2
SSB	Saint Sauveur	79.40	338	P	P	18 30 01.1	0.0
SSB				pmax	pmax		
	comp=Z,11nm,0.8s						
SSB	Saint Sauveur	79.40	338	P	P	18 30 01.1	0.0
R57A	Stanardsville	79.41	39	P	P	18 30 01.5	+0.4
	baz=331						
TKL	Tuckaleechee C	79.52	44	P	P	18 30 01.5	-0.3
TKL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TKL	Tuckaleechee C	79.52	44		P	18 30 01.5	-0.3
SGRT	San Giovanni R	79.58	329	P	P	18 30 00.9	-1.3
U54A	Nelsons Funny	79.61	42	P	P	18 30 02.5	+0.1
	baz=329						
FPAL	Fort Paine	79.66	46	P	P	18 30 02.4	-0.3
Y49A	Blount Mountai	79.88	47	P	P	18 30 03.1	-0.6
Y49A				IAmb	IAmb	18 30 05.0	
	comp=Z,17nm,0.9s						
Y49A					pP	18 31 37.3	+0.3
X51A	Calhoun	79.98	45	P	P	18 30 04.9	+0.6
	baz=328						
LATE	Laterza	79.99	332	P	P	18 30 03.6	-0.7
LATE				IAmb	IAmb	18 30 04.6	
	comp=Z,26nm,1.1s						
T57A	Hurt	80.24	40	P	P	18 30 05.8	+0.1
	baz=330						
MATE	Matera	80.27	328	⇑P	P	18 30 04.8	-0.8
LRAL	Lakeview Retre	80.30	48	P	P	18 30 05.9	0.0
LRAL	Lakeview Retre	80.30	48	P	P	18 30 06.0	0.0
	baz=327						
ACER	Acerenza	80.39	328	P	P	18 30 05.7	-0.7
T58A	Grand View Acr	80.58	40	P	P	18 30 07.5	+0.1
	baz=331						
Z50A	Ashland	80.61	47	P	P	18 30 07.4	-0.3
Z50A					pP	18 31 42.1	+1.2
Z50A	Ashland	80.61	47	P	P	18 30 08.0	+0.4
	baz=328,SNR=13						
ZAIG	Zacatecas	80.67	65	P	P	18 30 09.2	+0.8
W54A	Cherokee Point	80.69	43	P	P	18 30 08.1	+0.1
	baz=329						
X53A	Estanollee	80.71	44	P	P	18 30 09.2	+1.1
	baz=329						
V56A	Mocksville	80.77	42	P	P	18 30 09.0	+0.6
	baz=330						
V57A	Coltrane Farms	81.00	41	P	P	18 30 09.9	+0.3
	baz=330						
U58A	Oxford	81.05	40	P	P	18 30 10.0	+0.1
	baz=331						
V58A	Windy Hill, Pi	81.34	41	P	P	18 30 11.3	-0.1
V58A				IAmb	IAmb	18 30 12.5	
	comp=Z,15nm,0.9s						
V58A	Windy Hill, Pi	81.34	41	P	P	18 30 12.1	+0.7
	baz=331						
HODGE	Hodges	81.39	44	P	P	18 30 13.2	+1.6
ITM	Ithomi	81.52	323	P	P	18 30 11.3	-1.0
ITM				IAmb	IAmb	18 31 34.1	
	comp=Z,39nm,1.3s						
W57A	Gilead	81.54	42	P	P	18 30 13.0	+0.6
	baz=330						
TIP	Timpagrande	81.58	327	⇑P	P	18 30 11.4	-1.2
TIP	Timpagrande	81.58	327	P	P	18 30 11.6	-1.1
X56A	White Oak	81.68	43	P	P	18 30 13.6	+0.5
	baz=330						
V59A	Middlesex	81.72	40	P	P	18 30 14.1	+0.8
	baz=331						
BIRD	Birdtown, Kers	81.79	42	P	P	18 30 12.9	-0.8
BIRD				IAmb	IAmb	18 30 15.1	
	comp=Z,23nm,1.2s						
W58A	Raeford	81.97	41	P	P	18 30 15.3	+0.7
	baz=331						
RAYN	Ar Rayn	81.98	298	*i* P	P	18 30 14.3	-0.5
	SNR=18						
RAYN	Ar Rayn	81.98	298	P	P	18 30 14.4	-0.5
RAYN				pmax	pmax		
	comp=Z,62nm,1.4s						
RAYN	Ar Rayn	81.98	298	P	P	18 30 14.4	-0.5
ABTO	Aybut	82.44	288	P	P	18 30 15.6	-1.7
STKA	Stephens Creek	84.15	190	P	P	18 30 26.5	+1.1
	comp=Z,2.2nm,1.0s,baz=321,slow=7.2,SNR=5.3						
STKA	Stephens Creek	84.15	190	P	P	18 30 26.9	+1.5
ESDC	Sonseca Array	86.55	343	P	P	18 30 36.1	-1.2
	comp=Z,1.0nm,0.4s,baz=19,slow=5.0,SNR=5.2						
ESDC	Sonseca Array	86.55	343	IAmb	IAmb	18 30 37.5	
	comp=Z,4.1nm,1.1s						
KEST	Kesra	87.08	331	P	P	18 30 39.8	-0.1
	comp=Z,2.9nm,0.6s,baz=58,slow=2.6,SNR=6.2						
SYO	Syowa Base	145.33	215	⇑*e*PKPdf	PKPdf	18 37 27.0	-0.5
SYO	Syowa Base	145.33	215	⇓*e*PKPbc	PKPbc	18 37 27.7	-0.7
SYO	Syowa Base	145.33	215	⇑*e*PKPab	PKiKP	18 37 31.5	-0.1
CPUP	Villa Florida	145.55	54	PKPbc	PKiKP	18 37 31.4	-2.1
	comp=Z,5.2nm,0.9s,baz=341,slow=5.7,SNR=7.7						
PLCA	Paso Flores	148.24	87	PKPbc	PKiKP	18 37 38.1	-0.6
	comp=Z,2.9nm,0.7s,baz=337,slow=7.1,SNR=5.6						
PLCA				pPKPbc	pPKPbc	18 39 16.6	-1.0
	comp=Z,2.9nm,0.9s,baz=15,slow=1.9,SNR=4.3						

IDC ***12*** *19:10:00.5±1.5, 47.°94N×146.°76E, h476km±25km, mb2.7/4, mb1 2.8/11, mb1mx2.7/54, mbtmp3.7/11, Error ellipse: s-maj=34.1km s-min=15.6km az=146.0*

ISC 12 19:09:59.0±0.9, **47.°95N**±0.°09×**146.°9E**±0.°1, **h442**km, **n26**, σ**2.s01**/28, **mb3.1**/4, **Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JRA	Rausu	4.19	197	P	P	19 11 18.1	+2.8
JSE	Soyaes	4.20	226	P	P	19 11 18.8	+3.4
JWK2	Keihoku	4.31	234	P	P	19 11 20.4	+4.0
JTKR	Abashiri--Toko	4.47	208	P	P	19 11 20.8	+2.8
NEM2	Nemuro 2	4.65	190	P	P	19 11 20.4	+0.8
NEM2				*e*S	S	19 12 24.7	-0.5
ASAJ	Asahikawa	4.84	219	P	P	19 11 24.0	+2.5
	1.1nm,0.3s,baz=293,slow=3.5,SNR=19						
JKK2	Kamakawa 2	4.98	217	P	P	19 11 25.7	+2.9
JAR	Ashorobuto	5.13	206	P	P	19 11 26.5	+2.3
JAK	Akkeshi	5.18	198	P	P	19 11 25.6	+0.9
JAK				*e*S	S	19 12 32.8	-1.8
JHR	Hokuryu	5.52	222	P	P	19 11 30.7	+2.6
JFR	Furan	5.64	214	P	P	19 11 31.7	+2.3
JCH	Churui	5.87	206	P	P	19 11 32.3	+0.6
JNBK	Urakawa-nobuka	6.37	209	P	P	19 11 37.1	+0.3
JEW	Eniwo	6.37	219	P	P	19 11 38.4	+1.6
JKB	Kayabe	7.33	216	P	P	19 11 47.3	+0.2
JOT	Ohata	7.76	214	P	P	19 11 52.0	+0.3
KLR	Kul'dur	10.09	283	P	P	19 12 17.8	+0.9
	0.1nm,0.3s,baz=112,slow=8.0,SNR=5.3						
USRK	Ussuriysk Ar.	10.98	256	P	P	19 12 26.9	+0.2
	baz=77,slow=10,SNR=4.3						
MA2	Magadan	11.88	10	P	P	19 12 37.7	+1.5
	0.4nm,0.3s,baz=135,slow=18,SNR=6.1						
MJAR	Matsushiro Arr	13.06	212	P	P	19 12 50.7	+1.2
	0.0nm,0.3s,baz=9.0,slow=13,SNR=4.7						
SEY	Seymchan	15.33	10	P	P	19 13 14.4	+0.9
	0.3nm,0.3s,baz=183,slow=8.7,SNR=12						
KSRS	Korea Array	17.38	240	P	P	19 13 35.4	0.0
	0.1nm,0.3s,baz=35,slow=12,SNR=3.6						
SONM	Songino Array	26.91	285	P	P	19 15 03.5	+0.7
	0.2nm,0.4s,baz=76,slow=11,SNR=3.2						
ILAR	Eielson Array	38.30	39	P	P	19 16 39.2	-0.2
	0.6nm,0.7s,baz=271,slow=8.5,SNR=6.3						
MKAR	Makanchi Array	42.58	294	P	P	19 17 11.3	-3.0
	0.5nm,0.6s,baz=62,slow=7.2,SNR=7.4						
RES	Resolute Bay	51.02	18	P	P	19 18 16.4	-1.5
	1.3nm,0.4s,baz=346,slow=6.2						

NIED ***12*** *19:13:00, 37.°30N×144.°30E, h5km, Mw4.2 Best double couple: M0 2.40000×10^15 NP1: φs 236.00000°, δ61.00000°, λ-86.00000°. NP2: φs 47.00000°, δ29.00000°, λ-98.00000°.*

IDC ***12*** *19:13:24.6±0.5, 37.°04N×144.°61E, h0km, mb4.4/33, mb1 4.5/40, mb1mx4.4/63, mbtmp4.4/40, ML4.2/5, MS3.1/10, Ms1 3.1/10, ms1mx3.0/53, Error ellipse: s-maj=12.9km s-min=11.4km az=141.0*

BJI ***12*** *19:13:24.6±0.0, 37.°21N×144.°50E, h6km, mB4.9/38, mb4.5/49, Ms4.3/18, Ms7 4.2/16*

JMA ***12*** *19:13:29.9±0.2, 37.°29N×144.°32E, h58km, M4.0*

MOS ***12*** *19:13:29.8±0.8, 37.°37N×144.°41E, h34km, mb4.9/18, Error ellipse: s-maj=6.8km s-min=4.6km az=113.1*

NEIC ***12*** *19:13:31.2±1.5, 37.°07N±0.°09×144.°5E±0.°1, h43km±5km, mb4.7/166, Error ellipse: s-maj=14.6km s-min=12.3km az=135.0*

ISC 12 19:13:28.9±0.4, **37.°17N**±0.°05×**144.°54E**±0.°05, **h26**km, **n401**, σ**1.s51**/408, **mb4.7**/143, **MS4.2**/10, **21C-11D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.69	296	P	Pn	19 14 09.0	-1.5
JIO	Ouri	2.84	298	P	Pn	19 14 10.9	-1.6
JIO				S	Sn	19 14 41.9	-3.9
JKMT	Kesennumamotoy	2.93	305	P	Pn	19 14 12.1	-1.6
JKMT				S	Sn	19 14 43.5	-4.5
OFUJ	Ofunato	2.96	311	P	Pn	19 14 12.5	-1.7
JMK	Ichinoseki	3.17	305	P	Pn	19 14 15.9	-1.2
JFT	Otama	3.37	277	P	Pn	19 14 19.6	-0.2
JFT				S	Sn	19 14 57.0	-2.0
JOM	Ohasama	3.44	313	P	Pn	19 14 19.6	-1.2
JOM				S	Sn	19 14 56.9	-3.8
BSO1	Boso 1	3.83	230	P	Pn	19 14 23.8	-1.8
JRY	Ryogami san	4.68	257	P	Pn	19 14 36.5	-1.4
JRY				*e*S	Sn	19 15 26.4	-5.0
JOD2	Odawara 2	4.80	248	P	Pn	19 14 37.9	-1.6
ERM	Erimo	4.96	348	*ce*P	Pn	19 14 39.4	-2.2
ERM				pmax	pmax		
	comp=Z,176nm,1.3s						
ERM	Erimo	4.96	348		Pn	19 14 39.6	-2.0
JOT	Ohata	5.01	328	P	Pn	19 14 41.4	-0.9
MJAR	Matsushiro Arr	5.12	265	Pn	Pn	19 14 43.3	-0.6
	comp=Z,2.9nm,0.3s,baz=86,slow=14,SNR=110						
MJAR				Sn	Sn	19 15 39.1	-3.0
	comp=Z,2.6nm,0.3s,baz=80,slow=14,SNR=5.8						
MJAR				LR	LR	19 16 45.8	
	comp=Z,181nm,19.5s,baz=85,slow=39						
MAJO	Matsushiro	5.12	265	*d i*P	Pn	19 14 43.7	-0.2
MAJO	Matsushiro	5.12	265		Pn	19 14 44.2	+0.4
MAT	Matsushiro	5.12	265	P	Pn	19 14 44.2	+0.3
MAT				S	Sn	19 15 38.0	-4.1
MJB9	Matsu-Tunnel	5.12	265		Pn	19 14 44.2	+0.3
JKB	Kayabe	5.44	331	P	Pn	19 14 47.0	-1.2
JCH	Churui	5.52	351	P	Pn	19 14 47.0	-2.3
JCH				*e*S	Sn	19 15 44.3	-7.5
JHJ2	Mitsune	5.60	225		Pn	19 14 48.1	-2.4
JHJ	Hachijo jima 2	5.61	225	Pn	Pn	19 14 47.5	-3.2
	comp=Z,52nm,0.3s,baz=343,slow=21,SNR=26						
JHJ				Sn	Sn	19 15 47.6	-6.7
	comp=Z,381nm,0.3s,baz=62,slow=22,SNR=18						
NEM2	Nemuro 2	6.26	8	P	Pn	19 14 55.1	-4.4
NMR	Nemuro--Hokkai	6.26	8	⇑*i*P	Pn	19 14 55.1	-4.4
NMR				*i* S	Sn	19 16 00.5	-10
JOSM	Okushiri--Mats	6.28	323	P	Pn	19 14 58.8	-0.9
INU	Inuyama	6.34	256		Pn	19 15 00.4	-0.3
GLVR	Golovnino	6.61	6	*e*P	Pn	19 15 01.3	-2.9
GLVR				*i* S	Sn	19 16 08.9	-10
GLVR				smax	smax		
	comp=N,437nm,0.4s						
GLVR				smax	smax		
	comp=E,720nm,0.4s						
JTKR	Abashiri--Toko	6.81	356	P	Pn	19 15 04.4	-2.7
JTKR				*e*S	Sn	19 16 15.5	-8.3
GRPR	Tuman	6.88	7	*c i*P	Pn	19 15 03.6	-4.4
GRPR				*i* S	Sn	19 16 15.4	-10
GRPR				pmax	pmax		
	comp=Z,294nm,0.4s						
GRPR				pmax	pmax		
	comp=N,216nm,0.3s						
GRPR				pmax	pmax		
	comp=E,85nm,0.2s						
JHR	Hokuryu	6.91	343	P	Pn	19 15 07.9	-0.5
JHR				*e*S	Sn	19 16 20.6	-5.6
SHO	Shikotan	6.92	14	*c i*P	Pn	19 15 03.8	-4.7
SHO				*i* S	Sn	19 16 16.0	-10
SHO				pmax	pmax		
	comp=Z,79nm,0.4s						
SHO				pmax	pmax		
	comp=E,44nm,0.2s						
SHO				pmax	pmax		
	comp=N,39nm,0.4s						
YUK	Yuzh-Kuril'sk	6.93	8	*d i*P	Pn	19 15 03.5	-5.2
YUK				*i* S	Sn	19 16 16.3	-10
YUK				pmax	pmax		
	comp=Z,238nm,0.5s						
YUK				pmax	pmax		
	comp=E,67nm,0.3s						
YUK				pmax	pmax		
	comp=N,61nm,0.5s						
JKA	Kamikawa-asahi	7.10	349		Pn	19 15 09.7	-1.3
JKA					Sn	19 16 28.1	-2.7
ASAJ	Asahikawa	7.10	349	Pn	Pn	19 15 09.7	-1.4
	comp=N,11nm,0.3s,baz=190,slow=8.8,SNR=174						
ASAJ				Sn	Sn	19 16 28.1	-2.7
	comp=N,3.6nm,0.3s,baz=354,slow=31,SNR=4.2						
ASAJ				LR	LR	19 18 46.6	
	comp=N,121nm,18.3s,baz=190,slow=44						
KUR	Kuril'sk	8.44	16	*e*P	Pn	19 15 26.1	-3.3
KUR				*e*S	Sn	19 16 54.1	-10
KUR				pmax	pmax		
	comp=N,32nm,0.5s						
KUR				pmax	pmax		
	comp=E,13nm,0.5s						
KUR				pmax	pmax		
	comp=Z,43nm,0.5s						
KUR				smax	smax		
	comp=N,32nm,0.5s						
KUR				smax	smax		
	comp=E,76nm,0.5s						
YSS	Yuzh-Sakhalins	9.87	353	*e*P	Pn	19 15 46.6	-2.4
YSS				*e*S	Sn	19 17 33.0	-5.8
YSS				pmax	pmax		
	comp=Z,10.0nm,0.4s						
YSS				smax	smax		
	comp=E,10.0nm,0.7s						
YSS				MLR	MLR		
	comp=Z,300nm,20.0s						
YSS				MLR	MLR		
	comp=N,200nm,17.0s						
YSS				MLR	MLR		
	comp=E,200nm,17.0s						
TEY	Ternei	9.88	325	⇑*e*P	Pn	19 15 48.4	-0.7
TEY				pmax	pmax		
	comp=N,50nm,0.7s						
TEY				pmax	pmax		
	comp=E,50nm,0.7s						
TEY				pmax	pmax		
	comp=Z,60nm,0.7s						
JCJ	Chichijima	10.24	192	Pn	Pn	19 15 48.5	-5.6
	comp=Z,8.3nm,0.3s,baz=270,slow=22,SNR=12						
JCJ				Sn	Sn	19 17 36.1	-12
	comp=Z,19nm,0.3s,baz=290,slow=23,SNR=7.9						
JCJ				LR	LR	19 20 19.9	
	comp=Z,21nm,18.5s,baz=83,slow=41						
VLA	Vladivostok	11.36	305	*i* P	Pn	19 16 09.7	+0.3
VLA				pmax	pmax		
	comp=Z,27nm,0.9s						
MSHR	Mys Shultsa	11.61	302	*i* P	Pn	19 16 12.0	-0.9
USA0B	Ussuriysk Arra	11.83	310	P	Pn	19 16 16.4	+0.6
USA0B	Ussuriysk Arra	11.83	310		Pn	19 16 16.4	+0.6
USRK	Ussuriysk Ar.	11.83	310	Pn	Pn	19 16 17.1	+1.2
	baz=109,slow=11,SNR=13						
USRK				LR	LR	19 20 56.8	
	comp=Z,150nm,18.1s,baz=122,slow=38						
USRK	Ussuriysk Ar.	11.83	310		Pn	19 16 15.3	-0.5
JNU	Nakatsue	11.89	254	LR	LR	19 20 52.6	
	comp=Z,87nm,18.3s,baz=34,slow=38						
KSRS	Korea Array	13.24	276	Pn	Pn	19 16 36.7	+1.6
	comp=Z,0.3nm,0.3s,baz=87,slow=13,SNR=7.7						
KSRS				LR	LR	19 20 55.7	
	comp=Z,60nm,18.9s,baz=62,slow=34						
MDJ	Mudanjiang	13.53	308	P	Pn	19 16 40.0	+1.0
MDJ				pP	P	19 16 47.0	-0.9
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,180nm,3.9s						
MDJ				LR	LR		
	comp=Z,930nm,19.5s						
MDJ				LR	LR		
	comp=Z,1µm,20.2s						
MDJ				LR	LR		
	comp=Z,2µm,22.8s						
GRNR	Gornyy	14.79	339	⇓*i*P	Pn	19 16 54.2	-2.0
GRNR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GRNR				MLR	MLR		
	comp=Z,100nm,19.0s						
KLR	Kul'dur	15.22	326	Pn	Pn	19 17 03.7	+1.8
	comp=Z,0.4nm,0.3s,baz=141,slow=11,SNR=11						
KLR				LR	LR	19 22 27.1	
	comp=Z,78nm,21.6s,baz=139,slow=35						
KLR	Kul'dur	15.22	326	*i* P	Pn	19 17 01.3	-0.6

KLR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PEA0B	**Petropavlovsk-**	18.39	26	iP	P	19 17 42.0	+0.2
PETK	**Petropavlovsk-**	18.39	26	P	P	19 17 42.5	+0.8
	comp=Z,0.1nm,0.3s,baz=182,slow=14,SNR=3.7						
PETK				LR	LR	19 24 00.4	
	comp=Z,47nm,21.7s,baz=241,slow=34						
ZEA	**Zeya**	20.44	330	eP	P	19 18 04.4	+0.3
ZEA				pmax	pmax		
	comp=Z,21nm,1.2s						
HIA	**Hailar**	21.64	312	P	P	19 18 18.1	+1.0
HIA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HIA	**Hailar**	21.64	312	P	P	19 18 18.1	+1.0
NJ2	**Nanjing**	21.72	264	eP	P	19 18 18.3	+0.2
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MA2	**Magadan**	22.78	8	P	P	19 18 30.1	+0.9
	comp=Z,1.9nm,0.6s,baz=219,slow=8.7,SNR=4.3						
MA2	**Magadan**	22.78	8	ceP	P	19 18 29.5	+0.3
MA2				pmax	pmax		
	comp=Z,7.0nm,1.7s						
GUMO	**Guam**	23.48	179	LR	LR	19 27 00.7	
	comp=Z,73nm,18.1s,baz=98,slow=35						
HHC	**Hu-ho-hao-te**	25.80	288	eP	P	19 18 57.6	-0.3
HHC				pmax	pmax		
	comp=Z,75nm,0.7s						
HHC				pmax	pmax		
	comp=Z,280nm,4.1s						
H11N2	**WAKE ISLAND Hy**	26.13	126	T	T	19 45 52.3	
	baz=317,slow=74,SNR=260						
H11N1	**WAKE ISLAND Hy**	26.14	126	T	T	19 46 04.1	
	baz=317,slow=74,SNR=113						
H11N3	**WAKE ISLAND Hy**	26.14	126	T	T	19 46 15.4	
	baz=317,slow=74,SNR=206						
SEY	**Seymchan**	26.24	8	P	P	19 19 02.2	+0.7
	comp=Z,10nm,0.8s,baz=180,slow=6.8,SNR=50						
SEY	**Seymchan**	26.24	8	iP	P	19 19 01.1	-0.4
YAK	**Yakutsk**	26.55	344	P	P	19 19 04.3	0.0
	comp=Z,4.4nm,0.5s,baz=172,slow=2.0,SNR=5.2						
YAK				LR	LR	19 30 34.7	
	comp=Z,46nm,19.3s,baz=152,slow=39						
YAK	**Yakutsk**	26.55	344	eP	P	19 19 02.7	-1.6
YAK				e*PP	pP	19 19 08.9	-1.2
YAK				e		19 22 26.8	
YAK				eS	S	19 23 38.4	+1.5
YAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,92nm,4.3s						
YAK				pmax	pmax		
	comp=N,155nm,4.6s						
YAK				pmax	pmax		
	comp=E,106nm,4.3s						
YAK				smax	smax		
	comp=E,64nm,4.8s						
YAK				smax	smax		
	comp=N,112nm,4.1s						
YAK	**Yakutsk**	26.55	344	IAmb	IAmb	19 19 25.0	
	comp=Z,13nm,0.6s						
H11S1	**WAKE ISLAND Hy**	26.89	128	T	T	19 46 51.4	
	baz=319,slow=76,SNR=80						
H11S3	**WAKE ISLAND Hy**	26.90	128	T	T	19 46 53.5	
	baz=319,slow=76,SNR=69						
H11S2	**WAKE ISLAND Hy**	26.91	128	T	T	19 46 53.6	
	baz=319,slow=76,SNR=56						
BOD	**Bodaibo**	28.79	326	eP	P	19 19 23.9	-0.5
BOD				pmax	pmax		
	comp=Z,8.0nm,1.8s						
XAN	**Xi'an**	29.03	275	P	P	19 19 33.4	+6.6
XAN				pP	pwP	19 19 42.1	+1.5
SONM	**Songino Array**	29.80	303	P	P	19 19 34.5	+0.8
	comp=Z,1.4nm,0.9s,baz=104,slow=8.4,SNR=8.2						
SONM	**Songino Array**	29.80	303	P	P	19 19 34.1	+0.5
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM	**Songino Array**	29.80	303	P	P	19 19 34.1	+0.5
ENH	**Enshi**	29.84	267	P	P	19 19 34.1	+0.1
ENH				IAmb	IAmb	19 20 11.6	
	comp=Z,17nm,1.2s						
TLY	**Talaya**	32.15	310	iP	P	19 19 56.3	+2.1
TLY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZAK	**Zakamensk**	32.16	308	eP	P	19 19 54.9	+0.5
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
LZH	**Lanzhou**	32.51	281	eP	P	19 19 57.0	-0.6
LZH				pP	sP	19 20 07.6	+1.7
LZH				ePP	PP	19 21 06.2	-5.0
LZH				pmax	pmax		
	comp=Z,21nm,1.2s						
LZH				pmax	pmax		
	comp=Z,75nm,5.4s						
LZH				LR	LR		
	comp=Z,370nm,13.2s						
LZH				LR	LR		
	comp=Z,370nm,13.3s						
LZH				LR	LR		
	comp=Z,520nm,16.5s						
BILL	**Bilibino**	33.23	15	⇑iP	P	19 20 03.8	+0.4
BILL				e		19 20 14.1	
BILL				pmax	pmax		
	comp=Z,20nm,2.5s						
BILL				MLR	MLR		
	comp=Z,101nm,20.0s						
BILL	**Bilibino**	33.23	15	P	P	19 20 03.6	+0.3
BILL				IAmb	IAmb	19 20 04.5	
	comp=Z,6.7nm,0.9s						
GYA	**Guiyang**	33.71	263	⇓iP	P	19 20 11.6	+3.4
GYA				PP	PP	19 21 24.1	-0.6
GYA				S	S	19 25 33.9	+3.8
GYA				SS	SnSn	19 27 38.6	+3.5
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA				pmax	pmax		
	comp=Z,110nm,4.8s						
GYA				LR	LR		
	comp=Z,210nm,17.0s						
GYA				LR	LR		
	comp=Z,280nm,17.8s						
GYA				LR	LR		
	comp=Z,330nm,17.3s						
CD2	**Chengdu**	34.17	272	P	P	19 20 10.1	-2.0
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
GTA	**Gaotai**	34.91	288	eP	P	19 20 20.1	+1.6
GTA				pP	sP	19 20 29.5	+2.6
GTA				PcP	PcP	19 22 51.6	+0.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.6s						
GTA				pmax	pmax		
	comp=Z,84nm,4.9s						
GTA				LR	LR		
	comp=Z,170nm,16.5s						
GTA				LR	LR		
	comp=Z,140nm,15.6s						
GTA				LR	LR		
	comp=Z,150nm,16.5s						
TIXI	**Tiksi**	35.49	352	P	P	19 20 22.2	-0.7
	comp=Z,0.8nm,0.6s,baz=152,slow=5.2,SNR=4.5						
TIXI	**Tiksi**	35.49	352	ceP	P	19 20 24.1	+1.2
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.7s						
ANM	**Nome**	40.19	31	P	P	19 21 04.2	+1.6
ANM				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ANM	**Nome**	40.19	31	P	P	19 21 04.2	+1.6
RDOG	**Red Dog Mine**	42.27	26	P	P	19 21 20.4	+0.7
RDOG				IAmb	IAmb	19 22 09.3	
	comp=Z,5.9nm,0.4s						
WMQ	**Urumqi**	43.01	297	eP	P	19 21 28.1	+2.0
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,120nm,8.3s						
WMQ	**Urumqi**	43.01	297	P	P	19 21 27.3	+1.2
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WMQ	**Urumqi**	43.01	297	P	P	19 21 27.2	+1.2
LUWI	**Luwuk**	43.04	213	P	P	19 21 25.9	-0.6
LUWI				IAmb	IAmb	19 22 35.9	
	comp=Z,20nm,1.0s						
ZAA0	**Zalesovo Array**	43.67	312	P	P	19 21 31.2	0.0
ZALV	**Zalesovo Beam**	43.67	312	P	P	19 21 32.0	+0.8
	comp=Z,2.2nm,0.5s,baz=86,slow=7.6,SNR=10						
ZALV				PcP	PcP	19 23 17.1	-0.9
	comp=Z,1.3nm,0.5s,baz=101,slow=4.4,SNR=3.7						
ZALV	**Zalesovo Beam**	43.67	312	P	P	19 21 31.2	0.0
CHTO	**Chiang Mai**	43.76	258	P	P	19 21 32.8	+0.4
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CHTO	**Chiang Mai**	43.76	258	P	P	19 21 32.8	+0.4
CM31	**Chiang Mai Arr**	43.96	258	P	P	19 21 32.5	-1.5
CMAR	**Chiang Mai Arr**	43.96	258	P	P	19 21 35.2	+1.2
	comp=Z,2.8nm,0.7s,baz=46,slow=7.1,SNR=35						
CMAR				PcP	PcP	19 23 19.7	+0.1
	comp=Z,0.4nm,0.5s,baz=320,slow=1.0,SNR=4.7						
CMAR	**Chiang Mai Arr**	43.96	258	P	P	19 21 34.4	+0.5
LSA	**Lhasa**	44.68	277	P	P	19 21 42.1	+1.9
LSA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LSA	**Lhasa**	44.68	277	P	P	19 21 42.1	+1.9
IMAR	**Indian Mountai**	45.27	30	P	P	19 21 44.7	+0.9
SHL	**Shillong**	45.91	271	P	P	19 21 49.8	+0.2
SHL				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SHL	**Shillong**	45.91	271	P	P	19 21 49.8	+0.2
SHL				IAmb	IAmb	19 21 50.6	
	comp=Z,6.6nm,0.6s						
MK31	**Makanchi Array**	46.16	303	P	P	19 21 50.7	-0.5
MK31				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MK31	**Makanchi Array**	46.16	303	P	P	19 21 50.7	-0.5
MK31				IAmb	IAmb	19 21 52.9	
	comp=Z,6.1nm,0.8s						
MKAR	**Makanchi Array**	46.16	303	P	P	19 21 51.9	+0.7
	comp=Z,6.5nm,0.8s,baz=85,slow=9.0,SNR=65						
MKAR	**Makanchi Array**	46.16	303	P	P	19 21 51.0	-0.2
MAKZ	**Makanchi**	46.37	303	P	P	19 21 52.9	+0.1
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MAKZ	**Makanchi**	46.37	303	P	P	19 21 52.9	+0.1
MAKZ				IAmb	IAmb	19 21 54.6	
	comp=Z,8.1nm,1.1s						
MLY	**Manley**	46.41	32	P	P	19 21 55.0	+2.0
MLY				IAmb	IAmb	19 21 55.6	
	comp=Z,7.0nm,1.0s						
NEA	**Nenana**	47.09	33	P	P	19 21 59.4	+1.2
NEA				IAmb	IAmb	19 22 00.7	
	comp=Z,8.5nm,0.9s						
MCK	**McKinley**	47.13	34	P	P	19 21 59.2	+0.7
MCK				pmax	pmax		
	comp=Z,27nm,1.6s						
MCK	**McKinley**	47.13	34	P	P	19 21 59.2	+0.7
RND	**Reindeer**	47.16	34	P	P	19 21 59.3	+0.5
RND				pmax	pmax		
	comp=Z,40nm,1.8s						
RND	**Reindeer**	47.16	34	P	P	19 21 59.3	+0.5
TOLK	**Toolik Lake Re**	47.21	27	P	P	19 21 59.7	+0.6
TOLK				IAmb	IAmb	19 22 01.6	
	comp=Z,7.5nm,0.9s						
MDM	**Murphy Dome**	47.47	32	P	P	19 22 02.3	+1.1
MDM				IAmb	IAmb	19 22 03.6	
	comp=Z,9.6nm,0.9s						
KURK	**Kurchatov**	47.81	308	ceP	P	19 22 04.0	0.0
KURK				pmax	pmax		
	comp=Z,11nm,0.7s						
KURK	**Kurchatov**	47.81	308	P	P	19 22 03.6	-0.3
KURBB	**Kurchatov Arra**	47.89	308	P	P	19 22 05.0	+0.4
	comp=Z,13nm,0.5s,baz=81,slow=7.9,SNR=145						
IL31		48.04	32	P	P	19 22 05.9	+0.4
IL31				IAmb	IAmb	19 22 06.9	
	comp=Z,7.2nm,1.0s						
ILAR	**Eielson Array**	48.04	32	P	P	19 22 06.2	+0.6
	comp=Z,3.8nm,0.9s,baz=264,slow=6.3,SNR=28						
ILAR	**Eielson Array**	48.04	32	P	P	19 22 04.9	-0.6
TAPN	**Taplejung**	48.42	276	eP	P	19 22 10.6	+1.2
	comp=Z,12nm,0.6s						
ODAN	**Odare**	48.90	275	eP	P	19 22 13.9	+0.9
	comp=Z,23nm,0.9s						
BMAR	**Burnt Mountain**	49.01	29	P	P	19 22 14.5	+1.5
RAMN	**Ramite**	49.48	276	eP	P	19 22 18.4	+0.9
	comp=Z,48nm,0.6s						
JIRN	**Jiri**	49.49	277	eP	P	19 22 19.0	+1.3
	comp=Z,16nm,0.6s						
GUN	**Gumba**	49.63	277	eP	P	19 22 19.7	+1.0
	comp=Z,21nm,0.5s						
PRZ	**Przheval'sk**	49.92	298	P	P	19 22 21.9	+1.3
PRZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PRZ	**Przheval'sk**	49.92	298	P	P	19 22 21.9	+1.3
PRZ				IAmb	IAmb	19 22 23.3	
	comp=Z,5.7nm,0.8s						
PKI	**Pulchoki**	50.15	277	eP	P	19 22 23.3	+0.7
	comp=Z,15nm,0.6s						
KKN	**Kakani**	50.15	277	eP	P	19 22 23.4	+0.9
	comp=Z,26nm,0.5s						
PKIN	**Phulchoki**	50.16	277	eP	P	19 22 23.2	+0.6
	comp=Z,12nm,0.5s						
BCAR	**Beaver Creek A**	50.37	35	P	P	19 22 24.0	+0.5
DMN	**Daman**	50.37	277	eP	P	19 22 25.2	+1.0
	comp=Z,11nm,0.5s						
GKN	**Gorkha**	50.57	278	eP	P	19 22 26.6	+1.0
	comp=Z,47nm,0.5s						
COEN	**Coen**	50.87	182	P	P	19 22 27.2	-0.4
KDJ	**Kajisay**	50.89	298	P	P	19 22 28.2	+0.3
KDJ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KDJ	**Kajisay**	50.89	298	P	P	19 22 28.2	+0.3
DANN	**Dangsing**	51.11	279	eP	P	19 22 31.2	+1.4
	comp=Z,102nm,0.6s						
NRN	**Naryn**	51.95	297	P	P	19 22 34.5	-1.5
NRN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NRN	**Naryn**	51.95	297	P	P	19 22 34.5	-1.5
EPYK	**Eagle Plains**	52.16	30	P	P	19 22 38.5	+1.6
BVAR	**Borovoye Array**	52.33	313	P	P	19 22 39.1	+1.0
	comp=Z,3.0nm,0.5s,baz=75,slow=8.5,SNR=20						
BRVK	**Borovoye**	52.38	313	ceP	P	19 22 39.9	+1.3
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRVK	**Borovoye**	52.38	313	P	P	19 22 39.1	+0.5
BRVK				IAmb	IAmb	19 22 40.3	
	comp=Z,8.5nm,0.8s						
FRU1	**Bishkek**	52.47	299	P	P	19 22 39.3	-0.2
FRU1				pmax	pmax		
	comp=Z,14nm,1.2s						
FRU1	**Bishkek**	52.47	299	P	P	19 22 39.3	-0.2
AAK	**Ala-Archa**	52.62	299	P	P	19 22 41.6	+0.9
	comp=Z,4.5nm,0.7s,baz=130,slow=5.3,SNR=15						
AAK	**Ala-Archa**	52.62	299	ceP	P	19 22 41.1	+0.4
AAK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AAK	**Ala-Archa**	52.62	299	P	P	19 22 40.5	-0.2
AAK				IAmb	IAmb	19 22 42.2	
	comp=Z,5.4nm,0.7s						
KSH	**Kashi**	52.63	295	P	P	19 22 43.1	+2.3
KSH				PP	PP	19 24 43.9	+4.1
KSH				PcS	PcS	19 27 48.3	-0.9
KSH				S	S	19 30 06.0	-0.6
KSH				pmax	pmax		
	comp=Z,24nm,1.2s						
KSH				pmax	pmax		
	comp=Z,100nm,4.4s						
KSH				LR	LR		
	comp=Z,320nm,12.3s						
KSH				LR	LR		
	comp=Z,540nm,15.1s						
KSH				LR	LR		
	comp=Z,290nm,11.2s						
HYT	**Haines Junctio**	52.69	37	P	P	19 22 40.5	-0.4
INK	**Inuvik**	53.12	27	P	P	19 22 45.0	+1.3
	comp=Z,6.9nm,0.8s,baz=290,slow=7.0,SNR=16						
INK	**Inuvik**	53.12	27	P	P	19 22 44.9	+1.1
INK				pmax	pmax		
	comp=Z,12nm,1.1s						
INK	**Inuvik**	53.12	27	P	P	19 22 44.9	+1.1
ARSB	**Arslanbob**	54.12	298	P	P	19 22 51.8	0.0
ARSB				pmax	pmax		
	comp=Z,18nm,1.0s						
ARSB	**Arslanbob**	54.12	298	P	P	19 22 51.8	0.0
KK31	**Karatay Array**	55.21	301	P	P	19 22 59.1	-0.4
KK31				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KK31	**Karatay Array**	55.21	301	P	P	19 22 59.1	-0.4
KK31				IAmb	IAmb	19 23 01.0	
	comp=Z,5.6nm,0.9s						
KKAR	**Karatay Array**	55.21	301	P	P	19 22 59.1	-0.4
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KKAR	**Karatay Array**	55.21	301	P	P	19 22 58.5	-0.9
KKAR	**Karatay Array**	55.21	301	P	P	19 22 59.1	-0.4
KKAR				IAmb	IAmb	19 23 01.0	
	comp=Z,5.6nm,0.9s						
SVE	**Sverdlovsk**	56.69	319	⇓eP	P	19 23 11.0	+1.2
SVE				pmax	pmax		
	comp=Z,16nm,0.9s						
DLBC	**Dease Lake**	56.97	39	P	P	19 23 12.5	+0.6
	comp=Z,4.5nm,0.9s,baz=276,slow=7.8,SNR=5.9						
DLBC	**Dease Lake**	56.97	39	IAmb	IAmb	19 23 15.7	
	comp=Z,11nm,1.1s						
WRAB	**Tennant Creek**	57.60	191	ceP	P	19 23 15.0	-1.6
WRAB				pmax	pmax		
	comp=Z,20nm,2.5s						
WRAB	**Tennant Creek**	57.60	191	P	P	19 23 14.2	-2.4
WRAB				IAmb	IAmb	19 23 16.0	
	comp=Z,7.8nm,0.8s						
WRA	**Warramunga Arr**	57.61	191	P	P	19 23 15.4	-1.3
	comp=Z,9.1nm,0.5s						
FITZ	**Fitzroy Crossi**	57.79	201	P	P	19 23 16.7	-1.2
FITZ				IAmb	IAmb	19 23 57.1	
	comp=Z,9.4nm,1.4s						
CHGR	**Chuyangaron**	57.86	297	P	P	19 23 17.4	-1.1
ARU	**Arti**	57.91	319	P	P	19 23 19.5	+1.1
	comp=Z,3.1nm,0.8s,baz=139,slow=2.5,SNR=11						
ARU	**Arti**	57.91	319	d iP	P	19 23 19.0	+0.6
ARU						19 25 22.6	
ARU				S	S	19 31 18.6	+2.1
ARU				SS	SS	19 35 08.4	+1.5
ARU				pmax	pmax		
	comp=Z,14nm,1.0s						
ARU	**Arti**	57.91	319	P	P	19 23 18.3	-0.1
ABKAR	**Akbulak array**	59.75	311	P	P	19 23 31.3	-0.1
AKTO	**Aktyubinsk**	60.43	313	P	P	19 23 36.6	+0.7
	comp=Z,6.9nm,0.7s,baz=76,slow=6.9,SNR=19						
HYB	**Hyderabad**	60.70	270	iP	P	19 23 39.0	+0.7
AS31	**Alice Springs**	61.33	191	P	P	19 23 41.2	-1.1
ASAR	**Alice Springs**	61.33	191	P	P	19 23 41.3	-1.0
	comp=Z,5.5nm,0.8s,baz=7.8,slow=7.4,SNR=72						
ASAR	**Alice Springs**	61.33	191	P	P	19 23 40.9	-1.4
RES	**Resolute Bay**	61.84	15	P	P	19 23 45.8	+0.7
	comp=Z,5.6nm,0.9s,baz=318,slow=6.9,SNR=23						
RES	**Resolute Bay**	61.84	15	P	P	19 23 45.6	+0.5
RES				IAmb	IAmb	19 23 46.3	
	comp=Z,6.5nm,1.0s						
PRGR	**Permogore**	62.00	328	eP	P	19 23 43.0	-3.4
PRGR				pmax	pmax		
	comp=Z,12nm,1.3s						
YKA	**Yellowknife Ar**	62.42	31	P	P	19 23 49.5	+0.4
	comp=Z,3.1nm,0.8s,baz=294,slow=6.3,SNR=16						
NLWA	**Neilton Lookou**	64.77	49	P	P	19 24 07.1	+2.1
KLMR	**Klimovskoe**	64.96	329	eP	P	19 24 03.6	-2.4
KLMR				pmax	pmax		
	comp=Z,28nm,1.9s						
KLMR	**Klimovskoe**	64.96	329	eP	P	19 24 03.6	-2.4
KLMR				AMP		19 24 10.6	
	comp=Z,28nm,1.9s						
GEYT	**Alibeck**	65.94	300	P	P	19 24 13.7	+0.9
	comp=Z,4.0nm,0.8s,baz=354,slow=1.5,SNR=7.8						
D05A	**Enumclaw**	65.99	48	P	P	19 24 14.4	+1.6
LON	**Longmire**	66.31	49	P	P	19 24 16.2	+1.2
LON				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LON	**Longmire**	66.31	49	P	P	19 24 16.2	+1.2
LON				IAmb	IAmb	19 24 17.7	
	comp=Z,4.4nm,0.8s						
F04A	**Amboy**	66.34	50	P	P	19 24 16.2	+1.0
LTY	**Liberty**	66.73	48	P	P	19 24 17.7	0.0
LTY				IAmb	IAmb	19 24 22.1	
	comp=Z,7.1nm,0.8s						
B08A	**Colville Reser**	66.96	46	P	P	19 24 20.0	+0.8
B08A				IAmb	IAmb	19 24 20.7	
	comp=Z,6.9nm,0.8s						
H04A	**Detroit Lake**	67.11	51	P	P	19 24 21.2	+1.1
E07A	**Sunnyside**	67.57	48	P	P	19 24 22.1	-0.9
G06A	**Carlson Farm,**	67.78	50	P	P	19 24 24.7	+0.4
C09A	**Chrisman Ranch**	67.86	46	P	P	19 24 25.4	+0.6
D08A	**Wollman Farm,**	67.86	47	P	P	19 24 24.7	-0.1
E08A	**Dider Farm, El**	68.08	48	P	P	19 24 26.5	+0.3
YBH	**Yreka Blue Hor**	68.27	54	P	P	19 24 29.5	+1.9
YBH				pmax	pmax		
	comp=Z,6.0nm,1.1s						
YBH	**Yreka Blue Hor**	68.27	54	P	P	19 24 29.5	+1.9
YBH				IAmb	IAmb	19 24 31.0	
	comp=Z,6.1nm,1.1s						
NEW	**Newport**	68.27	45	P	P	19 24 28.5	+1.1
NEW				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NEW	**Newport**	68.27	45	P	P	19 24 28.5	+1.1
PINE	**Pine Mountain**	68.33	51	P	P	19 24 29.6	+1.5
E09A	**Wood Farm, Sta**	68.60	47	P	P	19 24 30.7	+1.3
STKA	**Stephens Creek**	68.74	183	P	P	19 24 28.8	-1.5
	comp=Z,2.3nm,1.0s,baz=323,slow=1.3,SNR=3.0						
G08A	**Pilot Rock**	68.76	49	P	P	19 24 31.7	+1.1
G08A				IAmb	IAmb	19 24 34.2	
	comp=Z,10nm,1.6s						
WDC	**Whiskeytown Da**	68.97	55	P	P	19 24 33.0	+1.2
WDC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
WDC	**Whiskeytown Da**	68.97	55	P	P	19 24 33.0	+1.2
WDC				IAmb	IAmb	19 24 34.3	
	comp=Z,6.6nm,1.1s						
I07A	**Izee**	69.06	50	P	P	19 24 33.5	+0.9
VRH	**Novokhopyorsk**	69.14	319	eP	P	19 24 31.5	-1.2
VRH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
FORT	**Forrest**	69.33	195	P	P	19 24 33.0	-1.0
F10A	**Beach Ranch, E**	69.43	47	P	P	19 24 35.7	+1.0
F10A				IAmb	IAmb	19 24 36.3	
	comp=Z,7.1nm,1.2s						
OBN	**Obninsk**	69.47	324	⇑iP	P	19 24 34.7	+0.1
OBN				e		19 24 40.3	
OBN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
OBN				MLR	MLR		
	comp=Z,198nm,15.0s						
MOD	**Modoc Plateau**	69.72	52	P	P	19 24 38.0	+1.4
MOD				IAmb	IAmb	19 24 38.9	
	comp=Z,6.9nm,0.8s						
LPSR	**Galich'ya Gora**	69.78	321	eP	P	19 24 35.9	-0.7
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
FINES	**FINESS Array B**	69.84	333	P	P	19 24 36.9	0.0
	comp=Z,3.9nm,0.7s,baz=53,slow=7.4,SNR=8.5						
BMO	**Blue Mountains**	69.98	49	P	P	19 24 38.1	-0.1
BMO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BMO	**Blue Mountains**	69.98	49	P	P	19 24 38.0	-0.1
BMO				IAmb	IAmb	19 24 40.3	
	comp=Z,5.3nm,0.8s						
J08A	**Circle Bar Ran**	70.08	50	P	P	19 24 40.3	+1.5
JTMT	**Jette**	70.16	45	P	P	19 24 39.2	0.0
JTMT				IAmb	IAmb	19 24 41.4	
	comp=Z,8.5nm,0.9s						
ORV	**Oroville**	70.19	55	P	P	19 24 39.3	-0.1
ORV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ORV	**Oroville**	70.19	55	P	P	19 24 39.3	-0.1
ORV				IAmb	IAmb	19 24 41.7	
	comp=Z,6.9nm,1.1s						
VSR	**Storozhevoye**	70.46	320	eP	P	19 24 40.3	-0.5
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WVOR	**Wild Horse Val**	70.48	51	P	P	19 24 42.6	+1.3
WVOR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
WVOR	**Wild Horse Val**	70.48	51	P	P	19 24 42.6	+1.3
WVOR				IAmb	IAmb	19 24 43.6	
	comp=Z,6.4nm,1.1s						
SUMG	**Summit**	70.53	1	P	P	19 24 42.4	+1.0
SUMG				pmax	pmax		
	comp=Z,8.0nm,1.4s						
SUMG	**Summit**	70.53	1	P	P	19 24 42.4	+1.0
BEKR	**Beckworth**	70.77	54	P	P	19 24 44.3	+1.2
BEKR				IAmb	IAmb	19 24 45.6	
	comp=Z,9.6nm,0.9s						
MSO	**Missoula**	70.86	45	P	P	19 24 43.9	+0.4
MSO				IAmb	IAmb	19 24 45.2	
	comp=Z,6.5nm,0.9s						
PAHR	**Pah Rah Range**	71.48	54	P	P	19 24 48.7	+1.3
PAHR				IAmb	IAmb	19 24 49.5	
	comp=Z,7.8nm,1.0s						

MFID	Camas Ranch	71.66	49	P	P	19 24 49.8	+1.3
MFID				IAmb	IAmb	19 24 50.6	
	comp=Z,7.4nm,0.9s						
CMB	Columbia Colle	71.74	56	P	P	19 24 50.2	+1.3
CMB				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CMB	Columbia Colle	71.74	56	P	P	19 24 50.2	+1.3
CMB				IAmb	IAmb	19 24 51.1	
	comp=Z,8.2nm,1.0s						
GOF	Gofitskoye	71.85	313	⇑eP	P	19 24 50.3	+0.9
GOF				pmax	pmax		
	comp=Z,19nm,0.9s						
YERR	Yerington	71.97	55	P	P	19 24 52.0	+1.6
YERR				IAmb	IAmb	19 24 52.8	
	comp=Z,9.6nm,0.8s						
FFC	Flin Flon	72.22	34	P	P	19 24 51.4	0.0
FFC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
FFC	Flin Flon	72.22	34	P	P	19 24 51.4	0.0
FFC				IAmb	IAmb	19 24 52.7	
	comp=Z,9.3nm,0.9s						
LRM	Limekiln Ridge	72.28	46	P	P	19 24 53.2	+0.9
DLMT	Dillon	72.47	46	P	P	19 24 54.0	+0.8
DLMT				IAmb	IAmb	19 24 55.8	
	comp=Z,10nm,0.9s						
MCMT	McKenzie Canyo	72.63	47	P	P	19 24 54.3	-0.1
RYN	Ryan	72.64	55	P	P	19 24 55.7	+1.3
RYN				IAmb	IAmb	19 24 56.7	
	comp=Z,6.6nm,0.9s						
KVN	Kaiserville	72.67	54	P	P	19 24 55.9	+1.3
KVN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KVN	Kaiserville	72.67	54	P	P	19 24 55.9	+1.3
KVN				IAmb	IAmb	19 24 56.9	
	comp=Z,9.6nm,0.9s						
KIV	Kislovodsk	72.69	312	⇑P	P	19 24 56.9	+2.4
KIV	Kislovodsk	72.69	312	eP	P	19 24 53.6	-0.9
KIV				pmax	pmax		
	comp=Z,62nm,1.1s						
KIV				MLR	MLR		
	comp=Z,432nm,18.0s						
KIV	Kislovodsk	72.69	312	P	P	19 24 54.5	0.0
KBZ	Khabaz	72.69	312	P	P	19 24 55.4	+1.0
	comp=Z,8.2nm,0.9s,baz=308,slow=1.3,SNR=11						
KBZ	Khabaz	72.69	312	i P	P	19 24 54.2	-0.2
KBZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
FCC	Fort Churchill	72.74	28	P	P	19 24 54.3	0.0
FCC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
FCC	Fort Churchill	72.74	28	P	P	19 24 54.3	0.0
FCC				IAmb	IAmb	19 24 55.3	
	comp=Z,6.7nm,1.1s						
SHA1	Shidzhatmaz	72.83	312	i P	P	19 24 54.6	-0.9
NVAR	Mina Array Bea	72.89	55	P	P	19 24 57.0	+1.0
	comp=Z,7.2nm,0.8s,baz=283,slow=6.0,SNR=46						
NV11	Mina Array Sit	72.98	55	P	P	19 24 55.7	-0.7
NEY	Neytrino	73.07	312	i P	P	19 24 57.9	+1.0
NEY				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ILULI	Ilulissat	73.30	6	P	P	19 24 59.0	+1.5
ILULI				pmax	pmax		
	comp=Z,23nm,1.4s						
ILULI	Ilulissat	73.30	6	P	P	19 24 59.0	+1.5
ELK	Elko	73.53	51	P	P	19 25 01.2	+1.4
ELK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ELK	Elko	73.53	51	P	P	19 25 01.1	+1.4
YHL	Hebgen Lake	73.58	46	P	P	19 25 01.7	+1.6
YHB	Horse Butte	73.63	46	P	P	19 25 01.8	+1.6
YHH	Holmes Hill	73.81	46	P	P	19 25 02.7	+1.4
YMR	Madison River	73.81	46	P	P	19 25 03.0	+1.7
YNR	Norris Junctio	73.95	46	P	P	19 25 03.5	+1.4
YPP	Pitchstone Pla	74.14	46	P	P	19 25 05.2	+1.9
YNE	Yellowstone No	74.16	45	P	P	19 25 03.3	0.0
LKWY	Lake	74.20	46	P	P	19 25 05.7	+2.1
LKWY				pmax	pmax		
	comp=Z,9.0nm,0.5s						
LKWY	Lake	74.20	46	P	P	19 25 05.7	+2.1
H17A	Grant Village	74.20	46	P	P	19 25 06.1	+2.5
FLWY	Flagg Ranch	74.31	46	P	P	19 25 06.2	+2.0
FXWY	Fox Creek	74.39	47	P	P	19 25 06.5	+1.8
FXWY				IAmb	IAmb	19 25 07.5	
	comp=Z,7.1nm,1.1s						
HVU	Hansel Valley	74.45	49	P	P	19 25 05.2	+0.2
HVU				pmax	pmax		
	comp=Z,11nm,1.0s						
HVU	Hansel Valley	74.45	49	P	P	19 25 05.2	+0.2
RLMT	Red Lodge	74.50	45	P	P	19 25 06.5	+1.2
RLMT				IAmb	IAmb	19 25 08.4	
	comp=Z,10nm,1.4s						
SNOW	Snow King Moun	74.65	47	P	P	19 25 07.0	+0.7
SNOW				IAmb	IAmb	19 25 09.0	
	comp=Z,6.5nm,0.8s						
REDW	Red Top Meadow	74.65	47	P	P	19 25 07.7	+1.4
R11A	Troy Canyon, C	74.69	53	P	P	19 25 07.8	+1.3
R11A				IAmb	IAmb	19 25 08.6	
	comp=Z,6.8nm,0.8s						
BGU	Big Grassy Mou	74.79	50	P	P	19 25 08.4	+1.4
NB2	NORSAR Subarra	75.00	338	P	P	19 25 07.6	-0.1
	comp=Z,3.5nm,0.8s,baz=37,slow=5.9						
NOA	NORSAR Array B	75.00	338	P	P	19 25 07.8	+0.1
	comp=Z,3.1nm,0.8s,baz=38,slow=5.8,SNR=12						
TPNV	Topopah Spring	75.07	55	P	P	19 25 09.8	+1.1
TPNV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TPNV	Topopah Spring	75.07	55	P	P	19 25 09.8	+1.1
TPNV				IAmb	IAmb	19 25 10.7	
	comp=Z,9.1nm,0.8s						
HWUT	Hardware Ranch	75.28	49	P	P	19 25 10.2	+0.3
HWUT				IAmb	IAmb	19 25 12.9	
	comp=Z,11nm,1.2s						
DUG	Dugway, Tooele	75.36	51	P	P	19 25 11.1	+0.8
DUG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
DUG	Dugway, Tooele	75.36	51	P	P	19 25 11.1	+0.8
DUG				IAmb	IAmb	19 25 12.6	
	comp=Z,8.9nm,0.8s						
GSC	Goldstone, Bar	75.65	57	P	P	19 25 12.8	+0.8
GSC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GSC	Goldstone, Bar	75.65	57	P	P	19 25 12.8	+0.8
PSUT	Pine Spring	75.69	52	P	P	19 25 13.1	+0.8
AKASG	Malin Array Be	75.70	324	P	P	19 25 12.1	+0.3
	comp=Z,6.1nm,0.6s,baz=45,slow=6.1,SNR=28						
CTU	Camp Tracy	75.71	50	P	P	19 25 13.3	+1.0
BW06	Boulder Array	75.77	47	P	P	19 25 13.1	+0.4
PD31	Pinedale Array	75.77	47	P	P	19 25 13.0	+0.3
PDAR	Pinedale Array	75.77	47	P	P	19 25 13.0	+0.3
	comp=Z,2.3nm,0.6s,baz=280,slow=1.8,SNR=18						
PDAR	Pinedale Array	75.77	47	P	P	19 25 12.6	-0.1
JLU	Jordanelle	75.95	50	P	P	19 25 15.0	+1.2
NLU	North Lily Min	75.96	50	P	P	19 25 13.7	-0.1
SHPR	Sheep Range	76.04	55	P	P	19 25 15.5	+1.3
MPU	Maple Canyon	76.19	50	P	P	19 25 16.2	+1.1
CCUT	Cedar City	76.58	53	P	P	19 25 18.8	+1.4
SZCU	Shurtz Canyon	76.73	53	P	P	19 25 19.5	+1.3
MSU	Marysvale	76.76	52	P	P	19 25 19.6	+1.2
MSU	Marysvale	76.76	52	P	P	19 25 19.6	+1.2
PFO	Pinyon Flats O	76.87	58	P	P	19 25 19.5	+0.6
PFO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PFO	Pinyon Flats O	76.87	58	P	P	19 25 19.5	+0.6
XPFO	Pion Flat	76.87	58	P	P	19 25 19.8	+0.8
TMUT	Trail Mountain	76.89	51	P	P	19 25 20.6	+1.4
LCMT	Little Creek M	76.98	53	P	P	19 25 20.3	+0.7
MTPU	Mount Pierson	77.04	52	P	P	19 25 20.6	+0.5
P17A	Butcher Ranch,	77.07	50	P	P	19 25 20.5	+0.5
RDMU	Red Mountain	77.11	49	P	P	19 25 21.5	+1.2
Q16A	Castle Valley	77.14	51	P	P	19 25 22.0	+1.5
KNB	Kanab	77.25	53	P	P	19 25 22.7	+1.6
KNB				pmax	pmax		
	comp=Z,12nm,1.1s						
KNB	Kanab	77.25	53	P	P	19 25 22.7	+1.6
BAR	Barrett	77.27	59	P	P	19 25 22.0	+1.0
BAR				IAmb	IAmb	19 25 22.7	
	comp=Z,7.5nm,0.9s						
SRU	San Rafael Swe	77.42	50	P	P	19 25 22.6	+0.6
SRU				pmax	pmax		
	comp=Z,15nm,0.7s						
SRU	San Rafael Swe	77.42	50	P	P	19 25 22.6	+0.6
K22A	Casper	77.59	46	P	P	19 25 23.1	+0.2
K22A				IAmb	IAmb	19 25 24.7	
	comp=Z,13nm,1.2s						
BORG	Borgarnes	77.81	354	LR	LR	19 58 39.4	
	comp=Z,140nm,19.5s,baz=84,slow=35						
SORM	Soroca	77.85	322	⇑P	P	19 25 24.1	+0.2
U15A	North Rim	77.94	53	P	P	19 25 25.8	+0.7
U15A				IAmb	IAmb	19 25 27.4	
	comp=Z,5.5nm,0.8s						
ULM	Lac du Bonnet	77.99	35	P	P	19 25 24.1	-0.7
	comp=Z,2.7nm,0.8s,baz=270,slow=9.7,SNR=4.7						
ULM	Lac du Bonnet	77.99	35	IAmb	IAmb	19 25 25.5	
	comp=Z,3.7nm,0.9s						
Y12C	Blythe	78.09	57	P	P	19 25 26.6	+1.0
Y12C				IAmb	IAmb	19 25 27.6	
	comp=Z,5.7nm,0.9s						
O20A	White River Ci	78.17	48	P	P	19 25 27.3	+1.1
O20A				IAmb	IAmb	19 25 28.4	
	comp=Z,6.0nm,0.9s						
N23A	Red Feather La	79.05	47	P	P	19 25 32.5	+1.4
N23A				IAmb	IAmb	19 25 34.0	
	comp=Z,6.6nm,0.8s						
WUAZ	Wupatki	79.09	54	P	P	19 25 31.8	+0.5
WUAZ				IAmb	IAmb	19 25 33.4	
	comp=Z,8.3nm,0.9s						
113A	Mohawk Valley,	79.18	57	P	P	19 25 32.5	+0.9
AGMN	Agassiz Nation	79.38	36	P	P	19 25 32.4	0.0
KWP	Kalwaria Pacla	79.45	326	P	P	19 25 32.9	+0.1
KWP				pmax	pmax		
	comp=Z,20nm,1.1s						
KWP	Kalwaria Pacla	79.45	326	P	P	19 25 32.9	+0.1
SMCO	Snowmass	79.53	49	P	P	19 25 34.2	+0.3
SMCO				IAmb	IAmb	19 25 36.8	
	comp=Z,13nm,1.6s						
X16A	Lo Mia Camp, P	79.72	55	P	P	19 25 35.5	+0.7
BUR08	Bucovina Ar. S	79.72	323	P	P	19 25 35.3	+0.9
BURAR	Bucovina Array	79.73	323	⇓P	P	19 25 35.2	+0.8
BURAR	Bucovina Array	79.73	323	P	P	19 25 35.4	+0.9
TESR	Tescani	79.81	322	⇑P	P	19 25 35.6	+0.9
MVCO	Mesa Verde	79.85	51	P	P	19 25 36.4	+0.9
MVCO				IAmb	IAmb	19 25 37.5	
	comp=Z,11nm,1.4s						
ISCO	Idaho Springs	79.94	47	P	P	19 25 37.0	+0.9
ISCO				pmax	pmax		
	comp=Z,7.0nm,1.5s						
ISCO	Idaho Springs	79.94	47	P	P	19 25 37.0	+0.9
GAZ	Gaziantep	80.11	309	P	P	19 25 36.8	+0.1
GAZ				IAmb	IAmb	19 25 38.8	
	comp=Z,7.7nm,0.8s						
VRI	Vrincioaia	80.22	321	⇓P	P	19 25 39.2	+2.2
OJC	Ojcow	80.30	328	P	P	19 25 38.0	+0.7
OJC				pmax	pmax		
	comp=Z,14nm,1.2s						
OJC	Ojcow	80.30	328	P	P	19 25 38.0	+0.7
OJC				IAmb	IAmb	19 25 39.2	
	comp=Z,14nm,1.2s						
S22A	4UR Ranch, Cre	80.54	50	P	P	19 25 41.1	+1.9
BRTR	Keskin Array B	80.61	313	P	P	19 25 39.3	-0.1
	comp=Z,2.6nm,1.1s,baz=132,slow=3.7,SNR=5.9						
TRPA	Tarpa	80.62	325	⇓P	P	19 25 40.4	+1.3
DOPR	Dopca	80.81	322	⇓P	P	19 25 42.3	+2.0
LANS	Liptovska Anna	81.24	327	eP	P	19 25 43.8	+1.3
LANS	Liptovska Anna	81.24	327	eP	P	19 25 43.8	+1.3
SDCO	Great Sand Dun	81.34	49	P	P	19 25 44.5	+0.9
VOIR		81.36	322	⇑P	P	19 25 44.8	+1.5
DRGR		81.51	324	⇑P	P	19 25 44.8	+0.7
ARR	Arges	81.61	322	⇑P	P	19 25 46.6	+2.1
KRLC	Kraliky	81.67	329	eP	P	19 25 45.7	+1.0
KRLC	Kraliky	81.67	329	eP	P	19 25 45.7	+1.0
VYHS	Vyhne	82.01	327	eP	P	19 25 47.6	+1.1
VYHS	Vyhne	82.01	327	eP	P	19 25 47.6	+1.1
BRG	Berggiesshubel	82.18	331	eP	P	19 25 47.4	+0.1
	comp=Z,3.0nm,0.7s						
BRG	Berggiesshubel	82.18	331	eP	P	19 25 47.4	+0.1
BRG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CLL	Collm	82.20	332	i P	P	19 25 48.8	+1.4
	comp=Z,6.0nm,1.1s						
CLL	Collm	82.20	332	P	P	19 25 48.2	+0.8
CLL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CLL	Collm	82.20	332	P	P	19 25 48.2	+0.8
CLL				IAmb	IAmb	19 25 49.6	
	comp=Z,6.2nm,1.0s						
ECSD	EROS Data Cent	82.24	40	P	P	19 25 47.7	-0.2
ECSD				IAmb	IAmb	19 25 48.6	
	comp=Z,5.1nm,0.9s						
GZR	Gura Zlata	82.50	323	⇑P	P	19 25 49.3	+0.1
ANMO	Albuquerque	82.57	52	P	P	19 25 50.9	+1.0
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ANMO	Albuquerque	82.57	52	P	P	19 25 50.9	+1.0
GOPC	GO Pecny, Ondr	82.61	330	eP	P	19 25 50.3	+0.7
GOPC	GO Pecny, Ondr	82.61	330	eP	P	19 25 50.3	+0.7
E38A	The Farm, Brul	82.62	35	P	P	19 25 49.5	-0.2
E38A				IAmb	IAmb	19 25 50.0	
	comp=Z,7.3nm,1.1s						
319A	Douglas	83.03	56	P	P	19 25 53.3	+1.0
121A	Cookes Peak, D	83.28	54	P	P	19 25 54.0	+0.4
121A				IAmb	IAmb	19 25 55.7	
	comp=Z,5.1nm,0.8s						
KHC	Kasperske Hory	83.71	330	eP	P	19 25 55.5	+0.2
KHC	Kasperske Hory	83.71	330	P	P	19 25 54.6	-0.7
KHC				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KHC	Kasperske Hory	83.71	330	P	P	19 25 54.6	-0.7
GERES	GERESS Array B	83.89	330	P	P	19 25 56.7	+0.3
	comp=Z,0.9nm,0.8s,baz=38,slow=6.8,SNR=5.8						
GERES	GERESS Array B	83.89	330	P	P	19 25 56.1	-0.3
MMAI	Mount Meron Ar	83.91	307	P	P	19 25 57.2	+0.5
	comp=Z,3.4nm,0.6s,baz=359,slow=5.0,SNR=5.2						
VTS	Vitosha	84.29	321	⇓P	P	19 25 59.4	+0.8
VTS	Vitosha	84.29	321	P	P	19 25 59.7	+1.1
VTS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
VTS	Vitosha	84.29	321	P	P	19 25 59.7	+1.1
MNTX	Cornudas Mount	85.36	53	P	P	19 26 04.2	+0.2
BFO	Black Forest	86.38	332	P	P	19 26 09.2	+0.5
BFO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BFO	Black Forest	86.38	332	P	P	19 26 09.2	+0.5
BFO				IAmb	IAmb	19 26 10.1	
	comp=Z,6.9nm,1.1s						
TX31	Lajitas Ar. Si	88.04	54	P	P	19 26 17.5	+0.3
TX31				IAmb	IAmb	19 26 18.4	
	comp=Z,3.1nm,0.8s						
TX32	Lajitas Array	88.04	54	P	P	19 26 17.8	+0.5
TX32				IAmb	IAmb	19 26 18.4	
	comp=Z,3.1nm,0.8s						
TXAR	Lajitas Array	88.04	54	P	P	19 26 17.7	+0.5
	comp=Z,2.4nm,0.7s,baz=300,slow=3.2,SNR=13						
TXAR	Lajitas Array	88.04	54	P	P	19 26 17.4	+0.1
CCM	Cathedral Cave	89.16	41	P	P	19 26 22.4	+0.2
CCM				pmax	pmax		
	comp=Z,15nm,1.3s						
CCM	Cathedral Cave	89.16	41	P	P	19 26 22.4	+0.2
U40A	Yellville	89.56	43	P	P	19 26 24.1	-0.1
QSPA	South Pole Qui	126.91	180	PKP	PKPdf	19 32 27.7	-1.7
	comp=Z,3.6nm,0.9s,baz=7.9,slow=0.2,SNR=16						
VNA2	Neumayer--Watz	143.12	195	PKPdf	PKPab	19 32 55.5	+0.6
	baz=124,slow=2.7						
VNA3	Neumayer Olymp	143.31	194	PKPdf	PKPab	19 32 55.9	+0.2
LPAZ	La Paz	144.44	63	PKP	PKPab	19 33 02.6	+0.4
	comp=Z,1.7nm,0.9s,baz=5.3,slow=4.5,SNR=5.8						
PLCA	Paso Flores	152.59	108	PKPab	PKPab	19 33 33.4	-0.1
	comp=Z,2.6nm,0.9s,baz=316,slow=3.1,SNR=4.7						

IDC **12** *19:19:16.2±1.1, 29°42N×67°44E, h0^{km}, mb3.6/8, mb1 3.8/9, mb1mx3.5/50, mbtmp3.7/9, ML4.0/1, MS3.3/3, Ms1 3.3/3, ms1mx2.8/46, Error ellipse: s-maj=32.2km s-min=21.9km az=131.0*

NEIC **12** *19:19:18.3±1.3, 29°37N±0°07×67°43E±0°08, h18^{km}±6^{km}, mb4.0/3, Error ellipse: s-maj=12.3km s-min=6.7km az=219.0*

ISC 12 19:19:20.7±0.8**, 29°30N**±0°09×**67°43E**±0°10**, h35**^{km}**, n28,** σ**1^{s}84**/27**, mb3.7**/8**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	5.41	14	P	Pn	19 20 39.8	+0.8
	SNR=8.0						
KBL				S	Sn	19 21 45.3	+5.1
KBL	Kabul	5.41	14		Pn	19 20 38.0	-1.0
NIL	Nilore	6.60	47		Pn	19 20 53.8	-1.5
HRA	Herat	6.72	320		Pn	19 20 55.2	-1.9
CHGR	Chuyangaron	9.45	8	Pn	Pn	19 21 32.8	-1.6
WSAR	Wadi Sarin	9.93	235	Pn	Pn	19 21 40.7	-0.3
	1.4nm,0.3s,baz=86,slow=6.7,SNR=37						
WSAR				LR	LR	19 26 54.2	
	comp=Z,151nm,18.2s,baz=106,slow=46						
WSAR	Wadi Sarin	9.93	235	P	Pn	19 21 40.5	-0.5
	SNR=28						
WSAR				S	Sn	19 23 23.5	-7.8
GAR	Garm	9.97	13	Pn	Pn	19 21 40.0	-1.6
WBK	Wadi Bani Khal	10.11	231	P	Pn	19 21 43.0	-0.5
	SNR=12						
WBK				S	Sn	19 23 28.4	-7.2
HOQ	Hoqain	10.70	240	P	Pn	19 21 51.0	-0.5
	SNR=13						
HOQ				S	Sn	19 23 42.8	-7.4
BTK	Batken	11.09	14	Pn	Pn	19 21 54.6	-2.3
ARSB	Arslanbob	12.82	19	Pn	Pn	19 22 18.3	-2.3
KK31	Karatay Array	14.00	9	Pn	Pn	19 22 34.6	-1.9
KKAR	Karatay Array	14.00	9	Pn	Pn	19 22 34.5	-2.1
KKAR	Karatay Array	14.00	9	Pn	Pn	19 22 34.8	-1.8
AAK	Ala-Archa	14.48	21	LR	LR	19 29 17.5	
	comp=Z,79nm,20.5s,baz=191,slow=42						
RAYN	Ar Rayn	20.45	259	P	P	19 23 57.2	+1.9
RAYN				IAmb	IAmb	19 24 42.9	
	comp=Z,27nm,2.0s						
LSA	Lhasa	20.65	83	P	P	19 23 57.7	-0.2
LSA				IAmb	IAmb	19 24 08.0	
	comp=Z,3.4nm,0.7s						
MKAR	Makanchi Array	20.97	30	P	P	19 23 58.2	-2.5
	comp=Z,1.3nm,0.6s,baz=211,slow=10,SNR=7.1						
KURBB	Kurchatov Arra	22.89	18	P	P	19 24 19.6	-1.6
	comp=Z,1.7nm,0.6s,baz=212,slow=9.2,SNR=8.4						
KURK	Kurchatov	23.00	18	P	P	19 24 20.7	-1.6
KURK				IAmb	IAmb	19 24 28.7	
	comp=Z,5.6nm,1.1s						
BVAR	Borovoye Array	23.81	4	P	P	19 24 31.2	+1.0
	comp=Z,0.6nm,0.7s,baz=180,slow=5.8,SNR=2.5						
PALK	Pallekele	25.23	148	LR	LR	19 34 54.2	
	comp=Z,73nm,18.5s,baz=213,slow=37						
SONM	Songino Array	35.18	47	P	P	19 26 10.8	-0.7
	comp=Z,0.2nm,0.6s,baz=235,slow=10.0,SNR=2.9						
ARCES	ARCESS Array B	46.82	341	P	P	19 27 46.2	-0.5
	comp=Z,3.9nm,1.0s,baz=129,slow=7.1,SNR=3.9						
TORD	Torodi Ar. Bea	62.63	270	P	P	19 29 42.6	+0.6
	comp=Z,0.8nm,0.7s,baz=54,slow=6.4,SNR=5.2						
ASAR	Alice Springs	82.80	122	P	P	19 31 43.4	+1.7
	comp=Z,0.3nm,0.6s,baz=305,slow=5.2,SNR=8.2						
YKA	Yellowknife Ar	88.52	1	P	P	19 32 09.7	+0.4
	comp=Z,0.2nm,0.5s,baz=350,slow=4.1,SNR=3.8						

MAN 12 19:24:00.4, 9°84N×124°37E, h79^{km}, mb4.0, ML2.7, MS2.3, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBP	Tagbilaran	0.52	254	eP	Pn	19 24 16.0	+1.9
MSLP	Maasin	0.57	58	eP	Pn	19 24 16.2	+1.5
MSLP				eS	Sn	19 24 28.3	+3.1
LLP	Lapu-Lapu	0.62	321	⇓eP	Pn	19 24 17.0	+1.8
LLP				eS	Sn	19 24 29.1	+3.0
CTBH	Cotabato--PC H	2.60	183	⇑iP	Pn	19 24 42.6	+2.3

BJI **12** *19:25:41.8±0.0, 23°11S×174°61W, h21^{km}, mB5.9/55, mb5.2/51, Ms5.6/55, Ms7 5.4/57*

NEIC **12** *19:25:41.6±2.6, 23°59S±0°10×175°1W±0°1, h15^{km}±3^{km}, mb5.2/116, Ms_20 5.7/683, Mwb5.4/77, Mww5.6, Mwc5.6(GCMT), Error ellipse: s-maj=16.4km s-min=14.0km az=74.0*

NEIC **12** *19:25:41, 23°59S×175°06W, h20^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.28; $M_{\theta\theta}$0.14; $M_{\phi\phi}$-1.41; $M_{r\theta}$0.50; $M_{\theta\phi}$-0.18; $M_{\phi r}$0.45; Fault plane solution: $M_0$1.52000×10^{17} NP1:ϕ_s23.74000°, δ57.84000°, λ110.33000°. NP2:ϕ_s168.90000°, δ37.45000°, λ61.07000°. Principal axes: T 1.5093, Plg70.0000°, Azm339.0000°; N 0.0202, Plg17.0000°, Azm193.0000°; P -1.5295, Plg11.0000°, Azm99.0000°;*

IDC **12** *19:25:42.2±0.4, 23°28S×175°50W, h0^{km}, mb4.7/25, mb1 4.8/26, mb1mx4.7/39, mbtmp4.7/26, ML4.9/1, MS5.2/25, Ms1 5.3/25, ms1mx5.1/39 Error ellipse: s-maj=16.0km s-min=14.0km az=139.0*

GCMT **12** *19:25:46.6±0.1, 23°48S±0°01×174°74W±0°01, h14^{km}, MW5.6/163, Moment Tensor Solution. s134, c232; s163, c322; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M_{rr}2.52±.04; $M_{\theta\theta}$-0.44±.02; $M_{\phi\phi}$-2.09±.03; $M_{r\theta}$0.72±.06; $M_{\theta\phi}$-0.77±.02; $M_{\phi r}$1.19±.06; Best double couple: $M_0$2.82400×10^{17} NP1:ϕ_s197.00000°, δ31.00000°, λ82.00000°. NP2:ϕ_s26.00000°, δ60.00000°, λ94.00000°. Principal axes: T 2.8940, Plg75.0000°, Azm308.0000°; N -0.1490, Plg4.0000°, Azm204.0000°; P -2.7530, Plg15.0000°, Azm113.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **12** *19:25:46, 23°48S×174°73W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.53; $M_{\theta\theta}$-0.40; $M_{\phi\phi}$-2.13; $M_{r\theta}$0.68; $M_{\theta\phi}$-0.77; $M_{\phi r}$1.48; Fault plane solution: $M_0$2.97000×10^{17} NP1:ϕ_s23.00000°, δ62.00000°, λ92.00000°. NP2:ϕ_s199.00000°, δ28.00000°, λ86.00000°. Principal axes: T 3.0191, Plg73.0000°, Azm298.0000°; N -0.1107, Plg2.0000°, Azm202.0000°; P -2.9084, Plg17.0000°, Azm111.0000°;*

NEIC **12** *19:25:46, 23°09S×174°50W, h26^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.54; $M_{\theta\theta}$-0.30; $M_{\phi\phi}$-2.24; $M_{r\theta}$0.41; $M_{\theta\phi}$-0.43; $M_{\phi r}$1.34; Fault plane solution: $M_0$2.82000×10^{17} NP1:ϕ_s14.00000°, δ60.00000°, λ92.00000°. NP2:ϕ_s190.00000°, δ30.00000°, λ86.00000°. Principal axes: T 2.9174, Plg75.0000°, Azm290.0000°; N -0.2135, Plg2.0000°, Azm193.0000°; P -2.7039, Plg15.0000°, Azm103.0000°;*

MOS **12** *19:25:57.6±2.1, 20°24S×174°71W, h33^{km}, mb5.2/13, MS5.6/31 Error ellipse: s-maj=14.3km s-min=9.8km az=103.8*

ISC 12 19:25:41.4±0.3**, 23°57S**±0°05×**175°03W**±0°05**, h10**^{km}**, n728,** σ**2^{s}13**/431**, mb5.1**/103**, MS5.7**/400**, 25C-22D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	6.23	204	Sn	Sn	19 28 26.1	+1.4
	55nm,0.3s,baz=131,slow=19,SNR=2.1						
NIUE	Niue	6.52	48	P	Pn	19 27 10.6	-6.9
	baz=6.2,SNR=50						
MSVF	Nonsavu	8.70	311	P	Pn	19 27 47.8	+0.4
MSVF	Nonsavu	8.70	311		Pn	19 27 47.8	+0.4
AFI	Afiamalu	10.09	18	Pn	Pn	19 27 59.3	-7.2
	20nm,0.3s,baz=30,slow=1.7,SNR=12						
AFI				Sn	Sn	19 29 44.4	-15
	11nm,0.3s,baz=340,slow=20,SNR=4.9						
AFI	Afiamalu	10.09	18		Pn	19 27 58.4	-8.1
RAR	Rarotonga	14.30	84	Pn	Pn	19 29 00.2	-3.9
	15nm,0.3s,baz=256,slow=9.3,SNR=14						
RAR				LR	LR	19 33 59.4	
	comp=Z,16μm,20.2s,baz=269,slow=34						
URZ	Urewera	16.11	203	Pn	P	19 29 30.6	-0.7
	4.2nm,0.3s,baz=203,slow=3.1,SNR=8.8						
URZ				Sn	Sn	19 32 24.1	-2.7
	2.4nm,0.3s,baz=200,slow=23,SNR=6.2						
URZ	Urewera	16.11	203		Pn	19 29 27.3	-0.7
BKZ	Black Stump Fm	17.14	203		Pn	19 29 37.7	-3.4
DZM	Mont Dzumac	17.15	271	eP	P	19 29 47.2	+4.2
	253nm,1.5s						
DZM				eLQ	LQ	19 33 04.0	
	14μm,28.4s						
DZM				eLR	LR	19 33 49.3	
	comp=Z,11μm,25.6s						
DZM	Mont Dzumac	17.15	271	Pn	P	19 29 43.4	+0.3
	1.1nm,0.3s,baz=86,slow=20,SNR=9.2						
DZM	Mont Dzumac	17.15	271	P	Pn	19 29 41.2	-0.2
BFZ	Birch Farm	18.58	201	P	P	19 29 53.9	-4.7
TUWZ	Tuamarina	20.06	205	P	P	19 30 10.0	-4.8
LTZ	Lake Taylor	21.87	206	P	P	19 30 32.7	-1.7
OXZ	Oxford	22.42	205	P	P	19 30 40.9	+0.6
RPZ	Rata Peaks	23.14	206	P	P	19 30 50.9	+3.2
	12nm,0.6s,baz=64,slow=4.3,SNR=7.7						
RPZ				S	S	19 34 55.8	-3.4
	18nm,0.7s,baz=305,slow=9.6,SNR=5.8						
RPZ	Rata Peaks	23.14	206	P	P	19 30 46.1	-1.6

FOZ	**Fox Glacier**	**23.51**	**208**	P	**P**	**19 30 52.0**	**+0.5**
FOZ				IAmb	IAmb	19 30 58.6	
	comp=Z,100nm,1.3s						
FOZ				IAMs_20	IAMs_20	19 40 56.7	
	comp=Z,32µm,19.0s						
LBZ	**Lake Benmore**	**24.04**	**207**	IAMs_20	IAMs_20	19 41 29.8	
	comp=Z,23µm,18.0s						
PAE	**Paea**	**24.51**	**81**	*e*T	T	19 56 01.6	
	comp=Z,5.3nm,0.3s						
PPT2	**Papeete2**	**24.54**	**81**	*e*LR	LR	19 37 02.3	
	comp=Z,14µm,21.5s,baz=251						
PPT2	**Papeete2**	**24.54**	**81**	*e*T	T	19 56 05.6	
	comp=Z,8.8nm,0.3s						
PPT	**Papeete**	**24.55**	**81**	LR	LR	19 38 31.4	
	comp=Z,13µm,20.3s,baz=265,slow=31						
PPTF	**Pamatai, Papee**	**24.55**	**81**	IAMs_20	IAMs_20	19 38 12.9	
	comp=Z,18µm,18.0s						
WKZ	**Wanaka**	**24.89**	**208**	IAMs_20	IAMs_20	19 41 50.2	
	comp=Z,18µm,18.0s						
MLZ	**Mavora Lakes**	**25.71**	**208**	IAMs_20	IAMs_20	19 42 13.8	
	comp=Z,19µm,18.0s						
WHZ	**Wether Hill Ro**	**26.20**	**208**	P	**P**	**19 31 15.1**	**-1.1**
WHZ				IAmb	IAmb	19 31 41.9	
	comp=Z,88nm,1.3s						
PYZ	**Puysegur Point**	**26.96**	**209**	IAMs_20	IAMs_20	19 42 48.9	
	comp=Z,20µm,19.0s						
HNR	**Honiara**	**27.74**	**296**	LR	LR	19 41 55.1	
	comp=Z,3µm,20.6s,baz=153,slow=36						
EIDS	**Eidsvold**	**30.85**	**260**	P	**P**	**19 31 58.8**	**+0.8**
	baz=31,SNR=3.8						
RMQ	**Roma**	**32.88**	**257**	P	**P**	**19 32 17.0**	**+1.2**
	baz=33,SNR=7.0						
MILA	**Mila**	**33.51**	**238**	P	**P**	**19 32 21.7**	**+0.4**
	baz=34,SNR=4.2						
CMSA	**Cobar Meteorol**	**35.57**	**248**	P	**P**	**19 32 39.6**	**+0.5**
	baz=36,SNR=18						
CTA	**Charters Tower**	**36.04**	**268**	P	**P**	**19 32 42.4**	**-0.9**
	comp=Z,18nm,0.5s,baz=95,slow=11,SNR=26						
TAOE	**Nuku Hiva Isla**	**36.42**	**72**	*e*S	**S**	**19 38 22.0**	**-6.5**
	comp=Z,1µm,25.3s						
TAOE				*e*LR	LR	19 42 27.8	
	comp=Z,8µm,21.9s,baz=247						
TOO	**Toolangi**	**36.48**	**238**	P	**P**	**19 32 48.0**	**+1.2**
	baz=37,SNR=4.1						
TOO	**Toolangi**	**36.48**	**238**	P	**P**	**19 32 46.4**	**-0.4**
KRVT	**Keravat (AS076**	**37.10**	**296**	P	**P**	**19 32 50.4**	**-1.9**
	comp=Z,22nm,0.7s,baz=156,slow=22,SNR=4.0						
MTSU	**Mount Surprise**	**38.28**	**270**	P	**P**	**19 33 02.6**	**+0.2**
	baz=38,SNR=6.7						
PMG	**Port Moresby**	**38.75**	**285**	P	**P**	**19 33 03.8**	**-2.5**
	comp=Z,18nm,0.8s,baz=87,slow=6.9,SNR=8.0						
PMG	**Port Moresby**	**38.75**	**285**	IAmb	IAmb	19 33 41.1	
	comp=Z,66nm,1.1s						
STKA	**Stephens Creek**	**39.07**	**248**	P	**P**	**19 33 08.9**	**+0.1**
	baz=39,SNR=13						
STKA	**Stephens Creek**	**39.07**	**248**	P	**P**	**19 33 07.8**	**-1.0**
	comp=Z,4.9nm,0.6s,baz=87,slow=8.7,SNR=15						
STKA				LR	LR	19 48 49.4	
	comp=Z,6µm,18.6s,baz=82,slow=36						
STKA	**Stephens Creek**	**39.07**	**248**	P	**P**	**19 33 08.1**	**-0.7**
PATS	**Pohnpei**	**39.89**	**316**	IAMs_20	IAMs_20	19 47 22.1	
	comp=Z,8µm,20.0s						
COEN	**Coen**	**40.59**	**276**	P	**P**	**19 33 21.9**	**+0.3**
	baz=41,SNR=3.8						
PTCN	**Pitcairn Islan**	**40.83**	**102**	IAMs_20	IAMs_20	19 46 15.4	
	comp=Z,9µm,20.0s						
HTT	**Hallett**	**41.36**	**246**	P	**P**	**19 33 27.8**	**0.0**
	baz=42,SNR=12						
QIS	**Mount Isa**	**42.02**	**265**	P	**P**	**19 33 32.5**	**-0.9**
	baz=42,SNR=4.1						
BBOO	**Buckleboo**	**43.76**	**247**	P	**P**	**19 33 46.9**	**-0.4**
	baz=44,SNR=7.6						
BBOO	**Buckleboo**	**43.76**	**247**	P	**P**	**19 33 46.3**	**-1.0**
BBOO				IAmb	IAmb	19 34 36.6	
	comp=Z,56nm,1.5s						
BBOO				IAMs_20	IAMs_20	19 50 13.2	
	comp=Z,7µm,20.0s						
AS31	**Alice Springs**	**46.58**	**259**	P	**P**	**19 34 08.9**	**-1.0**
ASAR	**Alice Springs**	**46.58**	**259**	P	**P**	**19 34 08.9**	**-0.9**
	comp=Z,5.2nm,0.6s,baz=97,slow=7.1,SNR=66						
ASAR				S	**S**	**19 40 55.2**	**-3.8**
	comp=Z,1.0nm,0.7s,baz=95,slow=14,SNR=5.9						
ASAR				LR	LR	19 53 50.0	
	comp=Z,7µm,18.2s,baz=104,slow=36						
ASAR	**Alice Springs**	**46.58**	**259**	P	**P**	**19 34 07.5**	**-2.3**
WRAB	**Tennant Creek**	**46.97**	**264**	P	**P**	**19 34 10.9**	**-2.0**
WRAB				IAmb	IAmb	19 34 18.0	
	comp=Z,37nm,1.3s						
WRAB	**Tennant Creek**	**46.97**	**264**	IAMs_20	IAMs_20	19 53 28.4	
	comp=Z,6µm,20.0s						
FORT	**Forrest**	**50.69**	**249**	P	**P**	**19 34 39.6**	**-1.8**
FORT				IAmb	IAmb	19 34 59.4	
	comp=Z,33nm,0.9s						
FORT				IAMs_20	IAMs_20	19 57 46.6	
	comp=Z,5µm,18.0s						
KDU	**Kakadu**	**50.81**	**273**	P	**P**	**19 34 40.9**	**-1.6**
	baz=51,SNR=7.9						
WRKA	**Warakurna**	**51.35**	**256**	P	**P**	**19 34 45.3**	**-1.1**
	baz=52,SNR=80						
MTN	**Manton Dam**	**51.98**	**272**	P	**P**	**19 34 50.1**	**-1.1**
	baz=52,SNR=11						
MTN	**Manton Dam**	**51.98**	**272**	P	**P**	**19 34 50.1**	**-1.1**
MTN				IAMs_20	IAMs_20	19 56 22.3	
	comp=Z,5µm,19.0s						
KNRA	**Kununurra**	**53.25**	**268**	P	**P**	**19 34 59.8**	**-0.8**
	baz=54,SNR=30						
KNRA	**Kununurra**	**53.25**	**268**	P	**P**	**19 34 58.0**	**-2.6**
KNRA				IAmb	IAmb	19 35 24.1	
	comp=Z,36nm,0.8s						
VNDA	**Vanda**	**55.14**	**186**	LR	LR	19 53 58.9	
	comp=Z,2µm,21.5s,baz=20,slow=31						
FITZ	**Fitzroy Crossi**	**55.40**	**264**	P	**P**	**19 35 16.0**	**-0.2**
	baz=56,SNR=14						
FITZ	**Fitzroy Crossi**	**55.40**	**264**	LR	LR	19 57 26.0	
	comp=Z,2µm,21.1s,baz=115,slow=35						
FITZ	**Fitzroy Crossi**	**55.40**	**264**	P	**P**	**19 35 14.9**	**-1.4**
FITZ				IAmb	IAmb	19 35 28.0	
	comp=Z,22nm,1.1s						
SIJI	**Sorong**	**56.70**	**285**	LR	LR	19 59 16.8	
	comp=Z,2µm,19.4s,baz=110,slow=36						
SWI	**Sorong**	**56.70**	**285**	P	P	19 35 16.7	-8.9
	comp=Z,930nmcomp=Z,78nm,1.0s						
KLBR	**Kellerberrin**	**59.30**	**246**	P	**P**	**19 35 44.1**	**+0.4**
	baz=60,SNR=20						
SOEI	**Soe**	**59.37**	**272**	P	P	19 35 38.9	-5.6
	comp=Z,1µmcomp=Z,90nm,1.1s						
SOEI	**Soe**	**59.37**	**272**	P	**P**	**19 35 44.2**	**-0.3**
NWAO	**Narrogin (SRO)**	**59.51**	**245**	LR	LR	19 58 37.8	
	comp=Z,2µm,20.3s,baz=98,slow=33						
MEEK	**Meekatharra**	**59.56**	**252**	P	**P**	**19 35 45.2**	**-0.4**
	baz=60,SNR=5.3						
PSAD2	**Pilbara Seismi**	**59.58**	**258**	IAMs_20	IAMs_20	20 01 08.2	
	comp=Z,5µm,22.0s						
PSAC2	**Pilbara Seismi**	**59.65**	**258**	IAMs_20	IAMs_20	20 00 47.0	
	comp=Z,5µm,20.0s						
PSAB3	**Pilbara Seismi**	**59.68**	**258**	IAMs_20	IAMs_20	20 00 47.9	
	comp=Z,5µm,19.0s						
PSAA3	**Pilbara Seismi**	**59.69**	**258**	IAMs_20	IAMs_20	20 00 52.0	
	comp=Z,5µm,21.0s						
PSAB2	**Pilbara Seismi**	**59.69**	**258**	IAMs_20	IAMs_20	20 02 31.0	
	comp=Z,4µm,20.0s						
PSA00	**Pilbara Seismi**	**59.70**	**258**	P	**P**	**19 35 44.5**	**-2.1**
PSA00	**Pilbara Seismi**	**59.70**	**258**	P	**P**	**19 35 45.1**	**-1.4**
PSA00				IAmb	IAmb	19 36 23.4	
	comp=Z,16nm,1.2s						
PSA00				IAMs_20	IAMs_20	20 01 21.3	
	comp=Z,5µm,20.0s						
PSAA2	**Pilbara Seismi**	**59.70**	**258**	IAMs_20	IAMs_20	20 00 48.3	
	comp=Z,5µm,19.0s						
PSAC3	**Pilbara Seismi**	**59.70**	**258**	IAMs_20	IAMs_20	20 00 49.4	
	comp=Z,4µm,19.0s						
PSAB1	**Pilbara Seismi**	**59.72**	**258**	IAMs_20	IAMs_20	20 04 10.9	
	comp=Z,5µm,18.0s						
PSAD3	**Pilbara Seismi**	**59.74**	**258**	IAMs_20	IAMs_20	20 04 28.3	
	comp=Z,5µm,18.0s						
PSAC1	**Pilbara Seismi**	**59.74**	**258**	IAMs_20	IAMs_20	20 00 50.4	
	comp=Z,6µm,22.0s						
PSAD1	**Pilbara Seismi**	**59.74**	**258**	IAMs_20	IAMs_20	20 04 20.5	
	comp=Z,6µm,19.0s						
MBWA	**Marble Bar**	**59.91**	**258**	IAMs_20	IAMs_20	20 01 05.9	
	comp=Z,4µm,19.0s						
BLDU	**Ballidu**	**60.37**	**247**	P	**P**	**19 35 51.4**	**+0.3**
	baz=61,SNR=14						
MUN	**Mundaring**	**60.53**	**245**	P	**P**	**19 35 53.9**	**+1.7**
	baz=61,SNR=3.5						
SANI	**Sanana**	**60.88**	**281**	P	P	19 35 46.4	-8.3
TNTI	**Ternate**	**60.91**	**285**	P	P	19 35 46.9	-8.0
	comp=Z,701nmcomp=Z,22nm,2.2s						
MORW	**Morawa**	**61.25**	**249**	P	**P**	**19 35 57.7**	**+0.6**
	baz=62,SNR=13						
MORW	**Morawa**	**61.25**	**249**	P	**P**	**19 35 57.1**	**0.0**
MORW				IAmb	IAmb	19 35 58.5	
	comp=Z,11nm,0.8s						
MORW				IAMs_20	IAMs_20	20 02 04.4	
	comp=Z,4µm,18.0s						
CASY	**Casey**	**62.41**	**206**		pP	19 36 04.6	+0.1
MATI	**Mati**	**64.83**	**290**	*e*P	**P**	**19 36 17.1**	**-3.9**
KCP	**Kidapawan**	**65.87**	**290**⇓	*e*P	**P**	**19 36 26.9**	**-0.9**
SKMP	**Bagumbayan, Su**	**66.10**	**289**	*e*P	**P**	**19 36 26.7**	**-2.6**
QSPA	**South Pole Qui**	**66.52**	**180**	P	**P**	**19 36 34.7**	**+3.4**
	comp=Z,8.5nm,1.0s,baz=286,slow=1.7,SNR=12						
QSPA	**South Pole Qui**	**66.52**	**180**	P	**P**	**19 36 31.4**	**+0.1**
QSPA				IAmb	IAmb	19 36 48.8	
	comp=Z,23nm,1.1s						
BATP	**Bataraza**	**73.05**	**288**	*e*P	**P**	**19 37 11.6**	**-0.6**
LUBP	**Lubang**	**73.33**	**293**	*e*P	**P**	**19 37 11.6**	**-2.2**
MJAR	**Matsushiro Arr**	**74.30**	**322**	P	**P**	**19 37 18.2**	**-0.9**
	comp=Z,4.5nm,0.7s,baz=150,slow=6.0,SNR=5.4						
MJAR				LR	LR	20 10 12.7	
	comp=Z,483nm,18.0s,baz=150,slow=36						
MAJO	**Matsushiro**	**74.31**	**322**	*i* P	**P**	**19 37 18.2**	**-0.9**
ERM	**Erimo**	**75.85**	**329**	IAMs_20	IAMs_20	20 04 52.9	
	comp=Z,5µm,22.0s						
YUK	**Yuzh-Kuril'sk**	**76.22**	**332***d*	*i*P	**P**	**19 37 29.5**	**-0.4**
YUK				*e*		19 37 39.7	
YUK				*e*		19 40 17.9	
YUK				pmax	pmax		
	comp=Z,175nm,1.9s						
KUR	**Kuril'sk**	**76.36**	**334**	*e*P	**P**	**19 37 30.6**	**0.0**
KUR				*e*		19 37 41.4	
KUR				*e*		19 47 43.3	
KUR				pmax	pmax		
	comp=Z,79nm,1.9s						
SNCC	**San Nicolas Is**	**77.38**	**45**	IAMs_20	IAMs_20	20 03 17.5	
	comp=Z,3µm,20.0s						
PMSA	**Palmer Station**	**77.38**	**156**	P	P	19 37 42.1	+5.8
	comp=Z,40nm,1.0s,baz=248,slow=8.6,SNR=5.7						
ASAJ	**Asahikawa**	**77.73**	**330**	LR	LR	20 06 45.0	
	comp=Z,3µm,21.7s,baz=168,slow=32						
TPUB	**Ta-pu**	**77.94**	**302**	P	**P**	**19 37 38.5**	**-1.5**
SSLB	**Suanglung**	**77.95**	**303**	P	**P**	**19 37 38.9**	**-1.3**
SSLB				IAmb	IAmb	19 37 44.4	
	comp=Z,15nm,0.6s						
YHNB	**Yeheng**	**78.10**	**304**	IAMs_20	IAMs_20	20 06 26.3	
	comp=Z,3µm,22.0s						
SKR	**Severo-Kuril's**	**78.20**	**342**	*e*P	**P**	**19 37 41.0**	**+0.2**
SKR				*e*S	**S**	**19 47 38.8**	**+3.5**
SKR				*e*		19 48 08.2	
SAO	**San Andreas Ge**	**78.43**	**41**	IAMs_20	IAMs_20	20 08 49.2	
	comp=Z,3µm,19.0s						
PMPB	**Monarch Peak**	**78.47**	**42**	IAMs_20	IAMs_20	20 04 00.2	
	comp=Z,3µm,22.0s						
109C	**Camp Elliot, M**	**78.75**	**47**	IAMs_20	IAMs_20	20 04 41.8	
	comp=Z,3µm,21.0s						
OSI	**Osito Audit: C**	**78.75**	**44**	IAMs_20	IAMs_20	20 04 30.8	
	comp=Z,4µm,21.0s						
PASC	**Pasadena Art C**	**78.82**	**45**	IAMs_20	IAMs_20	20 04 42.8	
	comp=Z,3µm,21.0s						
BAR	**Barrett**	**78.91**	**47**	IAMs_20	IAMs_20	20 04 45.2	
	comp=Z,4µm,20.0s						
MWC	**Mount Wilson**	**78.94**	**45**	IAMs_20	IAMs_20	20 04 13.8	
	comp=Z,3µm,22.0s						
SRIG	**Santa Rosalia**	**78.94**	**54**	IAMs_20	IAMs_20	20 04 14.6	
	comp=Z,4µm,21.0s						
HOPS	**Hopland Field**	**78.96**	**39**	IAMs_20	IAMs_20	20 04 05.0	
	comp=Z,3µm,20.0s						
GDXM	**Geysers**	**78.99**	**39**	IAMs_20	IAMs_20	20 10 05.9	
	comp=Z,4µm,19.0s						
KMRM	**Mail Ridge**	**79.43**	**37**	P	**P**	**19 37 49.0**	**+1.0**
KMRM				IAmb	IAmb	19 38 04.5	
	comp=Z,30nm,0.9s						
ISA	**Isabella, Lake**	**79.57**	**44**	IAMs_20	IAMs_20	20 05 08.4	
	comp=Z,3µm,21.0s						
MAW	**Mawson**	**79.61**	**199**	P	**P**	**19 37 53.2**	**+4.7**
	comp=Z,10nm,0.7s,baz=143,slow=4.0,SNR=5.9						
MAW				LR	LR	20 12 30.9	
	comp=Z,3µm,18.8s,baz=114,slow=35						
MAW	**Mawson**	**79.61**	**199**	P	**P**	**19 37 47.3**	**-1.2**
PFO	**Pinyon Flats O**	**79.61**	**46**	P	P	19 37 54.2	+5.0
	comp=Z,1.2nm,0.7s,baz=243,slow=4.5,SNR=3.8						
PFO	**Pinyon Flats O**	**79.61**	**46**	*i* P	**P**	**19 37 50.5**	**+1.3**
PFO				pmax	pmax		
	comp=Z,7.0nm,1.3s						
PFO	**Pinyon Flats O**	**79.61**	**46**	P	**P**	**19 37 48.7**	**-0.5**
PFO	**Pinyon Flats O**	**79.61**	**46**	IAMs_20	IAMs_20	20 04 42.8	
	comp=Z,4µm,20.0s						
XPFO	**Pion Flat**	**79.62**	**46**	IAMs_20	IAMs_20	20 04 42.8	
	comp=Z,4µm,21.0s						
PET	**Petropavlovsk**	**79.63**	**344**	*e*P	**P**	**19 37 48.0**	**-0.6**
PET				*e*S	**S**	**19 47 47.9**	**-2.6**
PET				pmax	pmax		
	comp=Z,500nm,16.4s						
PET				MLR	MLR		
	comp=Z,3µm,21.0s						
PET	**Petropavlovsk**	**79.63**	**344**	IAMs_20	IAMs_20	20 16 47.1	
	comp=Z,3µm,19.0s						
YSS	**Yuzh-Sakhalins**	**79.87**	**332**	*e*P	**P**	**19 37 51.2**	**+1.1**
YSS				*e*		19 38 02.3	
YSS				*e*S	**S**	**19 47 49.9**	**-3.4**
YSS				smax	smax		
	comp=N,2µm,12.0s						
YSS	**Yuzh-Sakhalins**	**79.87**	**332**	P	**P**	**19 37 49.6**	**-0.5**
YSS				IAMs_20	IAMs_20	20 07 00.4	
	comp=Z,3µm,22.0s						
CMB	**Columbia Colle**	**79.90**	**41**	P	**P**	**19 37 49.7**	**-0.9**
CMB				pmax	pmax		
	comp=Z,14nm,1.2s						
CMB				MLR	MLR		
	comp=Z,2µm,22.0s						
CMB	**Columbia Colle**	**79.90**	**41**	P	**P**	**19 37 49.7**	**-0.9**
PEA0B	**Petropavlovsk-**	**79.95**	**344**	IAMs_20	IAMs_20	20 07 05.6	
	comp=Z,3µm,22.0s						
PETK	**Petropavlovsk-**	**79.95**	**344**	P	**P**	**19 37 50.2**	**-0.2**
	comp=Z,6.1nm,0.8s,baz=131,slow=8.1,SNR=8.2						
PETK				LR	LR	20 07 17.1	
	comp=Z,3µm,21.7s,baz=157,slow=31						
PETK	**Petropavlovsk-**	**79.95**	**344**	P	**P**	**19 37 49.8**	**-0.6**
PETK	**Petropavlovsk-**	**79.95**	**344**	P	**P**	**19 37 49.8**	**-0.6**
USHA	**Ushuaia**	**80.06**	**146**	LR	LR	20 08 36.3	
	comp=Z,3µm,18.8s,baz=244,slow=32						
KRMB	**Red Mountain**	**80.22**	**36**	IAMs_20	IAMs_20	20 05 33.2	
	comp=Z,4µm,21.0s						
ORV	**Oroville**	**80.24**	**39**	P	**P**	**19 37 53.6**	**+1.3**
ORV				pmax	pmax		
	comp=Z,21nm,1.3s						
ORV	**Oroville**	**80.24**	**39**	P	**P**	**19 37 53.6**	**+1.3**
ORV				IAmb	IAmb	19 38 09.8	
	comp=Z,21nm,1.3s						
WDC	**Whiskeytown Da**	**80.33**	**38**	P	**P**	**19 37 53.8**	**+1.0**
WDC				pmax	pmax		
	comp=Z,34nm,1.5s						
WDC				MLR	MLR		
	comp=Z,3µm,20.0s						
WDC	**Whiskeytown Da**	**80.33**	**38**		**P**	**19 37 53.8**	**+1.0**
WDC				IAmb	IAmb	19 38 41.5	
	comp=Z,34nm,1.5s						
WDC				IAMs_20	IAMs_20	20 05 31.3	
	comp=Z,3µm,20.0s						
GLA	**Glamis**	**80.38**	**48**	IAMs_20	IAMs_20	20 05 31.1	
	comp=Z,4µm,21.0s						
GSC	**Goldstone, Bar**	**80.41**	**45**	P	**P**	**19 37 52.7**	**-0.8**
GSC				pmax	pmax		
	comp=Z,16nm,1.4s						
GSC				MLR	MLR		
	comp=Z,3µm,20.0s						
GSC	**Goldstone, Bar**	**80.41**	**45**	P	**P**	**19 37 52.7**	**-0.8**
GSC				IAMs_20	IAMs_20	20 05 00.9	
	comp=Z,3µm,20.0s						
MDPB	**Devils Postpil**	**80.43**	**42**	IAMs_20	IAMs_20	20 05 12.2	
	comp=Z,3µm,22.0s						
OMMB	**Old Mammoth Mi**	**80.47**	**42**	P	**P**	**19 37 54.5**	**+0.5**
OMMB				IAmb	IAmb	19 38 26.9	
	comp=Z,25nm,1.5s						
OMMB				IAMs_20	IAMs_20	20 05 34.2	
	comp=Z,3µm,20.0s						
RUBR	**Rubicon Trail**	**80.70**	**40**	IAMs_20	IAMs_20	20 05 41.1	
	comp=Z,3µm,21.0s						
HSIG		**80.83**	**53**	IAMs_20	IAMs_20	20 05 43.2	
	comp=Z,3µm,20.0s						
113A	**Mohawk Valley,**	**80.94**	**48**	P	**P**	**19 37 53.0**	**-3.2**
Y12C	**Blythe**	**80.99**	**47**	P	**P**	**19 37 57.1**	**+0.6**
Y12C				IAMs_20	IAMs_20	20 06 00.3	
	comp=Z,3µm,20.0s						
KSRS	**Korea Array**	**81.00**	**317**	P	**P**	**19 37 57.5**	**+1.1**
	comp=Z,4.3nm,0.8s,baz=129,slow=5.6,SNR=7.1						
KSRS				LR	LR	20 11 28.4	
	comp=Z,805nm,18.9s,baz=124,slow=34						
KSAR	**Wonju Array Be**	**81.02**	**317**	P	**P**	**19 37 54.6**	**-1.9**
KSAR	**Wonju Array Be**	**81.02**	**317**	P	**P**	**19 37 54.6**	**-1.9**
YBH	**Yreka Blue Hor**	**81.02**	**37**	P	**P**	**19 37 58.8**	**+2.3**
	comp=Z,2.5nm,0.8s,baz=143,slow=8.4,SNR=7.5						
YBH				LR	LR	20 06 24.4	
	comp=Z,3µm,21.9s,baz=261,slow=30						
YBH	**Yreka Blue Hor**	**81.02**	**37**	P	**P**	**19 37 56.6**	**+0.1**
YBH				pmax	pmax		
	comp=Z,14nm,1.2s						
YBH				MLR	MLR		
	comp=Z,4µm,21.0s						
YBH	**Yreka Blue Hor**	**81.02**	**37**	P	**P**	**19 37 56.5**	**+0.1**
YBH				IAMs_20	IAMs_20	20 05 39.4	
	comp=Z,3µm,21.0s						
PNTR	**Pine Nut**	**81.05**	**40**	IAMs_20	IAMs_20	20 05 41.5	
	comp=Z,3µm,22.0s						
BEKR	**Beckworth**	**81.11**	**39**	P	**P**	**19 37 57.0**	**-0.1**
BEKR				IAmb	IAmb	19 38 14.9	
	comp=Z,25nm,1.4s						
214A	**Organ Pipe Nat**	**81.13**	**50**	IAMs_20	IAMs_20	20 05 43.1	
	comp=Z,5µm,21.0s						
VCNR	**Virginia City**	**81.15**	**40**	P	**P**	**19 37 58.6**	**+1.2**
VCNR				IAmb	IAmb	19 38 13.5	
	comp=Z,14nm,1.1s						
VCNR				IAMs_20	IAMs_20	20 05 33.2	
	comp=Z,3µm,21.0s						
YERR	**Yerington**	**81.20**	**41**	P	**P**	**19 37 53.7**	**-4.0**
YERR				IAmb	IAmb	19 38 15.3	
	comp=Z,27nm,1.3s						
YERR				IAMs_20	IAMs_20	20 05 57.4	
	comp=Z,3µm,21.0s						
RYN	**Ryan**	**81.40**	**41**	P	**P**	**19 37 58.3**	**-0.5**
RYN				IAmb	IAmb	19 38 27.0	
	comp=Z,34nm,1.5s						
RYN				IAMs_20	IAMs_20	20 05 31.9	
	comp=Z,3µm,22.0s						
NVAR	**Mina Array Bea**	**81.41**	**42**	P	**P**	**19 38 00.5**	**+1.6**
	comp=Z,2.3nm,0.7s,baz=221,slow=7.7,SNR=11						
NVAR				LR	LR	20 06 31.0	
	comp=Z,2µm,21.9s,baz=223,slow=30						
NVAR	**Mina Array Bea**	**81.41**	**42**	P	**P**	**19 37 59.7**	**+0.8**
HUMO	**Hull Mountain**	**81.47**	**36**	P	**P**	**19 38 00.6**	**+1.7**
HUMO				IAmb	IAmb	19 38 20.0	
	comp=Z,24nm,1.3s						
HUMO				IAMs_20	IAMs_20	20 06 03.5	
	comp=Z,3µm,22.0s						
NV11	**Mina Array Sit**	**81.50**	**42**	P	**P**	**19 37 56.1**	**-3.1**
NV11				IAMs_20	IAMs_20	20 06 08.5	
	comp=Z,3µm,22.0s						
PAHR	**Pah Rah Range**	**81.58**	**40**	P	**P**	**19 37 55.3**	**-4.3**
PAHR				IAMs_20	IAMs_20	20 06 07.4	
	comp=Z,3µm,21.0s						
TPNV	**Topopah Spring**	**81.77**	**44**	P	**P**	**19 37 57.6**	**-3.2**
TPNV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TPNV				MLR	MLR		
	comp=Z,4µm,21.0s						
TPNV	**Topopah Spring**	**81.77**	**44**	P	**P**	**19 37 57.6**	**-3.2**
TPNV				IAMs_20	IAMs_20	20 05 55.8	
	comp=Z,4µm,21.0s						
KVN	**Kaiserville**	**81.93**	**41**	P	**P**	**19 38 01.0**	**-0.6**
KVN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KVN	**Kaiserville**	**81.93**	**41**	P	**P**	**19 38 00.9**	**-0.6**
GO07	**Milladeo Hill,**	**82.05**	**134**	IAMs_20	IAMs_20	20 08 49.3	
	comp=Z,4µm,20.0s						
SHPR	**Sheep Range**	**82.20**	**45**	P	**P**	**19 38 00.2**	**-2.9**
SHPR				IAMs_20	IAMs_20	20 06 51.3	
	comp=Z,2µm,20.0s						
W13A	**Hualapai Mount**	**82.21**	**46**	IAMs_20	IAMs_20	20 06 37.5	
	comp=Z,3µm,20.0s						
VLA	**Vladivostok**	**82.37**	**324**	*i* P	**P**	**19 38 02.7**	**-0.8**
VLA				pmax	pmax		
	comp=Z,16nm,1.1s						
MSHR	**Mys Shultsa**	**82.41**	**323**	*i* P	**P**	**19 38 02.6**	**-1.1**
MOD	**Modoc Plateau**	**82.47**	**38**	P	P	19 37 59.4	-4.9
MOD				IAmb	IAmb	19 38 22.6	
	comp=Z,12nm,1.1s						
MOD				IAMs_20	IAMs_20	20 07 02.9	
	comp=Z,3µm,21.0s						
DLV	**T Lat**	**82.64**	**286**	P	**P**	**19 38 04.4**	**-1.4**
TUC	**Tucson**	**82.75**	**50**	IAMs_20	IAMs_20	20 06 53.1	
	comp=Z,4µm,20.0s						
R11A	**Troy Canyon, C**	**83.04**	**43**	P	**P**	**19 38 07.9**	**+0.6**
R11A				IAMs_20	IAMs_20	20 06 36.3	
	comp=Z,3µm,21.0s						
USA0B	**Ussuriysk Arra**	**83.04**	**325**	P	**P**	**19 38 07.2**	**+0.2**
USA0B				pmax	pmax		
	comp=Z,53nm,1.1s						
USA0B				MLR	MLR		
	comp=Z,2µm,20.0s						
USA0B	**Ussuriysk Arra**	**83.04**	**325**	P	**P**	**19 38 07.2**	**+0.2**
USRK	**Ussuriysk Ar.**	**83.04**	**325**	P	**P**	**19 38 07.3**	**+0.3**
	comp=Z,8.3nm,0.7s,baz=103,slow=3.0,SNR=15						
USRK				LR	LR	20 09 28.0	
	comp=Z,1µm,21.6s,baz=126,slow=32						
USRK	**Ussuriysk Ar.**	**83.04**	**325**	P	**P**	**19 38 04.2**	**-2.8**
USRK	**Ussuriysk Ar.**	**83.04**	**325**	P	**P**	**19 38 04.2**	**-2.8**
H04A	**Detroit Lake**	**83.30**	**35**	P	**P**	**19 38 08.5**	**+0.1**
H04A				IAMs_20	IAMs_20	20 11 33.6	
	comp=Z,3µm,19.0s						
PINE	**Pine Mountain**	**83.36**	**36**	P	**P**	**19 38 08.2**	**-0.7**
PINE				IAMs_20	IAMs_20	20 07 17.5	
	comp=Z,3µm,20.0s						
X16A	**Lo Mia Camp, P**	**83.47**	**48**	P	**P**	**19 38 08.9**	**-0.8**
X16A				IAmb	IAmb	19 38 25.8	
	comp=Z,10nm,1.1s						
HPIG		**83.71**	**57**	IAMs_20	IAMs_20	20 09 20.4	
	comp=Z,4µm,19.0s						
LCMT	**Little Creek M**	**83.75**	**45**	P	P	19 38 02.1	-8.9
WVOR	**Wild Horse Val**	**83.76**	**38**	P	**P**	**19 38 09.6**	**-1.3**
WVOR				pmax	pmax		
	comp=Z,24nm,1.1s						
WVOR				MLR	MLR		
	comp=Z,3µm,21.0s						
WVOR	**Wild Horse Val**	**83.76**	**38**	P	**P**	**19 38 09.6**	**-1.3**
WVOR				IAmb	IAmb	19 38 29.2	
	comp=Z,24nm,1.1s						
WVOR				IAMs_20	IAMs_20	20 07 43.0	
	comp=Z,3µm,21.0s						
NJ2	**Nanjing**	**83.94**	**309**	*e*P	**P**	**19 38 12.2**	**+0.3**
NJ2				S	**S**	**19 48 37.7**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,15nm,0.8s						
NJ2				LR	LR		
	comp=Z,700nm,19.9s						
NJ2				LR	LR		
	comp=Z,670nm,19.9s						
NJ2				LR	LR		
	comp=Z,1µm,17.5s						
CCUT	**Cedar City**	**83.98**	**45**	P	**P**	**19 38 10.7**	**-1.6**
F04A	**Amboy**	**84.02**	**34**	P	**P**	**19 38 12.7**	**+0.8**
F04A				IAMs_20	IAMs_20	20 11 51.8	
	comp=Z,2µm,19.0s						
KNB	**Kanab**	**84.02**	**45**	P	P	19 38 07.3	-5.2
KNB				pmax	pmax		
	comp=Z,56nm,1.5s						
KNB	**Kanab**	**84.02**	**45**	P	P	19 38 07.3	-5.2
U15A	**North Rim**	**84.03**	**46**	P	**P**	**19 38 13.6**	**+1.0**
U15A				IAmb	IAmb	19 38 46.3	
	comp=Z,26nm,1.1s						
U15A				IAMs_20	IAMs_20	20 07 35.8	
	comp=Z,3µm,21.0s						
WUAZ	**Wupatki**	**84.13**	**47**	P	**P**	**19 38 08.7**	**-4.3**
WUAZ				IAmb	IAmb	19 38 46.6	
	comp=Z,27nm,1.5s						
WUAZ				IAMs_20	IAMs_20	20 07 39.4	
	comp=Z,4µm,21.0s						
SZCU	**Shurtz Canyon**	**84.19**	**45**	P	**P**	**19 38 14.5**	**+1.2**
NLWA	**Neilton Lookou**	**84.30**	**32**	P	**P**	**19 38 11.7**	**-1.8**
SYO	**Syowa Base**	**84.33**	**192**⇑	*i*PcP	**P**	**19 38 15.0**	**+1.7**
SYO	**Syowa Base**	**84.33**	**192**⇑	*i*P	P	19 38 31.9	+19
I07A	**Izee**	**84.33**	**37**	P	**P**	**19 38 09.5**	**-4.3**
I07A				IAmb	IAmb	19 38 31.5	
	comp=Z,26nm,1.3s						
I07A				IAMs_20	IAMs_20	20 08 10.2	
	comp=Z,3µm,20.0s						
J08A	**Circle Bar Ran**	**84.44**	**38**	P	**P**	**19 38 12.0**	**-2.3**
J08A				IAmb	IAmb	19 38 32.6	
	comp=Z,21nm,1.1s						
J08A				IAMs_20	IAMs_20	20 08 18.0	
	comp=Z,3µm,21.0s						
G06A	**Carlson Farm,**	**84.48**	**35**	P	**P**	**19 38 10.8**	**-3.7**

G06A				IAmb	IAmb	19 38 31.9	
	comp=Z,27nm,1.1s						
G06A				IAMs_20	IAMs_20	20 11 16.1	
	comp=Z,2µm,19.0s						
X18A	**Snowflake**	**84.55**	**49**	P	P	19 38 08.7	-6.5
X18A				IAmb	IAmb	19 38 34.9	
	comp=Z,24nm,1.4s						
MDJ	**Mudanjiang**	**84.60**	**324**	P	**P**	**19 38 15.6**	**+0.6**
MDJ				pP	PcP	19 38 19.3	+0.8
MDJ				S	**S**	**19 48 42.0**	**-0.1**
MDJ				sS	SKKSac	19 48 48.7	+4.0
MDJ				pmax	pmax		
	comp=Z,25nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,1µm,6.7s						
MDJ				LR	LR		
	comp=Z,930nm,19.1s						
MDJ				LR	LR		
	comp=Z,1µm,19.6s						
MDJ				LR	LR		
	comp=Z,2µm,25.0s						
MDJ	**Mudanjiang**	**84.60**	**324**	P	**P**	**19 38 14.3**	**-0.6**
QIZ	**Qiongzhong**	**84.61**	**293**	P	**P**	**19 38 14.2**	**-1.4**
QIZ				S	**S**	**19 48 42.3**	**-0.9**
QIZ				SS	**SS**	**19 54 14.8**	**0.0**
QIZ				pmax	pmax		
	comp=Z,370nm,5.5s						
QIZ				LR	LR		
	comp=Z,340nm,19.6s						
QIZ				LR	LR		
	comp=Z,780nm,17.6s						
QIZ				LR	LR		
	comp=Z,960nm,22.6s						
ELK	**Elko**	**84.70**	**41**	P	**P**	**19 38 18.8**	**+2.9**
	comp=Z,2.6nm,0.9s,baz=223,slow=5.4,SNR=8.1						
ELK	**Elko**	**84.70**	**41**	P	**P**	**19 38 15.0**	**-0.9**
ELK				IAmb	IAmb	19 38 48.4	
	comp=Z,20nm,1.4s						
ELK				IAMs_20	IAMs_20	20 07 37.2	
	comp=Z,3µm,22.0s						
SNAA	**Sanae**	**84.86**	**178**	P	**P**	**19 38 19.0**	**+2.8**
VNA3	**Neumayer Olymp**	**84.90**	**175**	P	**P**	**19 38 19.0**	**+2.7**
121A	**Cookes Peak, D**	**85.01**	**51**	P	**P**	**19 38 16.8**	**-0.8**
121A				IAmb	IAmb	19 40 38.3	
	comp=Z,8.7nm,0.9s						
W18A	**Petrified Fore**	**85.02**	**48**	P	**P**	**19 38 16.0**	**-1.6**
W18A				IAmb	IAmb	19 38 43.8	
	comp=Z,23nm,1.2s						
W18A				IAMs_20	IAMs_20	20 07 54.1	
	comp=Z,4µm,21.0s						
MTPU	**Mount Pierson**	**85.03**	**45**	P	**P**	**19 38 19.3**	**+1.5**
TLIG	**Tlapa**	**85.08**	**69**	IAMs_20	IAMs_20	20 07 04.9	
	comp=Z,4µm,20.0s						
D05A	**Enumclaw**	**85.09**	**33**	P	**P**	**19 38 15.9**	**-1.4**
PLCA	**Paso Flores**	**85.18**	**132**	P	**P**	**19 38 22.4**	**+4.1**
	comp=Z,3.2nm,0.9s,baz=234,slow=6.3,SNR=4.9						
PLCA				LR	LR	20 07 48.6	
	comp=Z,2µm,21.8s,baz=264,slow=30						
PLCA	**Paso Flores**	**85.18**	**132**	P	**P**	**19 38 18.8**	**+0.5**
PLCA				IAmb	IAmb	19 38 24.3	
	comp=Z,11nm,1.2s						
MSU	**Marysvale**	**85.30**	**44**	P	**P**	**19 38 19.8**	**+0.9**
MSU	**Marysvale**	**85.30**	**44**	P	**P**	**19 38 19.8**	**+0.9**
UNM	**Universidad Na**	**85.35**	**67**	IAMs_20	IAMs_20	20 07 40.0	
	comp=Z,4µm,21.0s						
VNA2	**Neumayer--Watz**	**85.37**	**176**	P	**P**	**19 38 21.6**	**+3.1**
	baz=175,slow=3.2						
G08A	**Pilot Rock**	**85.41**	**36**	P	**P**	**19 38 17.6**	**-1.6**
G08A				IAmb	IAmb	19 38 37.3	
	comp=Z,21nm,1.0s						
GRNR	**Gornyy**	**85.49**	**331**	⇑*i*P	**P**	**19 38 20.0**	**+0.7**
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GRNR				MLR	MLR		
	comp=Z,400nm,19.0s						
NKL	**Nikolayevsk**	**85.51**	**335**	*e*P	**P**	**19 38 15.8**	**-3.5**
NKL				pmax	pmax		
	comp=Z,13nm,1.4s						
NKL				pmax	pmax		
	comp=E,1.0nm,1.3s						
NKL				pmax	pmax		
	comp=N,6.0nm,0.8s						
EPT	**El Paso**	**85.54**	**53**	IAMs_20	IAMs_20	20 08 22.9	
	comp=Z,3µm,21.0s						
NVL	**N'lazarevskaya**	**85.80**	**182**	*e*P	P	19 38 56.1	+35
NVL				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LTY	**Liberty**	**85.81**	**34**	P	**P**	**19 38 21.9**	**+0.9**
LTY				IAmb	IAmb	19 39 09.6	
	comp=Z,17nm,1.4s						
HAWA	**Hanford**	**85.82**	**35**	P	**P**	**19 38 20.6**	**-0.5**
HAWA				IAmb	IAmb	19 38 41.6	
	comp=Z,25nm,1.2s						
DL2	**Dalian**	**85.84**	**316**	P	**P**	**19 38 20.4**	**-0.9**
DL2				PP	**PP**	**19 41 41.6**	**+0.4**
DL2				SKS	S	19 48 45.4	-9.1
DL2				S	**SKKSac**	**19 48 55.8**	**+1.6**
DL2				pmax	pmax		
	comp=Z,29nm,1.0s						
DL2				pmax	pmax		
	comp=Z,760nm,4.9s						
DL2				LR	LR		
	comp=Z,890nm,16.3s						
DL2				LR	LR		
	comp=Z,740nm,13.9s						
DL2				LR	LR		
	comp=Z,1µm,18.6s						
MFID	**Camas Ranch**	**85.98**	**39**	P	P	19 38 17.5	-4.6
MFID				IAmb	IAmb	19 38 39.4	
	comp=Z,16nm,1.3s						
BMO	**Blue Mountains**	**86.04**	**37**	P	**P**	**19 38 20.6**	**-1.7**
BMO				pmax	pmax		
	comp=Z,21nm,1.5s						
BMO				MLR	MLR		
	comp=Z,3µm,21.0s						
BMO	**Blue Mountains**	**86.04**	**37**	P	**P**	**19 38 20.6**	**-1.7**
BMO				IAmb	IAmb	19 38 59.9	
	comp=Z,20nm,1.5s						
BMO				IAMs_20	IAMs_20	20 09 30.3	
	comp=Z,3µm,21.0s						
Q16A	**Castle Valley**	**86.18**	**45**	P	**P**	**19 38 22.5**	**-0.7**
IPM	**Ipoh**	**86.24**	**277**	P	**P**	**19 38 22.5**	**-1.4**
TMUT	**Trail Mountain**	**86.37**	**44**	P	**P**	**19 38 25.1**	**+0.8**
CN2	**Changchun**	**86.40**	**321**	*e*P	**P**	**19 38 24.7**	**+0.8**
CN2				pP	pwP	19 38 36.8	+1.0
CN2				*e*S	**SKSac**	**19 48 51.9**	**+1.5**
CN2				sS	ScS	19 49 11.0	+2.7
CN2				pmax	pmax		
	comp=Z,30nm,1.5s						
CN2				pmax	pmax		
	comp=Z,660nm,8.5s						
CN2				LR	LR		
	comp=Z,530nm,17.1s						
CN2				LR	LR		
	comp=Z,790nm,17.1s						
CN2				LR	LR		
	comp=Z,900nm,16.1s						
TXAR	**Lajitas Array**	**86.43**	**56**	LR	LR	20 09 14.5	
	comp=Z,1µm,20.9s,baz=0.0,slow=30						
Y22D	**IRIS PASSCAL I**	**86.43**	**51**	IAMs_20	IAMs_20	20 09 02.5	
	comp=Z,4µm,21.0s						
WHN	**Wuhan**	**86.47**	**305**	⇑P	**P**	**19 38 25.8**	**+1.2**
WHN				pmax	pmax		
	comp=Z,1µm,7.0s						
WHN				LR	LR		
	comp=Z,3µm,23.6s						
KLR	**Kul'dur**	**86.56**	**328**	*i* P	**P**	**19 38 24.8**	**+0.2**
KLR				pmax	pmax		
	comp=Z,15nm,1.1s						
D08A	**Wollman Farm,**	**86.58**	**35**	IAMs_20	IAMs_20	20 17 21.4	
	comp=Z,3µm,19.0s						
E09A	**Wood Farm, Sta**	**86.64**	**35**	IAMs_20	IAMs_20	20 17 51.0	
	comp=Z,2µm,19.0s						
SRU	**San Rafael Swe**	**86.70**	**45**	P	**P**	**19 38 23.8**	**-2.0**
SRU				pmax	pmax		
	comp=Z,17nm,1.1s						
SRU	**San Rafael Swe**	**86.70**	**45**	P	**P**	**19 38 23.8**	**-2.0**
UBPT	**Khong Chiam**	**86.72**	**288**	P	**P**	**19 38 27.9**	**+1.8**
SPUT	**South Promonto**	**86.74**	**42**	P	**P**	**19 38 23.9**	**-2.0**
P17A	**Butcher Ranch,**	**86.77**	**44**	P	**P**	**19 38 27.1**	**+1.0**
GO05	**Huala**	**86.77**	**127**	IAMs_20	IAMs_20	20 09 46.8	
	comp=Z,4µm,20.0s						
F10A	**Beach Ranch, E**	**86.78**	**36**	P	**P**	**19 38 25.2**	**-0.7**
F10A				IAmb	IAmb	19 38 41.0	
	comp=Z,9.2nm,0.8s						
F10A				IAMs_20	IAMs_20	20 13 04.1	
	comp=Z,3µm,18.0s						
RC01	**Rabbit Creek A**	**86.81**	**12**	IAMs_20	IAMs_20	20 11 12.2	
	comp=Z,3µm,20.0s						
HIN	**Hinchinbrook I**	**86.84**	**14**	IAMs_20	IAMs_20	20 09 08.1	
	comp=Z,4µm,20.0s						
KULM	**Kulim**	**86.90**	**277**	P	**P**	**19 38 28.3**	**+1.1**
KULM				IAmb	IAmb	19 38 58.4	
	comp=Z,26nm,1.3s						
MVCO	**Mesa Verde**	**87.00**	**47**	IAMs_20	IAMs_20	20 09 41.3	
	comp=Z,4µm,20.0s						
PV05	**Paradox Valley**	**87.07**	**46**	IAMs_20	IAMs_20	20 09 38.3	
	comp=Z,3µm,21.0s						
GLI	**Glacier Island**	**87.14**	**13**	IAMs_20	IAMs_20	20 11 13.5	
	comp=Z,4µm,22.0s						
FID	**Port Fidalgo**	**87.16**	**14**	IAMs_20	IAMs_20	20 10 49.4	
	comp=Z,4µm,21.0s						
B08A	**Colville Reser**	**87.21**	**33**	P	**P**	**19 38 26.0**	**-1.9**
ANMO	**Albuquerque**	**87.21**	**50**	P	**P**	**19 38 32.0**	**+3.6**
	comp=Z,2.8nm,0.9s,baz=248,slow=8.2,SNR=5.7						
ANMO	**Albuquerque**	**87.21**	**50**	*i* P	**P**	**19 38 30.5**	**+2.1**
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ANMO	**Albuquerque**	**87.21**	**50**	P	**P**	**19 38 28.4**	**0.0**
PV10	**Paradox Valley**	**87.27**	**46**	IAMs_20	IAMs_20	20 10 45.1	
	comp=Z,3µm,22.0s						
PV19	**Morning Glory**	**87.27**	**46**	IAMs_20	IAMs_20	20 09 40.4	
	comp=Z,2µm,20.0s						
TCUT	**Toone Canyon**	**87.27**	**43**	P	P	19 38 24.2	-4.4
PV14	**Lion Creek, Pa**	**87.28**	**46**	IAMs_20	IAMs_20	20 09 41.6	
	comp=Z,3µm,21.0s						
PV18	**Skein Mesa, Pa**	**87.28**	**46**	IAMs_20	IAMs_20	20 10 02.8	
	comp=Z,3µm,21.0s						
PV13	**Radium Mtn., P**	**87.30**	**46**	IAMs_20	IAMs_20	20 09 53.1	
	comp=Z,3µm,20.0s						
PV16	**Nyswonger Mesa**	**87.31**	**46**	IAMs_20	IAMs_20	20 09 42.6	
	comp=Z,3µm,21.0s						
PV03	**Paradox Valley**	**87.33**	**46**	IAMs_20	IAMs_20	20 10 05.0	
	comp=Z,3µm,21.0s						
PV11	**David Mesa, Pa**	**87.34**	**46**	IAMs_20	IAMs_20	20 09 44.2	
	comp=Z,4µm,22.0s						
KNK	**Knik Glacier**	**87.35**	**12**	IAMs_20	IAMs_20	20 10 26.7	
	comp=Z,3µm,22.0s						
TIA	**Tai'an**	**87.36**	**311**	P	**P**	**19 38 30.0**	**+1.1**
TIA				pmax	pmax		
	comp=Z,15nm,1.3s						
PV04	**Paradox Valley**	**87.36**	**46**	IAMs_20	IAMs_20	20 09 46.0	
	comp=Z,3µm,21.0s						
PV02	**Paradox Valley**	**87.38**	**46**	IAMs_20	IAMs_20	20 10 26.3	
	comp=Z,3µm,20.0s						
C09A	**Chrisman Ranch**	**87.39**	**34**	IAMs_20	IAMs_20	20 13 31.0	
	comp=Z,4µm,19.0s						
RPSI	**Rantau Prapat**	**87.44**	**274**	P	**P**	**19 38 29.2**	**-0.6**
HWUT	**Hardware Ranch**	**87.45**	**42**	IAMs_20	IAMs_20	20 09 39.0	
	comp=Z,3µm,22.0s						
MA2	**Magadan**	**87.48**	**343**	*i* P	**P**	**19 38 27.6**	**-1.2**
MA2				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MA2	**Magadan**	**87.48**	**343**	P	**P**	**19 38 28.1**	**-0.7**
MA2				IAmb	IAmb	19 38 42.0	
	comp=Z,13nm,0.9s						
PV22	**Blue Mesa, Par**	**87.52**	**46**	IAMs_20	IAMs_20	20 22 04.0	
	comp=Z,2µm,20.0s						
GHO	**Glory Hole Cre**	**87.59**	**12**	P	**P**	**19 38 29.9**	**+0.4**
GHO				IAMs_20	IAMs_20	20 23 30.3	
	comp=Z,2µm,18.0s						
PV15	**Paradox Valley**	**87.62**	**46**	IAMs_20	IAMs_20	20 09 42.7	
	comp=Z,3µm,22.0s						
SML	**Sawmill**	**87.74**	**12**	IAMs_20	IAMs_20	20 10 39.9	
	comp=Z,3µm,22.0s						
SCM	**Sheep Creek Mo**	**87.96**	**13**	IAMs_20	IAMs_20	20 18 44.8	
	comp=Z,3µm,20.0s						
CMIG	**Matias Romero**	**88.05**	**71**	P	**P**	**19 38 36.5**	**+4.0**
	comp=Z,0.7nm,0.4s,baz=216,slow=3.5,SNR=3.9						
ANM	**Nome**	**88.16**	**4**	IAMs_20	IAMs_20	20 12 19.1	
	comp=Z,3µm,22.0s						
VRDI	**Verde Repeater**	**88.26**	**15**	IAMs_20	IAMs_20	20 11 54.9	
	comp=Z,3µm,21.0s						
NEW	**Newport**	**88.28**	**34**	IAMs_20	IAMs_20	20 14 16.6	
	comp=Z,4µm,20.0s						
BALM	**Baldy**	**88.36**	**15**	IAMs_20	IAMs_20	20 20 20.4	
	comp=Z,3µm,20.0s						
GLB	**Gilahina Butte**	**88.37**	**14**	IAMs_20	IAMs_20	20 12 19.7	
	comp=Z,2µm,21.0s						
AHID	**Auburn Hatcher**	**88.39**	**41**	IAMs_20	IAMs_20	20 09 31.9	
	comp=Z,2µm,21.0s						
S22A	**4UR Ranch, Cre**	**88.41**	**47**	IAMs_20	IAMs_20	20 10 07.6	
	comp=Z,4µm,21.0s						
MCARA	**McCarthy VSAT**	**88.50**	**15**	IAMs_20	IAMs_20	20 21 15.1	
	comp=Z,3µm,19.0s						
PEL	**Peldehue**	**88.53**	**126**	IAMs_20	IAMs_20	20 10 17.8	
	comp=Z,3µm,19.0s						
CTGM	**Chitina Glacie**	**88.55**	**16**	IAMs_20	IAMs_20	20 18 34.3	
	comp=Z,3µm,19.0s						
TRF	**Thorofare Moun**	**88.89**	**11**	P	**P**	**19 38 33.2**	**-2.5**
SNOW	**Snow King Moun**	**89.00**	**41**	IAMs_20	IAMs_20	20 18 47.8	
	comp=Z,2µm,19.0s						
SMCO	**Snowmass**	**89.06**	**46**	IAMs_20	IAMs_20	20 11 00.8	
	comp=Z,3µm,21.0s						
DHY	**Denali Highway**	**89.08**	**12**	IAMs_20	IAMs_20	20 16 16.7	
	comp=Z,2µm,20.0s						
RND	**Reindeer**	**89.11**	**11**	P	**P**	**19 38 36.0**	**-0.6**
RND				pmax	pmax		
	comp=Z,52nm,1.4s						
RND				MLR	MLR		
	comp=Z,4µm,22.0s						
RND	**Reindeer**	**89.11**	**11**	P	**P**	**19 38 36.0**	**-0.6**
MSO	**Missoula**	**89.11**	**37**	IAMs_20	IAMs_20	20 14 18.5	
	comp=Z,3µm,20.0s						
SDCO	**Great Sand Dun**	**89.31**	**48**	IAMs_20	IAMs_20	20 10 44.5	
	comp=Z,3µm,21.0s						
PD31	**Pinedale Array**	**89.34**	**42**	P	**P**	**19 38 36.3**	**-2.1**
PD31				IAmb	IAmb	19 40 51.2	
	comp=Z,5.7nm,0.6s						
PDAR	**Pinedale Array**	**89.34**	**42**	LR	LR	20 11 01.8	
	comp=Z,1µm,21.9s,baz=258,slow=30						
PDAR	**Pinedale Array**	**89.34**	**42**	P	**P**	**19 38 38.5**	**+0.1**
MSTX	**Muleshoe**	**89.35**	**52**	IAMs_20	IAMs_20	20 10 46.0	
	comp=Z,4µm,21.0s						
MCK	**McKinley**	**89.39**	**11**	P	**P**	**19 38 35.0**	**-2.8**
MCK				pmax	pmax		
	comp=Z,21nm,1.0s						
MCK				MLR	MLR		
	comp=Z,5µm,22.0s						
MCK	**McKinley**	**89.39**	**11**	P	**P**	**19 38 35.0**	**-2.8**
MCK				IAmb	IAmb	19 39 07.3	
	comp=Z,21nm,1.0s						
MENT	**Mentasta**	**89.71**	**14**	P	**P**	**19 38 38.8**	**-0.5**
MENT				IAmb	IAmb	19 39 03.5	
	comp=Z,16nm,1.0s						
T25A	**Trinidad**	**89.75**	**49**	IAMs_20	IAMs_20	20 10 49.3	
	comp=Z,3µm,21.0s						
JCT	**Junction City**	**89.92**	**57**	IAMs_20	IAMs_20	20 11 44.3	
	comp=Z,2µm,20.0s						
SEY	**Seymchan**	**89.99**	**346**	*i* P	**P**	**19 38 39.4**	**-1.2**
BJI	**Beijing**	**90.00**	**314**	P	**P**	**19 38 42.1**	**+0.9**
BJI				S	**S**	**19 49 37.7**	**+3.5**
BJI				pmax	pmax		
	comp=Z,17nm,2.3s						
BJI				pmax	pmax		
	comp=Z,650nm,3.5s						
BJI				LR	LR		
	comp=Z,510nm,20.1s						
BJI				LR	LR		
	comp=Z,370nm,21.1s						
BJI				LR	LR		
	comp=Z,770nm,25.5s						
ENH	**Enshi**	**90.03**	**303**	P	**P**	**19 38 41.0**	**-0.7**
KVTX	**Kingsville**	**90.08**	**60**	IAMs_20	IAMs_20	20 23 15.4	
	comp=Z,3µm,18.0s						
CCIG	**Comitan**	**90.10**	**72**	IAMs_20	IAMs_20	20 10 55.7	
	comp=Z,2µm,19.0s						
WRH	**Wood River Hil**	**90.22**	**11**	P	**P**	**19 38 41.9**	**+0.2**
WRH				IAMs_20	IAMs_20	20 13 38.4	
	comp=Z,3µm,21.0s						
RWWY	**Rawlins**	**90.23**	**44**	IAMs_20	IAMs_20	20 11 11.5	
	comp=Z,4µm,22.0s						
BCAR	**Beaver Creek A**	**90.25**	**14**	P	**P**	**19 38 42.2**	**+0.3**
DOT	**Dot Lake**	**90.27**	**13**	P	**P**	**19 38 42.2**	**+0.3**
ISCO	**Idaho Springs**	**90.28**	**46**	IAMs_20	IAMs_20	20 11 32.2	
	comp=Z,2µm,21.0s						
MLY	**Manley**	**90.28**	**10**	IAMs_20	IAMs_20	20 12 43.4	
	comp=Z,3µm,22.0s						
YNE	**Yellowstone No**	**90.31**	**40**	P	**P**	**19 38 41.4**	**-1.4**
HDA	**Harding Lake**	**90.37**	**12**	P	**P**	**19 38 41.5**	**-0.9**
HDA				IAmb	IAmb	19 39 10.1	
	comp=Z,14nm,1.1s						
CCB	**Clear Creek Bu**	**90.43**	**11**	P	**P**	**19 38 41.9**	**-0.7**
CCB				IAmb	IAmb	19 39 04.7	
	comp=Z,13nm,1.1s						
CCB				IAMs_20	IAMs_20	20 13 11.0	
	comp=Z,3µm,22.0s						
WALA	**Waterton Lakes**	**90.45**	**35**	IAMs_20	IAMs_20	20 15 30.0	
	comp=Z,3µm,20.0s						
GYA	**Guiyang**	**90.54**	**299**	⇓*i*P	**P**	**19 38 45.9**	**+1.7**
GYA				PP	**PP**	**19 42 24.1**	**+4.7**
GYA				SKS	**SKSac**	**19 49 17.1**	**+0.9**
GYA				S	**ScS**	**19 49 44.5**	**+0.8**
GYA				pmax	pmax		
	comp=Z,60nm,1.0s						
GYA				pmax	pmax		
	comp=Z,450nm,5.3s						
GYA				LR	LR		
	comp=Z,150nm,18.8s						
GYA				LR	LR		
	comp=Z,220nm,18.6s						
GYA				LR	LR		
	comp=Z,2µm,19.8s						
SLVN	**Son La**	**90.63**	**293**	P	**P**	**19 38 45.5**	**+0.8**
SLVN				IAmb	IAmb	19 38 47.4	
	comp=Z,24nm,1.4s						
IL31		**90.71**	**12**	P	**P**	**19 38 41.6**	**-2.3**
IL31				IAmb	IAmb	19 38 57.8	
	comp=Z,18nm,1.4s						
ILAR	**Eielson Array**	**90.71**	**12**	P	**P**	**19 38 44.6**	**+0.7**
	comp=Z,7.7nm,1.2s,baz=221,slow=2.8,SNR=16						
ILAR	**Eielson Array**	**90.71**	**12**	P	**P**	**19 38 43.7**	**-0.2**
ILAR	**Eielson Array**	**90.71**	**12**	P	**P**	**19 38 43.7**	**-0.2**
IMAR	**Indian Mountai**	**90.73**	**9**	P	**P**	**19 38 43.9**	**-0.1**
735A	**Kenedy**	**90.73**	**59**	IAMs_20	IAMs_20	20 11 27.5	
	comp=Z,2µm,21.0s						
ABTX	**Abilene, Hawle**	**91.03**	**55**	IAMs_20	IAMs_20	20 11 49.5	
	comp=Z,4µm,21.0s						
APG	**El Apazote**	**91.05**	**74**	P	**P**	**19 38 51.2**	**+4.3**
	comp=Z,6.7nm,0.3s,baz=353,slow=8.9,SNR=3.7						
K22A	**Casper**	**91.16**	**43**	IAMs_20	IAMs_20	20 12 16.3	
	comp=Z,3µm,22.0s						
TIY	**Taiyuan**	**91.36**	**311**	*e*P	**P**	**19 38 49.9**	**+2.2**
TIY				PP	**PP**	**19 42 27.2**	**+1.6**
TIY				SKS	**SKSac**	**19 49 18.4**	**-1.9**
TIY				S	**S**	**19 49 44.1**	**-2.9**
TIY				SS	**SS**	**19 55 53.2**	**+0.2**
TIY				pmax	pmax		
	comp=Z,400nm,5.2s						
TIY				LR	LR		
	comp=Z,410nm,11.4s						
TIY				LR	LR		
	comp=Z,1µm,20.9s						
TIY				LR	LR		
	comp=Z,1µm,23.0s						
PRP	**Porcupine Dome**	**91.64**	**12**	IAMs_20	IAMs_20	20 21 31.9	
	comp=Z,3µm,20.0s						
ZEA	**Zeya**	**91.64**	**330**	*e*P	**P**	**19 38 50.2**	**+1.7**
ZEA				*e*S	**SKSac**	**19 49 22.0**	**+1.0**
ZEA				pmax	pmax		
	comp=Z,32nm,1.8s						
ZEA				pmax	pmax		
	comp=Z,400nm,10.0s						
ZEA				smax	smax		
	comp=E,500nm,10.0s						
DAWY	**Dawson**	**91.67**	**15**	P	**P**	**19 38 48.5**	**0.0**
DAWY				IAmb	IAmb	19 39 03.2	
	comp=Z,15nm,1.1s						
DAWY				IAMs_20	IAMs_20	20 14 45.9	
	comp=Z,3µm,20.0s						
RDOG	**Red Dog Mine**	**91.79**	**5**	IAMs_20	IAMs_20	20 16 46.9	
	comp=Z,3µm,21.0s						
EGAK	**Eagle**	**91.88**	**14**	P	**P**	**19 38 49.2**	**-0.2**
EGAK				IAMs_20	IAMs_20	20 23 18.3	
	comp=Z,3µm,18.0s						
EGMT	**Eagleton**	**92.12**	**38**	IAMs_20	IAMs_20	20 15 35.3	
	comp=Z,3µm,19.0s						
XAN	**Xi'an**	**92.17**	**306**	P	**P**	**19 38 52.6**	**+1.1**
XAN				SKS	**SKSac**	**19 49 23.0**	**-2.0**
XAN				pmax	pmax		
	comp=Z,19nm,0.8s						
XAN				pmax	pmax		
	comp=Z,400nm,4.6s						
XAN				LR	LR		
	comp=Z,820nm,20.3s						
XAN				LR	LR		
	comp=Z,740nm,22.5s						
XAN				LR	LR		
	comp=Z,1µm,20.3s						
XAN	**Xi'an**	**92.17**	**306**	P	**P**	**19 38 50.8**	**-0.7**
XAN				pmax	pmax		
	comp=Z,50nm,1.0s						
XAN				MLR	MLR		
	comp=Z,1µm,20.0s						
XAN	**Xi'an**	**92.17**	**306**	P	**P**	**19 38 50.8**	**-0.7**
BILL	**Bilibino**	**92.38**	**353**	⇑*e*P	**P**	**19 38 52.6**	**+1.0**
BILL				*i*		19 39 03.8	
BILL				*e*S	**SKSac**	**19 49 31.0**	**+6.5**
BILL				*e*PS	PS	19 50 45.7	-21
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,3µm,19.0s						
WHTX	**Lake Whitney,**	**92.40**	**56**	IAMs_20	IAMs_20	20 12 21.5	
	comp=Z,3µm,21.0s						
WMOK	**Wichita Mounta**	**92.63**	**53**	IAMs_20	IAMs_20	20 12 07.8	
	comp=Z,2µm,21.0s						
FYU	**Fort Yukon**	**92.63**	**11**	IAMs_20	IAMs_20	20 19 23.1	
	comp=Z,3µm,20.0s						
PB10	**IPOC Station P**	**93.03**	**117**	IAMs_20	IAMs_20	20 12 44.4	
	comp=Z,3µm,20.0s						
Z35A	**Perchaven, San**	**93.14**	**55**	P	**P**	**19 38 53.9**	**-2.0**
Z35A				IAMs_20	IAMs_20	20 13 06.5	
	comp=Z,3µm,20.0s						
KMI	**Kunming**	**93.18**	**296**	P	**P**	**19 38 58.9**	**+2.3**
KMI				pmax	pmax		
	comp=Z,21nm,1.6s						
KMI				LR	LR		
	comp=Z,450nm,17.4s						
KMI				LR	LR		
	comp=Z,580nm,18.1s						
KMI				LR	LR		
	comp=Z,770nm,19.7s						
OGNE	**Ogallala**	**93.22**	**47**	IAMs_20	IAMs_20	20 13 16.1	
	comp=Z,4µm,21.0s						
HHC	**Hu-ho-hao-te**	**93.45**	**313**	*e*P	**P**	**19 38 58.6**	**+1.2**
HHC				SKS	**SKSac**	**19 49 30.6**	**-1.4**
HHC				S	**S**	**19 50 02.9**	**-2.8**
HHC				SS	**SS**	**19 56 23.0**	**0.0**
HHC				pmax	pmax		
	comp=Z,78nm,1.3s						
HHC				pmax	pmax		
	comp=Z,300nm,7.2s						
HHC				LR	LR		
	comp=Z,250nm,17.9s						
HHC				LR	LR		
	comp=Z,630nm,17.9s						
HHC				LR	LR		
	comp=Z,630nm,17.0s						
RSSD	**Black Hills**	**93.47**	**43**	IAMs_20	IAMs_20	20 14 11.3	
	comp=Z,3µm,21.0s						
BMAR	**Burnt Mountain**	**93.52**	**11**	P	**P**	**19 38 57.3**	**+0.3**
237A	**Washetta, Mont**	**93.66**	**57**	IAMs_20	IAMs_20	20 15 24.3	
	comp=Z,2µm,19.0s						
CM31	**Chiang Mai Arr**	**93.71**	**288**	P	**P**	**19 39 00.0**	**+1.1**
CMAR	**Chiang Mai Arr**	**93.71**	**288**	P	**P**	**19 39 00.3**	**+1.4**
	comp=Z,8.5nm,0.8s,baz=123,slow=3.0,SNR=48						
CMAR				LR	LR	20 21 51.8	
	comp=Z,434nm,19.1s,baz=122,slow=36						
CMAR	**Chiang Mai Arr**	**93.71**	**288**	P	**P**	**19 39 00.1**	**+1.2**
TOLK	**Toolik Lake Re**	**93.81**	**9**	IAMs_20	IAMs_20	20 15 08.5	
	comp=Z,3µm,21.0s						
CHTO	**Chiang Mai**	**93.86**	**289**	P	**P**	**19 39 00.3**	**+0.7**
CHTO				pmax	pmax		
	comp=Z,22nm,1.0s						
CHTO				MLR	MLR		
	comp=Z,700nm,20.0s						
CHTO	**Chiang Mai**	**93.86**	**289**	P	**P**	**19 39 00.3**	**+0.7**
PB04	**IPOC Station P**	**93.90**	**116**	IAMs_20	IAMs_20	20 13 04.5	
	comp=Z,3µm,20.0s						
OKCFA	**Oklahoma City**	**93.91**	**53**	IAMs_20	IAMs_20	20 13 20.6	
	comp=Z,3µm,21.0s						
EPYK	**Eagle Plains**	**94.22**	**15**	IAMs_20	IAMs_20	20 24 47.3	
	comp=Z,2µm,19.0s						
NATX	**Nacogdoches**	**94.44**	**57**	IAMs_20	IAMs_20	20 16 08.6	
	comp=Z,3µm,19.0s						
CD2	**Chengdu**	**94.75**	**302**	⇑*i*P	**P**	**19 39 01.8**	**-1.7**
CD2				sP	pwP	19 39 12.6	-2.7
CD2				SKS	**SKSac**	**19 49 40.2**	**+0.9**

CD2				S	**ScS**	**19 50 17.9**	**-0.5**
CD2				sS	sS	19 50 27.0	+9.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CD2				pmax	pmax		
	comp=Z,460nm,10.9s						
CD2				LR	LR		
	comp=Z,1µm,23.3s						
CD2				LR	LR		
	comp=Z,2µm,23.2s						
CD2				LR	LR		
	comp=Z,2µm,24.5s						
LVC	**Limon Verde**	**94.79**	**117**	IAMs_20	IAMs_20	20 11 31.0	
	comp=Z,2µm,22.0s						
PB01	**IPOC Station P**	**95.03**	**115**	IAMs_20	IAMs_20	20 12 11.7	
	comp=Z,3µm,21.0s						
X37A	**Clayton**	**95.09**	**55**	IAMs_20	IAMs_20	20 14 40.1	
	comp=Z,2µm,20.0s						
T35A	**Sooner Cattle**	**95.24**	**52**	IAMs_20	IAMs_20	20 14 22.9	
	comp=Z,3µm,21.0s						
TUL1	**Leonard**	**95.34**	**53**	IAMs_20	IAMs_20	20 14 37.5	
	comp=Z,3µm,21.0s						
PB11	**IPOC Station P**	**95.48**	**114**	IAMs_20	IAMs_20	20 13 49.6	
	comp=Z,3µm,20.0s						
DGMT	**Dagmar**	**95.52**	**39**	IAMs_20	IAMs_20	20 14 41.4	
	comp=Z,2µm,21.0s						
YAK	**Yakutsk**	**95.98**	**337**	*e*P	**P**	**19 39 06.7**	**-1.5**
YAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BGNE	**Belgrade**	**96.04**	**47**	IAMs_20	IAMs_20	20 14 53.7	
	comp=Z,3µm,21.0s						
342A	**Flagon Creek P**	**96.10**	**59**	IAMs_20	IAMs_20	20 23 27.6	
	comp=Z,2µm,18.0s						
OTAV	**Otavalo**	**96.13**	**92**	IAMs_20	IAMs_20	20 12 41.1	
	comp=Z,2µm,21.0s						
MIAR	**Mount Ida**	**96.42**	**55**	IAMs_20	IAMs_20	20 15 20.5	
	comp=Z,3µm,21.0s						
INK	**Inuvik**	**96.52**	**14**	IAMs_20	IAMs_20	20 17 18.1	
	comp=Z,3µm,21.0s						
W39A	**Magazine**	**96.53**	**55**	IAMs_20	IAMs_20	20 14 55.2	
	comp=Z,3µm,21.0s						
U38A	**Gravette**	**96.59**	**53**	IAMs_20	IAMs_20	20 15 15.7	
	comp=Z,3µm,21.0s						
LZH	**Lanzhou**	**96.81**	**306**	*e*P	**P**	**19 39 12.2**	**-0.7**
LZH				SKS	**SKSac**	**19 49 49.1**	**-1.1**
LZH				SS	**SS**	**19 57 14.4**	**+3.4**
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,220nm,8.5s						
LZH				LR	LR		
	comp=Z,820nm,17.0s						
LZH				LR	LR		
	comp=Z,1µm,17.3s						
LZH				LR	LR		
	comp=Z,2µm,19.5s						
HHAR	**Hobbs**	**96.86**	**54**	IAMs_20	IAMs_20	20 15 32.7	
	comp=Z,3µm,20.0s						
X40A	**Basin Creek Fa**	**96.96**	**56**	IAMs_20	IAMs_20	20 17 40.5	
	comp=Z,2µm,19.0s						
545A	**Edgard**	**97.03**	**60**	IAMs_20	IAMs_20	20 24 43.2	
	comp=Z,3µm,18.0s						
143A	**Socs Landing,**	**97.35**	**58**	IAMs_20	IAMs_20	20 24 10.5	
	comp=Z,2µm,18.0s						
UALR	**University of**	**97.44**	**55**	IAMs_20	IAMs_20	20 15 40.4	
	comp=Z,2µm,21.0s						
U40A	**Yellville**	**97.69**	**54**	IAMs_20	IAMs_20	20 15 48.8	
	comp=Z,2µm,21.0s						
S39A	**Bolivar**	**97.88**	**52**	IAMs_20	IAMs_20	20 15 43.6	
	comp=Z,3µm,21.0s						
MDND	**Maddock**	**97.95**	**41**	IAMs_20	IAMs_20	20 17 13.7	
	comp=Z,2µm,20.0s						
FCAR	**Ozark Folk Cen**	**98.05**	**54**	IAMs_20	IAMs_20	20 16 13.3	
	comp=Z,3µm,21.0s						
ECSD	**EROS Data Cent**	**98.06**	**46**	IAMs_20	IAMs_20	20 16 31.1	
	comp=Z,3µm,20.0s						
YKA	**Yellowknife Ar**	**98.15**	**24**	P	Pdif	19 39 20.4	+2.3
	comp=Z,1.0nm,1.0s,baz=235,slow=4.2,SNR=7.1						
YKA				LR	LR	20 17 42.3	
	comp=Z,1µm,20.8s,baz=0.0,slow=32						
LPAZ	**La Paz**	**98.36**	**112**	LR	LR	20 15 35.6	
	comp=Z,1µm,20.4s,baz=197,slow=30						
MGMO	**Mountain Grove**	**98.44**	**53**	IAMs_20	IAMs_20	20 16 43.5	
	comp=Z,3µm,20.0s						
D32A	**Dogwood Acres,**	**99.23**	**43**	IAMs_20	IAMs_20	20 21 57.6	
	comp=Z,2µm,19.0s						
LPAR	**Lepanto**	**99.31**	**55**	IAMs_20	IAMs_20	20 19 05.7	
	comp=Z,3µm,19.0s						
C36M	**Paulatuk**	**99.59**	**16**	IAMs_20	IAMs_20	20 18 55.4	
	comp=Z,2µm,20.0s						
SCIA	**State Center**	**99.61**	**49**	IAMs_20	IAMs_20	20 16 42.3	
	comp=Z,3µm,22.0s						
PBMO	**Poplar Bluff**	**99.65**	**54**	IAMs_20	IAMs_20	20 17 22.8	
	comp=Z,3µm,21.0s						
GNAR	**Gosnell**	**99.66**	**55**	IAMs_20	IAMs_20	20 19 06.9	
	comp=Z,3µm,20.0s						
FFC	**Flin Flon**	**99.71**	**34**	IAMs_20	IAMs_20	20 21 15.8	
	comp=Z,3µm,20.0s						
PEBM	**Pemiscott Bayo**	**99.83**	**55**	IAMs_20	IAMs_20	20 17 37.2	
	comp=Z,3µm,20.0s						
SONM	**Songino Array**	**99.86**	**318**	P	**Pdif**	**19 39 27.2**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=138,slow=4.7,SNR=4.5						
SONM				LR	LR	20 21 18.5	
	comp=Z,359nm,20.4s,baz=111,slow=34						
HALT	**Halls**	**100.15**	**55**	IAMs_20	IAMs_20	20 19 40.9	
	comp=Z,3µm,20.0s						
GLAT	**Glass**	**100.32**	**55**	IAMs_20	IAMs_20	20 18 21.4	
	comp=Z,3µm,20.0s						
HICK	**Hickman**	**100.46**	**55**	IAMs_20	IAMs_20	20 17 25.2	
	comp=Z,3µm,21.0s						
PLAL	**Pickwick Lake**	**100.77**	**57**	IAMs_20	IAMs_20	20 19 55.5	
	comp=Z,3µm,20.0s						
S44A	**Carbondale**	**100.86**	**54**	IAMs_20	IAMs_20	20 18 00.7	
	comp=Z,2µm,21.0s						
LRAL	**Lakeview Retre**	**100.91**	**59**	IAMs_20	IAMs_20	20 19 29.9	
	comp=Z,2µm,20.0s						
GTA	**Gaotai**	**101.03**	**308**	*e*P	**Pdif**	**19 39 32.2**	**+0.5**
GTA				pP	pwP	19 39 40.0	-3.6
GTA				sP	sPdif	19 39 44.0	+12
GTA				SKS	**SKSac**	**19 50 08.4**	**-2.8**
GTA				S	**Sdif**	**19 51 04.7**	**-5.9**
GTA				sS	sS	19 51 18.7	+7.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,170nm,5.2s						
GTA				LR	LR		
	comp=Z,330nm,17.5s						
GTA				LR	LR		
	comp=Z,650nm,18.4s						
GTA				LR	LR		
	comp=Z,880nm,21.6s						
L40A	**Anamosa**	**101.05**	**49**	IAMs_20	IAMs_20	20 20 40.3	
	comp=Z,2µm,19.0s						
SPMN	**Marine on St.**	**101.16**	**46**	IAMs_20	IAMs_20	20 17 35.0	
	comp=Z,3µm,22.0s						
ULM	**Lac du Bonnet**	**101.18**	**40**	IAMs_20	IAMs_20	20 18 39.2	
	comp=Z,3µm,22.0s						
WVT	**Waverly**	**101.37**	**56**	IAMs_20	IAMs_20	20 20 36.3	
	comp=Z,3µm,20.0s						
P43A	**Skaggs, Pawnee**	**101.37**	**52**	IAMs_20	IAMs_20	20 18 13.7	
	comp=Z,2µm,20.0s						
Y49A	**Blount Mountai**	**101.66**	**58**	IAMs_20	IAMs_20	20 21 10.7	
	comp=Z,2µm,19.0s						
Z50A	**Ashland**	**101.83**	**59**	IAMs_20	IAMs_20	20 20 27.7	
	comp=Z,2µm,20.0s						
HDIL	**Hopedale**	**101.86**	**51**	IAMs_20	IAMs_20	20 18 17.9	
	comp=Z,3µm,21.0s						
V48A	**Smith Brothers**	**102.00**	**56**	IAMs_20	IAMs_20	20 20 46.0	
	comp=Z,2µm,19.0s						
JFWS	**Jewell Farm**	**102.03**	**48**	IAMs_20	IAMs_20	20 18 16.2	
	comp=Z,3µm,21.0s						
OLIL	**Olney**	**102.08**	**53**	IAMs_20	IAMs_20	20 18 25.0	
	comp=Z,2µm,22.0s						
T47A	**Sharon Grove**	**102.21**	**55**	IAMs_20	IAMs_20	20 18 28.6	
	comp=Z,3µm,21.0s						
O44A	**Mansfield**	**102.31**	**52**	IAMs_20	IAMs_20	20 18 22.9	
	comp=Z,2µm,21.0s						
TIXI	**Tiksi**	**102.42**	**344**	*i* P	**Pdif**	**19 39 36.1**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.3s						
TIXI	**Tiksi**	**102.42**	**344**	IAMs_20	IAMs_20	20 20 36.2	
	comp=Z,3µm,22.0s						
Z51A	**Franklin**	**102.44**	**59**	IAMs_20	IAMs_20	20 21 07.4	
	comp=Z,2µm,20.0s						
CLTN	**Cedars of Leba**	**102.49**	**56**	IAMs_20	IAMs_20	20 21 20.0	
	comp=Z,2µm,19.0s						
SWET	**Sewanee**	**102.50**	**57**	IAMs_20	IAMs_20	20 21 27.3	
	comp=Z,2µm,19.0s						
FPAL	**Fort Paine**	**102.51**	**58**	IAMs_20	IAMs_20	20 29 33.4	
	comp=Z,2µm,18.0s						
152A	**Waverly Hall**	**102.58**	**60**	IAMs_20	IAMs_20	20 19 59.2	
	comp=Z,2µm,21.0s						
G40A	**Rib Lake**	**102.89**	**46**	IAMs_20	IAMs_20	20 21 33.8	
	comp=Z,2µm,20.0s						
EYMN	**Ely**	**102.99**	**43**	IAMs_20	IAMs_20	20 19 29.3	
	comp=Z,2µm,21.0s						
P46A	**Rosedale**	**103.03**	**52**	IAMs_20	IAMs_20	20 18 53.2	
	comp=Z,3µm,20.0s						
U49A	**Red Boiling Sp**	**103.05**	**56**	IAMs_20	IAMs_20	20 21 28.9	
	comp=Z,2µm,19.0s						
K43A	**Burlington**	**103.28**	**49**	IAMs_20	IAMs_20	20 21 58.3	
	comp=Z,3µm,20.0s						
SFIN	**Lafayette**	**103.37**	**52**	IAMs_20	IAMs_20	20 19 06.0	
	comp=Z,3µm,21.0s						
BLO	**Bloomington**	**103.39**	**53**	IAMs_20	IAMs_20	20 19 28.5	
	comp=Z,3µm,21.0s						
T49A	**Edmonton**	**103.44**	**55**	IAMs_20	IAMs_20	20 21 41.0	
	comp=Z,2µm,20.0s						
Y52A	**Lilburn**	**103.50**	**59**	IAMs_20	IAMs_20	20 22 49.4	
	comp=Z,1µm,18.0s						
GOGA	**Godfrey**	**103.82**	**59**	IAMs_20	IAMs_20	20 22 37.0	
	comp=Z,2µm,18.0s						
COWI	**Conover**	**103.87**	**46**	IAMs_20	IAMs_20	20 19 41.8	
	comp=Z,2µm,21.0s						
P48A	**Milroy**	**104.28**	**53**	IAMs_20	IAMs_20	20 20 17.3	
	comp=Z,3µm,21.0s						
TKL	**Tuckaleechee C**	**104.31**	**57**	IAMs_20	IAMs_20	20 19 41.2	
	comp=Z,2µm,21.0s						
F42A	**Maple Grove Fa**	**104.42**	**46**	IAMs_20	IAMs_20	20 19 47.4	
	comp=Z,2µm,21.0s						
R50A	**Paris**	**104.72**	**54**	IAMs_20	IAMs_20	20 20 08.0	
	comp=Z,3µm,21.0s						
TZTN	**Tazewell**	**104.76**	**56**	IAMs_20	IAMs_20	20 28 51.2	
	comp=Z,2µm,18.0s						
J45A	**Montague**	**104.86**	**49**	IAMs_20	IAMs_20	20 20 03.3	
	comp=Z,2µm,21.0s						
S51A	**Beattyville**	**105.07**	**55**	IAMs_20	IAMs_20	20 22 34.3	
	comp=Z,3µm,20.0s						
I45A	**Fountain**	**105.16**	**48**	IAMs_20	IAMs_20	20 20 01.8	
	comp=Z,3µm,22.0s						
257A	**Skidaway Islan**	**105.30**	**62**	IAMs_20	IAMs_20	20 22 41.4	
	comp=Z,2µm,20.0s						
O49A	**Covington**	**105.31**	**53**	IAMs_20	IAMs_20	20 28 50.4	
	comp=Z,2µm,18.0s						
T52A	**Hallie**	**105.37**	**56**	IAMs_20	IAMs_20	20 29 01.2	
	comp=Z,3µm,18.0s						
E43A	**Lone Tree Farm**	**105.37**	**46**	IAMs_20	IAMs_20	20 20 15.4	
	comp=Z,3µm,21.0s						
Z56A	**Williston**	**105.45**	**60**	IAMs_20	IAMs_20	20 23 11.7	
	comp=Z,2µm,20.0s						
PAULI	**Pauline**	**105.56**	**59**	IAMs_20	IAMs_20	20 23 32.1	
	comp=Z,3µm,19.0s						
N49A	**Columbus Grove**	**105.64**	**52**	IAMs_20	IAMs_20	20 23 10.4	
	comp=Z,3µm,19.0s						
PALK	**Pallekele**	**105.92**	**271**	IAMs_20	IAMs_20	20 25 20.6	
	comp=Z,3µm,22.0s						
KMSC	**Kings Mountain**	**106.04**	**58**	IAMs_20	IAMs_20	20 29 26.7	
	comp=Z,3µm,18.0s						
E44A	**Grand Marais A**	**106.15**	**46**	IAMs_20	IAMs_20	20 20 40.1	
	comp=Z,3µm,21.0s						
NHSC	**New Hope**	**106.33**	**61**	IAMs_20	IAMs_20	20 30 45.7	
	comp=Z,2µm,19.0s						
I47A	**Gladwin**	**106.34**	**49**	IAMs_20	IAMs_20	20 20 58.3	
	comp=Z,3µm,21.0s						
V55A	**Taylorsville**	**106.34**	**58**	IAMs_20	IAMs_20	20 28 57.8	
	comp=Z,1µm,18.0s						
Y57A	**Sumter**	**106.44**	**60**	IAMs_20	IAMs_20	20 24 31.4	
	comp=Z,2µm,19.0s						
BIRD	**Birdtown, Kers**	**106.57**	**59**	IAMs_20	IAMs_20	20 33 48.9	
	comp=Z,1µm,18.0s						
SDV	**Santo Domingo**	**106.64**	**87**	IAMs_20	IAMs_20	20 18 58.8	
	comp=Z,3µm,21.0s						
S54A	**Dingess, Beckl**	**106.84**	**56**	IAMs_20	IAMs_20	20 23 56.3	
	comp=Z,2µm,19.0s						
N51A	**Ashland**	**106.95**	**52**	IAMs_20	IAMs_20	20 20 43.9	
	comp=Z,2µm,21.0s						
W57A	**Gilead**	**107.09**	**59**	IAMs_20	IAMs_20	20 23 58.6	
	comp=Z,2µm,19.0s						
E46A	**Sault Ste Mari**	**107.15**	**46**	IAMs_20	IAMs_20	20 24 05.5	
	comp=Z,2µm,20.0s						
K50A	**Casco**	**107.30**	**50**	IAMs_20	IAMs_20	20 21 24.9	
	comp=Z,3µm,21.0s						
BLA	**Blacksburg**	**107.35**	**56**	IAMs_20	IAMs_20	20 30 13.8	
	comp=Z,2µm,18.0s						
I49A	**Point Hope**	**107.48**	**49**	IAMs_20	IAMs_20	20 21 51.6	
	comp=Z,2µm,20.0s						
Y59A	**Loris**	**107.64**	**60**	IAMs_20	IAMs_20	20 25 19.1	
	comp=Z,1µm,19.0s						
M52A	**Chesterland**	**107.86**	**52**	IAMs_20	IAMs_20	20 21 44.0	
	comp=Z,2µm,21.0s						
R55A	**Marlinton**	**107.88**	**55**	IAMs_20	IAMs_20	20 24 20.8	
	comp=Z,2µm,20.0s						
V58A	**Windy Hill, Pi**	**107.96**	**58**	IAMs_20	IAMs_20	20 32 00.6	
	comp=Z,1µm,18.0s						
N53A	**Lisbon**	**108.04**	**53**	IAMs_20	IAMs_20	20 21 50.7	
	comp=Z,2µm,21.0s						
T57A	**Hurt**	**108.19**	**57**	IAMs_20	IAMs_20	20 23 34.0	
	comp=Z,2µm,19.0s						
MCWV	**Mont Chateau**	**108.46**	**54**	IAMs_20	IAMs_20	20 22 47.0	
	comp=Z,2µm,20.0s						
S57A	**Dark Hollow, R**	**108.63**	**56**	IAMs_20	IAMs_20	20 32 54.5	
	comp=Z,2µm,18.0s						
N54A	**Moraine State**	**108.70**	**53**	IAMs_20	IAMs_20	20 24 57.4	
	comp=Z,2µm,20.0s						
CNNC	**Cliffs of the**	**108.77**	**59**	IAMs_20	IAMs_20	20 24 31.9	
	comp=Z,2µm,20.0s						
ALLY	**Alegheny Colle**	**108.77**	**52**	IAMs_20	IAMs_20	20 22 12.9	
	comp=Z,3µm,21.0s						
Q56A	**Snyder Ridge,**	**108.79**	**55**	IAMs_20	IAMs_20	20 30 58.8	
	comp=Z,2µm,19.0s						
M54A	**Oil Creek Stat**	**109.08**	**52**	IAMs_20	IAMs_20	20 22 33.2	
	comp=Z,3µm,22.0s						
U59A	**Littleton**	**109.14**	**58**	IAMs_20	IAMs_20	20 23 03.9	
	comp=Z,2µm,21.0s						
V60A	**Jim Taylor Roa**	**109.40**	**59**	IAMs_20	IAMs_20	20 31 37.7	
	comp=Z,2µm,18.0s						
R58B	**Mineral**	**109.50**	**56**	IAMs_20	IAMs_20	20 31 47.6	
	comp=Z,2µm,18.0s						
M55A	**Ridgway**	**109.72**	**53**	IAMs_20	IAMs_20	20 22 54.3	
	comp=Z,3µm,22.0s						
P57A	**Homestead Farm**	**109.79**	**55**	IAMs_20	IAMs_20	20 22 56.1	
	comp=Z,3µm,22.0s						
V61A	**Roper**	**109.94**	**59**	IAMs_20	IAMs_20	20 32 02.2	
	comp=Z,2µm,19.0s						
CBN	**Corbin Frederi**	**109.95**	**56**	IAMs_20	IAMs_20	20 32 00.5	
	comp=Z,2µm,18.0s						
T60A	**Surry**	**110.17**	**57**	IAMs_20	IAMs_20	20 32 37.0	
	comp=Z,2µm,18.0s						
U61A	**Possum Corner**	**110.19**	**58**	IAMs_20	IAMs_20	20 31 32.5	
	comp=Z,1µm,18.0s						
V62A	**Hyde County Ai**	**110.37**	**59**	IAMs_20	IAMs_20	20 32 18.5	
	comp=Z,2µm,18.0s						
SDD	**Santo Domingo**	**110.62**	**78**	IAMs_20	IAMs_20	20 24 40.9	
	comp=Z,2µm,20.0s						
SDMD	**Soldier's Deli**	**110.65**	**55**	IAMs_20	IAMs_20	20 32 14.9	
	comp=Z,1µm,18.0s						
M57A	**Sunshine Farm,**	**110.89**	**53**	IAMs_20	IAMs_20	20 24 13.1	
	comp=Z,3µm,20.0s						
WMQ	**Urumqi**	**111.00**	**310**	*e*PKP	**PKiKP**	**19 44 14.3**	**-0.9**
WMQ				AMB	AMB		
	comp=Z,190nm,9.7s						
S61A	**Accomac**	**111.12**	**57**	IAMs_20	IAMs_20	20 32 47.6	
	comp=Z,2µm,18.0s						
DELO	**Deloro Mine**	**111.25**	**50**	IAMs_20	IAMs_20	20 26 23.9	
	comp=Z,3µm,19.0s						
Q60A	**Greensboro**	**111.30**	**56**	IAMs_20	IAMs_20	20 26 43.3	
	comp=Z,2µm,20.0s						
R61A	**Willards**	**111.53**	**56**	IAMs_20	IAMs_20	20 32 44.4	
	comp=Z,2µm,18.0s						
PLVO	**Plevna**	**111.74**	**49**	IAMs_20	IAMs_20	20 38 18.2	
	comp=Z,2µm,18.0s						
P61A	**Hammonton**	**112.25**	**55**	IAMs_20	IAMs_20	20 33 13.3	
	comp=Z,2µm,18.0s						
PTGA	**Pitinga**	**112.56**	**101**	IAMs_20	IAMs_20	20 23 34.0	
	comp=Z,2µm,21.0s						
NCB	**Newcomb**	**113.53**	**51**	IAMs_20	IAMs_20	20 26 08.8	
	comp=Z,2µm,20.0s						
ZALV	**Zalesovo Beam**	**114.60**	**320**	PKiKP	**PKiKP**	**19 44 22.2**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=169,slow=0.8,SNR=4.7						
BDFB	**Brasilia**	**115.19**	**122**	IAMs_20	IAMs_20	20 29 58.2	
	comp=Z,2µm,20.0s						
FFD	**Franklin Falls**	**115.28**	**52**	IAMs_20	IAMs_20	20 29 25.2	
	comp=Z,2µm,19.0s						
MK31	**Makanchi Array**	**115.29**	**312**		**PKPdf**	**19 44 20.8**	**-2.4**
MKAR	**Makanchi Array**	**115.29**	**312**	PKP	**PKPdf**	**19 44 22.8**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=106,slow=4.7,SNR=5.9						
F63A	**Nahmakanta, Br**	**117.39**	**49**	IAMs_20	IAMs_20	20 27 26.8	
	comp=Z,3µm,21.0s						
KURK	**Kurchatov**	**118.11**	**316**	PKIKP	**PKPdf**	**19 44 28.1**	**-0.3**
KURK				MLR	MLR		
	comp=Z,1µm,19.0s						
KURK	**Kurchatov**	**118.11**	**316**		**PKPdf**	**19 44 28.1**	**-0.3**
FRB	**Frobisher Bay**	**118.15**	**29**	PKP	**PKiKP**	**19 44 31.0**	**+2.9**
	comp=Z,4.2nm,0.3s,baz=304,slow=3.6,SNR=20						
FRB	**Frobisher Bay**	**118.15**	**29**	PKIKP	**PKiKP**	**19 44 31.0**	**+2.9**
KSH	**Kashi**	**118.88**	**303**	PKP	**PKPdf**	**19 44 29.2**	**-1.3**
KSH				sPKP		19 44 43.1	
KSH				PP	**PP**	**19 45 54.7**	**+5.0**
KSH				SKS	**SKSdf**	**19 51 35.4**	**-7.4**
KSH				SS	**SS**	**20 02 10.6**	**+0.9**
KSH				AMB	AMB		
	comp=Z,520nm,6.7s						
KSH				LR	LR		
	comp=Z,440nm,12.5s						
KSH				LR	LR		
	comp=Z,370nm,12.1s						
KSH				LR	LR		
	comp=Z,310nm,14.0s						
NRN	**Naryn**	**119.10**	**306**	PKIKP	**PKPdf**	**19 44 30.2**	**-0.9**
NRN				MLR	MLR		
	comp=Z,900nm,21.0s						
NRN	**Naryn**	**119.10**	**306**		**PKPdf**	**19 44 30.2**	**-0.9**
SCHQ	**Schefferville**	**119.34**	**39**	IAMs_20	IAMs_20	20 30 27.4	
	comp=Z,2µm,20.0s						
ABPO	**Ambohimpanom**	**120.92**	**228**	IAMs_20	IAMs_20	20 33 52.6	
	comp=Z,2µm,19.0s						
HAL	**Halifax**	**121.18**	**51**	IAMs_20	IAMs_20	20 31 12.4	
	comp=Z,2µm,20.0s						
ARSB	**Arslanbob**	**121.35**	**305**	IAMs_20	IAMs_20	20 20 26.7	
	comp=Z,2µm,21.0s						
GAR	**Garm**	**123.19**	**302**	IAMs_20	IAMs_20	20 38 14.3	
	comp=Z,2µm,21.0s						
KK31	**Karatay Array**	**123.29**	**307**	PKIKP	**PKPdf**	**19 44 37.8**	**-0.9**
KK31	**Karatay Array**	**123.29**	**307**		**PKPdf**	**19 44 37.8**	**-0.9**
KKAR	**Karatay Array**	**123.29**	**307**		**PKPdf**	**19 44 36.3**	**-2.4**
KKAR	**Karatay Array**	**123.29**	**307**		**PKPdf**	**19 44 36.9**	**-1.8**
MSEY	**Mahe Island**	**123.33**	**247**	IAMs_20	IAMs_20	20 33 36.0	
	comp=Z,1µm,20.0s						
ILULI	**Ilulissat**	**123.65**	**21**	IAMs_20	IAMs_20	20 37 20.8	
	comp=Z,1µm,20.0s						
CHGR	**Chuyangaron**	**124.06**	**302**	IAMs_20	IAMs_20	20 44 45.4	
	comp=Z,2µm,21.0s						
KBS	**Kingsbay**	**124.48**	**358**	IAMs_20	IAMs_20	20 32 32.8	
	comp=Z,2µm,22.0s						
SFJD	**Kangerlussuaq**	**124.70**	**23**	IAMs_20	IAMs_20	20 33 51.7	
	comp=Z,2µm,20.0s						
SVE	**Sverdlovsk**	**128.07**	**325**	*e*PKIKP	**PKiKP**	**19 44 48.3**	**+0.4**
ARU	**Arti**	**129.28**	**325**	PKIKP	PKiKP	19 45 02.4	+12
SOCY	**Socotra**	**132.21**	**265**	IAMs_20	IAMs_20	20 37 20.8	
	comp=Z,1µm,21.0s						
ARCES	**ARCESS Array B**	**132.40**	**350**	PKP	**PKiKP**	**19 44 57.1**	**+0.8**
	comp=Z,1.6nm,0.7s,baz=336,slow=2.7,SNR=3.7						
LSZ	**Lusaka**	**135.22**	**213**	IAMs_20	IAMs_20	20 41 28.3	
	comp=Z,2µm,19.0s						
KLMR	**Klimovskoe**	**135.78**	**337**	*e*PKIKP	**PKiKP**	**19 45 04.0**	**+0.7**
KLMR				pmax	pmax		
	comp=Z,45nm,2.1s						
KLMR	**Klimovskoe**	**135.78**	**337**	*e*PKPdf	**PKiKP**	**19 45 04.1**	**+0.7**
KLMR				AMP		19 45 05.3	
	comp=Z,45nm,2.1s						
KLMR				LR	LR	20 38 42.0	
KLMR				AMP		20 49 28.8	
	comp=Z,2µm,17.5s						
FINES	**FINESS Array B**	**139.46**	**345**	PKhKP	PKPpre	19 45 03.4	
	comp=Z,1.7nm,0.8s,baz=94,slow=2.7,SNR=3.4						
FINES				PKP	**PKiKP**	**19 45 11.9**	**+1.0**
	comp=Z,2.6nm,0.8s,baz=58,slow=4.7,SNR=3.6						
MAK	**Makhachkala**	**140.02**	**309**	*e*P	**Pdif**	**19 42 17.3**	**-7.5**
MAK				*i*		19 45 05.6	
MAK				*e*		19 52 22.7	
MAK				pmax	pmax		
	comp=Z,215nm,1.4s						
KMBO	**Kilima Mbogo**	**140.16**	**236**	IAMs_20	IAMs_20	20 44 48.3	
	comp=Z,999nm,19.0s						
DAMY	**Dhamar**	**141.79**	**264**	IAMs_20	IAMs_20	20 41 18.9	
	comp=Z,2µm,22.0s						
ATD	**Arta Tunnel**	**142.07**	**258**	IAMs_20	IAMs_20	20 51 37.4	
	comp=Z,1µm,18.0s						
NB2	**NORSAR Subarra**	**142.30**	**355**	PKP	**PKPdf**	**19 45 13.3**	**-0.5**
	comp=Z,1.7nm,1.1s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**142.30**	**355**	PKP	**PKPdf**	**19 45 12.9**	**-0.9**
	comp=Z,1.6nm,0.9s,baz=15,slow=4.8,SNR=4.2						
KIV	**Kislovodsk**	**143.05**	**313**	IAMs_20	IAMs_20	20 48 28.3	
	comp=Z,1µm,22.0s						
CLDR	**Caldiran**	**143.60**	**305**	*e*P	PKPbc	19 45 14.8	+0.4
VANB	**Van**	**144.13**	**304**	*e*P	PKPbc	19 45 16.9	+1.0
AGRB	**Hanur-Agry**	**144.19**	**306**	*e*P	**PKPdf**	**19 45 17.3**	**-0.7**
SENK	**Senkaya-Erzuru**	**144.39**	**307**	*e*P	PKPbc	19 45 17.5	+0.7
AKDM	**Akdamar-Van**	**144.50**	**303**	*e*P	**PKPdf**	**19 45 18.9**	**+0.3**
FURI	**Furi**	**144.62**	**251**	IAMs_20	IAMs_20	20 43 45.5	
	comp=Z,1µm,22.0s						
MLAZ	**Malazgirt-MUS**	**144.63**	**305**	*e*P	**PKPdf**	**19 45 18.5**	**-0.2**
BCA	**Borcka**	**144.65**	**309**	*e*P	PKPbc	19 45 17.9	+0.6
GURO	**Guroymak-BITLI**	**145.17**	**304**	*e*P	**PKPdf**	**19 45 20.8**	**+1.1**
SOC	**Sochi**	**145.19**	**313**	*i* PKHKP	**PKPbc**	**19 45 18.1**	**-0.8**
SOC				*e*PPP	PPP	19 51 51.2	
SOC				*e*SSS	SSS	20 12 44.3	
SOC				MLR	MLR		
	comp=Z,1µm,21.0s						
CHOM	**Cayeli-Rize**	**145.37**	**309**	*e*P	**PKiKP**	**19 45 24.7**	**+1.0**
VRTB	**Varto-Mus**	**145.45**	**305**	*e*P	**PKiKP**	**19 45 23.3**	**-0.8**
KARO	**Karliova-Bingo**	**145.71**	**306**	*e*P	**PKPab**	**19 45 23.0**	**+1.7**
SVAN	**Silvan-Diyarba**	**145.91**	**304**	*e*P	**PKPab**	**19 45 22.8**	**+0.9**
YEDI	**Yedisu-Bingol**	**146.05**	**306**	*e*P	**PKPab**	**19 45 23.7**	**+1.1**
BNGB	**Bingl**	**146.07**	**305**	*e*P	**PKPab**	**19 45 23.7**	**+1.1**
SUW	**Suwalki**	**146.65**	**340**	*e*PKP	**PKPab**	**19 45 24.0**	**-0.1**
MAZI	**Mazidag**	**146.66**	**303**	*e*P	**PKPab**	**19 45 25.1**	**+0.2**
DYBB	**Diyarbakir**	**146.76**	**304**	*e*P	**PKPab**	**19 45 25.1**	**-0.2**
MUD	**Monsted U'grnd**	**147.00**	**356**	*i* P	**PKiKP**	**19 45 29.5**	**+3.0**
MUD	**Monsted U'grnd**	**147.00**	**356**	*e*PKIKP	**PKiKP**	**19 45 29.5**	**+3.0**
AKASG	**Malin Array Be**	**147.01**	**331**	PKPbc	**PKPbc**	**19 45 24.0**	**-0.2**
	comp=Z,6.2nm,0.5s,baz=42,slow=4.1,SNR=17						
AKASG	**Malin Array Be**	**147.01**	**331**		**PKPdf**	**19 45 22.1**	**-0.1**
AKBB	**Malin Array Si**	**147.01**	**331**		**PKPdf**	**19 45 21.7**	**-0.5**
AKBB				IAMs_20	IAMs_20	20 55 50.8	
	comp=Z,2µm,21.0s						
PTK	**Pertek**	**147.06**	**306**	*e*P	**PKPbc**	**19 45 25.3**	**+0.3**
SVRC	**Sivrice-ELAZID**	**147.28**	**305**	*e*P	**PKPab**	**19 45 27.5**	**+0.1**
BSD	**Bornholm Skovb**	**147.63**	**349**	*i* P	**PKPab**	**19 45 29.3**	**+1.4**
BSD	**Bornholm Skovb**	**147.63**	**349**	*e*PKIKP	**PKPab**	**19 45 29.3**	**+1.4**
MALT	**Malatya**	**147.96**	**305**	*e*P	**PKiKP**	**19 45 29.2**	**0.0**
RSDY	**Resadiye-TOKAT**	**148.06**	**309**	*e*P	**PKPbc**	**19 45 28.1**	**+0.6**
SVSK	**Karacayir**	**148.47**	**309**	*e*P	**PKPbc**	**19 45 28.5**	**0.0**
DARE	**Darende-Malaty**	**148.58**	**306**	*e*P	**PKiKP**	**19 45 31.2**	**+0.7**
GAZ	**Gaziantep**	**149.22**	**304**	IAMs_20	IAMs_20	20 53 54.2	
	comp=Z,1µm,22.0s						
SORM	**Soroca**	**149.25**	**329**	⇑P	**PKPbc**	**19 45 30.8**	**+0.6**
SARI	**SarD1z-Kayseri**	**149.43**	**306**	*e*P	**PKPbc**	**19 45 31.8**	**+0.6**
BNN	**Bunyan**	**149.69**	**307**	*e*P	**PKiKP**	**19 45 33.5**	**+0.7**
YOZ	**Yozgat**	**149.77**	**309**	*e*P	**PKPab**	**19 45 36.7**	**-0.7**
KIS	**Kishinev**	**149.80**	**327**	*e*PKP	**PKPab**	**19 45 35.0**	**-2.0**
KIS				LRM	MLR	20 49 48.0	
	comp=Z,700nm,19.0s						
KIS	**Kishinev**	**149.80**	**327**	*e*PKIKP	**PKPab**	**19 45 35.0**	**-2.0**
KIS				MLR	MLR		
	comp=Z,2µm,20.0s						
KIS				MLR	MLR		
	comp=N,700nm,19.0s						
LVV	**L'vov**	**149.84**	**335**	*i* PKP2	**PKPab**	**19 45 38.2**	**+1.1**
LVV				MLR	MLR		
	comp=N,700nm,19.0s						
LVV				MLR	MLR		
	comp=E,600nm,19.0s						
LVV				MLR	MLR		
	comp=Z,1µm,19.0s						
MILM	**Milestii Mici**	**149.86**	**327**	⇑P	**PKiKP**	**19 45 32.7**	**0.0**
CORM	**Corum**	**150.04**	**311**	*e*P	**PKiKP**	**19 45 35.9**	**+2.4**
CEYT	**Ceyhan**	**150.38**	**304**	*e*P	**PKPab**	**19 45 37.4**	**-2.3**
LEOM	**Leova**	**150.44**	**326**	⇓P	**PKiKP**	**19 45 34.4**	**+0.5**
KWP	**Kalwaria Pacla**	**150.50**	**336**	*e*PKP	**PKPbc**	**19 45 33.0**	**-0.3**
KWP	**Kalwaria Pacla**	**150.50**	**336**		**PKPbc**	**19 45 33.4**	**+0.1**
BR131	**Keskin Array S**	**150.92**	**310**		**PKPbc**	**19 45 35.0**	**+0.3**
BRTR	**Keskin Array B**	**150.92**	**310**	PKPbc	**PKiKP**	**19 45 35.5**	**+0.1**
	comp=Z,3.8nm,0.7s,baz=126,slow=2.8,SNR=14						
BRTR	**Keskin Array B**	**150.92**	**310**		**PKPbc**	**19 45 35.0**	**+0.3**
OJC	**Ojcow**	**150.98**	**340**	*e*PKP	**PKiKP**	**19 45 36.5**	**+1.5**
OJC	**Ojcow**	**150.98**	**340**	*e*PKIKP	**PKiKP**	**19 45 36.5**	**+1.5**
BURAR	**Bucovina Array**	**151.07**	**331**	⇑P	**PKiKP**	**19 45 36.7**	**+1.4**
BURAR	**Bucovina Array**	**151.07**	**331**	⇑PKIKP	**PKiKP**	**19 45 36.7**	**+1.4**

BURAR	Bucovina Array	151.07	331		PKPbc	19 45 35.1	+0.3
TESR	Tescani	151.21	328	⇓P	PKiKP	19 45 37.3	+1.8
KOLS	Kolonicke sedl	151.23	336	*e*PKIKP	PKiKP	19 45 37.1	+1.6
KOLS				*e*		19 45 46.2	
KOLS	Kolonicke sedl	151.23	336	*e*PKP	PKiKP	19 45 37.1	+1.6
KOLS				*e*		19 45 46.2	
CFR	Carcaliu	151.37	325	⇓P	PKiKP	19 45 38.7	+2.8
CFR	Carcaliu	151.37	325	⇓PKIKP	PKiKP	19 45 38.7	+2.8
KSP	Ksiaz	151.39	345	*e*PKP	PKiKP	19 45 36.6	+0.9
KSP	Ksiaz	151.39	345	*e*PKIKP	PKiKP	19 45 36.6	+0.9
TOPG	Topolog	151.43	324	⇓P	PKiKP	19 45 39.2	+3.2
UZH	Uzhgorod	151.47	336	*e*PKHKP	PKPbc	19 45 34.3	-1.2
UZH				*e*		19 45 36.4	
UZH				*e*		19 45 40.9	
NIE	Niedzica	151.52	339	*e*PKP	PKPbc	19 45 35.7	+0.1
CRVS	Cervenica-Dubn	151.56	337	*e*PKP	PKPab	19 45 44.1	-0.1
CLL	Collm	151.62	349	*e*PKPbc	PKiKP	19 45 37.0	+0.8
CLL				*e*PKPab	PKPab	19 45 45.0	+0.7
	comp=Z,17nm,0.8s						
CLL				*e*pPKPab	sPKPab	19 45 49.0	+4.0
CLL				*i*		19 45 53.3	
	comp=Z,36nm,1.1s						
CLL				*e*PP	PP	19 49 14.0	-0.7
CLL				*e*		19 49 38.0	
CLL				*e*PSKS		19 59 30.0	
CLL				*e*SKKSdf	SKKSdf	20 01 24.0	-2.2
CLL				*e*PPS	PPS	20 02 18.0	
CLL				*e*SS	SS	20 08 41.0	+1.6
CLL				*e*PSPS		20 09 48.0	
CLL				*e*		20 11 54.0	
CLL				*e*SSS	SSS	20 14 42.0	
CLL				LmH		20 58 00.0	
	comp=N,400nm,21.0s						
CLL				LmH		20 58 00.0	
	comp=E,800nm,21.2s						
CLL				LmV		21 01 00.0	
	comp=Z,1µm,19.2s						
CLL	Collm	151.62	349	*e*PKIKP	PKiKP	19 45 37.0	+0.8
CLL				*e*		19 45 45.0	
CLL				*e*		19 45 49.0	
CLL				pmax	pmax		
	comp=Z,17nm,0.8s						
CLL				MLR	MLR		
	comp=Z,1µm,19.2s						
CLL	Collm	151.62	349	IAMs_20	IAMs_20	21 01 20.7	
	comp=Z,1µm,20.0s						
VRI	Vrincioaia	151.63	327	⇓P	PKiKP	19 45 39.4	+2.9
VRI	Vrincioaia	151.63	327	⇓PKIKP	PKiKP	19 45 39.4	+2.9
OSTC	Ostas	151.67	345	*e*PKP	PKiKP	19 45 37.9	+1.5
OSTC				AMS	AMS	20 52 40.0	
	comp=Z,2µm,20.2s						
PLOR	Plostina	151.68	327	⇑P	PKPab	19 45 42.7	-2.2
PLOR	Plostina	151.68	327	⇑PKP2	PKPab	19 45 42.7	-2.2
CHVC	Chvalec	151.68	345	*e*PKP	PKiKP	19 45 39.2	+2.8
CHVC				AMS	AMS	20 52 20.0	
	comp=Z,2µm,21.4s						
TIRR	Tirgusor	151.68	323	⇑P	PKPab	19 45 44.2	-0.7
UPC	Upice	151.76	345	*e*PKP	PKPab	19 45 41.0	-4.0
UPC				*e*x	x	19 45 49.6	
UPC				AMS	AMS	20 52 20.0	
	comp=Z,2µm,21.1s						
UPC	Upice	151.76	345	*e*PKP2	PKPab	19 45 41.0	-4.0
UPC				MLR	MLR		
	comp=Z,2µm,21.1s						
TRPA	Tarpa	151.79	335	⇓P	PKiKP	19 45 37.2	+0.6
HARR	Harsova	151.80	324	⇑P	PKiKP	19 45 40.2	+3.4
DPC	Dobruska-Polom	151.84	345	*e*PKP	PKiKP	19 45 39.9	+3.1
DPC				AMS	AMS	21 02 20.0	
	comp=Z,1µm,21.0s						
DPC	Dobruska-Polom	151.84	345	*e*PKIKP	PKiKP	19 45 39.9	+3.1
DPC				MLR	MLR		
	comp=Z,1µm,21.0s						
ARCR	ARCALIA	151.85	331	⇓P	PKPab	19 45 42.9	-2.6
BRG	Berggiesshubel	151.86	348	*e*PKP	PKiKP	19 45 37.5	+0.8
	comp=Z,7.7nm,0.8s						
BRG				*e*		19 45 49.3	
	comp=Z,31nm,1.2s						
BRG				*e*PP	PP	19 49 34.4	+18
	comp=Z,18nm,1.5s						
BRG				SS	SS	20 08 38.0	-4.2
BRG	Berggiesshubel	151.86	348	*e*PKIKP	PKiKP	19 45 37.5	+0.8
BRG				*e*		19 45 49.3	
BRG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BRG				pmax	pmax		
	comp=Z,31nm,1.2s						
BRG				pmax	pmax		
	comp=Z,18nm,1.5s						
BRG				MLR	MLR		
	comp=N,997nm,21.0s						
BRG				MLR	MLR		
	comp=E,556nm,20.8s						
BRG				MLR	MLR		
	comp=Z,1µm,18.9s						
KRLC	Kraliky	151.97	344	*e*PKP	PKiKP	19 45 39.7	+2.6
KRLC				*e*x	x	19 45 51.7	
KRLC				AMS	AMS	21 02 40.0	
	comp=Z,2µm,21.8s						
KRLC	Kraliky	151.97	344	*e*PKIKP	PKiKP	19 45 39.7	+2.6
KRLC				*e*		19 45 51.7	
KRLC				MLR	MLR		
	comp=Z,2µm,21.8s						
LANS	Liptovska Anna	152.02	339	*e*PKP2	PKPab	19 45 46.4	+0.2
LANS	Liptovska Anna	152.02	339	*e*PKP	PKPab	19 45 46.4	+0.2
MORC	Moravsky Berou	152.04	342	⇑P	PKiKP	19 45 40.8	+3.5
MORC	Moravsky Berou	152.04	342	*e*PKP	PKiKP	19 45 37.7	+0.5
MORC	Moravsky Berou	152.04	342		PKiKP	19 45 37.9	+0.7
PVCC	Panska Ves	152.07	347	*e*PKP	PKiKP	19 45 40.5	+3.3
PVCC				*e*x	x	19 45 53.0	
PVCC				AMS	AMS	20 59 30.0	
	comp=Z,1µm,22.0s						
PVCC	Panska Ves	152.07	347	*e*PKIKP	PKiKP	19 45 40.5	+3.3
PVCC				*e*		19 45 53.0	
PVCC				MLR	MLR		
	comp=Z,1µm,22.0s						
DOPR	Dopca	152.21	329	⇑P	PKiKP	19 45 41.2	+3.5
MLR	Muntele Rosu	152.28	327	⇑P	PKPab	19 45 43.1	-4.4
CJR	Cluj-Napoca	152.47	332	⇑P	PKiKP	19 45 41.6	+3.4
PRA	Prague	152.53	347	AMS	AMS	20 59 50.0	
	comp=Z,2µm,24.0s						
PRU	Pruhonice	152.58	347	*e*PKP	PKiKP	19 45 42.7	+4.5
PRU				AMS	AMS	20 59 40.0	
	comp=Z,2µm,23.1s						
GOPC	GO Pecny, Ondr	152.60	346	*e*PKP	PKiKP	19 45 41.3	+3.0
GOPC				AMS	AMS	20 59 00.0	
	comp=Z,1µm,18.5s						
VRAC	Vranov	152.72	343	⇓P	PKPab	19 45 44.1	-4.9
VRAC	Vranov	152.72	343	⇓PKP2	PKPab	19 45 44.1	-4.9
VRAC	Vranov	152.72	343	*e*PKP	PKiKP	19 45 40.9	+2.3
VRAC				*e*		19 45 49.6	
NKC	Novy Kostel	152.75	349	AMS	AMS	21 03 00.0	
	comp=Z,1µm,18.9s						
VOIR		152.76	328	⇑P	PKPab	19 45 44.8	-4.6
VOIR		152.76	328	⇑PKIKP	PKPab	19 45 44.8	-4.6
DRGR		152.79	333	⇓P	PKiKP	19 45 39.3	+0.4
DRGR		152.79	333	⇓PKIKP	PKiKP	19 45 39.3	+0.4
VYHS	Vyhne	152.80	340	*e*PKP2	PKPab	19 45 50.9	+1.5
VYHS	Vyhne	152.80	340	*e*PKP	PKPab	19 45 50.8	+1.4
VYHS				*e*		19 46 03.3	
UCC	Uccle	152.81	1	IAMs_20	IAMs_20	20 55 53.4	
	comp=Z,2µm,20.0s						
PSZ	Piszkesteto	152.94	338	⇑P	PKPab	19 45 47.5	-2.6
PSZ	Piszkesteto	152.94	338		PKiKP	19 45 40.2	+1.0
KRUC	Moravsky	153.00	343	*e*PKP	PKiKP	19 45 41.7	+2.6
KRUC				*e*		19 45 50.2	
ARR	Arges	153.01	328	⇓P	PKiKP	19 45 41.1	+1.8
TREC	Trest	153.02	345	AMS	AMS	20 57 40.0	
	comp=Z,2µm,20.6s						
LEF	Lefka	153.17	302	*e*P	PKiKP	19 45 44.2	+4.3
MODS	Modra-Piesok	153.38	342	*e*PKP2	PKPab	19 46 04.2	+12
MODS	Modra-Piesok	153.38	342	*e*	PKPab	19 46 04.2	+12
KHC	Kasperske Hory	153.60	347	*e*PKP	PKPbc	19 45 37.0	-3.3
KHC				*e*x	x	19 45 41.3	
KHC				*e*x	x	19 45 53.9	
KHC				AMS	AMS	20 59 50.0	
	comp=Z,2µm,20.1s						
KHC	Kasperske Hory	153.60	347	*e*PKIKP	PKPbc	19 45 37.0	-3.3
KHC				*e*		19 45 41.3	
KHC				*e*		19 45 53.9	
KHC				MLR	MLR		
	comp=Z,2µm,20.1s						
KHC	Kasperske Hory	153.60	347	IAMs_20	IAMs_20	20 57 44.1	
	comp=Z,895nm,21.0s						
ARMT	Armutlu	153.72	316	*e*P	PKPab	19 45 53.4	-0.2
SZH	Strazhica	153.82	324	*e*P	PKPab	19 45 55.1	+1.2
GERES	GERESS Array B	153.84	347	PKPbc	PKiKP	19 45 41.6	+0.6
	comp=Z,0.4nm,0.5s,baz=48,slow=2.0,SNR=6.1						
GERES				PKPab	PKPab	19 45 56.2	+2.3
	comp=Z,2.9nm,0.9s,baz=48,slow=2.0,SNR=6.6						
GERES	GERESS Array B	153.84	347		PKPbc	19 45 40.0	-0.9
GZR	Gura Zlata	153.85	331	⇑P	PKiKP	19 45 46.3	+5.2
GZR	Gura Zlata	153.85	331	⇑PKIKP	PKiKP	19 45 46.3	+5.2
ELND	Elena	154.08	323	⇑P	PKPab	19 45 51.5	-3.5
PVL	Pavlikeni	154.18	324	*e*P	PKPab	19 46 13.8	+18
BZS	Buzias	154.19	333	⇓P	PKiKP	19 45 42.5	+0.8
BZS	Buzias	154.19	333	⇓PKIKP	PKiKP	19 45 42.5	+0.8
CONA	Conrad Observa	154.19	343	PKiKP	PKiKP	19 45 42.8	+1.0
	comp=Z,18nm,1.3s						
HERR	Herculane	154.41	330	⇓P	PKiKP	19 45 47.9	+5.7
PLVB	Pleven	154.44	325	⇑P	PKPab	19 45 51.7	-4.8
STU	Stuttgart	154.62	353	IAMs_20	IAMs_20	20 57 42.2	
	comp=Z,1µm,20.0s						
MOA	Molln	154.66	345	*e*pPKiKP	PKiKP	19 45 46.9	+4.2
	comp=Z,7.5nm,1.8s						
ECH	Echery	155.34	356	IAMs_20	IAMs_20	21 03 26.2	
	comp=Z,1µm,20.0s						
KBA	Koelnbreinsper	155.59	346	*i* PKPab	PKPab	19 45 58.1	-3.4
	comp=Z,3.2nm,1.0s						
VTS	Vitosha	155.70	326	⇓P	PKPab	19 45 57.2	-4.9
VTS	Vitosha	155.70	326	*e*P	PKPab	19 46 03.0	+0.9
VTS	Vitosha	155.70	326	⇓PKIKP	PKPab	19 45 57.2	-4.9
VTS	Vitosha	155.70	326	IAMs_20	IAMs_20	21 03 20.7	
	comp=Z,1µm,21.0s						
AYDB	Zeytinkoy-Aydi	155.73	312	*e*P	PKPab	19 46 01.9	-0.5
WTTA	Wattenberg	155.76	349	*i* PKPab	PKPab	19 45 59.2	-3.0
	comp=Z,7.6nm,1.0s						
ABTA	Abfaltersbach	156.09	347	PKPdf	PKPdf	19 45 31.5	-4.7
	comp=Z,4.8nm,1.2s						
FETA	Feichten	156.14	350	*i* pPKPdf	pPKPdf	19 45 37.2	+0.3
	comp=Z,4.2nm,1.7s						
BLY	Banja Luka	156.63	338	IAMs_20	IAMs_20	20 55 23.8	
	comp=Z,1µm,22.0s						
TRI	Trieste	156.78	344	IAMs_20	IAMs_20	20 59 30.6	
	comp=Z,2µm,21.0s						
TUE	Stuetta	156.87	352	IAMs_20	IAMs_20	21 03 52.8	
	comp=Z,1µm,20.0s						
CTI	Castel Tesino	156.93	348	IAMs_20	IAMs_20	20 57 06.2	
	comp=Z,1µm,22.0s						
PDG	Podgorica	157.75	331	IAMs_20	IAMs_20	20 57 05.9	
	comp=Z,1µm,22.0s						
LIT	Litokhoron	157.86	322	PKP2	PKPab	19 46 12.7	+1.4
LIT				MLR	MLR		
	comp=Z,1µm,19.0s						
LIT	Litokhoron	157.86	322		PKPab	19 46 12.7	+1.4
LIT				IAMs_20	IAMs_20	21 07 57.3	
	comp=Z,1µm,19.0s						
FNA	Florina	157.98	325	IAMs_20	IAMs_20	21 00 10.4	
	comp=Z,908nm,21.0s						
TIR	Tirane	158.32	328	IAMs_20	IAMs_20	21 01 26.2	
	comp=Z,1µm,21.0s						
AGG	Agios Georgios	158.67	320	IAMs_20	IAMs_20	21 12 32.9	
	comp=Z,1µm,20.0s						
MSSA	Maissana	158.97	351	IAMs_20	IAMs_20	21 08 52.2	
	comp=Z,1µm,20.0s						
SCTE	Santa Cesarea	159.98	328	IAMs_20	IAMs_20	21 03 56.1	
	comp=Z,1µm,20.0s						
TORD	Torodi Ar. Bea	169.18	163	PKP	PKPdf	19 45 52.4	+2.6
	comp=Z,0.7nm,0.7s,baz=277,slow=0.7,SNR=4.8						
TORD				PKPab	PKPab	19 47 05.9	+4.5
	comp=Z,1.0nm,0.6s,baz=181,slow=4.0,SNR=7.9						
TORD	Torodi Ar. Bea	169.18	163		PKPdf	19 45 51.5	+1.7

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*NEIC **12** 19:29:25.5±1.8, 23°.9S±0°.1×175°.1W±0°.1, h10^{km}±1^{km}, mb4.8/21, Error ellipse: s-maj=22.2km s-min=18.3km az=72.0*

*IDC **12** 19:29:25.9±1.9, 23°.44S×175°.38W, h0^{km}, mb4.3/9, mb1 4.4/9, mb1mx4.2/39, mbtmp4.3/9, Error ellipse: s-maj=66.6km s-min=23.4km az=149.0*

ISC 12 19:29:24.8±0.8**, 24°.0S**±0°.1×**175°.1W**±0°.1**, h10^{km}, n48, σ1^{s}42**/39**, mb4.7**/18**, 1C, South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NIUE	Niue	6.86	45		Pn	19 30 54.4	-11
MSVF	Nonsavu	8.99	313	Pn	Pn	19 31 33.6	-1.2
AFI	Afiamalu	10.54	18	Pn	Pn	19 31 45.1	-11
	5.2nm,0.3s,baz=60,slow=20,SNR=3.0						
AFI	Afiamalu	10.54	18		Pn	19 31 43.5	-13
BFZ	Birch Farm	18.14	202		Pn	19 33 14.2	-23
MSWZ	Moikau Station	19.13	203	P	P	19 33 35.7	-12
SNZO	South Karori	19.24	204	P	P	19 33 38.8	-10
BHW	Baring Head	19.26	204	P	P	19 33 38.5	-11
PLWZ	Palliser	19.27	203	P	P	19 33 36.9	-13
TUWZ	Tuamarina	19.63	205	P	P	19 33 45.9	-7.5
BSWZ	Blackbirch Sta	19.90	205	P	P	19 33 52.7	-3.7
THZ	Tophouse	20.33	207	P	P	19 34 01.9	+0.7
KHZ	Kahutara	20.63	205	P	P	19 34 03.4	-0.9
CTA	Charters Tower	36.00	269	P	P	19 36 26.3	+0.1
	4.6nm,0.5s,baz=92,slow=9.8,SNR=7.0						
PMG	Port Moresby	38.85	285	P	P	19 36 49.7	-0.8
	6.3nm,0.5s,baz=149,slow=11,SNR=4.7						
PMG	Port Moresby	38.85	285	P	P	19 36 49.2	-1.3
PMG				IAmb	IAmb	19 36 55.9	
	comp=Z,20nm,1.1s						
STKA	Stephens Creek	38.88	249	P	P	19 36 52.8	+2.3
	comp=Z,0.9nm,0.5s,baz=90,slow=13,SNR=3.5						
ASAR	Alice Springs	46.47	260	P	P	19 37 53.2	+0.9
	comp=Z,2.0nm,0.8s,baz=96,slow=7.5,SNR=4.9						
WRA	Warramunga Arr	46.91	265	P	P	19 37 55.6	-0.2
MJAR	Matsushiro Arr	74.66	323	P	P	19 41 02.4	-2.1
	comp=Z,1.3nm,0.7s,baz=136,slow=6.7,SNR=3.7						
NVAR	Mina Array Bea	81.78	42	P	P	19 41 46.0	+1.8
	comp=Z,0.9nm,0.8s,baz=224,slow=6.1,SNR=3.8						
NVAR	Mina Array Bea	81.78	42	P	P	19 41 45.3	+1.2
USA0B	Ussuriysk Arra	83.41	325	P	P	19 41 51.6	-0.6
USA0B				IAmb	IAmb	19 41 57.6	
	comp=Z,4.6nm,0.8s						
USRK	Ussuriysk Ar.	83.41	325	P	P	19 41 53.0	+0.8
	comp=Z,3.8nm,0.8s,baz=150,slow=4.2,SNR=7.0						
USRK	Ussuriysk Ar.	83.41	325	P	P	19 41 50.9	-1.3
H04A	Detroit Lake	83.69	35	P	P	19 41 54.4	+0.7
SYO	Syowa Base	83.87	192	⇑*e*P	P	19 41 52.4	-1.9
LCMT	Little Creek M	84.09	45	P	P	19 41 56.5	+0.4
WVOR	Wild Horse Val	84.14	38	P	P	19 41 57.0	+0.8
U15A	North Rim	84.37	46	P	P	19 41 59.7	+2.0
U15A				IAmb	IAmb	19 42 15.9	
	comp=Z,5.8nm,1.1s						
I07A	Izee	84.72	37	P	P	19 41 58.5	-0.6
J08A	Circle Bar Ran	84.82	38	P	P	19 42 00.2	+0.6
J08A				IAmb	IAmb	19 42 14.4	
	comp=Z,10.0nm,1.2s						
MDJ	Mudanjiang	84.97	324	P	P	19 41 59.8	-0.3
MDJ				IAmb	IAmb	19 42 14.2	
	comp=Z,9.4nm,1.0s						
ELK	Elko	85.07	41	P	P	19 42 00.3	-0.7
G08A	Pilot Rock	85.80	36	P	P	19 42 04.9	+0.4
G08A				IAmb	IAmb	19 42 21.4	
	comp=Z,6.3nm,1.1s						
RPSI	Rantau Prapat	87.45	274	P	P	19 42 15.0	+1.8
ENH	Enshi	90.26	303	P	P	19 42 26.6	+0.5
ENH				IAmb	IAmb	19 42 38.9	
	comp=Z,9.4nm,1.1s						
ILAR	Eielson Array	91.17	12	P	P	19 42 29.0	-0.5
	comp=Z,0.7nm,0.8s,baz=208,slow=5.7,SNR=3.9						
PBKT	Sadao Pong	91.31	287	P	P	19 42 32.8	+1.6
PBKT				IAmb	IAmb	19 42 48.6	
	comp=Z,4.7nm,1.1s						
XAN	Xi'an	92.42	306	P	P	19 42 38.0	+1.9
CM31	Chiang Mai Arr	93.84	288	P	P	19 42 45.3	+2.4
CM31				IAmb	IAmb	19 42 59.3	
	comp=Z,7.2nm,1.1s						
CMAR	Chiang Mai Arr	93.84	288	P	P	19 42 45.1	+2.3
	comp=Z,3.4nm,0.8s,baz=131,slow=3.2,SNR=8.5						
CMAR	Chiang Mai Arr	93.84	288	P	P	19 42 44.6	+1.7
CHTO	Chiang Mai	93.98	289	P	P	19 42 43.6	+0.1
CHTO				IAmb	IAmb	19 42 48.7	
	comp=Z,5.8nm,1.1s						
AKASG	Malin Array Be	147.41	331	PKPbc	PKPbc	19 49 08.6	0.0
	comp=Z,0.8nm,0.5s,baz=41,slow=4.2,SNR=4.0						
AKASG	Malin Array Be	147.41	331		PKPbc	19 49 08.1	-0.6
LIT	Litokhoron	158.21	321		PKPab	19 49 55.2	-1.0
NRCA	Norcia	160.07	342		PKPab	19 50 03.9	-0.3

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*NEIC **12** 19:35:26.5±1.1, 37°.18N±0°.03×97°.87W±0°.06, h5^{km}±2^{km}, mb_Lg3.2/102, Error ellipse: s-maj=8.6km s-min=5.4km az=76.0*

*ANF **12** 19:35:26.8±0.3, 37°.19N×97°.92W, h0^{km}, ML4.2/9, Error ellipse: s-maj=3.2km s-min=2.5km az=60.0*

ISC 12 19:35:25.3±0.8**, 37°.23N**±0°.03×**97°.85W**±0°.03**, h10^{km}, n76, σ1^{s}97**/52**, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
T35A	Sooner Cattle	1.11	106		Pb	19 35 47.4	+0.7
U32A	Winter Ranch,	1.25	228		Pn	19 35 48.5	-0.4
R32A	Long Quarter,	1.37	331		Pn	19 35 51.7	+1.0
OKCFA	Oklahoma City	1.84	170		Pn	19 35 58.1	+1.1
OKCFA				IAmb_Lg		19 36 27.2	
	comp=Z,147nm,0.8s						
OKCSW	OKLAHOMA CITY	1.85	169		Pn	19 35 58.6	+1.5
FNO	Franklin	2.00	169		Pn	19 36 00.8	+1.6
KSU1	Kansas State U	2.11	27	IAmb_Lg		19 36 38.9	
	comp=Z,100nm,0.8s						
KSU1	Kansas State U	2.11	27	P	Pb	19 36 04.0	+0.3
	baz=208						
KSU1				S	Sg	19 36 33.0	-0.1
	baz=208						
TUL1	Leonard	2.12	128		Pn	19 36 02.1	+1.3
TUL1				IAmb_Lg		19 36 35.0	
	comp=Z,110nm,0.9s						
TUL1	Leonard	2.12	128	P	Pb	19 36 03.6	-0.2
	baz=308						
TUL1				S	Sb	19 36 32.5	+2.4
	baz=308						
CBKS	Cedar Bluff	2.17	317		Pn	19 36 03.7	+2.1
CBKS	Cedar Bluff	2.17	317	P	Pn	19 36 03.8	+2.1
	baz=137						
CBKS				S	Sb	19 36 33.5	+1.7
	baz=137						
W35A	Tecumseh	2.22	159		Pn	19 36 03.5	+1.3
WMOK	Wichita Mounta	2.60	197		Pn	19 36 09.5	+2.1
WMOK	Wichita Mounta	2.60	197	S	Sb	19 36 43.4	-0.5
	baz=17						
X34A	Smith Ranch, M	2.62	180		Pn	19 36 09.0	+1.2
X34A				IAmb_Lg		19 36 51.9	
	comp=Z,110nm,0.7s						
U38A	Gravette	2.89	105		Pn	19 36 14.0	+2.6
U38A				IAmb_Lg		19 36 58.1	
	comp=Z,51nm,0.8s						
HHAR	Hobbs	3.28	106		Pn	19 36 19.0	+2.2
X37A	Clayton	3.31	142		Pn	19 36 19.2	+2.0
S39A	Bolivar	3.63	81		Pn	19 36 23.8	+2.1
W39A	Magazine	3.86	120	Pn	Pn	19 36 26.4	+1.7
W39A				IAmb_Lg		19 37 35.5	
	comp=Z,91nm,1.0s						
W39A	Magazine	3.86	120	Pb	Pb	19 36 35.7	+2.1
	baz=302						
AMTX	Amarillo	3.89	234		Pn	19 36 26.8	+1.6
AMTX				IAmb_Lg		19 37 38.7	
	comp=Z,75nm,1.0s						
AMTX	Amarillo	3.89	234	Pb	Pb	19 36 34.5	+0.5
	baz=52						
U40A	Yellville	4.10	101		Pn	19 36 30.4	+2.3
KSCO	Kaye Shedlock'	4.17	297	Pn	Pn	19 36 30.9	+1.8
KSCO				IAmb_Lg		19 37 49.2	
	comp=Z,38nm,0.8s						
KSCO	Kaye Shedlock'	4.17	297	Pb	Pb	19 36 41.4	+2.6
	baz=114						
BGNE	Belgrade	4.18	357	Pn	Pn	19 36 29.4	+0.2
BGNE	Belgrade	4.18	357	Sb	Sg	19 37 37.3	-2.3
	baz=177						
MIAR	Mount Ida	4.38	126	Pn	Pn	19 36 33.5	+1.6
MIAR				IAmb_Lg		19 37 45.5	
	comp=Z,44nm,0.8s						
MGMO	Mountain Grove	4.46	89		Pn	19 36 34.7	+1.7
Z38A	Mt. Pleasant	4.60	149	IAmb_Lg		19 37 54.9	
	comp=Z,45nm,0.8s						
FCAR	Ozark Folk Cen	4.80	104	Pn	Pn	19 36 38.7	+1.0
FCAR				IAmb_Lg		19 38 02.8	
	comp=Z,60nm,0.8s						
ABTX	Abilene, Hawle	4.82	198		Pn	19 36 39.9	+1.8
WHAR	Wooly Hollow	4.89	112		Pn	19 36 40.5	+1.5
WHAR				IAmb_Lg		19 38 10.7	
	comp=Z,50nm,0.7s						
X40A	Basin Creek Fa	4.91	122	Pn	Pn	19 36 40.3	+1.2
X40A				IAmb_Lg		19 37 58.7	
	comp=Z,42nm,0.7s						
OGNE	Ogallala	4.94	320		Pn	19 36 41.6	+2.0
OGNE				IAmb_Lg		19 38 06.6	
	comp=Z,43nm,0.7s						
W41B	Gary Mavity, V	4.97	113	IAmb_Lg		19 38 12.8	
	comp=Z,38nm,0.8s						
MSTX	Muleshoe	5.16	232	Pn	Pn	19 36 44.0	+1.2
WLAR	White Oak Lake	5.24	131	IAmb_Lg		19 38 19.2	
	comp=Z,25nm,0.7s						
T25A	Trinidad	5.24	271	Pn	Pn	19 36 46.6	+2.7
T25A				IAmb_Lg		19 38 16.5	
	comp=Z,57nm,1.1s						
CCM	Cathedral Cave	5.31	79	Pn	Pn	19 36 47.7	+3.1
CCM				IAmb_Lg		19 38 22.7	
	comp=Z,36nm,0.8s						
CCM	Cathedral Cave	5.31	79	P	Pn	19 36 48.2	+3.5
	baz=263						
T42A	Van Buren	5.40	90	IAmb_Lg		19 38 29.3	
	comp=Z,59nm,0.9s						
237A	Washetta, Mont	5.48	162	IAmb_Lg		19 38 29.9	
	comp=Z,36nm,0.8s						
LCAR	Lake Charles	5.51	100		Sn	19 37 51.4	+0.6
LCAR				IAmb_Lg		19 38 24.7	
	comp=Z,50nm,1.0s						
SCIA	State Center	5.89	36	IAmb_Lg		19 38 42.7	
	comp=Z,50nm,0.8s						
PBMO	Poplar Bluff	5.96	92		Sn	19 38 02.7	+0.9
Q24A	Divide	6.01	289	IAmb_Lg		19 38 45.3	
	comp=Z,29nm,0.7s						
SDCO	Great Sand Dun	6.11	277	IAmb_Lg		19 38 52.0	
	comp=Z,21nm,0.9s						
N41A	Harden Midland	6.46	55	IAmb_Lg		19 38 57.8	
	comp=Z,49nm,0.7s						
ECSD	EROS Data Cent	6.57	8		Sn	19 38 17.4	+0.5
ECSD				IAmb_Lg		19 38 59.6	
	comp=Z,29nm,0.9s						
ISCO	Idaho Springs	6.61	295	Pn	Pn	19 37 05.1	+2.4
JCT	Junction City	6.92	194	IAmb_Lg		19 39 15.2	
	comp=Z,34nm,0.7s						
P43A	Skaggs, Pawnee	6.97	67	IAmb_Lg		19 39 14.1	
	comp=Z,43nm,0.8s						
L40A	Anamosa	7.03	45	Pn	Pn	19 37 10.7	+2.4
L40A					Pg	19 37 36.6	-3.4
L40A				IAmb_Lg		19 39 10.7	
	comp=Z,27nm,1.0s						
S22A	4UR Ranch, Cre	7.16	277		Pb	19 37 37.2	+7.3
SUSD	Miller	7.26	354	IAmb_Lg		19 39 28.8	
	comp=Z,31nm,0.8s						
N23A	Red Feather La	7.28	303		Pn	19 37 14.2	+2.2
N23A				Pg	Pg	19 37 41.3	-3.4
N23A				IAmb_Lg		19 39 28.3	
	comp=Z,38nm,0.9s						
ANMO	Albuquerque	7.33	254	IAmb_Lg		19 39 25.0	
	comp=Z,13nm,1.0s						
OXF	Oxford	7.37	109	IAmb_Lg		19 39 38.6	
	comp=Z,30nm,0.7s						
HDIL	Hopedale	7.45	61	Pn	Pn	19 37 16.2	+2.1
O44A	Mansfield	7.90	65	IAmb_Lg		19 39 50.2	
	comp=Z,37nm,0.7s						
L42A	Oliver, Polo	7.91	50	IAmb_Lg		19 39 51.0	
	comp=Z,17nm,0.7s						
WVT	Waverly	8.13	95	IAmb_Lg		19 40 00.5	
	comp=Z,25nm,0.9s						
JFWS	Jewell Farm	8.14	43	IAmb_Lg		19 39 48.9	
	comp=Z,18nm,0.7s						
PLAL	Pickwick Lake	8.22	103	IAmb_Lg		19 39 50.8	
	comp=Z,15nm,0.8s						
RSSD	Black Hills	8.34	328		Pn	19 37 29.7	+3.3
RSSD				IAmb_Lg		19 39 56.1	
	comp=Z,16nm,0.8s						
K22A	Casper	8.58	312	IAmb_Lg		19 40 01.5	
	comp=Z,16nm,0.8s						
PV02	Paradox Valley	8.68	280	IAmb_Lg		19 40 08.6	
	comp=Z,15nm,1.1s						
V48A	Smith Brothers	9.01	96	IAmb_Lg		19 40 11.9	
	comp=Z,31nm,1.1s						
X48A	Hartselle	9.20	104	IAmb_Lg		19 40 26.5	
	comp=Z,13nm,0.9s						
WCI	Wyandotte Cave	9.21	80	IAmb_Lg		19 40 19.8	
	comp=Z,26nm,0.7s						
CLTN	Cedars of Leba	9.33	94	IAmb_Lg		19 40 23.0	
	comp=Z,17nm,0.7s						
T49A	Edmonton	9.83	87	IAmb_Lg		19 40 36.4	
	comp=Z,21nm,1.0s						
D32A	Dogwood Acres,	9.92	3	IAmb_Lg		19 40 55.2	

comp=Z,22nm,0.7s

MAN 12 19:48:52.5, 17°.45N×120°.09E, h13^{km}, mb4.5, ML3.4, MS3.2, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	0.58	37	⇑eP	Pg	19 49 02.5	-1.5
SIPP				iS	Sg	19 49 11.2	-0.6
ABRA	**Dolores**	0.62	72	eP	Pb	19 49 05.8	+0.5
ABRA				eS	Sn	19 49 15.5	-1.5
APYP	**Conner**	1.17	70	eP	Pn	19 49 13.1	-1.5
APYP				eS	Sg	19 49 30.2	-0.1
SMPP	**San Manuel, Pa**	1.41	156	eP	Pn	19 49 17.7	-0.2
SMPP				eS	Sn	19 49 36.1	-0.4
SGCP	**Mt. Cagua**	2.02	67	eP	Pb	19 49 27.8	-1.3
SGCP				eS	Sg	19 50 07.5	+10

IDC 12 19:51:16.1±8.4, 24°.02S×175°.68W, h0^{km}, mb4.0/3, mb1 4.1/3, mb1mx3.7/38, mbtmp3.9/3, Error ellipse: s-maj=291.0km s-min=98.2km az=148.0, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	35.43	269	P	P	19 58 14.7	+0.6
	4.4nm,0.9s,baz=92,slow=10,SNR=3.9						
ASAR	**Alice Springs**	45.91	260	P	P	19 59 40.5	-0.4
	0.7nm,1.0s,baz=93,slow=8.4,SNR=11						
WRA	**Warramunga Arr**	46.34	265	P	P	19 59 43.7	-0.5
CMAR	**Chiang Mai Arr**	93.29	289	P	P	20 04 33.3	0.0
	0.7nm,0.8s,baz=134,slow=3.3,SNR=5.1						

IDC 12 19:56:30.0±16.0, 23°.05S×176°.65W, h0^{km}, mb3.8/2, mb1 4.0/2, mb1mx3.6/29, mbtmp3.7/2, MS4.5/2, Ms1 4.5/2, ms1mx3.7/33, Error ellipse: s-maj=598.4km s-min=100.1km az=142.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	34.57	268	LR	LR	20 16 37.9	
	comp=Z,709nm,18.2s,baz=355,slow=35						
ASAR	**Alice Springs**	45.21	259	P	P	20 04 49.1	-0.1
	0.4nm,0.7s,baz=96,slow=7.8,SNR=7.6						
WRA	**Warramunga Arr**	45.54	264	P	P	20 04 51.7	-0.2
LPIG	**La Paz**	79.65	58	LR	LR	20 36 30.9	
	comp=Z,292nm,19.8s,baz=306,slow=30						
CMAR	**Chiang Mai Arr**	92.14	289	P	P	20 09 41.8	-0.1
	0.9nm,0.7s,baz=129,slow=3.5,SNR=5.4						

IDC 12 20:01:09.8±426.0, 19°.03N×54°.42E, h0^{km}, Error ellipse: s-maj=281.0km s-min=166.6km az=130.0, Eastern Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I19DJ	**I19DJ**	13.19	237	i		21 21 40.0	
	baz=53,slow=315,SNR=0.9						
I32KE	**NAIROBI INFRAS**	26.54	223	i		22 44 10.0	
	baz=44,slow=313,SNR=1.3						

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*BJI **12** 20:10:27.0±0.0, 23°.70S×174°.70W, h5^{km}, mB5.9/11, mb5.3/28, Ms5.3/5, Ms7 5.1/5*

*IDC **12** 20:10:30.5±0.6, 23°.16S×175°.34W, h0^{km}, mb4.6/21, mb1 4.7/22, mb1mx4.6/34, mbtmp4.6/22, ML4.3/1, MS4.4/12, Ms1 4.4/12, ms1mx4.1/30, Error ellipse: s-maj=22.3km s-min=15.8km az=122.0*

*NEIC **12** 20:10:31.7±1.7, 23°.1S±0°.1×175°.3W±0°.1, h10^{km}±1^{km}, mb5.0/71, Error ellipse: s-maj=21.8km s-min=18.2km az=218.0*

*GCMT **12** 20:10:33.7±0.3, 23°.47S±0°.03×174°.73W±0°.02, h21^{km}, MW5.0/94, Moment Tensor Solution. s43,c55; s94,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.86±.20; $M_{\theta\theta}$-1.06±.12; $M_{\phi\phi}$-2.81±.12; $M_{r\theta}$1.48±.25; $M_{\theta\phi}$-0.76±.08; $M_{\phi r}$1.84±.20; Best double couple: $M_0$4.19100×10^{16} NP1:ϕ_s195.00000°,δ29.00000°,λ77.00000°. NP2: ϕ_s30.00000°,δ62.00000°,λ97.00000°. Principal axes: T 4.6140, Plg72.0000°, Azm316.0000°; N -0.8560, Plg6.0000°, Azm207.0000°; P -3.7680, Plg17.0000°, Azm115.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **12** 20:10:44.0±1.7, 20°.68S×175°.02W, h33^{km}, mb5.1/10 Error ellipse: s-maj=18.4km s-min=12.2km az=96.3*

ISC 12 20:10:34.5±0.4, 23°.35S±0°.08×175°.32W±0°.09, h30^{km}, n281, σ1^{s}.65/267, mb4.9/68, MS4.4/18, 18C-20D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	6.59	51		Pn	20 11 59.0	-10
NIUE					Sn	20 13 01.4	-22
MSVF	**Nonsavu**	8.36	311	iP	**Pn**	**20 12 37.6**	**+3.8**
MSVF	**Nonsavu**	8.36	311	Pn	**Pn**	**20 12 30.9**	**-2.9**
AFI	**Afiamalu**	9.97	20	Pn	Pn	20 12 47.9	-8.0
	12nm,0.3s,baz=243,slow=9.0,SNR=13						
AFI				Sn	Sn	20 14 32.3	-15
	7.1nm,0.3s,baz=107,slow=19,SNR=4.5						
RAR	**Rarotonga**	14.55	85	Pn	Pn	20 13 49.7	-8.6
	5.3nm,0.3s,baz=271,slow=5.6,SNR=6.8						
RAR				Sn	Sn	20 16 12.6	-26
	3.8nm,0.3s,baz=131,slow=20,SNR=3.7						
URZ	**Urewera**	16.21	202	Pn	**P**	**20 14 22.5**	**-0.4**
	1.1nm,0.3s,baz=31,slow=7.5,SNR=4.7						
URZ				Sn	**Sn**	**20 17 08.1**	**-11**
	0.4nm,0.3s,baz=348,slow=18,SNR=3.1						
URZ	**Urewera**	16.21	202		**P**	**20 14 21.8**	**-1.1**
DZM	**Mont Dzumac**	16.88	271	eP	**P**	**20 14 34.3**	**+3.7**
	136nm,1.5s						
DZM				eLR	LR	20 18 32.7	
	comp=Z,1μm,21.6s						
DZM	**Mont Dzumac**	16.88	271	Pn	**P**	**20 14 31.4**	**+0.8**
	0.2nm,0.3s,baz=96,slow=18,SNR=2.3						
DZM	**Mont Dzumac**	16.88	271	P	**P**	**20 14 30.9**	**+0.3**
RPZ	**Rata Peaks**	23.21	206	P	**P**	**20 15 42.2**	**+3.2**
	5.5nm,0.3s,baz=28,slow=7.7,SNR=6.8						
RPZ	**Rata Peaks**	23.21	206	P	**P**	**20 15 41.6**	**+2.7**
PAE	**Paea**	24.74	82	eT	T	20 41 14.0	
	3.0nm,0.3s						
PPT2	**Papeete2**	24.77	81	eLR	LR	20 21 38.0	
	comp=Z,1μm,21.8s						
PPT	**Papeete**	24.77	81	LR	LR	20 23 18.8	
	comp=Z,1μm,19.7s,baz=264,slow=31						
CTA	**Charters Tower**	35.78	268	P	**P**	**20 17 31.6**	**+0.3**
	9.8nm,0.5s,baz=93,slow=10,SNR=24						
TAOE	**Nuku Hiva Isla**	36.61	73	eLR	LR	20 27 23.5	
	comp=Z,784nm,22.4s						
PMG	**Port Moresby**	38.44	285	P	**P**	**20 17 53.6**	**-0.3**
	14nm,0.9s,baz=84,slow=15,SNR=4.9						
PMG				LR	LR	20 32 15.8	
	comp=Z,524nm,19.9s,baz=166,slow=34						
PMG	**Port Moresby**	38.44	285	iP	**P**	**20 17 52.7**	**-1.2**
PMG				pmax	pmax		
	comp=Z,82nm,1.0s						
PMG	**Port Moresby**	38.44	285	P	**P**	**20 17 52.8**	**-1.2**
PMG				IAmb	IAmb	20 17 54.8	
	comp=Z,23nm,1.0s						
STKA	**Stephens Creek**	38.91	248	P	**P**	**20 17 58.0**	**+0.3**
	comp=Z,2.4nm,0.8s,baz=98,slow=13,SNR=12						
STKA				LR	LR	20 32 15.5	
	comp=Z,456nm,19.0s,baz=63,slow=34						
STKA	**Stephens Creek**	38.91	248	P	**P**	**20 17 58.0**	**+0.3**
AS31	**Alice Springs**	46.36	259	P	**P**	**20 18 59.0**	**+0.6**
ASAR	**Alice Springs**	46.36	259	P	**P**	**20 18 57.6**	**-0.7**
	comp=Z,4.6nm,0.7s,baz=95,slow=8.1,SNR=37						
ASAR				LR	LR	20 38 38.4	
	comp=Z,489nm,19.2s,baz=100,slow=36						
ASAR	**Alice Springs**	46.36	259	P	**P**	**20 18 58.0**	**-0.3**
WR0	**Warramunga Arr**	46.54	264	P	**P**	**20 18 58.3**	**-1.4**
WR0				IAmb	IAmb	20 18 59.8	
	comp=Z,7.5nm,0.9s						
WRAB	**Tennant Creek**	46.72	264	P	**P**	**20 19 00.6**	**-0.6**
WRAB				IAmb	IAmb	20 19 01.3	
	comp=Z,12nm,0.8s						
KNRA	**Kununurra**	52.99	268	P	**P**	**20 19 48.2**	**-0.6**
KNRA				IAmb	IAmb	20 19 49.1	
	comp=Z,36nm,1.1s						
FITZ	**Fitzroy Crossi**	55.16	264	P	**P**	**20 20 04.8**	**+0.1**
FITZ				IAmb	IAmb	20 20 05.8	
	comp=Z,16nm,0.9s						
VNDA	**Vanda**	55.32	186	LR	LR	20 42 31.4	
	comp=Z,161nm,19.1s,baz=10,slow=35						
SWI	**Sorong**	56.39	285	P	**P**	**20 20 12.9**	**-0.6**
	comp=Z,53nm,1.1s						
SOEI	**Soe**	59.10	272	P	**P**	**20 20 33.6**	**+0.9**
	comp=Z,66nm,1.1s						
SOEI	**Soe**	59.10	272	P	**P**	**20 20 33.6**	**+0.9**
SANI	**Sanana**	60.58	281	P	**P**	**20 20 41.7**	**-1.1**
	comp=Z,14nm,1.0s						
EDFI	**Ende, Flores**	61.83	272	P	**P**	**20 20 50.9**	**-0.5**
KCP	**Kidapawan**	65.55	290	⇓eP	**P**	**20 21 15.4**	**-0.4**
QSPA	**South Pole Qui**	66.73	180	P	**P**	**20 21 24.4**	**+1.7**
	comp=Z,5.4nm,1.0s,baz=325,slow=1.3,SNR=8.6						
QSPA	**South Pole Qui**	66.73	180	P	**P**	**20 21 23.8**	**+1.0**
QSPA				IAmb	IAmb	20 21 43.1	
	comp=Z,5.9nm,0.9s						
MJAR	**Matsushiro Arr**	73.97	323	P	**P**	**20 22 06.7**	**-0.5**
	comp=Z,3.1nm,0.8s,baz=151,slow=5.7,SNR=5.4						
MAJO	**Matsushiro**	73.98	323	iP	**P**	**20 22 06.6**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
JKA	**Kamikawa-asahi**	77.42	330	P	**P**	**20 22 27.0**	**+0.3**
ASAJ	**Asahikawa**	77.42	330	P	**P**	**20 22 27.0**	**+0.3**
	comp=Z,25nm,0.9s,baz=216,slow=11,SNR=26						
TPUB	**Ta-pu**	77.60	302	P	**P**	**20 22 27.4**	**-0.8**
SSLB	**Suanglung**	77.61	303	P	**P**	**20 22 26.6**	**-1.7**
SSLB				IAmb	IAmb	20 22 28.6	
	comp=Z,17nm,0.9s						
MDSI	**Maura Dua**	79.53	270	P	**P**	**20 22 38.6**	**-0.5**
	comp=Z,15nm,1.0s						
YSS	**Yuzh-Sakhalins**	79.56	332	eP	**P**	**20 22 39.8**	**+1.4**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS	**Yuzh-Sakhalins**	79.56	332	P	**P**	**20 22 39.7**	**+1.3**
PETK	**Petropavlovsk-**	79.67	344	P	**P**	**20 22 38.7**	**-0.2**
	comp=Z,10nm,0.9s,baz=145,slow=9.1,SNR=8.8						
PETK				LR	LR	20 51 07.0	
	comp=Z,178nm,21.1s,baz=121,slow=31						
PETK	**Petropavlovsk-**	79.67	344	P	**P**	**20 22 37.8**	**-1.1**
PETK	**Petropavlovsk-**	79.67	344	P	**P**	**20 22 37.8**	**-1.1**
MAW	**Mawson**	79.72	199	P	**P**	**20 22 40.8**	**+1.7**
	comp=Z,13nm,1.1s,baz=104,slow=12,SNR=2.8						
MAW	**Mawson**	79.72	199	P	**P**	**20 22 41.9**	**+2.8**
CMB	**Columbia Colle**	79.91	41	P	**P**	**20 22 39.5**	**-1.2**
CMB				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CMB	**Columbia Colle**	79.91	41	P	**P**	**20 22 39.5**	**-1.2**
CMB				IAmb	IAmb	20 22 53.7	
	comp=Z,10nm,1.1s						
ORV	**Oroville**	80.24	39	P	**P**	**20 22 40.6**	**-1.7**
ORV				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ORV	**Oroville**	80.24	39	P	**P**	**20 22 40.6**	**-1.7**
WDC	**Whiskeytown Da**	80.33	38	P	**P**	**20 22 42.4**	**-0.3**
WDC				pmax	pmax		
	comp=Z,13nm,1.1s						
WDC	**Whiskeytown Da**	80.33	38	P	**P**	**20 22 42.4**	**-0.3**
WDC				IAmb	IAmb	20 22 56.8	
	comp=Z,13nm,1.1s						
MDPB	**Devils Postpil**	80.45	42	P	**P**	**20 22 42.5**	**-1.3**
MDPB				IAmb	IAmb	20 22 58.1	
	comp=Z,14nm,1.1s						
OMMB	**Old Mammoth Mi**	80.49	42	P	**P**	**20 22 43.1**	**-1.0**
KSRS	**Korea Array**	80.66	318	P	**P**	**20 22 44.8**	**+0.2**
	comp=Z,3.3nm,0.8s,baz=137,slow=7.2,SNR=7.2						
KSRS				LR	LR	20 56 16.3	
	comp=Z,172nm,18.7s,baz=60,slow=34						
KSAR	**Wonju Array Be**	80.68	318	P	**P**	**20 22 44.1**	**-0.6**
KSAR	**Wonju Array Be**	80.68	318	P	**P**	**20 22 44.1**	**-0.6**
YBH	**Yreka Blue Hor**	81.00	37	P	**P**	**20 22 46.3**	**-0.2**
YBH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
YBH	**Yreka Blue Hor**	81.00	37	P	**P**	**20 22 46.3**	**-0.2**
YBH				IAmb	IAmb	20 23 00.0	
	comp=Z,8.1nm,1.1s						
YERR	**Yerington**	81.21	41	P	**P**	**20 22 45.2**	**-2.5**
NVAR	**Mina Array Bea**	81.43	42	P	**P**	**20 22 49.0**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=218,slow=8.3,SNR=9.8						
NVAR				LR	LR	20 51 07.5	
	comp=Z,333nm,21.1s,baz=256,slow=30						
NVAR	**Mina Array Bea**	81.43	42	P	**P**	**20 22 47.9**	**-1.0**
HUMO	**Hull Mountain**	81.46	36	P	**P**	**20 22 46.0**	**-2.8**
HUMO				IAmb	IAmb	20 23 03.2	
	comp=Z,7.8nm,1.1s						
NV11	**Mina Array Sit**	81.52	42	P	**P**	**20 22 49.0**	**-0.4**
NV11				IAmb	IAmb	20 23 03.2	
	comp=Z,8.1nm,1.0s						
KVN	**Kaiserville**	81.94	41	P	**P**	**20 22 50.2**	**-1.4**
KVN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KVN	**Kaiserville**	81.94	41	P	**P**	**20 22 50.2**	**-1.4**
KVN				IAmb	IAmb	20 23 05.3	
	comp=Z,9.1nm,1.1s						
MSHR	**Mys Shultsa**	82.08	323	iP	**P**	**20 22 51.9**	**-0.1**
USRK	**Ussuriysk Ar.**	82.72	325	P	**P**	**20 22 55.3**	**0.0**
	comp=Z,14nm,0.8s,baz=121,slow=3.6,SNR=23						
USRK	**Ussuriysk Ar.**	82.72	325	P	**P**	**20 22 55.8**	**+0.5**
USRK	**Ussuriysk Ar.**	82.72	325	P	**P**	**20 22 55.8**	**+0.5**
USA0B	**Ussuriysk Arra**	82.72	325	P	**P**	**20 22 56.2**	**+0.9**
USA0B				pmax	pmax		
	comp=Z,27nm,1.1s						
USA0B	**Ussuriysk Arra**	82.72	325	P	**P**	**20 22 56.2**	**+0.9**
PINE	**Pine Mountain**	83.35	36	P	**P**	**20 22 58.7**	**-0.1**
PINE				IAmb	IAmb	20 23 13.0	
	comp=Z,20nm,1.1s						
X16A	**Lo Mia Camp, P**	83.52	48	P	**P**	**20 22 59.2**	**-0.7**
X16A				IAmb	IAmb	20 23 14.4	
	comp=Z,4.7nm,1.0s						
WVOR	**Wild Horse Val**	83.76	38	P	**P**	**20 22 59.5**	**-1.4**
WVOR				pmax	pmax		
	comp=Z,12nm,1.1s						
WVOR	**Wild Horse Val**	83.76	38	P	**P**	**20 22 59.5**	**-1.4**
WVOR				IAmb	IAmb	20 23 14.6	
	comp=Z,12nm,1.1s						
LCMT	**Little Creek M**	83.78	45	P	**P**	**20 23 00.6**	**-0.6**
F04A	**Amboy**	83.99	34	P	**P**	**20 23 00.9**	**-0.9**
CCUT	**Cedar City**	84.02	45	P	**P**	**20 23 01.3**	**-1.1**
KNB	**Kanab**	84.06	46	P	**P**	**20 23 03.3**	**+0.7**
KNB				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KNB	**Kanab**	84.06	46	P	**P**	**20 23 03.3**	**+0.7**
U15A	**North Rim**	84.08	46	P	**P**	**20 23 01.7**	**-1.2**
U15A				IAmb	IAmb	20 23 17.4	
	comp=Z,15nm,1.0s						
WUAZ	**Wupatki**	84.18	47	P	**P**	**20 23 01.0**	**-2.3**
SZCU	**Shurtz Canyon**	84.22	45	P	**P**	**20 23 02.9**	**-0.6**
MDJ	**Mudanjiang**	84.28	324		**P**	**20 23 04.1**	**+0.8**
I07A	**Izee**	84.32	37	P	**P**	**20 23 02.6**	**-1.2**
I07A				IAmb	IAmb	20 23 16.9	
	comp=Z,12nm,1.2s						
J08A	**Circle Bar Ran**	84.43	38	P	**P**	**20 23 03.3**	**-1.0**
J08A				IAmb	IAmb	20 23 17.9	
	comp=Z,9.3nm,0.9s						
G06A	**Carlson Farm,**	84.46	35	P	**P**	**20 23 03.7**	**-0.6**
G06A				IAmb	IAmb	20 23 17.4	
	comp=Z,16nm,1.2s						
SYO	**Syowa Base**	84.48	192	⇓iP	**P**	**20 23 03.8**	**-0.3**
SYO	**Syowa Base**	84.48	192	⇓epP	**P**	**20 23 07.8**	**+3.7**
PKCU	**Pink Cliffs**	84.64	45	P	**P**	**20 23 03.3**	**-2.5**
ELK	**Elko**	84.72	41	P	**P**	**20 23 04.1**	**-1.8**
ELK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ELK	**Elko**	84.72	41	P	**P**	**20 23 04.1**	**-1.8**
ELK				IAmb	IAmb	20 23 19.5	
	comp=Z,6.5nm,1.1s						
D05A	**Enumclaw**	85.06	33	P	**P**	**20 23 07.3**	**+0.1**
MTPU	**Mount Pierson**	85.06	45	P	**P**	**20 23 07.5**	**-0.4**
SNAA	**Sanae**	85.09	178	P	**P**	**20 23 09.4**	**+2.2**
VNA3	**Neumayer Olymp**	85.13	175	P	**P**	**20 23 10.1**	**+2.7**
GRNR	**Gornyy**	85.18	332	eP	**P**	**20 23 07.1**	**-0.6**
GRNR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GRNR				MLR	MLR		
	comp=Z,190nm,20.0s						
MSU	**Marysvale**	85.33	45	P	**P**	**20 23 08.6**	**-0.5**
MSU	**Marysvale**	85.33	45	P	**P**	**20 23 08.6**	**-0.5**
G08A	**Pilot Rock**	85.40	36	P	**P**	**20 23 09.1**	**0.0**
G08A				IAmb	IAmb	20 23 22.8	
	comp=Z,14nm,1.0s						
PLCA	**Paso Flores**	85.52	133	LR	LR	20 52 36.7	
	comp=Z,157nm,21.6s,baz=286,slow=30						
VNA2	**Neumayer--Watz**	85.60	176	P	**P**	**20 23 11.5**	**+1.8**
	baz=170,slow=4.1						
IPM	**Ipoh**	85.95	277	P	**P**	**20 23 12.8**	**+0.4**
CN2	**Changchun**	86.07	321	eP	**P**	**20 23 12.1**	**-0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KLR	**Kul'dur**	86.25	328	iP	**P**	**20 23 11.3**	**-1.7**
KLR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TMUT	**Trail Mountain**	86.40	44	P	**P**	**20 23 14.1**	**-0.3**
UBPT	**Khong Chiam**	86.40	288	P	**P**	**20 23 16.1**	**+1.5**
UBPT				IAmb	IAmb	20 23 29.8	
	comp=Z,15nm,1.2s						
TX31	**Lajitas Ar. Si**	86.53	56	P	**P**	**20 23 13.1**	**-1.9**
TX32	**Lajitas Array**	86.53	56	P	**P**	**20 23 13.0**	**-2.0**
TXAR	**Lajitas Array**	86.53	56	P	**P**	**20 23 15.4**	**+0.4**
	comp=Z,1.0nm,1.0s,baz=195,slow=7.8,SNR=3.5						
TXAR				LR	LR	20 56 34.0	
	comp=Z,132nm,18.7s,baz=0.0,slow=32						
TXAR	**Lajitas Array**	86.53	56	P	**P**	**20 23 14.6**	**-0.4**
TXAR	**Lajitas Array**	86.53	56	P	**P**	**20 23 14.6**	**-0.4**
KULM	**Kulim**	86.62	277	P	**P**	**20 23 16.9**	**+1.2**
KULM				IAmb	IAmb	20 23 18.2	
	comp=Z,17nm,1.0s						
SRU	**San Rafael Swe**	86.74	45	P	**P**	**20 23 14.0**	**-2.0**
SRU				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SRU	**San Rafael Swe**	86.74	45	P	**P**	**20 23 14.0**	**-2.0**
F10A	**Beach Ranch, E**	86.77	36	P	**P**	**20 23 14.1**	**-1.8**
F10A				IAmb	IAmb	20 23 30.7	
	comp=Z,5.9nm,1.1s						
TIA	**Tai'an**	87.03	312	P	**P**	**20 23 18.7**	**+1.5**
TIA				pmax	pmax		
	comp=Z,28nm,1.3s						
RPSI	**Rantau Prapat**	87.16	274	P	**P**	**20 23 18.3**	**-0.1**
MA2	**Magadan**	87.20	343	P	**P**	**20 23 17.4**	**-0.1**
	comp=Z,5.8nm,0.8s,baz=121,slow=2.3,SNR=5.5						
MA2	**Magadan**	87.20	343	iP	**P**	**20 23 15.8**	**-1.6**
MA2				pmax	pmax		
	comp=Z,11nm,1.1s						
MA2	**Magadan**	87.20	343	P	**P**	**20 23 17.0**	**-0.4**
MA2				IAmb	IAmb	20 23 29.9	
	comp=Z,12nm,1.0s						
PSI	**Prapat**	87.21	274	P	**P**	**20 23 18.3**	**-0.5**
PSI				pmax	pmax		
	comp=Z,28nm,1.0s						
ANMO	**Albuquerque**	87.28	50	iP	**P**	**20 23 16.1**	**-2.6**
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.3s						
ANMO	**Albuquerque**	87.28	50	P	**P**	**20 23 17.1**	**-1.6**
TRF	**Thorofare Moun**	88.73	11	P	**P**	**20 23 24.6**	**-0.3**
PDAR	**Pinedale Array**	89.36	42	P	**P**	**20 23 28.4**	**-0.1**
	comp=Z,0.7nm,0.9s,baz=158,slow=1.0,SNR=2.6						
PDAR				LR	LR	21 00 52.6	
	comp=Z,246nm,18.9s,baz=346,slow=34						
PDAR	**Pinedale Array**	89.36	42	P	**P**	**20 23 27.4**	**-1.0**
ENH	**Enshi**	89.69	303	P	**P**	**20 23 31.0**	**+1.0**
SEY	**Seymchan**	89.72	346	P	**P**	**20 23 29.4**	**+0.1**
	comp=Z,8.2nm,1.0s,baz=155,slow=6.6,SNR=14						
SEY	**Seymchan**	89.72	346	iP	**P**	**20 23 28.5**	**-0.8**
WRH	**Wood River Hil**	90.06	11	P	**P**	**20 23 30.7**	**-0.2**
WRH				IAmb	IAmb	20 23 49.8	
	comp=Z,9.4nm,1.2s						
BCAR	**Beaver Creek A**	90.12	15	P	**P**	**20 23 30.4**	**-0.9**
DOT	**Dot Lake**	90.12	13	P	**P**	**20 23 31.2**	**0.0**
DOT				IAmb	IAmb	20 23 44.3	
	comp=Z,10nm,0.9s						
CCB	**Clear Creek Bu**	90.28	11	P	**P**	**20 23 30.9**	**-0.9**
CCB				IAmb	IAmb	20 23 44.2	
	comp=Z,9.0nm,0.9s						
SLVN	**Son La**	90.30	293	P	**P**	**20 23 32.6**	**-0.5**
IL31		90.56	12	P	**P**	**20 23 32.2**	**-1.0**
ILAR	**Eielson Array**	90.56	12	P	**P**	**20 23 32.8**	**-0.4**
	comp=Z,6.1nm,1.3s,baz=224,slow=6.1,SNR=8.7						
ILAR	**Eielson Array**	90.56	12	P	**P**	**20 23 31.8**	**-1.4**
ILAR	**Eielson Array**	90.56	12	P	**P**	**20 23 31.8**	**-1.4**
IMAR	**Indian Mountai**	90.56	9	P	**P**	**20 23 32.5**	**-0.7**
PBKT	**Sadao Pong**	90.87	288	P	**P**	**20 23 37.8**	**+2.1**
ZEA	**Zeya**	91.33	330	eP	P	20 23 43.6	+6.6
DAWY	**Dawson**	91.53	15	P	**P**	**20 23 38.4**	**+0.6**
DAWY				IAmb	IAmb	20 23 51.8	
	comp=Z,11nm,1.0s						
EGAK	**Eagle**	91.73	14	P	**P**	**20 23 38.4**	**-0.2**
EGAK				IAmb	IAmb	20 23 52.5	
	comp=Z,11nm,1.1s						
XAN	**Xi'an**	91.83	306	P	**P**	**20 23 41.5**	**+1.6**
XAN				pmax	pmax		
	comp=Z,31nm,1.0s						
XAN				pmax	pmax		
	comp=Z,350nm,4.7s						
XAN				LR	LR		
	comp=Z,350nm,17.1s						
XAN				LR	LR		
	comp=Z,460nm,18.2s						
XAN				LR	LR		
	comp=Z,560nm,18.1s						
XAN	**Xi'an**	91.83	306	P	**P**	**20 23 40.9**	**+1.0**
XAN				pmax	pmax		
	comp=Z,27nm,0.9s						
XAN	**Xi'an**	91.83	306	P	**P**	**20 23 40.9**	**+1.0**
BILL	**Bilibino**	92.13	353	⇓eP	**P**	**20 23 40.3**	**-0.1**
BILL				*SP	**pP**	**20 23 46.0**	**-2.4**
BILL				e		20 23 53.2	
BILL				S	**SKKSac**	**20 34 23.0**	**-4.9**
BILL				e		20 40 22.9	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,404nm,17.0s						
HIA	**Hailar**	92.45	324	iP	**P**	**20 23 41.3**	**-1.1**
HIA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KMI	**Kunming**	92.85	296	P	**P**	**20 23 47.5**	**+2.5**
KMI				pmax	pmax		
	comp=Z,28nm,0.9s						
KMI				LR	LR		
	comp=Z,250nm,14.8s						
KMI				LR	LR		
	comp=Z,250nm,16.9s						
KMI				LR	LR		
	comp=Z,320nm,18.2s						
BMAR	**Burnt Mountain**	93.36	11	P	**P**	**20 23 46.4**	**+0.2**
CM31	**Chiang Mai Arr**	93.40	289	P	**P**	**20 23 50.0**	**+2.6**
CMAR	**Chiang Mai Arr**	93.40	289	P	**P**	**20 23 48.6**	**+1.2**
	comp=Z,13nm,0.9s,baz=127,slow=3.1,SNR=72						
CMAR				LR	LR	21 05 56.6	
	comp=Z,109nm,18.8s,baz=275,slow=36						
CMAR	**Chiang Mai Arr**	93.40	289	P	**P**	**20 23 48.3**	**+0.9**
CMAR	**Chiang Mai Arr**	93.40	289	P	**P**	**20 23 48.3**	**+0.9**
CHTO	**Chiang Mai**	93.54	289	P	**P**	**20 23 49.1**	**+1.0**
CHTO				pmax	pmax		
	comp=Z,17nm,1.0s						
CHTO	**Chiang Mai**	93.54	289	P	**P**	**20 23 49.1**	**+1.0**
YKA	**Yellowknife Ar**	98.07	24	P	**P**	**20 24 07.4**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=233,slow=4.5,SNR=6.3						
SONM	**Songino Array**	99.53	318	P	**Pdif**	**20 24 14.9**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=108,slow=4.7,SNR=3.1						
SONM				PP	**PP**	**20 28 14.9**	**-4.1**
	comp=Z,0.2nm,0.5s,baz=111,slow=7.9,SNR=3.8						
SONM	**Songino Array**	99.53	318	P	**Pdif**	**20 24 14.8**	**+0.1**
SONM				pmax	pmax		
	comp=Z,1.0nm,1.1s						
SONM	**Songino Array**	99.53	318	P	**Pdif**	**20 24 14.8**	**+0.1**
GTA	**Gaotai**	100.69	308	eP	**Pdif**	**20 24 25.2**	**+5.1**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.5s						
MKAR	**Makanchi Array**	114.95	312	PKiKP	PKPdf	20 29 12.3	-0.1
	comp=Z,0.4nm,0.6s,baz=90,slow=1.4,SNR=2.1						
MKAR	**Makanchi Array**	114.95	312	iPKIKP	PKPdf	20 29 11.9	-0.5
MKAR	**Makanchi Array**	114.95	312		PKPdf	20 29 11.9	-0.5
KURBB	**Kurchatov Arra**	117.82	316	PKP	**PKPdf**	**20 29 16.4**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=97,slow=2.2,SNR=5.5						
KSH	**Kashi**	118.55	303	PKP	PKiKP	20 29 28.6	+8.9
KSH				sPKP		20 30 11.9	
KSH				PP	**PP**	**20 30 39.9**	**+2.5**
KSH				PKS	PKSdf	20 33 04.5	+8.0
KSH				SKKS		20 37 03.1	
BVAR	**Borovoye Array**	122.86	319	PKP	**PKiKP**	**20 29 27.5**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=202,slow=1.6,SNR=3.7						
ARU	**Arti**	128.96	325	iPKIKP	**PKPdf**	**20 29 38.2**	**-0.7**
ARU						20 31 47.0	
ARU						20 36 48.5	
ARU				SS	SS	20 49 08.0	+4.5
OBN	**Obninsk**	140.44	332	⇓ePKHKP	**PKPdf**	**20 29 56.3**	**-4.1**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						

OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MBAR	Mbarara	145.23	230		PKPdf	20 30 11.1	+0.6
ANN	Anapa	145.80	317	*i* PKHKP	PKPbc	20 30 10.4	-0.3
ANN				pmax	pmax		
	comp=Z,83nm,1.5s						
SUW	Suwalki	146.36	340	*e*PKP	PKPab	20 30 13.0	0.0
SUW	Suwalki	146.36	340		PKPdf	20 30 11.4	+0.6
AKASG	Malin Array Be	146.70	331	PKPbc	PKPbc	20 30 12.7	-0.6
	comp=Z,5.1nm,0.8s,baz=39,slow=4.2,SNR=20						
AKASG	Malin Array Be	146.70	331		PKPdf	20 30 12.1	+0.6
AKBB	Malin Array Si	146.70	331		PKPdf	20 30 12.2	+0.7
MUD	Monsted U'grnd	146.77	355	*i* P	PKiKP	20 30 24.0	+8.1
MUD	Monsted U'grnd	146.77	355	*i* PKIKP	PKiKP	20 30 24.0	+8.1
BSD	Bornholm Skovb	147.38	349	*i* P	PKiKP	20 30 27.3	+10
BSD	Bornholm Skovb	147.38	349	*i* PKIKP	PKiKP	20 30 27.3	+10
SORM	Soroca	148.93	329	⇓P	PKPbc	20 30 19.4	+0.2
MILM	Milestii Mici	149.53	326	⇑P	PKPbc	20 30 20.7	-0.1
LVV	L'vov	149.54	335	*e*PKIKP	PKPbc	20 30 20.6	-0.2
KWP	Kalwaria Pacla	150.19	336	PKIKP	PKPbc	20 30 22.8	+0.4
KWP	Kalwaria Pacla	150.19	336		PKPbc	20 30 22.8	+0.4
BR131	Keskin Array S	150.59	311		PKPbc	20 30 23.4	-0.5
BRTR	Keskin Array B	150.59	311	PKPbc	PKPbc	20 30 24.1	+0.3
	comp=Z,3.0nm,0.8s,baz=138,slow=4.4,SNR=9.6						
OJC	Ojcow	150.69	340	*e*PKP	PKPbc	20 30 23.2	-0.3
OJC	Ojcow	150.69	340	*e*PKIKP	PKPbc	20 30 23.2	-0.3
BURAR	Bucovina Array	150.76	331	⇓P	PKiKP	20 30 25.3	+0.7
BURAR	Bucovina Array	150.76	331	⇓PKIKP	PKiKP	20 30 26.2	+1.6
BURAR	Bucovina Array	150.76	331		PKiKP	20 30 24.8	+0.2
TESR	Tescani	150.89	328	⇓P	PKPbc	20 30 24.1	-0.1
KOLS	Kolonicke sedl	150.93	336	*e*PKIKP	PKiKP	20 30 24.9	+0.1
KOLS	Kolonicke sedl	150.93	336	*e*PKP	PKiKP	20 30 24.9	+0.1
CFR	Carcaliu	151.04	324	⇑P	PKPbc	20 30 22.2	-2.3
TOPG	Topolog	151.11	324	⇑P	PKPbc	20 30 24.3	-0.4
ANTO	Ankara	151.11	311	⇑P	PKiKP	20 30 26.2	+0.7
ANTO	Ankara	151.11	311	⇑PKIKP	PKiKP	20 30 25.7	+0.2
KSP	Ksiaz	151.11	345	*e*PKP	PKPbc	20 30 24.7	+0.2
KSP	Ksiaz	151.11	345	*e*PKIKP	PKPbc	20 30 24.7	+0.2
UZH	Uzhgorod	151.17	335	*e*PKHKP	PKPdf	20 30 20.8	+2.0
UZH				*e*		20 30 24.9	
UZH				*e*		20 30 33.5	
UZH				*e*		20 30 37.9	
NIE	Niedzica	151.23	339	*e*PKP	PKiKP	20 30 26.6	+1.2
NIE	Niedzica	151.23	339	*e*PKIKP	PKiKP	20 30 26.6	+1.2
VRI	Vrincioaia	151.31	327	⇓P	PKPbc	20 30 24.9	-0.3
VRI	Vrincioaia	151.31	327	⇑PKP2	PKPab	20 30 30.4	-2.8
MMAI	Mount Meron Ar	151.35	296	PKPbc	PKiKP	20 30 27.0	+0.8
	comp=Z,7.9nm,0.9s,baz=101,slow=6.0,SNR=2.8						
PLOR	Plostina	151.35	327	⇓P	PKPbc	20 30 24.3	-1.0
PLOR	Plostina	151.35	327	⇓PKIKP	PKPbc	20 30 24.3	-1.0
CLL	Collm	151.36	349	*i* PKPbc	PKiKP	20 30 25.9	+0.4
	comp=Z,18nm,1.3s						
CLL				*e*PKPab	sPKPdf	20 30 31.0	+0.8
CLL				*i* pPKPbc	sPKPbc	20 30 38.0	+1.8
	comp=Z,26nm,1.0s						
CLL				*i*		20 30 45.8	
CLL	Collm	151.36	349	*i* PKIKP	PKiKP	20 30 25.9	+0.4
CLL				*i*		20 30 38.0	
CLL				pmax	pmax		
	comp=Z,18nm,1.3s						
CLL				pmax	pmax		
	comp=Z,26nm,1.0s						
CLL	Collm	151.36	349		PKPbc	20 30 25.0	-0.1
OSTC	Ostas	151.40	345	*e*PKP	PKiKP	20 30 26.0	+0.3
OSTC				*e*x	x	20 30 38.7	
CHVC	Chvalec	151.41	345	*e*PKP	PKPbc	20 30 25.3	+0.1
CHVC				*e*x	x	20 30 38.5	
HARR	Harsova	151.47	324	⇑P	PKPbc	20 30 25.2	-0.3
HARR	Harsova	151.47	324	⇑PKIKP	PKPbc	20 30 25.2	-0.3
TRPA	Tarpa	151.48	335	⇓P	PKiKP	20 30 25.9	+0.1
OKC	Ostrava-Krasne	151.53	342	*e*PKP	PKPab	20 30 38.3	+4.3
DPC	Dobruska-Polom	151.56	344	*e*PKP	PKiKP	20 30 26.4	+0.3
DPC				*e*x	x	20 30 39.0	
DPC	Dobruska-Polom	151.56	344	*e*PKIKP	PKiKP	20 30 26.4	+0.3
DPC				*e*		20 30 39.0	
BRG	Berggiesshubel	151.60	348	*e*PKP	PKPbc	20 30 25.4	-0.2
	comp=Z,22nm,1.6s						
BRG	Berggiesshubel	151.60	348	*i* PKP	PKPab	20 30 38.4	+4.2
	comp=Z,24nm,0.8s						
BRG	Berggiesshubel	151.60	348	*e*PKIKP	PKPbc	20 30 25.4	-0.2
BRG				*i*		20 30 38.4	
BRG				pmax	pmax		
	comp=Z,22nm,1.6s						
BRG				pmax	pmax		
	comp=Z,25nm,0.8s						
KRLC	Kraliky	151.69	343	*e*PKP	PKPbc	20 30 26.0	0.0
KRLC				*e*x	x	20 30 39.0	
LANS	Liptovska Anna	151.73	339	*e*PKP2	PKPab	20 30 40.2	+5.3
LANS	Liptovska Anna	151.73	339	*e*PKP	PKPab	20 30 40.2	+5.3
MORC	Moravsky Berou	151.76	342	⇑P	PKiKP	20 30 27.0	+0.5
MORC	Moravsky Berou	151.76	342	*e*PKP	PKiKP	20 30 26.4	-0.1
MORC	Moravsky Berou	151.76	342		PKiKP	20 30 26.5	-0.1
PVCC	Panska Ves	151.80	347	*e*x	PKPab	20 30 39.2	+4.1
DOPR	Dopca	151.89	328	⇓P	PKiKP	20 30 26.8	0.0
ISR	Istrita	151.92	326	⇓PKP2	PKPab	20 30 37.3	+1.5
MLR	Muntele Rosu	151.96	327	PKPbc	PKiKP	20 30 27.1	0.0
	comp=Z,2.0nm,0.8s,baz=3.0,slow=3.0,SNR=4.1						
MLR	Muntele Rosu	151.96	327	⇓P	PKPbc	20 30 27.0	+0.2
MLR	Muntele Rosu	151.96	327		PKPbc	20 30 27.0	+0.2
PRU	Pruhonice	152.31	346	*e*PKP	PKPab	20 30 39.8	+2.6
GOPC	GO Pecny, Ondr	152.33	346	*e*PKP	PKPab	20 30 40.2	+2.9
VOIR		152.44	328	⇑P	PKiKP	20 30 29.8	+1.7
VOIR		152.44	328	⇑PKIKP	PKiKP	20 30 33.0	+4.9
VRAC	Vranov	152.45	343	⇓P	PKiKP	20 30 29.1	+1.2
VRAC	Vranov	152.45	343	*e*PKP	PKiKP	20 30 28.4	+0.5
VRAC				*e*		20 30 38.4	
DRGR		152.48	333	⇑P	PKiKP	20 30 28.5	+0.4
DRGR		152.48	333	⇑PKIKP	PKiKP	20 30 28.6	+0.4
VYHS	Vyhne	152.51	339	*e*PKIKP	PKPab	20 30 38.6	+0.5
VYHS	Vyhne	152.51	339	*e*PKP	PKPab	20 30 38.6	+0.5
PSZ	Piszkesteto	152.65	337	⇑P	PKPab	20 30 39.4	+0.5
PSZ	Piszkesteto	152.65	337		PKPab	20 30 39.3	+0.5
ARR	Arges	152.69	328	⇑P	PKiKP	20 30 29.5	+0.9
KRUC	Moravsky	152.72	343	*e*PKP	PKPbc	20 30 28.2	0.0
KRUC				*e*		20 30 39.4	
MODS	Modra-Piesok	153.10	341	*e*PKP	PKPab	20 30 40.6	0.0
GRF	Grafenberg Arr	153.21	351	*e*PKPab	PKPab	20 30 39.5	-1.5
	baz=12,slow=3.9						
KHC	Kasperske Hory	153.33	347	*e*PKP	PKPab	20 30 42.1	+0.5
KHC				*e*x	x	20 30 53.8	
GZR	Gura Zlata	153.54	331	⇑P	PKiKP	20 30 33.1	+2.8
GZR	Gura Zlata	153.54	331	⇑PKIKP	PKPbc	20 30 26.6	-3.6
GEC2	GERESS Array S	153.58	347		PKPab	20 30 41.8	-0.9
GERES	GERESS Array B	153.58	347	PKPbc	PKPbc	20 30 30.0	-0.3
	comp=Z,0.5nm,0.8s,baz=28,slow=4.4,SNR=3.0						
GERES				PKPab	PKPab	20 30 42.7	0.0
	comp=Z,2.5nm,0.9s,baz=39,slow=3.8,SNR=8.9						
BZS	Buzias	153.88	332	⇓P	PKPbc	20 30 30.5	-0.3
BZS	Buzias	153.88	332	⇑PKIKP	PKiKP	20 30 31.4	+0.5
CONA	Conrad Observa	153.91	343	*i* PKiKP	PKiKP	20 30 31.7	+0.7
	comp=Z,5.3nm,1.3s						
CONA				*e*pPKPab	PKPab	20 30 44.1	-0.1
	comp=Z,14nm,1.5s						
CONA	Conrad Observa	153.91	343	*i* PKiKP	PKPab	20 30 57.4	+13
	comp=Z,10nm,1.0s						
HERR	Herculane	154.10	330	⇓P	PKPbc	20 30 29.4	-2.0
MOA	Molln	154.39	345	*i* PKPab	PKPab	20 30 44.5	-1.6
	comp=Z,4.0nm,1.0s						
MOA	Molln	154.39	345	*i* PKiKP	PKPab	20 30 59.5	+13
	comp=Z,6.8nm,1.2s						
ARSA	Arzberg	154.62	343	*e*PKPab	PKPab	20 30 45.0	-2.1
	comp=Z,2.9nm,1.1s						
ARSA	Arzberg	154.62	343	*i* PKiKP	PKPab	20 30 59.8	+13
	comp=Z,3.4nm,0.7s						
SOKA	Soboth	155.28	343	*e*pPKPdf	PKPdf	20 30 25.9	+0.9
	comp=Z,4.0nm,1.3s						
SOKA				*e*pPKiKP	sPKPdf	20 30 36.6	+0.8
	comp=Z,5.4nm,1.2s						
SOKA				*i* pPKPab	PKPab	20 30 50.6	+0.6
	comp=Z,9.7nm,1.4s						
SOKA	Soboth	155.28	343	*i* PKiKP	PKPab	20 31 02.7	+13
	comp=Z,11nm,1.1s						
VTS	Vitosha	155.38	326	⇓P	PKPab	20 30 51.6	+1.0
OBKA	Obir	155.56	343	*i* PKiKP	PKPab	20 31 03.3	+12
	comp=Z,7.4nm,1.1s						
MYKA	Terra Mystica	155.68	345	*i* pPKiKP	PKPdf	20 30 37.3	+12
	comp=Z,4.2nm,1.0s						
MYKA				*i* PKPab	PKPab	20 30 50.0	-1.7
	comp=Z,7.8nm,1.7s						
MYKA	Terra Mystica	155.68	345	*i* PKiKP	PKPab	20 31 03.8	+12
	comp=Z,13nm,1.7s						
ABTA	Abfaltersbach	155.82	347	*i* pPKPdf	pPKPdf	20 30 37.6	+3.8
	comp=Z,9.6nm,1.6s						
NRCA	Norcia	159.35	342		PKPab	20 31 08.0	+0.4

IDC ***12*** *20:21:56.4±0.8, 28.°26N×56.°95E, h0^{km}, mb4.1/20, mb1 4.2/22, mb1mx4.0/52, mbtmp4.1/22, ML3.8/2, Error ellipse: s-maj=18.4km s-min=15.6km az=6.0*

MOS ***12*** *20:21:57.5±1.2, 28.°18N×56.°99E, h25^{km}, mb4.4/13, Error ellipse: s-maj=8.2km s-min=5.5km az=72.9*

DSN ***12*** *20:21:58.1±1.0, 28.°37N×57.°52E, h10^{km}, ML5.0/8, Error ellipse: s-maj=36.0km s-min=9.4km az=115.0*

NEIC ***12*** *20:21:58.0±2.2, 28.°33N±0.°09×56.°9E±0.°1, h10^{km}±2^{km}, Error ellipse: s-maj=20.1km s-min=12.0km az=121.0*

TEH ***12*** *20:21:59.5, 28.°37N×57.°09E, h10^{km}, ML4.2*

THR ***12*** *20:22:00.5±0.5, 28.°22N×57.°09E, h14^{km}±8^{km}, ML4.4*

OMAN ***12*** *20:22:00.5±99.0, 28.°36N×57.°51E, h43^{km}±999^{km}, mb4.2/1, ml4.5/15, ms2.9/1, Error ellipse: s-maj=3353.0km s-min=83.7km az=294.0*

ISC 12 20:21:59.8±1.0**, 28.°31N**±0.°02×**56.°99E**±0.°03**, h19**^{km}±3^{km}**, n220,** σ1^{s}**74**/229**, mb4.2**/44**, 3C, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHNJ	Kahnooj	0.73	120	*e*Pg	Pg	20 22 12.9	-1.2
KHNJ				*e*Sg	Sg	20 22 23.1	-0.7
NIAN	Nian	0.76	191	*e*Pg	Pn	20 22 15.5	0.0
NIAN				*e*Sg	Sn	20 22 29.5	+3.0
NIAN				*e*		20 22 39.1	
IBND	Bandar-abas	0.94	205	*e*Pg	Pn	20 22 19.7	+1.6
IBND				*e*		20 22 49.4	
GENO	Geno	1.16	219	*e*Pg	Pn	20 22 23.4	+2.2
GENO				*e*		20 22 42.0	
NGRK	Negar Kerman	1.35	350	*e*Pg	Pg	20 22 24.6	-1.4
NGRK				*e*		20 22 49.6	
CHMN	Cheshme madani	1.62	17	*e*Pn	Pb	20 22 28.4	-0.9
CHMN				*e*		20 22 52.2	
KRBR	Kerman	1.68	353	*e*Pn	Pg	20 22 33.3	+1.1
KRBR				*e*Sg	Sg	20 22 56.9	+2.7
KRBR				IAML		20 23 05.9	
	comp=E,2µm,0.6s						
KRBR				IAML		20 23 06.4	
	comp=N,4µm,0.8s						
KRBR	Kerman	1.68	353	*e*Pn	Pg	20 22 33.3	+1.1
TVBK	TV Kerman	1.68	353	*e*Pn	Pg	20 22 30.1	-2.2
TVBK				*e*		20 23 00.9	
KHGB	Koh Gabri	2.11	348	*e*Pn	Pg	20 22 36.9	-3.5
KHGB				*e*		20 23 11.9	
SHME	Shamm	2.38	199	*e*P	Pb	20 22 39.5	-2.6
	SNR=33						
SHME	Shamm	2.38	199	*e*Pn	Pb	20 22 39.4	-2.6
LAR1	LAR	2.40	255	*e*Pn	Pg	20 22 42.5	-3.4
BANOM	Banah	2.46	195	*e*P	Pb	20 22 40.4	-2.9
	SNR=51						
BANOM				S	Sb	20 23 14.6	+1.3
BANOM	Banah	2.46	195	P	Pb	20 22 40.5	-2.9
	SNR=51						
BANOM				S	Sg	20 23 17.3	-1.5
BANOM	Banah	2.46	195	*e*Pn	Pb	20 22 40.6	-2.8
JHRM	Jahrom	3.01	275	*e*Pn	Pb	20 22 49.6	-3.3
UMQ	Umm Al-Quwin	3.02	203	*i* P	Pb	20 22 50.0	-2.9
	SNR=6.5						
UMQ	Umm Al-Quwin	3.02	203	P	Pb	20 22 50.0	-2.9
	SNR=6.5						
UMQ				S	Sb	20 23 30.0	+0.7
UMQ	Umm Al-Quwin	3.02	203	*e*Pn	Pb	20 22 50.1	-2.8
MSFE	Esma-Masafi	3.03	194	*e*Pn	Pn	20 22 49.0	+2.2
MDH	Madha	3.06	192	P	Pn	20 22 49.3	+2.1
MDH	Madha	3.06	192	P	Pb	20 22 49.6	-4.1
MDH	Madha	3.06	192	*e*Pn	Pn	20 22 49.4	+2.2
UOSS	Minazif	3.42	192	P	Pn	20 22 54.6	+2.4
UOSS	Minazif	3.42	192	P	Pn	20 22 54.7	+2.6
UOSS	Minazif	3.42	192	*e*Pn	Pn	20 22 54.8	+2.6
UOSS	Minazif	3.42	192		Pn	20 22 52.7	+0.5
NAZ	Nazwa, Dubai	3.52	200	*i* P	Pn	20 22 56.3	+2.9
	SNR=16						
NAZ	Nazwa, Dubai	3.52	200	P	Pb	20 22 56.5	-5.0
	SNR=16						
NAZ				S	Sn	20 23 38.2	+3.6
NAZ	Nazwa, Dubai	3.52	200	*e*Pn	Pn	20 22 56.2	+2.8
LMD1	Lamerd	3.52	255	*e*Pn	Pb	20 22 58.2	-3.4
HATD	Hatta, Dubai	3.55	193	P	Pn	20 22 55.6	+1.6
HATD	Hatta, Dubai	3.55	193	*e*Pn	Pn	20 22 55.8	+1.8
SZD1	Zahaedan-tmp	3.59	70	*e*Pn	Pn	20 22 56.5	+1.8
ASHO	Ashiyiah	3.71	193	*i* P	Pn	20 22 58.7	+2.6
	SNR=13						
ASHO	Ashiyiah	3.71	193	P	Pn	20 22 58.3	+2.1
	SNR=13						
ASHO	Ashiyiah	3.71	193	*e*Pn	Pn	20 22 58.4	+2.3
FAQ	Al Faqa, Dubai	3.76	200	P	Pn	20 22 59.6	+2.8
FAQ				S	Sn	20 23 43.1	+2.5
FAQ	Al Faqa, Dubai	3.76	200	*e*Pn	Pn	20 22 59.7	+2.8
NHDN	Nehbandan	4.06	40	*e*Pn	Pn	20 23 03.0	+1.9
BSRN	Basiran	4.09	26	*e*Pn	Pn	20 23 05.3	+3.9
BSRN	Basiran	4.09	26	*e*Pn	Pn	20 23 05.3	+3.9
CHBR	Chabahar	4.12	130	*e*Pn	Pn	20 23 03.3	+1.5
CHBR	Chabahar	4.12	130	*e*Pn	Pn	20 23 03.3	+1.5
AJN	Ajban	4.14	206	*i* P	Pb	20 23 05.9	-6.2
	SNR=8.7						
AJN	Ajban	4.14	206	P	Pn	20 23 04.7	+2.7
	SNR=12						
AJN	Ajban	4.14	206	*e*Pn	Pn	20 23 04.6	+2.6
SOHO	SOHO	4.18	186	P	Pn	20 23 01.9	-0.6
	SNR=14						
SOHO	SOHO	4.18	186	*e*Pn	Pn	20 23 02.4	-0.2
ALNE	Al Ain	4.38	195	*e*Pn	Pn	20 23 06.6	+1.2
YZKH	Yazd	4.57	334	*e*Pn	Pb	20 23 12.8	-6.6
YZKH	Yazd	4.57	334	*e*Pn	Pb	20 23 12.8	-6.6
ISAD	Sadrabad	4.59	322	*e*Pn	Pn	20 23 11.7	+3.2
TPRV	Parvadeh(Tabas	4.71	357	*e*Pn	Pn	20 23 12.1	+2.1
HOQ	Hoqain	4.72	176	P	Pn	20 23 09.7	-0.3
	SNR=28						
HOQ				S	Sn	20 24 02.5	-1.7
BIDO	Bidbid	4.88	168	P	Pn	20 23 11.9	-0.3
	SNR=17						
BIDO				S	Sn	20 24 05.7	-2.4
BIDO	Bidbid	4.88	168	*e*Pn	Pn	20 23 12.1	-0.1
ARQ	Araqi	4.97	185	P	Pn	20 23 15.8	+2.3
	SNR=24						
ARQ				S	Sn	20 24 14.5	+4.1
WSAR	Wadi Sarin	5.26	163	Pn	Pn	20 23 17.6	+0.1
	comp=N,15nm,0.3s,baz=4.7,slow=10.0,SNR=298						
WSAR				Sn	Sn	20 24 15.2	-2.4
	comp=N,82nm,0.3s,baz=229,slow=22,SNR=19						
WSAR	Wadi Sarin	5.26	163	P	Pn	20 23 18.2	+0.8
	SNR=302						
IRAM	Ramesheh	5.30	312	*e*Pn	Pn	20 23 21.1	+2.9
SMDO	Samad	5.31	169	P	Pn	20 23 19.1	+0.8
	SNR=14						
SMDO				S	Sn	20 24 19.4	+0.3
	SNR=6.0						
MZWR	Madinat Zayed	5.32	212	*e*Pn	Pn	20 23 19.8	+1.5
TABS	Tabas	5.32	1	*e*Pn	Pn	20 23 23.0	+4.6
TABS	Tabas	5.32	1	*e*Pn	Pn	20 23 23.0	+4.6
BSY	Bisya	5.54	178	P	Pn	20 23 24.0	+2.6
	SNR=12						
TNSJ	Nastanj	5.65	357	*e*Pn	Pn	20 23 25.9	+3.1
GHWR	Ruwais	5.69	221	*e*Pn	Pn	20 23 24.6	+1.2
UMZA	Um Al Zommool	5.81	197	*e*Pn	Pn	20 23 26.4	+1.4
WBK	Wadi Bani Khal	5.95	162	P	Pn	20 23 27.3	+0.3
	SNR=52						
WBK				S	Sn	20 24 31.7	-2.9
JMDO	Jabal Madar	6.00	170	P	Pn	20 23 29.1	+1.5
	SNR=8.4						
SHRT	Shahrakht	6.03	27	*e*Pn	Pn	20 23 32.0	+4.0
SHRT	Shahrakht	6.03	27	*e*Pn	Pn	20 23 32.0	+4.0
IZEF	Zefreh	6.09	320	*e*Pn	Pn	20 23 31.8	+2.8
SLWR	Sila	6.36	230	*e*Pn	Pn	20 23 34.2	+1.6
JLN	Jalan Bani Buh	6.51	160	S	Sn	20 24 49.0	+0.5
	SNR=5.6						
KRSH	Karshahi	7.01	325	*e*Pn	Pn	20 23 44.1	+2.5
MHTO	MHTO	7.34	173	P	Pn	20 23 47.5	+1.4
	SNR=12						
MHTO				S	Sn	20 25 06.3	-2.7
HRA	Herat	7.54	35		Pn	20 23 47.0	-1.9
IMYA	Miami	8.43	17	*e*Pn	Pn	20 24 02.9	+1.8
GEYT	Alibeck	9.64	5	Pn	Pn	20 24 22.9	+5.3
	comp=N,1.1nm,0.3s,baz=183,slow=12,SNR=15						
GEYT				Lg	Lg	20 27 14.2	
	comp=N,0.2nm,0.3s,baz=185,slow=30,SNR=2.7						
GEYT	Alibeck	9.64	5		Pn	20 24 19.8	+2.2
GYA0B	ALIBECK ARRAY	9.64	5		Pn	20 24 21.0	+3.4
RAYN	Ar Rayn	11.38	248	P	Pn	20 24 38.9	-2.6
RAYN	Ar Rayn	11.38	248		Pn	20 24 38.9	-2.6
ABTO	Aybut	11.42	198	P	Pn	20 24 41.8	-0.2
	SNR=7.1						
KBL	Kabul	12.02	56	P	Pn	20 24 51.2	+0.9
KBL	Kabul	12.02	56	Pn	Pn	20 24 51.2	+0.9
CHGR	Chuyangaron	14.46	41		Pn	20 25 25.2	+1.6
NIL	Nilore	14.93	65	P	Pn	20 25 31.3	+1.4
NIL	Nilore	14.93	65		Pn	20 25 31.2	+1.4
GAR	Garm	15.37	43	P	P	20 25 40.0	-0.3
GAR				IAmb	IAmb	20 25 41.3	
	comp=Z,13nm,0.8s						
BTK	Batken	16.35	41	P	Pn	20 25 48.9	+0.5
BTK				pmax	pmax		
	comp=Z,34nm,1.2s						
BTK	Batken	16.35	41	P	Pn	20 25 48.9	+0.5
BTK				IAmb	IAmb	20 25 52.1	
	comp=Z,34nm,1.2s						
TAS	Tashkent	16.43	35	P	Pn	20 25 49.7	+0.4
TAS				pmax	pmax		
	comp=Z,41nm,0.5s						
TAS	Tashkent	16.43	35	Pn	Pn	20 25 49.7	+0.4
DHRM	DHARAMSHALA	17.13	72	*e*P	P	20 26 01.4	+1.4
SMLA	Simla	17.75	76	*e*P	P	20 26 08.1	+1.5
DAMY	Dhamar	17.99	223	Pn	Pn	20 26 07.9	-1.3
KK31	Karatay Array	18.36	33	P	P	20 26 13.6	+0.3
KK31				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KK31	Karatay Array	18.36	33	P	P	20 26 13.6	+0.3
KKAR	Karatay Array	18.36	33	P	Pn	20 26 13.1	-0.2
KKAR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KKAR	Karatay Array	18.36	33	P	Pn	20 26 13.1	-0.2
KKAR	Karatay Array	18.36	33	P	P	20 26 13.8	+0.5
KKAR				IAmb	IAmb	20 26 18.5	
	comp=Z,10nm,0.8s						
ARSB	Arslanbob	18.43	41	P	Pn	20 26 14.7	+0.4
ARSB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ARSB	Arslanbob	18.43	41	P	Pn	20 26 14.7	+0.4
KBZ	Khabaz	19.11	327	P	Pn	20 26 22.1	-0.2
	comp=Z,0.1nm,0.3s,baz=204,slow=10.0,SNR=2.4						
SHA1	Shidzhatmaz	19.23	327	*i* P	Pn	20 26 23.6	-0.5
KSH	Kashi	19.28	50	P	P	20 26 22.3	-1.2
KSH				pP	pP	20 26 26.0	-3.3
KSH				S	Sn	20 29 49.5	-11
KSH				sS	S	20 29 55.9	-5.2
KSH				SS	SnSn	20 30 15.5	+1.1
KSH				PcP	PcP	20 30 47.6	+1.7
KIV	Kislovodsk	19.38	327	*e*P	Pn	20 26 26.2	+0.5
KIV				pmax	pmax		
	comp=Z,26nm,1.1s						
KIV				MLR	MLR		
	comp=Z,227nm,14.0s						
KIV	Kislovodsk	19.38	327	P	Pn	20 26 24.3	-1.4
KIV				IAmb	IAmb	20 26 56.3	
	comp=Z,13nm,1.1s						
AAK	Ala-Archa	20.13	40	P	Pn	20 26 33.8	-0.9
	comp=Z,2.9nm,0.6s,baz=238,slow=9.1,SNR=15						
AAK	Ala-Archa	20.13	40	*i* P	P	20 26 30.4	-2.5
AAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AAK	Ala-Archa	20.13	40	P	P	20 26 33.6	+0.7
AAK				IAmb	IAmb	20 26 39.2	
	comp=Z,14nm,1.4s						
NRN	Naryn	20.31	45	P	P	20 26 35.0	+0.1
NRN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NRN	Naryn	20.31	45	P	P	20 26 35.0	+0.1
NRN				IAmb	IAmb	20 26 36.7	
	comp=Z,10nm,0.7s						
FRU1	Bishkek	20.32	40	P	P	20 26 33.4	-1.4
FRU1				pmax	pmax		
	comp=Z,20nm,1.0s						
FRU1	Bishkek	20.32	40	P	P	20 26 33.4	-1.4
ABKAR	Akbulak array	21.04	5	P	P	20 26 42.6	+0.1
KDJ	Kajisay	21.43	45	P	P	20 26 48.5	+1.6
KDJ				pmax	pmax		
	comp=Z,22nm,1.2s						
KDJ	Kajisay	21.43	45	P	P	20 26 48.5	+1.6
AKTO	Aktyubinsk	22.11	2	P	P	20 26 54.7	+0.8
	comp=Z,3.8nm,0.5s,baz=181,slow=9.7,SNR=16						
PRZ	Przheval'sk	22.38	45	P	P	20 26 57.2	+0.1
PRZ				pmax	pmax		
	comp=Z,12nm,1.0s						
PRZ	Przheval'sk	22.38	45	P	P	20 26 57.2	+0.1
PRZ				IAmb	IAmb	20 27 21.9	
	comp=Z,12nm,1.0s						
BR131	Keskin Array S	22.39	307	P	P	20 26 58.7	+1.4
	SNR=5.8						
BR131	Keskin Array S	22.39	307	P	P	20 26 57.1	-0.1
BR131				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BR131	Keskin Array S	22.39	307	P	P	20 26 57.1	-0.1
BR131				IAmb	IAmb	20 27 01.1	
	comp=Z,9.4nm,0.9s						
BRTR	Keskin Array B	22.39	307	P	P	20 26 58.2	+0.9
	comp=Z,5.8nm,0.8s,baz=124,slow=8.6,SNR=24						
BRTR	Keskin Array B	22.39	307	*i* P	P	20 26 59.0	+1.8
BRTR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRTR	Keskin Array B	22.39	307	P	P	20 26 58.0	+0.8
DANN	Dangsing	23.55	83	*e*P	P	20 27 10.5	+1.1
	comp=Z,60nm,0.7s						
GKN	Gorkha	24.36	84	*e*P	P	20 27 17.8	+0.9
	comp=Z,15nm,0.7s						
DMN	Daman	24.82	85	*e*P	P	20 27 21.9	+0.6
	comp=Z,9.7nm,0.6s						
KKN	Kakani	24.95	84	*e*P	P	20 27 22.4	0.0
	comp=Z,19nm,0.5s						
PKIN	Phulchoki	25.08	85	*e*P	P	20 27 23.5	-0.1
	comp=Z,13nm,0.6s						
PKI	Pulchoki	25.10	85	*e*P	P	20 27 23.7	-0.1
	comp=Z,14nm,0.5s						
GUN	Gumba	25.46	84	*e*P	P	20 27 27.0	-0.1
	comp=Z,35nm,0.7s						
JIRN	Jiri	25.77	84	*e*P	P	20 27 29.9	-0.1
	comp=Z,13nm,0.4s						
RAMN	Ramite	26.24	86	*e*P	P	20 27 34.4	+0.3
	comp=Z,3.3nm,0.3s						
VSR	Storozhevoye	26.53	334	*e*P	P	20 27 34.9	-1.2
VSR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BRVK	Borovoye	26.61	18	*i* P	P	20 27 35.8	-1.1
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRVK	Borovoye	26.61	18	P	P	20 27 35.3	-1.6
BRVK				IAmb	IAmb	20 27 42.6	
	comp=Z,4.0nm,0.7s						
BVAR	Borovoye Array	26.61	18	P	P	20 27 37.3	+0.4
	comp=Z,4.2nm,0.6s,baz=198,slow=8.9,SNR=29						
MAKZ	Makanchi	26.90	40	P	P	20 27 39.4	-0.1
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MAKZ	Makanchi	26.90	40	P	P	20 27 39.4	-0.1
MAKZ				IAmb	IAmb	20 27 41.2	
	comp=Z,8.4nm,1.1s						
ODAN	Odare	26.95	86	*e*P	P	20 27 39.9	-0.6
MK31	Makanchi Array	27.07	40	P	P	20 27 41.0	-0.1
MK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MK31	Makanchi Array	27.07	40	P	P	20 27 41.0	-0.1
MKAR	Makanchi Array	27.07	40	P	P	20 27 41.3	+0.2
	comp=Z,1.1nm,0.5s,baz=223,slow=8.3,SNR=37						
MKAR	Makanchi Array	27.07	40	P	P	20 27 40.2	-0.9
MKAR	Makanchi Array	27.07	40	P	P	20 27 40.2	-0.9
KURBB	Kurchatov Arra	27.61	30	P	P	20 27 46.1	+0.2
	comp=Z,1.7nm,0.7s,baz=228,slow=8.4,SNR=26						
KURK	Kurchatov	27.72	30	*i* P	P	20 27 45.9	-0.9
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURK	Kurchatov	27.72	30	P	P	20 27 45.5	-1.3
KURK				IAmb	IAmb	20 28 08.7	
	comp=Z,8.2nm,1.4s						
WMQ	Urumqi	29.04	50	*e*P	P	20 28 01.1	+2.3
OBN	Obninsk	30.59	337	⇑*e*P	P	20 28 11.8	-0.4
OBN				*e*		20 28 16.6	
OBN				*e*		20 28 21.1	
OBN				*e*PPP	PPP	20 29 21.0	
OBN				SSS	SSS	20 35 19.0	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKASG	Malin Array Be	30.66	324	P	P	20 28 12.1	-0.9
	comp=Z,0.5nm,0.4s,baz=125,slow=8.2,SNR=6.3						
AKASG	Malin Array Be	30.66	324	*i* P	P	20 28 12.5	-0.4
AKASG				pmax	pmax		

	comp=Z,1.0nm,0.6s						
ZAA0	Zalesovo Array	32.71	31	P	P	20 28 30.0	-0.9
ZALV	Zalesovo Beam	32.71	31	P	P	20 28 30.8	-0.1
	comp=Z,6.4nm,0.6s,baz=244,slow=9.6,SNR=30						
ZALV	Zalesovo Beam	32.71	31	P	P	20 28 29.5	-1.4
KOLS	Kolonicke sedl	33.64	317	*e*P	P	20 28 40.1	+1.0
KOLS	Kolonicke sedl	33.64	317	*e*P	P	20 28 40.1	+1.0
LANS	Liptovska Anna	35.41	316	*e*P	P	20 28 56.1	+1.6
LANS	Liptovska Anna	35.41	316	*e*P	P	20 28 56.1	+1.6
OJC	Ojcow	35.63	318	P	P	20 28 55.9	-0.4
OJC				pmax	pmax		
	comp=Z,44nm,2.0s						
OJC	Ojcow	35.63	318	P	P	20 28 55.9	-0.4
VSU	Vasula	36.71	334	*i* P	P	20 29 05.0	-0.4
VSU				pmax	pmax		
	comp=Z,24nm,0.8s						
GTA	Gaotai	36.94	61	*e*P	P	20 29 07.8	0.0
GTA				pP	sP	20 29 14.3	-2.4
GTA				sP	pP	20 29 18.4	+4.2
KRLC	Kraliky	37.38	317	*e*P	P	20 29 10.8	-0.5
KRLC	Kraliky	37.38	317	*e*P	P	20 29 10.8	-0.5
CHVC	Chvalec	37.99	317	*e*P	P	20 29 16.4	-0.1
GERES	GERESS Array B	38.91	314	P	P	20 29 23.6	-0.7
	comp=Z,0.9nm,0.7s,baz=110,slow=7.3,SNR=8.9						
FINES	FINESS Array B	38.99	337	P	P	20 29 24.4	-0.3
	comp=Z,3.3nm,0.6s,baz=140,slow=9.7,SNR=18						
FINES	FINESS Array B	38.99	337	*i* P	P	20 29 25.2	+0.5
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KHC	Kasperske Hory	39.06	314	*e*P	P	20 29 25.1	-0.4
KHC	Kasperske Hory	39.06	314	*i* P	P	20 29 24.9	-0.6
KHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KHC	Kasperske Hory	39.06	314	P	P	20 29 24.5	-1.0
ABTA	Abfaltersbach	39.18	310	*i* P	P	20 29 26.8	+0.2
	comp=Z,2.1nm,0.8s						
WTTA	Wattenberg	39.88	311	*i* P	P	20 29 31.9	-0.6
	comp=Z,3.1nm,0.6s						
CLL	Collm	40.05	317	*e*P	P	20 29 35.0	+1.3
CLL	Collm	40.05	317	*e*P	P	20 29 35.0	+1.3
LZH	Lanzhou	40.09	67	*e*P	P	20 29 34.3	-0.1
LZH				pP	pP	20 29 37.2	-3.7
LZH				sP	sP	20 29 39.1	-4.2
LZH				*e*PP	PnPn	20 31 10.5	+0.4
SQTA	Sankt Quirin	40.15	311	*i* P	P	20 29 34.2	-0.5
	comp=Z,5.5nm,0.6s						
MOTA	Moosalm	40.25	311	*i* P	P	20 29 35.2	-0.4
	comp=Z,2.5nm,0.5s						
BSD	Bornholm Skovb	40.35	324	*i* P	P	20 29 34.0	-2.0
BSD	Bornholm Skovb	40.35	324	*i* P	P	20 29 34.2	-1.8
	comp=Z,6.2nm,0.4s						
BSD	Bornholm Skovb	40.35	324	*i* P	P	20 29 34.2	-1.8
BSD				pmax	pmax		
	comp=Z,6.0nm,0.4s						
FETA	Feichten	40.44	310	*i* P	P	20 29 36.8	-0.3
	comp=Z,3.0nm,0.6s						
DAVA	Damuels	41.05	311	*i* P	P	20 29 41.7	-0.5
	comp=Z,5.5nm,0.6s						
TLY	Talaya	41.76	43	P	P	20 29 48.0	+0.3
	comp=Z,3.0nm,0.6s,baz=257,slow=11,SNR=4.7						
TLY	Talaya	41.76	43	*i* P	P	20 29 45.8	-1.9
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
APA	Apatity	41.78	347	⇑*i*P	P	20 29 43.1	-4.5
APA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,2µm,20.0s						
SENIN	Lac Senin/Sane	42.66	309	P	P	20 29 53.8	-1.6
SENIN				IAmb	IAmb	20 31 10.6	
	comp=Z,4.7nm,0.8s						
SONM	Songino Array	42.68	49	P	P	20 29 55.7	+0.3
	comp=Z,0.5nm,0.8s,baz=282,slow=7.4,SNR=4.6						
BNI	Bardonecchia	42.95	307	P	P	20 29 56.2	-1.5
BNI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BNI	Bardonecchia	42.95	307	P	P	20 29 56.2	-1.5
BNI				IAmb	IAmb	20 31 17.0	
	comp=Z,5.7nm,0.9s						
NB2	NORSAR Subarra	44.65	330	P	P	20 30 09.9	-1.1
	comp=Z,0.9nm,0.7s,baz=116,slow=7.9						
NOA	NORSAR Array B	44.65	330	P	P	20 30 10.2	-0.8
	comp=Z,1.3nm,0.7s,baz=116,slow=7.9,SNR=5.6						
NOA	NORSAR Array B	44.65	330	PKIKP	P	20 30 10.2	-0.8
NRIK	Noril'sk	44.72	15	P	P	20 30 09.3	-2.1
HHC	Hu-ho-hao-te	45.96	59	*e*P	P	20 30 21.9	+0.1
BOD	Bodaibo	49.05	36	*e*P	P	20 30 44.7	-0.7
BOD				pmax	pmax		
	comp=Z,8.0nm,1.7s						
TOA0	Torodi Ar. Sit	53.44	266	P	P	20 31 18.0	-1.0
TOA0				IAmb	IAmb	20 31 32.0	
	comp=Z,4.0nm,0.9s						
TORD	Torodi Ar. Bea	53.44	266	P	P	20 31 18.1	-0.9
	comp=Z,2.4nm,0.5s,baz=62,slow=7.2,SNR=16						
TORD	Torodi Ar. Bea	53.44	266	P	P	20 31 17.0	-2.0
YAK	Yakutsk	57.34	32	P	P	20 31 43.8	-2.5
TIXI	Tiksi	57.70	21	P	P	20 31 47.7	-1.0
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
TIXI	Tiksi	57.70	21	P	P	20 31 47.7	-1.0
KSRS	Korea Array	59.01	61	P	P	20 31 58.9	+0.5
	comp=Z,1.0nm,0.5s,baz=279,slow=7.4,SNR=3.2						
KLR	Kul'dur	59.46	47	P	P	20 31 60.0	-1.4
	comp=Z,1.4nm,0.7s,baz=288,slow=6.0,SNR=6.4						
KLR	Kul'dur	59.46	47	*i* P	P	20 31 58.4	-2.9
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
YSS	Yuzh-Sakhalins	67.15	48	P	P	20 32 47.5	-4.8
SEY	Seymchan	67.57	30	P	P	20 32 54.5	-0.2
	comp=Z,6.1nm,0.6s,baz=270,slow=10.0,SNR=10						
SEY	Seymchan	67.57	30	*i* P	P	20 32 53.7	-1.0
BILL	Bilibino	70.88	22	⇑*e*P	P	20 33 15.5	+0.4
BILL				*e*		20 33 26.9	
BILL						20 33 31.0	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,404nm,17.0s						
ILAR	Eielson Array	85.37	10	P	P	20 34 33.9	-1.6
	comp=Z,0.3nm,0.6s,baz=6.4,slow=9.0,SNR=4.8						
YKA	Yellowknife Ar	89.26	356	P	P	20 34 54.1	-0.2
	comp=Z,0.4nm,0.6s,baz=1.9,slow=4.7,SNR=10						
ASAR	Alice Springs	90.30	117	P	P	20 35 00.1	+0.3
	comp=Z,0.5nm,0.6s,baz=308,slow=5.0,SNR=14						

IDC 12 20:27:37.7±2.0**, 27°.19N**×**91°.55E, h0^{km}, mb3.4**/5**, mb1 3.5**/5**, mb1mx3.2**/55**, mbtmp3.4**/5**, MS4.1**/1**, Ms1 4.1**/1**, ms1mx3.3**/36**, Error ellipse: s-maj=80.8km s-min=25.3km az=66.0, Bhutan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	20.89	342	P	P	20 32 22.1	+0.6
	0.9nm,0.5s,baz=152,slow=11,SNR=11						
SONM	Songino Array	23.66	25	P	P	20 32 51.2	+0.3
	0.5nm,0.5s,baz=215,slow=11,SNR=2.6						
KURBB	Kurchatov Arra	25.43	340	P	P	20 33 06.8	-0.1
	0.3nm,0.5s,baz=150,slow=9.9,SNR=3.1						
ZALV	Zalesovo Beam	27.19	351	P	P	20 33 22.4	-0.5
	0.6nm,0.6s,baz=165,slow=12,SNR=3.4						
YAK	Yakutsk	43.02	25	LR	LR	20 55 47.1	
	comp=Z,263nm,21.1s,baz=234,slow=39						
ASAR	Alice Springs	65.03	137	P	P	20 38 20.0	0.0
	0.2nm,0.5s,baz=327,slow=6.8,SNR=5.1						

IDC 12 20:42:17.5±2.8**, 23°.92S**×**175°.03W, h0^{km}, mb4.3**/4**, mb1 4.6**/4**, mb1mx4.0**/23**, mbtmp4.3**/4**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx3.1**/41**, Error ellipse: s-maj=130.2km s-min=35.4km az=154.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAR	Rarotonga	14.35	82	LR	LR	20 51 11.2	
	comp=Z,301nm,18.9s,baz=302,slow=37						
ASAR	Alice Springs	46.51	259	P	P	20 50 46.6	-0.4
	2.0nm,0.8s,baz=102,slow=8.0,SNR=17						
NVAR	Mina Array Bea	81.67	42	P	P	20 54 38.4	+0.4
	0.9nm,0.8s,baz=229,slow=8.2,SNR=5.5						
USRK	Ussuriysk Ar.	83.33	325	P	P	20 54 45.8	-0.4
	3.7nm,0.8s,baz=145,slow=5.3,SNR=5.3						
CMAR	Chiang Mai Arr	93.83	288	P	P	20 55 38.8	+1.6
	3.1nm,0.8s,baz=132,slow=3.2,SNR=20						
AKASG	Malin Array Be	147.32	331	PKPbc	PKPdf	21 02 01.2	+0.7
	0.5nm,0.4s,baz=36,slow=4.3,SNR=5.9						
BRTR	Keskin Array B	151.15	310	PKPbc	PKPbc	21 02 12.2	-0.9
	0.8nm,0.9s,baz=31,slow=0.7,SNR=3.8						

BJI ***12*** *20:43:29.1±0.0, 12°.71S×43°.81E, h19^{km}, mB5.1/14, mb4.5/27, Ms5.0/4, Ms7 4.8/4*

IDC ***12*** *20:43:31.4±0.6, 12°.16S×44°.30E, h0^{km}, mb4.1/21, mb1 4.3/23, mb1mx4.2/45, mbtmp4.2/23, ML4.8/2, MS4.1/6, Ms1 4.1/6, ms1mx3.8/45, Error ellipse: s-maj=19.6km s-min=13.3km az=127.0*

NEIC ***12*** *20:43:32.7±2.0, 12°.2S±0°.1×44°.3E±0°.1, h10^{km}±1^{km}, mb4.8/27, Error ellipse: s-maj=20.4km s-min=16.9km az=260.0*

ISC 12 20:43:32.1±0.4**, 12°.20S**±0°.05×**44°.10E**±0°.05**, h10^{km}, n106, σ2^{s}.11**/114**, mb4.6**/33**, MS4.2**/7**, Northwest of Madagascar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPO	Ambohidratompo	7.00	155	Pn	Pn	20 45 14.1	-0.8
	32nm,0.3s,baz=321,slow=16,SNR=161						
OPO				Sn	Sn	20 46 28.7	-6.0
	88nm,0.3s,baz=264,slow=19,SNR=15						
OPO				LR	LR	20 47 21.5	
	comp=Z,549nm,20.6s,baz=354,slow=33						
ABPO	Ambohimpanom	7.42	156	Pn	Pn	20 45 19.6	-1.1
ZOMB	Zomba	9.06	249	*i* P	Pn	20 45 45.6	+2.4
ZOMB				S	Sn	20 47 19.9	-5.6
ZOMB	Zomba	9.06	249	*i* P	Pn	20 45 45.6	+2.4
ZOMB				S	Sn	20 47 19.9	-5.6
KMBO	Kilima Mbogo	12.93	328	Pn	Pn	20 46 33.7	-2.6
	0.5nm,0.3s,baz=140,slow=12,SNR=8.1						
KMBO				Sn	Sn	20 48 54.4	-6.2
	0.6nm,0.3s,baz=160,slow=16,SNR=3.2						
KMBO	Kilima Mbogo	12.93	328		Pn	20 46 34.3	-2.1
RER	Riviere de l'E	14.27	130		Pn	20 46 51.0	-3.5
LSZ	Lusaka	15.75	257	Pn	Pn	20 47 15.1	+0.7
	2.4nm,0.3s,baz=78,slow=11,SNR=26						
LSZ				Sn	Sn	20 50 02.6	-6.6
	1.0nm,0.3s,baz=155,slow=22,SNR=4.5						
LSZ	Lusaka	15.75	257		Pn	20 47 14.9	+0.5
MATP	Matopo	17.05	239	P	Pn	20 47 29.3	-1.6
	0.3nm,0.3s,baz=54,slow=13,SNR=15						
MATP				S	S	20 50 50.1	-0.4
	0.2nm,0.3s,baz=110,slow=15,SNR=2.9						
MBAR	Mbarara	17.56	310	P	P	20 47 39.4	+0.9
	1.8nm,0.3s,baz=327,slow=6.7,SNR=6.4						
MBAR	Mbarara	17.56	310		Pn	20 47 37.8	+0.3
LBTB	Lobatse	21.64	231	P	P	20 48 25.8	+2.9
	15nm,0.8s,baz=53,slow=11,SNR=33						
LBTB				LR	LR	20 56 55.5	
	comp=Z,497nm,18.0s,baz=84,slow=37						
LBTB	Lobatse	21.64	231	P	P	20 48 25.7	+2.8
LBTB				IAmb	IAmb	20 48 26.8	
	comp=Z,25nm,0.8s						
BOSA	Boshof	23.99	224	P	P	20 48 48.3	+1.0
	comp=Z,17nm,0.9s,baz=51,slow=10.0,SNR=13						
BOSA				LR	LR	20 59 15.8	
	comp=Z,541nm,18.3s,baz=106,slow=39						
BOSA	Boshof	23.99	224	P	P	20 48 48.1	+0.8
BOSA				IAmb	IAmb	20 48 59.4	
	comp=Z,30nm,1.0s						
SOCY	Socotra	26.14	22	P	P	20 49 10.3	+3.5
SOCY				IAmb	IAmb	20 49 30.9	
	comp=Z,22nm,1.3s						
TSUM	Tsumeb	26.43	251	P	P	20 49 12.7	+3.2
	comp=Z,6.8nm,0.9s,baz=90,slow=7.1,SNR=6.5						
TSUM	Tsumeb	26.43	251	IAmb	IAmb	20 49 40.2	
	comp=Z,40nm,1.9s						
SUR	Sutherland	29.33	223	P	P	20 49 38.3	+2.8
	comp=Z,16nm,1.1s,baz=58,slow=16,SNR=3.8						
SUR				LR	LR	21 01 30.9	
	comp=Z,466nm,19.5s,baz=138,slow=37						
SUR	Sutherland	29.33	223	P	P	20 49 38.2	+2.8
RAYN	Ar Rayn	35.53	2	P	P	20 50 30.2	+0.7
TOA0	Torodi Ar. Sit	49.02	300	P	P	20 52 21.0	+1.4
TORD	Torodi Ar. Bea	49.02	300	P	P	20 52 22.0	+2.4
	comp=Z,1.8nm,0.9s,baz=120,slow=7.2,SNR=9.1						
TORD	Torodi Ar. Bea	49.02	300	P	P	20 52 21.4	+1.8
GEYT	Alibeck	51.57	14	P	P	20 52 38.7	+0.1
	comp=Z,2.0nm,1.0s,baz=216,slow=9.0,SNR=4.2						
GEYT	Alibeck	51.57	14	P	P	20 52 40.6	+2.0
BRTR	Keskin Array B	52.57	350	P	P	20 52 46.5	+0.4
	comp=Z,0.8nm,0.9s,baz=177,slow=8.7,SNR=2.6						
NIL	Nilore	53.39	30	P	P	20 52 54.0	+1.8
NIL				IAmb	IAmb	20 52 59.0	
	comp=Z,21nm,1.6s						
DANN	Dangsing	55.66	43	*e*P	P	20 53 08.2	-0.9
GKN	Gorkha	56.02	44	*e*P	P	20 53 09.9	-1.6
	comp=Z,52nm,1.1s						
DMN	Daman	56.09	45	*e*P	P	20 53 11.8	-0.4
	comp=Z,42nm,1.4s						
PKIN	Phulchoki	56.27	45	*e*P	P	20 53 11.8	-1.7
PKI	Pulchoki	56.27	45	*e*P	P	20 53 14.3	+0.7
KKN	Kakani	56.33	45	*e*P	P	20 53 13.0	-0.8
GAR	Garm	56.51	24	P	P	20 53 13.7	-1.1
RAMN	Ramite	56.72	46	*e*P	P	20 53 14.7	-2.0
GUN	Gumba	56.81	45	*e*P	P	20 53 16.0	-1.4
	comp=Z,54nm,1.3s						
JIRN	Jiri	56.87	45	*e*P	P	20 53 17.0	-0.9
ODAN	Odare	57.23	47	*e*P	P	20 53 18.2	-2.0
TAPN	Taplejung	57.75	47	*e*P	P	20 53 22.1	-1.9
KSH	Kashi	59.40	28	P	P	20 53 34.2	-0.8
KSH				pP	sP	20 53 38.6	0.0
KSH				PcP	PcP	20 54 23.6	+0.8
KSH				PcS	PcS	20 58 23.1	-1.8
KSH				S	S	21 01 38.6	-5.5
KSH				SS	SS	21 05 33.2	-6.3
KSH				pmax	pmax		
	comp=Z,15nm,0.7s						
KSH				LR	LR		
	comp=Z,160nm,9.6s						
KSH				LR	LR		
	comp=Z,370nm,11.8s						
KSH				LR	LR		
	comp=Z,490nm,11.3s						
ARSB	Arslanbob	59.56	25	P	P	20 53 36.0	-0.2
KK31	Karatay Array	60.11	22	P	P	20 53 39.5	-0.2
KK31				IAmb	IAmb	20 53 47.0	
	comp=Z,10nm,1.1s						
KKAR	Karatay Array	60.11	22	P	P	20 53 39.2	-0.5
AAK	Ala-Archa	61.28	25	P	P	20 53 48.3	+0.4
	comp=Z,3.1nm,1.1s,baz=203,slow=2.3,SNR=6.2						
AAK	Ala-Archa	61.28	25	P	P	20 53 49.0	+1.0
AAK				IAmb	IAmb	20 53 55.6	
	comp=Z,8.6nm,1.4s						
BURAR	Bucovina Array	61.88	346	P	P	20 53 53.1	+1.3
CMAR	Chiang Mai Arr	62.08	61	P	P	20 53 53.4	-0.2
	comp=Z,2.2nm,0.9s,baz=251,slow=8.1,SNR=11						
CMAR	Chiang Mai Arr	62.08	61	P	P	20 53 51.6	-2.0
CHTO	Chiang Mai	62.23	61	P	P	20 53 54.3	-0.3
CHTO				IAmb	IAmb	20 54 02.0	
	comp=Z,7.5nm,1.1s						
LEM	Lembang	62.76	91	LR	LR	21 16 45.9	
	comp=Z,171nm,18.5s,baz=253,slow=32						
ABKAR	Akbulak array	62.77	12	P	P	20 53 57.3	-0.3
PRZ	Przheval'sk	62.86	28	P	P	20 54 00.1	+1.5
PRZ				IAmb	IAmb	20 54 06.3	
	comp=Z,9.7nm,1.2s						
PBKT	Sadao Pong	63.07	64	P	P	20 53 58.5	-1.7
PBKT				IAmb	IAmb	20 54 06.2	
	comp=Z,5.0nm,1.0s						
AKTO	Aktyubinsk	63.55	10	P	P	20 54 02.9	+0.2
	comp=Z,1.6nm,0.5s,baz=188,slow=8.3,SNR=3.8						
AKASG	Malin Array Be	63.97	350	P	P	20 54 06.7	+1.3
	comp=Z,0.7nm,0.5s,baz=166,slow=5.4,SNR=3.7						
GERES	GERESS Array B	66.46	339	P	P	20 54 22.3	+0.5
	comp=Z,0.4nm,0.6s,baz=144,slow=6.8,SNR=4.4						
GERES	GERESS Array B	66.46	339	P	P	20 54 21.5	-0.3
VNA3	Neumayer Olymp	67.31	196	P	P	20 54 29.6	+2.7
MAKZ	Makanchi	67.83	27	P	P	20 54 30.6	+0.2
MAKZ				IAmb	IAmb	20 54 38.7	
	comp=Z,8.7nm,1.1s						
MK31	Makanchi Array	67.95	27	P	P	20 54 30.5	-0.8
MK31				IAmb	IAmb	20 54 39.2	
	comp=Z,4.5nm,1.1s						
MKAR	Makanchi Array	67.95	27	P	P	20 54 31.1	-0.2
	comp=Z,0.7nm,0.7s,baz=214,slow=6.8,SNR=8.0						
MKAR	Makanchi Array	67.95	27	P	P	20 54 30.5	-0.8
ESDC	Sonseca Array	68.24	322	P	P	20 54 35.1	+1.9
	comp=Z,0.6nm,0.3s,baz=133,slow=5.8,SNR=6.2						
WMQ	Urumqi	68.43	32	*e*P	P	20 54 36.4	+2.0
WMQ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,180nm,7.7s						
BVAR	Borovoye Array	68.77	17	P	P	20 54 36.6	+0.4
	comp=Z,1.0nm,0.6s,baz=228,slow=6.4,SNR=8.4						
KURBB	Kurchatov Arra	69.41	23	P	P	20 54 40.4	+0.2
	comp=Z,0.9nm,0.6s,baz=224,slow=7.1,SNR=13						
ARU	Arti	69.43	9	P	P	20 54 40.6	+0.4
	comp=Z,1.8nm,0.8s,baz=190,slow=6.4,SNR=7.5						
ARU	Arti	69.43	9	P	P	20 54 41.7	+1.5
CD2	Chengdu	71.51	51	P	P	20 54 52.8	-0.8
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KLMR	Klimovskoe	72.91	358	*e*P	P	20 55 03.3	+2.1
KLMR				AMP		20 55 13.9	
	comp=Z,30nm,1.7s						
GTA	Gaotai	72.91	42	*e*P	P	20 55 11.2	+9.3
GTA				pP	PcP	20 55 15.9	-3.0
GTA				sP	pwP	20 55 18.2	+11
LZH	Lanzhou	73.99	47	*e*P	P	20 55 08.6	+0.2
LZH				pP	sP	20 55 11.8	-0.2
LZH				*e*PP	PP	20 57 55.7	+2.0
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,87nm,8.2s						
LZH				LR	LR		
	comp=Z,190nm,15.0s						
LZH				LR	LR		
	comp=Z,190nm,15.3s						
LZH				LR	LR		
	comp=Z,330nm,17.8s						
ZALV	Zalesovo Beam	74.42	24	P	P	20 55 10.0	-0.2
	comp=Z,1.4nm,0.5s,baz=228,slow=6.5,SNR=7.6						
ZALV	Zalesovo Beam	74.42	24	P	P	20 55 09.3	-1.0
FINES	FINESS Array B	74.78	351	P	P	20 55 13.0	+0.9
	comp=Z,3.3nm,1.1s,baz=160,slow=4.4,SNR=3.7						
ENH	Enshi	75.71	54	P	P	20 55 18.6	+0.4
APSI	Ampana	77.64	88	P	P	20 55 32.1	+2.6
SONM	Songino Array	81.31	37	P	P	20 55 50.2	+1.2
	comp=Z,0.8nm,0.7s,baz=227,slow=5.2,SNR=7.9						
SONM	Songino Array	81.31	37	P	P	20 55 50.3	+1.3
HHC	Hu-ho-hao-te	81.53	45	*e*P	P	20 55 50.6	+0.4
HHC				pmax	pmax		
	comp=Z,270nm,6.8s						
NJ2	Nanjing	83.84	55	*e*P	P	20 56 02.4	+0.1
ASAR	Alice Springs	85.02	113	P	P	20 56 09.1	+0.5
	comp=Z,4.0nm,1.0s,baz=263,slow=4.6,SNR=20						
ASAR				LR	LR	21 28 04.9	
	comp=Z,156nm,19.3s,baz=274,slow=32						
AS31	Alice Springs	85.02	113	P	P	20 56 08.6	0.0
INK	Inuvik	123.93	359	PKP	PKiKP	21 02 30.8	+0.5
	comp=Z,1.0nm,0.7s,baz=337,slow=4.5,SNR=3.4						
ILAR	Eielson Array	126.95	6	PKP	PKPdf	21 02 36.0	0.0
	comp=Z,0.3nm,0.7s,baz=318,slow=3.2,SNR=2.9						
YKA	Yellowknife Ar	127.51	348	PKP	PKiKP	21 02 37.8	+0.2
	comp=Z,0.3nm,0.8s,baz=343,slow=1.3,SNR=3.7						
YKA				PP	PP	21 04 36.6	-0.4
	comp=Z,0.3nm,0.7s,baz=22,slow=6.7,SNR=3.9						
N47A	Urbana	127.69	313		PKPdf	21 02 37.6	-0.5
YNE	Yellowstone No	140.53	331		PKPpre	21 02 52.5	
YMP	Mirror Lake Pl	140.80	331		PKPdf	21 03 02.5	-0.5
H17A	Grant Village	141.25	331		PKPdf	21 03 02.8	-0.9
YPP	Pitchstone Pla	141.46	331		PKPdf	21 03 03.3	-0.8
FLWY	Flagg Ranch	141.55	330		PKiKP	21 03 06.4	-0.6
FXWY	Fox Creek	142.03	330		PKPdf	21 03 01.0	-4.1
REDW	Red Top Meadow	142.15	330		PKPdf	21 03 03.7	-1.6
SRU	San Rafael Swe	145.00	324		PKPdf	21 03 11.3	+0.9
DUG	Dugway, Tooele	145.48	328		PKPbc	21 03 07.7	-3.4
TXAR	Lajitas Array	145.53	305	PKPbc	PKPab	21 03 12.8	+1.0
	comp=Z,1.1nm,0.8s,baz=120,slow=5.3,SNR=5.3						
TXAR	Lajitas Array	145.53	305		PKPab	21 03 12.3	+0.5
TX31	Lajitas Ar. Si	145.53	305		PKPab	21 03 12.6	+0.7
TX32	Lajitas Array	145.53	305		PKPab	21 03 12.3	+0.5
KVN	Kaiserville	148.94	333		PKPbc	21 03 19.3	-1.7
BEKR	Beckworth	149.21	336		PKPbc	21 03 21.2	-0.4
RYN	Ryan	149.47	333		PKPdf	21 03 16.2	-1.6
NVAR	Mina Array Bea	149.53	332	PKPbc	PKPbc	21 03 23.1	+0.6
	comp=Z,1.0nm,0.5s,baz=255,slow=4.0,SNR=6.1						

IDC 12 21:02:08.5±7.4**, 35°.73N**×**81°.18E, h0^{km}, mb3.0**/1**, mb1 3.3**/3**, mb1mx3.0**/50**, mbtmp3.3**/3**, ML3.0**/2**, Error ellipse: s-maj=112.3km s-min=44.6km az=68.0, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	11.09	4	Pn	Pn	21 04 49.9	+1.6
	0.2nm,0.3s,baz=189,slow=12,SNR=14						
MKAR				Sn	Sn	21 06 49.4	-3.6
	0.1nm,0.3s,baz=183,slow=24,SNR=4.2						
MKAR				Lg	Lg	21 08 01.8	
	0.0nm,0.3s,baz=193,slow=31,SNR=2.6						
ZALV	Zalesovo Beam	18.39	7	P	Pn	21 06 23.9	-1.0
	0.1nm,0.3s,baz=192,slow=13,SNR=3.7						
SONM	Songino Array	22.25	49	P	P	21 07 07.0	0.0
	0.5nm,0.7s,baz=254,slow=10.0,SNR=4.8						

IDC ***12*** *21:04:07.3±2.2, 2°.64S×130°.41E, h0^{km}, mb3.7/4, mb1 3.9/5, mb1mx3.5/43, mbtmp3.7/5, ML3.2/1, Error ellipse: s-maj=100.6km s-min=25.5km az=73.0*

DJA ***12*** *21:04:13.5±1.5, 3°S±5°×13°0E±°, h30^{km}±15^{km}, M3.2/6, MLv3.2/6*

ISC 12 21:04:13.7±0.9**, 2°.75S**±0°.07×**130°.00E**±0°.07**, h35^{km}, n10, σ1^{s}.55**/13**, mb3.7**/4**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.23	241	P	Pn	21 04 34.1	-0.3
MSAI				S	Sn	21 04 51.5	+1.7
BNDI	Bandanaira	1.77	183	P	Pn	21 04 43.6	+1.8
AAI	Ambon	2.03	243	P	Pn	21 04 45.1	-0.4
FAKI	Fak Fak	2.25	94	P	Pn	21 04 49.2	+0.7
SWI	Sorong	2.25	34	P	Pn	21 04 48.6	+0.1
SWI				S	Sn	21 05 15.3	+0.2
FITZ	Fitzroy Crossi	15.85	195	Pn	Pn	21 07 54.2	-0.1
	0.1nm,0.3s,baz=17,slow=11,SNR=2.9						
ASAR	Alice Springs	21.14	170	P	P	21 08 54.6	-1.2
	6.5nm,0.8s,baz=348,slow=9.7,SNR=49						
ASAR				S	S	21 12 45.4	-3.8
	0.6nm,0.8s,baz=351,slow=17,SNR=4.5						
CMAR	Chiang Mai Arr	37.13	306	P	P	21 11 22.6	+1.2
	0.6nm,0.9s,baz=119,slow=7.4,SNR=4.0						
MKAR	Makanchi Array	64.71	326	P	P	21 14 48.1	-0.2
	0.3nm,0.8s,baz=134,slow=6.9,SNR=3.6						
KURBB	Kurchatov Arra	68.92	328	P	P	21 15 15.0	-0.1
	0.9nm,0.7s,baz=128,slow=5.6,SNR=11						

SJA ***12*** *21:06:04.1±1.2, 22°.10S×68°.77W, h117^{km}±6^{km}, ML3.5, MW3.4*

GUC ***12*** *21:06:05.4±0.5, 22°.13S×68°.85W, h125^{km}±3^{km}, ML3.2*

ISC 12 21:06:04.7±1.4**, 22°.15S**±0°.03×**68°.89W**±0°.05**, h129^{km}**±9^{km}**, n31, σ0^{s}.91**/59**, 9C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	0.46	182	*i* P	Pn	21 06 23.2	-0.7
LVC				*i* S	Sn	21 06 36.1	-2.3
PB09	IPOC Station P	0.48	317	⇑*i*P	Pn	21 06 23.9	+0.1
PB09				*i* S	Sn	21 06 37.5	-0.6
PB09				IAML		21 06 39.2	
	comp=N,1µm,0.2s						
PB09	IPOC Station P	0.48	317	*i* P	Pn	21 06 23.9	+0.1
PB09				IAML		21 06 38.9	
	comp=Z,704nm,0.2s						
PB03	IPOC Station P	0.81	277	⇑*i*P	Pn	21 06 26.4	+0.4
PB03				*i* S	Sn	21 06 42.1	0.0
PB03				IAML		21 06 42.8	
	comp=E,682nm,0.2s						
PB03	IPOC Station P	0.81	277	*i* P	Pn	21 06 26.4	+0.4
PB03				*i* S	Sn	21 06 42.4	+0.3
PB06	IPOC Station P	0.84	229	⇑*i*P	Pn	21 06 26.6	+0.3
PB06				*i* S	Sn	21 06 42.3	-0.3
PB06	IPOC Station P	0.84	229	*i* P	Pn	21 06 26.5	+0.2
PB06				*i* S	Sn	21 06 42.2	-0.3
PB06				IAML		21 06 44.5	
	comp=Z,846nm,0.2s						
PB07	IPOC Station P	1.02	294	⇑*i*P	Pn	21 06 28.4	+0.6
PB07				*i* S	Sn	21 06 45.3	-0.1
PB07				IAML		21 06 45.9	
	comp=N,788nm,0.2s						
PB07	IPOC Station P	1.02	294	*i* P	Pn	21 06 28.4	+0.6

PB07				iS	Sn	21 06 45.4	-0.1
PB04	IPOC Station P	1.18	261	⇑iP	Pn	21 06 30.0	+0.6
PB04				iS	Sn	21 06 48.7	+0.4
PB04	IPOC Station P	1.18	261	iP	Pn	21 06 30.1	+0.6
PB04				iS	Sn	21 06 49.5	+1.2
PB15	IPOC Station P	1.18	207	⇓iP	Pn	21 06 30.3	+0.8
PB15				iS	Sn	21 06 48.9	+0.5
PB15	IPOC Station P	1.18	207	iP	Pn	21 06 30.3	+0.8
PB15				iS	Sn	21 06 49.1	+0.7
PB15				IAML		21 06 55.8	
	comp=Z,2μm,0.3s						
PB01	IPOC Station P	1.23	333	⇑iP	Pn	21 06 30.0	+0.1
PB01				iS	Sn	21 06 48.4	-0.7
PB01				IAML		21 06 50.7	
	comp=N,402nm,0.2s						
PB02	IPOC Station P	1.25	311	⇑iP	Pn	21 06 30.5	+0.5
PB02				eS	Sn	21 06 49.1	-0.2
PB02	IPOC Station P	1.25	311	iP	Pn	21 06 30.6	+0.5
PB02				iS	Sn	21 06 49.2	-0.2
PB05	IPOC Station P	1.40	240	⇑iP	Pn	21 06 32.3	+0.6
PB05				iS	Sn	21 06 52.9	+0.5
PB05				IAML		21 06 55.5	
	comp=E,286nm,0.6s						
PB05	IPOC Station P	1.40	240	iP	Pn	21 06 32.4	+0.6
PB05				iS	Sn	21 06 52.2	-0.1
PATCX	Punta Patache	1.77	318	⇑iP	Pn	21 06 36.2	+0.3
PATCX				iS	Sn	21 06 59.7	-0.1
PATCX	Punta Patache	1.77	318	iP	Pn	21 06 36.2	+0.3
PATCX				iS	Sn	21 06 59.5	-0.3
TA01	Diego Aracena	1.98	322	eP	Pn	21 06 38.4	0.0
TA01				eS	Sn	21 07 04.3	+0.1
TA01				IAML		21 07 05.5	
	comp=N,229nm,0.4s						
PB08	IPOC Station P	2.01	353	⇓iP	Pn	21 06 40.1	+0.9
PB08				iS	Sn	21 07 06.4	+0.9
PB08				IAML		21 07 07.5	
	comp=N,124nm,0.2s						
PB10	IPOC Station P	2.05	228	iP	Pn	21 06 39.9	+0.7
PB10				iS	Sn	21 07 04.4	-1.2
PB10				IAML		21 07 06.1	
	comp=Z,89nm,0.3s						
PB11	IPOC Station P	2.48	343	iP	Pn	21 06 44.7	-0.1
PB11				iS	Sn	21 07 14.5	-1.1
PSGCX	Pisagua	2.79	335	iP	Pn	21 06 47.8	-0.9
PB14	IPOC Station P	2.83	209	iP	Pn	21 06 50.4	+1.1
PB14				iS	Sn	21 07 19.2	-4.6
PB14				IAML		21 07 19.7	
	comp=Z,128nm,0.4s						
GO02	Mina Guanaco	3.07	192	eP	Pn	21 06 52.8	+0.4
GO02				iS	Sn	21 07 29.3	+0.1
MNMC	Minye Minye	3.08	347	eP	Pn	21 06 52.5	-0.1
MNMC				iS	Sn	21 07 29.0	-0.4
MNMCX	Minye Minye	3.08	347	iP	Pn	21 06 52.1	-0.4
MNMCX				iS	Sn	21 07 28.7	-0.7
YJA	Yavi	3.13	91	iP	Pn	21 06 54.8	+1.4
YJA				iS	Sn	21 07 31.3	+0.5
ASTB	Santa Barbara	4.46	115	iP	Pn	21 07 10.7	0.0

GUC ***12*** *21:35:20.9±0.5, 21°.44S×68°.71W, h107^{km}±2^{km}, ML3.7*
SJA ***12*** *21:35:20.1±1.2, 21°.47S×68°.72W, h106^{km}±8^{km}, ML3.7, MW3.6*
IDC ***12*** *21:35:21.2±1.0, 21°.55S×68°.34W, h108^{km}±14^{km}, mb3.6/2, mb1 3.7/4, mb1mx3.3/39, mbtmp3.9/4, Error ellipse: s-maj=40.4km s-min=19.4km az=115.0*
ISC 12 21:35:20.6±0.9**, 21°.45S**±0°.03×**68°.72W**±0°.05**, h109**^{km}±7^{km}**, n47, σ0^{s}.94**/79**, 5C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.59	234	⇓iP	Pn	21 35 38.3	+0.1
PB09				iS	Sn	21 35 51.5	+0.1
PB09	IPOC Station P	0.59	234	iP	Pn	21 35 38.3	+0.1
PB09				iS	Sn	21 35 51.4	+0.1
PB01	IPOC Station P	0.82	300	⇑iP	Pn	21 35 39.6	-0.4
PB01				iS	Sn	21 35 53.9	-0.7
PB01				IAML		21 35 55.9	
	comp=E,2μm,0.2s						
PB02	IPOC Station P	1.10	277	eP	Pn	21 35 42.8	0.0
PB02				iS	Sn	21 35 59.7	0.0
PB02				IAML		21 36 03.8	
	comp=E,3μm,0.3s						
PB02	IPOC Station P	1.10	277	iP	Pn	21 35 42.9	0.0
PB02				iS	Sn	21 35 59.7	0.0
PB07	IPOC Station P	1.12	256	⇑iP	Pn	21 35 43.1	0.0
PB07				iS	Sn	21 36 00.1	0.0
PB07				IAML		21 36 00.6	
	comp=N,2μm,0.3s						
PB07	IPOC Station P	1.12	256	iP	Pn	21 35 43.1	0.0
PB07				iS	Sn	21 36 00.1	0.0
PB03	IPOC Station P	1.13	238	eP	Pn	21 35 43.4	+0.2
PB03				iS	Sn	21 36 00.4	+0.2
PB03				IAML		21 36 01.0	
	comp=N,2μm,0.2s						
PB03	IPOC Station P	1.13	238	iP	Pn	21 35 43.4	+0.2
PB03				iS	Sn	21 36 00.4	+0.2
LVC	Limon Verde	1.17	188	P	Pn	21 35 44.1	+0.2
	comp=N,94nm,0.3s,baz=39,slow=9.7,SNR=699						
LVC				S	Sn	21 36 02.1	+0.7
	comp=N,78nm,0.3s,baz=93,slow=23,SNR=90						
LVC	Limon Verde	1.17	188	eP	Pn	21 35 44.1	+0.2
LVC				iS	Sn	21 36 01.9	+0.4
LVC	Limon Verde	1.17	188	iP	Pn	21 35 44.1	+0.2
LVC				iS	Sn	21 36 01.8	+0.4
PB08	IPOC Station P	1.36	343	⇑iP	Pn	21 35 46.7	+0.6
PB08				iS	Sn	21 36 06.2	+0.8
PB08				IAML		21 36 08.2	
	comp=E,751nm,0.6s						
PB08	IPOC Station P	1.36	343	iP	Pn	21 35 46.8	+0.6
PB08				iS	Sn	21 36 06.3	+0.8
PATCX	Punta Patache	1.47	295	eP	Pn	21 35 47.1	0.0
PATCX				eS	Sn	21 36 07.5	+0.3
PATCX				IAML		21 36 09.1	
	comp=E,2μm,0.2s						
PATCX	Punta Patache	1.47	295	iP	Pn	21 35 47.4	+0.2
PATCX				iS	Sn	21 36 08.3	+1.1
PB06	IPOC Station P	1.48	212	⇑iP	Pn	21 35 47.4	+0.2
PB06				iS	Sn	21 36 08.0	+0.6
PB06				IAML		21 36 12.1	
	comp=E,896nm,0.1s						
PB06	IPOC Station P	1.48	212	iP	Pn	21 35 47.5	+0.2
PB06				iS	Sn	21 36 08.0	+0.6
PB06				IAML		21 36 14.4	
	comp=Z,521nm,0.3s						
PB04	IPOC Station P	1.59	236	eP	Pn	21 35 48.9	+0.3
PB04				iS	Sn	21 36 10.6	+0.7
PB04				IAML		21 36 16.2	
	comp=N,1μm,0.2s						
PB04	IPOC Station P	1.59	236	iP	Pn	21 35 48.9	+0.3
PB04				iS	Sn	21 36 11.1	+1.3
TA01	Diego Aracena	1.62	303	eP	Pn	21 35 48.5	-0.3
TA01				iS	Sn	21 36 10.1	-0.2
TA01				IAML		21 36 11.5	
	comp=E,965nm,0.2s						
GO01	Chusmiza	1.83	346	eP	Pn	21 35 52.0	+0.2
GO01				iS	Sn	21 36 16.4	+0.8
PB15	IPOC Station P	1.88	201	⇓iP	Pn	21 35 52.7	+0.4
PB15				eS	Sn	21 36 17.3	+1.0
PB15	IPOC Station P	1.88	201	iP	Pn	21 35 52.6	+0.4
PB11	IPOC Station P	1.90	332	⇑iP	Pn	21 35 52.3	0.0
PB11				iS	Sn	21 36 16.9	+0.3
PB11				IAML		21 36 18.6	
	comp=N,1μm,0.2s						
PB11	IPOC Station P	1.90	332	iP	Pn	21 35 52.4	0.0
PB11				iS	Sn	21 36 16.7	+0.1
PB05	IPOC Station P	1.96	224	iP	Pn	21 35 53.1	0.0
PSGC	Pisagua	2.26	324	eP	Pn	21 35 56.3	-0.7
PSGC				iS	Sn	21 36 24.0	-0.9
PSGC				IAML		21 36 31.1	
	comp=E,420nm,0.5s						
PSGCX	Pisagua	2.26	324	iP	Pn	21 35 56.4	-0.7
PSGCX				iS	Sn	21 36 24.2	-0.7
MNMC	Minye Minye	2.45	340	eP	Pn	21 35 59.9	+0.3
MNMC				iS	Sn	21 36 30.4	+0.9
MNMCX	Minye Minye	2.45	340	iP	Pn	21 35 60.0	+0.4
MNMCX				iS	Sn	21 36 31.6	+2.1
PB10	IPOC Station P	2.66	219	eP	Pn	21 36 03.2	+1.1
PB10				iS	Sn	21 36 35.1	+1.2
PB10	IPOC Station P	2.66	219	iP	Pn	21 36 03.3	+1.2
PB10				IAML		21 36 44.7	
	comp=Z,263nm,0.4s						
YJA	Yavi	3.07	104	iP	Pn	21 36 08.7	+0.9
PB16	IPOC Station P	3.19	346	iP	Pn	21 36 11.1	+1.5
PB16				iS	Sn	21 36 48.7	+1.4
PB12	IPOC Station P	3.20	332	iP	Pn	21 36 08.1	-1.3
PB12				iS	Sn	21 36 45.5	-1.5
PB14	IPOC Station P	3.52	206	iP	Pn	21 36 13.2	-0.6
PB14				IAML		21 37 05.0	
	comp=Z,149nm,0.3s						
AZAP	Zapla	4.36	130	iP	Pn	21 36 25.7	+0.7
ASTB	Santa Barbara	4.66	123	iP	Pn	21 36 29.2	+0.2
LPAZ	La Paz	5.17	6	P	Pn	21 36 38.3	+2.1
	comp=Z,3.4nm,0.3s,baz=188,slow=14,SNR=50						
AROD	Rodeo	8.71	184	iP	Pn	21 37 23.3	-0.7
SIV	San Ignacio	9.06	54	P	Pn	21 37 25.5	-3.0
	comp=Z,0.7nm,0.3s,baz=240,slow=9.9,SNR=11						
ACCO	Cerro Coronel	9.10	182	iP	Pn	21 37 27.1	-2.2
AMOG	MOGNA	9.45	179	iP	Pn	21 37 30.1	-3.8
TORD	Torodi Ar. Bea	77.18	70	P	P	21 47 02.1	-0.9
	comp=Z,0.8nm,0.6s,baz=247,slow=5.2,SNR=5.3						
YKA	Yellowknife Ar	91.20	341	P	P	21 48 13.6	+0.6
	comp=Z,0.3nm,0.5s,baz=137,slow=4.9,SNR=7.6						
MKAR	Makanchi Array	145.49	36	PKPbc	PKPbc	21 54 46.7	+0.6
	comp=Z,0.7nm,0.8s,baz=322,slow=3.7,SNR=6.6						

THE ***12*** *21:50:49.7, 38°.39N×20°.39E, h10^{km}, ML2.9/3, Error ellipse: s-maj=2.1km s-min=0.6km az=83.0*
ATH ***12*** *21:50:50.5, 38°.39N×20°.50E, h9^{km}±2^{km}, ML2.9/4, Error ellipse: s-maj=2.2km s-min=0.6km az=279.0*
ISC 12 21:50:49.9±0.8**, 38°.39N**±0°.02×**20°.47E**±0°.03**, h13**^{km}±5^{km}**, n49, σ1^{s}.01**/74**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KONA	Konidatara, Ke	0.09	68	P	Pg	21 50 52.5	-0.2
KONA				S	Sg	21 50 53.7	-1.0
FSK	Fiskardo	0.10	48	P	Pg	21 50 52.6	-0.2
FSK				S	Sg	21 50 56.0	+1.1
	9μm,0.5s						
FSK	Fiskardo	0.10	48	P	Pg	21 50 52.6	-0.2
FSK				S	Sg	21 50 54.9	0.0
FSK				AML	AML	21 50 57.0	
	comp=N,13658μm,0.3s						
FSK				AML	AML	21 50 58.4	
	comp=E,23055μm,0.4s						
KEF1	Kardakata, Kep	0.11	178	P	Pg	21 50 52.9	0.0
KEF1				S	Sg	21 50 54.9	-0.2
KEF4	Livadi, Kephal	0.14	194	P	Pg	21 50 53.5	+0.2
KEF4				S	Sg	21 50 55.8	+0.1
LXRA	Lixouri, Kepha	0.19	187	P	Pg	21 50 54.6	+0.5
LXRA				S	Sg	21 50 58.4	+1.3
KEF3	Kipouria, Keph	0.21	206	P	Pg	21 50 54.7	+0.3
KEF3				S	Sg	21 50 58.9	+1.4
ARGA	Argostoli. Kep	0.21	177	P	Pg	21 50 54.9	+0.4
ARGA				S	Sg	21 50 58.3	+0.7
KEF2	Argostoli. Kep	0.23	176	P	Pg	21 50 54.9	+0.2
KEF2				S	Sg	21 50 58.7	+0.7
VLS	Valsamata	0.23	156	P	Pg	21 50 55.1	+0.2
VLS				S	Sg	21 50 59.3	+1.1
	comp=E,4μm,0.3s						
VLS	Valsamata	0.23	156	P	Pg	21 50 55.1	+0.2
VLS				S	Sg	21 50 58.9	+0.7
VLS				AML	AML	21 51 01.6	
	comp=E,7392μm,0.2s						
VLS				AML	AML	21 51 03.8	
	comp=N,10160μm,0.4s						
EVGI	Lefkada island	0.27	33	P	Pg	21 50 56.0	+0.5
EVGI	Lefkada island	0.27	33	P	Pg	21 50 56.0	+0.5
EVGI				S	Sg	21 50 59.9	+0.6
MGNA	Meganis	0.37	44	P	Pg	21 50 57.6	+0.3
MGNA				S	Sg	21 51 03.1	+0.9
KFL	Anninata	0.38	138	P	Pg	21 50 57.8	+0.3
KFL				S	Sb	21 51 04.5	+0.2
KFL	Anninata	0.38	138	P	Pg	21 50 57.7	+0.3
KFL				S	Sg	21 51 03.2	+0.7
KFL				AML	AML	21 51 05.4	
	comp=E,8281μm,0.4s						
KFL				AML	AML	21 51 07.8	
	comp=N,8631μm,0.7s						
LKD2	Lefkada island	0.42	21	P	Pg	21 50 58.5	+0.2
LKD2				S	Sg	21 51 04.8	+0.8
	comp=N,1μm,0.7s						
LKD2	Lefkada island	0.42	21	P	Pg	21 50 58.5	+0.2
LKD2				S	Sg	21 51 05.1	+1.0
TSLK	Tsoukalades, L	0.46	19	P	Pg	21 50 59.3	+0.4
TSLK	Tsoukalades, L	0.46	19	P	Pg	21 50 59.3	+0.4
TSLK				S	Sg	21 51 05.2	+0.2
TSLK				AML	AML	21 51 09.0	
	comp=E,3538μm,0.8s						
TSLK				AML	AML	21 51 13.1	
	comp=N,3981μm,0.9s						
PDO	Prodromos	0.60	70	P	Pg	21 51 01.9	+0.4
PDO				S	Sg	21 51 09.6	+0.1
RLS	Riolos of Patr	0.85	113	P	Pg	21 51 06.5	+0.1
RLS	Riolos of Patr	0.85	113	P	Pg	21 51 06.2	-0.2
PVO	Paravola	0.86	75	P	Pg	21 51 07.0	+0.5
PVO	Paravola	0.86	75	P	Pg	21 51 07.1	+0.5
PVO				S	Sg	21 51 17.5	-0.3
DRO	Drossia	1.07	114	P	Pg	21 51 10.4	-0.1
DRO	Drossia	1.07	114	P	Pg	21 51 10.4	-0.1
ANX	Ano Chora	1.16	80	P	Pb	21 51 11.7	-0.2
SERG	Sergoula	1.25	89	P	Pn	21 51 13.3	+0.2
TRIZ	Trizonia	1.26	91	P	Pn	21 51 13.3	0.0
TRIZ	Trizonia	1.26	91	P	Pn	21 51 13.2	0.0
KALE	Kalithea	1.31	89	P	Pn	21 51 14.0	0.0
KLV	Kalavryta, Ach	1.37	104	P	Pn	21 51 15.4	+0.6
KLV	Kalavryta, Ach	1.37	104	P	Pn	21 51 15.1	+0.2
MAKR	Makrakomi, Fth	1.44	64	P	Pn	21 51 16.8	+1.0
AXAR	Agios Charalam	1.76	77	P	Pg	21 51 24.2	+0.6
PROD	Prodromos	1.92	93	P	Pb	21 51 25.4	+0.6
OHR	Ohrid	2.73	5	iPn	Pg	21 51 44.1	+2.0
VAY	Valandovo	3.34	28	iPn	Pb	21 51 46.7	-2.3
STIP	Stip	3.55	21	iPn	Pn	21 51 49.2	+4.4
STON	Ston	4.95	336	ePn	Pn	21 52 04.5	+0.7
STON				Sn	Sn	21 52 58.2	-2.8
MAKA	Makarska	5.54	333	ePn	Pn	21 52 12.9	+0.8
MAKA				Sn	Sn	21 53 14.4	-1.3
RICI	Ricice	5.69	335	iPn	Pn	21 52 14.9	+0.8
RICI				Sn	Sn	21 53 18.4	-0.9
KIJV	Kijevo	6.39	333	ePn	Pn	21 52 24.4	+0.7
ZIRJ	Zirje	6.40	327	ePn	Pn	21 52 23.5	-0.3
MORI	Morici	6.54	328	ePn	Pn	21 52 25.8	-0.1
MORI				Sn	Sn	21 53 38.5	-1.8
DUGI	Dugi Otok	6.92	326	iPn	Pn	21 52 30.8	-0.2
DUGI				Sn	Sn	21 53 47.0	-2.6
UDBI	Udbina	7.07	332	iPn	Pn	21 52 34.9	+1.7
NVLJ	Novalja	7.46	328	ePn	Pn	21 52 39.1	+0.7

IDC 12 22:10:58.4±5.6**, 24°.04S**×**174°.93W, h0**^{km}**, mb4.0**/3**, mb1 4.3**/3**, mb1mx3.8**/35**, mbtmp4.0**/3**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.8**/40**, Error ellipse: s-maj=317.0km s-min=37.7km az=155.0, South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	Rarotonga	14.28	82	LR	LR	22 19 16.5	
	comp=Z,114nm,18.7s,baz=252,slow=35						
ASAR	Alice Springs	46.58	260	P	P	22 19 27.7	-0.7
	1.5nm,0.9s,baz=91,slow=8.7,SNR=10						
NVAR	Mina Array Bea	81.71	42	P	P	22 23 19.2	+0.1
	0.2nm,0.3s,baz=217,slow=7.5,SNR=3.9						
CMAR	Chiang Mai Arr	93.94	288	P	P	22 24 20.2	+1.5
	0.9nm,0.3s,baz=132,slow=3.4,SNR=9.9						
AKASG	Malin Array Be	147.47	331	PKPbc	PKPdf	22 30 42.2	+0.6
	0.4nm,0.4s,baz=42,slow=4.4,SNR=5.8						

SJA ***12*** *22:12:07.9±0.4, 28°.67S×71°.54W, h10^{km}, ML3.4, MW3.4*
GUC ***12*** *22:12:09.1±0.5, 28°.61S×70°.81W, h107^{km}±10^{km}, ML3.6*
IDC ***12*** *22:12:18.7±11.0, 21°.65S×70°.75W, h0^{km}, mb3.9/1, mb1 3.9/1, mb1mx3.4/29, mbtmp3.9/1, Error ellipse: s-maj=691.4km s-min=113.8km az=5.0*
ISC 12 22:12:05.6±1.3**, 28°.39S**±0°.05×**71°.83W**±0°.09**, h20**^{km}**, n21, σ1^{s}.59**/31**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO03	Copiap	1.62	61	eP	Pn	22 12 32.5	-0.5
GO03				iS	Sn	22 12 50.0	-3.4
GO03				IAML		22 12 52.2	
	comp=E,1μm,0.2s						
GO04	Tololo Observa	2.00	153	eP	Pn	22 12 38.0	-0.5
GO04				iS	Sn	22 13 00.3	-2.6
GO04				IAML		22 13 07.3	
	comp=N,2μm,0.5s						
CO03	El Pedregal	2.64	158	eP	Pn	22 12 47.2	0.0
CO03				iS	Sn	22 13 14.7	-4.0
CO03				IAML		22 13 37.4	
	comp=N,320nm,0.2s						
AROD	Rodeo	2.72	131	iP	Pn	22 12 49.3	+0.9
AROD				iS	Sn	22 13 20.4	-0.6
CO02	Combarbal	2.90	166	eP	Pn	22 12 50.9	+0.1
CO02				iS	Sn	22 13 22.9	-2.3
VCA	Vinchina	3.21	97	iP	Pn	22 12 57.2	+2.2
VCA				iS	Sn	22 13 34.0	+1.2
VCA				IAML		22 13 38.9	
	comp=Z,200nm,0.3s						
ACCO	Cerro Coronel	3.26	133	iP	Pn	22 12 57.5	+1.5
ACCO				iS	Sn	22 13 33.9	-0.4
AMOG	MOGNA	3.86	132	iP	Pn	22 13 05.5	+1.5
AMOG				iS	Sn	22 13 48.5	-0.3
RTLS	Leoncito	4.05	148	iP	Pn	22 13 09.3	+2.5
RTLS				iS	Sn	22 13 54.4	+0.6
RTLS				IAML		22 14 15.4	
	comp=Z,60nm,0.5s						
RTLL	Cerro Villicun	4.14	136	iP	Pn	22 13 08.8	+1.1
RTLL				iS	Sn	22 13 54.1	-1.4
RTLL				IAML		22 14 11.5	
	comp=Z,60nm,0.5s						
ACLC	CERRO LA CRUZ	4.40	105	iP	Pn	22 13 12.0	+0.5
ROCH	El Roble	4.63	171	eP	Pn	22 13 14.7	+0.1
ROC1	El Roble	4.63	171	iP	Pn	22 13 15.2	+0.5
APLL	PUNTA DE LOS L	5.04	115	iP	Pn	22 13 19.6	-0.5
CYA	Choya	5.31	92	iP	Pn	22 13 23.2	-0.6
CYA				IAML		22 13 29.2	
	comp=Z,23nm,0.3s						
PB05	IPOC Station P	5.70	15	iP	Pn	22 13 29.6	+0.2
MRA	San Martin	6.64	129	iP	Pn	22 13 41.0	-1.1
TORD	Torodi Ar. Bea	82.16	71	P	P	22 24 25.2	-0.3
	comp=Z,0.7nm,0.6s,baz=254,slow=5.5,SNR=6.0						
KURBB	Kurchatov Arra	148.47	37	PKP	PKPbc	22 31 52.1	+1.6
	comp=Z,0.4nm,0.5s,baz=302,slow=2.9,SNR=7.8						
ZALV	Zalesovo Beam	149.28	27	PKP	PKPbc	22 31 53.8	+1.4
	comp=Z,1.2nm,0.5s,baz=316,slow=2.7,SNR=6.6						
MKAR	Makanchi Array	152.66	41	PKPbc	PKPbc	22 32 01.8	+1.1
	comp=Z,0.3nm,0.5s,baz=318,slow=1.9,SNR=6.6						

IDC ***12*** *22:27:44.0±0.9, 16°.18N×148°.06E, h0^{km}, mb3.8/11, mb1 4.0/12, mb1mx3.8/49, mbtmp3.9/12, ML4.5/1, Error ellipse: s-maj=26.4km s-min=20.7km az=103.0*
NEIC ***12*** *22:27:44.9±1.7, 16°.1N±0°.1×147°.9E±0°.1, h10^{km}±1^{km}, mb4.2/5, Error ellipse: s-maj=20.7km s-min=16.9km az=76.0*
ISC 12 22:27:48.6±0.7**, 16°.08N**±0°.08×**147°.95E**±0°.10**, h35**^{km}**, n29, σ1^{s}.03**/25**, mb3.8**/12**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	3.87	231	Pn	Pn	22 28 46.5	+0.8
	32nm,0.3s,baz=37,slow=18,SNR=4.8						
GUMO				Sn	Sn	22 29 29.5	-0.5
	50nm,0.3s,baz=54,slow=23,SNR=7.9						
GUMO	Guam	3.87	231		Sn	22 29 29.0	-1.0
PATS	Pohnpei	13.69	131	Pn	Pn	22 30 59.8	-0.4
PATS					Sn	22 33 20.2	-11
H11S3	WAKE ISLAND Hy	18.05	80	T	T	22 50 39.6	
	baz=264						
H11S1	WAKE ISLAND Hy	18.07	80	T	T	22 50 45.3	
	baz=264						
H11S2	WAKE ISLAND Hy	18.07	80	T	T	22 50 39.3	
	baz=264						
MJAR	Matsushiro Arr	22.14	339	P	P	22 32 40.7	-0.6
	2.2nm,0.5s,baz=159,slow=9.6,SNR=5.4						
MJAR	Matsushiro Arr	22.14	339	IAmb	IAmb	22 32 42.9	
	comp=Z,1.9nm,0.7s						
NACB	Ninganchiao	25.99	292	P	P	22 33 16.6	-1.6
KLR	Kul'dur	35.60	342	P	P	22 34 43.5	+0.8
	comp=Z,0.9nm,0.5s,baz=139,slow=11,SNR=3.1						
ASAR	Alice Springs	41.82	199	P	P	22 35 37.1	+2.0
	comp=Z,0.6nm,0.7s,baz=24,slow=8.1,SNR=8.5						
ASAR	Alice Springs	41.82	199	P	P	22 35 34.4	-0.8
SONM	Songino Array	46.52	322	P	P	22 36 14.2	+1.5
	comp=Z,0.4nm,0.5s,baz=137,slow=7.2,SNR=3.4						
SONM	Songino Array	46.52	322	P	P	22 36 11.4	-1.4
CMAR	Chiang Mai Arr	46.75	280	P	P	22 36 16.5	+1.7
	comp=Z,2.3nm,0.3s,baz=79,slow=6.2,SNR=10						
MKAR	Makanchi Array	61.82	315	P	P	22 38 05.1	+1.0
	comp=Z,0.5nm,0.7s,baz=90,slow=8.4,SNR=5.5						
MKAR	Makanchi Array	61.82	315	P	P	22 38 04.1	0.0
KURK	Kurchatov	64.64	319	P	P	22 38 22.1	-0.6
KURK	Kurchatov	64.64	319	IAmb	IAmb	22 38 26.9	
	comp=Z,1.6nm,0.9s						
KURBB	Kurchatov Arra	64.69	319	P	P	22 38 22.1	-0.9
	comp=Z,1.9nm,0.8s,baz=99,slow=6.6,SNR=14						
ILAR	Eielson Array	65.05	25	P	P	22 38 25.3	+0.1
	comp=Z,0.3nm,0.7s,baz=242,slow=6.8,SNR=3.4						
NIL	Nilore	68.69	300	P	P	22 38 48.0	-0.9
BVAR	Borovoye Array	69.85	321	P	P	22 38 56.1	+0.4
	comp=Z,0.3nm,0.4s,baz=90,slow=7.9						
YKA	Yellowknife Ar	79.28	28	P	P	22 39 50.5	+0.3
	comp=Z,0.3nm,0.6s,baz=282,slow=5.2,SNR=6.7						
FINES	FINESS Array B	90.14	336	P	P	22 40 45.6	+0.7
	comp=Z,1.2nm,0.8s,baz=45,slow=2.2,SNR=2.9						
FINES	FINESS Array B	90.14	336	P	P	22 40 45.2	+0.3
DBIC	Dimbokro	144.85	308	PKP	PKPdf	22 47 22.7	-0.2
	comp=Z,1.8nm,0.4s,baz=27,slow=2.6,SNR=6.5						
DBIC	Dimbokro	144.85	308		PKPab	22 47 20.4	-1.5
LPAZ	La Paz	145.38	95	PKPbc	PKPdf	22 47 24.1	-0.4
	comp=Z,2.3nm,0.4s,baz=320,slow=3.3,SNR=13						

NIED ***12*** *22:35:00, 31°.10N×131°.50E, h29^{km}, Mw4.4 Best double couple: M$_0$4.85000×10^{15} NP1:ϕ_s45.00000°, δ63.00000°, λ113.00000°. NP2:ϕ_s181.00000°, δ35.00000°, λ52.00000°.*
JMA ***12*** *22:35:53.7±0.1, 31°.07N×131°.49E, h29^{km}±1^{km}, M4.1*
JMA Felt I J1.
NEIC ***12*** *22:35:54.6±1.9, 31°.04N±0°.06×131°.46E±0°.08, h51^{km}±7^{km}, mb4.6/34, Error ellipse: s-maj=11.2km s-min=7.1km az=123.0*
IDC ***12*** *22:35:56.0±1.5, 31°.05N×131°.31E, h55^{km}±12^{km}, mb3.9/24, mb1 4.0/31, mb1mx3.9/66, mbtmp4.1/31, MS3.8/19, Ms1 3.8/19, ms1mx3.5/53, Error ellipse: s-maj=15.0km s-min=8.8km az=103.0*
ISC 12 22:35:54.5±0.8**, 31°.05N**±0°.04×**131°.47E**±0°.05**, h48**^{km}±7^{km}**, n108, σ1^{s}.56**/112**, mb4.4**/39**, MS3.9**/14**, 3C-4D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTSR	Tashiro 2	0.49	284	⇓P	Pn	22 36 03.8	-1.7
JTSR				eS	Sn	22 36 11.6	-1.8
JNAR	Kushima--Naru	0.51	340	⇓P	Pn	22 36 03.9	-1.9
JNAR				eS	Sn	22 36 10.9	-2.9
JTN	Tanegashima 3	0.58	227	⇓P	Pn	22 36 06.0	-0.6
JTN				eS	Sn	22 36 14.7	-0.6
JNKG	Nichinankitago	0.62	352	⇓P	Pn	22 36 05.8	-1.4
JMTN	Minamitane	0.81	217	P	Pn	22 36 09.4	-0.3
JMTN				eS	Sn	22 36 22.4	+1.6
JTZ	Takazaki	0.91	339	⇑P	Pn	22 36 10.3	-0.7
JTZ				S	Sn	22 36 23.9	+0.8
JSU	Suzuyama	0.98	298	⇑P	Pn	22 36 11.6	-0.4
JYAK	Yakushimahirau	1.16	226	P	Pn	22 36 14.4	+0.1
JYAK				S	Sn	22 36 30.2	+1.2
JTSN	Tsuno	1.20	1	P	Pn	22 36 13.8	-1.1
JTSN				eS	Sn	22 36 29.7	-0.3
JKC	Kuchinoerabu	1.24	242	P	Pn	22 36 15.3	-0.2
JZO	Okuchi	1.32	326	⇑P	Pn	22 36 16.2	-0.4
JNU	Nakatsue	2.13	346	P	Pn	22 36 28.1	+0.4
	8.1nm,0.3s,baz=201,slow=4.4,SNR=28						
JNU				S	Sn	22 36 55.3	+2.4
	21nm,0.3s,baz=340,slow=19,SNR=5.6						
JNU				LR	LR	22 37 40.1	
	comp=Z,2μm,18.0s,baz=193,slow=50						
JNU	Nakatsue	2.13	346		Pn	22 36 28.3	+0.6
JOW	Kunigami	5.05	214	P	Pn	22 37 07.8	+0.1
	3.1nm,0.3s,baz=91,slow=19,SNR=22						
JOW				S	Sn	22 38 04.2	-0.5
	1.5nm,0.3s,baz=153,slow=11,SNR=3.1						
JOW	Kunigami	5.05	214	Pn	Pn	22 37 08.1	+0.4
JOW				Sn	Sn	22 38 01.7	-3.0
INU	Inuyama	6.33	46		Pn	22 37 26.1	+1.0
INU				Sn	Sn	22 38 32.5	-3.6
KSRS	Korea Array	7.03	336	P	Pn	22 37 35.7	+0.9

	0.4nm,0.3s,baz=166,slow=11,SNR=5.2						
KSRS				LR	LR	22 40 34.0	
	comp=Z,801nm,18.2s,baz=155,slow=40						
MJAR	Matsushiro Arr	7.84	44	P	Pn	22 37 46.9	+1.0
	0.1nm,0.3s,baz=238,slow=14,SNR=7.9						
USRK	Ussuriysk Ar.	13.14	2	P	Pn	22 38 58.6	+0.3
	baz=195,slow=13,SNR=4.2						
USRK				LR	LR	22 44 04.9	
	comp=Z,386nm,19.1s,baz=180,slow=37						
BJT	Baijiatuau	15.32	310	P	Pn	22 39 28.8	+1.3
BJI	Beijing	15.33	310	P	P	22 39 33.5	+1.9
ASAJ	Asahikawa	15.73	31	P	Pn	22 39 32.9	+0.1
	0.1nm,0.3s,baz=185,slow=14,SNR=3.6						
ASAJ				LR	LR	22 46 26.9	
	comp=Z,267nm,18.8s,baz=236,slow=40						
JKA	Kamikawa-asahi	15.73	31		Pn	22 39 32.9	+0.1
KLR	Kul'dur	18.16	1	P	Pn	22 40 04.2	+1.1
	0.2nm,0.3s,baz=160,slow=13,SNR=8.0						
KLR				LR	LR	22 46 31.6	
	comp=Z,192nm,21.2s,baz=184,slow=35						
HHC	Hu-ho-hao-te	18.82	307	eP	Pn	22 40 11.6	+0.5
ENH	Enshi	18.93	273		Pn	22 40 13.0	+0.5
ENH				IAmb	IAmb	22 40 14.5	
	comp=Z,20nm,0.6s						
XAN	Xi'an	19.24	285	P	P	22 40 15.2	+0.4
XAN				pP	pP	22 40 23.0	-3.0
XAN				sP	sP	22 40 27.1	-5.0
XAN	Xi'an	19.24	285	P	P	22 40 14.6	-0.2
LZH	Lanzhou	23.52	290	eP	P	22 41 01.3	+0.8
LZH				pP	pP	22 41 12.9	+0.5
LZH				sP	sP	22 41 18.3	-0.1
LZH				ePP	PnPn	22 41 34.5	+5.7
ULN	Ulaanbaatar	25.09	319	P	P	22 41 14.5	-0.2
ULN				IAmb	IAmb	22 41 16.5	
	comp=Z,21nm,1.0s						
SONM	Songino Array	25.45	318	P	P	22 41 17.6	-0.3
	comp=Z,5.6nm,0.9s,baz=133,slow=8.1,SNR=28						
SONM				LR	LR	22 53 09.4	
	comp=Z,168nm,18.6s,baz=133,slow=41						
SONM	Songino Array	25.45	318	P	P	22 41 17.1	-0.8
GTA	Gaotai	27.07	297	eP	P	22 41 32.5	-0.1
GTA				pP	pP	22 41 40.1	-5.0
GTA				sP	sP	22 41 43.8	-7.1
TLY	Talaya	29.05	323	LR	LR	22 55 12.5	
	comp=Z,165nm,18.1s,baz=124,slow=40						
PETK	Petropavlovsk-	29.12	33	LR	LR	22 54 40.8	
	comp=Z,141nm,18.6s,baz=236,slow=38						
MA2	Magadan	31.35	19	P	P	22 42 11.3	+1.1
	baz=196,slow=12,SNR=6.6						
MA2	Magadan	31.35	19	P	P	22 42 10.6	+0.4
MA2				IAmb	IAmb	22 42 12.3	
	comp=Z,12nm,1.1s						
CHTO	Chiang Mai	31.79	255	P	P	22 42 13.3	-1.3
CHTO				IAmb	IAmb	22 42 15.5	
	comp=Z,6.2nm,0.8s						
CMAR	Chiang Mai Arr	31.97	255	P	P	22 42 15.9	-0.1
	comp=Z,2.5nm,0.6s,baz=49,slow=7.3,SNR=13						
CMAR	Chiang Mai Arr	31.97	255	P	P	22 42 16.2	+0.1
H11N2	WAKE ISLAND Hy	33.79	101	T	T	23 18 24.5	
	baz=296,slow=75,SNR=54						
H11N1	WAKE ISLAND Hy	33.80	101	T	T	23 18 29.9	
	baz=296,slow=75,SNR=23						
H11N3	WAKE ISLAND Hy	33.81	101	T	T	23 18 25.8	
	baz=296,slow=75,SNR=31						
H11S3	WAKE ISLAND Hy	34.18	103	T	T	23 19 27.4	
	baz=303						
H11S1	WAKE ISLAND Hy	34.19	103	T	T	23 19 38.9	
	baz=303						
H11S2	WAKE ISLAND Hy	34.20	103	T	T	23 19 20.0	
	baz=303						
SEY	Seymchan	34.60	17	P	P	22 42 40.2	+1.7
	comp=Z,6.0nm,0.9s,baz=216,slow=5.9,SNR=22						
SHL	Shillong	35.15	271	P	P	22 42 43.0	-0.9
SHL				IAmb	IAmb	22 42 45.1	
	comp=Z,5.4nm,0.8s						
WMQ	Urumqi	36.62	303	eP	P	22 42 57.6	+1.4
KAPI	Kappang	37.57	199	LR	LR	23 00 53.2	
	comp=Z,38nm,18.4s,baz=93,slow=40						
IPM	Ipoh	38.97	233	P	P	22 43 13.5	-2.7
IPM				IAmb	IAmb	22 43 18.9	
	comp=Z,5.2nm,0.6s						
ZALV	Zalesovo Beam	40.34	318	P	P	22 43 25.6	-1.6
	comp=Z,0.7nm,0.5s,baz=116,slow=10,SNR=6.7						
ZALV				PcP	PcP	22 45 30.1	+0.3
	comp=Z,0.6nm,0.5s,baz=116,slow=3.4,SNR=3.6						
ZALV				LR	LR	23 01 36.1	
	comp=Z,206nm,18.9s,baz=118,slow=38						
ZALV	Zalesovo Beam	40.34	318	P	P	22 43 25.6	-1.6
ZALV				PcP	PcP	22 45 29.0	-0.7
MK31	Makanchi Array	40.68	307	P	P	22 43 29.5	-0.7
MKAR	Makanchi Array	40.68	307	P	P	22 43 30.0	-0.1
	comp=Z,2.3nm,0.8s,baz=94,slow=10,SNR=19						
MKAR				PcP	PcP	22 45 30.9	-0.2
	comp=Z,0.6nm,0.8s,baz=90,slow=2.8,SNR=4.0						
MKAR				LR	LR	23 01 53.7	
	comp=Z,178nm,19.6s,baz=86,slow=38						
MKAR	Makanchi Array	40.68	307	P	P	22 43 29.5	-0.6
TIXI	Tiksi	40.68	359	P	P	22 43 30.7	+1.0
	comp=Z,1.4nm,0.3s,baz=133,slow=8.5,SNR=3.3						
BILL	Bilibino	42.22	19	P	P	22 43 43.5	+1.1
BILL				PP	PP	22 45 15.7	-4.9
KURK	Kurchatov	43.48	313	P	P	22 43 52.6	-0.3
KURK				IAmb	IAmb	22 43 53.2	
	comp=Z,8.3nm,0.8s						
KURBB	Kurchatov Arra	43.52	312	P	P	22 43 52.8	-0.4
	comp=Z,5.2nm,0.8s,baz=98,slow=9.0,SNR=38						
LEM	Lembang	44.04	215	LR	LR	23 03 12.6	
	comp=Z,139nm,18.4s,baz=350,slow=37						
KSH	Kashi	45.47	297	P	P	22 44 12.3	+3.2
KSH				pP	sP	22 44 54.0	+26
KSH				PcP	PcP	22 45 48.0	+0.6
KSH				PcS	PcS	22 49 39.6	-2.0
KSH				S	S	22 50 39.9	-7.5
KSH				SS	ScS	22 54 02.1	+0.6
NRIK	Noril'sk	45.64	340	P	P	22 44 09.4	-0.4
	comp=Z,1.8nm,0.7s,baz=111,slow=12,SNR=4.0						
ARSB	Arslanbob	47.51	299	P	P	22 44 24.6	-0.4
ARSB				IAmb	IAmb	22 44 33.3	
	comp=Z,12nm,1.4s						
ARSB				PcP	PcP	22 45 53.0	-1.6
NIL	Nilore	48.69	289	P	P	22 44 32.4	-1.7
NIL				IAmb	IAmb	22 44 37.5	
	comp=Z,4.8nm,0.8s						
BVAR	Borovoye Array	48.72	315	P	P	22 44 34.0	-0.1
	comp=Z,7.6nm,0.7s,baz=96,slow=9.4,SNR=74						
BVAR				PcP	PcP	22 45 58.8	+0.3
	comp=Z,1.3nm,0.7s,baz=101,slow=3.8,SNR=4.1						
BRVK	Borovoye	48.79	315	P	P	22 44 34.3	-0.3
KK31	Karatay Array	49.11	302	IAmb	IAmb	22 44 38.9	
	comp=Z,10nm,0.8s						
KKAR	Karatay Array	49.11	302	P	P	22 44 37.0	-0.2
KKAR	Karatay Array	49.11	302	IAmb	IAmb	22 44 38.9	
	comp=Z,10nm,0.8s						
CHGR	Chuyangaron	50.84	297	IAmb	IAmb	22 44 51.7	
	comp=Z,7.4nm,0.9s						
ANM	Nome	50.93	30	P	P	22 44 50.9	+0.2
ANM				IAmb	IAmb	22 44 54.2	
	comp=Z,5.6nm,0.8s						
SDPT	Sand Point	52.81	42	P	P	22 45 03.5	-1.3
ASAR	Alice Springs	54.45	177	P	P	22 45 18.4	+1.3
	comp=Z,1.2nm,0.8s,baz=7.7,slow=9.6,SNR=16						
ARU	Arti	55.47	320	P	P	22 45 24.0	-0.1
ABKAR	Akbulak array	55.54	311	P	P	22 45 24.2	-0.5
IMAR	Indian Mountai	55.91	28	P	P	22 45 28.4	+1.2
AKTO	Aktyubinsk	56.58	313	P	P	22 45 31.8	-0.4
	comp=Z,1.3nm,0.7s,baz=69,slow=13,SNR=3.1						
MLY	Manley	57.20	30	P	P	22 45 39.4	+3.0
MLY				IAmb	IAmb	22 45 39.7	
	comp=Z,5.2nm,1.0s						
RND	Reindeer	58.16	31	P	P	22 45 43.8	+0.6
ILAR	Eielson Array	58.86	30	P	P	22 45 48.6	+0.6
	comp=Z,1.3nm,0.8s,baz=272,slow=5.9,SNR=13						
GEYT	Alibeck	59.43	298	LR	LR	23 15 03.9	
	comp=Z,96nm,18.2s,baz=30,slow=40						
GEYT	Alibeck	59.43	298	P	P	22 45 52.1	-0.3
MENT	Mentasta	60.53	32	P	P	22 45 57.2	-2.4
BCAR	Beaver Creek A	61.37	31	P	P	22 46 06.5	+1.2
STKA	Stephens Creek	63.31	170	P	P	22 46 19.9	+1.5
	comp=Z,2.0nm,0.6s,baz=344,slow=10,SNR=5.8						
STKA				LR	LR	23 13 31.6	
	comp=Z,49nm,19.8s,baz=18,slow=36						
INK	Inuvik	63.35	24	P	P	22 46 19.6	+1.3
	comp=Z,1.8nm,0.6s,baz=272,slow=5.1,SNR=6.0						
C36M	Paulatuk	66.19	22	P	P	22 46 36.4	-0.3
C36M				IAmb	IAmb	22 46 38.9	
	comp=Z,7.6nm,0.7s						
KBZ	Khabaz	68.35	309	P	P	22 46 51.6	+0.8
	comp=Z,5.5nm,0.9s,baz=353,slow=2.3,SNR=6.6						
FINES	FINESS Array B	70.09	330	P	P	22 47 00.5	-0.7
	comp=Z,2.2nm,0.7s,baz=72,slow=6.1,SNR=6.2						
FINES				LR	LR	23 23 21.1	
	comp=Z,200nm,20.0s,baz=42,slow=41						
RES	Resolute Bay	70.28	12	IAmb	IAmb	22 47 04.3	
	comp=Z,6.4nm,0.9s						
YKA	Yellowknife Ar	72.97	26	P	P	22 47 19.5	+0.9
	comp=Z,1.3nm,0.8s,baz=305,slow=5.1,SNR=16						
AKASG	Malin Array Be	73.72	320	P	P	22 47 23.1	-0.1
	comp=Z,0.7nm,0.5s,baz=57,slow=6.5,SNR=5.0						
AKASG	Malin Array Be	73.72	320	IAmb	IAmb	22 47 24.3	
	comp=Z,1.8nm,1.4s						
RAYN	Ar Rayn	74.98	289	P	P	22 47 31.5	+0.3
HFS	Hagfors	75.87	333	P	P	22 47 35.6	+0.1
	comp=Z,2.8nm,0.8s,baz=304,slow=3.3,SNR=2.9						
NB2	NORSAR Subarra	76.24	334	P	P	22 47 37.4	-0.3
	comp=Z,0.8nm,0.6s,baz=50,slow=5.9						
NOA	NORSAR Array B	76.24	334	P	P	22 47 37.2	-0.4
	comp=Z,1.0nm,0.7s,baz=51,slow=5.5,SNR=4.0						
NOA				LR	LR	23 26 22.2	
	comp=Z,57nm,19.2s,baz=35,slow=40						
BR131	Keskin Array S	76.32	308	P	P	22 47 37.3	-1.4
BRTR	Keskin Array B	76.32	308	P	P	22 47 39.4	+0.8
	comp=Z,3.0nm,0.8s,baz=99,slow=5.4,SNR=14						
BRTR	Keskin Array B	76.32	308	P	P	22 47 39.3	+0.6
CLL	Collm	81.80	326	eP	P	22 48 09.0	+0.8
CLL				LmV		23 28 00.0	
	comp=Z,100nm,18.8s						
GERES	GERESS Array B	83.04	324	LR	LR	23 28 47.4	
	comp=Z,135nm,18.5s,baz=60,slow=38						
DAVOX	Davos/Dischmat	86.34	324	P	P	22 48 32.3	+0.7
	comp=Z,1.1nm,0.5s,baz=106,slow=5.4,SNR=3.7						
PDAR	Pinedale Array	87.65	40	P	P	22 48 39.4	+1.3
	comp=Z,0.4nm,0.8s,baz=328,slow=2.6,SNR=4.3						
PDAR				LR	LR	23 30 23.1	
	comp=Z,42nm,18.9s,baz=274,slow=37						
ULM	Lac du Bonnet	88.85	28	P	P	22 48 44.5	+1.2
	comp=Z,4.9nm,0.8s,baz=330,slow=5.6,SNR=12						
ULM	Lac du Bonnet	88.85	28	P	P	22 48 44.3	+1.0
ULM				IAmb	IAmb	22 48 45.4	
	comp=Z,5.7nm,0.9s						
SCHQ	Schefferville	93.03	10	LR	LR	23 34 03.4	
	comp=Z,44nm,18.7s,baz=350,slow=38						

DNK ***12*** *22:36:57.4±1.3, 81.°45N×3.°68W, h0^{km}±20^{km}, ML2.7, Hypocentre not reviewed by the ISC*
IEPN ***12*** *22:36:58.0, 81.°75N×2.°34W, h15^{km}*
BER 12 22:36:58.1±1.7**, 81.°78N×4.°03W, h10**^{km}**, ML2.1, ML2.7**(DNK)**, 1C, Confirmed Earthquake, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	3.91	129	eP	Pn	22 37 56.1	-2.0
KBS				eS	Sn	22 38 39.3	-4.6
KBS				IAML		22 38 46.0	
	comp=Z,3.9nm,1.0s						
KBS	Kingsbay	3.91	129	eP	Pn	22 37 56.2	-1.9
KBS				eS	Sn	22 38 38.4	-5.5
KBS	Kingsbay	3.91	129	i P		22 37 56.1	
KBS				i S		22 38 38.0	
KBS				IAML		22 38 43.2	
	comp=Z,4.5nm,0.3s						
SPA0	Spitsbergen Ar	5.04	125	eP	Pn	22 38 11.4	-2.1
SPA0				eS	Sn	22 39 06.8	-4.9
SPA0				IAML		22 39 14.2	
	comp=Z,2.9nm,1.1s						
SPA0	Spitsbergen Ar	5.04	125	⇑iP	Pn	22 38 11.4	-2.1
SPA0				eS	Sn	22 39 05.7	-6.0
DAG	Danmarks Havn	5.69	216	i P	Pn	22 38 19.7	-2.8
DAG				i S	Sn	22 39 20.2	-7.6
DAG	Danmarks Havn	5.69	216	i P	Pn	22 38 19.8	-2.7
DAG				i S	Sn	22 39 20.3	-7.5
DAG				IAML		22 39 29.0	
	comp=Z,3.9nm,0.3s						
DAG	Danmarks Havn	5.69	216	i P		22 38 19.8	
DAG				i S		22 39 20.3	
DAG				IAML		22 39 29.0	
	comp=Z,3.9nm,0.3s						
ZFI2	Zemlya Franca-	7.67	71	eP	Pn	22 38 42.0	-7.6
ZFI2				eS	Sn	22 40 00.5	-16
	comp=Z,6.1nm,1.4s						
DBG	Daneborg	8.17	212	i P	Pn	22 38 52.4	-4.1
DBG				eS	Sn	22 40 20.1	-8.5
DBG				IAML		22 40 26.5	
	comp=Z,2.6nm,0.3s						
DBG	Daneborg	8.17	212	i P		22 38 52.4	
DBG				eS		22 40 20.1	
DBG				IAML		22 40 26.5	
	comp=Z,2.6nm,0.3s						
SUMG	Summit	11.65	237	i P	Pn	22 39 39.0	-5.5
SUMG				eS	Sn	22 41 39.0	-16
SUMG	Summit	11.65	237	i P	Pn	22 39 39.0	-5.5
SUMG				eS	Sn	22 41 39.0	-16
SUMG				IAML		22 41 48.4	
	comp=Z,2.0nm,0.4s						
SUMG	Summit	11.65	237	i P		22 39 39.0	
SUMG				eS		22 41 39.0	
SUMG				IAML		22 41 48.4	
	comp=Z,2.0nm,0.4s						

TIR ***12*** *22:42:06.3, 41.°54N×19.°51E, h12^{km}, Md2.5/5*
ISC 12 22:42:07.4±1.2**, 41.°55N**±0.°05×**19.°55E**±0.°05**, h12**^{km}±11^{km}**, n9, σ0.^{s}67**/15**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.31	130	i PG	Pg	22 42 13.2	-0.5
TIR				i SG	Sg	22 42 18.6	+0.6
PUK	Puka	0.56	28	i PG	Pg	22 42 18.3	0.0
PUK				i SG	Sb	22 42 26.8	-0.3
PHP	Peshkopia	0.69	78	i PG	Pg	22 42 20.3	-0.3
PHP				i SG	Sb	22 42 31.4	+0.6
BCI	Bajram Curri	0.90	25	i PG	Pb	22 42 25.2	+0.1
BCI				i SG	Sn	22 42 38.6	-0.4
DBRK	Dubrovnik	1.53	318	ePn	Pb	22 42 36.0	+0.4
DBRK				Sn	Sg	22 42 56.4	-0.2
FNA	Florina	1.58	118	i PN	Pb	22 42 36.7	+0.1
STON	Ston	1.90	315	ePn	Pn	22 42 39.5	-0.2
STON				Sn	Sn	22 43 02.6	-1.0
MAKA	Makarska	2.55	314	Sn	Sn	22 43 19.4	-0.2
RICI	Ricice	2.64	318	Sn	Sn	22 43 23.3	+1.5

SKO ***12*** *23:07:15.0, 41.°26N×19.°16E, h4^{km}*
TIR ***12*** *23:07:17.5, 41.°50N×19.°49E, h24^{km}, Md2.7/5*
BEO ***12*** *23:07:20.8±0.6, 41.°51N×19.°51E, h5^{km}±3^{km}, ML2.0/5*
ISC 12 23:07:18.9±1.2**, 41.°50N**±0.°04×**19.°53E**±0.°04**, h12**^{km}±9^{km}**, n24, σ0.^{s}67**/37**, 1C, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.30	120	ePg	Pg	23 07 25.4	+0.5
TIR				eSg	Sb	23 07 31.0	0.0
TIR	Tirane	0.30	120	i PG	Pg	23 07 24.7	-0.2
TIR				i SG	Sb	23 07 30.2	-0.8
PUK	Puka	0.61	27	i PG	Pg	23 07 30.0	-0.8
PUK				i SG	Sg	23 07 39.3	+0.4
PHP	Peshkopia	0.71	74	i PG	Pg	23 07 31.5	-1.2
PHP				i SG	Sb	23 07 43.1	+0.1
DRME	Dracevica, Mon	0.73	340	ePn	Pb	23 07 33.9	+0.2
PDG	Podgorica	0.95	348	ePg	Pn	23 07 38.5	+0.4
PDG				eSg	Sn	23 07 52.2	+0.5
PDG	Podgorica	0.95	348	ePn	Pb	23 07 37.6	+0.2
BCI	Bajram Curri	0.96	25	i PG	Pg	23 07 36.2	-1.2
BCI				i SG	Sb	23 07 49.9	-0.3
OHR	Ohrid	1.03	111	⇑iPg	Pb	23 07 37.4	-1.3
OHR				i Sg	Sn	23 07 55.0	+1.3
OHR				eLg	Lg	23 07 56.8	
	comp=N,28nm,0.8s						
HCY	Herceg Novi	1.22	321	ePn	Pn	23 07 41.6	-0.2
TREB	Trebinje	1.50	325	ePn	Pb	23 07 47.3	+0.6
TREB				eSg	Sg	23 08 07.6	+0.4
TREB	Trebinje	1.50	325	ePn	Pn	23 07 46.2	+0.5
DBRK	Dubrovnik	1.56	319	ePn	Pn	23 07 47.0	+0.6
DBRK				Sn	Sg	23 08 09.4	+0.4
FNA	Florina	1.57	116	i PN	Pb	23 07 47.5	-0.4
FNA				i SN	Sg	23 08 09.6	+0.3
SJES	Sjenica	1.79	11	ePn	Pg	23 07 53.1	-0.2
SJES				eSg	Sg	23 08 16.3	-0.3
STON	Ston	1.93	316	i Pn	Pn	23 07 51.5	-0.1
STON	Ston	1.93	316	ePn	Pb	23 07 53.6	-0.4
STIP	Stip	2.01	83	i Pn	Pg	23 07 56.8	-0.5
STIP				i Sn	Sg	23 08 24.9	+1.6
STIP				eLg	Lg	23 08 26.7	
	comp=N,1.5nm,0.4s						
SELS	Selova	2.09	34	ePn	Pn	23 07 54.4	+0.6
RUDO	Rudo	2.12	357	ePn	Pn	23 07 54.9	+0.7
IVAS	Ivanjica	2.13	12	ePn	Pb	23 07 57.6	+0.1
BARS	Barje	2.15	51	ePn	Pb	23 07 57.6	-0.2
MAKA	Makarska	2.58	315	ePn	Pn	23 08 00.2	-0.3
MAKA				Sn	Sn	23 08 31.1	-0.6
RICI	Ricice	2.67	319	ePn	Pn	23 08 01.7	-0.1

ATH 12 23:07:58.5, 37.°97N×21.°54E, h17^{km}±2^{km}**, ML1.8**/2**, Error ellipse: s-maj=2.7km s-min=0.9km az=269.0, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RLS	Riolos of Patr	0.10	329	P	Pg	23 08 02.2	0.0
RLS				S	Sb	23 08 04.4	-0.1
RLS				AML	AML	23 08 05.2	
	comp=E,1503μm,0.1s						
RLS				AML	AML	23 08 05.3	
	comp=N,1886μm,0.1s						
DRO	Drossia	0.14	96	P	Pg	23 08 02.6	0.0
DRO				S	Sb	23 08 05.4	-0.1
DRO				AML	AML	23 08 07.2	
	comp=N,482μm,0.1s						
DRO				AML	AML	23 08 07.8	
	comp=E,752μm,0.1s						
AMT	Artemida-Makis	0.46	162	P	Pg	23 08 07.5	-0.3
AMT				S	Sg	23 08 14.2	+0.2
KLV	Kalavryta, Ach	0.49	81	P	Pg	23 08 08.3	-0.2
KLV				S	Sb	23 08 15.8	+0.1
SERG	Sergoula	0.60	43	P	Pg	23 08 10.1	-0.4
SERG				S	Sg	23 08 18.1	-0.5
PVO	Paravola	0.65	359	P	Pg	23 08 11.1	-0.2
PVO				S	Sb	23 08 20.5	+0.4
ANX	Ano Chora	0.69	26	P	Pg	23 08 12.0	-0.2
ANX				S	Sb	23 08 22.6	+1.0
ITM	Ithomi	0.85	158	P	Pb	23 08 14.9	+0.1
ITM				S	Sg	23 08 26.9	+0.7

LJU 12 23:08:22.5, 45.°75N×14.°87E, h2^{km}**, ML0.2, 1D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VISS	Visnje	0.05	338	⇓iPg	Pg	23 08 23.5	-0.1
VISS				i Sg	Sg	23 08 24.4	0.0
	comp=Z,7.0nm,0.1s						

IDC ***12*** *23:10:05.0±0.9, 28.°54N×139.°28E, h477^{km}±12^{km}, mb2.7/6, mb1 2.9/7, mb1mx2.7/36, mbtmp3.6/7, Error ellipse: s-maj=24.1km s-min=18.5km az=77.0*
JMA ***12*** *23:10:06.5±0.3, 28.°81N×139.°47E, h466^{km}, M3.4*
ISC 12 23:10:06.0±1.0**, 28.°69N**±0.°09×**139.°7E**±0.°2**, h500**^{km}**, n15, σ2.^{s}47**/20**, mb3.0**/6**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	2.71	125	P	P	23 11 14.8	-0.4
CBIJ				eS	S	23 12 08.9	-2.4
JCJ	Chichijima	2.71	125	P	P	23 11 14.8	-0.3
	35nm,0.3s,baz=277,slow=19,SNR=17						
JCJ				S	S	23 12 09.7	-1.6
	33nm,0.3s,baz=128,slow=19,SNR=13						
JHH2	Haha-jima-NKT2	3.00	132	P	P	23 11 17.0	-0.1
JHH2				eS	S	23 12 13.3	-1.5
BSO1	Boso 1	6.04	10	P	P	23 11 42.6	+0.6
BSO1				eS	S	23 13 00.9	+0.2
JHU	Hanno	7.15	357	P	P	23 11 53.0	-0.6
JRY	Ryogami san	7.34	355	P	P	23 11 55.2	-0.3
JAG	Ashikaga	7.72	359	P	P	23 11 58.4	-0.9
JAG				eS	S	23 13 24.7	-7.6
JHO	Hitachi	7.93	5	P	P	23 12 02.6	+1.1
JHO				eS	S	23 13 33.7	-2.7
JFK	Kawauchi	8.71	6	eS	S	23 13 49.1	-2.2
SONM	Songino Array	32.04	316	P	P	23 15 50.0	-0.9
	0.4nm,0.4s,baz=128,slow=9.2,SNR=7.5						
MKAR	Makanchi Array	47.77	309	P	P	23 17 56.0	-1.1
	0.4nm,0.5s,baz=95,slow=9.4,SNR=10.0						
MKAR				ScP	ScP	23 22 23.7	+0.9
	0.2nm,0.6s,baz=86,slow=5.6,SNR=3.6						
ASAR	Alice Springs	52.35	187	P	P	23 18 30.3	-0.8
	0.2nm,0.4s,baz=22,slow=10,SNR=4.2						
ILAR	Eielson Array	57.38	29	P	P	23 19 08.4	+2.7
	0.2nm,0.8s,baz=284,slow=7.3,SNR=4.2						
YKA	Yellowknife Ar	71.78	28	P	P	23 20 40.3	+3.3
	0.2nm,0.5s,baz=295,slow=6.8,SNR=4.3						
FINES	FINESS Array B	75.54	333	P	P	23 20 59.0	+0.6
	1.6nm,0.8s,baz=57,slow=5.1,SNR=4.4						

MEX ***12*** *23:33:37.9±0.6, 15.°12N×93.°40W, h69^{km}±8^{km}, MD3.8*
GCG ***12*** *23:33:38.3±2.9, 15.°47N×93.°00W, h4^{km}±999^{km}, MD4.3*
IDC ***12*** *23:33:39.6±1.8, 15.°47N×93.°20W, h77^{km}±12^{km}, mb3.3/4, mb1 3.8/8, mb1mx3.4/37, mbtmp3.8/8, MS2.0/1, Ms1 2.0/1, ms1mx1.9/19, Error ellipse: s-maj=31.2km s-min=7.3km az=25.0*
ISC 12 23:33:38.3±1.0**, 15.°29N**±0.°06×**93.°31W**±0.°06**, h72**^{km}±8^{km}**, n18, σ1.^{s}17**/28**, mb3.7**/4**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.42	11	eP	Pn	23 33 50.0	-0.6
PCIG				eS	Sn	23 34 00.2	+0.5
THIG		1.07	110	eP	Pn	23 33 56.3	-1.6
THIG				eS	Sn	23 34 10.9	-1.5
TGIG		1.49	7	eP	Pn	23 34 04.0	+0.7
TGIG				eS	Sn	23 34 23.9	+1.7
CCIG	Comitan	1.50	49	i P	Pn	23 34 04.6	+1.1
CCIG				eS	Sn	23 34 24.1	+1.6
STG3	Santiaguito 3,	1.77	109	eP	Pn	23 34 06.9	-0.3
ERG	Entre ros, C	1.88	116	eP	Pn	23 34 08.4	0.0
ERG				eS	Sn	23 34 32.6	+1.4
CMIG	Matias Romero	2.35	320	P	Pn	23 34 14.5	-0.2
	11nm,0.3s,baz=143,slow=12,SNR=103						
CMIG				S	Sn	23 34 43.4	+0.7
	78nm,0.3s,baz=147,slow=9.7,SNR=14						
CMIG	Matias Romero	2.35	320	eP	Pn	23 34 14.0	-0.8
CMIG				i S	Sn	23 34 43.0	+0.4
FUG	Fuego 3	2.52	109	eP	Pn	23 34 18.4	+1.1
FUG				eS	Sn	23 34 47.4	+0.3
PCG	Pacaya	2.76	108	eS	Sn	23 34 53.9	+1.0
APG	El Apazote	2.76	95	P	Pn	23 34 21.1	+0.7
	8.3nm,0.3s,baz=342,slow=15,SNR=48						
APG				LR	LR	23 34 52.6	
	comp=Z,28nm,21.0s,baz=97,slow=27						
APG				S	Sn	23 34 53.0	+0.1
	18nm,0.3s,baz=113,slow=8.6,SNR=5.7						
IXG	Ixpaco	2.98	111	eP	Pn	23 34 24.6	+1.1
TEIG	Tepich	6.86	44	P	Pn	23 35 15.3	-1.0
	baz=334,slow=0.0						
TEIG				S	Sn	23 36 29.7	-3.3
	17nm,0.3s,baz=66,slow=0.0,SNR=4.7						
TXAR	Lajitas Array	16.93	327	P	P	23 37 32.5	+0.9
	0.1nm,0.3s,baz=153,slow=12,SNR=7.7						
NVAR	Mina Array Bea	31.88	321	P	P	23 39 57.2	+0.2
	0.4nm,0.6s,baz=134,slow=7.6,SNR=3.5						
YKA	Yellowknife Ar	49.49	347	P	P	23 42 20.4	-0.7
	0.6nm,0.5s,baz=151,slow=7.6,SNR=13						
INK	Inuvik	58.86	344	P	P	23 43 28.8	-0.3
	1.5nm,0.8s,baz=135,slow=5.7,SNR=6.8						
ILAR	Eielson Array	61.17	337	P	P	23 43 45.2	+0.2
	0.3nm,0.8s,baz=148,slow=7.1,SNR=3.1						

TIR ***13*** *00:01:42.4, 41.°51N×19.°49E, h25^{km}, Md2.8/7*
PDG ***13*** *00:01:43.4±0.5, 41.°47N×19.°49E, h16^{km}, MD3.3/1, ML2.8/13, Error ellipse: s-maj=0.7km s-min=1.1km az=0.0*
SKO ***13*** *00:01:44.3, 41.°44N×19.°42E, h16^{km}*
RHSSO ***13*** *00:01:45.4±1.2, 41.°73N×19.°91E, h3^{km}, ML0.0*
BEO ***13*** *00:01:45.1±0.4, 41.°50N×19.°54E, h11^{km}±2^{km}, ML2.5/14*
ISC 13 00:01:43.6±1.0**, 41.°50N**±0.°02×**19.°48E**±0.°02**, h12**^{km}±8^{km}**,**

n68,σ0ˢ93/94,12C-6D,Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.33	118	*e*Pg	Pg	00 01 50.5	+0.2
TIR				*e*Sg	Sb	00 01 56.0	-0.7
TIR	Tirane	0.33	118	*i* PG	Pg	00 01 50.0	-0.3
TIR				*i* SG	Sg	00 01 55.2	+0.5
TIR	Tirane	0.33	118	⇓P	Pg	00 01 50.5	+0.2
TIR				⇓S	Sb	00 01 55.9	-0.7
PUK	Puka	0.62	30	*i* PG	Pg	00 01 54.8	-1.0
PUK				*i* SG	Sg	00 02 04.1	0.0
DRME	Dracevica, Mon	0.72	342	*e*Pn	Pg	00 01 57.6	0.0
PHP	Peshkopia	0.74	75	*i* PG	Pg	00 01 56.8	-1.3
PHP				*i* SG	Sg	00 02 08.2	+0.3
PDG	Podgorica	0.94	350	*e*Pg	Pn	00 02 03.2	+0.5
PDG				*e*Sg	Sn	00 02 17.3	+1.2
PDG	Podgorica	0.94	350	⇑P	Pn	00 02 02.9	+0.2
PDG				⇑S	Sn	00 02 16.3	+0.2
PDG	Podgorica	0.94	350	*e*Pn	Pb	00 02 01.6	-0.3
BCI	Bajram Curri	0.97	27	*i* PG	Pb	00 02 01.1	-1.3
BCI				*i* SG	Sb	00 02 14.6	-0.6
VLO	Vlora	1.03	179	*i* PG	Pb	00 02 02.5	-1.0
VLO				*i* SG	Sg	00 02 17.3	+0.3
OHR	Ohrid	1.07	111	*i* Pg	Pb	00 02 03.8	-0.3
OHR				*i* Sg	Sn	00 02 19.8	+0.5
HCY	Herceg Novi	1.20	322	*e*Pn	Pn	00 02 06.4	+0.2
TREB	Trebinje	1.48	326	*e*Pn	Pb	00 02 11.4	+0.4
TREB				*e*Sg	Sg	00 02 32.4	+1.2
TREB	Trebinje	1.48	326	*e*Pn	Pn	00 02 10.8	+0.7
DBRK	Dubrovnik	1.53	320	*e*Pn	Pb	00 02 11.9	-0.1
DBRK				Sn	Sg	00 02 32.8	-0.2
SKO	Skopje	1.54	72	*e*Pg	Pb	00 02 12.5	+0.4
SKO				*e*Sg	Sg	00 02 33.5	+0.3
SKO	Skopje	1.54	72	*i* Pn	Pb	00 02 12.1	0.0
BRY	Bratogost	1.56	334	*e*Pn	Pb	00 02 13.0	+0.4
FNA	Florina	1.60	116	*i* PN	Pn	00 02 12.4	+0.5
FNA				*i* SN	Sg	00 02 34.6	-0.6
SRN	Sarande	1.67	166	*i* PN	Pn	00 02 13.4	+0.8
CGL1	Ceglie Messapi	1.73	241	*e*Pn	Pn	00 02 13.4	-0.2
UPM	Unac-Piva	1.75	346	*e*Pn	Pb	00 02 16.2	+0.3
SJES	Sjenica	1.80	12	*e*Pn	Pb	00 02 16.8	+0.2
SJES				*e*Sg	Sb	00 02 40.5	+1.4
SJES				*e*Sg	Sg	00 02 41.0	-0.4
STON	Ston	1.90	317	*e*Pn	Pb	00 02 17.6	-0.7
STON	Ston	1.90	317	*e*Pn	Pn	00 02 16.4	+0.5
STON				Sn	Sb	00 02 43.2	+1.2
STON	Ston	1.90	317	*e*Pn	Pn	00 02 17.0	+1.1
BAI	Bari	2.00	259	*e*Pn	Pn	00 02 17.2	0.0
STIP	Stip	2.04	84	⇓*i*Pn	Pb	00 02 21.0	+0.4
SELS	Selova	2.10	35	*e*Pn	Pn	00 02 19.5	+0.8
RUDO	Rudo	2.12	358	*e*Pn	Pb	00 02 21.9	-0.1
IVAS	Ivanjica	2.13	13	*e*Pn	Pn	00 02 20.2	+1.0
BARS	Barje	2.18	52	*e*Pn	Pn	00 02 20.8	+1.1
SG1	Sgolgore (BA)	2.21	254	*e*Pn	Pn	00 02 20.2	0.0
VAY	Valandovo	2.33	93	*e*Pn	Pn	00 02 22.6	+0.8
VAY	Valandovo	2.33	93	*e*P	Pn	00 02 23.1	+1.3
BBLS	Lazići	2.36	359	*e*Pn	Pb	00 02 25.4	-0.8
BBLS	Lazići	2.36	359	*e*Pn	Pb	00 02 25.9	-0.3
MAKA	Makarska	2.55	315	*e*Pn	Pn	00 02 25.3	+0.5
MAKA				Sn	Sn	00 02 56.0	+0.2
GRUS	Gruza	2.55	20	*e*Pn	Pn	00 02 26.2	+1.3
HAPS	Han Pijesak,Bl	2.61	352	*e*Pn	Pn	00 02 26.6	+0.8
HAPS	Han Pijesak,Bl	2.61	352	*e*Pn	Pn	00 02 26.0	+0.2
DIVS	Divibare	2.62	8	*e*Pn	Pb	00 02 29.1	-1.5
DIVS	Divibare	2.62	8	*e*Pn	Pn	00 02 26.1	+0.2
RICI	Ricice	2.64	320	*e*Pn	Pn	00 02 26.7	+0.6
RICI				Sn	Sn	00 02 59.8	+1.7
BOVS	Bovan	2.69	37	*e*Pn	Pn	00 02 27.6	+0.8
TRUS	Trudelj	2.81	14	*e*Pn	Pn	00 02 29.6	+1.3
ZAPS	Zavoj	2.93	52	*e*Pn	Pn	00 02 29.9	-0.2
VTS	Vitosha	3.01	67	*e*Pn	Pn	00 02 31.8	+0.5
VTS	Vitosha	3.01	67	⇑P	Pn	00 02 32.4	+1.1
VTS				⇑S	Sn	00 03 07.9	+0.5
VTS	Vitosha	3.01	67	*e*P	Pn	00 02 32.3	+1.0
ZAGS	Zajecar	3.08	40	*e*Pn	Pn	00 02 33.6	+1.6
BLKB	Belogradchik	3.17	47	⇑S	Sn	00 03 12.2	+1.0
MMB	Musomiste	3.19	87	*e*P	Pn	00 02 35.2	+1.5
KIJV	Kijevo	3.37	319	*e*Pn	Pn	00 02 36.9	+0.7
ZIRJ	Zirje	3.56	309	*e*Pn	Pn	00 02 39.3	+0.6
ZIRJ				Sn	Sn	00 03 20.9	+0.4
MORI	Morici	3.65	312	*e*Pn	Pn	00 02 41.0	+1.1
BLY	Banja Luka	3.66	333	*e*Pn	Pg	00 02 52.1	-1.5
MDVR	Moldovita	3.66	26	⇑P	Pn	00 02 40.7	+0.5
MDVR				⇑S	Sn	00 03 22.2	-1.1
HERR	Herculane	4.00	31	⇓P	Pn	00 02 45.6	+0.8
HERR				⇑S	Sn	00 03 31.5	-0.1
UDBI	Udbina	4.07	319	*e*Pn	Pn	00 02 47.5	+1.7
DUGI	Dugi Otok	4.10	309	*e*Pn	Pn	00 02 47.1	+1.0
BZS	Buzias	4.40	20	⇑P	Pn	00 02 50.7	+0.5
BZS				⇑S	Sn	00 03 39.1	-2.2
NVLJ	Novalja	4.56	314	*e*Pn	Pn	00 02 53.3	+0.9
GZR	Gura Zlata	4.57	31	⇓P	Pn	00 02 54.5	+1.8
GZR				⇑S	Sn	00 03 45.5	-0.3
CRES	Cresnjev	5.21	327	*e*Pn	Pn	00 03 01.8	+0.4
CEY	Cerknica	5.60	321	*e*Pn	Pn	00 03 06.4	-0.4
DRGR		5.78	23	⇓P	Pn	00 03 10.7	+1.5
DRGR				⇑S	Sn	00 04 12.2	-3.2

ROM 13 00:03:15.1±0.2**,37°.156N**±0°.006×**14°.618E**±0°.008**,**
h19^{km}±1^{km}**,Md2.1**/6**,4C-2D,Error ellipse: s-maj=0.7km**
s-min=0.3km az=100.0,Sicily

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HVZN	Vizzini	0.08	74	⇑P	Pg	00 03 18.9	0.0
HVZN				S	Sg	00 03 21.7	+0.3
HVZN				END			
HBSP	Bosco Santo Pi	0.10	254	⇑P	Pg	00 03 19.2	+0.2
HBSP				S	Sg	00 03 21.8	+0.1
HBSP				END			
HMDC	Modica	0.24	146	⇓P	Pg	00 03 20.7	-0.1
HMDC				S	Sg	00 03 25.1	+0.4
HMDC				END			
MEU	Monte Lauro	0.26	102	P	Pb	00 03 20.0	-1.0
MEU				S	Sb	00 03 24.1	-0.8
MEU				END			
HLNI	Lentini	0.28	47	⇑P	Pg	00 03 21.4	0.0
HLNI				S	Sg	00 03 26.2	+0.5
HLNI				END			
HCRL	Carlentini	0.35	69	⇑P	Pg	00 03 22.6	-0.1
HCRL				S	Sb	00 03 28.6	+0.5
HAVL	Avola	0.45	116	P	Pg	00 03 24.1	-0.3
HAVL				S	Sb	00 03 31.0	+0.2
HAVL				END			
CLTA	Licata	0.52	270	P	Pn	00 03 26.6	-0.9
HPAC	Pachino	0.61	139	⇓P	Pb	00 03 26.0	-1.0
HPAC				S	Sb	00 03 34.8	-0.3
MSRU	Castanea	1.31	32	P	Pb	00 03 38.8	-0.3
BULG	Bulgheria - Ca	2.98	11	AML	AML		
	comp=E,25µm,0.2s						
BULG				AML	AML		
	comp=N,55µm,0.2s						
SALB	San Lorenzo Be	3.04	26	AML	AML		
	comp=N,33µm,0.7s						
SALB				AML	AML		
	comp=E,45µm,1.6s						
MGR	Morigerati	3.07	14	AML	AML		
	comp=E,26µm,0.3s						
MGR				AML	AML		
	comp=N,21µm,1.0s						
CMPR	Campora	3.20	9	AML	AML		
	comp=N,18µm,1.5s						
CMPR				AML	AML		
	comp=E,17µm,0.3s						
MCEL	Monticello	3.30	16	AML	AML		
	comp=E,27µm,0.6s						
MCEL				AML	AML		
	comp=N,34µm,0.5s						
SLCN	Sala Consilina	3.33	13	AML	AML		
	comp=N,2933µm,1.4s						
SLCN				AML	AML		
	comp=N,40µm,0.4s						
SLCN				AML	AML		
	comp=E,2986µm,1.3s						
SLCN				AML	AML		
	comp=E,53µm,0.3s						
CDRU	Civita di Ruta	3.37	9	AML	AML		
	comp=N,14µm,1.6s						
CDRU				AML	AML		
	comp=E,20µm,1.5s						
ACER	Acerenza	3.77	15	AML	AML		
	comp=E,100µm,0.4s						
ACER				AML	AML		
	comp=N,85µm,0.7s						
AMUR	Altamura	4.05	22	AML	AML		
	comp=E,55µm,1.6s						
AMUR				AML	AML		
	comp=N,52µm,0.6s						
SCTE	Santa Cesarea	4.19	45	AML	AML		
	comp=E,228µm,1.4s						
SCTE				AML	AML		
	comp=N,152µm,1.5s						
SGG	Gregorio Mates	4.23	358	AML	AML		
	comp=N,17µm,0.5s						
SGG				AML	AML		
	comp=E,23µm,1.4s						
SGRT	San Giovanni R	4.67	10	AML	AML		
	comp=E,49µm,1.0s						
SGRT				AML	AML		
	comp=N,52µm,1.2s						
LPEL	Lama dei Pelig	4.90	356	AML	AML		
	comp=N,23µm,1.2s						
LPEL				AML	AML		
	comp=E,30µm,1.5s						
VLO	Vlora	5.04	48	AML	AML		
	comp=N,565µm,0.8s						
VLO				AML	AML		
	comp=E,518µm,0.9s						
TERO	Teramo	5.51	352	AML	AML		
	comp=E,8µm,1.3s						
TERO				AML	AML		
	comp=N,8µm,1.4s						
NRCA	Norcia	5.79	349	AML	AML		
	comp=E,45µm,0.1s						
NRCA				AML	AML		
	comp=N,29µm,0.1s						
ASSB	Assisi San Ben	6.07	346	AML	AML		
	comp=N,16µm,1.4s						
ASSB				AML	AML		
	comp=E,24µm,1.5s						
CING	Cingoli	6.31	351	AML	AML		
	comp=E,16µm,0.7s						
CING				AML	AML		
	comp=N,14µm,1.6s						

IDC 13 00:31:26.3±12.0**,23°.48S**×**176°.66W,h0**^{km}**,mb3.9**/3**,**
mb1 4.2/3**,mb1mx3.7**/29**,mbtmp3.9**/3**,Error ellipse:**
s-maj=452.7km s-min=97.0km az=142.0,South of Fiji
Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	45.12	259	P	P	00 39 43.5	-1.3
	0.4nm,0.8s,baz=97,slow=7.6,SNR=4.7						
WRA	Warramunga Arr	45.49	265	P	P	00 39 48.6	+0.9
	0.6nm,0.4s,baz=101,slow=8.4,SNR=6.1						
CMAR	Chiang Mai Arr	92.27	289	P	P	00 44 38.7	-0.1
	0.9nm,0.4s,baz=121,slow=2.7,SNR=9.5						

IDC 13 00:48:28.5±4.3**,16°.49S**×**179°.55E,h0**^{km}**,mb3.8**/3**,**
mb1 4.1/3**,mb1mx3.7**/25**,mbtmp3.8**/3**,Error ellipse:**
s-maj=339.9km s-min=29.8km az=154.0,Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	42.99	258	P	P	00 56 29.8	-0.1
	0.7nm,0.3s,baz=91,slow=8.2,SNR=9.9						
ASAR	Alice Springs	43.32	253	P	P	00 56 32.6	0.0
	0.2nm,0.5s,baz=94,slow=7.5,SNR=3.2						
NVAR	Mina Array Bea	79.78	45	P	P	01 00 39.2	+0.3
	0.3nm,0.3s,baz=210,slow=6.3,SNR=3.2						
AKASG	Malin Array Be	138.40	332	PKP	PKPdf	01 07 53.2	-2.6
	0.2nm,0.3s,baz=38,slow=3.4,SNR=4.2						

*IASPEI **13** 00:59:52.0±0.9, 49°.82N±0°.02×8°.76E±0°.03, h11^{km}±5^{km},*
Error ellipse: s-maj=3.7km s-min=2.8km az=75.4, GT5
selection from ISC bulletin GT5 identified by Bondr and
McLaughlin (2009) selection criteria Bondr and
McLaughlin, A new ground truth data set for seismic
studies, <i>Seism. Res. Let.</i>, 80, 465-472,
2009
*BGR **13** 00:59:52.4±0.2, 49°.82N×8°.81E, h9^{km}±3^{km}, ML2.0/18,*
Error ellipse: s-maj=1.1km s-min=1.1km az=129.0
*LDG **13** 00:59:52.4±0.1, 49°.81N×8°.77E, h10^{km}, Md2.8/1, Ml2.3/16,*
Error ellipse: s-maj=1.7km s-min=1.2km az=79.0
*STR **13** 00:59:53.0±1.1, 50°N±3°×°±°, h19^{km}±9^{km}, MLv2.2/7*
*BNS **13** 00:59:53.2±0.3, 49°.80N×8°.73E, h6^{km}±5^{km}, ML1.6*
*PRU **13** 00:59:56.5±0.0, 50°.56N×8°.73E, h0^{km}*
ISC 13 00:59:52.3±0.8**,49°.82N**±0°.01×**8°.75E**±0°.02**,h14**^{km}±5^{km}**,**
n81,σ1ˢ88/141**,3C-8D,Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBB	Darmstadt	0.06	297	⇓*i*Pg	Pg	00 59 54.5	-0.6
WBB				*i* Sg	Sg	00 59 55.8	-1.1
WBA	Furth	0.17	164	⇓*i*Pg	Pg	00 59 56.0	-0.4
WBA				Sg	Sg	00 59 58.3	-0.8
TOD	Tromm	0.21	170	⇓*e*Pg	Pg	00 59 56.6	-0.5
TOD				Sg	Sg	00 59 59.7	-0.6
SWS	Schriesheim-Wi	0.33	185	⇑*e*Pg	Pg	00 59 58.7	-0.4
SWS				Sg	Sg	01 00 03.3	-0.4
TNS	Taunus Mts	0.45	335	⇓*e*Pg	Pg	01 00 01.2	-0.1
TNS				⇑P*	Pb	01 00 02.0	-0.2
TNS				Sg	Sg	01 00 08.2	+0.7
WBG	Bieber	0.53	47	⇑*e*Pg	Pg	01 00 01.9	-0.8
IMS	Imsbach	0.59	248	Pg	Pg	01 00 04.0	0.0
IMS				Sg	Sg	01 00 12.3	+0.5
GWBC	Aumenau	0.66	332	⇓*e*Pg	Pg	01 00 05.4	+0.2
GWBC				Sg	Sg	01 00 14.4	+0.6
KTD	Kalmit	0.66	221	Pg	Pg	01 00 05.2	0.0
KTD				Sg	Sg	01 00 14.8	+1.0
KTD	Kalmit	0.66	221	Pg	Pg	01 00 05.3	+0.2
KTD				*e*Sg	Sb	01 00 15.8	+1.2
FACH	Fachingen	0.73	318	Pg	Pg	01 00 06.6	+0.1
SIND	Sindeldorf	0.73	130	⇓*i*Pg	Pg	01 00 06.2	-0.3
ABH	Alteburg	0.78	275	Pg	Pg	01 00 07.2	-0.3
ABH	Alteburg	0.78	275	Pg	Pg	01 00 07.2	-0.3
ABH				*e*Sg	Sg	01 00 18.0	+0.3
BRET	Bretten	0.80	183	Pg	Pg	01 00 08.1	+0.2
BRET				PmP		01 00 08.6	
BRET				Sg	Sg	01 00 18.2	-0.3
KOE	Koeppel	0.90	313	*e*Pg	Pg	01 00 09.8	+0.2
BGG	Burgeitz	0.99	294	*e*Pg	Pg	01 00 11.3	-0.1
BGG				*e*Sg	Sg	01 00 25.2	+0.8
	22nm,0.1s						
PEB	Petersbachel	1.01	222	Pn	Pg	01 00 11.1	-0.7
PEB				Pg	Pb	01 00 11.8	+0.2
PEB				Sg	Sg	01 00 25.6	+0.6
LANF	Langenberg	1.04	217	Pg	Pg	01 00 12.7	+0.3
LANF				Sg	Sb	01 00 26.9	+1.4
LANF	Langenberg	1.04	217	Pg	Pg	01 00 12.1	-0.2
SUBF	Surbourg	1.07	213	Pg	Pg	01 00 13.3	+0.2
SUBF				Sg	Sg	01 00 27.9	+0.8
STU	Stuttgart	1.08	164	*e*Pn	Pg	01 00 13.2	-0.1
STU				*e*Sg	Sg	01 00 27.2	-0.2
BIW	Bindweide	1.09	328	⇓*e*Pg	Pg	01 00 12.9	-0.4
LBG	Lerchenberg	1.15	178	Pg	Pb	01 00 14.5	+0.4
HROE	Hohe Rhon--Fla	1.16	51	*e*Pg	Pb	01 00 14.3	+0.1
HROE				*e*Sg	Sg	01 00 29.2	-0.6
LAGB	Langenfeld Gru	1.19	298	⇓*i*Pg	Pb	01 00 15.4	+0.7
UBBA	Unterbreizbach	1.29	38	*e*Sg	Sb	01 00 32.4	-0.2
RIVT	Riveris	1.29	266	*e*Pn	Pn	01 00 15.6	-0.3
RIVT				*e*Pg	Pb	01 00 17.2	+0.8
RIVT				*e*Sg	Sb	01 00 33.9	+1.1
AHRW	Bad Neuenahr-A	1.30	305	*e*Pn	Pn	01 00 17.0	+1.0
AHRW				*e*Sg	Sb	01 00 34.4	+1.4
OPP	Oppenau	1.37	196	Pn	Pn	01 00 15.9	-1.2
OPP				Sg	Sn	01 00 36.9	+1.9
OPP	Oppenau	1.37	196	Pn	Pn	01 00 15.9	-1.2
HILG	Hillesheim	1.42	290	*e*Pg	Pn	01 00 17.9	+0.2
STB	Steinbach	1.45	303	*e*Pg	Pn	01 00 18.4	+0.2
BFO	Black Forest	1.51	191	Pn	Pn	01 00 17.9	-1.1
BFO				*e*Pg	Pb	01 00 21.1	+0.9
BFO				*e*Sg	Sn	01 00 40.3	+1.8
HDH	Heidenheim-Cha	1.56	142	Pg	Pn	01 00 21.3	+1.7
GRF	Grafenberg Arr	1.61	93	*e*Sg	Sn	01 00 42.5	+1.5
NORI	Noerdlinger Ri	1.65	131	*e*Sg	Sn	01 00 43.7	+1.9
WLS	Welschbruch	1.68	214	Pn	Pn	01 00 19.7	-1.6
WLS				Sg	Sg	01 00 47.0	+0.8
WLS	Welschbruch	1.68	214	Pg	Pb	01 00 24.0	+1.0
WLF	Walferdange	1.69	266	*e*Pn	Pn	01 00 21.5	0.0
WLF				*e*Sn	Sn	01 00 42.6	-0.3
WLF				*e*Sg	Sg	01 00 47.4	+0.7
CDF	Champ du Feu	1.71	215	*e*Pn	Pn	01 00 20.9	-0.8
CDF	Champ du Feu	1.71	215	*e*Pg	Pb	01 00 24.1	+0.6
CDF				*e*Sn	Sn	01 00 41.6	-1.8
CDF				*e*Sg	Sb	01 00 46.4	+1.6
	6.1nm,0.2s						
ECH	Echery	1.91	214	P	Pn	01 00 21.5	-3.0
ECH				Pn	Pb	01 00 24.0	-3.0
ECH	Echery	1.91	214	*e*Pg	Pb	01 00 28.4	+1.4
ECH				*e*Sg	Sg	01 00 53.8	0.0
EMING	Emmingen-Lipti	1.93	178	*e*Sg	Sb	01 00 53.3	+2.2
KIZ	Kirchzarten	1.94	197	Pn	Pn	01 00 23.5	-1.4
BERGE	Lenzkirch (DE)	1.98	191	*e*Sg	Sb	01 00 54.6	+1.8
MOX	Moxa	2.02	65	*e*Pg	Pb	01 00 29.0	+0.2
MOX				*e*Sg	Sb	01 00 55.2	+1.3
POSS	Possen	2.03	41	*e*Pn	Pn	01 00 25.7	-0.5
POSS				*e*Pg	Pb	01 00 30.5	+1.5
POSS				*e*Sg	Sb	01 00 56.1	+1.9
SLE	Schleitheim	2.06	185	Pn	Pn	01 00 25.7	-0.8
SLE				Sg	Sb	01 00 57.7	+2.7
WALHA	Wallhausen, DE	2.08	173	*e*Pg	Pg	01 00 32.5	+0.3
WALHA				*e*Sg	Sg	01 00 58.5	-0.6
METMA	Mettma DE	2.13	189	*e*Sg	Sb	01 01 00.0	+3.0
MANZ	Manzenberg	2.18	84	*e*Pg	Pb	01 00 33.0	+1.4
MANZ				*e*Sg	Sb	01 00 59.1	+0.6
MOF	Molkenrain	2.24	209	Pg	Pb	01 00 33.3	+0.8
PAGF	Fort de Pagny	2.35	239	*e*Pn	Pn	01 00 29.6	-0.9
PAGF	Fort de Pagny	2.35	239	*e*Pg	Pb	01 00 36.1	+1.7
	baz=56						
PAGF				*e*Sn	Sn	01 00 56.9	-2.3
PAGF				*e*Sg	Sb	01 01 06.2	+2.9
	1.2nm,0.2s						
HINF	Hinteralfeld	2.36	213	*e*Pn	Pn	01 00 29.6	-1.1
HINF	Hinteralfeld	2.36	213	*e*Pg	Pb	01 00 36.4	+1.8
HINF				*e*Sg	Sb	01 01 06.9	+3.3
	6.3nm,0.3s						
HAU	Haudompre	2.41	222	*e*Pn	Pn	01 00 29.9	-1.4
HAU	Haudompre	2.41	222	*e*Pg	Pb	01 00 36.7	+1.3
HAU				*e*Sg	Sb	01 01 07.8	+2.9
	11nm,0.2s						
NKC	Novy Kostel	2.42	79	*e*PN	Pb	01 00 36.8	+1.1
NKC				*e*SN	Sb	01 01 06.6	+1.2
GIVF	Givet	2.55	278	*e*Pn	Pn	01 00 32.3	-1.0
GIVF				*e*Sn	Sn	01 01 01.5	-2.6
	3.8nm,0.2s						
BALST	Balsthal	2.58	196	Pn	Pn	01 00 32.3	-1.4
MEZF	Maizieres J'vi	2.76	243	*e*Pn	Pn	01 00 34.3	-1.8
MEZF				*e*Sn	Sn	01 01 06.3	-2.9
	1.7nm,0.3s,baz=78						
CHMF	Charmoille	2.92	209	Pn	Pn	01 00 36.5	-1.9
CHMF				Sg	Sg	01 01 25.1	-1.0
SFTF	Sexfontaines	2.92	238	*e*Pn	Pn	01 00 37.0	-1.4
SFTF				*e*Sn	Sn	01 01 10.5	-2.9
	baz=54						
SFTF				*e*Sg	Sb	01 01 23.6	+3.7
	2.7nm,0.2s						
BAIF	Baives	2.94	276	*e*Pn	Pn	01 00 37.7	-0.9
BAIF	Baives	2.94	276	*e*Pg	Pb	01 00 47.2	+2.7
BAIF				*e*Sn	Sn	01 01 10.5	-3.3
BAIF				*e*Sg	Sb	01 01 24.7	+4.4
	1.7nm,0.2s						
CLL	Collm	3.10	60	*i* Pg	Pg	01 00 50.3	-1.4
CLL				*i* Sg	Sg	01 01 29.6	-2.2
KHC	Kasperske Hory	3.22	100	*e*SN	Sb	01 01 32.1	+3.6
CABF	La Chapelle	3.67	210	*e*Pn	Pn	01 00 48.2	-0.5
CABF	La Chapelle	3.67	210	*e*Pg	Pb	01 01 00.6	+3.7
CABF				*e*Sg	Sg	01 01 47.7	-2.3
	0.7nm,0.2s						
LOR	Lormes	4.13	234	*e*Pn	Pn	01 00 53.1	-1.9
	baz=53						
LOR	Lormes	4.13	234	*e*Pg	Pb	01 01 08.4	+3.6
LOR				*e*Sn	Sn	01 01 38.5	-4.5
LOR				*e*Sg	Sg	01 02 01.1	-3.7
	1.4nm,0.2s						
SSF	Saint Saulge	4.45	234	*e*Pn	Pn	01 00 58.3	-1.0
SSF	Saint Saulge	4.45	234	*e*Pg	Pb	01 01 13.9	+3.8
SSF				*e*Sg	Sg	01 02 11.1	-3.9
	0.5nm,0.3s						
LPL	La Plagne	4.51	198	*e*Pn	Pn	01 00 59.0	-1.4
LPL				*e*Sn	Sn	01 01 48.9	-3.9
	0.7nm,0.4s						
LPG	La Plagne	4.53	198	*e*Pn	Pn	01 00 59.1	-1.6
LPG				*e*Sn	Sn	01 01 48.5	-4.7
	0.1nm,0.2s						
SMF	Signal de Mont	4.56	228	*e*Pn	Pn	01 00 59.9	-1.0
SMF	Signal de Mont	4.56	228	*e*Pg	Pb	01 01 16.4	+4.3
SMF				*e*Sg	Sg	01 02 14.8	-3.9
	0.8nm,0.2s						
AVF	Avril sur Loir	4.70	232	*e*Pn	Pn	01 01 01.2	-1.6
AVF				*e*Sn	Sn	01 01 52.5	-4.6
AVF				*e*Sg	Sg	01 02 18.9	-4.3
	0.3nm,0.2s						

*NEIC **13** 01:04:18.1±1.4, 22°.69S±0°.10×174°.97W±0°.06, h10^{km}±1^{km},*
mb4.8/24, Error ellipse: s-maj=17.8km s-min=7.0km
az=205.0
*IDC **13** 01:04:26.8±0.5, 23°.13S×175°.38W, h40^{km}±3^{km}, mb4.2/17,*
mb1 4.4/18, mb1mx4.3/30, mbtmp4.4/18, ML3.8/1, MS3.9/1,
Ms1 3.9/1, ms1mx3.0/41, Error ellipse: s-maj=21.2km
s-min=13.4km az=151.0
ISC 13 01:04:26.9±0.5**,23°.16S**±0°.09×**175°.49W**±0°.09**,h42**^{km}±3^{km}**,**
h42^{km}**:pP-P,n117,σ1ˢ82**/118**,mb4.6**/29**,8C-10D,Tonga**
Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	6.59	53	Pn	Pn	01 05 46.2	-15
NIUE				Sn	Sn	01 06 52.6	-23
MSVF	Nonsavu	8.11	311	Pn	Pn	01 06 19.1	-3.1
AFI	Afiamalu	9.85	22	P	Pn	01 06 38.4	-7.6
	4.6nm,0.3s,baz=31,slow=8.5,SNR=4.3						
AFI				S	Sn	01 08 17.1	-18
	4.3nm,0.3s,baz=112,slow=19,SNR=2.4						
RAR	Rarotonga	14.69	85	P	Pn	01 07 38.2	-14
	1.7nm,0.3s,baz=159,slow=11,SNR=3.1						
RAR				LR	LR	01 12 37.1	
	comp=Z,490nm,18.7s,baz=273,slow=34						
URZ	Urewera	16.33	201	P	Pn	01 08 11.6	-1.5
	0.9nm,0.3s,baz=21,slow=8.6,SNR=3.0						
URZ				S	Sn	01 10 59.2	-14
	1.2nm,0.3s,baz=168,slow=20,SNR=5.1						
DZM	Mont Dzumac	16.72	270	*e*LR	LR	01 12 23.0	
	comp=Z,297nm,25.9s						
DZM	Mont Dzumac	16.72	270	P	Pn	01 08 19.0	+0.8
	0.4nm,0.3s,baz=99,slow=17,SNR=4.9						
DZM	Mont Dzumac	16.72	270	P	Pn	01 08 20.2	+2.0
BKZ	Black Stump Fm	17.36	201	P	P	01 08 29.6	+2.7
BSWZ	Blackbirch Sta	20.53	203	P	Pn	01 09 04.2	+0.1
THZ	Tophouse	20.94	205	P	P	01 09 08.1	+2.0
LTZ	Lake Taylor	22.05	205	P	P	01 09 15.9	-2.1
RPZ	Rata Peaks	23.32	205	P	P	01 09 32.0	+0.9
	12nm,1.0s,baz=48,slow=14,SNR=2.4						
FOZ	Fox Glacier	23.67	207	P	P	01 09 35.4	+0.9
TBI	Tubuai	23.91	96	*e*LR	LR	01 15 07.1	
	comp=Z,340nm,22.5s						
LHI	Lord Howe Isla	24.05	244	P	P	01 09 38.3	+0.2
LHI				IAmb	IAmb	01 09 51.1	
	comp=Z,41nm,1.0s						
ODZ	Otahua Downs	24.60	204	P	P	01 09 44.8	+1.8
ODZ				IAmb	IAmb	01 09 58.0	
	comp=Z,9.9nm,1.1s						
PPT2	Papeete2	24.90	82	*e*LR	LR	01 15 39.0	
	comp=Z,320nm,21.5s						
WHZ	Wether Hill Ro	26.36	207	P	P	01 10 00.3	+1.3
WHZ				IAmb	IAmb	01 10 11.8	
	comp=Z,14nm,1.0s						
EIDS	Eidsvold	30.51	259	P	P	01 10 36.9	+0.7
EIDS				IAmb	IAmb	01 10 52.5	
	comp=Z,4.7nm,0.9s						
CTA	Charters Tower	35.63	267	P	P	01 11 22.2	+1.3
	comp=Z,8.1nm,0.5s,baz=94,slow=11,SNR=17						
CTA				pP	pP	01 11 34.1	+2.1
	comp=Z,10nm,0.5s,baz=71,slow=13,SNR=5.3						
PMG	Port Moresby	38.24	285	P	P	01 11 43.6	+0.5
	comp=Z,9.2nm,0.6s,baz=140,slow=17,SNR=3.2						
STKA	Stephens Creek	38.84	247	P	P	01 11 48.3	+0.3
	comp=Z,1.5nm,0.5s,baz=95,slow=12,SNR=4.8						
BBOO	Buckleboo	43.54	246	P	P	01 12 25.9	-0.7
BBOO				IAmb	IAmb	01 12 37.7	

	comp=Z,10nm,1.1s						
AS31	Alice Springs	46.24	259	P	P	01 12 48.0	-0.3
ASAR	Alice Springs	46.24	259	P	P	01 12 48.5	+0.2
	comp=Z,2.8nm,0.8s,baz=101,slow=7.2,SNR=28						
ASAR				pP	pP	01 13 01.1	+1.3
	comp=Z,3.9nm,0.8s,baz=89,slow=8.4,SNR=9.6						
ASAR				pPcP		01 14 34.6	
	comp=Z,1.3nm,0.7s,baz=106,slow=3.6,SNR=4.2						
ASAR	Alice Springs	46.24	259	P	P	01 12 47.9	-0.4
WR0	Warramunga Arr	46.41	264	P	P	01 12 49.5	0.0
WR0				IAmb	IAmb	01 12 51.3	
	comp=Z,6.2nm,0.6s						
WB2	Warramunga Arr	46.58	264	P	P	01 12 50.5	-0.5
WB2				IAmb	IAmb	01 12 51.5	
	comp=Z,12nm,0.6s						
WB0	Warramunga Arr	46.59	264	P	P	01 12 50.8	-0.3
WB0				IAmb	IAmb	01 12 51.8	
	comp=Z,10nm,0.6s						
WRA	Warramunga Arr	46.59	264	P	P	01 12 50.4	-0.7
	comp=Z,6.7nm,0.5s,baz=103,slow=8.3,SNR=10						
WRA	Warramunga Arr	46.59	264	P	P	01 12 50.5	-0.6
FORT	Forrest	50.44	248	P	P	01 13 19.6	-0.9
FORT				IAmb	IAmb	01 13 25.3	
	comp=Z,12nm,0.7s						
KNRA	Kununurra	52.84	267	P	P	01 13 37.7	-0.9
FITZ	Fitzroy Crossi	55.02	264	P	P	01 13 54.3	-0.2
FITZ				IAmb	IAmb	01 13 57.6	
	comp=Z,10nm,1.0s						
SOEI	Soe	58.93	272	P	P	01 14 21.3	-1.1
NWAO	Narrogin (SRO)	59.30	244	P	P	01 14 24.2	-0.3
NWAO				IAmb	IAmb	01 14 27.7	
	comp=Z,11nm,1.1s						
PSAA2	Pilbara Seismi	59.37	258	P	P	01 14 24.4	-0.8
PSAA2				IAmb	IAmb	01 14 25.7	
	comp=Z,12nm,1.1s						
QSPA	South Pole Qui	66.92	180	P	P	01 15 15.1	+0.4
	comp=Z,3.7nm,1.0s,baz=329,slow=0.9,SNR=7.4						
QSPA	South Pole Qui	66.92	180	P	P	01 15 14.1	-0.7
QSPA				IAmb	IAmb	01 15 33.2	
	comp=Z,4.5nm,1.0s						
MJAR	Matsushiro Arr	73.73	323	P	P	01 15 55.6	-0.9
	comp=Z,1.3nm,0.3s,baz=136,slow=5.1,SNR=3.1						
YSS	Yuzh-Sakhalins	79.31	332	P	P	01 16 22.5	-5.3
PETK	Petropavlovsk-	79.44	344	P	P	01 16 28.8	+0.3
	comp=Z,5.8nm,0.7s,baz=138,slow=9.0,SNR=5.6						
PETK				pP	pP	01 16 41.5	+1.0
	comp=Z,4.4nm,0.6s,baz=134,slow=8.6,SNR=3.3						
PETK	Petropavlovsk-	79.44	344	P	P	01 16 23.1	-5.4
KSRS	Korea Array	80.42	318	P	P	01 16 34.7	+0.6
	comp=Z,1.9nm,0.8s,baz=122,slow=5.7,SNR=3.7						
KSRS				pP	pP	01 16 46.7	+0.7
	comp=Z,3.0nm,0.7s,baz=132,slow=5.6,SNR=4.4						
NVAR	Mina Array Bea	81.39	42	P	P	01 16 39.5	0.0
	comp=Z,2.5nm,0.9s,baz=220,slow=8.7,SNR=12						
NVAR				pP	pP	01 16 51.8	+0.7
	comp=Z,3.8nm,0.9s,baz=220,slow=9.1,SNR=11						
USRK	Ussuriysk Ar.	82.47	325	P	P	01 16 45.8	+1.1
	comp=Z,11nm,0.9s,baz=140,slow=2.7,SNR=12						
SYO	Syowa Base	84.64	192	⇑*e*P	P	01 16 51.4	-4.2
TXAR	Lajitas Array	86.55	56	P	P	01 17 05.3	-0.6
	comp=Z,0.9nm,0.9s,baz=207,slow=7.8,SNR=4.3						
PDAR	Pinedale Array	89.32	42	P	P	01 17 17.9	-1.0
	comp=Z,0.5nm,0.8s,baz=252,slow=2.8,SNR=3.7						
PDAR				pP	pP	01 17 30.4	-0.3
	comp=Z,0.8nm,0.8s,baz=187,slow=2.4,SNR=5.0						
ILAR	Eielson Array	90.40	12	P	P	01 17 22.9	-0.3
	comp=Z,1.3nm,1.0s,baz=218,slow=3.8,SNR=4.9						
ILAR				pP	pP	01 17 35.3	0.0
	comp=Z,4.9nm,1.1s,baz=224,slow=5.2,SNR=7.7						
CMAR	Chiang Mai Arr	93.19	289	P	P	01 17 39.5	+2.3
	comp=Z,8.8nm,0.9s,baz=123,slow=3.1,SNR=33						
CMAR				pP	sP	01 17 51.7	-2.6
	comp=Z,15nm,1.1s,baz=124,slow=3.4,SNR=5.4						
CMAR	Chiang Mai Arr	93.19	289	P	P	01 17 35.6	-1.6
CHTO	Chiang Mai	93.32	289	P	P	01 17 35.9	-1.9
YKA	Yellowknife Ar	97.96	24	P	P	01 17 57.3	-0.6
	comp=Z,0.3nm,0.8s,baz=229,slow=3.9,SNR=4.2						
YKA				pP	pP	01 18 09.8	-0.2
	comp=Z,0.8nm,0.8s,baz=233,slow=4.4,SNR=6.8						
ZALV	Zalesovo Beam	114.02	320	PKP	PKPdf	01 23 00.6	-0.4
	comp=Z,0.3nm,0.3s,baz=211,slow=1.7,SNR=2.4						
ZALV				pPKP	pPKiKP	01 23 12.6	-1.0
	comp=Z,1.9nm,0.6s,baz=156,slow=1.2,SNR=6.1						
MKAR	Makanchi Array	114.71	312	PKP	PKPdf	01 23 02.2	-0.4
	comp=Z,0.4nm,0.7s,baz=24,slow=0.1,SNR=4.1						
MKAR				pPKP	pPKiKP	01 23 14.5	-0.7
	comp=Z,0.9nm,0.6s,baz=112,slow=0.2,SNR=8.7						
ARCES	ARCESS Array B	131.94	350	pPKP	pPKPdf	01 23 47.2	+0.2
	comp=Z,2.6nm,0.6s,baz=349,slow=3.8,SNR=2.6						
FINES	FINESS Array B	138.96	344	PKP	PKPdf	01 23 46.9	-1.3
	comp=Z,5.4nm,1.2s,baz=47,slow=10,SNR=2.7						
FINES				pPKP	pPKiKP	01 24 02.5	-0.6
	comp=Z,1.9nm,0.6s,baz=17,slow=2.0,SNR=2.7						
NB2	NORSAR Subarra	141.86	355	PKP	PKiKP	01 24 00.8	+4.4
	comp=Z,0.9nm,0.8s,baz=10,slow=3.2						
AKASG	Malin Array Be	146.46	331	PKPbc	PKPbc	01 24 03.0	-0.2
	comp=Z,2.6nm,0.5s,baz=40,slow=4.2,SNR=15						
AKASG				pPKPbc	pPKPbc	01 24 15.2	-0.5
	comp=Z,9.5nm,0.7s,baz=40,slow=4.0,SNR=12						
AKASG	Malin Array Be	146.46	331	PKPdf	PKPdf	01 23 57.3	-4.5
SORM	Soroca	148.68	329	⇓P	PKPbc	01 24 09.8	+0.5
MILM	Milestii Mici	149.28	326	⇓P	PKPdf	01 24 07.0	+0.4
LEOM	Leova	149.87	326	⇑P	PKPab	01 24 16.0	-1.9
BR131	Keskin Array S	150.34	311		PKPdf	01 24 09.6	+0.9
BRTR	Keskin Array B	150.34	311	PKPbc	PKPbc	01 24 13.0	-0.9
	comp=Z,1.6nm,0.8s,baz=141,slow=4.6,SNR=10.0						
BRTR				pPKPbc	pPKPbc	01 24 26.8	+0.3
	comp=Z,5.2nm,0.7s,baz=145,slow=3.9,SNR=12						
BRTR	Keskin Array B	150.34	311		PKPbc	01 24 13.4	-0.6
BUR08	Bucovina Ar. S	150.50	331		PKiKP	01 24 17.0	+2.3
BURAR	Bucovina Array	150.51	331	⇑P	PKiKP	01 24 14.9	+0.2
BURAR	Bucovina Array	150.51	331		PKiKP	01 24 15.4	+0.7
GHRR		150.58	327	⇓P	PKPab	01 24 23.9	+3.0
TESR	Tescani	150.64	328	⇓P	PKPbc	01 24 12.7	-1.5
CFR	Carcaliu	150.79	324	⇓P	PKPdf	01 24 10.0	+1.1
ANTO	Ankara	150.86	311	⇑P	PKPbc	01 24 14.0	-1.1
CLL	Collm	151.14	349	*i* PKPbc	PKiKP	01 24 16.7	+0.9
	comp=Z,11nm,1.3s						
CLL				*i* pPKPbc	pPKPbc	01 24 29.0	+1.8
	comp=Z,18nm,0.9s						
OSTC	Ostas	151.17	344	*e*PKP	PKiKP	01 24 16.7	+0.8
OSTC				*e*x	x	01 24 28.6	
OSTC				*e*x	x	01 24 36.9	
CHVC	Chvalec	151.18	345	*e*PKP	PKiKP	01 24 16.7	+0.8
CHVC				*e*x	x	01 24 28.2	
TRPA	Tarpa	151.24	334	⇑P	PKiKP	01 24 16.4	+0.3
UPC	Upice	151.26	345	*e*PKP	PKPab	01 24 28.7	+5.1
DPC	Dobruska-Polom	151.33	344	*e*PKP	PKiKP	01 24 16.5	+0.2
DPC				*e*x	x	01 24 27.8	
BRG	Berggiesshubel	151.38	347	*e*PKP	PKiKP	01 24 16.4	+0.1
	comp=Z,4.6nm,1.1s						
BRG	Berggiesshubel	151.38	347	*i* PKP	PKPab	01 24 28.7	+4.7
	comp=Z,16nm,0.7s						
KRLC	Kraliky	151.47	343	*e*PKP	PKiKP	01 24 17.3	+0.7
KRLC				*e*x	x	01 24 28.3	
MORC	Moravsky Berou	151.53	342	⇓P	PKiKP	01 24 16.9	+0.2
MORC	Moravsky Berou	151.53	342	*e*PKP	PKPab	01 24 29.1	+4.4
PVCC	Panska Ves	151.57	346	*e*PKP	PKiKP	01 24 20.6	+3.9
PVCC				*e*x	x	01 24 28.8	
DOPR	Dopca	151.65	328	⇑P	PKiKP	01 24 18.4	+1.4
MLR	Muntele Rosu	151.71	327	⇑P	PKPbc	01 24 16.7	-0.3
PRU	Pruhonice	152.09	346	*e*PKP	PKPab	01 24 28.3	+1.3
GOPC	GO Pecny, Ondr	152.10	346	*e*PKP	PKPab	01 24 30.8	+3.7
VOIR		152.19	328	⇓P	PKPdf	01 24 12.5	+1.3
VRAC	Vranov	152.22	343	⇓P	PKiKP	01 24 20.2	+2.1
VRAC	Vranov	152.22	343	*e*PKP	PKPab	01 24 29.5	+1.9
ARR	Arges	152.44	328	⇓P	PKiKP	01 24 20.1	+1.3
KRUC	Moravsky	152.49	343	*e*PKP	PKPab	01 24 30.0	+1.3
TREC	Trest	152.51	344	*e*PKP	PKPab	01 24 31.2	+2.3
KHC	Kasperske Hory	153.11	347	*e*PKP	PKiKP	01 24 23.0	+3.0
KHC				*e*x	x	01 24 32.9	
KHC				*e*x	x	01 24 44.7	
GZR	Gura Zlata	153.29	331	⇑P	PKPbc	01 24 19.4	-1.0
GERES	GERESS Array B	153.35	346	PKPbc	PKiKP	01 24 22.8	+2.2
	comp=Z,0.3nm,0.7s,baz=130,slow=2.1,SNR=5.0						
GERES				pPKPbc	pPKPbc	01 24 33.1	0.0
	comp=Z,1.9nm,0.9s,baz=56,slow=2.4,SNR=6.3						
GERES	GERESS Array B	153.35	346		PKPbc	01 24 20.5	0.0
CONA	Conrad Observa	153.67	343	*i* PKPbc	PKPdf	01 24 15.7	+2.4
	comp=Z,3.4nm,0.7s						
HERR	Herculane	153.85	330	⇓P	PKPbc	01 24 20.5	-1.0
MOA	Molln	154.16	345	*i* PKPbc	PKPdf	01 24 16.1	+2.2
	comp=Z,2.9nm,1.0s						
ARSA	Arzberg	154.39	342	*i* PKPbc	PKPdf	01 24 17.5	+3.2
	comp=Z,4.5nm,1.1s						
SOKA	Soboth	155.05	343	*i* sPKPab	PKPab	01 24 40.3	+0.6
	comp=Z,4.2nm,1.1s						
KBA	Koelnbreinsper	155.10	346	*i* sPKPab	PKPab	01 24 39.0	-1.1
	comp=Z,5.5nm,1.1s						
RETA	Reutte	155.21	350	*i* sPKPab	PKPab	01 24 41.1	+0.7
	comp=Z,5.8nm,1.2s						
WATA	Walderalm	155.22	348	*i* sPKPab	PKPab	01 24 39.8	-0.7
	comp=Z,3.6nm,0.6s						
WTTA	Wattenberg	155.28	348	*i* sPKPab	PKPab	01 24 42.9	+2.1
	comp=Z,2.1nm,0.5s						
MOTA	Moosalm	155.29	349	*i* PKiKP	PKPdf	01 24 19.9	+4.2
	comp=Z,5.3nm,1.2s						
OBKA	Obir	155.33	343	*i* sPKiKP	pPKPdf	01 24 26.2	-1.6
	comp=Z,5.1nm,1.4s						
SQTA	Sankt Quirin	155.40	349	*i* sPKPab	PKPab	01 24 43.1	+1.8
	comp=Z,5.1nm,1.5s						
DAVA	Damuels	155.54	351	*i* pPKPdf	PKPdf	01 24 14.0	-2.1
	comp=Z,3.3nm,1.1s						
ABTA	Abfaltersbach	155.60	347	*i* sPKPab	PKPab	01 24 40.9	-1.2
	comp=Z,3.0nm,0.9s						
FETA	Feichten	155.67	350	*i* pPKPab	PKPab	01 24 38.6	-3.9
	comp=Z,3.5nm,1.0s						
TORD	Torodi Ar. Bea	169.69	164	PKP	PKPdf	01 24 28.9	-1.7
	comp=Z,0.3nm,0.5s,baz=333,slow=2.3,SNR=3.1						
TORD				PKPab	PKPab	01 25 45.4	+1.1
	comp=Z,0.4nm,0.7s,baz=190,slow=4.7,SNR=4.7						

NEIC ***13*** *01:13:37.5±1.8, 23°.3S±0°.1×174°.8W±0°.1, h10^{km}±1^{km}, mb4.7/19, Error ellipse: s-maj=24.1km s-min=6.9km az=138.0*

BJI ***13*** *01:13:46.0±0.0, 23°.40S×174°.50W, h61^{km}, mB5.6/5, mb5.2/12*

GCMT ***13*** *01:13:47.5±0.2, 23°.43S±0°.03×174°.78W±0°.02, h21^{km}, MW5.0/99, Moment Tensor Solution. s50,c57; s99,c131; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.01±.18; $M_{\theta\theta}$-1.08±.12; $M_{\phi\phi}$-2.92±.11; $M_{r\theta}$1.17±.22; $M_{\theta\phi}$-1.03±.07; $M_{\phi r}$1.20±.17; Best double couple: $M_0$4.05100×10^{16} NP1:ϕ_s199.00000°, δ34.00000°, λ79.00000°. NP2: ϕ_s31.00000°, δ57.00000°, λ97.00000°. Principal axes: T 4.3950, Plg77.0000°, Azm324.0000°; N -0.6780, Plg6.0000°, Azm208.0000°; P -3.7060, Plg12.0000°, Azm116.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***13*** *01:13:49.3±0.5, 23°.20S×175°.35W, h37^{km}±3^{km}, mb4.3/17, mb1 4.4/18, mb1mx4.3/42, mbtmp4.5/18, ML4.2/1, MS4.3/23, Ms1 4.3/23, ms1mx4.2/39 Error ellipse: s-maj=20.1km s-min=14.1km az=129.0*

ISC 13 01:13:49.4±0.5, **23°.44S**±0°.09×**175°.4W**±0°.1, **h43**^{km}±4^{km}, **h42**^{km}**:pP-P, n128,** σ**2^s.56**/114, **mb4.5**/27, **MS4.3**/25, **7C-7D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	6.71	51	Pn	Pn	01 15 10.0	-15
NIUE				Sn	Sn	01 16 16.2	-24
AFI	Afiamalu	10.09	21	Pn	Pn	01 16 01.2	-11
	18nm,0.3s,baz=5.4,slow=2.5,SNR=8.6						
AFI				Sn	Sn	01 17 42.2	-22
	5.6nm,0.3s,baz=139,slow=19,SNR=2.8						
AFI	Afiamalu	10.09	21		Pn	01 15 59.3	-13
RAR	Rarotonga	14.64	84	Pn	Pn	01 17 01.9	-12
	7.6nm,0.3s,baz=198,slow=16,SNR=3.6						
RAR				LR	LR	01 22 00.6	
	comp=Z,2μm,19.5s,baz=264,slow=34						
URZ	Urewera	16.10	202	Pn	Pn	01 17 35.8	+3.2
	0.9nm,0.3s,baz=3.5,slow=4.1,SNR=2.7						
URZ				Sn	Sn	01 20 21.4	-8.7
	2.4nm,0.3s,baz=359,slow=10,SNR=5.4						
URZ	Urewera	16.10	202	P	Pn	01 17 29.4	-3.3
DZM	Mont Dzumac	16.79	271	*e*P	P	01 17 48.3	+4.9
	32nm,0.8s						
DZM				*e*LQ	LQ	01 21 07.8	
	3μm,31.2s						
DZM				*e*LR	LR	01 21 52.9	
	comp=Z,998nm,21.5s						
DZM	Mont Dzumac	16.79	271	Pn	P	01 17 48.2	+4.9
	0.8nm,0.3s,baz=83,slow=17,SNR=7.7						
DZM	Mont Dzumac	16.79	271	P	P	01 17 42.8	-0.6
BKZ	Black Stump Fm	17.12	202		Pn	01 17 42.0	-3.7
HIZ	Hauiti	17.17	207	Pn	Pn	01 17 41.9	-4.3
HIZ				IAmb	IAmb	01 17 51.0	
	comp=Z,29nm,1.1s						
BFZ	Birch Farm	18.57	200	P	P	01 17 58.4	-4.4
BFZ				IAmb	IAmb	01 17 59.2	
	comp=Z,51nm,1.2s						
KHZ	Kahutara	21.04	203	P	P	01 18 26.5	-3.1
KHZ				IAmb	IAmb	01 18 35.9	
	comp=Z,18nm,1.1s						
RPZ	Rata Peaks	23.09	206	P	P	01 18 55.4	+4.0
	comp=Z,5.8nm,0.6s,baz=39,slow=13,SNR=3.1						
RPZ				S	S	01 22 57.5	-2.0
	comp=Z,7.3nm,0.8s,baz=14,slow=19,SNR=2.3						
TBI	Tubuai	23.82	95	*e*LQ	LQ	01 23 22.9	
	comp=Z,624nm,26.2s						
TBI				*e*LR	LR	01 24 17.3	
	comp=Z,1μm,22.0s,baz=269						
WKZ	Wanaka	24.84	207	P	P	01 19 02.7	-5.0
WKZ				IAmb	IAmb	01 19 03.4	
	comp=Z,36nm,1.1s						
PAE	Paea	24.85	81	*e*T	T	01 44 32.8	
	comp=Z,4.7nm,0.5s						
PPT2	Papeete2	24.87	81	*e*LQ	LQ	01 23 56.5	
	comp=Z,878nm,24.8s						
PPT2				*e*LR	LR	01 24 53.6	
	comp=Z,1μm,21.5s,baz=250						
PPT	Papeete	24.88	81	LR	LR	01 26 52.8	
	comp=Z,1μm,19.3s,baz=222,slow=32						
HNR	Honiara	27.36	297	LR	LR	01 29 27.4	
	comp=Z,479nm,18.4s,baz=132,slow=34						
TAOE	Nuku Hiva Isla	36.72	73	*e*LR	LR	01 30 19.3	
	comp=Z,519nm,20.9s						
KRVT	Keravat (AS076	36.73	296	LR	LR	01 36 03.2	
	comp=Z,508nm,18.6s,baz=148,slow=36						
PMG	Port Moresby	38.38	285	LR	LR	01 35 19.9	
	comp=Z,456nm,20.7s,baz=140,slow=34						
STKA	Stephens Creek	38.79	248	P	P	01 21 12.2	+2.1
	comp=Z,1.2nm,0.5s,baz=86,slow=11,SNR=4.4						
STKA				LR	LR	01 36 41.6	
	comp=Z,678nm,19.1s,baz=68,slow=35						
BBOO	Buckleboo	43.48	246	P	P	01 21 46.1	-2.7
BBOO				IAmb	IAmb	01 21 56.0	
	comp=Z,9.3nm,1.1s						
AS31	Alice Springs	46.25	259	P	P	01 22 08.0	-3.0
ASAR	Alice Springs	46.25	259	P	P	01 22 11.6	+0.6
	comp=Z,3.2nm,0.9s,baz=99,slow=7.5,SNR=18						
ASAR				PcP	PcP	01 23 47.9	+1.9
	comp=Z,0.7nm,0.6s,baz=98,slow=4.5,SNR=2.8						
ASAR				pPcP		01 23 59.5	
	comp=Z,1.0nm,0.7s,baz=98,slow=4.1,SNR=4.4						
ASAR				LR	LR	01 41 42.2	
	comp=Z,864nm,18.3s,baz=102,slow=36						
ASAR	Alice Springs	46.25	259	P	P	01 22 06.7	-4.2
WR0	Warramunga Arr	46.44	264	P	P	01 22 09.6	-2.9
WR0				IAmb	IAmb	01 22 14.0	
	comp=Z,8.3nm,0.9s						
WB2	Warramunga Arr	46.62	264	P	P	01 22 12.6	-1.3
WB0	Warramunga Arr	46.62	264	P	P	01 22 10.7	-3.2
WRA	Warramunga Arr	46.63	264	P	P	01 22 13.8	-0.1
	comp=Z,10nm,0.6s,baz=90,slow=8.2,SNR=74						
WRA				pP	pP	01 22 25.9	+1.1
	comp=Z,5.4nm,0.6s,baz=102,slow=8.3,SNR=6.9						
WRA				LR	LR	01 41 50.7	
	comp=Z,597nm,18.1s,baz=95,slow=36						
WRA	Warramunga Arr	46.63	264	P	P	01 22 11.0	-2.9
KNRA	Kununurra	52.90	268	P	P	01 22 58.2	-3.3
KNRA				IAmb	IAmb	01 23 05.7	
	comp=Z,17nm,0.9s						
FITZ	Fitzroy Crossi	55.05	264	LR	LR	01 47 00.9	
	comp=Z,398nm,18.3s,baz=269,slow=36						
FITZ	Fitzroy Crossi	55.05	264	P	P	01 23 14.3	-3.0
FITZ				IAmb	IAmb	01 23 20.3	
	comp=Z,7.1nm,0.8s						
VNDA	Vanda	55.23	186	LR	LR	01 47 05.1	
	comp=Z,110nm,18.0s,baz=350,slow=36						
SIJI	Sorong	56.32	286	LR	LR	01 46 48.4	
	comp=Z,304nm,20.2s,baz=57,slow=35						
JCJ	Chichijima	64.82	318	LR	LR	01 46 11.9	
	comp=Z,686nm,20.9s,baz=112,slow=30						
DAV	Davao City (W)	65.10	290	LR	LR	01 49 15.1	
	comp=Z,144nm,19.9s,baz=106,slow=33						
QSPA	South Pole Qui	66.65	180	P	P	01 24 37.2	+1.7
	comp=Z,3.0nm,0.9s,baz=60,slow=1.1,SNR=11						
MJAR	Matsushiro Arr	73.99	323	P	P	01 25 19.6	-1.0
	comp=Z,4.5nm,0.7s,baz=148,slow=6.5,SNR=8.3						
MJAR				LR	LR	01 57 07.9	
	comp=Z,65nm,18.4s,baz=150,slow=35						
MAJO	Matsushiro	73.99	323	P	P	01 25 12.3	-8.3
MAJO				IAmb	IAmb	01 25 22.7	
	comp=Z,6.7nm,0.8s						
ASAJ	Asahikawa	77.45	330	P	P	01 25 40.9	+0.7
	comp=Z,18nm,0.8s,baz=209,slow=8.6,SNR=13						
TPUB	Ta-pu	77.57	302	P	P	01 25 34.8	-6.6
MAW	Mawson	79.61	199	P	P	01 25 52.8	+0.9
	comp=Z,6.0nm,0.8s,baz=167,slow=5.4,SNR=4.1						
MAW				LR	LR	02 00 32.8	
	comp=Z,228nm,18.5s,baz=74,slow=35						
PETK	Petropavlovsk-	79.73	344	P	P	01 25 50.7	-1.8
	comp=Z,10.0nm,0.9s,baz=132,slow=8.2,SNR=9.4						
PETK				LR	LR	01 54 33.1	
	comp=Z,156nm,20.4s,baz=88,slow=31						
KSRS	Korea Array	80.67	318	P	P	01 25 58.7	+0.8
	comp=Z,2.8nm,0.6s,baz=127,slow=5.7,SNR=6.8						
KSRS				LR	LR	01 57 21.5	
	comp=Z,158nm,19.7s,baz=138,slow=32						
YBH	Yreka Blue Hor	81.13	37	P	P	01 26 00.2	-0.3
	comp=Z,2.2nm,0.8s,baz=102,slow=2.9,SNR=7.8						
YBH				pP	pP	01 26 12.0	+0.7
	comp=Z,3.1nm,0.7s,baz=225,slow=5.5,SNR=5.5						
NVAR	Mina Array Bea	81.56	42	P	P	01 26 03.2	+0.3
	comp=Z,1.1nm,0.7s,baz=224,slow=9.5,SNR=7.7						
NVAR				pP	pP	01 26 14.7	+0.8
	comp=Z,3.7nm,0.8s,baz=225,slow=8.5,SNR=9.9						
NVAR				LR	LR	01 59 05.5	
	comp=Z,248nm,18.1s,baz=182,slow=33						
USRK	Ussuriysk Ar.	82.73	325	P	P	01 26 09.6	+0.9
	comp=Z,6.5nm,0.7s,baz=123,slow=3.0,SNR=17						
SYO	Syowa Base	84.38	192	⇓*e*P	P	01 26 08.6	-8.2
SYO	Syowa Base	84.38	192	⇓*e*X	P	01 26 19.0	+2.1
ELK	Elko	84.84	41	pP	pP	01 26 31.2	+0.3
	comp=Z,2.4nm,0.8s,baz=259,slow=4.3,SNR=6.7						
SNAA	Sanae	85.01	178	P	P	01 26 22.1	+2.0
VNA3	Neumayer Olymp	85.05	175	P	P	01 26 22.1	+1.9
VNA2	Neumayer--Watz	85.52	176	P	P	01 26 25.4	+2.9
	baz=180,slow=2.2						
PLCA	Paso Flores	85.53	133	LR	LR	01 57 48.8	
	comp=Z,162nm,20.0s,baz=271,slow=31						
F10A	Beach Ranch, E	86.89	36	P	P	01 26 19.7	-10
F10A				IAmb	IAmb	01 26 31.5	
	comp=Z,2.7nm,0.8s						
MA2	Magadan	87.25	344	LR	LR	01 59 21.7	
	comp=Z,143nm,21.8s,baz=149,slow=31						
TRF	Thorofare Moun	88.83	11	P	P	01 26 30.6	-8.1
PDAR	Pinedale Array	89.48	42	P	P	01 26 40.9	-1.4
	comp=Z,0.5nm,0.8s,baz=242,slow=1.9,SNR=5.9						
PDAR				pP	pP	01 26 53.3	-0.4
	comp=Z,1.0nm,0.8s,baz=224,slow=5.0,SNR=8.0						
ILAR	Eielson Array	90.66	12	P	P	01 26 45.0	-2.0
	comp=Z,0.6nm,0.6s,baz=219,slow=4.7,SNR=5.6						
ILAR				pP	pP	01 26 57.6	-0.8
	comp=Z,1.3nm,0.8s,baz=220,slow=5.7,SNR=6.3						
XAN	Xi'an	91.81	306	P	P	01 26 54.9	+1.8
XAN				pP	pP	01 27 05.9	+1.0
XAN				pmax	pmax		
	comp=Z,16nm,0.8s						
CMAR	Chiang Mai Arr	93.34	289	P	P	01 27 01.8	+1.4
	comp=Z,5.1nm,0.6s,baz=126,slow=3.3,SNR=26						
CMAR				LR	LR	02 07 21.4	
	comp=Z,73nm,20.3s,baz=182,slow=34						
YKA	Yellowknife Ar	98.18	24	P	P	01 27 19.7	-1.7
	comp=Z,0.2nm,0.4s,baz=230,slow=4.7,SNR=5.3						
YKA				pP	pP	01 27 32.1	-0.7
	comp=Z,0.8nm,0.8s,baz=231,slow=4.8,SNR=6.4						
LPAZ	La Paz	98.73	112	LR	LR	02 04 44.7	
	comp=Z,108nm,18.7s,baz=244,slow=31						
SONM	Songino Array	99.53	318	LR	LR	02 10 26.4	
	comp=Z,59nm,18.4s,baz=60,slow=34						
ZALV	Zalesovo Beam	114.27	320	PKP	PKPdf	01 32 23.6	-0.5
	comp=Z,0.8nm,0.5s,baz=201,slow=2.0,SNR=4.5						
ZALV				pPKP	pPKiKP	01 32 35.1	-0.8
	comp=Z,2.1nm,0.6s,baz=163,slow=1.3,SNR=8.1						
MKAR	Makanchi Array	114.94	312	PKP	PKPdf	01 32 25.3	-0.3
	comp=Z,0.7nm,0.7s,baz=51,slow=1.1,SNR=7.8						
MKAR				pPKP	pPKiKP	01 32 37.4	-0.1
	comp=Z,1.4nm,0.6s,baz=101,slow=0.3,SNR=13						
KURBB	Kurchatov Arra	117.82	316	PKP	PKPdf	01 32 30.1	-0.9
	comp=Z,0.8nm,0.6s,baz=94,slow=1.9,SNR=4.1						
KURBB				pPKP	pPKPdf	01 32 42.5	-0.4
	comp=Z,2.0nm,0.7s,baz=88,slow=1.9,SNR=8.5						
ARCES	ARCESS Array B	132.22	350	pPKP	pPKPdf	01 33 09.9	-0.1
	comp=Z,3.7nm,0.7s,baz=343,slow=2.5,SNR=2.8						
GEYT	Alibeck	132.36	301	pPKP	pPKPdf	01 33 12.2	+1.1
	comp=Z,1.4nm,0.6s,baz=0.0,slow=1.5,SNR=3.4						
NB2	NORSAR Subarra	142.14	355	PKP	PKiKP	01 33 23.7	+4.1
	comp=Z,0.6nm,0.6s,baz=7.5,slow=3.4						
AKASG	Malin Array Be	146.73	331	PKPbc	PKPbc	01 33 25.5	-1.0
	comp=Z,4.4nm,0.7s,baz=41,slow=4.1,SNR=13						
AKASG				pPKPbc	pPKPdf	01 33 37.4	+0.7
	comp=Z,8.7nm,0.7s,baz=38,slow=4.2,SNR=11						
SORM	Soroca	148.95	328	⇑P	PKPbc	01 33 32.5	0.0
BEL	Belsk	149.03	340	*e*PKP	PKPab	01 33 45.7	+8.8
MILM	Milestii Mici	149.55	326	⇑P	PKPbc	01 33 32.5	-1.6
BR131	Keskin Array S	150.57	310		PKiKP	01 33 37.3	-0.4
BRTR	Keskin Array B	150.57	310	PKPbc	PKPbc	01 33 37.1	+0.1
	comp=Z,2.3nm,0.7s,baz=144,slow=5.1,SNR=12						
BRTR				pPKPbc	pPKPbc	01 33 49.2	+0.4
	comp=Z,5.4nm,0.7s,baz=146,slow=5.0,SNR=14						
BRTR	Keskin Array B	150.57	310	PKPab	PKPbc	01 33 36.6	-0.4
OJC	Ojcow	150.74	340	*e*PKP	PKPab	01 33 49.5	+5.5
BURAR	Bucovina Array	150.78	331	⇓P	PKiKP	01 33 40.4	+2.6
BURAR	Bucovina Array	150.78	331		PKiKP	01 33 37.5	-0.3
CFR	Carcaliu	151.06	324	⇓P	PKPbc	01 33 37.8	+0.1
ANTO	Ankara	151.10	311	⇓P	PKPbc	01 33 36.5	-1.6
TOPG	Topolog	151.12	324	⇓P	PKiKP	01 33 39.6	+1.1
KSP	Ksiaz	151.17	345	*e*PKP	PKiKP	01 33 39.1	+0.7
NIE	Niedzica	151.27	338	*e*PKP	PKiKP	01 33 40.3	+1.6
CLL	Collm	151.43	349	*i* PKPbc	PKiKP	01 33 39.6	+0.7
	comp=Z,5.0nm,0.8s						
CLL				*i* pPKPbc	pPKPbc	01 33 51.9	+1.5
	comp=Z,16nm,0.8s						
OSTC	Ostas	151.45	344	*e*PKPAB	PKiKP	01 33 41.1	+2.1
OSTC				*e*pPKP	PKPab	01 33 46.2	-0.7
OSTC				*e*x	x	01 33 51.2	
CHVC	Chvalec	151.46	345	*e*PKPAB	PKPab	01 33 42.7	-4.3
CHVC				*e*x	x	01 33 51.2	
UPC	Upice	151.55	345	*e*pPKP	PKPab	01 33 51.1	+3.8
OKC	Ostrava-Krasne	151.58	341	*e*PKPAB	PKPab	01 33 46.7	-0.7
OKC				*e*pPKP	pPKPbc	01 33 51.0	+0.2
DPC	Dobruska-Polom	151.62	344	*e*PKPAB	PKiKP	01 33 40.1	+0.7
DPC				*e*pPKP	pPKPbc	01 33 50.8	-0.1
BRG	Berggiesshubel	151.66	347	*e*PKP	PKiKP	01 33 40.6	+1.2
	comp=Z,5.4nm,0.9s						
BRG	Berggiesshubel	151.66	347	*i* PKP	PKPab	01 33 51.3	+3.6
	comp=Z,16nm,0.7s						
KRLC	Kraliky	151.75	343	*e*PKPAB	PKiKP	01 33 40.0	+0.3
KRLC				*e*pPKP	PKPab	01 33 46.8	-1.4
KRLC				*e*x	x	01 33 51.6	
MORC	Moravsky Berou	151.81	342	⇑P	PKPab	01 33 47.4	-1.0
MORC	Moravsky Berou	151.81	342	*e*PKP	PKPab	01 33 51.8	+3.3
PVCC	Panska Ves	151.86	346	*e*PKPAB	PKiKP	01 33 43.2	+3.4
PVCC				*e*pPKP	pPKPbc	01 33 51.2	-0.2
DOPR	Dopca	151.92	328	⇑P	PKiKP	01 33 40.5	+0.4
MLR	Muntele Rosu	151.98	327	⇑P	PKiKP	01 33 40.8	+0.4
PRU	Pruhonice	152.38	346	*e*PKPAB	PKPab	01 33 47.5	-3.2
PRU				*e*pPKP	pPKPbc	01 33 52.1	-0.5
GOPC	GO Pecny, Ondr	152.39	346	*e*pPKP	PKPab	01 33 52.9	+2.0
ARR	Arges	152.72	328	⇑P	PKiKP	01 33 43.2	+1.3
KRUC	Moravsky	152.78	343	*e*PKP	PKPab	01 33 53.0	+0.5
SIRR	Siria	153.37	333	⇑P	PKPdf	01 33 36.9	+1.5
DOU	Dourbes	153.39	360	x	PKPab	01 33 55.2	+0.2
KHC	Kasperske Hory	153.39	347	*e*PKPAB	PKiKP	01 33 46.8	+3.7
KHC				*e*pPKP	pPKPbc	01 33 54.9	0.0
KHC				*e*x	x	01 34 07.0	
GERES	GERESS Array B	153.64	346	PKPbc	PKPbc	01 33 42.3	-1.3
	comp=Z,0.9nm,0.9s,baz=41,slow=2.6,SNR=5.9						
GERES				pPKPbc	pPKPbc	01 33 55.4	-0.1
	comp=Z,1.5nm,0.7s,baz=20,slow=3.1,SNR=8.3						
BZS	Buzias	153.91	332	⇓P	PKPbc	01 33 43.5	-0.6
CONA	Conrad Observa	153.96	343	*i* pPKPbc	pPKPbc	01 33 56.6	+0.4
	comp=Z,3.3nm,0.7s						
CONA				*i* SKSdf	SKSdf	01 40 23.0	-17
	comp=Z,16nm,1.5s						
MOA	Molln	154.44	345	*i* pPKPbc	pPKPbc	01 33 57.2	0.0
	comp=Z,4.2nm,1.7s						
MOA				*i* SKSdf	SKSdf	01 40 23.0	-17
	comp=Z,7.1nm,1.1s						
ARSA	Arzberg	154.67	342	*i* pPKPbc	pPKPbc	01 33 57.7	0.0
	comp=Z,2.6nm,0.8s						

ARSA				*i* SKSdf	SKSdf	01 40 27.0	-13
	comp=Z,9.1nm,1.1s						
SOKA	**Soboth**	**155.33**	**343**	*i* pPKiKP	**PKPab**	**01 34 02.4**	**-1.1**
	comp=Z,5.3nm,1.5s						
SOKA				*i* SKSdf	SKSdf	01 40 25.6	-16
	comp=Z,17nm,1.5s						
KBA	**Koelnbreinsper**	**155.38**	**346**	*i* PKPab	**PKPab**	**01 33 59.6**	**-4.2**
	comp=Z,3.2nm,0.9s						
KBA				*i* SKSdf	SKSdf	01 40 27.2	-14
	comp=Z,7.3nm,1.3s						
RETA	**Reutte**	**155.50**	**350**	*i* PKPab	**PKPab**	**01 33 59.4**	**-4.8**
	comp=Z,5.2nm,1.3s						
RETA				*i* SKSdf	SKSdf	01 40 25.7	-16
	comp=Z,9.1nm,1.2s						
WATA	**Walderalm**	**155.50**	**348**	*i* SKSdf	SKSdf	01 40 25.7	-16
	comp=Z,17nm,1.4s						
WTTA	**Wattenberg**	**155.56**	**348**	*i* PKPab	**PKPab**	**01 33 59.4**	**-5.1**
	comp=Z,2.5nm,0.6s						
WTTA				*i* SKSdf	SKSdf	01 40 26.0	-16
	comp=Z,24nm,1.7s						
MOTA	**Moosalm**	**155.58**	**349**	*i* PKPab	**PKPab**	**01 33 59.3**	**-5.3**
	comp=Z,2.1nm,0.6s						
MOTA				*i* SKSdf	SKSdf	01 40 26.0	-16
	comp=Z,18nm,1.3s						
OBKA	**Obir**	**155.62**	**343**	*i* SKSdf	SKSdf	01 40 29.7	-12
	comp=Z,7.7nm,1.3s						
SQTA	**Sankt Quirin**	**155.68**	**349**	*i* PKPab	**PKPab**	**01 33 59.9**	**-5.1**
	comp=Z,2.0nm,0.7s						
SQTA				*i* SKSdf	SKSdf	01 40 25.9	-16
	comp=Z,21nm,1.7s						
MYKA	**Terra Mystica**	**155.74**	**345**	*i* SKSdf	SKSdf	01 40 25.7	-16
	comp=Z,17nm,1.6s						
DAVA	**Damuels**	**155.83**	**351**	*i* SKSdf	SKSdf	01 40 25.6	-16
	comp=Z,12nm,1.1s						
ABTA	**Abfaltersbach**	**155.88**	**347**	*i* PKPab	**PKPab**	**01 33 58.8**	**-7.1**
	comp=Z,2.3nm,0.7s						
ABTA				*i* SKSdf	SKSdf	01 40 25.8	-16
	comp=Z,14nm,1.2s						
FETA	**Feichten**	**155.96**	**350**	*i* PKPab	**PKPab**	**01 33 59.6**	**-6.6**
	comp=Z,1.9nm,0.8s						
FETA				*i* SKSdf	SKSdf	01 40 26.4	-16
	comp=Z,17nm,1.2s						
TORD	**Torodi Ar. Bea**	**169.40**	**165**	PKP	**PKPdf**	**01 33 52.8**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=256,slow=0.9,SNR=2.9						
TORD				pPKP	**pPKPdf**	**01 34 04.8**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=336,slow=1.1,SNR=4.1						
TORD				PKPab	**PKPab**	**01 35 08.1**	**+2.5**
	comp=Z,1.0nm,0.7s,baz=187,slow=3.9,SNR=5.4						

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*IDC **13** 01:20:33.9±0.6, 16°.97S×174°.12W, h0^{km}, mb4.4/16, mb1 4.6/17, mb1mx4.3/53, mbtmp4.4/17, ML3.4/1, MS4.3/2, Ms1 4.3/2, ms1mx3.5/32, Error ellipse: s-maj=26.2km s-min=15.0km az=147.0*

*NEIC **13** 01:20:37.9±1.2, 17°.09S±0°.08×174°.0W±0°.1, h35^{km}±1^{km}, mb4.5/45, Error ellipse: s-maj=18.5km s-min=13.8km az=102.0*

*BGR **13** 01:20:39.2±0.0, 17°.24S×173°.55W, h33^{km}*

ISC 13 01:20:38.3±0.4**, 17°.06S**±0°.08×**174°.01W**±0°.09**, h35**^{km}**,**
n123, σ1^{s}.**04**/114**, mb4.4**/30**, 5C-8D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.80**	**35**	Pn	Pn	01 21 26.0	-8.5
	2.7nm,0.3s,baz=14,slow=16,SNR=1.9						
AFI				Sn	Sn	01 21 59.8	-18
	4.9nm,0.3s,baz=24,slow=19,SNR=2.9						
AFI	**Afiamalu**	**3.80**	**35**		**Pn**	**01 21 33.6**	**-0.9**
AFI					**Sn**	**01 22 14.8**	**-3.3**
NIUE	**Niue**	**4.37**	**118**		**Pn**	**01 21 40.8**	**-1.4**
DZM	**Mont Dzumac**	**19.07**	**252**	P	**P**	**01 24 56.8**	**-1.1**
	0.1nm,0.3s,baz=74,slow=18,SNR=2.2						
DZM				LR	LR	01 31 40.2	
	comp=Z,262nm,19.9s,baz=133,slow=35						
DZM	**Mont Dzumac**	**19.07**	**252**	P	**P**	**01 24 57.5**	**-0.4**
DZM				IAmb	IAmb	01 25 03.0	
	comp=Z,51nm,1.1s						
URZ	**Urewera**	**22.51**	**198**	P	**P**	**01 25 32.2**	**-2.7**
	comp=Z,15nm,0.9s,baz=32,slow=6.8,SNR=7.3						
URZ	**Urewera**	**22.51**	**198**	P	**P**	**01 25 34.1**	**-0.8**
URZ				IAmb	IAmb	01 25 39.3	
	comp=Z,46nm,1.2s						
QRZ	**Quartz Range**	**26.38**	**203**	P	**P**	**01 26 09.9**	**-1.5**
QRZ				IAmb	IAmb	01 26 19.0	
	comp=Z,33nm,1.0s						
PMG	**Port Moresby**	**38.50**	**276**	P	**P**	**01 27 58.4**	**+0.9**
	comp=Z,4.8nm,0.4s,baz=123,slow=8.9,SNR=3.3						
PMG	**Port Moresby**	**38.50**	**276**	P	**P**	**01 27 56.7**	**-0.8**
PMG				IAmb	IAmb	01 28 00.9	
	comp=Z,14nm,1.1s						
H11S2	**WAKE ISLAND Hy**	**40.10**	**331**	T	T	02 10 41.0	
	baz=149,slow=76						
H11S3	**WAKE ISLAND Hy**	**40.11**	**331**	T	T	02 10 40.7	
	baz=149,slow=76						
H11S1	**WAKE ISLAND Hy**	**40.12**	**331**	T	T	02 10 41.4	
	baz=149,slow=76						
H11N3	**WAKE ISLAND Hy**	**41.07**	**332**	T	T	02 11 53.5	
	baz=151,slow=76						
H11N1	**WAKE ISLAND Hy**	**41.08**	**332**	T	T	02 11 52.7	
	baz=151,slow=76						
H11N2	**WAKE ISLAND Hy**	**41.09**	**332**	T	T	02 11 53.9	
	baz=151,slow=76						
STKA	**Stephens Creek**	**42.71**	**241**	P	**P**	**01 28 32.9**	**+0.7**
	comp=Z,14nm,0.9s,baz=74,slow=8.1,SNR=19						
STKA	**Stephens Creek**	**42.71**	**241**	P	**P**	**01 28 31.0**	**-1.2**
STKA				IAmb	IAmb	01 28 34.0	
	comp=Z,5.6nm,1.1s						
BBOO	**Buckleboo**	**47.48**	**241**	P	**P**	**01 29 09.9**	**-0.2**
WB0	**Warramunga Arr**	**48.88**	**258**	P	**P**	**01 29 21.0**	**0.0**
WB0				IAmb	IAmb	01 29 25.1	
	comp=Z,12nm,1.1s						
WRA	**Warramunga Arr**	**48.91**	**258**	P	**P**	**01 29 19.7**	**-1.6**
	comp=Z,4.6nm,1.0s,baz=92,slow=7.2,SNR=9.3						
WRA				PcP	**PcP**	**01 30 44.2**	**-1.2**
	comp=Z,1.1nm,0.9s,baz=95,slow=3.3,SNR=5.9						
WRA	**Warramunga Arr**	**48.91**	**258**	P	**P**	**01 29 21.0**	**-0.3**
AS31	**Alice Springs**	**49.05**	**253**	P	**P**	**01 29 22.5**	**+0.1**
AS31				IAmb	IAmb	01 29 23.1	
	comp=Z,3.5nm,0.8s						
ASAR	**Alice Springs**	**49.05**	**253**	P	**P**	**01 29 22.2**	**-0.2**
	comp=Z,11nm,0.8s,baz=87,slow=8.3,SNR=82						
ASAR	**Alice Springs**	**49.05**	**253**	P	**P**	**01 29 22.0**	**-0.3**
ASAR					**PcP**	**01 30 45.4**	**-0.4**
FORT	**Forrest**	**54.15**	**244**	P	**P**	**01 29 59.6**	**-0.7**
PSA00	**Pilbara Seismi**	**62.18**	**254**	P	**P**	**01 30 56.5**	**-0.1**
MJAR	**Matsushiro Arr**	**69.83**	**321**	P	**P**	**01 31 45.8**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=133,slow=8.8,SNR=2.8						
MJAR	**Matsushiro Arr**	**69.83**	**321**	P	**P**	**01 31 45.7**	**+0.3**
QSPA	**South Pole Qui**	**72.99**	**180**	P	**P**	**01 32 06.3**	**+2.0**
	comp=Z,8.1nm,0.9s,baz=44,slow=3.2,SNR=19						
QSPA	**South Pole Qui**	**72.99**	**180**	P	**P**	**01 32 03.6**	**-0.7**
ISA	**Isabella, Lake**	**74.25**	**44**	P	**P**	**01 32 11.9**	**-0.1**
ISA				IAmb	IAmb	01 32 17.7	
	comp=Z,5.4nm,1.1s						
PFO	**Pinyon Flats O**	**74.48**	**47**	P	**P**	**01 32 14.6**	**+1.1**
	comp=Z,1.2nm,0.5s,baz=233,slow=5.9,SNR=4.1						
YBH	**Yreka Blue Hor**	**75.27**	**37**	P	**P**	**01 32 19.2**	**+1.4**
	comp=Z,4.2nm,1.1s,baz=197,slow=14,SNR=2.9						
113A	**Mohawk Valley,**	**75.94**	**49**	P	**P**	**01 32 22.1**	**+0.3**
113A				IAmb	IAmb	01 32 26.0	
	comp=Z,3.8nm,1.1s						
NVAR	**Mina Array Bea**	**75.95**	**42**	P	**P**	**01 32 23.3**	**+1.3**
	comp=Z,3.2nm,1.1s,baz=216,slow=9.0,SNR=6.8						
NVAR	**Mina Array Bea**	**75.95**	**42**	P	**P**	**01 32 21.5**	**-0.4**
NV11	**Mina Array Sit**	**76.05**	**42**	P	**P**	**01 32 22.2**	**-0.2**
NV11				IAmb	IAmb	01 32 27.8	
	comp=Z,3.6nm,1.1s						
TPNV	**Topopah Spring**	**76.45**	**44**	P	**P**	**01 32 24.1**	**-0.7**
SHPR	**Sheep Range**	**76.94**	**45**	P	**P**	**01 32 27.3**	**-0.3**
SHPR				IAmb	IAmb	01 32 33.3	
	comp=Z,2.7nm,1.0s						
W13A	**Hualapai Mount**	**77.07**	**47**	P	**P**	**01 32 28.5**	**+0.1**
PINE	**Pine Mountain**	**77.58**	**36**	IAmb	IAmb	01 32 35.6	
	comp=Z,4.9nm,1.1s						
U15A	**North Rim**	**78.87**	**46**	IAmb	IAmb	01 32 43.2	
	comp=Z,5.1nm,1.1s						
ELK	**Elko**	**79.21**	**41**	P	**P**	**01 32 39.8**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=258,slow=5.9,SNR=3.6						
ELK	**Elko**	**79.21**	**41**	IAmb	IAmb	01 32 50.5	
	comp=Z,3.1nm,1.1s						
BMO	**Blue Mountains**	**80.30**	**37**	IAmb	IAmb	01 32 51.4	
	comp=Z,4.5nm,1.1s						
TXAR	**Lajitas Array**	**82.02**	**56**	P	**P**	**01 32 57.0**	**+1.7**
	comp=Z,4.3nm,1.2s,baz=202,slow=6.3,SNR=5.8						
REDW	**Red Top Meadow**	**83.37**	**41**	IAmb	IAmb	01 33 10.3	
	comp=Z,2.4nm,0.9s						
WRH	**Wood River Hil**	**83.69**	**11**	P	**P**	**01 33 02.7**	**-0.3**
PDAR	**Pinedale Array**	**83.89**	**42**	P	**P**	**01 33 05.2**	**+0.4**
	comp=Z,1.6nm,1.0s,baz=197,slow=1.5,SNR=6.3						
PDAR	**Pinedale Array**	**83.89**	**42**	P	**P**	**01 33 03.5**	**-1.4**
SEY	**Seymchan**	**83.96**	**345**	P	**P**	**01 33 04.4**	**0.0**
	comp=Z,1.4nm,0.5s,baz=126,slow=7.6,SNR=5.8						
IL31		**84.18**	**11**	IAmb	IAmb	01 33 10.1	
	comp=Z,4.9nm,1.1s						
ILAR	**Eielson Array**	**84.18**	**11**	P	**P**	**01 33 05.5**	**0.0**
	comp=Z,5.7nm,1.1s,baz=212,slow=5.6,SNR=7.5						
ILAR	**Eielson Array**	**84.18**	**11**	P	**P**	**01 33 04.7**	**-0.8**
IMAR	**Indian Mountai**	**84.19**	**8**	P	**P**	**01 33 04.8**	**-0.7**
DAWY	**Dawson**	**85.17**	**15**	IAmb	IAmb	01 33 14.6	
	comp=Z,3.1nm,0.9s						
YKA	**Yellowknife Ar**	**91.85**	**24**	P	**P**	**01 33 44.8**	**+2.5**
	comp=Z,0.8nm,1.1s,baz=236,slow=6.6,SNR=4.8						
CMAR	**Chiang Mai Arr**	**92.57**	**288**	P	**P**	**01 33 49.0**	**+2.3**
	comp=Z,1.1nm,0.4s,baz=103,slow=4.0,SNR=3.5						
CMAR	**Chiang Mai Arr**	**92.57**	**288**	P	**P**	**01 33 44.4**	**-2.4**
TIXI	**Tiksi**	**96.44**	**344**	LR	LR	02 14 56.2	
	comp=Z,358nm,19.1s,baz=46,slow=34						
KMBO	**Kilima Mbogo**	**144.27**	**243**	PKP	**PKPdf**	**01 40 11.8**	**-0.2**
	comp=Z,3.8nm,1.0s,baz=42,slow=5.6,SNR=7.4						
IBBN	**Ibbenburen**	**144.80**	**358**	*e*PKPbc	**PKPdf**	**01 40 11.7**	**+0.3**
	baz=7.2,slow=3.1						
KWP	**Kalwaria Pacla**	**144.81**	**341**	*e*PKP	**PKPdf**	**01 40 11.3**	**-0.2**
ASSE	**Asse, Remlinge**	**144.81**	**355**	*e*PKPbc	**PKPdf**	**01 40 11.5**	**+0.2**
	baz=7.2,slow=3.1						
OJC	**Ojcow**	**145.10**	**344**	*e*PKP	**PKPdf**	**01 40 12.3**	**+0.3**
CLZ	**Clausthal**	**145.12**	**355**	*e*PKPbc	**PKPdf**	**01 40 12.7**	**+0.7**
	baz=7.2,slow=3.1						
KSP	**Ksiaz**	**145.30**	**349**	*e*PKP	**PKPdf**	**01 40 12.6**	**+0.3**
CLL	**Collm**	**145.38**	**352**	*e*PKPbc	**PKPab**	**01 40 13.0**	**+0.5**
	comp=Z,6.0nm,0.9s						
CLL				*i* PKiKP	**PKiKP**	**01 40 17.7**	**+1.3**
	comp=Z,26nm,1.6s						
CLL	**Collm**	**145.38**	**352**	*e*PKPbc	**PKiKP**	**01 40 14.1**	**-2.2**
	baz=7.2,slow=3.1						
GTTG	**Gottingen**	**145.45**	**356**	*e*PKPbc	**PKPab**	**01 40 13.7**	**+1.0**
	baz=7.2,slow=3.1						
CHVC	**Chvalec**	**145.59**	**349**	*e*PKP	**PKPab**	**01 40 14.0**	**+0.7**
OSTC	**Ostas**	**145.59**	**348**	*e*PKP	**PKPab**	**01 40 13.7**	**+0.4**
NEUB	**Neuenburg**	**145.62**	**354**	*e*PKPbc	**PKPab**	**01 40 14.2**	**+0.8**
	baz=7.2,slow=3.1						
BURAR	**Bucovina Array**	**145.67**	**337**	⇑P	**PKPab**	**01 40 14.3**	**+0.5**
BRG	**Berggiesshubel**	**145.67**	**351**	*e*PKP	**PKPab**	**01 40 14.0**	**+0.4**
	comp=Z,13nm,1.3s						
BRG	**Berggiesshubel**	**145.67**	**351**	*e*PKPbc	**PKPab**	**01 40 14.5**	**+0.9**
	baz=7.2,slow=3.1						
UPC	**Upice**	**145.67**	**349**	*e*PKP	**PKPab**	**01 40 14.4**	**+0.8**
BUG	**Bochum--Univer**	**145.68**	**359**	*e*PKPbc	**PKPab**	**01 40 14.3**	**+0.7**
	baz=7.2,slow=3.1						
NIE	**Niedzica**	**145.70**	**343**	*e*PKP	**PKPab**	**01 40 14.6**	**+0.8**
FBE	**Freiberg**	**145.71**	**352**	*e*PKPbc	**PKPab**	**01 40 14.9**	**+1.2**
	baz=7.2,slow=3.1						
DPC	**Dobruska-Polom**	**145.76**	**348**	*e*PKP	**PKPab**	**01 40 15.3**	**+1.3**
OKC	**Ostrava-Krasne**	**145.86**	**346**	*e*PKP	**PKiKP**	**01 40 18.8**	**+1.4**
PVCC	**Panska Ves**	**145.91**	**350**	*e*PKP	**PKPab**	**01 40 15.2**	**+0.7**
KRLC	**Kraliky**	**145.93**	**348**	*e*PKP	**PKPab**	**01 40 15.2**	**+0.5**
MORC	**Moravsky Berou**	**146.05**	**347**	*e*PKP	**PKPab**	**01 40 15.4**	**+0.3**
UBBA	**Unterbreizbach**	**146.17**	**355**	*e*PKPbc	**PKPab**	**01 40 15.8**	**+0.5**
	baz=7.2,slow=3.1						
TRPA	**Tarpa**	**146.17**	**340**	⇓P	**PKPab**	**01 40 15.9**	**+0.4**
MOX	**Moxa**	**146.19**	**354**	*e*PKPbc	**PKPab**	**01 40 16.1**	**+0.6**
	baz=7.2,slow=3.1						
PLN	**Plauen**	**146.29**	**353**	*e*PKPbc	**PKPab**	**01 40 16.5**	**+0.5**
	baz=7.2,slow=3.1						
TANN	**Tannenbergstha**	**146.32**	**353**	*e*PKPbc	**PKPab**	**01 40 16.8**	**+0.6**
	baz=7.2,slow=3.1						
GUNZ	**Gunzen**	**146.39**	**353**	*e*PKPbc	**PKPab**	**01 40 17.1**	**+0.7**
	baz=7.2,slow=3.1						
PRU	**Pruhonice**	**146.44**	**350**	*e*PKP	**PKiKP**	**01 40 17.3**	**-1.3**
WERN	**Wernitzgruen**	**146.46**	**353**	*e*PKPbc	**PKiKP**	**01 40 17.4**	**-1.3**
	baz=7.2,slow=3.1						
TOPG	**Topolog**	**146.50**	**331**	⇑P	**PKPab**	**01 40 17.5**	**+0.6**
NKC	**Novy Kostel**	**146.50**	**352**	*e*PKP	**PKiKP**	**01 40 17.6**	**-1.2**
VRAC	**Vranov**	**146.70**	**347**	*e*PKP	**PKiKP**	**01 40 19.0**	**-0.2**
MANZ	**Manzenberg**	**146.79**	**353**	*e*PKPbc	**PKiKP**	**01 40 18.4**	**-1.0**
	baz=7.2,slow=3.1						
TNS	**Taunus Mts**	**146.86**	**357**	*e*PKPbc	**PKiKP**	**01 40 18.8**	**-0.7**
	baz=7.2,slow=3.1						
JAVC	**Velka Javorina**	**146.88**	**346**	*e*PKP	**PKiKP**	**01 40 19.9**	**+0.2**
DOPR	**Dopca**	**146.95**	**335**	⇓P	**PKiKP**	**01 40 19.3**	**-0.6**
KRUC	**Moravsky**	**146.98**	**347**	*e*PKP	**PKiKP**	**01 40 18.9**	**-0.8**
ROTZ	**Rotzenmuhle**	**146.99**	**353**	*e*PKPbc	**PKiKP**	**01 40 19.0**	**-0.7**
	baz=7.2,slow=3.1						
BRTR	**Keskin Array B**	**147.04**	**319**	PKPbc	**PKPab**	**01 40 19.1**	**-0.3**
	comp=Z,2.6nm,0.9s,baz=124,slow=2.0,SNR=9.4						
BRTR	**Keskin Array B**	**147.04**	**319**		**PKPab**	**01 40 18.7**	**-0.7**
PSZ	**Piszkesteto**	**147.17**	**343**	⇑P	**PKiKP**	**01 40 19.7**	**-0.6**
DRGR		**147.28**	**339**	⇓P	**PKPab**	**01 40 19.1**	**-0.9**
KHC	**Kasperske Hory**	**147.42**	**351**	*e*PKP	**PKPab**	**01 40 19.8**	**-0.7**
WLF	**Walferdange**	**147.48**	**360**	*e*PKPbc	**PKiKP**	**01 40 20.6**	**-0.1**
	baz=7.2,slow=3.1						
WET	**Wettzell**	**147.51**	**352**	*e*PKPbc	**PKiKP**	**01 40 20.6**	**-0.3**
	baz=7.2,slow=3.1						
VOIR		**147.52**	**335**	⇓P	**PKPab**	**01 40 20.9**	**-0.1**
GEC2	**GERESS Array S**	**147.68**	**350**	*e*PKPbc	**PKiKP**	**01 40 20.7**	**-0.6**
	baz=7.2,slow=3.1						
GERES	**GERESS Array B**	**147.68**	**350**	PKPbc	**PKiKP**	**01 40 20.1**	**-1.3**
	comp=Z,2.1nm,1.1s,baz=11,slow=2.7,SNR=8.8						
GERES	**GERESS Array B**	**147.68**	**350**		**PKiKP**	**01 40 20.2**	**-1.2**
ARR	**Arges**	**147.75**	**335**	⇓P	**PKPab**	**01 40 21.8**	**-0.1**
DEV	**Deva**	**147.99**	**337**	⇓P	**PKPbc**	**01 40 19.7**	**-0.4**
SIRR	**Siria**	**148.09**	**339**	⇑P	**PKPbc**	**01 40 20.5**	**+0.1**
GZR	**Gura Zlata**	**148.45**	**337**	⇓P	**PKPdf**	**01 40 17.8**	**-0.1**
BZS	**Buzias**	**148.67**	**339**	⇑P	**PKiKP**	**01 40 23.0**	**-0.4**
BFO	**Black Forest**	**148.75**	**357**	*e*PKPbc	**PKiKP**	**01 40 23.4**	**-0.1**
	baz=7.2,slow=3.1						
HERR	**Herculane**	**149.02**	**337**	⇓P	**PKiKP**	**01 40 23.9**	**-0.2**
TORD	**Torodi Ar. Bea**	**174.32**	**133**	PKP	**PKPdf**	**01 40 45.9**	**+0.7**
	comp=Z,0.8nm,1.1s,baz=299,slow=1.5,SNR=3.8						
TORD				PKPab	**PKPab**	**01 42 19.4**	**+1.9**
	comp=Z,2.4nm,1.1s,baz=239,slow=2.9,SNR=5.0						
TORD	**Torodi Ar. Bea**	**174.32**	**133**		**PKPdf**	**01 40 48.6**	**+3.3**
TORD					**PKPab**	**01 42 19.4**	**+1.9**

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*NEIC **13** 01:21:02.8±1.4, 15°.90N±0°.06×98°.65W±0°.05, h25^{km}±3^{km}, Error ellipse: s-maj=9.2km s-min=5.6km az=204.0*

*MEX **13** 01:21:03.7±0.5, 15°.91N×98°.67W, h20^{km}±11^{km}, MD4.7*

*IDC **13** 01:21:05.4±0.6, 16°.49N×98°.36W, h0^{km}, mb4.3/19, mb1 4.4/25, mb1mx4.3/53, mbtmp4.3/25, ML3.5/5, MS3.9/20, Ms1 3.9/20, ms1mx3.7/45, Error ellipse: s-maj=20.4km s-min=9.9km az=47.0*

*GCMT **13** 01:21:06.7±0.5, 16°.02N±0°.03×98°.49W±0°.05, h14^{km}±2^{km}, MW4.8/74, Moment Tensor Solution. s8,c10; s74,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.29±.15; $M_{\theta\theta}$-1.01±.10; $M_{\phi\phi}$-0.28±.08; $M_{r\theta}$1.23±.24; $M_{\theta\phi}$0.28±.04; $M_{\phi r}$-0.31±.21; Best double couple: $M_0$1.74300×10^{16} NP1:ϕ_s291.00000°, δ22.00000°, λ95.00000°. NP2: ϕ_s105.00000°, δ68.00000°, λ88.00000°. Principal axes: T 1.8380, Plg67.0000°, Azm12.0000°; N -0.1960, Plg2.0000°, Azm106.0000°; P -1.6480, Plg23.0000°, Azm197.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 01:21:03.0±0.9**, 16°.11N**±0°.04×**98°.60W**±0°.03**, h5**^{km}±5^{km}**,**
n506, σ1^{s}.**86**/527**, mb4.8**/95**, MS3.9**/18**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOIG	**Yosondua**	**1.25**	**54**	*i* P	**Pn**	**01 21 26.0**	**-1.4**
YOIG				*i* S	**Sn**	**01 21 42.3**	**-2.4**
PEIG	**Puerto Escondi**	**1.40**	**94**	*i* P	**Pn**	**01 21 25.9**	**-3.2**
PEIG				*e*S	**Sb**	**01 21 43.1**	**-4.7**
TLIG	**Tlapa**	**1.44**	**1**	*i* P	**Pg**	**01 21 29.0**	**-1.7**
TLIG				*i* S	**Sg**	**01 21 48.0**	**-1.5**
TLIG	**Tlapa**	**1.44**	**1**		**Pg**	**01 21 29.3**	**-1.4**
TLIG				Sn	**Sg**	**01 21 51.4**	**+1.9**
CAIG	**El Cayaco**	**1.85**	**300**	*i* P	**Pn**	**01 21 31.6**	**-3.8**
CAIG				*i* S	**Sn**	**01 21 54.0**	**-5.2**
CAIG	**El Cayaco**	**1.85**	**300**		**Pn**	**01 21 31.6**	**-3.8**
CAIG					**Sn**	**01 21 54.0**	**-5.2**
HLIG	**Huajuapan de L**	**1.87**	**24**	*e*P	**Pb**	**01 21 35.5**	**-2.2**
HLIG				*e*S	**Sb**	**01 21 59.2**	**-2.3**
VHO	**Vista Hermosa**	**2.03**	**62**	*e*P	**Pn**	**01 21 36.2**	**-1.7**
VHO				*i* S	**Sn**	**01 22 01.9**	**-1.9**
OXBJ	**Oaxaca**	**2.03**	**62**	*i* P	**Pn**	**01 21 37.2**	**-0.8**
OXBJ	**Oaxaca**	**2.03**	**62**		**Pn**	**01 21 37.2**	**-0.8**
MEIG	**Mezcala**	**2.05**	**332**	*i* S	**Sn**	**01 22 03.0**	**-1.3**
MEIG	**Mezcala**	**2.05**	**332**		**Sn**	**01 22 03.0**	**-1.3**
HUIG	**Huatulco**	**2.42**	**98**	*i* P	**Pn**	**01 21 40.1**	**-3.0**
HUIG				*e*S	**Sn**	**01 22 09.0**	**-4.1**
HUIG	**Huatulco**	**2.42**	**98**		**Pn**	**01 21 40.1**	**-3.0**
HUIG					**Sn**	**01 22 09.0**	**-4.1**
PLIG	**Platanillo**	**2.43**	**339**	*i* P	**Pn**	**01 21 42.9**	**-0.5**
PLIG				*i* S	**Sn**	**01 22 12.5**	**-1.0**
PLIG	**Platanillo**	**2.43**	**339**		**Pn**	**01 21 42.9**	**-0.5**
PLIG					**Sn**	**01 22 12.5**	**-1.0**
TPIG	**Tehuac#an**	**2.58**	**27**	*i* P	**Pn**	**01 21 44.5**	**-1.0**
TPIG				*i* S	**Sb**	**01 22 18.2**	**-3.8**
TPIG	**Tehuac#an**	**2.58**	**27**		**Pn**	**01 21 44.5**	**-1.0**
ARIG	**Puente Sto Nin**	**2.73**	**322**	*i* P	**Pn**	**01 21 46.1**	**-1.4**
ARIG				*i* S	**Sn**	**01 22 17.6**	**-3.3**
ARIG	**Puente Sto Nin**	**2.73**	**322**		**Pn**	**01 21 46.1**	**-1.4**
ARIG					**Sn**	**01 22 17.6**	**-3.3**
YAIG	**Yautepec**	**2.77**	**351**	*e*P	**Pn**	**01 21 48.1**	**0.0**
YAIG				*i* S	**Sn**	**01 22 21.1**	**-1.0**
YAIG	**Yautepec**	**2.77**	**351**		**Pn**	**01 21 48.1**	**0.0**
YAIG					**Sn**	**01 22 21.1**	**-1.0**
PPM	**Popocatepetl**	**2.94**	**359**	*e*P	**Pn**	**01 21 51.1**	**+0.3**
PPM				*i* S	**Sn**	**01 22 26.0**	**-0.8**
AMVM	**AMECAMECA**	**3.01**	**357**	*e*P	**Pn**	**01 21 51.5**	**-0.1**
AMVM	**AMECAMECA**	**3.01**	**357**		**Pn**	**01 21 51.5**	**-0.1**
ZIIG	**Zihuatanejo**	**3.12**	**299**	*e*P	**Pn**	**01 21 50.3**	**-2.5**
ZIIG				*i* S	**Sn**	**01 22 27.1**	**-3.5**
ZIIG	**Zihuatanejo**	**3.12**	**299**		**Pn**	**01 21 50.3**	**-2.5**
ZIIG					**Sn**	**01 22 27.1**	**-3.5**
UNM	**Universidad Na**	**3.25**	**350**	*i* P	**Pn**	**01 21 54.6**	**-0.2**
UNM				*i* S	**Sn**	**01 22 33.7**	**-0.3**
UNM	**Universidad Na**	**3.25**	**350**		**Pn**	**01 21 55.5**	**+0.6**
AZVM	**Cuida Lopez Ma**	**3.52**	**349**	*e*P	**Pn**	**01 21 57.0**	**-1.6**
AZVM	**Cuida Lopez Ma**	**3.52**	**349**		**Pn**	**01 21 57.0**	**-1.6**
CMIG	**Matias Romero**	**3.69**	**74**	Pn	**Pn**	**01 21 59.3**	**-1.4**
	6.1nm,0.3s,baz=248,slow=12,SNR=50						
CMIG				Sn	**Sn**	**01 22 43.4**	**-1.2**
	15nm,0.3s,baz=322,slow=8.2,SNR=6.0						
CMIG				Lg	Lg	01 22 56.0	
	23nm,0.3s,baz=245,slow=17,SNR=6.4						
CMIG				LR	LR	01 23 26.7	
	comp=Z,1μm,19.3s,baz=261,slow=42						
CMIG	**Matias Romero**	**3.69**	**74**	*e*P	**Pn**	**01 21 59.5**	**-1.2**
CMIG				*i* S	**Sn**	**01 22 42.7**	**-1.9**
CMIG	**Matias Romero**	**3.69**	**74**		**Pn**	**01 21 59.5**	**-1.2**
CMIG					**Sn**	**01 22 42.7**	**-1.9**
LVIG	**Laguna Verde**	**4.15**	**30**	*i* P	**Pn**	**01 22 05.7**	**-1.3**
LVIG				*i* S	**Sn**	**01 22 55.6**	**-0.2**
LVIG	**Laguna Verde**	**4.15**	**30**		**Pn**	**01 22 05.7**	**-1.3**
LVIG					**Sn**	**01 22 55.6**	**-0.2**
DEIG	**Demacu**	**4.19**	**354**	*i* S	**Sn**	**01 22 56.4**	**-0.8**
MOIG	**Morelia**	**4.32**	**326**	*i* P	**Pn**	**01 22 07.9**	**-1.7**
MOIG				*i* S	**Sn**	**01 22 58.4**	**-2.1**
MOIG	**Morelia**	**4.32**	**326**		**Pn**	**01 22 10.0**	**+0.4**
MOIG	**Morelia**	**4.32**	**326**		**Sn**	**01 22 58.4**	**-2.1**
JRQG	**Juriquilla Cam**	**4.89**	**339**	*e*P	**Pn**	**01 22 20.4**	**+3.0**
JRQG				*i* S	**Sn**	**01 23 14.2**	**-0.4**
JRQG	**Juriquilla Cam**	**4.89**	**339**		**Pn**	**01 22 20.4**	**+3.0**
JRQG					**Sn**	**01 23 14.2**	**-0.4**
MMIG	**Aquila**	**5.03**	**296**	*i* P	**Pn**	**01 22 17.4**	**-1.7**
MMIG				*i* S	**Sn**	**01 23 13.9**	**-3.7**
MMIG	**Aquila**	**5.03**	**296**		**Pn**	**01 22 17.4**	**-1.7**
MMIG					**Sn**	**01 23 13.9**	**-3.7**
PCIG		**5.19**	**94**	*i* P	**Pn**	**01 22 18.4**	**-2.8**
PCIG				*i* S	**Sn**	**01 23 17.7**	**-3.8**
PCIG		**5.19**	**94**		**Pn**	**01 22 18.4**	**-2.8**
PCIG					**Sn**	**01 23 17.7**	**-3.8**
IGIG	**Irapuato, Guan**	**5.29**	**331**	*i* P	**Pn**	**01 22 22.2**	**-0.7**
IGIG				*e*S	**Sn**	**01 23 24.1**	**-0.4**
IGIG	**Irapuato, Guan**	**5.29**	**331**		**Pn**	**01 22 22.2**	**-0.7**
IGIG					**Sn**	**01 23 24.1**	**-0.4**
TGIG		**5.29**	**82**	*e*P	**Pn**	**01 22 20.7**	**-2.1**
TGIG				*e*S	**Sn**	**01 23 21.4**	**-2.8**
TGIG		**5.29**	**82**		**Pn**	**01 22 20.7**	**-2.1**
TGIG					**Sn**	**01 23 21.4**	**-2.8**
COIG	**Colima**	**5.74**	**303**	*i* P	**Pn**	**01 22 28.2**	**-0.6**
CCIG	**Comitan**	**6.21**	**88**	*i* P	**Pn**	**01 22 34.6**	**-0.9**
CCIG				*i* S	**Sn**	**01 23 45.2**	**-1.8**
CCIG	**Comitan**	**6.21**	**88**		**Pn**	**01 22 34.6**	**-0.9**
CCIG				Sn	**Sn**	**01 23 44.6**	**-2.4**
CJM	**Chamela**	**7.00**	**300**	*i* P	**Pn**	**01 22 44.0**	**-2.3**
CJM				*e*S	**Sn**	**01 24 02.8**	**-3.5**
ANIG	**Ahuacatlan**	**7.46**	**312**	*i* P	**Pn**	**01 22 51.7**	**-0.9**
ANIG				*i* S	**Sn**	**01 24 14.4**	**-3.4**
ANIG	**Ahuacatlan**	**7.46**	**312**		**Pn**	**01 22 51.7**	**-0.9**
ANIG					**Sn**	**01 24 14.4**	**-3.4**
ZAIG	**Zacatecas**	**7.61**	**331**	*i* P	**Pn**	**01 22 55.4**	**+0.6**
ZAIG				*i* S	**Sn**	**01 24 20.6**	**-1.0**
ZAIG	**Zacatecas**	**7.61**	**331**		**Pn**	**01 22 54.7**	**-0.1**
ZAIG	**Zacatecas**	**7.61**	**331**		**Sn**	**01 24 20.6**	**-1.0**
APG	**El Apazote**	**7.91**	**97**	Pn	**Pn**	**01 22 59.6**	**+0.7**
	0.2nm,0.3s,baz=310,slow=16,SNR=5.2						
APG				Sn	**Sn**	**01 24 23.9**	**-5.2**
	0.8nm,0.3s,baz=17,slow=17,SNR=2.6						
APG				Lg	Lg	01 25 10.3	
	0.5nm,0.3s,baz=22,slow=19,SNR=2.9						
APG				LR	LR	01 25 59.8	
	comp=Z,1μm,19.5s,baz=284,slow=38						
LNIG	**Linares**	**8.78**	**355**	*i* P	**Pn**	**01 23 11.8**	**+1.2**
LNIG	**Linares**	**8.78**	**355**		**Pn**	**01 23 11.8**	**+1.2**
TEIG	**Tepich**	**10.63**	**66**	Pn	**Pn**	**01 23 33.4**	**-2.5**
	baz=39,slow=0.0						
TEIG				Sn	**Sn**	**01 25 27.6**	**-7.8**
	1.7nm,0.3s,baz=134,slow=0.0,SNR=2.7						
TEIG				LR	LR	01 27 38.0	
	comp=Z,272nm,18.5s,baz=68,slow=38						
TEIG	**Tepich**	**10.63**	**66**	Pn	**Pn**	**01 23 33.6**	**-2.4**
TEIG					**Sn**	**01 25 32.7**	**-2.7**
833A	**Chaparral WMA,**	**12.18**	**357**		**Pn**	**01 23 55.6**	**-1.5**
833A	**Chaparral WMA,**	**12.18**	**357**	P	Pn	01 24 00.4	+3.3
	baz=175						
HPIG		**12.62**	**330**		**Pn**	**01 24 04.8**	**+1.5**
735A	**Kenedy**	**12.71**	**3**	Pn	**Pn**	**01 24 04.5**	**+0.1**
LPIG	**La Paz**	**13.57**	**308**	LR	LR	01 28 36.5	
	comp=Z,761nm,19.3s,baz=104,slow=33						
ACON	**Acoyapa**	**13.66**	**106**		**Pn**	**01 24 19.1**	**+1.7**
TX31	**Lajitas Ar. Si**	**13.96**	**341**		**Pn**	**01 24 19.0**	**-2.7**
TX32	**Lajitas Array**	**13.96**	**341**		**Pn**	**01 24 21.7**	**0.0**
TXAR	**Lajitas Array**	**13.96**	**341**	Pn	**Pn**	**01 24 23.0**	**+1.3**
	0.1nm,0.3s,baz=159,slow=14,SNR=18						
TXAR				Lg	Lg	01 28 16.6	
	0.0nm,0.3s,baz=207,slow=11,SNR=2.8						
TXAR	**Lajitas Array**	**13.96**	**341**		**Pn**	**01 24 21.6**	**0.0**
HKT	**Hockley**	**14.01**	**10**	Pn	**Pn**	**01 24 21.8**	**-0.3**
JCT	**Junction City**	**14.35**	**356**		**Pn**	**01 24 26.9**	**+0.1**
JCT	**Junction City**	**14.35**	**356**	P	**Pn**	**01 24 28.5**	**+1.6**
	baz=174						
JTS	**Las Juntas de**	**14.48**	**112**	Pn	**P**	**01 24 32.4**	**-3.2**
	0.4nm,0.3s,baz=356,slow=12,SNR=2.8						
JTS	**Las Juntas de**	**14.48**	**112**	P	**P**	**01 24 33.4**	**-2.2**
435B	**Jarrell**	**14.63**	**3**	P	**Pn**	**01 24 29.4**	**-1.4**
435B	**Jarrell**	**14.63**	**3**	P	**P**	**01 24 38.9**	**+1.7**
	baz=183						
HDC	**Heredia**	**15.36**	**112**	Pn	**Pn**	**01 24 39.2**	**-1.5**
HDC				IAmb	IAmb	01 24 50.3	
	comp=Z,117nm,1.1s						
WHTX	**Lake Whitney,**	**15.84**	**4**	Pn	**Pn**	**01 24 46.5**	**-0.2**
WHTX				IAmb	IAmb	01 24 58.6	
	comp=Z,151nm,1.0s						
WHTX	**Lake Whitney,**	**15.84**	**4**	P	**P**	**01 24 51.9**	**+1.3**
	baz=184,SNR=23						
NATX	**Nacogdoches**	**15.99**	**12**	Pn	**P**	**01 24 48.8**	**-3.4**
NATX				IAmb	IAmb	01 24 59.4	
	comp=Z,74nm,1.0s						
NATX	**Nacogdoches**	**15.99**	**12**	P	**P**	**01 24 53.1**	**+0.9**
	baz=194						
237A	**Washetta, Mont**	**16.02**	**9**	Pn	**Pn**	**01 24 49.1**	**+0.1**
342A	**Flagon Creek P**	**16.24**	**20**	P	**Pn**	**01 24 51.1**	**-0.7**
ABTX	**Abilene, Hawle**	**16.47**	**357**	Pn	**P**	**01 24 55.5**	**-2.1**
ABTX				IAmb	IAmb	01 25 06.3	
	comp=Z,87nm,0.9s						
ABTX	**Abilene, Hawle**	**16.47**	**357**	P	**P**	**01 24 58.8**	**+1.2**
	baz=176,SNR=32						
MNTX	**Cornudas Mount**	**16.70**	**339**		**P**	**01 24 57.9**	**-2.3**
MNTX	**Cornudas Mount**	**16.70**	**339**	P	**P**	**01 24 59.3**	**-0.9**
	baz=156,SNR=23						
344A	**Westbrook Farm**	**16.87**	**24**	Pn	**P**	**01 25 00.5**	**-1.5**
HSIG		**17.16**	**321**	Pn	**Pn**	**01 25 02.8**	**-0.8**
Z35A	**Perchaven, San**	**17.19**	**4**	Pn	**P**	**01 25 04.0**	**-1.6**
Z35A				IAmb	IAmb	01 25 13.0	
	comp=Z,78nm,1.0s						
Z38A	**Mt. Pleasant**	**17.38**	**10**	Pn	**P**	**01 25 05.4**	**-2.3**
Z38A				IAmb	IAmb	01 25 15.3	

	comp=Z,124nm,1.1s						
VBMS	Vicksburg	17.64	23	P	P	01 25 09.3	-1.2
143A	Socs Landing,	17.76	20	P	P	01 25 11.0	-0.8
Z41A	Richland Creek	17.86	16	P	P	01 25 15.0	+2.1
	baz=198						
319A	Douglas	18.05	329		Pn	01 25 13.5	-1.2
319A				IAmb	IAmb	01 25 23.8	
	comp=Z,66nm,1.1s						
MSTX	Muleshoe	18.18	349	P	Pn	01 25 13.8	-2.5
MSTX	Muleshoe	18.18	349	P	P	01 25 17.7	+1.1
	baz=166,SNR=15						
WLAR	White Oak Lake	18.19	15	P	P	01 25 15.3	-1.2
WLAR				IAmb	IAmb	01 25 26.5	
	comp=Z,88nm,1.1s						
121A	Cookes Peak, D	18.35	335	P	P	01 25 17.5	-1.0
121A	Cookes Peak, D	18.35	335	P	P	01 25 20.9	+2.3
	baz=150,SNR=8.4						
X34A	Smith Ranch, M	18.43	2	P	P	01 25 18.5	-0.7
X34A				IAmb	IAmb	01 25 36.1	
	comp=Z,70nm,1.1s						
WMOK	Wichita Mounta	18.55	360	P	Pn	01 25 19.6	-1.2
WMOK	Wichita Mounta	18.55	360	P	Pn	01 25 20.1	-0.6
	baz=179,SNR=11						
CCAR	Cane Creek	18.77	18	P	Pn	01 25 21.9	-1.4
CCAR				IAmb	IAmb	01 25 32.5	
	comp=Z,48nm,0.9s						
AMTX	Amarillo	18.90	352	P	P	01 25 22.6	-1.9
AMTX				IAmb	IAmb	01 25 39.1	
	comp=Z,48nm,0.9s						
AMTX	Amarillo	18.90	352	P	Pn	01 25 25.1	+0.1
	baz=170						
MIAR	Mount Ida	18.90	13	P	Pn	01 25 24.0	-1.0
MIAR	Mount Ida	18.90	13	P	Pn	01 25 25.5	+0.5
	baz=195,SNR=14						
X40A	Basin Creek Fa	19.02	15	P	Pn	01 25 25.5	-0.9
X40A	Basin Creek Fa	19.02	15	P	Pn	01 25 27.1	+0.7
	baz=197						
W35A	Tecumseh	19.03	4	P	Pn	01 25 24.9	-1.6
FNO	Franklin	19.10	3	P	Pn	01 25 25.8	-1.6
OKCSW	OKLAHOMA CITY	19.24	3	P	Pn	01 25 27.1	-2.0
OKCFA	Oklahoma City	19.25	3	P	P	01 25 26.6	-1.6
OKCFA				IAmb	IAmb	01 25 35.6	
	comp=Z,102nm,0.9s						
UALR	University of	19.41	16	P	P	01 25 28.2	-1.8
W39A	Magazine	19.49	12	P	Pn	01 25 30.5	-1.5
W39A				IAmb	IAmb	01 25 40.3	
	comp=Z,50nm,1.1s						
W39A	Magazine	19.49	12	P	Pn	01 25 33.1	+1.1
	baz=194,SNR=16						
TUC	Tucson	19.56	328	P	Pn	01 25 31.2	-1.8
TUC	Tucson	19.56	328	P	Pn	01 25 34.3	+1.3
	baz=142						
W41B	Gary Mavity, V	19.82	15	P	Pn	01 25 35.1	-0.8
	baz=198						
LRAL	Lakeview Retre	19.85	30	P	Pn	01 25 34.8	-1.6
LRAL	Lakeview Retre	19.85	30	P	Pn	01 25 35.6	-0.7
	baz=215						
TUL1	Leonard	19.88	7	P	Pn	01 25 34.6	-2.1
TUL1				IAmb	IAmb	01 25 45.1	
	comp=Z,101nm,1.1s						
TUL1	Leonard	19.88	7	P	Pn	01 25 35.2	-1.5
	baz=188,SNR=11						
WHAR	Wooly Hollow	19.92	15	P	P	01 25 34.6	-0.9
WHAR				IAmb	IAmb	01 25 49.2	
	comp=Z,92nm,1.2s						
ANMO	Albuquerque	20.04	341	P	Pn	01 25 39.0	+0.2
	comp=Z,0.3nm,0.3s,baz=151,slow=12,SNR=46						
ANMO				Lg	Lg	01 31 35.3	
	comp=Z,0.1nm,0.3s,baz=202,slow=19,SNR=1.7						
ANMO				LR	LR	01 34 24.3	
	comp=Z,739nm,19.7s,baz=156,slow=40						
ANMO	Albuquerque	20.04	341	P	P	01 25 36.3	-0.8
ANMO				IAmb	IAmb	01 25 51.3	
	comp=Z,59nm,1.1s						
ANMO	Albuquerque	20.04	341	P	Pn	01 25 39.4	+0.7
	baz=157						
OXF	Oxford	20.10	23	P	Pn	01 25 37.7	-1.6
OXF				IAmb	IAmb	01 25 50.0	
	comp=Z,104nm,1.1s						
OXF	Oxford	20.10	23	P	Pn	01 25 43.1	+3.8
	baz=207,SNR=7.3						
U32A	Winter Ranch,	20.19	359	P	Pn	01 25 38.4	-2.0
MTDJ	Mount Denham	20.23	81	P	P	01 25 38.3	-0.9
MTDJ				IAmb	IAmb	01 25 45.5	
	comp=Z,83nm,1.1s						
214A	Organ Pipe Nat	20.39	323	P	Pn	01 25 40.7	-2.1
214A	Organ Pipe Nat	20.39	323	P	Pn	01 25 43.2	+0.4
	baz=136,SNR=9.9						
HHAR	Hobbs	20.51	11	P	Pn	01 25 41.9	-2.3
HHAR				IAmb	IAmb	01 25 51.3	
	comp=Z,46nm,1.1s						
FCAR	Ozark Folk Cen	20.53	15	P	P	01 25 41.3	-0.9
Z50A	Ashland	20.56	32	P	Pn	01 25 42.5	-2.3
Z50A				IAmb	IAmb	01 25 51.4	
	comp=Z,44nm,1.1s						
Z50A	Ashland	20.56	32	P	Pn	01 25 43.8	-0.9
	baz=217						
U38A	Gravette	20.59	10	P	P	01 25 41.6	-1.3
U38A				IAmb	IAmb	01 25 54.3	
	comp=Z,47nm,0.9s						
W45A	Hickory Valley	20.75	22	P	Pn	01 25 44.7	-2.3
LPAR	Lepanto	20.78	19	P	Pn	01 25 44.5	-2.7
U40A	Yellville	20.80	13	P	Pn	01 25 44.9	-2.7
U40A	Yellville	20.80	13	P	Pn	01 25 46.2	-1.3
	baz=196,SNR=23						
T35A	Sooner Cattle	20.80	5	P	P	01 25 44.7	-0.5
Y49A	Blount Mountai	20.80	30	P	P	01 25 44.2	-1.0
Y49A				IAmb	IAmb	01 25 52.0	
	comp=Z,35nm,0.9s						
LCAR	Lake Charles	20.96	17	P	P	01 25 46.1	-0.7
X18A	Snowflake	20.99	333	P	P	01 25 46.5	-0.9
X18A				IAmb	IAmb	01 25 59.8	
	comp=Z,32nm,1.0s						
X48A	Hartselle	21.01	27	P	P	01 25 46.2	-1.2
X48A				IAmb	IAmb	01 25 53.6	
	comp=Z,36nm,1.1s						
PLAL	Pickwick Lake	21.03	25	P	P	01 25 46.1	-1.5
PLAL				IAmb	IAmb	01 25 55.9	
	comp=Z,42nm,1.1s						
GNAR	Gosnell	21.20	20	P	P	01 25 49.4	-0.1
W18A	Petrified Fore	21.40	334	P	P	01 25 50.2	-1.5
W18A				IAmb	IAmb	01 26 04.5	
	comp=Z,40nm,1.1s						
W18A	Petrified Fore	21.40	334	P	P	01 25 54.2	+2.4
	baz=148,SNR=10						
113A	Mohawk Valley,	21.54	323	P	P	01 25 50.5	-2.6
113A				IAmb	IAmb	01 26 01.8	
	comp=Z,33nm,1.1s						
T25A	Trinidad	21.57	347	P	P	01 25 55.6	+2.0
	baz=164,SNR=25						
X16A	Lo Mia Camp, P	21.58	330	P	P	01 25 52.0	-1.8
FPAL	Fort Paine	21.74	30	P	P	01 25 54.6	-0.8
FPAL				IAmb	IAmb	01 26 07.1	
	comp=Z,27nm,0.9s						
PBMO	Poplar Bluff	21.82	18	P	P	01 25 56.0	-0.1
GOGA	Godfrey	21.99	36	P	P	01 25 56.4	-1.5
GOGA	Godfrey	21.99	36	P	P	01 26 02.7	+4.8
	baz=222						
HICK	Hickman	21.99	20	P	P	01 25 56.9	-0.9
Y14A	Wickenburg	21.99	326	P	P	01 25 56.8	-1.3
Y14A				IAmb	IAmb	01 26 06.7	
	comp=Z,41nm,1.1s						
S39A	Bolivar	22.00	11	P	P	01 25 57.2	-0.7
S39A				IAmb	IAmb	01 26 07.2	
	comp=Z,72nm,1.0s						
Y52A	Lilburn	22.00	34	P	P	01 25 57.1	-0.9
Y52A	Lilburn	22.00	34	P	P	01 26 02.0	+3.9
	baz=220						
WVT	Waverly	22.12	24	P	P	01 25 58.5	-0.9
WVT	Waverly	22.12	24	P	P	01 26 01.0	+1.7
	baz=208						
SWET	Sewanee	22.15	28	P	P	01 25 59.0	-0.7
SWET				IAmb	IAmb	01 26 05.8	
	comp=Z,46nm,1.0s						
V48A	Smith Brothers	22.20	26	P	P	01 25 59.3	-0.9
V48A				IAmb	IAmb	01 26 08.7	
	comp=Z,36nm,1.1s						
R32A	Long Quarter,	22.23	360	P	P	01 25 59.1	-1.4
R32A				IAmb	IAmb	01 26 10.1	
	comp=Z,74nm,1.1s						
GLA	Glamis	22.36	322	P	P	01 26 01.2	-0.8
GLA				IAmb	IAmb	01 26 16.8	
	comp=Z,40nm,1.1s						
GLA	Glamis	22.36	322	P	P	01 26 04.7	+2.7
	baz=134,SNR=18						
SDCO	Great Sand Dun	22.40	346	P	P	01 26 01.9	-0.7
SDCO	Great Sand Dun	22.40	346	P	P	01 26 03.8	+1.2
	baz=162,SNR=54						
WUAZ	Wupatki	22.45	332	P	P	01 26 01.8	-1.2
WUAZ	Wupatki	22.45	332	P	P	01 26 06.6	+3.6
	baz=145,SNR=90						
CBKS	Cedar Bluff	22.64	358	P	P	01 26 04.1	-0.8
CBKS				IAmb	IAmb	01 26 14.2	
	comp=Z,44nm,1.1s						
CBKS	Cedar Bluff	22.64	358	P	P	01 26 07.0	+2.1
	baz=177						
GTBY	Guantanamo Bay	22.65	77	P	P	01 26 02.1	-3.0
Y12C	Blythe	22.69	324	P	P	01 26 03.8	-1.6
CLTN	Cedars of Leba	22.70	26	P	P	01 26 04.1	-1.4
CLTN				IAmb	IAmb	01 26 16.3	
	comp=Z,23nm,1.0s						
S22A	4UR Ranch, Cre	22.75	343	P	P	01 26 08.3	+2.0
	baz=158,SNR=39						
MVCO	Mesa Verde	22.77	339	P	P	01 26 05.5	-1.1
MVCO	Mesa Verde	22.77	339	P	P	01 26 08.4	+1.8
	baz=154,SNR=34						
CCM	Cathedral Cave	22.80	15	P	P	01 26 06.0	-0.6
CCM	Cathedral Cave	22.80	15	P	P	01 26 07.5	+0.9
	baz=198						
IKP	In-Ko-Pah, Jac	22.87	319	P	P	01 26 10.5	+3.1
	baz=131						
SWSC	Sam W. Stewart	22.88	320	P	P	01 26 10.5	+3.1
	baz=132,SNR=5.3						
PDMCI	Parker Dam,Lak	22.88	325	P	P	01 26 09.6	+2.1
	baz=138,SNR=12						
CPCT	Cooper Cave	23.00	31	P	P	01 26 08.2	-0.5
CPCT				IAmb	IAmb	01 26 16.1	
	comp=Z,35nm,1.1s						
S44A	Carbondale	23.03	19	P	P	01 26 08.4	-0.6
KSCO	Kaye Shedlock’	23.09	352	P	P	01 26 08.8	-0.9
KSCO	Kaye Shedlock’	23.09	352	P	P	01 26 11.0	+1.3
	baz=170,SNR=20						
T47A	Sharon Grove	23.16	24	P	P	01 26 09.1	-1.2
BC3	Big Chuckawall	23.16	322	P	P	01 26 12.8	+2.3
	baz=134,SNR=10						
MONP2	Monument Peak	23.23	319	P	P	01 26 14.6	+3.3
	baz=131,SNR=6.1						
BAR	Barrett	23.25	318	P	P	01 26 10.7	-0.5
Y55A	Saluda	23.29	37	P	P	01 26 09.4	-2.2
	baz=225						
U49A	Red Boiling Sp	23.30	27	P	P	01 26 11.2	-0.6
U49A				IAmb	IAmb	01 26 23.6	
	comp=Z,30nm,1.1s						
IRM	Iron Mountain	23.34	323	P	P	01 26 14.3	+2.1
	baz=135,SNR=13						
Q24A	Divide	23.48	347	P	P	01 26 17.1	+3.2
	baz=163						
TKL	Tuckaleechee C	23.54	31	P	P	01 26 14.5	+0.3
	comp=Z,4.1nm,0.9s,baz=189,slow=13,SNR=2.9						
TKL				LR	LR	01 38 10.3	
	comp=Z,152nm,18.1s,baz=210,slow=44						
TKL	Tuckaleechee C	23.54	31	P	P	01 26 13.2	-1.0
TKL				IAmb	IAmb	01 26 27.1	
	comp=Z,25nm,1.1s						
U15A	North Rim	23.62	332	P	P	01 26 14.1	-1.2
U15A				IAmb	IAmb	01 26 31.6	
	comp=Z,29nm,1.0s						
BELC	Belle Mtn. Jos	23.72	322	P	P	01 26 17.8	+1.6
	baz=133,SNR=8.9						
XPFO	Pion Flat	23.73	321	P	P	01 26 14.3	-1.9
PFO	Pinyon Flats O	23.73	321	P	P	01 26 18.8	+2.6
	comp=Z,3.0nm,0.9s,baz=119,slow=14,SNR=6.3						
PFO				LR	LR	01 35 40.5	
	comp=Z,256nm,20.4s,baz=118,slow=37						
PFO	Pinyon Flats O	23.73	321	P	P	01 26 14.8	-1.5
PFO	Pinyon Flats O	23.73	321	P	P	01 26 23.1	+6.9
	baz=132,SNR=8.1						
NHSC	New Hope	23.74	41	P	P	01 26 19.7	+3.6
	baz=229						
USIN	University of	23.81	22	P	P	01 26 15.8	-0.9
T49A	Edmonton	23.90	26	P	P	01 26 16.9	-0.7
T49A	Edmonton	23.90	26	P	P	01 26 18.6	+0.9
	baz=212,SNR=7.4						
W54A	Cherokee Point	23.94	35	P	P	01 26 18.3	+0.3
	baz=222						
GMRC	Granite Mounta	24.08	324	P	P	01 26 21.3	+1.8
	baz=135,SNR=14						
SMCO	Snowmass	24.12	344	P	P	01 26 19.7	-0.6
SMCO				IAmb	IAmb	01 26 31.3	
	comp=Z,29nm,0.9s						
T50A	Nancy	24.14	28	P	P	01 26 19.9	0.0
	baz=214,SNR=9.8						
KNB	Kanab	24.34	332	P	P	01 26 21.5	-0.5
OLIL	Olney	24.35	20	P	P	01 26 21.2	-0.6
OLIL				IAmb	IAmb	01 26 33.8	
	comp=Z,46nm,1.1s						
TZTN	Tazewell	24.35	30	P	P	01 26 20.9	-1.0
TZTN				IAmb	IAmb	01 26 32.4	
	comp=Z,35nm,1.1s						
TZTN	Tazewell	24.35	30	P	P	01 26 23.0	+1.1
	baz=217						
ISCO	Idaho Springs	24.38	347	P	P	01 26 20.9	-1.6
ISCO				IAmb	IAmb	01 26 39.0	
	comp=Z,20nm,1.1s						
ISCO	Idaho Springs	24.38	347	P	P	01 26 23.9	+1.3
	baz=163,SNR=25						
KMSC	Kings Mountain	24.45	36	P	P	01 26 21.1	-1.7
KMSC				IAmb	IAmb	01 26 31.8	
	comp=Z,22nm,1.1s						
T51A	Gray	24.50	29	P	P	01 26 24.0	+0.8
	baz=216,SNR=6.2						
WCI	Wyandotte Cave	24.55	24	P	P	01 26 22.1	-1.6
WCI				IAmb	IAmb	01 26 26.0	
	comp=Z,40nm,1.0s						
WCI	Wyandotte Cave	24.55	24	P	P	01 26 24.0	+0.3
	baz=210						
S49A	Springfield	24.58	26	P	P	01 26 23.8	-0.1
	baz=212						
V54A	Nebo	24.58	34	P	P	01 26 24.7	+0.7
	baz=222						
BIRD	Birdtown, Kers	24.61	38	P	P	01 26 23.4	-0.8
TUQ	Turquoise Moun	24.70	324	P	P	01 26 27.7	+2.5
	baz=136,SNR=6.0						
P43A	Skaggs, Pawnee	24.75	17	P	P	01 26 24.9	-0.5
P43A				IAmb	IAmb	01 26 34.8	
	comp=Z,52nm,1.1s						
S50A	Richmond	24.88	28	P	P	01 26 28.0	+1.4
	baz=214,SNR=18						
MTPU	Mount Pierson	24.91	334	P	P	01 26 25.6	-1.7
OGNE	Ogallala	24.93	354	P	P	01 26 26.6	-0.5
OGNE	Ogallala	24.93	354	P	P	01 26 29.5	+2.4
	baz=172,SNR=9.4						
CCUT	Cedar City	25.03	331	P	P	01 26 26.5	-1.8
V55A	Taylorsville	25.04	35	P	P	01 26 26.9	-1.2
V55A				IAmb	IAmb	01 26 38.2	
	comp=Z,28nm,1.1s						
V55A	Taylorsville	25.04	35	P	P	01 26 28.6	+0.6
	baz=223						
R49A	Shelbyville	25.06	26	P	P	01 26 27.2	-1.1
R49A	Shelbyville	25.06	26	P	P	01 26 29.3	+1.1
	baz=212						
T52A	Hallie	25.07	31	P	P	01 26 27.3	-1.1
T52A				IAmb	IAmb	01 26 34.9	
	comp=Z,41nm,1.1s						
T52A	Hallie	25.07	31	P	P	01 26 30.1	+1.6
	baz=218						
SHPR	Sheep Range	25.09	327	P	P	01 26 27.1	-1.6
GSC	Goldstone, Bar	25.11	323	P	P	01 26 27.2	-1.6
GSC				IAmb	IAmb	01 26 37.2	
	comp=Z,20nm,1.1s						
GSC	Goldstone, Bar	25.11	323	P	P	01 26 32.7	+3.8
	baz=134,SNR=9.7						
SRU	San Rafael Swe	25.18	338	P	P	01 26 28.3	-1.3
S51A	Beattyville	25.21	29	P	P	01 26 28.5	-1.1
S51A	Beattyville	25.21	29	P	P	01 26 30.0	+0.4
	baz=216,SNR=11						
U54A	Nelsons Funny	25.21	33	P	P	01 26 29.0	-0.7
U54A				IAmb	IAmb	01 26 37.4	
	comp=Z,34nm,1.0s						
U54A	Nelsons Funny	25.21	33	P	P	01 26 30.1	+0.4
	baz=221						
BGNE	Belgrade	25.21	1	P	P	01 26 29.8	+0.1
SHOC	Shoshone, Teco	25.23	325	P	P	01 26 31.7	+1.8
	baz=136,SNR=5.5						
W57A	Gilead	25.23	38	P	P	01 26 29.1	-0.7
W57A				IAmb	IAmb	01 26 41.2	
	comp=Z,44nm,1.1s						
W57A	Gilead	25.23	38	P	P	01 26 29.7	-0.1
	baz=226						
Q16A	Castle Valley	25.26	337	P	P	01 26 29.8	-0.5
BLO	Bloomington	25.29	22	P	P	01 26 29.9	-0.4
MSU	Marysvale	25.31	334	P	P	01 26 30.0	-0.7
O20A	White River Ci	25.37	343	P	P	01 26 31.0	-0.2
O20A	White River Ci	25.37	343	P	P	01 26 33.2	+2.0
	baz=157,SNR=20						
Q48A	North Vernon	25.38	24	P	P	01 26 32.4	+1.3
	baz=210,SNR=10						
R50A	Paris	25.41	27	P	P	01 26 30.9	-0.5
R50A				IAmb	IAmb	01 26 37.5	
	comp=Z,29nm,1.1s						
R50A	Paris	25.41	27	P	P	01 26 31.4	0.0
	baz=214						
N41A	Harden Midland	25.41	14	P	P	01 26 31.4	-0.1
P46A	Rosedale	25.45	21	P	P	01 26 30.7	-1.0
P46A				IAmb	IAmb	01 26 39.1	
	comp=Z,34nm,1.1s						
N23A	Red Feather La	25.50	347	P	P	01 26 34.8	+2.2
	baz=163,SNR=20						
EDW2	Edwards Air Fo	25.52	321	P	P	01 26 35.7	+3.1
	baz=131,SNR=7.6						
P17A	Butcher Ranch,	25.58	338	P	P	01 26 31.9	-1.3
HDIL	Hopedale	25.66	17	P	P	01 26 33.3	-0.4
HDIL	Hopedale	25.66	17	P	P	01 26 34.2	+0.5
	baz=201,SNR=5.6						
LRMC	Laurel Mtn Rad	25.75	322	P	P	01 26 36.9	+2.2
	baz=133,SNR=7.7						
R51A	Hillsboro	25.75	28	P	P	01 26 36.1	+1.5
	baz=215,SNR=19						
Q49A	Aurora	25.78	25	P	P	01 26 34.8	0.0
	baz=212						
V57A	Coltrane Farms	25.87	37	P	P	01 26 37.1	+1.4
	baz=226						
P48A	Milroy	25.96	24	P	P	01 26 36.9	+0.5
	baz=210						
TPNV	Topopah Spring	25.99	326	P	P	01 26 36.2	-0.8
TPNV	Topopah Spring	25.99	326	P	P	01 26 38.5	+1.6
	baz=137,SNR=6.0						
Q50A	Georgetown	26.03	27	P	P	01 26 36.8	-0.2
	baz=214,SNR=9.1						
MPMC	Manual Prospec	26.04	323	P	P	01 26 39.5	+2.1
	baz=134						
SCIA	State Center	26.12	9	P	P	01 26 37.3	-0.5
SCIA	State Center	26.12	9	P	P	01 26 39.0	+1.1
	baz=192,SNR=13						
SFIN	Lafayette	26.17	20	P	P	01 26 37.3	-1.0
SFIN				IAmb	IAmb	01 26 46.6	
	comp=Z,35nm,0.9s						
SFIN	Lafayette	26.17	20	P	P	01 26 38.9	+0.6
	baz=206						
RDMU	Red Mountain	26.17	341	P	P	01 26 37.5	-1.1
V58A	Windy Hill, Pi	26.20	38	P	P	01 26 38.5	-0.1
V58A				IAmb	IAmb	01 26 46.9	
	comp=Z,37nm,1.1s						
V58A	Windy Hill, Pi	26.20	38	P	P	01 26 40.0	+1.4
	baz=227						
R52A	Catlettsburg	26.21	29	P	P	01 26 41.2	+2.5
	baz=217						
P49A	Miami Univ. Ec	26.30	25	P	P	01 26 39.6	+0.1
	baz=211,SNR=10						
ROSC	El Rosal	26.33	113	P	P	01 26 44.6	+4.2
	comp=Z,2.6nm,0.3s,baz=252,slow=20,SNR=1.7						
ROSC	El Rosal	26.33	113	P	P	01 26 36.7	-3.8
ISA	Isabella, Lake	26.34	321	P	P	01 26 38.0	-2.0
ISA	Isabella, Lake	26.34	321	P	P	01 26 44.5	+4.5
	baz=132						
MPU	Maple Canyon	26.39	337	P	P	01 26 39.2	-1.3
Q51A	Peebles	26.45	27	P	P	01 26 39.5	-1.4
Q51A	Peebles	26.45	27	P	P	01 26 43.1	+2.2
	baz=215,SNR=5.8						
BLA	Blacksburg	26.47	34	P	P	01 26 40.2	-0.9
BLA				IAmb	IAmb	01 26 50.4	
	comp=Z,31nm,1.1s						
BLA	Blacksburg	26.47	34	P	P	01 26 41.0	-0.1
	baz=222						
NLU	North Lily Min	26.50	336	P	P	01 26 40.4	-1.2
U57A	Blanch	26.51	37	P	P	01 26 39.0	-2.4
	baz=226						
R53A	Hurricane	26.54	30	P	P	01 26 40.8	-0.9
R53A				IAmb	IAmb	01 26 48.7	
	comp=Z,31nm,0.9s						
R53A	Hurricane	26.54	30	P	P	01 26 42.9	+1.2
	baz=218						
RWWY	Rawlins	26.55	345	P	P	01 26 40.7	-1.4
L40A	Anamosa	26.63	12	P	P	01 26 41.7	-0.7
CWC	Cottonwood Cre	26.64	323	P	P	01 26 44.6	+1.8
	baz=134						
V59A	Middlesex	26.70	39	P	P	01 26 44.5	+1.4
	baz=228,SNR=5.8						
R11A	Troy Canyon, C	26.72	329	P	P	01 26 42.6	-1.0
R11A	Troy Canyon, C	26.72	329	P	P	01 26 45.5	+1.9
	baz=141,SNR=6.3						
P50A	Jamestown	26.74	26	P	P	01 26 45.5	+2.0
	baz=213						
O48A	Farmland	26.75	23	P	P	01 26 45.2	+1.6
	baz=210,SNR=22						
M44A	Midewin, Midew	26.79	18	P	P	01 26 43.0	-0.9
JLU	Jordanelle	26.83	338	P	P	01 26 43.8	-0.8
Q52A	Bidwell	26.89	29	P	P	01 26 44.9	+0.1
	baz=217						
L42A	Oliver, Polo	26.92	15	P	P	01 26 43.8	-1.3
P51A	Williamsport	26.95	27	P	P	01 26 44.6	-0.8
P51A				IAmb	IAmb	01 27 02.0	
	comp=Z,43nm,1.1s						
P51A	Williamsport	26.95	27	P	P	01 26 45.7	+0.3
	baz=215						
DUG	Dugway, Tooele	27.00	336	P	P	01 26 44.8	-1.2
DUG	Dugway, Tooele	27.00	336	P	P	01 26 48.6	+2.6
	baz=148,SNR=16						
O49A	Covington	27.01	25	P	P	01 26 44.9	-1.0
O49A				IAmb	IAmb	01 26 59.6	
	comp=Z,18nm,0.8s						
O49A	Covington	27.01	25	P	P	01 26 47.7	+1.8
	baz=212						
CTU	Camp Tracy	27.02	338	P	P	01 26 45.0	-1.2
N47A	Urbana	27.10	22	P	P	01 26 45.6	-1.0
N47A	Urbana	27.10	22	P	P	01 26 47.1	+0.5
	baz=208						
Q53A	Leroy	27.16	30	P	P	01 26 47.4	+0.1
	baz=218						
O50A	Cable	27.27	26	P	P	01 26 50.2	+2.0
	baz=213						
TCUT	Toone Canyon	27.27	339	P	P	01 26 47.7	-0.9
K22A	Casper	27.31	347	P	P	01 26 46.9	-1.9
K22A				IAmb	IAmb	01 27 01.0	
	comp=Z,28nm,1.1s						
K22A	Casper	27.31	347	P	P	01 26 51.2	+2.5
	baz=163,SNR=7.2						
N48A	Decatur	27.32	23	P	P	01 26 49.6	+0.9
	baz=209						
ECSD	EROS Data Cent	27.59	3	P	P	01 26 49.3	-1.8
ECSD				IAmb	IAmb	01 27 02.5	
	comp=Z,45nm,1.1s						
ECSD	EROS Data Cent	27.59	3	P	P	01 26 51.7	+0.7
	baz=184,SNR=16						
JFWS	Jewell Farm	27.65	13	P	P	01 26 50.6	-1.0
JFWS				IAmb	IAmb	01 26 59.1	
	comp=Z,32nm,0.9s						
JFWS	Jewell Farm	27.65	13	P	P	01 26 52.7	+1.0
	baz=197						
BGU	Big Grassy Mou	27.71	336	P	P	01 26 51.5	-0.8
HWUT	Hardware Ranch	27.76	339	P	P	01 26 51.6	-1.3
SPUT	South Promonto	27.82	337	P	P	01 26 52.3	-1.0
OMMB	Old Mammoth Mi	27.99	324	P	P	01 26 53.8	-1.3
MDPB	Devils Postpil	28.05	324	P	P	01 26 53.8	-1.8
MDPB				IAmb	IAmb	01 27 04.1	
	comp=Z,16nm,1.0s						
NV11	Mina Array Sit	28.11	326	P	P	01 26 53.9	-2.0
NV11				IAmb	IAmb	01 27 04.8	
	comp=Z,21nm,1.1s						
BW06	Boulder Array	28.18	343	P	P	01 26 54.8	-1.8
BW06				IAmb	IAmb	01 27 04.3	
	comp=Z,26nm,1.1s						
BW06	Boulder Array	28.18	343	P	P	01 26 58.8	+2.2
	baz=157,SNR=18						
PD31	Pinedale Array	28.18	343	P	P	01 26 54.8	-1.8
PD31				IAmb	IAmb	01 27 04.3	
	comp=Z,24nm,1.1s						
PDAR	Pinedale Array	28.18	343	P	P	01 26 58.1	+1.5
	comp=Z,9.3nm,1.1s,baz=139,slow=12,SNR=27						
PDAR				PcP	PcP	01 30 13.6	+3.1
	comp=Z,1.1nm,1.0s,baz=188,slow=5.5,SNR=3.5						
PDAR				LR	LR	01 37 36.3	
	comp=Z,302nm,19.3s,baz=166,slow=36						
PDAR	Pinedale Array	28.18	343	P	P	01 26 55.5	-1.1
NVAR	Mina Array Bea	28.18	326	P	P	01 26 58.8	+2.0
	comp=Z,4.7nm,0.9s,baz=158,slow=9.9,SNR=16						
NVAR				PcP	PcP	01 30 13.6	+3.0

	comp=Z,1.6nm,0.8s,baz=163,slow=4.5,SNR=4.5						
NVAR				LR	LR	01 39 36.5	
	comp=Z,299nm,19.5s,baz=174,slow=40						
NVAR	Mina Array Bea	28.18	326	P	P	01 26 55.3	-1.4
SDV	Santo Domingo	28.20	101	P	P	01 26 58.0	+0.9
	comp=Z,1.1nm,0.3s,baz=339,slow=6.5,SNR=3.8						
SDV				LR	LR	01 38 42.1	
	comp=Z,149nm,19.7s,baz=22,slow=38						
SDV	Santo Domingo	28.20	101	P	P	01 26 54.2	-2.9
L47A	Sherwood	28.24	21	P	P	01 26 57.4	+0.5
	baz=208						
P54A	Burton	28.25	31	P	P	01 26 58.0	+1.0
	baz=219						
RSSD	Black Hills	28.30	352	P	P	01 26 56.9	-0.8
RSSD				IAmb	IAmb	01 27 09.9	
	comp=Z,22nm,1.1s						
RSSD	Black Hills	28.30	352	P	P	01 27 00.2	+2.5
	baz=168						
HVU	Hansel Valley	28.35	337	P	P	01 26 56.4	-1.7
RYN	Ryan	28.45	326	P	P	01 26 57.4	-1.6
RYN				IAmb	IAmb	01 27 08.3	
	comp=Z,19nm,1.2s						
ELK	Elko	28.47	333	P	P	01 26 59.4	+0.1
	comp=Z,0.6nm,0.3s,baz=154,slow=7.2,SNR=5.2						
ELK				LR	LR	01 40 30.0	
	comp=Z,487nm,18.3s,baz=154,slow=41						
ELK	Elko	28.47	333	P	P	01 26 57.5	-1.8
L48A	N Adams	28.48	23	P	P	01 26 58.9	-0.1
	baz=210						
KVN	Kaiserville	28.53	327	P	P	01 26 57.7	-2.0
KVN				IAmb	IAmb	01 27 08.3	
	comp=Z,16nm,1.1s						
I42A	Draeger Farm,	28.89	15	P	P	01 27 02.0	-0.7
I42A				IAmb	IAmb	01 27 10.7	
	comp=Z,32nm,1.1s						
CMB	Columbia Colle	29.07	323	P	P	01 27 02.6	-1.8
REDW	Red Top Meadow	29.10	341	P	P	01 27 03.8	-1.0
REDW				IAmb	IAmb	01 27 16.5	
	comp=Z,24nm,1.1s						
SNOW	Snow King Moun	29.16	342	P	P	01 27 04.2	-1.2
SNOW				IAmb	IAmb	01 27 14.8	
	comp=Z,25nm,0.9s						
K48A	Perry	29.35	22	P	P	01 27 07.5	+0.8
	baz=209						
PNTR	Pine Nut	29.36	325	P	P	01 27 05.8	-1.4
PNTR				IAmb	IAmb	01 27 16.7	
	comp=Z,39nm,1.2s						
FXWY	Fox Creek	29.41	341	P	P	01 27 06.1	-1.4
FXWY				IAmb	IAmb	01 27 17.5	
	comp=Z,17nm,1.1s						
SPMN	Marine on St.	29.43	8	P	P	01 27 06.4	-1.0
SPMN				IAmb	IAmb	01 27 16.8	
	comp=Z,13nm,0.8s						
SPMN	Marine on St.	29.43	8	P	P	01 27 08.7	+1.2
	baz=191						
J47A	Sunmer	29.48	21	P	P	01 27 06.8	-1.1
J47A				IAmb	IAmb	01 27 12.5	
	comp=Z,21nm,1.1s						
PAHR	Pah Rah Range	29.69	326	P	P	01 27 08.0	-2.0
FLWY	Flagg Ranch	29.71	342	P	P	01 27 08.2	-2.0
G40A	Rib Lake	29.91	12	P	P	01 27 10.7	-1.0
G40A				IAmb	IAmb	01 27 18.0	
	comp=Z,13nm,1.1s						
L53A	Girard	30.20	28	P	P	01 27 15.3	+1.0
	baz=217						
I47A	Gladwin	30.28	20	P	P	01 27 14.1	-0.9
I47A				IAmb	IAmb	01 27 22.6	
	comp=Z,26nm,1.1s						
I47A	Gladwin	30.28	20	P	P	01 27 16.3	+1.4
	baz=208						
RLMT	Red Lodge	30.29	345	P	P	01 27 14.6	-0.7
RLMT				IAmb	IAmb	01 27 26.4	
	comp=Z,24nm,1.1s						
RLMT	Red Lodge	30.29	345	P	P	01 27 17.2	+1.9
	baz=159,SNR=13						
YMR	Madison River	30.33	342	P	P	01 27 14.1	-1.6
BEKR	Beckworth	30.33	326	P	P	01 27 13.8	-1.9
BEKR				IAmb	IAmb	01 27 24.3	
	comp=Z,16nm,1.0s						
YNE	Yellowstone No	30.37	344	P	P	01 27 15.3	-0.8
YHH	Holmes Hill	30.40	343	P	P	01 27 14.8	-1.6
ATAH	Atahualpa	30.55	138	P	P	01 27 21.6	+3.5
	comp=Z,6.8nm,0.8s,baz=302,slow=7.6,SNR=4.2						
ATAH				LR	LR	01 37 05.4	
	comp=Z,177nm,19.2s,baz=325,slow=31						
YHL	Hebgen Lake	30.56	342	P	P	01 27 15.8	-2.0
ORV	Oroville	30.74	324	P	P	01 27 17.5	-1.6
G45A	Suttons Bay	30.83	18	P	P	01 27 19.0	-0.9
G45A				IAmb	IAmb	01 27 31.3	
	comp=Z,28nm,0.9s						
G45A	Suttons Bay	30.83	18	P	P	01 27 21.0	+1.1
	baz=205						
MFID	Camas Ranch	30.92	335	P	P	01 27 19.9	-0.9
COWI	Conover	30.93	13	P	P	01 27 19.9	-0.8
E38A	The Farm, Brul	30.97	9	P	P	01 27 19.3	-1.7
E38A				IAmb	IAmb	01 27 29.6	
	comp=Z,15nm,1.1s						
MCMT	McKenzie Canyo	31.05	340	P	P	01 27 20.8	-1.3
LAO	LASA Array	31.14	350	P	P	01 27 29.5	+6.9
	baz=165						
WVOR	Wild Horse Val	31.36	331	P	P	01 27 23.3	-1.4
F45A	CMU Biological	31.46	18	P	P	01 27 30.3	+4.9
	baz=205						
MDND	Maddock	31.66	359	P	P	01 27 25.7	-1.4
MDND	Maddock	31.66	359	P	P	01 27 28.3	+1.2
	baz=178,SNR=17						
E43A	Lone Tree Farm	31.69	15	P	P	01 27 26.6	-0.7
E43A				IAmb	IAmb	01 27 34.0	
	comp=Z,22nm,1.0s						
MOD	Modoc Plateau	31.77	328	P	P	01 27 26.5	-1.8
LRM	Limekiln Ridge	31.82	341	P	P	01 27 27.7	-1.1
D41A	Chassel	31.96	13	P	P	01 27 28.6	-1.1
J08A	Circle Bar Ran	32.01	332	P	P	01 27 28.7	-1.7
AGMN	Agassiz Nation	32.18	3	P	P	01 27 31.0	-0.7
AGMN	Agassiz Nation	32.18	3	P	P	01 27 32.0	+0.3
	baz=185,SNR=11						
E44A	Grand Marais A	32.20	16	P	P	01 27 31.5	-0.3
EYMN	Ely	32.28	9	P	P	01 27 31.8	-0.8
EYMN	Ely	32.28	9	P	P	01 27 32.7	+0.1
	baz=193						
M04C	Macdoel	32.48	327	P	P	01 27 36.5	+1.9
	baz=134,SNR=5.3						
DGMT	Dagmar	32.60	353	P	P	01 27 33.6	-1.8
F49A	Sandfield	32.66	22	P	P	01 27 36.8	+0.9
	baz=210						
BMO	Blue Mountains	32.71	335	P	P	01 27 35.0	-1.5
BMO				IAmb	IAmb	01 27 43.7	
	comp=Z,12nm,1.1s						
D46A	Sault St. Mari	32.99	18	P	P	01 27 38.8	0.0
	baz=206						
L04D	Klamath Falls	33.03	327	P	P	01 27 39.8	+0.4
	baz=134						
EGMT	Eagleton	33.13	346	P	P	01 27 38.7	-1.4
EGMT	Eagleton	33.13	346	P	P	01 27 41.3	+1.2
	baz=160,SNR=6.0						
MSO	Missoula	33.18	341	P	P	01 27 39.0	-1.6
MSO				IAmb	IAmb	01 27 48.2	
	comp=Z,12nm,1.1s						
MSO	Missoula	33.18	341	P	P	01 27 41.6	+1.0
	baz=152,SNR=6.0						
J05D	Fort Rock, OR	33.25	329	P	P	01 27 42.9	+1.6
	baz=137,SNR=5.3						
F10A	Beach Ranch, E	33.60	336	P	P	01 27 43.6	-0.7
J04D	Umpqua Nationa	33.66	328	P	P	01 27 46.3	+1.4
	baz=136						
G08A	Pilot Rock	33.75	334	P	P	01 27 44.8	-0.8
D48A	Paudash Townsh	33.96	21	P	P	01 27 51.7	+4.4
	baz=210						
JTMT	Jette	34.10	341	P	P	01 27 47.6	-1.1
JTMT				IAmb	IAmb	01 27 58.4	
	comp=Z,9.9nm,0.9s						
ULM	Lac du Bonnet	34.12	3	P	P	01 27 47.7	-0.9
	comp=Z,13nm,1.2s,baz=193,slow=11,SNR=7.9						
ULM				LR	LR	01 41 33.0	
	comp=Z,102nm,20.9s,baz=150,slow=36						
ULM	Lac du Bonnet	34.12	3	P	P	01 27 47.7	-0.9
ULM				IAmb	IAmb	01 27 57.6	
	comp=Z,23nm,1.1s						
E51A	G1948 Merrick	34.25	24	P	P	01 27 51.7	+1.9
	baz=214						
J01E	Myrtle Point	34.55	326	P	P	01 27 54.7	+2.3
	baz=133						
D50A	G1974 Best Tow	34.65	23	P	P	01 27 54.4	+1.2
	baz=213						
H04A	Detroit Lake	34.75	330	P	P	01 27 53.3	-0.9
H04A				IAmb	IAmb	01 28 01.6	
	comp=Z,17nm,0.9s						
D51A	Lot 18 Range I	34.76	23	P	P	01 27 55.0	+0.9
	baz=214						
NEW	Newport	35.49	339	P	P	01 28 01.2	+0.7
	comp=Z,1.6nm,0.8s,baz=288,slow=3.2,SNR=2.2						
NEW	Newport	35.49	339	P	P	01 28 00.1	-0.5
NEW				IAmb	IAmb	01 28 08.3	
	comp=Z,13nm,1.1s						
NEW	Newport	35.49	339	P	P	01 28 04.0	+3.4
	baz=148,SNR=5.3						
C09A	Chrisman Ranch	35.52	337	P	P	01 27 59.5	-1.3
LTY	Liberty	36.03	334	P	P	01 28 03.8	-1.5
LTY				IAmb	IAmb	01 28 13.2	
	comp=Z,23nm,1.1s						
LON	Longmire	36.13	333	P	P	01 28 05.1	-0.9
D55A	Sainte-Anne-du	36.30	27	P	P	01 28 07.8	+0.4
	baz=220						
B08A	Colville Reser	36.38	337	P	P	01 28 06.9	-1.3
B08A				IAmb	IAmb	01 28 15.7	
	comp=Z,12nm,1.0s						
F59A	Saint Guilaume	36.68	31	P	P	01 28 12.9	+2.3
	baz=225						
D57A	Chemin Vers le	37.00	28	P	P	01 28 19.1	+5.6
	baz=222						
D03D	Eldon	37.29	332	P	P	01 28 19.2	+3.3
	baz=138						
LSQQ	Lebel-sur-Quev	37.29	24	P	P	01 28 15.5	-0.3
	baz=216						
B05A	Bryant	37.42	334	P	P	01 28 21.3	+4.4
	baz=140						
D58A	Chemin du LacG	37.53	29	P	P	01 28 18.2	+0.3
	baz=223						
MATQ	Matagami	37.62	22	P	P	01 28 18.9	+0.3
	baz=214						
A04D	Lummi Island	38.03	334	P	P	01 28 28.5	+6.5
	baz=140,SNR=5.9						
FFC	Flin Flon	38.62	357	P	P	01 28 26.1	-0.9
FFC				IAmb	IAmb	01 28 36.4	
	comp=Z,28nm,1.1s						
LLLB	Lillooet	39.18	337	P	P	01 28 29.0	-2.9
PTGA	Pitinga	41.64	110	P	P	01 28 55.5	+2.9
	comp=Z,1.4nm,0.4s,baz=287,slow=5.9,SNR=5.6						
PTGA	Pitinga	41.64	110	P	P	01 28 49.4	-3.2
FCC	Fort Churchill	42.71	3	P	P	01 28 59.6	-1.1
LPAZ	La Paz	44.04	136	P	P	01 29 17.3	+4.6
	comp=Z,1.8nm,0.8s,baz=346,slow=8.2,SNR=5.2						
LPAZ	La Paz	44.04	136	P	P	01 29 07.7	-5.0
RPN	Rapa Nui	44.23	194	LR	LR	01 42 53.1	
	comp=Z,256nm,20.3s,baz=300,slow=29						
SCHQ	Schefferville	45.75	25	P	P	01 29 24.3	-0.9
	comp=Z,6.8nm,0.8s,baz=225,slow=5.9,SNR=12						
SCHQ				LR	LR	01 51 34.9	
	comp=Z,230nm,18.6s,baz=300,slow=40						
SCHQ	Schefferville	45.75	25	P	P	01 29 23.2	-2.0
YKA	Yellowknife Ar	47.68	350	P	P	01 29 40.0	-0.2
	comp=Z,3.0nm,1.0s,baz=158,slow=8.1,SNR=22						
YKA				PcP	PcP	01 31 13.2	+3.7
	comp=Z,1.0nm,0.9s,baz=152,slow=3.8,SNR=4.8						
YKA				LR	LR	01 49 15.2	
	comp=Z,154nm,21.7s,baz=0.0,slow=36						
DLBC	Dease Lake	48.24	338	P	P	01 29 42.5	-2.2
SIV	San Ignacio	48.88	129	P	P	01 29 53.2	+3.2
	comp=Z,3.8nm,1.2s,baz=296,slow=6.5,SNR=10.0						
WHY	Whitehorse	51.56	338	P	P	01 30 07.8	-2.1
HYT	Haines Junctio	52.63	337	P	P	01 30 16.0	-1.9
HYT				IAmb	IAmb	01 30 34.6	
	comp=Z,11nm,1.2s						
DAWY	Dawson	55.41	340	P	P	01 30 36.9	-1.2
DAWY				IAmb	IAmb	01 30 45.4	
	comp=Z,8.8nm,1.1s						
BCAR	Beaver Creek A	55.62	338	P	P	01 30 37.4	-2.2
EGAK	Eagle	56.46	340	P	P	01 30 45.1	-0.3
EGAK				IAmb	IAmb	01 30 53.2	
	comp=Z,17nm,1.0s						
INK	Inuvik	56.70	345	P	P	01 30 47.0	-0.1
	comp=Z,4.7nm,1.0s,baz=120,slow=8.5,SNR=13						
INK	Inuvik	56.70	345	P	P	01 30 46.4	-0.7
INK				IAmb	IAmb	01 30 57.3	
	comp=Z,20nm,1.1s						
GHO	Glory Hole Cre	57.70	334	P	P	01 30 53.6	-0.8
HDA	Harding Lake	58.27	338	P	P	01 31 04.7	+6.3
	baz=122,SNR=6.5						
PRP	Porcupine Dome	58.38	339	P	P	01 30 57.8	-1.4
IL31		58.45	338	P	P	01 30 58.7	-0.7
IL31				IAmb	IAmb	01 31 06.9	
	comp=Z,14nm,1.0s						
ILAR	Eielson Array	58.45	338	P	P	01 31 00.1	+0.6
	comp=Z,4.4nm,1.0s,baz=147,slow=5.0,SNR=23						
ILAR	Eielson Array	58.45	338	P	P	01 30 58.8	-0.7
RND	Reindeer	58.48	336	P	P	01 30 57.4	-2.4
MCK	McKinley	58.67	336	P	P	01 30 59.7	-1.5
POKR	Poker Plat Res	58.83	338	P	P	01 31 02.8	+0.6
	baz=122						
TRF	Thorofare Moun	59.06	336	P	P	01 31 01.3	-2.7
NEA	Nenana	59.15	337	P	P	01 31 03.3	-1.1
SFJD	Kangerlussuaq	59.57	20	*i* P	P	01 31 11.9	+4.7
BPAW	Bear Paw Mtn.	59.64	336	P	P	01 31 06.4	-1.5
BPAW				IAmb	IAmb	01 31 14.6	
	comp=Z,8.3nm,1.0s						
MLY	Manley	59.99	337	P	P	01 31 07.6	-2.7
MLY				IAmb	IAmb	01 31 17.7	
	comp=Z,12nm,1.0s						
PPT	Papeete	60.36	239	LR	LR	01 49 31.9	
	comp=Z,98nm,18.3s,baz=205,slow=28						
COLD	Coldfoot	60.89	340	P	P	01 31 15.1	-1.3
COLD				IAmb	IAmb	01 31 24.2	
	comp=Z,7.4nm,1.1s						
TOLK	Toolik Lake Re	61.42	341	P	P	01 31 26.9	+6.9
	baz=121						
PLCA	Paso Flores	62.26	156	P	P	01 31 30.5	+4.5
	comp=Z,3.7nm,1.0s,baz=21,slow=7.6,SNR=4.0						
ANM	Nome	65.64	334	P	P	01 31 47.1	-0.8
SUMG	Summit	65.97	17	*i* P	P	01 31 56.1	+5.7
	comp=Z,61nm,1.1s						
SUMG	Summit	65.97	17	P	P	01 31 49.9	-0.5
SUMG				IAmb	IAmb	01 32 00.1	
	comp=Z,15nm,1.1s						
DAG	Danmarks Havn	72.12	14	*i* P	P	01 32 32.0	+4.0
	comp=Z,24nm,1.4s						
BILL	Bilibino	77.10	337	P	P	01 32 55.2	-1.8
BILL				IAmb	IAmb	01 33 05.2	
	comp=Z,9.9nm,1.1s						
SEY	Seymchan	84.15	334	P	P	01 33 38.1	+3.2
	comp=Z,3.2nm,0.9s,baz=98,slow=6.4,SNR=6.3						
NOA	NORSAR Array B	85.28	27	LR	LR	02 13 15.8	
	comp=Z,50nm,18.2s,baz=280,slow=37						
BMRD	Maredsous	86.04	39	P	P	01 33 45.2	+0.6
BMRD				PcP	sP	01 33 49.3	+2.6
BMRD				x	x	01 33 54.8	
DAVOX	Davos/Dischmat	90.52	41	LR	LR	02 13 13.7	
	comp=Z,32nm,21.8s,baz=306,slow=35						
NRIK	Noril'sk	94.67	358	LR	LR	02 19 54.5	
	comp=Z,55nm,19.7s,baz=34,slow=37						
HHC	Hu-ho-hao-te	116.79	335	*e*PKP	PKiKP	01 39 52.5	+3.5
WMQ	Urumqi	120.08	355	*e*PKP	PKiKP	01 39 59.3	+4.0
WMQ				AMB	AMB		
	comp=Z,76nm,4.5s						
LZH	Lanzhou	123.91	338	*e*PKP	PKiKP	01 40 08.0	+4.8
LZH				LR	LR		
	comp=Z,190nm,18.0s						
LZH				LR	LR		
	comp=Z,200nm,18.1s						
LZH				LR	LR		
	comp=Z,270nm,20.3s						
KSH	Kashi	124.43	5	PKP	PKiKP	01 40 08.3	+4.2
KSH				PP	PP	01 41 57.3	+9.2
KSH				SKS	SKSdf	01 47 15.1	-1.6
KSH				SS	SS	01 58 40.9	+0.6
KSH				AMB	AMB		
	comp=Z,230nm,8.2s						
KSH				LR	LR		
	comp=Z,190nm,8.9s						
KSH				LR	LR		
	comp=Z,150nm,10.0s						
KSH				LR	LR		
	comp=Z,150nm,10.4s						
MAW	Mawson	127.16	171		PKPdf	01 40 04.9	-2.9
CD2	Chengdu	128.54	335	PKP	PKiKP	01 40 14.7	+2.3
WRA	Warramunga Arr	129.68	257	PKP	PKiKP	01 40 17.1	+2.2
	comp=Z,2.2nm,1.0s,baz=85,slow=1.3,SNR=5.8						
ASAR	Alice Springs	130.28	252	PKhKP	PKPdf	01 40 13.6	-1.6
	comp=Z,0.3nm,0.7s,baz=80,slow=2.1,SNR=3.2						
ASAR				PKP	PKiKP	01 40 19.0	+3.0
	comp=Z,1.3nm,0.9s,baz=61,slow=2.4,SNR=8.2						
ASAR	Alice Springs	130.28	252	PKPdf	PKPdf	01 40 12.0	-3.1
CMAR	Chiang Mai Arr	141.55	333	PKP	PKPdf	01 40 36.6	+0.4
	comp=Z,0.9nm,0.3s,baz=348,slow=4.9,SNR=4.4						
CMAR	Chiang Mai Arr	141.55	333		PKPdf	01 40 31.0	-5.3
HYB	Hyderabad	146.57	5	*i* PKP	PKiKP	01 40 51.0	+1.6

INET ***13*** *01:36:09.3, 13°.17N×87°.98W, h221^{km}, ML3.4*
UCR ***13*** *01:36:11.2±1.3, 12°.60N×88°.09W, h175^{km}±41^{km}, ML3.4*
SNET ***13*** *01:36:11.4±1.0, 12°.78N×88°.03W, h181^{km}±23^{km}, ML3.5*
GCG ***13*** *01:36:17.8±2.8, 13°.70N×87°.78W, h126^{km}, MD4.0*
ISC 13 01:36:14.4±3.8**, 12°.8N**±0°.6×**88°.0W**±0°.2**, h164**^{km}±22^{km}**, n32,**
σ**0^s.87**/39**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.46	17	*e*P	Pn	01 36 37.1	-0.2
CNCH	Conchagua	0.46	17	*e*P	Pn	01 36 37.1	-0.2
LCND	La Caada	0.48	10	*e*P	Pn	01 36 36.9	-0.3
LCND				IAML		01 36 37.8	
	comp=Z,409nm,0.3s						
LCND	La Caada	0.48	10	*e*P	Pn	01 36 36.9	-0.3
LCND				IAML		01 36 37.8	
	comp=Z,409nm,0.3s						
JUCU	Jucuar¡n	0.50	327	*e*P	Pn	01 36 37.0	-0.3
JUCU				IAML		01 37 01.1	
	comp=Z,491nm,0.2s						
JUCU	Jucuar¡n	0.50	327	*e*P	Pn	01 36 37.0	-0.3
JUCU				IAML		01 37 01.1	
	comp=Z,491nm,0.2s						
BLLM	Bellamira	0.66	337	*e*P	Pn	01 36 37.5	-0.6
BLLM	Bellamira	0.66	337	*e*P	Pn	01 36 37.5	-0.6
LCY	Lacayo	0.67	332	*e*P	Pn	01 36 37.9	-0.4
LCY	Lacayo	0.67	332	*e*P	Pn	01 36 37.9	-0.4
PACA	Pacayal	0.72	332	*e*P	Pn	01 36 38.0	-0.6
PACA	Pacayal	0.72	332	*e*P	Pn	01 36 38.0	-0.6
TECA	Tecapa	0.83	322	*e*P	Pn	01 36 38.9	-0.6
TECA	Tecapa	0.83	322	*e*P	Pn	01 36 38.9	-0.6
COEB	Comit de Eme	0.85	321	*e*P	Pn	01 36 39.0	-0.5
COEB				IAML		01 36 40.2	
	comp=Z,258nm,0.4s						
COEB	Comit de Eme	0.85	321	*e*P	Pn	01 36 39.0	-0.5
COEB				IAML		01 36 40.2	
	comp=Z,258nm,0.4s						
COEG	Centro de Oper	1.18	312	*e*P	Pn	01 36 40.4	-1.7
COEG	Centro de Oper	1.18	312	*e*P	Pn	01 36 40.4	-1.7
LFRS	El Faro	1.32	307	*e*P	Pn	01 36 42.4	-0.9
LFRS				*e*S	Sn	01 37 07.2	+1.5
LBRS	Las Brisas	1.38	311	*e*P	Pn	01 36 43.2	-0.7
LOMA	Loma Larga	1.42	305	*e*P	Pn	01 36 43.4	-1.0
LOMA				*e*S	Sn	01 37 07.9	+0.5
LOMA	Loma Larga	1.42	305	*e*P	Pn	01 36 43.4	-1.0
LOMA				*e*S	Sn	01 37 07.9	+0.5
BOQS	Boqueron	1.56	305	*e*S	Sn	01 37 12.1	+2.1
CEVE	Cerro Verde	1.89	302	*e*P	Pn	01 36 48.8	-0.5
CEVE				*e*S	Sn	01 37 16.9	+0.6
CEVE				IAML		01 37 24.6	
	comp=Z,362nm,0.2s						
CEVE	Cerro Verde	1.89	302	*e*P	Pn	01 36 48.8	-0.5
CEVE				*e*S	Sn	01 37 16.9	+0.6
CEVE				IAML		01 37 24.6	
	comp=Z,362nm,0.2s						
SBLS	San Blas	1.89	302	*e*P	Pn	01 36 48.8	-0.6
SBLS	San Blas	1.89	302	*e*P	Pn	01 36 48.8	-0.6
SNJE	San Jose	1.89	303	*e*P	Pn	01 36 48.8	-0.6
SNJE	San Jose	1.89	303	*e*P	Pn	01 36 48.8	-0.6
IXG	Ixpaco	2.74	299	*e*P	Pn	01 36 59.7	+0.4
IXG				*e*S	Sn	01 37 32.8	-1.3
FUG	Fuego 3	3.22	300	*e*S	Sn	01 37 45.6	+0.9
STG3	Santiaguito 3,	3.96	299	*e*P	Pn	01 37 15.6	+0.9
STG3				*e*S	Sn	01 38 00.5	-1.2

IDC ***13*** *02:06:48.2±1.1, 20°.92N×120°.95E, h0^{km}, mb3.5/6, mb1 3.7/7, mb1mx3.5/51, mbtmp3.5/7, Error ellipse: s-maj=42.0km s-min=19.8km az=66.0*
ISC 13 02:06:53.3±1.1**, 21°.0N**±0°.1×**121°.0E**±0°.2**, h36**^{km}**, n7,**
σ**0^s.76**/7**, mb3.3**/5**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	17.51	19	P	P	02 10 55.4	0.0
	baz=202,slow=13,SNR=2.4						
CMAR	Chiang Mai Arr	20.91	267	P	P	02 11 33.2	+0.4
	1.4nm,0.3s,baz=71,slow=8.7,SNR=4.8						
SONM	Songino Array	29.30	340	P	P	02 12 53.1	+0.7
	0.1nm,0.4s,baz=143,slow=7.5,SNR=2.6						
MKAR	Makanchi Array	40.59	319	P	P	02 14 28.2	-1.2
	0.2nm,0.5s,baz=98,slow=7.4,SNR=2.4						
WRA	Warramunga Arr	42.69	161	P	P	02 14 46.6	-0.2
	1.0nm,0.6s,baz=344,slow=8.9,SNR=7.3						
KURBB	Kurchatov Arra	44.50	322	P	P	02 15 01.0	-0.1
	0.3nm,0.6s,baz=116,slow=7.0,SNR=4.8						
ASAR	Alice Springs	46.10	163	P	P	02 15 14.2	+0.2
	0.5nm,0.5s,baz=341,slow=7.3,SNR=7.7						

NEIC ***13*** *02:11:04.0±1.1, 36°.107N±0°.010×118°.05W±0°.01, h3^{km}±4^{km}, Error ellipse: s-maj=1.6km s-min=1.2km az=224.0*
ANF ***13*** *02:11:03.8±0.1, 36°.11N×118°.04W, h1^{km}±2^{km}, ML4.5/47, Error ellipse: s-maj=1.0km s-min=0.9km az=119.0*
NEIC ***13*** *02:11:04.1, 36°.12N×118°.05W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.17; M$_{\theta\theta}$0.42; M$_{\phi\phi}$-0.25; M$_{r\theta}$-0.44; M$_{\theta\phi}$4.56; M$_{\phi r}$1.54; Fault plane solution: M$_0$4.85000×10^{15} NP1:ϕ_s91.10000°, δ71.71000°, λ-5.97000°. NP2:ϕ_s182.98000°, δ84.33000°, λ-161.62000°. Principal axes: T 4.7717, Plg9.0000°, Azm316.0000°; N 0.1521, Plg71.0000°, Azm200.0000°; P -4.9237, Plg17.0000°, Azm48.0000°;*
NEIC ***13*** *02:11:04.0, 36°.11N×118°.06W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.17; M$_{\theta\theta}$0.17; M$_{\phi\phi}$-0.35; M$_{r\theta}$0.75; M$_{\theta\phi}$3.60; M$_{\phi r}$-0.79; Fault plane solution: M$_0$3.77000×10^{15} NP1:ϕ_s3.02000°, δ79.55000°, λ-169.60000°. NP2:ϕ_s271.12000°, δ79.77000°, λ-10.62000°. Principal axes: T 3.5207, Plg0.0000°, Azm317.0000°; N 0.4606, Plg75.0000°, Azm48.0000°; P -3.9813, Plg15.0000°, Azm227.0000°;*
PAS ***13*** *02:11:04.0±1.2, 36°.11N±0°.01×118°.06W±0°.01, h0^{km}±2^{km}, Mwr4.4/6, mb4.4/12(NEIC), Mwr4.3/89(NEIC) Error ellipse: s-maj=1.5km s-min=1.5km az=55.0*
IDC ***13*** *02:11:05.2±0.7, 36°.12N×117°.91W, h0^{km}, mb4.1/5, mb1 4.3/12, mb1mx4.0/42, mbtmp4.0/12, ML3.8/7, MS3.7/19, Ms1 3.7/19, ms1mx3.5/41, Error ellipse: s-maj=14.4km s-min=5.2km az=73.0*
NCEDC ***13*** *02:11:05.0, 36°.10N×118°.06W, h5^{km}*
ISC 13 02:11:04.9±0.5**, 36°.10N**±0°.01×**118°.02W**±0°.01**, h10**^{km}**,**
n264, σ**1^s.57**/335**, mb4.4**/9**, MS3.7**/13**, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MFS	McCloud Flat S	0.13	83		Pg	02 11 07.3	-0.7
RVCM	Rose Valley Ce	0.14	133		Pg	02 11 07.6	-0.5
JRC2	Joshua Ridge	0.21	125		Pg	02 11 08.8	-0.5
JRC2					Sg	02 11 12.5	+0.2
WCSM	Coso Springs S	0.22	110		Pg	02 11 09.0	-0.5
VPEM	Volcano Peak E	0.22	133		Pg	02 11 09.2	-0.4
WCHM	Chimney Peak	0.22	192		Pg	02 11 08.5	-1.1
CWC	Cottonwood Cre	0.34	351		Pg	02 11 10.3	-1.5
CWC					Sg	02 11 14.8	-1.6
CWC	Cottonwood Cre	0.34	351	P	Pg	02 11 10.3	-1.5
	baz=177						
CWC				S	Sg	02 11 14.8	-1.6
	baz=177						
TOW	Tower One	0.36	145		Pb	02 11 11.8	-1.6
MPMC	Manual Prospec	0.43	96		Pg	02 11 13.0	-0.4
MPMC					Sb	02 11 19.4	-2.0
MPMC	Manual Prospec	0.43	96	P	Pg	02 11 13.0	-0.4
	baz=275,SNR=1000						
MPMC				S	Sb	02 11 19.3	-2.0
	baz=275						
CLC	China Lake	0.44	130		Pg	02 11 13.2	-0.4
CLC					Sb	02 11 19.9	-1.7
WORM	Onyx Ranch	0.45	204		Pg	02 11 12.5	-1.1
SRTC	Snort	0.46	152		Pb	02 11 13.8	-1.4
CGO	Cerro Gordo	0.48	21		Pg	02 11 13.3	-1.0
CGO					Sg	02 11 20.4	-0.4
WHFM	Hanning Flat	0.49	214		Pg	02 11 13.3	-1.1
WASM	Alta Sierra Ca	0.57	231		Pg	02 11 14.8	-1.2
WBSM	Bird Springs	0.57	190		Pg	02 11 15.2	-0.9
WBSM					Sg	02 11 23.2	-0.5

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ISA    Isabella, Lake    0.57 220  Pg    Pg    02 11 15.0 -1.1
ISA    Isabella, Lake    0.57 220        Sg    02 11 22.9 -0.7
ISA    Isabella, Lake    0.57 220  P     Pg    02 11 14.8 -1.3
       baz=38,SNR=1000
ISA                                S     Sg    02 11 22.9 -0.7
       baz=38
SPG2   Springville 2     0.61 279        Pg    02 11 15.1 -1.7
SPG2                                     Sg    02 11 23.0 -1.9
LRMC   Laurel Mtn Rad    0.68 156        Pg    02 11 17.4 -0.7
LRMC                                     Sb    02 11 27.0 -1.4
LRMC   Laurel Mtn Rad    0.68 156  P     Pg    02 11 17.4 -0.7
       baz=334,SNR=1000
LRMC                               S     Sb    02 11 27.3 -1.1
       baz=334
CCCA   Chr Cany lake     0.78 137        Pb    02 11 19.7 -0.9
JFS    Joseph F. Stat    0.80 159        Pg    02 11 19.5 -0.9
WOFM   Oak Flat          0.80 225        Pg    02 11 18.9 -1.5
DTP    Desert Tortois    0.84 170        Pg    02 11 20.2 -0.9
TMO    Tin Mountain      0.86  35        Pg    02 11 20.2 -1.3
VES    Vestal, Richgr    0.91 254        Pg    02 11 21.0 -1.4
VES                                      Sg    02 11 33.4 -0.7
VES    Vestal, Richgr    0.91 254  P     Pg    02 11 20.9 -1.4
       baz=72,SNR=937
VES                                S     Sg    02 11 33.4 -0.7
       baz=72
QSM    Queen of Sheba    0.94  98        Pb    02 11 22.4 -0.9
TIN    Tinemaha, Big     0.97 350        Pg    02 11 22.2 -1.4
TIN                                      Sg    02 11 35.4 -0.7
TIN    Tinemaha, Big     0.97 350  P     Pg    02 11 22.2 -1.4
       baz=172,SNR=379
TIN                                S     Sg    02 11 35.4 -0.7
       baz=172
FURC   Furnace Creek,    1.00  68        Pn    02 11 23.8 -1.2
FURC                                     Sn    02 11 37.8 -1.3
FURC   Furnace Creek,    1.00  68  P     Pn    02 11 23.7 -1.3
       baz=249,SNR=1000
FURC                               S     Sn    02 11 37.8 -1.3
       baz=249
RCTC   Rector, Farmer    1.01 282        Pg    02 11 22.4 -1.9
RCTC                                     Sg    02 11 35.6 -2.0
TEJ    El Tejon          1.03 212        Pg    02 11 23.0 -1.7
TEJ                                      Sg    02 11 36.6 -1.4
GRAC   Grapevine Rang    1.03  30        Pg    02 11 23.8 -1.1
GRAC                                     Sb    02 11 38.2 -0.4
GRAC   Grapevine Rang    1.03  30  P     Pg    02 11 23.8 -1.1
       baz=212,SNR=1000
GRAC                               S     Sn    02 11 38.5 -1.6
       baz=212
MAGC   SCE Magundon P    1.04 225        Pg    02 11 23.9 -1.1
MAGC                                     Sg    02 11 37.3 -1.3
GVN    Grapevine         1.05  31        Pg    02 11 24.0 -1.1
VOG    Valley Oaks Go    1.13 282        Pb    02 11 24.8 -1.7
VOG                                      Sb    02 11 39.0 -2.2
VOG    Valley Oaks Go    1.13 282  P     Pb    02 11 24.8 -1.7
       baz=101,SNR=82
VOG                                S     Sb    02 11 39.8 -1.4
       baz=101
FMT    Funeral Mounta    1.13  61        Pb    02 11 25.5 -1.1
BAKC   Calstate          1.16 230        Pb    02 11 26.1 -1.0
BAKC                                     Sn    02 11 42.2 -0.9
ARVC   Arvin             1.18 215        Pb    02 11 26.1 -1.2
ARVC   Arvin             1.18 215  P     Pb    02 11 26.2 -1.2
       baz=33,SNR=894
ARVC                               S     Sn    02 11 42.6 -0.9
       baz=33
EDW2   Edwards Air Fo    1.22 179        Pn    02 11 26.8 -1.2
EDW2   Edwards Air Fo    1.22 179  P     Pn    02 11 26.9 -1.2
       baz=358,SNR=1000
EDW2                               S     Sb    02 11 42.9 -0.9
       baz=358
TJR    Tejon Ranch       1.23 209        Pn    02 11 26.8 -1.3
GSC    Goldstone, Bar    1.27 129        Pg    02 11 28.4 -0.9
GSC                                Sg    Sn    02 11 45.8 -0.1
GSC    Goldstone, Bar    1.27 129  P     Pg    02 11 28.2 -1.1
       baz=308,SNR=1000
GSC                                S     Sn    02 11 45.8 -0.1
       baz=308
HYS    Haystack Butte    1.29 163        Pb    02 11 28.3 -1.0
THC    Tehachapi Micr    1.30 204        Pn    02 11 28.2 -1.2
FOXC   Fox Airport       1.37 187        Pb    02 11 29.6 -1.0
SBB    Saddle Back Bu    1.42 174        Pb    02 11 30.4 -1.1
SBB                                      Sn    02 11 48.6 -1.0
SHOC   Shoshone, Teco    1.43  98        Pn    02 11 30.2 -0.7
SHOC   Shoshone, Teco    1.43  98  P     Pn    02 11 30.2 -0.7
       baz=278,SNR=694
SHOC                               S     Sg    02 11 52.1 +1.3
       baz=278
ALPC   Antelope          1.43 189        Pb    02 11 30.6 -1.1
ALPC                                     Sb    02 11 49.2 -0.8
AMDNV  Amargosa          1.45  75        Pb    02 11 30.6 -1.3
RRX    Edison Barstow    1.48 146        Pb    02 11 31.7 -0.8
RRX    Edison Barstow    1.48 146  P     Pb    02 11 31.6 -0.8
       baz=325,SNR=136
RRX                                S     Sg    02 11 53.3 +0.8
       baz=325
LEOC   Leona Valley      1.49 189        Pb    02 11 31.5 -1.2
BTPC   Burnt Peak        1.49 198        Pg    02 11 32.3 -1.2
ALV    Alvord Mountai    1.54 132        Pn    02 11 31.8 -0.6
LRRC   Littlerock Res    1.57 180        Pb    02 11 32.7 -1.4
MPI    Mount Pinos, F    1.58 216        Pn    02 11 32.9 -0.5
ABL    Mount Abel        1.59 219        Pn    02 11 33.0 -0.3
OSI    Osito Audit: C    1.59 201        Pb    02 11 33.4 -1.0
OSI                                Sn    Sb    02 11 53.9 -0.8
OSI    Osito Audit: C    1.59 201  P     Pb    02 11 33.5 -1.0
       baz=20,SNR=288
OSI                                S     Sg    02 11 55.7 -0.5
       baz=20
BCW    Bitter Crk WRg    1.63 225        Pn    02 11 33.5 -0.2
CRGC   Crocker Grade     1.64 239        Pb    02 11 34.3 -0.9
HOLC   Holcomb Ridge     1.65 175        Pn    02 11 33.7 -0.3
TPNV   Topopah Spring    1.66  59        Pb    02 11 34.2 -1.4
TPNV                               Sn    Sg    02 11 56.5 -1.7
TPNV   Topopah Spring    1.66  59  P     Pb    02 11 34.2 -1.4
       baz=240,SNR=1000
MLAC   Mammoth, Mammo    1.66 337        Pb    02 11 34.7 -1.0
MLAC   Mammoth, Mammo    1.66 337  P     Pb    02 11 34.8 -1.0
       baz=158,SNR=1000
MLAC                               S     Sb    02 11 56.6 -0.3
       baz=158
CARC   Carrizo Plain     1.69 243        Pb    02 11 35.5 -0.5
OMMB   Old Mammoth Mi    1.70 333        Pn    02 11 34.6 -0.4
OMMB                               Sn    Sb    02 11 56.9 -1.2
YEG    Yeguas Mountai    1.71 248        Pb    02 11 35.4 -1.2
IR2C   Iron Canyon       1.74 191        Pb    02 11 35.3 -1.6
MDPB   Devils Postpil    1.75 331        Pn    02 11 34.9 -0.6
MDPB                               Sn    Sn    02 11 57.8 -0.3
CHFC   Chilao Flat St    1.77 180        Pb    02 11 36.4 -1.0
SMMC   Simmler           1.79 245        Pb    02 11 36.2 -1.7
SMMC   Simmler           1.79 245  P     Pb    02 11 36.2 -1.7
       baz=63,SNR=324
SMMC                               S     Sb    02 12 00.1 -0.3
       baz=63
RYS    Reyes Peak        1.82 217        Pb    02 11 37.2 -1.2
TUQ    Turquoise Moun    1.83 111        Pn    02 11 36.0 -0.5
TUQ    Turquoise Moun    1.83 111  P     Pn    02 11 35.9 -0.5
       baz=292,SNR=549
TUQ                                Sb    Sg    02 12 04.1 +0.4
       baz=292
DSCC   Desert Studies    1.83 121        Pn    02 11 35.6 -0.8
PAGB   Antelope Grade    1.85 259        Pn    02 11 36.0 -0.8
PAGB                               Sn    Sn    02 12 00.0 -0.2
DECC   Green Verdugo     1.86 188  P     Pb    02 11 37.2 -1.9
       baz=6.9,SNR=74
DECC                               Sb    Sg    02 12 03.9 -0.9
       baz=6.9
HEC    Hector,Ludlow     1.87 132        Pn    02 11 36.6 -0.5
HEC    Hector,Ludlow     1.87 132  P     Pn    02 11 36.5 -0.5
       baz=313,SNR=288
HEC                                Sb    Sg    02 12 05.0  0.0
       baz=313
MWC    Mount Wilson      1.87 181        Pn    02 11 36.8 -0.4
MWC                                Sn    Sb    02 12 01.2 -1.7
BFSC   Mount Baldy Ra    1.88 171        Pb    02 11 37.8 -1.7
BFSC   Mount Baldy Ra    1.88 171  P     Pn    02 11 37.1 -0.2
       baz=350,SNR=348
BFSC                               Sb    Sg    02 12 04.5 -0.9
       baz=350
PKM    Mcpherson Peak    1.90 231        Pb    02 11 38.0 -1.9
PKM    Mcpherson Peak    1.90 231  P     Pb    02 11 37.9 -1.9
       baz=49,SNR=447
PKM                                S     Sb    02 12 02.9 -0.8
       baz=49
SSK    Sunset Peak       1.91 172        Pn    02 11 37.8 +0.2
BCH    Branch Mountai    1.92 242        Pn    02 11 37.9 +0.2
BLCC   Black Canyon      1.93 196        Pn    02 11 36.5 -1.4
PASC   Pasadena Art C    1.93 184        Pn    02 11 37.3 -0.5
PASC                               Sn    Sb    02 12 02.5 -1.9
SIL    Silver Peak       2.00 151        Pg    02 11 42.3 -1.0
PSRC   Puddingstone R    2.01 175        Pb    02 11 40.0 -1.7
BTL    Butler Peak       2.02 155        Pn    02 11 39.1 -0.2
DJJ    Donna J Jenkin    2.02 190        Pn    02 11 39.3 +0.2
BBRC   Big Bear Solar    2.04 154        Pn    02 11 39.4 -0.2
BBRC   Big Bear Solar    2.04 154  P     Pn    02 11 39.2 -0.4
       baz=334,SNR=78
BBRC                               Sb    Sg    02 12 10.2 -0.4
       baz=334
FIGC   Figueroa Mtn.     2.12 230        Pb    02 11 41.9 -1.5
SVD    Seven Oaks Dam    2.13 159        Pg    02 11 44.4 -1.3
SBC    Santa Barbara     2.16 220  Pb    Pb    02 11 42.9 -1.3
       baz=39,SNR=55
BLG    Laguna Peak, P    2.17 204  P     Pn    02 11 41.1 +0.1
       baz=22,SNR=70
BLG                                S     Sb    02 12 09.8 -1.4
       baz=22
PMPB   Monarch Peak      2.26 274        Pn    02 11 41.7 -0.7
PMPB                               Sn    Sn    02 12 10.6 +0.3
NV11   Mina Array Sit    2.33 357        Pn    02 11 43.4 -0.1
GMRC   Granite Mounta    2.33 124        Pn    02 11 42.3 -1.1
GMRC   Granite Mounta    2.33 124  P     Pn    02 11 42.3 -1.1
       baz=305,SNR=208
NVAR   Mina Array Bea    2.33 354  Pn    Pn    02 11 44.0 +0.4
       18nm,0.3s,baz=181,slow=15,SNR=94
NVAR                               Pg    Pg    02 11 48.0 -1.7
       133nm,0.3s,baz=177,slow=17,SNR=306
NVAR                               Lg    Lg    02 12 18.0
       122nm,0.3s,baz=1.1,slow=7.4,SNR=10
NVAR   Mina Array Bea    2.33 354        Pn    02 11 43.2 -0.3
SME    Santa Rosa Min    2.34 166        Pn    02 11 43.5  0.0
SHPR   Sheep Range       2.34  79        Pn    02 11 43.9 +0.2
FMP    Fort Macarthur    2.40 186  Pg    Pg    02 11 50.4 -0.4
       baz=4.6,SNR=8.8
BLAC   Blackrock camp    2.43 146        Pn    02 11 44.6 -0.1
SCZ2   Santa Cruz Isl    2.49 213  P     Pn    02 11 46.0 +0.5
       baz=31,SNR=27
SCZ2                               Sb    Sg    02 12 23.7 -1.1
       baz=31
EW2    E Wide Canyon     2.53 148        Pn    02 11 46.0  0.0
GATR   Gnd/Air Tx Cnt    2.55 233        Pb    02 11 48.0 -2.9
RYN    Ryan              2.55 351        Pn    02 11 46.1 -0.4
TPC    Twentynine Pal    2.56 140        Pn    02 11 46.2 -0.3
POB    Polly Butte       2.57 159        Pn    02 11 46.9 +0.2
MURC   Murrieta          2.59 165        Pn    02 11 47.0 +0.2
MURC   Murrieta          2.59 165  P     Pn    02 11 47.0 +0.2
       baz=344,SNR=62
MURC                               Sb    Sg    02 12 26.5 -1.5
       baz=344
DANC   Danby, Needles    2.60 123        Pn    02 11 46.3 -0.7
BELC   Belle Mtn. Jos    2.67 141  Pn    Pn    02 11 47.8 -0.4
       baz=322,SNR=165
BELC                               Pg    Pg    02 11 54.6 -1.5
       baz=322
BELC                               Sb    Sg    02 12 28.6 -2.1
       baz=322
CMB    Columbia Colle    2.70 316        Pn    02 11 47.6 -0.9
CIS    Catalina Islan    2.71 187  Pn    Pn    02 11 49.2 +0.6
       baz=6.1,SNR=14
CIS                                Pg    Pg    02 11 55.8 -1.1
       baz=6.1
CIS                                Sb    Sg    02 12 29.6 -2.5
       baz=6.1
CRY    Cary Ranch        2.74 157        Pn    02 11 49.5 +0.4
DNR    Dunn Ranch,Anz    2.77 155        Pn    02 11 49.9 +0.4
SNDA   J Saunders Pla    2.79 155        Pn    02 11 50.1 +0.3
PFO    Pinyon Flats O    2.79 152  Pn    Pn    02 11 49.7 -0.2
       9.9nm,0.3s,baz=337,slow=15,SNR=73
PFO                                Pg    Pb    02 11 55.7 +0.7
       25nm,0.3s,baz=321,slow=14,SNR=42
PFO                                Lg    Lg    02 12 32.9
       61nm,0.3s,baz=224,slow=23,SNR=11
PFO    Pinyon Flats O    2.79 152        Pn    02 11 49.6 -0.2
PFO                                      Pg    02 11 58.0 -0.5
PFO    Pinyon Flats O    2.79 152  P     Pn    02 11 49.7 -0.2
       baz=333,SNR=55
PFO                                Sb    Sg    02 12 32.8 -2.0
       baz=333
XPFO   Pion Flat         2.80 152        Pn    02 11 49.8  0.0
XPFO   Pion Flat         2.80 152        Pn    02 11 49.7 -0.2
BZNA   Buzz No.'s Pla    2.83 157        Pn    02 11 50.7 +0.3
SAO    San Andreas Ge    2.84 284        Pn    02 11 49.7 -0.7
FRD    Ford Ranch, An    2.85 155        Pn    02 11 50.8 +0.3
PLM    Palomar           2.90 161        Pn    02 11 49.8 -1.5
KVN    Kaiserville       2.94 359        Pn    02 11 51.6 -0.4
R11A   Troy Canyon, C    2.96  40        Pn    02 11 50.9 -1.3
R11A   Troy Canyon, C    2.96  40  Pn    Pn    02 11 52.0 -0.2
       baz=222,SNR=44
R11A                               Pb    Pb    02 11 58.3 +0.4
       baz=222
R11A                               Sb    Sg    02 12 38.7 -1.5
       baz=222
GORC   Green Oak Ranc    3.01 167        Pn    02 11 53.3 +0.6
YERR   Yerington         3.04 342        Pn    02 11 53.0 -0.2
IRM    Iron Mountain     3.05 129        Pn    02 11 52.2 -1.1
IRM    Iron Mountain     3.05 129  Pn    Pn    02 11 52.1 -1.1
       baz=310,SNR=66
IRM                                Pb    Pg    02 12 00.8 -2.6
       baz=310
IRM                                Sb    Sg    02 12 41.0 -1.9
       baz=310
NEE2   Needles Airpor    3.08 115  P     Pn    02 11 53.2 -0.3
       baz=296,SNR=12
SNCC   San Nicolas Is    3.11 204        Pn    02 11 53.4 -0.6
SNCC   San Nicolas Is    3.11 204  P     Pn    02 11 54.9 +0.9
       baz=23,SNR=8.2
SNCC                               S     Sn    02 12 30.9 -0.2
       baz=23
SCI2   San Clemente I    3.15 188  P     Pn    02 11 56.2 +1.7
       baz=7.2
SCI2                               Sb    Sg    02 12 43.6 -2.4
       baz=7.2
BC3    Big Chuckawall    3.22 138  Pn    Pn    02 11 54.8 -0.9
       baz=320,SNR=51
BC3                                Pg    Pg    02 12 07.2 +0.5
       baz=320
BC3                                Sg    Sg    02 12 51.6 +3.1
       baz=320
PNTR   Pine Nut          3.24 338        Pn    02 11 55.7 -0.3
109C   Camp Elliot, M    3.29 167        Pn    02 11 56.8 +0.2
109C   Camp Elliot, M    3.29 167  P     Pn    02 11 57.6 +1.0
       baz=346,SNR=7.9
109C                               Pg    Pg    02 12 07.4 -0.6
       baz=346
109C                               Sb    Sg    02 12 46.4 -4.2
       baz=346
RUBR   Rubicon Trail     3.40 331  Pn    Pn    02 11 57.9 -0.3
VCNR   Virginia City     3.44 338  Pn    Pn    02 11 58.5 -0.3
MONP2  Monument Peak     3.46 157  P     Pn    02 11 59.1 +0.1
       baz=338,SNR=14
MONP2                              Pb    Pg    02 12 08.0 -3.2
       baz=338
MONP2                              Sb    Sg    02 12 52.2 -3.9
       baz=338
W13A   Hualapai Mount    3.51 105        Pn    02 11 59.7 -0.1
BAR    Barrett           3.59 162        Pn    02 12 00.3 -0.4
SWSC   Sam W. Stewart    3.64 149  Pn    Pn    02 12 00.4 -1.0
       baz=330,SNR=6.8
SWSC                               Pg    Pg    02 12 12.4 -2.3
       baz=330
SWSC                               Sb    Sg    02 12 59.1 -2.8
       baz=330
PDMCI  Parker Dam,Lak    3.65 118  Pn    Pn    02 12 00.9 -0.5
       baz=300,SNR=37
PDMCI                              Pg    Pg    02 12 14.1 -0.7
       baz=300
AFDM   Forest Hills D    3.69 321        Pn    02 12 01.8 -0.2
Y12C   Blythe            3.71 128        Pn    02 12 01.3 -1.0
Y12C   Blythe            3.71 128  Pn    Pn    02 12 01.1 -1.1
       baz=310,SNR=28
Y12C                               Pg    Pg    02 12 14.0 -1.9
       baz=310
PAHR   Pah Rah Range     3.76 344        Pn    02 12 03.8 +0.7
IKP    In-Ko-Pah, Jac    3.79 155  P     Pn    02 12 03.1 -0.3
       baz=336
IKP                                Sb    Sg    02 13 03.6 -3.0
       baz=336
LCMT   Little Creek M    3.95  75        Pn    02 12 06.0 +0.3
CCUT   Cedar City        4.00  67        Pn    02 12 06.9 +0.3
GLA    Glamis            4.02 138  P     Pn    02 12 05.4 -1.2
       baz=320,SNR=19
PSUT   Pine Spring       4.11  53        Pn    02 12 08.1 +0.2
SZCU   Shurtz Canyon     4.22  68        Pn    02 12 09.8 +0.3
KNB    Kanab             4.28  76        Pn    02 12 10.6 +0.3
MCCM   Marconi Confer    4.39 299        Pn    02 12 11.5 -0.1
ORV    Oroville          4.41 322        Pn    02 12 11.8 -0.2
U15A   North Rim         4.64  84        Pn    02 12 15.6 +0.3
Y14A   Wickenburg        4.64 116        Pn    02 12 14.8 -0.4
GDXM   Geysers           4.66 307        Pn    02 12 15.0 -0.5
PKCU   Pink Cliffs       4.77  72        Pn    02 12 17.3 +0.2
113A   Mohawk Valley,    4.84 132        Pn    02 12 17.7  0.0
HOPS   Hopland Field     4.95 307  Pn    Pn    02 12 18.9 -0.4
MTPU   Mount Pierson     5.05  66        Pn    02 12 21.1 +0.1
ELK    Elko              5.12  24  Pn    Pn    02 12 23.1 +1.2
       4.6nm,0.3s,baz=217,slow=10,SNR=105
ELK                                Pg    Pg    02 12 38.4 -4.6
       15nm,0.3s,baz=214,slow=14,SNR=21
ELK                                Lg    Lg    02 13 45.4
       8.8nm,0.3s,baz=298,slow=20,SNR=12
ELK    Elko              5.12  24        Pn    02 12 21.9  0.0
O03E   Paynes Creek      5.14 326  P     Pn    02 12 26.1 +4.1
       baz=144,SNR=39
O03E                               Sb    Sb    02 13 41.0 +4.3
       baz=144
MSU    Marysvale         5.24  61        Pn    02 12 23.7 +0.2
WUAZ   Wupatki           5.43  94        Pn    02 12 26.9 +0.8
WUAZ   Wupatki           5.43  94  Pn    Pn    02 12 28.9 +2.8
       baz=278,SNR=8.3
WUAZ                               Pg    Pg    02 12 46.6 -2.3
       baz=278
WUAZ                               Sb    Sg    02 13 53.6 -5.7
       baz=278
O02D   Mt. Diablo Mer    5.54 319  Sb    Sg    02 13 56.9 -5.8
       baz=136
X16A   Lo Mia Camp, P    5.64 105        Pn    02 12 29.4 +0.4
DUG    Dugway, Tooele    5.79  44        Pn    02 12 30.9 -0.1
DUG    Dugway, Tooele    5.79  44  Pn    Pn    02 12 33.7 +2.8
       baz=227,SNR=12
DUG                                Pg    Pg    02 12 52.6 -3.1
       baz=227
DUG                                Sb    Sg    02 14 06.2 -4.5
       baz=227
214A   Organ Pipe Nat    5.98 132        Pn    02 12 33.6 +0.1
214A   Organ Pipe Nat    5.98 132  Pn    Pn    02 12 32.7 -0.9
       baz=315
214A                               Pg    Pg    02 13 02.0 +2.5
       baz=315
N02D   Trinity Center    6.10 324  Sb    Sb    02 14 10.9 +6.6
       baz=142
BGU    Big Grassy Mou    6.20  38        Pn    02 12 36.3 -0.3
MPU    Maple Canyon      6.37  50  Pn    Pn    02 12 39.4 +0.3
M02C   Callahan          6.49 326  Pb    Pb    02 12 58.3 +0.3
       baz=143
M02C                               Sb    Sb    02 14 21.5 +5.8
       baz=143
KHMM   Horse Mountain    6.54 318  Pn    Pn    02 12 38.9 -2.4
YBH    Yreka Blue Hor    6.71 328  Pn    Pn    02 12 48.0 +4.5
       0.6nm,0.3s,baz=153,slow=8.4,SNR=20
YBH                                Pg    Pb    02 13 00.4 -1.3
       1.2nm,0.3s,baz=116,slow=6.7,SNR=9.6
YBH                                Lg    Lg    02 14 35.1
       0.4nm,0.3s,baz=123,slow=5.7,SNR=8.5
YBH    Yreka Blue Hor    6.71 328        Pn    02 12 42.8 -0.7
CTU    Camp Tracy        6.72  45  Pn    Pn    02 12 44.1 +0.2
W18A   Petrified Fore    6.82  96  Pn    Pn    02 12 44.9 -0.3
W18A   Petrified Fore    6.82  96  Pg    Pg    02 13 11.5 -3.9
       baz=281
W18A                               Sg    Sg    02 14 40.4 -3.3
       baz=281
L04D   Klamath Falls     6.96 333  P     Pn    02 12 52.5 +5.5
       baz=150,SNR=8.2
HVU    Hansel Valley     6.99  34  Pn    Pn    02 12 47.3 -0.1
TUC    Tucson            7.08 120        Pn    02 12 49.0 +0.3
TUC    Tucson            7.08 120  P     Pn    02 12 48.6 -0.1
       baz=304
TUC                                Sb    Sg    02 14 47.6 -4.7
       baz=304
K04D   Chiloquin, OR     7.13 337  Sb    Sg    02 14 49.2 -4.4
       baz=155
J08A   Circle Bar Ran    7.25 357  Pn    Pn    02 12 50.9 -0.2
J05D   Fort Rock, OR     7.59 342  P     Pn    02 13 04.7 +9.0
       baz=160,SNR=6.9
J05D                               Sb    Sg    02 15 03.8 -4.7
       baz=160
MVCO   Mesa Verde        7.73  79  Pg    Pg    02 13 30.3 -2.6
       baz=265
O20A   White River Ci    8.69  59  P     Pn    02 13 15.4 +4.5
       baz=246,SNR=15
BMO    Blue Mountains    8.76   3  Pn    Pn    02 13 10.7 -1.0
BW06   Boulder Array     9.33  42  P     Pn    02 13 23.2 +3.5
       baz=227,SNR=6.7
PDAR   Pinedale Array    9.33  42  Pn    Pn    02 13 23.3 +3.7
       0.1nm,0.3s,baz=236,slow=10,SNR=27
PDAR                               LR    LR    02 16 59.7
       comp=Z,317nm,21.6s,baz=230,slow=38
ANMO   Albuquerque       9.49  94  Pn    Pn    02 13 25.5 +3.7
       0.1nm,0.3s,baz=267,slow=16,SNR=2.7
ANMO                               Pg          02 14 02.8
       0.4nm,0.3s,baz=275,slow=14,SNR=8.7
ANMO                               Lg    Lg    02 16 01.5
       0.2nm,0.3s,baz=189,slow=21,SNR=5.1
ANMO                               LR    LR    02 17 12.5
       comp=Z,178nm,18.6s,baz=280,slow=39
N23A   Red Feather La   10.60  60  P     Pn    02 13 42.0 +4.9
       baz=247,SNR=5.4
NEW    Newport          12.17   3  Pn    Pn    02 14 01.8 +3.5
       0.1nm,0.3s,baz=191,slow=17,SNR=1.9
NEW                                Lg    Lg    02 17 27.1
       0.1nm,0.3s,baz=70,slow=15,SNR=1.9
NEW                                LR    LR    02 19 08.0
       comp=Z,284nm,18.8s,baz=184,slow=40
WALA   Waterton Lakes   13.29  12        Pn    02 14 13.2 -0.5
RSSD   Black Hills      13.35  49        Pn    02 14 14.5 -0.2
LPIG   La Paz           13.69 149  LR    LR    02 18 18.0
       comp=Z,78nm,21.5s,baz=330,slow=32
LAO    LASA Array       13.77  36        Pn    02 14 19.7 -0.5
TXAR   Lajitas Array    13.83 115  Pn    Pn    02 14 23.5 +2.4
       0.1nm,0.3s,baz=291,slow=12,SNR=25
TXAR                               LR    LR    02 20 39.4
       comp=Z,102nm,19.4s,baz=0.0,slow=42
TXAR   Lajitas Array    13.83 115        Pn    02 14 21.4 +0.3
DGMT   Dagmar           16.01  35        Pn    02 14 50.1  0.0
X34A   Smith Ranch, M   16.54  89  P     P     02 14 57.3 -2.2
X34A                               IAmb  IAmb  02 15 05.6
       comp=Z,32nm,1.2s
BBB    Bella Bella      17.61 339  LR    LR    02 22 17.8
       comp=Z,362nm,20.0s,baz=158,slow=38
ECSD   EROS Data Cent   18.07  59  P     P     02 15 16.2 -0.2
MIAR   Mount Ida        19.99  87  P     Pn    02 15 37.7 -1.6
MIAR                               IAmb  IAmb  02 15 44.9
       comp=Z,34nm,1.3s
MIAR   Mount Ida        19.99  87  P     Pn    02 15 40.2 +1.0
       baz=282
SCIA   State Center     20.09  66  P     P     02 15 38.4 -0.2
AGMN   Agassiz Nation   20.36  46  P     Pn    02 15 42.9 -0.6
       baz=241
SPMN   Marine on St.    21.12  57  P     P     02 15 50.2 +0.5
SPMN                               IAmb  IAmb  02 15 55.7
       comp=Z,31nm,1.4s
ULM    Lac du Bonnet    21.35  42  P     P     02 15 52.6 +0.5
       comp=Z,28nm,1.1s,baz=238,slow=11,SNR=19
ULM                                LR    LR    02 24 47.9
       comp=Z,282nm,18.9s,baz=206,slow=39
ULM    Lac du Bonnet    21.35  42  P     P     02 15 52.4 +0.3
ULM                                IAmb  IAmb  02 15 55.2
       comp=Z,27nm,1.1s
FFC    Flin Flon        21.67  26  P     P     02 15 56.6 +1.2
FFC                                IAmb  IAmb  02 15 58.5
       comp=Z,19nm,1.1s
E38A   The Farm, Brul   22.37  54  P     P     02 16 04.0 +0.9
E38A                               IAmb  IAmb  02 16 06.0
       comp=Z,19nm,1.2s
EYMN   Ely              22.86  51  P     P     02 16 08.0 -0.4
EYMN                               IAmb  IAmb  02 16 11.0
       comp=Z,19nm,1.4s
EYMN   Ely              22.86  51  P     P     02 16 08.7 +0.3
       baz=248,SNR=5.5
DLBC   Dease Lake       23.71 344  P     P     02 16 19.4 +2.5
       comp=Z,4.0nm,0.9s,baz=166,slow=10,SNR=4.5
YKA    Yellowknife Ar   26.50   4  P     P     02 16 43.8 +1.6
       comp=Z,3.7nm,0.9s,baz=181,slow=8.9,SNR=27
YKA                                LR    LR    02 28 51.1
       comp=Z,184nm,20.2s,baz=0.0,slow=40
TKL    Tuckaleechee C   27.67  81  LR    LR    02 29 19.1
       comp=Z,112nm,18.5s,baz=291,slow=40
CMIG   Matias Romero    27.92 127  LR    LR    02 28 04.8
       comp=Z,96nm,19.9s,baz=336,slow=37
ILAR   Eielson Array    33.49 338  P     P     02 17 47.0 +2.9
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	comp=Z,3.5nm,0.9s,baz=154,slow=7.4,SNR=24						
ILAR				LR	LR	02 32 21.1	
	comp=Z,158nm,19.1s,baz=140,slow=38						
IMAR	Indian Mountai	36.46	336	P	P	02 18 09.8	+0.2
ROSC	El Rosal	50.76	117	LR	LR	02 47 43.6	
	comp=Z,44nm,18.2s,baz=169,slow=43						
PPT	Papeete	61.16	215	LR	LR	02 42 29.9	
	comp=Z,47nm,19.3s,baz=342,slow=31						
LPAZ	La Paz	70.27	129	LR	LR	02 50 57.1	
	comp=Z,34nm,18.7s,baz=343,slow=34						
NOA	NORSAR Array B	74.74	23	LR	LR	02 55 46.4	
	comp=Z,77nm,18.6s,baz=325,slow=36						
FINES	FINESS Array B	78.50	17	LR	LR	02 59 08.7	
	comp=Z,105nm,18.5s,baz=304,slow=37						
BDFB	Brasilia	83.70	114	LR	LR	03 06 13.4	
	comp=Z,37nm,19.0s,baz=49,slow=40						
RAO	Raoul Island	86.00	229	LR	LR	02 51 41.4	
	comp=Z,377nm,21.1s,baz=132,slow=28						
SONM	Songino Array	87.49	332	P	P	02 23 55.2	+2.3
	comp=Z,0.4nm,0.8s,baz=96,slow=2.9,SNR=2.6						
HNR	Honiara	89.13	258	LR	LR	02 59 52.2	
	comp=Z,36nm,20.5s,baz=40,slow=33						
WMQ	Urumqi	97.09	342	eP	Pdif	02 24 39.2	+1.8
LZH	Lanzhou	98.31	327	eP	Pdif	02 24 43.8	+0.7
LZH				pP	pP	02 24 44.7	-2.5
LZH				sP	sP	02 24 46.3	-2.3
LZH				ePP	PP	02 28 45.6	+3.7

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*IDC **13** 02:11:58.4±0.8, 34°.46N×70°.27E, h0km, mb3.8/15, mb1 3.9/21, mb1mx3.8/48, mbtmp3.8/21, ML3.4/6, Error ellipse: s-maj=17.9km s-min=16.0km az=132.0*
*NDI **13** 02:11:59.2±1.7, 34°.32N×69°.77E, h10km, ML4.1*
*NNC **13** 02:12:04.6±2.5, 34°.74N×70°.14E, h0km, mb4.1, mpv4.0, Error ellipse: s-maj=29.1km s-min=18.2km az=132.0*
ISC 13 02:12:03.7±0.6, **34°.45N**±0°.06×**70°.17E**±0°.06, **h35km, n42,** σ1ˢ**98**/49, **mb3.8**/14, **2C-3D, Southeastern Afghanistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	5.05	112	eP	Pn	02 13 20.0	+3.1
THN				eS	Sn	02 14 17.5	+3.5
DHRM	DHARAMSHALA	5.58	111	eP	Pn	02 13 25.1	+0.8
DHRM				eS	Sn	02 14 28.2	+1.0
DHRM				IAML		02 14 31.8	
	comp=N,169nm,0.5s						
DHRM				IAML		02 14 33.6	
	comp=E,276nm,0.4s						
BHK	Bhakra	6.06	118	ex	Sn	02 14 42.1	+3.2
SMLA	Simla	6.75	117	eP	Pn	02 13 40.7	+0.4
SMLA				eS	Sn	02 14 56.3	+0.3
SMLA				IAML		02 15 01.3	
	comp=E,570nm,0.9s						
SMLA				IAML		02 15 01.7	
	comp=N,116nm,0.3s						
KUDL	Kundal	8.29	138	eP	Pn	02 13 48.2	-13
KUDL				eS	Sn	02 15 16.5	-17
KK31	Karatay Array	8.65	2	⇓Pn	Pn	02 14 07.4	+1.1
	comp=N,3.7nm,0.5s,baz=182,slow=13,SNR=7.3						
KK31				⇑Sn	Sn	02 15 43.9	+1.3
	comp=N,4.4nm,0.6s,baz=190,slow=26,SNR=5.6						
JOSI	Joshimath	8.82	114	eP	Pn	02 14 09.2	+0.3
JOSI				eS	Sn	02 15 44.5	-2.7
JOSI				IAML		02 15 53.8	
	comp=N,65nm,0.2s						
JOSI				IAML		02 15 56.3	
	comp=E,76nm,0.5s						
AAK	Ala-Archa	8.85	21	Pn	Pn	02 14 09.9	+0.7
	comp=E,0.7nm,0.3s,baz=149,slow=15,SNR=16						
AAK				Sn	Sn	02 15 48.8	+1.1
	baz=329,slow=19,SNR=2.7						
AAK	Ala-Archa	8.85	21	⇓Pn	Pn	02 14 11.0	+1.8
	comp=E,3.5nm,0.5s						
AAK				⇓Sn	Sn	02 15 48.6	+0.9
	comp=E,15nm,1.0s						
GEYT	Alibeck	10.34	293	Pn	Pn	02 14 30.4	+0.9
	comp=E,0.2nm,0.3s,baz=118,slow=15,SNR=3.2						
BHPL	Bhopal	12.84	149	eP	Pn	02 15 01.8	-2.0
BHPL				IAmb	IAmb	02 15 05.4	
	comp=Z,8.8nm,0.3s						
DANN	Dangsing	13.10	114	eP	Pn	02 15 05.9	-1.6
GKN	Gorkha	13.94	114	eP	Pn	02 15 15.3	-3.5
DMN	Daman	14.50	114	eP	Pn	02 15 22.6	-3.9
	comp=Z,16nm,0.5s						
PKIN	Phulchoki	14.73	114	eP	Pn	02 15 26.6	-3.1
	comp=Z,9.8nm,0.4s						
PKI	Pulchoki	14.74	114	eP	Pn	02 15 26.5	-3.5
	comp=Z,17nm,0.6s						
JIRN	Jiri	15.29	112	eP	Pn	02 15 34.6	-2.7
	comp=Z,20nm,0.4s						
MK31	Makanchi Array	15.36	33	P	Pn	02 15 38.9	+1.1
	comp=Z,1.0nm,0.6s,baz=214,slow=9.5,SNR=16						
MKAR	Makanchi Array	15.36	33	Pn	Pn	02 15 36.0	-1.8
	comp=Z,0.0nm,0.3s,baz=207,slow=11,SNR=5.4						
RAMN	Ramite	15.97	113	eP	Pn	02 15 43.0	-2.9
	comp=Z,12nm,0.7s						
ODAN	Odare	16.62	112	eP	Pn	02 15 50.7	-3.5
	comp=Z,4.2nm,0.4s						
TAPN	Taplejung	16.62	110	eP	Pn	02 15 52.1	-2.1
	comp=Z,16nm,0.7s						
KURBB	Kurchatov Arra	17.28	18	P	Pn	02 15 59.9	-2.1
	comp=Z,0.1nm,0.3s,baz=209,slow=10,SNR=11						
AKTO	Aktyubinsk	18.28	335	P	P	02 16 14.2	-0.1
	comp=Z,0.1nm,0.3s,baz=143,slow=12,SNR=12						
AKTO				S	Sn	02 19 33.2	-4.1
	comp=Z,0.1nm,0.3s,baz=156,slow=20,SNR=3.3						
AKTO	Aktyubinsk	18.28	335	⇑P	Pn	02 16 15.7	+1.3
	comp=Z,6.1nm,1.1s						
BVAR	Borovoye Array	18.57	0	P	P	02 16 16.9	-0.5
	comp=Z,0.3nm,0.3s,baz=180,slow=10,SNR=14						
GNI	Garni	20.98	293	P	P	02 16 44.8	+0.8
	comp=Z,2.8nm,0.9s,baz=47,slow=19,SNR=2.1						
ZALV	Zalesovo Beam	22.06	23	P	P	02 16 54.0	-1.2
	comp=Z,1.8nm,0.5s,baz=220,slow=11,SNR=7.6						
ARU	Arti	23.38	344	P	P	02 17 08.9	-0.1
	comp=Z,0.6nm,0.3s,baz=142,slow=12,SNR=4.0						
BRTR	Keskin Array B	29.48	291	P	P	02 18 05.6	+1.1
	comp=Z,0.5nm,0.6s,baz=95,slow=10,SNR=3.5						
SONM	Songino Array	30.09	53	P	P	02 18 10.3	+0.5
	comp=Z,0.7nm,0.7s,baz=259,slow=8.9,SNR=6.6						
AKASG	Malin Array Be	33.75	311	P	P	02 18 40.3	-1.4
	comp=Z,0.5nm,0.5s,baz=90,slow=6.6,SNR=5.6						
FINES	FINESS Array B	38.83	328	P	P	02 19 25.3	+0.3
	comp=Z,1.9nm,0.7s,baz=137,slow=9.1,SNR=4.6						
NB2	NORSAR Subarra	45.63	324	P	P	02 20 20.3	-0.1
	comp=Z,0.8nm,0.5s,baz=99,slow=7.9						
NOA	NORSAR Array B	45.63	324	P	P	02 20 20.4	0.0
	comp=Z,1.4nm,0.6s,baz=99,slow=7.8,SNR=8.4						
TIXI	Tiksi	47.93	21	P	P	02 20 37.2	-0.9
	comp=Z,0.7nm,0.4s,baz=270,slow=4.3,SNR=3.6						
TORD	Torodi Ar. Bea	65.00	269	P	P	02 22 40.1	-0.4
	comp=Z,0.6nm,0.7s,baz=53,slow=5.2,SNR=4.8						
BOSA	Boshof	75.74	220	P	P	02 23 47.8	+1.9
	comp=Z,2.4nm,0.9s,baz=0.0,slow=7.1,SNR=2.8						
ILAR	Eielson Array	76.93	15	P	P	02 23 52.5	+0.4
	comp=Z,0.2nm,0.5s,baz=306,slow=6.1,SNR=3.3						
WRA	Warramunga Arr	81.50	121	P	P	02 24 16.6	-1.0
	comp=Z,0.9nm,1.0s,baz=326,slow=5.4,SNR=4.4						
YKA	Yellowknife Ar	83.32	2	P	P	02 24 25.9	-0.6
	comp=Z,0.8nm,0.5s,baz=349,slow=4.8,SNR=20						
ASAR	Alice Springs	83.65	124	P	P	02 24 28.8	0.0
	comp=Z,0.8nm,0.9s,baz=313,slow=5.1,SNR=7.0						

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*IDC **13** 02:28:07.5±0.9, 1°.98N×96°.61E, h0km, mb4.3/11, mb1 4.4/13, mb1mx4.1/36, mbtmp4.2/13, ML4.1/2, MS3.5/7, Ms1 3.5/7, ms1mx3.1/47, Error ellipse: s-maj=27.3km s-min=16.3km az=46.0*
*NEIC **13** 02:28:10.8±1.1, 1°.9N±0°.1×96°.60E±0°.09, h28km±6km, mb4.5/14, Error ellipse: s-maj=17.9km s-min=10.9km az=208.0*
*DJA **13** 02:28:11.9±0.7, 2°N±3°×9°7E±°, h43km±17km, M4.2/11, mB4.7/1, mb4.5/3, MLv4.1/11, Mw(mB)3.9/1*
ISC 13 02:28:13.4±1.2, **2°.07N**±0°.05×**96°.64E**±0°.06, **h44**km±10km, **n63,** σ1ˢ**00**/64, **mb4.4**/18, **MS3.6**/5, **2C-1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	0.46	317	P	Pn	02 28 23.3	-0.5
TPTI		1.30	25	P	Pn	02 28 33.3	-1.8
TPTI				S	Sn	02 28 51.1	-0.2
KCSI	Kotacane, Aceh	1.83	38	P	Pn	02 28 41.1	-1.3
KCSI				S	Sn	02 29 06.2	+1.7
MLSI	Meulaboh, Aceh	2.19	354	P	Pn	02 28 45.6	-1.8
RPSI	Rantau Prapat	2.37	75		Pn	02 28 48.4	-1.4
RPSI				Sn	Sn	02 29 18.4	+0.8
RPSI	Rantau Prapat	2.37	75		Pn	02 28 49.0	-0.8
RPSI					Sn	02 29 19.5	+1.9
PSI	Prapat	2.40	72	Pn	Pn	02 28 49.0	-1.3
	5.5nm,0.3s,baz=262,slow=5.7,SNR=23						
PSI				Sn	Sn	02 29 19.5	+1.0
	8.3nm,0.3s,baz=264,slow=9.1,SNR=5.9						
PSI				LR	LR	02 29 28.4	
	comp=Z,273nm,19.4s,baz=296,slow=33						
PBSI	Pulau Batu	2.67	142	P	Pn	02 28 52.5	-1.5
LHMI	Lhok Sumawe	3.15	6	P	Pn	02 29 00.5	0.0
LHMI	Lhok Sumawe	3.15	6	Pn	Pn	02 29 00.5	0.0
SISI	Saibi	4.17	144	P	Pn	02 29 13.9	-0.6
IPM	Ipoh	4.99	61		Pn	02 29 24.7	-1.1
KULM	Kulim	5.12	51		Pn	02 29 26.6	-1.0
SDSI	Sungai Dareh	5.64	122	P	Pn	02 29 35.5	+0.7
CMAR	Chiang Mai Arr	16.44	8	Pn	Pn	02 32 00.3	-0.7
	1.0nm,0.3s,baz=198,slow=12,SNR=35						
PALK	Pallekele	16.70	289	LR	LR	02 37 42.3	
	comp=Z,156nm,18.6s,baz=113,slow=34						
SHL	Shillong	23.80	349	P	P	02 33 20.9	-1.6
SHL				IAmb	IAmb	02 33 23.3	
	comp=Z,10nm,0.7s						
H08S2	Diego Garcia H	25.95	248	T	T	03 00 31.2	
	baz=69,slow=75,SNR=570						
H08S3	Diego Garcia H	25.95	248	T	T	03 00 31.3	
	baz=69,slow=75,SNR=1266						
H08S1	Diego Carcia H	25.97	248	T	T	03 00 32.5	
	baz=69,slow=75,SNR=285						
GTA	Gaotai	37.28	4	⇓P	P	02 35 22.0	+0.8
GTA				pP	pP	02 35 30.8	-2.4
GTA				sP	sP	02 35 34.9	-3.5
NIL	Nilore	38.28	328	P	P	02 35 28.6	-1.2
NIL				IAmb	IAmb	02 35 34.0	
	comp=Z,8.6nm,0.7s						
H01W3	Cape Leeuwin H	40.26	158	T	T	03 18 30.7	
	baz=333,slow=76,SNR=14						
H01W2	Cape Leeuwin H	40.27	158	T	T	03 18 30.4	
	baz=333,slow=76,SNR=16						
H01W1	Cape Leeuwin H	40.27	157	T	T	03 18 29.7	
	baz=333,slow=76,SNR=18						
KSH	Kashi	41.75	336	P	P	02 35 58.7	+0.2
KSH				sP	pP	02 36 12.5	+1.9
KSH				PP	PnPn	02 37 39.4	-1.5
KSH				PcS	PcS	02 41 45.3	-0.6
KSH				S	S	02 42 13.1	+0.3
KSH				ScS	ScS	02 45 55.7	-2.4
WB0	Warramunga Arr	42.94	122	P	P	02 36 07.4	-0.9
WB0				IAmb	IAmb	02 36 08.6	
	comp=Z,5.3nm,0.6s						
WRA	Warramunga Arr	42.97	122	P	P	02 36 08.3	-0.3
	comp=Z,2.8nm,0.7s,baz=300,slow=9.3,SNR=27						
WRA				PcP	PcP	02 37 59.3	+0.7
	comp=Z,0.4nm,0.6s,baz=306,slow=2.7,SNR=3.3						
WRA	Warramunga Arr	42.97	122	P	P	02 36 06.8	-1.8
WB2	Warramunga Arr	42.98	122	P	P	02 36 08.2	-0.5
WR0	Warramunga Arr	43.15	122	P	P	02 36 09.5	-0.5
GAR	Garm	43.91	330	P	P	02 36 16.0	0.0
GAR				IAmb	IAmb	02 36 21.1	
	comp=Z,7.7nm,0.9s						
ASAR	Alice Springs	44.37	127	P	P	02 36 19.8	0.0
	comp=Z,3.0nm,0.9s,baz=301,slow=8.1,SNR=22						
ASAR				PcP	PcP	02 38 04.1	+0.8
	comp=Z,0.5nm,0.7s,baz=291,slow=2.9,SNR=4.2						
ASAR	Alice Springs	44.37	127	P	P	02 36 19.1	-0.7
ARSB	Arslanbob	44.52	334	P	P	02 36 20.5	-0.3
ARSB				IAmb	IAmb	02 36 38.3	
	comp=Z,5.8nm,0.8s						
AAK	Ala-Archa	44.99	337	P	P	02 36 24.7	+0.1
KSRS	Korea Array	45.46	35	P	P	02 36 28.4	+0.2
	comp=Z,2.8nm,0.8s,baz=234,slow=10,SNR=4.4						
KSRS				LR	LR	02 58 04.9	
	comp=Z,65nm,18.4s,baz=194,slow=40						
MK31	Makanchi Array	46.27	346	P	P	02 36 35.1	+0.7
MK31				IAmb	IAmb	02 36 36.4	
	comp=Z,4.2nm,0.7s						
MKAR	Makanchi Array	46.27	346	P	P	02 36 35.6	+1.1
	comp=Z,7.2nm,0.7s,baz=161,slow=7.7,SNR=77						
MKAR	Makanchi Array	46.27	346	P	P	02 36 34.7	+0.2
MAKZ	Makanchi	46.35	346	P	P	02 36 35.6	+0.5
MAKZ				IAmb	IAmb	02 36 37.0	
	comp=Z,5.6nm,0.7s						
SONM	Songino Array	46.36	9	P	P	02 36 36.5	+1.2
	comp=Z,3.6nm,0.7s,baz=188,slow=9.3,SNR=23						
SONM				PcP	PcP	02 38 11.1	+1.3
	comp=Z,0.4nm,0.6s,baz=183,slow=3.7,SNR=2.2						
SONM	Songino Array	46.36	9	P	P	02 36 35.7	+0.4
TLY	Talaya	49.79	6	LR	LR	02 59 36.8	
	comp=Z,72nm,19.3s,baz=0.0,slow=38						
GEYT	Alibeck	50.19	320	P	P	02 37 06.1	+1.2
	comp=Z,1.4nm,0.7s,baz=184,slow=7.1,SNR=3.6						
GEYT	Alibeck	50.19	320	P	P	02 37 04.6	-0.4
PMG	Port Moresby	51.60	104	P	P	02 37 14.7	-1.2
USRK	Ussuriysk Ar.	52.32	32	P	P	02 37 21.6	+0.8
	comp=Z,1.3nm,0.5s,baz=255,slow=5.5,SNR=3.2						
USRK	Ussuriysk Ar.	52.32	32	P	P	02 37 21.3	+0.5
ZALV	Zalesovo Beam	52.62	351	P	P	02 37 23.8	+1.0
	comp=Z,9.9nm,0.8s,baz=178,slow=6.3,SNR=28						
ZALV	Zalesovo Beam	52.62	351	P	P	02 37 23.3	+0.6
ABKAR	Akbulak array	56.48	332	P	P	02 37 51.5	+0.6
BRTR	Keskin Array B	68.11	312	LR	LR	03 11 49.6	
	comp=Z,39nm,20.2s,baz=262,slow=38						
MA2	Magadan	70.80	26	LR	LR	03 13 21.7	
	comp=Z,19nm,20.0s,baz=231,slow=38						
FINES	FINESS Array B	78.97	333	P	P	02 40 13.1	+0.8
	comp=Z,1.3nm,0.6s,baz=86,slow=4.5,SNR=5.0						
FINES	FINESS Array B	78.97	333	P	P	02 40 12.6	+0.4
SYO	Syowa Base	80.65	198	⇑eP	P	02 40 20.0	-1.2
SYO	Syowa Base	80.65	198	⇑ePcP	PcP	02 40 28.4	+0.5
ARCES	ARCESS Array B	81.53	340	P	P	02 40 26.6	+0.7
	comp=Z,2.7nm,0.9s,baz=98,slow=8.7,SNR=8.3						
ARCES	ARCESS Array B	81.53	340	P	P	02 40 26.2	+0.2
GERES	GERESS Array B	83.79	319	P	P	02 40 38.9	+0.6
	comp=Z,0.2nm,0.3s,baz=89,slow=8.2,SNR=4.5						
GERES	GERESS Array B	83.79	319	P	P	02 40 38.1	-0.1
VNDA	Vanda	86.78	169	LR	LR	03 20 05.2	
	comp=Z,56nm,18.3s,baz=284,slow=36						

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*NEIC **13** 02:47:51.9±2.2, 15°.9N±0°.1×98°.64W±0°.10, h1km±9km, Error ellipse: s-maj=19.6km s-min=9.0km az=214.0*
*MEX **13** 02:47:54.9±0.5, 15°.84N×98°.69W, h6km±5km, MD3.9*
*IDC **13** 02:47:57.0±2.6, 16°.45N×98°.47W, h0km, mb3.6/6, mb1 3.8/11, mb1mx3.7/44, mbtmp3.6/11, ML3.6/4, MS3.2/3, Ms1 3.2/3, ms1mx2.7/39, Error ellipse: s-maj=52.8km s-min=16.2km az=15.0*
ISC 13 02:47:54.0±0.9, **15°.85N**±0°.07×**98°.68W**±0°.05, **h17km, n35,** σ1ˢ**40**/46, **mb3.7**/8, **Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOIG	Yosondua	1.48	47	iP	Pn	02 48 18.6	-1.5
YOIG				eS	Sn	02 48 37.6	-1.6
PEIG	Puerto Escondi	1.48	84	iP	Pn	02 48 18.8	-1.1
PEIG				iS	Sn	02 48 37.0	-1.9
TLIG	Tlapa	1.71	4	eP	Pn	02 48 21.9	-1.2
TLIG				iS	Sn	02 48 43.8	-0.8
TLIG	Tlapa	1.71	4		Pn	02 48 22.0	-1.0
TLIG	Tlapa	1.71	4		Sn	02 48 43.8	-0.8
CAIG	El Cayaco	1.93	308	eP	Pn	02 48 24.8	-1.3
CAIG				iS	Sn	02 48 48.4	-1.6
CAIG	El Cayaco	1.93	308		Pn	02 48 24.8	-1.3
CAIG					Sn	02 48 48.4	-1.6
FTIG	Fresnillo de T	2.11	14	eP	Pn	02 48 27.8	-0.9
FTIG				iS	Sn	02 48 53.3	-1.3
HLIG	Huajuapan de L	2.14	23	eP	Pn	02 48 28.1	-1.0
HLIG				iS	Sn	02 48 54.4	-1.0
VHO	Vista Hermosa	2.23	57	iP	Pn	02 48 29.9	-0.4
VHO				iS	Sn	02 48 55.8	-1.8
HUIG	Huatulco	2.48	92	iP	Pn	02 48 33.3	-0.2
HUIG	Huatulco	2.48	92		Pn	02 48 33.3	-0.2
TOIG	Toxpalan	2.71	34	eP	Pn	02 48 36.9	0.0
TOIG				iS	Sn	02 49 09.6	+0.2
UNM	Universidad Na	3.49	352	Pn	Pn	02 48 47.9	+0.2
UNM				Sn	Sn	02 49 30.2	+1.3
CMIG	Matias Romero	3.84	71	Pn	Pn	02 48 51.6	-0.8
	1.6nm,0.3s,baz=262,slow=8.7,SNR=25						
CMIG				Sn	Sn	02 49 35.0	-2.2
	1.7nm,0.3s,baz=32,slow=13,SNR=3.9						
CMIG				Lg	Lg	02 49 49.7	
	4.7nm,0.3s,baz=4.4,slow=7.6,SNR=6.0						
CMIG				LR	LR	02 50 06.2	
	comp=Z,79nm,20.7s,baz=243,slow=37						
MOIG	Morelia	4.50	328	Pn	Pn	02 49 01.1	-0.4
MOIG				Sn	Sn	02 49 55.0	+1.4
APG	El Apazote	7.97	95	Pn	Pn	02 49 52.8	+3.5
	baz=273,slow=17,SNR=2.0						
APG				Lg	Lg	02 52 15.2	
	0.2nm,0.3s,baz=186,slow=10,SNR=2.0						
TXAR	Lajitas Array	14.18	342	Pn	Pn	02 51 12.6	-1.7
	0.2nm,0.3s,baz=165,slow=3.7,SNR=4.1						
JTS	Las Juntas de	14.47	111	Pn	P	02 51 24.2	-0.5
	0.3nm,0.3s,baz=5.5,slow=19,SNR=2.1						
ANMO	Albuquerque	20.26	341	P	P	02 52 29.4	+0.6
	0.1nm,0.3s,baz=151,slow=13,SNR=5.8						
X16A	Lo Mia Camp, P	21.76	330	P	P	02 52 44.2	-0.9
MVCO	Mesa Verde	22.99	340	P	P	02 52 57.7	-0.5
MVCO				IAmb	IAmb	02 53 08.0	
	comp=Z,9.3nm,1.0s						
MTPU	Mount Pierson	25.11	334	P	P	02 53 18.3	-0.1
Q16A	Castle Valley	25.46	337	P	P	02 53 20.8	-0.5
TPNV	Topopah Spring	26.17	327	P	P	02 53 28.8	+1.0
TPNV				IAmb	IAmb	02 53 40.9	
	comp=Z,3.2nm,1.1s						
NVAR	Mina Array Bea	28.36	326	P	P	02 53 51.2	+3.8
	comp=Z,0.3nm,0.4s,baz=160,slow=11,SNR=3.5						
PDAR	Pinedale Array	28.40	343	P	P	02 53 49.7	+1.9
	comp=Z,0.4nm,0.7s,baz=145,slow=8.4,SNR=4.5						
PDAR				LR	LR	03 04 41.1	
	comp=Z,77nm,21.0s,baz=338,slow=36						
PDAR	Pinedale Array	28.40	343	P	P	02 53 49.0	+1.2
RYN	Ryan	28.62	326	P	P	02 53 49.8	+0.1
ELK	Elko	28.67	333	LR	LR	03 06 10.2	
	comp=Z,151nm,18.4s,baz=234,slow=39						
SCHQ	Schefferville	46.02	25	P	P	02 56 16.9	+0.5
	comp=Z,2.7nm,0.8s,baz=281,slow=3.7,SNR=4.5						
YKA	Yellowknife Ar	47.92	350	P	P	02 56 32.3	+1.2
	comp=Z,0.6nm,0.9s,baz=154,slow=7.9,SNR=4.5						
INK	Inuvik	56.93	345	P	P	02 57 38.3	+0.5
	comp=Z,0.7nm,0.7s,baz=102,slow=7.8,SNR=2.6						
ILAR	Eielson Array	58.66	338	P	P	02 57 52.6	+2.5
	comp=Z,0.5nm,0.9s,baz=116,slow=4.1,SNR=3.0						
ILAR	Eielson Array	58.66	338	P	P	02 57 49.7	-0.4

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*IDC **13** 02:48:25.7±0.6, 38°.05S×176°.02E, h305km±7km, mb3.3/4, mb1 3.4/5, mb1mx3.3/43, mbtmp4.1/5, Error ellipse: s-maj=25.7km s-min=17.7km az=129.0*
*NEIC **13** 02:48:27.1±1.7, 38°.1S±0°.1×175°.8E±0°.1, h312km±8km, mb3.7/9, ML4.0(WEL), Error ellipse: s-maj=16.2km s-min=9.8km az=146.0*
*WEL **13** 02:48:29.0, 38°S±2°×17°6E±°, h294km±6km, M4.0/70, MLv4.0/70, Error ellipse: s-maj=0.0km s-min=0.0km az=37.0*
ISC 13 02:48:27.4±0.6, **38°.01S**±0°.05×**175°.87E**±0°.05, **h311**km±5km, **n198,** σ1ˢ**32**/249, **mb3.6**/9, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMRZ	Kaimai	0.18	20	P	Pn	02 49 06.6	-0.3
KARZ	Kaharoa	0.30	91	P	Pn	02 49 06.7	-0.2
UTU	Utuhina	0.30	122	P	Pn	02 49 07.1	+0.2
GRRZ	Galatos Road	0.39	150	P	Pn	02 49 07.3	+0.3
TOZ	Tahuroa Road	0.40	314	P	Pn	02 49 06.8	-0.3
TLZ	Tolley Road	0.41	219	P	Pn	02 49 07.6	+0.6
OMRZ	Omania	0.41	103	P	Pn	02 49 06.9	-0.2
HSRZ	Hossack Road	0.42	135	P	Pn	02 49 07.3	+0.3
TGRZ	Tauranga	0.42	48	P	Pn	02 49 06.4	-0.7
HLRZ	Highlands Stat	0.45	122	P	Pn	02 49 07.6	+0.5
KUTZ	Kaahu Road	0.47	184	P	Pn	02 49 07.8	+0.7
MKRZ	Makatiti	0.49	105	P	Pn	02 49 07.7	+0.4
HRRZ	Handcock Road	0.50	139	P	Pn	02 49 07.6	+0.3
TARZ	Mount Tarawera	0.55	114	P	Pn	02 49 07.4	0.0
WPRZ	Whakapapatarin	0.56	155	P	Pn	02 49 07.7	+0.4
OPRZ	Ohinepanea	0.57	73	P	Pn	02 49 06.4	-1.0
RRRZ	Republican Roa	0.61	123	P	Pn	02 49 07.3	-0.2
PRRZ	Plateau Road	0.64	140	P	Pn	02 49 07.6	0.0
PRRZ				S	S	02 49 38.2	-1.3
WHTZ	Whakaora	0.66	174	P	Pn	02 49 08.3	+0.6
ALRZ	Allen Road	0.66	146	P	Pn	02 49 07.9	+0.3
ALRZ				S	S	02 49 39.5	-0.2
EDRZ	Edgecumbe	0.70	98	P	Pn	02 49 07.3	-0.5
WATZ	Wairara	0.70	189	P	Pn	02 49 08.5	+0.7
WATZ				S	S	02 49 40.5	+0.6
MUGZ	Murupara	0.85	123	P	Pn	02 49 08.0	-0.3
MUGZ				S	S	02 49 38.6	-2.2
RATZ	Rangitukua	0.85	185	P	Pn	02 49 08.8	+0.4
RATZ				S	S	02 49 40.2	-0.7
HATZ	Hinemaiaia	0.89	169	P	Pn	02 49 08.7	+0.2
HATZ				S	S	02 49 39.8	-1.4
MRHZ	Matea Rd	0.93	152	P	Pn	02 49 08.8	+0.1
MRHZ				S	S	02 49 39.4	-2.1
HIZ	Hauiti	0.94	238		Pn	02 49 08.9	+0.2
HIZ				S	S	02 49 40.6	-0.9
HIZ	Hauiti	0.94	238	P	Pn	02 49 09.3	+0.6
HIZ				S	S	02 49 42.7	+1.2
RITZ	Rihia Road	0.96	180	P	Pn	02 49 09.9	+1.1
RITZ				S	S	02 49 41.1	-0.6
KATZ	Kakaramea	0.97	188	P	Pn	02 49 09.5	+0.6
URZ	Urewera	1.01	104	P	Pn	02 49 07.9	-1.0
	210nm,0.3s,baz=258,slow=4.4,SNR=763						
URZ				S	S	02 49 38.3	-3.7
	328nm,0.3s,baz=175,slow=23,SNR=63						
URZ	Urewera	1.01	104		Pn	02 49 07.9	-1.0
URZ					S	02 49 40.6	-1.5
URZ	Urewera	1.01	104	P	Pn	02 49 08.0	-1.0
URZ				S	S	02 49 39.0	-3.0
RTZ	Ruatahuna	1.06	125	P	Pn	02 49 09.2	-0.1
RTZ				S	S	02 49 40.8	-1.9
MKAZ	Moumakai	1.07	328	P	Pn	02 49 08.7	-0.6
MKAZ				S	S	02 49 41.0	-1.7
KRVZ	Karewarewa	1.09	189	P	Pn	02 49 10.2	+0.7
TWVZ	Taurewa	1.11	198	P	Pn	02 49 10.1	+0.6
TWVZ				S	S	02 49 42.6	-0.4
WTVZ	West Tongariro	1.12	191	P	Pn	02 49 10.2	+0.6
WTVZ				S	S	02 49 42.8	-0.5
MTHZ	Maungataniwha	1.13	138	P	Pn	02 49 09.9	+0.3
MTHZ				S	S	02 49 41.9	-1.3
NGZ	Ngauruhoe	1.18	190	P	Pn	02 49 10.7	+0.7
KBAZ	Karaka Road Bo	1.20	319	P	Pn	02 49 09.6	-0.4
BKZ	Black Stump Fm	1.25	157		Pn	02 49 10.5	+0.3
BKZ				S	S	02 49 43.8	-0.5
BKZ	Black Stump Fm	1.25	157	P	Pn	02 49 10.8	+0.6
BKZ				S	S	02 49 42.1	-2.2
TUVZ	Tukino	1.26	187	P	Pn	02 49 11.2	+0.8
TUVZ				S	S	02 49 43.8	-0.8
FWVZ	Far West T-bar	1.26	191	P	Pn	02 49 11.3	+0.8
FWVZ				S	S	02 49 43.8	-1.0
KUZ	Kuaotunu	1.27	355	P	Pn	02 49 08.8	-1.6
DRZ	Dome Shelter	1.28	191	P	Pn	02 49 11.8	+1.1
WHVZ	Whangaehu Hut	1.28	190	P	Pn	02 49 11.4	+0.9
WHVZ				S	S	02 49 43.7	-1.3
ETAZ	East Tamaki Re	1.29	325	P	Pn	02 49 09.8	-0.7
TRVZ	Turoa	1.31	191	P	Pn	02 49 11.6	+0.9
TRVZ				S	S	02 49 43.7	-1.5
NMHZ	Naumai	1.31	146	P	Pn	02 49 11.8	+1.3
RAGZ	Rawiri	1.31	112	P	Pn	02 49 10.8	+0.2
RAGZ				S	S	02 49 42.8	-2.2
RAHZ	Arahi	1.31	134	P	Pn	02 49 11.3	+0.8
PKVZ	Pokaka	1.34	198	P	Pn	02 49 11.4	+0.8
PKVZ				S	S	02 49 44.9	-0.2
MWZ	Matawai	1.35	104	P	Pn	02 49 10.1	-0.6
MWZ				S	S	02 49 42.2	-3.1
WIAZ	Waiheke Island	1.35	334	P	Pn	02 49 09.8	-1.0
AWAZ	Awhitu Peninsu	1.36	314	P	Pn	02 49 10.4	-0.4
SNGZ	Shannon Statio	1.39	124	P	Pn	02 49 11.4	+0.4
SNGZ				S	S	02 49 43.7	-2.0
MOVZ	Moawhango	1.39	184	P	Pn	02 49 11.5	+0.5
MOVZ				S	S	02 49 46.9	+1.1
MTVZ	Mangateitei	1.40	193	P	Pn	02 49 12.0	+1.0
MTVZ				S	S	02 49 45.7	-0.2
VRZ	Vera Road	1.41	218	P	Pn	02 49 12.2	+1.2
VRZ				S	S	02 49 46.5	+0.8
RUGZ	Raukumara Rang	1.43	89	P	Pn	02 49 09.4	-2.0
EPAZ	Eden Park BICE	1.45	322	P	Pn	02 49 10.7	-0.7
MBAZ	Motutapu North	1.46	328	P	Pn	02 49 10.5	-1.0
HBAZ	Herne Bay Bore	1.47	322	P	Pn	02 49 10.8	-0.7
KWHZ	Kaweka Forest	1.47	163	P	Pn	02 49 12.5	+1.0
WTAZ	Waiatarua	1.49	316	P	Pn	02 49 11.4	-0.3
WHHZ	Waihua	1.51	135	P	Pn	02 49 12.4	+0.8
ARHZ	Aropaoanui	1.53	145	P	Pn	02 49 12.7	+1.0
ARHZ				S	S	02 49 46.6	-0.5
HAZ	Te Kaha	1.54	81	P	Pn	02 49 10.0	-1.8

HAZ				S	S	02 49 41.9	-5.4
MCHZ	McNeill Hill	1.57	156	P	Pn	02 49 13.3	+1.3
MHEZ	Mangahewa	1.61	228	P	Pn	02 49 14.3	+2.0
RVAZ	Riverhead Bore	1.61	320	P	Pn	02 49 11.8	-0.6
TKGZ	Te Karaka	1.62	106	P	Pn	02 49 12.4	+0.1
TKGZ				S	S	02 49 45.9	-2.3
ABAZ	Army Bay	1.63	329	P	Pn	02 49 11.7	-0.9
RIGZ	Rimuhau	1.64	115	P	Pn	02 49 12.9	+0.4
KRHZ	Kereru	1.67	167	P	Pn	02 49 13.6	+0.8
TWGZ	Tauwhareparae	1.68	96	P	Pn	02 49 12.8	0.0
TWGZ				S	S	02 49 48.1	-0.9
KNZ	Kokohu	1.74	126	P	Pn	02 49 13.5	+0.3
PKGZ	Pakihiroa	1.75	87	P	Pn	02 49 12.6	-0.8
PKGZ				S	S	02 49 46.9	-3.1
DREZ	Durham Road	1.75	228	P	Pn	02 49 15.0	+1.7
GRZ	Great Barrier	1.79	349	P	Pn	02 49 12.1	-1.6
PRGZ	Paritu Road	1.82	120	P	Pn	02 49 14.3	+0.5
LREZ	Lake Rotokare	1.84	218	P	Pn	02 49 15.3	+1.4
WAZ	Wanganui	1.87	201	P	Pn	02 49 15.2	+1.1
PREZ	Palmer Road	1.88	225	P	Pn	02 49 15.8	+1.5
PKE	Pukeiti	1.89	231	P	Pn	02 49 15.9	+1.7
PUZ	Puketiti	1.89	92	P	Pn	02 49 13.6	-0.7
CKHZ	Cape Kidnapper	1.90	150	P	Pn	02 49 15.4	+1.2
CNGZ	Carnagh Statio	1.90	105	P	Pn	02 49 14.6	+0.3
PNHZ	Pukenui	1.91	172	P	Pn	02 49 15.2	+0.8
KHEZ	Kahui Hut	1.93	228	P	Pn	02 49 16.2	+1.6
KAHZ	Kahuranaki	1.94	156	P	Pn	02 49 16.0	+1.3
MHGZ	Mahia Peninsul	1.96	126	P	Pn	02 49 15.5	+0.7
MXZ	Matakaoa Point	1.99	78		Pn	02 49 14.0	-1.0
MXZ				S	S	02 49 50.9	-2.1
MXZ	Matakaoa Point	1.99	78	P	Pn	02 49 13.8	-1.2
NBEZ	Newall Road No	2.00	231	P	Pn	02 49 16.9	+1.8
WMGZ	Waiomatatini S	2.03	85	P	Pn	02 49 14.6	-0.7
TSZ	Takapari Road	2.04	178	P	Pn	02 49 16.2	+0.8
NMEZ	Namu Road	2.09	227	P	Pn	02 49 17.2	+1.5
WPHZ	Waipukurau	2.10	168	P	Pn	02 49 16.8	+1.0
PXZ	Pawanui	2.16	159	P	Pn	02 49 17.4	+1.1
OHWZ	Ohakea	2.23	191	P	Pn	02 49 18.4	+1.5
DVHZ	Dannevirke	2.29	174	P	Pn	02 49 18.1	+0.7
PRHZ	Porangahau	2.33	165	P	Pn	02 49 18.8	+1.1
POWZ	Post Office Ro	2.38	182	P	Pn	02 49 18.8	+0.7
WCZ	Waipu Caves	2.40	329	P	Pn	02 49 17.2	-1.3
ANWZ	Angora Road	2.49	169	P	Pn	02 49 20.4	+1.3
PRWZ	Pori Road	2.54	178	P	Pn	02 49 20.5	+1.0
MRZ	Mangatainoka R	2.65	185	P	Pn	02 49 21.0	+0.5
BFZ	Birch Farm	2.68	174		Pn	02 49 20.1	-0.7
BFZ				S	S	02 50 00.8	-2.7
BFZ	Birch Farm	2.68	174	P	Pn	02 49 21.7	+0.9
TIWZ	Tintock	2.76	180	P	Pn	02 49 22.5	+1.0
OGWZ	Otaki Gorge	2.85	191	P	Pn	02 49 23.0	+0.6
HOWZ	Holdsworth Sta	2.89	185	P	Pn	02 49 23.1	+0.3
CPWZ	Castlepoint	2.90	175	P	Pn	02 49 24.3	+1.4
KIW	Kapiti Island	2.94	194	P	Pn	02 49 23.5	+0.3
TMWZ	Te Maipa	3.09	180	P	Pn	02 49 25.3	+0.6
CAW	Cannon Point	3.15	191	P	Pn	02 49 25.7	+0.4
MTW	Mount Morrison	3.15	185	P	Pn	02 49 25.5	+0.2
DUWZ	D'Urville Isla	3.17	208	P	Pn	02 49 25.6	+0.2
OUZ	Omahuta	3.33	326		Pn	02 49 25.7	-1.6
OUZ	Omahuta	3.33	326	P	Pn	02 49 25.6	-1.6
WEL	Wellington	3.37	194	P	Pn	02 49 28.0	+0.5
PAWZ	Paruwai Farm	3.38	186	P	Pn	02 49 28.0	+0.4
TRWZ	Traveller	3.38	182	P	Pn	02 49 28.4	+0.8
SNZO	South Karori	3.41	195		Pn	02 49 28.1	+0.2
TCW	Tory Channel	3.42	201	P	Pn	02 49 28.3	+0.3
MSWZ	Moikau Station	3.43	188		Pn	02 49 28.5	+0.4
MSWZ	Moikau Station	3.43	188	P	Pn	02 49 28.3	+0.2
BHW	Baring Head	3.48	192		Pn	02 49 28.8	+0.3
BHW	Baring Head	3.48	192	P	Pn	02 49 28.6	+0.1
PLWZ	Palliser	3.58	187		Pn	02 49 30.0	+0.3
PLWZ				S	S	02 50 19.1	-0.5
PLWZ	Palliser	3.58	187	P	Pn	02 49 29.9	+0.3
TUWZ	Tuamarina	3.72	203		Pn	02 49 31.3	+0.2
TUWZ	Tuamarina	3.72	203	P	Pn	02 49 31.4	+0.4
NNZ	Nelson	3.73	210		Pn	02 49 31.2	0.0
NNZ				S	S	02 50 21.7	-0.6
NNZ	Nelson	3.73	210	P	Pn	02 49 31.1	-0.1
QRZ	Quartz Range	3.81	222		Pn	02 49 31.6	-0.6
QRZ				S	S	02 50 23.1	-0.9
QRZ	Quartz Range	3.81	222	P	Pn	02 49 31.4	-0.7
CMWZ	Cape Campbell	3.94	198		Pn	02 49 34.1	+0.6
CMWZ				S	S	02 50 28.2	+1.7
CMWZ	Cape Campbell	3.94	198	P	Pn	02 49 34.4	+1.0
BSWZ	Blackbirch Sta	4.00	202		Pn	02 49 34.7	+0.6
BSWZ				S	S	02 50 29.0	+1.4
BSWZ	Blackbirch Sta	4.00	202	P	Pn	02 49 34.5	+0.4
THZ	Tophouse	4.38	210		Pn	02 49 38.6	+0.3
THZ				S	S	02 50 34.6	-0.7
THZ	Tophouse	4.38	210	P	Pn	02 49 38.0	-0.4
KHZ	Kahutara	4.74	201		Pn	02 49 42.8	+0.5
KHZ				S	S	02 50 40.4	-2.1
KHZ	Kahutara	4.74	201	P	Pn	02 49 42.5	+0.3
DSZ	Denniston Nort	4.86	219	P	Pn	02 49 42.9	-0.8
GVZ	Greta Valley S	5.40	203	P	Pn	02 49 49.8	0.0
LTZ	Lake Taylor	5.50	209		Pn	02 49 50.6	-0.3
LTZ				S	S	02 50 56.1	-2.3
LTZ	Lake Taylor	5.50	209	P	Pn	02 49 50.7	-0.3
AMCZ	Amberley	5.71	204	P	Pn	02 49 53.4	0.0
INZ	Inchbonnie	5.79	214	P	Pn	02 49 53.4	-0.9
OXZ	Oxford	6.05	208		Pn	02 49 56.7	-0.8
OXZ				S	S	02 51 08.0	-2.2
OXZ	Oxford	6.05	208	P	Pn	02 49 56.7	-0.8
OKCZ	Okains Bay	6.09	200	P	Pn	02 49 58.1	+0.1
MQZ	McQueen's Vall	6.18	202		Pn	02 49 58.3	-0.7
RPZ	Rata Peaks	6.76	211	P	Pn	02 50 05.1	-0.9
	50nm,0.3s,baz=355,slow=1.6,SNR=131						
RPZ				S	S	02 51 22.5	-3.2
	27nm,0.3s,baz=194,slow=22,SNR=15						
RPZ	Rata Peaks	6.76	211		Pn	02 50 05.3	-0.7
RPZ					S	02 51 25.2	-0.5
FOZ	Fox Glacier	7.17	218		Pn	02 50 09.8	-1.1
LBZ	Lake Benmore	7.67	212		Pn	02 50 17.1	+0.2
LBZ					S	02 51 43.8	-2.0
ODZ	Otahua Downs	8.04	207		Pn	02 50 21.3	-0.1
WKZ	Wanaka	8.53	215	Pn	Pn	02 50 25.6	-1.8
WKZ					S	02 52 00.3	-4.7
EAZ	Earnscleugh	8.72	212	S	S	02 52 03.0	-6.2
MSZ	Milford Sound	8.94	219	P	Pn	02 50 31.3	-1.0
TUZ	Tuapeka	9.19	208	P	Pn	02 50 36.4	+1.0
MLZ	Mavora Lakes	9.35	216	P	Pn	02 50 37.0	-0.5
WHZ	Wether Hill Ro	9.83	214	P	Pn	02 50 42.5	-0.8
WHZ	Wether Hill Ro	9.83	214	P	Pn	02 50 42.4	-0.8
SYZ	Scrubby Hill	9.86	208	P	Pn	02 50 44.8	+1.2
APZ	The Paps	10.55	211	P	Pn	02 50 52.2	+0.1
PYZ	Puysegur Point	10.62	217	Pn	Pn	02 50 52.0	-0.9
PYZ	Puysegur Point	10.62	217	P	Pn	02 50 52.8	-0.1
DZM	Mont Dzumac	17.84	330	P	P	02 52 13.5	-1.5
	1.4nm,0.3s,baz=220,slow=8.5,SNR=8.1						
DZM	Mont Dzumac	17.84	330	P	P	02 52 14.2	-0.8
TOO	Toolangi	23.96	262	P	P	02 53 13.9	-0.4
TOO				IAmb	IAmb	02 53 31.0	
	comp=Z,2.8nm,0.9s						
STKA	Stephens Creek	28.64	272	P	P	02 53 57.8	+1.8
	comp=Z,0.4nm,0.3s,baz=116,slow=12,SNR=4.0						
BBOO	Buckleboo	32.68	267	P	P	02 54 30.8	-0.5
BBOO				IAmb	IAmb	02 54 32.2	
	comp=Z,1.5nm,0.6s						
COEN	Coen	37.59	301	P	P	02 55 12.7	-0.4
COEN				IAmb	IAmb	02 55 19.1	
	comp=Z,5.5nm,1.0s						
AS31	Alice Springs	38.44	280	P	P	02 55 19.3	-0.8
ASAR	Alice Springs	38.44	280	P	P	02 55 19.9	-0.2
	comp=Z,1.1nm,0.5s,baz=125,slow=8.4,SNR=26						
ASAR	Alice Springs	38.44	280	P	P	02 55 20.1	0.0
FORT	Forrest	39.75	266	P	P	02 55 30.1	-0.6
WB2	Warramunga Arr	40.15	285	P	P	02 55 33.4	-0.8
WB2				IAmb	IAmb	02 55 44.4	
	comp=Z,5.1nm,1.1s						
WRA	Warramunga Arr	40.16	285	P	P	02 55 33.3	-0.9
	comp=Z,0.5nm,0.5s,baz=121,slow=7.9,SNR=8.0						
WB0	Warramunga Arr	40.22	285	P	P	02 55 34.2	-0.6
FITZ	Fitzroy Crossi	47.93	280	P	P	02 56 35.0	-0.5
FITZ				IAmb	IAmb	02 56 45.7	
	comp=Z,2.7nm,1.1s						
SNAA	Sanae	70.61	180	P	P	02 59 10.3	+1.3
VNA3	Neumayer Olymp	70.97	178	P	P	02 59 11.3	+0.2
VNA2	Neumayer--Watz	71.34	179	P	P	02 59 13.9	+0.6
	baz=156,slow=4.9						
KSRS	Korea Array	87.15	324	P	P	03 00 38.7	+0.3
	comp=Z,1.0nm,0.6s,baz=153,slow=4.9,SNR=4.6						
KSH	Kashi	119.58	299	PKP	PKiKP	03 06 42.8	+2.4
KSH				PP	PP	03 08 14.8	+6.7
KSH				sPKP		03 08 23.5	
KSH				PKS	PKSdf	03 10 18.4	+1.4
KSH	Kashi	119.58	299	SS	SS	03 24 12.9	+5.7
ARCES	ARCESS Array B	144.64	343	PKP	PKPbc	03 07 23.4	-2.2
	comp=Z,3.1nm,0.9s,baz=70,slow=3.9,SNR=5.8						
FINES	FINESS Array B	149.98	331	PKPbc	PKPbc	03 07 37.5	-2.8
	comp=Z,2.7nm,0.9s,baz=108,slow=4.5,SNR=3.2						
BRTR	Keskin Array B	150.68	285	PKPbc	PKPbc	03 07 41.0	-1.8
	comp=Z,0.3nm,0.4s,baz=152,slow=2.5,SNR=4.2						
TORD	Torodi Ar. Bea	154.70	193	PKPbc	PKiKP	03 07 52.5	+0.3
	comp=Z,0.1nm,0.4s,baz=142,slow=3.1,SNR=3.0						

GUC ***13*** *02:56:50.3±0.6, 33°.67S×72°.04W, h42km±4km, ML3.1*
SJA ***13*** *02:56:57.2±0.6, 33°.42S×71°.66W, h10km, ML3.2, MW3.3*
ISC 13 02:56:47.4±2.1**, 33°.64S**±0°.05×**72°.10W**±0°.09**, h0**km±13km**,**
n20, σ1ˢ.06/31**, 2C-5D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MT01	Popeta	0.74	108	⇓iP	Pb	02 57 03.6	+0.4
MT01				iS	Sb	02 57 13.2	-0.7
MT01				IAML		02 57 15.8	
	comp=N,1µm,0.5s						
MT02	Curacav	0.89	65	⇓iP	Pb	02 57 05.8	0.0
MT02				iS	Sb	02 57 17.7	-0.5
MT02				IAML		02 57 20.5	
	comp=N,748nm,0.7s						
PEL	Peldehue	1.28	68	⇓iP	Pg	02 57 12.6	+0.5
PEL				iS	Sb	02 57 29.5	0.0
PEL				IAML		02 57 32.6	
	comp=N,918nm,0.5s						
PEL	Peldehue	1.28	68	iP	Pg	02 57 12.5	+0.5
PEL				eS	Sg	02 57 26.9	-1.8
CLCH	Cerro Calan	1.33	80	eP	Pg	02 57 13.1	+0.2
CLCH				iS	Sb	02 57 29.7	-1.1
CLCH				IAML		02 57 36.8	
	comp=N,783nm,0.5s						
MT03	Universidad Ad	1.34	84	⇑iP	Pg	02 57 13.0	-0.1
MT03				iS	Sb	02 57 30.2	-0.8
MT03				IAML		02 57 38.1	
	comp=N,1µm,0.4s						
GO05	Huala	1.37	174	eP	Pn	02 57 13.6	-0.2
GO05				iS	Sg	02 57 31.2	-0.3
GO05				IAML		02 57 36.9	
	comp=N,460nm,0.3s						
FCH	Farellones	1.54	79	⇑iP	Pn	02 57 16.4	0.0
FCH				iS	Sn	02 57 36.8	-0.6
FCH				IAML		02 57 42.2	
	comp=N,564nm,0.3s						
LMEL	Las Melosas	1.59	98	⇓iP	Pn	02 57 16.8	-0.2
LMEL				iS	Sb	02 57 36.8	-1.8
LMEL				IAML		02 57 46.2	
	comp=N,644nm,0.4s						
LAMA	Las Malvinas	2.72	119	iP	Pb	02 57 37.0	0.0
LAMA				eS	Sg	02 58 15.5	+0.7
ARCO	CERRO ARCO	2.77	74	iP	Pb	02 57 38.5	+0.6
ARCO				eS	Sb	02 58 13.4	+0.9
ARCO				IAML		02 58 20.4	
	comp=Z,122nm,0.6s						
AAGR	Agrelo	2.79	79	iP	Pb	02 57 39.2	+0.9
AAGR				IAML		02 58 33.7	
	comp=Z,66nm,1.5s						
PUMA	Malargue	2.87	131	iP	Pb	02 57 39.6	+0.1
ASAL	Salagasta	2.93	70	iP	Pb	02 57 41.9	+1.3
ASAL				eS	Sb	02 58 17.2	+0.1
ASAL				IAML		02 58 25.1	
	comp=Z,64nm,1.1s						
RTLS	Leoncito	2.99	53	iP	Pb	02 57 42.2	+0.4
RTLS				eS	Sb	02 58 19.6	+0.6
RTCV	Cerro Valdivia	3.48	60	iP	Pb	02 57 48.6	-1.4
RTCV				IAML		02 58 48.7	
	comp=Z,43nm,2.7s						
CFA	Coronel Fontan	3.84	59	iP	Pb	02 57 53.6	-2.4
CFA				IAML		02 58 57.3	
	comp=Z,203nm,1.2s						
MRA	San Martin	5.50	79	iP	Pn	02 58 13.4	+2.7
APLL	PUNTA DE LOS L	5.73	57	iP	Pn	02 58 19.5	+5.7
ACLC	CERRO LA CRUZ	6.08	48	⇓iP	Pn	02 58 26.9	+8.2

KEA 13 03:22:05.8±0.0**, 40°.50N**×**123°.29E, h0**km**, ML3.5**/10**,**
Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUJ	Sinuiju	1.01	113	Pg	Pg	03 22 25.5	+0.4
SUJ				Sg	Sg	03 22 38.9	+0.8
PYS	Pyongsong	2.34	121	Pg	Pn	03 22 46.3	+0.8
PYS				Sg	Sg	03 23 20.0	-1.0
PYAG	Pyongyang	2.40	126	Pn	Pn	03 22 46.5	+0.3
PYAG				Pg	Pg	03 22 50.8	-0.9
PYAG				Sn	Sn	03 23 15.9	-0.4
PYAG				Sg	Sg	03 23 22.5	-0.2
KGE	Kanggye	2.57	79	Pn	Pn	03 22 49.1	+0.5
KGE				Pg	Pb	03 22 53.2	+0.5
KGE				Sg	Sg	03 23 26.9	-1.4
HJU	Haeju	3.10	142	Pg	Pg	03 23 03.8	-1.4
HJU				Sg	Sg	03 23 43.5	-2.0
HHU	Hamhung	3.30	99	Pg	Pg	03 23 08.5	-0.5
HHU				Sg	Sg	03 23 50.5	-1.3
WOSN	Wonsan	3.45	111	Sg	Sg	03 23 56.0	-0.8

ATH ***13*** *03:36:55.3, 38°.10N×20°.37E, h17km±2km, ML2.9/3, Error ellipse: s-maj=2.8km s-min=1.9km az=224.0*
THE ***13*** *03:36:55.0, 38°.07N×20°.35E, h16km, ML2.9/6, Error ellipse: s-maj=1.0km s-min=0.5km az=237.0*
ISC 13 03:36:52.2±1.5**, 38°.01N**±0°.06×**20°.24E**±0°.06**, h11**km**, n39,**
σ1ˢ.15/65**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHV1	Chavriata, Kef	0.21	33	P	Pg	03 36 58.7	+2.1
CHV1				S	Sg	03 37 01.5	+1.9
KEF3	Kipouria, Keph	0.21	25	P	Pb	03 36 58.8	+0.7
KEF3				S	Sg	03 37 00.6	+0.9
LXRA	Lixouri, Kepha	0.25	40	P	Pb	03 36 59.2	+0.5
LXRA				S	Sg	03 37 02.0	+1.3
LXR1	Lixouri, Cepha	0.25	40	P	Pb	03 36 59.2	+0.5
LXR1				S	Sg	03 37 02.3	+1.5
KEF2	Argostoli. Kep	0.25	52	P	Pb	03 36 58.9	+0.1
KEF2				S	Sg	03 37 01.3	+0.4
ARGA	Argostoli. Kep	0.25	49	P	Pb	03 36 59.0	+0.2
ARGA				S	Sg	03 37 01.6	+0.7
AGT1	Agia Thekli	0.27	26	P	Pb	03 36 59.5	+0.5
AGT1				S	Sg	03 37 02.6	+1.3
KEF4	Livadi, Kephal	0.29	31	P	Pb	03 36 59.7	+0.3
KEF4				S	Sg	03 37 03.0	+1.0
KEF1	Kardakata, Kep	0.32	35	P	Pb	03 37 00.0	0.0
KEF1				S	Sg	03 37 03.2	+0.1
VLS	Valsamata	0.32	59	P	Pb	03 36 59.8	-0.2
VLS				S	Sg	03 37 03.5	+0.4
	8µm,0.2s						
VLS	Valsamata	0.32	59	P	Pb	03 36 59.7	-0.4
VLS				S	Sg	03 37 02.6	-0.5
VLS				AML	AML	03 37 03.6	
	comp=E,11608µm,0.1s						
VLS				AML	AML	03 37 03.8	
	comp=N,13578µm,0.1s						
KFL	Anninata	0.45	77	P	Pg	03 37 01.9	+0.9
KFL				S	Sb	03 37 07.9	-0.9
	comp=N,4µm,0.3s						
KFL	Anninata	0.45	77	P	Pg	03 37 01.9	+0.9
KFL				S	Sb	03 37 07.9	-0.9
KFL				AML	AML	03 37 12.2	
	comp=E,9099µm,0.5s						
KFL				AML	AML	03 37 13.1	
	comp=N,5318µm,0.2s						
VSK1	VASILIKIADES	0.47	33	P	Pb	03 37 02.5	-0.1
VSK1				S	Sb	03 37 08.3	-1.3
KONA	Konidatara, Ke	0.49	32	P	Pg	03 37 02.7	+0.9
KONA				S	Sg	03 37 08.1	-0.2
KONA				AML	AML	03 37 09.4	
	comp=N,3905µm,0.3s						
KONA				AML	AML	03 37 12.4	
	comp=E,2645µm,0.4s						
FSK	Fiskardo	0.52	30	P	Pg	03 37 03.0	+0.7
FSK				S	Sb	03 37 09.7	-1.1
	comp=E,1µm,0.3s						
FSK	Fiskardo	0.52	30	P	Pg	03 37 03.1	+0.7
FSK				S	Sg	03 37 08.2	-0.9
EVGI	Lefkada island	0.69	28	P	Pg	03 37 06.1	+0.5
EVGI	Lefkada island	0.69	28	P	Pg	03 37 06.4	+0.7
MGNA	Meganis	0.78	34	P	Pg	03 37 07.7	+0.4
LKD2	Lefkada island	0.84	23	P	Pg	03 37 09.2	+0.7
LKD2				S	Sb	03 37 20.7	+0.4
	comp=E,612nm,0.6s						
LKD2	Lefkada island	0.84	23	P	Pb	03 37 09.6	+0.7
TSLK	Tsoukalades, L	0.88	22	P	Pg	03 37 09.5	+0.4
TSLK				S	Sb	03 37 21.6	+0.4
	comp=E,560nm,0.4s						
TSLK	Tsoukalades, L	0.88	22	P	Pb	03 37 10.0	+0.6
PDO	Prodromos	0.95	51	P	Pb	03 37 10.9	+0.2
PDO				S	Sb	03 37 22.8	-0.4
	comp=E,2µm,0.4s						
PDO	Prodromos	0.95	51	P	Pg	03 37 10.7	+0.3
RLS	Riolos of Patr	0.97	87	P	Pg	03 37 11.0	+0.1
DRO	Drossia	1.17	92	P	Pb	03 37 14.9	+0.5
PVO	Paravola	1.18	59	P	Pg	03 37 15.1	+0.2
SERG	Sergoula	1.49	74	P	Pn	03 37 19.7	+0.8
TRIZ	Trizonia	1.49	76	P	Pn	03 37 19.7	+0.8
KLV	Kalavryta, Ach	1.51	88	P	Pn	03 37 20.4	+1.1
DBRK	Dubrovnik	4.92	342	ePn	Pn	03 38 06.8	+0.7
DBRK				Sn	Sn	03 39 00.9	-2.1
STON	Ston	5.23	339	ePn	Pn	03 38 10.8	+0.6
STON				Sn	Sn	03 39 07.5	-3.0
MAKA	Makarska	5.81	336	ePn	Pn	03 38 19.1	+0.8
MAKA				Sn	Sn	03 39 22.7	-2.2
RICI	Ricice	5.96	338	iPn	Pn	03 38 21.3	+0.9
RICI				Sn	Sn	03 39 25.8	-2.9
ZIRJ	Zirje	6.63	330	ePn	Pn	03 38 30.2	+0.7
ZIRJ				Sn	Sn	03 39 42.1	-2.8
KIJV	Kijevo	6.65	335	ePn	Pn	03 38 31.7	+1.8
MORI	Morici	6.78	331	ePn	Pn	03 38 33.1	+1.5
MORI				Sn	Sn	03 39 45.9	-2.9

IDC ***13*** *03:47:34.5±1.2, 1°.42S×127°.40E, h0km, mb3.7/3, mb1 3.9/5, mb1mx3.6/46, mbtmp3.8/5, ML3.6/2, Error ellipse: s-maj=45.9km s-min=21.9km az=62.0*
ISC 13 03:47:37.3±1.3**, 1°.3S**±0°.2×**127°.88E**±0°.10**, h25**km**, n6,**
σ1ˢ.25/6**, mb3.9**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.41	83	Pn	Pb	03 48 36.1	-0.9
	4.2nm,0.3s,baz=261,slow=16,SNR=5.0						
SIJI				Sn	Sb	03 49 19.2	+1.1
	1.1nm,0.3s,baz=177,slow=23,SNR=1.3						
TBP	Tagbilaran	11.62	340	iP	Pn	03 50 10.0	-12
WRA	Warramunga Arr	19.58	162	P	Pn	03 52 04.1	-1.0
	0.2nm,0.3s,baz=343,slow=12,SNR=6.7						
ASAR	Alice Springs	22.99	166	P	P	03 52 41.6	+1.2
	0.9nm,0.5s,baz=345,slow=12,SNR=12						
MKAR	Makanchi Array	62.33	326	P	P	03 57 58.0	+0.3
	0.4nm,0.3s,baz=113,slow=7.4,SNR=11						
KURBB	Kurchatov Arra	66.58	328	P	P	03 58 25.2	-0.1
	0.4nm,0.4s,baz=124,slow=6.0,SNR=5.3						

IDC 13 04:20:52.1±1.9**, 8°.28S**×**118°.05E, h0**km**, mb3.4**/3**,**
mb1 3.4/5**, mb1mx3.3**/38**, mbtmp3.3**/5**, ML3.2**/2**, Error**
ellipse: s-maj=63.4km s-min=24.3km az=60.0,
Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	Kappang	3.66	28	Pn	Pn	04 21 50.1	+0.1
	1.4nm,0.3s,baz=204,slow=10.0,SNR=3.9						
KAPI				Sn	Sn	04 22 30.3	-3.5
	4.4nm,0.3s,baz=198,slow=23,SNR=7.5						
WRA	Warramunga Arr	19.57	128	P	P	04 25 20.1	-1.7
	0.1nm,0.3s,baz=303,slow=13,SNR=4.7						
ASAR	Alice Springs	21.56	137	P	P	04 25 44.6	+1.3
	0.7nm,0.5s,baz=314,slow=9.4,SNR=11						
SONM	Songino Array	56.81	351	P	P	04 30 39.1	+0.7
	0.4nm,0.5s,baz=170,slow=7.2,SNR=2.8						
MKAR	Makanchi Array	63.39	333	P	P	04 31 22.7	-0.7
	0.3nm,0.7s,baz=143,slow=5.0,SNR=3.4						

ANF ***13*** *04:52:54.9±2.4, 44°.20N×128°.93W, h0km, ML3.6/1, Error ellipse: s-maj=29.6km s-min=10.4km az=44.0*
NEIC ***13*** *04:52:54.6±1.5, 44°.3N±0°.1×129°.10W±0°.04, h10km±2km, mb3.6/5, Error ellipse: s-maj=17.5km s-min=4.6km az=170.0*
IDC ***13*** *04:52:56.4±3.0, 44°.48N×128°.54W, h0km, mb3.5/3, mb1 3.5/7, mb1mx3.3/43, mbtmp3.2/7, ML2.8/4, MS3.2/4, Ms1 3.2/4, ms1mx2.8/39, Error ellipse: s-maj=59.1km s-min=19.0km az=52.0*
ISC 13 04:52:55.2±1.7**, 44°.3N**±0°.1×**129°.0W**±0°.1**, h10**km**, n55,**
σ0ˢ.95/45**, mb3.6**/3**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COR	Corvallis	4.12	84	Pn	Pn	04 53 58.6	+0.5
I03D	Drain, OR	4.15	96	P	Pn	04 53 58.0	-0.6
	baz=279,SNR=32						
I03D				S	Sn	04 54 47.7	+0.6
	baz=279						
F03A	Seaside	4.21	65	Pn	Pn	04 53 59.8	+0.4
G03D	McMinnville, O	4.22	75	P	Pn	04 53 59.0	-0.5
	baz=258,SNR=5.5						
K02D	Willamette Mer	4.22	110	S	Sn	04 54 48.5	-0.6
	baz=293						
E03A	Lebam	4.47	58	Pn	Pn	04 54 02.3	-0.6
H04D	Lebanon	4.52	85	P	Pn	04 54 04.4	+0.7
	baz=268						
HUMO	Hull Mountain	4.74	109	Pn	Pn	04 54 06.2	-0.5
HUMO				Sn	Sn	04 55 01.1	-0.6
NLWA	Neilton Lookou	4.76	48	Pn	Pn	04 54 07.1	+0.1
H04A	Detroit Lake	4.92	83		Pn	04 54 09.6	+0.4
F04A	Amboy	4.96	68		Pn	04 54 10.8	+1.0
E04D	Cinebar	5.09	61	P	Pn	04 54 11.7	+0.2
	baz=244,SNR=7.1						
D03D	Eldon	5.27	50	P	Pn	04 54 14.1	+0.2
	baz=233,SNR=6.1						
YBH	Yreka Blue Hor	5.30	117	Pn	Pn	04 54 14.7	+0.2
	0.1nm,0.3s,baz=286,slow=15,SNR=3.1						
YBH	Yreka Blue Hor	5.30	117		Pn	04 54 15.4	+0.9
L04D	Klamath Falls	5.34	111	S	Sn	04 55 18.2	+1.5
	baz=294						
G05D	Wamic, OR	5.58	78	P	Pn	04 54 19.5	+1.2
	baz=262						
LON	Longmire	5.64	62		Pn	04 54 19.1	-0.1
D05A	Enumclaw	5.72	57	Pn	Pn	04 54 21.2	+1.0
PGC	Sidney	5.82	40	Pn	Pn	04 54 20.8	-0.6
PINE	Pine Mountain	5.86	92	Pn	Pn	04 54 21.9	-0.4
G06A	Carlson Farm,	6.06	78	Pn	Pn	04 54 25.6	+0.8
B05A	Bryant	6.24	48	P	Pn	04 54 28.1	+0.8
	baz=232,SNR=17						
LTY	Liberty	6.56	60		Pn	04 54 32.6	+0.8
B06A	Marblemount	6.72	48	Pn	Pn	04 54 34.3	+0.5
I07A	Izee	6.86	88	Pn	Pn	04 54 35.9	0.0
NEW	Newport	9.16	60	LR	LR	04 58 16.3	
	comp=Z,116nm,19.3s,baz=257,slow=36						
H02S1	DAWSON INLET T	9.20	347	T	T	05 05 35.0	
H02N1	VAN INLET T-PH	9.26	347	T	T	05 05 34.0	
NVAR	Mina Array Bea	9.97	122	Pn	Pn	04 55 20.5	+1.8
	0.0nm,0.3s,baz=298,slow=14,SNR=3.9						
ELK	Elko	10.79	104	LR	LR	04 59 35.3	
	comp=Z,103nm,21.9s,baz=290,slow=38						
DLMT	Dillon	11.73	79		Pn	04 55 43.0	+0.4
YHL	Hebgen Lake	12.75	81		Pn	04 55 56.1	-0.6
YHH	Holmes Hill	12.99	81		Pn	04 55 59.0	-1.0
FLWY	Flagg Ranch	13.17	85		Pn	04 56 01.2	-1.1
LCMT	Little Creek M	14.01	116	Pn	Pn	04 56 13.1	-0.7
PDAR	Pinedale Array	14.22	89	Pn	Pn	04 56 19.0	+2.3
	0.0nm,0.3s,baz=271,slow=9.7,SNR=2.6						
Q16A	Castle Valley	14.40	106	Pn	Pn	04 56 20.4	+1.1
SRU	San Rafael Swe	14.76	104		Pn	04 56 23.5	-0.7
WUAZ	Wupatki	16.12	117	IAmb	IAmb	04 56 54.1	
	comp=Z,7.5nm,1.4s						
ISCO	Idaho Springs	17.95	96	IAmb	IAmb	04 57 12.0	
	comp=Z,2.0nm,0.8s						
YKA	Yellowknife Ar	20.07	20	P	P	04 57 28.6	+0.2
	comp=Z,0.0nm,0.3s,baz=205,slow=11,SNR=7.5						
FFC	Flin Flon	20.31	49	P	P	04 57 30.7	-0.4
ILAR	Eielson Array	22.82	340	P	P	04 58 00.3	+2.4
	comp=Z,0.9nm,0.9s,baz=158,slow=7.5,SNR=5.5						
ILAR	Eielson Array	22.82	340	P	P	04 57 57.2	-0.7
ULM	Lac du Bonnet	23.15	63	P	P	04 57 59.6	-1.9
	comp=Z,1.1nm,0.6s,baz=245,slow=12,SNR=3.5						
ULM				LR	LR	05 07 19.8	
	comp=Z,71nm,21.0s,baz=266,slow=38						

ULM	Lac du Bonnet	23.15	63	P	P	04 58 00.5	-1.0
RES	Resolute Bay	34.02	15	P	P	04 59 38.0	-0.7
	comp=Z,0.7nm,0.7s,baz=225,slow=8.6,SNR=4.5						
RES				LR	LR	05 13 32.5	
	comp=Z,51nm,19.8s,baz=254,slow=37						
RES	Resolute Bay	34.02	15	P	P	04 59 38.9	+0.2
RES				IAmb	IAmb	04 59 49.4	
	comp=Z,2.3nm,1.4s						
H11N3	WAKE ISLAND Hy	58.03	267	T	T	06 05 13.5	
	baz=49,slow=75,SNR=228						
H11N2	WAKE ISLAND Hy	58.03	267	T	T	06 05 13.7	
	baz=49,slow=75,SNR=200						
H11N1	WAKE ISLAND Hy	58.05	267	T	T	06 05 14.1	
	baz=49,slow=75,SNR=132						
H11S1	WAKE ISLAND Hy	58.97	266	T	T	06 06 24.2	
	baz=48,slow=75,SNR=53						
H11S2	WAKE ISLAND Hy	58.97	266	T	T	06 06 23.6	
	baz=48,slow=75,SNR=31						
H11S3	WAKE ISLAND Hy	58.98	266	T	T	06 06 24.6	
	baz=48,slow=75,SNR=31						

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*IDC **13** 05:17:41.3±1.6, 40°.80N×144°.99E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.4/52, mbtmp3.6/4, MS2.7/1, Ms1 2.7/1, ms1mx2.2/54, Error ellipse: s-maj=41.4km s-min=36.8km az=92.0*

*JMA **13** 05:17:42.1±0.2, 40°.89N×145°.32E, h59^{km}±4^{km}, M3.1*

ISC 13 05:17:45.5±1.1**, 40°.93N**±0°.07×**145°.14E**±0°.08**, h35^{km}, n17, σ1^{s}.46**/25**, mb3.6**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JEM	Erimo	1.84	307	P	Pn	05 18 14.0	-0.6
JEM				*e*S	Sn	05 18 36.6	-0.1
JTHR	Tokachihiroo	1.94	315	P	Pn	05 18 15.3	-0.6
JTHR				S	Sn	05 18 38.2	-0.9
JCH	Churui	2.15	322	P	Pn	05 18 18.0	-0.8
JCH				*e*S	Sn	05 18 43.2	-1.0
JKHN	Kushirohamanak	2.15	0	P	Pn	05 18 17.3	-1.6
JKHN				*e*S	Sn	05 18 42.3	-2.1
JOB	Onbets	2.20	334	*e*S	Sn	05 18 45.6	+0.1
JNBK	Urakawa-nobuka	2.24	308	P	Pn	05 18 20.4	+0.3
JNBK				*e*S	Sn	05 18 47.7	+1.1
NEM2	Nemuro 2	2.48	10	P	Pn	05 18 21.6	-1.7
JAR	Ashorobuto	2.58	337	P	Pn	05 18 23.2	-1.5
JAR				*e*S	Sn	05 18 54.7	-0.2
JNK	Nakash	2.68	353	P	Pn	05 18 23.9	-2.2
JANG	Nango	2.81	260	P	Pn	05 18 26.4	-1.5
JANG				*e*S	Sn	05 18 57.4	-3.2
JFR	Furan	2.93	321	P	Pn	05 18 29.0	-0.6
JFR				*e*S	Sn	05 19 01.6	-2.0
JTKR	Abashiri--Toko	3.18	344	P	Pn	05 18 32.1	-0.8
JTKR				*e*S	Sn	05 19 09.0	-0.6
PETK	Petropavlovsk-	14.87	31	LR	LR	05 25 53.2	
	comp=Z,30nm,21.6s,baz=242,slow=33						
SONM	Songino Array	28.31	297	P	P	05 23 35.4	-0.4
	0.5nm,0.9s,baz=87,slow=8.8,SNR=1.4						
ILAR	Eielson Array	44.65	34	P	P	05 25 56.4	+2.1
	0.4nm,0.7s,baz=275,slow=6.0,SNR=3.2						
KURBB	Kurchatov Arra	46.00	306	P	P	05 26 06.7	+1.6
	0.5nm,0.3s,baz=78,slow=8.1,SNR=1.7						
WRA	Warramunga Arr	61.38	192	P	P	05 27 58.1	+0.2
	0.9nm,1.0s,baz=9.0,slow=7.0,SNR=1.6						

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*IDC **13** 05:18:18.1±1.0, 40°.85N×145°.04E, h0^{km}, mb3.7/8, mb1 3.8/10, mb1mx3.6/55, mbtmp3.7/10, ML3.0/2, MS2.3/1, Ms1 2.3/1, ms1mx2.1/51, Error ellipse: s-maj=27.1km s-min=20.2km az=93.0*

*JMA **13** 05:18:19.4±0.2, 40°.92N×145°.30E, h54^{km}, M3.5*

ISC 13 05:18:22.7±0.9**, 40°.89N**±0°.06×**145°.12E**±0°.08**, h35^{km}, n25, σ1^{s}.70**/23**, mb3.7**/8**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JEM	Erimo	1.86	308	P	Pn	05 18 51.2	-0.8
JEM				S	Sn	05 19 13.2	-1.0
JTHR	Tokachihiroo	1.96	316	P	Pn	05 18 52.3	-1.1
JTHR				S	Sn	05 19 15.2	-1.5
JAK	Akkeshi	2.13	352	*e*S	Sn	05 19 18.6	-2.3
JCH	Churui	2.17	323	*e*S	Sn	05 19 19.8	-2.1
JKHN	Kushirohamanak	2.19	1	P	Pn	05 18 54.2	-2.4
JKHN				*e*S	Sn	05 19 18.9	-3.6
JOB	Onbets	2.23	335	*e*S	Sn	05 19 23.1	-0.3
JNBK	Urakawa-nobuka	2.25	309	S	Sn	05 19 24.6	+0.6
JANG	Nango	2.79	261	*e*S	Sn	05 19 35.3	-2.0
JBT2	Biratori 2	2.79	313	*e*S	Sn	05 19 37.3	0.0
ASAJ	Asahikawa	3.73	331	Pn	Pn	05 19 15.8	-1.9
	2.0nm,0.3s,baz=121,slow=19,SNR=3.6						
ASAJ				Sn	Sn	05 20 01.9	+1.6
	1.8nm,0.3s,baz=88,slow=31,SNR=2.0						
ASAJ				LR	LR	05 20 42.6	
	comp=Z,40nm,20.8s,baz=148,slow=39						
MJAR	Matsushiro Arr	6.93	233	Pn	Pn	05 19 58.8	-2.9
	0.0nm,0.3s,baz=50,slow=12,SNR=3.0						
H11N2	WAKE ISLAND Hy	28.11	132	T	T	05 53 44.9	
	baz=324						
H11N1	WAKE ISLAND Hy	28.12	132	T	T	05 53 44.5	
	baz=324						
H11N3	WAKE ISLAND Hy	28.13	132	T	T	05 53 45.2	
	baz=324						
SONM	Songino Array	28.31	297	P	P	05 24 13.2	+0.2
	1.1nm,1.0s,baz=91,slow=9.6,SNR=5.0						
H11S1	WAKE ISLAND Hy	28.98	134	T	T	05 54 46.4	
	baz=326						
H11S3	WAKE ISLAND Hy	28.99	134	T	T	05 54 49.5	
	baz=326						
H11S2	WAKE ISLAND Hy	29.00	134	T	T	05 54 48.2	
	baz=326						
ILAR	Eielson Array	44.69	34	P	P	05 26 32.8	+1.0
	0.7nm,0.7s,baz=258,slow=6.4,SNR=8.1						
KURBB	Kurchatov Arra	46.01	306	P	P	05 26 43.2	+0.8
	0.7nm,0.2s,baz=77,slow=8.6,SNR=3.1						
BVAR	Borovoye Array	50.19	311	P	P	05 27 15.8	+1.2
	0.5nm,0.6s,baz=80,slow=10,SNR=2.6						
YKA	Yellowknife Ar	59.02	32	P	P	05 28 19.5	+1.0
	0.2nm,0.6s,baz=297,slow=6.2,SNR=3.8						
WRA	Warramunga Arr	61.34	192	P	P	05 28 35.1	+0.2
	1.5nm,1.0s,baz=15,slow=7.2,SNR=4.0						
ASAR	Alice Springs	65.06	191	P	P	05 29 00.1	+0.6
	0.2nm,0.5s,baz=8.2,slow=6.2,SNR=3.9						
FINES	FINESS Array B	66.73	333	P	P	05 29 10.6	+0.8
	2.0nm,1.0s,baz=46,slow=8.0,SNR=3.0						

ISC 13 05:20:56.7±1.0**, 50°.27N**±0°.04×**18°.78E**±0°.03**, h0^{km}, n17, σ0^{s}.59**/30**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.59	224	*e*PG	Pg	05 21 09.0	+1.0
OKC				*e*SG	Sg	05 21 16.4	+0.7
	comp=Z,10nm,0.4s						
OJC	Ojcow	0.66	94	*e*Pg	Pg	05 21 09.4	+0.1
OJC				*e*Sg	Sg	05 21 17.9	+0.1
MORC	Moravsky Berou	0.94	239	*e*PG	Pg	05 21 14.8	+0.2
MORC				*e*SG	Sg	05 21 27.3	+0.6
LANS	Liptovska Anna	1.20	158	*e*PG	Pg	05 21 20.0	+0.3
LANS				*e*SG	Sg	05 21 35.7	+0.4
LANS				*e*LG	Lg	05 21 38.1	
KRLC	Kraliky	1.30	262	*e*PG	Pg	05 21 21.0	-0.6
KRLC				*e*SG	Sg	05 21 38.1	-0.3
	comp=Z,9.5nm,0.3s						
NIE	Niedzica	1.30	130	*e*Pg	Pg	05 21 21.6	0.0
NIE				*e*Sg	Sb	05 21 39.6	+0.3
DPC	Dobruska-Polom	1.58	274	*e*PG	Pn	05 21 25.8	-0.2
DPC				*e*SG	Sg	05 21 47.7	+0.4
	comp=Z,7.1nm,0.7s						
OSTC	Ostas	1.67	281	*e*PG	Pn	05 21 26.8	-0.4
OSTC				*e*SG	Sg	05 21 51.1	+0.9
KSP	Ksiaz	1.69	291	*e*Pg	Pg	05 21 29.2	+0.2
KSP				*e*Sg	Sg	05 21 51.8	+1.0
VRAC	Vranov	1.71	237	*e*PN	Pb	05 21 28.6	-0.4
VRAC				*e*SG	Sb	05 21 51.1	+0.1
CHVC	Chvalec	1.77	282	*e*PG	Pn	05 21 28.7	+0.1
CHVC				*e*SG	Sg	05 21 54.6	+1.0
VYHS	Vyhne	1.77	179	*e*PN	Pn	05 21 27.9	-0.8
VYHS				*e*SN	Sn	05 21 52.4	+0.5
UPC	Upice	1.79	279	*e*SG	Sg	05 21 54.8	+0.7
	comp=Z,3.1nm,0.4s						
KRUC	Moravsky	1.96	233	*e*PN	Pn	05 21 31.2	0.0
KRUC				*e*SG	Sb	05 21 57.9	-0.4
GOPC	GO Pecny, Ondr	2.59	264	*e*SG	Sg	05 22 19.3	-0.7
PRU	Pruhonice	2.74	266	*e*SG	Sg	05 22 23.8	-0.9
KHC	Kasperske Hory	3.56	253	*e*SG	Sg	05 22 50.2	-0.9

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*ATH **13** 05:26:39.6, 38°.15N×20°.43E, h15^{km}, ML2.8/9, Error ellipse: s-maj=1.7km s-min=0.9km az=248.0*

*THE **13** 05:26:39.6, 38°.14N×20°.41E, h15^{km}, ML3.1/8, Error ellipse: s-maj=0.6km s-min=0.3km az=258.0*

ISC 13 05:26:39.2±0.9**, 38°.15N**±0°.03×**20°.42E**±0°.04**, h18^{km}**±3^{km}**, n58, σ0^{s}.69**/88**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.04	320	P	Pg	05 26 42.4	0.0
CHV1				S	Sg	05 26 44.6	+0.1
LXRA	Lixouri, Kepha	0.05	20	P	Pg	05 26 42.5	+0.1
LXRA				S	Sg	05 26 44.4	-0.2
LXR1	Lixouri, Cepha	0.05	20	P	Pg	05 26 42.5	0.0
LXR1				S	Sg	05 26 44.6	0.0
	63μm,0.3s						
ARGA	Argostoli. Kep	0.06	64	P	Pg	05 26 42.3	-0.2
ARGA				S	Sg	05 26 44.2	-0.5
KEF2	Argostoli. Kep	0.06	77	P	Pg	05 26 42.3	-0.2
KEF2				S	Sg	05 26 44.1	-0.6
ARG2	Argostoli	0.06	65	P	Pg	05 26 42.4	-0.1
ARG2				S	Sg	05 26 44.3	-0.4
	44μm,0.2s						
KEF3	Kipouria, Keph	0.07	314	P	Pg	05 26 42.7	+0.1
KEF3				S	Sg	05 26 45.0	+0.1
KEF4	Livadi, Kephal	0.11	4	P	Pg	05 26 42.7	-0.2
KEF4				S	Sg	05 26 45.4	0.0
KEF1	Kardakata, Kep	0.13	19	P	Pg	05 26 43.4	+0.2
KEF1				S	Sg	05 26 45.7	-0.2
VLS	Valsamata	0.14	80	P	Pg	05 26 43.2	-0.1
VLS				S	Sg	05 26 45.8	-0.3
	14μm,0.1s						
VLS	Valsamata	0.14	80	P	Pg	05 26 43.2	-0.1
VLS				S	Sg	05 26 45.6	-0.5
VLS				AML	AML	05 26 46.1	
	comp=N,32112μm,0.2s						
VLS				AML	AML	05 26 46.2	
	comp=E,22488μm,0.1s						
VSK1	VASILIKIADES	0.28	24	P	Pg	05 26 45.7	+0.2
VSK1				S	Sb	05 26 50.5	+0.4
	comp=E,10μm,0.3s						
KFL	Anninata	0.30	98	P	Pg	05 26 45.5	-0.2
KFL				S	Sb	05 26 50.6	0.0
	comp=E,4μm,0.4s						
KFL	Anninata	0.30	98	P	Pg	05 26 45.7	+0.1
KFL				S	Sb	05 26 50.5	0.0
KFL				AML	AML	05 26 51.0	
	comp=N,10389μm,0.6s						
KFL				AML	AML	05 26 52.7	
	comp=E,6103μm,0.4s						
KONA	Konidatara, Ke	0.30	24	P	Pg	05 26 45.9	+0.2
KONA				S	Sb	05 26 51.1	+0.5
KONA				AML	AML	05 26 51.6	
	comp=E,11652μm,0.3s						
KONA				AML	AML	05 26 51.7	
	comp=N,10036μm,0.2s						
FSK	Fiskardo	0.33	21	P	Pg	05 26 46.3	+0.1
FSK				S	Sb	05 26 51.8	+0.3
	comp=N,2μm,0.2s						
FSK	Fiskardo	0.33	21	P	Pg	05 26 46.4	+0.1
FSK				S	Sg	05 26 51.0	0.0
FSK				AML	AML	05 26 52.4	
	comp=N,3493μm,0.2s						
FSK				AML	AML	05 26 52.6	
	comp=E,5646μm,0.1s						
EVGI	Lefkada island	0.51	22	P	Pg	05 26 49.4	0.0
EVGI	Lefkada island	0.51	22	P	Pg	05 26 49.4	0.0
EVGI				S	Sb	05 26 57.2	+0.6
ZAK2	Zakynthos	0.53	133	P	Pg	05 26 50.0	+0.2
KRI1	kERI	0.58	147	P	Pg	05 26 50.5	-0.3
MGNA	Meganis	0.58	30	P	Pg	05 26 50.6	-0.2
MGNA				S	Sb	05 26 59.4	+0.6
AST1	Astakos	0.66	54	P	Pg	05 26 52.2	0.0
AST1				S	Sb	05 27 02.5	+1.6
	comp=E,665nm,0.1s						
LKD2	Lefkada island	0.66	17	P	Pg	05 26 52.1	-0.2
LKD2	Lefkada island	0.66	17	P	Pg	05 26 52.4	+0.1
LKD2				S	Sg	05 27 00.8	-0.4
LKD2				AML	AML	05 27 09.2	
	comp=N,756μm,0.3s						
LKD2				AML	AML	05 27 11.0	
	comp=E,680μm,0.2s						
TSLK	Tsoukalades, L	0.70	16	P	Pg	05 26 53.0	+0.1
TSLK	Tsoukalades, L	0.70	16	P	Pg	05 26 53.2	+0.2
TSLK				S	Sg	05 27 02.2	0.0
PDO	Prodromos	0.75	53	P	Pg	05 26 53.9	-0.1
PDO	Prodromos	0.75	53	P	Pg	05 26 53.8	-0.1
RLS	Riolos of Patr	0.83	96	P	Pg	05 26 55.0	-0.5
RLS				S	Sn	05 27 07.7	-0.2
	comp=E,408nm,0.6s						
RLS	Riolos of Patr	0.83	96	P	Pg	05 26 55.0	-0.5
RLS				AML	AML	05 27 10.9	
	comp=E,596μm,0.4s						
RLS				AML	AML	05 27 12.8	
	comp=N,740μm,0.7s						
PVO	Paravola	0.99	62	P	Pb	05 26 58.2	+0.4
PVO	Paravola	0.99	62	P	Pg	05 26 58.6	+0.2
PVO				AML	AML	05 27 15.9	
	comp=E,933μm,0.3s						
PVO				AML	AML	05 27 19.9	
	comp=N,902μm,0.5s						
DRO	Drossia	1.04	101	P	Pb	05 26 59.0	+0.3
DRO	Drossia	1.04	101	P	Pb	05 26 59.2	+0.5
DRO				AML	AML	05 27 20.4	
	comp=N,922μm,0.4s						
DRO				AML	AML	05 27 22.2	
	comp=E,1029μm,0.3s						
AMT	Artemida-Makis	1.20	121	P	Pn	05 27 01.1	0.0
AMT	Artemida-Makis	1.20	121	P	Pb	05 27 02.1	+0.8
ANX	Ano Chora	1.26	69	P	Pn	05 27 02.4	+0.3
ANX	Ano Chora	1.26	69	P	Pb	05 27 03.0	+0.4
SERG	Sergoula	1.32	78	P	Pn	05 27 03.1	+0.3
SERG	Sergoula	1.32	78	P	Pb	05 27 03.7	+0.3
TRIZ	Trizonia	1.32	80	P	Pn	05 27 02.7	-0.1
TRIZ	Trizonia	1.32	80	P	Pn	05 27 03.6	+0.8
EVR	Evrytania	1.33	55	P	Pn	05 27 02.9	-0.1
KLV	Kalavryta, Ach	1.37	94	P	Pn	05 27 03.4	-0.1
KLV	Kalavryta, Ach	1.37	94	P	Pb	05 27 04.6	+0.2
KALE	Kalithea	1.38	79	P	Pn	05 27 04.4	+0.8
KALE				AML	AML	05 27 34.7	
	comp=N,341μm,0.7s						
KALE				AML	AML	05 27 40.1	
	comp=E,277μm,0.5s						
MAKR	Makrakomi, Fth	1.60	57	P	Pg	05 27 10.6	+0.6
PYL	PYLOS	1.64	140	P	Pn	05 27 08.5	+1.4
AGG	Agios Georgios	1.73	59	P	Pg	05 27 12.1	-0.5
DYR	Agios Nikonas	2.06	132	P	Pb	05 27 16.3	+0.2
DBRK	Dubrovnik	4.83	340	*e*Pn	Pn	05 27 51.4	+0.4
DBRK				Sn	Sn	05 28 45.9	-0.7
STON	Ston	5.15	337	*e*Pn	Pn	05 27 54.9	-0.5
STON				Sn	Sn	05 28 51.7	-2.6
MAKA	Makarska	5.74	334	*e*Pn	Pn	05 28 04.7	+1.2
MAKA				Sn	Sn	05 29 06.6	-2.3
RICI	Ricice	5.89	336	*i* Pn	Pn	05 28 06.3	+0.8
RICI				Sn	Sn	05 29 11.9	-0.7
ZIRJ	Zirje	6.58	328	*e*Pn	Pn	05 28 15.5	+0.5
ZIRJ				Sn	Sn	05 29 28.5	-1.0
KIJV	Kijevo	6.58	334	*e*Pn	Pn	05 28 16.4	+1.3
KIJV				Sn	Sn	05 29 27.0	-2.7
MORI	Morici	6.73	330	*e*Pn	Pn	05 28 18.2	+1.2
MORI				Sn	Sn	05 29 32.2	-1.0

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*NEIC **13** 05:30:12.1±2.9, 22°.21S±0°.05×177°.5W±0°.1, h333^{km}±8^{km}, mb4.4/26, Error ellipse: s-maj=15.1km s-min=4.9km az=113.0*

*IDC **13** 05:30:16.7±2.8, 22°.46S×177°.87W, h369^{km}±28^{km}, mb3.5/10, mb1 3.8/11, mb1mx3.5/46, mbtmp4.3/11, Error ellipse: s-maj=22.7km s-min=14.3km az=145.0*

ISC 13 05:30:12.7±0.5**, 22°.30S**±0°.05×**177°.49W**±0°.07**, h350^{km}, n97, σ2^{s}.39**/116**, mb4.2**/22**, 8C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.18	316		Pn	05 31 45.9	+0.1
GLKZ	Green Lake	6.95	183	S	S	05 33 14.7	-2.4
NIUE	Niue	7.77	67		Pn	05 32 07.4	+3.2
NIUE					S	05 33 35.5	+0.5
AFI	Afiamalu	9.95	34	P	Pn	05 32 28.7	-1.6
	43nm,0.3s,baz=174,slow=2.7,SNR=32						
AFI				S	S	05 34 14.7	-8.4
	10nm,0.3s,baz=29,slow=22,SNR=4.2						
AFI	Afiamalu	9.95	34		Pn	05 32 29.0	-1.3
AFI					S	05 34 15.1	-8.0
DZM	Mont Dzumac	14.89	268	P	Pn	05 33 28.9	+0.4
	1.1nm,0.3s,baz=80,slow=19,SNR=8.2						
DZM	Mont Dzumac	14.89	268		Pn	05 33 29.9	+1.4
OUZ	Omahuta	15.05	209	P	Pn	05 33 30.0	-0.1
OUZ				IAmb	IAmb	05 33 30.3	
	comp=Z,30nm,1.1s						
MXZ	Matakaoa Point	15.64	192	P	P	05 33 35.3	+1.0
MXZ	Matakaoa Point	15.64	192	P	P	05 33 35.2	+1.0
MXZ				S	S	05 36 16.4	-4.9
WMGZ	Waiomatatini S	15.87	192	P	P	05 33 37.2	+0.5
WMGZ				S	S	05 36 19.6	-6.2
HAZ	Te Kaha	15.94	194	P	P	05 33 36.8	-0.6
HAZ				S	S	05 36 24.7	-2.4
PUZ	Puketiti	16.14	192	P	P	05 33 39.3	-0.4
PUZ				S	S	05 36 25.1	-6.2
RUGZ	Raukumara Rang	16.16	194	P	P	05 33 39.7	-0.2
RUGZ				S	S	05 36 25.5	-6.3
MWZ	Matawai	16.55	194	P	P	05 33 44.4	+0.4
MWZ				S	S	05 36 36.1	-3.2
URZ	Urewera	16.57	195	P	P	05 33 42.8	-1.4
	comp=Z,15nm,0.3s,baz=269,slow=2.8,SNR=21						
URZ				S	S	05 36 37.1	-2.6
	comp=Z,8.6nm,0.3s,baz=329,slow=22,SNR=15						
URZ	Urewera	16.57	195	P	P	05 33 43.4	-0.9
URZ	Urewera	16.57	195	P	P	05 33 43.2	-1.1
URZ				S	S	05 36 38.7	-1.0
TKGZ	Te Karaka	16.58	193	P	P	05 33 44.7	+0.3
TKGZ				S	S	05 36 37.2	-2.6
RAGZ	Rawiri	16.73	194	P	P	05 33 45.8	-0.3
RAGZ				S	S	05 36 40.8	-2.1
RIGZ	Rimuhau	16.86	193	P	P	05 33 47.2	-0.1
RIGZ				S	S	05 36 42.7	-2.6
MUGZ	Murupara	16.86	196	P	P	05 33 47.7	+0.3
MUGZ				S	S	05 36 41.6	-3.9
HRRZ	Handcock Road	16.91	197	P	Pn	05 33 50.3	-1.4
SNGZ	Shannon Statio	17.02	194	P	P	05 33 49.8	+0.7
SNGZ				S	S	05 36 47.8	-0.7
PRGZ	Paritu Road	17.04	192	P	P	05 33 49.7	+0.4
ALRZ	Allen Road	17.05	197	P	P	05 33 52.0	+2.5
MTHZ	Maungataniwha	17.20	195	P	P	05 33 51.8	+0.7
MTHZ				S	S	05 36 49.9	-2.3
RAHZ	Arahi	17.20	194	P	P	05 33 51.9	+0.8
RAHZ				S	S	05 36 50.0	-2.2
MHGZ	Mahia Peninsul	17.26	192	P	P	05 33 53.1	+1.4
MHGZ				S	S	05 36 51.5	-1.6
MRHZ	Matea Rd	17.29	196	P	P	05 33 53.2	+1.1
NMHZ	Naumai	17.44	195	P	P	05 33 54.3	+0.6
NMHZ				S	S	05 36 57.4	+0.5
HIZ	Hauiti	17.45	200	P	P	05 33 56.4	+2.7
HIZ				IAmb	IAmb	05 33 57.4	
	comp=Z,24nm,0.7s						
BKZ	Black Stump Fm	17.58	196		S	05 37 00.9	+1.3
SNZO	South Karori	20.07	197	P	P	05 34 20.7	-0.5
OXZ	Oxford	22.71	200	P	P	05 34 45.6	+0.4
RPZ	Rata Peaks	23.38	201	P	P	05 34 51.4	+0.2
	comp=Z,13nm,0.4s,baz=33,slow=2.0,SNR=12						
ARMA	Armidale	28.76	247	P	P	05 35 40.6	+1.1
ARMA				IAmb	IAmb	05 35 47.3	
	comp=Z,15nm,1.1s						
EIDS	Eidsvold	28.88	258	P	P	05 35 41.0	+0.4
EIDS				IAmb	IAmb	05 35 45.1	
	comp=Z,10nm,1.1s						
CAN	Canberra	31.94	239	P	P	05 36 07.1	-0.1
CAN				IAmb	IAmb	05 36 08.3	
	comp=Z,7.2nm,0.7s						
TOO	Toolangi	35.26	236	P	P	05 36 35.9	+0.4
TOO				IAmb	IAmb	05 36 54.6	
	comp=Z,15nm,1.4s						
TAU	Tasmania Unive	35.71	227	P	P	05 36 39.3	+0.1
TAU				IAmb	IAmb	05 36 43.7	
	comp=Z,67nm,1.5s						
PMG	Port Moresby	36.24	285	P	P	05 36 43.8	-0.2
PMG				IAmb	IAmb	05 36 44.7	
	comp=Z,29nm,0.8s						
STKA	Stephens Creek	37.47	246	P	P	05 36 53.8	-0.3
	comp=Z,2.3nm,0.5s,baz=89,slow=12,SNR=9.5						
STKA	Stephens Creek	37.47	246	P	P	05 36 54.4	+0.3
COEN	Coen	38.20	276	P	P	05 37 01.6	+1.2
COEN				IAmb	IAmb	05 37 03.4	
	comp=Z,18nm,1.4s						
BBOO	Buckleboo	42.20	245	P	P	05 37 32.1	-0.6
ASAR	Alice Springs	44.60	258	P	P	05 37 51.1	-0.7
	comp=Z,1.6nm,0.7s,baz=95,slow=8.3,SNR=13						
ASAR				S	S	05 43 56.4	-4.6
	comp=Z,0.8nm,0.9s,baz=113,slow=13,SNR=6.1						
WR0	Warramunga Arr	44.66	264	P	P	05 37 52.1	-0.2
WB0	Warramunga Arr	44.84	264	P	P	05 37 53.2	-0.5
WRA	Warramunga Arr	44.85	264	P	P	05 37 52.8	-1.0
	comp=Z,1.3nm,0.6s,baz=95,slow=8.1,SNR=20						
FORT	Forrest	49.04	248	P	P	05 38 25.1	-0.6
FORT				IAmb	IAmb	05 38 33.4	
	comp=Z,10.0nm,0.8s						
KNRA	Kununurra	51.04	268	P	P	05 38 41.0	+0.3
FITZ	Fitzroy Crossi	53.28	264	P	P	05 38 57.7	+0.7
SIJI	Sorong	54.17	286	P	P	05 39 03.5	0.0
	comp=Z,35nm,0.7s,baz=85,slow=5.6,SNR=12						
MJAR	Matsushiro Arr	71.93	324	P	P	05 40 59.3	+0.4
	comp=Z,1.6nm,0.5s,baz=147,slow=5.0,SNR=3.4						
NVAR	Mina Array Bea	82.00	43	P	P	05 41 59.2	+4.5
	comp=Z,0.1nm,0.4s,baz=224,slow=7.5,SNR=2.4						
GHO	Glory Hole Cre	86.86	13	P	P	05 42 21.6	+3.5
SCM	Sheep Creek Mo	87.25	14	P	P	05 42 23.4	+3.4
SEY	Seymchan	88.22	347	P	P	05 42 26.4	+2.0
	comp=Z,0.8nm,0.4s,baz=127,slow=7.3,SNR=8.2						
RND	Reindeer	88.34	12	P	P	05 42 28.6	+3.6
RND				IAmb	IAmb	05 42 29.1	
	comp=Z,14nm,1.1s						
WRH	Wood River Hil	89.45	12	P	P	05 42 32.9	+2.9
WRH				IAmb	IAmb	05 42 33.7	
	comp=Z,4.6nm,1.0s						
MLY	Manley	89.46	11	P	P	05 42 32.7	+2.6
MLY				IAmb	IAmb	05 42 33.2	
	comp=Z,11nm,1.4s						
CCB	Clear Creek Bu	89.66	12	P	P	05 42 33.6	+2.6
CCB				IAmb	IAmb	05 42 34.4	
	comp=Z,8.4nm,1.4s						
IMAR	Indian Mountai	89.84	9	P	P	05 42 35.0	+3.2
ILAR	Eielson Array	89.95	13	P	P	05 42 35.0	+2.6
	comp=Z,0.9nm,0.6s,baz=217,slow=5.5,SNR=15						
ILAR	Eielson Array	89.95	13	P	P	05 42 35.0	+2.6
CMAR	Chiang Mai Arr	91.16	289	P	P	05 42 41.5	+2.4
	comp=Z,1.0nm,0.3s,baz=127,slow=3.2,SNR=10						
YKA	Yellowknife Ar	97.94	25	P	Pdif	05 43 12.0	+3.1
	comp=Z,0.1nm,0.5s,baz=238,slow=3.5,SNR=4.0						
MKAR	Makanchi Array	112.77	313	PKiKP	PKiKP	05 48 10.0	+1.8
	comp=Z,0.1nm,0.3s,baz=115,slow=3.4,SNR=4.7						
KURBB	Kurchatov Arra	115.68	317	PKP	PKiKP	05 48 13.5	0.0
	comp=Z,0.2nm,0.5s,baz=90,slow=2.9,SNR=3.3						
BVAR	Borovoye Array	120.75	319	PKP	PKiKP	05 48 24.1	+0.8
	comp=Z,0.7nm,0.4s,baz=120,slow=2.3,SNR=7.6						
ARCES	ARCESS Array B	130.77	350	PKP	PKiKP	05 48 44.0	+1.1
	comp=Z,1.4nm,0.5s,baz=16,slow=0.8,SNR=10						
FINES	FINESS Array B	137.62	343	PKP	PKiKP	05 48 55.8	-1.2
	comp=Z,3.2nm,1.0s,baz=58,slow=3.4,SNR=4.1						
NB2	NORSAR Subarra	140.81	353	PKP	PKPdf	05 48 56.0	-4.8
	comp=Z,1.2nm,0.9s,baz=17,slow=2.6						
NOA	NORSAR Array B	140.81	353	PKP	PKiKP	05 49 02.6	-1.0
	comp=Z,0.5nm,0.7s,baz=13,slow=4.1,SNR=2.5						
AKASG	Malin Array Be	144.81	330	PKP	PKPab	05 49 09.0	+0.7
	comp=Z,2.8nm,0.4s,baz=44,slow=4.0,SNR=19						
AKASG	Malin Array Be	144.81	330		PKiKP	05 49 09.2	-2.8
SORM	Soroca	146.97	328	⇑P	PKiKP	05 49 15.4	-1.1
BRTR	Keskin Array B	148.38	310	PKPbc	PKiKP	05 49 19.7	-0.2
	comp=Z,1.0nm,0.6s,baz=134,slow=5.1,SNR=6.0						
BRTR	Keskin Array B	148.38	310		PKiKP	05 49 20.1	+0.2
BURAR	Bucovina Array	148.85	330	⇑P	PKPab	05 49 22.6	-2.0
TRPA	Tarpa	149.65	333	⇑P	PKiKP	05 49 23.6	+1.6
OSTC	Ostas	149.82	343	*e*PKP	PKPab	05 49 24.7	-3.7
OSTC				*e*x	x	05 49 28.1	
CLL	Collm	149.91	347	*i* PKPbc	PKPab	05 49 25.4	-3.3
	comp=Z,5.0nm,0.6s						
DOPR	Dopca	149.94	327	⇑P	PKiKP	05 49 24.1	+1.3
DPC	Dobruska-Polom	149.97	342	*e*PKP	PKiKP	05 49 24.9	+2.1
MLR	Muntele Rosu	149.98	326	⇑P	PKiKP	05 49 25.2	+2.2
KRLC	Kraliky	150.09	341	*e*PKP	PKiKP	05 49 25.2	+2.2
BRG	Berggiesshubel	150.11	345	*e*PKP	PKiKP	05 49 24.8	+1.9
	comp=Z,6.0nm,1.0s						
VOIR		150.47	327	⇑P	PKiKP	05 49 26.0	+2.0
ARR	Arges	150.73	327	⇑P	PKiKP	05 49 26.9	+2.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GOPC	GO Pecny, Ondr	150.79	344	ePKP	PKiKP	05 49 26.5	+2.1
SIRR	Siria	151.48	332	⇑P	PKiKP	05 49 28.2	+2.2
KHC	Kasperske Hory	151.82	345	ePKP	PKiKP	05 49 28.6	+2.0
GERES	GERESS Array B	152.05	344	PKPbc	PKiKP	05 49 29.1	+1.9
	comp=Z,0.7nm,0.5s,baz=3.5,slow=2.8,SNR=6.7						
TORD	Torodi Ar. Bea	170.87	175	PKP	PKPdf	05 49 42.3	+2.1
	comp=Z,0.5nm,0.8s,baz=166,slow=2.3,SNR=3.3						
TORD	Torodi Ar. Bea	170.87	175		PKPdf	05 49 42.6	+2.5

UCR ***13*** *05:45:21.8±2.5, 12°.55N×87°.82W, h55^{km}±25^{km}, ML4.6, mb4.6(NEIC)*

UPA ***13*** *05:45:21.7±2.0, 12°.06N×88°.18W, h10^{km}±150^{km}, MW4.8*

INET ***13*** *05:45:21.8, 12°.59N×87°.75W, h70^{km}, ML5.6*

SNET ***13*** *05:45:21.8±0.9, 12°.50N×87°.99W, h20^{km}±3^{km}, ML4.7*

NEIC ***13*** *05:45:22.3±2.0, 12°.63N±0°.05×87°.71W±0°.05, h81^{km}±4^{km}, mb4.6/244, Md4.7(SNET), Error ellipse: s-maj=9.7km s-min=5.1km az=220.0*

IDC ***13*** *05:45:22.1±0.5, 12°.81N×87°.50W, h78^{km}±4^{km}, mb4.1/22, mb1 4.2/27, mb1mx4.1/47, mbtmp4.4/27, MS3.8/23, Ms1 3.8/23, ms1mx3.7/37, Error ellipse: s-maj=16.8km s-min=6.7km az=54.0*

GCMT ***13*** *05:45:22.3±0.3, 12°.56N±0°.02×87°.90W±0°.02, h74^{km}±4^{km}, MW4.9/95, Moment Tensor Solution. s31,c34; s95,c128; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.22±.12; M$_{\theta\theta}$0.85±.12; M$_{\phi\phi}$0.37±.12; M$_{r\theta}$1.93±.06; M$_{\theta\phi}$-0.66±.12; M$_{\phi r}$-1.62±.06; Best double couple: M$_0$2.82000×10^{16} NP1:φ$_s$120.00000°,δ13.00000°,λ-99.00000°. NP2: φ$_s$310.00000°,δ77.00000°,λ-88.00000°. Principal axes: T 2.8630, Plg32.0000°, Azm38.0000°; N -0.0860, Plg2.0000°, Azm129.0000°; P -2.7780, Plg58.0000°, Azm223.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

GCG ***13*** *05:45:26.3±0.7, 12°.92N×88°.05W, h156^{km}±57^{km}, MD4.6*

ISC 13 05:45:21.8±0.5**, 12°.62N**±0°.04×**87°.80W**±0°.03**, h78**^{km}±3^{km}**, n643, σ1^{s}28**/713**, mb4.6**/113**, 3C-6D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	0.42	33	⇓iP	Pn	05 45 34.4	-0.5
CSGN	Cosiguina Volc	0.42	33		Pn	05 45 34.3	-0.6
CSGN				Sn	Sn	05 45 44.9	+0.4
CNCH	Conchagua	0.65	357	⇓eP	Pn	05 45 36.4	-0.6
CNCH				eS	Sn	05 45 48.0	-0.2
CNCH				IAML		05 45 51.7	
	comp=Z,109μm,0.3s						
CNCH	Conchagua	0.65	357	⇓eP	Pn	05 45 36.4	-0.6
CNCH				eS	Sn	05 45 48.0	-0.2
CNCH				IAML		05 45 51.7	
	comp=Z,109μm,0.3s						
LCND	La Caada	0.69	352	eP	Pn	05 45 36.7	-0.6
LCND				eS	Sn	05 45 48.8	+0.1
LCND				IAML		05 45 55.5	
	comp=Z,43μm,0.6s						
LCND	La Caada	0.69	352	eP	Pn	05 45 36.7	-0.6
LCND				eS	Sn	05 45 48.8	+0.1
LCND				IAML		05 45 55.5	
	comp=Z,43μm,0.6s						
CRIN	San Cristobal	0.73	84	⇓eP	Pn	05 45 37.0	-0.7
CRIN				eS	Sn	05 45 49.6	0.0
JUCU	Jucuar¡n	0.77	325	eP	Pn	05 45 36.8	-1.3
JUCU				eS	Sn	05 45 48.2	-2.1
JUCU	Jucuar¡n	0.77	325	eP	Pn	05 45 36.8	-1.3
JUCU				eS	Sn	05 45 48.2	-2.1
BLLM	Bellamira	0.92	332	⇑eP	Pn	05 45 39.4	-0.5
BLLM	Bellamira	0.92	332	⇑eP	Pn	05 45 39.4	-0.5
VSM	San Miguel	0.93	330	eP	Pn	05 45 39.8	-0.3
VSM	San Miguel	0.93	330	eP	Pn	05 45 39.8	-0.3
RANC	El Ranchito	0.94	329	eP	Pn	05 45 39.8	-0.4
RANC				eS	Sn	05 45 54.3	+0.4
RANC	El Ranchito	0.94	329	eP	Pn	05 45 39.8	-0.4
RANC				eS	Sn	05 45 54.3	+0.4
PACA	Pacayal	0.98	329	eP	Pn	05 45 40.4	-0.3
PACA				eS	Sn	05 45 55.4	+0.6
PACA	Pacayal	0.98	329	eP	Pn	05 45 40.4	-0.3
PACA				eS	Sn	05 45 55.4	+0.6
ALJI	Alcalda de J	1.03	313	eP	Pn	05 45 40.5	-0.7
ALJI				eS	Sn	05 45 53.8	-1.7
ALJI	Alcalda de J	1.03	313	eP	Pn	05 45 40.5	-0.7
ALJI				eS	Sn	05 45 53.8	-1.7
CNGN	Cerro Negro	1.08	96	eP	Pn	05 45 40.3	-1.5
CNGN				eS	Sn	05 45 54.7	-2.0
TECA	Tecapa	1.10	322	eP	Pn	05 45 41.7	-0.5
TECA	Tecapa	1.10	322	eP	Pn	05 45 41.7	-0.5
FAGO	Alcalda de S	1.11	344	eP	Pn	05 45 42.1	0.0
FAGO	Alcalda de S	1.11	344	eP	Pn	05 45 42.1	0.0
COEB	Comit de Eme	1.12	321	eP	Pn	05 45 41.8	-0.6
COEB				eS	Sn	05 45 57.3	-0.5
COEB	Comit de Eme	1.12	321	eP	Pn	05 45 41.8	-0.6
COEB				eS	Sn	05 45 57.3	-0.5
UESV	Universidad de	1.40	316	eP	Pn	05 45 45.6	-0.1
UESV				eS	Sn	05 46 04.3	+0.5
UESV	Universidad de	1.40	316	eP	Pn	05 45 45.6	-0.1
UESV				eS	Sn	05 46 04.3	+0.5
COEG	Centro de Oper	1.45	313	eP	Pn	05 45 46.3	-0.2
COEG				eS	Sn	05 46 05.8	+0.7
COEG				IAML		05 46 09.5	
	comp=Z,9μm,0.4s						
COEG	Centro de Oper	1.45	313	eP	Pn	05 45 46.3	-0.2
COEG				eS	Sn	05 46 05.8	+0.7
COEG				IAML		05 46 09.5	
	comp=Z,9μm,0.4s						
TGUH	Tegucigalpa,Un	1.51	20		Pn	05 45 48.2	+0.8
TGUH				Sn	Sn	05 46 08.0	+1.3
LFRS	El Faro	1.58	309	eP	Pn	05 45 48.1	-0.2
LBRS	Las Brisas	1.64	313	eP	Pn	05 45 49.4	+0.3
AEIL	Aeropuerto Ilo	1.67	310	eP	Pn	05 45 49.7	+0.3
AEIL				eS	Sn	05 46 11.0	+0.7
AEIL				IAML		05 46 15.6	
	comp=Z,9μm,0.3s						
AEIL	Aeropuerto Ilo	1.67	310	eP	Pn	05 45 49.7	+0.3
AEIL				eS	Sn	05 46 11.0	+0.7
AEIL				IAML		05 46 15.6	
	comp=Z,9μm,0.3s						
LOMA	Loma Larga	1.68	307	eP	Pn	05 45 49.4	-0.2
LOMA				eS	Sn	05 46 11.3	+0.7
LOMA	Loma Larga	1.68	307	eP	Pn	05 45 49.4	-0.2
LOMA				eS	Sn	05 46 11.3	+0.7
UDBS	Universidad Do	1.71	309	eP	Pn	05 45 50.2	+0.3
UDBS				eS	Sn	05 46 11.9	+0.7
UDBS	Universidad Do	1.71	309	eP	Pn	05 45 50.2	+0.3
UDBS				eS	Sn	05 46 11.9	+0.7
LALI	Alcalda de L	1.72	300	eP	Pn	05 45 49.1	-0.8
LALI				eS	Sn	05 46 10.3	-0.9
LALI				IAML		05 46 15.1	
	comp=Z,2μm,0.5s						
LALI	Alcalda de L	1.72	300	eP	Pn	05 45 49.1	-0.8
LALI				eS	Sn	05 46 10.3	-0.9
LALI				IAML		05 46 15.1	
	comp=Z,2μm,0.5s						
MASN	Masaya	1.73	111	eP	Pn	05 45 48.2	-1.9
MASN				eS	Sn	05 46 08.5	-3.1
UTEC	Universidad Te	1.74	308	eP	Pn	05 45 50.4	+0.1
UTEC				eS	Sn	05 46 12.1	+0.2
UTEC	Universidad Te	1.74	308	eP	Pn	05 45 50.4	+0.1
UTEC				eS	Sn	05 46 12.1	+0.2
OPAM	Oficina de Pla	1.74	309	eP	Pn	05 45 50.3	0.0
OPAM				eS	Sn	05 46 12.4	+0.5
OPAM	Oficina de Pla	1.74	309	eP	Pn	05 45 50.3	0.0
OPAM				eS	Sn	05 46 12.4	+0.5
UESS	Universidad de	1.75	309	eP	Pn	05 45 50.9	+0.5
UESS	Universidad de	1.75	309	eP	Pn	05 45 50.9	+0.5
SNET	Serv Nac Est T	1.75	307	eP	Pn	05 45 50.5	0.0
SNET				eS	Sn	05 46 12.6	+0.4
SNET				IAML		05 46 15.4	
	comp=Z,5μm,0.4s						
SNET	Serv Nac Est T	1.75	307	eP	Pn	05 45 50.5	0.0
SNET				eS	Sn	05 46 12.6	+0.4
SNET				IAML		05 46 15.4	
	comp=Z,5μm,0.4s						
SNET	Serv Nac Est T	1.75	307		Pn	05 45 50.8	+0.4
SNET				Sn	Sn	05 46 12.1	-0.1
UEES	Universidad Ev	1.78	308	eP	Pn	05 45 51.1	+0.4
UEES				eS	Sn	05 46 13.8	+1.0
UEES	Universidad Ev	1.78	308	eP	Pn	05 45 51.1	+0.4
UEES				eS	Sn	05 46 13.8	+1.0
BOQS	Boqueron	1.82	308	eP	Pn	05 45 52.0	+0.5
MATN	Matagalpa	1.85	80	⇓eP	Pn	05 45 51.0	-0.7
MATN				eS	Sn	05 46 14.9	+0.4
LLGN	La Laguna	1.89	324	eP	Pn	05 45 52.8	+0.5
LLGN	La Laguna	1.89	324	eP	Pn	05 45 52.8	+0.5
CEVE	Cerro Verde	2.15	304	eP	Pn	05 45 56.6	+0.8
CEVE				IAML		05 46 33.1	
	comp=Z,11μm,0.4s						
CEVE	Cerro Verde	2.15	304	eP	Pn	05 45 56.6	+0.8
CEVE				IAML		05 46 33.1	
	comp=Z,11μm,0.4s						
SBLS	San Blas	2.15	304	eP	Pn	05 45 56.7	+0.8
SBLS	San Blas	2.15	304	eP	Pn	05 45 56.7	+0.8
SNJE	San Jose	2.15	305	eP	Pn	05 45 55.8	-0.1
SNJE	San Jose	2.15	305	eP	Pn	05 45 55.8	-0.1
UNIC	Universidad Ca	2.17	309	eP	Pn	05 45 56.2	+0.1
UNIC				eS	Sn	05 46 23.2	+0.9
UNIC	Universidad Ca	2.17	309	eP	Pn	05 45 56.2	+0.1
UNIC				eS	Sn	05 46 23.2	+0.9
RTR	El Retiro	2.20	305	eP	Pn	05 45 57.1	+0.6
RTR	El Retiro	2.20	305	eP	Pn	05 45 57.1	+0.6
MTO3	Montecristo	2.33	319	eP	Pn	05 45 58.8	+0.5
MTO3	Montecristo	2.33	319	eP	Pn	05 45 58.8	+0.5
ACON	Acoyapa	2.65	104	⇓eP	Pn	05 46 00.7	-1.7
ACON	Acoyapa	2.65	104		Pn	05 46 01.4	-0.9
IXG	Ixpaco	3.00	301	eP	Pn	05 46 08.5	+1.2
MRL	Marmol	3.05	323	eP	Pn	05 46 11.3	+3.2
NBG	Las Nubes	3.16	308	eP	Pn	05 46 12.0	+2.5
CUI	Cuipilapa	3.24	127	i P	Pn	05 46 09.5	-0.9
CUI				eS	Sn	05 46 47.3	-0.6
PLVR	Palo Verde	3.30	133	eP	Pn	05 46 10.3	-1.0
ESPN	Las Esperanzas	3.44	97	⇑eP	Pn	05 46 13.3	+0.1
ESPN	Las Esperanzas	3.44	97		Pn	05 46 12.9	-0.2
FUG	Fuego 3	3.47	302	eP	Pn	05 46 16.7	+3.0
FUG				eS	Sn	05 46 55.8	+2.0
APG	El Apazote	3.51	313	P	Pn	05 46 15.7	+1.4
	comp=Z,6.2nm,0.3s,baz=129,slow=9.0,SNR=34						
JTS	Las Juntas de	3.63	129	P	Pn	05 46 15.4	-0.3
	comp=Z,30nm,0.3s,baz=14,slow=18,SNR=94						
JTS				S	Sn	05 46 55.0	-2.4
	comp=Z,36nm,0.3s,baz=348,slow=20,SNR=5.2						
JTS	Las Juntas de	3.63	129	eP	Pn	05 46 16.9	+1.3
JTS				eS	Sn	05 47 00.8	+3.5
JTS	Las Juntas de	3.63	129	eP	Pn	05 46 14.8	-0.9
JTS	Las Juntas de	3.63	129		Pn	05 46 15.7	0.0
ERG	Entre ros, C	4.09	297	eP	Pn	05 46 25.1	+3.1
SRA1	San Ramn	4.12	127	eP	Pn	05 46 22.6	+0.1
SRA1				eS	Sn	05 47 13.2	+3.7
STG3	Santiaguito 3,	4.21	300	eP	Pn	05 46 26.3	+2.5
STG3				eS	Sn	05 47 13.3	+1.3
HDC	Heredia	4.45	125	eP	Pn	05 46 29.3	+2.2
HDC				eS	Sn	05 47 19.6	+1.8
HDC	Heredia	4.45	125	eP	Pn	05 46 29.0	+2.0
HDC				eS	Sn	05 47 23.0	+5.3
HDC	Heredia	4.45	125		Pn	05 46 26.6	-0.5
SJS	Escuela Geolog	4.54	126	eP	Pn	05 46 30.4	+2.2
SJS				eS	Sn	05 47 21.1	+1.3
LCR2	La Lucha 2	4.70	127	eP	Pn	05 46 31.3	+0.8
LCR2				eS	Sn	05 47 24.7	+0.9
EDDO	Dominical	5.11	131	eP	Pn	05 46 33.7	-2.2
EDLM	Las Mercedes	5.30	128	eP	Pn	05 46 40.8	+2.2
CCIG	Comitan	5.56	311		Pn	05 46 44.1	+2.0
EDPN	Palmar Norte	5.61	130	eP	Pn	05 46 43.8	+1.1
EDPN				eS	Sn	05 47 44.9	-0.9
EDBA	Buenos Aires	5.62	127	eP	Pn	05 46 43.5	+0.7
PTJ1	Puerto Jimnez	6.00	132	eP	Pn	05 46 49.4	+1.4
PTJ1				eS	Sn	05 47 56.2	+0.8
PTJ1	Puerto Jimnez	6.00	132	eP	Pn	05 46 49.7	+1.6
EDSV	San Vito	6.06	128	eP	Pn	05 46 50.6	+1.6
EDSV				eS	Sn	05 47 59.2	+2.1
CNI2	El Empalme, Bo	6.12	121	eP	Pn	05 46 53.8	+4.1
CNI2				eS	Sn	05 48 00.9	+2.6
BRU2	Volcan	6.30	127	eP	Pn	05 46 53.4	+1.1
BRU2				eS	Sn	05 48 04.9	+2.0
BRU2	Volcan	6.30	127	eP	Pn	05 46 53.2	+0.9
BCO2	Palmira	6.47	126	eP	Pn	05 46 57.3	+2.6
BCO2				eS	Sn	05 48 05.9	-1.2
DVD	David	6.70	128	eP	Pn	05 46 59.2	+1.5
DVD				eS	Sn	05 48 15.3	+2.7
LOMA3	Las Lomas, Chi	6.75	128	eP	Pn	05 47 00.0	+1.7
LOMA3				eS	Sn	05 48 14.2	+0.3
ICCO	Coco Island	7.07	174	eP	Pn	05 47 03.3	+0.6
TEIG	Tepich	7.57	357	P	Pn	05 47 12.2	+2.7
	comp=Z,3.7nm,0.3s,baz=278,slow=0.0,SNR=24						
TEIG	Tepich	7.57	357		Pn	05 47 12.7	+3.2
GMAL	Guarumal, Vera	8.06	126	eP	Pn	05 47 15.2	-1.1
CMIG	Matias Romero	8.16	304	P	Pn	05 47 19.1	+1.5
	comp=Z,3.4nm,0.3s,baz=143,slow=8.9,SNR=52						
CMIG				S	Sn	05 48 44.9	-3.4
	comp=Z,1.1nm,0.3s,baz=64,slow=16,SNR=1.0						
CMIG	Matias Romero	8.16	304		Pn	05 47 18.7	+1.1
CMIG					Sn	05 48 46.9	-1.5
BCIP	Isla Barro Col	8.54	113		Pn	05 47 21.7	-1.0
FSCY	Frank Sound, G	9.20	43		Pn	05 47 35.5	+3.7
CBCY	The Bluff, Cay	10.47	46		Pn	05 47 52.4	+3.4
MTDJ	Mount Denham	11.35	59		Pn	05 48 04.6	+3.4
TLIG	Tlapa	11.50	297		Pn	05 48 04.2	+0.9
LCBC	Los crdobas,	11.84	107	eP	Pn	05 48 05.7	-2.0
DBBC	Dabeiba	12.70	115	eP	Pn	05 48 21.3	+1.7
CBOC	Ciudad Bolivar	13.43	119	eP	Pn	05 48 28.6	-0.7
GR1C	Gorgona, Isla	13.50	134	eP	Pn	05 48 32.6	+2.5
HELC	Santa Helena	13.68	117	eP	Pn	05 48 35.8	+3.0
ZARC	Zaragoza, Cauc	13.72	111	eP	Pn	05 48 35.2	+2.2
SMLC	San Martn de	14.01	104	eP	P	05 48 41.5	-0.7
GTBY	Guantanamo Bay	14.17	58		Pn	05 48 39.2	+0.3
YOTC	Yotoco, Valle	14.21	126	eP	Pn	05 48 36.8	-2.7
PTBC	PUERTO BERRIO,	14.47	113	eP	P	05 48 46.4	-1.0
NORC	Norcasia	14.56	118	eP	P	05 48 47.8	-0.6
MOIG	Morelia	14.65	300	Pn	Pn	05 48 46.8	+1.5
OCAC	Ocana	14.89	106	eP	P	05 48 51.3	-0.9
ORTC	Ortega, Tolima	15.13	124	eP	Pn	05 48 52.3	+0.9
SOTA	Rioblanco	15.21	132	eP	P	05 48 55.2	-0.9
SPBC	San Pablo de B	15.21	116	eP	P	05 48 55.6	0.0
PCON	Cinco Dias	15.23	131	eP	Pn	05 48 55.2	+2.1
ROSC	El Rosal	15.39	119	P	Pn	05 48 54.3	-0.7
	comp=Z,0.4nm,0.3s,baz=290,slow=17,SNR=3.3						
ROSC	El Rosal	15.39	119	P	Pn	05 48 54.5	-0.6
OTAV	Otavalo	15.41	142	eP	P	05 48 59.0	+0.7
OTAV	Otavalo	15.41	142		Pn	05 48 55.8	+0.5
URIC	Uribia, Colomb	15.48	92		Pn	05 48 55.6	-0.1
PAMC	Pamplona, Colo	15.77	108	eP	Pn	05 49 00.1	+0.3
RUSC	La Rusia	15.98	113	eP	Pn	05 49 01.9	-0.6
RUSC	La Rusia	15.98	113		Pn	05 49 01.0	-1.5
FLOC	Florencia	16.28	131	Pn	Pn	05 49 04.0	-1.9
TAMC	Tame, Arauca	16.93	110	eP	Pn	05 49 13.6	-0.4
SDDR	Presa de Saban	17.09	66	P	Pn	05 49 15.2	-0.6
SDDR				IAmb	IAmb	05 49 34.3	
	comp=Z,66nm,1.4s						
SDV	Santo Domingo	17.26	101	P	Pn	05 49 16.4	-1.7
	comp=Z,0.9nm,0.3s,baz=295,slow=8.1,SNR=18						
SDV				LR	LR	05 56 39.8	
	comp=Z,187nm,21.0s,baz=266,slow=40						
SDV				ScP	ScP	05 57 26.9	+1.4
	comp=Z,0.1nm,0.3s,baz=264,slow=7.1,SNR=3.3						
SDV	Santo Domingo	17.26	101	eP	Pn	05 49 16.5	-1.7
SDV	Santo Domingo	17.26	101	P	Pn	05 49 16.6	-1.6
ZAIG	Zacatecas	17.30	308		Pn	05 49 16.8	-1.9
SC01	Santiago de lo	17.74	65	P	Pn	05 49 28.0	+4.3
SC01				IAmb	IAmb	05 49 28.9	
	comp=Z,35nm,0.7s						
441A	DeRidder	18.71	345	P	Pn	05 49 42.0	+6.7
DR12	Loma Pena Alta	18.75	69	P	P	05 49 34.0	-0.7
HKT	Hockley	18.78	338	P	P	05 49 36.0	+1.2
344A	Westbrook Farm	18.93	352	P	P	05 49 37.8	+1.3
344A				IAmb	IAmb	05 49 42.3	
	comp=Z,42nm,0.8s						
352A	Blakely	18.95	8	P	P	05 49 36.7	0.0
352A				IAmb	IAmb	05 49 45.5	
	comp=Z,67nm,1.1s						
833A	Chaparral WMA,	19.00	327	P	P	05 49 37.9	+0.6
833A				IAmb	IAmb	05 49 40.7	
	comp=Z,25nm,0.8s						
833A	Chaparral WMA,	19.00	327	P	Pn	05 49 39.0	+0.1
	baz=143,SNR=11						
342A	Flagon Creek P	19.12	348	P	P	05 49 39.4	+0.8
342A				IAmb	IAmb	05 49 42.9	
	comp=Z,30nm,0.9s						
TIGA	Tifton	19.12	11	P	P	05 49 39.9	+1.3
TIGA	Tifton	19.12	11	P	Pn	05 49 41.9	+1.7
	baz=192						
VBMS	Vicksburg	19.66	353	P	P	05 49 46.3	+1.8
VBMS				IAmb	IAmb	05 49 52.4	
	comp=Z,51nm,0.9s						
VBMS	Vicksburg	19.66	353	P	Pn	05 49 48.1	+1.5
	baz=172						
NATX	Nacogdoches	20.07	343	P	P	05 49 49.8	+0.9
NATX				IAmb	IAmb	05 49 58.2	
	comp=Z,44nm,1.0s						
NATX	Nacogdoches	20.07	343	P	Pn	05 49 52.2	+0.9
	baz=160						
152A	Waverly Hall	20.15	8	P	P	05 49 51.1	+1.4
152A				IAmb	IAmb	05 49 56.3	
	comp=Z,34nm,0.8s						
435B	Jarrell	20.21	335	P	P	05 49 51.8	+1.4
435B	Jarrell	20.21	335	P	Pn	05 49 55.5	+2.5
	baz=151						
143A	Socs Landing,	20.26	351	P	P	05 49 51.5	+0.6
143A				IAmb	IAmb	05 49 56.7	
	comp=Z,22nm,0.8s						
LRAL	Lakeview Retre	20.33	2	P	P	05 49 52.9	+1.2
LRAL				IAmb	IAmb	05 49 57.4	
	comp=Z,20nm,0.7s						
LRAL	Lakeview Retre	20.33	2	P	Pn	05 49 54.2	-0.1
	baz=182,SNR=8.1						
154A	Montrose	20.36	11	P	P	05 49 53.1	+1.1
Z50A	Ashland	20.61	4	P	P	05 49 55.7	+1.0
Z50A				IAmb	IAmb	05 49 59.7	
	comp=Z,31nm,0.8s						
Z50A	Ashland	20.61	4	P	P	05 49 57.1	+2.4
	baz=185,SNR=12						
MLPR	Magueyes Islan	20.70	73	P	P	05 49 54.5	-1.3
MLPR				IAmb	IAmb	05 49 58.3	
	comp=Z,25nm,0.8s						
AGPR	Aguadilla, PR	20.75	71	P	P	05 49 54.8	-1.6
JCT	Junction City	20.95	330	P	P	05 49 59.0	+0.5
JCT	Junction City	20.95	330	P	P	05 49 59.7	+1.1
	baz=145						
Z41A	Richland Creek	21.04	348	P	P	05 50 00.2	+0.9
Z41A				IAmb	IAmb	05 50 02.8	
	comp=Z,34nm,0.7s						
Z41A	Richland Creek	21.04	348	P	P	05 50 01.4	+2.1
	baz=166,SNR=7.2						
GOGA	Godfrey	21.07	10	P	P	05 49 59.6	0.0
GOGA	Godfrey	21.07	10	P	P	05 50 01.8	+2.2
	baz=192,SNR=19						
OBIP	Obispado Ponce	21.13	73	P	P	05 49 59.5	-0.9
ICMP	Isla Caja de M	21.17	73	P	P	05 50 00.9	0.0
Y49A	Blount Mountai	21.18	3	P	P	05 50 01.8	+1.0
Y49A				IAmb	IAmb	05 50 10.2	
	comp=Z,22nm,0.8s						
WHTX	Lake Whitney,	21.22	337	P	P	05 50 02.0	+0.7
WHTX				IAmb	IAmb	05 50 21.3	
	comp=Z,26nm,0.9s						
Y52A	Lilburn	21.42	9	P	P	05 50 03.4	0.0
Y52A	Lilburn	21.42	9	P	P	05 50 05.7	+2.4
	baz=190,SNR=11						
WLAR	White Oak Lake	21.52	348	P	P	05 50 04.7	+0.2
WLAR				IAmb	IAmb	05 50 09.2	
	comp=Z,23nm,0.8s						
SJG	San Juan	21.57	73	P	P	05 50 02.6	-2.5
	comp=Z,7.8nm,0.5s,baz=276,slow=10,SNR=4.9						
Z38A	Mt. Pleasant	21.57	343	P	P	05 50 03.0	-1.9
Z38A				IAmb	IAmb	05 50 12.3	
	comp=Z,20nm,0.8s						
PDPR	Patillas Dam,	21.67	73	P	P	05 50 05.1	-1.1
GCPR	Guaynabo City	21.67	72	P	P	05 50 05.5	-0.6
GCPR				IAmb	IAmb	05 50 08.2	
	comp=Z,22nm,0.9s						
ATAH	Atahualpa	21.74	154	P	P	05 50 09.2	+1.8
	comp=Z,9.1nm,1.0s,baz=349,slow=10,SNR=8.6						
ATAH				LR	LR	05 58 13.1	
	comp=Z,125nm,21.5s,baz=338,slow=35						
X48A	Hartselle	21.74	2	P	P	05 50 08.0	+1.2
X48A				IAmb	IAmb	05 50 16.2	
	comp=Z,20nm,0.9s						
OXF	Oxford	21.84	356	P	P	05 50 09.6	+1.7
	baz=176						
Y55A	Saluda	21.90	13	P	P	05 50 10.5	+2.0
	baz=195						
FPAL	Fort Paine	21.91	5	P	P	05 50 09.2	+0.5
FPAL				IAmb	IAmb	05 50 12.3	
	comp=Z,15nm,0.8s						
HPIG		21.99	313	P	P	05 50 11.7	+1.9
X51A	Calhoun	22.01	6	P	P	05 50 13.8	+4.1
	baz=188						
HODGE	Hodges	22.09	12	P	P	05 50 11.6	+1.0
HODGE				IAmb	IAmb	05 50 13.9	
	comp=Z,30nm,0.7s						
X53A	Estanollee	22.16	10	P	P	05 50 13.5	+2.2
	baz=192,SNR=10.0						
TX31	Lajitas Ar. Si	22.23	321	P	P	05 50 12.9	+0.7
TX32	Lajitas Array	22.23	321	P	P	05 50 12.9	+0.7
TXAR	Lajitas Array	22.23	321	P	P	05 50 13.3	+1.1
	comp=Z,11nm,0.8s,baz=139,slow=10.0,SNR=73						
TXAR				pP	pP	05 50 29.2	+0.9
	comp=Z,3.2nm,0.6s,baz=138,slow=11,SNR=4.9						
TXAR				PcP	PcP	05 54 06.4	+0.4
	comp=Z,0.3nm,0.6s,baz=140,slow=4.7,SNR=3.4						
TXAR				pPcP		05 54 29.1	
	comp=Z,0.3nm,0.6s,baz=139,slow=4.3,SNR=3.4						
TXAR				ScP	ScP	05 57 36.9	+0.3
	comp=Z,1.6nm,0.7s,baz=155,slow=5.8,SNR=17						
TXAR				LR	LR	05 59 47.9	
	comp=Z,43nm,19.9s,baz=0.0,slow=39						
TXAR	Lajitas Array	22.23	321	P	P	05 50 13.4	+1.2
X40A	Basin Creek Fa	22.24	349	P	P	05 50 11.8	-0.4
X40A	Basin Creek Fa	22.24	349	P	P	05 50 14.1	+2.0
	baz=167						
Z35A	Perchaven, San	22.35	339	P	P	05 50 13.7	+0.3
Z35A				IAmb	IAmb	05 50 18.4	
	comp=Z,35nm,0.8s						
JSC	Jenkinsville	22.36	14	P	P	05 50 14.0	+0.5
X54A	Belton	22.38	12	P	P	05 50 15.3	+1.7
	baz=194,SNR=7.9						
UALR	University of	22.44	350	P	P	05 50 14.8	+0.5
UALR				IAmb	IAmb	05 50 16.9	
	comp=Z,18nm,0.8s						
MIAR	Mount Ida	22.45	347	P	P	05 50 14.8	+0.4
MIAR				IAmb	IAmb	05 50 16.9	
	comp=Z,26nm,0.8s						
MIAR	Mount Ida	22.45	347	P	P	05 50 15.5	+1.1
	baz=165,SNR=14						
X55A	Gracelyn & Ava	22.46	13	P	P	05 50 16.1	+1.6
	baz=196						
W45A	Hickory Valley	22.47	357	P	P	05 50 14.3	-0.3
W45A				IAmb	IAmb	05 50 16.1	
	comp=Z,27nm,0.8s						
SWET	Sewanee	22.56	4	P	P	05 50 15.7	+0.1
X56A	White Oak	22.62	15	P	P	05 50 18.0	+1.8
	baz=197						
ABTX	Abilene, Hawle	22.68	333	P	P	05 50 16.7	-0.1
ABTX	Abilene, Hawle	22.68	333	P	P	05 50 18.1	+1.2
	baz=149,SNR=11						
BG3	Lake Jocassee	22.70	10	P	P	05 50 17.2	+0.1
BG3				IAmb	IAmb	05 50 19.8	
	comp=Z,29nm,0.9s						
STVI	Saint Thomas	22.73	73	P	P	05 50 16.2	-1.3
PAULI	Pauline	22.75	13	P	P	05 50 18.3	+0.7
PAULI				IAmb	IAmb	05 50 20.1	
	comp=Z,32nm,0.9s						
W41B	Gary Mavity, V	22.81	351	P	P	05 50 18.4	+0.3
W41B	Gary Mavity, V	22.81	351	P	P	05 50 18.8	+0.7
	baz=169						
PCRV	Puerto La Cruz	22.83	94	P	P	05 50 17.0	-1.7
	comp=Z,17nm,0.7s,baz=231,slow=3.9,SNR=12						
PLCV	Puerto La Cruz	22.88	94	P	P	05 50 17.0	-2.1
BIRD	Birdtown, Kers	22.91	16	P	P	05 50 19.5	+0.3
BIRD				IAmb	IAmb	05 50 21.2	
	comp=Z,21nm,0.7s						
CPCT	Cooper Cave	22.92	7	P	P	05 50 19.1	-0.1
CPCT				IAmb	IAmb	05 50 22.5	
	comp=Z,17nm,0.8s						
WHAR	Wooly Hollow	22.93	351	P	P	05 50 19.4	0.0
W54A	Cherokee Point	22.93	12	P	P	05 50 21.4	+1.9
	baz=194,SNR=11						
W39A	Magazine	23.12	347	P	P	05 50 22.0	+0.8
W39A				IAmb	IAmb	05 50 41.0	
	comp=Z,20nm,1.1s						
W39A	Magazine	23.12	347	P	P	05 50 22.5	+1.2
	baz=165,SNR=7.2						
X58A	Rowland	23.14	18	P	P	05 50 22.8	+1.3
	baz=201						
KMSC	Kings Mountain	23.17	14	P	P	05 50 22.6	+0.9
KMSC				IAmb	IAmb	05 50 23.9	
	comp=Z,29nm,0.7s						
KMSC	Kings Mountain	23.17	14	P	P	05 50 23.2	+1.4
	baz=196,SNR=6.9						

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TKL   Tuckaleechee C  23.22   8 P     P     05 50 23.0 +0.8
      comp=Z,30nm,0.9s,baz=180,slow=9.4,SNR=19
TKL                             ScP   ScP   05 57 38.5 -0.5
      comp=Z,4.4nm,0.9s,baz=90,slow=3.0,SNR=3.2
TKL                             LR    LR    06 00 50.0
      comp=Z,177nm,19.1s,baz=193,slow=40
TKL   Tuckaleechee C  23.22   8 P     P     05 50 22.9 +0.7
TKL                             IAmb  IAmb  05 50 25.1
      comp=Z,34nm,0.9s
GNAR  Gosnell         23.33 355 P     P     05 50 23.8 +0.6
GNAR                            IAmb  IAmb  05 50 39.5
      comp=Z,30nm,0.9s
W56A  Indian Trail    23.34  15 P     P     05 50 24.7 +1.4
      baz=198
V53A  Saluda          23.38  10 P     P     05 50 25.1 +1.4
      baz=192
CLTN  Cedars of Leba  23.40   3 P     P     05 50 23.8 -0.1
CLTN                            IAmb  IAmb  05 50 26.4
      comp=Z,17nm,0.7s
FCAR  Ozark Folk Cen  23.49 351 P     P     05 50 24.5 -0.2
W57A  Gilead          23.52  16 P     P     05 50 25.9 +1.0
      baz=199
LCAR  Lake Charles    23.54 353 P     P     05 50 24.5 -0.6
X60A  Albert Glenn T  23.61  21 P     P     05 50 26.7 +1.0
      baz=204
W58A  Raeford         23.61  18 P     P     05 50 26.9 +1.2
      baz=201
V54A  Nebo            23.65  12 P     P     05 50 27.6 +1.4
      baz=194,SNR=5.9
X34A  Smith Ranch, M  23.70 339 P     P     05 50 27.7 +1.1
U49A  Red Boiling Sp  23.86   4 P     P     05 50 27.9  0.0
V55A  Taylorsville    23.88  13 P     P     05 50 29.6 +1.4
      baz=196
W35A  Tecumseh        23.89 341 P     P     05 50 28.0 -0.2
PARMO Parma           24.00 356 P     P     05 50 29.7 +0.5
V56A  Mocksville      24.01  15 P     P     05 50 30.8 +1.5
      baz=198
HENM  Henderson Moun  24.04 357 P     P     05 50 29.7 +0.2
U40A  Yellville       24.07 350 P     P     05 50 29.9 +0.1
U40A                            IAmb  IAmb  05 50 31.9
      comp=Z,16nm,0.8s
U40A  Yellville       24.07 350 P     P     05 50 30.2 +0.4
      baz=168,SNR=17
TZTN  Tazewell        24.12   8 P     P     05 50 30.6 +0.2
TZTN                            IAmb  IAmb  05 50 34.4
      comp=Z,17nm,0.9s
TZTN  Tazewell        24.12   8 P     P     05 50 31.3 +1.0
      baz=190
FNO   Franklin        24.15 341 P     P     05 50 31.1 +0.5
PBMO  Poplar Bluff    24.17 355 P     P     05 50 30.6 -0.1
PBMO                            IAmb  IAmb  05 50 32.2
      comp=Z,22nm,0.8s
WMOK  Wichita Mounta  24.17 337 P     P     05 50 30.9 +0.1
WMOK  Wichita Mounta  24.17 337 P     P     05 50 31.1 +0.3
      baz=153,SNR=16
HHAR  Hobbs           24.20 348 P     P     05 50 31.1 +0.1
HHAR                            IAmb  IAmb  05 50 34.2
      comp=Z,14nm,0.8s
V57A  Coltrane Farms  24.27  16 P     P     05 50 32.9 +1.2
      baz=199
T47A  Sharon Grove    24.27   1 P     P     05 50 31.5 -0.2
TUL1  Leonard         24.28 344 P     P     05 50 31.8 +0.1
TUL1                            IAmb  IAmb  05 50 36.1
      comp=Z,12nm,0.7s
TUL1  Leonard         24.28 344 P     P     05 50 33.1 +1.3
      baz=161
OKCSW OKLAHOMA CITY   24.30 341 P     P     05 50 31.5 -0.5
T45A  Paducah         24.30 358 P     P     05 50 32.2 +0.3
OKCFA Oklahoma City   24.31 341 P     P     05 50 32.5 +0.4
OKCFA                           IAmb  IAmb  05 50 36.1
      comp=Z,18nm,0.7s
V58A  Windy Hill, Pi  24.36  17 P     P     05 50 33.3 +0.8
V58A  Windy Hill, Pi  24.36  17 P     P     05 50 33.7 +1.2
      baz=201,SNR=8.5
U54A  Nelsons Funny   24.39  12 P     P     05 50 33.5 +0.7
U54A  Nelsons Funny   24.39  12 P     P     05 50 34.1 +1.2
      baz=194,SNR=8.9
SMRT  St. Maarten     24.43  74 P     P     05 50 30.6 -2.7
T50A  Nancy           24.44   6 P     P     05 50 33.8 +0.6
      baz=187
U38A  Gravette        24.44 347 P     P     05 50 33.3  0.0
OK005 Luther M Schoo  24.45 341 P     P     05 50 35.6 +2.3
T49A  Edmonton        24.46   4 P     P     05 50 32.8 -0.6
T49A  Edmonton        24.46   4 P     P     05 50 33.7 +0.3
      baz=185
T42A  Van Buren       24.48 354 P     P     05 50 32.8 -0.7
T42A                            IAmb  IAmb  05 50 34.4
      comp=Z,15nm,0.8s
T51A  Gray            24.48   7 P     P     05 50 34.7 +1.1
      baz=189
U55A  TA2, Sparta     24.54  13 P     P     05 50 35.4 +1.2
      baz=196
V59A  Middlesex       24.60  19 P     P     05 50 35.8 +1.1
      baz=203
T53A  Wise            24.71  10 P     P     05 50 36.4 +0.7
      baz=192
MGMO  Mountain Grove  24.75 351 P     P     05 50 35.9 -0.2
T52A  Hallie          24.76   9 P     P     05 50 37.2 +1.0
      baz=191
U57A  Blanch          24.90  16 P     P     05 50 38.6 +1.2
      baz=200
MNTX  Cornudas Mount  24.94 322 P     P     05 50 37.9  0.0
MNTX  Cornudas Mount  24.94 322 P     P     05 50 39.1 +1.2
      baz=136,SNR=16
T54A  Tazewell        24.96  12 P     P     05 50 39.2 +1.1
      baz=194
S44A  Carbondale      25.00 357 P     P     05 50 38.1 -0.2
S44A                            IAmb  IAmb  05 50 39.6
      comp=Z,18nm,0.8s
U58A  Oxford          25.09  18 P     P     05 50 40.1 +0.9
      baz=201
S49A  Springfield     25.16   5 P     P     05 50 39.9 +0.1
      baz=186
T55A  Pulaski         25.19  13 P     P     05 50 41.5 +1.4
      baz=196
S51A  Beattyville     25.19   8 P     P     05 50 40.1  0.0
S51A                            IAmb  IAmb  05 50 43.6
      comp=Z,13nm,0.6s
S51A  Beattyville     25.19   8 P     P     05 50 41.0 +0.9
      baz=190
MSTX  Muleshoe        25.25 330 P     P     05 50 41.1 +0.3
MSTX  Muleshoe        25.25 330 P     P     05 50 41.5 +0.7
      baz=144,SNR=26
U59A  Littleton       25.29  19 P     P     05 50 42.5 +1.6
      baz=203
BLA   Blacksburg      25.36  14 P     P     05 50 43.3 +1.6
      baz=197
S39A  Bolivar         25.45 350 P     P     05 50 42.2 -0.1
S39A                            IAmb  IAmb  05 50 43.5
      comp=Z,18nm,0.6s
T57A  Hurt            25.45  16 P     P     05 50 43.7 +1.3
      baz=200
AMTX  Amarillo        25.49 333 P     P     05 50 43.6 +0.8
AMTX                            IAmb  IAmb  05 50 49.5
      comp=Z,17nm,0.8s
CCM   Cathedral Cave  25.51 354 P     P     05 50 42.5 -0.4
CCM                             IAmb  IAmb  05 50 43.5
      comp=Z,15nm,0.8s
CCM   Cathedral Cave  25.51 354 P     P     05 50 43.1 +0.1
      baz=172
WCI   Wyandotte Cave  25.54   3 P     P     05 50 43.3 +0.1
WCI                             IAmb  IAmb  05 50 44.6
      comp=Z,24nm,0.8s
WCI   Wyandotte Cave  25.54   3 P     P     05 50 43.7 +0.5
      baz=183
U60A  Pendleton       25.60  20 P     P     05 50 44.9 +1.2
      baz=204
R49A  Shelbyville     25.67   5 P     P     05 50 44.3 -0.1
      baz=186
U32A  Winter Ranch,   25.71 339 P     P     05 50 44.7 -0.2
R51A  Hillsboro       25.84   8 P     P     05 50 46.7 +0.8
      baz=189
S55A  Lewisburg       25.88  13 P     P     05 50 47.4 +1.1
      baz=196
OLIL  Olney           26.00 359 P     P     05 50 47.1 -0.2
OLIL                            IAmb  IAmb  05 50 49.0
      comp=Z,20nm,0.9s
R53A  Hurricane       26.13  10 P     P     05 50 48.9 +0.4
      baz=193
R54A  Victor          26.16  12 P     P     05 50 49.6 +0.7
      baz=195
Q44A  Meyer Farm, Va  26.20 358 P     P     05 50 49.0 -0.1
Q44A                            IAmb  IAmb  05 50 50.1
      comp=Z,20nm,0.8s
S57A  Dark Hollow, R  26.25  16 P     P     05 50 50.6 +1.0
      baz=200
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Q48A  North Vernon    26.26   4 P     P     05 50 49.3 -0.4
      baz=184
Q49A  Aurora          26.40   5 P     P     05 50 51.0  0.0
      baz=186
R55A  Marlinton       26.45  14 P     P     05 50 52.4 +0.8
      baz=197
BLO   Bloomington     26.47   2 P     P     05 50 51.3 -0.3
BLO                             IAmb  IAmb  05 50 52.0
      comp=Z,17nm,1.1s
Q51A  Peebles         26.59   8 P     P     05 50 52.9 +0.2
Q51A                            IAmb  IAmb  05 50 55.4
      comp=Z,28nm,0.8s
Q51A  Peebles         26.59   8 P     P     05 50 53.4 +0.7
      baz=190,SNR=7.9
Q52A  Bidwell         26.69  10 P     P     05 50 54.5 +0.9
      baz=192
Q53A  Leroy           26.72  11 P     P     05 50 54.8 +1.0
      baz=194
R56A  Bull Pasture M  26.74  15 P     P     05 50 55.3 +1.2
      baz=198
NNA   Nana            26.76 156 LR    LR    05 59 44.7
      comp=Z,130nm,20.0s,baz=326,slow=32
P48A  Milroy          26.81   4 P     P     05 50 54.1 -0.5
      baz=185
R57A  Stanardsville   26.87  16 P     P     05 50 56.3 +1.1
      baz=200
P49A  Miami Univ. Ec  26.94   5 P     P     05 50 55.2 -0.6
      baz=186
Q54A  Coxs Mills      26.97  12 P     P     05 50 56.6 +0.5
Q54A  Coxs Mills      26.97  12 P     P     05 50 57.0 +0.9
      baz=195
121A  Cookes Peak, D  26.99 320 P     P     05 51 01.5 +4.9
      baz=133
R58A  Rapidan         27.02  17 P     P     05 50 58.0 +1.5
      baz=201
P51A  Williamsport    27.08   8 P     P     05 50 57.6 +0.6
      baz=190
Q55A  Buckhannon      27.14  13 P     P     05 50 58.7 +1.0
      baz=196
P53A  Whipple         27.35  11 P     P     05 50 59.6 +0.1
P53A  Whipple         27.35  11 P     P     05 51 00.5 +1.0
      baz=194,SNR=5.5
P52A  Corning         27.36  10 P     P     05 51 00.1 +0.5
      baz=192
P38A  Dawn            27.37 350 P     P     05 50 59.4 -0.3
P38A                            IAmb  IAmb  05 51 01.4
      comp=Z,19nm,0.7s
Q56A  Snyder Ridge,   27.40  15 P     P     05 51 01.6 +1.7
      baz=198
O44A  Mansfield       27.43 359 P     P     05 50 59.5 -0.6
O44A                            IAmb  IAmb  05 51 01.3
      comp=Z,15nm,0.9s
R32A  Long Quarter,   27.47 341 P     P     05 51 00.4 -0.2
R32A                            IAmb  IAmb  05 51 01.5
      comp=Z,8.2nm,0.6s
KSU1  Kansas State U  27.50 345 P     P     05 51 00.9  0.0
      baz=161
O49A  Covington       27.62   6 P     P     05 51 01.9 -0.1
O49A                            IAmb  IAmb  05 51 03.0
      comp=Z,13nm,0.7s
O49A  Covington       27.62   6 P     P     05 51 02.5 +0.5
      baz=187
P54A  Burton          27.64  12 P     P     05 51 02.8 +0.7
      baz=195
SFIN  Lafayette       27.65   1 P     P     05 51 01.3 -0.8
      baz=181
O50A  Cable           27.66   7 P     P     05 51 02.5 +0.2
      baz=189,SNR=16
O51A  Pataskala       27.80   9 P     P     05 51 04.0 +0.5
      baz=191
ACSO  Alum Creek Sta  27.82   8 P     P     05 51 04.0 +0.4
ACSO                            IAmb  IAmb  05 51 06.1
      comp=Z,12nm,0.7s
ACSO  Alum Creek Sta  27.82   8 P     P     05 51 04.1 +0.4
      baz=190
MCWV  Mont Chateau    27.83  13 P     P     05 51 04.9 +1.2
      baz=197
HDIL  Hopedale        27.86 358 P     P     05 51 03.5 -0.5
HDIL                            IAmb  IAmb  05 51 05.2
      comp=Z,11nm,0.7s
HDIL  Hopedale        27.86 358 P     P     05 51 04.2 +0.2
      baz=177
O52A  Adamsville      27.88  10 P     P     05 51 04.5 +0.3
O52A                            IAmb  IAmb  05 51 05.5
      comp=Z,17nm,0.9s
O52A  Adamsville      27.88  10 P     P     05 51 04.8 +0.6
      baz=192
P56A  Dayton Farm, R  27.92  15 P     P     05 51 06.1 +1.5
      baz=199
ANMO  Albuquerque     27.93 326 P     P     05 51 05.4 +0.5
      comp=Z,1.3nm,0.5s,baz=148,slow=8.4,SNR=13
ANMO  Albuquerque     27.93 326 P     P     05 51 06.0 +1.1
ANMO  Albuquerque     27.93 326 P     P     05 51 07.3 +2.4
      baz=138
P57A  Homestead Farm  28.12  16 P     P     05 51 07.5 +1.2
P57A                            IAmb  IAmb  05 51 08.8
      comp=Z,19nm,0.8s
P57A  Homestead Farm  28.12  16 P     P     05 51 08.1 +1.8
      baz=200
O53A  New Philadelph  28.12  11 P     P     05 51 07.2 +0.8
      baz=194
CBKS  Cedar Bluff     28.16 340 P     P     05 51 06.7 -0.1
CBKS                            IAmb  IAmb  05 51 09.0
      comp=Z,12nm,0.9s
CBKS  Cedar Bluff     28.16 340 P     P     05 51 07.4 +0.6
      baz=155
O54A  Avella          28.22  12 P     P     05 51 06.8 -0.4
O54A                            IAmb  IAmb  05 51 08.8
      comp=Z,21nm,0.8s
O54A  Avella          28.22  12 P     P     05 51 07.8 +0.6
      baz=195
N48A  Decatur         28.23   4 P     P     05 51 07.2 -0.2
      baz=186
P58A  Pank, Wackersv  28.32  17 P     P     05 51 09.5 +1.4
      baz=202
Q60A  Greensboro      28.33  20 P     P     05 51 09.8 +1.6
      baz=205
N50A  Nevada          28.33   7 P     P     05 51 08.7 +0.4
      baz=189
N49A  Columbus Grove  28.37   6 P     P     05 51 08.1 -0.5
N49A                            IAmb  IAmb  05 51 10.0
      comp=Z,17nm,0.8s
N49A  Columbus Grove  28.37   6 P     P     05 51 08.7 +0.2
      baz=187
N51A  Ashland         28.59   9 P     P     05 51 10.6 +0.1
      baz=191
N52A  McGinn's Farm,  28.59  10 P     P     05 51 11.1 +0.6
      baz=192
T25A  Trinidad        28.59 331 P     P     05 51 13.2 +2.3
      baz=144
N53A  Lisbon          28.73  11 P     P     05 51 12.4 +0.6
N53A                            IAmb  IAmb  05 51 13.7
      comp=Z,17nm,0.9s
N53A  Lisbon          28.73  11 P     P     05 51 12.4 +0.6
      baz=194
O57A  Amberson        28.90  16 P     P     05 51 14.3 +1.0
      baz=201
M49A  Liberty Center  28.93   6 P     P     05 51 13.4 -0.1
      baz=188
M50A  Fremont         28.97   7 P     P     05 51 14.2 +0.3
      baz=189
N54A  Moraine State   29.05  12 P     P     05 51 15.4 +0.8
N54A  Moraine State   29.05  12 P     P     05 51 15.0 +0.4
      baz=196
SSPA  Standing Stone  29.23  16 P     P     05 51 17.2 +1.0
      baz=200
L47A  Sherwood        29.33   4 P     P     05 51 16.7 -0.4
      baz=185
L48A  N Adams         29.36   5 P     P     05 51 16.3 -1.0
      baz=186
M53A  WI Miller and   29.38  11 P     P     05 51 18.0 +0.5
      baz=194
KSCO  Kaye Shedlock'  29.39 336 P     P     05 51 20.5 +2.7
KSCO                            IAmb  IAmb  05 51 20.9
      comp=Z,7.9nm,0.6s
KSCO  Kaye Shedlock'  29.39 336 P     P     05 51 18.9 +1.1
      baz=149
N56A  West Decatur    29.39  15 P     P     05 51 18.4 +0.7
      baz=199
O59A  Robesonia       29.41  18 P     P     05 51 19.1 +1.3
      baz=203
L40A  Anamosa         29.48 355 P     P     05 51 17.7 -0.7
L40A                            IAmb  IAmb  05 51 18.9
      comp=Z,10nm,0.7s
SDCO  Great Sand Dun  29.60 331 P     P     05 51 21.3 +1.4
SDCO  Great Sand Dun  29.60 331 P     P     05 51 21.7 +1.9
      baz=143,SNR=8.4
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M54A  Oil Creek Stat  29.64  12 P     P     05 51 20.5 +0.6
M54A  Oil Creek Stat  29.64  12 P     P     05 51 20.4 +0.5
      baz=196,SNR=6.2
N58A  Sunbury         29.74  17 P     P     05 51 21.5 +0.8
      baz=202
L53A  Girard          29.95  11 P     P     05 51 23.1 +0.6
      baz=195
M56A  Emporium        29.95  15 P     P     05 51 23.1 +0.4
      baz=199
K46A  Dorr            30.00   3 P     P     05 51 21.6 -1.4
      baz=184
K47A  Vermontville    30.04   4 P     P     05 51 22.3 -1.0
      baz=185
M57A  Sunshine Farm,  30.09  16 P     P     05 51 24.9 +1.1
      baz=201
N59A  State Game Lan  30.09  18 P     P     05 51 25.2 +1.4
      baz=204
ERPA  Erie            30.16  12 P     P     05 51 25.4 +0.9
ERPA  Erie            30.16  12 P     P     05 51 25.4 +0.9
      baz=195
K48A  Perry           30.24   5 P     P     05 51 24.4 -0.6
      baz=187
S22A  4UR Ranch, Cre  30.25 329 P     P     05 51 27.6 +2.0
S22A                            IAmb  IAmb  05 51 28.2
      comp=Z,6.2nm,0.7s
S22A  4UR Ranch, Cre  30.25 329 P     P     05 51 27.7 +2.0
      baz=141,SNR=9.6
K49A  Clarkson        30.29   6 P     P     05 51 25.3 -0.2
      baz=188
M58A  Price's Panora  30.31  17 P     P     05 51 26.9 +1.1
      baz=202
L54A  Sinclairville   30.41  12 P     P     05 51 26.9 +0.3
      baz=196
X16A  Lo Mia Camp, P  30.52 319 P     P     05 51 30.1 +2.1
L55A  Hinsdale        30.56  14 P     P     05 51 28.5 +0.5
      baz=198
J47A  Sunmer          30.61   4 P     P     05 51 27.5 -0.9
      baz=186
M59A  Waymart         30.77  18 P     P     05 51 31.0 +1.1
      baz=204
L57A  Andrews Acres   30.78  16 P     P     05 51 30.9 +0.9
      baz=201
M60A  Port Jervis     30.83  20 P     P     05 51 31.3 +1.0
      baz=206
J49A  Marlette        30.89   7 P     P     05 51 30.4 -0.4
      baz=189
M61A  Granite Spring  31.10  21 P     P     05 51 33.8 +1.1
      baz=207
L58A  Harry Jones Me  31.10  17 P     P     05 51 33.7 +0.9
      baz=203
I42A  Draeger Farm,   31.17 358 P     P     05 51 32.4 -0.9
I42A                            IAmb  IAmb  05 51 33.5
      comp=Z,13nm,1.1s
BINY  Binghamton      31.21  17 P     P     05 51 34.4 +0.8
      baz=202
K56A  Middlesex       31.31  15 P     P     05 51 34.8 +0.2
      baz=200
I45A  Fountain        31.33   2 P     P     05 51 33.6 -1.1
      baz=183
SMCO  Snowmass        31.43 331 P     P     05 51 37.6 +1.4
SMCO                            IAmb  IAmb  05 51 41.0
      comp=Z,6.9nm,0.8s
L59A  Walton          31.48  18 P     P     05 51 37.2 +1.1
L59A  Walton          31.48  18 P     P     05 51 37.1 +1.0
      baz=204
K57A  Scipio Center   31.55  16 P     P     05 51 37.0 +0.3
      baz=201
L60A  Shokan          31.56  20 P     P     05 51 37.6 +0.9
      baz=206
PV13  Radium Mtn., P  31.58 327 P     P     05 51 39.2 +1.9
PV13                            IAmb  IAmb  05 51 40.3
      comp=Z,6.0nm,0.7s
PV03  Paradox Valley  31.67 327 P     P     05 51 40.0 +1.9
PV03                            IAmb  IAmb  05 51 40.4
      comp=Z,10nm,0.7s
PV12  Saucer Basin,   31.69 328 P     P     05 51 40.1 +1.9
PV18  Skein Mesa, Pa  31.69 327 P     P     05 51 39.8 +1.5
PV11  David Mesa, Pa  31.71 327 P     P     05 51 39.9 +1.5
PV16  Nyswonger Mesa  31.75 327 P     P     05 51 40.2 +1.5
PV16                            IAmb  IAmb  05 51 41.1
      comp=Z,11nm,0.6s
PV17  East Wray Mesa  31.75 327 P     P     05 51 40.2 +1.5
PV19  Morning Glory   31.78 327 P     P     05 51 40.2 +1.2
PV19                            IAmb  IAmb  05 51 41.3
      comp=Z,11nm,0.7s
PV20  West Nyswonger  31.80 327 P     P     05 51 40.4 +1.3
PV20                            IAmb  IAmb  05 51 41.4
      comp=Z,10nm,0.7s
PV04  Paradox Valley  31.80 328 P     P     05 51 40.8 +1.7
PV04                            IAmb  IAmb  05 51 45.4
      comp=Z,12nm,0.7s
K58A  Earlville       31.82  17 P     P     05 51 39.7 +0.6
      baz=203
PV14  Lion Creek, Pa  31.85 327 P     P     05 51 41.0 +1.3
PV14                            IAmb  IAmb  05 51 41.9
      comp=Z,9.7nm,0.7s
PV10  Paradox Valley  31.86 327 P     P     05 51 40.8 +1.0
PV10                            IAmb  IAmb  05 51 41.4
      comp=Z,13nm,0.7s
ECSD  EROS Data Cent  31.92 348 P     P     05 51 39.1 -0.8
ECSD                            IAmb  IAmb  05 51 40.5
      comp=Z,12nm,0.8s
ECSD  EROS Data Cent  31.92 348 P     P     05 51 39.1 -0.8
      baz=164,SNR=15
J56A  Wolcott         31.97  15 P     P     05 51 40.9 +0.6
      baz=200
H48A  Harrisville     32.20   6 P     P     05 51 42.0 -0.3
H48A  Harrisville     32.20   6 P     P     05 51 42.0 -0.3
      baz=188,SNR=5.3
J57A  Williamstown    32.32  16 P     P     05 51 43.6 +0.2
      baz=202
G45A  Suttons Bay     32.36   3 P     P     05 51 42.2 -1.5
G45A  Suttons Bay     32.36   3 P     P     05 51 42.8 -0.9
      baz=184,SNR=7.2
SAML  Samuel          32.52 130 P     P     05 51 44.3 -1.2
G40A  Rib Lake        32.60 357 P     P     05 51 44.6 -1.2
H52A  Wyevale         32.62  10 P     P     05 51 45.7 -0.2
      baz=194
I55A  Frankford       32.66  14 P     P     05 51 46.1 -0.2
      baz=198
BC3   Big Chuckawall  32.76 314 P     P     05 51 49.5 +2.0
      baz=123
SPMN  Marine on St.   32.77 353 P     P     05 51 46.2 -1.1
SPMN  Marine on St.   32.77 353 P     P     05 51 46.6 -0.7
      baz=171,SNR=8.0
O20A  White River Ci  32.79 330 P     P     05 51 48.4 +0.6
O20A  White River Ci  32.79 330 P     P     05 51 50.5 +2.7
      baz=141,SNR=12
H53A  Bobcaygeon      32.80  12 P     P     05 51 47.7 +0.1
      baz=197
I58A  Old Forge       32.87  17 P     P     05 51 48.6 +0.4
      baz=203
SADO  Sadowa          32.88  11 P     P     05 51 47.3 -0.9
      comp=Z,14nm,0.6s,baz=250,slow=6.8,SNR=27
SADO                            pP    pP    05 52 06.1 -0.6
      comp=Z,5.1nm,0.5s,baz=231,slow=4.5,SNR=2.5
SADO                            ScP   ScP   05 58 06.7 -1.8
      comp=Z,4.3nm,0.9s,baz=246,slow=1.5,SNR=3.6
SADO                            LR    LR    06 06 31.1
      comp=Z,193nm,18.4s,baz=184,slow=39
SADO  Sadowa          32.88  11 P     P     05 51 47.2 -1.1
F45A  CMU Biological  33.01   3 P     P     05 51 48.2 -1.2
      baz=184
PKCU  Pink Cliffs     33.03 323 P     P     05 51 50.3 +0.2
SUSD  Miller          33.12 345 P     P     05 51 50.3 -0.2
SUSD  Miller          33.12 345 P     P     05 51 50.2 -0.2
      baz=160,SNR=6.3
SRU   San Rafael Swe  33.19 327 P     P     05 51 52.5 +1.3
I59A  Olmsteadville   33.30  19 P     P     05 51 52.1 +0.2
      baz=205
H56A  Elgin           33.36  15 P     P     05 51 53.5 +1.1
      baz=201
F48A  Evansville      33.38   7 P     P     05 51 52.1 -0.5
      baz=189
COWI  Conover         33.38 358 P     P     05 51 51.5 -1.2
COWI                            IAmb  IAmb  05 51 52.4
      comp=Z,7.1nm,0.8s
H57A  Richville       33.46  16 P     P     05 51 54.4 +1.0
      baz=202
P17A  Butcher Ranch,  33.56 327 P     P     05 51 55.3 +0.7
E43A  Lone Tree Farm  33.65   1 P     P     05 51 53.7 -1.2
E43A                            IAmb  IAmb  05 51 54.7
      comp=Z,8.6nm,0.8s
MSU   Marysvale       33.68 324 P     P     05 51 57.4 +1.8
TMUT  Trail Mountain  33.69 326 P     P     05 51 56.6 +0.9
G54A  Lake Saint Pet  33.69  12 P     P     05 51 55.2 -0.2
```

	baz=197						
H58A	**Gabriels**	**33.77**	**18**	P	**P**	**05 51 56.1**	**+0.1**
	baz=204						
F52A	**Sundridge**	**33.84**	**11**	P	**P**	**05 51 56.2**	**-0.4**
	baz=195						
E44A	**Grand Marais A**	**33.92**	**2**	P	**P**	**05 51 57.3**	**0.0**
	baz=183						
E47A	**Iron Bridge**	**33.94**	**6**	P	**P**	**05 51 57.0**	**-0.4**
	baz=188						
E38A	**The Farm, Brul**	**34.02**	**355**	P	**P**	**05 51 57.3**	**-0.9**
E38A				IAmb	IAmb	05 51 57.6	
	comp=Z,7.1nm,0.8s						
K22A	**Casper**	**34.04**	**335**	P	**P**	**05 52 00.2**	**+1.6**
	baz=146						
ALGO	**Algonquin Park**	**34.23**	**12**	P	**P**	**05 51 59.8**	**-0.2**
	baz=197						
RSSD	**Black Hills**	**34.35**	**339**	P	**P**	**05 52 02.8**	**+1.5**
RSSD				IAmb	IAmb	05 52 04.2	
	comp=Z,5.3nm,0.9s						
RSSD	**Black Hills**	**34.35**	**339**	P	**P**	**05 52 02.8**	**+1.5**
	baz=151						
E52A	**Mattawa**	**34.43**	**11**	P	**P**	**05 52 01.4**	**-0.3**
	baz=196						
MPU	**Maple Canyon**	**34.43**	**327**	P	**P**	**05 52 03.1**	**+1.0**
E51A	**G1948 Merrick**	**34.52**	**10**	P	**P**	**05 52 02.3**	**-0.2**
	baz=194,SNR=5.5						
D47A	**Chapleau**	**34.55**	**6**	P	**P**	**05 52 01.8**	**-1.0**
	baz=188						
PSUT	**Pine Spring**	**34.67**	**323**	P	**P**	**05 52 06.4**	**+2.2**
LPAZ	**La Paz**	**34.69**	**145**	P	**P**	**05 52 05.6**	**+0.6**
	comp=Z,2.1nm,0.5s,baz=340,slow=5.9,SNR=22						
LPAZ				LR	LR	06 08 26.5	
	comp=Z,48nm,19.5s,baz=317,slow=40						
LPAZ	**La Paz**	**34.69**	**145**	P	**P**	**05 52 04.5**	**-0.4**
JLU	**Jordanelle**	**34.76**	**328**	P	**P**	**05 52 06.3**	**+1.3**
D48A	**Paudash Townsh**	**34.81**	**7**	P	**P**	**05 52 04.0**	**-1.0**
	baz=190						
E54A	**Lac Daplat, Po**	**34.87**	**13**	P	**P**	**05 52 05.3**	**-0.3**
	baz=198						
D49A	**Beulah Townshi**	**34.96**	**8**	P	**P**	**05 52 05.5**	**-0.8**
	baz=191						
CTU	**Camp Tracy**	**34.98**	**327**	P	**P**	**05 52 08.1**	**+1.3**
D50A	**G1974 Best Tow**	**35.08**	**9**	P	**P**	**05 52 06.6**	**-0.7**
	baz=193						
D51A	**Lot 18 Range I**	**35.08**	**10**	P	**P**	**05 52 07.0**	**-0.3**
	baz=194						
TCUT	**Toone Canyon**	**35.11**	**328**	P	**P**	**05 52 08.9**	**+0.9**
DUG	**Dugway, Tooele**	**35.20**	**326**	P	**P**	**05 52 10.1**	**+1.5**
DUG	**Dugway, Tooele**	**35.20**	**326**	P	**P**	**05 52 10.3**	**+1.7**
	baz=134,SNR=5.7						
D32A	**Dogwood Acres,**	**35.27**	**349**	P	**P**	**05 52 07.8**	**-1.0**
EYMN	**Ely**	**35.35**	**356**	P	**P**	**05 52 07.9**	**-1.7**
EYMN				IAmb	IAmb	05 52 08.9	
	comp=Z,4.8nm,0.8s						
EYMN	**Ely**	**35.35**	**356**	P	**P**	**05 52 08.2**	**-1.4**
	baz=174						
D53A	**Lac Vacive, Po**	**35.38**	**12**	P	**P**	**05 52 10.3**	**+0.4**
	baz=197						
BW06	**Boulder Array**	**35.46**	**332**	P	**P**	**05 52 11.3**	**+0.4**
BW06	**Boulder Array**	**35.46**	**332**	P	**P**	**05 52 12.0**	**+1.1**
	baz=141						
PD31	**Pinedale Array**	**35.46**	**332**	P	**P**	**05 52 11.5**	**+0.5**
PDAR	**Pinedale Array**	**35.46**	**332**	P	**P**	**05 52 11.6**	**+0.7**
	comp=Z,3.0nm,0.7s,baz=127,slow=10.0,SNR=31						
PDAR				pP	**pP**	**05 52 30.2**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=126,slow=10,SNR=3.7						
PDAR				PcP	**PcP**	**05 54 38.6**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=114,slow=4.0,SNR=3.9						
PDAR				LR	LR	06 09 06.1	
	comp=Z,83nm,21.9s,baz=134,slow=40						
PDAR	**Pinedale Array**	**35.46**	**332**	P	**P**	**05 52 11.1**	**+0.1**
HWUT	**Hardware Ranch**	**35.55**	**329**	P	**P**	**05 52 13.1**	**+1.4**
R11A	**Troy Canyon, C**	**35.59**	**321**	P	**P**	**05 52 14.4**	**+2.4**
	baz=129						
G62A	**West of Eustis**	**35.66**	**21**	P	**P**	**05 52 13.2**	**+0.9**
	baz=210						
D54A	**Lac Fusel, La**	**35.67**	**13**	P	**P**	**05 52 11.9**	**-0.4**
	baz=199						
SPUT	**South Promonto**	**35.79**	**327**	P	**P**	**05 52 14.8**	**+1.1**
E58A	**La Victoria**	**35.81**	**17**	P	**P**	**05 52 13.3**	**-0.3**
	baz=204						
D55A	**Sainte-Anne-du**	**35.82**	**14**	P	**P**	**05 52 13.5**	**-0.1**
	baz=201						
BGU	**Big Grassy Mou**	**35.83**	**327**	P	**P**	**05 52 14.6**	**+0.6**
AHID	**Auburn Hatcher**	**36.19**	**330**	P	**P**	**05 52 17.8**	**+0.7**
AGMN	**Agassiz Nation**	**36.20**	**351**	P	**P**	**05 52 16.1**	**-0.7**
AGMN	**Agassiz Nation**	**36.20**	**351**	P	**P**	**05 52 16.3**	**-0.5**
	baz=166,SNR=16						
MNMC	**Minye Minye**	**36.30**	**150**	P	**P**	**05 52 19.8**	**+1.4**
HVU	**Hansel Valley**	**36.30**	**328**	P	**P**	**05 52 19.3**	**+1.3**
MDND	**Maddock**	**36.48**	**347**	P	**P**	**05 52 19.4**	**+0.1**
MDND	**Maddock**	**36.48**	**347**	P	**P**	**05 52 19.5**	**+0.2**
	baz=160,SNR=8.3						
REDW	**Red Top Meadow**	**36.52**	**331**	P	**P**	**05 52 21.1**	**+1.1**
SNOW	**Snow King Moun**	**36.55**	**332**	P	**P**	**05 52 21.2**	**+0.9**
D58A	**Chemin du LacG**	**36.58**	**17**	P	**P**	**05 52 19.8**	**-0.4**
	baz=205						
FXWY	**Fox Creek**	**36.81**	**331**	P	**P**	**05 52 23.7**	**+1.2**
FXWY				IAmb	IAmb	05 52 24.4	
	comp=Z,3.9nm,0.8s						
ELK	**Elko**	**36.93**	**324**	P	**P**	**05 52 25.4**	**+1.9**
GO01	**Chusmiza**	**36.95**	**150**	P	**P**	**05 52 25.1**	**+0.9**
FLWY	**Flagg Ranch**	**37.01**	**332**	P	**P**	**05 52 25.7**	**+1.6**
H17A	**Grant Village**	**37.19**	**333**	P	**P**	**05 52 27.8**	**+2.0**
H17A	**Grant Village**	**37.19**	**333**	P	**P**	**05 52 27.7**	**+2.0**
	baz=141						
YPP	**Pitchstone Pla**	**37.20**	**332**	P	**P**	**05 52 27.9**	**+2.0**
RLMT	**Red Lodge**	**37.20**	**335**	P	**P**	**05 52 26.6**	**+0.9**
RLMT				IAmb	IAmb	05 52 27.3	
	comp=Z,5.4nm,0.7s						
RLMT	**Red Lodge**	**37.20**	**335**	P	**P**	**05 52 26.6**	**+0.9**
	baz=144,SNR=9.1						
LKWY	**Lake**	**37.25**	**333**	P	**P**	**05 52 28.4**	**+2.2**
LKWY				IAmb	IAmb	05 52 38.5	
	comp=Z,3.9nm,0.8s						
NV11	**Mina Array Sit**	**37.26**	**319**	P	**P**	**05 52 28.5**	**+2.3**
LAO	**LASA Array**	**37.34**	**339**	P	**P**	**05 52 27.4**	**+0.7**
	baz=149						
NVAR	**Mina Array Bea**	**37.35**	**319**	P	**P**	**05 52 28.5**	**+1.4**
	comp=Z,2.0nm,0.8s,baz=133,slow=7.8,SNR=15						
NVAR				pP	**pP**	**05 52 47.9**	**+2.2**
	comp=Z,1.4nm,0.7s,baz=132,slow=7.5,SNR=5.8						
NVAR				PcP	**PcP**	**05 54 45.3**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=124,slow=3.0,SNR=5.1						
NVAR				pPcP		05 55 06.9	
	comp=Z,1.3nm,0.6s,baz=134,slow=3.9,SNR=6.9						
NVAR				ScP	**ScP**	**05 58 25.7**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=145,slow=4.5,SNR=11						
NVAR				LR	LR	06 08 27.8	
	comp=Z,183nm,20.0s,baz=151,slow=37						
NVAR	**Mina Array Bea**	**37.35**	**319**	P	**P**	**05 52 28.9**	**+1.8**
LSQQ	**Lebel-sur-Quev**	**37.41**	**12**	P	**P**	**05 52 26.6**	**-0.6**
	baz=197						
YNE	**Yellowstone No**	**37.43**	**334**	P	**P**	**05 52 28.5**	**+0.9**
YNR	**Norris Junctio**	**37.49**	**333**	P	**P**	**05 52 31.0**	**+2.8**
YMR	**Madison River**	**37.58**	**333**	P	**P**	**05 52 31.0**	**+2.0**
KVN	**Kaiserville**	**37.58**	**320**	P	**P**	**05 52 30.8**	**+1.8**
YHH	**Holmes Hill**	**37.62**	**333**	P	**P**	**05 52 31.6**	**+2.2**
YHB	**Horse Butte**	**37.75**	**332**	P	**P**	**05 52 32.5**	**+2.2**
D62A	**Allapoint, All**	**37.79**	**21**	P	**P**	**05 52 30.9**	**+0.5**
	baz=211						
YHL	**Hebgen Lake**	**37.82**	**333**	P	**P**	**05 52 33.1**	**+2.1**
QLMT	**Earthquake Lak**	**37.92**	**332**	P	**P**	**05 52 34.0**	**+2.3**
MATQ	**Matagami**	**37.96**	**11**	P	**P**	**05 52 31.2**	**-0.6**
	baz=196,SNR=13						
ULM	**Lac du Bonnet**	**38.10**	**352**	P	**P**	**05 52 31.4**	**-1.6**
	comp=Z,11nm,0.7s,baz=169,slow=8.9,SNR=30						
ULM				ScP	**ScP**	**05 58 25.9**	**-1.6**
	comp=Z,2.2nm,0.7s,baz=169,slow=5.8,SNR=7.4						
ULM				LR	LR	06 11 02.5	
	comp=Z,108nm,19.1s,baz=154,slow=41						
ULM	**Lac du Bonnet**	**38.10**	**352**	P	**P**	**05 52 31.4**	**-1.6**
DGMT	**Dagmar**	**38.25**	**342**	P	**P**	**05 52 34.5**	**+0.2**
DGMT	**Dagmar**	**38.25**	**342**	P	**P**	**05 52 35.2**	**+0.9**
	baz=154,SNR=17						
MCMT	**McKenzie Canyo**	**38.57**	**331**	P	**P**	**05 52 39.3**	**+2.0**
PAHR	**Pah Rah Range**	**38.77**	**320**	P	**P**	**05 52 41.8**	**+2.9**
MFID	**Camas Ranch**	**39.05**	**327**	P	**P**	**05 52 42.4**	**+1.2**
LRM	**Limekiln Ridge**	**39.14**	**332**	P	**P**	**05 52 43.8**	**+1.8**
LVC	**Limon Verde**	**39.61**	**152**	P	**P**	**05 52 47.5**	**+1.2**
	comp=Z,2.6nm,0.5s,baz=306,slow=6.8,SNR=5.6						
LVC				pP	**pP**	**05 53 06.9**	**+1.8**
	comp=Z,7.5nm,1.1s,baz=306,slow=16,SNR=3.6						
LVC	**Limon Verde**	**39.61**	**152**	IAmb	IAmb	05 52 48.4	
	comp=Z,5.7nm,0.8s						
EGMT	**Eagleton**	**39.76**	**337**	P	**P**	**05 52 48.1**	**+1.1**
EGMT				IAmb	IAmb	05 52 48.6	
	comp=Z,10nm,1.1s						
EGMT	**Eagleton**	**39.76**	**337**	P	**P**	**05 52 48.1**	**+1.1**
	baz=145						
WVOR	**Wild Horse Val**	**39.96**	**324**	P	**P**	**05 52 50.0**	**+1.2**
WVOR				IAmb	IAmb	05 52 52.6	
	comp=Z,5.8nm,0.8s						
J08A	**Circle Bar Ran**	**40.46**	**325**	P	**P**	**05 52 54.0**	**+1.1**
MSO	**Missoula**	**40.58**	**332**	P	**P**	**05 52 54.7**	**+0.9**
MSO				IAmb	IAmb	05 52 55.3	
	comp=Z,7.7nm,1.0s						
MSO	**Missoula**	**40.58**	**332**	P	**P**	**05 52 54.7**	**+0.9**
	baz=139						
BMO	**Blue Mountains**	**40.81**	**328**	P	**P**	**05 52 55.6**	**-0.1**
M04C	**Macdoel**	**41.49**	**321**	P	**P**	**05 53 03.0**	**+1.6**
	baz=124						
I07A	**Izee**	**41.49**	**325**	P	**P**	**05 53 02.0**	**+0.7**
F10A	**Beach Ranch, E**	**41.54**	**329**	P	**P**	**05 53 02.1**	**+0.5**
F10A				IAmb	IAmb	05 53 04.5	
	comp=Z,8.7nm,0.8s						
PINE	**Pine Mountain**	**42.13**	**324**	P	**P**	**05 53 06.9**	**+0.3**
PINE				IAmb	IAmb	05 53 08.2	
	comp=Z,6.7nm,0.8s						
WALA	**Waterton Lakes**	**42.26**	**334**	P	**P**	**05 53 08.6**	**+1.1**
J04D	**Umpqua Nationa**	**42.49**	**322**	P	**P**	**05 53 11.1**	**+1.5**
	baz=126						
HAWA	**Hanford**	**43.00**	**328**	P	**P**	**05 53 13.8**	**+0.3**
HAWA				IAmb	IAmb	05 53 15.1	
	comp=Z,5.1nm,0.8s						
NEW	**Newport**	**43.10**	**331**	P	**P**	**05 53 14.4**	**+0.2**
NEW	**Newport**	**43.10**	**331**	P	**P**	**05 53 14.4**	**+0.2**
	baz=136						
D08A	**Wollman Farm,**	**43.13**	**329**	P	**P**	**05 53 15.2**	**+0.8**
D08A				IAmb	IAmb	05 53 15.7	
	comp=Z,11nm,0.8s						
E07A	**Sunnyside**	**43.28**	**328**	P	**P**	**05 53 16.6**	**+0.9**
H04A	**Detroit Lake**	**43.38**	**324**	P	**P**	**05 53 17.4**	**+0.9**
H04A				IAmb	IAmb	05 53 17.7	
	comp=Z,11nm,1.0s						
FFC	**Flin Flon**	**43.46**	**348**	P	**P**	**05 53 16.8**	**-0.1**
FFC				IAmb	IAmb	05 53 17.8	
	comp=Z,8.5nm,0.8s						
LTY	**Liberty**	**44.16**	**328**	P	**P**	**05 53 23.2**	**+0.4**
B08A	**Colville Reser**	**44.22**	**330**	P	**P**	**05 53 23.5**	**+0.3**
B08A				IAmb	IAmb	05 53 24.1	
	comp=Z,7.1nm,1.0s						
LON	**Longmire**	**44.44**	**327**	P	**P**	**05 53 25.5**	**+0.5**
C06D	**Leavenworth**	**44.71**	**329**	P	**P**	**05 53 28.3**	**+1.2**
	baz=131						
SCHQ	**Schefferville**	**45.21**	**17**	P	**P**	**05 53 29.9**	**-1.1**
	comp=Z,24nm,0.7s,baz=218,slow=6.2,SNR=64						
SCHQ				LR	LR	06 12 48.0	
	comp=Z,220nm,22.0s,baz=186,slow=37						
SCHQ	**Schefferville**	**45.21**	**17**	P	**P**	**05 53 30.0**	**-1.0**
B06A	**Marblemount**	**45.39**	**329**	P	**P**	**05 53 32.4**	**0.0**
B06A				IAmb	IAmb	05 53 34.2	
	comp=Z,14nm,0.9s						
D03D	**Eldon**	**45.61**	**327**	P	**P**	**05 53 34.2**	**+0.1**
	baz=128						
FCC	**Fort Churchill**	**46.29**	**355**	P	**P**	**05 53 39.0**	**-0.4**
FCC				IAmb	IAmb	05 53 39.4	
	comp=Z,11nm,0.9s						
LLLB	**Lillooet**	**46.96**	**331**	P	**P**	**05 53 44.4**	**-0.4**
LLLB				IAmb	IAmb	05 53 46.3	
	comp=Z,12nm,0.8s						
BDFB	**Brasilia**	**48.35**	**124**	P	**P**	**05 53 54.5**	**-1.7**
	comp=Z,1.6nm,0.7s,baz=295,slow=11,SNR=4.0						
BDFB				PcP	**PcP**	**05 55 21.2**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=221,slow=1.4,SNR=3.2						
BDFB				LR	LR	06 14 55.2	
	comp=Z,110nm,20.5s,baz=307,slow=37						
BDFB	**Brasilia**	**48.35**	**124**	P	**P**	**05 53 53.9**	**-2.3**
CPUP	**Villa Florida**	**48.76**	**143**	P	**P**	**05 53 57.5**	**-1.4**
	comp=Z,1.4nm,0.6s,baz=336,slow=9.2,SNR=5.7						
CPUP				LR	LR	06 14 51.3	
	comp=Z,126nm,20.9s,baz=314,slow=36						
CPUP	**Villa Florida**	**48.76**	**143**	P	**P**	**05 53 58.0**	**-0.9**
GO05	**Huala**	**49.71**	**163**	P	**P**	**05 54 06.6**	**+0.6**
FRB	**Frobisher Bay**	**52.82**	**11**	P	**P**	**05 54 27.4**	**-1.5**
	comp=Z,14nm,0.7s,baz=209,slow=8.5,SNR=49						
YKA	**Yellowknife Ar**	**53.36**	**345**	P	**P**	**05 54 32.0**	**-0.9**
	comp=Z,2.3nm,0.7s,baz=140,slow=8.0,SNR=42						
YKA				pP	**pP**	**05 54 50.1**	**-2.4**
	comp=Z,2.2nm,0.8s,baz=140,slow=8.1,SNR=7.1						
YKA				ScP	**ScP**	**05 59 29.0**	**-1.2**
	comp=Z,0.3nm,0.4s,baz=144,slow=5.0,SNR=6.4						
YKA				LR	LR	06 18 55.4	
	comp=Z,121nm,21.0s,baz=0.0,slow=38						
PLCA	**Paso Flores**	**55.44**	**164**	P	**P**	**05 54 48.8**	**+0.4**
	comp=Z,6.5nm,0.7s,baz=360,slow=8.9,SNR=20						
PLCA	**Paso Flores**	**55.44**	**164**	P	**P**	**05 54 49.1**	**+0.7**
DLBC	**Dease Lake**	**55.61**	**335**	P	**P**	**05 54 50.8**	**+1.4**
RES	**Resolute Bay**	**62.17**	**358**	P	**P**	**05 55 33.2**	**-1.3**
	comp=Z,2.6nm,0.5s,baz=176,slow=10,SNR=23						
RES	**Resolute Bay**	**62.17**	**358**	P	**P**	**05 55 33.4**	**-1.0**
RES				IAmb	IAmb	05 55 35.7	
	comp=Z,3.2nm,0.5s						
BALM	**Baldy**	**62.27**	**333**	P	**P**	**05 55 35.9**	**+0.4**
DAWY	**Dawson**	**62.50**	**337**	P	**P**	**05 55 36.3**	**-0.6**
INK	**Inuvik**	**62.94**	**343**	P	**P**	**05 55 39.0**	**-0.6**
	comp=Z,2.2nm,0.8s,baz=116,slow=10.0,SNR=7.1						
INK	**Inuvik**	**62.94**	**343**	P	**P**	**05 55 39.4**	**-0.2**
BCAR	**Beaver Creek A**	**62.95**	**336**	P	**P**	**05 55 40.1**	**+0.2**
DOT	**Dot Lake**	**64.14**	**336**	P	**P**	**05 55 47.8**	**+0.1**
DOT				IAmb	IAmb	05 56 01.9	
	comp=Z,14nm,1.4s						
HDA	**Harding Lake**	**65.61**	**336**	P	**P**	**05 55 55.7**	**-1.5**
	baz=113						
IL31		**65.73**	**336**	P	**P**	**05 55 57.3**	**-0.6**
IL31				IAmb	IAmb	05 56 00.8	
	comp=Z,8.7nm,1.5s						
ILAR	**Eielson Array**	**65.73**	**336**	P	**P**	**05 55 57.0**	**-1.0**
	comp=Z,0.7nm,0.4s,baz=150,slow=5.2,SNR=18						
ILAR				pP	**pP**	**05 56 16.8**	**-1.5**
	comp=Z,0.7nm,0.6s,baz=180,slow=5.2,SNR=3.1						
ILAR				LR	LR	06 28 38.1	
	comp=Z,88nm,18.1s,baz=130,slow=40						
ILAR	**Eielson Array**	**65.73**	**336**	P	**P**	**05 55 57.3**	**-0.7**
BMAR	**Burnt Mountain**	**66.00**	**339**	P	**P**	**05 55 59.8**	**+0.1**
RND	**Reindeer**	**66.01**	**334**	P	**P**	**05 56 00.1**	**+0.2**
RND				IAmb	IAmb	05 56 00.8	
	comp=Z,6.6nm,0.9s						
CCB	**Clear Creek Bu**	**66.04**	**336**	P	**P**	**05 55 59.3**	**-0.7**
SUMG	**Summit**	**66.50**	**14**	P	**P**	**05 56 03.0**	**-0.3**
SUMG				IAmb	IAmb	05 56 06.2	
	comp=Z,5.3nm,1.0s						
MLY	**Manley**	**67.35**	**336**	P	**P**	**05 56 07.8**	**-0.6**
MLY				IAmb	IAmb	05 56 08.5	
	comp=Z,5.6nm,1.0s						
TOLK	**Toolik Lake Re**	**68.21**	**340**	P	**P**	**05 56 14.1**	**+0.3**
TOLK	**Toolik Lake Re**	**68.21**	**340**	P	**P**	**05 56 14.0**	**+0.3**
	baz=112						
IMAR	**Indian Mountai**	**68.84**	**336**	P	**P**	**05 56 16.4**	**-1.2**
ESDC	**Sonseca Array**	**77.35**	**52**	P	**P**	**05 57 06.8**	**-1.6**
	comp=Z,0.2nm,0.4s,baz=280,slow=5.8,SNR=4.3						
DBIC	**Dimbokro**	**81.71**	**85**	LR	LR	06 29 54.2	
	comp=Z,114nm,20.1s,baz=258,slow=33						
NOA	**NORSAR Array B**	**83.38**	**29**	LR	LR	06 34 46.6	
	comp=Z,39nm,18.1s,baz=275,slow=36						
ARCES	**ARCESS Array B**	**86.13**	**19**	P	**P**	**05 57 52.2**	**-1.7**
	comp=Z,4.8nm,1.1s,baz=296,slow=4.9,SNR=3.2						
ARCES				LR	LR	06 36 06.4	
	comp=Z,59nm,18.9s,baz=330,slow=36						
TORD	**Torodi Ar. Bea**	**86.70**	**77**	LR	LR	06 32 44.6	
	comp=Z,79nm,21.9s,baz=325,slow=33						
GERES	**GERESS Array B**	**88.02**	**40**	LR	LR	06 33 14.3	
	comp=Z,82nm,19.3s,baz=286,slow=33						
VRAC	**Vranov**	**89.69**	**39**	LR	LR	06 33 03.2	
	comp=Z,98nm,21.9s,baz=300,slow=32						
VAE	**Valguarnera**	**91.87**	**51**	LR	LR	06 36 23.3	
	comp=Z,125nm,19.2s,baz=328,slow=34						
MLR	**Muntele Rosu**	**97.01**	**40**	LR	LR	06 38 06.2	
	comp=Z,76nm,18.8s,baz=297,slow=33						
KSH	**Kashi**	**125.97**	**15**	PKP	**PKPdf**	**06 04 13.0**	**-2.4**
KSH				sPKP		06 04 50.6	
KSH				PP	**PP**	**06 06 10.3**	**+2.2**
KSH				PKS	**PKSdf**	**06 07 48.3**	**-3.9**
KSH	**Kashi**	**125.97**	**15**	SS	SS	06 23 01.8	-1.2
LZH	**Lanzhou**	**130.32**	**348**	*e*PKP	**PKPdf**	**06 04 22.5**	**-1.4**
LZH				pPKP	pPKPdf	06 04 44.1	-1.9
LZH				sPKP		06 04 53.0	
WRA	**Warramunga Arr**	**138.99**	**254**	PKhKP	PKPpre	06 04 32.0	
	comp=Z,0.3nm,0.4s,baz=88,slow=2.5,SNR=2.9						
WRA				PKP	**PKPdf**	**06 04 41.5**	**+1.3**
	comp=Z,2.1nm,0.6s,baz=84,slow=1.8,SNR=6.3						
WRA				SKP		06 08 08.4	
	comp=Z,0.6nm,0.9s,baz=92,slow=3.1,SNR=2.8						
ASAR	**Alice Springs**	**139.02**	**248**	PKhKP	PKPpre	06 04 31.7	
	comp=Z,0.5nm,0.5s,baz=111,slow=3.1,SNR=4.8						
ASAR				PKP	**PKPdf**	**06 04 41.4**	**+1.2**
	comp=Z,1.5nm,0.7s,baz=96,slow=1.8,SNR=14						
ASAR				pPKP	pPKPdf	06 05 02.3	-0.1
	comp=Z,1.4nm,0.8s,baz=118,slow=1.5,SNR=4.8						
ASAR				SKP		06 08 08.2	
	comp=Z,1.2nm,0.8s,baz=104,slow=3.0,SNR=2.9						
CMAR	**Chiang Mai Arr**	**148.41**	**348**	PKPbc	**PKPbc**	**06 04 59.6**	**-0.7**
	comp=Z,1.5nm,0.4s,baz=349,slow=3.6,SNR=12						

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*DJA **13** 05:47:06.7±0.5, 8°S±5°×10°9E±°, h10^{km}, M3.8/8, MLv3.8/8*
*IDC **13** 05:47:11.2±4.2, 7°.77S×109°.43E, h75^{km}±56^{km}, mb3.3/5, mb1 3.5/6, mb1mx3.3/28, mbtmp3.6/6, ML3.7/1, Error ellipse: s-maj=108.9km s-min=18.1km az=47.0*
ISC 13 05:47:10.4±1.3, **8°.2S**±0°.1×**109°.18E**±0°.06, **h74**^{km}±14^{km}, **n17**, σ**1^s.08**/19, **mb3.6**/5, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KPJI	**Karang Pucung**	**0.92**	**345**	P	**Pn**	**05 47 28.3**	**+0.2**
KPJI				S	**Sn**	**05 47 42.6**	**+1.4**
UGM	**Wanagama**	**1.37**	**77**	P	**Pn**	**05 47 33.6**	**-0.2**
UGM				S	**Sn**	**05 47 50.9**	**-0.5**
CISI	**Cisompet, Garu**	**1.50**	**296**	P	**Pn**	**05 47 34.7**	**-0.8**
CISI				S	**Sn**	**05 47 53.6**	**-0.9**
WOJI	**Wonogiri, Jawa**	**1.77**	**78**	P	**Pn**	**05 47 38.2**	**-0.9**
PCJI	**Pacitan**	**1.98**	**89**	P	**Pn**	**05 47 41.2**	**-0.6**
PCJI				S	**Sn**	**05 48 05.2**	**-0.6**
LEM	**Lembang**	**2.08**	**312**	P	**Pn**	**05 47 43.1**	**-0.2**
	28nm,0.3s,baz=102,slow=20,SNR=6.7						
LEM				S	**Sn**	**05 48 08.8**	**+0.4**
	14nm,0.3s,baz=316,slow=21,SNR=4.7						
LEM	**Lembang**	**2.08**	**312**	P	**Pn**	**05 47 42.9**	**-0.4**
CNJI	**Cibinong**	**2.22**	**294**	P	**Pn**	**05 47 44.3**	**-0.8**
DBJI	**Dramaga**	**2.92**	**304**	P	**Pn**	**05 47 54.9**	**+0.3**
WRA	**Warramunga Arr**	**27.00**	**118**	P	**P**	**05 52 46.8**	**+1.2**
	0.4nm,0.4s,baz=290,slow=12,SNR=1.4						
ASAR	**Alice Springs**	**28.23**	**126**	P	**P**	**05 52 57.5**	**+0.9**
	0.3nm,0.6s,baz=303,slow=9.8,SNR=5.2						
H08S2	**Diego Garcia H**	**36.33**	**268**	T	T	06 32 30.9	
	baz=94,slow=76,SNR=12						
H08S3	**Diego Garcia H**	**36.34**	**268**	T	T	06 32 35.5	
	baz=94,slow=76,SNR=29						
H08S1	**Diego Carcia H**	**36.35**	**268**	T	T	06 32 33.1	
	baz=94,slow=76,SNR=5.2						
STKA	**Stephens Creek**	**38.23**	**133**	P	**P**	**05 54 25.0**	**+1.7**
	0.5nm,0.3s,baz=319,slow=11,SNR=2.9						
MKAR	**Makanchi Array**	**59.78**	**339**	P	**P**	**05 57 05.5**	**-2.3**
	0.2nm,0.4s,baz=158,slow=7.1,SNR=5.2						
ZALV	**Zalesovo Beam**	**65.27**	**344**	P	**P**	**05 57 43.3**	**-0.8**
	0.5nm,0.3s,baz=144,slow=5.4,SNR=2.4						

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*INET **13** 05:48:59.9, 12°.69N×87°.62W, h86^{km}, ML3.8*
*SNET **13** 05:49:00.2±1.1, 12°.53N×87°.83W, h50^{km}±16^{km}, ML3.2*
ISC 13 05:48:59.0±4.7, **12°.5N**±0°.2×**87°.80W**±0°.09, **h30**^{km}±18^{km}, **n13**, σ**0^s.46**/25, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.81**	**357**	*e*P	**Pn**	**05 49 14.6**	**+0.1**
CNCH				*e*S	**Sb**	**05 49 26.4**	**+1.0**
LCND	**La Caada**	**0.85**	**354**	*e*P	**Pn**	**05 49 15.0**	**+0.1**
LCND				*e*S	**Sb**	**05 49 26.2**	**-0.2**
LCND				IAML		05 49 31.6	
	comp=Z,614nm,0.3s						
JUCU	**Jucuar¡n**	**0.91**	**331**	*e*P	**Pn**	**05 49 15.2**	**-0.5**
JUCU				*e*S	**Sb**	**05 49 27.2**	**-0.8**
JUCU				IAML		05 49 32.4	
	comp=Z,446nm,0.3s						
BLLM	**Bellamira**	**1.07**	**336**	*e*P	**Pn**	**05 49 18.4**	**+0.4**
BLLM				*e*S	**Sn**	**05 49 31.7**	**-0.1**
RANC	**El Ranchito**	**1.08**	**334**	*e*P	**Pn**	**05 49 18.7**	**+0.4**
PACA	**Pacayal**	**1.13**	**333**	*e*P	**Pn**	**05 49 19.0**	**+0.2**
PACA				*e*S	**Sn**	**05 49 33.3**	**-0.1**
PACA				IAML		05 49 38.5	
	comp=Z,1µm,0.1s						
ALJI	**Alcalda de J**	**1.15**	**319**	*e*P	**Pn**	**05 49 18.9**	**-0.1**
ALJI				*e*S	**Sn**	**05 49 33.9**	**+0.3**
TECA	**Tecapa**	**1.24**	**326**	*e*P	**Pn**	**05 49 20.5**	**+0.1**
TECA				*e*S	**Sn**	**05 49 36.6**	**+0.4**
COEB	**Comit de Eme**	**1.26**	**325**	*e*P	**Pn**	**05 49 20.8**	**+0.2**
COEB				*e*S	**Sn**	**05 49 36.5**	**-0.1**
FAGO	**Alcalda de S**	**1.27**	**346**	*e*P	**Pn**	**05 49 20.3**	**-0.4**
FAGO				*e*S	**Sn**	**05 49 36.3**	**-0.4**
UESV	**Universidad de**	**1.52**	**321**	*e*P	**Pn**	**05 49 23.3**	**-0.8**
UESV				*e*S	**Sn**	**05 49 43.1**	**+0.2**
UESV				*e*S		05 49 43.6	
COEG	**Centro de Oper**	**1.56**	**318**	*e*P	**Pn**	**05 49 25.0**	**+0.2**
COEG				*e*S	**Sn**	**05 49 45.0**	**+0.8**
TGUH	**Tegucigalpa,Un**	**1.67**	**18**	*e*P	**Pn**	**05 49 26.4**	**+0.1**
TGUH				*e*S	**Sn**	**05 49 46.2**	**-0.5**

IDC 13 05:53:11.4±11.0, **2°.88N**×**127°.53E**, **h0**^{km}, **mb3.7**/3, **mb1 3.9**/3, **mb1mx3.5**/25, **mbtmp3.8**/3, **1D**, **Error ellipse: s-maj=186.3km s-min=173.6km az=136.0**, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**4.77**	**329**⇓	*e*P	Pn	05 54 13.8	-11
WRA	**Warramunga Arr**	**23.65**	**164**	P	P	05 58 25.2	+0.6
	1.0nm,0.5s,baz=342,slow=11,SNR=4.4						
ASAR	**Alice Springs**	**27.11**	**167**	P	P	05 58 57.0	+0.7
	0.4nm,0.5s,baz=350,slow=7.8,SNR=4.4						
STKA	**Stephens Creek**	**37.06**	**160**	P	P	06 00 22.1	-1.3
	0.5nm,0.4s,baz=332,slow=8.8,SNR=3.9						

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*INET **13** 05:56:38.1, 12°.46N×87°.82W, h64^{km}, ML3.5*
*SNET **13** 05:56:39.1±0.8, 12°.53N×87°.85W, h33^{km}±9^{km}, ML3.2*
ISC 13 05:56:35.9±3.0, **12°.4N**±0°.1×**87°.76W**±0°.06, **h29**^{km}±21^{km}, **n14**, σ**0^s.68**/27, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.91**	**356**	*e*P	**Pn**	**05 56 53.5**	**+0.7**
CNCH				*e*S	**Sb**	**05 57 04.6**	**-0.3**
CNCH				IAML		05 57 09.6	
	comp=Z,1µm,0.2s						
LCND	**La Caada**	**0.94**	**352**	*e*P	**Pn**	**05 56 53.9**	**+0.7**
LCND				*e*S	**Sn**	**05 57 05.1**	**-0.6**
LCND				IAML		05 57 11.7	
	comp=Z,654nm,0.3s						
JUCU	**Jucuar¡n**	**1.00**	**332**	*e*P	**Pn**	**05 56 54.3**	**+0.3**
JUCU				*e*S	**Sn**	**05 57 07.0**	**-0.2**
BLLM	**Bellamira**	**1.16**	**337**	*e*P	**Pn**	**05 56 57.2**	**+0.9**
BLLM				*e*S	**Sn**	**05 57 10.2**	**-1.1**
RANC	**El Ranchito**	**1.18**	**334**	*e*P	**Pn**	**05 56 57.2**	**+0.6**
RANC				*e*S	**Sn**	**05 57 10.9**	**-0.8**
RANC				IAML		05 57 14.0	
	comp=Z,343nm,0.2s						
MOMN	**Momotombo**	**1.20**	**88**	*e*P	**Pn**	**05 56 56.0**	**-0.8**
MOMN				*e*S	**Sn**	**05 57 13.0**	**+1.0**
PACA	**Pacayal**	**1.22**	**334**	*e*P	**Pn**	**05 56 57.2**	**0.0**
PACA				*e*S	**Sn**	**05 57 12.7**	**-0.2**
PACA				IAML		05 57 14.6	
	comp=Z,1µm,0.2s						
TECA	**Tecapa**	**1.33**	**327**	*e*P	**Pn**	**05 56 59.4**	**+0.7**
TECA				*e*S	**Sn**	**05 57 15.2**	**-0.4**
COEB	**Comit de Eme**	**1.35**	**326**	*e*P	**Pn**	**05 56 59.6**	**+0.7**
COEB				*e*S	**Sn**	**05 57 15.1**	**-0.9**
FAGO	**Alcalda de S**	**1.36**	**346**	*e*P	**Pn**	**05 56 59.2**	**+0.2**
FAGO				*e*S	**Sn**	**05 57 15.7**	**-0.4**
UESV	**Universidad de**	**1.61**	**322**	*e*P	**Pn**	**05 57 03.0**	**+0.6**
COEG	**Centro de Oper**	**1.65**	**319**	*e*P	**Pn**	**05 57 03.7**	**+0.6**
COEG				*e*S	**Sn**	**05 57 23.1**	**-0.3**
TGUH	**Tegucigalpa,Un**	**1.75**	**16**	*e*P	**Pn**	**05 57 05.3**	**+1.0**
TGUH				*e*S	**Sn**	**05 57 25.4**	**-0.3**
LOMA	**Loma Larga**	**1.87**	**313**	*e*P	**Pn**	**05 57 06.7**	**+0.6**
LOMA				*e*S	**Sn**	**05 57 28.3**	**-0.5**

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*IDC **13** 06:09:20.8±0.4, 23°.23S×175°.38W, h0^{km}, mb4.8/20, mb1 4.9/21, mb1mx4.9/26, mbtmp4.8/21, ML5.4/1, MS4.9/23, Ms1 5.0/23, ms1mx4.9/30, Error ellipse: s-maj=17.6km s-min=14.3km az=110.0*
*BJI **13** 06:09:20.8±0.0, 23°.29S×175°.44W, h7^{km}, mB5.8/35,*

mb5.4/44, Ms5.4/34, Ms7 5.2/33

NEIC ***13*** *06:09:22.3±1.6, 23°.28S±0°.08×175°.3W±0°.1, h10^{km}±1^{km}, mb5.1/61, Error ellipse: s-maj=19.1km s-min=12.8km az=110.0*

GCMT ***13*** *06:09:27.3±0.1, 23°.33S±0°.01×174°.88W±0°.01, h15^{km}, MW5.3/150, Moment Tensor Solution. s109,c188; s150,c272; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}1.06±.02; $M_{\theta\theta}$-0.11±.01; $M_{\phi\phi}$-0.95±.01; $M_{r\theta}$0.27±.03; $M_{\theta\phi}$-0.32±.01; $M_{\phi r}$0.75±.03; Best double couple: $M_0$1.32800×10^{17} NP1:ϕ_s198.00000°,δ26.00000°, λ89.00000°. NP2:ϕ_s19.00000°,δ64.00000°,λ91.00000°. Principal axes: T 1.3280, Plg71.0000°, Azm291.0000°; N -0.0020, Plg1.0000°, Azm199.0000°; P -1.3290, Plg19.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***13*** *06:09:32.5±2.7, 22°.22S×176°.78W, h33^{km}, mb5.3/22, MS5.1/9 Error ellipse: s-maj=13.8km s-min=10.4km az=123.1*

ISC 13 06:09:23.5±0.6**, 23°.38S**±0°.05×**175°.39W**±0°.06**, h18**^{km}±3^{km}**, h18**^{km}**:pP-P, n413,** σ1^s**57**/419**, mb5.2**/72**, MS5.0**/45**, 45C-11D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**6.27**	**201**	Pn	**Pn**	**06 10 56.4**	**+1.3**
	90nm,0.3s,baz=252,slow=22,SNR=2.1						
RAO				Sn	**Sn**	**06 12 02.9**	**-3.4**
	141nm,0.3s,baz=37,slow=23,SNR=1.4						
NIUE	**Niue**	**6.66**	**51**	P	Pn	06 10 50.6	-10
	baz=5.8,SNR=44						
NIUE	**Niue**	**6.66**	**51**		Pn	06 10 51.1	-9.3
MSVF	**Nonsavu**	**8.33**	**311**		Pn	06 11 30.0	+6.5
AFI	**Afiamalu**	**10.03**	**21**	Pn	Pn	06 11 38.8	-7.9
	5.6nm,0.3s,baz=44,slow=23,SNR=4.0						
AFI				Sn	Sn	06 13 22.5	-16
	12nm,0.3s,baz=256,slow=22,SNR=2.2						
AFI	**Afiamalu**	**10.03**	**21**	P	Pn	06 11 40.6	-6.2
AFI	**Afiamalu**	**10.03**	**21**		Pn	06 11 40.6	-6.2
RAR	**Rarotonga**	**14.62**	**85**	Pn	Pn	06 12 41.8	-7.6
	13nm,0.3s,baz=267,slow=8.8,SNR=13						
RAR				Sn	Sn	06 15 06.1	-25
	8.3nm,0.3s,baz=339,slow=19,SNR=2.1						
RAR				LR	LR	06 17 40.1	
	comp=Z,6µm,21.3s,baz=268,slow=34						
FUNA	**Funafuti**	**15.66**	**340**	Pn	**Pn**	**06 13 02.0**	**-1.4**
URZ	**Urewera**	**16.16**	**202**	Pn	**Pn**	**06 13 06.9**	**-2.7**
	0.6nm,0.3s,baz=260,slow=3.7,SNR=4.5						
URZ				Sn	Sn	06 16 00.0	-8.3
	3.8nm,0.3s,baz=42,slow=22,SNR=7.8						
URZ	**Urewera**	**16.16**	**202**	Pn	**Pn**	**06 13 09.3**	**-0.3**
DZM	**Mont Dzumac**	**16.81**	**271**	*e*P	**P**	**06 13 23.5**	**+3.2**
	192nm,1.6s						
DZM				*e*LQ	LQ	06 16 37.7	
	8µm,29.8s						
DZM				*e*LR	LR	06 17 23.9	
	comp=Z,7µm,24.3s						
DZM	**Mont Dzumac**	**16.81**	**271**	Pn	**P**	**06 13 24.6**	**+4.3**
	1.5nm,0.3s,baz=74,slow=20,SNR=10						
DZM				LR	LR	06 17 15.9	
	comp=Z,2µm,19.0s,baz=112,slow=28						
DZM	**Mont Dzumac**	**16.81**	**271**	Pn	**Pn**	**06 13 17.8**	**-0.4**
BFZ	**Birch Farm**	**18.63**	**200**	P	**P**	**06 13 38.2**	**-1.9**
BFZ				IAmb	IAmb	06 13 43.8	
	comp=Z,154nm,1.4s						
SNZO	**South Karori**	**19.71**	**203**	P	**P**	**06 13 51.2**	**-0.7**
SNZO				IAmb	IAmb	06 14 09.1	
	comp=Z,82nm,1.1s						
RPZ	**Rata Peaks**	**23.15**	**206**	P	**P**	**06 14 29.1**	**+0.2**
	comp=Z,18nm,0.7s,baz=3.0,slow=13,SNR=3.3						
RPZ				S	**S**	**06 18 33.3**	**-6.3**
	comp=Z,9.6nm,0.8s,baz=49,slow=11,SNR=2.7						
TBI	**Tubuai**	**23.80**	**95**	*e*LQ	LQ	06 18 46.5	
	comp=Z,1µm,25.5s						
TBI				*e*LR	LR	06 20 30.3	
	comp=Z,5µm,22.8s,baz=265						
TBI	**Tubuai**	**23.80**	**95**	*e*T	T	06 39 34.6	
	comp=Z,8.1nm,0.3s						
PAE	**Paea**	**24.81**	**82**	*e*T	T	06 40 23.4	
	comp=Z,7.2nm,0.3s						
PPT2	**Papeete2**	**24.84**	**81**	*e*LQ	LQ	06 19 23.7	
	comp=Z,3µm,24.2s						
PPT2				*e*LR	LR	06 20 53.7	
	comp=Z,4µm,22.0s,baz=250						
PPT2	**Papeete2**	**24.84**	**81**	*e*T	T	06 40 25.8	
	comp=Z,9.0nm,0.3s						
PPT	**Papeete**	**24.84**	**81**	LR	LR	06 23 26.7	
	comp=Z,4µm,18.4s,baz=264,slow=34						
TIAR	**Tiarei**	**25.06**	**81**	*e*T	T	06 40 42.3	
	comp=Z,2.9nm,0.3s						
MEH	**Mehetia**	**26.13**	**83**	*e*T	T	06 42 05.2	
	comp=Z,32nm,0.3s						
ARMA	**Armidale**	**30.16**	**249**	P	**P**	**06 15 35.0**	**+2.2**
	baz=31,SNR=5.0						
ARMA	**Armidale**	**30.16**	**249**	P	**P**	**06 15 35.2**	**+2.4**
EIDS	**Eidsvold**	**30.56**	**259**	P	**P**	**06 15 37.6**	**+1.4**
	baz=31,SNR=6.6						
EIDS	**Eidsvold**	**30.56**	**259**	P	**P**	**06 15 37.9**	**+1.6**
RMQ	**Roma**	**32.59**	**257**	P	**P**	**06 15 56.0**	**+1.8**
	baz=33,SNR=6.5						
CAN	**Canberra**	**33.07**	**241**	P	**P**	**06 15 59.6**	**+1.3**
CAN				pmax	pmax		
	comp=Z,29nm,1.5s						
CAN	**Canberra**	**33.07**	**241**	P	**P**	**06 15 59.6**	**+1.3**
CAN				IAmb	IAmb	06 16 17.8	
	comp=Z,29nm,1.5s						
MILA	**Mila**	**33.33**	**238**	P	**P**	**06 16 02.4**	**+1.9**
	baz=34,SNR=3.1						
CMSA	**Cobar Meteorol**	**35.33**	**248**	P	**P**	**06 16 19.2**	**+1.3**
	baz=36,SNR=23						
TOO	**Toolangi**	**36.29**	**238**	P	**P**	**06 16 28.9**	**+2.9**
	baz=37,SNR=4.5						
TOO	**Toolangi**	**36.29**	**238**	P	**P**	**06 16 26.6**	**+0.5**
TOO				pmax	pmax		
	comp=Z,23nm,1.2s						
TOO	**Toolangi**	**36.29**	**238**	P	**P**	**06 16 26.6**	**+0.5**
QLP	**Quilpie**	**36.63**	**256**	P	**P**	**06 16 29.9**	**+0.8**
	baz=37,SNR=7.0						
TAOE	**Nuku Hiva Isla**	**36.68**	**73**	*e*S	S	06 22 02.4	-10
	comp=Z,566nm,25.8s						
TAOE				*e*LR	LR	06 26 09.5	
	comp=Z,2µm,22.4s						
MTSU	**Mount Surprise**	**37.95**	**270**	P	**P**	**06 16 40.9**	**+0.6**
	baz=38,SNR=21						
PMG	**Port Moresby**	**38.39**	**285**	P	**P**	**06 16 42.8**	**-1.3**
	comp=Z,11nm,0.4s,baz=309,slow=7.3,SNR=6.3						
PMG	**Port Moresby**	**38.39**	**285**	⇓*e*P	**P**	**06 16 44.2**	**+0.2**
PMG				pmax	pmax		
	comp=Z,143nm,1.0s						
PMG	**Port Moresby**	**38.39**	**285**	P	**P**	**06 16 44.0**	**-0.1**
PMG				IAmb	IAmb	06 17 02.0	
	comp=Z,44nm,0.9s						
STKA	**Stephens Creek**	**38.83**	**248**	P	**P**	**06 16 48.6**	**+0.9**
	baz=40,SNR=22						
STKA	**Stephens Creek**	**38.83**	**248**	P	**P**	**06 16 48.4**	**+0.8**
	comp=Z,4.2nm,0.5s,baz=91,slow=9.6,SNR=23						
STKA				LR	LR	06 32 17.8	
	comp=Z,4µm,18.5s,baz=80,slow=35						
STKA	**Stephens Creek**	**38.83**	**248**	P	**P**	**06 16 48.4**	**+0.8**
COEN	**Coen**	**40.24**	**276**	P	**P**	**06 17 00.9**	**+1.4**
HTT	**Hallett**	**41.14**	**245**	P	**P**	**06 17 07.2**	**+0.4**
	baz=42,SNR=8.3						
BBOO	**Buckleboo**	**43.53**	**246**	P	**P**	**06 17 27.4**	**+1.1**
	baz=44,SNR=7.8						
BBOO	**Buckleboo**	**43.53**	**246**	P	**P**	**06 17 26.2**	**0.0**
AS31	**Alice Springs**	**46.29**	**259**	P	**P**	**06 17 48.1**	**-0.3**
ASAR	**Alice Springs**	**46.29**	**259**	P	**P**	**06 17 49.0**	**+0.6**
	comp=Z,4.6nm,0.7s,baz=95,slow=8.1,SNR=46						
ASAR				PcP	**PcP**	**06 19 21.9**	**-1.8**
	comp=Z,2.5nm,0.7s,baz=100,slow=4.9,SNR=2.7						
ASAR				S	**S**	**06 24 32.2**	**-2.6**
	comp=Z,0.8nm,0.8s,baz=93,slow=16,SNR=4.2						
ASAR				LR	LR	06 37 09.8	
	comp=Z,5µm,18.3s,baz=106,slow=36						
WR0	**Warramunga Arr**	**46.48**	**264**	P	**P**	**06 17 49.6**	**-0.3**
WR0				IAmb	IAmb	06 17 53.7	
	comp=Z,20nm,1.0s						
WB2	**Warramunga Arr**	**46.65**	**264**	P	**P**	**06 17 51.0**	**-0.3**
WB0	**Warramunga Arr**	**46.66**	**264**	P	**P**	**06 17 50.7**	**-0.6**
WB0				IAmb	IAmb	06 17 55.0	
	comp=Z,23nm,0.8s						
WRAB	**Tennant Creek**	**46.66**	**264**	*de*P	**P**	**06 17 51.0**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,26nm,1.0s						
WRAB	**Tennant Creek**	**46.66**	**264**	P	**P**	**06 17 51.2**	**-0.1**
WRAB				IAmb	IAmb	06 17 52.6	
	comp=Z,28nm,1.1s						
WRA	**Warramunga Arr**	**46.66**	**264**	P	**P**	**06 17 50.9**	**-0.5**
	comp=Z,8.3nm,0.3s,baz=93,slow=8.3,SNR=90						
WRA				S	S	06 24 33.1	-7.1
	comp=Z,1.2nm,0.9s,baz=94,slow=14,SNR=3.3						
WRA				LR	LR	06 37 17.8	
	comp=Z,3µm,18.1s,baz=95,slow=36						
WRA	**Warramunga Arr**	**46.66**	**264**	P	**P**	**06 17 51.0**	**-0.4**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WRA	**Warramunga Arr**	**46.66**	**264**	P	**P**	**06 17 51.0**	**-0.4**
FORT	**Forrest**	**50.45**	**249**	P	**P**	**06 18 19.7**	**-0.6**
	baz=51,SNR=22						
FORT	**Forrest**	**50.45**	**249**	P	**P**	**06 18 19.8**	**-0.5**
KDU	**Kakadu**	**50.47**	**273**	P	**P**	**06 18 19.5**	**-1.2**
	baz=51,SNR=10						
WRKA	**Warakurna**	**51.07**	**256**	P	**P**	**06 18 24.1**	**-1.1**
	baz=52,SNR=113						
MTN	**Manton Dam**	**51.65**	**272**	P	**P**	**06 18 28.8**	**-0.8**
	baz=52,SNR=5.7						
MTN	**Manton Dam**	**51.65**	**272**	P	**P**	**06 18 29.1**	**-0.5**
MTN				IAmb	IAmb	06 18 35.2	
	comp=Z,13nm,0.7s						
KNRA	**Kununurra**	**52.93**	**268**	P	**P**	**06 18 38.4**	**-0.6**
	baz=54,SNR=26						
KNRA	**Kununurra**	**52.93**	**268**	P	**P**	**06 18 38.7**	**-0.4**
VNDA	**Vanda**	**55.28**	**186**	P	**P**	**06 18 55.8**	**+0.5**
	comp=Z,2.4nm,0.8s,baz=106,slow=5.6,SNR=2.2						
VNDA				LR	LR	06 42 42.4	
	comp=Z,590nm,18.0s,baz=19,slow=36						
SOEI	**Soe**	**59.03**	**273**	P	**P**	**06 19 23.3**	**+0.4**
SOEI	**Soe**	**59.03**	**273**	P	**P**	**06 19 22.6**	**-0.4**
KLBR	**Kellerberrin**	**59.08**	**246**	P	**P**	**06 19 23.3**	**+0.4**
	baz=60,SNR=10						
MEEK	**Meekatharra**	**59.30**	**252**	P	**P**	**06 19 25.1**	**+0.5**
	baz=60,SNR=7.4						
PSAC2	**Pilbara Seismi**	**59.36**	**258**	P	**P**	**06 19 25.8**	**+0.7**
PSAC2				IAmb	IAmb	06 19 30.0	
	comp=Z,11nm,0.9s						
PSAC3	**Pilbara Seismi**	**59.41**	**258**	P	**P**	**06 19 25.0**	**-0.4**
PSAC3				IAmb	IAmb	06 19 29.4	
	comp=Z,15nm,1.0s						
BLDU	**Ballidu**	**60.13**	**247**	P	**P**	**06 19 30.2**	**0.0**
	baz=61,SNR=12						
SANI	**Sanana**	**60.52**	**281**	P	**P**	**06 19 31.4**	**-1.6**
	comp=Z,26nm,0.7s						
MORW	**Morawa**	**61.01**	**249**	P	**P**	**06 19 36.6**	**+0.3**
	baz=62,SNR=11						
MORW	**Morawa**	**61.01**	**249**	P	**P**	**06 19 37.0**	**+0.8**
MORW				IAmb	IAmb	06 19 48.8	
	comp=Z,9.6nm,0.7s						
EDFI	**Ende, Flores**	**61.76**	**273**	P	**P**	**06 19 38.8**	**-2.8**
	comp=Z,12nm,0.9s						
KMSI	**Cibinong**	**63.47**	**283**	P	P	06 20 03.4	+11
LUWI	**Luwuk**	**63.85**	**281**	P	**P**	**06 19 55.5**	**+0.1**
GIRL	**Giralia**	**64.14**	**255**	P	**P**	**06 20 00.8**	**+3.5**
PLAI	**Plampang**	**65.33**	**271**	P	**P**	**06 20 03.7**	**-1.4**
	comp=Z,758nmcomp=Z,46nm,0.9s						
QSPA	**South Pole Qui**	**66.70**	**180**	P	**P**	**06 20 14.8**	**+1.6**
	comp=Z,11nm,0.8s,baz=28,slow=1.0,SNR=48						
QSPA	**South Pole Qui**	**66.70**	**180**	P	**P**	**06 20 14.8**	**+1.6**
MPSI	**Mapaga**	**67.03**	**281**	P	**P**	**06 20 14.6**	**-1.4**
	comp=Z,2µmcomp=Z,38nm,1.0s						
SPMM	**Sapulut**	**72.02**	**283**	P	**P**	**06 20 48.0**	**+1.1**
MJAR	**Matsushiro Arr**	**73.96**	**323**	P	**P**	**06 20 57.3**	**-0.5**
	comp=Z,7.2nm,0.8s,baz=144,slow=6.4,SNR=9.2						
MJAR				LR	LR	06 52 55.3	
	comp=Z,383nm,18.5s,baz=160,slow=35						
MJAR	**Matsushiro Arr**	**73.96**	**323**	P	**P**	**06 20 58.1**	**+0.3**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MJAR	**Matsushiro Arr**	**73.96**	**323**	P	**P**	**06 20 58.1**	**+0.3**
MAT	**Matsushiro**	**73.96**	**323**	P	**P**	**06 20 59.4**	**+1.6**
MAT				*e*S	**SKiKP**	**06 30 23.6**	**-2.3**
KUR	**Kuril'sk**	**76.06**	**334**	*e*P	**P**	**06 21 10.7**	**+1.1**
KUR				pmax	pmax		
	comp=Z,91nm,1.1s						
KUR				MLR	MLR		
	comp=Z,600nm,18.0s						
KSM	**Kuching**	**76.21**	**278**	P	**P**	**06 21 12.0**	**+0.7**
TPUB	**Ta-pu**	**77.56**	**302**	P	**P**	**06 21 18.5**	**-0.2**
SSLB	**Suanglung**	**77.57**	**303**	P	**P**	**06 21 17.6**	**-1.2**
KASI	**Kota Agung**	**78.77**	**269**	P	**P**	**06 21 24.8**	**-0.8**
	comp=Z,52nm,1.0s						
MONP2	**Monument Peak**	**79.33**	**47**	P	**P**	**06 21 28.6**	**0.0**
	baz=233						
PET	**Petropavlovsk**	**79.37**	**344**	*e*P	**P**	**06 21 26.4**	**-1.5**
PET				*e*S	**S**	**06 31 24.2**	**-3.4**
PET				pmax	pmax		
	comp=Z,400nm,8.1s						
PET				MLR	MLR		
	comp=Z,800nm,21.0s						
VES	**Vestal, Richgr**	**79.39**	**43**	P	**P**	**06 21 28.5**	**0.0**
	baz=231						
MDSI	**Maura Dua**	**79.46**	**270**	P	**P**	**06 21 28.1**	**-1.3**
	comp=Z,910nmcomp=Z,19nm,0.9s						
EDW2	**Edwards Air Fo**	**79.49**	**45**	P	**P**	**06 21 28.5**	**-0.7**
	baz=232						
YSS	**Yuzh-Sakhalins**	**79.55**	**332**	⇑*i*P	**P**	**06 21 30.3**	**+1.2**
YSS				*e**SP	**pwP**	**06 21 43.5**	**+3.6**
YSS				*e*S	**S**	**06 31 28.2**	**-1.7**
YSS				*e*PS		06 31 57.0	
YSS				pmax	pmax		
	comp=Z,80nm,0.9s						
YSS				pmax	pmax		
	comp=Z,500nm,3.4s						
YSS				MLR	MLR		
	comp=Z,700nm,18.0s						
ISA	**Isabella, Lake**	**79.67**	**44**	P	**P**	**06 21 30.1**	**0.0**
	baz=231						
MAW	**Mawson**	**79.67**	**199**	P	**P**	**06 21 30.9**	**+1.4**
	comp=Z,10nm,0.9s,baz=134,slow=9.6,SNR=7.3						
MAW				LR	LR	06 56 09.9	
	comp=Z,1µm,18.5s,baz=115,slow=35						
MAW	**Mawson**	**79.67**	**199**	IAmb	IAmb	06 21 35.8	
	comp=Z,4.4nm,1.1s						
PEA0B	**Petropavlovsk-**	**79.68**	**344**	P	**P**	**06 21 30.0**	**+0.3**
PEA0B				pmax	pmax		
	comp=Z,36nm,0.9s						
PEA0B	**Petropavlovsk-**	**79.68**	**344**	P	**P**	**06 21 29.9**	**+0.3**
PETK	**Petropavlovsk-**	**79.68**	**344**	P	**P**	**06 21 29.0**	**-0.7**
	comp=Z,29nm,0.9s,baz=131,slow=8.1,SNR=28						
PETK				LR	LR	06 56 49.6	
	comp=Z,538nm,18.2s,baz=177,slow=36						
PETK	**Petropavlovsk-**	**79.68**	**344**	P	**P**	**06 21 29.6**	**-0.1**
PFO	**Pinyon Flats O**	**79.73**	**47**	⇑*i*P	**P**	**06 21 33.8**	**+3.2**
PFO	**Pinyon Flats O**	**79.73**	**47**	P	**P**	**06 21 33.3**	**+2.8**
	baz=233						
O02D	**Mt. Diablo Mer**	**79.98**	**38**	P	**P**	**06 21 32.5**	**+0.8**
	baz=228						
QZH	**Quanzhou**	**80.01**	**303**	*e*P	**P**	**06 21 32.1**	**0.0**
QZH				S	**S**	**06 31 38.8**	**+3.2**
QZH				LR	LR		
	comp=Z,960nm,17.3s						
QZH				LR	LR		
	comp=Z,990nm,19.0s						
QZH				LR	LR		
	comp=Z,1µm,20.1s						
BELC	**Belle Mtn. Jos**	**80.27**	**47**	P	**P**	**06 21 33.9**	**+0.3**
	baz=233						
CWC	**Cottonwood Cre**	**80.40**	**43**	P	**P**	**06 21 34.8**	**+0.6**
	baz=231						
GSC	**Goldstone, Bar**	**80.52**	**45**	P	**P**	**06 21 35.8**	**+1.1**
	baz=232						
MPMC	**Manual Prospec**	**80.54**	**44**	P	**P**	**06 21 35.1**	**+0.1**
	baz=232						
N02D	**Trinity Center**	**80.56**	**38**	P	**P**	**06 21 35.5**	**+0.7**
	baz=228						
O03E	**Paynes Creek**	**80.62**	**39**	P	**P**	**06 21 35.8**	**+0.6**
	baz=228						
KSRS	**Korea Array**	**80.64**	**318**	P	**P**	**06 21 35.0**	**-0.2**
	comp=Z,8.4nm,1.0s,baz=133,slow=5.4,SNR=8.3						
KSRS				LR	LR	06 53 10.8	
	comp=Z,782nm,20.4s,baz=134,slow=33						
KSAR	**Wonju Array Be**	**80.66**	**318**	P	**P**	**06 21 36.6**	**+1.3**
KSAR	**Wonju Array Be**	**80.66**	**318**	P	**P**	**06 21 36.6**	**+1.3**
M02C	**Callahan**	**80.76**	**37**	P	**P**	**06 21 36.8**	**+0.9**
	baz=227						
L02E	**Cave Junction**	**80.87**	**36**	P	**P**	**06 21 37.5**	**+1.1**
	baz=227						
IRM	**Iron Mountain**	**80.93**	**47**	P	**P**	**06 21 37.3**	**+0.4**
	baz=234						
FURC	**Furnace Creek,**	**81.19**	**44**	P	**P**	**06 21 38.5**	**+0.3**
	baz=232						
J01E	**Myrtle Point**	**81.38**	**35**	P	**P**	**06 21 40.1**	**+1.1**
	baz=226						
NVAR	**Mina Array Bea**	**81.50**	**42**	P	**P**	**06 21 39.8**	**-0.3**
	comp=Z,6.4nm,0.7s,baz=224,slow=8.4,SNR=40						
NVAR				LR	LR	06 54 17.8	
	comp=Z,1µm,18.2s,baz=203,slow=33						
M04C	**Macdoel**	**81.59**	**37**	P	**P**	**06 21 41.9**	**+1.5**
	baz=228						
L04D	**Klamath Falls**	**81.62**	**37**	P	**P**	**06 21 40.3**	**-0.2**
	baz=228						
PDMCI	**Parker Dam,Lak**	**81.69**	**47**	P	**P**	**06 21 41.2**	**+0.3**
	baz=234						
TPNV	**Topopah Spring**	**81.87**	**44**	P	**P**	**06 21 42.2**	**+0.2**
	baz=233						
MSHR	**Mys Shultsa**	**82.06**	**323**	⇑*i*P	**P**	**06 21 44.9**	**+2.3**
MYKOM	**Kota Tinggi**	**82.23**	**275**	P	**P**	**06 21 48.0**	**+3.8**
DLV	**T Lat**	**82.27**	**287**	P	**P**	**06 21 47.2**	**+2.6**
DLV				IAmb	IAmb	06 21 48.7	
	comp=Z,24nm,1.0s						
J04D	**Umpqua Nationa**	**82.41**	**36**	P	**P**	**06 21 45.2**	**+0.5**
	baz=228						
TYV	**Tymovskoe**	**82.66**	**335**	*e*P	**P**	**06 21 46.0**	**+0.4**
TYV				*e*S	**S**	**06 31 58.9**	**-3.1**
TYV				pmax	pmax		
	comp=Z,23nm,1.1s						
TYV				pmax	pmax		
	comp=Z,500nm,5.5s						
TYV				smax	smax		
	comp=E,800nm,10.2s						
USRK	**Ussuriysk Ar.**	**82.70**	**325**	P	**P**	**06 21 45.8**	**-0.1**
	comp=E,33nm,0.9s,baz=124,slow=3.5,SNR=20						
USRK				LR	LR	06 54 42.7	
	comp=E,604nm,19.8s,baz=131,slow=33						
USRK	**Ussuriysk Ar.**	**82.70**	**325**	P	**P**	**06 21 47.2**	**+1.2**
TUC	**Tucson**	**82.89**	**50**	P	**P**	**06 21 47.7**	**+0.4**
	baz=237						
J05D	**Fort Rock, OR**	**82.92**	**37**	P	**P**	**06 21 47.3**	**0.0**
	baz=228						
R11A	**Troy Canyon, C**	**83.14**	**43**	P	**P**	**06 21 48.4**	**-0.2**
	baz=233						
SDSI	**Sungai Dareh**	**83.37**	**272**	P	**P**	**06 21 48.8**	**-1.4**
	comp=E,6.5nm,1.0s						
I05D	**Terrebonne, OR**	**83.56**	**36**	P	**P**	**06 21 50.5**	**0.0**
	baz=228						
NJ2	**Nanjing**	**83.57**	**309**	*e*P	**P**	**06 21 49.3**	**-1.4**
NJ2				pmax	pmax		
	comp=E,18nm,0.5s						
QIZ	**Qiongzhong**	**84.23**	**293**	P	**P**	**06 21 52.5**	**-1.9**
QIZ				S	**S**	**06 32 18.8**	**-0.5**
QIZ				LR	LR		
	comp=E,250nm,5.8s						
QIZ				LR	LR		
	comp=E,630nm,18.0s						
QIZ				LR	LR		
	comp=E,560nm,20.6s						
WUAZ	**Wupatki**	**84.25**	**47**	P	**P**	**06 21 55.3**	**+0.9**
	baz=236						
MDJ	**Mudanjiang**	**84.26**	**324**	P	**P**	**06 21 55.3**	**+1.3**
MDJ				PP	**PP**	**06 25 07.5**	**-1.5**
MDJ				S	**S**	**06 32 17.4**	**-1.2**
MDJ				SS	**SS**	**06 37 46.3**	**-2.6**
MDJ				pmax	pmax		
	comp=E,49nm,0.9s						
MDJ				pmax	pmax		
	comp=E,750nm,9.3s						
MDJ				LR	LR		
	comp=E,400nm,19.2s						
MDJ				LR	LR		
	comp=E,440nm,15.0s						
MDJ				LR	LR		
	comp=E,510nm,20.6s						
MDJ	**Mudanjiang**	**84.26**	**324**	P	**P**	**06 21 55.2**	**+1.2**
E04D	**Cinebar**	**84.40**	**34**	P	**P**	**06 21 54.6**	**0.0**
	baz=227						
SYO	**Syowa Base**	**84.44**	**192**	⇑*i*P	**P**	**06 21 53.6**	**-1.0**
SYO	**Syowa Base**	**84.44**	**192**	⇓*e*pP	pP	06 21 57.4	-1.5
SYO	**Syowa Base**	**84.44**	**192**	⇑*i*PP	PP	06 25 08.6	-0.5
D03D	**Eldon**	**84.81**	**33**	P	**P**	**06 21 56.9**	**+0.3**
	baz=226						
SNAA	**Sanae**	**85.06**	**178**	P	**P**	**06 21 58.3**	**+0.5**
SNAA	**Sanae**	**85.06**	**178**	P	**P**	**06 21 58.0**	**+0.2**
SNAA				pmax	pmax		
	comp=Z,15nm,1.1s						
SNAA	**Sanae**	**85.06**	**178**	P	**P**	**06 21 58.0**	**+0.2**
SNAA				IAmb	IAmb	06 22 04.5	
	comp=Z,15nm,1.1s						
VNA3	**Neumayer Olymp**	**85.10**	**175**	P	**P**	**06 21 58.3**	**+0.4**
MTPU	**Mount Pierson**	**85.13**	**45**	P	**P**	**06 21 59.4**	**+0.4**
GRNR	**Gornyy**	**85.17**	**332**	⇓*i*P	**P**	**06 22 00.1**	**+1.6**
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GRNR				MLR	MLR		
	comp=Z,180nm,19.0s						
NKL	**Nikolayevsk**	**85.21**	**335**	*e*P	**P**	**06 21 56.0**	**-2.5**
NKL				*e*SSS	SSS	06 41 17.5	
NKL				pmax	pmax		
	comp=Z,12nm,0.9s						
NKL				pmax	pmax		
	comp=N,6.0nm,0.8s						
NKL				pmax	pmax		
	comp=E,1.0nm,0.8s						
PLCA	**Paso Flores**	**85.54**	**133**	P	**P**	**06 22 02.2**	**+1.4**
	comp=E,3.7nm,0.9s,baz=249,slow=6.5,SNR=6.5						
PLCA				LR	LR	06 53 17.6	
	comp=E,596nm,19.4s,baz=260,slow=31						
VNA2	**Neumayer--Watz**	**85.57**	**176**	P	**P**	**06 22 01.6**	**+1.2**
	baz=176,slow=3.0						
VNA1	**Neumayer--Stat**	**85.78**	**176**	P	**P**	**06 22 02.0**	**+0.7**
B05A	**Bryant**	**85.79**	**32**	P	**P**	**06 22 01.2**	**-0.3**
	baz=227						
NVL	**N'lazarevskaya**	**85.97**	**182**	*e*P	P	06 22 07.8	+5.5
NVL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NVL				MLR	MLR		
	comp=Z,751nm,16.0s						
CN2	**Changchun**	**86.05**	**321**	*e*P	**P**	**06 22 03.0**	**0.0**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
KLR	**Kul'dur**	**86.24**	**328**	LR	LR	06 57 14.6	
	comp=Z,827nm,20.0s,baz=135,slow=33						
KLR	**Kul'dur**	**86.24**	**328**	⇑*e*P	**P**	**06 22 04.6**	**+0.9**
KLR				pmax	pmax		
	comp=Z,13nm,1.0s						
MNTX	**Cornudas Mount**	**86.48**	**53**	P	**P**	**06 22 05.0**	**-0.4**
	baz=240						
KULM	**Kulim**	**86.55**	**277**	P	**P**	**06 22 08.0**	**+1.8**
TXAR	**Lajitas Array**	**86.60**	**56**	P	**P**	**06 22 05.5**	**-0.6**
	comp=Z,1.4nm,0.7s,baz=215,slow=8.0,SNR=12						
TXAR				LR	LR	06 55 00.2	
	comp=Z,464nm,18.9s,baz=0.0,slow=32						
F10A	**Beach Ranch, E**	**86.83**	**36**	P	**P**	**06 22 06.3**	**-0.6**
F10A				IAmb	IAmb	06 22 19.8	
	comp=Z,11nm,0.8s						
TIA	**Tai'an**	**87.00**	**312**	P	**P**	**06 22 09.3**	**+1.5**
TIA				pmax	pmax		
	comp=Z,25nm,0.9s						
RPSI	**Rantau Prapat**	**87.10**	**274**	P	**P**	**06 22 09.3**	**+0.4**
PSI	**Prapat**	**87.14**	**274**	LR	LR	07 00 53.7	
	comp=Z,614nm,21.2s,baz=110,slow=36						
PSI	**Prapat**	**87.14**	**274**	P	**P**	**06 22 09.3**	**+0.1**
PSI				pmax	pmax		
	comp=Z,29nm,0.9s						
MA2	**Magadan**	**87.21**	**344**	⇑*e*P	**P**	**06 22 07.9**	**-0.4**
MA2				pmax	pmax		
	comp=Z,19nm,1.0s						
MA2	**Magadan**	**87.21**	**344**	P	**P**	**06 22 07.9**	**-0.4**
MA2				IAmb	IAmb	06 22 10.9	
	comp=Z,19nm,1.1s						
B08A	**Colville Reser**	**87.24**	**34**	P	**P**	**06 22 08.7**	**-0.1**
B08A				IAmb	IAmb	06 22 14.3	
	comp=Z,15nm,1.4s						
ANMO	**Albuquerque**	**87.35**	**50**	⇑*e*P	**P**	**06 22 10.1**	**+0.3**
ANMO				pmax	pmax		
	comp=Z,12nm,1.7s						
ANMO	**Albuquerque**	**87.35**	**50**	P	**P**	**06 22 09.9**	**+0.1**
	baz=239						
TTA	**Tatalina**	**87.38**	**9**	P	**P**	**06 22 09.1**	**-0.1**
TTA				pmax	pmax		
	comp=Z,19nm,1.1s						
TTA	**Tatalina**	**87.38**	**9**	P	**P**	**06 22 09.1**	**-0.1**
TTA				IAmb	IAmb	06 22 13.0	
	comp=Z,19nm,1.1s						
C09A	**Chrisman Ranch**	**87.43**	**35**	P	**P**	**06 22 09.3**	**-0.3**
KCSI	**Kotacane, Aceh**	**88.48**	**274**	P	**P**	**06 22 15.6**	**+0.1**
S22A	**4UR Ranch, Cre**	**88.53**	**48**	P	**P**	**06 22 15.7**	**+0.2**
	baz=239						

O20A	White River Ci	88.84	45	P	P	06 22 16.2	-0.5
	baz=238						
TPTI		88.92	274	P	P	06 22 18.8	+1.3
MCK	McKinley	89.28	11	P	P	06 22 17.9	-0.1
MCK				pmax	pmax		
	comp=Z,20nm,1.0s						
MCK	McKinley	89.28	11	P	P	06 22 17.9	-0.1
MCK				IAmb	IAmb	06 22 36.7	
	comp=Z,20nm,1.0s						
PDAR	Pinedale Array	89.42	42	P	P	06 22 18.3	-1.2
	comp=Z,1.3nm,0.7s,baz=196,slow=3.0,SNR=13						
PDAR				LR	LR	07 00 23.4	
	comp=Z,697nm,18.2s,baz=244,slow=34						
PDAR	Pinedale Array	89.42	42	P	P	06 22 18.6	-1.0
SDCO	Great Sand Dun	89.43	48	P	P	06 22 18.8	-0.9
SDCO	Great Sand Dun	89.43	48	P	P	06 22 19.7	0.0
	baz=239						
MENT	Mentasta	89.61	14	P	P	06 22 19.6	0.0
MENT				IAmb	IAmb	06 22 23.0	
	comp=Z,15nm,0.9s						
ENH	Enshi	89.65	303	P	P	06 22 21.3	+0.7
SEY	Seymchan	89.73	346⇑	*e*P	P	06 22 20.3	+0.2
GYA	Guiyang	90.17	299⇓	*i*P	P	06 22 26.3	+3.1
GYA				PP	PP	06 26 02.9	+5.7
GYA				SKS	SKSac	06 32 56.8	+2.9
GYA				S	ScS	06 33 20.5	+0.1
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.0s						
GYA				LR	LR		
	comp=Z,460nm,19.6s						
GYA				LR	LR		
	comp=Z,450nm,18.3s						
GYA				LR	LR		
	comp=Z,310nm,18.8s						
HDA	Harding Lake	90.26	12	P	P	06 22 22.3	-0.3
	baz=206						
CCB	Clear Creek Bu	90.32	12	P	P	06 22 21.9	-0.9
CCB				IAmb	IAmb	06 22 30.7	
	comp=Z,11nm,1.0s						
TCOL	CIGO, UAF Yank	90.51	11	P	P	06 22 23.2	-0.5
	baz=205						
COLA	College	90.52	11	P	P	06 22 23.1	-0.6
COLA				pmax	pmax		
	comp=Z,18nm,1.0s						
COLA	College	90.52	11	P	P	06 22 23.1	-0.6
COLA				IAmb	IAmb	06 22 30.4	
	comp=Z,18nm,1.0s						
IL31		90.60	12	P	P	06 22 23.7	-0.4
IL31				IAmb	IAmb	06 22 32.0	
	comp=Z,16nm,1.3s						
ILAR	Eielson Array	90.60	12	P	P	06 22 23.4	-0.8
	comp=Z,3.1nm,0.8s,baz=224,slow=5.3,SNR=18						
ILAR				PP	PP	06 26 03.7	+4.1
	comp=Z,0.7nm,0.9s,baz=220,slow=6.6,SNR=4.2						
ILAR	Eielson Array	90.60	12	P	P	06 22 23.3	-0.9
IMAR	Indian Mountai	90.60	9	P	P	06 22 22.7	-1.5
POKR	Poker Plat Res	90.81	11	P	P	06 22 25.2	0.0
	baz=205						
TIY	Taiyuan	90.99	311	*e*P	P	06 22 28.8	+2.1
TIY				pP	pwP	06 22 35.4	-1.3
TIY				sP	sP	06 22 39.3	+6.6
TIY				SKS	SKSac	06 32 52.8	-5.2
TIY				S	SKKSac	06 33 17.8	+4.8
TIY				sS	sS	06 33 36.0	+5.2
TIY				pmax	pmax		
	comp=Z,48nm,1.2s						
TIY				pmax	pmax		
	comp=Z,130nm,4.0s						
TIY				LR	LR		
	comp=Z,220nm,4.4s						
TIY				LR	LR		
	comp=Z,400nm,5.2s						
TIY				LR	LR		
	comp=Z,680nm,18.6s						
ABTX	Abilene, Hawle	91.19	55	P	P	06 22 26.2	-1.5
ABTX				IAmb	IAmb	06 22 33.3	
	comp=Z,14nm,1.2s						
ZEA	Zeya	91.32	330	*e*P	P	06 22 28.8	+1.1
ZEA				pmax	pmax		
	comp=Z,15nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,400nm,8.0s						
DAWY	Dawson	91.58	15	P	P	06 22 28.6	-0.1
DAWY				IAmb	IAmb	06 22 32.2	
	comp=Z,13nm,0.9s						
EGAK	Eagle	91.78	14	P	P	06 22 29.7	+0.1
EGAK				IAmb	IAmb	06 22 32.9	
	comp=Z,12nm,1.0s						
XAN	Xi'an	91.79	306	P	P	06 22 31.9	+1.4
XAN				SKS	SKSac	06 33 05.3	+2.6
XAN				pmax	pmax		
	comp=Z,44nm,1.0s						
XAN				pmax	pmax		
	comp=Z,360nm,6.3s						
XAN				LR	LR		
	comp=Z,890nm,21.4s						
XAN				LR	LR		
	comp=Z,730nm,20.3s						
XAN				LR	LR		
	comp=Z,1µm,20.6s						
XAN	Xi'an	91.79	306	P	P	06 22 31.4	+0.9
XAN				pmax	pmax		
	comp=Z,39nm,0.9s						
XAN	Xi'an	91.79	306	P	P	06 22 31.4	+0.9
BILL	Bilibino	92.16	353⇑	*e*P	P	06 22 31.3	0.0
BILL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BILL	Bilibino	92.16	353	P	P	06 22 31.1	-0.2
BILL				IAmb	IAmb	06 22 38.5	
	comp=Z,11nm,1.1s						
WMOK	Wichita Mounta	92.78	53	P	P	06 22 34.7	-0.3
	baz=243						
KMI	Kunming	92.80	296	P	P	06 22 34.1	-1.5
KMI				pP	sP	06 22 38.4	-3.1
KMI				sP	pwP	06 22 47.0	+1.5
KMI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,300nm,4.0s						
KMI				LR	LR		
	comp=Z,290nm,12.6s						
KMI				LR	LR		
	comp=Z,340nm,15.6s						
KMI				LR	LR		
	comp=Z,540nm,16.2s						
HHC	Hu-ho-hao-te	93.09	313	*e*P	P	06 22 35.3	-1.1
HHC				pP	pwP	06 22 45.4	-0.9
HHC				S	S	06 33 39.8	-2.5
HHC				pmax	pmax		
	comp=Z,87nm,1.3s						
HHC				pmax	pmax		
	comp=Z,350nm,7.3s						
HHC				LR	LR		
	comp=Z,640nm,17.8s						
HHC				LR	LR		
	comp=Z,570nm,17.4s						
HHC				LR	LR		
	comp=Z,730nm,18.7s						
CMAR	Chiang Mai Arr	93.34	289	P	P	06 22 39.9	+1.9
	comp=Z,28nm,1.0s,baz=131,slow=3.1,SNR=75						
CMAR				LR	LR	07 02 28.4	
	comp=Z,494nm,20.9s,baz=100,slow=34						
CMAR	Chiang Mai Arr	93.34	289	P	P	06 22 40.5	+2.5
X34A	Smith Ranch, M	93.43	54	P	P	06 22 37.7	-0.3
CHTO	Chiang Mai	93.48	289	P	P	06 22 40.3	+1.7
CHTO				pmax	pmax		
	comp=Z,26nm,0.9s						
CHTO	Chiang Mai	93.48	289	P	P	06 22 40.3	+1.7
LAO	LASA Array	93.51	40	P	P	06 22 37.4	-0.8
LAO	LASA Array	93.51	40	P	P	06 22 37.5	-0.6
	baz=239						
RSSD	Black Hills	93.57	43	P	P	06 22 38.2	-0.5
RSSD				pmax	pmax		
	comp=Z,8.0nm,0.9s						
RSSD	Black Hills	93.57	43	P	P	06 22 38.2	-0.5
RSSD				IAmb	IAmb	06 22 50.6	
	comp=Z,8.4nm,0.9s						
FNO	Franklin	94.03	53	P	P	06 22 40.9	+0.2
EPYK	Eagle Plains	94.13	15	P	P	06 22 41.5	+1.0
	baz=215						
YAK	Yakutsk	95.69	337	LR	LR	07 00 45.9	
	comp=Z,256nm,21.0s,baz=102,slow=32						
LZH	Lanzhou	96.43	306	*e*P	P	06 22 52.3	+0.4
LZH				SKS	SKSac	06 33 27.3	-0.8
LZH				S	S	06 34 12.1	+0.3
LZH				pmax	pmax		
	comp=Z,29nm,1.3s						
LZH				pmax	pmax		
	comp=Z,150nm,6.0s						
LZH				LR	LR		
	comp=Z,710nm,17.5s						
LZH				LR	LR		
	comp=Z,1µm,17.6s						
LZH				LR	LR		
	comp=Z,2µm,19.0s						
YKA	Yellowknife Ar	98.12	24	P	P	06 22 58.0	-0.6
	comp=Z,1.4nm,0.9s,baz=230,slow=4.3,SNR=14						
YKA				PP	PP	06 26 57.2	-1.1
	comp=Z,0.3nm,0.9s,baz=239,slow=7.5,SNR=3.7						
YKA				LR	LR	07 01 42.1	
	comp=Z,580nm,20.2s,baz=0.0,slow=32						
LPAZ	La Paz	98.73	112	LR	LR	07 00 23.9	
	comp=Z,504nm,19.0s,baz=200,slow=31						
SONM	Songino Array	99.51	318	P	Pdif	06 23 05.2	-0.3
	comp=Z,0.4nm,0.5s,baz=108,slow=4.7,SNR=3.8						
SONM				PP	PP	06 27 05.1	-4.4
	comp=Z,0.9nm,0.9s,baz=120,slow=8.5,SNR=3.2						
SONM				LR	LR	07 06 04.9	
	comp=Z,213nm,18.7s,baz=143,slow=34						
GTA	Gaotai	100.66	308	*e*P	Pdif	06 23 11.6	+0.8
GTA				pP	pwP	06 23 16.6	-4.2
GTA				sP	sP	06 23 20.5	+3.7
GTA				SKS	SKSac	06 33 49.8	+0.6
GTA				S	Sdif	06 34 43.8	-3.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,100nm,4.9s						
GTA				LR	LR		
	comp=Z,270nm,18.4s						
GTA				LR	LR		
	comp=Z,320nm,20.9s						
GTA				LR	LR		
	comp=Z,350nm,18.4s						
TIXI	Tiksi	102.15	344⇑	*e*P	Pdif	06 23 18.4	+2.0
TIXI				pmax	pmax		
	comp=Z,6.0nm,3.1s						
TLY	Talaya	102.65	321	*e*P	Pdif	06 23 26.1	+6.9
TLY				*e*		06 37 09.1	
TLY				*e*SS	SS	06 42 11.0	-0.7
TLY				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WMQ	Urumqi	110.63	310	*e*PKP	PKiKP	06 27 51.1	-4.1
WMQ				AMB	AMB		
	comp=Z,100nm,5.9s						
ZALV	Zalesovo Beam	114.25	320	PKP	PKPdf	06 28 00.3	-1.3
	comp=Z,2.4nm,0.6s,baz=200,slow=1.6,SNR=11						
MKAR	Makanchi Array	114.93	312	PKP	PKPdf	06 28 02.4	-0.8
	comp=Z,1.5nm,0.6s,baz=93,slow=0.5,SNR=15						
MKAR	Makanchi Array	114.93	312		PKPdf	06 28 02.0	-1.2
KURK	Kurchatov	117.75	316⇑	*i*PKIKP	PKiKP	06 28 09.3	+0.9
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURK	Kurchatov	117.75	316		PKPdf	06 28 07.1	-1.3
KURBB	Kurchatov Arra	117.80	316	PKP	PKPdf	06 28 07.7	-0.9
	comp=Z,2.7nm,0.7s,baz=93,slow=1.8,SNR=25						
KSH	Kashi	118.51	303	PKP	PKPdf	06 28 08.3	-2.2
KSH				SKKS		06 36 20.3	
KSH				LR	LR		
	comp=Z,220nm,13.0s						
KSH				LR	LR		
	comp=Z,430nm,12.8s						
KSH				LR	LR		
	comp=Z,190nm,18.8s						
BOOM	Boomskoye usch	118.89	307	PKIKP	PKiKP	06 28 11.4	+0.2
BOOM	Boomskoye usch	118.89	307		PKiKP	06 28 11.4	+0.2
AAK	Ala-Archa	119.97	307⇓	*i*PKIKP	PKPdf	06 28 13.3	+0.1
GAR	Garm	122.81	302		PKPdf	06 28 18.9	+0.2
BVAR	Borovoye Array	122.83	319	PKP	PKPdf	06 28 17.4	-0.8
	comp=Z,4.1nm,0.8s,baz=98,slow=2.1,SNR=15						
BRVK	Borovoye	122.90	319⇓	*i*PKIKP	PKPdf	06 28 17.6	-0.7
BRVK	Borovoye	122.90	319		PKPdf	06 28 17.7	-0.6
KK31	Karatay Array	122.92	307	PKIKP	PKPdf	06 28 18.3	-0.4
KK31	Karatay Array	122.92	307		PKPdf	06 28 18.3	-0.4
KKAR	Karatay Array	122.92	307	PKIKP	PKPdf	06 28 18.3	-0.4
KKAR	Karatay Array	122.92	307		PKPdf	06 28 18.3	-0.4
ARU	Arti	128.94	325	PKP	PKPdf	06 28 29.7	0.0
	comp=Z,1.0nm,0.3s,baz=149,slow=0.8,SNR=6.6						
ARU	Arti	128.94	325	*i* PKIKP	PKPdf	06 28 29.9	+0.2
ARU						06 35 38.3	
ARU	Arti	128.94	325		PKPdf	06 28 29.1	-0.6
ABKAR	Akbulak array	129.84	315		PKPdf	06 28 31.5	-0.1
AKTO	Aktyubinsk	130.82	317	PKP	PKPdf	06 28 33.6	+0.1
	comp=Z,2.6nm,0.8s,baz=49,slow=4.0,SNR=8.9						
ARCES	ARCESS Array B	132.17	350	PKP	PKPdf	06 28 34.8	-0.7
	comp=Z,3.5nm,0.8s,baz=28,slow=2.9,SNR=7.6						
ARCES	ARCESS Array B	132.17	350	PKIKP	PKPdf	06 28 35.6	+0.1
ARCES	ARCESS Array B	132.17	350		PKPdf	06 28 35.6	+0.1
GEYT	Alibeck	132.35	301	PKP	PKiKP	06 28 37.7	-0.3
	comp=Z,1.5nm,0.3s,baz=81,slow=3.6,SNR=3.9						
FINES	FINESS Array B	139.20	344	PKhKP	PKPpre	06 28 40.0	
	comp=Z,1.4nm,0.8s,baz=46,slow=4.0,SNR=2.6						
FINES				PKP	pPKPdf	06 28 50.1	-3.1
	comp=Z,2.6nm,0.8s,baz=49,slow=4.2,SNR=5.4						
KMBO	Kilima Mbogo	139.98	237	PKhKP	PKPpre	06 28 46.9	
	comp=Z,0.7nm,0.4s,baz=13,slow=13,SNR=2.8						
OBN	Obninsk	140.44	331	*e*PKIKP	PKiKP	06 28 53.7	0.0
OBN				*e*		06 31 51.3	
OBN				*e*PPP	PPP	06 34 51.0	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NB2	NORSAR Subarra	142.09	355	PKP	PKPdf	06 28 49.0	-5.1
	comp=Z,1.3nm,0.9s,baz=12,slow=3.0						
NOA	NORSAR Array B	142.09	355	PKhKP	PKPdf	06 28 49.6	-4.5
	comp=Z,2.0nm,0.9s,baz=5.1,slow=2.3,SNR=5.5						
KIV	Kislovodsk	142.69	313	*i* PKIKP	PKiKP	06 29 00.2	+1.3
KIV				pmax	pmax		
	comp=Z,21nm,1.1s						
KIV				MLR	MLR		
	comp=Z,1µm,24.0s						
AKH	Akhalkalaki	142.94	308	⇑P	PKPdf	06 28 53.5	-2.9
NACGM	Naroch	144.45	338	*e*LQ	LQ	06 30 10.0	
SOC	Sochi	144.82	314	*e*PKHKP	PKPab	06 28 56.7	-1.7
SOC				*e*SS	SS	06 50 57.6	-7.2
SOC				MLR	MLR		
	comp=Z,481nm,21.0s						
SUW	Suwalki	146.37	340	*e*PKP	PKPab	06 29 04.6	+0.8
SUW	Suwalki	146.37	340	PKIKP	PKPab	06 29 04.5	+0.8
SUW	Suwalki	146.37	340		PKPab	06 29 04.5	+0.8
AKASG	Malin Array Be	146.70	331	PKPbc	PKPdf	06 29 03.1	+0.8
	comp=Z,16nm,0.8s,baz=40,slow=4.1,SNR=38						
AKASG	Malin Array Be	146.70	331		PKPbc	06 29 03.3	-0.7
AKBB	Malin Array Si	146.70	331		PKPdf	06 29 02.5	+0.1
MUD	Monsted U'grnd	146.80	355	*i* P	PKPbc	06 29 04.0	-0.1
	comp=Z,34nm,0.8s						
BSD	Bornholm Skovb	147.39	349	*i* P	PKPbc	06 29 05.4	-0.4
	comp=Z,28nm,0.9s						
SIM	Simferopol'	147.75	319	*i* PKIKP	PKPbc	06 29 08.0	+0.8
SIM				*e*		06 29 18.0	
SIM				SS	SS	06 51 58.0	+20
SIM				pmax	pmax		
	comp=Z,27nm,0.9s						
SIM				pmax	pmax		
	comp=Z,40nm,12.2s						
GKP	Gorka Klasztor	148.66	345	*e*PKP	PKPab	06 29 12.9	+0.1
GKP	Gorka Klasztor	148.66	345	*e*PKP2	PKPab	06 29 12.9	+0.1
SORM	Soroca	148.92	329	⇑P	PKPbc	06 29 09.4	-0.6
SORM	Soroca	148.92	329	⇑PKIKP	PKPbc	06 29 09.4	-0.6
BEL	Belsk	148.99	340	*e*PKP	PKiKP	06 29 11.0	-0.5
BEL	Belsk	148.99	340	*e*PKIKP	PKiKP	06 29 11.0	-0.5
KIS	Kishinev	149.47	326	*e*PKP	PKiKP	06 29 14.0	+1.4
KIS				LRM	MLR	07 35 12.0	
	comp=Z,400nm,20.0s						
KIS	Kishinev	149.47	326	*e*PKP2	PKiKP	06 29 14.0	+1.4
KIS				MLR	MLR		
	comp=Z,400nm,20.0s						
LVV	L'vov	149.54	335	*e*PKIKP	PKPbc	06 29 10.6	-1.0
KWP	Kalwaria Pacla	150.19	336	*e*PKP	PKiKP	06 29 13.7	-0.3
KWP	Kalwaria Pacla	150.19	336	PKIKP	PKiKP	06 29 13.9	-0.1
KWP	Kalwaria Pacla	150.19	336		PKPdf	06 29 09.1	+1.0
KWP				PKPbc	PKiKP	06 29 13.9	-0.1
ASF	Jabal al Asfar	150.21	294	PKPbc	PKPbc	06 29 14.2	+0.3
	comp=Z,6.9nm,0.8s,baz=97,slow=2.7,SNR=7.6						
BR131	Keskin Array S	150.56	310	PKIKP	PKiKP	06 29 15.2	-0.1
BR131	Keskin Array S	150.56	310		PKiKP	06 29 15.2	-0.1
BRTR	Keskin Array B	150.56	310	PKPbc	PKPbc	06 29 14.4	-0.2
	comp=Z,7.1nm,0.7s,baz=143,slow=3.9,SNR=26						
BRTR	Keskin Array B	150.56	310	PKIKP	PKPbc	06 29 14.8	+0.2
BRTR	Keskin Array B	150.56	310		PKPbc	06 29 14.8	+0.2
OJC	Ojcow	150.70	340	*e*PKP	PKiKP	06 29 14.9	-0.1
OJC	Ojcow	150.70	340		PKiKP	06 29 15.0	-0.1
BUR08	Bucovina Ar. S	150.74	331		PKiKP	06 29 15.7	+0.3
BUR08				PKPab	PKPab	06 29 22.4	+0.7
BURAR	Bucovina Array	150.75	331	⇑P	PKPbc	06 29 13.8	-1.0
BURAR	Bucovina Array	150.75	331	⇑PKIKP	PKPbc	06 29 13.8	-1.0
BURAR	Bucovina Array	150.75	331		PKiKP	06 29 15.9	+0.5
TESR	Tescani	150.88	328	⇑P	PKPbc	06 29 15.1	+0.1
KOLS	Kolonicke sedl	150.93	336	*e*PKP	PKiKP	06 29 15.7	+0.1
KOLS				*e*		06 29 22.4	
CFR	Carcaliu	151.03	324	⇑P	PKPbc	06 29 15.0	-0.2
ANTO	Ankara	151.08	311	⇑P	PKPbc	06 29 15.1	-0.6
ANTO	Ankara	151.08	311		PKiKP	06 29 16.2	0.0
KSP	Ksiaz	151.12	345	*e*PKP	PKiKP	06 29 16.1	+0.2
UZH	Uzhgorod	151.17	335	*e*PKIKP	PKPdf	06 29 11.2	+1.6
UZH				*i*		06 29 15.8	
UZH				*e*		06 29 19.6	
UZH				*e*		06 29 22.4	
NIE	Niedzica	151.23	338	*e*PKP	PKiKP	06 29 16.8	+0.6
CRVS	Cervenica-Dubn	151.26	337	*e*PKP	PKiKP	06 29 16.5	+0.2
CRVS				*e*		06 29 22.4	
VRI	Vrincioaia	151.29	327	⇑P	PKPbc	06 29 16.0	+0.1
MMAI	Mount Meron Ar	151.30	296	PKPbc	PKiKP	06 29 17.1	+0.1
	comp=Z,16nm,0.8s,baz=71,slow=5.6,SNR=8.5						
PLOR	Plostina	151.34	327	⇓P	PKPdf	06 29 13.1	+3.0
PLOR	Plostina	151.34	327	⇓PKIKP	PKPdf	06 29 13.1	+3.0
CLL	Collm	151.38	349	*i* PKPbc	PKiKP	06 29 17.2	+0.8
	comp=Z,25nm,0.9s						
CLL				*i* PKPab	PKPab	06 29 23.8	-0.2
	comp=Z,24nm,0.9s						
CLL				*i*		06 29 28.5	
CLL				*e*SS	SS	06 52 20.0	+3.3
CLL				L	L	07 45 00.0	
	comp=Z,400nm,18.4s						
CLL	Collm	151.38	349		PKiKP	06 29 17.4	+1.0
CLL				PKPab	PKPab	06 29 24.2	+0.2
OSTC	Ostas	151.41	344⇑	*e*PKP	PKPbc	06 29 16.1	0.0
CHVC	Chvalec	151.42	345⇑	*e*PKP	PKiKP	06 29 16.5	-0.1
UPC	Upice	151.50	345⇑	*e*PKP	PKiKP	06 29 17.0	+0.3
UPC	Upice	151.50	345	*e*PKIKP	PKiKP	06 29 17.0	+0.3
BISRR	Bisoca	151.52	326	⇑P	PKPbc	06 29 16.3	-0.3
OKC	Ostrava-Krasne	151.54	341	*e*PKPAB	PKPab	06 29 26.8	+2.0
OKC	Ostrava-Krasne	151.54	341	*e*PKIKP	PKPab	06 29 26.8	+2.0
DPC	Dobruska-Polom	151.57	344⇑	*e*PKP	PKiKP	06 29 17.0	+0.1
DPC				*e*PKPAB	PKPab	06 29 24.4	-0.6
DPC	Dobruska-Polom	151.57	344	*e*PKIKP	PKiKP	06 29 17.0	+0.1
DPC				*e*		06 29 24.4	
OZUR		151.60	328	⇑P	PKPbc	06 29 16.7	+0.1
BRG	Berggiesshubel	151.62	348	*e*PKP	PKiKP	06 29 17.0	+0.1
	comp=Z,11nm,0.7s						
BRG				*i*		06 29 23.4	
	comp=Z,30nm,1.3s						
BRG	Berggiesshubel	151.62	348	*e*PKIKP	PKiKP	06 29 17.0	+0.1
BRG				*i*		06 29 23.4	
BRG				pmax	pmax		
	comp=Z,11nm,0.7s						
BRG				pmax	pmax		
	comp=Z,30nm,1.3s						
BRG				MLR	MLR		
	comp=N,353nm,17.3s						
BRG				MLR	MLR		
	comp=E,321nm,18.5s						
BRG				MLR	MLR		
	comp=Z,584nm,16.5s						
KRLC	Kraliky	151.71	343⇑	*e*PKP	PKiKP	06 29 17.1	-0.1
KRLC				*e*PKPAB	sPKPab	06 29 28.8	-2.7
KRLC	Kraliky	151.71	343	*e*PKIKP	PKiKP	06 29 17.1	-0.1
KRLC				*e*		06 29 28.8	
LANS	Liptovska Anna	151.74	339	*e*PKIKP	PKiKP	06 29 18.2	+0.9
LANS	Liptovska Anna	151.74	339	*e*PKP	PKiKP	06 29 18.2	+0.9
MORC	Moravsky Berou	151.77	342	PKIKP	PKiKP	06 29 17.3	-0.1
MORC	Moravsky Berou	151.77	342	*e*PKP	PKiKP	06 29 17.5	+0.2
MORC	Moravsky Berou	151.77	342		PKiKP	06 29 17.3	-0.1
PVCC	Panska Ves	151.81	346⇑	*e*PKP	PKiKP	06 29 17.4	+0.1
PVCC				*e*pPKP	sPKPab	06 29 29.7	-2.2
PVCC	Panska Ves	151.81	346	*e*PKIKP	PKiKP	06 29 17.4	+0.1
PVCC				*e*		06 29 29.7	
DOPR	Dopca	151.88	328	⇑P	PKPbc	06 29 16.9	-0.4
MDUB	Mudurnu	151.88	314		PKiKP	06 29 18.6	+0.6
MLR	Muntele Rosu	151.95	327	PKPbc	PKiKP	06 29 18.1	+0.2
	comp=Z,7.8nm,0.9s,baz=301,slow=1.8,SNR=8.0						
MLR	Muntele Rosu	151.95	327	⇑P	PKiKP	06 29 18.2	+0.2
MLR	Muntele Rosu	151.95	327	PKIKP	PKiKP	06 29 17.9	-0.1
MLR	Muntele Rosu	151.95	327		PKiKP	06 29 17.9	-0.1
EIL	Elat	152.19	290	PKPbc	PKiKP	06 29 19.2	+0.5
	comp=Z,10nm,0.8s,baz=155,slow=19,SNR=4.8						
PRU	Pruhonice	152.33	346⇑	*e*PKP	PKPbc	06 29 17.6	-0.5
PRU	Pruhonice	152.33	346	*e*PKIKP	PKPbc	06 29 17.6	-0.5
GOPC	GO Pecny, Ondr	152.34	346⇑	*e*PKP	PKiKP	06 29 20.2	+1.7
GOPC	GO Pecny, Ondr	152.34	346	*e*PKIKP	PKiKP	06 29 20.2	+1.7
VOIR		152.43	328	⇑P	PKPbc	06 29 17.8	-0.8
VOIR		152.43	328	⇑PKIKP	PKPbc	06 29 17.8	-0.8
DRGR		152.48	332	⇑P	PKPbc	06 29 18.2	-0.5
DRGR		152.48	332	⇑PKIKP	PKPbc	06 29 18.2	-0.5
CSS	Mathiatis	152.49	301		PKPab	06 29 30.7	+1.3
NKC	Novy Kostel	152.51	349⇑	*e*PKP	PKiKP	06 29 19.9	+1.1
NKC				*e*PKPAB	pPKPab	06 29 30.1	-3.1
NKC	Novy Kostel	152.51	349	*e*PKIKP	PKiKP	06 29 19.9	+1.1
NKC				*e*		06 29 30.1	
VYHS	Vyhne	152.51	339	*e*PKIKP	PKiKP	06 29 19.0	+0.1
VYHS				*e*		06 29 29.6	
VYHS	Vyhne	152.51	339	*e*PKP	PKiKP	06 29 19.0	+0.1
VYHS				*e*		06 29 29.6	
JAVC	Velka Javorina	152.56	341	*e*PKP	PKiKP	06 29 20.3	+1.3
ARR	Arges	152.68	328	⇑P	PKPdf	06 29 13.1	+1.0
KRUC	Moravsky	152.73	343	*e*PKP	PKiKP	06 29 19.4	+0.1
TREC	Trest	152.75	344⇑	*e*PKP	PKiKP	06 29 21.0	+1.6
TREC	Trest	152.75	344	*e*PKIKP	PKiKP	06 29 21.0	+1.6
GRF	Grafenberg Arr	153.23	350	*e*PKPab	PKPab	06 29 32.0	+0.1
	baz=12,slow=3.9						
SIRR	Siria	153.33	333	⇓P	PKPbc	06 29 20.2	-0.3
DOU	Dourbes	153.34	0	PKiKP	PKPdf	06 29 16.0	+3.2
KHC	Kasperske Hory	153.34	347⇑	*e*PKP	PKiKP	06 29 20.6	0.0
KHC				*e*PKPAB	pPKPab	06 29 33.2	-3.6
KHC				*e*x	x	06 29 47.0	
KHC	Kasperske Hory	153.34	347	*e*PKIKP	PKiKP	06 29 20.6	0.0
KHC				*e*		06 29 33.2	
KHC	Kasperske Hory	153.34	347		PKiKP	06 29 20.8	+0.2
GZR	Gura Zlata	153.53	330	⇑P	PKPbc	06 29 20.3	-0.7
GZR	Gura Zlata	153.53	330	⇑PKIKP	PKPbc	06 29 20.3	-0.7
GERES	GERESS Array B	153.59	346	PKPbc	PKPbc	06 29 21.1	0.0
	comp=Z,2.1nm,0.9s,baz=354,slow=1.3,SNR=9.2						
BZS	Buzias	153.87	332	⇑P	PKPbc	06 29 21.6	-0.1
CONA	Conrad Observa	153.91	343	*i* PKPbc	PKPbc	06 29 20.7	-1.1
	comp=Z,7.9nm,1.1s						
HERR	Herculane	154.09	330	⇑P	PKPbc	06 29 20.9	-1.3
MOA	Molln	154.40	345	*i* PKPab	PKPab	06 29 31.8	-5.1
	comp=Z,13nm,1.0s						
ARSA	Arzberg	154.63	342	*i* pPKPdf	pPKPdf	06 29 19.9	+0.6
	comp=Z,5.5nm,0.7s						
BFO	Black Forest	154.93	354		PKPab	06 29 38.9	-0.3
ECH	Echery	155.14	356		PKPab	06 29 39.3	-0.7
SOKA	Soboth	155.29	343	*i* PKPab	PKPab	06 29 36.2	-4.6
	comp=Z,8.4nm,1.0s						
KBA	Koelnbreinsper	155.34	346	*i* PKPab	PKPab	06 29 36.2	-5.0
	comp=Z,6.8nm,0.7s						
VTS	Vitosha	155.36	326	⇓P	PKPab	06 29 37.3	-4.1
VTS	Vitosha	155.36	326		PKPab	06 29 42.4	+1.0
RETA	Reutte	155.45	350	*i* PKPab	PKPab	06 29 37.3	-4.2
	comp=Z,2.4nm,0.6s						
WATA	Walderalm	155.46	349	*i* PKPab	PKPab	06 29 36.3	-5.3
	comp=Z,7.2nm,0.8s						
WTTA	Wattenberg	155.51	348	*i* PKPbc	PKPbc	06 29 23.6	
	comp=Z,6.7nm,0.8s						
MOTA	Moosalm	155.53	349	*i* PKPbc	PKPbc	06 29 24.5	
	comp=Z,6.0nm,1.1s						
MYKA	Terra Mystica	155.69	345	*i* PKPab	PKPab	06 29 37.0	-5.5
	comp=Z,6.8nm,1.0s						
FETA	Feichten	155.91	350	*i* PKPab	PKPab	06 29 39.0	-4.5
	comp=Z,8.5nm,1.0s						
CTI	Castel Tesino	156.68	348	PKP2	PKPab	06 29 47.5	+0.7
CTI	Castel Tesino	156.68	348		PKPab	06 29 47.5	+0.7
SENIN	Lac Senin/Sane	156.97	355		PKPab	06 29 48.1	-0.1
LIT	Litokhoron	157.51	322	PKP2	PKPab	06 29 50.8	+0.2
LIT	Litokhoron	157.51	322		PKPab	06 29 50.8	+0.2
BNI	Bardonecchia	158.32	356	PKP2	PKPab	06 29 54.8	+0.8
BNI	Bardonecchia	158.32	356		PKPab	06 29 54.8	+0.8
IDI	Anoyia	158.76	309	PKPab	PKPab	06 29 56.3	+0.1
	comp=Z,37nm,1.1s,baz=21,slow=14,SNR=3.0						
MURB	Monte Urbino	159.12	344		PKPab	06 29 58.8	+1.4
NRCA	Norcia	159.36	342	PKPdf	PKPdf	06 29 19.9	-1.2
NRCA					PKPab	06 29 59.0	+0.5

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
DBIC	**Dimbokro**	161.05	150	PKPab	PKPab	06 30 07.3	+0.9
	comp=Z,2.4nm,0.9s,baz=164,slow=6.0,SNR=3.5						
ESDC	**Sonseca Array**	162.21	22	PKPab	PKPab	06 30 10.3	-0.6
	comp=Z,0.4nm,0.5s,baz=331,slow=3.0,SNR=3.2						
KEST	**Kesra**	167.03	343	PKPab	PKPab	06 30 32.5	+0.2
	comp=Z,7.6nm,0.9s,baz=293,slow=12,SNR=4.4						
TORD	**Torodi Ar. Bea**	169.45	164	PKP	PKPdf	06 29 30.5	-0.1
	comp=Z,1.3nm,0.8s,baz=211,slow=0.9,SNR=6.7						
TORD				PKPab	PKPab	06 30 44.2	+0.9
	comp=Z,2.3nm,0.8s,baz=191,slow=3.8,SNR=7.4						

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*IASPEI **13** 06:16:46.6±0.8,41°.19N±0°.03×25°.54E±0°.02,h14^{km}±5^{km}, Error ellipse: s-maj=3.8km s-min=3.3km az=27.4,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*ISK **13** 06:16:46.2,41°.23N×25°.57E,h10^{km},ML2.5/9*
*THE **13** 06:16:46.9,41°.17N×25°.54E,h12^{km}±1^{km},ML2.4/9,Error ellipse: s-maj=1.1km s-min=0.6km az=8.0*
*ATH **13** 06:16:46.5,41°.14N×25°.54E,h28^{km}±1^{km},ML2.3/7,Error ellipse: s-maj=2.9km s-min=1.1km az=185.0*
ISC 13 06:16:46.6±0.8,**41°.19N**±0°.02×**25°.54E**±0°.02,**h14**^{km}±5^{km}, **n34,**σ**0^{s}.40**/55,**2D,Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
RDO	**Rodhopi**	0.04	183	P	Pg	06 16 49.2	+0.1
RDO				S	Sg	06 16 50.6	-0.2
	12μm,0.2s						
RDO	**Rodhopi**	0.04	183	PG	Pg	06 16 49.2	+0.1
RDO				SG	Sg	06 16 50.7	-0.1
KDZ	**Kurdzhali**	0.47	349	PG	Pg	06 16 55.3	-0.7
KDZ				SG	Sg	06 17 01.8	-0.6
ALN	**Alexandroupoli**	0.48	127	P	Pb	06 16 56.6	-0.2
ALN				S	Sg	06 17 02.9	+0.5
	355nm,0.2s						
ALN	**Alexandroupoli**	0.48	127	P	Pb	06 16 56.6	-0.2
ALN				S	Sb	06 17 03.1	-0.6
ALN				AML	AML	06 17 03.2	
	comp=N,817μm,0.2s						
ALN				AML	AML	06 17 03.3	
	comp=E,761μm,0.2s						
ALN	**Alexandroupoli**	0.48	127	PG	Pb	06 16 56.6	-0.2
ALN				SG	Sb	06 17 03.1	-0.6
ENEZ	**Enez**	0.65	134	PG	Pb	06 16 59.5	-0.2
ENEZ				SG	Sb	06 17 08.9	+0.4
SMTH	**Samothraki Isl**	0.71	181	P	Pb	06 17 00.9	+0.1
SMTH				S	Sb	06 17 10.6	+0.1
	comp=E,170nm,0.2s						
SMTH	**Samothraki Isl**	0.71	181	P	Pb	06 17 00.8	0.0
SMTH				S	Sg	06 17 09.5	-0.3
SMTH				AML	AML	06 17 10.9	
	comp=E,425μm,0.2s						
SMTH				AML	AML	06 17 11.6	
	comp=N,245μm,0.3s						
KAVA	**Kavala**	0.80	257	P	Pg	06 17 02.0	-0.1
KAVA				S	Sb	06 17 13.3	+0.4
	comp=N,300nm,0.1s						
KAVA	**Kavala**	0.80	257	P	Pb	06 17 02.1	-0.2
KAVA				S	Sb	06 17 13.0	0.0
KAVA				AML	AML	06 17 16.1	
	comp=E,636μm,0.1s						
KAVA				AML	AML	06 17 16.9	
	comp=N,465μm,0.1s						
THAS	**Thassos island**	0.85	227	P	Pg	06 17 02.8	-0.2
THAS				S	Sb	06 17 14.8	+0.4
	comp=N,302nm,0.3s						
THAS	**Thassos island**	0.85	227	P	Pg	06 17 02.7	-0.3
THAS				S	Sg	06 17 14.0	-0.2
THAS				AML	AML	06 17 16.9	
	comp=N,482μm,0.2s						
THAS				AML	AML	06 17 17.4	
	comp=E,695μm,0.2s						
ERIK	**Erikli-Kesan**	0.90	125	PG	Pg	06 17 03.8	-0.2
ERIK				SG	Sb	06 17 15.7	-0.1
KVLA	**Kavala**	0.91	255	P	Pb	06 17 04.5	+0.4
GELI	**Tayfur-Gelibol**	1.06	138	PG	Pn	06 17 07.3	+0.3
PLD	**Plovdiv**	1.11	326	PN	Pb	06 17 07.6	0.0
PLD				SN	Sg	06 17 22.7	+0.1
EDRB	**Edirne**	1.12	53	P	Pb	06 17 07.7	0.0
EDRB				S	Sb	06 17 22.8	+0.5
	comp=E,215nm,0.4s						
EDRB	**Edirne**	1.12	53	PG	Pb	06 17 07.8	0.0
EDRB				SG	Sb	06 17 22.7	+0.5
LPK	**Lapseki**	1.23	131	PN	Pb	06 17 09.8	+0.1
LPK				SN	Sg	06 17 27.1	+0.8
NVR	**Nevrokopi**	1.28	278	P	Pb	06 17 10.4	-0.1
NVR				S	Sn	06 17 27.1	+0.1
	comp=E,70nm,0.2s						
NVR	**Nevrokopi**	1.28	278	P	Pb	06 17 10.4	-0.1
NVR				AML	AML	06 17 29.6	
	comp=E,142μm,0.2s						
NVR				AML	AML	06 17 31.1	
	comp=N,109μm,0.2s						
LIA	**Limnos Island**	1.31	192	P	Pn	06 17 10.6	0.0
RKY	**Sarkoy-Tekirda**	1.34	111	PN	Pn	06 17 11.0	+0.1
BOZC	**Bozcaada**	1.40	164	PN	Pb	06 17 12.5	0.0
OUR	**Ouranopolis**	1.46	235	P	Pn	06 17 12.3	-0.2
OUR				S	Sg	06 17 32.5	-1.0
	comp=N,188nm,0.4s						
OUR	**Ouranopolis**	1.46	235	P	Pn	06 17 12.2	-0.2
OUR				AML	AML	06 17 36.0	
	comp=E,322μm,0.6s						
OUR				AML	AML	06 17 36.7	
	comp=N,416μm,0.2s						
SRS	**Serrai**	1.47	268	P	Pn	06 17 13.1	+0.3
SRS				S	Sb	06 17 32.3	-0.1
	comp=N,205nm,0.7s						
SRS	**Serrai**	1.47	268	P	Pn	06 17 13.3	+0.5
EZN	**Ezine**	1.48	156	PN	Pb	06 17 13.8	-0.2
PAIG	**Paliouri**	1.89	229	P	Pn	06 17 18.3	-0.2
KNT	**Kendrikon**	1.99	270	P	Pn	06 17 20.9	+0.9
KNT				AML	AML	06 17 53.2	
	comp=N,111μm,0.4s						
KNT				AML	AML	06 17 54.0	
	comp=E,102μm,0.4s						
VAY	**Valandovo**	2.24	274	⇓*i*Pn	Pg	06 17 30.5	+0.9
STIP	**Stip**	2.57	283	⇓*i*Pn	Pn	06 17 27.0	-0.9

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*BJI **13** 06:27:47.9±0.0,37°.66N×77°.83E,h9^{km},ML3.6/5*
*IDC **13** 06:27:48.4±3.5,37°.76N×78°.03E,h0^{km},mb3.0/1, mb1 3.6/5,mb1mx3.3/48,mbtmp3.6/5,ML3.4/4,MS3.8/1, Ms1 3.8/1,ms1mx2.8/21,Error ellipse: s-maj=39.7km s-min=27.1km az=25.0*
ISC 13 06:27:52.3±2.1,**37°.8N**±0°.2×**78°.0E**±0°.1,**h17**^{km},**n8,**σ**2^{s}.37**/9, **Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
AAK	**Ala-Archa**	5.55	332	Pn	Pn	06 29 15.9	+1.6
	0.3nm,0.3s,baz=155,slow=11,SNR=5.3						
AAK				Pg	Pb	06 29 30.0	+1.2
	0.4nm,0.3s,baz=223,slow=2.4,SNR=5.1						
AAK				Lg	Lg	06 30 45.6	
	0.9nm,0.3s,baz=334,slow=14,SNR=4.4						
WMQ	**Urumqi**	9.52	48	*e*P	Pn	06 30 12.6	+3.9
WMQ				smax	smax		
	comp=N,14nm,0.7s						
WMQ				smax	smax		
	comp=E,12nm,0.9s						
MKAR	**Makanchi Array**	9.57	18	Pn	Pn	06 30 09.7	+0.5
	1.3nm,0.3s,baz=204,slow=13,SNR=40						
MKAR				Sn	Sn	06 31 54.0	-2.3
	0.3nm,0.3s,baz=206,slow=22,SNR=3.2						
KURBB	**Kurchatov Arra**	12.86	2	Lg	Lg	06 34 37.4	
	0.0nm,0.3s,baz=190,slow=32,SNR=1.9						
GEYT	**Alibeck**	15.70	277	Pn	Pn	06 31 31.7	-1.0
	0.8nm,0.3s,baz=85,slow=18,SNR=2.7						
BVAR	**Borovoye Array**	16.15	343	Pn	P	06 31 41.5	0.0
	0.3nm,0.3s,baz=159,slow=12,SNR=3.9						
ZALV	**Zalesovo Beam**	16.85	14	Pn	Pn	06 31 45.5	-1.8
	0.2nm,0.3s,baz=194,slow=11,SNR=1.8						
ZALV				LR	LR	06 39 09.8	
	comp=Z,321nm,18.6s,baz=48,slow=40						
SONM	**Songino Array**	23.03	55	P	P	06 32 54.4	-2.2
	0.2nm,0.4s,baz=259,slow=10,SNR=2.4						

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*IDC **13** 06:33:01.0±2.5,22°.72S×175°.64W,h0^{km},mb4.0/4, mb1 4.3/5,mb1mx3.9/27,mbtmp4.1/5,ML4.1/1,Error ellipse: s-maj=109.4km s-min=26.4km az=147.0*
ISC 13 06:33:14.3±2.0,**21°.9S**±0°.3×**176°.1W**±0°.4,**h100**^{km},**n6,** σ**2^{s}.27**/6,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
AFI	**Afiamalu**	8.91	28	Pn	Pn	06 35 18.0	-2.3
	2.0nm,0.3s,baz=201,slow=8.6,SNR=2.7						
AFI				Sn	Sn	06 37 01.1	+2.1
	1.7nm,0.3s,baz=231,slow=20,SNR=1.3						
ASAR	**Alice Springs**	45.95	258	P	P	06 41 28.0	+0.5
	0.4nm,0.8s,baz=91,slow=7.4,SNR=3.6						
WRA	**Warramunga Arr**	46.18	263	P	P	06 41 29.8	+0.4
	1.2nm,0.3s,baz=106,slow=8.6,SNR=9.6						
NVAR	**Mina Array Bea**	80.81	42	P	P	06 45 18.9	+1.6
	0.9nm,0.8s,baz=216,slow=8.3,SNR=6.6						
CMAR	**Chiang Mai Arr**	92.23	289	P	P	06 46 17.0	+3.5
	0.9nm,0.3s,baz=139,slow=4.3,SNR=5.5						
AKASG	**Malin Array Be**	145.05	332	PKPbc	PKiKP	06 52 41.9	-1.6
	0.3nm,0.3s,baz=38,slow=4.3,SNR=3.0						

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*ASRS **13** 06:44:46.7,53°.74N×90°.96E,M2.0,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
NNC 13 06:44:54.6±7.9,**53°.88N**×**90°.45E,h0**^{km},**mb3.7,mpv3.5, 5C-4D,Error ellipse: s-maj=82.5km s-min=56.0km az=161.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
KURK	**Kurchatov**	7.92	251	⇑Pn	Pn	06 46 52.1	+1.2
	3.3nm,1.1s						
KURK				⇓Sn	Sn	06 48 23.8	+2.7
	8.5nm,0.9s						
KURK				⇓Lg	Lg	06 49 12.1	
	15nm,0.9s						
KURBB	**Kurchatov Arra**	8.01	251	⇓Pn	Pn	06 46 53.7	+1.5
	1.3nm,0.6s						
KURBB				⇑Sn	Sn	06 48 22.9	-0.5
	19nm,0.8s						
KURBB				⇑Lg	Lg	06 49 10.9	
	42nm,1.1s						
MK31	**Makanchi Array**	8.80	220	⇑Pn	Pn	06 47 14.0	+11
	1.1nm,0.8s,baz=34,slow=14,SNR=4.0						
MK31				⇓Sn	Sn	06 48 42.1	-0.9
	3.0nm,0.9s,baz=40,slow=28,SNR=4.4						
MK31				⇑Lg	Lg	06 49 30.9	
	10nm,1.1s,baz=41,slow=29,SNR=3.8						

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*IDC **13** 06:51:39.9±1.3,9°.68S×159°.98E,h0^{km},mb4.0/5, mb1 4.2/5,mb1mx3.8/37,mbtmp4.0/5,Error ellipse: s-maj=30.1km s-min=10.8km az=98.0*
ISC 13 06:51:44.9±1.4,**9°.7S**±0°.1×**159°.9E**±0°.3,**h34**^{km},**n12,** σ**0^{s}.89**/7,**mb3.8**/5,**Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
HNR	**Honiara**	0.24	6	Pn	Pn	06 51 51.0	-0.6
	988nm,0.3s,baz=169,slow=11,SNR=178						
HNR				Sn	Sb	06 51 57.7	+0.7
	8μm,0.3s,baz=152,slow=5.7,SNR=54						
WRA	**Warramunga Arr**	26.71	245	P	P	06 57 22.4	+1.1
	1.7nm,0.7s,baz=75,slow=9.1,SNR=7.7						
STKA	**Stephens Creek**	27.86	215	P	P	06 57 30.5	-1.0
	1.0nm,0.3s,baz=40,slow=9.0,SNR=1.9						
ASAR	**Alice Springs**	28.47	238	P	P	06 57 37.0	-0.1
	0.5nm,0.5s,baz=62,slow=10.0,SNR=4.4						
H11S2	**WAKE ISLAND Hy**	28.78	13	T	T	07 26 27.9	
	baz=194,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	28.78	13	T	T	07 26 31.3	
	baz=194,slow=76,SNR=8.5						
H11S1	**WAKE ISLAND Hy**	28.80	13	T	T	07 26 27.5	
	baz=194,slow=76,SNR=5.4						
H11N1	**WAKE ISLAND Hy**	30.00	13	T	T	07 28 00.1	
	baz=193,slow=76,SNR=5.3						
H11N3	**WAKE ISLAND Hy**	30.01	13	T	T	07 28 01.5	
	baz=193,slow=76,SNR=5.0						
H11N2	**WAKE ISLAND Hy**	30.02	13	T	T	07 28 01.8	
	baz=193,slow=76,SNR=6.8						
ILAR	**Eielson Array**	84.13	20	P	P	07 04 12.6	+0.4
	0.6nm,0.4s,baz=247,slow=4.9,SNR=4.6						
YKA	**Yellowknife Ar**	96.42	28	P	P	07 05 10.2	0.0
	0.2nm,0.6s,baz=259,slow=4.3,SNR=3.8						

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*NEIC **13** 07:34:13.6±2.8,23°.29S±0°.10×175°.16W±0°.05,h10^{km}±1^{km}, mb4.6/11,Error ellipse: s-maj=16.9km s-min=7.7km az=182.0*
*IDC **13** 07:34:14.6±1.2,23°.15S×175°.53W,h0^{km},mb3.9/6, mb1 4.2/7,mb1mx4.0/29,mbtmp4.0/7,ML3.8/1,MS3.7/4, Ms1 3.7/4,ms1mx3.3/33,Error ellipse: s-maj=56.4km s-min=23.2km az=146.0*
ISC 13 07:34:13.5±0.6,**23°.18S**±0°.09×**175°.1W**±0°.1,**h10**^{km},**n35,** σ**1^{s}.74**/34,**mb4.5**/12,**MS3.5**/3,**Tonga Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
NIUE	**Niue**	6.34	51	Pn	Pn	07 35 46.1	-1.0
MSVF	**Nonsavu**	8.38	309	Pn	Pn	07 36 14.2	-1.1
AFI	**Afiamalu**	9.75	20	Pn	Pn	07 36 33.4	-0.6
AFI				Sn	Sn	07 38 19.0	-4.7
URZ	**Urewera**	16.43	202	Pn	P	07 38 04.4	-2.6
	0.4nm,0.3s,baz=201,slow=15,SNR=2.2						
URZ				Sn	Sn	07 40 51.2	-15
	0.2nm,0.3s,baz=196,slow=22,SNR=1.7						
URZ	**Urewera**	16.43	202		Pn	07 38 02.7	-1.5
URZ				IAmb	IAmb	07 38 06.2	
	comp=Z,11nm,1.3s						
DZM	**Mont Dzumac**	17.05	270	LR	LR	07 43 40.2	
	comp=Z,197nm,18.1s,baz=145,slow=34						
RPZ	**Rata Peaks**	23.44	206	LR	LR	07 48 37.3	
	comp=Z,164nm,19.6s,baz=12,slow=37						
PPT	**Papeete**	24.57	82	LR	LR	07 48 48.7	
	comp=Z,97nm,18.4s,baz=326,slow=35						
EIDS	**Eidsvold**	30.84	259	P	P	07 40 29.6	-0.4
STKA	**Stephens Creek**	39.14	248	P	P	07 41 42.5	+1.1
	comp=Z,0.9nm,0.5s,baz=96,slow=14,SNR=5.6						
STKA	**Stephens Creek**	39.14	248	P	P	07 41 40.9	-0.5
BBOO	**Buckleboo**	43.83	246	P	P	07 42 19.7	-0.3
AS31	**Alice Springs**	46.56	259	P	P	07 42 40.4	-1.4
ASAR	**Alice Springs**	46.57	259	P	P	07 42 41.8	-0.1
	comp=Z,1.3nm,0.8s,baz=92,slow=8.2,SNR=14						
ASAR				LR	LR	08 01 42.2	
	comp=Z,152nm,18.3s,baz=111,slow=36						
ASAR	**Alice Springs**	46.57	259	P	P	07 42 42.5	+0.6
WR0	**Warramunga Arr**	46.74	264	P	P	07 42 42.8	-0.5
WR0				IAmb	IAmb	07 42 49.4	
	comp=Z,6.9nm,1.3s						
WB0	**Warramunga Arr**	46.92	264	P	P	07 42 44.1	-0.5
WB0				IAmb	IAmb	07 43 00.2	
	comp=Z,5.3nm,0.8s						
WRA	**Warramunga Arr**	46.93	264	P	P	07 42 43.7	-1.0
	comp=Z,0.8nm,0.3s,baz=89,slow=6.0,SNR=24						
WRA	**Warramunga Arr**	46.93	264	P	P	07 42 44.5	-0.2
KNRA	**Kununurra**	53.18	267	P	P	07 43 32.4	+0.2
KNRA				IAmb	IAmb	07 43 33.1	
	comp=Z,8.3nm,0.9s						
FITZ	**Fitzroy Crossi**	55.35	263	P	P	07 43 48.6	+0.6
FITZ				IAmb	IAmb	07 43 49.1	
	comp=Z,11nm,1.3s						
QSPA	**South Pole Qui**	66.90	180	P	P	07 45 04.0	-1.9
QSPA				IAmb	IAmb	07 45 16.3	
	comp=Z,8.2nm,1.4s						
PETK	**Petropavlovsk-**	79.56	344	P	P	07 46 23.1	+2.7
	comp=Z,3.4nm,0.8s,baz=128,slow=9.6,SNR=5.7						
PETK	**Petropavlovsk-**	79.56	344	P	P	07 46 20.7	+0.3
NVAR	**Mina Array Bea**	81.19	42	P	P	07 46 33.5	+3.8
	comp=Z,0.3nm,0.6s,baz=226,slow=6.1,SNR=3.1						
NVAR	**Mina Array Bea**	81.19	42	P	P	07 46 31.9	+2.2
TXAR	**Lajitas Array**	86.29	56	P	P	07 47 01.5	+5.5
	comp=Z,0.5nm,0.8s,baz=242,slow=1.9,SNR=2.6						
CMAR	**Chiang Mai Arr**	93.51	288	P	P	07 47 31.4	+1.2
	comp=Z,2.3nm,0.3s,baz=130,slow=3.5,SNR=15						
KURBB	**Kurchatov Arra**	117.82	316	PKP	PKiKP	07 53 01.0	+1.0
	comp=Z,0.4nm,0.6s,baz=80,slow=1.9,SNR=5.1						
BVAR	**Borovoye Array**	122.84	319	PKP	PKiKP	07 53 11.6	+1.8
	comp=Z,0.5nm,0.6s,baz=240,slow=2.9,SNR=3.6						
AKASG	**Malin Array Be**	146.64	332	PKPbc	PKPab	07 53 56.3	0.0
	comp=Z,0.8nm,0.4s,baz=37,slow=4.3,SNR=7.8						
AKASG	**Malin Array Be**	146.64	332		PKiKP	07 53 57.6	-0.5
BRTR	**Keskin Array B**	150.61	311	PKPbc	PKiKP	07 54 06.8	-0.1
	comp=Z,1.0nm,0.8s,baz=122,slow=1.9,SNR=5.0						
BRTR	**Keskin Array B**	150.61	311	PKPdf	PKPdf	07 53 58.8	-1.9
BRTR					PKPbc	07 54 07.4	+1.3
BRTR				PKPab	PKPab	07 54 14.1	+1.2
CLL	**Collm**	151.22	349	*e*PKPbc	PKiKP	07 54 11.0	+3.5

DJA 13 07:47:29.0±1.2,**6°S**±3°×**11°6E**±°,**h23**^{km}±11^{km},**M3.6**/11, **mb3.3**/1,**MLv3.8**/11,**Bali Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
SRBI	**Singaraja**	2.22	214	P	Pn	07 48 06.0	+1.5
SRBI				S	Sn	07 48 32.7	+1.5
KMMI	**Kalianget**	2.62	252	P	Pn	07 48 09.1	-0.9
KMMI				S	Sn	07 48 41.8	+0.7
PLAI	**Plampang**	2.87	154	P	Pn	07 48 12.7	-0.8
PLAI				S	Sn	07 48 46.5	-0.8
KBKI	**Kotabaru**	2.94	354	P	Pn	07 48 14.5	+0.2
KBKI				S	Pb	07 48 20.6	-0.1
JAGI	**Jajag, Banyuwa**	3.20	226	P	Pn	07 48 18.4	+0.5
JAGI				S	Sn	07 48 51.8	-3.6
BKSI	**Bulukumba**	3.74	76	P	Pn	07 48 26.1	+0.8
SPSI	**Sidrap Palu**	3.98	56	P	Pn	07 48 29.5	+0.8
GRJI	**Gresik**	4.03	260	P	Pn	07 48 27.8	-1.5
BNSI	**Bone**	4.05	63	P	Pn	07 48 30.3	+0.7
PWJI	**Pagerwojo**	4.97	249	P	Pn	07 48 37.1	-5.1
EDFI	**Ende, Flores**	5.74	116	P	Pn	07 48 53.0	+0.1

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*KRNET **13** 07:53:01.2±0.1,40°.10N×79°.82E,mb3.4*
*SOME **13** 07:53:03.6,40°.52N×79°.62E,h5^{km}*
*NNC **13** 07:53:05.2±1.1,40°.44N×79°.40E,h0^{km},mb3.8,mpv3.5, Error ellipse: s-maj=7.8km s-min=6.5km az=171.0*
ISC 13 07:53:02.3±2.5,**40°.2N**±0°.1×**79°.70E**±0°.07,**h10**^{km},**n39,** σ**1^{s}.70**/62,**19C-9D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
PRZ	**Przheval'sk**	2.52	338	⇑*e*P	Pn	07 53 44.0	+0.5
	baz=37						
PRZ				⇑*i*S	Sn	07 54 15.1	+0.6
	baz=37						
KDJ	**Kajisay**	2.74	317	⇓*e*P	Pn	07 53 47.0	+0.5
	baz=16						
KDJ				⇓*i*S	Sn	07 54 20.8	+1.0
	baz=16						
UZB	**Uzynbulak**	3.03	351	*e*P	Pn	07 53 51.5	+1.0
	7.6nm,0.3s						
UZB				*e*S	Sn	07 54 26.5	-0.5
	30nm,0.6s						
UZB	**Uzynbulak**	3.03	351	Pg	Pb	07 53 54.5	-2.0
	17nm,0.4s						
UZB				Lg	Lg	07 54 30.9	
	30nm,0.6s						
ANVS	**Anan'yevo**	3.04	330	⇑*i*P	Pn	07 53 51.3	+0.7
	baz=30						
ANVS				⇑*i*S	Sn	07 54 27.9	+0.8
	baz=30						
SATY	**Saty**	3.06	342	*e*P	Pn	07 53 53.3	+2.4
	25nm,0.4s						
SATY				*e*S	Sn	07 54 29.3	+1.7
	51nm,0.5s						
SATY	**Saty**	3.06	342	Pg	Pb	07 53 55.6	-1.3
	20nm,0.3s						
SATY				Lg	Lg	07 54 32.8	
	51nm,0.5s						
NRN	**Naryn**	3.09	296	⇑*e*P	Pn	07 53 52.4	+1.0
	baz=96						
NRN				⇑*i*S	Sn	07 54 29.4	+0.9
	baz=96						
ULHL	**Ulahol**	3.34	310	⇑*i*P	Pn	07 53 55.4	+0.6
	baz=10.0						
ULHL				⇑*i*S	Sn	07 54 35.2	+0.5
	baz=10.0						
KURS	**Kuram**	3.52	342	*e*P	Pb	07 54 02.8	-2.0
	15nm,0.5s						
KURS				*e*S	Sb	07 54 45.4	-2.2
	17nm,0.6s						
KURS	**Kuram**	3.52	342	Pg	Pb	07 54 03.2	-1.6
	15nm,0.5s						
KURS				Lg	Lg	07 54 46.2	
	17nm,0.6s						
TNSS	**Tian-Shan**	3.54	325	*e*P	Pb	07 54 02.6	-2.7
	15nm,0.6s						
TNSS				*e*S	Sn	07 54 45.5	+5.5
	32nm,0.7s						
TNSS	**Tian-Shan**	3.54	325	Pg	Pb	07 54 02.8	-2.5
	15nm,0.6s						
TNSS				Lg	Lg	07 54 46.0	
	32nm,0.7s						
MDOK	**Medeo**	3.60	327	*e*P	Pb	07 54 03.9	-2.3
	6.8nm,0.5s						
MDOK				*e*S	Sb	07 54 47.3	-2.7
	40nm,0.7s						
MDOK	**Medeo**	3.60	327	⇓Pg	Pb	07 54 03.5	-2.7
	14nm,0.5s						
MDOK				Lg	Lg	07 54 48.7	
	31nm,0.7s						
MDOK	**Medeo**	3.60	327	Pg	Pb	07 54 03.5	-2.7
	6.8nm,0.5s						
MDOK				Lg	Lg	07 54 47.3	
	40nm,0.7s						
BOOM	**Boomskoye usch**	3.67	311	⇑*i*P	Pn	07 54 00.3	+1.0
	baz=11						
BOOM				⇑*i*S	Sn	07 54 43.1	+0.4
	baz=11						
IZV	**Izvestkoviy**	3.69	322	Pg	Pb	07 54 06.5	-1.3
IZV				Lg	Lg	07 54 51.4	
KZA	**Kyzart**	3.87	301	⇓*i*P	Pn	07 54 03.3	+1.0
	baz=1.0						
KZA				⇓*i*S	Sn	07 54 48.4	+0.3
	baz=1.0						
KST	**Kastek**	4.02	317	*e*P	Pb	07 54 11.8	-1.6
	10nm,0.6s						
KST				*e*S	Sb	07 55 00.9	-1.2
	26nm,0.4s						
KST	**Kastek**	4.02	317	Pg	Pb	07 54 11.9	-1.5
	10nm,0.6s						
KST				Lg	Lg	07 55 01.0	
	26nm,0.4s						
DJR	**Jarkent**	4.17	1	*e*P	Pb	07 54 13.0	-2.9
	0.5nm,0.2s						
DJR				*e*S	Sb	07 55 03.5	-2.8
	13nm,0.5s						
DJR	**Jarkent**	4.17	1	Pg	Pb	07 54 17.1	+1.2
	3.0nm,0.2s						
DJR				Lg	Lg	07 55 09.8	
	14nm,0.5s						
CHKK	**Chushkaly**	4.21	332	*e*P	Pb	07 54 15.2	-1.3
	7.1nm,0.3s						
CHKK				*e*S	Sb	07 55 06.9	-0.5
	22nm,0.7s						
CHKK	**Chushkaly**	4.21	332	Pg	Pb	07 54 15.8	-0.7
	7.1nm,0.3s						
CHKK				Lg	Lg	07 55 07.6	
	22nm,0.7s						
ARLS	**Aral**	4.41	294	⇑*i*P	Pn	07 54 10.2	+0.7
	baz=95						
ARLS				⇑*i*S	Sn	07 55 01.3	+0.3
	baz=95						
UCH	**Uchtor**	4.43	300	⇓*i*P	Pn	07 54 10.8	+0.8
	baz=0.0						
UCH				⇓*i*S	Sn	07 55 01.5	-0.3
	baz=0.0						
KUU	**Kurty**	4.50	327	*e*P	Pb	07 54 20.8	-0.5
	2.8nm,0.3s						
KUU				*e*S	Sb	07 55 16.3	+0.7
	14nm,0.7s						
KUU	**Kurty**	4.50	327	Pg	Pb	07 54 20.7	-0.7
	2.8nm,0.3s						
KUU				Lg	Lg	07 55 16.3	
	14nm,0.7s						
AAK	**Ala-Archa**	4.64	304	⇑*i*P	Pn	07 54 13.5	+1.0
	baz=4.0						
AAK				⇑*i*S	Sn	07 55 06.3	-0.2
	baz=4.0						
AAK	**Ala-Archa**	4.64	304	⇑Pg	Pb	07 54 24.4	+0.6
	3.4nm,0.7s						
AAK				⇑Lg	Lg	07 55 20.5	
	17nm,0.9s						
CHMS	**Chumysh**	4.67	309	⇑Pg	Pb	07 54 23.0	-1.4
	2.5nm,0.5s						
CHMS				⇑Lg	Lg	07 55 21.5	
	14nm,1.0s						
TDK	**Taldyqorghan**	4.94	349	*e*P	Pb	07 54 29.5	+0.7
	41nm,0.3s						
TDK				*e*S	Sb	07 55 31.8	+3.5
	58nm,0.4s						

TDK	Taldyqorghan	4.94	349	Pg	Pb	07 54 31.5	+2.6
	41nm,0.3s						
TDK				Lg	Lg	07 55 34.4	
	58nm,0.4s						
SGDS	Sogindy	5.02	313	Pg	Pb	07 54 30.1	-0.2
	3.1nm,0.8s						
SGDS				Lg	Lg	07 55 31.8	
	6.2nm,0.7s						
EKS2	Erkin-Say	5.11	301	⇓eP	Pn	07 54 20.0	+1.0
	baz=1.0						
EKS2				⇓iS	Sn	07 55 17.6	-0.5
	baz=1.0						
KAPS	Kapalarasan	5.13	357	eP	Pb	07 54 31.3	-0.9
	0.9nm,0.4s						
KAPS				eS	Sb	07 55 34.5	+0.6
	18nm,0.8s						
KAPS	Kapalarasan	5.13	357	Pg	Pb	07 54 33.2	+1.0
	1.3nm,0.3s						
KAPS				Lg	Lg	07 55 37.3	
	18nm,0.8s						
MK31	Makanchi Array	6.90	15	Pn	Pn	07 54 44.1	+0.7
	0.1nm,0.2s,baz=197,slow=12,SNR=34						
MK31				⇑Sn	Sn	07 55 59.1	-2.9
	0.6nm,0.5s,baz=183,slow=27,SNR=6.3						

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*IDC **13** 07:55:40.5±1.5, 45°.73S×77°.34W, h0^{km}, mb4.0/8, mb1 4.1/10, mb1mx3.9/37, mbtmp4.0/10, ML3.6/2, MS4.0/9, Ms1 3.9/9, ms1mx3.6/30, Error ellipse: s-maj=38.8km s-min=28.4km az=84.0*

*NEIC **13** 07:55:42.6±1.8, 45°.62S±0°.03×77°.3W±0°.2, h14^{km}±5^{km}, mb4.4/9, Error ellipse: s-maj=24.6km s-min=2.7km az=82.0*

ISC 13 07:55:42.2±0.9, **45°.63S**±0°.08×**77°.2W**±0°.2, **h10**^{km}, **n36, σ1^{s}26**/29, **mb4.2**/10, **MS4.2**/6, **Off coast of southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO07	Milladeo Hill,	3.59	47		Pn	07 56 36.0	-1.9
GO09	Cerro Castillo	6.51	152	Pn	Pn	07 57 18.8	+0.8
PLCA	Paso Flores	6.91	47	Pn	Pn	07 57 23.9	+0.3
	0.2nm,0.3s,baz=249,slow=7.1,SNR=10						
PLCA				LR	LR	07 59 59.1	
	comp=Z,982nm,20.2s,baz=258,slow=37						
GO06	Curarrehue	7.38	37		Pn	07 57 30.6	+0.5
GO10	Punta Arenas	8.53	154	Pn	Pn	07 57 46.1	+0.3
USHA	Ushuaia	10.78	152	Pn	Pn	07 58 14.5	-2.0
	0.7nm,0.3s,baz=13,slow=1.5,SNR=5.9						
USHA				LR	LR	08 02 35.6	
	comp=Z,328nm,21.0s,baz=287,slow=39						
GO05	Huala	11.35	23	Pn	Pn	07 58 24.1	-0.3
PEL	Peldehue	13.45	24	Pn	Pn	07 58 51.3	-1.9
CFA	Coronel Fontan	15.65	30	LR	LR	08 05 33.8	
	comp=Z,342nm,19.3s,baz=204,slow=38						
GO04	Tololo Observa	16.24	20	Pn	Pn	07 59 29.6	-1.0
GO04				IAmb	IAmb	07 59 43.5	
	comp=Z,24nm,1.1s						
CPUP	Villa Florida	24.98	46	P	P	08 01 07.4	+1.4
	comp=Z,6.4nm,0.9s,baz=224,slow=8.7,SNR=14						
CPUP				LR	LR	08 10 56.6	
	comp=Z,246nm,19.8s,baz=229,slow=36						
CPUP	Villa Florida	24.98	46	P	P	08 01 06.2	+0.2
CPUP				IAmb	IAmb	08 01 16.1	
	comp=Z,14nm,1.1s						
PB11	IPOC Station P	26.55	16	P	P	08 01 17.4	-3.0
PB11				IAmb	IAmb	08 01 25.4	
	comp=Z,12nm,1.1s						
HOPE	Hope Point	27.26	123	P	P	08 01 25.9	-0.5
LPAZ	La Paz	30.23	18	P	P	08 01 55.0	+1.2
	comp=Z,1.0nm,0.9s,baz=190,slow=5.7,SNR=3.7						
LPAZ	La Paz	30.23	18	P	P	08 01 53.1	-0.7
SIV	San Ignacio	32.51	30	P	P	08 02 14.4	+1.2
	comp=Z,2.4nm,1.0s,baz=217,slow=9.8,SNR=9.1						
BDFB	Brasilia	38.65	49	P	P	08 03 06.7	+0.6
	comp=Z,4.0nm,0.9s,baz=214,slow=8.6,SNR=4.4						
BDFB				LR	LR	08 20 21.9	
	comp=Z,394nm,19.9s,baz=207,slow=38						
SNAA	Sanae	42.63	153	P	P	08 03 39.9	+1.6
QSPA	South Pole Qui	44.61	180	P	P	08 03 53.8	-0.7
QSPA				IAmb	IAmb	08 04 06.0	
	comp=Z,9.3nm,1.4s						
PAYG	Puerto Ayora	46.23	342	P	P	08 04 08.7	+1.1
PTGA	Pitinga	47.23	24	P	P	08 04 15.3	-0.1
	comp=Z,0.9nm,0.3s,baz=188,slow=7.8,SNR=4.5						
PTGA	Pitinga	47.23	24	P	P	08 04 15.7	+0.3
PTGA				IAmb	IAmb	08 04 22.4	
	comp=Z,3.6nm,1.0s						
SDV	Santo Domingo	54.59	8	LR	LR	08 24 53.9	
	comp=Z,61nm,21.8s,baz=114,slow=32						
MAW	Mawson	63.13	164	LR	LR	08 32 27.9	
	comp=Z,207nm,18.0s,baz=264,slow=35						
TEIG	Tepich	66.31	349	LR	LR	08 27 19.6	
	comp=Z,148nm,21.5s,baz=156,slow=29						
RAR	Rarotonga	70.05	260	LR	LR	08 31 24.2	
	comp=Z,165nm,18.8s,baz=160,slow=31						
TXAR	Lajitas Array	78.39	337	P	P	08 07 42.8	0.0
	comp=Z,0.3nm,0.9s,baz=165,slow=7.3,SNR=2.8						
DBIC	Dimbokro	82.59	73	P	P	08 08 07.1	+1.4
	comp=Z,4.3nm,1.0s,baz=218,slow=5.1,SNR=3.8						
TORD	Torodi Ar. Bea	91.70	73	P	P	08 08 48.3	-1.7
	comp=Z,0.2nm,0.3s,baz=248,slow=4.9,SNR=2.6						
H11S2	WAKE ISLAND Hy	121.15	265	T	T	10 27 36.3	
	baz=135,slow=75,SNR=22						
H11S1	WAKE ISLAND Hy	121.16	265	T	T	10 27 35.7	
	baz=135,slow=75,SNR=8.7						
H11S3	WAKE ISLAND Hy	121.16	265	T	T	10 27 36.5	
	baz=135,slow=75,SNR=13						
GEYT	Alibeck	146.18	87	PKPbc	PKPab	08 15 24.0	+0.9
	comp=Z,3.2nm,0.7s,baz=318,slow=2.0,SNR=4.4						
MKAR	Makanchi Array	165.77	78	PKPab	PKPab	08 16 45.8	-0.4
	comp=Z,1.0nm,0.9s,baz=274,slow=3.2,SNR=5.4						
MKAR	Makanchi Array	165.77	78	PKPdf	PKPdf	08 15 44.8	-1.8
MKAR					PKPab	08 16 45.9	-0.2

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*UCR **13** 07:55:59.5±2.4, 12°.49N×87°.79W, h43^{km}±87^{km}, ML3.7*

*SNET **13** 07:56:00.7±1.0, 12°.53N×87°.89W, h32^{km}±4^{km}, ML3.7*

*INET **13** 07:56:00.2, 12°.51N×87°.76W, h64^{km}, ML4.1*

ISC 13 07:55:57.5±1.4, **12°.42N**±0°.06×**87°.83W**±0°.05, **h20**^{km}±6^{km}, **n43, σ1^{s}02**/72, **4D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	Conchagua	0.85	360	⇓eP	Pg	07 56 14.9	+0.6
CNCH				eS	Sb	07 56 26.3	+1.5
CNCH				IAML		07 56 31.1	
	comp=Z,10μm,0.3s						
CNCH	Conchagua	0.85	360	⇓eP	Pg	07 56 14.9	+0.6
CNCH				eS	Sb	07 56 26.3	+1.5
CNCH				IAML		07 56 31.1	
	comp=Z,10μm,0.3s						
LCND	La Caada	0.89	356	⇓eP	Pg	07 56 15.3	+0.4
LCND				eS	Sb	07 56 26.5	+0.8
LCND				IAML		07 56 33.6	
	comp=Z,3μm,0.3s						
LCND	La Caada	0.89	356	⇓eP	Pg	07 56 15.3	+0.4
LCND				eS	Sb	07 56 26.5	+0.8
LCND				IAML		07 56 33.6	
	comp=Z,3μm,0.3s						
JUCU	Jucuar¡n	0.93	334	eP	Pg	07 56 15.6	0.0
JUCU				eS	Sg	07 56 28.0	+0.1
JUCU				IAML		07 56 32.6	
	comp=Z,3μm,0.3s						
JUCU	Jucuar¡n	0.93	334	eP	Pg	07 56 15.6	0.0
JUCU				eS	Sg	07 56 28.0	+0.1
JUCU				IAML		07 56 32.6	
	comp=Z,3μm,0.3s						
BLLM	Bellamira	1.09	339	eP	Pg	07 56 18.2	-0.5
BLLM				eS	Sg	07 56 32.3	-0.9
BLLM	Bellamira	1.09	339	eP	Pg	07 56 18.2	-0.5
BLLM				eS	Sg	07 56 32.3	-0.9
VSM	San Miguel	1.09	337	eP	Pg	07 56 18.9	+0.1
VSM	San Miguel	1.09	337	eP	Pg	07 56 18.9	+0.1
PACA	Pacayal	1.15	335	eP	Pg	07 56 19.1	-0.7
PACA				eS	Sg	07 56 34.0	-1.0
PACA				IAML		07 56 36.4	
	comp=Z,7μm,0.1s						
PACA	Pacayal	1.15	335	eP	Pg	07 56 19.1	-0.7
PACA				eS	Sg	07 56 34.0	-1.0
PACA				IAML		07 56 36.4	
	comp=Z,7μm,0.1s						
ALJI	Alcalda de J	1.16	322	eP	Pb	07 56 19.1	+0.2
ALJI				eS	Sb	07 56 32.8	-0.6
ALJI	Alcalda de J	1.16	322	eP	Pb	07 56 19.1	+0.2
ALJI				eS	Sb	07 56 32.8	-0.6
TECA	Tecapa	1.25	329	eP	Pb	07 56 20.6	0.0
TECA				eS	Sb	07 56 35.6	-0.8
TECA	Tecapa	1.25	329	eP	Pb	07 56 20.6	0.0
TECA				eS	Sb	07 56 35.6	-0.8
MOMN	Momotombo	1.26	90	eP	Pn	07 56 16.7	-3.4
MOMN				eS	Sb	07 56 33.6	-2.9
MOMN	Momotombo	1.26	90	eP	Pn	07 56 16.7	-3.4
MOMN				eS	Sb	07 56 33.6	-2.9
COEB	Comit de Eme	1.27	328	eP	Pn	07 56 20.7	+0.4
COEB				eS	Sb	07 56 35.9	-0.9
COEB	Comit de Eme	1.27	328	eP	Pn	07 56 20.7	+0.4
COEB				eS	Sb	07 56 35.9	-0.9
FAGO	Alcalda de S	1.30	348	eP	Pn	07 56 20.8	+0.2
FAGO				eS	Sb	07 56 37.2	-0.3
FAGO				IAML		07 56 39.1	
	comp=Z,380nm,0.4s						
FAGO	Alcalda de S	1.30	348	eP	Pn	07 56 20.8	+0.2
FAGO				eS	Sb	07 56 37.2	-0.3
FAGO				IAML		07 56 39.1	
	comp=Z,380nm,0.4s						
COEG	Centro de Oper	1.57	320	eP	Pn	07 56 24.8	+0.4
COEG	Centro de Oper	1.57	320	eP	Pn	07 56 24.8	+0.4
LFRS	El Faro	1.69	315	eP	Pn	07 56 26.8	+0.7
LFRS				eS	Sn	07 56 47.6	+0.3
LBRS	Las Brisas	1.77	318	eP	Pn	07 56 28.1	+1.1
LOMA	Loma Larga	1.79	313	eP	Pn	07 56 28.1	+0.8
LOMA				eS	Sn	07 56 49.5	-0.1
LOMA	Loma Larga	1.79	313	eP	Pn	07 56 28.1	+0.8
LOMA				eS	Sn	07 56 49.5	-0.1
LALI	Alcalda de L	1.80	306	eP	Pn	07 56 28.0	+0.6
LALI				eS	Sn	07 56 48.6	-1.1
LALI	Alcalda de L	1.80	306	eP	Pn	07 56 28.0	+0.6
LALI				eS	Sn	07 56 48.6	-1.1
OPAM	Oficina de Pla	1.85	314	eP	Pn	07 56 28.6	+0.4
OPAM				eS	Sn	07 56 50.9	-0.2
OPAM				IAML		07 56 55.0	
	comp=Z,456nm,0.2s						
OPAM	Oficina de Pla	1.85	314	eP	Pn	07 56 28.6	+0.4
OPAM				eS	Sn	07 56 50.9	-0.2
OPAM				IAML		07 56 55.0	
	comp=Z,456nm,0.2s						
SNET	Serv Nac Est T	1.86	313	eP	Pn	07 56 29.4	+1.1
SNET				eS	Sn	07 56 51.4	+0.1
SNET				IAML		07 56 53.4	
	comp=Z,464nm,0.3s						
SNET	Serv Nac Est T	1.86	313	eP	Pn	07 56 29.4	+1.1
SNET				eS	Sn	07 56 51.4	+0.1
SNET				IAML		07 56 53.4	
	comp=Z,464nm,0.3s						
UEES	Universidad Ev	1.88	313	eP	Pn	07 56 29.8	+1.1
UEES	Universidad Ev	1.88	313	eP	Pn	07 56 29.8	+1.1
BOQS	Boqueron	1.92	313	eP	Pn	07 56 30.8	+1.4
MTO3	Montecristo	2.47	323	eP	Pn	07 56 37.3	+0.5
MTO3	Montecristo	2.47	323	eP	Pn	07 56 37.3	+0.5
CUI	Cuipilapa	3.15	124	eP	Pn	07 56 47.4	+1.4
CUI				eS	Sn	07 57 21.1	-2.0
PLVR	Palo Verde	3.19	130	eP	Pn	07 56 49.3	+2.6
PLVR				eS	Sn	07 57 25.8	+1.6
SRA1	San Ramn	4.02	125	eP	Pn	07 56 57.4	-0.8
LCR2	La Lucha 2	4.60	125	eP	Pn	07 57 09.0	+2.7

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*GCG **13** 08:15:22.7±0.4, 14°.15N×91°.52W, h50^{km}±175^{km}, MD3.4*

*MEX **13** 08:15:22.4±0.4, 13°.89N×91°.96W, h20^{km}±69^{km}, MD3.8*

ISC 13 08:15:18.4±2.7, **13°.9N**±0°.2×**91°.73W**±0°.08, **h61**^{km}, **n7, σ1^{s}52**/11, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	0.86	10	eP	Pn	08 15 35.3	+0.5
FUG	Fuego 3	1.04	56	eP	Pn	08 15 37.4	+0.3
FUG				eS	Sn	08 15 48.6	-2.4
THIG		1.16	333	i P	Pn	08 15 38.3	-0.2
THIG				i S	Sn	08 15 51.7	-1.9
IXG	Ixpaco	1.29	76	eP	Pn	08 15 41.6	+1.2
PCIG		2.33	322	i P	Pn	08 15 54.8	+0.4
PCIG				i S	Sn	08 16 20.7	-1.2
CCIG	Comitan	2.44	351	eP	Pn	08 15 57.7	+1.7
CCIG				i S	Sn	08 16 26.2	+1.5
CMIG	Matias Romero	4.42	317	eP	Pn	08 16 23.8	+0.8

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*NEIC **13** 08:22:04.6±1.4, 23°.3S±0°.1×175°.0W±0°.1, h10^{km}±1^{km}, mb4.6/12, Error ellipse: s-maj=21.0km s-min=15.7km az=175.0*

*IDC **13** 08:22:07.6±0.8, 23°.00S×175°.39W, h0^{km}, mb4.2/12, mb1 4.4/13, mb1mx4.3/31, mbtmp4.1/13, ML3.7/1, MS3.7/2, Ms1 3.6/2, ms1mx3.1/25, Error ellipse: s-maj=38.6km s-min=18.7km az=153.0*

ISC 13 08:22:10.6±0.6, **23°.45S**±0°.10×**175°.4W**±0°.1, **h30**^{km}, **n36, σ1^{s}91**/34, **mb4.4**/19, **1C, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	6.69	50	Pn	Pn	08 23 37.7	-9.1
MSVF	Nonsavu	8.38	312		Pn	08 24 08.6	-1.5
AFI	Afiamalu	10.08	20	Pn	Pn	08 24 25.2	-8.3
RAR	Rarotonga	14.61	84	Pn	Pn	08 25 26.7	-8.6
URZ	Urewera	16.10	202	Pn	P	08 25 58.5	+0.8
	0.3nm,0.3s,baz=4.0,slow=5.8,SNR=1.9						
URZ				Sn	Sn	08 28 48.1	-4.2
	0.2nm,0.3s,baz=5.2,slow=12,SNR=1.7						
RPZ	Rata Peaks	23.10	206	LR	LR	08 35 42.7	
	comp=Z,211nm,18.9s,baz=94,slow=35						
CTA	Charters Tower	35.72	268	P	P	08 29 08.7	+1.9
	3.3nm,0.6s,baz=109,slow=14,SNR=2.7						
STKA	Stephens Creek	38.82	248	P	P	08 29 36.3	+3.3
	0.8nm,0.6s,baz=119,slow=13,SNR=1.1						
STKA				LR	LR	08 44 21.6	
	comp=Z,79nm,19.3s,baz=193,slow=34						
STKA	Stephens Creek	38.82	248	P	P	08 29 32.8	-0.2
BBOO	Buckleboo	43.51	246	P	P	08 30 10.8	-0.7
BBOO				IAmb	IAmb	08 30 15.3	
	comp=Z,12nm,1.3s						
AS31	Alice Springs	46.28	259	P	P	08 30 33.8	+0.1
ASAR	Alice Springs	46.28	259	P	P	08 30 35.6	+1.8
	comp=Z,0.8nm,0.6s,baz=96,slow=6.7,SNR=9.2						
ASAR	Alice Springs	46.28	259	P	P	08 30 33.8	0.0
WR0	Warramunga Arr	46.48	264	P	P	08 30 35.7	+0.4
WR0				IAmb	IAmb	08 30 53.6	
	comp=Z,9.4nm,1.4s						
WB2	Warramunga Arr	46.65	264	P	P	08 30 36.9	+0.2
WB2				IAmb	IAmb	08 30 38.1	
	comp=Z,7.9nm,1.1s						
WB0	Warramunga Arr	46.66	264	P	P	08 30 36.6	-0.1
WRAB	Tennant Creek	46.66	264	P	P	08 30 36.1	-0.6
WRAB				IAmb	IAmb	08 30 47.3	
	comp=Z,5.6nm,1.1s						
WRA	Warramunga Arr	46.66	264	P	P	08 30 37.8	+1.0
	comp=Z,1.5nm,0.3s,baz=91,slow=8.4,SNR=71						
WRA	Warramunga Arr	46.66	264	P	P	08 30 36.9	+0.1
KNRA	Kununurra	52.93	268	P	P	08 31 25.6	+1.2
KNRA				IAmb	IAmb	08 31 32.2	
	comp=Z,12nm,1.1s						
FITZ	Fitzroy Crossi	55.09	264	P	P	08 31 41.2	+1.0
FITZ				IAmb	IAmb	08 31 43.3	
	comp=Z,5.6nm,1.1s						
QSPA	South Pole Qui	66.64	180	P	P	08 32 54.7	-3.5
PETK	Petropavlovsk-	79.75	344	P	P	08 34 14.3	-1.1
	comp=Z,4.4nm,0.9s,baz=120,slow=8.8,SNR=5.3						
NVAR	Mina Array Bea	81.54	42	P	P	08 34 26.3	+0.7
	comp=Z,1.4nm,0.7s,baz=222,slow=8.8,SNR=12						
NV11	Mina Array Sit	81.63	42	P	P	08 34 21.8	-4.2
NV11				IAmb	IAmb	08 34 27.8	
	comp=Z,3.3nm,1.0s						
SYO	Syowa Base	84.38	192	⇑epP	P	08 34 41.6	+2.0
PLCA	Paso Flores	85.49	133	P	P	08 34 50.0	+4.1
	comp=Z,1.1nm,1.0s,baz=344,slow=5.7,SNR=3.0						
TXAR	Lajitas Array	86.63	56	P	P	08 34 51.7	+0.1
	comp=Z,1.0nm,1.0s,baz=218,slow=7.9,SNR=6.7						
PDAR	Pinedale Array	89.47	42	P	P	08 35 04.2	-0.8
	comp=Z,0.9nm,0.9s,baz=235,slow=5.2,SNR=4.6						
ILAR	Eielson Array	90.66	12	P	P	08 35 09.9	+0.2
	comp=Z,0.5nm,0.7s,baz=209,slow=4.1,SNR=4.7						
CMAR	Chiang Mai Arr	93.37	289	P	P	08 35 25.6	+2.2
	comp=Z,3.3nm,0.9s,baz=134,slow=3.4,SNR=15						
YKA	Yellowknife Ar	98.18	24	P	P	08 35 44.1	-0.1
	comp=Z,0.5nm,1.0s,baz=222,slow=4.1,SNR=3.5						
AKASG	Malin Array Be	146.76	331	PKPbc	PKPbc	08 41 49.2	-0.2
	comp=Z,1.1nm,0.5s,baz=36,slow=3.9,SNR=6.1						
BRTR	Keskin Array B	150.60	310	PKPbc	PKiKP	08 42 00.5	-0.1
	comp=Z,1.9nm,0.9s,baz=116,slow=2.9,SNR=5.4						
BRTR	Keskin Array B	150.60	310	PKPdf	PKPdf	08 41 52.4	-2.1
BRTR					PKPbc	08 41 57.2	-2.8
BRG	Berggiesshubel	151.68	348	ePKP	PKiKP	08 42 02.5	+0.2
	comp=Z,3.2nm,1.0s						

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*NEIC **13** 08:22:17.5±3.0, 13°.50N±0°.07×90°.46W±0°.05, h55^{km}±7^{km}, mb4.3/89, Md4.5(SNET), Error ellipse: s-maj=10.3km s-min=5.9km az=206.0*

*SNET **13** 08:22:17.5±1.0, 13°.46N×90°.44W, h22^{km}±2^{km}, ML4.5*

*UCR **13** 08:22:17.4±4.7, 13°.61N×90°.44W, h20^{km}±12^{km}, ML4.3*

*INET **13** 08:22:18.1, 13°.57N×90°.40W, h12^{km}, ML4.4*

*IDC **13** 08:22:21.1±1.8, 13°.79N×90°.05W, h81^{km}±14^{km}, mb3.6/9, mb1 3.8/12, mb1mx3.6/36, mbtmp3.9/12, MS3.2/2, Ms1 3.3/2, ms1mx2.9/27, Error ellipse: s-maj=30.3km s-min=14.0km az=52.0*

*GCG **13** 08:22:23.1±0.7, 13°.97N×90°.64W, h56^{km}±13^{km}, MD4.4*

ISC 13 08:22:17.7±1.0, **13°.50N**±0°.06×**90°.46W**±0°.05, **h64**^{km}±8^{km}, **n195, σ1^{s}33**/242, **mb4.2**/40, **4C-9D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	Ixpaco	0.67	2	⇑iP	Pn	08 22 31.5	-0.6
CEVE	Cerro Verde	0.88	68	⇓eP	Pn	08 22 34.4	-0.2
CEVE				eS	Sn	08 22 47.5	+0.4
CEVE				IAML		08 22 48.7	
	comp=Z,51μm,0.3s						
CEVE	Cerro Verde	0.88	68	⇓eP	Pn	08 22 34.4	-0.2
CEVE				eS	Sn	08 22 47.5	+0.4
CEVE				IAML		08 22 48.7	
	comp=Z,51μm,0.3s						
SBLS	San Blas	0.88	67	eP	Pn	08 22 34.3	-0.4
SBLS	San Blas	0.88	67	eP	Pn	08 22 34.3	-0.4
RTR	El Retiro	0.89	63	eP	Pn	08 22 34.6	-0.1
RTR	El Retiro	0.89	63	eP	Pn	08 22 34.6	-0.1
PCG	Pacaya	0.90	351	eP	Pn	08 22 34.6	-0.3
SNJE	San Jose	0.91	66	eP	Pn	08 22 34.8	-0.2
SNJE	San Jose	0.91	66	eP	Pn	08 22 34.8	-0.2
UNIC	Universidad Ca	1.01	62	⇓eP	Pn	08 22 36.0	-0.1
UNIC				eS	Sn	08 22 49.9	+0.2
UNIC	Universidad Ca	1.01	62	⇓eP	Pn	08 22 36.0	-0.1
UNIC				eS	Sn	08 22 49.9	+0.2
FUG	Fuego 3	1.01	339	eP	Pn	08 22 35.6	-0.7
NBG	Las Nubes	1.09	6	⇓eP	Pn	08 22 38.6	+1.3
LALI	Alcalda de L	1.11	90	eP	Pn	08 22 37.2	-0.1
LALI				eS	Sn	08 22 51.4	-0.6
LALI				IAML		08 23 01.2	
	comp=Z,1μm,0.3s						
LALI	Alcalda de L	1.11	90	eP	Pn	08 22 37.2	-0.1
LALI				eS	Sn	08 22 51.4	-0.6
LALI				IAML		08 23 01.2	
	comp=Z,1μm,0.3s						
BOQS	Boqueron	1.17	78	eP	Pn	08 22 38.5	+0.1
BOQS				eS	Sn	08 22 55.1	+1.3
UEES	Universidad Ev	1.21	80	eP	Pn	08 22 38.9	+0.2
UEES				eS	Sn	08 22 55.9	+1.5
UEES				IAML		08 22 57.1	
	comp=Z,9μm,0.2s						
UEES	Universidad Ev	1.21	80	eP	Pn	08 22 38.9	+0.2
UEES				eS	Sn	08 22 55.9	+1.5
UEES				IAML		08 22 57.1	
	comp=Z,9μm,0.2s						
SNET	Serv Nac Est T	1.21	81	⇓eP	Pn	08 22 38.8	+0.1
SNET				eS	Sn	08 22 55.2	+0.7
SNET				IAML		08 22 56.6	
	comp=Z,9μm,0.4s						
SNET	Serv Nac Est T	1.21	81	⇓eP	Pn	08 22 38.8	+0.1
SNET				eS	Sn	08 22 55.2	+0.7
SNET				IAML		08 22 56.6	
	comp=Z,9μm,0.4s						
SNET	Serv Nac Est T	1.21	81	Pn	Pn	08 22 38.9	+0.1
SNET				Sn	Sn	08 22 54.7	+0.3
UTEC	Universidad Te	1.24	81	eP	Pn	08 22 39.3	+0.2
UTEC				eS	Sn	08 22 56.4	+1.2
UTEC	Universidad Te	1.24	81	eP	Pn	08 22 39.3	+0.2
UTEC				eS	Sn	08 22 56.4	+1.2
UESS	Universidad de	1.25	80	eP	Pn	08 22 39.6	+0.4
UESS				eS	Sn	08 22 56.5	+1.3
UESS				IAML		08 22 57.9	
	comp=Z,10μm,0.2s						
UESS	Universidad de	1.25	80	eP	Pn	08 22 39.6	+0.4
UESS				eS	Sn	08 22 56.5	+1.3
UESS				IAML		08 22 57.9	
	comp=Z,10μm,0.2s						
OPAM	Oficina de Pla	1.25	80	eP	Pn	08 22 39.4	+0.2
OPAM				eS	Sn	08 22 56.4	+1.1
OPAM				IAML		08 23 01.3	
	comp=Z,6μm,0.2s						
OPAM	Oficina de Pla	1.25	80	eP	Pn	08 22 39.4	+0.2
OPAM				eS	Sn	08 22 56.4	+1.1
OPAM				IAML		08 23 01.3	
	comp=Z,6μm,0.2s						
UDBS	Universidad Do	1.29	80	eP	Pn	08 22 40.2	+0.4
UDBS				IAML		08 22 41.0	
	comp=Z,12μm,0.2s						
UDBS				eS	Sn	08 22 58.0	+1.7
UDBS	Universidad Do	1.29	80	eP	Pn	08 22 40.2	+0.4
UDBS				IAML		08 22 41.0	
	comp=Z,12μm,0.2s						
UDBS				eS	Sn	08 22 58.0	+1.7
AEIL	Aeropuerto Ilo	1.32	81	eP	Pn	08 22 40.8	+0.6
AEIL				eS	Sn	08 22 58.0	+0.9
AEIL				IAML		08 23 07.2	
	comp=Z,10μm,0.4s						
AEIL	Aeropuerto Ilo	1.32	81	eP	Pn	08 22 40.8	+0.6
AEIL				eS	Sn	08 22 58.0	+0.9
AEIL				IAML		08 23 07.2	
	comp=Z,10μm,0.4s						
LFRS	El Faro	1.37	85	eP	Pn	08 22 40.9	+0.1
MTO3	Montecristo	1.39	50	⇓eP	Pn	08 22 41.7	+0.4
MTO3				eS	Sn	08 23 00.8	+1.8
MTO3	Montecristo	1.39	50	⇓eP	Pn	08 22 41.7	+0.4
MTO3				eS	Sn	08 23 00.8	+1.8
LBRS	Las Brisas	1.40	80	eP	Pn	08 22 41.8	+0.6
ERG	Entre ros, C	1.42	311	eP	Pn	08 22 41.3	-0.2
APG	El Apazote	1.50	360	P	Pn	08 22 43.3	+0.6
	comp=Z,201nm,0.3s,baz=210,slow=14,SNR=2453						
APG				S	Sn	08 23 03.8	+2.4
	comp=Z,355nm,0.3s,baz=188,slow=21,SNR=15						
APG				LR	LR	08 23 23.3	
	comp=Z,745nm,20.2s,baz=228,slow=49						
COEG	Centro de Oper	1.54	85	eP	Pn	08 22 43.6	+0.4
COEG				IAML		08 23 10.1	
	comp=Z,3μm,0.3s						
COEG	Centro de Oper	1.54	85	eP	Pn	08 22 43.6	+0.4
COEG				IAML		08 23 10.1	
	comp=Z,3μm,0.3s						
STG3	Santiaguito 3,	1.61	318	eP	Pn	08 22 43.7	-0.6
LLGN	La Laguna	1.61	66	eP	Pn	08 22 44.3	+0.1
LLGN				eS	Sn	08 23 06.8	+2.7
LLGN	La Laguna	1.61	66	eP	Pn	08 22 44.3	+0.1
LLGN				eS	Sn	08 23 06.8	+2.7
UESV	Universidad de	1.63	85	eP	Pn	08 22 44.8	+0.5
UESV	Universidad de	1.63	85	eP	Pn	08 22 44.8	+0.5
MRL	Marmol	1.74	26	⇑eP	Pn	08 22 47.8	+1.7
ALJI	Alcalda de J	1.85	95	eP	Pn	08 22 47.2	0.0
ALJI	Alcalda de J	1.85	95	eP	Pn	08 22 47.2	0.0
COEB	Comit de Eme	1.88	90	eP	Pn	08 22 48.2	+0.4
COEB				eS	Sn	08 23 11.8	+1.3
COEB	Comit de Eme	1.88	90	eP	Pn	08 22 48.2	+0.4
COEB				eS	Sn	08 23 11.8	+1.3
TECA	Tecapa	1.91	90	⇑eP	Pn	08 22 49.0	+0.8
TECA	Tecapa	1.91	90	⇑eP	Pn	08 22 49.0	+0.8
PACA	Pacayal	2.08	91	eP	Pn	08 22 51.2	+0.7
PACA				eS	Sn	08 23 17.4	+2.0
PACA	Pacayal	2.08	91	eP	Pn	08 22 51.2	+0.7
PACA				eS	Sn	08 23 17.4	+2.0
RANC	El Ranchito	2.12	92	eP	Pn	08 22 51.2	+0.3
RANC	El Ranchito	2.12	92	eP	Pn	08 22 51.2	+0.3
BLLM	Bellamira	2.17	91	eP	Pn	08 22 52.9	+1.3
BLLM	Bellamira	2.17	91	eP	Pn	08 22 52.9	+1.3
JUCU	Jucuar¡n	2.17	96	eP	Pn	08 22 51.5	-0.1
JUCU				eS	Sn	08 23 19.1	+1.6
JUCU				IAML		08 23 24.0	
	comp=Z,2μm,0.4s						
JUCU	Jucuar¡n	2.17	96	eP	Pn	08 22 51.5	-0.1
JUCU				eS	Sn	08 23 19.1	+1.6
JUCU				IAML		08 23 24.0	
	comp=Z,2μm,0.4s						
FAGO	Alcalda de S	2.30	85	eP	Pn	08 22 53.4	+0.1
FAGO				eS	Sn	08 23 22.2	+1.6

FAGO	Alcalda de S	2.30	85	eP	Pn	08 22 53.4	+0.1
FAGO				eS	Sn	08 23 22.2	+1.6
LCND	La Caada	2.51	94	eP	Pn	08 22 56.7	+0.5
LCND				eS	Sn	08 23 27.4	+1.7
LCND				IAML		08 23 35.1	
	comp=Z,2μm,0.5s						
LCND	La Caada	2.51	94	eP	Pn	08 22 56.7	+0.5
LCND				eS	Sn	08 23 27.4	+1.7
LCND				IAML		08 23 35.1	
	comp=Z,2μm,0.5s						
CNCH	Conchagua	2.57	95	eP	Pn	08 22 57.5	+0.4
CNCH				eS	Sn	08 23 29.8	+2.6
CNCH				IAML		08 23 41.1	
	comp=Z,6μm,0.4s						
CNCH	Conchagua	2.57	95	eP	Pn	08 22 57.5	+0.4
CNCH				eS	Sn	08 23 29.8	+2.6
CNCH				IAML		08 23 41.1	
	comp=Z,6μm,0.4s						
CSGN	Cosiguina Volc	2.88	100	Pn	Pn	08 23 02.8	+1.6
CSGN				Sn	Sn	08 23 36.7	+2.0
TGUH	Tegucigalpa,Un	3.15	79		Pn	08 23 05.4	+0.4
CCIG	Comitan	3.21	330		Pn	08 23 07.2	+1.4
ACON	Acoyapa	5.38	106	Pn	Pn	08 23 35.8	+0.3
CMIG	Matias Romero	5.56	310	P	Pn	08 23 40.2	+2.3
	comp=Z,5.8nm,0.3s,baz=146,slow=9.2,SNR=46						
CMIG				S	Sn	08 24 40.3	-0.3
	comp=Z,14nm,0.3s,baz=103,slow=16,SNR=5.3						
GBS3	Finca Las Img	5.59	118	eP	Pn	08 23 40.5	+2.2
NY14	Universidad de	5.59	120	eP	Pn	08 23 41.0	+2.7
LAPC	Finca la Perla	5.62	118	eP	Pn	08 23 41.0	+2.3
GB1A	Borinquen Arri	5.62	118	eP	Pn	08 23 40.6	+1.8
BUEV	Buena Vista	5.62	118	eP	Pn	08 23 40.9	+2.0
GUAI	GUAI	5.81	123	eP	Pn	08 23 43.3	+1.9
MESS	Mesas	5.84	117	eP	Pn	08 23 42.2	+0.4
COLC	Colonia	5.86	118	eP	Pn	08 23 44.4	+2.3
CUI	Cuipilapa	5.90	118	eP	Pn	08 23 44.4	+1.7
ACAL	Aguas Claras	6.02	118	eP	Pn	08 23 45.2	+0.9
PTEN	Parque Tenorio	6.03	117	eP	Pn	08 23 45.0	+0.6
ESPN	Las Esperanzas	6.15	101	Pn	Pn	08 23 46.4	+0.4
JTS	Las Juntas de	6.26	120	P	Pn	08 23 48.9	+1.3
	comp=Z,4.6nm,0.3s,baz=14,slow=20,SNR=31						
JTS				S	Sn	08 24 53.3	-4.6
	baz=277,slow=18,SNR=1.0						
JTS				LR	LR	08 25 40.3	
	comp=Z,54nm,21.5s,baz=5.0,slow=33						
JTS	Las Juntas de	6.26	120		Pn	08 23 49.0	+1.4
CEDE	Laguna Cedeo	6.38	117	eP	Pn	08 23 51.6	+2.4
TEIG	Tepich	7.01	17	P	Pn	08 23 59.6	+1.9
	comp=Z,13nm,0.3s,SNR=17						
TLIG	Tlapa	8.79	298		Pn	08 24 23.8	+1.5
344A	Westbrook Farm	17.87	359		P	08 26 21.7	-0.2
WHTX	Lake Whitney,	19.49	342	P	Pn	08 26 40.8	-0.6
WHTX				IAmb	IAmb	08 26 52.7	
	comp=Z,8.5nm,0.5s						
HPIG		19.52	316	P	P	08 26 40.2	-0.1
LRAL	Lakeview Retre	19.70	9	P	P	08 26 42.6	+0.7
LRAL				IAmb	IAmb	08 26 47.8	
	comp=Z,17nm,1.2s						
TXAR	Lajitas Array	19.95	324	P	Pn	08 26 47.8	+0.7
	comp=Z,0.3nm,0.3s,baz=148,slow=11,SNR=17						
TXAR				PcP	PcP	08 31 01.1	+1.8
	comp=Z,0.1nm,0.3s,baz=170,slow=4.3,SNR=5.1						
TXAR	Lajitas Array	19.95	324	P	Pn	08 26 47.6	+0.6
TX31	Lajitas Ar. Si	19.95	324	P	Pn	08 26 47.9	+0.9
TX32	Lajitas Array	19.95	324	P	Pn	08 26 47.8	+0.7
SDV	Santo Domingo	19.98	101	P	P	08 26 43.5	-1.8
	comp=Z,0.3nm,0.3s,baz=341,slow=3.5,SNR=4.0						
SDV	Santo Domingo	19.98	101	P	Pn	08 26 48.0	+0.5
Z38A	Mt. Pleasant	20.10	349	P	P	08 26 46.5	+0.3
WLAR	White Oak Lake	20.24	354	P	P	08 26 48.8	+1.1
WLAR				IAmb	IAmb	08 26 58.6	
	comp=Z,13nm,0.8s						
Z51A	Franklin	20.31	13	P	Pn	08 26 51.6	+0.6
Z51A				IAmb	IAmb	08 26 56.0	
	comp=Z,14nm,0.8s						
Y49A	Blount Mountai	20.60	10	P	Pn	08 26 54.0	-0.5
Y49A				IAmb	IAmb	08 26 56.0	
	comp=Z,14nm,0.8s						
Z35A	Perchaven, San	20.69	344	P	P	08 26 51.8	-0.8
Z35A				IAmb	IAmb	08 26 55.7	
	comp=Z,11nm,0.7s						
ABTX	Abilene, Hawle	20.80	338	P	P	08 26 54.5	+0.6
GOGA	Godfrey	20.82	17	P	P	08 26 54.1	+0.1
GOGA				IAmb	IAmb	08 27 00.3	
	comp=Z,15nm,1.0s						
X48A	Hartselle	21.09	8	P	P	08 26 58.0	+1.1
X48A				IAmb	IAmb	08 27 01.2	
	comp=Z,9.7nm,0.8s						
Y52A	Lilburn	21.09	15	P	P	08 26 55.9	-1.1
Y52A				IAmb	IAmb	08 27 02.4	
	comp=Z,6.5nm,0.7s						
MIAR	Mount Ida	21.14	353	P	P	08 26 58.4	+0.9
MIAR				IAmb	IAmb	08 27 02.8	
	comp=Z,14nm,1.5s						
FPAL	Fort Paine	21.40	11	P	P	08 27 02.1	+1.8
PLAL	Pickwick Lake	21.50	5	P	P	08 27 03.1	+1.9
W45A	Hickory Valley	21.59	3	P	P	08 27 03.4	+1.1
W41B	Gary Mavity, V	21.64	356	P	P	08 27 04.3	+1.5
WHAR	Wooly Hollow	21.76	356	P	P	08 27 02.7	-1.3
HODGE	Hodges	21.94	18	P	P	08 27 07.2	+1.2
HODGE				IAmb	IAmb	08 27 25.2	
	comp=Z,16nm,1.4s						
SWET	Sewanee	22.01	10	P	P	08 27 07.4	+0.6
SWET				IAmb	IAmb	08 27 11.5	
	comp=Z,10.0nm,0.8s						
X34A	Smith Ranch, M	22.04	344	P	P	08 27 07.0	-0.1
X34A				IAmb	IAmb	08 27 19.6	
	comp=Z,8.6nm,1.2s						
W50A	Signal Mountai	22.10	11	P	P	08 27 04.8	-3.0
V48A	Smith Brothers	22.39	8	P	P	08 27 11.8	+1.0
V48A				IAmb	IAmb	08 27 14.3	
	comp=Z,8.3nm,0.6s						
WMOK	Wichita Mounta	22.45	342	P	P	08 27 10.9	-0.6
CPCT	Cooper Cave	22.50	13	P	P	08 27 12.1	0.0
FNO	Franklin	22.55	345	P	P	08 27 12.8	+0.2
WVT	Waverly	22.66	6	P	P	08 27 13.8	+0.1
MNTX	Cornudas Mount	22.71	325	P	P	08 27 15.1	+0.8
CLTN	Cedars of Leba	22.80	9	P	P	08 27 11.9	-3.3
CLTN				IAmb	IAmb	08 27 18.6	
	comp=Z,6.9nm,0.8s						
TUL1	Leonard	22.82	349	P	P	08 27 13.7	-1.7
TUL1				IAmb	IAmb	08 27 16.8	
	comp=Z,6.7nm,0.6s						
U40A	Yellville	22.86	355	P	P	08 27 16.3	+0.4
TKL	Tuckaleechee C	22.87	14	P	P	08 27 15.6	-0.3
	comp=Z,6.1nm,0.7s,baz=185,slow=14,SNR=8.4						
TKL	Tuckaleechee C	22.87	14	P	P	08 27 16.4	+0.4
HHAR	Hobbs	22.90	353	P	P	08 27 16.0	-0.2
V53A	Saluda	23.12	16	P	P	08 27 21.0	+2.5
U49A	Red Boiling Sp	23.30	10	P	P	08 27 20.5	+0.4
U49A				IAmb	IAmb	08 27 36.1	
	comp=Z,5.2nm,0.6s						
T47A	Sharon Grove	23.58	7	P	P	08 27 23.1	+0.4
T47A				IAmb	IAmb	08 27 26.1	
	comp=Z,12nm,0.8s						
V55A	Taylorsville	23.76	19	P	P	08 27 23.3	-1.1
TZTN	Tazewell	23.77	14	P	P	08 27 24.9	+0.4
T49A	Edmonton	23.92	10	P	P	08 27 26.4	+0.6
T35A	Sooner Cattle	23.94	348	P	P	08 27 26.1	+0.2
T35A				IAmb	IAmb	08 27 27.3	
	comp=Z,8.0nm,0.8s						
S44A	Carbondale	24.12	2	P	P	08 27 28.3	+0.8
S44A				IAmb	IAmb	08 27 30.1	
	comp=Z,9.3nm,0.7s						
U54A	Nelsons Funny	24.20	17	P	P	08 27 29.7	+1.3
S39A	Bolivar	24.23	354	P	P	08 27 29.9	+1.3
S39A				IAmb	IAmb	08 27 31.8	
	comp=Z,8.0nm,0.6s						
V58A	Windy Hill, Pi	24.44	23	P	P	08 27 29.7	-0.7
121A	Cookes Peak, D	24.69	323	P	P	08 27 34.2	+1.1
S51A	Beattyville	24.81	13	P	P	08 27 33.9	0.0
WCI	Wyandotte Cave	24.91	8	P	P	08 27 34.2	-0.5
Q51A	Peebles	26.19	13	P	P	08 27 44.5	-1.9
Q51A				IAmb	IAmb	08 27 50.2	
	comp=Z,9.1nm,0.8s						
PV12	Saucer Basin,	29.60	330	P	P	08 28 19.6	+2.5
PV12				IAmb	IAmb	08 28 20.9	
	comp=Z,3.5nm,0.8s						
PV11	David Mesa, Pa	29.62	330	P	P	08 28 19.1	+1.8
PV11				IAmb	IAmb	08 28 26.7	
	comp=Z,7.3nm,1.3s						
ECSD	EROS Data Cent	30.59	351	P	P	08 28 24.9	-0.6
I49A	Point Hope	31.04	11	P	P	08 28 28.9	-0.5
MTPU	Mount Pierson	31.15	326	P	P	08 28 33.7	+2.8
SPMN	Marine on St.	31.68	357	P	P	08 28 34.5	-0.6
G45A	Suttons Bay	31.70	6	P	P	08 28 34.5	-0.8
J58A	Remsen	32.50	21	P	P	08 28 41.7	-0.6
J58A				IAmb	IAmb	08 28 58.5	
	comp=Z,2.2nm,0.7s						
E43A	Lone Tree Farm	32.90	4	P	P	08 28 44.4	-1.3
PTGA	Pitinga	33.37	113	P	P	08 28 50.6	+0.4
ISA	Isabella, Lake	33.49	316	P	P	08 28 50.8	-0.4
ISA				IAmb	IAmb	08 28 55.0	
	comp=Z,3.4nm,1.1s						
PDAR	Pinedale Array	33.51	334	P	P	08 28 51.4	0.0
	comp=Z,0.2nm,0.5s,baz=121,slow=11,SNR=2.8						
PDAR				PcP	PcP	08 31 31.9	+0.9
	comp=Z,0.2nm,0.4s,baz=132,slow=6.3,SNR=4.0						
PDAR				LR	LR	08 47 03.0	
	comp=Z,186nm,18.5s,baz=62,slow=44						
EYMN	Ely	34.35	359	P	P	08 28 56.9	-1.4
REDW	Red Top Meadow	34.55	333	P	P	08 29 01.1	+0.7
REDW				IAmb	IAmb	08 29 02.7	
	comp=Z,3.4nm,0.6s						
SNOW	Snow King Moun	34.58	334	P	P	08 29 02.1	+1.4
ELK	Elko	34.73	326	P	P	08 29 04.4	+2.3
FXWY	Fox Creek	34.84	333	P	P	08 29 04.2	+1.3
NV11	Mina Array Sit	34.91	320	P	P	08 29 05.5	+2.0
NV11				IAmb	IAmb	08 29 07.3	
	comp=Z,2.3nm,0.8s						
OMMB	Old Mammoth Mi	34.96	319	P	P	08 29 04.1	0.0
AGMN	Agassiz Nation	34.98	354	P	P	08 29 03.6	-0.2
AGMN				IAmb	IAmb	08 29 05.3	
	comp=Z,8.0nm,1.5s						
NVAR	Mina Array Bea	35.00	320	P	P	08 29 06.8	+2.5
	comp=Z,3.0nm,0.6s,baz=132,slow=8.0,SNR=28						
NVAR				PcP	PcP	08 31 37.6	+2.2
	comp=Z,1.2nm,0.7s,baz=142,slow=3.8,SNR=7.4						
NVAR	Mina Array Bea	35.00	320	P	P	08 29 06.4	+2.0
NVAR					PcP	08 31 38.4	+3.0
MDPB	Devils Postpil	35.02	318	P	P	08 29 04.9	+0.3
MDPB				IAmb	IAmb	08 29 08.6	
	comp=Z,2.8nm,0.7s						
SAML	Samuel	35.08	128	P	P	08 29 05.0	0.0
SAML				IAmb	IAmb	08 29 05.7	
	comp=Z,3.9nm,0.9s						
KVN	Kaiserville	35.26	321	P	P	08 29 09.2	+2.6
KVN				IAmb	IAmb	08 29 10.4	
	comp=Z,2.1nm,0.6s						
PNTR	Pine Nut	36.21	320	P	P	08 29 14.7	-0.1
PNTR				IAmb	IAmb	08 29 29.1	
	comp=Z,3.2nm,0.9s						
MCMT	McKenzie Canyo	36.58	333	P	P	08 29 20.2	+2.3
ULM	Lac du Bonnet	36.91	354	P	P	08 29 18.7	-1.5
	comp=Z,1.5nm,0.5s,baz=175,slow=10,SNR=8.3						
ULM	Lac du Bonnet	36.91	354	P	P	08 29 18.3	-1.9
ULM				IAmb	IAmb	08 29 33.9	
	comp=Z,4.0nm,1.1s						
BEKR	Beckworth	37.14	321	P	P	08 29 24.2	+1.6
BEKR				IAmb	IAmb	08 29 26.0	
	comp=Z,4.0nm,0.9s						
LRM	Limekiln Ridge	37.20	334	P	P	08 29 24.3	+1.2
J08A	Circle Bar Ran	38.27	326	P	P	08 29 33.5	+1.5
J08A				IAmb	IAmb	08 29 34.7	
	comp=Z,3.6nm,0.9s						
F10A	Beach Ranch, E	39.47	330	P	P	08 29 43.2	+1.3
F10A				IAmb	IAmb	08 29 47.7	
	comp=Z,2.7nm,0.8s						
JTMT	Jette	39.49	335	P	P	08 29 44.1	+1.9
SIV	San Ignacio	41.27	134	P	P	08 29 57.5	+0.4
	comp=Z,1.7nm,0.7s,baz=307,slow=7.0,SNR=12						
SCHQ	Schefferville	45.19	19	P	P	08 30 26.6	-1.5
	comp=Z,2.4nm,0.6s,baz=226,slow=7.9,SNR=10						
SCHQ	Schefferville	45.19	19	P	P	08 30 26.6	-1.5
SCHQ				IAmb	IAmb	08 30 27.9	
	comp=Z,4.4nm,0.8s						
FCC	Fort Churchill	45.26	357	P	P	08 30 27.9	-0.7
YKA	Yellowknife Ar	51.86	346	P	P	08 31 18.6	-0.7
	comp=Z,0.6nm,0.7s,baz=151,slow=7.8,SNR=11						
YKA				PcP	PcP	08 32 31.2	-0.1
	comp=Z,0.2nm,0.6s,baz=148,slow=4.0,SNR=4.9						
ILAR	Eielson Array	63.89	337	P	P	08 32 43.2	-0.3
	comp=Z,0.2nm,0.5s,baz=170,slow=5.4,SNR=6.1						
ILAR	Eielson Array	63.89	337	P	P	08 32 43.0	-0.5
BMAR	Burnt Mountain	64.27	340	P	P	08 32 46.1	0.0
MLY	Manley	65.50	336	P	P	08 32 54.2	+0.1
MLY				IAmb	IAmb	08 32 54.9	
	comp=Z,3.2nm,0.9s						
SUMG	Summit	66.32	15	P	P	08 32 59.0	-0.7
SUMG				IAmb	IAmb	08 32 59.4	
	comp=Z,6.2nm,1.4s						
ARCES	ARCESS Array B	86.14	18	P	P	08 34 50.4	-1.2
	comp=Z,3.5nm,1.0s,baz=317,slow=9.1,SNR=1.4						
KSH	Kashi	125.76	13	PKP	PKPdf	08 41 09.3	-3.5
KSH				sPKP		08 41 46.3	
KSH				PP	PP	08 43 06.8	+2.6
KSH				PKS	PKSdf	08 44 43.8	-5.7
KSH				SKKS		08 49 46.8	
LZH	Lanzhou	128.86	345	ePKP	PKPdf	08 41 18.3	-0.5
LZH				pPKP	pPKPdf	08 41 36.8	-0.5
LZH				sPKP		08 41 44.5	
ASAR	Alice Springs	136.90	250	PKP	PKiKP	08 41 35.6	-0.3
	comp=Z,0.2nm,0.7s,baz=103,slow=1.2,SNR=1.6						
ASAR	Alice Springs	136.90	250		PKPdf	08 41 34.9	+0.9
FITZ	Fitzroy Crossi	145.00	258	PKPbc	PKPdf	08 41 49.4	+0.7
	comp=Z,0.8nm,0.7s,baz=1.8,slow=21,SNR=3.5						
CMAR	Chiang Mai Arr	146.92	343	PKPbc	PKPbc	08 41 54.1	+0.2
	comp=Z,3.7nm,0.6s,baz=349,slow=3.3,SNR=12						

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*SJA **13** 08:29:59.3±0.6, 20°.67S×68°.86W, h113km±5km, ML3.1, MW3.3*

*IDC **13** 08:30:01.3±1.4, 20°.71S×68°.54W, h122km±16km, mb3.4/2, mb1 3.3/5, mb1mx3.1/25, mbtmp3.6/5, Error ellipse: s-maj=33.7km s-min=16.6km az=106.0*

*GUC **13** 08:30:01.0±0.7, 20°.63S×68°.83W, h106km±3km, ML3.7*

ISC 13 08:30:00.0±0.9**, 20°.63S**±0°.03×**68°.88W**±0°.06**, h111**km±7km**, n33, σ1ˢ.08**/53**, 15C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.55	333	⇑iP	Pn	08 30 18.1	+0.3
PB08				i S	Sn	08 30 31.4	+0.3
PB08				IAML		08 30 32.2	
	comp=E,5μm,0.2s						
PB08	IPOC Station P	0.55	333	i P	Pn	08 30 18.0	+0.2
PB08				i S	Sn	08 30 32.2	+1.0
PB01	IPOC Station P	0.70	234	⇑iP	Pn	08 30 18.7	+0.1
PB01				i S	Sn	08 30 32.9	+0.3
PB01				IAML		08 30 33.6	
	comp=N,3μm,0.2s						
GO01	Chusmiza	1.00	343	⇑iP	Pn	08 30 22.3	+0.4
GO01				i S	Sn	08 30 38.8	+0.5
PB11	IPOC Station P	1.13	320	⇑iP	Pn	08 30 23.1	+0.2
PB11				i S	Sn	08 30 40.7	+0.6
PB11				IAML		08 30 41.3	
	comp=N,4μm,0.3s						
PB11	IPOC Station P	1.13	320	i P	Pn	08 30 23.3	+0.4
PB11				i S	Sn	08 30 41.2	+1.1
PB02	IPOC Station P	1.17	234	⇑iP	Pn	08 30 23.6	+0.4
PB02				i S	Sn	08 30 41.1	+0.4
PB02				IAML		08 30 43.5	
	comp=E,2μm,0.3s						
PB02	IPOC Station P	1.17	234	i P	Pn	08 30 23.2	0.0
PATCX	Punta Patache	1.20	261	i S	Sn	08 30 42.2	+0.8
PATCX				IAML		08 30 46.0	
	comp=E,1μm,0.4s						
PB09	IPOC Station P	1.21	196	⇑iP	Pn	08 30 24.5	+0.8
PB09				i S	Sn	08 30 43.2	+1.5
PB09				IAML		08 30 46.1	
	comp=N,954nm,0.5s						
TA01	Diego Aracena	1.22	273	⇑iP	Pn	08 30 23.7	+0.1
TA01				i S	Sn	08 30 41.5	+0.1
TA01				IAML		08 30 43.8	
	comp=E,908nm,0.1s						
PB07	IPOC Station P	1.44	220	⇑iP	Pn	08 30 26.7	+0.3
PB07				i S	Sn	08 30 46.6	+0.3
PB07				IAML		08 30 48.5	
	comp=E,2μm,0.3s						
PB07	IPOC Station P	1.44	220	i P	Pn	08 30 26.4	+0.1
PB07				i S	Sn	08 30 46.9	+0.5
PSGC	Pisagua	1.55	311	⇑iP	Pn	08 30 27.7	0.0
PSGC				i S	Sn	08 30 48.6	-0.1
PSGC				IAML		08 30 51.5	
	comp=N,740nm,0.6s						
PSGCX	Pisagua	1.55	311	i P	Pn	08 30 28.0	+0.3
PSGCX				i S	Sn	08 30 50.2	+1.5
PB03	IPOC Station P	1.63	210	⇑iP	Pn	08 30 29.2	+0.6
PB03				i S	Sn	08 30 50.5	+0.2
MNMC	Minye Minye	1.64	336	⇑iP	Pn	08 30 29.7	+0.8
MNMC				i S	Sn	08 30 52.0	+1.3
MNMC				IAML		08 30 53.7	
	comp=E,2μm,0.6s						
MNMCX	Minye Minye	1.64	336	i P	Pn	08 30 29.9	+1.0
MNMCX				i S	Sn	08 30 52.5	+1.8
LVC	Limon Verde	1.97	181	P	Pn	08 30 34.3	+1.3
	comp=E,11nm,0.3s,baz=30,slow=8.5,SNR=97						
LVC				S	Sn	08 30 59.7	+1.5
	comp=E,16nm,0.3s,baz=260,slow=21,SNR=7.2						
PB04	IPOC Station P	2.06	215	⇑iP	Pn	08 30 35.1	+1.1
PB06	IPOC Station P	2.16	197	⇑iP	Pn	08 30 35.9	+0.6
PB06				IAML		08 31 08.3	
	comp=N,246nm,0.1s						
PB16	IPOC Station P	2.36	345	⇑iP	Pn	08 30 39.7	+1.4
PB16				i S	Sn	08 31 09.2	+1.7
PB12	IPOC Station P	2.42	326	⇑iP	Pn	08 30 38.3	-0.3
PB12				i S	Sn	08 31 08.2	0.0
PB12				IAML		08 31 15.7	
	comp=E,510nm,0.6s						
PB05	IPOC Station P	2.53	209	eP	Pn	08 30 40.5	+0.5
PB05				IAML		08 31 22.5	
	comp=E,157nm,0.5s						
PB15	IPOC Station P	2.62	192	eP	Pn	08 30 42.3	+1.0
PB15				i S	Sn	08 31 13.5	+0.5
YJA	Yavi	3.50	117	i P	Pn	08 30 53.9	+0.9
HJA	Humahuaca	4.12	129	i P	Pn	08 31 02.1	+0.8
HJA				IAML		08 31 04.0	
	comp=Z,25nm,0.6s						
LPAZ	La Paz	4.38	10	P	Pn	08 31 07.8	+2.7
	comp=Z,0.6nm,0.3s,baz=252,slow=2.1,SNR=19						
AZAP	Zapla	5.03	136	i P	Pn	08 31 13.7	+0.2
AZAP				IAML		08 31 15.3	
	comp=Z,10nm,0.3s						
SIV	San Ignacio	8.74	59	P	Pn	08 32 00.6	-3.0
	comp=Z,0.5nm,0.3s,baz=264,slow=10,SNR=12						
CPUP	Villa Florida	12.02	120	P	Pn	08 32 44.7	-3.0
	comp=Z,0.1nm,0.3s,baz=297,slow=11,SNR=2.1						
TORD	Torodi Ar. Bea	77.04	71	P	P	08 41 40.5	-0.9
	comp=Z,0.8nm,0.5s,baz=251,slow=5.1,SNR=9.5						
YKA	Yellowknife Ar	90.38	341	P	P	08 42 48.1	-0.1
	comp=Z,0.2nm,0.7s,baz=131,slow=6.6,SNR=3.9						

WEL 13 08:32:05.7±1.1**, 47°S**±6°×**16°6E**±°**, h12**km**, M3.6**/6**, ML3.8**/6**, MLv3.6**/6**, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYZ	Puysegur Point	1.35	22	P	Pn	08 32 28.6	-1.7
PYZ				S	Sb	08 32 47.4	-0.7
APZ	The Paps	1.51	68	P	Pn	08 32 32.3	-0.2
APZ				S	Sn	08 32 51.3	-0.8
WHZ	Wether Hill Ro	2.05	43	P	Pn	08 32 39.8	-0.2
WHZ				S	Sn	08 33 06.4	+1.0
DCZ	Deep Cove	2.12	23	P	Pn	08 32 40.9	0.0
SYZ	Scrubby Hill	2.35	69	P	Pn	08 32 44.8	+0.7
SYZ				S	Sn	08 33 13.4	+0.6
MLZ	Mavora Lakes	2.54	37	P	Pn	08 32 47.1	+0.4
MLZ				S	Sn	08 33 19.8	+2.3
TUZ	Tuapeka	2.92	61	P	Pn	08 32 52.8	+0.9
TUZ				S	Sn	08 33 28.7	+1.8
MSZ	Milford Sound	3.07	27	P	Pn	08 32 55.8	+1.9
EAZ	Earnscleugh	3.19	48	P	Pn	08 32 56.1	+0.4
EAZ				S	Sn	08 33 35.3	+1.7
WKZ	Wanaka	3.35	41	P	Pn	08 32 59.0	+1.1
HHSZ	Highcliff Hill	3.54	66	P	Pn	08 33 01.3	+0.8
JCZ	Jackson Bay	3.89	32	P	Pn	08 33 07.6	+2.3
ODZ	Otahua Downs	4.03	56	P	Pn	08 33 05.8	-1.4
LBZ	Lake Benmore	4.23	46	P	Pn	08 33 09.0	-1.0
FOZ	Fox Glacier	4.74	36	P	Pn	08 33 18.2	+1.3
FOZ				S	Sn	08 34 12.4	+0.7
RPZ	Rata Peaks	5.15	46	P	Pn	08 33 20.4	-2.2
OXZ	Oxford	5.92	49	P	Pn	08 33 32.4	-0.7
OXZ				S	Sn	08 34 37.0	-4.0
AKCZ	Akaroa Harbour	6.03	56	P	Pn	08 33 33.5	-1.1
INZ	Inchbonnie	6.09	42	P	Pn	08 33 36.1	+0.7
LTZ	Lake Taylor	6.44	46	P	Pn	08 33 39.4	-0.9
LTZ				S	Sn	08 34 50.5	-3.2
DSZ	Denniston Nort	7.04	38	P	Pn	08 33 48.4	-0.2
THZ	Tophouse	7.52	44	P	Pn	08 33 55.8	+0.6
QRZ	Quartz Range	8.11	38	P	Pn	08 34 03.7	+0.5
NNZ	Nelson	8.17	43	P	Pn	08 34 07.6	+3.7

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*CRAAG **13** 08:34:51.9, 36°.83N×3°.65E, Ml2.9*

*MDD **13** 08:34:52.6±1.4, 36°.92N×3°.64E, h8km±15km, mb4.1/6, Error ellipse: s-maj=16.1km s-min=12.0km az=56.0, PRXIMO*

ISC 13 08:34:50.9±1.2**, 36°.97N**±0°.05×**3°.70E**±0°.09**, h12**km**, n18, σ1ˢ.85**/25**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABMS	Boumerdes	0.28	219	P	Pg	08 34 56.1	-0.6
ABMS	Boumerdes	0.28	219	P	Pg	08 34 56.1	-0.6
ABMS	Boumerdes	0.28	219	P	Pg	08 34 56.1	-0.6
ABA	Alger-Bouzarea	0.56	253	P	Pg	08 35 02.4	+0.6
ABA	Alger-Bouzarea	0.56	253	P	Pg	08 35 02.4	+0.6
ABA	Alger-Bouzarea	0.56	253	P	Pg	08 35 02.4	+0.6
ADJB	Djebel Djouab	0.84	195	P	Pb	08 35 07.5	0.0
ADJB	Djebel Djouab	0.84	195	P	Pb	08 35 07.5	0.0
ADJB	Djebel Djouab	0.84	195	P	Pb	08 35 07.5	0.0
EIBI	Ibiza	2.77	319	P	Pn	08 35 36.5	+1.4
	3.3nm,0.2s,SNR=7.9						
EIBI				S	Sn	08 36 07.3	-1.2
	3.3nm,0.2s,SNR=7.9						
ETOS	Mallorca	2.88	346	P	Pn	08 35 38.3	+1.6
	4.6nm,0.1s,SNR=7.9						
ETOS				S	Sn	08 36 10.0	-1.2
	3.0nm,0.1s,SNR=7.9						
ETOB	Tobarra	4.48	294	P	Pn	08 35 59.6	+0.9
	0.9nm,0.2s,SNR=7.9						
ETOB				S	Sn	08 36 50.2	-0.5
	SNR=7.9						
EMOS	Mosqueruela	4.70	317	P	Pn	08 36 03.6	+1.7
	0.5nm,0.1s,SNR=7.9						
EMOS				S	Sn	08 36 53.3	-3.2
	0.2nm,0.3s,SNR=7.9						
EPOB	Poblet	4.83	336	P	Pn	08 36 05.3	+1.8
	1.8nm,0.3s,SNR=7.9						
EPOB				S	Sn	08 36 56.9	-2.4
	0.7nm,0.2s,SNR=7.9						
CFON	Fontmartina	4.88	349	P	Pn	08 36 05.8	+1.5
	3.7nm,0.2s,SNR=7.9						
CFON				S	Sn	08 36 57.6	-3.2
	1.6nm,0.2s,SNR=7.9						
EMIR	Miracle	5.22	342	P	Pn	08 36 11.7	+2.8
	4.6nm,0.3s,SNR=7.9						
EMIR				S	Sn	08 37 05.5	-3.4
	0.1nm,0.2s,SNR=7.9						
EJON	La Jonquera	5.51	354	P	Pn	08 36 15.0	+2.2
	2.0nm,0.1s,SNR=7.9						
SJAF	Saint Jean de	5.54	354	P	Pn	08 36 15.6	+2.3
	0.6nm,0.1s,SNR=7.9						

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*SFS **13** 08:56:41.0, 36°.90N×9°.50W, h11km, ML3.6, SW CABO DE SAN VICENTE*

*IGIL **13** 08:56:41.8, 36°.94N×9°.54W, h9km, ML3.9*

*MDD **13** 08:56:42.3±0.8, 36°.96N×9°.48W, h11km, mbLg3.7/17, Error ellipse: s-maj=6.8km s-min=4.4km az=41.0, PRXIMO*

*INMG **13** 08:56:42.7±1.7, 36°.92N×9°.49W, h11km±3km, MD3.4, ML3.5, Error ellipse: s-maj=3.9km s-min=2.6km az=81.0*

*LDG **13** 08:56:42.8±0.2, 36°.95N×9°.48W, h10km, Ml3.4/3, Error ellipse: s-maj=3.2km s-min=2.5km az=38.0*

*CNRM **13** 08:56:43.7, 36°.70N×9°.28W, h22km*

ISC 13 08:56:44.6±1.4**, 36°.97N**±0°.04×**9°.33W**±0°.05**, h28**km±9km**, n117, σ2ˢ.14**/211**, 6C, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	0.43	68	⇑Pg	Pb	08 56 52.8	-1.1
	58nm,0.1s,SNR=18						
PFVI				Lg	Lg	08 57 01.0	
	3μm,0.1s,SNR=31						
PFVI	Vila Bisbo	0.43	68	P	Pb	08 56 52.5	-1.4
	SNR=1038						
PFVI				S	Sb	08 57 01.5	+1.2
PFVI	Vila Bisbo	0.43	68	⇑ePg	Pb	08 56 52.8	-1.1

PFVI				eSg	Sb	08 57 01.4	+1.1
PFVI				A	A	08 57 02.8	
	2µm,0.2s						
MORF	Marmelete	0.64	58	eP	Pb	08 56 56.3	-1.0
MORF				eS	Sb	08 57 06.5	+0.5
MORF				AML	AML	08 57 07.5	
	comp=N,5µm,0.2s						
MORF	Marmelete	0.64	58	Pg	Pb	08 56 56.3	-1.0
MORF				Lg	Lg	08 57 06.5	
	comp=N,5µm,0.2s						
PTEO	Sao Teotonio	0.75	40	Pg	Pb	08 56 58.5	-0.6
PTEO				Lg	Lg	08 57 09.6	
	comp=N,464nm,0.2s						
PTEO	Sao Teotonio	0.75	40	eP	Pb	08 56 58.5	-0.6
PTEO				eS	Sb	08 57 09.6	+0.6
PTEO				A	A	08 57 12.1	
	comp=N,927nm,0.2s						
PBDV	Barranco-do-Ve	1.15	76	Pg	Pn	08 57 04.6	-0.3
PBDV				Lg	Lg	08 57 21.5	
	comp=N,682nm,0.2s						
PBDV	Barranco-do-Ve	1.15	76	eP	Pn	08 57 04.6	-0.3
PBDV				eS	Sb	08 57 21.5	+1.0
PBDV				A	A	08 57 26.1	
	comp=N,682nm,0.2s						
PCVE	Castro Verde	1.22	57	Pg	Pn	08 57 05.4	-0.4
PCVE				Lg	Lg	08 57 23.6	
	comp=N,526nm,0.4s						
PCVE	Castro Verde	1.22	57	⇑iP	Pn	08 57 05.4	-0.4
PCVE				eS	Sb	08 57 23.6	+1.1
PCVE				A	A	08 57 25.1	
	comp=N,526nm,0.4s						
MESJ	Messejana	1.24	45	eP	Pn	08 57 05.3	-0.8
MESJ				eS	Sn	08 57 22.8	+1.0
MESJ				AML	AML	08 57 25.7	
	comp=N,938nm,0.4s						
MESJ	Messejana	1.24	45	Pg	Pn	08 57 05.3	-0.8
MESJ				Lg	Lg	08 57 22.8	
	comp=N,938nm,0.4s						
PNCL	Nicolau / Gran	1.30	29	Pn	Pn	08 57 05.8	-1.1
PNCL				Sn	Sb	08 57 25.8	+1.0
	comp=N,820nm,0.3s						
PNCL	Nicolau / Gran	1.30	29	⇑eP	Pn	08 57 05.8	-1.1
PNCL				eS	Sb	08 57 25.8	+1.0
PNCL				A	A	08 57 28.6	
	comp=N,820nm,0.3s						
PVAQ	Vaqueiros	1.36	71	Pn	Pn	08 57 07.3	-0.4
PVAQ				Sn	Sb	08 57 27.2	+0.8
	comp=N,463nm,0.3s						
PVAQ	Vaqueiros	1.36	71	P	Pn	08 57 07.4	-0.4
	SNR=217						
PVAQ				S	Sb	08 57 27.2	+0.8
PVAQ	Vaqueiros	1.36	71	eP	Pn	08 57 07.3	-0.4
PVAQ				eS	Sb	08 57 27.2	+0.8
PVAQ				A	A	08 57 31.2	
	comp=N,463nm,0.3s						
PBEJ	Beja	1.57	47	Pn	Pn	08 57 09.8	-0.8
PBEJ				Lg	Lg	08 57 34.9	
	comp=N,189nm,0.2s						
PBEJ	Beja	1.57	47	ePn	Pn	08 57 09.8	-0.8
PBEJ				eSg	Sb	08 57 34.9	+2.5
PBEJ				A	A	08 57 37.6	
	comp=N,378nm,0.2s						
EGRO	El Granado	1.58	69	Pn	Pn	08 57 10.6	-0.1
	comp=N,2.2nm,0.1s,SNR=67						
EGRO				Pg	Pb	08 57 12.8	-0.4
	comp=N,69nm,0.1s,SNR=7.9						
EGRO				Sn	Sb	08 57 32.8	+0.2
	comp=N,316nm,0.2s,SNR=7.9						
EGRO				Lg	Lg	08 57 35.5	
	comp=N,497nm,0.2s,SNR=7.9						
PMAFR	Mafra	1.98	1	⇑Pn	Pn	08 57 15.1	-1.1
	comp=N,15nm,0.1s,SNR=18						
PMAFR				Sn	Sn	08 57 39.2	-0.9
	comp=N,190nm,0.2s,SNR=7.9						
PMAFR				Lg	Lg	08 57 45.9	
	comp=N,411nm,0.2s,SNR=7.9						
PMAFR	Mafra	1.98	1	⇑ePn	Pn	08 57 15.1	-1.1
PMAFR				eSn	Sn	08 57 39.6	-0.5
PMAFR				A	A	08 57 52.5	
	comp=N,591nm,0.5s						
PBAR	Barrancos	2.18	56	Pn	Pn	08 57 19.0	0.0
PBAR				Lg	Lg	08 57 53.3	
	comp=N,228nm,0.5s						
PBAR	Barrancos	2.18	56	ePn	Pn	08 57 19.0	0.0
PBAR				eSg	Sb	08 57 53.3	+3.3
PBAR				A	A	08 57 57.0	
	comp=N,228nm,0.5s						
EMIN	Mina Concepcio	2.26	69	Pn	Pn	08 57 19.3	-0.8
	comp=N,1.4nm,0.1s,SNR=6.6						
EMIN				Pg	Pb	08 57 25.2	+0.4
	comp=N,12nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	08 57 48.3	+1.2
	comp=N,20nm,0.2s,SNR=7.9						
EMIN				Lg	Lg	08 57 56.4	
	comp=N,112nm,0.2s,SNR=12						
PMTG	Montargil	2.27	22	Pn	Pn	08 57 19.0	-1.2
PMTG				Lg	Lg	08 57 55.2	
	comp=N,296nm,0.2s						
PMTG	Montargil	2.27	22	ePn	Pn	08 57 19.0	-1.2
PMTG				eSg	Sb	08 57 55.2	+2.7
PMTG				A	A	08 57 58.0	
	comp=N,296nm,0.2s						
PESTR	Estremoz	2.34	36	P	Pn	08 57 21.0	-0.1
PESTR				S	Sb	08 57 58.6	+4.0
PESTR	Estremoz	2.34	36	ePn	Pn	08 57 21.3	+0.1
PESTR				eSg	Sb	08 57 58.2	+3.6
PESTR				A	A	08 58 03.1	
	comp=N,187nm,0.5s						
EBAD	Badajoz	2.56	45	Pn	Pn	08 57 22.7	-1.4
	comp=N,2.0nm,0.1s,SNR=37						
EBAD				Pg	Pb	08 57 31.7	+1.9
	comp=N,25nm,0.1s,SNR=7.9						
EBAD				Lg	Lg	08 58 06.8	
	comp=N,333nm,0.3s,SNR=8.4						
PSBE	So Bento	2.57	9	ePn	Pn	08 57 23.5	-0.9
PSBE				eSn	Sn	08 57 56.3	+1.6
PSBE				eSg	Sb	08 58 06.6	+5.3
PSBE				A	A	08 58 11.6	
	comp=N,132nm,0.3s						
CNIL	Conil	2.70	102	Pn	Pn	08 57 27.0	+0.9
CNIL	Conil	2.70	102	eP	Pn	08 57 27.0	+0.9
PTOM	Tomar	2.74	15	Pn	Pn	08 57 26.4	-0.3
PTOM				Sn	Sn	08 57 59.4	+0.6
	comp=N,109nm,0.3s						
PTOM	Tomar	2.74	15	ePn	Pn	08 57 26.4	-0.3
PTOM				eSn	Sn	08 57 59.4	+0.6
PTOM				A	A	08 58 14.5	
	comp=N,218nm,0.3s						
ESPR	Espera	2.79	91	Pn	Pn	08 57 27.2	-0.2
	comp=N,3.3nm,0.1s,SNR=24						
ESPR				Pg	Pb	08 57 35.9	+2.2
	comp=N,46nm,0.2s,SNR=7.9						
ESPR				Sn	Sn	08 57 59.9	-0.1
	comp=N,98nm,0.3s,SNR=7.9						
ESPR				Lg	Lg	08 58 12.0	
	comp=N,148nm,0.2s,SNR=7.9						
PMRV	Marv??o	2.89	31	Pn	Pn	08 57 27.5	-1.2
PMRV				Sn	Sn	08 58 01.7	-0.8
	comp=N,108nm,0.4s						
PMRV	Marv??o	2.89	31	ePn	Pn	08 57 27.5	-1.2
PMRV				eSn	Sn	08 58 01.7	-0.8
PMRV				A	A	08 58 19.5	
	comp=N,108nm,0.4s						
PCAS	Casmilo, Conde	3.14	12	Pn	Pn	08 57 31.4	-0.8
PCAS				Sn	Sn	08 58 07.8	-1.0
	comp=N,107nm,0.4s						
PCAS	Casmilo, Conde	3.14	12	ePn	Pn	08 57 31.4	-0.8
PCAS				eSn	Sn	08 58 07.8	-1.0
PCAS				A	A	08 58 30.8	
	comp=N,107nm,0.4s						
LIJA	Lijar	3.15	90	eP	Pn	08 57 33.0	+0.6
LIJA				eS	Sn	08 58 09.5	+0.5
PCBR	Castelo Branco	3.21	26	Pn	Pn	08 57 33.1	-0.1
PCBR				Sn	Sn	08 58 09.8	-0.7
PCBR				Lg	Lg	08 58 24.7	
	comp=N,56nm,0.4s						
PCBR	Castelo Branco	3.21	26	ePn	Pn	08 57 33.1	-0.1
PCBR				eSn	Sn	08 58 09.8	-0.7
PCBR				eSg	Sb	08 58 24.7	+5.1
PCBR				A	A	08 58 32.5	
	comp=N,113nm,0.4s						
ECAB	El Cabril	3.30	69	Pn	Pn	08 57 34.1	-0.3
	comp=N,3.6nm,0.1s,SNR=94						
ECAB				Sn	Sn	08 58 12.8	+0.1
	comp=N,25nm,0.2s,SNR=7.9						
ECAB				Lg	Lg	08 58 29.5	
	comp=N,80nm,0.2s,SNR=7.9						
COI	Coimbra	3.31	12	Pn	Pn	08 57 34.6	+0.1
COI				Sn	Sn	08 58 11.5	-1.4
COI				Lg	Lg	08 58 29.2	
COI	Coimbra	3.31	12	ePn	Pn	08 57 34.6	+0.1
COI				eSn	Sn	08 58 11.5	-1.4
COI				eSg	Sb	08 58 29.2	+6.8
HORN	Hornachuelos	3.36	74	P	Pn	08 57 34.4	-0.8
	SNR=44						
HORN				S	Sn	08 58 14.0	-0.1
ECEU	Ceuta	3.36	107	Pn	Pn	08 57 35.3	0.0
	comp=N,11nm,0.2s,SNR=7.9						
ECEU				Sn	Sn	08 58 15.0	+0.7
	comp=N,12nm,0.1s,SNR=7.9						
SMIR	Smir Dam	3.44	111	P	Pn	08 57 35.7	-0.6
SMIR				S	Sn	08 58 16.7	+0.5
EMIJ	Mijas	3.68	95	Pn	Pn	08 57 39.9	+0.2
	comp=N,1.3nm,0.1s,SNR=12						
EMIJ				Sn	Sn	08 58 24.4	+2.3
	comp=N,15nm,0.2s,SNR=7.9						
MTE	Manteigas	3.70	22	Pn	Pn	08 57 39.5	-0.4
MTE				Sn	Sn	08 58 20.9	-1.6
MTE				Lg	Lg	08 58 42.9	
	comp=N,96nm,0.5s						
MTE	Manteigas	3.70	22	ePn	Pn	08 57 39.5	-0.4
MTE				eSn	Sn	08 58 20.9	-1.6
MTE				eSg	Sb	08 58 42.9	+9.3
MTE				A	A	08 58 48.1	
	comp=N,192nm,0.5s						
CHEFC	Chefchaouen	3.73	119	P	Pn	08 57 40.1	-0.3
CHEFC				S	Sn	08 58 21.1	-2.4
PVIS	Viseu	3.90	16	Pn	Pn	08 57 41.7	-1.0
PVIS				Sn	Sn	08 58 26.2	-1.4
PVIS				Lg	Lg	08 58 48.0	
	comp=N,30nm,0.4s						
PVIS	Viseu	3.90	16	ePn	Pn	08 57 41.7	-1.0
PVIS				eSn	Sn	08 58 26.2	-1.4
PVIS				eSg	Sb	08 58 48.0	+8.5
PVIS				A	A	08 58 58.9	
	comp=N,60nm,0.4s						
EMAL	Malaga-Limoner	3.94	92	Sn	Sn	08 58 26.6	-1.7
EMAL	Malaga-Limoner	3.94	92	eP	Pn	08 57 44.3	+1.2
EMAL				eS	Sn	08 58 26.6	-1.7
EADA	Adamuz	3.96	71	Pn	Pn	08 57 43.1	-0.4
	comp=N,2.7nm,0.1s,SNR=34						
EADA				Sn	Sn	08 58 27.8	-1.2
	comp=N,21nm,0.1s,SNR=7.9						
EADA				Lg	Lg	08 58 49.9	
	comp=N,44nm,0.2s,SNR=4.9						
AVE	Averroes	3.99	156	S	Sn	08 58 25.8	-3.9
AVE	Averroes	3.99	156	eP	Pn	08 57 42.6	-1.2
AVE				eS	Sn	08 58 25.8	-3.9
EPLA	Plasencia	4.00	39	Pn	Pn	08 57 43.7	-0.4
	comp=N,1.5nm,0.1s,SNR=13						
EPLA				Sn	Sn	08 58 29.3	-0.8
	comp=N,9.5nm,0.2s,SNR=7.9						
EPLA				Lg	Lg	08 58 50.9	
	comp=N,28nm,0.2s,SNR=7.9						
ZHG	ZHG	4.15	147	P	Pn	08 57 44.5	-1.7
ZHG				S	Sn	08 58 30.8	-3.0
	SNR=8.3						
SICH	Sidi Chahed	4.35	130	P	Pn	08 57 45.2	-3.7
SICH				S	Sn	08 58 36.1	-2.4
PVRL	Vila Real	4.48	16	Pn	Pn	08 57 49.5	-1.1
PVRL				Sn	Sn	08 58 39.7	-2.0
	comp=N,21nm,0.3s						
PVRL	Vila Real	4.48	16	ePn	Pn	08 57 49.5	-1.1
PVRL				eSn	Sn	08 58 39.7	-2.0
PVRL				A	A	08 59 13.3	
	comp=N,42nm,0.3s						
MVO	Moncorvo	4.55	22	Pn	Pn	08 57 51.0	-0.6
	comp=N,16nm,0.2s,SNR=7.9						
MVO				Sn	Sn	08 58 41.8	-1.8
	comp=N,4.9nm,0.1s,SNR=7.9						
MVO				Lg	Lg	08 59 08.6	
	comp=N,71nm,0.4s,SNR=7.1						
MVO	Moncorvo	4.55	22	ePn	Pn	08 57 51.1	-0.6
MVO				eSn	Sn	08 58 43.4	-0.2
MVO				A	A	08 59 19.8	
	comp=N,81nm,0.6s						
ELGU	Los Guajares,	4.57	90	Pn	Pn	08 57 53.4	+1.4
	comp=N,1.9nm,0.1s,SNR=7.9						
ELGU				Sn	Sn	08 58 43.3	-0.9
	comp=N,19nm,0.3s,SNR=7.9						
SRHM	Skhour des Reh	4.64	165	P	Pn	08 57 50.9	-2.1
PAB	San Pablo	4.69	55	Pn	Pn	08 57 52.7	-0.9
	comp=N,3.2nm,0.2s,SNR=7.9						
PAB				Sn	Sn	08 58 44.6	-2.4
	comp=N,5.3nm,0.2s,SNR=7.9						
PAB				Lg	Lg	08 59 13.1	
	comp=N,34nm,0.4s,SNR=7.9						
EQUE	Quentar	4.72	85	Pn	Pn	08 57 54.6	+0.7
	comp=N,5.1nm,0.3s,SNR=8.3						
EQUE				Sn	Sn	08 58 47.0	-0.7
	comp=N,6.8nm,0.2s,SNR=7.9						
PCAB	Cabril	4.84	12	Pn	Pn	08 57 54.4	-1.1
PCAB				Sn	Sn	08 58 47.9	-2.7
	comp=N,16nm,0.6s						
PCAB	Cabril	4.84	12	ePn	Pn	08 57 54.4	-1.1
PCAB				eSn	Sn	08 58 47.9	-2.7
PCAB				A	A	08 59 30.4	
	comp=N,33nm,0.6s						
LCRM	LCR	4.91	131	P	Pn	08 57 55.0	-1.7
LCRM				S	Sn	08 58 47.7	-5.0
ELOB	Lobios	4.99	11	Pn	Pn	08 57 56.3	-1.4
	comp=N,5.1nm,0.1s,SNR=26						
ELOB				Sn	Sn	08 58 49.3	-5.0
	comp=N,14nm,0.2s,SNR=4.7						
ELOB				Lg	Lg	08 59 20.8	
	comp=N,14nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	5.01	56	Pn	Pn	08 57 57.0	-0.9
	comp=N,2.4nm,0.3s,baz=241,slow=13,SNR=18						
ESDC				Lg	Lg	08 59 23.1	
	baz=225,slow=28,SNR=7.9						
EQES	Quesada	5.05	79	Pn	Pn	08 57 58.3	-0.3
	comp=N,3.0nm,0.2s,SNR=8.7						
EQES				Sn	Sn	08 58 56.6	+0.6
	comp=N,23nm,0.3s,SNR=6.7						
PGAV	Gavieira, Arco	5.05	9	Pn	Pn	08 57 57.3	-1.3
PGAV				Sn	Sn	08 58 52.0	-4.0
	comp=N,21nm,0.6s						
PGAV	Gavieira, Arco	5.05	9	ePn	Pn	08 57 57.3	-1.3
PGAV				eSn	Sn	08 58 52.0	-4.0
PGAV				A	A	08 58 55.5	
	comp=N,21nm,0.6s						
EBER	Berja	5.16	89	Pn	Pn	08 58 01.7	+1.6
	comp=N,2.1nm,0.2s,SNR=4.0						
EBER				Sn	Sn	08 58 58.0	-0.8
	comp=N,9.7nm,0.3s,SNR=7.9						
EZAM	Zamans	5.19	5	Pn	Pn	08 57 59.5	-0.9
	comp=N,1.8nm,0.1s,SNR=7.9						
EZAM				Sn	Sn	08 58 54.8	-4.6
	comp=N,3.1nm,0.1s,SNR=7.9						
PBRG	Braganca	5.22	22	Pn	Pn	08 58 00.1	-0.8
PBRG				Sn	Sn	08 58 57.3	-2.9
	comp=N,12nm,0.6s						
PBRG	Braganca	5.22	22	ePn	Pn	08 58 00.1	-0.8
PBRG				eSn	Sn	08 58 57.3	-2.9
PBRG				A	A	08 59 42.5	
	comp=N,25nm,0.6s						
EAH	EAH	5.32	182	P	Pn	08 57 58.9	-3.2
EAH				S	Sn	08 58 55.4	-7.0
	SNR=9.5						
ECAL	Calabor	5.35	21	Pn	Pn	08 58 01.9	-0.7
	comp=N,6.5nm,0.2s,SNR=24						
ECAL				Sn	Sn	08 59 00.6	-2.7
	comp=N,6.4nm,0.2s,SNR=4.0						
ECAL				Lg	Lg	08 59 33.5	
	comp=N,114nm,0.6s,SNR=7.9						
GUD	Guadarrama	5.46	46	Pn	Pn	08 58 03.1	-1.0
	comp=N,1.1nm,0.1s,SNR=16						
GUD				Sn	Sn	08 59 03.9	-2.2
	comp=N,7.7nm,0.3s,SNR=7.9						
GUD				Lg	Lg	08 59 37.9	
	comp=N,44nm,0.5s,SNR=7.9						
SESP	Santiago Espad	5.51	76	Pn	Pn	08 58 04.5	-0.4
	comp=N,1.5nm,0.1s,SNR=7.9						
SESP				Sn	Sn	08 59 06.6	-0.9
	comp=N,3.3nm,0.1s,SNR=7.9						
SESP				Lg	Lg	08 59 39.7	
	comp=N,42nm,0.4s,SNR=7.9						
MD31	MD31	5.56	136	P	Pn	08 58 03.6	-1.9
UCM	Universidad Co	5.81	53	Sn	Sn	08 59 12.7	-1.9
UCM	Universidad Co	5.81	53	eP	Pn	08 58 07.5	-1.4
UCM				eS	Sn	08 59 12.7	-1.9
EAGO	Agolada(Pontev	5.90	9	Pn	Pn	08 58 08.8	-1.3
	comp=N,4.6nm,0.1s,SNR=7.9						
EAGO				Sn	Sn	08 59 12.0	-4.8
	comp=N,3.7nm,0.2s,SNR=7.9						
EMAZ	Mazaricos	5.97	3	Pn	Pn	08 58 09.5	-1.6
	comp=N,2.6nm,0.1s,SNR=7.9						
EMAZ				Sn	Sn	08 59 12.0	-6.6
	comp=N,10nm,0.2s,SNR=7.9						
ETOB	Tobarra	6.38	72	Pn	Pn	08 58 16.0	-0.8
	comp=N,1.0nm,0.2s,SNR=19						
ETOB				Sn	Sn	08 59 27.3	-1.5
	comp=N,2.1nm,0.1s,SNR=7.9						
ETOB				Lg	Lg	09 00 06.0	
	comp=N,19nm,0.4s,SNR=7.9						
EMUR	La Murta	6.50	80	Pn	Pn	08 58 18.6	+0.2
	comp=N,6.4nm,0.3s,SNR=7.9						
EMUR				Sn	Sn	08 59 28.2	-3.3
	comp=N,5.6nm,0.4s,SNR=7.9						
EPON	Pontenova	6.56	14	Pn	Pn	08 58 18.5	-0.7
	comp=N,0.5nm,0.1s,SNR=5.7						
EPON				Sn	Sn	08 59 28.7	-4.4
	comp=N,4.5nm,0.4s,SNR=7.9						
ETOR	Torete	6.85	54	Pn	Pn	08 58 22.4	-0.9
	comp=N,5.0nm,0.2s,SNR=16						
ETOR				Sn	Sn	08 59 37.6	-2.7
	comp=N,9.3nm,0.2s,SNR=7.9						
ETOR				Lg	Lg	09 00 25.9	
	comp=N,43nm,0.6s,SNR=7.9						
EARI	Arriondas	7.06	25	Pn	Pn	08 58 26.0	-0.1
	comp=N,0.7nm,0.3s,SNR=11						
EARI				Sn	Sn	08 59 43.9	-1.6
	comp=N,1.1nm,0.2s,SNR=7.9						
EARI				Lg	Lg	09 00 27.3	
	comp=N,35nm,0.9s,SNR=7.9						
AFON	Font Roja	7.16	74	Pn	Pn	08 58 28.6	+1.1
	comp=N,6.3nm,0.3s,SNR=7.9						
EBEN2	Beniarda presa	7.43	74	Sn	Sn	08 59 52.0	-2.5
	comp=N,3.4nm,0.1s,SNR=7.9						
EMOS	Mosqueruela	7.71	61	Pn	Pn	08 58 37.1	+1.9
	comp=N,0.3nm,0.1s,SNR=4.0						
EMOS				Sn	Sn	08 59 58.8	-2.8
	comp=N,1.3nm,0.3s,SNR=7.9						
EORO	Oroz-Betelu	8.54	44	Pn	Pn	08 58 46.6	+0.3
	comp=N,0.7nm,0.1s,SNR=4.0						
EORO				Lg	Lg	09 01 14.4	
	comp=N,28nm,0.8s,SNR=7.9						
EALK	Alkurruntz	8.65	41	Pn	Pn	08 58 48.4	+0.5
	comp=N,1.3nm,0.2s,SNR=7.9						
SJPF	Ste Jean	8.73	43	ePn	Pn	08 58 47.9	-1.0
SJPF				eSn	Sn	09 00 22.3	-4.1
	comp=N,1.1nm,0.2s						
SJPF	Ste Jean	8.73	43	Pn	Pn	08 58 47.9	-1.0
SJPF				Sn	Sn	09 00 22.3	-4.1
	comp=N,0.6nm,0.2s						
ETSF	Etsaut	8.96	46	ePn	Pn	08 58 50.8	-1.4
ETSF				eSn	Sn	09 00 28.1	-4.1
	comp=N,2.4nm,0.3s						
ETSF	Etsaut	8.96	46	Pn	Pn	08 58 50.8	-1.4
ETSF				Sn	Sn	09 00 28.1	-4.1
	comp=N,1.2nm,0.3s						
ATE	Arette	9.00	45	Pn	Pn	08 58 53.5	+0.8
	SNR=7.9						
ATE				Sn	Sn	09 00 29.6	-3.5
	comp=N,0.8nm,0.2s,SNR=7.9						
EPF	Esparros	9.57	48	ePn	Pn	08 58 59.2	-1.3
EPF				eSn	Sn	09 00 42.4	-4.7
	comp=N,2.9nm,0.3s						
EPF	Esparros	9.57	48	Pn	Pn	08 58 59.2	-1.3
EPF				Sn	Sn	09 00 42.4	-4.7
	comp=N,1.4nm,0.3s						
LFF	La Frestale	11.01	41	ePn	Pn	08 59 18.9	-1.2
LFF	La Frestale	11.01	41	Pn	Pn	08 59 18.9	-1.2
RJF	Les Rejaudoux	11.66	41	ePn	Pn	08 59 27.5	-1.5
RJF	Les Rejaudoux	11.66	41	eP	Pn	08 59 33.6	+4.6
RJF	Les Rejaudoux	11.66	41	Pn	Pn	08 59 27.5	-1.5
PSMN	Pico do Norte,	12.58	275	eT	T	09 12 04.5	
PSMA	Santa Maria	12.64	275	eT	T	09 12 08.6	

IDC ***13*** *09:19:11.6±1.2, 53°.96N×164°.26W, h0^{km}, mb4.1/23, mb1 4.2/25, mb1mx4.0/80, mbtmp4.1/25, ML3.3/2, MS3.3/7, Ms1 3.3/7, ms1mx2.9/53, Error ellipse: s-maj=29.1km s-min=15.1km az=169.0*

AEIC ***13*** *09:19:17±1.9, 53°.86N±0°.06×164°.15W±0°.06, h26^{km}±5^{km}, ML3.9/49, mb3.8/11(NEIC), Error ellipse: s-maj=9.2km s-min=4.1km az=152.0*

NEIC ***13*** *09:19:18.4±1.7, 53°.93N±0°.05×164°.13W±0°.06, h48^{km}±7^{km}, Error ellipse: s-maj=8.5km s-min=4.4km az=158.0*

ISC 13 09:19:18.2±1.2**, 53°.87N**±0°.08×**164°.09W**±0°.04**, h52**^{km}±9^{km}**, n104,** σ1^{s}.**22**/106**, mb4.2**/25**, MS3.4**/6**, 1C, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	West Dahl East	0.68	335		Pn	09 19 31.5	-0.3
WESP	Westdahl Peak	0.73	330		Pn	09 19 31.4	-1.0
WESP					Sn	09 19 42.8	-0.1
BRPK	Brown Peak	0.81	15		Pn	09 19 32.3	-1.1
WEBT	Westdahl Beart	0.82	332		Pn	09 19 33.0	-0.7
SSLW	Shishaldin Wes	0.91	359		Pn	09 19 33.2	-1.6
SSBA	Shishaldin	0.91	359		Pn	09 19 33.7	-1.1
SSBA					Sn	09 19 46.8	-0.2
AKSA	Akutan Strait	0.98	287		Pn	09 19 34.7	-1.0
AKUT	Akutan	1.03	286		Pn	09 19 35.5	-0.7
AKUT	Akutan	1.03	286		Sn	09 19 49.7	+0.1
FALS	False Pass	1.07	21		Pn	09 19 35.8	-1.0
FALS	False Pass	1.07	21		Sn	09 19 49.5	-1.1
AKBBA	Akutan Broad B	1.11	283		Pn	09 19 36.5	-0.9
AKBBA					Sn	09 19 51.8	+0.1
ZRO	Akutan Zero	1.14	282		Pn	09 19 37.0	-0.8
AKLV	Akutan Long Va	1.14	286		Pn	09 19 36.9	-1.0
AKLV					Sn	09 19 51.9	-0.5
AKMO	Akutan Morgan	1.16	282		Pn	09 19 37.2	-0.8
AKMO					Sn	09 19 52.7	0.0
AKGG	Akutan Green G	1.17	287		Pn	09 19 38.0	-0.2
AKRB	Akutan Reef Bi	1.20	284		Pn	09 19 37.8	-0.7
UNV	Unalaska Valle	1.43	270		Pn	09 19 40.3	-1.4
UNV					Sn	09 19 58.1	-1.3
BALA	Baldy Mountain	1.53	29		Pn	09 19 43.4	+0.2
MNAT	Makushin Natee	1.53	272		Pn	09 19 42.3	-0.8
MNAT					Sn	09 20 01.5	-0.5
MTBL	Makushin Table	1.53	275		Pn	09 19 42.5	-0.7
MREP	Makushin Rep't	1.57	269		Pn	09 19 42.8	-1.0
MSW	Makushin Switc	1.59	273		Pn	09 19 42.9	-1.0
MSW					Sn	09 20 03.2	-0.2
DT1	Dutton Round H	1.63	40		Pn	09 19 44.0	-0.5
MGOD	Makushin Gods	1.65	269		Pn	09 19 44.0	-0.8
MGOD					Sn	09 20 05.1	+0.2
HAG	Hague Volcano	1.93	40		Pn	09 19 48.6	+0.1
PVV	Pavlof Volcano	2.02	41		Pn	09 19 50.0	+0.2
BLHA	Black Hill	2.18	32		Pn	09 19 51.9	-0.1
OKFG	Magazine Ridge	2.32	260		Pn	09 19 54.0	+0.2
SDPT	Sand Point	2.58	53		Pn	09 19 57.3	0.0
OKSP	Okmok Steeple	2.58	258		Pn	09 19 57.5	+0.1
CNBA	Chernabura Isl	2.80	68	Pn	Pn	09 20 00.6	+0.2
NIKH	Nikolski High	2.99	254		Pn	09 20 02.9	0.0
VNFG	Fog Glacier, M	3.56	45		Pn	09 20 11.5	+0.6
VNHG	Veniaminof 1	3.69	48		Pn	09 20 13.6	+0.9
CHGN	Chignik	4.08	51	Pn	Pn	09 20 18.0	+0.2
CHGN					Sn	09 21 07.7	+3.5
SPIA	Saint Paul Isl	4.82	316	Pn	Pn	09 20 29.7	+1.7
SII	Sitkinak Islan	6.28	61	Pn	Pn	09 20 48.2	+0.1
ATKA	Atka Island	6.32	259		Pn	09 20 48.7	+0.1
OHAK	Old Harbor	6.99	57	Pn	Pn	09 20 57.2	-0.5
GSMY	Great Sitkin M	7.46	261		Pn	09 21 07.1	+2.9
KDAK	Kodiak Island	7.58	54	Pn	Pn	09 21 03.6	-2.2
	0.8nm,0.3s,baz=204,slow=6.2,SNR=10						
KDAK				Sn	Sn	09 22 23.3	-6.8
	baz=317,slow=19,SNR=1.6						
KDAK	Kodiak Island	7.58	54	Pn	Pn	09 21 05.6	-0.2
ADK	Adak	7.88	260	Pn	Pn	09 21 10.7	+0.8
ANM	Nome	10.75	357		Pn	09 21 50.0	+0.9
GHO	Glory Hole Cre	11.30	39	Pn	Pn	09 21 56.4	-0.3
SCM	Sheep Creek Mo	11.95	41	Pn	Pn	09 22 05.4	-0.2
IMAR	Indian Mountai	13.19	19	Pn	Pn	09 22 24.1	+1.7
GLB	Gilahina Butte	13.20	47	Pn	Pn	09 22 23.6	+0.9
ILAR	Eielson Array	13.96	32	Pn	Pn	09 22 29.6	-3.3
	0.1nm,0.3s,baz=227,slow=12,SNR=6.4						
ILAR				LR	LR	09 28 15.8	
	comp=Z,87nm,19.5s,baz=254,slow=39						
ILAR	Eielson Array	13.96	32		Pn	09 22 33.0	+0.1
BCAR	Beaver Creek A	14.79	43		P	09 22 47.4	-1.3

COLD	Coldfoot	14.98	21	P	P	09 22 52.3	+1.5
FYU	Fort Yukon	15.71	29	Pn	Pn	09 22 56.7	+1.1
HYT	Haines Junctio	15.87	53		P	09 23 02.8	+2.1
HYT				IAmb	IAmb	09 23 11.9	
	comp=Z,6.9nm,1.1s						
EGAK	Eagle	15.90	38	P	P	09 22 59.7	-1.2
EGAK				IAmb	IAmb	09 23 17.5	
	comp=Z,5.4nm,0.9s						
DAWY	Dawson	16.21	41	P	P	09 23 05.2	+0.8
DAWY				IAmb	IAmb	09 23 07.2	
	comp=Z,6.4nm,0.7s						
TOLK	Toolik Lake Re	16.31	19	P	P	09 23 05.1	-0.4
TOLK				IAmb	IAmb	09 23 22.5	
	comp=Z,7.5nm,1.0s						
WHY	Whitehorse	17.09	55		P	09 23 15.4	+1.1
EPYK	Eagle Plains	18.31	36	P	P	09 23 27.5	0.0
EPYK				IAmb	IAmb	09 23 32.6	
	comp=Z,6.6nm,0.8s						
INK	Inuvik	20.35	33	P	P	09 23 48.4	-1.4
	comp=Z,1.5nm,0.5s,baz=250,slow=10,SNR=16						
PEA0B	Petropavlovsk-	22.57	284	P	P	09 24 13.0	-0.7
PETK	Petropavlovsk-	22.57	284	P	P	09 24 13.4	-0.3
	comp=Z,2.4nm,0.4s,baz=91,slow=13,SNR=8.8						
PETK	Petropavlovsk-	22.57	284	P	P	09 24 14.1	+0.4
YKA	Yellowknife Ar	26.84	51	P	P	09 24 54.0	+0.8
	comp=Z,1.2nm,0.7s,baz=274,slow=8.7,SNR=17						
TIXI	Tiksi	33.13	328	P	P	09 25 46.6	-2.1
	comp=Z,1.3nm,0.3s,baz=39,slow=2.1,SNR=4.4						
TIXI				LR	LR	09 40 54.2	
	comp=Z,54nm,20.1s,baz=81,slow=40						
RES	Resolute Bay	33.62	27	P	P	09 25 52.1	-0.8
	comp=Z,0.8nm,0.6s,baz=252,slow=11,SNR=7.2						
RES	Resolute Bay	33.62	27	P	P	09 25 52.5	-0.5
RES				IAmb	IAmb	09 25 53.2	
	comp=Z,2.5nm,0.9s						
H11N2	WAKE ISLAND Hy	40.68	224	T	T	10 10 13.7	
	baz=26,slow=76,SNR=46						
H11N3	WAKE ISLAND Hy	40.69	224	T	T	10 10 21.4	
	baz=26,slow=76,SNR=56						
H11N1	WAKE ISLAND Hy	40.70	224	T	T	10 10 19.5	
	baz=26,slow=76,SNR=47						
USRK	Ussuriysk Ar.	41.66	284	LR	LR	09 47 10.8	
	comp=Z,45nm,18.1s,baz=171,slow=40						
H11S1	WAKE ISLAND Hy	41.86	224	T	T	10 11 56.2	
	baz=25,slow=76,SNR=83						
H11S2	WAKE ISLAND Hy	41.87	224	T	T	10 11 58.7	
	baz=25,slow=76,SNR=90						
H11S3	WAKE ISLAND Hy	41.88	224	T	T	10 11 45.5	
	baz=25,slow=76,SNR=53						
NRIK	Noril'sk	46.60	332	LR	LR	09 50 41.6	
	comp=Z,42nm,18.1s,baz=20,slow=41						
DAG	Danmarks Havn	47.80	10	⇑iP	P	09 27 49.2	-0.3
	comp=Z,5.1nm,0.7s						
SPITS	Spitsbergen Ar	48.22	360	P	P	09 27 52.1	-0.7
	comp=Z,8.1nm,1.0s,baz=45,slow=8.4,SNR=6.9						
KSRS	Korea Array	48.35	279	LR	LR	09 47 50.2	
	comp=Z,17nm,20.4s,baz=165,slow=36						
SUMG	Summit	48.37	19	iP	P	09 27 55.2	+0.7
	comp=Z,16nm,0.6s						
SUMG	Summit	48.37	19	P	P	09 27 55.1	+0.7
TXAR	Lajitas Array	49.61	94	P	P	09 28 05.1	+0.9
	comp=Z,0.3nm,0.6s,baz=302,slow=5.9,SNR=5.3						
TXAR				PcP	PcP	09 29 26.0	+0.9
	comp=Z,0.2nm,0.4s,baz=188,slow=2.3,SNR=4.2						
TXAR				LR	LR	09 46 21.6	
	comp=Z,31nm,19.5s,baz=0.0,slow=33						
SONM	Songino Array	53.22	303	P	P	09 28 30.3	-0.6
	comp=Z,0.4nm,0.4s,baz=21,slow=8.5,SNR=6.2						
ARCES	ARCESS Array B	56.71	356	P	P	09 28 54.6	-1.1
	comp=Z,2.6nm,0.8s,baz=12,slow=9.2,SNR=5.2						
ZALV	Zalesovo Beam	58.40	320	LR	LR	09 57 36.6	
	comp=Z,43nm,18.4s,baz=41,slow=40						
BVAR	Borovoye Array	64.26	327	P	P	09 29 48.0	+0.6
	comp=Z,2.3nm,0.7s,baz=46,slow=6.4,SNR=10						
KIRV	Kirov	64.68	341	P	P	09 29 48.9	-1.0
	comp=Z,16nm,0.5s,baz=305,slow=0.9,SNR=4.7						
FINES	FINESS Array B	64.75	355	P	P	09 29 49.8	-0.6
	comp=Z,2.0nm,0.5s,baz=23,slow=6.6,SNR=16						
MKAR	Makanchi Array	65.01	316	P	P	09 29 52.4	0.0
	comp=Z,0.9nm,0.7s,baz=53,slow=11,SNR=6.6						
NOA	NORSAR Array B	65.38	3	P	P	09 29 54.1	-0.4
	comp=Z,1.3nm,0.7s,baz=358,slow=6.5,SNR=4.9						
HFS	Hagfors	66.34	1	P	P	09 30 00.0	-0.7
	comp=Z,3.9nm,0.5s,baz=29,slow=3.4,SNR=18						
EKA	Eskdalemuir Ar	70.04	11	P	P	09 30 24.1	+0.2
	comp=Z,0.9nm,0.5s,baz=350,slow=4.8,SNR=8.3						
AKTO	Aktyubinsk	70.22	333	P	P	09 30 25.2	+0.1
	comp=Z,5.0nm,0.8s,baz=27,slow=5.8,SNR=15						
ABKAR	Akbulak array	70.75	331	P	P	09 30 28.8	+0.5
AAK	Ala-Archa	71.58	318	P	P	09 30 33.5	-0.2
	comp=Z,1.8nm,0.6s,baz=142,slow=4.5,SNR=5.9						
AKASG	Malin Array Be	75.21	351	P	P	09 30 54.4	-0.3
	comp=Z,1.3nm,0.4s,baz=17,slow=6.0,SNR=4.7						
GERES	GERESS Array B	77.65	1	P	P	09 31 08.9	+0.2
	comp=Z,0.2nm,0.3s,baz=38,slow=5.0,SNR=3.4						
CMAR	Chiang Mai Arr	79.32	287	P	P	09 31 18.4	+0.3
	comp=Z,1.1nm,0.4s,baz=8.4,slow=5.6,SNR=7.7						
CMAR	Chiang Mai Arr	79.32	287	P	P	09 31 16.9	-1.3
KBZ	Khabaz	80.07	340	P	P	09 31 24.1	+2.2
	comp=Z,3.0nm,0.9s,baz=290,slow=13,SNR=3.9						
ESDC	Sonseca Array	85.27	15	P	P	09 31 50.0	+1.0
	comp=Z,1.0nm,0.5s,baz=349,slow=4.6,SNR=5.5						
ESDC	Sonseca Array	85.27	15	P	P	09 31 48.9	-0.2
BRTR	Keskin Array B	85.54	346	P	P	09 31 51.5	+1.0
	comp=Z,2.8nm,0.8s,baz=58,slow=3.2,SNR=10						
BRTR	Keskin Array B	85.54	346	P	P	09 31 51.0	+0.5

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*UPP **13** 09:23:40.0±2.8, 64°.60N×30°.87E, h0^{km}, ML1.7, Suspected explosion*
*HEL **13** 09:23:40.8±0.1, 64°.75N×30°.68E, h0^{km}, ML2.1, Explosion*
*KOLA **13** 09:23:40.5, 64°.76N×30°.00E, h0^{km}*
*IDC **13** 09:23:41.6±1.9, 64°.77N×31°.28E, h0^{km}, mb1 3.3/4, mb1mx3.0/60, mbtmp3.2/4, ML2.3/4, Error ellipse: s-maj=27.9km s-min=8.9km az=105.0*
*NAO **13** 09:23:42.5±1.3, 64°.82N×30°.12E, ML2.4*
*BER **13** 09:23:44.9±3.8, 64°.89N×30°.05E, h0^{km}, ML2.4(NAO), Suspected explosion*
ISC 13 09:23:42.3±0.9**, 64°.83N**±0°.02×**30°.71E**±0°.04**, h0**^{km}**, n50, σ2^{s}.00**/84**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KU6	Riekki	1.25	344	PG	Pg	09 24 04.5	-1.8
	baz=162						
KU6				MSG		09 24 20.7	
	comp=Z,9.6nm,0.2s						
KU6				SB	Sg	09 24 21.9	-0.5
MSF	Maaselka	1.29	328	PG	Pg	09 24 05.0	-2.1
MSF				SG	Sg	09 24 22.4	-1.5
JOF	Joensuu	1.94	172	PG	Pn	09 24 14.2	-2.1
	baz=352						
JOF				SG	Sn	09 24 40.8	-0.5
OUL	Oulu	2.07	279	PG	Pn	09 24 18.0	-0.1
OUL				SG	Sn	09 24 43.9	-0.7
OUF	Merijarvi	2.62	263	PB	Pn	09 24 25.1	-0.6
	baz=75						
OUF				MSG		09 24 57.2	
	comp=Z,17nm,0.2s						
OUF				SG	Sn	09 25 00.4	+2.2
OBF0	Syolatti, Pyha	2.81	266	PG	Pn	09 24 30.0	+1.7
OBF0				SG	Sn	09 25 07.2	+4.4
SUF	Sumiainen	2.93	226	PB	Pn	09 24 29.8	-0.2
	baz=40						
SUF				MSG		09 25 05.3	
	comp=Z,7.9nm,0.2s						
SUF				SG	Sn	09 25 09.0	+3.2
APA0	Apatity Array	2.94	17	Pn	Pn	09 24 30.1	-0.1
	baz=188,slow=12						
APA0				Sn	Sn	09 25 08.7	+2.5
	baz=204,slow=28						
APA0				Lg	Lg	09 25 19.1	
	baz=193,slow=37						
APA0	Apatity Array	2.94	17	P	Pn	09 24 30.0	-0.2
APA0				S	Sn	09 25 07.2	+1.0
APA0	Apatity Array	2.94	17	Pn	Pn	09 24 30.1	-0.1
	baz=188,slow=12						
APA0				Sn	Sn	09 25 08.7	+2.5
	baz=204,slow=28						
TOF	Tornio	2.95	298	PB	Pn	09 24 31.8	+1.5
	baz=110						
TOF				MSG		09 25 08.1	
	comp=Z,6.0nm,0.2s						
TOF				SB	Sn	09 25 08.2	+1.9
APA	Apatity	2.96	20	P	Pn	09 24 30.6	+0.1
APA				S	Sn	09 25 08.0	+1.3
VRF	Varrio	2.97	352	PN	Pn	09 24 30.2	-0.4
VRF				MSG		09 25 10.2	
	comp=Z,3.3nm,0.2s						
SGF	Sodankyl	3.13	329	PN	Pn	09 24 32.0	-0.8
SGF				SB	Sn	09 25 15.2	+4.4
KAF	Kangasniemi	3.37	218	PB	Pn	09 24 36.3	+0.3
KAF				SB	Sn	09 25 16.7	+0.1
KEF	Keuruu	3.74	227	PB	Pn	09 24 41.5	+0.4
KEF				SB	Sn	09 25 26.4	+0.5
PAJU	Pajala	3.81	309	P	Pn	09 24 41.8	-0.4
SJUU	Sjulsmark	3.90	284	P	Pn	09 24 42.5	-0.9
ERTU	Ertsjaerv	3.93	300	P	Pn	09 24 43.4	-0.4
ERTU				S	Sn	09 25 30.7	+0.3
ERTU	Ertsjaerv	3.93	300	PN	Pn	09 24 44.5	+0.8
VAF	Ylistaro	3.98	247	PB	Pn	09 24 45.0	+0.6
VAF				SG	Sb	09 25 44.5	+2.9
FIA0	FINESS Array S	3.99	214	Pn	Pn	09 24 43.8	-0.9
	baz=35,slow=12						
FIA0				Sn	Sn	09 25 28.6	-3.4
	baz=31,slow=18						
FIA0				Lg	Lg	09 25 41.8	
	baz=25,slow=37						
FIA0	FINESS Array S	3.99	214	Pn	Pn	09 24 43.8	-0.9
	baz=35,slow=12						
FIA0				Sn	Sn	09 25 28.6	-3.4
	baz=31,slow=18						
FIA0	FINESS Array S	3.99	214	PN	Pn	09 24 43.5	-1.1
FIA0				SG	Sb	09 25 42.5	+0.3
FINES	FINESS Array B	3.99	214	Pn	Pn	09 24 43.6	-0.9
	comp=Z,0.2nm,0.3s,baz=37,slow=12,SNR=8.9						
FINES				Pg	Pb	09 24 52.3	-1.1
	comp=Z,0.3nm,0.3s,baz=26,slow=14,SNR=16						
FINES				Sn	Sn	09 25 34.3	+2.2
	comp=Z,0.3nm,0.3s,baz=27,slow=28,SNR=1.7						
FINES				Lg	Lg	09 25 44.3	
	comp=Z,2.0nm,0.3s,baz=30,slow=28,SNR=20						
BURU	Burvik	4.01	271	P	Pn	09 24 43.4	-1.5
BURU				S	Sn	09 25 30.8	-1.8
BURU	Burvik	4.01	271	PN	Pn	09 24 43.5	-1.5
BURU				SG	Sb	09 25 44.6	+1.8
HARU	Harads	4.27	293	P	Pn	09 24 48.3	-0.1
ODEU	Stanfors	4.32	269	P	Pn	09 24 47.0	-2.2
MASU	Masugnsbyn	4.41	311	P	Pn	09 24 50.9	+0.4
VJF	Virojoki	4.54	200	SG	Sb	09 26 00.4	+2.4
HEF	Hetta	4.56	325	Pn	Pn	09 24 51.9	-0.6
HEF				Pg	Pb	09 25 03.7	+0.5
HEF				Lg	Lg	09 26 00.8	
HEF	Hetta	4.56	325	Pn	Pn	09 24 51.9	-0.6
HEF				Pg	Pb	09 25 03.7	+0.5
HEF				Sg	Sb	09 26 00.8	+2.3
HEF	Hetta	4.56	325	PG	Pb	09 25 03.6	+0.5
	baz=143						
HEF				SG	Sb	09 26 01.1	+2.6
LILU	Lilltraesk	4.62	281	P	Pn	09 24 52.2	-1.1
DUNU	Dundret	4.74	304	P	Pn	09 24 54.4	-0.5
LANU	Lannavaara	4.76	317	P	Pn	09 24 54.2	-1.0
PVF	Pernaja	4.84	210	SG	Sb	09 26 09.8	+3.2
KTK1	Kautokeino	5.13	328	Pn	Pn	09 24 59.2	-1.0
KTK1				Sn	Sn	09 25 58.0	-2.0
KTK1				Lg	Lg	09 26 17.6	
ARA0	ARCESS Array S	5.14	339	Pn	Pn	09 24 59.2	-1.2
	baz=156,slow=14						
ARA0				Sn	Sn	09 25 55.5	-5.0
	baz=159,slow=28						
ARA0				Lg	Lg	09 26 19.1	
ARA0	ARCESS Array S	5.14	339	Pn	Pn	09 24 59.2	-1.2
	baz=156,slow=14						
ARA0				Sn	Sn	09 25 55.5	-5.0
	baz=159,slow=28						
ARA0				Sg	Sb	09 26 19.1	+3.8
ARCES	ARCESS Array B	5.14	339	Pn	Pn	09 24 59.1	-1.4
	comp=Z,0.9nm,0.3s,baz=154,slow=13,SNR=99						
ARCES				Sn	Sn	09 25 57.9	-2.5
	comp=Z,0.5nm,0.3s,baz=160,slow=24,SNR=6.8						
ARCES				Lg	Lg	09 26 19.1	
	comp=Z,1.3nm,0.3s,baz=149,slow=35,SNR=5.1						
KEV	Kevo	5.15	345	Pn	Pn	09 24 58.1	-2.4
KEV				Sn	Sn	09 25 56.9	-3.7
KEV				Lg	Lg	09 26 19.0	
KEV	Kevo	5.15	345	Pn	Pn	09 24 58.1	-2.4
KEV				Sn	Sn	09 25 56.9	-3.7
KEV				Sg	Sb	09 26 19.0	+3.5
KUA	Kurravaara	5.22	312	P	Pn	09 25 01.7	+0.2
KIF	Kilpisjarvi	5.72	322	Pn	Pn	09 25 04.0	-4.3
KIF				Sn	Sn	09 26 12.6	-2.0
KIF	Kilpisjarvi	5.72	322	Pn	Pn	09 25 04.0	-4.3
I37NO	I37NO	6.38	317	i		10 08 20.0	
	baz=126,slow=322,SNR=1.0						
HFS	Hagfors	9.16	247	Pn	Pn	09 25 54.8	-0.7
	comp=Z,0.1nm,0.3s,baz=60,slow=14,SNR=5.1						
HFS				Lg	Lg	09 28 23.8	
	comp=Z,0.3nm,0.3s,baz=53,slow=28,SNR=5.3						
NOA	NORSAR Array B	9.65	256	Pn	Pn	09 26 01.1	-1.1
	comp=Z,0.0nm,0.3s,baz=57,slow=12,SNR=1.4						

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*IDC **13** 09:23:57.8±0.9, 48°.92S×124°.00E, h0^{km}, mb4.1/7, mb1 4.3/8, mb1mx4.1/32, mbtmp4.2/8, ML3.0/1, MS3.7/13, Ms1 3.7/13, ms1mx3.5/33, Error ellipse: s-maj=43.5km s-min=16.6km az=98.0*
*NEIC **13** 09:23:59.9±1.4, 48°.9S±0°.1×123°.8E±0°.1, h10^{km}±1^{km}, mb4.5/7, Error ellipse: s-maj=19.9km s-min=14.8km az=191.0*
ISC 13 09:23:59.4±0.7**, 48°.90S**±0°.08×**123°.8E**±0°.2**, h10**^{km}**, n34, σ0^{s}.74**/19**, mb4.1**/7**, MS3.7**/12**, 2C, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W1	Cape Leeuwin H	15.72	329	T	T	09 43 48.0	
	baz=153,slow=74,SNR=50						
H01W2	Cape Leeuwin H	15.73	329	T	T	09 43 48.0	
	baz=153,slow=74,SNR=51						
H01W3	Cape Leeuwin H	15.74	329	T	T	09 43 49.1	
	baz=153,slow=74,SNR=65						
NWAO	Narrogin (SRO)	16.71	340	Pn	Pn	09 27 53.6	0.0
	2.8nm,0.3s,baz=160,slow=12,SNR=18						
NWAO				LR	LR	09 32 51.0	
	comp=Z,574nm,20.6s,baz=168,slow=32						
NWAO	Narrogin (SRO)	16.71	340		Pn	09 27 53.7	+0.2
NWAO				IAmb	IAmb	09 27 57.7	
	comp=Z,48nm,0.8s						
FORT	Forrest	18.39	12	P	Pn	09 28 13.9	-0.5
FORT				IAmb	IAmb	09 28 16.0	
	comp=Z,20nm,0.8s						
TOO	Toolangi	19.35	62	Pn	Pn	09 28 26.7	+0.6
TOO				IAmb	IAmb	09 28 28.3	
	comp=Z,13nm,1.0s						
MORW	Morawa	20.69	340	P	P	09 28 39.3	-0.2
STKA	Stephens Creek	21.64	45	P	P	09 28 49.2	-0.6
	comp=Z,2.2nm,0.7s,baz=216,slow=12,SNR=6.8						
STKA				LR	LR	09 35 30.4	
	comp=Z,126nm,21.6s,baz=210,slow=32						
STKA	Stephens Creek	21.64	45	P	P	09 28 50.3	+0.5
ASAR	Alice Springs	26.42	21	P	P	09 29 35.4	-0.9
	comp=Z,2.7nm,0.9s,baz=202,slow=8.4,SNR=20						
ASAR				LR	LR	09 38 27.6	
	comp=Z,64nm,21.7s,baz=180,slow=33						
WRA	Warramunga Arr	30.11	20	P	P	09 30 08.0	-1.1
	comp=Z,0.7nm,0.9s,baz=193,slow=8.0,SNR=3.6						
WRA				LR	LR	09 40 40.7	
	comp=Z,69nm,20.9s,baz=290,slow=33						
VNDA	Vanda	32.17	165	P	P	09 30 25.8	-1.0
	comp=Z,3.3nm,0.8s,baz=311,slow=7.2,SNR=5.4						
VNDA				LR	LR	09 42 29.9	
	comp=Z,317nm,18.8s,baz=321,slow=35						
QSPA	South Pole Qui	41.22	180	P	P	09 31 43.9	-0.3
	comp=Z,5.3nm,1.0s,baz=138,slow=1.4,SNR=12						
QSPA	South Pole Qui	41.22	180	P	P	09 31 44.2	+0.1
QSPA				IAmb	IAmb	09 31 46.0	
	comp=Z,13nm,1.3s						
DZM	Mont Dzumac	43.02	67	LR	LR	09 47 16.8	
	comp=Z,108nm,18.2s,baz=223,slow=33						
SYO	Syowa Base	43.55	211	⇑eP	P	09 32 02.8	0.0
SYO	Syowa Base	43.55	211	⇑epP	pP	09 32 07.1	+2.4
KAPI	Kappang	43.87	354	LR	LR	09 51 55.1	
	comp=Z,85nm,18.3s,baz=158,slow=38						
LEM	Lembang	44.12	337	LR	LR	09 51 45.4	
	comp=Z,62nm,18.8s,baz=48,slow=38						
SNAA	Sanae	53.97	198	P	P	09 33 22.9	0.0
	comp=Z,4.2nm,0.9s,baz=148,slow=9.8,SNR=8.5						
SNAA	Sanae	53.97	198	P	P	09 33 22.9	0.0
SNAA				IAmb	IAmb	09 33 34.6	
	comp=Z,15nm,1.3s						
PSI	Prapat	55.86	329	LR	LR	09 58 09.6	
	comp=Z,147nm,18.2s,baz=166,slow=37						
H08S2	Diego Garcia H	59.48	296	T	T	10 38 23.3	
	baz=143,slow=76,SNR=8.7						
H08S1	Diego Carcia H	59.49	296	T	T	10 38 25.2	
	baz=143,slow=76,SNR=6.6						
H08S3	Diego Garcia H	59.49	296	T	T	10 38 25.3	
	baz=143,slow=76,SNR=7.1						
PMSA	Palmer Station	66.49	176	LR	LR	10 03 03.8	
	comp=Z,45nm,20.1s,baz=211,slow=35						
CMAR	Chiang Mai Arr	70.63	335	P	P	09 35 15.4	+0.5
	comp=Z,0.8nm,0.5s,baz=180,slow=5.7,SNR=5.9						
PLCA	Paso Flores	89.84	169	LR	LR	10 13 20.8	
	comp=Z,40nm,20.8s,baz=208,slow=33						
USRK	Ussuriysk Ar.	93.00	6	LR	LR	10 21 19.9	
	comp=Z,33nm,18.2s,baz=126,slow=37						
SONM	Songino Array	97.54	348	LR	LR	10 21 06.9	
	comp=Z,24nm,21.9s,baz=186,slow=35						
BPAW	Bear Paw Mtn.	130.60	35		PKiKP	09 43 11.7	+1.7
YKA	Yellowknife Ar	145.68	45	PKPbc	PKPab	09 43 37.6	+0.2
	comp=Z,0.7nm,0.8s,baz=265,slow=3.0,SNR=9.6						
S39A	Bolivar	151.01	99		PKPab	09 44 00.7	+1.0

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*JMA **13** 09:24:47.7±0.2, 35°.64N×140°.13E, h67^{km}±2^{km}, M3.1*
JMA Felt I J1.
*IDC **13** 09:24:51.5±2.9, 35°.30N×139°.66E, h81^{km}±16^{km}, mb3.2/3, mb1 3.4/4, mb1mx3.0/63, mbtmp3.6/4, Error ellipse: s-maj=63.0km s-min=8.2km az=67.0*
ISC 13 09:24:48.2±1.1**, 35°.56N**±0°.05×**140°.11E**±0°.06**, h69**^{km}±8^{km}**, n17, σ0^{s}.96**/23**, mb3.5**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCN	Nagara	0.16	152	P	Pn	09 24 58.6	+0.1
JSMT	Sammumatsuo	0.29	73	P	Pn	09 24 58.7	-0.4
TOK	Tokyo	0.31	294	P	Pn	09 24 59.5	+0.3
BSO3	Boso 3	0.82	156	P	Pn	09 25 04.0	-0.2
BSO3				X		09 25 17.8	
JOD2	Odawara 2	0.89	251	P	Pn	09 25 04.9	-0.3
JOD2				S	Sn	09 25 17.3	-0.5
JAG	Ashikaga	1.01	329	P	Pn	09 25 05.8	-1.0
JRY	Ryogami san	1.08	295	P	Pn	09 25 07.7	0.0
BSO1	Boso 1	1.15	142	eS	Sn	09 25 24.1	+1.2
JFNN	Fujinakano	1.22	253	P	Pn	09 25 09.2	-0.2
JFNN				S	Sn	09 25 25.4	+0.1
JYN	Shimob	1.28	268	P	Pn	09 25 10.0	-0.2
JYN				S	Sn	09 25 26.6	-0.2
JKT	Katashina	1.39	330	P	Pn	09 25 10.7	-1.1
MJAR	Matsushiro Arr	1.82	303	P	Pn	09 25 17.6	+0.2
	2.5nm,0.3s,baz=138,slow=15,SNR=104						
MJAR				S	Sn	09 25 40.8	+1.1
	3.5nm,0.3s,baz=164,slow=20,SNR=5.2						
MAT	Matsushiro	1.83	303	P	Pn	09 25 17.7	+0.2
MAT				S	Sn	09 25 41.4	+1.7
JHJ	Hachijo jima 2	2.45	186	P	Pn	09 25 26.9	+1.0
	32nm,0.3s,baz=71,slow=18,SNR=1.3						
JHJ				S	Sn	09 25 52.5	-2.3
	54nm,0.3s,baz=69,slow=22,SNR=2.1						
MKAR	Makanchi Array	44.02	303	P	P	09 32 48.6	-0.3
	0.3nm,0.6s,baz=80,slow=8.8,SNR=4.2						
WRA	Warramunga Arr	55.47	187	P	P	09 34 15.0	-0.9
	0.6nm,0.5s,baz=359,slow=7.4,SNR=1.3						
ASAR	Alice Springs	59.20	187	P	P	09 34 43.4	+1.3
	0.2nm,0.6s,baz=11,slow=10,SNR=4.5						

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*IDC **13** 09:31:00.4±2.7, 47°.59N×147°.05E, h410^{km}±41^{km}, mb2.8/5, mb1 2.8/9, mb1mx2.6/52, mbtmp3.5/9, Error ellipse: s-maj=55.5km s-min=20.8km az=5.0*
ISC 13 09:30:59.9±1.2**, 47°.6N**±0°.2×**147°.1E**±0°.1**, h403**^{km}**, n9, σ0^{s}.82**/9**, mb3.1**/5**, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	Asahikawa	4.68	224	P	P	09 32 18.9	+0.3
	0.4nm,0.3s,baz=75,slow=7.1,SNR=5.7						
KLR	Kul'dur	10.36	285	P	P	09 33 22.6	+1.4
	0.2nm,0.3s,baz=90,slow=12,SNR=2.1						
USRK	Ussuriysk Ar.	11.07	258	P	P	09 33 28.9	-0.3
	baz=72,slow=13,SNR=5.5						
KSRS	Korea Array	17.35	241	P	P	09 34 38.0	+0.7
	0.3nm,0.3s,baz=45,slow=9.7,SNR=5.4						
SONM	Songino Array	27.19	286	P	P	09 36 08.2	-0.4
	0.2nm,0.4s,baz=87,slow=7.5,SNR=1.5						
MKAR	Makanchi Array	42.90	294	P	P	09 38 20.1	-0.5
	0.4nm,0.5s,baz=64,slow=5.0,SNR=6.5						
KURBB	Kurchatov Arra	43.56	301	P	P	09 38 24.8	-0.9
	0.5nm,0.5s,baz=68,slow=9.0,SNR=3.6						
PDAR	Pinedale Array	67.49	51	P	P	09 41 14.1	0.0
	0.4nm,0.5s,baz=347,slow=1.2,SNR=5.6						
TXAR	Lajitas Array	80.56	57	P	P	09 42 29.2	+0.4
	0.2nm,0.5s,baz=300,slow=4.1,SNR=5.0						

ISC 13 09:36:33.8±1.1**, 49°.56N**±0°.10×**18°.00E**±0°.06**, h10**^{km}**, n5, σ0^{s}.62**/9**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORC	Moravsky Berou	0.37	307	ePG	Pg	09 36 40.6	-0.6
MORC				eSG	Sg	09 36 46.4	+0.3
VRAC	Vranov	0.95	255	ePG	Pb	09 36 52.6	+0.2
VRAC				eSG	Sb	09 37 05.8	+0.8
LANS	Liptovska Anna	1.04	112	ePG	Pn	09 36 54.8	+0.3
LANS				eSG	Sg	09 37 07.4	0.0
LANS				eLG	Lg	09 37 11.9	
KRUC	Moravsky	1.16	245	ePG	Pb	09 36 55.7	-0.3
VYHS	Vyhne	1.20	152	ePG	Pn	09 36 55.8	-0.8
VYHS				eSG	Sn	09 37 13.6	+0.7

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*IDC **13** 09:45:31.5±1.6, 10°.10N×123°.35E, h0^{km}, mb3.8/5, mb1 3.9/5, mb1mx3.6/48, mbtmp3.8/5, Error ellipse: s-maj=69.5km s-min=28.9km az=60.0*
*MAN **13** 09:45:32.6, 10°.09N×123°.27E, h1^{km}, mb4.8, ML3.7, MS3.7*
MAN Intensity III - La Libertad and Guihulngan Negros Oriental; Intensity I - Tayasan Negros Oriental.
ISC 13 09:45:31.8±1.3**, 10°.06N**±0°.04×**123°.29E**±0°.04**, h7**^{km}±10^{km}**, n15, σ1^{s}.98**/22**, mb3.8**/5**, 2C-2D, Cebu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBP	Tagbilaran	0.67	123	iP	Pn	09 45 47.1	-0.7
TBP				iS	Sn	09 46 00.2	+1.7
SNPH	Sibulan	0.71	184	⇓iP	Pn	09 45 48.7	+0.4
SNPH				iS	Sn	09 46 00.2	+0.6
LLP	Lapu-Lapu	0.71	69	⇓eP	Pb	09 45 46.0	-0.6
LLP				eS	Sb	09 45 56.0	-0.6
GUIM	Jordan	0.89	309	eP	Pg	09 45 48.6	-0.4
GUIM				eS	Sg	09 46 01.0	+0.4
MSLP	Maasin	1.55	87	eP	Pg	09 46 01.1	-0.4
MSLP				eS	Sg	09 46 23.6	+2.1
RCP	Roxas	1.59	340	⇑eP	Pb	09 46 00.7	-0.8
RCP				eS	Sg	09 46 23.4	+0.5
PAGZ	Pagadian	2.20	178	eP	Pg	09 46 14.4	+0.4
OTRP	Odiongan	2.61	332	eP	Pb	09 46 16.9	-2.1
BUKP	Musuan	2.78	141	eP	Pb	09 46 20.4	-1.6
KCP	Kidapawan	3.51	149	⇑eP	Pb	09 46 33.7	-0.7
KCP				iS	Sn	09 47 01.9	-7.0
CMAR	Chiang Mai Arr	25.01	292	P	P	09 50 57.5	+0.9
	1.8nm,0.8s,baz=111,slow=7.9,SNR=12						
ASAR	Alice Springs	35.09	163	P	P	09 52 26.9	+1.0
	0.4nm,0.7s,baz=345,slow=7.7,SNR=3.3						
MKAR	Makanchi Array	50.45	324	P	P	09 54 31.7	+1.4
	0.3nm,0.7s,baz=120,slow=9.4,SNR=3.4						
ZALV	Zalesovo Beam	53.44	333	P	P	09 54 52.7	+0.3
	0.8nm,0.5s,baz=121,slow=7.6,SNR=1.9						
ARCES	ARCESS Array B	83.37	339	P	P	09 57 60.0	+0.6
	3.6nm,0.9s,baz=105,slow=6.9,SNR=2.7						

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*ASRS **13** 09:47:18.5, 53°.61N×87°.96E, M1.6, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
NNC 13 09:47:27.4±2.9**, 53°.41N×87°.52E, h0**^{km}**, mb3.6, mpv3.2, 4C-5D, Error ellipse: s-maj=21.6km s-min=18.7km az=18.0, Southwestern Siberia**

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

KURK	Kurchatov	6.11	247	⇓Pn	Pn	09 48 59.5	+0.6
	1.2nm,0.6s						
KURK				⇓Sn	Sn	09 50 10.5	+1.0
	1.9nm,0.7s						
KURK				⇑Lg	Lg	09 50 44.4	
	5.8nm,0.9s						
KURBB	Kurchatov Arra	6.21	247	⇑Pn	Pn	09 49 00.0	-0.2
	2.9nm,0.5s						
KURBB				⇓Sn	Sn	09 50 11.9	+0.1
	4.5nm,0.6s						
KURBB				⇓Lg	Lg	09 50 47.3	
	17nm,1.0s						
MK31	Makanchi Array	7.43	209	⇑Pn	Pn	09 49 17.0	+0.1
	0.4nm,0.6s,baz=32,slow=13,SNR=10						
MK31				⇓Sn	Sn	09 50 43.3	+1.4
	0.6nm,0.5s						
MK31				⇑Lg	Lg	09 51 22.7	
	1.2nm,0.6s,baz=38,slow=31,SNR=5.1						

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*IDC **13** 10:01:06.2±3.8, 24°.53S×179°.89E, h509km±40km, mb3.4/9, mb1 3.6/11, mb1mx3.4/31, mbtmp4.3/11, Error ellipse: s-maj=29.2km s-min=22.6km az=30.0*

ISC 13 10:01:07.0±0.9**, 24°.6S**±0°.1×**179°.9E**±0°.1**, h517**km**, n24, σ1s.00**/24**, mb4.0**/8**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.58	279	P	P	10 03 52.7	+0.9
	0.6nm,0.3s,baz=56,slow=16,SNR=5.8						
MXZ	Matakaoa Point	13.02	185	P	P	10 03 57.5	+1.5
ETAZ	East Tamaki Re	13.04	198	P	P	10 04 04.3	+8.0
HAZ	Te Kaha	13.26	187	P	P	10 03 58.1	-0.4
WMGZ	Waiomatatini S	13.26	185	P	P	10 04 00.2	+1.6
RUGZ	Raukumara Rang	13.48	187	P	P	10 04 02.2	+1.2
PUZ	Puketiti	13.53	185	P	P	10 04 03.3	+1.9
TWGZ	Tauwhareparae	13.65	186	P	P	10 04 04.0	+1.2
URZ	Urewera	13.84	189	P	P	10 04 03.4	-1.3
	3.1nm,0.3s,baz=284,slow=1.7,SNR=29						
URZ				S	S	10 06 29.8	-1.3
	0.8nm,0.3s,baz=51,slow=23,SNR=8.2						
URZ	Urewera	13.84	189	P	P	10 04 03.7	-1.0
MUGZ	Murupara	14.11	190	P	P	10 04 07.2	-0.2
MTHZ	Maungataniwha	14.46	189	P	P	10 04 05.1	-6.1
RPZ	Rata Peaks	20.41	199	P	P	10 05 08.4	+0.1
	6.4nm,0.6s,baz=77,slow=8.8,SNR=2.0						
CTA	Charters Tower	31.36	271	P	P	10 06 45.2	0.0
	5.3nm,0.4s,baz=97,slow=9.7,SNR=13						
STKA	Stephens Creek	34.36	249	P	P	10 07 10.8	+0.3
	2.1nm,0.3s,baz=92,slow=11,SNR=18						
ASAR	Alice Springs	41.80	261	P	P	10 08 11.0	-0.4
	1.1nm,0.4s,baz=92,slow=7.5,SNR=22						
ASAR				PcP	PcP	10 09 55.2	-0.3
	0.3nm,0.5s,baz=106,slow=4.8,SNR=4.5						
WRA	Warramunga Arr	42.24	267	P	P	10 08 13.6	-1.2
	2.3nm,0.4s,baz=98,slow=8.1,SNR=4.6						
FITZ	Fitzroy Crossi	50.65	266	P	P	10 09 18.5	-0.1
	3.0nm,0.6s,baz=4.7,slow=0.3,SNR=8.7						
CMAR	Chiang Mai Arr	89.64	290	P	P	10 13 10.8	+0.9
	0.8nm,0.4s,baz=113,slow=4.2,SNR=2.2						
TXAR	Lajitas Array	90.89	58	P	P	10 13 15.8	+0.1
	0.3nm,0.7s,baz=202,slow=6.5,SNR=3.5						
ILAR	Eielson Array	92.71	14	P	P	10 13 22.3	-0.7
	0.6nm,1.0s,baz=216,slow=4.5,SNR=4.1						
AKASG	Malin Array Be	145.46	327	PKPbc	PKPdf	10 19 45.1	-0.7
	0.8nm,0.4s,baz=42,slow=3.7,SNR=5.1						
BRTR	Keskin Array B	147.88	306	PKPbc	PKPbc	10 19 53.5	-0.6
	0.7nm,0.6s,baz=25,slow=3.8,SNR=3.2						
TORD	Torodi Ar. Bea	168.50	189	PKPab	PKPab	10 21 28.6	+0.8
	0.4nm,0.6s,baz=180,slow=3.3,SNR=3.0						

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*IDC **13** 10:08:43.0±5.4, 21°.34S×170°.20E, h168km±33km, mb3.3/3, mb1 3.4/4, mb1mx3.1/42, mbtmp3.6/4, Error ellipse: s-maj=97.2km s-min=38.1km az=147.0*

ISC 13 10:08:41.7±1.9**, 21°.2S**±0°.7×**170°.3E**±0°.3**, h150**km**, n8, σ2s.00**/9**, mb3.5**/3**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.66	255	P	Pn	10 09 38.3	+0.7
	0.8nm,0.3s,baz=96,slow=19,SNR=9.2						
DZM				S	Sn	10 10 21.8	+0.9
	2.5nm,0.3s,baz=4.8,slow=24,SNR=7.3						
STKA	Stephens Creek	27.70	241	P	P	10 14 14.9	-0.9
	0.7nm,0.7s,baz=61,slow=11,SNR=3.4						
WRA	Warramunga Arr	33.60	266	P	P	10 15 06.4	-1.6
	0.6nm,0.5s,baz=99,slow=7.7,SNR=5.0						
ASAR	Alice Springs	33.64	259	P	P	10 15 07.3	-1.0
	0.8nm,0.8s,baz=92,slow=9.1,SNR=7.6						
ARCES	ARCESS Array B	127.15	345	PKP	PKPdf	10 27 26.2	-1.3
	1.5nm,0.8s,baz=56,slow=2.3,SNR=1.4						
BRG	Berggiesshubel	145.00	334	*e*PKP	PKPbc	10 28 00.2	-0.4
	12nm,1.3s						
GERES	GERESS Array B	146.62	331	PKPbc	PKPdf	10 28 04.8	+0.9
	1.4nm,0.5s,baz=31,slow=3.6,SNR=8.1						
DAVOX	Davos/Dischmat	149.87	333	PKPbc	PKPdf	10 28 13.3	+4.0
	6.7nm,1.0s,baz=56,slow=7.8,SNR=5.8						

IDC 13 10:26:40.3±6.3**, 25°.89N**×**67°.07E, h0**km**, mb3.7**/5**, mb1 3.7**/5**, mb1mx3.4**/60**, mbtmp3.7**/5**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.6**/36**, Error ellipse: s-maj=191.3km s-min=29.2km az=139.0, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	17.78	18	P	Pn	10 30 46.1	-3.3
	0.2nm,0.3s,baz=166,slow=5.0,SNR=3.7						
MKAR	Makanchi Array	24.11	26	P	P	10 31 57.6	-0.1
	1.0nm,0.6s,baz=205,slow=9.9,SNR=11						
KURBB	Kurchatov Arra	26.22	17	P	P	10 32 17.2	+0.5
	0.4nm,0.5s,baz=209,slow=8.8,SNR=4.5						
BVAR	Borovoye Array	27.21	4	P	P	10 32 25.5	-0.2
	0.4nm,0.4s,baz=158,slow=12,SNR=3.9						
ZALV	Zalesovo Beam	30.98	20	P	P	10 32 59.0	-0.1
	0.7nm,0.5s,baz=221,slow=11,SNR=2.4						
BRTR	Keskin Array B	31.10	305	LR	LR	10 46 58.1	
	comp=Z,34nm,19.2s,baz=26,slow=39						
TORD	Torodi Ar. Bea	62.37	272	P	P	10 37 05.2	0.0
	1.1nm,0.9s,baz=62,slow=5.7,SNR=6.5						

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*INET **13** 10:36:03.8, 12°.48N×87°.80W, h69km, ML3.5*
*SNET **13** 10:36:04.9±0.6, 12°.55N×87°.87W, h47km±12km, ML3.3*

ISC 13 10:36:01.9±3.6**, 12°.4N**±0°.1×**87°.77W**±0°.08**, h30**km±20km**, n11, σ0s.73**/21**, 2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.88	356	⇓*e*P	Pn	10 36 19.1	+0.8
CNCH				*e*S	Sb	10 36 30.6	+0.3
LCND	La Caada	0.92	353	⇓*e*P	Pn	10 36 19.6	+0.8
LCND				*e*S	Sb	10 36 30.3	-1.0
LCND				IAML		10 36 34.3	
	comp=Z,846nm,0.3s						
JUCU	Jucuar¡n	0.97	332	*e*P	Pn	10 36 19.8	+0.2
JUCU				*e*S	Sn	10 36 31.7	-0.8
JUCU				IAML		10 36 37.7	
	comp=Z,431nm,0.3s						
BLLM	Bellamira	1.14	337	*e*P	Pn	10 36 22.6	+0.7
BLLM				*e*S	Sn	10 36 35.7	-0.8
RANC	El Ranchito	1.15	334	*e*P	Pn	10 36 22.8	+0.7
RANC				*e*S	Sn	10 36 37.0	0.0
RANC				IAML		10 36 38.6	
	comp=Z,648nm,0.2s						
PACA	Pacayal	1.20	333	*e*P	Pn	10 36 23.3	+0.5
PACA				*e*S	Sn	10 36 37.9	-0.2
PACA				IAML		10 36 40.1	
	comp=Z,2μm,0.2s						
MOMN	Momotombo	1.21	89	*e*P	Pn	10 36 20.4	-2.3
MOMN				*e*S	Sn	10 36 37.1	-1.0
TECA	Tecapa	1.31	327	*e*P	Pn	10 36 24.9	+0.6
TECA				*e*S	Sn	10 36 40.5	-0.3
COEB	Comit de Eme	1.32	326	*e*P	Pn	10 36 25.2	+0.8
COEB				*e*S	Sn	10 36 40.5	-0.7
FAGO	Alcalda de S	1.33	346	*e*P	Pn	10 36 24.8	+0.2
FAGO				*e*S	Sn	10 36 40.5	-0.8
TGUH	Tegucigalpa,Un	1.73	16	*e*P	Pn	10 36 30.9	+0.9
TGUH				*e*S	Sn	10 36 51.0	-0.1

IDC 13 10:38:38.4±1.8**, 4°.01N**×**123°.31E, h556**km±25km**, mb3.0**/4**, mb1 3.3**/5**, mb1mx2.7**/43**, mbtmp4.1**/5**, Error ellipse: s-maj=61.2km s-min=13.7km az=57.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	9.31	121	P	P	10 40 50.1	+0.6
	1.5nm,0.3s,baz=315,slow=20,SNR=2.3						
WRA	Warramunga Arr	26.16	156	P	P	10 43 28.8	-0.3
	3.6nm,0.3s,baz=335,slow=9.9,SNR=44						
CMAR	Chiang Mai Arr	27.82	303	P	P	10 43 43.8	0.0
	0.7nm,0.3s,baz=130,slow=7.7,SNR=6.1						
ASAR	Alice Springs	29.39	160	P	P	10 43 57.2	-0.1
	0.2nm,0.4s,baz=340,slow=6.9,SNR=12						
ASAR				ScP	ScP	10 49 35.0	-0.1
	0.1nm,0.4s,baz=343,slow=2.8,SNR=5.8						
MKAR	Makanchi Array	55.42	327	P	P	10 47 20.4	-0.2
	1.4nm,0.4s,baz=121,slow=8.0,SNR=21						

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*IDC **13** 11:24:05.7±1.4, 23°.69S×175°.21W, h0km, mb4.2/12, mb1 4.4/12, mb1mx4.3/24, mbtmp4.2/12, MS3.7/13, Ms1 3.7/13, ms1mx3.5/32, Error ellipse: s-maj=61.7km s-min=20.2km az=153.0*

ISC 13 11:24:10.8±0.8**, 23°.5S**±0°.2×**175°.2W**±0°.1**, h29**km**, n26, σ1s.49**/19**, mb4.2**/12**, MS3.8**/16**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	16.97	271	*e*P	P	11 28 11.8	+3.8
	19nm,0.8s						
DZM				*e*LR	LR	11 32 07.1	
	comp=Z,249nm,22.6s						
TBI	Tubuai	23.63	95	*e*LR	LR	11 34 44.7	
	comp=Z,387nm,24.8s						
PPT2	Papeete2	24.70	81	*e*LR	LR	11 35 14.3	
	comp=Z,318nm,22.0s						
PPT	Papeete	24.71	81	LR	LR	11 36 56.1	
	comp=Z,244nm,20.7s,baz=232,slow=31						
CTA	Charters Tower	35.86	268	P	P	11 31 07.7	-0.7
	4.5nm,0.7s,baz=93,slow=10,SNR=7.5						
TAOE	Nuku Hiva Isla	36.57	72	*e*LR	LR	11 40 40.3	
	comp=Z,173nm,22.0s						
STKA	Stephens Creek	38.94	248	P	P	11 31 32.9	-1.4
	1.4nm,0.7s,baz=84,slow=13,SNR=4.5						
STKA				LR	LR	11 46 23.7	
	comp=Z,156nm,19.2s,baz=46,slow=34						
ASAR	Alice Springs	46.42	259	P	P	11 32 33.8	-1.4
	3.1nm,0.9s,baz=93,slow=8.6,SNR=19						
ASAR				LR	LR	11 51 24.9	
	comp=Z,165nm,18.2s,baz=126,slow=35						
WRA	Warramunga Arr	46.81	264	P	P	11 32 36.4	-1.8
	1.2nm,0.4s,baz=103,slow=8.3,SNR=6.5						
WRA				LR	LR	11 52 22.0	
	comp=Z,113nm,18.5s,baz=120,slow=36						
KAPI	Kappang	65.13	276	LR	LR	12 02 24.7	
	comp=Z,61nm,18.8s,baz=74,slow=35						
MJAR	Matsushiro Arr	74.15	323	LR	LR	12 03 54.8	
	comp=Z,28nm,21.5s,baz=215,slow=32						
PETK	Petropavlovsk-	79.84	344	P	P	11 36 15.8	-0.3
	4.2nm,0.9s,baz=132,slow=6.2,SNR=4.5						
PETK				LR	LR	12 05 52.8	
	comp=Z,70nm,21.5s,baz=63,slow=31						
KSRS	Korea Array	80.83	318	P	P	11 36 22.1	+0.2
	2.7nm,1.0s,baz=120,slow=7.5,SNR=4.1						
KSRS				LR	LR	12 08 06.6	
	comp=Z,16nm,21.0s,baz=145,slow=33						
YBH	Yreka Blue Hor	81.07	37	LR	LR	12 04 49.9	
	comp=Z,88nm,19.3s,baz=216,slow=30						
NVAR	Mina Array Bea	81.48	42	P	P	11 36 26.1	+0.5
	0.8nm,0.8s,baz=221,slow=9.3,SNR=6.2						
USRK	Ussuriysk Ar.	82.89	325	P	P	11 36 33.8	+1.2
	6.3nm,0.9s,baz=133,slow=2.6,SNR=8.6						
VNA3	Neumayer Olymp	84.98	175	P	P	11 36 44.1	+1.1
PLCA	Paso Flores	85.35	132	LR	LR	12 06 51.8	
	comp=Z,42nm,19.2s,baz=230,slow=30						
VNA2	Neumayer--Watz	85.44	176	P	P	11 36 46.8	+1.5
TXAR	Lajitas Array	86.54	56	P	P	11 36 51.8	+0.3
	0.3nm,0.9s,baz=212,slow=5.0,SNR=2.8						
TXAR				LR	LR	12 07 49.8	
	comp=Z,34nm,21.0s,baz=0.0,slow=30						
PDAR	Pinedale Array	89.41	42	P	P	11 37 04.7	-0.3
	0.3nm,0.8s,baz=194,slow=3.3,SNR=2.8						
ILAR	Eielson Array	90.68	12	P	P	11 37 09.8	-0.4
	0.8nm,1.1s,baz=210,slow=6.8,SNR=1.7						
CMAR	Chiang Mai Arr	93.53	288	P	P	11 37 26.1	+1.6
	3.5nm,0.8s,baz=132,slow=3.2,SNR=25						
CMAR				LR	LR	12 18 28.9	
	comp=Z,16nm,19.9s,baz=215,slow=35						
LPAZ	La Paz	98.54	112	LR	LR	12 13 48.6	
	comp=Z,42nm,21.1s,baz=177,slow=30						
AKASG	Malin Array Be	146.87	331	PKP	PKPdf	11 43 46.2	-2.0
	0.3nm,0.3s,baz=38,slow=4.3,SNR=5.6						
AKASG				PKPbc	PKPbc	11 43 49.2	-0.9
	0.3nm,0.3s,baz=36,slow=3.8,SNR=2.6						
BRTR	Keskin Array B	150.75	310	PKP	PKPdf	11 43 55.0	0.0
	1.1nm,1.0s,baz=264,slow=4.1,SNR=2.2						
BRTR				PKPbc	PKiKP	11 44 00.7	-0.6
	1.0nm,0.8s,baz=174,slow=2.6,SNR=4.5						

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*MOS **13** 11:44:05.2±2.9, 50°.02N×96°.45E, h10km, mb3.9/2, Error ellipse: s-maj=12.5km s-min=9.1km az=108.3*
*IDC **13** 11:44:08.5±1.2, 50°.47N×96°.39E, h0km, mb1 3.2/5, mb1mx3.1/57, mbtmp3.2/5, ML2.5/4, Error ellipse: s-maj=38.7km s-min=10.5km az=174.0*
*ASRS **13** 11:44:10.4±0.2, 51°N±1°×9°6E±°, h2km, MLh4.7/20, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*

ISC 13 11:44:10.0±0.6**, 50°.66N**±0°.04×**96°.20E**±0°.03**, h10**km**, n58, σ2s.67**/99**, 1C-1D, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZLR	Kyzyl	1.52	314	Pg	Pn	11 44 37.7	+0.5
KZLR				Sg	Sg	11 44 59.5	+0.7
KZLR	Kyzyl	1.52	314	PN	Pn	11 44 37.8	+0.6
TDJR	Todzha	1.75	358	Pg	Pn	11 44 41.3	+0.9
TDJR				Sg	Sb	11 45 06.0	+1.8
TDJR	Todzha	1.75	358	*e*PN	Pn	11 44 41.1	+0.7
ORL	Orlik	2.94	49	Pg	Pn	11 44 58.8	+2.0
ORL				Sg	Sn	11 45 35.9	+3.7
ORL	Orlik	2.94	49	*e*PN	Pn	11 44 58.5	+1.7
ORL				*e*		11 45 35.8	
ORL				pmax	pmax		
	comp=Z,122nm,0.4s						
ORL				smax	smax		
	comp=N,762nm,0.7s						
MOY	Mondy	3.19	70	Pn	Pn	11 45 00.9	+0.7
MOY				Pg	Pb	11 45 06.7	+0.1
MOY				Sg	Sn	11 45 42.9	+4.6
MOY	Mondy	3.19	70	*e*PN	Pn	11 45 01.3	+1.1
MOY				*e*		11 45 42.6	
MOY				pmax	pmax		
	comp=Z,397nm,0.6s						
MOY				smax	smax		
	comp=N,892nm,0.6s						
DJOS	Djoyskaya Sosn	3.67	308	Pg	Pb	11 45 17.9	+3.1
DJOS				Sg	Sg	11 46 05.5	-2.3
DJOS	Djoyskaya Sosn	3.67	308	PN	Pb	11 45 15.3	+0.4
DJOS						11 46 04.0	
CERR	Cheremushki	3.70	308	Pg	Pb	11 45 17.1	+1.8
CERR				Sg	Sg	11 46 06.2	-2.4
CERR	Cheremushki	3.70	308	PN	Pb	11 45 14.7	-0.6
CERR						11 46 04.5	
DJO	Djoy, Khakassi	3.76	306	Pn	Pn	11 45 11.8	+3.8
DJO				Pg	Pg	11 45 20.2	-1.7
DJO				Sg	Sb	11 46 07.2	+5.3
DJO	Djoy, Khakassi	3.76	306	PN	Pb	11 45 18.8	+2.5
DJO						11 46 06.8	
ARS	Arshan	4.11	70	*e*PN	Pb	11 45 19.5	-2.9
ARS				*e*		11 46 10.2	
ARS				pmax	pmax		
	comp=Z,104nm,0.5s						
ARS				smax	smax		
	comp=E,773nm,0.6s						
ABNR	Abakan	4.25	318	Pn	Pn	11 45 17.8	+3.2
ABNR				Pg	Pg	11 45 32.7	+1.5
ABNR				Sg	Sg	11 46 23.6	-2.6
ORY	Orie	4.40	352	Pn	Pn	11 45 18.3	+1.5
ORY				Pg	Pb	11 45 27.1	-0.2
ORY				Sg	Sb	11 46 25.0	+4.5
ORY	Orie	4.40	352	PN	Pb	11 45 27.9	+0.6
ORY						11 46 25.2	
MINR	Mina	4.42	345	Pn	Pn	11 45 20.9	+3.9
MINR				Pg	Pb	11 45 30.8	+3.2
MINR				Sg	Sg	11 46 29.9	-1.9
ZAK	Zakamensk	4.53	91	*e*PN	Pn	11 45 12.4	-6.2
ZAK				*e*		11 45 24.4	
ZAK				pmax	pmax		
	comp=Z,140nm,0.7s						
TLY	Talaya	4.80	75	Pn	Pn	11 45 23.7	+1.4
	comp=Z,0.0nm,0.3s,baz=234,slow=16,SNR=2.3						
TLY				Pg	Pb	11 45 30.5	-3.6
	comp=Z,0.1nm,0.3s,baz=247,slow=14,SNR=26						
TLY				Lg	Lg	11 46 31.3	
	comp=Z,0.2nm,0.3s,baz=88,slow=12,SNR=11						
TLY	Talaya	4.80	75	Pg	Pb	11 45 32.6	-1.5
TLY				Sg	Sb	11 46 31.7	-0.1
TLY	Talaya	4.80	75	*e*PN	Pb	11 45 31.0	-3.1
TLY				*e*		11 46 31.6	
TLY				pmax	pmax		
	comp=Z,60nm,0.5s						
TLY				smax	smax		
	comp=N,294nm,0.4s						
SLNR	Muhor-Tarhata,	5.04	263	Pn	Pn	11 45 27.0	+1.2
SLNR				Pg	Pb	11 45 41.4	+3.0
SLNR				Sg	Sg	11 46 50.3	-1.4
CUR	Chagan-Uzun	5.05	267	Pn	Pn	11 45 27.6	+1.8
CUR				Pg	Pb	11 45 40.1	+1.7
CUR				Sg	Sg	11 46 51.2	-0.9
ULGR	Ulagan, Altay	5.24	273	Pn	Pn	11 45 30.9	+2.5
ULGR				Pg	Pb	11 45 44.8	+3.1
ULGR				Sg	Sg	11 46 55.7	-2.4
IRK	Irkutsk	5.29	69	Pn	Pn	11 45 28.7	-0.3
IRK				Pg	Pb	11 45 42.5	0.0
IRK				Sg	Sb	11 46 47.9	+1.9
LUZB	Luzhba, Kemero	5.41	307	Pn	Pn	11 45 33.5	+2.9
LUZB				Pg	Pg	11 45 50.0	-3.4
LUZB				Sg	Sg	11 46 58.4	-5.0
AKAR	Aktash	5.49	270	Pn	Pn	11 45 33.8	+2.0
AKAR				Pg	Pb	11 45 50.2	+4.3
AKAR				Sg	Sg	11 47 03.1	-2.9
CHBI	Chibit, Altay	5.56	270	Pn	Pn	11 45 34.8	+2.0
CHBI				Pg	Pg	11 45 55.1	-1.3
CHBI				Sg	Sg	11 47 07.8	-0.6
TASR	Tashtagol	5.58	295	Pn	Pn	11 45 36.0	+2.9
TASR				Pg	Pg	11 45 56.3	-0.5
TASR				Sg	Sg	11 47 05.0	-4.0
DGZ	Jazzator, Alta	5.71	264	Pn	Pn	11 45 37.0	+2.1
DGZ				Pg	Pb	11 45 53.4	+3.7
DGZ				Sg	Sg	11 47 11.8	-1.4
ARTR	Artybash	5.72	285	Pn	Pn	11 45 37.4	+2.6
ARTR				Pg	Pb	11 45 52.4	+2.6
ARTR				Sg	Sg	11 47 10.3	-3.1
GZL	Zheleznogorsk	5.84	345	Sg	Sg	11 47 13.4	-3.8
SHTK	Zheleznogorsk-	5.89	346	Pg	Pn	11 45 44.2	+7.0
SHTK				Sg	Sb	11 47 03.5	+0.3
GZLN	Zheleznogorsk	5.91	347	Pn	Pn	11 45 40.4	+2.8
GZLN				Pg	Pb	11 45 57.0	+3.9
GZLN				Sg	Sb	11 47 13.4	+10
TUNR	Tungur	6.33	269	Pg	Pg	11 46 06.4	-4.7
TUNR				Sg	Sg	11 47 32.0	-0.9
ELDR	Elanda	6.41	279	Pn	Pn	11 45 47.3	+2.9
ELDR				Pg	Pg	11 46 07.9	-4.7
ELDR				Sg	Sg	11 47 33.8	-1.9
GALT	Gorno-Altaysk,	6.56	285	Pg	Pb	11 46 08.6	+4.6
GALT				Sg	Sg	11 47 36.7	-3.6
ELT	Eltsovka	6.68	297	Pn	Pn	11 45 50.4	+2.3
ELT				Pg	Pb	11 46 10.0	+3.8
ELT				Sg	Sg	11 47 39.6	-4.7
UKR	Ust'-Kan	7.25	277	Pn	Pn	11 45 53.9	-2.1
UKR				Pg	Pg	11 46 24.3	-4.3
UKR				Sg	Sg	11 48 01.6	-0.8
SONM	Songino Array	7.25	109	Pn	Pn	11 45 51.9	-4.1
	comp=N,1.5nm,0.3s,baz=298,slow=15,SNR=29						
SONM				Pg	Pb	11 46 14.0	-1.8
	comp=N,4.1nm,0.3s,baz=298,slow=18,SNR=32						
SONM				Lg	Lg	11 47 51.2	
	comp=N,7.7nm,0.3s,baz=294,slow=26,SNR=8.9						
SALR	Pechorkino, Sa	7.42	305	Pg	Pb	11 46 21.0	+2.3
SALR				Sg	Sg	11 48 02.3	-5.7
OGRR	Ongureny	7.62	63	*e*P	Pn	11 46 00.8	-0.2
OGRR				pmax	pmax		
	comp=Z,15nm,0.8s						
ULN	Ulaanbaatar	7.63	107	Pg	Pb	11 46 22.7	+0.3
ULN				Sg	Sg	11 48 05.6	-9.1
ZALV	Zalesovo Beam	7.71	300	Pn	Pn	11 46 04.7	+2.5
	comp=Z,0.3nm,0.3s,baz=114,slow=14,SNR=2.7						
ZALV				Lg	Lg	11 48 10.3	
	comp=Z,2.6nm,0.3s,baz=97,slow=20,SNR=3.7						
NVSII	Novosibirsk	8.90	303	Sg	Sg	11 48 48.9	-6.5
BSTK	Bystrovka, Nov	9.12	301	Sg	Sn	11 48 57.0	+53
ALXA	Alekseevka, NS	9.29	303	Sg	Sn	11 49 03.0	+55
MKAR	Makanchi Array	9.97	253	Pn	Pn	11 46 35.1	+1.9
	comp=Z,0.1nm,0.3s,baz=67,slow=12,SNR=1.6						
MKAR				Lg	Lg	11 49 25.4	
	comp=Z,0.7nm,0.3s,baz=59,slow=28,SNR=2.7						
KURK	Kurchatov	11.15	277	P	Pn	11 46 50.4	+1.1
KURBB	Kurchatov Arra	11.22	277	Pn	Pn	11 46 50.4	+0.2
	comp=Z,0.0nm,0.3s,baz=83,slow=16,SNR=3.7						
KURBB				Lg	Lg	11 50 08.9	
	comp=Z,0.1nm,0.3s,baz=70,slow=31,SNR=6.0						
BRVK	Borovoye	16.16	289	⇑*e*P	Pn	11 47 54.1	-2.8
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AAK	Ala-Archa	16.88	250	Lg	Lg	11 52 59.9	
	comp=Z,0.4nm,0.3s,baz=200,slow=16,SNR=1.9						
NRIK	Noril'sk	19.20	351	P	P	11 48 32.0	-1.5
TIXI	Tiksi	25.67	23	⇓*e*P	P	11 49 37.9	-1.6
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
OBN	Obninsk	35.30	301	*e*P	P	11 51 03.4	-1.3
OBN				*e*		11 52 21.7	
BILL	Bilibino	37.23	36	*e*P	P	11 51 20.4	-0.7
BILL				*e*		11 52 48.9	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.3s						

IDC 13 11:47:42.0±10.0**, 5°.88N**×**95°.84E, h0**km**, mb3.3**/2**, mb1 3.6**/3**, mb1mx3.3**/51**, mbtmp3.4**/3**, ML3.9**/1**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.6**/20**, Error ellipse: s-maj=279.3km s-min=43.4km az=80.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	12.87	13	Pn	Pn	11 50 46.4	0.0
	0.2nm,0.3s,baz=201,slow=14,SNR=5.5						
BRDH	Bariadhala	17.19	347	LR	LR	11 58 55.3	
	comp=Z,93nm,19.1s,baz=132,slow=39						
WRA	Warramunga Arr	45.74	125	P	P	11 56 05.6	+0.1
	0.3nm,0.8s,baz=306,slow=8.7,SNR=7.2						
ASAR	Alice Springs	47.35	130	P	P	11 56 17.7	-0.4
	0.3nm,0.7s,baz=298,slow=7.9,SNR=5.9						

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*JMA **13** 12:55:20.2±0.1, 38°.95N×142°.44E, h34km±2km, M3.2*
*IDC **13** 12:55:25.0±3.3, 38°.99N×142°.21E, h76km±30km, mb3.1/3, mb1 3.3/5, mb1mx3.0/46, mbtmp3.4/5, Error ellipse: s-maj=40.3km s-min=19.7km az=114.0*

ISC 13 12:55:20.3±1.3**, 38°.96N**±0°.05×**142°.34E**±0°.09**, h27**km**, n23, σ1s.35**/23**, mb3.4**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.54	283	P	Pn	12 55 32.3	+0.1
JKMT	Kesennumamotoy	0.69	258	P	Pn	12 55 34.4	+0.1
JKMT				*e*S	Sn	12 55 44.3	+0.1
MIYJ	Miyakonagasawa	0.74	327	P	Pn	12 55 34.6	-0.4
MIYJ				S	Sn	12 55 45.0	-0.3
JMK	Ichinoseki	0.88	270	P	Pb	12 55 37.4	+0.5
JMK				S	Sn	12 55 49.8	+1.1
JIO	Ouri	0.93	237	P	Pn	12 55 37.3	-0.2
JIO				S	Sb	12 55 49.5	-0.1
JOM	Ohasama	0.96	303	P	Pb	12 55 38.9	+0.5
JTH	Tanohata	1.05	339	P	Pb	12 55 39.3	-0.5
JKZ	Kuzumaki	1.29	323	P	Pb	12 55 43.9	0.0
JOU	Okura	1.44	246	P	Pb	12 55 45.7	-0.8
JYK	Kaneyama	1.55	269	P	Pb	12 55 48.2	-0.1
JANG	Nango	1.55	336	P	Pb	12 55 47.7	-0.7
MJAR	Matsushiro Arr	4.07	235	P	Pn	12 56 24.7	+4.0
	0.2nm,0.3s,baz=35,slow=14,SNR=13						
MJAR				S	Sn	12 57 09.5	+2.0
	0.0nm,0.3s,baz=85,slow=18,SNR=1.7						
MAT	Matsushiro	4.07	235	P	Pn	12 56 20.1	-0.7
MAT				*e*S	Sn	12 57 08.0	+0.5
ASAJ	Asahikawa	5.16	2	P	Pn	12 56 38.7	+3.0
	0.4nm,0.3s,baz=249,slow=12,SNR=4.5						
H11N2	WAKE ISLAND Hy	28.58	125	T	T	13 31 39.7	
	baz=318,slow=75,SNR=4.9						

H11N1	WAKE ISLAND Hy	28.59	125	T	T	13 31 39.9	
	baz=318,slow=75,SNR=5.0						
H11N3	WAKE ISLAND Hy	28.59	125	T	T	13 31 41.0	
	baz=318,slow=75,SNR=4.5						
H11S1	WAKE ISLAND Hy	29.36	127	T	T	13 32 37.4	
	baz=319,slow=76,SNR=3.8						
H11S3	WAKE ISLAND Hy	29.36	127	T	T	13 32 39.0	
	baz=319,slow=76,SNR=5.1						
H11S2	WAKE ISLAND Hy	29.38	127	T	T	13 32 38.1	
	baz=319,slow=76,SNR=4.2						
MKAR	Makanchi Array	43.75	301	P	P	13 03 22.2	-1.0
	0.3nm,0.8s,baz=89,slow=6.6,SNR=2.2						
WRA	Warramunga Arr	59.07	189	P	P	13 05 16.8	-1.3
	0.6nm,0.5s,baz=5.3,slow=7.2,SNR=9.7						
ASAR	Alice Springs	62.80	189	P	P	13 05 42.6	-0.7
	0.2nm,0.6s,baz=1.0,slow=7.0,SNR=5.6						

IDC 13 13:02:30.9±2.8, 6°.76S×130°.45E, h74^{km}±38^{km}, mb3.5/1, mb1 3.3/5, mb1mx3.1/46, mbtmp3.4/5, ML3.3/4, Error ellipse: s-maj=81.2km s-min=23.2km az=90.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.91	8	P	Pn	13 03 56.2	+0.2
	0.8nm,0.3s,baz=241,slow=5.1,SNR=11						
FITZ	Fitzroy Crossi	12.20	202	P	Pn	13 05 21.4	-0.5
	0.2nm,0.3s,baz=167,slow=0.4,SNR=11						
WRA	Warramunga Arr	13.63	164	P	Pn	13 05 40.5	-0.6
	0.1nm,0.3s,baz=351,slow=13,SNR=6.3						
WRA				S	Sn	13 08 03.4	-7.7
	0.2nm,0.3s,baz=340,slow=22,SNR=6.4						
ASAR	Alice Springs	17.13	169	P	P	13 06 26.7	+0.4
	0.1nm,0.3s,baz=345,slow=9.3,SNR=10						
MKAR	Makanchi Array	68.28	327	P	P	13 13 24.0	0.0
	0.6nm,0.5s,baz=117,slow=7.9,SNR=9.0						

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*IDC **13** 13:05:02.1±0.9, 33°.03N×103°.72E, h0^{km}, mb3.8/8, mb1 4.0/10, mb1mx3.7/53, mbtmp3.8/10, ML3.8/2, MS3.2/7, Ms1 3.2/7, ms1mx3.1/56, Error ellipse: s-maj=31.8km s-min=16.2km az=61.0*

*BJI **13** 13:05:06.5±0.0, 33°.15N×103°.78E, h26^{km}, mb4.2/6, ML4.0/23, Ms3.9/9, Ms7 3.7/6*

ISC 13 13:05:05.1±0.6, 33°.15N±0°.03×103°.71E±0°.05, h10^{km}, n22, σ2^{s}.20/30, mb3.8/7, MS3.2/3, 1C, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	Chengdu	2.23	179	Pn	Pn	13 05 42.8	+0.6
CD2				Pg	Pb	13 05 45.5	0.0
CD2				Sn	Sb	13 06 15.1	+1.9
CD2				Sg	Sg	13 06 18.3	+1.5
CD2				smax	smax		
	comp=N,2μm,0.7s						
CD2				smax	smax		
	comp=E,1μm,0.9s						
LZH	Lanzhou	2.93	2	Pg	Pb	13 05 59.3	+1.7
LZH				Sg	Sb	13 06 36.4	+2.8
LZH				smax	smax		
	comp=N,1μm,1.0s						
LZH				smax	smax		
	comp=E,1μm,1.0s						
XAN	Xi'an	4.44	77	Pn	Pn	13 06 11.0	-1.5
XAN				Pg	Pb	13 06 24.3	+1.2
XAN				Sn	Sn	13 06 58.0	-6.2
XAN				Sg	Sb	13 07 18.6	+1.9
XAN				smax	smax		
	comp=N,920nm,0.9s						
XAN				smax	smax		
	comp=E,680nm,0.8s						
XAN				LR	LR		
	comp=N,2μm,7.1s						
XAN				LR	LR		
	comp=E,1μm,7.9s						
XAN				LR	LR		
	comp=Z,810nm,7.6s						
GTA	Gaotai	7.00	334	*e*Pn	Pn	13 06 48.5	+0.8
GTA				smax	smax		
	comp=N,15nm,1.1s						
GTA				smax	smax		
	comp=E,15nm,1.2s						
GTA				LR	LR		
	comp=N,450nm,12.1s						
GTA				LR	LR		
	comp=E,670nm,12.4s						
GYA	Guiyang	7.14	158⇑	*i*Pn	Pn	13 06 50.8	+1.1
GYA				Sn	Sn	13 08 13.4	+2.4
GYA				Sg	Sg	13 08 51.8	-2.5
GYA				smax	smax		
	comp=N,80nm,0.9s						
GYA				smax	smax		
	comp=E,130nm,1.0s						
KMI	Kunming	8.04	186	P	Pn	13 07 03.3	+1.1
KMI				S	Sn	13 08 35.0	+1.7
KMI				smax	smax		
	comp=N,28nm,0.6s						
KMI				smax	smax		
	comp=E,24nm,0.6s						
KMI				LR	LR		
	comp=N,450nm,9.7s						
KMI				LR	LR		
	comp=E,310nm,7.8s						
KMI				LR	LR		
	comp=Z,480nm,10.3s						
BTO	Baotou	8.99	32	*e*P	Pn	13 07 16.1	+1.0
WHN	Wuhan	9.41	103	*e*P	Pn	13 07 24.5	+3.8
WHN				S	Sn	13 09 09.9	+3.3
SONM	Songino Array	14.81	7	Pn	Pn	13 08 35.5	+0.9
	0.1nm,0.3s,baz=190,slow=16,SNR=3.3						
SONM				Lg	Lg	13 12 57.1	
	0.1nm,0.3s,baz=192,slow=34,SNR=3.8						
SONM				LR	LR	13 14 46.1	
	comp=Z,140nm,19.4s,baz=186,slow=39						
BRDH	Bariadhala	14.91	229	LR	LR	13 15 01.0	
	comp=Z,101nm,19.5s,baz=93,slow=40						
CMAR	Chiang Mai Arr	15.24	197	Pn	Pn	13 08 39.4	-1.1
	0.3nm,0.3s,baz=0.0,slow=9.9,SNR=4.3						
CMAR				LR	LR	13 14 27.8	
	comp=Z,25nm,19.4s,baz=215,slow=37						
WMQ	Urumqi	16.43	315	*e*P	Pn	13 08 53.1	-2.6
TLY	Talaya	18.52	360	LR	LR	13 17 09.1	
	comp=Z,141nm,18.4s,baz=156,slow=39						
KSRS	Korea Array	20.20	71	P	P	13 09 39.8	-0.2
	3.5nm,1.0s,baz=265,slow=9.7,SNR=5.9						
KSRS				LR	LR	13 18 35.9	
	comp=Z,38nm,20.8s,baz=160,slow=40						
MKAR	Makanchi Array	21.25	316	P	P	13 09 50.9	-0.4
	2.8nm,0.8s,baz=116,slow=12,SNR=21						
MKAR				LR	LR	13 18 49.8	
	comp=Z,87nm,19.1s,baz=118,slow=39						
ZALV	Zalesovo Beam	24.75	333	P	P	13 10 26.9	+0.3
	1.4nm,0.6s,baz=119,slow=12,SNR=5.1						
KURBB	Kurchatov Arra	25.43	321	P	P	13 10 32.6	-0.1
	1.5nm,0.7s,baz=125,slow=11,SNR=13						
KLR	Kul'dur	26.31	44	LR	LR	13 22 06.9	
	comp=Z,97nm,18.0s,baz=248,slow=39						
WRA	Warramunga Arr	60.35	147	P	P	13 15 12.1	-2.3
	3.6nm,1.0s,baz=337,slow=7.2,SNR=9.8						
NOA	NORSAR Array B	62.77	327	P	P	13 15 28.8	-1.5
	0.1nm,0.3s,baz=72,slow=8.6,SNR=2.9						
ASAR	Alice Springs	63.41	149	P	P	13 15 33.0	-1.9
	1.8nm,0.8s,baz=334,slow=6.9,SNR=12						
YKA	Yellowknife Ar	79.84	17	P	P	13 17 11.8	-1.6
	0.3nm,0.6s,baz=331,slow=5.0,SNR=8.5						

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*IDC **13** 13:08:55.9±1.1, 0°.91N×127°.53E, h0^{km}, mb3.6/4, mb1 3.9/5, mb1mx3.5/43, mbtmp3.7/5, ML3.5/1, Error ellipse: s-maj=61.8km s-min=19.6km az=61.0*

*DJA **13** 13:08:58.6±0.4, 1°N±3°×12°8E±°, h10^{km}±3^{km}, M3.7/9, MLv3.7/9*

ISC 13 13:08:57.9±1.2, 1°.02N±0°.09×127°.73E±0°.06, h10^{km}, n12, σ1^{s}.07/13, mb3.8/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.44	236	P	Pg	13 09 07.3	+0.7
TNTI				S	Sb	13 09 14.4	0.0
SANI	Sanana	3.51	210	P	Pn	13 09 51.1	-1.5
SANI				S	Sn	13 10 34.8	+0.6
KMSI	Cibinong	3.77	263	P	Pn	13 09 57.3	+1.1
SWI	Sorong	3.99	118	P	Pn	13 10 00.4	+1.1
SIJI	Sorong	4.00	118	Pn	Pn	13 09 58.9	-0.5
	2.7nm,0.3s,baz=346,slow=19,SNR=11						
NLAI	Namlea	4.28	188	P	Pn	13 10 02.9	-0.2
MSAI	Masohi	4.50	165	P	Pn	13 10 08.0	+1.8
WRA	Warramunga Arr	21.82	163	P	P	13 13 49.4	-1.1
	2.7nm,0.7s,baz=338,slow=11,SNR=17						
TNG	Tangerang	22.23	251	P	P	13 13 41.5	-14
ASAR	Alice Springs	25.26	167	P	P	13 14 24.0	-0.6
	2.1nm,0.8s,baz=344,slow=11,SNR=26						
MKAR	Makanchi Array	60.34	326	P	P	13 19 06.9	-0.2
	0.2nm,0.5s,baz=114,slow=8.4,SNR=5.1						
KURBB	Kurchatov Arra	64.55	328	P	P	13 19 34.4	-0.8
	0.4nm,0.5s,baz=126,slow=5.8,SNR=4.0						

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*IDC **13** 13:10:28.7±2.5, 23°.11S×173°.99W, h0^{km}, mb4.1/6, mb1 4.4/6, mb1mx4.0/32, mbtmp4.0/6, MS3.8/3, Ms1 3.9/3, ms1mx3.2/45, Error ellipse: s-maj=152.0km s-min=25.0km az=157.0*

*NEIC **13** 13:10:29.9±3.0, 22°.9S±0°.1×174°.15W±0°.10, h10^{km}±1^{km}, mb4.7/8, Error ellipse: s-maj=19.4km s-min=13.7km az=148.0*

ISC 13 13:10:34.0±0.8, 22°.8S±0°.1×174°.2W±0°.1, h35^{km}, n20, σ1^{s}.52/17, mb4.4/10, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	5.47	48		Pn	13 11 51.4	-1.7
MSVF	Nonsavu	8.85	304		Pn	13 12 39.4	-0.2
RAR	Rarotonga	13.49	86	LR	LR	13 18 38.1	
	comp=Z,152nm,18.2s,baz=274,slow=37						
MXZ	Matakaoa Point	16.04	202	Pn	Pn	13 14 14.5	-2.3
MXZ				IAmb	IAmb	13 14 17.3	
	comp=Z,97nm,1.4s						
PPT	Papeete	23.69	82	LR	LR	13 23 17.9	
	comp=Z,82nm,19.4s,baz=218,slow=33						
PMG	Port Moresby	39.30	283	P	P	13 17 58.2	-1.7
PMG				IAmb	IAmb	13 18 01.9	
	comp=Z,15nm,1.0s						
AS31	Alice Springs	47.46	258	P	P	13 19 04.2	-1.5
ASAR	Alice Springs	47.46	258	P	P	13 19 07.0	+1.3
	comp=Z,3.9nm,1.0s,baz=88,slow=8.4,SNR=19						
ASAR	Alice Springs	47.46	258	P	P	13 19 05.8	+0.1
WR0	Warramunga Arr	47.61	263	P	P	13 19 06.5	-0.4
WR0				IAmb	IAmb	13 19 11.4	
	comp=Z,8.2nm,1.4s						
WB0	Warramunga Arr	47.79	264	P	P	13 19 08.2	-0.1
WB0				IAmb	IAmb	13 19 09.6	
	comp=Z,9.2nm,1.1s						
WRAB	Tennant Creek	47.79	263		P	13 19 06.6	-1.7
WRA	Warramunga Arr	47.80	263	P	P	13 19 08.3	0.0
	comp=Z,4.6nm,1.1s,baz=95,slow=7.9,SNR=13						
WRA	Warramunga Arr	47.80	263	P	P	13 19 06.9	-1.5
VNDA	Vanda	55.95	186	P	P	13 20 09.4	+1.2
VNDA				IAmb	IAmb	13 20 23.5	
	comp=Z,7.0nm,1.4s						
NVAR	Mina Array Bea	80.36	41	P	P	13 22 41.7	-0.3
	comp=Z,0.8nm,0.9s,baz=221,slow=9.8,SNR=3.7						
TXAR	Lajitas Array	85.39	56	P	P	13 23 08.8	+0.6
	comp=Z,1.0nm,1.1s,baz=211,slow=5.1,SNR=3.9						
ILAR	Eielson Array	89.84	11	P	P	13 23 29.9	+1.4
	comp=Z,2.5nm,1.2s,baz=202,slow=6.8,SNR=4.5						
CMAR	Chiang Mai Arr	94.20	288	P	P	13 23 52.8	+2.9
	comp=Z,0.7nm,0.8s,baz=107,slow=3.8,SNR=5.7						
CMAR				LR	LR	14 03 30.2	
	comp=Z,249nm,21.6s,baz=40,slow=34						
CLL	Collm	151.02	351	*e*pPKPbc	pPKPbc	13 30 35.0	+3.1

MAN 13 13:10:36.5, 9°.36N×122°.54E, h13^{km}, mb4.1, ML2.8, MS2.5, 1C-2D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNPH	Sibulan	0.69	91⇓	*i*P	Pg	13 10 50.0	+0.1
SNPH				*i* S	Sb	13 11 00.5	+0.6
GUIM	Jordan	1.26	2	*e*P	Pn	13 10 57.8	-2.0
GUIM				*e*S	Sb	13 11 13.2	-3.1
TBP	Tagbilaran	1.35	76	*e*P	Pn	13 10 59.7	-1.3
TBP				*i* S	Sb	13 11 18.6	-0.1
LLP	Lapu-Lapu	1.70	56⇓	*e*P	Pg	13 11 10.7	+1.6
LLP				*i* S	Sn	13 11 26.3	-1.1
PAGZ	Pagadian	1.72	151	*e*P	Pn	13 11 06.0	-0.1
PAGZ				*e*S	Sg	13 11 32.1	+0.2
RCP	Roxas	2.19	5⇑	*e*P	Pn	13 11 13.8	+1.1
RCP				*e*S	Sn	13 11 40.9	+1.2
MSLP	Maasin	2.41	71	*e*P	Pn	13 11 15.8	+0.1
MSLP				*e*S	Sn	13 11 46.8	+1.7

ISK 13 13:17:30.5, 39°.69N×28°.94E, h5^{km}, ML2.2/8, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TVSB	Tavsanli	0.47	120	PG	Pb	13 17 40.7	-0.6
MDNY	Mudanya-Bursa	0.68	356	PG	Pb	13 17 45.0	+0.1
CAVI	Cavuskoy	0.86	53	PG	Pb	13 17 48.4	+0.4
ARMT	Armutlu	0.88	356	PG	Pb	13 17 48.8	+0.5
YLV	Yalova	0.94	20	PG	Pb	13 17 49.8	+0.5
YLV				SG	Sn	13 18 03.3	-1.0
GONE	Gonen-Balikesi	1.03	291	PG	Pb	13 17 51.1	+0.3
BORA	Eskisehir	1.18	80	PN	Pb	13 17 53.6	+0.2
SRCK	Saricakaya, Es	1.34	74	PN	Pg	13 17 56.8	+0.5
MRMT	Marmara Adasi	1.38	312	PN	Pg	13 17 58.1	+1.1
MRMT				SN	Sn	13 18 18.3	+3.1
RKY	Sarkoy-Tekirda	1.68	307	PN	Pb	13 18 01.4	-0.6

DDA 13 13:17:53.4, 38°.98N×27°.35E, h7^{km}±1^{km}, ML2.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZEDA	zmir-Bergama	0.22	268	*i* P	Pg	13 17 57.4	-0.3
ZEDA				IAML		13 18 00.0	
	comp=N,516nm,0.1s						
ZEDA				IAML		13 18 00.0	
	comp=E,765nm,0.1s						
ZEDA				*i* S	Sg	13 18 00.2	-0.4
AKHS	Akhisar	0.37	105	*i* P	Pg	13 18 01.1	+0.4
AKHS				*i* S	Sg	13 18 06.5	+0.9
STEP	BALIKESIR_Sava	0.49	35	*i* P	Pb	13 18 03.9	-0.5
STEP				*i* S	Sg	13 18 10.2	+0.8
URLA	Izmir	0.85	224	*i* P	Pb	13 18 10.7	+0.1
URLA				*i* S	Sb	13 18 22.8	+0.6
URLA				IAML		13 18 25.0	
	comp=E,70nm,0.7s						
URLA				IAML		13 18 27.0	
	comp=N,47nm,0.8s						
BAYC	CANAKKALE_Bayr	0.99	321	*i* P	Pg	13 18 12.5	+0.1
BAYC				*i* S	Sg	13 18 24.0	-1.2
BAYC				IAML		13 18 26.0	
	comp=N,51nm,0.4s						
BAYC				IAML		13 18 27.0	
	comp=E,61nm,0.3s						
DGB	zmir	0.99	202	*i* P	Pg	13 18 12.4	-0.1
DGB				IAML		13 18 29.0	
	comp=N,37nm,0.6s						
DURS	Dursunbey	1.07	54	*i* P	Pg	13 18 14.1	+0.1
DURS				*i* S	Sb	13 18 28.6	+0.1
DURS				IAML		13 18 31.0	
	comp=E,69nm,0.2s						
DURS				IAML		13 18 31.0	
	comp=N,39nm,0.6s						

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*BGR **13** 13:20:54.5±0.0, 50°.50N×179°.50W, h29^{km}±29^{km}, mb5.6, mB_BB5.8, Ms4.8*

*BJI **13** 13:20:55.3±0.0, 51°.31N×179°.12W, h32^{km}, mB5.5/67, mb5.6/81, Ms5.4/79, Ms7 5.1/76*

*MOS **13** 13:20:57.5±1.0, 51°.44N×179°.25W, h33^{km}, mb5.8/105, MS5.1/55, Error ellipse: s-maj=6.2km s-min=4.4km az=99.5*

*NEIC **13** 13:20:57.8, 51°.32N×179°.28W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.18; $M_{\theta\theta}$-1.35; $M_{\phi\phi}$0.17; $M_{r\theta}$0.66; $M_{\theta\phi}$-0.17; $M_{\phi r}$0.73; Fault plane solution: $M_0$1.62000×10^{17} NP1:ϕ_s60.59000°, δ64.30000°, λ66.63000°. NP2:ϕ_s285.49000°, δ34.19000°, λ129.50000°. Principal axes: T 1.6512, Plg63.0000°, Azm292.0000°; N -0.0683, Plg21.0000°, Azm71.0000°; P -1.5829, Plg16.0000°, Azm168.0000°;*

*NEIC **13** 13:20:57.0±2.1, 51°.28N±0°.07×179°.29W±0°.08, h22^{km}±3^{km} Error ellipse: s-maj=10.8km s-min=7.0km az=168.0*

*IDC **13** 13:20:58.2±0.6, 51°.36N×179°.18W, h29^{km}±3^{km}, mb4.9/33, mb1 5.0/37, mb1mx5.0/46, mbtmp5.1/37, ML4.8/3, MS4.9/33, Ms1 4.9/33, ms1mx4.8/45, Error ellipse: s-maj=13.1km s-min=8.1km az=169.0*

*AEIC **13** 13:20:59±2.7, 51°.21N±0°.07×179°.11W±0°.07, h26^{km}±3^{km}, ML5.3/41, mb5.7/370(NEIC), Ms_20 5.0/360(NEIC), Mwb5.4/89(NEIC), Mwc5.6(GCMT), Mww5.4(NEIC), Error ellipse: s-maj=10.2km s-min=6.5km az=172.0*

*NEIC **13** 13:21:00, 51°.16N×179°.15W, h32^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.62; $M_{\theta\theta}$-1.89; $M_{\phi\phi}$0.26; $M_{r\theta}$1.16; $M_{\theta\phi}$-0.58; $M_{\phi r}$1.19; Fault plane solution: $M_0$2.50000×10^{17} NP1:ϕ_s54.00000°, δ67.00000°, λ69.00000°. NP2:ϕ_s279.00000°, δ30.00000°, λ130.00000°. Principal axes: T 2.4424, Plg62.0000°, Azm292.0000°; N 0.1053, Plg19.0000°, Azm63.0000°; P -2.5477, Plg20.0000°, Azm160.0000°;*

*GCMT **13** 13:21:00.0±0.1, 51°.18N±0°.01×179°.17W±0°.01, h30^{km}, MW5.5/146, Moment Tensor Solution. s133, c222; s146, c288; Duration: 1^{s}.4 Moment tensor: Scale 10^{17} Nm; M_{rr}1.65±.03; $M_{\theta\theta}$-1.85±.02; $M_{\phi\phi}$0.19±.02; $M_{r\theta}$1.22±.04; $M_{\theta\phi}$-0.60±.02; $M_{\phi r}$1.19±.04; Best double couple: $M_0$2.52000×10^{17} NP1:ϕ_s276.00000°, δ29.00000°, λ128.00000°. NP2:ϕ_s55.00000°, δ68.00000°, λ71.00000°. Principal axes: T 2.4710, Plg63.0000°, Azm295.0000°; N 0.0970, Plg17.0000°, Azm62.0000°; P -2.5690, Plg20.0000°, Azm159.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **13** 13:21:05, 51°.36N×179°.27W, h36^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.21; $M_{\theta\theta}$-1.46; $M_{\phi\phi}$0.24; $M_{r\theta}$0.89; $M_{\theta\phi}$-0.24; $M_{\phi r}$0.83; Fault plane solution: $M_0$1.83000×10^{17} NP1:ϕ_s59.00000°, δ67.00000°, λ68.00000°. NP2:ϕ_s285.00000°, δ31.00000°, λ131.00000°. Principal axes: T 1.8281, Plg62.0000°, Azm296.0000°; N 0.0119, Plg20.0000°, Azm68.0000°; P -1.8399, Plg19.0000°, Azm165.0000°;*

ISC 13 13:20:58.4±0.3, 51°.25N±0°.04×179°.20W±0°.03, h32^{km}±1^{km}, h32^{km}:pP-P, n1658, σ1^{s}.27/1665, mb5.7/402, MS5.0/270, 80C-23D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAEA	Gareloi East	0.60	28		Pn	13 21 12.2	+1.4
TASE	Tanaga Southea	0.93	51		Pb	13 21 16.5	+0.4
TANO	Tanaga North	0.95	45		Pb	13 21 16.9	+0.6
TAFP	Tanaga Falls P	1.00	49		Pb	13 21 17.2	+0.1
TAPA	Tanaga Point A	1.03	56		Pb	13 21 17.8	0.0
KIMD	Kanaga Island	1.33	67		Pn	13 21 21.3	+0.6
KIKV	Kanaga Island	1.41	63		Pn	13 21 22.9	+1.0
KIWB	Kanaga Island	1.41	64		Pn	13 21 21.4	-0.4
KICM	Kanaga Island	1.42	61		Pb	13 21 23.5	-0.7
KINC	Kanaga Island	1.46	61		Pb	13 21 24.0	-0.9
KIRH	Kanaga Island	1.47	63		Pn	13 21 23.8	+1.2
ADK	Adak	1.69	67	P	Pn	13 21 26.7	+1.0
ADK	Adak	1.69	67		Pn	13 21 26.6	+1.0
ADAG	Mount Adagdak	1.78	65		Pb	13 21 28.8	-1.4
GSTD	Great Sitkin T	2.07	66		Pn	13 21 32.9	+2.0
GSMY	Great Sitkin M	2.11	67		Pn	13 21 33.1	+1.6
GSTR	Great Sitkin T	2.13	65		Pn	13 21 33.4	+1.6
ATKA	Atka Island	3.25	71		Pn	13 21 49.2	+2.1
ATKA	Atka Island	3.25	71		Sn	13 22 28.5	+3.8
KOKL	Mount Kliuchef	3.29	69		Pn	13 21 50.3	+2.6
KOFP	Korovin Flat P	3.33	70		Pn	13 21 51.0	+2.7
SMY	Shemya	4.40	292	P	Pn	13 22 04.3	+1.5
SMY						13 22 59.5	
SMY	Shemya	4.40	292		Pn	13 22 04.3	+1.5
NIKH	Nikolski High	6.60	71		Pn	13 22 35.6	+2.5
NIKH	Nikolski High	6.60	71		Sn	13 23 52.4	+5.2
OKSP	Okmok Steeple	6.99	69		Pn	13 22 41.5	+3.0
OKTU	Okmok Mt. Tuli	7.17	68		Pn	13 22 44.1	+3.2
SPIA	Saint Paul Isl	7.92	38		Pn	13 22 52.4	+1.2
SPIA	Saint Paul Isl	7.92	38		Sn	13 24 23.4	+4.0
MGOD	Makushin Gods	7.94	66		Pn	13 22 55.1	+3.6
MREP	Makushin Rep't	8.02	67		Pn	13 22 55.5	+3.0
MSW	Makushin Switc	8.02	66		Pn	13 22 56.8	+4.2
UNV	Unalaska Valle	8.16	67		Pn	13 22 57.5	+3.0
UNV	Unalaska Valle	8.16	67		Sn	13 24 31.8	+6.3
AKRB	Akutan Reef Bi	8.48	65		Pn	13 23 01.9	+3.1
LVA	Lava Point	8.51	65		Pn	13 23 03.1	+3.8
AKBBA	Akutan Broad B	8.55	65		Pn	13 23 03.9	+4.0
AKUT	Akutan	8.65	65		Pn	13 23 04.9	+3.7
WESP	Westdahl Peak	9.34	64		Pn	13 23 14.2	+3.5
SSBA	Shishaldin	9.74	63		Pn	13 23 20.0	+3.8
DOL	Dolgoi Island	11.10	63		Pn	13 23 37.4	+2.7
CNBA	Chernabura Isl	12.32	66		Pn	13 23 52.2	+0.8
GAMB	Gambell	13.17	15		Pn	13 24 03.8	+0.9
PET	Petropavlovsk	13.71	286	*e*P	Pn	13 24 10.8	+0.5
PET				*e*S	Sn	13 26 42.8	+1.5
PET				pmax	pmax		
	comp=Z,1μm,12.4s						
PET				pmax	pmax		
	comp=Z,1μm,11.4s						
PET				pmax	pmax		
	comp=Z,131nm,1.1s						
PET				MLR	MLR		
	comp=Z,7μm,20.0s						
PET				MLR	MLR		
	comp=Z,6μm,18.0s						
PET	Petropavlovsk	13.71	286		Pn	13 24 12.8	+2.5
PEA0B	Petropavlovsk-	14.28	286*c*	*i*P	Pn	13 24 18.5	+0.4
PEA0B	Petropavlovsk-	14.28	286		Pn	13 24 20.1	+1.9
PETK	Petropavlovsk-	14.28	286	Pn	Pn	13 24 18.6	+0.4
	comp=Z,1.0nm,0.3s,baz=100,slow=17,SNR=30						
PETK				LR	LR	13 29 38.3	
	comp=Z,8μm,21.6s,baz=93,slow=36						
PETK	Petropavlovsk-	14.28	286	P	Pn	13 24 18.7	+0.5
PETK	Petropavlovsk-	14.28	286		Pn	13 24 18.7	+0.5
ANM	Nome	15.18	23	P	P	13 24 33.5	-1.3
ANM				pmax	pmax		
	comp=Z,170nm,1.3s						
ANM	Nome	15.18	23		P	13 24 33.5	-1.3
SKR	Severo-Kuril's	15.54	278	*e*P	P	13 24 39.8	+0.9
SKR				pmax	pmax		
	comp=Z,186nm,0.8s						
SKR				MLR	MLR		
	comp=Z,900nm,17.0s						
SII	Sitkinak Islan	15.62	60		Pn	13 24 36.7	+0.7
SII				IAmb	IAmb	13 24 43.1	
	comp=Z,400nm,1.2s						
OHAK	Old Harbor	16.22	58		Pn	13 24 41.0	-2.6
SVW2	Sparrevohn	16.34	44	P	P	13 24 47.4	-0.3
KDAK	Kodiak Island	16.70	57	Pn	Pn	13 24 47.3	-2.4
	comp=Z,1.9nm,0.3s,baz=220,slow=1.5,SNR=90						
KDAK	Kodiak Island	16.70	57	P	Pn	13 24 47.6	-2.1
KDAK				pmax	pmax		
	comp=Z,247nm,1.3s						
KDAK	Kodiak Island	16.70	57		Pn	13 24 47.6	-2.1
TTA	Tatalina	17.07	38	P	P	13 24 57.0	+1.1
TTA	Tatalina	17.07	38	P	P	13 24 57.0	+1.1
RSO	Redoubt South	17.36	48	P	P	13 25 00.9	+1.7
CNPM	China Poot	17.80	51	P	Pn	13 25 03.8	+0.4
BILL	Bilibino	18.28	342*c*	*i*P	Pn	13 25 11.2	+2.1
BILL				pmax	pmax		
	comp=Z,222nm,1.7s						
BILL				MLR	MLR		
	comp=Z,9μm,17.0s						
BILL	Bilibino	18.28	342	P	Pn	13 25 11.1	+2.0
BILL				IAmb	IAmb	13 25 25.6	
	comp=Z,590nm,1.5s						
PPLA	Purkeypile	18.57	41	P	Pn	13 25 13.5	+0.6
PPLA				IAmb	IAmb	13 25 39.4	
	comp=Z,805nm,1.3s						
SUA	Susitna One	18.63	46	P	Pn	13 25 13.8	+0.2
RDOG	Red Dog Mine	18.64	19	P	Pn	13 25 14.4	+0.9
SEW	Seward	18.82	50	P	P	13 25 15.1	+0.1
MA2	Magadan	18.83	308	P	Pn	13 25 16.0	+0.1
	comp=Z,0.8nm,0.3s,baz=96,slow=12,SNR=11						
MA2	Magadan	18.83	308⇑	*e*P	Pn	13 25 15.7	-0.2
MA2				pmax	pmax		
	comp=Z,25nm,1.3s						
MA2				MLR	MLR		
	comp=Z,3μm,15.0s						
MA2	Magadan	18.83	308	P	Pn	13 25 15.6	-0.2
MA2					Pn	13 25 15.8	-0.2
RC01	Rabbit Creek A	18.96	47	P	P	13 25 16.5	-0.1
SEY	Seymchan	19.17	318	P	Pn	13 25 20.0	+0.1
	comp=Z,0.7nm,0.3s,baz=83,slow=23,SNR=41						
SEY	Seymchan	19.17	318⇑	*e*P	Pn	13 25 19.8	-0.2

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KTH    Kantishna Hill     19.38  40    P        Pn       13 25 22.3 -0.3
KTH                                    IAmb     IAmb     13 25 37.3
       comp=Z,852nm,1.2s
PMR    Palmer             19.40  46    P        P        13 25 20.4 -1.0
PMR                                    pmax     pmax
       comp=Z,313nm,1.8s
PMR    Palmer             19.40  46    P        P        13 25 20.4 -1.0
GHO    Glory Hole Cre     19.55  46    P        P        13 25 22.5 -0.7
TRF    Thorofare Moun     19.59  40    P        P        13 25 23.7  0.0
TRF                                    IAmb     IAmb     13 25 42.4
       comp=Z,420nm,1.0s
BPAW   Bear Paw Mtn.      19.61  38    P        P        13 25 24.6 +0.9
BPAW                                   IAmb     IAmb     13 25 40.3
       comp=Z,318nm,1.0s
IMAR   Indian Mountai     19.62  32    P        P        13 25 24.6 +0.9
KNK    Knik Glacier       19.65  47    P        P        13 25 23.4 -0.8
SML    Sawmill            19.83  46    P        P        13 25 26.1 -0.1
MLY    Manley             20.15  36    P        P        13 25 29.9 +0.3
RND    Reindeer           20.16  41    P        P        13 25 29.2 -0.6
RND                                    pmax     pmax
       comp=Z,273nm,1.0s
RND                                    MLR      MLR
       comp=Z,5µm,20.0s
RND    Reindeer           20.16  41    P        P        13 25 29.2 -0.6
RND                                    IAmb     IAmb     13 26 00.6
       comp=Z,273nm,1.0s
BWN    Browne             20.23  39    P        P        13 25 31.2 +0.7
MCK    McKinley           20.26  40    P        P        13 25 29.9 -0.9
MCK                                    pmax     pmax
       comp=Z,233nm,1.0s
MCK                                    MLR      MLR
       comp=Z,4µm,20.0s
MCK    McKinley           20.26  40    P        P        13 25 29.9 -0.9
MCK                                    IAmb     IAmb     13 25 48.4
       comp=Z,233nm,1.0s
SCM    Sheep Creek Mo     20.29  46    P        P        13 25 30.4 -0.8
SCM                                    pmax     pmax
       comp=Z,181nm,0.8s
SCM                                    MLR      MLR
       comp=Z,3µm,19.0s
SCM    Sheep Creek Mo     20.29  46    P        P        13 25 30.4 -0.8
SCM                                    IAmb     IAmb     13 25 44.7
       comp=Z,181nm,0.8s
HIN    Hinchinbrook I     20.32  51    IAMs_20  IAMs_20  13 33 44.7
       comp=Z,6µm,20.0s
NEA    Nenana             20.56  38    P        P        13 25 34.3 +0.2
NEA                                    IAmb     IAmb     13 25 45.7
       comp=Z,455nm,1.1s
DHY    Denali Highway     20.66  43    P        P        13 25 34.7 -0.6
DHY                                    IAmb     IAmb     13 25 45.0
       comp=Z,368nm,0.9s
EYAK   Cordova Ski Ar     20.71  50    P        Pn       13 25 37.8 -0.3
EYAK                                   IAmb     IAmb     13 26 02.9
       comp=Z,348nm,1.7s
EYAK                                   IAMs_20  IAMs_20  13 34 09.2
       comp=Z,6µm,21.0s
WRH    Wood River Hil     20.90  39    P        P        13 25 36.5 -1.2
MDM    Murphy Dome        21.06  38    P        P        13 25 39.1 -0.3
MDM                                    IAmb     IAmb     13 25 54.3
       comp=Z,421nm,1.0s
CCB    Clear Creek Bu     21.09  39    P        P        13 25 37.8 -1.9
CCB                                    IAmb     IAmb     13 25 55.1
       comp=Z,273nm,1.2s
TCOL   CIGO, UAF Yank     21.16  38    P        P        13 25 42.0 +1.6
       baz=245,SNR=20
COLA   College            21.17  38    P        P        13 25 39.8 -0.7
COLA                                   pmax     pmax
       comp=Z,220nm,0.9s
COLA   College            21.17  38    P        P        13 25 39.8 -0.7
COLA                                   IAmb     IAmb     13 25 55.6
       comp=Z,220nm,0.9s
RAGM   Ragged Mountai     21.21  51    IAMs_20  IAMs_20  13 34 51.2
       comp=Z,6µm,20.0s
HDA    Harding Lake       21.33  40    P        P        13 25 42.1 -0.2
HDA                                    IAMs_20  IAMs_20  13 34 57.9
       comp=Z,5µm,19.0s
HDA    Harding Lake       21.33  40    P        P        13 25 42.8 +0.4
       baz=248,SNR=29
POKR   Poker Plat Res     21.43  38    P        P        13 25 44.5 +1.1
       baz=245,SNR=46
PAX    Paxson             21.45  44    P        P        13 25 43.5 -0.2
PAX                                    pmax     pmax
       comp=Z,376nm,1.3s
PAX                                    MLR      MLR
       comp=Z,5µm,19.0s
PAX    Paxson             21.45  44    P        P        13 25 43.5 -0.2
PAX                                    IAmb     IAmb     13 25 58.3
       comp=Z,376nm,1.3s
PAX                                    IAMs_20  IAMs_20  13 35 19.4
       comp=Z,5µm,19.0s
COLD   Coldfoot           21.49  31    P        P        13 25 44.8 +0.8
COLD                                   IAMs_20  IAMs_20  13 33 39.4
       comp=Z,5µm,20.0s
IL31                      21.50  39    P        P        13 25 42.3 -1.8
IL31                                   IAmb     IAmb     13 26 08.2
       comp=Z,186nm,1.0s
ILAR   Eielson Array      21.50  39    P        P        13 25 41.9 -2.2
       comp=Z,9.7nm,0.6s,baz=237,slow=8.7,SNR=110
ILAR                                   PcP      PcP      13 29 44.8 -0.8
       comp=Z,2.9nm,0.6s,baz=298,slow=3.3,SNR=6.2
ILAR                                   ScP      ScP      13 33 18.5 -1.5
       comp=Z,2.6nm,0.7s,baz=280,slow=3.6,SNR=8.7
ILAR                                   P3KPbc            13 59 37.5
       comp=Z,1.1nm,0.9s,baz=60,slow=4.1,SNR=7.0
ILAR   Eielson Array      21.50  39    P        P        13 25 42.8 -1.3
GLB    Gilahina Butte     21.82  48    P        P        13 25 47.3 -0.4
GLB                                    IAmb     IAmb     13 26 03.1
       comp=Z,782nm,2.0s
VRDI   Verde Repeater     21.95  49    P        P        13 25 49.0 -0.1
VRDI                                   IAmb     IAmb     13 26 17.5
       comp=Z,309nm,1.4s
CRQM   Cirque             22.02  50    P        P        13 25 50.6 +0.7
TGL    Tana Glacier       22.17  51    P        P        13 25 51.2 -0.2
TGL                                    IAmb     IAmb     13 26 21.1
       comp=Z,219nm,1.2s
MCARA  McCarthy VSAT      22.18  49    P        P        13 25 53.1 +1.7
MCARA                                  IAmb     IAmb     13 26 20.0
       comp=Z,216nm,1.0s
MENT   Mentasta           22.21  45    P        P        13 25 52.0 +0.2
DOT    Dot Lake           22.27  43    P        P        13 25 51.4 -1.0
DOT                                    IAmb     IAmb     13 26 02.6
       comp=Z,230nm,1.0s
DOT                                    IAMs_20  IAMs_20  13 35 57.6
       comp=Z,5µm,20.0s
PRP    Porcupine Dome     22.33  37    P        P        13 25 51.9 -1.3
BALM   Baldy              22.45  50    P        P        13 25 53.9 -0.6
TOLK   Toolik Lake Re     22.50  28    P        P        13 25 55.2 +0.5
TOLK                                   IAMs_20  IAMs_20  13 35 21.1
       comp=Z,6µm,18.0s
TOLK   Toolik Lake Re     22.50  28    P        P        13 25 55.3 +0.5
       baz=234,SNR=68
KUR    Kuril'sk           22.61 268c iP       P        13 25 56.4 +0.2
KUR                                   e                  13 26 23.5
KUR                                   eS       S        13 30 02.8 +1.1
KUR                                    pmax     pmax
       comp=Z,3µm,4.0s
KUR                                    pmax     pmax
       comp=E,170nm,1.3s
KUR                                    pmax     pmax
       comp=Z,594nm,1.3s
KUR                                    MLR      MLR
       comp=Z,900nm,15.0s
BARN   Barnard Glacie     22.78  50    P        P        13 25 58.2 +0.2
FYU    Fort Yukon         22.87  35    P        P        13 25 58.5 -0.2
FYU                                    IAmb     IAmb     13 26 00.2
       comp=Z,199nm,1.1s
CTGM   Chitina Glacie     22.92  50    P        P        13 25 59.3 -0.2
CTGM                                   IAmb     IAmb     13 26 29.3
       comp=Z,249nm,1.5s
CTGM                                   IAMs_20  IAMs_20  13 36 00.9
       comp=Z,5µm,20.0s
MIDW   Midway             23.05 176    P        P        13 26 00.1 -0.7
MIDW                                   IAmb     IAmb     13 26 06.0
       comp=Z,387nm,1.2s
BCAR   Beaver Creek A     23.10  45    P        P        13 26 01.0 -0.2
PCA    Pinnacle           23.35  53    P        P        13 26 03.0 -0.8
BMAR   Burnt Mountain     23.48  33    P        P        13 26 04.2 -0.6
TYV    Tymovskoe          23.80 284   eP       P        13 26 09.9 +1.9
TYV                                    pmax     pmax
       comp=Z,3µm,3.6s
TYV                                    pmax     pmax
       comp=Z,180nm,1.0s
TYV                                    MLR      MLR
       comp=Z,4µm,22.0s
EGAK   Eagle              23.81  41    P        P        13 26 07.5 -0.5
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EGAK                                   IAmb     IAmb     13 26 09.8
       comp=Z,292nm,1.0s
EGAK                                   IAMs_20  IAMs_20  13 36 42.0
       comp=Z,5µm,18.0s
DHAK   Deception Hill     24.34  55    IAMs_20  IAMs_20  13 36 03.8
       comp=Z,4µm,19.0s
DAWY   Dawson             24.37  43    P        P        13 26 12.8 -0.4
DAWY                                   IAMs_20  IAMs_20  13 37 10.0
       comp=Z,6µm,20.0s
NKL    Nikolayevsk        24.44 290   eP       P        13 26 15.2 +1.3
NKL                                    pmax     pmax
       comp=E,20nm,1.3s
NKL                                    pmax     pmax
       comp=Z,455nm,1.3s
NKL                                    pmax     pmax
       comp=N,5.0nm,0.5s
YUK    Yuzh-Kuril'sk      24.44 267c iP       P        13 26 14.0  0.0
YUK                                   e                  13 26 46.0
YUK                                   ePPP     PPP      13 26 55.5
YUK                                   i S      S        13 30 33.5 +1.8
YUK                                   eSS      SnSn     13 31 19.5 +2.6
YUK                                   eSSS     SSS      13 31 37.1
YUK                                    pmax     pmax
       comp=Z,595nm,1.3s
YUK                                    pmax     pmax
       comp=E,363nm,1.4s
YUK                                    pmax     pmax
       comp=N,333nm,1.0s
YUK                                    MLR      MLR
       comp=Z,2µm,19.0s
YUK                                    MLR      MLR
       comp=N,1µm,14.0s
HYT    Haines Junctio     24.77  51    P        P        13 26 16.4 -0.6
YSS    Yuzh-Sakhalins     25.08 275α iP       P        13 26 21.0 +1.3
YSS                                   e*PP     sP       13 26 32.2 -0.2
YSS                                   e                  13 26 55.2
YSS                                   eS       S        13 30 41.6 -0.3
YSS                                   eSS      SnSn     13 31 43.9  +11
YSS                                    pmax     pmax
       comp=Z,300nm,1.3s
YSS                                    pmax     pmax
       comp=Z,1µm,8.7s
YSS                                    smax     smax
       comp=E,600nm,12.6s
YSS                                    MLR      MLR
       comp=Z,1µm,17.0s
YSS                                    MLR      MLR
       comp=N,900nm,15.0s
YSS                                    MLR      MLR
       comp=E,900nm,14.0s
YSS    Yuzh-Sakhalins     25.08 275    P        P        13 26 20.4 +0.7
SKAG   Skagway            25.82  54    P        P        13 26 26.8 +0.5
SKAG                                   IAMs_20  IAMs_20  13 36 41.9
       comp=Z,4µm,21.0s
EPYK   Eagle Plains       26.02  38    P        P        13 26 26.9 -1.2
EPYK                                   IAMs_20  IAMs_20  13 38 26.8
       comp=Z,4µm,20.0s
EPYK   Eagle Plains       26.02  38    P        P        13 26 27.1 -1.0
       baz=256,SNR=32
WHY    Whitehorse         26.05  52    P        P        13 26 27.9 -0.6
WHY                                    IAMs_20  IAMs_20  13 37 32.7
       comp=Z,4µm,21.0s
JKA    Kamikawa-asahi     26.45 269    P        P        13 26 33.2 +1.0
ASAJ   Asahikawa          26.45 269    P        P        13 26 33.2 +1.0
       comp=Z,211nm,1.1s,baz=53,slow=7.4,SNR=51
ERM    Erimo              27.18 265ceP        P        13 26 39.7 +0.9
ERM                                    pmax     pmax
       comp=Z,155nm,1.3s
GRNR   Gornyy             27.61 287⇑iP       P        13 26 43.0 +0.4
GRNR                                  eS       S        13 31 24.9 +3.0
GRNR                                   pmax     pmax
       comp=Z,120nm,1.3s
GRNR                                   smax     smax
       comp=N,3.0nm,1.2s
GRNR                                   MLR      MLR
       comp=Z,2µm,18.0s
INK    Inuvik             27.71  35    P        P        13 26 42.6 -0.6
       comp=Z,9.5nm,0.9s,baz=235,slow=8.3,SNR=29
INK                                    PcP      PcP      13 29 59.1  0.0
       comp=Z,13nm,0.8s,baz=300,slow=3.4,SNR=9.9
INK    Inuvik             27.71  35    P        P        13 26 42.8 -0.4
INK                                                      13 29 59.2
INK                                    pmax     pmax
       comp=Z,61nm,1.1s
INK                                    MLR      MLR
       comp=Z,3µm,20.0s
INK    Inuvik             27.71  35    P        P        13 26 42.8 -0.4
INK    Inuvik             27.71  35    IAMs_20  IAMs_20  13 38 52.6
       comp=Z,3µm,20.0s
DIB    Dawson Inlet,      28.29  68    P        P        13 26 49.2 +0.6
H02S1  DAWSON INLET T     28.29  68    P        P        13 26 50.1 +1.5
       SNR=5.3
DLBC   Dease Lake         28.64  56    P        P        13 26 52.3 +0.6
       comp=Z,4.9nm,1.0s,baz=291,slow=6.7,SNR=5.3
DLBC   Dease Lake         28.64  56    P        P        13 26 52.0 +0.3
YAK    Yakutsk            29.31 311    P        P        13 26 56.3 -1.2
       comp=Z,5.2nm,0.3s,baz=83,slow=5.3,SNR=7.1
YAK                                    PcP      PcP      13 30 03.6 +0.4
       comp=Z,20nm,0.5s,baz=281,slow=0.5,SNR=4.8
YAK    Yakutsk            29.31 311   eP       P        13 26 55.7 -1.8
YAK                                   e*PP     pP       13 27 03.9 -2.5
YAK                                   ePPP     PPP      13 27 55.1
YAK                                   e                  13 30 02.2
YAK                                   eS       S        13 31 45.2 -3.2
YAK                                   e*SS     pS       13 32 00.6 +2.6
YAK                                   eSS      SnSn     13 33 10.0 -5.4
YAK                                   e                  13 33 43.9
YAK                                   e                  13 37 33.1
YAK                                    pmax     pmax
       comp=Z,16nm,1.1s
YAK                                    pmax     pmax
       comp=N,2.0nm,1.0s
YAK                                    pmax     pmax
       comp=E,8.0nm,1.1s
YAK                                    pmax     pmax
       comp=Z,90nm,1.4s
YAK                                    pmax     pmax
       comp=E,89nm,1.3s
YAK                                    pmax     pmax
       comp=N,32nm,1.3s
YAK                                    smax     smax
       comp=N,147nm,3.2s
YAK                                    smax     smax
       comp=E,115nm,3.3s
YAK                                    MLR      MLR
       comp=Z,4µm,21.0s
YAK                                    MLR      MLR
       comp=E,2µm,19.0s
YAK                                    MLR      MLR
       comp=N,2µm,20.0s
YAK    Yakutsk            29.31 311    P        P        13 26 56.4 -1.2
YAK    Yakutsk            29.31 311    IAMs_20  IAMs_20  13 38 17.0
       comp=Z,3µm,20.0s
TEY    Ternei             29.77 276⇑iP       P        13 27 01.6 -0.2
TEY                                    pmax     pmax
       comp=E,100nm,1.0s
TEY                                    pmax     pmax
       comp=N,30nm,1.2s
TEY                                    pmax     pmax
       comp=Z,160nm,1.0s
TIXI   Tiksi              30.62 331    P        P        13 27 08.1 -1.0
       comp=Z,1.2nm,0.3s,baz=127,slow=3.4,SNR=4.0
TIXI                                   PcP      PcP      13 30 06.2 -0.3
       comp=Z,38nm,1.0s,baz=104,slow=1.8,SNR=14
TIXI                                   pPcP              13 30 15.5
       comp=Z,10nm,0.8s,baz=328,slow=4.5,SNR=6.3
TIXI   Tiksi              30.62 331⇓eP       P        13 27 11.7 +2.7
TIXI                                   pmax     pmax
       comp=Z,13nm,1.7s
TIXI                                   MLR      MLR
       comp=Z,6µm,16.0s
TIXI   Tiksi              30.62 331    P        P        13 27 08.0 -1.0
TIXI                                            PcP      13 30 06.0 -0.5
TIXI   Tiksi              30.62 331    IAMs_20  IAMs_20  13 39 35.2
       comp=Z,3µm,19.0s
KLR    Kul'dur            30.97 286c iP       P        13 27 12.4  0.0
KLR                                    MLR      MLR
       comp=Z,4µm,19.0s
BBB    Bella Bella        31.13  68    P        P        13 27 12.7 -1.0
BBB                                    IAmb     IAmb     13 27 24.5
       comp=Z,80nm,1.1s
C36M   Paulatuk           31.27  34    P        P        13 27 14.3 -0.4
C36M                                   IAMs_20  IAMs_20  13 40 39.8
       comp=Z,3µm,20.0s
C36M   Paulatuk           31.27  34    P        P        13 27 14.6 -0.2
       baz=264,SNR=14
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ZEA    Zeya               32.06 296ceP        P        13 27 21.0 -0.8
ZEA                                   eS       S        13 32 26.5 -5.0
ZEA                                    pmax     pmax
       comp=E,65nm,1.0s
ZEA                                    pmax     pmax
       comp=Z,170nm,1.0s
ZEA                                    pmax     pmax
       comp=E,300nm,5.0s
ZEA                                    pmax     pmax
       comp=Z,500nm,5.0s
ZEA                                    smax     smax
       comp=E,400nm,5.0s
ZEA                                    smax     smax
       comp=N,600nm,6.0s
ZEA                                    MLR      MLR
       comp=Z,3µm,21.0s
ZEA                                    MLR      MLR
       comp=N,2µm,20.0s
ZEA                                    MLR      MLR
       comp=E,2µm,20.0s
USA0B  Ussuriysk Arra     33.06 277    P        P        13 27 30.4 -0.3
USA0B                                  pmax     pmax
       comp=Z,77nm,1.3s
USA0B                                  MLR      MLR
       comp=Z,2µm,19.0s
USA0B  Ussuriysk Arra     33.06 277    P        P        13 27 30.4 -0.3
USA0B                                  IAmb     IAmb     13 27 33.1
       comp=Z,77nm,1.3s
USRK   Ussuriysk Ar.      33.06 277    P        P        13 27 30.6 -0.1
       comp=Z,15nm,0.6s,baz=54,slow=9.0,SNR=37
USRK                                   PcP      PcP      13 30 14.2 +0.7
       comp=Z,14nm,0.8s,baz=48,slow=2.0,SNR=12
USRK                                   ScP      ScP      13 33 55.0 -0.2
       comp=Z,2.3nm,0.9s,baz=67,slow=4.8,SNR=4.7
USRK                                   LR       LR       13 42 53.5
       comp=Z,1µm,18.3s,baz=55,slow=40
USRK   Ussuriysk Ar.      33.06 277    P        P        13 27 29.7 -1.0
USRK                                            PcP      13 30 14.6 +1.0
H11N2  WAKE ISLAND Hy     33.31 204    T        T        14 02 47.1
       baz=16,slow=76,SNR=251
H11N3  WAKE ISLAND Hy     33.32 204    T        T        14 02 47.7
       baz=16,slow=76,SNR=383
H11N1  WAKE ISLAND Hy     33.33 204    T        T        14 02 48.5
       baz=16,slow=76,SNR=259
MAJO   Matsushiro         33.52 261    P        P        13 27 35.2 +0.4
MAJO                                   pmax     pmax
       comp=Z,126nm,1.2s
MAJO   Matsushiro         33.52 261    P        P        13 27 35.2 +0.4
MAJO                                   IAmb     IAmb     13 27 37.0
       comp=Z,126nm,1.2s
MAJO   Matsushiro         33.52 261    IAMs_20  IAMs_20  13 39 11.2
       comp=Z,3µm,20.0s
MAT    Matsushiro         33.52 261    P        P        13 27 35.5 +0.7
MJAR   Matsushiro Arr     33.52 261    P        P        13 27 35.5 +0.6
       comp=Z,31nm,1.0s,baz=51,slow=9.3,SNR=25
MJAR                                   PcP      PcP      13 30 15.0  0.0
       comp=Z,10.0nm,0.9s,baz=134,slow=1.6,SNR=7.6
MJAR                                   ScP      ScP      13 33 57.5 +0.6
       comp=Z,7.2nm,1.2s,baz=58,slow=5.2,SNR=5.0
MJAR                                   LR       LR       13 39 09.7
       comp=Z,2µm,21.9s,baz=65,slow=33
MJAR   Matsushiro Arr     33.52 261    P        P        13 27 34.1 -0.7
MJAR                                                     13 30 15.7
MJAR                                   pmax     pmax
       comp=Z,36nm,1.1s
MJAR   Matsushiro Arr     33.52 261    P        P        13 27 34.1 -0.7
MJAR                                            PcP      13 30 15.7 +0.6
MJB9   Matsu-Tunnel       33.52 261    P        P        13 27 35.4 +0.6
MJB9                                   IAmb     IAmb     13 27 36.9
       comp=Z,129nm,1.2s
MJB9                                   IAMs_20  IAMs_20  13 39 10.2
       comp=Z,3µm,19.0s
VLA    Vladivostok        33.68 276c iP       P        13 27 36.8 +0.7
VLA                                    pmax     pmax
       comp=Z,263nm,1.5s
KIP    Kipapa             34.06 143    P        P        13 27 41.2 +1.6
KIP                                             sP       13 27 52.5 -0.1
KIP                                    IAmb     IAmb     13 28 03.9
       comp=Z,235nm,1.3s
MDJ    Mudanjiang         34.34 279    P        P        13 27 41.4 -0.5
MDJ                                    pP       pP       13 27 51.3 +0.4
MDJ                                    sP       sP       13 27 55.8 +1.2
MDJ                                    PP       PnPn     13 28 57.8 +1.1
MDJ                                    S        S        13 33 04.4 -2.8
MDJ                                    sS       sS       13 33 24.3 +2.4
MDJ                                    ScP      ScP      13 34 00.8 +1.1
MDJ                                    PcS      PcS      13 34 03.1 -0.3
MDJ                                    SS       SnSn     13 35 17.8 -0.2
MDJ                                    ScS      ScS      13 38 01.6 -0.5
MDJ                                    pmax     pmax
       comp=Z,70nm,1.0s
MDJ                                    pmax     pmax
       comp=Z,540nm,6.6s
MDJ                                    LR       LR
       comp=Z,1µm,19.9s
MDJ                                    LR       LR
       comp=Z,2µm,20.6s
MDJ                                    LR       LR
       comp=Z,3µm,20.6s
MSHR   Mys Shultsa        34.41 275c iP       P        13 27 43.3 +0.8
H11S1  WAKE ISLAND Hy     34.53 204    T        T        14 04 18.7
       baz=16,slow=76,SNR=362
H11S2  WAKE ISLAND Hy     34.55 204    T        T        14 04 26.3
       baz=16,slow=76,SNR=204
H11S3  WAKE ISLAND Hy     34.55 204    T        T        14 04 17.8
       baz=16,slow=76,SNR=232
PGC    Sidney             35.24  72    P        P        13 27 51.4 +1.9
PGC                                    IAmb     IAmb     13 28 07.2
       comp=Z,85nm,1.1s
LLLB   Lillooet           35.34  68    P        P        13 27 52.1 +1.6
LLLB                                   IAmb     IAmb     13 28 01.4
       comp=Z,66nm,0.9s
YKA    Yellowknife Ar     35.50  46    P        P        13 27 51.2 -0.4
       comp=Z,36nm,0.8s,baz=279,slow=7.9,SNR=383
YKA                                    pP       pP       13 28 00.0 -0.9
       comp=Z,25nm,0.9s,baz=279,slow=8.0,SNR=9.7
YKA                                    PcP      PcP      13 30 20.6 +0.4
       comp=Z,18nm,1.0s,baz=285,slow=2.4,SNR=8.3
YKA                                    pPcP              13 30 29.8
       comp=Z,12nm,1.0s,baz=279,slow=2.4,SNR=5.1
YKA                                    ScP      ScP      13 34 02.4 -1.1
       comp=Z,3.6nm,0.8s,baz=290,slow=2.9,SNR=11
YKA                                    LR       LR       13 43 50.6
       comp=Z,3µm,20.3s,baz=0.0,slow=39
YKA                                    P3KPbc            13 58 35.2
       comp=Z,0.3nm,0.6s,baz=97,slow=5.2,SNR=5.7
NLWA   Neilton Lookou     35.55  74    P        P        13 27 54.6 +2.3
NLWA                                   IAMs_20  IAMs_20  13 38 38.8
       comp=Z,3µm,22.0s
A04D   Lummi Island       35.65  71    P        P        13 27 55.2 +2.1
       baz=296,SNR=6.6
D03D   Eldon              35.95  73    P        P        13 27 58.1 +2.4
       baz=298,SNR=76
E03A   Lebam              36.13  75    P        P        13 27 59.8 +2.6
E03A                                   IAmb     IAmb     13 28 09.8
       comp=Z,148nm,1.0s
B05A   Bryant             36.22  72    P        P        13 27 59.8 +1.9
       baz=297,SNR=65
D04E   Lakebay            36.31  74    P        P        13 28 01.7 +3.0
       baz=298,SNR=10
F03A   Seaside            36.43  76    P        P        13 28 02.5 +2.7
F03A                                   IAMs_20  IAMs_20  13 39 15.1
       comp=Z,3µm,22.0s
KHLU   Kahalu`u           36.54 141    IAMs_20  IAMs_20  13 39 22.0
       comp=Z,4µm,21.0s
F04D   Rainier, OR        36.69  75    P        P        13 28 04.3 +2.3
       baz=299,SNR=5.9
E04D   Cinebar            36.73  75    P        P        13 28 04.8 +2.5
       baz=299,SNR=27
D05A   Enumclaw           36.78  73    P        P        13 28 03.1 +0.4
G03D   McMinnville, O     36.96  77    P        P        13 28 06.3 +1.9
       baz=300
C06D   Leavenworth        37.09  72    P        P        13 28 07.3 +1.8
       baz=298,SNR=5.5
LON    Longmire           37.09  74    P        P        13 28 06.7 +1.2
LON    Longmire           37.09  74    P        P        13 28 06.7 +1.2
LON                                    IAmb     IAmb     13 28 24.8
       comp=Z,318nm,1.9s
LON                                    IAMs_20  IAMs_20  13 40 12.6
       comp=Z,2µm,21.0s
F04A   Amboy              37.12  75    P        P        13 28 07.4 +1.8
F04A                                   IAmb     IAmb     13 28 16.1
       comp=Z,123nm,0.8s
I02D   Swisshome          37.17  79    P        P        13 28 08.5 +2.4
       baz=301
COR    Corvallis          37.26  78    IAMs_20  IAMs_20  13 39 36.1
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	comp=Z,3µm,22.0s						
CN2	**Changchun**	**37.32**	**281**	*e*P	**P**	**13 28 06.4**	**-1.0**
CN2				*e*pP	pP	13 28 16.3	-0.2
CN2				*e*PP	**PnPn**	**13 29 34.8**	**+1.4**
CN2				*e*S	**S**	**13 33 51.9**	**-0.9**
CN2				*e*sS	sS	13 34 08.1	+0.5
CN2				pmax	pmax		
	comp=Z,50nm,1.0s						
CN2				pmax	pmax		
	comp=Z,670nm,3.0s						
CN2				LR	LR		
	comp=Z,1µm,20.0s						
CN2				LR	LR		
	comp=Z,1µm,20.0s						
CN2				LR	LR		
	comp=Z,2µm,22.0s						
LTY	**Liberty**	**37.54**	**72**	P	**P**	**13 28 09.4**	**+0.1**
LTY				IAmb	IAmb	13 28 20.0	
	comp=Z,136nm,1.2s						
J01E	**Myrtle Point**	**37.61**	**80**	P	**P**	**13 28 12.6**	**+2.8**
	baz=302						
H04D	**Lebanon**	**37.63**	**78**	P	**P**	**13 28 12.6**	**+2.5**
	baz=301,SNR=9.9						
I03D	**Drain, OR**	**37.69**	**79**	P	**P**	**13 28 12.7**	**+2.2**
	baz=302						
F05D	**White Salmon**	**37.73**	**75**	P	**P**	**13 28 12.8**	**+2.0**
	baz=300						
B08A	**Colville Reser**	**37.82**	**70**	P	**P**	**13 28 12.8**	**+1.2**
B08A				IAmb	IAmb	13 28 22.1	
	comp=Z,148nm,1.1s						
BOD	**Bodaibo**	**37.85**	**307**	*e*P	**P**	**13 28 10.1**	**-1.6**
BOD				*e*		13 34 02.9	
BOD				pmax	pmax		
	comp=Z,95nm,2.2s						
H04A	**Detroit Lake**	**37.89**	**77**	P	**P**	**13 28 13.9**	**+1.7**
H04A				IAmb	IAmb	13 28 23.2	
	comp=Z,179nm,0.9s						
K02D	**Willamette Mer**	**38.03**	**81**	P	**P**	**13 28 16.0**	**+2.6**
	baz=303,SNR=6.6						
HIA	**Hailar**	**38.10**	**292**	P	**P**	**13 28 13.8**	**-0.2**
HIA				pmax	pmax		
	comp=Z,277nm,1.4s						
HIA				MLR	MLR		
	comp=Z,3µm,20.0s						
HIA	**Hailar**	**38.10**	**292**	P	**P**	**13 28 13.8**	**-0.2**
HIA				IAmb	IAmb	13 28 14.9	
	comp=Z,277nm,1.4s						
HIA	**Hailar**	**38.10**	**292**	IAMs_20	IAMs_20	13 44 42.5	
	comp=Z,3µm,20.0s						
G05D	**Wamic, OR**	**38.14**	**76**	P	**P**	**13 28 16.3**	**+2.0**
	baz=301,SNR=18						
I04A	**Tendick Farm,**	**38.21**	**78**	P	**P**	**13 28 16.9**	**+1.9**
	baz=302,SNR=43						
L02E	**Cave Junction**	**38.36**	**81**	P	**P**	**13 28 19.0**	**+2.8**
	baz=304						
E07A	**Sunnyside**	**38.36**	**73**	P	**P**	**13 28 17.8**	**+1.6**
E07A				IAmb	IAmb	13 28 27.2	
	comp=Z,298nm,1.4s						
HUMO	**Hull Mountain**	**38.51**	**80**	P	**P**	**13 28 19.8**	**+2.3**
HUMO				IAMs_20	IAMs_20	13 41 13.5	
	comp=Z,2µm,19.0s						
G06A	**Carlson Farm,**	**38.55**	**75**	P	**P**	**13 28 19.6**	**+1.7**
G06A				IAmb	IAmb	13 28 42.6	
	comp=Z,196nm,1.6s						
I05D	**Terrebonne, OR**	**38.59**	**77**	P	**P**	**13 28 19.9**	**+1.7**
	baz=302,SNR=32						
HAWA	**Hanford**	**38.64**	**73**	P	**P**	**13 28 19.9**	**+1.4**
F07A	**Phinny Hill Vi**	**38.65**	**74**	P	**P**	**13 28 20.6**	**+2.0**
F07A				IAMs_20	IAMs_20	13 40 15.8	
	comp=Z,3µm,22.0s						
D08A	**Wollman Farm,**	**38.68**	**72**	P	**P**	**13 28 19.8**	**+1.0**
D08A				IAmb	IAmb	13 28 29.2	
	comp=Z,185nm,1.2s						
J04D	**Umpqua Nationa**	**38.70**	**79**	P	**P**	**13 28 21.7**	**+2.5**
	baz=303,SNR=17						
C09A	**Chrisman Ranch**	**38.70**	**70**	P	**P**	**13 28 19.4**	**+0.3**
C09A				IAmb	IAmb	13 28 29.3	
	comp=Z,110nm,1.0s						
E08A	**Dider Farm, El**	**38.88**	**73**	P	**P**	**13 28 21.1**	**+0.7**
E08A				IAmb	IAmb	13 28 31.1	
	comp=Z,259nm,1.3s						
PINE	**Pine Mountain**	**39.12**	**77**	IAMs_20	IAMs_20	13 40 34.4	
	comp=Z,3µm,22.0s						
L04D	**Klamath Falls**	**39.13**	**80**	P	**P**	**13 28 25.0**	**+2.1**
	baz=304,SNR=15						
YBH	**Yreka Blue Hor**	**39.15**	**81**	P	**P**	**13 28 25.5**	**+2.6**
YBH				pmax	pmax		
	comp=Z,61nm,1.1s						
YBH	**Yreka Blue Hor**	**39.15**	**81**	P	**P**	**13 28 25.5**	**+2.6**
YBH				IAMs_20	IAMs_20	13 40 40.3	
	comp=Z,3µm,22.0s						
NEW	**Newport**	**39.16**	**69**	LR	LR	13 42 07.6	
	comp=Z,993nm,21.5s,baz=310,slow=32						
NEW	**Newport**	**39.16**	**69**	P	**P**	**13 28 23.6**	**+0.7**
NEW				pmax	pmax		
	comp=Z,101nm,1.0s						
NEW				MLR	MLR		
	comp=Z,1µm,19.0s						
NEW	**Newport**	**39.16**	**69**	P	**P**	**13 28 23.6**	**+0.7**
NEW				IAmb	IAmb	13 28 33.0	
	comp=Z,101nm,0.9s						
NEW	**Newport**	**39.16**	**69**	P	**P**	**13 28 23.7**	**+0.8**
	baz=299,SNR=73						
J05D	**Fort Rock, OR**	**39.21**	**78**	P	**P**	**13 28 25.7**	**+2.2**
	baz=303,SNR=43						
K04D	**Chiloquin, OR**	**39.25**	**80**	P	**P**	**13 28 26.0**	**+2.2**
	baz=303						
M02C	**Callahan**	**39.25**	**82**	P	**P**	**13 28 26.4**	**+2.6**
	baz=304,SNR=7.4						
KSRS	**Korea Array**	**39.39**	**271**	P	**P**	**13 28 25.9**	**+1.1**
	comp=Z,49nm,1.0s,baz=60,slow=8.2,SNR=65						
KSRS				PcP	**PcP**	**13 30 33.2**	**+0.7**
	comp=Z,9.6nm,0.9s,baz=59,slow=3.4,SNR=8.5						
KSRS				LR	LR	13 43 40.0	
	comp=Z,710nm,21.6s,baz=58,slow=34						
G08A	**Pilot Rock**	**39.54**	**74**	P	**P**	**13 28 27.0**	**+0.8**
SNY	**Shenyang**	**39.55**	**279**	⇑P	**P**	**13 28 26.8**	**+0.7**
SNY				LR	LR		
	comp=Z,2µm,20.2s						
SNY				LR	LR		
	comp=Z,1µm,23.9s						
SNY				LR	LR		
	comp=Z,3µm,22.4s						
N02D	**Trinity Center**	**39.58**	**82**	P	**P**	**13 28 29.4**	**+2.9**
	baz=305						
M04C	**Macdoel**	**39.66**	**81**	P	**P**	**13 28 29.6**	**+2.3**
	baz=304,SNR=41						
I07A	**Izee**	**39.84**	**76**	P	**P**	**13 28 30.4**	**+1.7**
RES	**Resolute Bay**	**39.96**	**24**	LR	LR	13 47 11.0	
	comp=Z,2µm,20.7s,baz=260,slow=40						
RES	**Resolute Bay**	**39.96**	**24**	P	**P**	**13 28 28.2**	**-1.0**
RES				pmax	pmax		
	comp=Z,41nm,1.5s						
RES				MLR	MLR		
	comp=Z,2µm,20.0s						
RES	**Resolute Bay**	**39.96**	**24**	P	**P**	**13 28 28.2**	**-1.0**
RES				IAMs_20	IAMs_20	13 46 58.7	
	comp=Z,2µm,20.0s						
O02D	**Mt. Diablo Mer**	**39.98**	**83**	P	**P**	**13 28 32.7**	**+2.8**
	baz=306,SNR=27						
F10A	**Beach Ranch, E**	**40.23**	**72**	P	**P**	**13 28 32.7**	**+0.8**
F10A				IAMs_20	IAMs_20	13 41 31.6	
	comp=Z,2µm,22.0s						
JNU	**Nakatsue**	**40.31**	**263**	P	**P**	**13 28 33.8**	**+1.2**
JNU				IAmb	IAmb	13 28 35.1	
	comp=Z,329nm,1.2s						
JNU				IAMs_20	IAMs_20	13 43 05.0	
	comp=Z,2µm,20.0s						
CIT	**Chita**	**40.38**	**298**	*e*P	**P**	**13 28 33.4**	**+0.4**
CIT				pmax	pmax		
	comp=Z,423nm,1.3s						
TJN	**Taejon**	**40.41**	**270**	*c i*P	**P**	**13 28 34.1**	**+0.8**
HOPS	**Hopland Field**	**40.50**	**85**	IAMs_20	IAMs_20	13 41 08.1	
	comp=Z,3µm,20.0s						
O03E	**Paynes Creek**	**40.53**	**83**	P	**P**	**13 28 36.3**	**+1.9**
	baz=306,SNR=10						
MOD	**Modoc Plateau**	**40.54**	**80**	P	**P**	**13 28 36.0**	**+1.4**
MOD				IAMs_20	IAMs_20	13 42 01.3	
	comp=Z,2µm,20.0s						
WALA	**Waterton Lakes**	**40.65**	**67**	P	**P**	**13 28 35.9**	**+0.6**
WALA				IAmb	IAmb	13 28 45.4	
	comp=Z,173nm,1.2s						
BMO	**Blue Mountains**	**40.77**	**74**	P	**P**	**13 28 37.2**	**+0.8**
BMO				pmax	pmax		
	comp=Z,456nm,2.0s						
BMO	**Blue Mountains**	**40.77**	**74**	P	**P**	**13 28 37.2**	**+0.8**
BMO				IAmb	IAmb	13 28 47.2	
	comp=Z,456nm,2.0s						
BMO				IAMs_20	IAMs_20	13 42 07.9	
	comp=Z,2µm,22.0s						
GDXM	**Geysers**	**40.78**	**85**	IAMs_20	IAMs_20	13 41 14.6	
	comp=Z,3µm,20.0s						
J08A	**Circle Bar Ran**	**40.86**	**77**	P	**P**	**13 28 38.3**	**+1.2**
J08A				IAMs_20	IAMs_20	13 41 54.5	
	comp=Z,2µm,22.0s						
JTMT	**Jette**	**41.08**	**68**	P	**P**	**13 28 39.6**	**+0.7**
JTMT				IAmb	IAmb	13 28 49.0	
	comp=Z,232nm,1.4s						
MCCM	**Marconi Confer**	**41.13**	**86**	IAMs_20	IAMs_20	13 40 58.7	
	comp=Z,2µm,21.0s						
WVOR	**Wild Horse Val**	**41.27**	**78**	P	**P**	**13 28 42.3**	**+1.7**
WVOR				pmax	pmax		
	comp=Z,83nm,0.9s						
WVOR	**Wild Horse Val**	**41.27**	**78**	P	**P**	**13 28 42.3**	**+1.7**
WVOR				IAmb	IAmb	13 28 51.3	
	comp=Z,83nm,0.9s						
WVOR				IAMs_20	IAMs_20	13 42 20.5	
	comp=Z,2µm,22.0s						
BEKR	**Beckworth**	**41.68**	**82**	P	**P**	**13 28 45.3**	**+1.3**
MSO	**Missoula**	**41.75**	**69**	P	**P**	**13 28 45.1**	**+0.7**
MSO				IAmb	IAmb	13 28 54.2	
	comp=Z,188nm,1.1s						
MSO	**Missoula**	**41.75**	**69**	P	**P**	**13 28 44.9**	**+0.5**
	baz=301,SNR=64						
PAHR	**Pah Rah Range**	**42.38**	**82**	P	**P**	**13 28 51.9**	**+2.2**
MFID	**Camas Ranch**	**42.44**	**75**	P	**P**	**13 28 52.0**	**+1.9**
DL2	**Dalian**	**42.45**	**277**	P	**P**	**13 28 50.3**	**+0.3**
DL2				S	**S**	**13 35 14.3**	**+4.7**
DL2				pmax	pmax		
	comp=Z,79nm,1.2s						
DL2				pmax	pmax		
	comp=Z,560nm,7.5s						
DL2				LR	LR		
	comp=Z,770nm,27.5s						
DL2				LR	LR		
	comp=Z,920nm,25.9s						
DL2				LR	LR		
	comp=Z,1µm,21.4s						
PNTR	**Pine Nut**	**42.61**	**83**	P	**P**	**13 28 52.3**	**+0.7**
PNTR				IAmb	IAmb	13 29 01.8	
	comp=Z,257nm,1.5s						
CMB	**Columbia Colle**	**42.76**	**84**	IAMs_20	IAMs_20	13 43 50.8	
	comp=Z,2µm,19.0s						
YERR	**Yerington**	**42.90**	**82**	P	**P**	**13 28 55.2**	**+1.2**
MCMT	**McKenzie Canyo**	**43.46**	**71**	P	**P**	**13 28 59.4**	**+0.9**
EGMT	**Eagleton**	**43.56**	**66**	P	**P**	**13 28 59.3**	**+0.3**
EGMT				IAmb	IAmb	13 29 09.7	
	comp=Z,100nm,0.9s						
EGMT	**Eagleton**	**43.56**	**66**	P	**P**	**13 28 58.9**	**-0.1**
	baz=302,SNR=38						
RYN	**Ryan**	**43.56**	**82**	P	**P**	**13 29 00.1**	**+0.9**
KVN	**Kaiserville**	**43.57**	**82**	P	**P**	**13 29 00.5**	**+1.2**
KVN				pmax	pmax		
	comp=Z,44nm,1.2s						
KVN	**Kaiserville**	**43.57**	**82**	P	**P**	**13 29 00.5**	**+1.2**
KVN				IAMs_20	IAMs_20	13 43 46.3	
	comp=Z,2µm,22.0s						
NVAR	**Mina Array Bea**	**43.82**	**82**	P	**P**	**13 29 02.2**	**+0.8**
	comp=Z,20nm,0.9s,baz=295,slow=8.1,SNR=33						
NVAR				ScP	**ScP**	**13 34 36.5**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=294,slow=3.9,SNR=3.6						
NVAR				LR	LR	13 43 52.4	
	comp=Z,1µm,21.9s,baz=288,slow=31						
NVAR	**Mina Array Bea**	**43.82**	**82**	P	**P**	**13 29 02.6**	**+1.2**
MDPB	**Devils Postpil**	**43.82**	**84**	P	**P**	**13 29 03.7**	**+2.2**
MDPB				IAMs_20	IAMs_20	13 42 53.0	
	comp=Z,2µm,21.0s						
OMMB	**Old Mammoth Mi**	**43.88**	**84**	P	**P**	**13 29 04.2**	**+2.2**
OMMB				IAMs_20	IAMs_20	13 42 52.6	
	comp=Z,3µm,20.0s						
NV11	**Mina Array Sit**	**43.91**	**82**	P	**P**	**13 29 03.0**	**+1.0**
MLAC	**Mammoth, Mammo**	**43.98**	**84**	P	**P**	**13 29 06.9**	**+4.2**
	baz=308						
QLMT	**Earthquake Lak**	**44.30**	**71**	P	**P**	**13 29 05.6**	**+0.5**
ELK	**Elko**	**44.33**	**78**	LR	LR	13 44 28.5	
	comp=Z,2µm,21.4s,baz=320,slow=32						
ELK	**Elko**	**44.33**	**78**	P	**P**	**13 29 06.9**	**+1.4**
ELK				pmax	pmax		
	comp=Z,62nm,0.9s						
ELK	**Elko**	**44.33**	**78**	P	**P**	**13 29 06.9**	**+1.4**
ELK				IAmb	IAmb	13 29 15.4	
	comp=Z,62nm,0.9s						
ELK				IAMs_20	IAMs_20	13 43 55.3	
	comp=Z,2µm,22.0s						
NRIK	**Noril'sk**	**44.39**	**330**	P	**P**	**13 29 04.6**	**-0.7**
	comp=Z,18nm,1.1s,baz=92,slow=6.2,SNR=9.5						
NRIK				PcP	**PcP**	**13 30 49.6**	**+1.1**
	comp=Z,16nm,1.0s,baz=83,slow=3.4,SNR=4.4						
NRIK				LR	LR	13 50 05.7	
	comp=Z,1µm,18.5s,baz=54,slow=39						
FFC	**Flin Flon**	**44.42**	**54**	IAMs_20	IAMs_20	13 47 32.3	
	comp=Z,2µm,20.0s						
YHL	**Hebgen Lake**	**44.43**	**70**	P	**P**	**13 29 07.2**	**+0.9**
VOG	**Valley Oaks Go**	**44.45**	**86**	P	**P**	**13 29 09.6**	**+3.4**
	baz=309						
YHB	**Horse Butte**	**44.48**	**71**	P	**P**	**13 29 07.5**	**+0.9**
YMR	**Madison River**	**44.66**	**71**	P	**P**	**13 29 09.1**	**+1.0**
YHH	**Holmes Hill**	**44.66**	**70**	P	**P**	**13 29 09.1**	**+0.9**
SMMC	**Simmler**	**44.70**	**87**	P	**P**	**13 29 11.3**	**+3.1**
	baz=310						
TIN	**Tinemaha, Big**	**44.71**	**84**	P	P	13 29 13.6	+5.2
	baz=309						
VES	**Vestal, Richgr**	**44.94**	**86**	P	**P**	**13 29 10.9**	**+0.8**
	baz=310						
YPP	**Pitchstone Pla**	**44.98**	**71**	P	**P**	**13 29 12.6**	**+1.9**
YNE	**Yellowstone No**	**45.04**	**70**	P	**P**	**13 29 11.8**	**+0.6**
H17A	**Grant Village**	**45.05**	**71**	P	**P**	**13 29 13.4**	**+2.2**
H17A	**Grant Village**	**45.05**	**71**	P	**P**	**13 29 13.4**	**+2.2**
	baz=304,SNR=162						
LKWY	**Lake**	**45.06**	**70**	P	**P**	**13 29 11.9**	**+0.6**
LKWY				pmax	pmax		
	comp=Z,193nm,1.0s						
LKWY	**Lake**	**45.06**	**70**	P	**P**	**13 29 11.9**	**+0.6**
PKM	**Mcpherson Peak**	**45.09**	**87**	P	**P**	**13 29 12.9**	**+1.4**
	baz=310,SNR=5.6						
YMP	**Mirror Lake Pl**	**45.10**	**70**	P	**P**	**13 29 12.5**	**+0.9**
FLWY	**Flagg Ranch**	**45.15**	**71**	P	**P**	**13 29 14.2**	**+2.2**
BJI	**Beijing**	**45.15**	**282**	P	**P**	**13 29 12.4**	**+0.7**
BJI				S	**S**	**13 35 47.5**	**-1.5**
BJI				SS	**ScS**	**13 39 04.5**	**-1.4**
BJI				pmax	pmax		
	comp=Z,57nm,1.3s						
BJI				pmax	pmax		
	comp=Z,590nm,8.8s						
BJI				LR	LR		
	comp=Z,820nm,22.1s						
BJI				LR	LR		
	comp=Z,1µm,21.9s						
BJI				LR	LR		
	comp=Z,1µm,28.6s						
CWC	**Cottonwood Cre**	**45.19**	**84**	P	**P**	**13 29 13.1**	**+0.8**
	baz=309						
FXWY	**Fox Creek**	**45.21**	**72**	P	**P**	**13 29 13.4**	**+0.9**
FXWY				IAmb	IAmb	13 29 23.1	
	comp=Z,78nm,1.3s						
HVU	**Hansel Valley**	**45.23**	**75**	P	**P**	**13 29 14.4**	**+1.9**
HVU				pmax	pmax		
	comp=Z,80nm,0.7s						
HVU	**Hansel Valley**	**45.23**	**75**	P	**P**	**13 29 14.4**	**+1.9**
GRAC	**Grapevine Rang**	**45.29**	**83**	P	**P**	**13 29 14.1**	**+1.2**
	baz=309,SNR=9.9						
IRK	**Irkutsk**	**45.30**	**303**	*e*P	**P**	**13 29 12.2**	**-0.5**
IRK				pmax	pmax		
	comp=Z,141nm,2.0s						
RLMT	**Red Lodge**	**45.41**	**69**	P	**P**	**13 29 15.3**	**+1.3**
RLMT	**Red Lodge**	**45.41**	**69**	P	**P**	**13 29 15.0**	**+0.9**
	baz=304,SNR=187						
ISA	**Isabella, Lake**	**45.44**	**86**	P	**P**	**13 29 14.4**	**+0.2**
	baz=310,SNR=12						
REDW	**Red Top Meadow**	**45.47**	**72**	P	**P**	**13 29 15.8**	**+1.3**
REDW				IAmb	IAmb	13 29 25.3	
	comp=Z,172nm,1.3s						
REDW				IAMs_20	IAMs_20	13 45 13.2	
	comp=Z,2µm,22.0s						
ARVC	**Arvin**	**45.55**	**86**	P	P	13 29 20.0	+5.0
	baz=310						
R11A	**Troy Canyon, C**	**45.56**	**81**	P	**P**	**13 29 16.1**	**+0.9**
R11A				IAMs_20	IAMs_20	13 44 51.9	
	comp=Z,2µm,21.0s						
R11A	**Troy Canyon, C**	**45.56**	**81**	P	**P**	**13 29 15.5**	**+0.3**
	baz=308,SNR=108						
BGU	**Big Grassy Mou**	**45.57**	**76**	P	**P**	**13 29 16.2**	**+0.9**
AHID	**Auburn Hatcher**	**45.66**	**73**	IAMs_20	IAMs_20	13 45 40.4	
	comp=Z,2µm,20.0s						
SPUT	**South Promonto**	**45.70**	**75**	P	**P**	**13 29 16.8**	**+0.5**
SCZ2	**Santa Cruz Isl**	**45.78**	**88**	P	**P**	**13 29 18.4**	**+1.6**
	baz=311						
MPMC	**Manual Prospec**	**45.80**	**84**	P	**P**	**13 29 18.0**	**+0.8**
	baz=310,SNR=32						
TLY	**Talaya**	**45.92**	**302**	*c i*P	**P**	**13 29 18.1**	**+0.4**
TLY				*e*		13 30 54.6	
TLY				*e*		13 31 06.2	
TLY				*e*S	**S**	**13 36 03.2**	**+3.4**
TLY				pmax	pmax		
	comp=Z,207nm,1.3s						
TLY				MLR	MLR		
	comp=Z,4µm,17.0s						
TLY	**Talaya**	**45.92**	**302**	P	**P**	**13 29 17.5**	**-0.2**
TLY				IAmb	IAmb	13 29 19.8	
	comp=Z,174nm,1.5s						
TLY				IAMs_20	IAMs_20	13 48 24.2	
	comp=Z,3µm,21.0s						
FURC	**Furnace Creek,**	**45.93**	**84**	P	**P**	**13 29 19.2**	**+1.3**
	baz=310,SNR=11						
OSI	**Osito Audit: C**	**45.95**	**87**	P	**P**	**13 29 21.7**	**+3.5**
	baz=311						
TPNV	**Topopah Spring**	**46.01**	**83**	P	**P**	**13 29 20.0**	**+1.2**
TPNV				pmax	pmax		
	comp=Z,91nm,1.1s						
TPNV	**Topopah Spring**	**46.01**	**83**	P	**P**	**13 29 20.0**	**+1.2**
TPNV				IAmb	IAmb	13 29 28.4	
	comp=Z,91nm,1.1s						
TPNV				IAMs_20	IAMs_20	13 45 46.0	
	comp=Z,2µm,19.0s						
TPNV	**Topopah Spring**	**46.01**	**83**	P	**P**	**13 29 19.8**	**+1.0**
	baz=309,SNR=50						
LRMC	**Laurel Mtn Rad**	**46.05**	**85**	P	**P**	**13 29 20.5**	**+1.4**
	baz=310						
HWUT	**Hardware Ranch**	**46.06**	**74**	P	**P**	**13 29 20.6**	**+1.5**
HWUT				IAmb	IAmb	13 29 30.8	
	comp=Z,69nm,0.9s						
BLG	**Laguna Peak, P**	**46.07**	**88**	P	**P**	**13 29 23.5**	**+4.4**
	baz=311						
ULN	**Ulaanbaatar**	**46.09**	**296**	P	**P**	**13 29 19.4**	**+0.1**
ULN				pmax	pmax		
	comp=Z,179nm,1.3s						
ULN				MLR	MLR		
	comp=Z,5µm,20.0s						
ULN	**Ulaanbaatar**	**46.09**	**296**	P	**P**	**13 29 19.4**	**+0.1**
ULN				IAmb	IAmb	13 29 21.2	
	comp=Z,179nm,1.3s						
DUG	**Dugway, Tooele**	**46.14**	**77**	P	**P**	**13 29 21.0**	**+1.3**
DUG				pmax	pmax		
	comp=Z,156nm,1.1s						
DUG	**Dugway, Tooele**	**46.14**	**77**	P	**P**	**13 29 21.0**	**+1.3**
DUG				IAmb	IAmb	13 29 35.9	
	comp=Z,156nm,1.1s						
DUG	**Dugway, Tooele**	**46.14**	**77**	P	**P**	**13 29 21.2**	**+1.4**
	baz=307,SNR=107						
FCC	**Fort Churchill**	**46.23**	**46**	P	**P**	**13 29 18.6**	**-1.4**
FCC				pmax	pmax		
	comp=Z,48nm,1.2s						
FCC	**Fort Churchill**	**46.23**	**46**	P	**P**	**13 29 18.6**	**-1.4**
EDW2	**Edwards Air Fo**	**46.24**	**86**	P	**P**	**13 29 21.1**	**+0.7**
	baz=311,SNR=10						
LAO	**LASA Array**	**46.30**	**66**	P	**P**	**13 29 21.8**	**+0.9**
LAO				IAmb	IAmb	13 29 30.9	
	comp=Z,156nm,0.9s						
LAO	**LASA Array**	**46.30**	**66**	P	**P**	**13 29 21.7**	**+0.9**
	baz=304,SNR=12						
DECC	**Green Verdugo**	**46.43**	**87**	P	**P**	**13 29 25.3**	**+3.3**
	baz=311						
TCUT	**Toone Canyon**	**46.45**	**75**	P	**P**	**13 29 23.1**	**+0.8**
DGMT	**Dagmar**	**46.47**	**62**	IAMs_20	IAMs_20	13 49 27.9	
	comp=Z,1µm,18.0s						
DGMT	**Dagmar**	**46.47**	**62**	P	**P**	**13 29 22.0**	**0.0**
	baz=303,SNR=13						
SONM	**Songino Array**	**46.48**	**296**	P	**P**	**13 29 23.2**	**+0.9**
	comp=Z,88nm,1.1s,baz=54,slow=9.2,SNR=158						
SONM				ScP	**ScP**	**13 34 46.2**	**-1.0**
	comp=Z,3.9nm,1.1s,baz=95,slow=3.4,SNR=4.2						
SONM				LR	LR	13 50 09.8	
	comp=Z,5µm,19.0s,baz=57,slow=38						
SONM	**Songino Array**	**46.48**	**296**	P	**P**	**13 29 22.7**	**+0.4**
SONM				pmax	pmax		
	comp=Z,109nm,1.3s						
SONM	**Songino Array**	**46.48**	**296**	P	**P**	**13 29 22.7**	**+0.4**
CTU	**Camp Tracy**	**46.49**	**76**	P	**P**	**13 29 23.7**	**+1.1**
PSUT	**Pine Spring**	**46.51**	**79**	P	**P**	**13 29 23.8**	**+1.1**
BW06	**Boulder Array**	**46.59**	**72**	P	**P**	**13 29 24.1**	**+0.7**
BW06				IAMs_20	IAMs_20	13 46 34.7	
	comp=Z,1µm,21.0s						
BW06	**Boulder Array**	**46.59**	**72**	P	**P**	**13 29 24.0**	**+0.7**
	baz=306,SNR=76						
PD31	**Pinedale Array**	**46.59**	**72**	P	**P**	**13 29 24.1**	**+0.7**
PDAR	**Pinedale Array**	**46.59**	**72**	P	**P**	**13 29 23.8**	**+0.5**
	comp=Z,40nm,0.6s,baz=304,slow=3.5,SNR=547						
PDAR				pP	**pP**	**13 29 32.7**	**-0.1**
	comp=Z,82nm,0.8s,baz=308,slow=4.4,SNR=24						
PDAR				S	**S**	**13 36 10.6**	**+0.5**
	comp=Z,0.4nm,0.9s,baz=317,slow=8.7,SNR=4.1						
PDAR				LR	LR	13 46 23.8	
	comp=Z,1µm,21.6s,baz=312,slow=33						
PDAR	**Pinedale Array**	**46.59**	**72**	P	**P**	**13 29 24.1**	**+0.7**
SHOC	**Shoshone, Teco**	**46.66**	**84**	P	**P**	**13 29 24.6**	**+0.9**
	baz=310,SNR=10						
GSC	**Goldstone, Bar**	**46.71**	**85**	P	**P**	**13 29 24.9**	**+0.7**
	baz=310,SNR=28						
JLU	**Jordanelle**	**46.73**	**75**	P	**P**	**13 29 25.4**	**+0.9**
NLU	**North Lily Min**	**46.74**	**77**	P	**P**	**13 29 25.5**	**+1.0**
ZAK	**Zakamensk**	**46.80**	**301**	*e*P	**P**	**13 29 24.9**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,119nm,1.4s						
BFSC	**Mount Baldy Ra**	**46.86**	**86**	P	**P**	**13 29 26.0**	**+0.6**
	baz=311						
RRX	**Edison Barstow**	**46.87**	**85**	P	**P**	**13 29 27.0**	**+1.7**
	baz=311						
TIA	**Tai'an**	**46.93**	**277**	P	**P**	**13 29 26.0**	**+0.2**
TIA				pmax	pmax		
	comp=Z,69nm,0.7s						
TIA				LR	LR		
	comp=Z,760nm,17.2s						
TIA				LR	LR		
	comp=Z,1µm,21.4s						
TIA				LR	LR		
	comp=Z,1µm,22.8s						
CIS	**Catalina Islan**	**46.94**	**88**	P	**P**	**13 29 26.7**	**+0.8**
	baz=312						
SHPR	**Sheep Range**	**46.97**	**82**	IAMs_20	IAMs_20	13 46 05.4	
	comp=Z,1µm,20.0s						
SCI2	**San Clemente I**	**47.13**	**88**	P	**P**	**13 29 30.9**	**+3.4**
	baz=312						
TUQ	**Turquoise Moun**	**47.18**	**84**	P	**P**	**13 29 28.9**	**+1.0**
	baz=310,SNR=8.8						
HEC	**Hector,Ludlow**	**47.31**	**85**	P	**P**	**13 29 29.5**	**+0.6**
	baz=311,SNR=7.9						
BBRC	**Big Bear Solar**	**47.31**	**86**	P	**P**	**13 29 31.2**	**+2.2**
	baz=311						
MOY	**Mondy**	**47.33**	**304**	*e*P	**P**	**13 29 29.1**	**+0.3**
MOY				pmax	pmax		
	comp=Z,169nm,2.6s						
CCUT	**Cedar City**	**47.43**	**80**	P	**P**	**13 29 31.2**	**+1.2**
HHC	**Hu-ho-hao-te**	**47.48**	**286**	*e*P	**P**	**13 29 31.3**	**+1.1**
HHC				pP	pP	13 29 40.8	+1.5
HHC				S	**S**	**13 36 25.8**	**+3.2**
HHC				sS	sS	13 36 39.9	+2.4
HHC				pmax	pmax		
	comp=Z,320nm,1.0s						
HHC				pmax	pmax		
	comp=Z,980nm,5.1s						
HHC				LR	LR		
	comp=Z,2µm,15.1s						
HHC				LR	LR		
	comp=Z,1µm,15.5s						
HHC				LR	LR		
	comp=Z,3µm,14.0s						
MSU	**Marysvale**	**47.56**	**78**	P	**P**	**13 29 32.1**	**+1.1**
MSU	**Marysvale**	**47.56**	**78**	P	**P**	**13 29 32.1**	**+1.1**
SZCU	**Shurtz Canyon**	**47.57**	**80**	P	**P**	**13 29 30.9**	**-0.2**
MURC	**Murrieta**	**47.57**	**87**	P	**P**	**13 29 32.3**	**+1.5**
	baz=312						
TMUT	**Trail Mountain**	**47.67**	**77**	P	**P**	**13 29 32.8**	**+0.9**
SSE	**Sheshan**	**47.74**	**269**	P	**P**	**13 29 32.9**	**+0.8**
SSE				S	**S**	**13 36 25.4**	**-0.8**
SSE				pmax	pmax		
	comp=Z,55nm,1.4s						
SSE				pmax	pmax		
	comp=Z,400nm,6.0s						

SSE				LR	LR		
	comp=Z,280nm,18.9s						
SSE				LR	LR		
	comp=Z,470nm,19.2s						
SSE	**Sheshan**	**47.74**	**269**	IAMs_20	IAMs_20	13 48 44.8	
	comp=Z,1µm,20.0s						
GMRC	**Granite Mounta**	**47.76**	**84**	P	**P**	**13 29 33.0**	**+0.6**
	baz=311,SNR=34						
P17A	**Butcher Ranch,**	**47.85**	**76**	P	**P**	**13 29 34.6**	**+1.5**
MTPU	**Mount Pierson**	**47.85**	**79**	P	**P**	**13 29 34.8**	**+1.4**
PFO	**Pinyon Flats O**	**48.03**	**86**⇑	*e*P	**P**	**13 29 35.3**	**+0.8**
PFO				pmax	pmax		
	comp=Z,27nm,1.5s						
PFO	**Pinyon Flats O**	**48.03**	**86**	P	**P**	**13 29 36.4**	**+1.9**
	baz=312						
XPFO	**Pion Flat**	**48.03**	**86**	P	**P**	**13 29 35.3**	**+0.8**
BELC	**Belle Mtn. Jos**	**48.06**	**85**	P	**P**	**13 29 35.4**	**+0.6**
	baz=311,SNR=8.4						
109C	**Camp Elliot, M**	**48.10**	**87**	P	**P**	**13 29 36.3**	**+1.5**
	baz=312						
KNB	**Kanab**	**48.10**	**80**	P	**P**	**13 29 36.8**	**+1.7**
KNB				pmax	pmax		
	comp=Z,82nm,1.1s						
KNB	**Kanab**	**48.10**	**80**	P	**P**	**13 29 36.8**	**+1.7**
SRU	**San Rafael Swe**	**48.20**	**76**	P	**P**	**13 29 37.3**	**+1.4**
SRU				pmax	pmax		
	comp=Z,94nm,0.8s						
SRU	**San Rafael Swe**	**48.20**	**76**	P	**P**	**13 29 37.3**	**+1.4**
NEE2	**Needles Airpor**	**48.42**	**84**	P	**P**	**13 29 37.9**	**+0.5**
	baz=311						
K22A	**Casper**	**48.46**	**70**	P	**P**	**13 29 38.3**	**+0.5**
K22A				IAmb	IAmb	13 29 47.3	
	comp=Z,140nm,1.0s						
K22A	**Casper**	**48.46**	**70**	P	**P**	**13 29 37.8**	**+0.1**
	baz=307,SNR=28						
IRM	**Iron Mountain**	**48.49**	**85**	P	**P**	**13 29 38.5**	**+0.5**
	baz=311,SNR=34						
MONP2	**Monument Peak**	**48.53**	**87**	P	**P**	**13 29 39.0**	**+0.5**
	baz=312						
BTO	**Baotou**	**48.56**	**286**	*e*P	**P**	**13 29 38.3**	**-0.2**
BTO				*e*pP	**sP**	**13 29 53.4**	**+2.1**
NJ2	**Nanjing**	**48.56**	**272**	*e*P	**P**	**13 29 37.8**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,52nm,1.1s						
NJ2				LR	LR		
	comp=Z,900nm,23.7s						
NJ2				LR	LR		
	comp=Z,1µm,22.5s						
NJ2				LR	LR		
	comp=Z,2µm,22.3s						
BC3	**Big Chuckawall**	**48.63**	**85**	P	**P**	**13 29 39.4**	**+0.3**
	baz=312,SNR=11						
RWWY	**Rawlins**	**48.63**	**72**	P	**P**	**13 29 38.5**	**-0.7**
RWWY				IAMs_20	IAMs_20	13 47 06.8	
	comp=Z,2µm,21.0s						
KULLO	**Kullorsuaq**	**48.67**	**18**⇑	*i*P	**P**	**13 29 38.4**	**-0.3**
	comp=Z,41nm,1.0s						
KULLO	**Kullorsuaq**	**48.67**	**18**⇑	*i*P	**P**	**13 29 38.4**	**-0.3**
KULLO				pmax	pmax		
	comp=Z,41nm,1.0s						
U15A	**North Rim**	**48.80**	**80**	P	**P**	**13 29 42.0**	**+1.4**
U15A				IAmb	IAmb	13 29 51.2	
	comp=Z,117nm,1.1s						
U15A				IAMs_20	IAMs_20	13 47 16.8	
	comp=Z,2µm,20.0s						
SWSC	**Sam W. Stewart**	**48.88**	**86**	P	**P**	**13 29 40.8**	**-0.1**
	baz=312						
IKP	**In-Ko-Pah, Jac**	**48.88**	**87**	P	**P**	**13 29 41.6**	**+0.6**
	baz=312						
TIY	**Taiyuan**	**48.88**	**282**	*e*P	**P**	**13 29 42.4**	**+1.4**
TIY				pP	**sP**	**13 29 53.1**	**-0.9**
TIY				S	**S**	**13 36 38.1**	**-4.3**
TIY				sS	**sS**	**13 37 00.3**	**+2.8**
TIY				pmax	pmax		
	comp=Z,96nm,1.1s						
TIY				pmax	pmax		
	comp=Z,620nm,4.8s						
TIY				LR	LR		
	comp=Z,930nm,15.6s						
TIY				LR	LR		
	comp=Z,730nm,15.9s						
TIY				LR	LR		
	comp=Z,1µm,20.8s						
O20A	**White River Ci**	**48.96**	**74**	P	**P**	**13 29 42.2**	**+0.5**
O20A	**White River Ci**	**48.96**	**74**	P	**P**	**13 29 42.2**	**+0.5**
	baz=308,SNR=91						
PDMCI	**Parker Dam,Lak**	**49.02**	**84**	P	**P**	**13 29 42.4**	**+0.4**
	baz=311,SNR=6.0						
RSSD	**Black Hills**	**49.04**	**67**	P	**P**	**13 29 42.1**	**-0.1**
RSSD				pmax	pmax		
	comp=Z,101nm,1.2s						
RSSD	**Black Hills**	**49.04**	**67**	P	**P**	**13 29 42.1**	**-0.1**
RSSD				IAmb	IAmb	13 29 51.6	
	comp=Z,101nm,1.1s						
RSSD	**Black Hills**	**49.04**	**67**	P	**P**	**13 29 42.2**	**-0.1**
	baz=307						
Y12C	**Blythe**	**49.15**	**85**	P	**P**	**13 29 43.6**	**+0.7**
	baz=312,SNR=14						
MDND	**Maddock**	**49.36**	**61**	IAMs_20	IAMs_20	13 51 14.3	
	comp=Z,1µm,19.0s						
MDND	**Maddock**	**49.36**	**61**	P	**P**	**13 29 44.5**	**+0.1**
	baz=306,SNR=6.4						
GLA	**Glamis**	**49.42**	**86**	IAMs_20	IAMs_20	13 50 18.2	
	comp=Z,1µm,18.0s						
GLA	**Glamis**	**49.42**	**86**	P	**P**	**13 29 46.0**	**+0.9**
	baz=312,SNR=10						
PV10	**Paradox Valley**	**49.57**	**76**	IAMs_20	IAMs_20	13 46 37.4	
	comp=Z,2µm,18.0s						
PV14	**Lion Creek, Pa**	**49.58**	**76**	IAMs_20	IAMs_20	13 47 57.2	
	comp=Z,2µm,21.0s						
PV19	**Morning Glory**	**49.64**	**76**	IAMs_20	IAMs_20	13 48 21.1	
	comp=Z,1µm,20.0s						
PV16	**Nyswonger Mesa**	**49.68**	**76**	IAMs_20	IAMs_20	13 48 13.0	
	comp=Z,2µm,20.0s						
PV18	**Skein Mesa, Pa**	**49.73**	**76**	IAMs_20	IAMs_20	13 48 17.2	
	comp=Z,2µm,21.0s						
PV03	**Paradox Valley**	**49.76**	**76**	IAMs_20	IAMs_20	13 48 17.0	
	comp=Z,2µm,21.0s						
PV13	**Radium Mtn., P**	**49.84**	**76**	IAMs_20	IAMs_20	13 48 18.1	
	comp=Z,2µm,22.0s						
N23A	**Red Feather La**	**49.87**	**72**	P	**P**	**13 29 49.5**	**+0.8**
N23A				IAMs_20	IAMs_20	13 48 09.6	
	comp=Z,2µm,22.0s						
N23A	**Red Feather La**	**49.87**	**72**	P	**P**	**13 29 49.3**	**+0.6**
	baz=308,SNR=17						
KBS	**Kingsbay**	**49.91**	**357**	*e*P	**P**	**13 29 48.7**	**+0.5**
KBS	**Kingsbay**	**49.91**	**357**	P	**P**	**13 29 49.0**	**+0.8**
KBS				pmax	pmax		
	comp=Z,101nm,0.7s						
KBS				MLR	MLR		
	comp=Z,1µm,18.0s						
KBS	**Kingsbay**	**49.91**	**357**	P	**P**	**13 29 49.0**	**+0.8**
KBS	**Kingsbay**	**49.91**	**357**	IAMs_20	IAMs_20	13 54 15.5	
	comp=Z,1µm,18.0s						
WUAZ	**Wupatki**	**49.96**	**81**	P	**P**	**13 29 50.8**	**+1.5**
WUAZ				IAmb	IAmb	13 29 59.8	
	comp=Z,70nm,1.0s						
WUAZ				IAMs_20	IAMs_20	13 47 30.4	
	comp=Z,1µm,21.0s						
WUAZ	**Wupatki**	**49.96**	**81**	P	**P**	**13 29 50.2**	**+0.9**
	baz=311,SNR=59						
ULM	**Lac du Bonnet**	**49.96**	**56**	P	**P**	**13 29 47.7**	**-1.2**
	comp=Z,6.3nm,0.6s,baz=304,slow=7.4,SNR=15						
ULM				LR	LR	13 52 00.9	
	comp=Z,954nm,18.5s,baz=312,slow=37						
ULM	**Lac du Bonnet**	**49.96**	**56**	P	**P**	**13 29 47.4**	**-1.6**
ULM				pmax	pmax		
	comp=Z,76nm,1.7s						
ULM				MLR	MLR		
	comp=Z,1µm,18.0s						
ULM	**Lac du Bonnet**	**49.96**	**56**	P	**P**	**13 29 47.4**	**-1.6**
ULM				IAMs_20	IAMs_20	13 52 00.0	
	comp=Z,1µm,18.0s						
SMCO	**Snowmass**	**50.32**	**74**	P	**P**	**13 29 53.0**	**+0.7**
SPA0	**Spitsbergen Ar**	**50.48**	**356**	*e*P	**P**	**13 29 52.1**	**-0.4**
SPA0	**Spitsbergen Ar**	**50.48**	**356**	P	**P**	**13 29 52.5**	**0.0**
X16A	**Lo Mia Camp, P**	**50.63**	**82**	P	**P**	**13 29 55.7**	**+1.2**
MVCO	**Mesa Verde**	**50.64**	**77**	P	**P**	**13 29 55.5**	**+1.0**
MVCO				IAmb	IAmb	13 30 17.4	
	comp=Z,74nm,0.8s						
MVCO				IAMs_20	IAMs_20	13 48 12.3	
	comp=Z,2µm,20.0s						
MVCO	**Mesa Verde**	**50.64**	**77**	P	**P**	**13 29 54.9**	**+0.4**
	baz=310,SNR=72						
ISCO	**Idaho Springs**	**50.75**	**73**	P	**P**	**13 29 56.8**	**+1.4**
ISCO	**Idaho Springs**	**50.75**	**73**	P	**P**	**13 29 56.8**	**+1.4**
ISCO				IAmb	IAmb	13 30 06.1	
	comp=Z,288nm,1.9s						
ISCO				IAMs_20	IAMs_20	13 48 37.9	
	comp=Z,1µm,22.0s						
ISCO	**Idaho Springs**	**50.75**	**73**	P	**P**	**13 29 56.5**	**+1.0**
	baz=309,SNR=24						
AGMN	**Agassiz Nation**	**51.12**	**58**	IAMs_20	IAMs_20	13 53 59.8	
	comp=Z,1µm,19.0s						
AGMN	**Agassiz Nation**	**51.12**	**58**	P	**P**	**13 29 56.8**	**-0.9**
	baz=307,SNR=18						
D32A	**Dogwood Acres,**	**51.19**	**60**	IAMs_20	IAMs_20	13 54 11.8	
	comp=Z,1µm,19.0s						
W18A	**Petrified Fore**	**51.23**	**80**	P	**P**	**13 29 59.9**	**+1.0**
W18A				IAmb	IAmb	13 30 04.0	
	comp=Z,111nm,1.2s						
W18A				IAMs_20	IAMs_20	13 48 34.2	
	comp=Z,2µm,21.0s						
W18A	**Petrified Fore**	**51.23**	**80**	P	**P**	**13 29 59.6**	**+0.6**
	baz=311,SNR=45						
S22A	**4UR Ranch, Cre**	**51.31**	**75**	P	**P**	**13 30 00.7**	**+1.0**
	baz=310,SNR=79						
214A	**Organ Pipe Nat**	**51.42**	**85**	P	**P**	**13 30 01.0**	**+0.8**
214A	**Organ Pipe Nat**	**51.42**	**85**	P	**P**	**13 30 00.5**	**+0.3**
	baz=313,SNR=12						
X18A	**Snowflake**	**51.48**	**81**	P	**P**	**13 30 02.8**	**+1.9**
X18A				IAmb	IAmb	13 30 13.4	
	comp=Z,222nm,1.9s						
Q24A	**Divide**	**51.55**	**73**	P	**P**	**13 30 02.1**	**+0.6**
	baz=310,SNR=13						
DAG	**Danmarks Havn**	**51.65**	**6**⇑	*i*P	**P**	**13 30 00.4**	**-0.9**
	comp=Z,12nm,0.8s						
DAG	**Danmarks Havn**	**51.65**	**6**⇑	*i*P	**P**	**13 30 00.4**	**-0.9**
DAG				pmax	pmax		
	comp=Z,12nm,0.8s						
HSPB	**Hornsund (broa**	**51.68**	**356**	*e*P	**P**	**13 30 05.0**	**+3.5**
HSPB	**Hornsund (broa**	**51.68**	**356**	*e*P	**P**	**13 30 02.5**	**+1.1**
HSPB	**Hornsund (broa**	**51.68**	**356**	*e*P	**P**	**13 30 05.0**	**+3.5**
SUSD	**Miller**	**51.75**	**64**	IAMs_20	IAMs_20	13 52 29.9	
	comp=Z,1µm,20.0s						
SUSD	**Miller**	**51.75**	**64**	P	**P**	**13 30 02.2**	**-0.3**
	baz=308						
SDCO	**Great Sand Dun**	**52.12**	**75**	P	**P**	**13 30 06.6**	**+0.9**
SDCO				IAmb	IAmb	13 30 21.7	
	comp=Z,146nm,1.4s						
SDCO	**Great Sand Dun**	**52.12**	**75**	P	**P**	**13 30 06.2**	**+0.5**
	baz=310,SNR=75						
OGNE	**Ogallala**	**52.16**	**69**	P	**P**	**13 30 06.3**	**+0.7**
	baz=309,SNR=24						
NACB	**Ninganchiao**	**52.37**	**262**	IAMs_20	IAMs_20	13 51 04.3	
	comp=Z,1µm,20.0s						
WHN	**Wuhan**	**52.41**	**274**⇑	*i*P	**P**	**13 30 07.1**	**-0.5**
WHN				S	**S**	**13 37 34.8**	**+3.5**
WHN				pmax	pmax		
	comp=Z,180nm,1.1s						
WHN				LR	LR		
	comp=Z,3µm,23.3s						
TUC	**Tucson**	**52.45**	**83**	P	**P**	**13 30 09.1**	**+1.2**
TUC				pmax	pmax		
	comp=Z,67nm,1.3s						
TUC				MLR	MLR		
	comp=Z,900nm,18.0s						
TUC	**Tucson**	**52.45**	**83**	P	**P**	**13 30 09.1**	**+1.2**
TUC	**Tucson**	**52.45**	**83**	P	**P**	**13 30 08.7**	**+0.8**
	baz=313						
KSCO	**Kaye Shedlock'**	**53.03**	**72**	IAMs_20	IAMs_20	13 50 34.6	
	comp=Z,1µm,20.0s						
KSCO	**Kaye Shedlock'**	**53.03**	**72**	P	**P**	**13 30 13.6**	**+1.4**
	baz=310						
SSLB	**Suanglung**	**53.05**	**262**	P	**P**	**13 30 11.4**	**-1.0**
SSLB				IAmb	IAmb	13 30 13.6	
	comp=Z,163nm,1.1s						
YULB	**Yu-li**	**53.12**	**262**	P	**P**	**13 30 13.0**	**+0.1**
YULB				IAmb	IAmb	13 30 16.1	
	comp=Z,154nm,1.4s						
T25A	**Trinidad**	**53.17**	**74**	P	**P**	**13 30 14.6**	**+1.2**
	baz=311,SNR=83						
FRB	**Frobisher Bay**	**53.27**	**31**	LR	LR	13 54 40.1	
	comp=Z,2µm,19.9s,baz=302,slow=38						
ANMO	**Albuquerque**	**53.37**	**78**	LR	LR	13 50 12.6	
	comp=Z,1µm,21.6s,baz=358,slow=33						
ANMO	**Albuquerque**	**53.37**	**78***c*	*i*P	**P**	**13 30 15.3**	**+0.5**
ANMO				pmax	pmax		
	comp=Z,30nm,1.7s						
ANMO	**Albuquerque**	**53.37**	**78**	IAMs_20	IAMs_20	13 50 01.7	
	comp=Z,1µm,21.0s						
ANMO	**Albuquerque**	**53.37**	**78**	P	**P**	**13 30 15.6**	**+0.8**
	baz=312						
XAN	**Xi'an**	**53.44**	**281**	P	**P**	**13 30 14.5**	**-0.7**
XAN				pP	pP	13 30 25.1	+0.7
XAN				sP	sP	13 30 29.1	+1.1
XAN				PcP	**PcP**	**13 31 21.8**	**-0.2**
XAN				PP	**PP**	**13 32 16.0**	**+0.5**
XAN				S	**S**	**13 37 42.3**	**-3.0**
XAN				ScS	**ScS**	**13 40 03.0**	**+0.9**
XAN				pmax	pmax		
	comp=Z,62nm,1.1s						
XAN				pmax	pmax		
	comp=Z,550nm,4.1s						
XAN				LR	LR		
	comp=Z,830nm,16.0s						
XAN				LR	LR		
	comp=Z,1µm,20.3s						
XAN				LR	LR		
	comp=Z,1µm,21.1s						
XAN	**Xi'an**	**53.44**	**281**	IAMs_20	IAMs_20	13 51 58.6	
	comp=Z,1µm,20.0s						
SUMG	**Summit**	**53.48**	**14**⇑	*i*P	**P**	**13 30 15.1**	**-0.3**
	comp=Z,227nm,1.1s						
SUMG	**Summit**	**53.48**	**14**	P	**P**	**13 30 15.0**	**-0.3**
SUMG				pmax	pmax		
	comp=Z,72nm,1.0s						
SUMG	**Summit**	**53.48**	**14**	P	**P**	**13 30 14.9**	**-0.4**
SUMG				IAmb	IAmb	13 30 17.5	
	comp=Z,72nm,1.0s						
ECSD	**EROS Data Cent**	**53.51**	**63**	P	**P**	**13 30 14.6**	**-1.0**
ECSD	**EROS Data Cent**	**53.51**	**63**	IAMs_20	IAMs_20	13 56 01.7	
	comp=Z,2µm,18.0s						
ECSD	**EROS Data Cent**	**53.51**	**63**	P	**P**	**13 30 14.6**	**-1.0**
	baz=309,SNR=16						
TPUB	**Ta-pu**	**53.60**	**262**	P	**P**	**13 30 15.6**	**-0.9**
TPUB				IAmb	IAmb	13 30 18.8	
	comp=Z,89nm,1.1s						
TPUB				IAMs_20	IAMs_20	13 51 53.2	
	comp=Z,1µm,20.0s						
EYMN	**Ely**	**53.65**	**57**	P	**P**	**13 30 15.9**	**-0.5**
EYMN	**Ely**	**53.65**	**57**	P	**P**	**13 30 15.7**	**-0.8**
	baz=309,SNR=23						
Y22D	**IRIS PASSCAL I**	**53.66**	**79**	P	**P**	**13 30 19.4**	**+2.5**
	baz=312						
QZH	**Quanzhou**	**53.68**	**265**⇑	*i*P	**P**	**13 30 17.4**	**+0.4**
QZH				S	**S**	**13 37 52.4**	**+3.7**
QZH				pmax	pmax		
	comp=Z,120nm,1.3s						
QZH				pmax	pmax		
	comp=Z,550nm,7.4s						
QZH				LR	LR		
	comp=Z,780nm,20.8s						
QZH				LR	LR		
	comp=Z,640nm,17.5s						
QZH				LR	LR		
	comp=Z,960nm,22.8s						
ZAA0	**Zalesovo Array**	**53.94**	**313**	IAMs_20	IAMs_20	13 53 33.9	
	comp=Z,2µm,22.0s						
ZALV	**Zalesovo Beam**	**53.94**	**313**	P	**P**	**13 30 17.7**	**-0.7**
	comp=Z,2.0nm,0.5s,baz=64,slow=5.5,SNR=11						
ZALV				PcP	**PcP**	**13 31 23.8**	**+0.3**
	comp=Z,28nm,0.7s,baz=37,slow=3.6,SNR=17						
ZALV				pPcP		13 31 33.0	
	comp=Z,17nm,0.8s,baz=33,slow=3.7,SNR=6.3						
ZALV				LR	LR	13 54 50.3	
	comp=Z,1µm,18.7s,baz=54,slow=38						
319A	**Douglas**	**54.02**	**83**	IAMs_20	IAMs_20	13 53 22.9	
	comp=Z,1µm,18.0s						
BGNE	**Belgrade**	**54.12**	**67**	P	**P**	**13 30 20.4**	**+0.4**
	baz=310,SNR=5.4						
121A	**Cookes Peak, D**	**54.16**	**81**	P	**P**	**13 30 19.5**	**-1.1**
121A	**Cookes Peak, D**	**54.16**	**81**	P	**P**	**13 30 21.5**	**+0.8**
	baz=313,SNR=8.6						
E38A	**The Farm, Brul**	**54.46**	**58**	P	**P**	**13 30 21.1**	**-1.3**
E38A				IAmb	IAmb	13 30 22.6	
	comp=Z,71nm,1.1s						
SPMN	**Marine on St.**	**54.67**	**60**	IAMs_20	IAMs_20	13 56 01.1	
	comp=Z,1µm,18.0s						
SPMN	**Marine on St.**	**54.67**	**60**	P	**P**	**13 30 23.7**	**-0.3**
	baz=310						
CBKS	**Cedar Bluff**	**54.88**	**70**	P	**P**	**13 30 25.3**	**-0.3**
CBKS				pmax	pmax		
	comp=Z,702nm,1.4s						
CBKS	**Cedar Bluff**	**54.88**	**70**	P	**P**	**13 30 25.3**	**-0.3**
CBKS	**Cedar Bluff**	**54.88**	**70**	P	**P**	**13 30 26.4**	**+0.8**
	baz=311,SNR=16						
LZH	**Lanzhou**	**55.18**	**286**	⇑P	**P**	**13 30 28.8**	**+0.9**
LZH				pP	sP	13 30 41.6	+0.8
LZH				PP	**PP**	**13 32 33.3**	**+2.1**
LZH				S	**S**	**13 38 07.3**	**-1.7**
LZH				sS	sS	13 38 24.6	+0.3
LZH				pmax	pmax		
	comp=Z,180nm,1.3s						
LZH				pmax	pmax		
	comp=Z,730nm,7.2s						
LZH				LR	LR		
	comp=Z,3µm,15.7s						
LZH				LR	LR		
	comp=Z,2µm,16.0s						
LZH				LR	LR		
	comp=Z,3µm,18.6s						
GTA	**Gaotai**	**55.38**	**292**	⇑P	**P**	**13 30 29.8**	**+0.5**
GTA				pP	pP	13 30 39.3	+0.7
GTA				sP	sP	13 30 43.5	+1.3
GTA				S	**S**	**13 38 10.0**	**-1.5**
GTA				sS	sS	13 38 26.5	-0.2
GTA				ScS	**ScS**	**13 40 13.6**	**-2.4**
GTA				pmax	pmax		
	comp=Z,110nm,1.2s						
GTA				pmax	pmax		
	comp=Z,730nm,5.4s						
GTA				LR	LR		
	comp=Z,2µm,16.5s						
GTA				LR	LR		
	comp=Z,2µm,16.5s						
GTA				LR	LR		
	comp=Z,2µm,16.8s						
ENH	**Enshi**	**55.64**	**277**	P	**P**	**13 30 30.5**	**-0.7**
ENH				IAmb	IAmb	13 30 32.0	
	comp=Z,85nm,1.1s						
D41A	**Chassel**	**55.74**	**56**	IAMs_20	IAMs_20	13 55 33.6	
	comp=Z,2µm,22.0s						
SFJD	**Kangerlussuaq**	**55.86**	**22**	*i* P	**P**	**13 30 31.0**	**-1.1**
SFJD	**Kangerlussuaq**	**55.86**	**22**	*i* P	**P**	**13 30 31.0**	**-1.1**
G40A	**Rib Lake**	**56.05**	**58**	P	**P**	**13 30 33.1**	**-0.8**
G40A				IAmb	IAmb	13 30 43.6	
	comp=Z,75nm,1.4s						
COWI	**Conover**	**56.07**	**57**	P	**P**	**13 30 33.1**	**-0.9**
MNTX	**Cornudas Mount**	**56.22**	**80**	P	**P**	**13 30 36.1**	**+0.8**
MNTX				IAmb	IAmb	13 30 40.2	
	comp=Z,81nm,1.1s						
MNTX	**Cornudas Mount**	**56.22**	**80**	P	**P**	**13 30 35.9**	**+0.6**
	baz=314,SNR=72						
MSTX	**Muleshoe**	**56.28**	**76**	P	**P**	**13 30 36.6**	**+0.8**
MSTX	**Muleshoe**	**56.28**	**76**	P	**P**	**13 30 35.8**	**0.0**
	baz=313,SNR=30						
AMTX	**Amarillo**	**56.32**	**75**	P	**P**	**13 30 37.4**	**+1.3**
AMTX				IAmb	IAmb	13 30 47.0	
	comp=Z,128nm,1.3s						
AMTX				IAMs_20	IAMs_20	13 51 44.0	
	comp=Z,1µm,21.0s						
AMTX	**Amarillo**	**56.32**	**75**	P	**P**	**13 30 36.4**	**+0.4**
	baz=313						
KSU1	**Kansas State U**	**56.52**	**68**	IAMs_20	IAMs_20	13 58 45.5	
	comp=Z,1µm,20.0s						
KSU1	**Kansas State U**	**56.52**	**68**	P	**P**	**13 30 37.0**	**-0.3**
	baz=312,SNR=18						
SCIA	**State Center**	**56.60**	**63**	IAMs_20	IAMs_20	13 53 05.4	
	comp=Z,1µm,22.0s						
SCIA	**State Center**	**56.60**	**63**	P	**P**	**13 30 37.9**	**+0.1**
	baz=312						
I40A	**Norwalk**	**56.73**	**60**	IAMs_20	IAMs_20	13 57 15.4	
	comp=Z,2µm,18.0s						
U32A	**Winter Ranch,**	**56.93**	**72**	IAMs_20	IAMs_20	13 51 52.6	
	comp=Z,1µm,22.0s						
E43A	**Lone Tree Farm**	**57.01**	**56**	P	**P**	**13 30 39.7**	**-1.0**
E43A				IAmb	IAmb	13 31 10.4	
	comp=Z,40nm,0.8s						
APYP	**Conner**	**57.29**	**257**	*e*P	**P**	**13 30 41.8**	**-1.2**
HAMF	**Hammerfest**	**57.30**	**351**	*e*P	**P**	**13 30 41.9**	**-0.4**
E44A	**Grand Marais A**	**57.40**	**55**	P	**P**	**13 30 43.7**	**+0.3**
	baz=312,SNR=5.7						
SCO	**Scoresbysund**	**57.47**	**9**	*i* P	**P**	**13 30 43.0**	**-0.5**
SCO	**Scoresbysund**	**57.47**	**9**	*i* P	**P**	**13 30 43.0**	**-0.5**
JFWS	**Jewell Farm**	**57.58**	**60**	P	**P**	**13 30 44.0**	**-0.7**
	baz=312,SNR=10						
L40A	**Anamosa**	**57.61**	**62**	IAMs_20	IAMs_20	13 56 16.9	
	comp=Z,2µm,18.0s						
I42A	**Draeger Farm,**	**57.65**	**59**	IAMs_20	IAMs_20	13 58 12.8	
	comp=Z,1µm,18.0s						
H43A	**Windswept, Lux**	**57.87**	**58**	P	**P**	**13 30 44.4**	**-2.3**
H43A				IAmb	IAmb	13 30 47.4	
	comp=Z,89nm,1.1s						
JMIC	**Jan Mayen**	**57.88**	**4**	LR	LR	13 56 10.4	
	comp=Z,395nm,18.8s,baz=299,slow=37						
ARCES	**ARCESS Array B**	**58.17**	**350**	P	**P**	**13 30 47.5**	**-1.0**
	comp=Z,15nm,0.5s,baz=25,slow=7.0,SNR=75						
ARCES	**ARCESS Array B**	**58.17**	**350**	P	**P**	**13 30 48.0**	**-0.5**
ARE0	**ARCESS Array S**	**58.17**	**350**	*e*P	**P**	**13 30 47.8**	**-0.7**
WMOK	**Wichita Mounta**	**58.17**	**73**	P	**P**	**13 30 49.5**	**+0.4**
WMOK				pmax	pmax		
	comp=Z,49nm,0.8s						
WMOK	**Wichita Mounta**	**58.17**	**73**	P	**P**	**13 30 49.5**	**+0.4**
WMOK				IAmb	IAmb	13 30 59.0	
	comp=Z,49nm,0.8s						
WMOK				IAMs_20	IAMs_20	13 52 42.7	
	comp=Z,1µm,22.0s						
WMOK	**Wichita Mounta**	**58.17**	**73**	P	**P**	**13 30 49.4**	**+0.4**
	baz=313,SNR=40						
D46A	**Sault St. Mari**	**58.18**	**54**	P	**P**	**13 30 48.5**	**-0.4**
	baz=313,SNR=9.5						
F45A	**CMU Biological**	**58.24**	**55**	P	**P**	**13 30 48.9**	**-0.4**
	baz=313,SNR=9.6						
GZH	**Guangzhou**	**58.32**	**268**	P	**P**	**13 30 46.3**	**-3.9**
E46A	**Sault Ste Mari**	**58.40**	**54**	P	**P**	**13 30 50.2**	**-0.2**
E46A				IAmb	IAmb	13 31 42.6	
	comp=Z,72nm,0.9s						
E46A				IAMs_20	IAMs_20	13 57 18.2	
	comp=Z,2µm,20.0s						
HKPS	**Hong Kong Po S**	**58.41**	**267**	IAMs_20	IAMs_20	13 53 34.5	
	comp=Z,1µm,22.0s						
LVZ	**Lovozero**	**58.50**	**346**⇑	*i*P	**P**	**13 30 51.0**	**+0.1**
LVZ				pmax	pmax		
	comp=Z,40nm,0.8s						
LVZ	**Lovozero**	**58.50**	**346**	P	**P**	**13 30 50.1**	**-0.8**
LVZ				IAmb	IAmb	13 31 04.3	
	comp=Z,195nm,1.7s						
L42A	**Oliver, Polo**	**58.51**	**61**	P	**P**	**13 30 50.1**	**-1.1**
L42A				IAmb	IAmb	13 30 59.7	
	comp=Z,93nm,1.1s						
L42A				IAMs_20	IAMs_20	13 55 42.6	
	comp=Z,2µm,20.0s						
D47A	**Chapleau**	**58.53**	**53**	P	**P**	**13 30 50.9**	**-0.5**
	baz=313,SNR=13						
G45A	**Suttons Bay**	**58.60**	**56**	P	**P**	**13 30 51.6**	**-0.2**
	baz=313,SNR=8.4						
TRO	**Tromso**	**58.70**	**353**	*e*P	**P**	**13 30 51.5**	**-0.7**
N41A	**Harden Midland**	**58.73**	**63**	IAMs_20	IAMs_20	13 59 42.5	
	comp=Z,1µm,18.0s						
CD2	**Chengdu**	**58.75**	**282**	P	**P**	**13 30 53.3**	**+0.1**
CD2				S	**S**	**13 39 03.8**	**+7.8**
CD2				SS	**SS**	**13 42 53.0**	**+4.0**
CD2				pmax	pmax		
	comp=Z,130nm,1.2s						
CD2				pmax	pmax		
	comp=Z,600nm,15.0s						
CD2				LR	LR		
	comp=Z,1µm,14.2s						
CD2				LR	LR		
	comp=Z,1µm,15.0s						
CD2				LR	LR		
	comp=Z,2µm,21.4s						
K43A	**Burlington**	**58.76**	**60**	IAMs_20	IAMs_20	13 58 28.2	
	comp=Z,1µm,18.0s						
G46A	**Petoskey**	**58.82**	**55**	P	**P**	**13 30 53.5**	**+0.1**
	baz=313,SNR=7.0						
E47A	**Iron Bridge**	**58.86**	**53**	P	**P**	**13 30 53.1**	**-0.5**
	baz=313,SNR=13						
KTK1	**Kautokeino**	**58.91**	**351**	*e*P	**P**	**13 30 52.4**	**-1.3**
TX31	**Lajitas Ar. Si**	**58.92**	**81**	P	**P**	**13 30 54.1**	**-0.3**
TX31				IAmb	IAmb	13 30 59.0	
	comp=Z,92nm,1.4s						
TX32	**Lajitas Array**	**58.92**	**81**	P	**P**	**13 30 55.0**	**+0.6**
TX32				IAmb	IAmb	13 30 59.0	
	comp=Z,93nm,1.4s						
TXAR	**Lajitas Array**	**58.92**	**81**	P	**P**	**13 30 54.3**	**-0.1**
	comp=Z,34nm,1.0s,baz=305,slow=4.4,SNR=46						
TXAR				PKPPKP	**P'P'df**	**14 00 29.6**	**-1.9**

	comp=Z,0.6nm,1.0s,baz=163,slow=13,SNR=3.9						
TXAR				PKP2bc		14 00 42.7	
	comp=Z,0.8nm,1.0s,baz=119,slow=4.4,SNR=4.0						
TXAR	**Lajitas Array**	**58.92**	**81**	P	**P**	**13 30 54.7**	**+0.3**
KURK	**Kurchatov**	**58.93**	**313**c	iP	**P**	**13 30 52.8**	**-1.2**
KURK				pmax	pmax		
	comp=Z,117nm,1.3s						
KURK	**Kurchatov**	**58.93**	**313**	P	**P**	**13 30 53.0**	**-1.0**
KURK				IAmb	IAmb	13 30 55.8	
	comp=Z,105nm,1.1s						
SMPP	**San Manuel, Pa**	**58.94**	**257**	eP	**P**	**13 30 53.0**	**-1.6**
I45A	**Fountain**	**58.98**	**57**	P	**P**	**13 30 54.4**	**-0.1**
	baz=313						
APA	**Apatity**	**58.99**	**346**⇓	iP	**P**	**13 30 53.2**	**-1.0**
APA				pmax	pmax		
	comp=Z,15nm,1.2s						
APA				MLR	MLR		
	comp=Z,2μm,20.0s						
D48A	**Paudash Townsh**	**59.10**	**52**	P	**P**	**13 30 54.6**	**-0.7**
	baz=314,SNR=17						
ABTX	**Abilene, Hawle**	**59.10**	**75**	P	**P**	**13 30 53.6**	**-2.0**
ABTX				IAMs_20	IAMs_20	13 54 18.6	
	comp=Z,1μm,21.0s						
ABTX	**Abilene, Hawle**	**59.10**	**75**	P	**P**	**13 30 56.0**	**+0.4**
	baz=314,SNR=36						
TUL1	**Leonard**	**59.15**	**70**	P	**P**	**13 30 56.2**	**+0.3**
	baz=314,SNR=7.1						
H46A	**Fife Lake**	**59.18**	**56**	P	**P**	**13 30 55.8**	**-0.1**
	baz=313						
WMQ	**Urumqi**	**59.20**	**303**	P	**P**	**13 30 56.1**	**0.0**
WMQ				pP	pwP	13 31 08.1	+0.6
WMQ				PcP	**PcP**	**13 31 45.3**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,75nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,290nm,7.7s						
WMQ				LR	LR		
	comp=Z,1μm,22.1s						
WMQ				LR	LR		
	comp=Z,1μm,22.1s						
WMQ				LR	LR		
	comp=Z,3μm,24.1s						
D49A	**Beulah Townshi**	**59.26**	**52**	P	**P**	**13 30 55.7**	**-0.6**
	baz=314						
GLMI	**Grayling**	**59.29**	**56**	P	**P**	**13 30 56.7**	**+0.1**
	baz=314						
J45A	**Montague**	**59.31**	**58**	P	**P**	**13 30 56.4**	**-0.4**
	baz=313						
MATQ	**Matagami**	**59.31**	**48**	P	**P**	**13 30 55.0**	**-1.7**
	baz=314,SNR=6.9						
L44A	**Lake County Fo**	**59.35**	**60**	IAMs_20	IAMs_20	13 55 03.8	
	comp=Z,2μm,22.0s						
L44A	**Lake County Fo**	**59.35**	**60**	P	**P**	**13 30 56.9**	**-0.1**
	baz=313						
S39A	**Bolivar**	**59.38**	**67**	P	**P**	**13 30 56.2**	**-1.2**
S39A				IAmb	IAmb	13 31 05.2	
	comp=Z,53nm,0.9s						
E48A	**Lockeyer**	**59.40**	**53**	P	**P**	**13 30 57.0**	**-0.4**
	baz=314,SNR=16						
G47A	**Hillman**	**59.44**	**55**	P	**P**	**13 30 57.5**	**-0.2**
	baz=314						
I46A	**Reed City**	**59.46**	**57**	P	**P**	**13 30 58.0**	**+0.2**
	baz=314,SNR=5.1						
F48A	**Evansville**	**59.62**	**54**	P	**P**	**13 30 58.6**	**-0.3**
	baz=314,SNR=16						
H47A	**Mio**	**59.66**	**56**	P	**P**	**13 30 59.4**	**+0.2**
	baz=314						
HDIL	**Hopedale**	**59.70**	**62**	P	**P**	**13 30 58.5**	**-1.1**
HDIL				IAMs_20	IAMs_20	13 59 59.9	
	comp=Z,1μm,18.0s						
HDIL	**Hopedale**	**59.70**	**62**	P	**P**	**13 30 59.3**	**-0.2**
	baz=314,SNR=16						
J46A	**Howard City**	**59.76**	**57**	P	**P**	**13 30 59.8**	**-0.1**
	baz=314						
M44A	**Midewin, Midew**	**59.82**	**60**	P	**P**	**13 31 00.1**	**-0.2**
I47A	**Gladwin**	**59.90**	**56**	P	**P**	**13 31 01.0**	**+0.2**
	baz=314,SNR=6.0						
MK31	**Makanchi Array**	**59.91**	**308**	P	**P**	**13 30 59.7**	**-1.3**
MK31	**Makanchi Array**	**59.91**	**308**	P	**P**	**13 31 00.3**	**-0.7**
MKAR	**Makanchi Array**	**59.91**	**308**	P	**P**	**13 30 59.6**	**-1.3**
	comp=Z,13nm,0.5s,baz=51,slow=5.7,SNR=181						
MKAR				PcP	**PcP**	**13 31 47.5**	**+0.5**
	comp=Z,9.7nm,0.6s,baz=60,slow=6.9,SNR=5.1						
MKAR				LR	LR	13 58 06.3	
	comp=Z,1μm,20.1s,baz=38,slow=37						
MKAR				PKP2bc		14 00 35.9	
	comp=Z,0.9nm,1.0s,baz=94,slow=4.9,SNR=5.2						
MKAR	**Makanchi Array**	**59.91**	**308**	P	**P**	**13 31 00.4**	**-0.5**
F49A	**Sandfield**	**59.96**	**53**	P	**P**	**13 31 01.0**	**-0.2**
	baz=314,SNR=17						
H48A	**Harrisville**	**60.04**	**55**	P	**P**	**13 31 01.9**	**+0.1**
	baz=314,SNR=8.1						
MAKZ	**Makanchi**	**60.06**	**308**	P	**P**	**13 31 01.1**	**-0.9**
MAKZ	**Makanchi**	**60.06**	**308**	P	**P**	**13 31 01.2**	**-0.7**
Z35A	**Perchaven, San**	**60.06**	**73**	IAMs_20	IAMs_20	13 54 15.6	
	comp=Z,2μm,22.0s						
D50A	**G1974 Best Tow**	**60.07**	**51**	P	**P**	**13 31 01.2**	**-0.8**
	baz=314,SNR=12						
GYA	**Guiyang**	**60.09**	**276**⇑	iP	**P**	**13 31 02.3**	**-0.2**
GYA				PP	**PP**	**13 33 15.8**	**+0.8**
GYA				S	**S**	**13 39 10.1**	**-3.4**
GYA				pmax	pmax		
	comp=Z,50nm,1.1s						
GYA				pmax	pmax		
	comp=Z,670nm,5.8s						
GYA				LR	LR		
	comp=Z,780nm,19.8s						
GYA				LR	LR		
	comp=Z,650nm,20.1s						
GYA				LR	LR		
	comp=Z,860nm,20.7s						
LSQQ	**Lebel-sur-Quev**	**60.11**	**48**	P	**P**	**13 31 00.8**	**-1.4**
	baz=315						
K46A	**Dorr**	**60.14**	**58**	P	**P**	**13 31 02.0**	**-0.5**
	baz=314,SNR=8.5						
P43A	**Skaggs, Pawnee**	**60.20**	**63**	P	**P**	**13 31 01.9**	**-1.1**
P43A				IAMs_20	IAMs_20	14 00 01.6	
	comp=Z,1μm,18.0s						
I48A	**Sherman Twp**	**60.20**	**56**	P	**P**	**13 31 03.0**	**+0.1**
	baz=314,SNR=7.2						
SCHQ	**Schefferville**	**60.26**	**38**	P	**P**	**13 31 02.5**	**-0.7**
	comp=Z,98nm,1.1s,baz=325,slow=7.1,SNR=86						
SCHQ				LR	LR	13 58 44.6	
	comp=Z,2μm,19.3s,baz=323,slow=38						
SCHQ	**Schefferville**	**60.26**	**38**	P	**P**	**13 31 02.6**	**-0.6**
J47A	**Sunmer**	**60.27**	**57**	P	**P**	**13 31 03.5**	**+0.1**
	baz=314,SNR=6.6						
X37A	**Clayton**	**60.31**	**71**	P	**P**	**13 31 04.3**	**+0.5**
X37A				IAmb	IAmb	13 31 17.5	
	comp=Z,76nm,0.9s						
BOAC	**Boac**	**60.32**	**254**	eP	**P**	**13 31 04.5**	**+0.5**
CCM	**Cathedral Cave**	**60.32**	**65**	P	**P**	**13 31 02.9**	**-0.9**
CCM				pmax	pmax		
	comp=Z,252nm,1.7s						
CCM	**Cathedral Cave**	**60.32**	**65**	P	**P**	**13 31 02.9**	**-0.9**
CCM	**Cathedral Cave**	**60.32**	**65**	P	**P**	**13 31 03.1**	**-0.7**
	baz=314						
L46A	**Eue Claire**	**60.33**	**59**	P	**P**	**13 31 03.6**	**-0.2**
	baz=314						
D51A	**Lot 18 Range I**	**60.35**	**51**	P	**P**	**13 31 03.1**	**-0.8**
	baz=315,SNR=10						
O44A	**Mansfield**	**60.43**	**62**	P	**P**	**13 31 02.7**	**-1.9**
O44A				IAMs_20	IAMs_20	13 57 43.7	
	comp=Z,1μm,19.0s						
SLM	**Saint Louis**	**60.49**	**64**	IAMs_20	IAMs_20	13 54 47.4	
	comp=Z,1μm,21.0s						
JCT	**Junction City**	**60.50**	**77**	P	**P**	**13 31 05.0**	**-0.2**
	baz=315,SNR=18						
VLDQ	**Val d'Or**	**60.55**	**49**	P	**P**	**13 31 02.8**	**-2.5**
VLDQ				IAmb	IAmb	13 31 04.0	
	comp=Z,70nm,1.2s						
VLDQ				IAMs_20	IAMs_20	13 57 50.3	
	comp=Z,1μm,20.0s						
U40A	**Yellville**	**60.57**	**68**	P	**P**	**13 31 04.6**	**-0.9**
U40A	**Yellville**	**60.57**	**68**	P	**P**	**13 31 04.8**	**-0.8**
	baz=314,SNR=30						
K47A	**Vermontville**	**60.57**	**58**	P	**P**	**13 31 05.3**	**-0.2**
	baz=314,SNR=10.0						
E51A	**G1948 Merrick**	**60.69**	**51**	P	**P**	**13 31 05.3**	**-1.0**
	baz=315,SNR=9.2						
J48A	**Bridge Port**	**60.77**	**56**	P	**P**	**13 31 06.6**	**-0.2**
	baz=314						
I49A	**Point Hope**	**60.83**	**55**	P	**P**	**13 31 07.5**	**+0.3**
	baz=315,SNR=7.4						
W39A	**Magazine**	**60.83**	**69**	P	**P**	**13 31 07.6**	**+0.3**
W39A	**Magazine**	**60.83**	**69**	P	**P**	**13 31 07.4**	**+0.1**
	baz=314,SNR=16						
BRVK	**Borovoye**	**60.84**	**320**⇑	eP	**P**	**13 31 06.2**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,87nm,1.7s						
BRVK	**Borovoye**	**60.84**	**320**	P	**P**	**13 31 06.5**	**-0.7**
BRVK				IAmb	IAmb	13 31 09.7	
	comp=Z,33nm,0.7s						
WHTX	**Lake Whitney,**	**60.87**	**74**	P	**P**	**13 31 07.8**	**+0.2**
WHTX				IAmb	IAmb	13 31 23.3	
	comp=Z,128nm,1.1s						
WHTX				IAMs_20	IAMs_20	13 54 49.3	
	comp=Z,1μm,21.0s						
WHTX	**Lake Whitney,**	**60.87**	**74**	P	**P**	**13 31 08.4**	**+0.8**
	baz=315,SNR=9.5						
F51A	**Arnstein**	**60.91**	**52**	P	**P**	**13 31 06.8**	**-0.8**
	baz=315,SNR=7.5						
K48A	**Perry**	**60.94**	**57**	P	**P**	**13 31 07.9**	**-0.1**
	baz=314,SNR=9.4						
L47A	**Sherwood**	**60.95**	**58**	P	**P**	**13 31 07.6**	**-0.5**
	baz=314,SNR=11						
SFIN	**Lafayette**	**61.03**	**61**	P	**P**	**13 31 08.8**	**+0.2**
SFIN	**Lafayette**	**61.03**	**61**	P	**P**	**13 31 08.8**	**+0.2**
	baz=314,SNR=36						
J49A	**Marlette**	**61.07**	**56**	P	**P**	**13 31 08.9**	**0.0**
	baz=315,SNR=12						
MSLP	**Maasin**	**61.15**	**249**	eP	**P**	**13 31 06.5**	**-3.2**
M47A	**Cromwell**	**61.15**	**59**	P	**P**	**13 31 09.2**	**-0.3**
	baz=314						
D53A	**Lac Vacive, Po**	**61.17**	**50**	P	**P**	**13 31 07.9**	**-1.6**
D53A				IAmb	IAmb	13 31 09.4	
	comp=Z,55nm,1.1s						
D53A				IAMs_20	IAMs_20	14 01 29.9	
	comp=Z,2μm,20.0s						
D53A	**Lac Vacive, Po**	**61.17**	**50**	P	**P**	**13 31 08.4**	**-1.1**
	baz=316,SNR=9.6						
E52A	**Mattawa**	**61.27**	**51**	P	**P**	**13 31 09.1**	**-1.1**
	baz=315,SNR=7.2						
F52A	**Sundridge**	**61.29**	**52**	P	**P**	**13 31 09.8**	**-0.6**
	baz=315,SNR=14						
K49A	**Clarkson**	**61.31**	**57**	P	**P**	**13 31 10.9**	**+0.4**
	baz=315,SNR=10						
FCAR	**Ozark Folk Cen**	**61.31**	**68**	P	**P**	**13 31 09.8**	**-0.8**
TMCR	**Tamitsa**	**61.32**	**342**	eP	**P**	**13 31 08.5**	**-1.6**
TMCR				pmax	pmax		
	comp=Z,63nm,1.0s						
L48A	**N Adams**	**61.38**	**58**	P	**P**	**13 31 10.8**	**-0.1**
	baz=315,SNR=11						
MIAR	**Mount Ida**	**61.40**	**70**	P	**P**	**13 31 11.4**	**+0.2**
MIAR					**S**	**13 39 31.7**	**+1.9**
MIAR	**Mount Ida**	**61.40**	**70**	P	**P**	**13 31 11.5**	**+0.3**
	baz=315,SNR=41						
N47A	**Urbana**	**61.45**	**60**	P	**P**	**13 31 10.4**	**-1.1**
N47A				IAmb	IAmb	13 31 20.2	
	comp=Z,130nm,1.2s						
N47A				IAMs_20	IAMs_20	13 58 26.0	
	comp=Z,1μm,20.0s						
N47A	**Urbana**	**61.45**	**60**	P	**P**	**13 31 10.9**	**-0.6**
	baz=315,SNR=17						
Z38A	**Mt. Pleasant**	**61.47**	**72**	P	**P**	**13 31 11.7**	**+0.1**
P46A	**Rosedale**	**61.50**	**61**	P	**P**	**13 31 12.0**	**+0.2**
P46A				IAMs_20	IAMs_20	13 58 37.6	
	comp=Z,1μm,19.0s						
AAM	**Ann Arbor**	**61.54**	**57**	P	**P**	**13 31 12.1**	**+0.1**
	baz=315						
M48A	**Edgerton**	**61.55**	**58**	IAMs_20	IAMs_20	14 00 19.6	
	comp=Z,1μm,19.0s						
M48A	**Edgerton**	**61.55**	**58**	P	**P**	**13 31 11.7**	**-0.4**
	baz=315,SNR=6.8						
SVE	**Sverdlovsk**	**61.56**	**327**⇓	eP	**P**	**13 31 11.8**	**-0.2**
SVE				eS	**S**	**13 39 29.2**	**-2.1**
SVE				pmax	pmax		
	comp=Z,25nm,0.9s						
SVE				MLR	MLR		
	comp=Z,3μm,20.0s						
L49A	**Milan**	**61.62**	**57**	P	**P**	**13 31 12.7**	**+0.1**
	baz=315,SNR=14						
D54A	**Lac Fusel, La**	**61.62**	**49**	P	**P**	**13 31 11.1**	**-1.4**
	baz=316						
OLIL	**Olney**	**61.62**	**63**	P	**P**	**13 31 11.3**	**-1.3**
WHAR	**Wooly Hollow**	**61.64**	**68**	P	**P**	**13 31 11.9**	**-0.9**
435B	**Jarrell**	**61.64**	**75**	IAMs_20	IAMs_20	13 58 21.5	
	comp=Z,1μm,20.0s						
435B	**Jarrell**	**61.64**	**75**	P	**P**	**13 31 13.7**	**+0.8**
	baz=315						
PBMO	**Poplar Bluff**	**61.67**	**66**	P	**P**	**13 31 11.4**	**-1.6**
PBMO				IAMs_20	IAMs_20	13 57 43.5	
	comp=Z,1μm,20.0s						
E53A	**Dumoine, Ponti**	**61.69**	**50**	P	**P**	**13 31 11.9**	**-1.1**
	baz=316,SNR=6.2						
S44A	**Carbondale**	**61.70**	**64**	P	**P**	**13 31 12.4**	**-0.7**
S44A				IAmb	IAmb	13 31 13.8	
	comp=Z,93nm,0.9s						
S44A				IAMs_20	IAMs_20	13 59 17.1	
	comp=Z,960nm,18.0s						
W41B	**Gary Mavity, V**	**61.74**	**68**	P	**P**	**13 31 13.1**	**-0.4**
	baz=315,SNR=16						
K50A	**Casco**	**61.75**	**56**	P	**P**	**13 31 13.4**	**-0.1**
	baz=315						
LCAR	**Lake Charles**	**61.75**	**67**	P	**P**	**13 31 12.7**	**-0.8**
LCAR				IAmb	IAmb	13 31 21.5	
	comp=Z,108nm,1.2s						
ALGO	**Algonquin Park**	**61.80**	**51**	P	**P**	**13 31 12.8**	**-0.9**
	baz=316						
N48A	**Decatur**	**61.82**	**59**	P	**P**	**13 31 13.2**	**-0.8**
	baz=315,SNR=13						
H52A	**Wyevale**	**61.83**	**53**	P	**P**	**13 31 13.8**	**-0.2**
	baz=316						
I51A	**Listowel**	**61.85**	**54**	P	**P**	**13 31 14.7**	**+0.6**
	baz=315,SNR=20						
E54A	**Lac Daplat, Po**	**61.88**	**50**	P	**P**	**13 31 12.9**	**-1.3**
	baz=316,SNR=11						
X40A	**Basin Creek Fa**	**61.88**	**69**	P	**P**	**13 31 13.1**	**-1.4**
X40A				IAMs_20	IAMs_20	14 00 33.3	
	comp=Z,988nm,20.0s						
X40A	**Basin Creek Fa**	**61.88**	**69**	P	**P**	**13 31 14.7**	**+0.2**
	baz=315,SNR=12						
PRGR	**Permogore**	**61.93**	**338**	eP	**P**	**13 31 12.9**	**-1.4**
PRGR				pmax	pmax		
	comp=Z,34nm,0.6s						
M49A	**Liberty Center**	**61.95**	**58**	P	**P**	**13 31 14.7**	**-0.2**
	baz=315,SNR=11						
H06E1	**SOCORRO T-PHAS**	**62.01**	**95**	T	T	14 38 42.6	
	SNR=31						
I52A	**Shelburne**	**62.09**	**54**	P	**P**	**13 31 16.3**	**+0.5**
	baz=316						
SADO	**Sadowa**	**62.11**	**53**	P	**P**	**13 31 15.3**	**-0.6**
SADO				IAmb	IAmb	13 31 16.2	
	comp=Z,82nm,1.3s						
G53A	**Haliburton**	**62.12**	**52**	P	**P**	**13 31 15.5**	**-0.4**
	baz=316,SNR=18						
L50A	**Kingsville**	**62.17**	**57**	P	**P**	**13 31 16.2**	**-0.1**
	baz=315,SNR=5.7						
O48A	**Farmland**	**62.18**	**60**	P	**P**	**13 31 15.6**	**-0.7**
	baz=315,SNR=14						
G54A	**Lake Saint Pet**	**62.18**	**51**	P	**P**	**13 31 15.5**	**-0.8**
	baz=316,SNR=6.1						
N49A	**Columbus Grove**	**62.23**	**59**	P	**P**	**13 31 16.4**	**-0.3**
N49A				IAmb	IAmb	13 31 17.3	
	comp=Z,132nm,1.2s						
N49A	**Columbus Grove**	**62.23**	**59**	P	**P**	**13 31 16.4**	**-0.3**
	baz=315,SNR=18						
D55A	**Sainte-Anne-du**	**62.27**	**49**	P	**P**	**13 31 15.7**	**-1.2**
	baz=317,SNR=13						
833A	**Chaparral WMA,**	**62.28**	**79**	IAMs_20	IAMs_20	14 00 43.7	
	comp=Z,816nm,18.0s						
833A	**Chaparral WMA,**	**62.28**	**79**	P	**P**	**13 31 18.4**	**+1.2**
	baz=316,SNR=6.1						
K51A	**Iona Station**	**62.37**	**56**	P	**P**	**13 31 17.9**	**+0.4**
	baz=316						
USIN	**University of**	**62.41**	**63**	P	**P**	**13 31 17.9**	**0.0**
USIN				IAMs_20	IAMs_20	14 01 10.7	
	comp=Z,1μm,18.0s						
E55A	**Montcerf-Lytto**	**62.41**	**49**	P	**P**	**13 31 16.7**	**-1.1**
	baz=317						
MOR8	**Moi Rana**	**62.44**	**354**	eP	**P**	**13 31 16.7**	**-1.1**
M50A	**Fremont**	**62.50**	**57**	P	**P**	**13 31 18.3**	**-0.2**
	baz=316						
T45A	**Paducah**	**62.52**	**64**	IAMs_20	IAMs_20	14 00 00.9	
	comp=Z,1μm,18.0s						
J52A	**Paris**	**62.53**	**55**	P	**P**	**13 31 18.8**	**+0.1**
	baz=316,SNR=12						
H53A	**Bobcaygeon**	**62.53**	**52**	P	**P**	**13 31 18.1**	**-0.5**
	baz=316,SNR=11						
I53A	**Kortright Cn E**	**62.56**	**54**	P	**P**	**13 31 19.1**	**+0.2**
	baz=316						
ARU	**Arti**	**62.58**	**328**c	iP	**P**	**13 31 17.9**	**-0.9**
ARU						13 31 57.0	
ARU						13 33 31.9	
ARU				S	**S**	**13 39 44.9**	**+0.8**
ARU				SS	**SS**	**13 43 43.4**	**-4.2**
ARU				pmax	pmax		
	comp=Z,36nm,1.4s						
ARU				MLR	MLR		
	comp=Z,2μm,20.0s						
ARU	**Arti**	**62.58**	**328**	P	**P**	**13 31 18.1**	**-0.7**
D56A	**ZEC Mazanza, M**	**62.59**	**48**	P	**P**	**13 31 17.5**	**-1.5**
	baz=317,SNR=9.0						
P48A	**Milroy**	**62.59**	**60**	P	**P**	**13 31 18.7**	**-0.5**
P48A	**Milroy**	**62.59**	**60**	P	**P**	**13 31 18.6**	**-0.6**
	baz=315,SNR=28						
O49A	**Covington**	**62.67**	**59**	P	**P**	**13 31 19.3**	**-0.3**
	baz=315,SNR=7.1						
F55A	**Otter Lake**	**62.71**	**50**	P	**P**	**13 31 18.6**	**-1.2**
	baz=317						
NATX	**Nacogdoches**	**62.72**	**73**	IAMs_20	IAMs_20	13 56 00.7	
	comp=Z,1μm,22.0s						
NATX	**Nacogdoches**	**62.72**	**73**	P	**P**	**13 31 21.9**	**+1.8**
	baz=316						
K52A	**Tillsonburg**	**62.73**	**55**	P	**P**	**13 31 20.4**	**+0.4**
	baz=316						
Z41A	**Richland Creek**	**62.76**	**70**	P	**P**	**13 31 21.1**	**+0.7**
	baz=315						
Q48A	**North Vernon**	**62.80**	**61**	P	**P**	**13 31 20.2**	**-0.3**
	baz=315,SNR=12						
E56A	**St. Veronique**	**62.83**	**49**	P	**P**	**13 31 19.1**	**-1.5**
	baz=317,SNR=6.8						
BUKP	**Musuan**	**62.84**	**247**	eP	**P**	**13 31 20.8**	**-0.3**
N50A	**Nevada**	**62.89**	**58**	P	**P**	**13 31 21.2**	**+0.1**
	baz=316,SNR=21						
P49A	**Miami Univ. Ec**	**62.92**	**60**	P	**P**	**13 31 20.8**	**-0.6**
	baz=316,SNR=9.7						
PLVO	**Plevna**	**62.94**	**51**	P	**P**	**13 31 20.7**	**-0.6**
PLVO				IAmb	IAmb	13 31 22.3	
	comp=Z,178nm,1.8s						
G55A	**Calabogie**	**62.96**	**51**	P	**P**	**13 31 20.5**	**-1.0**
	baz=317,SNR=8.9						
WCI	**Wyandotte Cave**	**62.98**	**62**	P	**P**	**13 31 22.1**	**+0.3**
WCI				pmax	pmax		
	comp=Z,133nm,1.1s						
WCI				MLR	MLR		
	comp=Z,1μm,21.0s						
WCI	**Wyandotte Cave**	**62.98**	**62**	P	**P**	**13 31 22.1**	**+0.3**
WCI	**Wyandotte Cave**	**62.98**	**62**	IAMs_20	IAMs_20	13 59 31.9	
	comp=Z,1μm,21.0s						
WCI	**Wyandotte Cave**	**62.98**	**62**	P	**P**	**13 31 21.8**	**0.0**
	baz=316						
X43A	**Marvell**	**63.00**	**68**	P	**P**	**13 31 22.4**	**+0.5**
	baz=315						
M51A	**Elyria**	**63.00**	**57**	P	**P**	**13 31 21.4**	**-0.5**
	baz=316,SNR=5.9						
D57A	**Chemin Vers le**	**63.02**	**48**	P	**P**	**13 31 20.3**	**-1.5**
	baz=317,SNR=7.0						
DELO	**Deloro Mine**	**63.05**	**52**	P	**P**	**13 31 21.5**	**-0.6**
DELO				IAmb	IAmb	13 31 22.8	
	comp=Z,83nm,1.4s						
DELO				IAMs_20	IAMs_20	14 00 18.6	
	comp=Z,1μm,18.0s						
O50A	**Cable**	**63.08**	**59**	P	**P**	**13 31 22.4**	**0.0**
	baz=316,SNR=20						
N51A	**Ashland**	**63.20**	**57**	P	**P**	**13 31 22.9**	**-0.2**
	baz=316,SNR=8.5						
Q49A	**Aurora**	**63.20**	**61**	P	**P**	**13 31 22.9**	**-0.4**
	baz=316,SNR=5.1						
I55A	**Frankford**	**63.23**	**52**	P	**P**	**13 31 22.9**	**-0.4**
	baz=317,SNR=5.5						
H55A	**Tweed**	**63.24**	**52**	P	**P**	**13 31 22.7**	**-0.7**
	baz=317,SNR=6.4						
LATQ	**La Tuque**	**63.26**	**47**	P	**P**	**13 31 21.8**	**-1.7**
LATQ	**La Tuque**	**63.26**	**47**	P	**P**	**13 31 22.2**	**-1.3**
	baz=318,SNR=13						
M52A	**Chesterland**	**63.29**	**56**	P	**P**	**13 31 23.5**	**-0.2**
	baz=316,SNR=6.8						
E57A	**Chemin Saint G**	**63.34**	**48**	P	**P**	**13 31 22.5**	**-1.5**
	baz=317,SNR=16						
ACSO	**Alum Creek Sta**	**63.37**	**58**	P	**P**	**13 31 24.0**	**-0.3**
	baz=316,SNR=7.4						
P50A	**Jamestown**	**63.37**	**59**	P	**P**	**13 31 24.2**	**-0.1**
	baz=316,SNR=20						
T47A	**Sharon Grove**	**63.41**	**63**	P	**P**	**13 31 24.6**	**0.0**
D58A	**Chemin du LacG**	**63.43**	**47**	P	**P**	**13 31 23.1**	**-1.5**
	baz=318,SNR=12						
J54A	**Appleton**	**63.44**	**53**	P	**P**	**13 31 23.8**	**-0.9**
J54A	**Appleton**	**63.44**	**53**	P	**P**	**13 31 24.9**	**+0.3**
	baz=317,SNR=5.5						
KMI	**Kunming**	**63.49**	**278**	P	**P**	**13 31 25.8**	**+0.2**
KMI				pP	sP	13 31 37.1	-1.5
KMI				sP	pP	13 31 42.1	+7.0
KMI				PP	**PP**	**13 33 45.1**	**-0.1**
KMI				S	**S**	**13 39 57.3**	**+0.5**
KMI				sS	sS	13 40 13.8	+1.3
KMI				SS	**SS**	**13 44 06.0**	**+2.2**
KMI				pmax	pmax		
	comp=Z,59nm,1.3s						
KMI				pmax	pmax		
	comp=Z,490nm,3.8s						
KMI				LR	LR		
	comp=Z,550nm,20.2s						
KMI				LR	LR		
	comp=Z,620nm,20.5s						
KMI				LR	LR		
	comp=Z,750nm,21.9s						
QIZ	**Qiongzhong**	**63.51**	**268**	P	**P**	**13 31 25.3**	**-0.2**
QIZ				S	**S**	**13 39 56.8**	**+0.2**
QIZ				SS	**SS**	**13 44 04.8**	**+1.0**
QIZ				LR	LR		
	comp=Z,590nm,21.1s						
QIZ				LR	LR		
	comp=Z,430nm,20.4s						
QIZ				LR	LR		
	comp=Z,630nm,24.3s						
R49A	**Shelbyville**	**63.56**	**61**	P	**P**	**13 31 25.8**	**+0.2**
	baz=316,SNR=6.8						
L53A	**Girard**	**63.56**	**55**	P	**P**	**13 31 25.5**	**-0.1**
	baz=316,SNR=11						
KIRV	**Kirov**	**63.58**	**334**	LR	LR	14 01 12.9	
	comp=Z,3μm,20.8s,baz=53,slow=38						
ERPA	**Erie**	**63.58**	**55**	P	**P**	**13 31 25.9**	**+0.2**
	baz=316,SNR=8.3						
MEDO	**Medina**	**63.61**	**53**	P	**P**	**13 31 26.1**	**+0.3**
MEDO				IAMs_20	IAMs_20	14 00 55.7	
	comp=Z,1μm,21.0s						
WVT	**Waverly**	**63.61**	**65**	P	**P**	**13 31 25.7**	**-0.2**
WVT				pmax	pmax		
	comp=Z,136nm,1.2s						
WVT	**Waverly**	**63.61**	**65**	P	**P**	**13 31 25.7**	**-0.2**
WVT				IAmb	IAmb	13 31 35.1	
	comp=Z,136nm,1.2s						
WVT	**Waverly**	**63.61**	**65**	P	**P**	**13 31 26.1**	**+0.2**
	baz=316						
O51A	**Pataskala**	**63.63**	**58**	P	**P**	**13 31 25.8**	**-0.2**
	baz=316,SNR=9.2						
N52A	**McGinn’s Farm,**	**63.64**	**57**	P	**P**	**13 31 25.6**	**-0.4**
	baz=316,SNR=5.1						
H56A	**Elgin**	**63.66**	**51**	P	**P**	**13 31 25.3**	**-0.9**
	baz=317,SNR=5.3						
M53A	**WI Miller and**	**63.72**	**56**	P	**P**	**13 31 26.7**	**+0.1**
	baz=316,SNR=19						
E58A	**La Victoria**	**63.78**	**48**	P	**P**	**13 31 25.5**	**-1.4**
	baz=318						
GENI	**Genyem**	**63.80**	**226**	P	**P**	**13 31 28.0**	**+0.6**
	comp=Z,2μmcomp=Z,70nm,1.3s						
Q50A	**Georgetown**	**63.82**	**60**	P	**P**	**13 31 27.5**	**+0.2**
	baz=316,SNR=14						
CTBH	**Cotabato--PC H**	**63.84**	**247**⇑	iP	**P**	**13 31 28.3**	**+0.6**
L54A	**Sinclairville**	**63.84**	**55**	P	**P**	**13 31 27.5**	**0.0**
	baz=317,SNR=18						
J55A	**Hilton**	**63.86**	**53**	P	**P**	**13 31 27.5**	**+0.1**
	baz=317						
S49A	**Springfield**	**63.86**	**62**	P	**P**	**13 31 27.6**	**0.0**
	baz=316,SNR=19						
OXF	**Oxford**	**63.86**	**67**	P	**P**	**13 31 28.0**	**+0.4**
	baz=316						
P51A	**Williamsport**	**63.86**	**59**	P	**P**	**13 31 26.7**	**-0.8**
P51A				IAmb	IAmb	13 31 27.6	
	comp=Z,28nm,0.7s						
P51A	**Williamsport**	**63.86**	**59**	P	**P**	**13 31 27.0**	**-0.5**
	baz=316,SNR=8.5						
K54A	**Basiliko Farm,**	**63.89**	**54**	P	**P**	**13 31 27.8**	**+0.1**
	baz=317,SNR=15						
G57A	**Newington**	**63.90**	**50**	P	**P**	**13 31 26.1**	**-1.6**
	baz=318						
SMPI	**Sarmi**	**63.94**	**228**	P	**P**	**13 31 29.4**	**+1.1**
	comp=Z,70nm,1.7s						
D59A	**Saint-Raymond**	**63.97**	**47**	P	**P**	**13 31 27.2**	**-1.0**
	baz=318						

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143A  Socs Landing,   63.98  70    IAMs_20  IAMs_20  14 02 01.0
      comp=Z,1µm,19.0s
KLMR  Klimovskoe      64.01 340  eP        P        13 31 25.1  -3.0
KLMR                              pmax     pmax
      comp=Z,98nm,1.2s
KLMR                              MLR      MLR
      comp=Z,2µm,17.0s
KLMR  Klimovskoe      64.01 340  eP        P        13 31 25.1  -3.0
KLMR                              AMP               13 31 28.9
      comp=Z,98nm,1.2s
KLMR                              LR       LR       13 54 55.0
KLMR                              AMP               14 03 21.8
      comp=Z,2µm,16.6s
R50A  Paris           64.03  61    P        P        13 31 29.1  +0.4
      baz=316,SNR=14
Q51A  Peebles         64.03  60    P        P        13 31 29.0  +0.3
Q51A                              IAmb     IAmb     13 31 29.4
      comp=Z,72nm,0.7s
Q51A                              IAMs_20  IAMs_20  14 01 58.4
      comp=Z,1µm,19.0s
Q51A  Peebles         64.03  60    P        P        13 31 28.9  +0.2
      baz=316,SNR=18
E59A  St. Maurice     64.05  47    P        P        13 31 27.5  -1.2
      baz=318
O52A  Adamsville      64.06  58    P        P        13 31 28.7  -0.2
O52A  Adamsville      64.06  58    P        P        13 31 28.7  -0.2
      baz=316,SNR=25
WVNY  West Valley, N  64.08  54    P        P        13 31 28.9  -0.1
N53A  Lisbon          64.09  57    P        P        13 31 28.8  -0.2
      baz=316,SNR=8.2
K55A  Perry           64.12  53    P        P        13 31 29.1  -0.1
      baz=317,SNR=8.3
H57A  Richville       64.18  51    P        P        13 31 28.5  -1.0
      baz=318,SNR=5.8
M54A  Oil Creek Stat  64.19  55    P        P        13 31 29.0  -0.7
M54A                              IAmb     IAmb     13 31 30.5
      comp=Z,98nm,1.2s
M54A  Oil Creek Stat  64.19  55    P        P        13 31 29.6  -0.1
      baz=317,SNR=7.7
T49A  Edmonton        64.21  62    P        P        13 31 29.8  -0.1
T49A  Edmonton        64.21  62    P        P        13 31 30.1  +0.2
      baz=316,SNR=24
P52A  Corning         64.25  58    P        P        13 31 29.5  -0.6
      baz=316,SNR=6.9
PLAL  Pickwick Lake   64.29  66    P        P        13 31 30.3  -0.2
O53A  New Philadelph  64.29  57    P        P        13 31 30.1  -0.3
      baz=317,SNR=8.9
G58A  Ormstown        64.32  49    P        P        13 31 28.8  -1.6
      baz=318
J56A  Wolcott         64.33  52    P        P        13 31 29.7  -0.8
J56A                              IAmb     IAmb     13 31 31.0
      comp=Z,123nm,1.2s
J56A  Wolcott         64.33  52    P        P        13 31 30.2  -0.4
      baz=317,SNR=7.5
L55A  Hinsdale        64.33  54    P        P        13 31 30.6   0.0
      baz=317,SNR=9.1
F59A  Saint Guilaume  64.39  48    P        P        13 31 29.9  -1.0
      baz=318
N54A  Moraine State   64.42  56    P        P        13 31 30.9  -0.3
N54A                              IAmb     IAmb     13 31 32.4
      comp=Z,48nm,0.6s
N54A  Moraine State   64.42  56    P        P        13 31 30.9  -0.3
      baz=317,SNR=10
S50A  Richmond        64.42  61    P        P        13 31 31.5  +0.3
      baz=316,SNR=15
R51A  Hillsboro       64.42  60    P        P        13 31 31.8  +0.5
      baz=316,SNR=32
I57A  Carthage        64.43  51    P        P        13 31 30.3  -0.9
      baz=318
LONY  Lake Ozonia     64.45  50    P        P        13 31 30.2  -1.2
      baz=318
D60A  Saint Jean D'O  64.46  46    P        P        13 31 30.1  -1.2
      baz=319,SNR=11
V48A  Smith Brothers  64.46  64    P        P        13 31 31.5   0.0
V48A                              IAMs_20  IAMs_20  14 03 21.2
      comp=Z,903nm,18.0s
CLTN  Cedars of Leba  64.49  64    P        P        13 31 32.1  +0.4
CLTN                              IAMs_20  IAMs_20  13 57 24.8
      comp=Z,1µm,20.0s
U49A  Red Boiling Sp  64.49  63    P        P        13 31 31.8   0.0
K56A  Middlesex       64.52  53    P        P        13 31 31.9  +0.1
      baz=317,SNR=20
D61A  St Aubert, Com  64.57  46    P        P        13 31 31.1  -0.9
      baz=319,SNR=14
E60A  Ste Agathe de   64.63  47    P        P        13 31 31.1  -1.4
      baz=319,SNR=7.4
T50A  Nancy           64.65  62    P        P        13 31 33.1  +0.3
      baz=316,SNR=29
J57A  Williamstown    64.66  52    P        P        13 31 32.2  -0.5
J57A                              IAmb     IAmb     13 31 32.7
      comp=Z,64nm,1.2s
J57A  Williamstown    64.66  52    P        P        13 31 32.0  -0.6
      baz=318,SNR=6.4
Q52A  Bidwell         64.66  59    P        P        13 31 32.6  -0.2
      baz=317,SNR=7.1
M55A  Ridgway         64.68  55    P        P        13 31 32.6  -0.3
M55A                              IAmb     IAmb     13 31 34.5
      comp=Z,63nm,0.9s
M55A  Ridgway         64.68  55    P        P        13 31 32.9   0.0
      baz=317,SNR=9.2
F60A  Warwick         64.69  47    P        P        13 31 31.5  -1.4
      baz=319
P53A  Whipple         64.75  58    P        P        13 31 33.3  -0.1
P53A                              IAmb     IAmb     13 31 33.7
      comp=Z,48nm,0.8s
P53A  Whipple         64.75  58    P        P        13 31 33.2  -0.2
      baz=317,SNR=6.9
G59A  Clarenceville   64.78  49    P        P        13 31 31.9  -1.6
      baz=318
O54A  Avella          64.78  57    P        P        13 31 33.1  -0.4
O54A                              IAmb     IAmb     13 31 33.8
      comp=Z,38nm,0.8s
O54A  Avella          64.78  57    P        P        13 31 33.4  -0.2
      baz=317,SNR=6.4
H58A  Gabriels        64.80  50    P        P        13 31 32.0  -1.6
      baz=318
L56A  Greenwood       64.81  54    P        P        13 31 33.9  +0.1
L56A  Greenwood       64.81  54    P        P        13 31 33.9  +0.1
      baz=317,SNR=26
VBMS  Vicksburg       64.85  69    P        P        13 31 34.8  +0.7
      baz=316
H59A  Cadyville       64.86  49    P        P        13 31 32.7  -1.3
      baz=318
S51A  Beattyville     64.89  61    P        P        13 31 34.4   0.0
S51A                              IAmb     IAmb     13 31 43.3
      comp=Z,108nm,1.4s
S51A                              IAMs_20  IAMs_20  13 58 26.4
      comp=Z,1µm,21.0s
S51A  Beattyville     64.89  61    P        P        13 31 34.4   0.0
      baz=317,SNR=6.1
K57A  Scipio Center   64.90  53    P        P        13 31 34.1  -0.3
      baz=318,SNR=13
R52A  Catlettsburg    64.91  60    P        P        13 31 34.4   0.0
      baz=317,SNR=9.9
I58A  Old Forge       64.95  51    P        P        13 31 33.4  -1.3
      baz=318
M56A  Emporium        64.97  54    P        P        13 31 34.6  -0.3
M56A  Emporium        64.97  54    P        P        13 31 34.7  -0.1
      baz=317,SNR=12
E61A  Lac Etchemin    65.02  46    P        P        13 31 34.0  -1.1
      baz=319
J58A  Remsen          65.04  51    P        P        13 31 34.5  -0.8
J58A                              IAmb     IAmb     13 31 35.6
      comp=Z,76nm,1.2s
J58A  Remsen          65.04  51    P        P        13 31 34.7  -0.6
      baz=318,SNR=5.8
N55A  Marion Center   65.07  55    P        P        13 31 35.1  -0.4
      baz=317,SNR=5.4
F61A  St Evariste     65.13  47    P        P        13 31 35.0  -0.8
      baz=319,SNR=6.7
Q53A  Leroy           65.13  59    P        P        13 31 36.1  +0.2
      baz=317,SNR=19
S52A  Salyersville    65.15  60    P        P        13 31 36.5  +0.5
      baz=317
P54A  Burton          65.15  57    P        P        13 31 35.8  -0.2
      baz=317,SNR=12
D62A  Allapoint, All  65.17  45    P        P        13 31 35.0  -0.9
D62A                              IAmb     IAmb     13 31 36.8
      comp=Z,85nm,1.0s
D62A  Allapoint, All  65.17  45    P        P        13 31 35.4  -0.6
      baz=320,SNR=12
T51A  Gray            65.19  61    P        P        13 31 36.6  +0.3
      baz=317,SNR=9.9
X48A  Hartselle       65.26  65    P        P        13 31 36.2  -0.6
X48A                              IAmb     IAmb     13 31 45.9
      comp=Z,126nm,1.1s
L57A  Andrews Acres   65.27  53    P        P        13 31 36.6  -0.2
      baz=318,SNR=11
R53A  Hurricane       65.29  59    P        P        13 31 36.5  -0.4
R53A  Hurricane       65.29  59    P        P        13 31 37.3  +0.4
      baz=317,SNR=11
K58A  Earlville       65.31  52    P        P        13 31 36.8  -0.2
K58A                              IAmb     IAmb     13 31 37.8
      comp=Z,170nm,1.5s
K58A  Earlville       65.31  52    P        P        13 31 36.8  -0.2
      baz=318,SNR=5.8
O55A  Ligonier        65.33  56    P        P        13 31 36.5  -0.6
      baz=317
N56A  West Decatur    65.33  55    P        P        13 31 37.0  -0.2
      baz=318,SNR=5.5
SWET  Sewanee         65.34  64    P        P        13 31 37.0  -0.3
J59A  Piesco          65.35  51    P        P        13 31 36.0  -1.2
J59A                              IAmb     IAmb     13 31 36.9
      comp=Z,123nm,1.5s
J59A  Piesco          65.35  51    P        P        13 31 36.1  -1.2
      baz=318
H60A  Morristown      65.40  49    P        P        13 31 36.3  -1.3
      baz=319
G61A  St-Isidore-de-  65.41  48    P        P        13 31 36.5  -1.0
      baz=319,SNR=5.1
I59A  Olmsteadville   65.41  50    P        P        13 31 36.4  -1.1
      baz=318
Q54A  Coxs Mills      65.41  58    P        P        13 31 37.7   0.0
Q54A                              IAmb     IAmb     13 31 39.7
      comp=Z,48nm,1.1s
Q54A  Coxs Mills      65.41  58    P        P        13 31 37.6   0.0
      baz=317,SNR=6.3
MCWV  Mont Chateau    65.44  57    P        P        13 31 37.4  -0.5
MCWV  Mont Chateau    65.44  57    P        P        13 31 37.8  -0.1
      baz=317,SNR=5.1
SLVN  Son La          65.53 274    P        P        13 31 39.3  +0.6
SLVN                              IAmb     IAmb     13 31 40.7
      comp=Z,105nm,1.3s
SLVN                              IAMs_20  IAMs_20  14 00 53.2
      comp=Z,771nm,19.0s
BINY  Binghamton      65.56  53    P        P        13 31 37.4  -1.2
BINY  Binghamton      65.56  53    P        P        13 31 38.5  -0.1
      baz=318,SNR=11
P55A  Reedsville      65.56  57    P        P        13 31 38.6  -0.1
      baz=317,SNR=7.0
T52A  Hallie          65.61  61    P        P        13 31 39.6  +0.6
      baz=317,SNR=12
M57A  Sunshine Farm,  65.62  54    P        P        13 31 39.0  +0.1
M57A  Sunshine Farm,  65.62  54    P        P        13 31 39.1  +0.1
      baz=318,SNR=11
D63A  Stockholm       65.62  44    P        P        13 31 38.0  -0.9
      baz=320,SNR=5.2
I60A  Shoreham        65.65  50    P        P        13 31 38.4  -0.7
      baz=319
O56A  Blue Knob Stat  65.67  56    P        P        13 31 38.6  -0.7
      baz=318
S53A  Williamson      65.67  60    P        P        13 31 39.9  +0.5
      baz=317
K59A  Cooperstown     65.69  52    P        P        13 31 38.7  -0.8
      baz=318
TZTN  Tazewell        65.71  62    P        P        13 31 40.1  +0.4
      baz=317,SNR=12
L58A  Harry Jones Me  65.74  53    P        P        13 31 39.7   0.0
      baz=318,SNR=12
SSPA  Standing Stone  65.75  55    P        P        13 31 39.5  -0.2
SSPA                              IAmb     IAmb     13 31 40.6
      comp=Z,81nm,1.1s
SSPA  Standing Stone  65.75  55    P        P        13 31 39.6  -0.2
      baz=318
H61A  Lyndonville     65.78  48    P        P        13 31 39.0  -1.1
      baz=319
Q55A  Buckhannon      65.80  58    P        P        13 31 40.4  +0.1
      baz=317,SNR=10
KDJ   Kajisay         65.81 308    P        P        13 31 40.8  +0.3
KDJ                               pmax     pmax
      comp=Z,131nm,1.5s
KDJ                               MLR      MLR
      comp=Z,2µm,22.0s
KDJ   Kajisay         65.81 308    P        P        13 31 40.8  +0.3
KDJ                               IAmb     IAmb     13 31 42.5
      comp=Z,131nm,1.4s
FIA1  FINESS Array S  65.85 347    P        P        13 31 39.3  -0.8
FIA1                              IAmb     IAmb     13 31 40.6
      comp=Z,60nm,0.9s
FINES FINESS Array B  65.85 347    P        P        13 31 38.9  -1.2
      comp=Z,35nm,0.7s,baz=22,slow=7.0,SNR=56
FINES                             LR       LR       14 06 15.6
      comp=Z,1µm,18.2s,baz=24,slow=41
FINES FINESS Array B  65.85 347  i P        P        13 31 39.0  -1.2
FINES                             pmax     pmax
      comp=Z,35nm,0.7s
FINES FINESS Array B  65.85 347    P        P        13 31 39.2  -0.9
G62A  West of Eustis  65.92  47    P        P        13 31 39.4  -1.4
G62A                              IAmb     IAmb     13 31 40.5
      comp=Z,53nm,0.8s
G62A  West of Eustis  65.92  47    P        P        13 31 40.2  -0.7
      baz=320,SNR=6.4
R54A  Victor          65.92  59    P        P        13 31 41.4  +0.4
      baz=317,SNR=11
M58A  Price's Panora  65.93  54    P        P        13 31 41.0  -0.1
      baz=318,SNR=12
T53A  Wise            65.95  61    P        P        13 31 41.8  +0.5
      baz=317,SNR=7.5
E63A  Oxbow           65.95  45    P        P        13 31 39.6  -1.4
E63A                              IAmb     IAmb     13 31 40.5
      comp=Z,65nm,0.9s
E63A  Oxbow           65.95  45    P        P        13 31 39.8  -1.3
      baz=320,SNR=9.2
CPCT  Cooper Cave     65.97  63    P        P        13 31 41.2  -0.1
TKM2  Tokmak 2        66.00 309    P        P        13 31 42.5  +0.8
      SNR=29
LBNH  Lisbon          66.00  49    P        P        13 31 40.6  -0.8
      baz=319
FPAL  Fort Paine      66.01  64    P        P        13 31 41.6   0.0
S54A  Dingess, Beckl  66.02  59    P        P        13 31 41.8  +0.1
S54A                              IAmb     IAmb     13 31 42.8
      comp=Z,94nm,1.3s
S54A                              IAMs_20  IAMs_20  14 03 09.0
      comp=Z,1µm,21.0s
S54A  Dingess, Beckl  66.02  59    P        P        13 31 41.8  +0.1
      baz=317,SNR=5.5
L59A  Walton          66.03  52    P        P        13 31 41.3  -0.4
L59A                              IAmb     IAmb     13 31 42.3
      comp=Z,109nm,1.1s
L59A  Walton          66.03  52    P        P        13 31 41.3  -0.4
      baz=318,SNR=8.3
J60A  Lant Hill Farm  66.04  50    P        P        13 31 41.0  -0.7
      baz=319,SNR=9.3
Y49A  Blount Mountai  66.05  65    P        P        13 31 41.5  -0.4
P56A  Dayton Farm, R  66.08  56    P        P        13 31 42.1  +0.1
      baz=318,SNR=8.6
I61A  Oroboro, Fairl  66.10  49    P        P        13 31 41.4  -0.7
      baz=319
H62A  Milan           66.11  48    P        P        13 31 41.2  -1.0
H62A  Milan           66.11  48    P        P        13 31 41.3  -0.8
      baz=319,SNR=9.1
ULHL  Ulahol          66.19 308    P        P        13 31 43.0  +0.1
      SNR=35
O57A  Amberson        66.19  55    P        P        13 31 42.6  -0.1
      baz=318,SNR=9.3
N58A  Sunbury         66.19  54    P        P        13 31 42.4  -0.3
N58A                              IAmb     IAmb     13 31 43.5
      comp=Z,132nm,1.3s
N58A  Sunbury         66.19  54    P        P        13 31 42.5  -0.3
      baz=318,SNR=7.5
F63A  Nahmakanta, Br  66.20  46    P        P        13 31 41.9  -0.8
F63A                              IAmb     IAmb     13 31 42.6
      comp=Z,102nm,1.1s
F63A  Nahmakanta, Br  66.20  46    P        P        13 31 41.8  -0.9
      baz=320
E64A  Bridgewater     66.22  45    P        P        13 31 41.6  -1.2
      baz=320,SNR=11
TKL   Tuckaleechee C  66.23  62    P        P        13 31 43.1  +0.1
TKL                               pmax     pmax
      comp=Z,153nm,1.1s
TKL                               MLR      MLR
      comp=Z,1µm,19.0s
TKL   Tuckaleechee C  66.23  62    P        P        13 31 43.1  +0.1
Q56A  Snyder Ridge,   66.24  57    P        P        13 31 42.6  -0.5
      baz=318
USP   Ospenovka       66.27 310    P        P        13 31 44.3  +1.1
      SNR=74
R55A  Marlinton       66.31  58    P        P        13 31 43.3  -0.2
R55A                              IAmb     IAmb     13 31 44.6
      comp=Z,44nm,0.9s
R55A  Marlinton       66.31  58    P        P        13 31 43.8  +0.2
      baz=318,SNR=6.2
LRAL  Lakeview Retre  66.31  66    P        P        13 31 43.0  -0.5
LRAL                              IAmb     IAmb     13 31 52.0
      comp=Z,96nm,1.0s
LRAL  Lakeview Retre  66.31  66    P        P        13 31 43.1  -0.5
      baz=317,SNR=12
M59A  Waymart         66.32  53    P        P        13 31 43.2  -0.4
      baz=318,SNR=11
BATG  Bathurst New B  66.33  43    P        P        13 31 42.7  -0.7
CHMS  Chumysh         66.35 310    P        P        13 31 45.0  +1.3
      SNR=28
CHMS  Chumysh         66.35 310  i P        P        13 31 43.5  -0.2
CHMS                              pmax     pmax
      comp=Z,73nm,1.1s
J61A  Chester         66.38  50    P        P        13 31 43.1  -0.7
      baz=319
G63A  Kingsbury       66.41  47    P        P        13 31 43.1  -1.0
      baz=320
F64A  Sherman         66.42  45    P        P        13 31 42.9  -1.1
F64A                              IAmb     IAmb     13 31 43.9
      comp=Z,84nm,0.9s
F64A  Sherman         66.42  45    P        P        13 31 43.0  -1.0
      baz=320,SNR=6.6
T54A  Tazewell        66.42  60    P        P        13 31 44.9  +0.6
      baz=317,SNR=14
X51A  Calhoun         66.42  64    P        P        13 31 44.4  +0.2
      baz=317,SNR=8.8
PKME  Peaks-Kenny Pk  66.45  46    P        P        13 31 43.5  -0.7
      baz=320
S55A  Lewisburg       66.48  59    P        P        13 31 44.9  +0.3
      baz=318,SNR=5.9
KBK   Karagaybulak    66.51 309    P        P        13 31 45.8  +0.9
      SNR=41
P57A  Homestead Farm  66.53  56    P        P        13 31 44.5  -0.4
P57A                              IAmb     IAmb     13 31 45.6
      comp=Z,56nm,1.2s
P57A  Homestead Farm  66.53  56    P        P        13 31 44.6  -0.3
      baz=318,SNR=5.5
K61A  Williamstown    66.54  51    P        P        13 31 44.3  -0.6
      baz=319
H63A  New Sharon      66.57  47    P        P        13 31 44.1  -0.8
      baz=320
L60A  Shokan          66.59  52    P        P        13 31 44.8  -0.4
      baz=319
R56A  Bull Pasture M  66.59  58    P        P        13 31 45.2  -0.2
      baz=318
N59A  State Game Lan  66.62  53    P        P        13 31 45.2  -0.2
N59A  State Game Lan  66.62  53    P        P        13 31 45.4   0.0
      baz=318,SNR=14
O58A  Lewisberry      66.62  55    P        P        13 31 45.1  -0.3
      baz=318,SNR=5.7
Q57A  Strasburg       66.66  56    P        P        13 31 45.4  -0.2
      baz=318
SWI   Sorong          66.66 236    P        P        13 31 46.1  +0.2
      comp=Z,3µmcomp=Z,335nm,1.1s
U54A  Nelsons Funny   66.68  60    P        P        13 31 46.4  +0.4
U54A                              IAMs_20  IAMs_20  14 01 14.6
      comp=Z,1µm,19.0s
U54A  Nelsons Funny   66.68  60    P        P        13 31 46.6  +0.7
      baz=318,SNR=7.8
G64A  Maxfield        66.70  46    P        P        13 31 45.0  -0.8
      baz=320
AAK   Ala-Archa       66.75 310    P        P        13 31 46.4   0.0
      SNR=43
AAK   Ala-Archa       66.75 310  i P        P        13 31 46.7  +0.3
      SNR=14
AAK   Ala-Archa       66.75 310c iP        P        13 31 46.2  -0.2
AAK                               pmax     pmax
      comp=Z,87nm,1.3s
AAK   Ala-Archa       66.75 310    P        P        13 31 46.3  -0.2
AAK                               IAmb     IAmb     13 31 48.7
      comp=Z,76nm,1.1s
V53A  Saluda          66.76  62    P        P        13 31 46.9  +0.4
      baz=317,SNR=12
L61A  Hillsdale 1, H  66.76  51    P        P        13 31 46.4  +0.1
      baz=319
Z50A  Ashland         66.77  66    P        P        13 31 45.9  -0.6
Z50A  Ashland         66.77  66    P        P        13 31 46.2  -0.3
      baz=317,SNR=33
I63A  Otisfield       66.78  48    P        P        13 31 45.9  -0.4
      baz=320
PUL   Pulkovo         66.78 344⇑iP        P        13 31 46.4  +0.3
KZA   Kyzart          66.80 309    P        P        13 31 48.2  +1.1
      SNR=29
T55A  Pulaski         66.81  59    P        P        13 31 47.3  +0.6
      baz=318
J62A  Henniker        66.82  49    P        P        13 31 46.2  -0.5
      baz=320
O59A  Robesonia       66.86  54    P        P        13 31 46.6  -0.3
      baz=318,SNR=9.2
M60A  Port Jervis     66.88  52    P        P        13 31 46.6  -0.5
      baz=319,SNR=10.0
BLA   Blacksburg      66.93  59    P        P        13 31 47.6  +0.1
      baz=318,SNR=5.1
H64A  Troy            66.96  47    P        P        13 31 46.4  -1.1
      baz=320
N60A  Cedar Hill Far  66.99  53    P        P        13 31 47.6  -0.2
      baz=319,SNR=14
L61B  Northampton     67.00  50    P        P        13 31 46.7  -1.0
      baz=319
K62A  Royalston       67.05  50    P        P        13 31 47.4  -0.7
      baz=320
PMG   Port Moresby    67.05 216ceP        P        13 31 48.3   0.0
PMG                               pmax     pmax
      comp=Z,295nm,2.5s
S56A  Natural Bridge  67.05  58    P        P        13 31 48.5  +0.3
      baz=318,SNR=7.8
UCH   Uchtor          67.05 309    P        P        13 31 50.1  +1.4
      SNR=37
LUPA  Lehigh Univers  67.06  53    P        P        13 31 48.1  -0.1
EKS2  Erkin-Say       67.08 310    P        P        13 31 48.6  +0.2
      SNR=54
ODNJ  Ogdensburg      67.08  53    P        P        13 31 47.8  -0.5
ODNJ                              IAmb     IAmb     13 31 50.0
      comp=Z,88nm,1.2s
Q58A  Fox Den Farm,   67.11  56    P        P        13 31 48.2  -0.3
      baz=318,SNR=5.7
U55A  TA2, Sparta     67.11  60    P        P        13 31 48.9  +0.2
      baz=318,SNR=5.1
R57A  Stanardsville   67.14  57    P        P        13 31 48.9  +0.2
      baz=318,SNR=6.7
V54A  Nebo            67.16  61    P        P        13 31 49.3  +0.4
      baz=318,SNR=12
LSA   Lhasa           67.25 289  i P        P        13 31 51.7  +1.5
      SNR=28
O60A  Telford         67.25  54    P        P        13 31 49.2  -0.2
      baz=319,SNR=7.1
P59A  Jarrettsville   67.25  55    P        P        13 31 49.3  -0.1
      baz=319
T56A  Rocky Mt        67.28  59    P        P        13 31 49.3  -0.4
      baz=318
G65A  Princeton       67.28  45    P        P        13 31 48.8  -0.7
      baz=321
S57A  Dark Hollow, R  67.31  58    P        P        13 31 50.2  +0.3
      baz=318,SNR=5.6
X53A  Estanollee      67.34  63    P        P        13 31 50.3  +0.3
      baz=318,SNR=16
H65A  Eastbrook       67.36  46    P        P        13 31 49.3  -0.7
      baz=321
K63A  Dunstable       67.37  50    P        P        13 31 49.7  -0.4
      baz=320
Y52A  Lilburn         67.38  64    P        P        13 31 50.3   0.0
      baz=318,SNR=13
R58A  Rapidan         67.41  57    P        P        13 31 50.4  -0.1
      baz=318,SNR=7.0
N61A  South Mountain  67.48  53    P        P        13 31 50.9  +0.1
      baz=319
PAL   Palisades       67.48  52    P        P        13 31 50.6  -0.3
PAL                               pmax     pmax
      comp=Z,83nm,0.9s
PAL   Palisades       67.48  52    P        P        13 31 50.6  -0.3
PAL                               IAmb     IAmb     13 31 50.9
      comp=Z,83nm,0.9s
PAL   Palisades       67.48  52    P        P        13 31 50.5  -0.3
      baz=319,SNR=6.1
HRV   Adam Dziewonsk  67.49  50    P        P        13 31 51.2  +0.3
      baz=320
V55A  Taylorsville    67.50  61    P        P        13 31 50.9  -0.2
V55A                              IAmb     IAmb     13 31 52.6
      comp=Z,116nm,1.4s
V55A  Taylorsville    67.50  61    P        P        13 31 51.5  +0.4
      baz=318,SNR=8.4
250A  Grady           67.50  67    P        P        13 31 51.5  +0.3
250A                              IAMs_20  IAMs_20  13 59 31.0
      comp=Z,961nm,22.0s
AML   Almayashu       67.52 310    P        P        13 31 51.9  +0.3
      SNR=87
W54A  Cherokee Point  67.53  62    P        P        13 31 51.6  +0.3
      baz=318,SNR=6.0
NC204 NORSAR Array S  67.54 355    P        P        13 31 50.9  -0.1
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NC204				IAmb	IAmb	13 31 53.4	
	comp=Z,138nm,1.3s						
NC303	**NORSAR Array S**	**67.55**	**354**	P	**P**	**13 31 51.6**	**+0.6**
NC303				IAmb	IAmb	13 31 52.3	
	comp=Z,60nm,0.8s						
U56A	**King**	**67.59**	**60**	P	**P**	**13 31 51.8**	**+0.1**
	baz=318						
AKTO	**Aktyubinsk**	**67.64**	**324**	P	**P**	**13 31 50.3**	**-1.4**
NC405	**NORSAR Array S**	**67.64**	**354**	P	**P**	**13 31 51.4**	**-0.2**
NC405				IAmb	IAmb	13 31 52.8	
	comp=Z,80nm,0.8s						
GGN	**Saint George**	**67.66**	**45**	P	**P**	**13 31 50.6**	**-1.3**
GGN				IAmb	IAmb	13 31 51.5	
	comp=Z,80nm,0.9s						
H66A	**Whiting**	**67.71**	**46**	P	**P**	**13 31 51.5**	**-0.8**
	baz=321						
T57A	**Hurt**	**67.72**	**58**	P	**P**	**13 31 52.3**	**-0.2**
T57A				IAmb	IAmb	13 31 53.1	
	comp=Z,30nm,0.8s						
T57A	**Hurt**	**67.72**	**58**	P	**P**	**13 31 52.2**	**-0.3**
	baz=318,SNR=5.4						
R58B	**Mineral**	**67.73**	**57**	P	**P**	**13 31 52.5**	**0.0**
	baz=318						
NB201	**NORSAR Array S**	**67.73**	**355**	*e*P	**P**	**13 31 51.7**	**-0.5**
NB201	**NORSAR Array S**	**67.73**	**355**	P	**P**	**13 31 52.2**	**0.0**
NB2	**NORSAR Subarra**	**67.75**	**355**	P	**P**	**13 31 51.7**	**-0.6**
	comp=Z,10nm,0.6s,baz=6.5,slow=6.5						
NB2	**NORSAR Subarra**	**67.75**	**355**	P	**P**	**13 31 51.7**	**-0.6**
	baz=6.5,slow=6.5						
NOA	**NORSAR Array B**	**67.75**	**355**	P	**P**	**13 31 51.7**	**-0.6**
	comp=Z,14nm,0.6s,baz=6.5,slow=6.2,SNR=58						
NOA				LR	LR	14 02 40.1	
	comp=Z,574nm,19.3s,baz=10.0,slow=37						
X54A	**Belton**	**67.83**	**62**	P	**P**	**13 31 53.6**	**+0.5**
	baz=318,SNR=21						
O61A	**Allentown**	**67.85**	**53**	P	**P**	**13 31 53.0**	**-0.2**
	baz=319						
HYA	**Hoyanger**	**67.85**	**357**	*e*P	**P**	**13 31 53.7**	**+0.9**
AB31	**Akbulak array**	**67.89**	**323**	*i* P	**P**	**13 31 52.4**	**-0.9**
ABKAR	**Akbulak array**	**67.89**	**323**	P	**P**	**13 31 52.7**	**-0.6**
ABKAR	**Akbulak array**	**67.89**	**323**	P	**P**	**13 31 52.6**	**-0.6**
ABKAR				IAmb	IAmb	13 32 21.0	
	comp=Z,19nm,1.1s						
S58A	**Poland Farm, P**	**67.90**	**57**	P	**P**	**13 31 53.7**	**+0.2**
	baz=318						
FAKI	**Fak Fak**	**67.91**	**234**	P	**P**	**13 31 53.3**	**-0.5**
	comp=Z,2µmcomp=Z,169nm,1.4s						
FAKI	**Fak Fak**	**67.91**	**234**	P	**P**	**13 31 53.4**	**-0.4**
V56A	**Mocksville**	**67.93**	**60**	P	**P**	**13 31 53.9**	**+0.1**
	baz=318,SNR=8.0						
LMN	**Caledonia Moun**	**67.98**	**43**	P	**P**	**13 31 53.0**	**-0.9**
LMN				IAmb	IAmb	13 31 54.0	
	comp=Z,88nm,0.9s						
NC602	**NORSAR Array S**	**68.03**	**354**	P	**P**	**13 31 54.1**	**+0.1**
GOGA	**Godfrey**	**68.05**	**64**	P	**P**	**13 31 54.3**	**-0.3**
GOGA				pmax	pmax		
	comp=Z,186nm,1.4s						
GOGA				MLR	MLR		
	comp=Z,2µm,19.0s						
GOGA	**Godfrey**	**68.05**	**64**	P	**P**	**13 31 54.2**	**-0.3**
GOGA	**Godfrey**	**68.05**	**64**	P	**P**	**13 31 54.3**	**-0.3**
	baz=318,SNR=14						
U57A	**Blanch**	**68.09**	**59**	P	**P**	**13 31 54.9**	**+0.1**
	baz=318,SNR=7.9						
M63A	**Gales Ferry**	**68.10**	**51**	P	**P**	**13 31 54.1**	**-0.6**
	baz=320						
T58A	**Grand View Acr**	**68.14**	**58**	P	**P**	**13 31 54.7**	**-0.4**
	baz=318						
S59A	**Mechanicsville**	**68.19**	**57**	P	**P**	**13 31 55.3**	**0.0**
	baz=319						
DRLN	**Deer Lake**	**68.20**	**37**	P	**P**	**13 31 54.5**	**-0.7**
DRLN				IAmb	IAmb	13 31 55.1	
	comp=Z,74nm,0.8s						
SKAR	**Skarslia**	**68.26**	**356**	*e*P	**P**	**13 31 54.9**	**-0.6**
V57A	**Coltrane Farms**	**68.26**	**60**	P	**P**	**13 31 55.5**	**-0.4**
	baz=318						
KK31	**Karatay Array**	**68.28**	**312**	P	**P**	**13 31 55.9**	**0.0**
KK31				pmax	pmax		
	comp=Z,126nm,1.3s						
KK31	**Karatay Array**	**68.28**	**312**	P	**P**	**13 31 55.9**	**0.0**
KK31				IAmb	IAmb	13 31 57.9	
	comp=Z,126nm,1.3s						
KKAR	**Karatay Array**	**68.28**	**312**	P	**P**	**13 31 55.9**	**-0.1**
KKAR				pmax	pmax		
	comp=Z,126nm,1.3s						
KKAR	**Karatay Array**	**68.28**	**312**	P	**P**	**13 31 55.9**	**-0.1**
KKAR				IAmb	IAmb	13 31 57.9	
	comp=Z,126nm,1.3s						
X55A	**Gracelyn & Ava**	**68.29**	**62**	P	**P**	**13 31 56.4**	**+0.4**
	baz=318,SNR=9.4						
KSH	**Kashi**	**68.37**	**306**	P	**P**	**13 32 01.0**	**+4.3**
KSH				sP	sP	13 32 15.1	+5.4
KSH				PP	**PP**	**13 34 34.3**	**+7.1**
KSH				PcS		13 36 29.1	
KSH				S	**S**	**13 40 58.8**	**+3.1**
KSH				ScS	**ScS**	**13 41 54.4**	**+0.6**
KSH				pmax	pmax		
	comp=Z,230nm,1.0s						
KSH				pmax	pmax		
	comp=Z,960nm,11.5s						
KSH				LR	LR		
	comp=Z,920nm,13.6s						
KSH				LR	LR		
	comp=Z,2µm,19.2s						
KSH				LR	LR		
	comp=Z,2µm,19.5s						
W56A	**Indian Trail**	**68.38**	**61**	P	**P**	**13 31 56.4**	**-0.2**
	baz=318						
TEZP	**TEZPUR**	**68.52**	**286**	*e*P	**P**	**13 31 57.6**	**0.0**
ASK	**Askoy**	**68.56**	**358**	*e*P	**P**	**13 31 57.4**	**+0.1**
Y55A	**Saluda**	**68.56**	**62**	P	**P**	**13 31 58.1**	**+0.4**
	baz=318,SNR=13						
X56A	**White Oak**	**68.61**	**61**	P	**P**	**13 31 58.4**	**+0.3**
	baz=318,SNR=11						
VSU	**Vasula**	**68.61**	**346**	*e*P	**P**	**13 31 57.5**	**-0.1**
VSU	**Vasula**	**68.61**	**346***d*	*i*P	**P**	**13 31 57.4**	**-0.2**
T59A	**Double "B" Far**	**68.64**	**57**	P	**P**	**13 31 58.5**	**+0.3**
	baz=319,SNR=7.0						
V58A	**Windy Hill, Pi**	**68.69**	**59**	P	**P**	**13 31 58.9**	**+0.3**
	baz=319,SNR=7.1						
W57A	**Gilead**	**68.69**	**60**	P	**P**	**13 31 57.9**	**-0.6**
W57A	**Gilead**	**68.69**	**60**	P	**P**	**13 31 58.5**	**0.0**
	baz=318						
TAOE	**Nuku Hiva Isla**	**68.69**	**138**	*e*S	**S**	**13 41 00.7**	**+0.9**
	comp=Z,2µm,27.3s						
TAOE	**Nuku Hiva Isla**	**68.69**	**138**	*e*LR	LR	13 52 49.1	
	comp=Z,3µm,23.8s,baz=340						
TAOE	**Nuku Hiva Isla**	**68.69**	**138**	*e*T	T	14 46 42.4	
	comp=Z,70nm,0.2s						
OSL	**Oslo**	**68.88**	**355**	*e*P	**P**	**13 31 59.1**	**-0.1**
U59A	**Littleton**	**68.98**	**58**	P	**P**	**13 32 00.3**	**0.0**
	baz=319						
MOS	**Moscow**	**69.08**	**339**	*e*P	**P**	**13 31 59.0**	**-1.6**
MOS				pmax	pmax		
	comp=Z,180nm,1.1s						
MOS				pmax	pmax		
	comp=Z,200nm,1.4s						
MOS				MLR	MLR		
	comp=Z,2µm,16.0s						
ODD1	**Odda**	**69.09**	**357**	*e*P	**P**	**13 32 00.2**	**-0.5**
V59A	**Middlesex**	**69.18**	**59**	P	**P**	**13 32 01.7**	**+0.1**
	baz=319,SNR=6.4						
W58A	**Raeford**	**69.20**	**60**	P	**P**	**13 32 01.9**	**+0.2**
	baz=319,SNR=5.4						
KONO	**Kongsberg**	**69.22**	**355**	*e*P	**P**	**13 32 02.1**	**+0.7**
KONO	**Kongsberg**	**69.22**	**355**	P	**P**	**13 32 01.3**	**-0.1**
KONO				pmax	pmax		
	comp=Z,33nm,0.7s						
KONO	**Kongsberg**	**69.22**	**355**	P	**P**	**13 32 01.3**	**-0.1**
KONO				IAmb	IAmb	13 32 02.8	
	comp=Z,33nm,0.7s						
Y57A	**Sumter**	**69.32**	**61**	P	**P**	**13 32 03.0**	**+0.5**
	baz=319						
X58A	**Rowland**	**69.49**	**60**	P	**P**	**13 32 04.4**	**+0.8**
	baz=319						
BLS5	**Blasjo**	**69.59**	**357**	*e*P	**P**	**13 32 05.1**	**+1.4**
Z57A	**Bowman**	**69.68**	**62**	P	**P**	**13 32 05.4**	**+0.7**
	baz=319,SNR=12						
255A	**Hazlehurst**	**69.71**	**64**	P	**P**	**13 32 03.9**	**-1.0**
Y58A	**Scranton**	**69.80**	**61**	P	**P**	**13 32 05.9**	**+0.5**
	baz=319						
KMY	**Karmoy**	**69.83**	**358**	*e*P	**P**	**13 32 05.5**	**+0.4**
OBN	**Obninsk**	**69.90**	**339**	LR	LR	14 05 25.4	
	comp=Z,317nm,21.7s,baz=18,slow=38						
OBN	**Obninsk**	**69.90**	**339***c*	*e*P	**P**	**13 32 04.9**	**-0.7**
OBN				*e*		13 32 23.4	
OBN				*e*		13 34 37.6	
OBN				pmax	pmax		
	comp=Z,154nm,1.3s						
OBN				MLR	MLR		
	comp=Z,2µm,17.0s						
157A	**Early Branch**	**69.98**	**63**	P	**P**	**13 32 07.8**	**+1.2**
	baz=319,SNR=6.1						
MSAI	**Masohi**	**69.98**	**237**	P	**P**	**13 32 07.2**	**+0.5**
	comp=Z,254nmcomp=Z,24nm,0.9s						
SLIT	**Slitere, Latvi**	**70.06**	**348**	*e*P	**P**	**13 32 06.6**	**0.0**
NHSC	**New Hope**	**70.11**	**62**	P	**P**	**13 32 08.6**	**+1.2**
	baz=319						
Z58A	**St. Stephen**	**70.15**	**61**	P	**P**	**13 32 08.3**	**+0.7**
	baz=319,SNR=5.7						
SPMM	**Sapulut**	**70.44**	**252**	P	**P**	**13 32 10.0**	**+0.4**
SANI	**Sanana**	**70.47**	**240**	P	**P**	**13 32 08.0**	**-1.7**
	comp=Z,1µmcomp=Z,67nm,1.3s						
BNDI	**Bandanaira**	**70.47**	**235**	P	**P**	**13 32 09.8**	**+0.1**
	comp=Z,3µmcomp=Z,135nm,1.7s						
CHTO	**Chiang Mai**	**70.51**	**276**	P	**P**	**13 32 09.8**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,71nm,1.3s						
CHTO				MLR	MLR		
	comp=Z,600nm,19.0s						
CHTO	**Chiang Mai**	**70.51**	**276**	P	**P**	**13 32 09.8**	**-0.2**
CHTO				IAmb	IAmb	13 32 11.0	
	comp=Z,71nm,1.3s						
SNART	**Snartemo**	**70.64**	**356**	*e*P	**P**	**13 32 10.0**	**-0.1**
MRSI	**Marisa**	**70.64**	**245**	P	**P**	**13 32 10.0**	**-0.8**
	comp=Z,2µmcomp=Z,150nm,1.1s						
AAI	**Ambon**	**70.66**	**237**	P	**P**	**13 32 10.8**	**0.0**
	comp=Z,6µmcomp=Z,6µmcomp=Z,193nm,1.2s						
CMAR	**Chiang Mai Arr**	**70.78**	**276**	P	**P**	**13 32 11.6**	**0.0**
	comp=Z,18nm,0.9s,baz=27,slow=7.0,SNR=120						
CMAR				PKPPKP	**P'P'df**	**14 00 10.8**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=228,slow=5.0,SNR=4.5						
NLAI	**Namlea**	**70.86**	**238**	P	**P**	**13 32 12.5**	**+0.4**
	comp=Z,2µmcomp=Z,26nm,1.9s						
PBKT	**Sadao Pong**	**70.92**	**273**	P	**P**	**13 32 12.4**	**-0.1**
TAPN	**Taplejung**	**71.01**	**290**	*e*P	**P**	**13 32 14.1**	**+0.8**
	comp=Z,261nm,0.9s						
IZAR	**Zarasai**	**71.29**	**345**	*e*P	**P**	**13 32 15.8**	**+1.6**
PMOR	**Pomariorio Ree**	**71.41**	**148**	*e*T	T	14 50 07.3	
	comp=Z,20nm,0.2s						
LUWI	**Luwuk**	**71.42**	**243**	P	**P**	**13 32 14.4**	**-1.1**
	comp=Z,8µmcomp=Z,193nm,1.1s						
ISAL	**Salakas**	**71.48**	**345**	*e*P	**P**	**13 32 16.2**	**+0.9**
ODAN	**Odare**	**71.57**	**290**	*e*P	**P**	**13 32 17.2**	**+0.6**
	comp=Z,106nm,0.8s						
LPSR	**Galich'ya Gora**	**71.65**	**337**	*e*P	**P**	**13 32 15.2**	**-1.1**
LPSR				pmax	pmax		
	comp=Z,60nm,1.3s						
LPSR				MLR	MLR		
	comp=Z,2µm,16.0s						
PBUR	**Paburge**	**71.67**	**348**	*e*P	**P**	**13 32 16.1**	**-0.3**
GUN	**Gumba**	**71.67**	**292**	*e*P	**P**	**13 32 18.1**	**+0.8**
	comp=Z,330nm,0.5s						
JIRN	**Jiri**	**71.68**	**291**	*e*P	**P**	**13 32 18.2**	**+0.8**
	comp=Z,422nm,0.9s						
VAH	**Vaihoa**	**71.72**	**148**	*e*T	T	14 50 30.3	
	comp=Z,6.0nm,0.3s						
PABE	**Paberze**	**71.88**	**346**	*e*P	**P**	**13 32 17.4**	**-0.3**
MPSI	**Mapaga**	**71.93**	**247**	P	**P**	**13 32 18.0**	**-0.6**
	comp=Z,1µmcomp=Z,95nm,1.5s						
APSI	**Ampana**	**71.94**	**245**	P	**P**	**13 32 18.5**	**-0.1**
	comp=Z,745nmcomp=Z,58nm,1.2s						
RAMN	**Ramite**	**71.97**	**291**	*e*P	**P**	**13 32 19.5**	**+0.5**
	comp=Z,197nm,0.6s						
KKN	**Kakani**	**72.11**	**292**	*e*P	**P**	**13 32 20.5**	**+0.7**
	comp=Z,96nm,0.5s						
VRH	**Novokhopyorsk**	**72.19**	**334**	*e*P	**P**	**13 32 17.0**	**-2.6**
VRH				pmax	pmax		
	comp=Z,70nm,1.4s						
VRH				MLR	MLR		
	comp=Z,3µm,18.0s						
PKI	**Pulchoki**	**72.20**	**292**	*e*P	**P**	**13 32 20.8**	**+0.3**
	comp=Z,102nm,0.6s						
PKIN	**Phulchoki**	**72.20**	**292**	*e*P	**P**	**13 32 20.8**	**+0.4**
	comp=Z,86nm,0.5s						
MICGM	**Minsk**	**72.21**	**344**⇓	*e*P	**P**	**13 32 19.0**	**-0.7**
MICGM				PM		13 32 20.0	
	comp=Z,0.4nm,1.0s						
MNK	**Minsk**	**72.21**	**344**	*e*P	**P**	**13 32 19.0**	**-0.7**
MNK				pmax	pmax		
	comp=Z,440nm,1.0s						
GKN	**Gorkha**	**72.32**	**293**	*e*P	**P**	**13 32 21.5**	**+0.5**
	comp=Z,149nm,0.6s						
DMN	**Daman**	**72.35**	**292**	*e*P	**P**	**13 32 21.8**	**+0.5**
VORR	**Voronezh**	**72.42**	**336**	P	**P**	**13 32 18.0**	**-3.0**
VORR				pmax	pmax		
	comp=Z,250nm,1.6s						
DANN	**Dangsing**	**72.57**	**294**	*e*P	**P**	**13 32 23.2**	**+0.5**
SAUI	**Saumlaki**	**72.73**	**232**	P	**P**	**13 32 24.0**	**+0.8**
	comp=Z,6µmcomp=Z,375nm,1.1s						
EAB	**Aberfoyle**	**72.84**	**3**	*e*P	**P**	**13 32 22.8**	**-0.6**
VSR	**Storozhevoye**	**72.85**	**336**	*e*P	**P**	**13 32 22.6**	**-1.0**
VSR				pmax	pmax		
	comp=Z,70nm,1.3s						
VSR				MLR	MLR		
	comp=Z,1µm,20.0s						
DWPF	**Disney Wildern**	**73.17**	**66**	P	**P**	**13 32 26.9**	**+1.1**
	baz=320						
KLNR	**Kaliningrad**	**73.27**	**348***d*	*e*P	**P**	**13 32 25.8**	**-0.2**
PPT	**Papeete**	**73.28**	**151**	LR	LR	13 55 54.2	
	comp=Z,901nm,20.6s,baz=356,slow=29						
PPT2	**Papeete2**	**73.30**	**151**	*e*S	**S**	**13 41 53.9**	**+1.0**
	comp=Z,3µm,28.8s						
PPT2	**Papeete2**	**73.30**	**151**	*e*LR	LR	13 54 43.0	
	comp=Z,2µm,28.8s,baz=344						
PPT2	**Papeete2**	**73.30**	**151**	*e*T	T	14 52 29.2	
	comp=Z,9.1nm,0.2s						
TIAR	**Tiarei**	**73.34**	**150**	*e*T	T	14 52 31.8	
	comp=Z,2.4nm,0.2s						
BSD	**Bornholm Skovb**	**73.35**	**352**	*i* P	**P**	**13 32 25.7**	**-0.7**
BSD	**Bornholm Skovb**	**73.35**	**352**	*i* P	**P**	**13 32 25.7**	**-0.7**
PAE	**Paea**	**73.36**	**151**	*e*T	T	14 52 33.4	
	comp=Z,3.6nm,0.3s						
SUW	**Suwalki**	**73.44**	**346**	*e*P	**P**	**13 32 26.2**	**-0.8**
SUW	**Suwalki**	**73.44**	**346**	*e*P	**P**	**13 32 26.2**	**-0.8**
ESK	**Eskdalemuir**	**73.75**	**2**	*e*P	**P**	**13 32 28.5**	**-0.3**
DHRM	**DHARAMSHALA**	**73.75**	**301**	*e*P	**P**	**13 32 30.1**	**+0.6**
CLGH	**Cloghs, Cushen**	**73.88**	**4**	*e*P	**P**	**13 32 29.3**	**-0.2**
CLGH				IAmb	IAmb	13 32 30.4	
	comp=Z,100nm,1.4s						
RGN	**Rugen**	**74.05**	**352**	*e*P	**P**	**13 32 31.3**	**+0.8**
RGN	**Rugen**	**74.05**	**352**	*e*P	**P**	**13 32 30.6**	**0.0**
	comp=Z,176nm,1.0s,baz=7.4,slow=5.5						
RGN				*e*pP	**pP**	**13 32 39.3**	**-0.8**
	baz=8.5,slow=5.5						
DZM	**Mont Dzumac**	**74.09**	**194**	*e*P	**P**	**13 32 32.9**	**+1.7**
	comp=Z,98nm,1.2s						
DZM				*e*S	**S**	**13 42 03.3**	**+1.6**
	comp=Z,387nm,25.7s						
DZM	**Mont Dzumac**	**74.09**	**194**	*e*LR	LR	13 55 18.5	
	comp=Z,2µm,23.2s						
GAL1	**Galloway**	**74.15**	**3**	*e*P	**P**	**13 32 30.8**	**-0.4**
GAL1				IAmb	IAmb	13 32 31.9	
	comp=Z,29nm,1.1s						
SMLA	**Simla**	**74.15**	**300**	*e*P	**P**	**13 32 31.9**	**+0.4**
NIL	**Nilore**	**74.28**	**304**	P	**P**	**13 32 33.9**	**+1.6**
NIL				pmax	pmax		
	comp=Z,735nm,1.5s						
NIL				MLR	MLR		
	comp=Z,3µm,22.0s						
NIL	**Nilore**	**74.28**	**304**	P	**P**	**13 32 33.9**	**+1.6**
BHK	**Bhakra**	**74.33**	**301**	*e*x	**P**	**13 32 34.8**	**+2.1**
KESW	**Keswick, Cumbr**	**74.48**	**2**	*e*P	**P**	**13 32 32.5**	**-0.5**
KESW				IAmb	IAmb	13 32 34.0	
	comp=Z,74nm,1.3s						
TTSI	**Tana Toraja**	**74.73**	**245**	P	**P**	**13 32 34.6**	**-0.4**
	comp=Z,1µmcomp=Z,74nm,1.2s						
IOMK	**Kirk Michael**	**74.76**	**3**	*e*P	**P**	**13 32 34.4**	**-0.3**
IOMK				IAmb	IAmb	13 32 35.5	
	comp=Z,80nm,1.1s						
BOK	**Bokaro**	**74.77**	**289**	*e*P	**P**	**13 32 35.9**	**+0.6**
BOK				IAmb	IAmb	13 32 37.1	
	comp=Z,70nm,0.3s						
HLG	**Helgoland**	**74.77**	**356**	*e*P	**P**	**13 32 35.0**	**+0.3**
	comp=Z,174nm,1.3s,baz=7.4,slow=5.5						
HLG				*e*pP	**pP**	**13 32 43.8**	**-0.5**
	baz=8.5,slow=5.5						
SBUM	**Sibu**	**74.79**	**255**	P	**P**	**13 32 36.0**	**+0.6**
SBUM	**Sibu**	**74.79**	**255**	P	**P**	**13 32 36.0**	**+0.6**
WIM	**Isle of Man**	**74.87**	**3**	*e*P	**P**	**13 32 35.2**	**-0.2**
BSEG	**Bad Segeberg**	**74.88**	**354**	*e*P	**P**	**13 32 35.5**	**+0.1**
	comp=Z,104nm,1.1s,baz=7.4,slow=5.5						
BSEG				*e*pP	**pP**	**13 32 44.2**	**-0.8**
	baz=8.5,slow=5.5						
GKP	**Gorka Klasztor**	**74.94**	**350**	*e*P	**P**	**13 32 35.9**	**+0.2**
GKP	**Gorka Klasztor**	**74.94**	**350**	*e*P	**P**	**13 32 35.9**	**+0.2**
TEIG	**Tepich**	**75.06**	**76**	*e*P	pP	13 32 46.7	-0.2
AKASG	**Malin Array Be**	**75.59**	**342**	P	**P**	**13 32 38.8**	**-0.7**
	comp=Z,8.7nm,0.3s,baz=22,slow=6.0,SNR=113						
AKASG				LR	LR	14 10 11.5	
	comp=Z,817nm,18.6s,baz=25,slow=39						
AKASG	**Malin Array Be**	**75.59**	**342**	P	**P**	**13 32 39.1**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,40nm,1.1s						
AKASG	**Malin Array Be**	**75.59**	**342**	P	**P**	**13 32 39.1**	**-0.4**
AKBB	**Malin Array Si**	**75.59**	**342**	P	**P**	**13 32 39.1**	**-0.4**
AKBB				pmax	pmax		
	comp=Z,164nm,1.2s						
AKBB				MLR	MLR		
	comp=Z,1µm,20.0s						
AKBB	**Malin Array Si**	**75.59**	**342**	P	**P**	**13 32 39.1**	**-0.4**
AKBB				IAmb	IAmb	13 32 40.1	
	comp=Z,164nm,1.2s						
AKBB				IAMs_20	IAMs_20	14 09 21.5	
	comp=Z,1µm,20.0s						
WME	**Myndd Eilian**	**75.64**	**3**	*e*P	**P**	**13 32 38.6**	**-1.1**
KBL	**Kabul**	**75.72**	**308**	P	**P**	**13 32 41.0**	**+0.1**
KBL				pmax	pmax		
	comp=Z,79nm,0.8s						
KBL				MLR	MLR		
	comp=Z,900nm,22.0s						
KBL	**Kabul**	**75.72**	**308**	P	**P**	**13 32 41.0**	**+0.1**
KBL				IAmb	IAmb	13 32 41.6	
	comp=Z,78nm,0.8s						
KBL				IAMs_20	IAMs_20	14 08 31.5	
	comp=Z,914nm,22.0s						
BEL	**Belsk**	**75.90**	**347**	*e*P	**P**	**13 32 41.8**	**+0.5**
BEL	**Belsk**	**75.90**	**347**	*e*P	**P**	**13 32 41.8**	**+0.5**
NDI	**New Delhi**	**76.01**	**298**	*e*P	**P**	**13 32 42.0**	**-0.3**
RUE	**Ruedersdorf**	**76.06**	**352**	*e*P	**P**	**13 32 42.2**	**0.0**
RUE	**Ruedersdorf**	**76.06**	**352**	*e*P	**P**	**13 32 41.7**	**-0.5**
	comp=Z,79nm,1.1s,baz=7.4,slow=5.5						
RUE				*e*pP	**pP**	**13 32 50.4**	**-1.3**
	baz=8.5,slow=5.5						
FOEL	**Foel Wylfa**	**76.18**	**2**	*e*P	**P**	**13 32 42.8**	**-0.1**
FOEL				IAmb	IAmb	13 32 43.9	
	comp=Z,60nm,1.2s						
NRDL	**Niedersach Rie**	**76.33**	**354**	*e*P	**P**	**13 32 43.4**	**-0.3**
	comp=Z,73nm,1.2s,baz=7.4,slow=5.5						
NRDL				*e*pP	**pP**	**13 32 52.1**	**-1.1**
	baz=8.5,slow=5.5						
BKSI	**Bulukumba**	**76.42**	**243**	P	**P**	**13 32 44.7**	**0.0**
	comp=Z,1µmcomp=Z,111nm,1.4s						
HLM1	**Long Mynd**	**76.56**	**2**	*e*P	**P**	**13 32 44.6**	**-0.4**
HLM1				IAmb	IAmb	13 32 45.2	
	comp=Z,57nm,1.5s						
IBBN	**Ibbenburen**	**76.65**	**356**	*e*P	**P**	**13 32 45.6**	**+0.1**
	comp=Z,175nm,1.1s,baz=7.4,slow=5.5						
IBBN				*e*pP	**pP**	**13 32 54.3**	**-0.8**
	baz=8.5,slow=5.5						
ASSE	**Asse, Remlinge**	**76.66**	**354**	*e*P	**P**	**13 32 45.3**	**-0.2**
	comp=Z,108nm,1.4s,baz=7.4,slow=5.5						
ASSE				*e*pP	**pP**	**13 32 54.1**	**-0.9**
	baz=8.5,slow=5.5						
KSM	**Kuching**	**76.72**	**256**	P	**P**	**13 32 46.7**	**+0.3**
KSM				IAmb	IAmb	13 32 48.1	
	comp=Z,103nm,1.3s						
KSM	**Kuching**	**76.72**	**256**	P	**P**	**13 32 47.0**	**+0.5**
CLZ	**Clausthal**	**76.96**	**354**	*e*P	**P**	**13 32 47.4**	**0.0**
	comp=Z,135nm,1.3s,baz=7.4,slow=5.5						
CLZ				*e*pP	**pP**	**13 32 56.1**	**-0.9**
	baz=8.5,slow=5.5						
MTN	**Manton Dam**	**77.00**	**230**	P	**P**	**13 32 47.8**	**-0.1**
KBKI	**Kotabaru**	**77.04**	**248**	P	**P**	**13 32 47.7**	**-0.5**
	comp=Z,12nm,1.8s						
RSBS	**Rosebush, Pemb**	**77.06**	**4**	*e*P	**P**	**13 32 47.4**	**-0.4**
RSBS				IAmb	IAmb	13 32 48.7	
	comp=Z,44nm,1.1s						
MCH1	**Michaelchurch**	**77.08**	**2**	*e*P	**P**	**13 32 47.2**	**-0.7**
MCH1				IAmb	IAmb	13 32 49.2	
	comp=Z,39nm,1.1s						
MONM	**Monmouth**	**77.24**	**2**	*e*P	**P**	**13 32 48.5**	**-0.3**
MONM				IAmb	IAmb	13 32 49.7	
	comp=Z,67nm,1.1s						
GTTG	**Gottingen**	**77.28**	**354**	*e*P	**P**	**13 32 49.0**	**-0.1**
	comp=Z,102nm,1.2s,baz=7.4,slow=5.5						
CLL	**Collm**	**77.29**	**352**	*i* P	**P**	**13 32 49.4**	**+0.2**
	comp=Z,41nm,1.2s						
CLL				*e*PS	**PnS**	**13 43 24.0**	**+6.1**
CLL				*e*SS	SS	13 47 42.0	+8.5
CLL				L	L	14 10 00.0	
	comp=Z,700nm,20.6s						
CLL	**Collm**	**77.29**	**352**	*e*P	**P**	**13 32 49.3**	**+0.2**
	comp=Z,40nm,1.2s,baz=7.4,slow=5.5						
CLL	**Collm**	**77.29**	**352**	*i* P	**P**	**13 32 49.4**	**+0.2**
CLL				pmax	pmax		
	comp=Z,41nm,1.2s						
CLL				MLR	MLR		
	comp=Z,700nm,20.6s						
STRD	**Stroud**	**77.32**	**2**	*e*P	**P**	**13 32 48.8**	**-0.5**
STRD				IAmb	IAmb	13 32 50.3	
	comp=Z,156nm,1.3s						
GOF	**Gofitskoye**	**77.35**	**331**⇑	*i*P	**P**	**13 32 49.4**	**-0.2**
GOF				pmax	pmax		
	comp=Z,228nm,1.3s						
LVV	**L'vov**	**77.38**	**345**	*e*P	**P**	**13 32 48.6**	**-1.1**
LVV				*e*		13 35 45.7	
LVV				*e*S	**S**	**13 42 33.4**	**-4.1**
LVV				*e*PS		13 43 23.6	
LVV				*e*SS	**SS**	**13 47 40.0**	**+5.2**
LVV				*e*SSS	SSS	13 50 52.0	
LVV				pmax	pmax		
	comp=Z,130nm,1.2s						
KSP	**Ksiaz**	**77.43**	**350**	*e*P	**P**	**13 32 49.9**	**-0.1**
KSP	**Ksiaz**	**77.43**	**350**	*e*P	**P**	**13 32 49.9**	**-0.1**
BWNR	**Bhubaneshwar**	**77.47**	**287**	*e*P	**P**	**13 32 51.2**	**+0.5**
BWNR				IAmb	IAmb	13 32 53.8	
	comp=Z,33nm,0.8s						
BWNR				*i* x	x	13 44 07.5	
NEUB	**Neuenburg**	**77.49**	**353**	*e*P	**P**	**13 32 49.8**	**-0.5**
	comp=Z,136nm,1.2s,baz=7.4,slow=5.5						
NEUB				*e*pP	**pP**	**13 32 58.6**	**-1.3**
	baz=8.5,slow=5.5						
BUG	**Bochum--Univer**	**77.54**	**356**	*e*P	**P**	**13 32 50.1**	**-0.4**
	comp=Z,91nm,1.4s,baz=7.4,slow=5.5						
BUG				*e*pP	**pP**	**13 32 58.9**	**-1.2**
	baz=8.5,slow=5.5						
OJC	**Ojcow**	**77.62**	**348**	*e*P	**P**	**13 32 50.9**	**-0.1**
OJC	**Ojcow**	**77.62**	**348**	*e*P	**P**	**13 32 50.9**	**-0.1**
BRG	**Berggiesshubel**	**77.64**	**352**	*i* P	**P**	**13 32 50.6**	**-0.5**
	comp=Z,60nm,1.4s						
BRG				*i*		13 32 58.1	
	comp=Z,16nm,1.1s						
BRG	**Berggiesshubel**	**77.64**	**352**	*e*P	**P**	**13 32 50.4**	**-0.8**
	comp=Z,60nm,1.4s,baz=7.4,slow=5.5						
BRG				*e*pP	**pP**	**13 32 59.1**	**-1.7**
	baz=8.5,slow=5.5						
BRG	**Berggiesshubel**	**77.64**	**352**	*i* P	**P**	**13 32 50.6**	**-0.5**
BRG				*i*		13 32 58.1	
BRG				S	S	13 43 13.0	+33
BRG				pmax	pmax		
	comp=Z,60nm,1.4s						
BRG				pmax	pmax		
	comp=Z,16nm,1.1s						
BRG				MLR	MLR		
	comp=N,876nm,23.0s						
BRG				MLR	MLR		
	comp=E,612nm,16.2s						
BRG				MLR	MLR		
	comp=Z,949nm,21.8s						
FBE	**Freiberg**	**77.65**	**352**	*e*P	**P**	**13 32 50.8**	**-0.3**
	comp=Z,88nm,1.3s,baz=7.4,slow=5.5						
FBE				*e*pP	**pP**	**13 32 59.6**	**-1.2**
	baz=8.5,slow=5.5						
CHVC	**Chvalec**	**77.71**	**350**	*e*P	**P**	**13 32 51.2**	**-0.4**
CHVC				*e*x	x	13 32 59.4	
CHVC				AMS	AMS	14 12 20.0	
	comp=Z,1µm,18.9s						
OSTC	**Ostas**	**77.72**	**350**	*e*P	**P**	**13 32 51.4**	**-0.2**
OSTC				*e*x	x	13 33 00.4	
OSTC				AMS	AMS	14 13 40.0	
	comp=Z,2µm,17.1s						
KWP	**Kalwaria Pacla**	**77.77**	**346**	*e*P	**P**	**13 32 52.3**	**+0.4**
KWP	**Kalwaria Pacla**	**77.77**	**346**	P	**P**	**13 32 52.9**	**+1.0**
KWP				pmax	pmax		
	comp=Z,179nm,0.8s						
KWP	**Kalwaria Pacla**	**77.77**	**346**	P	**P**	**13 32 52.9**	**+1.0**
MAK	**Makhachkala**	**77.77**	**327**	*e*P	**P**	**13 32 50.4**	**-1.6**

MAK				e		13 35 46.1	
MAK				eS	S	13 42 41.4	-0.5
MAK				eSS	SS	13 47 42.1	+1.0
MAK				pmax	pmax		
	comp=Z,240nm,1.2s						
MAK				MLR	MLR		
	comp=Z,2µm,17.0s						
UPC	Upice	77.80	350	eP	P	13 32 51.4	-0.6
UPC				AMS	AMS	14 12 30.0	
	comp=Z,1µm,18.3s						
UPC	Upice	77.80	350	eP	P	13 32 51.4	-0.6
UPC				MLR	MLR		
	comp=Z,1µm,18.3s						
SOEI	Soe	77.84	237	P	P	13 32 52.5	-0.3
	comp=Z,65nm,1.0s						
DPC	Dobruska-Polom	77.92	350	eP	P	13 32 52.5	-0.2
DPC				epP	pP	13 33 00.1	-2.3
DPC				AMS	AMS	14 13 50.0	
	comp=Z,2µm,16.2s						
DPC	Dobruska-Polom	77.92	350	eP	P	13 32 52.5	-0.2
DPC				e		13 33 00.1	
DPC				MLR	MLR		
	comp=Z,2µm,16.2s						
PVCC	Panska Ves	77.92	351	eP	P	13 32 52.3	-0.4
PVCC				AMS	AMS	14 14 00.0	
	comp=Z,1µm,18.7s						
PVCC	Panska Ves	77.92	351	eP	P	13 32 52.3	-0.4
PVCC				MLR	MLR		
	comp=Z,1µm,18.7s						
UBBA	Unterbreizbach	78.01	354	eP	P	13 32 52.9	-0.2
	comp=Z,70nm,1.5s,baz=7.4,slow=5.5						
GEYT	Alibeck	78.01	317	P	P	13 32 53.2	-0.3
	comp=Z,21nm,1.1s,baz=328,slow=5.3,SNR=20						
GEYT				LR	LR	14 10 20.8	
	comp=Z,2µm,19.8s,baz=30,slow=38						
MOX	Moxa	78.06	353	eP	P	13 32 53.1	-0.5
	comp=Z,60nm,1.4s,baz=7.4,slow=5.5						
MOX				epP	PcP	13 33 01.8	-1.3
	baz=8.5,slow=5.5						
MOX				eL	L	14 14 41.7	
	comp=Z,396nm,21.4s						
GROC	Groznyy	78.13	328	eP	P	13 32 51.7	-2.3
GROC				e		13 33 02.0	
GROC				e		13 35 49.7	
GROC				pmax	pmax		
	comp=Z,20nm,0.4s						
KRLC	Kraliky	78.14	350	eP	P	13 32 53.5	-0.5
KRLC				epP	PcP	13 33 02.1	-1.4
KRLC				AMS	AMS	14 12 10.0	
	comp=Z,1µm,18.8s						
KRLC	Kraliky	78.14	350	eP	P	13 32 53.5	-0.5
KRLC				e		13 33 02.1	
KRLC				MLR	MLR		
	comp=Z,1µm,18.8s						
PLN	Plauen	78.18	353	eP	P	13 32 53.7	-0.4
	comp=Z,27nm,1.1s,baz=7.4,slow=5.5						
PLN				epP	P	13 32 53.7	-0.4
	baz=8.5,slow=5.5						
STHS	Stebnicka Huta	78.20	347	eP	P	13 32 54.8	+0.5
STHS				pmax	pmax		
	comp=Z,107nm,1.3s						
STHS	Stebnicka Huta	78.20	347	eP	P	13 32 54.8	+0.5
OKC	Ostrava-Krasne	78.21	349	eP	P	13 32 54.3	0.0
OKC				epP	PcP	13 33 02.5	-1.2
OKC				AMS	AMS	14 12 40.0	
	comp=Z,1µm,16.0s						
OKC	Ostrava-Krasne	78.21	349	eP	P	13 32 54.3	0.0
OKC				e		13 33 02.5	
OKC				MLR	MLR		
	comp=Z,1µm,16.0s						
SORM	Soroca	78.21	342	⇑P	P	13 32 54.1	-0.2
TANN	Tannenbergstha	78.22	352	eP	P	13 32 54.1	-0.4
	comp=Z,113nm,1.5s,baz=7.4,slow=5.5						
TANN				epP	PcP	13 33 02.8	-1.1
	baz=8.5,slow=5.5						
GUNZ	Gunzen	78.29	352	eP	P	13 32 54.5	-0.3
	comp=Z,54nm,1.4s,baz=7.4,slow=5.5						
GUNZ				epP	PcP	13 33 03.2	-0.9
	baz=8.5,slow=5.5						
NIE	Niedzica	78.33	347	eP	P	13 32 55.3	+0.2
NIE	Niedzica	78.33	347	eP	P	13 32 55.3	+0.2
MORC	Moravsky Berou	78.34	349	⇓P	P	13 32 55.1	0.0
MORC	Moravsky Berou	78.34	349	eP	P	13 32 54.5	-0.6
WERN	Wernitzgruen	78.36	352	eP	P	13 32 54.9	-0.3
	comp=Z,103nm,1.4s,baz=7.4,slow=5.5						
WERN				epP	PcP	13 33 03.6	-0.8
	baz=8.5,slow=5.5						
EDFI	Ende, Flores	78.38	240	P	P	13 32 53.8	-2.0
	comp=Z,676nmcomp=Z,50nm,1.6s						
PRA	Prague	78.39	351	AMS	AMS	14 14 00.0	
	comp=Z,1µm,16.3s						
NKC	Novy Kostel	78.41	352	eP	P	13 32 55.0	-0.4
NKC				AMS	AMS	14 15 10.0	
	comp=Z,1µm,18.2s						
NKC	Novy Kostel	78.41	352	eP	P	13 32 55.0	-0.4
NKC				MLR	MLR		
	comp=Z,1µm,18.2s						
AHRW	Bad Neuenahr-A	78.44	356	eP	P	13 32 55.5	-0.1
	comp=Z,99nm,1.3s,baz=7.4,slow=5.5						
AHRW				epP	PcP	13 33 04.3	-0.4
	baz=8.5,slow=5.5						
KIV	Kislovodsk	78.46	331	P	P	13 32 56.7	+0.7
KIV	Kislovodsk	78.46	331	eP	P	13 32 55.4	-0.5
KIV				pmax	pmax		
	comp=Z,123nm,1.1s						
KIV				MLR	MLR		
	comp=Z,3µm,19.0s						
PRU	Pruhonice	78.46	351	eP	P	13 32 55.4	-0.3
PRU				epP	PcP	13 33 03.6	-1.2
PRU				AMS	AMS	14 11 20.0	
	comp=Z,900nm,18.4s						
PRU	Pruhonice	78.46	351	eP	P	13 32 55.4	-0.3
PRU				e		13 33 03.6	
PRU				MLR	MLR		
	comp=Z,900nm,18.4s						
GOPC	GO Pecny, Ondr	78.51	351	eP	P	13 32 55.5	-0.5
GOPC				AMS	AMS	14 10 00.0	
	comp=Z,1µm,22.9s						
GOPC	GO Pecny, Ondr	78.51	351	eP	P	13 32 55.5	-0.5
GOPC				MLR	MLR		
	comp=Z,1µm,22.9s						
KOLS	Kolonicke sedl	78.52	346	eP	P	13 32 56.3	+0.3
KOLS				pmax	pmax		
	comp=Z,80nm,1.4s						
KOLS	Kolonicke sedl	78.52	346	eP	P	13 32 56.3	+0.3
NCK	Nalchik	78.59	330	⇓eP	P	13 32 57.3	+0.8
NCK				pmax	pmax		
	comp=Z,176nm,1.4s						
KBZ	Khabaz	78.59	330	P	P	13 32 56.5	0.0
	comp=Z,16nm,1.0s,baz=15,slow=1.9,SNR=15						
KBZ				LR	LR	14 11 26.2	
	comp=Z,2µm,21.9s,baz=20,slow=39						
KBZ	Khabaz	78.59	330	c iP	P	13 32 56.2	-0.3
CRVS	Cervenica-Dubn	78.67	346	eP	P	13 32 57.1	+0.2
CRVS				pmax	pmax		
	comp=Z,71nm,1.0s						
CRVS	Cervenica-Dubn	78.67	346	eP	P	13 32 57.1	+0.2
MANZ	Manzenberg	78.68	353	eP	P	13 32 56.4	-0.5
	comp=Z,39nm,1.3s,baz=7.4,slow=5.5						
MANZ				epP	PcP	13 33 05.1	-0.7
	baz=8.5,slow=5.5						
TNS	Taunus Mts	78.69	355	eP	P	13 32 56.7	-0.4
	comp=Z,72nm,1.4s,baz=7.4,slow=5.5						
TNS				epP	PcP	13 33 05.5	-0.4
	baz=8.5,slow=5.5						
LANS	Liptovska Anna	78.71	348	eP	P	13 32 57.8	+0.6
LANS				pmax	pmax		
	comp=Z,64nm,1.3s						
LANS	Liptovska Anna	78.71	348	eP	P	13 32 57.8	+0.6
TBI	Tubuai	78.76	152	eS	S	13 42 54.5	+1.9
	comp=Z,549nm,32.2s						
TBI	Tubuai	78.76	152	eLR	LR	13 57 19.6	
	comp=Z,2µm,22.2s,baz=335						
TBI	Tubuai	78.76	152	eT	T	14 59 18.4	
	comp=Z,7.4nm,0.3s						
UZH	Uzhgorod	78.81	346	⇑iP	P	13 32 57.2	-0.4
UZH				i		13 33 05.6	
UZH				e		13 33 12.5	
PBCC	Pribram	78.81	351	eP	P	13 32 57.3	-0.4
PBCC				ex	x	13 33 05.5	
ROTZ	Rotzenmuhle	78.89	352	eP	P	13 32 57.8	-0.3
	comp=Z,47nm,1.2s,baz=7.4,slow=5.5						
ROTZ				epP	PcP	13 33 06.6	-0.1
	baz=8.5,slow=5.5						
VRAC	Vranov	78.91	350	⇓P	P	13 32 58.6	+0.4
VRAC	Vranov	78.91	350	eP	P	13 32 58.0	-0.2
AKT	Akhty	79.00	326	eP	P	13 32 59.0	0.0
AKT				e		13 33 06.9	
AKT				pmax	pmax		
	comp=Z,45nm,0.9s						
GRF	Grafenberg Arr	79.04	353	eP	P	13 32 58.9	-0.1
	comp=Z,147nm,1.4s,baz=7.4,slow=5.5						
GRF				epP	PcP	13 33 07.6	+0.3
	baz=8.5,slow=5.5						
GRF				eL	L	14 10 22.3	
	comp=Z,534nm,21.8s						
TREC	Trest	79.05	350	eP	P	13 32 58.6	-0.4
TREC				epP	PcP	13 33 06.9	-0.5
TREC				AMS	AMS	14 14 50.0	
	comp=Z,2µm,18.2s						
TREC	Trest	79.05	350	eP	P	13 32 58.6	-0.4
TREC				e		13 33 06.9	
TREC				MLR	MLR		
	comp=Z,2µm,18.2s						
NEY	Neytrino	79.08	330	⇓eP	P	13 33 03.1	+3.6
NEY				pmax	pmax		
	comp=Z,7.0nm,1.2s						
HRA	Herat	79.11	312	P	P	13 33 00.8	+1.0
HRA				IAmb	IAmb	13 33 02.0	
	comp=Z,94nm,1.7s						
ZEI	Tsey	79.12	329	eP	P	13 32 56.9	-2.8
ZEI				pmax	pmax		
	comp=Z,47nm,1.0s						
KRUC	Moravsky	79.18	350	eP	P	13 32 59.4	-0.3
KIS	Kishinev	79.20	341	i P	P	13 33 00.0	+0.2
	comp=Z,400nm,1.4s						
KIS	Kishinev	79.20	341	i PcP	PcP	13 33 07.0	-1.1
KIS	Kishinev	79.20	341	ePP	PP	13 36 10.0	+11
KIS	Kishinev	79.20	341	i P	P	13 33 00.0	+0.2
KIS				i		13 33 07.0	
KIS				ePPP	PPP	13 37 44.0	
KIS				eS	S	13 42 50.0	-7.2
KIS				e		13 43 12.0	
KIS				ePS	PnS	13 43 45.0	+2.8
KIS				pmax	pmax		
	comp=Z,400nm,1.4s						
KIS				MLR	MLR		
	comp=Z,2µm,17.0s						
KIS				MLR	MLR		
	comp=N,3µm,20.0s						
ANN	Anapa	79.21	334	eP	P	13 32 57.3	-2.6
ANN				e		13 33 05.1	
ANN				e*PP	PcP	13 33 07.8	-0.3
ANN				eS	S	13 42 53.6	-3.7
ANN				pmax	pmax		
	comp=Z,52nm,1.1s						
KECS	Kecovo	79.22	347	eP	P	13 33 00.1	+0.2
KECS				pmax	pmax		
	comp=Z,33nm,1.1s						
KECS	Kecovo	79.22	347	eP	P	13 33 00.1	+0.2
JAVC	Velka Javorina	79.23	349	eP	P	13 33 00.9	+0.9
TRPA	Tarpa	79.26	345	⇑P	P	13 33 00.5	+0.4
IAS	Iasi	79.27	342	⇓P	P	13 33 00.3	+0.2
BUR08	Bucovina Ar. S	79.28	343	P	P	13 33 00.8	+0.4
BUR08				IAmb	IAmb	13 33 01.8	
	comp=Z,148nm,1.2s						
MILM	Milestii Mici	79.28	341	⇓P	P	13 33 00.0	-0.2
BURAR	Bucovina Array	79.30	343	⇑P	P	13 33 00.6	+0.1
BURAR	Bucovina Array	79.30	343	P	P	13 33 01.0	+0.5
WLF	Walferdange	79.36	356	eP	P	13 33 00.7	0.0
	comp=Z,54nm,1.2s,baz=7.4,slow=5.5						
WLF				epP	PcP	13 33 09.3	+0.6
	baz=8.5,slow=5.5						
KHC	Kasperske Hory	79.40	352	eP	P	13 33 00.7	-0.2
KHC				epP	PcP	13 33 07.0	-2.0
KHC				AMS	AMS	14 14 40.0	
	comp=Z,1µm,17.3s						
KHC	Kasperske Hory	79.40	352	c iP	P	13 33 01.1	+0.2
KHC				pmax	pmax		
	comp=Z,120nm,1.3s						
KHC	Kasperske Hory	79.40	352	P	P	13 33 00.5	-0.4
VYHS	Vyhne	79.44	348	eP	P	13 33 01.2	+0.1
VYHS				pmax	pmax		
	comp=Z,56nm,1.2s						
VYHS	Vyhne	79.44	348	eP	P	13 33 01.2	+0.1
WET	Wettzell	79.45	352	eP	P	13 33 00.9	-0.3
	comp=Z,44nm,1.5s,baz=7.4,slow=5.5						
WET				epP	PcP	13 33 09.6	+0.4
	baz=8.5,slow=5.5						
SMOL	Smolenice	79.60	349	eP	P	13 33 02.6	+0.6
SMOL				pmax	pmax		
	comp=Z,33nm,1.2s						
SMOL	Smolenice	79.60	349	eP	P	13 33 02.6	+0.6
GEC2	GERESS Array S	79.67	351	eP	P	13 33 01.9	-0.6
	comp=Z,30nm,1.1s,baz=7.4,slow=5.5						
GEC2				epP	PcP	13 33 10.6	+0.4
	baz=8.5,slow=5.5						
GEC2	GERESS Array S	79.67	351	P	P	13 33 02.2	-0.2
GEC2				IAMs_20	IAMs_20	14 10 46.1	
	comp=Z,1µm,22.0s						
GERES	GERESS Array B	79.67	351	P	P	13 33 02.1	-0.4
	comp=Z,7.5nm,0.7s,baz=23,slow=4.8,SNR=48						
GERES				LR	LR	14 13 36.7	
	comp=Z,335nm,18.5s,baz=22,slow=40						
SOC	Sochi	79.69	332	i P	P	13 33 01.1	-1.4
SOC				e		13 36 02.0	
SOC				ePPP	PPP	13 37 54.1	
SOC				eS	S	13 43 01.1	-1.3
SOC				eSS	SS	13 48 11.2	+1.4
SOC				eSSS	SSS	13 51 37.7	
SOC				pmax	pmax		
	comp=Z,67nm,1.2s						
SOC				MLR	MLR		
	comp=Z,2µm,19.0s						
MODS	Modra-Piesok	79.75	349	eP	P	13 33 02.5	-0.3
MODS				pmax	pmax		
	comp=Z,89nm,1.3s						
MODS	Modra-Piesok	79.75	349	eP	P	13 33 02.5	-0.3
PSZ	Piszkesteto	79.86	347	⇑P	P	13 33 04.0	+0.5
PSZ	Piszkesteto	79.86	347	IAMs_20	IAMs_20	14 13 24.1	
	comp=Z,910nm,19.0s						
JVM	Valle D.L. Mar	79.88	2	eP	P	13 33 02.5	-0.9
JQE	Queens East	79.90	2	eP	P	13 33 03.0	-0.5
CHLP	Challavanipeta	79.90	287	eP	P	13 33 04.5	+0.4
CHLP				IAmb	IAmb	13 33 04.9	
	comp=Z,44nm,1.2s						
CHLP				e		13 43 03.1	
JSA	Saint Aubin	79.91	2	eP	P	13 33 03.0	-0.6
JSA				IAmb	IAmb	13 33 04.3	
	comp=Z,182nm,1.3s						
SIM	Simferopol'	79.94	337	P	P	13 33 03.7	-0.1
SIM				ePS	PnS	13 43 57.0	+5.5
SIM				pmax	pmax		
	comp=Z,20nm,1.2s						
ZST	Bratislava	79.95	349	eP	P	13 33 03.4	-0.5
ZST				pmax	pmax		
	comp=Z,112nm,1.4s						
ZST	Bratislava	79.95	349	eP	P	13 33 03.4	-0.5
ARCR	ARCALIA	79.97	344	⇑P	P	13 33 05.2	+1.2
FSCY	Frank Sound, G	80.04	72	P	P	13 33 04.3	-0.5
STU	Stuttgart	80.10	354	eP	P	13 33 04.1	-0.5
	comp=Z,50nm,1.2s,baz=7.4,slow=5.5						
STU				epP	PcP	13 33 12.9	+0.9
	baz=8.5,slow=5.5						
TESR	Tescani	80.10	342	⇑P	P	13 33 04.5	-0.2
IPM	Ipoh	80.12	265	P	P	13 33 04.9	-0.4
BHPL	Bhopal	80.13	295	eP	P	13 33 05.1	-0.1
BHPL				IAmb	IAmb	13 33 07.1	
	comp=Z,129nm,1.0s						
SRO	Srobarova	80.17	348	eP	P	13 33 05.4	+0.3
SRO	Srobarova	80.17	348	eP	P	13 33 05.4	+0.3
CONA	Conrad Observa	80.36	350	i P	P	13 33 06.3	+0.1
	comp=Z,71nm,2.0s,SNR=22						
TGUH	Tegucigalpa,Un	80.37	80	eP	P	13 33 15.4	+8.6
WBSI	Waikabubak, Su	80.38	241	P	P	13 33 07.0	+0.4
	comp=Z,1µmcomp=Z,67nm,1.8s						
GHRR		80.38	342	⇓P	P	13 33 07.4	+1.2
MYKOM	Kota Tinggi	80.45	261	P	P	13 33 06.4	-0.6
MYKOM	Kota Tinggi	80.45	261	P	P	13 33 07.0	0.0
CJR	Cluj-Napoca	80.46	344	⇑P	P	13 33 07.8	+1.1
AKH	Akhalkalaki	80.50	329	⇑P	P	13 33 08.3	+1.2
DRGR		80.53	345	⇑P	P	13 33 07.1	0.0
DRGR		80.53	345	P	P	13 33 06.8	-0.3
FUR	Furstenfeldbru	80.56	353	eP	P	13 33 06.8	-0.4
	comp=Z,104nm,1.4s,baz=7.4,slow=5.5						
FUR				epP	PcP	13 33 15.5	+1.5
	baz=8.5,slow=5.5						
BFO	Black Forest	80.59	355	eP	P	13 33 06.8	-0.5
	comp=Z,65nm,1.5s,baz=7.4,slow=5.5						
BFO				epP	PcP	13 33 15.6	+1.4
	baz=8.5,slow=5.5						
BFO	Black Forest	80.59	355	P	P	13 33 06.8	-0.5
BFO				pmax	pmax		
	comp=Z,83nm,1.6s						
BFO	Black Forest	80.59	355	P	P	13 33 06.8	-0.5
BFO				IAmb	IAmb	13 33 08.3	
	comp=Z,83nm,1.6s						
KNRA	Kununurra	80.59	230	P	P	13 33 06.3	-1.3
KNRA				IAmb	IAmb	13 33 08.5	
	comp=Z,109nm,1.2s						
MOA	Molln	80.60	351	i P	P	13 33 07.3	-0.2
	comp=Z,21nm,1.5s,SNR=6.6						
PLAI	Plampang	80.61	243	P	P	13 33 06.3	-1.5
	comp=Z,1µmcomp=Z,74nm,1.5s						
VRI	Vrincioaia	80.70	342	⇑P	P	13 33 08.1	+0.1
PLOR	Plostina	80.73	342	⇑P	P	13 33 08.6	+0.4
ODBI	Odobesti	80.74	342	⇑P	P	13 33 09.6	+1.5
PETR	Petresti	80.74	342	⇑P	P	13 33 09.1	+1.0
RJOB	Jochberg	80.85	352	eP	P	13 33 08.5	-0.3
	comp=Z,25nm,0.9s,baz=7.4,slow=5.5						
DOPR	Dopca	80.86	343	⇑P	P	13 33 09.8	+1.0
BISRR	Bisoca	81.01	342	⇑P	P	13 33 11.0	+1.3
ARSA	Arzberg	81.06	350	i P	P	13 33 10.2	+0.3
	comp=Z,36nm,1.1s,SNR=13						
CFR	Carcaliu	81.08	341	⇑P	P	13 33 10.0	0.0
CLF	Chambon-Foret	81.09	359	P	P	13 33 10.7	+0.8
GRER		81.12	342	⇑P	P	13 33 11.2	+1.0
UBR	Ueberruh	81.12	354	eP	P	13 33 09.9	-0.4
	comp=Z,62nm,1.6s,baz=7.4,slow=5.5						
SIRR	Siria	81.21	346	⇓P	P	13 33 11.2	+0.6
GNI	Garni	81.22	327	i P	P	13 33 12.6	+1.6
	SNR=6.5						
GNI	Garni	81.22	327	P	P	13 33 11.7	+0.7
MLR	Muntele Rosu	81.22	342	⇑P	P	13 33 11.0	+0.1
MLR	Muntele Rosu	81.22	342	P	P	13 33 12.1	+1.2
MLR				pmax	pmax		
	comp=Z,243nm,1.5s						
MLR	Muntele Rosu	81.22	342	P	P	13 33 12.1	+1.2
RETA	Reutte	81.27	353	i P	P	13 33 10.9	-0.2
	comp=Z,22nm,0.9s,SNR=12						
JURR	Jurilovca	81.32	340	⇑P	P	13 33 10.9	-0.3
TOPG	Topolog	81.32	341	⇑P	P	13 33 11.4	+0.2
WATA	Walderalm	81.36	353	i P	P	13 33 11.4	-0.2
	comp=Z,68nm,1.0s,SNR=19						
MOTA	Moosalm	81.38	353	i P	P	13 33 11.5	-0.3
	comp=Z,75nm,1.2s,SNR=27						
WTTA	Wattenberg	81.42	353	i P	P	13 33 12.0	0.0
	comp=Z,116nm,1.6s,SNR=22						
VOIR		81.44	343	⇑P	P	13 33 12.8	+0.8
KBA	Koelnbreinsper	81.46	351	i P	P	13 33 12.7	+0.5
	comp=Z,101nm,0.8s,SNR=68						
SRBI	Singaraja	81.46	246	P	P	13 33 11.5	-0.8
	comp=Z,46nm,1.3s						
ISR	Istrita	81.46	342	⇑P	P	13 33 12.8	+0.7
SQTA	Sankt Quirin	81.50	353	i P	P	13 33 12.4	0.0
	comp=Z,44nm,0.9s,SNR=18						
DAVA	Damuels	81.53	354	i P	P	13 33 12.7	+0.1
	comp=Z,29nm,1.2s,SNR=8.7						
WB0	Warramunga Arr	81.57	224	P	P	13 33 11.9	-0.8
WB0				IAmb	IAmb	13 33 13.2	
	comp=Z,155nm,1.8s						
ARR	Arges	81.58	343	⇑P	P	13 33 13.5	+0.8
HARR	Harsova	81.59	341	⇓P	P	13 33 13.0	+0.4
SECR		81.63	342	⇑P	P	13 33 13.5	+0.6
SENK	Senkaya-Erzuru	81.63	329	eP	P	13 33 13.6	+0.3
MTUR	Matau	81.64	343	⇑P	P	13 33 14.7	+1.7
SOKA	Soboth	81.68	350	i P	P	13 33 13.3	0.0
	comp=Z,141nm,1.4s,SNR=64						
WR9	Warramunga Arr	81.69	223	IAMs_20	IAMs_20	14 03 35.9	
	comp=Z,962nm,20.0s						
WB4	Warramunga Arr	81.70	224	IAMs_20	IAMs_20	14 09 04.4	
	comp=Z,580nm,20.0s						
TIRR	Tirgusor	81.71	340	P	P	13 33 13.0	-0.3
PERS	Pernice	81.72	350	i P	P	13 33 13.4	+0.1
FETA	Feichten	81.73	353	i P	P	13 33 13.5	-0.1
	comp=Z,51nm,1.0s,SNR=28						
WRAB	Tennant Creek	81.73	224	c iP	P	13 33 12.7	-0.9
WRAB				pmax	pmax		
	comp=Z,81nm,1.7s						
WRAB	Tennant Creek	81.73	224	P	P	13 33 12.7	-0.9
WRAB				IAmb	IAmb	13 33 14.1	
	comp=Z,75nm,1.4s						
WRA	Warramunga Arr	81.75	224	P	P	13 33 12.8	-0.8
	comp=Z,17nm,0.9s,baz=37,slow=5.9,SNR=59						
WRA				LR	LR	14 09 26.5	
	comp=Z,245nm,19.1s,baz=25,slow=36						
BZS	Buzias	81.85	345	⇑P	P	13 33 13.9	-0.1
ABTA	Abfaltersbach	81.86	352	i P	P	13 33 13.8	-0.4
	comp=Z,73nm,1.3s,SNR=25						
MYKA	Terra Mystica	81.87	351	i P	P	13 33 13.6	-0.6
	comp=Z,50nm,1.6s,SNR=14						
GZR	Gura Zlata	81.88	345	⇑P	P	13 33 14.5	+0.2
OBKA	Obir	81.90	350	i P	P	13 33 14.2	-0.3
	comp=Z,37nm,0.8s,SNR=16						
AGRB	Hanur-Agry	82.32	328	eP	P	13 33 16.7	-0.2
HUMR	Humele	82.33	343	⇑P	P	13 33 16.6	0.0
PVM	Polavaram	82.33	288	eP	P	13 33 17.2	+0.3
PVM				IAmb	IAmb	13 33 18.1	
	comp=Z,44nm,0.8s						
PVM				e		13 43 32.7	
LJU	Ljubljana	82.36	350	i P	P	13 33 16.0	-0.8
TUE	Stuetta	82.38	354	P	P	13 33 16.8	-0.3
TUE				IAmb	IAmb	13 33 18.4	
	comp=Z,122nm,1.6s						
TUE				IAMs_20	IAMs_20	14 11 38.5	
	comp=Z,540nm,20.0s						
CLDR	Caldiran	82.40	328	eP	P	13 33 17.2	-0.1
HERR	Herculane	82.44	345	⇑P	P	13 33 16.9	-0.2
RPR	Rampur	82.46	291	eP	P	13 33 17.5	-0.1
RPR				IAmb	IAmb	13 33 18.8	
	comp=Z,30nm,0.9s						
CRES	Cresnjev	82.48	350	eP	P	13 33 16.7	-0.6
SRE	Strehaia	82.51	344	⇓P	P	13 33 18.1	+0.6
FRGS	Fruska Gora	82.57	347	eP	P	13 33 12.3	-5.6
SENIN	Lac Senin/Sane	82.60	355	P	P	13 33 19.0	+0.8
CTI	Castel Tesino	82.63	352	P	P	13 33 17.1	-1.1
CTI				pmax	pmax		
	comp=Z,76nm,1.5s						
CTI	Castel Tesino	82.63	352	P	P	13 33 17.1	-1.1
CTI				IAmb	IAmb	13 33 19.4	
	comp=Z,76nm,1.5s						
MDVR	Moldovita	82.65	345	⇑P	P	13 33 17.9	-0.4
COPA	Copaceanca	82.66	343	⇑P	P	13 33 18.4	+0.1
CEY	Cerknica	82.67	350	eP	P	13 33 17.7	-0.7
GGR	Gangavaram	82.73	289	eP	P	13 33 18.8	-0.3
GGR				IAmb	IAmb	13 33 19.4	
	comp=Z,47nm,1.3s						
GGR				e		13 43 36.1	
PSI	Prapat	82.73	265	P	P	13 33 19.5	+0.3
PSI				pmax	pmax		
	comp=Z,203nm,1.4s						
RPSI	Rantau Prapat	82.82	265	P	P	13 33 19.5	0.0
BOJS	Bojanci	82.82	350	i P	P	13 33 18.8	-0.3
KNDS	Knezji Dol	82.89	350	i P	P	13 33 18.9	-0.7
KCSI	Kotacane, Aceh	82.90	267	P	P	13 33 17.6	-2.4
	comp=Z,14nm,0.8s						
PUNG	Punghina	82.93	344	⇓P	P	13 33 19.7	0.0
VLAD	Vladila	82.94	343	⇓P	P	13 33 20.2	+0.5
RAZG	Razgrad	82.96	341	⇓P	P	13 33 19.8	-0.1
SRSP	Sriramsagar	82.96	291	eP	P	13 33 19.6	-0.7
SRSP				IAmb	IAmb	13 33 20.1	
	comp=Z,40nm,1.2s						
SRSP				e		13 43 34.5	
KVT	Kavak	83.04	334	eP	P	13 33 20.5	+0.1
MTDJ	Mount Denham	83.05	70	eP	P	13 33 21.7	+0.8
VANB	Van	83.07	328	eP	P	13 33 21.4	+0.7
RIY	Rijeka	83.08	350	eP	P	13 33 19.6	-0.8
NEF	NEVSHA	83.09	341	P	P	13 33 21.1	+0.5
PRD	Provadia	83.13	341	P	P	13 33 20.9	+0.2
GTBY	Guantanamo Bay	83.13	67	IAMs_20	IAMs_20	14 11 44.9	
	comp=Z,896nm,21.0s						
SALO	Salr	83.14	353	IAMs_20	IAMs_20	14 17 37.9	
	comp=Z,982nm,21.0s						
MLSI	Meulaboh, Aceh	83.18	268	P	P	13 33 20.4	-1.0
	comp=Z,39nm,0.9s						
TEKS	Tekeris	83.21	347	eP	P	13 33 21.1	-0.1
MYLAV	Mylavaram	83.31	288	eP	P	13 33 22.5	+0.5
MYLAV				IAmb	IAmb	13 33 22.9	
	comp=Z,37nm,0.9s						
MYLAV				eSKSac	S	13 43 39.7	-0.9
BLY	Banja Luka	83.33	348	⇑P	P	13 33 21.4	-0.3
BLY	Banja Luka	83.33	348	eP	P	13 33 21.6	-0.2
SZH	Strazhica	83.36	342	P	P	13 33 21.4	-0.6

AKDM	Akdamar-Van	83.45	328	eP	P	13 33 23.9	+1.2
PLVB	Pleven	83.50	343	⇓P	P	13 33 23.0	+0.4
GURO	Guroymak-BITLI	83.56	329	eP	P	13 33 23.6	+0.4
DIVS	Divibare	83.58	346	eP	P	13 33 22.7	-0.5
BNGB	Bingl	83.59	330	eP	P	13 33 23.6	+0.2
TOKT	Tokat	83.61	333	eP	P	13 33 23.5	+0.2
MGRS	Mrkonjic Grad	83.67	348	eP	P	13 33 24.0	+0.4
ELND	Elena	83.70	342	⇑P	P	13 33 15.8	-7.9
HAPS	Han Pijesak,Bl	83.75	347	eP	P	13 33 23.4	-0.7
WOJI	Wonogiri, Jawa	83.75	249	P	P	13 33 23.4	-0.8
	comp=Z,44nm,1.7s						
SVSK	Karacayir	83.85	333	eP	P	13 33 25.0	+0.5
PCJI	Pacitan	83.89	249	P	P	13 33 24.1	-0.8
	comp=Z,49nm,1.0s						
BBLS	Lazići	83.89	347	eP	P	13 33 23.2	-1.6
BNI	Bardonecchia	83.94	356	P	P	13 33 26.4	+1.3
BNI				pmax	pmax		
	comp=Z,123nm,1.4s						
BNI	Bardonecchia	83.94	356	P	P	13 33 26.4	+1.3
BNI				IAmb	IAmb	13 33 27.4	
	comp=Z,123nm,1.4s						
JMB	Yambol	84.00	341	P	P	13 33 24.9	-0.3
HYBB	Hyderabad (bro	84.02	290	eP	P	13 33 25.4	-0.3
HYBB				IAmb	IAmb	13 33 25.9	
	comp=Z,67nm,1.2s						
HYBB				eSKSac	SKSac	13 43 46.6	-0.2
HYB	Hyderabad	84.02	290	i P	P	13 33 25.0	-0.8
HYB				epP	pP	13 33 34.5	-0.9
HYB				esP	sP	13 33 38.0	-1.0
HYB				eS	S	13 43 48.0	+0.1
HYB	Hyderabad	84.02	290	eP	P	13 33 25.4	-0.3
HYB				IAmb	IAmb	13 33 39.9	
	comp=Z,235nm,0.2s						
UGM	Wanagama	84.05	250	P	P	13 33 24.9	-0.9
	comp=Z,133nm,1.6s						
SDSI	Sungai Dareh	84.07	261	P	P	13 33 25.0	-0.9
	comp=Z,978nmcomp=Z,42nm,1.6s						
PTK	Pertek	84.08	331	i P	P	13 33 26.6	+0.6
GRTK	Grand Turk	84.14	63	IAMs_20	IAMs_20	14 12 47.3	
	comp=Z,739nm,20.0s						
RUDO	Rudo	84.14	347	eP	P	13 33 25.5	-0.5
FITZ	Fitzroy Crossi	84.19	232	P	P	13 33 26.9	+0.6
SVAN	Silvan-Diyarba	84.19	329	eP	P	13 33 26.8	+0.4
ARPR	Arapgir-MALATY	84.22	332	eP	P	13 33 27.1	+0.5
NJS	Nagarjunasagar	84.25	289	eP	P	13 33 26.5	-0.4
NJS				IAmb	IAmb	13 33 26.9	
	comp=Z,39nm,1.3s						
NJS				eSKSac	SKSac	13 43 48.1	-0.1
CORM	Corum	84.27	335	eP	P	13 33 25.6	-1.2
ZCCA	Zocca	84.37	353	IAMs_20	IAMs_20	14 17 17.3	
	comp=Z,598nm,19.0s						
SIRT	Sirnak	84.38	328	eP	P	13 33 26.9	-0.5
PGB	Panagyurishte	84.39	343	P	P	13 33 27.1	-0.2
ADKI	Addanki	84.41	288	eP	P	13 33 27.2	-0.5
ADKI				IAmb	IAmb	13 33 28.9	
	comp=Z,47nm,1.3s						
ADKI				eSKSac	SKSac	13 43 48.9	-0.3
VTS	Vitosha	84.49	344	⇓P	P	13 33 28.1	+0.1
VTS	Vitosha	84.49	344	P	P	13 33 27.3	-0.6
VTS	Vitosha	84.49	344	P	P	13 33 28.0	+0.1
VTS				pmax	pmax		
	comp=Z,76nm,1.4s						
VTS	Vitosha	84.49	344	P	P	13 33 28.0	+0.1
VTS				IAmb	IAmb	13 33 28.8	
	comp=Z,76nm,1.4s						
MSSA	Maissana	84.51	354	P	P	13 33 27.2	-0.7
MSSA				IAmb	IAmb	13 33 28.7	
	comp=Z,50nm,0.8s						
MSSA				IAMs_20	IAMs_20	14 18 40.0	
	comp=Z,573nm,19.0s						
KPJI	Karang Pucung	84.53	251	P	P	13 33 27.3	-0.9
	comp=Z,44nm,1.0s						
SVRC	Sivrice-ELAZID	84.58	331	eP	P	13 33 29.4	+0.9
VLC	Villacollemand	84.61	353	P	P	13 33 27.9	-0.5
VLC				IAMs_20	IAMs_20	14 14 25.5	
	comp=Z,600nm,20.0s						
UPM	Unac-Piva	84.62	347	eP	P	13 33 25.9	-2.7
PDSI	Padang	84.65	262	P	P	13 33 27.9	-1.0
	comp=Z,19nm,1.4s						
KLRI	Killari	84.66	292	eP	P	13 33 28.3	-0.7
KLRI				IAmb	IAmb	13 33 29.5	
	comp=Z,71nm,1.2s						
KLRI				eSKSac	SKSac	13 43 50.9	0.0
DYBB	Diyarbakir	84.71	330	P	P	13 33 29.5	+0.5
YUVA	Yuva-Kibriscik	84.83	337	eP	P	13 33 29.6	0.0
SRLM	Srisailam	84.85	289	eP	P	13 33 29.4	-0.6
SRLM				IAmb	IAmb	13 33 30.4	
	comp=Z,43nm,1.4s						
MALT	Malatya	84.91	331	eP	P	13 33 30.6	+0.5
BR131	Keskin Array S	84.96	335	P	P	13 33 30.5	+0.2
BR131				pmax	pmax		
	comp=Z,34nm,0.9s						
BR131	Keskin Array S	84.96	335	P	P	13 33 30.5	+0.2
BR131				IAmb	IAmb	13 33 31.1	
	comp=Z,34nm,0.9s						
BRTR	Keskin Array B	84.96	335	P	P	13 33 29.9	-0.5
	comp=Z,24nm,0.8s,baz=44,slow=2.5,SNR=72						
BRTR				LR	LR	14 14 02.8	
	comp=Z,383nm,22.0s,baz=354,slow=38						
BRTR	Keskin Array B	84.96	335	eP	P	13 33 29.9	-0.5
BRTR	Keskin Array B	84.96	335	P	P	13 33 30.5	+0.2
DARE	Darende-Malaty	84.96	332	i P	P	13 33 31.0	+0.7
BRY	Bratogost	84.97	347	eP	P	13 33 29.2	-1.1
KDZ	Kurdzhali	85.02	342	P	P	13 33 30.4	0.0
LOD	Lodumlu	85.03	336	eP	P	13 33 30.3	-0.3
ANTO	Ankara	85.04	336	eP	P	13 33 30.9	+0.2
GULT	Gulveren	85.07	338	eP	P	13 33 30.8	0.0
STON	Ston	85.11	348	eP	P	13 33 29.8	-1.0
BNN	Bunyan	85.17	333	i P	P	13 33 31.4	0.0
OSSC	Osservatorio P	85.17	352	P	P	13 33 30.9	-0.3
OSSC				IAMs_20	IAMs_20	14 15 13.5	
	comp=Z,795nm,20.0s						
TREB	Trebinje	85.17	347	eP	P	13 33 30.0	-1.2
AS31	Alice Springs	85.22	222	P	P	13 33 31.6	+0.1
ASAR	Alice Springs	85.22	222	P	P	13 33 31.3	-0.2
	comp=Z,16nm,0.8s,baz=23,slow=5.5,SNR=269						
ASAR				PKKPbc	PKKPbc	13 51 37.1	+1.1
	comp=Z,0.5nm,1.0s,baz=195,slow=2.8,SNR=4.4						
ASAR				LR	LR	14 09 17.1	
	comp=Z,379nm,19.6s,baz=26,slow=34						
KKB	Krupnik	85.25	343	P	P	13 33 27.1	-4.5
MURB	Monte Urbino	85.31	351	P	P	13 33 32.4	+0.5
PDG	Podgorica	85.32	346	⇑P	P	13 33 31.3	-0.6
PDG	Podgorica	85.32	346	eP	P	13 33 31.3	-0.6
PDG	Podgorica	85.32	346	P	P	13 33 31.6	-0.3
PDG				IAmb	IAmb	13 33 32.5	
	comp=Z,74nm,0.8s						
HCY	Herceg Novi	85.42	347	eP	P	13 33 31.6	-0.8
SRCK	Saricakaya, Es	85.42	337	eP	P	13 33 32.0	-0.4
SARI	SarD1z-Kayseri	85.42	333	eP	P	13 33 33.2	+0.5
SKO	Skopje	85.43	345	i P	P	13 33 32.5	0.0
DRME	Dracevica, Mon	85.57	346	eP	P	13 33 32.7	-0.5
STIP	Stip	85.57	344	i P	P	13 33 31.9	-1.3
URFA	Urfa	85.59	331	eP	P	13 33 33.9	+0.4
ALN	Alexandroupoli	85.62	341	IAMs_20	IAMs_20	14 17 12.8	
	comp=Z,791nm,18.0s						
YAYX	Yaylak	85.65	335	eP	P	13 33 32.3	-1.4
NRCA	Norcia	85.68	351	P	P	13 33 34.5	+0.7
SERE	Sereflikochisa	85.71	335	eP	P	13 33 33.9	-0.1
SVRH	Sivrihisar-ESK	85.76	337	eP	P	13 33 33.4	-0.9
SISI	Saibi	85.83	263	P	P	13 33 33.7	-1.1
	comp=Z,48nm,1.7s						
VAY	Valandovo	85.87	344	i P	P	13 33 34.5	-0.2
POO	Poona	85.88	295	⇓ix	P	13 33 31.2	-3.9
	comp=Z,200nm,0.4s						
POO				eP	P	13 33 35.3	+0.2
POO				IAmb	IAmb	13 33 36.9	
	comp=Z,65nm,0.7s						
CASP	Castiglione de	85.93	353	P	P	13 33 34.5	-0.4
CASP				IAmb	IAmb	13 33 35.5	
	comp=Z,120nm,1.5s						
SDDR	Presa de Saban	86.07	64	P	P	13 33 36.9	+0.8
SDDR				IAmb	IAmb	13 33 37.5	
	comp=Z,36nm,1.1s						
SDDR				IAMs_20	IAMs_20	14 13 40.5	
	comp=Z,528nm,20.0s						
KMRS	Kahramanmaras	86.11	332	eP	P	13 33 35.6	-0.4
AQU	L'Aquila	86.13	351	IAMs_20	IAMs_20	14 17 09.9	
	comp=Z,970nm,22.0s						
KIZT	Kizilcal	86.21	336	eP	P	13 33 35.8	-0.7
SKHT	Srikalahasti	86.21	287	eP	P	13 33 36.7	0.0
SKHT				IAmb	IAmb	13 33 37.1	
	comp=Z,13nm,0.8s						
GAZ	Gaziantep	86.33	332	eP	P	13 33 37.6	+0.5
OHR	Ohrid	86.37	345	i P	P	13 33 34.4	-2.9
INTR	Introdacqua	86.42	350	P	P	13 33 36.9	-0.5
INTR				IAmb	IAmb	13 33 47.3	
	comp=Z,44nm,0.8s						
SULT	Sultanhani-AKS	86.42	335	i P	P	13 33 37.1	-0.5
SGRT	San Giovanni R	86.46	349	P	P	13 33 37.3	-0.4
CMRD	Camardi-Nigde	86.52	333	eP	P	13 33 38.1	0.0
FNA	Florina	86.60	344	P	P	13 33 36.8	-1.5
FNA				pmax	pmax		
	comp=Z,14nm,0.8s						
FNA	Florina	86.60	344	P	P	13 33 36.8	-1.5
LADK	Ladik-KONYA	86.72	336	eP	P	13 33 38.4	-0.7
URV	Uravakonda	86.72	290	eP	P	13 33 38.4	-0.9
URV				IAmb	IAmb	13 33 39.4	
	comp=Z,65nm,1.1s						
PGAV	Gavieira, Arco	86.83	7	eLR	LR	14 03 44.5	
	comp=Z,426nm,20.0s						
SHUT	Suhut-Afyon	86.85	337	eP	P	13 33 37.9	-1.8
KARA	Karaisali	86.88	333	eP	P	13 33 39.2	-0.5
LIT	Litokhoron	87.07	344	IAMs_20	IAMs_20	14 15 24.1	
	comp=Z,834nm,22.0s						
PBRG	Braganca	87.09	6	eP	P	13 33 39.9	-0.8
	comp=Z,22nm,1.4s						
PCAB	Cabril	87.10	7	eP	P	13 33 40.2	-0.5
	comp=Z,34nm,1.3s						
DR12	Loma Pena Alta	87.30	63	P	P	13 33 42.4	+0.4
ACER	Acerenza	87.39	349	P	P	13 33 41.9	-0.3
ACER				IAmb	IAmb	13 33 44.3	
	comp=Z,35nm,0.8s						
MVO	Moncorvo	87.71	6	eP	P	13 33 43.0	-0.7
	comp=Z,33nm,1.2s						
MVO				i LQ	LQ	13 33 51.4	
MVO	Moncorvo	87.71	6	eLR	LR	14 04 42.3	
	comp=Z,389nm,18.0s						
PVIS	Viseu	88.10	7	eP	P	13 33 44.6	-1.0
	comp=Z,39nm,0.9s						
PVIS				i LQ	LQ	13 33 53.8	
AGG	Agios Georgios	88.14	343	IAMs_20	IAMs_20	14 15 17.6	
	comp=Z,772nm,21.0s						
MTE	Manteigas	88.44	6	P	P	13 33 46.6	-0.6
MTE				IAmb	IAmb	13 33 56.4	
	comp=Z,30nm,1.0s						
MTE				IAMs_20	IAMs_20	14 14 10.5	
	comp=Z,508nm,21.0s						
MTE	Manteigas	88.44	6	eP	P	13 33 46.4	-0.8
	comp=Z,39nm,1.3s						
MTE				i LQ	LQ	13 33 55.4	
MTE	Manteigas	88.44	6	eLR	LR	14 03 48.2	
	comp=Z,434nm,18.0s						
COI	Coimbra	88.56	7	IAMs_20	IAMs_20	14 08 33.9	
	comp=Z,679nm,20.0s						
PCAS	Casmilo, Conde	88.71	7	eP	P	13 33 47.3	-1.1
	comp=Z,45nm,1.3s						
PCAS				i LQ	LQ	13 33 56.1	
TIP	Timpagrande	88.87	348	⇓P	P	13 33 49.0	-0.3
TIP	Timpagrande	88.87	348	IAMs_20	IAMs_20	14 14 47.5	
	comp=Z,495nm,21.0s						
PCBR	Castelo Branco	89.00	6	eP	P	13 33 48.6	-1.1
	comp=Z,28nm,1.2s						
PTOM	Tomar	89.15	7	eP	P	13 33 49.5	-0.9
	comp=Z,56nm,1.2s						
PTOM				i LQ	LQ	13 33 58.5	
ESDC	Sonseca Array	89.36	4	P	P	13 33 50.5	-1.0
	comp=Z,6.3nm,0.6s,baz=359,slow=4.1,SNR=27						
ESDC				pP	pP	13 33 58.9	-2.4
	comp=Z,13nm,1.0s,baz=355,slow=4.3,SNR=7.9						
ESDC	Sonseca Array	89.36	4	P	P	13 33 50.7	-0.8
PMRV	Marv??o	89.41	6	eP	P	13 33 50.4	-1.3
	comp=Z,44nm,1.3s						
PMRV	Marv??o	89.41	6	eLR	LR	14 03 39.5	
	comp=Z,384nm,18.0s						
PAB	San Pablo	89.47	4	P	P	13 33 51.2	-0.9
PAB				pmax	pmax		
	comp=Z,22nm,1.2s						
PAB	San Pablo	89.47	4	P	P	13 33 51.2	-0.9
MSFE	Esma-Masafi	89.53	312	P	P	13 33 52.0	-0.5
SJG	San Juan	89.64	61	eP	P	13 33 53.1	+0.1
SJG	San Juan	89.64	61	IAMs_20	IAMs_20	14 16 20.8	
	comp=Z,665nm,20.0s						
STKA	Stephens Creek	89.68	213	P	P	13 33 53.4	+0.6
	comp=Z,46nm,1.0s,baz=358,slow=5.6,SNR=57						
STKA				pP	pP	13 34 02.4	+0.1
	comp=Z,31nm,0.9s,baz=334,slow=6.9,SNR=14						
STKA				LR	LR	14 11 24.2	
	comp=Z,773nm,19.7s,baz=17,slow=34						
STKA	Stephens Creek	89.68	213	P	P	13 33 53.2	+0.5
STKA				pmax	pmax		
	comp=Z,22nm,1.2s						
STKA	Stephens Creek	89.68	213	P	P	13 33 53.2	+0.5
PMTG	Montargil	89.71	7	eP	P	13 33 50.8	-2.3
	comp=Z,20nm,1.2s						
PMTG				i LQ	LQ	13 33 59.3	
PMAFR	Mafra	89.73	8	eP	P	13 33 52.7	-0.5
	comp=Z,59nm,0.9s						
UOSS	Minazif	89.87	312	P	P	13 33 53.1	-1.0
UOSS	Minazif	89.87	312	IAMs_20	IAMs_20	14 18 03.0	
	comp=Z,667nm,21.0s						
HATD	Hatta, Dubai	90.00	312	P	P	13 33 53.9	-0.8
ITM	Ithomi	90.01	343	IAMs_20	IAMs_20	14 20 29.0	
	comp=Z,698nm,20.0s						
PSA00	Pilbara Seismi	90.02	234	P	P	13 33 53.7	-0.9
STVI	Saint Thomas	90.10	60	P	P	13 33 55.8	+0.6
SMRC	Santa Marta, M	90.56	71	eP	P	13 33 59.4	+2.0
PALK	Pallekele	90.66	282	IAMs_20	IAMs_20	14 18 29.6	
	comp=Z,439nm,19.0s						
PBEJ	Beja	90.77	7	eP	P	13 33 57.3	-0.8
PBEJ				i LQ	LQ	13 34 06.0	
SJCC	San Jacinto, C	90.99	73	eP	P	13 33 59.4	-0.1
PCVE	Castro Verde	91.15	7	eP	P	13 33 59.5	-0.3
PCVE				i LQ	LQ	13 34 08.2	
SMRT	St. Maarten	91.36	59	IAMs_20	IAMs_20	14 13 44.1	
	comp=Z,644nm,22.0s						
PVAQ	Vaqueiros	91.40	7	eP	P	13 34 00.3	-0.7
PVAQ				i LQ	LQ	13 34 08.4	
PVAQ	Vaqueiros	91.40	7	eLR	LR	14 05 07.3	
	comp=Z,429nm,20.0s						
PBDV	Barranco-do-Ve	91.55	7	eP	P	13 34 01.1	-0.6
PFVI	Vila Bisbo	91.58	8	IAMs_20	IAMs_20	14 15 17.8	
	comp=Z,705nm,20.0s						
CODC	Agustn Codazz	91.99	72	eP	P	13 34 05.0	+0.9
SKI	Saint Kitts	92.13	59	IAMs_20	IAMs_20	14 18 51.5	
	comp=Z,607nm,21.0s						
SMLC	San Martn de	92.52	73	eP	P	13 34 05.0	-1.5
DBBC	Dabeiba	92.63	76	eP	P	13 34 12.7	+5.6
KEST	Kesra	93.06	353	P	P	13 34 08.4	-0.4
	comp=Z,13nm,0.9s,baz=230,slow=4.9,SNR=4.6						
KEST				LR	LR	14 18 57.4	
	comp=Z,249nm,19.2s,baz=342,slow=37						
CBOC	Ciudad Bolivar	93.65	76	eP	P	13 34 11.3	-0.7
FORT	Forrest	93.93	223	P	P	13 34 12.8	+0.4
FORT				IAmb	IAmb	13 34 13.6	
	comp=Z,37nm,1.0s						
PTBC	PUERTO BERRIO,	94.07	74	eP	P	13 34 12.7	-1.0
BARC	Barichara	94.79	73	eP	P	13 34 17.6	+0.3
SOCV	Socops	94.84	71	eP	P	13 34 12.7	-4.5
FDF	Fort de France	95.13	59	IAMs_20	IAMs_20	14 23 00.0	
	comp=Z,522nm,20.0s						
RUSC	La Rusia	95.41	74	eP	P	13 34 18.2	-2.1
RAYN	Ar Rayn	95.81	320	i P	P	13 34 20.9	-0.7
	SNR=5.3						
RAYN	Ar Rayn	95.81	320	P	P	13 34 19.9	-1.7
RAYN				pmax	pmax		
	comp=Z,12nm,1.3s						
RAYN	Ar Rayn	95.81	320	P	P	13 34 19.9	-1.7
SOTA	Rioblanco	96.21	79	eP	P	13 34 26.6	+2.6
GARC	Garzon, Huila	96.85	78	eP	P	13 34 24.5	-2.1
GRGR	Grenville	97.00	61	IAMs_20	IAMs_20	14 20 27.7	
	comp=Z,636nm,21.0s						
SOCY	Socotra	101.83	307	IAMs_20	IAMs_20	14 25 39.8	
	comp=Z,630nm,21.0s						
TAM	Tamanrasset	106.16	355	IAMs_20	IAMs_20	14 32 37.3	
	comp=Z,408nm,18.0s						
PTGA	Pitinga	108.47	67	IAMs_20	IAMs_20	14 30 02.3	
	comp=Z,353nm,20.0s						
SAML	Samuel	113.11	75	IAMs_20	IAMs_20	14 28 15.3	
	comp=Z,420nm,21.0s						
MSEY	Mahe Island	115.16	296	IAMs_20	IAMs_20	14 33 54.2	
	comp=Z,403nm,19.0s						
TOA0	Torodi Ar. Sit	115.87	359		PKiKP	13 39 37.7	-0.1
TOA0				IAMs_20	IAMs_20	14 38 07.3	
	comp=Z,409nm,19.0s						
TORD	Torodi Ar. Bea	115.87	359	PKP	PKiKP	13 39 36.6	-1.3
	comp=Z,3.6nm,0.8s,baz=354,slow=2.4,SNR=18						
TORD				PKKPbc	PKKPbc	13 50 07.9	+0.7
	comp=Z,0.9nm,0.5s,baz=172,slow=2.8,SNR=9.0						
TOA3	Torodi Ar. Sit	115.87	359	IAMs_20	IAMs_20	14 28 55.4	
	comp=Z,430nm,21.0s						
TOB4	Torodi Ar. Sit	115.88	359	IAMs_20	IAMs_20	14 30 39.5	
	comp=Z,392nm,20.0s						
TOB3	Torodi Ar. Sit	115.88	359	IAMs_20	IAMs_20	14 28 55.6	
	comp=Z,411nm,22.0s						
TOC5	Torodi Ar. Sit	115.89	359	IAMs_20	IAMs_20	14 28 45.8	
	comp=Z,535nm,22.0s						
TOC4	Torodi Ar. Sit	115.89	359	IAMs_20	IAMs_20	14 30 40.0	
	comp=Z,377nm,20.0s						
SIV	San Ignacio	119.86	78	PKP	PKPdf	13 39 44.6	-0.9
	comp=Z,1.0nm,0.8s,baz=219,slow=2.1,SNR=3.7						
SIV				PP	PP	13 41 09.2	-0.2
	comp=Z,5.9nm,1.2s,baz=357,slow=6.9,SNR=6.5						
KMBO	Kilima Mbogo	121.37	316	PKP	PKiKP	13 39 49.5	+0.6
	comp=Z,0.9nm,0.3s,baz=320,slow=3.4,SNR=7.3						
KMBO				PP	PP	13 41 19.3	-0.1
	comp=Z,1.0nm,0.3s,baz=16,slow=10,SNR=3.6						
DBIC	Dimbokro	122.11	7	PKP	PKPdf	13 39 49.0	-0.8
	comp=Z,8.1nm,0.6s,baz=340,slow=3.9,SNR=17						
DBIC	Dimbokro	122.11	7		PKPdf	13 39 50.1	+0.2
TIC	Toumodi	122.12	7	ePKP1	PKPdf	13 39 49.0	-0.9
	comp=Z,18nm,0.5s						
TIC	Toumodi	122.12	7	PKIKP	PKPdf	13 39 49.0	-0.9
TIC	Toumodi	122.12	7		PKPdf	13 39 49.0	-0.9
KIC	Kosan Boka	122.42	7	ePKP1	PKPdf	13 39 48.6	-1.9
	comp=Z,51nm,1.0s						
LIC	Lamto	122.53	7	ePKP1	PKPdf	13 39 49.8	-0.9
	comp=Z,68nm,1.0s						
LIC	Lamto	122.53	7		PKPdf	13 39 49.8	-0.9
CFA	Coronel Fontan	126.69	96	PKP	PKPdf	13 39 57.9	-0.3
	comp=Z,5.9nm,0.8s,baz=290,slow=3.7,SNR=7.2						
PLCA	Paso Flores	131.17	107	PKP	PKPdf	13 40 06.8	+0.3
	comp=Z,20nm,1.1s,baz=302,slow=2.5,SNR=23						
PLCA				SKPbc	SKPbc	13 43 27.8	-0.7
	comp=Z,9.8nm,1.2s,baz=351,slow=4.6,SNR=6.5						
PLCA				SKP		13 43 37.4	
	comp=Z,3.4nm,0.9s,baz=354,slow=6.9,SNR=3.1						
QSPA	South Pole Qui	141.00	180		PKPdf	13 40 17.7	-6.1
MATP	Matopo	142.35	314	i P	PKPdf	13 40 20.7	-7.1
MATP	Matopo	142.35	314	i P	PKPdf	13 40 20.7	-7.1
MSNA	Messina	143.30	311	i P	PKPab	13 40 19.4	-5.8
MSNA	Messina	143.30	311	i P	PKPab	13 40 19.4	-5.8
EFI	East Falkland	144.19	114	PKIKP	PKPbc	13 40 28.4	+0.3
EFI	East Falkland	144.19	114		PKPbc	13 40 28.4	+0.3
TSUM	Tsumeb	145.38	331		PKPdf	13 40 33.2	+0.1
MAW	Mawson	146.23	218	PKPbc	PKPbc	13 40 33.7	-0.3
	comp=Z,26nm,0.9s,baz=87,slow=2.5,SNR=15						
MAW	Mawson	146.23	218	PKP2	PKPbc	13 40 34.1	+0.1
MAW	Mawson	146.23	218		PKPbc	13 40 34.1	+0.1
LBTB	Lobatse	147.64	315	i P	PKPbc	13 40 40.1	+0.6
LBTB	Lobatse	147.64	315	i P	PKPbc	13 40 40.1	+0.6
LBTB	Lobatse	147.64	315	PKP2	PKPbc	13 40 40.4	+1.0
LBTB	Lobatse	147.64	315		PKPbc	13 40 40.4	+1.0
BOSA	Boshof	150.87	312	i P	PKiKP	13 40 48.5	+0.3
BOSA	Boshof	150.87	312	PKPbc	PKPbc	13 40 47.5	0.0
	comp=Z,28nm,0.6s,baz=25,slow=2.3,SNR=65						
BOSA	Boshof	150.87	312	i P	PKiKP	13 40 48.5	+0.3
BOSA	Boshof	150.87	312		PKiKP	13 40 48.2	+0.1
SYO	Syowa Base	154.44	212	⇑epPKPdf	pPKPdf	13 40 56.0	+0.2
SYO	Syowa Base	154.44	212	⇑epPKPbc	PKPab	13 41 06.6	-1.9
VNA3	Neumayer Olymp	159.38	170	PKPdf	PKPdf	13 40 50.7	-1.2
SNAA	Sanae	159.44	177	PKPdf	PKPdf	13 40 50.6	-1.4
NVL	N'lazarevskaya	159.77	191	ePKP2	PKPab	13 41 41.7	+10
NVL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
VNA2	Neumayer--Watz	159.90	172	PKPdf	PKPdf	13 40 51.4	-1.1

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*IDC **13** 13:29:29.6±1.8, 16°.86S×173°.22W, h0km, mb3.9/5, mb1 4.2/6, mb1mx3.8/44, mbtmp3.8/6, ML3.7/1, Error ellipse: s-maj=85.2km s-min=20.4km az=140.0*

ISC 13 13:29:35.0±1.7**, 16°.8S**±0°.3×**173°.3W**±0°.4**, h35km, n7, σ1ˢ33**/8**, mb3.7**/5**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.20	27	Pn	Pn	13 30 21.1	-1.8
	8.7nm,0.3s,baz=237,slow=0.4,SNR=16						
AFI				Sn	Sn	13 31 00.9	+1.1
	32nm,0.3s,baz=157,slow=23,SNR=9.7						
AFI				T	T	13 34 13.1	
	5.7nm,0.3s,baz=22,slow=20,SNR=4.1						
WRA	Warramunga Arr	49.67	258	P	P	13 38 23.3	-0.5
	0.8nm,0.5s,baz=97,slow=7.5,SNR=11						
ASAR	Alice Springs	49.82	253	P	P	13 38 24.5	-0.5
	2.5nm,0.5s,baz=89,slow=9.3,SNR=54						
NVAR	Mina Array Bea	75.27	42	P	P	13 41 14.8	0.0
	0.6nm,0.6s,baz=229,slow=11,SNR=4.6						
PDAR	Pinedale Array	83.20	42	P	P	13 41 57.6	-0.5
	0.2nm,0.6s,baz=224,slow=4.1,SNR=3.6						
ILAR	Eielson Array	83.77	11	P	P	13 42 01.8	+1.6
	0.5nm,0.8s,baz=221,slow=6.5,SNR=6.9						
GERES	GERESS Array B	147.52	351	PKPbc	PKPbc	13 49 16.6	+1.0
	0.2nm,0.3s,baz=43,slow=4.4,SNR=3.7						

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*IDC **13** 13:46:56.8±6.6, 36°.78N×140°.77E, h87km±49km, mb3.3/4, mb1 3.3/5, mb1mx3.0/49, mbtmp3.5/5, ML2.1/1, MS3.4/1, Ms1 3.4/1, ms1mx2.9/25, Error ellipse: s-maj=59.0km s-min=21.8km az=70.0*

*JMA **13** 13:46:56.2±0.1, 36°.83N×140°.69E, h77km±1km, M3.4 Broadband fault plane solution: P waves. NP1: φs60.00000°, δ33.00000°, λ138.00000°. NP2: φs187.00000°, δ69.00000°, λ64.00000°. Principal axes: T Plg58.0000°, Azm62.0000°; N Plg24.0000°, Azm197.0000°; P Plg20.0000°, Azm296.0000°;*

JMA Felt I J1.

ISC 13 13:46:55.9±1.1**, 36°.82N**±0°.05×**140°.76E**±0°.07**, h78km**±7km**, n24, σ0ˢ49**/34**, mb3.5**/4**, 6C-2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.26	216	⇑P	Pn	13 47 07.8	+0.2
JHO				S	Sn	13 47 16.1	-0.2
ONAJ	Iwakimizuishiy	0.28	7	⇑P	Pn	13 47 08.1	+0.2
ONAJ				S	Sn	13 47 16.8	+0.1
JFFD	Fukushimafurud	0.31	330	⇑P	Pn	13 47 08.1	+0.1
JFFD				S	Sn	13 47 16.7	-0.2
JFK	Kawauchi	0.56	10	⇑P	Pn	13 47 10.2	+0.3
JFK				S	Sn	13 47 20.5	+0.2
JFT	Otama	0.77	334	P	Pn	13 47 12.3	+0.1
JFT				S	Sn	13 47 24.1	-0.2
JFY	Yanaizu	1.02	305	⇓P	Pn	13 47 15.1	0.0
JFY				S	Sn	13 47 29.2	-0.2
JMM	Marumori	1.05	2	P	Pn	13 47 15.4	+0.1
JMM				S	Sn	13 47 29.3	-0.5
JAG	Ashikaga	1.12	250	⇑P	Pn	13 47 16.2	0.0
JAG				S	Sn	13 47 30.9	-0.6
JKT	Katashina	1.21	268	P	Pn	13 47 17.8	+0.4
JKT				eS	Sn	13 47 34.2	+0.6
JHK	Hiroka	1.46	288	⇓P	Pn	13 47 20.6	+0.1
JHK				eS	Sn	13 47 38.7	-0.4
JYS	Shirataka	1.50	339	S	Sn	13 47 40.5	+0.3
JNS	Sasagawa	1.52	311	P	Pn	13 47 20.9	-0.4
JOU	Okura	1.55	357	P	Pn	13 47 21.9	+0.2
JOU				S	Sn	13 47 41.4	+0.2
JRY	Ryogami san	1.70	242	⇑P	Pn	13 47 23.8	+0.1
JRY				S	Sn	13 47 43.8	-1.0
MJAR	Matsushiro Arr	2.07	263	P	Pn	13 47 29.1	+0.5
	0.6nm,0.3s,baz=84,slow=15,SNR=20						
MJAR				S	Sn	13 47 55.1	+1.5
	1.1nm,0.3s,baz=86,slow=28,SNR=12						
MAT	Matsushiro	2.07	263	P	Pn	13 47 29.5	+0.9
MAT				S	Sn	13 47 52.7	-0.9
PETK	Petropavlovsk-	20.14	31	LR	LR	13 58 32.3	
	comp=Z,96nm,19.3s,baz=62,slow=34						
SONM	Songino Array	27.47	304	P	P	13 52 34.8	+0.1
	0.5nm,0.5s,baz=103,slow=8.4,SNR=3.9						
H11N2	WAKE ISLAND Hy	28.50	120	T	T	14 22 49.3	
	baz=312						
H11N1	WAKE ISLAND Hy	28.50	120	T	T	14 22 50.3	
	baz=312,slow=74,SNR=3.7						
H11N3	WAKE ISLAND Hy	28.51	120	T	T	14 22 51.0	
	baz=312,slow=74,SNR=4.0						
ZALV	Zalesovo Beam	41.67	313	P	P	13 54 36.2	-0.2
	1.3nm,0.7s,baz=101,slow=7.5,SNR=5.3						
MKAR	Makanchi Array	43.79	302	P	P	13 54 53.6	-0.2
	0.3nm,0.6s,baz=95,slow=9.1,SNR=3.7						
WRA	Warramunga Arr	56.78	187	P	P	13 56 31.9	0.0
	0.4nm,0.9s,baz=3.5,slow=4.8,SNR=3.4						

*NEIC **13** 14:08:46.1±1.9, 19°.3S±0°.2×177°.4W±0°.1, h585^{km}±13^{km}, mb4.4/26, Error ellipse: s-maj=25.5km s-min=15.2km az=158.0*

*IDC **13** 14:08:46.0±1.8, 19°.39S×177°.39W, h578^{km}±29^{km}, mb3.5/5, mb1 3.8/8, mb1mx3.2/47, mbtmp4.5/8, Error ellipse: s-maj=31.8km s-min=18.6km az=129.0*

ISC 13 14:08:46.5±0.6**, 19°.3S**±0°.1×**177°.33W**±0°.10**, h600**^{km}**, n38, σ1§22**/42**, mb4.4**/17**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.66	289	P	P	14 10 15.6	-1.4
NIUE	Niue	7.00	89	P	P	14 10 36.4	-0.1
AFI	Afiamalu	7.57	45	P	P	14 10 41.6	-0.3
	20nm,0.3s,baz=170,slow=2.0,SNR=36						
AFI				S	S	14 12 13.4	-2.9
	4.6nm,0.3s,baz=22,slow=23,SNR=4.4						
AFI	Afiamalu	7.57	45	P	P	14 10 41.4	-0.5
DZM	Mont Dzumac	15.43	257	P	P	14 11 59.4	+0.7
	0.8nm,0.3s,baz=76,slow=17,SNR=6.4						
DZM	Mont Dzumac	15.43	257	IAmb	IAmb	14 12 00.3	
	comp=Z,18nm,0.9s						
URZ	Urewera	19.48	193	P	P	14 12 34.9	-0.4
	comp=Z,1.1nm,0.3s,baz=359,slow=7.6,SNR=10						
URZ				S	S	14 15 37.3	-3.2
	comp=Z,0.3nm,0.3s,baz=51,slow=22,SNR=7.3						
URZ	Urewera	19.48	193	P	P	14 12 34.9	-0.4
LHI	Lord Howe Isla	24.48	236	P	P	14 13 20.8	+0.7
LHI				PcP	PcP	14 16 37.3	0.0
MLZ	Mavora Lakes	28.64	202	P	P	14 13 58.1	+1.8
MLZ				IAmb	IAmb	14 14 00.7	
	comp=Z,6.5nm,0.5s						
MLZ				PcP	PcP	14 16 48.5	+1.3
EIDS	Eidsvold	29.79	253	P	P	14 14 05.5	-0.9
ARMA	Armidale	30.16	242	P	P	14 14 09.9	+0.1
ARMA				IAmb	IAmb	14 14 10.8	
	comp=Z,4.1nm,0.6s						
CAN	Canberra	33.70	235	P	P	14 14 40.2	+0.7
CAN				IAmb	IAmb	14 14 59.4	
	comp=Z,6.4nm,1.0s						
TOO	Toolangi	37.10	233	P	P	14 15 08.7	+1.1
TOO				PcP	PcP	14 17 12.7	+1.2
TAU	Tasmania Unive	37.91	224	P	P	14 15 12.9	-1.0
TAU				IAmb	IAmb	14 15 20.5	
	comp=Z,10nm,1.0s						
COEN	Coen	38.16	272	P	P	14 15 16.4	0.0
COEN				IAmb	IAmb	14 15 17.6	
	comp=Z,13nm,1.1s						
STKA	Stephens Creek	38.88	243	P	P	14 15 22.9	+0.8
	comp=Z,10nm,0.8s,baz=94,slow=10,SNR=22						
STKA	Stephens Creek	38.88	243	P	P	14 15 23.0	+1.0
BBOO	Buckleboo	43.64	242	P	P	14 15 59.5	-0.1
WR0	Warramunga Arr	45.21	261	P	P	14 16 11.1	-0.7
WR0				IAmb	IAmb	14 16 12.1	
	comp=Z,4.3nm,0.5s						
WB0	Warramunga Arr	45.38	261	P	P	14 16 12.5	-0.5
WB0				IAmb	IAmb	14 16 13.0	
	comp=Z,9.0nm,0.5s						
WB2	Warramunga Arr	45.39	261	P	P	14 16 12.6	-0.6
WB2				IAmb	IAmb	14 16 13.8	
	comp=Z,7.4nm,0.6s						
WRAB	Tennant Creek	45.39	261	P	P	14 16 12.5	-0.6
WRA	Warramunga Arr	45.40	261	P	P	14 16 12.6	-0.6
	comp=Z,4.1nm,0.4s,baz=98,slow=7.8,SNR=91						
WRA	Warramunga Arr	45.40	261	P	P	14 16 12.2	-1.0
AS31	Alice Springs	45.41	256	P	P	14 16 13.3	0.0
AS31				IAmb	IAmb	14 16 14.7	
	comp=Z,4.7nm,0.3s						
ASAR	Alice Springs	45.41	256	P	P	14 16 13.2	-0.1
	comp=Z,12nm,0.7s,baz=87,slow=8.2,SNR=250						
ASAR				S	S	14 22 09.5	-2.6
	comp=Z,2.0nm,0.7s,baz=91,slow=16,SNR=16						
ASAR	Alice Springs	45.41	256	P	P	14 16 12.9	-0.4
MTN	Manton Dam	49.80	269	P	P	14 16 45.0	-1.0
FORT	Forrest	50.35	246	P	P	14 16 49.7	0.0
KNRA	Kununurra	51.38	265	P	P	14 16 57.1	-0.3
KNRA				IAmb	IAmb	14 16 58.2	
	comp=Z,14nm,0.7s						
FITZ	Fitzroy Crossi	53.82	261	P	P	14 17 14.9	+0.1
SOEI	Soe	57.11	271	P	P	14 17 39.1	+1.4
SOEI				IAmb	IAmb	14 17 48.8	
	comp=Z,22nm,0.8s						
PSA00	Pilbara Seismi	58.56	256	IAmb	IAmb	14 17 48.0	
	comp=Z,11nm,0.8s						
NWAO	Narrogin (SRO)	59.46	243	P	P	14 17 51.9	-1.3
MORW	Morawa	60.86	247	P	P	14 18 01.9	-0.5
ILAR	Eielson Array	87.03	13	P	P	14 20 30.2	+1.5
	comp=Z,0.4nm,0.4s,baz=228,slow=5.3,SNR=8.8						
CMAR	Chiang Mai Arr	90.32	289	P	P	14 20 47.8	+2.7
	comp=Z,0.4nm,0.3s,baz=100,slow=2.7,SNR=4.6						

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*IDC **13** 14:17:38.5±1.4, 2°.46S×140°.29E, h0^{km}, mb4.0/6, mb1 4.2/7, mb1mx3.9/28, mbtmp4.1/7, ML4.0/1, MS3.4/2, Ms1 3.4/2, ms1mx2.9/30, Error ellipse: s-maj=46.4km s-min=21.2km az=98.0*

*DJA **13** 14:17:40.4±0.5, 2°S±4°×14°0E±°, h10^{km}, M4.4/3, mb4.5/3, MLv4.4/3*

*NEIC **13** 14:17:45.2±1.5, 2°.5S±0°.1×140°.08E±0°.05, h42^{km}±8^{km}, mb4.2/15, Error ellipse: s-maj=20.5km s-min=3.5km az=162.0*

ISC 13 14:17:42.5±1.0**, 2°.47S**±0°.07×**140°.23E**±0°.04**, h23**^{km}±6^{km}**, n44, σ1§50**/41**, mb4.2**/10**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	0.14	207	P	Pb	14 17 47.0	-0.3
GENI				S	Sb	14 17 51.3	+0.8
JAY	Jayapura	0.48	96	P	Pb	14 17 51.0	-1.3
JAY				S	Sb	14 17 57.5	-1.5
SMPI	Sarmi	1.59	287	P	Pn	14 18 07.5	-1.8
SMPI				S	Sn	14 18 29.8	+0.6
WAMI	Wamena	2.07	227	P	Pn	14 18 17.5	+1.6
WAMI				S	Sb	14 18 45.6	+0.9
MANU	Manus Island	7.14	87		Pn	14 19 28.8	+3.1
PMG	Port Moresby	9.74	135	LR	LR	14 24 43.5	
	comp=Z,316nm,18.8s,baz=298,slow=44						
KRVT	Keravat (AS076	11.92	99	LR	LR	14 24 36.0	
	comp=Z,124nm,20.1s,baz=289,slow=35						
MTN	Manton Dam	13.69	221		Pn	14 20 54.1	-1.2
KNRA	Kununurra	17.32	220		Pn	14 21 41.7	-1.2
KNRA				IAmb	IAmb	14 21 47.3	
	comp=Z,24nm,1.1s						
SOEI	Soe	17.44	245	P	Pn	14 21 44.9	+0.3
SOEI	Soe	17.44	245	P	Pn	14 21 42.6	-2.0
SOEI				IAmb	IAmb	14 22 00.2	
	comp=Z,30nm,1.0s						
WB0	Warramunga Arr	18.11	198		Pn	14 21 52.6	-0.2
WR0	Warramunga Arr	18.25	197		Pn	14 21 54.3	-0.2
WRAB	Tennant Creek	18.28	198	P	P	14 21 55.3	+0.4
WRAB				IAmb	IAmb	14 22 10.4	
	comp=Z,5.8nm,0.7s						
WB2	Warramunga Arr	18.29	198	P	P	14 21 55.2	+0.2
WRA	Warramunga Arr	18.30	198	P	Pn	14 21 54.1	-0.9
	comp=Z,0.5nm,0.3s,baz=17,slow=12,SNR=19						
WRA	Warramunga Arr	18.30	198	P	P	14 21 55.1	0.0
PATS	Pohnpei	20.28	63		Pn	14 22 21.6	+2.8
FITZ	Fitzroy Crossi	21.12	222	P	P	14 22 25.4	-0.4
	comp=Z,5.1nm,0.8s,baz=32,slow=0.2,SNR=12						
FITZ	Fitzroy Crossi	21.12	222	P	P	14 22 26.0	+0.1
FITZ				IAmb	IAmb	14 22 35.5	
	comp=Z,7.5nm,0.9s						
AS31	Alice Springs	21.94	196	P	P	14 22 35.4	+0.7
AS31				IAmb	IAmb	14 22 41.3	
	comp=Z,2.8nm,0.6s						
ASAR	Alice Springs	21.95	196	P	P	14 22 34.1	-0.7
	comp=Z,1.6nm,0.6s,baz=21,slow=10.0,SNR=22						
ASAR	Alice Springs	21.95	196	P	P	14 22 34.6	-0.1
PSA00	Pilbara Seismi	27.46	225	P	P	14 23 26.3	-0.8
PSA00				IAmb	IAmb	14 23 31.8	
	comp=Z,13nm,1.3s						
BBOO	Buckleboo	30.44	187	P	P	14 23 52.4	-1.0
H11S3	WAKE ISLAND Hy	33.35	50	T	T	14 59 27.9	
	baz=231,slow=75,SNR=56						
H11S2	WAKE ISLAND Hy	33.36	50	T	T	14 59 28.6	
	baz=231,slow=75,SNR=27						
H11S1	WAKE ISLAND Hy	33.37	50	T	T	14 59 29.1	
	baz=231,slow=75,SNR=29						
H11N1	WAKE ISLAND Hy	34.23	49	T	T	15 00 28.0	
	baz=229,slow=76,SNR=26						
H11N2	WAKE ISLAND Hy	34.24	49	T	T	15 00 29.0	
	baz=229,slow=76,SNR=33						
H11N3	WAKE ISLAND Hy	34.24	49	T	T	15 00 34.4	
	baz=229,slow=76,SNR=13						
TOO	Toolangi	35.27	173	P	P	14 24 34.2	-1.4
TOO				IAmb	IAmb	14 24 45.6	
	comp=Z,2.6nm,0.8s						
CMAR	Chiang Mai Arr	45.64	299	P	P	14 26 01.4	-0.4
	comp=Z,3.0nm,1.0s,baz=119,slow=6.0,SNR=18						
GTA	Gaotai	55.79	323	*e*P	P	14 27 18.1	0.0
GTA				pP	pP	14 27 23.8	-1.5
GTA				sP	sP	14 27 26.9	-1.4
MK31	Makanchi Array	70.53	322	P	P	14 28 55.6	-0.1
MK31				IAmb	IAmb	14 28 56.9	
	comp=Z,2.5nm,0.8s						
MKAR	Makanchi Array	70.53	322	P	P	14 28 56.0	+0.3
	comp=Z,3.3nm,0.8s,baz=108,slow=7.6,SNR=36						
MKAR	Makanchi Array	70.53	322	P	P	14 28 55.9	+0.2
MAKZ	Makanchi	70.73	322	P	P	14 28 57.0	+0.1
KSH	Kashi	72.03	313	P	P	14 29 07.3	+2.3
KSH				sP	pP	14 29 14.3	+1.7
KSH				PP	PP	14 31 50.9	+5.6
KSH				S	S	14 38 27.8	+2.1
KSH				SKS	SKSac	14 39 05.9	-2.2
KSH	Kashi	72.03	313	SS	SS	14 43 07.1	+4.1
ZALV	Zalesovo Beam	72.50	329	P	P	14 29 06.2	-1.1
	comp=Z,1.8nm,0.7s,baz=110,slow=6.8,SNR=6.6						
ZALV	Zalesovo Beam	72.50	329	P	P	14 29 06.8	-0.5
ILAR	Eielson Array	84.99	24	P	P	14 30 15.3	-0.5
	comp=Z,0.6nm,0.8s,baz=258,slow=4.5,SNR=4.8						
DBIC	Dimbokro	144.96	278	PKPbc	PKPab	14 37 18.1	-0.2
	comp=Z,2.2nm,0.6s,baz=153,slow=2.7,SNR=5.1						

IDC 13 14:23:36.6±371.0**, 37°.93N**×**116°.06W, h0**^{km}**, Error ellipse: s-maj=144.2km s-min=93.6km az=2.0, Southern Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I57US	PINON FLAT INF	4.32	184	*i*		14 50 40.0	
	baz=4.5,slow=324,SNR=4.6						
I56US	NEWPORT INFRAS	10.36	356	*i*		15 23 40.0	
	baz=174,slow=327,SNR=0.9						
I18DK	QAANAAQ INFRAS	44.31	13	*i*		18 58 20.0	
	baz=238,slow=344,SNR=1.3						

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*DDA **13** 14:28:04.7, 37°.24N×38°.06E, h5^{km}±1^{km}, MW3.4*

*ISK **13** 14:28:05.2, 37°.23N×38°.10E, h8^{km}, ML3.2/13*

*GII **13** 14:28:18.6±0.0, 37°.09N×38°.50E, h1^{km}*

ISC 13 14:28:03.6±1.2**, 37°.15N**±0°.02×**38°.03E**±0°.02**, h6**^{km}±10^{km}**, n39, σ1§25**/57**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GZT	Gaziantep	0.42	300	*i* P	Pb	14 28 13.3	-0.4
GZT				*i* S	Sb	14 28 19.4	-1.0
URFA	Urfa	0.70	65	PG	Pg	14 28 16.9	-0.2
KUZU	Kuzuini	0.85	244	*i* P	Pn	14 28 22.4	+0.2
KUZU				IAML		14 28 37.0	
	comp=E,1μm,0.4s						
KUZU				IAML		14 28 38.0	
	comp=N,748nm,0.3s						
HCB	Kahramanmara	0.92	283	*i* P	Pn	14 28 23.4	+0.3
KMRS	Kahramanmaras	0.97	292	PG	Pn	14 28 23.9	+0.1
KMRS				SG	Sn	14 28 38.8	+0.9
AYKD	Aykdinkavak	1.01	286	*i* P	Pn	14 28 24.5	+0.1
AYKD				*i* S	Sn	14 28 38.9	-0.1
AYKD				IAML		14 28 41.0	
	comp=N,998nm,0.2s						
AYKD				IAML		14 28 44.0	
	comp=E,1μm,0.6s						
KAMA	Osmaniye	1.09	272	*i* P	Pn	14 28 26.1	+0.6
MALT	Malatya	1.21	15	PN	Pg	14 28 27.2	+0.4
MALT				SN	Sg	14 28 42.9	+0.4
ELBS	KAHRAMANMARAS	1.37	329	*i* P	Pb	14 28 29.5	-0.3
ELBS				*i* S	Sg	14 28 49.0	+1.2
ELBS				IAML		14 28 50.0	
	comp=N,413nm,0.4s						
ELBS				IAML		14 28 51.0	
	comp=E,315nm,0.7s						
ANDN	Andirin	1.41	288	*i* P	Pg	14 28 32.0	+1.3
ANDN				*i* S	Sg	14 28 49.8	+0.8
ANDN				IAML		14 28 52.0	
	comp=E,413nm,0.3s						
ANDN				IAML		14 28 55.0	
	comp=N,374nm,0.3s						
DARE	Darende-Malaty	1.49	343	PN	Pg	14 28 32.1	0.0
DARE				SN	Sg	14 28 51.4	0.0
ELZG	Elazig	1.55	29	*i* P	Pb	14 28 32.7	-0.1
ELZG				*i* S	Sn	14 28 51.0	-1.5
ELZG				IAML		14 28 54.0	
	comp=E,517nm,0.2s						
ELZG				IAML		14 28 55.0	
	comp=N,509nm,0.4s						
SVRC	Sivrice-ELAZID	1.59	39	PN	Pn	14 28 32.8	+0.2
SVRC				SN	Sn	14 28 52.9	-0.7
TAHT	Tahtakopru-Hat	1.67	243	PN	Pg	14 28 36.7	+1.1
CUGUR	Gurin_SVAS	1.68	339	*i* P	Pg	14 28 36.1	+0.2
CUGUR				*i* S	Sg	14 29 00.2	+2.4
HEKM	Malatya_Hekimh	1.73	358	*i* P	Pg	14 28 36.6	-0.3
HEKM				IAML		14 29 05.0	
	comp=E,197nm,0.4s						
SAIM	ADANA	1.75	299	*i* P	Pg	14 28 37.4	+0.2
SAIM				*i* S	Sg	14 28 58.7	-1.3
SAIM				IAML		14 29 03.0	
	comp=E,321nm,0.4s						
SAIM				IAML		14 29 04.0	
	comp=N,352nm,0.3s						
SARI	SarD1z-Kayseri	1.79	315	PN	Pb	14 28 36.9	-0.1
CEYT	Ceyhan	1.83	266	PN	Pg	14 28 38.8	+0.1
DIYA	Diyarbakir	1.84	64	*i* P	Pn	14 28 37.1	+1.3
DIYA				*i* S	Sb	14 29 02.2	+1.2
DIYA				IAML		14 29 06.0	
	comp=E,256nm,0.3s						
DIYA				IAML		14 29 06.0	
	comp=N,241nm,0.3s						
DYBB	Diyarbakir	1.86	64	PN	Pn	14 28 36.9	+0.7
YURE	YUREGIR	1.94	261	PN	Pg	14 28 40.7	-0.2
YURE	YUREGIR	1.94	261	*i* P	Pg	14 28 43.0	+2.1
MAZI	Mazidag	1.95	80	PN	Pn	14 28 38.8	+1.3
ARPR	Arapgir-MALATY	1.96	7	PN	Pn	14 28 38.3	+0.7
PTK	Pertek	2.05	31	PN	Pn	14 28 39.3	+0.4
KEMA	Kemaliye	2.15	10	*i* P	Pn	14 28 40.2	+0.1
KEMA				*i* S	Sb	14 29 08.6	-1.4
KEMA				IAML		14 29 23.0	
	comp=E,50nm,0.5s						
CUKAN	kangal_SIVAS	2.21	349	*i* P	Pn	14 28 41.7	+0.7
HANI	Diyarbakir_Han	2.27	55	*i* P	Pn	14 28 39.1	-2.7
HANI				*i* S	Sb	14 29 14.3	+0.9
TNCL	Tunceli-Merkez	2.30	31	*i* P	Pb	14 28 45.7	+0.1
TNCL				*i* S	Sg	14 29 17.4	-0.1
TNCL				IAML		14 29 19.0	
	comp=E,59nm,0.5s						
YAHY	KAYSERI_Yahyal	2.32	295	*i* P	Pb	14 28 46.3	+0.4
YAHY				*i* S	Sg	14 29 17.9	-0.2
BNN	Bunyan	2.42	315	PN	Pb	14 28 46.2	-1.5
CMRD	Camardi-Nigde	2.47	283	PN	Pb	14 28 47.6	-1.0
GULE	Gulek	2.60	274	*i* P	Pg	14 28 52.3	-1.2
CUSAR	Sarkisla-SIVAS	2.67	329	*i* P	Pg	14 28 53.8	-1.0
NATI	Neve Ativ	4.31	206	Pn	Pg	14 29 27.4	+1.3
NATI				Sn	Sg	14 30 20.4	-1.5
KSDI	Kefar Szold	4.40	207	Sn	Sg	14 30 22.6	-2.3
MMA0B	Mount Meron ar	4.65	208	Pn	Pg	14 29 32.6	-0.1
MMA0B				Sn	Sg	14 30 29.1	-3.9
HMDT	Nahal Hemdat	5.30	204	Sn	Sb	14 30 44.3	+3.7

NNC 13 14:37:51.1±2.5**, 36°.62N**×**71°.04E, h116**^{km}±52^{km}**, mb3.2, mpv4.0, 1C-2D, Error ellipse: s-maj=26.8km s-min=20.1km az=128.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.49	357	P	Pn	14 39 24.3	+0.3
	5.1nm,0.2s,baz=176,slow=12,SNR=126						
KK31				⇓S	Sn	14 40 36.9	+0.3
	1.7nm,0.3s,baz=181,slow=22,SNR=5.5						
AAK	Ala-Archa	6.57	23	⇑P	Pn	14 39 25.0	-0.3
	3.3nm,0.5s						
AAK				⇓S	Sn	14 40 39.6	+0.6
	5.3nm,0.6s						
AB31	Akbulak array	14.99	331	P	Pn	14 41 16.9	0.0
	0.2nm,0.2s,baz=147,slow=13,SNR=29						

KRNET 13 14:46:44.4±0.1**, 40°.33N**×**72°.58E, h13**^{km}**, mb2.0, 16C-8D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob	1.03	17	⇓*i*P	Pb	14 47 02.6	-1.7
	baz=15						
ARSB				⇓*i*S	Sb	14 47 17.3	-0.5
	baz=15						
ARSB	Arslanbob	1.03	17	⇑*e*P	Pb	14 47 03.8	-0.5
	baz=17						
ARSB				⇑*e*S	Sb	14 47 17.4	-0.4
	baz=17						
BTK	Batken	1.38	259	⇓*i*P	Pn	14 47 08.4	-1.0
	baz=61						
BTK				⇓*i*S	Sn	14 47 27.1	-0.4
	baz=61						
BTK	Batken	1.38	259	⇑*i*P	Pb	14 47 09.9	-0.2
	baz=59						
BTK				⇑*i*S	Sb	14 47 27.9	+0.3
	baz=59						
ARK	Arkit	1.54	343	⇑*i*P	Pn	14 47 11.6	0.0
	baz=42						
ARK				⇑*i*S	Sb	14 47 32.4	+0.2
	baz=42						
ARK	Arkit	1.54	343	⇑*i*P	Pb	14 47 12.3	-0.5
	baz=43						
ARK				⇑*i*S	Sb	14 47 32.6	+0.4
	baz=43						
AML	Almayashu	1.98	25	⇓*i*P	Pn	14 47 19.2	+1.2
	baz=25						
AML				⇓*i*S	Sb	14 47 44.8	-0.5
	baz=25						
ARLS	Aral	2.02	40	⇑*i*P	Pn	14 47 18.6	+0.3
	baz=39						
ARLS				⇑*i*S	Sb	14 47 45.9	-0.2
	baz=39						
ARLS	Aral	2.02	40	⇑*i*P	Pb	14 47 19.8	-1.2
	baz=40						
ARLS				⇑*i*S	Sb	14 47 45.8	-0.3
	baz=40						
UCH	Uchtor	2.39	37	⇑*e*P	Pn	14 47 25.5	+1.8
	baz=37						
UCH				⇑*i*S	Sn	14 47 55.0	+2.0
	baz=37						
EKS2	Erkin-Say	2.49	21	⇑*i*P	Pn	14 47 26.6	+1.8
	baz=21						
EKS2				⇑*i*S	Sn	14 47 56.8	+1.6
	baz=21						
AAK	Ala-Archa	2.71	31	⇓*i*P	Pn	14 47 29.6	+1.7
	baz=31						
AAK				⇓*e*S	Sn	14 48 02.3	+1.7
	baz=31						

IDC 13 14:50:42.6±7.1**, 28°.83N**×**143°.24E, h0**^{km}**, mb3.4**/3**, mb1 3.6**/4**, mb1mx3.3**/28**, mbtmp3.4**/4**, ML2.9**/1**, Error ellipse: s-maj=274.4km s-min=26.3km az=72.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	8.78	332	Pn	Pn	14 52 51.4	+0.6
	0.1nm,0.3s,baz=123,slow=12,SNR=5.0						
WRA	Warramunga Arr	49.24	191	P	P	14 59 33.1	+0.2
	0.7nm,0.6s,baz=14,slow=8.6,SNR=11						
MKAR	Makanchi Array	50.11	308	P	P	14 59 38.8	-0.7
	0.5nm,0.9s,baz=89,slow=8.6,SNR=4.8						
ASAR	Alice Springs	52.96	191	P	P	15 00 00.7	-0.2
	0.1nm,0.6s,baz=11,slow=7.5,SNR=3.2						

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*IDC **13** 15:25:13.8±5.5, 24°.34S×67°.14W, h150^{km}±47^{km}, mb1 3.4/3, mb1mx3.1/40, mbtmp3.7/3, Error ellipse: s-maj=72.3km s-min=30.3km az=159.0*

*SJA **13** 15:25:14.0±1.2, 24°.30S×67°.36W, h176^{km}±10^{km}, ML3.2, MW3.3*

*GUC **13** 15:25:16.2±0.6, 24°.28S×67°.73W, h209^{km}±11^{km}, ML3.6*

ISC 13 15:25:14.3±1.0**, 24°.29S**±0°.05×**67°.38W**±0°.04**, h177**^{km}±9^{km}**, n31, σ1§17**/55**, 8C-3D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.76	104	*i* P	Pn	15 25 49.3	+0.4
SLA				*i* S	Sn	15 26 15.1	-0.4
HJA	Humahuaca	2.11	60	*i* P	Pn	15 25 53.3	+0.6
AZAP	Zapla	2.12	89	*i* P	Pn	15 25 52.4	-0.4
AZAP				*i* S	Sn	15 26 22.2	-0.2
GO02	Mina Guanaco	2.19	246	⇑*i*P	Pn	15 25 54.5	+1.0
GO02				*e*S	Sn	15 26 24.6	+0.6
GO02				IAML		15 26 25.7	
	comp=E,360nm,0.4s						
LVC	Limon Verde	2.19	320	P	Pn	15 25 54.9	+1.3
	comp=E,3.2nm,0.3s,baz=148,slow=5.3,SNR=8.5						
LVC				S	Sn	15 26 24.4	+0.3
	comp=E,18nm,0.3s,baz=272,slow=21,SNR=55						
LVC	Limon Verde	2.19	320	*i* P	Pn	15 25 54.9	+1.3
LVC				*i* S	Sn	15 26 24.2	+0.2
PB15	IPOC Station P	2.20	299	⇑*i*P	Pn	15 25 55.0	+1.4
PB15				*e*S	Sn	15 26 24.1	+0.1
PB15	IPOC Station P	2.20	299	*i* P	Pn	15 25 54.9	+1.3
PB15				*i* S	Sn	15 26 24.1	+0.1
PB15				IAML		15 26 25.5	
	comp=Z,363nm,0.4s						
PB06	IPOC Station P	2.56	308	⇑*i*P	Pn	15 25 59.0	+1.3
PB06				*e*S	Sn	15 26 30.6	-0.7
PB06				IAML		15 26 32.8	
	comp=N,129nm,0.5s						
PB06	IPOC Station P	2.56	308	*i* P	Pn	15 25 58.8	+1.1
PB06				*i* S	Sn	15 26 31.0	-0.4
PB06				IAML		15 26 34.6	
	comp=Z,61nm,0.3s						
YJA	Yavi	2.72	40	*i* P	Pn	15 26 00.5	+0.5
YJA				*i* S	Sn	15 26 34.7	-0.6
PB14	IPOC Station P	2.77	263	*i* P	Pn	15 26 01.0	+0.6
PB14				*i* S	Sn	15 26 35.1	-1.1
PB14				IAML		15 26 39.5	
	comp=Z,52nm,0.4s						
PB05	IPOC Station P	2.96	298	⇑*i*P	Pn	15 26 02.9	+0.4
PB05				*e*S	Sn	15 26 38.0	-1.9
PB05	IPOC Station P	2.96	298	*i* P	Pn	15 26 03.2	+0.8
PB05				*i* S	Sn	15 26 38.3	-1.6
PB10	IPOC Station P	3.00	284	⇑*i*P	Pn	15 26 03.7	+0.8
PB10				*i* S	Sn	15 26 38.6	-2.1
PB10	IPOC Station P	3.00	284	*i* P	Pn	15 26 04.0	+1.1
PB10				*i* S	Sn	15 26 39.7	-1.0
PB10				IAML		15 26 42.3	
	comp=Z,36nm,0.4s						
PB09	IPOC Station P	3.02	325	*i* P	Pn	15 26 05.0	+1.7
PB09				*i* S	Sn	15 26 42.0	+0.6
PB09				IAML		15 26 47.2	
	comp=Z,27nm,0.3s						
PB03	IPOC Station P	3.12	315	⇑*i*P	Pn	15 26 05.2	+0.7
PB03				*e*S	Sn	15 26 42.4	-1.3
PB03				IAML		15 26 43.2	
	comp=E,87nm,0.4s						
PB03	IPOC Station P	3.12	315	*i* P	Pn	15 26 05.3	+0.7
PB03				*i* S	Sn	15 26 42.3	-1.3
PB04	IPOC Station P	3.21	307	⇑*i*P	Pn	15 26 05.7	+0.2
PB04				*e*S	Sn	15 26 43.7	-1.8
PB04				IAML		15 26 51.3	
	comp=E,86nm,0.5s						
PB04	IPOC Station P	3.21	307	*i* P	Pn	15 26 06.3	+0.8
PB04				*i* S	Sn	15 26 43.6	-1.8
PB04				IAML		15 26 49.7	
	comp=Z,49nm,0.4s						
PB07	IPOC Station P	3.44	317	⇓*i*P	Pn	15 26 09.2	+0.7
PB07	IPOC Station P	3.44	317	*i* P	Pn	15 26 09.2	+0.7
PB07				*i* S	Sn	15 26 48.8	-1.9
AC01	Pan de Azucar	3.45	237	⇓*e*P	Pn	15 26 08.1	-0.2
AC01				⇓*i*P	Pn	15 26 08.1	-0.2
AC01				*e*S	Sn	15 26 48.9	-1.6
AC01				IAML		15 26 49.5	
	comp=E,81nm,0.3s						
PB02	IPOC Station P	3.76	321	⇑*i*P	Pn	15 26 12.8	+0.4
PB02				*e*S	Sn	15 26 55.5	-2.3
PB01	IPOC Station P	3.77	329	*e*P	Pn	15 26 13.6	+0.9
PB01				IAML		15 26 56.9	
	comp=E,34nm,0.3s						
LPAZ	La Paz	8.00	355	P	Pn	15 27 09.6	+1.3
	comp=E,0.6nm,0.3s,baz=161,slow=6.2,SNR=8.3						
SIV	San Ignacio	10.16	37	P	Pn	15 27 33.6	-2.6
	comp=E,1.6nm,0.3s,baz=230,slow=14,SNR=16						
ASAR	Alice Springs	128.04	205	PKP	PKiKP	15 44 02.1	+1.5

	comp=E,0.2nm,0.8s,baz=140,slow=1.4,SNR=4.3						
WRA	Warramunga Arr	131.20	208	PKP	PKiKP	15 44 08.3	+1.3
	comp=E,0.2nm,0.5s,baz=156,slow=1.7,SNR=4.2						
MKAR	Makanchi Array	146.97	40	PKPbc	PKiKP	15 44 38.2	-0.1
	comp=E,0.6nm,0.7s,baz=288,slow=3.9,SNR=6.7						

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*ISK **13** 15:38:54.5, 42°.37N×40°.92E, h10^{km}, ML2.9/7*
*TIF **13** 15:38:55.9, 42°.37N×41°.01E, h26^{km}±1^{km}*
*NORS **13** 15:38:56.3±0.0, 42°.52N×41°.06E, h4^{km}, MPVA3.6*
*DDA **13** 15:38:57.5, 42°.21N×41°.15E, h5^{km}±5^{km}, ML2.4*
ISC 13 15:38:56.4±1.7**, 42°.35N**±0°.04×**41°.04E**±0°.05**, h12**^{km}±12^{km}**,**
n24, σ0^{s}.79/41**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	Batumi	0.89	147	P	Pb	15 39 13.8	+0.1
BATM				S	Sn	15 39 27.1	-0.4
BATM	Batumi	0.89	147	PG	Pg	15 39 13.6	+0.1
BATM				SG	Sn	15 39 27.1	-0.4
BATM	Batumi	0.89	147	i P	Pg	15 39 13.6	+0.1
BATM				i S	Sb	15 39 26.4	+0.9
BCA	Borcka	1.00	154	PG	Pg	15 39 14.9	-0.8
CHOM	Cayeli-Rize	1.27	190	PN	Pn	15 39 18.9	-1.0
CHOM				SN	Sb	15 39 36.6	+0.1
DBAD	Bademkaya	1.42	160	i P	Pn	15 39 21.4	-0.7
DBAD				i S	Sn	15 39 40.3	-0.4
DAGI	Agillar	1.43	153	i P	Pn	15 39 21.6	-0.7
DAGI				i S	Sn	15 39 40.0	-1.0
TKB	Tkibuli	1.45	89	P	Pn	15 39 21.5	-0.9
TKB				S	Sn	15 39 41.0	-0.4
EPOS	Posof	1.51	123	i P	Pn	15 39 23.1	-0.4
EPOS				i S	Sn	15 39 43.3	+0.1
NEY	Neytrino	1.53	53	ePg	Pn	15 39 22.9	-0.8
NEY				eSg	Sn	15 39 43.1	-0.5
DDEM	Demirkent	1.55	160	i P	Pn	15 39 23.4	-0.5
DDEM				i S	Sn	15 39 43.4	-0.6
DDEM				IAML		15 39 45.0	
	comp=N,110nm,0.2s						
DDEM				IAML		15 39 48.0	
	comp=E,83nm,0.3s						
ONI	Oni	1.80	81	P	Pn	15 39 27.6	+0.3
ONI				S	Sb	15 39 51.8	0.0
ONI	Oni	1.80	81	PN	Pn	15 39 27.4	+0.1
ONI				SN	Sb	15 39 51.9	0.0
SHA1	Shidzhatmaz	1.82	40	ePg	Pn	15 39 28.3	+0.5
SHA1				eSg	Sn	15 39 50.9	-0.1
DIGR	Digorskoe uzhe	1.95	73	ePg	Pn	15 39 30.5	+0.9
DIGR				eSg	Sb	15 39 56.0	-0.4
KIV	Kislovodsk	2.01	36	PN	Pn	15 39 29.9	-0.3
KRIK	Erzurum-spir	2.01	183	i P	Pb	15 39 33.9	+0.9
KRIK				i S	Sb	15 39 59.5	+1.4
SENK	Senkaya-Erzuru	2.04	151	PN	Pn	15 39 30.6	-0.1
AKH	Akhalkalaki	2.06	116	PN	Pn	15 39 31.5	+0.6
BAYT	Aydıntepe-Bayb	2.07	199	PN	Pn	15 39 29.8	-1.3
ESPY	Espiye-Giresun	2.25	231	PN	Pn	15 39 32.1	-1.3
KOPR	Koprukoy-ERZUR	2.43	165	PN	Pn	15 39 36.2	+0.1
LACR	Lac	2.45	78	ePn	Pn	15 39 38.1	+1.8
LACR				eSn	Sb	15 40 09.3	-1.3
KELT	Kelkit	2.58	212	i P	Pn	15 39 38.7	+0.6
KELT				IAML		15 40 05.0	
	comp=N,30nm,1.6s						
KELT				IAML		15 40 08.0	
	comp=E,11nm,1.7s						
KELT				i S	Sn	15 40 11.1	+1.6

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*IDC **13** 15:41:37.9±1.1, 2°.40N×128°.52E, h0^{km}, mb3.8/5,*
mb1 3.9/6, mb1mx3.6/41, mbtmp3.8/6, ML3.8/1, Error
ellipse: s-maj=83.2km s-min=17.9km az=67.0
*NEIC **13** 15:41:40.6±1.6, 2°.55N±0°.09×128°.93E±0°.07, h23^{km}±6^{km},*
mb4.4/21, Error ellipse: s-maj=12.7km s-min=10.3km
az=201.0
ISC 13 15:41:42.0±0.6**, 2°.53N**±0°.08×**129°.0E**±0°.1**, h35**^{km}**, n44,**
σ1^{s}.12/37**, mb4.2**/16**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.36	222		Pn	15 42 18.6	+0.3
SIJI	Sorong	4.09	146	Pn	Pn	15 42 42.6	+0.5
	5.6nm,0.3s,baz=324,slow=18,SNR=54						
SIJI				Sn	Sn	15 43 26.8	-2.0
	5.4nm,0.3s,baz=13,slow=23,SNR=10						
FAKI	Fak Fak	6.33	149	Pn	Pn	15 43 13.2	+0.2
SAUI	Saumlaki	10.70	167		Pn	15 44 05.0	-7.9
SOEI	Soe	13.06	201		Pn	15 44 34.0	-11
FITZ	Fitzroy Crossi	20.75	189	P	P	15 46 18.6	-1.4
TPUB	Ta-pu	22.17	339	P	P	15 46 31.7	-3.4
TPUB				IAmb	IAmb	15 47 07.9	
	comp=Z,74nm,1.6s						
WB0	Warramunga Arr	22.79	167	P	P	15 46 42.1	+0.3
WRAB	Tennant Creek	22.94	167	P	P	15 46 42.9	-0.5
WRAB				IAmb	IAmb	15 46 59.4	
	comp=Z,8.4nm,1.1s						
WRA	Warramunga Arr	22.95	167	P	P	15 46 43.8	+0.3
	comp=Z,0.8nm,0.5s,baz=344,slow=11,SNR=8.6						
WRA	Warramunga Arr	22.95	167	P	P	15 46 43.4	0.0
WB2	Warramunga Arr	22.95	167	P	P	15 46 43.6	+0.2
WB2				IAmb	IAmb	15 47 16.2	
	comp=Z,7.6nm,1.1s						
WR0	Warramunga Arr	23.01	166	P	P	15 46 44.5	+0.5
WR0				IAmb	IAmb	15 46 52.6	
	comp=Z,6.3nm,1.1s						
AS31	Alice Springs	26.48	170	P	P	15 47 17.0	+0.8
ASAR	Alice Springs	26.48	170	P	P	15 47 16.9	+0.8
	comp=Z,0.5nm,0.5s,baz=354,slow=7.9,SNR=15						
ASAR	Alice Springs	26.48	170	P	P	15 47 15.2	-0.9
BBOO	Buckleboo	35.78	170	P	P	15 48 36.7	-1.3
STKA	Stephens Creek	36.26	162	P	P	15 48 40.8	-1.3
H11S3	WAKE ISLAND Hy	40.22	64	T	T	16 32 26.8	
	baz=251,slow=75,SNR=23						
H11S2	WAKE ISLAND Hy	40.23	64	T	T	16 32 30.9	
	baz=251,slow=75,SNR=19						
H11S1	WAKE ISLAND Hy	40.23	64	T	T	16 32 34.2	
	baz=251,slow=75,SNR=12						
H11N1	WAKE ISLAND Hy	40.80	62	T	T	16 33 07.6	
	baz=250,slow=75,SNR=13						
H11N2	WAKE ISLAND Hy	40.81	62	T	T	16 33 06.9	
	baz=250,slow=75,SNR=5.8						
H11N3	WAKE ISLAND Hy	40.82	62	T	T	16 33 18.9	
	baz=250,slow=75,SNR=8.2						
SONM	Songino Array	49.16	340	P	P	15 50 27.9	+1.3
	comp=Z,0.6nm,0.7s,baz=149,slow=7.9,SNR=3.7						
SONM	Songino Array	49.16	340	P	P	15 50 27.5	+0.9
PETK	Petropavlovsk-	55.73	21	P	P	15 51 13.4	-1.7
WKZ	Wanaka	59.12	148	P	P	15 51 40.6	+1.5
MK31	Makanchi Array	59.81	325	P	P	15 51 44.0	+0.1
MK31				IAmb	IAmb	15 51 45.4	
	comp=Z,1.5nm,0.7s						
MKAR	Makanchi Array	59.81	325	P	P	15 51 44.8	+0.9
	comp=Z,1.8nm,0.6s,baz=120,slow=8.2,SNR=30						
MKAR	Makanchi Array	59.81	325	P	P	15 51 44.5	+0.6
MAKZ	Makanchi	60.00	325	P	P	15 51 45.3	+0.2
MAKZ				IAmb	IAmb	15 51 46.7	
	comp=Z,2.5nm,0.7s						
ZALV	Zalesovo Beam	62.67	332	P	P	15 52 02.2	-0.9
	comp=Z,0.7nm,0.4s,baz=109,slow=7.8,SNR=3.9						
ZALV	Zalesovo Beam	62.67	332	P	P	15 52 01.8	-1.2
KURK	Kurchatov	63.95	327	P	P	15 52 12.2	+0.6
KURK				IAmb	IAmb	15 52 12.8	
	comp=Z,3.2nm,0.7s						
GAR	Garm	64.37	312	P	P	15 52 14.3	-0.5
GAR				IAmb	IAmb	15 52 15.5	
	comp=Z,5.2nm,1.1s						
KK31	Karatay Array	65.62	317	P	P	15 52 22.7	0.0
KK31				IAmb	IAmb	15 53 51.5	
	comp=Z,5.9nm,1.6s						
KKAR	Karatay Array	65.62	317	P	P	15 52 22.9	+0.2
KKAR	Karatay Array	65.62	317	P	P	15 52 22.7	0.0
KKAR				IAmb	IAmb	15 53 51.5	
	comp=Z,5.9nm,1.6s						
GSTR	Great Sitkin T	67.16	33	P	P	15 52 33.5	+1.1
BRVK	Borovoye	69.61	327	P	P	15 52 48.1	+0.5
BRVK				IAmb	IAmb	15 52 48.7	
	comp=Z,2.4nm,0.9s						
CASY	Casey	69.92	188	P	P	15 52 51.0	+1.8
ABKAR	Akbulak array	74.48	321	P	P	15 53 16.6	-0.3
RAGM	Ragged Mountai	86.02	30	P	P	15 54 20.1	+1.3

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*MOS **13** 16:04:07.6±0.8, 42°.37N×40°.90E, h8^{km}, mb3.7/1, Error*
ellipse: s-maj=8.4km s-min=6.4km az=85.5
*ISK **13** 16:04:07.9, 42°.34N×40°.94E, h14^{km}, ML3.3/9*
*TIF **13** 16:04:08.4, 42°.36N×40°.94E, h40^{km}±3^{km}*
*NORS **13** 16:04:09.0±0.0, 42°.54N×41°.27E, h3^{km}±1^{km}, MPVA3.9*
*DDA **13** 16:04:09.0, 42°.27N×40°.87E, h14^{km}±1^{km}, ML2.8*
ISC 13 16:04:07.1±1.2**, 42°.38N**±0°.02×**40°.94E**±0°.02**, h2**^{km}±10^{km}**,**
n57, σ1^{s}.00/95**, 4C-5D, Black Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	Batumi	0.95	144	P	Pb	16 04 26.5	+0.1
BATM				S	Sb	16 04 40.0	+0.6
BATM	Batumi	0.95	144	PG	Pb	16 04 26.5	+0.1
BATM				SG	Sb	16 04 39.6	+0.1
BATM	Batumi	0.95	144	i P	Pb	16 04 26.6	+0.1
BATM				i S	Sn	16 04 40.5	-1.2
BATM	Batumi	0.95	144	⇑iPG	Pb	16 04 26.5	+0.1
BATM				i S	Sn	16 04 40.2	-1.5
BCA	Borcka	1.06	151	PG	Pg	16 04 27.8	+0.4
DBOC	Borcka	1.16	152	i P	Pg	16 04 29.5	0.0
DBOC				i S	Sg	16 04 45.0	+0.5
DBOC				IAML		16 04 49.0	
	comp=E,292nm,0.2s						
ARXR	Arkhyz	1.21	12	i PG	Pg	16 04 30.2	-0.2
ARXR				i S	Sg	16 04 45.3	-0.8
CHOM	Cayeli-Rize	1.28	186	PN	Pn	16 04 31.5	-0.6
CHOM				SN	Sg	16 04 48.8	+0.4
RPOR	Krasnaya Polya	1.41	340	dePG	Pn	16 04 34.2	+0.2
RPOR				i S	Sb	16 04 52.7	-0.1
RPOR				pmax	pmax		
	comp=Z,61nm,0.4s						
DBAD	Bademkaya	1.47	157	i P	Pn	16 04 34.1	-0.6
DBAD				i S	Sn	16 04 52.9	-1.7
DBAD				IAML		16 04 55.0	
	comp=N,204nm,0.5s						
DBAD				IAML		16 04 58.0	
	comp=E,164nm,0.4s						
DAGI	Agillar	1.49	150	i P	Pn	16 04 34.4	-0.6
DAGI				i S	Sn	16 04 53.2	-1.9
DAGI				IAML		16 04 54.0	
	comp=N,101nm,0.4s						
DAGI				IAML		16 04 55.0	
	comp=E,120nm,0.4s						
SOC	Sochi	1.50	324	ePG	Pn	16 04 35.3	+0.1
SOC				e		16 04 57.1	
SOC				pmax	pmax		
	comp=Z,169nm,0.9s						
SOC				smax	smax		
	comp=E,327nm,0.6s						
SOC				smax	smax		
	comp=N,414nm,0.5s						
TKB	Tkibuli	1.52	90	P	Pn	16 04 34.4	-1.1
TKB				S	Sn	16 04 53.6	-2.3
NEY	Neytrino	1.58	56	i Pg	Pn	16 04 35.7	-0.6
NEY				eSg	Sn	16 04 56.1	-1.3
NEY	Neytrino	1.58	56	⇑iPG	Pn	16 04 35.7	-0.6
NEY				eS	Sn	16 04 56.1	-1.3
EPOS	Posof	1.59	123	i P	Pn	16 04 36.6	0.0
EPOS				i S	Sn	16 04 56.9	-0.9
EPOS				IAML		16 05 02.0	
	comp=E,94nm,0.3s						
EPOS				IAML		16 05 03.0	
	comp=N,228nm,0.7s						
DDEM	Demirkent	1.60	157	i P	Pn	16 04 36.3	-0.3
DDEM				i S	Sn	16 04 57.2	-0.6
DDEM				IAML		16 05 00.0	
	comp=N,248nm,0.3s						
DDEM				IAML		16 05 04.0	
	comp=E,234nm,0.3s						
KTUT	Trabzon	1.64	213	PN	Pn	16 04 36.6	-0.4
GUZR	Guzeripl'	1.73	340	i PN	Pb	16 04 39.5	-0.2
GUZR				i S	Sb	16 05 02.0	+0.1
SHA1	Shidzhatmaz	1.85	42	i Pg	Pn	16 04 41.0	+0.8
SHA1				eSg	Sn	16 05 04.2	-0.1
SHA1	Shidzhatmaz	1.85	42	dePN	Pn	16 04 40.7	+0.5
ONI	Oni	1.87	83	P	Pn	16 04 40.3	0.0
ONI				S	Sn	16 05 04.0	-0.5
ONI	Oni	1.87	83	PN	Pn	16 04 40.3	0.0
ONI				SN	Sn	16 05 04.1	-0.5
LZRR	Lazarevskoye	1.93	324	ePN	Pb	16 04 42.3	-0.8
LZRR				eS	Sg	16 05 09.4	+0.2
KBZ	Khabaz	1.97	46	d iPN	Pn	16 04 42.5	+0.9
DIGR	Digorskoe uzhe	2.02	74	i Pg	Pn	16 04 43.4	+1.0
DIGR				eSg	Sn	16 05 08.6	+0.2
DIGR	Digorskoe uzhe	2.02	74	⇓iPN	Pn	16 04 43.4	+1.0
BKRG	Bakuriani	2.02	107	P	Pn	16 04 42.6	+0.2
BKRG				S	Sb	16 05 10.2	-0.1
KIV	Kislovodsk	2.03	38	PN	Pn	16 04 43.1	+0.6
KIV	Kislovodsk	2.03	38	⇓ePN	Pb	16 04 43.9	-1.0
KRIK	Erzurum-spir	2.04	180	i P	Pg	16 04 46.8	+0.6
KRIK				i S	Sg	16 05 13.6	+1.1
BAYT	Aydıntepe-Bayb	2.07	197	PN	Pn	16 04 42.8	-0.3
SENK	Senkaya-Erzuru	2.10	149	PN	Pn	16 04 43.3	-0.2
AKH	Akhalkalaki	2.14	116	PN	Pn	16 04 43.9	-0.1
BEYR	Belyy Ugol+	2.14	39	ePN	Pn	16 04 45.1	+1.2
BEYR				eS	Sn	16 05 11.6	+0.6
TPSR	Tuapse	2.17	322	ePN	Pb	16 04 46.2	-0.9
TPSR				eS	Sb	16 05 14.2	-0.3
ESPY	Espiye-Giresun	2.21	229	PN	Pn	16 04 44.9	+0.1
ZEI	Tsey	2.23	78	ePN	Pn	16 04 45.5	+0.2
ZEI				eS	Sn	16 05 14.7	+1.2
ZEI				pmax	pmax		
	comp=Z,32nm,0.6s						
ZEI				smax	smax		
	comp=E,141nm,0.3s						
ZEI				smax	smax		
	comp=N,142nm,0.6s						
NCK	Nalchik	2.25	59	ePg	Pb	16 04 48.2	-0.3
NCK				eSg	Sb	16 05 16.6	-0.2
NCK	Nalchik	2.25	59	⇑ePN	Pb	16 04 48.0	-0.5
NCK				i S	Sn	16 05 15.2	+1.4
LSNR	Lesken	2.31	66	ePg	Pb	16 04 49.8	+0.2
LSNR				eSg	Sb	16 05 19.9	+1.4
LSNR	Lesken	2.31	66	ePN	Pn	16 04 46.3	+0.1
LSNR				eS	Sb	16 05 17.6	-0.9
KORR	Kora	2.41	72	ePg	Pb	16 04 51.1	-0.2
KORR				eSg	Sb	16 05 22.9	+1.4
KORR	Kora	2.41	72	ePN	Pb	16 04 51.0	-0.3
KORR				eS	Sb	16 05 21.4	-0.1
KOPR	Koprukoy-ERZUR	2.48	164	PN	Pn	16 04 48.6	-0.1
STDR	Stavd-Durt	2.50	66	ePg	Pb	16 04 53.6	+0.8
STDR				eSg	Sb	16 05 25.0	+1.0
STDR	Stavd-Durt	2.50	66	ePN	Pb	16 04 52.4	-0.4
STDR				eS	Sb	16 05 23.6	-0.5
LACR	Lac	2.52	79	ePn	Pn	16 04 51.0	+1.8
LACR				eSn	Sn	16 05 21.3	+0.7
LACR	Lac	2.52	79	ePN	Pn	16 04 51.0	+1.8
LACR				eS	Sn	16 05 21.3	+0.7
TBLG	Delisi	2.90	102	PN	Pn	16 04 54.9	+0.5
GOF	Gofitskoye	3.08	29	⇑ePN	Pg	16 05 05.8	-0.5
GOF				eS	Sg	16 05 44.2	-2.0
GOF				pmax	pmax		
	comp=Z,35nm,0.6s						
GOF				smax	smax		
	comp=N,83nm,0.6s						
GOF				smax	smax		
	comp=E,91nm,0.8s						
RSDY	Resadiye-TOKAT	3.36	235	PN	Pn	16 05 01.4	+0.7
ANN	Anapa	3.52	315	ePN	Pn	16 05 05.1	+2.3
ANN				eS	Sn	16 05 47.4	+2.5
ANN				pmax	pmax		
	comp=Z,6.0nm,0.3s						
ANN				smax	smax		
	comp=E,20nm,1.8s						
FEO	Feodosiya	4.81	305	ePN	Pn	16 05 16.3	-4.3
FEO				pmax	pmax		
	comp=Z,56nm,0.2s						
SUDU	Sudak	4.99	302	ePN	Pn	16 05 23.4	+0.4
SUDU				pmax	pmax		
	comp=Z,5.0nm,0.1s						
ALU	Alushta	5.28	298	ePN	Pn	16 05 28.3	+1.3
ALU				pmax	pmax		
	comp=Z,9.0nm,0.3s						
OBN	Obninsk	13.07	349	eP	Pn	16 07 14.1	+0.5
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						

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*IDC **13** 16:05:17.8±2.1, 5°.59N×124°.69E, h0^{km}, mb3.3/3,*
mb1 3.5/3, mb1mx3.3/33, mbtmp3.3/3, Error ellipse:
s-maj=198.8km s-min=25.4km az=64.0
*MAN **13** 16:05:24.2, 6°.42N×126°.35E, h3^{km}, mb4.3, ML3.2, MS2.9*
ISC 13 16:05:20.0±2.3**, 6°.22N**±0°.07×**126°.48E**±0°.09**, h24**^{km}±16^{km}**,**
n10, σ1^{s}.86/15**, mb3.2**/3**, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	0.76	343	eP	Pb	16 05 35.1	+0.7
MATI				eS	Sn	16 05 45.9	+0.1
DDMP	Don Marcelino,	0.78	261	eP	Pn	16 05 37.8	+2.4
DDMP				eS	Sn	16 05 49.1	+2.8
GSPH	General Santos	1.53	265	⇓iP	Pn	16 05 46.5	+0.6
GSPH				i S	Sn	16 06 04.2	-0.9
SKMP	Bagumbayan, Su	1.95	279	eP	Pb	16 05 53.8	-1.1
BUKP	Musuan	2.17	320	eP	Pn	16 05 56.7	+2.1
BUKP				eS	Sb	16 06 24.6	-0.5
CTBH	Cotabato--PC H	2.43	294	⇑iP	Pb	16 06 01.4	-1.6
BUTP	Butuan	2.86	343	eP	Pb	16 06 08.5	-1.9
BUTP				eS	Sb	16 06 46.3	+1.4
WRA	Warramunga Arr	27.12	164	P	P	16 11 03.2	+1.8
	0.2nm,0.4s,baz=338,slow=11,SNR=9.9						
ASAR	Alice Springs	30.58	167	P	P	16 11 31.5	-0.6
	0.2nm,0.4s,baz=345,slow=6.9,SNR=7.4						
MKAR	Makanchi Array	55.39	324	P	P	16 14 50.0	-2.3
	0.1nm,0.4s,baz=118,slow=6.2,SNR=4.1						

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*ISK **13** 16:07:29.9, 42°.34N×41°.00E, h13^{km}, ML2.6/2*
*TIF **13** 16:07:31.1, 42°.35N×41°.12E, h27^{km}±4^{km}*
*NORS **13** 16:07:32.2±0.0, 42°.53N×41°.13E, h6^{km}, MPVA3.2*
ISC 13 16:07:30.0±3.2**, 42°.37N**±0°.03×**41°.05E**±0°.04**, h11**^{km}±24^{km}**,**
n20, σ0^{s}.75/39**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	Batumi	0.90	148	P	Pb	16 07 48.3	+0.6
BATM				S	Sn	16 08 00.3	-1.3
BATM	Batumi	0.90	148	PG	Pb	16 07 48.0	+0.4
BATM				SG	Sn	16 08 00.5	-1.1
BATM	Batumi	0.90	148	i Pg	Pb	16 07 48.3	+0.6
BATM				i Sg	Sn	16 08 01.6	-0.1
BCA	Borcka	1.02	155	PG	Pb	16 07 49.6	0.0
BCA				SG	Sn	16 08 04.3	-0.2
ARXR	Arkhyz	1.20	8	ePg	Pn	16 07 51.9	-1.0
ARXR				eSg	Sb	16 08 07.1	-1.5
CHOM	Cayeli-Rize	1.29	190	PN	Pn	16 07 53.7	-0.3
CHOM				SN	Sb	16 08 11.1	+0.2
TKB	Tkibuli	1.44	90	P	Pn	16 07 55.5	-0.5
TKB				S	Sb	16 08 14.8	-0.4
RPOR	Krasnaya Polya	1.45	337	ePg	Pn	16 07 56.0	-0.3
RPOR				eSg	Sn	16 08 15.1	-0.2
NEY	Neytrino	1.51	54	ePg	Pn	16 07 57.2	0.0
NEY				eSg	Sn	16 08 17.1	+0.1
SOC	Sochi	1.56	321	ePg	Pn	16 07 57.1	-0.6
SOC				eSg	Sn	16 08 18.0	+0.1
GUZR	Guzeripl'	1.77	338	ePg	Pn	16 08 01.3	+0.7
GUZR				eSg	Sn	16 08 23.9	+0.8
ONI	Oni	1.79	82	P	Pb	16 08 02.0	-0.8
ONI				S	Sb	16 08 25.3	0.0
ONI	Oni	1.79	82	PN	Pn	16 08 01.8	+0.9
ONI				SN	Sb	16 08 25.0	-0.3
ONI	Oni	1.79	82	ePg	Pb	16 08 02.0	-0.8
ONI				eSg	Sb	16 08 25.3	0.0
SHA1	Shidzhatmaz	1.80	40	ePg	Pn	16 08 02.6	+1.4
SHA1				eSg	Sn	16 08 24.9	+0.6
KBZ	Khabaz	1.92	44	ePg	Pn	16 08 03.4	+0.8
KBZ				eSg	Sb	16 08 28.6	-0.2
DIGR	Digorskoe uzhe	1.94	73	ePg	Pn	16 08 04.4	+1.3
DIGR				eSg	Sb	16 08 29.9	+0.2
KIV	Kislovodsk	1.98	36	PN	Pn	16 08 04.8	+1.2
KIV				SN	Sb	16 08 30.3	-0.7
LZRR	Lazarevskoye	1.99	323	ePg	Pn	16 08 04.5	+0.9
LZRR				eSg	Sn	16 08 29.2	+0.8
SENK	Senkaya-Erzuru	2.05	151	PN	Pn	16 08 05.0	+0.4

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*ISK **13** 16:14:36.5, 42°.31N×40°.85E, h20^{km}, ML2.5/3*
*DDA **13** 16:14:38.8, 42°.40N×41°.48E, h18^{km}±2^{km}, ML2.2*
*TIF **13** 16:14:38.3, 42°.32N×41°.10E, h27^{km}±2^{km}*
ISC 13 16:14:36.8±1.7**, 42°.33N**±0°.03×**40°.92E**±0°.03**, h14**^{km}±13^{km}**,**
n31, σ0^{s}.73/55**, Black Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	Batumi	0.93	141	P	Pb	16 14 55.4	+0.7
BATM				S	Sg	16 15 06.6	-0.4
BATM	Batumi	0.93	141	PG	Pb	16 14 55.3	+0.7
BATM				SG	Sn	16 15 08.8	+0.2
BATM	Batumi	0.93	141	i Pg	Pb	16 14 55.4	+0.7
BATM				i Sg	Sn	16 15 08.7	+0.2
BATM	Batumi	0.93	141	i P	Pb	16 14 55.2	+0.5
BATM				i S	Sn	16 15 08.8	+0.2
BCA	Borcka	1.03	149	PG	Pb	16 14 56.5	+0.1
BCA				SG	Sn	16 15 11.1	0.0
DBOC	Borcka	1.13	150	i P	Pb	16 14 58.4	+0.2
DBOC				i S	Sg	16 15 13.6	+0.1
DBOC				IAML		16 15 14.0	
	comp=E,56nm,0.9s						
CHOM	Cayeli-Rize	1.24	185	PN	Pn	16 14 58.9	-0.8
CHOM				SN	Sb	16 15 15.4	-0.4
ARXR	Arkhyz	1.26	12	i Pg	Pn	16 14 59.1	-1.0
ARXR				eSg	Sb	16 15 14.1	-2.4
DBAD	Bademkaya	1.44	156	i P	Pn	16 15 03.0	+0.4
DBAD				IAML		16 15 24.0	
	comp=N,36nm,0.5s						
DBAD				IAML		16 15 25.0	
	comp=E,31nm,0.5s						
RPOR	Krasnaya Polya	1.45	341	ePg	Pn	16 15 03.0	+0.4
RPOR				eSg	Sn	16 15 21.9	+0.5
DAGI	Agillar	1.46	149	i P	Pn	16 15 03.1	+0.3
DAGI				i S	Sn	16 15 21.9	+0.1
SOC	Sochi	1.53	325	ePg	Pb	16 15 04.9	-0.1
SOC				eSg	Sb	16 15 24.4	+0.2
TKB	Tkibuli	1.54	89	P	Pn	16 15 04.1	+0.2
TKB				S	Sn	16 15 22.3	-1.4
DDEM	Demirkent	1.57	156	i P	Pn	16 15 05.4	+1.1
DDEM				IAML		16 15 28.0	
	comp=E,46nm,0.5s						
DDEM				IAML		16 15 31.0	
	comp=N,35nm,0.4s						
EPOS	Posof	1.58	121	i P	Pb	16 15 05.8	-0.2
NEY	Neytrino	1.61	55	ePg	Pn	16 15 04.2	-0.8
NEY				eSg	Sn	16 15 25.1	-0.6
GUZR	Guzeripl'	1.76	341	ePg	Pn	16 15 08.3	+1.3
GUZR				eSg	Sb	16 15 30.9	-0.1
ONI	Oni	1.89	81	P	Pn	16 15 09.2	+0.4
ONI				S	Sn	16 15 33.0	+0.5
ONI	Oni	1.89	81	PN	Pn	16 15 09.2	+0.4
ONI				SN	Sn	16 15 33.5	+1.0
ONI	Oni	1.89	81	ePg	Pn	16 15 09.2	+0.4
ONI				eSg	Sn	16 15 33.0	+0.5
SHA1	Shidzhatmaz	1.90	42	ePg	Pn	16 15 09.4	+0.4
SHA1				eSg	Sn	16 15 32.4	-0.4
LZRR	Lazarevskoye	1.96	325	ePg	Pn	16 15 11.1	+1.5
LZRR				eSg	Sb	16 15 36.5	0.0
KBZ	Khabaz	2.02	45	i Pg	Pn	16 15 10.9	+0.5
KBZ				eSg	Sn	16 15 35.4	0.0
BAYT	Aydıntepe-Bayb	2.02	197	PN	Pn	16 15 10.0	-0.6
BKRG	Bakuriani	2.02	106	P	Pn	16 15 11.9	+1.3
BKRG				S	Sb	16 15 38.0	-0.5
DIGR	Digorskoe uzhe	2.05	73	ePg	Pn	16 15 11.6	+0.5
DIGR				eSg	Sn	16 15 35.9	-0.5
SENK	Senkaya-Erzuru	2.07	148	PN	Pn	16 15 11.3	0.0
KIV	Kislovodsk	2.08	38	PN	Pn	16 15 12.0	+0.7
ESPY	Espiye-Giresun	2.17	230	PN	Pn	16 15 11.8	-0.7
LACR	Lac	2.54	78	ePn	Pn	16 15 18.3	+0.5
LACR				eSn	Sn	16 15 48.6	0.0
ARNR	Ardon	2.62	70	ePn	Pn	16 15 19.7	+1.0
ARNR				i Sn	Sn	16 15 49.8	-0.5

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*ISK **13** 16:16:50.9, 42°.39N×40°.85E, h25^{km}, ML2.5/3*
*TIF **13** 16:16:51.3, 42°.40N×41°.00E, h27^{km}±3^{km}*
*DDA **13** 16:16:53.4, 42°.41N×41°.53E, h16^{km}±3^{km}, ML1.9*
ISC 13 16:16:51.9±1.5**, 42°.36N**±0°.03×**40°.95E**±0°.03**, h19**^{km}±4^{km}**,**
n34, σ0^{s}.73/62**, Black Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	Batumi	0.94	144	P	Pg	16 17 10.1	0.0
BATM				S	Sn	16 17 23.6	+0.6
BATM	Batumi	0.94	144	P	Pg	16 17 10.1	0.0
BATM				S	Sn	16 17 23.9	+1.0

BATM	Batumi	0.94	144	PG	Pn	16 17 09.9	-0.2
BATM				SG	Sn	16 17 23.8	+0.9
BATM	Batumi	0.94	144	*i* Pg	Pg	16 17 10.2	0.0
BATM				*i* Sg	Sn	16 17 23.8	+0.9
BATM	Batumi	0.94	144	*i* P	Pg	16 17 10.2	0.0
BATM				*i* S	Sn	16 17 24.1	+1.1
BCA	Borcka	1.04	151	PN	Pb	16 17 11.4	0.0
BCA				SN	Sn	16 17 25.6	0.0
DBOC	Borcka	1.15	152	*i* P	Pn	16 17 12.9	-0.1
DBOC				*i* S	Sn	16 17 28.3	+0.1
DBOC				IAML		16 17 29.0	
	comp=E,44nm,0.2s						
ARXR	Arkhyz	1.22	11	*e*Pg	Pn	16 17 13.6	-0.5
ARXR				*e*Sg	Sb	16 17 28.8	-1.1
CHOM	Cayeli-Rize	1.27	187	PN	Pn	16 17 14.0	-0.7
CHOM				SN	Sn	16 17 30.8	-0.5
RPOR	Krasnaya Polya	1.43	340	*e*Pg	Pb	16 17 18.1	+0.1
RPOR				*e*Sg	Sb	16 17 36.7	+1.0
DBAD	Bademkaya	1.45	157	*i* P	Pn	16 17 17.7	+0.5
DBAD				IAML		16 17 39.0	
	comp=N,24nm,0.5s						
DBAD				IAML		16 17 39.0	
	comp=E,19nm,0.2s						
DAGI	Agillar	1.47	150	*i* P	Pn	16 17 18.0	+0.5
DAGI				*i* S	Sn	16 17 36.5	+0.2
TKB	Tkibuli	1.51	90	P	Pn	16 17 18.2	+0.1
TKB				S	Sn	16 17 37.4	+0.1
TKB	Tkibuli	1.51	90	P	Pn	16 17 18.1	+0.1
TKB				S	Sn	16 17 37.3	+0.1
SOC	Sochi	1.52	324	*e*Pg	Pb	16 17 19.1	-0.4
SOC				*i* Sg	Sb	16 17 39.2	+0.8
NEY	Neytrino	1.57	55	*i* Pg	Pn	16 17 19.3	+0.3
NEY				*e*Sg	Sb	16 17 39.6	-0.4
EPOS	Posof	1.58	122	*i* P	Pb	16 17 20.6	0.0
DDEM	Demirkent	1.59	158	*i* P	Pb	16 17 20.2	-0.4
DDEM				*i* S	Sb	16 17 40.8	+0.4
DDEM				IAML		16 17 43.0	
	comp=E,18nm,0.2s						
DDEM				IAML		16 17 45.0	
	comp=N,26nm,0.3s						
GUZR	Guzeripl'	1.74	340	*e*Pg	Pb	16 17 23.1	-0.2
GUZR				*e*Sg	Sb	16 17 45.7	+0.9
SHA1	Shidzhatmaz	1.86	42	*i* Pg	Pb	16 17 24.6	-0.7
SHA1				*e*Sg	Sb	16 17 47.9	-0.4
ONI	Oni	1.86	82	P	Pn	16 17 23.9	+1.1
ONI				S	Sb	16 17 47.2	-1.0
ONI	Oni	1.86	82	P	Pn	16 17 23.8	+1.1
ONI				S	Sb	16 17 48.0	-0.3
ONI	Oni	1.86	82	PN	Pn	16 17 23.2	+0.4
ONI				SN	Sn	16 17 46.6	+0.7
ONI	Oni	1.86	82	*e*Pg	Pn	16 17 23.9	+1.1
ONI				*e*Sg	Sb	16 17 48.2	0.0
LZRR	Lazarevskoye	1.95	324	*e*Pg	Pb	16 17 26.3	-0.5
LZRR				*i* Sg	Sb	16 17 51.6	+1.0
KBZ	Khabaz	1.97	46	*i* Pg	Pb	16 17 25.6	-1.6
KBZ				*i* Sg	Sb	16 17 50.3	-1.1
BKRG	Bakuriani	2.01	107	P	Pb	16 17 26.6	-1.2
BKRG				S	Sb	16 17 51.9	-0.6
BKRG	Bakuriani	2.01	107	P	Pb	16 17 27.4	-0.5
BKRG				S	Sb	16 17 53.6	+1.1
DIGR	Digorskoe uzhe	2.01	74	*e*Pg	Pn	16 17 26.0	+1.0
DIGR				*i* Sg	Sb	16 17 51.6	-1.1
KIV	Kislovodsk	2.04	38	PN	Pn	16 17 24.8	-0.4
BAYT	Aydıntepe-Bayb	2.06	198	PN	Pn	16 17 25.0	-0.7
SENK	Senkaya-Erzuru	2.08	149	PN	Pn	16 17 26.2	+0.2
ESPY	Espiye-Giresun	2.21	230	PN	Pn	16 17 26.6	-0.9
LACR	Lac	2.51	78	*e*Pn	Pn	16 17 33.0	+1.2
LACR				*e*Sn	Sn	16 18 03.4	+1.4

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*ISK **13** 16:18:59.8, 42°.34N×40°.96E, h12km, ML3.3/11*
*TIF **13** 16:18:59.5, 42°.39N×41°.01E, h29km±2km*
*NORS **13** 16:19:00.2±0.0, 42°.48N×41°.06E, h2km, MPVA4.0*
*DDA **13** 16:19:00.4, 42°.29N×40°.91E, h13km±1km, ML2.9*
*MOS **13** 16:19:00.2±2.5, 42°.34N×40°.86E, h10km, mb3.6/1, Error ellipse: s-maj=8.5km s-min=6.3km az=82.0*

ISC 13 16:19:00.6±1.7**, 42°.33N**±0°.02×**40°.98E**±0°.02**, h13**km±13km**,**
n56, σ0ˢ.88/85**, 5C-2D, Black Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATM	Batumi	0.90	143	P	Pb	16 19 18.2	+0.1
BATM				S	Sn	16 19 31.4	-0.5
BATM	Batumi	0.90	143	PG	Pb	16 19 18.2	+0.1
BATM				SG	Sb	16 19 31.0	+0.9
BATM	Batumi	0.90	143	*i* P	Pb	16 19 18.2	+0.1
BATM				*i* S	Sn	16 19 31.6	-0.3
BATM	Batumi	0.90	143	⇑*i*PG	Pb	16 19 18.2	+0.1
BATM				*e*S	Sn	16 19 31.2	-0.7
BCA	Borcka	1.01	151	PG	Pb	16 19 19.5	-0.4
DBOC	Borcka	1.11	152	*i* P	Pb	16 19 21.1	-0.6
DBOC				*i* S	Sg	16 19 36.7	+0.2
DBOC				IAML		16 19 37.0	
	comp=E,417nm,0.5s						
CHOM	Cayeli-Rize	1.25	187	PN	Pn	16 19 23.5	-0.2
CHOM				SN	Sg	16 19 41.0	+0.3
ARXR	Arkhyz	1.25	10	*i* PG	Pn	16 19 21.9	-2.0
DBAD	Bademkaya	1.42	157	*i* P	Pn	16 19 25.8	-0.4
DBAD				IAML	Sb	16 19 45.0	0.0
	comp=N,176nm,0.1s						
DBAD				*i* S	Sb	16 19 45.0	0.0
DBAD				IAML		16 19 47.0	
	comp=E,179nm,0.2s						
DAGI	Agillar	1.44	150	*i* P	Pn	16 19 26.1	-0.4
DAGI				*i* S	Sn	16 19 45.0	-0.3
DAGI				IAML		16 19 45.0	
	comp=N,120nm,0.4s						
DAGI				IAML		16 19 45.0	
	comp=E,159nm,0.5s						
RPOR	Krasnaya Polya	1.46	339	*i* PG	Pn	16 19 25.9	-0.8
RPOR				*e*S	Sn	16 19 45.1	-0.7
TKB	Tkibuli	1.50	89	P	Pn	16 19 25.9	-1.3
TKB				S	Sn	16 19 45.3	-1.3
EPOS	Posof	1.55	122	*i* P	Pn	16 19 27.8	-0.2
EPOS				*i* S	Sb	16 19 48.7	0.0
EPOS				IAML		16 19 50.0	
	comp=E,85nm,0.3s						
EPOS				IAML		16 19 55.0	
	comp=N,236nm,0.8s						
DDEM	Demirkent	1.55	158	*i* P	Pn	16 19 27.9	-0.1
DDEM				*i* S	Sb	16 19 49.0	+0.1
DDEM				IAML		16 19 51.0	
	comp=N,451nm,0.3s						
DDEM				IAML		16 19 52.0	
	comp=E,321nm,0.3s						
SOC	Sochi	1.55	324	*e*PG	Pn	16 19 27.4	-0.5
SOC				*e*		16 19 48.9	
SOC				pmax	pmax		
	comp=Z,128nm,0.9s						
SOC				smax	smax		
	comp=N,214nm,0.5s						
SOC				smax	smax		
	comp=E,130nm,0.4s						
NEY	Neytrino	1.58	54	*i* Pg	Pn	16 19 27.4	-1.1
NEY				*e*Sg	Sn	16 19 47.2	-1.7
NEY	Neytrino	1.58	54	*de*PN	Pn	16 19 27.0	-1.5
NEY				pmax	pmax		
	comp=Z,279nm,0.5s						
KTUT	Trabzon	1.62	214	PN	Pn	16 19 28.7	-0.1
GUZR	Guzeripl'	1.78	340	⇑*i*PN	Pn	16 19 31.1	0.0
ONI	Oni	1.85	81	P	Pn	16 19 31.9	-0.2
ONI				S	Sn	16 19 55.5	+0.1
ONI	Oni	1.85	81	PN	Pn	16 19 31.9	-0.2
SHA1	Shidzhatmaz	1.87	41	*e*Pg	Pn	16 19 32.6	+0.1
SHA1				*e*Sg	Sn	16 19 55.9	-0.2
SHA1	Shidzhatmaz	1.87	41	*i* PN	Pn	16 19 32.0	-0.5
BKRG	Bakuriani	1.98	106	P	Pn	16 19 33.9	-0.1
BKRG				S	Sb	16 20 00.7	-0.6
LZRR	Lazarevskoye	1.98	324	*ce*PN	Pn	16 19 33.7	-0.1
LZRR				*i* S	Sb	16 20 01.1	0.0
LZRR				pmax	pmax		
	comp=Z,69nm,0.9s						
KBZ	Khabaz	1.98	45	*de*PN	Pn	16 19 34.3	+0.5
KRIK	Erzurum-spir	1.99	181	*i* P	Pb	16 19 37.5	+0.7
DIGR	Digorskoe uzhe	2.00	73	*e*Pg	Pn	16 19 35.0	+0.7
DIGR				*e*Sg	Sn	16 20 00.1	+0.7
DIGR	Digorskoe uzhe	2.00	73	*e*PN	Pn	16 19 35.2	+0.9
DIGR				pmax	pmax		
	comp=Z,26nm,0.3s						
BAYT	Aydıntepe-Bayb	2.04	198	PN	Pn	16 19 34.9	+0.2
KIV	Kislovodsk	2.05	37	PN	Pn	16 19 35.6	+0.8
KIV	Kislovodsk	2.05	37	*e*PN	Pn	16 19 35.7	+0.8
SENK	Senkaya-Erzuru	2.05	149	PN	Pb	16 19 36.3	-1.5
AKH	Akhalkalaki	2.09	115	PN	Pn	16 19 35.6	+0.1
AKH	Akhalkalaki	2.09	115	*e*PN	Pn	16 19 35.4	-0.1
AKH				*e*S	Sb	16 20 03.3	-1.2
BEYR	Belyy Ugol+	2.15	38	*e*PN	Pn	16 19 37.3	+1.1
BEYR				*e*S	Sn	16 20 03.8	+1.0
ESPY	Espiye-Giresun	2.20	231	PN	Pn	16 19 37.0	+0.2
TPSR	Tuapse	2.22	322	*e*PN	Pn	16 19 36.7	-0.4
TPSR				*e*S	Sb	16 20 07.4	-0.5
NCK	Nalchik	2.25	58	⇑*e*PN	Pb	16 19 39.8	-1.3
NCK				pmax	pmax		
	comp=Z,84nm,0.4s						
LSNR	Lesken	2.30	65	*e*PN	Pb	16 19 41.0	-1.0
LSNR				*e*S	Sn	16 20 08.2	+1.7
KORR	Kora	2.40	71	*e*Pn	Pb	16 19 43.2	-0.5
KORR				*e*Sn	Sb	16 20 13.8	+0.6
KORR	Kora	2.40	71	*e*PN	Pb	16 19 43.2	-0.5
KORR				*e*S	Sb	16 20 13.8	+0.6
KOPR	Koprukoy-ERZUR	2.43	164	PN	Pn	16 19 40.5	+0.3
STDR	Stavd-Durt	2.50	64	*e*PN	Pb	16 19 46.4	+1.1
LACR	Lac	2.50	77	*e*Pn	Pn	16 19 42.1	+1.0
LACR				*e*Sn	Sb	16 20 14.0	-2.2
LACR	Lac	2.50	77	*e*PN	Pn	16 19 42.0	+0.9
LACR				pmax	pmax		
	comp=Z,29nm,0.3s						
GUDG	Gudauri	2.60	86	P	Pn	16 19 42.5	0.0
TBLG	Delisi	2.87	101	PN	Pn	16 19 46.6	+0.6
GOF	Gofitskoye	3.11	28	⇑*e*PN	Pb	16 19 57.3	+1.6
GOF				*e*S	Sb	16 20 35.8	+2.2
GOF				pmax	pmax		
	comp=Z,19nm,0.6s						
GOF				smax	smax		
	comp=N,87nm,0.6s						
GOF				smax	smax		
	comp=E,90nm,0.7s						
ANN	Anapa	3.56	315	*e*PN	Pb	16 20 01.0	-2.5
ANN				*e*S	Sn	16 20 39.2	+1.7
GNI	Garni	3.58	126	PN	Pn	16 19 56.4	+0.4
GROC	Groznyy	3.66	75	*e*PN	Pb	16 20 05.8	+0.8
GROC				*e*		16 20 56.7	
GROC				smax	smax		
	comp=N,32nm,1.7s						
KVT	Kavak	3.90	253	PN	Pn	16 20 01.2	+1.0
DIKM	Dikmen	4.32	263	PN	Pn	16 20 06.9	+1.0
SUDU	Sudak	5.04	303	*e*PN	Pn	16 20 16.3	+0.5
SUDU				*e*S	Sn	16 21 14.2	+0.4
SUDU				pmax	pmax		
	comp=Z,3.0nm,0.3s						
SUDU				smax	smax		
	comp=N,2.0nm,0.3s						
SUDU				smax	smax		
	comp=E,6.0nm,0.3s						
OBN	Obninsk	13.11	349	*e*P	Pn	16 22 06.2	-0.2
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						

DJA 13 16:21:43.6±0.4**, 4°S**±5°×**13°0E**±°**, h21**km±6km**, M4.0**/9**,**
mB5.0/1**, mb5.0**/1**, MLv3.6**/9**, Mw(mB)4.3**/1**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	0.39	140	P	Pb	16 21 52.4	+0.6
BNDI				S	Sb	16 21 58.6	+1.3
MSAI	Masohi	1.13	320	P	Pn	16 22 04.0	-0.2
MSAI				S	Sb	16 22 18.7	+0.1
AAI	Ambon	1.55	290	P	Pb	16 22 10.8	-0.7
AAI				S	Sn	16 22 28.1	-1.3
NLAI	Namlea	2.73	291	P	Pn	16 22 26.5	+0.3
FAKI	Fak Fak	2.90	64	P	Pn	16 22 30.6	+2.1
FAKI				S	Sn	16 23 02.9	+0.1
SWI	Sorong	3.70	26	P	Pn	16 22 40.7	+1.1
SANI	Sanana	4.25	300	P	Pn	16 22 48.3	+1.2
SANI				S	Sn	16 23 36.7	+0.7
RKPI	Ransiki, Papua	5.26	59	P	Pn	16 23 03.3	+2.2
RKPI				S	Sn	16 24 00.8	-0.3

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*ISK **13** 16:22:50.5, 42°.34N×40°.96E, h21km, ML2.5/2*
*TIF **13** 16:22:51.5, 42°.34N×41°.07E, h27km±3km*
*DDA **13** 16:22:52.1, 42°.24N×41°.04E, h10km±1km, ML1.6*

ISC 13 16:22:51.5±2.2**, 42°.35N**±0°.03×**40°.98E**±0°.04**, h20**km±10km**,**
n24, σ0ˢ.79/47**, Black Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATM	Batumi	0.92	144	P	Pb	16 23 09.0	+0.3
BATM				S	Sg	16 23 21.5	+0.1
BATM	Batumi	0.92	144	PG	Pb	16 23 08.7	0.0
BATM				SG	Sn	16 23 21.9	+0.1
BATM	Batumi	0.92	144	*i* Pg	Pb	16 23 08.8	+0.2
BATM				*i* Sg	Sn	16 23 22.3	+0.5
BATM	Batumi	0.92	144	*i* P	Pb	16 23 08.9	+0.2
BATM				*i* S	Sn	16 23 22.3	+0.5
BCA	Borcka	1.02	152	PG	Pb	16 23 10.2	-0.3
BCA				SG	Sn	16 23 24.5	0.0
DBOC	Borcka	1.13	153	*i* P	Pn	16 23 11.8	-0.4
DBOC				*i* S	Sn	16 23 27.4	+0.3
DBOC				IAML		16 23 28.0	
	comp=E,31nm,0.5s						
ARXR	Arkhyz	1.23	10	*e*Pg	Pn	16 23 11.8	-2.0
ARXR				*e*Sg	Sb	16 23 27.6	-2.1
CHOM	Cayeli-Rize	1.26	187	PN	Pn	16 23 13.5	-0.5
CHOM				SN	Sb	16 23 30.1	-0.2
DBAD	Bademkaya	1.43	158	*i* P	Pn	16 23 16.3	-0.1
DBAD				*i* S	Sn	16 23 35.2	+0.4
DBAD				IAML		16 23 37.0	
	comp=N,14nm,0.3s						
DBAD				IAML		16 23 39.0	
	comp=E,14nm,0.4s						
RPOR	Krasnaya Polya	1.45	339	*e*Pg	Pn	16 23 15.8	-0.8
RPOR				*e*Sg	Sn	16 23 35.3	+0.2
DAGI	Agillar	1.45	151	*i* P	Pn	16 23 16.8	+0.1
DAGI				*i* S	Sn	16 23 35.1	-0.1
DAGI				IAML		16 23 38.0	
	comp=N,13nm,2.0s						
DAGI				IAML		16 23 46.0	
	comp=E,6.5nm,1.4s						
TKB	Tkibuli	1.50	89	P	Pn	16 23 17.4	+0.2
TKB				S	Sn	16 23 36.3	+0.1
SOC	Sochi	1.54	324	*e*Pg	Pn	16 23 18.9	+1.0
SOC				*e*Sg	Sb	16 23 38.7	+0.2
NEY	Neytrino	1.57	54	*e*Pg	Pn	16 23 17.7	-0.7
NEY				*e*Sg	Sn	16 23 38.2	0.0
GUZR	Guzeripl'	1.76	339	*e*Pg	Pn	16 23 21.4	+0.4
GUZR				*e*Sg	Sb	16 23 45.0	+0.1
ONI	Oni	1.85	82	P	Pn	16 23 22.1	0.0
ONI				S	Sb	16 23 46.8	-0.5
ONI	Oni	1.85	82	PN	Pn	16 23 22.2	0.0
ONI				SN	Sn	16 23 44.9	0.0
ONI	Oni	1.85	82	*e*Pg	Pn	16 23 22.1	0.0
ONI				*e*Sg	Sb	16 23 46.8	-0.5
SHA1	Shidzhatmaz	1.86	41	*e*Pg	Pn	16 23 22.6	+0.2
SHA1				*e*Sg	Sn	16 23 45.7	+0.3
KBZ	Khabaz	1.97	45	*e*Pg	Pn	16 23 24.6	+0.8
KBZ				*e*Sg	Sn	16 23 49.2	+1.3
BKRG	Bakuriani	1.98	106	P	Pn	16 23 21.4	-2.7
BKRG				S	Sb	16 23 52.6	+1.2
DIGR	Digorskoe uzhe	2.00	73	*e*Pg	Pn	16 23 24.3	0.0
DIGR				*e*Sg	Sn	16 23 49.9	+1.1
KIV	Kislovodsk	2.04	37	PN	Pn	16 23 24.8	+0.1
LACR	Lac	2.50	78	*e*Pn	Pn	16 23 31.6	+0.5
LACR				*i* Sn	Sn	16 24 02.1	+1.1

IDC 13 16:28:56.5±2.2**, 3°.33N**×**125°.40E, h0**km**, mb3.3**/3**,**
mb1 3.5/3**, mb1mx3.2**/37**, mbtmp3.3**/3**, Error ellipse:**
s-maj=202.4km s-min=27.6km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	24.74	160	P	P	16 34 19.4	-0.5
	0.7nm,0.9s,baz=338,slow=10,SNR=7.2						
ASAR	Alice Springs	28.08	163	P	P	16 34 50.6	+0.5
	0.1nm,0.6s,baz=341,slow=6.8,SNR=3.7						
MKAR	Makanchi Array	57.14	326	P	P	16 38 45.0	-0.1
	0.3nm,0.8s,baz=130,slow=9.8,SNR=4.3						

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*NIED **13** 17:06:00, 33°.70N×131°.90E, h83km, Mw6.3 Best double couple: $M_0$3.54000×10^{18} NP1:ϕ_s355.00000°, δ79.00000°, λ63.00000°. NP2:ϕ_s245.00000°, δ29.00000°, λ157.00000°.*

*DNK **13** 17:06:48.5±1.9, 33°.37N×131°.53E, h74km±9km, mb5.9, Ms5.5, Hypocentre not reviewed by the ISC*

*MOS **13** 17:06:49.5±0.9, 33°.64N×131°.76E, h86km, mb5.9/60, MS5.5/31, Error ellipse: s-maj=4.7km s-min=3.2km az=105.5*

*BJI **13** 17:06:50.4±0.0, 33°.64N×131°.87E, h80km, mB6.2/75, mb5.8/80, Ms6.0/95, Ms7 5.8/88*

*JMA **13** 17:06:50.8, 33°.69N×131°.89E, h78km, M6.2 Broadband fault plane solution: P waves. NP1:ϕ_s279.00000°, δ61.00000°, λ155.00000°. NP2:ϕ_s22.00000°, δ69.00000°, λ32.00000°. Principal axes: T Plg37.0000°, Azm243.0000°; N Plg53.0000°, Azm52.0000°; P Plg5.0000°, Azm149.0000°;*

*NEIC **13** 17:06:50.8±2.6, 33°.68N±0°.04×131°.83E±0°.06, h79km±1km, mb6.1/525, Mwb6.3/101, Mwc6.3/60, Mww6.3, Mwc6.3(GCMT) Error ellipse: s-maj=8.5km s-min=6.3km az=273.0*

*NEIC **13** 17:06:51.1, 33°.66N×131°.71E, h80km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.68; $M_{\theta\theta}$-0.62; $M_{\phi\phi}$-1.06; $M_{r\theta}$-1.08; $M_{\theta\phi}$-1.59; $M_{\phi r}$3.11; Fault plane solution: $M_0$3.94000×10^{18} NP1:ϕ_s358.72000°, δ77.08000°, λ62.35000°. NP2:ϕ_s245.61000°, δ30.31000°, λ153.70000°. Principal axes: T 4.3489, Plg50.0000°, Azm238.0000°; N -1.0138, Plg27.0000°, Azm5.0000°; P -3.3352, Plg27.0000°, Azm110.0000°;*

*IDC **13** 17:06:52.2±0.4, 33°.70N×131°.66E, h91km±2km, mb5.3/47, mb1 5.4/53, mb1mx5.4/57, mbtmp5.7/53, MS5.5/51, Ms1 5.5/51, ms1mx5.4/60 Error ellipse: s-maj=8.9km s-min=7.1km az=75.0*

*GCMT **13** 17:06:54.8±0.0, 33°.62N×131°.82E, h82km, MW6.3/170, Moment Tensor Solution. s169,c430; s170,c669; Duration: 3ˢ.5 Moment tensor: Scale 10^{18}Nm; M_{rr}1.07±.02; $M_{\theta\theta}$-0.37±.02; $M_{\phi\phi}$-0.70±.02; $M_{r\theta}$-1.06±.01; $M_{\theta\phi}$-1.66±.01; $M_{\phi r}$3.00±.01; Best double couple: $M_0$3.62300×10^{18} NP1:ϕ_s251.00000°, δ30.00000°, λ163.00000°. NP2:ϕ_s356.00000°, δ81.00000°, λ61.00000°. Principal axes: T 4.0850, Plg46.0000°, Azm236.0000°; N -0.9280, Plg29.0000°, Azm1.0000°; P -3.1610, Plg30.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **13** 17:06:54, 33°.68N×131°.98E, h90km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.98; $M_{\theta\theta}$-0.63; $M_{\phi\phi}$-0.35; $M_{r\theta}$-0.77; $M_{\theta\phi}$-1.10; $M_{\phi r}$2.89; Fault plane solution: $M_0$3.30000×10^{18} NP1:ϕ_s357.00000°, δ83.00000°, λ69.00000°. NP2:ϕ_s250.00000°, δ22.00000°, λ162.00000°. Principal axes: T 3.6680, Plg48.0000°, Azm245.0000°; N -0.9325, Plg21.0000°, Azm359.0000°; P -2.7355, Plg35.0000°, Azm104.0000°;*

*NEIC **13** 17:06:55, 33°.60N×131°.85E, h88km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.99; $M_{\theta\theta}$-0.32; $M_{\phi\phi}$-0.67; $M_{r\theta}$-1.13; $M_{\theta\phi}$-1.67; $M_{\phi r}$3.06; Fault plane solution: $M_0$3.77000×10^{18} NP1:ϕ_s355.00000°, δ83.00000°, λ61.00000°. NP2:ϕ_s251.00000°, δ30.00000°, λ165.00000°. Principal axes: T 4.1567, Plg45.0000°, Azm236.0000°; N -0.9690, Plg29.0000°, Azm359.0000°; P -3.1877, Plg31.0000°, Azm108.0000°;*

*BGR **13** 17:06:55.9±0.0, 34°.34N×132°.45E, h99km±6km, mb6.0, mB_BB6.4*

*NEIC **13** 17:07:11.8, 33°.37N×131°.65E, h88km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.02; $M_{\theta\theta}$-0.25; $M_{\phi\phi}$-0.77; $M_{r\theta}$-0.94; $M_{\theta\phi}$-1.65; $M_{\phi r}$2.52; Fault plane solution: $M_0$3.23000×10^{18} NP1:ϕ_s357.59000°, δ79.21000°, λ56.21000°. NP2:ϕ_s251.96000°, δ35.28000°, λ161.08000°. Principal axes: T 3.5918, Plg45.0000°, Azm234.0000°; N -0.7288, Plg33.0000°, Azm5.0000°; P -2.8630, Plg26.0000°, Azm114.0000°;*

ISC 13 17:06:51.0±0.2**, 33°.62N**±0°.02×**131°.81E**±0°.02**, h83**km±1km**,**
h83km:pP-P, n2060, σ1ˢ.79/2564**, mb6.0**/559**, 229C-77D,**
Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKI	Kunimi	0.20	273	⇑P	Pn	17 07 02.8	-0.4
JKI				S	Sn	17 07 11.4	-0.8
JKD	Kudamatsu	0.43	7	⇑P	Pn	17 07 03.3	-1.3
JKD				S	Sn	17 07 12.6	-2.0
JUS	Usuki	0.56	185	⇓P	Pn	17 07 05.8	+0.2
JUS				S	Sn	17 07 16.6	+0.2
JNA	Nagahama	0.56	96	⇑P	Pn	17 07 04.5	-1.1
JNA				S	Sn	17 07 14.7	-1.8
JHM	Kurahashi	0.79	49	⇑P	Pn	17 07 06.3	-1.6
JHM				S	Sn	17 07 18.0	-2.5
UWA2	Uwa jima 2	0.80	121	⇓P	Pn	17 07 07.0	-1.0
UWA2				S	Sn	17 07 19.2	-1.4
JSKE	Saikikamae	0.82	175	⇓P	Pn	17 07 08.5	+0.2
JFA	Akaike	0.85	276	⇓P	Pn	17 07 08.7	+0.2
JFA				S	Sn	17 07 22.1	+0.5
JTY	Toyota	0.89	316	⇓P	Pn	17 07 08.8	-0.2
JTY				S	Sn	17 07 22.4	0.0
JHIK	Hikimi	0.91	6	⇓P	Pn	17 07 08.4	-0.9
JNU	Nakatsue	0.92	238	⇑P	Pn	17 07 10.3	+0.8
JNU	Nakatsue	0.92	238	P	Pn	17 07 10.2	+0.8
	23µm,0.3s,baz=16,slow=6.3						
JNU				S	Sn	17 07 24.7	+1.6
	20µm,0.3s,baz=98,slow=22,SNR=18						
JNU				LR	LR	17 07 45.1	
	comp=Z,528µm,19.8s,baz=98,slow=61						
JKIT	Kitakata	1.04	197	⇓P	Pn	17 07 10.9	+0.2
JKIT				S	Sn	17 07 26.2	+0.7
JET	Tanbara	1.05	81	⇑P	Pn	17 07 09.4	-1.4
JET				S	Sn	17 07 23.7	-2.0
JKU	Kubokawa	1.09	106	⇑P	Pn	17 07 10.1	-1.3
JTO	Tosashimizu	1.13	132	⇓P	Pn	17 07 11.0	-0.8
JHT	Toyohira	1.16	26	⇑P	Pn	17 07 11.0	-1.2
JFI	Itaya	1.20	261	⇑P	Pn	17 07 13.7	+1.0
JTA	Tamana	1.25	239	⇑P	Pn	17 07 14.5	+1.2
JTA				S	Sn	17 07 31.7	+1.6
JHGM	Hagimishima	1.28	335	⇓P	Pn	17 07 13.1	-0.6
JIU3	Izumi3	1.36	218	⇑P	Pn	17 07 15.7	+1.0
JIU3				S	Sn	17 07 34.4	+1.9
JTSN	Tsuno	1.40	191	⇓P	Pn	17 07 16.5	+1.4
JGT2	ShimaneMisato	1.55	22	⇑P	Pn	17 07 15.8	-1.3
JGT2				S	Sn	17 07 34.4	-2.4
JUR	Ureshino	1.64	252	⇑P	Pn	17 07 19.7	+1.4
JMN	Monobe	1.73	86	⇑P	Pn	17 07 17.8	-1.7
JMN				S	Sn	17 07 38.0	-3.1
JHS	Saijyo	1.75	38	P	Pn	17 07 18.6	-1.1
JZO	Okuchi	1.79	215	⇑P	Pn	17 07 21.9	+1.6
JHD	Hondo	1.82	231	⇑P	Pn	17 07 22.1	+1.5
JJS	Sakaide	1.92	66	⇑P	Pn	17 07 20.2	-1.7
NGSJ	Nagasakinomoza	1.95	240	⇑P	Pn	17 07 23.6	+1.2
NGSJ				S	Sn	17 07 48.7	+2.5
MRT2	Murotomisaki 2	1.96	96	⇑P	Pn	17 07 20.3	-2.2
JNKG	Nichinankitago	1.99	191	P	Pn	17 07 24.7	+1.9
JTSM	Tsushimamitsus	2.14	290	⇓P	Pn	17 07 24.8	0.0
JNAR	Kushima--Naru	2.14	192	⇓P	Pn	17 07 26.5	+1.7
JTU	Tsushima	2.19	295	⇓P	Pn	17 07 25.5	0.0
JAI	Aioi	2.21	85	⇑P	Pn	17 07 24.0	-1.8
JAD	Aida	2.35	55	⇑P	Pn	17 07 26.2	-1.5
JAJ2	Tsuna	2.68	72	⇑P	Pn	17 07 29.9	-2.1
JFU	Fukue jima 2	2.74	250	⇑P	Pn	17 07 34.5	+1.6
JKS	Kasai	2.86	61	⇑P	Pn	17 07 32.8	-1.6
JOI	OKI	2.91	24	⇑P	Pn	17 07 34.2	-1.0
JMIK	Miki	2.94	65	⇑P	Pn	17 07 33.8	-1.7
JWM	Minabe	2.96	85	⇑P	Pn	17 07 34.1	-1.8
JKSM	Kasumi	3.06	49	⇑P	Pn	17 07 36.2	-1.0
JWY	Kouya	3.20	78	⇑P	Pn	17 07 37.8	-1.4
JKY	Yasaka	3.38	53	⇑P	Pn	17 07 40.3	-1.2
JHE	Heguri	3.38	71	⇑P	Pn	17 07 39.8	-1.7
JWT	Wachi	3.40	60	⇑P	Pn	17 07 40.8	-1.0
JMMH	Miemihama	3.52	86	⇑P	Pn	17 07 41.3	-2.1
JKN2	Miekihoku	3.76	79	⇑P	Pn	17 07 44.7	-2.0
TSUJ	Tsu 2	3.97	73	⇑P	Pn	17 07 47.8	-1.8
JEG	Eigenji	4.08	67	⇑P	Pn	17 07 50.2	-0.8
JIE	Ise	4.14	78	⇑P	Pn	17 07 50.2	-1.7
JICN	Ichinomiyachia	4.49	67	P	Pn	17 07 56.2	-0.3
TJN	Taejon	4.57	308	*d i*P	Pn	17 07 57.9	+0.3
INU	Inuyama	4.63	67		Pn	17 07 57.9	-0.7
JAO	Obara	4.79	68	⇑P	Pn	17 07 59.8	-1.0
JSSY	Shinshiroyabe	4.89	73	P	Pn	17 08 00.8	-1.3
KSRS	Korea Array	4.96	321	P	Pn	17 08 03.5	+0.5

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       274nm,0.3s,baz=140,slow=14,SNR=2405
KSRS                               PKiKP  PKiKP   17 23 13.7 -0.6
       0.1nm,0.3s,baz=155,slow=0.6,SNR=6.1
KSAR   Wonju Array Be     4.98 321 P      Pn      17 08 02.3 -0.9
KSAR   Wonju Array Be     4.98 321        Pn      17 08 02.2 -0.9
JGF    Kuroka             4.98  65 ⇑P     Pn      17 08 02.5 -0.9
KS19   Wonju Array Si     5.03 321        Pn      17 08 03.5 -0.5
HMMJ   Hamamatsu 2        5.05  74 ⇑P     Pn      17 08 02.8 -1.4
JYZW   Yoshizawa          5.09  73 P      Pn      17 08 03.4 -1.4
JGN    Niukaw             5.22  59 ⇑P     Pn      17 08 06.2 -0.4
JJH    Hakui              5.24  50 ⇑P     Pn      17 08 06.5 -0.2
JKKS   Kakegawashinom     5.24  76 P      Pn      17 08 06.4 -0.4
JNY    Yasuok             5.29  69 ⇑P     Pn      17 08 06.4 -1.2
JTT    Ttatey             5.42  55 ⇑P     Pn      17 08 09.5 +0.2
JNT    Takato             5.67  65 ⇑P     Pn      17 08 12.5 -0.4
INCN   Inchon             5.71 314 P      Pn      17 08 14.1 +0.9
INCN   Inchon             5.71 314 P      Pn      17 08 13.8 +0.5
INCN   Inchon             5.71 314        Pn      17 08 13.8 +0.5
JNG    Nsakai             5.86  60 ⇑P     Pn      17 08 15.6 +0.2
JYN    Shimob             5.87  70 ⇑P     Pn      17 08 14.7 -0.7
JHG    Hegura jima        5.92  43 ⇑P     Pn      17 08 16.4 +0.3
JSZ    Suzu               5.92  48 ⇑P     Pn      17 08 16.1  0.0
MJB9   Matsu-Tunnel       6.00  59        Pn      17 08 17.2  0.0
MAJO   Matsushiro         6.00  59c iP    Pn      17 08 17.2  0.0
MAJO                               pmax   pmax
       comp=Z,3µm,0.6s
MAJO   Matsushiro         6.00  59        Pn      17 08 17.2  0.0
MAT    Matsushiro         6.00  59 P      Pn      17 08 17.1 -0.1
MAT    Matsushiro         6.00  59 P      Pn      17 08 17.1 -0.1
MAT                                S      Sn      17 09 23.8 -0.7
MJAR   Matsushiro Arr     6.00  59 P      Pn      17 08 17.7 +0.5
       comp=Z,96nm,0.3s,baz=246,slow=13,SNR=1287
MJAR   Matsushiro Arr     6.00  59 P      Pn      17 08 17.0 -0.2
MJAR   Matsushiro Arr     6.00  59        Pn      17 08 17.0 -0.2
JSKK   Shikinejimakit     6.19  81 P      Pn      17 08 19.1 -0.7
JJN    Nakama             6.25  54 ⇑P     Pn      17 08 21.5 +1.0
JRY    Ryogami san        6.30  66 ⇑P     Pn      17 08 21.2 -0.2
JGK    Kuni               6.32  60 P      Pn      17 08 22.1 +0.5
JHJ    Hachijo jima 2     6.69  92 P      Pn      17 08 25.9 -0.7
       comp=Z,2µm,0.3s,baz=354,slow=6.7,SNR=88
JHJ                                S      Sn      17 09 38.4 -3.0
       comp=Z,872nm,0.3s,baz=89,slow=21,SNR=16
JHJ2   Mitsune            6.72  92        Pn      17 08 25.8 -1.2
JIZZ   Izumozaki          6.84  53 ⇑P     Pn      17 08 29.6 +0.9
JSD    Sado               6.84  48 ⇑P     Pn      17 08 28.7  0.0
JKT    Katashina          6.85  61 ⇑P     Pn      17 08 29.2 +0.3
JHK    Hiroka             6.91  56 ⇑P     Pn      17 08 29.9 +0.4
JIH    Iheya              7.36 208 P      Pn      17 08 37.0 +1.3
JIH                                S      Sn      17 09 55.0 -2.7
JNS    Sasagawa           7.40  53 ⇑P     Pn      17 08 36.9 +0.6
JOW    Kunigami           7.42 205 P      Pn      17 08 38.3 +1.6
JOW    Kunigami           7.42 205 P      Pn      17 08 38.1 +1.4
       comp=Z,5.6nm,0.3s,baz=104,slow=16,SNR=19
JOW                                S      Sn      17 09 57.1 -2.2
       comp=Z,27nm,0.3s,baz=61,slow=30,SNR=17
JOW    Kunigami           7.42 205        Pn      17 08 37.9 +1.2
JOW                                       Sn      17 09 56.9 -2.5
JFY    Yanaizu            7.46  57 P      Pn      17 08 37.8 +0.6
JKDJ   Kitadaitoujima     7.66 183 P      Pn      17 08 40.2 +0.3
JKDJ                               eS     Sn      17 09 59.7 -5.4
JMZ    Minamidaito 2      7.79 184 P      Pn      17 08 42.1 +0.4
JMZ                                S      Sn      17 10 01.8 -6.6
JNTH   Nagotoyohara       7.80 206 P      Pn      17 08 42.6 +0.8
JNTH                               S      Sn      17 10 05.0 -3.6
JFFD   Fukushimafurud     7.94  62 ⇑P     Pn      17 08 44.1 +0.4
JAGN   Aguni-jima         8.05 211 P      Pn      17 08 46.3 +1.2
JAGN                               S      Sn      17 10 13.1 -1.4
JYA    Atsumi             8.09  50 P      Pn      17 08 46.5 +0.8
JJT3   Tamagusuku3        8.23 206 P      Pn      17 08 49.4 +1.7
JJT3                               eS     Sn      17 10 16.0 -3.0
JKE    Kume jima 2        8.47 212 P      Pn      17 08 51.0  0.0
JKE                                eS     Sn      17 10 23.2 -1.8
JYK    Kaneyama           8.69  50 P      Pn      17 08 54.5 +0.6
MSHR   Mys Shultsa        8.96 357d iP    Pn      17 08 56.9 -0.6
JYW    Yuwa               8.97  46 P      Pn      17 08 58.8 +1.1
SSE    Sheshan            9.33 257 P      Pn      17 09 06.3 +3.7
SSE                                S      Sn      17 10 45.6 -0.2
SSE                                pmax   pmax
       comp=Z,500nm,1.9s
SSE                                pmax   pmax
       comp=Z,9µm,7.9s
SSE    Sheshan            9.33 257        Pn      17 09 05.5 +2.9
JNTW   Noshirotokiwa      9.42  43 P      Pn      17 09 05.1 +1.4
VLA    Vladivostok        9.48   0d iP    Pn      17 09 05.0 +0.4
VLA                                pmax   pmax
       comp=Z,693nm,0.8s
JSZI   Iwateshizukuis     9.55  48 P      Pn      17 09 06.9 +1.3
JAH    Hinai              9.64  45 P      Pn      17 09 08.0 +1.3
DL2    Dalian             9.76 306⇑iP     Pn      17 09 09.9 +1.4
DL2                                sP             17 09 30.6
DL2                                S      Sn      17 11 00.4 +4.1
DL2                                pmax   pmax
       comp=Z,240nm,1.1s
DL2                                pmax   pmax
       comp=Z,3µm,7.7s
DL2                                LR     LR
       comp=Z,40µm,4.9s
DL2                                LR     LR
       comp=Z,40µm,4.5s
DL2                                LR     LR
       comp=Z,55µm,14.1s
SNY    Shenyang          10.46 324 ⇓P     Pn      17 09 21.8 +3.8
SNY                                S      Sn      17 11 22.8  +10
SNY                                pmax   pmax
       comp=Z,470nm,2.3s
SNY                                pmax   pmax
       comp=Z,8µm,3.7s
SNY                                LR     LR
       comp=Z,85µm,24.7s
SNY                                LR     LR
       comp=Z,75µm,9.0s
SNY                                LR     LR
       comp=Z,69µm,31.9s
USRK   Ussuriysk Ar.     10.56   1 P      Pn      17 09 20.1 +0.8
       baz=184,slow=13,SNR=171
USRK                               S      Sn      17 11 10.7 -5.1
       baz=118,slow=30,SNR=2.2
USRK                               LR     LR      17 13 13.3
       comp=Z,14µm,19.8s,baz=170,slow=36
USA0B  Ussuriysk Arra    10.56   1 P      Pn      17 09 20.5 +1.1
USA0B  Ussuriysk Arra    10.56   1        Pn      17 09 20.5 +1.1
NJ2    Nanjing           11.01 265 ⇑P     Pn      17 09 28.5 +3.0
NJ2                                sP             17 09 49.9
NJ2                                pmax   pmax
       comp=Z,1µm,1.9s
NJ2                                LR     LR
       comp=Z,33µm,13.7s
NJ2                                LR     LR
       comp=Z,47µm,22.3s
NJ2                                LR     LR
       comp=Z,101µm,24.2s
JCJ    Chichijima        11.07 123 P      Pn      17 09 28.8 +2.5
       comp=Z,59nm,0.3s,baz=313,slow=4.1,SNR=30
JCJ                                S      Sn      17 11 28.2 -0.1
       comp=Z,49nm,0.3s,baz=294,slow=21,SNR=7.4
JCJ                                LR     LR      17 13 13.5
       comp=Z,67µm,21.1s,baz=311,slow=34
MDJ    Mudanjiang        11.11 352 P      Pn      17 09 28.3 +1.5
MDJ                                sP             17 09 49.9
MDJ                                S      Sn      17 11 29.5 +0.4
MDJ                                PcP    PcP     17 15 21.6 +4.9
MDJ                                ScP    ScP     17 18 45.3 +3.5
MDJ                                PcS    PcS     17 18 54.4 +4.0
MDJ                                ScS    ScS     17 22 20.3 +3.3
MDJ                                pmax   pmax
       comp=Z,380nm,1.2s
MDJ                                pmax   pmax
       comp=Z,8µm,4.3s
MDJ                                LR     LR
       comp=Z,5µm,15.7s
MDJ                                LR     LR
       comp=Z,20µm,10.0s
MDJ                                LR     LR
       comp=Z,12µm,9.3s
MDJ    Mudanjiang        11.11 352        Pn      17 09 27.6 +0.8
CN2    Changchun         11.31 336 eP     Pn      17 09 30.8 +1.3
CN2                                ePP            17 09 41.8
CN2                                eS     Sn      17 11 35.0 +1.1
CN2                                eSS            17 11 50.5
CN2                                pmax   pmax
       comp=Z,280nm,1.2s
CN2                                pmax   pmax
       comp=Z,4µm,6.0s
CN2                                LR     LR
       comp=Z,10µm,12.0s
CN2                                LR     LR
       comp=Z,42µm,12.0s
CN2                                LR     LR
       comp=Z,29µm,12.0s
TEY    Ternei            11.98  17⇓eP     Pn      17 09 41.2 +2.6
TEY                                eS     Sn      17 11 54.7 +4.4
TEY                                pmax   pmax
       comp=Z,100nm,0.9s
TEY                                pmax   pmax
       comp=N,110nm,1.0s
TEY                                pmax   pmax
       comp=E,30nm,0.9s
TEY                                smax   smax
       comp=Z,19µm,12.8s
TEY                                MLR    MLR
       comp=E,10µm,12.0s
TEY                                MLR    MLR
       comp=N,11µm,14.0s
TEY                                MLR    MLR
       comp=Z,16µm,14.0s
ERM    Erimo             12.27  44deP     Pn      17 09 42.9 +0.4
ERM                                pmax   pmax
       comp=Z,631nm,1.7s
ERM    Erimo             12.27  44        Pn      17 09 41.9 -0.6
TIA    Tai'an            12.33 286 P      Pn      17 09 45.9 +2.5
TIA                                sP     P       17 10 07.6  +15
TIA                                S      Sn      17 12 06.9 +8.1
TIA                                pmax   pmax
       comp=Z,620nm,1.4s
TIA                                LR     LR
       comp=Z,40µm,21.3s
TIA                                LR     LR
       comp=Z,34µm,24.7s
TIA                                LR     LR
       comp=Z,71µm,31.7s
TATO   Taipei            12.46 229 P      Pn      17 09 48.5 +3.3
TATO   Taipei            12.46 229        Pn      17 09 46.8 +1.6
YHNB   Yeheng            12.75 228        Pn      17 09 50.2 +1.1
NACB   Ninganchiao       12.98 226        Pn      17 09 52.1 -0.1
ASAJ   Asahikawa         13.42  36 P      Pn      17 09 57.2 -0.7
       comp=Z,9.7nm,0.3s,baz=220,slow=12,SNR=53
JKA    Kamikawa-asahi    13.42  36        Pn      17 09 57.2 -0.7
SSLB   Suanglung         13.65 227        Pn      17 10 01.3 +0.2
BJT    Baijiatuau        14.05 301 P      Pn      17 10 07.4 +1.2
BJT    Baijiatuau        14.05 301 P      Pn      17 10 07.4 +1.2
BJI    Beijing           14.06 302 P      Pn      17 10 07.8 +1.6
BJI                                S      Sn      17 12 47.0 +6.3
BJI                                LR     LR
       comp=Z,27µm,26.0s
BJI                                LR     LR
       comp=Z,28µm,23.5s
BJI                                LR     LR
       comp=Z,50µm,30.9s
TPUB   Ta-pu             14.21 227        Pn      17 10 07.5 -0.9
QZH    Quanzhou          14.40 237⇑iP     Pn      17 10 12.3 +1.5
QZH                                sP     P       17 10 39.8  +25
QZH                                S      Sn      17 12 55.5 +6.2
QZH                                pmax   pmax
       comp=Z,830nm,1.4s
QZH                                pmax   pmax
       comp=Z,28µm,10.2s
QZH                                LR     LR
       comp=Z,32µm,18.2s
QZH                                LR     LR
       comp=Z,22µm,18.0s
QZH                                LR     LR
       comp=Z,44µm,20.1s
NMR    Nemuro--Hokkai    14.59  44⇑iP     Pn      17 10 11.0 -2.1
NMR                                i S    Sn      17 12 51.5 -2.2
GLVR   Golovnino         14.70  43d iP    Pn      17 10 13.8 -0.7
GLVR                               eS     Sn      17 12 55.8 -0.4
KNMB   Chin-men Tao      14.85 236 P      Pn      17 10 18.2 +1.6
GRPR   Tuman             15.00  42d iP    Pn      17 10 17.2 -1.2
GRPR                               i S    Sn      17 13 02.2 -1.4
GRPR                               pmax   pmax
       comp=Z,1µm,1.3s
GRPR                               pmax   pmax
       comp=N,848nm,1.0s
GRPR                               pmax   pmax
       comp=E,278nm,1.3s
YUK    Yuzh-Kuril'sk     15.08  42d iP    Pn      17 10 18.1 -1.2
YUK                                i S    Sn      17 13 04.2 -1.2
YUK                                pmax   pmax
       comp=Z,1µm,1.5s
YUK                                pmax   pmax
       comp=N,747nm,1.7s
YUK                                pmax   pmax
       comp=E,662nm,1.0s
WHN    Wuhan             15.11 263⇑iP     P       17 10 22.1 -1.1
WHN                                sP     sP      17 10 45.3 -4.6
WHN                                S      S       17 13 15.0 -3.5
WHN                                sS     sS      17 13 28.3  -16
WHN                                LR     LR
       comp=E,25µm,5.9s
WHN                                LR     LR
       comp=E,53µm,11.8s
WHN                                LR     LR
       comp=E,225µm,31.9s
SHO    Shikotan          15.53  44d iP    Pn      17 10 22.7 -2.4
SHO                                i S    Sn      17 13 13.9 -2.5
SHO                                pmax   pmax
       comp=Z,869nm,1.4s
SHO                                pmax   pmax
       comp=N,240nm,1.3s
SHO                                pmax   pmax
       comp=E,296nm,1.6s
KLR    Kul'dur           15.60 360 P      Pn      17 10 26.9 +1.0
       comp=E,4.0nm,0.3s,baz=178,slow=12,SNR=80
KLR                                PKiKP  PKiKP   17 23 15.6 -0.9
       comp=E,0.2nm,0.3s,baz=282,slow=1.7,SNR=6.1
YSS    Yuzh-Sakhalins    15.70  29⇑eP     Pn      17 10 27.3 +0.2
YSS                                eS     Sn      17 13 18.5 -1.8
YSS                                pmax   pmax
       comp=N,460nm,1.3s
YSS                                pmax   pmax
       comp=Z,840nm,1.3s
YSS                                smax   smax
       comp=N,20µm,10.4s
YSS                                smax   smax
       comp=E,11µm,12.5s
YSS                                MLR    MLR
       comp=Z,9µm,17.0s
YSS                                MLR    MLR
       comp=N,8µm,14.0s
YSS                                MLR    MLR
       comp=E,8µm,16.0s
YSS    Yuzh-Sakhalins    15.70  29        Pn      17 10 26.8 -0.3
YSS                                IAmb   IAmb    17 10 30.8
       comp=Z,2µm,1.4s
TIY    Taiyuan           16.26 290 eP     P       17 10 37.4 +1.5
TIY                                S      S       17 13 40.3 -1.8
TIY                                pmax   pmax
       comp=Z,150nm,1.2s
TIY                                pmax   pmax
       comp=Z,14µm,5.0s
TIY                                LR     LR
       comp=Z,14µm,12.4s
TIY                                LR     LR
       comp=Z,11µm,9.8s
TIY                                LR     LR
       comp=Z,68µm,37.1s
KUR    Kuril'sk          16.95  42d iP    Pn      17 10 40.9 -1.8
KUR                                eS     Sn      17 13 48.6 -1.9
KUR                                pmax   pmax
       comp=Z,876nm,1.0s
KUR                                pmax   pmax
       comp=N,196nm,1.1s
KUR                                pmax   pmax
       comp=E,139nm,0.9s
KUR                                pmax   pmax
       comp=Z,10µm,3.2s
KUR                                smax   smax
       comp=E,20µm,13.3s
KUR                                smax   smax
       comp=N,14µm,13.8s
KUR                                MLR    MLR
       comp=Z,8µm,13.0s
KUR                                MLR    MLR
       comp=E,8µm,14.0s
KUR                                MLR    MLR
       comp=N,5µm,10.0s
UGL    Uglegorsk         17.23  23deP     Pn      17 10 45.9 -0.2
UGL                                eS     Sn      17 13 54.2 -3.0
UGL                                pmax   pmax
       comp=Z,4µm,2.0s
UGL                                pmax   pmax
       comp=Z,627nm,1.4s
UGL                                smax   smax
       comp=E,8µm,6.3s
UGL                                MLR    MLR
       comp=Z,11µm,15.0s
UGL                                MLR    MLR
       comp=E,16µm,18.0s
GRNR   Gornyy            17.47  10⇓iP     P       17 10 50.3 +1.2
GRNR                               eS     Sn      17 14 03.0  0.0
GRNR                               pmax   pmax
       comp=Z,210nm,1.2s
GRNR                               smax   smax
       comp=N,20nm,1.3s
GRNR                               MLR    MLR
       comp=Z,10µm,15.0s
HHC    Hu-ho-hao-te      17.64 300 eP     Pn      17 10 54.0 +2.7
HHC                                sP     sP      17 11 21.4 +3.4
HHC                                S      S       17 14 10.1 +0.7
HHC                                pmax   pmax
       comp=Z,1µm,0.7s
HHC                                pmax   pmax
       comp=Z,4µm,3.7s
HHC                                LR     LR
       comp=Z,10µm,8.9s
HHC                                LR     LR
       comp=Z,13µm,9.9s
HHC                                LR     LR
       comp=Z,10µm,7.8s
HIA    Hailar            18.02 334 P      Pn      17 10 56.4 +0.6
HIA                                pmax   pmax
       comp=Z,830nm,1.5s
HIA    Hailar            18.02 334 P      Pn      17 10 56.4 +0.6
APYP   Conner            18.33 214 eP     P       17 10 58.0 -0.8
PALP   Palanan           18.52 209 eP     Pn      17 11 03.3 +1.3
BTO    Baotou            18.70 298 eP     Pn      17 11 06.1 +2.0
ABRA   Dolores           18.77 215 eP     P       17 11 04.2 +0.7
CAUP   Cauayan           18.88 211 eP     Pn      17 11 06.1 -0.2
TYV    Tymovskoe         18.97  22 eP     Pn      17 11 07.4 +0.3
TYV                                eS     S       17 14 35.4 -1.0
TYV                                pmax   pmax
       comp=Z,4µm,2.4s
TYV                                pmax   pmax
       comp=Z,349nm,1.4s
TYV                                smax   smax
       comp=N,6µm,7.8s
TYV                                smax   smax
       comp=N,66nm,1.9s
TYV                                MLR    MLR
       comp=Z,13µm,15.0s
SZP    Santa             18.97 215 P      P       17 11 05.5 -0.2
SZP                                IAmb   IAmb    17 11 17.1
       comp=Z,835nm,1.0s
XAN    Xi'an             19.02 278 P      P       17 11 06.8 +0.6
XAN                                S      Sn      17 14 39.8 -0.8
XAN                                PcP    PcP     17 15 31.6 +3.5
XAN                                pmax   pmax
       comp=Z,760nm,1.5s
XAN                                pmax   pmax
       comp=Z,18µm,6.9s
XAN                                LR     LR
       comp=Z,18µm,12.2s
XAN                                LR     LR
       comp=Z,14µm,15.0s
XAN    Xi'an             19.02 278 P      Pn      17 11 07.1 -0.7
XAN                                pmax   pmax
       comp=Z,2µm,1.6s
XAN    Xi'an             19.02 278 P      Pn      17 11 07.1 -0.7
XAN                                IAmb   IAmb    17 11 11.9
       comp=Z,2µm,1.6s
HKC    Hong Kong Obse    19.20 239 ⇑P     P       17 11 09.0 +0.8
ENH    Enshi             19.23 266 P      P       17 11 09.0 +0.4
ENH                                IAmb   IAmb    17 11 16.4
       comp=Z,1µm,0.9s
HKPS   Hong Kong Po S    19.24 239 P      P       17 11 09.1 +0.5
HKPS                               IAmb   IAmb    17 11 12.8
       comp=Z,986nm,0.8s
GZH    Guangzhou         19.32 242⇑iP     P       17 11 04.6 -4.9
GZH                                sP     pP      17 11 30.3 +4.2
GZH                                S      S       17 14 38.9 -4.9
GZH                                pmax   pmax
       comp=Z,33µm,8.8s
MCO    Taipa Grande      19.75 239 P      P       17 11 15.0 +0.7
BALP   Baler             20.06 210 eP     P       17 11 17.1 -0.5
SMPP   San Manuel, Pa    20.09 213 eP     P       17 11 16.1 -1.8
BOLP   Bolinao           20.24 215 eP     P       17 11 19.6 +0.1
ZEA    Zeya              20.37 352 eP     P       17 11 20.4 -0.3
ZEA                                e              17 11 40.0
ZEA                                eS     S       17 15 04.0 -0.1
ZEA                                e              17 15 30.0
ZEA                                pmax   pmax
       comp=N,450nm,0.6s
ZEA                                pmax   pmax
       comp=Z,970nm,0.7s
ZEA                                pmax   pmax
       comp=Z,300nm,3.0s
ZEA                                pmax   pmax
       comp=N,2µm,4.0s
ZEA                                pmax   pmax
       comp=Z,6µm,4.0s
ZEA                                pmax   pmax
       comp=N,3µm,5.0s
ZEA                                smax   smax
       comp=E,14µm,10.0s
ZEA                                smax   smax
       comp=N,11µm,11.0s
ZEA                                MLR    MLR
       comp=Z,12µm,13.0s
ZEA                                MLR    MLR
       comp=N,10µm,12.0s
PCPH   Palayan           20.42 211⇓eP     P       17 11 21.4 -0.1
NKL    Nikolayevsk       20.53  15 eP     P       17 11 20.5 -1.8
NKL                                eS     Sn      17 15 25.9  +10
NKL                                pmax   pmax
       comp=Z,195nm,1.9s
NKL                                pmax   pmax
       comp=E,9.0nm,0.7s
NKL                                pmax   pmax
       comp=N,143nm,25.3s
SCZP   Santa Cruz        20.77 214 eP     P       17 11 23.6 -1.6
PVCP   Virac             21.12 201 eP     P       17 11 30.0 +1.0
GQP    Guinayangan       21.39 206⇓eP     P       17 11 33.0 +1.1
LQP    Lukban            21.55 208 eP     P       17 11 33.3 -0.5
TGY    Tagaytay City     21.80 210 P      P       17 11 37.1 +0.8
       comp=N,1µm,0.7s,baz=336,slow=1.6,SNR=23
TGY    Tagaytay City     21.80 210⇑eP     P       17 11 27.5 -8.8
CNP    Catarman          22.00 199 eP     P       17 11 39.5 +1.0
BOAC   Boac              22.03 207 eP     P       17 11 39.3 +0.6
LUBP   Lubang            22.42 211 eP     P       17 11 40.9 -2.0
CIT    Chita             22.63 330 eP     P       17 11 44.2 -0.8
CIT                                e              17 12 19.5
CIT                                pmax   pmax
       comp=Z,759nm,2.6s
GYA    Guiyang           22.87 259⇑iP     P       17 11 46.8 -0.9
GYA                                pP     pP      17 12 06.9 +2.0
GYA                                PP     PnPn    17 12 17.9 +1.7
GYA                                S      S       17 15 49.1 -2.0
GYA                                sS     Sn      17 16 16.4 +3.3
GYA                                pmax   pmax
       comp=Z,130nm,1.0s
GYA                                pmax   pmax
       comp=Z,2µm,5.5s
GYA                                LR     LR
       comp=Z,16µm,18.6s
GYA                                LR     LR
       comp=Z,25µm,17.2s
GYA                                LR     LR
       comp=Z,33µm,17.9s
OTRP   Odiongan          22.97 205 eP     P       17 11 48.5 -0.1
LZH    Lanzhou           23.05 284 ⇑P     P       17 11 49.3 -0.2
LZH                                pP     sP      17 12 12.3 -4.7
LZH                                PP     PnPn    17 12 21.6 +3.1
LZH                                S      S       17 15 50.9 -3.0
LZH                                sS     sS      17 16 21.3 -3.9
LZH                                pmax   pmax
       comp=Z,1µm,1.1s
LZH                                pmax   pmax
       comp=Z,11µm,7.6s
LZH                                LR     LR
       comp=Z,29µm,12.0s
LZH                                LR     LR
       comp=Z,23µm,12.5s
LZH                                LR     LR
       comp=Z,37µm,14.6s
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GUMO  Guam              23.21 146   P      P       17 11 51.1 +0.1
      comp=Z,485nm,0.7s,baz=182,slow=7.6,SNR=16
GUMO  Guam              23.21 146   P      P       17 11 51.0 +0.1
GUMO                                IAmb   IAmb    17 11 54.7
      comp=Z,1µm,1.0s
SJMP  San Jose          23.21 207  eP      P       17 11 50.4 -0.6
ULN   Ulaanbaatar       23.41 315   P      P       17 11 52.7  0.0
ULN                                 P      P       17 11 52.7  0.0
ULN                                 S      S       17 16 08.2 +8.7
ULN                                 S      S       17 16 08.2 +8.7
ULN   Ulaanbaatar       23.41 315   P      P       17 11 52.4 -0.3
ULN                                 pmax   pmax
      comp=Z,967nm,1.0s
ULN   Ulaanbaatar       23.41 315   P      P       17 11 52.4 -0.3
ULN                                 IAmb   IAmb    17 12 17.8
      comp=Z,967nm,1.0s
RCP   Roxas             23.48 203⇑eP      P       17 11 53.0 -0.4
SONM  Songino Array     23.79 314   P      P       17 11 56.2 +0.2
      comp=Z,127nm,0.8s,baz=132,slow=9.7,SNR=436
SONM                                PcP    PcP     17 15 39.2 +1.9
      comp=Z,22nm,0.6s,baz=167,slow=2.8,SNR=9.9
SONM                                LR     LR      17 22 21.2
      comp=Z,18µm,19.6s,baz=116,slow=39
SONM                                PKiKP  PKiKP   17 23 19.5 -0.8
      comp=Z,3.1nm,0.6s,baz=183,slow=1.5,SNR=12
SONM  Songino Array     23.79 314   P      P       17 11 55.6 -0.5
SONM                                       PcP     17 15 37.4 +0.1
CD2   Chengdu           23.84 271⇑iP      P       17 11 56.3 -0.3
CD2                                 pP     pP      17 12 13.6 -1.5
CD2                                 sP     sP      17 12 25.9 +0.7
CD2                                 S      S       17 16 07.3 +0.7
CD2                                 sS     sS      17 16 38.3 -0.8
CD2                                 pmax   pmax
      comp=Z,2µm,0.7s
CD2                                 pmax   pmax
      comp=Z,17µm,8.6s
CD2                                 LR     LR
      comp=Z,33µm,10.7s
CD2                                 LR     LR
      comp=Z,50µm,15.7s
CD2                                 LR     LR
      comp=Z,52µm,27.0s
BUSP  Coron             23.99 209  eP      P       17 11 55.2 -2.8
MSLP  Maasin            24.23 197  eP      P       17 11 59.0 -1.1
QIZ   Qiongzhong        24.40 239   P      P       17 12 01.8 +0.2
QIZ                                 sP     sP      17 12 28.3 -2.3
QIZ                                 S      S       17 16 16.4 +0.9
QIZ                                 pmax   pmax
      comp=Z,8µm,5.1s
QIZ                                 LR     LR
      comp=Z,16µm,18.2s
QIZ                                 LR     LR
      comp=Z,12µm,16.1s
QIZ                                 LR     LR
      comp=Z,24µm,24.8s
QIZ   Qiongzhong        24.40 239   P      P       17 12 01.8 +0.2
GUIM  Jordan            24.40 202  eP      P       17 12 01.5 -0.1
SKR   Severo-Kuril's    24.63  39d iP      P       17 12 06.0 +2.5
SKR                                eS      S       17 16 20.6 +1.9
SKR                                 pmax   pmax
      comp=Z,649nm,1.9s
SKR                                 pmax   pmax
      comp=Z,2µm,7.5s
SKR                                 MLR    MLR
      comp=Z,3µm,17.0s
TBP   Tagbilaran        24.91 199  eP      P       17 12 08.2 +1.8
ENPP  El Nido           25.03 210  eP      P       17 12 05.4 -2.0
BUTP  Butuan            25.19 194  eP      P       17 12 08.2 -0.7
SNPH  Sibulan           25.42 200⇑eP      P       17 12 14.9 +3.9
GTA   Gaotai            26.27 292  ⇑P      P       17 12 18.1 -0.5
GTA                                 pP     pP      17 12 40.1 +2.5
GTA                                 sP     sP      17 12 51.9 +4.5
GTA                                 PcP    PcP     17 15 46.5 +3.5
GTA                                 S      S       17 16 44.0 -1.2
GTA                                 SS     SnSn    17 18 01.8 +8.6
GTA                                 ScP    ScP     17 19 17.8 +2.5
GTA                                 PcS    PcS     17 19 23.5 -0.7
GTA                                 ScS    ScS     17 23 03.0 -2.5
GTA                                 pmax   pmax
      comp=Z,62nm,1.8s
GTA                                 pmax   pmax
      comp=Z,4µm,7.6s
GTA                                 LR     LR
      comp=Z,12µm,20.0s
GTA                                 LR     LR
      comp=Z,19µm,21.3s
GTA                                 LR     LR
      comp=Z,23µm,19.0s
BUKP  Musuan            26.37 195  eP      P       17 12 18.6 -1.0
KMI   Kunming           26.64 259   P      P       17 12 21.4 -0.8
KMI                                 pP     pP      17 12 44.8 +3.5
KMI                                 PP     PnPn    17 13 09.0 +1.3
KMI                                 S      S       17 16 44.1 -7.4
KMI                                 sS     sS      17 17 19.0 -5.6
KMI                                 pmax   pmax
      comp=Z,180nm,1.3s
KMI                                 pmax   pmax
      comp=Z,5µm,6.3s
KMI                                 LR     LR
      comp=Z,16µm,12.4s
KMI                                 LR     LR
      comp=Z,31µm,12.9s
KMI                                 LR     LR
      comp=Z,37µm,12.2s
KMI   Kunming           26.64 259   P      P       17 12 21.1 -1.1
KMI                                 pmax   pmax
      comp=Z,234nm,0.7s
KMI   Kunming           26.64 259   P      P       17 12 21.1 -1.1
ZAK   Zakamensk         26.78 317  eP      P       17 12 22.9 -0.2
ZAK                                 pmax   pmax
      comp=Z,150nm,1.2s
PAGZ  Pagadian          26.81 199  eP      P       17 12 21.8 -1.6
PEA0B Petropavlovsk-    26.84  36   P      P       17 12 23.4  0.0
PEA0B                               pmax   pmax
      comp=Z,307nm,1.3s
PEA0B Petropavlovsk-    26.84  36   P      P       17 12 23.4  0.0
PETK  Petropavlovsk-    26.84  36   P      P       17 12 23.4  0.0
      comp=Z,19nm,0.6s,baz=222,slow=4.0,SNR=37
PETK                                PcP    PcP     17 15 43.5 -0.4
      comp=Z,24nm,0.7s,baz=198,slow=5.5,SNR=4.8
PETK                                PKiKP  PKiKP   17 23 21.1 -0.6
      comp=Z,5.6nm,0.8s,baz=177,slow=5.0,SNR=7.6
PETK                                LR     LR      17 23 37.0
      comp=Z,7µm,19.4s,baz=226,slow=37
BOD   Bodaibo           27.04 339  eP      P       17 12 23.9 -1.2
BOD                                e               17 12 43.6
BOD                                 pmax   pmax
      comp=Z,435nm,1.6s
MATI  Mati              27.04 192  eP      P       17 12 24.2 -1.3
DAV   Davao City (W)    27.05 194⇑iP      P       17 12 24.3 -1.3
IRK   Irkutsk           27.18 322  eP      P       17 12 26.7 +0.2
IRK                                 pmax   pmax
      comp=Z,645nm,3.1s
CTBH  Cotabato--PC H    27.19 197⇓eP      P       17 12 27.4 +0.5
TLY   Talaya            27.22 320   P      P       17 12 27.0 +0.1
      comp=Z,10nm,0.6s,baz=222,slow=6.6,SNR=15
TLY                                 LR     LR      17 24 37.1
      comp=Z,9µm,18.6s,baz=122,slow=39
TLY   Talaya            27.22 320c iP      P       17 12 26.9 +0.1
TLY                                e               17 12 59.3
TLY                                eS      S       17 17 02.0 +2.4
TLY                                eSSS    SSS     17 18 21.4
TLY                                 pmax   pmax
      comp=Z,293nm,1.5s
TLY                                 MLR    MLR
      comp=Z,25µm,14.0s
TLY   Talaya            27.22 320   P      P       17 12 26.9 +0.1
PET   Petropavlovsk     27.26  37  eP      P       17 12 28.2 +1.0
PET                                e               17 15 45.1
PET                                eS      S       17 16 59.7 -0.5
PET                                 pmax   pmax
      comp=Z,3µm,9.1s
PET                                 pmax   pmax
      comp=Z,449nm,1.4s
PET                                 MLR    MLR
      comp=Z,12µm,19.0s
PET                                 MLR    MLR
      comp=Z,12µm,18.0s
PET   Petropavlovsk     27.26  37   P      P       17 12 26.7 -0.5
PET                                 IAmb   IAmb    17 12 31.1
      comp=Z,677nm,1.3s
SLVN  Son La            27.52 251   P      P       17 12 29.4 -0.6
SKMP  Bagumbayan, Su    27.80 196  eP      P       17 12 32.8 +0.5
BATP  Bataraza          27.88 211  eP      P       17 12 33.8 +0.8
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DDMP  Don Marcelino,    27.96 193  eP      P       17 12 32.4 -1.3
GSPH  General Santos    28.13 195⇑iP      P       17 12 38.2 +2.8
YAK   Yakutsk           28.46 358   P      P       17 12 36.2 -1.5
      comp=Z,210nm,0.8s,baz=88,slow=3.2,SNR=127
YAK                                 PcP    PcP     17 15 47.5 -0.1
      comp=Z,73nm,0.7s,baz=191,slow=2.3,SNR=6.0
YAK                                 LR     LR      17 24 49.2
      comp=Z,5µm,18.7s,baz=182,slow=38
YAK   Yakutsk           28.46 358c iP      P       17 12 36.2 -1.5
YAK                                e*PP    sP      17 13 02.3 -4.6
YAK                                e               17 13 27.6
YAK                                e               17 15 49.3
YAK                                eS      S       17 17 15.3 -3.5
YAK                                e*SS    sS      17 17 51.1 -0.9
YAK                                e               17 23 08.0
YAK                                 pmax   pmax
      comp=N,246nm,1.1s
YAK                                 pmax   pmax
      comp=Z,412nm,1.1s
YAK                                 pmax   pmax
      comp=E,19nm,1.0s
YAK                                 pmax   pmax
      comp=Z,249nm,1.0s
YAK                                 pmax   pmax
      comp=E,103nm,0.9s
YAK                                 pmax   pmax
      comp=N,149nm,1.2s
YAK                                 smax   smax
      comp=E,1µm,1.9s
YAK                                 smax   smax
      comp=N,1µm,2.2s
YAK                                 MLR    MLR
      comp=Z,6µm,16.0s
YAK                                 MLR    MLR
      comp=N,5µm,14.0s
YAK                                 MLR    MLR
      comp=E,5µm,12.0s
YAK   Yakutsk           28.46 358   P      P       17 12 36.0 -1.7
YAK                                 IAmb   IAmb    17 12 41.4
      comp=Z,464nm,1.0s
MOY   Mondy             28.66 318  eP      P       17 12 39.1 -0.7
MOY                                e               17 12 58.9
MOY                                 pmax   pmax
      comp=Z,206nm,3.1s
MA2   Magadan           28.83  20   P      P       17 12 41.1  0.0
      comp=Z,46nm,0.8s,baz=221,slow=8.9,SNR=34
MA2                                 PcP    PcP     17 15 50.7 +2.1
      comp=Z,68nm,0.7s,baz=165,slow=2.3,SNR=8.3
MA2                                 LR     LR      17 25 32.3
      comp=Z,7µm,18.1s,baz=206,slow=39
MA2   Magadan           28.83  20ceP      P       17 12 40.9 -0.2
MA2                                 pmax   pmax
      comp=Z,266nm,1.7s
MA2   Magadan           28.83  20   P      P       17 12 41.1  0.0
MA2                                        PcP     17 15 49.5 +0.8
UBPT  Khong Chiam       30.00 239   P      P       17 12 51.6 -0.3
DLV   T  Lat            30.32 230   P      P       17 12 54.9  0.0
KKM   Kota Kinabalu     31.02 211   P      P       17 13 01.2 +0.2
LKP   Lekhapani         31.51 268  i P     P       17 13 05.0 -0.2
SEY   Seymchan          32.06  18   P      P       17 13 10.2 +0.6
      comp=Z,79nm,1.1s,baz=210,slow=6.5,SNR=84
SEY                                 PcP    PcP     17 15 58.2 +1.2
      comp=Z,32nm,0.8s,baz=186,slow=3.0,SNR=3.9
SEY                                 LR     LR      17 26 05.7
      comp=Z,13µm,21.0s,baz=202,slow=36
SEY   Seymchan          32.06  18⇑eP      P       17 13 10.3 +0.8
PBKT  Sadao Pong        32.51 246   P      P       17 13 13.8 -0.2
PBKT                                IAmb   IAmb    17 13 38.9
      comp=Z,292nm,1.0s
CHTO  Chiang Mai        32.80 252   P      P       17 13 16.3 -0.2
CHTO                                P      P       17 13 16.3 -0.2
CHTO  Chiang Mai        32.80 252   P      P       17 13 15.9 -0.6
CHTO                                pmax   pmax
      comp=Z,80nm,1.0s
CHTO  Chiang Mai        32.80 252   P      P       17 13 15.9 -0.6
TNTI  Ternate           32.94 188   P      P       17 13 18.0 +0.3
      comp=Z,9µmcomp=Z,11µmcomp=Z,1µm,1.3s
TNTI  Ternate           32.94 188   P      P       17 13 17.4 -0.3
CMAR  Chiang Mai Arr    33.00 251   P      P       17 13 17.7 -0.5
      comp=Z,11nm,0.7s,baz=43,slow=7.3,SNR=86
CMAR                                PcP    PcP     17 16 00.5 +0.1
      comp=Z,7.8nm,0.6s,baz=22,slow=2.3,SNR=6.9
CMAR                                ScP    ScP     17 19 37.7 +0.6
      comp=Z,12nm,1.1s,baz=14,slow=1.8,SNR=7.4
CMAR                                PKiKP  PKiKP   17 23 26.1 -0.5
      comp=Z,2.4nm,0.6s,baz=295,slow=1.1,SNR=17
CMAR                                LR     LR      17 27 16.8
      comp=Z,13µm,21.2s,baz=60,slow=37
CMAR                                P3KPbc         17 44 34.8
      comp=Z,0.3nm,0.3s,baz=242,slow=5.2,SNR=2.4
CMAR  Chiang Mai Arr    33.00 251  i P     P       17 13 18.7 +0.5
CMAR                                pmax   pmax
      comp=Z,11nm,0.7s
CMAR  Chiang Mai Arr    33.00 251   P      P       17 13 17.1 -1.1
CMAR                                       PcP     17 16 00.2 -0.2
CMAR                                       ScP     17 19 36.6 -0.5
CMAR                                       ScS     17 23 26.6  -11
KMSI  Cibinong          33.69 194   P      P       17 13 25.0 +0.8
      comp=Z,8µmcomp=Z,788nm,0.7s
H11N2 WAKE ISLAND Hy    34.09 105   P      P       17 13 31.7 +4.2
      baz=280,slow=9.3,SNR=11
H11N2                               T      T       17 48 40.8
      baz=300,slow=75,SNR=17
H11N1 WAKE ISLAND Hy    34.10 105   P      P       17 13 31.6 +4.1
      baz=280,slow=9.3,SNR=5.7
H11N1                               T      T       17 48 41.1
      baz=300,slow=75,SNR=17
H11N3 WAKE ISLAND Hy    34.11 105   P      P       17 13 31.9 +4.3
      baz=280,slow=9.3,SNR=7.2
H11N3                               T      T       17 48 42.1
      baz=300,slow=75,SNR=20
MRSI  Marisa            34.25 198   P      P       17 13 29.2 +0.2
      comp=Z,17µmcomp=Z,8µmcomp=Z,283nm,0.8s
SWI   Sorong            34.31 181   P      P       17 13 30.3 +0.8
      comp=Z,13µmcomp=Z,8µmcomp=Z,492nm,1.0s
TEZP  TEZPUR            34.31 269  eP      P       17 13 28.6 -0.9
SIJI  Sorong            34.31 181   LR     LR      17 27 14.8
      comp=Z,4µm,19.7s,baz=334,slow=36
H11S3 WAKE ISLAND Hy    34.58 107   P      P       17 13 35.6 +3.9
      baz=315,slow=5.2,SNR=3.9
H11S3                               T      T       17 49 01.7
      baz=302,slow=75,SNR=12
H11S1 WAKE ISLAND Hy    34.58 107   P      P       17 13 35.9 +4.2
      baz=315,slow=5.2,SNR=3.3
H11S1                               T      T       17 48 48.8
      baz=302,slow=75,SNR=102
H11S2 WAKE ISLAND Hy    34.59 107   P      P       17 13 35.9 +4.1
      baz=315,slow=5.2,SNR=3.3
H11S2                               T      T       17 49 20.7
      baz=302,slow=75,SNR=100
LSA   Lhasa             34.67 275   P      P       17 13 33.2  0.0
LSA   Lhasa             34.67 275   P      P       17 13 33.0 -0.2
LSA                                 pmax   pmax
      comp=Z,170nm,1.2s
LSA   Lhasa             34.67 275   P      P       17 13 33.0 -0.2
BAKI  Biak              34.86 172   P      P       17 13 34.7 +0.4
      comp=Z,6µmcomp=Z,215nm,0.8s
MPSI  Mapaga            34.95 201   P      P       17 13 35.6 +0.5
      comp=Z,19µmcomp=Z,9µmcomp=Z,280nm,1.9s
RKPI  Ransiki, Papua    35.02 176   P      P       17 13 35.9 +0.2
      comp=Z,6µmcomp=Z,182nm,1.3s
SHL   Shillong          35.46 268⇑iP      P       17 13 38.9 -0.7
SHL   Shillong          35.46 268   P      P       17 13 38.4 -1.3
      SNR=38
SHL   Shillong          35.46 268   P      P       17 13 38.2 -1.5
SHL                                 pmax   pmax
      comp=Z,515nm,1.4s
SHL   Shillong          35.46 268   P      P       17 13 38.2 -1.5
SHL                                 IAmb   IAmb    17 14 05.4
      comp=Z,515nm,1.4s
LUWI  Luwuk             35.51 196   P      P       17 13 38.3 -1.6
      comp=Z,15µmcomp=Z,6µmcomp=Z,563nm,0.9s
LUWI  Luwuk             35.51 196   P      P       17 13 37.1 -2.8
WMQ   Urumqi            35.52 300   P      P       17 13 39.8 -0.1
WMQ                                 pP     pP      17 13 58.4 -1.0
WMQ                                 sP     sP      17 14 10.8 +1.7
WMQ                                 S      S       17 19 07.9 -1.4
WMQ                                 sS     sS      17 19 42.5 -0.4
WMQ                                 SS     SnSn    17 21 31.0 -6.4
WMQ                                 ScS    ScS     17 23 45.3 -5.3
WMQ                                 pmax   pmax
      comp=Z,250nm,1.9s
WMQ                                 pmax   pmax
      comp=Z,2µm,9.9s
WMQ                                 LR     LR
      comp=Z,6µm,20.9s
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WMQ                                 LR     LR
      comp=Z,10µm,19.1s
WMQ                                 LR     LR
      comp=Z,21µm,24.5s
WMQ   Urumqi            35.52 300   P      P       17 13 39.5 -0.4
WMQ                                 pmax   pmax
      comp=Z,1µm,1.2s
WMQ   Urumqi            35.52 300   P      P       17 13 39.5 -0.4
SMY   Shemya            35.62  45   P      P       17 13 40.6 +0.1
SMY                                 pmax   pmax
      comp=Z,974nm,1.5s
SMY   Shemya            35.62  45   P      P       17 13 40.5 +0.1
APSI  Ampana            35.66 198   P      P       17 13 40.7 -0.4
      comp=Z,9µmcomp=Z,4µmcomp=Z,226nm,0.9s
APSI                                pP     pP      17 14 00.1 -0.6
      comp=Z,9µmcomp=Z,4µmcomp=Z,226nm,0.9s
SANI  Sanana            35.90 190   P      P       17 13 42.7 -0.5
      comp=Z,15µmcomp=Z,14µmcomp=Z,1µm,0.7s
SMPI  Sarmi             36.02 168   P      P       17 13 46.1 +1.9
      comp=Z,14µmcomp=Z,7µmcomp=Z,424nm,0.9s
SBUM  Sibu              36.02 215   P      P       17 13 44.2  0.0
SBUM  Sibu              36.02 215   P      P       17 13 45.0 +0.7
FAKI  Fak Fak           36.35 179   P      P       17 13 47.3 +0.3
      comp=Z,14µmcomp=Z,14µmcomp=Z,977nm,1.3s
FAKI  Fak Fak           36.35 179   P      P       17 13 47.7 +0.7
SMKI  Samarinda         36.56 205   P      P       17 13 50.9 +2.0
MSAI  Masohi            36.87 185   P      P       17 13 53.2 +1.7
      comp=Z,5µmcomp=Z,493nm,1.3s
GENI  Genyem            36.88 166   P      P       17 13 53.5 +2.0
      comp=Z,11µmcomp=Z,10µmcomp=Z,396nm,1.0s
NLAI  Namlea            36.93 188   P      P       17 13 52.6 +0.6
      comp=Z,11µmcomp=Z,880nm,0.8s
SIMRM Sittwe            37.01 259   P      P       17 13 52.6  0.0
AAI   Ambon             37.26 186   P      P       17 13 56.0 +1.2
      comp=Z,17µmcomp=Z,19µmcomp=Z,2µm,0.9s
BKB   Balikpapan        37.43 205   P      P       17 13 57.1 +0.9
      comp=Z,29µmcomp=Z,17µmcomp=Z,369nm,2.3s
BKB   Balikpapan        37.43 205   P      P       17 13 55.9 -0.4
BKB                                 IAmb   IAmb    17 14 01.6
      comp=Z,230nm,0.9s
GTK   Tadong            37.56 272⇑iP      P       17 13 55.3 -2.1
ZSN   Zaisan            37.68 306⇑iP      P       17 13 57.9 -0.3
      comp=Z,304nm,3.0s
ZSN                                epP     pP      17 14 18.4 +0.5
ZSN                                esS     sS      17 20 15.8  0.0
ZSN   Zaisan            37.68 306c iP      P       17 13 57.8 -0.3
ZSN                                e*PP    pP      17 14 18.3 +0.5
ZSN                                 pmax   pmax
      comp=Z,304nm,3.0s
KSM   Kuching           37.80 217   P      P       17 13 59.6 +0.2
KSM                                 IAmb   IAmb    17 14 03.5
      comp=Z,184nm,1.0s
KSM   Kuching           37.80 217   P      P       17 14 00.0 +0.6
BNDI  Bandanaira        37.98 183   P      P       17 14 01.0 +0.2
      comp=Z,17µmcomp=Z,18µmcomp=Z,1µm,1.1s
TIXI  Tiksi             38.12 358   P      P       17 14 00.1 -1.3
      comp=Z,82nm,0.6s,baz=155,slow=6.9,SNR=211
TIXI                                PKiKP  PKiKP   17 23 28.3 -0.8
      comp=Z,4.4nm,0.6s,baz=76,slow=1.8,SNR=10
TIXI                                LR     LR      17 30 31.1
      comp=Z,7µm,18.2s,baz=180,slow=37
TIXI  Tiksi             38.12 358c iP      P       17 13 59.9 -1.5
TIXI                                pmax   pmax
      comp=Z,145nm,1.3s
TIXI  Tiksi             38.12 358   P      P       17 13 60.0 -1.5
TTSI  Tana Toraja       38.19 200   P      P       17 14 02.1 -0.5
      comp=Z,12µmcomp=Z,4µmcomp=Z,116nm,1.8s
TAPN  Taplejung         38.29 273  eP      P       17 14 03.5 -0.3
      comp=Z,160nm,0.6s
MANU  Manus Island      38.39 154   P      P       17 14 04.8 +0.5
MANU                                IAmb   IAmb    17 14 27.9
      comp=Z,266nm,1.4s
ZAA0  Zalesovo Array    38.65 316   P      P       17 14 05.1 -1.0
ZALV  Zalesovo Beam     38.65 316   P      P       17 14 05.4 -0.7
      comp=Z,22nm,0.7s,baz=102,slow=5.7,SNR=52
ZALV                                pP     pP      17 14 29.3 +3.4
      comp=Z,80nm,0.8s,baz=103,slow=7.5,SNR=12
ZALV                                PcP    PcP     17 16 15.8 -0.7
      comp=Z,35nm,0.8s,baz=67,slow=2.8,SNR=5.7
ZALV                                ScP    S       17 19 54.6 -1.8
      comp=Z,10.0nm,0.7s,baz=137,slow=3.6,SNR=5.7
ZALV                                PKiKP  PKiKP   17 23 28.2 -1.8
      comp=Z,3.5nm,0.6s,baz=181,slow=1.5,SNR=5.4
ZALV                                LR     LR      17 31 21.0
      comp=Z,7µm,19.0s,baz=103,slow=38
ZALV  Zalesovo Beam     38.65 316   P      P       17 14 04.6 -1.5
ZALV                                       PcP     17 16 15.2 -1.4
ZALV                                       S       17 19 53.7 -2.6
ODAN  Odare             38.73 272  eP      P       17 14 06.9 -0.5
      comp=Z,264nm,0.7s
SPSI  Sidrap Palu       39.08 199   P      P       17 14 10.2 +0.1
      comp=Z,14µmcomp=Z,4µmcomp=Z,188nm,1.6s
RAMN  Ramite            39.36 273  eP      P       17 14 12.0 -0.7
      comp=Z,165nm,0.6s
BNSI  Bone              39.40 199   P      P       17 14 11.8 -1.0
      comp=Z,6µmcomp=Z,157nm,0.9s
MK31  Makanchi Array    39.41 305   P      P       17 14 11.6 -1.0
MK31                                pmax   pmax
      comp=Z,194nm,1.0s
MK31  Makanchi Array    39.41 305   P      P       17 14 11.6 -1.0
MK31                                IAmb   IAmb    17 14 39.1
      comp=Z,194nm,1.0s
MKAR  Makanchi Array    39.41 305   P      P       17 14 12.1 -0.6
      comp=Z,31nm,0.6s,baz=92,slow=10,SNR=207
MKAR                                pP     pP      17 14 32.3 -0.1
      comp=Z,76nm,0.8s,baz=90,slow=8.9,SNR=5.7
MKAR                                ScP    ScP     17 19 58.2 -2.1
      comp=Z,18nm,0.9s,baz=78,slow=6.1,SNR=7.4
MKAR                                PKiKP  PKiKP   17 23 29.0 -1.9
      comp=Z,1.3nm,0.5s,baz=168,slow=1.1,SNR=9.6
MKAR                                LR     LR      17 32 12.5
      comp=Z,12µm,19.8s,baz=90,slow=39
MKAR                                P3KPbc         17 44 10.0
      comp=Z,0.6nm,0.9s,baz=296,slow=2.5,SNR=2.9
MKAR  Makanchi Array    39.41 305   P      P       17 14 11.9 -0.6
MKAR                                       pP      17 14 32.0 -0.4
MKAR                                       ScP     17 19 57.5 -2.8
JIRN  Jiri              39.45 274  eP      P       17 14 13.5 -0.1
KBKI  Kotabaru          39.58 205   P      P       17 14 14.3  0.0
      comp=Z,1µmcomp=Z,103nm,0.9s
GUN   Gumba             39.62 274  eP      P       17 14 15.0  0.0
      comp=Z,1µm,0.9s
MAKZ  Makanchi          39.62 305   P      P       17 14 13.9 -0.5
MAKZ                                pmax   pmax
      comp=Z,211nm,0.9s
MAKZ  Makanchi          39.62 305   P      P       17 14 13.9 -0.5
MAKZ                                IAmb   IAmb    17 14 40.5
      comp=Z,211nm,0.8s
BILL  Bilibino          39.70  19ceP      P       17 14 15.5 +0.8
BILL                                pmax   pmax
      comp=Z,630nm,1.6s
BILL  Bilibino          39.70  19   P      P       17 14 15.2 +0.5
BILL                                IAmb   IAmb    17 14 51.0
      comp=Z,507nm,1.2s
BBSI  Bau Bau           39.87 194   P      P       17 14 17.6 +1.0
      comp=Z,2µmcomp=Z,149nm,1.1s
KAPI  Kappang           40.09 199   LR     LR      17 30 27.5
      comp=Z,5µm,21.5s,baz=32,slow=35
PKI   Pulchoki          40.13 274  eP      P       17 14 18.6 -0.6
PKIN  Phulchoki         40.14 274  eP      P       17 14 18.5 -0.7
KKN   Kakani            40.16 275  eP      P       17 14 18.9 -0.4
BKSI  Bulukumba         40.28 198   P      P       17 14 20.5 +0.5
      comp=Z,16µmcomp=Z,6µmcomp=Z,194nm,1.0s
DMN   Daman             40.37 274  eP      P       17 14 20.5 -0.6
KULM  Kulim             40.40 233   P      P       17 14 21.2 +0.1
KULM                                IAmb   IAmb    17 14 25.6
      comp=Z,183nm,0.7s
KULM  Kulim             40.40 233   P      P       17 14 22.0 +0.9
GKN   Gorkha            40.62 275  eP      P       17 14 22.4 -0.7
IPM   Ipoh              40.76 231   P      P       17 14 23.5 -0.5
IPM   Ipoh              40.76 231   P      P       17 14 24.0 -0.1
SEM   Semipalatinsk     40.93 310  eP      P       17 14 23.0 -2.4
SEM                                epP     pP      17 14 45.9 +0.6
SEM                                eS      S       17 20 27.6 -3.5
SEM                                esS     sS      17 21 04.6 -0.6
SEM   Semipalatinsk     40.93 310  eP      P       17 14 22.9 -2.4
SEM                                e*PP    pP      17 14 45.8 +0.6
SEM                                eS      S       17 20 27.6 -3.5
SEM                                e*SS    sS      17 21 04.5 -0.6
ADK   Adak              41.03  48   P      P       17 14 26.7 +0.9
ADK                                 pmax   pmax
      comp=Z,850nm,1.6s
ADK   Adak              41.03  48   P      P       17 14 26.7 +0.9
ADK                                 IAmb   IAmb    17 14 30.0
      comp=Z,850nm,1.6s
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MYKOM	Kota Tinggi	41.08	225	P	P	17 14 26.0	-0.7
MYKOM	Kota Tinggi	41.08	225	P	P	17 14 28.0	+1.3
BOK	Bokaro	41.17	269	iP	P	17 14 27.2	-0.2
BOK				IAmb	IAmb	17 14 31.3	
	comp=Z,136nm,0.8s						
DANN	Dangsing	41.24	276	eP	P	17 14 28.1	-0.1
	comp=Z,511nm,0.6s						
SAUI	Saumlaki	41.38	181	P	P	17 14 29.7	+0.7
	comp=Z,20µmcomp=Z,16µmcomp=Z,609nm,0.9s						
SAUI	Saumlaki	41.38	181	P	P	17 14 30.0	+1.0
TPRI	Tanjung Pinang	41.38	224	P	P	17 14 29.1	-0.1
	comp=Z,18µmcomp=Z,4µmcomp=Z,318nm,0.8s						
GSTR	Great Sitkin T	41.43	47	P	P	17 14 29.7	+0.5
SHLS	Shalkode	41.53	299⇑	iP	P	17 14 26.8	-3.5
	comp=Z,165nm,1.7s						
SHLS				epP	pP	17 14 47.4	-2.8
SHLS				eS	S	17 20 33.9	-6.0
SHLS				esS	sS	17 21 11.4	-2.7
SHLS	Shalkode	41.53	299c	iP	P	17 14 26.7	-3.5
SHLS				e*PP	pP	17 14 47.3	-2.8
SHLS				eS	S	17 20 33.9	-6.0
SHLS				e*SS	sS	17 21 11.3	-2.7
SHLS				pmax	pmax		
	comp=Z,165nm,1.7s						
PBA	Port Blair	41.81	248	eP	P	17 14 30.8	-1.9
PBA	Port Blair	41.81	248	P	P	17 14 31.7	-0.9
UZB	Uzynbulak	41.85	299⇑	iP	P	17 14 32.0	-0.9
	comp=Z,166nm,2.0s						
UZB				epP	pP	17 14 52.0	-0.8
UZB				eS	S	17 20 44.4	-0.3
UZB				esS	sS	17 21 19.2	+0.4
UZB	Uzynbulak	41.85	299c	iP	P	17 14 32.0	-0.9
UZB				e*PP	pP	17 14 52.0	-0.8
UZB				eS	S	17 20 44.4	-0.3
UZB				e*SS	sS	17 21 19.2	+0.4
UZB				pmax	pmax		
	comp=Z,166nm,2.0s						
KURK	Kurchatov	41.99	310	P	P	17 14 33.3	-0.4
KURK				S	S	17 20 47.0	+0.8
KURK	Kurchatov	41.99	310c	iP	P	17 14 33.1	-0.6
KURK				pmax	pmax		
	comp=Z,594nm,1.7s						
KURK	Kurchatov	41.99	310	P	P	17 14 32.9	-0.8
KURK				IAmb	IAmb	17 14 37.9	
	comp=Z,305nm,1.0s						
KURBB	Kurchatov Arra	42.04	310	P	P	17 14 32.3	-1.8
KPKS	Kokpek	42.07	300⇑	iP	P	17 14 33.9	-0.8
	comp=Z,144nm,1.8s						
KPKS				epP	pP	17 14 53.7	-0.8
KPKS	Kokpek	42.07	300c	iP	P	17 14 33.8	-0.8
KPKS				e*PP	pP	17 14 53.7	-0.8
KPKS				pmax	pmax		
	comp=Z,144nm,1.8s						
TDK	Taldyqorghan	42.15	302	eP	P	17 14 34.9	-0.3
	comp=Z,461nm,2.4s						
TDK				epP	pP	17 14 55.5	+0.4
TDK				eS	S	17 20 47.9	-1.0
TDK				esS	sS	17 21 24.2	+1.1
TDK	Taldyqorghan	42.15	302	eP	P	17 14 34.9	-0.3
TDK				e*PP	pP	17 14 55.5	+0.4
TDK				eS	S	17 20 47.8	-1.0
TDK				e*SS	sS	17 21 24.1	+1.0
TDK				pmax	pmax		
	comp=Z,461nm,2.4s						
RABL	Rabaul	42.25	149	P	P	17 14 36.8	+0.6
SATY	Saty	42.31	299⇑	iP	P	17 14 35.8	-0.9
	comp=Z,118nm,1.7s						
SATY				epP	pP	17 14 56.5	-0.1
SATY				eS	S	17 20 50.5	-0.9
SATY				esS	sS	17 21 27.4	+1.7
SATY	Saty	42.31	299c	iP	P	17 14 35.7	-0.9
SATY				e*PP	pP	17 14 56.4	-0.1
SATY				eS	S	17 20 50.5	-0.9
SATY				e*SS	sS	17 21 27.3	+1.7
SATY				pmax	pmax		
	comp=Z,118nm,1.7s						
PRZ	Przheval'sk	42.37	298	P	P	17 14 37.3	+0.1
PRZ				pmax	pmax		
	comp=Z,967nm,1.1s						
PRZ	Przheval'sk	42.37	298	P	P	17 14 37.3	+0.1
ATKA	Atka Island	42.59	47	P	P	17 14 38.8	+0.2
ATKA				IAmb	IAmb	17 14 42.4	
	comp=Z,507nm,1.3s						
BWNR	Bhubaneshwar	42.77	264⇑	iP	P	17 14 40.2	-0.2
BWNR				IAmb	IAmb	17 14 46.7	
	comp=Z,73nm,1.0s						
BWNR				ipP	pP	17 15 04.5	+4.1
LHMI	Lhok Sumawe	42.97	237	P	P	17 14 42.2	+0.2
	comp=Z,25µmcomp=Z,8µmcomp=Z,450nm,0.7s						
LHMI	Lhok Sumawe	42.97	237	P	P	17 14 42.9	+0.9
LHMI				IAmb	IAmb	17 14 46.7	
	comp=Z,316nm,0.7s						
MMRI	Maumere	43.00	194	P	P	17 14 41.2	-1.0
	comp=Z,15µmcomp=Z,9µmcomp=Z,563nm,0.8s						
MMRI	Maumere	43.00	194	P	P	17 14 41.2	-1.0
EDFI	Ende, Flores	43.22	195	P	P	17 14 42.3	-1.8
	comp=Z,9µmcomp=Z,3µmcomp=Z,177nm,1.6s						
CHKK	Chushkaly	43.26	300⇑	iP	P	17 14 43.6	-0.6
CHKK				epP	pP	17 15 04.0	-0.2
CHKK	Chushkaly	43.26	300⇑	iP	P	17 14 43.5	-0.6
CHKK				e*PP	pP	17 15 03.9	-0.2
MDOK	Medeo	43.28	299	eP	P	17 14 44.5	0.0
MDOK				epP	pP	17 15 04.7	+0.1
MDOK				eS	S	17 21 05.0	-0.8
MDOK				esS	sS	17 21 40.0	-0.1
MDOK	Medeo	43.28	299	eP	P	17 14 44.5	0.0
MDOK				e*PP	pP	17 15 04.7	+0.1
MDOK				eS	S	17 21 05.0	-0.8
MDOK				e*SS	sS	17 21 39.9	-0.1
KDJ	Kajisay	43.31	298	P	P	17 14 44.2	-0.6
KDJ				pmax	pmax		
	comp=Z,358nm,1.0s						
KDJ	Kajisay	43.31	298	P	P	17 14 44.2	-0.6
KDJ				IAmb	IAmb	17 15 11.1	
	comp=Z,358nm,1.0s						
NRIK	Noril'sk	43.33	339	P	P	17 14 43.1	-1.2
	comp=Z,60nm,1.0s,baz=116,slow=9.7,SNR=18						
NRIK				LR	LR	17 33 49.0	
	comp=Z,7µm,19.4s,baz=121,slow=37						
TNSS	Tian-Shan	43.37	299⇑	iP	P	17 14 45.8	+0.3
TNSS				epP	pP	17 15 06.2	+0.6
TNSS	Tian-Shan	43.37	299⇑	iP	P	17 14 45.8	+0.3
TNSS				e*PP	pP	17 15 06.2	+0.6
AAA	Alma-Ata	43.38	299	eP	P	17 14 45.0	-0.1
	comp=Z,287nm,1.1s						
AAA				epP	pP	17 15 05.6	+0.4
AAA	Alma-Ata	43.38	299	eP	P	17 14 45.0	-0.1
AAA				e*PP	pP	17 15 05.6	+0.4
AAA				pmax	pmax		
	comp=Z,287nm,1.1s						
PSI	Prapat	43.39	232	LR	LR	17 33 32.7	
	comp=Z,11µm,21.0s,baz=62,slow=37						
PSI	Prapat	43.39	232	P	P	17 14 45.1	-0.5
PSI				pmax	pmax		
	comp=Z,184nm,0.8s						
RPSI	Rantau Prapat	43.47	232	P	P	17 14 45.0	-1.1
RPSI				IAmb	IAmb	17 14 48.9	
	comp=Z,184nm,0.8s						
KUU	Kurty	43.72	300⇑	iP	P	17 14 47.3	-0.5
	comp=Z,376nm,2.0s						
KUU				epP	pP	17 15 07.9	-0.1
KUU				eS	S	17 21 11.0	-0.8
KUU				esS	sS	17 21 46.5	+0.3
KUU	Kurty	43.72	300c	iP	P	17 14 47.3	-0.5
KUU				e*PP	pP	17 15 07.8	-0.1
KUU				eS	S	17 21 11.0	-0.8
KUU				e*SS	sS	17 21 46.5	+0.3
KUU				pmax	pmax		
	comp=Z,376nm,2.0s						
SOEI	Soe	43.73	191	P	P	17 14 47.0	-1.2
	comp=Z,16µmcomp=Z,14µmcomp=Z,1µm,0.8s						
SOEI	Soe	43.73	191	P	P	17 14 47.3	-0.9
KMMI	Kalianget	43.85	206	P	P	17 14 49.6	+0.5
	comp=Z,8µmcomp=Z,400nm,0.8s						
BKNI	Bangkinang	43.94	227	P	P	17 14 50.6	+0.7
	comp=Z,19µmcomp=Z,5µmcomp=Z,329nm,0.7s						
BKNI	Bangkinang	43.94	227	P	P	17 14 49.8	-0.1
BKNI				IAmb	IAmb	17 14 53.4	
	comp=Z,233nm,0.6s						
ULHL	Ulahol	43.99	298	P	P	17 14 50.3	0.0
	SNR=75						
MLSI	Meulaboh, Aceh	44.03	236	P	P	17 14 50.1	-0.5
	comp=Z,19µmcomp=Z,9µmcomp=Z,863nm,0.7s						
BOOM	Boomskoye usch	44.17	299	P	P	17 14 51.2	-0.5
BOOM	Boomskoye usch	44.17	299	P	P	17 14 51.2	-0.5
TPTI		44.22	234	P	P	17 14 50.5	-1.6
	comp=Z,661nmcomp=Z,19nm,0.9s						
PLAI	Plampang	44.27	200	P	P	17 14 51.6	-0.8
	comp=Z,20µmcomp=Z,16µmcomp=Z,583nm,0.8s						
NRN	Naryn	44.28	297	P	P	17 14 52.7	-0.1
NRN				pmax	pmax		
	comp=Z,314nm,1.1s						
NRN	Naryn	44.28	297	P	P	17 14 52.7	-0.1
NRN				IAmb	IAmb	17 15 19.0	
	comp=Z,314nm,1.1s						
GRJI	Gresik	44.29	208	P	P	17 14 54.0	+1.4
	comp=Z,727nmcomp=Z,4µmcomp=Z,442nm,0.8s						
SRBI	Singaraja	44.37	204	P	P	17 14 53.6	+0.4
	comp=Z,22µmcomp=Z,11µmcomp=Z,332nm,1.7s						
PMBI	Palembang	44.41	220	P	P	17 14 55.7	+2.1
	comp=Z,9µmcomp=Z,807nm,1.0s						
PMBI	Palembang	44.41	220	P	P	17 14 54.5	+0.9
WSI	Waingapu	44.42	196	P	P	17 14 53.7	+0.1
	comp=Z,7µmcomp=Z,278nm,0.8s						
UWJI	Ujung Watu	44.46	210	P	P	17 14 54.4	+0.4
	comp=Z,559nmcomp=Z,3µmcomp=Z,231nm,1.2s						
WBSI	Waikabubak, Su	44.62	198	P	P	17 14 53.8	-1.4
	comp=Z,13µmcomp=Z,3µmcomp=Z,188nm,0.8s						
KSH	Kashi	44.62	294	P	P	17 14 58.8	+3.5
KSH				pP	pP	17 15 16.8	+1.4
KSH				PP	PP	17 16 45.8	+5.1
KSH				S	S	17 21 29.0	+3.7
KSH				ScS	ScS	17 24 45.6	+0.7
KSH				pmax	pmax		
	comp=Z,250nm,1.2s						
KSH				pmax	pmax		
	comp=Z,6µm,11.3s						
KSH				LR	LR		
	comp=Z,18µm,19.9s						
KSH				LR	LR		
	comp=Z,10µm,11.9s						
KSH				LR	LR		
	comp=Z,12µm,14.1s						
SDSI	Sungai Dareh	44.70	226	P	P	17 14 55.8	-0.1
	comp=Z,5µmcomp=Z,156nm,0.8s						
KZA	Kyzart	44.74	298	P	P	17 14 57.5	+1.0
	SNR=50						
KBK	Karagaybulak	44.88	299	P	P	17 14 57.7	+0.4
	SNR=77						
BASI	Baing, Sumba	44.89	196	P	P	17 14 54.9	-2.4
	comp=Z,8µmcomp=Z,3µmcomp=Z,147nm,1.6s						
DNP	Denpasar	44.93	204	P	P	17 14 58.9	+1.3
	comp=Z,15µmcomp=Z,983nm,0.8s						
CHMS	Chumysh	44.98	299	P	P	17 14 58.0	+0.1
	SNR=52						
SGDS	Sogindy	45.00	300⇑	iP	P	17 14 57.9	-0.3
	comp=Z,109nm,1.7s						
SGDS				epP	pP	17 15 18.0	-0.3
SGDS				eS	S	17 21 30.2	-0.3
SGDS				esS	sS	17 22 05.5	+0.5
CHLP	Challavanipeta	45.07	263	eP	P	17 14 59.2	+0.3
CHLP				IAmb	IAmb	17 15 05.2	
	comp=Z,68nm,0.9s						
CHLP				eS	S	17 21 35.9	+4.1
CHLP				IVMs_BB	IVMs_BB	17 31 51.0	
	comp=Z,3µm,35.1s						
IGBI	Denpasar	45.08	204	P	P	17 14 58.6	-0.2
	comp=Z,9µmcomp=Z,5µmcomp=Z,437nm,0.7s						
FRU1	Bishkek	45.09	299	P	P	17 14 58.8	0.0
FRU1				pmax	pmax		
	comp=Z,731nm,1.0s						
FRU1	Bishkek	45.09	299	P	P	17 14 58.8	0.0
JAGI	Jajag, Banyuwa	45.10	205	P	P	17 14 59.6	+0.6
	comp=Z,16µmcomp=Z,5µmcomp=Z,101nm,0.8s						
JAGI	Jajag, Banyuwa	45.10	205	P	P	17 14 57.2	-1.8
USP	Ospenovka	45.12	300	P	P	17 14 59.0	-0.1
	SNR=67						
GMJI	Gumukmas	45.17	206	P	P	17 15 00.0	+0.4
PMG	Port Moresby	45.21	158	LR	LR	17 33 20.0	
	comp=Z,8µm,20.2s,baz=316,slow=35						
PMG	Port Moresby	45.21	158c	iP	P	17 15 00.5	+0.6
PMG				pmax	pmax		
	comp=Z,271nm,1.0s						
PMG	Port Moresby	45.21	158	P	P	17 15 00.7	+0.8
AAK	Ala-Archa	45.21	299	P	P	17 15 00.0	+0.1
	SNR=48						
AAK	Ala-Archa	45.21	299	iP	P	17 14 59.7	-0.2
	SNR=126						
AAK	Ala-Archa	45.21	299	P	P	17 15 00.0	+0.1
AAK				P	P	17 15 00.0	+0.1
AAK	Ala-Archa	45.21	299c	iP	P	17 14 59.7	-0.2
AAK				pmax	pmax		
	comp=Z,257nm,1.7s						
AAK	Ala-Archa	45.21	299	P	P	17 14 59.7	-0.2
AAK				IAmb	IAmb	17 15 26.2	
	comp=Z,300nm,1.0s						
BTLS	Baital	45.23	302⇓	iP	P	17 14 59.3	-0.6
	comp=Z,44nm,1.0s						
BTLS				epP	pP	17 15 19.8	-0.3
BTLS				eS	S	17 21 32.6	-1.0
BTLS				esS	sS	17 22 07.3	-0.9
BTLS	Baital	45.23	302d	iP	P	17 14 59.2	-0.6
BTLS				e*PP	pP	17 15 19.7	-0.3
BTLS				eS	S	17 21 32.6	-1.0
BTLS				e*SS	sS	17 22 07.2	-0.9
BTLS				pmax	pmax		
	comp=Z,43nm,1.0s						
SMRI	Semarang	45.24	211	P	P	17 15 00.6	+0.4
	comp=Z,29µmcomp=Z,16µmcomp=Z,460nm,1.3s						
SMRI	Semarang	45.24	211	P	P	17 15 00.8	+0.6
UCH	Uchtor	45.26	298	P	P	17 15 01.4	+0.8
	SNR=112						
PDSI	Padang	45.27	227	P	P	17 14 59.4	-1.0
	comp=Z,11µmcomp=Z,2µmcomp=Z,62nm,0.8s						
DDI	Dehra Dun	45.30	281⇑	iP	P	17 14 59.8	-0.8
DDI				IAmb	IAmb	17 15 06.7	
	comp=Z,292nm,0.3s						
SNSI	Sinabang, Aceh	45.42	235	P	P	17 15 03.6	+2.0
	comp=Z,6µmcomp=Z,228nm,1.4s						
KRJI	Kerinci	45.60	225	P	P	17 15 03.8	+0.6
	comp=Z,20µmcomp=Z,15µmcomp=Z,572nm,1.1s						
GAMB	Gambell	45.70	31	P	P	17 15 03.5	+0.3
GAMB				IAmb	IAmb	17 15 28.6	
	comp=Z,203nm,1.0s						
EKS2	Erkin-Say	45.73	299	P	P	17 15 03.9	-0.1
	SNR=48						
WOJI	Wonogiri, Jawa	45.75	210	P	P	17 15 04.2	0.0
	comp=Z,13µmcomp=Z,6µmcomp=Z,168nm,0.9s						
SMLA	Simla	45.77	283⇑	iP	P	17 15 02.9	-1.3
BRZS	Berezniki	45.79	309⇑	iP	P	17 15 03.6	-0.7
	comp=Z,87nm,0.9s						
BRZS				epP	pP	17 15 24.7	+0.2
BRZS				eS	S	17 21 39.6	-2.0
BRZS				esS	sS	17 22 17.5	+1.3
BRZS	Berezniki	45.79	309c	iP	P	17 15 03.5	-0.7
BRZS				e*PP	pP	17 15 24.6	+0.2
BRZS				eS	S	17 21 39.6	-2.0
BRZS				e*SS	sS	17 22 17.4	+1.3
BRZS				pmax	pmax		
	comp=Z,87nm,0.9s						
AML	Almayashu	45.88	298	P	P	17 15 06.2	+0.8
	SNR=94						
PBSI	Pulau Batu	45.97	230	P	P	17 15 05.4	-0.5
	comp=Z,16µmcomp=Z,7µmcomp=Z,384nm,1.4s						
PCJI	Pacitan	45.97	209	P	P	17 15 07.4	+1.5
	comp=Z,5µmcomp=Z,73nm,0.7s						
UGM	Wanagama	45.99	210	P	P	17 15 06.0	-0.1
	comp=Z,21µmcomp=Z,12µmcomp=Z,442nm,1.1s						
UGM	Wanagama	45.99	210	P	P	17 15 05.2	-0.9
UGM				IAmb	IAmb	17 15 11.0	
	comp=Z,282nm,0.9s						
MDSI	Maura Dua	46.04	220	P	P	17 15 06.2	-0.2
	comp=Z,17µmcomp=Z,7µmcomp=Z,199nm,1.1s						
DHRM	DHARAMSHALA	46.13	284⇑	iP	P	17 15 05.7	-1.7
KPJI	Karang Pucung	46.16	212	P	P	17 15 07.3	-0.1
	comp=Z,19µmcomp=Z,9µmcomp=Z,504nm,0.7s						
TNG	Tangerang	46.21	216	P	P	17 15 08.1	+0.3
	comp=Z,28µmcomp=Z,22µmcomp=Z,1µm,1.2s						
MTN	Manton Dam	46.21	181	P	P	17 15 07.5	-0.2
KSI	Kapahiang	46.22	222	P	P	17 15 07.3	-0.6
	comp=Z,6µmcomp=Z,341nm,0.8s						
BHK	Bhakra	46.29	283	ex	P	17 15 11.6	+3.2
BHK				epP	sP	17 15 34.2	-3.9
LEM	Lembang	46.31	214	LR	LR	17 36 52.6	
	comp=Z,2µm,19.2s,baz=15,slow=39						
LEM	Lembang	46.31	214	P	P	17 15 09.0	+0.2
	comp=Z,13µmcomp=Z,9µmcomp=Z,662nm,0.8s						
CBJI	Citeko	46.32	215	P	P	17 15 12.5	+3.8
	comp=Z,10µmcomp=Z,514nm,0.7s						
JBP	Jabalpur	46.35	271⇑	eP	P	17 15 08.9	0.0
JBP				eS	S	17 21 58.5	+8.3
SISI	Saibi	46.44	228	P	P	17 15 08.5	-1.1
	comp=Z,4µmcomp=Z,287nm,0.7s						
DBJI	Dramaga	46.49	215	P	P	17 15 10.0	0.0
	comp=Z,8µmcomp=Z,495nm,1.1s						
NDI	New Delhi	46.53	279	eP	P	17 15 07.0	-3.3
ARSB	Arslanbob	46.54	297	P	P	17 15 10.3	-0.1
ARSB				pmax	pmax		
	comp=Z,895nm,1.1s						
ARSB	Arslanbob	46.54	297	P	P	17 15 10.3	-0.1
THN	Thein Dam	46.54	285	eP	P	17 15 09.0	-1.3
THN				eS	S	17 21 55.0	+2.3
LWLI	Liwa	46.55	220	P	P	17 15 10.2	-0.4
	comp=Z,214µmcomp=Z,115nm,0.6s						
MNAI	Manna	46.60	221	P	P	17 15 11.0	+0.1
	comp=Z,18µmcomp=Z,7µmcomp=Z,294nm,0.8s						
MNAI	Manna	46.60	221	P	P	17 15 10.7	-0.2
MNAI				IAmb	IAmb	17 15 15.6	
	comp=Z,188nm,0.7s						
KASI	Kota Agung	46.74	219	P	P	17 15 10.7	-1.2
	comp=Z,15µmcomp=Z,4µmcomp=Z,164nm,0.7s						
CISI	Cisompet, Garu	46.86	214	P	P	17 15 13.3	+0.4
	comp=Z,14µmcomp=Z,4µmcomp=Z,193nm,1.2s						
CISI	Cisompet, Garu	46.86	214	P	P	17 15 12.8	-0.2
CNJI	Cibinong	46.96	215	P	P	17 15 15.7	+2.0
	comp=Z,16µmcomp=Z,4µmcomp=Z,222nm,0.8s						
SKJI	Sukabumi	46.97	215	P	P	17 15 13.9	+0.1
	comp=Z,12µmcomp=Z,4µmcomp=Z,309nm,0.8s						
PPSI	Pulau Pagai	47.00	226	P	P	17 15 16.0	+2.0
	comp=Z,23µmcomp=Z,7µmcomp=Z,272nm,0.9s						
JMU	Jammu	47.12	285	ex	P	17 15 30.0	+15
BVAR	Borovoye Array	47.13	314	P4KPbc		17 52 58.6	
	comp=Z,0.4nm,0.6s,baz=90,slow=4.4,SNR=3.7						
BRVK	Borovoye	47.19	314	P	P	17 15 14.1	-1.0
BRVK				S	S	17 22 05.1	+3.7
BRVK	Borovoye	47.19	314c	iP	P	17 15 14.7	-0.4
BRVK				pmax	pmax		
	comp=Z,386nm,0.8s						
BRVK	Borovoye	47.19	314	P	P	17 15 14.6	-0.4
BRVK				IAmb	IAmb	17 15 19.6	
	comp=Z,330nm,0.8s						
DZA	Taraz	47.47	300	eP	P	17 15 16.1	-1.4
DZA				epP	pP	17 15 40.5	+2.6
DZA	Taraz	47.47	300	eP	P	17 15 16.1	-1.4
DZA				e*PP	pP	17 15 40.4	+2.6
PVM	Polavaram	47.70	263	eP	P	17 15 19.8	+0.4
PVM				IAmb	IAmb	17 15 22.8	
	comp=Z,92nm,1.0s						
PVM				eS	S	17 22 10.4	+1.0
PVM				IVMs_BB	IVMs_BB	17 32 45.4	
	comp=Z,3µm,37.4s						
NGP	Nagpur	48.01	269	eP	P	17 15 21.2	-0.6
NGP				eS	S	17 22 18.5	+4.7
KK31	Karatay Array	48.03	300	P	P	17 15 21.6	-0.2
KK31				pmax	pmax		
	comp=Z,808nm,1.1s						
KK31	Karatay Array	48.03	300	P	P	17 15 21.6	-0.2
KKAR	Karatay Array	48.03	300	P	P	17 15 21.6	-0.2
KKAR				pmax	pmax		
	comp=Z,808nm,1.1s						
KKAR	Karatay Array	48.03	300	P	P	17 15 21.4	-0.4
KKAR	Karatay Array	48.03	300	P	P	17 15 21.6	-0.2
KKAR				IAmb	IAmb	17 15 48.1	
	comp=Z,808nm,1.1s						
NIL	Nilore	48.16	287	P	P	17 15 23.0	+0.1
NIL	Nilore	48.16	287	P	P	17 15 22.7	-0.2
NIL				pmax	pmax		
	comp=Z,441nm,1.0s						
NIL	Nilore	48.16	287	P	P	17 15 22.7	-0.2
BTK	Batken	48.40	296	P	P	17 15 24.4	-0.4
BTK	Batken	48.40	296	P	P	17 15 24.4	-0.4
BHPL	Bhopal	48.45	272	iP	P	17 15 23.5	-1.8
BHPL				IAmb	IAmb	17 15 25.1	
	comp=Z,103nm,1.1s						
BRLS	Borolday	48.53	300	eS	S	17 22 20.4	-0.4
BRLS				esS	sS	17 22 58.9	+3.4
COEN	Coen	48.54	165	P	P	17 15 27.0	+1.2
IUG	Iuzhnay	48.55	299⇑	iP	P	17 15 25.8	-0.2
IUG				epP	pP	17 15 46.7	+0.4
IUG				esS	sS	17 22 58.2	+2.1
IUG	Iuzhnay	48.55	299c	iP	P	17 15 25.7	-0.2
IUG				e*PP	pP	17 15 46.7	+0.4
ANM	Nome	48.57	31	P	P	17 15 26.2	+0.7
ANM				pmax	pmax		
	comp=Z,399nm,0.9s						
ANM	Nome	48.57	31	P	P	17 15 26.2	+0.7
GGR	Gangavaram	48.60	264	eP	P	17 15 26.3	-0.2
GGR				IAmb	IAmb	17 15 27.5	
	comp=Z,345nm,2.0s						
GGR				eS	S	17 22 23.0	+0.7
GGR				IVMs_BB	IVMs_BB	17 34 36.0	
	comp=Z,3µm,25.7s						
MYLAV	Mylavaram	48.77	263	eP	P	17 15 28.3	+0.6
MYLAV				IAmb	IAmb	17 15 29.4	
	comp=Z,171nm,1.4s						
MYLAV				eS	S	17 22 25.8	+1.2
MYLAV				IVMs_BB	IVMs_BB	17 32 56.0	
	comp=Z,3µm,42.4s						
CHM	Chimkent	48.83	299⇑	iP	P	17 15 27.2	-0.7
	comp=Z,152nm,0.9s						
CHM				epP	pP	17 15 48.8	+0.4
CHM				eS	S	17 22 25.3	+0.3
CHM				esS	sS	17 23 01.1	+1.2
CHM	Chimkent	48.83	299c	iP	P	17 15 27.2	-0.7
CHM				e*PP	pP	17 15 48.7	+0.4
CHM				eS	S	17 22 25.3	+0.3
CHM				e*SS	sS	17 23 01.0	+1.2
CHM				pmax	pmax		
	comp=Z,152nm,0.9s						
RPR	Rampur	48.86	266	eP	P	17 15 28.2	-0.1
RPR				eS	S	17 22 27.0	+1.2
GAR	Garm	49.02	295	P	P	17 15 28.9	-0.6
KNRA	Kununurra	49.11	184	P	P	17 15 30.6	+0.5
TAS	Tashkent	49.26	298	P	P	17 15 31.3	+0.1
TAS				pmax	pmax		
	comp=Z,689nm,1.1s						
TAS	Tashkent	49.26	298	P	P	17 15 31.3	+0.1
SRSP	Sriramsagar	49.62	267	eP	P	17 15 33.8	-0.4
SRSP				IAmb	IAmb	17 15 35.6	
	comp=Z,145nm,1.3s						
SRSP				eS	S	17 22 35.6	-0.9
SRSP				IVMs_BB	IVMs_BB	17 37 17.6	
	comp=Z,1µm,24.1s						
ADKI	Addanki	49.78	262	eP	P	17 15 36.0	+0.6
ADKI				IAmb	IAmb	17 15 38.1	
	comp=Z,133nm,1.6s						
ADKI				eS	S	17 22 40.7	+2.0
ADKI				IVMs_BB	IVMs_BB	17 33 24.5	
	comp=Z,2µm,38.2s						
NJS	Nagarjunasagar	49.97	264	eP	P	17 15 37.0	+0.2
NJS				IAmb	IAmb	17 15 38.9	
	comp=Z,194nm,1.7s						
NJS				eS	S	17 22 42.5	+1.1
NJS				IVMs_BB	IVMs_BB	17 35 29.6	
	comp=Z,2µm,23.7s						
CHGR	Chuyangaron	49.98	295	P	P	17 15 36.2	-0.7
RDOG	Red Dog Mine	50.07	26	P	P	17 15 37.7	+0.8
HYB	Hyderabad	50.17	265	iP	P	17 15 37.0	-1.4
	comp=Z,260nm,1.0s						
HYB				epP	pP	17 15 59.5	+0.6
HYB				esP	sP	17 16 07.5	-0.9
HYB				eS	S	17 22 46.0	+1.8
HYB				esS	sS	17 23 20.0	+0.8
HYB				eLR	LR		
	comp=Z,11nm,28.0s						
HYB	Hyderabad	50.17	265⇑	iP	P	17 15 37.9	-0.5
HYBB	Hyderabad (bro	50.17	265	eP	P	17 15 38.1	-0.3
HYBB				IAmb	IAmb	17 15 39.3	
	comp=Z,138nm,1.3s						
HYBB				epP	pP	17 15 59.0	+0.1
HYBB				eS	S	17 22 46.8	+2.6
HYBB				IVMs_BB	IVMs_BB	17 35 18.8	
	comp=Z,2µm,32.8s						
HNR	Honiara	50.49	143	LR	LR	17 34 47.9	
	comp=Z,4µm,21.3s,baz=324,slow=33						
HNR	Honiara	50.49	143	eP	P	17 15 43.0	+2.3
SRLM	Srisailam	50.54	263	eP	P	17 15 41.0	-0.2
SRLM				IAmb	IAmb	17 15 42.2	
	comp=Z,175nm,1.5s						
SRLM				eS	S	17 22 49.6	+0.2
SRLM				IVMs_BB	IVMs_BB	17 34 06.2	
	comp=Z,2µm,32.1s						
MDRS	Chennai	51.00	259⇑	iP	P	17 15 45.1	+0.5
SKHT	Srikalahasti	51.08	260	eP	P	17 15 45.8	+0.5

SKHT				IAmb	IAmb	17 15 46.5	
	comp=Z,75nm,1.2s						
SKHT				eS	S	17 22 59.5	+2.7
SKHT				IVMs_BB	IVMs_BB	17 33 41.1	
	comp=Z,2µm,33.5s						
KBL	Kabul	51.22	290	P	P	17 15 46.1	-0.3
KBL				P	P	17 15 46.1	-0.3
KBL				S	S	17 22 58.1	-0.8
KBL				S	S	17 22 58.1	-0.8
KBL	Kabul	51.22	290	P	P	17 15 46.0	-0.3
KBL				pmax	pmax		
	comp=Z,448nm,1.0s						
KBL	Kabul	51.22	290	P	P	17 15 46.0	-0.3
CNBA	Chernabura Isl	51.27	44	P	P	17 15 44.5	-1.6
KLRI	Killari	51.48	267	eP	P	17 15 47.7	-0.6
KLRI				IAmb	IAmb	17 15 48.8	
	comp=Z,346nm,1.6s						
KLRI				e		17 23 01.0	
KLRI				eS	S	17 23 04.0	+1.7
KLRI				IVMs_BB	IVMs_BB	17 39 22.8	
	comp=Z,2µm,26.2s						
FITZ	Fitzroy Crossi	51.77	187	P	P	17 15 50.8	+0.6
URV	Uravakonda	52.48	263	eP	P	17 15 55.3	-0.4
URV				IAmb	IAmb	17 15 56.7	
	comp=Z,366nm,1.9s						
URV				eS	S	17 23 15.6	-0.4
URV				IVMs_BB	IVMs_BB	17 34 40.3	
	comp=Z,4µm,38.6s						
SVE	Sverdlovsk	52.52	319	d iP	P	17 15 55.5	+0.1
SVE				eS	S	17 23 15.4	-0.2
SVE				e		17 25 30.8	
SVE				pmax	pmax		
	comp=Z,557nm,1.4s						
SVE				MLR	MLR		
	comp=Z,5µm,18.0s						
TTA	Tatalina	52.63	33	P	P	17 15 56.4	+0.1
TTA	Tatalina	52.63	33	P	P	17 15 56.4	+0.1
SVW2	Sparrevohn	52.92	36	P	P	17 15 58.5	+0.2
SVW2				IAmb	IAmb	17 16 32.4	
	comp=Z,197nm,1.1s						
WB0	Warramunga Arr	53.15	177	P	P	17 16 00.2	-0.1
WRAB	Tennant Creek	53.31	177	ceP	P	17 16 02.0	+0.4
WRAB				pmax	pmax		
	comp=Z,725nm,1.7s						
WRAB	Tennant Creek	53.31	177	P	P	17 16 01.7	+0.2
WRA	Warramunga Arr	53.32	177	P	P	17 16 01.9	+0.3
	comp=Z,209nm,0.9s,baz=352,slow=7.7,SNR=165						
WRA				PcP	PcP	17 17 09.0	+0.8
	comp=Z,67nm,1.0s,baz=356,slow=6.5,SNR=4.7						
WRA				S	S	17 23 28.7	+1.6
	comp=Z,12nm,1.3s,baz=0.2,slow=14,SNR=6.3						
WRA				LR	LR	17 38 12.0	
	comp=Z,3µm,20.7s,baz=20,slow=35						
WRA				PKPPKP	P'P'df	17 46 12.7	-7.5
	comp=Z,3.1nm,1.0s,baz=143,slow=1.6,SNR=7.3						
WRA				P4KPbc		17 53 24.6	
	comp=Z,1.7nm,0.7s,baz=356,slow=5.7,SNR=21						
WRA	Warramunga Arr	53.32	177	P	P	17 16 00.3	-1.3
WRA						17 17 08.0	
WRA				pmax	pmax		
	comp=Z,27nm,1.1s						
WRA	Warramunga Arr	53.32	177	P	P	17 16 00.3	-1.3
WRA					PcP	17 17 08.0	-0.2
WB2	Warramunga Arr	53.32	177	P	P	17 16 01.3	-0.4
IMAR	Indian Mountai	53.53	29	P	P	17 16 03.4	+0.7
POO	Poona	53.55	269	⇑ix	P	17 15 59.4	-4.2
	comp=Z,180nm,1.1s						
POO				⇑iP	P	17 16 03.1	-0.4
POO				ex	x	17 23 27.6	
ARU	Arti	53.71	319	P	P	17 16 03.5	-0.5
	comp=Z,116nm,1.0s,baz=82,slow=2.7,SNR=120						
ARU				S	S	17 23 30.8	-0.8
	comp=Z,3.3nm,0.9s,baz=225,slow=19,SNR=3.4						
ARU				LR	LR	17 41 46.8	
	comp=Z,5µm,18.9s,baz=80,slow=39						
ARU	Arti	53.71	319	c iP	P	17 16 03.6	-0.5
ARU				*PP	pP	17 16 25.1	+0.3
ARU						17 17 05.5	
ARU						17 18 04.5	
ARU				PPP	PPP	17 19 11.1	
ARU				S	S	17 23 30.9	-0.8
ARU				*SS	sS	17 24 07.1	0.0
ARU						17 25 41.1	
ARU				pmax	pmax		
	comp=Z,493nm,1.0s						
ARU				MLR	MLR		
	comp=Z,5µm,17.0s						
ARU	Arti	53.71	319	P	P	17 16 03.6	-0.5
PALK	Pallekele	53.91	253	LR	LR	17 39 20.7	
	comp=Z,3µm,21.2s,baz=37,slow=36						
PALK	Pallekele	53.91	253	i P	P	17 16 06.5	+0.3
	SNR=10						
PALK	Pallekele	53.91	253	P	P	17 16 06.6	+0.3
ABKAR	Akbulak array	54.09	310	P	P	17 16 05.8	-1.2
BOM	Bombay	54.24	270	AMb	AMB	17 16 16.8	
	comp=Z,635nm,14.4s						
RSO	Redoubt South	54.36	36	P	P	17 16 09.4	+0.3
PPLA	Purkeypile	54.38	33	P	P	17 16 10.8	+1.7
OHAK	Old Harbor	54.50	40	P	P	17 16 09.3	-0.6
OHAK				IAmb	IAmb	17 16 15.3	
	comp=Z,261nm,1.2s						
KDAK	Kodiak Island	54.80	39	LR	LR	17 40 10.0	
	comp=Z,12µm,22.0s,baz=256,slow=36						
KDAK	Kodiak Island	54.80	39	P	P	17 16 12.8	+0.9
KDAK				pmax	pmax		
	comp=Z,580nm,1.5s						
KDAK	Kodiak Island	54.80	39	P	P	17 16 12.8	+0.9
BPAW	Bear Paw Mtn.	54.81	32	P	P	17 16 12.9	+0.9
MLY	Manley	54.83	30	P	P	17 16 11.9	-0.3
COLD	Coldfoot	54.88	28	P	P	17 16 13.1	+0.6
COLD				IAmb	IAmb	17 16 50.2	
	comp=Z,152nm,1.0s						
KTH	Kantishna Hill	54.89	32	P	P	17 16 14.3	+1.6
BHUJ	Bhuj	54.91	276	⇑iP	P	17 16 13.1	-0.3
TOLK	Toolik Lake Re	55.03	26	P	P	17 16 13.8	+0.3
TOLK	Toolik Lake Re	55.03	26	P	P	17 16 14.8	+1.2
	baz=273,SNR=64						
GOA	Goa	55.05	266	⇑iP	P	17 16 14.5	+0.1
AKTO	Aktyubinsk	55.06	311	P	P	17 16 13.3	-0.7
	comp=Z,51nm,0.8s,baz=83,slow=7.6,SNR=67						
AKTO				S	S	17 23 50.1	0.0
	comp=Z,4.5nm,1.1s,baz=206,slow=21,SNR=5.6						
AKTO				LR	LR	17 41 21.8	
	comp=Z,10µm,21.5s,baz=82,slow=38						
TRF	Thorofare Moun	55.19	32	P	P	17 16 15.2	+0.2
TRF				IAmb	IAmb	17 16 41.2	
	comp=Z,226nm,0.8s						
SUA	Susitna One	55.21	35	P	P	17 16 15.4	+0.3
CNPM	China Poot	55.24	37	P	P	17 16 16.2	+1.0
CNPM				IAmb	IAmb	17 16 41.0	
	comp=Z,233nm,0.9s						
BRLK	Bradley Lake	55.38	37	P	P	17 16 16.8	+0.6
BRLK				IAmb	IAmb	17 16 42.3	
	comp=Z,282nm,0.9s						
BWN	Browne	55.47	31	P	P	17 16 16.4	-0.3
NEA	Nenana	55.59	31	P	P	17 16 17.4	-0.2
MBWA	Marble Bar	55.68	194	P	P	17 16 18.8	+0.1
MBWA				P	P	17 16 18.8	+0.1
MBWA				S	S	17 24 04.6	+5.9
MBWA				S	S	17 24 04.6	+5.9
RC01	Rabbit Creek A	55.75	35	P	P	17 16 17.9	-0.9
RC01				IAmb	IAmb	17 16 45.3	
	comp=Z,348nm,1.1s						
MCK	McKinley	55.75	32	P	P	17 16 19.4	+0.6
MCK				pmax	pmax		
	comp=Z,550nm,1.0s						
MCK	McKinley	55.75	32	P	P	17 16 19.4	+0.6
RND	Reindeer	55.83	32	P	P	17 16 19.8	+0.4
RND				pmax	pmax		
	comp=Z,740nm,1.0s						
RND	Reindeer	55.83	32	P	P	17 16 19.8	+0.4
MDM	Murphy Dome	55.90	30	P	P	17 16 21.3	+1.5
PMR	Palmer	55.96	35	P	P	17 16 20.1	-0.2
PMR				pmax	pmax		
	comp=Z,575nm,1.4s						
PMR	Palmer	55.96	35	P	P	17 16 20.1	-0.2
GHO	Glory Hole Cre	56.03	34	P	P	17 16 21.8	+0.9
SEW	Seward	56.04	36	P	P	17 16 21.4	+0.5
SEW				IAmb	IAmb	17 16 45.5	
	comp=Z,243nm,0.8s						
PSA00	Pilbara Seismi	56.06	193	P	P	17 16 21.4	0.0
PSA00	Pilbara Seismi	56.06	193	P	P	17 16 21.0	-0.4
PSA00				IAmb	IAmb	17 16 24.6	
	comp=Z,198nm,0.7s						
TCOL	CIGO, UAF Yank	56.07	30	P	P	17 16 22.2	+1.3
	baz=278,SNR=23						
TCOL				S	S	17 24 08.5	+5.5
	baz=278						
COLA	College	56.07	30	P	P	17 16 22.4	+1.4
COLA				pmax	pmax		
	comp=Z,461nm,1.0s						
COLA	College	56.07	30	P	P	17 16 22.4	+1.4
CCB	Clear Creek Bu	56.12	31	P	P	17 16 22.0	+0.6
CCB				IAmb	IAmb	17 16 49.2	
	comp=Z,276nm,0.9s						
TRD	Trivandrum	56.21	257	eP	P	17 16 21.7	-1.0
POKR	Poker Plat Res	56.22	30	P	P	17 16 23.7	+1.6
	baz=278,SNR=110						
POKR				S	S	17 24 11.1	+6.1
	baz=278						
SML	Sawmill	56.30	34	P	P	17 16 22.5	-0.3
KNK	Knik Glacier	56.31	35	P	P	17 16 23.5	+0.7
COCO	West Island	56.43	222	P	P	17 16 24.4	+0.2
COCO				pmax	pmax		
	comp=Z,2µm,2.0s						
COCO	West Island	56.43	222	P	P	17 16 24.4	+0.2
IL31		56.49	31	P	P	17 16 23.8	-0.2
ILAR	Eielson Array	56.49	31	P	P	17 16 24.1	0.0
	comp=Z,37nm,0.6s,baz=270,slow=6.9,SNR=74						
ILAR				pP	pP	17 16 43.5	-1.5
	comp=Z,200nm,0.8s,baz=282,slow=6.7,SNR=18						
ILAR				LR	LR	17 42 28.1	
	comp=Z,2µm,18.0s,baz=286,slow=38						
ILAR				PKPPKP	P'P'df	17 46 07.5	-14
	comp=Z,2.0nm,1.1s,baz=150,slow=2.0,SNR=4.1						
ILAR				P4KPbc		17 53 40.7	
	comp=Z,0.6nm,0.8s,baz=275,slow=4.1,SNR=5.1						
ILAR	Eielson Array	56.49	31	P	P	17 16 24.0	0.0
ILAR					pP	17 16 44.2	-0.8
HDA	Harding Lake	56.52	31	P	P	17 16 24.4	+0.2
HDA	Harding Lake	56.52	31	P	P	17 16 24.6	+0.3
	baz=279,SNR=56						
DHY	Denali Highway	56.54	33	P	P	17 16 24.8	+0.2
DHY				IAmb	IAmb	17 16 48.8	
	comp=Z,217nm,0.8s						
HRA	Herat	56.58	292	P	P	17 16 25.3	-0.1
SCM	Sheep Creek Mo	56.77	34	P	P	17 16 26.3	+0.2
SCM				pmax	pmax		
	comp=Z,389nm,1.0s						
SCM	Sheep Creek Mo	56.77	34	P	P	17 16 26.3	+0.2
FYU	Fort Yukon	56.90	28	P	P	17 16 28.6	+1.7
PRP	Porcupine Dome	56.95	30	P	P	17 16 28.2	+0.8
AS31	Alice Springs	57.00	178	P	P	17 16 28.5	+0.4
ASAR	Alice Springs	57.01	178	P	P	17 16 28.8	+0.6
	comp=Z,153nm,0.9s,baz=359,slow=6.1,SNR=574						
ASAR				pP	pP	17 16 51.3	+2.2
	comp=Z,120nm,1.0s,baz=356,slow=5.3,SNR=5.4						
ASAR				S	S	17 24 17.5	+1.2
	comp=Z,7.2nm,0.9s,baz=16,slow=22,SNR=7.8						
ASAR				PKPPKP	P'P'df	17 46 04.6	-10
	comp=Z,1.2nm,0.8s,baz=150,slow=4.1,SNR=6.4						
ASAR				PKP2bc		17 46 27.6	
	comp=Z,6.6nm,0.7s,baz=165,slow=1.8,SNR=13						
ASAR				P4KPbc		17 53 41.9	
	comp=Z,1.9nm,0.7s,baz=353,slow=3.8,SNR=27						
ASAR	Alice Springs	57.01	178	P	P	17 16 28.5	+0.4
BMAR	Burnt Mountain	57.03	27	P	P	17 16 29.1	+1.3
PAX	Paxson	57.41	33	P	P	17 16 30.3	-0.4
PAX				pmax	pmax		
	comp=Z,154nm,1.0s						
PAX	Paxson	57.41	33	P	P	17 16 30.3	-0.4
PAX				IAmb	IAmb	17 16 58.3	
	comp=Z,154nm,1.0s						
DOT	Dot Lake	57.91	32	P	P	17 16 34.0	0.0
KIRV	Kirov	58.17	322	P	P	17 16 35.5	-0.4
	comp=Z,159nm,0.7s,baz=48,slow=1.1,SNR=35						
KIRV				LR	LR	17 44 19.4	
	comp=Z,4µm,18.3s,baz=84,slow=39						
KIRV				PKPPKP	P'P'df	17 46 13.2	-5.8
	comp=Z,4.9nm,0.7s,baz=222,slow=20,SNR=3.7						
KIRV				PKP2bc		17 46 23.4	
	comp=Z,6.0nm,0.7s,baz=313,slow=7.5,SNR=6.5						
MENT	Mentasta	58.21	32	P	P	17 16 37.3	+1.1
GIRL	Giralia	58.41	199	P	P	17 16 39.1	+1.3
GEYT	Alibeck	58.49	297	P	P	17 16 38.3	-0.2
	comp=Z,35nm,0.8s,baz=33,slow=3.5,SNR=65						
GEYT				pP	pP	17 17 01.3	+1.7
	comp=Z,73nm,0.9s,baz=35,slow=5.4,SNR=11						
GEYT				LR	LR	17 45 32.5	
	comp=Z,5µm,18.7s,baz=90,slow=40						
GEYT				PKP2bc		17 46 27.9	
	comp=Z,1.1nm,0.5s,baz=284,slow=5.8,SNR=3.4						
GEYT	Alibeck	58.49	297	P	P	17 16 38.4	-0.2
GEYT					pP	17 16 57.4	-2.2
GYA0B	ALIBECK ARRAY	58.49	297	P	P	17 16 38.1	-0.5
GYA0B				IAmb	IAmb	17 17 05.4	
	comp=Z,182nm,1.1s						
GLB	Gilahina Butte	58.49	34	P	P	17 16 38.6	+0.4
GLB				IAmb	IAmb	17 17 02.6	
	comp=Z,223nm,1.1s						
VRDI	Verde Repeater	58.71	34	P	P	17 16 40.4	+0.5
VRDI				IAmb	IAmb	17 17 05.9	
	comp=Z,222nm,0.9s						
MCARA	McCarthy VSAT	58.88	34	P	P	17 16 41.6	+0.8
EGAK	Eagle	58.90	30	P	P	17 16 40.1	-0.8
EGAK				IAmb	IAmb	17 17 07.4	
	comp=Z,147nm,0.8s						
CRQM	Cirque	58.97	35	P	P	17 16 42.4	+0.6
BCAR	Beaver Creek A	59.04	32	P	P	17 16 42.4	+0.4
TGL	Tana Glacier	59.12	35	P	P	17 16 42.8	+0.2
TGL				IAmb	IAmb	17 17 06.7	
	comp=Z,226nm,1.0s						
BALM	Baldy	59.28	34	P	P	17 16 44.2	+0.5
BALM				IAmb	IAmb	17 17 11.0	
	comp=Z,243nm,1.1s						
PRGR	Permogore	59.28	326	⇑iP	P	17 16 42.9	-0.7
PRGR				eS	S	17 24 44.5	-0.6
PRGR				pmax	pmax		
	comp=Z,190nm,1.0s						
MNCI	Minicoy	59.52	259	P	P	17 16 44.3	-1.6
BARN	Barnard Glacie	59.60	34	P	P	17 16 46.0	0.0
BARN				IAmb	IAmb	17 17 10.6	
	comp=Z,126nm,0.7s						
CTGM	Chitina Glacie	59.77	34	P	P	17 16 48.1	+1.0
CTGM				IAmb	IAmb	17 17 14.6	
	comp=Z,189nm,0.9s						
DAWY	Dawson	59.82	31	P	P	17 16 47.8	+0.5
DAWY				IAmb	IAmb	17 17 11.8	
	comp=Z,160nm,0.8s						
EPYK	Eagle Plains	60.28	28	P	P	17 16 51.3	+0.9
EPYK	Eagle Plains	60.28	28	P	P	17 16 51.7	+1.3
	baz=286,SNR=193						
EPYK				S	S	17 25 03.3	+5.3
	baz=286						
INK	Inuvik	60.90	25	LR	LR	17 44 00.2	
	comp=Z,2µm,21.2s,baz=286,slow=37						
INK				P4KPbc		17 53 59.7	
	comp=Z,2.9nm,1.1s,baz=279,slow=4.8,SNR=4.1						
INK	Inuvik	60.90	25	P	P	17 16 55.1	+0.6
INK				pmax	pmax		
	comp=Z,198nm,0.9s						
INK	Inuvik	60.90	25	P	P	17 16 55.1	+0.6
INK				IAmb	IAmb	17 17 18.3	
	comp=Z,198nm,0.8s						
HOPEN	Hopen	61.37	345	eP	P	17 16 57.1	-0.5
HOPEN				eS	S	17 25 16.5	+5.1
EIDS	Eidsvold	61.46	160	P	P	17 16 59.1	+0.3
EIDS				IAmb	IAmb	17 17 02.9	
	comp=Z,111nm,0.8s						
HYT	Haines Junctio	61.61	34	P	P	17 16 59.3	-0.3
HYT				IAmb	IAmb	17 17 24.7	
	comp=Z,257nm,1.0s						
TMCR	Tamitsa	61.88	330	eP	P	17 16 59.5	-1.6
TMCR				eS	S	17 25 19.3	+1.2
TMCR				pmax	pmax		
	comp=Z,231nm,0.8s						
LVZ	Lovozero	61.91	335	deP	P	17 17 01.8	+0.4
LVZ				pmax	pmax		
	comp=Z,112nm,1.0s						
LVZ	Lovozero	61.91	335	P	P	17 17 01.1	-0.4
LVZ				IAmb	IAmb	17 17 10.4	
	comp=Z,135nm,1.0s						
SPA0	Spitsbergen Ar	62.27	348	eP	P	17 17 03.2	-0.4
SPA0				eS	S	17 25 23.4	+0.7
SPA0	Spitsbergen Ar	62.27	348	P	P	17 17 03.3	-0.3
SPA0				IAmb	IAmb	17 17 46.9	
	comp=Z,160nm,1.0s						
SPITS	Spitsbergen Ar	62.27	348	P	P	17 17 03.6	0.0
	comp=Z,52nm,0.8s,baz=92,slow=9.2,SNR=55						
SPITS				pP	pP	17 17 26.0	+1.2
	comp=Z,42nm,0.8s,baz=85,slow=11,SNR=3.4						
KLMR	Klimovskoe	62.34	326	c iP	P	17 17 03.4	-0.9
KLMR				e*PP	pP	17 17 26.3	+0.8
KLMR				S	S	17 25 17.0	-7.0
KLMR				*SS	sS	17 25 59.1	-1.0
KLMR				SS	SS	17 29 35.3	+7.2
KLMR				pmax	pmax		
	comp=Z,465nm,1.4s						
KLMR				pmax	pmax		
	comp=Z,938nm,1.5s						
KLMR	Klimovskoe	62.34	326	⇑iP	P	17 17 03.4	-0.9
KLMR				⇓iP	P	17 17 03.4	-0.9
KLMR				⇓iP	P	17 17 03.4	-0.9
KLMR				AMP		17 17 07.8	
	comp=Z,938nm,1.5s						
KLMR				AMP		17 17 08.2	
	comp=Z,465nm,1.4s						
KLMR				epP	pP	17 17 26.3	+0.8
KLMR				S	S	17 25 17.0	-7.0
KLMR				S	S	17 25 17.0	-7.0
KLMR				sS	sS	17 25 59.2	-0.9
KLMR				SS	SS	17 29 35.3	+7.2
KLMR				SSS	SSS	17 32 28.0	
KLMR				SSS	SSS	17 32 28.0	
KLMR				LQ	LQ	17 37 28.9	
KLMR				LQ	LQ	17 37 28.9	
KLMR				LR	LR	17 38 01.5	
KLMR				AMP		17 42 08.2	
	comp=Z,7µm,19.4s						
APA	Apatity	62.48	335	⇑iP	P	17 17 03.4	-1.7
APA				i		17 17 46.0	
APA				i		17 19 25.0	
APA				i S	S	17 25 22.0	-3.5
APA				i PS		17 25 57.0	
APA				i SSS	SSS	17 32 20.0	
APA				pmax	pmax		
	comp=Z,172nm,0.9s						
APA				MLR	MLR		
	comp=Z,5µm,16.0s						
KBS	Kingsbay	62.59	349	eP	P	17 17 05.6	-0.1
KBS				IVmB_BB		17 17 29.6	
	comp=Z,3µm,3.7s						
KBS				eS	S	17 25 28.0	+1.3
KBS	Kingsbay	62.59	349	⇓eP	P	17 17 06.1	+0.4
KBS				pmax	pmax		
	comp=Z,620nm,1.7s						
KBS	Kingsbay	62.59	349	P	P	17 17 05.9	+0.2
KBS	Kingsbay	62.59	349	i P		17 17 05.6	
KBS				IAmb		17 17 07.3	
	comp=Z,142nm,0.8s						
WHY	Whitehorse	62.88	34	P	P	17 17 08.5	+0.4
WHY				IAmb	IAmb	17 17 32.4	
	comp=Z,212nm,1.1s						
HSPB	Hornsund (broa	63.05	347	eP	P	17 17 08.4	-0.3
HSPB				eS	S	17 25 33.3	+0.8
SKAG	Skagway	63.09	35	P	P	17 17 10.4	+1.1
SKAG				IAmb	IAmb	17 17 34.5	
	comp=Z,274nm,1.2s						
BJO1	Bjornoya	63.65	344	eP	P	17 17 12.3	-0.5
BJO1				eS	S	17 25 40.0	+0.1
BJO1				eSS	SS	17 29 53.0	+5.0
C36M	Paulatuk	63.70	23	P	P	17 17 13.4	+0.3
C36M	Paulatuk	63.70	23	P	P	17 17 14.0	+0.8
	baz=296						
C36M				S	S	17 25 44.4	+3.6
	baz=296						
KEV	Kevo	63.74	338	PB	P	17 17 12.3	-1.1
KEV				MSG		17 17 49.9	
	comp=Z,2.1nm,0.2s						
KEV	Kevo	63.74	338	P	P	17 17 12.8	-0.6
KEV				pmax	pmax		
	comp=Z,124nm,0.8s						
KEV	Kevo	63.74	338	P	P	17 17 12.8	-0.6
KEV				IAmb	IAmb	17 17 18.8	
	comp=Z,124nm,0.8s						
VRF	Varrio	63.74	335	PN	P	17 17 12.8	-0.7
SIT	Sitka	63.97	37	P	P	17 17 17.4	+2.2
SIT				pmax	pmax		
	comp=Z,196nm,1.0s						
SIT	Sitka	63.97	37	P	P	17 17 17.4	+2.2
SIT				IAmb	IAmb	17 17 22.2	
	comp=Z,196nm,1.0s						
JIS	Juneau Island	63.98	36	P	P	17 17 17.0	+1.9
JIS				IAmb	IAmb	17 17 56.1	
	comp=Z,209nm,1.2s						
WBK	Wadi Bani Khal	64.01	281	P	P	17 17 16.1	0.0
	SNR=5.1						
WBK				P	P	17 17 16.1	0.0
	SNR=5.1						
WBK				S	S	17 25 46.7	+0.6
WBK				S	S	17 25 46.7	+0.6
MORW	Morawa	64.11	195	P	P	17 17 15.7	-0.6
MORW				IAmb	IAmb	17 17 17.6	
	comp=Z,484nm,1.3s						
FORT	Forrest	64.15	184	P	P	17 17 16.6	+0.1
MAK	Makhachkala	64.21	306	eP	P	17 17 15.4	-1.6
MAK				e*PP	pP	17 17 37.5	-0.8
MAK				e*SP	sP	17 17 48.0	+0.5
MAK				e		17 19 36.8	
MAK				eS	S	17 25 45.1	-2.8
MAK				e*SS	sS	17 26 25.5	+1.4
MAK				eSS	SS	17 29 56.8	-1.3
MAK				pmax	pmax		
	comp=Z,237nm,1.4s						
MAK				MLR	MLR		
	comp=Z,4µm,15.0s						
ARCES	ARCESS Array B	64.31	338	P	P	17 17 16.4	-0.8
	comp=Z,43nm,0.5s,baz=61,slow=8.7,SNR=147						
ARCES				LR	LR	17 50 14.9	
	comp=Z,4µm,18.6s,baz=65,slow=40						
ARE0	ARCESS Array S	64.31	338	eP	P	17 17 17.0	-0.2
ARE0				eS	S	17 25 48.8	+0.5
ARE0	ARCESS Array S	64.31	338	P	P	17 17 16.3	-0.9
HAMF	Hammerfest	64.34	339	eP	P	17 17 17.1	-0.2
HAMF				IVmB_BB		17 17 21.6	
	comp=Z,5µm,4.2s						
HAMF				eS	S	17 25 49.5	+0.8
HAMF				eSS	SS	17 30 05.3	+6.5
DZM	Mont Dzumac	64.47	144	eP	P	17 17 20.2	+1.3
	comp=Z,214nm,0.7s						
DZM				epP	pP	17 17 40.7	+0.5
	comp=Z,503nm,1.2s						
DZM				eS	S	17 25 49.3	-2.3
	comp=Z,7µm,24.8s						
DZM				eLQ	LQ	17 33 54.7	
	comp=Z,17µm,32.5s						
DZM				eLR	LR	17 36 37.0	
	comp=Z,35µm,32.5s						
DZM	Mont Dzumac	64.47	144	P	P	17 17 20.2	+1.3
DZM				IAmb	IAmb	17 17 47.0	
	comp=Z,322nm,1.3s						
SMDO	Samad	64.56	282	P	P	17 17 19.3	-0.4
	SNR=8.5						
SMDO				P	P	17 17 19.3	-0.4
	SNR=8.5						
AKT	Akhty	64.64	304	⇑iP	P	17 17 19.4	-0.6
AKT				e*PP	pP	17 17 40.1	-1.2
AKT				e		17 17 50.1	
AKT				pmax	pmax		
	comp=Z,250nm,0.7s						
BANOM	Banah	64.68	285	P	P	17 17 19.4	-0.9
BANOM	Banah	64.68	285	P	P	17 17 19.5	-0.9
BANOM				S	S	17 25 56.9	+2.6
VRH	Novokhopyorsk	64.68	316	eP	P	17 17 18.4	-1.5
VRH				e*SP	pP	17 17 42.7	+1.5
VRH				eS	S	17 25 47.6	-5.8
VRH				pmax	pmax		
	comp=Z,150nm,0.7s						
VRH				smax	smax		
	comp=N,3µm,12.8s						
MSF	Maaselka	64.73	334	PN	P	17 17 19.4	-0.6
SHME	Shamm	64.75	286	i P	P	17 17 21.1	+0.3
	SNR=17						
JMDO	Jabal Madar	64.83	281	P	P	17 17 20.6	-0.8
	SNR=6.9						
JMDO				P	P	17 17 20.6	-0.8
	SNR=6.9						
HOQ	Hoqain	64.92	283	P	P	17 17 21.5	-0.5
	SNR=8.2						
HOQ				P	P	17 17 21.5	-0.5
	SNR=8.2						
HOQ				S	S	17 25 56.2	-1.0
HOQ				S	S	17 25 56.2	-1.0

MDH	Madha	64.96	285	P	P	17 17 22.8	+0.7
KHLU	Kahalu`u	64.98	82	P	P	17 17 22.4	-0.1
KHLU				IAmb	IAmb	17 17 27.4	
	comp=Z,173nm,1.0s						
MSFE	Esma-Masafi	65.05	285	P	P	17 17 22.3	-0.4
MOS	Moscow	65.16	322	eP	P	17 17 21.0	-1.9
MOS				e		17 17 46.6	
MOS				eS	S	17 25 56.2	-2.9
MOS				pmax	pmax		
	comp=Z,600nm,1.6s						
MOS				pmax	pmax		
	comp=Z,1µm,1.7s						
MOS				smax	smax		
	comp=N,6µm,7.0s						
MOS				MLR	MLR		
	comp=Z,3µm,17.0s						
UOSS	Minazif	65.20	284	P	P	17 17 22.8	-0.9
UOSS	Minazif	65.20	284	P	P	17 17 23.5	-0.2
POHA	Pohakuloa	65.20	82	P	P	17 17 23.9	-0.2
POHA				IAmb	IAmb	17 17 29.1	
	comp=Z,204nm,0.8s						
GROC	Groznyy	65.27	307	eP	P	17 17 21.4	-2.4
GROC				e*PP	pP	17 17 43.8	-1.4
GROC				e*SP	PcP	17 17 55.3	-0.3
GROC				eS	S	17 26 02.4	+1.5
GROC				e		17 26 25.1	
GROC				pmax	pmax		
	comp=Z,197nm,1.4s						
KTK1	Kautokeino	65.27	338	eP	P	17 17 22.9	-0.5
KTK1				eS	S	17 25 56.0	-4.1
MLOA	Mauna Loa Obse	65.27	82	P	P	17 17 23.5	-1.3
MLOA				IAmb	IAmb	17 17 30.5	
	comp=Z,220nm,1.0s						
SOHO	SOHO	65.30	283	P	P	17 17 24.0	-0.4
	SNR=9.8						
SOHO				P	P	17 17 24.0	-0.4
	SNR=9.8						
SOHO				S	S	17 26 03.4	+1.5
SOHO				S	S	17 26 03.4	+1.5
HATD	Hatta, Dubai	65.31	284	i P	P	17 17 24.1	-0.4
	SNR=5.5						
BSY	Bisya	65.40	282	P	P	17 17 25.1	0.0
	SNR=6.6						
HEF	Hetta	65.43	337	eS	S	17 26 03.1	+1.0
ASHO	Ashiyiah	65.43	284	P	P	17 17 25.1	-0.2
ASHO	Ashiyiah	65.43	284	P	P	17 17 25.6	+0.3
	SNR=5.4						
ASHO				S	S	17 26 04.8	+1.2
MHTO	MHTO	65.59	280	P	P	17 17 25.6	-0.7
	SNR=24						
MHTO				P	P	17 17 25.6	-0.7
	SNR=24						
MHTO				S	S	17 26 04.1	-1.3
MHTO				S	S	17 26 04.1	-1.3
NAZ	Nazwa, Dubai	65.62	285	P	P	17 17 26.0	-0.4
ARQ	Araqi	65.68	283	P	P	17 17 26.5	-0.3
	SNR=12						
ARQ				P	P	17 17 26.5	-0.3
	SNR=12						
LPSR	Galich'ya Gora	65.72	318	eP	P	17 17 25.3	-1.3
LPSR				e*SP	pP	17 17 49.5	+1.5
LPSR				eS	S	17 25 59.0	-7.1
LPSR				pmax	pmax		
	comp=Z,290nm,1.0s						
LPSR				smax	smax		
	comp=N,3µm,10.4s						
LPSR				MLR	MLR		
	comp=Z,5µm,23.0s						
WRAK	Wrangell Islan	65.73	37	P	P	17 17 27.6	+1.0
FAQ	Al Faqa, Dubai	65.78	284	P	P	17 17 27.3	-0.2
STKA	Stephens Creek	65.80	171	P	P	17 17 28.4	+1.2
	comp=Z,70nm,0.5s,baz=350,slow=6.1,SNR=131						
STKA				PKPPKP	P'P'df	17 46 03.7	+2.8
	comp=Z,3.3nm,0.9s,baz=110,slow=3.3,SNR=4.6						
STKA				PKP2bc		17 46 09.0	
	comp=Z,4.9nm,1.1s,baz=182,slow=3.0,SNR=4.0						
STKA	Stephens Creek	65.80	171	P	P	17 17 28.1	+0.9
STKA				pmax	pmax		
	comp=Z,89nm,1.4s						
STKA	Stephens Creek	65.80	171	P	P	17 17 28.1	+0.9
OBN	Obninsk	65.96	321	P	P	17 17 27.0	-1.1
	comp=Z,26nm,0.8s,baz=64,slow=0.8,SNR=21						
OBN	Obninsk	65.96	321	c iP	P	17 17 27.0	-1.1
OBN				e*PP	pP	17 17 52.1	+2.6
OBN				e		17 17 57.0	
OBN				e		17 19 52.9	
OBN				ePPP	PPP	17 21 27.9	
OBN				eS	S	17 26 07.5	-1.4
OBN				eSS	SS	17 30 24.7	0.0
OBN				pmax	pmax		
	comp=Z,491nm,1.7s						
OBN				MLR	MLR		
	comp=Z,5µm,19.0s						
OBN	Obninsk	65.96	321	P	P	17 17 26.9	-1.1
OBN				IAmb	IAmb	17 17 31.8	
	comp=Z,350nm,1.2s						
ALNE	Al Ain	65.97	284	i P	P	17 17 28.5	-0.2
	SNR=47						
DLBC	Dease Lake	66.02	35	P	P	17 17 29.3	+0.7
VSR	Storozhevoye	66.15	317	eP	P	17 17 28.6	-0.8
VSR				e*SP	pP	17 17 53.5	+2.7
VSR				eS	S	17 26 05.6	-5.8
VSR				pmax	pmax		
	comp=Z,190nm,0.8s						
VSR				smax	smax		
	comp=N,2µm,10.3s						
BBOO	Buckleboo	66.20	176	P	P	17 17 29.9	+0.2
BBOO				IAmb	IAmb	17 17 31.8	
	comp=Z,468nm,1.2s						
TRO	Tromso	66.25	339	eP	P	17 17 29.1	-0.6
TRO				eS	S	17 26 12.9	+0.9
TRO				eSS	SS	17 30 26.3	-2.3
GOF	Gofitskoye	66.33	309	⇑iP	P	17 17 29.8	-0.8
GOF				eS	SKiKP	17 26 54.6	-32
GOF				pmax	pmax		
	comp=Z,139nm,0.7s						
AJN	Ajban	66.36	285	P	P	17 17 30.2	-0.9
AJN	Ajban	66.36	285	P	P	17 17 30.7	-0.4
ARMA	Armidale	66.39	161	P	P	17 17 31.3	+0.1
ARMA				IAmb	IAmb	17 17 56.3	
	comp=Z,197nm,1.2s						
DQM	DQM	66.45	279	P	P	17 17 31.1	-0.7
DQM				P	P	17 17 31.1	-0.7
TBLG	Delisi	66.58	305	P	P	17 17 32.0	-0.4
TBLG				pmax	pmax		
	comp=Z,100nm,1.0s						
TBLG	Delisi	66.58	305	P	P	17 17 32.0	-0.4
NCK	Nalchik	66.61	308	⇓iP	P	17 17 32.3	-0.2
NCK				pmax	pmax		
	comp=Z,100nm,1.2s						
ZEI	Tsey	66.70	307	eP	P	17 17 27.8	-5.6
ZEI				pmax	pmax		
	comp=Z,141nm,1.3s						
PUL	Pulkovo	66.96	327	⇑eP	P	17 17 34.7	+0.3
PUL				pmax	pmax		
	comp=Z,167nm,0.8s						
H02N1	VAN INLET T-PH	66.97	41	P	P	17 17 36.4	+1.7
KBZ	Khabaz	66.97	308	P	P	17 17 34.2	-0.6
	comp=Z,73nm,0.9s,baz=80,slow=3.0,SNR=45						
KBZ				LR	LR	17 49 50.3	
	comp=Z,11µm,21.1s,baz=65,slow=39						
KBZ	Khabaz	66.97	308	c iP	P	17 17 34.1	-0.6
KBZ				pmax	pmax		
	comp=Z,215nm,1.3s						
KIV	Kislovodsk	67.02	308	i P	P	17 17 34.3	-0.9
	SNR=53						
KIV	Kislovodsk	67.02	308	eP	P	17 17 34.4	-0.8
KIV				e		17 20 03.0	
KIV				eS	S	17 26 21.1	-1.2
KIV				pmax	pmax		
	comp=Z,688nm,1.0s						
KIV				pmax	pmax		
	comp=Z,2µm,4.8s						
KIV				MLR	MLR		
	comp=Z,21µm,17.0s						
KIV	Kislovodsk	67.02	308	P	P	17 17 34.5	-0.6
KIV				IAmb	IAmb	17 17 39.5	
	comp=Z,317nm,1.2s						
DIB	Dawson Inlet,	67.03	41	P	P	17 17 34.8	-0.1
DIB				IAmb	IAmb	17 17 59.5	
	comp=Z,204nm,1.3s						
H02S1	DAWSON INLET T	67.03	41	P	P	17 17 36.7	+1.7
GNI	Garni	67.25	304	P	P	17 17 37.1	+0.3
	comp=Z,81nm,0.9s,baz=177,slow=3.3,SNR=24						
GNI	Garni	67.25	304	i P	P	17 17 36.9	+0.1
	SNR=34						
GNI	Garni	67.25	304	c iP	P	17 17 37.0	+0.1
GNI				pmax	pmax		
	comp=Z,1µm,1.7s						
GNI	Garni	67.25	304	P	P	17 17 36.5	-0.3
GNI				IAmb	IAmb	17 17 41.9	
	comp=Z,285nm,1.2s						
NEY	Neytrino	67.29	308	d iP	P	17 17 37.7	+0.7
MOBC	Moresby Island	67.33	40	P	P	17 17 37.6	+0.6
MSVF	Nonsavu	67.47	132	P	P	17 17 40.9	+2.7
MSVF				pmax	pmax		
	comp=Z,343nm,1.1s						
MSVF	Nonsavu	67.47	132	P	P	17 17 40.9	+2.7
MSVF				IAmb	IAmb	17 18 07.2	
	comp=Z,343nm,1.1s						
AKH	Akhalkalaki	67.57	306	⇑P	P	17 17 39.0	+0.2
AKH	Akhalkalaki	67.57	306	P	P	17 17 38.6	-0.2
AKH				pmax	pmax		
	comp=Z,96nm,1.0s						
AKH	Akhalkalaki	67.57	306	P	P	17 17 38.6	-0.2
NWAO	Narrogin (SRO)	67.60	193	P	P	17 17 38.5	-0.1
NWAO				pmax	pmax		
	comp=Z,492nm,1.3s						
NWAO	Narrogin (SRO)	67.60	193	P	P	17 17 38.5	-0.1
NWAO				IAmb	IAmb	17 17 40.0	
	comp=Z,492nm,1.2s						
RES	Resolute Bay	67.71	12	P	P	17 17 38.8	-0.1
RES				pmax	pmax		
	comp=Z,185nm,1.0s						
RES	Resolute Bay	67.71	12	P	P	17 17 38.8	-0.1
RES				IAmb	IAmb	17 18 02.5	
	comp=Z,185nm,1.0s						
FIA1	FINESS Array S	68.00	330	P	P	17 17 39.6	-1.3
FIA1				IAmb	IAmb	17 17 44.6	
	comp=Z,549nm,1.6s						
FINES	FINESS Array B	68.00	330	P	P	17 17 40.1	-0.8
	comp=Z,71nm,0.6s,baz=68,slow=5.4,SNR=194						
FINES				PcP	PcP	17 18 07.1	+0.5
	comp=Z,79nm,0.7s,baz=72,slow=8.4,SNR=12						
FINES				LR	LR	17 52 38.2	
	comp=Z,3µm,18.7s,baz=66,slow=40						
FINES	FINESS Array B	68.00	330	P	P	17 17 39.8	-1.1
STEI	Steigen	68.33	339	eP	P	17 17 42.3	-0.5
STEI				eS	S	17 26 37.7	+0.7
DAG	Danmarks Havn	68.34	353	⇑iP	P	17 17 42.5	-0.3
	comp=Z,590nm,1.3s						
DAG				i pP	pP	17 18 02.7	-1.6
DAG	Danmarks Havn	68.34	353	⇑iP	P	17 17 42.5	-0.3
DAG				i *PP	pP	17 18 02.7	-1.6
DAG				pmax	pmax		
	comp=Z,590nm,1.3s						
DAG	Danmarks Havn	68.34	353	⇑iP		17 17 42.5	
DAG				IAmb		17 17 46.9	
	comp=Z,590nm,1.3s						
DAG				i pP		17 18 02.8	
LOF	Lofoten	68.72	339	eP	P	17 17 44.9	-0.3
LOF				eS	S	17 26 38.6	-2.9
BCA	Borcka	68.81	306	⇓P	P	17 17 46.4	0.0
SHAO	Shalim	68.95	278	P	P	17 17 47.1	-0.5
SHAO				P	P	17 17 47.1	-0.5
SHAO				S	S	17 26 46.0	+0.1
SHAO				S	S	17 26 46.0	+0.1
SOC	Sochi	69.11	309	eP	P	17 17 49.0	+0.8
SOC				e*PP	pP	17 18 10.2	+0.5
SOC				e*SP	sP	17 18 19.3	+0.4
SOC				e		17 20 21.2	
SOC				ePPP	PPP	17 21 59.8	
SOC				i S	S	17 26 47.6	+0.5
SOC				eSS	SS	17 31 11.0	-3.0
SOC				pmax	pmax		
	comp=Z,78nm,1.1s						
VSU	Vasula	69.22	327	eP	P	17 17 48.3	-0.2
VSU	Vasula	69.22	327	c iP	P	17 17 47.5	-1.0
VSU				pmax	pmax		
	comp=Z,724nm,1.7s						
TULEG	Thule	69.34	5	P	P	17 17 48.5	-0.5
TULEG				IAmb	IAmb	17 17 53.4	
	comp=Z,276nm,1.0s						
TULEG	Thule	69.34	5	⇑iP		17 17 48.7	
TULEG				IAmb		17 17 53.1	
	comp=Z,286nm,1.0s						
TULEG				i		17 18 12.3	
H08S3	Diego Garcia H	69.56	245	P	P	17 17 52.8	+1.8
	baz=11,slow=13,SNR=6.0						
H08S2	Diego Garcia H	69.56	245	P	P	17 17 50.8	-0.1
	baz=11,slow=13,SNR=6.3						
H08S1	Diego Carcia H	69.57	245	P	P	17 17 53.1	+2.0
	baz=11,slow=13,SNR=5.7						
MOR8	Moi Rana	69.65	337	eP	P	17 17 49.2	-1.9
MOR8				eS	S	17 26 50.7	-1.9
MOR8				eSS	SS	17 31 18.9	-2.3
KONS	Konsvik	69.86	338	eP	P	17 17 52.1	-0.3
STOK	Stokkvaagen	70.00	338	eP	P	17 17 52.9	-0.2
STOK				eS	S	17 26 57.2	+0.6
ANN	Anapa	70.02	311	eP	P	17 17 51.6	-2.1
ANN				e*PP	pP	17 18 15.1	-0.2
ANN				eS	S	17 26 54.9	-2.7
ANN				e*SS	sS	17 27 34.5	+0.1
ANN				pmax	pmax		
	comp=Z,302nm,1.3s						
ANN				MLR	MLR		
	comp=N,6µm,20.0s						
ANN				MLR	MLR		
	comp=Z,7µm,20.0s						
ANN				MLR	MLR		
	comp=E,1µm,10.0s						
H01W3	Cape Leeuwin H	70.13	195	P	P	17 17 55.6	+1.6
	baz=35,slow=7.4,SNR=11						
H01W1	Cape Leeuwin H	70.14	195	P	P	17 17 55.8	+1.7
	baz=35,slow=7.4,SNR=13						
H01W2	Cape Leeuwin H	70.15	195	P	P	17 17 55.6	+1.6
	baz=35,slow=7.4,SNR=6.9						
CAN	Canberra	70.45	165	P	P	17 17 57.5	+1.2
CAN				pmax	pmax		
	comp=Z,153nm,1.2s						
CAN	Canberra	70.45	165	P	P	17 17 57.5	+1.2
WHFO	Wadi Hawf	70.54	279	P	P	17 17 56.1	-1.2
	SNR=8.4						
WHFO				S	S	17 27 02.7	-1.9
YKA	Yellowknife Ar	70.54	27	P	P	17 17 57.2	+0.7
	comp=Z,35nm,0.8s,baz=298,slow=5.3,SNR=178						
YKA				PcP	PcP	17 18 17.4	+0.1
	comp=Z,159nm,0.9s,baz=301,slow=5.6,SNR=27						
YKA				PKiKP	PKiKP	17 24 05.2	-0.9
	comp=Z,3.0nm,0.7s,baz=313,slow=1.1,SNR=8.0						
YKA				PKPPKP	P'P'df	17 45 49.2	-9.3
	comp=Z,6.4nm,1.1s,baz=114,slow=3.3,SNR=19						
YKA				LR	LR	17 50 49.2	
	comp=Z,3µm,21.6s,baz=0.0,slow=37						
YKA				P4KPbc		17 54 40.6	
	comp=Z,2.0nm,1.0s,baz=307,slow=4.4,SNR=13						
MICGM	Minsk	70.70	323	⇓iP	P	17 17 57.0	-0.7
MICGM				PM		17 17 59.0	
	comp=Z,1.1nm,1.0s						
MICGM				epP	pP	17 18 20.0	+0.7
MICGM				ePP	PP	17 20 25.0	-10
MICGM				ePPP	PPP	17 26 33.0	
MICGM				eS	S	17 27 02.0	-3.2
MICGM				esS	sS	17 27 40.0	-2.2
MICGM				eSS	SS	17 31 20.0	-18
MICGM				eSSS	SSS	17 34 36.0	
MICGM				eLR	LR	17 41 20.0	
MICGM				LRM	MLR	17 46 00.0	
	comp=N,29nm,26.0s						
MICGM				LRM	MLR	17 46 36.0	
	comp=E,16nm,20.0s						
MICGM				LRM	MLR	17 47 16.0	
	comp=Z,29nm,26.0s						
MNK	Minsk	70.70	323	⇓iP	P	17 17 57.0	-0.7
MNK				eS	S	17 27 02.0	-3.2
MNK				pmax	pmax		
	comp=Z,1µm,1.0s						
DBG	Daneborg	70.75	352	⇑iP		17 17 57.4	
DBG				IAmb		17 18 01.7	
	comp=Z,251nm,1.2s						
IDID	Didziasalis	70.84	324	eP	P	17 17 59.1	+0.6
IZAR	Zarasai	70.85	325	eP	P	17 17 58.4	-0.2
ISAL	Salakas	71.00	325	eP	P	17 17 59.2	-0.3
NACGM	Naroch	71.03	324	eP	P	17 17 59.0	-0.7
NACGM				eP	P	17 17 59.0	-0.7
NACGM				eS	S	17 27 08.0	-1.1
NACGM				eSS	SS	17 31 42.0	-0.9
NACGM				eSSS	SSS	17 35 18.0	
NACGM				eLQ	LQ	17 42 34.0	
NACGM				LQM		17 46 22.0	
	comp=N,18nm,20.0s						
NACGM				LQM		17 46 41.0	
	comp=E,18nm,20.0s						
NACGM				eLR	LR	17 49 17.0	
NACGM				LRM	MLR	17 52 48.0	
	comp=E,12nm,17.0s						
NACGM				LRM	MLR	17 52 52.0	
	comp=Z,20nm,17.0s						
ABTO	Aybut	71.21	279	P	P	17 18 00.6	-0.8
	SNR=9.9						
NSS	Namsos	71.49	337	eP	P	17 18 01.4	-0.8
NSS				eS	S	17 27 14.8	+0.8
NSS				eSS	SS	17 31 49.0	-0.4
AFI	Afiamalu	71.55	121	LR	LR	17 44 33.4	
	comp=Z,3µm,21.6s,baz=320,slow=32						
SLIT	Slitere, Latvi	71.66	328	eP	P	17 18 02.3	-1.1
KULLO	Kullorsuaq	71.91	3	⇑iP	P	17 18 04.4	-0.2
	comp=Z,70nm,0.9s						
KULLO				i		17 18 26.4	
KULLO	Kullorsuaq	71.91	3	⇑iP	P	17 18 04.4	-0.2
KULLO				i		17 18 26.4	
KULLO				pmax	pmax		
	comp=Z,70nm,0.9s						
KULLO	Kullorsuaq	71.91	3	⇑iP		17 18 04.4	
KULLO				IAmb		17 18 05.4	
	comp=Z,70nm,0.9s						
KULLO				i		17 18 26.5	
JMIC	Jan Mayen	71.93	347	P	P	17 18 04.5	-0.3
	comp=Z,99nm,0.6s,baz=91,slow=13,SNR=2.8						
JMIC	Jan Mayen	71.93	347	eP	P	17 18 05.8	+1.0
JMIC				eS	SKiKP	17 27 30.9	-3.0
AKASG	Malin Array Be	71.96	319	P	P	17 18 04.0	-1.3
	comp=Z,40nm,0.6s,baz=51,slow=6.7,SNR=146						
AKASG				PKPPKP	P'P'df	17 45 45.1	-11
	comp=Z,0.5nm,0.5s,baz=249,slow=2.9,SNR=5.1						
AKASG				LR	LR	17 53 23.8	
	comp=Z,3µm,18.7s,baz=30,slow=39						
AKASG	Malin Array Be	71.96	319	P	P	17 18 03.7	-1.6
AKBB	Malin Array Si	71.96	319	P	P	17 18 03.8	-1.5
AKBB				pmax	pmax		
	comp=Z,116nm,0.8s						
AKBB	Malin Array Si	71.96	319	P	P	17 18 03.8	-1.5
TOO	Toolangi	71.97	169	P	P	17 18 06.3	+0.9
TOO				pmax	pmax		
	comp=Z,299nm,1.4s						
TOO	Toolangi	71.97	169	P	P	17 18 06.3	+0.9
TOO				IAmb	IAmb	17 18 08.7	
	comp=Z,299nm,1.4s						
SIM	Simferopol'	72.02	312	c iP	P	17 18 04.9	-0.9
SIM				e*PP	pP	17 18 31.0	+3.5
SIM				e		17 20 47.0	
SIM				ePPP	PPP	17 22 38.0	
SIM				i S	S	17 27 17.7	-3.1
SIM				i *SS	sS	17 27 59.0	+1.2
SIM				pmax	pmax		
	comp=Z,82nm,0.7s						
SIM				pmax	pmax		
	comp=Z,310nm,10.3s						
SIM				MLR	MLR		
	comp=Z,1µm,17.2s						
PABE	Paberze	72.07	325	eP	P	17 18 05.4	-0.5
PBUR	Paburge	72.73	326	eP	P	17 18 09.0	-0.8
XMAS	Kiritimati	72.87	99	P	P	17 18 11.2	-0.1
XMAS				IAmb	IAmb	17 18 45.0	
	comp=Z,269nm,1.1s						
TBLU	Trondheim	72.91	336	eP	P	17 18 09.6	-1.2
TBLU				eS	S	17 27 29.4	-0.8
DIKM	Dikmen	72.93	309	⇑P	P	17 18 10.9	-0.4
SOCY	Socotra	73.28	274	P	P	17 18 11.7	-2.2
	SNR=22						
SOCY	Socotra	73.28	274	P	P	17 18 11.1	-2.7
SOCY				IAmb	IAmb	17 18 39.1	
	comp=Z,246nm,1.1s						
SUW	Suwalki	73.28	324	eP	P	17 18 12.6	-0.5
SUW	Suwalki	73.28	324	P	P	17 18 11.7	-1.4
SUW				pmax	pmax		
	comp=Z,242nm,0.9s						
SUW	Suwalki	73.28	324	P	P	17 18 11.7	-1.4
SUW				IAmb	IAmb	17 18 17.2	
	comp=Z,242nm,0.9s						
HFS	Hagfors	73.72	333	P	P	17 18 14.4	-1.1
	comp=Z,37nm,0.6s,baz=72,slow=4.8,SNR=79						
HFS				pP	pP	17 18 38.8	+1.4
	comp=Z,99nm,0.8s,baz=66,slow=5.2,SNR=8.7						
UPNV	Upernavik	73.74	2	⇑iP		17 18 15.5	
UPNV				IAmb		17 18 19.7	
	comp=Z,90nm,1.1s						
UPNV				i		17 18 37.8	
SORM	Soroca	73.79	317	⇓P	P	17 18 15.2	-1.0
NC405	NORSAR Array S	73.82	334	P	P	17 18 15.2	-1.0
GAZ	Gaziantep	73.85	304	P	P	17 18 16.4	-0.5
NC303	NORSAR Array S	73.87	334	P	P	17 18 15.5	-1.0
SUMG	Summit	73.87	357	⇑iP	P	17 18 17.5	+0.7
	comp=Z,2µm,1.2s						
SUMG	Summit	73.87	357	P	P	17 18 16.9	+0.1
SUMG				pmax	pmax		
	comp=Z,748nm,1.2s						
SUMG	Summit	73.87	357	P	P	17 18 16.9	+0.1
SUMG	Summit	73.87	357	⇑iP		17 18 17.6	
SUMG				IAmb		17 18 21.9	
	comp=Z,2µm,1.2s						
LLLB	Lillooet	74.01	40	P	P	17 18 17.8	+0.3
LLLB				IAmb	IAmb	17 18 23.1	
	comp=Z,388nm,1.4s						
NB201	NORSAR Array S	74.02	334	P	P	17 18 15.7	-1.7
NB2	NORSAR Subarra	74.05	334	P	P	17 18 16.1	-1.5
	comp=Z,60nm,0.8s,baz=50,slow=5.9						
NB2	NORSAR Subarra	74.05	334	P	P	17 18 16.1	-1.5
	baz=50,slow=5.9						
NOA	NORSAR Array B	74.05	334	P	P	17 18 16.4	-1.1
	comp=Z,49nm,0.8s,baz=48,slow=5.7,SNR=122						
NOA				pP	pP	17 18 41.8	+2.4
	comp=Z,73nm,0.9s,baz=54,slow=6.1,SNR=12						
NOA				LR	LR	17 52 48.7	
	comp=Z,2µm,21.1s,baz=40,slow=37						
NC204	NORSAR Array S	74.06	335	P	P	17 18 16.2	-1.4
KIS	Kishinev	74.13	316	⇓iP	P	17 18 18.0	-0.2
	comp=Z,210nm,2.0s						
KIS	Kishinev	74.13	316	ePcP	PcP	17 18 34.0	+1.1
KIS				i pP	sP	17 18 45.0	-4.1
KIS	Kishinev	74.13	316	ePP	PP	17 20 22.0	-42
KIS	Kishinev	74.13	316	⇑iP	P	17 18 18.0	-0.2
KIS				e		17 18 34.0	
KIS				i *PP	sP	17 18 45.0	-4.1
KIS				ePPP	PPP	17 22 55.0	
KIS				i S	SKiKP	17 27 41.0	+3.2
KIS				i		17 28 28.0	
KIS				pmax	pmax		
	comp=Z,210nm,2.0s						
KIS				smax	smax		
	comp=N,3µm,13.0s						
KIS				MLR	MLR		
	comp=Z,8µm,25.0s						
KIS				MLR	MLR		
	comp=N,2µm,16.0s						
DOMB	Dombas	74.13	336	eP	P	17 18 17.5	-0.5
DOMB				IVmB_BB		17 18 20.8	
	comp=Z,5µm,4.8s						
DOMB				eS	S	17 27 44.0	-0.3
DOMB				eSS	SS	17 32 29.1	-0.7
DOMB				IVMs_BB	IVMs_BB	17 50 40.3	
	comp=Z,6µm,5.2s						
NC602	NORSAR Array S	74.14	334	eP	P	17 18 17.1	-0.9
NC602				IVmB_BB		17 18 21.1	
	comp=Z,5µm,3.9s						
NC602				eS	S	17 27 44.4	+0.2
NC602				eSS	SS	17 32 33.0	+3.1
NC602	NORSAR Array S	74.14	334	P	P	17 18 16.4	-1.6
NC602				IAmb	IAmb	17 18 21.3	
	comp=Z,545nm,1.6s						
MILM	Milestii Mici	74.18	316	⇑P	P	17 18 17.8	-0.7
NBO00	NORSAR Array S	74.22	334	P	P	17 18 17.0	-1.5
ILGA	Ilgaz	74.23	309	P	P	17 18 17.9	-1.3
MOL	Molde	74.28	337	eP	P	17 18 18.5	-0.3
MOL				IVmB_BB		17 18 24.8	
	comp=Z,4µm,3.6s						
MOL				eS	S	17 27 44.0	-1.8
NAO01	NORSAR Array S	74.30	334	P	P	17 18 17.2	-1.8
KLNR	Kaliningrad	74.36	326	⇓eP	P	17 18 21.4	+2.0
KLNR				pmax	pmax		
	comp=Z,87nm,0.8s						
RAYN	Ar Rayn	74.45	288	i P	P	17 18 19.2	-1.3

	SNR=27						
RAYN	Ar Rayn	74.45	288	P	P	17 18 19.3	-1.3
RAYN				pmax	pmax		
	comp=Z,426nm,1.7s						
RAYN	Ar Rayn	74.45	288	P	P	17 18 19.3	-1.2
RAYN				IAmb	IAmb	17 18 24.3	
	comp=Z,426nm,1.7s						
SCO	Scoresbysund	74.48	351	i P	P	17 18 20.0	+0.2
	comp=Z,398nm,1.3s						
SCO	Scoresbysund	74.48	351	P	P	17 18 19.4	-0.4
SCO				pmax	pmax		
	comp=Z,324nm,1.2s						
SCO	Scoresbysund	74.48	351	P	P	17 18 19.4	-0.4
SCO				IAmb	IAmb	17 18 25.1	
	comp=Z,324nm,1.2s						
SCO	Scoresbysund	74.48	351	i P		17 18 20.0	
SCO				i P		17 18 20.0	
SCO				IAmb		17 18 24.9	
	comp=Z,399nm,1.3s						
A04D	Lummi Island	74.61	41	P	P	17 18 22.8	+1.9
	baz=304,SNR=11						
A04D				S	S	17 27 55.0	+5.1
	baz=304						
NLWA	Neilton Lookou	74.69	43	P	P	17 18 21.9	+0.4
NLWA				IAmb	IAmb	17 18 28.7	
	comp=Z,419nm,1.2s						
BR131	Keskin Array S	74.97	308	P	P	17 18 23.0	-0.4
	SNR=36						
BR131	Keskin Array S	74.97	308	P	P	17 18 22.2	-1.2
BR131				pmax	pmax		
	comp=Z,111nm,1.0s						
BR131	Keskin Array S	74.97	308	P	P	17 18 22.2	-1.2
BRTR	Keskin Array B	74.97	308	P	P	17 18 22.5	-0.9
	comp=Z,70nm,0.8s,baz=97,slow=5.1,SNR=112						
BRTR				pP	pP	17 18 48.4	+3.1
	comp=Z,86nm,1.0s,baz=94,slow=4.4,SNR=7.9						
BRTR				PKKPbc	PKKPbc	17 37 48.1	+2.5
	comp=Z,1.1nm,0.8s,baz=224,slow=1.3,SNR=4.3						
BRTR				LR	LR	17 55 36.9	
	comp=Z,2µm,20.5s,baz=36,slow=39						
BRTR	Keskin Array B	74.97	308	P	P	17 18 22.2	-1.2
OSL	Oslo	74.97	333	eP	P	17 18 22.5	-0.3
OSL				eS	S	17 27 55.0	+1.5
D03D	Eldon	75.05	43	P	P	17 18 25.9	+2.4
	baz=304,SNR=107						
NUUG	Nuugaatsiaq	75.07	2	eP		17 18 23.6	
NUUG				i		17 18 45.9	
TLCR		75.11	315	⇓P	P	17 18 23.3	-0.5
B05A	Bryant	75.20	42	P	P	17 18 26.2	+1.9
	baz=304,SNR=54						
B05A				S	S	17 28 00.3	+3.8
	baz=304						
LVV	L'vov	75.23	320	i P	P	17 18 23.2	-1.4
LVV				e*PP	sP	17 18 51.1	-4.4
LVV				i		17 21 15.9	
LVV				i S	S	17 27 53.2	-3.6
LVV				i PS		17 28 32.3	
LVV				i SS	SS	17 32 46.2	-0.9
LVV				pmax	pmax		
	comp=Z,200nm,1.2s						
LVV				MLR	MLR		
	comp=N,2µm,19.0s						
LVV				MLR	MLR		
	comp=E,3µm,19.0s						
LVV				MLR	MLR		
	comp=Z,3µm,19.0s						
JURR	Jurilovca	75.30	314	⇓P	P	17 18 24.8	-0.2
E03A	Lebam	75.32	44	P	P	17 18 27.1	+2.0
E03A				IAmb	IAmb	17 18 31.3	
	comp=Z,428nm,1.1s						
SKAR	Skarslia	75.34	335	eP	P	17 18 25.0	-0.1
SKAR				eS	S	17 27 58.8	+1.1
SKAR				eSS	SS	17 32 51.5	+3.3
D04E	Lakebay	75.43	43	P	P	17 18 28.3	+2.7
	baz=304,SNR=12						
ANTO	Ankara	75.45	308	⇓P	P	17 18 26.0	-0.1
ANTO	Ankara	75.45	308	P	P	17 18 25.2	-0.9
ANTO				pmax	pmax		
	comp=Z,103nm,1.0s						
ANTO	Ankara	75.45	308	P	P	17 18 25.2	-0.9
GHRR		75.46	316	⇑P	P	17 18 26.4	+0.5
BR231	Keskin MP Arra	75.47	308	P	P	17 18 25.5	-0.8
CFR	Carcaliu	75.52	315	⇓P	P	17 18 25.6	-0.6
TOPG	Topolog	75.54	314	⇑P	P	17 18 25.7	-0.7
KONO	Kongsberg	75.59	334	eP	P	17 18 26.1	-0.3
KONO				IVmB_BB		17 18 32.1	
	comp=Z,2µm,3.7s						
KONO				eS	S	17 28 01.0	+0.7
KONO				eSS	SS	17 32 52.2	+0.3
KONO	Kongsberg	75.59	334	P	P	17 18 26.1	-0.3
KONO				pmax	pmax		
	comp=Z,62nm,1.0s						
KONO	Kongsberg	75.59	334	P	P	17 18 26.1	-0.3
TESR	Tescani	75.65	317	⇑P	P	17 18 26.3	-0.7
F03A	Seaside	75.67	44	P	P	17 18 28.8	+1.6
BEL	Belsk	75.73	323	eP	P	17 18 27.6	+0.3
BEL	Belsk	75.73	323	eP	P	17 18 27.6	+0.3
HYA	Hoyanger	75.73	336	eP	P	17 18 27.0	-0.1
HYA				eS	S	17 28 04.5	+2.6
TIRR	Tirgusor	75.74	314	⇓P	P	17 18 26.7	-0.8
TIRR	Tirgusor	75.74	314	⇓P	P	17 18 26.7	-0.8
TIRR	Tirgusor	75.74	314	P	P	17 18 26.0	-1.6
TIRR	Tirgusor	75.74	314	P	P	17 18 26.0	-1.6
PETR	Petresti	75.75	316	⇓P	P	17 18 28.0	+0.4
FOO	Floro	75.80	337	eP	P	17 18 27.1	-0.4
FOO				eS	S	17 28 03.0	+0.4
FOO				eSS	SS	17 32 58.9	+3.9
EFOR	EFORIE	75.82	314	⇑P	pP	17 18 53.2	+3.4
ODBI	Odobesti	75.83	316	⇑P	P	17 18 28.1	+0.1
BUR08	Bucovina Ar. S	75.83	318	P	P	17 18 26.8	-1.4
BURAR	Bucovina Array	75.84	318	⇓P	P	17 18 28.2	0.0
BURAR	Bucovina Array	75.84	318	P	P	17 18 27.1	-1.1
D05A	Enumclaw	75.86	42	P	P	17 18 30.7	+2.5
E04D	Cinebar	75.89	43	P	P	17 18 30.6	+2.2
	baz=304,SNR=49						
MFTR	Murfatlar	75.89	314	⇓P	P	17 18 28.6	+0.2
F04D	Rainier, OR	75.90	44	P	P	17 18 32.3	+3.8
	baz=304						
HARR	Harsova	75.91	314	⇑P	P	17 18 28.6	+0.2
VRI	Vrincioaia	75.96	316	⇓P	P	17 18 28.7	-0.1
PLOR	Plostina	76.02	316	⇓P	P	17 18 29.2	+0.1
KWP	Kalwaria Pacla	76.04	321	eP	P	17 18 29.6	+0.4
KWP	Kalwaria Pacla	76.04	321	P	P	17 18 28.5	-0.7
KWP				pmax	pmax		
	comp=Z,431nm,1.2s						
KWP	Kalwaria Pacla	76.04	321	P	P	17 18 28.5	-0.7
KWP				IAmb	IAmb	17 18 33.8	
	comp=Z,431nm,1.2s						
C06D	Leavenworth	76.06	41	P	P	17 18 31.2	+1.9
	baz=305,SNR=14						
C06D				S	S	17 28 10.3	+4.3
	baz=305						
MDUB	Mudurnu	76.17	309	P	P	17 18 29.2	-1.0
LON	Longmire	76.21	43	P	P	17 18 31.0	+0.7
LON				pmax	pmax		
	comp=Z,152nm,1.3s						
LON	Longmire	76.21	43	P	P	17 18 31.0	+0.7
G03D	McMinnville, O	76.24	45	P	P	17 18 32.8	+2.4
	baz=304,SNR=16						
SUE	Sulen	76.29	336	eP	P	17 18 30.2	-0.1
SUE				eS	S	17 28 08.5	+0.5
SUE				eSS	SS	17 32 59.8	-2.5
ICOR	Ion Corvin	76.30	314	⇓P	P	17 18 30.8	+0.1
PSN	Preselentsi	76.31	313	P	P	17 18 29.6	-1.2
F04A	Amboy	76.33	44	P	P	17 18 32.2	+1.4
F04A				IAmb	IAmb	17 18 36.6	
	comp=Z,388nm,1.2s						
OZUR		76.38	317	⇑P	P	17 18 31.2	0.0
BSD	Bornholm Skovb	76.45	328	i P	P	17 18 30.0	-1.4
	comp=Z,45nm,0.8s						
BSD	Bornholm Skovb	76.45	328	i P	P	17 18 30.0	-1.4
BSD				pmax	pmax		
	comp=Z,45nm,0.8s						
BSD	Bornholm Skovb	76.45	328	i P		17 18 30.0	
BSD				⇑iP		17 18 30.4	
BSD				IAmb		17 18 31.3	
	comp=Z,45nm,0.8s						
ODD1	Odda	76.48	335	eP	P	17 18 31.2	-0.2
I02D	Swisshome	76.51	46	P	P	17 18 35.1	+3.2
	baz=304						
ASK	Askoy	76.56	336	eP	P	17 18 31.7	-0.2
LTY	Liberty	76.56	42	P	P	17 18 32.6	+0.3
LTY				IAmb	IAmb	17 18 38.5	
	comp=Z,359nm,1.5s						
COR	Corvallis	76.56	45	P	P	17 18 34.7	+2.5
COR				pmax	pmax		
	comp=Z,865nm,1.4s						
COR	Corvallis	76.56	45	P	P	17 18 34.7	+2.5
GKP	Gorka Klasztor	76.57	326	eP	P	17 18 31.7	-0.3
GKP	Gorka Klasztor	76.57	326	eP	P	17 18 31.7	-0.3
BER	Bergen	76.59	336	eP	P	17 18 31.7	-0.3
BER				IVmB_BB		17 18 43.7	
	comp=Z,5µm,3.2s						
BER				eS	S	17 28 12.9	+1.7
BER				eSS	SS	17 33 03.1	-3.8
BER				IVMs_BB	IVMs_BB	17 58 59.4	
	comp=Z,5µm,4.6s						
ARCR	ARCALIA	76.62	318	⇓P	P	17 18 33.4	+0.9
MLR	Muntele Rosu	76.63	316	P	P	17 18 32.2	-0.6
	comp=Z,40nm,1.1s,baz=33,slow=4.4,SNR=21						
MLR	Muntele Rosu	76.63	316	⇓P	P	17 18 32.5	-0.2
MLR	Muntele Rosu	76.63	316	P	P	17 18 31.4	-1.3
MLR				pmax	pmax		
	comp=Z,134nm,1.2s						
MLR	Muntele Rosu	76.63	316	P	P	17 18 31.4	-1.3
B08A	Colville Reser	76.66	40	P	P	17 18 33.1	+0.4
B08A				IAmb	IAmb	17 18 39.1	
	comp=Z,481nm,1.3s						
DOPR	Dopca	76.68	317	⇑P	P	17 18 33.1	+0.3
KOLS	Kolonicke sedl	76.68	320	eP	P	17 18 32.3	-0.5
KOLS				pmax	pmax		
	comp=Z,61nm,1.3s						
KOLS	Kolonicke sedl	76.68	320	eP	P	17 18 32.3	-0.5
LEHL	Lehliu	76.69	315	⇓P	P	17 18 33.6	+0.8
SECR		76.81	315	⇑P	P	17 18 34.5	+0.9
UZH	Uzhgorod	76.85	320	eP	P	17 18 30.7	-3.0
UZH				i		17 18 46.6	
UZH				i S	S	17 28 07.7	-6.9
UZH				eSS	SS	17 33 12.5	+1.0
UZH				MLR	MLR		
	comp=Z,600nm,20.0s						
BLS5	Blasjo	76.89	335	eP	P	17 18 33.5	-0.3
BLS5				IVmB_BB		17 18 37.0	
	comp=Z,3µm,2.1s						
BLS5				eS	S	17 28 15.4	+0.7
BLS5				eSS	SS	17 33 08.7	-2.8
KEBM	Edson Butte	76.90	47	P	P	17 18 35.9	+1.7
F05D	White Salmon	76.90	43	P	P	17 18 36.8	+2.7
	baz=305,SNR=8.1						
H04D	Lebanon	76.93	45	P	P	17 18 38.2	+3.9
	baz=304,SNR=19						
HOMB	Homborsund	76.95	333	eP	P	17 18 31.9	-2.1
HOMB				eS	S	17 28 15.1	-0.2
HOMB				eSS	SS	17 33 10.9	-1.6
HOMB				IVMs_BB	IVMs_BB	17 48 09.1	
	comp=Z,3µm,6.3s						
HOMB	Homborsund	76.95	333	eP		17 18 33.6	
J01E	Myrtle Point	76.98	47	P	P	17 18 37.5	+2.9
	baz=304,SNR=14						
TRPA	Tarpa	77.01	320	⇑P	P	17 18 35.0	+0.3
I03D	Drain, OR	77.03	46	P	P	17 18 37.3	+2.4
	baz=304,SNR=36						
PRD	Provadia	77.05	313	P	P	17 18 34.8	-0.1
NEF	NEVSHA	77.09	313	P	P	17 18 34.8	-0.4
CRVS	Cervenica-Dubn	77.13	321	eP	P	17 18 35.5	+0.1
CRVS				pmax	pmax		
	comp=Z,101nm,1.2s						
CRVS	Cervenica-Dubn	77.13	321	eP	P	17 18 35.5	+0.1
COP	Copenhagen	77.15	330	i P	P	17 18 35.4	+0.2
	comp=Z,76nm,0.7s						
COP				e		17 19 00.6	
COP	Copenhagen	77.15	330	eP	P	17 18 35.4	+0.2
COP				e		17 19 00.6	
COP				pmax	pmax		
	comp=Z,76nm,0.7s						
COP				MLR	MLR		
	comp=Z,3µm,29.0s						
COP	Copenhagen	77.15	330	eP		17 18 35.5	
COP				IAmb		17 18 36.3	
	comp=Z,76nm,0.7s						
COP				e		17 19 00.7	
COP				IAMs_20		17 52 32.4	
	comp=Z,3µm,28.9s						
H04A	Detroit Lake	77.17	45	P	P	17 18 35.8	+0.1
H04A				IAmb	IAmb	17 18 41.2	
	comp=Z,284nm,1.2s						
VOIR		77.17	316	⇓P	P	17 18 35.3	-0.4
OJC	Ojcow	77.20	322	eP	P	17 18 35.7	0.0
OJC	Ojcow	77.20	322	P	P	17 18 34.9	-0.8
OJC				pmax	pmax		
	comp=Z,210nm,0.9s						
OJC	Ojcow	77.20	322	P	P	17 18 34.9	-0.8
OJC				IAmb	IAmb	17 18 40.0	
	comp=Z,210nm,0.9s						
CJR	Cluj-Napoca	77.26	318	⇑P	P	17 18 36.6	+0.4
KBO	Bosley Butte	77.33	48	P	P	17 18 37.9	+1.2
KBO				IAmb	IAmb	17 18 43.9	
	comp=Z,539nm,1.4s						
G05D	Wamic, OR	77.35	44	P	P	17 18 38.6	+1.9
	baz=305,SNR=32						
RAZG	Razgrad	77.38	314	⇑P	P	17 18 36.5	-0.3
SNART	Snartemo	77.39	334	eP	P	17 18 36.3	-0.3
SNART				eS	S	17 28 15.7	-4.4
SNART	Snartemo	77.39	334	i P		17 18 36.4	
SNART				e		17 19 01.0	
K02D	Willamette Mer	77.41	47	P	P	17 18 39.0	+1.9
	baz=304,SNR=49						
E07A	Sunnyside	77.42	42	P	P	17 18 38.4	+1.3
E07A				IAmb	IAmb	17 18 43.7	
	comp=Z,455nm,1.4s						
NIE	Niedzica	77.43	322	eP	P	17 18 37.6	+0.5
NIE	Niedzica	77.43	322	eP	P	17 18 37.6	+0.5
ILULI	Ilulissat	77.45	1	⇑iP	P	17 18 37.0	+0.3
	comp=Z,217nm,1.0s						
ILULI	Ilulissat	77.45	1	P	P	17 18 36.7	0.0
ILULI				pmax	pmax		
	comp=Z,199nm,1.0s						
ILULI	Ilulissat	77.45	1	P	P	17 18 36.7	0.0
ILULI				IAmb	IAmb	17 18 41.4	
	comp=Z,199nm,1.0s						
ILULI	Ilulissat	77.45	1	⇑iP		17 18 37.0	
ILULI				IAmb		17 18 41.2	
	comp=Z,217nm,1.0s						
ARR	Arges	77.45	316	⇑P	P	17 18 37.9	+0.6
KMY	Karmoy	77.47	335	eP	P	17 18 36.9	-0.1
KMY				eS	S	17 28 22.5	+1.6
TAU	Tasmania Unive	77.48	168	P	P	17 18 38.7	+1.7
TAU				pmax	pmax		
	comp=Z,344nm,1.3s						
TAU	Tasmania Unive	77.48	168	P	P	17 18 38.7	+1.7
TAU				IAmb	IAmb	17 18 40.4	
	comp=Z,344nm,1.3s						
STAV	Stavanger	77.51	335	eP	P	17 18 36.9	-0.3
STAV				IVmB_BB		17 18 39.2	
	comp=Z,3µm,3.9s						
STAV				eS	S	17 28 21.4	+0.1
STAV				eSS	SS	17 33 18.5	-2.3
RGN	Rugen	77.52	328	eP	P	17 18 37.4	0.0
RGN	Rugen	77.52	328	eP	P	17 18 37.1	-0.3
	comp=Z,233nm,1.4s,baz=46,slow=5.2						
RGN				epP	pP	17 19 02.7	+3.4
	baz=46,slow=5.3						
RGN	Rugen	77.52	328	P	P	17 18 36.5	-0.9
GOET	G??ttrup	77.54	332	i P	P	17 18 37.3	-0.1
	comp=Z,178nm,0.9s						
GOET				i		17 19 02.2	
GOET	G??ttrup	77.54	332	i P		17 18 37.4	
GOET				IAmb		17 18 41.4	
	comp=Z,178nm,0.9s						
GOET				i		17 19 02.3	
I04A	Tendick Farm,	77.54	46	P	P	17 18 39.7	+1.9
	baz=305,SNR=68						
C09A	Chrisman Ranch	77.56	40	P	P	17 18 38.9	+1.1
GOLR		77.57	316	⇓P	P	17 18 39.0	+1.2
D08A	Wollman Farm,	77.65	41	P	P	17 18 38.8	+0.6
D08A				IAmb	IAmb	17 18 43.9	
	comp=Z,466nm,1.4s						
CSS	Mathiatis	77.68	304	P	P	17 18 37.2	-1.4
CSS	Mathiatis	77.68	304	P	P	17 18 37.3	-1.4
HAWA	Hanford	77.70	42	P	P	17 18 39.2	+0.7
HAWA				IAmb	IAmb	17 18 45.1	
	comp=Z,263nm,1.1s						
DRGR		77.71	318	⇓P	P	17 18 38.8	+0.1
L02E	Cave Junction	77.75	47	P	P	17 18 41.0	+2.1
	baz=304,SNR=28						
G06A	Carlson Farm,	77.75	44	P	P	17 18 40.4	+1.4
F07A	Phinny Hill Vi	77.77	43	P	P	17 18 40.5	+1.5
F07A				IAmb	IAmb	17 18 45.6	
	comp=Z,423nm,1.2s						
I05D	Terrebonne, OR	77.86	45	P	P	17 18 41.4	+1.8
	baz=305,SNR=40						
HUMO	Hull Mountain	77.89	47	P	P	17 18 40.3	+0.6
SZH	Strazhica	77.90	314	P	P	17 18 38.7	-1.0
NEW	Newport	77.90	40	LR	LR	17 53 17.2	
	comp=Z,2µm,21.0s,baz=316,slow=36						
NEW	Newport	77.90	40	P	P	17 18 40.6	+0.9
NEW				pmax	pmax		
	comp=Z,278nm,1.2s						
NEW	Newport	77.90	40	P	P	17 18 40.6	+0.9
NEW				IAmb	IAmb	17 18 45.4	
	comp=Z,278nm,1.2s						
NEW	Newport	77.90	40	P	P	17 18 41.1	+1.4
	baz=307,SNR=129						
KECS	Kecovo	77.90	321	eP	P	17 18 39.2	-0.4
KECS				pmax	pmax		
	comp=Z,34nm,1.1s						
KECS	Kecovo	77.90	321	eP	P	17 18 39.2	-0.4
LOT	Lotru	77.90	317	⇑P	P	17 18 39.8	0.0
E08A	Dider Farm, El	77.91	42	P	P	17 18 40.7	+1.0
E08A				IAmb	IAmb	17 18 45.5	
	comp=Z,298nm,1.2s						
KRMB	Red Mountain	77.91	48	P	P	17 18 40.8	+0.8
KRMB				IAmb	IAmb	17 18 47.0	
	comp=Z,293nm,1.5s						
JMB	Yambol	77.96	313	P	P	17 18 39.5	-0.6
ZIMR		78.01	315	⇓P	P	17 18 40.8	+0.5
LANS	Liptovska Anna	78.03	322	eP	P	17 18 41.2	+0.8
LANS				pmax	pmax		
	comp=Z,69nm,1.4s						
LANS	Liptovska Anna	78.03	322	eP	P	17 18 41.2	+0.8
J04D	Umpqua Nationa	78.04	46	P	P	17 18 42.7	+2.0
	baz=305,SNR=68						
ISP	Isparta	78.04	307	P	P	17 18 39.3	-1.5
ISP				pmax	pmax		
	comp=Z,130nm,1.1s						
ISP	Isparta	78.04	307	P	P	17 18 39.3	-1.5
ELND	Elena	78.12	314	⇑P	P	17 18 40.8	-0.2
DEV	Deva	78.14	318	⇓P	P	17 18 41.4	+0.4
EDRB	Edirne	78.21	313	P	P	17 18 40.8	-0.7
JCC	Jacoby Creek,	78.23	49	P	P	17 18 44.2	+2.6
JCC				IAmb	IAmb	17 18 51.6	
	comp=Z,293nm,1.1s						
OKC	Ostrava-Krasne	78.28	323	eP	P	17 18 41.5	-0.2
OKC				ex	x	17 18 45.2	
OKC				epP	pP	17 19 06.6	+3.0
OKC				eS	S	17 28 31.2	+1.2
OKC				AMS	AMS	17 57 20.0	
	comp=Z,5µm,14.9s						
OKC	Ostrava-Krasne	78.28	323	eP	P	17 18 41.5	-0.2
OKC				e		17 18 45.2	
OKC				e		17 19 06.6	
OKC				eS	S	17 28 31.2	+1.2
OKC				MLR	MLR		
	comp=Z,5µm,14.9s						
PVL	Pavlikeni	78.28	314	P	P	17 18 41.8	0.0
VLAD	Vladila	78.38	315	⇓P	P	17 18 42.1	-0.3
KHMM	Horse Mountain	78.39	49	P	P	17 18 43.2	+0.6
KHMM				IAmb	IAmb	17 19 06.5	
	comp=Z,241nm,1.2s						
E09A	Wood Farm, Sta	78.40	41	P	P	17 18 43.8	+1.4
PINE	Pine Mountain	78.41	45	P	P	17 18 44.4	+1.6
GZR	Gura Zlata	78.50	317	⇓P	P	17 18 43.0	-0.1
L04D	Klamath Falls	78.50	47	P	P	17 18 45.1	+1.9
	baz=305,SNR=122						
J05D	Fort Rock, OR	78.53	45	P	P	17 18 45.5	+2.1
	baz=306,SNR=199						
YBH	Yreka Blue Hor	78.53	47	P	P	17 18 44.3	+0.9
YBH				pmax	pmax		
	comp=Z,278nm,1.5s						
YBH	Yreka Blue Hor	78.53	47	P	P	17 18 44.3	+0.9
YBH				IAmb	IAmb	17 18 50.3	
	comp=Z,278nm,1.4s						
KSP	Ksiaz	78.56	324	eP	P	17 18 43.5	+0.3
KSP	Ksiaz	78.56	324	eP	P	17 18 43.5	+0.3
PSZ	Piszkesteto	78.56	320	⇓P	P	17 18 43.6	+0.2
PSZ	Piszkesteto	78.56	320	P	P	17 18 43.0	-0.4
PSZ				pmax	pmax		
	comp=Z,118nm,1.0s						
PSZ	Piszkesteto	78.56	320	P	P	17 18 43.0	-0.4
K04D	Chiloquin, OR	78.60	46	P	P	17 18 45.8	+2.0
	baz=305,SNR=30						
SIRR	Siria	78.61	318	⇑P	P	17 18 43.6	0.0
PLVB	Pleven	78.61	315	⇓P	P	17 18 43.4	-0.2
MORC	Moravsky Berou	78.62	323	⇓P	P	17 18 43.9	+0.2
MORC	Moravsky Berou	78.62	323	P	P	17 18 43.1	-0.6
MORC				pmax	pmax		
	comp=Z,136nm,1.1s						
MORC	Moravsky Berou	78.62	323	⇑iP	P	17 18 43.3	-0.3
MORC				eS	S	17 28 34.1	+0.3
MORC	Moravsky Berou	78.62	323	P	P	17 18 43.1	-0.6
M02C	Callahan	78.64	48	P	P	17 18 46.2	+2.3
	baz=305,SNR=61						
G08A	Pilot Rock	78.68	43	P	P	17 18 45.0	+0.9
RUE	Ruedersdorf	78.68	327	eP	P	17 18 44.1	+0.3
RUE	Ruedersdorf	78.68	327	eP	P	17 18 43.7	-0.1
	comp=Z,192nm,1.4s,baz=46,slow=5.2						
RUE				epP	pP	17 19 09.3	+3.5
	baz=46,slow=5.3						
SRE	Strehaia	78.69	316	⇑P	P	17 18 45.1	+1.1
VYHS	Vyhne	78.76	321	eP	P	17 18 44.2	-0.2
VYHS				pmax	pmax		
	comp=Z,161nm,1.2s						
VYHS	Vyhne	78.76	321	eP	P	17 18 44.2	-0.2
KMRM	Mail Ridge	78.77	49	P	P	17 18 46.5	+1.8
OSTC	Ostas	78.78	324	eP	P	17 18 44.2	-0.3
OSTC				ex	x	17 18 47.0	
OSTC				eS	S	17 28 28.2	-7.2
OSTC				AMS	AMS	17 51 40.0	
	comp=Z,8µm,25.4s						
KRLC	Kraliky	78.81	323	eP	P	17 18 44.2	-0.5
KRLC				ex	x	17 18 46.9	
KRLC				epP	pP	17 19 05.9	-0.8
KRLC				eS	S	17 28 24.9	-11
KRLC				AMS	AMS	17 57 30.0	
	comp=Z,8µm,15.4s						
KRLC	Kraliky	78.81	323	eP	P	17 18 44.2	-0.5
KRLC				e		17 18 46.9	
KRLC				e		17 19 05.9	
KRLC				eS	S	17 28 24.9	-11
KRLC				MLR	MLR		
	comp=Z,8µm,15.4s						
DIM	Dimitrovgrad	78.84	313	P	P	17 18 44.9	0.0
CHVC	Chvalec	78.84	324	eP	P	17 18 44.5	-0.3
CHVC				ex	x	17 18 46.8	
CHVC				eS	S	17 28 30.9	-5.1
CHVC				AMS	AMS	17 51 50.0	
	comp=Z,8µm,22.6s						
DPC	Dobruska-Polom	78.86	324	eP	P	17 18 44.9	-0.1
DPC				ex	x	17 18 48.4	
DPC				ex	x	17 19 11.9	
DPC				AMS	AMS	17 57 20.0	
	comp=Z,7µm,20.4s						
DPC	Dobruska-Polom	78.86	324	eP	P	17 18 44.9	-0.1
DPC				e		17 18 48.4	
DPC				e		17 19 11.9	
DPC				MLR	MLR		
	comp=Z,7µm,20.4s						
OUZ	Omahuta	78.87	146	P	P	17 18 46.4	+1.4
KULA	Kula-Manisa	78.88	309	P	P	17 18 44.1	-1.2
UPC	Upice	78.91	324	eP	P	17 18 45.0	-0.2
UPC				ex	x	17 18 49.0	
UPC				ex	x	17 19 11.9	
UPC				eS	S	17 28 26.8	-10
UPC				AMS	AMS	17 51 40.0	
	comp=Z,8µm,22.3s						
UPC	Upice	78.91	324	eP	P	17 18 45.0	-0.2
UPC				e		17 18 49.0	
UPC				e		17 19 11.9	
UPC				eS	S	17 28 26.8	-10
UPC				MLR	MLR		
	comp=Z,8µm,22.3s						
MANT	Manisa	78.96	309	P	P	17 18 44.8	-1.2
MANT				IAmb	IAmb	17 18 49.4	
	comp=Z,327nm,1.0s						
N02D	Trinity Center	78.97	48	P	P	17 18 47.9	+2.1
	baz=305,SNR=67						
HERR	Herculane	79.01	317	⇑P	P	17 18 45.4	-0.4
BZS	Buzias	79.02	318	⇑P	P	17 18 45.4	-0.5
ELL	Elmali	79.04	307	P	P	17 18 45.2	-1.1
ELL				pmax	pmax		
	comp=Z,412nm,0.8s						

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ELL   Elmali           79.04 307   P      P       17 18 45.2  -1.1
M04C  Macdoel          79.04  47   P      P       17 18 48.1  +1.9
      baz=306,SNR=127
PUNG  Punghina         79.07 316 ⇓P      P       17 18 46.3  +0.1
WALA  Waterton Lakes   79.08  38   P      P       17 18 47.0  +0.7
WALA                               IAmb   IAmb    17 18 52.1
      comp=Z,417nm,1.4s
I07A  Izee             79.08  44   P      P       17 18 47.5  +1.2
I07A                               IAmb   IAmb    17 18 52.4
      comp=Z,226nm,1.3s
JAVC  Velka Javorina   79.13 322⇑iP      P       17 18 47.1  +0.6
JAVC                              eS      S       17 28 43.0  +3.7
MPEP  Malo Peshtene    79.15 315   P      P       17 18 46.2  -0.4
KCPM  Cahto Peak       79.16  49   P      P       17 18 48.5  +1.7
KCPM                               IAmb   IAmb    17 18 52.7
      comp=Z,412nm,1.7s
ALN   Alexandroupoli   79.19 312   P      P       17 18 46.2  -0.6
ALN   Alexandroupoli   79.19 312   P      P       17 18 45.4  -1.4
ALN                                pmax   pmax
      comp=Z,95nm,1.4s
ALN   Alexandroupoli   79.19 312   P      P       17 18 45.4  -1.4
F10A  Beach Ranch, E   79.23  42   P      P       17 18 48.1  +0.9
BSEG  Bad Segeberg     79.24 329  eP      P       17 18 46.4  -0.4
      comp=Z,202nm,1.3s,baz=46,slow=5.2
BSEG                              epP     pP      17 19 12.0  +3.2
      baz=46,slow=5.3
WDC   Whiskeytown Da   79.30  48   P      P       17 18 48.8  +1.3
WDC                                pmax   pmax
      comp=Z,167nm,1.1s
WDC   Whiskeytown Da   79.30  48   P      P       17 18 48.8  +1.3
PLD   Plovdiv          79.31 314   P      P       17 18 47.5   0.0
RDO   Rodhopi          79.36 312   P      P       17 18 43.4  -4.3
PGB   Panagyurishte    79.37 314   P      P       17 18 47.7  -0.2
O02D  Mt. Diablo Mer   79.38  49   P      P       17 18 50.1  +2.1
      baz=305,SNR=56
VRAC  Vranov           79.39 323   P      P       17 18 47.9  +0.1
      comp=Z,75nm,0.9s,baz=61,slow=5.7,SNR=45
VRAC                               pP     pP      17 19 13.0  +3.2
      comp=Z,72nm,0.8s,baz=60,slow=5.3,SNR=6.7
VRAC  Vranov           79.39 323 ⇑P      P       17 18 48.3  +0.4
VRAC  Vranov           79.39 323⇑iP      P       17 18 47.8   0.0
VRAC                              eS      S       17 28 42.5  +0.6
MDVR  Moldovita        79.47 317 ⇓P      P       17 18 48.0  -0.4
SMOL  Smolenice        79.48 322  eP      P       17 18 48.8  +0.5
SMOL                               pmax   pmax
      comp=Z,83nm,1.0s
SMOL  Smolenice        79.48 322  eP      P       17 18 48.8  +0.5
PVCC  Panska Ves       79.60 325  eP      P       17 18 48.9   0.0
PVCC                              ex      x       17 19 15.7
PVCC                              eS      S       17 28 36.3  -7.7
PVCC                               AMS    AMS     17 52 10.0
      comp=Z,6μm,19.4s
PVCC  Panska Ves       79.60 325  eP      P       17 18 48.9   0.0
PVCC                              e               17 19 15.7
PVCC                              eS      S       17 28 36.3  -7.7
PVCC                               MLR    MLR
      comp=Z,6μm,19.4s
EZN   Ezine            79.63 311   P      P       17 18 48.3  -0.9
MODS  Modra-Piesok     79.64 322  eP      P       17 18 48.4  -0.8
MODS                               pmax   pmax
      comp=Z,225nm,1.4s
MODS  Modra-Piesok     79.64 322  eP      P       17 18 48.4  -0.8
FETY  Fethiye          79.65 307   P      P       17 18 47.8  -1.7
KRUC  Moravsky         79.65 323⇑iP      P       17 18 48.9  -0.3
KRUC                              eS      S       17 28 45.3  +0.7
BRG   Berggiesshubel   79.67 325  i P     P       17 18 48.9  -0.3
      comp=Z,38nm,1.0s
BRG                               i sP    pP      17 19 15.1  +3.8
      comp=Z,69nm,1.2s
BRG                                S      S       17 28 44.0  -0.7
BRG                                SS     SS      17 33 51.0  -2.7
BRG                               ePKPPKP P'P'df  17 45 40.7  -1.7
      comp=Z,7.5nm,1.2s
BRG   Berggiesshubel   79.67 325  eP      P       17 18 49.0  -0.3
      comp=Z,80nm,1.1s,baz=46,slow=5.2
BRG                               epP     pP      17 19 14.9  +3.6
      baz=46,slow=5.3
BRG   Berggiesshubel   79.67 325  i P     P       17 18 48.9  -0.3
BRG                               i *SP   pP      17 19 15.1  +3.8
BRG                                S      S       17 28 44.0  -0.7
BRG                                SS     SS      17 33 51.0  -2.7
BRG                                pmax   pmax
      comp=Z,38nm,1.0s
BRG                                pmax   pmax
      comp=N,69nm,1.3s
BRG                                pmax   pmax
      comp=Z,8.0nm,1.2s
BRG                                MLR    MLR
      comp=N,5μm,17.6s
BRG                                MLR    MLR
      comp=E,4μm,12.1s
BRG                                MLR    MLR
      comp=Z,7μm,15.9s
SFJD  Kangerlussuaq    79.68   1⇑iP      P       17 18 49.0   0.0
      comp=Z,15nm,1.0s
SFJD                              e               17 19 11.3
SFJD  Kangerlussuaq    79.68   1⇑iP      P       17 18 49.0   0.0
SFJD                              e               17 19 11.3
SFJD                               pmax   pmax
      comp=Z,15nm,1.0s
SFJD  Kangerlussuaq    79.68   1   P      P       17 18 48.8  -0.2
SFJD                               IAmb   IAmb    17 18 53.5
      comp=Z,206nm,0.9s
SFJD  Kangerlussuaq    79.68   1⇑iP              17 18 49.0
SFJD                               IAmb           17 18 53.0
      comp=Z,15nm,1.0s
SFJD                              e               17 19 11.3
JTMT  Jette            79.72  39   P      P       17 18 50.7  +0.9
JTMT                               IAmb   IAmb    17 18 55.7
      comp=Z,443nm,1.3s
SMTH  Samothraki Isl   79.75 312   P      P       17 18 48.1  -1.8
CLL   Collm            79.82 326⇑iP      P       17 18 50.3  +0.2
      comp=Z,171nm,1.1s
CLL                               ePmax           17 18 52.0
CLL                               ePlp            17 18 54.0
CLL                               i pP    pP      17 19 16.2  +4.1
      comp=Z,170nm,1.0s
CLL                               i               17 19 32.4
CLL                               ePP     PP      17 21 57.0  +5.2
CLL                               ePPP    PPP     17 23 36.0
CLL                               eS      S       17 28 44.0  -2.3
      comp=N,4μm,13.9s
CLL                               eS      S       17 28 44.0  -2.3
      comp=E,3μm,18.5s
CLL                               esS     sS      17 29 25.0  +0.9
CLL                               ePS     PnS     17 29 42.0  +1.4
CLL                               eSS     SS      17 34 06.0   +10
CLL                               esSS            17 34 38.0
CLL                                L      L       17 57 00.0
      comp=Z,5μm,21.9s
CLL                                Lmax           17 59 00.0
CLL   Collm            79.82 326  eP      P       17 18 50.5  +0.5
      comp=Z,171nm,1.1s,baz=46,slow=5.2
CLL                               epP     pP      17 19 16.1  +4.1
      baz=46,slow=5.3
CLL   Collm            79.82 326⇑iP      P       17 18 50.3  +0.2
CLL                               i *PP   pP      17 19 16.2  +4.1
CLL                               eS      S       17 28 44.0  -2.3
CLL                               e*SS    sS      17 29 25.0  +0.9
CLL                                pmax   pmax
      comp=Z,171nm,1.1s
CLL                                MLR    MLR
      comp=Z,5μm,21.9s
CLL   Collm            79.82 326   P      P       17 18 50.4  +0.2
ZST   Bratislava       79.85 322  eP      P       17 18 49.5  -0.8
ZST                                pmax   pmax
      comp=Z,270nm,1.7s
ZST   Bratislava       79.85 322  eP      P       17 18 49.5  -0.8
BMO   Blue Mountains   79.88  42   P      P       17 18 51.4  +0.8
BMO                                pmax   pmax
      comp=Z,304nm,1.3s
BMO   Blue Mountains   79.88  42   P      P       17 18 51.4  +0.8
BMO                                IAmb   IAmb    17 18 56.4
      comp=Z,304nm,1.2s
HOPS  Hopland Field    79.88  50   P      P       17 18 52.3  +1.7
VTS   Vitosha          79.88 315   P      P       17 18 49.2  -1.6
VTS   Vitosha          79.88 315 ⇑P      P       17 18 51.2  +0.4
VTS   Vitosha          79.88 315   P      P       17 18 50.3  -0.5
VTS   Vitosha          79.88 315   P      P       17 18 49.8  -1.0
VTS                                pmax   pmax
      comp=Z,341nm,1.8s
VTS   Vitosha          79.88 315   P      P       17 18 49.8  -1.0
VTS                                IAmb   IAmb    17 18 55.3
      comp=Z,341nm,1.8s
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GOPC  GO Pecny, Ondr   79.90 324  eP      P       17 18 50.3  -0.3
GOPC                              ex      x       17 18 54.1
GOPC                              epP     pP      17 19 12.6   0.0
GOPC                              eS      S       17 28 39.8  -7.4
GOPC                               AMS    AMS     17 57 50.0
      comp=Z,6μm,20.0s
GOPC  GO Pecny, Ondr   79.90 324  eP      P       17 18 50.3  -0.3
GOPC                              e               17 18 54.1
GOPC                              e               17 19 12.6
GOPC                              eS      S       17 28 39.8  -7.4
GOPC                               MLR    MLR
      comp=Z,6μm,20.0s
MOD   Modoc Plateau    79.90  46   P      P       17 18 51.6  +0.7
MOD                                IAmb   IAmb    17 18 56.6
      comp=Z,212nm,1.2s
YER   Yerkesik         79.90 308   P      P       17 18 49.8  -1.1
YER   Yerkesik         79.90 308   P      P       17 19 04.6   +14
YER                                pmax   pmax
      comp=Z,188nm,1.1s
FBE   Freiberg         79.92 326  eP      P       17 18 50.6   0.0
      comp=Z,330nm,1.4s,baz=46,slow=5.2
FBE                               epP     pP      17 19 16.2  +3.6
      baz=46,slow=5.3
O03E  Paynes Creek     79.92  48   P      P       17 18 52.4  +1.4
      baz=306,SNR=39
TREC  Trest            79.96 323  eP      P       17 18 50.6  -0.3
TREC                              ex      x       17 18 54.1
TREC                              epP     pP      17 19 14.5  +1.6
TREC                              eS      S       17 28 42.8  -5.1
TREC                               AMS    AMS     17 58 00.0
      comp=Z,9μm,15.8s
TREC  Trest            79.96 323  eP      P       17 18 50.6  -0.3
TREC                              e               17 18 54.1
TREC                              e               17 19 14.5
TREC                              eS      S       17 28 42.8  -5.1
TREC                               MLR    MLR
      comp=Z,9μm,15.8s
PRA   Prague           79.97 324  eP      P       17 18 50.7  -0.2
PRA                               ex      x       17 18 53.7
PRA                               ex      x       17 19 16.9
PRA                               eS      S       17 28 38.9  -9.0
PRA                                AMS    AMS     17 58 30.0
      comp=Z,5μm,15.2s
PRA   Prague           79.97 324  eP      P       17 18 50.7  -0.2
PRA                               e               17 18 53.7
PRA                               e               17 19 16.9
PRA                               eS      S       17 28 38.9  -9.0
PRA                                MLR    MLR
      comp=Z,5μm,15.2s
DAMY  Dhamar           79.97 281   P      P       17 18 52.5  +0.6
      SNR=20
DAMY  Dhamar           79.97 281   P      P       17 18 50.9  -0.9
PRU   Pruhonice        79.97 324  eP      P       17 18 50.7  -0.2
PRU                               ex      x       17 18 54.5
PRU                               epP     pP      17 19 14.3  +1.4
PRU                               eS      S       17 28 47.4  -0.5
PRU                                AMS    AMS     17 52 40.0
      comp=Z,6μm,23.9s
PRU   Pruhonice        79.97 324  eP      P       17 18 50.7  -0.2
PRU                               e               17 18 54.5
PRU                               e               17 19 14.3
PRU                               eS      S       17 28 47.4  -0.5
PRU                                MLR    MLR
      comp=Z,6μm,23.9s
KAVA  Kavala           80.07 313   P      P       17 18 51.2  -0.4
HLG   Helgoland        80.08 330  eP      P       17 18 50.9  -0.5
      comp=Z,522nm,2.1s,baz=46,slow=5.2
J08A  Circle Bar Ran   80.11  44   P      P       17 18 53.3  +1.4
J08A                               IAmb   IAmb    17 18 58.0
      comp=Z,416nm,1.2s
GDXM  Geysers          80.16  50   P      P       17 18 53.4  +1.1
GDXM                               IAmb   IAmb    17 18 59.0
      comp=Z,250nm,1.3s
THAS  Thassos island   80.17 312   P      P       17 18 50.8  -1.4
MMB   Musomiste        80.20 314   P      P       17 18 52.1  -0.3
NVR   Nevrokopi        80.26 313   P      P       17 18 51.9  -0.8
FRGS  Fruska Gora      80.31 318⇑iP      P       17 18 46.7  -6.2
NRDL  Niedersach Rie   80.33 328  eP      P       17 18 52.4  -0.2
      comp=Z,645nm,2.4s,baz=46,slow=5.2
NRDL                              epP     pP      17 19 18.0  +3.3
      baz=46,slow=5.3
ASSE  Asse, Remlinge   80.33 328  eP      P       17 18 52.4  -0.2
      comp=Z,243nm,1.9s,baz=46,slow=5.2
ASSE                              epP     pP      17 19 18.2  +3.4
      baz=46,slow=5.3
FCC   Fort Churchill   80.34  22   P      P       17 18 53.1  +0.4
FCC                                pmax   pmax
      comp=Z,527nm,1.1s
FCC   Fort Churchill   80.34  22   P      P       17 18 53.1  +0.4
KKB   Krupnik          80.42 314   P      P       17 18 52.9  -0.6
PBCC  Pribram          80.43 324  eP      P       17 18 53.2  -0.2
PBCC                              ex      x       17 18 56.7
PBCC                              epP     pP      17 19 16.4  +0.9
PBCC                              eS      S       17 28 44.5  -8.3
NEUB  Neuenburg        80.46 326  eP      P       17 18 53.2  -0.3
      baz=46,slow=5.2
NEUB                              epP     pP      17 19 18.9  +3.3
      baz=46,slow=5.3
MSO   Missoula         80.48  39   P      P       17 18 54.0  +0.1
MSO                                IAmb   IAmb    17 18 59.9
      comp=Z,438nm,1.4s
MSO   Missoula         80.48  39   P      P       17 18 54.9  +1.0
      baz=310,SNR=113
MCCM  Marconi Confer   80.49  50   P      P       17 18 55.8  +1.9
ORV   Oroville         80.55  49   P      P       17 18 54.1  -0.1
ORV                                pmax   pmax
      comp=Z,254nm,1.5s
ORV   Oroville         80.55  49   P      P       17 18 54.1  -0.1
ORV                                IAmb   IAmb    17 18 60.0
      comp=Z,254nm,1.4s
WVOR  Wild Horse Val   80.58  45   P      P       17 18 55.8  +1.3
WVOR                               pmax   pmax
      comp=Z,259nm,1.3s
WVOR  Wild Horse Val   80.58  45   P      P       17 18 55.8  +1.3
WVOR                               IAmb   IAmb    17 19 00.3
      comp=Z,259nm,1.3s
FFC   Flin Flon        80.62  28   P      P       17 18 54.7  +0.4
FFC                                pmax   pmax
      comp=Z,582nm,1.3s
FFC   Flin Flon        80.62  28   P      P       17 18 54.7  +0.4
CONA  Conrad Observa   80.66 322  i P     P       17 18 55.0  +0.2
      comp=Z,122nm,1.2s,SNR=79
CLZ   Clausthal        80.66 328  eP      P       17 18 54.6  -0.1
      comp=Z,249nm,1.3s,baz=46,slow=5.2
CLZ                               epP     pP      17 19 20.2  +3.5
      baz=46,slow=5.3
TANN  Tannenbergstha   80.68 326  eP      P       17 18 54.5  -0.3
      comp=Z,162nm,1.3s,baz=46,slow=5.2
TANN                              epP     pP      17 19 20.3  +3.4
      baz=46,slow=5.3
ANGG  Ammassalik, Gr   80.74 356   P      P       17 18 54.0  -0.7
ANGG  Ammassalik, Gr   80.75 356  i P             17 18 54.1
ANGG                               IAmb           17 18 58.3
      comp=Z,142nm,1.2s
GUNZ  Gunzen           80.78 326  eP      P       17 18 55.0  -0.2
      comp=Z,122nm,1.2s,baz=46,slow=5.2
GUNZ                              epP     pP      17 19 20.8  +3.4
      baz=46,slow=5.3
PLN   Plauen           80.78 326  eP      P       17 18 54.9  -0.3
      comp=Z,76nm,1.1s,baz=46,slow=5.2
PLN                               epP     pP      17 19 20.6  +3.3
      baz=46,slow=5.3
WERN  Wernitzgruen     80.81 326  eP      P       17 18 55.3  -0.2
      comp=Z,175nm,1.2s,baz=46,slow=5.2
WERN                              epP     pP      17 19 21.0  +3.5
      baz=46,slow=5.3
NKC   Novy Kostel      80.81 325  eP      P       17 18 55.1  -0.3
NKC                               ePCP    PcP     17 18 59.1  -2.8
NKC                               epP     pP      17 19 21.4  +3.9
NKC                               eS      S       17 28 50.2  -6.6
NKC                                AMS    AMS     17 58 10.0
      comp=Z,6μm,15.1s
NKC   Novy Kostel      80.81 325  eP      P       17 18 55.1  -0.3
NKC                               e               17 19 21.4
NKC                               eS      S       17 28 50.2  -6.6
NKC                                MLR    MLR
      comp=Z,6μm,15.1s
TEKS  Tekeris          80.84 318  eP      P       17 18 59.0  +3.3
DIVS  Divibare         80.86 317⇑iP      P       17 18 54.6  -1.3
ISOG  Isortoq, Green   80.89 356  i P             17 18 55.0
ISOG                               IAmb           17 18 59.3
      comp=Z,176nm,1.3s
MOX   Moxa             80.92 326  eP      P       17 18 55.7  -0.3
      comp=Z,89nm,1.4s,baz=46,slow=5.2
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MOX                               epP     pP      17 19 21.6  +3.5
      baz=46,slow=5.3
KHC   Kasperske Hory   81.01 324  eP      P       17 18 56.0  -0.5
KHC                               ePCP    PcP     17 19 00.0  -2.8
KHC                               epP     pP      17 19 21.2  +2.6
KHC                               eS      S       17 28 46.9   -12
KHC                                AMS    AMS     17 58 50.0
      comp=Z,6μm,17.0s
KHC   Kasperske Hory   81.01 324  eP      P       17 18 56.0  -0.5
KHC                               e               17 19 21.2
KHC                               eS      S       17 28 46.9   -12
KHC                                MLR    MLR
      comp=Z,6μm,17.0s
KHC   Kasperske Hory   81.01 324   P      P       17 18 55.7  -0.8
GTTG  Gottingen        81.05 328  eP      P       17 18 56.3  -0.3
      comp=Z,122nm,1.1s,baz=46,slow=5.2
GTTG                              epP     pP      17 19 22.1  +3.4
      baz=46,slow=5.3
VAY   Valandovo        81.06 314  i P     P       17 18 56.2  -0.7
STIP  Stip             81.06 314  i P     P       17 18 55.1  -1.8
BEKR  Beckworth        81.07  48   P      P       17 18 58.2  +1.0
BEKR                               IAmb   IAmb    17 19 02.6
      comp=Z,236nm,1.2s
GEC2  GERESS Array S   81.14 324  eP      P       17 18 56.7  -0.6
      comp=Z,73nm,1.0s,baz=46,slow=5.2
GEC2                              epP     pP      17 19 22.4  +3.0
      baz=46,slow=5.3
GEC2  GERESS Array S   81.14 324   P      P       17 18 55.8  -1.5
GERES GERESS Array B   81.14 324   P      P       17 18 56.3  -1.0
      comp=Z,31nm,0.8s,baz=45,slow=4.7,SNR=92
GERES                              pP     pP      17 19 19.9  +0.5
      comp=Z,36nm,1.1s,baz=38,slow=6.6,SNR=3.7
GERES                              LR     LR      17 59 43.6
      comp=Z,5μm,18.3s,baz=54,slow=39
GERES GERESS Array B   81.14 324   P      P       17 18 56.1  -1.2
MANZ  Manzenberg       81.14 325  eP      P       17 18 57.0  -0.2
      comp=Z,75nm,1.0s,baz=46,slow=5.2
MANZ                              epP     pP      17 19 22.8  +3.5
      baz=46,slow=5.3
HORT  Hortiatis        81.17 313   P      P       17 18 55.9  -1.7
AFDM  Forest Hills D   81.23  49   P      P       17 18 58.5  +0.6
ROTZ  Rotzenmuhle      81.24 325  eP      P       17 18 57.8  +0.1
      comp=Z,181nm,1.3s,baz=46,slow=5.2
ROTZ                              epP     pP      17 19 23.4  +3.6
      baz=46,slow=5.3
MSEY  Mahe Island      81.26 258   P      P       17 18 57.3  -1.2
MSEY  Mahe Island      81.26 258   P      P       17 18 57.2  -1.2
MSEY                               pmax   pmax
      comp=Z,156nm,1.3s
MSEY  Mahe Island      81.26 258   P      P       17 18 57.2  -1.2
ARSA  Arzberg          81.27 322  i P     P       17 18 58.0   0.0
      comp=Z,64nm,0.9s,SNR=35
ARSA                              i pP    pP      17 19 21.2  +1.1
      comp=Z,60nm,1.0s
SKO   Skopje           81.34 315  i P     P       17 18 58.2  -0.2
WET   Wettzell         81.34 324  eP      P       17 18 58.1  -0.2
      comp=Z,66nm,1.2s,baz=46,slow=5.2
WET                               epP     pP      17 19 23.8  +3.4
      baz=46,slow=5.3
BBLS  Lazi&#263;i      81.34 317⇑iP      P       17 18 57.8  -0.6
GRG   Griva            81.38 314   P      P       17 18 57.4  -1.3
KOGS  Kog              81.42 321  i P     P       17 18 57.9  -0.8
HAPS  Han Pijesak,Bl   81.46 318⇓iP      P       17 18 57.6  -1.5
IBBN  Ibbenburen       81.48 329  eP      P       17 18 58.1  -0.7
      comp=Z,232nm,1.2s,baz=46,slow=5.2
IBBN                              epP     pP      17 19 24.0  +3.0
      baz=46,slow=5.3
KALN  Kalnik           81.51 321  i P     P       17 18 58.6  -0.6
RUDO  Rudo             81.52 317  eP      P       17 18 58.6  -0.7
MOA   Molln            81.52 323  i P     P       17 18 59.2  -0.1
      comp=Z,65nm,1.3s,SNR=30
UBBA  Unterbreizbach   81.54 327  eP      P       17 18 58.9  -0.2
      comp=Z,142nm,1.6s,baz=46,slow=5.2
UBBA                              epP     pP      17 19 24.7  +3.4
      baz=46,slow=5.3
KARP  Karpathos        81.55 307   P      P       17 18 58.4  -1.2
KARP                               IAmb   IAmb    17 19 04.7
      comp=Z,205nm,0.9s
MCD   Coleburn Disti   81.59 337  eP      P       17 18 58.9  -0.5
MFID  Camas Ranch      81.60  43   P      P       17 19 01.0  +1.1
MFID                               IAmb   IAmb    17 19 06.6
      comp=Z,656nm,1.4s
RUBR  Rubicon Trail    81.68  48   P      P       17 19 01.4  +0.9
RUBR                               IAmb   IAmb    17 19 30.3
      comp=Z,258nm,1.2s
MOSL  Moslavina        81.69 320  i P     P       17 18 59.5  -0.7
GRA1  Grafenberg Arr   81.76 326   P      P       17 18 59.7  -0.8
GRA1                               IAmb   IAmb    17 19 05.2
      comp=Z,282nm,1.0s
GRF   Grafenberg Arr   81.76 326  eP      P       17 19 00.6  +0.2
      comp=Z,381nm,1.2s,baz=46,slow=5.2
GRF                               epP     pP      17 19 26.4  +3.8
      baz=46,slow=5.3
GRF   Grafenberg Arr   81.76 326   P      P       17 18 59.7  -0.8
GRF                                pmax   pmax
      comp=Z,282nm,1.0s
PAHR  Pah Rah Range    81.77  48   P      P       17 19 01.6  +0.7
PAHR                               IAmb   IAmb    17 19 06.5
      comp=Z,246nm,1.2s
GROS  Grobnik          81.80 321  i P     P       17 18 59.9  -0.9
LIT   Litokhoron       81.84 313   P      P       17 18 59.2  -1.8
LIT   Litokhoron       81.84 313   P      P       17 18 59.3  -1.8
LIT                                pmax   pmax
      comp=Z,106nm,0.9s
LIT   Litokhoron       81.84 313   P      P       17 18 59.3  -1.8
EGMT  Eagleton         81.85  37   P      P       17 19 01.4  +0.3
EGMT  Eagleton         81.85  37   P      P       17 19 02.4  +1.3
      baz=312
VCNR  Virginia City    81.85  48   P      P       17 19 02.1  +0.6
NEO   Neokhori         81.87 312   P      P       17 19 00.2  -1.1
SOKA  Soboth           81.90 322  i P     P       17 19 01.1  -0.3
      comp=Z,162nm,0.9s,SNR=108
LRM   Limekiln Ridge   81.92  40   P      P       17 19 02.8  +1.1
PNTR  Pine Nut         82.01  48   P      P       17 19 03.4  +1.2
PNTR                               IAmb   IAmb    17 19 08.1
      comp=Z,329nm,1.5s
BLY   Banja Luka       82.01 319 ⇓P      P       17 19 02.0  +0.2
BLY   Banja Luka       82.01 319⇑iP      P       17 19 01.2  -0.7
BLY   Banja Luka       82.01 319   P      P       17 19 01.0  -0.9
FNA   Florina          82.10 314   P      P       17 19 00.7  -1.8
FNA   Florina          82.10 314   P      P       17 18 59.9  -2.6
FNA                                pmax   pmax
      comp=Z,244nm,2.0s
FNA   Florina          82.10 314   P      P       17 18 59.9  -2.6
DLMT  Dillon           82.14  40   P      P       17 19 03.4  +0.6
CMB   Columbia Colle   82.14  49   P      P       17 19 03.5  +0.7
CMB                                pmax   pmax
      comp=Z,124nm,1.2s
CMB   Columbia Colle   82.14  49   P      P       17 19 03.5  +0.7
HIZ   Hauiti           82.15 147   P      P       17 19 04.4  +2.0
HIZ                                IAmb   IAmb    17 19 31.2
      comp=Z,247nm,0.9s
KZN   Kozani           82.16 314   P      P       17 18 59.5  -3.3
SAO   San Andreas Ge   82.22  51   P      P       17 19 02.5  -0.6
SAO                                pmax   pmax
      comp=Z,76nm,1.2s
SAO   San Andreas Ge   82.22  51   P      P       17 19 02.5  -0.6
OHR   Ohrid            82.24 315  i P     P       17 18 59.8  -3.4
LEWI  Lewis, Hebride   82.25 339  eP      P       17 19 01.8  -1.0
LEWI                               IAmb   IAmb    17 19 07.2
      comp=Z,229nm,1.3s
OBKA  Obir             82.26 322  i P     P       17 19 02.9  -0.3
      comp=Z,60nm,0.8s,SNR=28
MGRS  Mrkonjic Grad    82.28 319⇑iP      P       17 19 02.8  -0.5
YERR  Yerington        82.29  48   P      P       17 19 04.6  +0.9
YERR                               IAmb   IAmb    17 19 12.4
      comp=Z,188nm,1.1s
KAC   Achnashellach    82.31 338⇑eP      P       17 19 02.3  -0.9
BUG   Bochum--Univer   82.31 329  eP      P       17 19 02.5  -0.8
      comp=Z,220nm,1.4s,baz=46,slow=5.2
BUG                               epP     pP      17 19 29.8  +4.4
      baz=46,slow=5.3
PDG   Podgorica        82.33 316 ⇑P      P       17 19 03.0  -0.6
PDG   Podgorica        82.33 316⇑iP      P       17 19 02.3  -1.2
PDG   Podgorica        82.33 316   P      P       17 19 02.5  -1.1
PDG                                IAmb   IAmb    17 19 08.8
      comp=Z,161nm,0.9s
RJOB  Jochberg         82.33 323  eP      P       17 19 03.5  -0.1
      comp=Z,156nm,1.3s,baz=46,slow=5.2
RJOB                              epP     pP      17 19 29.3  +3.6
      baz=46,slow=5.3
EDU   Dundee           82.35 337⇑eP      P       17 19 02.3  -1.1
MCMT  McKenzie Canyo   82.35  40   P      P       17 19 04.6  +0.6
OZLJ  Ozalj            82.37 321  i P     P       17 19 03.1  -0.6
LKR   Lokris           82.41 312   P      P       17 19 00.2  -3.8
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BRY	Bratogost	82.44	317	⇑*i*P	P	17 19 02.7	-1.6
THL	Klokotos Trika	82.46	313	P	P	17 19 00.9	-3.4
NUUK	Nuuk	82.49	2	⇑*i*P		17 19 04.2	
KBA	Koelnbreinsper	82.50	323	*i* P	P	17 19 04.1	-0.5
	comp=Z,39nm,0.9s,SNR=27						
NEST	Nestorio	82.52	314	P	P	17 19 03.0	-1.8
KPL	Plockton	82.55	338	*e*P	P	17 19 03.5	-0.8
KPL				IAmb	IAmb	17 19 08.0	
	comp=Z,472nm,1.6s						
BOJS	Bojanci	82.56	321	*i* P	P	17 19 04.2	-0.6
BOJS				*e*PP	PP	17 22 17.7	+3.2
BOJS				*e*S	S	17 29 13.9	-1.0
LJU	Ljubljana	82.58	321	*i* P	P	17 19 04.1	-0.7
LJU				*i*		17 19 07.2	
LJU				*e*pP	pP	17 19 25.5	-1.5
LJU				*e*PP	PP	17 22 19.3	+4.6
LJU				*i* S	S	17 29 12.2	-2.9
LJU				*e*		17 29 51.1	
LJU				*e*		17 40 53.2	
LJU	Ljubljana	82.58	321	⇑*i*P	P	17 19 03.8	-1.0
AGG	Agios Georgios	82.60	312	P	P	17 19 02.7	-2.4
AGG	Agios Georgios	82.60	312	P	P	17 19 02.3	-2.8
AGG				pmax	pmax		
	comp=Z,59nm,1.0s						
AGG	Agios Georgios	82.60	312	P	P	17 19 02.2	-2.8
KPRO	Kipourio	82.62	313	P	P	17 19 02.8	-2.4
TIR	Tirane	82.65	315	⇓P	P	17 19 05.4	+0.2
TIR	Tirane	82.65	315	P	P	17 19 03.5	-1.8
TIR				pmax	pmax		
	comp=Z,149nm,0.9s						
TIR	Tirane	82.65	315	P	P	17 19 03.5	-1.8
TIR				IAmb	IAmb	17 19 10.4	
	comp=Z,149nm,0.9s						
MYKA	Terra Mystica	82.65	322	*i* P	P	17 19 04.3	-0.9
	comp=Z,57nm,0.8s,SNR=34						
TREB	Trebinje	82.66	317	*e*P	P	17 19 04.3	-1.0
TNS	Taunus Mts	82.67	327	*e*P	P	17 19 04.9	-0.4
	comp=Z,142nm,1.3s,baz=46,slow=5.2						
TNS				*e*pP	pP	17 19 30.6	+3.2
	baz=46,slow=5.3						
ESY	Stoneypath	82.72	336	⇑*e*P	P	17 19 04.2	-1.1
MAKR	Makrakomi, Fth	82.72	312	P	P	17 19 03.9	-1.8
FUR	Furstenfeldbru	82.78	324	*e*P	P	17 19 05.8	-0.1
	comp=Z,316nm,1.2s,baz=46,slow=5.2						
FUR				*e*pP	pP	17 19 31.5	+3.5
	baz=46,slow=5.3						
INVG	Invergeldie, C	82.78	337	*e*P	P	17 19 04.5	-1.1
CEY	Cerknica	82.84	321	P	P	17 19 04.5	-1.7
RICI	Ricice	82.85	318	P	P	17 19 04.8	-1.5
ATD	Arta Tunnel	82.86	279	P	P	17 19 07.1	+0.2
	SNR=7.4						
ATD	Arta Tunnel	82.86	279	P	P	17 19 05.2	-1.6
KIJV	Kijevo	82.92	319	*i* P	P	17 19 05.6	-1.0
UDBI	Udbina	82.93	320	*i* P	P	17 19 05.5	-1.2
STON	Ston	82.93	317	*i* P	P	17 19 04.9	-1.7
STON	Ston	82.93	317	⇑*i*P	P	17 19 04.5	-2.1
RYN	Ryan	82.95	48	P	P	17 19 08.1	+1.0
RYN				IAmb	IAmb	17 19 13.8	
	comp=Z,475nm,1.6s						
KVN	Kaiserville	82.96	47	P	P	17 19 08.5	+1.3
KVN				pmax	pmax		
	comp=Z,277nm,1.0s						
KVN	Kaiserville	82.96	47	P	P	17 19 08.5	+1.3
KVN				IAmb	IAmb	17 19 16.0	
	comp=Z,277nm,1.0s						
PMPB	Monarch Peak	82.96	51	P	P	17 19 08.8	+1.7
EBL	Broad Law	82.98	336	⇑*e*P	P	17 19 05.8	-0.9
URZ	Urewera	82.98	146	P	P	17 19 06.4	-0.3
MAKA	Makarska	83.05	318	*i* P	P	17 19 05.9	-1.4
AHRW	Bad Neuenahr-A	83.05	328	*e*P	P	17 19 06.7	-0.4
	comp=Z,225nm,1.1s,baz=46,slow=5.2						
QRZ	Quartz Range	83.05	150	P	P	17 19 07.7	+0.6
RIY	Rijeka	83.08	321	⇑*i*P	P	17 19 06.1	-1.3
KALE	Kalithea	83.10	312	P	P	17 19 05.2	-2.5
ANX	Ano Chora	83.11	312	P	P	17 19 06.0	-1.8
JAN	Janina	83.11	313	P	P	17 19 06.3	-1.4
QLMT	Earthquake Lak	83.11	40	P	P	17 19 09.1	+1.2
ABTA	Abfaltersbach	83.14	323	*i* P	P	17 19 06.4	-1.4
	comp=Z,84nm,1.0s,SNR=43						
ABTA				*i* pP	pP	17 19 32.2	+2.2
	comp=Z,49nm,1.1s						
TRIZ	Trizonia	83.16	312	P	P	17 19 04.8	-3.1
TRI	Trieste	83.20	321	P	P	17 19 06.2	-1.8
TRI				pmax	pmax		
	comp=Z,129nm,1.0s						
TRI	Trieste	83.20	321	P	P	17 19 06.2	-1.8
IDI	Anoyia	83.20	308	P	P	17 19 06.3	-2.0
	comp=Z,157nm,1.2s,baz=74,slow=3.9,SNR=8.5						
WATA	Walderalm	83.21	324	*i* P	P	17 19 07.5	-0.7
	comp=Z,71nm,0.9s,SNR=17						
NVAR	Mina Array Bea	83.21	48	P	P	17 19 10.2	+1.7
	comp=Z,39nm,0.7s,baz=293,slow=5.2,SNR=120						
NVAR				pP	pP	17 19 31.1	+0.4
	comp=Z,37nm,0.7s,baz=296,slow=4.9,SNR=5.1						
NVAR				LR	LR	17 50 07.9	
	comp=Z,2µm,21.8s,baz=302,slow=31						
NVAR	Mina Array Bea	83.21	48	P	P	17 19 08.6	+0.1
WTTA	Wattenberg	83.23	324	*i* P	P	17 19 07.6	-0.8
	comp=Z,126nm,1.4s,SNR=34						
YHL	Hebgen Lake	83.23	40	P	P	17 19 09.6	+1.0
OMMB	Old Mammoth Mi	83.27	49	P	P	17 19 09.9	+0.9
GDLE	Glaisdale, N Y	83.28	334	*e*P	P	17 19 07.2	-1.0
GDLE				IAmb	IAmb	17 19 12.4	
	comp=Z,866nm,1.9s						
YHB	Horse Butte	83.29	40	P	P	17 19 09.7	+0.9
NV11	Mina Array Sit	83.30	48	P	P	17 19 09.9	+1.0
NV11				IAmb	IAmb	17 19 15.6	
	comp=Z,240nm,1.4s						
KLV	Kalavryta, Ach	83.30	312	P	P	17 19 06.5	-2.3
STU	Stuttgart	83.35	326	*e*P	P	17 19 08.2	-0.5
	comp=Z,202nm,1.1s,baz=46,slow=5.2						
STU				*e*pP	pP	17 19 33.8	+2.9
	baz=46,slow=5.3						
STU	Stuttgart	83.35	326	P	P	17 19 08.0	-0.8
STU				pmax	pmax		
	comp=Z,171nm,1.0s						
STU	Stuttgart	83.35	326	P	P	17 19 08.0	-0.8
STU				IAmb	IAmb	17 19 12.7	
	comp=Z,171nm,1.0s						
MLAC	Mammoth, Mammo	83.37	49	P	P	17 19 11.8	+2.5
	baz=308,SNR=28						
STAL	STALIGIAL	83.37	322	P	P	17 19 06.8	-2.1
EKA	Eskdalemuir Ar	83.38	336	P	P	17 19 07.9	-0.8
	comp=Z,30nm,0.8s,baz=37,slow=5.2,SNR=18						
EKA				pP	pP	17 19 31.7	+0.9
	comp=Z,46nm,1.0s,baz=38,slow=5.2,SNR=4.8						
NVLJ	Novalja	83.38	320	*i* P	P	17 19 07.6	-1.3
MORI	Morici	83.39	319	*i* P	P	17 19 08.1	-0.9
GCMT	Greycliff	83.40	38	P	P	17 19 10.7	+1.4
ESK	Eskdalemuir	83.40	336	P	P	17 19 07.7	-1.1
ESK				pmax	pmax		
	comp=Z,249nm,1.6s						
ESK	Eskdalemuir	83.40	336	P	P	17 19 07.7	-1.1
ESK				IAmb	IAmb	17 19 13.5	
	comp=Z,249nm,1.6s						
BKZ	Black Stump Fm	83.42	147	P	P	17 19 08.9	-0.2
BKZ				IAmb	IAmb	17 19 36.3	
	comp=Z,263nm,1.3s						
PGBU	Glenifferbraes	83.43	337	*e*P	P	17 19 08.3	-0.7
MOTA	Moosalm	83.43	324	*i* P	P	17 19 08.7	-0.7
	comp=Z,68nm,0.9s,SNR=35						
YHH	Holmes Hill	83.45	40	P	P	17 19 10.9	+1.2
SQTA	Sankt Quirin	83.47	324	*i* P	P	17 19 08.8	-0.7
	comp=Z,64nm,0.9s,SNR=30						
SQTA				*i* pP	pP	17 19 34.1	+2.4
	comp=Z,101nm,2.0s						
YMR	Madison River	83.47	40	P	P	17 19 11.3	+1.6
IGT	Igoumenitsa	83.50	314	P	P	17 19 07.0	-2.7
RETA	Reutte	83.50	324	*i* P	P	17 19 09.1	-0.6
	comp=Z,111nm,1.0s,SNR=77						
RETA				*i* pP	pP	17 19 35.9	+4.0
	comp=Z,96nm,1.3s						
ZIRJ	Zirje	83.57	319	*i* P	P	17 19 08.4	-1.5
YNR	Norris Junctio	83.59	40	P	P	17 19 12.1	+1.7
PAGB	Antelope Grade	83.61	51	P	P	17 19 11.5	+1.1
ELK	Elko	83.62	45	LR	LR	17 50 35.2	
	comp=Z,1µm,21.5s,baz=312,slow=31						
ELK	Elko	83.62	45	P	P	17 19 11.9	+1.3
ELK				pmax	pmax		
	comp=Z,169nm,1.2s						
ELK	Elko	83.62	45	P	P	17 19 11.9	+1.3
ELK				IAmb	IAmb	17 19 16.7	
	comp=Z,169nm,1.1s						
DUGI	Dugi Otok	83.66	320	*i* P	P	17 19 09.7	-0.7
YUF	Upper Falls	83.68	39	P	P	17 19 12.8	+2.0
UBR	Ueberruh	83.69	325	*e*P	P	17 19 09.9	-0.6
	comp=Z,107nm,1.1s,baz=46,slow=5.2						
UBR				*e*pP	pP	17 19 36.3	+3.6
	baz=46,slow=5.3						
KEK	Kerkira	83.71	314	P	P	17 19 08.4	-2.4
NNZ	Nelson	83.73	150	P	P	17 19 10.8	+0.3
NNZ				IAmb	IAmb	17 19 44.3	
	comp=Z,151nm,1.0s						
YNE	Yellowstone No	83.75	39	P	P	17 19 12.2	+1.0
LKD2	Lefkada island	83.77	313	P	P	17 19 09.3	-1.8
YPP	Pitchstone Pla	83.82	40	P	P	17 19 13.8	+2.2
FETA	Feichten	83.84	324	*i* P	P	17 19 10.8	-0.7
	comp=Z,98nm,1.0s,SNR=52						
YMP	Mirror Lake Pl	83.85	39	P	P	17 19 13.3	+1.5
H17A	Grant Village	83.86	40	P	P	17 19 14.7	+2.9
H17A	Grant Village	83.86	40	P	P	17 19 15.1	+3.3
	baz=312,SNR=351						
LMK	Market Rasen	83.86	334	⇑*e*P	P	17 19 10.1	-1.1
LMK				IAmb	IAmb	17 19 15.4	
	comp=Z,542nm,1.4s						
AMT	Artemida-Makis	83.89	311	P	P	17 19 10.3	-1.5
HPK	Haverah Park	83.94	334	⇑*e*P	P	17 19 10.5	-1.1
HPK				IAmb	IAmb	17 19 16.0	
	comp=Z,382nm,1.1s						
KESW	Keswick, Cumbr	83.96	336	*e*P	P	17 19 10.8	-0.9
KESW				IAmb	IAmb	17 19 15.3	
	comp=Z,260nm,1.5s						
DYR	Agios Nikonas	83.97	310	P	P	17 19 10.5	-1.7
ITM	Ithomi	83.97	311	P	P	17 19 09.1	-3.1
ITM	Ithomi	83.97	311	P	P	17 19 09.9	-2.3
ITM				IAmb	IAmb	17 19 14.6	
	comp=Z,207nm,0.8s						
THZ	Tophouse	83.99	150	P	P	17 19 11.4	-0.5
FLWY	Flagg Ranch	84.00	40	P	P	17 19 14.1	+1.7
SMMC	Simmler	84.03	51	P	P	17 19 14.6	+2.1
	baz=307,SNR=14						
FSK	Fiskardo	84.03	313	P	P	17 19 09.9	-2.5
UCC	Uccle	84.03	330	P	P	17 19 10.5	-1.6
UCC				pmax	pmax		
	comp=Z,56nm,0.8s						
UCC	Uccle	84.03	330	P	P	17 19 10.5	-1.6
CTI	Castel Tesino	84.06	323	P	P	17 19 10.6	-1.9
CTI	Castel Tesino	84.06	323	P	P	17 19 10.6	-1.9
RLMT	Red Lodge	84.06	39	P	P	17 19 13.8	+1.1
RLMT				IAmb	IAmb	17 19 18.6	
	comp=Z,451nm,1.4s						
RLMT	Red Lodge	84.06	39	P	P	17 19 14.3	+1.6
	baz=313,SNR=196						
BFO	Black Forest	84.07	326	*e*P	P	17 19 11.8	-0.7
	comp=Z,328nm,1.3s,baz=46,slow=5.2						
BFO				*e*pP	pP	17 19 37.6	+3.0
	baz=46,slow=5.3						
BFO	Black Forest	84.07	326	P	P	17 19 11.4	-1.1
BFO				pmax	pmax		
	comp=Z,189nm,1.0s						
BFO	Black Forest	84.07	326	P	P	17 19 11.4	-1.1
BFO				IAmb	IAmb	17 19 16.3	
	comp=Z,189nm,1.0s						
WACR	West Acre	84.07	333	⇑*e*P	P	17 19 10.8	-1.5
WACR				IAmb	IAmb	17 19 15.2	
	comp=Z,169nm,0.8s						
DAVA	Damuels	84.07	324	*i* P	P	17 19 12.1	-0.5
	comp=Z,222nm,0.9s,SNR=98						
WLF	Walferdange	84.09	328	*e*P	P	17 19 12.3	-0.2
	comp=Z,296nm,1.4s,baz=46,slow=5.2						
WLF				*e*pP	pP	17 19 38.0	+3.3
	baz=46,slow=5.3						
WLF	Walferdange	84.09	328	P	P	17 19 11.8	-0.7
WLF				pmax	pmax		
	comp=Z,195nm,1.1s						
WLF	Walferdange	84.09	328	P	P	17 19 11.8	-0.7
WLF				IAmb	IAmb	17 19 16.8	
	comp=Z,195nm,1.1s						
TIN	Tinemaha, Big	84.10	49	P	P	17 19 15.3	+2.4
	baz=308,SNR=11						
KFL	Anninata	84.11	312	P	P	17 19 09.1	-3.7
FXWY	Fox Creek	84.12	40	P	P	17 19 13.7	+0.6
FXWY				IAmb	IAmb	17 19 20.2	
	comp=Z,204nm,1.2s						
TUWZ	Tuamarina	84.15	150	P	P	17 19 11.9	-0.7
DGMT	Dagmar	84.21	34	P	P	17 19 13.9	+0.8
DGMT	Dagmar	84.21	34	P	P	17 19 14.3	+1.1
	baz=316						
TPAW	Teton Pass	84.26	41	P	P	17 19 14.3	+0.4
TPAW				IAmb	IAmb	17 19 19.1	
	comp=Z,246nm,1.4s						
FOZ	Fox Glacier	84.27	153	P	P	17 19 14.4	+1.3
GAL1	Galloway	84.28	336	*e*P	P	17 19 11.9	-1.4
SCTE	Santa Cesarea	84.28	315	P	P	17 19 12.8	-0.8
SCTE				IAmb	IAmb	17 19 17.2	
	comp=Z,338nm,1.3s						
VES	Vestal, Richgr	84.30	50	P	P	17 19 14.9	+1.1
	baz=308						
BSWZ	Blackbirch Sta	84.35	150	P	P	17 19 13.8	+0.1
BSWZ				pP	pP	17 19 37.6	+1.7
HVU	Hansel Valley	84.38	43	P	P	17 19 15.7	+1.4
HVU				pmax	pmax		
	comp=Z,185nm,1.2s						
HVU	Hansel Valley	84.38	43	P	P	17 19 15.7	+1.4
SNOW	Snow King Moun	84.39	40	P	P	17 19 15.4	+1.0
SNOW				IAmb	IAmb	17 19 20.7	
	comp=Z,179nm,1.1s						
REDW	Red Top Meadow	84.40	41	P	P	17 19 15.7	+1.2
REDW				IAmb	IAmb	17 19 21.3	
	comp=Z,281nm,1.4s						
PKM	Mcpherson Peak	84.40	52	P	P	17 19 16.4	+1.8
	baz=307,SNR=34						
DAVOX	Davos/Dischmat	84.43	324	P	P	17 19 14.0	-0.5
	comp=Z,105nm,1.0s,baz=57,slow=2.7,SNR=87						
DAVOX	Davos/Dischmat	84.43	324	P	P	17 19 14.0	-0.5
CGL1	Ceglie Messapi	84.48	316	*e*P	P	17 19 13.8	-0.9
LAO	LASA Array	84.51	36	P	P	17 19 15.6	+0.8
LAO	LASA Array	84.51	36	P	P	17 19 16.6	+1.8
	baz=315,SNR=25						
TEOL	Teolo	84.52	322	P	P	17 19 13.8	-0.9
TEOL				IAmb	IAmb	17 20 47.8	
	comp=Z,388nm,1.1s						
BHW	Baring Head	84.53	149	P	P	17 19 14.5	0.0
BHW				pP	pP	17 19 37.3	+0.6
BFZ	Birch Farm	84.54	148	P	P	17 19 15.1	+0.5
BFZ				IAmb	IAmb	17 19 17.1	
	comp=Z,412nm,1.9s						
BAI	Bari	84.54	316	*e*P	P	17 19 14.3	-0.6
CLGH	Cloghs, Cushen	84.56	337	*e*P	P	17 19 13.4	-1.3
CLGH				IAmb	IAmb	17 19 18.2	
	comp=Z,248nm,1.3s						
CWC	Cottonwood Cre	84.57	50	P	P	17 19 16.6	+1.2
	baz=308						
LTZ	Lake Taylor	84.58	151	P	P	17 19 15.9	+1.0
LTZ				pP	pP	17 19 39.3	+2.2
AHID	Auburn Hatcher	84.66	41	P	P	17 19 16.7	+0.9
TAR1	Taranto	84.68	316	*e*P	P	17 19 14.8	-0.8
GRAC	Grapevine Rang	84.68	49	P	P	17 19 17.7	+1.9
	baz=309,SNR=29						
MSWZ	Moikau Station	84.69	149	P	P	17 19 16.0	+0.6
ECH	Echery	84.70	326	P	P	17 19 14.3	-1.3
ECH				pmax	pmax		
	comp=Z,186nm,1.3s						
ECH	Echery	84.70	326	P	P	17 19 14.3	-1.3
ECH				IAmb	IAmb	17 19 19.3	
	comp=Z,186nm,1.3s						
IOMK	Kirk Michael	84.72	336	*e*P	P	17 19 14.5	-1.0
IOMK				IAmb	IAmb	17 19 18.9	
	comp=Z,710nm,1.6s						
SBC	Santa Barbara	84.74	52	P	P	17 19 18.7	+2.6
	baz=308						
SGRT	San Giovanni R	84.76	318	P	P	17 19 14.8	-1.3
SGRT				IAmb	IAmb	17 19 20.0	
	comp=Z,394nm,1.1s						
BGU	Big Grassy Mou	84.79	44	P	P	17 19 17.5	+1.1
CWF	Charnwood Fore	84.79	334	⇑*e*P	P	17 19 14.4	-1.5
CWF				IAmb	IAmb	17 19 18.9	
	comp=Z,335nm,1.4s						
KHZ	Kahutara	84.79	150	P	P	17 19 16.4	+0.6
ISA	Isabella, Lake	84.80	50	P	P	17 19 16.5	+0.1
ISA				pmax	pmax		
	comp=Z,62nm,1.0s						
ISA	Isabella, Lake	84.80	50	P	P	17 19 16.5	+0.1
ISA	Isabella, Lake	84.80	50	P	P	17 19 16.8	+0.4
	baz=308,SNR=33						
PLWZ	Palliser	84.82	149	P	P	17 19 16.3	+0.2
SG1	Sgolgore (BA)	84.83	316	*e*P	P	17 19 15.7	-0.7
STNC	Stoke	84.84	334	⇑*e*P	P	17 19 15.4	-0.8
STNC				IAmb	IAmb	17 19 19.2	
	comp=Z,168nm,0.9s						
WIM	Isle of Man	84.85	336	⇑*e*P	P	17 19 15.0	-1.2
SPUT	South Promonto	84.87	43	P	P	17 19 17.8	+0.9
RPZ	Rata Peaks	84.89	153	P	P	17 19 15.9	-0.4
ARVC	Arvin	84.90	51	P	P	17 19 18.5	+1.6
	baz=308						
TUE	Stuetta	84.91	324	P	P	17 19 15.3	-1.6
SALO	Salr	84.92	323	P	P	17 19 15.4	-1.4
SALO				IAmb	IAmb	17 19 20.2	
	comp=Z,146nm,0.9s						
R11A	Troy Canyon, C	84.93	47	P	P	17 19 18.4	+1.2
R11A				IAmb	IAmb	17 19 23.9	
	comp=Z,434nm,1.6s						
R11A				pP	pP	17 19 39.4	-0.1
R11A	Troy Canyon, C	84.93	47	P	P	17 19 18.9	+1.7
	baz=310,SNR=222						
OXZ	Oxford	84.95	152	P	P	17 19 16.6	0.0
DCZ	Deep Cove	84.98	156	P	P	17 19 17.2	+0.5
SCZ2	Santa Cruz Isl	85.06	52	P	P	17 19 19.3	+1.6
	baz=308						
LBZ	Lake Benmore	85.13	153	P	P	17 19 18.1	+0.5
HWUT	Hardware Ranch	85.17	42	P	P	17 19 19.4	+1.1
HWUT				IAmb	IAmb	17 19 25.2	
	comp=Z,434nm,1.4s						
MPMC	Manual Prospec	85.19	50	P	P	17 19 19.8	+1.3
	baz=309,SNR=107						
OSI	Osito Audit: C	85.28	51	P	P	17 19 19.5	+0.6
OSI	Osito Audit: C	85.28	51	P	P	17 19 21.0	+2.1
	baz=308,SNR=6.2						
ACER	Acerenza	85.28	317	P	P	17 19 17.7	-1.0
FURC	Furnace Creek,	85.33	49	P	P	17 19 20.8	+1.9
	baz=309,SNR=62						
WME	Myndd Eilian	85.34	335	⇑*e*P	P	17 19 17.5	-1.1
FOEL	Foel Wylfa	85.36	335	⇑*e*P	P	17 19 17.9	-1.0
FOEL				IAmb	IAmb	17 19 22.2	
	comp=Z,242nm,0.8s						
BLG	Laguna Peak, P	85.37	52	P	P	17 19 20.8	+1.6
	baz=308,SNR=6.9						
DUG	Dugway, Tooele	85.39	44	P	P	17 19 20.8	+1.4
DUG				pmax	pmax		
	comp=Z,575nm,1.7s						
DUG	Dugway, Tooele	85.39	44	P	P	17 19 20.8	+1.4
DUG				IAmb	IAmb	17 19 26.3	
	comp=Z,575nm,1.6s						
DUG	Dugway, Tooele	85.39	44	P	P	17 19 21.3	+1.9
	baz=311,SNR=124						
WPS	Cemaes, Angles	85.40	335	⇑*e*P	P	17 19 17.8	-1.2
WPS				IAmb	IAmb	17 19 22.1	
	comp=Z,494nm,1.9s						
TPNV	Topopah Spring	85.41	48	P	P	17 19 20.2	+0.6
TPNV				pmax	pmax		
	comp=Z,278nm,1.2s						
TPNV	Topopah Spring	85.41	48	P	P	17 19 20.2	+0.6
TPNV				IAmb	IAmb	17 19 43.0	
	comp=Z,278nm,1.2s						
TPNV	Topopah Spring	85.41	48	P	P	17 19 21.0	+1.4
	baz=309,SNR=86						
LRMC	Laurel Mtn Rad	85.42	50	P	P	17 19 21.0	+1.3
	baz=308,SNR=22						
WLF1	Llynfaes	85.46	335	⇑*e*P	P	17 19 18.2	-1.0
WLF1				IAmb	IAmb	17 19 22.6	
	comp=Z,313nm,0.8s						
NRCA	Norcia	85.49	320	P	P	17 19 18.8	-1.0
NRCA				IAmb	IAmb	17 19 24.5	
	comp=Z,272nm,1.1s						
BW06	Boulder Array	85.50	40	P	P	17 19 20.2	+0.2
BW06				IAmb	IAmb	17 19 25.2	
	comp=Z,190nm,1.2s						
BW06	Boulder Array	85.50	40	P	P	17 19 21.0	+1.0
	baz=313						
YLL	Llanberis	85.50	335	⇑*e*P	P	17 19 18.5	-1.0
PD31	Pinedale Array	85.50	40	P	P	17 19 20.4	+0.3
PD31				IAmb	IAmb	17 19 25.2	
	comp=Z,175nm,1.2s						
PDAR	Pinedale Array	85.50	40	P	P	17 19 20.8	+0.7
	comp=Z,138nm,1.1s,baz=304,slow=1.5,SNR=104						
PDAR				PKKPbc	PKKPbc	17 37 22.3	-0.3
	comp=Z,0.5nm,0.6s,baz=126,slow=4.0,SNR=4.1						
PDAR				LR	LR	17 58 33.9	
	comp=Z,2µm,21.2s,baz=332,slow=36						
PDAR	Pinedale Array	85.50	40	P	P	17 19 20.2	+0.2
IVI	Ivigtut	85.51	360	P	P	17 19 18.7	-0.6
IVI				IAmb	IAmb	17 19 23.2	
	comp=Z,171nm,1.0s						
IVI	Ivigtut	85.51	360	⇑*i*P		17 19 18.9	
IVI				IAmb		17 19 22.9	
	comp=Z,181nm,1.0s						
MURB	Monte Urbino	85.51	320	P	P	17 19 19.4	-0.4
MURB				IAmb	IAmb	17 19 25.7	
	comp=Z,320nm,1.2s						
NRS	Narsarsuaq	85.53	359	P	P	17 19 18.2	-1.2
NRS				pmax	pmax		
	comp=Z,467nm,1.8s						
NRS	Narsarsuaq	85.53	359	P	P	17 19 18.2	-1.2
NRS				IAmb	IAmb	17 19 23.2	
	comp=Z,467nm,1.8s						
HLM1	Long Mynd	85.55	334	⇑*e*P	P	17 19 18.4	-1.3
HLM1				IAmb	IAmb	17 19 22.8	
	comp=Z,534nm,1.9s						
YRC	Rhoscolyn	85.55	335	⇑*e*P	P	17 19 18.7	-1.0
LLW	Llanuwychllyn	85.56	335	⇑*e*P	P	17 19 18.7	-1.1
LLW				IAmb	IAmb	17 19 23.1	
	comp=Z,101nm,0.9s						
ZCCA	Zocca	85.58	322	P	P	17 19 20.4	+0.3
ZCCA				IAmb	IAmb	17 20 21.5	
	comp=Z,280nm,1.3s						
TCUT	Toone Canyon	85.59	43	P	P	17 19 22.0	+1.5
SNCC	San Nicolas Is	85.59	53	P	P	17 19 20.5	+0.2
SNCC				IAmb	IAmb	17 19 43.5	
	comp=Z,351nm,1.2s						
SNCC	San Nicolas Is	85.59	53	P	P	17 19 21.0	+0.7
	baz=308						
EDW2	Edwards Air Fo	85.59	51	P	P	17 19 21.8	+1.4
	baz=308,SNR=58						
INTR	Introdacqua	85.61	319	P	P	17 19 19.1	-1.3
INTR				IAmb	IAmb	17 19 25.7	
	comp=Z,148nm,0.9s						
HMNX	Herstmonceux	85.63	332	⇑*e*P	P	17 19 19.2	-0.9
HMNX				IAmb	IAmb	17 19 24.1	
	comp=Z,246nm,1.2s						
AQU	L'Aquila	85.66	319	⇑*i*P	P	17 19 19.9	-0.7
AQU	L'Aquila	85.66	319	P	P	17 19 20.4	-0.2
AQU				pmax	pmax		
	comp=Z,257nm,1.0s						
AQU	L'Aquila	85.66	319	P	P	17 19 20.4	-0.2
AQU				IAmb	IAmb	17 19 56.3	
	comp=Z,257nm,1.0s						
CTU	Camp Tracy	85.67	43	P	P	17 19 21.8	+0.9
DECC	Green Verdugo	85.76	51	P	P	17 19 23.1	+1.9
	baz=308						
PSUT	Pine Spring	85.86	46	P	P	17 19 22.8	+1.0
TIP	Timpagrande	85.86	315	P	P	17 19 19.9	-1.8
TIP	Timpagrande	85.86	315	P	P	17 19 20.7	-0.9
TIP				IAmb	IAmb	17 19 25.8	
	comp=Z,214nm,1.2s						
ODZ	Otahua Downs	85.87	154	P	P	17 19 19.5	-1.6
STRD	Stroud	85.88	333	⇑*e*P	P	17 19 20.1	-1.3
STRD				IAmb	IAmb	17 19 24.5	
	comp=Z,397nm,1.0s						
PAOL	Paolisi	85.90	318	P	P	17 19 20.3	-1.5
PASC	Pasadena Art C	85.90	51	P	P	17 19 21.4	-0.5
JLU	Jordanelle	85.91	43	P	P	17 19 23.3	+1.2
SWN1	Swindon	85.95	333	⇑*e*P	P	17 19 20.6	-1.1
SWN1				IAmb	IAmb	17 19 25.0	
	comp=Z,334nm,1.1s						
MWC	Mount Wilson	85.95	51	P	P	17 19 23.3	+0.9
MWC				pmax	pmax		
	comp=Z,181nm,1.4s						
MWC	Mount Wilson	85.95	51	P	P	17 19 23.2	+0.9
MWC				IAmb	IAmb	17 19 58.5	
	comp=Z,181nm,1.4s						
SENIN	Lac Senin/Sane	85.97	325	P	P	17 19 20.8	-1.5
NLU	North Lily Min	85.97	44	P	P	17 19 23.8	+1.4
MCH1	Michaelchurch	86.01	334	⇑*e*P	P	17 19 20.8	-1.2
MCH1				IAmb	IAmb	17 19 25.1	
	comp=Z,238nm,0.8s						
OSSC	Osservatorio P	86.01	321	P	P	17 19 20.8	-1.4
VLC	Villacollemand	86.01	322	P	P	17 19 22.6	+0.3
SHOC	Shoshone, Teco	86.05	49	P	P	17 19 26.2	+3.6
	baz=309						
MONM	Monmouth	86.06	334	⇑*e*P	P	17 19 20.9	-1.4
MONM				IAmb	IAmb	17 19 25.3	
	comp=Z,231nm,0.9s						
GSC	Goldstone, Bar	86.09	50	P	P	17 19 23.9	+1.0

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GSC                                pmax     pmax
      comp=Z,156nm,1.3s
GSC   Goldstone, Bar    86.09  50  P        P         17 19 23.9 +1.0
GSC   Goldstone, Bar    86.09  50  P        P         17 19 24.3 +1.4
      baz=309,SNR=52
OLDB  Oldbury-Upon-S    86.11 333⇑eP        P         17 19 21.2 -1.3
OLDB                               IAmb     IAmb      17 19 25.3
      comp=Z,73nm,0.8s
DSB   Dublin            86.17 336  P        P         17 19 21.6 -1.1
DSB                                IAmb     IAmb      17 19 26.6
      comp=Z,128nm,0.8s
MPU   Maple Canyon      86.19  44  P        P         17 19 24.3 +0.9
BFSC  Mount Baldy Ra    86.20  51  P        P         17 19 24.3 +0.8
      baz=309,SNR=10
CIS   Catalina Islan    86.23  52  P        P         17 19 23.1 -0.4
      baz=308,SNR=13
RRX   Edison Barstow    86.23  50  P        P         17 19 27.0 +3.5
      baz=309
LATE  Laterza           86.34 320  P        P         17 19 22.4 -1.5
MSSA  Maissana          86.35 323  P        P         17 19 21.2 -2.8
SHPR  Sheep Range       86.36  48  P        P         17 19 25.6 +1.3
SHPR                               IAmb     IAmb      17 19 30.3
      comp=Z,182nm,1.3s
SCI2  San Clemente I    86.40  52  P        P         17 19 26.0 +1.7
      baz=308
ULM   Lac du Bonnet     86.45  28  P        P         17 19 24.7 +0.5
      comp=Z,489nm,1.1s,baz=324,slow=5.7,SNR=257
ULM                                LR       LR        18 00 37.3
      comp=Z,2µm,21.9s,baz=333,slow=37
ULM   Lac du Bonnet     86.45  28  P        P         17 19 24.5 +0.3
TUQ   Turquoise Moun    86.56  49  P        P         17 19 27.2 +1.9
      baz=310,SNR=28
TCRU  Three Creeks R    86.64  45  P        P         17 19 27.5 +1.8
BBRC  Big Bear Solar    86.67  51  P        P         17 19 28.4 +2.5
      baz=309
RSBS  Rosebush, Pemb    86.67 335⇑eP        P         17 19 23.6 -1.7
RSBS                               IAmb     IAmb      17 19 28.2
      comp=Z,82nm,0.8s
HEC   Hector,Ludlow     86.69  50  P        P         17 19 27.2 +1.4
      baz=309,SNR=47
CASP  Castiglione de    86.72 321  P        P         17 19 23.7 -2.0
MDND  Maddock           86.74  32  P        P         17 19 26.9 +1.2
MDND  Maddock           86.74  32  P        P         17 19 27.6 +1.8
      baz=319
CCUT  Cedar City        86.79  46  P        P         17 19 27.4 +0.9
MSU   Marysvale         86.87  45  P        P         17 19 28.7 +1.9
MSU   Marysvale         86.87  45  P        P         17 19 28.7 +1.9
MURC  Murrieta          86.90  51  P        P         17 19 28.7 +1.9
      baz=309,SNR=5.4
TMUT  Trail Mountain    86.91  44  P        P         17 19 28.4 +1.3
SZCU  Shurtz Canyon     86.93  46  P        P         17 19 28.4 +1.3
CEL   Celeste           86.97 315  P        P         17 19 27.0 -0.1
RDMU  Red Mountain      86.99  42  P        P         17 19 28.3 +1.0
CLF   Chambon-Foret     87.03 329  P        P         17 19 25.8 -1.3
CLF                                IAmb     IAmb      17 19 31.0
      comp=Z,265nm,1.6s
P17A  Butcher Ranch,    87.06  43  P        P         17 19 29.1 +1.5
GMRC  Granite Mounta    87.14  50  P        P         17 19 29.4 +1.3
      baz=310,SNR=58
MTPU  Mount Pierson     87.17  45  P        P         17 19 30.4 +1.9
Q16A  Castle Valley     87.19  44  P        P         17 19 29.9 +1.5
K22A  Casper            87.20  39  P        P         17 19 28.5 +0.2
K22A                               IAmb     IAmb      17 19 33.4
      comp=Z,265nm,1.3s
K22A  Casper            87.20  39  P        P         17 19 29.5 +1.2
      baz=315,SNR=43
LCMT  Little Creek M    87.21  47  P        P         17 19 29.6 +1.2
BNI   Bardonecchia      87.22 325  P        P         17 19 27.2 -1.1
BNI                                pmax     pmax
      comp=Z,54nm,1.1s
BNI   Bardonecchia      87.22 325  P        P         17 19 27.2 -1.1
HTL   Hartland          87.37 334 eP        P         17 19 27.7 -0.9
PFO   Pinyon Flats O    87.37  51  LR       LR        17 54 42.9
      comp=Z,2µm,19.9s,baz=290,slow=33
PFO   Pinyon Flats O    87.37  51  P        P         17 19 30.2 +1.0
PFO                                pmax     pmax
      comp=Z,105nm,1.2s
PFO   Pinyon Flats O    87.37  51  P        P         17 19 30.2 +1.0
PFO   Pinyon Flats O    87.37  51  P        P         17 19 30.4 +1.2
      baz=309,SNR=37
XPFO  Pion Flat         87.38  51  P        P         17 19 30.2 +0.9
TPFO  Pinon Flats       87.38  51  P        P         17 19 30.5 +1.3
      baz=309,SNR=41
109C  Camp Elliot, M    87.41  52  P        P         17 19 29.4 +0.2
109C  Camp Elliot, M    87.41  52  P        P         17 19 31.7 +2.5
      baz=309
RSSD  Black Hills       87.42  37  P        P         17 19 29.6 +0.2
RSSD                               pmax     pmax
      comp=Z,643nm,1.4s
RSSD  Black Hills       87.42  37  P        P         17 19 29.6 +0.2
RSSD  Black Hills       87.42  37  P        P         17 19 30.4 +1.0
      baz=316
BELC  Belle Mtn. Jos    87.42  50  P        P         17 19 30.4 +0.9
      baz=310,SNR=27
SRU   San Rafael Swe    87.43  44  P        P         17 19 30.5 +1.0
SRU                                pmax     pmax
      comp=Z,167nm,0.8s
SRU   San Rafael Swe    87.43  44  P        P         17 19 30.5 +1.0
KNB   Kanab             87.47  46  P        P         17 19 31.5 +1.8
KNB                                pmax     pmax
      comp=Z,423nm,1.4s
KNB   Kanab             87.47  46  P        P         17 19 31.5 +1.8
PKCU  Pink Cliffs       87.49  46  P        P         17 19 31.5 +1.5
RWWY  Rawlins           87.51  40  P        P         17 19 29.9  0.0
NEE2  Needles Airpor    87.81  49  P        P         17 19 32.9 +1.8
      baz=310
BAR   Barrett           87.82  52  P        P         17 19 32.0 +0.8
BAR                                IAmb     IAmb      17 19 37.3
      comp=Z,190nm,1.8s
MONP2 Monument Peak     87.85  51  P        P         17 19 32.9 +1.3
      baz=309,SNR=17
IRM   Iron Mountain     87.87  50  P        P         17 19 33.2 +1.7
      baz=310,SNR=40
JVM   Valle D.L. Mar    87.94 332 eP        P         17 19 29.7 -1.7
JSA   Saint Aubin       87.95 332 eP        P         17 19 29.9 -1.5
JSA                                IAmb     IAmb      17 19 34.6
      comp=Z,68nm,0.9s
AGMN  Agassiz Nation    87.99  30  P        P         17 19 31.4 -0.3
AGMN                               IAmb     IAmb      17 19 36.4
      comp=Z,266nm,1.1s
AGMN  Agassiz Nation    87.99  30  P        P         17 19 32.2 +0.5
      baz=322
BC3   Big Chuckawall    87.99  50  P        P         17 19 33.3 +1.2
      baz=310,SNR=39
O20A  White River Ci    88.02  42  P        P         17 19 32.5 +0.2
O20A                               IAmb     IAmb      17 19 37.8
      comp=Z,203nm,1.2s
O20A  White River Ci    88.02  42  P        P         17 19 33.6 +1.3
      baz=314,SNR=40
W13A  Hualapai Mount    88.06  48  P        P         17 19 33.0 +0.4
SSB   Saint Sauveur     88.08 326  P        P         17 19 30.6 -1.6
SSB                                pmax     pmax
      comp=Z,33nm,0.9s
SSB   Saint Sauveur     88.08 326  P        P         17 19 30.6 -1.6
U15A  North Rim         88.17  47  P        P         17 19 34.0 +0.8
U15A                               IAmb     IAmb      17 19 40.4
      comp=Z,317nm,1.4s
IKP   In-Ko-Pah, Jac    88.21  51  P        P         17 19 34.8 +1.7
      baz=310,SNR=10
SWSC  Sam W. Stewart    88.22  51  P        P         17 19 34.5 +1.4
      baz=310,SNR=6.1
PDMCI Parker Dam,Lak    88.41  49  P        P         17 19 35.6 +1.6
      baz=310,SNR=33
D32A  Dogwood Acres,    88.42  31  P        P         17 19 33.8 +0.1
Y12C  Blythe            88.53  50  P        P         17 19 35.5 +1.0
Y12C  Blythe            88.53  50  P        P         17 19 36.2 +1.7
      baz=310,SNR=22
N23A  Red Feather La    88.75  40  P        P         17 19 37.2 +1.4
N23A  Red Feather La    88.75  40  P        P         17 19 37.7 +1.9
      baz=315,SNR=193
GLA   Glamis            88.78  50  P        P         17 19 36.8 +1.0
GLA                                pmax     pmax
      comp=Z,125nm,1.4s
GLA   Glamis            88.78  50  P        P         17 19 36.8 +1.0
GLA                                IAmb     IAmb      17 19 42.2
      comp=Z,125nm,1.4s
GLA   Glamis            88.78  50  P        P         17 19 38.4 +2.6
      baz=310,SNR=8.7
WUAZ  Wupatki           89.33  47  P        P         17 19 39.8 +1.3
WUAZ                               IAmb     IAmb      17 19 44.6
      comp=Z,149nm,1.2s
WUAZ  Wupatki           89.33  47  P        P         17 19 40.6 +2.1
      baz=312,SNR=48
Y14A  Wickenburg        89.37  49  P        P         17 19 39.3 +0.8
Y14A                               IAmb     IAmb      17 19 44.2
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      comp=Z,136nm,1.4s
SMCO  Snowmass          89.39  42  P        P         17 19 40.5 +1.5
SMCO                               IAmb     IAmb      17 19 45.1
      comp=Z,257nm,1.2s
SUSD  Miller            89.63  34  P        P         17 19 40.5 +1.0
SUSD  Miller            89.63  34  P        P         17 19 41.0 +1.5
      baz=320,SNR=41
113A  Mohawk Valley,    89.65  50  P        P         17 19 40.2 +0.4
ISCO  Idaho Springs     89.70  40  P        P         17 19 41.6 +1.3
ISCO                               pmax     pmax
      comp=Z,208nm,1.7s
ISCO  Idaho Springs     89.70  40  P        P         17 19 41.6 +1.3
ISCO                               IAmb     IAmb      17 19 48.5
      comp=Z,208nm,1.6s
ISCO  Idaho Springs     89.70  40  P        P         17 19 41.9 +1.5
      baz=316,SNR=38
MVCO  Mesa Verde        89.89  44  P        P         17 19 42.0 +0.8
MVCO  Mesa Verde        89.89  44  P        P         17 19 43.0 +1.9
      baz=314,SNR=93
EYMN  Ely               90.02  27  P        P         17 19 41.6 +0.3
EYMN  Ely               90.02  27  P        P         17 19 42.2 +1.0
      baz=325,SNR=269
X16A  Lo Mia Camp, P    90.02  48  P        P         17 19 43.5 +1.7
X16A                               pP       pP        17 20 04.2  0.0
PMOR  Pomariorio Ree    90.34 108 eP        P         17 19 44.7 +1.6
      comp=Z,140nm,1.1s
PMOR                              epP       pP        17 20 07.0 +1.4
      comp=Z,435nm,1.0s
PMOR  Pomariorio Ree    90.34 108 eT        T         18 58 38.5
      comp=Z,28nm,0.2s
SCHQ  Schefferville     90.45  11  P        P         17 19 43.1  0.0
      comp=Z,98nm,0.9s,baz=6.0,slow=5.0,SNR=42
SCHQ                               pP       pP        17 20 06.9 +1.3
      comp=Z,49nm,0.8s,baz=11,slow=6.6,SNR=5.2
SCHQ                               PKKPbc   PKKPbc    17 37 10.1 -0.7
      comp=Z,8.0nm,0.6s,baz=161,slow=0.8,SNR=19
SCHQ                               PKPPKP   P'P'df    17 45 14.9 -7.3
      comp=Z,3.8nm,1.0s,baz=216,slow=6.3,SNR=4.4
SCHQ                               LR       LR        18 04 11.0
      comp=Z,2µm,18.5s,baz=343,slow=38
SCHQ  Schefferville     90.45  11  P        P         17 19 42.9 -0.2
SCHQ                               IAmb     IAmb      17 19 47.6
      comp=Z,129nm,1.0s
SCHQ                                        pP        17 20 05.8 +0.3
PPT   Papeete           90.47 111  LR       LR        17 58 45.3
      comp=Z,1µm,18.6s,baz=300,slow=34
S22A  4UR Ranch, Cre    90.47  43  P        P         17 19 45.7 +1.7
S22A                               IAmb     IAmb      17 19 50.4
      comp=Z,219nm,1.3s
S22A  4UR Ranch, Cre    90.47  43  P        P         17 19 46.2 +2.2
      baz=315,SNR=158
PPT2  Papeete2          90.48 111 eP        P         17 19 45.6 +1.7
      comp=Z,90nm,1.2s
PPT2                              epP       pP        17 20 07.8 +1.5
      comp=Z,212nm,1.2s
PPT2                              eSKSac    SKSac     17 30 07.1 -1.0
      comp=Z,4µm,27.5s
PPT2                              eSP       SPn       17 31 37.3 -2.7
      comp=Z,5µm,28.5s
PPT2  Papeete2          90.48 111 eLR       LR        17 48 37.9
      comp=Z,24µm,31.5s,baz=311
PPTF  Pamatai, Papee    90.49 111  P        P         17 19 43.5 -0.4
PAE   Paea              90.52 111 eP        P         17 19 45.7 +1.8
      comp=Z,11nm,1.0s
PAE                               epP       pP        17 20 07.8 +1.4
      comp=Z,22nm,1.0s
Q24A  Divide            90.55  41  P        P         17 19 45.4 +1.1
Q24A                               IAmb     IAmb      17 19 49.9
      comp=Z,172nm,1.3s
Q24A  Divide            90.55  41  P        P         17 19 46.0 +1.7
      baz=316
W18A  Petrified Fore    90.59  46  P        P         17 19 48.4 +4.0
      baz=313
TIAR  Tiarei            90.64 111 eP        P         17 19 46.2 +1.6
      comp=Z,32nm,1.1s
TIAR                              epP       pP        17 20 08.3 +1.3
      comp=Z,91nm,1.0s
VAH   Vaihoa            90.68 108 eP        P         17 19 46.1 +1.4
      comp=Z,114nm,1.2s
VAH                               epP       pP        17 20 08.7 +1.5
      comp=Z,209nm,1.1s
OGNE  Ogallala          90.75  38  P        P         17 19 45.7 +0.8
OGNE  Ogallala          90.75  38  P        P         17 19 46.5 +1.6
      baz=318,SNR=32
214A  Organ Pipe Nat    90.79  50  P        P         17 19 46.6 +1.4
214A  Organ Pipe Nat    90.79  50  P        P         17 19 47.0 +1.8
      baz=311,SNR=19
214A                               S        S         17 30 38.8 +3.8
      baz=311
TVO   Taravao           90.85 111 eP        P         17 19 46.6 +1.1
      comp=Z,33nm,1.2s
TVO                               epP       pP        17 20 09.4 +1.4
      comp=Z,84nm,1.1s
X18A  Snowflake         90.86  47  P        P         17 19 47.1 +1.4
X18A                               IAmb     IAmb      17 19 51.6
      comp=Z,152nm,1.4s
SDCO  Great Sand Dun    91.22  42  P        P         17 19 48.5 +1.0
SDCO                               IAmb     IAmb      17 19 53.4
      comp=Z,151nm,1.4s
SDCO  Great Sand Dun    91.22  42  P        P         17 19 49.1 +1.7
      baz=316,SNR=71
SDCO                               S        S         17 30 42.6 +3.3
      baz=316
ECSD  EROS Data Cent    91.25  33  P        P         17 19 47.5 +0.4
ECSD                               IAmb     IAmb      17 20 14.7
      comp=Z,190nm,1.1s
ECSD  EROS Data Cent    91.25  33  P        P         17 19 48.0 +0.9
      baz=322,SNR=89
ECSD                               S        S         17 30 41.0 +2.3
      baz=322
SPMN  Marine on St.     91.71  30  P        P         17 19 49.6 +0.5
SPMN                               IAmb     IAmb      17 20 16.6
      comp=Z,144nm,1.0s
SPMN  Marine on St.     91.71  30  P        P         17 19 50.3 +1.2
      baz=324,SNR=18
MEH   Mehetia           91.83 110 eP        P         17 19 51.8 +1.8
      comp=Z,16nm,0.9s
MEH                               epP       pP        17 20 13.9 +1.4
      comp=Z,52nm,1.3s
TUC   Tucson            91.84  49  P        P         17 19 51.3 +1.2
TUC                                pmax     pmax
      comp=Z,89nm,1.2s
TUC   Tucson            91.84  49  P        P         17 19 51.3 +1.2
TUC                                IAmb     IAmb      17 20 18.6
      comp=Z,89nm,1.2s
TUC   Tucson            91.84  49  P        P         17 19 52.2 +2.1
      baz=312
TUC                                S        S         17 30 48.8 +4.2
      baz=312
D41A  Chassel           91.86  26  P        P         17 19 50.0 +0.2
D41A                               IAmb     IAmb      17 19 55.1
      comp=Z,135nm,1.1s
KSCO  Kaye Shedlock'    91.87  39  P        P         17 19 50.9 +0.7
KSCO  Kaye Shedlock'    91.87  39  P        P         17 19 51.7 +1.5
      baz=317,SNR=20
MAHO  Mahon             92.24 322⇑iP        P         17 19 52.8 +1.2
MAHO                              i S       S         17 30 46.9 -0.7
T25A  Trinidad          92.26  42  P        P         17 19 52.9 +0.7
T25A  Trinidad          92.26  42  P        P         17 19 53.4 +1.2
      baz=316,SNR=73
BGNE  Belgrade          92.33  35  P        P         17 19 51.5 -0.6
BGNE  Belgrade          92.33  35  P        P         17 19 53.3 +1.2
      baz=320,SNR=5.4
COWI  Conover           92.45  27  P        P         17 19 52.2 -0.4
COWI                               IAmb     IAmb      17 19 57.7
      comp=Z,104nm,1.3s
KEST  Kesra             92.52 317  P        P         17 19 52.8 -0.4
      comp=Z,33nm,0.9s,baz=15,slow=1.5,SNR=13
KEST                               LR       LR        18 06 33.7
      comp=Z,2µm,19.6s,baz=348,slow=39
KEST  Kesra             92.52 317  P        P         17 19 51.9 -1.3
ANMO  Albuquerque       92.65  44  LR       LR        18 00 40.6
      comp=Z,1µm,20.0s,baz=328,slow=35
ANMO  Albuquerque       92.65  44  P        P         17 19 55.2 +1.2
ANMO                               pmax     pmax
      comp=Z,204nm,1.5s
ANMO  Albuquerque       92.65  44  P        P         17 19 55.2 +1.2
ANMO                               IAmb     IAmb      17 20 01.1
      comp=Z,204nm,1.4s
ANMO  Albuquerque       92.65  44  P        P         17 19 56.4 +2.4
      baz=315
G40A  Rib Lake          92.73  28  P        P         17 19 54.6 +0.7
MATQ  Matagami          92.97  19  P        P         17 19 54.4 -0.4
      baz=336,SNR=6.5
E43A  Lone Tree Farm    93.01  26  P        P         17 19 55.3 +0.2
E43A                               IAmb     IAmb      17 20 01.2
      comp=Z,94nm,1.2s
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E43A                               pP       pP        17 20 17.7 +0.1
E44A  Grand Marais A    93.19  25  P        P         17 19 55.7 -0.2
E44A                               pP       pP        17 20 19.3 +0.9
E44A  Grand Marais A    93.19  25  P        P         17 19 56.9 +0.9
      baz=329
TAOE  Nuku Hiva Isla    93.22  98 eSKSac    SKSac     17 30 23.5 -0.3
      comp=Z,6µm,30.6s
TAOE                              eSP       SP        17 32 09.4 -0.8
      comp=Z,4µm,26.4s
TAOE  Nuku Hiva Isla    93.22  98 eLR       LR        17 49 51.7
      comp=Z,21µm,28.8s,baz=305
319A  Douglas           93.41  49  P        P         17 19 58.7 +1.3
319A                               IAmb     IAmb      17 20 03.2
      comp=Z,101nm,1.0s
LODK  Lodwar            93.49 276  P        P         17 19 57.0 -0.9
      SNR=5.2
CBKS  Cedar Bluff       93.52  38  P        P         17 19 57.8 +0.1
CBKS                               pmax     pmax
      comp=Z,137nm,1.1s
CBKS  Cedar Bluff       93.52  38  P        P         17 19 57.8 +0.1
CBKS                               IAmb     IAmb      17 20 02.4
      comp=Z,137nm,1.1s
CBKS  Cedar Bluff       93.52  38  P        P         17 19 58.4 +0.8
      baz=319,SNR=16
121A  Cookes Peak, D    93.54  47  P        P         17 19 59.2 +1.1
121A                               pP       pP        17 20 20.2 -0.3
121A                               IAmb     IAmb      17 20 27.5
      comp=Z,102nm,1.1s
121A  Cookes Peak, D    93.54  47  P        P         17 20 00.4 +2.3
      baz=314,SNR=55
D46A  Sault St. Mari    93.60  24  P        P         17 19 58.1 +0.3
      baz=331,SNR=36
I40A  Norwalk           93.70  29  P        P         17 19 58.4  0.0
I40A                               IAmb     IAmb      17 20 03.3
      comp=Z,126nm,1.1s
D47A  Chapleau          93.77  23  P        P         17 19 58.9 +0.2
      baz=332,SNR=29
LSQQ  Lebel-sur-Quev    93.78  19  P        P         17 19 58.7 +0.1
      baz=336
TBI   Tubuai            93.86 115 eSKSac    SKSac     17 30 25.6 -1.0
      comp=Z,2µm,27.0s
TBI                               eS        S         17 30 59.7 -2.6
      comp=Z,5µm,27.2s
TBI                               eSP       SP        17 32 17.9 +1.0
      comp=Z,3µm,34.0s
TBI   Tubuai            93.86 115 eLR       LR        17 50 04.1
      comp=Z,20µm,35.5s,baz=309
HSIG                    93.93  51  P        P         17 20 00.5 +0.8
HSIG                               IAmb     IAmb      17 20 06.1
      comp=Z,181nm,1.4s
HSIG                               pP       pP        17 20 21.2 -1.0
E46A  Sault Ste Mari    93.97  24  P        P         17 19 59.6 +0.1
E46A                               IAmb     IAmb      17 20 04.2
      comp=Z,164nm,1.2s
D48A  Paudash Townsh    94.08  22  P        P         17 19 59.8 -0.2
      baz=332,SNR=14
D49A  Beulah Townshi    94.13  22  P        P         17 20 00.3 +0.1
      baz=333,SNR=20
D49A                               S        S         17 31 05.1 +0.9
      baz=333
F45A  CMU Biological    94.14  25  P        P         17 20 01.2 +0.9
      baz=330,SNR=15
SRIG  Santa Rosalia     94.20  53  P        P         17 20 02.0 +1.0
SRIG                               pP       pP        17 20 22.6 -0.8
SCIA  State Center      94.22  32  P        P         17 20 01.7 +0.9
SCIA  State Center      94.22  32  P        P         17 20 02.3 +1.5
      baz=324,SNR=14
SCIA                               S        S         17 31 07.1 +2.0
      baz=324
E47A  Iron Bridge       94.23  23  P        P         17 20 00.9 +0.2
      baz=331,SNR=28
E47A                               S        S         17 31 04.9 -0.2
      baz=331
R32A  Long Quarter,     94.34  37  P        P         17 20 01.9 +0.4
R32A                               IAmb     IAmb      17 20 06.2
      comp=Z,89nm,1.1s
H43A  Windswept, Lux    94.34  27  P        P         17 20 01.9 +0.6
I42A  Draeger Farm,     94.39  28  P        P         17 20 02.0 +0.6
KMBO  Kilima Mbogo      94.42 272  P        P         17 20 01.0 -1.4
      comp=Z,10nm,1.2s,baz=41,slow=5.4,SNR=15
KMBO                               LR       LR        18 02 29.2
      comp=Z,1µm,21.8s,baz=64,slow=35
KMBO  Kilima Mbogo      94.42 272 i P       P         17 20 01.6 -0.9
      SNR=7.7
KMBO  Kilima Mbogo      94.42 272 i P       P         17 20 01.3 -1.1
KMBO                               pmax     pmax
      comp=Z,10.0nm,1.2s
KMBO  Kilima Mbogo      94.42 272  P        P         17 20 00.1 -2.3
KIBK  Kibwezi           94.42 270  P        P         17 20 00.9 -1.3
      SNR=9.4
VLDQ  Val d'Or          94.52  19  P        P         17 20 00.4 -1.5
VLDQ                               IAmb     IAmb      17 20 05.4
      comp=Z,55nm,0.9s
E48A  Lockeyer          94.58  23  P        P         17 20 02.4 +0.1
      baz=332,SNR=13
G45A  Suttons Bay       94.64  26  P        P         17 20 02.8 +0.2
G45A                               IAmb     IAmb      17 20 07.5
      comp=Z,124nm,1.1s
G45A  Suttons Bay       94.64  26  P        P         17 20 03.9 +1.3
      baz=330,SNR=5.9
JFWS  Jewell Farm       94.66  30  P        P         17 20 03.0 +0.3
JFWS                               pmax     pmax
      comp=Z,66nm,0.9s
JFWS  Jewell Farm       94.66  30  P        P         17 20 03.0 +0.3
JFWS                               IAmb     IAmb      17 20 29.7
      comp=Z,66nm,0.8s
JFWS  Jewell Farm       94.66  30  P        P         17 20 03.1 +0.3
      baz=326,SNR=15
G46A  Petoskey          94.68  25  P        P         17 20 04.1 +1.3
      baz=330
D50A  G1974 Best Tow    94.69  21  P        P         17 20 02.6 -0.2
      baz=334
KSU1  Kansas State U    94.86  36  P        P         17 20 04.5 +0.7
      baz=321,SNR=12
KSU1                               S        S         17 31 09.5 -1.4
      baz=321
D51A  Lot 18 Range I    94.90  21  P        P         17 20 03.6 -0.2
      baz=334
L40A  Anamosa           94.95  31  P        P         17 20 04.1  0.0
F48A  Evansville        95.00  23  P        P         17 20 04.7 +0.4
      baz=332,SNR=23
G47A  Hillman           95.16  24  P        P         17 20 05.7 +0.7
      baz=331,SNR=10
F49A  Sandfield         95.25  23  P        P         17 20 05.5 +0.1
      baz=332,SNR=15
E51A  G1948 Merrick     95.36  21  P        P         17 20 05.6 -0.4
      baz=334
D53A  Lac Vacive, Po    95.39  20  P        P         17 20 05.7 -0.3
D53A                               IAmb     IAmb      17 20 10.1
      comp=Z,59nm,0.9s
D53A  Lac Vacive, Po    95.39  20  P        P         17 20 05.9 -0.1
      baz=336,SNR=14
AMTX  Amarillo          95.42  42  P        P         17 20 06.7 +0.2
AMTX                               IAmb     IAmb      17 20 12.0
      comp=Z,87nm,1.1s
AMTX  Amarillo          95.42  42  P        P         17 20 07.9 +1.4
      baz=318
MSTX  Muleshoe          95.47  43  P        P         17 20 07.3 +0.6
MSTX                               IAmb     IAmb      17 20 11.7
      comp=Z,74nm,1.1s
MSTX  Muleshoe          95.47  43  P        P         17 20 07.4 +0.6
      baz=317,SNR=24
UCM   Universidad Co    95.54 327⇑iP        P         17 20 07.7 +0.9
UCM                               i S       S         17 31 13.3 -3.4
MNTX  Cornudas Mount    95.58  46  P        P         17 20 08.1 +0.9
MNTX  Cornudas Mount    95.58  46  P        P         17 20 08.4 +1.2
      baz=315,SNR=38
K43A  Burlington        95.61  29  P        P         17 20 06.7 -0.4
K43A                               IAmb     IAmb      17 20 34.0
      comp=Z,65nm,0.9s
D54A  Lac Fusel, La     95.61  19  P        P         17 20 06.7 -0.3
      baz=336
L42A  Oliver, Polo      95.65  30  P        P         17 20 06.9 -0.4
L42A                               IAmb     IAmb      17 20 11.7
      comp=Z,72nm,1.1s
I46A  Reed City         95.66  26  P        P         17 20 07.3  0.0
      baz=330
U32A  Winter Ranch,     95.74  39  P        P         17 20 08.8 +0.9
U32A                               IAmb     IAmb      17 20 13.3
      comp=Z,129nm,1.1s
H48A  Harrisville       95.76  24  P        P         17 20 07.9 +0.2
H48A                               IAmb     IAmb      17 20 12.4
      comp=Z,80nm,0.8s
H48A  Harrisville       95.76  24  P        P         17 20 08.8 +1.0
      baz=331,SNR=10
F51A  Arnstein          95.78  22  P        P         17 20 07.7 -0.1
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      baz=334,SNR=11
PBRG  Braganca          95.83 330 eP      P       17 20 07.2 -1.0
      comp=Z,24nm,1.7s
E52A  Mattawa           95.84  21  P      P       17 20 07.6 -0.4
      baz=335
I47A  Gladwin           95.93  25  P      P       17 20 09.0 +0.4
I47A                               IAmb   IAmb    17 20 13.7
      comp=Z,106nm,1.2s
I47A  Gladwin           95.93  25  P      P       17 20 10.0 +1.4
      baz=330,SNR=5.2
ABPO  Ambohimpanom      95.97 251  P      P       17 20 07.5 -1.7
ABPO                               pmax   pmax
      comp=Z,58nm,1.4s
ABPO  Ambohimpanom      95.97 251  P      P       17 20 07.5 -1.7
ABPO                               IAmb   IAmb    17 20 33.7
      comp=Z,58nm,1.4s
E53A  Dumoine, Ponti    96.04  20  P      P       17 20 08.6 -0.4
      baz=336
D55A  Sainte-Anne-du    96.05  18  P      P       17 20 09.2 +0.2
      baz=337,SNR=16
I48A  Sherman Twp       96.07  25  P      P       17 20 10.0 +0.8
      baz=331,SNR=16
F52A  Sundridge         96.08  21  P      P       17 20 09.4 +0.2
      baz=334
E54A  Lac Daplat, Po    96.12  20  P      P       17 20 08.9 -0.4
      baz=336
D56A  ZEC Mazanza, M    96.21  18  P      P       17 20 10.1 +0.4
      baz=338,SNR=30
L44A  Lake County Fo    96.22  29  P      P       17 20 09.9  0.0
L44A                               pP     pP      17 20 31.9 -0.5
L44A  Lake County Fo    96.22  29  P      P       17 20 11.2 +1.3
      baz=328
N41A  Harden Midland    96.22  31  P      P       17 20 10.2 +0.3
N41A                               IAmb   IAmb    17 20 37.2
      comp=Z,98nm,1.1s
ALGO  Algonquin Park    96.31  20  P      P       17 20 10.1 -0.1
      baz=335,SNR=11
PGAV  Gavieira, Arco    96.32 331 eP      P       17 20 09.8 -0.7
      comp=Z,44nm,1.5s
PGAV  Gavieira, Arco    96.32 331 ePP     PP      17 24 11.0 +7.1
PGAV                              eS      S       17 31 20.8 -2.8
PGAV  Gavieira, Arco    96.32 331 eLR     LR      17 53 20.9
      comp=Z,2µm,20.0s
ESDC  Sonseca Array     96.37 327  P      P       17 20 08.8 -1.8
      comp=Z,3.9nm,0.9s,baz=31,slow=4.0,SNR=6.0
ESDC                               PKKPbc PKKPbc  17 36 55.3 +0.1
      comp=Z,1.3nm,0.7s,baz=199,slow=2.7,SNR=4.8
ESDC                               LR     LR      18 08 59.9
      comp=Z,1µm,18.3s,baz=55,slow=39
ESDC  Sonseca Array     96.37 327  P      P       17 20 08.9 -1.8
ESDC                                      PKKPbc  17 36 55.7 +0.5
LATQ  La Tuque          96.39  17  P      P       17 20 09.9 -0.6
LATQ  La Tuque          96.39  17  P      P       17 20 10.8 +0.2
      baz=340
E55A  Montcerf-Lytto    96.42  19  P      P       17 20 11.0 +0.4
      baz=337
D57A  Chemin Vers le    96.46  17  P      P       17 20 11.1 +0.2
      baz=339,SNR=15
MVO   Moncorvo          96.48 330 eP      P       17 20 10.2 -1.0
      comp=Z,30nm,1.6s
MVO                               epP     pP      17 20 34.5 +0.8
MVO   Moncorvo          96.48 330 eS      S       17 31 19.0 -5.9
MVO   Moncorvo          96.48 330 eLR     LR      17 53 51.5
      comp=Z,2µm,18.0s
J47A  Sunmer            96.50  26  P      P       17 20 11.6 +0.4
J47A  Sunmer            96.50  26  P      P       17 20 12.3 +1.2
      baz=330,SNR=10
I49A  Point Hope        96.60  24  P      P       17 20 11.6  0.0
I49A                               IAmb   IAmb    17 20 16.5
      comp=Z,78nm,0.8s
I49A  Point Hope        96.60  24  P      P       17 20 12.8 +1.2
      baz=332,SNR=13
T35A  Sooner Cattle     96.61  37  P      P       17 20 11.9 +0.2
E56A  St. Veronique     96.61  18  P      P       17 20 11.7 +0.2
      baz=338,SNR=13
K46A  Dorr              96.62  27  P      P       17 20 12.1 +0.4
      baz=329
D58A  Chemin du LacG    96.64  17  P      P       17 20 11.4 -0.2
      baz=340,SNR=6.1
CART  Cartagena         96.64 324⇑iP      P       17 20 11.6 -0.3
CART                              i S     S       17 31 21.9 -4.3
G54A  Lake Saint Pet    96.81  21  P      P       17 20 12.3 -0.2
      baz=335
J48A  Bridge Port       96.82  25  P      P       17 20 12.3 -0.2
J48A                               IAmb   IAmb    17 20 17.7
      comp=Z,88nm,0.9s
J48A  Bridge Port       96.82  25  P      P       17 20 13.3 +0.7
      baz=331,SNR=11
M44A  Midewin, Midew    96.83  29  P      P       17 20 12.7  0.0
M44A                               IAmb   IAmb    17 20 17.4
      comp=Z,103nm,1.1s
G53A  Haliburton        96.90  21  P      P       17 20 13.0 +0.1
      baz=335
K47A  Vermontville      96.92  26  P      P       17 20 14.1 +1.1
      baz=330
H52A  Wyevale           96.94  22  P      P       17 20 13.3 +0.2
      baz=334
E57A  Chemin Saint G    96.96  18  P      P       17 20 13.5 +0.3
      baz=338,SNR=24
J49A  Marlette          97.00  25  P      P       17 20 14.5 +1.1
      baz=331,SNR=5.3
HDIL  Hopedale          97.02  30  P      P       17 20 13.5  0.0
HDIL                               IAmb   IAmb    17 20 18.4
      comp=Z,83nm,1.1s
HDIL  Hopedale          97.02  30  P      Pdif    17 20 14.8 +1.2
      baz=327,SNR=5.3
TRQ   Mont Tremblant    97.03  18  P      P       17 20 12.6 -1.0
SADO  Sadowa            97.06  22  LR     LR      18 09 10.1
      comp=Z,916nm,18.5s,baz=358,slow=38
WMOK  Wichita Mounta    97.10  40  P      Pdif    17 20 14.3 +0.1
WMOK                               pmax   pmax
      comp=Z,62nm,1.3s
WMOK  Wichita Mounta    97.10  40  P      Pdif    17 20 14.3 +0.2
WMOK                               IAmb   IAmb    17 20 19.2
      comp=Z,62nm,1.2s
WMOK  Wichita Mounta    97.10  40  P      Pdif    17 20 15.3 +1.1
      baz=320,SNR=27
K48A  Perry             97.13  26  P      Pdif    17 20 15.1 +1.0
      baz=330,SNR=9.9
E58A  La Victoria       97.22  17  P      Pdif    17 20 14.4 +0.1
      baz=339,SNR=9.3
PVIS  Viseu             97.22 330 eP      P       17 20 13.6 -0.9
      comp=Z,29nm,1.6s
D60A  Saint Jean D'O    97.26  15  P      P       17 20 14.3 -0.1
      baz=341,SNR=12
I51A  Listowel          97.33  23  P      Pdif    17 20 15.4 +0.5
      baz=333
MTE   Manteigas         97.33 330  P      P       17 20 13.0 -2.0
MTE   Manteigas         97.33 330 eP      P       17 20 14.1 -1.0
      comp=Z,24nm,1.4s
MTE                               epP     pP      17 20 39.4 +1.8
MTE   Manteigas         97.33 330 ePP     PP      17 24 16.0 +4.3
MTE                               eSKSac  SKSac   17 30 47.6 +2.6
MTE                               eS      SKKSac  17 31 21.5 +8.9
MTE   Manteigas         97.33 330 eLR     LR      17 54 17.0
      comp=Z,2µm,18.0s
G55A  Calabogie         97.34  20  P      P       17 20 14.7 -0.2
      baz=336
I52A  Shelburne         97.36  23  P      Pdif    17 20 15.8 +0.7
      baz=334
H53A  Bobcaygeon        97.41  21  P      P       17 20 15.0 -0.3
      baz=335,SNR=8.9
PLVO  Plevna            97.43  20  P      P       17 20 13.7 -1.6
L47A  Sherwood          97.45  27  P      Pdif    17 20 16.0 +0.5
      baz=330,SNR=5.3
D62A  Allapoint, All    97.50  14  P      P       17 20 14.7 -0.9
D62A                               IAmb   IAmb    17 20 19.8
      comp=Z,64nm,1.0s
D62A  Allapoint, All    97.50  14  P      Pdif    17 20 15.9 +0.3
      baz=343
S39A  Bolivar           97.55  35  P      P       17 20 15.2 -0.8
S39A                               IAmb   IAmb    17 20 20.2
      comp=Z,52nm,1.1s
S39A                               pP     pP      17 20 37.2 -1.3
LPIG  La Paz            97.63  55  LR     LR      17 57 50.5
      comp=Z,1µm,21.6s,baz=291,slow=31
P43A  Skaggs, Pawnee    97.68  31  P      P       17 20 16.2 -0.3
P43A                               IAmb   IAmb    17 20 43.8
      comp=Z,75nm,1.3s
X34A  Smith Ranch, M    97.71  39  P      Pdif    17 20 17.2 +0.3
X34A                               IAmb   IAmb    17 20 24.1
      comp=Z,134nm,1.3s
D63A  Stockholm         97.73  14  P      P       17 20 16.6  0.0
      baz=343
DELO  Deloro Mine       97.75  21  P      Pdif    17 20 16.8  0.0
DELO                               IAmb   IAmb    17 20 20.8
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      comp=Z,57nm,1.1s
TUL1  Leonard           97.75  37  P      P       17 20 16.8 -0.1
TUL1                               IAmb   IAmb    17 20 22.0
      comp=Z,57nm,1.0s
TUL1  Leonard           97.75  37  P      Pdif    17 20 18.4 +1.4
      baz=322
L48A  N Adams           97.76  26  P      Pdif    17 20 17.9 +0.9
      baz=330
PCBR  Castelo Branco    97.77 330 eP      P       17 20 16.0 -0.9
      comp=Z,18nm,1.9s
W35A  Tecumseh          97.79  38  P      P       17 20 17.0 -0.1
E61A  Lac Etchemin      97.81  15  P      P       17 20 17.0  0.0
      baz=341
F59A  Saint Guilaume    97.82  17  P      Pdif    17 20 17.8 +0.7
      baz=340
H55A  Tweed             97.85  20  P      Pdif    17 20 17.5 +0.3
      baz=336
COI   Coimbra           97.86 330 ePP     PP      17 24 20.2 +4.6
COI                               eS      S       17 31 27.0  -10
L49A  Milan             97.86  26  P      Pdif    17 20 18.4 +1.1
      baz=331
BATG  Bathurst New B    97.88  12  P      P       17 20 16.3 -1.0
G57A  Newington         97.95  19  P      Pdif    17 20 18.0 +0.4
      baz=338
I55A  Frankford         98.00  21  P      P       17 20 17.1 -0.7
      baz=336
J52A  Paris             98.01  23  P      Pdif    17 20 18.6 +0.7
      baz=333,SNR=5.2
PCAS  Casmilo, Conde    98.02 330 ePP     PP      17 24 21.7 +4.8
PCAS                              eS      S       17 31 33.1 -4.9
U38A  Gravette          98.04  36  P      P       17 20 18.1 -0.1
U38A                               IAmb   IAmb    17 20 22.9
      comp=Z,62nm,1.2s
M48A  Edgerton          98.05  27  P      P       17 20 16.2 -1.9
M48A                               IAmb   IAmb    17 20 21.8
      comp=Z,148nm,1.9s
M48A  Edgerton          98.05  27  P      Pdif    17 20 19.5 +1.3
      baz=330
SFIN  Lafayette         98.07  29  P      P       17 20 18.0 -0.3
SFIN                               IAmb   IAmb    17 20 23.1
      comp=Z,60nm,1.3s
SFIN  Lafayette         98.07  29  P      Pdif    17 20 19.3 +1.0
      baz=328,SNR=6.1
H56A  Elgin             98.07  20  P      P       17 20 18.2  0.0
      baz=337
PMRV  Marv??o           98.08 329 eP      P       17 20 18.0 -0.4
      comp=Z,21nm,1.3s
PMRV  Marv??o           98.08 329 ePP     PP      17 24 23.6 +6.2
PMRV                              eSKSac  SKSac   17 30 49.7 +1.0
PMRV  Marv??o           98.08 329 eLR     LR      17 54 43.4
      comp=Z,3µm,20.0s
K51A  Iona Station      98.12  24  P      Pdif    17 20 19.9 +1.4
      baz=332
F61A  St Evariste       98.13  16  P      Pdif    17 20 19.0 +0.6
      baz=341
G58A  Ormstown          98.16  18  P      P       17 20 18.5 -0.1
      baz=338
N47A  Urbana            98.20  28  P      P       17 20 18.1 -0.7
N47A                               IAmb   IAmb    17 20 24.2
      comp=Z,109nm,1.5s
N47A  Urbana            98.20  28  P      Pdif    17 20 19.4 +0.6
      baz=329
CCM   Cathedral Cave    98.22  33  P      P       17 20 18.5 -0.5
CCM                                pmax   pmax
      comp=Z,28nm,1.0s
CCM   Cathedral Cave    98.22  33  P      P       17 20 18.5 -0.5
CCM   Cathedral Cave    98.22  33  P      Pdif    17 20 19.6 +0.6
      baz=325
ABTX  Abilene, Hawle    98.23  42  P      P       17 20 18.0 -1.2
ABTX                               IAmb   IAmb    17 20 24.4
      comp=Z,92nm,1.4s
ABTX  Abilene, Hawle    98.23  42  P      Pdif    17 20 20.5 +1.3
      baz=319,SNR=7.0
E63A  Oxbow             98.26  14  P      P       17 20 18.8 -0.2
      baz=343
L50A  Kingsville        98.27  25  P      Pdif    17 20 19.9 +0.8
      baz=332,SNR=5.6
TX31  Lajitas Ar. Si    98.30  47  P      P       17 20 18.9 -0.7
TX31                               IAmb   IAmb    17 20 25.2
      comp=Z,68nm,1.4s
TX32  Lajitas Array     98.30  47  P      P       17 20 19.3 -0.3
TX32                               IAmb   IAmb    17 20 25.2
      comp=Z,69nm,1.4s
TXAR  Lajitas Array     98.30  47  P      Pdif    17 20 20.5 +0.8
      comp=Z,9.3nm,0.7s,baz=287,slow=2.5,SNR=46
TXAR                               pP     pP      17 20 42.2  0.0
      comp=Z,5.3nm,0.6s,baz=311,slow=3.3,SNR=5.0
TXAR                               PP     PP      17 24 20.3 +0.7
      comp=Z,3.2nm,1.0s,baz=298,slow=5.3,SNR=4.3
TXAR                               PKiKP  PKiKP   17 24 50.6 -1.2
      comp=Z,8.4nm,0.9s,baz=308,slow=6.2,SNR=5.4
TXAR                               PKKP   PKKPdf  17 36 51.2 -0.5
      comp=Z,0.9nm,0.7s,baz=142,slow=6.6,SNR=5.4
TXAR  Lajitas Array     98.30  47  P      P       17 20 19.6 -0.1
TXAR  Lajitas Array     98.30  47  P      P       17 20 19.6 -0.1
TXAR                                      pP      17 20 41.6 -0.6
TXAR                                      PP      17 24 15.1 -4.5
TXAR                                      PKiKP   17 24 48.9 -2.9
TXAR                                      PKKPbc  17 36 50.6 +0.9
M49A  Liberty Center    98.34  26  P      Pdif    17 20 20.2 +0.8
      baz=331
E64A  Bridgewater       98.38  14  P      P       17 20 19.5  0.0
      baz=344
HHAR  Hobbs             98.38  36  P      P       17 20 19.4 -0.4
H57A  Richville         98.44  19  P      Pdif    17 20 20.0 +0.2
      baz=337
PECO  Prince Edward     98.47  21  P      P       17 20 19.3 -0.6
PECO                               IAmb   IAmb    17 20 24.0
      comp=Z,57nm,1.0s
N48A  Decatur           98.47  27  P      Pdif    17 20 21.0 +0.9
      baz=330
MGMO  Mountain Grove    98.48  34  P      P       17 20 19.7 -0.5
J54A  Appleton          98.57  22  P      Pdif    17 20 20.6 +0.2
J54A                               IAmb   IAmb    17 20 24.7
      comp=Z,60nm,1.0s
PSBE  So Bento          98.60 330 ePP     PP      17 24 24.7 +3.3
PSBE                              eSKSac  SKSac   17 30 52.0 +0.6
PSBE                              eS      S       17 31 36.5 -6.4
PESTR Estremoz          98.63 329 eSKSac  SKSac   17 30 54.5 +3.0
PESTR                             eS      SKKSac  17 31 29.1 +7.2
G61A  St-Isidore-de-    98.66  16  Pdiff  Pdif    17 20 21.4 +0.6
      baz=340
H59A  Cadyville         98.72  18  Pdiff  P       17 20 21.1  0.0
      baz=339
PMTG  Montargil         98.74 330 eP      P       17 20 19.3 -2.0
      comp=Z,20nm,1.8s
PMTG  Montargil         98.74 330 ePP     PP      17 24 29.6 +7.2
PMTG                              eSKSac  SKSac   17 30 52.9 +0.9
PMTG                              eS      S       17 31 36.6 -7.4
N49A  Columbus Grove    98.74  27  P      Pdif    17 20 21.6 +0.4
N49A  Columbus Grove    98.74  27  Pdiff  Pdif    17 20 21.8 +0.5
      baz=330
M50A  Fremont           98.74  26  Pdiff  Pdif    17 20 21.9 +0.7
      baz=331
HPIG                    98.75  50  P      Pdif    17 20 22.6 +0.7
HPIG                               pP     pP      17 20 42.9 -1.5
H58A  Gabriels          98.81  19  Pdiff  Pdif    17 20 22.1 +0.6
      baz=338
I57A  Carthage          98.84  20  Pdiff  P       17 20 21.0 -0.7
      baz=337
U40A  Yellville         98.85  35  P      P       17 20 20.8 -1.1
U40A                               IAmb   IAmb    17 20 26.5
      comp=Z,63nm,1.1s
U40A  Yellville         98.85  35  Pdiff  Pdif    17 20 22.5 +0.6
      baz=324
O48A  Farmland          98.94  28  Pdiff  Pdif    17 20 23.0 +0.8
      baz=330
Z35A  Perchaven, San    98.99  40  P      Pdif    17 20 22.8 +0.3
Z35A                               IAmb   IAmb    17 20 27.2
      comp=Z,110nm,1.1s
X37A  Clayton           99.00  38  P      Pdif    17 20 21.8 -0.8
OLIL  Olney             99.04  31  P      Pdif    17 20 22.9 +0.3
OLIL                               IAmb   IAmb    17 20 27.7
      comp=Z,62nm,1.1s
H60A  Morristown        99.05  17  Pdiff  Pdif    17 20 23.2 +0.6
      baz=340
J56A  Wolcott           99.11  21  P      Pdif    17 20 22.7 -0.1
J56A                               IAmb   IAmb    17 20 27.4
      comp=Z,82nm,1.2s
J56A  Wolcott           99.11  21  Pdiff  Pdif    17 20 22.8 -0.1
      baz=336
K54A  Basiliko Farm,    99.15  22  Pdiff  Pdif    17 20 23.5 +0.4
      baz=335
ERPA  Erie              99.17  23  P      Pdif    17 20 22.0 -1.2
ERPA                               IAmb   IAmb    17 20 27.8
      comp=Z,75nm,1.1s
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ERPA  Erie              99.17  23  Pdiff  Pdif    17 20 22.6 -0.5
      baz=334
NCB   Newcomb           99.21  19  P      Pdif    17 20 24.0 +0.7
NCB                                IAmb   IAmb    17 20 28.2
      comp=Z,73nm,1.6s
M52A  Chesterland       99.22  25  Pdiff  Pdif    17 20 24.9 +1.4
      baz=333
L53A  Girard            99.23  24  Pdiff  Pdif    17 20 24.0 +0.6
      baz=333
J57A  Williamstown      99.23  20  Pdiff  Pdif    17 20 24.1 +0.7
      baz=337
K55A  Perry             99.24  22  Pdiff  Pdif    17 20 24.1 +0.7
      baz=335
N50A  Nevada            99.26  26  Pdiff  Pdif    17 20 24.6 +1.0
      baz=331
H61A  Lyndonville       99.27  17  Pdiff  Pdif    17 20 24.6 +1.0
      baz=340
PMAFR Mafra             99.27 330 eP      Pdif    17 20 23.4 -0.3
PMAFR Mafra             99.27 330 ePP     PP      17 24 32.2 +5.7
PMAFR                             eS      S       17 31 39.1  -10
L54A  Sinclairville     99.29  23  Pdiff  Pdif    17 20 24.7 +1.0
      baz=334
W39A  Magazine          99.32  36  P      Pdif    17 20 23.9 -0.1
W39A                               IAmb   IAmb    17 20 50.8
      comp=Z,78nm,1.6s
W39A  Magazine          99.32  36  Pdiff  Pdif    17 20 24.8 +0.9
      baz=323
WVNY  West Valley, N    99.36  22  P      Pdif    17 20 23.8 -0.3
WVNY                               IAmb   IAmb    17 20 29.1
      comp=Z,90nm,1.2s
N51A  Ashland           99.41  26  P      Pdif    17 20 23.1 -1.1
N51A  Ashland           99.41  26  Pdiff  Pdif    17 20 25.1 +0.9
      baz=332
S44A  Carbondale        99.41  32  P      Pdif    17 20 23.6 -0.7
H62A  Milan             99.42  16  Pdiff  Pdif    17 20 24.5 +0.3
      baz=341
J58A  Remsen            99.48  20  Pdiff  Pdif    17 20 25.1 +0.5
      baz=337
M53A  WI Miller and     99.55  24  Pdiff  Pdif    17 20 25.6 +0.7
      baz=333
I60A  Shoreham          99.57  18  Pdiff  Pdif    17 20 25.9 +1.0
      baz=339
J59A  Piesco            99.60  19  Pdiff  Pdif    17 20 24.3 -0.8
      baz=338
O50A  Cable             99.63  27  Pdiff  Pdif    17 20 25.7 +0.5
      baz=331
PNCL  Nicolau / Gran    99.67 329 eP      Pdif    17 20 25.5 +0.1
      comp=Z,33nm,1.7s
PNCL  Nicolau / Gran    99.67 329 ePP     PP      17 24 32.1 +2.6
PNCL                              eSKSac  SKSac   17 30 58.1 +1.5
PNCL                              eS      S       17 31 56.7 +4.8
K57A  Scipio Center     99.70  21  Pdiff  Pdif    17 20 26.9 +1.4
      baz=336
P49A  Miami Univ. Ec    99.74  28  P      Pdif    17 20 28.9 +3.1
      baz=330,SNR=5.2
JCT   Junction City     99.74  43  Pdiff  Pdif    17 20 27.6 +1.6
      baz=319
MESJ  Messejana         99.76 329 ePP     PP      17 24 30.7 +0.5
MESJ                               AMS    AMS     18 03 56.0
      comp=N,3µm,18.4s
ACSO  Alum Creek Sta    99.79  26  Pdiff  Pdif    17 20 26.9 +0.9
      baz=331
M54A  Oil Creek Stat    99.83  23  Pdiff  Pdif    17 20 27.1 +1.0
      baz=334
Q48A  North Vernon      99.86  29  Pdiff  Pdif    17 20 27.5 +1.3
      baz=329
PCVE  Castro Verde      99.86 329 eP      Pdif    17 20 26.3  0.0
PVAQ  Vaqueiros         99.91 328 eP      Pdif    17 20 28.0 +1.5
      comp=N,24nm,1.4s
PVAQ  Vaqueiros         99.91 328 ePP     PP      17 24 34.1 +2.7
PVAQ                              eS      S       17 31 52.0 -2.0
PVAQ  Vaqueiros         99.91 328 eLR     LR      17 55 37.5
      comp=N,2µm,22.0s
WHTX  Lake Whitney,     99.91  41  Pdiff  Pdif    17 20 31.3 +4.6
      baz=320
K58A  Earlville         99.93  20  Pdiff  Pdif    17 20 29.7 +3.1
      baz=337
L56A  Greenwood         99.93  22  Pdiff  Pdif    17 20 29.3 +2.6
      baz=336
MIAR  Mount Ida         99.94  37  P      Pdif    17 20 28.0 +1.3
      baz=323,SNR=13
SFS   San Fernando     100.01 327 ePP     PP      17 24 15.3  -17
P50A  Jamestown        100.03  27  Pdiff  Pdif    17 20 27.8 +0.7
      baz=331
I63A  Otisfield        100.05  16  Pdiff  Pdif    17 20 28.2 +1.2
      baz=341
N53A  Lisbon           100.05  25  Pdiff  Pdif    17 20 30.2 +3.1
      baz=333
CEU   Ceuta            100.09 326 ePP     PP      17 24 31.6 -1.1
W41B  Gary Mavity, V   100.09  35  Pdiff  Pdif    17 20 28.0 +0.6
      baz=324
Q49A  Aurora           100.12  28  Pdiff  Pdif    17 20 29.0 +1.5
      baz=330
PBDV  Barranco-do-Ve   100.14 328 ePP     PP      17 24 38.3 +5.2
PBDV                              eSKSac  SKSac   17 31 01.6 +2.5
PBDV                              eS      SKKSac  17 31 36.3 +3.4
K59A  Cooperstown      100.14  20  Pdiff  Pdif    17 20 27.3 -0.2
      baz=338
M55A  Ridgway          100.16  23  Pdiff  Pdif    17 20 27.7 +0.1
      baz=335
PVLZ  Peæn de          100.17 325 ePP     PP      17 24 23.0  -10
N54A  Moraine State    100.20  24  Pdiff  Pdif    17 20 28.1 +0.3
      baz=334
PTEO  Sao Teotonio     100.23 329 eP      Pdif    17 20 28.1 +0.2
M56A  Emporium         100.33  22  Pdiff  Pdif    17 20 31.4 +3.0
      baz=335
X40A  Basin Creek Fa   100.36  36  Pdiff  Pdif    17 20 30.2 +1.6
      baz=324
MORF  Marmelete        100.40 329 ePP     PP      17 24 35.6 +0.5
MORF                              eSKSac  SKSac   17 30 59.5 -0.9
MORF                               AMS    AMS     18 05 01.1
      comp=E,3µm,17.6s
O53A  New Philadelph   100.42  25  Pdiff  Pdif    17 20 32.7 +4.0
      baz=333
J62A  Henniker         100.53  17  Pdiff  Pdif    17 20 33.2 +4.1
      baz=340
L58A  Harry Jones Me   100.53  21  Pdiff  Pdif    17 20 33.0 +3.7
      baz=337
PFVI  Vila Bisbo       100.62 329 ePP     PP      17 24 39.1 +2.4
PFVI                              eSKSac  SKSac   17 31 03.7 +2.4
PFVI                              eS      SKKSac  17 31 39.1 +2.9
Q50A  Georgetown       100.62  28  Pdiff  Pdif    17 20 34.3 +4.6
      baz=330
L59A  Walton           100.63  20  Pdiff  Pdif    17 20 33.0 +3.3
      baz=338
J63A  Strafford        100.66  17  Pdiff  Pdif    17 20 34.1 +4.4
      baz=341
K61A  Williamstown     100.67  19  Pdiff  Pdif    17 20 34.7 +4.8
      baz=339
N55A  Marion Center    100.70  23  Pdiff  Pdif    17 20 30.3 +0.3
      baz=334
O54A  Avella           100.77  25  Pdiff  Pdif    17 20 31.1 +0.8
      baz=333
M57A  Sunshine Farm,   100.79  22  Pdiff  Pdif    17 20 31.1 +0.7
      baz=336
R50A  Paris            100.97  28  Pdiff  Pdif    17 20 33.2 +1.9
      baz=330
S49A  Springfield      101.02  29  Pdiff  Pdif    17 20 35.1 +3.6
      baz=329
O56A  Blue Knob Stat   101.30  23  Pdiff  Pdif    17 20 33.9 +1.1
      baz=335
WVT   Waverly          101.34  32  Pdiff  Pdif    17 20 34.0 +1.1
      baz=327
S50A  Richmond         101.46  29  Pdiff  Pdif    17 20 34.4 +0.9
      baz=330
T49A  Edmonton         101.50  30  Pdiff  Pdif    17 20 36.6 +3.0
      baz=329
Q53A  Leroy            101.53  26  Pdiff  Pdif    17 20 34.7 +0.9
      baz=332
P56A  Dayton Farm, R   101.90  24  Pdiff  Pdif    17 20 36.5 +1.1
      baz=334
MDT   Midelt           102.22 324  P      Pdif    17 20 36.2 -0.8
      comp=E,6.9nm,1.0s,baz=42,slow=6.3,SNR=8.5
MDT                                PP     PP      17 24 52.0 +2.9
      comp=E,6.8nm,0.9s,baz=60,slow=8.4,SNR=6.7
R55A  Marlinton        102.55  25  Pdiff  Pdif    17 20 40.9 +2.5
      baz=333
AVE   Averroes         103.18 326⇑iP      Pdif    17 20 41.8 +0.7
AVE                               i S             17 31 42.2
Z50A  Ashland          104.61  32  Pdiff  Pdif    17 20 48.8 +1.2
      baz=328
PMOZ  Porto Moniz, M   107.75 333 ePP     PP      17 25 35.5 +5.7
PMOZ  Porto Moniz, M   107.75 333 eLR     LR      17 58 32.2
      comp=E,1µm,20.0s
MATP  Matopo           111.80 259  PKiKP  PKiKP   17 25 15.4 -1.3
      comp=E,6.4nm,0.6s,baz=15,slow=1.5,SNR=16
VNDA  Vanda            112.38 173  PKiKP  PKiKP   17 25 16.0  0.0
```

	comp=E,4.5nm,0.6s,baz=308,slow=5.3,SNR=16						
VNDA				PKKPbc	**PKKPbc**	**17 36 07.1**	**-1.4**
	comp=E,4.8nm,0.7s,baz=185,slow=2.4,SNR=17						
VNDA	**Vanda**	**112.38**	**173**	*i* PKIKP	**PKiKP**	**17 25 16.0**	**0.0**
MAW	**Mawson**	**113.21**	**203**	PKKPbc	PKKPbc	17 36 06.9	+1.5
	comp=E,5.1nm,0.7s,baz=280,slow=7.3,SNR=3.9						
TORD	**Torodi Ar. Bea**	**113.52**	**306**	PKiKP	**PKiKP**	**17 25 18.9**	**-1.2**
	comp=E,14nm,0.6s,baz=23,slow=1.6,SNR=32						
TORD				PP	**PP**	**17 26 10.3**	**-1.7**
	comp=E,4.4nm,0.8s,baz=36,slow=8.1,SNR=4.9						
TORD				PKKPbc	**PKKPbc**	**17 36 03.9**	**+1.0**
	comp=E,2.3nm,0.6s,baz=216,slow=2.1,SNR=11						
TORD	**Torodi Ar. Bea**	**113.52**	**306**		**PKiKP**	**17 25 19.1**	**-1.0**
TORD					**PP**	**17 26 07.3**	**-4.8**
TORD					**PKKPbc**	**17 36 02.5**	**-0.5**
LBTB	**Lobatse**	**116.30**	**256**	PKP	**PKPdf**	**17 25 24.9**	**-0.3**
	comp=E,21nm,0.7s,baz=94,slow=1.4,SNR=22						
LBTB	**Lobatse**	**116.30**	**256**		**PKPdf**	**17 25 24.7**	**-0.5**
BOSA	**Boshof**	**118.14**	**253**	PKP	**PKPdf**	**17 25 28.5**	**-0.2**
	comp=E,12nm,0.7s,baz=130,slow=1.4,SNR=16						
BOSA				PKKPab	**PKKPab**	**17 35 50.4**	**+0.5**
	comp=E,3.1nm,0.8s,baz=235,slow=5.5,SNR=4.8						
BOSA				PKKP	**PKKPdf**	**17 36 13.1**	**-3.3**
	comp=E,4.7nm,0.8s,baz=106,slow=1.0,SNR=5.6						
BOSA	**Boshof**	**118.14**	**253**		**PKPdf**	**17 25 27.6**	**-1.1**
BOSA					**PKKPbc**	**17 35 48.2**	**+0.9**
TSUM	**Tsumeb**	**120.25**	**266**		**PKPdf**	**17 25 32.3**	**-0.7**
GTBY	**Guantanamo Bay**	**120.88**	**30**		**PKPdf**	**17 25 33.0**	**-1.1**
SYO	**Syowa Base**	**121.72**	**205**	⇓*i*X	**PKPdf**	**17 25 32.4**	**-1.7**
SYO	**Syowa Base**	**121.72**	**205**	⇓*e*pPKPdf	pPKPdf	17 25 56.6	-0.9
ACON	**Acoyapa**	**122.59**	**44**		**PKPdf**	**17 25 36.8**	**-0.7**
DBIC	**Dimbokro**	**122.63**	**306**	PKP	**PKPdf**	**17 25 36.4**	**-1.2**
	comp=E,43nm,0.6s,baz=30,slow=1.9,SNR=48						
DBIC				PP	**PP**	**17 27 13.7**	**-1.5**
	comp=E,15nm,1.1s,baz=13,slow=8.1,SNR=5.0						
DBIC				PKKPab	**PKKPab**	**17 35 33.7**	**+0.5**
	comp=E,2.5nm,0.8s,baz=198,slow=3.9,SNR=4.4						
DBIC	**Dimbokro**	**122.63**	**306**		**PKPdf**	**17 25 36.4**	**-1.2**
DBIC					**PP**	**17 27 12.0**	**-3.2**
TIC	**Toumodi**	**122.76**	**306**	*e*PKP1	**PKPdf**	**17 25 36.3**	**-1.6**
	comp=E,85nm,0.6s						
KIC	**Kosan Boka**	**122.78**	**306**	*e*PKP1	**PKPdf**	**17 25 36.3**	**-1.6**
	comp=E,190nm,0.9s						
LIC	**Lamto**	**123.07**	**306**	*e*PKP1	**PKPdf**	**17 25 36.9**	**-1.6**
	comp=E,211nm,0.9s						
SUR	**Sutherland**	**123.14**	**251**	PKP	**PKPdf**	**17 25 38.1**	**-0.2**
	comp=E,12nm,1.0s,baz=106,slow=12,SNR=4.0						
SUR	**Sutherland**	**123.14**	**251**		**PKPdf**	**17 25 37.6**	**-0.7**
QSPA	**South Pole Qui**	**123.37**	**180**	PKP	**PKPdf**	**17 25 36.9**	**-0.6**
	comp=E,46nm,0.6s,baz=293,slow=0.9,SNR=42						
QSPA				PP	**PP**	**17 27 19.5**	**-0.4**
	comp=E,29nm,1.0s,baz=338,slow=3.4,SNR=5.1						
QSPA	**South Pole Qui**	**123.37**	**180**		**PKPdf**	**17 25 36.9**	**-0.6**
QSPA					**PP**	**17 27 13.1**	**-6.9**
DR12	**Loma Pena Alta**	**124.10**	**24**		**PKPdf**	**17 25 39.7**	**-0.7**
AOPR	**Arecibo Observ**	**125.37**	**22**		**PKPdf**	**17 25 42.0**	**-0.8**
GCPR	**Guaynabo City**	**125.61**	**21**		**PKPdf**	**17 25 41.9**	**-1.4**
MLPR	**Magueyes Islan**	**125.64**	**22**		**PKPdf**	**17 25 41.0**	**-2.3**
OBIP	**Obispado Ponce**	**125.70**	**22**		**PKPdf**	**17 25 41.3**	**-2.1**
SJG	**San Juan**	**125.78**	**21**	PKIKP	**PKPdf**	**17 25 42.0**	**-1.6**
SJG	**San Juan**	**125.78**	**21**		**PKPdf**	**17 25 42.0**	**-1.6**
ICMP	**Isla Caja de M**	**125.87**	**22**		**PKPdf**	**17 25 42.4**	**-1.3**
STVI	**Saint Thomas**	**125.90**	**20**		**PKPdf**	**17 25 42.8**	**-1.0**
PDPR	**Patillas Dam,**	**125.90**	**21**		**PKPdf**	**17 25 42.5**	**-1.3**
SMRT	**St. Maarten**	**126.69**	**18**		**PKPdf**	**17 25 44.0**	**-1.4**
BCIP	**Isla Barro Col**	**127.89**	**41**	*e*P	**PKPdf**	**17 25 43.4**	**-4.3**
BCIP	**Isla Barro Col**	**127.89**	**41**	PKIKP	**PKPdf**	**17 25 46.7**	**-1.0**
BCIP	**Isla Barro Col**	**127.89**	**41**		**PKPdf**	**17 25 46.7**	**-1.0**
H05N1	**Guadeloupe/Mar**	**128.85**	**16**	PKP	**PKPdf**	**17 25 48.5**	**-1.0**
	SNR=4.0						
SMRC	**Santa Marta, M**	**129.03**	**34**	*e*P	**PKPdf**	**17 25 49.0**	**-0.9**
URIC	**Uribia, Colomb**	**129.55**	**31**	*e*P	**PKPdf**	**17 25 51.0**	**+0.2**
CAPC	**Capurgana**	**129.67**	**39**	*e*P	**PKPdf**	**17 25 48.3**	**-2.8**
SJCC	**San Jacinto, C**	**129.68**	**36**	⇑*e*P	**PKiKP**	**17 25 52.5**	**+0.5**
LCBC	**Los crdobas,**	**129.99**	**38**	*e*P	PKiKP	17 26 05.7	+13
FDF	**Fort de France**	**130.35**	**17**	PKIKP	**PKPdf**	**17 25 51.6**	**-0.8**
FDF	**Fort de France**	**130.35**	**17**		**PKPdf**	**17 25 51.5**	**-0.8**
CODC	**Agustn Codazz**	**130.47**	**34**	*e*P	**PKPdf**	**17 25 51.0**	**-1.6**
NVL	**N'lazarevskaya**	**131.16**	**202**	*e*PKIKP	**PKPdf**	**17 25 52.1**	**0.0**
NVL				*e*SP	SP	17 38 12.7	-1.5
NVL				MLR	MLR		
	comp=Z,422nm,16.0s						
SMLC	**San Martn de**	**131.17**	**35**	*e*P	**PKPdf**	**17 25 53.9**	**-0.1**
UREC	**San Jos de Ur**	**131.35**	**37**	*e*P	**PKPdf**	**17 25 52.5**	**-1.9**
DBBC	**Dabeiba**	**131.63**	**39**	*e*P	**PKPdf**	**17 25 54.5**	**-0.4**
OCAC	**Ocana**	**132.01**	**34**	*e*P	**PKiKP**	**17 25 58.7**	**+2.0**
SDV	**Santo Domingo**	**132.65**	**31**		**PKPdf**	**17 25 55.6**	**-1.4**
HELC	**Santa Helena**	**132.68**	**38**	*e*P	**PKPdf**	**17 25 55.9**	**-1.3**
CBOC	**Ciudad Bolivar**	**132.71**	**39**	*e*P	**PKPdf**	**17 25 55.9**	**-1.1**
BRRC	**Barranca, Sant**	**132.81**	**36**	*e*P	**PKPdf**	**17 25 56.6**	**-0.4**
PTBC	**PUERTO BERRIO,**	**132.93**	**37**	⇑*e*P	**PKPdf**	**17 25 57.3**	**0.0**
PAMC	**Pamplona, Colo**	**133.09**	**34**	*e*P	**PKPdf**	**17 25 58.0**	**-0.2**
PLMC	**San Jos del P**	**133.37**	**40**	*e*P	**PKiKP**	**17 26 00.1**	**+0.7**
MALC	**Bahia Malaga**	**133.53**	**42**	*e*P	**PKiKP**	**17 26 01.5**	**+1.9**
NORC	**Norcasia**	**133.56**	**38**	*e*P	**PKiKP**	**17 26 00.1**	**+0.3**
GUY2C	**Guyana, Caldas**	**133.59**	**39**	*e*P	**PKPdf**	**17 25 58.0**	**-1.1**
GR1C	**Gorgona, Isla**	**133.88**	**44**	*e*P	**PKPdf**	**17 25 57.3**	**-1.7**
SPBC	**San Pablo de B**	**133.88**	**37**	*e*P	**PKPdf**	**17 25 59.4**	**+0.2**
YOTC	**Yotoco, Valle**	**134.10**	**41**	*e*P	**PKPdf**	**17 25 58.0**	**-1.6**
RUSC	**La Rusia**	**134.17**	**36**	*e*P	**PKPdf**	**17 25 55.9**	**-4.3**
ROSC	**El Rosal**	**134.45**	**38**	PKP	**PKiKP**	**17 26 01.4**	**-0.6**
	comp=Z,21nm,0.6s,baz=27,slow=2.8,SNR=9.1						
ROSC	**El Rosal**	**134.45**	**38**		**PKPdf**	**17 25 58.0**	**-2.6**
ORTC	**Ortega, Tolima**	**134.76**	**40**	*e*P	**PKiKP**	**17 26 02.9**	**+0.7**
ELOV	**Elorza**	**134.83**	**31**	*e*P	**PKPdf**	**17 25 58.7**	**-2.1**
CHIC	**Chingaza**	**134.93**	**37**	⇑*e*P	**PKPdf**	**17 25 54.5**	**-7.0**
SNAA	**Sanae**	**135.10**	**199**	PKP	**PKPdf**	**17 25 59.0**	**-0.7**
	comp=Z,9.7nm,0.7s,baz=177,slow=2.8,SNR=8.5						
SNAA				PP	**PP**	**17 28 33.5**	**-2.6**
	comp=Z,9.7nm,0.7s,baz=166,slow=4.5,SNR=5.4						
SNAA	**Sanae**	**135.10**	**199**	PKPdf	**PKPdf**	**17 25 59.0**	**-0.7**
SNAA					**PP**	**17 28 32.7**	**-3.5**
POPC	**Popayan, Colom**	**135.11**	**42**	*e*P	**PKPdf**	**17 25 58.7**	**-2.9**
VILC	**Villavicencio,**	**135.39**	**38**	*e*P	**PKPdf**	**17 25 58.0**	**-4.0**
PCON	**Cinco Dias**	**135.44**	**42**	*e*P	**PKPdf**	**17 26 01.5**	**-1.2**
SOTA	**Rioblanco**	**135.48**	**43**	*e*P	**PKPdf**	**17 25 56.6**	**-6.1**
CRUC	**La Cruz**	**135.75**	**44**	*e*P	PKPdf	17 25 53.9	-9.2
OTAV	**Otavalo**	**135.93**	**46**	*e*P	**PKiKP**	**17 26 04.3**	**-0.8**
GARC	**Garzon, Huila**	**136.06**	**41**	*e*P	**PKPdf**	**17 26 02.2**	**-1.2**
FLOC	**Florencia**	**136.47**	**42**	*e*P	**PKPdf**	**17 26 00.8**	**-3.1**
FLOC	**Florencia**	**136.47**	**42**		**PKPdf**	**17 26 02.3**	**-1.6**
ATAH	**Atahualpa**	**141.59**	**53**	PKhKP	**PKPdf**	**17 26 08.7**	**-5.0**
	comp=Z,12nm,0.6s,baz=356,slow=1.6,SNR=6.5						
PTGA	**Pitinga**	**145.47**	**21**	PKPbc	**PKPdf**	**17 26 19.8**	**-0.3**
	comp=Z,648nm,0.8s,baz=351,slow=4.2,SNR=226						
NNA	**Nana**	**146.12**	**57**	PKPbc	**PKPdf**	**17 26 21.1**	**0.0**
	comp=Z,151nm,0.7s,baz=36,slow=3.5,SNR=20						
NNA	**Nana**	**146.12**	**57**	PKP2	**PKPdf**	**17 26 20.5**	**-0.6**
NNA	**Nana**	**146.12**	**57**		**PKPdf**	**17 26 20.5**	**-0.6**
PMSA	**Palmer Station**	**147.34**	**167**	PKPbc	**PKPbc**	**17 26 24.5**	**+0.4**
	comp=Z,80nm,1.1s,baz=184,slow=5.5,SNR=5.8						
PMSA	**Palmer Station**	**147.34**	**167**		**PKPab**	**17 26 25.3**	**-0.9**
RCBR	**Riachuelo**	**150.08**	**335**	PKIKP	**PKPdf**	**17 26 27.8**	**+0.1**
RCBR	**Riachuelo**	**150.08**	**335**		**PKPdf**	**17 26 27.8**	**+0.1**
H09W1	**TRISTAN DA CUN**	**150.66**	**253**	PKPbc	**PKiKP**	**17 26 34.8**	**+0.8**
SAML	**Samuel**	**151.82**	**33**	PKIKP	**PKPdf**	**17 26 29.7**	**-0.6**
SAML						17 30 13.5	
SAML	**Samuel**	**151.82**	**33**		**PKPdf**	**17 26 29.6**	**-0.6**
SAML				PP	**PP**	**17 30 13.5**	**-3.1**
USHA	**Ushuaia**	**154.49**	**152**	PKP	**PKPdf**	**17 26 33.5**	**+0.7**
	comp=Z,17nm,0.7s,baz=160,slow=1.9,SNR=9.3						
USHA				PKPbc	**PKiKP**	**17 26 42.6**	**+1.3**
	comp=Z,34nm,0.7s,baz=139,slow=1.6,SNR=17						
LPAZ	**La Paz**	**155.09**	**51**	PKP	**PKPdf**	**17 26 36.0**	**+0.4**
	comp=Z,33nm,1.1s,baz=2.0,slow=3.9,SNR=22						
LPAZ	**La Paz**	**155.09**	**51**		**PKPdf**	**17 26 35.7**	**+0.1**
MNMC	**Minye Minye**	**156.07**	**58**		**PKPdf**	**17 26 37.1**	**+0.7**
PB11	**IPOC Station P**	**156.44**	**60**		**PKPdf**	**17 26 37.2**	**+0.4**
GO01	**Chusmiza**	**156.71**	**59**		**PKPdf**	**17 26 37.6**	**0.0**
PB01	**IPOC Station P**	**157.36**	**62**		**PKPdf**	**17 26 38.1**	**+0.2**
LVC	**Limon Verde**	**158.73**	**64**	PKP	**PKPdf**	**17 26 40.5**	**+0.6**
	comp=Z,8.3nm,0.8s,baz=170,slow=1.6,SNR=6.7						
LVC				PKPab	**PKPab**	**17 27 16.2**	**+0.4**
	comp=Z,9.4nm,0.6s,baz=1.7,slow=0.6,SNR=5.7						
LVC	**Limon Verde**	**158.73**	**64**		**PKPdf**	**17 26 39.5**	**-0.3**
SIV	**San Ignacio**	**158.94**	**37**	PKP	**PKPdf**	**17 26 39.8**	**0.0**
	comp=Z,32nm,0.8s,baz=32,slow=1.1,SNR=31						
SIV				PKPab	**PKPab**	**17 27 16.4**	**+0.1**
	comp=Z,118nm,1.0s,baz=308,slow=4.4,SNR=14						
SIV				PP	**PP**	**17 30 56.7**	**+0.3**
	comp=Z,18nm,1.0s,baz=328,slow=5.2,SNR=7.1						
GO02	**Mina Guanaco**	**159.57**	**71**		**PKPdf**	**17 26 41.4**	**+0.8**
GO02				PP	**PP**	**17 30 56.8**	**-4.4**
GO03	**Copiap**	**160.12**	**78**		**PKPdf**	**17 26 40.8**	**-0.2**
GO06	**Curarrehue**	**160.41**	**114**		**PKPdf**	**17 26 40.2**	**-0.7**
GO04	**Tololo Observa**	**160.51**	**86**		**PKPdf**	**17 26 40.4**	**-1.1**
GO04				PKPab	**PKPab**	**17 27 24.1**	**+0.9**
PLCA	**Paso Flores**	**160.85**	**118**	PKP	**PKPdf**	**17 26 41.2**	**-0.2**
	comp=Z,12nm,0.9s,baz=225,slow=1.8,SNR=14						
PLCA				PKPab	**PKPab**	**17 27 25.9**	**+1.7**
	comp=Z,15nm,0.7s,baz=243,slow=3.6,SNR=13						
PLCA	**Paso Flores**	**160.85**	**118**		**PKPdf**	**17 26 40.5**	**-0.9**
PLCA					**PKPab**	**17 27 24.1**	**-0.1**
AROD	**Rodeo**	**161.61**	**85**	*i* P	**PKPdf**	**17 26 43.3**	**+0.5**
ACCO	**Cerro Coronel**	**162.06**	**86**	*i* P	**PKPdf**	**17 26 43.1**	**-0.2**
BDFB	**Brasilia**	**162.10**	**359**	PKP	**PKPdf**	**17 26 43.1**	**-0.3**
	comp=Z,58nm,0.9s,baz=343,slow=0.9,SNR=16						
BDFB				PKPab	**PKPab**	**17 27 29.9**	**-0.1**
	comp=Z,71nm,0.9s,baz=3.2,slow=4.0,SNR=8.4						
BDFB				PP	**PP**	**17 31 13.9**	**+1.1**
	comp=Z,13nm,0.9s,baz=349,slow=18,SNR=3.9						
BDFB	**Brasilia**	**162.10**	**359**		**PKPdf**	**17 26 43.0**	**-0.3**
BDFB					**PKPab**	**17 27 27.3**	**-2.8**
BDFB					**PP**	**17 31 12.2**	**-0.7**
RTLS	**Leoncito**	**162.15**	**90**	*i* P	**PKPdf**	**17 26 43.0**	**-0.2**
AGUA	**GUANDACOL**	**162.22**	**82**	*i* P	**PKPdf**	**17 26 43.3**	**+0.2**
RTCV	**Cerro Valdivia**	**162.79**	**90**	*i* P	**PKPdf**	**17 26 43.2**	**-0.3**
CFA	**Coronel Fontan**	**162.99**	**89**	PKP	**PKPdf**	**17 26 43.0**	**-0.8**
	comp=Z,26nm,1.1s,baz=191,slow=1.3,SNR=16						
CFA				PKPab	**PKPab**	**17 27 36.0**	**+2.2**
	comp=Z,33nm,0.8s,baz=290,slow=4.2,SNR=13						
CYA	**Choya**	**164.05**	**76**	*i* P	**PKPdf**	**17 26 44.6**	**-0.2**
CPUP	**Villa Florida**	**169.25**	**50**	PKP	**PKPdf**	**17 26 48.8**	**0.0**
	comp=Z,18nm,0.9s,baz=356,slow=1.9,SNR=16						
CPUP				PKPab	**PKPab**	**17 28 02.5**	**+1.1**
	comp=Z,31nm,1.1s,baz=334,slow=6.0,SNR=8.3						
CPUP				PP	**PP**	**17 31 53.9**	**+3.0**
	comp=Z,29nm,1.1s,baz=341,slow=7.4,SNR=10						
CPUP	**Villa Florida**	**169.25**	**50**		**PKPdf**	**17 26 47.6**	**-1.2**
CPUP					**PKPab**	**17 28 01.1**	**-0.3**
CPUP					**PP**	**17 31 52.1**	**+1.2**
SPB	**Sao Paulo**	**169.98**	**356**		**PKPdf**	**17 26 49.2**	**-0.1**
LPA	**La Plata**	**171.84**	**102**	PKIKP	**PKPdf**	**17 26 43.9**	**-6.0**
LPA	**La Plata**	**171.84**	**102**	PKP	**PKPab**	**17 28 12.4**	**-0.4**
LPA				SKIKS		17 30 04.5	
LPA				PP	**PP**	**17 31 58.6**	**-5.9**
LPA				pPP		17 32 18.2	
LPA				PPP	PPP	17 36 00.1	
LPA				PSP	PSP	17 46 06.6	
LPA				SS	SS	17 53 04.6	-2.0

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*IDC **13** 17:12:31.7±0.4, 60°.73S×19°.51W, h0^{km}, mb4.9/17, mb1 4.9/17, mb1mx4.8/29, mbtmp4.9/17, MS4.5/5, Ms1 4.5/5, ms1mx4.2/21, Error ellipse: s-maj=18.1km s-min=13.6km az=43.0*

*NEIC **13** 17:12:32.5±1.8, 60°.8S±0°.1×19°.7W±0°.1, h10^{km}±1^{km}, mb5.3/42, Error ellipse: s-maj=17.7km s-min=10.2km az=197.0*

*GCMT **13** 17:12:36.5±0.4, 61°.06S±0°.04×19°.57W±0°.05, h28^{km}±1^{km}, MW5.5/65, Moment Tensor Solution. s22,c27; s65,c79; Duration: $1^{s}3$ Moment tensor: Scale 10^{17}Nm; M_{rr}-1.83±.16; $M_{\theta\theta}$0.06±.10; $M_{\phi\phi}$1.77±.10; $M_{r\theta}$0.03±.18; $M_{\theta\phi}$0.73±.07; $M_{\phi r}$0.07±.14; Best double couple: $M_0$1.93800×10^{17} NP1:ϕ_s20.00000°,δ44.00000°, λ-90.00000°. NP2:ϕ_s200.00000°,δ46.00000°, λ-90.00000°. Principal axes: T 2.0440, Plg1.0000°, Azm290.0000°; N -0.2110, Plg0.0000°, Azm200.0000°; P -1.8310, Plg89.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 17:12:32.8±0.3**, 60°.79S**±0°.08×**19°.71W**±0°.08**, h10**^{km}**, n176,** σ**1^{s}33**/174**, mb5.2**/37**, 1C-1D, East of South Sandwich Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**10.93**	**160**	P	**Pn**	**17 15 08.1**	**-0.9**
VNA1				x	x	17 15 08.2	
HOPE	**Hope Point**	**11.10**	**299**		**Pn**	**17 15 10.5**	**-0.9**
VNA3	**Neumayer Olymp**	**11.24**	**163**	P	**Pn**	**17 15 11.5**	**-1.7**
VNA2	**Neumayer--Watz**	**11.32**	**159**	P	**Pn**	**17 15 12.5**	**-1.8**
	baz=326,slow=13						
SNAA	**Sanae**	**12.79**	**155**	P	**Pn**	**17 15 32.4**	**-2.1**
SNAA	**Sanae**	**12.79**	**155**	Pn	**Pn**	**17 15 32.4**	**-2.1**
	6.6nm,0.3s,baz=314,slow=14,SNR=206						
SNAA				Sn	Sn	17 17 39.6	-17
	3.1nm,0.3s,baz=313,slow=16,SNR=3.5						
SNAA				LR	LR	17 19 32.3	
	comp=Z,1µm,20.0s,baz=310,slow=33						
SNAA	**Sanae**	**12.79**	**155**		**Pn**	**17 15 32.2**	**-2.3**
EFI	**East Falkland**	**22.87**	**276**	P	**P**	**17 17 34.9**	**-1.1**
SYO	**Syowa Base**	**25.43**	**134**	⇑*i*P	**P**	**17 17 59.0**	**-1.1**
SYO	**Syowa Base**	**25.43**	**134**	⇓*e*sP	sP	17 18 03.4	+1.0
USHA	**Ushuaia**	**26.10**	**261**	LR	LR	17 26 01.3	
	comp=Z,726nm,20.7s,baz=97,slow=31						
QSPA	**South Pole Qui**	**29.44**	**180**	P	**P**	**17 18 38.0**	**+1.7**
	35nm,0.9s,baz=203,slow=6.5,SNR=66						
QSPA	**South Pole Qui**	**29.44**	**180**	P	**P**	**17 18 37.5**	**+1.1**
QSPA				IAmb	IAmb	17 18 39.0	
	comp=Z,50nm,1.1s						
MAW	**Mawson**	**33.98**	**137**	P	**P**	**17 19 17.7**	**+1.8**
	comp=Z,18nm,0.8s,baz=285,slow=8.6,SNR=6.9						
MAW	**Mawson**	**33.98**	**137**	P	**P**	**17 19 17.3**	**+1.4**
PLTB	**Pedras Altas**	**36.55**	**307**	*e*P	**P**	**17 19 39.3**	**+0.9**
PLCA	**Paso Flores**	**36.69**	**280**	P	**P**	**17 19 40.6**	**+0.9**
	comp=Z,5.4nm,0.9s,baz=169,slow=7.6,SNR=6.5						
PLCA				LR	LR	17 32 12.3	
	comp=Z,1µm,21.8s,baz=172,slow=32						
PLCA	**Paso Flores**	**36.69**	**280**	P	**P**	**17 19 40.3**	**+0.7**
PLCA	**Paso Flores**	**36.69**	**280**	*e*P	**P**	**17 19 40.5**	**+0.9**
SBA	**Scott Base**	**41.54**	**182**	P	**P**	**17 20 22.6**	**+2.9**
SPB	**Sao Paulo**	**41.83**	**320**	P	**P**	**17 20 23.9**	**+1.4**
SPB				IAmb	IAmb	17 20 27.4	
	comp=Z,42nm,0.9s						
SPB	**Sao Paulo**	**41.83**	**320**	*e*P	**P**	**17 20 25.1**	**+2.6**
VNDA	**Vanda**	**41.93**	**181**	P	**P**	**17 20 25.0**	**+2.1**
	comp=Z,6.7nm,1.0s,baz=186,slow=7.4,SNR=10						
VNDA	**Vanda**	**41.93**	**181**	P	**P**	**17 20 25.1**	**+2.2**
FRTB	**Fartura**	**42.75**	**318**	*e*P	**P**	**17 20 32.4**	**+2.3**
PEL	**Peldehue**	**42.83**	**287**	P	**P**	**17 20 29.3**	**-1.5**
PEL				IAmb	IAmb	17 20 38.1	
	comp=Z,100nm,1.3s						
CPUP	**Villa Florida**	**42.85**	**306**	P	**P**	**17 20 31.2**	**+0.4**
	comp=Z,18nm,1.0s,baz=158,slow=7.4,SNR=22						
CPUP	**Villa Florida**	**42.85**	**306**	P	**P**	**17 20 30.4**	**-0.5**
CFA	**Coronel Fontan**	**42.98**	**290**	LR	LR	17 36 59.6	
	comp=Z,1µm,19.4s,baz=190,slow=34						
BSCB	**Bom Sucesso**	**43.48**	**325**	*e*P	**P**	**17 20 38.5**	**+2.4**
BOSA	**Boshof**	**43.92**	**64**	P	**P**	**17 20 40.1**	**+0.4**
	comp=Z,11nm,1.0s,baz=217,slow=6.8,SNR=6.8						
BOSA	**Boshof**	**43.92**	**64**	P	**P**	**17 20 39.9**	**+0.2**
TRCB	**Terra Rica**	**44.30**	**314**	*e*P	**P**	**17 20 44.9**	**+2.3**
SJMB	**Sao Joao De Ma**	**44.73**	**330**	*e*P	**P**	**17 20 47.5**	**+1.4**
LBTB	**Lobatse**	**47.20**	**62**	P	**P**	**17 21 06.2**	**+0.6**
	comp=Z,10nm,0.9s,baz=219,slow=8.7,SNR=8.4						
LBTB	**Lobatse**	**47.20**	**62**	P	**P**	**17 21 05.8**	**+0.2**
LBTB				IAmb	IAmb	17 21 07.0	
	comp=Z,51nm,1.4s						
IPMB	**Ipameri, GO**	**47.34**	**322**	*e*P	**P**	**17 21 08.5**	**+1.9**
C2SB	**Chapadao do Su**	**48.09**	**316**	*e*P	**P**	**17 21 14.7**	**+2.3**
JANB	**Januaria**	**49.02**	**328**	*e*P	**P**	**17 21 20.3**	**+0.7**
GO02	**Mina Guanaco**	**49.09**	**294**	P	**P**	**17 21 19.7**	**-0.7**
GO02				IAmb	IAmb	17 21 23.5	
	comp=Z,21nm,0.9s						
TSUM	**Tsumeb**	**49.18**	**49**	P	**P**	**17 21 21.7**	**+0.7**
TSUM				IAmb	IAmb	17 21 22.7	
	comp=Z,35nm,1.4s						
BDFB	**Brasilia**	**49.49**	**323**	P	**P**	**17 21 24.8**	**+1.4**
	comp=Z,9.4nm,0.8s,baz=171,slow=2.5,SNR=8.5						
BDFB	**Brasilia**	**49.49**	**323**	P	**P**	**17 21 21.6**	**-1.7**
LVC	**Limon Verde**	**51.00**	**296**	P	**P**	**17 21 36.1**	**+1.0**
	comp=Z,16nm,1.0s,baz=132,slow=6.6,SNR=5.5						
LVC	**Limon Verde**	**51.00**	**296**	P	**P**	**17 21 35.3**	**+0.3**
LVC	**Limon Verde**	**51.00**	**296**	*e*P	**P**	**17 21 36.4**	**+1.4**
SALV	**Santo Antonio**	**51.74**	**314**	*e*P	**P**	**17 21 41.2**	**+1.0**
PB04	**IPOC Station P**	**51.79**	**295**	P	**P**	**17 21 40.8**	**+0.1**
PB04				IAmb	IAmb	17 21 45.3	
	comp=Z,58nm,1.1s						
H10S2	**ASCENSION HYDR**	**51.87**	**6**	T	T	18 17 55.2	
	baz=37,slow=74,SNR=21						
H10S3	**ASCENSION HYDR**	**51.87**	**6**	T	T	18 17 47.1	
	baz=183,slow=74,SNR=27						
MATP	**Matopo**	**52.49**	**62**	P	**P**	**17 21 42.6**	**-3.3**
	comp=Z,5.1nm,0.9s,baz=230,slow=6.7,SNR=5.6						
PB01	**IPOC Station P**	**52.63**	**296**	P	**P**	**17 21 47.3**	**+0.4**
PB01				IAmb	IAmb	17 21 59.4	
	comp=Z,25nm,1.0s						
H10N3	**ASCENSION HYDR**	**52.98**	**6**	T	T	18 19 06.2	
	baz=189,slow=74,SNR=22						
H10N2	**ASCENSION HYDR**	**53.00**	**6**	T	T	18 19 23.5	
	baz=265,slow=74,SNR=7.5						
GO01	**Chusmiza**	**53.71**	**297**	P	**P**	**17 21 56.0**	**+0.6**
GO01				IAmb	IAmb	17 22 08.0	
	comp=Z,46nm,1.4s						
PB11	**IPOC Station P**	**53.83**	**297**	P	**P**	**17 21 56.5**	**+0.7**
PB11				IAmb	IAmb	17 22 00.6	
	comp=Z,37nm,1.0s						
MNMC	**Minye Minye**	**54.36**	**297**	P	**P**	**17 22 00.6**	**+0.7**
SMTB	**Santa Maria do**	**55.82**	**326**	*e*P	**P**	**17 22 10.8**	**+0.8**
LPAZ	**La Paz**	**56.25**	**300**	P	**P**	**17 22 14.9**	**+1.0**
	comp=Z,13nm,0.9s,baz=168,slow=5.6,SNR=32						
LPAZ	**La Paz**	**56.25**	**300**	P	**P**	**17 22 14.3**	**+0.5**
LPAZ	**La Paz**	**56.25**	**300**	*e*P	**P**	**17 22 15.3**	**+1.5**
CLDB	**Colider**	**56.45**	**316**	*e*P	**P**	**17 22 13.9**	**-0.6**
SAML	**Samuel**	**60.90**	**309**	P	**P**	**17 22 45.7**	**+0.2**
SAML				IAmb	IAmb	17 22 48.7	
	comp=Z,24nm,0.9s						
SAML	**Samuel**	**60.90**	**309**	*e*P	**P**	**17 22 45.5**	**0.0**
PTGA	**Pitinga**	**67.33**	**316**	P	**P**	**17 23 26.2**	**-1.6**
PTGA				IAmb	IAmb	17 23 31.6	
	comp=Z,15nm,1.0s						
PTGA	**Pitinga**	**67.33**	**316**	*e*P	**P**	**17 23 27.7**	**0.0**
LIC	**Lamto**	**67.80**	**16**	*e*P	**P**	**17 23 30.3**	**-0.4**
	comp=Z,53nm,1.4s						
KIC	**Kosan Boka**	**67.97**	**16**	*e*P	**P**	**17 23 31.5**	**-0.3**
	comp=Z,20nm,0.9s						
TIC	**Toumodi**	**68.22**	**16**	*e*P	**P**	**17 23 32.7**	**-0.6**
DBIC	**Dimbokro**	**68.26**	**16**	P	**P**	**17 23 33.7**	**+0.1**
	comp=Z,8.1nm,0.8s,baz=151,slow=7.4,SNR=8.4						
DBIC	**Dimbokro**	**68.26**	**16**	P	**P**	**17 23 32.9**	**-0.7**
ATAH	**Atahualpa**	**68.87**	**295**	P	**P**	**17 23 40.5**	**+2.6**
	comp=Z,8.0nm,0.9s,baz=152,slow=4.8,SNR=6.4						
MBAR	**Mbarara**	**71.25**	**55**	P	**P**	**17 23 54.8**	**+2.6**
MBAR				IAmb	IAmb	17 23 56.2	
	comp=Z,28nm,1.4s						
OTAV	**Otavalo**	**75.47**	**298**	P	**P**	**17 24 18.7**	**+1.2**
OTAV				IAmb	IAmb	17 26 35.0	
	comp=Z,24nm,0.9s						
OTAV	**Otavalo**	**75.47**	**298**	*e*P	**P**	**17 24 19.2**	**+1.8**
FLOC	**Florencia**	**75.48**	**301**	P	**P**	**17 24 17.0**	**-0.1**
TOA0	**Torodi Ar. Sit**	**75.65**	**22**	P	**P**	**17 24 17.8**	**0.0**
TOA0				IAmb	IAmb	17 25 22.5	
	comp=Z,16nm,0.7s						
TORD	**Torodi Ar. Bea**	**75.65**	**22**	P	**P**	**17 24 17.7**	**-0.1**
	comp=Z,12nm,0.9s,baz=192,slow=6.3,SNR=40						
TORD	**Torodi Ar. Bea**	**75.65**	**22**	P	**P**	**17 24 17.0**	**-0.8**
THZ	**Tophouse**	**77.28**	**190**	P	**P**	**17 24 27.8**	**+0.8**
THZ				IAmb	IAmb	17 24 31.0	
	comp=Z,44nm,1.3s						
ROSC	**El Rosal**	**77.88**	**304**	P	**P**	**17 24 32.3**	**+1.3**
	comp=Z,11nm,0.3s,baz=150,slow=14,SNR=5.1						
ROSC	**El Rosal**	**77.88**	**304**	P	**P**	**17 24 31.4**	**+0.4**
RUSC	**La Rusia**	**78.33**	**305**	P	**P**	**17 24 32.9**	**-0.7**
SDV	**Santo Domingo**	**80.11**	**309**	P	**P**	**17 24 43.1**	**+0.2**
SDV	**Santo Domingo**	**80.11**	**309**	*e*P	**P**	**17 24 43.5**	**+0.6**
CAN	**Canberra**	**83.79**	**171**	P	**P**	**17 25 01.7**	**-0.3**
CAN				IAmb	IAmb	17 25 05.9	
	comp=Z,16nm,0.9s						
STKA	**Stephens Creek**	**86.41**	**164**	P	**P**	**17 25 15.5**	**+0.3**
	comp=Z,15nm,0.9s,baz=153,slow=4.7,SNR=7.7						
STKA	**Stephens Creek**	**86.41**	**164**	P	**P**	**17 25 15.1**	**0.0**
STVI	**Saint Thomas**	**86.83**	**318**	P	**P**	**17 25 17.0**	**-0.1**
CUPR	**Culebra, Puert**	**86.90**	**317**	P	**P**	**17 25 16.5**	**-0.9**
JTS	**Las Juntas de**	**87.28**	**297**	P	**P**	**17 25 19.2**	**-0.3**
JTS				IAmb	IAmb	17 25 43.5	
	comp=Z,30nm,1.1s						
ACON	**Acoyapa**	**88.87**	**297**	P	**P**	**17 25 26.7**	**-0.2**
SDDR	**Presa de Saban**	**89.62**	**312**	P	**P**	**17 25 31.9**	**+1.4**
SDDR				IAmb	IAmb	17 25 42.0	
	comp=Z,20nm,0.8s						
MTDJ	**Mount Denham**	**91.30**	**306**	P	**P**	**17 25 37.2**	**-1.1**
ASAR	**Alice Springs**	**93.16**	**156**	P	**P**	**17 25 46.7**	**-0.3**
	comp=Z,5.0nm,0.9s,baz=188,slow=3.7,SNR=9.8						
ASAR	**Alice Springs**	**93.16**	**156**	P	**P**	**17 25 46.1**	**-0.9**
FITZ	**Fitzroy Crossi**	**96.59**	**147**	LR	LR	18 06 13.6	
	comp=Z,226nm,18.9s,baz=268,slow=33						
WRA	**Warramunga Arr**	**96.86**	**156**	P	**P**	**17 26 03.1**	**-0.9**
	comp=Z,3.2nm,0.9s,baz=204,slow=4.3,SNR=4.9						
WRA	**Warramunga Arr**	**96.86**	**156**	P	**P**	**17 26 02.5**	**-1.5**
CLL	**Collm**	**114.79**	**22**	*e*PKiKP	**PKiKP**	**17 31 14.0**	**+1.8**
AKASG	**Malin Array Be**	**117.88**	**33**	PKP	**PKPdf**	**17 31 17.4**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=242,slow=1.6,SNR=3.6						
AKASG	**Malin Array Be**	**117.88**	**33**		**PKPdf**	**17 31 17.0**	**-1.1**
CMAR	**Chiang Mai Arr**	**119.83**	**106**	PKP	**PKPdf**	**17 31 22.6**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=233,slow=3.6,SNR=7.0						
CMAR	**Chiang Mai Arr**	**119.83**	**106**		**PKPdf**	**17 31 22.7**	**-0.3**
GAR	**Garm**	**123.12**	**68**		**PKiKP**	**17 31 29.1**	**+0.1**
NOA	**NORSAR Array B**	**123.81**	**18**	PKP	**PKPdf**	**17 31 29.1**	**-0.2**
	comp=Z,2.5nm,1.0s,baz=187,slow=1.7,SNR=4.6						
PSUT	**Pine Spring**	**124.64**	**288**		**PKiKP**	**17 31 32.0**	**-0.1**
RSSD	**Black Hills**	**124.72**	**299**		**PKPdf**	**17 31 31.1**	**-0.7**
LSA	**Lhasa**	**125.56**	**92**		**PKPdf**	**17 31 33.6**	**-0.6**
TCUT	**Toone Canyon**	**125.58**	**292**		**PKPdf**	**17 31 33.6**	**-0.1**
HWUT	**Hardware Ranch**	**126.04**	**292**		**PKPdf**	**17 31 33.6**	**-0.8**
PDAR	**Pinedale Array**	**126.06**	**294**	PKP	**PKPdf**	**17 31 33.3**	**-1.2**
	comp=Z,1.2nm,0.8s,baz=132,slow=6.6,SNR=5.9						
PDAR	**Pinedale Array**	**126.06**	**294**		**PKPdf**	**17 31 32.6**	**-1.9**
KSH	**Kashi**	**126.15**	**72**	PKP	**PKiKP**	**17 31 36.3**	**+1.3**
KSH				PP	**PP**	**17 33 33.6**	**+4.1**
KSH				PKS	**PKSdf**	**17 35 11.6**	**+0.4**
KSH				LR	LR		
	comp=Z,660nm,17.2s						
SPUT	**South Promonto**	**126.21**	**291**		**PKPdf**	**17 31 34.2**	**-0.5**
ULM	**Lac du Bonnet**	**126.36**	**309**	PKP	**PKPdf**	**17 31 33.4**	**-1.0**
	comp=Z,3.3nm,0.9s,baz=69,slow=1.5,SNR=3.1						
ULM	**Lac du Bonnet**	**126.36**	**309**		**PKPdf**	**17 31 33.1**	**-1.4**
KKAR	**Karatay Array**	**126.50**	**66**		**PKPdf**	**17 31 34.1**	**-0.9**
NVAR	**Mina Array Bea**	**126.65**	**285**	PKP	**PKiKP**	**17 31 36.3**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=151,slow=3.4,SNR=6.0						
NVAR	**Mina Array Bea**	**126.65**	**285**		**PKPdf**	**17 31 33.1**	**-2.6**
FINES	**FINESS Array B**	**126.86**	**26**	PKP	**PKPdf**	**17 31 34.5**	**-0.6**
	comp=Z,3.7nm,0.8s,baz=132,slow=2.8,SNR=7.7						
FINES	**FINESS Array B**	**126.86**	**26**		**PKPdf**	**17 31 33.6**	**-1.4**
ABKAR	**Akbulak array**	**126.92**	**54**		**PKPdf**	**17 31 34.5**	**-1.0**
ELK	**Elko**	**127.05**	**289**		**PKiKP**	**17 31 36.8**	**-0.1**
AKTO	**Aktyubinsk**	**127.11**	**52**	PKP	**PKPdf**	**17 31 35.7**	**-0.2**
	comp=Z,6.0nm,1.0s,baz=193,slow=2.7,SNR=9.2						
KMI	**Kunming**	**127.34**	**106**	PKP	**PKPdf**	**17 31 35.8**	**-1.7**
KMI				LR	LR		
	comp=Z,280nm,16.4s						
KMI				LR	LR		
	comp=Z,380nm,13.6s						
KMI				LR	LR		
	comp=Z,460nm,20.2s						
FXWY	**Fox Creek**	**127.40**	**294**		**PKPdf**	**17 31 36.9**	**-0.1**
YHH	**Holmes Hill**	**128.23**	**295**		**PKPdf**	**17 31 38.6**	**0.0**
YHL	**Hebgen Lake**	**128.42**	**295**		**PKiKP**	**17 31 39.8**	**+0.2**
KLMR	**Klimovskoe**	**129.57**	**33**	*e*	**PKPdf**	**17 31 38.6**	**-1.6**
KLMR				AMP		17 31 41.3	
	comp=Z,30nm,1.4s						
WVOR	**Wild Horse Val**	**129.95**	**287**		**PKiKP**	**17 31 42.5**	**-0.1**
J08A	**Circle Bar Ran**	**130.59**	**288**		**PKPdf**	**17 31 42.6**	**-0.3**
MSO	**Missoula**	**131.18**	**295**		**PKPdf**	**17 31 44.2**	**+0.3**
BMO	**Blue Mountains**	**131.20**	**290**		**PKPdf**	**17 31 44.0**	**0.0**
G08A	**Pilot Rock**	**132.29**	**290**		**PKPdf**	**17 31 46.2**	**+0.1**
CD2	**Chengdu**	**132.68**	**103**	PKP	**PKPdf**	**17 31 46.8**	**-0.4**
MKAR	**Makanchi Array**	**134.69**	**71**	PKP	**PKPdf**	**17 31 49.7**	**-0.8**
	comp=Z,3.3nm,1.0s,baz=228,slow=3.1,SNR=7.9						
MKAR	**Makanchi Array**	**134.69**	**71**		**PKPdf**	**17 31 48.4**	**-2.0**
B08A	**Colville Reser**	**134.75**	**292**		**PKPdf**	**17 31 50.1**	**-0.4**
WMQ	**Urumqi**	**135.03**	**78**	*e*PKP	**PKPdf**	**17 31 51.8**	**+0.6**
LZH	**Lanzhou**	**136.94**	**99**	*e*PKP	**PKPdf**	**17 31 55.0**	**-0.2**
LZH				LR	LR		
	comp=Z,230nm,18.0s						
LZH				LR	LR		
	comp=Z,240nm,17.9s						
LZH				LR	LR		
	comp=Z,300nm,20.1s						
DAG	**Danmarks Havn**	**137.31**	**0**	*i* P	**PKPdf**	**17 31 54.0**	**-0.4**
	comp=Z,3.6nm,1.0s						
GTA	**Gaotai**	**137.59**	**92**	*e*PKP	**PKiKP**	**17 31 58.3**	**+0.2**
GTA				sPKP		17 32 05.3	
NJ2	**Nanjing**	**140.58**	**118**	*e*PKP	**PKiKP**	**17 32 04.0**	**-0.3**
YKA	**Yellowknife Ar**	**142.30**	**311**	PKhKP	**PKPdf**	**17 31 59.4**	**-4.4**
	comp=Z,1.4nm,0.9s,baz=133,slow=3.0,SNR=7.0						
YKA				PP	**PP**	**17 35 10.1**	**-1.6**
	comp=Z,1.4nm,0.9s,baz=122,slow=6.5,SNR=7.1						

RES	**Resolute Bay**	143.78	334		PKPab	17 32 03.3	+0.2
HHC	**Hu-ho-hao-te**	144.42	102	*e*PKP	PKPbc	17 32 07.5	+0.6
BJT	**Baijiatuau**	145.95	107		PKPdf	17 32 10.8	-0.2
BJI	**Beijing**	145.97	107	PKPbc	PKPdf	17 32 11.1	+0.2
DLBC	**Dease Lake**	146.17	298		PKPbc	17 32 11.5	-0.4
SONM	**Songino Array**	147.00	88	PKP	PKPdf	17 32 11.7	-1.0
	comp=Z,20nm,0.9s,baz=191,slow=1.7,SNR=68						
SONM				PKPbc	pPKPdf	17 32 14.3	-0.2
	comp=Z,20nm,0.9s,baz=224,slow=3.3,SNR=60						
SONM	**Songino Array**	147.00	88		PKPdf	17 32 11.8	-0.8
ULN	**Ulaanbaatar**	147.35	89		PKPbc	17 32 15.1	-0.5
TLY	**Talaya**	148.20	81		PKPbc	17 32 17.1	-0.6
KSAR	**Wonju Array Be**	149.00	124		PKPbc	17 32 19.6	-0.5
KSRS	**Korea Array**	149.03	124	PKPbc	PKPbc	17 32 20.2	0.0
	comp=Z,5.9nm,0.9s,baz=179,slow=1.8,SNR=12						
NRIK	**Noril'sk**	150.04	43	PKPbc	PKPbc	17 32 21.4	-0.3
	comp=Z,4.8nm,0.7s,baz=258,slow=0.8,SNR=4.2						
HYT	**Haines Junctio**	150.66	298		PKPbc	17 32 23.2	-0.4
INK	**Inuvik**	151.96	314		PKPbc	17 32 25.4	-0.8
MJAR	**Matsushiro Arr**	151.97	140	PKPbc	PKPbc	17 32 27.3	0.0
	comp=Z,8.3nm,1.0s,baz=186,slow=2.8,SNR=7.5						
MJAR	**Matsushiro Arr**	151.97	140		PKPbc	17 32 25.8	-1.5
EPYK	**Eagle Plains**	152.53	309		PKPbc	17 32 27.1	-0.5
DAWY	**Dawson**	152.81	303		PKPbc	17 32 27.3	-1.0
BCAR	**Beaver Creek A**	153.44	300		PKPbc	17 32 29.0	-0.8
PAX	**Paxson**	154.97	299		PKPab	17 32 47.6	-1.2
PRP	**Porcupine Dome**	155.75	305		PKPab	17 32 51.4	-0.7
BMAR	**Burnt Mountain**	155.80	309	PKPdf	PKPdf	17 32 23.7	-1.5
BMAR					PKPab	17 32 52.5	+0.4
SML	**Sawmill**	155.82	295		PKPab	17 32 50.6	-1.7
ILAR	**Eielson Array**	156.12	302	PKPbc	PKPdf	17 32 34.8	+9.1
	comp=Z,2.6nm,1.0s,baz=132,slow=1.0,SNR=11						
ILAR				PKPab	PKPab	17 32 53.6	+0.1
	comp=Z,3.2nm,1.0s,baz=59,slow=4.0,SNR=8.3						
ILAR	**Eielson Array**	156.12	302		PKPdf	17 32 32.4	+6.8
ILAR					PKPab	17 32 52.5	-1.0
COLA	**College**	156.54	302		PKPab	17 32 55.1	-0.1
MDM	**Murphy Dome**	156.72	303		PKPab	17 32 55.2	-0.9
BWN	**Browne**	157.04	300	PKPdf	PKPdf	17 32 28.9	+2.0
BWN					PKPab	17 32 58.1	+0.6
BPAW	**Bear Paw Mtn.**	157.67	300	PKPdf	PKPdf	17 32 28.6	+0.9
BPAW					PKPab	17 32 59.8	-0.4
TOLK	**Toolik Lake Re**	157.82	312		PKPab	17 33 01.0	+0.1
IMAR	**Indian Mountai**	159.17	304		PKPab	17 33 05.7	-1.0

HEL 13 17:16:18.9±0.3, 67.90N×20.21E, h0km, ML1.6, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LANU	**Lannavaara**	0.69	76	PG	Pg	17 16 31.7	-0.3
	baz=265						
LANU				SG	Sg	17 16 40.2	-0.7
KIF	**Kilpisjarvi**	1.13	11	PN	Pn	17 16 42.4	+0.4
	baz=201						
KIF				MSG		17 16 54.4	
	comp=Z,3.2nm,0.2s						
KIF				SN	Sn	17 16 58.2	0.0
HEF	**Hetta**	1.39	67	PG	Pg	17 16 43.8	-1.7
	baz=260						
HEF				MSG		17 17 00.6	
	comp=Z,2.8nm,0.2s						
HEF				SN	Sn	17 17 06.5	+2.0
ERTU	**Ertsjaerv**	1.55	149	PG	Pn	17 16 46.8	-0.9
	baz=324						
ERTU				SG	Sn	17 17 06.1	-2.5
TOF	**Tornio**	2.44	137	PB	Pn	17 17 00.5	+0.6
	baz=312						
TOF				SN	Sn	17 17 29.9	-0.5
TOF				MSG		17 17 30.9	
	comp=Z,4.1nm,0.2s						
SGF	**Sodankyl**	2.46	98	PG	Pn	17 17 01.7	+1.6
	baz=287						

IDC 13 17:19:15.5±17.0, 56.33S×27.16W, h156km±155km, mb3.6/2, mb1 3.7/3, mb1mx3.4/44, mbtmp4.0/3, ML4.1/1, Error ellipse: s-maj=103.2km s-min=38.8km az=106.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	18.48	156	P	P	17 23 19.2	0.0
	0.7nm,0.3s,baz=303,slow=10,SNR=11						
TORD	**Torodi Ar. Bea**	73.29	29	P	P	17 30 29.6	0.0
	0.4nm,0.5s,baz=193,slow=6.3,SNR=2.5						
ASAR	**Alice Springs**	98.72	162	P	P	17 32 36.9	-0.2
	0.3nm,0.7s,baz=188,slow=4.4,SNR=5.2						
INK	**Inuvik**	146.03	320	PKPbc	PKPbc	17 38 34.8	-0.5
	0.9nm,0.6s,baz=101,slow=3.8,SNR=4.1						
ILAR	**Eielson Array**	150.31	311	PKPbc	PKPbc	17 38 46.0	-0.6
	0.9nm,0.9s,baz=117,slow=3.0,SNR=5.8						

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*MDD **13** 17:31:31.9±0.2, 28.65N×15.53W, h45km±5km, mb4.0/12, Error ellipse: s-maj=2.8km s-min=1.0km az=179.0, PRXIMO TT-model: canary*

*CNRM **13** 17:31:34.0±2.7, 29.00N×15.32W, h29km±54km, Error ellipse: s-maj=52.5km s-min=7.2km az=25.0*

ISC 13 17:31:26.8±0.7, 28.70N±0.05×15.48W±0.03, h10km, n31, σ2.27/55, 4C-1D, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOSO	**Osorio**	0.63	185	⇑P	Pn	17 31 42.9	+1.0
	75nm,0.1s,SNR=18						
EOSO				S	Sb	17 31 50.2	+1.4
	349nm,0.2s						
EBAJ	**Bajamar**	0.77	258	⇑P	Pn	17 31 44.6	+0.8
	12nm,0.1s,SNR=18						
EBAJ				S	Sb	17 31 53.5	+0.6
	68nm,0.2s,SNR=9.9						
CGUI	**Guimar, Teneri**	0.93	246	⇑P	Pn	17 31 46.8	+0.8
	22nm,0.1s,SNR=18						
CGUI				S	Sg	17 31 56.8	+0.1
	185nm,0.5s,SNR=7.9						
MACI	**Morro de la Ar**	1.01	244	P	Pn	17 31 47.9	+0.7
	3.6nm,0.1s,SNR=4.0						
MACI				S	Sg	17 31 59.5	+0.1
	30nm,0.2s,SNR=7.9						
CRAJ	**Montana Rajada**	1.07	246	S	Sg	17 32 00.2	-1.2
	56nm,0.3s,SNR=5.7						
CCAN	**Las Canadas**	1.10	244	P	Pb	17 31 48.5	+0.5
	1.9nm,0.2s,SNR=7.9						
CCAN				S	Sg	17 32 02.3	+0.1
	4.1nm,0.2s,SNR=7.9						
CFTV	**Fuerteventura**	1.27	103	⇓P	Pg	17 31 52.1	+1.0
	19nm,0.2s,SNR=18						
CFUE	**Fuerteventura**	1.36	92	P	Pg	17 31 53.9	+1.0
	3.0nm,0.0s,SNR=7.9						
CFUE				S	Sb	17 32 08.8	-1.1
	118nm,0.1s,SNR=7.9						
EGOM	**La Gomera**	1.61	251	⇑P	Pn	17 31 55.5	+0.2
	8.9nm,0.1s,SNR=18						
EGOM				S	Sn	17 32 13.5	-2.6
	22nm,0.1s,SNR=6.7						
EFAM	**Famara**	1.77	76	P	Pb	17 31 59.6	+0.4
	1.7nm,0.1s,SNR=7.9						
EFAM				S	Sn	17 32 19.0	-0.9
	22nm,0.1s,SNR=7.9						
TBT	**Taburiente**	2.13	270	P	Pn	17 32 03.7	+1.2
	1.0nm,0.1s,SNR=7.9						
TBT				S	Sn	17 32 25.4	-3.7
	2.8nm,0.2s,SNR=7.9						
CTIG	**El Hierro**	2.34	248	P	Pn	17 32 06.3	+1.1
	1.3nm,0.1s,SNR=7.9						
CTIG				S	Sn	17 32 29.6	-4.5
	5.9nm,0.2s,SNR=7.9						
CHIE	**El Hierro**	2.39	247	P	Pn	17 32 08.1	+2.1
	0.3nm,0.1s,SNR=4.0						
CHIE				S	Sn	17 32 30.3	-5.1
	1.0nm,0.2s,SNR=7.9						
CJUL	**El Julan, El H**	2.49	248	P	Pn	17 32 07.9	+0.4
	1.8nm,0.1s,SNR=7.9						
CJUL				S	Sn	17 32 35.9	-2.1
	11nm,0.1s,SNR=7.9						
PMAR	**Madeira**	4.19	343	P	Pn	17 32 33.6	+2.6
PMAR	**Madeira**	4.19	343	P	Pn	17 32 33.8	+2.8
PMAR				S	Sn	17 33 20.0	-0.2
PMAR	**Madeira**	4.19	343	*e*P	Pn	17 32 33.6	+2.6
PMOZ	**Porto Moniz, M**	4.36	341	P	Pn	17 32 34.5	+1.3
	25nm,0.3s,SNR=7.9						
PMOZ				S	Sn	17 33 21.8	-2.4
	31nm,0.3s,SNR=7.9						
PMOZ	**Porto Moniz, M**	4.36	341	P	Pn	17 32 35.6	+2.3
PMOZ				S	Sn	17 33 23.5	-0.7
PMOZ	**Porto Moniz, M**	4.36	341	*e*P	Pn	17 32 34.6	+1.3
PMOZ				*e*S	Sn	17 33 21.8	-2.4
PMOZ				A	A	17 33 26.9	
	52nm,0.4s						
PMPS	**Porto Santo**	4.40	351	P	Pn	17 32 34.2	+0.5
PMPS	**Porto Santo**	4.40	351	*e*P	Pn	17 32 34.2	+0.5
PMPST	**Porto Santo, M**	4.42	351	*e*P	Pn	17 32 38.5	+4.5
EAH	**EAH**	5.89	59	P	Pn	17 32 53.5	-0.7
EAH				S	Sn	17 34 00.1	-1.6
TTIG	**Tnine Tigouga,**	6.40	72	P	Pn	17 32 59.2	-2.1
TTIG				S	Sn	17 34 12.6	-1.9
OUK	**Oukaimeden**	7.07	67	P	Pn	17 33 13.9	+3.3
OUK				S	Sn	17 34 31.9	+0.8
OUZM	**OUZ**	7.89	72	P	Pn	17 33 22.8	+1.1
OUZM				S	Sn	17 34 48.4	-2.8
ZGR	**Zagora**	8.72	78	P	Pn	17 33 34.3	+1.2
ZGR				S	Sn	17 35 11.0	-0.6
ZHG	**ZHG**	8.93	56	P	Pn	17 33 34.3	-1.7
ZHG				S	Sn	17 35 10.6	-6.1
MD31	**MD31**	10.11	63	P	Pn	17 33 56.1	+4.0
MD31				S	Sn	17 35 42.8	-2.9
MDT	**Midelt**	10.21	64	P	Pn	17 33 57.2	+3.6
MDT				S	Sn	17 35 46.1	-2.2

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*MOS **13** 17:31:58.7±0.9, 45.74N×14.85E, h14km, mb4.6/11, Error ellipse: s-maj=5.7km s-min=3.8km az=85.4*

*PRU **13** 17:31:58.3±0.0, 45.66N×14.90E, h0km, M4.4*

*LJU **13** 17:31:58.9, 45.75N×14.85E, h4km, ML3.7*

*ROM **13** 17:31:59.5±0.2, 45.67N±0.02×14.90E±0.01, h8km, ML4.3/25, Error ellipse: s-maj=2.0km s-min=1.0km az=18.0*

*LDG **13** 17:31:59.3±0.1, 45.75N×14.84E, h2km, Md4.3/5, Ml4.2/59, Error ellipse: s-maj=2.1km s-min=1.4km az=171.0*

*RHSSO **13** 17:31:59.6±0.2, 45.75N×14.83E, h2km, ML4.2/17*

*IASPEI **13** 17:31:59.0±0.9, 45.75N±0.02×14.83E±0.01, h5km±7km, mb4.3/25, Error ellipse: s-maj=2.4km s-min=2.1km az=4.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*PDG **13** 17:31:59.5±0.5, 45.76N×14.78E, h12km±1km, ML4.5/13, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*

*NEIC **13** 17:32:00.3±2.1, 45.74N±0.03×14.87E±0.05, h10km±1km, Error ellipse: s-maj=6.6km s-min=5.5km az=237.0*

*BGR **13** 17:32:01.7±0.4, 45.80N×14.92E, h10km, ML4.4/15, Error ellipse: s-maj=7.8km s-min=7.8km az=83.0*

*IDC **13** 17:32:01.2±3.9, 45.85N×14.79E, h16km±24km, mb3.9/9, mb1 4.0/14, mb1mx3.8/53, mbtmp3.9/14, ML3.8/5, MS4.8/1, Ms1 4.8/1, ms1mx3.3/72, Error ellipse: s-maj=14.2km s-min=13.0km az=93.0*

*BEO **13** 17:32:01.8±0.5, 45.92N×15.14E, h0km, ML4.1/16*

*BNS **13** 17:32:03.0±0.3, 45.81N×14.71E, h10km, ML4.2*

ISC 13 17:31:59.0±0.8, 45.75N±0.01×14.81E±0.01, h6km±5km, n526, σ1.96/773, mb4.3/25, 32C-38D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VISS	**Visnje**	0.06	17	⇓*i*Pg	Pg	17 32 00.3	-0.3
VISS				*i* Sg	Sg	17 32 01.3	-0.4
	comp=Z,36μm,0.1s						
GBRS	**Gornja Briga**	0.21	181	⇓*i*Pg	Pg	17 32 03.3	+0.1
GBRS				*i* Sg	Sg	17 32 07.2	+1.2
	comp=Z,53μm,0.4s						
CEY	**Cerknica**	0.27	269	⇑*i*Pg	Pg	17 32 05.0	+0.8
CEY				*i* Sg	Sg	17 32 09.6	+1.8
	comp=Z,16μm,0.5s						
CEY	**Cerknica**	0.27	269	⇑*i*Pg	Pg	17 32 04.9	+0.6
CEY				*e*Sg	Sg	17 32 08.6	+0.7
GBAS	**Gorenja Brezov**	0.32	306	⇑*i*Pg	Pg	17 32 05.7	+0.5
GBAS				*i* Sg	Sg	17 32 10.6	+1.1
	comp=Z,38μm,0.8s						
PDKS	**Podkum**	0.34	22	⇓*i*Pg	Pg	17 32 05.6	0.0
PDKS				*e*Sg	Sg	17 32 11.1	+1.0
	comp=Z,74μm,1.2s						
LJU	**Ljubljana**	0.36	326	⇓*i*Pg	Pg	17 32 06.3	+0.3
LJU				*i* Sg	Sg	17 32 12.0	+1.3
	comp=Z,41μm,0.9s						
LJU	**Ljubljana**	0.36	326	P	Pg	17 32 06.4	+0.4
LJU				S	Sg	17 32 12.1	+1.3
LJU				AML	AML		
LJU				AML	AML		
LJU	**Ljubljana**	0.36	326	⇓*i*Pg	Pg	17 32 06.4	+0.4
LJU				*e*Sg	Sg	17 32 11.6	+0.9
VNDS	**Vrh nad Dolski**	0.36	348	⇓*i*Pg	Pg	17 32 06.2	+0.1
VNDS				*e*Sg	Sb	17 32 12.7	-1.2
	comp=Z,56μm,1.1s						
KNDS	**Knezji Dol**	0.37	235	⇓*i*Pg	Pg	17 32 07.0	+0.7
KNDS				*e*Sg	Sb	17 32 14.1	-0.1
BOJS	**Bojanci**	0.39	128	⇓*i*Pg	Pg	17 32 06.3	-0.2
BOJS				*i* Sg	Sg	17 32 11.6	0.0
BOJS	**Bojanci**	0.39	128	P	Pg	17 32 06.3	-0.2
BOJS				S	Sg	17 32 11.6	0.0
BOJS				AML	AML		
	comp=E,48650μm,1.4s						
BOJS				AML	AML		
	comp=N,46200μm,0.8s						
BOJS				AML	AML		
	comp=N,46200μm,0.8s						
BOJS				AML	AML		
	comp=E,48650μm,1.4s						
LEGS	**Legarje**	0.41	60	⇓*i*Pg	Pg	17 32 06.5	-0.4
LEGS				*e*Sg	Sg	17 32 12.7	+0.5
CRES	**Cresnjev**	0.46	80	*i* Pg	Pg	17 32 07.0	-0.8
CRES				*e*Sg	Sg	17 32 14.0	+0.2
	comp=Z,7μm,0.3s						
CRES	**Cresnjev**	0.46	80	⇓*i*Pg	Pg	17 32 07.0	-0.8
CRES				*e*Sg	Sg	17 32 14.0	+0.2
OZLJ	**Ozalj**	0.48	106	*i* Pg	Pg	17 32 08.2	+0.1
OZLJ				Sg	Sg	17 32 14.5	+0.1
RIY	**Rijeka**	0.48	209	*i* Pg	Pg	17 32 08.6	+0.4
RIY				Sg	Sb	17 32 16.2	-0.9
RIY	**Rijeka**	0.48	209	⇓*i*Pg	Pg	17 32 08.4	+0.2
RIY				*e*Sg	Sg	17 32 15.3	+0.9
CESS	**Cesta pri Krsk**	0.51	63	*i* Pg	Pg	17 32 08.6	-0.2
CESS				*i* Sg	Sg	17 32 15.9	+0.6
CRNS	**Crni Vrh**	0.51	311	*i* Pg	Pg	17 32 09.4	+0.5
CRNS				*e*Sg	Sg	17 32 16.9	+1.4
	comp=Z,5μm,0.3s						
JAVS	**Javornik**	0.54	286	⇑*i*Pg	Pg	17 32 09.8	+0.4
JAVS				*e*Sg	Sb	17 32 19.0	-0.2
GCIS	**Gornji Cirnik**	0.58	78	⇓*i*Pg	Pg	17 32 09.9	-0.3
GCIS				*e*Sg	Sg	17 32 18.1	+0.3
	comp=Z,1μm,0.3s						
SKDS	**Skadanscina**	0.59	251	⇑*i*Pg	Pg	17 32 10.5	+0.1
MOZS	**Mozjanca**	0.61	335	⇓*i*Pg	Pg	17 32 11.2	+0.5
DOBS	**Dobrina**	0.61	48	⇓*i*Pg	Pg	17 32 10.4	-0.3
DOBS				*i* Sg	Sg	17 32 19.1	+0.4
GOLS	**Golise**	0.63	65	⇓*i*Pg	Pg	17 32 10.8	-0.2
GOLS				*e*Sg	Sg	17 32 18.8	-0.4
	comp=Z,5μm,0.4s						
VOJS	**Vojsko**	0.71	294	⇑*i*Pg	Pg	17 32 12.7	+0.1
VOJS				*e*Sg	Sb	17 32 24.3	+0.4
TRI	**Trieste**	0.74	268	P	Pg	17 32 12.7	-0.4
TRI				S	Sb	17 32 24.8	+0.3
TRI				AML	AML		
	comp=E,6205μm,1.5s						
TRI				AML	AML		
	comp=N,7775μm,0.5s						
TRI	**Trieste**	0.74	268	⇓*e*Pg	Pg	17 32 13.1	0.0
TRI				*e*Sg	Sb	17 32 24.5	-0.1
TRI	**Trieste**	0.74	268	P	Pg	17 32 13.2	+0.1
TRI	**Trieste**	0.74	268		Pg	17 32 13.2	+0.1
OBKA	**Obir**	0.79	347	*e*Pg	Pg	17 32 14.3	+0.3
OBKA				*e*Sg	Sg	17 32 24.5	+0.2
OBKA	**Obir**	0.79	347	*e*Pg	Pg	17 32 14.3	+0.3
OBKA				*e*Sg	Sg	17 32 24.5	+0.2
OBKA	**Obir**	0.79	347	*i* Pg	Pg	17 32 14.2	+0.2
	comp=N,233nm,0.1s,SNR=738						
OBKA				*i* Sn	Sb	17 32 26.7	+0.6
	comp=N,2μm,0.3s						
OBKA	**Obir**	0.79	347		Pg	17 32 14.2	+0.2
OBKA					Sb	17 32 26.7	+0.6
GORS	**Gorjuse**	0.81	315	*i* Pg	Pg	17 32 14.6	+0.2
GORS				*e*Sg	Sb	17 32 27.5	+0.8
PTJ	**Puntijarka**	0.82	78	*i* Pg	Pg	17 32 14.9	+0.1
PTJ				Sg	Sg	17 32 26.1	+0.6
ZAG	**Zagreb**	0.82	84	*e*Pg	Pb	17 32 15.3	-0.4
ZAG				Sg	Sb	17 32 26.9	-0.1
ZAG	**Zagreb**	0.82	84	P	Pb	17 32 15.2	-0.4
ZAG				S	Sn	17 32 30.6	+1.0
ZAG				AML	AML		
	comp=E,37100μm,1.2s						
ZAG				AML	AML		
	comp=N,42250μm,1.1s						
ZAG				AML	AML		
	comp=E,37100μm,1.2s						
ZAG	**Zagreb**	0.82	84	*e*Pg	Pg	17 32 14.3	-0.5
ZAG				*e*Sg	Sg	17 32 25.6	+0.1
GROS	**Grobnik**	0.86	34	⇓*i*Pg	Pg	17 32 15.2	-0.3
	comp=Z,1μm,0.2s						
SABO	**M.te Sabotino**	0.88	286	P	Pg	17 32 15.8	-0.1
SABO				S	Sb	17 32 30.3	+1.6
SABO				AML	AML		
	comp=E,17400μm,1.6s						
SABO				AML	AML		
	comp=N,14750μm,0.6s						
SABO				AML	AML		
	comp=N,14750μm,0.6s						
SABO				AML	AML		
	comp=E,17400μm,1.6s						
SABO	**M.te Sabotino**	0.88	286	⇑*e*Pg	Pg	17 32 15.3	-0.5
SABO				*e*Sg	Sb	17 32 29.2	+0.5
CADS	**Cadrg**	0.89	303	⇑*i*Pg	Pg	17 32 15.8	-0.2
CADS				*i* Sg	Sb	17 32 30.2	+1.1
	comp=Z,3μm,0.5s						
PERS	**Pernice**	0.92	13	⇓*i*Pg	Pg	17 32 16.2	-0.3
PERS				*e*Sg	Sg	17 32 28.6	+0.1
DRE	**Drenchia**	0.92	298	⇑*e*Pg	Pg	17 32 16.3	-0.3
DRE				*e*Sg	Sb	17 32 30.4	+0.5
SOKA	**Soboth**	0.95	9	*i* Pg	Pg	17 32 16.9	-0.2
	comp=Z,201nm,0.3s,SNR=586						
SOKA				*e*Sn	Sb	17 32 31.0	+0.3
	comp=Z,875nm,0.4s						
SOKA	**Soboth**	0.95	9		Pg	17 32 16.9	-0.2
SOKA					Sb	17 32 31.0	+0.3
ROBS	**Robic**	1.04	299	⇑*i*Pg	Pg	17 32 18.2	-0.6
ROBS				*e*Sg	Sn	17 32 35.1	+0.2
	comp=Z,1μm,0.4s						
NVLJ	**Novalja**	1.18	178	*i* Pg	Pb	17 32 21.9	+0.1
NVLJ				Sg	Sn	17 32 39.4	+1.0
BAD	**Bernadia**	1.20	295	⇓*e*Pg	Pg	17 32 21.2	-0.8
BAD				*e*Sg	Sn	17 32 40.0	+1.0
MYKA	**Terra Mystica**	1.20	318	*e*Pg	Pg	17 32 22.0	0.0
	comp=Z,1μm,0.4s,SNR=638						
MYKA				*i* Sn	Sn	17 32 40.4	+1.3
	comp=Z,2μm,0.4s						
MYKA	**Terra Mystica**	1.20	318		Pg	17 32 22.0	0.0
MYKA					Sn	17 32 40.4	+1.3
ACOM	**Acomizza, Ital**	1.21	312	P	Pg	17 32 22.1	-0.1
ACOM				S	Sn	17 32 41.5	+2.1
ACOM				AML	AML		
	comp=E,39400μm,1.0s						
ACOM				AML	AML		
	comp=N,23950μm,0.8s						
ACOM				AML	AML		
	comp=E,39400μm,1.0s						
ACOM				AML	AML		
	comp=N,23950μm,0.8s						
KALN	**Kalnik**	1.21	71	*i* Pg	Pg	17 32 21.8	-0.4
KALN				Sg	Sb	17 32 38.8	+0.6
PTCC	**Patocco-Chiusa**	1.21	304	P	Pg	17 32 22.3	+0.1
PTCC				S	Sn	17 32 41.4	+2.1
PTCC				AML	AML		
	comp=N,5025μm,0.6s						
PTCC				AML	AML		
	comp=E,8950μm,0.7s						
KOGS	**Kog**	1.22	54	*e*Pg	Pg	17 32 21.8	-0.6
KOGS				*e*Sg	Sb	17 32 39.0	+0.5
	comp=Z,2μm,0.4s						
KOGS	**Kog**	1.22	54	P	Pg	17 32 21.6	-0.8
KOGS				S	Sn	17 32 39.4	-0.1
KOGS				AML	AML		
	comp=N,28950μm,1.0s						
KOGS				AML	AML		
	comp=E,20850μm,1.0s						
KOGS				AML	AML		
	comp=N,28950μm,1.0s						
GEPF	**Gemona**	1.28	295	P	Pg	17 32 23.3	-0.2
GEPF				S	Sn	17 32 43.8	+2.9
GEPF				AML	AML		
	comp=E,9155μm,1.1s						
GEPF				AML	AML		
	comp=N,8120μm,0.5s						
MOSL	**Moslavina**	1.37	95	*e*Pg	Pn	17 32 24.7	+0.1
MOSL				Sg	Sg	17 32 42.6	-0.3
UDBI	**Udbina**	1.39	151	*e*Pg	Pn	17 32 24.9	-0.1
UDBI				Sg	Sg	17 32 42.8	-0.8
PLRO	**Paularo**	1.41	305	*e*Pg	Pn	17 32 25.6	+0.3
CLUD	**Cludinico**	1.52	299	*e*Pg	Pb	17 32 27.4	-0.2
BEHE	**Becsehely**	1.55	61	*e*Pg	Pn	17 32 26.8	-0.3
BEHE				*e*Sg	Sb	17 32 48.1	+0.2
STAL	**STALIGIAL**	1.55	290	P	Pb	17 32 28.5	+0.3
STAL				S	Sg	17 32 51.9	+3.0
STAL				AML	AML		
	comp=E,22700μm,0.9s						
STAL				AML	AML		
	comp=E,29050μm,0.9s						
STAL				AML	AML		
	comp=N,12750μm,0.8s						
STAL				AML	AML		
	comp=N,16100μm,0.8s						
STAL				AML	AML		
	comp=N,16100μm,0.8s						
STAL				AML	AML		
	comp=E,22750μm,0.9s						
STAL				AML	AML		
	comp=E,29050μm,0.9s						
STAL	**STALIGIAL**	1.55	290		Pg	17 32 28.9	+0.1
STAL				Sg	Sg	17 32 51.3	+2.4
ARSA	**Arzberg**	1.58	18	*e*Pn	Pn	17 32 27.6	0.0
ARSA				*e*Pg	Pg	17 32 30.4	+1.1
ARSA				*e*Sg	Sn	17 32 47.9	-0.6
ARSA	**Arzberg**	1.58	18	*e*Pn	Pn	17 32 27.6	0.0
ARSA				*e*Pg	Pg	17 32 30.4	+1.1
ARSA				*e*Sg	Sn	17 32 47.9	-0.6
ARSA	**Arzberg**	1.58	18	⇑P	Pn	17 32 27.7	0.0
ARSA				S	Sg	17 32 50.4	+0.5
ARSA				AML	AML		
	comp=E,3315μm,1.5s						
ARSA				AML	AML		
	comp=N,1555μm,0.5s						
ARSA	**Arzberg**	1.58	18	*i* Pn	Pn	17 32 27.6	0.0
	comp=N,232nm,0.3s,SNR=350						
ARSA	**Arzberg**	1.58	18		Pn	17 32 27.6	0.0
IESO	**Jesolo**	1.60	263	*e*Pg	Pg	17 32 29.6	-0.1
POLC	**Polcenigo**	1.64	281	⇑P	Pb	17 32 30.0	+0.4
POLC				S	Sg	17 32 54.9	+3.2
POLC				AML	AML		
	comp=N,22550μm,0.5s						
POLC				AML	AML		
	comp=N,22550μm,0.5s						
POLC				AML	AML		
	comp=E,19700μm,0.9s						
FVI	**Forni Avoltri**	1.65	302	⇑P	Pb	17 32 29.6	-0.2
FVI				S	Sg	17 32 54.0	+2.1
FVI				AML	AML		
	comp=E,4685μm,1.0s						
FVI				AML	AML		
	comp=N,6470μm,1.1s						
KBA	**Koelnbreinsper**	1.68	323	*e*Pn	Pb	17 32 30.1	-0.3
KBA				*e*Pg	Pg	17 32 32.5	+1.4
KBA				*e*Sg	Sg	17 32 53.4	+0.5
KBA	**Koelnbreinsper**	1.68	323	*e*Pn	Pb	17 32 30.1	-0.3
KBA				*e*Pg	Pg	17 32 32.5	+1.4
KBA				*e*Sg	Sg	17 32 53.4	+0.5
KBA	**Koelnbreinsper**	1.68	323	*i* Pn	Pb	17 32 30.1	-0.3
	comp=N,649nm,0.3s,SNR=610						
KBA				*e*Sn	Sg	17 32 53.6	+0.7
	comp=N,1μm,0.7s						
KBA	**Koelnbreinsper**	1.68	323		Pb	17 32 30.1	-0.3
KBA					Sg	17 32 53.6	+0.7
FRE8	**Fregona**	1.74	280	P	Pb	17 32 31.9	+0.6
FRE8				S	Sg	17 32 57.1	+2.3
DUGI	**Dugi Otok**	1.76	174	*i* Pn	Pb	17 32 31.9	+0.2
DUGI				Sn	Sg	17 32 56.9	+1.4
ABTA	**Abfaltersbach**	1.89	303	*e*Pn	Pb	17 32 33.3	-0.6
	comp=N,492nm,0.5s,SNR=440						
ABTA				*i* Sg	Sg	17 33 01.2	+1.7

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      comp=N,2µm,0.9s
ABTA  Abfaltersbach      1.89 303         Pb     17 32 33.3 -0.6
ABTA                                      Sg     17 33 01.2 +1.7
VARN  Col Varnada, M     1.91 278  ePg    Pn     17 32 32.9 +0.8
BLY   Banja Luka         1.95 120  ePn    Pn     17 32 33.4 +0.8
BLY                                eSg    Sg     17 33 00.6 -0.9
BLY   Banja Luka         1.95 120  ⇑P     Pn     17 32 33.4 +0.8
BLY                                ⇑S     Sb     17 32 59.6 +0.2
BLY   Banja Luka         1.95 120   P     Pn     17 32 32.8 +0.1
BLY                                 S     Sg     17 33 01.6 +0.1
BLY                                 AML   AML
      comp=E,4635µm,0.5s
BLY                                 AML   AML
      comp=E,4550µm,0.5s
BLY                                 AML   AML
      comp=N,2915µm,0.7s
BLY                                 AML   AML
      comp=N,3010µm,0.7s
BLY   Banja Luka         1.95 120  ePn    Pn     17 32 32.7 +0.1
BLY                                eSn    Sn     17 32 58.0 +0.6
BLY   Banja Luka         1.95 120         Pn     17 32 32.6  0.0
MORI  Morici             1.98 161  i Pn   Pb     17 32 35.2 -0.2
MORI                                Sn    Sg     17 33 02.4 -0.2
KIJV  Kijevo             2.08 146  i Pn   Pb     17 32 36.0 -1.0
KIJV                                Sn    Sg     17 33 07.0 +1.4
MGRS  Mrkonjic Grad      2.09 129  ePn    Pn     17 32 35.8 +1.3
MGRS                               eSn    Sn     17 33 01.3 +0.5
MOA   Molln              2.14 350  ePn    Pb     17 32 36.9 -1.2
MOA                                eSn    Sb     17 33 04.0 -1.0
MOA   Molln              2.14 350  ePn    Pn     17 32 36.7 +1.4
MOA                                ePg    Pg     17 32 42.2 +2.3
MOA                                eSg    Sn     17 33 03.1 +0.9
MOA   Molln              2.14 350  ePn    Pn     17 32 36.7 +1.4
MOA                                ePg    Pg     17 32 42.2 +2.3
MOA                                eSg    Sn     17 33 03.1 +0.9
MOA   Molln              2.14 350  ePn    Pn     17 32 36.3 +1.0
      comp=N,22nm,0.2s,SNR=112
MOA                                eSn    Sn     17 33 03.1 +0.9
      comp=N,365nm,0.8s
MOA   Molln              2.14 350         Pn     17 32 36.3 +1.0
MOA                                       LR     17 33 03.1
ZIRJ  Zirje              2.17 164  ePn    Pb     17 32 37.9 -0.8
ZIRJ                                Sn    Sb     17 33 06.7 +0.9
CTI   Castel Tesino      2.23 279   P     Pn     17 32 37.7 +1.1
CTI                                 S     Sb     17 33 08.3 +0.7
CTI                                 AML   AML
      comp=E,4320µm,1.4s
CTI                                 AML   AML
      comp=N,3705µm,0.4s
CTI   Castel Tesino      2.23 279   P     Pn     17 32 37.6 +1.0
CTI   Castel Tesino      2.23 279         Pn     17 32 37.6 +1.0
TEOL  Teolo              2.24 261  ⇑P     Pn     17 32 37.6 +1.0
TEOL                                S     Sg     17 33 12.7 +1.8
TEOL                                AML   AML
      comp=E,12300µm,0.9s
TEOL                                AML   AML
      comp=N,12850µm,1.0s
TEOL  Teolo              2.24 261         Pn     17 32 37.6 +1.0
RISI  Rein               2.24 303   P     Pn     17 32 38.1 +1.3
RISI                                S     Sg     17 33 11.1  0.0
RISI                                AML   AML
      comp=E,5080µm,0.7s
RISI                                AML   AML
      comp=N,6025µm,0.6s
CONA  Conrad Observa     2.30  18  i Pn   Pn     17 32 37.9 +0.4
      comp=N,5.4nm,0.2s,SNR=40
CONA                               i Pg   Pg     17 32 44.3 +1.3
      comp=N,178nm,0.7s
CONA                               eSn    Sb     17 33 08.7 -1.0
      comp=N,103nm,0.3s
CONA                               i Sg   Sg     17 33 16.3 +3.4
      comp=N,377nm,0.7s
CONA  Conrad Observa     2.30  18         Pn     17 32 37.9 +0.4
CONA                                      Pg     17 32 44.3 +1.3
CONA                                      LR     17 33 08.7
CONA                                      Lg     17 33 16.3
BRES  Bressanone         2.34 295  ⇑P     Pn     17 32 40.1 +1.9
BRES                                S     Sb     17 33 10.8 -0.2
BRES                                AML   AML
      comp=E,4070µm,0.7s
BRES                                AML   AML
      comp=N,2510µm,1.0s
RJOB  Jochberg           2.43 326  ePn    Pn     17 32 40.7 +1.4
RJOB                               ePg    Pg     17 32 47.1 +1.6
RJOB                               eSg    Sg     17 33 17.6 +0.6
RJOB  Jochberg           2.43 326  ePn    Pn     17 32 40.7 +1.4
RJOB                               ePg    Pg     17 32 47.1 +1.6
RJOB                               eSg    Sg     17 33 17.6 +0.6
KOSI  Kohlern            2.50 288  ⇑P     Pn     17 32 42.0 +1.7
KOSI                                S     Sb     17 33 15.5 +0.1
KOSI                                AML   AML
      comp=E,3835µm,0.8s
KOSI                                AML   AML
      comp=N,4010µm,0.9s
FSSB  Fossombrone        2.51 216  ⇓P     Pn     17 32 41.9 +1.5
FSSB                                AML   AML
      comp=N,7085µm,1.0s
FSSB                                AML   AML
      comp=E,3455µm,0.7s
DOB   Doboj              2.53 112  ePn    Pn     17 32 41.2 +0.6
DOB                                eSn    Sn     17 33 12.6 +0.8
MPAG  Monte Paganucc     2.57 215  ⇓P     Pn     17 32 42.8 +1.6
MPAG                                AML   AML
      comp=E,2235µm,0.6s
MPAG                                AML   AML
      comp=N,2435µm,1.1s
APPI  Appiano            2.60 288   P     Pn     17 32 43.3 +1.7
APPI                                S     Sb     17 33 17.4 -0.9
APPI                                AML   AML
      comp=E,1905µm,1.3s
APPI                                AML   AML
      comp=N,2215µm,1.1s
ARVD  Arcevia            2.61 211   AML   AML
      comp=N,1240µm,1.5s
ARVD                                AML   AML
      comp=E,1440µm,1.5s
ABSI  Aberstueckl        2.62 293   AML   AML
      comp=N,5020µm,0.6s
ABSI                                AML   AML
      comp=E,5145µm,0.7s
ROVR  Rover Verones      2.62 269   P     Pn     17 32 43.0 +1.0
ROVR                                AML   AML
      comp=E,1430µm,1.1s
ROVR                                AML   AML
      comp=N,4020µm,0.9s
ROVR                                AML   AML
      comp=E,3850µm,1.1s
ROVR                                AML   AML
      comp=N,1640µm,0.5s
ROSI  Rosskopf           2.64 298   P     Pn     17 32 44.1 +1.9
ROSI                                S     Sg     17 33 24.2 +0.6
ROSI                                AML   AML
      comp=E,2500µm,1.2s
ROSI                                AML   AML
      comp=N,2760µm,0.6s
NARO  Abbazia di Nar     2.66 218   AML   AML
      comp=N,2240µm,1.5s
NARO                                AML   AML
      comp=E,2615µm,1.6s
WTTA  Wattenberg         2.67 306   P     Pn     17 32 45.0 +2.3
WTTA                                S     Sb     17 33 20.1 -0.3
WTTA                                AML   AML
      comp=N,1370µm,0.9s
WTTA                                AML   AML
      comp=E,1550µm,1.2s
WTTA  Wattenberg         2.67 306  ePn    Pn     17 32 44.4 +1.7
      comp=E,100nm,0.3s,SNR=101
WTTA                                Sn    Sb     17 33 20.4 +0.1
      comp=E,805nm,1.0s
WTTA  Wattenberg         2.67 306   P     Pn     17 32 44.4 +1.7
WTTA                                             17 33 20.4
WTTA  Wattenberg         2.67 306         Pn     17 32 44.4 +1.7
WTTA                                      Sb     17 33 20.4 +0.1
FRON  Frontone           2.68 215   AML   AML
      comp=E,3255µm,0.7s
FRON                                AML   AML
      comp=N,3470µm,1.4s
EL6   Elcito             2.71 207   AML   AML
      comp=E,4620µm,1.2s
EL6                                 AML   AML
      comp=N,4265µm,1.6s
MTRZ  Monterenzio        2.74 241   AML   AML
      comp=E,3430µm,0.8s
MTRZ                                AML   AML
      comp=N,3030µm,1.0s
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MTRZ                                AML   AML
      comp=E,3560µm,0.8s
MTRZ                                AML   AML
      comp=N,3055µm,1.0s
PIEI  Pieia              2.74 217   AML   AML
      comp=N,1670µm,0.7s
PIEI                                AML   AML
      comp=E,1685µm,1.1s
WATA  Walderalm          2.74 307  i Pn   Pn     17 32 45.7 +2.0
      comp=E,86nm,0.4s,SNR=56
WATA                               eSn    Sb     17 33 20.4 -2.0
      comp=E,155nm,0.4s
WATA  Walderalm          2.74 307   P     Pn     17 32 45.7 +2.0
WATA                                             17 33 20.4
WATA  Walderalm          2.74 307         Pn     17 32 45.7 +2.0
WATA                                      Sb     17 33 20.4 -2.0
LMD   Lutirano           2.77 234   AML   AML
      comp=N,1398µm,1.3s
LMD                                 AML   AML
      comp=E,1220µm,0.8s
PARC  Parchiule          2.79 222   AML   AML
      comp=E,2695µm,1.2s
PARC                                AML   AML
      comp=N,1620µm,0.9s
RICI  Ricice             2.79 143  i Pn   Pn     17 32 46.5 +2.3
SNTG  Esanatoglia        2.83 209   AML   AML
      comp=E,2145µm,0.7s
SNTG                                AML   AML
      comp=E,255µm,0.6s
SNTG                                AML   AML
      comp=N,2610µm,1.2s
SNTG                                AML   AML
      comp=N,370µm,0.6s
CAVE  Cavezzo            2.83 253   AML   AML
      comp=E,4045µm,1.6s
CAVE                                AML   AML
      comp=N,4005µm,0.8s
BRIS  BRISIGHELLA        2.84 237   AML   AML
      comp=E,2460µm,1.3s
BRIS                                AML   AML
      comp=N,2190µm,1.2s
ATFO  Monte Foce - G     2.87 215   AML   AML
      comp=N,3780µm,1.1s
ATFO                                AML   AML
      comp=E,5090µm,1.0s
BADI  Badiali            2.89 220   AML   AML
      comp=N,2130µm,0.7s
BADI                                AML   AML
      comp=E,2270µm,1.0s
SQTA  Sankt Quirin       2.90 302   Pn    Pn     17 32 48.4 +2.6
      comp=E,89nm,0.4s,SNR=81
SQTA                               eSn    Sb     17 33 24.8 -2.0
      comp=E,419nm,0.8s
SQTA  Sankt Quirin       2.90 302         Pn     17 32 48.4 +2.6
SQTA                                      Sb     17 33 24.8 -2.0
ZST   Bratislava         2.91  32  eP     Pn     17 32 45.1 -0.7
ZST                                e             17 33 17.9
ZST   Bratislava         2.91  32  ePN    Pn     17 32 45.1 -0.7
ZST                                eSN    Sn     17 33 17.9 -3.2
ZST                                eSG    Sg     17 33 31.3 -1.1
MAKA  Makarska           2.92 147  ePn    Pn     17 32 48.6 +2.7
ATVO  AVT- Monte Val     2.92 217   AML   AML
      comp=N,2570µm,1.6s
ATVO                                AML   AML
      comp=E,2065µm,1.0s
MAGA  Magasa             2.93 272   AML   AML
      comp=E,8485µm,0.5s
MAGA                                AML   AML
      comp=N,5450µm,0.5s
CRE   Caprese Michel     2.95 225   AML   AML
      comp=E,1145µm,1.1s
CRE                                 AML   AML
      comp=N,1240µm,0.6s
MURB  Monte Urbino       2.97 214         Pn     17 32 48.5 +1.8
ATCC  AVT- Casa Cast     3.00 212   AML   AML
      comp=E,3385µm,0.8s
ATCC                                AML   AML
      comp=N,2650µm,0.5s
SALO  Salr               3.01 269         Pn     17 32 48.5 +1.3
MABI  Malga Bissina      3.02 277   AML   AML
      comp=E,976µm,0.6s
MABI                                AML   AML
      comp=N,1545µm,0.7s
MOTA  Moosalm            3.02 303  i Pn   Pn     17 32 49.5 +2.0
      comp=N,40nm,0.4s,SNR=52
MOTA                               i Sn   Sb     17 33 29.4 -1.0
      comp=N,213nm,0.6s
MOTA  Moosalm            3.02 303   P     Pn     17 32 49.5 +2.0
MOTA                                             17 33 29.4
MOTA  Moosalm            3.02 303         Pn     17 32 49.5 +2.0
MOTA                                      Sb     17 33 29.4 -1.0
ZCCA  Zocca              3.06 244   AML   AML
      comp=N,1150µm,1.2s
ZCCA                                AML   AML
      comp=N,1115µm,0.9s
ZCCA                                AML   AML
      comp=E,1240µm,1.5s
ZCCA                                AML   AML
      comp=E,1202µm,1.5s
ZCCA  Zocca              3.06 244         Pn     17 32 49.8 +1.9
MOSI  Grossmontoni       3.09 288   AML   AML
      comp=N,6910µm,1.0s
MOSI                                AML   AML
      comp=E,6020µm,0.9s
ATTE  AVT- Monte Tez     3.10 216   AML   AML
      comp=N,1460µm,1.3s
ATTE                                AML   AML
      comp=E,1725µm,1.1s
FETA  Feichten           3.10 296  ePn    Pn     17 32 51.1 +2.4
      comp=E,30nm,0.4s,SNR=39
FETA                               i Sn   Sb     17 33 33.9 +1.2
      comp=E,294nm,0.8s
FETA  Feichten           3.10 296         Pn     17 32 51.0 +2.4
FETA                                      Sb     17 33 33.9 +1.2
ASSB  Assisi San Ben     3.11 211   AML   AML
      comp=E,1845µm,1.5s
ASSB                                AML   AML
      comp=N,2480µm,0.9s
MODS  Modra-Piesok       3.12  32  eP     Pn     17 32 47.5 -1.3
MODS  Modra-Piesok       3.12  32  ePN    Pn     17 32 47.5 -1.3
MODS                               ePG    Pg     17 32 57.8 -1.0
MODS                               eSG    Sg     17 33 38.3 -0.9
NRCA  Norcia             3.16 203         Pn     17 32 49.8 +0.5
SRO   Srobarova          3.17  48  eSN    Sn     17 33 23.0 -4.6
GEC2  GERESS Array S     3.19 347  ePn    Pn     17 32 50.4 +0.6
GEC2                               ePg    Pg     17 32 59.3 -0.8
GEC2                               eSn    Sn     17 33 27.0 -1.2
GEC2                               eSg    Sg     17 33 43.2 +1.7
GEC2  GERESS Array S     3.19 347  ePn    Pn     17 32 50.4 +0.6
GEC2                               ePg    Pg     17 32 59.3 -0.8
GEC2                               eSn    Sn     17 33 27.0 -1.2
GEC2                               eSg    Sg     17 33 43.2 +1.7
GEC2  GERESS Array S     3.19 347         Pn     17 32 50.5 +0.6
GERES GERESS Array B     3.19 347   Pn    Pn     17 32 50.3 +0.5
      comp=N,4.7nm,0.3s,baz=166,slow=12,SNR=96
GERES                               Lg    Lg     17 33 44.0
      comp=N,25nm,0.3s,baz=153,slow=27,SNR=5.7
GERES GERESS Array B     3.19 347   P     Pn     17 32 50.4 +0.6
GERES GERESS Array B     3.19 347         Pn     17 32 50.4 +0.6
MTCR  Monte La Croce     3.21 239   AML   AML
      comp=N,1300µm,1.3s
MTCR                                AML   AML
      comp=E,1169µm,1.3s
RETA  Reutte             3.29 303  i Pn   Pn     17 32 53.0 +1.8
      comp=E,25nm,0.3s,SNR=18
RETA                               eSg    Sg     17 33 50.4 +5.7
      comp=E,347nm,0.8s
RETA  Reutte             3.29 303         Pn     17 32 53.0 +1.8
RETA                                      Lg     17 33 50.4
SMOL  Smolenice          3.30  32  eP     Pn     17 32 50.6 -0.5
SMOL  Smolenice          3.30  32  ePN    Pn     17 32 50.6 -0.5
SMOL                               eSG    Sg     17 33 47.4 +2.6
PRMA  PARMA              3.33 254         Pn     17 32 53.2 +1.7
POPM  Popiglio           3.35 241   AML   AML
      comp=E,794µm,0.4s
POPM                                AML   AML
      comp=N,1440µm,1.4s
HAPS  Han Pijesak,Bl     3.38 118  ePn    Pn     17 32 53.1 +0.8
HAPS                               eSn    Sn     17 33 32.4 -0.3
HAPS  Han Pijesak,Bl     3.38 118  ePn    Pn     17 32 52.5 +0.2
HAPS                               eSn    Sn     17 33 33.2 +0.5
OSSC  Osservatorio P     3.38 230   AML   AML
      comp=N,968µm,1.1s
OSSC                                AML   AML
      comp=E,1195µm,0.8s
OSSC                                AML   AML
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      comp=E,1130µm,0.9s
OSSC                                AML   AML
      comp=N,1125µm,1.1s
OSSC  Osservatorio P     3.38 230         Pn     17 32 52.9 +0.6
LNSS  Leonessa           3.39 203   AML   AML
      comp=N,1520µm,1.0s
LNSS                                AML   AML
      comp=E,2340µm,1.2s
FUR   Furstenfeldbru     3.42 316  ePn    Pn     17 32 54.3 +1.4
FUR                                ePg    Pg     17 33 04.3 -0.3
FUR                                eSg    Sg     17 33 47.9 -1.0
FUR   Furstenfeldbru     3.42 316  ePn    Pn     17 32 54.3 +1.4
FUR                                ePg    Pg     17 33 04.3 -0.3
FUR                                eSg    Sg     17 33 47.9 -1.0
MGAB  Montegabbione      3.43 215   AML   AML
      comp=E,2040µm,0.9s
MGAB                                AML   AML
      comp=N,2030µm,1.1s
MGAB                                AML   AML
      comp=N,2260µm,1.1s
MGAB                                AML   AML
      comp=E,1940µm,0.9s
KRUC  Moravsky           3.49  17  ePN    Pn     17 32 53.9 +0.1
KRUC                               ePG    Pg     17 33 04.0 -1.8
KRUC                               eSN    Sn     17 33 33.9 -1.5
KHC   Kasperske Hory     3.49 347  ePN    Pn     17 32 54.6 +0.8
KHC                                ePG    Pg     17 33 05.6 -0.2
KHC                                eSG    Sg     17 33 53.5 +2.5
      comp=E,450nm,1.0s
KHC   Kasperske Hory     3.49 347d iP     Pn     17 32 54.9 +1.1
KHC   Kasperske Hory     3.49 347         Pn     17 32 53.9 +0.1
VLC   Villacollemand     3.52 245         Pn     17 32 54.5 +0.3
CARD  Cardoso            3.52 242   AML   AML
      comp=E,572µm,0.5s
CARD                                AML   AML
      comp=N,690µm,1.3s
AQU   L'Aquila           3.54 197  ePn    Pn     17 32 55.4 +0.9
AQU                                eSn    Sn     17 33 37.4 +0.7
AQU   L'Aquila           3.54 197   P     Pn     17 32 55.2 +0.7
AQU   L'Aquila           3.54 197         Pn     17 32 55.2 +0.7
STON  Ston               3.54 143  ePn    Pn     17 32 57.1 +2.6
STON                               eSn    Sb     17 33 41.8 -3.4
STON  Ston               3.54 143  ePn    Pn     17 32 56.9 +2.4
STON  Ston               3.54 143   AML   AML
      comp=E,1115µm,0.8s
STON                                AML   AML
      comp=N,946µm,0.6s
STON  Ston               3.54 143  ePn    Pn     17 32 55.2 +0.7
STON                               eSn    Sn     17 33 37.6 +1.0
TEKS  Tekeris            3.54 108  ePn    Pn     17 32 56.6 +2.0
TEKS  Tekeris            3.54 108  ePn    Pn     17 32 55.6 +1.0
TEKS                               eSn    Sn     17 33 37.3 +0.5
FRGS  Fruska Gora        3.56  98  ePn    Pn     17 32 55.2 +0.3
FRGS                               eSn    Sn     17 33 38.0 +0.7
DAVOX Davos/Dischmat     3.58 289   Pn    Pn     17 32 57.4 +2.3
      comp=N,27nm,0.3s,baz=90,slow=12,SNR=158
DAVOX                               Sn    Sb     17 33 44.4 -2.1
      comp=N,36nm,0.3s,baz=222,slow=18,SNR=6.8
DAVOX                               Lg    Lg     17 33 57.3
      comp=N,20nm,0.3s,baz=349,slow=23,SNR=7.5
DAVOX Davos/Dischmat     3.58 289   P     Pn     17 32 57.4 +2.3
DAVOX                                            17 33 44.4
DAVOX Davos/Dischmat     3.58 289         Pn     17 32 57.4 +2.3
DAVOX                                     Sb     17 33 44.4 -2.1
MAIM  Mastiano           3.58 241   AML   AML
      comp=N,718µm,0.9s
MAIM                                AML   AML
      comp=E,604µm,0.9s
TREC  Trest              3.58   7  ePN    Pn     17 32 56.0 +0.9
TREC                               ePG    Pg     17 33 06.3 -1.3
TREC                               eSN    Sn     17 33 36.1 -1.6
TREC  Trest              3.58   7  eP     Pn     17 32 56.0 +0.9
TREC                               e             17 33 36.1
GRAM  Graiana            3.59 251   AML   AML
      comp=N,1280µm,0.7s
GRAM                                AML   AML
      comp=E,1940µm,1.6s
WET   Wettzell           3.65 340  ePn    Pn     17 32 56.4 +0.5
WET                                ePg    Pg     17 33 09.1 +0.3
WET                                eSg    Sg     17 33 55.3 -0.7
WET   Wettzell           3.65 340  ePn    Pn     17 32 56.4 +0.5
WET                                ePg    Pg     17 33 09.1 +0.3
WET                                eSg    Sg     17 33 55.3 -0.7
PII   Pisa               3.66 238   AML   AML
      comp=E,1845µm,1.2s
PII                                 AML   AML
      comp=N,1805µm,0.5s
JAVC  Velka Javorina     3.67  31  ePN    Pn     17 32 56.8 +0.4
JAVC                               eSN    Sn     17 33 38.9 -1.1
FIAM  Fiamignano         3.69 200   AML   AML
      comp=N,1260µm,1.5s
FIAM                                AML   AML
      comp=E,773µm,1.1s
DAVA  Damuels            3.74 296  ePn    Pn     17 32 59.5 +2.2
DAVA                               ePg    Pg     17 33 11.4 +0.8
DAVA  Damuels            3.74 296  ePn    Pn     17 32 59.5 +2.2
DAVA                               ePg    Pg     17 33 11.4 +0.8
DAVA  Damuels            3.74 296  i Pn   Pn     17 32 59.7 +2.3
      comp=E,27nm,0.4s,SNR=16
DAVA                               eSn    Sb     17 33 49.0 -2.1
      comp=E,151nm,0.6s
DAVA  Damuels            3.74 296         Pn     17 32 59.7 +2.3
DAVA                                      Sb     17 33 49.0 -2.1
VRAC  Vranov             3.76  18   Pn    Pn     17 32 57.9 +0.3
      comp=E,1.7nm,0.3s,baz=194,slow=14,SNR=17
VRAC                                Sn    Sn     17 33 40.3 -1.9
      comp=E,2.5nm,0.3s,baz=124,slow=11,SNR=3.2
VRAC                                Lg    Lg     17 33 57.3
      comp=E,3.9nm,0.3s,baz=321,slow=22,SNR=3.9
VRAC  Vranov             3.76  18  ⇑P     Pn     17 32 58.3 +0.7
VRAC  Vranov             3.76  18   P     Pn     17 32 57.9 +0.3
VRAC                                             17 33 40.3
VRAC  Vranov             3.76  18  ePN    Pn     17 32 57.7 +0.1
VRAC                               ePG    Pg     17 33 08.9 -2.1
VRAC                               eSN    Sn     17 33 40.5 -1.7
VRAC  Vranov             3.76  18         Pn     17 32 57.9 +0.3
VRAC                                      Sn     17 33 40.3 -1.9
BBLS  Lazi&#263;i        3.77 118  ePn    Pn     17 32 59.5 +1.8
BBLS                               eSn    Sn     17 33 43.7 +1.3
BBLS  Lazi&#263;i        3.77 118  ePn    Pn     17 32 58.8 +1.1
BBLS                               eSn    Sn     17 33 42.1 -0.3
UBR   Ueberruh           3.77 303  ePn    Pn     17 32 58.0 +0.2
UBR                                ePg    Pg     17 33 12.1 +0.9
UBR                                eSg    Sg     17 34 04.3 +4.2
UBR   Ueberruh           3.77 303  ePn    Pn     17 32 58.0 +0.2
UBR                                ePg    Pg     17 33 12.1 +0.9
UBR                                eSg    Sg     17 34 04.3 +4.2
INTR  Introdacqua        3.79 190         Pn     17 32 57.8 -0.2
LATE  Laterza            3.81 216         Pn     17 32 58.4 +0.2
TUE   Stuetta            3.87 283         Pn     17 33 00.7 +1.5
UPM   Unac-Piva          3.88 129  ePn    Pn     17 33 00.3 +1.0
RUDO  Rudo               3.88 122  ePn    Pn     17 32 59.7 +0.5
VYHS  Vyhne              3.89  44  eP     Pn     17 32 58.8 -0.5
VYHS                               e             17 33 41.7
VYHS  Vyhne              3.89  44  ePN    Pn     17 32 58.8 -0.5
VYHS                               eSN    Sn     17 33 41.7 -3.5
DBRK  Dubrovnik          3.90 141  ePn    Pn     17 33 02.6 +3.1
BRY   Bratogost          3.90 135  ePn    Pn     17 33 00.2 +0.6
BRY                                eSn    Sn     17 33 46.1 +0.3
PLMA  Palmaria, Port     3.91 246   AML   AML
      comp=N,636µm,1.2s
PLMA                                AML   AML
      comp=E,538µm,1.0s
BOB   Bobbio (Coli)      3.91 257   AML   AML
      comp=N,1240µm,1.1s
BOB                                 AML   AML
      comp=E,1300µm,0.8s
TREB  Trebinje           3.95 139  ePn    Pn     17 33 02.5 +2.3
TREB  Trebinje           3.95 139  ePn    Pn     17 33 00.9 +0.7
TREB                               eSn    Sn     17 33 47.2 +0.4
PLONS Plons/SG           3.98 291   AML   AML
      comp=N,722µm,1.1s
PLONS                               AML   AML
      comp=E,445µm,1.0s
PBCC  Pribram            3.98 352  ePN    Pn     17 33 01.3 +0.7
PBCC                               ePG    Pg     17 33 14.4 -0.8
PBCC                               eSG    Sg     17 34 08.3 +1.5
      comp=E,122nm,1.2s
MSSA  Maissana           4.02 251   AML   AML
      comp=N,638µm,0.7s
MSSA                                AML   AML
      comp=E,743µm,1.1s
MSSA  Maissana           4.02 251         Pn     17 33 02.3 +1.2
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DIVS	Divibare	4.03	112	ePn	Pn	17 33 02.5	+1.2
DIVS	Divibare	4.03	112	ePn	Pn	17 33 01.7	+0.4
DIVS				eSn	Sn	17 33 48.9	0.0
MUGIO	Muggio	4.04	275	AML	AML		
	comp=E,498µm,1.1s						
MUGIO				AML	AML		
	comp=N,471µm,1.4s						
SGRT	San Giovanni R	4.04	170		Pn	17 33 01.2	-0.3
CASP	Castiglione de	4.09	225	AML	AML		
	comp=N,264µm,0.5s						
CASP				AML	AML		
	comp=E,261µm,0.8s						
CASP	Castiglione de	4.09	225		Pn	17 33 01.9	-0.2
PSZ	Piszkesteto	4.11	56	⇓P	Pn	17 33 03.1	+0.7
PSZ				⇑S	Sn	17 33 50.0	-0.8
PSZ	Piszkesteto	4.11	56	P	Pn	17 33 01.8	-0.6
PSZ	Piszkesteto	4.11	56		Pn	17 33 01.8	-0.6
MIDA	Miranda	4.12	186	AML	AML		
	comp=N,646µm,0.8s						
MIDA				AML	AML		
	comp=E,743µm,1.0s						
MIDA				AML	AML		
	comp=N,648µm,0.8s						
MIDA				AML	AML		
	comp=E,743µm,1.0s						
GOPC	GO Pecny, Ondr	4.17	360	ePN	Pn	17 33 03.6	+0.4
GOPC				ePG	Pg	17 33 18.2	-0.7
GOPC				eSG	Sg	17 34 14.3	+1.4
	comp=E,961nm,1.5s						
GOPC	GO Pecny, Ondr	4.17	360	eP	Pn	17 33 03.6	+0.4
VARE	Varese	4.23	274	AML	AML		
	comp=N,876µm,0.9s						
VARE				AML	AML		
	comp=E,660µm,1.0s						
HCY	Herceg Novi	4.23	140	ePn	Pn	17 33 04.8	+0.8
PRU	Pruhonice	4.25	358	ePN	Pn	17 33 04.5	+0.3
PRU				ePG	Pg	17 33 19.9	-0.5
PRU				eSG	Sg	17 34 17.4	+2.0
	comp=E,515nm,1.1s						
PRU	Pruhonice	4.25	358	eP	Pn	17 33 04.5	+0.3
TRUS	Trudelj	4.25	109	ePn	Pn	17 33 05.3	+1.1
PRA	Prague	4.34	357	ePN	Pn	17 33 06.4	+1.0
PRA				ePG	Pg	17 33 21.3	-0.7
PRA				eSG	Sg	17 34 20.9	+2.8
	comp=E,1µm,1.4s						
PRA	Prague	4.34	357	eP	Pn	17 33 06.4	+1.0
VAGA	Valle Agricola	4.35	186	AML	AML		
	comp=E,400µm,0.9s						
VAGA				AML	AML		
	comp=N,559µm,1.2s						
IVAS	Ivanjica	4.38	118	ePn	Pn	17 33 06.8	+0.7
ROTZ	Rotzenmuhle	4.39	337	ePn	Pn	17 33 06.2	0.0
ROTZ				ePg	Pg	17 33 23.1	0.0
ROTZ				eSg	Sg	17 34 21.9	+2.0
ROTZ	Rotzenmuhle	4.39	337	ePn	Pn	17 33 06.2	0.0
ROTZ				ePg	Pg	17 33 23.1	0.0
ROTZ				eSg	Sg	17 34 21.9	+2.0
MORC	Moravsky Berou	4.43	24	⇓P	Pn	17 33 07.1	+0.3
MORC	Moravsky Berou	4.43	24	P	Pn	17 33 06.9	+0.1
MORC	Moravsky Berou	4.43	24	ePN	Pn	17 33 07.0	+0.1
MORC				ePG	Pg	17 33 24.4	+0.5
MORC				eSN	Sn	17 33 56.3	-2.5
MORC	Moravsky Berou	4.43	24		Pn	17 33 06.9	+0.1
SJES	Sjenica	4.45	122	ePn	Pn	17 33 09.3	+2.2
KRLC	Kraliky	4.53	16	ePN	Pn	17 33 08.9	+0.8
KRLC				ePG	Pg	17 33 24.0	-1.7
KRLC				eSG	Sg	17 34 25.5	+1.1
	comp=N,396nm,1.1s						
KRLC	Kraliky	4.53	16	eP	Pn	17 33 08.9	+0.8
GRUS	Gruza	4.59	112	ePn	Pn	17 33 10.2	+1.3
PCP	Piancastagn	4.59	257	AML	AML		
	comp=E,312µm,1.2s						
PCP				AML	AML		
	comp=N,332µm,1.1s						
PDG	Podgorica	4.61	134	ePn	Pn	17 33 12.3	+3.2
PDG	Podgorica	4.61	134	⇑P	Pn	17 33 12.0	+2.9
PDG				⇓S	Sn	17 34 06.7	+3.7
PDG	Podgorica	4.61	134	ePn	Pn	17 33 10.1	+1.0
PDG				eSn	Sn	17 34 02.7	-0.2
PDG	Podgorica	4.61	134		Pn	17 33 10.5	+1.3
MANZ	Manzenberg	4.62	338	ePn	Pn	17 33 09.3	0.0
MANZ				ePg	Pg	17 33 27.5	+0.1
MANZ				eSg	Sg	17 34 28.5	+1.3
MANZ	Manzenberg	4.62	338	ePn	Pn	17 33 09.3	0.0
MANZ				ePg	Pg	17 33 27.5	+0.1
MANZ				eSg	Sg	17 34 28.5	+1.3
GRA1	Grafenberg Arr	4.63	330		Pn	17 33 09.8	+0.3
GRF	Grafenberg Arr	4.63	330	ePn	Pn	17 33 09.1	-0.4
GRF				ePg	Pg	17 33 27.8	+0.1
GRF				eSg	Sg	17 34 28.2	+0.5
GRF	Grafenberg Arr	4.63	330	ePn	Pn	17 33 09.1	-0.4
GRF				ePg	Pg	17 33 27.8	+0.1
GRF				eSg	Sg	17 34 28.2	+0.5
GRF	Grafenberg Arr	4.63	330	P	Pn	17 33 09.8	+0.3
LANS	Liptovska Anna	4.64	41	eP	Pn	17 33 11.0	+1.3
LANS				e		17 34 01.9	
LANS	Liptovska Anna	4.64	41	ePN	Pn	17 33 11.0	+1.3
LANS				eSN	Sn	17 34 01.9	-2.1
OKC	Ostrava-Krasne	4.67	28	ePN	Pn	17 33 10.4	+0.4
OKC	Ostrava-Krasne	4.67	28	eP	Pn	17 33 10.4	+0.4
PAOL	Paolisi	4.71	182		Pn	17 33 11.5	+0.8
DPC	Dobruska-Polom	4.72	12	ePN	Pn	17 33 11.3	+0.6
DPC				ePG	Pg	17 33 27.3	-2.0
DPC				eSN	Sn	17 34 03.7	-2.1
DPC				eSG	Sg	17 34 31.8	+1.4
	comp=N,223nm,1.2s						
DPC	Dobruska-Polom	4.72	12	eP	Pn	17 33 11.3	+0.6
DPC				e		17 34 03.7	
DPC				smax	smax		
	comp=N,223nm,1.2s						
DRME	Dracevica, Mon	4.75	137	ePn	Pn	17 33 12.0	+0.8
DRME				eSn	Sn	17 34 05.8	-0.8
NKC	Novy Kostel	4.76	341	ePN	Pn	17 33 11.4	+0.1
NKC				ePG	Pg	17 33 29.1	-1.1
NKC				eSG	Sg	17 34 33.1	+1.2
	comp=N,1µm,1.5s						
NKC	Novy Kostel	4.76	341	eP	Pn	17 33 11.4	+0.1
BZS	Buzias	4.77	89	⇓P	Pn	17 33 11.6	+0.3
PVCC	Panska Ves	4.79	358	ePN	Pn	17 33 11.8	+0.2
PVCC				ePG	Pg	17 33 29.1	-1.6
PVCC				eSG	Sg	17 34 33.7	+1.0
	comp=N,2µm,1.2s						
PVCC	Panska Ves	4.79	358	eP	Pn	17 33 11.8	+0.2
SIRR	Siria	4.80	81	⇓P	Pn	17 33 13.2	+1.4
UPC	Upice	4.83	9	ePN	Pn	17 33 13.2	+1.0
UPC				ePG	Pg	17 33 29.5	-2.0
UPC				eSG	Sg	17 34 35.9	+1.8
	comp=N,613nm,1.0s						
UPC	Upice	4.83	9	eP	Pn	17 33 13.2	+1.0
FINB	Finale Ligure	4.86	254	AML	AML		
	comp=N,190µm,1.3s						
FINB				AML	AML		
	comp=E,188µm,0.4s						
PALZ	Palazzo San Ge	4.87	170	AML	AML		
	comp=E,1855µm,1.0s						
PALZ				AML	AML		
	comp=N,1680µm,1.3s						
BAI	Bari	4.87	161	ePn	Pn	17 33 13.9	+1.1
BAI				Sn	Sn	17 34 10.9	+1.4
STU	Stuttgart	4.88	310	P	Pn	17 33 12.5	-0.4
STU	Stuttgart	4.88	310		Pn	17 33 12.5	-0.4
OSTC	Ostas	4.91	11	ePN	Pn	17 33 14.1	+0.8
OSTC				ePG	Pg	17 33 31.3	-1.6
OSTC				eSG	Sg	17 34 37.4	+1.0
	comp=N,666nm,1.1s						
CHVC	Chvalec	4.92	9	ePN	Pn	17 33 14.1	+0.7
CHVC				ePG	Pg	17 33 31.2	-1.9
CHVC				eSG	Sg	17 34 37.5	+0.7
	comp=N,828nm,1.5s						
TANN	Tannenbergstha	4.93	342	ePn	Pn	17 33 13.9	+0.3
TANN				ePg	Pg	17 33 33.7	+0.3
TANN				eSg	Sg	17 34 39.7	+2.4
TANN	Tannenbergstha	4.93	342	ePn	Pn	17 33 13.9	+0.3
TANN				ePg	Pg	17 33 33.7	+0.3
TANN				eSg	Sg	17 34 39.7	+2.4
MDVR	Moldovita	4.96	99	⇑P	Pn	17 33 14.7	+0.5
ACER	Acerenza	5.02	170		Pn	17 33 14.3	-0.6
SG1	Sgolgore (BA)	5.09	164	ePn	Pn	17 33 15.8	0.0
SG1				Sn	Sn	17 34 13.6	-1.3
BFO	Black Forest	5.13	303	ePn	Pn	17 33 16.8	+0.4
BFO				ePg	Pg	17 33 36.2	-1.0
BFO				eSg	Sg	17 34 44.5	+0.9
BFO	Black Forest	5.13	303	ePn	Pn	17 33 16.8	+0.4
BFO				ePg	Pg	17 33 36.2	-1.0
BFO				eSg	Sg	17 34 44.5	+0.9
BFO	Black Forest	5.13	303	P	Pn	17 33 17.2	+0.8
BFO	Black Forest	5.13	303		Pn	17 33 17.2	+0.8
BRG	Berggiesshubel	5.17	354	PN	Pn	17 33 17.0	+0.2
BRG				PG	Pg	17 33 37.8	0.0
BRG				SN	Sn	17 34 18.0	+1.3
BRG				SG	Sg	17 34 43.7	-1.0
	comp=N,197nm,1.1s						
BRG	Berggiesshubel	5.17	354	ePn	Pn	17 33 17.0	+0.2
BRG				ePg	Pg	17 33 38.0	+0.1
BRG				eSg	Sg	17 34 45.0	+0.3
BRG	Berggiesshubel	5.17	354	ePn	Pn	17 33 17.0	+0.2
BRG				ePg	Pg	17 33 38.0	+0.1
BRG				eSg	Sg	17 34 45.0	+0.3
BRG	Berggiesshubel	5.17	354	P	Pn	17 33 17.0	+0.2
BRG						17 34 18.0	
BRG				smax	smax		
	comp=N,197nm,1.1s						
SELS	Selova	5.17	117	ePn	Pn	17 33 17.7	+0.8
PGF	Pioggiola	5.26	235	ePn	Pn	17 33 17.3	-1.0
PGF				eSn	Sn	17 34 14.7	-4.6
	comp=N,128nm,0.8s						
SENIN	Lac Senin/Sane	5.27	279		Pn	17 33 20.8	+2.3
BOVS	Bovan	5.35	111	ePn	Pn	17 33 20.1	+0.8
MOX	Moxa	5.35	338	ePn	Pn	17 33 19.6	+0.3
MOX				eSn	Sn	17 34 20.2	-1.1
MOX	Moxa	5.35	338	ePn	Pn	17 33 19.6	+0.3
MOX				eSn	Sn	17 34 20.2	-1.1
HERR	Herculane	5.43	96	⇑P	Pn	17 33 20.6	+0.1
DRGR		5.58	76	⇓P	Pn	17 33 23.7	+1.2
SBF	Sospel	5.58	253	ePn	Pn	17 33 23.0	+0.5
SBF				eSn	Sn	17 34 22.3	-4.7
	comp=N,205nm,0.7s						
OJC	Ojcow	5.59	35	P	Pn	17 33 20.5	-2.1
OJC	Ojcow	5.59	35	Pn	Pn	17 33 20.5	-2.1
GZR	Gura Zlata	5.60	91	⇑P	Pn	17 33 23.1	+0.2
ZAGS	Zajecar	5.62	107	ePn	Pn	17 33 24.1	+1.0
LPG	La Plagne	5.66	270	eP	Pn	17 33 26.4	+2.5
LPG				eSn	Sn	17 34 24.7	-4.6
	comp=N,40nm,0.6s						
LPL	La Plagne	5.67	271	eP	Pn	17 33 26.4	+2.4
LPL				eSn	Sn	17 34 24.5	-5.0
	comp=N,51nm,0.6s						
CLL	Collm	5.70	348	ePn	Pn	17 33 25.0	+0.9
CLL				eSg	Sg	17 34 59.6	-2.1
CLL	Collm	5.70	348	i Pn	Pn	17 33 25.5	+1.4
	comp=Z,16nm,0.4s						
CLL				i Pg	Pg	17 33 51.6	+3.6
CLL				eSg	Sg	17 34 57.0	-4.7
	comp=Z,660nm,1.2s						
CLL				eLmax		17 35 07.0	
CLL	Collm	5.70	348	ePn	Pn	17 33 25.0	+0.9
CLL				eSg	Sg	17 34 59.6	-2.1
CLL	Collm	5.70	348	i P	Pn	17 33 25.5	+1.4
CLL				pmax	pmax		
	comp=Z,16nm,0.4s						
CLL	Collm	5.70	348		Pn	17 33 24.9	+0.9
TIR	Tirane	5.73	138	ePn	Pn	17 33 26.9	+2.4
TIR	Tirane	5.73	138	⇑P	Pn	17 33 26.4	+1.9
TIR	Tirane	5.73	138	P	Pn	17 33 25.3	+0.8
TIR	Tirane	5.73	138		Pn	17 33 25.3	+0.8
MBDF	Montbardon	5.77	263	ePn	Pn	17 33 24.3	-1.0
MBDF				eSn	Sn	17 34 26.5	-5.3
	comp=Z,57nm,0.5s						
BNI	Bardonecchia	5.77	266	P	Pn	17 33 24.8	-0.5
BNI	Bardonecchia	5.77	266		Pn	17 33 24.8	-0.5
ECH	Echery	5.79	298	P	Pn	17 33 25.7	+0.3
ECH	Echery	5.79	298		Pn	17 33 25.7	+0.3
CDF	Champ du Feu	5.80	300	ePn	Pn	17 33 25.4	-0.2
CDF				eSn	Sn	17 34 26.8	-5.6
	comp=Z,29nm,0.5s						
CDF				eSg	Sg	17 35 01.0	-4.0
	comp=Z,241nm,0.9s						
TRPA	Tarpa	5.80	63	⇓P	Pn	17 33 25.0	-0.5
BARS	Barje	5.82	118	ePn	Pn	17 33 26.8	+1.0
HINF	Hinteralfeld	5.85	294	ePn	Pn	17 33 25.4	-0.8
HINF				eSn	Sn	17 34 29.2	-4.4
	comp=Z,295nm,1.0s						
HINF				eSg	Sg	17 35 03.2	-3.4
	comp=Z,420nm,1.1s						
UZH	Uzhgorod	5.86	58	eP	Pn	17 33 28.5	+2.2
UZH				eS	Sn	17 34 36.8	+3.1
KOLS	Kolonicke sedl	5.99	55	ePG	Pg	17 33 48.7	-4.9
SKO	Skopje	6.10	126	i Pn	Pn	17 33 33.4	+3.8
ZAPS	Zavoj	6.11	111	ePn	Pn	17 33 31.7	+1.8
CABF	La Chapelle	6.12	281	ePn	Pn	17 33 28.6	-1.4
CABF				eSn	Sn	17 34 34.6	-5.8
	comp=Z,99nm,0.8s						
CABF				eSg	Sg	17 35 13.1	-2.3
	comp=Z,254nm,1.1s						
TNS	Taunus Mts	6.19	319	ePn	Pn	17 33 31.7	+0.8
TNS				eSn	Sn	17 34 40.4	-1.6
TNS	Taunus Mts	6.19	319	ePn	Pn	17 33 31.7	+0.8
TNS				eSn	Sn	17 34 40.4	-1.6
FRF	La Foret Royal	6.22	252	ePn	Pn	17 33 30.4	-0.9
FRF				eSn	Sn	17 34 37.2	-5.5
	comp=Z,47nm,0.4s						
HAU	Haudompre	6.23	294	ePn	Pn	17 33 30.5	-0.9
HAU				eSn	Sn	17 34 37.0	-5.9
	comp=Z,232nm,0.8s						
HAU				eSg	Sg	17 35 14.5	-4.3
	comp=Z,218nm,0.9s						
SCTE	Santa Cesarea	6.27	153		Pn	17 33 31.9	-0.1
ORIF	Oris-en-Rattie	6.35	266	eP	Pn	17 33 35.7	+2.5
ORIF				eSn	Sn	17 34 40.7	-5.4
	comp=Z,251nm,1.1s						
OHR	Ohrid	6.36	135	i Pn	Pn	17 33 35.5	+2.2
BOSS	Bosilegrad	6.40	118	ePn	Pn	17 33 35.0	+1.2
LMR	La Mourre	6.41	251	ePn	Pn	17 33 33.5	-0.3
LMR				eSn	Sn	17 34 41.3	-6.0
	comp=Z,29nm,0.4s						
KOE	Koeppel	6.66	317	ePn	Pn	17 33 38.6	+1.2
STIP	Stip	6.70	125	i Pn	Pn	17 33 40.3	+2.3
BGG	Burgeitz	6.71	314	ePn	Pn	17 33 39.1	+1.1
BGG				eSn	Sn	17 34 52.3	-2.5
	comp=Z,110nm,1.4s						
TIP	Timpagrande	6.72	167	⇓P	Pn	17 33 41.0	+2.8
TIP	Timpagrande	6.72	167		Pn	17 33 39.3	+1.1
SMRF	Simiane la Rot	6.80	258	ePn	Pn	17 33 39.7	+0.4
SMRF				eSn	Sn	17 34 51.3	-5.7
	comp=Z,38nm,0.7s						
PAGF	Fort de Pagny	6.80	298	eP	Pn	17 33 42.1	+2.8
	baz=115						
PAGF				eSn	Sn	17 34 50.6	-6.5
	comp=Z,10nm,0.4s,baz=128						
PAGF				eSg	Sg	17 35 33.2	-4.1
	comp=Z,647nm,1.4s						
VTS	Vitosha	6.81	114	ePn	Pn	17 33 40.3	+0.7
VTS	Vitosha	6.81	114	⇓P	Pn	17 33 40.6	+1.1
VTS	Vitosha	6.81	114	P	Pn	17 33 39.3	-0.3
VTS	Vitosha	6.81	114		Pn	17 33 39.2	-0.3
FNA	Florina	6.89	134	P	Pn	17 33 41.3	+0.7
FNA	Florina	6.89	134		Pn	17 33 41.3	+0.7
WLF	Walferdange	7.04	307	Pn	Pn	17 33 45.1	+2.6
WLF				Pg	Pg	17 34 13.7	+0.1
WLF				Sn	Sn	17 35 05.6	+2.9
WLF				Sg	Sg	17 35 46.2	+1.5
WLF	Walferdange	7.04	307	P	Pn	17 33 43.8	+1.3
WLF	Walferdange	7.04	307	Pn	Pn	17 33 43.8	+1.3
SFTF	Sexfontaines	7.13	294	ePn	Pn	17 33 42.7	-1.0
	baz=116						
SFTF				eSn	Sn	17 34 59.0	-6.0
	comp=Z,225nm,1.1s,baz=115						
SFTF				eSg	Sg	17 35 42.2	-5.4
	comp=Z,204nm,1.2s						
VAY	Valandovo	7.16	125	i Pn	Pn	17 33 45.8	+1.6
VOIR		7.19	89	⇑P	Pn	17 33 45.5	+0.8
STB	Steinbach	7.21	315	ePn	Pn	17 33 46.0	+1.2
MEZF	Maizieres J'vi	7.21	296	ePn	Pn	17 33 42.3	-2.5
	baz=115						
MEZF				eSn	Sn	17 35 00.6	-6.4
	comp=Z,31nm,0.5s						
MEZF				eSg	Sg	17 35 45.7	-4.5
	comp=Z,101nm,1.0s						
VIVF	Saint-Julien-l	7.21	267	ePn	Pn	17 33 45.1	+0.2
VIVF				eSn	Sn	17 35 02.6	-4.5
	comp=Z,103nm,1.2s						
HOBG	Hohbusch	7.23	319	ePn	Pn	17 33 46.5	+1.4
SSB	Saint Sauveur	7.23	270	P	Pn	17 33 45.1	-0.1
SSB	Saint Sauveur	7.23	270		Pn	17 33 45.1	-0.1
BUR08	Bucovina Ar. S	7.39	71	Pn	Pn	17 33 47.8	+0.3
BURAR	Bucovina Array	7.40	72	⇑P	Pn	17 33 48.4	+0.9
BURAR	Bucovina Array	7.40	72	Pn	Pn	17 33 46.1	-1.4
MEM	Membach	7.64	313	Pn	Pn	17 33 52.9	+2.2
MEM				SnSn	Sn	17 35 29.9	+12
MEM				Sb	Sb	17 35 41.8	-1.2
SMF	Signal de Mont	7.67	281	ePn	Pn	17 33 50.7	-0.5
SMF				eSn	Sn	17 35 12.6	-5.8
	comp=Z,57nm,0.7s						
LOR	Lormes	7.71	285	ePn	Pn	17 33 51.3	-0.5
	baz=106						
LOR				eSn	Sn	17 35 13.1	-6.3
	comp=Z,37nm,0.4s						
LOR				eSg	Sg	17 36 00.8	-5.6
	comp=Z,98nm,1.1s						
MLR	Muntele Rosu	7.81	88	Pn	Pn	17 33 55.4	+2.1
	comp=Z,0.4nm,0.3s,baz=277,slow=0.7,SNR=4.4						
MLR	Muntele Rosu	7.81	88	⇑P	Pn	17 33 55.8	+2.5
MLR	Muntele Rosu	7.81	88	P	Pn	17 33 55.4	+2.1
MLR	Muntele Rosu	7.81	88		Pn	17 33 54.6	+1.4
BCLA	Clavier	7.90	310	Pn	Pn	17 33 56.0	+1.7
BCLA				Sn	Sn	17 35 25.0	+1.0
BEBN	Eben Emael	7.92	313	Pn	Pn	17 33 57.6	+3.0
SSF	Saint Saulge	7.93	284	ePn	Pn	17 33 53.9	-0.8
SSF				eSn	Sn	17 35 18.0	-6.7
	comp=Z,11nm,0.5s						
LASF	Ste Croix	7.96	262	ePn	Pn	17 33 54.6	-0.5
LASF				eSn	Sn	17 35 19.0	-6.4
	comp=Z,32nm,0.6s						
LIT	Litokhoron	7.97	132	P	Pn	17 33 56.3	+1.0
LIT	Litokhoron	7.97	132		Pn	17 33 56.3	+1.0
GIVF	Givet	8.00	307	ePn	Pn	17 33 54.5	-1.2
GIVF				eSn	Sn	17 35 20.3	-6.2
	comp=Z,30nm,0.7s						
GIVF				eSg	Sg	17 36 09.8	-5.8
	comp=Z,232nm,1.2s						
AVF	Avril sur Loir	8.01	282	ePn	Pn	17 33 54.2	-1.7
AVF				eSn	Sn	17 35 20.5	-6.3
	comp=Z,1.5nm,0.3s						
AVF				eSg	Sg	17 36 09.3	-6.7
	comp=Z,109nm,1.4s						
DOU	Dourbes	8.13	306	Pn	Pn	17 33 59.7	+2.3
	comp=Z,6.6nm,0.4s						
DOU				Sn	Sn	17 35 29.1	-0.4
BMRD	Maredsous	8.13	308	Pn	Pn	17 33 59.6	+2.1
PLOR	Plostina	8.27	85	⇓P	Pn	17 34 00.7	+1.2
BAIF	Baives	8.33	305	ePn	Pn	17 33 59.1	-1.1
BAIF				eSn	Sn	17 35 27.3	-7.2
	comp=Z,10nm,0.6s						
BAIF				eSg	Sg	17 36 20.9	-5.2
	comp=Z,79nm,1.1s						
BGF	Bois d'Agland	8.35	280	ePn	Pn	17 33 59.2	-1.3
BGF				eSn	Sn	17 35 28.2	-6.9
	comp=Z,39nm,0.5s						
HYF	Humbligny	8.54	285	ePn	Pn	17 34 02.6	-0.5
HYF				eSn	Sn	17 35 32.2	-7.5
AGG	Agios Georgios	8.72	138	P	Pn	17 34 04.4	-1.2
AGG	Agios Georgios	8.72	138		Pn	17 34 04.4	-1.2
TCF	Toulx Ste Croi	8.79	278	ePn	Pn	17 34 05.8	-0.8
TCF				eSn	Sn	17 35 38.4	-7.6
	comp=Z,9.7nm,0.4s						
CLF	Chambon-Foret	8.90	289	Pn	Pn	17 34 08.2	+0.2
CAF	Calviac	9.02	269	ePn	Pn	17 34 07.7	-2.0
CAF				eSn	Sn	17 35 44.3	-7.3
	comp=Z,21nm,0.8s						
MTLF	Montolieu	9.31	260	ePn	Pn	17 34 13.5	-0.2
MTLF				eSn	Sn	17 35 50.7	-8.0
	comp=Z,1.8nm,0.3s						
RJF	Les Rejaudoux	9.35	272	ePn	Pn	17 34 12.9	-1.3
RJF				eSn	Sn	17 35 52.5	-7.1
	comp=Z,13nm,0.7s						
ALN	Alexandroupoli	9.51	117	P	Pn	17 34 16.5	+0.1
ALN	Alexandroupoli	9.51	117	Pn	Pn	17 34 16.5	+0.1
LFF	La Frestale	9.95	270	ePn	Pn	17 34 20.8	-1.6
LFF				eSn	Sn	17 36 06.4	-7.8
	comp=Z,27nm,0.9s						
LFF				eSg		17 37 10.7	
	comp=Z,35nm,1.0s						
ITM	Ithomi	10.08	146	Pn	Pn	17 34 21.7	-2.6
MFF	Saint Martin d	10.41	280	ePn	Pn	17 34 26.5	-2.3
MFF	Saint Martin d	10.41	280	eP	Pn	17 34 32.8	+4.0
MFF				eSn	Sn	17 36 17.8	-8.0
	comp=Z,42nm,1.2s						
LDF	La Druitiere	10.56	291	ePn	Pn	17 34 29.5	-1.3
LDF				eSn	Sn	17 36 21.0	-8.4
	comp=Z,46nm,1.2s						
LDF				eSg		17 37 31.1	
	comp=Z,78nm,1.3s						
EPF	Esparros	10.71	260	ePn	Pn	17 34 32.2	-0.7
FLN	La Foliniere	10.83	292	ePn	Pn	17 34 31.8	-2.6
	baz=112						
FLN				eSn	Sn	17 36 28.0	-7.8
	comp=Z,22nm,0.8s						
GRR	Gorron	11.01	290	ePn	Pn	17 34 35.9	-1.1
GRR				eSn	Sn	17 36 31.9	-8.5
	comp=Z,2.6nm,0.4s						
ETSF	Etsaut	11.38	261	ePn	Pn	17 34 40.4	-1.6
ETSF	Etsaut	11.38	261	eP	Pn	17 34 45.2	+3.2
ETSF				eSn	Sn	17 36 40.8	-8.6
	comp=Z,8.5nm,0.7s						
SJPF	Ste Jean	11.77	263	ePn	Pn	17 34 45.7	-1.6
SJPF	Ste Jean	11.77	263	eP	Pn	17 34 51.0	+3.7
SGMF	Saint Gilles	12.12	288	ePn	Pn	17 34 50.8	-1.3
SGMF				eSn	Sn	17 36 58.0	-10
	comp=Z,14nm,0.9s						
QUIF	Quistinic	12.50	286	ePn	Pn	17 34 56.1	-1.2
QUIF				eSn	Sn	17 37 07.6	-9.3
	comp=Z,59nm,1.6s						
ROSF	Rostrenen	12.61	288	ePn	Pn	17 34 57.2	-1.6
ROSF				eSn	Sn	17 37 09.9	-10
	comp=Z,18nm,0.9s						
KONO	Kongsberg	14.28	349	⇑eP	Pn	17 35 21.5	0.0
ESBB	Sonseca Array	15.06	253	P	P	17 35 38.5	+0.8
ESDC	Sonseca Array	15.06	253	Pn	Pn	17 35 31.5	-0.8
	comp=Z,0.4nm,0.3s,baz=67,slow=13,SNR=5.3						
ESDC	Sonseca Array	15.06	253	P	P	17 35 37.8	0.0
PAB	San Pablo	15.39	253	P	Pn	17 35 38.7	+2.0
PAB				pmax	pmax		
	comp=Z,17nm,1.4s						
PAB	San Pablo	15.39	253		Pn	17 35 38.6	+2.0
PAB				IAmb	IAmb	17 35 44.2	
	comp=Z,17nm,1.4s						
NB2	NORSAR Subarra	15.47	353	P	P	17 35 42.4	+0.2
	comp=Z,12nm,1.1s,baz=170,slow=11						
NBO00	NORSAR Array S	15.50	353	P	P	17 35 42.9	+0.4
NC405	NORSAR Array S	15.50	354	P	P	17 35 42.4	-0.1
NC405				IAmb	IAmb	17 35 55.0	
	comp=Z,36nm,1.2s						
OBN	Obninsk	16.67	48	eP	P	17 35 54.4	-1.0
OBN				pmax	pmax		
	comp=Z,43nm,1.5s						
OBN	Obninsk	16.67	48	Pn	Pn	17 35 52.0	-0.9
OBN				IAmb	IAmb	17 35 57.1	
	comp=Z,71nm,1.5s						
VSR	Storozhevoye	17.01	62	eP	P	17 35 58.8	-0.4
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
FINES	FINESS Array B	17.05	19	P	P	17 36 00.5	+0.9
FINES	FINESS Array B	17.05	19	P	P	17 36 00.5	+0.9
FIA1	FINESS Array S	17.05	19	P	P	17 36 00.2	+0.7
FIA1				IAmb	IAmb	17 36 01.9	
	comp=Z,25nm,1.0s						
LPSR	Galich'ya Gora	17.14	58	eP	Pn	17 35 58.9	-0.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MOS	Moscow	17.48	47	eP	P	17 36 04.6	+0.2
MOS				pmax	pmax		
	comp=Z,68nm,1.2s						
KIV	Kislovodsk	19.81	85	eP	P	17 36 30.4	+0.2
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
KVAR	Kislovodsk Arr	19.81	85	LR	LR	17 46 54.0	
	comp=Z,3µm,19.0s,baz=250,slow=45						
KBZ	Khabaz	20.01	86	P	Pn	17 36 34.7	+0.7
	comp=Z,3.5nm,0.8s,baz=296,slow=7.6,SNR=5.2						
KBZ	Khabaz	20.01	86	⇑eP	Pn	17 36 33.7	-0.3
KBZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KBZ	Khabaz	20.01	86	P	Pn	17 36 34.7	+0.7
KLMR	Klimovskoe	20.95	35	eP	P	17 36 41.6	-0.6
KLMR				pmax	pmax		
	comp=Z,72nm,1.6s						
KLMR	Klimovskoe	20.95	35	eP	P	17 36 41.6	-0.6
KLMR				AMP		17 36 44.5	
	comp=Z,72nm,1.6s						

TMCR	Tamitsa	22.53	27	eP	P	17 36 58.3	-0.9
TMCR				pmax	pmax		
	comp=Z,33nm,1.1s						
GNI	Garni	22.53	94	⇓eP	P	17 37 03.1	+3.4
GNI				pmax	pmax		
	comp=Z,56nm,1.7s						
PRGR	Permogore	23.88	37	eP	P	17 37 12.5	-0.4
PRGR				pmax	pmax		
	comp=Z,20nm,0.8s						
ARU	Arti	29.00	52	P	P	17 37 59.2	0.0
	comp=Z,1.9nm,0.6s,baz=263,slow=8.3,SNR=11						
ARU	Arti	29.00	52	d iP	P	17 37 59.2	0.0
ARU						17 38 50.6	
ARU				S	S	17 42 51.1	+0.6
ARU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ARU	Arti	29.00	52	P	P	17 37 58.9	-0.3
TOA0	Torodi Ar. Sit	34.34	203	P	P	17 38 47.9	+1.4
TOA0				IAmb	IAmb	17 38 49.2	
	comp=Z,8.3nm,1.1s						
TORD	Torodi Ar. Bea	34.34	203	P	P	17 38 48.1	+1.5
	comp=Z,4.3nm,0.8s,baz=17,slow=8.4,SNR=9.1						
TORD	Torodi Ar. Bea	34.34	203	P	P	17 38 48.4	+1.9
BRVK	Borovoye	36.02	58	⇓iP	P	17 39 01.9	+1.2
BRVK				pmax	pmax		
	comp=Z,12nm,2.5s						
BRVK	Borovoye	36.02	58	P	P	17 39 00.6	-0.1
BRVK				IAmb	IAmb	17 39 03.2	
	comp=Z,3.9nm,0.8s						
KK31	Karatay Array	39.19	73	P	P	17 39 28.7	+1.1
KK31				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KK31	Karatay Array	39.19	73	P	P	17 39 28.7	+1.1
KKAR	Karatay Array	39.19	73	P	P	17 39 28.4	+0.8
KKAR						17 39 28.5	
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KKAR	Karatay Array	39.19	73	P	P	17 39 28.4	+0.8
KKAR	Karatay Array	39.19	73	P	P	17 39 28.5	+0.9
KKAR				IAmb	IAmb	17 39 29.6	
	comp=Z,5.9nm,1.1s						
GAR	Garm	40.85	79	P	P	17 39 42.9	+1.4
GAR				IAmb	IAmb	17 39 45.1	
	comp=Z,10nm,1.2s						
ARSB	Arslanbob	41.60	75	P	P	17 39 47.0	-0.8
ARSB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARSB	Arslanbob	41.60	75	P	P	17 39 47.0	-0.8
KURK	Kurchatov	41.62	59	⇓eP	P	17 39 48.0	+0.4
KURK				pmax	pmax		
	comp=Z,8.0nm,2.5s						
AAK	Ala-Archa	42.04	72	⇓eP	P	17 39 53.0	+1.6
AAK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
AAK	Ala-Archa	42.04	72	P	P	17 39 51.6	+0.2
AAK				IAmb	IAmb	17 39 54.4	
	comp=Z,10nm,1.3s						
KDJ	Kajisay	44.05	71	P	P	17 40 08.9	+1.2
KDJ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KDJ	Kajisay	44.05	71	P	P	17 40 08.9	+1.2
KDJ				IAmb	IAmb	17 40 10.5	
	comp=Z,4.0nm,0.9s						
ZALV	Zalesovo Beam	44.16	53	P	P	17 40 08.3	+0.2
	comp=Z,0.7nm,0.5s,baz=287,slow=11,SNR=4.6						
ZALV	Zalesovo Beam	44.16	53	i P	P	17 40 07.5	-0.7
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	Zalesovo Beam	44.16	53	P	P	17 40 08.3	+0.2
KSH	Kashi	44.46	75	P	P	17 40 12.8	+1.9
KSH				pP	sP	17 40 17.4	+3.7
KSH				PcS	PcS	17 45 51.4	+3.6
KSH				S	S	17 46 48.3	+1.9
KSH				ScS	ScS	17 50 10.9	+1.2
PRZ	Przheval'sk	44.70	70	P	P	17 40 13.7	+0.8
PRZ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
PRZ	Przheval'sk	44.70	70	P	P	17 40 13.7	+0.8
MK31	Makanchi Array	45.33	63	P	P	17 40 18.4	+0.7
MK31				pmax	pmax		
	comp=Z,4.0nm,1.3s						
MK31	Makanchi Array	45.33	63	P	P	17 40 18.4	+0.7
MKAR	Makanchi Array	45.33	63	P	P	17 40 18.4	+0.7
	comp=Z,2.6nm,1.0s,baz=292,slow=6.4,SNR=14						
MKAR				PcP	PcP	17 41 57.9	+0.8
	comp=Z,0.9nm,0.9s,baz=298,slow=3.2,SNR=5.5						
MKAR	Makanchi Array	45.33	63	ceP	P	17 40 18.3	+0.7
MKAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MKAR	Makanchi Array	45.33	63	P	P	17 40 18.2	+0.6
MKAR	Makanchi Array	45.33	63		PcP	17 41 57.9	+0.8
TLY	Talaya	55.42	49	⇓iP	P	17 41 35.6	+1.7
TLY				pmax	pmax		
	comp=Z,8.0nm,1.8s						
TLY	Talaya	55.42	49	P	P	17 41 34.7	+0.8
TLY				IAmb	IAmb	17 41 36.1	
	comp=Z,3.2nm,0.8s						
SONM	Songino Array	59.03	52	P	P	17 42 00.2	+0.5
	comp=Z,2.2nm,1.0s,baz=286,slow=8.6,SNR=12						
SONM	Songino Array	59.03	52	P	P	17 41 59.8	+0.1
SONM				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	Songino Array	59.03	52	P	P	17 41 59.8	+0.1
LSA	Lhasa	60.27	77	P	P	17 42 09.9	+1.0
LSA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LSA	Lhasa	60.27	77	P	P	17 42 09.9	+1.0
LSA				IAmb	IAmb	17 42 11.4	
	comp=Z,4.0nm,0.8s						
YKA	Yellowknife Ar	64.80	337	P	P	17 42 37.4	-0.6
	comp=Z,0.2nm,0.4s,baz=42,slow=6.3,SNR=6.8						
YKA	Yellowknife Ar	64.80	337	P	P	17 42 37.4	-0.6
YKA	Yellowknife Ar	64.80	337	P	P	17 42 37.4	-0.6
T47A	Sharon Grove	71.83	304	P	P	17 43 20.7	-1.8
CMAR	Chiang Mai Arr	72.98	81	P	P	17 43 30.2	+0.6
	comp=Z,0.5nm,0.4s,baz=309,slow=7.2,SNR=8.7						
CMAR	Chiang Mai Arr	72.98	81	P	P	17 43 30.2	+0.6
CMAR	Chiang Mai Arr	72.98	81	P	P	17 43 30.2	+0.6
BMO	Blue Mountains	80.34	328	P	P	17 44 11.6	+0.6
BMO				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BMO	Blue Mountains	80.34	328	P	P	17 44 11.6	+0.6
BMO				IAmb	IAmb	17 44 12.8	
	comp=Z,8.4nm,1.3s						
ANMO	Albuquerque	83.77	315	ceP	P	17 44 31.9	+2.6
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.7s						
PSUT	Pine Spring	84.27	322	P	P	17 44 33.1	+1.3
R11A	Troy Canyon, C	85.17	323	P	P	17 44 37.9	+1.6
R11A				IAmb	IAmb	17 44 39.1	
	comp=Z,2.6nm,1.2s						
PAHR	Pah Rah Range	85.55	326	P	P	17 44 40.0	+1.9
TXAR	Lajitas Array	86.77	310	P	P	17 44 43.6	-0.7
	comp=Z,0.7nm,0.9s,baz=74,slow=3.9,SNR=4.3						
TXAR	Lajitas Array	86.77	310	P	P	17 44 43.6	-0.7
TXAR	Lajitas Array	86.77	310	P	P	17 44 43.6	-0.7
ASAR	Alice Springs	126.66	87	PKP	PKPdf	17 51 03.4	0.0
	comp=Z,1.3nm,1.0s,baz=353,slow=2.4,SNR=4.3						
ASAR	Alice Springs	126.66	87	PKIKP	PKPdf	17 51 03.4	0.0

JMA 13 17:39:05.7±0.1, 38°.21N×142°.58E, h35^{km}±2^{km}, M3.7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.88	277	P	Pn	17 39 21.7	+0.1
JIKH				eS	Sn	17 39 33.3	+0.1
JIO	Ouri	1.00	285	eS	Sn	17 39 36.7	+0.7
JKMT	Kesennumamotoy	1.05	305	P	Pn	17 39 24.5	+0.5
JKMT				S	Sn	17 39 37.9	+0.5
OFUJ	Ofunato	1.12	321	P	Pn	17 39 25.6	+0.7
OFUJ				S	Sn	17 39 39.5	+0.3
JMK	Ichinoseki	1.30	305	P	Pn	17 39 28.2	+0.9
JMK				S	Sn	17 39 44.2	+0.8
JMM	Marumori	1.45	257	P	Pn	17 39 29.6	+0.2
JOU	Okura	1.52	276	P	Pn	17 39 31.9	+1.6
JOU				eS	Sn	17 39 50.7	+1.8
JFK	Kawauchi	1.59	239	P	Pn	17 39 31.3	-0.1
JFK				eS	Sn	17 39 51.5	+0.7
JOM	Ohasama	1.61	322	P	Pn	17 39 33.1	+1.4
JOM				eS	Sn	17 39 53.0	+1.8
JYK	Kaneyama	1.88	293	P	Pn	17 39 36.9	+1.6
JFT	Otama	1.91	249	P	Pn	17 39 37.0	+1.3
JRG	Rokugo	1.93	309	P	Pn	17 39 39.0	+3.0
JYA	Atsumi	2.28	281	P	Pn	17 39 43.9	+3.0
MAT	Matsushiro	3.86	246	P	Pn	17 40 05.8	+3.2
MAT				eS	Sn	17 40 51.8	+5.1

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*NEIC **13** 18:06:41.9±2.0, 43°.78N±0°.05×105°.26W±0°.06, h0^{km}±2^{km}, ML3.2/59, Error ellipse: s-maj=10.0km s-min=6.6km az=149.0*

*IDC **13** 18:06:41.9±1.6, 43°.73N×105°.46W, h0^{km}, mb3.7/3, mb1 3.7/7, mb1mx3.5/46, mbtmp3.6/7, ML3.3/4, Error ellipse: s-maj=44.7km s-min=7.6km az=148.0*

ISC 13 18:06:40.8±0.8**, 43°.75N**±0°.05×**105°.21W**±0°.07**, h0^{km}, n54, σ1^{s}.50**/55**, mb3.7**/3**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.92	66	Pg	Pn	18 07 00.6	-0.7
K22A	Casper	1.46	222		Pn	18 07 08.2	-0.4
K22A				IAML		18 07 32.2	
	comp=N,367nm,0.3s						
K22A				IAML		18 07 32.4	
	comp=E,332nm,0.3s						
RWWY	Rawlins	2.53	216		Pn	18 07 24.8	+1.4
RWWY				IAML		18 08 01.6	
	comp=E,144nm,0.5s						
N23A	Red Feather La	2.90	191		Pn	18 07 30.6	+2.0
N23A				IAML		18 08 18.0	
	comp=E,92nm,0.5s						
LAO	LASA Array	3.03	347		Pn	18 07 30.6	+0.6
RLMT	Red Lodge	3.22	297		Pn	18 07 33.4	+0.6
RLMT				IAML		18 08 30.1	
	comp=E,70nm,0.3s						
RLMT				IAML		18 08 33.9	
	comp=E,48nm,0.7s						
PD31	Pinedale Array	3.33	254		Pn	18 07 36.1	+1.7
PDAR	Pinedale Array	3.33	254	Pn	Pn	18 07 35.5	+1.2
	comp=E,4.0nm,0.3s,baz=75,slow=16,SNR=32						
PDAR				Lg	Lg	18 08 20.2	
	comp=E,14nm,0.3s,baz=72,slow=32,SNR=8.6						
PDAR	Pinedale Array	3.33	254		Pn	18 07 34.4	+0.1
BW06	Boulder Array	3.33	254		Pn	18 07 35.1	+0.8
OGNE	Ogallala	3.66	139		Pn	18 07 40.6	+1.9
YNE	Yellowstone No	3.67	292		Pn	18 07 39.6	+0.6
YMP	Mirror Lake Pl	3.69	287		Pn	18 07 40.0	+0.5
GCMT	Greycliff	3.78	304		Pn	18 07 41.1	+0.6
H17A	Grant Village	3.92	281		Pn	18 07 43.6	+1.1
ISCO	Idaho Springs	3.96	185		Pn	18 07 45.4	+2.4
FLWY	Flagg Ranch	3.98	277		Pn	18 07 42.2	-1.1
FLWY				IAML		18 08 53.4	
	comp=E,35nm,2.4s						
SNOW	Snow King Moun	4.04	268		Pn	18 07 47.4	+3.2
SNOW				IAML		18 08 54.3	
	comp=E,34nm,0.8s						
SNOW				IAML		18 09 28.6	
	comp=E,31nm,3.1s						
YNR	Norris Junctio	4.05	286		Pn	18 07 44.0	-0.3
YPP	Pitchstone Pla	4.07	279		Pn	18 07 43.7	-1.0
REDW	Red Top Meadow	4.12	267		Pn	18 07 44.8	-0.5
REDW				IAML		18 08 57.7	
	comp=E,33nm,0.6s						
REDW				IAML		18 09 04.4	
	comp=E,29nm,1.6s						
TPAW	Teton Pass	4.18	268		Pn	18 07 46.3	+0.2
TPAW				IAML		18 09 11.9	
	comp=E,25nm,0.6s						
YHH	Holmes Hill	4.19	286		Pn	18 07 47.2	+1.0
FXWY	Fox Creek	4.22	271		Pn	18 07 48.2	+1.6
O20A	White River Ci	4.26	213		Pn	18 07 48.4	+1.3
O20A				IAML		18 09 24.5	
	comp=N,32nm,2.7s						
O20A				IAML		18 09 28.5	
	comp=E,34nm,3.7s						
AHID	Auburn Hatcher	4.42	259		Pn	18 07 48.7	-0.5
AHID				IAML		18 09 10.3	
	comp=N,34nm,0.8s						
AHID				IAML		18 09 17.5	
	comp=E,20nm,2.2s						
YHB	Horse Butte	4.42	285		Pn	18 07 48.9	-0.4
YHL	Hebgen Lake	4.43	286		Pn	18 07 50.1	+0.6
RDMU	Red Mountain	4.54	227		Pn	18 07 54.3	+3.4
QLMT	Earthquake Lak	4.60	286		Pn	18 07 50.6	-1.2
SMCO	Snowmass	4.75	197		Pn	18 07 54.7	+0.6
SMCO				IAML		18 09 18.4	
	comp=E,19nm,0.4s						
SMCO				IAML		18 10 02.6	
	comp=E,19nm,4.8s						
DGMT	Dagmar	4.78	8		Pn	18 07 53.7	-0.3
Q24A	Divide	4.78	179		Pn	18 07 53.1	-1.2
Q24A				IAML		18 09 15.4	
	comp=E,27nm,0.3s						
Q24A				IAML		18 09 16.1	
	comp=N,14nm,0.4s						
KSCO	Kaye Shedlock'	5.11	157		Pn	18 08 00.5	+1.8
HWUT	Hardware Ranch	5.15	248		Pn	18 07 57.6	-1.8
HWUT				IAML		18 09 25.3	
	comp=N,12nm,2.5s						
HWUT				IAML		18 09 30.5	
	comp=N,21nm,1.1s						
TCUT	Toone Canyon	5.29	242		Pn	18 08 01.8	+0.5
MCMT	McKenzie Canyo	5.59	284		Pn	18 08 10.2	+4.7
SPUT	South Promonto	5.88	248		Pn	18 08 08.9	-0.4
P17A	Butcher Ranch,	5.95	226		Pn	18 08 07.0	-3.4
SRU	San Rafael Swe	6.12	223		Pn	18 08 13.4	+0.7
S22A	4UR Ranch, Cre	6.12	192		Pn	18 08 10.5	-2.2
ECSD	EROS Data Cent	6.22	87		Pn	18 08 13.9	0.0
TMUT	Trail Mountain	6.33	227		Pn	18 08 16.2	+0.6
Q16A	Castle Valley	6.59	225		Pn	18 08 19.4	+0.2
MSU	Marysvale	7.42	228		Pn	18 08 31.1	+0.6
ELK	Elko	8.03	251	Pn	Pn	18 08 40.5	+1.7
	comp=N,0.5nm,0.3s,baz=76,slow=8.4,SNR=8.7						
ELK	Elko	8.03	251		Pn	18 08 39.7	+0.9
ANMO	Albuquerque	8.84	187	Pg	Pg	18 09 28.2	-2.0
	comp=N,0.1nm,0.3s,baz=343,slow=17,SNR=3.7						
ULM	Lac du Bonnet	9.10	41	Pn	Pn	18 08 54.5	+1.2
	comp=N,1.1nm,0.3s,baz=227,slow=11,SNR=8.9						
ULM				Pg		18 09 27.7	
	comp=N,1.7nm,0.3s,baz=215,slow=17,SNR=6.5						
ULM				Sn	Sn	18 10 35.7	-0.8
	comp=N,0.7nm,0.3s,baz=226,slow=15,SNR=2.1						
ULM				Lg	Lg	18 11 25.1	
	comp=N,0.5nm,0.3s,baz=129,slow=21,SNR=2.6						
ULM	Lac du Bonnet	9.10	41		Pn	18 08 52.1	-1.3
YKA	Yellowknife Ar	19.57	347	P	Pn	18 11 11.8	+0.6
	comp=N,0.1nm,0.3s,baz=158,slow=11,SNR=4.4						
ZALV	Zalesovo Beam	82.30	354	P	P	18 19 04.2	+0.3
	comp=N,0.4nm,0.4s,baz=14,slow=6.7,SNR=2.7						
BVAR	Borovoye Array	83.53	3	P	P	18 19 11.3	+1.0
	comp=N,0.2nm,0.6s,baz=338,slow=3.4,SNR=2.2						
MKAR	Makanchi Array	89.60	355	P	P	18 19 40.7	+0.5
	comp=N,0.3nm,0.6s,baz=7.4,slow=3.5,SNR=3.9						

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*IDC **13** 18:17:20.9±1.0, 33°.82N×92°.55E, h0^{km}, mb3.8/9, mb1 3.8/13, mb1mx3.6/46, mbtmp3.7/13, ML3.2/4, Error ellipse: s-maj=32.2km s-min=19.5km az=65.0*

*BJI **13** 18:17:24.2±0.0, 33°.88N×92°.61E, h11^{km}, mb3.7/3, ML3.2/5, Ms3.2/1*

ISC 13 18:17:26.9±0.6**, 33°.93N**±0°.08×**92°.47E**±0°.09**, h35^{km}, n27, σ1^{s}.39**/27**, mb3.8**/8**, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAPN	Taplejung	7.73	213	eP	Pn	18 19 17.9	+0.7
GTA	Gaotai	8.05	45	eP	Pn	18 19 23.3	+1.9
GTA				pP		18 19 28.8	
GTA				sP		18 19 31.8	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GUN	Gumba	8.24	225	eP	Pn	18 19 27.0	+2.7
JIRN	Jiri	8.25	222	eP	Pn	18 19 26.7	+2.2
	78nm,1.0s						
ODAN	Odare	8.29	213	eP	Pn	18 19 24.6	-0.3
	7.2nm,0.4s						
RAMN	Ramite	8.60	218	eP	Pn	18 19 29.2	+0.1
	40nm,0.8s						
KKN	Kakani	8.69	227	eP	Pn	18 19 32.2	+1.9
	15nm,0.7s						
PKI	Pulchoki	8.77	226	eP	Pn	18 19 33.1	+1.5
	21nm,0.7s						
PKIN	Phulchoki	8.78	226	eP	Pn	18 19 33.0	+1.5
	14nm,0.5s						
DMN	Daman	8.93	227	eP	Pn	18 19 35.6	+2.0
	9.3nm,0.5s						
GKN	Gorkha	8.94	231	eP	Pn	18 19 35.1	+1.4
DANN	Dangsing	9.30	236	eP	Pn	18 19 40.2	+1.4
	18nm,0.7s						
WMQ	Urumqi	10.55	341	eP	Pn	18 19 54.8	-0.8
XAN	Xi'an	13.66	85	P	Pn	18 20 39.8	+1.7
MKAR	Makanchi Array	14.99	332	Pn	Pn	18 20 54.2	-1.8
	0.0nm,0.3s,baz=149,slow=14,SNR=8.0						
CMAR	Chiang Mai Arr	16.46	158	Pn	Pn	18 21 13.5	-1.7
	0.1nm,0.3s,baz=349,slow=8.6,SNR=3.3						
SONM	Songino Array	17.39	33	P	P	18 21 26.8	-1.0
	0.1nm,0.3s,baz=210,slow=12,SNR=12						
KURBB	Kurchatov Arra	19.55	333	P	P	18 21 51.8	+0.4
	0.1nm,0.3s,baz=140,slow=12,SNR=16						
ZALV	Zalesovo Beam	20.73	347	P	P	18 22 04.1	-0.1
	1.8nm,0.6s,baz=172,slow=11,SNR=8.2						
BVAR	Borovoye Array	24.74	327	P	P	18 22 45.8	+0.9
	0.9nm,0.6s,baz=131,slow=9.5,SNR=8.0						
TIXI	Tiksi	42.36	16	P	P	18 25 16.8	-0.3
	1.1nm,0.6s,baz=219,slow=6.2,SNR=9.8						
FINES	FINESS Array B	49.66	325	P	P	18 26 14.8	0.0
	0.8nm,0.7s,baz=92,slow=6.5,SNR=4.7						
ASAR	Alice Springs	69.53	140	P	P	18 28 30.9	-1.3
	0.7nm,0.7s,baz=323,slow=6.2,SNR=11						
ILAR	Eielson Array	71.32	23	P	P	18 28 42.4	-0.1
	0.5nm,0.9s,baz=301,slow=7.2,SNR=3.6						
INK	Inuvik	72.48	16	P	P	18 28 49.2	-0.2
	0.8nm,0.8s,baz=337,slow=6.3,SNR=2.5						
YKA	Yellowknife Ar	81.47	12	P	P	18 29 39.3	-0.8
	0.5nm,0.9s,baz=326,slow=4.7,SNR=5.8						
TORD	Torodi Ar. Bea	83.42	281	P	P	18 29 50.7	-0.4
	2.3nm,0.8s,baz=44,slow=5.0,SNR=11						

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*TAP **13** 18:24:16.1, 24°.87N×122°.13E, h12^{km}, ML3.2, C*

*JMA **13** 18:24:17.1±0.1, 24°.77N×122°.13E, h33^{km}, M2.7*

ISC 13 18:24:14.1±1.1**, 24°.89N**±0°.02×**122°.24E**±0°.02**, h11**^{km}±9^{km}**, n88, σ0^{s}.84**/160**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.25	297	i P	Pb	18 24 20.6	-0.1
	baz=320						
TWB1				i S	Sb	18 24 23.6	-1.5
	baz=320						
EOS1	EOS1	0.35	196	i P	Pn	18 24 23.0	-2.1
	baz=186						
EOS1				S	Sb	18 24 28.1	+0.2
	baz=186						
NTC	Toucheng	0.37	265	eP	Pb	18 24 22.5	-0.3
	baz=275						
TIPB	Shuangxi	0.38	282	P	Pb	18 24 22.9	-0.1
	baz=290						
TIPB				eS	Sg	18 24 26.9	+0.1
	baz=290						
TWC	Suao	0.45	232	i P	Pb	18 24 23.3	-0.8
	baz=212						
TWC				S	Sg	18 24 28.7	-0.3
	baz=212						
WFSB	Wu-fen Shan	0.45	294	P	Pn	18 24 24.6	-2.0
	baz=303						
WFSB				eS	Sb	18 24 30.9	0.0
	baz=303						
ILA	Ilan	0.46	254	eP	Pb	18 24 23.9	-0.3
	baz=250						
ILA				eS	Sb	18 24 30.7	-0.4
	baz=250						
TWE	Neicheng	0.55	252	i P	Pb	18 24 25.2	-0.4
	baz=240						
TWE				eS	Sg	18 24 32.8	+0.8
	baz=240						
SLBB	Yuanshan	0.56	256	P	Pb	18 24 25.3	-0.8
	baz=253						
SLBB				S	Sg	18 24 32.8	+0.2
	baz=253						
TWA	Mucha	0.60	279	eP	Pn	18 24 28.3	-0.3
	baz=282						
TWA				eS	Sb	18 24 35.1	-0.1
	baz=282						
ENA	Nanau	0.65	225	P	Pb	18 24 27.6	+0.2
	baz=207						
ENA				eS	Sb	18 24 36.1	-0.3
	baz=207						
NHDH	Xindian Distri	0.65	276	P	Pn	18 24 29.4	+0.1
	baz=279						
NHDH				eS	Sb	18 24 37.0	+0.5
	baz=279						
YM01	YM01	0.66	293	i P	Pn	18 24 28.8	-0.7
	baz=299						
YM01				eS	Sb	18 24 37.5	+0.7
	baz=299						
YM08	YM08	0.66	297	eP	Pn	18 24 28.5	-1.0
	baz=303						
ENTT	Nioudou	0.66	248	P	Pb	18 24 27.5	-0.2
	baz=241						
ENTT				eS	Sg	18 24 36.1	+0.5
	baz=241						
YM11	YM11	0.66	295	i P	Pn	18 24 28.8	-0.7
	baz=300						
TAP1	Taipei	0.67	283	eP	Pn	18 24 28.9	-0.6
	baz=286						
YM05	YM05	0.67	294	i P	Pn	18 24 28.9	-0.7
	baz=300						
YM05				eS	Sb	18 24 37.6	+0.5
	baz=300						
YM10	YM10	0.67	293	P	Pn	18 24 28.9	-0.7
	baz=300						
YM10				eS	Sn	18 24 38.5	-1.6
	baz=300						
NWLT	Wulai	0.68	261	i P	Pn	18 24 29.0	-0.6
	baz=259						
NWLT				eS	Sg	18 24 36.6	+0.4
	baz=259						
TAP	Taipei	0.68	283	P	Pn	18 24 28.8	-0.9
	baz=286						
YM04	YM04	0.69	293	i P	Pn	18 24 29.3	-0.5
	baz=298						
YM04				eS	Sb	18 24 38.4	+0.7
	baz=298						
TWY	Chenhua	0.69	304	P	Pn	18 24 29.6	-0.3
	baz=311						
TWY				eS	Sb	18 24 38.7	+0.9
	baz=311						
YM03	YM03	0.69	295	P	Pn	18 24 29.6	-0.4
	baz=301						
YM03				eS	Sn	18 24 39.5	-1.3
	baz=301						
ANP	Anpu	0.71	295	eP	Pn	18 24 29.1	-1.2
	baz=300						
NDT	Datong Townshi	0.72	247	P	Pb	18 24 28.8	+0.1
	baz=242						
NDT				eS	Sg	18 24 38.1	+0.6
	baz=242						
PCYT	Pengchaiyu	0.75	348	eP	Pn	18 24 31.5	+0.8
	baz=6.0						
NTST	Danshui	0.77	291	P	Pn	18 24 31.0	+0.1
	baz=307						
NTST				eS	Sn	18 24 41.4	-1.0
	baz=307						
TWS1	Kuangyinshan	0.77	286	P	Pn	18 24 30.7	-0.3
	baz=301						
TWS1				eS	Sb	18 24 41.1	+1.1
	baz=301						
JYNG	Yonagunijimaku	0.78	124	P	Pn	18 24 31.9	+0.9
JYNG				eS	Sn	18 24 42.8	+0.1
YHNB	Yeheng	0.81	254	P	Pn	18 24 30.7	-0.9
	baz=245						
YHNB				eS	Sg	18 24 40.2	-0.3
	baz=245						
YOJ	Yonaguni jima	0.82	121	eP	Pn	18 24 33.6	+1.9
	baz=117						
YOJ				eS	Sn	18 24 45.2	+1.4
	baz=117						
YOJ	Yonaguni jima	0.82	121	P	Pn	18 24 32.9	+1.2
YOJ				eS	Sn	18 24 44.3	+0.5
NSK	Sanguang	0.83	255	P	Pn	18 24 31.1	-0.7
	baz=261						
NSK				eS	Sg	18 24 41.5	+0.6
	baz=261						
WLTB	Daxi	0.90	268	eP	Pn	18 24 32.8	+0.2
	baz=268						
NNSB	Datong	0.90	240	P	Pn	18 24 31.9	-1.0
	baz=224						
NNSB				eS	Sg	18 24 44.1	+0.7
	baz=224						
NNSH	Datong	0.90	240	P	Pn	18 24 31.9	-0.9
	baz=238						
NNSH				S	Sg	18 24 43.5	+0.1
	baz=238						

NNS	Nan Shan	0.91	240	P	Pn	18 24 32.0	-0.9
	baz=239						
NNS				eS	Sg	18 24 44.0	+0.5
	baz=239						
NACB	Ninganchiao	0.92	219	P	Pn	18 24 32.2	-0.8
	baz=199						
NACB				S	Sg	18 24 42.6	-1.4
	baz=199						
NCUH	Zhongli	0.96	275	eP	Pn	18 24 34.0	+0.5
	baz=276						
ETLH	Xiulin Townshi	0.97	225	P	Pn	18 24 33.2	-0.6
	baz=217						
ETLH				S	Sg	18 24 45.2	-0.3
	baz=217						
TWD	Chiawan	1.00	216	P	Pn	18 24 33.7	-0.4
	baz=200						
TWD				eS	Sg	18 24 46.7	+0.4
	baz=200						
LIOB	Emei	1.14	258	eP	Pn	18 24 36.7	+0.7
	baz=255						
ENLB	Shoufeng	1.14	211	eS	Sn	18 24 53.3	+1.6
	baz=208						
NSTT	Nanjuang	1.15	257	eP	Pg	18 24 37.6	+1.3
	baz=253						
NSTT				eS	Sn	18 24 52.1	+0.1
	baz=253						
TWT	Tachien	1.16	237	eP	Pn	18 24 37.0	+0.6
	baz=221						
TWT				eS	Sb	18 24 51.9	+0.6
	baz=221						
TDCB	Techi	1.17	237	P	Pn	18 24 37.4	+0.8
	baz=221						
TDCB				eS	Sg	18 24 50.9	-1.0
	baz=221						
CHGB	Renai	1.27	230	P	Pg	18 24 39.4	+0.8
	baz=221						
CHGB				eS	Sb	18 24 55.4	+0.6
	baz=221						
ESL	Shilin	1.30	215	eP	Pg	18 24 39.0	-0.1
	baz=204						
ESL				S	Sg	18 24 56.1	+0.2
	baz=204						
WHP	Taichung City	1.32	243	eP	Pg	18 24 39.9	+0.3
	baz=236						
WHP				eS	Sb	18 24 56.8	+0.7
	baz=236						
OWD	Renai	1.34	226	eP	Pg	18 24 40.2	+0.2
	baz=217						
OWD				eS	Sb	18 24 56.8	+0.1
	baz=217						
NMLH	Miaoli	1.36	255	eP	Pg	18 24 41.4	+1.1
	baz=251						
NMLH				eS	Sg	18 24 58.4	+0.4
	baz=251						
EGFH	Guangfu	1.42	211	eP	Pg	18 24 40.5	-1.0
	baz=216						
EGFH				eS	Sn	18 24 58.7	+0.1
	baz=216						
NSY	Sanyi	1.42	251	eP	Pg	18 24 41.4	-0.1
	baz=260						
NSY				eS	Sb	18 24 59.5	+0.6
	baz=260						
TWQ1	Liyutan	1.44	248	eP	Pg	18 24 41.5	-0.2
	baz=258						
TWQ1				eS	Sg	18 25 02.2	+1.7
	baz=258						
IRIF	Iriomote-Funau	1.47	112	S	Sg	18 25 02.9	+1.5
DPDB	Guoxing	1.47	235	eP	Pg	18 24 43.4	+1.0
	baz=218						
DPDB				eS	Sb	18 25 01.1	+0.9
	baz=218						
VWDT	VWDT	1.51	222	P	Pg	18 24 43.4	+0.2
	baz=221						
VWDT				eS	Sb	18 25 02.0	+0.7
	baz=221						
HGSD	Ruisui	1.58	208	eP	Pg	18 24 44.2	-0.2
	baz=182						
HGSD				eS	Sg	18 25 05.8	+0.9
	baz=182						
SMLT	Sun Moon Lake	1.58	231	eP	Pg	18 24 43.7	-0.7
	baz=212						
SMLT				eS	Sg	18 25 05.8	+0.8
	baz=212						
TYC	Yuchr	1.60	232	eP	Pg	18 24 45.3	+0.5
	baz=215						
TYC				eS	Sb	18 25 04.1	+0.3
	baz=215						
TCU	Taichung	1.60	243	eP	Pg	18 24 45.0	+0.1
	baz=257						
TCU				eS	Sb	18 25 04.9	+0.9
	baz=257						
SSLB	Suanglung	1.60	227	eP	Pg	18 24 44.9	-0.1
	baz=217						
SSLB				eS	Sb	18 25 04.4	+0.3
	baz=217						
EHY	Hungye	1.61	211	eP	Pb	18 24 43.4	-0.6
	baz=196						
EHY				eS	Sb	18 25 04.7	+0.4
	baz=196						
HATJ	Hateruma jima	1.65	120	eS	Sg	18 25 05.8	-1.5
YULB	Yu-li	1.72	210	eP	Pb	18 24 44.9	-0.9
	baz=194						
YULB				eS	Sb	18 25 07.7	+0.3
	baz=194						
WHYT	Xinyi Township	1.73	227	eP	Pg	18 24 47.9	+0.4
	baz=216						
WHYT				eS	Sb	18 25 09.1	+1.2
	baz=216						
WNT	Mingjian	1.74	235	eP	Pg	18 24 47.4	-0.1
	baz=211						
WNT				eS	Sg	18 25 11.8	+1.7
	baz=211						
JKRS	Kuro-shima	1.74	112	P	Pg	18 24 46.4	-1.1
WJS	Zhushan	1.74	233	eP	Pg	18 24 48.0	+0.5
	baz=217						
WJS				eS	Sg	18 25 11.9	+1.8
	baz=217						
TWF1	Yuli	1.76	209	eP	Pg	18 24 46.4	-1.5
	baz=193						
TWF1				eS	Sn	18 25 07.4	+0.6
	baz=193						
JIJ	Ishigaki jima	1.81	106	P	Pg	18 24 47.8	-1.1
JIJ				eS	Sg	18 25 11.8	-0.6
FULB	Fuli	1.89	207	eP	Pb	18 24 48.6	-0.1
	baz=208						
FULB				eS	Sg	18 25 15.0	-0.1
	baz=208						
ALS	Alishan	1.90	224	eP	Pg	18 24 51.2	+0.6
	baz=195						
ALS				eS	Sb	18 25 14.1	+1.3
	baz=195						
JISG	Ishigakijimahi	1.91	99	P	Pg	18 24 51.4	+0.6
JISG				eS	Sg	18 25 14.3	-1.3
CHN5	Tsauling	1.92	228	eP	Pg	18 24 50.6	-0.4
	baz=213						
CHN5				eS	Sg	18 25 16.5	+0.6
	baz=213						
WGK	Gukeng	1.94	232	eP	Pg	18 24 50.7	-0.7
	baz=217						
WGK				eS	Sg	18 25 16.3	-0.3
	baz=217						
WDLH	Douliu	1.96	233	eP	Pg	18 24 51.0	-0.7
	baz=217						
WDLH				eS	Sb	18 25 16.2	+1.9
	baz=217						
RLNB	Erlin	1.98	240	eS	Sb	18 25 14.8	0.0
	baz=253						
ELDTW	Lidau	2.03	214	eP	Pb	18 24 49.5	-1.6
	baz=189						
ELDTW				eS	Sb	18 25 16.8	+0.4
	baz=189						
CHN4	Tsaushan	2.15	225	eP	Pb	18 24 53.4	+0.4
	baz=196						
CHN4				eS	Sg	18 25 22.0	-1.1
	baz=196						
TPUB	Ta-pu	2.16	223	eP	Pb	18 24 52.8	-0.4
	baz=190						
TPUB				eS	Sg	18 25 23.2	-0.3
	baz=190						
WTP	Ta-pu	2.21	223	eP	Pg	18 24 55.1	-1.4
	baz=190						
WTP				eS	Sb	18 25 23.1	+1.6
	baz=190						
TWK	Hsinying	2.27	225	P	Pb	18 24 54.5	-0.7
	baz=208						
TWK				eS	Sb	18 25 24.8	+1.4
	baz=208						
CHN1	Nanshi	2.31	223	eP	Pb	18 24 55.4	-0.4
	baz=206						
CHN1				eS	Sb	18 25 25.2	+0.9
	baz=206						
SGST	Jiashian	2.35	220	eP	Pb	18 24 56.3	-0.3
	baz=188						
SGST				eS	Sb	18 25 26.2	+0.6
	baz=188						
SLGT	Liugui	2.38	218	eP	Pb	18 24 56.4	-0.7
	baz=188						
SLGT				eS	Sb	18 25 26.6	0.0
	baz=188						
CHN8	Yiju	2.41	231	eS	Sb	18 25 27.1	0.0
	baz=214						

KRSC 13 18:24:59.6±2.4, 48°.83N×156°.50E, h7^{km}±39^{km}, ML4.1, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.87	353	eS	Sn	18 25 56.2	+0.3
ALID	Alaid	2.13	344	eP	Pn	18 25 33.9	-1.9
PAU	Pauzhetka	2.65	4	eP	Pb	18 25 45.3	-2.1
PAU				eS	Sb	18 26 18.3	-1.8
KDTR	Khodutka, Kamc	3.15	18	eP	Pb	18 25 53.4	-2.5
KDTR				eS	Sb	18 26 31.9	-2.6
ASAK	Asacha	3.67	14	eP	Pb	18 26 01.0	-3.8
MTVR	Mutnovka	3.81	16	eP	Pn	18 26 02.9	+4.0
MTVR				eS	Sb	18 26 49.1	-4.6
RUS	Russkaya	3.83	19	eP	Pn	18 26 02.5	+3.6
RUS				eS	Sn	18 26 48.5	+4.3
GRL	Gorelyy	3.86	14	eP	Pb	18 26 03.9	-4.2
GRL				eS	Sb	18 26 50.4	-4.6
KRMR	Karymshinskiy	4.14	14	eP	Pb	18 26 08.1	-4.6
DALK	Dalny	4.44	18	eP	Pn	18 26 11.3	+3.9
DALK				eS	Sn	18 27 04.2	+4.9
UGLR	Uglovaya	4.62	18	eP	Pn	18 26 14.6	+4.6
AVH	Avacha	4.66	17	eP	Pn	18 26 15.8	+5.3
KOK	Koryaka	4.67	16	eP	Pn	18 26 15.9	+5.3
SMAR	Somma	4.67	17	eP	Pb	18 26 16.6	-5.4
SDLR	Sedlovina	4.70	18	eP	Pn	18 26 15.4	+4.3
KRX	Arik	4.74	16	eP	Pn	18 26 16.2	+4.7
SPN	Mys Shipunski	4.82	26	eP	Pn	18 26 17.5	+4.9
MKZ	Mys Kozlova	6.59	28	eP	Pn	18 26 40.2	+3.4
KBTR	Krutoberegovo	8.33	25	eP	Pn	18 27 05.4	+4.7

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*DDA **13** 18:26:21.4, 35°.17N×27°.69E, h14^{km}±4^{km}, ML2.6*
*NIC **13** 18:26:24.4±0.0, 35°.21N×27°.70E, h18^{km}±3^{km}, Ml3.2/3*
*ISK **13** 18:26:24.9, 35°.31N×27°.65E, h21^{km}, ML3.0/16*
*THE **13** 18:26:26.4, 35°.41N×27°.64E, h0^{km}±1^{km}, ML2.9/3, Error ellipse: s-maj=3.5km s-min=0.8km az=156.0*
*ATH **13** 18:26:26.3, 35°.41N×27°.62E, h31^{km}±2^{km}, ML2.8/2, Error ellipse: s-maj=6.6km s-min=1.6km az=317.0*
*GII **13** 18:26:34.8±1.6, 35°.29N×28°.61E, h150^{km}*
ISC 13 18:26:24.1±1.2, **35°.24N**±0°.04×**27°.73E**±0°.03, **h15**^{km}±9^{km}, **n67, σ1^{s}41**/86, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.56	304	P	Pg	18 26 35.1	-0.1
KARP				S	Sg	18 26 42.4	-0.3
	1μm,0.4s						
KARP	Karpathos	0.56	304	P	Pg	18 26 35.3	+0.1
KARP				S	Sg	18 26 42.4	-0.3
KARP				AML	AML	18 26 43.6	
	comp=N,3039μm,0.6s						
KARP				AML	AML	18 26 43.7	
	comp=E,2898μm,0.3s						
KARP	Karpathos	0.56	304	PG	Pg	18 26 35.1	-0.1
KARP				SG	Sg	18 26 42.3	-0.4
KARP	Karpathos	0.56	304	P	Pg	18 26 35.0	-0.2
KARP				S	Sg	18 26 42.6	0.0
KARP				AML	AML	18 26 43.3	
	comp=E,2.9nm,0.3s						
KARP				AML	AML	18 26 43.3	
	comp=E,2.9nm,0.3s						
KARP				AML	AML	18 26 43.5	
	comp=E,3.0nm,0.4s						
KARP				AML	AML	18 26 43.5	
	comp=E,3.0nm,0.4s						
ARG	Arkhangelos	1.03	18	P	Pb	18 26 43.8	+0.2
ARG				S	Sn	18 26 58.3	+0.2
	comp=E,588nm,0.5s						
ARG	Arkhangelos	1.03	18	P	Pb	18 26 43.8	+0.2
ARG				S	Sg	18 26 57.3	-0.2
ARG				AML	AML	18 27 02.5	
	comp=N,1028μm,0.6s						
ARG				AML	AML	18 27 03.2	
	comp=E,1374μm,0.3s						
ARG	Arkhangelos	1.03	18	PG	Pg	18 26 43.9	-0.1
ARG				SG	Sn	18 26 57.9	-0.2
ARG	Arkhangelos	1.03	18	P	Pg	18 26 43.9	-0.1
ARG				S	Sn	18 26 59.7	+1.6
ZKR	Zakros	1.25	265	P	Pg	18 26 48.2	+0.1
ZKR	Zakros	1.25	265	P	Pn	18 26 47.6	+0.6
ZKR	Zakros	1.25	265	PN	Pn	18 26 46.9	0.0
DAT	Datca	1.50	355	P	Pn	18 26 50.8	+0.3
DAT	Datca	1.50	355	PN	Pn	18 26 50.4	-0.1
DAT	Datca	1.50	355	i P	Pn	18 26 50.7	+0.2
DAT				i S	Sg	18 27 12.4	0.0
DAT				IAML		18 27 17.0	
	comp=N,51nm,0.7s						
DATC	Datca-Mugla	1.52	358	PN	Pn	18 26 50.6	-0.1
MRSB	Marmaris-Mugla	1.52	14	PN	Pn	18 26 50.9	+0.1
KOSK	Kos Island	1.63	338	PN	Pn	18 26 51.9	-0.3
NPS	Neapolis	1.73	271	P	Pb	18 26 56.1	+0.5
NPS	Neapolis	1.73	271	P	Pb	18 26 55.8	+0.2
DALY	Dalyan (Mula)	1.75	25	PN	Pn	18 26 54.1	+0.3
DALY	Dalyan (Mula)	1.75	25	i P	Pn	18 26 54.7	+0.9
DALY				IAML		18 27 27.0	
	comp=N,52nm,0.8s						
DALY				IAML		18 27 32.0	
	comp=E,50nm,0.5s						
FETY	Fethiye	1.78	38	PN	Pn	18 26 55.1	+0.9
TURN	Turunc	1.78	23	PN	Pn	18 26 51.9	-2.3
TURN	Turunc	1.78	23	i P	Pn	18 26 52.8	-1.5
TURN				IAML		18 27 20.0	
	comp=E,124nm,0.4s						
TURN				IAML		18 27 23.0	
	comp=N,113nm,0.5s						
AKAS	Kas	1.82	56	PN	Pn	18 26 56.3	+1.4
AKAS	Kas	1.82	56	i P	Pb	18 26 56.5	-0.7
AKAS				i S	Sb	18 27 20.5	+0.7
AKAS				IAML		18 27 23.0	
	comp=N,90nm,0.4s						
AKAS				IAML		18 27 24.0	
	comp=E,49nm,0.6s						
LAST	Lasithi	1.85	268	P	Pb	18 26 57.6	0.0
LAST	Lasithi	1.85	268	P	Pb	18 26 57.6	0.0
BODT	Bodrum	1.85	350	PN	Pn	18 26 55.2	-0.1
ANAF	Anafi Island	1.95	306	P	Pn	18 26 57.0	+0.4
ANAF				S	Sn	18 27 20.9	+0.2
	comp=E,532nm,0.4s						
ANAF	Anafi Island	1.95	306	P	Pn	18 26 56.9	+0.3
YER	Yerkesik	1.95	13	P	Pn	18 26 57.6	+1.0
YER	Yerkesik	1.95	13	PN	Pn	18 26 56.9	+0.3
AMGA	Amorgos Island	2.18	317	P	Pn	18 26 59.8	0.0
ELL	Elmali	2.32	49	PN	Pn	18 27 03.2	+1.4
IDI	Anoyia	2.33	272	P	Pn	18 27 03.5	+1.6
IDI	Anoyia	2.33	272	PN	Pn	18 27 02.3	+0.5
AKUM	Antalya-Kumluc	2.38	62	i P	Pn	18 27 04.3	+1.7
AKUM				i S	Sn	18 27 33.1	+1.6
AKUM				IAML		18 28 35.0	
	comp=N,29nm,2.8s						
SIVA	Sivas	2.41	266	P	Pn	18 27 03.6	+0.8
TAVA	DENIZLI_Tavas	2.42	23	i P	Pn	18 27 04.3	+1.1
TAVA				IAML		18 27 46.0	
	comp=N,43nm,0.5s						
TAVA				IAML		18 27 47.0	
	comp=E,50nm,0.6s						
AYDN	Tasoluk	2.42	3	i P	Pn	18 27 03.8	+0.6
AYDN				IAML		18 27 47.0	
	comp=E,44nm,1.3s						
AYDN				IAML		18 27 48.0	
	comp=N,31nm,0.4s						
GOLH	Golhisar	2.48	36	i P	Pn	18 27 06.1	+2.0
GOLH				IAML		18 28 07.0	
	comp=N,54nm,1.5s						
GCAM	G?zelcaml?	2.49	351	PN	Pn	18 27 04.5	+0.5
APE	Apeiranthos	2.55	316	P	Pn	18 27 04.6	-0.3
APE	Apeiranthos	2.55	316	PN	Pn	18 27 04.9	0.0
APE	Apeiranthos	2.55	316	P	Pn	18 27 05.1	+0.1
SMG	Samos	2.57	344	P	Pn	18 27 05.4	+0.2
AYDB	Zeytinkoy-Aydi	2.71	3	PN	Pn	18 27 07.3	+0.1
KORT	Korkueli	2.76	50	PN	Pn	18 27 09.3	+1.5
KORT	Korkueli	2.76	50	i P	Pb	18 27 11.4	-1.7
KORT				i S	Sb	18 27 46.2	-0.6
KORT				IAML		18 27 49.0	
	comp=N,22nm,0.5s						
KORT				IAML		18 27 57.0	
	comp=E,29nm,0.6s						
DGB	zmir	2.89	347	i P	Pn	18 27 09.5	0.0
DGB				IAML		18 28 27.0	
	comp=E,45nm,2.5s						
DGB				IAML		18 28 47.0	
	comp=N,31nm,3.0s						
VAM	Vamos	2.89	274	P	Pn	18 27 11.5	+2.0
IMMV	Iera Moni Meta	3.07	275	P	Pn	18 27 15.1	+3.1
KULA	Kula-Manisa	3.36	13	PN	Pn	18 27 16.6	+0.6
AKMS	Akamas	3.78	92	P	Pn	18 27 22.8	+1.0
AKMS				S	Sn	18 28 07.4	+1.4
AKMS				AML	AML	18 28 11.3	
	comp=N,0.3nm,0.7s						
AKMS				AML	AML	18 28 11.3	
	comp=N,0.3nm,0.7s						
ALFC	Alefka	3.99	90	P	Pn	18 27 25.3	+0.6
ALFC				S	Sn	18 28 12.6	+1.5
ALFC				AML	AML	18 28 20.3	
	comp=N,0.3nm,0.7s						
ALFC				AML	AML	18 28 20.3	
	comp=N,0.3nm,0.7s						
NATA	Nata	4.00	95	P	Pn	18 27 25.9	+1.2
SZAC	Souni	4.25	95	P	Pn	18 27 29.1	+0.8
SZAC				S	Sn	18 28 19.7	+2.0
ASGA	Asgata	4.55	94	P	Pn	18 27 33.7	+1.3
CSS	Mathiatis	4.60	92	Pn	Pn	18 27 34.1	+1.1
CSS				Sn	Sn	18 28 19.4	-6.8
CSS	Mathiatis	4.60	92	P	Pn	18 27 34.3	+1.2
MVOU	Mavrovouni	4.84	91	P	Pn	18 27 37.2	+0.9
MVOU				S	Sn	18 28 34.1	+2.0
KSDI	Kefar Szold	6.88	105	Pn	Pn	18 28 04.3	0.0
HMDT	Nahal Hemdat	7.14	112	Pn	Pn	18 28 07.9	0.0
DSI	Dead Sea	7.37	118	Pn	Pn	18 28 11.6	+0.6
DSI				Sn	Sn	18 29 28.1	-6.2
PRNI	Paran	7.82	126	Pn	Pn	18 28 18.2	+0.9
EIL	Elat	8.24	130	Pn	Pn	18 28 25.1	+2.0

IDC 13 18:31:47.4±3.3, **30°.22S×177°.40W, h0**^{km}**, mb3.5**/2, **mb1 3.8**/2, **mb1mx3.5**/31, **mbtmp3.5**/2, **Error ellipse: s-maj=67.9km s-min=36.0km az=103.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.06	335	Pn	Pn	18 32 09.6	+0.1
	370nm,0.3s,baz=90,slow=19,SNR=6.8						
RAO				Sn	Sg	18 32 19.8	-1.7
	875nm,0.3s,baz=24,slow=23,SNR=9.4						
ASAR	Alice Springs	43.63	266	P	P	18 39 53.3	-0.6
	0.3nm,0.7s,baz=108,slow=7.3,SNR=5.1						
WRA	Warramunga Arr	44.61	272	P	P	18 40 01.9	+0.2
	0.9nm,0.6s,baz=111,slow=7.7,SNR=11						
FINES	FINESS Array B	145.15	340	PKPbc	PKPbc	18 51 24.8	-0.9
	0.6nm,0.4s,baz=69,slow=4.6,SNR=5.7						

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*TAP **13** 18:32:18.8, 24°.04N×120°.65E, h10^{km}, ML3.6, B*
*JMA **13** 18:32:18.6±0.2, 24°.05N×120°.63E, h2^{km}±3^{km}, M3.5*
*IASPEI **13** 18:32:19.3±0.8, 24°.05N±0°.01×120°.62E±0°.02, h14^{km}±5^{km}, Error ellipse: s-maj=2.7km s-min=1.6km az=120.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
ISC 13 18:32:19.4±0.8, **24°.05N**±0°.01×**120°.61E**±0°.01, **h16**^{km}±4^{km}, **n129, σ0^{s}78**/213, **22C-21D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WCHH	Zhanghua	0.06	301	⇑iP	Pg	18 32 21.7	-0.6
	baz=296						
WCHH				S	Sg	18 32 24.4	+0.1
	baz=296						
TCU	Taichung	0.11	31	⇓iP	Pg	18 32 22.3	-0.6
	baz=8.0						
TCU				i S	Sg	18 32 24.6	-0.6
	baz=8.0						
WNT	Mingjian	0.18	159	⇓iP	Pg	18 32 23.6	-0.2
	baz=164						
WNT				S	Sg	18 32 27.3	+0.5
	baz=164						
WJS	Zhushan	0.25	155	⇓iP	Pg	18 32 24.8	-0.1
	baz=160						
WJS				S	Sg	18 32 29.1	+0.5
	baz=160						
RLNB	Erlin	0.28	236	⇓P	Pb	18 32 25.7	-0.3
	baz=242						
RLNB				S	Sb	18 32 31.0	+0.4
	baz=242						
DPDB	Guoxing	0.29	93	⇑iP	Pb	18 32 25.2	-1.0
	baz=90						
DPDB				S	Sb	18 32 29.7	-1.1
	baz=90						
WDJ	Dajia District	0.30	5	P	Pb	18 32 26.5	+0.1
	baz=8.0						
WDJ				S	Sb	18 32 32.2	+1.1
	baz=8.0						
SMLT	Sun Moon Lake	0.31	122	⇑iP	Pb	18 32 25.9	-0.7
	baz=122						
SMLT				S	Sb	18 32 31.4	-0.1
	baz=122						
TWQ1	Liyutan	0.33	26	⇓P	Pb	18 32 26.8	-0.2
	baz=22						
TWQ1				S	Sb	18 32 32.1	+0.1
	baz=22						
WTCT	Ta-ch'eng	0.35	239	P	Pg	18 32 26.8	+0.1
	baz=243						
WTCT				i S	Sb	18 32 33.4	+0.7
	baz=243						
WDLH	Douliu	0.37	191	⇓P	Pb	18 32 27.2	-0.3
	baz=196						
WDLH				S	Sb	18 32 33.4	+0.4
	baz=196						
WGK	Gukeng	0.37	187	⇓iP	Pb	18 32 27.2	-0.3
	baz=191						
WGK				i S	Sb	18 32 33.5	+0.5
	baz=191						
WHP	Taichung City	0.38	53	⇑P	Pb	18 32 27.3	-0.6
	baz=48						
WHP				eS	Sb	18 32 34.2	+0.7
	baz=48						
NSY	Sanyi	0.39	21	⇓iP	Pb	18 32 28.2	+0.3
	baz=17						
NSY				S	Sb	18 32 34.0	+0.3
	baz=17						
PTSB	Yuanli	0.40	12	eP	Pb	18 32 28.4	+0.2
	baz=8.0						
SSLB	Suanglung	0.41	130	⇑P	Pb	18 32 27.2	-1.0
	baz=131						
SSLB				S	Sb	18 32 33.1	-1.2
	baz=131						
WHYT	Xinyi Township	0.42	148	⇑iP	Pb	18 32 27.7	-0.8
	baz=150						
WHYT				S	Sb	18 32 33.6	-0.9
	baz=150						
WMLT	Mailiao	0.43	235	eP	Pb	18 32 28.4	-0.3
	baz=240						
WMLT				S	Sb	18 32 35.7	+0.8
	baz=240						
CHN5	Tsauling	0.46	172	⇓iP	Pb	18 32 28.5	-0.7
	baz=176						
CHN5				S	Sb	18 32 35.2	-0.5
	baz=176						
NMLH	Miaoli	0.51	19	eP	Pb	18 32 30.6	+0.6
	baz=359						
CHGB	Renai	0.51	89	⇑P	Pb	18 32 29.6	-0.6
	baz=86						
CHGB				eS	Sb	18 32 37.6	0.0
	baz=86						
OWD	Renai	0.53	100	P	Pb	18 32 29.6	-0.7
	baz=98						
OWD				eS	Sb	18 32 37.0	-0.8
	baz=98						
TDCB	Techi	0.54	68	⇑P	Pb	18 32 29.9	-0.7
	baz=64						

TDCB	baz=64			S	Sb	18 32 37.3	-0.9
WSF	**Szhu** baz=224	0.54	221	⇓iP	Pb	18 32 30.2	-0.4
WSF	baz=224			iS	Sb	18 32 39.0	+0.8
TWT	**Tachien** baz=65	0.55	69	⇑P	Pb	18 32 30.0	-0.9
TWT	baz=65			S	Sg	18 32 37.0	-0.9
ALS	**Alishan** baz=163	0.57	162	⇓P	Pb	18 32 30.6	-0.5
ALS	baz=163			eS	Sg	18 32 37.6	-0.7
VWDT	**VWDT** baz=121	0.57	121	⇑P	Pb	18 32 30.5	-0.5
VWDT	baz=121			eS	Sb	18 32 38.0	-0.8
CHY	**Chiayi** baz=200	0.58	197	P	Pb	18 32 30.8	-0.3
CHY	baz=200			S	Sb	18 32 39.8	+0.7
WLGB	**Puzi** baz=196	0.64	207	⇓iP	Pb	18 32 32.0	-0.1
WLGB	baz=196			S	Sb	18 32 42.0	+1.2
YUS	**Yu-Shan** baz=152	0.64	151	P	Pb	18 32 32.0	-0.4
YUS	baz=152			S	Sb	18 32 41.1	-0.3
NSTT	**Nanjuang** baz=40	0.68	32	eP	Pb	18 32 33.0	+0.1
NSTT	baz=40			S	Sb	18 32 43.0	+1.0
CHN4	**Tsaushan** baz=195	0.70	181	⇓iP	Pb	18 32 32.8	-0.3
CHN4	baz=195			S	Sb	18 32 43.1	+0.6
LIOB	**Emei** baz=29	0.70	32	⇑P	Pb	18 32 33.2	0.0
TPUB	**Ta-pu** baz=181	0.75	179	⇓P	Pg	18 32 33.4	-0.5
TPUB	baz=181			S	Sb	18 32 44.1	0.0
ESL	**Shilin** baz=106	0.79	107	⇑iP	Pb	18 32 34.4	-0.4
ESL	baz=106			eS	Sb	18 32 45.4	+0.2
TWK	**Hsinying** baz=189	0.79	188	⇓iP	Pb	18 32 34.3	-0.5
TWK	baz=189			S	Sb	18 32 45.7	+0.5
CHN8	**Yiju** baz=196	0.79	208	⇓iP	Pb	18 32 34.5	-0.3
CHN8	baz=196			S	Sb	18 32 46.8	+1.5
NNS	**Nan Shan** baz=58	0.80	61	⇑iP	Pb	18 32 34.5	-0.4
NNS	baz=58			eS	Sg	18 32 44.6	-0.9
NNSB	**Datong** baz=59	0.80	62	⇑P	Pb	18 32 34.4	-0.6
NNSB	baz=59			eS	Sb	18 32 45.4	-0.3
NNSH	**Datong** baz=51	0.80	62	P	Pb	18 32 34.4	-0.6
NNSH	baz=51			eS	Sb	18 32 45.6	0.0
WTP	**Ta-pu** baz=181	0.80	180	⇓iP	Pg	18 32 34.4	-0.5
WTP	baz=181			S	Sb	18 32 45.6	0.0
ETLH	**Xiulin Townshi** baz=77	0.81	79	eP	Pb	18 32 35.0	-0.2
ETLH	baz=77			eS	Sb	18 32 46.0	+0.1
SBCB	**Hsinchu** baz=22	0.81	25	P	Pb	18 32 35.9	+0.8
HSN	**Hsinchu** baz=23	0.82	23	eP	Pn	18 32 36.2	0.0
SNST	**Tainan City** baz=189	0.83	187	eP	Pg	18 32 35.0	-0.6
SNST	baz=189			eS	Sb	18 32 46.9	+0.4
EGFH	**Guangfu** baz=116	0.84	117	eP	Pb	18 32 35.2	-0.4
EHY	**Hungye** baz=130	0.85	130	⇑iP	Pb	18 32 35.5	-0.2
EHY	baz=130			S	Sb	18 32 47.2	+0.3
CHN1	**Nanshi** baz=187	0.86	185	⇓iP	Pg	18 32 35.5	-0.7
CHN1	baz=187			eS	Sb	18 32 48.1	+0.7
STYT	**Tauyuan** baz=172	0.89	171	⇓iP	Pb	18 32 36.1	-0.5
STYT	baz=172			S	Sb	18 32 48.3	0.0
TWD	**Chiawan** baz=87	0.90	88	⇑iP	Pb	18 32 36.4	-0.3
TWD	baz=87			S	Sb	18 32 48.9	+0.5
NACB	**Ninganchiao** baz=73	0.91	82	⇑P	Pb	18 32 36.4	-0.4
NACB	baz=73			S	Sb	18 32 48.4	-0.2
YULB	**Yu-li** baz=136	0.91	136	⇑P	Pb	18 32 36.4	-0.4
YULB	baz=136			S	Sb	18 32 48.3	-0.4
HWA	**Hwalien** baz=93	0.91	94	eP	Pb	18 32 37.0	+0.2
ENLB	**Shoufeng** baz=98	0.92	99	eP	Pg	18 32 35.6	-1.5
ENLB	baz=98			eS	Sb	18 32 49.6	+0.7
NSK	**Sanguang** baz=45	0.92	47	⇑iP	Pb	18 32 36.9	-0.2
NSK	baz=45			S	Sg	18 32 48.7	-0.8
HGSD	**Ruisui** baz=126	0.93	127	⇑P	Pb	18 32 37.4	+0.2
HGSD	baz=126			S	Sb	18 32 49.4	+0.1
YHNB	**Yeheng** baz=46	0.93	48	⇑P	Pb	18 32 37.0	-0.3
YHNB	baz=46			eS	Sg	18 32 48.9	-0.8
ELDTW	**Lidau** baz=169	0.94	156	⇓P	Pb	18 32 36.7	-0.6
ELDTW	baz=169			S	Sg	18 32 48.9	-1.0
TWF1	**Yuli** baz=138	0.94	138	⇑iP	Pb	18 32 37.1	-0.2
TWF1	baz=138			S	Sb	18 32 49.4	-0.1
SCLT	**Jiali** baz=205	0.95	204	P	Pb	18 32 37.4	-0.1
SCLT	baz=205			eS	Sb	18 32 51.3	+1.4
SGST	**Jiashian** baz=183	0.96	182	⇓eP	Pg	18 32 36.3	-1.8
SGST	baz=183			S	Sb	18 32 50.5	+0.2
NDT	**Datong Townshi** baz=54	0.99	56	eP	Pb	18 32 37.7	-0.4
NDT	baz=54			eS	Sb	18 32 51.0	0.0
WLTB	**Daxi** baz=33	0.99	36	eP	Pb	18 32 38.4	+0.2
WLTB	baz=33			eS	Sn	18 32 53.0	+0.7
CHN3	**Shinhua** baz=195	1.00	193	eP	Pb	18 32 38.5	+0.2
CHN3	baz=195			eS	Sn	18 32 53.1	+0.7
ENTT	**Nioudou** baz=54	1.05	56	P	Pb	18 32 39.0	-0.3
ENTT	baz=54			eS	Sb	18 32 53.1	+0.3
NCUH	**Zhongli** baz=27	1.05	30	eP	Pb	18 32 39.5	+0.3
NCUH	baz=27			eS	Sn	18 32 54.3	+0.4
SLGT	**Liugui** baz=168	1.05	178	eP	Pg	18 32 38.7	-1.0
SLGT	baz=168			eS	Sb	18 32 53.8	+1.0
FULB	**Fuli** baz=144	1.05	143	eP	Pn	18 32 39.7	+0.1
FULB	baz=144			eS	Sn	18 32 53.9	-0.1
NCU	**National Centr** baz=28	1.05	30	eP	Pb	18 32 39.3	0.0
TAI1	**Yung-k'ang** baz=201	1.07	199	eP	Pb	18 32 39.4	0.0
TAI1	baz=201			eS	Sn	18 32 55.6	+1.5
PNG	**Penghu** baz=237	1.08	244	eP	Pg	18 32 38.9	-1.4
PNG	baz=237			eS	Sg	18 32 53.9	-0.5
NWLT	**Wulai** baz=46	1.09	48	eP	Pb	18 32 39.6	-0.2
NWLT	baz=46			eS	Sb	18 32 54.5	+0.7
PHUB	**P'eng-hu** baz=235	1.09	241	eP	Pg	18 32 39.0	-1.5
PHUB	baz=235			eS	Sg	18 32 53.8	-1.0
ENA	**Nanau** baz=82	1.10	70	eP	Pb	18 32 39.8	-0.2
ENA	baz=82			eS	Sb	18 32 54.2	+0.1
SLBB	**Yuanshan** baz=51	1.17	53	eP	Pg	18 32 40.1	-1.8
TWE	**Neicheng** baz=48	1.17	55	P	Pb	18 32 41.2	0.0
TWE	baz=48			eS	Sn	18 32 57.5	+0.7
CHKT	**Chengkung** baz=144	1.17	144	eP	Pn	18 32 42.0	+0.9
WDGT	**Dungji** baz=230	1.18	228	P	Pg	18 32 40.8	-1.3
WDGT	baz=230			eS	Sg	18 32 56.0	-1.4
TATO	**Taipei** baz=38	1.22	41	eP	Pn	18 32 42.6	+0.8
TATO	baz=38			eS	Sn	18 32 58.9	+0.9
NHDH	**Xindian Distri** baz=41	1.23	42	eP	Pn	18 32 42.5	+0.5
TWM1	**Shoushan** baz=203	1.23	188	eP	Pn	18 32 43.1	+1.1
ILA	**Ilan** baz=54	1.26	55	eP	Pn	18 32 43.6	+1.3
TWC	**Suao** baz=62	1.26	64	eP	Pn	18 32 43.0	+0.7
TWC	baz=62			eS	Sb	18 32 59.1	+0.4
TAP	**Taipei** baz=38	1.28	39	eP	Pg	18 32 43.1	-1.0
TWS1	**Kuangyinshan** baz=33	1.28	35	eP	Pn	18 32 42.9	+0.3
TWS1	baz=33			eS	Sn	18 33 01.1	+1.6
TAP1	**Taipei** baz=37	1.29	40	eP	Pn	18 32 43.1	+0.3
TAP1	baz=37			eS	Sn	18 33 00.6	+1.0
TWG	**Pinlang** baz=161	1.29	161	eP	Pg	18 32 43.3	-1.1
TWG	baz=161			eS	Sn	18 33 01.0	+1.2
SSD	**Sandimen** baz=180	1.30	179	P	Pn	18 32 42.8	-0.1
SSD	baz=180			eS	Sn	18 33 00.7	+0.7
TWGBT	**Beinan** baz=161	1.30	161	eP	Pn	18 32 43.1	+0.2
TWGBT	baz=161			eS	Sn	18 33 01.1	+1.1
SNJT	**Kaohsiung City** baz=206	1.32	191	eP	Pb	18 32 43.7	0.0
SGLT	**Jiouru** baz=186	1.32	185	eP	Pg	18 32 44.1	-0.8
NTC	**Toucheng** baz=34	1.37	54	eP	Pn	18 32 44.0	+0.1
VCHM	**Qimei** baz=235	1.37	233	eP	Pn	18 32 43.3	-0.6
VCHM	baz=235			eS	Sb	18 33 02.2	+0.3
YM01	**YM01** baz=20	1.40	38	eP	Pn	18 32 44.0	-0.4
YM10	**YM10** baz=17	1.40	38	eP	Pn	18 32 44.0	-0.3
YM10	baz=17			eS	Sb	18 33 02.9	0.0
ANP	**Anpu** baz=18	1.40	36	eP	Pn	18 32 44.6	+0.2
YM03	**YM03** baz=34	1.41	37	eP	Pn	18 32 44.8	+0.4
YM03	baz=34			eS	Sb	18 33 03.3	+0.2
VWUC	**VWUC** baz=310	1.41	312	eP	Pn	18 32 43.2	-1.3
YM11	**YM11** baz=20	1.41	38	eP	Pn	18 32 44.4	-0.2
MASBT	**Mashibuluo** baz=181	1.43	179	eP	Pn	18 32 44.9	+0.1
MASBT	baz=181			eS	Sb	18 33 03.6	-0.2
TIPB	**Shuangxi** baz=49	1.44	50	eP	Pb	18 32 45.5	-0.4
YM08	**YM08** baz=20	1.44	38	eP	Pb	18 32 45.9	0.0
EOS1	**EOS1** baz=69	1.47	70	eP	Pg	18 32 47.0	-0.7
NWF	**Wu-fen Shan** baz=45	1.47	46	eP	Pb	18 32 46.1	-0.3
WFSB	**Wu-fen Shan** baz=45	1.47	46	eP	Pb	18 32 46.0	-0.4
ECL	**Taimali** baz=169	1.48	168	eP	Pn	18 32 45.9	+0.5
TWH	**Lutao** baz=151	1.55	149	eP	Pn	18 32 46.7	+0.3
SSPT	**Xinbi** baz=184	1.56	181	eP	Pn	18 32 46.5	+0.1
TWB1	**Santiao Chiao** baz=32	1.57	52	eP	Pb	18 32 47.9	-0.3
PTTC	**Pingtan** baz=330	1.63	332	eP	Pn	18 32 46.6	-0.9
SCZT	**Fangliau** baz=181	1.67	180	eP	Pn	18 32 48.1	+0.1
EAST	**Anshuo** baz=186	1.67	172	eP	Pn	18 32 48.6	+0.5
PTMZ	**Houxiangcun** baz=305	1.68	306	eP	Pn	18 32 47.1	-1.0
KNM	**Kinmen** baz=280	2.02	281	eP	Pb	18 32 55.5	-0.3
KNMB	**Chin-men Tao** baz=282	2.07	282	eP	Pn	18 32 52.9	-0.6
TWKBT	**Hengchun** baz=177	2.11	175	eP	Pn	18 32 54.1	0.0
MATB	**Ma-tsu** baz=341	2.18	344	eP	Pn	18 32 53.9	-1.1
YOJ	**Yonaguni jima**	2.23	79	P	Pn	18 32 56.9	+1.2
MHZQ	**Yeshan** baz=322	2.49	325	eP	Pn	18 32 59.2	-0.2
AXDP	**Jialang** baz=289	2.55	290	eP	Pn	18 32 59.9	-0.2
LYJJ	**Jianjiangzhen** baz=340	2.60	343	eP	Pn	18 33 01.2	+0.4
ZPLA	**Ao Xicun** baz=269	2.62	268	eP	Pn	18 33 00.8	-0.3
ZZJH	**Jiuhuzhen** baz=279	2.75	279	eP	Pn	18 33 03.1	+0.2
IRIF	**Iriomote-Funau**	2.86	84	P	Pn	18 33 05.9	+1.5
IRIF				eS	Sn	18 33 40.5	+2.0
XPSS	**Dashiqiu** baz=350	2.89	353	eP	Pn	18 33 03.9	-0.9
HATJ	**Hateruma jima**	2.92	89	P	Pn	18 33 06.5	+1.3
HATJ				S	Sn	18 33 43.2	+3.2
JKRS	**Kuro-shima**	3.11	86	P	Pn	18 33 09.6	+1.8
JKRS				eS	Sn	18 33 47.6	+2.9
JIJ	**Ishigaki jima**	3.24	84	P	Pn	18 33 10.5	+0.9
JIJ				S	Sn	18 33 49.0	+1.1
JISG	**Ishigakijimahi**	3.42	80	P	Pn	18 33 13.3	+1.3
JISG				S	Sn	18 33 54.4	+2.2

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*IDC **13** 18:45:01.2±0.7, 12°.04N×143°.90E, h0^{km}, mb4.2/15, mb1 4.4/15, mb1mx4.1/48, mbtmp4.2/15, MS4.1/1, Ms1 4.1/1, ms1mx3.1/60, Error ellipse: s-maj=23.4km s-min=15.6km az=112.0*

*NEIC **13** 18:45:12.0±1.3, 12°.6N±0°.1×143°.9E±0°.1, h64^{km}±8^{km}, mb4.7/39, Error ellipse: s-maj=21.6km s-min=14.1km az=116.0*

ISC 13 18:45:06.1±0.6**, 12°.18N**±0°.09×**143°.93E**±0°.10**, h27^{km}, n68, σ1^{s}39**/71**, mb4.7**/34**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam** 139nm,0.3s,baz=185,slow=4.1,SNR=23	1.67	33	Pn	Pb	18 45 35.5	-0.8
GUMO	146nm,0.3s,baz=356,slow=20,SNR=7.4			Sn	Sb	18 45 58.4	+1.6
GUMO	**Guam**	1.67	33		Pb	18 45 35.4	-0.9
MJAR	**Matsushiro Arr** 3.5nm,0.9s,baz=164,slow=10.0,SNR=2.7	24.80	349	P	P	18 50 24.7	-1.2
WB2	**Warramunga Arr**	33.29	197	P	P	18 51 39.5	-2.1
WRA	**Warramunga Arr** 1.2nm,0.6s,baz=18,slow=9.8,SNR=11	33.29	197	P	P	18 51 39.0	-2.7
ASAR	**Alice Springs** 0.7nm,0.7s,baz=18,slow=10,SNR=14	36.95	195	P	P	18 52 11.2	-2.1
KLR	**Kul'dur** 1.0nm,0.6s,baz=172,slow=11,SNR=3.2	38.29	347	P	P	18 52 24.1	-0.2
DZM	**Mont Dzumac** comp=Z,306nm,21.6s,baz=163,slow=29	40.58	147	LR	LR	19 04 49.6	
CMAR	**Chiang Mai Arr** 0.7nm,0.3s,baz=89,slow=6.4,SNR=10	43.75	284	P	P	18 53 09.4	-0.3
ULN	**Ulaanbaatar**	47.02	326	P	P	18 53 32.0	-3.4
ULN	comp=Z,18nm,2.0s			IAmb	IAmb	18 53 38.8	
SONM	**Songino Array** comp=Z,1.1nm,0.5s,baz=153,slow=7.0,SNR=12	47.36	326	P	P	18 53 38.1	+0.1
SONM	comp=Z,0.6nm,0.5s,baz=156,slow=3.7,SNR=3.7			PcP	PcP	18 55 08.4	-0.1
SONM	**Songino Array**	47.36	326	P	P	18 53 37.8	-0.2
GTA	**Gaotai**	47.44	313	eP	P	18 53 39.3	+0.6
GTA				pP	pP	18 53 43.4	-2.1
GTA				sP	sP	18 53 46.4	-1.5
GTA				PcP	PcP	18 55 10.3	+1.4
LSA	**Lhasa**	51.83	298	P	P	18 54 13.2	+0.5
BILL	**Bilibino**	57.69	10	P	P	18 54 53.4	-0.6
MLZ	**Mavora Lakes**	61.31	161	P	P	18 55 22.6	+3.3
MK31	**Makanchi Array**	61.87	317	P	P	18 55 22.0	-1.2
MKAR	**Makanchi Array** comp=Z,1.6nm,0.7s,baz=93,slow=8.7,SNR=19	61.87	317	P	P	18 55 23.7	+0.5
MKAR	**Makanchi Array**	61.87	317	P	P	18 55 23.1	-0.1
MAKZ	**Makanchi**	62.08	317	P	P	18 55 24.7	+0.1
MAKZ	comp=Z,4.2nm,0.8s			IAmb	IAmb	18 55 26.1	
ZAA0	**Zalesovo Array**	62.23	325	P	P	18 55 24.9	-0.5
ZALV	**Zalesovo Beam** comp=Z,1.8nm,0.6s,baz=108,slow=8.2,SNR=6.5	62.23	325	P	P	18 55 25.4	-0.1
ZALV	comp=Z,1.4nm,0.5s,baz=124,slow=3.7,SNR=4.7			PcP	PcP	18 56 04.1	-1.1
ZALV	**Zalesovo Beam**	62.23	325	P	P	18 55 24.5	-0.9
ANM	**Nome**	62.83	22	P	P	18 55 28.7	-0.5
ANM	comp=Z,12nm,1.8s			IAmb	IAmb	18 56 00.4	
PRZ	**Przheval'sk**	63.85	311	P	P	18 55 37.6	+0.9
PRZ	comp=Z,7.8nm,1.1s			IAmb	IAmb	18 56 19.5	
KURK	**Kurchatov**	65.07	320	P	P	18 55 44.0	-0.2
KSH	**Kashi**	65.37	308	P	P	18 55 53.0	+6.4
KSH				pP	pwP	18 56 06.1	+5.8
KSH				PcP	PcP	18 56 25.4	+6.8
KSH				PcS		19 00 28.6	
KSH				S	S	19 04 32.6	+3.3
KSH	**Kashi**	65.37	308	SS	SS	19 08 48.8	+6.1
NIL	**Nilore**	67.32	301	P	P	18 55 59.1	+0.1
KK31	**Karatay Array**	69.69	312	P	P	18 56 12.8	-0.9
KKAR	**Karatay Array**	69.69	312	P	P	18 56 13.1	-0.6
KKAR	**Karatay Array**	69.69	312	P	P	18 56 12.8	-0.9
KKAR	comp=Z,4.2nm,0.8s			IAmb	IAmb	18 56 14.8	
GAR	**Garm**	69.73	307	P	P	18 56 13.6	-0.6
GAR	comp=Z,14nm,1.3s			IAmb	IAmb	18 56 15.3	
ILAR	**Eielson Array** comp=Z,1.1nm,0.6s,baz=250,slow=5.8,SNR=12	70.22	25	P	P	18 56 15.1	-1.4
ILAR	**Eielson Array**	70.22	25	P	P	18 56 14.6	-1.8
TOLK	**Toolik Lake Re**	70.25	21	P	P	18 56 17.3	+0.7
BRVK	**Borovoye**	70.53	322	P	P	18 56 18.7	+0.1
BRVK	comp=Z,7.2nm,0.7s			IAmb	IAmb	18 56 19.7	
CHGR	**Chuyangaron**	70.64	307	P	P	18 56 19.6	0.0
CHGR	comp=Z,13nm,0.9s			IAmb	IAmb	18 56 20.8	
KBL	**Kabul**	70.80	302	P	P	18 56 20.3	-0.6
BMAR	**Burnt Mountain**	71.74	23	P	P	18 56 25.3	-0.5
BCAR	**Beaver Creek A**	72.10	27	P	P	18 56 27.2	-0.8
INK	**Inuvik**	76.00	22	P	P	18 56 50.3	-0.2
INK	comp=Z,8.8nm,0.9s			IAmb	IAmb	18 56 52.1	
HRA	**Herat**	76.42	303	P	P	18 56 53.7	-0.2
HRA	comp=Z,8.4nm,0.8s			IAmb	IAmb	18 56 55.1	
ABKAR	**Akbulak array**	76.97	318	P	P	18 56 55.3	-1.1
ABKAR	**Akbulak array**	76.97	318	P	P	18 56 54.6	-1.8
ARU	**Arti**	77.40	325	P	P	18 56 58.1	-0.6
ARU	comp=Z,8.7nm,0.7s			IAmb	IAmb	18 56 59.0	
GEYT	**Alibeck** comp=Z,2.9nm,0.7s,baz=38,slow=7.5,SNR=7.0	79.35	307	P	P	18 57 10.1	+0.1
GEYT	**Alibeck**	79.35	307	P	P	18 57 10.3	+0.4
C36M	**Paulatuk**	79.40	21	P	P	18 57 09.9	+0.5
C36M	comp=Z,10nm,1.1s			IAmb	IAmb	18 57 10.4	
YKA	**Yellowknife Ar** comp=Z,4.3nm,0.8s,baz=284,slow=5.1,SNR=36	84.52	27	P	P	18 57 36.6	+0.1
PINE	**Pine Mountain**	85.34	46	P	P	18 57 42.2	+0.9
PINE	comp=Z,6.2nm,0.9s			IAmb	IAmb	18 57 43.8	
B08A	**Colville Reser**	85.43	42	P	P	18 57 40.6	-0.9
B08A	comp=Z,7.7nm,1.1s			IAmb	IAmb	18 57 44.3	
RES	**Resolute Bay**	86.12	13	P	P	18 57 44.1	-0.2
RES	comp=Z,5.2nm,0.8s			IAmb	IAmb	18 57 45.8	
BEKR	**Beckworth**	86.62	50	P	P	18 57 47.4	-0.3
NEW	**Newport**	86.88	41	P	P	18 57 47.9	-0.7
NEW	comp=Z,5.8nm,0.8s			IAmb	IAmb	18 57 51.7	
BMO	**Blue Mountains**	87.63	45	P	P	18 57 52.8	+0.4
BMO	comp=Z,5.4nm,0.9s			IAmb	IAmb	18 57 56.3	
ARCES	**ARCESS Array B** comp=Z,1.8nm,0.6s,baz=65,slow=6.4,SNR=8.0	88.13	342	P	P	18 57 54.4	+0.3
NVAR	**Mina Array Bea** comp=Z,2.3nm,0.7s,baz=222,slow=2.1,SNR=15	88.51	51	P	P	18 57 58.0	+1.1
NVAR	**Mina Array Bea**	88.51	51	P	P	18 57 57.0	+0.1
KVN	**Kaiserville**	88.51	50	P	P	18 57 57.2	+0.4
KVN	comp=Z,15nm,1.9s			IAmb	IAmb	19 00 34.6	
NV11	**Mina Array Sit**	88.62	51	P	P	18 57 57.9	+0.6
WALA	**Waterton Lakes**	88.71	40	P	P	18 57 57.7	+0.2
MFID	**Camas Ranch**	89.03	46	P	P	18 57 59.4	+0.3
MFID	comp=Z,4.5nm,0.8s			IAmb	IAmb	18 58 05.6	
ELK	**Elko**	90.19	48	P	P	18 58 04.3	-0.4
ELK	comp=Z,4.9nm,1.3s			IAmb	IAmb	18 58 07.1	
TPNV	**Topopah Spring**	90.46	52	P	P	18 58 06.0	0.0
GSC	**Goldstone, Bar**	90.47	54	P	P	18 58 06.8	+0.9
FINES	**FINESS Array B** comp=Z,4.8nm,0.9s,baz=71,slow=5.2,SNR=7.9	92.04	335	P	P	18 58 11.2	-1.4
PDAR	**Pinedale Array** comp=Z,0.4nm,0.5s,baz=184,slow=1.7,SNR=5.0	93.60	45	P	P	18 58 21.1	+0.6

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*IDC **13** 18:46:56.5±2.2, 33°.97N×132°.29E, h0^{km}, mb3.3/1, mb1 3.1/2, mb1mx2.9/48, mbtmp3.1/2, ML3.3/2, Error ellipse: s-maj=26.5km s-min=16.0km az=128.0*

*JMA **13** 18:46:59.1, 33°.82N×132°.49E, h49^{km}±1^{km}, M3.8 Broadband fault plane solution: P waves. NP1: ϕ_s32.00000°, δ70.00000°, λ-3.00000°. NP2: ϕ_s123.00000°, δ87.00000°, λ-160.00000°. Principal axes: T Plg12.0000°, Azm256.0000°; N Plg70.0000°, Azm131.0000°; P Plg16.0000°, Azm349.0000°;*

JMA Felt II J1.

ISC 13 18:46:58.7±1.1**, 33°.85N**±0°.03×**132°.47E**±0°.04**, h27^{km}**±12^{km}**, n17, σ1^{s}27**/28**, 2C-7D, Shikoku**

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

JNA	Nagahama	0.29	179	⇓P	Pn	18 47 07.6	+0.4
JNA				S	Sn	18 47 13.7	+1.0
JHM	Kurahashi	0.29	9	⇓P	Pn	18 47 08.3	+1.0
JHM				S	Sn	18 47 14.9	+2.1
JET	Tanbara	0.49	98	⇑P	Pn	18 47 09.9	0.0
JET				S	Sn	18 47 17.8	+0.3
UWA2	Uwa jima 2	0.65	168	⇓P	Pb	18 47 11.8	+0.4
UWA2				S	Sb	18 47 21.0	+1.0
JKU	Kubokawa	0.73	137	⇓P	Pb	18 47 12.7	-0.1
JKU				S	Sb	18 47 22.8	+0.4
JHT	Toyohira	0.81	357	⇓P	Pn	18 47 14.8	+0.3
JHT				S	Sn	18 47 26.6	+0.9
JTO	Tosashimizu	1.02	164	⇓P	Pn	18 47 16.7	-0.6
JMN	Monobe	1.18	95	P	Pn	18 47 18.5	-1.0
JMN				S	Sn	18 47 33.3	-1.4
JGT2	ShimaneMisato	1.21	1	⇓P	Pb	18 47 20.0	-1.0
JGT2				S	Sb	18 47 35.5	-0.7
JHS	Saijyo	1.27	25	P	Pb	18 47 21.0	-0.9
JHS				S	Sb	18 47 37.1	-0.7
JJS	Sakaide	1.32	66	⇑P	Pn	18 47 20.6	-0.8
JJS				S	Sn	18 47 36.5	-1.6
JNU	Nakatsue	1.52	242	Pg	Pb	18 47 24.1	-2.0
	33nm,0.3s,baz=53,slow=5.7,SNR=566						
JNU				Lg	Lg	18 47 42.7	
	41nm,0.3s,baz=186,slow=19,SNR=10						
KSRS	Korea Array	5.16	315	Pn	Pn	18 48 14.5	+0.3
	0.4nm,0.3s,baz=140,slow=14,SNR=4.3						
KSRS				Pg	Pb	18 48 31.5	+3.3
	0.4nm,0.3s,baz=143,slow=16,SNR=4.0						
KSRS				Sn	Sn	18 49 12.0	-0.9
	1.0nm,0.3s,baz=135,slow=24,SNR=6.7						
KSRS				Lg	Lg	18 49 35.3	
	0.4nm,0.3s,baz=137,slow=31,SNR=3.2						
MAT	Matsushiro	5.41	59	P	Pn	18 48 19.0	+1.4
MJAR	Matsushiro Arr	5.41	59	Pn	Pn	18 48 19.6	+1.9
	2.4nm,0.3s,baz=242,slow=14,SNR=121						
USRK	Ussuriysk Ar.	10.34	358	Pn	Pn	18 49 28.1	+2.9
	baz=186,slow=12,SNR=4.3						
SONM	Songino Array	24.03	313	P	P	18 52 10.0	-1.5
	0.4nm,0.4s,baz=130,slow=9.8,SNR=5.4						

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*NCEDC **13** 18:47:36.0±1.9, 40°.33N±0°.03×124°.6W±0°.1, h21km±7km, Md2.6/35, Error ellipse: s-maj=11.8km s-min=3.9km az=86.0*

NEIC 13 18:47:33.6±1.1**, 40°.35N**±0°.03×**124°.76W**±0°.05**, h27**km±9km**, Error ellipse: s-maj=5.4km s-min=4.5km az=96.0, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	0.34	68		Pn	18 47 42.6	-0.2
KCTM					Sb	18 47 47.8	+1.0
KSMM	Slide Mountain	0.47	110		Pb	18 47 43.7	+0.2
KMPM	Mount Pierce	0.49	82		Pb	18 47 44.3	+0.5
KMPM					Sb	18 47 50.7	0.0
KCRM	Chalk Rock	0.72	84		Pb	18 47 47.6	0.0
JCC	Jacoby Creek,	0.72	50		Pb	18 47 47.4	-0.1
JCC					Sb	18 47 55.9	-1.2
KMRM	Mail Ridge	0.81	99		Pn	18 47 49.3	0.0
KHMM	Horse Mountain	0.94	56		Pn	18 47 51.0	-0.1
KCSM	Cold Springs	0.97	78		Pn	18 47 51.4	-0.1
KRPM	Rodgers	0.98	34		Pn	18 47 51.7	0.0
KIPM	Iron Peak	1.12	119		Pn	18 47 53.1	-0.4
KCPM	Cahto Peak	1.12	126		Pn	18 47 53.4	-0.1
KHBM	Hayfork Bally	1.21	75		Pn	18 47 54.5	-0.4
KFPM	Farley Peak	1.25	124		Pn	18 47 55.1	-0.1
KBNM	Bluenose Ridge	1.28	110		Pn	18 47 56.1	+0.3
GTC	Three Chop Rid	1.32	135		Pn	18 47 56.2	-0.1
KRMB	Red Mountain	1.34	28		Pn	18 47 56.8	+0.2
KRMB					Sn	18 48 11.7	-1.8
KOMM	Orleans Mounta	1.36	46		Pn	18 47 57.0	+0.1
LBPM	Beegum Peak	1.43	91		Pn	18 47 57.8	0.0
GNAM	Navarro Ridge	1.44	143		Pn	18 47 57.8	0.0
KRKM	Rackout Spring	1.44	123		Pn	18 47 58.0	0.0
O02D	Mt. Diablo Mer	1.52	96		Pn	18 47 59.2	+0.3
LGPM	Granite Peak	1.57	68		Pn	18 47 59.7	0.0
GHOM	Hamilton Openi	1.61	144		Pn	18 48 00.1	-0.1
KSXB	Camp Six Broad	1.62	24		Pn	18 48 00.7	+0.3
KSXB					Sn	18 48 19.0	-1.6
GROM	Round Mountain	1.66	104		Pn	18 48 01.7	+0.8
N02D	Trinity Center	1.68	68		Pn	18 48 01.2	0.0
GVV	Valley View	1.70	109		Pn	18 48 02.1	+0.6
WDC	Whiskeytown Da	1.71	82		Pn	18 48 01.5	0.0
GASB	Alder Springs	1.71	113		Pn	18 48 02.7	+0.9
LBKM	Bonanza King	1.75	65		Pn	18 48 02.3	+0.1
YBH	Yreka Blue Hor	2.07	48	Pn	Pn	18 48 06.2	-0.5
LSHM	Sage Hen Hill	2.12	77		Pn	18 48 07.7	+0.5
GSSM	Skaggs Springs	2.13	140		Pb	18 48 13.0	+1.6
LGBM	Gray Butte	2.18	62		Pn	18 48 09.6	+1.2
HUMO	Hull Mountain	2.63	30	Pn	Pn	18 48 15.1	+0.8
BEKR	Beckworth	3.41	97	Pn	Pn	18 48 25.2	+0.2

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*IDC **13** 18:49:51.6±1.2, 16°.66S×166°.97E, h0km, mb4.2/8, mb1 4.4/11, mb1mx4.0/42, mbtmp4.3/11, ML4.1/3, MS4.2/2, Ms1 4.2/2, ms1mx3.3/49, Error ellipse: s-maj=33.6km s-min=21.1km az=129.0*

*NEIC **13** 18:49:54.2±3.0, 16°.6S±0°.1×167°.2E±0°.2, h26km±5km, mb4.6/12, Error ellipse: s-maj=27.7km s-min=14.0km az=122.0*

ISC 13 18:49:54.0±0.9**, 16°.65S**±0°.08×**167°.1E**±0°.2**, h18**km**, n31,** σ1ˢ.**61**/31**, mb4.4**/12**, 1C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	5.43	186	Pn	Pn	18 51 14.2	0.0
	19nm,0.3s,baz=36,slow=19,SNR=528						
DZM				Sn	Sn	18 52 13.7	-2.6
	4.4nm,0.3s,baz=117,slow=22,SNR=2.3						
DZM	Mont Dzumac	5.43	186		Pn	18 51 14.1	-0.1
KRVT	Keravat (AS076	19.19	308	P	Pn	18 54 17.1	-0.9
	0.9nm,0.3s,baz=150,slow=14,SNR=2.0						
ARMA	Armidale	19.68	223	P	Pn	18 54 30.3	+6.5
ARMA				IAmb	IAmb	18 54 31.2	
	comp=Z,24nm,1.4s						
CTA	Charters Tower	20.05	257	P	P	18 54 26.0	-0.4
	comp=Z,0.1nm,0.3s,baz=71,slow=14,SNR=3.0						
PMG	Port Moresby	20.68	288	P	P	18 54 33.0	-0.2
	comp=Z,7.3nm,1.0s,baz=101,slow=5.2,SNR=3.0						
STKA	Stephens Creek	27.64	232	P	P	18 55 41.0	+0.2
	comp=Z,6.0nm,0.7s,baz=43,slow=8.2,SNR=14						
STKA	Stephens Creek	27.64	232	P	P	18 55 40.8	+0.1
WR0	Warramunga Arr	31.04	259	P	P	18 56 10.2	-0.9
WB0	Warramunga Arr	31.17	259	P	P	18 56 10.6	-1.6
WB0				IAmb	IAmb	18 56 48.2	
	comp=Z,6.6nm,1.1s						
WB2	Warramunga Arr	31.21	259	P	P	18 56 11.8	-0.9
WB2				IAmb	IAmb	18 56 56.7	
	comp=Z,27nm,1.8s						
WRAB	Tennant Creek	31.21	259	P	P	18 56 11.2	-1.4
WRAB				IAmb	IAmb	18 56 27.6	
	comp=Z,26nm,1.9s						
WRA	Warramunga Arr	31.23	259	P	P	18 56 11.3	-1.4
	comp=Z,2.1nm,0.8s,baz=88,slow=7.9,SNR=12						
RAR	Rarotonga	31.65	103	LR	LR	19 05 24.7	
	comp=Z,291nm,21.6s,baz=67,slow=29						
AS31	Alice Springs	31.86	252	P	P	18 56 17.1	-1.2
ASAR	Alice Springs	31.86	252	P	P	18 56 17.2	-1.0
	comp=Z,4.4nm,0.7s,baz=80,slow=8.8,SNR=66						
ASAR				PcP	PcP	18 59 09.2	+0.2
	comp=Z,0.6nm,0.8s,baz=102,slow=3.3,SNR=4.7						
ASAR	Alice Springs	31.86	252	P	P	18 56 16.8	-1.5
BBOO	Buckleboo	32.29	234	P	P	18 56 21.5	-0.4
BBOO				IAmb	IAmb	18 57 32.6	
	comp=Z,44nm,1.7s						
KNRA	Kununurra	36.77	266	P	P	18 56 59.7	-1.2
KNRA				IAmb	IAmb	18 57 00.5	
	comp=Z,7.1nm,0.8s						
MORW	Morawa	48.29	246	P	P	18 58 34.6	+0.2
YULB	Yu-li	59.87	310	P	P	18 59 58.4	-0.5
SEY	Seymchan	80.15	353	P	P	19 02 03.6	+1.0
	comp=Z,1.2nm,0.8s,baz=111,slow=8.1,SNR=5.3						
ULN	Ulaanbaatar	83.56	324	P	P	19 02 20.6	-0.5
ULN				IAmb	IAmb	19 02 23.1	
	comp=Z,2.5nm,0.8s						
SONM	Songino Array	83.92	324	P	P	19 02 23.6	+0.6
	comp=Z,1.2nm,0.9s,baz=134,slow=6.5,SNR=5.8						
SONM	Songino Array	83.92	324	P	P	19 02 23.3	+0.3
SYO	Syowa Base	86.83	197	⇑*e*PcP	PcP	19 02 39.0	-0.3
ILAR	Eielson Array	88.40	18	P	P	19 02 44.9	+0.4
	comp=Z,0.6nm,0.5s,baz=235,slow=5.0,SNR=11						
ILAR	Eielson Array	88.40	18	P	P	19 02 44.6	+0.2
ELK	Elko	91.71	48	LR	LR	19 37 36.0	
	comp=Z,183nm,19.1s,baz=114,slow=31						
YKA	Yellowknife Ar	99.33	27	P	Pdif	19 03 36.3	+1.7
	comp=Z,0.3nm,0.7s,baz=252,slow=5.1,SNR=3.9						
BRTR	Keskin Array B	133.59	309	PKP	PKPdf	19 09 08.3	-1.7
	comp=Z,0.5nm,0.7s,baz=22,slow=4.7,SNR=2.4						

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*NEIC **13** 18:56:47.9±1.9, 20°.1S±0°.2×177°.9W±0°.1, h477km±9km, mb4.4/63, Error ellipse: s-maj=34.3km s-min=16.2km az=159.0*

*IDC **13** 18:56:48.2±1.9, 20°.14S×177°.82W, h484km±19km, mb3.6/17, mb1 3.8/18, mb1mx3.6/40, mbtmp4.4/18, Error ellipse: s-maj=21.5km s-min=11.2km az=149.0*

ISC 13 18:56:48.9±0.4**, 20°.18S**±0°.08×**177°.70W**±0°.07**, h500**km**, n211,** σ1ˢ.**61**/225**, mb4.2**/40**, 27C-9D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.70	300	P	P	18 58 15.1	+1.7
NIUE	Niue	7.41	83		P	18 58 39.0	-0.3
NIUE				S	S	19 00 11.9	+2.2
AFI	Afiamalu	8.42	43	P	P	18 58 48.1	-1.9
	28nm,0.3s,baz=176,slow=1.9,SNR=18						
AFI				S	S	19 00 21.1	-8.1
	13nm,0.3s,baz=31,slow=20,SNR=5.8						
AFI	Afiamalu	8.42	43	P	P	18 58 46.9	-3.1
OUZ	Omahuta	16.83	205		P	19 00 10.0	-8.1
MXZ	Matakaoa Point	17.66	191		P	19 00 22.8	-3.3
MXZ	Matakaoa Point	17.66	191	P	P	19 00 29.8	+3.8
WMGZ	Waiomatatini S	17.90	190	P	P	19 00 28.2	0.0
HAZ	Te Kaha	17.95	192	P	P	19 00 29.1	+0.4
PKGZ	Pakihiroa	18.02	191	P	P	19 00 29.3	-0.1
RUGZ	Raukumara Rang	18.17	192	P	P	19 00 30.8	-0.1
TWGZ	Tauwhareparae	18.32	191	P	P	19 00 32.1	-0.1
MWZ	Matawai	18.56	192	P	P	19 00 33.0	-1.3
URZ	Urewera	18.57	193	P	P	19 00 31.0	-3.3
	2.1nm,0.3s,baz=292,slow=3.7,SNR=8.3						
URZ	Urewera	18.57	193	P	P	19 00 30.2	-4.2
URZ				IAmb	IAmb	19 00 39.0	
	comp=Z,14nm,0.6s						
URZ	Urewera	18.57	193	P	P	19 00 31.7	-2.6
MUGZ	Murupara	18.85	194	P	P	19 00 34.8	-2.2
KNZ	Kokohu	19.20	191	P	P	19 00 38.6	-1.5
HIZ	Hauiti	19.37	198	P	P	19 00 41.2	-0.5
BKZ	Black Stump Fm	19.57	194	P	P	19 00 40.5	-3.1
BKZ				IAmb	IAmb	19 00 55.9	
	comp=Z,25nm,1.5s						
BFZ	Birch Farm	21.08	193	P	P	19 00 52.8	-4.3
MSWZ	Moikau Station	22.00	194	P	P	19 01 00.6	-4.9
BHW	Baring Head	22.08	195	P	P	19 01 03.6	-2.6
PLWZ	Palliser	22.14	194	P	P	19 01 02.1	-4.8
QRZ	Quartz Range	22.20	200	P	P	19 01 06.0	-1.3
NNZ	Nelson	22.30	198	P	P	19 01 06.3	-1.9
TUWZ	Tuamarina	22.34	197	P	P	19 01 07.9	-0.6
THZ	Tophouse	22.94	198	P	P	19 01 12.6	-1.5
THZ				IAmb	IAmb	19 02 00.9	
	comp=Z,46nm,1.6s						
KHZ	Kahutara	23.37	197	P	P	19 01 14.9	-2.8
LTZ	Lake Taylor	24.06	198	P	P	19 01 20.4	-3.6
OXZ	Oxford	24.63	198	P	P	19 01 25.5	-3.5
DCZ	Deep Cove	28.15	203	P	P	19 01 58.6	-1.3
WHZ	Wether Hill Ro	28.23	201	P	P	19 01 59.5	-1.2
CTA	Charters Tower	33.80	264	P	P	19 02 49.0	0.0
	comp=Z,5.5nm,0.3s,baz=92,slow=9.9,SNR=12						
PMG	Port Moresby	35.55	282	P	P	19 03 03.9	+0.2
	comp=Z,9.9nm,0.8s,baz=111,slow=4.5,SNR=5.6						
PMG	Port Moresby	35.55	282	P	P	19 03 03.2	-0.4
PMG				IAmb	IAmb	19 03 04.4	
	comp=Z,10nm,0.8s						
STKA	Stephens Creek	38.18	244	P	P	19 03 24.6	-0.6
	comp=Z,0.8nm,0.6s,baz=101,slow=16,SNR=2.5						
STKA				PcP	PcP	19 05 27.6	+0.5
	comp=Z,0.7nm,0.7s,baz=96,slow=5.4,SNR=4.7						
WR0	Warramunga Arr	44.73	262	P	P	19 04 15.9	-1.5
WR0				IAmb	IAmb	19 05 02.0	
	comp=Z,22nm,1.6s						
AS31	Alice Springs	44.86	256	P	P	19 04 17.8	-0.6
ASAR	Alice Springs	44.87	256	P	P	19 04 17.8	-0.6
	comp=Z,4.7nm,0.7s,baz=97,slow=7.9,SNR=55						
ASAR				PcP	PcP	19 05 49.5	-0.1
	comp=Z,3.4nm,0.7s,baz=102,slow=4.0,SNR=18						
ASAR				ScP	ScP	19 08 56.6	+2.4
	comp=Z,0.4nm,1.0s,baz=93,slow=4.6,SNR=4.1						
ASAR				S	S	19 10 15.3	-4.0
	comp=Z,0.7nm,0.9s,baz=95,slow=16,SNR=6.2						
ASAR	Alice Springs	44.87	256	P	P	19 04 16.9	-1.5
WB0	Warramunga Arr	44.90	262	P	P	19 04 17.0	-1.7
WB0				IAmb	IAmb	19 04 18.1	
	comp=Z,5.2nm,0.7s						
WB2	Warramunga Arr	44.91	262	P	P	19 04 17.6	-1.2
WB2				IAmb	IAmb	19 04 49.3	
	comp=Z,42nm,1.9s						
WRAB	Tennant Creek	44.91	262	P	P	19 04 17.1	-1.7
WRAB				IAmb	IAmb	19 04 40.0	
	comp=Z,11nm,1.3s						
WRA	Warramunga Arr	44.92	262	P	P	19 04 17.8	-1.1
	comp=Z,1.3nm,0.3s,baz=96,slow=7.8,SNR=109						
WRA				PcP	PcP	19 05 49.9	0.0
	comp=Z,1.6nm,0.7s,baz=87,slow=4.1,SNR=7.6						
WRA	Warramunga Arr	44.92	262	P	P	19 04 15.8	-3.1
KNRA	Kununurra	50.96	266	P	P	19 05 00.3	-3.8
FITZ	Fitzroy Crossi	53.35	262	P	P	19 05 20.2	-1.1
SOEI	Soe	56.77	271	P	P	19 05 45.9	+0.4
SOEI				IAmb	IAmb	19 05 47.4	
	comp=Z,16nm,0.6s						
VNDA	Vanda	58.25	185	P	P	19 05 56.0	+1.6
	comp=Z,0.9nm,0.7s,baz=50,slow=7.8,SNR=3.4						
MJAR	Matsushiro Arr	70.12	323	P	P	19 07 10.3	-0.3
	comp=Z,2.6nm,0.8s,baz=154,slow=5.1,SNR=3.9						
PETK	Petropavlovsk-	76.04	345	P	P	19 07 44.7	+0.6
	comp=Z,3.4nm,0.7s,baz=126,slow=7.7,SNR=6.1						
ISA	Isabella, Lake	78.91	45	P	P	19 08 01.9	+1.6
AFDM	Forest Hills D	79.21	42	P	P	19 08 03.3	+1.6
ORV	Oroville	79.25	41	P	P	19 08 03.5	+1.5
YBH	Yreka Blue Hor	79.87	39	P	P	19 08 07.1	+1.9
	comp=Z,5.3nm,0.7s,baz=201,slow=1.3,SNR=11						
YBH	Yreka Blue Hor	79.87	39	IAmb	IAmb	19 08 08.0	
	comp=Z,5.0nm,0.8s						
PNTR	Pine Nut	80.16	42	P	P	19 08 08.9	+1.9
PNTR				IAmb	IAmb	19 08 09.7	
	comp=Z,8.8nm,0.9s						
YERR	Yerington	80.32	42	P	P	19 08 09.1	+1.3
YERR				IAmb	IAmb	19 08 09.8	
	comp=Z,5.7nm,0.8s						
NVAR	Mina Array Bea	80.60	43	P	P	19 08 11.1	+1.8
	comp=Z,3.2nm,0.9s,baz=222,slow=8.5,SNR=18						
NVAR	Mina Array Bea	80.60	43	P	P	19 08 10.7	+1.4
PAHR	Pah Rah Range	80.66	42	P	P	19 08 10.5	+1.0
NV11	Mina Array Sit	80.70	43	P	P	19 08 11.4	+1.7
KVN	Kaiserville	81.09	43	P	P	19 08 13.4	+1.7
MOD	Modoc Plateau	81.39	39	P	P	19 08 14.9	+1.7
MOD				IAmb	IAmb	19 08 15.3	
	comp=Z,4.4nm,0.7s						
Y14A	Wickenburg	81.77	49	P	P	19 08 16.7	+1.4
PINE	Pine Mountain	82.16	38	P	P	19 08 19.2	+2.0
PINE				IAmb	IAmb	19 08 20.1	
	comp=Z,9.6nm,0.8s						
TUC	Tucson	82.56	52	P	P	19 08 21.8	+2.4
TUC				IAmb	IAmb	19 08 22.6	
	comp=Z,5.6nm,0.9s						
WVOR	Wild Horse Val	82.71	40	P	P	19 08 21.6	+1.7
X16A	Lo Mia Camp, P	83.13	50	P	P	19 08 24.6	+2.3
X16A				IAmb	IAmb	19 08 25.4	
	comp=Z,6.8nm,1.1s						
I07A	Izee	83.17	38	P	P	19 08 24.0	+1.9
I07A				IAmb	IAmb	19 08 24.8	
	comp=Z,8.5nm,1.0s						
LCMT	Little Creek M	83.19	47	P	P	19 08 24.3	+1.8
CCUT	Cedar City	83.39	46	P	P	19 08 25.7	+2.1
U15A	North Rim	83.54	48	P	P	19 08 26.2	+1.8
U15A				IAmb	IAmb	19 08 27.4	
	comp=Z,6.7nm,0.8s						
GAMB	Gambell	83.81	3	P	P	19 08 25.9	+1.3
G08A	Pilot Rock	84.19	37	P	P	19 08 28.3	+1.0
G08A				IAmb	IAmb	19 08 29.7	
	comp=Z,3.7nm,0.7s						
MTPU	Mount Pierson	84.44	46	P	P	19 08 31.2	+2.3
F10A	Beach Ranch, E	85.58	37	P	P	19 08 34.5	+0.5
F10A				IAmb	IAmb	19 08 35.8	
	comp=Z,9.0nm,0.8s						
TRF	Thorofare Moun	86.08	12	P	P	19 08 34.9	-1.1
SEY	Seymchan	86.13	347	P	P	19 08 36.3	+0.3
	comp=Z,4.9nm,0.8s,baz=157,slow=6.1,SNR=19						
RND	Reindeer	86.33	13	P	P	19 08 37.3	+0.2
RND				IAmb	IAmb	19 08 39.2	
	comp=Z,19nm,1.2s						
MNTX	Cornudas Mount	86.34	54	P	P	19 08 38.1	+0.3
TX32	Lajitas Array	86.65	57	P	P	19 08 41.1	+1.7
TXAR	Lajitas Array	86.65	57	P	P	19 08 41.3	+1.8
	comp=Z,2.0nm,0.7s,baz=214,slow=7.4,SNR=24						
TXAR	Lajitas Array	86.65	57	P	P	19 08 41.1	+1.7
CCB	Clear Creek Bu	87.64	12	P	P	19 08 43.0	-0.2
CCB				IAmb	IAmb	19 08 43.7	
	comp=Z,6.6nm,0.6s						
IMAR	Indian Mountai	87.80	10	P	P	19 08 44.5	+0.6
COLA	College	87.84	12	P	P	19 08 44.2	+0.2
COLA				IAmb	IAmb	19 08 45.0	
	comp=Z,13nm,0.8s						
IL31		87.94	13	P	P	19 08 44.3	-0.2
IL31				IAmb	IAmb	19 08 55.7	
	comp=Z,23nm,1.8s						
ILAR	Eielson Array	87.94	13	P	P	19 08 44.3	-0.2
	comp=Z,1.7nm,0.6s,baz=218,slow=5.8,SNR=21						
ILAR	Eielson Array	87.94	13	P	P	19 08 44.1	-0.4
REDW	Red Top Meadow	88.01	42	P	P	19 08 47.3	+1.6
REDW				IAmb	IAmb	19 08 48.2	
	comp=Z,7.3nm,1.2s						
XAN	Xi'an	88.16	307	P	P	19 08 47.3	+0.9
XAN				pP	PcP	19 08 57.0	+9.4
SNAA	Sanae	88.32	178	P	P	19 08 45.6	-0.9
QLMT	Earthquake Lak	88.39	41	P	P	19 08 49.0	+1.6
VNA3	Neumayer Olymp	88.44	176	P	P	19 08 46.4	-0.6
PD31	Pinedale Array	88.54	43	P	P	19 08 48.6	+0.4
PD31				IAmb	IAmb	19 12 00.0	
	comp=Z,6.1nm,0.6s						
PDAR	Pinedale Array	88.54	43	P	P	19 08 49.1	+1.0
	comp=Z,1.4nm,0.6s,baz=205,slow=4.0,SNR=4.7						
PDAR	Pinedale Array	88.54	43	P	P	19 08 49.0	+0.8
YHL	Hebgen Lake	88.56	41	P	P	19 08 50.5	+2.2
YMR	Madison River	88.60	41	P	P	19 08 49.7	+1.3
VNA2	Neumayer--Watz	88.89	177	P	P	19 08 48.9	-0.2
	baz=188,slow=3.1						
DAWY	Dawson	89.08	16	P	P	19 08 49.4	-0.6
DAWY				IAmb	IAmb	19 08 52.0	
	comp=Z,4.9nm,0.8s						
CMAR	Chiang Mai Arr	90.27	289	P	P	19 08 57.0	+0.5
	comp=Z,2.4nm,0.9s,baz=114,slow=2.8,SNR=15						
CMAR	Chiang Mai Arr	90.27	289	P	P	19 08 57.0	+0.5
CHTO	Chiang Mai	90.40	290	P	P	19 08 58.4	+1.4
CHTO				IAmb	IAmb	19 08 59.1	
	comp=Z,2.5nm,0.8s						
BMAR	Burnt Mountain	90.73	12	P	P	19 08 58.7	+1.2
INK	Inuvik	93.89	15	P	P	19 09 11.4	-0.5
	comp=Z,1.3nm,0.8s,baz=260,slow=5.5,SNR=3.5						
YKA	Yellowknife Ar	96.11	25	P	P	19 09 22.4	+0.3
	comp=Z,0.3nm,0.7s,baz=236,slow=4.6,SNR=3.8						
ZALV	Zalesovo Beam	110.42	321	PKiKP	PKiKP	19 14 22.2	-1.4
	comp=Z,1.0nm,0.5s,baz=68,slow=1.0,SNR=6.1						
MKAR	Makanchi Array	111.18	313	PKiKP	PKiKP	19 14 24.5	-0.9
	comp=Z,0.9nm,0.6s,baz=73,slow=1.5,SNR=17						
KSH	Kashi	114.94	305	PKP	PKiKP	19 14 35.9	+3.0
KSH				PP	PP	19 15 48.6	+7.3
KSH				sPKP		19 17 15.4	
KSH				PKS	PKSdf	19 18 10.4	+0.7
KSH				SKKS		19 21 52.3	
KKAR	Karatay Array	119.27	309		PKPdf	19 14 40.4	-0.6
GAR	Garm	119.27	304		PKPdf	19 14 40.7	-0.6
ARCES	ARCESS Array B	128.66	350	PKP	PKPdf	19 14 58.4	+0.1
	comp=Z,6.3nm,1.0s,baz=335,slow=1.7,SNR=6.4						
GEYT	Alibeck	128.85	303	PKP	PKPdf	19 14 58.9	-0.6
	comp=Z,1.4nm,0.6s,baz=270,slow=3.0,SNR=3.8						
GEYT	Alibeck	128.85	303		PKiKP	19 15 00.3	0.0
FINES	FINESS Array B	135.55	344	PKhKP	PKPpre	19 15 07.3	
	comp=Z,2.1nm,0.8s,baz=342,slow=1.8,SNR=7.0						
FINES				PKP	PKiKP	19 15 12.8	-0.2
	comp=Z,2.1nm,0.8s,baz=103,slow=4.4,SNR=7.3						
AKASG	Malin Array Be	142.87	332	PKhKP	PKPdf	19 15 21.6	-3.3
	comp=Z,4.1nm,0.3s,baz=42,slow=4.6,SNR=72						
AKASG	Malin Array Be	142.87	332		PKPdf	19 15 21.2	-3.8
AKBB	Malin Array Si	142.87	332		PKPdf	19 15 21.3	-3.6
SORM	Soroca	145.08	329	⇓P	PKPbc	19 15 29.5	-0.1
MILM	Milestii Mici	145.68	327	⇑P	PKPbc	19 15 31.4	0.0
BSEG	Bad Segeberg	145.75	352	*e*PKPbc	PKPab	19 15 32.0	-0.8
	baz=14,slow=2.5						
KWP	Kalwaria Pacla	146.41	336		PKPbc	19 15 34.1	+0.7
TLCR		146.81	325	⇑P	PKPbc	19 15 35.1	+0.5
BR131	Keskin Array S	146.83	313		PKPbc	19 15 35.1	0.0
BRTR	Keskin Array B	146.83	313	PKPbc	PKPbc	19 15 35.0	0.0
	comp=Z,4.3nm,0.6s,baz=144,slow=5.1,SNR=29						
BUR08	Bucovina Ar. S	146.91	331		PKPbc	19 15 35.7	+0.8
BURAR	Bucovina Array	146.92	331	⇓P	PKPbc	19 15 35.7	+0.7
BURAR	Bucovina Array	146.92	331		PKPbc	19 15 35.5	+0.5
JURR	Jurilovca	147.05	324	⇑P	PKPbc	19 15 35.5	+0.3
KOLS	Kolonicke sedl	147.14	335	*e*PKP	PKPbc	19 15 35.6	+0.2
KOLS				*e*		19 15 39.2	
NRDL	Niedersach Rie	147.18	351	*e*PKPbc	PKPbc	19 15 35.9	+0.7
	baz=14,slow=2.5						
CFR	Carcaliu	147.18	325	⇑P	PKPbc	19 15 36.0	+0.4
TOPG	Topolog	147.25	325	⇓P	PKPbc	19 15 36.2	+0.4
ANTO	Ankara	147.34	314	⇑P	PKPbc	19 15 36.9	+0.6
ASSE	Asse, Remlinge	147.45	350	*e*PKPbc	PKPbc	19 15 36.6	+0.7
	baz=14,slow=2.5						
VRI	Vrincioaia	147.45	328	⇑P	PKPbc	19 15 36.8	+0.5
TIRR	Tirgusor	147.50	324	⇑P	PKPbc	19 15 35.1	-1.3
TIRR	Tirgusor	147.50	324		PKPbc	19 15 34.9	-1.5
HARR	Harsova	147.61	325	⇑P	PKPbc	19 15 36.4	-0.3
MFTR	Murfatlar	147.67	324	⇑P	PKPbc	19 15 37.4	+0.5
TRPA	Tarpa	147.68	334	⇑P	PKPbc	19 15 37.3	+0.5
OSTC	Ostas	147.75	343	⇑*e*PKP	PKiKP	19 15 38.1	-0.4
CLZ	Clausthal	147.78	351	*e*PKPbc	PKiKP	19 15 37.9	-0.6
	baz=14,slow=2.5						
MANR	Mangalia	147.81	323	⇑P	PKPbc	19 15 37.9	+0.7
CLL	Collm	147.82	347	*i* PKPbc	PKiKP	19 15 38.4	-0.1
	comp=Z,20nm,0.8s						
CLL				*i* PKPab	PKPab	19 15 42.3	+1.1
	comp=Z,8.0nm,0.9s						
CLL	Collm	147.82	347	*e*PKPbc	PKiKP	19 15 38.7	+0.2
	baz=14,slow=2.5						
CLL	Collm	147.82	347		PKiKP	19 15 38.6	0.0
UPC	Upice	147.85	343	⇑*e*PKP	PKiKP	19 15 37.9	-0.7
DPC	Dobruska-Polom	147.91	343	⇑*e*PKP	PKiKP	19 15 38.1	-0.7
DPC				*e*PKPAB	PKPab	19 15 42.7	+1.0
LANS	Liptovska Anna	147.99	339	*e*PKP	PKiKP	19 15 39.0	0.0
LANS				*e*		19 15 43.6	
BRG	Berggiesshubel	148.02	346	*i* PKP	PKPbc	19 15 38.0	+0.4
	comp=Z,11nm,1.0s						
BRG	Berggiesshubel	148.02	346	*e*PKPbc	PKiKP	19 15 38.3	-0.6
	baz=14,slow=2.5						
KRLC	Kraliky	148.03	342	⇑*e*PKP	PKPbc	19 15 38.1	+0.4
KRLC				*e*PKPAB	PKPab	19 15 43.2	+1.0
DOPR	Dopca	148.04	329	⇓P	PKiKP	19 15 38.7	-0.5
MORC	Moravsky Berou	148.07	341	⇓P	PKiKP	19 15 38.6	-0.5
MORC	Moravsky Berou	148.07	341	*e*PKP	PKPbc	19 15 38.2	+0.4
FBE	Freiberg	148.11	347	*e*PKPbc	PKiKP	19 15 38.8	-0.3
	baz=14,slow=2.5						
MLR	Muntele Rosu	148.11	328	⇑P	PKiKP	19 15 39.5	-0.1
GTTG	Gottingen	148.13	351	*e*PKPbc	PKiKP	19 15 38.6	-0.6
	baz=14,slow=2.5						
NEUB	Neuenburg	148.15	349	*e*PKPbc	PKiKP	19 15 38.6	-0.6
	baz=14,slow=2.5						
VOIR		148.59	329	⇑P	PKiKP	19 15 39.8	-0.6
DRGR		148.66	333	⇓P	PKPbc	19 15 39.3	-0.2
PRU	Pruhonice	148.70	345	⇑*e*PKP	PKPbc	19 15 39.3	0.0
GOPC	GO Pecny, Ondr	148.71	344	⇑*e*PKP	PKiKP	19 15 39.9	-0.6
MOX	Moxa	148.72	349	*e*PKPbc	PKiKP	19 15 40.0	-0.4
	baz=14,slow=2.5						
PLN	Plauen	148.77	348	*e*PKPbc	PKiKP	19 15 40.2	-0.3
	baz=14,slow=2.5						
VRAC	Vranov	148.77	342	⇑P	PKiKP	19 15 40.3	-0.3
VRAC	Vranov	148.77	342	*e*PKP	PKPbc	19 15 39.9	+0.4
VYHS	Vyhne	148.77	339	*e*PKP	PKPbc	19 15 40.0	+0.4
VYHS				*e*		19 15 46.1	
TANN	Tannenbergstha	148.77	347	*e*PKPbc	PKiKP	19 15 40.4	-0.2
	baz=14,slow=2.5						
UBBA	Unterbreizbach	148.83	351	*e*PKPbc	PKiKP	19 15 39.9	-0.5
	baz=14,slow=2.5						
JAVC	Velka Javorina	148.84	340	*e*PKP	PKiKP	19 15 41.3	+0.5
ARR	Arges	148.84	329	⇑P	PKiKP	19 15 41.1	+0.2
GUNZ	Gunzen	148.85	348	*e*PKPbc	PKiKP	19 15 40.6	-0.2
	baz=14,slow=2.5						
WERN	Wernitzgruen	148.91	347	*e*PKPbc	PKiKP	19 15 40.7	-0.2
	baz=14,slow=2.5						
NKC	Novy Kostel	148.95	347	⇑*e*PKP	PKiKP	19 15 40.6	-0.3
NKC				*e*PKPAB	PKPab	19 15 46.4	+0.4
KRUC	Moravsky	149.05	342	*e*PKP	PKPbc	19 15 40.5	+0.3
TREC	Trest	149.09	343	⇑*e*PKP	PKiKP	19 15 40.9	-0.4

MANZ	Manzenberg	149.25	348	*e*PKPbc	PKiKP	19 15 41.5	-0.1
	baz=14,slow=2.5						
MODS	Modra-Piesok	149.39	340	*e*PKP	PKPbc	19 15 41.0	-0.1
ROTZ	Rotzenmuhle	149.44	347	*e*PKPbc	PKiKP	19 15 41.9	-0.1
	baz=14,slow=2.5						
SIRR	Siria	149.52	333	⇓P	PKiKP	19 15 42.0	-0.2
TNS	Taunus Mts	149.63	352	*e*PKPbc	PKiKP	19 15 42.3	-0.1
	baz=14,slow=2.5						
GZR	Gura Zlata	149.70	331	⇑P	PKPbc	19 15 41.9	-0.1
KHC	Kasperske Hory	149.73	345	⇑*e*PKP	PKPbc	19 15 42.0	+0.1
KHC				*e*PKPAB	PKPab	19 15 49.9	+0.6
KHC	Kasperske Hory	149.73	345		PKPbc	19 15 42.1	+0.2
GEC2	GERESS Array S	149.97	345	*e*PKPbc	PKiKP	19 15 43.0	-0.2
	baz=14,slow=2.5						
GEC2	GERESS Array S	149.97	345		PKiKP	19 15 43.0	-0.2
GERES	GERESS Array B	149.97	345	PKP	PKPdf	19 15 37.9	+0.8
	comp=Z,2.2nm,0.8s,baz=3.8,slow=2.9,SNR=3.6						
GERES				PKPbc	PKPbc	19 15 42.7	+0.1
	comp=Z,4.4nm,0.8s,baz=343,slow=2.8,SNR=3.6						
GERES				PKPab	PKPab	19 15 50.7	+0.4
	comp=Z,0.1nm,0.3s,baz=348,slow=3.2,SNR=4.2						
CONA	Conrad Observa	150.22	341	*i* PKiKP	PKiKP	19 15 43.9	+0.1
	comp=Z,5.8nm,0.6s						
PLVB	Pleven	150.25	326	⇓P	PKPbc	19 15 43.2	0.0
HERR	Herculane	150.26	330	⇑P	PKPbc	19 15 43.3	+0.1
WLF	Walferdange	150.42	355	*e*PKPbc	PKiKP	19 15 44.5	+0.6
	baz=14,slow=2.5						
WLF	Walferdange	150.42	355		PKiKP	19 15 44.6	+0.6
MOA	Molln	150.74	343	*e*PKiKP	PKiKP	19 15 44.6	-0.1
	comp=Z,1.9nm,0.5s						
VTS	Vitosha	151.52	326	⇓P	PKiKP	19 15 46.6	0.0
SOKA	Soboth	151.59	341	*i* PKPbc	PKPbc	19 15 46.0	-0.3
	comp=Z,2.9nm,0.7s						
KBA	Koelnbreinsper	151.70	344	*e*PKiKP	PKiKP	19 15 46.9	0.0
	comp=Z,2.0nm,0.5s						
UBR	Ueberruh	151.84	349	*e*PKPbc	PKiKP	19 15 46.9	-0.2
	baz=14,slow=2.5						
WATA	Walderalm	151.88	347	*i* PKiKP	PKPbc	19 15 47.0	-0.1
	comp=Z,2.1nm,0.6s						
SQTA	Sankt Quirin	152.07	347	*e*PKiKP	PKiKP	19 15 47.5	-0.1
	comp=Z,3.1nm,0.7s						
ABTA	Abfaltersbach	152.22	345	*i* PKPbc	PKPbc	19 15 47.3	-0.4
	comp=Z,4.7nm,0.6s,SNR=5.7						
FETA	Feichten	152.36	348	*e*PKiKP	PKiKP	19 15 48.5	+0.2
	comp=Z,2.1nm,0.7s						
STAL	STALIGIAL	152.62	344		PKPbc	19 15 48.1	-0.5
PDG	Podgorica	153.61	331	⇑P	PKiKP	19 15 50.7	0.0
DBIC	Dimbokro	164.88	152	PKPab	PKPab	19 16 55.4	-0.1
	comp=Z,1.2nm,0.4s,baz=208,slow=6.6,SNR=3.4						
TORD	Torodi Ar. Bea	172.98	175	PKP	PKPdf	19 16 00.2	-0.9
	comp=Z,1.4nm,0.9s,baz=152,slow=0.9,SNR=5.9						
TORD	Torodi Ar. Bea	172.98	175		PKPdf	19 16 00.5	-0.7

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*MOS **13** 19:02:09.5±0.7, 44.°09N×147.°23E, h113^{km}, mb4.0/1, Error ellipse: s-maj=16.3km s-min=11.6km az=61.9*

*SKHL **13** 19:02:10.9±0.5, 44.°06N×147.°22E, h107^{km}±7^{km}, mb4.1/6, msh5.4/5*

*JMA **13** 19:02:11.9±0.2, 43.°96N×147.°18E, h98^{km}±4^{km}, M3.6*

*IDC **13** 19:02:13.7±3.1, 44.°38N×147.°02E, h122^{km}±22^{km}, mb3.3/9, mb1 3.5/12, mb1mx3.3/48, mbtmp3.7/12, Error ellipse: s-maj=53.4km s-min=19.4km az=164.0*

ISC 13 19:02:09.9±0.8, **44.°01N**±0.°06×**147.°31E**±0.°06, **h105**^{km}±6^{km}, **n51,** σ**0.^{s}98**/69, **mb3.6**/9, **3C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	0.37	248	*i* P	Pn	19 02 26.1	+0.7
SHO				AMB	AMB	19 02 27.0	
	40nm,0.2s						
SHO				*i* S	Sn	19 02 37.0	0.0
SHO				A	A	19 02 37.0	
	300nm,0.2s						
SHO				A	A	19 02 37.0	
	600nm,0.2s						
SHO	Shikotan	0.37	248*c*	*i*PN	Pn	19 02 26.1	+0.7
SHO				*i* S	Sn	19 02 37.0	0.0
SHO				pmax	pmax		
	comp=N,196nm,0.2s						
SHO				pmax	pmax		
	comp=Z,375nm,0.2s						
SHO				pmax	pmax		
	comp=E,270nm,0.1s						
SHO				smax	smax		
	comp=N,3μm,0.3s						
SHO				smax	smax		
	comp=E,6.0nm,0.4s						
YUK	Yuzh-Kuril'sk	1.04	272	*i* P	Pn	19 02 31.6	+0.5
YUK				AMB	AMB	19 02 32.2	
	comp=E,60nm,0.3s						
YUK				*i* S	Sn	19 02 46.4	-0.7
YUK				A	A	19 02 47.3	
	comp=E,320nm,0.2s						
YUK				A	A	19 02 47.3	
	comp=E,310nm,0.2s						
YUK	Yuzh-Kuril'sk	1.04	272*c*	*i*PN	Pn	19 02 31.5	+0.5
YUK				*i* S	Sn	19 02 46.3	-0.8
YUK				pmax	pmax		
	comp=Z,601nm,0.3s						
YUK				pmax	pmax		
	comp=N,112nm,0.1s						
YUK				pmax	pmax		
	comp=E,174nm,0.1s						
YUK				smax	smax		
	comp=N,3.0nm,0.2s						
YUK				smax	smax		
	comp=E,3.0nm,0.4s						
GRPR	Tuman	1.11	270	*i* P	Pn	19 02 32.2	+0.4
GRPR				AMB	AMB	19 02 32.8	
	comp=E,30nm,0.2s						
GRPR				*i* S	Sn	19 02 47.6	-0.8
GRPR				A	A	19 02 48.0	
	comp=E,500nm,0.2s						
GRPR				A	A	19 02 48.0	
	comp=E,360nm,0.2s						
GRPR	Tuman	1.11	270	⇓*i*PN	Pn	19 02 32.2	+0.4
GRPR				*i* S	Sn	19 02 47.6	-0.8
GRPR				pmax	pmax		
	comp=E,74nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,331nm,0.2s						
GRPR				pmax	pmax		
	comp=N,95nm,0.1s						
GRPR				smax	smax		
	comp=N,5μm,0.4s						
GRPR				smax	smax		
	comp=E,4μm,0.4s						
KUR	Kuril'sk	1.29	18	*i* P	Pn	19 02 34.2	+0.4
KUR				AMB	AMB	19 02 38.0	
	comp=E,50nm,0.2s						
KUR				*i* S	Sn	19 02 51.9	-0.1
KUR				A	A	19 02 52.0	
	comp=E,740nm,0.4s						
KUR				A	A	19 02 52.0	
	comp=E,660nm,0.4s						
KUR	Kuril'sk	1.29	18*d*	*i*PN	Pn	19 02 34.2	+0.4
KUR				*i* S	Sn	19 02 51.9	-0.1
KUR				pmax	pmax		
	comp=E,47nm,0.2s						
KUR				pmax	pmax		
	comp=Z,54nm,0.2s						
KUR				pmax	pmax		
	comp=N,39nm,0.3s						
KUR				smax	smax		
	comp=N,743nm,0.4s						
KUR				smax	smax		
	comp=E,656nm,0.4s						
NEM2	Nemuro 2	1.30	241	P	Pn	19 02 34.5	+0.5
NEM2				*e*S	Sn	19 02 51.6	-0.7
NMR	Nemuro--Hokkai	1.31	241	*i* P	Pn	19 02 34.6	+0.5
NMR				*i* S	Sn	19 02 51.6	-0.9
NMR	Nemuro--Hokkai	1.31	241	⇑*i*PN	Pn	19 02 34.6	+0.5
NMR				*i* S	Sn	19 02 51.6	-0.9
GLVR	Golovnino	1.32	259	*i* P	Pn	19 02 35.1	+0.9
GLVR				AMB	AMB	19 02 36.0	
	comp=E,30nm,0.2s						
GLVR				*i* S	Sn	19 02 52.8	+0.1
GLVR				A	A	19 02 53.0	
	comp=E,110nm,0.2s						
GLVR				A	A	19 02 53.0	
	comp=E,200nm,0.2s						
GLVR	Golovnino	1.32	259	⇓*i*PN	Pn	19 02 35.1	+0.9
GLVR				*i* S	Sn	19 02 52.8	+0.1
GLVR				pmax	pmax		
	comp=Z,313nm,0.1s						
GLVR				smax	smax		
	comp=N,1μm,0.3s						
GLVR				smax	smax		
	comp=E,2μm,0.3s						
JRA	Rausu	1.58	268	P	Pn	19 02 38.1	+0.8
JRA				*e*S	Sn	19 02 57.8	-0.4
JNSB	Nemuroshibetsu	1.68	263	P	Pn	19 02 40.0	+1.4
JNSB				*e*S	Sn	19 03 01.0	+0.6
JKHN	Kushirohamanak	1.81	240	P	Pn	19 02 41.2	+0.9
JKHN				*e*S	Sn	19 03 02.9	-0.5
JNK	Nakash	1.92	258	P	Pn	19 02 42.3	+0.7
JNK				*e*S	Sn	19 03 05.0	-0.9
JAK	Akkeshi	2.15	243	P	Pn	19 02 45.1	+0.5
JAK				*e*S	Sn	19 03 10.2	-0.9
JTKR	Abashiri--Toko	2.45	270	P	Pn	19 02 49.2	+0.7
JTKR				*e*S	Sn	19 03 17.6	-0.5
JAR	Ashorobuto	2.67	256	P	Pn	19 02 52.9	+1.6
JAR				*e*S	Sn	19 03 23.9	+0.8
JOB	Onbets	2.76	248	P	Pn	19 02 53.7	+1.2
JOB				*e*S	Sn	19 03 24.8	-0.5
JMP	Maruseppu	2.85	271	P	Pn	19 02 54.5	+0.8
JCH	Churui	3.20	246	P	Pn	19 02 58.8	+0.4
JCH				*e*S	Sn	19 03 34.0	-1.8
JKK2	Kamakawa 2	3.30	269	P	Pn	19 03 00.8	+1.1
JKA	Kamikawa-asahi	3.40	273	*e*P	Pn	19 03 02.3	+1.3
ASAJ	Asahikawa	3.40	273	P	Pn	19 03 02.2	+1.2
ASAJ	Asahikawa	3.40	273	P	Pn	19 03 02.3	+1.2
	comp=E,4.9nm,0.3s,baz=75,slow=23,SNR=54						
JFR	Furan	3.53	258	P	Pn	19 03 04.5	+1.7
JFR				*e*S	Sn	19 03 44.6	+0.9
JNBK	Urakawa-nobuka	3.75	244	P	Pn	19 03 06.1	+0.3
JNBK				*e*S	Sn	19 03 47.1	-2.0
JHR	Hokuryu	4.05	268	P	Pn	19 03 11.8	+2.1
JWK2	Keihoku	4.08	291	P	Pn	19 03 11.9	+1.8
YSS	Yuzh-Sakhalins	4.35	314	*e*P	Pn	19 03 13.8	0.0
YSS				AMB	AMB	19 03 14.3	
	comp=E,8.0nm,0.5s						
YSS	Yuzh-Sakhalins	4.35	314	*e*PN	Pn	19 03 13.8	0.0
PETK	Petropavlovsk-	11.40	33	P	Pn	19 04 48.9	-0.4
	comp=E,0.1nm,0.3s,baz=195,slow=11,SNR=4.2						
SEY	Seymchan	19.19	7	P	P	19 06 25.7	+0.7
	comp=E,0.1nm,0.3s,baz=181,slow=9.0,SNR=5.4						
H11N2	WAKE ISLAND Hy	29.22	140	T	T	19 39 01.8	
	baz=330,slow=75,SNR=30						
H11N1	WAKE ISLAND Hy	29.23	140	T	T	19 39 00.2	
	baz=330,slow=75,SNR=17						
H11N3	WAKE ISLAND Hy	29.24	140	T	T	19 39 06.6	
	baz=330,slow=75,SNR=16						
H11S1	WAKE ISLAND Hy	30.20	141	T	T	19 40 16.4	
	baz=331,slow=76,SNR=56						
H11S3	WAKE ISLAND Hy	30.20	141	T	T	19 40 16.4	
	baz=331,slow=76,SNR=45						
H11S2	WAKE ISLAND Hy	30.21	141	T	T	19 40 18.2	
	baz=331,slow=76,SNR=43						
ILAR	Eielson Array	41.21	36	P	P	19 09 43.9	0.0
	comp=E,0.7nm,0.7s,baz=276,slow=8.4,SNR=5.6						
MKAR	Makanchi Array	44.57	297	P	P	19 10 11.4	+0.2
	comp=E,0.5nm,0.8s,baz=78,slow=7.8,SNR=5.2						
INK	Inuvik	46.12	30	P	P	19 10 24.2	+1.1
	comp=E,0.8nm,0.3s,baz=310,slow=8.4,SNR=5.4						
YKA	Yellowknife Ar	55.52	34	P	P	19 11 34.5	+0.9
	comp=E,0.4nm,0.7s,baz=297,slow=6.2,SNR=5.5						
ARCES	ARCESS Array B	59.04	340	P	P	19 11 55.6	-2.7
	comp=E,2.3nm,0.9s,baz=48,slow=8.6,SNR=3.1						
FINES	FINESS Array B	64.70	333	P	P	19 12 35.2	-1.0
	comp=E,0.9nm,0.5s,baz=35,slow=7.0,SNR=10.0						
NOA	NORSAR Array B	69.40	339	P	P	19 13 04.9	-1.2
	comp=E,0.3nm,0.4s,baz=31,slow=6.6,SNR=4.9						
AKASG	Malin Array Be	71.44	324	P	P	19 13 18.0	-0.5
	comp=E,0.1nm,0.3s,baz=40,slow=7.1,SNR=5.9						
TXAR	Lajitas Array	82.41	56	P	P	19 14 22.0	+1.4
	comp=E,0.2nm,0.6s,baz=302,slow=5.2,SNR=3.0						
TXAR	Lajitas Array	82.41	56	P	P	19 14 22.0	+1.4

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*BJI **13** 19:11:30.0±0.0, 41.°90N×126.°90W, h10^{km}, mB5.6/35, mb5.2/59, Ms5.3/36, Ms7 5.0/37*

*MOS **13** 19:11:33.6±1.1, 41.°89N×126.°91W, h14^{km}, mb5.4/37, Error ellipse: s-maj=5.5km s-min=4.0km az=113.6*

*NCEDC **13** 19:11:33.8±2.7, 41.°91N±0.°05×127.°07W±0.°08, h14^{km}±2^{km}, Error ellipse: s-maj=8.8km s-min=7.3km az=64.0*

*IDC **13** 19:11:33.6±0.4, 42.°04N×126.°90W, h0^{km}, mb4.7/35, mb1 4.7/42, mb1mx4.6/58, mbtmp4.6/42, ML3.6/7, MS4.8/22, Ms1 4.8/22, ms1mx4.7/34, Error ellipse: s-maj=13.0km s-min=6.7km az=31.0*

*NEIC **13** 19:11:34.6±2.3, 41.°90N±0.°05×126.°90W±0.°08, h10^{km}±1^{km}, mb5.2/216, Mww5.5, Mwc5.5(GCMT), Error ellipse: s-maj=10.6km s-min=7.7km az=262.0*

*ANF **13** 19:11:34.4±0.7, 41.°86N×126.°70W, h0^{km}, ML4.5/20, Error ellipse: s-maj=7.1km s-min=4.6km az=100.0*

*GCMT **13** 19:11:35.6±0.1, 42.°01N±0.°01×127.°13W±0.°01, h12^{km}, MW5.4/157, Moment Tensor Solution. s77,c110; s157,c292; Duration: 1.^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.79±.05; $M_{\theta\theta}$0.13±.03; $M_{\phi\phi}$1.67±.04; $M_{r\theta}$-0.30±.10; $M_{\theta\phi}$-0.16±.02; $M_{\phi r}$-0.17±.07; Best double couple: $M_0$1.76900×10^{17} NP1:ϕ_s165.00000°, δ44.00000°, λ-103.00000°. NP2:ϕ_s3.00000°, δ48.00000°, λ-78.00000°. Principal axes: T 1.6910, Plg2.0000°, Azm85.0000°; N 0.1610, Plg9.0000°, Azm175.0000°; P -1.8460, Plg81.0000°, Azm341.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **13** 19:11:36, 42.°00N×127.°16W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.90; $M_{\theta\theta}$0.07; $M_{\phi\phi}$1.82; $M_{r\theta}$-0.65; $M_{\theta\phi}$-0.19; $M_{\phi r}$0.21; Fault plane solution: $M_0$1.99000×10^{17} NP1:ϕ_s158.00000°, δ51.00000°, λ-111.00000°. NP2:ϕ_s9.00000°, δ43.00000°, λ-66.00000°. Principal axes: T 1.8638, Plg4.0000°, Azm262.0000°; N 0.2342, Plg16.0000°, Azm171.0000°; P -2.0980, Plg73.0000°, Azm7.0000°;*

*BGR **13** 19:11:38.5±0.0, 42.°28N×127.°48W, h33^{km}, mb5.3, Ms5.0*

*NEIC **13** 19:11:42, 41.°89N×126.°86W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.73; $M_{\theta\theta}$0.18; $M_{\phi\phi}$1.55; $M_{r\theta}$-0.63; $M_{\theta\phi}$-0.16; $M_{\phi r}$-1.26; Fault plane solution: $M_0$2.18000×10^{17} NP1:ϕ_s13.00000°, δ65.00000°, λ-75.00000°. NP2:ϕ_s161.00000°, δ28.00000°, λ-118.00000°. Principal axes: T 1.9833, Plg19.0000°, Azm92.0000°; N 0.3447, Plg13.0000°, Azm186.0000°; P -2.3280, Plg67.0000°, Azm309.0000°;*

ISC 13 19:11:36.6±0.7, **41.°91N**±0.°05×**126.°94W**±0.°05, **h22**^{km}±6^{km}, **n912,** σ**1.^{s}42**/901, **mb5.1**/229, **MS5.0**/30, **32C-19D, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBO	Bosley Butte	2.04	80		Pn	19 12 06.9	-2.8
KEBM	Edson Butte	2.16	63		Pn	19 12 08.6	-2.7
KEBM	Edson Butte	2.16	63		Sn	19 12 35.9	-1.5
KSXB	Camp Six Broad	2.29	91		Pn	19 12 10.4	-2.7
KRMB	Red Mountain	2.30	99		Pn	19 12 10.2	-3.1
KRPM	Rodgers	2.31	108		Pn	19 12 11.1	-2.3
KRPM					Sn	19 12 39.6	-1.7
KCTM	Capetown	2.43	125		Pn	19 12 12.5	-2.5
JCC	Jacoby Creek,	2.45	115		Pn	19 12 12.3	-2.8
L02E	Cave Junction	2.50	83		Pn	19 12 13.6	-2.3
L02E	Cave Junction	2.50	83	P	Pn	19 12 13.4	-2.5
	baz=265,SNR=72						
J01E	Myrtle Point	2.55	60	P	Pn	19 12 13.8	-2.8
	baz=241,SNR=76						
K02D	Willamette Mer	2.55	71	P	Pn	19 12 14.3	-2.5
	baz=253,SNR=1000						
K02D				S	Sn	19 12 46.0	-1.2
	baz=253						
KMPM	Mount Pierce	2.60	124		Pn	19 12 14.6	-2.7
KHMM	Horse Mountain	2.62	112		Sn	19 12 48.2	-0.9
KHMM	Horse Mountain	2.62	112		Pn	19 12 15.3	-2.4
KTRM	Thompson Ridge	2.66	89		Pn	19 12 15.9	-2.3
KOMM	Orleans Mounta	2.69	102		Pn	19 12 16.5	-2.1
KSMM	Slide Mountain	2.71	129		Pn	19 12 15.9	-2.9
J21C	J21C	2.75	343	S	Sn	19 12 47.4	-3.5
J21C				P	Pn	19 12 18.4	+0.3
KCRM	Chalk Rock	2.78	121		Pn	19 12 17.3	-2.6
KCSM	Cold Springs	2.92	117		Pn	19 12 19.7	-2.2
KMRM	Mail Ridge	2.97	123		Pn	19 12 20.1	-2.3
DBO	Dodson Butte	2.99	65		Pn	19 12 20.9	-1.8
HUMO	Hull Mountain	3.04	75		Pn	19 12 21.3	-2.1
KHBM	Hayfork Bally	3.07	113		Pn	19 12 21.4	-2.5
M02C	Callahan	3.10	98		Pn	19 12 22.7	-1.6
M02C	Callahan	3.10	98	P	Pn	19 12 22.7	-1.6
	baz=281,SNR=107						
KPPM	Pickett Peak	3.12	119		Pn	19 12 22.6	-2.1
J28C	J28C	3.16	357	S	Sn	19 13 00.5	-0.6
J28C				P	Pn	19 12 20.4	-3.4
I02D	Swisshome	3.16	45	P	Pn	19 12 22.9	-2.1
	baz=226,SNR=80						
YBH	Yreka Blue Hor	3.17	92	Pn	Pn	19 12 24.3	-0.9
	24nm,0.3s,baz=269,slow=13,SNR=157						
YBH				Sn	Sn	19 13 03.5	+1.2
	2.9nm,0.3s,baz=216,slow=23,SNR=2.2						
YBH				LR	LR	19 13 28.3	
	comp=Z,23μm,20.6s,baz=320,slow=36						
YBH	Yreka Blue Hor	3.17	92		Pn	19 12 23.9	-1.2
I03D	Drain, OR	3.19	55	P	Pn	19 12 23.1	-2.3
	baz=237,SNR=253						
I03D				S	Sn	19 13 02.5	-0.2
	baz=237						
KBSM	Bell Springs	3.22	127		Pn	19 12 23.6	-2.3
LAMM	Antelope Mount	3.24	94		Pn	19 12 25.3	-1.0
LGPM	Granite Peak	3.25	106		Pn	19 12 24.2	-2.1
BBOR	Butler Butte	3.30	71		Pn	19 12 25.7	-1.4
LBKM	Bonanza King	3.31	103		Pn	19 12 25.5	-1.7
N02D	Trinity Center	3.32	105		Pn	19 12 25.4	-1.8
N02D	Trinity Center	3.32	105	P	Pn	19 12 25.2	-2.0
	baz=288,SNR=46						
J29C	J29C	3.36	347	S	Sn	19 13 05.1	-0.9
J29C				P	Pn	19 12 28.2	+1.7
KIPM	Iron Peak	3.36	127		Pn	19 12 25.5	-2.3
B040	Montague	3.38	90		Pn	19 12 26.7	-1.3
KCPM	Cahto Peak	3.38	130		Pn	19 12 25.2	-2.9
LBPM	Beegum Peak	3.45	116		Pn	19 12 26.9	-2.2
L04D	Klamath Falls	3.47	83		Pn	19 12 28.3	-1.0
L04D	Klamath Falls	3.47	83	P	Pn	19 12 28.2	-1.2
	baz=266,SNR=104						
KBNM	Bluenose Ridge	3.48	124		Pn	19 12 27.8	-1.7
KFPM	Farley Peak	3.50	129		Pn	19 12 27.1	-2.6
LHEM	Herd Peak	3.54	93		Pn	19 12 29.5	-0.9
J23C	J23C	3.55	327	S	Sn	19 13 07.4	-3.6
J23C				P	Pn	19 12 24.3	-5.0
WDC	Whiskeytown Da	3.57	110	P	Pn	19 12 28.9	-1.7
WDC	Whiskeytown Da	3.57	110		Pn	19 12 28.9	-1.7
O02D	Mt. Diablo Mer	3.58	117		Pn	19 12 28.9	-2.1
O02D	Mt. Diablo Mer	3.58	117	P	Pn	19 12 28.8	-2.1
	baz=300,SNR=22						
LMPM	Military Pass	3.60	95		Pn	19 12 31.0	-0.3
J35C	J35C	3.62	7	S	Sb	19 13 22.8	+1.0
J35C				P	Pb	19 12 35.5	-2.7
M03C	McCloud	3.67	98		Pn	19 12 31.5	-0.5
COR	Corvallis	3.77	44	P	Pn	19 12 32.1	-1.3
COR	Corvallis	3.77	44		Pn	19 12 32.1	-1.3
J36C	J36C	3.78	358	S	Sb	19 13 25.1	-1.2
J36C				P	Pn	19 12 34.1	+1.8
J30C	J30C	3.80	339	S	Sn	19 13 12.8	-4.1
J30C				P	Pn	19 12 35.1	+2.5
J04D	Umpqua Nationa	3.81	68	P	Pn	19 12 33.5	-0.6
	baz=251,SNR=286						
M04C	Macdoel	3.81	90		Pn	19 12 33.4	-0.7
M04C	Macdoel	3.81	90	P	Pn	19 12 33.3	-0.8
	baz=274,SNR=45						
I04A	Tendick Farm,	3.83	59	P	Pn	19 12 33.0	-1.2
	baz=242,SNR=98						
I04A				S	Sn	19 13 19.2	+0.6
	baz=242						
LBFM	Black Fox Moun	3.83	97		Pn	19 12 34.0	-0.4
LGMM	Garner Mountai	3.83	93		Pn	19 12 33.9	-0.5
LSHM	Sage Hen Hill	3.85	105		Pn	19 12 33.5	-1.0
K04D	Chiloquin, OR	3.92	78	P	Pn	19 12 34.0	-1.5
	baz=261,SNR=33						
J37C	J37C	4.03	350	S	Sn	19 13 22.0	-0.5
J37C				P	Pn	19 12 33.9	-1.8
H04D	Lebanon	4.03	48	P	Pn	19 12 36.0	-0.9
	baz=231,SNR=132						
H04D				S	Sn	19 13 23.7	+0.2
	baz=231						
HOPS	Hopland Field	4.14	133		Pn	19 12 36.7	-1.8
J31C	J31C	4.15	332	S	Sn	19 13 26.6	+1.0
J31C				P	Pn	19 12 36.5	-0.9
O03E	Paynes Creek	4.20	111	P	Pn	19 12 38.1	-1.3
	baz=294,SNR=22						
G03D	McMinnville, O	4.25	38	P	Pn	19 12 39.3	-0.6
	baz=220,SNR=22						
J43C	J43C	4.27	7	S	Sn	19 13 35.0	+6.7
J43C				P	Pn	19 12 44.9	+5.9
J38C	J38C	4.36	342	S	Sn	19 13 32.0	+1.3
J38C				P	Pn	19 12 43.0	+2.7
J44C	J44C	4.42	359	S	Sn	19 13 38.5	+6.4
J44C				P	Pn	19 12 43.9	+2.9
GDXM	Geysers	4.43	133		Pn	19 12 41.6	-0.9
J05D	Fort Rock, OR	4.43	70	P	Pn	19 12 41.3	-1.3
	baz=254,SNR=90						
H04A	Detroit Lake	4.44	50		Pn	19 12 41.6	-1.1
J32C	J32C	4.64	326	S	Sb	19 13 46.6	-4.6
J45C	J45C	4.67	352	S	Sn	19 13 41.0	+2.8
J45C				P	Pn	19 12 49.8	+5.3
J39C	J39C	4.69	336	S	Sn	19 13 45.8	+6.8
J39C				P	Pn	19 12 46.6	+1.7
F03A	Seaside	4.71	30		Pn	19 12 44.3	-1.9
SUTB	Sutter Butte	4.75	123		Pn	19 12 49.7	+2.9
ORV	Oroville	4.75	118	P	Pn	19 12 44.6	-2.3
ORV	Oroville	4.75	118		Pn	19 12 44.6	-2.3
I05D	Terrebonne, OR	4.77	57	P	Pn	19 12 46.4	-0.7
	baz=241,SNR=30						
PINE	Pine Mountain	4.80	65		Pn	19 12 46.6	-1.1
J46C	J46C	4.94	345	S	Sn	19 13 44.5	-0.5
J46C				P	Pn	19 12 52.8	+4.5
MOD	Modoc Plateau	4.95	88		Pn	19 12 47.9	-1.8
F04D	Rainier, OR	5.05	33	P	Pn	19 12 51.0	+0.1
	baz=215,SNR=13						
J52C	J52C	5.08	359	S	Sn	19 13 53.4	+4.8
J52C				P	Pn	19 12 52.8	+2.5
F04A	Amboy	5.18	38		Pn	19 12 52.1	-0.7
E03A	Lebam	5.23	26		Pn	19 12 51.5	-1.9
G05D	Wamic, OR	5.27	49	P	Pn	19 12 53.3	-0.7
	baz=232,SNR=24						
J53C	J53C	5.30	353	S	Sn	19 14 00.6	+6.6
J53C				P	Pn	19 12 59.7	+6.4
J47C	J47C	5.32	339	S	Sn	19 13 58.5	+4.0
J47C				P	Pn	19 12 59.7	+6.1
BEKR	Beckworth	5.39	110		Pn	19 12 54.9	-0.9
AFDM	Forest Hills D	5.43	121		Pn	19 12 54.5	-1.7
J54C	J54C	5.59	347	S	Sn	19 14 06.5	+5.5
J54C				P	Pn	19 13 03.6	+6.4
E04D	Cinebar	5.61	33	P	Pn	19 12 59.4	+0.7
	baz=215,SNR=83						
F05D	White Salmon	5.61	43	P	Pn	19 12 58.0	-0.7
	baz=226,SNR=38						
G06A	Carlson Farm,	5.66	52		Pn	19 12 58.7	-0.6
J48C	J48C	5.86	334	S	Sn	19 14 11.5	+3.9
J48C				P	Pn	19 13 01.0	+0.1
I07A	Izee	5.87	66		Pn	19 13 01.6	-0.7
NLWA	Neilton Lookou	5.91	21		Pn	19 13 01.9	-0.8
RUBR	Rubicon Trail	5.91	117		Pn	19 13 02.8	-0.1
J55C	J55C	5.96	342	S	Sb	19 14 26.0	-3.0
M03C7	M03C7	6.01	5	S	Sb	19 14 25.5	-5.0
M03C7				P	Pn	19 13 09.5	+6.4
J61C	J61C	6.03	352	S	Sb	19 14 24.0	-7.1
D04E	Lakebay	6.05	28	P	Pn	19 13 05.1	+0.4
	baz=211,SNR=18						
LON	Longmire	6.08	35	P	Pn	19 13 05.1	0.0
LON	Longmire	6.08	35		Pn	19 13 05.1	0.0
VCNR	Virginia City	6.13	113		Pn	19 13 05.8	-0.2
PAHR	Pah Rah Range	6.14	108		Pn	19 13 05.2	-0.9
WVOR	Wild Horse Val	6.19	82	P	Pn	19 13 04.5	-2.2
WVOR	Wild Horse Val	6.19	82		Pn	19 13 04.5	-2.2
J67C	J67C	6.25	359	S	Sb	19 14 30.0	-7.2
D03D	Eldon	6.26	25	P	Pn	19 13 06.7	-0.8
	baz=207,SNR=19						
PNTR	Pine Nut	6.26	114		Pn	19 13 07.5	-0.3
CMB	Columbia Colle	6.35	125	P	Pn	19 13 08.4	-0.4
CMB	Columbia Colle	6.35	125		Pn	19 13 08.4	-0.4
D05A	Enumclaw	6.36	32		Pn	19 13 09.1	+0.3
J08A	Circle Bar Ran	6.41	74		Pn	19 13 08.4	-1.3
F07A	Phinny Hill Vi	6.45	49		Pn	19 13 08.8	-1.3
YERR	Yerington	6.56	114		Pn	19 13 10.7	-1.2
J68C	J68C	6.61	355	S	Sb	19 14 42.0	-5.5
J63C	J63C	6.66	342	S	Sn	19 14 38.5	+11
SAO	San Andreas Ge	6.67	139	P	Pn	19 13 12.9	-0.3
SAO	San Andreas Ge	6.67	139		Pn	19 13 12.8	-0.3
G08A	Pilot Rock	6.71	57		Pn	19 13 12.5	-1.3
J69C	J69C	6.84	350	S	Sb	19 14 54.2	-0.1

E07A	Sunnyside	6.89	45		Pn	19 13 15.4	-0.8
HAWA	Hanford	6.96	47		Pn	19 13 16.4	-0.7
LTY	Liberty	6.97	38		Pn	19 13 17.1	-0.3
PGC	Sidney	7.18	19		Pn	19 13 20.3	+0.2
B05A	Bryant	7.22	27	P	Pn	19 13 20.6	-0.1
	baz=210,SNR=13						
RYN	Ryan	7.22	114		Pn	19 13 20.6	-0.4
E08A	Dider Farm, El	7.28	48		Pn	19 13 20.9	-0.7
KVN	Kaiserville	7.32	110	P	Pn	19 13 21.2	-1.1
KVN	Kaiserville	7.32	110		Pn	19 13 21.2	-1.1
C06D	Leavenworth	7.39	33	P	Pn	19 13 23.8	+0.7
	baz=217,SNR=12						
PMPB	Monarch Peak	7.42	138		Pn	19 13 23.2	-0.4
OMMB	Old Mammoth Mi	7.47	122		Pn	19 13 24.9	+0.5
NVAR	Mina Array Bea	7.47	115	Pn	Pn	19 13 24.1	-0.3
	1.1nm,0.3s,baz=290,slow=14,SNR=32						
NVAR				LR	LR	19 16 34.1	
	comp=Z,17µm,18.1s,baz=294,slow=40						
NVAR	Mina Array Bea	7.47	115		Pn	19 13 23.7	-0.7
NV11	Mina Array Sit	7.57	114		Pn	19 13 25.9	+0.2
BMO	Blue Mountains	7.61	64	P	Pn	19 13 25.5	-0.7
BMO	Blue Mountains	7.61	64		Pn	19 13 25.5	-0.7
D08A	Wollman Farm,	7.71	45		Pn	19 13 26.6	-0.8
E09A	Wood Farm, Sta	7.82	51		Pn	19 13 27.4	-1.5
PAGB	Antelope Grade	8.08	138		Pn	19 13 31.1	-1.5
F10A	Beach Ranch, E	8.10	57		Pn	19 13 32.1	-0.8
MFID	Camas Ranch	8.33	76		Pn	19 13 34.9	-1.1
B08A	Colville Reser	8.39	37		Pn	19 13 36.2	-0.6
C09A	Chrisman Ranch	8.52	43		Pn	19 13 38.3	-0.3
ELK	Elko	8.88	94	Pn	Pn	19 13 45.1	+1.3
	0.4nm,0.3s,baz=287,slow=15,SNR=27						
ELK	Elko	8.88	94	P	Pn	19 13 43.7	-0.1
ELK	Elko	8.88	94		Pn	19 13 43.7	-0.1
PKM	Mcpherson Peak	8.96	139	P	Pn	19 13 46.8	+1.9
	baz=324						
ISA	Isabella, Lake	9.08	131	P	Pn	19 13 46.6	+0.2
ISA	Isabella, Lake	9.08	131		Pn	19 13 46.6	+0.2
ISA	Isabella, Lake	9.08	131	P	Pn	19 13 47.7	+1.3
	baz=316						
ARVC	Arvin	9.28	134	P	Pn	19 13 50.9	+1.9
	baz=320						
LLLB	Lillooet	9.38	20		Pn	19 13 50.5	+0.1
MPMC	Manual Prospec	9.39	125	P	Pn	19 13 53.4	+2.7
	baz=312						
R11A	Troy Canyon, C	9.39	108		Pn	19 13 50.9	+0.2
R11A	Troy Canyon, C	9.39	108	P	Pn	19 13 52.3	+1.5
	baz=296						
NEW	Newport	9.41	44	Pn	Pn	19 13 50.4	-0.4
	0.3nm,0.3s,baz=230,slow=13,SNR=10						
NEW				LR	LR	19 17 33.6	
	comp=Z,20µm,19.0s,baz=229,slow=39						
NEW	Newport	9.41	44	P	Pn	19 13 49.9	-0.9
NEW	Newport	9.41	44		Pn	19 13 49.9	-0.9
NEW	Newport	9.41	44	P	Pn	19 13 51.4	+0.6
	baz=231						
TPNV	Topopah Spring	9.64	117	P	Pn	19 13 59.6	+5.5
	baz=304						
EDW2	Edwards Air Fo	9.92	132	P	Pn	19 14 00.0	+2.2
	baz=318						
GSC	Goldstone, Bar	10.31	126	P	Pn	19 14 03.5	+0.3
GSC	Goldstone, Bar	10.31	126		Pn	19 14 03.5	+0.3
BBB	Bella Bella	10.31	356	Pn	Pn	19 14 00.7	-2.4
	0.2nm,0.3s,baz=155,slow=10,SNR=2.0						
BBB				LR	LR	19 17 10.5	
	comp=Z,3µm,20.7s,baz=173,slow=33						
BBB	Bella Bella	10.31	356		Pn	19 14 04.9	+1.8
MWC	Mount Wilson	10.38	135	P	Pn	19 14 04.2	-0.1
MWC	Mount Wilson	10.38	135		Pn	19 14 04.2	-0.1
BGU	Big Grassy Mou	10.50	91		Pn	19 14 05.4	-0.4
MSO	Missoula	10.53	58		Pn	19 14 05.4	-0.7
MSO	Missoula	10.53	58	P	Pn	19 14 06.2	+0.1
	baz=247						
PSUT	Pine Spring	10.56	104		Pn	19 14 07.4	+0.7
HVU	Hansel Valley	10.57	86	P	Pn	19 14 07.4	+0.5
HVU	Hansel Valley	10.57	86		Pn	19 14 07.4	+0.5
SHPR	Sheep Range	10.61	117		Pn	19 14 06.5	-0.9
MCMT	McKenzie Canyo	10.67	69		Pn	19 14 07.2	-1.0
JTMT	Jette	10.71	53		Pn	19 14 07.9	-0.9
DUG	Dugway, Tooele	10.81	94	P	Pn	19 14 09.1	-1.0
DUG	Dugway, Tooele	10.81	94		Pn	19 14 09.1	-1.0
DUG	Dugway, Tooele	10.81	94	P	Pn	19 14 12.5	+2.4
	baz=284						
SPUT	South Promonto	10.87	88		Pn	19 14 11.0	0.0
DLMT	Dillon	10.96	67		Pn	19 14 11.9	-0.1
LRM	Limekiln Ridge	11.17	65		Pn	19 14 15.1	0.0
CCUT	Cedar City	11.32	108		Pn	19 14 18.4	+1.3
GMRC	Granite Mounta	11.35	125	P	Pn	19 14 20.8	+3.3
	baz=312						
NLU	North Lily Min	11.42	95		Pn	19 14 17.2	-1.2
HWUT	Hardware Ranch	11.49	86		Pn	19 14 20.1	+0.6
SZCU	Shurtz Canyon	11.50	107		Pn	19 14 16.7	-2.9
TCRU	Three Creeks R	11.55	102		Pn	19 14 21.3	+0.9
WALA	Waterton Lakes	11.60	48		Pn	19 14 18.9	-1.9
LCMT	Little Creek M	11.66	110		Pn	19 14 19.2	-2.5
QLMT	Earthquake Lak	11.66	70		Pn	19 14 20.8	-1.0
TCUT	Toone Canyon	11.68	89		Pn	19 14 21.7	-0.3
BELC	Belle Mtn. Jos	11.69	129	P	Pn	19 14 25.3	+3.1
	baz=316						
PFO	Pinyon Flats O	11.71	132	Pn	Pn	19 14 24.3	+1.9
	0.2nm,0.3s,baz=318,slow=13,SNR=9.4						
PFO				LR	LR	19 18 50.4	
	comp=Z,6µm,18.1s,baz=306,slow=37						
PFO	Pinyon Flats O	11.71	132	⇓*i*P	Pn	19 14 24.3	+1.9
PFO				pmax	pmax		
	comp=Z,26nm,1.4s						
PFO	Pinyon Flats O	11.71	132		Pn	19 14 23.0	+0.6
PFO	Pinyon Flats O	11.71	132	P	Pn	19 14 24.4	+2.0
	baz=318						
XPFO	Pion Flat	11.71	132		Pn	19 14 22.8	+0.3
MPU	Maple Canyon	11.73	94		Pn	19 14 19.4	-3.3
JLU	Jordanelle	11.74	91		Pn	19 14 21.3	-1.5
AHID	Auburn Hatcher	11.76	81		Pn	19 14 22.3	-0.8
MSU	Marysvale	11.79	102	P	Pn	19 14 23.9	+0.4
MSU	Marysvale	11.79	102		Pn	19 14 23.9	+0.4
YHB	Horse Butte	11.82	71		Pn	19 14 23.3	-0.6
FXWY	Fox Creek	11.83	76		Pn	19 14 24.1	0.0
YHL	Hebgen Lake	11.84	70		Pn	19 14 23.4	-0.9
TPAW	Teton Pass	11.88	77		Pn	19 14 23.1	-1.6
DIB	Dawson Inlet,	11.90	344		Pn	19 14 26.6	+1.9
REDW	Red Top Meadow	11.94	78		Pn	19 14 25.4	-0.2
KNB	Kanab	11.95	109	P	Pn	19 14 25.7	0.0
KNB	Kanab	11.95	109		Pn	19 14 25.7	0.0
MTPU	Mount Pierson	11.96	104		Pn	19 14 27.2	+1.2
YMR	Madison River	11.97	71		Pn	19 14 23.6	-2.4
SNOW	Snow King Moun	12.02	77		Pn	19 14 27.1	+0.4
YPP	Pitchstone Pla	12.03	73		Pn	19 14 26.0	-1.0
YHH	Holmes Hill	12.06	71		Pn	19 14 27.1	-0.3
IRM	Iron Mountain	12.09	126	P	Pn	19 14 30.3	+2.8
	baz=313						
FLWY	Flagg Ranch	12.09	74		Pn	19 14 26.9	-0.8
PKCU	Pink Cliffs	12.12	107		Pn	19 14 29.8	+1.7
YNR	Norris Junctio	12.18	71		Pn	19 14 29.7	+0.9
H17A	Grant Village	12.21	73		Pn	19 14 27.3	-2.0
H17A	Grant Village	12.21	73	P	Pn	19 14 32.0	+2.6
	baz=264						
TMUT	Trail Mountain	12.24	97		Pn	19 14 30.1	+0.3
BC3	Big Chuckawall	12.26	129	P	Pn	19 14 32.5	+2.6
	baz=316						
W13A	Hualapai Mount	12.27	119		Pn	19 14 30.4	+0.2
MONP2	Monument Peak	12.27	134	P	Pn	19 14 32.1	+1.9
	baz=320						
YUF	Upper Falls	12.29	71		Pn	19 14 29.2	-1.3
Q16A	Castle Valley	12.38	99		Pn	19 14 33.3	+1.6
P17A	Butcher Ranch,	12.54	96		Pn	19 14 35.3	+1.6
PDMCI	Parker Dam,Lak	12.61	123	P	Pn	19 14 38.2	+3.7
	baz=311						
U15A	North Rim	12.61	111		Pn	19 14 36.4	+1.5
Y12C	Blythe	12.74	126		Pn	19 14 38.8	+2.4
Y12C	Blythe	12.74	126	P	Pn	19 14 40.6	+4.2
	baz=314						
SRU	San Rafael Swe	12.80	97	P	Pn	19 14 38.3	+0.9
SRU	San Rafael Swe	12.80	97		Pn	19 14 38.3	+0.9
BW06	Boulder Array	12.89	80		Pn	19 14 38.5	-0.2
BW06	Boulder Array	12.89	80	P	Pn	19 14 40.4	+1.7
	baz=272						
PD31	Pinedale Array	12.89	80		Pn	19 14 38.5	-0.2
PDAR	Pinedale Array	12.89	80	Pn	Pn	19 14 39.0	+0.3
	baz=265,slow=12,SNR=9.5						
PDAR				LR	LR	19 19 49.6	
	comp=Z,10µm,21.8s,baz=280,slow=39						
PDAR				PcP	PcP	19 20 13.0	+0.4
	baz=132,slow=2.2,SNR=4.6						
PDAR	Pinedale Array	12.89	80		Pn	19 14 38.5	-0.2
GLA	Glamis	13.05	129	P	Pn	19 14 41.6	+0.9
GLA	Glamis	13.05	129		Pn	19 14 41.6	+0.9
GCMT	Greycliff	13.06	67		Pn	19 14 39.8	-0.9
RDMU	Red Mountain	13.15	90		Pn	19 14 41.3	-0.7
Y14A	Wickenburg	13.56	121		Pn	19 14 49.9	+2.2
WUAZ	Wupatki	13.72	113		Pn	19 14 50.9	+1.0
WUAZ	Wupatki	13.72	113	P	P	19 14 54.6	-3.8
	baz=302						
113A	Mohawk Valley,	13.88	127		Pn	19 14 51.5	-0.4
O20A	White River Ci	14.23	91		Pn	19 14 53.8	-3.1
X16A	Lo Mia Camp, P	14.29	116		Pn	19 14 58.5	+0.8
MVCO	Mesa Verde	14.97	102		Pn	19 15 08.1	+1.0
MVCO	Mesa Verde	14.97	102	P	P	19 15 10.5	-1.9
	baz=294						
214A	Organ Pipe Nat	15.02	127		Pn	19 15 07.2	-0.3
214A	Organ Pipe Nat	15.02	127	P	P	19 15 10.3	-2.4
	baz=316						
W18A	Petrified Fore	15.06	111		Pn	19 15 09.8	+1.6
W18A	Petrified Fore	15.06	111	P	P	19 15 12.0	-1.4
	baz=302						
K22A	Casper	15.13	80		Pn	19 15 08.0	-1.1
K22A				IAmb	IAmb	19 15 27.9	
	comp=Z,133nm,1.5s						
K22A	Casper	15.13	80	P	Pn	19 15 08.2	-0.8
	baz=274						
X18A	Snowflake	15.24	113		Pn	19 15 12.2	+1.8
X18A				IAmb	IAmb	19 15 27.0	
	comp=Z,85nm,1.1s						
SMCO	Snowmass	15.42	94		Pn	19 15 12.5	-0.6
N23A	Red Feather La	15.79	87		Pn	19 15 16.7	-1.0
N23A	Red Feather La	15.79	87	P	Pn	19 15 17.1	-0.6
	baz=281						
S22A	4UR Ranch, Cre	15.99	98		Pn	19 15 21.0	+0.6
S22A	4UR Ranch, Cre	15.99	98	P	P	19 15 22.9	-0.9
	baz=291						
TUC	Tucson	16.03	121	P	Pn	19 15 22.1	+1.4
TUC				pmax	pmax		
	comp=Z,66nm,1.5s						
TUC	Tucson	16.03	121	P	Pn	19 15 22.1	+1.4
TUC	Tucson	16.03	121	P	P	19 15 23.7	-0.3
	baz=311						
ISCO	Idaho Springs	16.27	90	P	Pn	19 15 23.7	-0.3
ISCO				pmax	pmax		
	comp=Z,44nm,1.3s						
ISCO	Idaho Springs	16.27	90		Pn	19 15 23.7	-0.3
ISCO	Idaho Springs	16.27	90	P	Pn	19 15 24.3	+0.3
	baz=284						
DLBC	Dease Lake	16.66	354	Pn	P	19 15 30.2	-0.7
	comp=Z,0.3nm,0.3s,baz=189,slow=8.8,SNR=18						
DLBC	Dease Lake	16.66	354		Pn	19 15 29.0	+0.4
Q24A	Divide	16.84	93	P	P	19 15 32.7	-0.5
	baz=287						
RSSD	Black Hills	16.89	75	P	Pn	19 15 28.2	-3.5
RSSD				pmax	pmax		
	comp=Z,47nm,1.4s						
RSSD	Black Hills	16.89	75	P	Pn	19 15 28.1	-3.5
SDCO	Great Sand Dun	16.98	97		Pn	19 15 32.0	-0.8
SDCO	Great Sand Dun	16.98	97	P	P	19 15 34.8	+0.2
	baz=291						
JIS	Juneau Island	17.05	347	P	P	19 15 35.1	+0.2
DGMT	Dagmar	17.29	60	P	Pn	19 15 36.4	-0.1
DGMT				IAmb	IAmb	19 15 48.2	
	comp=Z,367nm,1.6s						
DGMT	Dagmar	17.29	60	P	P	19 15 38.7	+1.0
	baz=256						
ANMO	Albuquerque	17.47	107	P	Pn	19 15 39.4	+0.5
	comp=Z,0.0nm,0.3s,baz=300,slow=11,SNR=9.7						
ANMO				LR	LR	19 22 50.2	
	comp=Z,8µm,19.5s,baz=302,slow=39						
ANMO	Albuquerque	17.47	107	*ce*P	P	19 15 39.8	-0.2
ANMO				pmax	pmax		
	comp=Z,35nm,1.7s						
ANMO	Albuquerque	17.47	107	P	Pn	19 15 39.4	+0.5
ANMO	Albuquerque	17.47	107	P	P	19 15 42.3	+2.3
	baz=300						
319A	Douglas	17.61	121	P	P	19 15 42.4	+0.9
319A				IAmb	IAmb	19 16 03.8	
	comp=Z,270nm,1.4s						
121A	Cookes Peak, D	17.86	115	P	P	19 15 44.9	+0.5
121A	Cookes Peak, D	17.86	115	P	P	19 15 49.2	+4.8
	baz=307						
T25A	Trinidad	18.01	98	P	Pn	19 15 45.2	-0.4
T25A	Trinidad	18.01	98	P	P	19 15 48.2	+2.2
	baz=292						
HSIG		18.26	130	P	Pn	19 15 47.4	-1.1
SKAG	Skagway	18.34	346	P	Pn	19 15 49.9	+0.7
OGNE	Ogallala	18.69	85	P	P	19 15 51.7	-1.7
OGNE				IAmb	IAmb	19 16 02.0	
	comp=Z,150nm,1.2s						
OGNE	Ogallala	18.69	85	P	Pn	19 15 55.9	+2.1
	baz=281						
KSCO	Kaye Shedlock’	18.71	91	P	P	19 15 52.4	-1.2
KSCO				IAmb	IAmb	19 16 03.3	
	comp=Z,169nm,1.2s						
KSCO	Kaye Shedlock’	18.71	91	P	Pn	19 15 55.0	+1.0
	baz=287						
WHY	Whitehorse	19.40	348	P	P	19 16 01.0	0.0
MNTX	Cornudas Mount	20.00	114	P	Pn	19 16 09.1	-0.3
MNTX				IAmb	IAmb	19 16 20.5	
	comp=Z,172nm,1.8s						
MNTX	Cornudas Mount	20.00	114	P	Pn	19 16 11.4	+2.0
	baz=307						
HYT	Haines Junctio	20.01	345	P	Pn	19 16 08.9	-0.5
HYT				IAmb	IAmb	19 16 25.9	
	comp=Z,180nm,1.9s						
MDND	Maddock	20.20	64	P	P	19 16 09.1	-0.6
MDND				IAmb	IAmb	19 16 17.8	
	comp=Z,114nm,1.0s						
MDND	Maddock	20.20	64	P	Pn	19 16 12.5	+0.8
	baz=263						
SUSD	Miller	20.53	73	P	P	19 16 13.8	+0.5
SUSD				IAmb	IAmb	19 16 22.9	
	comp=Z,120nm,0.9s						
SUSD	Miller	20.53	73	P	Pn	19 16 15.3	-0.3
	baz=273						
MSTX	Muleshoe	20.60	105	P	P	19 16 12.9	-1.3
MSTX	Muleshoe	20.60	105	P	Pn	19 16 17.8	+1.2
	baz=300						
FFC	Flin Flon	20.84	43	*e*P	P	19 16 16.8	+0.3
FFC	Flin Flon	20.84	43	P	P	19 16 15.8	-0.7
FFC				IAmb	IAmb	19 16 23.0	
	comp=Z,127nm,1.2s						
CBKS	Cedar Bluff	20.93	89	P	P	19 16 18.4	+0.7
CBKS				pmax	pmax		
	comp=Z,204nm,1.5s						
CBKS	Cedar Bluff	20.93	89	P	P	19 16 18.4	+0.7
CBKS				IAmb	IAmb	19 16 26.4	
	comp=Z,204nm,1.4s						
CBKS	Cedar Bluff	20.93	89	P	Pn	19 16 20.0	-0.3
	baz=287						
AMTX	Amarillo	20.96	101	P	P	19 16 15.7	-2.4
AMTX				IAmb	IAmb	19 16 29.6	
	comp=Z,96nm,1.1s						
AMTX	Amarillo	20.96	101	P	Pn	19 16 22.0	+1.3
	baz=297						
CTGM	Chitina Glacie	21.00	340	P	Pn	19 16 20.0	-1.0
CTGM				IAmb	IAmb	19 16 26.9	
	comp=Z,162nm,1.4s						
BARN	Barnard Glacie	21.16	340	P	P	19 16 21.3	+1.1
BARN				IAmb	IAmb	19 16 28.5	
	comp=Z,94nm,1.0s						
BALM	Baldy	21.32	339	P	P	19 16 22.6	+0.8
BGNE	Belgrade	21.48	82	P	P	19 16 26.7	+3.1
	baz=281						
VRDI	Verde Repeater	21.78	338	P	P	19 16 28.4	+1.6
VRDI				IAmb	IAmb	19 16 31.4	
	comp=Z,85nm,1.3s						
MCARA	McCarthy VSAT	21.79	339	P	P	19 16 27.6	+0.9
MCARA				IAmb	IAmb	19 16 37.1	
	comp=Z,188nm,1.4s						
R32A	Long Quarter,	21.81	90	P	P	19 16 28.0	+0.9
R32A				IAmb	IAmb	19 16 35.6	
	comp=Z,158nm,1.4s						
YKA	Yellowknife Ar	21.89	15	P	P	19 16 26.7	-1.0
	comp=Z,28nm,0.9s,baz=203,slow=11,SNR=84						
YKA				PcP	PcP	19 20 26.7	+0.4
	comp=Z,1.8nm,0.9s,baz=182,slow=2.5,SNR=5.1						
YKA				LR	LR	19 24 43.2	
	comp=Z,1µm,19.4s,baz=0.0,slow=36						
GLB	Gilahina Butte	22.05	338	P	P	19 16 29.8	+0.2
GLB				IAmb	IAmb	19 16 44.9	
	comp=Z,153nm,1.5s						
ECSD	EROS Data Cent	22.26	75	P	P	19 16 31.8	-0.1
ECSD	EROS Data Cent	22.26	75	P	P	19 16 33.6	+1.7
	baz=276						
U32A	Winter Ranch,	22.31	95	P	P	19 16 31.2	-1.4
LPIG	La Paz	22.51	137	LR	LR	19 24 23.5	
	comp=Z,2µm,20.7s,baz=316,slow=34						
TX31	Lajitas Ar. Si	22.62	116	P	P	19 16 35.3	-0.6
TX31				IAmb	IAmb	19 17 01.3	
	comp=Z,80nm,1.4s						
TX32	Lajitas Array	22.62	116	P	P	19 16 37.6	+1.7
TX32				IAmb	IAmb	19 17 01.3	
	comp=Z,88nm,1.4s						
TXAR	Lajitas Array	22.62	116	P	P	19 16 38.4	+2.4
	comp=Z,6.1nm,0.8s,baz=296,slow=6.3,SNR=28						
TXAR				PcP	PcP	19 20 30.4	+1.9
	comp=Z,0.8nm,0.9s,baz=242,slow=1.9,SNR=3.2						
TXAR	Lajitas Array	22.62	116	P	P	19 16 37.1	+1.1
TXAR						19 20 30.4	
TXAR	Lajitas Array	22.62	116	P	P	19 16 37.1	+1.1
KDAK	Kodiak Island	22.72	323	P	P	19 16 37.9	+1.2
	comp=Z,25nm,1.1s,baz=136,slow=12,SNR=3.7						
KDAK				LR	LR	19 23 05.3	
	comp=Z,5µm,20.7s,baz=128,slow=31						
KDAK	Kodiak Island	22.72	323	P	P	19 16 37.9	+1.2
KDAK				pmax	pmax		
	comp=Z,281nm,1.8s						
AGMN	Agassiz Nation	22.75	63	P	P	19 16 37.0	0.0
AGMN				IAmb	IAmb	19 16 50.8	
	comp=Z,136nm,1.4s						
AGMN	Agassiz Nation	22.75	63	P	P	19 16 38.1	+1.1
	baz=265						
BCAR	Beaver Creek A	22.93	343	P	P	19 16 39.0	+0.2
ULM	Lac du Bonnet	22.97	58	P	P	19 16 39.5	+0.1
	comp=Z,48nm,0.9s,baz=268,slow=9.8,SNR=25						
ULM				LR	LR	19 25 51.0	
	comp=Z,5µm,18.6s,baz=254,slow=38						
ULM	Lac du Bonnet	22.97	58	*ce*P	P	19 16 40.1	+0.7
ULM	Lac du Bonnet	22.97	58	P	P	19 16 38.8	-0.6
WMOK	Wichita Mounta	23.16	99	P	P	19 16 41.1	-0.3
WMOK				pmax	pmax		
	comp=Z,49nm,1.1s						
WMOK	Wichita Mounta	23.16	99	P	P	19 16 41.1	-0.3
WMOK	Wichita Mounta	23.16	99	P	P	19 16 43.4	+2.0
	baz=296						
MENT	Mentasta	23.27	340	P	P	19 16 44.2	+1.9
DAWY	Dawson	23.34	346	P	P	19 16 44.5	+1.4
DAWY				IAmb	IAmb	19 16 45.9	
	comp=Z,102nm,1.3s						
SCM	Sheep Creek Mo	23.40	335	P	P	19 16 44.7	+1.0
SCM				pmax	pmax		
	comp=Z,253nm,1.4s						
SCM	Sheep Creek Mo	23.40	335	P	P	19 16 44.7	+1.0
KNK	Knik Glacier	23.45	334	P	P	19 16 45.3	+1.1
ABTX	Abilene, Hawle	23.54	104	P	P	19 16 45.1	-0.1
ABTX				IAmb	IAmb	19 16 58.4	
	comp=Z,176nm,1.9s						
RC01	Rabbit Creek A	23.66	332	P	P	19 16 46.2	+0.1
SML	Sawmill	23.70	334	P	P	19 16 47.9	+1.4
SML				IAmb	IAmb	19 16 50.2	
	comp=Z,70nm,1.0s						
PAX	Paxson	23.75	339	P	P	19 16 48.3	+1.2
PAX				pmax	pmax		
	comp=Z,31nm,1.3s						
PAX	Paxson	23.75	339	P	P	19 16 48.3	+1.2
PMR	Palmer	23.80	333	P	P	19 16 48.9	+1.4
PMR				pmax	pmax		
	comp=Z,156nm,1.6s						
PMR	Palmer	23.80	333	P	P	19 16 48.9	+1.4
PMR				IAmb	IAmb	19 17 03.9	
	comp=Z,156nm,1.6s						
GHO	Glory Hole Cre	23.86	334	P	P	19 16 49.4	+1.3
GHO				IAmb	IAmb	19 16 51.9	
	comp=Z,63nm,0.9s						
X34A	Smith Ranch, M	23.92	98	P	P	19 16 48.2	-0.6
X34A				IAmb	IAmb	19 17 01.0	
	comp=Z,110nm,1.3s						
DOT	Dot Lake	23.96	341	P	P	19 16 50.1	+1.1
T35A	Sooner Cattle	23.96	92	P	P	19 16 49.2	-0.1
T35A				IAmb	IAmb	19 16 59.0	
	comp=Z,113nm,1.3s						
EGAK	Eagle	24.32	345	P	P	19 16 53.3	+1.1
RSO	Redoubt South	24.36	328	P	P	19 16 54.4	+1.5
DHY	Denali Highway	24.37	337	P	P	19 16 54.3	+1.4
DHY				IAmb	IAmb	19 16 56.2	
	comp=Z,58nm,0.8s						
W35A	Tecumseh	24.39	96	P	P	19 16 53.7	+0.6
JCT	Junction City	24.59	109	P	P	19 16 54.1	-1.0
JCT				pmax	pmax		
	comp=Z,26nm,1.0s						
JCT	Junction City	24.59	109	P	P	19 16 54.1	-1.0
JCT	Junction City	24.59	109	P	P	19 16 57.6	+2.5
	baz=305						
SPMN	Marine on St.	24.85	71	P	P	19 16 58.8	+1.6
SPMN	Marine on St.	24.85	71	P	P	19 16 59.5	+2.3
	baz=274						
TUL1	Leonard	24.88	94	P	P	19 16 59.0	+1.3
TUL1				IAmb	IAmb	19 17 17.8	
	comp=Z,42nm,1.2s						
SCIA	State Center	25.01	79	P	P	19 16 59.2	+0.4
RND	Reindeer	25.05	337	P	P	19 16 59.7	+0.7
RND				pmax	pmax		
	comp=Z,37nm,0.9s						
RND	Reindeer	25.05	337	P	P	19 16 59.7	+0.7
RND				IAmb	IAmb	19 17 02.9	
	comp=Z,37nm,0.9s						
EPYK	Eagle Plains	25.11	351	P	P	19 16 59.8	+0.4
EPYK				IAmb	IAmb	19 17 01.4	
	comp=Z,90nm,1.2s						
EPYK	Eagle Plains	25.11	351	P	P	19 17 00.7	+1.2
	baz=163						
HDA	Harding Lake	25.31	340	P	P	19 17 02.0	+0.8
HDA				IAmb	IAmb	19 17 04.3	
	comp=Z,40nm,1.0s						
HDA	Harding Lake	25.31	340	P	P	19 17 02.2	+1.0
	baz=143						
MCK	McKinley	25.33	337	P	P	19 17 02.3	+0.9
MCK				pmax	pmax		
	comp=Z,69nm,1.1s						
MCK	McKinley	25.33	337	P	P	19 17 02.3	+0.9
MCK				IAmb	IAmb	19 17 05.4	
	comp=Z,69nm,1.1s						
WHTX	Lake Whitney,	25.45	103	P	P	19 17 03.0	+0.2
WHTX				IAmb	IAmb	19 17 48.5	
	comp=Z,79nm,1.6s						
TRF	Thorofare Moun	25.52	336	P	P	19 17 04.2	+0.9
IL31		25.59	340	P	P	19 17 03.6	-0.1
IL31				IAmb	IAmb	19 17 05.7	
	comp=Z,39nm,1.0s						
ILAR	Eielson Array	25.59	340	P	P	19 17 04.7	+1.0
	comp=Z,24nm,0.8s,baz=156,slow=7.6,SNR=150						
ILAR				PcP	PcP	19 20 34.2	+0.1
	comp=Z,4.5nm,0.8s,baz=172,slow=2.7,SNR=13						
ILAR				LR	LR	19 25 20.4	
	comp=Z,2µm,21.5s,baz=162,slow=32						
ILAR	Eielson Array	25.59	340	P	P	19 17 03.7	0.0
ILAR						19 20 33.4	
ILAR	Eielson Array	25.59	340	P	P	19 17 03.7	0.0
ILAR					PcP	19 20 33.4	-0.8
E38A	The Farm, Brul	25.64	67	P	P	19 17 05.5	+1.1
E38A				IAmb	IAmb	19 17 39.2	
	comp=Z,82nm,1.6s						
EYMN	Ely	25.65	64	P	P	19 17 05.9	+1.4
EYMN	Ely	25.65	64	P	P	19 17 06.5	+2.0
	baz=270						
WRH	Wood River Hil	25.66	339	P	P	19 17 04.1	-0.3
WRH				IAmb	IAmb	19 17 20.9	
	comp=Z,65nm,1.1s						
WRH					PcP	19 20 33.5	-0.8
CCB	Clear Creek Bu	25.72	339	P	P	19 17 05.3	+0.4
CCB				IAmb	IAmb	19 17 08.1	
	comp=Z,43nm,1.1s						
U38A	Gravette	25.73	91	P	P	19 17 06.2	+0.9
U38A				IAmb	IAmb	19 17 18.3	
	comp=Z,74nm,1.1s						
PPLA	Purkeypile	25.74	333	P	P	19 17 06.5	+1.2
KTH	Kantishna Hill	25.79	335	P	P	19 17 06.0	+0.3
KTH				IAmb	IAmb	19 17 45.8	
	comp=Z,80nm,1.6s						
SVW2	Sparrevohn	25.86	328	P	P	19 17 07.3	+1.0
PRP	Porcupine Dome	25.88	342	P	P	19 17 06.8	+0.3
PRP				IAmb	IAmb	19 17 10.2	
	comp=Z,35nm,1.0s						
COLA	College	25.92	340	P	P	19 17 07.3	+0.6
COLA				pmax	pmax		
	comp=Z,68nm,1.7s						
COLA	College	25.92	340	P	P	19 17 07.3	+0.6
COLA				IAmb	IAmb	19 17 09.9	
	comp=Z,68nm,1.6s						

TCOL	CIGO, UAF Yank	25.92	340	P	P	19 17 07.8	+1.1
	baz=142						
POKR	Poker Plat Res	26.00	340	P	P	19 17 09.0	+1.5
	baz=143						
NEA	Nenana	26.01	338	P	P	19 17 08.2	+0.6
S39A	Bolivar	26.07	88	P	P	19 17 08.8	+0.4
MDM	Murphy Dome	26.08	339	P	P	19 17 08.3	+0.1
HHAR	Hobbs	26.12	91	P	P	19 17 09.6	+0.8
HHAR				IAmb	IAmb	19 17 15.0	
	comp=Z,38nm,0.9s						
BPAW	Bear Paw Mtn.	26.21	336	P	P	19 17 09.5	+0.1
BPAW				IAmb	IAmb	19 17 12.2	
	comp=Z,30nm,0.9s						
L40A	Anamosa	26.43	78	P	P	19 17 11.6	-0.1
FCC	Fort Churchill	26.53	39	P	P	19 17 12.8	+0.5
FCC				pmax	pmax		
	comp=Z,139nm,1.9s						
FCC	Fort Churchill	26.53	39	P	P	19 17 12.8	+0.5
FCC				IAmb	IAmb	19 17 26.1	
	comp=Z,139nm,1.9s						
I40A	Norwalk	26.55	73	P	P	19 17 12.6	-0.1
I40A				IAmb	IAmb	19 17 20.7	
	comp=Z,81nm,1.4s						
W39A	Magazine	26.67	94	P	P	19 17 13.6	-0.2
W39A	Magazine	26.67	94	P	P	19 17 16.3	+2.5
	baz=295						
G40A	Rib Lake	26.68	70	P	P	19 17 15.9	+2.1
INK	Inuvik	26.69	355	P	P	19 17 14.0	+0.4
	comp=Z,5.8nm,0.9s,baz=169,slow=9.3,SNR=12						
INK	Inuvik	26.69	355	P	P	19 17 13.5	-0.2
INK				pmax	pmax		
	comp=Z,58nm,1.7s						
INK	Inuvik	26.69	355	P	P	19 17 13.4	-0.2
INK				IAmb	IAmb	19 18 10.0	
	comp=Z,58nm,1.6s						
FYU	Fort Yukon	26.70	344	P	P	19 17 14.7	+0.9
FYU				IAmb	IAmb	19 17 16.6	
	comp=Z,97nm,1.3s						
MLY	Manley	26.82	338	P	P	19 17 14.6	-0.3
MLY				IAmb	IAmb	19 17 17.2	
	comp=Z,60nm,1.1s						
U40A	Yellville	26.90	91	P	P	19 17 15.6	-0.3
U40A	Yellville	26.90	91	P	P	19 17 16.8	+0.8
	baz=292						
JFWS	Jewell Farm	26.98	75	P	P	19 17 17.0	+0.5
JFWS				pmax	pmax		
	comp=Z,98nm,1.2s						
JFWS	Jewell Farm	26.98	75	P	P	19 17 17.0	+0.5
JFWS	Jewell Farm	26.98	75	P	P	19 17 18.6	+2.1
	baz=280						
MGMO	Mountain Grove	27.04	89	P	P	19 17 20.1	+2.9
MGMO				IAmb	IAmb	19 17 29.7	
	comp=Z,38nm,1.1s						
MIAR	Mount Ida	27.10	95	P	P	19 17 18.7	+1.0
MIAR				pmax	pmax		
	comp=Z,46nm,1.0s						
MIAR	Mount Ida	27.10	95	P	P	19 17 18.7	+1.0
MIAR				IAmb	IAmb	19 17 32.2	
	comp=Z,46nm,1.0s						
MIAR	Mount Ida	27.10	95	P	P	19 17 20.2	+2.5
	baz=296						
TTA	Tatalina	27.10	331	P	P	19 17 18.3	+0.7
TTA				pmax	pmax		
	comp=Z,28nm,1.2s						
TTA	Tatalina	27.10	331	P	P	19 17 18.3	+0.7
BMAR	Burnt Mountain	27.32	345	P	P	19 17 18.4	-1.1
COWI	Conover	27.34	68	P	P	19 17 20.6	+0.8
COWI				IAmb	IAmb	19 17 34.3	
	comp=Z,38nm,1.1s						
CCM	Cathedral Cave	27.50	86	P	P	19 17 21.0	-0.3
CCM				pmax	pmax		
	comp=Z,142nm,2.0s						
CCM	Cathedral Cave	27.50	86	P	P	19 17 21.0	-0.3
C36M	Paulatuk	27.55	2	P	P	19 17 20.1	-1.2
C36M				IAmb	IAmb	19 17 31.6	
	comp=Z,39nm,1.2s						
C36M	Paulatuk	27.55	2	P	P	19 17 21.8	+0.5
	baz=185						
L42A	Oliver, Polo	27.58	77	P	P	19 17 21.7	-0.2
FCAR	Ozark Folk Cen	27.62	91	P	P	19 17 21.3	-1.1
D41A	Chassel	27.66	66	P	P	19 17 22.0	-0.7
HKT	Hockley	27.72	105	P	P	19 17 21.7	-1.5
HKT				pmax	pmax		
	comp=Z,33nm,1.5s						
HKT	Hockley	27.72	105	P	P	19 17 21.7	-1.5
WHAR	Wooly Hollow	27.74	92	P	P	19 17 23.7	+0.2
WHAR				IAmb	IAmb	19 17 31.7	
	comp=Z,54nm,1.2s						
I42A	Draeger Farm,	27.77	73	P	P	19 17 23.4	-0.2
I42A				IAmb	IAmb	19 17 41.8	
	comp=Z,50nm,1.2s						
W41B	Gary Mavity, V	27.82	92	P	P	19 17 24.4	+0.3
W41B	Gary Mavity, V	27.82	92	P	P	19 17 29.4	+5.2
	baz=294						
WLAR	White Oak Lake	27.82	96	P	P	19 17 24.1	-0.1
COLD	Coldfoot	28.37	341	P	P	19 17 29.0	+0.3
IMAR	Indian Mountai	28.38	337	P	P	19 17 29.8	+1.0
IMAR					PcP	19 20 40.9	+0.1
H43A	Windswept, Lux	28.49	71	P	P	19 17 29.1	-1.0
H43A				IAmb	IAmb	19 17 48.4	
	comp=Z,38nm,1.1s						
PBMO	Poplar Bluff	28.55	88	P	P	19 17 30.0	-0.7
PBMO				IAmb	IAmb	19 17 41.7	
	comp=Z,50nm,1.4s						
E43A	Lone Tree Farm	28.79	67	P	P	19 17 32.2	-0.5
M44A	Midewin, Midew	28.91	78	P	P	19 17 32.3	-1.4
M44A				IAmb	IAmb	19 17 41.1	
	comp=Z,53nm,1.0s						
TOLK	Toolik Lake Re	29.36	343	P	P	19 17 39.4	+1.8
TOLK				IAmb	IAmb	19 17 40.7	
	comp=Z,62nm,1.2s						
TOLK	Toolik Lake Re	29.36	343	P	P	19 17 39.6	+2.0
	baz=144						
SFIN	Lafayette	29.86	79	P	P	19 17 43.1	+0.9
SFIN				IAmb	IAmb	19 17 54.0	
	comp=Z,81nm,1.5s						
SFIN	Lafayette	29.86	79	P	P	19 17 42.9	+0.6
	baz=286						
OXF	Oxford	30.22	92	P	P	19 17 47.2	+1.8
OXF				pmax	pmax		
	comp=Z,73nm,1.0s						
OXF	Oxford	30.22	92	P	P	19 17 47.2	+1.8
E46A	Sault Ste Mari	30.64	67	P	P	19 17 50.1	+1.0
E46A				IAmb	IAmb	19 17 52.1	
	comp=Z,26nm,0.9s						
D46A	Sault St. Mari	30.77	66	P	P	19 17 52.1	+2.0
	baz=277						
I47A	Gladwin	30.88	72	P	P	19 17 52.0	+0.8
I47A	Gladwin	30.88	72	P	P	19 17 53.5	+2.3
	baz=281						
PLAL	Pickwick Lake	31.01	90	P	P	19 17 52.7	+0.3
PLAL				IAmb	IAmb	19 18 09.0	
	comp=Z,37nm,1.1s						
O48A	Farmland	31.32	79	P	P	19 17 57.6	+2.4
	baz=287						
E47A	Iron Bridge	31.34	67	P	P	19 17 57.0	+1.8
	baz=278						
D47A	Chapleau	31.38	65	P	P	19 17 56.9	+1.2
	baz=277						
K48A	Perry	31.41	74	P	P	19 17 57.6	+1.7
	baz=283						
I48A	Sherman Twp	31.41	71	P	P	19 17 58.7	+2.8
	baz=281						
ANM	Nome	31.50	329	P	P	19 17 57.7	+1.3
ANM				pmax	pmax		
	comp=Z,36nm,1.2s						
ANM	Nome	31.50	329	P	P	19 17 57.7	+1.3
ANM				IAmb	IAmb	19 17 59.0	
	comp=Z,36nm,1.2s						
J48A	Bridge Port	31.54	73	P	P	19 17 58.0	+0.9
P49A	Miami Univ. Ec	31.86	80	P	P	19 18 03.4	+3.5
	baz=288						
F48A	Evansville	31.88	68	P	P	19 18 01.8	+1.8
	baz=279						
E48A	Lockeyer	32.10	66	P	P	19 18 04.2	+2.3
	baz=278						
D48A	Paudash Townsh	32.24	65	P	P	19 18 04.3	+1.1
	baz=277						
F49A	Sandfield	32.29	68	P	P	19 18 05.1	+1.5
	baz=280						
RDOG	Red Dog Mine	32.47	336	P	P	19 18 06.0	+1.1
RDOG				IAmb	IAmb	19 18 06.4	
	comp=Z,32nm,1.4s						
D49A	Beulah Townshi	32.54	65	P	P	19 18 07.0	+1.3
	baz=278						
LRAL	Lakeview Retre	32.67	92	P	P	19 18 10.3	+3.3
	baz=298						
FPAL	Fort Paine	33.04	89	P	P	19 18 08.0	-2.4
FPAL				IAmb	IAmb	19 18 22.9	
	comp=Z,27nm,1.0s						
I51A	Listowel	33.39	71	P	P	19 18 16.0	+2.7
	baz=283						
CPCT	Cooper Cave	33.47	87	P	P	19 18 13.0	-1.1
CPCT				IAmb	IAmb	19 18 32.0	
	comp=Z,33nm,1.2s						
D50A	G1974 Best Tow	33.57	65	P	P	19 18 16.5	+1.6
	baz=279						
F51A	Arnstein	33.73	67	P	P	19 18 18.3	+2.1
	baz=280						
GAMB	Gambell	33.73	326	P	P	19 18 14.8	-1.1
GAMB				IAmb	IAmb	19 18 18.3	
	comp=Z,25nm,0.9s						
D51A	Lot 18 Range I	33.90	65	P	P	19 18 19.6	+2.0
	baz=279						
E51A	G1948 Merrick	33.91	66	P	P	19 18 19.1	+1.3
	baz=280						
H52A	Wyevale	34.00	69	P	P	19 18 21.3	+2.8
	baz=282						
F52A	Sundridge	34.16	67	P	P	19 18 22.0	+2.1
	baz=281						
Y52A	Lilburn	34.49	89	P	P	19 18 22.1	-0.8
Y52A				IAmb	IAmb	19 18 31.0	
	comp=Z,42nm,1.1s						
Y52A	Lilburn	34.49	89	P	P	19 18 25.7	+2.8
	baz=296						
SADO	Sadowa	34.49	69	P	P	19 18 22.8	0.0
SADO				IAmb	IAmb	19 18 30.4	
	comp=Z,35nm,1.1s						
E52A	Mattawa	34.52	66	P	P	19 18 24.2	+1.2
	baz=280						
V53A	Saluda	34.66	86	P	P	19 18 21.5	-2.9
V53A				IAmb	IAmb	19 18 36.4	
	comp=Z,46nm,1.4s						
V53A	Saluda	34.66	86	P	P	19 18 25.5	+1.1
	baz=294						
MATQ	Matagami	34.70	60	P	P	19 18 24.7	+0.2
	baz=276						
Q54A	Coxs Mills	34.89	79	P	P	19 18 29.1	+2.9
	baz=290						
H53A	Bobcaygeon	34.92	69	P	P	19 18 28.5	+1.9
	baz=283						
P54A	Burton	34.94	78	P	P	19 18 30.0	+3.2
	baz=289						
L54A	Sinclairville	34.99	73	P	P	19 18 29.9	+2.8
	baz=286						
ALGO	Algonquin Park	35.00	66	P	P	19 18 29.1	+1.9
	baz=281						
VLDQ	Val d'Or	35.03	63	P	P	19 18 26.5	-0.9
VLDQ				IAmb	IAmb	19 18 28.7	
	comp=Z,41nm,1.1s						
D53A	Lac Vacive, Po	35.03	64	P	P	19 18 29.4	+2.0
D53A				IAmb	IAmb	19 18 30.4	
	comp=Z,32nm,0.9s						
D53A	Lac Vacive, Po	35.03	64	P	P	19 18 29.2	+1.8
	baz=280						
GOGA	Godfrey	35.13	89	P	P	19 18 28.6	+0.1
GOGA				pmax	pmax		
	comp=Z,29nm,1.1s						
GOGA	Godfrey	35.13	89	P	P	19 18 28.6	+0.1
GOGA				IAmb	IAmb	19 18 35.6	
	comp=Z,29nm,1.1s						
GOGA	Godfrey	35.13	89	P	P	19 18 30.0	+1.6
	baz=297						
LSQQ	Lebel-sur-Quev	35.21	61	P	P	19 18 30.9	+1.9
	baz=278						
K54A	Basiliko Farm,	35.33	72	P	P	19 18 32.6	+2.5
	baz=286						
WVNY	West Valley, N	35.45	73	P	P	19 18 30.9	-0.2
WVNY				IAmb	IAmb	19 18 39.1	
	comp=Z,36nm,0.9s						
X54A	Belton	35.45	87	P	P	19 18 33.2	+2.0
	baz=296						
E54A	Lac Daplat, Po	35.50	65	P	P	19 18 32.9	+1.5
	baz=281						
T55A	Pulaski	35.59	82	P	P	19 18 36.7	+4.3
	baz=292						
O55A	Ligonier	35.60	76	P	P	19 18 35.3	+2.9
	baz=289						
L55A	Hinsdale	35.63	73	P	P	19 18 34.5	+1.8
	baz=286						
N55A	Marion Center	35.65	75	P	P	19 18 35.4	+2.5
	baz=288						
R55A	Marlinton	35.66	80	P	P	19 18 40.3	+7.3
	baz=291						
D54A	Lac Fusel, La	35.72	64	P	P	19 18 34.8	+1.4
	baz=280						
H55A	Tweed	35.90	69	P	P	19 18 35.1	+0.1
	baz=284						
RES	Resolute Bay	35.94	14	P	P	19 18 34.9	0.0
	comp=Z,17nm,0.9s,baz=232,slow=9.8,SNR=45						
RES				LR	LR	19 32 57.2	
	comp=Z,469nm,19.3s,baz=226,slow=36						
RES	Resolute Bay	35.94	14	P	P	19 18 33.9	-0.9
RES				pmax	pmax		
	comp=Z,25nm,1.0s						
RES	Resolute Bay	35.94	14	P	P	19 18 33.9	-0.9
RES				IAmb	IAmb	19 18 37.7	
	comp=Z,25nm,1.0s						
X55A	Gracelyn & Ava	36.04	87	P	P	19 18 37.2	+1.0
	baz=296						
L56A	Greenwood	36.27	73	P	P	19 18 37.2	-1.0
L56A	Greenwood	36.27	73	P	P	19 18 40.5	+2.3
	baz=287						
X56A	White Oak	36.48	86	P	P	19 18 47.1	+7.2
	baz=296						
SSPA	Standing Stone	36.49	75	P	P	19 18 38.8	-1.3
SSPA				IAmb	IAmb	19 18 57.4	
	comp=Z,95nm,1.9s						
H56A	Elgin	36.53	68	P	P	19 18 41.2	+0.9
	baz=284						
D55A	Sainte-Anne-du	36.54	64	P	P	19 18 41.3	+0.9
	baz=281						
L57A	Andrews Acres	36.82	73	P	P	19 18 44.9	+2.1
	baz=287						
M57A	Sunshine Farm,	36.82	74	P	P	19 18 45.3	+2.5
	baz=288						
CMIG	Matias Romero	36.92	122	P	P	19 18 46.2	+2.3
	comp=Z,4.3nm,0.8s,baz=313,slow=9.2,SNR=3.3						
E56A	St. Veronique	36.93	65	P	P	19 18 44.8	+1.1
	baz=282						
D56A	ZEC Mazanza, M	37.01	64	P	P	19 18 45.4	+1.0
	baz=282						
H57A	Richville	37.17	68	P	P	19 18 47.4	+1.6
	baz=285						
N58A	Sunbury	37.27	74	P	P	19 18 45.9	-0.7
N58A				IAmb	IAmb	19 18 53.9	
	comp=Z,45nm,1.2s						
M58A	Price’s Panora	37.28	73	P	P	19 18 49.2	+2.4
	baz=288						
TRQ	Mont Tremblant	37.32	65	P	P	19 18 47.6	+0.4
L58A	Harry Jones Me	37.51	72	P	P	19 18 50.4	+1.7
	baz=288						
J58A	Remsen	37.53	70	P	P	19 18 50.9	+2.1
	baz=286						
E57A	Chemin Saint G	37.56	65	P	P	19 18 50.4	+1.4
	baz=283						
D57A	Chemin Vers le	37.60	64	P	P	19 18 51.2	+1.8
	baz=282						
LONY	Lake Ozonia	37.69	68	P	P	19 18 50.6	+0.4
LONY	Lake Ozonia	37.69	68	P	P	19 18 50.9	+0.7
	baz=285						
N59A	State Game Lan	37.92	74	P	P	19 18 54.2	+2.0
	baz=289						
M59A	Waymart	37.97	73	P	P	19 18 54.1	+1.5
	baz=288						
K59A	Cooperstown	38.00	71	P	P	19 18 54.9	+2.0
	baz=287						
H58A	Gabriels	38.02	68	P	P	19 18 54.4	+1.4
	baz=285						
E58A	La Victoria	38.15	65	P	P	19 18 56.0	+2.0
	baz=283						
D58A	Chemin du LacG	38.26	63	P	P	19 18 55.9	+1.0
	baz=283						
LATQ	La Tuque	38.26	63	P	P	19 18 56.8	+1.9
	baz=282						
LUPA	Lehigh Univers	38.31	74	P	P	19 18 53.4	-2.1
N60A	Cedar Hill Far	38.42	74	P	P	19 18 58.6	+2.3
	baz=289						
I60A	Shoreham	38.79	68	P	P	19 19 01.7	+2.3
	baz=286						
J60A	Lant Hill Farm	38.87	69	P	P	19 19 02.5	+2.3
	baz=287						
D59A	Saint-Raymond	38.97	63	P	P	19 19 03.1	+2.2
	baz=283						
F60A	Warwick	39.14	65	P	P	19 19 04.2	+1.9
	baz=284						
E60A	Ste Agathe de	39.38	64	P	P	19 19 05.6	+1.3
	baz=284						
H61A	Lyndonville	39.54	67	P	P	19 19 07.5	+1.8
	baz=286						
D60A	Saint Jean D’O	39.60	63	P	P	19 19 08.1	+1.9
	baz=284						
F61A	St Evariste	39.79	65	P	P	19 19 09.8	+2.0
	baz=285						
E61A	Lac Etchemin	40.01	64	P	P	19 19 11.7	+2.1
	baz=285						
D61A	St Aubert, Com	40.02	62	P	P	19 19 11.7	+2.1
	baz=284						
H62A	Milan	40.06	67	P	P	19 19 12.5	+2.5
	baz=286						
SCHQ	Schefferville	40.71	50	P	P	19 19 14.8	-0.5
	comp=Z,12nm,0.8s,baz=282,slow=7.7,SNR=14						
SCHQ				LR	LR	19 36 54.8	
	comp=Z,3µm,18.7s,baz=280,slow=38						
SCHQ	Schefferville	40.71	50	P	P	19 19 14.6	-0.7
F63A	Nahmakanta, Br	41.13	64	P	P	19 19 18.0	-0.9
	baz=286						
APG	El Apazote	41.30	120	P	P	19 19 22.9	+2.1
	comp=Z,12nm,0.3s,baz=318,slow=13,SNR=3.7						
D63A	Stockholm	41.44	62	P	P	19 19 23.3	+1.9
	baz=285						
F64A	Sherman	41.60	64	P	P	19 19 25.0	+2.4
	baz=286						
E64A	Bridgewater	41.79	63	P	P	19 19 25.5	+1.3
	baz=286						
TULEG	Thule	42.33	17	P	P	19 19 28.0	-0.2
TULEG				IAmb	IAmb	19 19 31.6	
	comp=Z,68nm,1.9s						
BATG	Bathurst New B	42.72	61	P	P	19 19 32.6	+0.8
BATG				IAmb	IAmb	19 19 36.4	
	comp=Z,40nm,1.2s						
BILL	Bilibino	43.35	330	*d i*P	P	19 19 36.2	-0.4
BILL				pmax	pmax		
	comp=Z,64nm,2.3s						
BILL	Bilibino	43.35	330	P	P	19 19 36.0	-0.6
LMN	Caledonia Moun	43.97	63	P	P	19 19 43.5	+1.6
SFJD	Kangerlussuaq	47.06	31	P	P	19 20 06.3	+0.3
SFJD				pmax	pmax		
	comp=Z,72nm,1.7s						
SFJD	Kangerlussuaq	47.06	31	P	P	19 20 06.3	+0.3
JTS	Las Juntas de	48.38	118	P	P	19 20 18.5	+1.5
	comp=Z,1.4nm,0.3s,baz=21,slow=18,SNR=2.2						
JTS	Las Juntas de	48.38	118	P	P	19 20 18.5	+1.5
JTS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
PET	Petropavlovsk	49.34	310	*e*P	P	19 20 23.9	0.0
PET				*e*S	S	19 27 25.1	-3.9
PET				pmax	pmax		
	comp=Z,31nm,0.9s						
PET	Petropavlovsk	49.34	310	P	P	19 20 23.8	-0.1
PET				IAmb	IAmb	19 20 26.7	
	comp=Z,24nm,0.9s						
SEY	Seymchan	49.68	324	P	P	19 20 25.7	-0.6
	comp=Z,16nm,1.0s,baz=93,slow=9.2,SNR=55						
SEY				PcP	PcP	19 21 48.0	+0.8
	comp=Z,6.9nm,0.8s,baz=82,slow=2.5,SNR=6.8						
PEA0B	Petropavlovsk-	49.86	310	P	P	19 20 27.7	-0.2
PEA0B				pmax	pmax		
	comp=Z,32nm,1.1s						
PEA0B	Petropavlovsk-	49.86	310	P	P	19 20 27.7	-0.2
PEA0B				IAmb	IAmb	19 20 46.9	
	comp=Z,32nm,1.1s						
PETK	Petropavlovsk-	49.86	310	P	P	19 20 27.9	0.0
	comp=Z,16nm,0.8s,baz=91,slow=10,SNR=17						
PETK				PcP	PcP	19 21 48.6	+0.5
	comp=Z,6.2nm,0.8s,baz=97,slow=6.0,SNR=4.6						
PETK				LR	LR	19 38 25.2	
	comp=Z,652nm,21.0s,baz=63,slow=32						
PETK	Petropavlovsk-	49.86	310	P	P	19 20 27.0	-0.8
PETK	Petropavlovsk-	49.86	310	P	P	19 20 27.0	-0.8
SUMG	Summit	50.18	23	*i* P	P	19 20 30.9	+0.5
	comp=Z,143nm,1.1s						
SUMG	Summit	50.18	23	P	P	19 20 29.7	-0.7
SUMG				pmax	pmax		
	comp=Z,59nm,1.1s						
SUMG	Summit	50.18	23	P	P	19 20 29.7	-0.7
MA2	Magadan	51.41	320	P	P	19 20 39.2	-0.2
	comp=Z,9.6nm,0.9s,baz=90,slow=6.2,SNR=13						
MA2	Magadan	51.41	320	*d i*P	P	19 20 38.9	-0.5
MA2				pmax	pmax		
	comp=Z,42nm,1.7s						
MA2	Magadan	51.41	320	P	P	19 20 38.5	-0.9
MA2				IAmb	IAmb	19 20 40.8	
	comp=Z,25nm,1.1s						
TAOE	Nuku Hiva Isla	51.95	197	*e*LR	LR	19 34 53.5	
	comp=Z,2µm,27.5s						
TAOE	Nuku Hiva Isla	51.95	197	*e*T	T	20 16 32.4	
	comp=Z,46nm,0.2s						
DAG	Danmarks Havn	53.59	16	*i* P	P	19 20 55.0	-0.3
	comp=Z,24nm,1.1s						
DAG	Danmarks Havn	53.59	16	*i* P	P	19 20 55.0	-0.3
DAG				pmax	pmax		
	comp=Z,24nm,1.1s						
TIXI	Tiksi	55.03	338	P	P	19 21 04.9	-0.9
	comp=Z,7.1nm,0.8s,baz=68,slow=8.2,SNR=39						
TIXI	Tiksi	55.03	338	*d i*P	P	19 21 04.7	-1.1
TIXI				pmax	pmax		
	comp=Z,51nm,2.5s						
TIXI	Tiksi	55.03	338	P	P	19 21 05.1	-0.8
SCO	Scoresbysund	55.82	23	P	P	19 21 11.3	-0.2
SCO				pmax	pmax		
	comp=Z,78nm,1.7s						
SCO	Scoresbysund	55.82	23	P	P	19 21 11.3	-0.2
MTP	Monte Pirata	56.95	95	P	P	19 21 19.2	-1.1
TYV	Tymovskoe	59.24	312	*e*P	P	19 21 35.8	-0.1
TYV				pmax	pmax		
	comp=Z,23nm,1.1s						
TYV				pmax	pmax		
	comp=Z,400nm,4.5s						
SDV	Santo Domingo	59.25	107	P	P	19 21 38.7	+2.0
	comp=Z,4.7nm,0.8s,baz=321,slow=6.5,SNR=5.4						
SDV	Santo Domingo	59.25	107	P	P	19 21 36.6	-0.1
H11N3	WAKE ISLAND Hy	59.50	270	T	T	20 25 57.3	
	baz=56,slow=75						
H11N2	WAKE ISLAND Hy	59.50	270	T	T	20 25 57.5	
	baz=56,slow=75						
ROSC	El Rosal	59.51	113	P	P	19 21 40.7	+2.0
	comp=Z,6.8nm,0.3s,baz=338,slow=10,SNR=3.6						
ROSC	El Rosal	59.51	113	IAmb	IAmb	19 21 56.9	
	comp=Z,33nm,1.4s						
H11N1	WAKE ISLAND Hy	59.52	270	T	T	20 25 58.6	
	baz=56,slow=75						
RUSC	La Rusia	59.61	111	P	P	19 21 38.3	-1.3
YAK	Yakutsk	59.64	328	P	P	19 21 37.8	-0.7
	comp=Z,4.8nm,0.4s,baz=73,slow=4.3,SNR=18						
YAK	Yakutsk	59.64	328	*e*P	P	19 21 37.3	-1.2
YAK				*e**PP	sP	19 21 46.0	-0.7
YAK				*e*		19 22 23.9	
YAK				*e*		19 23 53.8	
YAK				*e*S	S	19 29 46.9	-0.4
YAK				*e**SS	sS	19 30 08.6	+11
YAK				*e*		19 31 23.9	
YAK				*e*SS	SS	19 33 45.2	+3.0
YAK				pmax	pmax		
	comp=Z,23nm,0.9s						
YAK				pmax	pmax		
	comp=E,13nm,1.5s						
YAK				pmax	pmax		
	comp=Z,161nm,4.6s						
YAK				pmax	pmax		
	comp=N,78nm,5.1s						
YAK				pmax	pmax		
	comp=E,102nm,4.9s						
YAK				smax	smax		
	comp=N,159nm,5.3s						
YAK				smax	smax		
	comp=E,106nm,5.3s						
YAK	Yakutsk	59.64	328	P	P	19 21 37.1	-1.4
PMOR	Pomariorio Ree	59.84	204	*e*T	T	20 26 19.1	
	comp=E,10nm,0.3s						
OTAV	Otavalo	60.17	120	P	P	19 21 41.4	-1.9
OTAV				pmax	pmax		
	comp=Z,26nm,1.5s						
OTAV	Otavalo	60.17	120	P	P	19 21 41.4	-1.9
OTAV				IAmb	IAmb	19 21 49.6	
	comp=Z,26nm,1.5s						
H11S1	WAKE ISLAND Hy	60.40	269	T	T	20 27 05.8	
	baz=51,slow=75						

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H11S2 WAKE ISLAND Hy 60.40 269   T      T        20 27 04.8
      baz=51,slow=75
H11S3 WAKE ISLAND Hy 60.41 269   T      T        20 27 22.5
      baz=51,slow=75
YSS   Yuzh-Sakhalins 61.18 309   eP     P        19 21 49.2  -0.1
YSS                              e               19 24 00.0
YSS                              eS     S        19 30 04.3  -3.1
YSS                              ePS    PnS      19 30 28.0  +5.5
YSS                               pmax  pmax
      comp=Z,10.0nm,0.9s
GRNR  Gornyy         62.66 315⇓ iP     P        19 21 58.5  -0.7
GRNR                              pmax  pmax
      comp=Z,5.0nm,1.3s
GRNR                              MLR   MLR
      comp=Z,190nm,17.0s
TIAR  Tiarei         62.69 204   eT     T        20 29 47.2
      comp=Z,7.7nm,0.2s
PPT2  Papeete2       62.79 204   eS     S        19 30 08.2   -20
      comp=Z,2µm,27.8s
PPT2                             eLQ    LQ       19 37 37.7
      comp=Z,2µm,28.5s
PPT2                             eLR    LR       19 39 56.7
      comp=Z,2µm,25.8s
ASAJ  Asahikawa      62.79 306    LR    LR       19 44 12.4
      comp=Z,344nm,21.4s,baz=48,slow=31
ZEA   Zeya           65.52 321   eP     P        19 22 17.1  -0.8
ZEA                               pmax  pmax
      comp=Z,100nm,2.0s
ATAH  Atahualpa      65.90 125    P     P        19 22 23.3  +1.9
      comp=Z,3.6nm,0.5s,baz=284,slow=9.7,SNR=3.4
KLR   Kul'dur        66.01 315    LR    LR       19 48 40.0
      comp=Z,444nm,20.5s,baz=45,slow=34
KLR   Kul'dur        66.01 315  deP     P        19 22 20.5  -0.7
KLR                               pmax  pmax
      comp=Z,23nm,2.3s
NRIK  Noril'sk       66.19 347    P     P        19 22 21.2  -0.7
      comp=Z,16nm,0.8s,baz=38,slow=4.1,SNR=25
NRIK                              LR    LR       19 52 03.8
      comp=Z,498nm,21.0s,baz=42,slow=37
TBI   Tubuai         68.19 202   eLQ    LQ       19 39 35.7
      comp=Z,730nm,27.8s
TBI                              eLR    LR       19 42 27.3
      comp=Z,1µm,28.8s,baz=11
BOD   Bodaibo        68.40 330   eP     P        19 22 34.9  -1.2
BOD                               pmax  pmax
      comp=Z,22nm,1.5s
USA0B Ussuriysk Arra 68.95 311    P     P        19 22 38.6  -1.2
USA0B                             pmax  pmax
      comp=Z,21nm,1.1s
USA0B Ussuriysk Arra 68.95 311    P     P        19 22 38.6  -1.2
USA0B                             IAmb  IAmb     19 22 40.7
      comp=Z,21nm,1.1s
USRK  Ussuriysk Ar.  68.95 311    P     P        19 22 39.8   0.0
      comp=Z,8.0nm,0.8s,baz=66,slow=6.8,SNR=13
USRK  Ussuriysk Ar.  68.95 311    P     P        19 22 38.2  -1.6
USRK  Ussuriysk Ar.  68.95 311    P     P        19 22 38.2  -1.6
LVZ   Lovozero       69.64   7⇑ eP     P        19 22 44.6  +0.9
LVZ                               pmax  pmax
      comp=Z,33nm,1.0s
VLA   Vladivostok    69.68 310⇓ eP     P        19 22 44.4  +0.1
VLA                               pmax  pmax
      comp=Z,59nm,2.1s
MAJO  Matsushiro     69.90 301⇓ eP     P        19 22 46.9  +1.0
MAJO                              pmax  pmax
      comp=Z,43nm,2.8s
MAT   Matsushiro     69.90 301    P     P        19 22 46.7  +0.8
MJAR  Matsushiro Arr 69.90 301    P     P        19 22 45.0  -0.9
      comp=Z,2.0nm,0.7s,baz=22,slow=10.0,SNR=4.6
MJAR  Matsushiro Arr 69.90 301    P     P        19 22 45.0  -0.9
MJAR                              pmax  pmax
      comp=Z,19nm,1.8s
MJAR  Matsushiro Arr 69.90 301    IAmb  IAmb     19 22 46.9
      comp=Z,19nm,1.8s
MDJ   Mudanjiang     70.03 312    P     P        19 22 45.4  -1.1
MDJ                               pmax  pmax
      comp=Z,7.0nm,0.9s
MDJ                               pmax  pmax
      comp=Z,190nm,7.8s
NB2   NORSAR Subarra 71.90  20    P     P        19 22 57.2  -0.4
      comp=Z,7.6nm,1.1s,baz=330,slow=5.9
NOA   NORSAR Array B 71.90  20    P     P        19 22 57.4  -0.2
      comp=Z,5.7nm,1.0s,baz=330,slow=5.9,SNR=7.4
CIT   Chita          72.78 326   eP     P        19 23 01.6  -1.5
CIT                               pmax  pmax
      comp=Z,75nm,2.1s
PTGA  Pitinga        73.53 106    P     P        19 23 07.7  -0.2
PTGA                              IAmb  IAmb     19 23 10.1
      comp=Z,36nm,1.8s
TMCR  Tamitsa        73.61   7   eP     P        19 23 06.9  -0.7
TMCR                              pmax  pmax
      comp=Z,27nm,1.2s
FINES FINESS Array B 74.70  13    P     P        19 23 14.0   0.0
      comp=Z,7.4nm,0.8s,baz=347,slow=7.8,SNR=12
FINES FINESS Array B 74.70  13    P     P        19 23 13.5  -0.5
FINES FINESS Array B 74.70  13    P     P        19 23 13.4  -0.5
KSRS  Korea Array    75.65 308    P     P        19 23 20.2  +0.3
      comp=Z,4.4nm,0.8s,baz=48,slow=4.9,SNR=10
KSRS                              LR    LR       19 52 00.5
      comp=Z,451nm,21.9s,baz=56,slow=32
KSAR  Wonju Array Be 75.68 308    P     P        19 23 18.8  -1.3
KSAR  Wonju Array Be 75.68 308    P     P        19 23 18.8  -1.3
IRK   Irkutsk        76.28 330   eP     P        19 23 22.7  -0.6
IRK                               pmax  pmax
      comp=Z,91nm,2.9s
PRGR  Permogore      76.64   4   eP     P        19 23 23.7  -1.4
PRGR                              pmax  pmax
      comp=Z,47nm,0.9s
JNU   Nakatsue       76.72 303    P     P        19 23 26.2   0.0
      comp=Z,9.1nm,1.0s,baz=51,slow=6.5,SNR=2.5
TLY   Talaya         76.96 330  d iP    P        19 23 27.0  -0.2
TLY                               pmax  pmax
      comp=Z,31nm,1.4s
TLY   Talaya         76.96 330    P     P        19 23 27.0  -0.2
KLMR  Klimovskoe     77.00   7   eP     P        19 23 24.5  -2.6
KLMR                              pmax  pmax
      comp=Z,68nm,1.3s
KLMR  Klimovskoe     77.00   7   eP     P        19 23 24.5  -2.6
KLMR                              AMP            19 23 28.1
      comp=Z,68nm,1.3s
SAML  Samuel         77.10 115    P     P        19 23 27.1  -1.3
SAML                              pmax  pmax
      comp=Z,11nm,1.4s
SAML  Samuel         77.10 115    P     P        19 23 27.1  -1.3
BSEG  Bad Segeberg   77.73  24   eP     P        19 23 32.5  +1.1
      comp=Z,73nm,1.8s,baz=330,slow=5.3
MOY   Mondy          77.93 332   eP     P        19 23 33.3  +0.6
MOY                               pmax  pmax
      comp=Z,53nm,3.9s
ZAK   Zakamensk      78.15 330   eP     P        19 23 33.6  -0.3
ZAK                               pmax  pmax
      comp=Z,9.0nm,1.5s
DL2   Dalian         78.27 312    P     P        19 23 33.6  -1.0
DL2                               S     S        19 33 32.5  +4.2
DL2                               pmax  pmax
      comp=Z,23nm,1.2s
DL2                               pmax  pmax
      comp=Z,180nm,4.7s
DL2                               LR    LR
      comp=Z,380nm,15.8s
DL2                               LR    LR
      comp=Z,320nm,16.9s
DL2                               LR    LR
      comp=Z,540nm,17.1s
IBBN  Ibbenburen     78.30  26   eP     P        19 23 35.8  +1.2
      comp=Z,36nm,1.2s,baz=330,slow=5.3
ULN   Ulaanbaatar    78.67 326   eP     P        19 23 37.2  +0.3
ULN   Ulaanbaatar    78.67 326    P     P        19 23 36.2  -0.8
BUG   Bochum--Univer 78.86  27   eP     P        19 23 38.6  +0.9
      comp=Z,100nm,2.5s,baz=330,slow=5.3
NRDL  Niedersach Rie 78.90  25   eP     P        19 23 38.9  +1.2
      comp=Z,35nm,1.5s,baz=330,slow=5.3
SONM  Songino Array  78.97 327    P     P        19 23 38.4  -0.1
      comp=Z,8.1nm,0.9s,baz=22,slow=2.4,SNR=47
SONM  Songino Array  78.97 327    P     P        19 23 37.8  -0.7
SONM                              pmax  pmax
      comp=Z,12nm,1.0s
SONM  Songino Array  78.97 327    P     P        19 23 37.8  -0.7
LPAZ  La Paz         79.29 123    P     P        19 23 41.8  +0.6
      comp=Z,3.8nm,0.8s,baz=6.2,slow=8.4,SNR=15
LPAZ  La Paz         79.29 123    P     P        19 23 38.4  -2.8
LPAZ  La Paz         79.29 123    P     P        19 23 38.4  -2.8
ASSE  Asse, Remlinge 79.39  25   eP     P        19 23 41.5  +1.1
      comp=Z,131nm,2.1s,baz=330,slow=5.3
CLZ   Clausthal      79.55  25   eP     P        19 23 42.8  +1.4
      comp=Z,84nm,1.9s,baz=330,slow=5.3
AHRW  Bad Neuenahr-A 79.55  28   eP     P        19 23 42.9  +1.4
      comp=Z,28nm,1.4s,baz=330,slow=5.3
GTTG  Gottingen      79.67  26   eP     P        19 23 43.7  +1.6
      comp=Z,30nm,1.6s,baz=330,slow=5.3
CLF   Chambon-Foret  79.83  32    P     P        19 23 43.5  +0.5
PGAV  Gavieira, Arco 79.85  42   eLR    LR       19 50 04.2
      comp=Z,1µm,20.0s
WLF   Walferdange    79.96  29   eP     P        19 23 44.9  +1.2
      comp=Z,73nm,2.0s,baz=330,slow=5.3
TNS   Taunus Mts     80.29  27   eP     P        19 23 46.4  +0.9
      comp=Z,181nm,2.7s,baz=330,slow=5.3
UBBA  Unterbreizbach 80.30  26   eP     P        19 23 46.7  +1.3
      comp=Z,108nm,2.3s,baz=330,slow=5.3
NEUB  Neuenburg      80.54  25   eP     P        19 23 47.6  +0.8
      baz=330,slow=5.3
MNMC  Minye Minye    80.56 126    P     P        19 23 45.6  -1.9
ZAA0  Zalesovo Array 80.70 342    P     P        19 23 47.1  -0.5
ZALV  Zalesovo Beam  80.70 342    P     P        19 23 47.8  +0.1
      comp=Z,7.1nm,0.8s,baz=20,slow=5.3,SNR=28
ZALV  Zalesovo Beam  80.70 342    P     P        19 23 46.6  -1.0
ZALV  Zalesovo Beam  80.70 342    P     P        19 23 46.6  -1.0
PBRG  Braganca       80.72  41   eP     P        19 23 49.5  +1.4
CLL   Collm          80.83  24⇓ iP     P        19 23 49.5  +1.1
      comp=Z,36nm,1.6s
CLL                               L     L        20 00 00.0
      comp=Z,800nm,20.6s
CLL   Collm          80.83  24   eP     P        19 23 50.1  +1.7
      comp=Z,36nm,1.6s,baz=330,slow=5.3
CLL   Collm          80.83  24⇓ iP     P        19 23 49.5  +1.1
CLL                               pmax  pmax
      comp=Z,36nm,1.6s
CLL                               MLR   MLR
      comp=Z,800nm,20.6s
CLL   Collm          80.83  24    P     P        19 23 48.4   0.0
CLL                               IAmb  IAmb     19 23 53.3
      comp=Z,28nm,1.4s
PVIS  Viseu          80.97  42   eP     P        19 23 51.6  +2.2
      comp=Z,18nm,1.7s
MOX   Moxa           80.97  25   eP     P        19 23 49.9  +0.8
      comp=Z,36nm,1.7s,baz=330,slow=5.3
MOX                              eL     L        20 00 26.9
      comp=Z,766nm,20.5s
PB11  IPOC Station P 81.00 127    P     P        19 23 48.0  -1.8
PB11                              IAmb  IAmb     19 23 52.2
      comp=Z,29nm,1.1s
MVO   Moncorvo       81.07  41   eP     P        19 23 51.7  +1.8
MVO   Moncorvo       81.07  41   eSKS   SKSac    19 34 10.2  +2.6
MVO   Moncorvo       81.07  41   eLR    LR       19 50 37.2
      comp=Z,1µm,20.0s
SUW   Suwalki        81.08  17   ePKP   P        19 23 49.5  -0.1
SUW   Suwalki        81.08  17    P     P        19 23 49.2  -0.4
SUW                               pmax  pmax
      comp=Z,47nm,0.9s
SUW   Suwalki        81.08  17    P     P        19 23 49.2  -0.4
PCAS  Casmilo, Conde 81.16  43   eP     P        19 23 52.3  +1.9
      comp=Z,26nm,1.5s
GO01  Chusmiza       81.21 126    P     P        19 23 47.2  -4.1
GO01                              IAmb  IAmb     19 24 24.1
      comp=Z,39nm,2.0s
FBE   Freiberg       81.28  24   eP     P        19 23 51.8  +1.1
      comp=Z,34nm,1.6s,baz=330,slow=5.3
PLN   Plauen         81.29  25   eP     P        19 23 51.4  +0.6
      comp=Z,21nm,1.4s,baz=330,slow=5.3
MTE   Manteigas      81.39  42   eP     P        19 23 53.1  +1.5
MTE   Manteigas      81.39  42   eSKS   SKSac    19 34 07.2  -2.6
MTE   Manteigas      81.39  42   eLR    LR       19 50 44.3
      comp=Z,1µm,20.0s
SVE   Sverdlovsk     81.43 356⇓ eP     P        19 23 51.0  -0.4
SVE                               pmax  pmax
      comp=Z,31nm,1.3s
TANN  Tannenbergstha 81.44  25   eP     P        19 23 52.4  +0.6
      comp=Z,55nm,1.9s,baz=330,slow=5.3
BRG   Berggiesshubel 81.50  24   i P    P        19 23 52.9  +1.0
      comp=Z,30nm,1.3s
BRG   Berggiesshubel 81.50  24   eP     P        19 23 52.8  +0.9
      comp=Z,30nm,1.3s,baz=330,slow=5.3
BRG   Berggiesshubel 81.50  24   i P    P        19 23 52.9  +1.0
BRG                               pmax  pmax
      comp=Z,30nm,1.3s
BRG                               MLR   MLR
      comp=N,710nm,17.4s
BRG                               MLR   MLR
      comp=E,509nm,15.3s
BRG                               MLR   MLR
      comp=Z,1µm,21.1s
ECH   Echery         81.53  29    P     P        19 23 52.0  -0.2
ECH                               pmax  pmax
      comp=Z,13nm,1.3s
ECH   Echery         81.53  29    P     P        19 23 52.0  -0.2
PMOZ  Porto Moniz, M 81.57  53   eLR    LR       19 50 44.5
      comp=Z,849nm,18.0s
PMAFR Mafra          81.58  44   eSKS   SKSac    19 34 12.7  +1.7
NKC   Novy Kostel    81.60  25   eP     P        19 23 54.0  +1.5
NKC   Novy Kostel    81.60  25   eP     P        19 23 54.0  +1.5
GRA1  Grafenberg Arr 81.67  26    P     P        19 23 53.4  +0.5
GRF   Grafenberg Arr 81.67  26   eP     P        19 23 54.1  +1.2
      comp=Z,225nm,2.9s,baz=330,slow=5.3
GRF                              eL     L        20 01 48.7
      comp=Z,724nm,19.0s
GRF   Grafenberg Arr 81.67  26    P     P        19 23 53.4  +0.5
GRF                               pmax  pmax
      comp=Z,14nm,1.0s
MANZ  Manzenberg     81.70  25   eP     P        19 23 53.7  +0.7
      comp=Z,22nm,1.8s,baz=330,slow=5.3
PCBR  Castelo Branco 81.84  43   eP     P        19 23 55.0  +1.1
      comp=Z,16nm,1.8s
BFO   Black Forest   81.86  28   eP     P        19 23 54.7  +0.8
      comp=Z,23nm,1.3s,baz=330,slow=5.3
BFO   Black Forest   81.86  28    P     P        19 23 53.0  -0.9
BFO                               pmax  pmax
      comp=Z,21nm,1.3s
BFO   Black Forest   81.86  28    P     P        19 23 53.0  -0.9
BFO                               IAmb  IAmb     19 23 55.9
      comp=Z,21nm,1.3s
ARU   Arti           81.92 357  d iP    P        19 23 52.9  -1.2
ARU                               S     S        19 34 05.3  -1.0
ARU                               pmax  pmax
      comp=Z,24nm,1.1s
ARU   Arti           81.92 357    P     P        19 23 53.1  -0.9
ARU                               IAmb  IAmb     19 23 56.0
      comp=Z,21nm,1.0s
ROTZ  Rotzenmuhle    81.93  25   eP     P        19 23 55.1  +0.8
      comp=Z,37nm,1.9s,baz=330,slow=5.3
PVCC  Panska Ves     81.99  24   eP     P        19 23 55.5  +1.0
PVCC  Panska Ves     81.99  24   eP     P        19 23 55.5  +1.0
PMTG  Montargil      82.04  44   eP     P        19 23 55.6  +0.6
      comp=Z,16nm,1.8s
HHC   Hu-ho-hao-te   82.08 319   eP     P        19 23 55.6  +0.2
HHC                               sP    pP       19 24 01.8  +0.1
HHC                               S     S        19 34 09.8  +1.1
HHC                               sS    SKKSac   19 34 19.0  +1.1
HHC                               pmax  pmax
      comp=Z,91nm,1.2s
HHC                               pmax  pmax
      comp=Z,320nm,6.9s
HHC                               LR    LR
      comp=Z,610nm,17.2s
HHC                               LR    LR
      comp=Z,730nm,17.0s
HHC                               LR    LR
      comp=Z,700nm,17.8s
PMRV  Marv??o        82.20  43   eP     P        19 23 57.3  +1.5
      comp=Z,22nm,2.1s
PMRV  Marv??o        82.20  43   eSKS   SKSac    19 34 17.2  +2.0
PMRV  Marv??o        82.20  43   eLR    LR       19 50 43.5
      comp=Z,974nm,22.0s
KSP   Ksiaz          82.22  23   ePKP   P        19 23 57.2  +1.5
KSP   Ksiaz          82.22  23   eP     P        19 23 57.2  +1.5
OBN   Obninsk        82.33   9   eP     P        19 23 56.0  -0.2
OBN                              i               19 24 00.9
OBN                              ePPP   PPP      19 28 52.5
OBN                               pmax  pmax
      comp=Z,52nm,1.3s
OBN   Obninsk        82.33   9    P     P        19 23 54.4  -1.8
PRU   Pruhonice      82.46  24   eP     P        19 23 58.0  +1.0
PRU   Pruhonice      82.46  24   eP     P        19 23 58.0  +1.0
PNCL  Nicolau / Gran 82.60  44   eP     P        19 23 59.8  +1.9
      comp=Z,28nm,2.0s
DPC   Dobruska-Polom 82.66  23   eP     P        19 23 58.9  +0.8
DPC                              ex     x        19 24 09.3
DPC   Dobruska-Polom 82.66  23   eP     P        19 23 58.9  +0.8
DPC                              e               19 24 09.3
WET   Wettzell       82.69  25   eP     P        19 23 59.3  +1.1
      comp=Z,42nm,2.3s,baz=330,slow=5.3
KHC   Kasperske Hory 82.92  25   eP     P        19 24 00.1  +0.6
KHC   Kasperske Hory 82.92  25⇑ eP     P        19 23 59.3  -0.2
KHC                               pmax  pmax
      comp=Z,38nm,1.6s
KHC   Kasperske Hory 82.92  25    P     P        19 23 59.1  -0.4
FUR   Furstenfeldbru 83.01  27   eP     P        19 24 01.1  +1.2
      comp=Z,112nm,2.0s,baz=330,slow=5.3
UBR   Ueberruh       83.03  28   eP     P        19 24 01.6  +1.5
      comp=Z,88nm,2.2s,baz=330,slow=5.3
KRLC  Kraliky        83.04  23   eP     P        19 24 00.7  +0.6
KRLC                             ex     x        19 24 11.4
KRLC  Kraliky        83.04  23   eP     P        19 24 00.7  +0.6
KRLC                             e               19 24 11.4
SENIN Lac Senin/Sane 83.14  30    P     P        19 23 59.3  -1.6
GEC2  GERESS Array S 83.21  25   eP     P        19 24 01.7  +0.6
      comp=Z,50nm,1.9s,baz=330,slow=5.3
GEC2  GERESS Array S 83.21  25    P     P        19 24 01.6  +0.5
GEC2                              IAmb  IAmb     19 24 02.9
      comp=Z,20nm,1.4s
GERES GERESS Array B 83.21  25    P     P        19 24 00.8  -0.2
      comp=Z,4.1nm,1.0s,baz=345,slow=4.1,SNR=19
GERES GERESS Array B 83.21  25    P     P        19 24 00.3  -0.7
GERES GERESS Array B 83.21  25    P     P        19 24 00.3  -0.7
DAVA  Damuels        83.29  28   i PcP  P        19 24 03.1  +1.6
      comp=Z,13nm,1.1s,SNR=5.0
RETA  Reutte         83.42  27   i pP   P        19 24 03.6  +1.4
      comp=Z,12nm,1.7s
MORC  Moravsky Berou 83.53  22   ⇑P     P        19 24 02.0  -0.6
MORC  Moravsky Berou 83.53  22    P     P        19 24 02.3  -0.3
MORC                              pmax  pmax
      comp=Z,31nm,1.6s
MORC  Moravsky Berou 83.53  22   eP     P        19 24 03.3  +0.7
MORC  Moravsky Berou 83.53  22    P     P        19 24 02.3  -0.3
MORC                              IAmb  IAmb     19 24 07.0
      comp=Z,31nm,1.6s
PVAQ  Vaqueiros      83.56  44   eS     SKSac    19 34 27.4  +3.2
PVAQ  Vaqueiros      83.56  44   eLR    LR       19 51 41.5
      comp=Z,660nm,20.0s
SIV   San Ignacio    83.61 118    P     P        19 24 03.5  +0.1
      baz=319,slow=5.3
SIV                               LR    LR       20 03 20.5
      comp=Z,227nm,21.0s,baz=352,slow=37
PAB   San Pablo      83.62  41    P     P        19 24 01.4  -1.9
PAB                               pmax  pmax
      comp=Z,28nm,1.5s
PAB   San Pablo      83.62  41    P     P        19 24 01.4  -1.9
PAB                               IAmb  IAmb     19 24 05.1
      comp=Z,28nm,1.5s
OKC   Ostrava-Krasne 83.64  22   eP     P        19 24 03.4  +0.3
OKC   Ostrava-Krasne 83.64  22   eP     P        19 24 03.4  +0.3
MOTA  Moosalm        83.67  27   i pP   P        19 24 04.7  +1.2
      comp=Z,24nm,2.0s
VRAC  Vranov         83.67  23   ⇑P     P        19 24 04.4  +1.1
VRAC  Vranov         83.67  23   ⇑P     P        19 24 04.4  +1.1
VRAC  Vranov         83.67  23   eP     P        19 24 04.2  +0.9
ESBB  Sonseca Array  83.71  41    P     P        19 24 03.2  -0.5
ESDC  Sonseca Array  83.71  41    P     P        19 24 03.9  +0.2
      comp=Z,4.0nm,0.8s,baz=306,slow=4.8,SNR=12
ESDC  Sonseca Array  83.71  41    IAmb  IAmb     19 24 05.6
      comp=Z,7.2nm,1.1s
OJC   Ojcow          83.74  21   ePKP   P        19 24 04.4  +0.8
OJC   Ojcow          83.74  21    P     P        19 24 02.2  -1.5
OJC                               pmax  pmax
      comp=Z,49nm,1.4s
OJC   Ojcow          83.74  21    P     P        19 24 02.1  -1.5
SQTA  Sankt Quirin   83.81  27   i PcP  P        19 24 05.5  +1.4
      comp=Z,23nm,1.3s,SNR=9.9
FETA  Feichten       83.82  28   i PcP  P        19 24 06.0  +1.7
      comp=Z,12nm,1.2s
WATA  Walderalm      83.83  27   ePcP   P        19 24 06.0  +1.6
      comp=Z,31nm,1.5s,SNR=5.8
KRUC  Moravsky       83.84  23   eP     P        19 24 04.5  +0.4
RJOB  Jochberg       83.89  26   eP     P        19 24 05.5  +1.0
      comp=Z,24nm,1.7s,baz=330,slow=5.3
WTTA  Wattenberg     83.92  27   i PcP  P        19 24 06.2  +1.4
      comp=Z,28nm,1.2s,SNR=6.5
HNR   Honiara        83.94 252    LR    LR       19 55 46.4
      comp=Z,1µm,19.6s,baz=73,slow=32
BNI   Bardonecchia   84.01  31    P     P        19 24 04.4  -0.9
BNI                               pmax  pmax
      comp=Z,25nm,1.4s
BNI   Bardonecchia   84.01  31    P     P        19 24 04.4  -0.9
BNI                               IAmb  IAmb     19 24 08.3
      comp=Z,25nm,1.4s
BRVK  Borovoye       84.25 350  deP     P        19 24 06.0  -0.2
BRVK                              pmax  pmax
      comp=Z,33nm,0.9s
BRVK  Borovoye       84.25 350    P     P        19 24 05.0  -1.1
MOA   Molln          84.26  25   i pP   P        19 24 07.1  +0.7
      comp=Z,18nm,1.5s,SNR=7.1
JAVC  Velka Javorina 84.39  23   eP     P        19 24 08.9  +1.9
NIE   Niedzica       84.61  21   ePKP   P        19 24 09.1  +1.0
NIE   Niedzica       84.61  21   eP     P        19 24 09.1  +1.0
LANS  Liptovska Anna 84.63  21   eP     P        19 24 09.7  +1.5
LANS                              pmax  pmax
      comp=Z,13nm,1.2s
LANS  Liptovska Anna 84.63  21   eP     P        19 24 09.7  +1.5
SMOL  Smolenice      84.63  23   eP     P        19 24 09.1  +0.9
SMOL                              pmax  pmax
      comp=Z,19nm,1.4s
SMOL  Smolenice      84.63  23   eP     P        19 24 09.1  +0.9
KBA   Koelnbreinsper 84.65  26   i PcP  P        19 24 09.6  +1.1
      comp=Z,20nm,1.1s,SNR=8.8
ABTA  Abfaltersbach  84.66  27   i pP   P        19 24 09.4  +0.9
      comp=Z,22nm,1.4s,SNR=11
CONA  Conrad Observa 84.69  24   i PcP  P        19 24 09.7  +1.1
      comp=Z,23nm,1.2s,SNR=13
MODS  Modra-Piesok   84.71  23   eP     P        19 24 08.7  +0.1
MODS                              pmax  pmax
      comp=Z,60nm,1.3s
MODS  Modra-Piesok   84.71  23   eP     P        19 24 08.7  +0.1
NJ2   Nanjing        84.75 309   eP     P        19 24 08.0  -1.0
NJ2                               pmax  pmax
      comp=Z,10.0nm,0.5s
CTI   Castel Tesino  84.98  28    P     P        19 24 09.1  -1.0
CTI                               pmax  pmax
      comp=Z,34nm,1.6s
CTI   Castel Tesino  84.98  28    P     P        19 24 09.1  -1.0
CTI                               IAmb  IAmb     19 24 11.7
      comp=Z,34nm,1.6s
VYHS  Vyhne          85.05  22   eP     P        19 24 10.7  +0.4
VYHS                              pmax  pmax
      comp=Z,34nm,1.7s
VYHS  Vyhne          85.05  22   eP     P        19 24 10.7  +0.4
LPSR  Galich'ya Gora 85.08   9   eP     P        19 24 10.0  -0.3
LPSR                              pmax  pmax
      comp=Z,30nm,1.4s
KURK  Kurchatov      85.09 344  d iP    P        19 24 10.0  -0.4
KURK                              pmax  pmax
      comp=Z,28nm,1.1s
KURK  Kurchatov      85.09 344    P     P        19 24 09.5  -1.0
MYKA  Terra Mystica  85.14  26   ePcP   P        19 24 11.4  +0.5
      comp=Z,7.8nm,1.1s
STAL  STALIGIAL      85.15  27    P     P        19 24 10.3  -0.5
STAL                              IAmb  IAmb     19 24 12.0
      comp=Z,40nm,1.9s
LVV   L'vov          85.17  18   eP     P        19 24 11.6  +0.7
ARSA  Arzberg        85.19  25   i pP   P        19 24 12.3  +1.2
      comp=Z,17nm,1.1s,SNR=7.7
AKASG Malin Array Be 85.45  15    P     P        19 24 11.4  -0.8
      comp=Z,12nm,0.9s,baz=348,slow=4.3,SNR=43
AKASG Malin Array Be 85.45  15   i P    P        19 24 11.3  -0.9
AKASG                             pmax  pmax
      comp=Z,13nm,0.9s
AKASG Malin Array Be 85.45  15    P     P        19 24 11.2  -0.9
AKBB  Malin Array Si 85.45  15    P     P        19 24 11.2  -1.0
AKBB                              pmax  pmax
      comp=Z,27nm,1.2s
AKBB  Malin Array Si 85.45  15    P     P        19 24 11.2  -1.0
AKBB                              IAmb  IAmb     19 24 12.9
      comp=Z,26nm,1.1s
OBKA  Obir           85.54  26   i PcP  P        19 24 13.4  +0.5
      comp=Z,27nm,1.2s,SNR=12
SOKA  Soboth         85.55  25   i PcP  P        19 24 13.5  +0.6
      comp=Z,27nm,1.3s,SNR=16
KOLS  Kolonicke sedl 85.56  20   eP     P        19 24 13.4  +0.5
KOLS  Kolonicke sedl 85.56  20   eP     P        19 24 13.4  +0.5
TEOL  Teolo          85.58  28    P     P        19 24 12.3  -0.7
PRMA  PARMA          85.61  29    P     P        19 24 13.6  +0.5
MSSA  Maissana       85.71  30    P     P        19 24 13.6  -0.1
MSSA                              IAmb  IAmb     19 24 15.0
      comp=Z,28nm,1.4s
UZH   Uzhgorod       85.85  20   eP     P        19 24 09.4  -4.8
UZH                              i               19 24 11.7
PSZ   Piszkesteto    85.87  22   ⇑P     P        19 24 15.8  +1.3
PSZ   Piszkesteto    85.87  22   ⇑P     P        19 24 15.8  +1.3
PSZ   Piszkesteto    85.87  22    P     P        19 24 14.3  -0.1
```

VSR	**Storozhevoye**	**86.47**	**9**	*e*P	**P**	**19 24 16.5**	**-0.8**
VSR				pmax	pmax		
	comp=Z,30nm,1.1s						
VRH	**Novokhopyorsk**	**86.75**	**7**	*e*P	**P**	**19 24 17.3**	**-1.3**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BUR08	**Bucovina Ar. S**	**87.48**	**18**	P	**P**	**19 24 22.3**	**-0.2**
BURAR	**Bucovina Array**	**87.51**	**18**	⇑P	**P**	**19 24 22.0**	**-0.5**
BURAR	**Bucovina Array**	**87.51**	**18**	⇑P	**P**	**19 24 22.0**	**-0.5**
BURAR	**Bucovina Array**	**87.51**	**18**	P	**P**	**19 24 21.1**	**-1.5**
DRGR		**87.66**	**20**	⇓P	**P**	**19 24 21.4**	**-1.8**
DRGR		**87.66**	**20**	⇓P	**P**	**19 24 21.5**	**-1.8**
SORM	**Soroca**	**87.72**	**16**	⇑P	**P**	**19 24 22.8**	**-0.6**
SORM	**Soroca**	**87.72**	**16**	⇑P	**P**	**19 24 22.8**	**-0.6**
SIRR	**Siria**	**87.86**	**21**	⇑P	**P**	**19 24 23.4**	**-0.8**
MK31	**Makanchi Array**	**87.94**	**340**	*i* P	**P**	**19 24 22.9**	**-1.6**
MK31	**Makanchi Array**	**87.94**	**340**	P	**P**	**19 24 22.5**	**-2.1**
MK31				IAmb	IAmb	19 24 25.2	
	comp=Z,23nm,1.9s						
MKAR	**Makanchi Array**	**87.94**	**340**	P	**P**	**19 24 22.8**	**-1.7**
	comp=Z,2.6nm,0.9s,baz=16,slow=3.9,SNR=16						
MKAR	**Makanchi Array**	**87.94**	**340**	*i* P	**P**	**19 24 24.1**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MAKZ	**Makanchi**	**88.01**	**341**	P	**P**	**19 24 23.2**	**-1.6**
MAKZ				pmax	pmax		
	comp=Z,15nm,0.9s						
MAKZ	**Makanchi**	**88.01**	**341**	P	**P**	**19 24 23.2**	**-1.6**
MAKZ				IAmb	IAmb	19 24 26.6	
	comp=Z,15nm,0.9s						
LATE	**Laterza**	**88.02**	**29**	P	**P**	**19 24 24.9**	**-0.1**
WHN	**Wuhan**	**88.45**	**311**	⇑P	**P**	**19 24 27.3**	**+0.1**
BZS	**Buzias**	**88.45**	**21**	⇓P	**P**	**19 24 25.1**	**-1.8**
BZS	**Buzias**	**88.45**	**21**	⇓P	**P**	**19 24 25.1**	**-1.8**
DZM	**Mont Dzumac**	**88.50**	**238**	*e*LR	LR	19 51 54.7	
	comp=Z,2µm,23.2s						
DZM	**Mont Dzumac**	**88.50**	**238**	P	**P**	**19 24 28.6**	**+1.1**
	comp=Z,14nm,0.9s,baz=287,slow=20,SNR=2.5						
GTA	**Gaotai**	**88.59**	**326**	⇑P	**P**	**19 24 27.3**	**-0.6**
GTA				pP	pP	19 24 33.9	-0.4
GTA				sP	sP	19 24 36.4	-0.2
GTA				pmax	pmax		
	comp=Z,8.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,250nm,5.9s						
GTA				LR	LR		
	comp=Z,660nm,19.7s						
GTA				LR	LR		
	comp=Z,600nm,21.3s						
GTA				LR	LR		
	comp=Z,1µm,20.6s						
XAN	**Xi'an**	**88.69**	**317**	P	**P**	**19 24 28.0**	**-0.3**
XAN				pmax	pmax		
	comp=Z,19nm,1.2s						
XAN				pmax	pmax		
	comp=Z,310nm,4.3s						
XAN				LR	LR		
	comp=Z,340nm,23.5s						
XAN				LR	LR		
	comp=Z,560nm,19.3s						
XAN				LR	LR		
	comp=Z,620nm,23.5s						
XAN	**Xi'an**	**88.69**	**317**	P	**P**	**19 24 25.9**	**-2.5**
XAN				pmax	pmax		
	comp=Z,19nm,1.0s						
XAN	**Xi'an**	**88.69**	**317**	P	**P**	**19 24 25.9**	**-2.5**
XAN				IAmb	IAmb	19 24 29.1	
	comp=Z,19nm,1.0s						
TESR	**Tescani**	**88.88**	**18**	⇑P	**P**	**19 24 29.8**	**+0.8**
GZR	**Gura Zlata**	**88.97**	**21**	⇑P	**P**	**19 24 29.6**	**+0.1**
GZR	**Gura Zlata**	**88.97**	**21**	⇑P	**P**	**19 24 29.6**	**+0.1**
MILM	**Milestii Mici**	**88.97**	**16**	⇑P	**P**	**19 24 29.9**	**+0.6**
AB31	**Akbulak array**	**89.02**	**355**	*i* P	**P**	**19 24 29.6**	**+0.1**
ABKAR	**Akbulak array**	**89.02**	**355**	P	**P**	**19 24 29.1**	**-0.4**
ABKAR	**Akbulak array**	**89.02**	**355**	P	**P**	**19 24 29.5**	**0.0**
ABKAR				IAmb	IAmb	19 24 32.4	
	comp=Z,25nm,0.9s						
WMQ	**Urumqi**	**89.17**	**336**	*e*P	**P**	**19 24 32.3**	**+1.9**
WMQ				sP	pwP	19 24 39.9	-0.4
WMQ				pmax	pmax		
	comp=Z,21nm,1.1s						
WMQ				LR	LR		
	comp=Z,470nm,23.7s						
WMQ				LR	LR		
	comp=Z,450nm,23.7s						
WMQ				LR	LR		
	comp=Z,630nm,23.7s						
HERR	**Herculane**	**89.35**	**21**	⇑P	**P**	**19 24 31.4**	**+0.3**
PLOR	**Plostina**	**89.51**	**18**	⇑P	**P**	**19 24 31.0**	**-0.9**
PLOR	**Plostina**	**89.51**	**18**	⇑P	**P**	**19 24 31.0**	**-0.9**
VRI	**Vrincioaia**	**89.51**	**18**	⇑P	**P**	**19 24 31.8**	**-0.1**
VRI	**Vrincioaia**	**89.51**	**18**	⇑P	**P**	**19 24 31.8**	**-0.1**
VOIR		**89.51**	**19**	⇑P	**P**	**19 24 29.2**	**-2.8**
VOIR		**89.51**	**19**	⇑P	**P**	**19 24 29.2**	**-2.8**
LZH	**Lanzhou**	**89.55**	**321**	⇑P	**P**	**19 24 33.3**	**+0.8**
LZH				pP	pP	19 24 36.5	-2.3
LZH				sP	sP	19 24 38.5	-2.7
LZH				PP	**PP**	**19 28 06.1**	**+2.8**
LZH				pmax	pmax		
	comp=Z,38nm,1.5s						
LZH				pmax	pmax		
	comp=Z,200nm,7.1s						
LZH				LR	LR		
	comp=Z,730nm,17.4s						
LZH				LR	LR		
	comp=Z,550nm,17.6s						
LZH				LR	LR		
	comp=Z,700nm,19.5s						
CFR	**Carcaliu**	**90.48**	**17**	⇑P	**P**	**19 24 36.1**	**-0.3**
CFR	**Carcaliu**	**90.48**	**17**	⇑P	**P**	**19 24 36.1**	**-0.3**
TIP	**Timpagrande**	**92.81**	**27**	⇑P	**P**	**19 24 46.9**	**-0.5**
TIP	**Timpagrande**	**92.81**	**27**	P	**P**	**19 24 46.7**	**-0.7**
TIP				IAmb	IAmb	19 24 48.1	
	comp=Z,14nm,1.4s						
FNA	**Florina**	**92.83**	**24**	P	**P**	**19 24 46.5**	**-1.0**
FNA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
FNA	**Florina**	**92.83**	**24**	P	**P**	**19 24 46.5**	**-1.0**
PRZ	**Przheval'sk**	**92.94**	**342**	P	**P**	**19 24 48.1**	**-0.1**
PRZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PRZ	**Przheval'sk**	**92.94**	**342**	P	**P**	**19 24 48.1**	**-0.1**
PRZ				IAmb	IAmb	19 24 54.6	
	comp=Z,6.4nm,1.0s						
KDJ	**Kajisay**	**93.56**	**342**	P	**P**	**19 24 50.3**	**-0.7**
KDJ				pmax	pmax		
	comp=Z,21nm,1.6s						
KDJ	**Kajisay**	**93.56**	**342**	P	**P**	**19 24 50.3**	**-0.7**
AAK	**Ala-Archa**	**93.65**	**344**	⇑*e*P	**P**	**19 24 51.5**	**+0.1**
AAK				pmax	pmax		
	comp=Z,10.0nm,2.3s						
AAK	**Ala-Archa**	**93.65**	**344**	P	**P**	**19 24 50.4**	**-1.0**
CD2	**Chengdu**	**93.80**	**318**	P	**P**	**19 24 51.3**	**-0.8**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KK31	**Karatay Array**	**93.93**	**347**	P	**P**	**19 24 50.7**	**-1.7**
KK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KK31	**Karatay Array**	**93.93**	**347**	P	**P**	**19 24 50.7**	**-1.7**
KKAR	**Karatay Array**	**93.93**	**347**	P	**P**	**19 24 51.7**	**-0.8**
KKAR						19 24 51.9	
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KKAR	**Karatay Array**	**93.93**	**347**	P	**P**	**19 24 51.7**	**-0.8**
KKAR	**Karatay Array**	**93.93**	**347**	P	**P**	**19 24 51.9**	**-0.5**
KKAR				IAmb	IAmb	19 24 54.1	
	comp=Z,3.6nm,0.9s						
KIV	**Kislovodsk**	**94.02**	**7**	*e*P	**P**	**19 24 53.4**	**+0.5**
KIV				pmax	pmax		
	comp=Z,29nm,1.0s						
KIV				MLR	MLR		
	comp=Z,505nm,20.0s						
NRN	**Naryn**	**94.49**	**343**	P	**P**	**19 24 54.6**	**-0.8**
NRN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
NRN	**Naryn**	**94.49**	**343**	P	**P**	**19 24 54.6**	**-0.8**
KSH	**Kashi**	**96.33**	**342**	P	**P**	**19 25 05.3**	**+1.7**
KSH				pP	pP	19 25 09.5	-0.5
KSH				PP	**PP**	**19 29 00.1**	**+4.1**
KSH				SKS	**SKSac**	**19 35 38.3**	**-0.8**
KSH				S	**S**	**19 36 20.3**	**-2.1**
KSH				sS	pS	19 36 28.6	-1.9
KSH				pmax	pmax		
	comp=Z,11nm,0.5s						
KSH				LR	LR		
	comp=Z,390nm,9.6s						
KSH				LR	LR		
	comp=Z,720nm,15.0s						
KSH				LR	LR		
	comp=Z,800nm,10.9s						
BRTR	**Keskin Array B**	**96.86**	**15**	P	**P**	**19 25 06.5**	**+0.4**
	comp=Z,1.9nm,0.9s,baz=252,slow=2.3,SNR=6.2						
GNI	**Garni**	**97.98**	**6**	LR	LR	20 11 47.0	
	comp=Z,225nm,21.7s,baz=5.0,slow=37						
KMI	**Kunming**	**99.03**	**316**	P	**Pdif**	**19 25 16.0**	**-0.2**
KMI				pP	pP	19 25 18.8	-3.7
KMI				sP	sP	19 25 21.1	-3.8
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**106.49**	**315**	PKiKP	**PKiKP**	**19 30 00.6**	**+0.6**
	comp=Z,1.2nm,0.9s,baz=336,slow=2.3,SNR=7.1						
CMAR				PKKPab	**PKKPab**	**19 41 36.9**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=331,slow=3.2,SNR=4.2						
ASAR	**Alice Springs**	**111.99**	**257**	PKKPab	PKKPab	19 41 12.0	+2.2
	comp=Z,0.7nm,0.9s,baz=228,slow=4.0,SNR=5.5						
ASAR				PKKP		19 41 17.6	
	comp=Z,0.6nm,0.8s,baz=220,slow=4.6,SNR=4.1						
PSI	**Prapat**	**119.14**	**305**	PKP	**PKPdf**	**19 30 23.2**	**-1.2**
	comp=Z,3.6nm,0.7s,baz=214,slow=3.6,SNR=4.8						
RPSI	**Rantau Prapat**	**119.22**	**305**		**PKPdf**	**19 30 23.2**	**-1.1**
VNDA	**Vanda**	**126.67**	**195**	PKP	**PKiKP**	**19 30 37.8**	**+0.6**
	comp=Z,2.5nm,0.9s,baz=97,slow=3.3,SNR=5.8						
VNDA	**Vanda**	**126.67**	**195**	PKIKP	**PKiKP**	**19 30 37.6**	**+0.4**
VNDA	**Vanda**	**126.67**	**195**		**PKiKP**	**19 30 37.6**	**+0.4**
QSPA	**South Pole Qui**	**131.71**	**180**	PKP	**PKiKP**	**19 30 47.7**	**+0.1**
	comp=Z,5.6nm,1.0s,baz=71,slow=2.8,SNR=5.9						
QSPA	**South Pole Qui**	**131.71**	**180**		**PKPdf**	**19 30 46.4**	**-0.2**
KMBO	**Kilima Mbogo**	**136.98**	**24**	PKP	**PKiKP**	**19 30 59.6**	**-0.6**
	comp=Z,1.2nm,0.3s,baz=262,slow=3.7,SNR=6.6						
TSUM	**Tsumeb**	**142.38**	**64**		**PKPdf**	**19 31 08.7**	**+0.8**
NVL	**N'lazarevskaya**	**144.48**	**158**	*e*PKIKP	PKPbc	19 31 08.7	+0.3
NVL				*e*PPP	PPP	19 37 40.0	
NVL				*e*		19 38 15.0	
LBTB	**Lobatse**	**151.73**	**62**	PKIKP	**PKPbc**	**19 31 29.7**	**+0.1**
LBTB	**Lobatse**	**151.73**	**62**		**PKPbc**	**19 31 29.6**	**+0.1**
BOSA	**Boshof**	**153.84**	**68**	PKPbc	**PKiKP**	**19 31 35.0**	**+0.8**
	comp=Z,8.9nm,0.9s,baz=22,slow=4.5,SNR=8.3						
BOSA	**Boshof**	**153.84**	**68**	PKIKP	**PKiKP**	**19 31 35.2**	**+0.9**
BOSA	**Boshof**	**153.84**	**68**		**PKiKP**	**19 31 35.2**	**+0.9**

ANF ***13*** *19:13:12.6±1.9,41°.79N×127°.17W,h0^{km},ML4.7/2,Error ellipse: s-maj=20.4km s-min=14.4km az=86.0*

NEIC ***13*** *19:13:16.6±2.1,41°.85N±0°.06×126°.9W±0°.1,h10^{km}±4^{km}, mb4.6/36,Error ellipse: s-maj=13.4km s-min=6.1km az=62.0*

IDC ***13*** *19:13:16.6±1.1,42°.05N×126°.84W,h0^{km},mb4.1/16, mb1 4.3/19,mb1mx4.1/61,mbtmp4.1/19,ML3.3/3,Error ellipse: s-maj=30.2km s-min=10.4km az=28.0*

ISC 13 19:13:16.8±0.6,**41°.87N**±0°.07×**126°.95W**±0°.07,**h10**^{km}, **n124,**σ**1§31**/119,**mb4.5**/31,**Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBO	**Bosley Butte**	**2.06**	**79**	Pn	**Pn**	**19 13 49.6**	**-2.0**
KEBM	**Edson Butte**	**2.19**	**62**	Pn	**Pn**	**19 13 51.9**	**-1.3**
KRMB	**Red Mountain**	**2.31**	**98**	Pn	**Pn**	**19 13 53.0**	**-1.9**
JCC	**Jacoby Creek,**	**2.44**	**115**	Pn	**Pn**	**19 13 54.1**	**-2.5**
L02E	**Cave Junction**	**2.51**	**82**	P	**Pn**	**19 13 56.2**	**-1.5**
	baz=264,SNR=23						
K02D	**Willamette Mer**	**2.58**	**70**	P	**Pn**	**19 13 57.3**	**-1.3**
	baz=252						
J01E	**Myrtle Point**	**2.58**	**59**	P	**Pn**	**19 13 57.5**	**-1.1**
	baz=240,SNR=19						
KHMM	**Horse Mountain**	**2.62**	**111**	Pn	**Pn**	**19 13 57.8**	**-1.4**
KMRM	**Mail Ridge**	**2.95**	**123**	Pn	**Pn**	**19 14 03.3**	**-0.5**
HUMO	**Hull Mountain**	**3.06**	**75**	Pn	**Pn**	**19 14 04.0**	**-1.1**
M02C	**Callahan**	**3.11**	**97**	P	**Pn**	**19 14 05.3**	**-0.6**
	baz=280,SNR=30						
YBH	**Yreka Blue Hor**	**3.17**	**91**	Pn	**Pn**	**19 14 06.8**	**-0.1**
	8.9nm,0.3s,baz=282,slow=14,SNR=6.2						
YBH				Sn	**Sn**	**19 14 43.8**	**-1.0**
	1.8nm,0.3s,baz=129,slow=16,SNR=1.4						
YBH	**Yreka Blue Hor**	**3.17**	**91**		**Pn**	**19 14 06.6**	**-0.2**
I02D	**Swisshome**	**3.19**	**44**	P	**Pn**	**19 14 06.4**	**-0.5**
	baz=226,SNR=12						
I03D	**Drain, OR**	**3.22**	**54**	P	**Pn**	**19 14 06.3**	**-1.1**
	baz=236,SNR=23						
KCPM	**Cahto Peak**	**3.36**	**129**	Pn	**Pn**	**19 14 08.1**	**-1.4**
L04D	**Klamath Falls**	**3.48**	**83**	P	**Pn**	**19 14 11.4**	**+0.3**
	baz=265,SNR=23						
WDC	**Whiskeytown Da**	**3.57**	**110**	Pn	**Pn**	**19 14 11.3**	**-0.9**
COR	**Corvallis**	**3.81**	**43**	Pn	**Pn**	**19 14 14.6**	**-0.8**
M04C	**Macdoel**	**3.82**	**90**	P	**Pn**	**19 14 16.4**	**+0.7**
	baz=273						
J04D	**Umpqua Nationa**	**3.83**	**67**	P	**Pn**	**19 14 17.2**	**+1.2**
	baz=250,SNR=9.1						
I04A	**Tendick Farm,**	**3.86**	**59**	P	**Pn**	**19 14 15.9**	**-0.2**
	baz=241,SNR=6.0						
I04A				S	**Sn**	**19 15 04.8**	**+3.2**
	baz=241						
H04D	**Lebanon**	**4.07**	**48**	P	**Pn**	**19 14 19.5**	**+0.5**
	baz=230						
HOPS	**Hopland Field**	**4.12**	**133**	Pn	**Pn**	**19 14 19.0**	**-0.8**
GDXM	**Geysers**	**4.41**	**133**	Pn	**Pn**	**19 14 23.2**	**-0.6**
H04A	**Detroit Lake**	**4.48**	**49**	Pn	**Pn**	**19 14 24.0**	**-0.7**
ORV	**Oroville**	**4.75**	**117**	Pn	**Pn**	**19 14 26.8**	**-1.5**
PINE	**Pine Mountain**	**4.82**	**64**	Pn	**Pn**	**19 14 29.6**	**0.0**
MOD	**Modoc Plateau**	**4.96**	**87**	Pn	**Pn**	**19 14 30.1**	**-1.4**
F04A	**Amboy**	**5.22**	**37**	Pn	**Pn**	**19 14 35.3**	**+0.5**
E03A	**Lebam**	**5.27**	**26**		**Pn**	**19 14 36.4**	**+0.9**
G05D	**Wamic, OR**	**5.31**	**49**	P	**Pn**	**19 14 36.3**	**+0.2**
	baz=232,SNR=6.4						
BEKR	**Beckworth**	**5.38**	**110**		**Pn**	**19 14 38.8**	**+1.5**
AFDM	**Forest Hills D**	**5.42**	**121**		**Pn**	**19 14 39.4**	**+1.8**
G06A	**Carlson Farm,**	**5.69**	**52**	Pn	**Pn**	**19 14 40.7**	**-0.7**
I07A	**Izee**	**5.90**	**65**	Pn	**Pn**	**19 14 44.4**	**+0.1**
LON	**Longmire**	**6.12**	**35**	Pn	**Pn**	**19 14 48.1**	**+0.8**
PAHR	**Pah Rah Range**	**6.14**	**108**	Pn	**Pn**	**19 14 47.9**	**+0.3**
WVOR	**Wild Horse Val**	**6.21**	**82**	Pn	**Pn**	**19 14 45.1**	**-3.4**
CMB	**Columbia Colle**	**6.33**	**125**		**Pn**	**19 14 50.1**	**-0.1**
D05A	**Enumclaw**	**6.39**	**32**	Pn	**Pn**	**19 14 50.0**	**-1.0**
F07A	**Phinny Hill Vi**	**6.48**	**49**		**Pn**	**19 14 52.6**	**+0.5**
YERR	**Yerington**	**6.55**	**114**	Pn	**Pn**	**19 14 52.2**	**-1.1**
G08A	**Pilot Rock**	**6.74**	**57**	Pn	**Pn**	**19 14 56.1**	**+0.3**
E07A	**Sunnyside**	**6.93**	**45**		**Pn**	**19 14 58.4**	**+0.1**
HAWA	**Hanford**	**7.00**	**47**		**Pn**	**19 15 00.0**	**+0.8**
LTY	**Liberty**	**7.01**	**38**	Pn	**Pn**	**19 14 58.5**	**-1.0**
KVN	**Kaiserville**	**7.31**	**110**	Pn	**Pn**	**19 15 03.6**	**-0.2**
E08A	**Dider Farm, El**	**7.32**	**48**	Pn	**Pn**	**19 15 01.1**	**-2.5**
NVAR	**Mina Array Bea**	**7.46**	**115**	Pn	**Pn**	**19 15 08.9**	**+3.1**
	0.7nm,0.3s,baz=304,slow=16,SNR=5.1						
NVAR	**Mina Array Bea**	**7.46**	**115**		**Pn**	**19 15 04.9**	**-0.9**
BMO	**Blue Mountains**	**7.64**	**64**	Pn	**Pn**	**19 15 08.7**	**+0.5**
F10A	**Beach Ranch, E**	**8.13**	**56**	Pn	**Pn**	**19 15 15.2**	**+0.3**
MFID	**Camas Ranch**	**8.35**	**76**		**Pn**	**19 15 16.3**	**-1.6**
B08A	**Colville Reser**	**8.43**	**37**	Pn	**Pn**	**19 15 18.5**	**-0.5**
ELK	**Elko**	**8.89**	**93**	Pn	**Pn**	**19 15 27.2**	**+1.7**
	0.1nm,0.3s,baz=287,slow=18,SNR=2.3						
ISA	**Isabella, Lake**	**9.06**	**130**	Pn	**Pn**	**19 15 26.0**	**-1.7**
MSO	**Missoula**	**10.55**	**58**		**Pn**	**19 15 47.2**	**-0.9**
LRM	**Limekiln Ridge**	**11.19**	**64**	Pn	**Pn**	**19 15 58.5**	**+1.5**
TMUT	**Trail Mountain**	**12.25**	**97**	Pn	**Pn**	**19 16 09.4**	**-2.0**
W13A	**Hualapai Mount**	**12.26**	**119**		**Pn**	**19 16 10.8**	**-0.8**
PDAR	**Pinedale Array**	**12.91**	**80**	Pn	**Pn**	**19 16 21.5**	**+1.1**
	baz=265,slow=8.1,SNR=1.9						
Q24A	**Divide**	**16.85**	**93**	P	**Pn**	**19 17 13.2**	**+0.1**
SDCO	**Great Sand Dun**	**16.98**	**97**	P	**P**	**19 17 16.7**	**+0.2**
T25A	**Trinidad**	**18.01**	**98**	P	**P**	**19 17 27.6**	**-0.2**
FFC	**Flin Flon**	**20.87**	**43**	P	**P**	**19 17 58.6**	**-0.1**
FFC				IAmb	IAmb	19 18 06.9	
	comp=Z,35nm,1.1s						
BARN	**Barnard Glacie**	**21.19**	**340**	P	**P**	**19 18 01.8**	**-0.6**
BARN				IAmb	IAmb	19 18 10.7	
	comp=Z,39nm,1.1s						
YKA	**Yellowknife Ar**	**21.93**	**15**	P	**P**	**19 18 10.6**	**+0.6**
	comp=Z,4.6nm,0.8s,baz=203,slow=11,SNR=3.8						
GLB	**Gilahina Butte**	**22.09**	**338**	P	**P**	**19 18 11.8**	**0.0**
ECSD	**EROS Data Cent**	**22.28**	**75**	P	**P**	**19 18 11.8**	**-2.3**
ECSD				IAmb	IAmb	19 18 16.6	
	comp=Z,29nm,1.1s						
TXAR	**Lajitas Array**	**22.61**	**116**	P	**P**	**19 18 21.0**	**+3.2**
	comp=Z,2.1nm,0.9s,baz=302,slow=10,SNR=3.7						
ULM	**Lac du Bonnet**	**23.00**	**58**	P	**P**	**19 18 22.6**	**+1.1**
	comp=Z,22nm,1.0s,baz=275,slow=7.5,SNR=2.9						
ULM	**Lac du Bonnet**	**23.00**	**58**	P	**P**	**19 18 19.6**	**-2.0**
DHY	**Denali Highway**	**24.40**	**337**	P	**P**	**19 18 34.0**	**-1.2**
DHY				IAmb	IAmb	19 18 43.9	
	comp=Z,21nm,1.0s						
RND	**Reindeer**	**25.09**	**337**	P	**P**	**19 18 40.4**	**-0.9**
RND				IAmb	IAmb	19 18 54.3	
	comp=Z,20nm,1.2s						
EPYK	**Eagle Plains**	**25.15**	**351**	P	**P**	**19 18 44.0**	**+2.3**
EPYK				IAmb	IAmb	19 18 45.7	
	comp=Z,16nm,1.0s						
IL31		**25.62**	**340**	P	**P**	**19 18 45.5**	**-0.4**
IL31				IAmb	IAmb	19 18 48.9	
	comp=Z,9.7nm,1.0s						
ILAR	**Eielson Array**	**25.62**	**340**	P	**P**	**19 18 47.5**	**+1.5**
	comp=Z,4.6nm,0.9s,baz=159,slow=8.4,SNR=4.6						
ILAR	**Eielson Array**	**25.62**	**340**	P	**P**	**19 18 46.7**	**+0.7**
EYMN	**Ely**	**25.68**	**64**	P	**P**	**19 18 47.4**	**+0.7**
EYMN				IAmb	IAmb	19 18 52.8	
	comp=Z,21nm,1.1s						
U38A	**Gravette**	**25.73**	**91**	P	**P**	**19 18 47.6**	**+0.2**
U38A				IAmb	IAmb	19 18 52.5	
	comp=Z,7.8nm,0.9s						
PPLA	**Purkeypile**	**25.77**	**333**	P	**P**	**19 18 43.2**	**-4.3**
MLY	**Manley**	**26.85**	**338**	P	**P**	**19 18 57.6**	**+0.4**
MLY				IAmb	IAmb	19 18 59.8	
	comp=Z,18nm,1.2s						
CCM	**Cathedral Cave**	**27.51**	**86**		**P**	**19 19 03.8**	**+0.5**
CCM				IAmb	IAmb	19 19 10.7	
	comp=Z,12nm,1.1s						
L42A	**Oliver, Polo**	**27.60**	**77**	P	**P**	**19 19 04.5**	**+0.4**
X48A	**Hartselle**	**32.02**	**90**	P	**P**	**19 19 45.1**	**+1.8**
LRAL	**Lakeview Retre**	**32.68**	**92**	P	**P**	**19 19 47.0**	**-2.1**
LRAL				IAmb	IAmb	19 19 58.8	
	comp=Z,12nm,0.8s						
RES	**Resolute Bay**	**35.98**	**14**	P	**P**	**19 20 17.7**	**+0.5**
	comp=Z,2.0nm,0.8s,baz=241,slow=13,SNR=2.6						
TULEG	**Thule**	**42.37**	**17**	P	**P**	**19 21 11.1**	**+0.5**
SEY	**Seymchan**	**49.71**	**324**	P	**P**	**19 22 08.6**	**0.0**
	comp=Z,8.5nm,1.1s,baz=94,slow=8.8,SNR=3.6						
MA2	**Magadan**	**51.43**	**320**	P	**P**	**19 22 22.7**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=54,slow=12,SNR=2.7						
MA2	**Magadan**	**51.43**	**320**	P	**P**	**19 22 22.0**	**+0.3**
H11N3	**WAKE ISLAND Hy**	**59.49**	**270**	T	T	20 27 51.1	
	baz=54						
H11N2	**WAKE ISLAND Hy**	**59.49**	**270**	T	T	20 27 42.9	
	baz=54						
H11N1	**WAKE ISLAND Hy**	**59.51**	**270**	T	T	20 27 44.1	
	baz=54						
YAK	**Yakutsk**	**59.67**	**328**	P	**P**	**19 23 19.5**	**-1.3**
H11S1	**WAKE ISLAND Hy**	**60.38**	**269**	T	T	20 28 52.0	
	baz=54						
H11S2	**WAKE ISLAND Hy**	**60.39**	**269**	T	T	20 28 57.0	
	baz=54						
H11S3	**WAKE ISLAND Hy**	**60.40**	**269**	T	T	20 28 57.4	
	baz=54						
NOA	**NORSAR Array B**	**71.94**	**20**	P	**P**	**19 24 39.9**	**0.0**
	comp=Z,1.8nm,0.9s,baz=329,slow=6.4,SNR=2.9						
EKR5	**Eskdalemuir Ar**	**72.06**	**30**	P	**P**	**19 24 39.9**	**-0.8**
FINES	**FINESS Array B**	**74.74**	**13**	P	**P**	**19 24 56.3**	**0.0**
	comp=Z,4.4nm,1.0s,baz=16,slow=2.0,SNR=3.1						
TLY	**Talaya**	**76.99**	**330**	P	**P**	**19 25 10.1**	**+0.6**
TLY				IAmb	IAmb	19 25 17.3	
	comp=Z,2.5nm,0.8s						
SONM	**Songino Array**	**78.99**	**327**	P	**P**	**19 25 21.7**	**+0.9**
	comp=Z,3.7nm,1.1s,baz=36,slow=5.5,SNR=4.4						
SONM	**Songino Array**	**78.99**	**327**	P	**P**	**19 25 21.4**	**+0.6**
ZAA0	**Zalesovo Array**	**80.74**	**342**	P	**P**	**19 25 29.9**	**0.0**
ZALV	**Zalesovo Beam**	**80.74**	**342**	P	**P**	**19 25 29.9**	**0.0**
	comp=Z,0.8nm,0.6s,baz=8.6,slow=4.8,SNR=2.9						
SUW	**Suwalki**	**81.11**	**17**	P	**P**	**19 25 30.0**	**-1.9**
GERES	**GERESS Array B**	**83.25**	**25**	P	**P**	**19 25 44.3**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=302,slow=5.6,SNR=3.7						
GERES	**GERESS Array B**	**83.25**	**25**	P	**P**	**19 25 43.7**	**+0.3**
MORC	**Moravsky Berou**	**83.56**	**22**	P	**P**	**19 25 44.7**	**-0.2**
SIV	**San Ignacio**	**83.60**	**118**	P	**P**	**19 25 47.1**	**+1.7**
	comp=Z,1.4nm,0.9s,baz=337,slow=5.9,SNR=2.9						
BRVK	**Borovoye**	**84.29**	**350**	P	**P**	**19 25 48.9**	**+0.5**
BRVK				IAmb	IAmb	19 25 50.1	
	comp=Z,8.0nm,1.0s						
BVAR	**Borovoye Array**	**84.30**	**350**	P	**P**	**19 25 49.0**	**+0.4**
	comp=Z,3.1nm,0.9s,baz=56,slow=3.6,SNR=4.3						
KURK	**Kurchatov**	**85.13**	**344**	P	**P**	**19 25 52.8**	**+0.1**
KURK				IAmb	IAmb	19 25 58.8	
	comp=Z,2.6nm,0.9s						
AKASG	**Malin Array Be**	**85.49**	**15**	P	**P**	**19 25 54.0**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=335,slow=4.4,SNR=5.4						
AKASG	**Malin Array Be**	**85.49**	**15**	P	**P**	**19 25 54.4**	**-0.2**
OSSC	**Osservatorio P**	**87.06**	**29**	P	**P**	**19 25 59.6**	**-2.9**
OSSC				IAmb	IAmb	19 26 04.6	
	comp=Z,2.8nm,0.7s						
MKAR	**Makanchi Array**	**87.97**	**340**	P	**P**	**19 26 07.2**	**+0.3**
	comp=Z,0.9nm,1.0s,baz=22,slow=5.3,SNR=2.8						
ABKAR	**Akbulak array**	**89.06**	**355**	P	**P**	**19 26 11.8**	**0.0**
SZP	**Santa**	**94.27**	**298**	P	**P**	**19 26 36.3**	**-0.2**
QRZ	**Quartz Range**	**98.86**	**222**	P	Pdif	19 26 58.3	+1.7
THZ	**Tophouse**	**99.38**	**221**	P	**Pdif**	**19 26 57.4**	**-1.7**
KARP	**Karpathos**	**99.39**	**21**	P	**Pdif**	**19 26 57.0**	**-2.5**

NEIC ***13*** *19:17:24.2±1.8,7°.64S±0°.08×112°.25E±0°.06,h184^{km}±5^{km}, mb4.5/54,Error ellipse: s-maj=11.6km s-min=8.5km az=204.0*

IDC ***13*** *19:17:24.9±2.4,7°.60S×112°.19E,h185^{km}±21^{km},mb4.0/20, mb1 4.1/22,mb1mx3.9/43,mbtmp4.5/22,Error ellipse: s-maj=16.9km s-min=9.1km az=66.0*

DJA ***13*** *19:17:24.4±0.2,8°S±3°×11°2E±°,h180^{km}±2^{km},M4.6/32, mb4.8/32,mB5.1/21,MLv4.8/18,Mw(mB)4.5/21,Mwp7.5/1*

KLM ***13*** *19:17:25.0,7°.85S×112°.20E,h185^{km},mb4.7*

ISC 13 19:17:24.4±0.6,**7°.75S**±0°.05×**112°.23E**±0°.04,**h186**^{km}±5^{km}, **n169,**σ**1§42**/184,**mb4.4**/39,**Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRJI	**Gresik**	**0.86**	**16**	P	**Pn**	**19 17 52.2**	**+0.3**
GRJI				S	**Sn**	**19 18 14.3**	**+1.2**
PCJI	**Pacitan**	**1.14**	**247**	P	**Pn**	**19 17 53.4**	**-0.4**
PCJI				S	**Sn**	**19 18 15.2**	**-1.3**
WOJI	**Wonogiri, Jawa**	**1.30**	**266**	P	**Pn**	**19 17 54.9**	**-0.2**
WOJI				S	**Sn**	**19 18 18.1**	**-0.7**
GMJI	**Gumukmas**	**1.31**	**114**	P	**Pn**	**19 17 55.2**	**0.0**
UGM	**Wanagama**	**1.70**	**264**	P	**Pn**	**19 17 59.0**	**+0.1**
UGM				S	**Sn**	**19 18 25.1**	**-0.5**
UGM	**Wanagama**	**1.70**	**264**		**Pn**	**19 17 58.8**	**-0.1**
UWJI	**Ujung Watu**	**1.84**	**316**	P	**Pn**	**19 18 00.2**	**0.0**
UWJI				S	**Sn**	**19 18 29.8**	**+1.8**
SMRI	**Semarang**	**1.91**	**291**	P	**Pn**	**19 18 01.2**	**+0.2**
SMRI				S	**Sn**	**19 18 30.2**	**+0.9**
SMRI	**Semarang**	**1.91**	**291**		**Pn**	**19 18 01.7**	**+0.7**
JAGI	**Jajag, Banyuwa**	**2.03**	**111**	P	**Pn**	**19 18 02.1**	**-0.2**
JAGI	**Jajag, Banyuwa**	**2.03**	**111**		**Pn**	**19 18 01.9**	**-0.3**
IGBI	**Denpasar**	**3.07**	**110**	P	**Pn**	**19 18 14.3**	**+0.1**
IGBI				S	**Sn**	**19 18 52.3**	**-0.8**
KPJI	**Karang Pucung**	**3.30**	**277**	P	**Pn**	**19 18 17.4**	**+0.4**
CISI	**Cisompet, Garu**	**4.38**	**272**	P	**Pn**	**19 18 30.3**	**-0.4**
CISI	**Cisompet, Garu**	**4.38**	**272**		**Pn**	**19 18 29.7**	**-1.0**
CNJI	**Cibinong**	**5.08**	**275**	P	**Pn**	**19 18 39.4**	**-0.1**
CBJI	**Citeko**	**5.50**	**284**	P	**Pn**	**19 18 43.6**	**-1.4**
	3.6nm13µm713nm,0.5s						
DBJI	**Dramaga**	**5.57**	**282**	P	**Pn**	**19 18 46.4**	**+0.5**
	0.8nm256nm,0.9s						
PLAI	**Plampang**	**5.59**	**101**	P	**Pn**	**19 18 45.7**	**-0.5**
	1.4nm2µm196nm,0.7s						
SKJI	**Sukabumi**	**5.68**	**277**	P	**Pn**	**19 18 49.1**	**+1.8**
	2.8nm13µm584nm,0.8s						
TNG	**Tangerang**	**5.76**	**285**	P	**Pn**	**19 18 48.8**	**+0.4**
	10nm622nm,0.4s						
KBKI	**Kotabaru**	**5.90**	**42**	P	**Pn**	**19 18 51.7**	**+1.4**
	0.1nm367nm50nm,0.7s						
XMIS	**Christmas Isla**	**7.04**	**247**	Pn	**Pn**	**19 19 02.0**	**-3.2**
WBSI	**Waikabubak, Su**	**7.32**	**105**	P	**Pn**	**19 19 06.1**	**-2.8**
	1.6nm1µm94nm,0.7s						
KAPI	**Kappang**	**7.95**	**70**	P	**Pn**	**19 19 18.4**	**+1.3**
	3.3nm,0.3s,baz=263,slow=4.3,SNR=17						
KASI	**Kota Agung**	**8.00**	**286**	P	**Pn**	**19 19 18.3**	**+0.6**
	6µm197nm,0.5s						
WSI	**Waingapu**	**8.20**	**104**	P	**Pn**	**19 19 19.9**	**-0.4**
	5µm294nm,0.5s						
BKSI	**Bulukumba**	**8.20**	**73**	P	**Pn**	**19 19 21.8**	**+1.4**
	787nm79nm,1.2s						
SPSI	**Sidrap Palu**	**8.38**	**64**	P	**Pn**	**19 19 24.4**	**+1.6**
	703nm47nm,1.2s						
BNSI	**Bone**	**8.51**	**67**	P	**Pn**	**19 19 25.5**	**+1.1**
	54nm,1.2s						
LWLI	**Liwa**	**8.56**	**288**	P	**Pn**	**19 19 26.1**	**+0.8**
BASI	**Baing, Sumba**	**8.60**	**107**	P	**Pn**	**19 19 26.5**	**+0.9**

	2µm188nm,0.7s						
MDSI	Maura Dua	8.64	292	P	Pn	19 19 27.2	+1.1
TTSI	Tana Toraja	8.88	59	P	Pn	19 19 31.0	+1.7
	1µm52nm,0.7s						
KSM	Kuching	9.36	348	Pn	Pn	19 19 35.8	+0.2
EDFI	Ende, Flores	9.41	97	P	Pn	19 19 33.7	-2.7
	1µm72nm,0.6s						
MNAI	Manna	9.82	290	P	Pn	19 19 41.1	-0.5
	13µm414nm,0.5s						
MNAI	Manna	9.82	290		Pn	19 19 40.9	-0.7
MMRI	Maumere	9.94	96	P	Pn	19 19 42.2	-1.0
	2µm123nm,0.5s						
MMRI	Maumere	9.94	96		Pn	19 19 41.6	-1.5
SBUM	Sibu	10.13	360		Pn	19 19 45.9	+0.2
KSI	Kapahiang	10.42	292	P	Pn	19 19 49.5	+0.1
	3µm149nm,0.9s						
MPSI	Mapaga	11.09	44	P	Pn	19 20 00.0	+2.0
	13nm,1.2s						
APSI	Ampana	11.58	55	P	Pn	19 20 05.3	+0.9
	12nm,0.9s						
SOEI	Soe	12.06	100	P	Pn	19 20 09.4	-1.3
	2µm155nm,0.7s						
SOEI	Soe	12.06	100		Pn	19 20 08.1	-2.6
KRJI	Kerinci	12.11	297	P	Pn	19 20 10.9	-0.4
	147nm,0.7s						
LUWI	Luwuk	12.44	58	Pn	Pn	19 20 14.2	-1.1
MYKOM	Kota Tinggi	12.64	318		Pn	19 20 19.1	+1.2
MYKOM	Kota Tinggi	12.64	318	P	P	19 20 21.0	-1.0
MRSI	Marisa	12.67	50	P	Pn	19 20 19.1	+0.8
	23nm,1.0s						
SDSI	Sungai Dareh	12.72	302	P	Pn	19 20 19.1	+0.2
	6.9nm,0.8s						
PPSI	Pulau Pagai	13.14	291	P	Pn	19 20 24.2	0.0
	104nm,0.5s						
PDSI	Padang	13.55	300	P	Pn	19 20 30.8	+1.3
	11nm,0.5s						
SISI	Saibi	14.57	295	P	P	19 20 42.8	-0.7
	13nm,1.2s						
SANI	Sanana	14.82	68	P	P	19 20 46.5	+0.2
	56nm,0.9s						
NLAI	Namlea	15.46	74	P	P	19 20 54.2	+0.8
	595nm59nm,0.6s						
PSA00	Pilbara Seismi	15.58	153	P	P	19 20 56.2	+1.5
PSA00	Pilbara Seismi	15.58	153		P	19 20 55.1	+0.4
PSA00				IAmb	IAmb	19 21 13.4	
	comp=Z,8.7nm,0.7s						
AAI	Ambon	16.38	77	P	Pn	19 21 05.1	+0.9
	comp=Z,2µmcomp=Z,208nm,0.6s						
IPM	Ipoh	16.51	317	P	P	19 21 02.7	-2.3
IPM				IAmb	IAmb	19 21 09.7	
	comp=Z,17nm,0.6s						
IPM	Ipoh	16.51	317	P	Pn	19 21 08.0	+2.3
FITZ	Fitzroy Crossi	16.62	130	P	Pn	19 21 08.2	+1.3
	comp=Z,0.8nm,0.3s,baz=265,slow=0.6,SNR=27						
FITZ				S	S	19 24 02.0	-8.1
	comp=Z,0.9nm,0.3s,baz=25,slow=0.4,SNR=4.2						
FITZ	Fitzroy Crossi	16.62	130	P	P	19 21 06.1	0.0
RPSI	Rantau Prapat	16.85	308		Pn	19 21 09.7	-0.1
RPSI				IAmb	IAmb	19 21 27.6	
	comp=Z,7.3nm,0.4s						
MSAI	Masohi	17.18	76	P	Pn	19 21 13.8	+0.1
	comp=Z,269nmcomp=Z,19nm,0.6s						
TNTI	Ternate	17.30	61	P	P	19 21 12.7	-1.0
TNTI				IAmb	IAmb	19 21 17.0	
	comp=Z,13nm,0.8s						
KULM	Kulim	17.36	318	P	P	19 21 13.3	-0.9
KULM	Kulim	17.36	318	P	Pn	19 21 15.0	-0.7
BNDI	Bandanaira	17.86	81	P	Pn	19 21 21.7	0.0
	comp=Z,3µmcomp=Z,296nm,0.7s						
KNRA	Kununurra	17.99	117	P	P	19 21 22.0	+0.8
SAUI	Saumlaki	18.89	92	P	Pn	19 21 33.9	+0.1
SAUI	Saumlaki	18.89	92	P	P	19 21 31.5	+0.5
MTN	Manton Dam	19.27	107	P	P	19 21 35.3	+0.3
FAKI	Fak Fak	20.49	78	P	P	19 21 46.8	-1.4
FAKI				IAmb	IAmb	19 21 52.7	
	comp=Z,29nm,1.1s						
UBPT	Khong Chiam	23.84	344	P	P	19 22 20.7	0.0
UBPT				IAmb	IAmb	19 22 26.1	
	comp=Z,16nm,1.3s						
WB0	Warramunga Arr	24.58	121	P	P	19 22 28.4	+0.9
WB0				IAmb	IAmb	19 22 30.3	
	comp=Z,11nm,0.6s						
WRA	Warramunga Arr	24.61	122	P	P	19 22 28.7	+1.0
	comp=Z,2.8nm,0.5s,baz=299,slow=11,SNR=53						
WRA				S	S	19 26 32.5	-2.8
	comp=Z,0.9nm,0.8s,baz=291,slow=17,SNR=2.4						
WRA	Warramunga Arr	24.61	122	P	P	19 22 27.3	-0.5
WRAB	Tennant Creek	24.61	122	P	P	19 22 28.5	+0.7
WRAB				IAmb	IAmb	19 22 30.8	
	comp=Z,15nm,0.6s						
WB2	Warramunga Arr	24.62	122	P	P	19 22 28.8	+0.9
WR0	Warramunga Arr	24.79	122	P	P	19 22 29.8	+0.4
WR0				IAmb	IAmb	19 22 32.9	
	comp=Z,8.0nm,0.5s						
ASAR	Alice Springs	26.12	130	P	P	19 22 42.5	+1.1
	comp=Z,3.6nm,0.6s,baz=304,slow=8.7,SNR=91						
ASAR				PcP	PcP	19 26 04.8	+0.8
	comp=Z,1.4nm,0.4s,baz=333,slow=2.1,SNR=7.7						
ASAR	Alice Springs	26.12	130	P	P	19 22 42.2	+0.8
AS31	Alice Springs	26.12	130	P	P	19 22 42.4	+1.0
PBKT	Sadao Pong	26.61	335	P	P	19 22 46.7	+1.0
FORT	Forrest	27.28	149	P	P	19 22 51.8	+0.2
CMAR	Chiang Mai Arr	29.16	333	P	P	19 23 09.6	+1.2
	comp=Z,12nm,0.8s,baz=168,slow=8.2,SNR=100						
CMAR				PcP	PcP	19 26 12.3	+1.0
	comp=Z,0.9nm,0.6s,baz=192,slow=3.1,SNR=6.1						
CMAR				ScP	ScP	19 29 35.9	+0.5
	comp=Z,0.6nm,0.9s,baz=199,slow=3.8,SNR=5.1						
CMAR	Chiang Mai Arr	29.16	333	P	P	19 23 08.6	+0.3
CMAR					PcP	19 26 11.9	+0.6
CHTO	Chiang Mai	29.47	334	P	P	19 23 11.3	+0.2
COEN	Coen	30.99	104	P	P	19 23 25.1	+0.6
COEN				IAmb	IAmb	19 23 26.7	
	comp=Z,14nm,0.8s						
BBOO	Buckleboo	33.32	142	P	P	19 23 45.6	+0.9
BBOO				IAmb	IAmb	19 23 53.7	
	comp=Z,30nm,1.6s						
STKA	Stephens Creek	36.37	135	P	P	19 24 12.8	+1.9
	comp=Z,6.4nm,0.4s,baz=317,slow=8.5,SNR=40						
STKA	Stephens Creek	36.37	135	P	P	19 24 12.7	+1.9
ENH	Enshi	37.89	356	P	P	19 24 23.2	-0.5
SHL	Shillong	38.58	330	P	P	19 24 29.8	+0.1
ODAN	Odare	42.00	326	*e*P	P	19 24 57.8	0.0
	comp=Z,67nm,0.5s						
TAPN	Taplejung	42.21	327	*e*P	P	19 24 59.9	+0.4
	comp=Z,47nm,0.5s						
LSA	Lhasa	42.40	332	P	P	19 25 02.5	+1.3
LSA				IAmb	IAmb	19 25 03.3	
	comp=Z,12nm,0.9s						
RAMN	Ramite	42.51	325	*e*P	P	19 25 02.0	+0.1
	comp=Z,17nm,0.4s						
JIRN	Jiri	43.29	325	*e*P	P	19 25 08.3	0.0
	comp=Z,100nm,0.5s						
CAN	Canberra	43.42	135	P	P	19 25 10.3	+1.4
GUN	Gumba	43.66	325	*e*P	P	19 25 11.2	0.0
	comp=Z,66nm,0.5s						
PKI	Pulchoki	43.67	325	*e*P	P	19 25 10.6	-0.7
	comp=Z,7.7nm,0.4s						
PKIN	Phulchoki	43.68	325	*e*P	P	19 25 10.6	-0.7
	comp=Z,15nm,0.5s						
DMN	Daman	43.87	324	*e*P	P	19 25 12.4	-0.4
	comp=Z,45nm,0.5s						
KKN	Kakani	43.91	325	*e*P	P	19 25 12.6	-0.5
	comp=Z,11nm,0.5s						
GKN	Gorkha	44.44	324	*e*P	P	19 25 16.7	-0.5
	comp=Z,23nm,0.2s						
DANN	Dangsing	45.21	324	*e*P	P	19 25 22.8	-0.7
	comp=Z,56nm,0.5s						
KSRS	Korea Array	47.30	17	P	P	19 25 39.9	+0.7
	comp=Z,3.4nm,0.7s,baz=200,slow=7.9,SNR=10						
GTA	Gaotai	48.31	347	*e*P	P	19 25 48.4	+1.3
MJAR	Matsushiro Arr	50.35	27	P	P	19 26 01.1	-1.4
	comp=Z,3.0nm,0.8s,baz=207,slow=8.4,SNR=8.2						
USA0B	Ussuriysk Arra	54.71	17	P	P	19 26 31.9	-2.4
USA0B				IAmb	IAmb	19 26 34.9	
	comp=Z,10nm,0.8s						
USRK	Ussuriysk Ar.	54.71	17	P	P	19 26 34.5	+0.2
	comp=Z,8.8nm,0.7s,baz=195,slow=4.8,SNR=19						
USRK	Ussuriysk Ar.	54.71	17	P	P	19 26 32.7	-1.6
NIL	Nilore	55.34	320	P	P	19 26 37.1	-2.0
NIL				IAmb	IAmb	19 26 39.6	
	comp=Z,7.2nm,0.6s						
ULN	Ulaanbaatar	55.56	356	P	P	19 26 40.1	-0.4
ULN				IAmb	IAmb	19 26 41.2	
	comp=Z,4.2nm,0.8s						
SONM	Songino Array	55.58	355	P	P	19 26 40.5	-0.2
	comp=Z,3.7nm,0.7s,baz=176,slow=7.9,SNR=16						
SONM				PcP	PcP	19 27 37.4	-0.6
	comp=Z,0.9nm,0.5s,baz=177,slow=4.2,SNR=6.1						
SONM	Songino Array	55.58	355	P	P	19 26 40.0	-0.6
KSH	Kashi	57.78	327	P	P	19 27 00.8	+4.5
KSH				PcP	PcP	19 27 51.4	+4.5
KSH				sP	sP	19 28 00.1	+0.7
KSH				S	S	19 34 42.5	+1.7
KSH				sS	sS	19 35 55.8	+0.7
KSH				ScS	ScS	19 36 29.3	+2.0
KBL	Kabul	58.61	319	P	P	19 27 00.2	-2.1
KBL				IAmb	IAmb	19 27 03.9	
	comp=Z,4.8nm,0.7s						
KDJ	Kajisay	59.07	330	P	P	19 27 04.5	-0.8
KDJ				IAmb	IAmb	19 27 06.3	
	comp=Z,21nm,1.6s						
NRN	Naryn	59.15	329	P	P	19 27 05.1	-0.9
MK31	Makanchi Array	60.48	337	P	P	19 27 13.6	-1.0
MK31				IAmb	IAmb	19 27 15.0	
	comp=Z,7.3nm,1.3s						
MKAR	Makanchi Array	60.48	337	P	P	19 27 14.0	-0.6
	comp=Z,3.0nm,0.5s,baz=151,slow=7.1,SNR=56						
MKAR	Makanchi Array	60.48	337	P	P	19 27 13.5	-1.2
GAR	Garm	60.62	323	P	P	19 27 13.5	-2.3
ARSB	Arslanbob	60.67	327	P	P	19 27 14.9	-1.2
ARSB				IAmb	IAmb	19 27 16.3	
	comp=Z,9.2nm,1.1s						
AAK	Ala-Archa	60.80	329	P	P	19 27 16.6	-0.3
CHGR	Chuyangaron	61.09	322	P	P	19 27 15.7	-3.2
KK31	Karatay Array	63.22	327	P	P	19 27 30.9	-2.1
KKAR	Karatay Array	63.22	327	P	P	19 27 31.1	-1.8
KKAR	Karatay Array	63.22	327	P	P	19 27 29.1	-3.8
KKAR				IAmb	IAmb	19 27 33.5	
	comp=Z,2.2nm,0.6s						
OPO	Ambohidratompo	63.96	253	P	P	19 27 39.8	+1.3
	comp=Z,1.3nm,0.5s,baz=84,slow=9.2,SNR=2.6						
KURK	Kurchatov	65.09	337	P	P	19 27 44.0	-0.9
KURK				IAmb	IAmb	19 27 44.9	
	comp=Z,17nm,1.6s						
ZAA0	Zalesovo Array	65.67	343	P	P	19 27 47.0	-1.5
ZAA0				IAmb	IAmb	19 27 48.3	
	comp=Z,4.3nm,0.7s						
ZALV	Zalesovo Beam	65.67	343	P	P	19 27 47.4	-1.2
	comp=Z,3.7nm,0.3s,baz=152,slow=5.1,SNR=21						
ZALV	Zalesovo Beam	65.67	343	P	P	19 27 46.8	-1.8
GEYT	Alibeck	67.83	316	P	P	19 28 01.9	-0.8
	comp=Z,3.1nm,0.6s,baz=190,slow=6.0,SNR=7.0						
GEYT	Alibeck	67.83	316	P	P	19 28 00.9	-1.7
BVAR	Borovoye Array	70.17	335	P	P	19 28 15.7	-1.0
	comp=Z,1.2nm,0.6s,baz=142,slow=9.4,SNR=6.0						
PETK	Petropavlovsk-	71.81	27	P	P	19 28 26.0	-0.5
	comp=Z,5.2nm,0.9s,baz=203,slow=4.3,SNR=8.1						
RAYN	Ar Rayn	72.17	298	P	P	19 28 27.5	-1.9
ABKAR	Akbulak array	72.78	327	P	P	19 28 31.1	-1.3
ABKAR	Akbulak array	72.78	327	P	P	19 28 31.2	-1.2
ABKAR				IAmb	IAmb	19 28 32.2	
	comp=Z,12nm,0.7s						
MA2	Magadan	73.79	19	P	P	19 28 37.9	-0.1
MA2				IAmb	IAmb	19 28 38.7	
	comp=Z,6.6nm,0.8s						
VNDA	Vanda	74.31	170	P	P	19 28 43.0	+2.2
	comp=Z,1.4nm,0.7s,baz=316,slow=7.0,SNR=6.5						
TIXI	Tiksi	80.00	5	P	P	19 29 10.6	-1.9
TIXI				IAmb	IAmb	19 29 11.8	
	comp=Z,6.8nm,0.8s						
KBZ	Khabaz	80.72	317	P	P	19 29 16.8	-0.1
	comp=Z,3.7nm,0.8s,baz=120,slow=1.4,SNR=7.1						
QSPA	South Pole Qui	82.24	180	P	P	19 29 26.3	+1.6
	comp=Z,2.0nm,0.5s,baz=282,slow=0.9,SNR=25						
BOSA	Boshof	83.70	242	P	P	19 29 34.3	+1.3
	comp=Z,2.5nm,1.0s,baz=66,slow=1.8,SNR=2.7						
BOSA	Boshof	83.70	242	IAmb	IAmb	19 31 36.9	
	comp=Z,53nm,1.8s						
BR131	Keskin Array S	86.22	311	P	P	19 29 44.2	-1.0
BR131				IAmb	IAmb	19 29 45.8	
	comp=Z,3.8nm,0.8s						
BRTR	Keskin Array B	86.22	311	P	P	19 29 44.7	-0.6
	comp=Z,2.9nm,0.7s,baz=135,slow=6.9,SNR=17						
SNAA	Sanae	90.33	197	P	P	19 30 06.3	+2.3
AKASG	Malin Array Be	91.53	321	P	P	19 30 08.4	-1.4
	comp=Z,0.4nm,0.4s,baz=79,slow=5.0,SNR=4.3						
AKASG	Malin Array Be	91.53	321	IAmb	IAmb	19 30 10.6	
	comp=Z,0.8nm,0.8s						
VNA2	Neumayer--Watz	91.98	197	P	P	19 30 13.9	+2.3
	baz=100,slow=3.7						
TORD	Torodi Ar. Bea	111.65	281	PKiKP	PKiKP	19 35 37.5	-0.3
	comp=Z,0.5nm,0.5s,baz=78,slow=1.1,SNR=6.6						
ESDC	Sonseca Array	115.01	310	PKP	PKiKP	19 35 43.1	-0.5
	comp=Z,0.6nm,0.4s,baz=46,slow=3.7,SNR=7.0						
YKA	Yellowknife Ar	115.68	22	PKP	PKPdf	19 35 43.6	-0.5
	comp=Z,0.5nm,0.6s,baz=313,slow=1.4,SNR=7.4						
NVAR	Mina Array Bea	125.28	48	PKP	PKiKP	19 36 05.1	+1.0
	comp=Z,0.6nm,0.7s,baz=318,slow=1.2,SNR=4.2						
ELK	Elko	126.59	44	PKP	PKiKP	19 36 06.9	+0.3
	comp=Z,0.4nm,0.3s,baz=312,slow=2.8,SNR=3.8						
ULM	Lac du Bonnet	131.59	24	PKP	PKPdf	19 36 15.3	+0.3
	comp=Z,1.8nm,0.8s,baz=213,slow=3.7,SNR=3.3						
TXAR	Lajitas Array	140.01	53	PKhKP	PKPpre	19 36 25.5	
	comp=Z,0.2nm,0.5s,baz=210,slow=3.1,SNR=3.5						
TXAR				PKP	PKiKP	19 36 33.6	-0.3
	comp=Z,0.2nm,0.6s,baz=170,slow=1.9,SNR=4.4						
CPUP	Villa Florida	144.64	196	PKP	PKPdf	19 36 40.4	+0.8
	comp=Z,4.2nm,0.6s,baz=162,slow=1.9,SNR=11						
CPUP	Villa Florida	144.64	196		PKPdf	19 36 39.9	+0.3
TKL	Tuckaleechee C	148.59	26	PKPbc	PKPbc	19 36 50.0	+0.1
	comp=Z,7.2nm,0.6s,baz=188,slow=2.6,SNR=8.2						
BDFB	Brasilia	149.62	220	PKPbc	PKiKP	19 36 53.9	-0.1
	comp=Z,2.8nm,0.4s,baz=90,slow=3.9,SNR=4.1						

MEX 13 19:21:57.9±0.5, 13°.91N×93°.14W, h15^{km}±29^{km}, MD3.8
GCG 13 19:22:03.9±0.7, 13°.90N×92°.70W, h22^{km}±999^{km}, MD4.0
ISC 13 19:21:56.0±3.2, 14°.1N±0°.1×93°.13W±0°.08, h4^{km}±14^{km}, n8, σ1^{s}.18/15, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.16	46	*i* P	Pg	19 22 18.5	+0.2
THIG				*i* S	Sg	19 22 33.1	-0.2
PCIG		1.60	357	*i* P	Pn	19 22 24.5	-0.6
PCIG				*i* S	Sn	19 22 46.2	0.0
STG3	Santiaguito 3,	1.63	68	*e*P	Pn	19 22 25.5	-0.2
STG3				*i* S	Sn	19 22 47.0	-0.1
FUG	Fuego 3	2.24	81	*e*P	Pn	19 22 35.0	+0.9
FUG				*i* S	Sn	19 22 59.8	-2.5
CCIG	Comitan	2.37	24	*e*P	Pb	19 22 38.7	-0.7
CCIG				*i* S	Sn	19 23 06.8	+1.2
TGIG		2.66	0	*i* P	Pn	19 22 40.5	+0.7
TGIG				*i* S	Sn	19 23 13.5	+0.9
NBG	Las Nubes	2.74	79	*e*P	Pn	19 22 43.0	+2.0
CMIG	Matias Romero	3.42	331	*e*P	Pn	19 22 50.5	+0.3
CMIG				*i* S	Sn	19 23 30.8	-0.5

UCR 13 19:40:12.0±0.8, 12°.37N×87°.75W, h31^{km}±34^{km}, ML3.8
SNET 13 19:40:12.2±0.8, 12°.36N×87°.76W, h38^{km}±594^{km}, ML3.9
INET 13 19:40:13.3, 12°.44N×87°.81W, h65^{km}, ML3.5
ISC 13 19:40:11.9±2.3, 12°.3N±0°.1×87°.8W±0°.1, h50^{km}, n11, σ0^{s}.22/13, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.95	356	*e*P	Pn	19 40 29.2	+0.1
CNCH				*e*S	Sn	19 40 41.6	-0.1
CNCH				IAML		19 40 43.7	
	comp=Z,4µm,0.2s						
CNCH	Conchagua	0.95	356	*e*P	Pn	19 40 29.2	+0.1
CNCH				*e*S	Sn	19 40 41.6	-0.1
CNCH				IAML		19 40 43.7	
	comp=Z,4µm,0.2s						
COPN	Copaltepe	1.15	97	*e*P	Pn	19 40 31.9	+0.2
COPN	Copaltepe	1.15	97	*e*P	Pn	19 40 31.9	+0.2
MOMN	Momotombo	1.20	86	*e*P	Pn	19 40 32.2	-0.2
MOMN	Momotombo	1.20	86	*e*P	Pn	19 40 32.2	-0.2
PACA	Pacayal	1.26	334	*e*P	Pn	19 40 33.6	+0.3
PACA	Pacayal	1.26	334	*e*P	Pn	19 40 33.6	+0.3
TECA	Tecapa	1.37	328	*e*P	Pn	19 40 35.0	+0.1
TECA	Tecapa	1.37	328	*e*P	Pn	19 40 35.0	+0.1
LFRS	El Faro	1.81	316	*e*P	Pn	19 40 40.5	-0.3
LFRS				IAML		19 41 05.6	
	comp=Z,1µm,0.5s						

JMA 13 19:41:13.8, 38°.23N×141°.85E, h64^{km}±1^{km}, M4.1
JMA Felt II J1.
IDC 13 19:41:15.5±1.1, 38°.11N×141°.88E, h87^{km}±8^{km}, mb3.4/10, mb1 3.5/14, mb1mx3.3/62, mbtmp3.7/14, Error ellipse: s-maj=23.2km s-min=14.1km az=80.0
ISC 13 19:41:14.2±0.9, 38°.21N±0°.04×141°.91E±0°.09, h70^{km}±6^{km}, n36, σ1^{s}.87/48, mb3.7/10, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.36	286	P	Pn	19 41 24.5	-1.3
JIKH				*i* S	Sn	19 41 32.1	-2.2
JIO	Ouri	0.50	299	P	Pn	19 41 25.8	-1.2
JIO				S	Sn	19 41 34.3	-2.1
JKMT	Kesennumamotoy	0.69	330	P	Pn	19 41 27.8	-1.2
JKMT				*i* S	Sn	19 41 38.0	-1.8
OFUJ	Ofunato	0.89	348	P	Pn	19 41 30.2	-1.1
OFUJ				S	Sn	19 41 42.3	-1.7
JMK	Ichinoseki	0.92	324	P	Pn	19 41 30.7	-0.9
JMK				S	Sn	19 41 43.1	-1.5
JMM	Marumori	0.95	249	P	Pn	19 41 30.6	-1.4
JMM				S	Sn	19 41 43.2	-2.0
JOU	Okura	0.99	279	P	Pn	19 41 31.5	-1.1
JOU				S	Sn	19 41 44.7	-1.6
JFK	Kawauchi	1.18	225	P	Pn	19 41 33.9	-1.1
JFK				S	Sn	19 41 48.6	-1.8
JOM	Ohasama	1.35	339	P	Pn	19 41 36.3	-0.9
JOM				S	Sn	19 41 53.5	-0.9
JYK	Kaneyama	1.41	301	P	Pn	19 41 37.0	-0.9
JYK				*e*S	Sn	19 41 54.2	-1.5
JFT	Otama	1.42	241	P	Pn	19 41 37.6	-0.6
JFT				S	Sn	19 41 55.1	-1.1
JYS	Shirataka	1.45	271	P	Pn	19 41 37.8	-0.7
JRG	Rokugo	1.55	320	P	Pn	19 41 39.2	-0.6
JRG				S	Sn	19 41 59.3	+0.2
JYA	Atsumi	1.77	283	P	Pn	19 41 41.9	-0.8
MJAR	Matsushiro Arr	3.38	242	P	Pn	19 42 05.5	+0.8
	0.9nm,0.3s,baz=99,slow=23,SNR=37						
MAT	Matsushiro	3.39	242	P	Pn	19 42 05.4	+0.7
MAT				*e*S	Sn	19 42 44.9	+1.2
JHJ	Hachijo jima 2	5.37	199	P	Pn	19 42 30.2	-1.5
	13nm,0.3s,baz=29,slow=19,SNR=4.6						
JHJ				S	Sn	19 43 26.4	-5.8
	37nm,0.3s,baz=131,slow=22,SNR=5.6						
ASAJ	Asahikawa	5.92	5	P	Pn	19 42 37.7	-1.6
	2.1nm,0.3s,baz=192,slow=18,SNR=49						
ASAJ				S	Sn	19 43 41.3	-4.4
	0.4nm,0.3s,baz=132,slow=32,SNR=2.2						
USRK	Ussuriysk Ar.	9.57	312	P	Pn	19 43 29.6	+0.5
	baz=122,slow=14,SNR=17						
KSRS	Korea Array	11.09	270	P	Pn	19 43 51.9	+2.1
	0.2nm,0.3s,baz=80,slow=14,SNR=3.2						
SEY	Seymchan	25.56	11	P	P	19 46 37.0	+0.7
	0.7nm,0.6s,baz=219,slow=6.6,SNR=4.2						
SONM	Songino Array	27.48	302	P	P	19 46 53.0	-0.9
	0.3nm,0.4s,baz=99,slow=7.6,SNR=3.6						
H11N2	WAKE ISLAND Hy	28.44	123	T	T	20 17 26.3	
	baz=316,slow=75,SNR=71						
H11N1	WAKE ISLAND Hy	28.45	123	T	T	20 17 25.6	
	baz=316,slow=75,SNR=77						
H11N3	WAKE ISLAND Hy	28.45	123	T	T	20 17 26.9	
	baz=316,slow=75,SNR=43						
H11S1	WAKE ISLAND Hy	29.19	125	T	T	20 18 15.8	
	baz=317,slow=76,SNR=40						
H11S3	WAKE ISLAND Hy	29.19	125	T	T	20 18 21.2	
	baz=317,slow=76,SNR=37						
H11S2	WAKE ISLAND Hy	29.21	125	T	T	20 18 21.7	
	baz=317,slow=76,SNR=29						
ZALV	Zalesovo Beam	41.42	311	P	P	19 48 53.0	-0.6
	0.5nm,0.4s,baz=87,slow=8.9,SNR=3.2						
MKAR	Makanchi Array	43.84	301	P	P	19 49 13.6	+0.2
	0.9nm,0.6s,baz=86,slow=10,SNR=11						
MKAR				pP	pP	19 49 35.0	+4.3
	0.4nm,0.6s,baz=85,slow=9.7,SNR=3.4						
KURBB	Kurchatov Arra	45.60	307	P	P	19 49 26.7	-0.5
	0.8nm,0.4s,baz=83,slow=8.2,SNR=7.1						
KURBB				pP	pP	19 49 49.0	+4.4
	1.0nm,0.6s,baz=84,slow=8.2,SNR=4.8						
ILAR	Eielson Array	48.29	33	P	P	19 49 48.4	+0.4
	0.3nm,0.7s,baz=268,slow=6.9,SNR=4.4						
WRA	Warramunga Arr	58.28	188	P	P	19 51 00.6	-1.1
	0.5nm,0.5s,baz=6.5,slow=7.1,SNR=15						
WRA				pP	pP	19 51 20.2	+0.6
	0.3nm,0.5s,baz=3.8,slow=7.4,SNR=2.3						
ASAR	Alice Springs	62.01	188	P	P	19 51 26.9	-0.3
	0.4nm,0.7s,baz=12,slow=4.4,SNR=6.7						
FINES	FINESS Array B	67.96	332	P	P	19 52 04.8	-0.5
	1.8nm,1.0s,baz=32,slow=7.6,SNR=4.0						
AKASG	Malin Array Be	73.61	322	P	P	19 52 39.2	-0.5
	0.1nm,0.2s,baz=42,slow=6.2,SNR=4.1						

IDC 13 19:43:24.8±10.0, 21°.86S×177°.37W, h0^{km}, mb3.6/3, mb1 3.9/3, mb1mx3.6/41, mbtmp3.6/3, MS4.3/3, Ms1 4.3/3, ms1mx3.6/29, Error ellipse: s-maj=324.7km s-min=91.6km az=138.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	33.97	266	LR	LR	20 03 06.6	
	comp=Z,724nm,21.0s,baz=88,slow=35						
ASAR	Alice Springs	44.80	258	P	P	19 51 41.3	+0.6
	0.2nm,0.7s,baz=92,slow=7.3,SNR=4.2						
ASAR				LR	LR	20 10 03.3	
	comp=Z,420nm,21.7s,baz=61,slow=36						
WRA	Warramunga Arr	45.01	263	P	P	19 51 41.7	-0.7
	0.7nm,0.5s,baz=102,slow=8.6,SNR=18						
VNDA	Vanda	56.61	185	LR	LR	20 13 54.3	
	comp=Z,214nm,20.8s,baz=24,slow=32						
CMAR	Chiang Mai Arr	91.12	289	P	P	19 56 31.9	-0.1
	0.8nm,0.9s,baz=128,slow=2.2,SNR=6.4						

IDC 13 19:45:58.8±2.1, 25°.57N×61°.52E, h0^{km}, mb3.6/9, mb1 3.6/9, mb1mx3.5/51, mbtmp3.6/9, Error ellipse: s-maj=51.2km s-min=23.5km az=165.0
DSN 13 19:46:03.8±2.3, 25°.47N×61°.37E, h10^{km}, ML4.4/5, Error ellipse: s-maj=53.4km s-min=13.9km az=18.0
OMAN 13 19:46:04.2±1.9, 25°.61N×61°.37E, h19^{km}, ml3.8/6, Error ellipse: s-maj=24.1km s-min=17.1km az=131.0
ISC 13 19:46:00.4±0.8, 25°.63N±0°.09×61°.58E±0°.07, h10^{km}, n22, σ1^{s}.31/28, mb3.6/8, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIDO	Bidbid	3.79	237	P	Pn	19 46 59.5	+0.7
BIDO				S	Sn	19 47 43.4	0.0
WBK	Wadi Bani Khal	3.84	219	P	Pn	19 47 00.4	+0.8
	SNR=26						
WBK				S	Sn	19 47 44.4	-0.5
BANOM	Banah	4.77	275	*i* P	Pn	19 47 13.9	+1.5
	SNR=21						
BANOM				S	Sn	19 48 07.7	-0.1
BANOM	Banah	4.77	275	P	Pn	19 47 12.3	-0.1
MDH	Madha	4.79	267	P	Pn	19 47 12.3	-0.3
SOHO	SOHO	4.82	253	P	Pn	19 47 12.3	-0.8
	SNR=9.3						
SOHO				S	Sn	19 48 06.5	-2.5
UOSS	Minazif	4.92	263	*i* P	Pn	19 47 13.5	-0.9
	SNR=9.3						
UOSS	Minazif	4.92	263	P	Pn	19 47 13.7	-0.6
UOSS				S	Sn	19 48 09.3	-2.0
SHME	Shamm	4.92	276	*i* P	Pn	19 47 15.7	+1.2
	SNR=11						
HATD	Hatta, Dubai	5.00	262	P	Pn	19 47 17.0	+1.4
ASHO	Ashiyiah	5.09	260	*i* P	Pn	19 47 17.4	+0.6
	SNR=44						
ASHO	Ashiyiah	5.09	260	P	Pn	19 47 18.9	+2.0
	SNR=46						
ASHO				S	Sn	19 48 16.9	+1.1
THW	Thamme Wali	11.38	49	P	Pn	19 48 40.0	-3.1
AAK	Ala-Archa	20.01	29	P	P	19 50 34.5	+1.2
	1.0nm,0.6s,baz=204,slow=11,SNR=2.6						
MKAR	Makanchi Array	26.78	33	P	P	19 51 40.2	-0.2
	0.7nm,0.7s,baz=217,slow=7.3,SNR=6.7						
BRTR	Keskin Array B	27.27	308	P	P	19 51 45.1	+0.1
	0.5nm,0.8s,baz=110,slow=8.0,SNR=2.0						
BVAR	Borovoye Array	28.15	11	P	P	19 51 54.6	+2.0
	0.4nm,0.5s,baz=202,slow=11,SNR=1.7						
AKASG	Malin Array Be	35.22	324	P	P	19 52 55.3	+0.6
	0.4nm,0.3s,baz=121,slow=7.9,SNR=3.3						
SONM	Songino Array	41.46	46	P	P	19 53 48.4	+0.9
	0.4nm,0.8s,baz=247,slow=7.5,SNR=3.0						
FINES	FINESS Array B	43.08	336	P	P	19 53 59.2	-1.1
	1.0nm,0.7s,baz=127,slow=11,SNR=1.3						

KSRS	Korea Array	56.71	61	P	P	19 55 44.9	+0.6
	0.9nm,0.7s,baz=268,slow=8.5,SNR=1.8						
TORD	Torodi Ar. Bea	57.43	270	P	P	19 55 49.3	-0.4
	0.9nm,0.8s,baz=65,slow=6.1,SNR=5.5						

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*IDC **13** 20:01:25.9±0.8, 33°.11N×87°.27E, h0km, mb3.8/12, mb1 3.9/16, mb1mx3.8/54, mbtmp3.8/16, ML2.6/3, MS4.0/2, Ms1 4.0/2, ms1mx3.2/40, Error ellipse: s-maj=24.5km s-min=15.2km az=53.0*

ISC 13 20:01:31.3±0.7**, 33°.24N**±0°.08×**87°.4E**±0°.1**, h35**km**, n29,** σ**1.s00**/26**, mb3.9**/10**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUN	Gumba	5.47	194	eP	Pn	20 02 50.9	+0.3
	21nm,0.6s						
JIRN	Jiri	5.66	191	eP	Pn	20 02 54.7	+1.5
	14nm,0.4s						
KKN	Kakani	5.73	199	eP	Pn	20 02 55.0	+0.9
DANN	Dangsing	5.78	213	eP	Pn	20 02 54.3	-0.6
	9.4nm,0.4s						
TAPN	Taplejung	5.88	177	eP	Pn	20 02 58.2	+1.9
	13nm,0.4s						
PKIN	Phulchoki	5.90	197	eP	Pn	20 02 56.7	+0.2
	13nm,0.5s						
PKI	Pulchoki	5.90	197	eP	Pn	20 02 57.1	+0.5
	14nm,0.4s						
DMN	Daman	5.95	200	eP	Pn	20 02 58.1	+1.0
	22nm,0.5s						
RAMN	Ramite	6.31	186	eP	Pn	20 03 01.3	-0.8
	10.0nm,0.4s						
ODAN	Odare	6.36	180	eP	Pn	20 03 03.6	+0.8
	12nm,0.5s						
AAK	Ala-Archa	13.81	316	Pn	Pn	20 04 44.9	+0.2
	0.1nm,0.3s,baz=170,slow=18,SNR=1.9						
MKAR	Makanchi Array	14.08	346	Pn	Pn	20 04 47.2	-1.0
	0.1nm,0.3s,baz=149,slow=14,SNR=7.5						
CMAR	Chiang Mai Arr	18.01	142	P	Pn	20 05 36.6	-2.4
	baz=325,slow=12,SNR=9.4						
KURBB	Kurchatov Arra	18.55	342	P	P	20 05 44.6	-0.1
	0.0nm,0.3s,baz=154,slow=12,SNR=5.4						
SONM	Songino Array	20.45	39	P	Pn	20 06 08.4	+0.3
	3.2nm,0.8s,baz=227,slow=12,SNR=32						
ZALV	Zalesovo Beam	20.78	356	P	P	20 06 09.4	+0.3
	2.5nm,0.6s,baz=179,slow=10,SNR=17						
BVAR	Borovoye Array	23.22	333	P	P	20 06 36.2	+1.1
	0.2nm,0.3s,baz=134,slow=8.5,SNR=3.8						
GEYT	Alibeck	24.19	289	P	P	20 06 45.5	+0.9
	3.4nm,0.9s,baz=139,slow=7.0,SNR=6.3						
FINES	FINESS Array B	47.78	325	P	P	20 10 05.4	+0.6
	2.7nm,0.9s,baz=106,slow=10,SNR=7.4						
MA2	Magadan	48.65	37	P	P	20 10 11.3	-0.2
	1.7nm,0.3s,baz=285,slow=10.0,SNR=3.5						
NB2	NORSAR Subarra	54.95	325	P	P	20 10 58.1	-0.5
	comp=Z,1.3nm,0.7s,baz=84,slow=7.4						
NOA	NORSAR Array B	54.95	325	P	P	20 10 58.2	-0.3
	comp=Z,1.3nm,0.7s,baz=84,slow=7.3,SNR=5.0						
KMBO	Kilima Mbogo	58.22	244	LR	LR	20 38 08.2	
	comp=Z,422nm,19.8s,baz=279,slow=38						
WRA	Warramunga Arr	69.33	133	P	P	20 12 35.4	-0.1
	comp=Z,2.1nm,0.8s,baz=325,slow=6.3,SNR=14						
KRVT	Keravat (AS076	71.52	108	LR	LR	20 42 08.7	
	comp=Z,40nm,22.0s,baz=143,slow=34						
ASAR	Alice Springs	71.89	136	P	P	20 12 51.5	+0.5
	comp=Z,1.2nm,0.8s,baz=325,slow=6.6,SNR=14						
ILAR	Eielson Array	73.55	21	P	P	20 13 01.7	+1.4
	comp=Z,0.3nm,0.8s,baz=317,slow=6.2,SNR=3.2						
TORD	Torodi Ar. Bea	79.35	279	P	P	20 13 32.6	-1.4
	comp=Z,0.5nm,0.7s,baz=37,slow=6.0,SNR=3.2						
YKA	Yellowknife Ar	82.97	10	P	P	20 13 52.3	0.0
	comp=Z,0.7nm,0.8s,baz=339,slow=4.9,SNR=8.9						

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*IDC **13** 20:05:16.3±2.9, 27°.88N×93°.44E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.2/49, mbtmp3.3/4, ML3.5/1, Error ellipse: s-maj=230.4km s-min=28.7km az=62.0*

*BJI **13** 20:05:18.5±0.0, 27°.16N×92°.70E, h6km, mb3.5/1, ML3.9/1*

*NDI **13** 20:05:18.9±1.9, 27°.51N×92°.68E, h10km, ML3.7*

ISC 13 20:05:17.3±0.9**, 27°.59N**±0°.06×**92°.78E**±0°.06**, h10**km**, n10,** σ**2.s13**/15**, Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEZP	TEZPUR	0.96	179	eP	Pg	20 05 36.0	+0.2
TEZP				eS	Sg	20 05 48.4	0.0
TEZP				IAML		20 05 50.2	
	comp=E,6μm,0.1s						
TEZP				IAML		20 05 50.2	
	comp=N,5μm,0.0s						
SHL	Shillong	2.17	202	eP	Pn	20 05 52.8	-0.8
SHL				eS	Sn	20 06 21.9	+1.4
SHL				IAML		20 06 23.8	
	comp=E,839nm,0.1s						
SHL				IAML		20 06 24.4	
	comp=N,668nm,0.5s						
KOHI	KOHIMA	2.20	147	eP	Pn	20 05 55.6	+1.6
KOHI				eS	Sg	20 06 29.4	+1.3
KOHI				IAML		20 06 34.0	
	comp=E,228nm,0.6s						
KOHI				IAML		20 06 35.5	
	comp=N,224nm,0.2s						
LKP	Lekhapani	2.73	95	eP	Pb	20 06 04.5	-1.7
LKP				eS	Sb	20 06 37.7	-2.1
LKP				IAML		20 07 00.5	
	comp=N,935nm,0.5s						
LKP				IAML		20 07 00.8	
	comp=E,749nm,0.3s						
GTK	Tadong	3.73	267	eP	Pn	20 06 15.1	+0.1
GTK				eS	Sn	20 06 56.9	-2.2
GTK				IAML		20 07 16.3	
	comp=N,303nm,0.4s						
GTK				IAML		20 07 16.3	
	comp=E,198nm,0.2s						
CMAR	Chiang Mai Arr	10.71	147	Pn	Pn	20 07 50.6	-0.1
	comp=E,0.1nm,0.3s,baz=328,slow=13,SNR=3.1						
WMQ	Urumqi	16.71	347	eP	P	20 09 19.8	+5.9
MKAR	Makanchi Array	20.88	339	P	P	20 09 59.5	-0.1
	comp=E,0.2nm,0.6s,baz=144,slow=11,SNR=4.1						
WRA	Warramunga Arr	62.05	135	P	P	20 15 37.5	-0.7
	comp=E,0.5nm,0.5s,baz=319,slow=7.6,SNR=15						
ASAR	Alice Springs	64.58	138	P	P	20 15 54.4	-0.6
	comp=E,0.3nm,0.5s,baz=320,slow=6.4,SNR=8.8						

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*JMA **13** 20:05:58.2±0.1, 39°.13N×142°.38E, h29km±1km, M3.8*

JMA Felt I J1.

*IDC **13** 20:06:03.9±2.2, 39°.05N×142°.36E, h76km±19km, mb3.4/6, mb1 3.5/8, mb1mx3.2/37, mbtmp3.7/8, Error ellipse: s-maj=24.9km s-min=10.8km az=111.0*

ISC 13 20:05:59.1±1.9**, 39°.11N**±0°.04×**142°.31E**±0°.09**, h23**km±13km**, n25,** σ**1.s98**/31**, mb3.6**/6**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.50	267	P	Pb	20 06 09.3	+0.1
OFUJ				eS	Sb	20 06 16.9	+0.8
MIYJ	Miyakonagasawa	0.60	321	P	Pb	20 06 10.2	-0.8
MIYJ				S	Sb	20 06 18.5	-0.6
JKMT	Kesennumamotoy	0.71	246	P	Pb	20 06 12.4	-0.5
JKMT				S	Sb	20 06 22.3	0.0
JMK	Ichinoseki	0.86	260	P	Pb	20 06 14.9	-0.5
JMK				S	Sb	20 06 26.9	+0.4
JOM	Ohasama	0.87	295	P	Pb	20 06 15.1	-0.4
JOM				S	Sb	20 06 26.9	+0.2
JTH	Tanohata	0.90	338	P	Pb	20 06 15.1	-0.9
JIO	Ouri	0.99	229	P	Pn	20 06 16.0	-1.6
JIO				eS	Sb	20 06 28.8	-1.5
JKZ	Kuzumaki	1.16	320	P	Pn	20 06 19.1	-0.8
JKZ				S	Sn	20 06 34.5	-0.5
JRG	Rokugo	1.33	283	P	Pb	20 06 22.6	-0.8
JRG				S	Sb	20 06 41.6	+1.6
JANG	Nango	1.40	334	P	Pn	20 06 22.5	-0.8
JANG				S	Sn	20 06 40.9	-0.1
MJAR	Matsushiro Arr	4.13	233	P	Pn	20 07 02.7	+1.9
	0.5nm,0.3s,baz=39,slow=13,SNR=30						
MJAR				S	Sn	20 07 52.6	+4.2
	baz=256,slow=31,SNR=2.1						
MAT	Matsushiro	4.13	233	P	Pn	20 07 02.9	+2.1
MAT				eS	Sn	20 07 51.7	+3.3
ASAJ	Asahikawa	5.01	2	P	Pn	20 07 16.1	+3.3
	0.4nm,0.3s,baz=177,slow=12,SNR=5.6						
ASAJ				S	Sn	20 08 16.1	+6.2
	0.1nm,0.3s,baz=342,slow=17,SNR=3.2						
H11N2	WAKE ISLAND Hy	28.68	125	T	T	20 42 16.5	
	baz=318,slow=75,SNR=8.3						
H11N1	WAKE ISLAND Hy	28.69	125	T	T	20 42 17.1	
	baz=318,slow=75,SNR=7.7						
H11N3	WAKE ISLAND Hy	28.70	125	T	T	20 42 17.7	
	baz=318,slow=75,SNR=4.1						
H11S1	WAKE ISLAND Hy	29.47	127	T	T	20 43 30.1	
H11S3	WAKE ISLAND Hy	29.47	127	T	T	20 43 21.6	
H11S2	WAKE ISLAND Hy	29.49	127	T	T	20 43 22.3	
ZALV	Zalesovo Beam	41.07	311	P	P	20 13 39.9	-0.7
	0.6nm,0.4s,baz=90,slow=10,SNR=3.2						
MKAR	Makanchi Array	43.65	300	P	P	20 14 01.4	-0.3
	0.7nm,0.7s,baz=85,slow=9.6,SNR=8.9						
KURBB	Kurchatov Arra	45.31	307	P	P	20 14 13.8	-1.1
	1.0nm,0.5s,baz=80,slow=8.4,SNR=13						
ILAR	Eielson Array	47.37	33	P	P	20 14 29.9	-1.0
	0.3nm,0.6s,baz=264,slow=6.4,SNR=5.6						
WRA	Warramunga Arr	59.21	189	P	P	20 15 56.6	-1.8
	0.6nm,0.4s,baz=5.7,slow=7.0,SNR=24						
ASAR	Alice Springs	62.94	189	P	P	20 16 22.4	-1.2
	0.2nm,0.5s,baz=6.4,slow=5.1,SNR=4.4						

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*SJA **13** 21:14:55.6±0.4, 33°.28S×72°.06W, h10km, ML2.9, MW3.2*

*GUC **13** 21:14:55.7±0.8, 33°.15S×72°.12W, h36km±5km, ML3.4*

ISC 13 21:14:57.6±2.0**, 33°.36S**±0°.05×**71°.95W**±0°.08**, h6**km±13km**, n14,** σ**1.s09**/22**, 2C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MT02	Curacav	0.69	82⇓	eP	Pg	21 15 11.0	+0.1
MT02				eS	Sb	21 15 22.3	+0.5
MT01	Popeta	0.78	131⇓	iP	Pb	21 15 13.7	+0.2
MT01				eS	Sb	21 15 25.4	+1.1
PEL	Peldehue	1.08	79⇓	eP	Pb	21 15 17.5	-1.2
PEL				eS	Sb	21 15 32.9	-0.2
PEL				IAML		21 15 35.7	
	comp=E,1μm,0.3s						
PEL	Peldehue	1.08	79	i P	Pb	21 15 17.8	-1.0
PEL				eS	Sn	21 15 34.4	-0.2
CLCH	Cerro Calan	1.19	92⇓	iP	Pn	21 15 19.6	-1.1
CLCH				i S	Sb	21 15 36.5	+0.4
CLCH				IAML		21 15 41.7	
	comp=E,1μm,0.4s						
MT03	Universidad Ad	1.22	97⇑	iP	Pn	21 15 19.6	-1.6
MT03				eS	Sn	21 15 38.5	+0.5
MT03				IAML		21 15 43.6	
	comp=N,2μm,0.5s						
LMEL	Las Melosas	1.54	109⇑	iP	Pn	21 15 25.4	-0.3
LMEL				eS	Sg	21 15 48.0	+0.9
LMEL				IAML		21 15 51.5	
	comp=N,789nm,0.2s						
GO05	Huala	1.65	179⇓	eP	Pn	21 15 26.5	-0.6
GO05				eS	Sg	21 15 51.0	+0.3
RTLS	Leoncito	2.73	56	i P	Pn	21 15 43.3	+1.1
RTLS				IAML		21 16 27.7	
	comp=Z,32nm,0.4s						
RTCV	Cerro Valdivia	3.24	64	i P	Pb	21 15 53.3	-2.3
RTCV				IAML		21 16 57.9	
	comp=Z,29nm,1.3s						
ACCO	Cerro Coronel	3.69	42	i P	Pn	21 15 56.7	+1.3
ACCO				IAML		21 17 14.9	
	comp=Z,22nm,0.7s						
AMOG	MOGNA	3.80	52	i P	Pn	21 15 57.8	+1.1
AMOG				IAML		21 17 16.3	
	comp=Z,18nm,0.4s						
AROD	Rodeo	3.82	34	i P	Pn	21 15 57.8	+0.6
ACAN	Cantantal	4.16	76	i P	Pn	21 16 03.0	+1.4

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*ARE **13** 21:18:42±0.0, 14°.41S×75°.92W, h39km, Error ellipse: s-maj=0.0km s-min=0.0km az=90.0*

*NEIC **13** 21:18:45.4±2.3, 14°.4S±0°.1×75°.8W±0°.2, h52km±13km, ML4.2(ARE), Error ellipse: s-maj=26.4km s-min=9.0km az=59.0*

*IDC **13** 21:18:46.2±2.5, 14°.29S×75°.83W, h57km±19km, mb3.3/2, mb1 3.8/7, mb1mx3.5/48, mbtmp3.8/7, ML3.9/5, MS2.4/1, Ms1 2.4/1, ms1mx2.3/17, Error ellipse: s-maj=59.4km s-min=11.5km az=53.0*

ISC 13 21:18:43.3±0.9**, 14°.50S**±0°.09×**76°.1W**±0°.1**, h29**km**, n27,** σ**2.s32**/26**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	2.61	343	P	Pn	21 19 22.5	-1.1
	62nm,0.3s,baz=140,slow=12,SNR=40						
NNA				S	Sn	21 19 54.6	+0.2
	189nm,0.3s,baz=223,slow=23,SNR=21						
NNA				LR	LR	21 20 35.8	
	comp=Z,86nm,20.3s,baz=82,slow=44						
NNA	Nana	2.61	343		Pn	21 19 23.2	-0.5
ATAH	Atahualpa	7.67	342	P	Pn	21 20 34.7	+1.2
	2.9nm,0.3s,baz=156,slow=10.0,SNR=9.5						
ATAH				S	Sn	21 22 01.9	+2.3
	1.4nm,0.3s,baz=291,slow=22,SNR=2.0						
MNMC	Minye Minye	7.72	128		Pn	21 20 33.8	-0.3
MNMC				Sn	Sn	21 21 56.8	-4.0
LPAZ	La Paz	7.86	104	P	Pn	21 20 37.5	+1.1
	0.7nm,0.3s,baz=278,slow=8.6,SNR=15						
LPAZ				S	Sn	21 22 09.9	+5.2
	baz=46,slow=18,SNR=2.7						
LPAZ	La Paz	7.86	104		Pn	21 20 38.6	+2.2
LPAZ	La Paz	7.86	104	Pn	Pn	21 20 37.3	+1.0
PB11	IPOC Station P	8.06	131		Pn	21 20 38.8	+0.1
GO01	Chusmiza	8.34	129		Pn	21 20 43.3	+0.4
PB01	IPOC Station P	9.04	137		Pn	21 20 52.8	+0.8
PB04	IPOC Station P	9.60	145	Pn	Pn	21 20 59.2	-0.6
LVC	Limon Verde	10.54	141	P	Pn	21 21 15.1	+2.2
	1.1nm,0.3s,baz=315,slow=11,SNR=3.7						
LVC				S	Sn	21 23 13.3	+3.1
	1.3nm,0.3s,baz=125,slow=21,SNR=4.5						
LVC	Limon Verde	10.54	141		Pn	21 21 12.6	-0.3
SAML	Samuel	13.77	68	Pn	Pn	21 21 52.6	-4.1
GO03	Copiap	14.12	158	Pn	Pn	21 22 03.8	+2.3
SIV	San Ignacio	14.55	98	P	Pn	21 22 05.9	-1.5
	0.4nm,0.3s,baz=280,slow=14,SNR=5.7						
OTAV	Otavalo	14.83	351	Pn	Pn	21 22 11.2	-0.5
TX32	Lajitas Array	51.08	329		pP	21 27 55.1	+2.7
TXAR	Lajitas Array	51.08	329	P	P	21 27 42.4	-1.0
	0.2nm,0.5s,baz=148,slow=8.6,SNR=2.2						
TXAR	Lajitas Array	51.08	329		pP	21 27 55.0	+2.6
TX31	Lajitas Ar. Si	51.08	329		pP	21 27 54.3	+1.9
K22A	Casper	63.38	335		pP	21 29 26.0	+6.7
PSUT	Pine Spring	63.51	328		PcP	21 29 51.5	+3.7
PDAR	Pinedale Array	64.75	333	P	P	21 29 15.3	-4.1
FXWY	Fox Creek	66.09	333		pP	21 29 39.1	+2.0
TORD	Torodi Ar. Bea	81.73	74	P	P	21 30 56.9	-3.1
	0.8nm,0.7s,baz=248,slow=4.7,SNR=4.4						
SONM	Songino Array	146.70	357	PKPbc	PKPdf	21 38 21.5	+0.5
	0.3nm,0.6s,baz=346,slow=3.0,SNR=3.4						

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*KRSC **13** 22:09:49.0±1.2, 53°.00N×160°.28E, h57km±13km, ML4.8, FELT [II-III] at Petropavlovsk, Institute.*

*MOS **13** 22:09:51.2±1.0, 53°.09N×160°.02E, h69km, mb4.2/5, Error ellipse: s-maj=0.1km s-min=0.1km az=103.0*

*NEIC **13** 22:09:53.1±1.6, 53°.13N±0°.10×160°.00E±0°.10, h72km±7km, mb4.2/26, Error ellipse: s-maj=16.6km s-min=1.8km az=150.0*

*IDC **13** 22:09:55.1±1.2, 53°.25N×159°.82E, h87km±10km, mb3.6/20, mb1 3.8/23, mb1mx3.7/44, mbtmp4.0/23, MS3.2/3, Ms1 3.2/3, ms1mx2.8/45, Error ellipse: s-maj=18.0km s-min=10.6km az=146.0*

ISC 13 22:09:50.9±0.7**, 53°.03N**±0°.03×**160°.21E**±0°.03**, h56**km±6km**, n169,** σ**1.s55**/225**, mb4.0**/33**, 3C-6D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.13	300	eP	Pn	22 09 59.4	-0.2
SPN				eS	Sn	22 10 05.2	-0.6
SPN	Mys Shipunski	0.13	300	PN	Pn	22 09 59.4	-0.2
SDLR	Sedlovina	0.84	288	eP	Pn	22 10 06.9	+0.1
SDLR				eS	Sn	22 10 18.5	+0.1
SDLR	Sedlovina	0.84	288	PN	Pn	22 10 06.9	+0.1
SDLR				S	Sn	22 10 18.5	+0.1
UGLR	Uglovaya	0.85	283	eP	Pn	22 10 07.4	+0.4
UGLR				eS	Sn	22 10 19.3	+0.5
UGLR	Uglovaya	0.85	283	PN	Pn	22 10 07.4	+0.4
UGLR				S	Sn	22 10 19.3	+0.5
DALK	Dalny	0.88	271	eP	Pn	22 10 07.0	-0.2
DALK				eS	Sn	22 10 19.6	+0.4
DALK	Dalny	0.88	271	PN	Pn	22 10 07.0	-0.2
DALK				S	Sn	22 10 19.6	+0.4
SMAR	Somma	0.88	286	eP	Pn	22 10 07.3	-0.1
SMAR				eS	Sn	22 10 19.4	-0.2
SMAR	Somma	0.88	286	PN	Pn	22 10 07.3	-0.1
SMAR				S	Sn	22 10 19.4	-0.2
AVH	Avacha	0.92	285	eP	Pn	22 10 08.2	+0.4
AVH				eS	Sn	22 10 20.3	+0.1
AVH	Avacha	0.92	285	PN	Pn	22 10 08.2	+0.4
AVH				S	Sn	22 10 20.3	+0.1
KRER	Koryakskii	0.92	288	eP	Pn	22 10 08.3	+0.4
KRER				eS	Sn	22 10 20.7	+0.2
KRER	Koryakskii	0.92	288	PN	Pn	22 10 08.3	+0.4
KRER				S	Sn	22 10 20.7	+0.2
PET	Petropavlovsk	0.94	270	eP	Pn	22 10 07.8	-0.2
PET				eS	Sn	22 10 20.3	-0.3
PET	Petropavlovsk	0.94	270κ	iPN	Pn	22 10 07.9	-0.1
PET				eS	Sn	22 10 20.0	-0.6
PET				pmax	pmax		
	comp=Z,591nm,0.4s						
PET				smax	smax		
	comp=E,7μm,0.5s						
PET				smax	smax		
	comp=N,9μm,0.6s						
PET	Petropavlovsk	0.94	270	Pn	Pn	22 10 08.0	+0.1
KOK	Koryaka	0.98	286	eP	Pn	22 10 08.8	+0.1
KOK				eS	Sn	22 10 21.3	-0.5
KOK	Koryaka	0.98	286	PN	Pn	22 10 08.8	+0.1
KOK				S	Sn	22 10 21.3	-0.5
KRX	Arik	1.00	290	eP	Pn	22 10 08.9	0.0
KRX				eS	Sn	22 10 21.3	-0.8
KRX	Arik	1.00	290	PN	Pn	22 10 08.9	0.0
KRX				S	Sn	22 10 21.3	-0.8
KII	Karymskiy	1.10	336	eP	Pn	22 10 10.3	+0.1
KII				eS	Sn	22 10 24.6	0.0
KII	Karymskiy	1.10	336	PN	Pn	22 10 10.3	+0.1
KII				S	Sn	22 10 24.6	0.0
RUS	Russkaya	1.20	241	eP	Pn	22 10 11.3	0.0
RUS				eS	Sn	22 10 26.9	+0.3
RUS	Russkaya	1.20	241	PN	Pn	22 10 11.3	0.0
RUS				S	Sn	22 10 26.9	+0.3
KRMR	Karymshinskiy	1.28	262	eP	Pn	22 10 12.7	+0.3
KRMR				eS	Sn	22 10 28.7	+0.2
KRMR	Karymshinskiy	1.28	262	PN	Pn	22 10 12.7	+0.3
KRMR				S	Sn	22 10 28.7	+0.2
MTVR	Mutnovka	1.35	247	eP	Pn	22 10 14.1	+0.5
MTVR				eS	Sn	22 10 31.2	+0.6
MTVR	Mutnovka	1.35	247	PN	Pn	22 10 14.1	+0.5
MTVR				S	Sn	22 10 31.2	+0.6
GRL	Gorelyy	1.39	251	eP	Pn	22 10 14.9	+0.9
GRL				eS	Sn	22 10 32.8	+1.4
GRL	Gorelyy	1.39	251	PN	Pn	22 10 14.9	+0.9
GRL				S	Sn	22 10 32.8	+1.4
PEA0B	Petropavlovsk-	1.52	274d	iPN	Pn	22 10 16.5	+0.8
PEA0B	Petropavlovsk-	1.52	274	Pn	Pn	22 10 16.6	+0.8
PEA0B				Sn	Sn	22 10 35.0	+0.5
PETK	Petropavlovsk-	1.52	274	P	Pn	22 10 16.4	+0.7
	comp=N,216nm,0.3s,baz=108,slow=20,SNR=5236						
PETK				S	Sn	22 10 35.5	+1.1
	comp=N,896nm,0.3s,baz=291,slow=12,SNR=45						
PETK	Petropavlovsk-	1.52	274		Pn	22 10 16.3	+0.6
PETK					Sn	22 10 34.8	+0.4
ASAK	Asacha	1.55	246	eP	Pn	22 10 17.1	+0.9
ASAK				eS	Sn	22 10 37.5	+2.2
ASAK	Asacha	1.55	246	PN	Pn	22 10 17.1	+0.9
ASAK				S	Sn	22 10 37.5	+2.2
MKZ	Mys Kozlova	1.77	30	eP	Pn	22 10 19.0	-0.1
MKZ				eS	Sn	22 10 39.6	-0.9
MKZ	Mys Kozlova	1.77	30	PN	Pn	22 10 19.0	-0.1
MKZ				S	Sn	22 10 39.6	-0.9
KDTR	Khodutka, Kamc	1.79	228	eP	Pn	22 10 19.9	+0.5
KDTR				eS	Sn	22 10 41.3	+0.3
KDTR	Khodutka, Kamc	1.79	228	PN	Pn	22 10 19.9	+0.5
KDTR				S	Sn	22 10 41.3	+0.3
APC	Apacha	1.85	268	eP	Pn	22 10 21.6	+1.4
APC				eS	Sn	22 10 45.4	+3.0
APC	Apacha	1.85	268	PN	Pn	22 10 21.6	+1.4
APC				S	Sn	22 10 45.4	+3.0
KZV	Kizimen	2.09	1	eP	Pn	22 10 24.5	+0.9
KZV				eS	Sn	22 10 49.9	+1.4
KZV	Kizimen	2.09	1	PN	Pn	22 10 24.5	+0.9
KZV				S	Sn	22 10 49.9	+1.4
TUMD	Tumrok D	2.18	3	eP	Pn	22 10 25.3	+0.6
TUMD				eS	Sn	22 10 51.4	+0.9
MIPR	Malaya Ipel'ka	2.24	252	eP	Pn	22 10 26.9	+1.4
MIPR				eS	Sn	22 10 53.9	+2.0
MIPR	Malaya Ipel'ka	2.24	252	PN	Pn	22 10 26.9	+1.4
MIPR				S	Sn	22 10 53.9	+2.0
TUMR	Tumrok	2.26	359	eP	Pn	22 10 27.3	+1.4
TUMR				eS	Sn	22 10 54.4	+1.8
TUMR	Tumrok	2.26	359	PN	Pn	22 10 25.3	-0.6
TUMR				S	Sn	22 10 51.4	-1.2
PAU	Pauzhetka	2.61	234	eP	Pn	22 10 32.5	+1.9
PAU	Pauzhetka	2.61	234	PN	Pn	22 10 32.5	+1.9
KMNR	Kamenistaya	2.73	0	eP	Pn	22 10 34.1	+1.8
KMNR	Kamenistaya	2.73	0	PN	Pn	22 10 34.1	+1.8
BZMR	Bezymyannaya	2.91	3	eP	Pn	22 10 37.1	+2.2
BZMR	Bezymyannaya	2.91	3	PN	Pn	22 10 37.1	+2.2
BZGR	Bezymyannyi-Gr	2.93	5	eP	Pn	22 10 37.2	+2.2
BZGR	Bezymyannyi-Gr	2.93	5	PN	Pn	22 10 37.2	+2.2
KIRR	Kirishev	2.93	1	eP	Pn	22 10 37.0	+1.9
KIRR				eS	Sn	22 11 10.5	+1.4
KIRR	Kirishev	2.93	1	PN	Pn	22 10 37.0	+1.9
KIRR				S	Sn	22 11 10.5	+1.4
KPT	Kopyto	2.94	0	eP	Pn	22 10 36.9	+1.7
KPT	Kopyto	2.94	0	PN	Pn	22 10 36.9	+1.7
ZLN	Zelenaya	3.01	6	eP	Pn	22 10 38.7	+2.5
ZLN	Zelenaya	3.01	6	PN	Pn	22 10 38.7	+2.5
ESO	Esso	3.03	344	eP	Pn	22 10 37.2	+0.8
ESO	Esso	3.03	344	PN	Pn	22 10 37.2	+0.8
LGNR	Loginova	3.07	5	eP	Pn	22 10 39.8	+2.7
LGNR				eS	Sn	22 11 15.8	+3.1
LGNR	Loginova	3.07	5	PN	Pn	22 10 39.8	+2.7
LGNR				S	Sn	22 11 15.8	+3.1
CIRR	Tsirk	3.11	6	eP	Pn	22 10 39.6	+2.1
CIRR				eS	Sn	22 11 16.0	+2.6
CIRR	Tsirk	3.11	6	PN	Pn	22 10 39.6	+2.1
CIRR				S	Sn	22 11 16.0	+2.6
KRSR	Krestovskiy	3.20	4	eP	Pn	22 10 40.4	+1.7
KRSR	Krestovskiy	3.20	4	PN	Pn	22 10 40.4	+1.7
KLY	Klyuchi	3.30	4	eP	Pn	22 10 42.4	+2.4
KLY				eS	Sn	22 11 21.6	+3.7
KLY	Klyuchi	3.30	4	PN	Pn	22 10 42.4	+2.4
KLY				S	Sn	22 11 21.6	+3.7
SRDR	Sredinnyy	3.31	355	eP	Pn	22 10 41.2	+1.1
SRDR	Sredinnyy	3.31	355	PN	Pn	22 10 41.2	+1.1
SKR	Severo-Kuril's	3.46	229	eP	Pn	22 10 43.5	+1.3
SKR				eS	Sn	22 11 21.9	0.0
SKR	Severo-Kuril's	3.46	229	ePN	Pn	22 10 43.7	+1.5
SKR				eS	Sn	22 11 22.6	+0.7
SKR				pmax	pmax		
	comp=Z,33nm,0.6s						
SKR				smax	smax		
	comp=E,506nm,0.6s						
SKR				smax	smax		
	comp=N,405nm,0.5s						
SKR				MLR	MLR		
	comp=Z,400nm,14.0s						
KBTR	Krutoberegovo	3.52	24	eP	Pn	22 10 45.1	+2.0
KBTR				eS	Sn	22 11 24.7	+1.2
KBTR	Krutoberegovo	3.52	24	PN	Pn	22 10 45.1	+2.0
KBTR				S	Sn	22 11 24.7	+1.2
KBG	Krutoberegovo	3.54	23	eP	Pn	22 10 45.5	+2.2
KBG	Krutoberegovo	3.54	23	PN	Pn	22 10 45.5	+2.2
BDR	Baidarnaya	3.59	9	eP	Pn	22 10 46.8	+2.7
BDR				eS	Sn	22 11 27.5	+2.3
BDR	Baidarnaya	3.59	9	PN	Pn	22 10 46.8	+2.7
BDR				S	Sn	22 11 27.5	+2.3
ALID	Alaid	3.61	235	eP	Pn	22 10 46.6	+2.2
ALID	Alaid	3.61	235	PN	Pn	22 10 46.6	+2.2
SRKR	Sorokina	3.67	8	eP	Pn	22 10 47.8	+2.6
SRKR	Sorokina	3.67	8	PN	Pn	22 10 47.8	+2.6
BKI	Bering	4.03	55	eP	Pn	22 10 50.1	+0.2
BKI				eS	Sn	22 11 32.1	-3.7
BKI	Bering	4.03	55	PN	Pn	22 10 50.1	+0.2
MA2	Magadan	8.39	325	LR	LR	22 15 25.5	
	comp=Z,48nm,18.0s,baz=96,slow=41						
SEY	Seymchan	10.75	340	P	Pn	22 12 22.2	+0.3
	comp=Z,0.1nm,0.3s,baz=126,slow=19,SNR=1.6						

JKA	Kamikawa-asahi	14.65	240	P	Pn	22 13 17.1	+2.4
ASAJ	Asahikawa	14.65	240	P	Pn	22 13 17.1	+2.4
	comp=Z,0.8nm,0.3s,baz=88,slow=17,SNR=8.2						
GRNR	Gornyy	14.84	271	⇑iP	P	22 13 22.8	+1.0
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GRNR				MLR	MLR		
	comp=Z,90nm,12.0s						
BILL	Bilibino	15.34	9	⇑eP	P	22 13 26.0	-1.2
ERM	Erimo	15.90	233	P	Pn	22 13 29.0	-1.8
ERM				pmax	pmax		
	comp=Z,47nm,1.2s						
ERM	Erimo	15.90	233	Pn	Pn	22 13 29.0	-1.8
KLR	Kul'dur	18.21	269	P	P	22 13 58.7	-0.3
	comp=Z,0.2nm,0.3s,baz=57,slow=12,SNR=7.5						
KLR	Kul'dur	18.21	269	⇓eP	Pn	22 14 00.2	+0.8
USA0B	Ussuriysk Arra	20.53	256	P	P	22 14 25.5	+1.1
USA0B				pmax	pmax		
	comp=Z,7.0nm,0.8s						
USA0B	Ussuriysk Arra	20.53	256	P	P	22 14 25.5	+1.1
USA0B				IAmb	IAmb	22 14 38.6	
	comp=Z,7.3nm,0.8s						
USRK	Ussuriysk Ar.	20.53	256	P	Pn	22 14 26.1	-1.0
	comp=Z,5.1nm,0.6s,baz=72,slow=16,SNR=9.0						
ANM	Nome	20.93	43	P	P	22 14 26.4	-2.1
ANM				pmax	pmax		
	comp=Z,1.0nm,1.2s						
ANM	Nome	20.93	43	P	P	22 14 26.4	-2.1
MJA0	Matsu Arr-Jizo	22.55	232	eP	P	22 14 45.3	-0.8
MJA0				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MJB9	Matsu-Tunnel	22.56	232	P	P	22 14 46.5	+0.2
MJB9				IAmb	IAmb	22 15 00.5	
	comp=Z,21nm,1.0s						
MAJO	Matsushiro	22.57	232	⇓eP	P	22 14 46.3	0.0
MAJO				pmax	pmax		
	comp=Z,127nm,3.6s						
MAJO	Matsushiro	22.57	232	P	P	22 14 46.5	+0.2
MAJO				IAmb	IAmb	22 15 00.5	
	comp=Z,20nm,1.0s						
MAT	Matsushiro	22.57	232	P	P	22 14 46.7	+0.4
MJAR	Matsushiro Arr	22.57	232	P	P	22 14 46.3	0.0
	comp=Z,4.5nm,0.7s,baz=18,slow=10,SNR=10						
MJAR	Matsushiro Arr	22.57	232	P	P	22 14 46.9	+0.6
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MJAR	Matsushiro Arr	22.57	232	P	P	22 14 46.9	+0.6
RDOG	Red Dog Mine	23.05	35	P	P	22 14 51.0	0.0
RDOG				IAmb	IAmb	22 15 06.1	
	comp=Z,3.6nm,0.7s						
SII	Sitkinak Islan	26.15	64	P	P	22 15 20.8	+1.3
BPAW	Bear Paw Mtn.	27.03	47	P	P	22 15 28.4	+1.0
KTH	Kantishna Hill	27.06	48	P	P	22 15 28.6	+1.0
MLY	Manley	27.17	45	P	P	22 15 29.7	+1.0
CNPM	China Poot	27.19	57	P	P	22 15 30.3	+1.5
CNPM				IAmb	IAmb	22 15 32.1	
	comp=Z,6.4nm,0.8s						
KSRS	Korea Array	27.26	248	P	P	22 15 31.2	+1.6
	comp=Z,1.3nm,0.5s,baz=39,slow=9.9,SNR=4.1						
KSRS				LR	LR	22 27 51.0	
	comp=Z,66nm,18.7s,baz=356,slow=40						
WRH	Wood River Hil	28.30	46	P	P	22 15 40.2	+1.6
WRH				IAmb	IAmb	22 15 54.1	
	comp=Z,3.8nm,1.1s						
KNK	Knik Glacier	28.32	52	P	P	22 15 39.3	+0.3
KNK				IAmb	IAmb	22 15 46.5	
	comp=Z,14nm,1.2s						
SML	Sawmill	28.34	51	P	P	22 15 40.6	+1.5
SML				IAmb	IAmb	22 15 58.8	
	comp=Z,5.5nm,1.1s						
HDA	Harding Lake	28.79	46	P	P	22 15 43.7	+0.6
ILAR	Eielson Array	28.81	45	P	P	22 15 44.1	+1.0
	comp=Z,0.9nm,0.7s,baz=265,slow=7.9,SNR=9.9						
BMAR	Burnt Mountain	29.74	40	P	P	22 15 52.7	+1.3
EGAK	Eagle	31.25	45	P	P	22 16 04.6	-0.1
EGAK				IAmb	IAmb	22 16 20.5	
	comp=Z,3.1nm,1.1s						
H11N2	WAKE ISLAND Hy	33.64	169	T	T	22 52 05.8	
	baz=353,slow=76,SNR=208						
H11N3	WAKE ISLAND Hy	33.66	169	T	T	22 52 19.8	
	baz=353,slow=76,SNR=306						
H11N1	WAKE ISLAND Hy	33.66	169	T	T	22 52 07.0	
	baz=353,slow=76,SNR=265						
INK	Inuvik	33.87	38	P	P	22 16 28.2	+0.6
	comp=Z,0.4nm,0.3s,baz=231,slow=6.5,SNR=4.1						
INK	Inuvik	33.87	38	IAmb	IAmb	22 16 29.0	
	comp=Z,1.9nm,0.9s						
SONM	Songino Array	33.98	283	P	P	22 16 27.8	-1.2
	comp=Z,0.3nm,0.4s,baz=64,slow=7.0,SNR=5.3						
SONM				LR	LR	22 29 38.1	
	comp=Z,79nm,19.4s,baz=10,slow=35						
SONM	Songino Array	33.98	283	IAmb	IAmb	22 16 32.0	
	comp=Z,0.4nm,0.7s						
H11S1	WAKE ISLAND Hy	34.82	169	T	T	22 53 50.0	
	baz=352,slow=76,SNR=38						
H11S3	WAKE ISLAND Hy	34.84	169	T	T	22 53 57.5	
	baz=352,slow=76,SNR=72						
H11S2	WAKE ISLAND Hy	34.84	169	T	T	22 53 54.1	
	baz=352,slow=76,SNR=25						
SIT	Sitka	35.92	57	P	P	22 16 45.8	+0.4
SIT				pmax	pmax		
	comp=Z,57nm,1.2s						
SIT	Sitka	35.92	57	P	P	22 16 45.8	+0.4
C36M	Paulatuk	37.06	35	P	P	22 16 55.8	+0.9
C36M				IAmb	IAmb	22 17 09.6	
	comp=Z,3.2nm,0.9s						
GTA	Gaotai	42.68	277	eP	P	22 17 43.0	+0.9
GTA				pP	pP	22 17 50.4	-6.2
GTA				sP	sP	22 17 55.0	-8.1
YKA	Yellowknife Ar	43.16	43	P	P	22 17 46.6	+1.2
	comp=Z,0.7nm,0.8s,baz=297,slow=7.9,SNR=8.4						
KURK	Kurchatov	47.83	302	deP	P	22 18 19.9	-2.6
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
UWE	Uwekahuna	47.93	117	P	P	22 18 22.9	-0.9
MK31	Makanchi Array	48.25	296	P	P	22 18 23.3	-2.5
MK31				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MK31	Makanchi Array	48.25	296	P	P	22 18 23.3	-2.5
MK31				IAmb	IAmb	22 18 27.7	
	comp=Z,0.8nm,0.5s						
MKAR	Makanchi Array	48.25	296	P	P	22 18 23.4	-2.4
	comp=Z,0.7nm,0.5s,baz=59,slow=5.9,SNR=11						
MKAR	Makanchi Array	48.25	296	P	P	22 18 23.6	-2.2
MKAR	Makanchi Array	48.25	296	P	P	22 18 23.6	-2.2
ARCES	ARCESS Array B	53.37	342	P	P	22 19 02.3	-1.6
	comp=Z,5.0nm,1.1s,baz=34,slow=6.6,SNR=3.3						
ARU	Arti	53.49	317	P	P	22 19 04.6	-0.4
AAK	Ala-Archa	55.17	296	⇑iP	P	22 19 15.2	-2.4
AAK				pmax	pmax		
	comp=Z,8.0nm,2.8s						
NVAR	Mina Array Bea	55.70	70	P	P	22 19 24.1	+2.6
	comp=Z,0.4nm,0.4s,baz=291,slow=7.6,SNR=4.4						
KSH	Kashi	56.49	293	P	P	22 19 29.0	+1.9
KSH				sP	sP	22 19 57.0	+8.5
KSH				PP	PP	22 21 38.0	+5.1
KSH				PcS	PcS	22 24 21.5	-2.6
KSH				S	S	22 27 12.4	-1.8
KSH				ScS	ScS	22 29 06.1	-5.1
PDAR	Pinedale Array	57.49	61	P	P	22 19 36.1	+1.9
	comp=Z,1.9nm,0.8s,baz=1.9,slow=4.5,SNR=5.5						
CMAR	Chiang Mai Arr	58.24	258	P	P	22 19 39.8	+0.3
	comp=Z,0.4nm,0.4s,baz=28,slow=6.1,SNR=3.1						
ULM	Lac du Bonnet	58.81	47	P	P	22 19 44.0	+1.0
	comp=Z,1.0nm,0.4s,baz=340,slow=4.1,SNR=3.1						
ULM	Lac du Bonnet	58.81	47	P	P	22 19 43.7	+0.7
ULM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ULM	Lac du Bonnet	58.81	47	P	P	22 19 43.7	+0.7
ULM				IAmb	IAmb	22 19 44.4	
	comp=Z,1.5nm,0.6s						
FINES	FINESS Array B	60.20	337	P	P	22 19 52.8	+0.4
	comp=Z,2.4nm,1.0s,baz=55,slow=7.2,SNR=3.9						
NIL	Nilore	62.21	290	P	P	22 20 04.9	-1.6
NIL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NIL	Nilore	62.21	290	P	P	22 20 04.9	-1.6
NOA	NORSAR Array B	63.62	344	P	P	22 20 14.1	-1.3
	comp=Z,0.1nm,0.4s,baz=14,slow=5.5,SNR=2.8						
GEYT	Alibeck	67.18	303	P	P	22 20 36.8	-2.0
	comp=Z,0.7nm,0.4s,baz=69,slow=7.9,SNR=3.0						
AKASG	Malin Array Be	68.70	329	P	P	22 20 46.4	-1.6
	comp=Z,0.4nm,0.3s,baz=30,slow=6.9,SNR=4.6						
TXAR	Lajitas Array	70.59	67	P	P	22 21 01.8	+1.6
	comp=Z,2.0nm,0.4s,baz=299,slow=5.0,SNR=48						
WRA	Warramunga Arr	76.06	205	P	P	22 21 32.6	+0.5
	comp=Z,0.6nm,0.6s,baz=24,slow=6.4,SNR=7.7						
WRA	Warramunga Arr	76.06	205	eP	P	22 21 31.6	-0.5
ASAR	Alice Springs	79.73	204	P	P	22 21 53.8	+1.3
	comp=Z,0.9nm,0.5s,baz=18,slow=5.6,SNR=14						

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*TAP **13** 22:21:14.3, 24°.86N×122°.16E, h12^{km}, ML3.6, C*
*JMA **13** 22:21:16.0, 24°.76N×122°.15E, h29^{km}±3^{km}, M3.4*
ISC 13 22:21:14.5±0.9**, 24°.84N**±0°.02×**122°.17E**±0°.02**, h11**^{km}±8^{km}**,**
n111, σ0^s.64/166**, 14C-3D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.24	315	⇑iP	Pg	22 21 19.4	-0.1
	baz=314						
TWB1				i S	Sg	22 21 22.3	-0.5
	baz=314						
EOS1	EOS1	0.29	188	⇑P	Pb	22 21 21.7	0.0
	baz=194						
EOS1				eS	Sb	22 21 26.8	+0.3
	baz=194						
NTC	Toucheng	0.31	273	eP	Pg	22 21 21.4	+0.6
	baz=277						
TIPB	Shuangxi	0.34	293	⇑iP	Pg	22 21 21.5	+0.1
	baz=289						
TIPB				i S	Sg	22 21 26.0	0.0
	baz=289						
TWC	Suao	0.37	232	⇑iP	Pg	22 21 21.9	0.0
	baz=220						
TWC				S	Sg	22 21 26.6	-0.3
	baz=220						
ILA	Ilan	0.39	259	eP	Pg	22 21 22.4	+0.2
	baz=244						
ILA				eS	Sb	22 21 29.2	-0.3
	baz=244						
NWF	Wu-fen Shan	0.42	303	⇑iP	Pg	22 21 23.2	+0.3
	baz=301						
NWF				S	Sg	22 21 28.7	+0.2
	baz=301						
WFSB	Wu-fen Shan	0.42	303	⇑P	Pg	22 21 23.2	+0.4
	baz=301						
WFSB				S	Sg	22 21 29.3	+0.8
	baz=301						
TWE	Neicheng	0.47	256	⇑iP	Pg	22 21 23.8	0.0
	baz=243						
TWE				S	Sg	22 21 30.7	+0.7
	baz=243						
SLBB	Yuanshan	0.50	260	eP	Pg	22 21 23.9	-0.3
	baz=248						
TWA	Mucha	0.55	285	P	Pb	22 21 26.4	+0.2
	baz=282						
TWA				S	Sb	22 21 33.6	-0.6
	baz=282						
ENA	Nanau	0.57	224	eP	Pg	22 21 25.4	-0.1
	baz=212						
ENA				S	Sg	22 21 33.1	+0.1
	baz=212						
ENTT	Nioudou	0.59	250	eP	Pg	22 21 26.0	+0.1
	baz=247						
NHDH	Xindian Distri	0.60	282	eP	Pb	22 21 27.9	+0.9
	baz=280						
NWLT	Wulai	0.61	264	eP	Pg	22 21 26.6	+0.2
	baz=261						
YM01	YM01	0.63	299	⇑iP	Pb	22 21 27.3	-0.2
	baz=298						
YM08	YM08	0.63	303	⇑P	Pg	22 21 27.2	+0.4
	baz=302						
YM11	YM11	0.63	301	⇑iP	Pb	22 21 27.4	-0.2
	baz=299						
TATO	Taipei	0.64	283	⇓P	Pb	22 21 28.2	+0.5
	baz=270						
TAP	Taipei	0.64	288	eP	Pb	22 21 27.7	0.0
	baz=286						
YM10	YM10	0.64	300	⇑iP	Pb	22 21 27.5	-0.2
	baz=298						
NDT	Datong Townshi	0.65	249	eP	Pg	22 21 27.3	+0.3
	baz=247						
NDT				S	Sb	22 21 36.7	-0.1
	baz=247						
YM03	YM03	0.67	301	⇑P	Pg	22 21 27.9	+0.4
	baz=299						
TWY	Chenhua	0.68	310	⇑iP	Pb	22 21 28.3	-0.1
	baz=309						
TWY				S	Sg	22 21 36.7	+0.1
	baz=309						
ANP	Anpu	0.69	300	eP	Pg	22 21 27.9	+0.1
	baz=299						
TWS1	Kuangyinshan	0.73	291	eP	Pb	22 21 29.8	+0.5
	baz=302						
TWS1				eS	Sb	22 21 39.1	-0.3
	baz=302						
YHNB	Yeheng	0.74	257	eP	Pg	22 21 28.7	-0.2
	baz=265						
NSK	Sanguang	0.76	258	eP	Pg	22 21 29.2	0.0
	baz=249						
NSK				eS	Sg	22 21 39.1	0.0
	baz=249						
PCYT	Pengchaiyu	0.79	353	⇑eP	Pg	22 21 29.1	-0.7
JYNG	Yonagunijimaku	0.80	119	P	Pb	22 21 30.5	+0.1
JYNG				S	Sg	22 21 40.9	+0.5
NNSB	Datong	0.83	241	eP	Pg	22 21 30.4	-0.1
	baz=228						
NNSB				eS	Sb	22 21 41.9	-0.3
	baz=228						
NNSH	Datong	0.83	241	eP	Pg	22 21 30.6	+0.1
	baz=230						
NNSH				eS	Sb	22 21 42.3	+0.1
	baz=230						
NNS	Nan Shan	0.83	242	eP	Pg	22 21 30.5	0.0
	baz=229						
NNS				eS	Sg	22 21 41.3	0.0
	baz=229						
WLTB	Daxi	0.84	271	eP	Pb	22 21 31.4	+0.4
	baz=285						
NACB	Ninganchiao	0.85	219	P	Pg	22 21 30.5	-0.3
	baz=207						
NACB				S	Sg	22 21 41.2	-0.6
	baz=207						
YOJ	Yonaguni jima	0.85	116	eP	Pb	22 21 31.5	+0.3
	baz=118						
YOJ				eS	Sb	22 21 42.8	+0.1
	baz=118						
YOJ	Yonaguni jima	0.85	116	P	Pb	22 21 31.3	0.0
YOJ				eS	Sb	22 21 42.6	-0.1
ETLH	Xiulin Townshi	0.89	225	eP	Pg	22 21 31.6	-0.1
	baz=217						
ETLH				eS	Sg	22 21 43.4	+0.1
	baz=217						
NCU	National Centr	0.91	279	eP	Pb	22 21 32.6	+0.4
	baz=276						
NCUH	Zhongli	0.91	278	eP	Pn	22 21 33.2	0.0
	baz=276						
TWD	Chiawan	0.92	215	⇓P	Pg	22 21 32.1	-0.1
	baz=214						
TWD				eS	Sg	22 21 43.9	-0.4
	baz=214						
HWA	Hwalien	1.00	211	eP	Pn	22 21 34.5	+0.1
	baz=215						
ENLB	Shoufeng	1.07	209	P	Pn	22 21 36.0	+0.6
	baz=216						
ENLB				S	Sn	22 21 51.2	+1.0
	baz=216						
LIOB	Emei	1.07	260	P	Pn	22 21 35.7	+0.3
	baz=258						
LIOB				eS	Sn	22 21 50.1	-0.3
	baz=258						
TWT	Tachien	1.08	238	P	Pn	22 21 36.0	+0.3
	baz=228						
TWT				S	Sn	22 21 50.8	0.0
	baz=228						
SBCB	Hsinchu	1.08	268	P	Pg	22 21 35.3	0.0
	baz=285						
SBCB				eS	Sn	22 21 50.0	-0.6
	baz=285						
NSTT	Nanjuang	1.09	259	eP	Pn	22 21 35.9	+0.2
	baz=257						
NSTT				eS	Sg	22 21 49.5	-0.1
	baz=257						
TDCB	Techi	1.09	238	P	Pb	22 21 35.4	-0.1
	baz=228						
TDCB				S	Sb	22 21 50.0	+0.1
	baz=228						
CHGB	Renai	1.20	230	eP	Pb	22 21 37.3	0.0
	baz=228						
CHGB				S	Sg	22 21 52.9	-0.1
	baz=228						
ESL	Shilin	1.22	214	P	Pn	22 21 37.5	-0.1
	baz=213						
ESL				S	Sn	22 21 54.0	-0.1
	baz=213						
WHP	Taichung City	1.25	244	eP	Pg	22 21 39.0	+0.5
	baz=241						
WHP				eS	Sn	22 21 55.9	+1.0
	baz=241						
OWD	Renai	1.27	226	eP	Pg	22 21 38.6	-0.2
	baz=225						
OWD				eS	Sb	22 21 54.4	-0.4
	baz=225						
NMLH	Miaoli	1.29	257	eP	Pg	22 21 40.2	+0.9
	baz=254						
NMLH				eS	Sg	22 21 58.1	+2.0
	baz=254						
EGFH	Guangfu	1.35	210	eP	Pb	22 21 39.7	-0.1
	baz=225						
EGFH				eS	Sg	22 21 58.7	+0.8
	baz=225						
NSY	Sanyi	1.35	252	eP	Pg	22 21 41.4	+1.0
	baz=262						
NSY				eS	Sg	22 21 59.2	+1.1
	baz=262						
TWQ1	Liyutan	1.36	249	eP	Pg	22 21 41.3	+0.6
	baz=260						
TWQ1				eS	Sg	22 21 59.7	+1.2
	baz=260						
DPDB	Guoxing	1.39	235	eP	Pg	22 21 41.5	+0.3
	baz=222						
VWDT	VWDT	1.43	221	⇓P	Pg	22 21 41.7	-0.3
	baz=228						
VWDT				eS	Sg	22 22 00.5	-0.1
	baz=228						
WDJ	Dajia District	1.48	251	eP	Pg	22 21 42.9	0.0
	baz=269						
SMLT	Sun Moon Lake	1.50	231	eP	Pg	22 21 43.3	0.0
	baz=229						
SMLT				eS	Sg	22 22 02.3	-0.5
	baz=229						
IRIF	Iriomote-Funau	1.50	109	P	Pn	22 21 41.8	+0.4
HGSD	Ruisui	1.50	207	eP	Pg	22 21 43.4	0.0
	baz=189						
HGSD				eS	Sg	22 22 03.8	+0.9
	baz=189						
TYC	Yuchr	1.52	233	P	Pg	22 21 43.4	-0.2
	baz=223						
TYC				eS	Sb	22 22 02.0	0.0
	baz=223						
SSLB	Suanglung	1.53	227	P	Pb	22 21 43.2	+0.3
	baz=225						
SSLB				S	Sb	22 22 02.4	+0.2
	baz=225						
TCU	Taichung	1.53	244	eP	Pg	22 21 44.8	+1.0
	baz=231						
EHY	Hungye	1.54	211	eP	Pn	22 21 41.5	-0.4
	baz=207						
YULB	Yu-li	1.65	209	eP	Pn	22 21 43.3	-0.1
	baz=205						
WHYT	Xinyi Township	1.66	227	eP	Pg	22 21 46.4	+0.1
	baz=225						
WHYT				eS	Sg	22 22 07.5	-0.3
	baz=225						
WNT	Mingjian	1.66	235	eP	Pb	22 21 45.1	0.0
	baz=230						
WJS	Zhushan	1.66	233	eP	Pg	22 21 46.7	+0.3
	baz=230						
WJS				eS	Sg	22 22 10.0	+2.1
	baz=230						
HATJ	Hateruma jima	1.68	117	P	Pn	22 21 43.6	-0.2
HATJ				eS	Sn	22 22 04.4	-0.9
TWF1	Yuli	1.68	209	eP	Pn	22 21 44.0	+0.1
	baz=206						
TWF1				eS	Sb	22 22 06.4	-0.3
	baz=206						
YUS	Yu-Shan	1.75	220	eP	Pb	22 21 47.2	+0.3
	baz=200						
YUS				eS	Sg	22 22 10.2	-0.6
	baz=200						
JKRS	Kuro-shima	1.78	109	P	Pn	22 21 45.0	-0.1
JKRS				eS	Sn	22 22 06.5	-1.2
ALS	Alishan	1.82	224	eP	Pg	22 21 49.0	-0.4
	baz=207						
ALS				eS	Sg	22 22 12.6	-0.5
	baz=207						
FULB	Fuli	1.82	206	eP	Pb	22 21 46.9	-1.0
	baz=219						
FULB				eS	Sb	22 22 10.9	+0.2
	baz=219						
CHN5	Tsauling	1.84	228	eP	Pg	22 21 49.1	-0.7
	baz=223						
JIJ	Ishigaki jima	1.85	104	P	Pn	22 21 46.9	+0.7
WDLH	Douliu	1.88	233	eP	Pb	22 21 49.0	+0.2
	baz=228						
CHKT	Chengkung	1.88	203	eP	Pn	22 21 47.3	+0.7
	baz=182						
RLNB	Erlin	1.90	241	eP	Pb	22 21 48.2	-1.0
	baz=235						
ELDTW	Lidau	1.95	213	eP	Pn	22 21 48.3	+0.6
	baz=194						
JISG	Ishigakijimahi	1.96	97	P	Pn	22 21 48.7	+1.0
JISG				eS	Sn	22 22 12.8	+0.5
CHN2	Minshiung	2.02	230	eP	Pb	22 21 51.7	+0.4
	baz=225						
CHN4	Tsaushan	2.07	225	eP	Pb	22 21 52.0	-0.1
	baz=219						
CHY	Chiayi	2.08	230	eP	Pb	22 21 52.0	-0.3
	baz=225						
TPUB	Ta-pu	2.08	223	eP	Pb	22 21 52.1	-0.2
	baz=203						
TPUB				eS	Sg	22 22 20.2	-1.3
	baz=203						
STYT	Tauyuan	2.11	218	eP	Pb	22 21 52.7	-0.2
	baz=197						
WTP	Ta-pu	2.13	222	P	Pb	22 21 53.0	-0.2
	baz=203						
WTP				eS	Sg	22 22 22.0	-1.0
	baz=203						
WSF	Szhu	2.15	237	eP	Pn	22 21 51.5	+1.3
	baz=230						
SNST	Tainan City	2.22	224	eP	Pb	22 21 54.1	-0.6
	baz=218						
CHN1	Nanshi	2.23	223	eP	Pb	22 21 53.8	-1.1
	baz=219						
CHN1				eS	Sb	22 22 22.8	+0.3
	baz=219						
TWG	Pinlang	2.25	207	eP	Pn	22 21 52.5	+0.8
	baz=190						
TWG				eS	Sn	22 22 19.8	+0.4
	baz=190						
TWGBT	Beinan	2.25	207	eP	Pn	22 21 52.1	+0.4
	baz=188						
PTTC	Pingtan	2.27	287	eP	Pn	22 21 50.8	-1.3
	baz=289						
JTJ	Tarama	2.31	94	P	Pn	22 21 54.2	+1.7
SLGT	Liugui	2.31	218	eP	Pb	22 21 55.7	-0.4
	baz=213						
MATB	Ma-tsu	2.40	303	eP	Pn	22 21 53.5	-0.3
	baz=306						
VWUC	VWUC	2.48	274	eP	Pn	22 21 53.9	-0.9
	baz=274						
SSD	Sandimen	2.52	214	eP	Pb	22 21 58.7	-1.0
	baz=193						
MASBT	Mashibuluo	2.63	213	eP	Pb	22 21 59.5	-2.2
	baz=192						
PHUB	P'eng-hu	2.72	241	eP	Pn	22 21 58.5	+0.4
	baz=234						
EAST	Anshuo	2.73	207	eP	Pn	22 21 59.2	+0.8
	baz=191						
XPSS	Dashiqiu	2.74	320	eP	Pn	22 21 57.4	-1.0
	baz=325						
LYJJ	Jianjiangzhen	2.77	309	eP	Pn	22 21 58.4	-0.4
	baz=313						
PTMZ	Houxiangcun	2.78	275	eP	Pn	22 21 58.2	-0.8
	baz=275						
SCZT	Fangliau	2.84	210	eP	Pb	22 22 02.6	-2.6
	baz=192						
MHZQ	Yeshan	3.11	295	eP	Pn	22 22 03.9	+0.5
	baz=297						
TWK1	Hengchun	3.14	204	eP	Pn	22 22 05.4	+1.4
	baz=187						
KNMB	Chin-men Tao	3.46	265	eP	Pn	22 22 07.7	-0.6
	baz=262						
AXDP	Jialang	3.82	272	eP	Pn	22 22 12.9	-0.4
	baz=271						

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*BJI **13** 22:31:27.2±0.0, 17°.16S×177°.83W, h146^{km}, mB5.3/20,* *mb4.8/24*

*NEIC **13** 22:32:09.4±1.6, 17°.8S±0°.1×178°.6W±0°.1, h553^{km}±6^{km}, mb4.5/244, Error ellipse: s-maj=16.6km s-min=12.8km az=130.0*

*IDC **13** 22:32:09.2±1.2, 17°.85S×178°.68W, h545^{km}±14^{km}, mb3.9/22, mb1 4.1/24, mb1mx4.0/33, mbtmp4.8/24, Error ellipse: s-maj=13.5km s-min=7.8km az=137.0*

ISC 13 22:32:11.4±0.3**, 17°.78S**±0°.07×**178°.59W**±0°.06**, h579**^{km}**, n570,** σ1§**21**/552**, mb4.5**/139**, 47C-7D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.20	270	P	P	22 33 29.4	-0.8
AFI	Afiamalu	7.60	61	P	P	22 34 03.0	-3.4
	38nm,0.3s,baz=3.4,slow=2.2,SNR=51						
AFI				S	S	22 35 34.0	-6.5
	2.3nm,0.3s,baz=350,slow=13,SNR=1.6						
NIUE	Niue	8.33	100	P	P	22 34 13.1	-0.1
	baz=8.3,SNR=3.2						
NIUE	Niue	8.33	100	P	P	22 34 10.3	-3.0
DZM	Mont Dzumac	14.70	251	P	P	22 35 15.9	-1.6
	3.1nm,0.3s,baz=176,slow=19,SNR=23						
DZM	Mont Dzumac	14.70	251	P	P	22 35 15.6	-1.9
OUZ	Omahuta	18.71	200	P	P	22 35 53.3	-1.0
MXZ	Matakaoa Point	19.90	187	P	P	22 36 03.3	-1.7
WHRZ	Whale Island	20.38	190	P	P	22 36 16.9	+7.5
URZ	Urewera	20.75	190	P	P	22 36 09.9	-2.8
	23nm,0.6s,baz=0.8,slow=6.2,SNR=13						
URZ	Urewera	20.75	190	P	P	22 36 10.1	-2.6
TARA	Tarawa	20.77	335	P	P	22 36 11.2	-2.0
RAGZ	Rawiri	20.93	189	P	P	22 36 13.9	-0.5
RTZ	Ruatahuna	21.12	190	P	P	22 36 13.6	-2.5
SNGZ	Shannon Statio	21.23	189	P	P	22 36 16.5	-0.5
MTHZ	Maungataniwha	21.37	190	P	P	22 36 17.9	-0.4
RAHZ	Arahi	21.40	189	P	P	22 36 17.6	-0.9
HIZ	Hauiti	21.44	194	P	P	22 36 17.8	-1.1
HIZ				IAmb	IAmb	22 36 31.9	
	comp=Z,12nm,0.7s						
BKZ	Black Stump Fm	21.74	190	P	P	22 36 19.2	-2.4
BKZ				IAmb	IAmb	22 36 33.3	
	comp=Z,6.3nm,0.7s						
BKZ	Black Stump Fm	21.74	190	P	P	22 36 19.5	-2.1
MCHZ	McNeill Hill	21.97	190	P	P	22 36 22.8	-0.9
KWHZ	Kaweka Forest	22.00	190	P	P	22 36 21.9	-2.1
BHHZ	Black Hill Sta	22.13	191	P	P	22 36 22.8	-2.3
KAHZ	Kahuranaki	22.29	189	P	P	22 36 24.5	-2.0
PRHZ	Porangahau	22.79	189	P	P	22 36 29.6	-1.3
BFZ	Birch Farm	23.25	190	P	P	22 36 32.7	-2.3
BFZ				IAmb	IAmb	22 36 35.3	
	comp=Z,13nm,0.6s						
MSWZ	Moikau Station	24.14	191	P	P	22 36 40.6	-2.3
SNZO	South Karori	24.15	192	P	P	22 36 41.4	-1.6
QRZ	Quartz Range	24.21	197	P	P	22 36 43.2	-0.3
QRZ				IAmb	IAmb	22 36 43.7	
	comp=Z,16nm,0.8s						
BHW	Baring Head	24.21	192	P	P	22 36 41.8	-1.6
PLWZ	Palliser	24.29	191	P	P	22 36 41.8	-2.4
NNZ	Nelson	24.36	195	P	P	22 36 43.3	-1.4
TUWZ	Tuamarina	24.43	194	P	P	22 36 45.2	-0.2
BSWZ	Blackbirch Sta	24.71	194	P	P	22 36 47.3	-0.7
THZ	Tophouse	24.99	195	IAmb	IAmb	22 36 51.0	
	comp=Z,18nm,0.9s						
KHZ	Kahutara	25.46	194	P	P	22 36 52.3	-2.1
MQZ	McQueen’s Vall	26.89	194	P	P	22 37 05.5	-1.5
RPZ	Rata Peaks	27.30	197	P	P	22 37 08.4	-2.3
	comp=Z,11nm,0.5s,baz=178,slow=2.4,SNR=17						
FOZ	Fox Glacier	27.48	198	P	P	22 37 11.3	-1.0
LBZ	Lake Benmore	28.16	197	IAmb	IAmb	22 37 20.7	
	comp=Z,21nm,1.1s						
ODZ	Otahua Downs	28.64	196	P	P	22 37 20.1	-2.2
ODZ				IAmb	IAmb	22 37 21.3	
	comp=Z,6.7nm,0.7s						
EIDS	Eidsvold	29.15	250	P	P	22 37 26.6	-0.4
	baz=29,SNR=8.7						
EIDS	Eidsvold	29.15	250	P	P	22 37 26.0	-1.0
ARMA	Armidale	29.85	240	P	P	22 37 33.8	+0.7
	baz=30,SNR=47						
ARMA	Armidale	29.85	240	P	P	22 37 32.7	-0.5
RMQ	Roma	31.39	248	P	P	22 37 46.7	+0.5
	baz=31,SNR=19						
CNB	Canberra Magne	33.37	232	P	P	22 38 03.7	+0.7
	baz=33,SNR=69						
CAN	Canberra	33.64	232	P	P	22 38 05.1	-0.2
YNG	Young	33.72	234	P	P	22 38 06.6	+0.7
	baz=34,SNR=5.5						
MILA	Mila	34.23	229	P	P	22 38 10.6	+0.5
	baz=34,SNR=12						
PMG	Port Moresby	34.26	279	P	P	22 38 08.8	-1.9
CMSA	Cobar Meteorol	35.06	240	P	P	22 38 17.2	+0.1
	baz=35,SNR=96						
MTSU	Mount Surprise	35.25	264	P	P	22 38 18.5	-0.3
	baz=35,SNR=17						
QLP	Quilpie	35.41	249	P	P	22 38 20.0	-0.1
	baz=35,SNR=5.0						
COEN	Coen	36.93	270	P	P	22 38 33.2	+0.5
	baz=37,SNR=34						
COEN	Coen	36.93	270	P	P	22 38 33.1	+0.5
TOO	Toolangi	37.12	231	P	P	22 38 34.5	+0.6
	baz=37,SNR=43						
TOO	Toolangi	37.12	231	P	P	22 38 34.4	+0.5
MOO	Moorlands	38.07	222	P	P	22 38 42.0	+0.5
	baz=38,SNR=4.7						
TAU	Tasmania Unive	38.22	222	P	P	22 38 42.6	-0.1
STKA	Stephens Creek	38.54	241	P	P	22 38 46.2	+0.7
	baz=38,SNR=55						
STKA	Stephens Creek	38.54	241	P	P	22 38 46.2	+0.7
	comp=Z,35nm,0.5s,baz=93,slow=10,SNR=118						
STKA	Stephens Creek	38.54	241	IAmb	IAmb	22 38 47.0	
	comp=Z,15nm,1.1s						
HTT	Hallett	41.06	239	P	P	22 39 06.1	+0.4
	baz=41,SNR=50						
GENI	Genyem	43.16	286	P	P	22 39 22.9	+0.5
	comp=Z,69nm,0.6s						
KHU	Kahuku	43.17	33	P	P	22 39 21.4	-1.1
BBOO	Buckleboo	43.31	241	P	P	22 39 23.6	+0.3
	baz=43,SNR=130						
BBOO	Buckleboo	43.31	241	P	P	22 39 23.1	-0.2
MLOA	Mauna Loa Obse	43.43	32	P	P	22 39 24.2	-0.5
MLH	Mauna Loa	43.49	33	P	P	22 39 24.7	-0.4
HMH	Humu‘ula Sheep	43.53	32	P	P	22 39 26.4	+1.0
HLK	Haleakala	44.12	31	P	P	22 39 29.1	-0.8
WR0	Warramunga Arr	44.29	259	P	P	22 39 29.5	-1.5
WR3	Warramunga Arr	44.44	259	P	P	22 39 31.5	-0.7
	baz=44						
WB0	Warramunga Arr	44.45	260	P	P	22 39 31.3	-0.9
WB0				IAmb	IAmb	22 39 32.3	
	comp=Z,16nm,0.7s						
WRAB	Tennant Creek	44.47	259	P	P	22 39 31.5	-0.9
WRAB				IAmb	IAmb	22 39 32.4	
	comp=Z,17nm,0.7s						
WRA	Warramunga Arr	44.48	259	P	P	22 39 31.5	-1.0
	comp=Z,11nm,0.5s,baz=92,slow=6.9,SNR=301						
WRA				S	S	22 45 25.2	-1.4
	comp=Z,1.6nm,0.9s,baz=95,slow=13,SNR=3.8						
WRA	Warramunga Arr	44.48	259	P	P	22 39 30.8	-1.7
AS31	Alice Springs	44.66	254	P	P	22 39 33.6	-0.2
ASAR	Alice Springs	44.66	254	P	P	22 39 33.8	-0.1
	comp=Z,146nm,0.6s,baz=87,slow=8.4,SNR=1121						
ASAR				ScP	ScP	22 44 04.9	+3.5
	comp=Z,1.8nm,0.8s,baz=98,slow=4.4,SNR=7.6						
ASAR				S	S	22 45 27.1	-1.9
	comp=Z,3.1nm,1.0s,baz=87,slow=16,SNR=11						
ASAR	Alice Springs	44.66	254	P	P	22 39 33.2	-0.6
KDU	Kakadu	47.38	269	P	P	22 39 54.2	-0.3
	baz=47,SNR=13						
MTN	Manton Dam	48.63	268	P	P	22 40 03.3	-0.4
	baz=49,SNR=5.8						
MTN	Manton Dam	48.63	268	IAmb	IAmb	22 40 03.9	
	comp=Z,18nm,0.8s						
WRKA	Warakurna	49.72	252	P	P	22 40 11.7	0.0
	baz=50,SNR=225						
FORT	Forrest	49.90	245	P	P	22 40 12.4	-0.5
	baz=50,SNR=30						
KNRA	Kununurra	50.33	264	P	P	22 40 15.9	-0.3
	baz=50,SNR=17						
FAKI	Fak Fak	50.38	281	P	P	22 40 15.7	-1.0
FAKI				IAmb	IAmb	22 40 18.7	
	comp=Z,18nm,1.1s						
BNDI	Bandanaira	52.04	278	P	P	22 40 29.1	+0.4
	comp=Z,50nm,0.9s						
SWI	Sorong	52.04	283	P	P	22 40 29.2	+0.5
	comp=Z,43nm,0.8s						
FITZ	Fitzroy Crossi	52.88	260	P	P	22 40 34.7	+0.2
	baz=53,SNR=12						
NLAI	Namlea	55.10	279	P	P	22 40 50.5	+0.2
	comp=Z,21nm,0.9s						
SOEI	Soe	55.89	270	P	P	22 40 56.2	+0.3
	comp=Z,58nm,0.8s						
SANI	Sanana	56.55	280	P	P	22 41 00.2	0.0
	comp=Z,20nm,0.9s						
PSA00	Pilbara Seismi	57.77	255	P	P	22 41 07.2	-1.2
PSA00	Pilbara Seismi	57.77	255	P	P	22 41 08.1	-0.4
PSA00				IAmb	IAmb	22 41 08.9	
	comp=Z,22nm,0.6s						
MEEK	Meekatharra	58.31	249	P	P	22 41 11.5	-0.6
	baz=58,SNR=12						
EDFI	Ende, Flores	58.61	270	P	P	22 41 14.4	0.0
	comp=Z,8.1nm,1.0s						
KLBR	Kellerberrin	58.73	243	P	P	22 41 14.3	-0.5
	baz=59,SNR=10						
NWAO	Narrogin (SRO)	59.12	242	P	P	22 41 17.0	-0.3
	baz=59,SNR=3.8						
NWAO	Narrogin (SRO)	59.12	242	P	P	22 41 16.9	-0.5
NWAO				IAmb	IAmb	22 41 18.6	
	comp=Z,21nm,1.1s						
LUWI	Luwuk	59.91	279	P	P	22 41 21.9	-1.0
LUWI				IAmb	IAmb	22 41 39.7	
	comp=Z,17nm,0.5s						
MORW	Morawa	60.37	246	P	P	22 41 25.3	-0.4
	baz=60,SNR=5.7						
MORW	Morawa	60.37	246	P	P	22 41 25.5	-0.3
SBA	Scott Base	60.54	184	P	P	22 41 26.7	+0.8
VNDA	Vanda	60.56	185	P	P	22 41 27.2	+1.1
	comp=Z,1.3nm,0.8s,baz=340,slow=9.3,SNR=6.4						
VNDA	Vanda	60.56	185	P	P	22 41 27.4	+1.3
PLAI	Plampang	62.32	269	P	P	22 41 38.9	+0.2
	comp=Z,24nm,0.7s						
GIRL	Giralia	62.76	253	P	P	22 41 42.6	+1.2
	baz=63,SNR=5.0						
GIRL	Giralia	62.76	253	P	P	22 41 40.7	-0.6
IGBI	Denpasar	64.83	268	P	P	22 41 54.3	-0.3
MJAR	Matsushiro Arr	67.70	323	P	P	22 42 12.1	+0.2
	comp=Z,8.0nm,0.5s,baz=145,slow=6.4,SNR=16						
MJAR	Matsushiro Arr	67.70	323	P	P	22 42 12.2	+0.3
MAT	Matsushiro	67.70	323	P	P	22 42 12.1	+0.2
MAT				*e*S	SKiKP	22 50 51.8	-15
UGM	Wanagama	69.47	268	P	P	22 42 22.7	-0.5
ATKA	Atka Island	69.79	3	P	P	22 42 23.9	-0.1
QSPA	South Pole Qui	72.28	180	P	P	22 42 39.7	+1.0
QSPA				IAmb	IAmb	22 42 40.1	
	comp=Z,8.1nm,0.8s						
PEA0B	Petropavlovsk-	73.51	345	P	P	22 42 45.9	+0.2
PEA0B				IAmb	IAmb	22 42 47.2	
	comp=Z,18nm,0.7s						
PETK	Petropavlovsk-	73.51	345	P	P	22 42 46.2	+0.5
	comp=Z,13nm,0.7s,baz=139,slow=8.9,SNR=24						
PETK	Petropavlovsk-	73.51	345	P	P	22 42 46.3	+0.6
KSRS	Korea Array	74.49	318	P	P	22 42 53.1	+1.6
	comp=Z,0.5nm,0.4s,baz=131,slow=6.6,SNR=5.2						
USRK	Ussuriysk Ar.	76.41	326	P	P	22 43 04.0	+1.9
	comp=Z,2.4nm,0.6s,baz=134,slow=3.4,SNR=11						
USRK	Ussuriysk Ar.	76.41	326	P	P	22 43 03.7	+1.6
SAO	San Andreas Ge	76.45	44	P	P	22 43 03.7	+1.2
SAO				IAmb	IAmb	22 43 05.2	
	comp=Z,16nm,0.8s						
PKM	Mcpherson Peak	76.52	46	P	P	22 43 05.1	+2.0
	baz=237						
PMPB	Monarch Peak	76.58	45	P	P	22 43 05.0	+1.7
PMPB				IAmb	IAmb	22 43 05.7	
	comp=Z,13nm,0.7s						
KCPM	Cahto Peak	76.79	40	P	P	22 43 03.8	-0.7
KCPM				IAmb	IAmb	22 43 04.8	
	comp=Z,22nm,1.1s						
SII	Sitkinak Islan	76.84	14	P	P	22 43 04.8	+0.6
KMRM	Mail Ridge	77.03	40	P	P	22 43 07.3	+1.7
MWC	Mount Wilson	77.38	48	P	P	22 43 08.5	+0.6
MWC				IAmb	IAmb	22 43 09.9	
	comp=Z,14nm,0.8s						
KHMM	Horse Mountain	77.41	39	P	P	22 43 06.5	-1.3
VES	Vestal, Richgr	77.53	46	P	P	22 43 09.6	+1.2
	baz=237						
O02D	Mt. Diablo Mer	77.57	40	P	P	22 43 10.6	+2.0
	baz=234						
OHAK	Old Harbor	77.65	14	P	P	22 43 08.6	+0.2
OHAK				IAmb	IAmb	22 43 15.9	
	comp=Z,13nm,1.0s						
BFSC	Mount Baldy Ra	77.67	48	P	P	22 43 10.6	+1.2
	baz=238						
NJ2	Nanjing	77.72	310	*e*P	P	22 43 11.9	+2.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
EDW2	Edwards Air Fo	77.77	47	P	P	22 43 11.4	+1.7
	baz=238,SNR=13						
ISA	Isabella, Lake	77.85	46	IAmb	IAmb	22 43 12.8	
	comp=Z,16nm,0.9s						
ISA	Isabella, Lake	77.85	46	P	P	22 43 11.8	+1.6
	baz=238,SNR=9.2						
MONP2	Monument Peak	77.86	50	P	P	22 43 12.4	+1.9
	baz=239,SNR=13						
CMB	Columbia Colle	77.87	43	IAmb	IAmb	22 43 12.5	
	comp=Z,12nm,1.0s						
WDC	Whiskeytown Da	77.96	40	P	P	22 43 11.0	+0.4
IKP	In-Ko-Pah, Jac	77.97	50	P	P	22 43 12.9	+1.9
	baz=240,SNR=5.1						
MDJ	Mudanjiang	77.98	325	IAmb	IAmb	22 43 13.2	
	comp=Z,14nm,0.9s						
AFDM	Forest Hills D	78.00	42	P	P	22 43 11.0	+0.1
ORV	Oroville	78.01	42	P	P	22 43 11.6	+0.7
N02D	Trinity Center	78.09	40	P	P	22 43 13.4	+2.0
	baz=234						
PFO	Pinyon Flats O	78.20	49	P	P	22 43 11.4	-0.8
PFO	Pinyon Flats O	78.20	49	P	P	22 43 13.9	+1.7
	baz=239						
TPFO	Pinon Flats	78.20	49	P	P	22 43 13.7	+1.4
	baz=239						
XPFO	Pion Flat	78.20	49	P	P	22 43 11.2	-1.0
M02C	Callahan	78.25	39	P	P	22 43 14.6	+2.4
	baz=233,SNR=6.0						
O03E	Paynes Creek	78.25	41	P	P	22 43 13.6	+1.4
	baz=234						
LRMC	Laurel Mtn Rad	78.31	47	P	P	22 43 14.4	+1.7
	baz=238						
KDAK	Kodiak Island	78.32	14	P	P	22 43 13.0	+1.0
KDAK				IAmb	IAmb	22 43 13.5	
	comp=Z,32nm,1.1s						
SWSC	Sam W. Stewart	78.34	50	P	P	22 43 14.7	+1.9
	baz=240						
SRIG	Santa Rosalia	78.38	56	P	P	22 43 14.6	+1.5
SRIG				IAmb	IAmb	22 43 15.8	
	comp=Z,18nm,1.0s						
MDPB	Devils Postpil	78.51	44	P	P	22 43 14.8	+0.9
MDPB				IAmb	IAmb	22 43 16.3	
	comp=Z,14nm,0.8s						
YBH	Yreka Blue Hor	78.54	39	P	P	22 43 15.8	+2.1
	comp=Z,10nm,0.8s,baz=224,slow=0.9,SNR=21						
YBH	Yreka Blue Hor	78.54	39	IAmb	IAmb	22 43 16.5	
	comp=Z,12nm,0.9s						
CWC	Cottonwood Cre	78.54	46	P	P	22 43 15.5	+1.5
	baz=238						
K02D	Willamette Mer	78.55	38	P	P	22 43 15.4	+1.6
	baz=233						
OMMB	Old Mammoth Mi	78.55	44	P	P	22 43 15.2	+1.0
RUBR	Rubicon Trail	78.59	43	P	P	22 43 15.0	+0.7
RUBR				IAmb	IAmb	22 43 31.4	
	comp=Z,8.0nm,0.6s						
BELC	Belle Mtn. Jos	78.73	49	P	P	22 43 16.7	+1.7
	baz=240,SNR=7.0						
MPMC	Manual Prospec	78.74	46	P	P	22 43 16.7	+1.6
	baz=238,SNR=8.4						
GSC	Goldstone, Bar	78.82	47	P	P	22 43 17.2	+1.8
	baz=239						
HUMO	Hull Mountain	78.91	38	IAmb	IAmb	22 43 18.5	
	comp=Z,17nm,1.1s						
HEC	Hector,Ludlow	78.91	48	P	P	22 43 17.4	+1.5
	baz=239,SNR=5.1						
BC3	Big Chuckawall	78.95	49	P	P	22 43 18.3	+2.1
	baz=240						
PNTR	Pine Nut	78.97	43	P	P	22 43 18.0	+1.8
PNTR				IAmb	IAmb	22 43 18.8	
	comp=Z,28nm,0.9s						
VCNR	Virginia City	79.05	43	P	P	22 43 17.1	+0.5
L04D	Klamath Falls	79.07	39	P	P	22 43 18.4	+1.8
	baz=234,SNR=6.4						
M04C	Macdoel	79.09	40	P	P	22 43 18.5	+1.7
	baz=234						
GLA	Glamis	79.11	50		P	22 43 18.9	+1.9
GLA	Glamis	79.11	50	P	P	22 43 19.2	+2.3
	baz=240						
YERR	Yerington	79.14	43	IAmb	IAmb	22 43 19.1	
	comp=Z,16nm,0.6s						
QIZ	Qiongzhong	79.24	294	P	P	22 43 17.3	-0.5
QIZ				IAmb	IAmb	22 43 25.9	
	comp=Z,26nm,1.1s						
GRAC	Grapevine Rang	79.32	46	P	P	22 43 19.9	+1.9
	baz=238						
GMRC	Granite Mounta	79.37	48	P	P	22 43 19.8	+1.4
	baz=240						
RYN	Ryan	79.42	44	P	P	22 43 18.5	0.0
IRM	Iron Mountain	79.42	49	P	P	22 43 20.4	+1.9
	baz=240						
NVAR	Mina Array Bea	79.45	44	P	P	22 43 20.4	+1.5
	comp=Z,9.1nm,0.8s,baz=225,slow=8.8,SNR=55						
NVAR	Mina Array Bea	79.45	44	P	P	22 43 20.2	+1.3
TUQ	Turquoise Moun	79.51	48	P	P	22 43 21.3	+2.2
	baz=239						
NV11	Mina Array Sit	79.55	44	P	P	22 43 20.3	+1.0
NV11				IAmb	IAmb	22 43 21.8	
	comp=Z,14nm,1.1s						
Y12C	Blythe	79.67	50	P	P	22 43 20.1	+0.3
Y12C	Blythe	79.67	50	P	P	22 43 22.0	+2.2
	baz=240						
113A	Mohawk Valley,	79.75	51	P	P	22 43 20.7	+0.5
J04D	Umpqua Nationa	79.79	38	P	P	22 43 22.3	+1.9
	baz=234,SNR=9.0						
KVN	Kaiserville	79.92	43	IAmb	IAmb	22 43 23.1	
	comp=Z,8.5nm,0.6s						
I04A	Tendick Farm,	79.94	38	P	P	22 43 22.1	+1.1
	baz=233						
TPNV	Topopah Spring	80.06	46	P	P	22 43 23.7	+1.7
	baz=239,SNR=8.1						
214A	Organ Pipe Nat	80.07	52	P	P	22 43 22.8	+0.8
214A	Organ Pipe Nat	80.07	52	P	P	22 43 24.2	+2.2
	baz=242						
MOD	Modoc Plateau	80.10	40	IAmb	IAmb	22 43 24.4	
	comp=Z,14nm,0.7s						
HSIG		80.16	55	P	P	22 43 21.5	-1.0
CNPM	China Poot	80.20	14	P	P	22 43 22.2	+0.3
PDMCI	Parker Dam,Lak	80.22	49	P	P	22 43 24.8	+2.1
	baz=241						
HOM	Homer	80.23	14	P	P	22 43 20.2	-1.8
J05D	Fort Rock, OR	80.33	39	P	P	22 43 25.2	+2.0
	baz=234,SNR=23						
BRLK	Bradley Lake	80.49	14	P	P	22 43 23.5	0.0
BRLK				IAmb	IAmb	22 43 24.8	
	comp=Z,12nm,0.6s						
SHPR	Sheep Range	80.58	47	P	P	22 43 25.0	+0.3
H04A	Detroit Lake	80.60	37	P	P	22 43 25.0	+0.6
H04A				IAmb	IAmb	22 43 26.2	
	comp=Z,11nm,0.6s						
RSO	Redoubt South	80.72	13	P	P	22 43 25.0	+0.2
W13A	Hualapai Mount	80.79	49	P	P	22 43 25.6	-0.3
PINE	Pine Mountain	80.80	38	P	P	22 43 26.8	+1.1
PINE				IAmb	IAmb	22 43 28.5	
	comp=Z,18nm,0.8s						
Y14A	Wickenburg	80.87	50	P	P	22 43 26.4	+0.3
I05D	Terrebonne, OR	80.88	38	P	P	22 43 27.6	+1.7
	baz=234						
E03A	Lebam	80.95	35	P	P	22 43 26.2	+0.2
MA2	Magadan	81.03	345	P	P	22 43 26.2	0.0
MA2				IAmb	IAmb	22 43 26.9	
	comp=Z,8.3nm,0.7s						
R11A	Troy Canyon, C	81.23	45	P	P	22 43 29.4	+1.4
	baz=239,SNR=6.6						
WVOR	Wild Horse Val	81.42	40	P	P	22 43 30.1	+1.2
WVOR				IAmb	IAmb	22 43 31.4	
	comp=Z,20nm,1.1s						
GAMB	Gambell	81.47	3	IAmb	IAmb	22 43 29.9	
	comp=Z,10nm,0.6s						
E04D	Cinebar	81.50	35	P	P	22 43 30.7	+1.8
	baz=233						
F05D	White Salmon	81.72	36	P	P	22 43 31.7	+1.6
	baz=234						
TUC	Tucson	81.76	52	P	P	22 43 32.1	+1.3
TUC				IAmb	IAmb	22 43 34.1	
	comp=Z,12nm,1.1s						
TUC	Tucson	81.76	52	P	P	22 43 33.3	+2.6
	baz=243						
D03D	Eldon	81.81	34	P	P	22 43 32.0	+1.5
	baz=232						
G06A	Carlson Farm,	81.81	37	P	P	22 43 31.8	+1.1
I07A	Izee	81.82	39	P	P	22 43 31.9	+1.1
I07A				IAmb	IAmb	22 43 33.3	
	comp=Z,14nm,0.8s						
RC01	Rabbit Creek A	81.94	14	P	P	22 43 31.3	+0.4
RC01				IAmb	IAmb	22 43 40.7	
	comp=Z,7.6nm,0.8s						
J08A	Circle Bar Ran	82.03	40	P	P	22 43 32.9	+1.0
J08A				IAmb	IAmb	22 43 34.3	
	comp=Z,20nm,1.1s						
LON	Longmire	82.03	36	P	P	22 43 32.2	+0.4
LCMT	Little Creek M	82.17	47	P	P	22 43 34.4	+1.6
D05A	Enumclaw	82.20	35	P	P	22 43 33.7	+1.2
D05A				IAmb	IAmb	22 43 35.2	
	comp=Z,20nm,1.0s						
X16A	Lo Mia Camp, P	82.24	50	IAmb	IAmb	22 43 36.4	
	comp=Z,13nm,0.9s						
BBB	Bella Bella	82.29	29	P	P	22 43 34.0	+1.2
	comp=Z,3.7nm,0.5s,baz=248,slow=11,SNR=4.5						
BBB	Bella Bella	82.29	29	P	P	22 43 32.3	-0.4
BBB				IAmb	IAmb	22 43 42.5	
	comp=Z,24nm,1.1s						
PGC	Sidney	82.30	33	P	P	22 43 33.9	+1.0
PGC				IAmb	IAmb	22 43 34.6	
	comp=Z,6.2nm,0.7s						
CCUT	Cedar City	82.35	47	P	P	22 43 34.3	+0.5
EYAK	Cordova Ski Ar	82.43	16	P	P	22 43 33.2	-0.1
EYAK				IAmb	IAmb	22 43 52.8	
	comp=Z,22nm,1.0s						
KNB	Kanab	82.47	47	P	P	22 43 34.9	+0.5
319A	Douglas	82.49	54	P	P	22 43 36.5	+2.0
319A				IAmb	IAmb	22 43 37.9	
	comp=Z,14nm,0.8s						
PSUT	Pine Spring	82.50	46	P	P	22 43 35.7	+1.2
KNK	Knik Glacier	82.52	14	P	P	22 43 34.2	+0.4
KNK				IAmb	IAmb	22 43 34.9	
	comp=Z,22nm,0.8s						
PMR	Palmer	82.52	14	P	P	22 43 34.2	+0.5
PMR				IAmb	IAmb	22 43 43.5	
	comp=Z,11nm,1.2s						
U15A	North Rim	82.56	48	IAmb	IAmb	22 43 38.0	
	comp=Z,20nm,0.8s						
F07A	Phinny Hill Vi	82.60	37	P	P	22 43 34.4	-0.1
F07A				IAmb	IAmb	22 43 36.7	
	comp=Z,11nm,0.8s						
ELK	Elko	82.68	43	P	P	22 43 36.7	+1.2
	comp=Z,7.3nm,0.9s,baz=269,slow=5.8,SNR=23						
ANM	Nome	82.71	6	P	P	22 43 34.5	-0.2
A04D	Lummi Island	82.73	34	P	P	22 43 36.8	+1.7
	baz=233						
B05A	Bryant	82.78	34	P	P	22 43 36.8	+1.4
	baz=233						
WUAZ	Wupatki	82.79	49	IAmb	IAmb	22 43 39.5	
	comp=Z,11nm,0.9s						
WUAZ	Wupatki	82.79	49	P	P	22 43 38.6	+2.7
	baz=242						
G08A	Pilot Rock	82.82	38	P	P	22 43 37.3	+1.5
G08A				IAmb	IAmb	22 43 37.7	
	comp=Z,8.1nm,0.7s						
LTY	Liberty	82.97	36	P	P	22 43 37.6	+1.2
LTY				IAmb	IAmb	22 43 38.2	
	comp=Z,12nm,1.1s						
E07A	Sunnyside	83.02	36	P	P	22 43 37.4	+0.7
E07A				IAmb	IAmb	22 43 39.0	
	comp=Z,20nm,1.1s						
PKCU	Pink Cliffs	83.03	47	P	P	22 43 39.8	+2.4
PPLA	Purkeypile	83.04	12	P	P	22 43 35.8	-0.7
HAWA	Hanford	83.11	37	P	P	22 43 37.4	+0.3
HAWA				IAmb	IAmb	22 43 39.4	
	comp=Z,19nm,1.1s						
SCM	Sheep Creek Mo	83.15	14	P	P	22 43 37.8	+0.8
X18A	Snowflake	83.38	51	P	P	22 43 39.1	+0.2
X18A				IAmb	IAmb	22 43 41.8	
	comp=Z,6.3nm,0.8s						
MTPU	Mount Pierson	83.41	47	P	P	22 43 40.7	+1.4
E08A	Dider Farm, El	83.43	37	P	P	22 43 39.8	+1.2
E08A				IAmb	IAmb	22 43 40.9	
	comp=Z,12nm,0.7s						
HPIG		83.51	59	P	P	22 43 40.9	+1.1
BMO	Blue Mountains	83.55	39	P	P	22 43 40.5	+1.0
VRDI	Verde Repeater	83.61	16	P	P	22 43 39.6	+0.2
VRDI				IAmb	IAmb	22 43 57.9	
	comp=Z,13nm,1.2s						
MSU	Marysvale	83.63	46	P	P	22 43 41.8	+1.6
GLB	Gilahina Butte	83.69	16	P	P	22 43 40.3	+0.7
MFID	Camas Ranch	83.69	41	P	P	22 43 40.9	+0.7
MFID				IAmb	IAmb	22 43 42.6	

	comp=Z,13nm,1.1s						
BALM	Baldy	83.75	17	IAmb	IAmb	22 43 41.3	
	comp=Z,13nm,0.6s						
D08A	Wollman Farm,	83.83	36	P	P	22 43 41.1	+0.4
D08A				IAmb	IAmb	22 43 42.9	
	comp=Z,10.0nm,0.7s						
MCARA	McCarthy VSAT	83.85	16	P	P	22 43 41.0	+0.6
MCARA				IAmb	IAmb	22 43 58.3	
	comp=Z,25nm,1.2s						
KTH	Kantishna Hill	83.89	12	IAmb	IAmb	22 43 41.5	
	comp=Z,17nm,1.0s						
MAW	Mawson	83.92	200	P	P	22 43 41.5	+0.8
	comp=Z,5.7nm,0.6s,baz=181,slow=4.2,SNR=3.4						
MAW	Mawson	83.92	200	IAmb	IAmb	22 43 49.6	
	comp=Z,2.4nm,0.9s						
BARN	Barnard Glacie	83.96	17	P	P	22 43 41.6	+0.4
BARN				IAmb	IAmb	22 43 42.7	
	comp=Z,17nm,0.8s						
E09A	Wood Farm, Sta	83.97	37	P	P	22 43 41.2	-0.1
CTGM	Chitina Glacie	83.97	17	P	P	22 43 41.9	+0.7
CTGM				IAmb	IAmb	22 43 42.6	
	comp=Z,10nm,0.7s						
DUG	Dugway, Tooele	84.01	45	P	P	22 43 42.1	+0.2
121A	Cookes Peak, D	84.14	53	P	P	22 43 41.7	-1.0
121A	Cookes Peak, D	84.14	53	P	P	22 43 44.7	+2.0
	baz=245						
BESE	Bessie Mountai	84.14	21	P	P	22 43 43.0	+1.0
BESE				IAmb	IAmb	22 43 45.9	
	comp=Z,16nm,1.0s						
F10A	Beach Ranch, E	84.21	38	IAmb	IAmb	22 43 44.5	
	comp=Z,18nm,0.9s						
LLLB	Lillooet	84.30	32	P	P	22 43 42.8	-0.1
B08A	Colville Reser	84.33	35	IAmb	IAmb	22 43 44.6	
	comp=Z,8.6nm,0.7s						
NLU	North Lily Min	84.39	45	P	P	22 43 44.2	+0.4
ZAIG	Zacatecas	84.52	64	P	P	22 43 44.0	-0.9
ZAIG				IAmb	IAmb	22 43 48.5	
	comp=Z,4.6nm,0.6s						
Q16A	Castle Valley	84.52	46	P	P	22 43 45.0	+0.5
C09A	Chrisman Ranch	84.61	36	P	P	22 43 45.2	+0.7
C09A				IAmb	IAmb	22 43 46.4	
	comp=Z,13nm,1.1s						
SKAG	Skagway	84.64	21	P	P	22 43 44.6	+0.4
SKAG				IAmb	IAmb	22 43 46.5	
	comp=Z,17nm,1.2s						
MPU	Maple Canyon	84.72	45	P	P	22 43 46.1	+0.7
SPUT	South Promonto	84.79	44	P	P	22 43 46.3	+0.6
CTU	Camp Tracy	84.96	45	P	P	22 43 46.9	+0.3
MENT	Mentasta	84.97	15	P	P	22 43 46.4	+0.5
SRU	San Rafael Swe	85.06	46	P	P	22 43 47.8	+0.7
P17A	Butcher Ranch,	85.07	46	P	P	22 43 47.1	0.0
JLU	Jordanelle	85.12	45	P	P	22 43 47.6	+0.2
MLY	Manley	85.25	11	IAmb	IAmb	22 43 48.4	
	comp=Z,4.3nm,0.5s						
SLVN	Son La	85.27	294	P	P	22 43 47.4	-0.9
WRH	Wood River Hil	85.28	13	IAmb	IAmb	22 43 48.8	
	comp=Z,16nm,1.0s						
HDA	Harding Lake	85.47	13	IAmb	IAmb	22 43 49.0	
	comp=Z,12nm,1.1s						
HDA	Harding Lake	85.47	13	P	P	22 43 48.1	-0.1
	baz=210						
DOT	Dot Lake	85.48	15	P	P	22 43 48.5	+0.2
DOT				IAmb	IAmb	22 43 49.6	
	comp=Z,12nm,0.8s						
CCB	Clear Creek Bu	85.50	13	IAmb	IAmb	22 43 50.2	
	comp=Z,8.1nm,0.8s						
NEW	Newport	85.51	36	P	P	22 43 49.2	+0.4
	comp=Z,4.8nm,0.6s,baz=244,slow=2.2,SNR=4.6						
NEW	Newport	85.51	36	P	P	22 43 49.1	+0.2
NEW				IAmb	IAmb	22 43 50.4	
	comp=Z,6.5nm,0.8s						
NEW	Newport	85.51	36	P	P	22 43 49.3	+0.4
	baz=237						
BCAR	Beaver Creek A	85.57	16	P	P	22 43 49.0	+0.2
PV05	Paradox Valley	85.58	48	P	P	22 43 50.3	+0.6
IMAR	Indian Mountai	85.58	10	P	P	22 43 48.5	-0.2
MVCO	Mesa Verde	85.63	49	P	P	22 43 48.3	-1.6
MDM	Murphy Dome	85.68	12	P	P	22 43 48.2	-1.0
MDM				IAmb	IAmb	22 43 49.1	
	comp=Z,5.7nm,0.8s						
TCOL	CIGO, UAF Yank	85.68	13	P	P	22 43 49.2	0.0
	baz=209						
COLA	College	85.69	13	P	P	22 43 49.3	+0.1
PV09	Paradox Valley	85.75	47	P	P	22 43 50.1	-0.5
PV10	Paradox Valley	85.76	48	P	P	22 43 49.9	-0.6
PV10				IAmb	IAmb	22 43 51.8	
	comp=Z,16nm,1.1s						
PV14	Lion Creek, Pa	85.77	48	P	P	22 43 50.0	-0.6
PV14				IAmb	IAmb	22 43 52.7	
	comp=Z,9.1nm,0.9s						
PV18	Skein Mesa, Pa	85.79	48	P	P	22 43 52.0	+1.3
PV20	West Nyswonger	85.79	48	P	P	22 43 51.0	+0.4
PV20				IAmb	IAmb	22 43 52.7	
	comp=Z,5.6nm,0.8s						
IL31		85.80	13	IAmb	IAmb	22 43 51.4	
	comp=Z,5.6nm,0.9s						
ILAR	Eielson Array	85.80	13	P	P	22 43 49.4	-0.4
	comp=Z,4.3nm,0.4s,baz=221,slow=5.1,SNR=86						
ILAR	Eielson Array	85.80	13	P	P	22 43 49.3	-0.5
POKR	Poker Plat Res	85.99	13	P	P	22 43 50.1	-0.5
	baz=210						
PV22	Blue Mesa, Par	86.00	48	P	P	22 43 51.2	-0.4
XAN	Xi'an	86.04	307	P	P	22 43 53.3	+1.6
XAN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
XAN	Xi'an	86.04	307	P	P	22 43 50.9	-0.8
XAN				IAmb	IAmb	22 43 54.2	
	comp=Z,10nm,1.1s						
PV07	Paradox Valley	86.06	48	P	P	22 43 52.0	0.0
TX31	Lajitas Ar. Si	86.08	58	P	P	22 43 53.6	+1.6
TX31				IAmb	IAmb	22 43 55.5	
	comp=Z,11nm,0.9s						
TX32	Lajitas Array	86.08	58	IAmb	IAmb	22 43 55.5	
	comp=Z,11nm,0.8s						
TXAR	Lajitas Array	86.08	58	P	P	22 43 54.5	+2.4
	comp=Z,8.8nm,0.7s,baz=218,slow=6.1,SNR=78						
TXAR	Lajitas Array	86.08	58	P	P	22 43 54.3	+2.2
ANMO	Albuquerque	86.16	52	P	P	22 43 52.8	+0.3
ANMO				IAmb	IAmb	22 43 54.8	
	comp=Z,6.0nm,1.1s						
ANMO	Albuquerque	86.16	52	P	P	22 43 54.0	+1.5
	baz=245						
BILL	Bilibino	86.29	354	P	P	22 43 51.8	-0.2
BILL				IAmb	IAmb	22 43 54.1	
	comp=Z,6.8nm,0.8s						
RDOG	Red Dog Mine	86.35	6	P	P	22 43 53.2	+0.8
AHID	Auburn Hatcher	86.37	43	P	P	22 43 53.7	+0.4
RDMU	Red Mountain	86.38	45	P	P	22 43 54.2	+0.8
MSO	Missoula	86.59	38	P	P	22 43 54.6	+0.5
MSO	Missoula	86.59	38	P	P	22 43 54.6	+0.5
	baz=240						
DLMT	Dillon	86.67	40	P	P	22 43 56.0	+1.4
DLMT				IAmb	IAmb	22 43 57.0	
	comp=Z,8.5nm,0.8s						
TPAW	Teton Pass	86.81	42	P	P	22 43 55.1	-0.3
TPAW				IAmb	IAmb	22 43 57.0	
	comp=Z,9.3nm,1.0s						
REDW	Red Top Meadow	86.81	43	P	P	22 43 56.4	+1.0
REDW				IAmb	IAmb	22 43 57.9	
	comp=Z,14nm,1.1s						
FXWY	Fox Creek	86.83	42	P	P	22 43 56.7	+1.3
FXWY				IAmb	IAmb	22 43 59.0	
	comp=Z,5.2nm,0.9s						
JTMT	Jette	86.86	38	P	P	22 43 55.5	+0.2
SNOW	Snow King Moun	86.92	42	P	P	22 43 56.4	+0.5
SNOW				IAmb	IAmb	22 43 58.5	
	comp=Z,14nm,1.0s						
LRM	Limekiln Ridge	86.99	40	P	P	22 43 50.1	-6.1
DAWY	Dawson	87.01	16	P	P	22 43 56.0	+0.4
DAWY				IAmb	IAmb	22 43 57.8	
	comp=Z,5.3nm,0.8s						
HHC	Hu-ho-hao-te	87.06	315	*e*P	P	22 43 58.1	+1.7
HHC				pmax	pmax		
	comp=Z,77nm,1.2s						
HHC				pmax	pmax		
	comp=Z,240nm,7.0s						
S22A	4UR Ranch, Cre	87.06	49	P	P	22 43 56.9	+0.2
S22A				IAmb	IAmb	22 43 59.4	
	comp=Z,9.3nm,1.1s						
S22A	4UR Ranch, Cre	87.06	49	P	P	22 43 58.1	+1.4
	baz=245						
O20A	White River Ci	87.09	46	P	P	22 43 57.8	+1.1
	baz=244						
QLMT	Earthquake Lak	87.14	41	P	P	22 43 58.1	+1.3
FLWY	Flagg Ranch	87.25	42	P	P	22 43 58.5	+1.1
FLWY				IAmb	IAmb	22 44 00.3	
	comp=Z,11nm,0.8s						
YHB	Horse Butte	87.25	41	P	P	22 43 58.5	+1.1
YPP	Pitchstone Pla	87.27	42	P	P	22 43 57.1	-0.5
YHL	Hebgen Lake	87.30	41	P	P	22 43 58.5	+0.7
COLD	Coldfoot	87.32	11	P	P	22 43 56.5	-0.4
YMR	Madison River	87.36	41	P	P	22 43 58.5	+0.7
BW06	Boulder Array	87.38	44	P	P	22 43 58.1	0.0
BW06				IAmb	IAmb	22 43 59.8	
	comp=Z,6.7nm,0.7s						
BW06	Boulder Array	87.38	44	P	P	22 43 59.2	+1.2
	baz=243						
PD31	Pinedale Array	87.38	44	IAmb	IAmb	22 43 59.8	
	comp=Z,6.0nm,0.7s						
PDAR	Pinedale Array	87.38	44	P	P	22 43 59.0	+0.9
	comp=Z,5.3nm,0.5s,baz=215,slow=3.3,SNR=50						
PDAR	Pinedale Array	87.38	44	P	P	22 43 58.7	+0.6
H17A	Grant Village	87.47	42	IAmb	IAmb	22 44 02.1	
	comp=Z,9.1nm,0.8s						
H17A	Grant Village	87.47	42	P	P	22 44 01.4	+2.9
	baz=242						
KMI	Kunming	87.62	297	P	P	22 44 03.8	+4.3
KMI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,200nm,4.3s						
KMI				LR	LR		
	comp=Z,170nm,5.4s						
KMI				LR	LR		
	comp=Z,190nm,5.4s						
KMI				LR	LR		
	comp=Z,190nm,5.6s						
YUF	Upper Falls	87.66	41	P	P	22 44 00.2	+0.9
WALA	Waterton Lakes	87.74	37	IAmb	IAmb	22 44 01.4	
	comp=Z,6.5nm,0.8s						
MSTX	Muleshoe	88.56	54	IAmb	IAmb	22 44 05.2	
	comp=Z,9.5nm,0.8s						
MSTX	Muleshoe	88.56	54	P	P	22 44 04.8	+1.2
	baz=247						
BMAR	Burnt Mountain	88.57	12	P	P	22 44 02.6	-0.2
RLMT	Red Lodge	88.64	41	P	P	22 44 05.8	+2.0
	baz=243						
CMAR	Chiang Mai Arr	88.67	290	P	P	22 44 06.2	+1.8
	comp=Z,0.3nm,0.3s,baz=109,slow=2.3,SNR=5.0						
CD2	Chengdu	88.85	303	P	P	22 44 08.4	+3.5
N23A	Red Feather La	89.00	46	P	P	22 44 07.1	+1.4
	baz=245						
833A	Chaparral WMA,	89.19	60	P	P	22 44 06.6	+0.1
833A				IAmb	IAmb	22 44 08.3	
	comp=Z,5.9nm,0.8s						
EPYK	Eagle Plains	89.53	16	P	P	22 44 07.6	+0.3
	baz=219						
JCT	Junction City	89.61	58	P	P	22 44 10.2	+1.7
	baz=249						
ABTX	Abilene, Hawle	90.50	56	P	P	22 44 12.3	-0.2
ABTX	Abilene, Hawle	90.50	56	P	P	22 44 14.0	+1.4
	baz=249						
LZH	Lanzhou	90.67	308	⇑P	P	22 44 15.0	+1.6
LZH				PP	PP	22 47 54.3	-5.3
LZH				pmax	pmax		
	comp=Z,20nm,1.4s						
LZH				pmax	pmax		
	comp=Z,91nm,4.3s						
SNAA	Sanae	90.73	179	P	P	22 44 13.0	0.0
VNA3	Neumayer Olymp	90.88	176	P	P	22 44 14.0	+0.5
RSSD	Black Hills	91.59	44	P	P	22 44 18.5	+0.9
	baz=247						
INK	Inuvik	91.81	15	P	P	22 44 17.8	+0.2
	comp=Z,5.9nm,0.8s,baz=215,slow=4.4,SNR=17						
ULN	Ulaanbaatar	92.94	320	P	P	22 44 23.4	-0.1
ULN				IAmb	IAmb	22 44 27.4	
	comp=Z,1.4nm,0.6s						
DGMT	Dagmar	93.21	40	P	P	22 44 22.4	-2.2
DGMT	Dagmar	93.21	40	P	P	22 44 26.6	+2.0
	baz=247						
R32A	Long Quarter,	93.23	51	P	P	22 44 24.9	0.0
ADOK	Arcadia Dam	93.31	54	P	P	22 44 23.8	-1.6
SONM	Songino Array	93.34	319	P	P	22 44 25.7	+0.4
	comp=Z,0.5nm,0.7s,baz=133,slow=4.0,SNR=4.6						
SONM	Songino Array	93.34	319	P	P	22 44 25.0	-0.4
YKA	Yellowknife Ar	94.29	25	P	P	22 44 29.3	+0.2
	comp=Z,2.8nm,0.8s,baz=240,slow=4.5,SNR=34						
GTA	Gaotai	94.82	310	*e*P	P	22 44 33.1	+0.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SUSD	Miller	95.11	45		pP	22 46 30.4	-8.4
ECSD	EROS Data Cent	96.47	46	P	P	22 44 40.8	+1.3
	baz=252						
ZALV	Zalesovo Beam	108.02	322	PKiKP	PKiKP	22 49 32.4	-1.3
	comp=Z,0.8nm,0.6s,baz=48,slow=2.1,SNR=4.5						
MKAR	Makanchi Array	108.92	314	PKiKP	PKiKP	22 49 35.1	-0.5
	comp=Z,0.9nm,0.5s,baz=171,slow=0.6,SNR=27						
KSH	Kashi	112.86	306	PKP	PKiKP	22 49 49.1	+5.6
KSH				PP	PP	22 50 43.0	-0.3
KSH				SKS	SKKSac	22 56 44.6	-0.3
KSH				SKKS	Sdif	22 57 21.0	-6.7
KSH				AMB	AMB		
	comp=Z,130nm,4.7s						
KSH				LR	LR		
	comp=Z,330nm,10.9s						
KSH				LR	LR		
	comp=Z,100nm,10.7s						
KSH				LR	LR		
	comp=Z,440nm,15.6s						
ARCES	ARCESS Array B	126.16	350	PKP	PKiKP	22 50 08.7	+0.2
	comp=Z,2.5nm,0.6s,baz=84,slow=0.7,SNR=11						
GEYT	Alibeck	126.82	304	PKP	PKiKP	22 50 11.2	+0.3
	comp=Z,1.5nm,0.9s,baz=192,slow=1.3,SNR=3.6						
FINES	FINESS Array B	133.02	344	PKhKP	PKPpre	22 50 14.3	
	comp=Z,2.6nm,0.9s,baz=277,slow=5.0,SNR=4.5						
FINES				PKP	PKPdf	22 50 21.2	0.0
	comp=Z,1.1nm,0.5s,baz=94,slow=5.1,SNR=7.7						
FINES				PP	PP	22 52 58.3	+2.7
	comp=Z,2.3nm,0.8s,baz=67,slow=5.0,SNR=3.4						
NOA	NORSAR Array B	136.23	353	PKP	PKiKP	22 50 29.2	+0.1
	comp=Z,0.9nm,0.6s,baz=13,slow=4.1,SNR=3.5						
AKASG	Malin Array Be	140.36	332	PKhKP	PKPpre	22 50 28.6	
	comp=Z,0.7nm,0.3s,baz=45,slow=4.1,SNR=5.9						
AKASG				PKP	PKiKP	22 50 37.7	-0.1
	comp=Z,1.1nm,0.4s,baz=32,slow=2.9,SNR=4.7						
SORM	Soroca	142.59	330	⇑P	PKPdf	22 50 37.0	-2.2
GAL1	Galloway	142.68	6	*e*P	PKPdf	22 50 36.4	-2.7
EDMD	Edmundbyers	142.93	3	*e*P	PKPdf	22 50 37.2	-2.3
BSEG	Bad Segeberg	143.26	351	*e*PKPbc	PKPbc	22 50 39.3	+0.7
	baz=15,slow=2.8						
WIM	Isle of Man	143.40	6	⇑*e*P	PKPab	22 50 38.9	+0.1
LEOM	Leova	143.80	328	⇑P	PKPdf	22 50 41.7	+0.4
HPK	Haverah Park	143.82	3	⇑*e*P	PKPab	22 50 40.7	+0.3
KWP	Kalwaria Pacla	143.88	336	*e*PKP	PKPdf	22 50 41.8	+0.5
RUE	Ruedersdorf	144.03	347	*e*PKPbc	PKPdf	22 50 41.9	+0.5
	baz=15,slow=2.8						
WME	Myndd Eilian	144.18	6	*e*P	PKPbc	22 50 41.4	-0.1
WLF1	Llynfaes	144.27	6	*e*P	PKPdf	22 50 42.0	+0.1
YRC	Rhoscolyn	144.29	6	⇑*e*P	PKPdf	22 50 41.9	0.0
TLCR		144.37	326	⇑P	PKPab	22 50 43.0	+0.2
LMK	Market Rasen	144.37	2	*e*P	PKPdf	22 50 42.1	0.0
BUR08	Bucovina Ar. S	144.40	332		PKPab	22 50 43.8	+0.8
BURAR	Bucovina Array	144.42	332	⇑P	PKPab	22 50 43.5	+0.4
BURAR	Bucovina Array	144.42	332		PKPab	22 50 43.3	+0.2
OJC	Ojcow	144.43	340	*e*PKP	PKPab	22 50 43.4	+0.5
OJC	Ojcow	144.43	340		PKPab	22 50 42.9	0.0
YLL	Llanberis	144.44	6	⇑*e*P	PKPbc	22 50 42.5	+0.2
GHRR		144.50	328	⇑P	PKPab	22 50 44.4	+1.1
TESR	Tescani	144.56	329	⇓P	PKPab	22 50 43.6	+0.1
BR131	Keskin Array S	144.57	315		PKPab	22 50 44.1	+0.1
BRTR	Keskin Array B	144.57	315	PKP	PKPab	22 50 43.6	-0.4
	comp=Z,3.8nm,0.5s,baz=112,slow=1.4,SNR=27						
BRTR	Keskin Array B	144.57	315		PKPdf	22 50 43.1	0.0
JURR	Jurilovca	144.61	325	⇑P	PKPab	22 50 44.1	+0.3
KOLS	Kolonicke sedl	144.61	336	*e*PKP	PKPab	22 50 44.1	+0.4
NRDL	Niedersach Rie	144.69	351	*e*PKPbc	PKPab	22 50 44.1	+0.4
	baz=15,slow=2.8						
CFR	Carcaliu	144.73	327	⇑P	PKPab	22 50 44.3	+0.1
FOEL	Foel Wylfa	144.78	5	⇑*e*P	PKPbc	22 50 43.8	+0.4
LLW	Llanuwychllyn	144.78	5	⇑*e*P	PKPbc	22 50 43.4	+0.1
KSP	Ksiaz	144.94	344	*e*PKP	PKPab	22 50 45.2	+0.4
NIE	Niedzica	144.94	338	*e*PKP	PKPab	22 50 45.4	+0.4
CRVS	Cervenica-Dubn	144.95	337	*e*PKP	PKPab	22 50 45.3	+0.3
ASSE	Asse, Remlinge	144.95	350	*e*PKPbc	PKPab	22 50 44.9	+0.2
	baz=15,slow=2.8						
VRI	Vrincioaia	144.98	329	⇑P	PKPab	22 50 45.1	-0.1
PLOR	Plostina	145.03	329	⇑P	PKPab	22 50 45.6	+0.1
CWF	Charnwood Fore	145.05	3	⇑*e*P	PKPbc	22 50 44.3	+0.2
WACR	West Acre	145.12	1	*e*P	PKPbc	22 50 44.5	+0.1
TRPA	Tarpa	145.16	335	⇑P	PKPab	22 50 45.3	-0.4
HARR	Harsova	145.17	326	⇑P	PKPbc	22 50 45.3	+0.5
HLM1	Long Mynd	145.17	5	*e*P	PKPbc	22 50 44.9	+0.3
IBBN	Ibbenburen	145.18	353	*e*PKPbc	PKPab	22 50 45.6	-0.1
	baz=15,slow=2.8						
ARCR	ARCALIA	145.20	332	⇑P	PKPbc	22 50 44.4	-0.4
OSTC	Ostas	145.22	343	⇑*e*PKP	PKPab	22 50 45.7	-0.3
CHVC	Chvalec	145.23	344	⇑*e*PKP	PKPab	22 50 45.9	-0.1
CLZ	Clausthal	145.28	350	*e*PKPbc	PKPab	22 50 46.2	0.0
	baz=15,slow=2.8						
OKC	Ostrava-Krasne	145.29	341	⇑*e*PKP	PKPbc	22 50 45.5	+0.5
CLL	Collm	145.30	347	⇑*i*PKPbc	PKPab	22 50 46.8	+0.6
	comp=Z,29nm,1.0s						
CLL	Collm	145.30	347	*e*PKPbc	PKPab	22 50 46.9	+0.7
	baz=15,slow=2.8						
CLL	Collm	145.30	347		PKPab	22 50 46.7	+0.6
UPC	Upice	145.32	344	⇑*e*PKP	PKPab	22 50 46.0	-0.3
DPC	Dobruska-Polom	145.37	343	⇑*e*PKP	PKPab	22 50 46.0	-0.6
MANR	Mangalia	145.38	324	⇓P	PKPab	22 50 46.6	-0.1
LANS	Liptovska Anna	145.46	339	*e*PKP	PKPab	22 50 47.5	+0.5
KRLC	Kraliky	145.49	342	⇑*e*PKP	PKPab	22 50 46.6	-0.5
BRG	Berggiesshubel	145.50	346	*i* PKP	PKPab	22 50 46.5	-0.5
	comp=Z,20nm,1.3s						
BRG	Berggiesshubel	145.50	346	*e*PKPbc	PKPab	22 50 46.7	-0.3
	baz=15,slow=2.8						
MORC	Moravsky Berou	145.53	341	⇓P	PKPab	22 50 47.0	-0.3
MORC	Moravsky Berou	145.53	341	*e*PKP	PKPab	22 50 46.6	-0.7
MORC	Moravsky Berou	145.53	341		PKPab	22 50 46.6	-0.7
RSBS	Rosebush, Pemb	145.56	7	*e*P	PKPbc	22 50 45.6	0.0
DOPR	Dopca	145.56	330	⇑P	PKPbc	22 50 46.3	+0.4
FBE	Freiberg	145.59	347	*e*PKPbc	PKPab	22 50 47.3	0.0
	baz=15,slow=2.8						
MLR	Muntele Rosu	145.63	329	⇓P	PKPab	22 50 48.3	+0.4
MLR	Muntele Rosu	145.63	329		PKPbc	22 50 46.9	+0.7
GTTG	Gottingen	145.63	351	*e*PKPbc	PKPab	22 50 47.2	-0.3
	baz=15,slow=2.8						
NEUB	Neuenburg	145.64	348	*e*PKPbc	PKPab	22 50 47.1	-0.4
	baz=15,slow=2.8						
PVCC	Panska Ves	145.67	345	⇑*e*PKP	PKPab	22 50 47.1	-0.6
MCH1	Michaelchurch	145.68	5	⇑*e*P	PKPbc	22 50 46.2	+0.2
MONM	Monmouth	145.85	5	*e*P	PKPbc	22 50 46.8	+0.3
STRD	Stroud	145.96	4	*e*P	PKPbc	22 50 47.0	+0.2
BUG	Bochum--Univer	146.09	353	*e*PKPbc	PKPbc	22 50 48.0	+0.8
	baz=15,slow=2.8						
VOIR		146.11	330	⇑P	PKPbc	22 50 48.4	+0.8
DRGR		146.15	333	⇑P	PKPbc	22 50 48.2	+0.7
PRU	Pruhonice	146.17	345	⇑*e*PKP	PKPbc	22 50 47.8	+0.3
GOPC	GO Pecny, Ondr	146.18	344	⇑*e*PKP	PKPbc	22 50 48.3	+0.8
GOPC				*e*x	x	22 50 49.9	
MOX	Moxa	146.21	348	*e*PKPbc	PKPbc	22 50 48.6	+1.0
	baz=15,slow=2.8						
VRAC	Vranov	146.23	342	*e*PKP	PKPbc	22 50 48.5	+0.8
VYHS	Vyhne	146.24	339	*e*PKP	PKPbc	22 50 48.7	+1.0
VYHS				*e*		22 50 51.6	
PLN	Plauen	146.25	348	*e*PKPbc	PKPbc	22 50 48.8	+1.1
	baz=15,slow=2.8						
TANN	Tannenbergstha	146.26	347	*e*PKPbc	PKiKP	22 50 48.9	-1.1
	baz=15,slow=2.8						
JAVC	Velka Javorina	146.30	341	*e*PKP	PKiKP	22 50 49.9	-0.3
GUNZ	Gunzen	146.33	347	*e*PKPbc	PKiKP	22 50 49.2	-0.9
	baz=15,slow=2.8						
PSZ	Piszkesteto	146.35	337	⇑P	PKPbc	22 50 48.8	+0.7
PSZ	Piszkesteto	146.35	337		PKPbc	22 50 49.1	+1.0
ARR	Arges	146.36	330	⇑P	PKiKP	22 50 49.8	-0.6
WERN	Wernitzgruen	146.39	347	*e*PKPbc	PKiKP	22 50 49.5	-0.8
	baz=15,slow=2.8						
NKC	Novy Kostel	146.43	347	⇑*e*PKP	PKPbc	22 50 49.1	+0.9
NKC				*e*PKPAB	PKPab	22 50 51.5	+0.7
WOL	Wolverton	146.48	3	*e*P	PKPbc	22 50 48.5	+0.3
KRUC	Moravsky	146.51	342	*e*PKP	PKPbc	22 50 49.2	+0.8
TREC	Trest	146.56	343	⇑*e*PKP	PKPbc	22 50 49.1	+0.5
TREC				*e*PKPAB	PKPab	22 50 52.3	+1.0
PBCC	Pribram	146.59	345	⇑*e*PKP	PKPbc	22 50 49.5	+0.9
PBCC				*e*x	x	22 50 52.2	
SMOL	Smolenice	146.68	340	*e*PKP	PKiKP	22 50 50.6	-0.3
MANZ	Manzenberg	146.74	347	*e*PKPbc	PKiKP	22 50 50.3	-0.7
	baz=15,slow=2.8						
MODS	Modra-Piesok	146.85	341	*e*PKP	PKPbc	22 50 50.0	+0.6
ROTZ	Rotzenmuhle	146.92	347	*e*PKPbc	PKiKP	22 50 50.8	-0.6
	baz=15,slow=2.8						
ROTZ				*e*PKPab	PKPab	22 50 53.7	+0.9
	baz=14,slow=4.0						
SIRR	Siria	147.00	334	⇑P	PKiKP	22 50 51.4	-0.2
MEM	Membach	147.04	355	PKPdf	PKiKP	22 50 50.8	-0.8
BLCH	La Chartreuse	147.04	355	PKPdf	PKPbc	22 50 50.6	+0.9
BTNL	Ternell	147.05	354	PKPdf	PKPbc	22 50 50.6	+0.8
BSTI	Sart Tilman	147.10	355	PKPdf	PKiKP	22 50 50.9	-0.8
TNS	Taunus Mts	147.14	352	*e*PKPbc	PKiKP	22 50 51.3	-0.5
	baz=15,slow=2.8						
TNS				*e*PKPab	PKPab	22 50 54.1	+0.4
	baz=14,slow=4.0						
BRQR	Ronquire	147.17	357	PKPdf	PKiKP	22 50 51.0	-0.7
GRA1	Grafenberg Arr	147.19	348		PKiKP	22 50 51.3	-0.6
GRF	Grafenberg Arr	147.19	348	*e*PKPbc	PKiKP	22 50 51.6	-0.3
	baz=15,slow=2.8						
GRF				*e*PKPab	PKPab	22 50 54.9	+1.0
	baz=14,slow=4.0						
GZR	Gura Zlata	147.20	332	⇑P	PKPbc	22 50 50.9	+0.4
KHC	Kasperske Hory	147.21	345	⇑*e*PKP	PKPbc	22 50 50.4	0.0
KHC				*e*PKPAB	PKPab	22 50 54.3	+0.3
KHC	Kasperske Hory	147.21	345		PKPbc	22 50 50.3	0.0
BCLA	Clavier	147.29	355	PKPdf	PKPbc	22 50 50.8	+0.4
WET	Wettzell	147.36	346	*e*PKPbc	PKiKP	22 50 51.9	-0.5
	baz=15,slow=2.8						
WET				*e*PKPab	PKPab	22 50 55.7	+1.1
	baz=14,slow=4.0						
BMRD	Maredsous	147.44	356	PKPdf	PKiKP	22 50 51.8	-0.6
GEC2	GERESS Array S	147.44	345	*e*PKPbc	PKiKP	22 50 52.1	-0.5
	baz=15,slow=2.8						
GERES	GERESS Array B	147.44	345	PKPbc	PKPbc	22 50 51.8	+0.8
	comp=Z,10.0nm,0.6s,baz=22,slow=3.2,SNR=90						
GERES	GERESS Array B	147.44	345		PKPbc	22 50 51.0	0.0
ELND	Elena	147.45	326	⇓P	PKiKP	22 50 52.1	-0.6
BZS	Buzias	147.54	333	⇓P	PKPbc	22 50 51.8	+0.5
DOU	Dourbes	147.66	356	PKPdf	PKiKP	22 50 52.3	-0.6
CONA	Conrad Observa	147.69	342	*i* PKiKP	PKiKP	22 50 52.8	-0.3
	comp=Z,11nm,0.6s,SNR=8.7						
HERR	Herculane	147.76	331	⇑P	PKiKP	22 50 52.5	-0.7
PLVB	Pleven	147.79	327	⇑P	PKiKP	22 50 52.8	-0.6
WLF	Walferdange	147.96	354	PKPdf	PKiKP	22 50 53.6	+0.1
WLF	Walferdange	147.96	354	*e*PKPbc	PKiKP	22 50 54.0	+0.5
	baz=15,slow=2.8						
MDVR	Moldovita	148.15	332	⇑P	PKiKP	22 50 53.6	-0.5
MOA	Molln	148.21	343	*i* PKiKP	PKiKP	22 50 53.6	-0.5
	comp=Z,4.7nm,0.7s						
ARSA	Arzberg	148.40	342	*e*PKiKP	PKiKP	22 50 54.4	-0.1
	comp=Z,5.1nm,0.9s						
STU	Stuttgart	148.44	350	*e*PKPbc	PKiKP	22 50 54.6	+0.1
	baz=15,slow=2.8						
STU				*e*PKPab	PKPab	22 50 59.4	+0.5
	baz=14,slow=4.0						
JVM	Valle D.L. Mar	148.50	5	*e*P	PKPbc	22 50 53.7	+0.2
JSA	Saint Aubin	148.54	4	⇑*e*P	PKiKP	22 50 54.2	-0.5
FUR	Furstenfeldbru	148.64	347	*e*PKPbc	PKiKP	22 50 55.0	0.0
	baz=15,slow=2.8						
RJOB	Jochberg	148.69	345	*e*PKPbc	PKiKP	22 50 55.0	-0.2
	baz=15,slow=2.8						
BFO	Black Forest	149.01	351	*e*PKPbc	PKiKP	22 50 55.8	+0.1
	baz=15,slow=2.8						
BFO				*e*PKPab	PKPab	22 51 01.7	+0.4
	baz=14,slow=4.0						
BFO	Black Forest	149.01	351		PKiKP	22 50 55.6	-0.2
VTS	Vitosha	149.05	328	⇑P	PKiKP	22 50 56.1	-0.1
SOKA	Soboth	149.06	342	*i* PKiKP	PKPbc	22 50 55.4	+0.3
	comp=Z,9.1nm,1.1s,SNR=6.2						
KBA	Koelnbreinsper	149.17	344	*i* PKiKP	PKPbc	22 50 55.5	0.0
	comp=Z,6.2nm,0.5s						
ECH	Echery	149.28	352		PKiKP	22 50 56.1	-0.2
UBR	Ueberruh	149.34	348	*e*PKPbc	PKiKP	22 50 56.6	+0.1
	baz=15,slow=2.8						
OBKA	Obir	149.35	342	*i* PKPbc	PKPbc	22 50 55.6	-0.2
	comp=Z,4.9nm,1.5s						
OBKA				*i* PKPab	PKPab	22 51 03.5	+0.6
	comp=Z,4.8nm,0.7s						
WATA	Walderalm	149.36	346	*i* PKiKP	PKiKP	22 50 56.4	-0.2
	comp=Z,7.3nm,0.5s,SNR=6.8						
RETA	Reutte	149.39	347	*i* PKiKP	PKiKP	22 50 56.4	-0.2
	comp=Z,4.6nm,0.5s						
WTTA	Wattenberg	149.41	346	*i* PKiKP	PKiKP	22 50 56.8	0.0
	comp=Z,11nm,0.5s,SNR=8.9						
MOTA	Moosalm	149.45	347	*i* PKiKP	PKiKP	22 50 56.6	-0.2
	comp=Z,14nm,0.9s,SNR=5.7						
MOTA				*i* PKPab	PKPab	22 51 04.2	+0.8
	comp=Z,9.8nm,1.0s						
MYKA	Terra Mystica	149.50	343	*i* PKPbc	PKPbc	22 50 56.1	0.0

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                comp=Z,9.1nm,0.5s,SNR=6.1
SQTA  Sankt Quirin      149.55 347  i PKiKP   PKiKP   22 50 57.0  0.0
                comp=Z,8.2nm,0.5s,SNR=9.1
SQTA                                i PKPab   PKPab   22 51 06.6 +2.9
                comp=Z,5.5nm,0.7s
ABTA  Abfaltersbach     149.69 345  i PKiKP   PKPbc   22 50 56.7 +0.1
                comp=Z,14nm,0.6s,SNR=9.7
ABTA                                i PKPab   PKPab   22 51 04.8 +0.5
                comp=Z,9.2nm,0.7s
DAVA  Damuels           149.76 349  i PKiKP   PKiKP   22 50 58.0 +0.5
                comp=Z,16nm,1.2s,SNR=5.4
LJU   Ljubljana         149.78 342  i PKPbc   PKiKP   22 50 57.3 -0.1
CLF   Chambon-Foret     149.82 359            PKiKP   22 50 58.1 +0.7
CRNS  Crni Vrh          149.83 342  i PKPbc   PKPbc   22 50 57.0 +0.1
FETA  Feichten          149.84 347  i PKiKP   PKiKP   22 50 57.8 +0.1
                comp=Z,7.9nm,0.7s,SNR=5.8
BOJS  Bojanci           150.04 340  i PKPbc   PKiKP   22 50 58.2 +0.3
STAL  STALIGIAL         150.09 344            PKPbc   22 50 57.5  0.0
TRI   Trieste           150.31 342            PKPbc   22 50 57.8 -0.1
CTI   Castel Tesino     150.55 345    PKPab   PKPab   22 51 07.7 -0.3
SENIN Lac Senin/Sane    151.08 352    PKPab   PKPab   22 51 10.2 -0.1
PDG   Podgorica         151.10 332  ⇓P        PKiKP   22 51 00.4 +0.2
BNI   Bardonecchia      152.45 352            PKiKP   22 51 04.5 +1.4
PCAB  Cabril            154.82  17  ePKPab    PKPab   22 51 27.4 +1.3
PBRG  Braganca          155.06  15  ePKPab    PKPab   22 51 27.4 +0.2
PVRL  Vila Real         155.31  17  ePKPab    PKPab   22 51 29.3 +1.0
MVO   Moncorvo          155.59  16  ePKPab    PKPab   22 51 30.6 +1.1
PVIS  Viseu             155.78  17  ePKPab    PKPab   22 51 31.4 +1.1
MTE   Manteigas         156.17  17  ePKPab    PKPab   22 51 32.7 +0.6
PCAS  Casmilo, Conde    156.21  19  ePKPab    PKPab   22 51 32.7 +0.5
PSBE  So Bento          156.60  20  ePKPab    PKPab   22 51 34.6 +0.7
PTOM  Tomar             156.63  19  ePKPab    PKPab   22 51 34.7 +0.7
PCBR  Castelo Branco    156.71  17  ePKPab    PKPab   22 51 34.8 +0.5
PMRV  Marv??o           157.11  18  ePKPab    PKPab   22 51 37.0 +0.9
PMTG  Montargil         157.19  20  ePKPab    PKPab   22 51 36.0 -0.4
PBEJ  Beja              158.25  20  ePKPab    PKPab   22 51 44.0 +2.9
KEST  Kesra             160.78 340    PKPab   PKPab   22 51 52.5 +0.2
                comp=Z,9.7nm,1.2s,baz=22,slow=0.8,SNR=4.3
TORD  Torodi Ar. Bea    175.39 183    PKP     PKPdf   22 51 16.1 -0.3
                comp=Z,0.8nm,0.9s,baz=262,slow=1.0,SNR=4.3
TORD                                  PKPab   PKPab   22 52 57.8 +0.7
                comp=Z,0.3nm,0.6s,baz=219,slow=1.8,SNR=2.2
TORD  Torodi Ar. Bea    175.39 183            PKPdf   22 51 15.2 -1.1
```

PRU 13 22:34:20.5±0.0**,51°.58N×16°.14E,h0^{km},Poland**

```
Code  Station Name       Δ°  AZ°     Phase ID          Time     Res
                                    Op      ISC      h  m  s    ISC
CHVC  Chvalec           0.99 183    ePG     Pg      22 34 39.0 -0.5
CHVC                                eSG     Sg      22 34 52.3 -0.1
OSTC  Ostas             1.03 177    ePG     Pg      22 34 39.6 -0.5
OSTC                                eSG     Sg      22 34 53.2 -0.2
DPC   Dobruska-Polom    1.24 175    eSG     Sg      22 34 59.6 -0.6
PVCC  Panska Ves        1.45 224    ePG     Pn      22 34 48.0 +0.1
PVCC                                eSG     Sg      22 35 06.2 -0.7
                comp=Z,5.8nm,0.6s
KRLC  Kraliky           1.56 165    ePG     Pn      22 34 48.9 -0.6
KRLC                                eSG     Sn      22 35 10.4 -0.1
```

ATH 13 22:37:00.6,38°.26N×20°.41E,h8^{km}±1^{km}**,ML1.6**/1**,Error ellipse: s-maj=1.9km s-min=0.9km az=256.0,Greece**

```
Code  Station Name       Δ°  AZ°     Phase ID          Time     Res
                                    Op      ISC      h  m  s    ISC
KEF4  Livadi, Kephal    0.01 118    P       Pg      22 37 02.0 -0.1
KEF4                                S       Sg      22 37 03.1 +0.1
KEF1  Kardakata, Kep    0.05  72    P       Pg      22 37 02.2 -0.1
KEF1                                S       Sg      22 37 03.5  0.0
LXRA  Lixouri, Kepha    0.07 163    P       Pg      22 37 02.7 +0.2
KEF3  Kipouria, Keph    0.08 220    P       Pg      22 37 02.7  0.0
KEF3                                S       Sg      22 37 04.5 +0.4
KEF2  Argostoli. Kep    0.11 149    P       Pg      22 37 03.3 +0.1
KEF2                                S       Sg      22 37 05.4 +0.4
VLS   Valsamata         0.16 122    P       Pg      22 37 04.0 -0.1
VLS                                 S       Sg      22 37 06.7 +0.3
VLS                                 AML     AML     22 37 07.0
                comp=E,583μm,0.1s
VLS                                 AML     AML     22 37 07.1
                comp=N,704μm,0.1s
KONA  Konidatara, Ke    0.20  38    P       Pg      22 37 04.7 -0.1
KONA                                S       Sg      22 37 08.1 +0.5
FSK   Fiskardo          0.23  31    P       Pg      22 37 05.1 -0.2
FSK                                 S       Sg      22 37 08.5 +0.2
KFL   Anninata          0.33 117    P       Pg      22 37 07.0 -0.2
KFL                                 S       Sg      22 37 12.4 +0.8
EVGI  Lefkada island    0.41  28    P       Pg      22 37 08.4 -0.2
EVGI                                S       Sg      22 37 15.0 +1.0
PVO   Paravola          0.94  68    P       Pg      22 37 18.6 -0.2
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*ROM **13** 22:37:55.7±0.3,45°.46N±0°.04×14°.78E±0°.03,h12^{km}, ML2.4/10,Error ellipse: s-maj=4.7km s-min=1.4km az=21.0*

*VIE **13** 22:37:56.1±0.5,45°.76N×14°.87E,h8^{km},mb1.9/6,ml2.2/7, Error ellipse: s-maj=3.5km s-min=1.9km az=161.0   44 km SE of Ljubljana*

LJU 13 22:37:55.7,45°.75N×14°.86E,h4^{km},ML1.9,5C-4D, Northwestern Balkan Peninsula

```
Code  Station Name       Δ°  AZ°     Phase ID          Time     Res
                                    Op      ISC      h  m  s    ISC
VISS  Visnje            0.06 348   ⇓iPg     Pg      22 37 57.1 +0.1
VISS                                i Sg    Sg      22 37 58.1 +0.2
                comp=Z,3μm,0.1s
GBRS  Gornja Briga      0.22 188    i Pg    Pg      22 38 00.0 +0.1
CEY   Cerknica          0.30 268    i Pg    Pg      22 38 01.8 +0.3
CEY                                 i Sg    Sg      22 38 06.4 +1.0
                comp=Z,68nm,0.2s
PDKS  Podkum            0.33  17    i Pg    Pg      22 38 02.3 +0.2
PDKS                                i Sg    Sg      22 38 07.8 +1.4
                comp=Z,67nm,0.1s
GBAS  Gorenja Brezov    0.34 303    i Pg    Pg      22 38 02.6 +0.3
GBAS                                i Sg    Sg      22 38 07.6 +0.8
                comp=Z,73nm,0.1s
BOJS  Bojanci           0.37 131   ⇓iPg     Pg      22 38 03.1 +0.3
BOJS                                i Sg    Sg      22 38 08.3 +0.7
BOJS  Bojanci           0.37 131    P       Pg      22 38 03.0 +0.2
BOJS                                S       Sg      22 38 08.4 +0.7
VNDS  Vrh nad Dolski    0.37 343    i Pg    Pg      22 38 03.3 +0.4
VNDS                                eSg     Sg      22 38 08.8 +1.1
                comp=Z,72nm,0.2s
LJU   Ljubljana         0.37 322    i Pg    Pg      22 38 03.6 +0.7
LJU                                 i Sg    Sg      22 38 08.7 +0.9
                comp=Z,43nm,0.1s
LJU   Ljubljana         0.37 322    AML     AML
                comp=E,852μm,0.8s
LJU                                 AML     AML
                comp=N,1370μm,0.5s
LEGS  Legarje           0.38  58    i Pg    Pg      22 38 03.5 +0.5
LEGS                                i Sg    Sg      22 38 09.3 +1.4
KNDS  Knezji Dol        0.40 237   ⇓iPg     Pg      22 38 03.7 +0.3
KNDS                                eSg     Sg      22 38 10.1 +1.5
                comp=Z,30nm,0.1s
CRES  Cresnjev          0.43  79    i Pg    Pg      22 38 04.1 +0.2
CRES                                i Sg    Sg      22 38 10.8 +1.3
                comp=Z,66nm,0.2s
OZLJ  Ozalj             0.45 107    ePg     Pg      22 38 04.6 +0.3
OZLJ                                Sg      Sg      22 38 10.9 +0.7
CESS  Cesta pri Krsk    0.48  62    ePg     Pg      22 38 05.6 +0.7
RIY   Rijeka            0.50 212    i Pg    Pg      22 38 05.3  0.0
RIY                                 Sg      Sg      22 38 12.5 +0.8
CRNS  Crni Vrh          0.53 309    i Pg    Pg      22 38 06.3 +0.4
CRNS                                i Sg    Sg      22 38 13.9 +1.0
                comp=Z,32nm,0.1s
GCIS  Gornji Cirnik     0.55  77    i Pg    Pg      22 38 06.9 +0.6
JAVS  Javornik          0.57 285    i Pg    Pg      22 38 06.7  0.0
DOBS  Dobrina           0.59  47    i Pg    Pg      22 38 07.4 +0.4
GOLS  Golise            0.60  64    i Pg    Pg      22 38 07.8 +0.6
GOLS                                eSg     Sg      22 38 16.0 +1.0
                comp=Z,39nm,0.2s
MOZS  Mozjanca          0.62 332    i Pg    Pg      22 38 08.3 +0.7
MOZS                                i Sg    Sb      22 38 17.2 -1.0
                comp=Z,13nm,0.1s
SKDS  Skadanscina       0.62 251    i Pg    Pg      22 38 07.7 +0.1
SKDS                                i Sg    Sg      22 38 17.0 +1.2
                comp=Z,26nm,0.1s
VOJS  Vojsko            0.74 293    i Pg    Pg      22 38 09.7 -0.1
VOJS                                i Sg    Sb      22 38 21.1 -0.6
                comp=Z,11nm,0.1s
TRI   Trieste           0.77 267    P       Pg      22 38 09.5 -0.9
TRI                                 S       Sg      22 38 21.0 +0.7
TRI                                 AML     AML
                comp=N,66μm,0.4s
TRI                                 AML     AML
                comp=E,76μm,1.1s
OBKA  Obir              0.79 344    ePg     Pg      22 38 11.1 +0.2
                comp=E,2.5nm,0.1s,SNR=70
OBKA                                i Sg    Sg      22 38 22.1 +1.0
                comp=E,20nm,0.2s
PTJ   Puntijarka        0.79  78    ePg     Pg      22 38 11.3 +0.4
PTJ                                 Sg      Sg      22 38 21.7 +0.5
ZAG   Zagreb            0.80  84    ePg     Pg      22 38 11.3 +0.3
ZAG                                 Sg      Sb      22 38 22.9 -0.4
GORS  Gorjuse           0.83 314    i Pg    Pg      22 38 11.5 -0.1
GROS  Grobnik           0.84  32    i Pg    Pg      22 38 12.1 +0.2
GROS                                eSg     Sb      22 38 23.8 -0.9
                comp=Z,64nm,0.3s
PERS  Pernice           0.91  11    ePg     Pg      22 38 13.3 +0.2
SABO  M.te Sabotino     0.91 285    P       Pg      22 38 12.4 -0.7
SABO                                S       Sb      22 38 26.6 +0.1
SABO                                AML     AML
                comp=N,128μm,0.4s
SABO                                AML     AML
                comp=E,143μm,0.3s
CADS  Cadrg             0.92 302    i Pg    Pg      22 38 13.0 -0.3
SOKA  Soboth            0.94   7    ePg     Pg      22 38 13.7  0.0
                comp=E,2.6nm,0.3s,SNR=18
SOKA                                i Sg    Sg      22 38 26.4 +0.5
                comp=E,6.5nm,0.2s
ROBS  Robic             1.06 298    ePg     Pg      22 38 15.9 -0.1
KALN  Kalnik            1.18  70    ePg     Pg      22 38 17.9 -0.4
NVLJ  Novalja           1.19 179    ePg     Pg      22 38 17.9 -0.5
NVLJ                                Sg      Sn      22 38 36.1 +0.4
KOGS  Kog               1.20  54    P       Pg      22 38 17.6 -1.0
KOGS                                S       Sn      22 38 37.0 +1.0
KOGS                                AML     AML
                comp=E,204μm,0.3s
KOGS                                AML     AML
                comp=N,276μm,0.4s
MYKA  Terra Mystica     1.22 317    ePg     Pg      22 38 19.2 +0.1
                comp=N,3.5nm,0.2s,SNR=13
MYKA                                i Sg    Sb      22 38 35.6  0.0
                comp=N,3.0nm,0.2s
ACOM  Acomizza, Ital    1.23 311    P       Pg      22 38 19.2 -0.1
ACOM                                S       Sn      22 38 38.2 +1.1
ACOM                                AML     AML
                comp=E,248μm,0.4s
ACOM                                AML     AML
                comp=N,151μm,0.4s
PTCC  Patocco-Chiusa    1.23 303    P       Pg      22 38 19.1 -0.2
PTCC                                S       Sn      22 38 38.5 +1.5
PTCC                                AML     AML
                comp=N,52μm,0.3s
PTCC                                AML     AML
                comp=E,72μm,0.4s
GEPF  Gemona            1.31 294    P       Pb      22 38 21.3 +0.4
GEPF                                S       Sn      22 38 41.3 +2.6
GEPF                                AML     AML
                comp=N,72μm,1.3s
GEPF                                AML     AML
                comp=E,80μm,0.3s
MOSL  Moslavina         1.34  95    ePg     Pb      22 38 21.8 +0.4
MOSL                                Sg      Sn      22 38 39.3 -0.2
UDBI  Udbina            1.38 152    i Pn    Pn      22 38 21.6 -0.2
ARSA  Arzberg           1.57  17    P       Pg      22 38 26.0 +0.2
ARSA  Arzberg           1.57  17    ePg     Pb      22 38 25.1 -0.3
                comp=E,5.2nm,0.3s
ARSA                                eSg     Sg      22 38 46.4 +0.2
                comp=E,4.3nm,0.4s
STAL  STALIGIAL         1.58 290    P       Pb      22 38 25.5  0.0
STAL                                S       Sg      22 38 49.1 +2.6
STAL                                AML     AML
                comp=E,204μm,0.3s
STAL                                AML     AML
                comp=N,124μm,0.2s
POLC  Polcenigo         1.67 280    P       Pb      22 38 27.1 +0.1
POLC                                S       Sg      22 38 51.1 +1.8
POLC                                AML     AML
                comp=N,204μm,1.5s
POLC                                AML     AML
                comp=E,209μm,0.4s
KBA   Koelnbreinsper    1.69 322    i Pn    Pb      22 38 27.6 +0.1
                comp=E,0.2nm,0.1s
KBA                                 i Sn    Sb      22 38 49.5 +0.2
                comp=E,1.7nm,0.2s
DUGI  Dugi Otok         1.76 175    ePn     Pb      22 38 28.1 -0.5
ABTA  Abfaltersbach     1.91 302    i Pn    Pn      22 38 30.2 +1.0
                comp=E,1.6nm,0.2s
ABTA                                i Sn    Sb      22 38 55.5 +0.1
                comp=E,2.2nm,0.3s
MORI  Morici            1.98 162    ePn     Pb      22 38 31.5 -0.7
MORI                                Sn      Sg      22 38 58.7 -0.5
KIJV  Kijevo            2.06 147    i Pn    Pb      22 38 32.7 -1.0
MOA   Molln             2.14 349    i Pn    Pn      22 38 33.5 +1.2
                comp=E,0.3nm,0.1s
MOA                                 i Sn    Sb      22 39 01.6 -0.4
                comp=E,2.9nm,0.3s
ZIRJ  Zirje             2.17 165    ePn     Pn      22 38 33.7 +1.1
RISI  Rein              2.27 303   ⇑P       Pg      22 38 39.0 -0.2
RISI                                AML     AML
                comp=N,46μm,0.4s
RISI                                AML     AML
                comp=E,50μm,1.5s
BOSI  Bolzano           2.57 288   ⇓P       Pg      22 38 48.4 +3.5
PE3   Peglio            2.65 220    S       Sn      22 39 08.0 -4.0
WTTA  Wattenberg        2.69 305    ePn     Pn      22 38 42.2 +2.2
                comp=E,1.3nm,0.2s
PIEI  Pieia             2.76 218   ⇑P       Pn      22 38 42.6 +1.8
PIEI                                AML     AML
                comp=N,15μm,1.6s
PIEI                                AML     AML
                comp=E,15μm,1.6s
ATPI  Pietralunga -     2.89 218    P       Pn      22 38 41.3 -1.3
SQTA  Sankt Quirin      2.92 302    ePn     Pb      22 38 46.3 -2.1
                comp=E,0.6nm,0.2s
MNTV  Mantova           2.92 260   ⇑P       Pn      22 38 41.9 -1.1
ATVO  AVT- Monte Val    2.94 217   ⇑P       Pn      22 38 40.8 -2.5
SRES  S.Oreste - Sor    3.90 207    P       Pb      22 39 05.8 +0.8
ROM9  Roma              4.27 204   ⇑P       Pb      22 39 10.8 -0.5
GBOS  Grotte di Boss    5.20 256    P       Pb      22 39 20.8 -6.4
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*DNK **13** 23:08:22.6±2.6,51°.31N×15°.24E,h45^{km}±38^{km},ML2.2, Hypocentre not reviewed by the ISC*

*BGR **13** 23:08:24.4±0.4,51°.49N×15°.98E,h1^{km},ML3.0/14,Error ellipse: s-maj=4.4km s-min=2.2km az=13.0*

ISC 13 23:08:22.5±0.9**,51°.56N**±0°.03×**15°.99E**±0°.02**,h0^{km},n51, σ1ˢ08**/112**,Poland**

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Code  Station Name       Δ°  AZ°     Phase ID          Time     Res
                                    Op      ISC      h  m  s    ISC
KSP   Ksiaz             0.74 165    ePg     Pg      23 08 37.1 +0.4
KSP                                 eSg     Sb      23 08 47.0 -1.9
KSP   Ksiaz             0.74 165    i Pg    Pg      23 08 37.0 +0.4
KSP                                 eSg     Sg      23 08 46.9 +0.6
CHVC  Chvalec           0.97 178    ePG     Pb      23 08 41.6 -0.6
CHVC                                eSG     Sb      23 08 55.1 -0.5
                comp=Z,61nm,0.5s
OSTC  Ostas             1.01 172    ePG     Pb      23 08 42.5 -0.4
OSTC                                eSG     Sb      23 08 56.2 -0.6
                comp=Z,47nm,0.3s
UPC   Upice             1.05 179    ePG     Pg      23 08 42.7 +0.1
UPC                                 eSG     Sb      23 08 57.1 -0.8
                comp=Z,87nm,0.8s
DPC   Dobruska-Polom    1.23 170    ePg     Pg      23 08 45.9  0.0
DPC                                 eSg     Sb      23 09 02.1 -0.9
DPC   Dobruska-Polom    1.23 170    ePG     Pg      23 08 45.6 -0.4
DPC                                 eSG     Sb      23 09 02.3 -0.7
                comp=Z,55nm,0.4s
PVCC  Panska Ves        1.37 222    ePG     Pg      23 08 48.3 -0.3
PVCC                                eSG     Sb      23 09 06.2 -0.7
                comp=Z,212nm,0.4s
BRG   Berggiesshubel    1.46 243    PN      Pn      23 08 49.9 -0.2
BRG                                 PG      Pb      23 08 51.0 +0.6
BRG                                 SG      Sn      23 09 10.4 +0.6
                130nm,0.5s
BRG   Berggiesshubel    1.46 243    ePn     Pn      23 08 49.9 -0.2
BRG                                 ePg     Pb      23 08 50.7 +0.2
BRG                                 eSg     Sn      23 09 10.4 +0.6
KRLC  Kraliky           1.57 161    ePG     Pn      23 08 50.9 -0.7
KRLC                                eSG     Sn      23 09 13.4 +0.8
                comp=Z,62nm,0.5s
FBE   Freiberg          1.77 250    ePg     Pg      23 08 56.7 +0.3
FBE                                 eSg     Sg      23 09 19.9 +0.5
PRA   Prague            1.79 214    ePG     Pn      23 08 54.5 -0.1
PRA                                 eSG     Sg      23 09 19.8  0.0
                comp=Z,52nm,0.5s
GOPC  GO Pecny, Ondr    1.82 205    ePG     Pn      23 08 55.1 +0.1
GOPC                                eSG     Sg      23 09 20.2 -0.5
                comp=Z,34nm,0.5s
PRU   Pruhonice         1.82 211    ePN     Pn      23 08 54.6 -0.4
PRU                                 ePG     Pb      23 08 56.3 -0.3
PRU                                 eSG     Sg      23 09 20.2 -0.7
                comp=Z,59nm,0.5s
CLL   Collm             1.89 263    ePn     Pn      23 08 56.5 +0.6
CLL                                 ePg     Pg      23 09 00.4 +1.9
CLL                                 eSg     Sg      23 09 24.6 +1.6
CLL   Collm             1.89 263    i Pn    Pn      23 08 56.4 +0.5
                comp=Z,8.0nm,0.3s
CLL                                 i Pg    Pg      23 08 59.2 +0.6
CLL                                 i               23 09 00.4
CLL                                 i Sg    Sg      23 09 24.2 +1.2
                comp=Z,53nm,0.3s
MORC  Moravsky Berou    2.04 150    ePn     Pn      23 08 57.8 -0.3
MORC                                ePg     Pg      23 09 02.0 +0.4
MORC                                eSg     Sg      23 09 28.5 +0.6
MORC  Moravsky Berou    2.04 150    ePN     Pn      23 08 57.5 -0.6
MORC                                eSG     Sg      23 09 27.1 -0.8
OKC   Ostrava-Krasne    2.20 141    ePg     Pb      23 09 03.7 +0.5
OKC                                 eSg     Sg      23 09 31.8 -1.4
OKC   Ostrava-Krasne    2.20 141    ePG     Pb      23 09 03.2 +0.1
OKC                                 eSG     Sg      23 09 35.0 +1.8
                comp=Z,26nm,0.6s
PBCC  Pribram           2.27 215    ePG     Pb      23 09 04.4 +0.2
PBCC                                eSG     Sg      23 09 34.5 -0.7
VRAC  Vranov            2.29 170    ePN     Pn      23 09 01.4  0.0
VRAC                                eSG     Sg      23 09 34.7 -1.2
TREC  Trest             2.29 188    ePN     Pn      23 09 01.9 +0.4
TREC                                ePG     Pg      23 09 05.3 -1.0
TREC                                eSG     Sg      23 09 35.5 -0.5
                comp=Z,21nm,0.4s
TANN  Tannenbergstha    2.51 244    ePn     Pn      23 09 04.8 +0.3
TANN                                eSg     Sg      23 09 42.8 -0.1
KRUC  Moravsky          2.51 174    ePN     Pn      23 09 04.8 +0.3
KRUC                                eSG     Sg      23 09 41.7 -1.5
NKC   Novy Kostel       2.61 241    ePN     Pn      23 09 06.0 +0.2
NKC                                 eSG     Sg      23 09 45.4 -0.7
                comp=Z,105nm,0.9s
OJC   Ojcow             2.76 118    ePn     Pn      23 09 07.9  0.0
OJC                                 ePg     Pg      23 09 15.2 -0.1
OJC                                 eSg     Sg      23 09 52.6 +1.5
OJC   Ojcow             2.76 118    ePg     Pg      23 09 15.2 -0.1
OJC                                 eSg     Sg      23 09 51.4 +0.3
KHC   Kasperske Hory    2.88 213    ePN     Pn      23 09 09.3 -0.3
KHC                                 ePG     Pb      23 09 15.3 +0.6
KHC                                 eSN     Sn      23 09 44.9 -0.1
KHC                                 eSG     Sg      23 09 53.4 -1.5
                comp=Z,13nm,0.4s
MOX   Moxa              2.91 253    ePn     Pn      23 09 11.1 +1.2
MOX                                 ePg     Pg      23 09 18.3 +0.2
MOX                                 eSg     Sg      23 09 54.8 -1.0
JAVC  Velka Javorina    2.91 158    ePN     Pn      23 09 10.5 +0.4
MANZ  Manzenberg        2.92 239    ePn     Pn      23 09 10.4 +0.2
MANZ                                ePg     Pg      23 09 18.8 +0.4
MANZ                                eSg     Sg      23 09 56.6 +0.3
ROTZ  Rotzenmuhle       3.00 235    ePn     Pn      23 09 11.3 +0.1
ROTZ                                eSg     Sg      23 09 58.3 -0.5
GEC2  GERESS Array S    3.09 209    ePn     Pn      23 09 13.0 +0.5
GEC2                                eSg     Sg      23 09 59.3 -2.3
WET   Wettzell          3.13 221    ePn     Pn      23 09 13.2 +0.1
WET                                 eSg     Sg      23 10 01.7 -1.4
SMOL  Smolenice         3.19 163    ePG     Pg      23 09 23.1 -0.4
SMOL                                eSG     Sg      23 10 04.3 -0.5
LANS  Liptovska Anna    3.28 136    ePG     Pg      23 09 24.2 -1.1
LANS                                eSG     Sg      23 10 08.5 +0.6
MODS  Modra-Piesok      3.30 165    ePG     Pg      23 09 25.0 -0.6
MODS                                eSG     Sg      23 10 09.0 +0.7
VYHS  Vyhne             3.58 148    ePN     Pn      23 09 19.4 +0.2
VYHS                                eSG     Sg      23 10 16.6 -0.7
BSD   Bornholm Skovb    3.62 350    i P     Pn      23 09 18.8 -0.9
BSD                                 i S     Sn      23 09 58.7 -4.4
BSD   Bornholm Skovb    3.62 350    e               23 09 18.1
                baz=187,slow=12
BSD                                 i P             23 09 18.8
BSD                                 i S             23 09 58.8
BSD                                   IAML          23 10 01.4
                comp=Z,2.2nm,0.3s
CONA  Conrad Observa    3.64 181    ePn     Pn      23 09 20.8 +0.7
                comp=Z,1.3nm,0.3s
CONA                                i Pg    Pg      23 09 31.0 -1.1
                comp=Z,1.8nm,0.2s
CONA                                i Sg    Sg      23 10 21.8 +2.6
                comp=Z,16nm,0.5s
MOA   Molln             3.88 197    i Pn    Pn      23 09 23.7 +0.4
                comp=Z,2.1nm,0.2s
MOA                                 eSg     Sg      23 10 27.7 +0.7
                comp=Z,17nm,0.5s
ARSA  Arzberg           4.32 184    i Pg    Pg      23 09 45.2 -0.1
                comp=Z,2.5nm,0.5s
ARSA                                  Sg    Sg      23 10 42.9 +1.6
                comp=Z,9.2nm,0.5s
KBA   Koelnbreinsper    4.81 202    i Pn    Pn      23 09 37.0 +0.8
                comp=Z,2.8nm,0.4s
KBA                                 i Sg    Sg      23 10 58.7 +1.9
                comp=Z,7.7nm,0.6s
KOLS  Kolonicke sedl    4.81 121    ePG     Pg      23 09 59.3 +4.7
WATA  Walderalm         5.11 216    i Pn    Pn      23 09 41.9 +1.5
                comp=Z,1.0nm,0.3s
WATA                                eSg     Sg      23 11 07.7 +1.1
                comp=Z,5.6nm,0.5s
OBKA  Obir              5.14 191      Sg    Sg      23 11 10.4 +2.8
                comp=Z,5.0nm,0.5s
WTTA  Wattenberg        5.15 215    i Pn    Pn      23 09 42.6 +1.6
                comp=Z,1.2nm,0.3s
WTTA                                eSg     Sg      23 11 08.5 +0.6
                comp=Z,6.0nm,0.5s
MOTA  Moosalm           5.29 219    i Pn    Pn      23 09 43.2 +0.5
                comp=Z,0.6nm,0.2s
MOTA                                eSg     Sg      23 11 12.5 +0.4
                comp=Z,6.1nm,0.6s
SQTA  Sankt Quirin      5.35 218    i Pn    Pn      23 09 44.5 +0.9
                comp=Z,0.9nm,0.2s
SQTA                                eSg     Sg      23 11 13.9 -0.3
                comp=Z,4.1nm,0.4s
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*NIED **13** 23:12:00,27°.10N×140°.50E,h540^{km},Mw4.9   Best double couple: M$_0$2.87000×10^{16} NP1:φ$_s$47.00000°, δ63.00000°,λ-119.00000°.   NP2:φ$_s$278.00000°, δ38.00000°,λ-46.00000°.*

*BJI **13** 23:12:54.7±0.0,26°.91N×140°.24E,h535^{km},mB5.0/47, mb5.1/62*

*NEIC **13** 23:12:55.5±1.8,26°.89N±0°.06×140°.12E±0°.08, h521^{km}±5^{km},mb4.8/233,Error ellipse: s-maj=11.6km s-min=7.5km az=125.0*

*IDC **13** 23:12:55.4±0.3,26°.91N×140°.18E,h518^{km}±3^{km},mb4.2/32, mb1 4.3/40,mb1mx4.2/45,mbtmp5.1/40,Error ellipse: s-maj=8.0km s-min=5.1km az=72.0*

*JMA **13** 23:12:56.4±0.3,27°.14N×140°.46E,h520^{km}±5^{km},M5.4*

ISC 13 23:12:55.9±0.4**,26°.92N**±0°.04×**140°.19E**±0°.04**,h526^{km}**±3^{km}**, h526^{km}:pP-P,n620,σ1ˢ10**/659**,mb4.8**/201**,30C-25D, Bonin Islands region**

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Code  Station Name       Δ°  AZ°     Phase ID          Time     Res
                                    Op      ISC      h  m  s    ISC
CBIJ  Chichi jima       1.79  84    P       P       23 14 01.7 -0.7
CBIJ                                S       S       23 14 52.8 -3.7
JCJ   Chichijima        1.79  84    P       P       23 14 01.8 -0.6
                935nm,0.3s,baz=176,slow=3.0,SNR=84
JCJ                                 S       S       23 14 53.0 -3.4
                720nm,0.3s,baz=163,slow=23,SNR=10
JHH2  Haha-jima-NKT2    1.80  99    P       P       23 14 02.4 -0.1
JHH2                                S       S       23 14 53.4 -3.1
JAOM  Aogashimamukai    5.54 356    P       P       23 14 28.9 -0.1
JAOM                                S       S       23 15 41.3 -3.9
JHJ2  Mitsune           6.18 357    P       P       23 14 34.3 -0.7
JHJ2                                S       S       23 15 51.6 -4.5
JHJ2  Mitsune           6.18 357    P       P       23 14 34.2 -0.7
JHJ   Hachijo jima 2    6.19 357    P       P       23 14 34.4 -0.6
                251nm,0.3s,baz=269,slow=21,SNR=31
JHJ                                 S       S       23 15 53.4 -2.8
                133nm,0.3s,baz=254,slow=22,SNR=5.7
TTO1  TONANKAI O.B.S    7.30 337    P       P       23 14 47.7 +2.2
TK02  Tokai 2           7.32 344    P       P       23 14 46.5 +0.8
BSO1  Boso 1            7.74   5    P       P       23 14 50.0 +0.4
BSO1                                S       S       23 16 19.4 -3.6
JIE   Ise               8.03 339    P       P       23 14 54.3 +1.2
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JIE				S	S	23 16 27.4	-1.9
JWY	Kouya	8.29	333	P	P	23 14 57.5	+1.7
JOD2	Odawara 2	8.38	354	P	P	23 14 56.0	-0.6
JOD2				S	S	23 16 33.0	-2.8
JAI	Aioi	8.46	326	P	P	23 14 58.7	+1.3
JAI				S	S	23 16 39.3	+2.0
JYN	Shimob	8.67	351	P	P	23 14 59.4	-0.3
JTO	Tosashimizu	8.73	315	P	P	23 15 01.5	+1.3
INU	Inuyama	8.83	343	P	P	23 15 01.1	-0.2
JRY	Ryogami san	9.14	353	P	P	23 15 03.5	-1.0
MJAR	Matsushiro Arr	9.74	351	P	P	23 15 09.3	-1.4
	5.7nm,0.3s,baz=153,slow=8.3,SNR=61						
MJAR				S	S	23 17 00.9	-0.7
	1.0nm,0.3s,baz=272,slow=17,SNR=5.0						
MJAR	Matsushiro Arr	9.74	351	P	P	23 15 09.1	-1.6
MAJO	Matsushiro	9.74	351	P	P	23 15 09.9	-0.8
MAT	Matsushiro	9.74	351	P	P	23 15 09.6	-1.1
MAT				S	S	23 16 58.1	-3.5
MJB9	Matsu-Tunnel	9.75	351	P	P	23 15 10.0	-0.8
JHS	Saijyo	10.08	325	P	P	23 15 15.2	+0.9
JNU	Nakatsue	10.16	310	P	P	23 15 15.4	+0.3
	3.4nm,0.3s,baz=106,slow=5.7,SNR=30						
JNU				S	S	23 17 09.9	+0.2
	baz=222,slow=22,SNR=4.0						
JNU	Nakatsue	10.16	310	P	P	23 15 14.7	-0.5
JOW	Kunigami	10.64	272	P	P	23 15 21.1	+0.9
JOW	Kunigami	10.64	272	P	P	23 15 19.6	-0.6
	3.4nm,0.3s,baz=121,slow=14,SNR=12						
JOW	Kunigami	10.64	272	P	P	23 15 18.7	-1.4
JMST	Minamisoumatoc	10.79	3	P	P	23 15 21.9	+0.3
JIKH	Ishinomakikobu	11.41	5	P	P	23 15 28.5	+0.4
JOU	Okura	11.43	2	P	P	23 15 28.9	+0.7
JYA	Atsumi	11.65	358	P	P	23 15 31.3	+0.7
JYK	Kaneyama	11.97	1	P	P	23 15 34.5	+0.6
JKE	Kume jima 2	12.01	270	P	P	23 15 34.5	0.0
JMK	Ichinoseki	12.04	4	P	P	23 15 34.9	+0.4
OFUJ	Ofunato	12.20	5	P	P	23 15 36.6	+0.4
JRG	Rokugo	12.45	2	P	P	23 15 39.7	+0.8
JOM	Ohasama	12.56	4	P	P	23 15 40.4	+0.4
JYW	Yuwa	12.59	0	P	P	23 15 41.3	+0.9
MIYJ	Miyakonagasawa	12.70	6	P	P	23 15 41.7	+0.2
JAH	Hinai	13.24	2	P	P	23 15 47.7	+0.5
JHHS	Hirosakihyakuz	13.70	1	P	P	23 15 52.7	+0.7
GUMO	Guam	13.96	161	P	P	23 15 54.6	-0.5
	94nm,0.3s,baz=21,slow=2.6,SNR=14						
GUMO	Guam	13.96	161	P	P	23 15 54.2	-0.9
JISG	Ishigakijimahi	14.49	264	P	P	23 15 59.3	-1.2
JIJ	Ishigaki jima	14.69	264	P	P	23 16 02.3	-0.3
KSRS	Korea Array	14.76	318	P	P	23 16 01.9	-1.1
	16nm,0.3s,baz=144,slow=8.8,SNR=151						
KSRS				S	S	23 18 41.2	+3.8
	baz=148,slow=16,SNR=19						
KSRS				PcP	PcP	23 20 35.9	+0.1
	baz=188,slow=1.9,SNR=4.4						
KSAR	Wonju Array Be	14.77	318	P	P	23 16 04.0	+0.8
KS19	Wonju Array Si	14.82	318	P	P	23 16 04.9	+1.1
ERM	Erimo	15.26	8	P	P	23 16 08.9	+0.7
INCN	Inchon	15.56	316	P	P	23 16 10.7	-0.7
YOJ	Yonaguni jima	15.68	265	P	P	23 16 10.5	-2.3
TATO	Taipei	16.93	268	P	P	23 16 23.8	-1.4
NACB	Ninganchiao	17.00	265	P	P	23 16 23.7	-2.2
YHNB	Yeheng	17.09	267	P	P	23 16 24.6	-2.2
SSE	Sheshan	17.13	289	P	P	23 16 25.6	-1.3
ASAJ	Asahikawa	17.27	6	P	P	23 16 28.9	+0.8
	3.0nm,0.3s,baz=240,slow=12,SNR=11						
ASAJ				ScP	ScP	23 23 24.6	-0.2
	0.3nm,0.3s,baz=92,slow=31,SNR=5.1						
JKA	Kamikawa-asahi	17.27	6		ScP	23 23 24.6	-0.2
YULB	Yu-li	17.46	263	P	P	23 16 29.2	-1.0
SSLB	Suanglung	17.66	264	P	P	23 16 31.2	-0.8
TWG	Pinlang	17.82	261	P	P	23 16 32.7	-0.7
USA0B	Ussuriysk Arra	18.47	341	P	P	23 16 39.9	+0.9
USRK	Ussuriysk Ar.	18.47	341	P	P	23 16 39.8	+0.7
	baz=164,slow=9.6,SNR=76						
DL2	Dalian	19.60	312	P	P	23 16 50.1	+0.7
DL2				S	S	23 20 03.9	+4.8
DL2				pmax	pmax		
	comp=Z,67nm,0.6s						
DL2				pmax	pmax		
	comp=Z,82nm,4.6s						
MDJ	Mudanjiang	19.61	337	P	P	23 16 50.3	+0.9
MDJ				pmax	pmax		
	comp=Z,20nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,320nm,4.2s						
MDJ	Mudanjiang	19.61	337	P	P	23 16 52.5	+3.1
MDJ				IAmb	IAmb	23 16 53.2	
	comp=Z,20nm,1.1s						
YSS	Yuzh-Sakhalins	20.11	5	P	P	23 16 54.0	+0.2
YSS				IAmb	IAmb	23 16 55.6	
	comp=Z,25nm,0.7s						
CN2	Changchun	20.64	328	*e*P	P	23 17 00.6	+1.8
CN2				*e*sP	sP	23 19 20.4	+5.2
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TIA	Tai'an	21.68	301	P	P	23 17 08.3	-0.1
TIA				pmax	pmax		
	comp=Z,35nm,0.7s						
WHN	Wuhan	22.93	285	⇑P	P	23 17 20.0	+0.5
KLR	Kul'dur	23.22	346	P	P	23 17 22.2	+0.4
	comp=Z,13nm,0.4s,baz=164,slow=8.2,SNR=104						
KLR				PcP	PcP	23 20 51.3	+0.5
	comp=Z,5.4nm,0.9s,baz=90,slow=1.0,SNR=3.2						
KLR				ScP	ScP	23 23 38.9	-0.2
	comp=Z,9.1nm,0.8s,baz=212,slow=1.6,SNR=20						
BJT	Baijiatuau	23.83	309	P	P	23 17 26.2	-1.3
BJI	Beijing	23.84	309	P	P	23 17 26.4	-1.1
BJI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HKPS	Hong Kong Po S	24.11	265	P	P	23 17 29.7	-0.4
H11N2	WAKE ISLAND Hy	25.52	101	P	P	23 17 43.6	+1.2
	baz=268,slow=9.6,SNR=11						
H11N1	WAKE ISLAND Hy	25.52	101	P	P	23 17 43.6	+1.2
	baz=268,slow=9.6,SNR=8.7						
H11N3	WAKE ISLAND Hy	25.53	101	P	P	23 17 43.6	+1.1
	baz=268,slow=9.6,SNR=7.2						
PATS	Pohnpei	26.38	136	P	P	23 17 49.9	-0.4
HIA	Hailar	27.34	330	P	P	23 17 57.9	-0.5
XAN	Xi'an	27.79	292	P	P	23 18 02.4	-0.2
XAN				PcP	PcP	23 21 01.8	-0.1
XAN				ScP	ScP	23 23 52.8	-0.1
XAN				pmax	pmax		
	comp=Z,46nm,0.6s						
XAN	Xi'an	27.79	292	P	P	23 18 02.6	0.0
BTO	Baotou	28.40	306	*e*P	P	23 18 06.8	-1.0
PETK	Petropavlovsk-	29.24	22	P	P	23 18 14.7	-0.1
	comp=Z,2.6nm,0.6s,baz=180,slow=5.5,SNR=3.9						
PETK				ScP	ScP	23 23 56.2	-0.8
	comp=Z,3.4nm,0.7s,baz=163,slow=6.0,SNR=5.3						
PETK	Petropavlovsk-	29.24	22	P	P	23 18 15.4	+0.6
GYA	Guiyang	29.91	277	⇑*i*P	P	23 18 21.3	+0.1
GYA				pP	pwP	23 19 52.0	-1.9
GYA				PP	PP	23 19 54.8	-6.7
GYA				PcP	PcP	23 21 08.5	+0.9
GYA				S	S	23 22 38.4	-3.2
GYA				SS	SS	23 25 22.8	-27
GYA				pmax	pmax		
	comp=Z,50nm,0.8s						
GYA				pmax	pmax		
	comp=Z,130nm,4.8s						
KMSI	Cibinong	30.47	213	P	P	23 18 26.4	+0.4
	comp=Z,98nm,0.4s						
FAKI	Fak Fak	30.63	196	P	P	23 18 26.5	-0.9
FAKI				IAmb	IAmb	23 18 28.4	
	comp=Z,22nm,0.7s						
KKM	Kota Kinabalu	30.85	232	P	P	23 18 29.1	-0.3
KKM				IAmb	IAmb	23 18 30.7	
	comp=Z,20nm,0.5s						
KWAJ	Kwajalein Atol	31.59	120	P	P	23 18 35.7	+0.1
MRSI	Marisa	31.60	217	P	P	23 18 36.5	+0.8
	comp=Z,1µmcomp=Z,115nm,1.0s						
SANI	Sanana	31.89	208	P	P	23 18 37.1	-1.0
	comp=Z,1µmcomp=Z,63nm,0.5s						
LZH	Lanzhou	32.16	296	⇓P	P	23 18 40.8	+0.4
LZH				pP	pwP	23 20 11.5	-2.8
LZH				PP	pP	23 20 13.3	+5.3
LZH				sP	PcP	23 21 12.0	-1.6
LZH				pmax	pmax		
	comp=Z,39nm,1.3s						
LZH				pmax	pmax		
	comp=Z,130nm,5.2s						
LUWI	Luwuk	32.47	214	P	P	23 18 42.5	-0.5
	comp=Z,2µmcomp=Z,55nm,0.8s						
LUWI	Luwuk	32.47	214	P	P	23 18 41.8	-1.2
MPSI	Mapaga	32.85	220	P	P	23 18 45.2	-1.1
	comp=Z,475nmcomp=Z,12nm,0.5s						
APSI	Ampana	32.93	216	P	P	23 18 46.0	-0.9
	comp=Z,47nm,0.7s						
KRVT	Keravat (AS076	33.08	158	P	P	23 18 47.6	-0.7
	comp=Z,42nm,0.6s,baz=3.5,slow=5.4,SNR=5.1						
ULN	Ulaanbaatar	33.24	318	P	P	23 18 50.0	+0.6
ULN				IAmb	IAmb	23 18 50.9	
	comp=Z,31nm,0.7s						
DLV	T Lat	33.28	250	P	P	23 18 50.1	-0.1
DLV				IAmb	IAmb	23 18 51.8	
	comp=Z,30nm,0.9s						
MA2	Magadan	33.46	10	P	P	23 18 51.5	+0.6
	comp=Z,3.6nm,0.3s,baz=194,slow=11,SNR=9.8						
MA2				ScP	ScP	23 24 10.3	-0.9
	comp=Z,3.6nm,0.3s,baz=78,slow=6.6,SNR=5.4						
MA2	Magadan	33.46	10	IAmb	IAmb	23 18 51.7	
	comp=Z,10nm,0.8s						
SLVN	Son La	33.50	268	IAmb	IAmb	23 18 53.6	
	comp=Z,28nm,1.0s						
KMI	Kunming	33.62	275	P	P	23 18 53.8	+0.8
KMI				pP	pP	23 20 23.9	+2.5
KMI				pmax	pmax		
	comp=Z,41nm,0.9s						
KMI				pmax	pmax		
	comp=Z,150nm,4.2s						
KMI	Kunming	33.62	275	P	P	23 18 53.3	+0.3
KMI				IAmb	IAmb	23 18 56.7	
	comp=Z,24nm,1.0s						
SONM	Songino Array	33.62	317	P	P	23 18 53.0	+0.4
	comp=Z,20nm,0.4s,baz=124,slow=7.8,SNR=255						
SONM				PcP	PcP	23 21 17.2	-0.3
	comp=Z,4.1nm,0.8s,baz=149,slow=3.6,SNR=4.6						
SONM				S	S	23 23 37.7	-0.2
	comp=Z,1.1nm,1.0s,baz=133,slow=12,SNR=3.6						
SONM				ScP	ScP	23 24 12.3	0.0
	comp=Z,3.8nm,0.7s,baz=149,slow=3.6,SNR=12						
SONM	Songino Array	33.62	317	P	P	23 18 52.9	+0.4
UBPT	Khong Chiam	34.28	257	IAmb	IAmb	23 19 01.0	
	comp=Z,15nm,0.7s						
GTA	Gaotai	35.74	301	⇓P	P	23 19 09.8	-0.6
GTA				PcP	PcP	23 21 24.4	+0.5
GTA				S	S	23 24 08.3	-1.7
GTA				ScP	ScP	23 24 20.8	+0.7
GTA				PcS	PcS	23 25 08.0	-4.3
GTA				pmax	pmax		
	comp=Z,56nm,0.9s						
GTA				pmax	pmax		
	comp=Z,92nm,5.9s						
SBUM	Sibu	36.19	233	P	P	23 19 14.4	+0.1
SBUM	Sibu	36.19	233	P	P	23 19 15.0	+0.7
SPSI	Sidrap Palu	36.49	216	P	P	23 19 17.5	+0.7
	comp=Z,22nm,1.0s						
BNSI	Bone	36.69	215	P	P	23 19 18.2	-0.2
	comp=Z,20nm,1.1s						
PMG	Port Moresby	36.73	168	P	P	23 19 19.2	+0.6
	comp=Z,21nm,0.5s,baz=14,slow=8.6,SNR=5.7						
PMG				ScP	ScP	23 24 23.7	-0.2
	comp=Z,12nm,0.7s,baz=45,slow=14,SNR=4.8						
PMG	Port Moresby	36.73	168	IAmb	IAmb	23 19 19.5	
	comp=Z,24nm,0.6s						
SEY	Seymchan	36.91	9	P	P	23 19 20.5	+1.0
	comp=Z,24nm,0.5s,baz=189,slow=6.9,SNR=58						
SEY				ScP	ScP	23 24 23.0	-0.8
	comp=Z,2.0nm,0.5s,baz=216,slow=4.1,SNR=5.8						
TLY	Talaya	36.97	322	P	P	23 19 20.9	+0.6
	comp=Z,21nm,0.6s,baz=153,slow=5.3,SNR=57						
TLY				PcP	PcP	23 21 27.8	+0.5
	comp=Z,4.1nm,0.8s,baz=213,slow=2.6,SNR=4.1						
TLY				ScP	ScP	23 24 23.6	-0.7
	comp=Z,1.2nm,0.5s,baz=188,slow=2.5,SNR=4.8						
TLY	Talaya	36.97	322	P	P	23 19 20.9	+0.6
TLY				IAmb	IAmb	23 19 22.0	
	comp=Z,22nm,0.6s						
PBKT	Sadao Pong	37.72	262	P	P	23 19 27.4	+0.6
KBKI	Kotabaru	37.95	221	P	P	23 19 28.9	+0.2
	comp=Z,8.1nm,1.3s						
KSM	Kuching	38.24	234	P	P	23 19 31.3	+0.2
KSM				IAmb	IAmb	23 19 32.1	
	comp=Z,10.0nm,0.6s						
KSM	Kuching	38.24	234	P	P	23 19 31.0	-0.1
CHTO	Chiang Mai	38.71	267	P	P	23 19 34.8	-0.1
CHTO				IAmb	IAmb	23 19 36.1	
	comp=Z,49nm,0.9s						
CHTO					PcP	23 21 34.3	+1.0
CMAR	Chiang Mai Arr	38.83	266	P	P	23 19 36.2	+0.3
	comp=Z,23nm,0.9s,baz=59,slow=7.9,SNR=117						
CMAR				PcP	PcP	23 21 34.8	+1.0
	comp=Z,3.3nm,0.6s,baz=98,slow=0.8,SNR=10						
CMAR				ScP	ScP	23 24 32.8	+0.8
	comp=Z,2.1nm,0.8s,baz=72,slow=2.3,SNR=12						
CMAR	Chiang Mai Arr	38.83	266	P	P	23 19 35.9	0.0
CMAR					PcP	23 21 34.5	+0.7
SOEI	Soe	39.59	205	P	P	23 19 41.1	-1.0
	comp=Z,18nm,1.1s						
SOEI	Soe	39.59	205	P	P	23 19 42.5	+0.4
SOEI				IAmb	IAmb	23 20 00.6	
	comp=Z,13nm,0.8s						
EDFI	Ende, Flores	39.73	209	P	P	23 19 42.7	-0.6
	comp=Z,15nm,0.9s						
PLAI	Plampang	41.65	215	P	P	23 19 58.4	0.0
	comp=Z,32nm,0.9s						
ATKA	Atka Island	42.33	41	P	P	23 20 03.9	+0.6
ATKA				IAmb	IAmb	23 20 05.2	
	comp=Z,61nm,1.0s						
SRBI	Singaraja	42.39	218	P	P	23 20 04.6	+0.4
MYKOM	Kota Tinggi	42.87	241	P	P	23 20 07.7	-0.4
MYKOM				IAmb	IAmb	23 20 10.0	
	comp=Z,31nm,1.0s						
MYKOM	Kota Tinggi	42.87	241	P	P	23 20 09.0	+1.0
LSA	Lhasa	43.01	286	P	P	23 20 10.8	+1.3
LSA	Lhasa	43.01	286	P	P	23 20 10.2	+0.7
LSA				IAmb	IAmb	23 20 12.6	
	comp=Z,30nm,0.8s						
SHL	Shillong	43.14	279	P	P	23 20 10.1	-0.1
JAGI	Jajag, Banyuwa	43.30	219	P	P	23 20 12.0	+0.6
KULM	Kulim	43.37	247	P	P	23 20 12.4	+0.5
KULM				IAmb	IAmb	23 20 13.5	
	comp=Z,37nm,0.7s						
KULM	Kulim	43.37	247	P	P	23 20 13.0	+1.1
IPM	Ipoh	43.52	246	P	P	23 20 13.0	-0.2
IPM				IAmb	IAmb	23 20 14.1	
	comp=Z,29nm,0.7s						
IPM	Ipoh	43.52	246	P	P	23 20 13.0	-0.2
SIMRM	Sittwe	43.70	272	P	P	23 20 14.8	+0.4
BILL	Bilibino	44.04	14	P	P	23 20 16.6	+0.2
BILL				IAmb	IAmb	23 20 17.9	
	comp=Z,22nm,0.9s						
BRDH	Bariadhala	44.06	276	P	P	23 20 18.2	+1.0
	comp=Z,308nm,0.3s,baz=92,slow=8.4,SNR=20						
SMRI	Semarang	44.39	225	P	P	23 20 18.0	-1.8
SMRI				IAmb	IAmb	23 20 32.9	
	comp=Z,37nm,0.9s						
TIXI	Tiksi	45.22	355	P	P	23 20 24.4	-0.9
	comp=Z,6.6nm,0.3s,baz=185,slow=7.0,SNR=18						
TIXI				PcP	PcP	23 21 53.6	-0.7
	comp=Z,1.7nm,0.3s,baz=112,slow=5.4,SNR=3.2						
TIXI				ScP	ScP	23 24 55.8	-0.9
	comp=Z,1.6nm,0.3s,baz=116,slow=0.4,SNR=4.4						
TIXI	Tiksi	45.22	355	P	P	23 20 24.6	-0.7
TIXI				IAmb	IAmb	23 20 26.9	
	comp=Z,7.9nm,0.5s						
WMQ	Urumqi	45.24	306	P	P	23 20 26.9	+0.8
WMQ				PcP	PcP	23 21 55.6	+0.6
WMQ				pP	pP	23 22 02.8	+1.5
WMQ				S	S	23 26 27.5	-0.1
WMQ				pmax	pmax		
	comp=Z,72nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,310nm,6.5s						
WMQ	Urumqi	45.24	306		PcP	23 21 56.3	+1.3
KPJI	Karang Pucung	45.57	226	P	P	23 20 28.7	-0.2
	comp=Z,933nmcomp=Z,104nm,1.0s						
LEM	Lembang	46.05	228	P	P	23 20 32.8	+0.1
RPSI	Rantau Prapat	46.25	246	P	P	23 20 33.8	-0.3
RPSI				IAmb	IAmb	23 20 35.0	
	comp=Z,42nm,0.7s						
RPSI					PcP	23 21 59.4	+0.4
TAPN	Taplejung	46.41	283	*e*P	P	23 20 36.1	+0.5
	comp=Z,62nm,0.4s						
SDSI	Sungai Dareh	46.46	240	P	P	23 20 35.9	+0.2
	comp=Z,1µmcomp=Z,23nm,1.0s						
CISI	Cisompet, Garu	46.46	227	P	P	23 20 32.9	-2.9
CISI				IAmb	IAmb	23 20 34.5	
	comp=Z,36nm,0.9s						
LHMI	Lhok Sumawe	46.48	250	P	P	23 20 35.7	-0.2
MDSI	Maura Dua	46.75	234	P	P	23 20 37.1	-0.8
	comp=Z,1µmcomp=Z,122nm,1.0s						
ODAN	Odare	46.79	283	*e*P	P	23 20 38.9	+0.5
	comp=Z,286nm,0.7s						
WRAB	Tennant Creek	46.91	188	P	P	23 20 38.6	-0.3
WRAB				IAmb	IAmb	23 20 39.2	
	comp=Z,19nm,0.7s						
FITZ	Fitzroy Crossi	46.92	199	P	P	23 20 37.8	-1.2
WB2	Warramunga Arr	46.92	188	IAmb	IAmb	23 20 39.3	
	comp=Z,23nm,0.7s						
WRA	Warramunga Arr	46.92	188	P	P	23 20 38.6	-0.5
	comp=Z,24nm,0.5s,baz=6.9,slow=7.7,SNR=673						
WRA				ScP	ScP	23 25 04.1	-0.6
	comp=Z,14nm,0.9s,baz=2.3,slow=2.8,SNR=18						
WRA				S	S	23 26 48.2	-3.3
	comp=Z,3.9nm,0.8s,baz=7.0,slow=14,SNR=7.7						
WRA	Warramunga Arr	46.92	188	P	P	23 20 38.5	-0.5
PBA	Port Blair	47.00	261	P	P	23 20 38.3	-1.5
PBA				IAmb	IAmb	23 20 39.9	
	comp=Z,58nm,1.0s						
CTA	Charters Tower	47.09	172	P	P	23 20 40.9	+0.6
	comp=Z,17nm,0.7s						
LWLI	Liwa	47.21	233	P	P	23 20 41.9	+0.4
MLSI	Meulaboh, Aceh	47.46	249	P	P	23 20 41.8	-1.4
	comp=Z,76nm,0.5s						
RAMN	Ramite	47.46	283	*e*P	P	23 20 43.8	+0.4
	comp=Z,166nm,0.4s						
MNAI	Manna	47.55	235	P	P	23 20 41.9	-2.0
JIRN	Jiri	47.66	284	*e*P	P	23 20 45.5	+0.4
	comp=Z,122nm,0.4s						
GUN	Gumba	47.88	284	*e*P	P	23 20 47.4	+0.7
	comp=Z,137nm,0.4s						
GAMB	Gambell	48.07	26	P	P	23 20 47.1	+0.1
PKI	Pulchoki	48.36	284	*e*P	P	23 20 50.2	0.0
	comp=Z,62nm,0.5s						
PKIN	Phulchoki	48.37	284	*e*P	P	23 20 50.2	0.0
	comp=Z,62nm,0.5s						
PBSI	Pulau Batu	48.39	243	P	P	23 20 50.3	+0.1
	comp=Z,31nm,1.1s						
KKN	Kakani	48.42	284	*e*P	P	23 20 50.8	+0.2
ZAA0	Zalesovo Array	48.46	319	IAmb	IAmb	23 20 50.7	
	comp=Z,21nm,0.9s						
ZAA0					PcP	23 22 05.7	-0.6
ZALV	Zalesovo Beam	48.46	319	P	P	23 20 49.7	-0.4
	comp=Z,13nm,0.4s,baz=104,slow=6.9,SNR=72						
ZALV				PcP	PcP	23 22 05.6	-0.7
	comp=Z,16nm,0.5s,baz=102,slow=3.6,SNR=21						
ZALV				ScP	ScP	23 25 09.7	-1.1
	comp=Z,2.2nm,0.6s,baz=120,slow=3.8,SNR=3.8						
SISI	Saibi	48.52	241	P	P	23 20 52.8	+1.6
	comp=Z,20nm,1.1s						
SNSI	Sinabang, Aceh	48.54	247	P	P	23 20 51.4	0.0
	comp=Z,162nm,1.2s						
GKN	Gorkha	48.93	285	*e*P	P	23 20 54.5	+0.2
	comp=Z,53nm,0.3s						
MK31	Makanchi Array	49.22	310	IAmb	IAmb	23 20 57.2	
	comp=Z,42nm,1.1s						
MKAR	Makanchi Array	49.22	310	P	P	23 20 56.2	+0.3
	comp=Z,26nm,0.5s,baz=92,slow=9.5,SNR=485						
MKAR				PcP	PcP	23 22 09.4	+0.1
	comp=Z,12nm,0.7s,baz=90,slow=6.1,SNR=9.8						
MKAR				ScP	ScP	23 25 13.8	-0.4
	comp=Z,2.6nm,0.5s,baz=81,slow=5.4,SNR=8.5						
MKAR				S	S	23 27 21.1	-1.4
	comp=Z,4.3nm,1.1s,baz=98,slow=6.5,SNR=10						
MKAR	Makanchi Array	49.22	310	P	P	23 20 56.1	+0.1
MAKZ	Makanchi	49.43	310	P	P	23 20 57.8	+0.3
MAKZ				IAmb	IAmb	23 20 59.0	
	comp=Z,50nm,0.9s						
DANN	Dangsing	49.62	285	*e*P	P	23 21 00.2	+0.7
	comp=Z,179nm,0.3s						
AS31	Alice Springs	50.65	187	IAmb	IAmb	23 21 07.7	
	comp=Z,9.7nm,0.5s						
ASAR	Alice Springs	50.65	187	P	P	23 21 06.2	-0.5
	comp=Z,9.4nm,0.4s,baz=1.5,slow=4.4,SNR=192						
ASAR				PcP	PcP	23 22 15.8	+0.9
	comp=Z,2.7nm,0.8s,baz=20,slow=4.7,SNR=7.0						
ASAR				PP	PP	23 23 13.8	+3.7
	comp=Z,1.8nm,0.9s,baz=20,slow=11,SNR=4.8						
ASAR				ScP	ScP	23 25 20.0	-0.6
	comp=Z,4.4nm,0.8s,baz=8.0,slow=4.8,SNR=11						
ASAR				S	S	23 27 42.0	-0.5
	comp=Z,1.1nm,0.9s,baz=356,slow=11,SNR=5.2						
ASAR	Alice Springs	50.65	187	P	P	23 21 05.9	-0.7
ANM	Nome	50.92	27	P	P	23 21 09.7	+1.6
KURK	Kurchatov	51.84	315	P	P	23 21 14.8	-0.1
KURK	Kurchatov	51.84	315		PcP	23 22 18.8	-0.2
KURBB	Kurchatov Arra	51.89	315	P	P	23 21 15.3	0.0
	comp=Z,72nm,0.4s,baz=92,slow=7.9,SNR=238						
KURBB				PcP	PcP	23 22 18.8	-0.4
	comp=Z,4.8nm,0.6s,baz=88,slow=4.4,SNR=4.5						
PSA00	Pilbara Seismi	52.07	204	P	P	23 21 16.6	-0.3
NRIK	Noril'sk	52.17	339	P	P	23 21 17.1	+0.1
	comp=Z,22nm,0.4s,baz=111,slow=9.0,SNR=79						
NRIK				PcP	PcP	23 22 19.7	-0.2
	comp=Z,10.0nm,0.7s,baz=134,slow=3.4,SNR=6.5						
NRIK				ScP	ScP	23 25 26.1	-0.4
	comp=Z,4.5nm,0.5s,baz=90,slow=3.7,SNR=6.3						
NRIK				S	S	23 27 59.8	-1.9
	comp=Z,6.1nm,0.8s,baz=195,slow=23,SNR=32						
CHGN	Chignik	52.26	38	P	P	23 21 19.3	+1.4
CHGN					PcP	23 22 24.2	+3.8
KDJ	Kajisay	52.96	304	IAmb	IAmb	23 21 26.6	
	comp=Z,32nm,0.9s						
RDOG	Red Dog Mine	53.09	23	P	P	23 21 23.7	+0.1
ULHL	Ulahol	53.64	304	P	P	23 21 29.2	+0.9
	SNR=43						
NRN	Naryn	53.90	303	IAmb	IAmb	23 21 33.3	
	comp=Z,34nm,1.1s						
KSH	Kashi	54.14	301	P	P	23 21 35.5	+3.8
KSH				PcP	PcP	23 22 29.5	+1.3
KSH				pP	pwP	23 23 20.1	+2.0
KSH				PcS	PcS	23 26 27.5	-1.1
KSH				S	S	23 28 31.5	+2.6
KSH				ScS	ScS	23 30 26.4	+0.1
KSH				pmax	pmax		
	comp=Z,150nm,0.7s						
KSH				pmax	pmax		
	comp=Z,470nm,6.1s						
KZA	Kyzart	54.39	304	P	P	23 21 35.2	+1.3
	SNR=70						
KBK	Karagaybulak	54.56	305	P	P	23 21 35.6	+0.9
	SNR=12						
CHMS	Chumysh	54.67	305	P	P	23 21 36.3	+1.0
	SNR=20						
FRU1	Bishkek	54.78	305	P	P	23 21 36.7	+0.6
FRU1				IAmb	IAmb	23 21 37.9	
	comp=Z,65nm,0.8s						
USP	Ospenovka	54.83	305	P	P	23 21 36.9	+0.5
	SNR=49						
AAK	Ala-Archa	54.89	305	P	P	23 21 37.5	+0.5
	comp=Z,27nm,0.5s,baz=108,slow=5.1,SNR=147						
AAK				PcP	PcP	23 22 31.2	+0.1
	comp=Z,4.1nm,0.5s,baz=160,slow=9.5,SNR=3.6						
AAK	Ala-Archa	54.89	305	P	P	23 21 37.6	+0.6
	SNR=36						
AAK	Ala-Archa	54.89	305	*i* P	P	23 21 37.5	+0.5
	SNR=61						
AAK	Ala-Archa	54.89	305	P	P	23 21 37.5	+0.5
AAK	Ala-Archa	54.89	305	P	P	23 21 37.2	+0.2
AAK				IAmb	IAmb	23 21 38.5	
	comp=Z,30nm,0.8s						
UCH	Uchtor	54.92	304	P	P	23 21 39.0	+1.4
	SNR=116						
DZM	Mont Dzumac	54.93	150	P	P	23 21 38.9	+1.5
	comp=Z,30nm,0.7s						
DZM	Mont Dzumac	54.93	150	IAmb	IAmb	23 21 40.0	
	comp=Z,37nm,0.7s						
EKS2	Erkin-Say	55.42	305	P	P	23 21 41.3	+0.6
	SNR=52						
AML	Almayashu	55.54	304	P	P	23 21 42.9	+1.1
	SNR=92						
KDAK	Kodiak Island	55.58	37	P	P	23 21 41.7	+0.4
	comp=Z,3.7nm,0.3s,baz=168,slow=0.2,SNR=19						
KDAK	Kodiak Island	55.58	37	IAmb	IAmb	23 21 50.5	
	comp=Z,11nm,0.9s						
ARSB	Arslanbob	56.17	303	IAmb	IAmb	23 21 47.8	
	comp=Z,111nm,1.1s						
KIP	Kipapa	56.18	81	P	P	23 21 46.0	-0.1
KIP				IAmb	IAmb	23 21 57.4	
	comp=Z,35nm,0.8s						
HON	Honolulu	56.22	81	P	P	23 21 43.5	-2.8
KTH	Kantishna Hill	56.87	30	P	P	23 21 50.3	+0.1
BPAW	Bear Paw Mtn.	56.90	29	P	P	23 21 51.8	+1.5
BRVK	Borovoye	57.03	317	P	P	23 21 50.9	-0.5
NIL	Nilore	57.31	294	P	P	23 21 54.3	+0.6

NIL	**Nilore**	**57.31**	**294**	P	**P**	**23 21 54.3**	**+0.6**
HYB	**Hyderabad**	**57.39**	**274**	*i* P	**P**	**23 21 55.0**	**+0.5**
	comp=Z,31nm,0.8s						
BWN	**Browne**	**57.57**	**29**	P	**P**	**23 21 56.5**	**+1.6**
BWN				IAmb	IAmb	23 22 14.0	
	comp=Z,33nm,1.1s						
KKAR	**Karatay Array**	**57.74**	**306**	P	**P**	**23 21 56.7**	**+0.2**
KKAR	**Karatay Array**	**57.74**	**306**	IAmb	IAmb	23 21 57.9	
	comp=Z,86nm,0.8s						
MCK	**McKinley**	**57.77**	**30**	IAmb	IAmb	23 22 13.4	
	comp=Z,28nm,1.0s						
NEA	**Nenana**	**57.77**	**29**	P	**P**	**23 21 57.6**	**+1.3**
RND	**Reindeer**	**57.78**	**30**	P	**P**	**23 21 56.2**	**-0.2**
KNK	**Knik Glacier**	**57.86**	**33**	P	**P**	**23 21 58.0**	**+1.1**
SML	**Sawmill**	**57.93**	**32**	P	**P**	**23 21 56.6**	**-0.9**
SML				IAmb	IAmb	23 22 14.1	
	comp=Z,22nm,1.0s						
HLK	**Haleakala**	**57.95**	**81**	P	**P**	**23 21 57.0**	**-1.5**
BTK	**Batken**	**57.99**	**302**	IAmb	IAmb	23 21 59.0	
	comp=Z,22nm,0.5s						
ARMA	**Armidale**	**58.05**	**168**	P	**P**	**23 21 58.3**	**-0.4**
ARMA				IAmb	IAmb	23 22 00.4	
	comp=Z,14nm,0.7s						
STKA	**Stephens Creek**	**58.48**	**179**	P	**P**	**23 22 01.6**	**+0.1**
	comp=Z,16nm,0.6s,baz=352,slow=7.2,SNR=54						
FORT	**Forrest**	**58.53**	**192**	IAmb	IAmb	23 22 02.3	
	comp=Z,40nm,0.5s						
HUH	**Hualalai**	**58.67**	**82**	P	**P**	**23 22 03.1**	**-0.3**
HUH				IAmb	IAmb	23 22 09.9	
	comp=Z,80nm,1.0s						
HDA	**Harding Lake**	**58.68**	**29**	P	**P**	**23 22 02.0**	**-0.4**
HPAH	**Hawaii Prepara**	**58.68**	**82**	P	**P**	**23 22 02.6**	**-0.6**
HPAH				IAmb	IAmb	23 22 14.9	
	comp=Z,69nm,0.9s						
ILAR	**Eielson Array**	**58.72**	**29**	P	**P**	**23 22 02.3**	**-0.4**
	comp=Z,2.4nm,1.0s,baz=247,slow=5.6,SNR=22						
ILAR				PcP	**PcP**	**23 22 45.1**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=265,slow=3.3,SNR=4.6						
ILAR				pP	**pP**	**23 23 45.9**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=262,slow=5.8,SNR=2.8						
ILAR	**Eielson Array**	**58.72**	**29**	P	**P**	**23 22 03.3**	**+0.6**
UWE	**Uwekahuna**	**59.25**	**82**	P	**P**	**23 22 07.5**	**+0.4**
PAX	**Paxson**	**59.30**	**31**	P	**P**	**23 22 07.4**	**+0.7**
BBOO	**Buckleboo**	**59.52**	**184**	P	**P**	**23 22 07.9**	**-0.5**
BMAR	**Burnt Mountain**	**59.79**	**26**	P	**P**	**23 22 11.4**	**+1.6**
BMAR					**PcP**	**23 22 52.1**	**+2.2**
MCARA	**McCarthy VSAT**	**60.47**	**33**	P	**P**	**23 22 15.8**	**+1.4**
KBL	**Kabul**	**60.51**	**296**	P	**P**	**23 22 15.5**	**+0.1**
	SNR=101						
KBL	**Kabul**	**60.51**	**296**	P	**P**	**23 22 15.3**	**-0.1**
BCAR	**Beaver Creek A**	**60.97**	**31**	P	**P**	**23 22 18.0**	**+0.2**
YKU2	**Yakutat**	**62.27**	**35**	P	**P**	**23 22 28.0**	**+1.8**
EPYK	**Eagle Plains**	**62.91**	**27**	P	**P**	**23 22 32.1**	**+1.8**
EPYK				IAmb	IAmb	23 22 47.9	
	comp=Z,28nm,1.1s						
NWAO	**Narrogin (SRO)**	**63.39**	**202**	P	**P**	**23 22 33.8**	**+0.1**
NWAO				IAmb	IAmb	23 22 35.2	
	comp=Z,30nm,1.1s						
ARU	**Arti**	**63.47**	**322**	P	**P**	**23 22 33.3**	**-0.7**
INK	**Inuvik**	**63.93**	**24**	P	**P**	**23 22 36.7**	**0.0**
	comp=Z,1.9nm,0.4s,baz=292,slow=5.7,SNR=15						
ABKAR	**Akbulak array**	**63.94**	**314**	P	**P**	**23 22 36.7**	**-0.4**
TOO	**Toolangi**	**64.34**	**175**	P	**P**	**23 22 40.2**	**+0.5**
TOO				IAmb	IAmb	23 22 41.4	
	comp=Z,12nm,0.6s						
C36M	**Paulatuk**	**67.09**	**23**	IAmb	IAmb	23 22 57.1	
	comp=Z,6.5nm,0.5s						
GEYT	**Alibeck**	**68.10**	**302**	P	**P**	**23 23 03.8**	**+0.5**
	comp=Z,24nm,0.9s,baz=48,slow=2.2,SNR=39						
GEYT	**Alibeck**	**68.10**	**302**	P	**P**	**23 23 03.8**	**+0.5**
GYA0B	**ALIBECK ARRAY**	**68.10**	**302**	IAmb	IAmb	23 23 04.9	
	comp=Z,37nm,1.1s						
BBB	**Bella Bella**	**70.22**	**41**	P	**P**	**23 23 15.8**	**+0.1**
BBB				IAmb	IAmb	23 23 33.6	
	comp=Z,33nm,1.1s						
SPA0	**Spitsbergen Ar**	**70.24**	**350**	*e*P	**P**	**23 23 15.9**	**+0.5**
SPA0	**Spitsbergen Ar**	**70.24**	**350**	P	**P**	**23 23 15.8**	**+0.5**
SPA0				IAmb	IAmb	23 23 26.7	
	comp=Z,30nm,1.0s						
KBS	**Kingsbay**	**70.43**	**351**	*e*P	**P**	**23 23 16.0**	**-0.5**
LVZ	**Lovozero**	**70.96**	**337**	P	**P**	**23 23 20.1**	**+0.3**
LVZ				IAmb	IAmb	23 23 21.1	
	comp=Z,30nm,1.0s						
HSPB	**Hornsund (broa**	**71.12**	**349**	*e*P	**P**	**23 23 21.1**	**+0.6**
KLMR	**Klimovskoe**	**71.84**	**330**	*e*P	**P**	**23 23 22.2**	**-2.8**
KLMR				AMP		23 23 25.2	
	comp=Z,23nm,0.6s						
KEV	**Kevo**	**72.56**	**340**	P	**P**	**23 23 28.6**	**-0.4**
KEV				IAmb	IAmb	23 23 29.9	
	comp=Z,31nm,0.7s						
WBK	**Wadi Bani Khal**	**72.66**	**287**	P	**P**	**23 23 31.2**	**+0.6**
HIZ	**Hauiti**	**72.73**	**152**	P	**P**	**23 23 31.0**	**+0.6**
HIZ				IAmb	IAmb	23 23 32.5	
	comp=Z,21nm,0.7s						
HAMF	**Hammerfest**	**73.05**	**342**	*e*P	**P**	**23 23 31.4**	**-0.4**
ARCES	**ARCESS Array B**	**73.12**	**340**	P	**P**	**23 23 32.7**	**+0.4**
	comp=Z,30nm,0.7s,baz=84,slow=9.3,SNR=139						
ARE0	**ARCESS Array S**	**73.12**	**340**	*e*P	**P**	**23 23 33.0**	**+0.7**
YKA	**Yellowknife Ar**	**73.14**	**28**	P	**P**	**23 23 32.6**	**+0.1**
	comp=Z,3.6nm,0.4s,baz=296,slow=5.8,SNR=50						
SMDO	**Samad**	**73.27**	**288**	P	**P**	**23 23 34.8**	**+0.7**
HAZ	**Te Kaha**	**73.37**	**150**	P	**P**	**23 23 33.4**	**-0.7**
URZ	**Urewera**	**73.48**	**150**	P	**P**	**23 23 34.4**	**-0.4**
URZ				IAmb	IAmb	23 23 36.4	
	comp=Z,12nm,0.5s						
URZ	**Urewera**	**73.48**	**150**	P	**P**	**23 23 34.5**	**-0.2**
JMDO	**Jabal Madar**	**73.49**	**287**	P	**P**	**23 23 35.0**	**-0.3**
RUGZ	**Raukumara Rang**	**73.49**	**150**	P	**P**	**23 23 34.2**	**-0.8**
KRVZ	**Karewarewa**	**73.55**	**152**	P	**PcP**	**23 23 52.4**	**+4.5**
BANOM	**Banah**	**73.66**	**291**	P	**P**	**23 23 37.0**	**+0.8**
HOQ	**Hoqain**	**73.70**	**288**	P	**P**	**23 23 36.9**	**+0.4**
	SNR=5.7						
RTZ	**Ruatahuna**	**73.72**	**151**	P	**P**	**23 23 35.8**	**-0.4**
MWZ	**Matawai**	**73.73**	**150**	P	**P**	**23 23 35.8**	**-0.4**
SHME	**Shamm**	**73.74**	**291**	*i* P	**P**	**23 23 37.4**	**+0.7**
	SNR=13						
QRZ	**Quartz Range**	**73.78**	**155**	P	**P**	**23 23 37.0**	**+0.6**
QRZ				IAmb	IAmb	23 23 37.9	
	comp=Z,29nm,1.2s						
TWGZ	**Tauwhareparae**	**73.80**	**150**	P	**P**	**23 23 36.7**	**0.0**
RAGZ	**Rawiri**	**73.81**	**150**	P	**P**	**23 23 35.7**	**-1.0**
MTHZ	**Maungataniwha**	**73.86**	**151**	P	**P**	**23 23 37.1**	**+0.2**
BKZ	**Black Stump Fm**	**73.97**	**151**	P	**P**	**23 23 37.6**	**0.0**
BKZ				IAmb	IAmb	23 23 38.9	
	comp=Z,27nm,0.9s						
MSFE	**Esma-Masafi**	**73.99**	**291**	P	**P**	**23 23 38.7**	**+0.6**
SNGZ	**Shannon Statio**	**74.02**	**151**	P	**P**	**23 23 38.1**	**+0.3**
RAHZ	**Arahi**	**74.02**	**151**	P	**P**	**23 23 38.3**	**+0.5**
NMHZ	**Naumai**	**74.05**	**151**	P	**P**	**23 23 38.7**	**+0.7**
KTK1	**Kautokeino**	**74.08**	**340**	*e*P	**P**	**23 23 37.9**	**+0.1**
UOSS	**Minazif**	**74.11**	**290**	P	**P**	**23 23 39.0**	**+0.2**
UOSS	**Minazif**	**74.11**	**290**	P	**P**	**23 23 39.0**	**+0.2**
UOSS				P	**P**	**23 23 39.0**	**+0.2**
UOSS	**Minazif**	**74.11**	**290**	P	**P**	**23 23 38.5**	**-0.3**
UOSS				IAmb	IAmb	23 23 40.2	
	comp=Z,37nm,0.9s						
BSY	**Bisya**	**74.11**	**288**	P	**P**	**23 23 38.9**	**0.0**
MHTO	**MHTO**	**74.14**	**286**	P	**P**	**23 23 38.9**	**-0.1**
	SNR=16						
RIGZ	**Rimuhau**	**74.14**	**150**	P	**P**	**23 23 39.0**	**+0.5**
SOHO	**SOHO**	**74.14**	**289**	P	**P**	**23 23 39.2**	**+0.2**
	SNR=14						
SOHO				P	**P**	**23 23 39.2**	**+0.2**
	SNR=14						
HATD	**Hatta, Dubai**	**74.22**	**290**	*i* P	**P**	**23 23 39.9**	**+0.5**
	SNR=6.2						
HATD	**Hatta, Dubai**	**74.22**	**290**	P	**P**	**23 23 39.9**	**+0.5**
	SNR=6.2						
HATD				P	**P**	**23 23 39.9**	**+0.5**
	SNR=6.2						
PGC	**Sidney**	**74.25**	**43**	P	**P**	**23 23 40.4**	**+1.3**
ASHO	**Ashiyiah**	**74.33**	**290**	*i* P	**P**	**23 23 40.6**	**+0.5**
	SNR=6.1						
ASHO	**Ashiyiah**	**74.33**	**290**	P	**P**	**23 23 41.0**	**+0.9**
	SNR=8.6						
ASHO				P	**P**	**23 23 41.0**	**+0.9**
	SNR=6.2						
ARQ	**Araqi**	**74.46**	**289**	P	**P**	**23 23 40.4**	**-0.4**
	SNR=19						
NAZ	**Nazwa, Dubai**	**74.55**	**290**	*i* P	**P**	**23 23 41.6**	**+0.3**
	SNR=5.9						
NAZ	**Nazwa, Dubai**	**74.55**	**290**	P	**P**	**23 23 41.7**	**+0.5**
	SNR=5.9						
THZ	**Tophouse**	**74.74**	**155**	P	**P**	**23 23 41.4**	**-0.4**
THZ				IAmb	IAmb	23 23 42.9	
	comp=Z,15nm,1.0s						
ALNE	**Al Ain**	**74.83**	**289**	*i* P	**P**	**23 23 43.5**	**+0.6**
	SNR=12						
DQM	**DQM**	**74.93**	**285**	P	**P**	**23 23 43.2**	**-0.3**
TRO	**Tromso**	**74.96**	**342**	*e*P	**P**	**23 23 42.8**	**+0.1**
SNZO	**South Karori**	**75.04**	**154**	P	**P**	**23 23 43.2**	**-0.2**
SNZO				IAmb	IAmb	23 23 43.5	
	comp=Z,23nm,0.6s						
BSWZ	**Blackbirch Sta**	**75.06**	**155**	P	**P**	**23 23 42.5**	**-1.1**
BFZ	**Birch Farm**	**75.13**	**152**	P	**P**	**23 23 43.1**	**-1.0**
BFZ				IAmb	IAmb	23 23 44.3	
	comp=Z,17nm,0.7s						
BHW	**Baring Head**	**75.19**	**154**	P	**P**	**23 23 43.2**	**-1.0**
TULEG	**Thule**	**75.24**	**7**	P	**P**	**23 23 44.1**	**0.0**
TULEG				IAmb	IAmb	23 23 45.4	
	comp=Z,14nm,0.8s						
AJN	**Ajban**	**75.28**	**290**	P	**P**	**23 23 45.6**	**+0.3**
LTZ	**Lake Taylor**	**75.39**	**156**	P	**P**	**23 23 45.6**	**+0.2**
LTZ				IAmb	IAmb	23 23 47.5	
	comp=Z,10nm,0.7s						
PLWZ	**Palliser**	**75.48**	**154**	P	**P**	**23 23 46.0**	**0.0**
KHZ	**Kahutara**	**75.54**	**155**	P	**P**	**23 23 45.4**	**-0.8**
KHZ				IAmb	IAmb	23 23 46.7	
	comp=Z,46nm,1.2s						
OBN	**Obninsk**	**75.66**	**325**	P	**P**	**23 23 46.1**	**-0.7**
OBN				IAmb	IAmb	23 23 47.7	
	comp=Z,53nm,1.0s						
DAG	**Danmarks Havn**	**75.74**	**355**	*i* P	**P**	**23 23 46.6**	**-0.3**
RPZ	**Rata Peaks**	**75.78**	**157**	P	**P**	**23 23 47.7**	**+0.1**
RPZ				IAmb	IAmb	23 23 50.3	
	comp=Z,20nm,0.6s						
OXZ	**Oxford**	**75.78**	**157**	IAmb	IAmb	23 23 48.3	
	comp=Z,16nm,0.6s						
COR	**Corvallis**	**75.96**	**47**	P	**P**	**23 23 47.4**	**-1.3**
COR				IAmb	IAmb	23 23 55.7	
	comp=Z,19nm,0.9s						
TBLG	**Delisi**	**76.40**	**310**	P	**P**	**23 23 51.5**	**+0.2**
TBLG				IAmb	IAmb	23 23 52.1	
	comp=Z,15nm,0.7s						
KBZ	**Khabaz**	**76.82**	**312**	P	**P**	**23 23 54.0**	**+0.5**
	comp=Z,66nm,0.8s,baz=85,slow=2.7,SNR=128						
KIV	**Kislovodsk**	**76.86**	**313**	*i* P	**P**	**23 23 54.6**	**+0.7**
	SNR=9.8						
KIV	**Kislovodsk**	**76.86**	**313**	P	**P**	**23 23 54.7**	**+0.7**
KIV				IAmb	IAmb	23 23 56.5	
	comp=Z,26nm,0.8s						
GNI	**Garni**	**77.04**	**308**	*i* P	**P**	**23 23 55.7**	**+0.7**
	SNR=9.4						
GNI	**Garni**	**77.04**	**308**	P	**P**	**23 23 55.2**	**+0.2**
GNI				IAmb	IAmb	23 24 03.6	
	comp=Z,32nm,1.1s						
STEI	**Steigen**	**77.08**	**341**	*e*P	**P**	**23 23 54.7**	**+0.3**
FINES	**FINESS Array B**	**77.31**	**333**	P	**P**	**23 23 55.4**	**-0.4**
	comp=Z,31nm,0.4s,baz=69,slow=4.9,SNR=498						
AKH	**Akhalkalaki**	**77.39**	**310**	⇓P	**P**	**23 23 58.1**	**+1.2**
AKH	**Akhalkalaki**	**77.39**	**310**	IAmb	IAmb	23 23 58.9	
	comp=Z,30nm,1.0s						
DMTO	**DMTO**	**78.06**	**284**	P	**P**	**23 24 00.9**	**+0.2**
	SNR=12						
MOR8	**Moi Rana**	**78.49**	**340**	*e*P	**P**	**23 24 01.2**	**-0.9**
BCA	**Borcka**	**78.64**	**311**	⇑P	**P**	**23 24 04.4**	**+0.9**
VSU	**Vasula**	**78.68**	**331**	*e*P	**P**	**23 24 02.8**	**-0.4**
WHFO	**Wadi Hawf**	**79.00**	**285**	P	**P**	**23 24 05.2**	**-0.6**
	SNR=11						
ABTO	**Aybut**	**79.64**	**284**	P	**P**	**23 24 09.3**	**+0.1**
BMO	**Blue Mountains**	**79.69**	**45**	P	**P**	**23 24 09.2**	**+0.2**
BEKR	**Beckworth**	**79.94**	**50**	P	**P**	**23 24 10.5**	**-0.1**
NSS	**Namsos**	**80.38**	**340**	*e*P	**P**	**23 24 11.8**	**-0.3**
IZAR	**Zarasai**	**80.42**	**328**	*e*P	**P**	**23 24 13.0**	**+0.5**
ISAL	**Salakas**	**80.57**	**328**	*e*P	**P**	**23 24 12.6**	**-0.6**
CMB	**Columbia Colle**	**80.75**	**52**	P	**P**	**23 24 15.7**	**+1.1**
SUMG	**Summit**	**80.77**	**360**	*i* P	**P**	**23 24 15.4**	**+0.9**
	comp=Z,7.8nm,0.3s						
SUMG	**Summit**	**80.77**	**360**	IAmb	IAmb	23 24 15.7	
	comp=Z,7.6nm,0.5s						
MSO	**Missoula**	**80.81**	**42**	P	**P**	**23 24 15.7**	**+0.9**
PNTR	**Pine Nut**	**80.82**	**51**	P	**P**	**23 24 16.1**	**+0.9**
SLIT	**Slitere, Latvi**	**81.09**	**331**	*e*P	**P**	**23 24 14.3**	**-1.6**
YERR	**Yerington**	**81.12**	**51**	P	**P**	**23 24 16.5**	**-0.2**
PPT	**Papeete**	**81.20**	**115**	P	**P**	**23 24 18.5**	**+1.3**
PPTF	**Pamatai, Papee**	**81.22**	**115**	P	**P**	**23 24 15.9**	**-1.4**
PPTF				IAmb	IAmb	23 24 34.1	
	comp=Z,45nm,1.0s						
SOCY	**Socotra**	**81.24**	**279**	P	**P**	**23 24 16.2**	**-1.4**
	SNR=6.8						
SOCY	**Socotra**	**81.24**	**279**	P	**P**	**23 24 15.8**	**-1.8**
SOCY				IAmb	IAmb	23 24 17.0	
	comp=Z,51nm,0.9s						
PMPB	**Monarch Peak**	**81.27**	**54**	P	**P**	**23 24 15.9**	**-1.5**
MFID	**Camas Ranch**	**81.31**	**46**	P	**P**	**23 24 17.9**	**+0.4**
PABE	**Paberze**	**81.61**	**329**	*e*P	**P**	**23 24 18.1**	**-0.5**
AKASG	**Malin Array Be**	**81.70**	**323**	P	**P**	**23 24 18.5**	**-0.7**
	comp=Z,21nm,0.4s,baz=52,slow=5.3,SNR=178						
AKASG	**Malin Array Be**	**81.70**	**323**	P	**P**	**23 24 18.5**	**-0.7**
RYN	**Ryan**	**81.78**	**51**	P	**P**	**23 24 20.2**	**+0.1**
TBLU	**Trondheim**	**81.82**	**339**	*e*P	**P**	**23 24 18.8**	**-0.8**
MDPB	**Devils Postpil**	**81.85**	**52**	P	**P**	**23 24 19.3**	**-1.3**
MDPB				IAmb	IAmb	23 24 21.6	
	comp=Z,16nm,1.1s						
KVN	**Kaiserville**	**81.87**	**50**	P	**P**	**23 24 20.5**	**-0.1**
PAGB	**Antelope Grade**	**81.89**	**54**	P	**P**	**23 24 19.6**	**-0.9**
NVAR	**Mina Array Bea**	**82.02**	**51**	P	**P**	**23 24 22.4**	**+1.0**
	comp=Z,1.0nm,0.6s,baz=298,slow=6.5,SNR=8.5						
NVAR				pP	**pP**	**23 26 13.4**	**-0.9**
	comp=Z,0.7nm,0.6s,baz=306,slow=5.1,SNR=2.6						
NVAR	**Mina Array Bea**	**82.02**	**51**	P	**P**	**23 24 22.6**	**+1.3**
LRM	**Limekiln Ridge**	**82.21**	**42**	P	**P**	**23 24 20.6**	**-1.7**
PBUR	**Paburge**	**82.23**	**330**	*e*P	**P**	**23 24 20.9**	**-0.9**
FFC	**Flin Flon**	**82.83**	**31**	P	**P**	**23 24 25.5**	**+0.7**
NC303	**NORSAR Array S**	**82.92**	**338**	P	**P**	**23 24 24.4**	**-0.8**
ELK	**Elko**	**82.99**	**48**	P	**P**	**23 24 27.1**	**+0.9**
NB201	**NORSAR Array S**	**83.07**	**338**	IAmb	IAmb	23 24 25.5	
	comp=Z,38nm,0.7s						
DOMB	**Dombas**	**83.09**	**339**	*e*P	**P**	**23 24 25.3**	**-0.7**
NB2	**NORSAR Subarra**	**83.11**	**338**	P	**P**	**23 24 25.0**	**-1.1**
	comp=Z,9.4nm,0.5s,baz=57,slow=5.1						
NB2	**NORSAR Subarra**	**83.11**	**338**	P	**P**	**23 24 25.0**	**-1.1**
	baz=57,slow=5.1						
NOA	**NORSAR Array B**	**83.11**	**338**	P	**P**	**23 24 25.1**	**-1.0**
	comp=Z,19nm,0.6s,baz=54,slow=6.6,SNR=71						
MOL	**Molde**	**83.17**	**340**	*e*P	**P**	**23 24 26.5**	**+0.1**
NC602	**NORSAR Array S**	**83.21**	**337**	*e*P	**P**	**23 24 25.4**	**-1.2**
NBO00	**NORSAR Array S**	**83.26**	**338**	P	**P**	**23 24 25.8**	**-1.1**
QLMT	**Earthquake Lak**	**83.34**	**43**	P	**P**	**23 24 28.3**	**+0.4**
NAO01	**NORSAR Array S**	**83.36**	**338**	P	**P**	**23 24 26.1**	**-1.2**
YHL	**Hebgen Lake**	**83.48**	**43**	P	**P**	**23 24 30.2**	**+1.6**
YHB	**Horse Butte**	**83.52**	**43**	P	**P**	**23 24 29.2**	**+0.4**
FCC	**Fort Churchill**	**83.54**	**25**	P	**P**	**23 24 27.7**	**-0.5**
SORM	**Soroca**	**83.58**	**321**	⇓P	**P**	**23 24 27.9**	**-0.7**
RAYN	**Ar Rayn**	**83.58**	**293**	*i* P	**P**	**23 24 29.7**	**+0.4**
	SNR=102						
RAYN	**Ar Rayn**	**83.58**	**293**	P	**P**	**23 24 29.5**	**+0.2**
GAZ	**Gaziantep**	**83.64**	**308**	IAmb	IAmb	23 24 31.0	
	comp=Z,18nm,0.9s						
YNM	**Yellowstone No**	**83.83**	**43**	P	**P**	**23 24 29.6**	**-0.7**
GCMT	**Greycliff**	**83.89**	**41**	P	**P**	**23 24 29.8**	**-0.7**
R11A	**Troy Canyon, C**	**83.94**	**50**	P	**P**	**23 24 30.7**	**-0.2**
OSL	**Oslo**	**84.07**	**337**	*e*P	**P**	**23 24 30.4**	**-0.5**
ILGA	**Ilgaz**	**84.08**	**313**	P	**P**	**23 24 32.2**	**+0.5**
ILGA				IAmb	IAmb	23 24 35.2	
	comp=Z,22nm,1.1s						
YMP	**Mirror Lake Pl**	**84.16**	**42**	P	**P**	**23 24 32.2**	**+0.1**
TPNV	**Topopah Spring**	**84.16**	**52**	P	**P**	**23 24 32.8**	**+0.7**
FLWY	**Flagg Ranch**	**84.18**	**43**	P	**P**	**23 24 33.1**	**+1.1**
FXWY	**Fox Creek**	**84.21**	**44**	P	**P**	**23 24 32.6**	**+0.3**
TPAW	**Teton Pass**	**84.34**	**44**	P	**P**	**23 24 33.2**	**+0.3**
SKAR	**Skarslia**	**84.34**	**338**	*e*P	**P**	**23 24 32.3**	**0.0**
RLMT	**Red Lodge**	**84.48**	**42**	P	**P**	**23 24 34.4**	**+0.8**
LEOM	**Leova**	**84.56**	**320**	⇑P	**P**	**23 24 33.3**	**-0.3**
HYA	**Hoyanger**	**84.66**	**339**	*e*P	**P**	**23 24 33.5**	**-0.2**
BR131	**Keskin Array S**	**84.81**	**312**	IAmb	IAmb	23 24 35.2	
	comp=Z,12nm,0.8s						
BRTR	**Keskin Array B**	**84.81**	**312**	P	**P**	**23 24 34.5**	**-0.7**
	comp=Z,11nm,0.9s,baz=100,slow=3.2,SNR=45						
BRTR				pP	**pP**	**23 26 29.9**	**+1.5**
	comp=Z,1.5nm,0.8s,baz=121,slow=4.3,SNR=4.3						
BRTR	**Keskin Array B**	**84.81**	**312**	P	**P**	**23 24 33.1**	**-2.1**
DUG	**Dugway, Tooele**	**84.87**	**47**	P	**P**	**23 24 36.0**	**+0.5**
TLCR		**84.94**	**319**	⇑P	**P**	**23 24 35.2**	**-0.2**
HWUT	**Hardware Ranch**	**84.94**	**46**	P	**P**	**23 24 37.0**	**+1.2**
BIR	**Birlad**	**85.03**	**320**	⇓P	**P**	**23 24 36.3**	**+0.4**
JURR	**Jurilovca**	**85.13**	**318**	⇓P	**P**	**23 24 36.3**	**-0.1**
SHPR	**Sheep Range**	**85.14**	**51**	P	**P**	**23 24 36.9**	**0.0**
ANTO	**Ankara**	**85.29**	**313**	⇑P	**P**	**23 24 37.2**	**-0.2**
ANTO	**Ankara**	**85.29**	**313**	P	**P**	**23 24 36.7**	**-0.7**
ANTO				IAmb	IAmb	23 24 37.6	
	comp=Z,14nm,0.9s						
TCUT	**Toone Canyon**	**85.30**	**46**	P	**P**	**23 24 38.1**	**+0.4**
BR231	**Keskin MP Arra**	**85.32**	**313**	P	**P**	**23 24 36.4**	**-1.1**
BR231				IAmb	IAmb	23 24 37.4	
	comp=Z,10nm,0.9s						
CFR	**Carcaliu**	**85.34**	**319**	⇑P	**P**	**23 24 36.8**	**-0.6**
TOPG	**Topolog**	**85.37**	**319**	⇑P	**P**	**23 24 37.3**	**-0.2**
TESR	**Tescani**	**85.45**	**321**	⇑P	**P**	**23 24 36.5**	**-1.4**
ASK	**Askoy**	**85.49**	**339**	*e*P	**P**	**23 24 37.9**	**+0.1**
PETR	**Petresti**	**85.56**	**320**	⇑P	**P**	**23 24 39.3**	**+0.8**
TIRR	**Tirgusor**	**85.58**	**318**	P	**P**	**23 24 38.1**	**-0.4**
TIRR				IAmb	IAmb	23 24 38.8	
	comp=Z,38nm,1.0s						
PD31	**Pinedale Array**	**85.58**	**44**	P	**P**	**23 24 39.0**	**0.0**
PDAR	**Pinedale Array**	**85.58**	**44**	P	**P**	**23 24 39.5**	**+0.5**
	comp=Z,0.9nm,0.9s,baz=282,slow=1.4,SNR=7.3						
PDAR				pP	**pP**	**23 26 33.0**	**-0.1**
	comp=Z,0.7nm,0.9s,baz=238,slow=1.7,SNR=2.3						
BUR08	**Bucovina Ar. S**	**85.60**	**322**	IAmb	IAmb	23 24 39.8	
	comp=Z,14nm,0.8s						
BURAR	**Bucovina Array**	**85.61**	**322**	⇑P	**P**	**23 24 38.7**	**-0.1**
BURAR	**Bucovina Array**	**85.61**	**322**	P	**P**	**23 24 38.3**	**-0.5**
PFO	**Pinyon Flats O**	**85.64**	**55**	P	**P**	**23 24 39.9**	**+0.6**
XPFO	**Pion Flat**	**85.65**	**55**	P	**P**	**23 24 39.9**	**+0.6**
MFTR	**Murfatlar**	**85.73**	**318**	⇓P	**P**	**23 24 39.0**	**-0.3**
HARR	**Harsova**	**85.74**	**319**	⇑	**P**	**23 24 39.2**	**-0.1**
KWP	**Kalwaria Pacla**	**85.75**	**325**	P	**P**	**23 24 38.8**	**-0.5**
VRI	**Vrincioaia**	**85.77**	**320**	⇓P	**P**	**23 24 40.3**	**+0.8**
PLOR	**Plostina**	**85.83**	**320**	⇑P	**P**	**23 24 39.3**	**-0.4**
BSD	**Bornholm Skovb**	**85.86**	**332**	*i* P	**P**	**23 24 38.6**	**-1.0**
	comp=Z,8.7nm,0.6s						
GRER		**85.91**	**320**	⇑P	**P**	**23 24 41.2**	**+1.1**
BISRR	**Bisoca**	**85.96**	**320**	⇓P	**P**	**23 24 41.1**	**+0.6**
SHAB	**Shabla**	**85.97**	**317**	⇓P	P	23 24 47.7	+7.3
SFJD	**Kangerlussuaq**	**86.03**	**4**	*i* P	**P**	**23 24 40.5**	**+0.3**
	comp=Z,0.2nm,0.4s						
SFJD	**Kangerlussuaq**	**86.03**	**4**	P	**P**	**23 24 40.3**	**+0.1**
SFJD				IAmb	IAmb	23 24 41.0	
	comp=Z,14nm,0.7s						
HOMB	**Homborsund**	**86.08**	**337**	*e*P	**P**	**23 24 39.7**	**-0.9**
ICOR	**Ion Corvin**	**86.13**	**318**	⇓P	**P**	**23 24 41.6**	**+0.4**
PGOR	**Pogoanele**	**86.17**	**319**	⇑P	**P**	**23 24 42.1**	**+0.8**
OZUR		**86.18**	**321**	⇓P	**P**	**23 24 41.6**	**+0.1**
KOLS	**Kolonicke sedl**	**86.40**	**324**	*e*P	**P**	**23 24 42.0**	**-0.4**
MLR	**Muntele Rosu**	**86.44**	**320**	⇑P	**P**	**23 24 42.2**	**-0.6**
RASA	**Rasa**	**86.47**	**318**	⇓P	**P**	**23 24 42.9**	**+0.2**
SNART	**Snartemo**	**86.48**	**337**	*e*P	**P**	**23 24 40.7**	**-1.8**
DOPR	**Dopca**	**86.48**	**321**	⇑P	**P**	**23 24 42.9**	**+0.1**
STAV	**Stavanger**	**86.53**	**338**	*i* P	**P**	**23 24 42.5**	**-0.2**
TRPA	**Tarpa**	**86.75**	**324**	⇓P	**P**	**23 24 43.9**	**-0.1**
CRVS	**Cervenica-Dubn**	**86.84**	**325**	*e*P	**P**	**23 24 44.2**	**-0.3**
OJC	**Ojcow**	**86.85**	**326**	IAmb	IAmb	23 24 45.0	
	comp=Z,24nm,1.1s						
SRU	**San Rafael Swe**	**86.94**	**47**	P	**P**	**23 24 46.0**	**+0.6**
VOIR		**86.98**	**320**	⇓P	**P**	**23 24 44.5**	**-0.8**
SGRR	**Singureni**	**87.15**	**319**	⇑P	**P**	**23 24 44.8**	**-1.2**
RAZG	**Razgrad**	**87.22**	**318**	⇓P	**P**	**23 24 45.6**	**-0.8**
ARR	**Arges**	**87.26**	**320**	⇓P	**P**	**23 24 46.8**	**+0.2**
MSEY	**Mahe Island**	**87.38**	**263**	P	**P**	**23 24 47.5**	**-0.2**
MSEY	**Mahe Island**	**87.38**	**263**	P	**P**	**23 24 46.4**	**-1.3**
MSEY				IAmb	IAmb	23 24 48.4	
	comp=Z,20nm,0.9s						
DRGR		**87.47**	**322**	⇓P	**P**	**23 24 47.2**	**-0.3**
HUMR	**Humele**	**87.55**	**320**	⇑P	**P**	**23 24 46.6**	**-1.3**
KECS	**Kecovo**	**87.61**	**325**	*e*P	**P**	**23 24 47.9**	**-0.2**
COPA	**Copaceanca**	**87.65**	**319**	⇑P	**P**	**23 24 47.4**	**-1.0**
LOT	**Lotru**	**87.70**	**321**	⇑P	**P**	**23 24 48.3**	**-0.4**
LANS	**Liptovska Anna**	**87.70**	**326**	*e*P	**P**	**23 24 48.6**	**0.0**
ZIMR		**87.84**	**319**	⇑P	**P**	**23 24 48.6**	**-0.6**
OKC	**Ostrava-Krasne**	**87.91**	**327**	*e*P	**P**	**23 24 48.9**	**-0.6**
ELND	**Elena**	**87.96**	**318**	⇓P	**P**	**23 24 49.4**	**-0.4**
RSSD	**Black Hills**	**88.12**	**40**	P	**P**	**23 24 51.1**	**+0.2**
VLAD	**Vladila**	**88.20**	**319**	⇓P	**P**	**23 24 50.4**	**-0.5**
MORC	**Moravsky Berou**	**88.25**	**327**	⇑P	**P**	**23 24 50.9**	**-0.2**
MORC	**Moravsky Berou**	**88.25**	**327**	*e*P	**P**	**23 24 50.4**	**-0.7**
MORC	**Moravsky Berou**	**88.25**	**327**	IAmb	IAmb	23 24 51.5	
	comp=Z,10nm,0.8s						
PSZ	**Piszkesteto**	**88.27**	**324**	⇑P	**P**	**23 24 51.2**	**-0.1**
PSZ	**Piszkesteto**	**88.27**	**324**	IAmb	IAmb	23 24 52.0	
	comp=Z,23nm,1.0s						
GZR	**Gura Zlata**	**88.29**	**321**	⇑P	**P**	**23 24 50.5**	**-0.9**
OSTC	**Ostas**	**88.37**	**328**	*e*P	**P**	**23 24 51.2**	**-0.4**
SIRR	**Siria**	**88.37**	**322**	⇑P	**P**	**23 24 51.1**	**-0.6**
KRLC	**Kraliky**	**88.42**	**327**	*e*P	**P**	**23 24 51.6**	**-0.3**
CHVC	**Chvalec**	**88.42**	**328**	*e*P	**P**	**23 24 51.7**	**-0.2**
PLVB	**Pleven**	**88.44**	**319**	⇓P	**P**	**23 24 52.0**	**0.0**
VYHS	**Vyhne**	**88.44**	**325**	*e*P	**P**	**23 24 51.9**	**-0.1**
DPC	**Dobruska-Polom**	**88.45**	**328**	*e*P	**P**	**23 24 51.6**	**-0.5**
SRE	**Strehaia**	**88.49**	**320**	⇓P	**P**	**23 24 52.9**	**+0.6**
UPC	**Upice**	**88.50**	**328**	*e*P	**P**	**23 24 52.0**	**-0.2**
BSEG	**Bad Segeberg**	**88.59**	**333**	*e*P	**P**	**23 24 52.0**	**-0.5**
	comp=Z,24nm,1.0s,baz=43,slow=4.6						
JAVC	**Velka Javorina**	**88.79**	**326**	*e*P	**P**	**23 24 54.2**	**+0.5**
BAIL	**Bailesti**	**88.80**	**320**	⇑P	**P**	**23 24 54.0**	**+0.3**
HERR	**Herculane**	**88.80**	**321**	⇑P	**P**	**23 24 52.9**	**-0.9**
MANT	**Manisa**	**88.81**	**313**	P	**P**	**23 24 52.5**	**-1.7**
VRAC	**Vranov**	**89.02**	**327**	⇑P	**P**	**23 24 52.9**	**-1.8**
VRAC	**Vranov**	**89.02**	**327**	*e*P	**P**	**23 24 54.4**	**-0.3**
ALN	**Alexandroupoli**	**89.04**	**316**	P	**P**	**23 24 53.0**	**-1.9**
SMOL	**Smolenice**	**89.14**	**326**	*e*P	**P**	**23 24 55.5**	**+0.3**
SRO	**Srobarova**	**89.15**	**325**	*e*P	**P**	**23 24 55.3**	**0.0**
PVCC	**Panska Ves**	**89.16**	**329**	*e*P	**P**	**23 24 55.1**	**-0.1**
PVCC				*e*x	x	23 25 03.0	
BRG	**Berggiesshubel**	**89.20**	**329**	*i* P	**P**	**23 24 54.8**	**-0.7**
	comp=Z,11nm,0.9s						
BRG	**Berggiesshubel**	**89.20**	**329**	*e*P	**P**	**23 24 55.0**	**-0.4**
	comp=Z,30nm,1.7s,baz=43,slow=4.6						
MDVR	**Moldovita**	**89.26**	**321**	⇓P	**P**	**23 24 55.3**	**-0.7**
KRUC	**Moravsky**	**89.28**	**327**	*e*P	**P**	**23 24 55.4**	**-0.5**
MODS	**Modra-Piesok**	**89.31**	**326**	*e*P	**P**	**23 24 55.1**	**-0.9**
CLL	**Collm**	**89.33**	**330**	*i* P	**P**	**23 24 55.9**	**-0.1**
	comp=Z,17nm,1.0s						
CLL	**Collm**	**89.33**	**330**	*e*P	**P**	**23 24 56.3**	**+0.3**
	comp=Z,17nm,1.0s,baz=43,slow=4.6						
CLL	**Collm**	**89.33**	**330**	IAmb	IAmb	23 24 57.0	
	comp=Z,14nm,0.9s						
FBE	**Freiberg**	**89.44**	**330**	*e*P	**P**	**23 24 56.4**	**-0.1**
	comp=Z,22nm,0.9s,baz=43,slow=4.6						
GOPC	**GO Pecny, Ondr**	**89.48**	**328**	*e*P	**P**	**23 24 56.3**	**-0.5**
ZST	**Bratislava**	**89.51**	**326**	*e*P	**P**	**23 24 55.7**	**-1.2**
PRU	**Pruhonice**	**89.54**	**328**	*e*P	**P**	**23 24 56.3**	**-0.7**
TREC	**Trest**	**89.57**	**327**	*e*P	**P**	**23 24 56.7**	**-0.5**
ISCO	**Idaho Springs**	**89.71**	**45**	P	**P**	**23 24 57.9**	**-0.5**
VTS	**Vitosha**	**89.71**	**319**	⇓P	**P**	**23 24 58.0**	**-0.2**
VTS	**Vitosha**	**89.71**	**319**	IAmb	IAmb	23 24 59.0	
	comp=Z,13nm,0.9s						
NEUB	**Neuenburg**	**89.94**	**330**	*e*P	**P**	**23 24 58.5**	**-0.4**
	comp=Z,21nm,0.8s,baz=43,slow=4.6						
PBCC	**Pribram**	**90.00**	**328**	*e*P	**P**	**23 24 58.5**	**-0.7**
CLZ	**Clausthal**	**90.09**	**332**	*e*P	**P**	**23 24 59.1**	**-0.5**
	comp=Z,8.4nm,0.9s,baz=43,slow=4.6						
TANN	**Tannenbergstha**	**90.20**	**330**	*e*P	**P**	**23 24 59.6**	**-0.6**
	comp=Z,16nm,1.1s,baz=43,slow=4.6						
PLN	**Plauen**	**90.29**	**330**	*e*P	**P**	**23 25 00.0**	**-0.5**
	comp=Z,9.2nm,1.1s,baz=43,slow=4.6						
GUNZ	**Gunzen**	**90.30**	**330**	*e*P	**P**	**23 25 00.2**	**-0.3**
	comp=Z,17nm,1.0s,baz=43,slow=4.6						
CONA	**Conrad Observa**	**90.31**	**326**	*i* PcP	**P**	**23 25 00.7**	**0.0**
	comp=Z,12nm,0.7s,SNR=10						
WERN	**Wernitzgruen**	**90.33**	**330**	*e*P	**P**	**23 25 00.6**	**-0.2**
	comp=Z,21nm,1.1s,baz=43,slow=4.6						
NKC	**Novy Kostel**	**90.33**	**329**	*e*P	**P**	**23 25 00.6**	**-0.1**
MOX	**Moxa**	**90.42**	**330**	*e*P	**P**	**23 25 00.6**	**-0.5**
	comp=Z,9.6nm,1.1s,baz=43,slow=4.6						
GTTG	**Gottingen**	**90.48**	**332**	*e*P	**P**	**23 25 00.9**	**-0.4**
	comp=Z,10nm,1.1s,baz=43,slow=4.6						
KHC	**Kasperske Hory**	**90.59**	**328**	*e*P	**P**	**23 25 01.5**	**-0.5**
KHC	**Kasperske Hory**	**90.59**	**328**	IAmb	IAmb	23 25 02.4	
	comp=Z,6.6nm,0.8s						
MANZ	**Manzenberg**	**90.66**	**329**	*e*P	**P**	**23 25 02.1**	**-0.2**
	comp=Z,14nm,1.1s,baz=43,slow=4.6						
GEC2	**GERESS Array S**	**90.73**	**328**	*e*P	**P**	**23 25 02.0**	**-0.7**
	comp=Z,17nm,1.0s,baz=43,slow=4.6						
GEC2	**GERESS Array S**	**90.73**	**328**	IAmb	IAmb	23 25 02.7	
	comp=Z,14nm,0.9s						
GERES	**GERESS Array B**	**90.73**	**328**	P	**P**	**23 25 02.0**	**-0.7**
	comp=Z,8.0nm,0.7s,baz=42,slow=5.0,SNR=77						
GERES	**GERESS Array B**	**90.73**	**328**	P	**P**	**23 25 01.6**	**-1.1**
ROTZ	**Rotzenmuhle**	**90.78**	**329**	*e*P	**P**	**23 25 02.6**	**-0.1**
	comp=Z,28nm,1.4s,baz=43,slow=4.6						

IBBN	Ibbenburen	90.83	333	eP	P	23 25 02.2	-0.7
	comp=Z,29nm,1.1s,baz=43,slow=4.6						
STIP	Stip	90.89	319	i P	P	23 25 02.0	-1.5
VAY	Valandovo	90.89	318	i P	P	23 25 02.8	-0.7
WET	Wettzell	90.91	329	eP	P	23 25 03.1	-0.4
	comp=Z,11nm,1.2s,baz=43,slow=4.6						
ARSA	Arzberg	90.94	326	i PcP	P	23 25 03.0	-0.6
	comp=Z,15nm,1.1s						
MOA	Molln	91.15	327	i PcP	P	23 25 04.2	-0.4
	comp=Z,9.5nm,0.7s,SNR=7.7						
SKO	Skopje	91.16	319	i P	P	23 25 04.8	+0.1
GRA1	Grafenberg Arr	91.28	330	IAmb	IAmb	23 25 05.7	
	comp=Z,17nm,0.9s						
GRF	Grafenberg Arr	91.28	330	eP	P	23 25 05.1	0.0
	comp=Z,22nm,1.1s,baz=43,slow=4.6						
ATD	Arta Tunnel	91.28	284	P	P	23 24 59.8	-6.0
	SNR=20						
PERS	Pernice	91.56	326	i P	P	23 25 05.9	-0.7
SOKA	Soboth	91.57	326	i PcP	P	23 25 05.9	-0.8
	comp=Z,17nm,1.4s,SNR=12						
BUG	Bochum--Univer	91.68	333	eP	P	23 25 06.0	-0.9
	comp=Z,13nm,1.0s,baz=43,slow=4.6						
LIT	Litokhoron	91.69	317	P	P	23 25 05.1	-2.1
OBKA	Obir	91.93	326	i PcP	P	23 25 07.0	-1.3
	comp=Z,5.2nm,0.5s,SNR=5.3						
FNA	Florina	91.94	318	P	P	23 25 06.3	-2.1
FNA				IAmb	IAmb	23 25 16.4	
	comp=Z,6.9nm,1.2s						
RJOB	Jochberg	91.94	328	eP	P	23 25 07.9	-0.3
	comp=Z,21nm,0.9s,baz=43,slow=4.6						
OHR	Ohrid	92.07	319	i P	P	23 25 08.0	-1.0
OZLJ	Ozalj	92.08	325	i P	P	23 25 08.1	-0.7
TNS	Taunus Mts	92.11	331	eP	P	23 25 08.5	-0.5
	comp=Z,11nm,1.2s,baz=43,slow=4.6						
PDG	Podgorica	92.13	321	⇓P	P	23 25 08.4	-0.7
PDG	Podgorica	92.13	321	P	P	23 25 07.7	-1.4
PDG				IAmb	IAmb	23 25 09.1	
	comp=Z,6.8nm,0.9s						
KBA	Koelnbreinsper	92.13	327	i PcP	P	23 25 08.0	-1.3
	comp=Z,4.2nm,0.4s						
LJU	Ljubljana	92.26	326	i P	P	23 25 08.7	-1.0
MYKA	Terra Mystica	92.30	326	i PcP	P	23 25 08.9	-1.0
	comp=Z,7.1nm,0.5s						
FUR	Furstenfeldbru	92.35	329	eP	P	23 25 10.2	+0.1
	comp=Z,37nm,0.8s,baz=43,slow=4.6						
RICI	Ricice	92.61	322	P	P	23 25 09.6	-1.8
KIJV	Kijevo	92.67	323	i P	P	23 25 10.5	-1.1
STON	Ston	92.71	322	i P	P	23 25 10.0	-1.8
ABTA	Abfaltersbach	92.77	327	i P	P	23 25 10.2	-1.9
	comp=Z,11nm,0.6s,SNR=6.9						
WATA	Walderalm	92.80	328	i PcP	P	23 25 11.0	-1.3
	comp=Z,4.2nm,0.8s						
WTTA	Wattenberg	92.83	328	i PcP	P	23 25 11.3	-1.2
	comp=Z,5.0nm,0.7s						
STU	Stuttgart	92.86	330	P	P	23 25 10.8	-1.6
STU				IAmb	IAmb	23 25 13.1	
	comp=Z,14nm,0.8s						
TRI	Trieste	92.88	326	P	P	23 25 10.8	-1.7
TRI				IAmb	IAmb	23 25 11.7	
	comp=Z,7.1nm,0.9s						
STAL	STALIGIAL	93.02	327	IAmb	IAmb	23 25 11.9	
	comp=Z,11nm,0.7s						
MOTA	Moosalm	93.02	328	i PcP	P	23 25 11.9	-1.4
	comp=Z,4.8nm,0.7s						
SQTA	Sankt Quirin	93.06	328	i PcP	P	23 25 12.1	-1.4
	comp=Z,4.7nm,0.6s						
RETA	Reutte	93.08	328	i PcP	P	23 25 12.5	-1.0
	comp=Z,3.3nm,0.7s						
NVLJ	Novalja	93.10	324	i P	P	23 25 11.7	-1.8
MORI	Morici	93.14	323	i P	P	23 25 12.5	-1.2
UBR	Ueberruh	93.24	329	eP	P	23 25 13.3	-0.9
	comp=Z,9.7nm,1.1s,baz=43,slow=4.6						
ZIRJ	Zirje	93.31	323	i P	P	23 25 12.8	-1.7
DUGI	Dugi Otok	93.39	324	i P	P	23 25 12.8	-2.1
FETA	Feichten	93.43	328	i PcP	P	23 25 14.1	-1.1
	comp=Z,6.6nm,0.7s						
WLF	Walferdange	93.50	332	eP	P	23 25 15.1	-0.1
	comp=Z,27nm,1.5s,baz=43,slow=4.6						
WLF	Walferdange	93.50	332	IAmb	IAmb	23 25 15.8	
	comp=Z,7.5nm,0.8s						
BFO	Black Forest	93.57	330	eP	P	23 25 15.1	-0.6
	comp=Z,18nm,1.2s,baz=43,slow=4.6						
BFO	Black Forest	93.57	330	P	P	23 25 14.9	-0.8
BFO				IAmb	IAmb	23 25 15.6	
	comp=Z,12nm,1.0s						
DAVA	Damuels	93.64	329	i PcP	P	23 25 15.2	-1.0
	comp=Z,11nm,0.8s,SNR=5.6						
CTI	Castel Tesino	93.69	327	P	P	23 25 13.9	-2.5
CTI				IAmb	IAmb	23 25 15.3	
	comp=Z,3.8nm,0.7s						
TEOL	Teolo	94.17	326	P	P	23 25 16.9	-1.5
TEOL				IAmb	IAmb	23 25 18.2	
	comp=Z,11nm,0.8s						
ECH	Echery	94.17	331	IAmb	IAmb	23 25 18.2	
	comp=Z,4.4nm,0.9s						
NRCA	Norcia	95.22	324	IAmb	IAmb	23 25 23.7	
	comp=Z,7.8nm,0.9s						
SENIN	Lac Senin/Sane	95.51	329	IAmb	IAmb	23 25 24.0	
	comp=Z,3.5nm,0.8s						
TIP	Timpagrande	95.68	319	IAmb	IAmb	23 25 26.8	
	comp=Z,9.3nm,1.0s						
LATE	Laterza	96.06	324	IAmb	IAmb	23 25 27.3	
	comp=Z,9.7nm,1.1s						
BNI	Bardonecchia	96.78	329	IAmb	IAmb	23 25 33.9	
	comp=Z,4.8nm,1.1s						
TXAR	Lajitas Array	97.13	52	P	Pdif	23 25 33.7	+1.4
	comp=Z,0.5nm,0.6s,baz=292,slow=2.1,SNR=5.6						
TXAR				pP	pP	23 27 29.1	+0.6
	comp=Z,0.6nm,0.8s,baz=288,slow=3.5,SNR=4.6						
SYO	Syowa Base	118.63	204	⇑ePdiff	Pdif	23 27 09.0	+2.4
BOSA	Boshof	123.05	252	PKP	PKiKP	23 30 53.3	0.0
	comp=Z,3.2nm,0.8s,baz=10.0,slow=1.7,SNR=3.9						
TORD	Torodi Ar. Bea	123.34	309	PKP	PKPdf	23 30 53.0	-0.8
	comp=Z,5.1nm,0.7s,baz=22,slow=2.8,SNR=29						
TORD				PP	PP	23 32 32.6	-10
	comp=Z,1.3nm,1.0s,baz=42,slow=7.2,SNR=5.8						
TORD				PKKPbc	PKKPbc	23 40 43.6	-1.6
	comp=Z,0.5nm,0.5s,baz=215,slow=3.5,SNR=6.7						
TORD	Torodi Ar. Bea	123.34	309		PKPdf	23 30 52.7	-1.2
TSUM	Tsumeb	127.00	266		PKPdf	23 31 00.6	-0.3
DBIC	Dimbokro	132.45	310	PKP	PKiKP	23 31 11.9	-0.6
	comp=Z,6.0nm,0.7s,baz=22,slow=3.5,SNR=9.0						
DBIC				SKPbc	SKPbc	23 33 48.8	-0.3
	comp=Z,6.7nm,0.6s,baz=30,slow=4.9,SNR=9.6						
TIC	Toumodi	132.58	310	ePKIKP	PKPdf	23 31 11.7	+0.2
	comp=Z,14nm,0.2s						
KIC	Kosan Boka	132.59	309	ePKIKP	PKPdf	23 31 11.5	-0.1
	comp=Z,13nm,0.8s						
LIC	Lamto	132.89	309	ePKIKP	PKPdf	23 31 12.1	0.0
	comp=Z,3.1nm,0.3s						
SDV	Santo Domingo	133.52	44		PKPdf	23 31 13.9	+0.4
PTGA	Pitinga	147.55	40		PKPbc	23 31 41.9	+0.1
PLCA	Paso Flores	151.15	126	PKP	PKPdf	23 31 43.8	+0.5
	comp=Z,1.5nm,0.8s,baz=293,slow=4.1,SNR=3.4						
PLCA				PKPbc	PKiKP	23 31 50.4	+0.3
	comp=Z,9.0nm,0.5s,baz=255,slow=2.7,SNR=38						
PLCA				PKPab	PKPab	23 32 00.6	+0.6
	comp=Z,3.5nm,0.7s,baz=285,slow=9.1,SNR=4.6						
PLCA	Paso Flores	151.15	126		PKiKP	23 31 50.8	+0.7
MNMC	Minye Minye	151.57	80		PKiKP	23 31 52.7	+0.9
LPAZ	La Paz	151.69	74	PKPbc	PKiKP	23 31 53.0	+0.4
	comp=Z,6.7nm,0.7s,baz=328,slow=2.1,SNR=26						
LPAZ				pPKPbc	pPKPbc	23 33 53.8	-0.4
	comp=Z,2.4nm,0.8s,baz=21,slow=4.9,SNR=3.3						
PB11	IPOC Station P	151.74	82		PKiKP	23 31 52.3	+0.3
GO01	Chusmiza	152.11	81		PKiKP	23 31 54.0	+0.9
PB01	IPOC Station P	152.30	84		PKiKP	23 31 53.7	+0.7
CPUP	Villa Florida	164.32	92	PKP	PKPdf	23 32 00.0	+0.5
	comp=Z,2.2nm,0.9s,baz=153,slow=4.5,SNR=4.8						
CPUP				PKPab	PKPab	23 32 57.8	+0.2
	comp=Z,0.9nm,0.4s,baz=304,slow=3.6,SNR=3.3						
BDFB	Brasilia	166.43	36	PKP	PKPdf	23 32 02.0	+0.4
	comp=Z,2.3nm,0.8s,baz=12,slow=11,SNR=3.1						

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*NEIC **13** 23:13:47.1±2.0, 19°.12N±0°.05×66°.81W±0°.02, h20^{km}±13^{km}, Error ellipse: s-maj=8.0km s-min=1.0km az=204.0*

*RSPR **13** 23:13:48.0, 19°.19N×66°.85W, h12^{km}±9^{km}, MD3.2/13*

ISC 13 23:13:48.6±1.3**, 19°.07N**±0°.06×**66°.82W**±0°.03**, h29**^{km}**, n49, σ0^{s}.75**/60**, 12C-2D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMPR	Esperanza - Ma	0.65	155	⇑eP	Pn	23 14 01.6	-0.2
EMPR	Esperanza - Ma	0.65	155	eS	Sn	23 14 11.2	0.0
EMPR	Esperanza - Ma	0.65	155		Pn	23 14 01.6	-0.2
EMPR					Sn	23 14 11.2	0.0
AGPR	Aguadilla, PR	0.66	205	⇑eP	Pb	23 14 01.1	-0.6
AGPR	Aguadilla, PR	0.66	205	eS	Sb	23 14 10.6	+0.1
AGPR	Aguadilla, PR	0.66	205		Pb	23 14 01.1	-0.6
AGPR					Sb	23 14 10.6	+0.1
AOPR	Arecibo Observ	0.72	175	⇑eP	Pn	23 14 02.6	-0.3
AOPR				eS	Sn	23 14 13.9	+1.0
AOPR	Arecibo Observ	0.72	175	⇑eP	Pb	23 14 02.3	-0.4
AOPR	Arecibo Observ	0.72	175		Pb	23 14 02.3	-0.4
AOPR					Sn	23 14 13.9	+1.0
UUPR	Utuado, UPR, P	0.82	173		Pb	23 14 04.1	-0.2
UUPR					Sn	23 14 16.2	+0.9
MPR	Mayaguez	0.91	200		Pn	23 14 04.7	-0.6
LSP	Las Mesas	0.92	196	eS	Sb	23 14 18.3	+0.3
LSP	Las Mesas	0.92	196	⇓eP	Pn	23 14 05.1	-0.6
LSP	Las Mesas	0.92	196		Pn	23 14 05.1	-0.6
LSP					Sb	23 14 18.3	+0.3
GCPR	Guaynabo City	1.03	137	⇑eP	Pn	23 14 06.7	-0.4
GCPR	Guaynabo City	1.03	137		Pn	23 14 06.7	-0.4
OBIP	Obispado Ponce	1.04	169	⇑eP	Pn	23 14 06.2	-1.1
OBIP	Obispado Ponce	1.04	169		Pn	23 14 06.2	-1.1
GBPR	Guanica, Bosqu	1.09	183	eS	Sb	23 14 22.9	+0.2
GBPR	Guanica, Bosqu	1.09	183	⇑eP	Pn	23 14 08.0	+0.1
GBPR	Guanica, Bosqu	1.09	183		Pn	23 14 08.0	+0.1
GBPR					Sb	23 14 22.9	+0.2
CRPR	Cabo Rojo, PR	1.09	195	eS	Sb	23 14 22.8	+0.1
CRPR	Cabo Rojo, PR	1.09	195	⇑eP	Pn	23 14 07.6	-0.3
CRPR	Cabo Rojo, PR	1.09	195		Pn	23 14 07.6	-0.3
CRPR					Sb	23 14 22.8	+0.1
MLPR	Magueyes Islan	1.11	191	eS	Sb	23 14 23.2	-0.2
MLPR	Magueyes Islan	1.11	191	⇑eP	Pn	23 14 08.0	-0.3
MLPR	Magueyes Islan	1.11	191		Pn	23 14 08.0	-0.3
MLPR					Sb	23 14 23.2	-0.2
SJG	San Juan	1.14	146		Pb	23 14 09.4	-0.3
ICMP	Isla Caja de M	1.21	167	Pn	Pb	23 14 10.3	-0.5
IGPR	InterUniversit	1.29	148	⇑eP	Pn	23 14 10.5	-0.1
IGPR	InterUniversit	1.29	148		Pb	23 14 13.8	+1.6
PDPR	Patillas Dam,	1.29	144	⇑eP	Pn	23 14 10.3	-0.3
PDPR	Patillas Dam,	1.29	144	eS	Sn	23 14 25.8	-1.1
PDPR	Patillas Dam,	1.29	144		Pn	23 14 10.3	-0.3
PDPR					Sn	23 14 25.8	-1.1
HUMP	Col San Antoni	1.30	135	⇑eP	Pn	23 14 10.4	-0.5
HUMP	Col San Antoni	1.30	135	eS	Sb	23 14 28.4	-0.4
HUMP	Col San Antoni	1.30	135		Pn	23 14 10.4	-0.5
HUMP					Sb	23 14 28.4	-0.4
MTP	Monte Pirata	1.54	129	⇓eP	Pn	23 14 13.3	-0.8
MTP	Monte Pirata	1.54	129		Pn	23 14 13.3	-0.8
PCDR	Punta Cana, DR	1.58	250		Pn	23 14 14.8	+0.2
CUPR	Culebra, Puert	1.64	117		Pn	23 14 15.9	+0.4
STVI	Saint Thomas	1.91	112		Pn	23 14 18.7	-0.4
DR12	Loma Pena Alta	2.44	264		Pn	23 14 26.7	+0.1
BANI	BANI	3.42	259	Pn	Pn	23 14 41.9	+1.8
SMRT	St. Maarten	3.69	105	Pn	Pn	23 14 45.5	+1.8
SC01	Santiago de lo	3.71	276		Pn	23 14 44.6	+0.7
SDDR	Presa de Saban	4.23	270		Pn	23 14 52.5	+1.3
SKI	Saint Kitts	4.24	113	Pn	Pn	23 14 52.3	+1.0
GRTK	Grand Turk	4.72	302	Pn	Pn	23 14 55.3	-2.6

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*IDC **13** 23:42:53.5±0.4, 23°.39S×175°.37W, h43^{km}±3^{km}, mb4.2/21, mb1 4.3/22, mb1mx4.2/42, mbtmp4.4/22, ML3.8/1, MS3.8/16, Ms1 3.8/16, ms1mx3.7/40, Error ellipse: s-maj=16.0km s-min=12.0km az=145.0*

*NEIC **13** 23:43:07.8±1.8, 23°.55S±0°.09×176°.7W±0°.1, h113^{km}±7^{km}, mb4.5/81, Error ellipse: s-maj=18.1km s-min=12.6km az=108.0*

*BJI **13** 23:43:07.1±0.0, 23°.50S×176°.70W, h120^{km}, mB5.4/14, mb4.9/22*

ISC 13 23:42:53.7±0.4**, 23°.51S**±0°.06×**175°.50W**±0°.08**, h40**^{km}±3^{km}**, h40**^{km}**:pP-P, n157, σ1^{s}.97**/134**, mb4.6**/54**, MS4.0**/18**, 3C, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.33	312		Pn	23 44 55.4	+3.3
AFI	Afiamalu	10.18	21	P	Pn	23 45 07.0	-10
	5.9nm,0.3s,baz=190,slow=18,SNR=3.5						
AFI				S	Sn	23 46 52.9	-17
	4.1nm,0.3s,baz=270,slow=20,SNR=3.7						
RAR	Rarotonga	14.73	84	P	Pn	23 46 06.7	-13
	4.8nm,0.3s,baz=262,slow=14,SNR=5.2						
RAR				LR	LR	23 53 02.4	
	comp=Z,228nm,18.4s,baz=261,slow=42						
URZ	Urewera	16.00	202	P	P	23 46 37.7	-1.1
	0.3nm,0.3s,baz=50,slow=11,SNR=3.1						
URZ				S	Sn	23 49 26.4	-5.7
	0.5nm,0.3s,baz=39,slow=13,SNR=5.3						
URZ	Urewera	16.00	202	Pn	P	23 46 40.8	+2.0
DZM	Mont Dzumac	16.71	271	eLR	LR	23 51 16.7	
	comp=Z,357nm,22.4s						
DZM	Mont Dzumac	16.71	271	P	P	23 46 52.1	+5.2
	1.0nm,0.3s,baz=82,slow=15,SNR=9.2						
DZM				LR	LR	23 51 57.7	
	comp=Z,257nm,20.1s,baz=46,slow=32						
DZM	Mont Dzumac	16.71	271	P	Pn	23 46 41.5	-3.6
DZM				IAmb	IAmb	23 46 54.2	
	comp=Z,36nm,1.0s						
BKZ	Black Stump Fm	17.03	202	Pn	P	23 46 52.3	+2.1
HIZ	Hauiti	17.07	207	P	P	23 46 53.0	+2.3
HIZ				IAmb	IAmb	23 47 03.0	
	comp=Z,29nm,1.2s						
MSWZ	Moikau Station	19.46	201	P	Pn	23 47 19.7	+1.2
BHW	Baring Head	19.59	202	P	Pn	23 47 22.6	+2.7
PLWZ	Palliser	19.60	201	P	Pn	23 47 22.3	+2.2
TUWZ	Tuamarina	19.94	204	P	Pn	23 47 26.6	+2.6
NNZ	Nelson	19.97	205	P	Pn	23 47 26.7	+2.3
NNZ				IAmb	IAmb	23 47 31.0	
	comp=Z,22nm,1.2s						
QRZ	Quartz Range	19.98	207	P	Pn	23 47 26.1	+1.5
QRZ				IAmb	IAmb	23 47 44.8	
	comp=Z,24nm,1.2s						
THZ	Tophouse	20.62	205	P	Pn	23 47 32.3	+0.2
KHZ	Kahutara	20.94	203	P	P	23 47 30.8	-2.2
KHZ				IAmb	IAmb	23 47 45.1	
	comp=Z,25nm,1.2s						
LTZ	Lake Taylor	21.73	205	P	P	23 47 45.3	+3.7
OXZ	Oxford	22.29	205	P	P	23 47 49.3	+1.9
FOZ	Fox Glacier	23.36	208	P	P	23 48 00.3	+1.9
FOZ				IAmb	IAmb	23 48 17.1	
	comp=Z,23nm,1.0s						
TBI	Tubuai	23.89	95	eLR	LR	23 53 53.7	
	comp=Z,751nm,26.8s						
LBZ	Lake Benmore	23.90	206	P	P	23 48 06.7	+3.0
LBZ				IAmb	IAmb	23 48 09.1	
	comp=Z,15nm,1.2s						
WKZ	Wanaka	24.74	207	P	P	23 48 15.0	+3.7
PPT2	Papeete2	24.96	81	eLR	LR	23 54 18.0	
	comp=Z,480nm,22.0s						
PPT	Papeete	24.97	81	LR	LR	23 55 25.8	
	comp=Z,365nm,20.7s,baz=235,slow=30						
DCZ	Deep Cove	26.05	209	P	P	23 48 24.2	+1.1
HNR	Honiara	27.33	297	LR	LR	23 58 19.4	
	comp=Z,155nm,18.4s,baz=126,slow=34						
EIDS	Eidsvold	30.44	260	P	P	23 48 60.0	-2.6
EIDS				IAmb	IAmb	23 49 04.0	
	comp=Z,15nm,1.1s						
CTA	Charters Tower	35.60	268	P	P	23 49 48.4	+0.7
	comp=Z,9.8nm,0.5s,baz=96,slow=11,SNR=16						
CTA				pP	pwP	23 50 00.7	-1.4
	comp=Z,11nm,0.6s,baz=93,slow=11,SNR=5.0						
TOO	Toolangi	36.14	238	P	P	23 49 51.4	-0.7
TOO				IAmb	IAmb	23 50 08.1	
	comp=Z,4.7nm,0.8s						
TAOE	Nuku Hiva Isla	36.82	73	eLR	LR	23 59 53.0	
	comp=Z,435nm,22.4s						
PMG	Port Moresby	38.32	285	P	P	23 50 10.7	-0.1
	comp=Z,37nm,0.9s,baz=137,slow=3.6,SNR=9.5						
PMG	Port Moresby	38.32	285	P	P	23 50 09.0	-1.8
STKA	Stephens Creek	38.69	248	P	P	23 50 14.1	+0.3
	comp=Z,5.8nm,1.0s,baz=84,slow=10,SNR=6.6						
STKA				LR	LR	00 04 31.0	
	comp=Z,226nm,20.1s,baz=39,slow=33						
STKA	Stephens Creek	38.69	248	P	P	23 50 12.4	-1.4
COEN	Coen	40.15	276	P	P	23 50 24.3	-1.8
BBOO	Buckleboo	43.39	247	P	P	23 50 51.3	-1.1
BBOO				IAmb	IAmb	23 50 53.9	
	comp=Z,11nm,0.9s						
AS31	Alice Springs	46.16	259	P	P	23 51 12.9	-1.8
ASAR	Alice Springs	46.16	259	P	P	23 51 14.2	-0.5
	comp=Z,4.0nm,0.8s,baz=91,slow=8.3,SNR=30						
ASAR				pP	pwP	23 51 27.6	-1.4
	comp=Z,4.6nm,0.9s,baz=104,slow=7.6,SNR=8.6						
ASAR				LR	LR	00 09 55.6	
	comp=Z,202nm,20.2s,baz=110,slow=35						
ASAR	Alice Springs	46.16	259	P	P	23 51 13.3	-1.4
WR0	Warramunga Arr	46.36	264	P	P	23 51 14.7	-1.5
WR0				IAmb	IAmb	23 51 28.9	
	comp=Z,8.1nm,1.1s						
WRAB	Tennant Creek	46.54	264	P	P	23 51 15.3	-2.3
WRAB				IAmb	IAmb	23 51 31.6	
	comp=Z,12nm,1.1s						
WB0	Warramunga Arr	46.54	265	P	P	23 51 16.1	-1.5
WB0				IAmb	IAmb	23 51 19.1	
	comp=Z,7.0nm,0.7s						
WRA	Warramunga Arr	46.55	264	P	P	23 51 16.6	-1.2
	comp=Z,4.7nm,0.6s,baz=100,slow=8.3,SNR=41						
WRA				pP	pP	23 51 29.9	+1.5
	comp=Z,5.5nm,0.9s,baz=98,slow=8.4,SNR=9.5						
WRA				LR	LR	00 11 02.9	
	comp=Z,206nm,18.7s,baz=115,slow=36						
WRA	Warramunga Arr	46.55	264	P	P	23 51 16.1	-1.6
FORT	Forrest	50.30	249	P	P	23 51 45.1	-1.4
KNRA	Kununurra	52.82	268	P	P	23 52 03.9	-1.6
FAKI	Fak Fak	54.45	284	P	P	23 52 13.9	-3.6
FITZ	Fitzroy Crossi	54.97	264	P	P	23 52 18.5	-2.7
VNDA	Vanda	55.15	186	P	P	23 52 22.1	+0.5
	comp=Z,1.3nm,0.9s,baz=11,slow=5.2,SNR=2.4						
VNDA				LR	LR	00 10 39.1	
	comp=Z,55nm,21.9s,baz=346,slow=30						
SOEI	Soe	58.93	273	P	P	23 52 47.9	-1.6
NWAO	Narrogin (SRO)	59.14	245	P	P	23 52 48.3	-2.2
NWAO				IAmb	IAmb	23 52 55.3	
	comp=Z,5.3nm,1.1s						
MORW	Morawa	60.87	249	P	P	23 53 01.4	-1.1
QSPA	South Pole Qui	66.58	180	P	P	23 53 41.2	+1.7
	comp=Z,2.3nm,0.9s,baz=12,slow=1.9,SNR=4.9						
QSPA				pP	sP	23 53 53.4	-1.0
	comp=Z,6.7nm,1.0s,baz=40,slow=4.0,SNR=7.1						
QSPA	South Pole Qui	66.58	180	IAmb	IAmb	23 53 54.7	
	comp=Z,11nm,1.1s						
MJAR	Matsushiro Arr	74.00	323	P	P	23 54 24.5	-0.6
	comp=Z,2.3nm,0.6s,baz=135,slow=6.4,SNR=3.6						
MJAR	Matsushiro Arr	74.00	323	P	P	23 54 26.1	+1.0
YULB	Yu-li	77.08	303	P	P	23 54 41.5	-1.6
YULB				IAmb	IAmb	23 54 42.5	
	comp=Z,12nm,0.8s						
ASAJ	Asahikawa	77.47	330	P	P	23 54 44.6	-0.2
	comp=Z,18nm,0.8s,baz=232,slow=6.5,SNR=5.0						
TPUB	Ta-pu	77.54	302	P	P	23 54 44.2	-1.5
SSLB	Suanglung	77.55	303	P	P	23 54 45.0	-0.8
AKUT	Akutan	77.78	6	P	P	23 54 52.6	+6.4
MAW	Mawson	79.52	199	P	P	23 54 59.5	+3.7
KMRM	Mail Ridge	79.65	38	P	pP	23 55 05.8	-2.2
KMRM				IAmb	IAmb	23 55 09.8	
	comp=Z,15nm,0.9s						
PETK	Petropavlovsk-	79.77	344	P	P	23 54 56.5	-0.7
	comp=Z,6.7nm,0.9s,baz=134,slow=6.4,SNR=7.4						
CMB	Columbia Colle	80.14	41	P	pP	23 55 09.8	-0.4
AFDM	Forest Hills D	80.38	40	P	pP	23 55 11.1	-0.7
ORV	Oroville	80.47	39	P	pP	23 55 11.9	-0.5
WDC	Whiskeytown Da	80.55	38	P	pP	23 55 12.2	-0.5
WDC				IAmb	IAmb	23 55 14.2	
	comp=Z,5.6nm,1.1s						
KSRS	Korea Array	80.67	318	P	P	23 55 03.0	+0.6
	comp=Z,2.2nm,0.7s,baz=127,slow=6.4,SNR=6.1						
KSRS				pP	pP	23 55 15.3	+1.7
	comp=Z,3.8nm,0.9s,baz=136,slow=6.6,SNR=5.4						
KSRS				LR	LR	00 25 03.0	
	comp=Z,78nm,20.5s,baz=135,slow=31						
OMMB	Old Mammoth Mi	80.72	42	P	pP	23 55 13.1	-0.6
YBH	Yreka Blue Hor	81.23	37	P	P	23 55 04.6	-0.9
	comp=Z,1.7nm,0.8s,baz=148,slow=9.5,SNR=2.2						
YBH				pP	pP	23 55 17.4	+0.9
	comp=Z,2.0nm,0.6s,baz=197,slow=6.0,SNR=3.4						
PNTR	Pine Nut	81.29	41	P	pP	23 55 15.3	-1.5
PNTR				IAmb	IAmb	23 55 18.3	
	comp=Z,9.9nm,1.0s						
RYN	Ryan	81.65	42	P	pP	23 55 17.9	-0.8
NVAR	Mina Array Bea	81.66	42	P	P	23 55 07.2	-0.8
	comp=Z,1.3nm,0.9s,baz=214,slow=7.0,SNR=5.2						
NVAR				pP	pP	23 55 19.4	+0.9
	comp=Z,4.0nm,1.0s,baz=223,slow=8.5,SNR=9.4						
NVAR	Mina Array Bea	81.66	42	P	pP	23 55 18.1	-0.4
HUMO	Hull Mountain	81.69	36	P	pP	23 55 17.9	-0.9
HUMO				IAmb	IAmb	23 55 20.7	
	comp=Z,7.8nm,1.1s						
NV11	Mina Array Sit	81.75	42	P	pP	23 55 17.8	-1.1
NV11				IAmb	IAmb	23 55 23.5	
	comp=Z,5.0nm,1.1s						
TPNV	Topopah Spring	82.03	44	P	pP	23 55 19.4	-1.0
KVN	Kaiserville	82.17	41	P	pP	23 55 20.4	-1.1
KVN				IAmb	IAmb	23 55 22.7	
	comp=Z,4.8nm,1.2s						
MOD	Modoc Plateau	82.69	38	P	pP	23 55 22.8	-1.3
MOD				IAmb	IAmb	23 55 25.5	
	comp=Z,4.5nm,1.0s						
USA0B	Ussuriysk Arra	82.75	325	P	P	23 55 14.1	+0.9
USRK	Ussuriysk Ar.	82.75	325	P	P	23 55 13.7	+0.5
	comp=Z,11nm,0.8s,baz=122,slow=3.9,SNR=25						
USRK				pP	pP	23 55 26.4	+2.1
	comp=Z,9.5nm,0.8s,baz=119,slow=2.4,SNR=10						
USRK	Ussuriysk Ar.	82.75	325	P	P	23 55 13.4	+0.2
R11A	Troy Canyon, C	83.30	43	P	pP	23 55 26.4	-0.6
H04A	Detroit Lake	83.50	35	P	pP	23 55 26.8	-1.4
H04A				IAmb	IAmb	23 55 29.2	
	comp=Z,5.0nm,0.9s						
NJ2	Nanjing	83.57	309	eP	P	23 55 21.9	+4.1
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
PINE	Pine Mountain	83.57	36	P	pP	23 55 27.6	-1.1
X16A	Lo Mia Camp, P	83.75	48	P	pP	23 55 29.2	-0.3
WVOR	Wild Horse Val	83.98	39	P	pP	23 55 29.2	-1.5
WVOR				IAmb	IAmb	23 55 31.9	
	comp=Z,7.3nm,1.1s						
LCMT	Little Creek M	84.01	45	P	pP	23 55 29.8	-1.0
CCUT	Cedar City	84.25	45	P	pP	23 55 30.4	-1.6
KNB	Kanab	84.29	46	P	pP	23 55 32.3	+0.1
SYO	Syowa Base	84.30	192	⇑eP	P	23 55 25.0	+4.1
SYO	Syowa Base	84.30	192	⇑iX	pP	23 55 33.0	+1.1
PSUT	Pine Spring	84.50	44	P	pP	23 55 32.1	-1.5
I07A	Izee	84.55	37	P	pP	23 55 32.0	-1.6
J08A	Circle Bar Ran	84.66	38	P	pP	23 55 32.3	-1.8
J08A				IAmb	IAmb	23 55 35.4	
	comp=Z,8.8nm,1.1s						
G06A	Carlson Farm,	84.69	35	P	pP	23 55 30.4	-3.8
G06A				IAmb	IAmb	23 55 35.3	
	comp=Z,6.7nm,1.1s						
VNA3	Neumayer Olymp	84.99	175	P	P	23 55 23.8	-0.7
MTPU	Mount Pierson	85.29	45	P	pP	23 55 35.2	-2.3
VNA2	Neumayer--Watz	85.45	176	P	P	23 55 27.9	+1.1
	baz=204,slow=2.5						
PLCA	Paso Flores	85.53	133	LR	LR	00 24 51.1	
	comp=Z,57nm,21.0s,baz=250,slow=29						
PGC	Sidney	85.56	32	P	pP	23 55 34.8	-3.6
PGC				IAmb	IAmb	23 55 40.2	
	comp=Z,9.5nm,1.1s						
MSU	Marysvale	85.56	45	P	pP	23 55 38.1	-0.8
G08A	Pilot Rock	85.62	36	P	pP	23 55 37.1	-1.8
G08A				IAmb	IAmb	23 55 40.2	
	comp=Z,8.8nm,1.1s						
IPM	Ipoh	85.80	277	P	P	23 55 29.4	-0.1
E07A	Sunnyside	85.96	35	P	pP	23 55 39.4	-1.1
E07A				IAmb	IAmb	23 55 41.9	
	comp=Z,7.2nm,1.0s						
HAWA	Hanford	86.03	35	P	pP	23 55 38.9	-1.8
HAWA				IAmb	IAmb	23 55 41.6	
	comp=Z,4.4nm,1.1s						
MFID	Camas Ranch	86.21	39	P	pP	23 55 40.3	-1.6
MFID				IAmb	IAmb	23 55 42.8	
	comp=Z,3.4nm,0.9s						
KLR	Kul'dur	86.29	328	P	P	23 55 31.2	+0.1
	comp=Z,1.4nm,0.6s,baz=89,slow=7.7,SNR=5.5						
KULM	Kulim	86.47	277	P	P	23 55 32.4	-0.3
KULM				IAmb	IAmb	23 55 48.2	
	comp=Z,9.7nm,0.9s						
TMUT	Trail Mountain	86.63	44	P	pP	23 55 41.4	-2.9
TX31	Lajitas Ar. Si	86.76	56	P	pP	23 55 45.1	+0.5
TX32	Lajitas Array	86.76	56	P	pP	23 55 45.0	+0.3
TX32				IAmb	IAmb	23 55 46.0	
	comp=Z,3.4nm,1.1s						
TXAR	Lajitas Array	86.76	56	P	P	23 55 32.4	-1.6
	comp=Z,0.3nm,0.7s,baz=204,slow=7.9,SNR=4.1						
TXAR				pP	pP	23 55 45.3	+0.7
	comp=Z,1.1nm,0.8s,baz=213,slow=8.5,SNR=8.7						
TXAR				LR	LR	00 26 31.8	
	comp=Z,46nm,21.2s,baz=0.0,slow=30						
TXAR	Lajitas Array	86.76	56	P	pP	23 55 45.0	+0.3

```
SRU   San Rafael Swe   86.97  45  P      pP      23 55 44.6 -1.2
F10A  Beach Ranch, E   87.00  36  P      pP      23 55 43.6 -2.1
F10A                              IAmb   IAmb    23 56 00.9
      comp=Z,6.0nm,1.1s
TIA   Tai'an           87.00 312  P      P       23 55 35.5 +0.6
TIA                               pmax   pmax
      comp=Z,12nm,0.9s
RPSI  Rantau Prapat    87.01 274  P      P       23 55 35.9 +0.5
GAMB  Gambell          87.04   2  P      P       23 55 39.2 +4.8
GAMB                              IAmb   IAmb    23 55 55.8
      comp=Z,5.4nm,1.1s
CMIG  Matias Romero    88.44  71  LR     LR      00 25 16.2
      comp=Z,79nm,21.2s,baz=220,slow=29
PDAR  Pinedale Array   89.59  42  P      P       23 55 45.1 -2.2
      comp=Z,0.2nm,0.6s,baz=289,slow=5.6,SNR=2.5
PDAR                              pP     pP      23 55 57.9 -0.3
      comp=Z,1.0nm,0.8s,baz=222,slow=3.6,SNR=7.2
PDAR  Pinedale Array   89.59  42  P      pP      23 55 57.7 -0.5
SEY   Seymchan         89.83 346  P      P       23 55 46.8 -0.8
      comp=Z,3.3nm,0.3s,baz=74,slow=1.2,SNR=14
ILAR  Eielson Array    90.75  12  P      P       23 55 51.3 -0.5
      comp=Z,0.7nm,0.9s,baz=224,slow=7.5,SNR=3.0
ILAR  Eielson Array    90.75  12  P      P       23 55 57.9 +6.1
XAN   Xi'an            91.78 306  P      P       23 55 59.0 +1.5
CMAR  Chiang Mai Arr   93.28 289  P      P       23 56 06.0 +1.4
      comp=Z,6.3nm,0.8s,baz=133,slow=3.2,SNR=42
CMAR                              pP     pwP     23 56 19.4 -0.6
      comp=Z,8.3nm,0.9s,baz=127,slow=2.4,SNR=7.0
CMAR                              LR     LR      00 37 22.4
      comp=Z,14nm,19.8s,baz=125,slow=35
CMAR  Chiang Mai Arr   93.28 289  P      P       23 56 06.5 +1.8
CHTO  Chiang Mai       93.43 289  P      P       23 56 07.7 +2.3
BMAR  Burnt Mountain   93.55  11  P      pP      23 56 12.1 -3.7
ATAH  Atahualpa        93.66  99  LR     LR      00 28 12.1
      comp=Z,111nm,20.0s,baz=235,slow=29
LZH   Lanzhou          96.42 306 ⇑P      P       23 56 20.9 +2.0
LZH                               pP     sP      23 56 54.3  +20
LZH                               sP     pwP     23 57 08.6  +34
LZH                               PP     PP      00 00 16.3 +2.9
LZH                               pmax   pmax
      comp=Z,23nm,1.4s
LZH                               pmax   pmax
      comp=Z,120nm,6.5s
YKA   Yellowknife Ar   98.28  24  P      P       23 56 23.5 -2.9
      comp=Z,0.2nm,0.8s,baz=248,slow=3.3,SNR=3.2
YKA                               pP     pP      23 56 37.2 -0.1
      comp=Z,0.5nm,0.8s,baz=239,slow=4.2,SNR=4.1
LPAZ  La Paz           98.78 112  LR     LR      00 32 29.1
      comp=Z,39nm,21.1s,baz=170,slow=30
SONM  Songino Array    99.53 318  LR     LR      00 42 55.4
      comp=Z,36nm,18.0s,baz=45,slow=36
GTA   Gaotai          100.66 308 eP      Pdif    23 56 38.6 +0.9
GTA                               pmax   pmax
      comp=Z,2.0nm,1.0s
MKAR  Makanchi Array  114.93 312  PKP    PKPdf   00 01 28.4 -1.7
      comp=Z,0.3nm,0.7s,baz=74,slow=4.3,SNR=3.5
MKAR                              pPKP   PKiKP   00 01 41.7  +12
      comp=Z,0.7nm,0.8s,baz=84,slow=1.9,SNR=6.5
KSH   Kashi           118.49 303  PKP    PKiKP   00 01 45.3 +7.9
KSH                               sPKP           00 02 22.3
KSH                               PP     PP      00 03 04.3 +9.4
KSH                               LR     LR
      comp=Z,280nm,10.0s
KSH                               LR     LR
      comp=Z,190nm,9.3s
KSH                               LR     LR
      comp=Z,430nm,10.9s
BVAR  Borovoye Array  122.86 319  PKP    PKPdf   00 01 43.6 -1.5
      comp=Z,0.8nm,0.7s,baz=151,slow=3.3,SNR=5.8
BVAR                              pPKP   pPKPdf  00 01 57.2 +0.6
      comp=Z,2.1nm,0.8s,baz=63,slow=0.3,SNR=9.5
AKASG Malin Array Be  146.76 331  PKPbc  PKPdf   00 02 29.4 +0.1
      comp=Z,2.4nm,0.7s,baz=38,slow=4.6,SNR=12
AKASG                             pPKPbc pPKPbc  00 02 42.5  0.0
      comp=Z,6.0nm,0.7s,baz=37,slow=4.0,SNR=7.8
EKA   Eskdalemuir Ar  147.71   8  PKPbc  PKPbc   00 02 32.5 -1.1
      comp=Z,0.3nm,0.6s,baz=354,slow=0.7,SNR=2.6
EKA                               pPKPbc pPKPbc  00 02 45.3 +0.5
      comp=Z,2.9nm,1.0s,baz=343,slow=2.2,SNR=5.6
BRTR  Keskin Array B  150.56 310  PKPbc  PKPbc   00 02 40.2 -1.3
      comp=Z,1.4nm,0.8s,baz=84,slow=2.9,SNR=7.5
BRTR                              PKPab  pPKPdf  00 02 47.6  0.0
      comp=Z,1.1nm,0.9s,baz=158,slow=4.0,SNR=3.8
BRTR                              pPKPbc pPKPbc  00 02 54.2 +1.2
      comp=Z,5.8nm,0.9s,baz=157,slow=1.5,SNR=13
CLL   Collm           151.48 349 i PKPbc PKPbc   00 02 42.7 -0.4
CLL                              i pPKPbc pPKPbc 00 02 56.2 +1.6
      comp=Z,14nm,1.2s
BRG   Berggiesshubel  151.72 347 ePKP    PKPab   00 02 55.7 +3.3
      comp=Z,9.2nm,1.1s
KHC   Kasperske Hory  153.44 347 ePKPDF  PKPbc   00 02 46.5 -1.1
KHC                              ex      x       00 03 12.0
GERES GERESS Array B  153.69 346  PKPbc  PKPbc   00 02 46.4 -1.9
      comp=Z,0.1nm,0.3s,baz=5.7,slow=4.9,SNR=2.3
GERES                             PKPab  PKPab   00 03 00.5 -0.4
      comp=Z,0.8nm,0.8s,baz=46,slow=4.2,SNR=5.5
CONA  Conrad Observa  154.00 342 i PKiKP PKiKP   00 02 53.3 +4.4
      comp=Z,5.6nm,1.3s
MOA   Molln           154.49 345 i PKPab PKPab   00 03 06.4 +2.1
      comp=Z,4.5nm,1.4s
ARSA  Arzberg         154.72 342 i PKiKP PKiKP   00 02 55.1 +4.7
      comp=Z,3.7nm,0.9s
SOKA  Soboth          155.37 342 i PKiKP PKPab   00 02 56.9  -11
      comp=Z,10nm,1.6s
RETA  Reutte          155.55 350 i PKPab PKPab   00 03 09.7 +0.8
      comp=Z,4.0nm,1.5s
DAVA  Damuels         155.88 351 i PKPab PKPab   00 03 09.5 -0.9
      comp=Z,3.8nm,0.9s
TORD  Torodi Ar. Bea  169.36 165  PKP    PKPdf   00 02 56.1 -1.4
      comp=Z,0.4nm,0.8s,baz=181,slow=2.6,SNR=2.5
TORD                              pPKP   pPKPdf  00 03 08.9 +0.1
      comp=Z,1.5nm,0.8s,baz=21,slow=0.9,SNR=7.4
TORD                              PKPab  PKPab   00 04 10.0 +0.1
      comp=Z,0.3nm,0.7s,baz=207,slow=2.9,SNR=2.5
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*IDC **13** 23:47:23.4±1.6, 13°.46S×167°.57E, h0^{km}, mb4.0/5, mb1 4.1/5, mb1mx3.7/41, mbtmp4.0/5, Error ellipse: s-maj=44.2km s-min=38.7km az=127.0*

*NEIC **13** 23:47:26.6±2.1, 13°.21S±0°.09×167°.44E±0°.04, h35^{km}±3^{km}, mb4.5/11, Error ellipse: s-maj=13.2km s-min=4.3km az=163.0*

ISC 13 23:47:27.0±0.6, **13°.28S**±0°.10×**167°.50E**±0°.09, **h35**^{km}, **n25**, σ**1^{s}44**/23, **mb4.3**/11, **Vanuatu Islands**

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Code  Station Name      Δ°   AZ°    Phase ID         Time      Res
                                  Op     ISC      h  m  s     ISC
HNR   Honiara           8.34 297  Pn     Pn      23 49 22.4 -3.1
DZM   Mont Dzumac       8.80 186  Pn     Pn      23 49 30.0 -1.8
MSVF  Nonsavu          11.09 115  Pn     Pn      23 50 01.9 -1.4
CTAO  Charters Tower   21.43 249  P      P       23 52 12.3  0.0
STKA  Stephens Creek   30.11 228  P      P       23 53 35.3 +1.8
      3.1nm,0.5s,baz=52,slow=11,SNR=10
STKA  Stephens Creek   30.11 228  IAmb   IAmb    23 53 36.0
      comp=Z,0.6nm,0.5s
MLZ   Mavora Lakes     31.98 179  P      P       23 53 50.6 +0.7
MLZ                               IAmb   IAmb    23 53 52.8
      comp=Z,5.3nm,0.9s
WB0   Warramunga Arr   32.35 254  P      P       23 53 53.9 +0.5
WB0                               IAmb   IAmb    23 54 07.8
      comp=Z,2.0nm,0.8s
WRA   Warramunga Arr   32.42 254  P      P       23 53 55.3 +1.3
      comp=Z,0.6nm,0.7s,baz=75,slow=6.1,SNR=2.9
ASAR  Alice Springs    33.42 247  P      P       23 54 03.2 +0.5
      comp=Z,0.4nm,0.5s,baz=74,slow=10.0,SNR=4.4
BBOO  Buckleboo        34.65 231  P      P       23 54 14.6 +1.3
BBOO                              IAmb   IAmb    23 54 21.3
      comp=Z,4.2nm,1.0s
FORT  Forrest          40.24 238  P      P       23 54 59.8 -0.8
FORT                              IAmb   IAmb    23 55 08.3
      comp=Z,12nm,0.8s
MBWA  Marble Bar       46.15 253         S       00 02 31.6 -1.0
KKH   Kailua Kona      48.59  48  P      P       23 56 08.2 +0.8
CHGN  Chignik          74.94  19  P      P       23 59 03.4 -0.8
QSPA  South Pole Qui   76.74 180  P      P       23 59 15.4 +0.7
      comp=Z,1.5nm,0.7s,baz=41,slow=0.3,SNR=8.8
QSPA  South Pole Qui   76.74 180  IAmb   IAmb    23 59 17.0
      comp=Z,1.3nm,0.8s
CNPM  China Poot       79.83  20  P      P       23 59 30.8 -0.8
CNPM                              IAmb   IAmb    23 59 31.0
      comp=Z,12nm,0.9s
RSO   Redoubt South    80.06  19  P      P       23 59 33.4 +0.4
ANM   Nome             80.31  12  P      P       23 59 33.4 -0.7
RC01  Rabbit Creek A   81.50  19  P      P       23 59 39.2 -1.3
RC01                              IAmb   IAmb    23 59 40.4
      comp=Z,25nm,1.2s
KCPM  Cahto Peak       82.82  47  P      P       23 59 46.9 -1.1
SCM   Sheep Creek Mo   82.84  20  P      P       23 59 47.9 +0.3
MKAR  Makanchi Array   96.32 316  P      P       00 00 55.2 +3.1
      comp=Z,0.2nm,0.6s,baz=90,slow=4.3,SNR=3.5
KEST  Kesra           150.22 322  PKPbc  PKiKP   00 07 17.1 +1.4
      comp=Z,2.2nm,0.6s,baz=63,slow=4.5,SNR=3.6
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*GUC **14** 00:20:51.5±0.7, 21°.09S×69°.00W, h112^{km}±3^{km}, ML3.8*

*IDC **14** 00:20:52.9±1.4, 21°.10S×68°.65W, h101^{km}±15^{km}, mb3.6/3, mb1 3.5/6, mb1mx3.3/34, mbtmp3.9/6, Error ellipse: s-maj=42.5km s-min=14.6km az=106.0*

ISC 14 00:20:51.3±0.8, **21°.07S**±0°.03×**69°.07W**±0°.07, **h113**^{km}±8^{km}, **n23**, σ**1^{s}18**/39, **10C-4D**, **Northern Chile**

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Code  Station Name      Δ°   AZ°    Phase ID         Time      Res
                                  Op     ISC      h  m  s     ISC
PB01  IPOC Station P    0.40 274⇑iP      Pn      00 21 07.5 -0.5
PB01                             eS      Sn      00 21 20.2 -0.4
PB01                              IAML           00 21 21.2
      comp=E,10μm,0.1s
PB09  IPOC Station P    0.74 193⇓iP      Pn      00 21 10.7 +0.1
PB09                             eS      Sn      00 21 25.5 +0.4
PB02  IPOC Station P    0.81 252⇑iP      Pn      00 21 11.2 +0.1
PB02                             eS      Sn      00 21 26.5 +0.4
PB02                              IAML           00 21 27.5
      comp=N,7μm,0.2s
PB08  IPOC Station P    0.93 355⇓iP      Pn      00 21 12.4 -0.2
PB08                             eS      Sn      00 21 28.5  0.0
PB08                              IAML           00 21 30.0
      comp=N,2μm,0.2s
PB07  IPOC Station P    1.00 230⇑iP      Pn      00 21 12.9 -0.1
PB07                             eS      Sn      00 21 29.3 -0.1
PB07                              IAML           00 21 30.2
      comp=N,2μm,0.2s
PATCX Punta Patache     1.05 284⇑iP      Pn      00 21 13.6 +0.3
PATCX                            i S     Sn      00 21 30.4 +0.4
PATCX                             IAML           00 21 32.2
      comp=E,4μm,0.2s
PB03  IPOC Station P    1.16 213⇑iP      Pn      00 21 14.5 -0.2
PB03                             i S     Sn      00 21 32.0 -0.3
PB03                              IAML           00 21 33.9
      comp=E,1μm,0.3s
GO01  Chusmiza          1.40 355⇓iP      Pn      00 21 17.5 -0.2
GO01                             eS      Sn      00 21 38.0 +0.3
GO01                              IAML           00 21 39.4
      comp=N,3μm,0.1s
PB11  IPOC Station P    1.42 337⇓iP      Pn      00 21 17.3 -0.3
PB11                             i S     Sn      00 21 37.5 +0.1
LVC   Limon Verde       1.54 175  P      Pn      00 21 19.4 +0.2
      comp=N,12nm,0.3s,baz=23,slow=13,SNR=14
LVC                               S      Sn      00 21 40.2  0.0
      comp=N,96nm,0.3s,baz=356,slow=6.8,SNR=37
LVC   Limon Verde       1.54 175 eP      Pn      00 21 19.4 +0.2
LVC                              eS      Sn      00 21 40.2  0.0
PB04  IPOC Station P    1.61 219⇑iP      Pn      00 21 19.7 -0.2
PB04                             eS      Sn      00 21 41.0 -0.5
PB04                              IAML           00 21 44.3
      comp=N,689nm,0.2s
PB06  IPOC Station P    1.69 196⇑iP      Pn      00 21 20.9  0.0
PB06                             eS      Sn      00 21 43.0 -0.3
PB06                              IAML           00 21 43.8
      comp=E,851nm,0.3s
PSGC  Pisagua           1.77 326⇑iP      Pn      00 21 21.0 -0.7
PSGC                             eS      Sn      00 21 44.4 -0.5
PSGC                              IAML           00 21 45.5
      comp=N,616nm,0.3s
MNMC  Minye Minye       2.00 345⇑iP      Pn      00 21 24.9 +0.2
MNMC                             i S     Sn      00 21 50.9 +0.7
PB05  IPOC Station P    2.06 211⇑iP      Pn      00 21 24.9 -0.4
PB05                             i S     Sn      00 21 50.1 -1.3
LPAZ  La Paz            4.84  11  P      Pn      00 22 04.2 +1.6
      comp=N,0.4nm,0.3s,baz=193,slow=6.4,SNR=2.6
SIV   San Ignacio       9.11  58  P      Pn      00 22 55.9 -4.1
      comp=N,2.7nm,0.3s,baz=249,slow=12,SNR=46
PLCA  Paso Flores      19.64 183  P      Pn      00 25 15.5 +1.9
      comp=N,0.1nm,0.3s,baz=350,slow=11,SNR=3.2
BDFB  Brasilia         20.69  78  P      P       00 25 22.1 -0.5
      comp=N,1.7nm,0.5s,baz=270,slow=8.1,SNR=4.1
PTGA  Pitinga          22.08  25  P      P       00 25 39.9 +2.5
      comp=N,1.5nm,0.3s,baz=211,slow=11,SNR=4.8
TORD  Torodi Ar. Bea   77.35  70  P      P       00 32 34.9 +0.7
      comp=N,1.1nm,0.5s,baz=251,slow=5.3,SNR=12
MKAR  Makanchi Array  145.37  35  PKPbc  PKiKP   00 40 16.1 -3.7
      comp=N,0.3nm,0.7s,baz=319,slow=4.0,SNR=4.2
```

IDC 14 00:24:31.2±11.0, **23°.39S**×**176°.09W**, **h0**^{km}, **mb3.9**/3, **mb1 4.2**/3, **mb1mx3.7**/34, **mbtmp3.9**/3, **Error ellipse: s-maj=392.0km s-min=102.3km az=142.0**, **South of Fiji Islands**

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Code  Station Name      Δ°   AZ°    Phase ID         Time      Res
                                  Op     ISC      h  m  s     ISC
ASAR  Alice Springs    45.65 259  P      P       00 32 53.1 -0.8
      0.3nm,0.6s,baz=100,slow=6.9,SNR=3.8
WRA   Warramunga Arr   46.02 264  P      P       00 32 57.1 +0.3
      0.7nm,0.3s,baz=102,slow=8.3,SNR=45
CMAR  Chiang Mai Arr   92.73 289  P      P       00 37 45.8 -0.1
      0.5nm,0.3s,baz=108,slow=3.0,SNR=5.5
```

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*NEIC **14** 00:43:02.8±1.2, 10°.9S±0°.1×164°.81E±0°.05, h58^{km}±11^{km}, mb4.4/16, Error ellipse: s-maj=16.4km s-min=6.1km az=169.0*

*IDC **14** 00:43:06.5±3.3, 11°.06S×164°.72E, h75^{km}±28^{km}, mb3.5/4, mb1 3.9/6, mb1mx3.5/32, mbtmp4.1/6, MS3.4/4, Ms1 3.4/4, ms1mx3.1/20, Error ellipse: s-maj=29.5km s-min=18.5km az=53.0*

ISC 14 00:43:01.3±0.9, **10°.93S**±0°.10×**164°.89E**±0°.09, **h31**^{km}, **n39**, σ**1^{s}68**/32, **mb4.4**/12, **Santa Cruz Islands region**

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Code  Station Name      Δ°   AZ°    Phase ID         Time      Res
                                  Op     ISC      h  m  s     ISC
HNR   Honiara           5.09 287  P      Pn      00 44 17.9 +2.4
      93nm,0.3s,baz=131,slow=2.2,SNR=29
HNR                               S      Sn      00 45 15.9 +2.7
      42nm,0.3s,baz=204,slow=20,SNR=3.1
HNR                               LR     LR      00 46 20.7
      comp=Z,449nm,20.1s,baz=104,slow=39
HNR   Honiara           5.09 287 eP      Pn      00 44 18.0 +2.5
HNR   Honiara           5.09 287         Pn      00 44 15.1 -0.4
DZM   Mont Dzumac      11.18 173  P      Pn      00 45 41.7 +2.5
      10nm,0.3s,baz=310,slow=23,SNR=127
DZM                               S      Sn      00 47 45.3 +2.0
      0.8nm,0.3s,baz=131,slow=20,SNR=4.2
DZM   Mont Dzumac      11.18 173         Pn      00 45 41.5 +2.3
KRVT  Keravat (AS076   14.34 296  LR     LR      00 52 34.6
      comp=Z,112nm,18.7s,baz=122,slow=40
PMG   Port Moresby     17.52 273  LR     LR      00 53 21.5
      comp=Z,144nm,18.9s,baz=140,slow=35
EIDS  Eidsvold         19.43 220  P      P       00 47 24.5 -0.8
EIDS                              IAmb   IAmb    00 47 30.9
      comp=Z,14nm,1.1s
CTA   Charters Tower   20.12 241  P      Pn      00 47 34.1 -0.7
      comp=Z,0.7nm,0.3s,baz=70,slow=14,SNR=4.1
COEN  Coen             21.42 260  P      P       00 47 45.8 -1.1
COEN                              IAmb   IAmb    00 47 49.8
      comp=Z,14nm,0.9s
AFI   Afiamalu         22.98 100  LR     LR      00 55 49.2
      comp=Z,76nm,20.8s,baz=278,slow=33
H11S2 WAKE ISLAND Hy   29.28   4  T      T       01 19 14.0
      baz=184,slow=76,SNR=24
H11S3 WAKE ISLAND Hy   29.29   3  T      T       01 19 13.4
      baz=184,slow=76,SNR=16
H11S1 WAKE ISLAND Hy   29.30   4  T      T       01 19 14.5
      baz=184,slow=76,SNR=13
BKZ   Black Stump Fm   29.96 162  P      P       00 49 07.3 +0.4
BKZ                               IAmb   IAmb    00 49 12.4
      comp=Z,6.4nm,1.0s
H11N1 WAKE ISLAND Hy   30.51   4  T      T       01 20 44.7
      baz=182,slow=76,SNR=18
H11N3 WAKE ISLAND Hy   30.51   4  T      T       01 20 42.9
      baz=182,slow=76,SNR=9.8
H11N2 WAKE ISLAND Hy   30.53   4  T      T       01 20 45.7
      baz=182,slow=76,SNR=8.3
QRZ   Quartz Range     30.54 169  P      P       00 49 10.1 -1.8
QRZ                               IAmb   IAmb    00 49 29.1
      comp=Z,11nm,1.0s
WR0   Warramunga Arr   30.56 249  P      P       00 49 09.7 -2.7
WB0   Warramunga Arr   30.65 250  P      P       00 49 11.8 -1.4
WB0                               IAmb   IAmb    00 49 31.2
      comp=Z,3.9nm,0.9s
WRA   Warramunga Arr   30.74 249  P      P       00 49 12.8 -1.2
      comp=Z,0.6nm,0.7s,baz=79,slow=9.2,SNR=6.1
BFZ   Birch Farm       31.29 163  P      P       00 49 18.2 -0.3
BFZ                               IAmb   IAmb    00 49 18.8
      comp=Z,13nm,1.0s
THZ   Tophouse         31.51 168  P      P       00 49 20.1 -0.5
THZ                               IAmb   IAmb    00 49 31.5
      comp=Z,4.1nm,0.8s
BHW   Baring Head      31.61 166  P      P       00 49 21.0 -0.3
BSWZ  Blackbirch Sta   31.67 167  P      P       00 49 21.7 -0.2
MSWZ  Moikau Station   31.71 165  P      P       00 49 20.2 -2.1
PLWZ  Palliser         31.86 165  P      P       00 49 23.7 +0.1
ASAR  Alice Springs    32.10 243  P      P       00 49 24.1 -1.9
      comp=Z,1.0nm,0.5s,baz=64,slow=10,SNR=16
KHZ   Kahutara         32.27 168  P      P       00 49 25.5 -1.6
MTN   Manton Dam       33.08 263  P      P       00 49 32.3 -2.2
MTN                               IAmb   IAmb    00 49 46.0
      comp=Z,6.6nm,1.1s
LBZ   Lake Benmore     33.65 173  P      P       00 49 39.1 -0.1
WKZ   Wanaka           33.97 175  P      P       00 49 39.8 -2.2
BBOO  Buckleboo        34.30 226  P      P       00 49 43.7 -1.3
BBOO                              IAmb   IAmb    00 49 51.4
      comp=Z,8.9nm,1.1s
WHZ   Wether Hill Ro   34.95 176  P      P       00 49 48.6 -1.8
FITZ  Fitzroy Crossi   38.60 255  P      P       00 50 20.2 -1.7
PPT   Papeete          44.54 104  P      P       00 51 10.1 -0.5
ILAR  Eielson Array    83.67  19  P      P       00 55 27.8 +1.2
      comp=Z,0.7nm,0.7s,baz=239,slow=5.6,SNR=5.8
MKAR  Makanchi Array   92.86 317  P      P       00 56 11.2 +0.1
      comp=Z,0.3nm,0.7s,baz=104,slow=6.1,SNR=3.5
```

DJA 14 01:12:27.1±0.4, **11°S**±3°×**11°9E**±°, **h80**^{km}±9^{km}, **M4.5**/16, **mB5.1**/4, **mb4.5**/10, **MLv4.5**/16, **Mw(mB)4.5**/4, **South of Sumba**

```
Code  Station Name      Δ°   AZ°    Phase ID         Time      Res
                                  Op     ISC      h  m  s     ISC
BASI  Baing, Sumba      1.50  50  P      Pn      01 12 52.4  0.0
BASI                              S      Sn      01 13 11.9 +0.4
WBSI  Waikabubak, Su    1.54 359  P      Pn      01 12 54.0 +1.0
WBSI                              S      Sn      01 13 13.5 +0.9
WSI   Waingapu          1.75  30  P      Pn      01 12 55.3 -0.4
WSI                               S      Sn      01 13 17.6 +0.3
PLAI  Plampang          2.85 325  P      Pn      01 13 10.9 +0.5
PLAI                              S      Sn      01 13 44.0 +0.3
EDFI  Ende, Flores      3.31  43  P      Pn      01 13 16.3 -0.4
EDFI                              S      Sn      01 13 54.6 -0.4
MMRI  Maumere           3.77  48  P      Pn      01 13 22.7 -0.2
IGBI  Denpasar          4.82 299  P      Pn      01 13 36.3 -0.9
DNP   Denpasar          4.83 301  P      Pn      01 13 37.5 +0.1
DNP                               S      Sn      01 14 32.4 +0.3
SOEI  Soe               4.99  74  P      Pn      01 13 40.7 +1.1
SOEI                              S      Sn      01 14 36.8 +0.7
SRBI  Singaraja         5.16 306  P      Pn      01 13 41.9  0.0
      0.6nm36nm,0.5s
SRBI                              S      Sn      01 14 41.1 +0.9
      0.6nm36nm,0.5s
JAGI  Jajag, Banyuwa    5.84 297  P      Pn      01 13 50.3 -0.9
      0.8nm4μm76nm,0.6s
BKSI  Bulukumba         5.87   7  P      Pn      01 13 50.8 -0.8
      0.2nm21nm,0.6s
BKSI                              S      Sn      01 14 58.9 +1.3
      0.2nm21nm,0.6s
GMJI  Gumukmas          6.56 296  P      Pn      01 14 00.8 -0.1
KMMI  Kalianget         6.77 307  P      Pn      01 14 04.8 +1.0
      0.2nm61nm,1.0s
BNSI  Bone              6.78   6  P      Pn      01 14 03.6 -0.4
      0.1nm11nm,1.3s
BNSI                              S      Sn      01 15 20.7 +0.9
      0.1nm11nm,1.3s
GRJI  Gresik            8.05 301  P      Pn      01 14 20.3 -1.1
      26nm,1.0s
PWJI  Pagerwojo         8.13 292  P      Pn      01 14 23.2 +0.7
      1μm19nm,0.4s
PCJI  Pacitan           8.64 289  P      Pn      01 14 29.7 +0.2
      31nm,0.4s
WOJI  Wonogiri, Jawa    9.01 291  P      Pn      01 14 34.4  0.0
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*IDC **14** 01:14:34.9±1.4, 63°.81N×149°.17W, h117^{km}±14^{km}, mb3.4/6, mb1 3.5/9, mb1mx3.2/35, mbtmp3.8/9, Error ellipse: s-maj=34.7km s-min=17.7km az=130.0*

*AEIC **14** 01:14:36.9±1.2, 63°.82N±0°.03×148°.93W±0°.10, h117^{km}±5^{km}, ML3.3/93, Error ellipse: s-maj=6.2km s-min=5.0km az=89.0*

*NEIC **14** 01:14:36.1±0.8, 63°.84N±0°.04×148°.96W±0°.08, h124^{km}±6^{km}, Error ellipse: s-maj=5.3km s-min=4.7km az=46.0*

ISC 14 01:14:35.7±0.7, **63°.84N**±0°.03×**148°.95W**±0°.04, **h124**^{km}±5^{km}, **n99**, σ**0^{s}71**/111, **mb3.6**/6, **Central Alaska**

```
Code  Station Name      Δ°   AZ°    Phase ID         Time      Res
                                  Op     ISC      h  m  s     ISC
MCK   McKinley          0.10 175         Pn      01 14 53.0 +0.3
MCK                                      Sn      01 15 06.0 +0.4
BWN   Browne            0.41 327         Pn      01 14 54.1 +0.5
BWN                                      Sn      01 15 07.2  0.0
RND   Reindeer          0.43 174         Pn      01 14 54.0 +0.1
RND                                      Sn      01 15 07.4 -0.1
TRF   Thorofare Moun    0.71 238         Pn      01 14 56.4 +0.6
TRF                                      Sn      01 15 11.1 +0.2
WRH   Wood River Hil    0.74  30         Pn      01 14 56.4 +0.6
WRH                                      Sn      01 15 10.9 -0.1
NEA   Nenana            0.75 356         Pn      01 14 56.4 +0.6
NEA                                      Sn      01 15 10.8 -0.3
WAT2  Susitna Watana    0.89 169         Pn      01 14 57.5 +0.3
HUR   Hurricane         0.91 200         Pn      01 14 57.8 +0.5
KTH   Kantishna Hill    0.92 253         Pn      01 14 58.1 +0.7
KTH                                      Sn      01 15 14.0 +0.2
BPAW  Bear Paw Mtn.     0.94 287         Pn      01 14 57.9 +0.4
BPAW                                     Sn      01 15 13.8 -0.3
CCB   Clear Creek Bu    0.96  31         Pn      01 14 58.2 +0.6
WAT1  Susitna Watana    1.02 170         Pn      01 14 58.6 +0.2
WAT1                                     Sn      01 15 15.3 -0.2
HDA   Harding Lake      1.05  56         Pn      01 14 59.2 +0.6
TCOL  CIGO, UAF Yank    1.15  24         Pn      01 15 00.2 +0.7
COLA  College           1.15  24  Pn     Pn      01 15 00.3 +0.8
COLA  College           1.15  24         Sn      01 15 17.6  0.0
MDM   Murphy Dome       1.17  15         Pn      01 15 00.6 +0.7
PS08  TAPS Pump Stn8    1.17  52         Pn      01 15 00.3 +0.5
PS08                                     Sn      01 15 17.7 -0.4
IL31                    1.30  43         Pn      01 15 01.7 +0.6
ILAR  Eielson Array     1.30  43  P      Pn      01 15 01.6 +0.5
      66nm,0.3s,baz=226,slow=11,SNR=3020
ILAR                              S      Sn      01 15 20.2 -0.4
      53nm,0.3s,baz=234,slow=19,SNR=26
ILAR  Eielson Array     1.30  43         Pn      01 15 00.9 -0.2
WAT6  Susitna Watana    1.37 156         Pn      01 15 02.5 +0.4
MLY   Manley            1.43 328         Pn      01 15 03.2 +0.5
MLY                                      Sn      01 15 22.9 -0.2
POKR  Poker Plat Res    1.45  26         Pn      01 15 03.5 +0.7
CAST  Castle Rocks      1.46 255         Pn      01 15 03.2 +0.3
PS10  TAPS Pump St10    1.48 105         Pn      01 15 04.7 +1.5
PS07  TAPS Pump Stn7    1.51  11         Pn      01 15 04.4 +0.9
PPLA  Purkeypile        1.74 239         Pn      01 15 06.9 +0.6
SML   Sawmill           2.06 172         Pn      01 15 10.3 +0.2
PS06  TAPS Pump Stn6    2.06 351         Pn      01 15 10.9 +0.9
GHO   Glory Hole Cre    2.07 180         Pn      01 15 10.7 +0.4
SCM   Sheep Creek Mo    2.14 159         Pn      01 15 11.5 +0.3
DOT   Dot Lake          2.18  93         Pn      01 15 11.8 +0.2
PRP   Porcupine Dome    2.24  40         Pn      01 15 13.0 +0.6
PMR   Palmer            2.25 182         Pn      01 15 12.8 +0.3
PS11  TAPS Pump St11    2.37 136         Pn      01 15 14.8 +0.8
KNK   Knik Glacier      2.44 174         Pn      01 15 15.2 +0.3
MENT  Mentasta          2.52 109         Pn      01 15 16.7 +0.7
STLK  Strandline Lak    2.69 211         Pn      01 15 18.3 +0.1
RC01  Rabbit Creek A    2.78 188         Pn      01 15 19.8 +0.6
PS12  TAPS Pump St12    2.95 142         Pn      01 15 21.6 +0.1
IM03                    2.97 319         Pn      01 15 22.1 +0.5
IMAR  Indian Mountai    2.97 319         Pn      01 15 21.9 +0.2
PWL   Port Wells        3.00 174         Pn      01 15 22.4 +0.3
SPBG  Spurr Blockage    3.03 213         Pn      01 15 24.1 +1.6
SPCR  Spurr Chakacha    3.04 211         Pn      01 15 23.6 +0.9
GLI   Glacier Island    3.09 163         Pn      01 15 22.9 -0.3
FYU   Fort Yukon        3.16  28         Pn      01 15 25.0 +1.0
TTA   Tatalina          3.30 257         Pn      01 15 26.2 +0.1
BC03                    3.31 100         Pn      01 15 26.4 +0.3
BCAR  Beaver Creek A    3.31 100         Pn      01 15 26.0 -0.2
TT01  Tatalina          3.32 257         Pn      01 15 26.4 +0.2
GLB   Gilahina Butte    3.38 133         Pn      01 15 27.4 +0.3
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SLKM	Skilak Lake	3.39	191		Pn	01 15 27.8	+0.6
COLD	Coldfoot	3.45	352		Pn	01 15 28.7	+0.9
EGAK	Eagle	3.53	71		Pn	01 15 29.2	+0.3
EYAK	Cordova Ski Ar	3.62	154	Pn	Pn	01 15 29.8	-0.5
HIN	Hinchinbrook I	3.64	160	Pn	Pn	01 15 31.1	+0.6
VRDI	Verde Repeater	3.65	133		Pn	01 15 31.6	+0.7
MCARA	McCarthy VSAT	3.68	129		Pn	01 15 32.6	+1.5
DFR	Drift River	3.69	210		Pn	01 15 32.2	+0.9
RDJH	Redoubt Jeurge	3.72	211		Pn	01 15 33.1	+1.4
SEW	Seward	3.75	184		Pn	01 15 31.7	-0.2
GOAT	Goat Mountain	3.82	147		Pn	01 15 32.7	-0.2
RDWB	Redoubt West	3.82	210		Pn	01 15 34.1	+1.1
RSO	Redoubt South	3.83	209		Pn	01 15 34.2	+1.1
RED	Redoubt Volcan	3.87	209		Pn	01 15 34.7	+1.1
PTPK	Patty Peak	4.01	129		Pn	01 15 36.6	+1.0
BM03	Burnt Mountain	4.03	25		Pn	01 15 36.1	+0.5
BMAR	Burnt Mountain	4.04	25		Pn	01 15 35.9	+0.1
CRQM	Cirque	4.11	136	Pn	Pn	01 15 37.5	+0.5
SVW2	Sparrevohn	4.12	231		Pn	01 15 37.4	+0.5
BALM	Baldy	4.16	129		Pn	01 15 37.2	-0.3
BRLK	Bradley Lake	4.19	194		Pn	01 15 38.2	+0.4
BRSE	Bradley Lake S	4.19	192		Pn	01 15 38.0	+0.1
YUK1	Sand Pete Hill	4.20	110		Pn	01 15 38.1	+0.1
TGL	Tana Glacier	4.21	134	Pn	Pn	01 15 39.0	+0.9
DAWY	Dawson	4.22	83		Pn	01 15 38.8	+0.5
YUK2	White River	4.25	115		Pn	01 15 39.4	+0.7
ILW	Iliamna West	4.27	209		Pn	01 15 39.8	+0.7
HOM	Homer	4.38	198	Pn	Pn	01 15 41.5	+1.1
BARN	Barnard Glacie	4.38	126	Pn	Pn	01 15 41.2	+0.6
CNPM	China Poot	4.46	195		Pn	01 15 41.7	+0.3
CTGM	Chitina Glacie	4.57	126	Pn	Pn	01 15 44.5	+1.6
TOLK	Toolik Lake Re	4.83	357		Pn	01 15 48.3	+1.9
EPYK	Eagle Plains	5.76	58		Pn	01 15 59.5	+0.7
KAHC	Katmai Hardscr	5.97	212		Pn	01 16 01.8	+0.1
KDAK	Kodiak Island 3.9nm,0.3s,baz=50,slow=9.1,SNR=31	6.33	198	P	Pn	01 16 04.6	-1.9
KDAK	2.8nm,0.3s,baz=90,slow=20,SNR=6.5			S	Sn	01 17 09.3	-7.9
OHAK	Old Harbor	6.97	200	Pn	Pn	01 16 15.1	0.0
RDOG	Red Dog Mine	7.09	313		Pn	01 16 18.3	+1.6
INK	Inuvik 1.1nm,0.3s,baz=234,slow=15,SNR=59	7.70	48	P	Pn	01 16 25.5	+0.7
C36M	Paulatuk	11.27	50		Pn	01 17 12.2	-0.5
YKA	Yellowknife Ar 0.2nm,0.3s,baz=286,slow=13,SNR=8.9	15.46	79	P	Pn	01 18 06.5	-0.1
RES	Resolute Bay 0.3nm,0.3s,baz=242,slow=13,SNR=4.3	21.05	37	P	P	01 19 09.9	+0.7
SEY	Seymchan 0.8nm,0.3s,baz=76,slow=8.2,SNR=6.7	25.51	295	P	P	01 19 50.5	-1.6
ARCES	ARCESS Array B 4.3nm,0.8s,baz=6.2,slow=10.0,SNR=2.9	46.85	3	P	P	01 22 52.6	+0.1
SONM	Songino Array 0.6nm,0.8s,baz=357,slow=3.3,SNR=3.6	54.07	306	P	P	01 23 47.7	+0.6
FINES	FINESS Array B 1.5nm,0.9s,baz=18,slow=6.8,SNR=3.8	54.98	3	P	P	01 23 53.2	0.0
MKAR	Makanchi Array 0.2nm,0.3s,baz=23,slow=5.0,SNR=4.6	62.58	323	P	P	01 24 45.1	-0.8

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*TAP **14** 01:54:26.7,24°.87N×122°.13E,h13^{km},ML3.2,C*
*JMA **14** 01:54:27.7±0.1,24°.77N×122°.13E,h43^{km},M2.5*
ISC 14 01:54:26.6±0.9,**24°.87N**±0°.02×**122°.16E**±0°.02,**h13**^{km}±7^{km},
n75,σ**0^{s}.78**/135,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao baz=319	0.21	311	P	Pg	01 54 31.3	+0.2
TWB1	baz=319			S	Sg	01 54 34.4	+0.1
NTC	Toucheng baz=270	0.30	267	*e*P	Pb	01 54 33.0	-0.9
NTC	baz=270			*e*S	Sb	01 54 37.9	-0.9
EOS1	EOS1 baz=190	0.32	186	*e*P	Pg	01 54 33.7	+0.6
EOS1	baz=190			S	Sb	01 54 38.8	-0.4
TIPB	Shuangxi baz=289	0.32	288	P	Pb	01 54 33.5	-0.7
TIPB	baz=289			*e*S	Sb	01 54 38.0	-1.4
TWC	Suao baz=216	0.39	228	P	Pg	01 54 34.0	-0.3
TWC	baz=216			*e*S	Sg	01 54 39.0	-0.5
NWF	Wu-fen Shan baz=295	0.40	300	*e*P	Pb	01 54 35.5	-0.1
NWF	baz=295			S	Sb	01 54 41.4	-0.3
WFSB	Wu-fen Shan baz=303	0.40	300	*e*P	Pb	01 54 35.2	-0.4
WFSB	baz=303			S	Sb	01 54 40.6	-1.0
TWE	Neicheng baz=237	0.47	252	P	Pg	01 54 36.0	+0.1
TWE	baz=237			*e*S	Sb	01 54 43.6	-0.1
SLBB	Yuanshan baz=243	0.49	256	P	Pg	01 54 36.0	-0.3
SLBB	baz=243			S	Sb	01 54 43.7	-0.6
TWA	Mucha baz=282	0.54	282	*e*P	Pb	01 54 38.4	+0.5
TWA	baz=282			*e*S	Sb	01 54 46.0	+0.4
ENA	Nanau baz=209	0.58	221	*e*P	Pg	01 54 38.1	+0.2
ENA	baz=209			S	Sg	01 54 45.4	-0.3
NHDH	Xindian Distri baz=279	0.59	279	*e*P	Pn	01 54 39.5	-1.2
NHDH	baz=279			*e*S	Sn	01 54 48.1	-2.0
ENTT	Nioudou baz=241	0.59	247	*e*P	Pb	01 54 38.5	-0.3
ENTT	baz=241			*e*S	Sb	01 54 46.1	-0.9
YM01	YM01 baz=299	0.60	297	*e*P	Pb	01 54 39.3	+0.2
YM01	baz=299			*e*S	Sb	01 54 47.3	-0.2
NWLT	Wulai baz=259	0.61	261	*e*P	Pb	01 54 38.9	-0.1
NWLT	baz=259			*e*S	Sb	01 54 47.4	-0.2
YM08	YM08 baz=303	0.61	301	*e*P	Pb	01 54 39.2	+0.1
YM11	YM11 baz=300	0.61	299	*e*P	Pb	01 54 39.4	+0.2
YM10	YM10 baz=299	0.61	298	*e*P	Pb	01 54 39.4	+0.1
TATO	Taipei baz=279	0.62	280	*e*P	Pn	01 54 40.4	-0.7
TATO	baz=279			*e*S	Sn	01 54 49.4	-1.5
YM04	YM04 baz=298	0.63	297	*e*P	Pb	01 54 40.0	+0.4
YM03	YM03 baz=300	0.64	299	*e*P	Pb	01 54 40.1	+0.4
YM03	baz=300			*e*S	Sb	01 54 48.7	0.0
NDT	Datong Townshi baz=242	0.65	246	*e*P	Pb	01 54 39.7	-0.1
NDT	baz=242			*e*S	Sb	01 54 49.0	+0.2
TWY	Chenhua baz=311	0.65	308	*e*P	Pb	01 54 40.2	+0.4
ANP	Anpu baz=300	0.66	299	*e*P	Pb	01 54 40.4	+0.4
TWS1	Kuangyinshan baz=290	0.71	289	*e*P	Pn	01 54 42.1	-0.3
YHNB	Yeheng baz=260	0.74	255	*e*P	Pg	01 54 40.8	-0.2
YHNB	baz=260			*e*S	Sb	01 54 52.0	+0.4
NSK	Sanguang baz=261	0.76	255	*e*P	Pb	01 54 41.4	-0.3
NSK	baz=261			*e*S	Sg	01 54 50.8	-0.4
PCYT	Pengchaiyu baz=5.0	0.76	354	*e*P	Pg	01 54 41.2	-0.1
WLTB	Daxi baz=268	0.83	269	*e*P	Pn	01 54 44.0	0.0
NNS	Nan Shan baz=225	0.84	239	*e*P	Pn	01 54 43.5	-0.7
NNS	baz=225			*e*S	Sb	01 54 53.8	-0.5
NACB	Ninganchiao baz=200	0.86	217	*e*P	Pg	01 54 42.6	-0.7
NACB	baz=200			S	Sg	01 54 54.0	-0.6
YOJ	Yonaguni jima baz=117	0.87	118	*e*P	Pg	01 54 43.4	0.0
YOJ	baz=117			*e*S	Sg	01 54 54.9	+0.1
YOJ	Yonaguni jima	0.87	118	P	Pg	01 54 43.5	0.0
YOJ				*e*S	Sg	01 54 54.9	+0.1
NCUH	Zhongli baz=276	0.89	276	*e*P	Pn	01 54 45.2	+0.3
ETLH	Xiulin Townshi baz=217	0.91	223	*e*P	Pb	01 54 44.3	+0.1
ETLH	baz=217			*e*S	Sb	01 54 56.2	0.0
TWD	Chiawan baz=200	0.94	213	*e*P	Pg	01 54 44.1	-0.6
TWD	baz=200			S	Sb	01 54 56.9	-0.2
LIOB	Emei baz=255	1.07	258	*e*P	Pn	01 54 48.4	+1.1
LIOB	baz=255			*e*S	Sn	01 55 03.1	+1.0
NSTT	Nanjuang baz=254	1.08	258	*e*P	Pn	01 54 48.6	+1.2
NSTT	baz=254			*e*S	Sn	01 55 02.9	+0.5
ENLB	Shoufeng baz=208	1.09	208	*e*P	Pn	01 54 48.9	+1.3
ENLB	baz=208			*e*S	Sn	01 55 04.1	+1.5
TDCB	Techi baz=220	1.10	236	*e*P	Pn	01 54 48.3	+0.5
TDCB	baz=220			*e*S	Sg	01 55 01.7	-0.5
CHGB	Renai baz=221	1.21	228	*e*P	Pg	01 54 50.2	+0.3
CHGB	baz=221			*e*S	Sn	01 55 05.4	-0.4
ESL	Shilin baz=205	1.24	212	*e*P	Pg	01 54 50.4	-0.2
ESL	baz=205			*e*S	Sg	01 55 06.5	-0.2
WHP	Taichung City baz=236	1.25	242	*e*P	Pg	01 54 51.2	+0.5
WHP	baz=236			*e*S	Sg	01 55 08.0	+0.9
OWD	Renai baz=217	1.28	225	*e*P	Pg	01 54 50.8	-0.4
OWD	baz=217			*e*S	Sb	01 55 06.7	-0.4
NMLH	Miaoli baz=251	1.29	255	*e*P	Pg	01 54 53.0	+1.6
NMLH	baz=251			*e*S	Sg	01 55 10.1	+1.9
NSY	Sanyi baz=260	1.35	251	*e*P	Pg	01 54 53.0	+0.4
NSY	baz=260			*e*S	Sg	01 55 11.1	+0.9
TWQ1	Liyutan baz=258	1.37	248	*e*P	Pg	01 54 53.3	+0.5
TWQ1	baz=258			*e*S	Sg	01 55 11.8	+1.2
EGFH	Guangfu baz=217	1.37	209	*e*P	Pb	01 54 52.0	-0.1
EGFH	baz=217			*e*S	Sg	01 55 10.7	0.0
DPDB	Guoxing baz=218	1.40	234	*e*P	Pg	01 54 53.8	+0.3
DPDB	baz=218			*e*S	Sg	01 55 10.9	-0.9
VWDT	VWDT baz=220	1.45	220	*e*P	Pb	01 54 53.7	+0.3
VWDT	baz=220			*e*S	Sb	01 55 11.9	+0.1
SMLT	Sun Moon Lake baz=213	1.51	230	*e*P	Pg	01 54 56.1	+0.4
SMLT	baz=213			*e*S	Sg	01 55 14.6	-0.7
IRIF	Iriomote-Funau	1.52	110	P	Pn	01 54 52.7	-0.8
HGSD	Ruisui baz=186	1.53	206	*e*P	Pb	01 54 55.0	+0.2
HGSD	baz=186			*e*S	Sg	01 55 16.3	+0.5
TYC	Yuchr baz=215	1.53	231	*e*P	Pg	01 54 56.2	+0.2
TYC	baz=215			*e*S	Sg	01 55 16.2	+0.3
SSLB	Suanglung baz=217	1.54	226	*e*P	Pb	01 54 55.1	+0.1
SSLB	baz=217			*e*S	Sb	01 55 13.9	-0.6
EHY	Hungye baz=200	1.56	210	*e*P	Pb	01 54 55.0	-0.3
EHY	baz=200			*e*S	Sg	01 55 16.1	-0.7
YULB	Yu-li baz=199	1.67	208	*e*P	Pn	01 54 56.2	+0.6
YULB	baz=199			*e*S	Sn	01 55 17.3	+0.4
WHYT	Xinyi Township baz=217	1.67	226	*e*P	Pg	01 54 58.5	-0.2
WHYT	baz=217			*e*S	Sg	01 55 20.3	-0.1
TWF1	Yuli baz=199	1.71	208	*e*P	Pb	01 54 57.8	0.0
TWF1	baz=199			*e*S	Sb	01 55 19.0	-0.2
JKRS	Kuro-shima	1.80	110	P	Pn	01 54 57.8	+0.5
ALS	Alishan baz=197	1.84	223	*e*P	Pg	01 55 01.2	-0.6
ALS	baz=197			*e*S	Sg	01 55 25.2	-0.5
FULB	Fuli baz=209	1.84	206	*e*P	Pb	01 54 59.9	-0.3
FULB	baz=209			*e*S	Sb	01 55 23.9	+0.7
CHN5	Tsauling baz=214	1.86	227	*e*P	Pb	01 55 01.1	+0.7
CHN5	baz=214			*e*S	Sg	01 55 26.2	-0.1
JIJ	Ishigaki jima	1.87	105	*e*S	Sn	01 55 22.3	+0.4
CHKT	Chengkung baz=182	1.91	203	*e*S	Sn	01 55 22.2	-0.5
ELDTW	Lidau baz=194	1.97	212	*e*P	Pn	01 55 00.4	+0.5
ELDTW	baz=194			*e*S	Sb	01 55 26.9	-0.2
CHN4	Tsaushan baz=200	2.08	224	*e*P	Pb	01 55 04.1	-0.1
CHN4	baz=200			*e*S	Sg	01 55 32.7	-0.9
CHY	Chiayi baz=215	2.10	230	*e*S	Sg	01 55 32.1	-1.8
TPUB	Ta-pu baz=199	2.10	222	*e*P	Pb	01 55 03.9	-0.6
TPUB	baz=199			*e*S	Sg	01 55 32.2	-1.9
CHN1	Nanshi baz=207	2.25	222	*e*P	Pb	01 55 06.6	-0.5
CHN1	baz=207			*e*S	Sb	01 55 36.3	+1.5
SLGT	Liugui baz=198	2.33	217	*e*P	Pb	01 55 08.2	-0.2
SLGT	baz=198			*e*S	Sb	01 55 37.8	+0.7
MATB	Ma-tsu baz=308	2.38	303	*e*P	Pb	01 55 08.1	-1.1
MATB	baz=308			*e*S	Sb	01 55 35.9	-2.5
ECL	Taimali baz=200	2.52	206	*e*P	Pn	01 55 08.6	+1.4
ECL	baz=200			*e*S	Sb	01 55 41.1	-1.6
MASBT	Mashibuluo baz=192	2.65	212	*e*P	Pb	01 55 12.8	-1.2
MASBT	baz=192			*e*S	Sb	01 55 45.8	-0.6
LYJJ	Jianjiangzhen baz=315	2.74	308	*e*P	Pn	01 55 12.3	+2.1
LYJJ	baz=315			*e*S	Sn	01 55 45.4	+2.2

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*TAP **14** 01:55:28.1,24°.87N×122°.14E,h12^{km},ML3.4,C*
*JMA **14** 01:55:29.0,24°.80N×122°.15E,h41^{km},M3.0*
ISC 14 01:55:27.7±1.1,**24°.81N**±0°.02×**122°.20E**±0°.02,**h8**^{km}±9^{km},
n88,σ**0^{s}.73**/148,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1 baz=191	0.27	194	*e*P	Pb	01 55 35.2	+0.4
EOS1	baz=191			*e*S	Sb	01 55 40.6	+1.1
TWB1	Santiao Chiao baz=317	0.27	316	P	Pg	01 55 32.8	-0.3
TWB1	baz=317			S	Sg	01 55 35.8	-1.0
NTC	Toucheng baz=276	0.34	277	*e*P	Pg	01 55 34.7	+0.4
TIPB	Shuangxi baz=290	0.37	295	*e*P	Pg	01 55 35.0	-0.1
TIPB	baz=290			*e*S	Sg	01 55 39.2	-0.8
TWC	Suao baz=217	0.38	238	*e*P	Pg	01 55 35.3	+0.2
TWC	baz=217			S	Sg	01 55 40.7	+0.6
NWF	Wu-fen Shan baz=302	0.46	304	P	Pg	01 55 37.0	+0.4
NWF	baz=302			*e*S	Sg	01 55 42.5	-0.2
WFSB	Wu-fen Shan baz=302	0.46	304	*e*P	Pg	01 55 37.0	+0.4
WFSB	baz=302			*e*S	Sg	01 55 42.5	-0.1
TWE	Neicheng baz=242	0.49	259	*e*P	Pg	01 55 37.2	0.0
TWE	baz=242			S	Sg	01 55 44.4	+0.7
SLBB	Yuanshan baz=248	0.52	264	*e*P	Pg	01 55 37.8	+0.1
SLBB	baz=248			*e*S	Sg	01 55 45.1	+0.7
ENA	Nanau baz=214	0.56	227	P	Pb	01 55 39.4	-0.5
ENA	baz=214			*e*S	Sb	01 55 47.7	-0.4
TWA	Mucha baz=282	0.58	287	*e*P	Pb	01 55 39.9	-0.3
TWA	baz=282			*e*S	Sb	01 55 47.7	-0.9
ENTT	Nioudou baz=245	0.60	253	*e*P	Pb	01 55 40.3	-0.2
ENTT	baz=245			*e*S	Sb	01 55 48.1	-1.0
NHDH	Xindian Distri baz=279	0.63	284	*e*P	Pg	01 55 40.4	+0.5
NHDH	baz=279			*e*S	Sb	01 55 48.9	-1.0
NWLT	Wulai baz=260	0.63	267	*e*P	Pb	01 55 41.0	-0.1
NWLT	baz=260			*e*S	Sg	01 55 48.9	+0.7
NDT	Datong Townshi baz=244	0.66	252	*e*P	Pb	01 55 41.2	-0.3
NDT	baz=244			*e*S	Sb	01 55 50.3	-0.5
YM01	YM01 baz=298	0.66	300	*e*P	Pg	01 55 40.7	+0.2
TATO	Taipei baz=272	0.67	284	*e*P	Pb	01 55 41.4	-0.2
YM11	YM11 baz=300	0.67	302	*e*P	Pg	01 55 40.8	+0.2
YM08	YM08 baz=302	0.67	304	*e*P	Pg	01 55 40.6	+0.1
YM10	YM10 baz=298	0.67	301	*e*P	Pg	01 55 41.0	+0.3
YM04	YM04 baz=297	0.69	300	*e*P	Pg	01 55 41.2	+0.2
YM03	YM03 baz=300	0.70	302	*e*P	Pg	01 55 41.3	+0.1
TWY	Chenhua baz=310	0.71	310	*e*P	Pg	01 55 41.7	+0.2
TWY	baz=310			*e*S	Sb	01 55 52.1	-0.2
ANP	Anpu baz=300	0.72	301	*e*P	Pg	01 55 41.7	+0.1
YHNB	Yeheng baz=261	0.76	259	*e*P	Pg	01 55 42.6	+0.2
YHNB	baz=261			*e*S	Sg	01 55 52.7	+0.4
TWS1	Kuangyinshan baz=303	0.76	292	*e*P	Pb	01 55 43.6	+0.3
TWS1	baz=303			*e*S	Sb	01 55 53.1	-0.8
JYNG	Yonagunijimaku	0.77	118	P	Pb	01 55 43.7	+0.3
JYNG				*e*S	Sb	01 55 55.1	+1.1
NSK	Sanguang baz=253	0.78	260	*e*P	Pg	01 55 42.5	-0.2
NSK	baz=253			*e*S	Sb	01 55 53.2	-1.0
YOJ	Yonaguni jima	0.82	115	P	Pb	01 55 44.8	+0.6
YOJ				*e*S	Sb	01 55 56.3	+0.9
PCYT	Pengchaiyu baz=2.0	0.82	352	*e*P	Pg	01 55 43.5	0.0
NNS	Nan Shan baz=240	0.84	244	*e*P	Pb	01 55 44.6	-0.1
NNS	baz=240			*e*S	Sb	01 55 55.7	-0.4
NACB	Ninganchiao baz=206	0.84	221	P	Pb	01 55 44.5	0.0
NACB	baz=206			*e*S	Sb	01 55 56.4	+0.4
WLTB	Daxi baz=268	0.86	273	*e*P	Pb	01 55 44.8	-0.1
ETLH	Xiulin Townshi baz=215	0.89	227	*e*P	Pb	01 55 45.3	-0.1
ETLH	baz=215			*e*S	Sb	01 55 57.9	+0.3
TWD	Chiawan baz=212	0.91	217	*e*P	Pb	01 55 45.7	-0.1
TWD	baz=212			*e*S	Sb	01 55 58.6	+0.5
NCUH	Zhongli baz=276	0.93	280	*e*P	Pb	01 55 46.4	+0.2
HWA	Hwalien baz=213	0.99	213	*e*P	Pn	01 55 48.3	+0.3
ENLB	Shoufeng baz=213	1.06	211	*e*P	Pn	01 55 49.4	+0.5
ENLB	baz=213			*e*S	Sn	01 56 04.7	+0.9
LIOB	Emei baz=256	1.09	261	*e*P	Pn	01 55 49.3	0.0
LIOB	baz=256			*e*S	Sb	01 56 03.4	+0.2
TDCB	Techi baz=224	1.10	240	*e*P	Pb	01 55 49.3	+0.2
TDCB	baz=224			*e*S	Sb	01 56 03.7	0.0
NSTT	Nanjuang baz=255	1.10	261	*e*P	Pb	01 55 49.0	-0.1
NSTT	baz=255			*e*S	Sb	01 56 03.7	0.0
CHGB	Renai baz=224	1.20	231	*e*P	Pn	01 55 51.6	+0.6
CHGB	baz=224			*e*S	Sn	01 56 07.4	-0.2
ESL	Shilin baz=211	1.22	215	*e*P	Pn	01 55 51.0	0.0
ESL	baz=211			*e*S	Sn	01 56 07.6	-0.1
WHP	Taichung City baz=238	1.26	245	*e*P	Pg	01 55 52.4	+0.5
WHP	baz=238			*e*S	Sn	01 56 09.0	+0.1
OWD	Renai baz=220	1.26	228	*e*P	Pg	01 55 52.0	+0.1
OWD	baz=220			*e*S	Sn	01 56 08.9	-0.2
NMLH	Miaoli baz=251	1.31	258	*e*P	Pg	01 55 52.7	-0.1
NMLH	baz=251			*e*S	Sn	01 56 10.8	+0.8
EGFH	Guangfu baz=220	1.34	212	*e*P	Pn	01 55 52.8	+0.1
EGFH	baz=220			*e*S	Sg	01 56 12.6	+1.8
NSY	Sanyi baz=260	1.37	253	*e*P	Pb	01 55 53.7	+0.1
NSY	baz=260			*e*S	Sg	01 56 11.7	0.0
TWQ1	Liyutan	1.38	251	*e*P	Pb	01 55 53.9	+0.2

	baz=257						
TWQ1				*e*S	**Sg**	**01 56 11.8**	**-0.2**
	baz=257						
DPDB	**Guoxing**	**1.40**	**236**	*e*P	**Pg**	**01 55 54.4**	**-0.1**
	baz=220						
DPDB				*e*S	**Sg**	**01 56 13.3**	**+0.7**
	baz=220						
VWDT	**VWDT**	**1.43**	**223**	*e*P	**Pg**	**01 55 55.3**	**+0.2**
	baz=225						
VWDT				*e*S	**Sg**	**01 56 13.6**	**-0.1**
	baz=225						
IRIF	**Iriomote-Funau**	**1.47**	**109**	P	**Pn**	**01 55 53.4**	**-1.2**
IRIF				*e*S	**Sn**	**01 56 12.9**	**-1.2**
HGSD	**Ruisui**	**1.49**	**208**	*e*P	**Pg**	**01 55 56.3**	**0.0**
	baz=187						
HGSD				*e*S	**Sg**	**01 56 16.9**	**+1.1**
	baz=187						
SMLT	**Sun Moon Lake**	**1.50**	**232**	*e*P	**Pg**	**01 55 56.2**	**-0.3**
	baz=217						
SMLT				*e*S	**Sg**	**01 56 16.8**	**+0.8**
	baz=217						
TYC	**Yuchr**	**1.52**	**234**	*e*P	**Pb**	**01 55 56.0**	**-0.1**
	baz=218						
TYC				*e*S	**Sg**	**01 56 16.2**	**-0.4**
	baz=218						
SSLB	**Suanglung**	**1.53**	**228**	*e*P	**Pb**	**01 55 56.3**	**0.0**
	baz=220						
SSLB				*e*S	**Sg**	**01 56 16.4**	**-0.5**
	baz=220						
EHY	**Hungye**	**1.53**	**212**	*e*P	**Pg**	**01 55 56.8**	**-0.2**
	baz=206						
TCU	**Taichung**	**1.54**	**245**	*e*S	**Sg**	**01 56 17.7**	**+0.5**
	baz=256						
YULB	**Yu-li**	**1.64**	**210**	*e*P	**Pn**	**01 55 57.3**	**+0.4**
	baz=205						
YULB				*e*S	**Sg**	**01 56 19.5**	**-0.8**
	baz=205						
HATJ	**Hateruma jima**	**1.65**	**117**	P	**Pn**	**01 55 56.7**	**-0.3**
WHYT	**Xinyi Township**	**1.66**	**228**	*e*P	**Pg**	**01 55 59.4**	**-0.1**
	baz=220						
WHYT				*e*S	**Sb**	**01 56 19.7**	**+0.1**
	baz=220						
WJS	**Zhushan**	**1.67**	**234**	*e*S	**Sg**	**01 56 20.3**	**-0.9**
	baz=220						
WNT	**Mingjian**	**1.67**	**236**	*e*P	**Pb**	**01 55 59.1**	**+0.4**
	baz=229						
TWF1	**Yuli**	**1.67**	**210**	*e*P	**Pb**	**01 55 58.5**	**-0.3**
	baz=205						
TWF1				*e*S	**Sg**	**01 56 20.5**	**-0.9**
	baz=205						
JKRS	**Kuro-shima**	**1.75**	**109**	P	**Pn**	**01 55 58.7**	**+0.4**
FULB	**Fuli**	**1.81**	**207**	*e*P	**Pb**	**01 56 00.5**	**-0.6**
	baz=213						
FULB				*e*S	**Sb**	**01 56 24.6**	**+0.7**
	baz=213						
ALS	**Alishan**	**1.82**	**225**	*e*P	**Pb**	**01 56 01.1**	**-0.3**
	baz=206						
ALS				*e*S	**Sg**	**01 56 25.0**	**-1.1**
	baz=206						
JIJ	**Ishigaki jima**	**1.83**	**104**	*e*S	**Sn**	**01 56 21.9**	**-0.9**
CHN5	**Tsauling**	**1.84**	**229**	*e*P	**Pb**	**01 56 01.1**	**-0.6**
	baz=219						
CHN5				*e*S	**Sg**	**01 56 25.6**	**-1.3**
	baz=219						
CHKT	**Chengkung**	**1.87**	**204**	*e*P	**Pn**	**01 56 00.2**	**+0.2**
	baz=183						
CHKT				*e*S	**Sb**	**01 56 25.3**	**-0.3**
	baz=183						
WDLH	**Douliu**	**1.88**	**234**	*e*P	**Pb**	**01 56 01.5**	**-0.8**
	baz=223						
WDLH				*e*S	**Sb**	**01 56 26.1**	**0.0**
	baz=223						
RLNB	**Erlin**	**1.91**	**242**	*e*S	**Sb**	**01 56 25.9**	**-1.0**
	baz=251						
ELDTW	**Lidau**	**1.94**	**214**	*e*P	**Pb**	**01 56 02.8**	**-0.7**
	baz=193						
ELDTW				*e*S	**Sb**	**01 56 28.1**	**+0.2**
	baz=193						
CHN4	**Tsaushan**	**2.07**	**226**	*e*P	**Pb**	**01 56 04.6**	**-0.9**
	baz=206						
CHN4				*e*S	**Sb**	**01 56 31.6**	**+0.2**
	baz=206						
TPUB	**Ta-pu**	**2.08**	**224**	*e*P	**Pb**	**01 56 05.7**	**-0.1**
	baz=203						
TPUB				*e*S	**Sb**	**01 56 31.0**	**-0.8**
	baz=203						
CHY	**Chiayi**	**2.08**	**231**	*e*P	**Pb**	**01 56 05.6**	**-0.1**
	baz=220						
CHY				*e*S	**Sb**	**01 56 31.2**	**-0.7**
	baz=220						
CHN1	**Nanshi**	**2.23**	**224**	*e*P	**Pb**	**01 56 07.3**	**-1.0**
	baz=213						
CHN1				*e*S	**Sb**	**01 56 34.6**	**-1.4**
	baz=213						
TWGBT	**Beinan**	**2.23**	**208**	*e*P	**Pn**	**01 56 06.0**	**+1.0**
	baz=189						
TWGBT				*e*S	**Sb**	**01 56 35.0**	**-1.2**
	baz=189						
TWG	**Pinlang**	**2.23**	**208**	*e*P	**Pn**	**01 56 06.7**	**+1.6**
	baz=189						
TWG				*e*S	**Sb**	**01 56 34.8**	**-1.4**
	baz=189						
SGST	**Jiashian**	**2.27**	**221**	*e*P	**Pb**	**01 56 07.4**	**-1.5**
	baz=210						
MATB	**Ma-tsu**	**2.43**	**304**	*e*P	**Pn**	**01 56 08.9**	**+1.1**
	baz=307						
VWUC	**VWUC**	**2.50**	**275**	*e*P	**Pn**	**01 56 09.0**	**+0.3**
	baz=274						
SSD	**Sandimen**	**2.51**	**215**	*e*P	**Pb**	**01 56 11.2**	**-1.9**
	baz=193						
MASBT	**Mashibuluo**	**2.62**	**214**	*e*P	**Pb**	**01 56 12.8**	**-2.1**
	baz=192						
MASBT				*e*S	**Sb**	**01 56 44.6**	**-2.6**
	baz=192						
XPSS	**Dashiqiu**	**2.78**	**320**	*e*P	**Pn**	**01 56 13.2**	**+0.6**
	baz=327						
LYJJ	**Jianjiangzhen**	**2.80**	**309**	*e*P	**Pn**	**01 56 13.4**	**+0.6**
	baz=315						
LYJJ				*e*S	**Sn**	**01 56 47.5**	**+0.8**
	baz=315						
SCZT	**Fangliau**	**2.83**	**211**	*e*P	**Pn**	**01 56 15.4**	**+2.2**
	baz=191						
AXDP	**Jialang**	**3.84**	**272**	*e*P	**Pn**	**01 56 28.7**	**+1.5**
	baz=272						

*IDC **14** 01:55:29.0±1.5, 0°.08N×122°.86E, h0^{km}, mb3.3/4, mb1 3.5/4, mb1mx3.3/35, mbtmp3.4/4, Error ellipse: s-maj=157.3km s-min=28.9km az=62.0*

*DJA **14** 01:55:44.6±0.4, 0°N±2°×12°3E±°, h110^{km}±5^{km}, M3.8/12, mB4.8/1, mb3.9/1, MLv3.8/12, Mw(mB)4.0/1*

ISC 14 01:55:42.9±0.9**, 0°.04N**±0°.05×**123°.19E**±0°.03**, h100**^{km}**, n15, σ2^s.62**/25**, mb3.4**/4**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**0.95**	**56**	P	**Pn**	**01 56 04.8**	**+2.0**
KMSI				S	**Sn**	**01 56 22.2**	**+4.5**
LUWI	**Luwuk**	**1.16**	**201**	P	**Pn**	**01 56 08.1**	**+3.0**
LUWI				S	**Sn**	**01 56 25.3**	**+3.5**
MRSI	**Marisa**	**1.32**	**289**	P	**Pn**	**01 56 10.0**	**+3.0**
MRSI				S	**Sn**	**01 56 28.6**	**+3.3**
APSI	**Ampana**	**1.81**	**238**	P	**Pn**	**01 56 14.9**	**+1.8**
APSI				S	**Sn**	**01 56 38.0**	**+1.9**
MPSI	**Mapaga**	**3.31**	**275**	P	**Pn**	**01 56 35.1**	**+2.3**
MPSI				S	**Sn**	**01 57 14.2**	**+2.9**
SANI	**Sanana**	**3.48**	**127**	P	**Pn**	**01 56 36.4**	**+1.3**
SANI				S	**Sn**	**01 57 17.6**	**+2.1**
TNTI	**Ternate**	**4.24**	**80**	P	**Pn**	**01 56 46.9**	**+1.6**
TNTI				S	**Sn**	**01 57 36.5**	**+2.8**
TTSI	**Tana Toraja**	**4.56**	**228**	P	**Pn**	**01 56 50.8**	**+1.1**
TTSI				S	**Sn**	**01 57 43.1**	**+1.5**
NLAI	**Namlea**	**5.09**	**130**	P	**Pn**	**01 56 58.7**	**+1.9**
NLAI				S	**Sn**	**01 57 56.8**	**+2.4**
SPSI	**Sidrap Palu**	**5.25**	**221**	P	**Pn**	**01 57 00.4**	**+1.4**
SPSI				S	**Sn**	**01 58 00.1**	**+1.8**
BNSI	**Bone**	**5.38**	**215**	S	**Sn**	**01 58 02.9**	**+1.3**
WRA	**Warramunga Arr**	**22.67**	**152**	P	**P**	**02 00 33.9**	**-2.1**
	0.4nm,0.6s,baz=332,slow=10,SNR=2.3						
SONM	**Songino Array**	**49.79**	**345**	P	**P**	**02 04 23.9**	**-1.7**
	0.2nm,0.4s,baz=152,slow=6.5,SNR=2.9						
MKAR	**Makanchi Array**	**58.68**	**328**	P	**P**	**02 05 26.6**	**-3.3**
	0.3nm,0.5s,baz=130,slow=7.6,SNR=7.0						
KURBB	**Kurchatov Arra**	**63.02**	**330**	P	**P**	**02 05 56.0**	**-3.3**
	0.1nm,0.3s,baz=114,slow=7.2,SNR=4.8						

*IDC **14** 02:05:49.9±1.0, 3°.40N×82°.95W, h0^{km}, mb3.8/8, mb1 4.2/13, mb1mx3.9/37, mbtmp4.1/13, ML3.5/5, MS3.5/17, Ms1 3.5/17, ms1mx3.4/34, Error ellipse: s-maj=31.4km s-min=15.4km az=51.0*

*NEIC **14** 02:05:50.9±3.0, 3°.34N±0°.09×82°.95W±0°.09, h10^{km}±2^{km}, mb4.4/9, Error ellipse: s-maj=15.7km s-min=8.8km az=224.0*

*UCR **14** 02:05:57.5±0.4, 4°.20N×82°.47W, h0^{km}±999^{km}, MW4.0, mb4.4(NEIC)*

ISC 14 02:05:52.9±0.7**, 3°.35N**±0°.06×**82°.89W**±0°.07**, h24**^{km}**, n55, σ2^s.02**/57**, mb4.1**/10**, MS3.5**/11**, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TUMC	**Tumaco**	**4.42**	**110**	*e*P	**Pn**	**02 06 58.1**	**-0.5**
TUMC				*e*S	**Sn**	**02 07 47.3**	**-2.1**
TUMC				*i*		02 07 56.7	
	comp=Z,58nm,1.0s						
GR1C	**Gorgona, Isla**	**4.72**	**94**	*e*P	**Pn**	**02 07 01.4**	**-1.3**
GR1C				*e*S	**Sn**	**02 07 52.2**	**-4.6**
GR1C				*i*		02 07 55.2	
	comp=Z,23nm,0.7s						
AZU	**Azuero**	**5.12**	**30**	*e*P	**Pn**	**02 07 08.6**	**+0.5**
AZU				*i*		02 08 11.2	
	comp=Z,50nm,1.5s						
OTAV	**Otavalo**	**5.41**	**125**	*e*P	**Pn**	**02 07 10.8**	**-1.6**
OTAV				*e*S	**Sn**	**02 08 11.4**	**-2.8**
OTAV				*i*		02 08 24.1	
	comp=Z,14nm,0.9s						
OTAV	**Otavalo**	**5.41**	**125**		**Pn**	**02 07 10.4**	**-2.0**
MALC	**Bahia Malaga**	**5.58**	**83**	*e*P	**Pn**	**02 07 14.8**	**+0.4**
MALC				*e*S	**Sn**	**02 08 15.8**	**-2.0**
MALC				*i*		02 08 25.4	
	comp=Z,23nm,0.7s						
BBAC	**Balboa, Cauca**	**5.79**	**103**	*e*P	**Pn**	**02 07 17.1**	**-0.3**
BBAC				*e*S	**Sn**	**02 08 20.0**	**-3.3**
BBAC				*i*		02 08 28.5	
	comp=Z,31nm,0.6s						
CRUC	**La Cruz**	**6.19**	**106**	*e*P	**Pn**	**02 07 23.1**	**0.0**
CRUC				*e*S	**Sn**	**02 08 33.4**	**0.0**
CRUC				*i*		02 08 37.0	
	comp=Z,34nm,0.5s						
SOTA	**Rioblanco**	**6.39**	**101**	*e*P	**Pn**	**02 07 26.6**	**+0.6**
SOTA				*e*S	**Sn**	**02 08 36.0**	**-2.5**
LCR2	**La Lucha 2**	**6.45**	**350**	*e*P	**Pn**	**02 07 24.4**	**-2.1**
LCR2				*e*S	**Sn**	**02 08 32.4**	**-7.1**
BCIP	**Isla Barro Col**	**6.52**	**28**		**Pn**	**02 07 27.6**	**+0.2**
YOTC	**Yotoco, Valle**	**6.56**	**84**	*e*P	**Pn**	**02 07 27.9**	**-0.2**
YOTC				*e*S	**Sn**	**02 08 37.4**	**-4.7**
YOTC				*i*		02 08 41.4	
	comp=Z,13nm,0.8s						
PCON	**Cinco Dias**	**6.56**	**99**	*e*P	**Pn**	**02 07 30.0**	**+1.6**
PCON				*e*S	**Sn**	**02 08 43.7**	**+0.9**
PCON				*i*		02 08 52.8	
	comp=Z,38nm,0.6s						
PLMC	**San Jos del P**	**6.76**	**77**	*e*P	**Pn**	**02 07 32.1**	**+1.3**
PLMC				*e*S	**Sn**	**02 08 47.3**	**+0.1**
PLMC				*i*		02 09 00.2	
	comp=Z,19nm,0.8s						
JTS	**Las Juntas de**	**7.19**	**344**	Pn	**Pn**	**02 07 34.8**	**-1.8**
	comp=Z,6.7nm,0.3s,baz=180,slow=20,SNR=24						
JTS				Sn	**Sn**	**02 08 54.9**	**-2.8**
	comp=Z,0.4nm,0.3s,baz=233,slow=16,SNR=3.1						
JTS	**Las Juntas de**	**7.19**	**344**	*e*P	**Pn**	**02 07 35.3**	**-1.3**
JTS	**Las Juntas de**	**7.19**	**344**		**Pn**	**02 07 35.4**	**-1.3**
CBOC	**Ciudad Bolivar**	**7.29**	**70**	*e*P	**Pn**	**02 07 39.2**	**+1.1**
CBOC				*i*		02 09 15.9	
	comp=Z,5.8nm,2.2s						
PLVR	**Palo Verde**	**7.37**	**341**	*e*P	**Pn**	**02 07 38.5**	**-0.7**
FLOC	**Florencia**	**7.44**	**103**		**Pn**	**02 07 40.7**	**+0.7**
CUI	**Cuipilapa**	**7.60**	**343**	*e*P	**Pn**	**02 07 42.0**	**-0.3**
HELC	**Santa Helena**	**7.86**	**69**	*e*P	**Pn**	**02 07 47.9**	**+1.8**
HELC				*i*		02 09 31.7	
	comp=Z,4.3nm,1.7s						
ROSC	**El Rosal**	**8.67**	**80**	Pn	**Pn**	**02 07 58.9**	**+1.6**
	comp=Z,2.0nm,0.3s,baz=135,slow=20,SNR=3.2						
ROSC				Sn	**Sn**	**02 09 38.8**	**+4.2**
	comp=Z,0.9nm,0.3s,baz=270,slow=20,SNR=2.1						
ROSC	**El Rosal**	**8.67**	**80**	Pn	**Pn**	**02 07 57.3**	**0.0**
ATAH	**Atahualpa**	**11.34**	**157**	Pn	**Pn**	**02 08 35.0**	**+1.1**
	comp=Z,0.8nm,0.3s,baz=295,slow=6.6,SNR=6.4						
ATAH				LR	LR	02 12 46.2	
	comp=Z,582nm,19.3s,baz=330,slow=36						
SDV	**Santo Domingo**	**13.36**	**65**	Pn	**Pn**	**02 09 00.6**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=237,slow=12,SNR=6.6						
SDV				LR	LR	02 14 03.7	
	comp=Z,190nm,20.8s,baz=264,slow=37						
SDV	**Santo Domingo**	**13.36**	**65**		**Pn**	**02 09 01.8**	**+0.5**
APG	**El Apazote**	**13.78**	**328**	LR	LR	02 13 38.5	
	comp=Z,193nm,20.0s,baz=86,slow=34						
NNA	**Nana**	**16.38**	**159**	Pn	**P**	**02 09 43.9**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=326,slow=8.7,SNR=7.5						
NNA				LR	LR	02 15 37.2	
	comp=Z,124nm,18.5s,baz=316,slow=36						
NNA	**Nana**	**16.38**	**159**	Pn	**Pn**	**02 09 39.6**	**-1.8**
NNA				IAmb	IAmb	02 09 46.5	
	comp=Z,27nm,0.9s						
TEIG	**Tepich**	**17.58**	**343**	LR	LR	02 16 13.3	
	comp=Z,88nm,21.1s,baz=66,slow=36						
CMIG	**Matias Romero**	**18.03**	**320**	LR	LR	02 15 39.7	
	comp=Z,154nm,21.9s,baz=125,slow=33						
SJG	**San Juan**	**22.00**	**47**	LR	LR	02 18 26.5	
	comp=Z,69nm,21.9s,baz=240,slow=34						
SAML	**Samuel**	**23.13**	**122**	P	**P**	**02 10 59.5**	**+1.9**
SAML				IAmb	IAmb	02 11 03.4	
	comp=Z,16nm,1.2s						
PTGA	**Pitinga**	**23.27**	**100**	P	**P**	**02 11 00.8**	**+1.9**
	comp=Z,0.8nm,0.3s,baz=300,slow=20,SNR=2.6						
PTGA				LR	LR	02 20 07.1	
	comp=Z,165nm,18.8s,baz=284,slow=37						
PTGA	**Pitinga**	**23.27**	**100**	IAmb	IAmb	02 11 12.7	
	comp=Z,29nm,1.9s						
LPAZ	**La Paz**	**24.36**	**144**	P	**P**	**02 11 10.9**	**+0.9**
	comp=Z,11nm,1.1s,baz=316,slow=13,SNR=17						
LPAZ				LR	LR	02 21 33.1	
	comp=Z,132nm,20.6s,baz=344,slow=39						
LPAZ	**La Paz**	**24.36**	**144**	P	**P**	**02 11 10.3**	**+0.3**
GO01	**Chusmiza**	**26.54**	**150**	P	**P**	**02 11 28.5**	**-1.1**
SIV	**San Ignacio**	**28.89**	**132**	P	**P**	**02 11 49.8**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=244,slow=4.7,SNR=3.5						
SIV				LR	LR	02 24 26.1	
	comp=Z,161nm,18.6s,baz=307,slow=38						
LVC	**Limon Verde**	**29.19**	**153**	LR	LR	02 23 35.6	
	comp=Z,100nm,20.2s,baz=332,slow=36						
TXAR	**Lajitas Array**	**32.51**	**325**	LR	LR	02 24 08.7	
	comp=Z,33nm,20.0s,baz=0.0,slow=34						
LCAR	**Lake Charles**	**33.44**	**348**	P	**P**	**02 12 30.3**	**+0.4**
CPUP	**Villa Florida**	**38.50**	**142**	LR	LR	02 30 21.0	
	comp=Z,107nm,18.4s,baz=346,slow=38						
BDFB	**Brasilia**	**39.33**	**120**	LR	LR	02 30 16.1	
	comp=Z,68nm,18.5s,baz=270,slow=37						
SDCO	**Great Sand Dun**	**40.01**	**332**	P	**P**	**02 13 28.2**	**+2.0**
WUAZ	**Wupatki**	**41.46**	**324**	P	**P**	**02 13 39.6**	**+1.4**
WUAZ				IAmb	IAmb	02 13 41.8	
	comp=Z,7.4nm,1.4s						
PDAR	**Pinedale Array**	**45.88**	**333**	LR	LR	02 36 05.9	
	comp=Z,58nm,18.3s,baz=25,slow=40						
NVAR	**Mina Array Bea**	**47.55**	**322**	P	**P**	**02 14 28.2**	**+1.4**
	comp=Z,1.0nm,0.6s,baz=139,slow=7.2,SNR=8.1						
NVAR				LR	LR	02 33 32.5	
	comp=Z,50nm,18.7s,baz=222,slow=35						
NVAR	**Mina Array Bea**	**47.55**	**322**	P	**P**	**02 14 28.4**	**+1.5**
ULM	**Lac du Bonnet**	**48.01**	**349**	P	**P**	**02 14 29.2**	**-0.7**
	comp=Z,2.0nm,0.7s,baz=138,slow=4.6,SNR=6.1						
YKA	**Yellowknife Ar**	**63.53**	**344**	P	**P**	**02 16 20.8**	**-0.3**
	comp=Z,0.7nm,1.0s,baz=147,slow=7.1,SNR=6.5						
ILAR	**Eielson Array**	**76.11**	**337**	P	**P**	**02 17 39.0**	**+0.6**
	comp=Z,0.3nm,0.8s,baz=139,slow=5.9,SNR=3.5						
TORD	**Torodi Ar. Bea**	**83.97**	**77**	P	**P**	**02 18 24.8**	**+2.9**
	comp=Z,0.4nm,1.0s,baz=280,slow=5.9,SNR=2.0						
NOA	**NORSAR Array B**	**89.08**	**29**	LR	LR	02 57 26.8	
	comp=Z,26nm,19.1s,baz=0.0,slow=35						

*NNC **14** 02:07:01.7±1.9, 42°.39N×70°.72E, h0^{km}, mb3.0, mpv2.2, Error ellipse: s-maj=11.4km s-min=7.8km az=15.0*

*KRNET **14** 02:07:02.9±0.1, 42°.23N×70°.68E, mb2.2*

*SOME **14** 02:07:02.8, 42°.47N×70°.75E, h5^{km}*

ISC 14 02:07:00.1±1.7**, 42°.47N**±0°.04×**70°.66E**±0°.05**, h7**^{km}±13^{km}**, n15, σ0^s.86**/28**, 14C-4D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**0.64**	**350**	⇑P	**Pn**	**02 07 16.1**	**+0.5**
	0.9nm,0.3s,baz=175,slow=18,SNR=60						
KK31				⇑S	**Sn**	**02 07 26.1**	**0.0**
	6.2nm,0.3s,baz=165,slow=31,SNR=55						
BRLS	**Borolday**	**0.82**	**313**	*e*P	**Pn**	**02 07 18.7**	**+0.5**
	0.3nm,0.1s						
BRLS				*e*S	**Sn**	**02 07 30.0**	**-0.5**
	17nm,0.1s						
BRLS	**Borolday**	**0.82**	**313**	P	**Pn**	**02 07 18.6**	**+0.5**
	0.3nm,0.1s						
BRLS				S	**Sn**	**02 07 29.9**	**-0.7**
	17nm,0.2s						
ARK	**Arkit**	**1.18**	**124**	⇑*i*P	**Pg**	**02 07 23.5**	**+0.7**
	baz=15						
ARK				⇑*i*S	**Sg**	**02 07 38.5**	**+0.4**
	baz=15						
MRKS	**Merke**	**1.91**	**81**	*e*P	**Pg**	**02 07 37.5**	**+0.7**
	0.6nm,0.0s						
MRKS				*e*S	**Sg**	**02 08 02.2**	**+0.7**
	4.6nm,0.2s						
MRKS	**Merke**	**1.91**	**81**	P	**Pg**	**02 07 37.4**	**+0.6**
	2.3nm,0.4s						
MRKS				S	**Sg**	**02 08 02.3**	**+0.7**
	5.4nm,0.3s						
ARSB	**Arslanbob**	**2.08**	**123**	⇑*i*P	**Pb**	**02 07 38.9**	**+0.7**
	baz=17						
ARSB				⇑*i*S	**Sg**	**02 08 05.5**	**-1.4**
	baz=17						
AML	**Almayashu**	**2.28**	**98**	⇑*i*P	**Pg**	**02 07 43.5**	**-0.3**
	baz=92						
AML				⇑*i*S	**Sg**	**02 08 13.4**	**+0.1**
	baz=92						
EKS2	**Erkin-Say**	**2.31**	**84**	⇑*i*P	**Pg**	**02 07 44.4**	**0.0**
	baz=78						
EKS2				⇑*i*S	**Sg**	**02 08 15.1**	**+0.8**
	baz=78						
BTK	**Batken**	**2.42**	**177**	⇑*i*P	**Pb**	**02 07 42.6**	**-1.3**
	baz=77						
BTK				⇑*i*S	**Sn**	**02 08 11.5**	**+1.6**
	baz=77						
ARLS	**Aral**	**2.79**	**101**	⇓*i*P	**Pb**	**02 07 50.2**	**-0.2**
	baz=96						
ARLS				⇓*i*S	**Sb**	**02 08 25.1**	**+0.3**
	baz=96						
AAK	**Ala-Archa**	**2.84**	**85**	⇑Pn	**Pn**	**02 07 44.2**	**-1.8**
	1.6nm,0.7s						
AAK				⇑Lg	Lg	02 08 29.6	
	2.0nm,0.8s						
UCH	**Uchtor**	**2.87**	**94**	⇓*i*P	**Pb**	**02 07 52.2**	**+0.4**
	baz=89						
UCH				⇓*i*S	**Sb**	**02 08 28.1**	**+0.8**
	baz=89						
SGDS	**Sogindy**	**3.07**	**70**	Pg	**Pg**	**02 07 57.8**	**-1.2**
SGDS				Lg	Lg	02 08 37.0	
KST	**Kastek**	**3.95**	**80**	*e*P	**Pg**	**02 08 14.9**	**-0.8**
	0.1nm,0.1s						
KST				*e*S	**Sg**	**02 09 06.1**	**-0.7**
	1.5nm,0.4s						

*JMA **14** 02:11:14.8±0.1, 36°.45N×140°.60E, h56^{km}±1^{km}, M3.3*
JMA Felt I J1.

*IDC **14** 02:11:24.1±2.6, 36°.04N×139°.33E, h109^{km}±12^{km}, mb3.2/4, mb1 3.3/4, mb1mx3.0/42, mbtmp3.5/4, Error ellipse: s-maj=55.4km s-min=23.9km az=62.0*

ISC 14 02:11:14.3±1.0**, 36°.46N**±0°.06×**140°.61E**±0°.06**, h58**^{km}±7^{km}**, n16, σ1^s.58**/27**, mb3.4**/4**, 2C-2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**0.12**	**191**	⇑P	**Pn**	**02 11 23.5**	**+0.4**
JHYU				S	**Sn**	**02 11 29.6**	**+0.2**
JHO	**Hitachi**	**0.16**	**347**	⇑P	**Pn**	**02 11 23.6**	**+0.3**
JHO				S	**Sn**	**02 11 29.5**	**-0.3**
JYT	**Yasato**	**0.41**	**236**	P	**Pn**	**02 11 25.5**	**+0.4**
JYT				S	**Sn**	**02 11 32.8**	**-0.2**
ONAJ	**Iwakimizuishiy**	**0.66**	**13**	P	**Pn**	**02 11 27.9**	**-0.1**
ONAJ				S	**Sn**	**02 11 37.4**	**-0.6**
JFK	**Kawauchi**	**0.93**	**13**	P	**Pn**	**02 11 31.2**	**-0.2**
JFK				S	**Sn**	**02 11 43.7**	**-0.3**
JAG	**Ashikaga**	**0.94**	**268**	⇓P	**Pn**	**02 11 32.0**	**+0.6**
JAG				S	**Sn**	**02 11 43.9**	**-0.2**
JFT	**Otama**	**1.08**	**348**	P	**Pn**	**02 11 34.0**	**+0.6**
JFT				S	**Sn**	**02 11 47.7**	**+0.2**
JKT	**Katashina**	**1.14**	**286**	P	**Pn**	**02 11 35.1**	**+0.9**
JKT				S	**Sn**	**02 11 49.6**	**+0.6**
JFY	**Yanaizu**	**1.20**	**323**	⇓P	**Pn**	**02 11 35.7**	**+0.8**
JMM	**Marumori**	**1.41**	**6**	P	**Pn**	**02 11 38.6**	**+0.8**
JMM				S	**Sn**	**02 11 55.6**	**+0.2**
MJAR	**Matsushiro Arr**	**1.94**	**273**	P	**Pn**	**02 11 46.2**	**+1.3**
	2.5nm,0.3s,baz=116,slow=10.0,SNR=59						
MJAR				S	**Sn**	**02 12 01.4**	**-6.8**
	3.0nm,0.3s,baz=204,slow=23,SNR=22						
MAT	**Matsushiro**	**1.94**	**273**	P	**Pn**	**02 11 46.5**	**+1.5**
MAT				S	**Sn**	**02 12 09.7**	**+1.5**
SONM	**Songino Array**	**27.58**	**305**	P	**P**	**02 16 55.3**	**-0.7**
	0.4nm,0.7s,baz=110,slow=8.3,SNR=2.6						
ZALV	**Zalesovo Beam**	**41.83**	**313**	P	**P**	**02 18 58.3**	**+0.1**
	1.0nm,0.6s,baz=87,slow=7.6,SNR=3.6						
MKAR	**Makanchi Array**	**43.88**	**302**	P	**P**	**02 19 14.8**	**-0.2**
	0.6nm,0.8s,baz=87,slow=8.3,SNR=6.0						
WRA	**Warramunga Arr**	**56.41**	**187**	P	**P**	**02 20 50.2**	**+0.3**
	0.2nm,0.5s,baz=3.5,slow=7.3,SNR=5.4						

*IDC **14** 02:16:15.9±1.0, 23°.32S×175°.34W, h0^{km}, mb4.1/6, mb1 4.3/7, mb1mx4.1/29, mbtmp4.0/7, ML3.7/1, MS3.6/1, Ms1 3.5/1, ms1mx2.8/37, Error ellipse: s-maj=40.4km s-min=26.5km az=143.0*

*NEIC **14** 02:16:16.5±2.5, 23°.88S±0°.05×175°.0W±0°.2, h10^{km}±1^{km}, mb4.1/3, Error ellipse: s-maj=25.3km s-min=9.2km az=84.0*

ISC 14 02:16:20.1±0.8**, 23°.7S**±0°.1×**175°.1W**±0°.2**, h29**^{km}**, n18, σ1^s.36**/18**, mb4.0**/6**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**8.72**	**312**		**Pn**	**02 18 25.9**	**+1.5**
URZ	**Urewera**	**15.96**	**203**	Pn	**Pn**	**02 20 03.6**	**+1.1**
	0.3nm,0.3s,baz=315,slow=19,SNR=1.7						
URZ				Sn	**Sn**	**02 22 57.5**	**-1.0**
	0.6nm,0.3s,baz=354,slow=18,SNR=3.4						
URZ	**Urewera**	**15.96**	**203**	IAmb	IAmb	02 20 29.8	
	comp=Z,14nm,1.0s						
STKA	**Stephens Creek**	**38.95**	**248**	LR	LR	02 38 09.4	
	comp=Z,82nm,18.6s,baz=207,slow=34						
ASAR	**Alice Springs**	**46.47**	**259**	P	**P**	**02 24 43.7**	**-1.2**
	comp=Z,0.6nm,0.8s,baz=93,slow=7.8,SNR=4.5						
ASAR				PcP	**PcP**	**02 26 20.5**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=114,slow=4.1,SNR=3.1						
WRA	**Warramunga Arr**	**46.88**	**264**	P	**P**	**02 24 46.3**	**-1.8**
	comp=Z,1.6nm,0.7s,baz=104,slow=8.2,SNR=3.8						
NVAR	**Mina Array Bea**	**81.57**	**42**	P	**P**	**02 28 35.3**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=223,slow=8.1,SNR=6.4						
NVAR	**Mina Array Bea**	**81.57**	**42**	P	**P**	**02 28 35.5**	**+0.1**
USRK	**Ussuriysk Ar.**	**83.10**	**325**	P	**P**	**02 28 42.2**	**-0.8**
	comp=Z,1.2nm,0.4s,baz=134,slow=8.3,SNR=5.6						
IL31		**90.86**	**12**	P	**P**	**02 29 20.0**	**-0.2**
ILAR	**Eielson Array**	**90.86**	**12**	P	**P**	**02 29 18.8**	**-1.5**
	comp=Z,0.4nm,0.6s,baz=215,slow=5.2,SNR=4.1						
CMAR	**Chiang Mai Arr**	**93.68**	**288**	P	**P**	**02 29 35.0**	**+0.6**
	comp=Z,2.0nm,0.4s,baz=129,slow=3.7,SNR=9.3						
CHTO	**Chiang Mai**	**93.82**	**289**	P	**P**	**02 29 36.1**	**+1.0**
MKAR	**Makanchi Array**	**115.32**	**312**	PKP	**PKPdf**	**02 34 57.1**	**-1.7**
	comp=Z,0.3nm,0.7s,baz=86,slow=4.5,SNR=3.5						
AKASG	**Malin Array Be**	**147.09**	**331**	PKPbc	**PKPdf**	**02 35 56.8**	**-1.1**
	comp=Z,1.0nm,0.6s,baz=42,slow=4.1,SNR=7.2						
BRTR	**Keskin Array B**	**150.95**	**310**	PKPbc	**PKPbc**	**02 36 09.9**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=48,slow=2.1,SNR=8.5						
CLL	**Collm**	**151.73**	**349**	*i* PKPbc	**PKiKP**	**02 36 13.1**	**+1.1**
TORD	**Torodi Ar. Bea**	**169.08**	**163**	PKPab	**PKPab**	**02 37 39.3**	**+2.7**
	comp=Z,0.4nm,0.9s,baz=195,slow=4.4,SNR=3.3						

*ANF **14** 02:22:14.0±0.8, 36°.03N×97°.11W, h0^{km}, ML3.5/8, Error ellipse: s-maj=11.9km s-min=2.5km az=171.0*

*TUL **14** 02:22:14.4±1.0, 36°.02N±0°.02×97°.11W±0°.02, h4^{km}, ML3.1, Error ellipse: s-maj=2.7km s-min=2.1km az=114.0*

*NEIC **14** 02:22:14.7±2.1, 35°.97N±0°.01×97°.11W±0°.02, h1^{km}±6^{km}, Error ellipse: s-maj=2.8km s-min=1.9km az=106.0*

ISC 14 02:22:14.1±0.7**, 36°.07N**±0°.03×**97°.12W**±0°.02**, h10**^{km}**, n49, σ1^s.58**/66**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.47	206	Pg	Pg	02 22 22.7	-0.5
OKCFA	Oklahoma City	0.71	203	Pg	Pg	02 22 27.0	-0.8
OKCFA				Sg	Sg	02 22 36.5	-0.6
OKCSW	OKLAHOMA CITY	0.71	201	Pg	Pg	02 22 27.4	-0.5
FNO	Franklin	0.85	196	Pg	Pg	02 22 29.7	-0.7
FNO				Sg	Sg	02 22 40.5	-0.8
W35A	Tecumseh	0.94	168	Pg	Pg	02 22 30.5	-1.7
W35A				Sg	Sg	02 22 42.8	-1.6
T35A	Sooner Cattle	0.97	30	Pg	Pn	02 22 33.8	-0.1
T35A				Sg	Sb	02 22 47.2	+1.2
TUL1	Leonard	1.09	98	Pg	Pb	02 22 34.3	-0.7
TUL1				Sg	Sg	02 22 48.7	-0.5
TUL1	Leonard baz=276	1.09	98	P	Pb	02 22 34.4	-0.6
TUL1	 baz=276			S	Sg	02 22 49.1	0.0
U32A	Winter Ranch,	1.55	282		Pb	02 22 42.9	0.0
X34A	Smith Ranch, M	1.58	202		Pb	02 22 42.5	-0.9
WMOK	Wichita Mounta	1.90	226		Pb	02 22 48.0	-0.9
WMOK	Wichita Mounta baz=46	1.90	226	Pb	Pb	02 22 48.5	-0.4
WMOK	 baz=46			S	Sg	02 23 13.4	-1.8
U38A	Gravette	2.24	80		Pb	02 22 53.6	-1.0
HHAR	Hobbs	2.58	84	Pn	Pn	02 22 57.3	+1.4
R32A	Long Quarter,	2.67	332	Pn	Pn	02 22 58.6	+1.5
Z35A	Perchaven, San	2.74	182	Pn	Pn	02 22 58.5	+0.4
Z35A					Pb	02 23 03.8	+0.7
W39A	Magazine	2.85	107		Pn	02 23 00.7	+1.1
W39A	Magazine baz=288	2.85	107	P	Pn	02 23 01.0	+1.4
W39A	 baz=288			S	Sn	02 23 36.5	+2.4
MIAR	Mount Ida	3.27	117		Pn	02 23 06.8	+1.4
MIAR					Lg	02 23 59.7	
MIAR	Mount Ida baz=298	3.27	117	P	Pn	02 23 07.2	+1.8
MIAR	 baz=298			S	Sn	02 23 47.3	+2.8
Z38A	Mt. Pleasant	3.31	147	Pn	Pn	02 23 06.4	+0.4
CBKS	Cedar Bluff	3.44	323	Pn	Pn	02 23 09.6	+1.8
CBKS				Pg	Pg	02 23 19.3	-0.7
CBKS					LR	02 24 05.7	
S39A	Bolivar	3.44	61	Pn	Pn	02 23 09.1	+1.3
S39A				Pg	Pg	02 23 18.2	-1.9
U40A	Yellville	3.46	84		Pn	02 23 09.4	+1.4
X40A	Basin Creek Fa	3.84	113	Pn	Pn	02 23 12.7	-0.6
AMTX	Amarillo	3.91	254	Pn	Pn	02 23 15.6	+1.4
AMTX					Pb	02 23 24.4	+1.2
AMTX	Amarillo baz=72	3.91	254	Pb	Pb	02 23 23.3	+0.2
WHAR	Wooly Hollow	4.01	100		Pb	02 23 27.1	+2.4
WHAR					LR	02 24 20.3	
ABTX	Abilene, Hawle	4.03	212	Pn	Pn	02 23 16.3	+0.5
ABTX					Pb	02 23 26.0	+0.9
ABTX				Sg	Sg	02 24 18.2	-5.1
FCAR	Ozark Folk Cen	4.05	91	Pn	Pn	02 23 17.6	+1.4
FCAR					Pb	02 23 26.1	+0.6
FCAR					LR	02 24 21.2	
WLAR	White Oak Lake	4.06	125	Pn	Pn	02 23 16.5	+0.3
W41B	Gary Mavity, V	4.07	101		Pn	02 23 17.5	+1.1
W41B	Gary Mavity, V baz=284	4.07	101	P	Pn	02 23 17.8	+1.5
W41B	 baz=284			S	Sn	02 24 05.3	+1.3
WHTX	Lake Whitney,	4.08	184	Pn	Pn	02 23 17.4	+0.8
UALR	University of	4.11	107	Pn	Pn	02 23 17.4	+0.4
UALR					LR	02 24 22.7	
237A	Washetta, Mont	4.20	165	Pn	Pn	02 23 18.1	-0.1
Z41A	Richland Creek baz=309	4.53	127	S	Sn	02 24 15.2	-0.2
LCAR	Lake Charles	4.83	88	Pn	Pn	02 23 27.4	+0.5
MSTX	Muleshoe	5.09	247	Pn	Pn	02 23 30.9	+0.3
MSTX	Muleshoe baz=64	5.09	247	S	Sn	02 24 30.8	+1.3
CCM	Cathedral Cave	5.10	65	Pn	Pn	02 23 32.5	+2.0
KSCO	Kaye Shedlock'	5.27	305		Sg	02 25 00.9	-2.3
BGNE	Belgrade	5.39	352	Pn	Pn	02 23 37.7	+3.2
T25A	Trinidad	5.96	282	Pn	Pn	02 23 43.9	+1.4
T25A					LR	02 25 23.4	
SLM	Saint Louis	6.05	63	Sg	Sg	02 25 23.5	-4.7
S44A	Carbondale	6.51	73	Pn	Pn	02 23 51.1	+1.3
S44A					LR	02 25 38.6	
SCIA	State Center	6.57	26	Pn	Pn	02 23 52.0	+1.3
SCIA					LR	02 25 43.6	
N41A	Harden Midland	6.75	45	Pn	Pn	02 23 54.6	+1.4
SDCO	Great Sand Dun	6.92	286	Pn	Pn	02 23 58.1	+2.3
SDCO					LR	02 25 53.2	

SOME ***14*** *02:37:00.0, 42°.03N×71°.95E, h0^{km}*

KRNET ***14*** *02:37:01.1±0.1, 41°.95N×71°.92E, h18^{km}, mb2.5*

NNC ***14*** *02:37:02.0±1.1, 42°.11N×71°.90E, h0^{km}, mb2.5, mpv2.5, Error ellipse: s-maj=10.7km s-min=4.6km az=1.0*

ISC 14 02:37:00.8±1.0**, 42°.01N**±0°.03×**71°.94E**±0°.02**, h9**^{km}±9^{km}**, n21,** σ**0ˢ.79**/39**, 22C-5D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	Arkit baz=65	0.21	175	⇑iP	Pg	02 37 05.6	+0.4
ARK	 baz=65			⇑iS	Sg	02 37 08.4	+0.2
ARSB	Arslanbob baz=28	1.04	131	⇑iP	Pb	02 37 19.6	-1.5
ARSB	 baz=28			⇑iS	Sb	02 37 33.6	-1.3
MRKS	Merke 5.2nm,0.1s	1.20	52	eP	Pg	02 37 23.9	0.0
MRKS	 4.2nm,0.1s			eS	Sn	02 37 40.6	+0.2
MRKS	Merke 5.2nm,0.1s	1.20	52	P	Pg	02 37 23.9	0.0
MRKS	 5.5nm,0.2s			S	Sn	02 37 40.4	-0.1
AML	Almayashu baz=81	1.31	84	⇓iP	Pn	02 37 25.5	-0.2
AML	 baz=81			⇓iS	Sg	02 37 43.8	+0.7
IUG	Iuzhnay 0.7nm,0.1s	1.43	276	eP	Pn	02 37 27.2	+0.2
IUG	 15nm,0.2s			eS	Sb	02 37 46.2	+0.1
IUG	Iuzhnay 1.0nm,0.2s	1.43	276	P	Pn	02 37 27.1	+0.1
IUG	 28nm,0.3s			S	Sb	02 37 46.0	-0.1
EKS2	Erkin-Say baz=62	1.51	64	⇑iP	Pb	02 37 29.3	+0.2
EKS2	 baz=62			⇑iS	Sg	02 37 50.2	+0.8
KK31	Karatay Array 0.6nm,0.4s,baz=135,slow=16,SNR=10	1.52	316	P	Pn	02 37 28.2	0.0
KK31	 3.3nm,0.5s,baz=130,slow=29,SNR=8.4			⇑S	Sg	02 37 48.6	-1.1
ARLS	Aral baz=92	1.78	94	⇑iP	Pb	02 37 33.8	0.0
ARLS	 baz=92			⇑iS	Sb	02 37 57.6	+1.3
BRLS	Borolday 0.3nm,0.1s	1.86	304	eP	Pb	02 37 35.2	+0.2
BRLS	 8.5nm,0.3s			eS	Sg	02 37 59.8	-0.9
UCH	Uchtor baz=81	1.93	83	⇑iP	Pb	02 37 36.5	+0.1
UCH	 baz=81			⇑iS	Sg	02 38 02.6	-0.2
AAK	Ala-Archa baz=69	2.00	71	⇑iP	Pb	02 37 37.6	+0.2
AAK	 baz=69			⇑iS	Sg	02 38 04.4	-0.6
AAK	Ala-Archa 1.4nm,0.8s	2.00	71	⇓Pn	Pb	02 37 37.1	-0.3
AAK	 2.9nm,0.8s			⇑Lg	Lg	02 38 07.9	
BTK	Batken baz=4.0	2.13	204	⇑iP	Pn	02 37 37.5	+0.9
BTK	 baz=4.0			⇑iS	Sn	02 38 03.8	+0.6
USP	Ospenovka baz=54	2.27	56	⇑iP	Pb	02 37 41.4	-0.6
USP	 baz=54			⇑iS	Sb	02 38 11.2	+1.0
CHMS	Chumysh 1.9nm,0.7s	2.30	64	⇑Pn	Pb	02 37 42.3	-0.2
CHMS	 3.0nm,0.8s			⇑Lg	Lg	02 38 14.3	
KBK	Karagaybulak baz=71	2.32	73	⇑iP	Pb	02 37 42.0	-1.0
KBK	 baz=71			⇑iS	Sb	02 38 12.2	+0.4
SGDS	Sogindy 1.8nm,0.3s	2.45	53	Pg	Pb	02 37 44.6	-0.6
SGDS	 3.1nm,0.5s			Lg	Lg	02 38 16.0	
KZA	Kyzart baz=86	2.47	87	⇓eP	Pb	02 37 44.0	-1.6
KZA	 baz=86			⇓iS	Sb	02 38 15.7	-0.5
KST	Kastek 0.3nm,0.0s	3.15	70	eP	Pb	02 37 58.9	+1.9
KST	 1.8nm,0.4s			eS	Sg	02 38 40.5	-1.4

IDC 14 03:09:00.1±1.8**, 5°.72S×149°.25E, h0**^{km}**, mb3.5**/4**, mb1 3.9**/5**, mb1mx3.6**/26**, mbtmp3.7**/5**, ML2.3**/1**, MS3.9**/1**, Ms1 3.9**/1**, ms1mx2.7**/30**, Error ellipse: s-maj=85.7km s-min=24.9km az=125.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby 13nm,0.3s,baz=24,slow=8.4,SNR=18	4.21	209	Pn	Pn	03 10 07.6	+2.0
PMG	 6.4nm,0.3s,baz=16,slow=18,SNR=3.8			Sn	Sn	03 10 49.0	-6.5
WRA	Warramunga Arr 1.2nm,0.4s,baz=51,slow=11,SNR=15	20.25	224	P	P	03 13 36.6	-0.6
ASAR	Alice Springs 0.9nm,0.6s,baz=55,slow=9.1,SNR=15	23.17	218	P	P	03 14 08.4	-0.1
FITZ	Fitzroy Crossi 0.8nm,0.5s,baz=90,slow=2.0,SNR=4.0	26.13	240	P	P	03 14 35.5	-0.7
JCJ	Chichijima comp=Z,189nm,19.3s,baz=332,slow=35	33.33	348	LR	LR	03 28 35.1	
ILAR	Eielson Array 0.2nm,0.6s,baz=258,slow=4.5,SNR=3.0	84.35	23	P	P	03 21 34.3	+0.4

IDC ***14*** *03:19:09.1±1.2, 3°.00S×129°.73E, h0^{km}, mb4.1/4, mb1 4.3/6, mb1mx3.9/36, mbtmp4.1/6, ML3.9/2, Error ellipse: s-maj=44.9km s-min=22.5km az=80.0*

NEIC ***14*** *03:19:14.1±0.6, 3°.00S±0°.09×129°.79E±0°.08, h35^{km}±2^{km}, mb4.2/7, Error ellipse: s-maj=14.9km s-min=12.5km az=201.0*

DJA ***14*** *03:19:14.8±1.2, 3˚S±3˚×13˚0E±˚, h26^{km}±12^{km}, M3.7/10, MLv3.7/10*

ISC 14 03:19:12.6±0.7**, 2°.88S**±0°.05×**129°.88E**±0°.05**, h25**^{km}**, n27,** σ**1ˢ.23**/29**, mb4.2**/7**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.06	244	P	Pn	03 19 31.4	-0.5
BNDI	Bandanaira	1.63	179	P	Pb	03 19 41.5	-0.6
BNDI				S	Sb	03 20 03.0	+0.7
AAI	Ambon	1.86	244	P	Pn	03 19 43.3	+0.3
AAI				S	Sn	03 20 06.4	+0.6
FAKI	Fak Fak	2.37	91	P	Pb	03 19 54.1	-0.5
FAKI				S	Sb	03 20 22.0	-1.4
FAKI	Fak Fak	2.37	91		Pn	03 19 51.7	+1.8
SIJI	Sorong 21nm,0.3s,baz=262,slow=22,SNR=32	2.43	35	Pn	Pb	03 19 53.4	-2.3
SIJI	 18nm,0.3s,baz=270,slow=20,SNR=11			Sn	Sn	03 20 20.8	+1.0
SWI	Sorong	2.43	35	P	Pb	03 19 55.0	-0.7
NLAI	Namlea	2.80	263	P	Pn	03 19 57.1	+1.3
SANI	Sanana	3.97	282	P	Pn	03 20 11.9	-0.1
RKPI	Ransiki, Papua	4.50	73	P	Pn	03 20 22.8	+3.5
LUWI	Luwuk	7.33	284	Pn	Pn	03 20 57.5	-0.7
EDFI	Ende, Flores	10.02	234	P	Pn	03 21 43.3	+8.1
KNRA	Kununurra	12.77	185		Pn	03 22 12.7	0.0
WB0	Warramunga Arr	17.36	166		Pn	03 23 12.7	-0.6
WRA	Warramunga Arr 0.4nm,0.3s,baz=348,slow=12,SNR=8.8	17.51	166	P	Pn	03 23 13.0	-2.3
KSM	Kuching	20.04	282	P	P	03 23 44.5	+0.4
KSM	 comp=Z,9.0nm,0.8s			IAmb	IAmb	03 23 46.3	
AS31	Alice Springs	21.03	170	P	P	03 23 53.7	-1.0
AS31	 comp=Z,6.2nm,0.8s			IAmb	IAmb	03 23 54.5	
ASAR	Alice Springs comp=Z,19nm,0.8s,baz=348,slow=10,SNR=152	21.03	170	P	P	03 23 53.6	-1.1
ASAR	Alice Springs	21.03	170	P	P	03 23 53.5	-1.3
SONM	Songino Array comp=Z,0.9nm,0.8s,baz=153,slow=8.3,SNR=4.9	54.53	341	P	P	03 28 39.1	+0.5
SONM	Songino Array comp=Z,1.9nm,1.2s	54.53	341	IAmb	IAmb	03 28 45.1	
MK31	Makanchi Array	64.75	326	P	P	03 29 49.5	+0.5
MK31	 comp=Z,5.6nm,1.9s			IAmb	IAmb	03 31 05.1	
MKAR	Makanchi Array comp=Z,0.7nm,0.5s,baz=114,slow=8.0,SNR=12	64.75	326	P	P	03 29 49.7	+0.7
ZALV	Zalesovo Beam comp=Z,1.1nm,0.5s,baz=120,slow=8.5,SNR=5.6	67.86	333	P	P	03 30 09.2	+0.5
KURK	Kurchatov	68.97	328	P	P	03 30 16.1	+0.3
BRVK	Borovoye	74.61	327	P	P	03 30 49.9	+0.3
BRVK	 comp=Z,3.3nm,1.0s			IAmb	IAmb	03 30 51.8	
ABKAR	Akbulak array	79.23	321	P	P	03 31 16.0	+0.3

IDC ***14*** *03:22:29.2±0.4, 3°.04S×129°.77E, h0^{km}, mb4.8/33, mb1 4.9/37, mb1mx4.8/48, mbtmp4.8/37, ML4.8/3, MS4.4/20, Ms1 4.4/20, ms1mx4.2/39, Error ellipse: s-maj=14.3km s-min=9.9km az=79.0*

BJI ***14*** *03:22:30.1±0.0, 3°.47S×130°.03E, h37^{km}, mB5.4/50, mb4.9/62, Ms4.9/32, Ms7 4.6/35*

MOS ***14*** *03:22:33.3±1.3, 3°.09S×129°.70E, h38^{km}, mb5.2/34, Error ellipse: s-maj=10.6km s-min=5.2km az=111.2*

GCMT ***14*** *03:22:34.2±0.2, 2°.91S±0°.01×129°.93E±0°.01, h19^{km}, MW5.2/112, Moment Tensor Solution. s98,c126; s112,c151; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.67±.17; $M_{\theta\theta}$-1.53±.12; $M_{\phi\phi}$-4.14±.12; $M_{r\theta}$-1.99±.29; $M_{\theta\phi}$2.93±.08; $M_{\phi r}$2.53±.26; Best double couple: $M_0$6.68300×10^{16} NP1:ϕ_s150.00000°, δ31.00000°, λ95.00000°. NP2:ϕ_s324.00000°, δ59.00000°, λ87.00000°. Principal axes: T 6.5030, Plg75.0000°, Azm226.0000°; N 0.3600, Plg2.0000°, Azm326.0000°; P -6.8630, Plg14.0000°, Azm56.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***14*** *03:22:34.2±1.3, 3°.00S±0°.05×129°.73E±0°.06, h27^{km}±3^{km}, mb5.1/103 Error ellipse: s-maj=8.1km s-min=7.9km az=84.0*

DJA ***14*** *03:22:35.4±0.2, 3˚S±2˚×13˚0E±˚, h46^{km}±4^{km}, M5.1/31, mB5.5/24, mb5.3/31, MLv5.2/16, Mw(mB)5.0/24, Mwp5.3/5*

KLM ***14*** *03:22:36.0, 3°.00S×129°.87E, h40^{km}, mb5.2*

ISC 14 03:22:33.5±0.2**, 3°.06S**±0°.03×**129°.82E**±0°.04**, h25**^{km}**, n348,** σ**1ˢ.65**/354**, mb5.1**/104**, MS4.5**/33**, 13C-13D, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.94	252	P	Pn	03 22 50.9	-0.2
BNDI	Bandanaira	1.46	177	P	Pb	03 23 00.3	+0.3
BNDI				S	Sb	03 23 21.5	+3.4
AAI	Ambon	1.74	249	P	Pn	03 23 03.2	+1.1
AAI				S	Sb	03 23 26.5	+0.3
FAKI	Fak Fak	2.43	87	P	Pn	03 23 12.0	+0.3
FAKI				S	Sb	03 23 42.6	-3.5
FAKI	Fak Fak	2.43	87		Pn	03 23 13.3	+1.6
SIJI	Sorong 156nm,0.3s,baz=217,slow=16,SNR=40	2.61	34	Pn	Pn	03 23 13.4	-0.7
SIJI	 156nm,0.3s,baz=236,slow=5.6,SNR=6.4			Sn	Sn	03 23 45.0	-0.1
SWI	Sorong	2.61	33	P	Pn	03 23 13.1	-1.0
NLAI	Namlea	2.72	266	P	Pn	03 23 16.9	+1.2
SANI	Sanana	3.96	285	P	Pn	03 23 31.2	-1.5
TNTI	Ternate	4.53	327	P	Pn	03 23 40.1	-0.4
TNTI	Ternate	4.53	327		Pn	03 23 41.0	+0.5
RKPI	Ransiki, Papua	4.62	71	P	Pn	03 23 42.8	+1.0
SAUI	Saumlaki 6.3nm21µm1µm,0.9s	5.11	163	P	Pn	03 23 51.7	+3.2
SAUI	Saumlaki	5.11	163		Pn	03 23 50.8	+2.3
BAKI	Biak 653nm,0.8s	6.55	74	P	Pn	03 24 09.4	+1.1
KMSI	Cibinong 3.1nm6µm349nm,0.5s	6.86	302	P	Pn	03 24 12.6	0.0
LUWI	Luwuk 2.0nm4µm325nm,0.6s	7.32	286	P	Pn	03 24 16.5	-2.4
LUWI	Luwuk	7.32	286		Pn	03 24 17.7	-1.2
BBSI	Bau Bau 0.4nm1µm90nm,1.1s	7.62	251	P	Pn	03 24 23.1	0.0
APSI	Ampana 5µm684nm,0.9s	8.44	284	P	Pn	03 24 34.0	-0.3
MRSI	Marisa 3µm236nm,1.2s	8.62	294	P	Pn	03 24 35.1	-1.7
MMRI	Maumere	9.36	233	Pn	Pn	03 24 47.6	+0.7
BNSI	Bone 2µm142nm,1.3s	9.78	262	P	Pn	03 24 54.3	+1.6
MTN	Manton Dam baz=9.9,SNR=21	9.81	172	P	Pn	03 24 54.2	+1.1
MTN	Manton Dam	9.81	172		Pn	03 24 53.8	+0.7
KDU	Kakadu baz=10.0,SNR=44	9.92	165	P	Pn	03 24 53.7	-0.9
BKSI	Bulukumba 5µm4µm199nm,0.7s	9.93	257	P	Pn	03 24 58.4	+3.7
SPSI	Sidrap Palu 3µm185nm,1.1s	10.07	265	P	Pn	03 24 58.2	+1.5
KAPI	Kappang 11nm,0.3s,baz=81,slow=4.8,SNR=15	10.23	259	Pn	Pn	03 25 02.4	+3.6
KAPI	 comp=Z,5µm,21.1s,baz=72,slow=42			LR	LR	03 29 36.2	
GENI	Genyem 5µm421nm,0.9s	10.35	88	P	Pn	03 25 01.4	+1.0
MPSI	Mapaga 106nm,1.1s	10.47	289	P	Pn	03 25 02.5	+0.3
I39PW	PALAU INFRASON baz=207,slow=316,SNR=1.1	11.53	24	i		04 38 00.0	
BASI	Baing, Sumba 3µm2µm192nm,0.8s	11.61	232	P	Pn	03 25 20.6	+2.8
WBSI	Waikabubak, Su 3µm291nm,1.2s	12.25	237	P	Pn	03 25 29.7	+3.1
KNRA	Kununurra baz=13,SNR=71	12.58	185	P	Pn	03 25 30.7	-0.3
KNRA	Kununurra	12.58	185		Pn	03 25 31.1	+0.1
BKB	Balikpapan	13.04	278	Pn	Pn	03 25 36.6	-0.7
PLAI	Plampang 4µm4µm197nm,1.2s	13.28	244	P	Pn	03 25 44.8	+4.2
SRBI	Singaraja 2µm101nm,0.8s	15.37	250	P	Pn	03 26 10.7	+1.8
FITZ	Fitzroy Crossi baz=16,SNR=21	15.50	195	P	Pn	03 26 09.3	-1.3
FITZ	Fitzroy Crossi 2.9nm,0.3s,baz=16,slow=0.2,SNR=41	15.50	195	Pn	Pn	03 26 08.9	-1.6
FITZ	 comp=Z,2µm,18.1s,baz=265,slow=45			LR	LR	03 34 03.8	
FITZ	Fitzroy Crossi	15.50	195		Pn	03 26 09.4	-1.2
IGBI	Denpasar 72nm,0.7s	15.67	248	P	Pn	03 26 15.0	+2.1
KKM	Kota Kinabalu	16.32	304		Pn	03 26 22.2	+0.9
JAGI	Jajag, Banyuwa 2µm121nm,0.7s	16.48	250	P	Pn	03 26 23.9	+0.6
JAGI	Jajag, Banyuwa	16.48	250	P	Pn	03 26 24.2	+0.9
JAGI	 comp=Z,88nm,0.7s			IAmb	IAmb	03 26 43.3	
COEN	Coen baz=17,SNR=20	17.07	130	P	Pn	03 26 30.7	+0.2
COEN	Coen	17.07	130		Pn	03 26 30.8	+0.2
COEN	 comp=Z,102nm,0.7s			IAmb	IAmb	03 26 45.6	
WB0	Warramunga Arr	17.20	165		P	03 26 33.8	+0.1
WB0	 comp=Z,165nm,1.1s			IAmb	IAmb	03 26 36.0	
WRAB	Tennant Creek	17.35	166	⇓eP	Pn	03 26 32.1	-2.0
WRAB	 comp=Z,134nm,1.3s			pmax	pmax		
WRAB	Tennant Creek	17.35	166	P	Pn	03 26 34.3	+0.2
WRAB	 comp=Z,121nm,0.8s			IAmb	IAmb	03 26 50.6	
WRA	Warramunga Arr comp=Z,3.6nm,0.3s,baz=346,slow=13,SNR=34	17.35	166	P	Pn	03 26 31.9	-2.2
WRA	 comp=Z,2.3nm,0.3s,baz=343,slow=22,SNR=4.0			S	Sn	03 29 38.8	-7.9
WRA	Warramunga Arr	17.35	166	i P	Pn	03 26 31.7	-2.5
WRA	 comp=Z,27nm,0.5s			pmax	pmax		
WRA	Warramunga Arr	17.35	166	Pn	Pn	03 26 33.0	-1.2
WB2	Warramunga Arr	17.36	166	Pn	Pn	03 26 32.9	-1.3
WB2	 comp=Z,180nm,1.1s			IAmb	IAmb	03 26 51.2	
MANU	Manus Island	17.56	87	P	P	03 26 40.4	+2.7
PMG	Port Moresby comp=Z,1.2nm,0.3s,baz=267,slow=11,SNR=9.7	18.35	111	P	Pn	03 26 47.4	+1.0
PMG	Port Moresby	18.35	111	P	Pn	03 26 47.6	+1.2
PMG	 comp=Z,83nm,1.0s			pmax	pmax		
PMG	Port Moresby	18.35	111	P	Pn	03 26 47.6	+1.2
SBUM	Sibu	18.42	287	P	P	03 26 45.8	-1.4
PWJI	Pagerwojo comp=Z,1µmcomp=Z,136nm,0.8s	18.59	254	P	P	03 26 49.2	+0.1
TGY	Tagaytay City comp=Z,601nm,21.4s,baz=173,slow=39	19.19	333	LR	LR	03 35 00.0	
PCJI	Pacitan comp=Z,108nm,0.7s	19.24	254	P	Pn	03 26 58.2	+1.0
WOJI	Wonogiri, Jawa comp=Z,107nm,0.9s	19.40	255	P	Pn	03 26 59.6	+0.5
SMRI	Semarang	19.70	258	P	P	03 26 59.8	-1.5
UGM	Wanagama	19.80	255	P	Pn	03 27 04.5	+0.5
UGM	 comp=Z,143nm,0.9s			IAmb	IAmb	03 27 22.2	
QIS	Mount Isa baz=20,SNR=200	19.84	152	P	P	03 27 02.5	-0.2
KSM	Kuching	20.02	283	P	P	03 27 04.6	-0.1
KSM	 comp=Z,73nm,0.9s			IAmb	IAmb	03 27 10.5	
KSM	Kuching	20.02	283	P	Pn	03 27 06.0	-0.5
PSA00	Pilbara Seismi	20.80	207	P	P	03 27 11.6	-1.6
PSA00	Pilbara Seismi	20.80	207	P	P	03 27 12.3	-0.8
PSA00	 comp=Z,86nm,0.7s			IAmb	IAmb	03 27 17.6	
AS31	Alice Springs	20.86	169	P	P	03 27 13.8	0.0
ASAR	Alice Springs comp=Z,303nm,0.8s,baz=349,slow=10,SNR=362	20.87	169	P	P	03 27 13.6	-0.3
ASAR	 comp=Z,20nm,0.8s,baz=352,slow=25,SNR=4.9			S	S	03 31 04.9	-0.7
ASAR	Alice Springs	20.87	169	P	P	03 27 14.0	+0.2
ASAR	Alice Springs	20.87	169	P	P	03 27 14.0	+0.2
KPJI	Karang Pucung comp=Z,4µmcomp=Z,112nm,0.7s	21.23	258	P	P	03 27 17.1	-0.7
WRKA	Warakurna baz=22,SNR=382	21.90	184	P	P	03 27 23.8	-1.2
KRVT	Keravat (AS076 comp=Z,42nm,0.5s,baz=294,slow=20,SNR=3.2	22.20	94	P	P	03 27 27.5	-0.7
KRVT	 comp=Z,2µm,19.1s,baz=281,slow=38			LR	LR	03 36 29.7	
GUMO	Guam comp=Z,355nm,19.4s,baz=246,slow=37	22.28	42	LR	LR	03 36 07.1	
CISI	Cisompet, Garu comp=Z,220nm,0.7s	22.36	258	P	P	03 27 27.1	-2.9
CISI	Cisompet, Garu	22.36	258	P	P	03 27 27.4	-2.6
LEM	Lembang comp=Z,56nm,0.7s,baz=123,slow=12,SNR=7.5	22.43	260	P	P	03 27 29.4	-1.6
LEM	 comp=Z,5µm,20.4s,baz=68,slow=40			LR	LR	03 37 34.8	
LEM	Lembang comp=Z,40nm,0.9s	22.43	260	P	P	03 27 30.8	-0.1
CNJI	Cibinong comp=Z,2µmcomp=Z,214nm,1.0s	22.98	259	P	P	03 27 32.8	-3.8
CTA	Charters Tower comp=Z,56nm,1.0s,baz=319,slow=13,SNR=29	23.32	138	P	P	03 27 40.6	+0.8
GIRL	Giralia baz=25,SNR=4.0	24.65	217	P	P	03 27 52.2	-0.1
KASI	Kota Agung	25.37	264	P	P	03 27 57.3	-1.7
MEEK	Meekatharra baz=26,SNR=20	25.79	204	P	P	03 28 02.6	-0.1
MYKOM	Kota Tinggi	26.40	280	P	P	03 28 08.6	+0.2
MYKOM	 comp=Z,56nm,0.9s			IAmb	IAmb	03 28 22.8	
QLP	Quilpie baz=27,SNR=6.9	27.17	151	P	P	03 28 15.5	+0.4
FORT	Forrest baz=28,SNR=19	27.62	183	P	P	03 28 19.9	+0.8
BKNI	Bangkinang	28.96	276	P	P	03 28 31.2	-0.2
QIZ	Qiongzhong	29.46	319	P	P	03 28 35.9	+0.2
QIZ				S	S	03 33 29.9	+1.2
QIZ	 comp=Z,390nm,13.0s			LR	LR		
QIZ	 comp=Z,310nm,8.7s			LR	LR		

QIZ				LR	LR		
	comp=Z,440nm,20.2s						
RMQ	**Roma**	**29.54**	**144**	P	**P**	**03 28 36.2**	**-0.1**
	baz=30,SNR=7.0						
IPM	**Ipoh**	**29.73**	**284**	P	**P**	**03 28 38.2**	**+0.1**
IPM				IAmb	IAmb	03 28 47.0	
	comp=Z,46nm,0.9s						
BBOO	**Buckleboo**	**30.17**	**170**	P	**P**	**03 28 41.7**	**-0.1**
	baz=30,SNR=17						
EIDS	**Eidsvold**	**30.18**	**139**	P	**P**	**03 28 41.7**	**-0.2**
	baz=30,SNR=3.9						
KULM	**Kulim**	**30.30**	**286**	IAmb	IAmb	03 28 53.0	
	comp=Z,49nm,1.4s						
KULM	**Kulim**	**30.30**	**286**	P	**P**	**03 28 46.0**	**+2.9**
KLBR	**Kellerberrin**	**30.57**	**201**	P	**P**	**03 28 43.9**	**-1.4**
	baz=31,SNR=10						
STKA	**Stephens Creek**	**30.74**	**160**	P	**P**	**03 28 46.1**	**-0.7**
	baz=31,SNR=24						
STKA	**Stephens Creek**	**30.74**	**160**	P	**P**	**03 28 46.2**	**-0.5**
	comp=Z,18nm,0.6s,baz=334,slow=9.1,SNR=32						
STKA	**Stephens Creek**	**30.74**	**160**	P	**P**	**03 28 47.0**	**+0.2**
STKA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
STKA	**Stephens Creek**	**30.74**	**160**	P	**P**	**03 28 47.0**	**+0.2**
HTT	**Hallett**	**31.39**	**165**	P	**P**	**03 28 52.8**	**+0.2**
	baz=32,SNR=6.3						
RPSI	**Rantau Prapat**	**31.41**	**280**	IAmb	IAmb	03 29 21.6	
	comp=Z,27nm,0.9s						
PSI	**Prapat**	**31.43**	**280**	P	**P**	**03 28 52.0**	**-1.2**
	comp=Z,23nm,0.9s,baz=86,slow=6.4,SNR=12						
NWAO	**Narrogin (SRO)**	**31.97**	**200**	P	**P**	**03 28 57.8**	**+0.1**
	baz=32,SNR=4.1						
NWAO	**Narrogin (SRO)**	**31.97**	**200**	P	**P**	**03 28 56.7**	**-1.0**
	comp=Z,7.2nm,0.5s,baz=39,slow=7.2,SNR=7.7						
NWAO	**Narrogin (SRO)**	**31.97**	**200**	IAmb	IAmb	03 29 55.7	
	comp=Z,34nm,1.0s						
CMSA	**Cobar Meteorol**	**32.03**	**154**	P	**P**	**03 28 59.2**	**+0.9**
	baz=32,SNR=15						
ARMA	**Armidale**	**34.15**	**145**	P	**P**	**03 29 16.5**	**-0.4**
	baz=34,SNR=9.7						
ARMA	**Armidale**	**34.15**	**145**	P	**P**	**03 29 18.6**	**+1.7**
PBKT	**Sadao Pong**	**34.53**	**305**	P	**P**	**03 29 19.5**	**-0.7**
SLVN	**Son La**	**35.09**	**315**	P	**P**	**03 29 25.2**	**+0.1**
SLVN				IAmb	IAmb	03 29 44.6	
	comp=Z,23nm,1.1s						
YNG	**Young**	**35.58**	**153**	P	**P**	**03 29 28.9**	**-0.1**
	baz=36,SNR=9.6						
NJ2	**Nanjing**	**36.44**	**344**	*e*P	**P**	**03 29 37.1**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
WHN	**Wuhan**	**36.53**	**337**	⇓P	**P**	**03 29 41.1**	**+3.9**
WHN				LR	LR		
	comp=Z,1μm,18.3s						
CAN	**Canberra**	**36.70**	**153**	P	**P**	**03 29 39.9**	**+1.2**
CAN				pmax	pmax		
	comp=Z,21nm,0.7s						
CAN	**Canberra**	**36.70**	**153**	P	**P**	**03 29 39.9**	**+1.2**
CAN				IAmb	IAmb	03 29 49.7	
	comp=Z,21nm,0.7s						
GYA	**Guiyang**	**36.91**	**324**	⇑*i*P	**P**	**03 29 41.8**	**+1.2**
GYA				pP	sP	03 29 53.8	+2.6
GYA				PP	**PnPn**	**03 31 10.3**	**+5.1**
GYA				PcP	**PcP**	**03 32 03.9**	**+1.9**
GYA				S	**S**	**03 35 22.9**	**-1.4**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,190nm,4.6s						
GYA				LR	LR		
	comp=Z,270nm,17.1s						
GYA				LR	LR		
	comp=Z,180nm,18.0s						
GYA				LR	LR		
	comp=Z,180nm,17.7s						
CMAR	**Chiang Mai Arr**	**37.17**	**306**	P	**P**	**03 29 42.9**	**+0.1**
	comp=Z,12nm,0.9s,baz=140,slow=8.2,SNR=25						
CMAR				PcP	**PcP**	**03 32 04.3**	**+1.5**
	comp=Z,1.9nm,0.3s,baz=168,slow=1.9,SNR=4.1						
CMAR				LR	LR	03 46 21.4	
	comp=Z,273nm,21.4s,baz=130,slow=39						
CMAR	**Chiang Mai Arr**	**37.17**	**306**	*ce*P	**P**	**03 29 43.2**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,12nm,0.9s						
CMAR	**Chiang Mai Arr**	**37.17**	**306**	P	**P**	**03 29 42.5**	**-0.3**
TOO	**Toolangi**	**37.24**	**159**	P	**P**	**03 29 43.6**	**+0.3**
	baz=37,SNR=6.9						
TOO	**Toolangi**	**37.24**	**159**	P	**P**	**03 29 44.5**	**+1.3**
TOO				pmax	pmax		
	comp=Z,42nm,0.9s						
TOO	**Toolangi**	**37.24**	**159**	P	**P**	**03 29 44.5**	**+1.3**
TOO				IAmb	IAmb	03 29 52.8	
	comp=Z,42nm,0.9s						
CHTO	**Chiang Mai**	**37.36**	**307**	P	**P**	**03 29 44.2**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,67nm,1.3s						
CHTO	**Chiang Mai**	**37.36**	**307**	P	**P**	**03 29 44.2**	**-0.2**
KMI	**Kunming**	**38.41**	**318**	P	**P**	**03 29 55.0**	**+1.5**
KMI				pmax	pmax		
	comp=Z,11nm,0.6s						
KMI				pmax	pmax		
	comp=Z,140nm,3.8s						
KMI				LR	LR		
	comp=Z,200nm,10.4s						
KMI				LR	LR		
	comp=Z,310nm,14.8s						
KMI				LR	LR		
	comp=Z,390nm,18.7s						
MAJO	**Matsushiro**	**40.16**	**10**	⇑*e*P	**P**	**03 30 06.2**	**-1.5**
MAJO				pmax	pmax		
	comp=Z,21nm,0.9s						
MAJO	**Matsushiro**	**40.16**	**10**	P	**P**	**03 30 07.0**	**-0.8**
MAT	**Matsushiro**	**40.16**	**10**	P	**P**	**03 30 06.1**	**-1.6**
MJAR	**Matsushiro Arr**	**40.16**	**10**	P	**P**	**03 30 05.9**	**-1.8**
	comp=Z,12nm,0.8s,baz=182,slow=8.9,SNR=14						
MJAR	**Matsushiro Arr**	**40.16**	**10**	P	**P**	**03 30 06.2**	**-1.5**
MJAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MJAR	**Matsushiro Arr**	**40.16**	**10**	P	**P**	**03 30 06.2**	**-1.5**
DZM	**Mont Dzumac**	**40.25**	**121**	*e*P	**P**	**03 30 10.3**	**+1.5**
	comp=Z,104nm,1.5s						
DZM	**Mont Dzumac**	**40.25**	**121**	*e*LR	LR	03 41 26.2	
	comp=Z,900nm,23.0s						
DZM	**Mont Dzumac**	**40.25**	**121**	P	**P**	**03 30 10.7**	**+1.9**
KSAR	**Wonju Array Be**	**40.33**	**358**	P	**P**	**03 30 08.3**	**-0.7**
KSAR	**Wonju Array Be**	**40.33**	**358**	P	**P**	**03 30 08.3**	**-0.7**
KSRS	**Korea Array**	**40.34**	**358**	P	**P**	**03 30 08.6**	**-0.6**
	comp=Z,2.3nm,0.8s,baz=178,slow=11,SNR=8.1						
KSRS				LR	LR	03 45 53.6	
	comp=Z,370nm,20.0s,baz=178,slow=35						
XAN	**Xi'an**	**41.83**	**334**	P	**P**	**03 30 22.0**	**+0.5**
XAN				pP	sP	03 30 34.3	+2.1
XAN				sP	pP	03 30 39.8	+11
XAN				pmax	pmax		
	comp=Z,12nm,1.0s						
XAN				pmax	pmax		
	comp=Z,210nm,4.1s						
XAN				LR	LR		
	comp=Z,390nm,19.3s						
XAN	**Xi'an**	**41.83**	**334**	P	**P**	**03 30 21.1**	**-0.4**
XAN				pmax	pmax		
	comp=Z,13nm,0.9s						
XAN	**Xi'an**	**41.83**	**334**	P	**P**	**03 30 21.1**	**-0.4**
CD2	**Chengdu**	**41.93**	**326**	P	**P**	**03 30 22.5**	**+0.1**
CD2				sP	sP	03 30 37.0	+3.9
CD2				PP	**PnPn**	**03 32 06.1**	**+1.2**
CD2				S	**S**	**03 36 33.3**	**-6.3**
CD2				sS	sS	03 36 57.8	+5.8
CD2				SS	**SS**	**03 39 48.0**	**+1.1**
CD2				pmax	pmax		
	comp=Z,20nm,1.1s						
CD2				pmax	pmax		
	comp=Z,330nm,4.9s						
CD2				LR	LR		
	comp=Z,720nm,18.4s						
BJT	**Baijiatuau**	**44.66**	**345**	P	**P**	**03 30 44.3**	**+0.1**
BJT				pmax	pmax		
	comp=Z,14nm,0.8s						
BJT	**Baijiatuau**	**44.66**	**345**	P	**P**	**03 30 44.3**	**+0.1**
BJI	**Beijing**	**44.68**	**345**	P	**P**	**03 30 45.1**	**+0.8**
BJI				pmax	pmax		
	comp=Z,15nm,0.9s						
MSHR	**Mys Shultsa**	**45.44**	**1**	⇓*e*P	**P**	**03 30 52.2**	**+1.8**
LZH	**Lanzhou**	**45.89**	**330**	⇓P	**P**	**03 30 58.1**	**+3.9**
LZH				sP	sP	03 31 12.0	+7.1
LZH				PP	**PP**	**03 32 46.8**	**+4.7**
LZH				*e*S	**S**	**03 37 40.3**	**+2.9**
LZH				sS	sS	03 37 59.3	+10
LZH				SS	**SS**	**03 40 56.3**	**-6.1**
LZH				pmax	pmax		
	comp=Z,42nm,1.3s						
LZH				pmax	pmax		
	comp=Z,180nm,7.0s						
LZH				LR	LR		
	comp=Z,580nm,14.0s						
LZH				LR	LR		
	comp=Z,650nm,13.6s						
LZH				LR	LR		
	comp=Z,750nm,17.0s						
SHL	**Shillong**	**46.48**	**310**	P	**P**	**03 30 58.2**	**-0.9**
SHL				pmax	pmax		
	comp=Z,21nm,0.8s						
SHL	**Shillong**	**46.48**	**310**	P	**P**	**03 30 58.2**	**-0.9**
SHL				IAmb	IAmb	03 31 23.7	
	comp=Z,21nm,0.8s						
HHC	**Hu-ho-hao-te**	**46.77**	**341**	*e*P	**P**	**03 31 04.3**	**+3.2**
HHC				pP	sP	03 31 15.0	+3.2
HHC				sP	pP	03 31 20.1	+11
HHC				PP	**PP**	**03 32 49.6**	**-1.8**
HHC				S	**S**	**03 37 56.1**	**+6.3**
HHC				pmax	pmax		
	comp=Z,85nm,1.0s						
HHC				pmax	pmax		
	comp=Z,320nm,5.0s						
HHC				LR	LR		
	comp=Z,730nm,15.5s						
HHC				LR	LR		
	comp=Z,550nm,14.2s						
HHC				LR	LR		
	comp=Z,760nm,15.3s						
CN2	**Changchun**	**46.81**	**356**	*e*P	**P**	**03 31 00.8**	**-0.4**
CN2				*e*S	**S**	**03 37 49.3**	**-0.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,300nm,6.0s						
CN2				LR	LR		
	comp=Z,580nm,17.0s						
CN2				LR	LR		
	comp=Z,380nm,17.0s						
CN2				LR	LR		
	comp=Z,690nm,18.0s						
USRK	**Ussuriysk Ar.**	**47.08**	**2**	P	**P**	**03 31 02.1**	**-1.2**
	comp=Z,3.6nm,0.6s,baz=201,slow=6.2,SNR=11						
USRK				LR	LR	03 51 47.2	
	comp=Z,375nm,19.0s,baz=158,slow=37						
USRK	**Ussuriysk Ar.**	**47.08**	**2**	P	**P**	**03 31 03.4**	**+0.1**
MDJ	**Mudanjiang**	**47.46**	**360**	P	**P**	**03 31 06.2**	**0.0**
LSA	**Lhasa**	**49.29**	**314**	P	**P**	**03 31 21.2**	**0.0**
LSA				pmax	pmax		
	comp=Z,11nm,0.7s						
LSA	**Lhasa**	**49.29**	**314**	P	**P**	**03 31 21.2**	**0.0**
LSA				IAmb	IAmb	03 31 45.5	
	comp=Z,11nm,0.7s						
GTA	**Gaotai**	**50.47**	**330**	⇑P	**P**	**03 31 29.4**	**-0.2**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,390nm,7.0s						
GTA				LR	LR		
	comp=Z,320nm,17.1s						
GTA				LR	LR		
	comp=Z,350nm,16.5s						
GTA				LR	LR		
	comp=Z,350nm,15.9s						
TAPN	**Taplejung**	**50.60**	**309**	*e*P	**P**	**03 31 29.7**	**-1.3**
	comp=Z,49nm,0.9s						
ODAN	**Odare**	**50.61**	**309**	*e*P	**P**	**03 31 30.5**	**-0.5**
	comp=Z,65nm,0.8s						
YSS	**Yuzh-Sakhalins**	**51.09**	**11**	*e*P	**P**	**03 31 33.4**	**-0.5**
YSS				*e*		03 31 46.7	
YSS				*e*		03 39 03.8	
RAMN	**Ramite**	**51.27**	**308**	*e*P	**P**	**03 31 34.9**	**-1.0**
	comp=Z,104nm,1.0s						
JIRN	**Jiri**	**51.93**	**309**	*e*P	**P**	**03 31 40.2**	**-0.8**
	comp=Z,37nm,0.6s						
KLR	**Kul'dur**	**52.10**	**2**	⇓*e*P	**P**	**03 31 42.2**	**+0.7**
KLR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GUN	**Gumba**	**52.29**	**309**	*e*P	**P**	**03 31 42.2**	**-1.5**
PKI	**Pulchoki**	**52.49**	**308**	*e*P	**P**	**03 31 42.7**	**-2.5**
	comp=Z,39nm,1.0s						
DMN	**Daman**	**52.75**	**308**	*e*P	**P**	**03 31 44.9**	**-2.1**
GKN	**Gorkha**	**53.30**	**309**	*e*P	**P**	**03 31 48.9**	**-2.0**
GRNR	**Gornyy**	**53.91**	**5**	*e*P	**P**	**03 31 56.4**	**+1.6**
GRNR				MLR	MLR		
	comp=Z,230nm,17.0s						
HIZ	**Hauiti**	**54.09**	**137**	IAmb	IAmb	03 32 14.2	
	comp=Z,36nm,1.1s						
DANN	**Dangsing**	**54.15**	**308**	*e*P	**P**	**03 31 55.5**	**-1.8**
	comp=Z,50nm,0.7s						
LBZ	**Lake Benmore**	**54.38**	**145**	P	**P**	**03 31 59.5**	**+1.1**
LBZ				IAmb	IAmb	03 32 08.1	
	comp=Z,23nm,0.8s						
RPZ	**Rata Peaks**	**54.48**	**144**	LR	LR	03 54 48.2	
	comp=Z,189nm,21.6s,baz=300,slow=36						
ULN	**Ulaanbaatar**	**54.49**	**341**	P	**P**	**03 31 59.1**	**-0.1**
ULN				pmax	pmax		
	comp=Z,17nm,0.8s						
ULN	**Ulaanbaatar**	**54.49**	**341**	P	**P**	**03 31 59.1**	**-0.1**
ULN				IAmb	IAmb	03 32 06.9	
	comp=Z,17nm,0.8s						
THZ	**Tophouse**	**54.49**	**141**	IAmb	IAmb	03 32 09.6	
	comp=Z,16nm,0.7s						
HYB	**Hyderabad**	**54.50**	**294**	*i* P	**P**	**03 31 59.0**	**-0.7**
SONM	**Songino Array**	**54.68**	**341**	P	**P**	**03 32 00.1**	**-0.5**
	comp=Z,5.7nm,0.9s,baz=150,slow=8.1,SNR=18						
SONM	**Songino Array**	**54.68**	**341**	P	**P**	**03 32 00.2**	**-0.4**
SONM				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SONM	**Songino Array**	**54.68**	**341**	P	**P**	**03 32 00.2**	**-0.4**
KHZ	**Kahutara**	**55.25**	**141**	IAmb	IAmb	03 32 19.5	
	comp=Z,29nm,1.0s						
URZ	**Urewera**	**55.54**	**135**	P	**P**	**03 32 08.4**	**+1.6**
URZ				IAmb	IAmb	03 32 21.5	
	comp=Z,18nm,0.8s						
ZEA	**Zeya**	**56.63**	**358**	*e*P	**P**	**03 32 17.8**	**+3.5**
ZEA				pmax	pmax		
	comp=Z,18nm,1.2s						
ZAK	**Zakamensk**	**57.91**	**340**	*e*P	**P**	**03 32 22.8**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TLY	**Talaya**	**58.90**	**341**	P	**P**	**03 32 31.2**	**+0.9**
	comp=Z,2.9nm,0.7s,baz=192,slow=11,SNR=7.8						
TLY	**Talaya**	**58.90**	**341**	⇓*e*P	**P**	**03 32 31.8**	**+1.4**
TLY				pmax	pmax		
	comp=Z,11nm,1.0s						
TLY	**Talaya**	**58.90**	**341**	P	**P**	**03 32 30.3**	**-0.1**
MOY	**Mondy**	**59.77**	**340**	*e*P	**P**	**03 32 36.8**	**+0.3**
MOY				pmax	pmax		
	comp=Z,64nm,2.4s						
WMQ	**Urumqi**	**60.03**	**326**	*e*P	**P**	**03 32 39.9**	**+1.5**
WMQ				pP	sP	03 32 50.0	+0.8
WMQ				pmax	pmax		
	comp=Z,14nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,350nm,6.5s						
WMQ				LR	LR		
	comp=Z,320nm,21.3s						
WMQ				LR	LR		
	comp=Z,330nm,22.3s						
WMQ	**Urumqi**	**60.03**	**326**	P	**P**	**03 32 38.4**	**0.0**
WMQ				pmax	pmax		
	comp=Z,15nm,0.6s						
WMQ	**Urumqi**	**60.03**	**326**	P	**P**	**03 32 38.4**	**0.0**
PEA0B	**Petropavlovsk-**	**60.67**	**19**	⇓*e*P	**P**	**03 32 45.6**	**+3.1**
PETK	**Petropavlovsk-**	**60.67**	**19**	P	**P**	**03 32 42.9**	**+0.4**
	comp=Z,17nm,0.8s,baz=182,slow=4.5,SNR=17						
PETK				LR	LR	03 55 43.6	
	comp=Z,146nm,21.8s,baz=234,slow=33						
PET	**Petropavlovsk**	**60.91**	**19**	*e*P	**P**	**03 32 45.8**	**+1.7**
PET				*e*S	**S**	**03 41 00.3**	**-0.1**
PET				pmax	pmax		
	comp=Z,21nm,0.7s						
PET	**Petropavlovsk**	**60.91**	**19**	P	**P**	**03 32 45.0**	**+0.9**
PET				IAmb	IAmb	03 32 53.5	
	comp=Z,26nm,1.1s						
BOD	**Bodaibo**	**62.00**	**350**	*e*P	**P**	**03 32 51.7**	**+0.3**
BOD				pmax	pmax		
	comp=Z,17nm,1.8s						
CASY	**Casey**	**64.55**	**189**	P	**P**	**03 33 08.8**	**+0.6**
NIL	**Nilore**	**64.55**	**310**	P	**P**	**03 33 08.3**	**-0.6**
NIL				pmax	pmax		
	comp=Z,14nm,0.6s						
NIL	**Nilore**	**64.55**	**310**	P	**P**	**03 33 08.3**	**-0.6**
NIL				IAmb	IAmb	03 33 28.5	
	comp=Z,14nm,0.6s						
MA2	**Magadan**	**64.59**	**12**	P	**P**	**03 33 09.2**	**+0.6**
	comp=Z,6.9nm,0.6s,baz=297,slow=18						
MA2	**Magadan**	**64.59**	**12**	⇑*e*P	**P**	**03 33 09.9**	**+1.4**
MA2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MA2	**Magadan**	**64.59**	**12**	P	**P**	**03 33 08.8**	**+0.3**
MA2				IAmb	IAmb	03 33 18.4	
	comp=Z,15nm,0.9s						
PRZ	**Przheval'sk**	**64.85**	**320**	P	**P**	**03 33 10.0**	**-0.8**
PRZ				pmax	pmax		
	comp=Z,28nm,1.2s						
PRZ	**Przheval'sk**	**64.85**	**320**	P	**P**	**03 33 10.0**	**-0.8**
PRZ				IAmb	IAmb	03 33 39.2	
	comp=Z,28nm,1.2s						
MK31	**Makanchi Array**	**64.86**	**326**	P	**P**	**03 33 09.5**	**-1.1**
MK31				pmax	pmax		
	comp=Z,11nm,1.0s						
MK31	**Makanchi Array**	**64.86**	**326**	P	**P**	**03 33 09.5**	**-1.1**
MKAR	**Makanchi Array**	**64.86**	**326**	P	**P**	**03 33 09.5**	**-1.1**
	comp=Z,3.3nm,0.4s,baz=115,slow=8.0,SNR=88						
MKAR				LR	LR	04 02 57.9	
	comp=Z,187nm,19.7s,baz=134,slow=38						
YAK	**Yakutsk**	**64.91**	**360**	P	**P**	**03 33 09.9**	**-0.5**
	comp=Z,13nm,0.4s,baz=125,slow=1.6,SNR=7.2						
YAK	**Yakutsk**	**64.91**	**360**	*e*P	**P**	**03 33 11.1**	**+0.6**
YAK				pmax	pmax		
	comp=Z,42nm,0.9s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,11nm,0.9s						
YAK	**Yakutsk**	**64.91**	**360**	P	**P**	**03 33 10.3**	**-0.2**
KSH	**Kashi**	**65.03**	**316**	P	**P**	**03 33 14.0**	**+2.0**
KSH				sP	sP	03 33 28.4	+5.5
KSH				PcP	**PcP**	**03 33 47.5**	**+2.7**
KSH				PcS		03 37 47.5	
KSH				S	**S**	**03 41 51.4**	**-1.6**
KSH				SS	**SS**	**03 46 06.6**	**+1.1**
KSH				pmax	pmax		
	comp=N,24nm,1.0s						
KSH				pmax	pmax		
	comp=N,920nm,8.9s						
KSH				LR	LR		
	comp=N,670nm,12.1s						
KSH				LR	LR		
	comp=N,390nm,11.3s						
KSH				LR	LR		
	comp=N,140nm,10.6s						
MAKZ	**Makanchi**	**65.05**	**326**	P	**P**	**03 33 10.7**	**-1.1**
MAKZ				pmax	pmax		
	comp=Z,19nm,1.2s						
MAKZ	**Makanchi**	**65.05**	**326**	P	**P**	**03 33 10.7**	**-1.1**
MAKZ				IAmb	IAmb	03 33 20.1	
	comp=Z,19nm,1.1s						
KDJ	**Kajisay**	**65.46**	**319**	P	**P**	**03 33 14.4**	**-0.4**
KDJ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KDJ	**Kajisay**	**65.46**	**319**	P	**P**	**03 33 14.4**	**-0.4**
BOOM	**Boomskoye usch**	**66.44**	**319**	P	**P**	**03 33 21.0**	**-0.1**
BOOM				pmax	pmax		
	comp=Z,34nm,1.7s						
BOOM	**Boomskoye usch**	**66.44**	**319**	P	**P**	**03 33 21.0**	**-0.1**
BOOM				IAmb	IAmb	03 34 08.3	
	comp=Z,34nm,1.6s						
AAK	**Ala-Archa**	**67.45**	**319**	P	**P**	**03 33 27.7**	**+0.2**
	comp=Z,3.9nm,0.8s,baz=129,slow=6.5,SNR=2.3						
AAK	**Ala-Archa**	**67.45**	**319**	⇓*e*P	**P**	**03 33 27.9**	**+0.4**
AAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
AAK	**Ala-Archa**	**67.45**	**319**	P	**P**	**03 33 27.4**	**-0.1**
ARSB	**Arslanbob**	**67.88**	**317**	IAmb	IAmb	03 33 46.3	
	comp=Z,23nm,1.1s						
SEY	**Seymchan**	**67.99**	**11**	P	**P**	**03 33 29.6**	**-0.7**
	comp=Z,13nm,0.8s,baz=198,slow=13,SNR=4.9						
SEY	**Seymchan**	**67.99**	**11**	⇓*e*P	**P**	**03 33 29.8**	**-0.4**
ZAA0	**Zalesovo Array**	**68.00**	**333**	P	**P**	**03 33 29.2**	**-1.3**
ZAA0				IAmb	IAmb	03 33 39.8	
	comp=Z,24nm,1.0s						
ZALV	**Zalesovo Beam**	**68.00**	**333**	P	**P**	**03 33 28.8**	**-1.7**
	comp=Z,17nm,0.9s,baz=114,slow=4.9,SNR=23						
ZALV				LR	LR	04 04 35.8	
	comp=Z,149nm,18.3s,baz=135,slow=37						
ZALV	**Zalesovo Beam**	**68.00**	**333**	P	**P**	**03 33 29.0**	**-1.4**
ZALV	**Zalesovo Beam**	**68.00**	**333**	P	**P**	**03 33 29.0**	**-1.4**
KBL	**Kabul**	**68.13**	**309**	P	**P**	**03 33 31.4**	**-0.6**
KBL				pmax	pmax		
	comp=Z,11nm,0.9s						
KBL	**Kabul**	**68.13**	**309**	P	**P**	**03 33 31.4**	**-0.6**
KBL				IAmb	IAmb	03 33 57.2	
	comp=Z,11nm,0.8s						
BTK	**Batken**	**68.85**	**315**	IAmb	IAmb	03 33 50.7	
	comp=Z,39nm,1.8s						
KURBB	**Kurchatov Arra**	**69.09**	**328**	P	**P**	**03 33 36.4**	**-0.9**
	comp=Z,16nm,0.5s,baz=127,slow=5.8,SNR=108						
KURBB	**Kurchatov Arra**	**69.09**	**328**	P	**P**	**03 33 34.9**	**-2.4**
KURK	**Kurchatov**	**69.09**	**328**	*ce*P	**P**	**03 33 36.4**	**-0.9**
KURK				pmax	pmax		
	comp=Z,44nm,0.8s						
KURK	**Kurchatov**	**69.09**	**328**	P	**P**	**03 33 36.4**	**-0.9**
CHGR	**Chuyangaron**	**69.50**	**313**	IAmb	IAmb	03 33 56.3	
	comp=Z,24nm,1.1s						
KK31	**Karatay Array**	**70.29**	**318**	P	**P**	**03 33 44.4**	**-0.6**
KK31				pmax	pmax		
	comp=Z,20nm,1.5s						
KK31	**Karatay Array**	**70.29**	**318**	P	**P**	**03 33 44.4**	**-0.6**
KK31				IAmb	IAmb	03 34 00.8	
	comp=Z,20nm,1.5s						
KKAR	**Karatay Array**	**70.29**	**318**	P	**P**	**03 33 43.8**	**-1.2**
KKAR	**Karatay Array**	**70.29**	**318**	P	**P**	**03 33 43.8**	**-1.2**
HRA	**Herat**	**73.43**	**307**	P	**P**	**03 34 03.7**	**-0.6**
TIXI	**Tiksi**	**74.57**	**360**	P	**P**	**03 34 08.5**	**-1.4**
	comp=Z,6.3nm,0.7s,baz=150,slow=3.3,SNR=8.6						
TIXI	**Tiksi**	**74.57**	**360**	⇑*e*P	**P**	**03 34 08.6**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
TIXI	**Tiksi**	**74.57**	**360**	P	**P**	**03 34 08.7**	**-1.2**
BVAR	**Borovoye Array**	**74.66**	**327**	P	**P**	**03 34 09.9**	**-0.8**
	comp=Z,11nm,0.8s,baz=129,slow=6.6,SNR=43						
BRVK	**Borovoye**	**74.73**	**327**	*de*P	**P**	**03 34 10.4**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,21nm,1.3s						
BRVK	**Borovoye**	**74.73**	**327**	P	**P**	**03 34 10.5**	**-0.7**
BRVK				IAmb	IAmb	03 34 22.1	
	comp=Z,17nm,0.8s						
BILL	**Bilibino**	**75.34**	**13**	⇑*e*P	**P**	**03 34 17.2**	**+2.8**
BILL				pmax	pmax		
	comp=Z,7.0nm,2.5s						
VNDA	**Vanda**	**76.36**	**173**	P	**P**	**03 34 19.5**	**-0.6**
	comp=Z,6.7nm,1.0s,baz=329,slow=5.8,SNR=13						
VNDA	**Vanda**	**76.36**	**173**	P	**P**	**03 34 20.5**	**+0.4**
VNDA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VNDA	**Vanda**	**76.36**	**173**	P	**P**	**03 34 20.4**	**+0.4**
SOCY	**Socotra**	**76.83**	**283**	IAmb	IAmb	03 34 47.1	
	comp=Z,16nm,0.9s						
GEYT	**Alibeck**	**77.56**	**310**	P	**P**	**03 34 27.8**	**+0.1**
	comp=Z,5.0nm,1.0s,baz=48,slow=47,SNR=5.8						
GEYT	**Alibeck**	**77.56**	**310**	P	**P**	**03 34 27.2**	**-0.4**
NRIK	**Noril'sk**	**77.72**	**346**	LR	LR	04 10 31.7	
	comp=Z,217nm,21.0s,baz=128,slow=37						
MAW	**Mawson**	**78.54**	**201**	P	**P**	**03 34 30.7**	**-1.7**
	comp=Z,7.7nm,0.8s,baz=18,slow=16,SNR=2.6						
MAW				LR	LR	04 05 55.9	
	comp=Z,482nm,21.5s,baz=56,slow=33						
MAW	**Mawson**	**78.54**	**201**	P	**P**	**03 34 33.0**	**+0.6**
MAW				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MAW	**Mawson**	**78.54**	**201**	P	**P**	**03 34 33.0**	**+0.6**
ABKAR	**Akbulak array**	**79.33**	**321**	P	**P**	**03 34 35.8**	**-1.3**
GAMB	**Gambell**	**79.37**	**23**	P	**P**	**03 34 37.9**	**+0.9**
PPT	**Papeete**	**80.13**	**107**	LR	LR	04 07 22.7	
	comp=Z,154nm,21.5s,baz=251,slow=34						
PPT2	**Papeete2**	**80.13**	**107**	*e*S	**S**	**03 44 45.2**	**-0.8**
	comp=Z,97nm,27.0s						
PPT2	**Papeete2**	**80.13**	**107**	*e*LR	LR	03 59 50.0	
	comp=Z,369nm,23.2s						
AKTO	**Aktyubinsk**	**80.87**	**322**	P	**P**	**03 34 44.5**	**-0.9**
	comp=Z,13nm,0.8s,baz=116,slow=5.0,SNR=28						
SVE	**Sverdlovsk**	**81.32**	**329**	*e*P	**P**	**03 34 48.4**	**+0.7**

SVE				pmax	pmax		
	comp=Z,32nm,1.4s						
ARU	Arti	82.29	328	P	P	03 34 51.5	-1.3
	comp=Z,1.8nm,0.3s,baz=117,slow=3.2,SNR=8.1						
ARU	Arti	82.29	328	d iP	P	03 34 52.6	-0.2
ARU						03 38 01.1	
ARU				S	S	03 45 08.5	+1.7
ARU				SS	SS	03 50 30.6	+3.2
ARU				pmax	pmax		
	comp=Z,20nm,1.0s						
ARU	Arti	82.29	328	P	P	03 34 52.5	-0.2
ARU				IAmb	IAmb	03 35 03.8	
	comp=Z,20nm,1.0s						
RAYN	Ar Rayn	86.00	294	P	P	03 35 11.9	-0.6
RAYN				pmax	pmax		
	comp=Z,31nm,1.0s						
RAYN	Ar Rayn	86.00	294	P	P	03 35 11.9	-0.6
DAMY	Dhamar	86.34	285	IAmb	IAmb	03 35 26.8	
	comp=Z,16nm,0.9s						
QSPA	South Pole Qui	86.89	180	P	P	03 35 16.4	+0.3
QSPA				IAmb	IAmb	03 35 26.5	
	comp=Z,16nm,1.0s						
SYO	Syowa Base	87.25	201	⇑eP	P	03 35 18.4	+0.9
SYO	Syowa Base	87.25	201	⇓ePcP	P	03 35 19.8	+2.3
SYO	Syowa Base	87.25	201	⇑ipP	pP	03 35 26.0	+0.1
IMAR	Indian Mountai	87.27	23	P	P	03 35 17.7	0.0
GNI	Garni	88.19	310	⇑eP	P	03 35 24.3	+1.4
GNI				pmax	pmax		
	comp=Z,19nm,1.4s						
MLY	Manley	88.30	25	IAmb	IAmb	03 35 33.3	
	comp=Z,8.0nm,1.0s						
TBLG	Delisi	88.34	312	P	P	03 35 23.6	+0.2
TBLG				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TBLG	Delisi	88.34	312	P	P	03 35 23.6	+0.2
TBLG				IAmb	IAmb	03 35 55.3	
	comp=Z,10nm,0.8s						
RND	Reindeer	88.83	26	IAmb	IAmb	03 35 29.6	
	comp=Z,10nm,0.8s						
ZEI	Tsey	89.06	313	eP	P	03 35 24.3	-2.7
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NCK	Nalchik	89.34	313	⇓eP	P	03 35 28.0	-0.1
CCB	Clear Creek Bu	89.47	25	IAmb	IAmb	03 35 40.9	
	comp=Z,14nm,1.2s						
TAOE	Nuku Hiva Isla	89.57	99	eLR	LR	04 04 20.9	
	comp=Z,350nm,21.6s						
HDA	Harding Lake	89.81	26	IAmb	IAmb	03 35 38.5	
	comp=Z,8.5nm,0.8s						
KBZ	Khabaz	89.86	314	P	P	03 35 31.4	+1.0
	comp=Z,2.9nm,0.9s,baz=90,slow=3.0,SNR=2.9						
ILAR	Eielson Array	89.88	25	P	P	03 35 28.9	-1.1
	comp=Z,1.4nm,0.9s,baz=270,slow=4.1,SNR=11						
ILAR				PKKPbc	PKKPdf	03 53 01.8	+1.2
	comp=Z,0.4nm,0.9s,baz=17,slow=3.5,SNR=4.7						
ILAR				LR	LR	04 10 38.0	
	comp=Z,113nm,20.3s,baz=272,slow=32						
ILAR	Eielson Array	89.88	25	P	P	03 35 29.0	-1.1
ILAR	Eielson Array	89.88	25	P	P	03 35 29.2	-0.8
PRGR	Permogore	89.90	332	eP	P	03 35 19.4	-11
PRGR				pmax	pmax		
	comp=Z,6.0nm,0.4s						
NEY	Neytrino	89.95	313	⇑eP	P	03 35 36.0	+4.8
KIV	Kislovodsk	90.03	314	eP	P	03 35 28.9	-2.5
KIV				pmax	pmax		
	comp=Z,18nm,0.9s						
BMAR	Burnt Mountain	91.11	23	P	P	03 35 36.1	+0.3
BCAR	Beaver Creek A	91.97	27	P	P	03 35 40.8	+0.9
KMBO	Kilima Mbogo	92.50	269	P	P	03 35 43.7	0.0
	comp=Z,5.8nm,0.9s,baz=48,slow=7.9,SNR=11						
KMBO				LR	LR	04 13 16.2	
	comp=Z,540nm,21.8s,baz=114,slow=33						
KMBO	Kilima Mbogo	92.50	269	P	P	03 35 43.7	0.0
KMBO				IAmb	IAmb	03 35 47.8	
	comp=Z,6.9nm,0.9s						
VORR	Voronezh	92.76	321	P	P	03 35 43.0	-0.7
VORR				pmax	pmax		
	comp=Z,250nm,1.0s						
KLMR	Klimovskoe	92.80	331	eP	P	03 35 40.8	-2.9
KLMR				pmax	pmax		
	comp=Z,35nm,1.7s						
KLMR	Klimovskoe	92.80	331	eP	P	03 35 40.9	-2.8
KLMR				AMP		03 35 45.6	
	comp=Z,35nm,1.7s						
DAWY	Dawson	93.07	26	IAmb	IAmb	03 36 12.6	
	comp=Z,12nm,1.2s						
INK	Inuvik	95.29	22	P	P	03 35 53.4	-1.6
	comp=Z,4.4nm,1.0s,baz=289,slow=1.0,SNR=4.0						
INK				PKKPbc	PKKPdf	03 52 47.6	-3.3
	comp=Z,2.1nm,1.1s,baz=65,slow=7.0,SNR=5.6						
INK	Inuvik	95.29	22	IAmb	IAmb	03 36 03.4	
	comp=Z,5.8nm,0.9s						
NVL	N'lazarevskaya	96.05	197	eP	P	03 35 55.3	-3.1
NVL				eS	SKSac	03 46 28.2	-4.8
NVL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BRTR	Keskin Array B	96.70	309	P	P	03 36 02.4	+0.1
	comp=Z,2.7nm,1.1s,baz=117,slow=5.0,SNR=3.2						
ARCES	ARCESS Array B	97.84	340	P	P	03 36 06.2	-0.3
	comp=Z,7.8nm,1.0s,baz=92,slow=8.2,SNR=3.7						
ARCES				LR	LR	04 26 59.1	
	comp=Z,267nm,20.0s,baz=246,slow=40						
FINES	FINESS Array B	99.23	332	LR	LR	04 27 22.5	
	comp=Z,348nm,19.3s,baz=308,slow=39						
BOSA	Boshof	101.28	240	P	Pdif	03 36 22.1	-0.8
	comp=Z,3.7nm,1.0s,baz=31,slow=4.8,SNR=4.4						
UZH	Uzhgorod	103.84	319	eP	Pdif	03 36 43.4	+10
YKA	Yellowknife Ar	104.30	26	Pdiff	Pdif	03 36 36.4	+0.9
	comp=Z,0.4nm,0.8s,baz=291,slow=4.0,SNR=4.1						
YKA				PKiKP	PKiKP	03 40 50.9	-1.1
	comp=Z,0.5nm,0.8s,baz=300,slow=1.8,SNR=5.4						
YKA				PKKPbc	PKKPbc	03 52 23.0	-2.1
	comp=Z,0.7nm,1.0s,baz=110,slow=2.9,SNR=4.5						
CRVS	Cervenica-Dubn	104.32	320	eP	Pdif	03 36 34.7	-1.2
CRVS	Cervenica-Dubn	104.32	320	ePDIFF	Pdif	03 36 34.7	-1.2
NVAR	Mina Array Bea	108.97	50	Pdiff	Pdif	03 36 57.4	+0.3
	comp=Z,0.1nm,0.3s,baz=263,slow=4.5,SNR=3.0						
NVAR				PKKPbc	PKKPbc	03 52 09.0	-1.2
	comp=Z,0.3nm,0.6s,baz=94,slow=4.5,SNR=3.6						
GERES	GERESS Array B	109.28	321	PKiKP	PKiKP	03 41 01.8	0.0
	comp=Z,0.2nm,0.4s,baz=66,slow=3.3,SNR=3.6						
PDAR	Pinedale Array	114.23	44	PKiKP	PKPdf	03 41 11.2	-0.4
	comp=Z,0.7nm,0.9s,baz=270,slow=0.9,SNR=5.9						
PDAR				PKKPbc	PKKPbc	03 51 51.2	-1.8
	comp=Z,1.0nm,0.8s,baz=115,slow=6.7,SNR=4.3						
ANMO	Albuquerque	119.05	51	⇑iPKIKP	PKiKP	03 41 22.3	+1.3
MNTX	Cornudas Mount	120.89	55		PKiKP	03 41 25.4	+0.9
TX31	Lajitas Ar. Si	123.00	57		PKiKP	03 41 29.2	+0.4
TXAR	Lajitas Array	123.00	57	PKP	PKPdf	03 41 28.6	0.0
	comp=Z,1.1nm,0.8s,baz=227,slow=0.7,SNR=9.2						
TXAR				PKKPbc	PKKPab	03 51 19.1	-1.1
	comp=Z,0.4nm,0.7s,baz=109,slow=3.8,SNR=5.1						
TXAR	Lajitas Array	123.00	57	PKIKP	PKiKP	03 41 29.6	+0.8
TXAR	Lajitas Array	123.00	57		PKiKP	03 41 29.6	+0.8
ESDC	Sonseca Array	124.54	317	PKP	PKPdf	03 41 31.1	-0.1
	comp=Z,0.8nm,0.6s,baz=112,slow=1.6,SNR=6.3						
TOA0	Torodi Ar. Sit	127.77	284		PKPdf	03 41 37.3	-0.6
TORD	Torodi Ar. Bea	127.77	284	PKP	PKPdf	03 41 37.4	-0.6
	comp=Z,6.1nm,1.1s,baz=49,slow=2.0,SNR=17						
TORD	Torodi Ar. Bea	127.77	284		PKPdf	03 41 37.9	0.0
PLCA	Paso Flores	132.61	159	PKP	PKPdf	03 41 45.8	-0.8
	comp=Z,3.1nm,1.0s,baz=179,slow=5.1,SNR=5.5						
KIC	Kosan Boka	134.61	276	ePKP2	PKiKP	03 41 53.2	+0.8
	comp=Z,22nm,1.3s						
DBIC	Dimbokro	134.71	276	PKhKP	PKPpre	03 41 41.1	
	comp=Z,5.5nm,1.0s,baz=67,slow=4.0,SNR=4.9						
TIC	Toumodi	134.88	276	ePKP2	PKiKP	03 41 54.6	+1.7
LIC	Lamto	134.90	276	ePKP2	PKiKP	03 41 52.8	-0.2
	comp=Z,30nm,0.9s						
JTS	Las Juntas de	144.75	77	PKIKP	PKPdf	03 42 09.9	+0.5
JTS	Las Juntas de	144.75	77		PKPdf	03 42 09.9	+0.5
ESPN	Las Esperanzas	145.03	73		PKPdf	03 42 09.7	0.0
GO02	Mina Guanaco	146.21	147		PKPab	03 42 14.0	+0.4
LVC	Limon Verde	148.61	145	PKP2	PKiKP	03 42 21.3	0.0
LVC	Limon Verde	148.61	145		PKiKP	03 42 21.3	0.0
CPUP	Villa Florida	149.98	167	PKPbc	PKPbc	03 42 22.5	-0.1
	comp=Z,13nm,0.7s,baz=198,slow=1.4,SNR=32						
CPUP	Villa Florida	149.98	167		PKPdf	03 42 18.0	+0.2
CPUP				PKPbc	PKiKP	03 42 24.2	+0.7
CPUP				PKPab	PKPab	03 42 30.8	+2.6
PB11	IPOC Station P	150.33	141		PKiKP	03 42 24.6	-0.1
MNMC	Minye Minye	150.83	140		PKiKP	03 42 26.5	+0.7
LPAZ	La Paz	153.84	138	PKPbc	PKiKP	03 42 34.0	+1.5
	comp=Z,3.3nm,0.9s,baz=1.0,slow=6.0,SNR=6.5						
LPAZ	La Paz	153.84	138	PKIKP	PKiKP	03 42 33.5	+1.0
LPAZ						03 42 43.2	
LPAZ	La Paz	153.84	138		PKPdf	03 42 23.3	-1.2
LPAZ				PKPbc	PKiKP	03 42 33.5	+1.0
LPAZ				PKPab	PKPab	03 42 43.2	-2.2
SDV	Santo Domingo	158.86	73		PKPdf	03 42 30.6	-0.1
SDV					PKPab	03 43 07.6	+1.0
SAML	Samuel	162.39	133	PKIKP	PKPdf	03 42 35.7	+1.4
SAML	Samuel	162.39	133		PKPdf	03 42 35.7	+1.4

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*IDC **14** 03:28:56.6±1.0, 2°.99S×130°.03E, h0^{km}, mb4.0/8, mb1 4.2/11, mb1mx3.9/49, mbtmp4.0/11, ML4.0/3, Error ellipse: s-maj=29.1km s-min=18.0km az=81.0*

*DJA **14** 03:29:00.0±0.3, 3°S±4°×13°0E±°, h10^{km}, M4.0/9, MLv4.0/9*

*NEIC **14** 03:29:01.3±1.3, 2°.99S±0°.08×129°.95E±0°.07, h35^{km}±7^{km}, mb4.2/5, Error ellipse: s-maj=13.2km s-min=6.8km az=137.0*

ISC 14 03:29:00.4±0.7**, 2°.99S**±0°.06×**129°.94E**±0°.05**, h25**^{km}**, n23,** σ**1^{s}13**/24**, mb4.0**/8**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	1.07	251	P	Pb	03 29 19.4	-0.9
MSAI				S	Sn	03 29 35.3	+1.4
BNDI	Bandanaira	1.52	181	P	Pb	03 29 27.3	-0.6
AAI	Ambon	1.88	248	P	Pb	03 29 32.3	-1.7
FAKI	Fak Fak	2.31	88	P	Pn	03 29 38.5	+1.6
FAKI				S	Sb	03 30 08.4	-1.0
FAKI	Fak Fak	2.31	88		Pn	03 29 37.2	+0.3
SIJI	Sorong	2.49	32	Pn	Pn	03 29 38.9	-0.5
	40nm,0.3s,baz=206,slow=22,SNR=19						
SIJI				Sn	Sn	03 30 08.5	-0.5
	57nm,0.3s,baz=42,slow=23,SNR=6.5						
SWI	Sorong	2.49	32	P	Pn	03 29 40.3	+0.9
NLAI	Namlea	2.85	265	P	Pn	03 29 44.8	+0.5
RKPI	Ransiki, Papua	4.48	71	P	Pn	03 30 08.6	+1.8
KAPI	Kappang	10.36	259	Pn	Pn	03 31 27.5	0.0
	0.3nm,0.3s,baz=136,slow=18,SNR=1.9						
WRA	Warramunga Arr	17.38	166	P	Pn	03 33 00.5	-1.0
	0.8nm,0.3s,baz=352,slow=11,SNR=6.6						
ASAR	Alice Springs	20.91	170	P	P	03 33 40.9	-0.3
	12nm,0.6s,baz=347,slow=11,SNR=7.5						
STKA	Stephens Creek	30.75	160	P	P	03 35 13.7	-0.2
	6.9nm,0.9s,baz=348,slow=9.6,SNR=3.8						
STKA	Stephens Creek	30.75	160	IAmb	IAmb	03 35 17.0	
	comp=Z,3.0nm,1.1s						
CMAR	Chiang Mai Arr	37.23	306	P	P	03 36 12.5	+2.2
	comp=Z,0.8nm,0.3s,baz=127,slow=8.4,SNR=4.1						
SONM	Songino Array	54.66	341	P	P	03 38 28.2	+0.8
	comp=Z,0.4nm,0.7s,baz=165,slow=6.0,SNR=2.8						
MK31	Makanchi Array	64.88	326	P	P	03 39 35.9	-1.8
MKAR	Makanchi Array	64.88	326	P	P	03 39 37.6	0.0
	comp=Z,0.3nm,0.4s,baz=110,slow=7.7,SNR=5.5						
KURBB	Kurchatov Arra	69.10	328	P	P	03 40 03.8	-0.5
	comp=Z,1.5nm,0.6s,baz=127,slow=5.9,SNR=9.2						
KURK	Kurchatov	69.10	328	P	P	03 40 03.8	-0.5
KURK	Kurchatov	69.10	328	IAmb	IAmb	03 40 13.7	
	comp=Z,5.1nm,1.1s						
BVAR	Borovoye Array	74.67	327	P	P	03 40 38.8	+1.0
	comp=Z,0.8nm,0.7s,baz=94,slow=5.8,SNR=3.5						
AKTO	Aktyubinsk	80.89	322	P	P	03 41 11.7	-0.8
	comp=Z,0.5nm,0.7s,baz=37,slow=5.1,SNR=2.2						

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*IDC **14** 04:39:05.9±0.8, 2°.72N×128°.19E, h137^{km}±7^{km}, mb4.1/21, mb1 4.2/23, mb1mx4.0/46, mbtmp4.6/23, Error ellipse: s-maj=20.4km s-min=7.8km az=79.0*

*NEIC **14** 04:39:06.6±1.5, 2°.78N±0°.07×128°.12E±0°.09, h145^{km}±4^{km}, mb4.5/29, Error ellipse: s-maj=14.5km s-min=8.4km az=66.0*

*DJA **14** 04:39:07.4±0.6, 3°N±6°×12°8E±°, h138^{km}±5^{km}, M4.7/14, mb4.8/11, mB5.1/7, MLv4.8/14, Mw(mB)4.4/7*

ISC 14 04:39:07.1±0.3**, 2°.75N**±0°.04×**128°.10E**±0°.06**, h150**^{km}**, n109,** σ**1^{s}41**/119**, mb4.4**/29**, 3C-2D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	2.10	201	P	Pn	04 39 43.6	+0.2
TNTI				S	Sn	04 40 11.7	+0.4
TNTI	Ternate	2.10	201		Pn	04 39 43.6	+0.2
DDMP	Don Marcelino,	4.10	324	eP	Pn	04 40 06.4	-2.2
DDMP				eS	Sn	04 40 54.9	-1.5
MATI	Mati	4.55	336	eP	Pn	04 40 13.6	-1.1
MATI				eS	Sn	04 41 01.1	-6.2
GSPH	General Santos	4.57	317	⇑iP	Pn	04 40 13.6	-1.4
GSPH				i S	Sn	04 41 04.8	-2.9
KMSI	Cibinong	4.65	242	P	Pn	04 40 15.6	-0.3
KMSI				S	Sn	04 41 09.1	-0.4
SWI	Sorong	4.78	139	P	Pn	04 40 19.8	+2.2
SIJI	Sorong	4.79	139	P	Pn	04 40 18.8	+1.0
	23nm,0.3s,baz=244,slow=23,SNR=31						
SIJI				S	Sn	04 41 10.0	-2.8
	6.6nm,0.3s,baz=152,slow=20,SNR=6.1						
DAV	Davao City (W)	4.97	330	P	Pn	04 40 19.5	-0.6
	73nm,0.3s,baz=310,slow=7.9,SNR=2.2						
DAV				S	Sn	04 41 18.7	+1.5
	100nm,0.3s,baz=74,slow=19,SNR=2.1						
SKMP	Bagumbayan, Su	5.16	317	eP	Pn	04 40 21.3	-1.3
SKMP				eS	Sn	04 41 19.7	-1.9
SANI	Sanana	5.22	204	P	Pn	04 40 21.0	-2.4
CTBH	Cotabato--PC H	5.87	319	⇑iP	Pn	04 40 31.1	-1.0
BUKP	Musuan	5.92	329	eP	Pn	04 40 32.3	-0.5
NLAI	Namlea	6.03	190	P	Pn	04 40 34.5	+0.2
	0.6nm2μm118nm,0.7s						
MSAI	Masohi	6.11	172	P	Pn	04 40 38.4	+3.1
	0.1nm2μm23nm,0.6s						
AAI	Ambon	6.40	179	P	Pn	04 40 40.6	+1.5
	0.3nm95nm,1.2s						
LUWI	Luwuk	6.53	235		Pn	04 40 40.9	+0.1
MRSI	Marisa	6.56	250	P	Pn	04 40 41.3	0.0
	0.5nm2μm129nm,0.6s						
FAKI	Fak Fak	6.99	144	P	Pn	04 40 48.9	+1.8
	0.4nm105nm,0.9s						
FAKI	Fak Fak	6.99	144		Pn	04 40 47.1	+0.1
APSI	Ampana	7.41	241	P	Pn	04 40 52.3	-0.3
	0.6nm1μm78nm,0.6s						
TTSI	Tana Toraja	10.09	235	P	Pn	04 41 26.5	-1.8
	60nm,0.5s						
SPSI	Sidrap Palu	10.67	231	P	Pn	04 41 36.2	+0.2
	771nm56nm,0.8s						
BNSI	Bone	10.69	228	P	Pn	04 41 36.1	-0.2
	868nm46nm,0.7s						
BKSI	Bulukumba	11.31	225	P	Pn	04 41 44.4	0.0
KAPI	Kappang	11.36	227	P	Pn	04 41 44.9	-0.2
	6.4nm,0.3s,baz=21,slow=7.9,SNR=28						
KAPI				S	Sn	04 43 46.8	-4.0
	9.1nm,0.3s,baz=120,slow=22,SNR=11						
SOEI	Soe	13.00	197	Pn	Pn	04 42 07.3	+0.8
MTN	Manton Dam	15.78	169	P	Pn	04 42 40.5	-0.7
MTN				IAmb	IAmb	04 42 46.0	
	comp=Z,17nm,0.6s						
SBUM	Sibu	15.87	269		Pn	04 42 42.4	0.0
JAGI	Jajag, Banyuwa	17.83	231	P	P	04 43 04.4	-0.2
JAGI				IAmb	IAmb	04 43 09.6	
	comp=Z,40nm,1.3s						
KSM	Kuching	17.83	266	P	Pn	04 43 05.6	-0.4
KNRA	Kununurra	18.32	178	P	P	04 43 10.2	+0.2
KNRA				IAmb	IAmb	04 43 13.1	
	comp=Z,23nm,0.6s						
FITZ	Fitzroy Crossi	20.86	187	P	P	04 43 35.6	-1.7
	comp=Z,3.5nm,0.4s,baz=180,slow=0.9,SNR=27						
FITZ	Fitzroy Crossi	20.86	187	P	P	04 43 35.8	-1.5
WB0	Warramunga Arr	23.21	165	P	P	04 44 00.1	-0.9
WRAB	Tennant Creek	23.36	165	P	P	04 44 01.5	-0.8
WRA	Warramunga Arr	23.37	165	P	P	04 44 01.6	-0.8
	comp=Z,22nm,0.5s,baz=343,slow=9.9,SNR=176						
WRA				S	S	04 48 02.3	-1.8
	comp=Z,0.6nm,0.8s,baz=344,slow=18,SNR=2.4						
WRA	Warramunga Arr	23.37	165	P	P	04 44 01.4	-1.0
WB2	Warramunga Arr	23.37	165	P	P	04 44 01.1	-1.3
AS31	Alice Springs	26.86	168	P	P	04 44 33.2	-0.6
ASAR	Alice Springs	26.86	168	P	P	04 44 33.2	-0.7
	comp=Z,1.8nm,0.4s,baz=346,slow=7.2,SNR=21						
ASAR				PcP	PcP	04 47 52.7	0.0
	comp=Z,2.9nm,0.5s,baz=352,slow=2.3,SNR=16						
ASAR				ScP	ScP	04 51 18.2	-0.8
	comp=Z,0.6nm,0.8s,baz=352,slow=2.8,SNR=4.6						
ASAR	Alice Springs	26.86	168	P	P	04 44 32.8	-1.0
ASAR					PcP	04 47 52.7	0.0
CTA	Charters Tower	28.86	143	P	P	04 44 51.8	+0.1
	comp=Z,5.2nm,0.7s,baz=311,slow=11,SNR=2.6						
JNU	Nakatsue	30.32	5	P	P	04 45 04.1	-0.4
	comp=Z,14nm,0.9s,baz=170,slow=6.2,SNR=5.0						
JNU	Nakatsue	30.32	5	IAmb	IAmb	04 45 04.9	
	comp=Z,53nm,1.3s						
WHN	Wuhan	30.55	336	P	P	04 45 09.3	+2.8
CMAR	Chiang Mai Arr	32.55	301	P	P	04 45 26.2	+2.0
	comp=Z,1.0nm,0.3s,baz=116,slow=7.3,SNR=4.5						
CMAR				ScP	ScP	04 51 39.6	+2.2
	comp=Z,1.1nm,0.3s,baz=22,slow=0.8,SNR=4.7						
KSRS	Korea Array	34.54	360	P	P	04 45 40.6	-0.5
	comp=Z,2.1nm,0.4s,baz=178,slow=9.5,SNR=9.7						
MJAR	Matsushiro Arr	34.90	14	P	P	04 45 42.1	-2.2
	comp=Z,6.6nm,0.5s,baz=182,slow=8.4,SNR=16						
MJAR	Matsushiro Arr	34.90	14	P	P	04 45 42.0	-2.3
MAT	Matsushiro	34.90	14	P	P	04 45 42.8	-1.5
XAN	Xi'an	35.91	332	P	P	04 45 53.5	+0.5
XAN	Xi'an	35.91	332	P	P	04 45 53.2	+0.2
XAN				IAmb	IAmb	04 45 54.3	
	comp=Z,11nm,0.8s						
STKA	Stephens Creek	36.75	161	P	P	04 45 59.9	-0.2
	comp=Z,33nm,0.5s,baz=336,slow=8.7,SNR=112						
STKA				PcP	PcP	04 48 19.5	+0.2
	comp=Z,2.5nm,0.5s,baz=284,slow=4.2,SNR=3.5						
STKA	Stephens Creek	36.75	161	P	P	04 45 59.4	-0.7
STKA				IAmb	IAmb	04 46 00.6	
	comp=Z,6.7nm,0.7s						
BJT	Baijiatuau	38.64	345	P	P	04 46 16.1	+0.2
BJT				IAmb	IAmb	04 46 16.5	
	comp=Z,5.2nm,0.6s						
ARMA	Armidale	39.91	147	P	P	04 46 27.0	+0.3
LZH	Lanzhou	40.04	329	⇑P	P	04 46 29.8	+2.1
LZH				pP	pP	04 47 00.3	+0.3
LZH				sP	sP	04 47 18.5	+1.8
LZH				PP	PnPn	04 48 09.1	+1.2
HHC	Hu-ho-hao-te	40.76	341	eP	P	04 46 35.8	+2.3
H11S3	WAKE ISLAND Hy	40.89	65	T	T	05 30 18.6	
	baz=252,slow=75,SNR=5.6						
H11S2	WAKE ISLAND Hy	40.90	65	T	T	05 30 22.5	
	baz=252,slow=75,SNR=6.0						
H11S1	WAKE ISLAND Hy	40.90	65	T	T	05 30 28.2	
	baz=252,slow=75,SNR=4.3						
USRK	Ussuriysk Ar.	41.42	4	P	P	04 46 39.0	+0.3
	comp=Z,3.5nm,0.6s,baz=185,slow=8.8,SNR=9.3						
USRK	Ussuriysk Ar.	41.42	4	P	P	04 46 38.3	-0.3
H11N1	WAKE ISLAND Hy	41.45	63	T	T	05 31 04.6	
	baz=250,slow=75,SNR=7.5						
H11N2	WAKE ISLAND Hy	41.46	63	T	T	05 31 09.5	
	baz=250,slow=75,SNR=5.0						
H11N3	WAKE ISLAND Hy	41.47	63	T	T	05 31 09.8	
	baz=250,slow=75,SNR=9.6						
ASAJ	Asahikawa	43.15	15	P	P	04 46 53.7	+1.0
	comp=Z,3.1nm,0.3s,baz=231,slow=6.5,SNR=3.6						
JKA	Kamikawa-asahi	43.15	15	P	P	04 46 53.7	+1.0
GTA	Gaotai	44.64	328	eP	P	04 47 05.9	+1.0
KLR	Kul'dur	46.41	3	P	P	04 47 18.3	-0.2
	comp=Z,2.1nm,0.5s,baz=195,slow=7.3,SNR=8.5						
ULN	Ulaanbaatar	48.47	341	P	P	04 47 34.3	-0.3
ULN				IAmb	IAmb	04 47 36.2	
	comp=Z,5.1nm,0.8s						
SONM	Songino Array	48.66	341	P	P	04 47 36.7	+0.6
	comp=Z,2.4nm,0.7s,baz=152,slow=8.5,SNR=13						
SONM				pP	pP	04 48 08.6	-0.9
	comp=Z,0.7nm,0.6s,baz=154,slow=8.0,SNR=1.7						
SONM				PcP	PcP	04 49 00.1	+1.0
	comp=Z,0.7nm,0.7s,baz=163,slow=5.5,SNR=2.6						
SONM	Songino Array	48.66	341	P	P	04 47 36.3	+0.3
WMQ	Urumqi	54.31	325	eP	P	04 48 19.8	+1.8
PETK	Petropavlovsk-	55.83	21	P	P	04 48 28.6	0.0
	comp=Z,4.4nm,0.9s,baz=205,slow=6.6,SNR=4.6						
PETK	Petropavlovsk-	55.83	21	P	P	04 48 28.9	+0.3
MK31	Makanchi Array	59.14	325	P	P	04 48 52.1	+0.2
MK31				IAmb	IAmb	04 49 27.5	
	comp=Z,8.0nm,1.6s						
MKAR	Makanchi Array	59.14	325	P	P	04 48 52.5	+0.5
	comp=Z,1.7nm,0.4s,baz=112,slow=8.0,SNR=41						
MKAR				pP	pP	04 49 25.1	-1.3
	comp=Z,1.0nm,0.6s,baz=121,slow=8.7,SNR=2.7						
MKAR	Makanchi Array	59.14	325	P	P	04 48 52.3	+0.4
YAK	Yakutsk	59.15	1	P	P	04 48 51.9	+0.3
	comp=Z,17nm,0.5s,baz=250,slow=0.7,SNR=3.5						
YAK	Yakutsk	59.15	1	IAmb	IAmb	04 48 52.5	
	comp=Z,27nm,0.6s						
MAKZ	Makanchi	59.32	325	P	P	04 48 53.5	+0.2
MAKZ				IAmb	IAmb	04 49 32.3	
	comp=Z,5.5nm,1.1s						
MA2	Magadan	59.33	13	P	P	04 48 53.5	+0.5
	comp=Z,1.9nm,0.3s,baz=142,slow=12,SNR=5.4						
MA2	Magadan	59.33	13	IAmb	IAmb	04 48 54.5	
	comp=Z,4.7nm,0.8s						
KSH	Kashi	59.70	315	P	P	04 49 01.5	+5.4
KSH				pP	pwP	04 49 34.3	0.0
KSH				PcS	PcS	04 53 44.6	+0.7
KSH				S	S	04 56 59.3	+4.0
KSH	Kashi	59.70	315	SS	SS	05 00 57.8	+4.1
RPZ	Rata Peaks	60.18	145	P	P	04 48 58.6	-0.5
	comp=Z,8.0nm,0.7s,baz=317,slow=3.1,SNR=5.9						
ZALV	Zalesovo Beam	62.08	333	P	P	04 49 11.1	-0.6
	comp=Z,0.5nm,0.3s,baz=101,slow=7.5,SNR=2.6						
ZALV				pP	pP	04 49 44.2	-2.2
	comp=Z,0.5nm,0.3s,baz=103,slow=6.2,SNR=1.9						
SEY	Seymchan	62.68	12	P	P	04 49 16.9	+1.4
	comp=Z,1.4nm,0.2s,baz=216,slow=8.1,SNR=4.4						
KURK	Kurchatov	63.30	327	P	P	04 49 19.7	-0.2
KURK				IAmb	IAmb	04 49 55.4	
	comp=Z,6.2nm,1.1s						
TIXI	Tiksi	68.80	0	P	P	04 49 54.1	-0.5
	comp=Z,3.2nm,0.5s,baz=198,slow=3.5,SNR=8.9						
TIXI	Tiksi	68.80	0	P	P	04 49 54.0	-0.5
BRVK	Borovoye	68.95	327	P	P	04 49 56.5	+0.6
BRVK				IAmb	IAmb	04 50 36.4	
	comp=Z,6.8nm,1.1s						
ABKAR	Akbulak array	73.77	321	P	P	04 50 26.1	+1.2
ABKAR					pP	04 50 59.0	-1.5
VNDA	Vanda	82.29	173	P	P	04 51 11.4	+0.1
	comp=Z,5.2nm,0.8s,baz=314,slow=6.3,SNR=18						
VNDA	Vanda	82.29	173	P	P	04 51 11.7	+0.4
VNDA				IAmb	IAmb	04 51 12.2	
	comp=Z,8.9nm,1.1s						
ILAR	Eielson Array	85.39	25	P	P	04 51 26.7	-0.6
	comp=Z,0.3nm,0.9s,baz=268,slow=4.5,SNR=3.7						
SYO	Syowa Base	92.01	201	⇓ePcP	PcP	04 52 01.5	+2.3
SYO	Syowa Base	92.01	201	⇓epP	pP	04 52 34.6	-1.8
QSPA	South Pole Qui	92.66	180	P	P	04 52 01.6	-0.2
YKA	Yellowknife Ar	99.81	25	PKKPbc	PKKPbc	05 08 53.2	-3.3
	comp=Z,0.3nm,0.8s,baz=120,slow=2.5,SNR=5.3						
TXAR	Lajitas Array	121.10	53	PKP	PKiKP	04 57 43.7	+0.8
	comp=Z,0.2nm,0.7s,baz=321,slow=1.2,SNR=3.3						
SCHQ	Schefferville	121.30	10	PKP	PKiKP	04 57 42.6	+0.2
	comp=Z,4.4nm,1.1s,baz=231,slow=6.5,SNR=2.2						
TORD	Torodi Ar. Bea	124.52	288	PKP	PKPdf	04 57 49.1	-0.5
	comp=Z,1.1nm,0.7s,baz=48,slow=2.1,SNR=6.8						
TORD	Torodi Ar. Bea	124.52	288		PKPdf	04 57 48.8	-0.8
PLCA	Paso Flores	138.61	158	PKP	PKiKP	04 58 16.5	-1.3
	comp=Z,1.7nm,0.9s,baz=245,slow=5.1,SNR=4.8						
CFA	Coronel Fontan	147.43	154	PKPbc	PKPbc	04 58 34.1	+0.2
	comp=Z,9.8nm,0.7s,baz=241,slow=2.9,SNR=24						
CPUP	Villa Florida	155.98	168	PKPab	PKPab	04 59 13.2	+1.4
	comp=Z,2.4nm,1.0s,baz=180,slow=6.3,SNR=4.4						

KEA 14 04:45:23.0±0.0**, 40°.57N**×**122°.83E, h0**^{km}**, ML2.5**/3**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUJ	Sinuiju	1.35	110	Pg	Pg	04 45 48.9	0.0
SUJ				Sg	Sg	04 46 06.5	+0.1
PYS	Pyongsong	2.67	119	Sg	Sg	04 46 48.1	-0.7
PYAG	Pyongyang	2.72	123	Sg	Sb	04 46 48.1	+1.8
KGE	Kanggye	2.90	81	Pg	Pb	04 46 16.0	+0.5
KGE				Sg	Sb	04 46 52.7	+1.2
SRW	Sariwon	3.06	132	Sg	Sg	04 47 00.0	-1.3
HJU	Haeju	3.38	137	Sg	Sg	04 47 13.9	+2.4
HHU	Hamhung	3.65	99	Sg	Sg	04 47 18.0	-2.3

IDC 14 04:51:15.7±22.0**, 22°.66N**×**142°.72E, h441**^{km}±194^{km}**, mb3.0**/5**, mb1 3.3**/5**, mb1mx2.8**/50**, mbtmp3.8**/5**, Error ellipse: s-maj=161.3km s-min=37.5km az=175.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLR	Kul'dur	27.90	345	P	P	04 56 27.8	-0.3
	1.3nm,0.5s,baz=250,slow=4.4,SNR=5.0						
MKAR	Makanchi Array	53.73	312	P	P	04 59 55.2	+0.2
	0.2nm,0.5s,baz=88,slow=8.4,SNR=2.8						
YKA	Yellowknife Ar	75.81	28	P	P	05 02 15.4	+0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	0.3nm,0.4s,baz=288,slow=5.3,SNR=7.0						
FINES	**FINESS Array B**	**82.13**	**334**	P	P	05 02 48.0	-0.6
	2.2nm,0.7s,baz=60,slow=9.1,SNR=5.4						
NVAR	**Mina Array Bea**	**82.88**	**51**	P	P	05 02 53.0	-0.3
	0.3nm,0.5s,baz=274,slow=5.3,SNR=3.8						

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*IDC **14** 04:51:20.6±0.6, 2°.55N×125°.84E, h0^{km}, mb4.3/17, mb1 4.4/17, mb1mx4.2/45, mbtmp4.3/17, MS2.9/4, Ms1 3.0/4, ms1mx2.8/37, Error ellipse: s-maj=39.5km s-min=13.4km az=74.0*

*NEIC **14** 04:51:24±1.7, 3°.08N±0°.07×127°.1E±0°.1, h36^{km}±7^{km}, mb4.5/14, Error ellipse: s-maj=20.2km s-min=7.6km az=71.0*

*DJA **14** 04:51:31.1±0.6, 2°N±5°×12°6E±°, h61^{km}±20^{km}, M4.5/9, mB4.9/3, mb4.8/3, MLv4.4/9, Mw(mB)4.2/3*

ISC 14 04:51:27.6±0.5, **2°.59N**±0°.05×**126°.30E**±0°.06, **h55**^{km}, **n68**, σ**1^{s}75**/67, **mb4.5**/21, **1C-2D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.10**	**149**	P	**Pn**	**04 52 02.1**	**+1.7**
TNTI	**Ternate**	**2.10**	**149**		**Pn**	**04 52 00.8**	**+0.3**
KMSI	**Cibinong**	**3.06**	**229**	P	**Pn**	**04 52 15.3**	**+1.7**
GSPH	**General Santos**	**3.72**	**339**	⇓*i*P	**Pn**	**04 52 23.8**	**+1.0**
GSPH				*i*S	**Sn**	**04 53 02.4**	**-3.1**
DAV	**Davao City (W)**	**4.51**	**351**	LR	LR	04 54 36.7	
	comp=Z,147nm,18.1s,baz=157,slow=44						
DAV	**Davao City (W)**	**4.51**	**351**	Pn	Pn	04 52 26.0	-7.4
SANI	**Sanana**	**4.62**	**184**	P	**Pn**	**04 52 34.8**	**-0.2**
SANI				S	**Sn**	**04 53 21.7**	**-5.6**
MRSI	**Marisa**	**4.83**	**244**	P	**Pn**	**04 52 39.8**	**+1.9**
MRSI				S	**Sn**	**04 53 28.4**	**-4.2**
CTBH	**Cotabato--PC H**	**5.03**	**336**	⇓*i*P	**Pn**	**04 52 42.6**	**+2.0**
LUWI	**Luwuk**	**5.04**	**224**	P	**Pn**	**04 52 44.5**	**+3.7**
LUWI	**Luwuk**	**5.04**	**224**		Pn	04 52 49.6	+8.8
APSI	**Ampana**	**5.80**	**233**	P	**Pn**	**04 52 54.9**	**+3.7**
	0.4nm1µm126nm,0.6s						
NLAI	**Namlea**	**5.85**	**172**	P	**Pn**	**04 52 53.0**	**+1.2**
MPSI	**Mapaga**	**6.78**	**251**	P	**Pn**	**04 53 06.6**	**+2.1**
SBUM	**Sibu**	**14.06**	**270**		**P**	**04 54 52.2**	**+1.8**
KNRA	**Kununurra**	**18.31**	**172**	P	**Pn**	**04 55 38.4**	**+0.5**
KNRA				IAmb	IAmb	04 55 38.9	
	comp=Z,16nm,0.7s						
FITZ	**Fitzroy Crossi**	**20.57**	**182**	P	**P**	**04 56 02.3**	**+0.3**
	comp=Z,1.9nm,0.4s,baz=1.6,slow=23,SNR=17						
WB0	**Warramunga Arr**	**23.60**	**161**	P	**P**	**04 56 33.1**	**-0.6**
WRAB	**Tennant Creek**	**23.74**	**161**	P	**P**	**04 56 35.3**	**+0.2**
WRAB				IAmb	IAmb	04 56 35.9	
	comp=Z,17nm,0.7s						
WRA	**Warramunga Arr**	**23.74**	**161**	P	**P**	**04 56 35.0**	**-0.1**
	comp=Z,13nm,0.5s,baz=334,slow=11,SNR=116						
WRA				S	**S**	**05 00 50.4**	**+3.8**
	comp=Z,1.2nm,0.8s,baz=324,slow=16,SNR=4.1						
WRA	**Warramunga Arr**	**23.74**	**161**	P	**P**	**04 56 34.7**	**-0.4**
WB2	**Warramunga Arr**	**23.75**	**161**	P	**P**	**04 56 34.9**	**-0.2**
WB2				IAmb	IAmb	04 56 36.1	
	comp=Z,22nm,0.8s						
KRVT	**Keravat (AS076**	**26.61**	**105**	LR	LR	05 07 31.0	
	comp=Z,30nm,20.2s,baz=299,slow=36						
AS31	**Alice Springs**	**27.13**	**165**	P	**P**	**04 57 06.8**	**+1.0**
AS31				IAmb	IAmb	04 57 11.1	
	comp=Z,3.5nm,0.4s						
ASAR	**Alice Springs**	**27.13**	**165**	P	**P**	**04 57 06.5**	**+0.7**
	comp=Z,2.9nm,0.3s,baz=341,slow=7.5,SNR=45						
ASAR				S	**S**	**05 01 40.9**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=347,slow=19,SNR=4.3						
WHN	**Wuhan**	**30.02**	**339**	P	**P**	**04 57 32.0**	**+0.7**
CMAR	**Chiang Mai Arr**	**31.09**	**302**	P	**P**	**04 57 38.3**	**-2.7**
	comp=Z,0.8nm,0.3s,baz=120,slow=5.3,SNR=3.0						
CMAR				LR	LR	05 10 04.2	
	comp=Z,29nm,18.9s,baz=340,slow=37						
KSRS	**Korea Array**	**34.73**	**2**	P	**P**	**04 58 14.2**	**+1.8**
	comp=Z,2.1nm,0.5s,baz=185,slow=11,SNR=7.1						
KSRS				LR	LR	05 13 37.9	
	comp=Z,9.7nm,18.3s,baz=335,slow=38						
XAN	**Xi'an**	**35.24**	**335**	P	**P**	**04 58 15.0**	**-2.1**
STKA	**Stephens Creek**	**37.23**	**158**	P	**P**	**04 58 35.1**	**+1.1**
	comp=Z,1.9nm,0.2s,baz=337,slow=11,SNR=7.0						
STKA	**Stephens Creek**	**37.23**	**158**	IAmb	IAmb	04 59 51.5	
	comp=Z,9.8nm,2.0s						
LZH	**Lanzhou**	**39.27**	**331**	*e*P	**P**	**04 58 50.1**	**-1.2**
LZH				pP	pwP	04 59 07.5	+0.2
LZH				sP	sP	04 59 15.0	+3.8
LZH				*e*PP	**PnPn**	**05 00 25.8**	**+0.4**
SHL	**Shillong**	**40.21**	**308**	P	**P**	**04 59 00.5**	**+1.2**
SHL				IAmb	IAmb	04 59 02.3	
	comp=Z,6.5nm,0.7s						
HHC	**Hu-ho-hao-te**	**40.34**	**343**	*e*P	**P**	**04 58 58.1**	**-2.0**
TAPN	**Taplejung**	**44.35**	**307**	*e*P	**P**	**04 59 32.8**	**-0.3**
	comp=Z,6.5nm,0.5s						
ODAN	**Odare**	**44.39**	**307**	*e*P	**P**	**04 59 33.1**	**-0.2**
	comp=Z,16nm,0.7s						
RAMN	**Ramite**	**45.06**	**306**	*e*P	**P**	**04 59 38.7**	**0.0**
	comp=Z,12nm,0.6s						
JIRN	**Jiri**	**45.70**	**307**	*e*P	**P**	**04 59 43.2**	**-0.7**
	comp=Z,27nm,0.5s						
GUN	**Gumba**	**46.05**	**307**	*e*P	**P**	**04 59 46.0**	**-0.7**
	comp=Z,39nm,0.6s						
PKI	**Pulchoki**	**46.28**	**306**	*e*P	**P**	**04 59 47.6**	**-0.9**
	comp=Z,7.6nm,0.5s						
DMN	**Daman**	**46.54**	**306**	*e*P	**P**	**04 59 49.8**	**-0.6**
KLR	**Kul'dur**	**46.70**	**5**	P	**P**	**04 59 52.3**	**+1.4**
	comp=Z,0.9nm,0.6s,baz=176,slow=14,SNR=3.6						
DANN	**Dangsing**	**47.93**	**307**	*e*P	**P**	**05 00 00.6**	**-0.7**
	comp=Z,34nm,0.6s						
SONM	**Songino Array**	**48.24**	**342**	P	**P**	**05 00 02.1**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=157,slow=9.2,SNR=6.0						
SONM	**Songino Array**	**48.24**	**342**	IAmb	IAmb	05 00 03.1	
	comp=Z,0.9nm,0.8s						
WMQ	**Urumqi**	**53.41**	**326**	*e*P	**P**	**05 00 42.1**	**+0.1**
MK31	**Makanchi Array**	**58.24**	**326**	P	**P**	**05 01 14.7**	**-1.8**
MKAR	**Makanchi Array**	**58.24**	**326**	P	**P**	**05 01 15.5**	**-1.0**
	comp=Z,1.9nm,0.5s,baz=119,slow=8.0,SNR=33						
MKAR				PcP	**PcP**	**05 02 07.3**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=127,slow=4.0,SNR=11						
MKAR	**Makanchi Array**	**58.24**	**326**	P	**P**	**05 01 14.7**	**-1.8**
MAKZ	**Makanchi**	**58.43**	**326**	P	**P**	**05 01 16.3**	**-1.5**
KSH	**Kashi**	**58.55**	**316**	P	**P**	**05 01 22.3**	**+3.4**
KSH				sP	sP	05 01 44.8	+5.5
KSH				S	**S**	**05 09 20.8**	**+1.9**
KSH				sS	sS	05 09 47.4	+3.7
KSH	**Kashi**	**58.55**	**316**	SS	SS	05 13 17.3	+4.9
ZALV	**Zalesovo Beam**	**61.41**	**334**	P	**P**	**05 01 37.0**	**-1.0**
	comp=Z,0.7nm,0.4s,baz=131,slow=6.6,SNR=3.3						
KURK	**Kurchatov**	**62.47**	**328**	P	**P**	**05 01 43.4**	**-1.8**
TIXI	**Tiksi**	**68.98**	**1**	P	**P**	**05 02 27.3**	**+0.5**
	comp=Z,3.4nm,0.3s,baz=139,slow=4.4,SNR=7.4						
NRIK	**Noril'sk**	**71.43**	**346**	P	**P**	**05 02 42.0**	**+0.2**
	comp=Z,4.1nm,0.5s,baz=110,slow=4.2,SNR=6.7						
ABKAR	**Akbulak array**	**72.76**	**321**	P	**P**	**05 02 48.2**	**-2.0**
IMAR	**Indian Mountai**	**83.55**	**24**	P	P	05 03 42.7	-6.9
ILAR	**Eielson Array**	**86.31**	**25**	P	**P**	**05 04 05.2**	**+1.7**
	comp=Z,0.2nm,0.6s,baz=258,slow=5.6,SNR=3.4						
BRTR	**Keskin Array B**	**90.41**	**310**	P	**P**	**05 04 22.4**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=131,slow=4.1,SNR=4.5						
SYO	**Syowa Base**	**91.21**	**201**	⇑*e*X	P	05 04 34.6	+8.1
ARCES	**ARCESS Array B**	**91.36**	**340**	P	**P**	**05 04 27.4**	**+0.1**
	comp=Z,3.0nm,0.7s,baz=97,slow=7.4,SNR=4.4						
SPITS	**Spitsbergen Ar**	**91.51**	**349**	P	**P**	**05 04 28.6**	**+0.8**
	comp=Z,26nm,1.1s,baz=81,slow=7.7,SNR=9.4						
AKASG	**Malin Array Be**	**92.50**	**321**	P	**P**	**05 04 31.8**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=67,slow=5.0,SNR=2.9						
FINES	**FINESS Array B**	**92.62**	**332**	P	**P**	**05 04 32.7**	**-0.5**
	comp=Z,3.0nm,0.8s,baz=101,slow=10,SNR=7.3						
BURAR	**Bucovina Array**	**95.56**	**318**	P	**P**	**05 04 46.6**	**-0.5**
BUR08	**Bucovina Ar. S**	**95.56**	**318**	P	**P**	**05 04 46.5**	**-0.7**
TORD	**Torodi Ar. Bea**	**122.85**	**287**	PKP	**PKiKP**	**05 10 18.9**	**0.0**
	comp=Z,0.4nm,0.6s,baz=59,slow=1.4,SNR=3.3						

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*IDC **14** 04:58:08.5±1.5, 6°.21N×123°.37E, h606^{km}±20^{km}, mb3.1/10, mb1 3.2/11, mb1mx2.9/48, mbtmp4.1/11, Error ellipse: s-maj=65.3km s-min=10.8km az=65.0*

ISC 14 04:58:07.7±0.7, **6°.1N**±0°.2×**123°.3E**±0°.3, **h600**^{km}, **n12**, σ**1^{s}37**/17, **mb3.7**/10, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**10.55**	**131**	P	**P**	**05 00 32.2**	**+0.2**
	2.5nm,0.3s,baz=315,slow=19,SNR=3.5						
FITZ	**Fitzroy Crossi**	**24.18**	**175**	P	**P**	**05 02 40.4**	**+1.7**
	0.7nm,0.7s,baz=0.0,slow=20,SNR=3.1						
WRA	**Warramunga Arr**	**28.09**	**158**	P	**P**	**05 03 13.3**	**+0.3**
	5.3nm,0.4s,baz=340,slow=9.3,SNR=24						
WRA				S	**S**	**05 07 13.2**	**-4.1**
	0.6nm,0.6s,baz=335,slow=15,SNR=4.4						
WRA				ScP	**ScP**	**05 08 52.5**	**+0.1**
	0.3nm,0.5s,baz=343,slow=3.2,SNR=6.4						
ASAR	**Alice Springs**	**31.37**	**161**	P	**P**	**05 03 42.6**	**+1.4**
	2.9nm,0.4s,baz=341,slow=6.6,SNR=42						
ASAR				S	**S**	**05 08 07.0**	**-0.7**
	1.8nm,1.1s,baz=343,slow=12,SNR=7.7						
ASAR				ScP	**ScP**	**05 09 02.6**	**-0.4**
	0.4nm,0.5s,baz=353,slow=3.4,SNR=4.1						
STKA	**Stephens Creek**	**41.62**	**156**	P	**P**	**05 05 05.9**	**+0.9**
	2.2nm,0.4s,baz=333,slow=7.8,SNR=8.1						
SONM	**Songino Array**	**44.00**	**344**	P	**P**	**05 05 23.9**	**+0.5**
	0.3nm,0.6s,baz=148,slow=8.4,SNR=2.8						
MKAR	**Makanchi Array**	**53.67**	**326**	P	**P**	**05 06 35.3**	**+0.8**
	1.3nm,0.4s,baz=120,slow=7.9,SNR=22						
MKAR				PcP	**PcP**	**05 07 30.9**	**0.0**
	0.6nm,0.5s,baz=134,slow=3.5,SNR=6.4						
KURBB	**Kurchatov Arra**	**57.91**	**328**	P	**P**	**05 07 03.8**	**+0.3**
	1.3nm,0.5s,baz=126,slow=6.6,SNR=7.8						
AKTO	**Aktyubinsk**	**69.68**	**322**	P	**P**	**05 08 17.5**	**-0.7**
	1.2nm,0.5s,baz=90,slow=8.7						
BRTR	**Keskin Array B**	**85.88**	**309**	P	**P**	**05 09 44.6**	**-0.9**
	0.4nm,0.5s,baz=138,slow=3.2,SNR=5.3						
FINES	**FINESS Array B**	**88.12**	**332**	P	**P**	**05 09 54.5**	**-0.8**
	0.9nm,0.7s,baz=27,slow=9.0,SNR=4.0						
TORD	**Torodi Ar. Bea**	**118.94**	**289**	PKP	**PKiKP**	**05 15 49.8**	**-0.3**
	0.2nm,0.4s,baz=49,slow=2.6,SNR=3.5						

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*IDC **14** 05:46:31.8±0.9, 3°.06S×129°.74E, h0^{km}, mb4.1/7, mb1 4.3/9, mb1mx4.0/43, mbtmp4.1/9, ML3.8/2, MS3.1/2, Ms1 3.1/2, ms1mx2.8/39, Error ellipse: s-maj=35.1km s-min=16.9km az=68.0*

*DJA **14** 05:46:35.8±1.4, 3°S±4°×13°0E±°, h17^{km}±12^{km}, M3.9/10, MLv3.9/10*

*NEIC **14** 05:46:37.9±2.2, 3°.07S±0°.07×129°.94E±0°.08, h46^{km}±9^{km}, mb4.1/11, Error ellipse: s-maj=14.3km s-min=6.9km az=49.0*

ISC 14 05:46:34.0±0.6, **3°.01S**±0°.05×**129°.87E**±0°.04, **h10**^{km}, **n38**, σ**1^{s}63**/39, **mb4.1**/9, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.00**	**250**	P	**Pg**	**05 46 54.2**	**+1.0**
MSAI				S	**Sb**	**05 47 09.3**	**+2.7**
BNDI	**Bandanaira**	**1.50**	**179**	P	**Pn**	**05 47 01.5**	**+0.4**
AAI	**Ambon**	**1.80**	**248**	P	**Pn**	**05 47 06.7**	**+1.5**
FAKI	**Fak Fak**	**2.38**	**88**	P	**Pn**	**05 47 14.7**	**+1.6**
FAKI				S	**Sn**	**05 47 44.3**	**+1.9**
FAKI	**Fak Fak**	**2.38**	**88**		**Pn**	**05 47 14.3**	**+1.2**
SIJI	**Sorong**	**2.54**	**33**	Pn	**Pn**	**05 47 15.7**	**+0.3**
	36nm,0.3s,baz=244,slow=22,SNR=34						
SIJI				Sn	**Sn**	**05 47 45.8**	**-0.6**
	28nm,0.3s,baz=210,slow=24,SNR=8.8						
SWI	**Sorong**	**2.54**	**33**	P	**Pn**	**05 47 16.1**	**+0.7**
NLAI	**Namlea**	**2.77**	**265**	P	**Pn**	**05 47 18.6**	**0.0**
SANI	**Sanana**	**3.99**	**284**	P	**Pn**	**05 47 34.7**	**-0.6**
RKPI	**Ransiki, Papua**	**4.55**	**71**	P	**Pn**	**05 47 44.1**	**+1.0**
DAV	**Davao City (W)**	**10.89**	**337**	LR	LR	05 54 09.2	
	comp=Z,86nm,19.7s,baz=174,slow=42						
FITZ	**Fitzroy Crossi**	**15.56**	**195**	Pn	**Pn**	**05 50 11.5**	**-2.1**
	0.1nm,0.3s,baz=180,slow=20,SNR=5.1						
FITZ				LR	LR	05 58 07.4	
	comp=Z,81nm,18.3s,baz=89,slow=45						
WB0	**Warramunga Arr**	**17.23**	**165**		**Pn**	**05 50 32.9**	**-2.2**
WB0				IAmb	IAmb	05 50 41.6	
	comp=Z,7.5nm,0.6s						
WRA	**Warramunga Arr**	**17.39**	**166**	P	**Pn**	**05 50 32.5**	**-4.4**
	comp=Z,0.2nm,0.3s,baz=346,slow=11,SNR=4.8						
WRA				S	Sn	05 53 36.7	-14
	comp=Z,0.0nm,0.3s,baz=335,slow=24,SNR=3.0						
WRA	**Warramunga Arr**	**17.39**	**166**		**Pn**	**05 50 35.0**	**-1.9**
WB2	**Warramunga Arr**	**17.39**	**166**	Pn	**Pn**	**05 50 34.3**	**-2.7**
UGM	**Wanagama**	**19.86**	**255**	P	**P**	**05 51 07.3**	**+1.8**
AS31	**Alice Springs**	**20.90**	**170**	P	**P**	**05 51 16.4**	**-0.4**
AS31				IAmb	IAmb	05 51 17.1	
	comp=Z,8.8nm,0.9s						
ASAR	**Alice Springs**	**20.90**	**170**	P	**P**	**05 51 16.1**	**-0.8**
	comp=Z,22nm,0.8s,baz=350,slow=10,SNR=200						
ASAR				S	S	05 54 59.2	-11
	comp=Z,0.4nm,0.9s,baz=354,slow=24,SNR=2.3						
ASAR	**Alice Springs**	**20.90**	**170**	P	**P**	**05 51 16.4**	**-0.4**
CTA	**Charters Tower**	**23.32**	**138**	P	**P**	**05 51 42.0**	**-0.6**
	comp=Z,3.8nm,0.7s,baz=349,slow=5.2,SNR=3.4						
STKA	**Stephens Creek**	**30.76**	**160**	P	**P**	**05 52 49.0**	**-0.7**
	comp=Z,2.1nm,0.8s,baz=349,slow=12,SNR=3.3						
STKA	**Stephens Creek**	**30.76**	**160**	P	**P**	**05 52 49.1**	**-0.7**
CMAR	**Chiang Mai Arr**	**37.18**	**306**	P	**P**	**05 53 43.9**	**-1.8**
	comp=Z,1.1nm,0.4s,baz=129,slow=7.1,SNR=9.1						
CHTO	**Chiang Mai**	**37.37**	**307**	P	**P**	**05 53 47.2**	**0.0**
CHTO				IAmb	IAmb	05 53 49.0	
	comp=Z,5.5nm,0.8s						
HHC	**Hu-ho-hao-te**	**46.74**	**341**	*e*P	**P**	**05 55 04.9**	**+1.3**
GTA	**Gaotai**	**50.46**	**330**	*e*P	**P**	**05 55 32.8**	**+0.5**
GTA				pP	sP	05 55 38.0	+1.3
GTA				sP	pP	05 55 41.3	+5.8
SONM	**Songino Array**	**54.65**	**341**	P	**P**	**05 56 03.1**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=145,slow=10,SNR=3.7						
SONM	**Songino Array**	**54.65**	**341**	IAmb	IAmb	05 56 10.2	
	comp=Z,2.8nm,1.4s						
WMQ	**Urumqi**	**60.02**	**326**	*e*P	**P**	**05 56 42.5**	**+1.3**
MKAR	**Makanchi Array**	**64.85**	**326**	P	**P**	**05 57 12.9**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=111,slow=7.8,SNR=20						
MK31	**Makanchi Array**	**64.85**	**326**	P	**P**	**05 57 13.0**	**-0.4**
MK31				IAmb	IAmb	05 57 13.8	
	comp=Z,1.1nm,0.9s						
MAKZ	**Makanchi**	**65.03**	**326**	P	**P**	**05 57 14.1**	**-0.5**
MAKZ				IAmb	IAmb	05 57 20.2	
	comp=Z,2.8nm,1.2s						
ZALV	**Zalesovo Beam**	**67.98**	**333**	P	**P**	**05 57 32.0**	**-1.2**
	comp=Z,1.0nm,0.6s,baz=107,slow=4.8,SNR=4.9						
ZALV	**Zalesovo Beam**	**67.98**	**333**	P	**P**	**05 57 31.5**	**-1.7**
KURK	**Kurchatov**	**69.08**	**328**	P	**P**	**05 57 39.2**	**-0.9**
ABKAR	**Akbulak array**	**79.33**	**321**	P	**P**	**05 58 38.5**	**-1.6**
CPUP	**Villa Florida**	**150.01**	**167**	PKPbc	**PKPdf**	**06 06 24.7**	**+3.9**
	comp=Z,1.8nm,0.8s,baz=96,slow=4.4,SNR=4.0						

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*KRSC **14** 05:54:15.5±0.9, 54°.90N×160°.82E, h144^{km}±8^{km}, ML4.1*

*MOS **14** 05:54:16.4±0.8, 54°.97N×160°.62E, h149^{km}, mb4.3/8, Error ellipse: s-maj=13.5km s-min=4.3km az=76.2*

*IDC **14** 05:54:17.7±1.9, 55°.11N×160°.27E, h147^{km}±19^{km}, mb3.5/17, mb1 3.8/18, mb1mx3.6/35, mbtmp3.9/18, Error ellipse: s-maj=17.0km s-min=12.5km az=158.0*

*NEIC **14** 05:54:17.9±1.6, 55°.01N±0°.09×160°.4E±0°.2, h147^{km}±7^{km}, mb4.2/49, Error ellipse: s-maj=15.6km s-min=13.3km az=105.0*

ISC 14 05:54:16.9±0.6, **54°.91N**±0°.03×**160°.76E**±0°.03, **h142**^{km}±4^{km}, **n181**, σ**1^{s}17**/256, **mb4.1**/40, **2C, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZV	**Kizimen**	**0.33**	**307**	P	**Pn**	**05 54 37.0**	**+0.2**
KZV				S	**Sn**	**05 54 51.7**	**-0.3**
KZV	**Kizimen**	**0.33**	**307**	PN	**Pn**	**05 54 37.0**	**+0.2**
KZV				S	**Sn**	**05 54 51.7**	**-0.3**
TUMD	**Tumrok D**	**0.36**	**325**	P	**Pn**	**05 54 36.4**	**-0.3**
TUMD				S	**Sn**	**05 54 51.0**	**-0.8**
TUMR	**Tumrok**	**0.51**	**317**	P	**Pn**	**05 54 38.1**	**+0.5**
TUMR				S	**Sn**	**05 54 53.8**	**+0.5**
TUMR	**Tumrok**	**0.51**	**317**	PN	**Pn**	**05 54 36.4**	**-1.2**
TUMR				S	**Sn**	**05 54 51.0**	**-2.3**
MKZ	**Mys Kozlova**	**0.67**	**122**	P	**Pn**	**05 54 38.2**	**-0.1**
MKZ				S	**Sn**	**05 54 54.0**	**-0.6**
MKZ	**Mys Kozlova**	**0.67**	**122**	PN	**Pn**	**05 54 38.2**	**-0.1**
MKZ				S	**Sn**	**05 54 54.0**	**-0.6**
KMNR	**Kamenistaya**	**0.90**	**341**	P	**Pn**	**05 54 40.8**	**+0.7**
KMNR				S	**Sn**	**05 54 58.0**	**+0.1**
KMNR	**Kamenistaya**	**0.90**	**341**	PN	**Pn**	**05 54 40.8**	**+0.7**
KMNR				S	**Sn**	**05 54 58.0**	**+0.1**
BZGR	**Bezymyannyi-Gr**	**1.03**	**358**	P	**Pn**	**05 54 41.3**	**0.0**
BZGR				S	**Sn**	**05 54 59.3**	**-0.6**
BZGR	**Bezymyannyi-Gr**	**1.03**	**358**	PN	**Pn**	**05 54 41.3**	**0.0**
BZGR				S	**Sn**	**05 54 59.3**	**-0.6**
BZMR	**Bezymyannaya**	**1.03**	**352**	S	**Sn**	**05 54 59.4**	**-0.7**
KIRR	**Kirishev**	**1.07**	**347**	P	**Pn**	**05 54 41.7**	**0.0**
KIRR				S	**Sn**	**05 55 00.2**	**-0.4**
KIRR	**Kirishev**	**1.07**	**347**	PN	**Pn**	**05 54 41.7**	**0.0**
KIRR				S	**Sn**	**05 55 00.2**	**-0.4**
KPT	**Kopyto**	**1.10**	**344**	P	**Pn**	**05 54 42.0**	**+0.1**
KPT				S	**Sn**	**05 55 00.4**	**-0.6**
KPT	**Kopyto**	**1.10**	**344**	PN	**Pn**	**05 54 42.0**	**+0.1**
KPT				S	**Sn**	**05 55 00.4**	**-0.6**
ZLN	**Zelenaya**	**1.11**	**1**	P	**Pn**	**05 54 42.8**	**+0.8**
ZLN				S	**Sn**	**05 55 01.9**	**+0.7**
ZLN	**Zelenaya**	**1.11**	**1**	PN	**Pn**	**05 54 42.8**	**+0.8**
ZLN				S	**Sn**	**05 55 01.9**	**+0.7**
KII	**Karymskiy**	**1.16**	**221**	P	**Pn**	**05 54 43.0**	**+0.5**
KII				S	**Sn**	**05 55 03.4**	**+1.4**
KII	**Karymskiy**	**1.16**	**221**	PN	**Pn**	**05 54 43.0**	**+0.5**
KII				S	**Sn**	**05 55 03.4**	**+1.4**
LGNR	**Loginova**	**1.17**	**358**	P	**Pn**	**05 54 43.6**	**+0.8**
LGNR				S	**Sn**	**05 55 03.9**	**+1.3**
LGNR	**Loginova**	**1.17**	**358**	PN	**Pn**	**05 54 43.6**	**+0.8**
LGNR				S	**Sn**	**05 55 03.9**	**+1.3**
CIRR	**Tsirk**	**1.21**	**360**	P	**Pn**	**05 54 43.4**	**+0.4**
CIRR				S	**Sn**	**05 55 03.9**	**+1.0**
CIRR	**Tsirk**	**1.21**	**360**	PN	**Pn**	**05 54 43.4**	**+0.4**
CIRR				S	**Sn**	**05 55 03.9**	**+1.0**
KOZ	**Kozyrevsk**	**1.25**	**337**	P	**Pn**	**05 54 43.7**	**+0.4**
KOZ	**Kozyrevsk**	**1.25**	**337**	PN	**Pn**	**05 54 43.7**	**+0.4**
KRSR	**Krestovskiy**	**1.31**	**355**	P	**Pn**	**05 54 44.3**	**+0.3**
KRSR				S	**Sn**	**05 55 04.4**	**-0.3**
KRSR	**Krestovskiy**	**1.31**	**355**	PN	**Pn**	**05 54 44.3**	**+0.3**
KRSR				S	**Sn**	**05 55 04.4**	**-0.3**
KLY	**Klyuchi**	**1.40**	**358**	P	**Pn**	**05 54 45.1**	**+0.3**
KLY				S	**Sn**	**05 55 07.0**	**+0.8**
KLY	**Klyuchi**	**1.40**	**358**	PN	**Pn**	**05 54 45.1**	**+0.3**
KLY				S	**Sn**	**05 55 07.0**	**+0.8**
SRDR	**Sredinnyy**	**1.52**	**338**	P	**Pn**	**05 54 46.1**	**-0.1**
SRDR				S	**Sn**	**05 55 08.1**	**-0.5**
SRDR	**Sredinnyy**	**1.52**	**338**	PN	**Pn**	**05 54 46.1**	**-0.1**
SRDR				S	**Sn**	**05 55 08.1**	**-0.5**
ESO	**Esso**	**1.55**	**312**	P	**Pn**	**05 54 46.5**	**+0.1**
ESO				S	**Sn**	**05 55 08.6**	**-0.4**
ESO	**Esso**	**1.55**	**312**	PN	**Pn**	**05 54 46.5**	**+0.1**
ESO				S	**Sn**	**05 55 08.6**	**-0.4**
BDR	**Baidarnaya**	**1.68**	**9**	P	**Pn**	**05 54 48.5**	**+0.6**
BDR				S	**Sn**	**05 55 12.1**	**+0.4**
BDR	**Baidarnaya**	**1.68**	**9**	PN	**Pn**	**05 54 48.5**	**+0.6**
BDR				S	**Sn**	**05 55 12.1**	**+0.4**
SMKR	**Semkarok**	**1.72**	**13**	S	**Sn**	**05 55 12.1**	**-0.4**
KBG	**Krutoberegovo**	**1.74**	**39**	P	**Pn**	**05 54 48.9**	**+0.4**
KBG				S	**Sn**	**05 55 12.7**	**0.0**
KBG	**Krutoberegovo**	**1.74**	**39**	PN	**Pn**	**05 54 48.9**	**+0.4**
KBG				S	**Sn**	**05 55 12.7**	**0.0**
KBTR	**Krutoberegovo**	**1.75**	**41**	P	**Pn**	**05 54 49.0**	**+0.4**
KBTR				S	**Sn**	**05 55 12.6**	**-0.3**
KBTR	**Krutoberegovo**	**1.75**	**41**	PN	**Pn**	**05 54 49.0**	**+0.4**
KBTR				S	**Sn**	**05 55 12.6**	**-0.3**
SRKR	**Sorokina**	**1.76**	**7**	P	**Pn**	**05 54 49.4**	**+0.6**
SRKR				S	**Sn**	**05 55 15.2**	**+1.9**
SRKR	**Sorokina**	**1.76**	**7**	PN	**Pn**	**05 54 49.4**	**+0.6**
SRKR				S	**Sn**	**05 55 15.2**	**+1.9**
SPN	**Mys Shipunski**	**1.87**	**194**	P	**Pn**	**05 54 49.2**	**-0.8**
SPN				S	**Sn**	**05 55 13.3**	**-2.0**
SPN	**Mys Shipunski**	**1.87**	**194**	PN	**Pn**	**05 54 49.2**	**-0.8**
SPN				S	**Sn**	**05 55 13.3**	**-2.0**
NLC	**Nalytchevo**	**1.93**	**206**	P	**Pn**	**05 54 50.7**	**0.0**
NLC				S	**Sn**	**05 55 16.2**	**-0.4**
NLC	**Nalytchevo**	**1.93**	**206**	PN	**Pn**	**05 54 50.7**	**0.0**
NLC				S	**Sn**	**05 55 16.2**	**-0.4**
SDLR	**Sedlovina**	**1.98**	**215**	P	**Pn**	**05 54 52.1**	**+0.7**
SDLR				S	**Sn**	**05 55 18.3**	**+0.5**
SDLR	**Sedlovina**	**1.98**	**215**	PN	**Pn**	**05 54 52.1**	**+0.7**
SDLR				S	**Sn**	**05 55 18.3**	**+0.5**
KRX	**Arik**	**1.99**	**219**	P	**Pn**	**05 54 52.6**	**+1.0**
KRX				S	**Sn**	**05 55 19.3**	**+1.2**
KRX	**Arik**	**1.99**	**219**	PN	**Pn**	**05 54 52.6**	**+1.0**
KRX				S	**Sn**	**05 55 19.3**	**+1.2**
KRER	**Koryakskii**	**2.00**	**217**	P	**Pn**	**05 54 52.7**	**+0.9**
KRER				S	**Sn**	**05 55 19.3**	**+0.9**
KRER	**Koryakskii**	**2.00**	**217**	PN	**Pn**	**05 54 52.7**	**+0.9**
KRER				S	**Sn**	**05 55 19.3**	**+0.9**
SMAR	**Somma**	**2.02**	**216**	P	**Pn**	**05 54 52.6**	**+0.6**
SMAR				S	**Sn**	**05 55 18.0**	**-0.8**
SMAR	**Somma**	**2.02**	**216**	PN	**Pn**	**05 54 52.6**	**+0.6**
SMAR				S	**Sn**	**05 55 18.0**	**-0.8**
AVH	**Avacha**	**2.04**	**217**	P	**Pn**	**05 54 52.9**	**+0.8**
AVH				S	**Sn**	**05 55 19.2**	**+0.2**
AVH	**Avacha**	**2.04**	**217**	PN	**Pn**	**05 54 52.9**	**+0.8**
AVH				S	**Sn**	**05 55 19.2**	**+0.2**
KOK	**Koryaka**	**2.05**	**218**	P	**Pn**	**05 54 53.1**	**+0.9**
KOK	**Koryaka**	**2.05**	**218**	PN	**Pn**	**05 54 53.1**	**+0.9**
UGLR	**Uglovaya**	**2.05**	**214**	P	**Pn**	**05 54 53.2**	**+0.9**
UGLR				S	**Sn**	**05 55 20.4**	**+1.0**
UGLR	**Uglovaya**	**2.05**	**214**	PN	**Pn**	**05 54 53.2**	**+0.9**
UGLR				S	**Sn**	**05 55 20.4**	**+1.0**
DALK	**Dalny**	**2.23**	**213**	P	**Pn**	**05 54 54.5**	**+0.3**
DALK				S	**Sn**	**05 55 23.2**	**+0.3**
DALK	**Dalny**	**2.23**	**213**	PN	**Pn**	**05 54 54.5**	**+0.3**
DALK				S	**Sn**	**05 55 23.2**	**+0.3**
PET	**Petropavlovsk**	**2.26**	**214**	α*i*PN	**Pn**	**05 54 55.3**	**+0.6**
PET				*i*S	**Sn**	**05 55 24.5**	**+0.8**
PET				pmax	pmax		
	comp=Z,63nm,0.5s						
PET				smax	smax		
	comp=N,311nm,0.5s						
PET				smax	smax		
	comp=E,474nm,0.5s						
PET	**Petropavlovsk**	**2.26**	**214**		**Pn**	**05 54 55.0**	**+0.3**
PET				Sn	**Sn**	**05 55 24.1**	**+0.4**
PEA0B	**Petropavlovsk-**	**2.55**	**226**	PN	**Pn**	**05 54 58.3**	**0.0**
PEA0B						05 55 30.7	
PEA0B	**Petropavlovsk-**	**2.55**	**226**		**Pn**	**05 54 58.3**	**0.0**
PEA0B				Sn	**Sn**	**05 55 30.7**	**+0.5**
PETK	**Petropavlovsk-**	**2.55**	**226**	P	**Pn**	**05 54 58.8**	**+0.4**
	comp=E,3.5nm,0.3s,baz=66,slow=13,SNR=40						
PETK				S	**Sn**	**05 55 33.5**	**+3.3**
	comp=E,6.2nm,0.3s,baz=86,slow=19,SNR=6.7						
PETK	**Petropavlovsk-**	**2.55**	**226**		**Pn**	**05 54 57.9**	**-0.4**
KRMR	**Karymshinskiy**	**2.60**	**218**	P	**Pn**	**05 54 59.3**	**+0.4**
KRMR				S	**Sn**	**05 55 31.2**	**0.0**
KRMR	**Karymshinskiy**	**2.60**	**218**	PN	**Pn**	**05 54 59.3**	**+0.4**
KRMR				S	**Sn**	**05 55 31.2**	**0.0**
RUS	**Russkaya**	**2.82**	**209**	P	**Pn**	**05 55 01.4**	**-0.2**
RUS				S	**Sn**	**05 55 35.1**	**-1.0**
RUS	**Russkaya**	**2.82**	**209**	PN	**Pn**	**05 55 01.4**	**-0.2**
RUS				S	**Sn**	**05 55 35.1**	**-1.0**
GRL	**Gorelyy**	**2.85**	**215**	P	**Pn**	**05 55 02.3**	**+0.1**
GRL				S	**Sn**	**05 55 35.9**	**-1.2**
GRL	**Gorelyy**	**2.85**	**215**	PN	**Pn**	**05 55 02.3**	**+0.1**
GRL				S	**Sn**	**05 55 35.9**	**-1.2**
MTVR	**Mutnovka**	**2.88**	**213**	P	**Pn**	**05 55 02.8**	**+0.3**
MTVR				S	**Sn**	**05 55 37.6**	**0.0**
MTVR	**Mutnovka**	**2.88**	**213**	PN	**Pn**	**05 55 02.8**	**+0.3**
MTVR				S	**Sn**	**05 55 37.6**	**0.0**
APC	**Apacha**	**2.92**	**228**	P	**Pn**	**05 55 03.3**	**+0.5**
APC				S	**Sn**	**05 55 39.4**	**+1.2**
APC	**Apacha**	**2.92**	**228**	PN	**Pn**	**05 55 03.3**	**+0.5**
APC				S	**Sn**	**05 55 39.4**	**+1.2**
BKI	**Bering**	**3.01**	**82**	P	**Pn**	**05 55 04.0**	**0.0**
BKI				S	**Sn**	**05 55 38.5**	**-2.0**
BKI	**Bering**	**3.01**	**82**	PN	**Pn**	**05 55 04.0**	**0.0**
BKI				S	**Sn**	**05 55 38.5**	**-2.0**
ASAK	**Asacha**	**3.05**	**215**	P	**Pn**	**05 55 05.4**	**+0.7**
ASAK	**Asacha**	**3.05**	**215**	PN	**Pn**	**05 55 05.4**	**+0.7**
KDTR	**Khodutka, Kamc**	**3.50**	**208**	P	**Pn**	**05 55 09.4**	**-1.0**
KDTR	**Khodutka, Kamc**	**3.50**	**208**	PN	**Pn**	**05 55 09.4**	**-1.0**
OSSR	**Ossora**	**4.53**	**15**	P	**Pn**	**05 55 24.1**	**+0.4**
OSSR				S	**Sn**	**05 56 14.4**	**-1.4**
OSSR	**Ossora**	**4.53**	**15**	PN	**Pn**	**05 55 24.1**	**+0.4**
OSSR				S	**Sn**	**05 56 14.4**	**-1.4**
SKR	**Severo-Kuril's**	**5.09**	**215**	*e*PN	**Pn**	**05 55 35.4**	**+4.1**
SKR				*e*S	**Sn**	**05 56 25.7**	**-3.5**
SKR				smax	smax		
	comp=E,46nm,0.8s						
SKR				smax	smax		
	comp=N,39nm,0.7s						
MA2	**Magadan**	**7.15**	**315**	P	**Pn**	**05 55 59.3**	**+0.5**
	baz=122,slow=13,SNR=17						
MA2	**Magadan**	**7.15**	**315**	PN	**Pn**	**05 55 58.4**	**-0.4**
MA2	**Magadan**	**7.15**	**315**		**Pn**	**05 55 58.4**	**-0.4**
KIWB	**Kanaga Island**	**13.52**	**94**	P	P	05 57 33.4	+6.3
ATKA	**Atka Island**	**15.10**	**90**	P	**P**	**05 57 46.0**	**+1.5**
UNV	**Unalaska Valle**	**19.01**	**80**	P	**Pn**	**05 58 29.7**	**0.0**
ANM	**Nome**	**19.36**	**47**	P	**Pn**	**05 58 32.8**	**-0.9**
ANM				pmax	pmax		
	comp=Z,1.0nm,1.1s						

ANM	Nome	19.36	47	P	Pn	05 58 32.8	-0.9
TIXI	Tiksi	21.61	333	P	P	05 58 53.6	-1.5
	comp=Z,1.5nm,0.2s,baz=115,slow=8.4,SNR=7.4						
TIXI	Tiksi	21.61	333	P	P	05 58 54.0	-1.1
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TIXI	Tiksi	21.61	333	P	P	05 58 54.0	-1.1
SVW2	Sparrevohn	23.57	57	P	P	05 59 16.4	+2.2
MJAR	Matsushiro Arr	24.01	229	P	P	05 59 18.3	-0.1
	comp=Z,1.6nm,0.4s,baz=22,slow=10,SNR=4.5						
IMAR	Indian Mountai	24.41	45	P	P	05 59 21.7	0.0
KDAK	Kodiak Island	25.62	64	P	P	05 59 34.7	+2.1
	comp=Z,32nm,1.3s,baz=252,slow=20,SNR=3.3						
KDAK	Kodiak Island	25.62	64	P	P	05 59 35.3	+2.6
KDAK				pmax	pmax		
	comp=Z,46nm,1.3s						
KDAK	Kodiak Island	25.62	64	P	P	05 59 35.3	+2.6
CNPM	China Poot	25.93	60	P	P	05 59 38.8	+3.3
MCK	McKinley	26.46	50	P	P	05 59 41.7	+1.5
MCK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MCK	McKinley	26.46	50	P	P	05 59 41.7	+1.5
MCK				IAmb	IAmb	05 59 49.9	
	comp=Z,9.8nm,1.3s						
GHO	Glory Hole Cre	26.68	55	P	P	05 59 44.5	+2.2
HDA	Harding Lake	27.28	49	P	P	05 59 47.4	-0.1
HDA				IAmb	IAmb	05 59 54.5	
	comp=Z,10nm,1.3s						
IL31		27.28	48	P	P	05 59 47.9	+0.4
ILAR	Eielson Array	27.28	48	P	P	05 59 47.5	0.0
	comp=Z,1.2nm,0.8s,baz=252,slow=5.7,SNR=16						
EGAK	Eagle	29.71	47	P	P	06 00 09.2	+0.1
EGAK				IAmb	IAmb	06 00 12.5	
	comp=Z,5.4nm,1.2s						
BCAR	Beaver Creek A	29.73	51	P	P	06 00 10.6	+1.2
DAWY	Dawson	30.59	48	P	P	06 00 18.0	+1.1
DAWY				IAmb	IAmb	06 00 22.7	
	comp=Z,8.7nm,1.5s						
INK	Inuvik	32.20	39	P	P	06 00 30.4	-0.4
	comp=Z,0.3nm,0.3s,baz=246,slow=4.8,SNR=4.5						
INK	Inuvik	32.20	39	P	P	06 00 30.5	-0.4
HYT	Haines Junctio	32.25	54	P	P	06 00 34.1	+2.5
HYT				IAmb	IAmb	06 00 34.3	
	comp=Z,4.1nm,1.0s						
C36M	Paulatuk	35.34	36	P	P	06 00 58.2	+0.3
C36M				IAmb	IAmb	06 00 58.4	
	comp=Z,1.5nm,0.3s						
YKA	Yellowknife Ar	41.57	44	P	P	06 01 50.6	+0.7
	comp=Z,1.1nm,0.6s,baz=298,slow=7.6,SNR=13						
YKA				PcP	PcP	06 03 44.5	+0.3
	comp=Z,0.3nm,0.6s,baz=301,slow=2.8,SNR=3.9						
KURK	Kurchatov	47.12	301	P	P	06 02 32.5	-1.7
KURK				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KURK	Kurchatov	47.12	301	P	P	06 02 32.5	-1.7
KURK				IAmb	IAmb	06 02 33.4	
	comp=Z,10nm,1.5s						
MKAR	Makanchi Array	47.73	295	P	P	06 02 35.5	-3.6
	comp=Z,0.5nm,0.5s,baz=45,slow=4.1,SNR=5.0						
PNTR	Pine Nut	53.59	72	P	P	06 03 25.6	+2.2
PNTR				IAmb	IAmb	06 03 26.7	
	comp=Z,3.9nm,0.6s						
YERR	Yerington	53.87	72	P	P	06 03 27.0	+1.8
YERR				IAmb	IAmb	06 03 28.1	
	comp=Z,4.4nm,0.9s						
KVN	Kaiserville	54.44	71	P	P	06 03 31.0	+1.6
KVN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KVN	Kaiserville	54.44	71	P	P	06 03 31.0	+1.6
KVN				IAmb	IAmb	06 03 32.3	
	comp=Z,2.3nm,0.7s						
YNE	Yellowstone No	54.48	61	P	P	06 03 31.0	+1.3
RYN	Ryan	54.51	72	P	P	06 03 32.6	+2.7
NVAR	Mina Array Bea	54.77	72	P	P	06 03 34.1	+2.3
	comp=Z,1.7nm,0.7s,baz=300,slow=7.5,SNR=13						
NVAR	Mina Array Bea	54.77	72	P	P	06 03 33.8	+2.0
RLMT	Red Lodge	54.77	60	P	P	06 03 33.8	+2.0
ELK	Elko	54.78	68	P	P	06 03 34.2	+2.3
ELK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ELK	Elko	54.78	68	P	P	06 03 34.2	+2.3
FXWY	Fox Creek	54.94	62	P	P	06 03 35.2	+2.2
TPAW	Teton Pass	55.08	63	P	P	06 03 36.2	+2.1
TPAW				IAmb	IAmb	06 03 51.7	
	comp=Z,4.6nm,1.4s						
SPUT	South Promonto	55.86	65	P	P	06 03 41.4	+1.9
SFJD	Kangerlussuaq	56.15	14	P	P	06 03 40.3	-0.7
SFJD				pmax	pmax		
	comp=Z,12nm,1.4s						
SFJD	Kangerlussuaq	56.15	14	P	P	06 03 40.3	-0.7
PD31	Pinedale Array	56.31	62	P	P	06 03 44.8	+2.0
PD31				IAmb	IAmb	06 03 45.0	
	comp=Z,3.5nm,1.4s						
PDAR	Pinedale Array	56.31	62	P	P	06 03 44.2	+1.4
	comp=Z,0.9nm,0.6s,baz=1.4,slow=2.5,SNR=11						
PDAR				PcP	PcP	06 04 38.8	+0.3
	comp=Z,0.7nm,1.1s,baz=355,slow=4.0,SNR=4.0						
PDAR	Pinedale Array	56.31	62	P	P	06 03 44.3	+1.5
ULM	Lac du Bonnet	57.30	48	P	P	06 03 49.6	+0.3
	comp=Z,0.5nm,0.4s,baz=321,slow=6.5,SNR=4.8						
ULM	Lac du Bonnet	57.30	48	P	P	06 03 49.9	+0.6
ULM				pmax	pmax		
	comp=Z,7.0nm,1.5s						
ULM	Lac du Bonnet	57.30	48	P	P	06 03 49.9	+0.6
ULM				IAmb	IAmb	06 04 02.8	
	comp=Z,7.5nm,1.4s						
RSSD	Black Hills	58.08	58	P	P	06 03 56.6	+1.4
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.7s						
RSSD	Black Hills	58.08	58	P	P	06 03 56.6	+1.4
RSSD				IAmb	IAmb	06 03 57.2	
	comp=Z,3.1nm,0.7s						
SRU	San Rafael Swe	58.47	66	P	P	06 04 00.2	+2.3
SRU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SRU	San Rafael Swe	58.47	66	P	P	06 04 00.2	+2.3
FINES	FINESS Array B	58.60	336	P	P	06 03 56.5	-1.7
	comp=Z,1.0nm,0.3s,baz=36,slow=7.4,SNR=14						
FINES	FINESS Array B	58.60	336	P	P	06 03 56.9	-1.3
FINES	FINESS Array B	58.60	336	P	P	06 03 56.9	-1.3
O20A	White River Ci	58.90	64	P	P	06 04 02.7	+1.8
O20A				IAmb	IAmb	06 04 04.7	
	comp=Z,2.3nm,0.9s						
PV22	Blue Mesa, Par	59.80	65	P	P	06 04 09.0	+1.9
PV22				IAmb	IAmb	06 04 10.6	
	comp=Z,5.0nm,1.3s						
SMCO	Snowmass	60.27	63	P	P	06 04 12.0	+1.5
EYMN	Ely	60.92	47	P	P	06 04 14.4	+0.1
EYMN				IAmb	IAmb	06 04 28.5	
	comp=Z,2.5nm,1.0s						
NB201	NORSAR Array S	61.88	344	P	P	06 04 19.3	-1.2
NOA	NORSAR Array B	61.90	344	P	P	06 04 19.0	-1.7
	comp=Z,0.9nm,0.6s,baz=19,slow=6.7,SNR=3.7						
ECSD	EROS Data Cent	61.91	53	P	P	06 04 21.9	+0.9
ECSD				IAmb	IAmb	06 04 22.5	
	comp=Z,6.1nm,1.4s						
MNTX	Cornudas Mount	66.81	68	P	P	06 04 55.3	+2.2
AKASG	Malin Array Be	67.25	329	P	P	06 04 53.5	-2.1
	comp=Z,0.3nm,0.3s,baz=30,slow=6.5,SNR=3.3						
TX31	Lajitas Ar. Si	69.58	68	P	P	06 05 12.1	+1.7
TX32	Lajitas Array	69.58	68	P	P	06 05 11.9	+1.5
TX32				IAmb	IAmb	06 05 12.2	
	comp=Z,2.0nm,0.7s						
TXAR	Lajitas Array	69.58	68	P	P	06 05 11.9	+1.5
	comp=Z,1.7nm,0.6s,baz=293,slow=5.1,SNR=39						
TXAR	Lajitas Array	69.58	68	P	P	06 05 12.1	+1.6
TXAR	Lajitas Array	69.58	68	P	P	06 05 12.1	+1.6
MIAR	Mount Ida	70.60	57	P	P	06 05 17.3	+0.8
MIAR				pmax	pmax		
	comp=Z,8.0nm,1.4s						
MIAR	Mount Ida	70.60	57	P	P	06 05 17.3	+0.8
MIAR				IAmb	IAmb	06 05 34.3	
	comp=Z,7.5nm,1.4s						
BURAR	Bucovina Array	71.19	330	P	P	06 05 19.0	-1.0
GERES	GERESS Array B	72.97	338	P	P	06 05 29.7	-0.8
	comp=Z,0.7nm,0.4s,baz=42,slow=6.1,SNR=6.4						
Z50A	Ashland	75.28	53	P	P	06 05 43.9	-0.2
WRA	Warramunga Arr	77.90	205	P	P	06 05 59.1	+0.3
	comp=Z,0.3nm,0.5s,baz=20,slow=6.2,SNR=3.2						
WRA	Warramunga Arr	77.90	205	IAmb	IAmb	06 06 07.2	
	comp=Z,0.1nm,0.8s						
VLC	Villacollemand	78.14	339	P	P	06 05 60.0	+0.1
MSSA	Maissana	78.17	339	P	P	06 05 58.9	-1.3
MSSA				IAmb	IAmb	06 06 17.1	
	comp=Z,4.7nm,0.9s						
MURB	Monte Urbino	78.52	337	P	P	06 06 03.0	+0.8
NRCA	Norcia	78.80	336	P	P	06 06 03.5	-0.1
NRCA				IAmb	IAmb	06 06 04.1	
	comp=Z,4.5nm,0.7s						
ASAR	Alice Springs	81.58	205	P	P	06 06 19.2	+0.7
	comp=Z,0.2nm,0.3s,baz=14,slow=5.2,SNR=4.8						
ESDC	Sonseca Array	84.88	348	P	P	06 06 34.1	-1.4
	comp=Z,1.2nm,0.6s,baz=353,slow=5.1,SNR=5.9						
ESDC	Sonseca Array	84.88	348	P	P	06 06 34.5	-1.0
QSPA	South Pole Qui	144.66	180		PKPbc	06 13 33.8	-0.5

IDC 14 06:10:53.8±8.7**, 13°.79N**×**146°.93E, h0^{km}, mb3.7**/5**, mb1 3.8**/5**, mb1mx3.4**/49**, mbtmp3.7**/5**, Error ellipse: s-maj=260.1km s-min=55.9km az=5.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	47.74	324	P	P	06 19 32.3	-0.5
	0.2nm,0.5s,baz=141,slow=9.3,SNR=2.4						
MKAR	Makanchi Array	62.74	316	P	P	06 21 21.4	+0.4
	0.7nm,0.5s,baz=95,slow=7.4,SNR=13						
KURBB	Kurchatov Arra	65.77	320	P	P	06 21 40.4	-0.3
	2.3nm,0.7s,baz=100,slow=6.7,SNR=11						
BVAR	Borovoye Array	71.02	322	P	P	06 22 13.7	+0.2
	0.9nm,0.8s,baz=107,slow=5.0,SNR=4.2						
YKA	Yellowknife Ar	81.76	28	P	P	06 23 14.3	0.0
	0.2nm,0.6s,baz=284,slow=4.8,SNR=4.1						

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*IDC **14** 06:52:05.0±7.8, 34°.04S×178°.74W, h0^{km}, mb3.9/2, mb1 4.2/2, mb1mx3.8/21, mbtmp3.9/2, Error ellipse: s-maj=389.0km s-min=57.1km az=163.0*

*WEL **14** 06:52:08.4±0.9, 34°S±10°×17°9W±1°2, h141^{km}±53^{km}, mB4.6/6, ML4.5/13, MLv4.4/13, Mw(mB)3.8/6*

*NEIC **14** 06:52:09.8±2.7, 34°.03S±0°.09×178°.6W±0°.1, h35^{km}±2^{km}, mb4.5/8, Error ellipse: s-maj=24.4km s-min=3.0km az=127.0*

ISC 14 06:52:09.9±1.1**, 33°.97S**±0°.08×**178°.6W**±0°.1**, h37^{km}, n48, σ1^{s}.29**/56**, mb4.1**/7**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	4.39	214	Pn	Pn	06 53 14.4	+0.4
MXZ				Sn	Sn	06 54 03.7	-0.1
MXZ	Matakaoa Point	4.39	214	P	Pn	06 53 14.8	+0.8
MXZ				S	Sn	06 54 06.2	+2.4
TWGZ	Tauwhareparae	5.04	213	P	Pn	06 53 24.0	+1.0
TWGZ				S	Sn	06 54 23.3	+3.3
TKGZ	Te Karaka	5.31	212	P	Pn	06 53 27.2	+0.5
TKGZ				S	Sn	06 54 29.0	+2.4
MWZ	Matawai	5.38	215	P	Pn	06 53 26.1	-1.5
MWZ				S	Sn	06 54 29.5	+1.3
URZ	Urewera	5.52	218		Pn	06 53 29.3	-0.2
URZ				Sn	Sn	06 54 31.3	-0.4
URZ	Urewera	5.52	218	P	Pn	06 53 29.4	-0.2
URZ				S	Sn	06 54 32.5	+0.8
RAGZ	Rawiri	5.56	215	P	Pn	06 53 30.6	+0.5
RIGZ	Rimuhau	5.57	211	P	Pn	06 53 30.2	-0.1
RIGZ				S	Sn	06 54 34.7	+1.6
PRGZ	Paritu Road	5.71	209	P	Pn	06 53 31.5	-0.6
SNGZ	Shannon Statio	5.82	213	P	Pn	06 53 34.0	+0.3
SNGZ				S	Sn	06 54 41.0	+1.8
RTZ	Ruatahuna	5.86	216	P	Pn	06 53 33.8	-0.5
KNZ	Kokohu	5.88	210	P	Pn	06 53 33.3	-1.1
MHGZ	Mahia Peninsul	5.89	208	P	Pn	06 53 33.9	-0.8
RAHZ	Arahi	6.05	214	P	Pn	06 53 37.2	+0.4
WHHZ	Waihua	6.11	212	P	Pn	06 53 31.3	-6.4
MTHZ	Maungataniwha	6.11	216	P	Pn	06 53 38.2	+0.5
NMHZ	Naumai	6.32	215	P	Pn	06 53 41.6	+1.0
ARHZ	Aropaoanui	6.37	213	P	Pn	06 53 40.6	-0.6
BKZ	Black Stump Fm	6.53	216		Pn	06 53 42.1	-1.4
BKZ	Black Stump Fm	6.53	216	P	Pn	06 53 43.1	-0.3
OUZ	Omahuta	6.58	257	Pn	Pn	06 53 45.0	+0.9
OUZ	Omahuta	6.58	257	P	Pn	06 53 43.4	-0.6
KWHZ	Kaweka Forest	6.76	215	P	Pn	06 53 46.5	-0.1
KAHZ	Kahuranaki	6.86	211	P	Pn	06 53 46.7	-1.2
BHHZ	Black Hill Sta	6.99	216	P	Pn	06 53 49.6	-0.1
MOVZ	Moawhango	7.08	218	P	Pn	06 53 51.4	+0.4
BFZ	Birch Farm	7.86	210	Pn	Pn	06 53 59.2	-2.4
BFZ	Birch Farm	7.86	210	P	Pn	06 53 59.3	-2.4
NNZ	Nelson	9.64	219	Pn	Pn	06 54 23.6	-2.4
BSWZ	Blackbirch Sta	9.76	215	Pn	Pn	06 54 27.2	-0.5
THZ	Tophouse	10.28	218	Pn	Pn	06 54 34.1	-0.8
KHZ	Kahutara	10.46	214	Pn	Pn	06 54 34.9	-2.4
RPZ	Rata Peaks	12.64	217	Pn	Pn	06 55 07.0	-0.1
KNTN	Kanton	31.69	13	P	P	06 58 31.5	+1.5
KNTN				IAmb	IAmb	06 58 45.3	
	comp=Z,62nm,0.9s						
STKA	Stephens Creek	33.36	262	P	P	06 58 43.0	-1.6
STKA				IAmb	IAmb	06 58 46.6	
	comp=Z,2.1nm,1.4s						
AS31	Alice Springs	42.56	271	P	P	07 00 00.2	-2.1
ASAR	Alice Springs	42.56	271	P	P	07 00 01.5	-0.8
	comp=Z,0.9nm,0.7s,baz=109,slow=7.6,SNR=11						
ASAR	Alice Springs	42.56	271	P	P	07 00 01.4	-0.9
WR0	Warramunga Arr	43.70	276	P	P	07 00 10.7	-0.9
WR0				IAmb	IAmb	07 00 11.2	
	comp=Z,4.0nm,1.2s						
WB2	Warramunga Arr	43.86	276	P	P	07 00 10.8	-2.0
WB2				IAmb	IAmb	07 00 12.7	
	comp=Z,20nm,0.8s						
WRA	Warramunga Arr	43.87	276	P	P	07 00 12.1	-0.8
	comp=Z,0.7nm,0.4s,baz=121,slow=7.3,SNR=3.5						
WRA	Warramunga Arr	43.87	276	P	P	07 00 11.7	-1.2
WB0	Warramunga Arr	43.91	276	P	P	07 00 12.2	-1.0
WB0				IAmb	IAmb	07 00 22.6	
	comp=Z,7.5nm,1.4s						
MIDW	Midway	61.86	1	P	P	07 02 25.7	+0.5
GNI	Garni	145.15	293		PKPbc	07 11 43.3	+0.1
FIA1	FINESS Array S	148.29	338	PKPbc	PKPbc	07 11 52.1	+0.8
FINES	FINESS Array B	148.29	338	PKPbc	PKPbc	07 11 51.7	+0.4
	comp=Z,3.2nm,0.9s,baz=48,slow=2.1,SNR=6.9						

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*NEIC **14** 06:56:03.9±1.6, 14°.20S±0°.08×73°.97W±0°.09, h76^{km}±5^{km}, mb4.7/142, Error ellipse: s-maj=15.3km s-min=8.1km az=50.0*

*IDC **14** 06:56:04.0±1.6, 14°.12S×73°.93W, h71^{km}±14^{km}, mb4.0/12, mb1 4.2/18, mb1mx4.0/31, mbtmp4.3/18, MS3.3/1, Ms1 3.2/1, ms1mx2.8/31, Error ellipse: s-maj=21.1km s-min=10.8km az=40.0*

*VAO **14** 06:56:05.9±0.8, 13°.92S×73°.40W, h10^{km}, mb4.4*

ISC 14 06:56:03.8±0.4**, 14°.24S**±0°.06×**73°.97W**±0°.07**, h76^{km}, n185, σ1^{s}.20**/147**, mb4.7**/71**, 1C-1D, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	3.58	308	P	Pn	06 56 57.6	+0.5
	170nm,0.3s,baz=139,slow=11,SNR=346						
NNA				S	Sn	06 57 37.8	-0.5
	581nm,0.3s,baz=225,slow=22,SNR=18						
LPAZ	La Paz	6.00	111	P	Pn	06 57 35.1	+4.6
	15nm,0.3s,baz=295,slow=8.6,SNR=349						
LPAZ				S	Sn	06 58 39.4	+1.3
	baz=174,slow=19,SNR=1.2						
MNMC	Minye Minye	6.42	140		Pn	06 57 36.3	+0.2
MNMC				Sn	Sn	06 58 46.0	-2.2
PB11	IPOC Station P	6.87	144		Pn	06 57 40.9	-1.2
GO01	Chusmiza	7.08	140		Pn	06 57 46.2	+1.0
PB01	IPOC Station P	8.00	148		Pn	06 57 57.7	+0.1
ATAH	Atahualpa	8.29	328	P	Pn	06 58 01.7	0.0
	0.4nm,0.3s,baz=59,slow=8.7,SNR=4.2						
ATAH				S	Sn	06 59 33.0	-1.0
	2.1nm,0.3s,baz=343,slow=17,SNR=2.1						
PB04	IPOC Station P	8.83	156	Pn	Pn	06 58 09.7	+0.7
LVC	Limon Verde	9.61	151	P	Pn	06 58 19.8	+0.1
	1.2nm,0.3s,baz=1.4,slow=6.6,SNR=8.4						
LVC				S	Sn	07 00 03.0	-3.3
	1.9nm,0.3s,baz=131,slow=22,SNR=9.9						
SAML	Samuel	11.80	65		Pn	06 58 47.2	-2.2
SAML	Samuel	11.80	65	*e*P	Pn	06 58 47.1	-2.3
SIV	San Ignacio	12.58	100	P	Pn	06 59 01.0	+1.1
	1.6nm,0.3s,baz=283,slow=12,SNR=51						
OTAV	Otavalo	15.05	343	P	P	06 59 37.0	+0.5
OTAV	Otavalo	15.05	343	*e*P	P	06 59 37.0	+0.5
FLOC	Florencia	15.81	354	*e*P	P	06 59 44.1	-0.3
FLOC	Florencia	15.81	354	P	P	06 59 46.3	+1.9
SOTA	Rioblanco	16.48	351	*e*P	P	06 59 54.5	+2.2
BBAC	Balboa, Cauca	16.48	348	*e*P	P	06 59 54.5	+2.5
PCON	Cinco Dias	16.63	352	*e*P	P	06 59 57.3	+3.1
SALV	Santo Antonio	17.73	98	*e*P	P	07 00 05.5	-0.2
CLDB	Colider	18.05	81	*e*P	Pn	07 00 10.0	+0.2
CFA	Coronel Fontan	18.07	164	P	Pn	07 00 10.3	+0.5
	0.2nm,0.3s,baz=338,slow=11,SNR=5.8						
ORTC	Ortega, Tolima	18.07	356	*e*P	Pn	07 00 12.1	+2.1
YOTC	Yotoco, Valle	18.26	352	*e*P	Pn	07 00 11.8	-0.5
CHIC	Chingaza	18.75	1	*e*P	Pn	07 00 20.1	+1.6
ROSC	El Rosal	18.96	359	P	Pn	07 00 24.7	+3.7
	1.9nm,0.3s,baz=238,slow=11,SNR=5.7						
ROSC	El Rosal	18.96	359	P	P	07 00 16.9	-2.6
PTGA	Pitinga	19.29	47	P	P	07 00 22.4	-0.4
	3.1nm,0.3s,baz=222,slow=14,SNR=39						
PTGA	Pitinga	19.29	47	P	Pn	07 00 23.7	-0.8
PTGA	Pitinga	19.29	47	*e*P	P	07 00 23.4	+0.6
CPUP	Villa Florida	19.68	130	P	P	07 00 28.3	+1.3
	0.1nm,0.3s,baz=309,slow=9.7,SNR=6.9						
CPUP	Villa Florida	19.68	130	P	Pn	07 00 29.2	+0.2
NORC	Norcasia	19.69	357	*e*P	Pn	07 00 29.3	0.0
SPBC	San Pablo de B	19.76	360	*e*P	Pn	07 00 30.3	+0.2
RUSC	La Rusia	20.02	3	*e*P	P	07 00 30.9	-0.3
RUSC	La Rusia	20.02	3	P	Pn	07 00 33.2	-0.4
CBOC	Ciudad Bolivar	20.07	354	*e*P	P	07 00 32.4	+0.9
HELC	Santa Helena	20.36	356	*e*P	P	07 00 33.8	-0.9
PTBC	PUERTO BERRIO,	20.65	359	*e*P	P	07 00 38.3	+0.8
BARC	Barichara	20.71	2	*e*P	P	07 00 38.3	-0.2
C2SB	Chapadao do Su	20.75	105	*e*P	Pn	07 00 40.8	-0.9
DBBC	Dabeiba	21.23	354	*e*P	P	07 00 45.8	+1.9
PAMC	Pamplona, Colo	21.48	3	*e*P	P	07 00 47.5	+0.7
ZARC	Zaragoza, Cauc	21.61	358	*e*P	P	07 00 48.3	+0.5
UREC	San Jos de Ur	21.90	356	*e*P	P	07 00 52.2	+1.2
SMLC	San Martn de	22.89	360	*e*P	P	07 00 58.2	-3.2
SDV	Santo Domingo	23.21	8	P	P	07 01 03.8	-0.9
	11nm,0.9s,baz=232,slow=11,SNR=12						
SDV	Santo Domingo	23.21	8	P	P	07 01 04.8	+0.1
ARGC	Ariguani, Magd	23.94	359	*e*P	P	07 01 12.6	+1.5
SJCC	San Jacinto, C	24.01	357	*e*P	P	07 01 09.4	-2.4
CPSB	Cacapava Do Su	24.82	134	*e*P	P	07 01 27.7	+8.6
BDFB	Brasilia	25.12	97	LR	LR	07 12 34.6	
	comp=Z,66nm,19.0s,baz=284,slow=40						
URIC	Uribia, Colomb	25.85	4	P	P	07 01 27.3	-1.1
JANB	Januaria	28.70	95	*e*P	P	07 01 59.7	+5.5
MLPR	Magueyes Islan	32.73	12	P	P	07 02 29.2	-0.3
CRPR	Cabo Rojo, PR	32.75	12	P	P	07 02 29.8	+0.2
OBIP	Obispado Ponce	32.89	13	P	P	07 02 29.7	-1.2
OBIP				IAmb	IAmb	07 02 30.5	
	comp=Z,15nm,0.8s						
MPR	Mayaguez	32.94	12	P	P	07 02 32.0	+0.7
AOPR	Arecibo Observ	33.15	13	P	P	07 02 33.5	+0.4
AOPR				IAmb	IAmb	07 02 33.6	
	comp=Z,13nm,0.8s						
GCPR	Guaynabo City	33.26	14	P	P	07 02 33.0	-1.1
GCPR				IAmb	IAmb	07 02 35.5	
	comp=Z,21nm,1.1s						
CUPR	Culebra, Puert	33.46	15	P	P	07 02 35.5	-0.2
CUPR				IAmb	IAmb	07 02 38.4	
	comp=Z,12nm,1.1s						
TEIG	Tepich	37.02	337	P	P	07 03 06.3	-0.1
152A	Waverly Hall	47.76	348	P	P	07 04 33.1	-0.3
152A				IAmb	IAmb	07 04 33.8	
	comp=Z,7.7nm,0.8s						
Z50A	Ashland	48.58	347	P	P	07 04 39.2	-0.6
Z50A				IAmb	IAmb	07 04 40.1	
	comp=Z,9.1nm,0.9s						
Y49A	Blount Mountai	49.27	346	P	P	07 04 44.6	-0.5
Y49A				IAmb	IAmb	07 05 01.5	
	comp=Z,15nm,1.4s						
PAULI	Pauline	49.35	351	P	P	07 04 45.4	-0.3
FPAL	Fort Paine	49.76	347	IAmb	IAmb	07 04 48.7	
	comp=Z,11nm,1.0s						
CPCT	Cooper Cave	50.42	349	P	P	07 04 53.1	-0.5
CPCT				IAmb	IAmb	07 04 55.5	
	comp=Z,6.5nm,1.2s						
SWET	Sewanee	50.47	347	IAmb	IAmb	07 04 54.5	
	comp=Z,12nm,1.0s						
TZTN	Tazewell	51.31	350	P	P	07 04 59.7	-0.7
U49A	Red Boiling Sp	51.69	348	P	P	07 05 02.3	-0.9
U49A				IAmb	IAmb	07 05 02.9	
	comp=Z,5.6nm,0.6s						
WVT	Waverly	51.78	346	P	P	07 05 02.7	-1.2
WVT				IAmb	IAmb	07 05 03.3	
	comp=Z,6.1nm,1.1s						
TXAR	Lajitas Array	51.95	327	P	P	07 05 05.6	+0.2
	comp=Z,1.9nm,0.8s,baz=152,slow=8.4,SNR=21						
TXAR	Lajitas Array	51.95	327	P	P	07 05 05.0	-0.3
MIAR	Mount Ida	51.97	339	IAmb	IAmb	07 05 06.2	
	comp=Z,7.3nm,0.8s						
ABTX	Abilene, Hawle	52.67	333	IAmb	IAmb	07 05 11.8	
	comp=Z,10nm,0.8s						
U40A	Yellville	53.39	341	IAmb	IAmb	07 05 16.2	
	comp=Z,9.8nm,0.8s						
WCI	Wyandotte Cave	53.45	348	P	P	07 05 15.2	-1.0
HHAR	Hobbs	53.67	340	IAmb	IAmb	07 05 18.4	
	comp=Z,8.3nm,0.9s						
P60A	Greenville	53.79	358	P	P	07 05 19.3	+0.7
MGMO	Mountain Grove	53.94	342	IAmb	IAmb	07 05 20.2	
	comp=Z,10nm,0.9s						
U38A	Gravette	53.96	340	IAmb	IAmb	07 05 20.5	
	comp=Z,5.6nm,0.8s						
TUL1	Leonard	53.98	338	IAmb	IAmb	07 05 21.0	
	comp=Z,7.1nm,0.9s						
O56A	Blue Knob Stat	54.39	356	P	P	07 05 23.4	+0.3
O56A				IAmb	IAmb	07 05 24.4	
	comp=Z,13nm,1.1s						
Q44A	Meyer Farm, Va	54.70	346	P	P	07 05 24.5	-0.7
S39A	Bolivar	54.76	341	IAmb	IAmb	07 05 26.0	
	comp=Z,8.7nm,0.8s						
M57A	Sunshine Farm,	55.37	357	P	P	07 05 30.9	+0.8
M57A				IAmb	IAmb	07 05 36.7	
	comp=Z,15nm,1.1s						
SFIN	Lafayette	55.69	348	P	P	07 05 30.7	-1.6
BINY	Binghamton	56.19	358	P	P	07 05 37.0	+1.1
L56A	Greenwood	56.19	357	P	P	07 05 35.9	0.0
L56A				IAmb	IAmb	07 05 45.9	
	comp=Z,12nm,1.1s						
K58A	Earlville	56.74	359	P	P	07 05 40.6	+0.8
R32A	Long Quarter,	57.28	337	P	P	07 05 43.8	+0.1
J56A	Wolcott	57.29	357	P	P	07 05 43.3	-0.4
J57A	Williamstown	57.40	358	P	P	07 05 44.6	+0.2
ANMO	Albuquerque	57.82	329	P	P	07 05 48.2	+0.4
CBKS	Cedar Bluff	58.02	336	IAmb	IAmb	07 05 50.5	
	comp=Z,11nm,1.1s						
DELO	Deloro Mine	58.57	357	P	P	07 05 52.5	-0.1
SADO	Sadowa	58.91	356	P	P	07 05 54.3	-0.6
SDCO	Great Sand Dun	59.59	331	IAmb	IAmb	07 06 01.7	
	comp=Z,8.0nm,1.0s						
X16A	Lo Mia Camp, P	60.08	325	IAmb	IAmb	07 06 05.5	
	comp=Z,4.3nm,1.1s						
WUAZ	Wupatki	60.85	325	IAmb	IAmb	07 06 10.7	
	comp=Z,8.1nm,1.1s						
ECSD	EROS Data Cent	61.29	341	IAmb	IAmb	07 06 11.8	
	comp=Z,6.1nm,1.0s						
ISCO	Idaho Springs	61.30	333	IAmb	IAmb	07 06 13.3	
	comp=Z,3.6nm,0.9s						
SMCO	Snowmass	61.42	331	IAmb	IAmb	07 06 14.5	
	comp=Z,3.9nm,0.8s						
PV13	Radium Mtn., P	61.51	329	IAmb	IAmb	07 06 14.6	
	comp=Z,4.2nm,0.8s						
SPMN	Marine on St.	61.60	345	IAmb	IAmb	07 06 13.4	
	comp=Z,8.7nm,0.8s						
PV12	Saucer Basin,	61.63	329	IAmb	IAmb	07 06 15.0	
	comp=Z,3.6nm,0.8s						
BATG	Bathurst New B	61.64	6	P	P	07 06 14.5	+0.9
BATG				IAmb	IAmb	07 06 14.9	
	comp=Z,9.4nm,0.9s						
D41A	Chassel	62.41	349	P	P	07 06 18.0	-0.6
O20A	White River Ci	62.78	331	IAmb	IAmb	07 06 23.0	
	comp=Z,7.7nm,0.8s						
SRU	San Rafael Swe	63.10	329	P	P	07 06 24.4	+0.7
K22A	Casper	64.02	334	IAmb	IAmb	07 06 30.9	
	comp=Z,7.9nm,0.8s						
RSSD	Black Hills	64.22	336	P	P	07 06 30.8	-0.2
DRLN	Deer Lake	64.87	12	P	P	07 06 35.0	+0.1
DUG	Dugway, Tooele	65.08	328	IAmb	IAmb	07 06 38.6	
	comp=Z,6.8nm,0.8s						
AGMN	Agassiz Nation	65.24	344	IAmb	IAmb	07 06 37.5	
	comp=Z,9.1nm,0.6s						
PDAR	Pinedale Array	65.46	332	P	P	07 06 39.0	-0.1
	comp=Z,1.4nm,0.8s,baz=121,slow=9.2,SNR=9.4						
PDAR	Pinedale Array	65.46	332	P	P	07 06 38.7	-0.5
HWUT	Hardware Ranch	65.51	330	IAmb	IAmb	07 06 40.5	
	comp=Z,5.2nm,0.8s						
AHID	Auburn Hatcher	66.17	331	IAmb	IAmb	07 06 44.7	
	comp=Z,5.2nm,0.8s						
TPAW	Teton Pass	66.66	332	P	P	07 06 46.4	-0.5

NVAR	Mina Array Bea	66.83	323	P	P	07 06 48.8	+0.8
	comp=Z,1.4nm,0.8s,baz=144,slow=8.0,SNR=8.7						
NVAR	Mina Array Bea	66.83	323	P	P	07 06 48.4	+0.5
FLWY	Flagg Ranch	67.00	332	IAmb	IAmb	07 06 50.8	
	comp=Z,13nm,0.8s						
ULM	Lac du Bonnet	67.03	345	P	P	07 06 48.1	-0.6
	comp=Z,5.9nm,0.5s,baz=166,slow=6.1,SNR=20						
ULM	Lac du Bonnet	67.03	345	IAmb	IAmb	07 06 48.9	
	comp=Z,12nm,1.0s						
RLMT	Red Lodge	67.19	334	IAmb	IAmb	07 06 51.4	
	comp=Z,10nm,1.4s						
LKWY	Lake	67.25	333	IAmb	IAmb	07 06 53.1	
	comp=Z,6.2nm,0.8s						
PNTR	Pine Nut	68.02	323	IAmb	IAmb	07 06 57.9	
	comp=Z,6.4nm,0.9s						
PAHR	Pah Rah Range	68.31	324	IAmb	IAmb	07 06 59.6	
	comp=Z,10nm,0.9s						
VNA3	Neumayer Olymp	68.45	162	P	P	07 06 58.9	+1.4
MFID	Camas Ranch	68.97	329	IAmb	IAmb	07 07 03.3	
	comp=Z,14nm,0.9s						
SCHQ	Schefferville	69.06	4	P	P	07 07 01.1	-0.2
	comp=Z,1.6nm,0.6s,baz=147,slow=4.4,SNR=4.0						
SCHQ	Schefferville	69.06	4	IAmb	IAmb	07 07 02.4	
	comp=Z,13nm,1.3s						
ORV	Oroville	69.44	322	IAmb	IAmb	07 07 06.4	
	comp=Z,11nm,1.0s						
MOD	Modoc Plateau	70.29	325	IAmb	IAmb	07 07 11.3	
	comp=Z,8.3nm,0.8s						
SNAA	Sanae	70.67	162	P	P	07 07 12.7	+1.6
SNAA	Sanae	70.67	162	P	P	07 07 12.7	+1.6
WDC	Whiskeytown Da	70.71	323	P	P	07 07 11.2	-0.5
I07A	Izee	71.33	327	IAmb	IAmb	07 07 17.9	
	comp=Z,7.5nm,1.1s						
LIC	Lamto	71.34	78	eP	P	07 07 15.6	-0.5
	comp=Z,13nm,0.9s						
TIC	Toumodi	71.47	78	eP	P	07 07 17.0	+0.1
F10A	Beach Ranch, E	71.50	330	IAmb	IAmb	07 07 20.3	
	comp=Z,5.5nm,0.8s						
DBIC	Dimbokro	71.63	78	P	P	07 07 17.4	-0.5
	comp=Z,3.2nm,0.7s,baz=231,slow=4.9,SNR=6.0						
DBIC	Dimbokro	71.63	78	IAmb	IAmb	07 07 18.5	
	comp=Z,7.2nm,1.1s						
KIC	Kosan Boka	71.65	78	eP	P	07 07 17.8	-0.2
	comp=Z,19nm,1.0s						
PINE	Pine Mountain	71.90	326	IAmb	IAmb	07 07 21.5	
	comp=Z,7.2nm,0.8s						
HUMO	Hull Mountain	72.24	324	P	P	07 07 21.3	+0.3
HUMO				IAmb	IAmb	07 07 34.5	
	comp=Z,9.7nm,1.4s						
FFC	Flin Flon	72.69	343	P	P	07 07 22.8	-0.5
FCC	Fort Churchill	74.58	349		P	07 07 34.5	+0.2
FCC				IAmb	IAmb	07 07 35.4	
	comp=Z,16nm,1.1s						
QSPA	South Pole Qui	75.91	180	P	P	07 07 43.4	+1.2
QSPA				IAmb	IAmb	07 07 45.0	
	comp=Z,17nm,1.4s						
TORD	Torodi Ar. Bea	79.71	74	P	P	07 08 04.0	-0.1
	comp=Z,3.2nm,0.9s,baz=256,slow=5.5,SNR=11						
TORD	Torodi Ar. Bea	79.71	74	P	P	07 08 03.0	-1.0
YKA	Yellowknife Ar	82.81	342	P	P	07 08 19.1	-0.3
	comp=Z,3.2nm,0.8s,baz=139,slow=6.0,SNR=58						
VNDA	Vanda	83.10	190	P	P	07 08 22.6	+1.8
	comp=Z,1.1nm,0.8s,baz=108,slow=6.4,SNR=2.9						
VNDA	Vanda	83.10	190	P	P	07 08 22.7	+1.8
PAB	San Pablo	83.91	47	P	P	07 08 26.7	+1.0
PAB				IAmb	IAmb	07 08 27.9	
	comp=Z,11nm,1.1s						
ESDC	Sonseca Array	84.24	47	P	P	07 08 28.3	+1.0
	comp=Z,4.2nm,0.8s,baz=258,slow=4.9,SNR=12						
ESDC	Sonseca Array	84.24	47	P	P	07 08 28.3	+1.0
SYO	Syowa Base	84.93	161	⇓eP	P	07 08 29.4	-0.8
SYO	Syowa Base	84.93	161	⇑ePcP	PcP	07 08 32.6	-0.8
RES	Resolute Bay	89.71	355	IAmb	IAmb	07 08 54.4	
	comp=Z,9.0nm,1.1s						
SUMG	Summit	89.73	10	iP	P	07 08 54.3	+0.7
	comp=Z,28nm,1.0s						
SUMG	Summit	89.73	10	P	P	07 08 54.1	+0.5
ILAR	Eielson Array	95.67	336	P	P	07 09 20.5	-0.2
	comp=Z,0.2nm,0.5s,baz=151,slow=3.4,SNR=5.5						
DAG	Danmarks Havn	96.36	11	iP	P	07 09 23.1	-0.5
PETK	Petropavlovsk-	123.89	325	PKP	PKPdf	07 14 53.1	0.0
	comp=Z,1.4nm,0.8s,baz=46,slow=6.2,SNR=2.7						
AKTO	Aktyubinsk	127.07	37	PKP	PKiKP	07 15 00.3	+0.5
	comp=Z,0.4nm,0.5s,baz=239,slow=4.9,SNR=3.9						
BVAR	Borovoye Array	132.13	28	PKP	PKiKP	07 15 10.0	+0.1
	comp=Z,0.2nm,0.3s,baz=329,slow=1.7,SNR=2.8						
ASAR	Alice Springs	133.50	216	PKP	PKPdf	07 15 12.5	+0.1
	comp=Z,0.7nm,0.7s,baz=135,slow=2.4,SNR=11						
WRA	Warramunga Arr	136.07	220	PKP	PKPdf	07 15 17.6	+0.4
	comp=Z,2.0nm,1.0s,baz=134,slow=2.0,SNR=8.1						
WRA	Warramunga Arr	136.07	220		PKPdf	07 15 17.1	-0.1
ZAA0	Zalesovo Array	137.01	18		PKPpre	07 15 05.6	
ZALV	Zalesovo Beam	137.01	18	PKP	PKPdf	07 15 17.9	0.0
	comp=Z,3.6nm,0.7s,baz=356,slow=4.5,SNR=6.4						
ZALV	Zalesovo Beam	137.01	18		PKPpre	07 15 06.3	
ZALV					PKPdf	07 15 17.2	-0.6
KURK	Kurchatov	137.38	26		PKiKP	07 15 19.9	-0.7
KURBB	Kurchatov Arra	137.42	26	PKP	PKiKP	07 15 19.9	-0.8
	comp=Z,0.9nm,0.6s,baz=312,slow=2.6,SNR=6.8						
MKAR	Makanchi Array	141.95	27	PKP	PKPdf	07 15 26.8	-0.4
	comp=Z,0.8nm,0.8s,baz=350,slow=1.6,SNR=5.1						
KSH	Kashi	143.53	41	PKP	PKPab	07 15 26.8	0.0
KSH				pPKP	pPKPdf	07 15 53.8	+0.7
KSH				PP	PP	07 18 44.1	+1.7
KSH				PKS	PKSdf	07 19 02.3	-3.8
MJAR	Matsushiro Arr	143.69	314	PKP	PKPbc	07 15 29.2	+1.0
	comp=Z,0.9nm,0.3s,baz=55,slow=4.6,SNR=2.6						
ULN	Ulaanbaatar	146.46	359		PKPbc	07 15 37.0	+0.4
SONM	Songino Array	146.50	360	PKPbc	PKPab	07 15 37.3	-0.4
	comp=Z,8.9nm,0.8s,baz=322,slow=2.0,SNR=38						
KSRS	Korea Array	149.77	324	PKP	PKPdf	07 15 40.7	+0.1
	comp=Z,0.7nm,0.4s,baz=355,slow=1.9,SNR=3.8						
KSRS				PKPbc	PKiKP	07 15 46.0	-0.4
	comp=Z,4.8nm,0.8s,baz=348,slow=1.2,SNR=14						
KSAR	Wonju Array Be	149.80	324	PKPdf	PKPdf	07 15 39.3	-1.4
KSAR					PKPbc	07 15 45.9	+0.3
LZH	Lanzhou	158.16	5	ePKP	PKPdf	07 15 50.6	-2.2
LZH				pPKP	pPKPdf	07 16 13.8	-1.8
LZH				sPKP		07 16 22.8	
LZH				PKP	PKPab	07 16 27.0	+0.4

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*MDD **14** 06:57:34.8±3.1, 37°.19N×13°.32W, h0^{km}, mb3.5/2, Error ellipse: s-maj=31.6km s-min=23.9km az=6.0, PRXIMO*
*INMG **14** 06:57:35.4±1.2, 36°.96N×13°.74W, h10^{km}, ML2.1, Error ellipse: s-maj=12.9km s-min=12.0km az=9.0*
ISC 14 06:57:35.9±4.3, **37°.3N**±0°.1×**13°.2W**±0°.2, **h10**^{km}**, n23,** σ**0^{s}.94**/33, **Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	Vila Bisbo	3.49	91	Pn	Pn	06 58 29.8	-0.4
	0.6nm,0.1s,SNR=7.9						
PFVI				Sn	Sn	06 59 10.5	-1.0
	5.6nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	3.49	91	ePn	Pn	06 58 30.1	-0.1
PFVI				eSn	Sn	06 59 10.5	-1.0
PFVI				A	A	06 59 11.7	
	4.3nm,0.9s						
PMAFR	Mafra	3.52	60	Pn	Pn	06 58 31.3	+0.7
	1.7nm,0.1s,SNR=7.9						
PMAFR	Mafra	3.52	60	ePn	Pn	06 58 31.3	+0.7
PMAFR				eSn	Sn	06 59 14.2	+1.9
PMAFR				A	A	06 59 16.3	
	7.5nm,0.5s						
PTEO	Sao Teotonio	3.57	84	Sn	Sn	06 59 13.4	-0.1
PTEO	Sao Teotonio	3.57	84	eSn	Sn	06 59 13.4	-0.1
PNCL	Nicolau / Gran	3.80	76	Pn	Pn	06 58 34.7	+0.3
PNCL				Sn	Sn	06 59 19.1	0.0
	1.5nm,0.5s						
PNCL	Nicolau / Gran	3.80	76	ePn	Pn	06 58 34.7	+0.3
PNCL				eSn	Sn	06 59 19.1	0.0
PNCL				A	A	06 59 20.9	
	1.5nm,0.5s						
MESJ	Messejana	3.99	80	Sn	Sn	06 59 23.9	-0.1
	1.9nm,0.5s						
MESJ	Messejana	3.99	80	eSn	Sn	06 59 23.9	-0.1
MESJ				A	A	06 59 24.7	
	1.9nm,0.5s						
PCVE	Castro Verde	4.12	83	Sn	Sn	06 59 26.4	-0.7
	1.4nm,0.6s						
PCVE	Castro Verde	4.12	83	eSn	Sn	06 59 26.4	-0.7
PCVE				A	A	06 59 30.1	
	1.4nm,0.6s						
PBDV	Barranco-do-Ve	4.20	89	Sn	Sn	06 59 28.2	-0.9
	1.6nm,0.2s						
PBDV	Barranco-do-Ve	4.20	89	eSn	Sn	06 59 28.2	-0.9
PBDV				A	A	06 59 32.4	
	1.6nm,0.2s						
PMTG	Montargil	4.31	64	Sn	Sn	06 59 31.4	-0.4
	1.2nm,1.0s						
PMTG	Montargil	4.31	64	eSn	Sn	06 59 31.4	-0.4
PMTG				A	A	06 59 37.7	
	1.2nm,1.0s						
PVAQ	Vaqueiros	4.37	86	Pn	Pn	06 58 43.4	+1.1
PVAQ				Sn	Sn	06 59 32.4	-0.8
	1.9nm,0.3s						
PVAQ	Vaqueiros	4.37	86	ePn	Pn	06 58 43.4	+1.1
PVAQ				eSn	Sn	06 59 32.4	-0.8
PVAQ				A	A	06 59 37.0	
	1.9nm,0.3s						
EGRO	El Granado	4.55	85	Pn	Pn	06 58 45.3	+0.5
	0.2nm,0.1s,SNR=4.0						
EGRO				Sn	Sn	06 59 38.7	+0.8
	0.5nm,0.1s,SNR=7.9						
PMRV	Marv??o	5.05	63	Pn	Pn	06 58 52.3	+0.6
PMRV				Sn	Sn	06 59 50.1	+0.1
	1.1nm,0.7s						
PMRV	Marv??o	5.05	63	ePn	Pn	06 58 52.3	+0.6
PMRV				eSn	Sn	06 59 50.1	+0.1
PMRV				A	A	07 00 03.8	
	1.1nm,0.7s						
EMIN	Mina Concepcio	5.21	82	Sn	Sn	06 59 53.0	-1.0
	0.4nm,0.1s,SNR=7.9						
ELOB	Lobios	6.07	39	Sn	Sn	07 00 12.2	-3.2
	0.6nm,0.1s,SNR=7.9						

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*DJA **14** 06:58:33.4±0.6, 0°S±3°×12°3E±°, h93^{km}±10^{km}, M3.9/8, MLv3.9/8*
*IDC **14** 06:58:37.2±10.0, 0°.18S×122°.82E, h130^{km}±103^{km}, mb3.0/4, mb1 3.1/4, mb1mx3.0/26, mbtmp3.4/4, Error ellipse: s-maj=170.0km s-min=22.5km az=66.0*
ISC 14 06:58:33.7±0.9, **0°.21S**±0°.07×**122°.91E**±0°.06, **h100**^{km}**, n11,** σ**0^{s}.97**/13, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	Luwuk	0.84	189	P	Pn	06 58 52.3	-0.2
MRSI	Marisa	1.18	305	P	Pn	06 58 55.9	-0.3
KMSI	Cibinong	1.33	54	P	Pn	06 58 57.4	-0.5
APSI	Ampana	1.44	241	P	Pn	06 58 59.3	+0.1
APSI				S	Sn	06 59 17.9	-0.6
SANI	Sanana	3.58	121	P	Pn	06 59 26.4	-0.9
TTSI	Tana Toraja	4.18	228	P	Pn	06 59 34.8	-0.5
SPSI	Sidrap Palu	4.87	220	P	Pn	06 59 43.9	-0.8
WRA	Warramunga Arr	22.58	151	P	P	07 03 27.7	+1.6
	0.3nm,0.5s,baz=333,slow=10,SNR=0.4						
ASAR	Alice Springs	25.64	156	P	P	07 03 55.7	+1.4
	0.3nm,0.7s,baz=341,slow=14,SNR=6.6						
ASAR				PcP	PcP	07 07 22.1	-0.6
	0.2nm,0.5s,baz=350,slow=2.7,SNR=5.1						
SONM	Songino Array	49.96	346	P	P	07 07 18.6	+1.0
	0.2nm,0.3s,baz=158,slow=7.1,SNR=3.7						
MKAR	Makanchi Array	58.74	328	P	P	07 08 20.2	-1.0
	0.4nm,0.7s,baz=116,slow=6.6,SNR=4.1						

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*EAF **14** 07:24:17.8±2.7, 26°.12S×22°.91E, h10^{km}, MD3.8*
*PRE **14** 07:24:30.8±1.3, 26°.90S×26°.75E, h2^{km}, ML2.7*
ISC 14 07:24:31.2±1.2, **26°.83S**±0°.05×**26°.76E**±0°.04, **h11**^{km}±12^{km}, **n11,** σ**1^{s}.43**/18, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRYS	Parys	0.54	100	eP	Pg	07 24 41.7	-0.2
PRYS				eS	Sg	07 24 48.8	-0.2
PRYS				AML	AML	07 24 56.8	
	comp=Z,86nm,0.2s						
KLOF	Kloof	0.90	58	eP	Pb	07 24 49.6	+0.6
KLOF				eS	Sg	07 25 01.4	+1.0
KLOF				AML	AML	07 25 06.0	
	comp=Z,939nm,0.1s						
SWZ	Schweizer	1.32	254	eP	Pg	07 24 55.1	-1.6
SWZ				eS	Sb	07 25 13.4	+0.1
SWZ				AML	AML	07 25 16.9	
	comp=Z,265nm,0.3s						
LBTB	Lobatse	2.09	330	iP	Pb	07 25 10.7	+1.4
LBTB	Lobatse	2.09	330	eP	Pb	07 25 09.2	-0.2
LBTB				eS	Sn	07 25 35.3	+2.8
LBTB				AML	AML	07 25 38.7	
	comp=Z,94nm,0.4s						
LBTB	Lobatse	2.09	330	iP	Pb	07 25 10.7	+1.4
BOSA	Boshof	2.22	217	iP	Pn	07 25 08.2	0.0
BOSA	Boshof	2.22	217	eP	Pn	07 25 09.1	+0.9
BOSA				eS	Sn	07 25 35.6	-0.1
BOSA				AML	AML	07 25 48.8	
	comp=Z,34nm,0.6s						
BOSA	Boshof	2.22	217	iP	Pn	07 25 08.2	0.0
MATP	Matopo	6.57	14	iP	Pn	07 26 07.9	-0.1
MATP				iS	Sn	07 27 20.6	-2.5
MATP	Matopo	6.57	14	iP	Pn	07 26 07.9	-0.1
MATP				iS	Sn	07 27 20.6	-2.5

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*UCR **14** 07:27:02.6±1.9, 9°.50N×83°.64W, h11^{km}±6^{km}, MW3.6*
*UPA **14** 07:27:03.7±1.0, 9°.45N×83°.55W, h0^{km}±25^{km}, MD3.6, MW3.6*
ISC 14 07:27:01.4±1.4, **9°.61N**±0°.10×**83°.52W**±0°.08, **h2**^{km}±13^{km}, **n13,** σ**0^{s}.59**/22, **2C, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCR2	La Lucha 2	0.49	286	⇑iP	Pg	07 27 11.6	+0.7
LCR2				eS	Sg	07 27 17.7	+0.3
EDBA	Buenos Aires	0.51	151	⇑iP	Pg	07 27 11.5	+0.4
EDBA				eS	Sg	07 27 17.7	0.0
SJS	Escuela Geolog	0.62	302	eP	Pg	07 27 12.7	-0.6
CNI2	El Empalme, Bo	1.05	100	iP	Pn	07 27 23.4	+0.3
CNI2				iS	Sn	07 27 38.7	+0.3
SRA1	San Ramn	1.06	297	eP	Pg	07 27 21.4	-0.3
SRA1				eS	Sg	07 27 35.8	+0.3
BRU2	Volcan	1.15	135	eP	Pn	07 27 24.5	-0.2
BRU2				iS	Sn	07 27 41.3	+0.2
BRU2	Volcan	1.15	135	eP	Pb	07 27 23.9	-0.2
BRU2				eS	Sb	07 27 38.8	-0.8
BCO2	Palmira	1.32	132	iP	Pn	07 27 27.4	+0.4
BCO2				iS	Sn	07 27 44.9	-0.4
PTAR3	Potrerillos Ar	1.36	132	iP	Pb	07 27 28.4	+0.7
PTAR3				eS	Sn	07 27 47.1	+0.8
DVD	David	1.57	138	eP	Pn	07 27 29.3	-1.1
DVD				iS	Sg	07 27 51.4	-0.6
CHIR3	Chiriqui UPA,	1.68	136	eP	Pg	07 27 33.3	-0.5
PLVR	Palo Verde	1.95	292	eP	Pn	07 27 35.3	-0.4
GMAL	Guarumal, Vera	2.91	129	eP	Pn	07 27 49.6	+0.9

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*ISK **14** 07:33:41.7, 34°.10N×25°.35E, h59^{km}, ML3.5/8*
*THE **14** 07:33:42.3, 34°.21N×25°.32E, h0^{km}±1^{km}, ML3.0/8, Error ellipse: s-maj=2.9km s-min=0.7km az=168.0*
*ATH **14** 07:33:43.1, 34°.27N×25°.28E, h31^{km}±3^{km}, ML3.1/6, Error ellipse: s-maj=4.4km s-min=1.9km az=352.0*
ISC 14 07:33:40.7±1.9, **34°.20N**±0°.08×**25°.35E**±0°.03, **h1**^{km}±12^{km}, **n44,** σ**0^{s}.44**/57, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIVA	Sivas	0.93	331	P	Pb	07 33 59.8	0.0
SIVA				S	Sn	07 34 13.7	-1.3
	3μm,0.6s						
SIVA	Sivas	0.93	331	P	Pb	07 33 59.7	0.0
SIVA				AML	AML	07 34 20.5	
	comp=N,4963μm,0.5s						
SIVA				AML	AML	07 34 21.3	
	comp=E,6907μm,0.4s						
LAST	Lasithi	0.97	6	P	Pb	07 34 00.8	+0.4
LAST				S	Sn	07 34 15.6	-0.4
	comp=E,1μm,0.6s						
LAST	Lasithi	0.97	6	P	Pb	07 34 00.8	+0.4
LAST				S	Sb	07 34 13.9	+0.2
LAST				AML	AML	07 34 18.5	
	comp=E,2140μm,0.5s						
LAST				AML	AML	07 34 23.8	
	comp=N,1988μm,0.7s						
NPS	Neapolis	1.08	11	P	Pn	07 34 02.7	-0.4
NPS				S	Sn	07 34 18.8	0.0
	comp=N,720nm,0.6s						
NPS	Neapolis	1.08	11	P	Pb	07 34 01.9	-0.4
NPS				AML	AML	07 34 27.9	
	comp=N,1655μm,0.5s						
NPS				AML	AML	07 34 28.4	
	comp=E,1231μm,1.1s						
KSTL	Kastelli Herak	1.13	348	P	Pg	07 34 01.9	-0.5
HRKL	Herakleio	1.13	350	PN	Pn	07 34 03.8	+0.1
HRKL				SN	Sn	07 34 19.8	-0.1
IDI	Anoyia	1.15	341	P	Pb	07 34 03.3	-0.2
IDI				S	Sn	07 34 20.9	+0.3
	comp=E,492nm,0.5s						
IDI	Anoyia	1.15	341	P	Pb	07 34 03.3	-0.2
IDI				AML	AML	07 34 22.2	
	comp=N,986μm,0.5s						
IDI				AML	AML	07 34 23.8	
	comp=E,992μm,0.6s						
IDI	Anoyia	1.15	341	PN	Pb	07 34 03.5	0.0
IDI				SN	Sb	07 34 19.1	+0.1
ZKR	Zakros	1.16	38	P	Pn	07 34 05.0	+0.9
ZKR				S	Sn	07 34 21.3	+0.7
	comp=E,572nm,0.5s						
ZKR	Zakros	1.16	38	P	Pn	07 34 04.9	+0.7
ZKR				AML	AML	07 34 28.3	
	comp=N,742μm,0.4s						
ZKR				AML	AML	07 34 30.7	
	comp=E,1543μm,0.5s						
ZKR	Zakros	1.16	38	PN	Pn	07 34 03.9	-0.2
STIA	Sitia Lasithi	1.17	31	P	Pn	07 34 04.5	+0.2
STIA				S	Sn	07 34 21.7	+0.8
GVD	Gavdhos	1.23	302	P	Pb	07 34 04.9	+0.2
GVD				S	Sn	07 34 22.7	+0.5
	comp=E,1μm,0.8s						
GVD	Gavdhos	1.23	302	P	Pb	07 34 04.9	+0.2
GVD				S	Sg	07 34 20.4	+0.3
GVD				AML	AML	07 34 27.1	
	comp=N,2027μm,0.5s						
GVD				AML	AML	07 34 27.2	
	comp=E,3113μm,0.5s						
GVD	Gavdhos	1.23	302	PN	Pb	07 34 04.7	0.0
GVDS	Gavdos	1.23	302	P	Pn	07 34 05.1	+0.1
GVDS				S	Sn	07 34 22.5	+0.2
	comp=E,780nm,0.6s						
GVDS	Gavdos	1.23	302	PN	Pg	07 34 04.6	+0.4
VAM	Vamos	1.54	322	P	Pn	07 34 09.1	-0.2
VAM				S	Sg	07 34 30.3	+0.2
	comp=E,458nm,0.6s						
VAM	Vamos	1.54	322	P	Pn	07 34 09.2	-0.1
IMMV	Iera Moni Meta	1.69	319	P	Pn	07 34 11.3	-0.2
IMMV	Iera Moni Meta	1.69	319	P	Pn	07 34 11.2	-0.3
IMMV	Iera Moni Meta	1.69	319	PN	Pn	07 34 10.9	-0.6
KNDR	Palaiochora Ch	1.72	307	PN	Pn	07 34 11.5	-0.3
RODP	Rodopos	1.89	316	PN	Pn	07 34 13.4	-0.8
KARP	Karpathos	2.01	47	P	Pb	07 34 17.1	-1.0
KARP	Karpathos	2.01	47	PN	Pn	07 34 15.7	-0.1
MHLO	Agia Marina, M	2.60	343	P	Pn	07 34 23.7	-0.3
KTHA	Kythira Island	2.78	318	P	Pn	07 34 25.8	-0.6
KTHA	Kythira Island	2.78	318	PN	Pn	07 34 26.2	-0.3
APE	Apeiranthos	2.87	3	PN	Pn	07 34 27.9	+0.2
DAT	Datca	3.11	35	PN	Pn	07 34 31.2	+0.1
VLI	Veliai	3.20	323	P	Pn	07 34 31.6	-0.5
DYR	Agios Nikonas	3.55	317	P	Pn	07 34 37.2	+0.2
DALY	Dalyan (Mula)	3.75	45	PN	Pn	07 34 40.1	+0.3
YER	Yerkesik	3.78	38	PN	Pn	07 34 40.5	+0.3
FETY	Fethiye	3.90	50	PN	Pn	07 34 41.5	-0.3
AKAS	Kas	4.03	59	PN	Pn	07 34 43.9	+0.2
ELL	Elmali	4.50	54	PN	Pn	07 34 50.3	0.0
KORT	Korkueli	4.94	54	PN	Pn	07 34 56.8	+0.6
GAZI	Gazipasa	6.05	68	PN	Pn	07 35 10.6	-0.8
SEYD	Seydisehir-KON	6.17	57	PN	Pn	07 35 12.9	-0.2

KRSC 14 07:39:52.2±1.2, **50°.96N**×**157°.79E, h60**^{km}±20^{km}**, ML3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAU	Pauzhetka	0.80	310	eP	Pn	07 40 09.5	+1.9
PAU				eS	Sn	07 40 20.2	+1.2
SKR	Severo-Kuril's	1.09	256	eP	Pn	07 40 12.8	+1.4
SKR				eS	Sn	07 40 26.3	+0.6
ALID	Alaid	1.42	267	eP	Pn	07 40 17.8	+1.9
ALID				eS	Sn	07 40 34.3	+0.6
ASAK	Asacha	1.43	3	eP	Pn	07 40 18.2	+2.2
ASAK				eS	Sn	07 40 35.9	+2.0
MIPR	Malaya Ipel'ka	1.47	335	eP	Pn	07 40 18.7	+2.2
MIPR				eS	Sn	07 40 37.1	+2.4
RUS	Russkaya	1.54	17	eP	Pn	07 40 19.3	+1.8
RUS				eS	Sn	07 40 37.6	+1.1
MTVR	Mutnovka	1.55	9	eP	Pn	07 40 20.2	+2.5
MTVR				eS	Sn	07 40 38.8	+2.0
GRL	Gorelyy	1.61	6	eP	Pn	07 40 21.3	+2.9
GRL				eS	Sn	07 40 40.8	+2.6
KRMR	Karymshinskiy	1.89	6	eP	Pn	07 40 25.3	+3.2
KRMR				eS	Sn	07 40 47.7	+2.9
APC	Apacha	2.01	349	eP	Pn	07 40 26.7	+3.0
APC				eS	Sn	07 40 50.4	+2.7
DALK	Dalny	2.16	16	eP	Pn	07 40 28.4	+2.6
DALK				eS	Sn	07 40 53.5	+2.1
UGLR	Uglovaya	2.34	15	eP	Pn	07 40 31.8	+3.4
UGLR				eS	Sn	07 40 59.3	+3.2
AVH	Avacha	2.38	14	eP	Pn	07 40 33.2	+4.3
SMAR	Somma	2.39	15	eP	Pn	07 40 33.0	+3.8
KOK	Koryaka	2.40	12	eP	Pn	07 40 33.1	+4.0
NLC	Nalytchevo	2.42	23	eS	Sn	07 40 57.6	-0.1
KRER	Koryakskii	2.42	14	eP	Pn	07 40 33.0	+3.4
KRX	Arik	2.46	12	eP	Pn	07 40 33.5	+3.4
SPN	Mys Shipunski	2.55	32	eP	Pn	07 40 33.8	+2.7
SPN				eS	Sn	07 41 02.6	+1.6
MKZ	Mys Kozlova	4.33	32	eP	Pn	07 40 58.1	+2.7
MKZ				eS	Sn	07 41 46.7	+2.2
KZV	Kizimen	4.43	19	eP	Pn	07 40 59.6	+2.7
TUMD	Tumrok D	4.54	19	P	Pn	07 41 01.4	+3.1
TUMR	Tumrok	4.56	17	eP	Pn	07 41 02.1	+3.4
KMNR	Kamenistaya	5.03	16	eP	Pn	07 41 09.3	+4.2
KBTR	Krutoberegovo	6.05	28	eP	Pn	07 41 22.6	+3.6
BKI	Bering	6.51	46	eP	Pn	07 41 27.8	+2.6

IDC 14 07:53:27.4±2.0, **8°.23S**×**127°.43E, h0**^{km}**, mb3.6**/1, **mb1 3.5**/3, **mb1mx3.3**/48, **mbtmp3.3**/3, **ML3.3**/2, **Error ellipse: s-maj=215.2km s-min=32.1km az=63.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	13.43	151	Pn	Pn	07 56 38.0	-1.4
	0.2nm,0.3s,baz=324,slow=14,SNR=9.7						
WRA				Sn	Sn	07 58 57.9	-12
	0.6nm,0.3s,baz=336,slow=22,SNR=9.8						
ASAR	Alice Springs	16.56	159	Pn	P	07 57 22.6	-1.3
	0.1nm,0.3s,baz=334,slow=8.7,SNR=4.5						
ASAR				Sn	Sn	08 00 14.7	-11
	0.1nm,0.3s,baz=328,slow=23,SNR=3.9						
MKAR	Makanchi Array	67.89	328	P	P	08 04 27.8	0.0
	0.3nm,0.5s,baz=119,slow=8.2,SNR=7.5						

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*JMA **14** 08:14:12.1±0.1, 22°.22N×121°.13E, h21^{km}±3^{km}, M3.6*
*TAP **14** 08:14:12.4, 22°.27N×121°.08E, h6^{km}, ML3.8, C*
ISC 14 08:14:12.7±1.0, **22°.26N**±0°.03×**121°.10E**±0°.03, **h14**^{km}±7^{km}, **n97,** σ**0^{s}.77**/107, **1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAW	Tawu	0.21	296	iP	Pg	08 14 17.5	+0.1
	baz=297						
TAW				S	Sg	08 14 20.4	-0.3
	baz=297						
EAST	Anshuo	0.26	297	⇓iP	Pg	08 14 18.4	+0.1
	baz=298						
EAST				iS	Sg	08 14 22.0	-0.1
	baz=298						
ECL	Taimali	0.36	338	P	Pb	08 14 20.5	-0.3
	baz=341						
ECL				S	Sb	08 14 26.3	-0.1
	baz=341						
TSEB	Hengchuen, Pin	0.41	207	eS	Sn	08 14 29.2	-2.3
	baz=209						
TWKBT	Hengchun	0.42	220	P	Pb	08 14 21.5	-0.4
	baz=217						
TWK1	Hengchun	0.42	221	P	Pb	08 14 21.6	-0.3
	baz=217						
TWK1				S	Sb	08 14 28.4	+0.3
	baz=217						

HEN	Hengchun baz=229	0.42	233	*e*S	Sb	08 14 28.7	+0.6
SCZT	Fangliau baz=283	0.46	284	*i* P	Pg	08 14 21.8	0.0
SCZT	baz=283			*e*S	Sg	08 14 28.4	+0.5
LAY	Lan-yu baz=117	0.47	118	*e*P	Pb	08 14 23.0	+0.2
TTN	Taitung baz=8.0	0.49	5	*e*P	Pn	08 14 24.6	-0.6
SSPT	Xinbi baz=294	0.54	294	P	Pb	08 14 24.2	+0.3
SSPT	baz=294			S	Sb	08 14 32.7	+1.2
TWGBT	Beinan baz=359	0.55	358	*e*P	Pg	08 14 23.7	+0.1
MASBT	Mashibuluo baz=309	0.56	309	P	Pb	08 14 23.8	-0.4
TWG	Pinlang baz=359	0.56	357	P	Pg	08 14 23.7	+0.1
TWH	Lutao baz=42	0.56	38	P	Pb	08 14 24.5	+0.2
TWH	baz=42			*e*S	Sb	08 14 32.9	+0.6
SSD	Sandimen baz=319	0.65	318	P	Pg	08 14 25.4	0.0
WLCH	Liuqiu baz=277	0.67	278	*e*P	Pn	08 14 28.7	+0.9
TWP	Hsiaoliuchiu baz=276	0.69	277	*e*P	Pn	08 14 29.0	+1.0
SGLT	Jiouru baz=310	0.73	309	*e*P	Pn	08 14 28.2	-0.3
KAU	Kaohsiung baz=292	0.79	293	*e*P	Pn	08 14 30.9	+1.4
SLGT	Liugui baz=330	0.84	330	P	Pb	08 14 29.1	+0.1
TWM1	Shoushan baz=312	0.84	312	*e*P	Pn	08 14 30.6	+0.5
SNJT	Kaohsiung City baz=304	0.86	305	*e*P	Pn	08 14 31.2	+0.9
WSSB	Gushan baz=296	0.86	296	*e*P	Pn	08 14 31.4	+1.0
CHKT	Chengkung baz=18	0.87	16	*e*S	Sb	08 14 41.2	+0.2
SGST	Jiashian baz=330	0.94	330	*e*P	Pb	08 14 30.7	-0.1
FULB	Fuli baz=11	0.95	11	*e*P	Pb	08 14 30.5	-0.4
STYT	Tauyuan baz=341	0.95	341	*e*P	Pg	08 14 31.1	0.0
CHN3	Shinhua baz=320	1.06	320	*e*P	Pg	08 14 34.8	+1.7
CHN1	Nanshi baz=330	1.06	330	*e*P	Pg	08 14 34.4	+1.3
WTP	Ta-pu baz=336	1.08	335	*e*P	Pg	08 14 34.5	+1.0
TWF1	Yuli baz=10.0	1.10	9	*e*P	Pg	08 14 33.9	0.0
SNST	Tainan City baz=330	1.10	330	*e*P	Pg	08 14 35.0	+1.0
TPUB	Ta-pu baz=337	1.12	337	*e*P	Pg	08 14 34.9	+0.6
YULB	Yu-li baz=10.0	1.14	9	*e*P	Pn	08 14 34.2	+0.1
CHN4	Tsaushan baz=337	1.18	337	*e*P	Pg	08 14 36.1	+0.7
YUS	Yu-Shan baz=354	1.23	354	*e*P	Pg	08 14 37.1	+0.7
HGSD	Ruisui baz=14	1.26	14	*e*P	Pg	08 14 36.6	-0.3
ALS	Alishan baz=348	1.27	348	*e*P	Pg	08 14 37.8	+0.5
CHY	Chiayi baz=333	1.38	333	*e*P	Pb	08 14 38.6	+0.4
CHN5	Tsauling baz=344	1.38	344	*e*P	Pg	08 14 39.6	+0.3
EGFH	Guangfu baz=12	1.43	12	*e*P	Pg	08 14 40.0	-0.2
WHYT	Xinyi Township baz=351	1.44	351	*e*P	Pg	08 14 41.2	+0.7
VWDT	VWDT baz=2.0	1.48	1	*e*P	Pg	08 14 41.0	-0.2
WGK	Gukeng baz=341	1.50	341	*e*P	Pn	08 14 39.6	+0.5
WDLH	Douliu baz=340	1.51	340	*e*P	Pb	08 14 40.7	+0.2
SSLB	Suanglung baz=355	1.52	355	*e*P	Pb	08 14 41.0	+0.3
ESL	Shilin baz=12	1.57	11	*e*P	Pb	08 14 41.8	+0.2
WJS	Zhushan baz=348	1.59	348	*e*P	Pg	08 14 43.2	0.0
WSF	Szhu baz=330	1.59	330	*e*P	Pb	08 14 41.4	-0.4
SMLT	Sun Moon Lake baz=354	1.62	353	*e*P	Pb	08 14 43.0	+0.5
WNT	Mingjian baz=347	1.65	347	*e*P	Pb	08 14 43.4	+0.5
WDGT	Dungji baz=307	1.66	307	*e*P	Pg	08 14 44.1	-0.4
OWD	Renai baz=2.0	1.69	2	*e*P	Pb	08 14 43.9	+0.3
RLNB	Erlin baz=337	1.76	337	*e*S	Sg	08 15 08.4	-0.9
DPDB	Guoxing baz=355	1.77	355	*e*P	Pb	08 14 44.0	-0.9
CHGB	Renai baz=2.0	1.79	2	*e*P	Pg	08 14 46.3	-0.8
VCHM	Qimei baz=301	1.81	302	*e*P	Pn	08 14 42.4	-1.0
TWD	Chiawan baz=14	1.86	14	*e*P	Pb	08 14 45.8	-0.7
TCU	Taichung baz=348	1.92	348	*e*P	Pb	08 14 47.1	-0.3
PNG	Penghu baz=312	1.93	313	*e*P	Pn	08 14 44.5	-0.5
NACB	Ninganchiao baz=13	1.96	13	*e*P	Pn	08 14 46.0	+0.5
ETLH	Xiulin Townshi baz=10.0	1.97	10	*e*P	Pb	08 14 47.2	-1.1
TDCB	Techi baz=2.0	1.98	2	*e*P	Pb	08 14 48.8	+0.2
TWT	Tachien baz=2.0	1.98	2	*e*P	Pb	08 14 49.0	+0.3
WHP	Taichung City baz=356	2.01	356	*e*P	Pb	08 14 48.8	-0.2
TWQ1	Liyutan baz=352	2.10	352	*e*P	Pb	08 14 49.4	-1.1
NSY	Sanyi baz=352	2.17	352	*e*P	Pb	08 14 50.8	-0.8
NNSB	Datong baz=7.0	2.17	7	*e*P	Pb	08 14 50.2	-1.6
NNSH	Datong baz=7.0	2.17	7	*e*P	Pb	08 14 51.1	-0.7
NNS	Nan Shan baz=7.0	2.18	7	*e*P	Pb	08 14 52.4	+0.4
ENA	Nanau baz=15	2.23	15	*e*P	Pn	08 14 49.8	+0.6
NDT	Datong Townshi baz=9.0	2.36	9	*e*P	Pb	08 14 54.6	-0.4
LIOB	Emei baz=358	2.37	358	*e*P	Pb	08 14 53.5	-1.7
ENTT	Nioudou baz=10.0	2.40	10	*e*P	Pb	08 14 54.5	-1.2
YHNB	Yeheng baz=6.0	2.41	6	*e*P	Pn	08 14 53.0	+1.3
NSK	Sanguang baz=6.0	2.41	6	*e*P	Pb	08 14 55.0	-1.0
TWC	Suao baz=17	2.43	16	*e*P	Pb	08 14 55.7	-0.5
EOS1	EOS1 baz=22	2.46	22	*e*P	Pn	08 14 53.2	+0.8
NWLT	Wulai baz=8.0	2.53	8	*e*P	Pb	08 14 56.1	-1.8
JYNG	Yonagunijimaku	2.76	38	P	Pn	08 14 55.3	-1.2
TIPB	Shuangxi baz=14	2.78	14	*e*P	Pn	08 14 58.6	+1.8
HATJ	Hateruma jima	3.06	54	P	Pn	08 15 01.4	+0.8
HATJ				S	Sn	08 15 36.6	-0.5
VWUC	VWUC baz=331	3.11	331	*e*P	Pn	08 15 00.5	-0.8
IRIF	Iriomote-Funau	3.18	49	P	Pn	08 15 03.3	+1.1
IRIF				*e*S	Sn	08 15 40.7	+0.8
KNM	Kinmen baz=309	3.26	312	*e*P	Pn	08 15 04.5	+1.2
PTMZ	Houxiangcun baz=326	3.31	327	*e*P	Pn	08 15 03.8	-0.2
KNMB	Chin-men Tao baz=311	3.32	312	*e*P	Pn	08 15 04.0	-0.2
JKRS	Kuro-shima	3.32	53	*e*S	Sn	08 15 43.3	-0.1
JIJ	Ishigaki jima	3.49	53	P	Pn	08 15 07.8	+1.3
JIJ				*e*S	Sn	08 15 47.8	+0.1
ZPLA	Ao Xicun baz=298	3.50	299	*e*P	Pn	08 15 05.8	-0.9
JISG	Ishigakijimahi	3.75	51	P	Pn	08 15 10.7	+0.6
ZZJH	Jiuhuzhen baz=304	3.87	305	*e*P	Pn	08 15 11.2	-0.5
AXDP	Jialang baz=312	3.89	313	*e*P	Pn	08 15 12.1	+0.1
MATB	Ma-tsu baz=344	4.01	345	*e*P	Pn	08 15 13.7	0.0
MHZQ	Yeshan baz=333	4.26	334	*e*P	Pn	08 15 17.4	+0.3
LYJJ	Jianjiangzhen baz=344	4.44	344	*e*P	Pn	08 15 20.0	+0.5

ISU ***14*** *08:15:03.0, 39°.20N×72°.50E, h5^{km}*

SOME ***14*** *08:15:03.8, 39°.53N×72°.22E, h15^{km}, MS3.9*

IDC ***14*** *08:15:03.5±0.6, 39°.13N×72°.69E, h0^{km}, mb4.2/24, mb1 4.3/33, mb1mx4.1/65, mbtmp4.2/33, ML3.7/9, MS3.6/2, Ms1 3.6/2, ms1mx2.9/51, Error ellipse: s-maj=11.7km s-min=9.8km az=153.0*

BJI ***14*** *08:15:04.4±0.0, 39°.35N×72°.51E, h8^{km}, mB4.5/7, mb4.5/31, ML4.4/3, Ms4.3/9, Ms7 4.2/8*

KRNET ***14*** *08:15:04.5±0.1, 39°.12N×72°.63E, mb4.5*

MOS ***14*** *08:15:10.4±1.1, 39°.32N×72°.62E, h59^{km}, mb4.6/20, Error ellipse: s-maj=7.8km s-min=4.9km az=80.9*

NNC ***14*** *08:15:10.1±2.2, 39°.46N×72°.44E, h0^{km}, mb4.9, mpv4.7, Error ellipse: s-maj=19.2km s-min=10.4km az=165.0*

NEIC ***14*** *08:15:11.7±2.0, 39°.37N±0°.05×72°.61E±0°.06, h54^{km}±5^{km}, mb4.6/31, Error ellipse: s-maj=7.9km s-min=5.7km az=131.0*

ISC 14 08:15:06.5±1.1**, 39°.26N**±0°.03×**72°.68E**±0°.02**, h15**^{km}±6^{km}**, n267,** σ**2^{s}.47**/320**, mb4.4**/49**, MS4.0**/6**, 54C-27D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANR	Andizhan	1.51	351	*e*P	Pb	08 15 34.2	0.0
ANR				*e*S	Sg	08 15 56.7	+1.5
FRG	Fergana	1.62	335	⇓*i*P	Pn	08 15 30.1	-4.5
FRG				S	Sb	08 15 57.9	+1.4
BTK	Batken baz=4.0	1.64	300	⇑*i*P	Pb	08 15 35.6	-0.9
BTK	baz=4.0			⇑*i*S	Sg	08 15 58.7	-0.6
BTK	Batken	1.64	300	PN	Pn	08 15 34.7	-0.2
BTK						08 15 58.3	
BTK	Batken	1.64	300		Pn	08 15 34.7	-0.2
BTK				Sn	Sg	08 15 58.2	-1.1
BTK	Batken	1.64	300	*i* P	Pb	08 15 35.7	-0.8
BTK				*i* S	Sg	08 16 00.5	+1.2
GAR	Garm	1.85	263		Pb	08 15 39.5	-0.6
GAR				Sn	Sg	08 16 08.6	+2.5
NAM	Namangan	1.90	336	*e*P	Pb	08 15 41.8	+1.0
NAM				S	Sg	08 16 08.8	+1.3
ARSB	Arslanbob baz=7.0	2.07	6	⇑*i*P	Pb	08 15 43.2	-0.7
ARSB	baz=7.0			⇑*i*S	Sb	08 16 11.8	+2.3
ARSB	Arslanbob	2.07	6	PN	Pb	08 15 43.2	-0.7
ARSB	Arslanbob	2.07	6		Pb	08 15 43.1	-0.7
ARSB	Arslanbob	2.07	6	*e*P	Pb	08 15 43.1	-0.8
ARSB				*e*S	Sb	08 16 12.1	+2.6
KSH	Kashi	2.57	83	Pn	Pn	08 15 47.3	-0.4
KSH				Sn	Sn	08 16 17.8	-0.9
KSH	comp=N,6µm,0.8s			smax	smax		
KSH	comp=E,9µm,1.1s			smax	smax		
ARK	Arkit baz=50	2.59	348	⇓*i*P	Pn	08 15 50.1	+2.1
ARK	baz=50			⇓*i*S	Sb	08 16 25.0	+0.6
ARK	Arkit	2.59	348	*i* P	Pn	08 15 50.0	+2.1
ARK				*i* S	Sb	08 16 23.9	-0.5
CHGR	Chuyangaron	2.81	259		Pb	08 15 53.5	-2.9
CHGR				Sn	Sg	08 16 35.4	-1.3
ARLS	Aral baz=25	2.88	25	⇓*i*P	Pn	08 15 54.9	+2.9
ARLS	baz=25			⇓*i*S	Sb	08 16 32.2	-0.7
AML	Almayashu baz=15	2.97	15	⇓*i*P	Pn	08 15 56.4	+3.0
AML	baz=15			⇓*i*S	Sb	08 16 34.8	-0.8
AML	Almayashu SNR=305	2.97	15	P	Pn	08 15 56.5	+3.1
TGS	TashGRES	3.24	313	*e*P	Pb	08 16 01.8	-1.8
TGS				S	Sb	08 16 44.2	+1.3
UCH	Uchtor baz=24	3.27	25	⇓*i*P	Pn	08 16 00.4	+2.7
UCH	baz=24			⇓*i*S	Sb	08 16 42.0	-2.4
UCH	Uchtor SNR=104	3.27	25	P	Pn	08 16 01.1	+3.4
TAS	Tashkent baz=12	3.31	310	⇑*i*P	Pn	08 15 59.2	+1.5
TAS	baz=12			⇑*i*S	Sn	08 16 40.0	+3.2
TAS	Tashkent	3.31	310		Pn	08 16 00.3	+2.6
TAS				Sn	Sb	08 16 41.5	-3.4
NRN	Naryn baz=47	3.34	48	⇑*i*P	Pn	08 16 00.2	+1.7
NRN	baz=47			⇑*i*S	Sn	08 16 41.4	+3.4
NRN	Naryn	3.34	48	PN	Pn	08 16 00.8	+2.3
NRN	Naryn	3.34	48		Pn	08 16 00.8	+2.3
KZA	Kyzart baz=33	3.43	34	⇓*i*P	Pn	08 16 02.5	+2.8
KZA	baz=33			⇓*i*S	Sn	08 16 45.0	+4.7
KZA	Kyzart SNR=50	3.43	34	P	Pn	08 16 03.5	+3.7
EKS2	Erkin-Say baz=13	3.50	13	⇑*i*P	Pn	08 16 03.6	+3.2
EKS2	baz=13			⇑*i*S	Sn	08 16 47.1	+5.5
EKS2	Erkin-Say SNR=41	3.50	13	P	Pn	08 16 04.3	+3.9
MRKS	Merke 163nm,0.2s	3.50	7	*e*P	Pn	08 16 03.5	+3.0
MRKS	388nm,0.4s			*e*S	Sn	08 16 47.0	+5.2
MRKS	Merke 441nm,0.5s	3.50	7	Pg	Pb	08 16 09.9	+1.6
MRKS	389nm,0.6s			Lg	Lg	08 16 48.1	
IUG	Iuzhnay 238nm,0.3s	3.51	326	Pg	Pb	08 16 10.1	+1.7
IUG	1µm,0.5s			Lg	Lg	08 16 48.5	
AAK	Ala-Archa 36nm,0.3s,baz=175,slow=6.6,SNR=223	3.64	22	Pn	Pn	08 16 06.5	+4.1
AAK	27nm,0.3s,baz=308,slow=24,SNR=15			Sn	Sn	08 16 50.9	+5.6
AAK	Ala-Archa baz=21	3.64	22	⇑*i*P	Pn	08 16 05.6	+3.1
AAK	baz=21			⇑*i*S	Sn	08 16 50.5	+5.2
AAK	Ala-Archa SNR=45	3.64	22	P	Pn	08 16 06.5	+4.1
AAK	Ala-Archa 125nm,0.6s	3.64	22	⇑Pn	Pn	08 16 06.4	+3.9
AAK	241nm,0.5s			⇑Sn	Sb	08 16 52.2	-2.5
AAK	Ala-Archa	3.64	22	*ce*PN	Pn	08 16 06.2	+3.7
AAK	comp=Z,90nm,0.7s			pmax	pmax		
AAK	Ala-Archa	3.64	22		Pn	08 16 06.2	+3.7
AAK				Sn	Sb	08 16 52.2	-2.5
KBK	Karagaybulak baz=26	3.80	26	⇑*i*P	Pn	08 16 07.8	+3.1
KBK	baz=26			⇑*i*S	Sn	08 16 54.0	+4.8
KBK	Karagaybulak SNR=44	3.80	26	P	Pn	08 16 08.8	+4.1
FRU1	Bishkek baz=22	3.84	22	⇑*i*P	Pn	08 16 08.0	+2.9
FRU1	baz=22			⇑*i*S	Sn	08 16 54.9	+4.9
FRU1	Bishkek	3.84	22	PN	Pn	08 16 09.9	+4.8
FRU1	Bishkek	3.84	22		Pn	08 16 09.9	+4.8
CHM	Chimkent	3.84	324	PN	Pb	08 16 11.5	-2.5
CHM						08 17 00.4	
ULHL	Ulahol baz=40	4.03	41	⇓*i*P	Pn	08 16 10.5	+2.7
ULHL	baz=40			⇓*i*S	Sn	08 16 59.2	+4.4
ULHL	Ulahol SNR=60	4.03	41	P	Pn	08 16 11.1	+3.3
CHMS	Chumysh baz=22	4.05	22	⇑*i*P	Pn	08 16 11.3	+3.4
CHMS	baz=22			⇑*i*S	Sn	08 17 00.2	+5.1
CHMS	Chumysh SNR=53	4.05	22	P	Pn	08 16 11.8	+3.9
CHMS	Chumysh comp=Z,76nm,0.7s	4.05	22	⇑Pn	Pn	08 16 11.5	+3.6
CHMS	comp=Z,137nm,0.7s			⇑Sn	Sn	08 17 00.4	+5.3
CHMS	Chumysh	4.05	22	*i* PN	Pn	08 16 11.5	+3.6
CHMS	comp=Z,76nm,0.6s			pmax	pmax		
BOOM	Boomskoye usch baz=36	4.07	36	⇑*i*P	Pn	08 16 11.3	+3.0
BOOM	baz=36			⇑*i*S	Sn	08 17 00.2	+4.5
KK31	Karatay Array comp=Z,35nm,0.3s,baz=155,slow=13,SNR=421	4.17	338	⇑Pn	Pn	08 16 12.5	+2.8
KK31	comp=Z,122nm,0.5s,baz=165,slow=24,SNR=11			⇑Sn	Sn	08 17 03.0	+5.0
KK31	Karatay Array	4.17	338	PN	Pn	08 16 12.4	+2.8
KK31				*e*		08 17 03.4	
KK31	Karatay Array	4.17	338		Pn	08 16 12.4	+2.8
KK31				Sn	Sn	08 17 02.1	+4.0
KKAR	Karatay Array	4.17	338	PN	Pn	08 16 12.7	+3.1
KKAR						08 17 02.2	
KKAR	Karatay Array	4.17	338		Pn	08 16 12.7	+3.1
KKAR				Sn	Sn	08 17 02.1	+4.1
USP	Ospenovka baz=18	4.23	18	⇑*e*P	Pn	08 16 13.9	+3.5
USP	baz=18			⇑*i*S	Sn	08 17 04.1	+4.5
USP	Ospenovka SNR=39	4.23	18	P	Pn	08 16 14.0	+3.5
BRLS	Borolday comp=Z,26nm,0.3s	4.33	331	Pg	Pb	08 16 21.5	-0.9
BRLS	comp=Z,70nm,0.4s			Lg	Lg	08 17 06.9	
SGDS	Sogindy comp=Z,110nm,0.6s	4.44	19	Pg	Pg	08 16 29.2	-2.2
SGDS	comp=Z,163nm,0.7s			Lg	Lg	08 17 20.7	
KDJ	Kajisay baz=48	4.46	49	⇓*e*P	Pn	08 16 16.7	+2.9
KDJ	baz=48			⇓*i*S	Sn	08 17 08.9	+3.3
KDJ	Kajisay	4.46	49	PN	Pn	08 16 17.5	+3.7
KDJ	Kajisay	4.46	49		Pn	08 16 17.5	+3.7
KST	Kastek comp=Z,43nm,0.4s	4.52	32	*e*P	Pb	08 16 27.3	+1.7
KST	comp=Z,166nm,0.3s			*e*S	Sg	08 17 27.1	-4.5
KST	Kastek comp=Z,76nm,0.6s	4.52	32	Pg	Pg	08 16 32.0	-1.1
KST	comp=Z,137nm,0.7s			Lg	Lg	08 17 25.1	
DGS	Degeres comp=Z,92nm,0.6s	4.61	29	*e*P	Pb	08 16 29.0	+1.9
DGS	comp=Z,279nm,0.5s			*e*S	Sg	08 17 30.7	-3.8
DGS	Degeres comp=Z,92nm,0.6s	4.61	29	Pg	Pg	08 16 32.8	-2.0
DGS	comp=Z,287nm,0.7s			Lg	Lg	08 17 26.1	
MTBS	Maitube comp=Z,28nm,0.3s	4.79	35	*e*P	Pb	08 16 32.9	+2.7
MTBS	comp=Z,98nm,0.3s			*e*S	Sg	08 17 36.4	-3.8
MTBS	Maitube comp=Z,61nm,0.6s	4.79	35	Pg	Pg	08 16 37.2	-1.0
MTBS	comp=Z,79nm,0.4s			Lg	Lg	08 17 34.8	
MTBS	Maitube	4.79	35	*e*PN	Pb	08 16 32.9	+2.7
IZV	Izvestkoviy comp=Z,61nm,0.3s	4.80	37	*e*P	Pb	08 16 32.7	+2.3
IZV	comp=Z,272nm,0.3s			*e*S	Sg	08 17 37.0	-3.6
IZV	Izvestkoviy comp=Z,74nm,0.6s	4.80	37	Pg	Pg	08 16 38.5	+0.1
IZV	comp=Z,278nm,0.6s			Lg	Lg	08 17 36.6	
TNSS	Tian-Shan comp=Z,28nm,0.2s	4.96	39	*e*P	Pb	08 16 35.6	+2.3
TNSS	comp=Z,186nm,0.3s			*e*S	Sg	08 17 41.0	-4.7
TNSS	Tian-Shan comp=Z,54nm,0.5s	4.96	39	Pg	Pg	08 16 42.2	+0.7
TNSS	comp=Z,188nm,0.5s			Lg	Lg	08 17 42.5	
TNSS	Tian-Shan	4.96	39	*e*PN	Pb	08 16 35.6	+2.3
AAA	Alma-Ata comp=Z,11nm,0.0s	5.08	38	*e*P	Pb	08 16 38.2	+3.2
AAA	comp=Z,93nm,0.1s			*e*S	Sg	08 17 46.0	-3.4
AAA	Alma-Ata comp=Z,37nm,0.1s	5.08	38	Pg	Pg	08 16 43.5	-0.2
AAA	comp=Z,159nm,0.6s			Lg	Lg	08 17 45.4	
MDOK	Medeo comp=Z,27nm,0.3s	5.11	39	*e*P	Pb	08 16 38.3	+2.7
MDOK	comp=Z,184nm,0.5s			*e*S	Sg	08 17 46.1	-4.2
MDOK	Medeo comp=Z,66nm,0.8s	5.11	39	⇑Pn	Pn	08 16 25.3	+2.7
MDOK	comp=Z,141nm,0.8s			⇓Lg	Lg	08 17 50.5	
MDOK	Medeo comp=Z,52nm,0.7s	5.11	39	Pg	Pg	08 16 44.0	-0.2
MDOK	comp=Z,184nm,0.7s			Lg	Lg	08 17 45.6	
MDOK	Medeo	5.11	39	*e*PN	Pb	08 16 38.3	+2.7
KNDC	Almaty comp=Z,76nm,0.6s	5.11	38	⇓Pg	Pg	08 16 44.6	+0.4
KNDC	comp=Z,404nm,0.6s			⇑Lg	Lg	08 17 47.6	
ANVS	Anan'yevo baz=45	5.16	45	⇑*i*P	Pn	08 16 26.1	+2.8
ANVS	baz=45			⇑*i*S	Sn	08 17 25.5	+2.8
KOTS	Kotyrbulak comp=Z,82nm,0.2s	5.19	39	*e*P	Pb	08 16 40.0	+3.0
KOTS	comp=Z,887nm,0.6s			*e*S	Sg	08 17 49.3	-3.7
KOTS	Kotyrbulak comp=Z,138nm,0.4s	5.19	39	Pg	Pg	08 16 46.1	+0.3
KOTS	comp=Z,887nm,0.6s			Lg	Lg	08 17 49.6	
KTBS	Karatobe comp=Z,16nm,0.2s	5.37	33	*e*P	Pb	08 16 43.6	+3.6
KTBS	comp=Z,308nm,0.6s			*e*S	Sg	08 17 54.9	-3.8
KTBS	Karatobe comp=Z,44nm,0.8s	5.37	33	Pg	Pg	08 16 49.0	-0.2
KTBS	comp=Z,312nm,1.0s			Lg	Lg	08 17 54.4	
KUU	Kurty comp=Z,10nm,0.2s	5.38	30	*e*P	Pb	08 16 43.2	+3.0
KUU	comp=Z,185nm,0.6s			*e*S	Sg	08 17 54.2	-4.9
KUU	Kurty comp=Z,31nm,0.5s	5.38	30	Pg	Pg	08 16 48.9	-0.6
KUU	comp=Z,183nm,0.8s			Lg	Lg	08 17 54.1	
KUU	Kurty	5.38	30	*e*PN	Pb	08 16 43.2	+3.0
PRZ	Przheval'sk baz=51	5.40	52	⇑*i*P	Pn	08 16 29.5	+2.8
PRZ	baz=51			⇑*e*S	Sn	08 17 31.2	+2.5
PRZ	Przheval'sk	5.40	52	PN	Pn	08 16 30.4	+3.7
PRZ	Przheval'sk	5.40	52		Pn	08 16 30.4	+3.7
CEP	Cherat	5.46	187	P	Pn	08 16 33.7	+6.2
KBL	Kabul	5.54	213	PN	Pn	08 16 32.9	+4.3
KBL	Kabul	5.54	213		Pn	08 16 32.9	+4.3
CHCP	Chirah Chowk	5.61	175	P	Pn	08 16 35.3	+5.9
CHKK	Chushkaly comp=Z,18nm,0.3s	5.61	34	*e*P	Pb	08 16 47.3	+3.2
CHKK				*e*S	Sg	08 18 01.6	-4.9

	comp=Z,123nm,0.3s						
CHKK	Chushkaly	5.61	34	Pg	Pg	08 16 53.0	-0.9
	comp=Z,26nm,0.5s						
CHKK				Lg	Lg	08 18 01.7	
	comp=Z,125nm,0.5s						
CHKK	Chushkaly	5.61	34	*e*PN	Pb	08 16 47.3	+3.2
NIL	Nilore	5.62	175	PN	Pn	08 16 35.1	+5.6
NIL	Nilore	5.62	175		Pn	08 16 35.1	+5.6
SATY	Saty	5.75	47	Pg	Pg	08 16 57.5	+1.0
	comp=Z,44nm,0.4s						
SATY				Lg	Lg	08 18 09.2	
	comp=Z,190nm,0.8s						
KURS	Kuram	5.91	43	Pg	Pg	08 16 59.0	-0.5
	comp=Z,26nm,0.6s						
KURS				Lg	Lg	08 18 11.5	
	comp=Z,75nm,0.9s						
THW	Thamme Wali	6.50	187	P	Pn	08 16 45.8	+4.2
THW				S	Sn	08 18 00.0	+4.5
THN	Thein Dam	7.25	159	*e*P	Pn	08 16 52.5	+0.7
THN				*e*x	x	08 17 17.5	
SARP	Sargodha	7.32	180	P	Pn	08 16 56.0	+3.1
DHRM	DHARAMSHALA	7.59	156	*i* P	Pn	08 17 00.3	+3.5
DHRM				*e*S	Sn	08 18 25.4	+2.7
DHRM				IAML		08 18 28.6	
	comp=N,101nm,0.6s						
DHRM				IAML		08 18 29.7	
	comp=E,143nm,0.7s						
BHK	Bhakra	8.40	158	*e*x	Sn	08 18 51.0	+8.7
SMLA	Simla	8.91	154	*e*P	Pn	08 17 17.4	+2.8
SMLA				*e*S	Sn	08 18 52.4	-2.3
SMLA				IAML		08 18 55.1	
	comp=E,98nm,0.7s						
SMLA				IAML		08 18 59.0	
	comp=N,152nm,0.7s						
HRA	Herat	9.67	243		Pn	08 17 28.3	+3.0
MAKZ	Makanchi	10.15	39	⇓Pn	Pn	08 17 35.6	+3.9
	comp=N,13nm,1.0s						
MAKZ				⇑Lg	Lg	08 20 34.0	
	comp=N,16nm,1.4s						
MAKZ	Makanchi	10.15	39	P	Pn	08 17 35.5	+3.9
MAKZ	Makanchi	10.15	39		Pn	08 17 34.2	+2.5
MK31	Makanchi Array	10.30	40	⇑Pn	Pn	08 17 36.5	+2.8
	comp=N,2.1nm,0.6s,baz=216,slow=14,SNR=32						
MK31				⇓Lg	Lg	08 20 37.4	
	comp=N,8.8nm,0.8s,baz=224,slow=28,SNR=5.0						
MK31	Makanchi Array	10.30	40	P	Pn	08 17 36.5	+2.8
MK31	Makanchi Array	10.30	40		Pn	08 17 36.5	+2.8
MKAR	Makanchi Array	10.30	40	Pn	Pn	08 17 36.6	+2.9
	comp=N,0.4nm,0.3s,baz=225,slow=14,SNR=22						
MKAR				Lg	Lg	08 20 31.1	
	comp=N,0.4nm,0.3s,baz=223,slow=28,SNR=5.3						
MKAR	Makanchi Array	10.30	40	*i* P	Pn	08 17 36.5	+2.9
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MKAR	Makanchi Array	10.30	40		Pn	08 17 36.2	+2.5
NDI	New Delhi	11.20	159	*e*P	Pn	08 17 47.0	+0.9
NDI				*e*S	Sn	08 19 47.0	-4.1
GEYT	Alibeck	11.47	268	Pn	Pn	08 17 48.7	-1.1
	comp=Z,0.8nm,0.3s,baz=72,slow=9.3,SNR=4.5						
GEYT				Sn	Sn	08 19 56.9	-0.8
	comp=Z,1.3nm,0.3s,baz=105,slow=17,SNR=4.3						
GEYT	Alibeck	11.47	268		Pn	08 17 51.4	+1.6
GYA0B	ALIBECK ARRAY	11.47	268	⇑Pn	Pn	08 17 51.2	+1.4
GYA0B				⇓Lg	Lg	08 21 05.3	
KURBB	Kurchatov Arra	12.09	18	Pn	Pn	08 17 57.6	-0.5
	comp=Z,0.1nm,0.3s,baz=203,slow=12,SNR=8.7						
KURBB				Sn	Sn	08 20 09.7	-2.8
	comp=Z,0.0nm,0.3s,baz=198,slow=27,SNR=3.7						
KURBB				Lg	Lg	08 21 25.1	
	comp=Z,0.2nm,0.3s,baz=207,slow=31,SNR=9.0						
KURBB	Kurchatov Arra	12.09	18	⇓Pn	Pn	08 17 56.8	-1.3
	comp=Z,3.1nm,0.7s						
KURBB				⇑Lg	Lg	08 21 32.7	
	comp=Z,34nm,1.0s						
KURBB	Kurchatov Arra	12.09	18	P	Pn	08 17 56.7	-1.3
WMQ	Urumqi	12.14	63	*e*P	Pn	08 18 00.0	+1.1
KURK	Kurchatov	12.20	18	⇑Pn	Pn	08 17 59.8	+0.2
	comp=Z,7.4nm,1.2s						
KURK				⇑Lg	Lg	08 21 36.3	
	comp=Z,59nm,1.1s						
KURK	Kurchatov	12.20	18	*ce*P	Pn	08 18 00.9	+1.4
KURK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
KURK	Kurchatov	12.20	18		Pn	08 18 01.0	+1.4
KURK	Kurchatov	12.20	18		Sn	08 20 09.7	-5.5
AB31	Akbulak array	13.51	322	⇓P	Pn	08 18 15.9	-1.6
	comp=Z,4.6nm,0.5s						
AB31				⇓S	Sn	08 20 45.6	-1.7
	comp=Z,7.5nm,0.5s						
AB31	Akbulak array	13.51	322	P	Pn	08 18 15.9	-1.6
AB31				S	Sn	08 20 40.8	-6.5
ABKAR	Akbulak array	13.51	322		Pn	08 18 15.7	-1.8
BVAR	Borovoye Array	13.86	354	Pn	Pn	08 18 21.0	-1.2
	comp=Z,0.6nm,0.3s,baz=163,slow=12,SNR=24						
BVAR				Sn	Sn	08 20 53.6	-2.1
	comp=Z,0.6nm,0.3s,baz=168,slow=22,SNR=5.8						
BVAR				Lg	Lg	08 22 25.9	
	comp=Z,0.5nm,0.3s,baz=169,slow=25,SNR=3.0						
BRVK	Borovoye	13.90	354	⇑P	P	08 18 27.8	-3.1
	comp=Z,12nm,0.6s						
BRVK	Borovoye	13.90	354	*ce*P	Pn	08 18 22.0	-0.8
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BRVK	Borovoye	13.90	354		Pn	08 18 21.4	-1.4
DANN	Dangsing	14.25	136	*e*P	Pn	08 18 24.7	-3.3
	comp=Z,43nm,0.6s						
GKN	Gorkha	14.99	135	*e*P	Pn	08 18 35.6	-2.4
	comp=Z,53nm,0.4s						
AKTO	Aktyubinsk	15.23	322	Pn	Pn	08 18 39.6	-1.2
	comp=Z,0.7nm,0.3s,baz=135,slow=13,SNR=23						
AKTO				Sn	Sn	08 21 23.8	-5.4
	comp=Z,0.5nm,0.3s,baz=9.0,slow=19,SNR=5.1						
AKTO	Aktyubinsk	15.23	322	⇑P	Pn	08 18 42.4	+1.6
	comp=Z,26nm,0.5s						
AKTO				⇑S	Sn	08 21 31.0	+1.8
	comp=Z,25nm,1.3s						
DMN	Daman	15.56	135	*e*P	Pn	08 18 42.6	-3.0
PKIN	Phulchoki	15.75	134	*e*P	Pn	08 18 45.0	-3.0
PKI	Pulchoki	15.76	134	*e*P	Pn	08 18 45.1	-3.1
	comp=Z,36nm,0.7s						
GUN	Gumba	15.77	132	*e*P	Pn	08 18 46.4	-1.9
JIRN	Jiri	16.14	132	*e*P	Pn	08 18 50.5	-2.6
	comp=Z,54nm,0.4s						
ZAA0	Zalesovo Array	16.86	25	P	Pn	08 19 01.9	+0.2
ZALV	Zalesovo Beam	16.86	25	Pn	Pn	08 19 01.0	-0.7
	comp=Z,2.4nm,0.3s,baz=216,slow=12,SNR=32						
ZALV	Zalesovo Beam	16.86	25	*i* P	P	08 19 03.5	-0.2
ZALV				pmax	pmax		
	comp=Z,11nm,0.5s						
ZALV	Zalesovo Beam	16.86	25		Pn	08 19 01.2	-0.5
RAMN	Ramite	16.91	132	*e*P	Pn	08 18 58.2	-4.6
	comp=Z,28nm,0.5s						
ARU	Arti	19.55	336	P	P	08 19 34.0	+0.6
	comp=Z,0.0nm,0.3s,baz=208,slow=6.4,SNR=4.3						
ARU	Arti	19.55	336	*d i*P	Pn	08 19 35.0	+0.3
ARU				S	Sn	08 23 15.1	+1.5
ARU				pmax	pmax		
	comp=Z,18nm,1.0s						
ARU	Arti	19.55	336	P	Pn	08 19 34.6	0.0
GNBR	Gunib	19.68	287	*i* P	Pn	08 19 36.0	-0.5
WSAR	Wadi Sarin	19.94	221	P	P	08 19 37.3	-0.6
	comp=Z,0.2nm,0.3s,baz=121,slow=5.9,SNR=2.2						
GTA	Gaotai	20.97	81	P	P	08 19 50.5	+1.4
GTA				pP	sP	08 19 58.8	+1.4
GTA				sP	pP	08 20 02.8	+8.0
GTA				pmax	pmax		
	comp=Z,23nm,1.1s						
GTA				pmax	pmax		
	comp=Z,110nm,4.8s						
GTA				LR	LR		
	comp=Z,210nm,15.9s						
GTA				LR	LR		
	comp=Z,300nm,17.1s						
GTA				LR	LR		
	comp=Z,210nm,16.2s						
SHL	Shillong	21.14	125	P	P	08 19 53.4	+2.3
SHL				pmax	pmax		
	comp=Z,12nm,0.5s						
SHL	Shillong	21.14	125	P	P	08 19 53.4	+2.3
SHL				IAmb	IAmb	08 20 01.1	
	comp=Z,12nm,0.5s						
GNI	Garni	21.48	281	P	P	08 19 55.0	+0.4
	comp=Z,1.7nm,0.3s,baz=37,slow=20,SNR=2.1						
GOF	Gofitskoye	22.64	294	⇑*e*P	P	08 20 12.0	+5.1
KBZ	Khabaz	22.68	291	P	P	08 20 06.5	-0.8
	comp=Z,1.8nm,0.7s,baz=118,slow=8.6,SNR=4.2						
KBZ	Khabaz	22.68	291	*i* P	P	08 20 07.3	0.0
KBZ				pmax	pmax		
	comp=Z,20nm,3.0s						
NEY	Neytrino	22.81	290	*i* P	P	08 20 10.5	+1.7
NEY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KIV	Kislovodsk	22.84	292	*e*P	P	08 20 10.0	+0.9
KIV				pmax	pmax		
	comp=Z,48nm,1.0s						
SHA1	Shidzhatmaz	22.86	291	*i* P	P	08 20 11.3	+1.9
MOY	Mondy	23.25	48	*e*P	P	08 20 15.4	+2.2
MOY				pmax	pmax		
	comp=Z,34nm,2.5s						
ZAK	Zakamensk	24.22	53	*e*P	P	08 20 22.8	+0.2
ZAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LZH	Lanzhou	24.81	87	*e*P	P	08 20 29.0	+0.8
LZH				*e*PP	PnPn	08 21 08.3	+7.9
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				pmax	pmax		
	comp=Z,78nm,4.9s						
LZH				LR	LR		
	comp=Z,460nm,12.0s						
LZH				LR	LR		
	comp=Z,470nm,12.3s						
LZH				LR	LR		
	comp=Z,640nm,14.5s						
TLY	Talaya	24.81	50	P	P	08 20 28.5	+0.6
	comp=Z,2.2nm,0.6s,baz=235,slow=3.8,SNR=5.4						
TLY	Talaya	24.81	50	*ce*P	P	08 20 29.6	+1.8
TLY				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TLY	Talaya	24.81	50	P	P	08 20 27.8	-0.1
SONM	Songino Array	25.73	59	P	P	08 20 36.6	+0.3
	comp=Z,5.7nm,0.8s,baz=266,slow=8.9,SNR=32						
SONM				LR	LR	08 31 43.7	
	comp=Z,243nm,18.1s,baz=344,slow=39						
SONM	Songino Array	25.73	59	P	P	08 20 36.1	-0.2
SONM				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SONM	Songino Array	25.73	59	P	P	08 20 36.1	-0.2
ULN	Ulaanbaatar	26.18	60	P	P	08 20 40.6	+0.2
ULN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ULN	Ulaanbaatar	26.18	60	P	P	08 20 40.6	+0.2
OBN	Obninsk	28.81	315	⇑*e*P	P	08 21 03.2	-0.5
OBN				*e*S	S	08 25 50.7	-2.0
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,394nm,14.0s						
HHC	Hu-ho-hao-te	29.65	74	*e*P	P	08 21 13.3	+1.8
HHC				LR	LR		
	comp=Z,430nm,12.0s						
HHC				LR	LR		
	comp=Z,880nm,13.0s						
BRTR	Keskin Array B	29.97	283	P	P	08 21 14.2	-0.1
	comp=Z,1.0nm,0.9s,baz=64,slow=13,SNR=3.5						
CMAR	Chiang Mai Arr	30.78	125	P	P	08 21 20.6	-0.9
	comp=Z,0.9nm,0.3s,baz=312,slow=9.5,SNR=5.5						
CMAR				LR	LR	08 35 12.9	
	comp=Z,43nm,19.6s,baz=295,slow=39						
NRIK	Noril'sk	31.18	10	P	P	08 21 25.2	+0.7
	comp=Z,1.1nm,0.4s,baz=172,slow=8.4,SNR=4.3						
EIL	Elat	32.34	264	P	P	08 21 35.5	+0.2
	comp=Z,2.8nm,0.4s,baz=72,slow=13,SNR=3.0						
AKASG	Malin Array Be	32.34	305	P	P	08 21 34.7	-0.3
	comp=Z,0.2nm,0.3s,baz=78,slow=7.0,SNR=4.5						
AKASG	Malin Array Be	32.34	305	P	P	08 21 34.7	-0.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,1.5s						
TLCR		32.70	295	P	P	08 21 39.9	+1.8
TOPG	Topolog	33.04	294	⇑P	P	08 21 43.8	+2.7
CVD1	Cernavoda-Powe	33.33	293	⇓P	P	08 21 40.4	-3.2
PBKT	Sadao Pong	33.47	124	P	P	08 21 44.5	-0.6
PBKT				IAmb	IAmb	08 21 45.5	
	comp=Z,5.1nm,0.7s						
VRI	Vrincioaia	34.10	296	⇓P	P	08 21 57.7	+7.3
VOIR		35.31	296	⇑P	P	08 21 59.9	-1.1
ARR	Arges	35.61	296	P	P	08 22 04.5	+1.0
FINES	FINESS Array B	35.99	324	P	P	08 22 06.7	+0.2
	comp=Z,2.5nm,0.6s,baz=115,slow=11,SNR=10						
LOT	Lotru	36.21	296	⇓P	P	08 22 09.5	+0.8
GZR	Gura Zlata	36.91	296	P	P	08 22 12.2	-2.4
NJ2	Nanjing	37.88	86	*e*P	P	08 22 23.3	+0.5
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
ARCES	ARCESS Array B	39.13	336	P	P	08 22 33.1	+0.1
	comp=Z,4.2nm,0.6s,baz=110,slow=8.0,SNR=20						
HFS	Hagfors	41.76	320	P	P	08 22 54.6	-0.2
	comp=Z,4.4nm,0.7s,baz=97,slow=12,SNR=11						
GERES	GERESS Array B	42.48	303	P	P	08 23 02.1	+1.2
	comp=Z,0.9nm,0.5s,baz=61,slow=11,SNR=6.6						
GERES	GERESS Array B	42.48	303	P	P	08 23 00.6	-0.3
GERES	GERESS Array B	42.48	303	P	P	08 23 00.6	-0.3
KLR	Kul'dur	42.48	56	P	P	08 23 00.8	0.0
	comp=Z,1.6nm,0.5s,baz=269,slow=10,SNR=8.0						
KLR	Kul'dur	42.48	56	*i* P	P	08 23 00.7	-0.1
KLR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TIXI	Tiksi	42.72	23	P	P	08 23 02.5	+0.1
	comp=Z,10nm,0.5s,baz=266,slow=4.5,SNR=20						
TIXI	Tiksi	42.72	23	*ce*P	P	08 23 02.3	-0.1
TIXI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TIXI	Tiksi	42.72	23	P	P	08 23 01.5	-1.0
TIXI				IAmb	IAmb	08 23 04.8	
	comp=Z,10nm,0.5s						
NC303	NORSAR Array S	42.95	321	P	P	08 23 04.3	-0.2
NB2	NORSAR Subarra	43.02	321	P	P	08 23 04.3	-0.8
	comp=Z,1.1nm,0.5s,baz=92,slow=8.6						
NOA	NORSAR Array B	43.02	321	P	P	08 23 04.2	-0.9
	comp=Z,1.0nm,0.6s,baz=92,slow=8.0,SNR=4.9						
NC204	NORSAR Array S	43.24	322	P	P	08 23 06.5	-0.4
SEY	Seymchan	51.39	35	P	P	08 24 09.2	-1.0
	comp=Z,1.6nm,0.3s,baz=64,slow=22,SNR=3.6						
DAG	Danmarks Havn	52.47	343	*i* P	P	08 24 18.5	+0.4
	comp=Z,3.3nm,0.6s						
DAG	Danmarks Havn	52.47	343	*i* P	P	08 24 18.5	+0.4
DAG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BILL	Bilibino	55.55	27	*i* P	P	08 24 40.5	-0.2
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SUMG	Summit	58.89	341	*i* P	P	08 25 05.4	+0.7
SUMG	Summit	58.89	341	P	P	08 25 06.1	+1.4
SUMG				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SUMG	Summit	58.89	341	P	P	08 25 06.1	+1.4
SUMG				IAmb	IAmb	08 25 15.5	
	comp=Z,7.7nm,1.1s						
TULEG	Thule	61.94	350	P	P	08 25 23.2	-1.8
RES	Resolute Bay	66.03	356	P	P	08 25 51.3	-0.6
	comp=Z,1.4nm,1.2s,baz=1.1,slow=14,SNR=2.4						
RES	Resolute Bay	66.03	356	P	P	08 25 51.3	-0.6
RES				pmax	pmax		
	comp=Z,3.0nm,1.2s						
RES	Resolute Bay	66.03	356	IAmb	IAmb	08 25 59.9	
	comp=Z,3.3nm,1.2s						
TOA0	Torodi Ar. Sit	67.11	268	P	P	08 25 59.0	-0.8
TOA0				IAmb	IAmb	08 26 09.6	
	comp=Z,3.5nm,1.1s						
TORD	Torodi Ar. Bea	67.11	268	P	P	08 25 58.9	-0.8
	comp=Z,2.5nm,0.5s,baz=45,slow=5.4,SNR=26						
TORD	Torodi Ar. Bea	67.11	268	P	P	08 25 59.0	-0.8
TOLK	Toolik Lake Re	67.92	15	P	P	08 26 04.4	+0.4
TOLK				IAmb	IAmb	08 26 10.7	
	comp=Z,7.7nm,1.2s						
COLD	Coldfoot	68.95	16	P	P	08 26 11.1	+0.6
IMAR	Indian Mountai	69.14	19	P	P	08 26 11.2	-0.5
INK	Inuvik	70.96	10	P	P	08 26 22.8	0.0
	comp=Z,2.1nm,0.5s,baz=347,slow=6.5,SNR=18						
INK	Inuvik	70.96	10	P	P	08 26 22.9	+0.1
INK				pmax	pmax		
	comp=Z,10.0nm,1.4s						
INK	Inuvik	70.96	10	P	P	08 26 22.9	+0.1
INK				IAmb	IAmb	08 26 23.8	
	comp=Z,9.9nm,1.4s						
ILAR	Eielson Array	71.76	17	P	P	08 26 26.4	-1.4
	comp=Z,2.2nm,1.0s,baz=311,slow=3.6,SNR=11						
ILAR	Eielson Array	71.76	17	P	P	08 26 26.8	-0.9
ILAR	Eielson Array	71.76	17	P	P	08 26 26.8	-0.9
PPLA	Purkeypile	72.04	20	P	P	08 26 29.3	-0.3
PPLA				IAmb	IAmb	08 26 36.3	
	comp=Z,11nm,1.0s						
MCK	McKinley	72.17	18	P	P	08 26 29.9	-0.3
MCK				pmax	pmax		
	comp=Z,20nm,1.4s						
MCK	McKinley	72.17	18	P	P	08 26 29.9	-0.3
PAX	Paxson	73.64	17	P	P	08 26 39.0	0.0
PAX				pmax	pmax		
	comp=Z,6.0nm,1.2s						
PAX	Paxson	73.64	17	P	P	08 26 39.0	0.0
PAX				IAmb	IAmb	08 26 51.4	
	comp=Z,5.9nm,1.2s						
GHO	Glory Hole Cre	73.83	19	P	P	08 26 39.7	-0.4
GHO				IAmb	IAmb	08 26 55.6	
	comp=Z,9.4nm,1.2s						
SML	Sawmill	73.95	19	P	P	08 26 40.5	-0.3
SCM	Sheep Creek Mo	74.18	18	P	P	08 26 41.8	-0.4
SCM				pmax	pmax		
	comp=Z,17nm,1.2s						
SCM	Sheep Creek Mo	74.18	18	P	P	08 26 41.8	-0.4
RC01	Rabbit Creek A	74.19	20	P	P	08 26 41.8	-0.4
BALM	Baldy	76.05	17	P	P	08 26 53.2	+0.2
BALM				IAmb	IAmb	08 27 04.0	
	comp=Z,20nm,1.4s						
CTGM	Chitina Glacie	76.33	16	P	P	08 26 55.3	+0.6
LBTB	Lobatse	77.61	223	P	P	08 27 03.2	+1.0
LBTB				pmax	pmax		
	comp=Z,7.0nm,1.1s						
LBTB	Lobatse	77.61	223	P	P	08 27 03.2	+1.0
LBTB				IAmb	IAmb	08 27 12.7	
	comp=Z,7.2nm,1.1s						
YKA	Yellowknife Ar	78.42	3	P	P	08 27 05.8	-0.4
	comp=Z,1.3nm,0.7s,baz=348,slow=5.2,SNR=28						
WB0	Warramunga Arr	82.27	123	P	P	08 27 26.4	-1.1
WB0				IAmb	IAmb	08 27 28.1	
	comp=Z,9.1nm,1.2s						
WRA	Warramunga Arr	82.36	123	P	P	08 27 26.8	-1.1
	comp=Z,1.9nm,0.6s,baz=323,slow=5.1,SNR=30						
WRA	Warramunga Arr	82.36	123	*ce*P	P	08 27 27.0	-0.9
WRA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WRAB	Tennant Creek	82.36	123	P	P	08 27 27.2	-0.7
WRAB				pmax	pmax		
	comp=Z,13nm,1.5s						
WRAB	Tennant Creek	82.36	123	P	P	08 27 27.2	-0.7
WRAB				IAmb	IAmb	08 27 28.2	
	comp=Z,13nm,1.5s						
PMG	Port Moresby	84.11	107	*ce*P	P	08 27 37.5	+0.4
PMG				pmax	pmax		
	comp=Z,55nm,2.5s						
PMG	Port Moresby	84.11	107	P	P	08 27 35.4	-1.7
PMG				IAmb	IAmb	08 27 37.2	
	comp=Z,6.7nm,0.7s						
ASAR	Alice Springs	84.78	126	P	P	08 27 39.0	-1.3
	comp=Z,0.9nm,0.8s,baz=323,slow=5.1,SNR=11						
ASAR	Alice Springs	84.78	126	P	P	08 27 39.2	-1.1
ASAR	Alice Springs	84.78	126	P	P	08 27 39.2	-1.1
QSPA	South Pole Qui	129.05	180	PKPdf	PKPdf	08 34 12.5	-0.3
GO04	Tololo Observa	148.81	276		PKPbc	08 34 53.0	-0.7
GO05	Huala	151.58	267		PKPbc	08 34 59.9	-0.1
PLCA	Paso Flores	151.92	255	PKPbc	PKPbc	08 35 00.4	-0.3
	comp=Z,1.5nm,0.9s,baz=356,slow=3.8,SNR=5.6						
PLCA	Paso Flores	151.92	255		PKiKP	08 35 00.9	-0.1

KRSC ***14*** *08:21:49.0±1.4, 52.°05N×159.°81E, h39km±19km, ML4.4*

MOS ***14*** *08:21:51.7±1.0, 52.°09N×159.°72E, h41km, mb4.0/3, Error ellipse: s-maj=9.0km s-min=3.8km az=92.6*

NEIC ***14*** *08:21:54.6±2.2, 52.°32N±0.°09×159.°6E±0.°1, h61km±4km, mb4.2/8, Error ellipse: s-maj=13.7km s-min=10.5km az=212.0*

IDC ***14*** *08:21:57.6±1.9, 52.°34N×159.°44E, h91km±14km, mb3.5/11, mb1 3.6/13, mb1mx3.4/51, mbtmp3.8/13, MS3.6/1, Ms1 3.6/1, ms1mx2.7/47, Error ellipse: s-maj=22.0km s-min=18.8km az=145.0*

ISC 14 08:21:52.7±1.1**, 52.°11N**±0.°04×**159.°70E**±0.°04**, h46**km±11km**, n127, σ1.s56**/152**, mb3.9**/15**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	Russkaya	0.80	294	*i* P	Pn	08 22 05.8	-1.7
RUS				*e*S	Sn	08 22 17.5	-0.8
RUS	Russkaya	0.80	294	PN	Pn	08 22 05.8	-1.7
RUS				S	Sn	08 22 17.5	-0.8
MTVR	Mutnovka	1.00	292	*i* P	Pn	08 22 09.5	-1.0
MTVR				*e*S	Sn	08 22 21.4	-2.1
MTVR	Mutnovka	1.00	292	PN	Pn	08 22 09.5	-1.0
MTVR				S	Sn	08 22 21.4	-2.1
SPN	Mys Shipunski	1.00	11	*e*P	Pn	08 22 09.2	-1.2
SPN				*e*S	Sn	08 22 23.4	0.0
SPN	Mys Shipunski	1.00	11	PN	Pn	08 22 09.2	-1.2
SPN				S	Sn	08 22 23.4	0.0
NLC	Nalytchevo	1.08	349	*e*P	Pn	08 22 09.7	-1.7
NLC				*e*S	Sn	08 22 24.6	-0.6
NLC	Nalytchevo	1.08	349	PN	Pn	08 22 09.7	-1.7
NLC				S	Sn	08 22 24.6	-0.6
DALK	Dalny	1.08	328	*e*P	Pn	08 22 10.2	-1.2
DALK				*e*S	Sn	08 22 24.8	-0.5
DALK	Dalny	1.08	328	PN	Pn	08 22 10.2	-1.2
DALK				S	Sn	08 22 24.8	-0.5
GRL	Gorelyy	1.09	294	*e*P	Pn	08 22 11.0	-0.7
GRL				*e*S	Sn	08 22 25.6	-0.1
GRL	Gorelyy	1.09	294	PN	Pn	08 22 11.0	-0.7
GRL				S	Sn	08 22 25.6	-0.1
PET	Petropavlovsk	1.11	325	PN	Pn	08 22 10.7	-1.1
PET				S	Sn	08 22 25.9	-0.1
PET	Petropavlovsk	1.11	325		Pn	08 22 10.7	-1.1
PET				Sn	Sn	08 22 26.1	+0.1
ASAK	Asacha	1.14	284	*i* P	Pn	08 22 11.9	-0.4
ASAK	Asacha	1.14	284	PN	Pn	08 22 11.9	-0.4
KRMR	Karymshinskiy	1.20	307	*e*P	Pn	08 22 12.2	-0.8
KRMR				*e*S	Sn	08 22 27.6	-0.5
KRMR	Karymshinskiy	1.20	307	PN	Pn	08 22 12.2	-0.8
KRMR				S	Sn	08 22 27.6	-0.5
UGLR	Uglovaya	1.22	334	*e*P	Pn	08 22 12.5	-0.9
UGLR	Uglovaya	1.22	334	PN	Pn	08 22 12.5	-0.9
SMAR	Somma	1.27	335	*e*P	Pn	08 22 12.9	-1.4
SMAR	Somma	1.27	335	PN	Pn	08 22 12.9	-1.4
AVH	Avacha	1.29	333	*e*P	Pn	08 22 13.6	-0.8
AVH				*e*S	Sn	08 22 30.9	+0.3
AVH	Avacha	1.29	333	PN	Pn	08 22 13.6	-0.8
AVH				S	Sn	08 22 30.9	+0.3
KRER	Koryakskii	1.32	335	*e*P	Pn	08 22 14.1	-0.8
KRER	Koryakskii	1.32	335	PN	Pn	08 22 14.1	-0.8
KOK	Koryaka	1.35	332	*e*P	Pn	08 22 14.4	-0.7
KOK	Koryaka	1.35	332	PN	Pn	08 22 14.4	-0.7
KRX	Arik	1.40	333	*e*P	Pn	08 22 15.0	-0.9
KRX	Arik	1.40	333	PN	Pn	08 22 15.0	-0.9
PEA0B	Petropavlovsk-	1.57	310	PN	Pn	08 22 18.1	-0.1
PEA0B						08 22 38.3	
PEA0B	Petropavlovsk-	1.57	310		Pn	08 22 18.1	-0.1
PEA0B				Sn	Sn	08 22 38.3	+0.9
PETK	Petropavlovsk-	1.57	310	P	Pn	08 22 18.9	+0.7
	115nm,0.3s,baz=110,slow=21,SNR=1136						
PETK				S	Sn	08 22 39.1	+1.8
	67nm,0.3s,baz=124,slow=21,SNR=7.6						
PETK				LR	LR	08 23 10.2	
	comp=Z,369nm,18.5s,baz=63,slow=55						
PETK	Petropavlovsk-	1.57	310		Pn	08 22 17.9	-0.3
APC	Apacha	1.75	299	*e*P	Pn	08 22 21.1	+0.5
APC				*e*S	Sn	08 22 43.4	+1.8
APC	Apacha	1.75	299	PN	Pn	08 22 21.1	+0.5
APC				S	Sn	08 22 43.4	+1.8
MIPR	Malaya Ipel'ka	1.82	276	*e*P	Pn	08 22 21.9	+0.4
MIPR	Malaya Ipel'ka	1.82	276	PN	Pn	08 22 21.9	+0.4
PAU	Pauzhetka	1.91	251	*e*P	Pn	08 22 23.5	+0.8
PAU				*e*S	Sn	08 22 45.6	+0.2
PAU	Pauzhetka	1.91	251	PN	Pn	08 22 23.5	+0.8
PAU				S	Sn	08 22 45.6	+0.2
KII	Karymskiy	1.93	356	*e*P	Pn	08 22 23.2	+0.1
KII				*e*S	Sn	08 22 47.7	+1.5
KII	Karymskiy	1.93	356	PN	Pn	08 22 23.2	+0.1
KII				S	Sn	08 22 47.7	+1.5
SKR	Severo-Kuril’s	2.66	239	*e*P	Pn	08 22 32.6	-0.5
SKR				*e*S	Sn	08 23 03.3	-0.7
SKR	Severo-Kuril’s	2.66	239	*e*PN	Pn	08 22 32.5	-0.5
SKR				*e*S	Sn	08 23 03.5	-0.5
SKR				pmax	pmax		
	comp=Z,35nm,0.5s						
SKR				smax	smax		
	comp=N,453nm,0.5s						

SKR				smax	smax		
	comp=E,217nm,0.5s						
MKZ	**Mys Kozlova**	**2.73**	**26**	*e*P	**Pn**	**08 22 32.3**	**-1.7**
MKZ				*e*S	**Sn**	**08 23 03.2**	**-2.5**
MKZ	**Mys Kozlova**	**2.73**	**26**	PN	**Pn**	**08 22 32.3**	**-1.7**
MKZ				S	**Sn**	**08 23 03.2**	**-2.5**
ALID	**Alaid**	**2.88**	**246**	*e*P	**Pn**	**08 22 36.4**	**+0.3**
ALID	**Alaid**	**2.88**	**246**	PN	**Pn**	**08 22 36.4**	**+0.3**
KZV	**Kizimen**	**3.03**	**6**	*e*P	**Pn**	**08 22 38.4**	**+0.2**
KZV				*e*S	**Sn**	**08 23 13.8**	**+0.6**
KZV	**Kizimen**	**3.03**	**6**	PN	**Pn**	**08 22 38.4**	**+0.2**
KZV				S	**Sn**	**08 23 13.8**	**+0.6**
TUMD	**Tumrok D**	**3.12**	**7**	*e*P	**Pn**	**08 22 40.6**	**+1.2**
TUMD				*e*S	**Sn**	**08 23 18.1**	**+2.7**
TUMR	**Tumrok**	**3.19**	**5**	*e*P	**Pn**	**08 22 41.1**	**+0.8**
TUMR				*e*S	**Sn**	**08 23 19.1**	**+2.0**
TUMR	**Tumrok**	**3.19**	**5**	PN	**Pn**	**08 22 41.1**	**+0.8**
TUMR				S	**Sn**	**08 23 19.1**	**+2.0**
KMNR	**Kamenistaya**	**3.66**	**5**	*e*P	**Pn**	**08 22 49.3**	**+2.4**
KMNR	**Kamenistaya**	**3.66**	**5**	PN	**Pn**	**08 22 49.3**	**+2.4**
ESO	**Esso**	**3.86**	**352**	*e*P	Pn	08 22 53.2	+3.7
ESO	**Esso**	**3.86**	**352**	PN	Pn	08 22 53.2	+3.7
KIRR	**Kirishev**	**3.87**	**5**	*e*P	**Pn**	**08 22 51.7**	**+2.0**
KIRR	**Kirishev**	**3.87**	**5**	PN	**Pn**	**08 22 51.7**	**+2.0**
KPT	**Kopyto**	**3.87**	**4**	*e*P	**Pn**	**08 22 52.5**	**+2.8**
KPT	**Kopyto**	**3.87**	**4**	PN	**Pn**	**08 22 52.5**	**+2.8**
KOZ	**Kozyrevsk**	**3.95**	**1**	*e*P	**Pn**	**08 22 52.3**	**+1.5**
KOZ	**Kozyrevsk**	**3.95**	**1**	PN	**Pn**	**08 22 52.3**	**+1.5**
ZLN	**Zelenaya**	**3.96**	**9**	*e*P	**Pn**	**08 22 53.2**	**+2.2**
ZLN	**Zelenaya**	**3.96**	**9**	PN	**Pn**	**08 22 53.2**	**+2.2**
CIRR	**Tsirk**	**4.06**	**8**	*e*P	**Pn**	**08 22 53.9**	**+1.6**
CIRR	**Tsirk**	**4.06**	**8**	PN	**Pn**	**08 22 53.9**	**+1.6**
KRSR	**Krestovskiy**	**4.14**	**7**	*e*P	**Pn**	**08 22 55.6**	**+2.2**
KRSR	**Krestovskiy**	**4.14**	**7**	PN	**Pn**	**08 22 55.6**	**+2.2**
SRDR	**Sredinnyy**	**4.21**	**0**	*e*P	**Pn**	**08 22 57.4**	**+3.0**
SRDR	**Sredinnyy**	**4.21**	**0**	PN	**Pn**	**08 22 57.4**	**+3.0**
KLY	**Klyuchi**	**4.25**	**7**	*e*P	**Pn**	**08 22 56.4**	**+1.7**
KLY	**Klyuchi**	**4.25**	**7**	PN	**Pn**	**08 22 56.4**	**+1.7**
KBTR	**Krutoberegovo**	**4.49**	**23**	*e*P	**Pn**	**08 22 57.9**	**-0.2**
KBTR				*e*S	**Sn**	**08 23 52.6**	**+3.5**
KBTR	**Krutoberegovo**	**4.49**	**23**	PN	**Pn**	**08 22 57.9**	**-0.2**
KBTR				S	**Sn**	**08 23 52.6**	**+3.5**
BDR	**Baidarnaya**	**4.55**	**11**	*e*P	**Pn**	**08 23 02.0**	**+3.0**
BDR	**Baidarnaya**	**4.55**	**11**	PN	**Pn**	**08 23 02.0**	**+3.0**
SMKR	**Semkarok**	**4.59**	**12**	P	**Pn**	**08 23 01.2**	**+1.6**
SMKR	**Semkarok**	**4.59**	**12**	PN	**Pn**	**08 23 01.2**	**+1.6**
SRKR	**Sorokina**	**4.63**	**10**	*e*P	**Pn**	**08 23 01.8**	**+1.7**
SRKR	**Sorokina**	**4.63**	**10**	PN	**Pn**	**08 23 01.8**	**+1.7**
BKI	**Bering**	**4.85**	**48**	*e*P	**Pn**	**08 23 01.4**	**-1.6**
BKI	**Bering**	**4.85**	**48**	PN	**Pn**	**08 23 01.4**	**-1.6**
OSSR	**Ossora**	**7.40**	**14**	P	Pn	08 23 42.1	+4.2
OSSR	**Ossora**	**7.40**	**14**	PN	Pn	08 23 42.1	+4.2
JKA	**Kamikawa-asahi**	**13.92**	**242**		**Pn**	**08 25 09.9**	**+2.7**
ASAJ	**Asahikawa**	**13.92**	**242**	P	**Pn**	**08 25 09.9**	**+2.7**
	comp=E,0.3nm,0.3s,baz=105,slow=20,SNR=1.9						
KLR	**Kul'dur**	**17.90**	**272**	P	**Pn**	**08 25 58.8**	**+0.8**
	comp=E,0.3nm,0.3s,baz=76,slow=10,SNR=4.8						
UNV	**Unalaska Valle**	**20.32**	**72**	P	**P**	**08 26 25.1**	**+0.6**
UNV				IAmb	IAmb	08 26 39.8	
	comp=Z,64nm,1.4s						
MAJO	**Matsushiro**	**21.75**	**233**	P	**P**	**08 26 42.1**	**+2.0**
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MAJO	**Matsushiro**	**21.75**	**233**	P	**P**	**08 26 42.1**	**+2.0**
MAJO				IAmb	IAmb	08 26 42.6	
	comp=Z,6.4nm,0.7s						
MJAR	**Matsushiro Arr**	**21.75**	**233**	P	**P**	**08 26 41.3**	**+1.2**
	comp=Z,1.7nm,0.4s,baz=19,slow=9.9,SNR=6.9						
MJAR	**Matsushiro Arr**	**21.75**	**233**	P	**P**	**08 26 43.5**	**+3.3**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MJAR	**Matsushiro Arr**	**21.75**	**233**	P	**P**	**08 26 43.5**	**+3.3**
TIXI	**Tiksi**	**23.88**	**336**	P	**P**	**08 26 59.7**	**-1.7**
	comp=Z,1.6nm,0.3s,baz=118,slow=10,SNR=6.0						
H11N2	**WAKE ISLAND Hy**	**32.81**	**167**	T	T	09 03 31.2	
	baz=350						
H11N3	**WAKE ISLAND Hy**	**32.82**	**167**	T	T	09 03 28.7	
	baz=350,slow=74						
H11N1	**WAKE ISLAND Hy**	**32.82**	**167**	T	T	09 03 28.8	
	baz=350,slow=74						
SONM	**Songino Array**	**33.90**	**284**	LR	LR	08 42 59.3	
	comp=Z,112nm,21.1s,baz=12,slow=37						
H11S1	**WAKE ISLAND Hy**	**33.98**	**168**	T	T	09 04 58.8	
	baz=346,slow=74,SNR=4.5						
H11S3	**WAKE ISLAND Hy**	**34.00**	**168**	T	T	09 05 01.8	
	baz=346,slow=74						
H11S2	**WAKE ISLAND Hy**	**34.00**	**168**	T	T	09 05 06.8	
	baz=346						
KURK	**Kurchatov**	**48.05**	**302**	P	**P**	**08 30 25.5**	**-1.5**
KURK	**Kurchatov**	**48.05**	**302**	P	**P**	**08 30 25.2**	**-1.8**
KURK				IAmb	IAmb	08 30 27.1	
	comp=Z,2.0nm,0.8s						
SPA0	**Spitsbergen Ar**	**48.06**	**350**	P	**P**	**08 30 26.6**	**-0.2**
KURBB	**Kurchatov Arra**	**48.15**	**302**	P	**P**	**08 30 25.5**	**-2.3**
	comp=Z,0.5nm,0.4s,baz=61,slow=7.1,SNR=3.0						
MK31	**Makanchi Array**	**48.37**	**296**	P	**P**	**08 30 27.6**	**-1.9**
MK31				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MK31	**Makanchi Array**	**48.37**	**296**	P	**P**	**08 30 27.6**	**-1.9**
MKAR	**Makanchi Array**	**48.37**	**296**	P	**P**	**08 30 27.2**	**-2.3**
	comp=Z,0.3nm,0.4s,baz=59,slow=7.7,SNR=6.0						
MKAR	**Makanchi Array**	**48.37**	**296**	P	**P**	**08 30 27.4**	**-2.2**
MKAR	**Makanchi Array**	**48.37**	**296**	P	**P**	**08 30 27.4**	**-2.2**
BVAR	**Borovoye Array**	**50.81**	**309**	P	**P**	**08 30 45.5**	**-2.6**
	comp=Z,0.6nm,0.4s,baz=72,slow=9.5,SNR=4.2						
ARCES	**ARCESS Array B**	**54.14**	**342**	P	**P**	**08 31 10.9**	**-1.5**
	comp=Z,3.1nm,0.9s,baz=32,slow=14,SNR=4.4						
NVAR	**Mina Array Bea**	**56.31**	**69**	P	**P**	**08 31 29.5**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=285,slow=7.0,SNR=3.4						
KKAR	**Karatay Array**	**57.15**	**299**	P	**P**	**08 31 32.6**	**-1.9**
KKAR	**Karatay Array**	**57.15**	**299**	P	**P**	**08 31 32.6**	**-1.9**
CMAR	**Chiang Mai Arr**	**57.74**	**258**	P	**P**	**08 31 39.7**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=30,slow=7.8,SNR=2.5						
CMAR	**Chiang Mai Arr**	**57.74**	**258**	P	**P**	**08 31 38.7**	**-0.2**
CMAR	**Chiang Mai Arr**	**57.74**	**258**	P	**P**	**08 31 38.7**	**-0.2**
PDAR	**Pinedale Array**	**58.22**	**60**	P	**P**	**08 31 43.0**	**+0.8**
AKASG	**Malin Array Be**	**69.33**	**329**	P	**P**	**08 32 52.7**	**-2.1**
	comp=Z,1.2nm,0.5s,baz=31,slow=6.6,SNR=3.7						
AKASG	**Malin Array Be**	**69.33**	**329**	IAmb	IAmb	08 32 56.1	
	comp=Z,1.5nm,1.3s						
TX32	**Lajitas Array**	**71.25**	**66**	P	**P**	**08 33 07.9**	**+0.9**
TX32				IAmb	IAmb	08 33 08.2	
	comp=Z,1.8nm,1.1s						
TXAR	**Lajitas Array**	**71.25**	**66**	P	**P**	**08 33 07.7**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=298,slow=4.7,SNR=8.3						
TXAR	**Lajitas Array**	**71.25**	**66**	P	**P**	**08 33 07.5**	**+0.4**
TXAR	**Lajitas Array**	**71.25**	**66**	P	**P**	**08 33 07.5**	**+0.4**
ASAR	**Alice Springs**	**78.76**	**204**	P	**P**	**08 33 51.0**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=13,slow=5.2,SNR=4.3						

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*WEL **14** 08:46:05.1±0.6, 33°S±8°×17°9W±2°1, h264^{km}±9^{km}, M4.3/16, mB4.7/10, MLv4.9/16, Mw(mB)3.9/10*

*IDC **14** 08:46:06.4±3.9, 32°.98S×179°.63E, h384^{km}±43^{km}, mb3.4/2, mb1 3.7/4, mb1mx3.2/35, mbtmp4.4/4, Error ellipse: s-maj=50.9km s-min=38.5km az=174.0*

ISC 14 08:46:03.1±1.9**, 32°.8S**±0°.1×**180°.0E**±0°.2**, h350**^{km}**, n59, σ2^s.50**/65**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.94**	**28**	S	S	08 47 54.9	-12
MXZ	**Matakaoa Point**	**4.97**	**195**	P	**Pn**	**08 47 26.0**	**+3.7**
MXZ				S	**S**	**08 48 26.3**	**-0.1**
WMGZ	**Waiomatatini S**	**5.20**	**194**	P	**Pn**	**08 47 26.1**	**+1.3**
WMGZ				S	**S**	**08 48 32.6**	**+1.8**
HAZ	**Te Kaha**	**5.29**	**199**	P	**Pn**	**08 47 27.2**	**+1.4**
HAZ				S	**S**	**08 48 32.7**	**0.0**
PUZ	**Puketiti**	**5.47**	**194**	P	**Pn**	**08 47 28.8**	**+0.9**
PUZ				S	**S**	**08 48 36.2**	**-0.3**
RUGZ	**Raukumara Rang**	**5.51**	**199**	P	**Pn**	**08 47 30.0**	**+1.5**
TWGZ	**Tauwhareparae**	**5.63**	**196**	P	**Pn**	**08 47 30.8**	**+1.1**
TWGZ				S	**S**	**08 48 42.1**	**+2.2**
OPRZ	**Ohinepanea**	**5.78**	**208**	P	**Pn**	**08 47 35.5**	**+4.2**
MARZ	**Manawahe**	**5.86**	**206**	P	**Pn**	**08 47 36.2**	**+4.0**
MWZ	**Matawai**	**5.90**	**199**	P	**Pn**	**08 47 32.9**	**+0.2**
TKGZ	**Te Karaka**	**5.92**	**196**	P	**Pn**	**08 47 33.2**	**+0.4**
TKGZ				S	**S**	**08 48 46.0**	**+0.4**
URZ	**Urewera**	**5.95**	**202**	P	**Pn**	**08 47 35.1**	**+1.8**
	13nm,0.3s,baz=267,slow=5.7,SNR=116						
URZ				S	**S**	**08 48 45.7**	**-0.7**
	7.2nm,0.3s,baz=255,slow=5.4,SNR=4.6						
URZ	**Urewera**	**5.95**	**202**	P	**Pn**	**08 47 32.6**	**-0.6**
URZ				S	**S**	**08 48 45.6**	**-0.7**
OMRZ	**Omania**	**6.08**	**208**	P	Pn	08 47 39.7	+4.9
RAGZ	**Rawiri**	**6.08**	**199**	P	**Pn**	**08 47 37.6**	**+2.7**
TARZ	**Mount Tarawera**	**6.14**	**206**	P	Pn	08 47 40.2	+4.6
TOZ	**Tahuroa Road**	**6.15**	**215**	P	**Pn**	**08 47 39.4**	**+3.9**
RIGZ	**Rimuhau**	**6.19**	**196**	P	**Pn**	**08 47 35.7**	**-0.3**
UTU	**Utuhina**	**6.21**	**209**	P	**Pn**	**08 47 40.5**	**+4.2**
HLRZ	**Highlands Stat**	**6.21**	**207**	P	**Pn**	**08 47 40.0**	**+3.7**
MUGZ	**Murupara**	**6.26**	**204**	P	**Pn**	**08 47 39.3**	**+2.5**
HSRZ	**Hossack Road**	**6.31**	**208**	P	**Pn**	**08 47 41.5**	**+4.2**
RTZ	**Ruatahuna**	**6.32**	**202**	P	**Pn**	**08 47 39.5**	**+2.0**
HRRZ	**Handcock Road**	**6.36**	**207**	P	**Pn**	**08 47 41.5**	**+3.5**
SNGZ	**Shannon Statio**	**6.37**	**199**	P	**Pn**	**08 47 40.4**	**+2.3**
PRGZ	**Paritu Road**	**6.37**	**195**	P	**Pn**	**08 47 41.1**	**+3.1**
GRRZ	**Galatos Road**	**6.39**	**208**	P	**Pn**	**08 47 42.4**	**+4.0**
PRRZ	**Plateau Road**	**6.42**	**206**	P	**Pn**	**08 47 41.4**	**+2.9**
ALRZ	**Allen Road**	**6.49**	**206**	P	**Pn**	**08 47 42.1**	**+2.7**
KNZ	**Kokohu**	**6.51**	**196**	P	**Pn**	**08 47 39.1**	**-0.6**
WPRZ	**Whakapapatarin**	**6.52**	**207**	P	**Pn**	**08 47 43.3**	**+3.5**
RAHZ	**Arahi**	**6.56**	**200**	P	**Pn**	**08 47 42.4**	**+2.0**
MTHZ	**Maungataniwha**	**6.58**	**202**	P	**Pn**	**08 47 43.0**	**+2.5**
MHGZ	**Mahia Peninsul**	**6.59**	**194**	P	**Pn**	**08 47 43.2**	**+2.6**
TLZ	**Tolley Road**	**6.62**	**212**	P	**Pn**	**08 47 45.1**	**+4.1**
KUTZ	**Kaahu Road**	**6.63**	**209**	P	**Pn**	**08 47 44.9**	**+3.8**
WHHZ	**Waihua**	**6.67**	**199**	P	**Pn**	**08 47 44.0**	**+2.4**
MRHZ	**Matea Rd**	**6.70**	**204**	P	**Pn**	**08 47 43.9**	**+2.0**
NMHZ	**Naumai**	**6.81**	**201**	P	**Pn**	**08 47 45.5**	**+2.2**
WATZ	**Wairara**	**6.85**	**209**	P	**Pn**	**08 47 46.7**	**+3.0**
HATZ	**Hinemaiaia**	**6.87**	**206**	P	**Pn**	**08 47 45.8**	**+1.9**
ARHZ	**Aropaoanui**	**6.91**	**200**	P	**Pn**	**08 47 46.1**	**+1.8**
BKZ	**Black Stump Fm**	**6.98**	**203**	P	**Pn**	**08 47 45.1**	**-0.1**
RITZ	**Rihia Road**	**7.03**	**207**	P	**Pn**	**08 47 48.5**	**+2.7**
MCHZ	**McNeill Hill**	**7.17**	**201**	P	**Pn**	**08 47 49.1**	**+1.7**
KRVZ	**Karewarewa**	**7.22**	**208**	P	**Pn**	**08 47 50.2**	**+2.2**
KWHZ	**Kaweka Forest**	**7.23**	**202**	P	**Pn**	**08 47 50.0**	**+1.8**
WTVZ	**West Tongariro**	**7.26**	**208**	P	**Pn**	**08 47 50.5**	**+2.0**
TWVZ	**Taurewa**	**7.28**	**209**	P	**Pn**	**08 47 51.1**	**+2.4**
NGZ	**Ngauruhoe**	**7.31**	**208**	P	**Pn**	**08 47 51.2**	**+2.0**
TUVZ	**Tukino**	**7.37**	**207**	P	**Pn**	**08 47 51.5**	**+1.7**
BHHZ	**Black Hill Sta**	**7.41**	**204**	P	**Pn**	**08 47 50.5**	**+0.3**
KAHZ	**Kahuranaki**	**7.44**	**199**	P	**Pn**	**08 47 52.2**	**+1.6**
PNHZ	**Pukenui**	**7.75**	**202**	P	**Pn**	**08 47 54.3**	**+0.1**
WPHZ	**Waipukurau**	**7.81**	**200**	P	**Pn**	**08 47 56.5**	**+1.5**
RPZ	**Rata Peaks**	**12.97**	**210**	P	**P**	**08 48 54.3**	**-1.0**
	3.0nm,0.3s,baz=262,slow=1.7,SNR=15						
RPZ				S	**S**	**08 51 11.6**	**-6.3**
	0.9nm,0.3s,baz=328,slow=23,SNR=10						
ASAR	**Alice Springs**	**41.32**	**271**	P	**P**	**08 53 14.4**	**-1.7**
	1.1nm,0.6s,baz=106,slow=7.7,SNR=17						
WRA	**Warramunga Arr**	**42.53**	**276**	P	**P**	**08 53 23.6**	**-2.1**
	2.2nm,0.4s,baz=116,slow=7.5,SNR=8.7						
FINES	**FINESS Array B**	**146.71**	**337**	PKPbc	**PKPdf**	**09 05 02.3**	**+1.2**
	1.5nm,0.5s,baz=29,slow=3.4,SNR=10.0						

ZUR 14 08:48:09.1, 46°.34N×7°.29E, h3^{km}±1^{km}**, MLh1.2**/8**, 7C-1D, Error ellipse: s-maj=2.1km s-min=0.6km az=92.0, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SENIN	**Lac Senin/Sane**	**0.02**	**21**	⇑Pg	Pg	08 48 10.2	+0.3
	2.1nm,SNR=39						
SENIN				Sg	Sg	08 48 10.9	+0.3
SIOV	**Sion-Valere**	**0.12**	**154**	⇓Pg	Pg	08 48 11.6	+0.2
	0.2nm,SNR=2.2						
SIOV				Sg	Sg	08 48 13.4	+0.4
GRYON	**Gryon**	**0.15**	**233**	⇑Pg	Pg	08 48 12.2	+0.1
	0.1nm,SNR=2.7						
GRYON				⇑Pg	Pg	08 48 12.2	+0.1
GRYON				Sg	Sg	08 48 14.6	+0.5
SIEB	**Ecole de Borzu**	**0.18**	**106**	Sg	Sg	08 48 15.5	+0.7
LKBD	**Leukerbad**	**0.24**	**79**	⇑Pg	Pg	08 48 13.9	+0.2
	0.2nm,SNR=1.9						
LKBD				⇑Pg	Pg	08 48 13.9	+0.2
LKBD				Sg	Sg	08 48 17.3	+0.5
DIX	**Grande Dixence**	**0.28**	**162**	⇑Pg	Pg	08 48 14.7	+0.3
DIX				⇑Pg	Pg	08 48 14.7	+0.3
	0.1nm,SNR=1.5						

ROM 14 08:49:22.4±0.1**, 43°.406N**±0°.004×**12°.457E**±0°.007**, h6**^{km}±1^{km}**, ML0.7**/2**, Error ellipse: s-maj=0.4km s-min=0.4km az=76.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATVO	**AVT- Monte Val**	**0.04**	**237**	P	Pg	08 49 23.9	+0.1
ATVO				S	Sg	08 49 25.0	+0.2
ATPI	**Pietralunga -**	**0.06**	**318**	P	Pg	08 49 24.1	+0.1
ATPI				S	Sg	08 49 25.5	+0.3
PIEI	**Pieia**	**0.14**	**24**	P	Pg	08 49 25.6	+0.3
PIEI				S	Sg	08 49 28.4	+1.1
PIEI				AML	AML		
	comp=N,45μm,0.2s						
PIEI				AML	AML		
	comp=E,35μm,1.1s						
MURB	**Monte Urbino**	**0.15**	**161**	P	Pg	08 49 25.9	+0.4
MURB				S	Sg	08 49 28.9	+1.3
MURB				AML	AML		
	comp=E,62μm,1.5s						
MURB				AML	AML		
	comp=N,63μm,1.5s						
BADI	**Badiali**	**0.19**	**304**	P	Pg	08 49 26.6	+0.5
BADI				S	Sg	08 49 30.2	+1.5

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*ISK **14** 08:49:34.9, 39°.54N×26°.09E, h7^{km}, ML2.5/16*

*DDA **14** 08:49:35.2, 39°.55N×26°.09E, h7^{km}±2^{km}, ML2.1*

*THE **14** 08:49:35.7, 39°.56N×26°.06E, h3^{km}±1^{km}, ML2.2/8, Error ellipse: s-maj=2.0km s-min=0.6km az=134.0*

*ATH **14** 08:49:35.0, 39°.52N×26°.03E, h29^{km}±1^{km}, ML2.3/5, Error ellipse: s-maj=3.3km s-min=1.2km az=229.0*

ISC 14 08:49:35.1±0.9**, 39°.54N**±0°.02×**26°.06E**±0°.02**, h14**^{km}±7^{km}**, n42, σ0^s.47**/65**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOZC	**Bozcaada**	**0.30**	**359**	PG	**Pg**	**08 49 41.5**	**+0.1**
BOZC				SG	**Sg**	**08 49 45.9**	**+0.3**
BOZC	**Bozcaada**	**0.30**	**359**	*i* P	**Pg**	**08 49 41.1**	**-0.2**
BOZC				*i* P	**Pg**	**08 49 41.4**	**+0.1**
BOZC				*i* S	**Sg**	**08 49 45.7**	**+0.2**
BOZC				*i* S	**Sg**	**08 49 45.8**	**+0.3**
BOZC				IAML		08 49 46.0	
	comp=E,353nm,0.2s						
BOZC				IAML		08 49 46.0	
	comp=N,298nm,0.2s						
PRK	**Paraskevi**	**0.34**	**151**	P	**Pb**	**08 49 43.3**	**+0.3**
PRK				S	**Sb**	**08 49 48.4**	**+0.2**
	comp=N,720nm,0.3s						
PRK	**Paraskevi**	**0.34**	**151**	P	**Pb**	**08 49 43.2**	**+0.3**
PRK				S	**Sb**	**08 49 48.5**	**+0.2**
PRK				AML	AML	08 49 48.6	
	comp=N,1403μm,0.4s						
PRK				AML	AML	08 49 49.0	
	comp=E,1470μm,0.2s						
EZN	**Ezine**	**0.35**	**36**	P	**Pg**	**08 49 42.1**	**-0.1**
EZN				S	**Sg**	**08 49 47.2**	**+0.2**
	comp=E,358nm,0.1s						
EZN	**Ezine**	**0.35**	**36**	PG	**Pg**	**08 49 42.2**	**0.0**
EZN				SG	**Sg**	**08 49 47.2**	**+0.2**
SIGR	**SIGRI**	**0.37**	**206**	P	**Pb**	**08 49 42.9**	**-0.6**
SIGR				S	**Sb**	**08 49 48.5**	**-0.5**
	comp=E,582nm,0.2s						
SIGR	**SIGRI**	**0.37**	**206**	P	**Pb**	**08 49 42.8**	**-0.6**
SIGR				S	**Sb**	**08 49 48.8**	**-0.2**
SIGR				AML	AML	08 49 49.0	
	comp=E,1261μm,0.2s						
SIGR				AML	AML	08 49 52.0	
	comp=N,1050μm,0.2s						
BAYC	**CANAKKALE_Bayr**	**0.42**	**62**	*i* P	**Pg**	**08 49 43.4**	**-0.2**
BAYC				*i* S	**Sg**	**08 49 48.9**	**-0.4**
BAYC				IAML		08 49 49.0	
	comp=E,138nm,0.2s						
AYVA	**Ayvalik**	**0.54**	**116**	*i* P	**Pb**	**08 49 47.1**	**+0.8**
AYVA				*i* S	**Sn**	**08 49 57.4**	**+0.1**
AYVA				IAML		08 49 59.0	
	comp=N,150nm,0.1s						
LIA	**Limnos Island**	**0.77**	**298**	P	**Pb**	**08 49 50.3**	**+0.1**
LIA				S	**Sb**	**08 50 01.7**	**+1.2**
	comp=N,118nm,0.3s						
LIA	**Limnos Island**	**0.77**	**298**	P	**Pb**	**08 49 50.4**	**+0.2**
LIA				AML	AML	08 50 03.1	
	comp=E,222μm,0.3s						
LIA				AML	AML	08 50 04.6	
	comp=N,239μm,0.3s						
DKL	**Dikili**	**0.81**	**125**	PG	**Pb**	**08 49 51.1**	**+0.2**
GELI	**Tayfur-Gelibol**	**0.91**	**20**	PG	**Pg**	**08 49 52.5**	**-0.2**
ZEDA	**zmir-Bergama**	**0.98**	**126**	*i* P	**Pn**	**08 49 54.1**	**-0.3**
ZEDA				*i* S	**Sn**	**08 50 08.6**	**+0.5**
ZEDA				IAML		08 50 09.0	
	comp=N,68nm,0.4s						
ZEDA				IAML		08 50 09.0	
	comp=E,73nm,0.2s						
LPK	**Lapseki**	**0.99**	**33**	PG	**Pg**	**08 49 54.1**	**-0.1**
SMTH	**Samothraki Isl**	**1.01**	**336**	P	**Pg**	**08 49 54.6**	**-0.1**
SMTH				S	**Sn**	**08 50 08.7**	**-0.4**
	comp=E,112nm,0.1s						
SMTH	**Samothraki Isl**	**1.01**	**336**	P	**Pb**	**08 49 54.5**	**0.0**
SMTH				AML	AML	08 50 10.4	
	comp=N,263μm,0.2s						
SMTH				AML	AML	08 50 10.6	
	comp=E,178μm,0.1s						
CHOS	**Chios island**	**1.16**	**180**	P	**Pb**	**08 49 56.6**	**-0.3**
CHOS				S	**Sn**	**08 50 14.5**	**+1.9**
	comp=E,112nm,0.3s						
CHOS	**Chios island**	**1.16**	**180**	P	**Pb**	**08 49 56.7**	**-0.3**
CHOS	**Chios island**	**1.16**	**180**	PN	**Pg**	**08 49 57.1**	**-0.3**
ERIK	**Erikli-Kesan**	**1.18**	**17**	PN	**Pn**	**08 49 56.5**	**-0.7**
ENEZ	**Enez**	**1.19**	**3**	P	**Pn**	**08 49 57.5**	**+0.1**
ENEZ				S	**Sg**	**08 50 14.2**	**+0.5**
ENEZ	**Enez**	**1.19**	**3**	PN	**Pb**	**08 49 57.8**	**+0.2**
URLA	**Izmir**	**1.25**	**160**	PN	**Pb**	**08 49 58.5**	**-0.1**
URLA	**Izmir**	**1.25**	**160**	*i* P	**Pn**	**08 49 58.1**	**-0.1**
URLA				*i* S	**Sg**	**08 50 15.0**	**-0.5**
URLA				IAML		08 50 18.0	
	comp=E,31nm,0.5s						
URLA				IAML		08 50 18.0	
	comp=N,27nm,0.4s						
STEP	**BALIKESIR_Sava**	**1.29**	**97**	*i* P	**Pn**	**08 49 58.7**	**-0.2**
STEP				*i* S	**Sg**	**08 50 16.9**	**+0.1**
STEP				IAML		08 50 20.0	
	comp=N,34nm,0.6s						
ALN	**Alexandroupoli**	**1.35**	**359**	P	**Pb**	**08 50 00.2**	**-0.1**
ALN				S	**Sg**	**08 50 18.4**	**-0.3**
	comp=N,122nm,0.4s						
ALN	**Alexandroupoli**	**1.35**	**359**	P	**Pb**	**08 50 00.2**	**-0.1**
ALN				AML	AML	08 50 19.6	
	comp=E,305μm,0.5s						
ALN				AML	AML	08 50 19.7	
	comp=N,196μm,0.4s						
ALN	**Alexandroupoli**	**1.35**	**359**	PN	**Pb**	**08 50 00.2**	**-0.1**
KESN	**Edirne-Kesan**	**1.37**	**20**	*i* P	**Pn**	**08 49 58.9**	**-1.2**
KESN				*i* S	**Sb**	**08 50 17.8**	**-0.4**
KESN				IAML		08 50 21.0	
	comp=N,79nm,0.5s						
KESN				IAML		08 50 23.0	
	comp=E,84nm,0.3s						
BLCB	**Balcova**	**1.39**	**146**	PN	**Pb**	**08 50 00.8**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.43**	**36**	PN	**Pb**	**08 50 01.4**	**-0.2**
SART	**Tekirdag**	**1.43**	**36**	*i* P	**Pb**	**08 50 02.0**	**+0.4**
SART				*i* S	**Sg**	**08 50 20.6**	**-0.6**
SART				IAML		08 50 21.0	
	comp=N,40nm,0.3s						
SART				IAML		08 50 22.0	
	comp=E,49nm,0.4s						
THAS	**Thassos island**	**1.48**	**316**	P	**Pn**	**08 50 01.4**	**+0.1**
THAS				S	**Sg**	**08 50 22.9**	**+0.1**
	comp=E,20nm,0.3s						
THAS	**Thassos island**	**1.48**	**316**	P	**Pn**	**08 50 01.5**	**+0.1**
MRMT	**Marmara Adasi**	**1.58**	**48**	PN	**Pb**	**08 50 03.6**	**-0.6**
EDC	**Edincik**	**1.60**	**59**	PN	**Pn**	**08 50 03.6**	**+0.6**
UKOP	**Uzunkopru-Edir**	**1.64**	**15**	PN	**Pg**	**08 50 06.2**	**-0.5**
RDO	**Rodhopi**	**1.65**	**346**	P	**Pb**	**08 50 04.8**	**-0.5**
RDO	**Rodhopi**	**1.65**	**346**	PN	**Pb**	**08 50 05.2**	**-0.1**
OUR	**Ouranopolis**	**1.78**	**297**	PN	**Pb**	**08 50 07.6**	**0.0**

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*GCG **14** 09:31:31.8±3.4, 16°.76N×94°.12W, h0^{km}±999^{km}, MD4.7*

*IDC **14** 09:31:38.6±0.6, 16°.23N×93°.88W, h98^{km}±4^{km}, mb3.9/22, mb1 4.1/25, mb1mx3.9/53, mbtmp4.2/25, MS2.9/2, Ms1 2.9/2, ms1mx2.7/27, Error ellipse: s-maj=14.7km s-min=6.2km az=36.0*

*NEIC **14** 09:31:39.1±2.5, 16°.19N±0°.06×94°.04W±0°.05, h107^{km}±2^{km}, Error ellipse: s-maj=9.3km s-min=5.3km az=210.0*

*MEX **14** 09:31:39.5±0.9, 16°.08N×94°.13W, h99^{km}±9^{km}, MD4.3*

ISC 14 09:31:38.4±0.6**, 16°.16N**±0°.04×**94°.07W**±0°.03**, h103**^{km}±5^{km}**, n235, σ1^s.41**/241**, mb4.3**/48**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.94**	**119**	*e*P	**Pn**	**09 31 57.9**	**-0.4**
PCIG				*e*S	**Sn**	**09 32 12.5**	**-0.8**
PCIG		**0.94**	**119**		**Pn**	**09 31 57.9**	**-0.4**
PCIG					**Sn**	**09 32 12.5**	**-0.8**
TGBT	**Tuxtla Gutierr**	**1.12**	**57**	*e*P	**Pn**	**09 32 00.5**	**+0.2**
TGBT				*e*S	**Sn**	**09 32 16.2**	**-0.7**
TGBT	**Tuxtla Gutierr**	**1.12**	**57**		**Pn**	**09 32 00.5**	**+0.2**
TGBT					**Sn**	**09 32 16.2**	**-0.7**
CMIG	**Matias Romero**	**1.21**	**320**	P	**Pn**	**09 32 01.9**	**+0.6**
	559nm,0.3s,baz=161,slow=8.7,SNR=9534						
CMIG				S	**Sn**	**09 32 19.6**	**+0.9**
	573nm,0.3s,baz=336,slow=21,SNR=88						
CMIG	**Matias Romero**	**1.21**	**320**	*e*P	**Pn**	**09 32 02.1**	**+0.7**
CMIG				*i* S	**Sn**	**09 32 19.1**	**+0.4**
CMIG	**Matias Romero**	**1.21**	**320**		**Pn**	**09 32 02.1**	**+0.7**
CMIG					**Sn**	**09 32 19.1**	**+0.4**
CCIG	**Comitan**	**1.86**	**86**		**Pn**	**09 32 09.2**	**-0.2**
CCIG				Sn	**Sn**	**09 32 29.2**	**-3.9**
HUIG	**Huatulco**	**2.00**	**259**	*e*P	**Pn**	**09 32 09.7**	**-1.3**
HUIG				*e*S	**Sn**	**09 32 33.3**	**-2.7**
HUIG	**Huatulco**	**2.00**	**259**		**Pn**	**09 32 09.7**	**-1.3**
HUIG					**Sn**	**09 32 33.3**	**-2.7**
THIG		**2.14**	**125**	*e*P	**Pn**	**09 32 13.1**	**+0.2**
THIG				*e*S	**Sn**	**09 32 39.3**	**0.0**
THIG		**2.14**	**125**		**Pn**	**09 32 13.1**	**+0.2**
THIG					**Sn**	**09 32 39.3**	**0.0**
VHO	**Vista Hermosa**	**2.71**	**290**	*e*P	**Pn**	**09 32 21.0**	**+0.5**
VHO				*i* S	**Sn**	**09 32 52.4**	**-0.5**
STG3	**Santiaguito 3,**	**2.81**	**121**	*e*P	**Pn**	**09 32 23.4**	**+1.5**
ERG	**Entre ros, C**	**2.96**	**125**	*e*P	**Pn**	**09 32 25.9**	**+2.2**
PEIG	**Puerto Escondi**	**2.96**	**267**	*e*P	**Pn**	**09 32 22.7**	**-1.0**
PEIG				*i* S	**Sn**	**09 32 57.2**	**-1.5**
FUG	**Fuego 3**	**3.55**	**118**	*i* S	**Sn**	**09 33 21.4**	**+8.4**
APG	**El Apazote**	**3.66**	**108**	P	**Pn**	**09 32 32.0**	**-1.3**
	11nm,0.3s,baz=335,slow=21,SNR=57						
APG				S	**Sn**	**09 33 12.4**	**-3.3**
	25nm,0.3s,baz=341,slow=20,SNR=8.2						
APG				LR	LR	09 33 41.0	
	comp=Z,103nm,20.7s,baz=312,slow=35						
NBG	**Las Nubes**	**3.92**	**113**	*e*P	**Pn**	**09 32 39.9**	**+3.1**
MRL	**Marmol**	**4.36**	**104**	*e*P	**Pn**	**09 32 42.9**	**+0.2**
TLIG	**Tlapa**	**4.53**	**289**		**Pn**	**09 32 47.0**	**+2.1**
TLIG				Sn	**Sn**	**09 33 35.4**	**-1.1**
TEIG	**Tepich**	**6.83**	**53**	P	**Pn**	**09 33 14.1**	**-1.9**
	103nm,0.3s,baz=220,slow=0.0,SNR=228						
TEIG				S	**Sn**	**09 34 28.0**	**-4.3**
	baz=319,slow=0.0						
TEIG				LR	LR	09 36 08.4	
	comp=Z,156nm,20.9s,baz=253,slow=41						
TGUH	**Tegucigalpa,Un**	**6.89**	**107**		**Pn**	**09 33 16.5**	**-0.5**
ACON	**Acoyapa**	**9.58**	**115**	Pn	**Pn**	**09 33 57.3**	**+3.8**
JTS	**Las Juntas de**	**10.62**	**122**	P	**Pn**	**09 34 06.8**	**-0.8**
	1.7nm,0.3s,baz=47,slow=15,SNR=8.9						
JTS	**Las Juntas de**	**10.62**	**122**		**Pn**	**09 34 07.1**	**-0.5**
FSCY	**Frank Sound, G**	**12.67**	**74**	Pn	**Pn**	**09 34 35.7**	**+0.8**
833A	**Chaparral WMA,**	**13.06**	**339**	Pn	**Pn**	**09 34 41.1**	**+1.0**
833A	**Chaparral WMA,**	**13.06**	**339**	P	**Pn**	**09 34 41.7**	**+1.6**
	baz=156						
CBCY	**The Bluff, Cay**	**14.07**	**73**	Pn	**Pn**	**09 34 55.2**	**+1.9**
435B	**Jarrell**	**14.90**	**348**	Pn	**Pn**	**09 35 03.7**	**-0.1**
435B	**Jarrell**	**14.90**	**348**	P	**Pn**	**09 35 04.9**	**+1.1**
	baz=166						
JCT	**Junction City**	**15.19**	**341**	P	**P**	**09 35 09.2**	**-0.9**
	baz=158,SNR=8.2						
HPIG		**15.20**	**317**	Pn	**Pn**	**09 35 07.7**	**-0.1**
342A	**Flagon Creek P**	**15.23**	**6**	Pn	**P**	**09 35 09.3**	**-1.1**
342A				IAmb	IAmb	09 35 13.1	
	comp=Z,12nm,0.7s						
NATX	**Nacogdoches**	**15.54**	**358**	Pn	**Pn**	**09 35 10.9**	**-0.9**
NATX				IAmb	IAmb	09 35 15.8	
	comp=Z,26nm,1.1s						
NATX	**Nacogdoches**	**15.54**	**358**	P	**Pn**	**09 35 12.1**	**+0.3**
	baz=177						
TXAR	**Lajitas Array**	**15.80**	**328**	P	**P**	**09 35 17.7**	**+0.7**

	comp=Z,0.2nm,0.3s,baz=148,slow=14,SNR=36						
TXAR	**Lajitas Array**	**15.80**	**328**		**Pn**	**09 35 15.7**	**+0.5**
TX31	**Lajitas Ar. Si**	**15.81**	**328**		**Pn**	**09 35 15.1**	**-0.2**
TX32	**Lajitas Array**	**15.81**	**328**		**Pn**	**09 35 16.0**	**+0.7**
237A	**Washetta, Mont**	**15.85**	**355**	Pn	**Pn**	**09 35 15.1**	**-0.5**
237A				IAmb	IAmb	09 35 30.0	
	comp=Z,43nm,1.4s						
WHTX	**Lake Whitney,**	**16.06**	**350**	Pn	**Pn**	**09 35 17.1**	**-1.2**
WHTX				IAmb	IAmb	09 35 36.3	
	comp=Z,16nm,1.1s						
WHTX	**Lake Whitney,**	**16.06**	**350**	P	**P**	**09 35 19.1**	**-0.5**
	baz=167						
451A	**Vernon**	**16.28**	**26**	Pn	**Pn**	**09 35 20.8**	**-0.2**
VBMS	**Vicksburg**	**16.31**	**11**	Pn	**P**	**09 35 22.3**	**-0.2**
VBMS				IAmb	IAmb	09 35 22.3	
	comp=Z,19nm,0.9s						
VBMS	**Vicksburg**	**16.31**	**11**	P	**Pn**	**09 35 21.8**	**+0.5**
	baz=191						
553A	**Crawfordville**	**16.52**	**31**	Pn	**P**	**09 35 25.6**	**+0.8**
DWPF	**Disney Wildern**	**16.67**	**42**	Pn	**Pn**	**09 35 25.8**	**-0.1**
DWPF	**Disney Wildern**	**16.67**	**42**	P	**Pn**	**09 35 24.8**	**-1.0**
	baz=226						
656A	**Willston**	**16.89**	**37**	Pn	**P**	**09 35 28.9**	**0.0**
Z41A	**Richland Creek**	**17.06**	**4**		**P**	**09 35 32.5**	**+1.8**
Z41A				IAmb	IAmb	09 35 35.9	
	comp=Z,15nm,0.8s						
Z41A	**Richland Creek**	**17.06**	**4**	P	**P**	**09 35 31.2**	**+0.5**
	baz=183						
ABTX	**Abilene, Hawle**	**17.15**	**344**	P	**P**	**09 35 33.8**	**+2.0**
ABTX				IAmb	IAmb	09 35 35.0	
	comp=Z,14nm,0.8s						
ABTX	**Abilene, Hawle**	**17.15**	**344**	P	**P**	**09 35 33.1**	**+1.3**
	baz=161,SNR=5.1						
352A	**Blakely**	**17.38**	**27**	P	**Pn**	**09 35 34.9**	**+0.5**
352A				IAmb	IAmb	09 35 37.1	
	comp=Z,20nm,0.8s						
LRAL	**Lakeview Retre**	**17.98**	**20**	P	**P**	**09 35 40.8**	**-0.1**
LRAL	**Lakeview Retre**	**17.98**	**20**	P	**P**	**09 35 40.4**	**-0.4**
	baz=202						
X40A	**Basin Creek Fa**	**18.28**	**3**	P	**P**	**09 35 44.2**	**0.0**
	baz=183						
MIAR	**Mount Ida**	**18.31**	**1**	P	**P**	**09 35 45.2**	**+0.7**
MIAR				IAmb	IAmb	09 35 45.8	
	comp=Z,11nm,0.7s						
MIAR	**Mount Ida**	**18.31**	**1**	P	**P**	**09 35 45.0**	**+0.5**
	baz=181,SNR=7.4						
GTBY	**Guantanamo Bay**	**18.41**	**75**	P	**P**	**09 35 45.0**	**-0.7**
GTBY				IAmb	IAmb	09 35 45.6	
	comp=Z,22nm,0.6s						
152A	**Waverly Hall**	**18.49**	**26**	P	**Pn**	**09 35 48.2**	**+0.3**
Z50A	**Ashland**	**18.54**	**22**	P	**Pn**	**09 35 48.0**	**-0.5**
Z50A				IAmb	IAmb	09 35 51.0	
	comp=Z,24nm,1.1s						
Z50A	**Ashland**	**18.54**	**22**	P	**P**	**09 35 46.4**	**-0.7**
	baz=205,SNR=7.4						
MNTX	**Cornudas Mount**	**18.58**	**328**	P	**Pn**	**09 35 49.0**	**+0.1**
MNTX	**Cornudas Mount**	**18.58**	**328**	P	**Pn**	**09 35 49.0**	**+0.1**
	baz=143						
X34A	**Smith Ranch, M**	**18.67**	**350**	P	**Pn**	**09 35 50.2**	**+0.2**
OXF	**Oxford**	**18.75**	**12**	P	**P**	**09 35 49.4**	**+0.1**
OXF				IAmb	IAmb	09 35 58.7	
	comp=Z,14nm,0.5s						
OXF	**Oxford**	**18.75**	**12**	P	**P**	**09 35 49.1**	**-0.1**
	baz=193						
255A	**Hazlehurst**	**18.91**	**32**	P	**P**	**09 35 50.0**	**-1.0**
Y49A	**Blount Mountai**	**18.92**	**20**	P	**P**	**09 35 51.3**	**+0.1**
W39A	**Magazine**	**18.96**	**1**	P	**P**	**09 35 52.4**	**+0.8**
W39A				IAmb	IAmb	09 36 00.3	
	comp=Z,11nm,0.9s						
W39A	**Magazine**	**18.96**	**1**	P	**P**	**09 35 51.7**	**+0.2**
	baz=180						
WMOK	**Wichita Mounta**	**18.98**	**348**	P	**P**	**09 35 52.7**	**+0.9**
WMOK				IAmb	IAmb	09 35 58.8	
	comp=Z,6.2nm,0.5s						
WMOK	**Wichita Mounta**	**18.98**	**348**	P	**P**	**09 35 52.4**	**+0.6**
	baz=165,SNR=9.8						
W41B	**Gary Mavity, V**	**19.00**	**5**	P	**P**	**09 35 52.6**	**+0.6**
W41B				IAmb	IAmb	09 36 01.9	
	comp=Z,13nm,1.4s						
W41B	**Gary Mavity, V**	**19.00**	**5**	P	**P**	**09 35 51.9**	**-0.1**
	baz=185						
W35A	**Tecumseh**	**19.08**	**353**	P	**Pn**	**09 35 54.5**	**-0.3**
WHAR	**Wooly Hollow**	**19.12**	**4**	P	**P**	**09 35 53.8**	**+0.6**
WHAR				IAmb	IAmb	09 36 08.7	
	comp=Z,15nm,1.3s						
FNO	**Franklin**	**19.25**	**352**	P	**Pn**	**09 35 56.8**	**0.0**
X48A	**Hartselle**	**19.28**	**18**	P	**P**	**09 35 55.4**	**+0.4**
X48A				IAmb	IAmb	09 35 58.2	
	comp=Z,11nm,0.8s						
MSTX	**Muleshoe**	**19.39**	**338**	P	**P**	**09 35 57.6**	**+1.2**
MSTX				IAmb	IAmb	09 36 01.5	
	comp=Z,30nm,1.0s						
MSTX	**Muleshoe**	**19.39**	**338**	P	**Pn**	**09 35 57.9**	**-0.6**
	baz=154,SNR=18						
OKCSW	**OKLAHOMA CITY**	**19.40**	**352**	P	**P**	**09 35 57.5**	**+1.1**
OKCFA	**Oklahoma City**	**19.41**	**352**	P	**P**	**09 35 57.6**	**+1.1**
GOGA	**Godfrey**	**19.66**	**27**	P	**P**	**09 35 58.0**	**-1.2**
	baz=211						
FCAR	**Ozark Folk Cen**	**19.72**	**5**	P	**P**	**09 35 59.9**	**+0.1**
TUL1	**Leonard**	**19.73**	**356**	P	**P**	**09 35 59.3**	**-0.7**
TUL1				IAmb	IAmb	09 36 04.7	
	comp=Z,13nm,0.7s						
TUL1	**Leonard**	**19.73**	**356**	P	**P**	**09 36 00.3**	**+0.4**
	baz=174						
Y52A	**Lilburn**	**19.80**	**25**	P	**P**	**09 35 59.6**	**-1.1**
	baz=209						
FPAL	**Fort Paine**	**19.82**	**21**	P	**P**	**09 36 01.3**	**+0.4**
FPAL				IAmb	IAmb	09 36 17.1	
	comp=Z,9.7nm,1.0s						
AMTX	**Amarillo**	**19.85**	**341**	P	**P**	**09 36 02.7**	**+1.3**
AMTX	**Amarillo**	**19.85**	**341**	P	**P**	**09 36 02.8**	**+1.4**
	baz=157						
HHAR	**Hobbs**	**20.04**	**0**	P	**P**	**09 36 04.1**	**+0.8**
HHAR				IAmb	IAmb	09 36 07.2	
	comp=Z,13nm,0.4s						
U40A	**Yellville**	**20.14**	**3**	P	**P**	**09 36 04.3**	**-0.1**
U40A	**Yellville**	**20.14**	**3**	P	**P**	**09 36 04.4**	**-0.1**
	baz=183						
U38A	**Gravette**	**20.20**	**359**	P	**P**	**09 36 06.2**	**+1.2**
U38A				IAmb	IAmb	09 36 08.9	
	comp=Z,9.1nm,0.8s						
121A	**Cookes Peak, D**	**20.50**	**325**	P	Pn	09 36 10.7	-0.8
121A				IAmb	IAmb	09 36 13.7	
	comp=Z,8.9nm,0.8s						
121A	**Cookes Peak, D**	**20.50**	**325**	P	Pn	09 36 11.6	0.0
	baz=139,SNR=5.7						
W50A	**Signal Mountai**	**20.52**	**21**	P	**P**	**09 36 09.5**	**+1.0**
W50A				IAmb	IAmb	09 36 15.3	
	comp=Z,7.4nm,0.7s						
U32A	**Winter Ranch,**	**20.61**	**349**	P	**P**	**09 36 08.6**	**-0.9**
WVT	**Waverly**	**20.65**	**14**	P	**P**	**09 36 09.1**	**-0.8**
	baz=197						
X53A	**Estanollee**	**20.67**	**26**	P	**P**	**09 36 08.7**	**-1.4**
	baz=210						
158A	**Hollywood**	**20.74**	**35**	P	**P**	**09 36 10.2**	**-0.7**
	baz=220						
T35A	**Sooner Cattle**	**20.79**	**354**	P	**P**	**09 36 10.8**	**-0.5**
T35A				IAmb	IAmb	09 36 15.2	
	comp=Z,12nm,0.6s						
T42A	**Van Buren**	**20.95**	**7**	P	**P**	**09 36 14.0**	**+0.9**
MGMO	**Mountain Grove**	**20.97**	**4**	P	**P**	**09 36 14.4**	**+1.1**
S39A	**Bolivar**	**21.46**	**2**	P	**P**	**09 36 18.2**	**-0.3**
S39A				IAmb	IAmb	09 36 20.6	
	comp=Z,9.0nm,0.7s						
TKL	**Tuckaleechee C**	**21.48**	**23**	P	**P**	**09 36 19.4**	**+0.6**
	comp=Z,1.3nm,0.4s,baz=186,slow=17,SNR=3.6						
TKL	**Tuckaleechee C**	**21.48**	**23**	P	**P**	**09 36 19.2**	**+0.4**
TKL				IAmb	IAmb	09 36 19.5	
	comp=Z,19nm,1.4s						
U49A	**Red Boiling Sp**	**21.57**	**18**	P	**P**	**09 36 19.0**	**-0.7**
U49A				IAmb	IAmb	09 36 20.6	
	comp=Z,4.7nm,0.5s						
T47A	**Sharon Grove**	**21.64**	**15**	P	**P**	**09 36 19.9**	**-0.6**
T47A				IAmb	IAmb	09 36 22.5	
	comp=Z,6.2nm,0.7s						
ANMO	**Albuquerque**	**21.75**	**332**	P	**P**	**09 36 24.3**	**+2.4**
	comp=Z,2.1nm,0.7s,baz=144,slow=13,SNR=16						
ANMO	**Albuquerque**	**21.75**	**332**	P	**P**	**09 36 23.5**	**+1.7**
ANMO	**Albuquerque**	**21.75**	**332**	P	**P**	**09 36 24.0**	**+2.1**
	baz=146						
V53A	**Saluda**	**21.87**	**25**	P	**P**	**09 36 22.6**	**-0.4**
	baz=210						
CCM	**Cathedral Cave**	**21.95**	**6**	P	**P**	**09 36 22.9**	**-0.8**
CCM	**Cathedral Cave**	**21.95**	**6**	P	**P**	**09 36 21.8**	**-1.9**
	baz=187						
TUC	**Tucson**	**22.10**	**320**	P	**P**	**09 36 27.9**	**+2.4**
	baz=132						
USIN	**University of**	**22.44**	**13**	P	**P**	**09 36 29.4**	**+0.6**
USIN				IAmb	IAmb	09 36 31.9	
	comp=Z,42nm,1.4s						
R32A	**Long Quarter,**	**22.55**	**350**	P	**P**	**09 36 29.5**	**-0.5**
R32A				IAmb	IAmb	09 36 31.5	
	comp=Z,43nm,1.2s						
T51A	**Gray**	**22.58**	**22**	P	**P**	**09 36 30.2**	**-0.2**
	baz=206						
T25A	**Trinidad**	**22.81**	**338**	P	**P**	**09 36 34.6**	**+1.7**
T25A				IAmb	IAmb	09 36 39.3	
	comp=Z,10nm,0.8s						
T25A	**Trinidad**	**22.81**	**338**	P	**P**	**09 36 34.6**	**+1.7**
	baz=153,SNR=11						
S49A	**Springfield**	**22.89**	**18**	P	**P**	**09 36 32.1**	**-1.3**
	baz=202						
KSU1	**Kansas State U**	**22.96**	**355**	P	**P**	**09 36 33.3**	**-0.7**
	baz=173						
WCI	**Wyandotte Cave**	**23.02**	**16**	P	**P**	**09 36 33.8**	**-0.8**
WCI				IAmb	IAmb	09 36 47.2	
	comp=Z,22nm,1.4s						
WCI	**Wyandotte Cave**	**23.02**	**16**	P	**P**	**09 36 33.7**	**-1.0**
	baz=199						
OLIL	**Olney**	**23.09**	**12**	P	**P**	**09 36 33.3**	**-1.9**
OLIL				IAmb	IAmb	09 36 35.0	
	comp=Z,9.9nm,0.8s						
CBKS	**Cedar Bluff**	**23.11**	**349**	P	**P**	**09 36 35.2**	**-0.3**
CBKS				IAmb	IAmb	09 36 37.8	
	comp=Z,20nm,0.8s						
CBKS	**Cedar Bluff**	**23.11**	**349**	P	**P**	**09 36 35.7**	**+0.2**
	baz=166						
X18A	**Snowflake**	**23.19**	**325**	P	**P**	**09 36 38.6**	**+2.1**
FLOC	**Florencia**	**23.22**	**127**	P	**P**	**09 36 38.7**	**+2.0**
S51A	**Beattyville**	**23.31**	**21**	P	**P**	**09 36 37.3**	**-0.1**
S51A				IAmb	IAmb	09 36 52.7	
	comp=Z,7.7nm,0.9s						
U55A	**TA2, Sparta**	**23.33**	**27**	P	**P**	**09 36 36.9**	**-0.8**
	baz=213						
P38A	**Dawn**	**23.38**	**1**	P	**P**	**09 36 36.9**	**-1.1**
P38A				IAmb	IAmb	09 36 38.2	
	comp=Z,7.3nm,0.5s						
W18A	**Petrified Fore**	**23.52**	**326**	P	**P**	**09 36 41.9**	**+2.4**
	baz=139						
R50A	**Paris**	**23.64**	**19**	P	**P**	**09 36 42.0**	**+1.6**
SDCO	**Great Sand Dun**	**23.75**	**337**	P	**P**	**09 36 44.9**	**+3.2**
SDCO	**Great Sand Dun**	**23.75**	**337**	P	**P**	**09 36 42.5**	**+0.8**
	baz=151,SNR=5.5						
Q48A	**North Vernon**	**23.83**	**16**	P	**P**	**09 36 41.4**	**-0.7**
	baz=200						
R51A	**Hillsboro**	**23.91**	**21**	P	**P**	**09 36 41.8**	**-0.9**
	baz=205						
X16A	**Lo Mia Camp, P**	**23.96**	**323**	P	**P**	**09 36 46.0**	**+2.5**
KSCO	**Kaye Shedlock’**	**23.97**	**343**	P	**P**	**09 36 44.4**	**+0.9**
KSCO				IAmb	IAmb	09 36 46.5	
	comp=Z,13nm,0.7s						
KSCO	**Kaye Shedlock’**	**23.97**	**343**	P	**P**	**09 36 44.0**	**+0.5**
	baz=159						
SDV	**Santo Domingo**	**23.98**	**105**	P	**P**	**09 36 44.3**	**+0.5**
	comp=Z,2.1nm,0.4s,baz=342,slow=4.4,SNR=5.7						
SDV	**Santo Domingo**	**23.98**	**105**	P	**P**	**09 36 43.4**	**-0.4**
S22A	**4UR Ranch, Cre**	**24.27**	**335**	P	**P**	**09 36 48.7**	**+2.3**
S22A	**4UR Ranch, Cre**	**24.27**	**335**	P	**P**	**09 36 48.1**	**+1.7**
	baz=148						
P48A	**Milroy**	**24.41**	**16**	P	**P**	**09 36 45.2**	**-2.1**
	baz=200						
U58A	**Oxford**	**24.42**	**31**	P	**P**	**09 36 46.4**	**-1.0**
	baz=218						
MVCO	**Mesa Verde**	**24.55**	**331**	P	**P**	**09 36 49.6**	**+0.8**
	baz=144						
Y14A	**Wickenburg**	**24.57**	**320**	P	**P**	**09 36 50.1**	**+1.2**
O48A	**Farmland**	**25.23**	**16**	P	**P**	**09 36 53.5**	**-1.2**
	baz=200						
O49A	**Covington**	**25.39**	**18**	P	**P**	**09 36 54.6**	**-1.6**
	baz=202						
PV13	**Radium Mtn., P**	**25.47**	**332**	P	**P**	**09 36 58.3**	**+1.0**
SMCO	**Snowmass**	**25.56**	**336**	P	**P**	**09 37 00.2**	**+2.0**
PV03	**Paradox Valley**	**25.56**	**332**	P	**P**	**09 36 58.7**	**+0.7**
PV12	**Saucer Basin,**	**25.59**	**332**	P	**P**	**09 36 59.1**	**+0.8**
PV12				IAmb	IAmb	09 37 05.1	
	comp=Z,14nm,1.3s						
P52A	**Corning**	**25.60**	**22**	P	**P**	**09 36 55.5**	**-2.6**
	baz=207						
ISCO	**Idaho Springs**	**25.61**	**339**	P	**P**	**09 36 59.1**	**+0.5**
ISCO	**Idaho Springs**	**25.61**	**339**	P	**P**	**09 36 58.8**	**+0.2**
	baz=153						
OGNE	**Ogallala**	**25.64**	**346**	P	**P**	**09 37 00.1**	**+1.6**
OGNE				IAmb	IAmb	09 37 01.1	
	comp=Z,18nm,0.9s						
OGNE	**Ogallala**	**25.64**	**346**	P	**P**	**09 36 58.9**	**+0.3**
	baz=162						
SCIA	**State Center**	**25.67**	**1**	P	**P**	**09 36 58.2**	**-0.5**
SCIA				IAmb	IAmb	09 36 59.6	
	comp=Z,19nm,0.8s						
SCIA	**State Center**	**25.67**	**1**	P	**P**	**09 36 58.3**	**-0.4**
	baz=181						
N48A	**Decatur**	**25.83**	**16**	P	**P**	**09 36 58.0**	**-2.1**
	baz=200						
BC3	**Big Chuckawall**	**25.98**	**316**	P	**P**	**09 37 04.3**	**+2.5**
	baz=127						
O52A	**Adamsville**	**26.14**	**22**	P	**P**	**09 37 01.1**	**-1.8**
O52A				IAmb	IAmb	09 37 01.8	
	comp=Z,9.1nm,1.0s						
O52A	**Adamsville**	**26.14**	**22**	P	**P**	**09 37 01.4**	**-1.5**
	baz=207						
JFWS	**Jewell Farm**	**26.86**	**6**	P	**P**	**09 37 07.9**	**-1.5**
JFWS				IAmb	IAmb	09 37 11.2	
	comp=Z,9.4nm,0.5s						
JFWS	**Jewell Farm**	**26.86**	**6**	P	**P**	**09 37 08.0**	**-1.4**
	baz=188						
ECSD	**EROS Data Cent**	**27.57**	**356**	IAmb	IAmb	09 37 16.4	
	comp=Z,7.2nm,1.1s						
ECSD	**EROS Data Cent**	**27.57**	**356**	P	**P**	**09 37 15.1**	**-0.6**
	baz=174,SNR=7.6						
SPMN	**Marine on St.**	**28.99**	**2**	P	**P**	**09 37 27.1**	**-1.2**
	baz=182,SNR=12						
RSSD	**Black Hills**	**29.12**	**345**	P	**P**	**09 37 31.1**	**+1.3**
	baz=160						
J52A	**Paris**	**29.38**	**20**	P	**P**	**09 37 29.2**	**-2.5**
	baz=207						
PDAR	**Pinedale Array**	**29.64**	**337**	P	**P**	**09 37 35.8**	**+1.3**
	comp=Z,0.7nm,0.8s,baz=139,slow=9.8,SNR=4.6						
PDAR	**Pinedale Array**	**29.64**	**337**	P	**P**	**09 37 34.4**	**-0.1**
E38A	**The Farm, Brul**	**30.43**	**3**	IAmb	IAmb	09 37 40.7	
	comp=Z,6.6nm,0.6s						
SNOW	**Snow King Moun**	**30.70**	**336**	IAmb	IAmb	09 37 47.6	
	comp=Z,14nm,1.1s						
NVAR	**Mina Array Bea**	**30.74**	**321**	P	**P**	**09 37 46.7**	**+2.5**
	comp=Z,2.4nm,0.7s,baz=137,slow=8.8,SNR=25						
NVAR				PcP	**PcP**	**09 40 40.5**	**+0.9**
	comp=Z,0.5nm,0.8s,baz=131,slow=4.1,SNR=3.7						
NVAR	**Mina Array Bea**	**30.74**	**321**	P	**P**	**09 37 47.0**	**+2.8**
TPAW	**Teton Pass**	**30.80**	**336**	P	**P**	**09 37 44.9**	**+0.2**
TPAW				IAmb	IAmb	09 37 47.0	
	comp=Z,4.4nm,0.9s						
E47A	**Iron Bridge**	**31.52**	**14**	P	**P**	**09 37 48.3**	**-2.3**
	baz=200						
YNE	**Yellowstone No**	**31.74**	**338**	P	**P**	**09 37 54.9**	**+2.1**
D46A	**Sault St. Mari**	**31.75**	**13**	P	**P**	**09 37 49.7**	**-3.0**
	baz=198						
EYMN	**Ely**	**31.77**	**3**	P	**P**	**09 37 50.2**	**-2.6**
	baz=184						
MDND	**Maddock**	**31.93**	**353**	P	**P**	**09 37 52.9**	**-1.3**
	baz=170						
LAO	**LASA Array**	**32.07**	**344**	P	**P**	**09 37 55.6**	**0.0**
	baz=157						
AGMN	**Agassiz Nation**	**32.08**	**358**	P	**P**	**09 37 54.6**	**-0.9**
	baz=176,SNR=11						
DLMT	**Dillon**	**33.01**	**336**	P	**P**	**09 38 06.0**	**+2.1**
DLMT				IAmb	IAmb	09 38 08.1	
	comp=Z,5.8nm,1.0s						
DGMT	**Dagmar**	**33.27**	**348**	IAmb	IAmb	09 38 08.8	
	comp=Z,7.0nm,0.7s						
DGMT	**Dagmar**	**33.27**	**348**	P	**P**	**09 38 05.7**	**-0.3**
	baz=162						
ULM	**Lac du Bonnet**	**34.03**	**358**	P	**P**	**09 38 10.9**	**-1.6**
	comp=Z,5.4nm,0.4s,baz=176,slow=11,SNR=18						
J08A	**Circle Bar Ran**	**34.15**	**328**	IAmb	IAmb	09 38 20.7	
	comp=Z,3.7nm,0.6s						
EGMT	**Eagleton**	**34.30**	**341**	P	**P**	**09 38 15.8**	**+0.9**
	baz=152						
MSO	**Missoula**	**34.75**	**336**	P	**P**	**09 38 19.1**	**+0.2**
	baz=145						
F10A	**Beach Ranch, E**	**35.47**	**332**	IAmb	IAmb	09 38 28.1	
	comp=Z,6.7nm,0.9s						
JTMT	**Jette**	**35.63**	**336**	IAmb	IAmb	09 38 29.0	
	comp=Z,6.1nm,0.9s						
FFC	**Flin Flon**	**38.97**	**353**	P	**P**	**09 38 54.4**	**+0.1**
SAML	**Samuel**	**39.46**	**127**	P	**P**	**09 38 56.6**	**-2.4**
LPAZ	**La Paz**	**41.17**	**140**	P	**P**	**09 39 12.3**	**-1.4**
	comp=Z,0.9nm,0.6s,baz=292,slow=3.2,SNR=4.9						
LPAZ	**La Paz**	**41.17**	**140**	IAmb	IAmb	09 39 19.6	
	comp=Z,4.9nm,1.4s						
SCHQ	**Schefferville**	**43.95**	**22**	P	**P**	**09 39 33.3**	**-1.7**
	comp=Z,4.8nm,1.2s,baz=225,slow=12,SNR=4.6						
SCHQ	**Schefferville**	**43.95**	**22**	IAmb	IAmb	09 39 35.1	
	comp=Z,2.3nm,0.8s						
SIV	**San Ignacio**	**45.62**	**133**	P	**P**	**09 39 48.7**	**-0.2**
	comp=Z,2.6nm,0.6s,baz=315,slow=7.8,SNR=19						
SIV				PcP	**PcP**	**09 41 27.1**	**+1.5**
	comp=Z,1.1nm,0.6s,baz=72,slow=4.3,SNR=3.8						
YKA	**Yellowknife Ar**	**48.48**	**347**	P	**P**	**09 40 10.7**	**+0.3**
	comp=Z,6.9nm,0.7s,baz=153,slow=7.7,SNR=130						
YKA				pP	**pP**	**09 40 34.7**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=153,slow=7.5,SNR=3.1						
DLBC	**Dease Lake**	**49.88**	**336**	P	**P**	**09 40 23.6**	**+2.4**
	comp=Z,3.7nm,0.8s,baz=149,slow=5.8,SNR=4.4						
DLBC	**Dease Lake**	**49.88**	**336**	IAmb	IAmb	09 40 29.3	
	comp=Z,20nm,1.4s						
BDFB	**Brasilia**	**55.36**	**123**	P	**P**	**09 41 02.1**	**-0.2**
	comp=Z,6.9nm,0.7s,baz=290,slow=7.3,SNR=9.7						
BDFB	**Brasilia**	**55.36**	**123**	IAmb	IAmb	09 41 02.8	
	comp=Z,8.6nm,0.8s						
RAGM	**Ragged Mountai**	**57.11**	**333**	P	**P**	**09 41 13.7**	**-0.3**
INK	**Inuvik**	**57.81**	**344**	P	**P**	**09 41 19.8**	**+1.1**
	comp=Z,5.6nm,0.9s,baz=121,slow=7.6,SNR=15						
INK				pP	**pP**	**09 41 44.2**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=115,slow=6.9,SNR=1.7						
INK	**Inuvik**	**57.81**	**344**	P	**P**	**09 41 19.4**	**+0.7**
RES	**Resolute Bay**	**58.53**	**360**	P	**P**	**09 41 22.8**	**-0.8**
	comp=Z,1.9nm,0.5s,baz=214,slow=5.6,SNR=18						
RES	**Resolute Bay**	**58.53**	**360**	P	**P**	**09 41 22.6**	**-1.0**
RES				IAmb	IAmb	09 41 23.6	
	comp=Z,2.8nm,0.8s						
ILAR	**Eielson Array**	**60.08**	**337**	P	**P**	**09 41 35.7**	**+1.2**
	comp=Z,0.7nm,0.7s,baz=121,slow=5.9,SNR=7.5						
ILAR				pP	**pP**	**09 42 00.8**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=149,slow=4.7,SNR=4.9						
PLCA	**Paso Flores**	**60.67**	**160**	P	**P**	**09 41 39.1**	**+0.2**
	comp=Z,3.0nm,0.8s,baz=354,slow=7.5,SNR=8.7						
NB2	**NORSAR Subarra**	**83.20**	**28**	P	**P**	**09 43 53.8**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=296,slow=5.1						
NOA	**NORSAR Array B**	**83.20**	**28**	P	**P**	**09 43 53.9**	**+0.7**
	comp=Z,1.4nm,0.7s,baz=291,slow=4.7,SNR=3.8						
ARCES	**ARCESS Array B**	**84.71**	**18**	P	**P**	**09 44 00.5**	**-0.1**
	comp=Z,4.0nm,0.4s,baz=291,slow=5.0,SNR=38						
TIXI	**Tiksi**	**87.73**	**348**	P	**P**	**09 44 15.7**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=20,slow=5.8,SNR=4.3						
TIXI	**Tiksi**	**87.73**	**348**	IAmb	IAmb	09 44 17.2	
	comp=Z,1.1nm,0.6s						
GERES	**GERESS Array B**	**89.20**	**39**	P	**P**	**09 44 22.4**	**-0.6**
	comp=Z,1.4nm,0.9s,baz=299,slow=6.0,SNR=5.8						
FINES	**FINESS Array B**	**89.39**	**25**	LR	LR	10 26 57.2	
	comp=Z,183nm,19.2s,baz=6.0,slow=37						
TORD	**Torodi Ar. Bea**	**91.81**	**76**	P	**P**	**09 44 33.5**	**-2.1**
	comp=Z,0.4nm,0.6s,baz=303,slow=4.3,SNR=2.5						
AKASG	**Malin Array Be**	**97.00**	**32**	P	**P**	**09 44 56.7**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=300,slow=3.9,SNR=2.9						
AKASG	**Malin Array Be**	**97.00**	**32**	IAmb	IAmb	09 44 57.5	
	comp=Z,0.8nm,0.9s						
BOSA	**Boshof**	**123.07**	**114**	PKP	**PKiKP**	**09 50 25.1**	**+1.3**
	comp=Z,2.6nm,0.9s,baz=281,slow=4.1,SNR=3.8						
KSH	**Kashi**	**123.84**	**9**	PKP	**PKiKP**	**09 50 26.8**	**+1.6**
KSH				sPKP		09 51 03.8	
KSH				PP	PP	09 52 16.5	+8.8
KSH				PKS	**PKSdf**	**09 54 01.8**	**+0.1**
KSH	**Kashi**	**123.84**	**9**	SS	SS	10 08 51.9	+3.9
LZH	**Lanzhou**	**125.34**	**342**	*e*PKP	**PKPdf**	**09 50 27.3**	**-0.7**
LZH				pPKP	pPKPdf	09 50 58.1	+2.0
LZH				sPKP		09 51 10.8	
ASAR	**Alice Springs**	**134.45**	**253**	PKP	**PKPdf**	**09 50 45.0**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=85,slow=1.6,SNR=5.8						

IASPEI ***14*** *09:51:22.9±1.0, 42°.15N±0°.03×73°.69E±0°.02, h7^{km}±5^{km}, Error ellipse: s-maj=3.8km s-min=3.4km az=177.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

SOME ***14*** *09:51:22.9, 42°.20N×73°.67E, h5^{km}*

KRNET ***14*** *09:51:23.0±0.1, 42°.15N×73°.70E, h16^{km}, mb2.9*

KNET ***14*** *09:51:23.4±0.2, 42°.15N×73°.76E, h0^{km}, ml2.1, Error ellipse: s-maj=2.2km s-min=1.4km az=167.0*

NNC ***14*** *09:51:23.5±0.8, 42°.21N×73°.68E, h0^{km}±4^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=7.2km s-min=3.1km az=171.0*

ISC 14 09:51:23.3±0.9**, 42°.18N**±0°.02×**73°.68E**±0°.02**, h4**^{km}±6^{km}**, n59, σ0^{s}.90**/102**, 37C-12D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**0.05**	**170**	⇑*i*P	**Pg**	**09 51 24.7**	**-0.1**
	baz=88						
AML				⇑*i*S	**Sg**	**09 51 25.9**	**0.0**
	baz=88						
AML	**Almayashu**	**0.05**	**170**	⇑P	**Pg**	**09 51 24.7**	**-0.1**
	358nm,0.1s,SNR=2179						
AML				⇑S	**Sg**	**09 51 25.7**	**-0.2**
	2μm,0.2s						
EKS2	**Erkin-Say**	**0.49**	**8**	⇓*i*P	**Pg**	**09 51 33.3**	**+0.6**
	baz=7.0						
EKS2				⇓*i*S	**Sb**	**09 51 40.2**	**-1.8**
	baz=7.0						
EKS2	**Erkin-Say**	**0.49**	**8**	⇑P	**Pg**	**09 51 33.3**	**+0.6**
	8.1nm,0.2s,SNR=51						
EKS2				⇑S	**Sb**	**09 51 40.3**	**-1.7**
	45nm,0.1s						
ARLS	**Aral**	**0.57**	**123**	⇓*i*P	**Pg**	**09 51 33.7**	**-0.6**
	baz=21						
ARLS				⇓*i*S	**Sg**	**09 51 41.1**	**-0.7**
	baz=21						
UCH	**Uchtor**	**0.62**	**85**	⇑*i*P	**Pg**	**09 51 34.7**	**-0.5**
	baz=83						
UCH				⇑*i*S	**Sg**	**09 51 43.3**	**0.0**
	baz=83						
UCH	**Uchtor**	**0.62**	**85**	⇑P	**Pg**	**09 51 34.9**	**-0.3**
	11nm,0.1s,SNR=60						
UCH				⇑S	**Sg**	**09 51 43.4**	**+0.1**
	97nm,0.2s						
MRKS	**Merke**	**0.66**	**329**	*e*P	**Pg**	**09 51 36.3**	**+0.4**
	baz=30						
MRKS				*e*S	**Sg**	**09 51 45.4**	**+0.9**
	baz=30						
MRKS	**Merke**	**0.66**	**329**	*e*P	**Pg**	**09 51 36.3**	**+0.4**
	45nm,0.1s						
MRKS				*e*S	**Sg**	**09 51 45.4**	**+0.9**
	176nm,0.1s						
MRKS	**Merke**	**0.66**	**329**	P	**Pg**	**09 51 36.3**	**+0.4**
	53nm,0.2s						
MRKS				S	**Sb**	**09 51 45.8**	**-1.1**
	176nm,0.2s						
AAK	**Ala-Archa**	**0.76**	**52**	⇑*i*P	**Pg**	**09 51 37.7**	**-0.1**
	baz=50						
AAK				⇑*i*S	**Sg**	**09 51 48.4**	**+0.8**
	baz=50						
AAK	**Ala-Archa**	**0.76**	**52**	⇑P	**Pg**	**09 51 37.8**	**0.0**
	15nm,0.2s,SNR=41						
AAK				⇑S	**Sb**	**09 51 48.6**	**-1.1**
	12nm,0.2s						
AAK	**Ala-Archa**	**0.76**	**52**	⇓P	**Pg**	**09 51 37.3**	**-0.4**
	11nm,0.4s						
AAK				⇑S	**Sb**	**09 51 49.1**	**-0.7**
	9.0nm,0.4s						
ARSB	**Arslanbob**	**1.00**	**212**	⇑*i*P	**Pg**	**09 51 41.8**	**-0.7**
	baz=13						
ARSB				⇑*i*S	**Sg**	**09 51 55.1**	**-0.4**
	baz=13						
KBK	**Karagaybulak**	**1.05**	**63**	⇑*i*P	**Pg**	**09 51 43.0**	**-0.4**
	baz=61						
KBK				⇑*i*S	**Sg**	**09 51 57.5**	**+0.4**
	baz=61						
KBK	**Karagaybulak**	**1.05**	**63**	⇑P	**Pg**	**09 51 43.1**	**-0.3**
	14nm,0.1s,SNR=37						
CHMS	**Chumysh**	**1.14**	**44**	⇑*i*P	**Pg**	**09 51 44.7**	**-0.4**
	baz=42						
CHMS				⇑*i*S	**Sb**	**09 52 00.2**	**-0.5**
	baz=42						
CHMS	**Chumysh**	**1.14**	**44**	P	**Pg**	**09 51 44.9**	**-0.2**
	9.5nm,0.1s,SNR=35						
CHMS	**Chumysh**	**1.14**	**44**	⇓P	**Pg**	**09 51 44.0**	**-1.1**
	5.3nm,0.3s						
CHMS				⇑S	**Sg**	**09 51 59.1**	**-0.7**

	4.5nm,0.3s						
KZA	**Kyzart**	1.17	94	⇑iP	Pg	09 51 45.0	-0.7
	baz=93						
KZA				⇑iS	Sg	09 52 00.6	-0.3
	baz=93						
KZA	**Kyzart**	1.17	94	P	Pg	09 51 45.3	-0.4
	7.4nm,0.1s,SNR=21						
KZA				⇓S	Sg	09 52 00.7	-0.3
	60nm,0.3s						
USP	**Ospenovka**	1.24	29	⇑iP	Pg	09 51 46.6	-0.5
	baz=28						
USP				⇑iS	Sb	09 52 03.7	0.0
	baz=28						
USP	**Ospenovka**	1.24	29	⇑P	Pg	09 51 46.8	-0.2
	8.4nm,0.1s,SNR=14						
ARK	**Arkit**	1.34	254	⇓iP	Pn	09 51 48.1	-0.7
	baz=54						
ARK				⇓iS	Sg	09 52 06.0	-0.2
	baz=54						
SGDS	**Sogindy**	1.45	28	P	Pn	09 51 50.4	+0.1
	18nm,0.1s						
SGDS				S	Sn	09 52 10.0	+0.1
	29nm,0.2s						
BOOM	**Boomskoye usch**	1.70	79	⇑iP	Pn	09 51 54.3	+0.4
	baz=78						
BOOM				⇑iS	Sb	09 52 17.1	+0.1
	baz=78						
DGS	**Degeres**	1.87	55	eP	Pg	09 51 59.3	+0.2
	21nm,0.1s						
DGS				eS	Sg	09 52 25.0	+1.6
	12nm,0.2s						
DGS	**Degeres**	1.87	55	P	Pb	09 51 58.1	+0.1
	21nm,0.2s						
DGS				S	Sg	09 52 23.3	-0.1
	12nm,0.3s						
NRN	**Naryn**	1.89	113	⇑iP	Pn	09 51 57.2	+0.7
	baz=12						
NRN				⇑iS	Sn	09 52 21.8	+0.9
	baz=12						
KST	**Kastek**	1.89	62	eP	Pg	09 51 59.1	-0.4
	20nm,0.2s						
KST				eS	Sg	09 52 24.9	+0.9
	10nm,0.2s						
KST	**Kastek**	1.89	62	P	Pb	09 51 58.3	-0.2
	23nm,0.2s						
KST				S	Sg	09 52 23.2	-0.9
	12nm,0.4s						
ULHL	**Ulahol**	1.90	87	⇑iP	Pb	09 51 57.9	-0.8
	baz=86						
ULHL				⇑iS	Sb	09 52 22.9	+0.1
	baz=86						
MTBS	**Maitube**	2.24	64	eP	Pb	09 52 05.0	+0.6
	12nm,0.1s						
MTBS				eS	Sg	09 52 34.9	-0.3
	8.6nm,0.1s						
MTBS	**Maitube**	2.24	64	Pg	Pb	09 52 04.9	+0.6
	14nm,0.3s						
MTBS				Lg	Lg	09 52 34.8	
	9.2nm,0.2s						
IZV	**Izvestkoviy**	2.33	67	eP	Pb	09 52 06.4	+0.6
	18nm,0.2s						
IZV				eS	Sg	09 52 37.4	-0.6
	11nm,0.1s						
IZV	**Izvestkoviy**	2.33	67	Pg	Pb	09 52 06.5	+0.6
	18nm,0.2s						
IZV				Lg	Lg	09 52 37.3	
	12nm,0.2s						
KK31	**Karatay Array**	2.52	293	⇓Pg	Pb	09 52 08.9	-0.1
	1.5nm,0.5s,baz=114,slow=15,SNR=12						
KK31				⇑Lg	Lg	09 52 43.1	
	2.6nm,0.3s,baz=116,slow=28,SNR=10						
TNSS	**Tian-Shan**	2.56	69	eP	Pg	09 52 11.6	-0.7
	17nm,0.3s						
TNSS				eS	Sg	09 52 46.1	+0.7
	18nm,0.3s						
TNSS	**Tian-Shan**	2.56	69	Pg	Pb	09 52 10.7	+0.7
	22nm,0.4s						
TNSS				Lg	Lg	09 52 44.4	
	18nm,0.4s						
KUU	**Kurty**	2.59	48	eP	Pb	09 52 11.2	+0.9
	4.6nm,0.1s						
KUU				eS	Sg	09 52 45.5	-1.1
	7.7nm,0.2s						
KUU	**Kurty**	2.59	48	Pg	Pb	09 52 11.2	+0.9
	3.6nm,0.1s						
KUU				Lg	Lg	09 52 45.3	
	12nm,0.4s						
KDJ	**Kajisay**	2.60	90	⇑iP	Pn	09 52 07.4	+1.1
	baz=89						
KDJ				⇑iS	Sn	09 52 39.7	+1.3
	baz=89						
MDOK	**Medeo**	2.67	67	eP	Pb	09 52 12.3	+0.6
	15nm,0.2s						
MDOK				eS	Sg	09 52 47.4	-1.6
	12nm,0.4s						
MDOK	**Medeo**	2.67	67	Pg	Pb	09 52 11.2	-0.5
	15nm,0.5s						
MDOK				Lg	Lg	09 52 47.3	
	13nm,0.7s						
MDOK	**Medeo**	2.67	67	Pg	Pb	09 52 12.4	+0.7
	22nm,0.4s						
MDOK				Lg	Lg	09 52 47.9	
	11nm,0.4s						
KTBS	**Karatobe**	2.68	54	eP	Pb	09 52 12.5	+0.7
	6.6nm,0.2s						
KTBS				eS	Sg	09 52 48.0	-1.4
	19nm,0.2s						
KTBS	**Karatobe**	2.68	54	Pg	Pb	09 52 12.6	+0.7
	6.7nm,0.3s						
KTBS				Lg	Lg	09 52 47.8	
	21nm,0.4s						
IUG	**Iuzhnay**	2.71	271	eP	Pb	09 52 13.7	+1.3
	1.6nm,0.2s						
IUG				eS	Sg	09 52 49.6	-0.9
	49nm,0.3s						
IUG	**Iuzhnay**	2.71	271	Pg	Pb	09 52 13.5	+1.1
	2.1nm,0.3s						
IUG				Lg	Lg	09 52 49.2	
	46nm,0.5s						
KOTS	**Kotyrbulak**	2.74	66	eP	Pb	09 52 14.0	+1.1
	24nm,0.2s						
KOTS				eS	Sg	09 52 50.0	-1.2
	29nm,0.2s						
KOTS	**Kotyrbulak**	2.74	66	Pg	Pb	09 52 13.5	+0.6
	27nm,0.4s						
KOTS				Lg	Lg	09 52 49.9	
	31nm,0.5s						
BTLS	**Baital**	2.87	5	eP	Pb	09 52 15.6	+0.5
	0.6nm,0.1s						
BTLS				eS	Sg	09 52 52.8	-2.7
	6.6nm,0.2s						
BTLS	**Baital**	2.87	5	Pg	Pg	09 52 16.8	-1.5
	0.8nm,0.4s						
BTLS				Lg	Lg	09 52 52.9	
CHKK	**Chushkaly**	2.95	54	eP	Pb	09 52 17.3	+0.9
	1.4nm,0.1s						
CHKK				eS	Sg	09 52 55.6	-2.2
	9.4nm,0.2s						
CHKK	**Chushkaly**	2.95	54	Pg	Pb	09 52 17.2	+0.9
	3.0nm,0.4s						
CHKK				Lg	Lg	09 52 55.3	
	10nm,0.3s						
BRLS	**Borolday**	2.96	288	eP	Pg	09 52 19.3	-0.8
	0.3nm,0.1s						
BRLS				eS	Sg	09 52 59.3	+0.8
	4.4nm,0.3s						
BRLS	**Borolday**	2.96	288	Pg	Pg	09 52 19.1	-0.9
	0.4nm,0.3s						
BRLS				Lg	Lg	09 52 58.9	
	5.1nm,0.3s						
ANVS	**Anan'yevo**	3.01	77	⇓iP	Pn	09 52 13.1	+1.2
	baz=76						
ANVS				⇓iS	Sn	09 52 49.3	+0.9
	baz=76						
ARXS	**Arharly**	3.65	55	eP	Pb	09 52 30.1	+1.7
	3.9nm,0.3s						
ARXS				eS	Sg	09 53 17.7	-2.7
	3.8nm,0.4s						

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*UPA **14** 09:55:44.7±1.7, 8°.44N×83°.05W, h4^{km}±4^{km}, MW4.0*
*UCR **14** 09:55:44.6±2.1, 8°.45N×83°.08W, h0^{km}±5^{km}, MD4.1*
ISC 14 09:55:45.0±0.9, **8°.42N**±0°.03×**83°.07W**±0°.02, **h13**^{km}±7^{km}, **n47**, σ1^{s}.**17**/73, **4C-13D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBAR3	**San Bartolo, C**	0.21	120	⇑iP	Pb	09 55 50.5	-0.3
SBAR3				eS	Sg	09 55 53.4	+0.6
PTJ1	**Puerto Jimnez**	0.26	295	⇓iP	Pg	09 55 50.0	-0.5
PTJ1				eS	Sg	09 55 54.8	+0.6
PTJ1	**Puerto Jimnez**	0.26	295	⇓iP	Pg	09 55 50.0	-0.5
PTJ1				eS	Sg	09 55 55.0	+0.8
PIRO	**Carate, Puerto**	0.27	266	eP	Pg	09 55 51.1	+0.5
PIRO				eS	Sg	09 55 55.0	+0.5
PIRO	**Carate, Puerto**	0.27	266	⇓eP	Pg	09 55 50.4	-0.2
EDSV	**San Vito**	0.40	13	⇓iP	Pb	09 55 53.7	-0.5
EDSV				eS	Sb	09 56 01.2	+0.9
BRU2	**Volcan**	0.52	45	⇓iP	Pb	09 55 55.6	-0.6
	baz=225,slow=1.6						
BRU2				eS	Sb	09 56 04.5	+0.7
BRU2	**Volcan**	0.52	45	⇓iP	Pb	09 55 55.6	-0.6
BRU2				eS	Sb	09 56 04.2	+0.4
BAGA3	**Bagala, Chiriq**	0.54	85	eP	Pb	09 55 56.0	-0.3
BAGA3				eS	Sb	09 56 03.5	-0.4
BCO2	**Palmira**	0.61	61	⇓iP	Pg	09 55 57.0	+0.1
BCO2				eS	Sb	09 56 07.3	+1.2
DVD	**David**	0.61	89	⇓eP	Pg	09 55 56.9	0.0
DVD				eS	Sg	09 56 05.0	-0.1
PTAR3	**Potrerillos Ar**	0.62	65	⇑iP	Pg	09 55 57.3	+0.1
PTAR3				i S	Sg	09 56 05.4	-0.2
PEDE3	**Pedregal, Chir**	0.64	94	⇑iP	Pg	09 55 57.2	-0.3
PEDE3				eS	Sb	09 56 07.5	+0.5
EDPN	**Palmar Norte**	0.66	324	⇓iP	Pg	09 55 56.7	-1.2
EDPN				eS	Sg	09 56 06.7	+0.1
LOMA3	**Las Lomas, Chi**	0.67	89	eP	Pg	09 55 57.9	-0.1
LOMA3				eS	Sb	09 56 07.7	-0.1
CHIR3	**Chiriqui UPA,**	0.73	92	i P	Pg	09 55 58.8	-0.4
EDBA	**Buenos Aires**	0.76	344	⇓iP	Pg	09 55 59.2	-0.6
EDBA				eS	Sn	09 56 13.1	+0.1
EDLM	**Las Mercedes**	0.99	329	eP	Pb	09 56 02.7	-1.5
EDLM				eS	Sn	09 56 18.7	0.0
CHGR2	**Aguacate**	1.04	61	eP	Pb	09 56 03.7	-1.3
CHGR2				eS	Sb	09 56 16.0	-2.7
EDDO	**Dominical**	1.14	316	eP	Pb	09 56 04.8	-1.9
EDDO				eS	Sn	09 56 22.3	+0.1
CNI2	**El Empalme, Bo**	1.15	31	⇑iP	Pb	09 56 05.6	-1.3
CNI2				eS	Sn	09 56 23.2	+0.7
RGM0	**Gandoca**	1.24	21	eP	Pg	09 56 09.1	0.0
NANC3	**Nancito, Chiri**	1.33	98	⇓eP	Pn	09 56 08.6	-0.8
NANC3				eS	Sb	09 56 26.7	-0.3
LCR2	**La Lucha 2**	1.60	325	eP	Pn	09 56 12.5	-0.8
HDC	**Heredia**	1.88	327	⇓eP	Pb	09 56 18.7	-0.6
HDC				eS	Sb	09 56 43.7	+0.9
GMAL	**Guarumal, Vera**	1.93	110	eP	Pn	09 56 17.1	-0.5
GMAL				eS	Sn	09 56 41.2	-0.5
GMAL				i S	Sb	09 56 42.1	-2.1
SFRA3	**San Francisco,**	2.08	95	eP	Pn	09 56 20.3	+0.6
STIA3	**Santiago, Vera**	2.10	99	eP	Pn	09 56 17.9	-2.0
CALO3	**Calobre, Verag**	2.20	93	eP	Pb	09 56 24.6	-0.1
CALO3				eS	Sb	09 56 53.8	+1.7
OCU3	**Ocu, Herrera**	2.32	102	eP	Pn	09 56 24.5	+1.5
CACAO	**El Cacao, Vera**	2.43	116	eP	Pn	09 56 24.9	+0.4
CACAO				eS	Sn	09 56 55.4	+1.2
FORC	**Fortuna**	2.57	322	i P	Pn	09 56 28.4	+1.9
CEDE	**Laguna Cedeo**	2.61	322	i P	Pn	09 56 29.3	+2.3
JTS	**Las Juntas de**	2.63	315	⇓iP	Pn	09 56 29.4	+2.2
JTS	**Las Juntas de**	2.63	315	eP	Pn	09 56 28.0	+0.8
AZU	**Azuero**	2.83	103	eP	Pn	09 56 29.7	-0.3
AZU				eS	Sn	09 57 05.1	+1.0
VTON	**El Valle, Cocl**	2.93	86	eP	Pn	09 56 31.8	+0.4
ACAL	**Aguas Claras**	2.93	319	i P	Pn	09 56 33.6	+2.2
PLVR	**Palo Verde**	2.96	310	eP	Pn	09 56 32.9	+1.0
PTEN	**Parque Tenorio**	2.96	320	i P	Pn	09 56 32.5	+0.7
GUAI	**GUAI**	3.03	307	i P	Pn	09 56 33.6	+0.9
CUI	**Cuipilapa**	3.03	317	i P	Pn	09 56 35.2	+2.4
COLC	**Colonia**	3.07	317	i P	Pn	09 56 36.1	+2.8
GUAB	**Guayabo de Bag**	3.11	317	i P	Pb	09 56 37.5	-2.9
ZANG	**Zanguenga, Cho**	3.21	80	eP	Pn	09 56 34.4	-0.8
BCIP	**Isla Barro Col**	3.27	77	eP	Pn	09 56 37.9	+1.8
BCIP	**Isla Barro Col**	3.27	77	eP	Pn	09 56 37.4	+1.3

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*INMG **14** 10:04:18.9±1.6, 37°.32N×8°.54W, h18^{km}±2^{km}, MD2.3, ML2.3, Error ellipse: s-maj=2.6km s-min=2.3km az=70.0*
*CNRM **14** 10:04:18.1±0.4, 37°.16N×8°.53W, h30^{km}, Error ellipse: s-maj=4.7km s-min=3.8km az=156.0*
*MDD **14** 10:04:18.6±0.2, 37°.32N×8°.56W, h22^{km}±1^{km}, mbLg2.6/9, Error ellipse: s-maj=3.7km s-min=2.6km az=141.0, PRXIMO*
*IGIL **14** 10:04:19.3, 37°.31N×8°.55W, h16^{km}, ML2.3*
ISC 14 10:04:17.5±0.9, **37°.29N**±0°.03×**8°.57W**±0°.03, **h23**^{km}±6^{km}, **n55**, σ1^{s}.**59**/86, **6C-2D, Portugal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORF	**Marmelete**	0.07	280	eP	Pb	10 04 22.0	+0.4
MORF				eS	Sb	10 04 24.5	-0.1
MORF				AML	AML	10 04 25.4	
	comp=N,459nm,0.1s						
MORF	**Marmelete**	0.07	280	Pg	Pb	10 04 22.1	+0.4
MORF				Lg	Lg	10 04 24.9	
	comp=N,253nm,0.1s						
MORF	**Marmelete**	0.07	280	⇓ePg	Pb	10 04 22.1	+0.4
MORF				eSg	Sb	10 04 24.9	+0.4
MORF				A	A	10 04 26.0	
	comp=N,253nm,0.1s						
PFVI	**Vila Bisbo**	0.26	232	⇑Pg	Pb	10 04 24.8	+1.0
	comp=N,43nm,0.0s,SNR=18						
PFVI				Lg	Lg	10 04 29.1	
	comp=N,438nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	0.26	232	P	Pb	10 04 24.0	+0.2
PFVI				S	Sb	10 04 29.6	+1.5
PFVI	**Vila Bisbo**	0.26	232	⇑ePg	Pb	10 04 24.8	+1.0
PFVI				eSg	Sb	10 04 29.1	+1.0
PFVI				A	A	10 04 29.6	
	comp=N,502nm,0.1s						
PTEO	**Sao Teotonio**	0.28	333	Pg	Pb	10 04 24.8	+0.7
PTEO				Lg	Lg	10 04 29.0	
	comp=N,69nm,0.4s						
PTEO	**Sao Teotonio**	0.28	333	⇓iPg	Pb	10 04 24.8	+0.7
PTEO				eSg	Sb	10 04 29.0	+0.5
PTEO				A	A	10 04 29.5	
	comp=N,137nm,0.4s						
PBDV	**Barranco-do-Ve**	0.51	96	Pg	Pb	10 04 28.5	+0.7
PBDV				Lg	Lg	10 04 35.8	
	comp=N,94nm,0.1s						
PBDV	**Barranco-do-Ve**	0.51	96	ePg	Pb	10 04 28.5	+0.7
PBDV				eSg	Sb	10 04 35.8	+1.0
PBDV				A	A	10 04 37.1	
	comp=N,94nm,0.1s						
PCVE	**Castro Verde**	0.54	51	Pg	Pb	10 04 28.8	+0.5
PCVE				Lg	Lg	10 04 36.4	
	comp=N,50nm,0.3s						
PCVE	**Castro Verde**	0.54	51	⇑ePg	Pb	10 04 28.8	+0.5
PCVE				eSg	Sb	10 04 36.4	+0.8
PCVE				A	A	10 04 37.8	
	comp=N,50nm,0.3s						
MESJ	**Messejana**	0.61	27	eP	Pb	10 04 30.0	+0.5
MESJ				eS	Sb	10 04 37.8	+0.1
MESJ				AML	AML	10 04 39.3	
	comp=N,208nm,0.2s						
MESJ	**Messejana**	0.61	27	Pg	Pb	10 04 30.1	+0.5
MESJ				Lg	Lg	10 04 38.0	
	comp=N,96nm,0.1s						
MESJ	**Messejana**	0.61	27	⇑iPg	Pb	10 04 30.1	+0.5
MESJ				eSg	Sb	10 04 38.0	+0.3
MESJ				A	A	10 04 40.0	
	comp=N,96nm,0.1s						
PVAQ	**Vaqueiros**	0.68	81	Pg	Pb	10 04 31.2	+0.4
PVAQ				Lg	Lg	10 04 40.1	
	comp=N,132nm,0.2s						
PVAQ	**Vaqueiros**	0.68	81	P	Pb	10 04 31.3	+0.4
PVAQ				S	Sb	10 04 40.4	+0.6
PVAQ	**Vaqueiros**	0.68	81	⇑ePg	Pb	10 04 31.2	+0.4
PVAQ				eSg	Sb	10 04 40.1	+0.3
PVAQ				A	A	10 04 42.3	
	comp=N,132nm,0.2s						
PNCL	**Nicolau / Gran**	0.82	2	Pg	Pn	10 04 33.4	-0.2
PNCL				Lg	Lg	10 04 43.5	
	comp=N,116nm,0.2s						
PNCL	**Nicolau / Gran**	0.82	2	ePg	Pn	10 04 33.4	-0.2
PNCL				eSg	Sb	10 04 43.5	-0.1
PNCL				A	A	10 04 43.9	
	comp=N,116nm,0.2s						
EGRO	**El Granado**	0.89	74	⇑Pg	Pn	10 04 34.8	+0.1
	comp=N,14nm,0.2s,SNR=18						
EGRO				Lg	Lg	10 04 46.3	
	comp=N,50nm,0.1s,SNR=52						
PBEJ	**Beja**	0.92	37	Pg	Pn	10 04 35.1	+0.1
PBEJ				Lg	Lg	10 04 46.4	
	comp=N,18nm,0.2s						
PBEJ	**Beja**	0.92	37	eP	Pn	10 04 35.1	+0.1
PBEJ				eS	Sb	10 04 46.4	-0.1
PBEJ				A	A	10 04 48.4	
	comp=N,37nm,0.2s						
PBAR	**Barrancos**	1.50	54	Pn	Pb	10 04 46.0	+1.4
PBAR				Sn	Sb	10 05 04.7	+1.6
	comp=N,28nm,0.6s						
PBAR	**Barrancos**	1.50	54	eP	Pb	10 04 46.0	+1.4
PBAR				eS	Sb	10 05 04.7	+1.6
PBAR				A	A	10 05 24.1	
	comp=N,28nm,0.6s						
EMIN	**Mina Concepcio**	1.58	72	Pn	Pn	10 04 44.5	+0.4
	comp=N,1.9nm,0.1s,SNR=17						
EMIN				Pg	Pb	10 04 46.5	+0.5
	comp=N,1.6nm,0.1s,SNR=7.9						
EMIN				Lg	Lg	10 05 05.9	
	comp=N,10nm,0.1s,SNR=12						
PESTR	**Estremoz**	1.75	26	P	Pn	10 04 47.6	+1.1
PESTR				S	Sb	10 05 12.5	+2.1
PESTR	**Estremoz**	1.75	26	ePg	Pb	10 04 50.4	+1.5
PESTR				eSg	Sb	10 05 10.7	+0.2
PESTR				A	A	10 05 18.9	
	comp=N,12nm,0.6s						
PMAFR	**Mafra**	1.75	341	Pg	Pn	10 04 46.4	-0.2
	comp=N,0.7nm,0.1s,SNR=7.9						
PMAFR				Lg	Lg	10 05 07.7	
	comp=N,13nm,0.2s,SNR=4.0						
PMAFR	**Mafra**	1.75	341	ePn	Pn	10 04 46.7	+0.2
PMAFR				eSg	Sb	10 05 12.9	+2.3
PMAFR				A	A	10 05 18.0	
	comp=N,20nm,0.2s						
PMTG	**Montargil**	1.79	8	Pn	Pn	10 04 45.6	-1.5
PMTG				Lg	Lg	10 05 11.0	
	comp=N,18nm,0.2s						
PMTG	**Montargil**	1.79	8	ePn	Pn	10 04 45.6	-1.5
PMTG				eSg	Sb	10 05 11.0	-0.7
PMTG				A	A	10 05 12.7	
	comp=N,18nm,0.2s						
EBAD	**Badajoz**	1.91	40	Pn	Pn	10 04 47.9	-0.7
	comp=N,0.8nm,0.1s,SNR=5.8						
EBAD				Pg	Pb	10 04 51.7	+0.1
	comp=N,1.9nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	10 05 10.8	-1.1
	comp=N,1.6nm,0.0s,SNR=7.9						
EBAD				Lg	Lg	10 05 15.6	
	comp=N,13nm,0.1s,SNR=11						
ESPR	**Espera**	2.21	100	Sn	Sn	10 05 20.2	+0.9
	comp=N,1.9nm,0.1s,SNR=4.0						
ESPR				Lg	Lg	10 05 28.4	
	comp=N,11nm,0.2s,SNR=7.9						
PSBE	**So Bento**	2.22	355	ePn	Pn	10 04 53.2	+0.2
PSBE				eSg	Sb	10 05 26.4	+2.3
PSBE				A	A	10 05 34.9	
	comp=N,15nm,0.6s						
PMRV	**Marv??o**	2.32	23	Pn	Pn	10 04 53.9	-0.5
PMRV				Sn	Sn	10 05 21.0	-1.2
PMRV				Lg	Lg	10 05 27.7	
	comp=N,18nm,0.3s						
PMRV	**Marv??o**	2.32	23	ePn	Pn	10 04 53.9	-0.5
PMRV				eSn	Sn	10 05 21.0	-1.2
PMRV				eSg	Sb	10 05 27.7	+0.8
PMRV				A	A	10 05 30.8	
	comp=N,18nm,0.3s						
PTOM	**Tomar**	2.32	3	Lg	Lg	10 05 29.6	
	comp=N,8.6nm,0.2s						
PTOM	**Tomar**	2.32	3	eSg	Sb	10 05 29.6	+2.6
PTOM				A	A	10 05 29.9	
	comp=N,17nm,0.2s						
ECAB	**El Cabril**	2.62	72	Sn	Sn	10 05 28.2	-1.2
	comp=N,3.2nm,0.2s,SNR=7.9						
ECAB				Lg	Lg	10 05 38.9	
	comp=N,8.1nm,0.2s,SNR=8.0						
PCBR	**Castelo Branco**	2.68	18	Sn	Sn	10 05 29.9	-1.1
PCBR				Lg	Lg	10 05 40.2	
	comp=N,4.4nm,0.5s						
PCBR	**Castelo Branco**	2.68	18	eSn	Sn	10 05 29.9	-1.1
PCBR				eSg	Sb	10 05 40.2	+2.9
PCBR				A	A	10 05 41.5	
	comp=N,8.8nm,0.5s						
HORN	**Hornachuelos**	2.68	77	P	Pn	10 04 59.7	+0.4
MTE	**Manteigas**	3.20	14	Lg	Lg	10 05 56.4	
MTE	**Manteigas**	3.20	14	eSg	Sb	10 05 56.4	+4.1
EADA	**Adamuz**	3.28	73	Pn	Pn	10 05 06.8	-0.8
	comp=N,0.4nm,0.1s,SNR=4.0						
EADA				Sn	Sn	10 05 44.4	-1.5
	comp=N,1.2nm,0.1s,SNR=7.9						
EADA				Lg	Lg	10 05 59.9	
	comp=N,3.1nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	3.38	34	Pn	Pn	10 05 07.0	-1.9
	comp=N,0.3nm,0.1s,SNR=7.9						
EPLA				Sn	Sn	10 05 46.4	-1.9
	comp=N,2.1nm,0.1s,SNR=7.9						
EPLA				Lg	Lg	10 06 00.3	
	comp=N,3.3nm,0.3s,SNR=7.9						
PVIS	**Viseu**	3.46	8	Sn	Sn	10 05 48.2	-2.1
	comp=N,2.6nm,0.6s						
PVIS	**Viseu**	3.46	8	eSn	Sn	10 05 48.2	-2.1
PVIS				A	A	10 06 08.8	
	comp=N,5.1nm,0.6s						
PAB	**San Pablo**	4.00	55	Pn	Pn	10 05 17.2	-0.4
	comp=N,0.0nm,0.3s,SNR=7.9						
PAB				Sn	Sn	10 06 00.4	-3.4
	comp=N,1.0nm,0.1s,SNR=7.9						
PAB				Lg	Lg	10 06 24.8	
	comp=N,1.9nm,0.3s,SNR=7.9						
MVO	**Moncorvo**	4.04	17	Sn	Sn	10 06 01.5	-3.3
	comp=N,0.9nm,0.1s,SNR=7.9						
MVO				Lg	Lg	10 06 23.1	
	comp=N,8.5nm,0.5s,SNR=7.9						
MVO	**Moncorvo**	4.04	17	eSg	Sb	10 06 23.1	+6.5
MVO				A	A	10 06 28.5	
	comp=N,5.4nm,0.4s						
PGAV	**Gavieira, Arco**	4.67	3	Pn	Pn	10 05 26.6	-0.1
PGAV				Sn	Sn	10 06 16.4	-3.9
	comp=N,3.4nm,0.5s						
PGAV	**Gavieira, Arco**	4.67	3	ePn	Pn	10 05 26.6	-0.1
PGAV				eSn	Sn	10 06 16.4	-3.9
PGAV				A	A	10 06 33.4	
	comp=N,3.4nm,0.5s						
MDT	**Midelt**	5.52	143	P	Pn	10 05 36.7	-1.8
MDT				S	Sn	10 06 39.5	-1.8

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*INET **14** 10:16:45.6, 12°.50N×87°.77W, h68^{km}, MD3.7, ML3.1*
SNET 14 10:16:44.8±0.8, **12°.42N×87°.84W, h37**^{km}±272^{km}, **MD3.1, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	0.85	1	eP	Pn	10 17 00.7	+0.3
CNCH				eS	Sn	10 17 12.9	+1.1
BLLM	**Bellamira**	1.09	339	eP	Pn	10 17 03.9	+0.3
PACA	**Pacayal**	1.14	336	eP	Pn	10 17 05.0	+0.7
PACA				eS	Sn	10 17 20.0	+1.1
TECA	**Tecapa**	1.25	329	eP	Pn	10 17 06.6	+0.8
MOMN	**Momotombo**	1.27	90	eP	Pn	10 17 05.6	-0.5
TGUH	**Tegucigalpa,Un**	1.72	19	eP	Pn	10 17 12.5	+0.2

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*IDC **14** 10:18:29.9±1.3, 1°.29N×127°.03E, h0^{km}, mb4.0/5, mb1 4.1/6, mb1mx3.7/49, mbtmp3.9/6, ML3.4/1, MS2.6/1, Ms1 2.6/1, ms1mx2.3/43, Error ellipse: s-maj=100.3km s-min=18.4km az=70.0*
*NEIC **14** 10:18:37.5±1.4, 1°.2N±0°.1×126°.97E±0°.09, h70^{km}±11^{km}, mb4.0/8, Error ellipse: s-maj=18.5km s-min=13.5km az=185.0*
*DJA **14** 10:18:37.9±0.8, 1°N±5°×12°7E±°, h35^{km}±16^{km}, M4.2/6, MLv4.2/6*
ISC 14 10:18:38.1±0.8, **1°.23N**±0°.08×**126°.94E**±0°.06, **h72**^{km}, **n24**, σ1^{s}.**67**/27, **mb4.0**/10, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	0.62	137	P	Pn	10 18 51.1	-1.2
TNTI	**Ternate**	0.62	137		Pn	10 18 51.5	-0.8
TNTI				Sn	Sn	10 19 02.0	-0.8
KMSI	**Cibinong**	3.03	258	P	Pn	10 19 23.0	-0.8
KMSI				S	Sn	10 19 58.3	-0.7
SANI	**Sanana**	3.40	196	P	Pn	10 19 27.1	-1.6
NLAI	**Namlea**	4.44	178	P	Pn	10 19 43.5	+0.5
LUWI	**Luwuk**	4.74	242	Pn	Pn	10 19 47.3	+0.2

LUWI					Sn	10 20 40.5	-0.3
FITZ	Fitzroy Crossi	19.25	184	P	Pn	10 22 57.1	-1.4
	0.1nm,0.3s,baz=180,slow=0.7,SNR=3.9						
WB0	Warramunga Arr	22.11	161	P	P	10 23 26.3	-1.4
WB0				IAmb	IAmb	10 23 28.7	
	comp=Z,5.3nm,0.8s						
WRAB	Tennant Creek	22.25	161	P	P	10 23 28.2	-1.0
WRAB				IAmb	IAmb	10 23 46.8	
	comp=Z,15nm,1.4s						
WRA	Warramunga Arr	22.26	161	P	P	10 23 28.6	-0.6
	comp=Z,3.9nm,0.7s,baz=340,slow=11,SNR=13						
WRA	Warramunga Arr	22.26	161	P	P	10 23 27.8	-1.5
WR0	Warramunga Arr	22.34	161	P	P	10 23 29.3	-0.9
WR0				IAmb	IAmb	10 23 31.4	
	comp=Z,4.9nm,0.8s						
AS31	Alice Springs	25.66	165	P	P	10 24 00.8	-0.5
AS31				IAmb	IAmb	10 24 05.5	
	comp=Z,2.1nm,1.0s						
ASAR	Alice Springs	25.66	165	P	P	10 24 02.9	+1.6
	comp=Z,4.7nm,0.8s,baz=347,slow=12,SNR=39						
ASAR				S	S	10 28 31.4	+6.7
	comp=Z,0.8nm,0.9s,baz=350,slow=22,SNR=4.7						
ASAR	Alice Springs	25.66	165	P	P	10 24 01.6	+0.2
STKA	Stephens Creek	35.74	158	P	P	10 25 29.8	-0.3
	comp=Z,1.9nm,0.7s,baz=320,slow=8.6,SNR=4.3						
STKA	Stephens Creek	35.74	158	P	P	10 25 30.2	+0.1
KSRS	Korea Array	36.06	1	LR	LR	10 44 49.4	
	comp=Z,9.0nm,18.2s,baz=170,slow=44						
SONM	Songino Array	49.72	342	P	P	10 27 24.4	+1.3
	comp=Z,0.7nm,0.7s,baz=157,slow=7.8,SNR=3.9						
MK31	Makanchi Array	59.72	326	P	P	10 28 36.1	+0.7
MK31				IAmb	IAmb	10 28 37.2	
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	59.72	326	P	P	10 28 36.1	+0.7
	comp=Z,1.0nm,0.6s,baz=121,slow=8.7,SNR=11						
MKAR	Makanchi Array	59.72	326	P	P	10 28 36.0	+0.6
KURK	Kurchatov	63.95	328	P	P	10 29 03.4	-0.3
ABKAR	Akbulak array	74.21	321	P	P	10 30 06.0	-1.2

NIED ***14*** *10:53:00, 44°.80N×147°.30E, h145^{km}, Mw4.4 Best double couple: $M_0$4.03000×10^{15} NP1:ϕ_s187.00000°, δ76.00000°, λ53.00000°. NP2:ϕ_s80.00000°, δ39.00000°, λ158.00000°.*

MOS ***14*** *10:53:31.6±1.0, 45°.01N×147°.20E, h157^{km}, mb4.4/48, Error ellipse: s-maj=7.2km s-min=5.1km az=62.0*

SKHL ***14*** *10:53:32.4±0.2, 44°.93N×147°.25E, h143^{km}±2^{km}, mb4.9/9, msh5.6/4*

BJI ***14*** *10:53:32.1±0.0, 45°.07N×147°.13E, h162^{km}, mB5.1/31, mb4.7/53*

JMA ***14*** *10:53:33.8±0.3, 44°.77N×147°.31E, h157^{km}±5^{km}, M4.5*

IDC ***14*** *10:53:34.4±1.7, 45°.13N×147°.08E, h166^{km}±15^{km}, mb4.0/27, mb1 4.1/35, mb1mx4.0/55, mbtmp4.4/35, MS3.3/3, Ms1 3.3/3, ms1mx2.8/39, Error ellipse: s-maj=13.5km s-min=8.4km az=148.0*

NEIC ***14*** *10:53:34.4±1.4, 45°.07N±0°.07×147°.1E±0°.1, h166^{km}±6^{km}, mb4.5/229, Error ellipse: s-maj=12.1km s-min=9.7km az=121.0*

ISC 14 10:53:32.4±0.5**, 44°.94N**±0°.04×**147°.26E**±0°.04**, h155**^{km}±4^{km}**, n633, σ1^s.05**/651**, mb4.5**/159**, 7C-9D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.52	56	i P	Pn	10 53 55.1	+0.8
KUR				AMB	AMB	10 53 55.8	
	910nm,0.5s						
KUR				i S	Sn	10 54 12.0	+0.9
KUR				A	A	10 54 13.0	
	5µm,2.0s						
KUR				A	A	10 54 13.0	
	12µm,2.0s						
KUR				A	A	10 54 13.0	
	850nm,0.5s						
KUR				A	A	10 54 13.0	
	1µm,0.5s						
KUR	Kuril'sk	0.52	56	d iPN	Pn	10 53 55.1	+0.8
KUR				i S	Sn	10 54 12.0	+0.9
KUR				pmax	pmax		
	comp=Z,914nm,0.7s						
KUR				pmax	pmax		
	comp=N,215nm,0.2s						
KUR				pmax	pmax		
	comp=E,157nm,0.6s						
KUR				smax	smax		
	comp=E,11µm,2.2s						
KUR				smax	smax		
	comp=N,5µm,1.3s						
KUR				smax	smax		
	comp=E,1µm,0.6s						
KUR				smax	smax		
	comp=N,849nm,0.7s						
SHO	Shikotan	1.11	196	i P	Pn	10 53 58.7	+0.1
SHO				AMB	AMB	10 53 59.0	
	comp=N,270nm,0.3s						
SHO				eS	Sn	10 54 17.9	-0.6
SHO				A	A	10 54 18.0	
	comp=N,1µm,0.4s						
SHO				A	A	10 54 18.0	
	comp=N,1µm,0.4s						
SHO	Shikotan	1.11	196	⇓iPN	Pn	10 53 58.1	-0.5
SHO				eS	Sn	10 54 17.6	-0.9
SHO				pmax	pmax		
	comp=Z,3µm,0.3s						
SHO				pmax	pmax		
	comp=N,927nm,0.2s						
SHO				pmax	pmax		
	comp=E,548nm,0.2s						
SHO				smax	smax		
	comp=N,12µm,0.4s						
SHO				smax	smax		
	comp=E,12µm,0.4s						
YUK	Yuzh-Kuril'sk	1.35	228	i P	Pn	10 54 02.1	+1.4
YUK				AMB	AMB	10 54 02.6	
	comp=E,560nm,0.4s						
YUK				eS	Sn	10 54 23.6	+1.2
YUK				A	A	10 54 27.0	
	comp=E,3µm,0.5s						
YUK				A	A	10 54 27.0	
	comp=E,3µm,0.5s						
YUK	Yuzh-Kuril'sk	1.35	228	⇓iPN	Pn	10 54 01.4	+0.7
YUK				eS	Sn	10 54 23.4	+1.0
YUK				pmax	pmax		
	comp=E,420nm,0.4s						
YUK				pmax	pmax		
	comp=Z,6µm,0.4s						
YUK				pmax	pmax		
	comp=N,554nm,0.5s						
YUK				smax	smax		
	comp=E,3µm,0.4s						
YUK				smax	smax		
	comp=N,3µm,0.5s						
JRA	Rausu	1.83	238	P	Pn	10 54 06.9	+1.1
JRA				eS	Sn	10 54 33.0	+1.5
NEM2	Nemuro 2	1.92	215	P	Pn	10 54 07.0	+0.2
NEM2				eS	Sn	10 54 31.7	-1.5
NMR	Nemuro--Hokkai	1.92	216	i P	Pn	10 54 06.3	-0.5
NMR				eS	Sn	10 54 31.9	-1.4
NMR	Nemuro--Hokkai	1.92	216	⇓iPN	Pn	10 54 06.3	-0.5
NMR				eS	Sn	10 54 31.5	-1.8
JNSB	Nemuroshibetsu	1.99	235	P	Pn	10 54 09.0	+1.3
JNK	Nakash	2.27	234	P	Pn	10 54 12.3	+1.3
JKHN	Kushirohamanak	2.39	220	P	Pn	10 54 13.0	+0.6
JKHN				eS	Sn	10 54 42.7	-0.6
JTKR	Abashiri--Toko	2.59	249	P	Pn	10 54 15.8	+1.1
JTKR				eS	Sn	10 54 48.6	+1.2
JAK	Akkeshi	2.68	224	P	Pn	10 54 16.5	+0.6
JAK				eS	Sn	10 54 49.2	-0.3
JAR	Ashorobuto	3.00	238	P	Pn	10 54 21.7	+1.8
JKK2	Kamakawa 2	3.40	253	P	Pn	10 54 26.7	+1.7
JKK2				eS	Sn	10 55 08.0	+2.2
JKA	Kamikawa-asahi	3.43	258	eP	Pn	10 54 27.1	+1.7
JKA	Kamikawa-asahi	3.43	258		Pn	10 54 27.1	+1.7
ASAJ	Asahikawa	3.43	258	P	Pn	10 54 27.1	+1.7
	comp=N,6.6nm,0.3s,baz=78,slow=16,SNR=37						
ASAJ				LR	LR	10 55 35.9	
	comp=N,244nm,21.6s,baz=123,slow=36						
JCH	Churui	3.66	232	P	Pn	10 54 29.0	+0.7
JCH				eS	Sn	10 55 10.4	-1.2
YSS	Yuzh-Sakhalins	3.73	304	eP	Pn	10 54 29.8	+0.6
YSS				AMB	AMB	10 54 30.4	
	comp=N,50nm,1.0s						
YSS				eS	Sn	10 55 14.2	+0.9
YSS				A	A	10 55 16.9	
	comp=N,50nm,1.0s						
YSS	Yuzh-Sakhalins	3.73	304	⇑ePN	Pn	10 54 29.8	+0.6
YSS				eS	Sn	10 55 14.2	+0.9
YSS				pmax	pmax		
	comp=Z,50nm,1.0s						
YSS				smax	smax		
	comp=E,50nm,1.0s						
YSS	Yuzh-Sakhalins	3.73	304		Pn	10 54 29.8	+0.6
YSS				Sn	Sn	10 55 13.5	+0.1
JFR	Furan	3.80	244	P	Pn	10 54 31.9	+1.7
JFR				eS	Sn	10 55 16.1	+1.0
JWK2	Keihoku	3.81	278	P	Pn	10 54 32.7	+2.5
ERM	Erimo	4.18	227	d iPN	Pn	10 54 36.5	+1.5
ERM	Erimo	4.18	227		Pn	10 54 36.5	+1.5
ERM				Sn	Sn	10 55 23.7	-0.1
JNBK	Urakawa-nobuka	4.21	232	P	Pn	10 54 35.6	+0.1
JNBK				eS	Sn	10 55 21.3	-3.4
JRBN	Rebuntou	4.41	278	P	Pn	10 54 39.9	+1.9
JEW	Eniwo	4.69	245	P	Pn	10 54 44.0	+2.2
JKB	Kayabe	5.46	238	P	Pn	10 54 51.7	-0.3
JKB				eS	Sn	10 55 50.2	-3.9
JOT	Ohata	5.77	234	P	Pn	10 54 55.1	-0.9
JOT				eS	Sn	10 55 55.5	-5.9
TYV	Tymovskoe	6.68	334	eP	Pn	10 55 10.5	+2.4
TYV				AMB	AMB	10 55 15.4	
	comp=E,10.0nm,0.8s						
TYV	Tymovskoe	6.68	334	ePN	Pn	10 55 14.8	+6.7
TYV				pmax	pmax		
	comp=Z,13nm,0.8s						
TEY	Ternei	7.56	274	eP	Pn	10 55 21.5	+1.8
TEY				AMB	AMB	10 55 22.3	
	comp=Z,60nm,0.8s						
TEY	Ternei	7.56	274	⇓iPN	Pn	10 55 21.5	+1.8
TEY				pmax	pmax		
	comp=E,90nm,0.9s						
TEY				pmax	pmax		
	comp=Z,100nm,0.8s						
SKR	Severo-Kuril's	8.28	43	eP	Pn	10 55 29.6	+0.3
SKR				AMB	AMB	10 55 32.0	
	comp=Z,100nm,0.7s						
SKR				AMB	AMB	10 55 49.5	
	comp=Z,100nm,7.0s						
SKR				eS	Sn	10 57 02.5	+1.1
SKR				A	A	10 57 33.9	
	comp=Z,50nm,0.8s						
SKR				A	A	10 57 33.9	
	comp=Z,60nm,0.8s						
SKR	Severo-Kuril's	8.28	43	ePN	Pn	10 55 27.6	-1.7
SKR				eS	Sn	10 57 02.5	+1.1
SKR				pmax	pmax		
	comp=Z,98nm,0.7s						
SKR				pmax	pmax		
	comp=Z,100nm,6.6s						
SKR				smax	smax		
	comp=E,61nm,0.8s						
SKR				smax	smax		
	comp=N,52nm,0.8s						
GRNR	Gornyy	9.33	313	eP	Pn	10 55 43.9	+0.6
GRNR				AMB	AMB	10 55 44.5	
	comp=N,20nm,0.8s						
GRNR				eS	Sn	10 57 27.6	+0.9
GRNR	Gornyy	9.33	313	⇓iPN	Pn	10 55 43.9	+0.6
GRNR				eS	Sn	10 57 27.6	+0.9
GRNR				pmax	pmax		
	comp=Z,20nm,0.8s						
GRNR				smax	smax		
	comp=N,1.0nm,0.9s						
GRNR				MLR	MLR		
	comp=Z,130nm,13.0s						
PEA0B	Petropavlovsk-	10.66	36	c iPN	Pn	10 56 00.2	-0.6
PEA0B	Petropavlovsk-	10.66	36		Pn	10 55 60.0	-0.9
PETK	Petropavlovsk-	10.66	36	P	Pn	10 56 00.2	-0.6
	comp=Z,3.8nm,0.3s,baz=196,slow=13,SNR=44						
PETK	Petropavlovsk-	10.66	36		Pn	10 56 00.0	-0.8
MJAR	Matsushiro Arr	10.83	222	P	Pn	10 56 02.5	-0.8
	comp=Z,0.1nm,0.3s,baz=30,slow=15,SNR=6.7						
MJAR	Matsushiro Arr	10.83	222	PN	Pn	10 56 02.0	-1.3
MJAR	Matsushiro Arr	10.83	222		Pn	10 56 02.0	-1.3
USA0B	Ussuriysk Arra	10.92	272	i PN	Pn	10 56 04.9	+0.5
USA0B	Ussuriysk Arra	10.92	272		Pn	10 56 04.8	+0.4
USRK	Ussuriysk Ar.	10.92	272	P	Pn	10 56 04.4	+0.1
	baz=91,slow=12,SNR=25						
USRK	Ussuriysk Ar.	10.92	272		Pn	10 56 03.8	-0.6
PET	Petropavlovsk	11.01	39	eP	Pn	10 56 07.4	+2.0
PET				AMB	AMB	10 56 08.8	
	comp=Z,10.0nm,0.4s						
PET	Petropavlovsk	11.01	39	PN	Pn	10 56 04.5	-0.9
PET	Petropavlovsk	11.01	39		Pn	10 56 04.5	-0.9
KLR	Kul'dur	11.41	298	P	Pn	10 56 11.0	+0.4
	comp=Z,0.4nm,0.3s,baz=104,slow=15,SNR=26						
KLR				LR	LR	11 01 28.6	
	comp=Z,49nm,18.4s,baz=142,slow=42						
KLR	Kul'dur	11.41	298	eP	Pn	10 56 11.5	+0.8
KLR	Kul'dur	11.41	298	i PN	Pn	10 56 11.5	+0.8
KLR				pmax	pmax		
	comp=Z,14nm,1.0s						
EKMR	Ekimchan	12.41	316	eP	Pn	10 56 23.2	-0.5
EKMR				AMB	AMB	10 56 24.5	
	comp=Z,10.0nm,0.9s						
MA2	Magadan	14.81	7	P	Pn	10 56 53.9	-0.1
	comp=Z,0.9nm,0.3s,baz=180,slow=9.8,SNR=13						
MA2	Magadan	14.81	7	eP	Pn	10 56 53.6	-0.4
MA2	Magadan	14.81	7	c eP	Pn	10 56 53.6	-0.4
MA2	Magadan	14.81	7	P	P	10 56 55.0	-0.9
BMKR	Bomnak	15.34	316	eP	Pn	10 57 00.2	-0.4
CN2	Changchun	15.63	274	eP	Pn	10 57 03.3	-1.0
ZEA	Zeya	15.69	311	eP	Pn	10 57 03.8	-1.0
ZEA				AMB	AMB	10 57 04.3	
	comp=Z,10.0nm,0.9s						
ZEA	Zeya	15.69	311	eP	Pn	10 57 04.2	-0.6
ZEA				pmax	pmax		
	comp=Z,17nm,1.0s						
KROS	Kirovskiy	16.15	313	eP	Pn	10 57 10.0	-0.5
KROS				AMB	AMB	10 57 11.5	
	comp=Z,10.0nm,0.8s						
KSRS	Korea Array	16.34	249	P	Pn	10 57 11.9	-1.0
	comp=Z,0.5nm,0.3s,baz=57,slow=11,SNR=13						
KS19	Wonju Array Si	16.35	250		Pn	10 57 12.9	-0.2
KS19				IAmb	IAmb	10 57 20.9	
	comp=Z,23nm,1.4s						
KSAR	Wonju Array Be	16.37	250	P	Pn	10 57 12.6	-0.7
KSAR	Wonju Array Be	16.37	250	P	Pn	10 57 12.6	-0.7
JNU	Nakatsue	17.32	233	P	Pn	10 57 24.8	0.0
	comp=Z,0.9nm,0.3s,baz=359,slow=4.5,SNR=11						
JNU	Nakatsue	17.32	233	P	Pn	10 57 24.6	-0.2
JNU				IAmb	IAmb	10 57 28.0	
	comp=Z,43nm,1.1s						
SNY	Shenyang	17.48	268	⇓P	Pn	10 57 26.3	-0.3
SNY				pmax	pmax		
	comp=Z,30nm,0.9s						
SEY	Seymchan	18.27	7	P	P	10 57 33.6	-0.3
	comp=Z,0.4nm,0.3s,baz=187,slow=9.3,SNR=28						
YAK	Yakutsk	19.94	335	eP	P	10 57 52.4	+0.4
YAK	Yakutsk	19.94	335	i P	P	10 57 52.4	+0.4
BJI	Beijing	23.36	269	P	P	10 58 27.0	+0.2
BJI				pmax	pmax		
	comp=Z,18nm,0.8s						
BJT	Baijiatuau	23.37	269	P	P	10 58 26.0	-0.9
BJT				pmax	pmax		
	comp=Z,13nm,0.7s						
BJT	Baijiatuau	23.37	269	P	P	10 58 26.0	-0.9
BJT				IAmb	IAmb	10 58 29.0	
	comp=Z,13nm,0.7s						
ADK	Adak	24.73	61	P	P	10 58 40.2	+1.1
ADK				pmax	pmax		
	comp=Z,51nm,1.2s						
ADK	Adak	24.73	61	P	P	10 58 40.2	+1.1
BILL	Bilibino	25.20	17	i P	P	10 58 43.7	+0.5
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
NJ2	Nanjing	25.54	250	eP	P	10 58 48.3	+1.6
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
HHC	Hu-ho-hao-te	26.33	274	eP	P	10 58 54.5	+0.6
HHC				pP	pwP	10 59 30.8	+2.0
HHC				sP	sP	10 59 43.3	+0.6
HHC				pmax	pmax		
	comp=Z,50nm,0.7s						
HHC				pmax	pmax		
	comp=Z,150nm,4.1s						
ULN	Ulaanbaatar	27.66	291	eP	P	10 59 04.6	-1.1
ULN	Ulaanbaatar	27.66	291	P	P	10 59 04.6	-1.1
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ULN	Ulaanbaatar	27.66	291	P	P	10 59 04.6	-1.1
ULN					P	10 59 05.6	-0.1
SONM	Songino Array	28.10	291	P	P	10 59 09.8	+0.1
	comp=Z,2.9nm,0.7s,baz=78,slow=8.2,SNR=16						
SONM	Songino Array	28.10	291	P	P	10 59 08.4	-1.2
TIXI	Tiksi	28.21	348	eP	P	10 59 08.5	-1.6
TIXI	Tiksi	28.21	348	P	P	10 59 08.5	-1.6
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.5s						
TIXI	Tiksi	28.21	348	P	P	10 59 08.5	-1.6
WHN	Wuhan	29.50	252	P	P	10 59 22.3	+0.4
GAMB	Gambell	29.69	36	P	P	10 59 22.5	-0.8
H11N2	WAKE ISLAND Hy	29.96	141	T	T	11 30 39.3	
	baz=330,slow=76,SNR=66						
H11N1	WAKE ISLAND Hy	29.97	141	T	T	11 30 45.7	
	baz=330,slow=76,SNR=76						
H11N3	WAKE ISLAND Hy	29.98	141	T	T	11 30 46.6	
	baz=330,slow=76,SNR=47						
TWG	Pinlang	30.74	233	P	P	10 59 34.7	+1.8
H11S1	WAKE ISLAND Hy	30.95	142	T	T	11 31 55.5	
	baz=332,slow=76,SNR=135						
H11S3	WAKE ISLAND Hy	30.95	142	T	T	11 31 56.6	
	baz=332,slow=76,SNR=115						
H11S2	WAKE ISLAND Hy	30.97	142	T	T	11 31 56.9	
	baz=332,slow=76,SNR=64						
XAN	Xi'an	31.26	263	P	P	10 59 37.5	0.0
XAN				pmax	pmax		
	comp=Z,7.0nm,1.4s						
XAN	Xi'an	31.26	263	P	P	10 59 37.7	+0.2
XAN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
XAN	Xi'an	31.26	263	P	P	10 59 37.7	+0.2
XAN				IAmb	IAmb	10 59 39.3	
	comp=Z,5.0nm,0.6s						
ANM	Nome	32.58	36	P	P	10 59 48.3	-0.3
ANM				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ANM	Nome	32.58	36	P	P	10 59 48.3	-0.3
ENH	Enshi	32.99	257	P	P	10 59 52.2	-0.5
ENH				IAmb	IAmb	10 59 53.6	
	comp=Z,13nm,0.7s						
LZH	Lanzhou	33.83	270	⇑P	P	11 00 01.3	+1.3
LZH				pP	pwP	11 00 36.5	+0.8
LZH				sP	sP	11 00 55.4	+6.0
LZH				PP	PP	11 01 20.6	+1.0
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				pmax	pmax		
	comp=Z,67nm,4.8s						
GTA	Gaotai	35.19	278	P	P	11 00 12.3	+0.7
GTA				pmax	pmax		
	comp=Z,16nm,0.9s						
GTA				pmax	pmax		
	comp=Z,110nm,4.9s						
GTA				LR	LR		
	comp=Z,260nm,15.6s						
GTA				LR	LR		
	comp=Z,190nm,17.1s						
GTA				LR	LR		
	comp=Z,190nm,16.2s						
SVW2	Sparrevohn	36.64	43	P	P	11 00 25.1	+1.5
CHIR	Chirikof Islan	36.99	52	P	P	11 00 27.3	+0.8
IMAR	Indian Mountai	37.62	35	P	P	11 00 31.8	0.0
RSO	Redoubt South	38.05	44	P	P	11 00 37.4	+1.7
PPLA	Purkeypile	38.21	40	P	P	11 00 38.5	+1.6
KDAK	Kodiak Island	38.39	48	P	P	11 00 38.2	-0.1
	comp=Z,11nm,0.5s,baz=302,slow=4.3,SNR=7.5						
KDAK	Kodiak Island	38.39	48	P	P	11 00 38.9	+0.6
KDAK				pmax	pmax		
	comp=Z,178nm,1.5s						
KDAK	Kodiak Island	38.39	48	P	P	11 00 38.9	+0.6
BPAW	Bear Paw Mtn.	38.73	38	P	P	11 00 42.3	+1.2
BPAW				IAmb	IAmb	11 00 42.8	
	comp=Z,10.0nm,0.8s						
KTH	Kantishna Hill	38.77	39	P	P	11 00 42.6	+1.1
MLY	Manley	38.84	37	P	P	11 00 42.6	+0.7
MLY				IAmb	IAmb	11 00 43.8	
	comp=Z,7.5nm,0.9s						
CNPM	China Poot	38.89	46	P	P	11 00 43.1	+0.7
CNPM				IAmb	IAmb	11 00 59.0	
	comp=Z,22nm,1.2s						
BRLK	Bradley Lake	39.04	45	P	P	11 00 44.5	+0.8
TRF	Thorofare Moun	39.06	39	P	P	11 00 45.1	+1.2
TRF				IAmb	IAmb	11 00 46.0	
	comp=Z,8.9nm,0.7s						
COLD	Coldfoot	39.11	33	P	P	11 00 43.5	-0.7
BWN	Browne	39.40	38	P	P	11 00 48.0	+1.4
TOLK	Toolik Lake Re	39.42	31	P	P	11 00 46.4	-0.4
TOLK	Toolik Lake Re	39.42	31	P	P	11 00 46.1	-0.7
	baz=266						
RC01	Rabbit Creek A	39.47	43	P	P	11 00 48.3	+1.0
MCK	McKinley	39.65	39	P	P	11 00 49.6	+0.9
MCK				pmax	pmax		
	comp=Z,16nm,0.8s						
MCK	McKinley	39.65	39	P	P	11 00 49.6	+0.9
RND	Reindeer	39.71	39	P	P	11 00 48.9	-0.3
RND				pmax	pmax		
	comp=Z,14nm,0.7s						
RND	Reindeer	39.71	39	P	P	11 00 48.9	-0.3
RND				IAmb	IAmb	11 00 51.5	
	comp=Z,14nm,0.7s						
PMR	Palmer	39.72	42	P	P	11 00 48.8	-0.4
PMR				pmax	pmax		
	comp=Z,19nm,1.0s						
PMR	Palmer	39.72	42	P	P	11 00 48.8	-0.4
SEW	Seward	39.72	44	P	P	11 00 48.9	-0.3
GHO	Glory Hole Cre	39.80	42	P	P	11 00 50.6	+0.6
MDM	Murphy Dome	39.91	37	P	P	11 00 51.6	+0.8
MDM				IAmb	IAmb	11 00 52.3	
	comp=Z,11nm,0.8s						
WRH	Wood River Hil	39.99	38	P	P	11 00 51.6	+0.2
WRH				IAmb	IAmb	11 00 52.9	
	comp=Z,21nm,1.3s						
KNK	Knik Glacier	40.05	42	P	P	11 00 52.8	+0.8
TCOL	CIGO, UAF Yank	40.06	37	P	P	11 00 52.2	+0.1
	baz=273,SNR=10						
COLA	College	40.07	37	P	P	11 00 52.0	0.0
COLA				pmax	pmax		
	comp=Z,29nm,1.0s						
COLA	College	40.07	37	P	P	11 00 52.0	0.0
SML	Sawmill	40.08	42	P	P	11 00 53.5	+1.3
CCB	Clear Creek Bu	40.10	37	P	P	11 00 52.5	+0.2
POKR	Poker Plat Res	40.24	37	P	P	11 00 54.1	+0.6
	baz=273,SNR=8.4						
ZALV	Zalesovo Beam	40.35	306	P	P	11 00 54.2	-0.4
	comp=Z,1.1nm,0.4s,baz=91,slow=5.8,SNR=3.7						
DHY	Denali Highway	40.40	40	P	P	11 00 55.5	+0.5
HDA	Harding Lake	40.48	38	P	P	11 00 55.5	0.0
HDA	Harding Lake	40.48	38	P	P	11 00 54.6	-0.9
	baz=274,SNR=5.9						
IL31		40.49	37	P	P	11 00 55.8	+0.3
IL31				IAmb	IAmb	11 00 57.0	
	comp=Z,16nm,0.9s						
ILAR	Eielson Array	40.49	37	P	P	11 00 55.5	0.0
	comp=Z,14nm,1.0s,baz=264,slow=6.7,SNR=70						
ILAR				PcP	PcP	11 02 54.2	-0.7
	comp=Z,0.6nm,0.6s,baz=280,slow=3.3,SNR=4.2						
ILAR	Eielson Array	40.49	37	P	P	11 00 55.8	+0.3
SCM	Sheep Creek Mo	40.55	42	P	P	11 00 57.1	+0.9
SCM				pmax	pmax		
	comp=Z,58nm,1.2s						
SCM	Sheep Creek Mo	40.55	42	P	P	11 00 57.1	+0.9
GLI	Glacier Island	40.78	43	P	P	11 00 58.3	+0.3
PRP	Porcupine Dome	41.01	36	P	P	11 01 01.0	+1.0
PRP				IAmb	IAmb	11 01 01.6	
	comp=Z,14nm,0.8s						
FYU	Fort Yukon	41.07	34	P	P	11 01 01.2	+0.9
FID	Port Fidalgo	41.09	43	P	P	11 01 01.1	+0.5
PAX	Paxson	41.27	40	P	P	11 01 03.2	+1.1
PAX				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PAX	Paxson	41.27	40	P	P	11 01 03.2	+1.1
BMAR	Burnt Mountain	41.29	33	P	P	11 01 02.0	-0.1
WMQ	Urumqi	41.74	290	eP	P	11 01 07.4	+1.3
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,330nm,5.9s						
MENT	Mentasta	42.07	40	P	P	11 01 09.7	+1.1
MENT				IAmb	IAmb	11 01 10.4	
	comp=Z,14nm,0.6s						
GLB	Gilahina Butte	42.26	42	P	P	11 01 11.1	+1.0

GLB				IAmb	IAmb	11 01 11.8	
	comp=Z,10.0nm,0.9s						
VRDI	Verde Repeater	42.47	42	P	P	11 01 13.3	+1.3
MCARA	McCarthy VSAT	42.65	42	P	P	11 01 14.6	+1.4
CRQM	Cirque	42.71	43	P	P	11 01 15.6	+1.7
TGL	Tana Glacier	42.86	43	P	P	11 01 16.4	+1.4
BCAR	Beaver Creek A	42.92	39	P	P	11 01 16.9	+1.5
EGAK	Eagle	42.93	37	P	P	11 01 15.5	+0.1
EGAK				IAmb	IAmb	11 01 16.2	
	comp=Z,14nm,0.8s						
BALM	Baldy	43.03	42	P	P	11 01 17.5	+1.1
BARN	Barnard Glacie	43.36	42	P	P	11 01 20.2	+1.1
CTGM	Chitina Glacie	43.53	42	P	P	11 01 21.9	+1.5
DAWY	Dawson	43.80	37	P	P	11 01 23.1	+0.7
MK31	Makanchi Array	44.11	297	P	P	11 01 25.0	-0.1
MK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MK31	Makanchi Array	44.11	297	P	P	11 01 24.9	-0.1
MKAR	Makanchi Array	44.11	297	P	P	11 01 24.1	-1.0
	comp=Z,1.4nm,0.5s,baz=77,slow=9.5,SNR=22						
MKAR	Makanchi Array	44.11	297	P	P	11 01 24.3	-0.8
MAKZ	Makanchi	44.30	297	P	P	11 01 24.9	-1.7
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MAKZ	Makanchi	44.30	297	P	P	11 01 24.9	-1.7
EPYK	Eagle Plains	44.49	34	P	P	11 01 28.2	+0.4
EPYK				IAmb	IAmb	11 01 29.2	
	comp=Z,10nm,0.7s						
EPYK	Eagle Plains	44.49	34	P	P	11 01 28.0	+0.1
	baz=281						
KURK	Kurchatov	44.94	303	*e*P	P	11 01 33.4	+1.9
KURK	Kurchatov	44.94	303	*i* P	P	11 01 33.4	+1.9
KURK				pmax	pmax		
	comp=Z,15nm,3.0s						
INK	Inuvik	45.34	31	P	P	11 01 34.0	-0.4
	comp=Z,7.9nm,0.5s,baz=294,slow=6.8,SNR=68						
INK	Inuvik	45.34	31	P	P	11 01 34.2	-0.2
INK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
INK	Inuvik	45.34	31	P	P	11 01 34.2	-0.2
INK				IAmb	IAmb	11 01 34.7	
	comp=Z,10nm,0.6s						
HYT	Haines Junctio	45.38	42	P	P	11 01 37.4	+2.3
WHY	Whitehorse	46.67	41	P	P	11 01 46.8	+1.7
WHY				IAmb	IAmb	11 01 47.6	
	comp=Z,13nm,0.8s						
CHTO	Chiang Mai	47.70	253	P	P	11 01 54.8	+1.4
CHTO				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CHTO	Chiang Mai	47.70	253	P	P	11 01 54.8	+1.4
PBKT	Sadao Pong	47.92	249	P	P	11 01 56.7	+1.5
CMAR	Chiang Mai Arr	47.94	253	P	P	11 01 56.1	+0.8
	comp=Z,2.0nm,0.5s,baz=38,slow=7.6,SNR=12						
CMAR	Chiang Mai Arr	47.94	253	P	P	11 01 56.5	+1.2
CMAR	Chiang Mai Arr	47.94	253	P	P	11 01 56.5	+1.2
C36M	Paulatuk	48.39	28	P	P	11 01 56.5	-1.6
C36M				IAmb	IAmb	11 01 57.8	
	comp=Z,9.8nm,0.6s						
C36M	Paulatuk	48.39	28	P	P	11 01 57.1	-1.0
	baz=288						
KDJ	Kajisay	49.42	293	P	P	11 02 06.6	0.0
KDJ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KDJ	Kajisay	49.42	293	P	P	11 02 06.6	0.0
DLBC	Dease Lake	49.75	43	P	P	11 02 10.2	+1.5
	comp=Z,3.8nm,0.6s,baz=295,slow=3.6,SNR=7.1						
DLBC	Dease Lake	49.75	43	P	P	11 02 11.2	+2.5
DLBC				IAmb	IAmb	11 02 28.5	
	comp=Z,22nm,1.4s						
BOOM	Boomskoye usch	50.05	294	P	P	11 02 10.6	-0.8
BOOM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BOOM	Boomskoye usch	50.05	294	P	P	11 02 10.6	-0.8
TAPN	Taplejung	50.07	271	*e*P	P	11 02 12.7	+0.9
	comp=Z,11nm,0.4s						
ODAN	Odare	50.59	270	*e*P	P	11 02 16.3	+0.7
AAK	Ala-Archa	50.92	295	*ce*P	P	11 02 17.8	0.0
AAK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
JIRN	Jiri	50.96	272	*e*P	P	11 02 19.5	+0.9
	comp=Z,26nm,0.5s						
GUN	Gumba	51.03	272	*e*P	P	11 02 19.8	+0.7
	comp=Z,22nm,0.5s						
RAMN	Ramite	51.10	271	*e*P	P	11 02 20.0	+0.6
	comp=Z,49nm,0.6s						
KSH	Kashi	51.51	291	P	P	11 02 27.1	+4.9
KSH				pP	pwP	11 03 04.6	+4.2
KSH				PP	PP	11 04 29.3	+8.5
KSH				S	S	11 09 34.1	+3.6
KSH				sS	sS	11 10 39.3	+8.0
KSH				ScS	ScS	11 11 56.8	+0.1
KSH				pmax	pmax		
	comp=Z,12nm,0.6s						
KSH				LR	LR		
	comp=Z,700nm,13.6s						
KSH				LR	LR		
	comp=Z,370nm,10.3s						
KSH				LR	LR		
	comp=Z,320nm,10.7s						
KKN	Kakani	51.53	273	*e*P	P	11 02 24.1	+1.5
PKI	Pulchoki	51.57	272	*e*P	P	11 02 23.3	+0.2
PKIN	Phulchoki	51.57	272	*e*P	P	11 02 23.5	+0.5
DMN	Daman	51.76	273	*e*P	P	11 02 25.2	+0.8
GKN	Gorkha	51.86	273	*e*P	P	11 02 25.6	+0.6
DANN	Dangsing	52.27	274	*e*P	P	11 02 29.3	+1.1
	comp=Z,55nm,0.7s						
ARSB	Arslanbob	52.55	294	P	P	11 02 30.7	+0.8
ARSB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ARSB	Arslanbob	52.55	294	P	P	11 02 30.7	+0.8
ARSB				IAmb	IAmb	11 02 31.3	
	comp=Z,7.2nm,0.8s						
KKAR	Karatay Array	53.23	297	P	P	11 02 34.2	-0.5
KKAR	Karatay Array	53.23	297	P	P	11 02 34.2	-0.5
RES	Resolute Bay	53.81	17	P	P	11 02 36.1	-2.2
	comp=Z,2.5nm,0.6s,baz=320,slow=8.0,SNR=19						
RES				PcP	PcP	11 03 42.1	+0.1
	comp=Z,1.8nm,0.7s,baz=312,slow=4.2,SNR=4.7						
RES	Resolute Bay	53.81	17	P	P	11 02 36.6	-1.8
RES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
RES	Resolute Bay	53.81	17	P	P	11 02 36.6	-1.8
YKA	Yellowknife Ar	54.77	34	P	P	11 02 46.1	+0.6
	comp=Z,14nm,0.7s,baz=297,slow=6.4,SNR=177						
GAR	Garm	55.51	293	P	P	11 02 51.2	-0.1
GAR				IAmb	IAmb	11 02 52.0	
	comp=Z,12nm,1.1s						
ABKAR	Akbulak array	56.38	308	P	P	11 02 56.0	-1.2
ABKAR	Akbulak array	56.38	308	P	P	11 02 55.8	-1.5
CHGR	Chuyangaron	56.45	293	P	P	11 02 57.1	-0.9
NIL	Nilore	56.53	286	P	P	11 02 58.7	+0.2
NIL				pmax	pmax		
	comp=Z,24nm,1.1s						
NIL	Nilore	56.53	286	P	P	11 02 58.7	+0.2
LLLB	Lillooet	57.60	49	P	P	11 03 06.9	+1.1
LLLB				IAmb	IAmb	11 03 26.4	
	comp=Z,7.6nm,1.2s						
D03D	Eldon	58.62	53	P	P	11 03 13.5	+0.6
	baz=304						
KBL	Kabul	58.86	289	P	P	11 03 14.1	-0.9
KBL				pmax	pmax		
	comp=Z,11nm,0.6s						
KBL	Kabul	58.86	289	P	P	11 03 14.1	-0.9
E04D	Cinebar	59.47	53	P	P	11 03 17.4	-1.3
	baz=305						
F04A	Amboy	59.91	54	P	P	11 03 23.0	+1.2
I02D	Swisshome	60.12	56	P	P	11 03 23.1	-0.1
	baz=305						
B08A	Colville Reser	60.24	50	P	P	11 03 25.0	+1.0
F05D	White Salmon	60.48	53	P	P	11 03 26.6	+0.9
	baz=306						
KEBM	Edson Butte	60.55	58	P	P	11 03 27.8	+1.6
J01E	Myrtle Point	60.62	57	P	P	11 03 27.3	+0.7
	baz=306						
I03D	Drain, OR	60.65	56	P	P	11 03 27.2	+0.3
	baz=306						
H04A	Detroit Lake	60.76	55	P	P	11 03 28.9	+1.3
G05D	Wamic, OR	60.94	54	P	P	11 03 27.3	-1.5
	baz=306						
KBO	Bosley Butte	60.99	58	P	P	11 03 30.8	+1.5
E07A	Sunnyside	61.00	52	P	P	11 03 31.0	+1.8
E07A				IAmb	IAmb	11 03 31.7	
	comp=Z,7.9nm,0.8s						
K02D	Willamette Mer	61.05	57	P	P	11 03 28.8	-0.9
	baz=306						
C09A	Chrisman Ranch	61.14	50	P	P	11 03 31.5	+1.4
C09A				IAmb	IAmb	11 03 31.7	
	comp=Z,5.8nm,0.8s						
F07A	Phinny Hill Vi	61.35	53	P	P	11 03 32.3	+0.8
L02E	Cave Junction	61.40	58	P	P	11 03 31.7	-0.2
	baz=306						
I05D	Terrebonne, OR	61.46	55	P	P	11 03 32.3	0.0
	baz=306						
NEW	Newport	61.49	49	P	P	11 03 33.4	+0.8
	comp=Z,5.8nm,0.9s,baz=317,slow=6.1,SNR=8.3						
NEW	Newport	61.49	49	P	P	11 03 33.2	+0.7
NEW				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NEW	Newport	61.49	49	P	P	11 03 33.2	+0.7
NEW				IAmb	IAmb	11 03 34.6	
	comp=Z,6.9nm,0.9s						
NEW	Newport	61.49	49	P	P	11 03 33.0	+0.4
	baz=307						
HUMO	Hull Mountain	61.52	57	P	P	11 03 34.0	+1.2
J04D	Umpqua Nationa	61.65	56	P	P	11 03 34.0	+0.2
	baz=306						
E09A	Wood Farm, Sta	61.98	51	P	P	11 03 37.7	+2.0
E09A				IAmb	IAmb	11 03 38.1	
	comp=Z,8.1nm,0.8s						
PINE	Pine Mountain	62.01	55	P	P	11 03 38.0	+1.8
J05D	Fort Rock, OR	62.14	56	P	P	11 03 36.1	-0.9
	baz=307						
L04D	Klamath Falls	62.14	57	P	P	11 03 37.1	0.0
	baz=307						
YBH	Yreka Blue Hor	62.19	58	P	P	11 03 39.0	+1.7
	comp=Z,4.9nm,0.6s,baz=5.8,slow=5.5,SNR=26						
YBH	Yreka Blue Hor	62.19	58	P	P	11 03 38.6	+1.2
YBH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
YBH	Yreka Blue Hor	62.19	58	P	P	11 03 38.6	+1.2
YBH				IAmb	IAmb	11 03 40.3	
	comp=Z,5.3nm,0.7s						
K04D	Chiloquin, OR	62.23	57	P	P	11 03 36.8	-0.9
	baz=307						
G08A	Pilot Rock	62.25	53	P	P	11 03 38.6	+0.9
G08A				IAmb	IAmb	11 03 40.2	
	comp=Z,7.0nm,1.3s						
M02C	Callahan	62.31	58	P	P	11 03 36.2	-1.9
	baz=307						
N02D	Trinity Center	62.65	58	P	P	11 03 41.9	+1.5
	baz=307						
I07A	Izee	62.67	54	P	P	11 03 41.8	+1.3
M04C	Macdoel	62.68	57	P	P	11 03 41.7	+1.1
	baz=307						
WDC	Whiskeytown Da	62.98	59	P	P	11 03 43.7	+1.2
WDC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WDC	Whiskeytown Da	62.98	59	P	P	11 03 43.7	+1.2
WDC				IAmb	IAmb	11 03 45.1	
	comp=Z,3.7nm,0.8s						
O02D	Mt. Diablo Mer	63.08	59	P	P	11 03 44.8	+1.5
	baz=307						
JTMT	Jette	63.32	48	P	P	11 03 46.1	+1.3
JTMT				IAmb	IAmb	11 03 46.8	
	comp=Z,3.8nm,0.8s						
BMO	Blue Mountains	63.45	52	P	P	11 03 46.6	+1.0
BMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BMO	Blue Mountains	63.45	52	P	P	11 03 46.6	+1.0
HRA	Herat	63.46	293	P	P	11 03 46.2	+0.2
HRA				IAmb	IAmb	11 03 47.2	
	comp=Z,7.0nm,1.1s						
MOD	Modoc Plateau	63.52	56	P	P	11 03 47.6	+1.4
MOD				IAmb	IAmb	11 03 48.6	
	comp=Z,4.8nm,0.7s						
O03E	Paynes Creek	63.60	59	P	P	11 03 47.4	+0.7
	baz=308						
J08A	Circle Bar Ran	63.70	54	P	P	11 03 48.3	+1.0
J08A				IAmb	IAmb	11 03 50.1	
	comp=Z,12nm,1.3s						
FINES	FINESS Array B	63.85	333	P	P	11 03 45.9	-1.9
	comp=Z,1.5nm,0.6s,baz=46,slow=8.2,SNR=9.3						
FINES	FINESS Array B	63.85	333	P	P	11 03 45.6	-2.2
GEYT	Alibeck	63.94	298	LR	LR	11 35 07.3	
	comp=Z,126nm,18.3s,baz=355,slow=39						
MSO	Missoula	64.08	49	P	P	11 03 49.3	-0.4
MSO				IAmb	IAmb	11 03 51.8	
	comp=Z,8.1nm,0.9s						
MSO	Missoula	64.08	49	P	P	11 03 50.5	+0.7
	baz=309,SNR=7.9						
ORV	Oroville	64.24	59	P	P	11 03 50.9	+0.1
ORV				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ORV	Oroville	64.24	59	P	P	11 03 50.9	+0.1
ORV				IAmb	IAmb	11 03 52.5	
	comp=Z,5.4nm,0.7s						
OBN	Obninsk	64.40	323	*e*P	P	11 03 51.2	-0.3
OBN	Obninsk	64.40	323	⇓*e*P	P	11 03 51.2	-0.3
OBN				*e**PP	pwP	11 04 29.0	-2.3
OBN				*e*		11 06 18.8	
OBN				pmax	pmax		
	comp=Z,14nm,0.7s						
FFC	Flin Flon	64.70	37	*ce*P	P	11 03 54.3	+0.8
FFC				pmax	pmax		
	comp=Z,21nm,1.3s						
FFC	Flin Flon	64.70	37	P	P	11 03 53.6	+0.1
FFC				IAmb	IAmb	11 03 55.0	
	comp=Z,6.2nm,0.8s						
BEKR	Beckworth	64.74	58	P	P	11 03 55.5	+1.2
BEKR				IAmb	IAmb	11 03 56.3	
	comp=Z,7.9nm,0.8s						
AFDM	Forest Hills D	64.94	59	P	P	11 03 56.5	+1.2
AFDM				IAmb	IAmb	11 03 57.6	
	comp=Z,7.5nm,1.3s						
FCC	Fort Churchill	64.95	30	P	P	11 03 55.1	+0.1
FCC				pmax	pmax		
	comp=Z,15nm,0.6s						
FCC	Fort Churchill	64.95	30	P	P	11 03 55.0	+0.1
MFID	Camas Ranch	65.18	53	P	P	11 03 58.2	+1.2
RUBR	Rubicon Trail	65.37	59	P	P	11 03 59.5	+1.1
PAHR	Pah Rah Range	65.43	58	P	P	11 03 59.9	+1.2
PAHR				IAmb	IAmb	11 04 01.0	
	comp=Z,9.1nm,1.1s						
WB0	Warramunga Arr	65.45	193	P	P	11 03 59.6	+1.0
WB0				IAmb	IAmb	11 04 13.6	
	comp=Z,9.7nm,1.3s						
EGMT	Eagleton	65.50	46	P	P	11 03 59.7	+0.7
EGMT				IAmb	IAmb	11 04 00.9	
	comp=Z,12nm,1.0s						
EGMT	Eagleton	65.50	46	P	P	11 03 59.6	+0.7
	baz=311,SNR=6.5						
LRM	Limekiln Ridge	65.51	49	P	P	11 04 00.4	+1.2
VCNR	Virginia City	65.52	58	P	P	11 04 01.0	+1.7
VCNR				IAmb	IAmb	11 04 01.9	
	comp=Z,5.2nm,0.7s						
WRAB	Tennant Creek	65.62	193	P	P	11 04 01.0	+1.2
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.2s						
WRAB	Tennant Creek	65.62	193	P	P	11 04 01.0	+1.2
WB2	Warramunga Arr	65.63	193	P	P	11 04 00.7	+0.9
WB2				IAmb	IAmb	11 04 13.8	
	comp=Z,7.1nm,0.9s						
WRA	Warramunga Arr	65.64	193	P	P	11 04 00.3	+0.5
	comp=Z,1.6nm,0.6s,baz=8.1,slow=6.7,SNR=10						
WRA	Warramunga Arr	65.64	193	*i* P	P	11 03 59.4	-0.4
WRA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WRA	Warramunga Arr	65.64	193	P	P	11 04 00.1	+0.3
PNTR	Pine Nut	65.68	59	P	P	11 04 01.5	+1.2
DLMT	Dillon	65.73	50	P	P	11 04 02.3	+1.8
DLMT				IAmb	IAmb	11 04 03.4	
	comp=Z,5.9nm,0.8s						
CMB	Columbia Colle	65.86	60	P	P	11 04 02.2	+0.9
CMB	Columbia Colle	65.86	60	P	P	11 04 02.2	+0.9
CMB				IAmb	IAmb	11 04 03.7	
	comp=Z,6.7nm,0.8s						
MCMT	McKenzie Canyo	65.94	50	P	P	11 04 02.6	+0.7
YERR	Yerington	65.97	58	P	P	11 04 03.9	+1.7
KVN	Kaiserville	66.61	58	P	P	11 04 07.7	+1.4
KVN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KVN	Kaiserville	66.61	58	P	P	11 04 07.7	+1.4
KVN				IAmb	IAmb	11 04 08.8	
	comp=Z,10nm,0.8s						
RYN	Ryan	66.63	58	P	P	11 04 07.8	+1.5
RYN				IAmb	IAmb	11 04 08.8	
	comp=Z,7.3nm,0.8s						
QLMT	Earthquake Lak	66.70	49	P	P	11 04 08.1	+1.3
YHL	Hebgen Lake	66.82	49	P	P	11 04 09.2	+1.5
YHB	Horse Butte	66.88	49	P	P	11 04 09.5	+1.6
NVAR	Mina Array Bea	66.89	58	P	P	11 04 09.7	+1.6
	comp=Z,5.7nm,0.7s,baz=295,slow=6.8,SNR=59						
NVAR	Mina Array Bea	66.89	58	P	P	11 04 09.4	+1.4
MDPB	Devils Postpil	66.92	59	P	P	11 04 09.5	+1.2
MDPB				IAmb	IAmb	11 04 10.8	
	comp=Z,6.4nm,0.8s						
NV11	Mina Array Sit	66.97	58	P	P	11 04 09.7	+1.2
NV11				IAmb	IAmb	11 04 11.0	
	comp=Z,5.7nm,0.8s						
YHH	Holmes Hill	67.04	49	P	P	11 04 10.1	+1.0
YMR	Madison River	67.06	49	P	P	11 04 10.2	+1.2
YNR	Norris Junctio	67.18	49	P	P	11 04 10.4	+0.6
ELK	Elko	67.22	55	P	P	11 04 10.8	+0.7
ELK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ELK	Elko	67.22	55	P	P	11 04 10.8	+0.7
YUF	Upper Falls	67.27	49	P	P	11 04 10.6	+0.2
YNE	Yellowstone No	67.35	49	P	P	11 04 11.9	+1.0
YPP	Pitchstone Pla	67.41	50	P	P	11 04 13.5	+2.2
LKWY	Lake	67.43	49	P	P	11 04 12.5	+1.1
LKWY				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LKWY	Lake	67.43	49	P	P	11 04 12.5	+1.1
LKWY				IAmb	IAmb	11 04 15.2	
	comp=Z,6.2nm,0.9s						
H17A	Grant Village	67.45	49	P	P	11 04 14.2	+2.6
H17A				IAmb	IAmb	11 04 15.6	
	comp=Z,8.1nm,0.9s						
H17A	Grant Village	67.45	49	P	P	11 04 13.6	+2.1
	baz=312,SNR=7.1						
RLMT	Red Lodge	67.67	48	P	P	11 04 14.1	+1.3
RLMT	Red Lodge	67.67	48	P	P	11 04 13.7	+0.9
	baz=312						
FXWY	Fox Creek	67.70	50	P	P	11 04 14.6	+1.5
TPAW	Teton Pass	67.84	50	P	P	11 04 14.9	+0.9
TPAW				IAmb	IAmb	11 04 16.2	
	comp=Z,9.7nm,0.9s						
SNOW	Snow King Moun	67.97	50	P	P	11 04 15.4	+0.6
SNOW				IAmb	IAmb	11 04 17.8	
	comp=Z,12nm,1.4s						
DGMT	Dagmar	67.97	43	P	P	11 04 15.2	+0.8
DGMT	Dagmar	67.97	43	P	P	11 04 15.2	+0.8
	baz=314						
REDW	Red Top Meadow	67.98	50	P	P	11 04 16.3	+1.4
VES	Vestal, Richgr	68.06	61	P	P	11 04 16.1	+0.9
	baz=310						
LAO	LASA Array	68.19	45	P	P	11 04 16.6	+0.8
LAO				IAmb	IAmb	11 04 18.0	
	comp=Z,9.3nm,1.0s						
LAO	LASA Array	68.19	45	P	P	11 04 16.4	+0.6
	baz=313						
CWC	Cottonwood Cre	68.30	60	P	P	11 04 17.9	+1.0
	baz=311						
BGU	Big Grassy Mou	68.37	53	P	P	11 04 18.1	+0.9
GRAC	Grapevine Rang	68.38	59	P	P	11 04 18.9	+1.7
	baz=311,SNR=18						
SPUT	South Promonto	68.45	53	P	P	11 04 19.0	+1.3
NB2	NORSAR Subarra	68.52	339	P	P	11 04 13.2	-4.5
	comp=Z,2.3nm,1.0s,baz=32,slow=6.5						
NOA	NORSAR Array B	68.52	339	P	P	11 04 17.3	-0.4
	comp=Z,1.1nm,0.9s,baz=30,slow=6.5,SNR=2.5						
ISA	Isabella, Lake	68.56	61	P	P	11 04 18.6	+0.2
ISA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ISA	Isabella, Lake	68.56	61	P	P	11 04 18.6	+0.2
ISA				IAmb	IAmb	11 04 19.7	
	comp=Z,4.8nm,0.8s						
ISA	Isabella, Lake	68.56	61	P	P	11 04 18.9	+0.6
	baz=311						
R11A	Troy Canyon, C	68.57	57	P	P	11 04 19.6	+1.1
R11A	Troy Canyon, C	68.57	57	P	P	11 04 19.5	+1.0
	baz=311,SNR=8.7						
HWUT	Hardware Ranch	68.75	52	P	P	11 04 20.0	+0.4
HWUT				IAmb	IAmb	11 04 22.3	
	comp=Z,9.4nm,1.3s						
MPMC	Manual Prospec	68.91	60	P	P	11 04 21.9	+1.2
	baz=311,SNR=10						
DUG	Dugway, Tooele	68.98	54	P	P	11 04 22.4	+1.4
DUG				pmax	pmax		
	comp=Z,11nm,1.2s						
DUG	Dugway, Tooele	68.98	54	P	P	11 04 22.4	+1.4
DUG				IAmb	IAmb	11 04 23.5	
	comp=Z,11nm,1.2s						
DUG	Dugway, Tooele	68.98	54	P	P	11 04 22.4	+1.4
	baz=312,SNR=7.3						
FURC	Furnace Creek,	69.03	59	P	P	11 04 22.6	+1.5
	baz=311,SNR=19						
KIV	Kislovodsk	69.03	312	*e*P	P	11 04 21.3	+0.1
KIV	Kislovodsk	69.03	312	*e*P	P	11 04 21.3	+0.1
KIV				pmax	pmax		
	comp=Z,26nm,1.0s						
KBZ	Khabaz	69.07	311	P	P	11 04 20.7	-0.6
	comp=Z,3.1nm,0.8s,baz=43,slow=4.8,SNR=4.9						
OSI	Osito Audit: C	69.08	62	P	P	11 04 22.9	+1.3
OSI				IAmb	IAmb	11 04 24.0	
	comp=Z,10nm,0.8s						
OSI	Osito Audit: C	69.08	62	P	P	11 04 22.7	+1.1
	baz=311						
TPNV	Topopah Spring	69.08	58	P	P	11 04 22.5	+0.8
TPNV				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TPNV	Topopah Spring	69.08	58	P	P	11 04 22.5	+0.8
TPNV				IAmb	IAmb	11 04 24.1	
	comp=Z,7.9nm,0.8s						
TPNV	Topopah Spring	69.08	58	P	P	11 04 23.0	+1.3
	baz=311,SNR=7.0						
BW06	Boulder Array	69.08	50	P	P	11 04 22.0	+0.3
BW06				IAmb	IAmb	11 04 23.6	
	comp=Z,7.6nm,1.0s						
BW06	Boulder Array	69.08	50	P	P	11 04 22.5	+0.8
	baz=312,SNR=7.7						
PD31	Pinedale Array	69.08	50	P	P	11 04 22.1	+0.4
PD31				IAmb	IAmb	11 04 23.6	
	comp=Z,7.0nm,1.0s						
PDAR	Pinedale Array	69.08	50	P	P	11 04 22.6	+0.9
	comp=Z,5.5nm,0.8s,baz=283,slow=1.1,SNR=39						
PDAR	Pinedale Array	69.08	50	P	P	11 04 22.0	+0.3
TCUT	Toone Canyon	69.16	52	P	P	11 04 23.4	+1.1
LRMC	Laurel Mtn Rad	69.17	60	P	P	11 04 23.0	+0.8
	baz=311						
ASAR	Alice Springs	69.35	193	P	P	11 04 25.2	+2.1
	comp=Z,0.7nm,0.5s,baz=9.0,slow=6.4,SNR=15						
ASAR	Alice Springs	69.35	193	P	P	11 04 24.8	+1.7
ASAR	Alice Springs	69.35	193	P	P	11 04 24.8	+1.7
EDW2	Edwards Air Fo	69.36	61	P	P	11 04 23.5	+0.2
	baz=311,SNR=5.3						
TBLG	Delisi	69.41	309	P	P	11 04 24.5	+1.0
TBLG				pmax	pmax		
	comp=Z,10.0nm,0.4s						
TBLG	Delisi	69.41	309	P	P	11 04 24.4	+1.0
PSUT	Pine Spring	69.47	56	P	P	11 04 25.2	+1.1
NLU	North Lily Min	69.56	54	P	P	11 04 26.0	+1.3
MPU	Maple Canyon	69.77	53	P	P	11 04 27.1	+1.2
GSC	Goldstone, Bar	69.82	60	P	P	11 04 27.2	+1.0
GSC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GSC	Goldstone, Bar	69.82	60	P	P	11 04 27.2	+1.0
GSC				IAmb	IAmb	11 04 28.3	
	comp=Z,5.7nm,0.8s						
GSC	Goldstone, Bar	69.82	60	P	P	11 04 27.4	+1.2
	baz=311,SNR=5.7						
BFSC	Mount Baldy Ra	69.99	61	P	P	11 04 27.9	+0.6
	baz=311						
SHPR	Sheep Range	70.03	58	P	P	11 04 28.7	+1.2
TUQ	Turquoise Moun	70.28	59	P	P	11 04 29.7	+0.7
	baz=312						
CCUT	Cedar City	70.41	56	P	P	11 04 30.8	+0.9
HEC	Hector,Ludlow	70.42	60	P	P	11 04 30.4	+0.6
	baz=312,SNR=6.7						
BBRC	Big Bear Solar	70.44	61	P	P	11 04 31.1	+1.0
	baz=312						
MSU	Marysvale	70.47	55	P	P	11 04 31.9	+1.7
MSU	Marysvale	70.47	55	P	P	11 04 31.9	+1.7
TMUT	Trail Mountain	70.50	54	P	P	11 04 31.5	+1.1
ULM	Lac du Bonnet	70.51	37	P	P	11 04 29.9	0.0
	comp=Z,3.4nm,0.6s,baz=334,slow=6.5,SNR=10						
ULM	Lac du Bonnet	70.51	37	P	P	11 04 29.7	-0.2
ULM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ULM	Lac du Bonnet	70.51	37	P	P	11 04 29.7	-0.2
SZCU	Shurtz Canyon	70.55	56	P	P	11 04 30.8	+0.1
RDMU	Red Mountain	70.56	52	P	P	11 04 31.5	+0.7
P17A	Butcher Ranch,	70.64	53	P	P	11 04 31.6	+0.4
MURC	Murrieta	70.70	62	P	P	11 04 32.3	+0.8
	baz=312						

Q16A	Castle Valley	70.77	54	P	P	11 04 33.8	+1.8
MTPU	Mount Pierson	70.78	55	P	P	11 04 34.1	+1.9
K22A	Casper	70.80	49	P	P	11 04 33.1	+1.0
K22A				IAmb	IAmb	11 04 33.3	
	comp=Z,4.4nm,0.6s						
K22A	Casper	70.80	49	P	P	11 04 32.1	0.0
	baz=314						
LCMT	Little Creek M	70.84	57	P	P	11 04 34.1	+1.7
GMRC	Granite Mounta	70.87	60	P	P	11 04 33.8	+1.2
	baz=312,SNR=6.5						
SRU	San Rafael Swe	71.01	54	P	P	11 04 35.1	+1.6
SRU				pmax	pmax		
	comp=Z,11nm,0.9s						
SRU	San Rafael Swe	71.01	54	P	P	11 04 35.1	+1.6
RSSD	Black Hills	71.07	46	P	P	11 04 34.3	+0.5
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RSSD	Black Hills	71.07	46	P	P	11 04 34.2	+0.5
RSSD				IAmb	IAmb	11 04 34.8	
	comp=Z,5.4nm,0.8s						
RSSD	Black Hills	71.07	46	P	P	11 04 34.1	+0.3
	baz=315						
KNB	Kanab	71.09	56	P	P	11 04 36.0	+2.1
KNB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KNB	Kanab	71.09	56	P	P	11 04 36.0	+2.1
PFO	Pinyon Flats O	71.16	61	P	P	11 04 34.9	+0.6
	comp=Z,3.4nm,0.9s,baz=279,slow=4.8,SNR=7.7						
PFO	Pinyon Flats O	71.16	61	*ce*P	P	11 04 36.0	+1.7
PFO				pmax	pmax		
	comp=Z,13nm,2.5s						
PFO	Pinyon Flats O	71.16	61	P	P	11 04 35.0	+0.6
PFO	Pinyon Flats O	71.16	61	P	P	11 04 35.3	+1.0
	baz=312						
BELC	Belle Mtn. Jos	71.18	61	P	P	11 04 34.3	-0.2
	baz=312						
109C	Camp Elliot, M	71.23	62	P	P	11 04 35.8	+1.2
	baz=312						
O20A	White River Ci	71.60	51	P	P	11 04 38.6	+1.6
O20A				IAmb	IAmb	11 04 39.4	
	comp=Z,5.2nm,0.7s						
O20A	White River Ci	71.60	51	P	P	11 04 36.5	-0.5
	baz=314						
IRM	Iron Mountain	71.60	60	P	P	11 04 38.0	+1.1
	baz=312,SNR=7.6						
MONP2	Monument Peak	71.66	62	P	P	11 04 37.1	-0.3
	baz=312						
W13A	Hualapai Mount	71.74	59	P	P	11 04 39.4	+1.5
BC3	Big Chuckawall	71.75	61	P	P	11 04 38.3	+0.4
	baz=312						
U15A	North Rim	71.80	57	P	P	11 04 40.3	+2.0
U15A				IAmb	IAmb	11 04 41.1	
	comp=Z,6.7nm,0.8s						
AGMN	Agassiz Nation	71.96	39	P	P	11 04 38.6	-0.1
	baz=318						
SWSC	Sam W. Stewart	72.01	61	P	P	11 04 40.3	+1.1
	baz=312						
IKP	In-Ko-Pah, Jac	72.01	62	P	P	11 04 40.4	+1.0
	baz=312						
PDMCI	Parker Dam,Lak	72.12	59	P	P	11 04 41.1	+1.2
	baz=313						
PV09	Paradox Valley	72.22	53	P	P	11 04 41.2	+0.3
Y12C	Blythe	72.26	60	P	P	11 04 40.9	+0.1
	baz=313						
PV23	Carpenter Ridg	72.33	53	P	P	11 04 43.0	+1.6
PV23				IAmb	IAmb	11 04 43.7	
	comp=Z,21nm,1.3s						
N23A	Red Feather La	72.33	50	P	P	11 04 43.3	+1.8
N23A	Red Feather La	72.33	50	P	P	11 04 41.4	-0.1
	baz=315						
PV10	Paradox Valley	72.36	53	P	P	11 04 43.4	+1.8
PV14	Lion Creek, Pa	72.37	53	P	P	11 04 43.0	+1.3
PV14				IAmb	IAmb	11 04 43.3	
	comp=Z,6.8nm,0.7s						
PV22	Blue Mesa, Par	72.40	53	P	P	11 04 43.0	+1.3
PV22				IAmb	IAmb	11 04 43.5	
	comp=Z,6.9nm,0.8s						
PV04	Paradox Valley	72.43	53	IAmb	IAmb	11 04 43.8	
	comp=Z,8.0nm,1.0s						
PV19	Morning Glory	72.44	53	IAmb	IAmb	11 04 45.0	
	comp=Z,7.8nm,0.8s						
PV11	David Mesa, Pa	72.51	53	IAmb	IAmb	11 04 45.4	
	comp=Z,9.3nm,0.7s						
PV18	Skein Mesa, Pa	72.53	53	IAmb	IAmb	11 04 44.7	
	comp=Z,8.1nm,0.8s						
PV05	Paradox Valley	72.53	54	IAmb	IAmb	11 04 44.9	
	comp=Z,23nm,1.4s						
PV12	Saucer Basin,	72.54	53	IAmb	IAmb	11 04 45.7	
	comp=Z,7.8nm,1.0s						
GLA	Glamis	72.54	61	P	P	11 04 43.7	+1.2
GLA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GLA	Glamis	72.54	61	P	P	11 04 43.7	+1.2
GLA				IAmb	IAmb	11 04 44.9	
	comp=Z,7.1nm,0.8s						
GLA	Glamis	72.54	61	P	P	11 04 43.5	+1.0
	baz=313						
PV03	Paradox Valley	72.56	53	IAmb	IAmb	11 04 44.9	
	comp=Z,5.7nm,0.7s						
PV13	Radium Mtn., P	72.64	53	P	P	11 04 44.9	+1.7
PV13				IAmb	IAmb	11 04 45.4	
	comp=Z,8.1nm,0.7s						
WUAZ	Wupatki	72.97	57	P	P	11 04 45.8	+0.7
	baz=314						
SMCO	Snowmass	72.97	51	P	P	11 04 46.8	+1.4
ISCO	Idaho Springs	73.28	50	P	P	11 04 47.5	+0.4
ISCO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ISCO	Idaho Springs	73.28	50	P	P	11 04 47.5	+0.4
ISCO	Idaho Springs	73.28	50	P	P	11 04 47.9	+0.8
	baz=315						
MVCO	Mesa Verde	73.48	54	P	P	11 04 48.9	+0.7
MVCO	Mesa Verde	73.48	54	P	P	11 04 47.8	-0.4
	baz=314						
X16A	Lo Mia Camp, P	73.68	58	P	P	11 04 50.9	+1.5
X16A				IAmb	IAmb	11 04 52.1	
	comp=Z,7.2nm,0.8s						
S22A	4UR Ranch, Cre	74.05	52	P	P	11 04 51.1	-0.5
	baz=315						
EYMN	Ely	74.13	37	P	P	11 04 51.0	-0.5
	baz=321						
OGNE	Ogallala	74.38	47	P	P	11 04 53.8	+0.6
X18A	Snowflake	74.49	57	P	P	11 04 54.9	+0.8
214A	Organ Pipe Nat	74.53	60	P	P	11 04 54.5	+0.3
	baz=314						
SDCO	Great Sand Dun	74.80	52	P	P	11 04 54.2	-1.7
SDCO	Great Sand Dun	74.80	52	P	P	11 04 55.2	-0.7
	baz=316						
ECSD	EROS Data Cent	75.03	42	P	P	11 04 56.8	0.0
ECSD	EROS Data Cent	75.03	42	P	P	11 04 55.1	-1.7
	baz=319						
E38A	The Farm, Brul	75.15	38	P	P	11 04 56.9	-0.4
E38A				IAmb	IAmb	11 04 58.9	
	comp=Z,7.3nm,0.9s						
TUC	Tucson	75.53	59	P	P	11 04 59.6	-0.3
TUC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TUC	Tucson	75.53	59	P	P	11 04 59.6	-0.3
TUC	Tucson	75.53	59	P	P	11 04 59.9	0.0
	baz=314						
T25A	Trinidad	75.84	51	P	P	11 05 01.9	+0.2
T25A	Trinidad	75.84	51	P	P	11 05 00.9	-0.8
	baz=316						
D41A	Chassel	76.06	36	P	P	11 05 02.0	-0.4
ANMO	Albuquerque	76.24	54	P	P	11 05 04.7	+0.7
	comp=Z,2.5nm,0.8s,baz=312,slow=6.0,SNR=9.9						
ANMO	Albuquerque	76.24	54	P	P	11 05 04.8	+0.8
ANMO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ANMO	Albuquerque	76.24	54	P	P	11 05 04.8	+0.8
ANMO	Albuquerque	76.24	54	P	P	11 05 03.7	-0.4
	baz=316						
SCHQ	Schefferville	76.47	19	P	P	11 05 04.6	-0.1
	comp=Z,3.6nm,0.5s,baz=357,slow=5.3,SNR=12						
BRTR	Keskin Array B	76.78	313	P	P	11 05 06.8	-0.1
	comp=Z,0.9nm,0.7s,baz=69,slow=8.1,SNR=4.8						
BRTR	Keskin Array B	76.78	313	*i* P	P	11 05 07.6	+0.7
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	Keskin Array B	76.78	313	P	P	11 05 07.2	+0.3
G40A	Rib Lake	76.78	38	P	P	11 05 06.9	+0.2
319A	Douglas	77.10	59	P	P	11 05 09.7	+0.9
319A				IAmb	IAmb	11 05 11.3	
	comp=Z,15nm,0.8s						
CBKS	Cedar Bluff	77.14	48	P	P	11 05 08.6	-0.2
	baz=318						
121A	Cookes Peak, D	77.18	57	P	P	11 05 09.7	+0.4
	baz=316						
MATQ	Matagami	77.90	28	P	P	11 05 12.0	-0.7
	baz=329						
D46A	Sault St. Mari	78.01	33	P	P	11 05 12.4	-1.0
	baz=326						
GERES	GERESS Array B	78.16	331	P	P	11 05 14.2	-0.1
	comp=Z,0.3nm,0.5s,baz=40,slow=7.7,SNR=3.0						
GERES	GERESS Array B	78.16	331	P	P	11 05 13.1	-1.2
D47A	Chapleau	78.23	33	P	P	11 05 14.0	-0.7
	baz=326						
F45A	CMU Biological	78.41	35	P	P	11 05 15.4	-0.3
	baz=325						
KSU1	Kansas State U	78.53	45	P	P	11 05 15.8	-0.7
	baz=320						
JFWS	Jewell Farm	78.62	39	P	P	11 05 15.9	-0.9
	baz=323						
E47A	Iron Bridge	78.67	33	P	P	11 05 16.1	-0.9
	baz=326						
D49A	Beulah Townshi	78.71	31	P	P	11 05 16.4	-0.8
	baz=327						
LSQQ	Lebel-sur-Quev	78.72	28	P	P	11 05 17.1	-0.2
	baz=330						
AMTX	Amarillo	78.99	51	P	P	11 05 19.3	+0.1
	baz=318						
E48A	Lockeyer	79.07	32	P	P	11 05 18.6	-0.7
	baz=327						
MNTX	Cornudas Mount	79.19	56	P	P	11 05 20.9	+0.7
MNTX	Cornudas Mount	79.19	56	P	P	11 05 21.2	+1.0
	baz=317						
D50A	G1974 Best Tow	79.35	31	P	P	11 05 19.9	-0.8
	baz=328						
VLDQ	Val d'Or	79.38	29	P	P	11 05 19.9	-1.0
F48A	Evansville	79.44	33	P	P	11 05 20.8	-0.4
	baz=327						
P38A	Dawn	79.66	43	P	P	11 05 23.3	+0.8
P38A				IAmb	IAmb	11 05 23.7	
	comp=Z,17nm,1.4s						
D53A	Lac Vacive, Po	80.19	29	P	P	11 05 24.4	-0.8
	baz=330						
T35A	Sooner Cattle	80.24	47	P	P	11 05 25.3	-0.5
T35A				IAmb	IAmb	11 05 27.4	
	comp=Z,9.8nm,0.9s						
D54A	Lac Fusel, La	80.48	29	P	P	11 05 25.9	-1.0
	baz=330						
WMOK	Wichita Mounta	80.69	50	P	P	11 05 28.9	+0.7
WMOK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
WMOK	Wichita Mounta	80.69	50	P	P	11 05 28.9	+0.7
WMOK	Wichita Mounta	80.69	50	P	P	11 05 28.8	+0.7
	baz=319						
F52A	Sundridge	80.71	31	P	P	11 05 27.5	-0.6
	baz=329						
D56A	ZEC Mazanza, M	81.21	28	P	P	11 05 30.4	-0.3
	baz=331						
S39A	Bolivar	81.27	44	P	P	11 05 30.9	-0.3
S39A				IAmb	IAmb	11 05 31.7	
	comp=Z,6.9nm,0.8s						
K48A	Perry	81.35	36	P	P	11 05 31.3	-0.2
	baz=326						
TUL1	Leonard	81.39	47	P	P	11 05 32.3	+0.5
TUL1				IAmb	IAmb	11 05 33.0	
	comp=Z,6.5nm,0.7s						
TUL1	Leonard	81.39	47	P	P	11 05 32.0	+0.2
	baz=320						
W35A	Tecumseh	81.40	48	P	P	11 05 31.6	-0.4
G54A	Lake Saint Pet	81.50	30	P	P	11 05 31.7	-0.5
	baz=330						
D57A	Chemin Vers le	81.52	27	P	P	11 05 31.9	-0.4
	baz=332						
G53A	Haliburton	81.54	31	P	P	11 05 32.2	-0.3
	baz=329						
E56A	St. Veronique	81.56	28	P	P	11 05 32.2	-0.3
	baz=331						
RAYN	Ar Rayn	81.57	295	P	P	11 05 32.1	-1.0
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RAYN	Ar Rayn	81.57	295	P	P	11 05 32.1	-1.0
L47A	Sherwood	81.58	37	P	P	11 05 31.6	-1.2
	baz=326						
TX31	Lajitas Ar. Si	81.93	56	P	P	11 05 36.1	+1.2
TX31				IAmb	IAmb	11 05 37.2	
	comp=Z,6.4nm,0.9s						
TX32	Lajitas Array	81.93	56	P	P	11 05 36.3	+1.4
TX32				IAmb	IAmb	11 05 37.1	
	comp=Z,6.6nm,0.9s						
TXAR	Lajitas Array	81.93	56	P	P	11 05 36.1	+1.2
	comp=Z,2.9nm,0.7s,baz=298,slow=4.1,SNR=20						
TXAR	Lajitas Array	81.93	56	P	P	11 05 36.0	+1.1
E57A	Chemin Saint G	81.97	28	P	P	11 05 33.8	-0.9
	baz=332						
CCM	Cathedral Cave	82.00	43	P	P	11 05 35.6	+0.6
CCM				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CCM	Cathedral Cave	82.00	43	P	P	11 05 35.6	+0.6
CCM				IAmb	IAmb	11 05 36.2	
	comp=Z,6.8nm,0.8s						
CCM	Cathedral Cave	82.00	43	P	P	11 05 34.8	-0.1
	baz=322						
TRQ	Mont Tremblant	82.00	28	P	P	11 05 34.8	-0.1
HHAR	Hobbs	82.05	46	P	P	11 05 35.4	0.0
HHAR				IAmb	IAmb	11 05 53.4	
	comp=Z,15nm,1.3s						
N47A	Urbana	82.27	38	P	P	11 05 35.9	-0.5
	baz=325						
J52A	Paris	82.44	33	P	P	11 05 36.3	-0.9
	baz=328						
D60A	Saint Jean D’O	82.54	25	P	P	11 05 36.9	-0.7
	baz=334						
U40A	Yellville	82.54	45	P	P	11 05 38.2	+0.2
U40A	Yellville	82.54	45	P	P	11 05 38.1	+0.2
	baz=322						
N48A	Decatur	82.58	37	P	P	11 05 37.3	-0.6
	baz=326						
Z35A	Perchaven, San	82.58	50	P	P	11 05 38.9	+0.8
E60A	Ste Agathe de	82.87	26	P	P	11 05 39.4	0.0
	baz=334						
T42A	Van Buren	82.88	43	P	P	11 05 39.6	0.0
T42A				IAmb	IAmb	11 05 40.2	
	comp=Z,4.3nm,0.7s						
N49A	Columbus Grove	82.88	37	P	P	11 05 39.0	-0.5
	baz=326						
F59A	Saint Guilaume	82.91	27	P	P	11 05 39.6	+0.1
	baz=333						
D62A	Allapoint, All	82.95	24	P	P	11 05 40.0	+0.3
D62A				IAmb	IAmb	11 05 53.8	
	comp=Z,16nm,1.4s						
D62A	Allapoint, All	82.95	24	P	P	11 05 39.0	-0.7
	baz=335						
S44A	Carbondale	83.24	42	P	P	11 05 41.6	+0.2
S44A				IAmb	IAmb	11 05 42.7	
	comp=Z,10nm,1.0s						
FCAR	Ozark Folk Cen	83.27	45	P	P	11 05 41.8	+0.1
FCAR				IAmb	IAmb	11 05 42.2	
	comp=Z,5.2nm,0.7s						
JCT	Junction City	83.32	53	P	P	11 05 42.4	+0.4
JCT				pmax	pmax		
	comp=Z,9.0nm,1.0s						
JCT	Junction City	83.32	53	P	P	11 05 42.4	+0.4
JCT				IAmb	IAmb	11 05 43.8	
	comp=Z,9.1nm,1.0s						
JCT	Junction City	83.32	53	P	P	11 05 42.7	+0.7
	baz=319						
WHTX	Lake Whitney,	83.49	51	P	P	11 05 43.6	+0.8
	baz=320						
MIAR	Mount Ida	83.59	46	P	P	11 05 43.6	+0.4
MIAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MIAR	Mount Ida	83.59	46	P	P	11 05 43.6	+0.4
MIAR				IAmb	IAmb	11 05 45.1	
	comp=Z,6.6nm,0.8s						
MIAR	Mount Ida	83.59	46	P	P	11 05 43.9	+0.6
	baz=322						
WHAR	Wooly Hollow	83.66	45	P	P	11 05 44.5	+0.9
WHAR				IAmb	IAmb	11 05 44.9	
	comp=Z,12nm,0.9s						
J56A	Wolcott	83.77	31	P	P	11 05 44.2	+0.2
	baz=330						
W41B	Gary Mavity, V	83.77	45	P	P	11 05 44.8	+0.7
W41B				IAmb	IAmb	11 05 46.0	
	comp=Z,7.2nm,0.8s						
W41B	Gary Mavity, V	83.77	45	P	P	11 05 44.5	+0.4
	baz=322						
G61A	St-Isidore-de-	83.82	26	P	P	11 05 44.1	-0.1
	baz=334						
M53A	WI Miller and	83.89	34	P	P	11 05 44.9	+0.2
	baz=328						
J57A	Williamstown	83.97	30	P	P	11 05 44.8	-0.3
	baz=331						
X40A	Basin Creek Fa	84.02	46	P	P	11 05 46.1	+0.7
	baz=322						
P50A	Jamestown	84.14	37	P	P	11 05 46.3	+0.3
	baz=326						
F64A	Sherman	84.26	24	P	P	11 05 46.1	-0.3
	baz=336						
J58A	Remsen	84.26	30	P	P	11 05 46.1	-0.4
	baz=331						
L56A	Greenwood	84.50	32	P	P	11 05 46.6	-1.2
	baz=330						
I60A	Shoreham	84.52	28	P	P	11 05 47.2	-0.6
	baz=333						
G63A	Kingsbury	84.56	25	P	P	11 05 47.7	-0.2
	baz=335						
H62A	Milan	84.57	26	P	P	11 05 48.2	+0.1
	baz=334						
O53A	New Philadelph	84.68	35	P	P	11 05 48.7	0.0
	baz=328						
Q51A	Peebles	84.82	37	P	P	11 05 49.9	+0.5
	baz=327						
K59A	Cooperstown	84.93	30	P	P	11 05 49.8	-0.1
	baz=332						
S49A	Springfield	84.99	39	P	P	11 05 50.6	+0.3
	baz=326						
N55A	Marion Center	85.12	33	P	P	11 05 50.2	-0.7
	baz=329						
I62A	Tamworth	85.14	27	P	P	11 05 50.7	-0.2
	baz=334						
WVT	Waverly	85.17	42	P	P	11 05 50.9	-0.3
	baz=324						
NATX	Nacogdoches	85.18	49	P	P	11 05 52.0	+0.7
	baz=321						
R51A	Hillsboro	85.32	38	P	P	11 05 52.1	+0.2
	baz=327						
Q52A	Bidwell	85.33	37	P	P	11 05 51.9	0.0
	baz=327						
L59A	Walton	85.37	30	P	P	11 05 52.0	-0.1
	baz=332						
T49A	Edmonton	85.44	40	P	P	11 05 52.0	-0.6
	baz=326						
S50A	Richmond	85.47	39	P	P	11 05 53.0	+0.3
	baz=326						
O55A	Ligonier	85.49	34	P	P	11 05 53.2	+0.4
	baz=329						
J62A	Henniker	85.56	28	P	P	11 05 52.9	-0.1
	baz=334						
K61A	Williamstown	85.57	29	P	P	11 05 53.0	-0.1
	baz=333						
M58A	Price’s Panora	85.57	31	P	P	11 05 53.1	-0.1
	baz=331						
OXF	Oxford	85.71	44	P	P	11 05 53.8	-0.1
	baz=324						
O56A	Blue Knob Stat	85.72	33	P	P	11 05 54.1	+0.2
	baz=330						
Q53A	Leroy	85.73	36	P	P	11 05 52.8	-1.1
	baz=328						
U49A	Red Boiling Sp	85.81	40	P	P	11 05 55.0	+0.6
U49A				IAmb	IAmb	11 05 55.7	
	comp=Z,7.6nm,0.8s						
T50A	Nancy	85.82	39	P	P	11 05 54.6	+0.2
	baz=326						
S51A	Beattyville	85.86	38	P	P	11 05 54.2	-0.4
	baz=327						
Q54A	Coxs Mills	85.91	36	P	P	11 05 54.4	-0.4
	baz=328						
Q55A	Buckhannon	86.21	35	P	P	11 05 55.8	-0.5
	baz=329						
N59A	State Game Lan	86.22	31	P	P	11 05 55.6	-0.7
	baz=331						
P56A	Dayton Farm, R	86.27	34	P	P	11 05 56.5	-0.1
	baz=329						
O59A	Robesonia	86.60	32	P	P	11 05 57.8	-0.4
	baz=331						
S54A	Dingess, Beckl	86.71	37	P	P	11 05 58.6	-0.2
	baz=328						
T54A	Tazewell	87.22	37	P	P	11 06 01.1	-0.2
	baz=328						
TKL	Tuckaleechee C	87.43	39	P	P	11 06 02.1	-0.2
	comp=Z,6.8nm,0.9s,baz=258,slow=4.9,SNR=5.2						
BLA	Blacksburg	87.58	36	P	P	11 06 03.3	+0.4
	baz=328						
M66A	Nantucket	87.88	27	P	P	11 06 03.3	-0.9
	baz=335						
U55A	TA2, Sparta	87.92	37	P	P	11 06 03.7	-0.9
	baz=328						
Z50A	Ashland	88.42	42	P	P	11 06 07.2	+0.2
Z50A	Ashland	88.42	42	P	P	11 06 07.3	+0.2
	baz=326						
X53A	Estanollee	88.61	40	P	P	11 06 07.4	-0.4
	baz=327						
W54A	Cherokee Point	88.62	39	P	P	11 06 07.9	0.0
	baz=328						
U57A	Blanch	88.70	36	P	P	11 06 08.8	+0.6
	baz=329						
Y52A	Lilburn	88.79	41	P	P	11 06 08.8	+0.1
	baz=327						
KMSC	Kings Mountain	88.95	38	P	P	11 06 09.1	-0.2
	baz=328						
T59A	Double "B" Far	88.97	34	P	P	11 06 09.5	+0.1
	baz=330						
V57A	Coltrane Farms	88.98	36	P	P	11 06 09.6	+0.1
	baz=329						
U58A	Oxford	89.06	35	P	P	11 06 09.8	0.0
	baz=330						
V58A	Windy Hill, Pi	89.34	36	P	P	11 06 11.4	+0.2
	baz=329						
W57A	Gilead	89.52	37	P	P	11 06 12.2	+0.2
	baz=329						
X56A	White Oak	89.63	38	P	P	11 06 12.0	-0.6
	baz=328						
V59A	Middlesex	89.73	35	P	P	11 06 12.5	-0.5
	baz=330						
Y55A	Saluda	89.73	39	P	P	11 06 12.2	-0.9
	baz=328						
W58A	Raeford	89.95	37	P	P	11 06 13.2	-0.8
	baz=329						
BDFB	Brasilia	148.07	29	PKPbc	PKPbc	11 13 00.3	+0.2
	comp=Z,1.9nm,0.3s,baz=332,slow=3.8,SNR=4.4						
PLCA	Paso Flores	152.13	95	PKPbc	PKiKP	11 13 09.9	+0.5
	comp=Z,3.3nm,0.7s,baz=272,slow=1.2,SNR=13						

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*GCG **14** 11:00:39.3±0.6, 13°.68N×93°.24W, h34^{km}±999^{km}, MD4.2*

*NEIC **14** 11:00:40.5±2.1, 14°.29N±0°.08×93°.22W±0°.02, h10^{km}±2^{km}, mb4.0/3, Md3.9/20(MEX), Error ellipse: s-maj=12.8km s-min=3.1km az=182.0*

*MEX **14** 11:00:41.5±0.9, 14°.20N×93°.23W, h10^{km}, MD3.9*

*IDC **14** 11:00:41.6±1.3, 14°.52N×93°.00W, h0^{km}, mb3.6/5, mb1 4.0/9, mb1mx3.7/34, mbtmp3.7/9, ML3.7/3, MS2.9/2, Ms1 2.9/2, ms1mx2.4/37, Error ellipse: s-maj=26.1km s-min=14.7km az=24.0*

ISC 14 11:00:41.8±0.8**, 14°.37N**±0°.06×**93°.18W**±0°.04**, h10^{km}, n33, σ1^s.40**/45**, mb3.7**/5**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.03	59	*e*P	Pb	11 01 00.3	-1.4
THIG				*i* S	Sb	11 01 14.5	-0.9
THIG		1.03	59		Pb	11 01 00.3	-1.4
THIG					Sb	11 01 14.5	-0.9
PCIG		1.33	358	*e*P	Pn	11 01 04.9	-1.5
PCIG				*i* S	Sn	11 01 22.2	-1.9
PCIG		1.33	358		Pn	11 01 04.9	-1.5
PCIG					Sn	11 01 22.2	-1.9
ERG	Entre ros, C	1.56	87	*e*P	Pn	11 01 07.8	-1.8
STG3	Santiaguito 3,	1.59	78	*e*P	Pn	11 01 08.1	-2.1
CCIG	Comitan	2.15	28	*e*P	Pn	11 01 17.2	-0.7
CCIG				*i* S	Sn	11 01 43.8	-1.0
CCIG	Comitan	2.15	28		Pn	11 01 19.5	+1.5
CCIG	Comitan	2.15	28		Pn	11 01 17.2	-0.7
CCIG					Sn	11 01 43.8	-1.0
FUG	Fuego 3	2.26	88	*e*P	Pn	11 01 18.0	-1.5
FUG				*e*S	Sn	11 01 47.6	+0.1
TGIG		2.39	1	*i* P	Pn	11 01 19.8	-1.4
TGIG				*i* S	Sn	11 01 50.6	0.0
TGIG		2.39	1		Pn	11 01 19.8	-1.4
TGIG					Sn	11 01 50.6	0.0
IXG	Ixpaco	2.66	94	*e*P	Pn	11 01 22.0	-3.0
APG	El Apazote	2.70	76	Pn	Pn	11 01 24.1	-1.4
	22nm,0.3s,baz=233,slow=14,SNR=31						
APG				Lg	Lg	11 02 00.3	
	18nm,0.3s,baz=350,slow=20,SNR=5.4						
HUIG	Huatulco	3.15	297	*i* P	Pn	11 01 30.0	-1.6
HUIG				*i* S	Sn	11 02 07.0	-2.4

HUIG	Huatulco	3.15	297		Pn	11 01 30.0	-1.6
HUIG					Sn	11 02 07.0	-2.4
CMIG	Matias Romero	3.17	329	Pn	Pn	11 01 31.0	-0.7
	1.9nm,0.3s,baz=152,slow=13,SNR=22						
CMIG				Sn	Sn	11 02 11.1	+1.5
	15nm,0.3s,baz=115,slow=16,SNR=8.7						
CMIG	Matias Romero	3.17	329	*e*P	Pn	11 01 31.1	-0.6
CMIG				*e*S	Sn	11 02 09.8	+0.1
CMIG	Matias Romero	3.17	329		Pn	11 01 31.1	-0.6
CMIG					Sn	11 02 09.8	+0.1
TGUH	Tegucigalpa,Un	5.73	92	Pn	Pn	11 02 07.0	-0.2
TEIG	Tepich	7.47	38	Pn	Pn	11 02 30.1	-0.8
	3.2nm,0.3s,baz=331,slow=0.0,SNR=18						
TEIG				LR	LR	11 05 02.2	
	comp=Z,24nm,20.4s,baz=249,slow=36						
TEIG	Tepich	7.47	38		Pn	11 02 30.7	-0.2
JTS	Las Juntas de	9.00	116	Lg	Lg	11 05 12.5	
	0.4nm,0.3s,baz=174,slow=18,SNR=4.8						
JTS	Las Juntas de	9.00	116	Pn	Pn	11 02 51.5	-0.5
TXAR	Lajitas Array	17.77	329	P	P	11 04 51.1	+0.8
	baz=161,slow=17,SNR=2.3						
TXAR	Lajitas Array	17.77	329	P	Pn	11 04 50.8	+1.2
MIAR	Mount Ida	20.09	359	P	P	11 05 17.2	+1.5
MIAR				IAmb	IAmb	11 05 23.6	
	comp=Z,7.1nm,1.1s						
PDAR	Pinedale Array	31.62	337	P	P	11 07 07.4	+2.1
	comp=Z,0.2nm,0.5s,baz=140,slow=7.1,SNR=2.3						
NVAR	Mina Array Bea	32.67	322	P	P	11 07 15.4	+0.8
	comp=Z,0.2nm,0.6s,baz=132,slow=7.4,SNR=3.2						
LPAZ	La Paz	39.24	140	P	P	11 08 12.8	+1.3
	comp=Z,1.6nm,0.3s,baz=326,slow=5.8,SNR=18						
SCHQ	Schefferville	45.28	21	LR	LR	11 29 38.8	
	comp=Z,53nm,18.3s,baz=350,slow=38						
YKA	Yellowknife Ar	50.41	347	P	P	11 09 38.4	-0.8
	comp=Z,0.9nm,0.7s,baz=152,slow=7.6,SNR=18						
ILAR	Eielson Array	62.05	337	P	P	11 11 03.3	+1.0
	comp=Z,0.6nm,1.0s,baz=142,slow=6.4,SNR=4.0						

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*IDC **14** 11:03:55.4±1.3, 6°.52N×125°.02E, h0^{km}, mb3.3/3, mb1 3.5/3, mb1mx3.2/37, mbtmp3.3/3, Error ellipse: s-maj=28.4km s-min=10.6km az=127.0*

*MAN **14** 11:03:58.3, 7°.15N×125°.97E, h52^{km}, mb4.7, ML3.5, MS3.4*

ISC 14 11:04:00.0±1.0, **7°.12N**±0°.04×**125°.93E**±0°.05, **h61**^{km}±8^{km}, **n16**, σ**1^{s}.94**/27, **mb3.3**/3, **2C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.35	262	Pg	Pn	11 04 11.4	+0.7
	322nm,0.3s,baz=254,slow=6.2,SNR=26						
DAV				Lg	Lg	11 04 20.3	
	233nm,0.3s,baz=229,slow=20,SNR=26						
DAV				LR	LR	11 04 42.7	
	comp=Z,185nm,18.6s,baz=132,slow=61						
MATI	Mati	0.37	118	*e*P	Pn	11 04 09.0	-1.8
MATI				*e*S	Sn	11 04 18.3	-0.4
DMPH	Davao City--Mi	0.42	265	⇓*e*P	Pn	11 04 11.4	+0.1
DMPH				*e*S	Sn	11 04 20.4	+0.8
KCP	Kidapawan	0.84	262	⇓*e*P	Pn	11 04 16.8	+0.6
KCP				*i* S	Sn	11 04 28.5	+0.4
DDMP	Don Marcelino,	1.03	192	*e*P	Pn	11 04 18.4	-0.2
DDMP				*e*S	Sn	11 04 29.6	-2.7
BUKP	Musuan	1.15	311	*e*P	Pn	11 04 18.7	-1.4
BUKP				*e*S	Sn	11 04 34.3	-0.7
GSPH	General Santos	1.42	224	⇑*i*P	Pn	11 04 23.5	-0.3
GSPH				*i* S	Sn	11 04 41.2	-0.4
SKMP	Bagumbayan, Su	1.50	247	*e*P	Pn	11 04 23.9	-0.9
SKMP				*e*S	Sn	11 04 42.3	-1.2
CTBH	Cotabato--PC H	1.68	273	⇑*i*P	Pn	11 04 27.1	0.0
CTBH				*i* S	Sn	11 04 47.2	-0.5
BUTP	Butuan	1.86	350	*e*P	Pn	11 04 29.4	-0.3
BUTP				*e*S	Sn	11 04 54.8	+2.6
PAGZ	Pagadian	2.63	286	*e*P	Pn	11 04 39.2	-0.9
PAGZ				*e*S	Sn	11 05 04.9	-6.1
MSLP	Maasin	3.18	341	*e*P	Pn	11 04 46.2	-1.4
MSLP				*e*S	Sn	11 05 20.7	-3.6
TBP	Tagbilaran	3.27	321	*e*P	Pn	11 04 48.3	-0.6
WRA	Warramunga Arr	28.14	163	P	P	11 09 46.8	+0.2
	0.2nm,0.7s,baz=334,slow=11,SNR=3.9						
ASAR	Alice Springs	31.57	166	P	P	11 10 16.6	-0.5
	0.2nm,0.4s,baz=341,slow=7.6,SNR=6.8						
MKAR	Makanchi Array	54.34	324	P	P	11 13 23.5	+3.0
	0.4nm,0.7s,baz=111,slow=7.9,SNR=2.9						

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*MEX **14** 11:06:07.6±0.3, 30°.93N×115°.32W, h22^{km}±15^{km}, MD3.5*

*ECX **14** 11:06:07.4±0.5, 31°.22N×115°.30W, h6^{km}±2^{km}, MD2.1, ML2.3*

ISC 14 11:06:06.7±1.0, **31°.23N**±0°.03×**115°.32W**±0°.03, **h11**^{km}±9^{km}, **n14**, σ**0^{s}.44**/28, **4C-1D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIG	San Pedro Mart	0.22	216	*e*P	Pg	11 06 11.7	+0.2
SPIG				*e*S	Sg	11 06 15.4	+0.6
SPIG	San Pedro Mart	0.22	216	*e*P	Pg	11 06 12.0	+0.5
SPIG				*i* S	Sg	11 06 15.4	+0.6
SPX	San Pedro Mart	0.23	215	⇑*e*P	Pg	11 06 11.0	-0.6
SPX				*e*S	Sg	11 06 14.5	-0.4
SPX				*e*		11 06 15.0	
SPX				IAML		11 06 15.0	
	comp=E,320nm,0.1s						
SPX	San Pedro Mart	0.23	215	*e*P	Pg	11 06 11.2	-0.4
SPX				*i* S	Sg	11 06 14.6	-0.4
ECBX	El Chinero	0.33	42	⇑*i*P	Pg	11 06 13.6	+0.2
ECBX				*e*S	Sg	11 06 18.0	+0.2
SFX	San Felipe	0.44	115	⇑*e*P	Pg	11 06 14.9	-0.4
SFX				*e*S	Sg	11 06 20.9	-0.2
SQX	San Quintin	0.81	217	⇑*e*P	Pg	11 06 21.9	-0.3
SQX				*e*S	Sg	11 06 32.6	-0.2
SQX				*e*S	Sg	11 06 32.6	-0.2
SQX				*e*		11 06 33.4	
SQX				IAML		11 06 33.4	
	comp=N,114nm,0.1s						
SQX				IAML		11 06 33.6	
	comp=E,155nm,0.2s						
SVX	San Vicente	0.81	278	*e*P	Pg	11 06 21.9	-0.3
SVX				*e*S	Sg	11 06 32.8	-0.1
ESJX	Sierra Juarez	0.95	325	⇓*e*P	Pg	11 06 24.5	-0.4
ESJX				*e*S	Sg	11 06 36.8	-0.5
ERMX	Rumorosa	1.46	336	*e*P	Pn	11 06 32.6	-0.5
ERMX				*e*S	Sb	11 06 52.5	-0.1
IKP	In-Ko-Pah, Jac	1.57	335	*e*P	Pn	11 06 34.6	-0.1
CBX	Cerro Bola	1.58	314	*e*P	Pn	11 06 34.7	-0.1
CBX				*e*S	Sn	11 06 56.1	+0.8
CBX	Cerro Bola	1.58	314	*i* P	Pn	11 06 34.7	-0.1
CBX				*i* S	Sn	11 06 55.6	+0.3
TJIG	Tijuana	1.67	317	*i* P	Pn	11 06 36.2	+0.3
TJIG				*i* S	Sn	11 06 58.1	+0.7

TEH 14 11:13:33.9, 40°.19N×53°.95E, h20^{km}, ML3.5, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGLO	Ghaloghah	3.69	182	*e*Pn	Pn	11 14 31.6	+1.7
IGLO				*e*		11 15 10.9	
IALA	Alasht	4.20	193	*e*Pn	Pn	11 14 38.8	+1.7
IALA				*e*		11 15 24.9	
ISHM	Shahmirzad	4.41	187	*e*Pn	Pn	11 14 43.1	+3.1
ISHM				*e*		11 15 34.1	
ISFR	Sfrayin	4.46	133	*e*Pn	Pn	11 14 42.5	+1.9
ISFR				*e*		11 14 43.9	
IEMG	Emamgholi	4.60	126	*e*Pn	Pn	11 14 43.9	+1.3
IEMG				*e*		11 16 13.4	
IANJ	Anjilo	4.72	180	*e*Pn	Pn	11 14 47.0	+2.9
IANJ				*e*		11 15 40.8	
IKRD	Kardeh	4.94	132	*e*Pn	Pb	11 14 57.4	-2.5
IAKL	Akhelmad	5.20	132	*e*	Sn	11 15 53.8	+3.3
TKDS	Koohdasht(Taba	7.04	158	*e*Pn	Pn	11 15 17.4	+1.5
ITEG	Tejag	8.24	151	*e*Pn	Pn	11 15 34.6	+2.1

PGC 14 11:24:35.1±0.0, **66°.60N×135°.42W, h10**^{km}, **ML3.6**/2, **103km southwest of Fort McPherson, Nt Northern Yukon Territory, Canada, Northern Yukon Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INK	Inuvik	1.86	22	Pn	Pn	11 25 06.6	-0.5
INK				Sn	Sn	11 25 29.5	-1.1
INK				Sg	Sb	11 25 33.2	+0.7
DAWY	Dawson	3.04	215	Pn	Pn	11 25 23.1	-0.1
DAWY				Pg	Pb	11 25 29.0	-0.3
DAWY				Sn	Sn	11 25 58.5	-1.1
BVCY	Beaver Creek	4.81	212	Pn	Pn	11 25 46.8	-0.8
BVCY				Sn	Sn	11 26 39.4	-3.9
YUK1	Sand Pete Hill	4.98	209	Pn	Pn	11 25 49.5	-0.6
YUK1				Sn	Sn	11 26 43.5	-4.2
DHRN	Dharma Camp	6.30	79	Sn	Sn	11 27 14.7	-5.1

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*KRNET **14** 11:35:52.4±0.1, 41°.20N×70°.15E, mb2.5*

*SOME **14** 11:35:54.1, 41°.08N×71°.02E, h0^{km}*

*NNC **14** 11:35:55.5±9.2, 41°.02N×71°.08E, h0^{km}, mb3.1, mpv2.7, Error ellipse: s-maj=72.5km s-min=33.0km az=15.0*

ISC 14 11:35:56.3±1.7, **41°.02N**±0°.05×**70°.74E**±0°.04, **h2**^{km}±14^{km}, **n15**, σ**1^{s}.57**/27, **9C-11D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	0.97	176	⇓*i*P	Pg	11 36 15.1	+0.3
	baz=56						
BTK				⇓*i*S	Sn	11 36 31.9	+0.6
	baz=56						
ARK	Arkit	1.20	50	⇑*i*P	Pb	11 36 18.6	-1.3
	baz=67						
ARK				⇑*i*S	Sn	11 36 37.7	+0.5
	baz=67						
IUG	Iuzhnay	1.24	335	*e*P	Pn	11 36 19.9	-0.9
	5.0nm,0.2s						
IUG				*e*S	Sn	11 36 40.3	+2.1
	46nm,0.3s						
IUG	Iuzhnay	1.24	335	P	Pn	11 36 19.9	-0.9
	5.0nm,0.2s						
IUG				S	Sn	11 36 40.3	+2.1
	46nm,0.3s						
ARSB	Arslanbob	1.72	79	⇑*i*P	Pn	11 36 27.1	-0.3
	baz=86						
ARSB				⇑*i*S	Sg	11 36 52.9	+1.4
	baz=86						
KK31	Karatay Array	2.08	355	⇑Pn	Pn	11 36 32.8	+0.5
	1.2nm,0.5s,baz=134,slow=14,SNR=24						
KK31				⇓Sn	Sn	11 37 01.2	+2.3
	2.6nm,0.3s,baz=124,slow=60,SNR=11						
BRLS	Borolday	2.12	342	Pg	Pn	11 36 30.0	-2.8
	0.5nm,0.3s						
BRLS				Lg	Lg	11 36 57.1	
	5.9nm,0.2s						
AML	Almayashu	2.48	63	⇓*i*P	Pn	11 36 36.8	-1.2
	baz=70						
AML				⇓*i*S	Sn	11 37 09.5	+0.4
	baz=70						
MRKS	Merke	2.53	46	*e*P	Pn	11 36 39.5	+1.0
	3.0nm,0.2s						
MRKS				*e*S	Sb	11 37 14.1	0.0
	2.8nm,0.2s						
MRKS	Merke	2.53	46	Pg	Pn	11 36 39.5	+1.0
	3.0nm,0.2s						
MRKS				Lg	Lg	11 37 14.1	
	2.8nm,0.2s						
EKS2	Erkin-Say	2.80	53	⇓*i*P	Pn	11 36 40.7	-1.5
	baz=61						
EKS2				⇓*i*S	Sn	11 37 15.5	-1.1
	baz=61						
ARLS	Aral	2.82	72	⇑*i*P	Pn	11 36 42.3	-0.2
	baz=77						
ARLS				⇑*i*S	Sn	11 37 19.3	+2.1
	baz=77						
UCH	Uchtor	3.07	66	⇓*i*P	Pn	11 36 45.5	-0.8
	baz=71						
UCH				⇓*i*S	Sn	11 37 24.0	+0.1
	baz=71						
AAK	Ala-Archa	3.24	59	⇓Pg	Pn	11 36 51.4	+3.1
	0.9nm,0.5s						
AAK				⇓Lg	Lg	11 37 28.4	
	1.7nm,0.7s						
USP	Ospenovka	3.58	50	⇑*i*P	Pn	11 36 51.1	-1.8
	baz=56						
USP				⇑*i*S	Sn	11 37 33.9	-1.9
	baz=56						

WEL 14 11:46:03.1±1.2, **34°S**±13°×**17°9W**±1°4, **h190**^{km}±40^{km}, **M4.1**/12, **mB4.2**/2, **ML4.2**/11, **MLv4.1**/12, **Mw(mB)3.2**/2, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	4.43	209	P	Pn	11 47 09.7	-0.1
PKGZ	Pakihiroa	4.63	212	P	Pn	11 47 08.9	-3.5
HAZ	Te Kaha	4.66	215	P	Pn	11 47 13.2	+0.5
HAZ				S	Sn	11 48 09.3	+1.7
PUZ	Puketiti	4.71	209	P	Pn	11 47 12.0	-1.4
RUGZ	Raukumara Rang	4.87	214	P	Pn	11 47 15.2	-0.4
RUGZ				S	Sn	11 48 12.7	-0.1
TWGZ	Tauwhareparae	4.91	211	P	Pn	11 47 16.3	+0.3
TKGZ	Te Karaka	5.19	210	P	Pn	11 47 19.9	+0.3
MWZ	Matawai	5.24	213	P	Pn	11 47 19.7	-0.6
URZ	Urewera	5.38	216	P	Pn	11 47 21.2	-0.9
RIGZ	Rimuhau	5.45	209	P	Pn	11 47 23.3	+0.3
SNGZ	Shannon Statio	5.69	212	P	Pn	11 47 27.0	+0.8
SNGZ				S	Sn	11 48 31.0	-0.8
RAHZ	Arahi	5.91	213	P	Pn	11 47 30.1	+1.0
NMHZ	Naumai	6.19	213	P	Pn	11 47 33.0	+0.4
OUZ	Omahuta	6.36	257	P	Pn	11 47 34.7	-0.1
BKZ	Black Stump Fm	6.39	215	P	Pn	11 47 34.9	-0.3

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*IDC **14** 11:46:48.4±2.1, 37°.36N×142°.33E, h0^{km}, mb3.6/3, mb1 3.6/4, mb1mx3.3/41, mbtmp3.5/4, ML2.0/1, Error ellipse: s-maj=45.6km s-min=31.6km az=60.0*

*JMA **14** 11:46:53.1±0.1, 37°.36N×141°.95E, h32^{km}±3^{km}, M3.4*

ISC 14 11:46:53.3±2.5, **37°.38N**±0°.06×**141°.89E**±0°.10, **h24**^{km}±15^{km}, **n13**, σ**0^{s}.97**/23, **mb3.5**/3, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.81	269	P	Pn	11 47 08.8	-0.5
JFK				*e*S	Sn	11 47 19.9	-0.7
JMST	Minamisoumatoc	0.87	293	P	Pn	11 47 09.9	-0.1
JMST				*e*S	Sn	11 47 21.3	-0.7
ONAJ	Iwakimizuishiy	0.92	253	P	Pn	11 47 10.3	-0.5
ONAJ				*e*S	Sn	11 47 22.1	-1.1
JIKH	Ishinomakikobu	0.99	340	P	Pn	11 47 11.3	-0.3
JIKH				*e*S	Sn	11 47 24.1	-0.8
JMM	Marumori	1.00	299	P	Pn	11 47 11.9	+0.1
JMM				*e*S	Sn	11 47 25.0	-0.1
JIO	Ouri	1.15	338	P	Pn	11 47 13.9	0.0
JIO				*e*S	Sn	11 47 28.1	-0.9
JFT	Otama	1.25	277	P	Pb	11 47 16.1	0.0
JFT				*e*S	Sb	11 47 32.3	+0.5
JOU	Okura	1.38	316	P	Pb	11 47 18.1	-0.3
JOU				*e*S	Sb	11 47 36.0	+0.3
JMK	Ichinoseki	1.66	341	P	Pn	11 47 21.5	+0.7
JMK				*e*S	Sn	11 47 41.6	+0.3
MJAR	Matsushiro Arr	3.07	255	Pn	Pn	11 47 43.2	+2.9
	0.1nm,0.3s,baz=74,slow=14,SNR=6.7						
MJAR				Sn	Sb	11 48 23.1	-1.1
	0.3nm,0.3s,baz=64,slow=26,SNR=4.3						
MKAR	Makanchi Array	44.26	302	P	P	11 55 01.9	+1.2
	0.4nm,0.7s,baz=89,slow=11,SNR=4.2						
KURBB	Kurchatov Arra	46.09	308	P	P	11 55 16.1	+0.9
	0.6nm,0.3s,baz=98,slow=4.5,SNR=3.0						
WRA	Warramunga Arr	57.46	188	P	P	11 56 39.2	-1.1
	0.2nm,0.4s,baz=6.2,slow=7.3,SNR=6.4						

BJI 14 11:53:36.0±0.0, **25°.63N×118°.74E, h10**^{km}, **ML4.1**/8, **1D, Near coast of southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QZH	Quanzhou	0.70	191	⇓*i*Pg	Pg	11 53 49.1	-0.4
QZH				Sg	Sg	11 53 58.5	-0.1
QZH				smax	smax		
	comp=N,3µm,0.2s						
QZH				smax	smax		
	comp=E,8µm,0.2s						
WHN	Wuhan	6.24	323	*e*Pn	Pn	11 55 05.0	-3.2
WHN				Sn	Sn	11 56 18.1	-1.5
WHN				Sg	Sg	11 56 49.0	-7.5
WHN				smax	smax		
	comp=N,400nm,0.8s						
WHN				smax	smax		
	comp=E,420nm,0.9s						
WMQ	Urumqi	31.06	314	*e*P	P	11 59 56.3	+2.1

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*IDC **14** 12:03:29.1±5.0, 29°.95S×177°.78W, h0^{km}, mb3.6/3, mb1 3.8/4, mb1mx3.6/30, mbtmp3.7/4, ML3.7/1, Error ellipse: s-maj=101.5km s-min=17.3km az=102.0*

*NEIC **14** 12:03:32.4±0.5, 29°.99S±0°.03×178°.1W±0°.3, h11^{km}±13^{km}, mb4.0/7, Error ellipse: s-maj=41.9km s-min=2.6km az=95.0*

ISC 14 12:03:31.9±1.3, **30°.04S**±0°.08×**178°.0W**±0°.2, **h10**^{km}, **n14**, σ**1^{s}.32**/17, **mb3.9**/5, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.80	8	Pn	Pg	12 03 46.6	-0.6
	140nm,0.3s,baz=108,slow=20,SNR=4.1						
RAO				Sn	Sb	12 03 58.3	-0.3
	638nm,0.3s,baz=21,slow=23,SNR=6.3						
RAO	Raoul Island	0.80	8		Pg	12 03 46.6	-0.6
RAO				Sg	Sg	12 03 56.9	-0.7
URZ	Urewera	9.12	205	Pn	Pn	12 05 43.7	+0.2
	0.8nm,0.3s,baz=318,slow=16,SNR=6.7						
URZ				Sn	Sn	12 07 22.2	-4.2
	0.2nm,0.3s,baz=18,slow=16,SNR=2.3						
URZ	Urewera	9.12	205		Pn	12 05 44.6	+1.1
RPZ	Rata Peaks	16.18	209	Pn	Pn	12 07 19.9	+0.6
RPZ				IAmb	IAmb	12 07 24.0	
	comp=Z,21nm,1.4s						
STKA	Stephens Creek	34.52	256	P	P	12 10 22.0	+1.5
	comp=Z,0.9nm,0.6s,baz=113,slow=13,SNR=3.1						
STKA	Stephens Creek	34.52	256	P	P	12 10 21.1	+0.6
STKA				IAmb	IAmb	12 10 24.0	
	comp=Z,2.9nm,1.5s						
AS31	Alice Springs	43.09	267	P	P	12 11 32.5	0.0
ASAR	Alice Springs	43.09	267	P	P	12 11 32.6	+0.2
	comp=Z,0.1nm,0.5s,baz=106,slow=7.7,SNR=4.3						
WB2	Warramunga Arr	44.04	272	P	P	12 11 40.3	+0.3
WRAB	Tennant Creek	44.04	272	P	P	12 11 40.3	+0.2
WRAB				IAmb	IAmb	12 11 46.6	
	comp=Z,6.2nm,1.2s						
WRA	Warramunga Arr	44.05	272	P	P	12 11 40.6	+0.4
	comp=Z,0.8nm,0.2s,baz=110,slow=8.1,SNR=55						
WRA	Warramunga Arr	44.05	272	P	P	12 11 40.5	+0.3
SBA	Scott Base	48.39	184	P	P	12 12 14.5	+1.0
SBA				IAmb	IAmb	12 12 15.8	
	comp=Z,0.5nm,0.5s						

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*KRNET **14** 12:06:24.6±0.1, 41°.43N×70°.97E, h10^{km}, mb2.5*

ISC 14 12:06:27.0±1.4, **41°.31N**±0°.04×**71°.16E**±0°.05, **h1**^{km}±12^{km}, **n11**, σ**1^{s}.64**/21, **19C-3D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	Arkit	0.78	51	⇓*i*P	Pg	12 06 40.8	-1.1
	baz=65						
ARK				⇓*i*S	Sg	12 06 52.5	+0.6
	baz=65						
BTK	Batken	1.27	192	⇑*i*P	Pg	12 06 50.8	-0.6
	baz=85						
BTK				⇑*i*S	Sn	12 07 10.0	+0.2
	baz=85						
ARSB	Arslanbob	1.37	89	⇑*i*P	Pg	12 06 53.5	+0.2
	baz=93						
ARSB				⇑*i*S	Sg	12 07 14.4	+3.3
	baz=93						
KK31	Karatay Array	1.86	345	⇑Pn	Pg	12 07 02.0	-0.6
	3.5nm,0.5s,baz=155,slow=14,SNR=18						
KK31				⇓Sn	Sg	12 07 28.8	+2.1
	6.7nm,0.6s,baz=152,slow=25,SNR=11						
AML	Almayashu	2.07	66	⇑*i*P	Pb	12 07 04.6	-1.0
	baz=70						
AML				⇑*i*S	Sg	12 07 33.4	0.0
	baz=70						
EKS2	Erkin-Say	2.37	54	⇑*i*P	Pn	12 07 07.9	+0.7
	baz=59						
EKS2				⇑*i*S	Sb	12 07 39.3	-1.2
	baz=59						
ARLS	Aral	2.44	76	⇑*i*P	Pb	12 07 09.4	-2.3
	baz=79						
ARLS				⇑*i*S	Sb	12 07 42.3	0.0
	baz=79						
UCH	Uchtor	2.67	69	⇑*i*P	Pn	12 07 13.0	+1.4
	baz=72						
UCH				⇑*i*S	Sb	12 07 48.1	-1.3
	baz=72						
AAK	Ala-Archa	2.82	61	⇑Pg	Pb	12 07 17.7	-0.6
	2.0nm,0.8s						
AAK				⇑Lg	Lg	12 07 55.4	
	3.4nm,1.1s						
KZA	Kyzart	3.16	75	⇑*i*P	Pn	12 07 20.0	+1.8
	baz=77						
KZA				⇑*i*S	Sb	12 08 00.2	-3.1
	baz=77						
USP	Ospenovka	3.16	51	⇑*i*P	Pn	12 07 18.6	+0.7
	baz=54						
USP				⇑*i*S	Sn	12 07 57.8	+1.6
	baz=54						

IDC 14 12:15:35.9±3.5, **12°.21N×43°.71W, h0**^{km}, **mb3.6**/3, **mb1 3.9**/3, **mb1mx3.5**/41, **mbtmp3.6**/3, **Error ellipse: s-maj=151.2km s-min=33.4km az=12.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N3	ASCENSION HYDR	35.21	123	T	T	12 59 38.7	
	baz=303,slow=75,SNR=13						
H10N2	ASCENSION HYDR	35.22	123	T	T	12 59 39.1	
	baz=303,slow=75,SNR=14						
H10N1	ASCENSION HYDR	35.23	123	T	T	12 59 40.3	
	baz=303,slow=75,SNR=21						
TORD	Torodi Ar. Bea	44.26	84	P	P	12 23 47.5	-0.2
	1.4nm,1.1s,baz=285,slow=6.2,SNR=3.8						
TXAR	Lajitas Array	58.01	297	P	P	12 25 31.0	0.0
	0.1nm,0.5s,baz=118,slow=7.6,SNR=2.8						
YKA	Yellowknife Ar	70.44	332	P	P	12 26 51.8	0.0
	1.1nm,1.1s,baz=103,slow=7.0,SNR=4.9						

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*SJA **14** 12:22:32.0±0.7, 32°.06S×71°.85W, h51^{km}±12^{km}, ML4.8, MW4.9*

*NEIC **14** 12:22:34.3±1.5, 32°.06S±0°.04×71°.56W±0°.10, h67^{km}±3^{km}, Error ellipse: s-maj=12.0km s-min=6.0km az=87.0*

*IDC **14** 12:22:34.2±0.6, 32°.11S×71°.67W, h60^{km}±4^{km}, mb4.3/13, mb1 4.5/17, mb1mx4.4/29, mbtmp4.7/17, MS3.8/7, Ms1 3.7/7, ms1mx3.5/18, Error ellipse: s-maj=14.1km s-min=10.5km az=175.0*

*GUC **14** 12:22:34.5±0.7, 32°.09S×71°.55W, h68^{km}±6^{km}, ML4.6*

*VAO **14** 12:22:44.7±1.7, 31°.70S×71°.06W, h129^{km}±12^{km}, mb4.9*

ISC 14 12:22:33.1±0.5, **32°.07S**±0°.03×**71°.78W**±0°.05, **h57**^{km}±4^{km}, **n212**, σ**1^{s}.41**/211, **mb4.6**/46, **MS4.1**/7, **12C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO04	Los Peladeros	0.69	88	⇓*e*P	Pn	12 22 47.5	+0.1
CO04				*i* S	Sn	12 22 56.5	-1.2
MT02	Curacav	1.31	156	⇑*i*P	Pn	12 22 55.3	+0.1
MT02				*e*S	Sn	12 23 10.1	-1.6
PEL	Peldehue	1.42	140	⇑*i*P	Pn	12 22 57.1	+0.4
PEL				*e*S	Sn	12 23 13.8	-0.6
PEL				IAML		12 23 14.2	
	comp=N,17µm,0.4s						
PEL	Peldehue	1.42	140		Pn	12 22 56.9	+0.2
PEL				Sn	Sn	12 23 13.5	-0.9
PEL	Peldehue	1.42	140	*i* P	Pn	12 22 57.1	+0.4
PEL				*e*S	Sn	12 23 13.8	-0.6
CO03	El Pedregal	1.54	38	⇑*i*P	Pn	12 22 59.1	+0.7
CO03				*e*S	Sn	12 23 17.4	0.0
CLCH	Cerro Calan	1.69	142	⇑*i*P	Pn	12 23 00.9	+0.5
CLCH				*e*S	Sn	12 23 20.4	-0.7
CLCH				IAML		12 23 23.9	
	comp=E,22µm,0.6s						
FCH	Farellones	1.78	135	⇑*i*P	Pn	12 23 02.1	+0.3
FCH				*i* S	Sn	12 23 23.3	-0.3
FCH				IAML		12 23 25.7	
	comp=E,8µm,0.3s						
MT03	Universidad Ad	1.78	143	⇑*i*P	Pn	12 23 02.3	+0.6
MT03				*e*S	Sn	12 23 22.6	-0.7
ANTU	Antumapu	1.78	147	⇑*i*P	Pn	12 23 03.3	+1.7
ANTU				*e*S	Sn	12 23 22.9	-0.3
ANTU				IAML		12 23 25.3	

	comp=E,20µm,0.4s						
MT01	Popeta	1.85	166	⇓eP	Pn	12 23 03.3	+0.8
MT01				eS	Sn	12 23 25.5	+0.7
MT01				IAML		12 23 27.4	
	comp=E,3µm,0.3s						
GO04	Tololo Observa	2.07	24		Pn	12 23 06.2	+0.5
GO04				Sn	Sn	12 23 30.3	-0.2
GO04	Tololo Observa	2.07	24	iP	Pn	12 23 06.5	+0.8
GO04				eS	Sn	12 23 30.1	-0.4
RTLS	Leoncito	2.13	83	iP	Pn	12 23 08.5	+1.9
RTLS				eS	Sn	12 23 35.2	+3.1
RTLS				IAML		12 23 41.6	
	comp=Z,5µm,0.7s						
LMEL	Las Melosas	2.22	144	IAML		12 23 34.7	
	comp=N,12µm,0.3s						
ARCO	CERRO ARCO	2.53	109	iP	Pn	12 23 14.7	+2.8
ARCO				IAML		12 23 35.3	
	comp=Z,2µm,0.3s						
ARCO				eS	Sn	12 23 44.8	+3.1
ASAL	Salagasta	2.55	103	iP	Pn	12 23 14.9	+2.8
AAGR	Agrelo	2.69	113	iP	Pn	12 23 16.5	+2.4
ZON	Zonda	2.69	80	iP	Pn	12 23 15.8	+1.7
ZON				eS	Sn	12 23 47.6	+2.1
ZON				IAML		12 23 55.2	
	comp=Z,3µm,0.6s						
AROD	Rodeo	2.74	47	iP	Pn	12 23 17.1	+2.1
ACCO	Cerro Coronel	2.75	58	iP	Pn	12 23 17.3	+2.2
RTCV	Cerro Valdivia	2.76	87	iP	Pn	12 23 16.9	+1.8
RTLL	Cerro Villicun	2.91	76	iP	Pn	12 23 18.7	+1.6
GO05	Huala	2.94	182		Pn	12 23 17.7	+0.3
GO05				Sn	Sn	12 23 49.9	-1.6
GO05	Huala	2.94	182	iP	Pn	12 23 17.8	+0.4
ACDV	Cuesta del Vie	2.96	51	iP	Pn	12 23 19.8	+1.9
AMOG	MOGNA	3.03	69	iP	Pn	12 23 20.4	+1.8
CFA	Coronel Fontan	3.05	82	P	Pn	12 23 20.2	+1.2
	baz=255,slow=15						
CFA				S	Sn	12 23 55.2	+0.9
	comp=Z,403nm,0.3s,baz=145,slow=21,SNR=8.3						
CFA				LR	LR	12 24 39.6	
	comp=Z,2µm,19.7s,baz=184,slow=42						
LAMA	Las Malvinas	3.58	144	iP	Pn	12 23 28.3	+2.2
PUMA	Malargue	3.93	151	iP	Pn	12 23 33.5	+2.5
EDS3	Malargue	4.19	152	iP	Pn	12 23 36.8	+2.1
CCHI	Chillan	4.53	183	iP	Pn	12 23 40.6	+1.4
VCA	Vinchina	4.54	44	iP	Pn	12 23 41.8	+2.4
VCA				IAML		12 25 01.9	
	comp=Z,2µm,0.5s						
GO03	Copiap	4.66	17	⇑iP	Pn	12 23 40.9	-0.2
GO03				iS	Sn	12 24 32.7	-1.1
GO03	Copiap	4.66	17		Pn	12 23 40.8	-0.2
GO03				Sn	Sn	12 24 32.9	-0.9
MRA	San Martin	5.15	96	iP	Pn	12 23 47.3	-0.5
CYA	Choya	6.31	57	iP	Pn	12 24 02.0	-1.6
CYA				IAML		12 24 42.3	
	comp=Z,264nm,0.6s						
GO02	Mina Guanaco	7.14	16		Pn	12 24 13.3	-2.1
GO06	Curarrehue	7.50	178		Pn	12 24 20.4	+0.4
PB14	IPOC Station P	7.51	10	iP	Pn	12 24 17.6	-2.8
PLCA	Paso Flores	8.71	174	P	Pn	12 24 37.1	+0.7
	comp=Z,1.8nm,0.3s,baz=2.0,slow=11,SNR=48						
PLCA				LR	LR	12 28 23.4	
	comp=Z,201nm,18.8s,baz=13,slow=40						
PLCA	Paso Flores	8.71	174		Pn	12 24 36.9	+0.5
LVC	Limon Verde	9.76	16	P	Pn	12 24 46.4	-4.7
	comp=Z,3.9nm,0.3s,baz=147,slow=8.5,SNR=22						
LVC				LR	LR	12 29 00.3	
	comp=Z,376nm,20.7s,baz=208,slow=40						
LVC	Limon Verde	9.76	16		Pn	12 24 47.5	-3.7
PB04	IPOC Station P	9.80	9	Pn	Pn	12 24 47.8	-3.8
GO07	Milladeo Hill,	11.13	187	Pn	Pn	12 25 09.9	+0.5
PB01	IPOC Station P	11.17	11	Pn	Pn	12 25 11.7	+1.5
PB11	IPOC Station P	12.40	9		Pn	12 25 28.6	+1.5
GO01	Chusmiza	12.56	11		Pn	12 25 30.6	+1.0
MNMC	Minye Minye	13.03	9		Pn	12 25 36.5	+0.8
CPUP	Villa Florida	13.85	69	P	Pn	12 25 42.6	-4.1
	comp=Z,0.3nm,0.3s,baz=240,slow=16,SNR=5.2						
CPUP	Villa Florida	13.85	69		Pn	12 25 43.5	-3.1
OGAUY	Aigu	14.47	104	eP	P	12 25 57.3	-2.8
LPAZ	La Paz	16.06	13	P	Pn	12 26 16.5	+0.6
	comp=Z,4.2nm,0.3s,baz=184,slow=8.3,SNR=160						
LPAZ	La Paz	16.06	13		Pn	12 26 14.9	-1.0
ITAB	Concordia	17.74	79	eP	P	12 26 35.7	-0.6
CNLB	Canela	18.21	87	eP	Pn	12 26 40.2	-1.6
AQDB	Aquidauana	18.45	55	eP	P	12 26 42.2	-1.9
SIV	San Ignacio	18.73	34	P	P	12 26 46.8	-0.6
	comp=Z,11nm,0.3s,baz=224,slow=10,SNR=254						
PTGB	Pitanga	18.81	72	eP	P	12 26 46.8	-1.4
GO09	Cerro Castillo	19.19	181	P	P	12 26 52.3	+0.3
TRCB	Terra Rica	19.32	66	eP	P	12 26 51.5	-2.2
NNA	Nana	20.52	346	P	Pn	12 27 09.4	-0.1
	comp=Z,11nm,0.7s,baz=230,slow=7.9,SNR=3.9						
NNA	Nana	20.52	346	P	P	12 27 07.6	+0.8
NNA				IAmb	IAmb	12 27 10.9	
	comp=Z,25nm,1.0s						
PCMB	Pacaembu	21.03	65	eP	P	12 27 10.6	-1.7
FRTB	Fartura	21.48	72	eP	P	12 27 15.4	-1.6
C2SB	Chapadao do Su	21.59	57	eP	P	12 27 17.7	-0.5
SALV	Santo Antonio	21.75	46	eP	P	12 27 18.5	-1.5
EFI	East Falkland	22.03	157	P	P	12 27 22.2	-0.3
EFI				IAmb	IAmb	12 27 29.6	
	comp=Z,39nm,1.1s						
ITRB	Iturama	22.82	63	eP	P	12 27 29.4	-2.0
USHA	Ushuaia	22.88	175	P	P	12 27 33.4	+1.7
	comp=Z,49nm,1.0s,baz=297,slow=2.7,SNR=12						
SPB	Sao Paulo	23.09	75	P	P	12 27 32.1	-2.0
SPB	Sao Paulo	23.09	75	eP	P	12 27 32.1	-2.0
BB19B	Bebedouro	23.46	68	eP	P	12 27 35.3	-2.4
RCLB	Rio Claro- Sao	23.56	72	eP	P	12 27 36.0	-2.6
VAO	Valinhos	23.74	74	eP	P	12 27 38.5	-1.8
SAML	Samuel	24.35	21	P	P	12 27 45.4	-0.3
SAML				IAmb	IAmb	12 27 47.8	
	comp=Z,18nm,0.8s						
SAML	Samuel	24.35	21	eP	P	12 27 45.9	+0.1
ARAG	Araguaiana, MT	24.40	53	eP	P	12 27 44.4	-1.8
PARB	Paraibuna	24.69	76	eP	P	12 27 47.5	-1.4
IPMB	Ipameri, GO	25.47	62	eP	P	12 27 54.4	-1.7
CLDB	Colider	25.74	39	eP	P	12 27 57.0	-1.5
ESAR	Angra dos Reis	25.81	76	eP	P	12 27 57.9	-1.1
BSCB	Bom Sucesso	26.49	72	eP	P	12 28 03.6	-1.7
BDFB	Brasilia	27.11	58	P	P	12 28 09.7	-1.1
	comp=Z,71nm,1.0s,baz=229,slow=8.6,SNR=39						
BDFB				LR	LR	12 39 58.4	
	comp=Z,572nm,21.9s,baz=216,slow=39						
BDFB	Brasilia	27.11	58	P	P	12 28 09.1	-1.8
JANB	Januaria	30.21	62	eP	P	12 28 36.8	-1.6
SJMB	Sao Joao De Ma	30.56	72	eP	P	12 28 40.0	-1.4
BSFB	Barra de Sao F	30.77	72	eP	P	12 28 41.7	-1.5
SMTB	Santa Maria do	32.20	49	eP	P	12 28 53.0	-2.9
PTGA	Pitinga	33.11	22	P	P	12 29 02.9	-0.9
PTGA	Pitinga	33.11	22	eP	P	12 29 03.3	-0.4
FLOC	Florencia	33.67	353	P	P	12 29 08.2	-0.5
NBIT	Itapeh - BA	34.04	68	eP	P	12 29 11.1	-0.9
NBPN	Ponto Novo - B	35.97	61	eP	P	12 29 27.5	-1.1
NBLA	Lagarto - SE	37.70	64	eP	P	12 29 41.2	-2.0
RUSC	La Rusia	37.77	358	P	P	12 29 45.3	+1.0
NBTA	Tacaratu-PE	38.69	61	eP	P	12 29 49.9	-1.7
NBMA	Muriti-CE	39.34	58	eP	P	12 29 55.9	-1.1
NBPS	Pedro II - PI	39.57	52	eP	P	12 29 57.4	-1.6
NBAN	Anadia - AL	39.68	64	eP	P	12 29 58.2	-1.7
NBPB	Pedra_Branca-C	40.02	56	eP	P	12 30 01.6	-1.1
SDV	Santo Domingo	40.74	2	P	P	12 30 07.5	-1.2
SDV				IAmb	IAmb	12 30 14.1	
	comp=Z,13nm,1.1s						
SDV	Santo Domingo	40.74	2	eP	P	12 30 09.0	+0.2
NBRF	Rio Formoso -	41.18	64	eP	P	12 30 11.1	-1.1
NBMO	Morrinhos-CE	41.31	53	eP	P	12 30 11.5	-1.8
NBCL	Cascavel-CE	41.86	56	eP	P	12 30 16.3	-1.5
RCBR	Riachuelo	42.47	60	eP	P	12 30 20.5	-2.3
TOSP	Speyside	44.44	16	P	P	12 30 38.6	+0.1
MLPR	Magueyes Islan	49.96	6	P	P	12 31 21.0	-0.4
SJG	San Juan	50.18	7	P	P	12 31 22.9	-0.2
VNA3	Neumayer Olymp	51.07	158	P	P	12 31 30.5	+1.3
VNA1	Neumayer--Stat	51.37	158	P	P	12 31 32.3	+0.9
VNA2	Neumayer--Watz	51.71	158	P	P	12 31 35.3	+1.2
	baz=287,slow=8.3						
SNAA	Sanae	53.29	158	P	P	12 31 46.9	+1.1
SNAA	Sanae	53.29	158	P	P	12 31 45.1	-0.7
SNAA				IAmb	IAmb	12 31 47.3	
	comp=Z,7.7nm,0.8s						
TEIG	Tepich	54.34	341	P	P	12 31 53.6	-0.3
QSPA	South Pole Qui	58.16	180	P	P	12 32 22.0	+1.1
VNDA	Vanda	66.03	191	P	P	12 33 14.4	+1.2
	comp=Z,1.6nm,0.8s,baz=101,slow=7.9,SNR=4.1						
SYO	Syowa Base	67.58	159	⇑eX	pP	12 33 34.8	-3.8
TBI	Tubuai	67.99	256	eLR	LR	12 54 03.0	
	comp=Z,360nm,29.0s						
TX32	Lajitas Array	68.16	330	P	P	12 33 28.4	+1.0
TXAR	Lajitas Array	68.16	330	P	P	12 33 28.9	+1.5
	comp=Z,1.0nm,0.7s,baz=154,slow=8.6,SNR=12						
TXAR	Lajitas Array	68.16	330	P	P	12 33 28.5	+1.1
SWET	Sewanee	68.24	348	P	P	12 33 28.2	+0.5
SWET				IAmb	IAmb	12 33 46.3	
	comp=Z,6.7nm,0.6s						
WVT	Waverly	69.49	346	P	P	12 33 36.0	+0.7
WVT				IAmb	IAmb	12 33 54.0	
	comp=Z,10nm,0.8s						
LCAR	Lake Charles	70.17	343	P	P	12 33 40.5	+1.0
LCAR				IAmb	IAmb	12 33 58.7	
	comp=Z,5.0nm,0.7s						
TIAR	Tiarei	70.56	261	eT	T	13 51 03.2	
	comp=Z,2.4nm,0.3s						
PPT2	Papeete2	70.74	261	eLR	LR	12 55 13.6	
	comp=Z,116nm,28.2s						
MNTX	Cornudas Mount	70.94	330	P	P	12 33 45.2	+0.8
CCM	Cathedral Cave	72.08	344	P	P	12 33 51.6	+0.5
CCM				IAmb	IAmb	12 33 53.2	
	comp=Z,12nm,1.2s						
LIC	Lamto	73.97	72	⇑iP	P	12 34 02.5	-0.3
	comp=Z,47nm,0.6s						
ANMO	Albuquerque	74.20	331	P	P	12 34 05.4	+1.5
TIC	Toumodi	74.22	72	⇑iP	P	12 34 04.0	-0.3
	comp=Z,20nm,0.5s						
KIC	Kosan Boka	74.28	72	⇑iP	P	12 34 04.5	-0.1
	comp=Z,53nm,0.7s						
DBIC	Dimbokro	74.36	72	P	P	12 34 05.1	0.0
	comp=Z,22nm,0.6s,baz=210,slow=6.1,SNR=45						
DBIC				pP	pP	12 34 20.8	-0.2
	comp=Z,13nm,0.9s,baz=188,slow=8.4,SNR=5.3						
DBIC				LR	LR	13 06 57.4	
	comp=Z,28nm,18.1s,baz=196,slow=36						
DBIC	Dimbokro	74.36	72	P	P	12 34 04.9	-0.2
T25A	Trinidad	75.30	334	IAmb	IAmb	12 34 13.8	
	comp=Z,8.6nm,1.1s						
SUR	Sutherland	75.58	119	P	P	12 34 11.7	-0.5
X16A	Lo Mia Camp, P	75.93	327	IAmb	IAmb	12 34 17.5	
	comp=Z,7.4nm,1.1s						
WUAZ	Wupatki	76.81	328	IAmb	IAmb	12 34 22.5	
	comp=Z,7.5nm,1.0s						
MVCO	Mesa Verde	76.99	331	IAmb	IAmb	12 34 23.8	
	comp=Z,10nm,1.4s						
Q24A	Divide	77.18	334	IAmb	IAmb	12 34 24.7	
	comp=Z,7.7nm,0.8s						
U15A	North Rim	77.98	328	IAmb	IAmb	12 34 29.2	
	comp=Z,5.0nm,0.8s						
PV12	Saucer Basin,	78.05	331	IAmb	IAmb	12 34 29.0	
	comp=Z,9.3nm,1.1s						
SMCO	Snowmass	78.06	333	IAmb	IAmb	12 34 29.7	
	comp=Z,7.1nm,0.9s						
ECSD	EROS Data Cent	78.78	342	P	P	12 34 30.0	+0.7
ECSD				IAmb	IAmb	12 34 49.5	
	comp=Z,9.6nm,1.1s						
TSUM	Tsumeb	79.54	106	P	P	12 34 33.7	-0.7
	comp=Z,1.9nm,0.8s,baz=260,slow=5.6,SNR=4.4						
TSUM				pP	pP	12 34 50.8	+0.3
	comp=Z,2.6nm,0.7s,baz=258,slow=8.9,SNR=4.4						
TSUM	Tsumeb	79.54	106	P	P	12 34 32.1	-2.3
D41A	Chassel	80.20	348	P	P	12 34 36.3	-0.7
D41A				IAmb	IAmb	12 34 39.4	
	comp=Z,22nm,1.2s						
ISA	Isabella, Lake	80.36	323	IAmb	IAmb	12 34 41.9	
	comp=Z,6.0nm,0.8s						
BOSA	Boshof	80.78	118	P	P	12 34 40.5	-0.4
	comp=Z,3.9nm,0.9s,baz=231,slow=2.7,SNR=4.9						
BOSA				LR	LR	13 07 11.3	
	comp=Z,36nm,18.9s,baz=212,slow=33						
BOSA	Boshof	80.78	118	P	P	12 34 39.8	-1.1
BOSA				IAmb	IAmb	12 34 58.5	
	comp=Z,15nm,1.1s						
K22A	Casper	80.91	335	IAmb	IAmb	12 34 44.7	
	comp=Z,8.6nm,1.1s						
DUG	Dugway, Tooele	81.32	329	IAmb	IAmb	12 34 46.4	
	comp=Z,8.5nm,1.4s						
RSSD	Black Hills	81.34	337	P	P	12 34 43.3	-0.1
HWUT	Hardware Ranch	81.97	331	IAmb	IAmb	12 34 49.2	
	comp=Z,5.9nm,0.8s						
OMMB	Old Mammoth Mi	82.14	324	P	P	12 34 49.0	+1.1
OMMB				IAmb	IAmb	12 34 51.1	
	comp=Z,4.9nm,0.9s						
PDAR	Pinedale Array	82.14	333	P	P	12 34 49.0	+1.3
	comp=Z,0.7nm,0.6s,baz=154,slow=5.7,SNR=7.8						
PDAR				pP	pP	12 35 06.8	+3.5
	comp=Z,0.5nm,0.6s,baz=119,slow=5.2,SNR=2.8						
PDAR	Pinedale Array	82.14	333	P	P	12 34 48.0	+0.3
NVAR	Mina Array Bea	82.43	325	P	P	12 34 51.8	+2.5
	comp=Z,3.3nm,0.7s,baz=156,slow=6.4,SNR=31						
NVAR	Mina Array Bea	82.43	325	P	P	12 34 50.9	+1.6
ELK	Elko	82.83	328	P	P	12 34 50.8	-0.6
ELK				IAmb	IAmb	12 34 54.1	
	comp=Z,4.8nm,0.8s						
LBTB	Lobatse	82.92	115	P	P	12 34 50.5	-1.7
LBTB				IAmb	IAmb	12 35 09.9	
	comp=Z,4.5nm,0.8s						
TOA0	Torodi Ar. Sit	83.35	70	P	P	12 34 53.5	-0.8
TORD	Torodi Ar. Bea	83.35	70	P	P	12 34 54.2	-0.1
	comp=Z,15nm,0.8s,baz=267,slow=4.6,SNR=77						
TORD				pP	pP	12 35 10.6	+0.2
	comp=Z,8.5nm,0.9s,baz=257,slow=4.9,SNR=6.8						
TORD				LR	LR	13 08 34.4	
	comp=Z,81nm,21.9s,baz=350,slow=33						
TORD	Torodi Ar. Bea	83.35	70	P	P	12 34 53.2	-1.1
FLWY	Flagg Ranch	83.70	333	IAmb	IAmb	12 34 58.5	
	comp=Z,6.7nm,1.1s						
ULM	Lac du Bonnet	84.69	345	P	P	12 35 00.7	+0.4
	comp=Z,1.6nm,0.5s,baz=129,slow=2.6,SNR=5.6						
ULM	Lac du Bonnet	84.69	345	IAmb	IAmb	12 35 01.6	
	comp=Z,5.1nm,0.9s						
ORV	Oroville	84.88	324	IAmb	IAmb	12 35 05.0	
	comp=Z,6.8nm,1.2s						
RPZ	Rata Peaks	85.25	220	P	P	12 35 04.6	+0.9
	comp=Z,5.5nm,0.8s,baz=31,slow=16,SNR=4.1						
BMO	Blue Mountains	87.03	329	IAmb	IAmb	12 35 14.6	
	comp=Z,3.2nm,0.8s						
I07A	Izee	87.40	328	IAmb	IAmb	12 35 17.1	
	comp=Z,5.9nm,1.1s						
PINE	Pine Mountain	87.84	327	IAmb	IAmb	12 35 19.5	
	comp=Z,6.6nm,0.8s						
JTMT	Jette	88.13	333	IAmb	IAmb	12 35 30.8	
	comp=Z,6.8nm,1.4s						
YKA	Yellowknife Ar	100.30	341	P	Pdif	12 36 13.0	+0.4
	comp=Z,0.3nm,0.6s,baz=142,slow=4.5,SNR=9.2						
DZM	Mont Dzumac	102.55	234	eLR	LR	13 10 13.9	
	comp=Z,160nm,30.2s						
ASAR	Alice Springs	119.38	207	PKP	PKPdf	12 41 16.2	-0.4
	comp=Z,1.0nm,0.7s,baz=126,slow=1.7,SNR=14						
ASAR	Alice Springs	119.38	207		PKPdf	12 41 15.7	-1.0
WRA	Warramunga Arr	122.55	209	PKP	PKPdf	12 41 22.7	-0.1
	comp=Z,2.3nm,0.6s,baz=162,slow=1.6,SNR=26						
H11S2	WAKE ISLAND Hy	125.99	270	T	T	15 00 36.5	
	baz=118,slow=75,SNR=100						
H11S1	WAKE ISLAND Hy	126.01	270	T	T	15 00 39.2	
	baz=118,slow=75,SNR=136						
H11S3	WAKE ISLAND Hy	126.01	270	T	T	15 00 38.0	
	baz=118,slow=75,SNR=111						
H11N3	WAKE ISLAND Hy	126.36	272	T	T	15 01 03.0	
	baz=117,slow=76,SNR=21						
H11N1	WAKE ISLAND Hy	126.37	272	T	T	15 01 04.4	
	baz=117,slow=76,SNR=10						
H11N2	WAKE ISLAND Hy	126.38	272	T	T	15 01 06.2	
	baz=117,slow=76,SNR=41						
FITZ	Fitzroy Crossi	127.40	201	PKP	PKPdf	12 41 32.0	0.0
	comp=Z,1.7nm,0.8s,baz=171,slow=1.1,SNR=3.5						
SEY	Seymchan	138.46	331	PKP	PKiKP	12 41 53.1	-0.4
	comp=Z,4.0nm,0.5s,baz=141,slow=3.5,SNR=17						
TIXI	Tiksi	138.83	350	PKP	PKPdf	12 41 52.5	+0.7
	comp=Z,0.5nm,0.3s,baz=33,slow=2.4,SNR=4.4						
MA2	Magadan	140.64	327	PKP	PKiKP	12 41 58.0	-0.1
	comp=Z,1.2nm,0.5s,baz=32,slow=7.4,SNR=4.3						
BVAR	Borovoye Array	145.70	41	PKPbc	PKPab	12 42 06.5	+1.0
	comp=Z,2.7nm,0.3s,baz=298,slow=3.2,SNR=25						
BVAR				pPKPbc	pPKPdf	12 42 22.6	+1.1
	comp=Z,6.2nm,0.7s,baz=298,slow=3.2,SNR=10						
YAK	Yakutsk	146.98	342	PKPbc	PKPbc	12 42 09.4	+0.9
	comp=Z,16nm,0.8s,baz=172,slow=0.9,SNR=9.3						
YAK	Yakutsk	146.98	342		PKPdf	12 42 06.9	+0.5
KKAR	Karatay Array	148.40	59		PKPbc	12 42 12.8	-0.2
RPSI	Rantau Prapat	149.50	161		PKPbc	12 42 16.9	+0.3
PSI	Prapat	149.60	161	PKPbc	PKPbc	12 42 16.9	-0.1
	comp=Z,3.2nm,0.5s,baz=339,slow=0.5,SNR=5.2						
KURK	Kurchatov	151.30	41		PKiKP	12 42 20.3	+0.1
AAK	Ala-Archa	151.36	59	PKPbc	PKiKP	12 42 21.3	+0.4
	comp=Z,2.3nm,0.6s,baz=80,slow=2.2,SNR=8.3						
AAK				pPKPbc	pPKPbc	12 42 38.3	+1.2
	comp=Z,4.2nm,0.7s,baz=241,slow=7.0,SNR=4.3						
AAK	Ala-Archa	151.36	59		PKPbc	12 42 19.1	-1.3
ZALV	Zalesovo Beam	152.47	31	PKPbc	PKiKP	12 42 23.0	+0.4
	comp=Z,4.4nm,0.5s,baz=301,slow=3.5,SNR=13						
ZALV	Zalesovo Beam	152.47	31		PKiKP	12 42 22.8	+0.2
KSH	Kashi	152.91	65	PKPbc	PKPbc	12 42 20.5	-3.5
KSH				sPKP		12 42 34.1	
KSH				PKS	PKSdf	12 45 51.5	+0.3
KSH				PP	PP	12 46 11.0	+1.9
KSH	Kashi	152.91	65	SKKS	SKKSac	12 52 55.5	+1.4
MKAR	Makanchi Array	155.30	46	PKP	PKPdf	12 42 20.4	+0.7
	comp=Z,0.3nm,0.6s,baz=48,slow=1.8,SNR=4.1						
MKAR				PKPbc	PKPbc	12 42 29.4	
	comp=Z,0.9nm,0.8s,baz=8.8,slow=1.5,SNR=7.0						
MKAR				PKPab	PKPab	12 42 45.6	+0.5
	comp=Z,4.6nm,0.8s,baz=294,slow=3.8,SNR=25						
MKAR	Makanchi Array	155.30	46		PKPdf	12 42 19.7	0.0
MKAR					PKPbc	12 42 28.5	
MKAR					PKPab	12 42 45.0	-0.1
WMQ	Urumqi	160.07	48	eP	PKPdf	12 42 26.3	+0.5
KSRS	Korea Array	162.95	294	PKPab	PKPab	12 43 20.4	+1.7
	comp=Z,0.5nm,0.8s,baz=78,slow=6.6,SNR=5.0						
CMAR	Chiang Mai Arr	164.07	146	PKP	PKPdf	12 42 30.7	+0.2
	comp=Z,0.3nm,0.3s,baz=237,slow=3.1,SNR=4.6						
CMAR	Chiang Mai Arr	164.07	146		PKPdf	12 42 30.0	-0.4
GTA	Gaotai	169.99	41	ePKP	PKPdf	12 42 35.8	+1.4
GTA				sPKP		12 42 53.3	
GTA				PKPab	PKPab	12 43 51.1	+1.4
LZH	Lanzhou	174.59	41	ePKP	PKPdf	12 42 36.0	-0.6
LZH				pPKP	pPKPdf	12 42 49.3	-4.0
LZH				sPKP		12 42 54.1	
LZH				PKP	PKPab	12 44 11.3	+1.0

IDC **14** *12:33:59.5±1.2, 33°.09N×139°.77E, h0km, mb3.4/2, mb1 3.7/4, mb1mx3.4/56, mbtmp3.4/4, ML2.9/2, Error ellipse: s-maj=11.7km s-min=7.6km az=47.0*

JMA **14** *12:34:02.0±0.1, 33°.28N×139°.63E, h26km±4km, M2.9*

ISC 14 12:34:02.8±0.9**, 33°.30N**±0°.04×**139°.50E**±0°.06**, h22km, n18, σ1s72**/23**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	Hachijo jima 2	0.30	127	Pn	Pb	12 34 07.5	-2.1
	452nm,0.3s,baz=235,slow=4.1,SNR=38						
JHJ				Sn	Sb	12 34 13.1	-1.1
	700nm,0.3s,baz=78,slow=20,SNR=54						
JHJ2	Mitsune	0.32	125	P	Pb	12 34 08.0	-2.0
JHCJ	Hachijojimakas	0.34	132	P	Pb	12 34 08.1	-2.1
JMKN	Mikurajimanish	0.60	7	P	Pb	12 34 13.6	-1.1
JMKN				eS	Sb	12 34 22.4	-0.3
JTHY	Toshimahigashi	1.24	352	P	Pn	12 34 24.3	-0.5
JIM2	Oshima 3	1.42	358	P	Pn	12 34 27.0	-0.3
JIZS	Izushimoda	1.51	340	P	Pn	12 34 28.2	-0.4
TK02	Tokai 2	1.59	294	P	Pn	12 34 29.3	-0.2
TK02				eS	Sn	12 34 49.2	-0.1
TK01	Tokai 1	1.66	287	eS	Sn	12 34 50.8	-0.1
KTJ3	Kamata3	1.67	348	P	Pn	12 34 30.9	+0.1
BSO3	Boso 3	1.72	29	P	Pb	12 34 30.8	-2.8
TK04	Tokai 4	1.73	309	eS	Sn	12 34 54.2	+1.2
TTO4	TONANKAI O.B.S	1.78	294	P	Pn	12 34 31.6	-0.5
TTO4				eS	Sn	12 34 53.6	-0.4
MJAR	Matsushiro Arr	3.41	342	Pn	Pn	12 34 58.0	+3.3
	0.2nm,0.3s,baz=163,slow=13,SNR=11						
MAT	Matsushiro	3.41	342	P	Pb	12 34 58.6	-3.9
MAT				S	Sn	12 35 35.6	+1.2
JNU	Nakatsue	7.23	271	Pn	Pn	12 35 48.6	+1.4
	0.4nm,0.3s,baz=130,slow=5.0,SNR=5.0						
ILAR	Eielson Array	53.49	31	P	P	12 43 22.6	+1.4
	0.3nm,0.8s,baz=246,slow=6.5,SNR=3.2						
TXAR	Lajitas Array	93.66	51	P	P	12 47 19.6	+1.6
	0.1nm,0.7s,baz=321,slow=2.3,SNR=2.8						

IDC **14** *12:34:48.4±1.1, 33°.10N×139°.80E, h0km, mb3.5/5, mb1 3.8/6, mb1mx3.5/55, mbtmp3.4/6, ML2.1/1, MS2.7/2, Ms1 2.9/2, ms1mx2.5/31, Error ellipse: s-maj=29.2km s-min=7.0km az=137.0*

JMA **14** *12:34:50.5±0.1, 33°.30N×139°.60E, h17km±5km, M3.3*

JMA Felt I J1.

ISC 14 12:34:50.2±0.8**, 33°.23N**±0°.07×**139°.46E**±0°.07**, h10km, n18, σ1s38**/17**, mb3.4**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	Hachijo jima 2	0.29	112	Pn	Pg	12 34 56.6	+0.4
	431nm,0.3s,baz=218,slow=8.8,SNR=3.8						
JHJ				Sn	Sg	12 35 01.2	+1.0
	2µm,0.3s,baz=196,slow=22,SNR=28						
JHJ2	Mitsune	0.32	111	P	Pg	12 34 56.3	-0.4
JHCJ	Hachijojimakas	0.33	119	P	Pg	12 34 56.4	-0.3
JHCJ				eS	Sg	12 35 00.6	-0.5
JKO	Kozu shima	0.99	344	P	Pg	12 35 08.4	-0.9
JTHY	Toshimahigashi	1.30	354	P	Pn	12 35 12.7	-1.7
JIZS	Izushimoda	1.56	342	P	Pn	12 35 16.3	-1.8
MJAR	Matsushiro Arr	3.46	343	Pn	Pn	12 35 46.4	+2.2
	0.2nm,0.3s,baz=160,slow=15,SNR=4.3						
MAT	Matsushiro	3.46	343	P	Pn	12 35 46.8	+2.6
MAT				eS	Sn	12 36 26.3	+1.0
JNU	Nakatsue	7.19	271	Pn	Pn	12 36 35.8	+0.2
	0.3nm,0.3s,baz=110,slow=16,SNR=3.0						
JNU				LR	LR	12 38 29.4	
	comp=Z,70nm,19.7s,baz=67,slow=30						
H11N2	WAKE ISLAND Hy	27.90	112	T	T	13 09 05.8	
	baz=305,slow=75,SNR=35						
H11N1	WAKE ISLAND Hy	27.91	112	T	T	13 08 54.7	
	baz=305,slow=75,SNR=28						
H11N3	WAKE ISLAND Hy	27.92	112	T	T	13 09 19.0	
	baz=305,slow=75,SNR=30						
SONM	Songino Array	28.80	310	P	P	12 40 50.2	+1.7
	0.4nm,0.8s,baz=122,slow=5.4,SNR=2.4						
CMAR	Chiang Mai Arr	39.06	258	LR	LR	12 57 42.6	
	comp=Z,10.0nm,19.3s,baz=280,slow=35						
WRA	Warramunga Arr	53.10	186	P	P	12 44 06.6	-1.4
	0.2nm,0.7s,baz=2.4,slow=7.4,SNR=2.6						
ILAR	Eielson Array	53.57	31	P	P	12 44 11.2	+0.2
	0.4nm,0.7s,baz=262,slow=6.2,SNR=5.2						
NVAR	Mina Array Bea	78.58	52	P	P	12 46 52.1	-0.3
	0.3nm,0.8s,baz=308,slow=4.4,SNR=2.2						
TXAR	Lajitas Array	93.73	51	P	P	12 48 07.0	-0.7
	0.2nm,0.6s,baz=278,slow=3.0,SNR=4.3						

KEA **14** *12:35:39.3±0.0, 41°.60N×121°.70E, h0km, ML3.5/8*

IDC **14** *12:35:40.0±1.5, 41°.75N×121°.88E, h0km, mb3.4/3, mb1 3.5/5, mb1mx3.3/56, mbtmp3.3/5, ML2.4/2, Error ellipse: s-maj=28.7km s-min=18.7km az=23.0*

ISC 14 12:35:41.1±1.2**, 41°.79N**±0°.06×**122°.09E**±0°.08**, h10km, n13, σ1s88**/19**, mb3.4**/3**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUJ	Sinuiju	2.48	132	Pg	Pg	12 36 28.5	-0.2
SUJ				Sg	Sg	12 37 02.0	+1.1
KGE	Kanggye	3.51	102	Pn	Pn	12 36 38.1	+2.4
KGE				Pg	Pg	12 36 47.2	-1.1
KGE				Sg	Sg	12 37 35.5	+1.7
PYS	Pyongsong	3.83	130	Sg	Sg	12 37 44.4	+0.3
PYAG	Pyongyang	3.92	133	Pg	Pg	12 36 54.8	-1.3
PYAG				Sg	Sg	12 37 46.4	-0.5
HHU	Hamhung	4.53	112	Pg	Pg	12 37 06.0	-1.8
HHU				Sg	Sg	12 38 06.9	+0.5
HJU	Haeju	4.67	142	Sg	Sg	12 38 09.7	-1.4
KSRS	Korea Array	6.25	132	Pn	Pn	12 37 15.6	+2.2
	0.3nm,0.3s,baz=317,slow=14,SNR=4.1						
KSRS				Pg	Pg	12 37 37.0	-3.7
	0.4nm,0.3s,baz=316,slow=18,SNR=4.2						
KSRS				Sn	Sn	12 38 23.4	-1.4
	0.6nm,0.3s,baz=308,slow=23,SNR=5.4						
KSRS				Lg	Lg	12 38 58.2	
	1.9nm,0.3s,baz=312,slow=30,SNR=9.3						
USRK	Ussuriysk Ar.	7.65	68	Pn	Pn	12 37 33.6	+1.0
	baz=259,slow=12,SNR=4.1						
USRK				Pg	Pg	12 38 04.2	-3.3
	baz=258,slow=18,SNR=4.1						
USRK				Lg	Lg	12 39 47.4	
	baz=258,slow=24,SNR=7.6						
KLR	Kul'dur	10.06	39	Lg	Lg	12 41 02.6	
	0.2nm,0.3s,baz=323,slow=23,SNR=3.9						
SONM	Songino Array	12.67	304	Lg	Lg	12 42 25.2	

	0.5nm,0.3s,baz=107,slow=24,SNR=5.7						
MKAR	**Makanchi Array**	**28.70**	**294**	P	**P**	**12 41 37.4**	**-0.9**
	0.2nm,0.6s,baz=90,slow=8.6,SNR=2.6						
ILAR	**Eielson Array**	**53.55**	**32**	P	**P**	**12 45 03.5**	**+1.9**
	0.2nm,0.4s,baz=292,slow=9.5,SNR=4.1						
INK	**Inuvik**	**56.82**	**25**	P	**P**	**12 45 25.9**	**+0.8**
	0.4nm,0.6s,baz=293,slow=7.5,SNR=3.2						

IDC 14 12:36:27.2±16.0**, 19°.27S**×**174°.28W, h0^{km}, mb4.2**/5**, mb1 4.3**/5**, mb1mx3.8**/49**, mbtmp4.2**/5**, Error ellipse: s-maj=316.3km s-min=150.0km az=80.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**37.11**	**262**	P	P	12 43 40.5	+0.7
	1.3nm,0.3s,baz=81,slow=12,SNR=4.7						
STKA	**Stephens Creek**	**41.47**	**243**	P	P	12 44 16.0	-0.1
	1.4nm,0.6s,baz=90,slow=9.1,SNR=4.1						
ASAR	**Alice Springs**	**48.21**	**255**	P	P	12 45 09.6	-0.5
	4.2nm,0.5s,baz=96,slow=7.6,SNR=85						
WRA	**Warramunga Arr**	**48.25**	**260**	P	P	12 45 09.7	-0.7
	1.1nm,0.3s,baz=97,slow=7.6,SNR=33						
FITZ	**Fitzroy Crossi**	**56.67**	**261**	P	P	12 46 13.0	+0.1
	0.8nm,0.5s,baz=253,slow=1.0,SNR=8.3						

MAN 14 12:41:13.0, 10°.37N×**122°.10E, h28^{km}, mb4.2, ML3.0, MS2.6, 1C, Panay**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIM	**Jordan**	**0.54**	**62**	*e*P	Pb	12 41 24.1	+0.1
GUIM				*e*S	Sn	12 41 32.6	-0.4
CUYO	**Cuyo Island**	**1.17**	**294**	*e*P	Pn	12 41 32.9	-0.6
CUYO				*e*S	Sn	12 41 47.4	-1.2
RCP	**Roxas**	**1.34**	**28**	⇑*e*P	Pb	12 41 37.8	+0.3
OTRP	**Odiongan**	**1.98**	**358**	*e*P	Pn	12 41 44.9	+0.2
OTRP				*e*S	Sn	12 42 07.8	-0.9

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*NNC **14** 12:56:30.2±10.0, 37°.62N×71°.21E, h57^{km}±288^{km}, mb3.8, mpv3.9, Error ellipse: s-maj=81.2km s-min=62.6km az=158.0*

ISC 14 12:56:30.7±3.0**, 37°.6N**±0°.2×**71°.5E**±0°.1**, h100^{km}, n11, σ1^{s}22**/16**, 8C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**4.81**	**20**	P	**Pn**	**12 57 41.5**	**+0.3**
	SNR=23						
UCH	**Uchtor**	**5.15**	**26**	P	**Pn**	**12 57 45.7**	**-0.2**
	SNR=6.2						
EKS2	**Erkin-Say**	**5.33**	**19**	P	**Pn**	**12 57 48.5**	**+0.6**
	SNR=11						
AAK	**Ala-Archa**	**5.51**	**24**	P	**Pn**	**12 57 50.9**	**+0.4**
	SNR=6.8						
AAK	**Ala-Archa**	**5.51**	**24**	⇑P	**Pn**	**12 57 50.5**	**0.0**
	6.0nm,0.5s						
AAK				⇓S	**Sn**	**12 58 53.2**	**+0.6**
	7.5nm,0.6s						
KK31	**Karatay Array**	**5.52**	**353**	⇑P	**Pn**	**12 57 52.2**	**+1.7**
	5.5nm,0.3s,baz=182,slow=14,SNR=98						
KK31				⇑S	**Sn**	**12 58 54.5**	**+1.8**
	5.3nm,0.5s,baz=185,slow=23,SNR=9.8						
CHMS	**Chumysh**	**5.92**	**24**	P	**Pn**	**12 57 56.1**	**+0.3**
	SNR=5.3						
CHMS	**Chumysh**	**5.92**	**24**	⇑P	**Pn**	**12 57 55.3**	**-0.5**
	4.1nm,0.3s						
CHMS				⇑S	**Sn**	**12 59 02.5**	**+0.2**
	9.7nm,0.8s						
USP	**Ospenovka**	**6.09**	**21**	P	**Pn**	**12 57 58.0**	**-0.1**
	SNR=15						
AB31	**Akbulak array**	**14.31**	**328**	⇑P	**Pn**	**12 59 47.7**	**-0.8**
	0.2nm,0.3s,baz=134,slow=15,SNR=16						
AB31				⇑S	**Sn**	**13 02 24.4**	**-1.7**
	0.5nm,0.4s,baz=147,slow=23,SNR=12						
AKTO	**Aktyubinsk**	**16.02**	**327**	⇑P	**P**	**13 00 12.8**	**+1.2**
	2.0nm,1.2s						
AKTO				⇓S	**Sn**	**13 03 04.7**	**-2.6**
	4.4nm,1.4s						

MAN 14 13:11:36.0, 18°.31N×**120°.85E, h23^{km}, mb4.5, ML3.3, MS3.2, 1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIPP	**Brgy, Tapao**	**0.54**	**224**	⇓*e*P	Pn	13 11 47.8	-0.4
SIPP				*e*S	Sn	13 11 57.5	+1.0
APYP	**Conner**	**0.58**	**140**	*e*P	Pb	13 11 48.0	+0.4
APYP				*e*S	Sb	13 11 56.1	+0.7
ABRA	**Dolores**	**0.67**	**191**	*e*P	Pb	13 11 48.8	-0.2
ABRA				*e*S	Sn	13 12 00.5	+0.6
SGCP	**Mt. Cagua**	**1.14**	**93**	*e*P	Pn	13 11 56.1	-0.3
SGCP				*e*S	Sn	13 12 11.9	+0.5
CAUP	**Cauayan**	**1.65**	**146**	*e*P	Pn	13 12 04.4	+0.9
CAUP				*e*S	Sb	13 12 26.1	+0.1
SMPP	**San Manuel, Pa**	**2.16**	**184**	*e*P	Pn	13 12 12.1	+1.6
SMPP				*e*S	Sb	13 12 39.7	-1.0
BALP	**Baler**	**2.65**	**165**	*e*P	Pn	13 12 18.6	+1.3
BALP				*e*S	Sn	13 12 44.4	-4.4

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*BJI **14** 13:38:01.0±0.0, 7°.37N×93°.93E, h7^{km}, mB5.5/76, mb5.2/85, Ms5.6/93, Ms7 5.3/85*

*BGR **14** 13:38:05.1±0.0, 6°.59N×94°.03E, h33^{km}, mb5.4, Ms5.0*

*NEIC **14** 13:38:06.2±1.9, 7°.76N±0°.08×94°.31E±0°.08, h10^{km}±1^{km}, mb5.5/80, Ms_20 5.4/223, Mwb5.4/24, Mww5.5, Mwc5.6(GCMT), Error ellipse: s-maj=15.4km s-min=10.6km az=219.0*

*NEIC **14** 13:38:06.4, 7°.76N×94°.25E, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.41; M$_{\theta\theta}$-1.07; M$_{\phi\phi}$1.48; M$_{r\theta}$-0.68; M$_{\theta\phi}$0.23; M$_{\phi r}$-0.60; Fault plane solution: M$_0$1.62000×10^{17} NP1:φ$_s$142.55000°, δ52.61000°, λ-168.11000°. NP2:φ$_s$45.26000°, δ80.58000°, λ-37.99000°. Principal axes: T 1.7198, Plg18.0000°, Azm99.0000°; N -0.2142, Plg51.0000°, Azm213.0000°; P -1.5056, Plg33.0000°, Azm357.0000°;*

*MOS **14** 13:38:06.3±1.0, 7°.74N×94°.15E, h24^{km}, mb5.6/62, MS5.1/27 Error ellipse: s-maj=7.0km s-min=3.8km az=110.8*

*NDI **14** 13:38:07.3±3.3, 7°.64N×94°.41E, h22^{km}±24^{km}, mb5.4, mb5.5(NEIC)*

*NEIC **14** 13:38:08, 7°.20N×93°.71E, h20^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.39; M$_{\theta\theta}$-0.69; M$_{\phi\phi}$2.09; M$_{r\theta}$-1.03; M$_{\theta\phi}$0.14; M$_{\phi r}$-0.73; Fault plane solution: M$_0$2.24000×10^{17} NP1:φ$_s$32.00000°, δ65.00000°, λ-55.00000°. NP2:φ$_s$153.00000°, δ42.00000°, λ-141.00000°. Principal axes: T 2.2770, Plg13.0000°, Azm97.0000°; N -0.0790, Plg31.0000°, Azm196.0000°; P -2.1980, Plg55.0000°, Azm348.0000°;*

*IDC **14** 13:38:09.8±1.8, 7°.73N×94°.22E, h34^{km}±12^{km}, mb4.8/44, mb1 4.8/49, mb1mx4.7/60, mbtmp5.0/49, ML5.2/4, MS5.0/34, Ms1 5.0/34, ms1mx5.0/35 Error ellipse: s-maj=10.6km s-min=8.6km az=47.0*

*DJA **14** 13:38:09.6±0.2, 8°N±2°×9°4E±°, h10^{km}, M5.3/76, mB5.7/53, mb5.4/76, MLv5.7/9, Mw(mB)5.3/53, Mwp5.4/22*

*GCMT **14** 13:38:10.2±0.1, 7°.74N±0°.01×94°.33E±0°.01, h17^{km}, MW5.6/147, Moment Tensor Solution. s113,c183; s147,c276; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.96±.03; M$_{\theta\theta}$-1.78±.03; M$_{\phi\phi}$2.74±.03; M$_{r\theta}$-1.10±.10; M$_{\theta\phi}$0.47±.03; M$_{\phi r}$-0.67±.08; Best double couple: M$_0$2.74800×10^{17} NP1:φ$_s$145.00000°, δ57.00000°, λ-162.00000°. NP2:φ$_s$45.00000°, δ75.00000°, λ-35.00000°. Principal axes: T 2.9520, Plg12.0000°, Azm98.0000°; N -0.4100, Plg53.0000°, Azm204.0000°; P -2.5450, Plg35.0000°, Azm360.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **14** 13:38:11, 7°.75N×94°.32E, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.80; M$_{\theta\theta}$-1.97; M$_{\phi\phi}$2.77; M$_{r\theta}$-0.94; M$_{\theta\phi}$0.57; M$_{\phi r}$-0.73; Fault plane solution: M$_0$2.80000×10^{17} NP1:φ$_s$48.00000°, δ80.00000°, λ-30.00000°. NP2:φ$_s$144.00000°, δ61.00000°, λ-168.00000°. Principal axes: T 3.0254, Plg13.0000°, Azm99.0000°; N -0.5329, Plg59.0000°, Azm211.0000°; P -2.4926, Plg28.0000°, Azm2.0000°;*

*KLM **14** 13:38:16.0, 7°.61N×94°.41E, h50^{km}, mb5.5*

ISC 14 13:38:09.2±0.5**, 7°.69N**±0°.03×**94°.23E**±0°.03**, h30^{km}**±3^{km}**, h30^{km}:pP-P, n829, σ1^{s}66**/815**, mb5.3**/222**, MS5.3**/177**, 28C-40D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMBY	**CAMPBELL BAY**	**0.74**	**204**	*e*P	**Pb**	**13 38 22.7**	**-0.9**
CMBY				*e*S	**Sb**	**13 38 33.1**	**-0.2**
LHMI	**Lhok Sumawe**	**3.65**	**132**	P	**Pn**	**13 39 03.5**	**-0.2**
LHMI				S	**Sn**	**13 39 45.1**	**-0.6**
LHMI	**Lhok Sumawe**	**3.65**	**132**		**Pn**	**13 39 03.9**	**+0.2**
LHMI				Sn	**Sn**	**13 39 45.3**	**-0.4**
MLSI	**Meulaboh, Aceh**	**4.03**	**147**	P	**Pn**	**13 39 10.3**	**+1.3**
PBA	**Port Blair**	**4.20**	**340**	*e*P	Pn	13 39 11.8	+0.4
PBA				*e*S	Sn	13 39 58.5	-1.0
TPTI		**5.29**	**146**	P	**Pn**	**13 39 27.9**	**+1.6**
	1.2nm4μm265nm,1.0s						
KCSI	**Kotacane, Aceh**	**5.44**	**139**	P	**Pn**	**13 39 28.9**	**+0.5**
	5.8nm16μm10μm760nm,0.9s						
DGPR	**DIGLIPUR**	**5.60**	**347**	*e*P	**Pn**	**13 39 32.3**	**+1.7**
DGPR				*e*x	x	13 40 43.1	
SNSI	**Sinabang, Aceh**	**5.65**	**158**	P	**Pn**	**13 39 29.9**	**-1.3**
	7.2nm14μm1μm,1.4s						
PSI	**Prapat**	**6.74**	**136**	Pn	**Pn**	**13 39 47.2**	**+0.8**
	14nm,0.3s,baz=335,slow=13,SNR=47						
PSI				Sn	**Sn**	**13 41 03.9**	**+1.6**
	31nm,0.3s,baz=183,slow=18,SNR=5.9						
PSI				LR	LR	13 42 57.8	
	comp=Z,30μm,19.6s,baz=301,slow=42						
KULM	**Kulim**	**6.81**	**110**		**Pn**	**13 39 46.7**	**-0.6**
KULM	**Kulim**	**6.81**	**110**	P	**Pn**	**13 39 47.0**	**-0.3**
RPSI	**Rantau Prapat**	**6.82**	**136**		**Pn**	**13 39 47.8**	**+0.4**
RPSI				Sn	**Sn**	**13 41 04.0**	**-0.1**
RPSI	**Rantau Prapat**	**6.82**	**136**		**Pn**	**13 39 47.2**	**-0.1**
RPSI					**Sn**	**13 41 03.9**	**-0.1**
IPM	**Ipoh**	**7.47**	**115**		**Pn**	**13 39 55.0**	**-1.4**
IPM				Sn	**Sn**	**13 41 16.4**	**-3.9**
IPM	**Ipoh**	**7.47**	**115**	P	**Pn**	**13 39 54.0**	**-2.4**
PBSI	**Pulau Batu**	**8.69**	**152**	P	**Pn**	**13 40 13.4**	**+0.4**
	10μm4μm183nm,1.0s						
BKNI	**Bangkinang**	**9.98**	**137**	P	**Pn**	**13 40 32.6**	**+1.8**
	8μm16μm729nm,1.1s						
SISI	**Saibi**	**10.19**	**151**	P	**Pn**	**13 40 35.1**	**+1.6**
	5μm1μm70nm,0.8s						
PDSI	**Padang**	**10.57**	**144**	P	**Pn**	**13 40 38.7**	**-0.1**
	3μm1μm88nm,0.8s						
PBKT	**Sadao Pong**	**11.01**	**36**		**Pn**	**13 40 46.4**	**+1.5**
PBKT				Sn	Sn	13 42 37.8	-9.3
SDSI	**Sungai Dareh**	**11.18**	**140**	P	**Pn**	**13 40 46.9**	**-0.2**
	1μm86nm,1.0s						
MYKOM	**Kota Tinggi**	**11.24**	**121**		**Pn**	**13 40 46.7**	**-1.2**
MYKOM				Sn	**Sn**	**13 42 47.7**	**-4.9**
MYKOM	**Kota Tinggi**	**11.24**	**121**	P	**Pn**	**13 40 47.0**	**-0.9**
CM31	**Chiang Mai Arr**	**11.64**	**23**	P	**Pn**	**13 40 55.7**	**+2.2**
	SNR=46						
CM31	**Chiang Mai Arr**	**11.64**	**23**		**Pn**	**13 40 56.1**	**+2.5**
CMAR	**Chiang Mai Arr**	**11.64**	**23**	Pn	**Pn**	**13 40 55.0**	**+1.5**
	9.4nm,0.3s,baz=213,slow=14,SNR=187						
CMAR				LR	LR	13 45 36.9	
	comp=Z,10μm,18.3s,baz=270,slow=38						
CMAR				ScP	**ScP**	**13 50 13.8**	**-0.2**
	0.2nm,0.3s,baz=235,slow=3.7,SNR=12						
CMAR	**Chiang Mai Arr**	**11.64**	**23**		**Pn**	**13 40 56.5**	**+2.9**
CMAR					**ScP**	**13 50 13.2**	**-0.7**
CHTO	**Chiang Mai**	**11.97**	**22**	P	**Pn**	**13 41 00.2**	**+2.2**
CHTO	**Chiang Mai**	**11.97**	**22**		**Pn**	**13 41 00.1**	**+2.2**
KRJI	**Kerinci**	**12.10**	**143**	P	Pn	13 41 05.3	+5.4
UBPT	**Khong Chiam**	**13.35**	**55**		**Pn**	**13 41 18.3**	**+1.5**
PALK	**Pallekele**	**13.42**	**269**	Pn	**Pn**	**13 41 17.6**	**-0.2**
	0.5nm,0.3s,baz=58,slow=10,SNR=4.2						
PALK				Sn	Sn	13 43 35.4	-11
	3.0nm,0.3s,baz=189,slow=23,SNR=7.5						
PALK				LR	LR	13 45 53.9	
	comp=Z,15μm,21.6s,baz=100,slow=35						
PALK	**Pallekele**	**13.42**	**269**		**Pn**	**13 41 18.1**	**+0.3**
KSI	**Kapahiang**	**14.02**	**143**	P	**Pn**	**13 41 24.8**	**-1.3**
CHLP	**Challavanipeta**	**14.61**	**318**	*e*P	**Pn**	**13 41 33.0**	**-1.0**
CHLP				*e*		13 44 03.8	
DLV	**T Lat**	**14.67**	**72**	P	**P**	**13 41 37.8**	**-3.2**
MDRS	**Chennai**	**14.75**	**292**	*e*P	**Pn**	**13 41 37.1**	**+1.2**
MDRS				IAmb	IAmb	13 42 17.1	
	comp=Z,210nm,0.6s						
MNAI	**Manna**	**14.80**	**144**	P	**Pn**	**13 41 38.3**	**+1.6**
	comp=Z,7μmcomp=Z,334nm,1.4s						
BRDH	**Bariadhala**	**15.11**	**351**	Pn	**Pn**	**13 41 40.5**	**-0.2**
	comp=Z,42nm,0.3s,baz=47,slow=5.7,SNR=5.9						
SKHT	**Srikalahasti**	**15.47**	**294**	*e*P	**Pn**	**13 41 45.5**	**-0.1**
SKHT				*e*		13 44 23.9	
SKHT				*e*S	**Sn**	**13 44 37.4**	**+1.3**
PVM	**Polavaram**	**15.54**	**309**	*e*P	**Pn**	**13 41 46.5**	**+0.2**
PVM				*e*		13 44 22.9	
PVM				*e*S	**Sn**	**13 44 37.3**	**-0.3**
MDSI	**Maura Dua**	**15.65**	**140**	P	**Pn**	**13 41 44.5**	**-3.3**
	comp=Z,2μmcomp=Z,218nm,1.0s						
LWLI	**Liwa**	**15.99**	**142**	P	**P**	**13 41 55.0**	**-0.5**
	comp=Z,199nm,0.8s						
MYLAV	**Mylavaram**	**16.04**	**305**	*e*P	**Pn**	**13 41 52.4**	**-0.4**
MYLAV				*e*		13 44 33.2	
MYLAV				*e*S	**Sn**	**13 44 51.1**	**+1.3**
ADKI	**Addanki**	**16.13**	**301**	*e*P	**Pn**	**13 41 54.9**	**+1.0**
ADKI				*e*		13 44 40.0	
ADKI				*e*S	**Sn**	**13 44 54.2**	**+2.1**
SLVN	**Son La**	**16.47**	**34**	P	**P**	**13 42 03.9**	**+3.1**
KASI	**Kota Agung**	**16.65**	**142**	P	**Pn**	**13 41 57.2**	**-3.4**
	comp=Z,2μmcomp=Z,1μmcomp=Z,154nm,0.9s						
RCLA	**Racherla**	**16.82**	**299**	*e*P	**Pn**	**13 42 02.2**	**-0.6**
RCLA				*e*P	**Pn**	**13 42 02.2**	**-0.6**
RCLA				*e*S	Sn	13 44 54.7	-14
RCLA				*e*		13 45 00.9	
RCLA				*e*S	**S**	**13 45 09.9**	**-9.0**
GGR	**Gangavaram**	**16.97**	**308**	*e*P	**Pn**	**13 42 04.1**	**-0.6**
GGR				*e*S	**Sn**	**13 45 13.5**	**+0.9**
NJS	**Nagarjunasagar**	**17.03**	**303**	*e*P	**P**	**13 42 07.5**	**+0.6**
NJS				*e*S	**Sn**	**13 45 14.1**	**+0.1**
SRLM	**Srisailam**	**17.16**	**301**	*e*P	**Pn**	**13 42 07.5**	**+0.4**
SRLM				*e*		13 45 05.6	
SRLM				*e*S	**Sn**	**13 45 19.1**	**+1.8**
KSM	**Kuching**	**17.17**	**110**	P	**P**	**13 42 10.7**	**+2.1**
KSM	**Kuching**	**17.17**	**110**	P	**P**	**13 42 11.0**	**+2.4**
BOK	**Bokaro**	**17.90**	**334**	*e*P	**Pn**	**13 42 15.3**	**-0.8**
BOK				IAmb	IAmb	13 42 25.1	
	comp=Z,68nm,0.7s						
BOK				*e*x	x	13 45 41.3	
SHL	**Shillong**	**17.92**	**353**	P	**Pn**	**13 42 13.5**	**-3.0**
	SNR=77						
HYB	**Hyderabad**	**18.08**	**304**	*i*P	**Pn**	**13 42 18.0**	**-0.4**
	comp=Z,150nm,1.0s						
HYB				*e*S	**S**	**13 45 44.0**	**-0.6**
HYB	**Hyderabad**	**18.08**	**304**	*e*P	**P**	**13 42 19.3**	**+0.6**
HYB				IAmb	IAmb	13 42 29.5	
	comp=Z,120nm,1.1s						
HYB				*e*S	**S**	**13 45 42.5**	**-2.1**
HYBB	**Hyderabad (bro**	**18.08**	**304**	*e*P	**Pn**	**13 42 18.4**	**-0.1**
HYBB				*e*S	**Sn**	**13 45 40.6**	**+1.1**
URV	**Uravakonda**	**18.12**	**295**	*e*P	**P**	**13 42 19.7**	**+0.6**
URV				*e*		13 45 30.5	
URV				*e*S	**S**	**13 45 43.4**	**-2.0**
RPR	**Rampur**	**18.27**	**309**	*e*P	**Pn**	**13 42 21.2**	**+0.5**
RPR				*e*		13 45 40.3	
RPR				*e*S	**Sn**	**13 45 45.0**	**+1.0**
SBUM	**Sibu**	**18.66**	**105**	P	**Pn**	**13 42 28.6**	**+3.1**
SBUM	**Sibu**	**18.66**	**105**	P	**Pn**	**13 42 28.0**	**+2.5**
DBJI	**Dramaga**	**18.87**	**138**	P	**P**	**13 42 25.2**	**-2.1**
	comp=Z,18μmcomp=Z,136nm,1.1s						
QIZ	**Qiongzhong**	**18.90**	**52**	P	**P**	**13 42 25.4**	**-2.2**
QIZ				S	**Sn**	**13 45 56.3**	**-2.9**
QIZ				pmax	pmax		
	comp=Z,2μm,7.3s						
QIZ				LR	LR		
	comp=Z,30μm,12.6s						
QIZ				LR	LR		
	comp=Z,13μm,13.7s						
QIZ				LR	LR		
	comp=Z,7μm,10.1s						
SRSP	**Sriramsagar**	**19.05**	**307**	*e*P	**Pn**	**13 42 29.8**	**-0.4**
SRSP				*e*Sn	**S**	**13 46 04.1**	**+0.2**
SKJI	**Sukabumi**	**19.09**	**140**	P	**Pn**	**13 42 32.9**	**+2.3**
KMI	**Kunming**	**19.15**	**24**	P	**Pn**	**13 42 34.1**	**+2.6**
KMI				pP	pP	13 42 35.1	-2.7
KMI				sP	pwP	13 42 37.3	-3.5
KMI				PP	**PnPn**	**13 42 46.4**	**+1.7**
KMI				S	**S**	**13 46 07.8**	**+1.7**
KMI				sS	sS	13 46 17.3	-0.8
KMI				pmax	pmax		
	comp=Z,120nm,1.0s						
KMI				pmax	pmax		
	comp=Z,2μm,4.2s						
KMI				LR	LR		
	comp=Z,6μm,12.6s						
KMI				LR	LR		
	comp=Z,8μm,14.1s						
KMI				LR	LR		
	comp=Z,9μm,14.0s						
LEM	**Lembang**	**19.66**	**137**	P	**Pn**	**13 42 36.9**	**-0.7**
	comp=Z,1.8nm,0.3s,baz=70,slow=2.8,SNR=11						
LEM				LR	LR	13 51 59.4	
	comp=Z,10μm,19.7s,baz=290,slow=42						
NGP	**Nagpur**	**19.85**	**314**	*e*P	**Pn**	**13 42 41.2**	**+1.5**
NGP				*e*x	x	13 46 30.7	
KLRI	**Killari**	**20.02**	**303**	*e*P	**P**	**13 42 40.5**	**+0.5**
KLRI				*e*		13 46 11.8	
KLRI				*e*S	Sn	13 46 26.7	+0.3
ODAN	**Odare**	**20.14**	**342**	*e*P	**P**	**13 42 40.8**	**-0.6**
GTK	**Tadong**	**20.24**	**345**	*e*P	**P**	**13 42 41.8**	**-0.5**
CISI	**Cisompet, Garu**	**20.32**	**138**	P	Pn	13 42 44.8	-0.5
	comp=Z,1μmcomp=Z,93nm,1.4s						
RAMN	**Ramite**	**20.48**	**340**	*e*P	**P**	**13 42 45.4**	**+0.4**
	comp=Z,674nm,0.8s						
TAPN	**Taplejung**	**20.51**	**343**	*e*P	**P**	**13 42 44.8**	**-0.6**
	comp=Z,682nm,0.9s						
JBP	**Jabalpur**	**20.59**	**320**	*e*P	**P**	**13 42 46.8**	**+0.8**
JBP				AMB	AMB	13 42 56.7	
	comp=Z,184nm,3.3s						
JBP				*e*x	x	13 46 30.2	
KPJI	**Karang Pucung**	**20.92**	**135**	P	**P**	**13 42 49.5**	**-0.1**
	comp=Z,76nm,0.9s						
MNCY	**Minicoy**	**21.00**	**273**	*e*P	**P**	**13 42 53.4**	**+3.0**
MNCY				IAmb	IAmb	13 43 05.1	
	comp=Z,5μm,2.9s						
JIRN	**Jiri**	**21.27**	**340**	*e*P	**P**	**13 42 52.9**	**-0.8**
GOA	**Goa**	**21.42**	**293**	*e*P	**P**	**13 42 57.1**	**+2.1**
GOA				IAmb	IAmb	13 43 00.5	
	comp=Z,1μm,2.9s						
GOA				*e*x	x	13 46 48.4	
PKI	**Pulchoki**	**21.47**	**338**	*e*P	**P**	**13 42 55.0**	**-0.8**
	comp=Z,574nm,1.0s						
PKIN	**Phulchoki**	**21.48**	**338**	*e*P	**P**	**13 42 54.9**	**-0.9**
	comp=Z,419nm,1.1s						
GUN	**Gumba**	**21.61**	**340**	*e*P	**P**	**13 42 56.5**	**-0.8**
DMN	**Daman**	**21.61**	**338**	*e*P	**P**	**13 42 56.6**	**-0.7**
	comp=Z,581nm,1.1s						
KKN	**Kakani**	**21.71**	**338**	*e*P	**P**	**13 42 57.3**	**-1.0**
	comp=Z,314nm,0.9s						
UWJI	**Ujung Watu**	**21.79**	**130**	P	**P**	**13 43 01.2**	**+2.3**
	comp=Z,4μmcomp=Z,330nm,1.3s						
SMRI	**Semarang**	**21.81**	**132**	P	**P**	**13 43 01.5**	**+2.2**
	comp=Z,5μmcomp=Z,297nm,1.0s						
KKM	**Kota Kinabalu**	**21.89**	**93**	P	**P**	**13 43 02.1**	**+1.9**
KKM				IAmb	IAmb	13 43 22.3	
	comp=Z,160nm,1.3s						
LSA	**Lhasa**	**22.09**	**353**	P	**P**	**13 43 02.3**	**-0.3**
LSA	**Lhasa**	**22.09**	**353**	P	**P**	**13 43 01.5**	**-1.1**
LSA				pmax	pmax		
	comp=Z,166nm,0.7s						
LSA	**Lhasa**	**22.09**	**353**	P	**P**	**13 43 01.5**	**-1.1**
LSA				IAmb	IAmb	13 43 05.8	
	comp=Z,166nm,0.7s						
GYA	**Guiyang**	**22.10**	**31**	⇓*i*P	**P**	**13 43 04.1**	**+1.8**
GYA				PP	**PnPn**	**13 43 30.0**	**+5.0**
GYA				S	**S**	**13 47 06.5**	**+1.9**
GYA				SS	**SnSn**	**13 47 44.1**	**+12**
GYA				pmax	pmax		
	comp=Z,50nm,1.0s						
GYA				pmax	pmax		
	comp=Z,1μm,6.2s						
GYA				LR	LR		
	comp=Z,12μm,13.2s						
GYA				LR	LR		
	comp=Z,14μm,19.0s						
GYA				LR	LR		
	comp=Z,10μm,13.5s						
GKN	**Gorkha**	**22.15**	**337**	*e*P	**P**	**13 43 02.1**	**-0.8**
	comp=Z,478nm,1.0s						
BHPL	**Bhopal**	**22.35**	**316**	*e*P	**P**	**13 43 05.3**	**+0.4**
BHPL				IAmb	IAmb	13 43 08.7	
	comp=Z,75nm,0.5s						
BHPL				IAmb	IAmb	13 43 19.6	
	comp=Z,792nm,2.0s						
BHPL				*e*S	**S**	**13 47 14.0**	**+4.9**
UGM	**Wanagama**	**22.45**	**133**	P	**P**	**13 43 05.6**	**-0.6**
	comp=Z,4μmcomp=Z,188nm,1.2s						
UGM	**Wanagama**	**22.45**	**133**	P	**P**	**13 43 06.1**	**-0.1**
UGM				IAmb	IAmb	13 43 19.0	
	comp=Z,227nm,1.1s						
UGM				IAMs_20	IAMs_20	13 52 01.3	
	comp=Z,8μm,19.0s						
POO	**Poona**	**22.55**	**301**	⇑*i*P	**P**	**13 43 07.0**	**-0.2**
	comp=Z,100nm,1.2s						
POO				*e*x	x	13 43 40.7	
POO				*e*x	x	13 43 51.3	
POO				*i* x	x	13 47 24.0	
POO				*e*x	x	13 48 18.6	
POO				*e*x	x	13 48 34.6	
WOJI	**Wonogiri, Jawa**	**22.69**	**132**	P	**P**	**13 43 12.3**	**+3.6**
	comp=Z,113nm,1.3s						
DANN	**Dangsing**	**22.80**	**336**	*e*P	**P**	**13 43 09.3**	**-0.8**
	comp=Z,727nm,1.1s						
PCJI	**Pacitan**	**23.12**	**133**	P	**P**	**13 43 16.3**	**+3.2**
	comp=Z,2μmcomp=Z,100nm,1.3s						
BATP	**Bataraza**	**23.36**	**86**	*e*P	**P**	**13 43 16.0**	**+0.6**
PWJI	**Pagerwojo**	**23.47**	**131**	P	**P**	**13 43 19.4**	**+2.9**
	comp=Z,2μmcomp=Z,85nm,0.9s						
GZH	**Guangzhou**	**23.91**	**48**	P	**P**	**13 43 26.5**	**+5.8**
GZH				S	Sn	13 47 49.3	-10
GZH				LR	LR		
	comp=Z,26μm,14.9s						
GZH				LR	LR		
	comp=Z,14μm,14.6s						
BKB	**Balikpapan**	**24.30**	**111**	P	**P**	**13 43 27.6**	**+3.2**
	comp=Z,5μmcomp=Z,6μmcomp=Z,288nm,0.9s						
KBKI	**Kotabaru**	**24.46**	**116**	P	**P**	**13 43 25.9**	**0.0**
	comp=Z,31nm,0.8s						
KMMI	**Kalianget**	**24.54**	**126**	P	**P**	**13 43 28.2**	**+1.7**
	comp=Z,4μmcomp=Z,138nm,1.1s						
CD2	**Chengdu**	**24.76**	**20**	⇓*i*P	**P**	**13 43 27.5**	**-1.0**
CD2				PP	sP	13 44 05.3	+25
CD2				S	**S**	**13 47 45.1**	**-4.0**
CD2				sS	pS	13 47 58.1	+0.3
CD2				pmax	pmax		
	comp=Z,90nm,0.5s						
CD2				pmax	pmax		
	comp=Z,2μm,6.8s						
CD2				LR	LR		
	comp=Z,7μm,11.4s						
CD2				LR	LR		
	comp=Z,16μm,10.8s						
CD2				LR	LR		
	comp=Z,9μm,14.6s						
PTH	**Pithoragarh**	**25.43**	**331**	*e*x	**P**	**13 43 29.9**	**-4.8**
JAGI	**Jajag, Banyuwa**	**25.54**	**129**	P	**P**	**13 43 37.3**	**+1.7**
	comp=Z,2μmcomp=Z,75nm,0.9s						
BUSP	**Coron**	**25.94**	**78**	*e*P	**P**	**13 43 40.6**	**+1.3**
SRBI	**Singaraja**	**26.14**	**126**	P	**P**	**13 43 43.5**	**+2.4**
	comp=Z,4μmcomp=Z,251nm,1.1s						
NDI	**New Delhi**	**26.33**	**325**	*e*P	**P**	**13 43 42.0**	**-0.7**
NDI				*e*x	x	13 48 47.0	
H08S3	**Diego Garcia H**	**26.48**	**235**	T	T	14 10 36.9	
	baz=54,slow=76,SNR=7989						
H08S2	**Diego Garcia H**	**26.49**	**235**	T	T	14 10 31.9	
	baz=54,slow=76,SNR=4841						
H08S1	**Diego Carcia H**	**26.50**	**235**	T	T	14 10 38.2	
	baz=54,slow=76,SNR=5883						
MPSI	**Mapaga**	**26.61**	**105**	P	**P**	**13 43 46.8**	**+1.4**
	comp=Z,3μmcomp=Z,2μmcomp=Z,226nm,1.0s						
ENH	**Enshi**	**26.64**	**31**	P	**P**	**13 43 45.3**	**-0.1**
ENH				IAmb	IAmb	13 43 56.8	
	comp=Z,63nm,1.0s						
ENH				IAMs_20	IAMs_20	13 54 35.4	
	comp=Z,10μm,18.0s						
TGY	**Tagaytay City**	**26.98**	**74**	LR	LR	13 54 11.2	
	comp=Z,3μm,18.8s,baz=263,slow=36						
TTSI	**Tana Toraja**	**27.67**	**112**	P	**P**	**13 43 58.1**	**+3.2**
	comp=Z,1μmcomp=Z,45nm,1.0s						
SPSI	**Sidrap Palu**	**27.99**	**114**	P	**P**	**13 44 00.2**	**+2.4**
	comp=Z,2μmcomp=Z,27nm,1.5s						
APYP	**Conner**	**28.18**	**66**	*e*P	**P**	**13 44 01.3**	**+1.9**
BHUJ	**Bhuj**	**28.21**	**306**	*e*P	**P**	**13 44 01.5**	**+1.9**

BHUJ				*e*S	**S**	**13 48 47.2**	**+3.5**
RCP	**Roxas**	**28.37**	**80**	⇓*e*P	**P**	**13 44 04.7**	**+3.5**
KAPI	**Kappang**	**28.42**	**116**	P	**P**	**13 44 03.4**	**+1.8**
	comp=Z,2.5nm,0.3s,baz=159,slow=18,SNR=4.7						
KAPI				LR	LR	13 57 31.0	
	comp=Z,3µm,18.5s,baz=300,slow=41						
BNSI	**Bone**	**28.48**	**114**	P	**P**	**13 44 02.6**	**+0.5**
	comp=Z,26nm,1.0s						
KNMB	**Chin-men Tao**	**28.50**	**51**	IAMs_20	IAMs_20	13 55 45.7	
	comp=Z,5µm,18.0s						
MRSI	**Marisa**	**28.54**	**103**	P	**P**	**13 44 03.4**	**+0.8**
	comp=Z,2µmcomp=Z,2µmcomp=Z,128nm,0.9s						
APSI	**Ampana**	**28.65**	**106**	P	**P**	**13 44 04.6**	**+1.0**
	comp=Z,2µmcomp=Z,1µmcomp=Z,95nm,1.1s						
BHK	**Bhakra**	**28.87**	**327**	*e*x	P	13 44 15.0	+10
PAGZ	**Pagadian**	**28.89**	**88**	*e*P	P	13 44 11.8	+6.0
BKSI	**Bulukumba**	**28.89**	**116**	P	**P**	**13 44 05.4**	**-0.3**
	comp=Z,1µmcomp=Z,90nm,0.9s						
QZH	**Quanzhou**	**28.91**	**51**	P	P	13 44 10.6	+4.8
QZH				S	**S**	**13 49 00.1**	**+5.4**
QZH				LR	LR		
	comp=Z,18µm,14.2s						
QZH				LR	LR		
	comp=Z,6µm,14.7s						
QZH				LR	LR		
	comp=Z,10µm,14.2s						
XAN	**Xi'an**	**29.52**	**25**	P	**P**	**13 44 10.9**	**-0.3**
XAN				pP	pwP	13 44 20.4	-1.6
XAN				sP	sP	13 44 25.1	+2.5
XAN				S	**S**	**13 49 01.1**	**-3.1**
XAN				sS	sS	13 49 18.3	+1.0
XAN				pmax	pmax		
	comp=Z,27nm,0.8s						
XAN				pmax	pmax		
	comp=Z,600nm,6.5s						
XAN				LR	LR		
	comp=Z,12µm,14.3s						
XAN				LR	LR		
	comp=Z,12µm,14.5s						
XAN				LR	LR		
	comp=Z,10µm,15.7s						
XAN	**Xi'an**	**29.52**	**25**	P	**P**	**13 44 11.2**	**0.0**
XAN				pmax	pmax		
	comp=Z,31nm,1.0s						
XAN				MLR	MLR		
	comp=Z,7µm,22.0s						
XAN	**Xi'an**	**29.52**	**25**	P	**P**	**13 44 11.2**	**0.0**
XAN	**Xi'an**	**29.52**	**25**	IAMs_20	IAMs_20	13 56 45.5	
	comp=Z,7µm,22.0s						
WHN	**Wuhan**	**29.53**	**37**	⇓P	**P**	**13 44 12.8**	**+1.6**
WHN				pmax	pmax		
	comp=Z,100nm,0.8s						
WHN				LR	LR		
	comp=Z,10µm,8.8s						
WHN				LR	LR		
	comp=Z,14µm,11.0s						
WHN				LR	LR		
	comp=Z,19µm,14.5s						
DHRM	**DHARAMSHALA**	**29.58**	**328**	*e*P	**P**	**13 44 10.7**	**-1.2**
DHRM				IAmb	IAmb	13 44 23.2	
	comp=Z,58nm,0.9s						
LZH	**Lanzhou**	**29.60**	**16**	⇓P	**P**	**13 44 12.3**	**+0.3**
LZH				sP	pP	13 44 20.0	-0.1
LZH				PP	**PnPn**	**13 45 09.4**	**+2.0**
LZH				S	**S**	**13 49 06.0**	**+0.4**
LZH				SS	ScP	13 50 41.0	-15
LZH				pmax	pmax		
	comp=Z,48nm,1.3s						
LZH				pmax	pmax		
	comp=Z,170nm,4.8s						
LZH				LR	LR		
	comp=Z,5µm,13.0s						
LZH				LR	LR		
	comp=Z,8µm,13.1s						
LZH				LR	LR		
	comp=Z,9µm,15.2s						
BBP	**Basco**	**29.68**	**62**	*e*P	**P**	**13 44 09.8**	**-2.9**
LUWI	**Luwuk**	**29.76**	**106**	P	**P**	**13 44 15.8**	**+2.3**
	comp=Z,4µmcomp=Z,308nm,1.2s						
WBSI	**Waikabubak, Su**	**30.41**	**124**	P	**P**	**13 44 20.8**	**+1.5**
	comp=Z,44nm,0.9s						
KMSI	**Cibinong**	**30.49**	**102**	P	**P**	**13 44 23.0**	**+3.1**
	comp=Z,2µmcomp=Z,259nm,0.9s						
KCP	**Kidapawan**	**30.61**	**89**	⇓*i*P	**P**	**13 44 24.2**	**+3.0**
NACB	**Ninganchiao**	**30.90**	**55**	IAMs_20	IAMs_20	13 56 19.4	
	comp=Z,8µm,20.0s						
YHNB	**Yeheng**	**30.96**	**54**	IAMs_20	IAMs_20	13 56 20.8	
	comp=Z,9µm,20.0s						
DAV	**Davao City (W)**	**31.10**	**89**	LR	LR	13 59 19.5	
	comp=Z,2µm,19.2s,baz=306,slow=41						
BBSI	**Bau Bau**	**31.16**	**114**	P	**P**	**13 44 28.2**	**+2.3**
	comp=Z,14nm,1.1s						
DDMP	**Don Marcelino,**	**31.29**	**91**	*e*P	**P**	**13 44 30.2**	**+3.1**
EDFI	**Ende, Flores**	**31.87**	**120**	P	**P**	**13 44 29.2**	**-3.0**
	comp=Z,18nm,1.4s						
GTA	**Gaotai**	**31.98**	**8**	⇓P	**P**	**13 44 33.3**	**+0.4**
GTA				pP	pP	13 44 37.3	-3.7
GTA				sP	pwP	13 44 40.5	-3.2
GTA				PcP	**PcP**	**13 47 23.3**	**+0.7**
GTA				S	**S**	**13 49 41.4**	**-1.3**
GTA				ScP	**ScP**	**13 51 04.3**	**+0.1**
GTA				PcS	**PcS**	**13 51 06.8**	**-0.6**
GTA				pmax	pmax		
	comp=Z,41nm,0.9s						
GTA				pmax	pmax		
	comp=Z,350nm,5.9s						
GTA				LR	LR		
	comp=Z,2µm,18.7s						
GTA				LR	LR		
	comp=Z,2µm,18.7s						
GTA				LR	LR		
	comp=Z,3µm,19.7s						
YOJ	**Yonaguni jima**	**32.19**	**55**	IAMs_20	IAMs_20	13 57 23.5	
	comp=Z,6µm,18.0s						
MMRI	**Maumere**	**32.28**	**120**	IAMs_20	IAMs_20	13 58 27.0	
	comp=Z,5µm,18.0s						
NIL	**Nilore**	**32.30**	**326**	P	**P**	**13 44 35.3**	**-0.4**
NIL				pmax	pmax		
	comp=Z,104nm,0.9s						
NIL				MLR	MLR		
	comp=Z,4µm,18.0s						
NIL	**Nilore**	**32.30**	**326**	P	**P**	**13 44 35.2**	**-0.4**
NIL	**Nilore**	**32.30**	**326**	IAMs_20	IAMs_20	13 59 02.5	
	comp=Z,4µm,18.0s						
SANI	**Sanana**	**33.13**	**106**	P	**P**	**13 44 44.2**	**+1.0**
	comp=Z,34nm,0.8s						
NJ2	**Nanjing**	**33.36**	**40**	⇓*i*P	**P**	**13 44 46.4**	**+1.5**
NJ2				pP	**pP**	**13 44 49.1**	**-3.9**
NJ2				sP	**pwP**	**13 44 53.9**	**-1.9**
NJ2				PP	**PP**	**13 45 56.3**	**-4.4**
NJ2				S	**S**	**13 50 08.1**	**+4.1**
NJ2				pmax	pmax		
	comp=Z,56nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,300nm,3.5s						
NJ2				LR	LR		
	comp=Z,9µm,13.7s						
NJ2				LR	LR		
	comp=Z,8µm,14.2s						
NJ2				LR	LR		
	comp=Z,6µm,15.2s						
TNTI	**Ternate**	**33.74**	**100**	P	**P**	**13 44 50.9**	**+2.4**
	comp=Z,26nm,1.0s						
SSE	**Sheshan**	**34.30**	**44**	P	**P**	**13 44 51.8**	**-1.3**
SSE				S	**S**	**13 50 23.4**	**+4.8**
SSE				pmax	pmax		
	comp=Z,18nm,0.6s						
SSE				pmax	pmax		
	comp=Z,130nm,3.8s						
SSE				LR	LR		
	comp=Z,5µm,14.9s						
SSE				LR	LR		
	comp=Z,3µm,16.1s						
SSE	**Sheshan**	**34.30**	**44**	IAMs_20	IAMs_20	14 00 03.3	
	comp=Z,5µm,18.0s						
SOEI	**Soe**	**34.58**	**120**	P	**P**	**13 44 54.5**	**-1.4**
	comp=Z,101nm,0.9s						
SOEI	**Soe**	**34.58**	**120**	P	**P**	**13 44 54.3**	**-1.6**
SOEI				IAmb	IAmb	13 45 19.0	
	comp=Z,79nm,0.9s						
SOEI				IAMs_20	IAMs_20	14 01 09.7	
	comp=Z,8µm,21.0s						
TIA	**Tai'an**	**35.26**	**33**	P	**P**	**13 45 02.4**	**+1.0**
TIA				S	**S**	**13 50 34.6**	**+1.3**
TIA				pmax	pmax		
	comp=Z,24nm,1.1s						
TIA				LR	LR		
	comp=Z,4µm,16.1s						
TIA				LR	LR		
	comp=Z,5µm,16.1s						
TIA				LR	LR		
	comp=Z,4µm,14.7s						
KBL	**Kabul**	**35.37**	**323**	P	**P**	**13 45 02.1**	**-0.5**
KBL	**Kabul**	**35.37**	**323**	P	**P**	**13 45 02.1**	**-0.5**
KBL				IAmb	IAmb	13 45 15.7	
	comp=Z,65nm,1.2s						
KBL					**PcP**	**13 47 33.6**	**+1.2**
KSH	**Kashi**	**35.67**	**335**	P	**P**	**13 45 02.8**	**-2.3**
KSH				sP	pP	13 45 10.6	-2.6
KSH				PP	**PnPn**	**13 46 23.8**	**-1.3**
KSH				S	**S**	**13 50 35.3**	**-4.6**
KSH				PcS	**PcS**	**13 51 15.6**	**-4.8**
KSH				ScS	**ScS**	**13 55 17.5**	**-4.7**
KSH				pmax	pmax		
	comp=Z,37nm,0.7s						
KSH				pmax	pmax		
	comp=Z,350nm,4.7s						
KSH				LR	LR		
	comp=Z,4µm,16.0s						
KSH				LR	LR		
	comp=Z,4µm,15.9s						
KSH				LR	LR		
	comp=Z,3µm,17.7s						
BTO	**Baotou**	**35.68**	**21**	*e*P	**P**	**13 45 04.6**	**-0.4**
BTO				S	S	13 50 49.3	+9.4
AAI	**Ambon**	**35.73**	**107**	P	**P**	**13 45 06.2**	**+0.5**
	comp=Z,1µmcomp=Z,91nm,0.9s						
WMQ	**Urumqi**	**36.44**	**352**	P	**P**	**13 45 11.6**	**+0.1**
WMQ				pP	pP	13 45 16.0	-3.6
WMQ				sP	pwP	13 45 18.9	-3.4
WMQ				PcP	**PcP**	**13 47 36.0**	**+0.8**
WMQ				S	**S**	**13 50 53.9**	**+2.5**
WMQ				ScS	**ScS**	**13 55 25.1**	**-1.0**
WMQ				pmax	pmax		
	comp=Z,51nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,520nm,4.9s						
WMQ				LR	LR		
	comp=Z,2µm,21.1s						
WMQ				LR	LR		
	comp=Z,2µm,21.1s						
WMQ				LR	LR		
	comp=Z,2µm,25.3s						
WMQ	**Urumqi**	**36.44**	**352**	P	**P**	**13 45 12.0**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,50nm,0.8s						
WMQ				MLR	MLR		
	comp=Z,1µm,22.0s						
WMQ	**Urumqi**	**36.44**	**352**	P	**P**	**13 45 12.0**	**+0.5**
WMQ				IAmb	IAmb	13 45 14.2	
	comp=Z,50nm,0.8s						
HHC	**Hu-ho-hao-te**	**36.46**	**22**	*e*P	**P**	**13 45 13.0**	**+1.3**
HHC				pP	sP	13 45 22.4	-0.8
HHC				PP	**PP**	**13 46 42.5**	**+7.5**
HHC				S	**S**	**13 50 54.3**	**+2.5**
HHC				SS	**SnSn**	**13 53 19.3**	**-2.2**
HHC				pmax	pmax		
	comp=Z,1µm,4.8s						
HHC				LR	LR		
	comp=Z,3µm,13.7s						
HHC				LR	LR		
	comp=Z,3µm,13.0s						
HHC				LR	LR		
	comp=Z,3µm,12.9s						
WBK	**Wadi Bani Khal**	**36.99**	**298**	P	**P**	**13 45 19.1**	**+2.7**
NRN	**Naryn**	**37.30**	**337**	P	**P**	**13 45 18.1**	**-1.0**
NRN				pmax	pmax		
	comp=Z,23nm,1.2s						
NRN				MLR	MLR		
	comp=Z,5µm,21.0s						
NRN	**Naryn**	**37.30**	**337**	P	**P**	**13 45 18.1**	**-1.0**
NRN				IAMs_20	IAMs_20	14 02 14.3	
	comp=Z,5µm,21.0s						
MHTO	**MHTO**	**37.42**	**295**	P	**P**	**13 45 22.1**	**+2.0**
KDJ	**Kajisay**	**37.47**	**339**	P	**P**	**13 45 19.0**	**-1.3**
KDJ				pmax	pmax		
	comp=Z,34nm,0.9s						
KDJ				MLR	MLR		
	comp=Z,2µm,19.0s						
KDJ	**Kajisay**	**37.47**	**339**	P	**P**	**13 45 19.0**	**-1.3**
WSAR	**Wadi Sarin**	**37.49**	**298**	P	**P**	**13 45 21.9**	**+1.3**
	comp=Z,9.3nm,0.7s,baz=137,slow=8.0,SNR=6.5						
WSAR	**Wadi Sarin**	**37.49**	**298**	P	**P**	**13 45 23.3**	**+2.7**
DQM	**DQM**	**37.55**	**293**	P	**P**	**13 45 24.2**	**+3.1**
BNDI	**Bandanaira**	**37.61**	**108**	P	**P**	**13 45 20.6**	**-1.1**
	comp=Z,3µmcomp=Z,109nm,0.8s						
SHLS	**Shalkode**	**37.63**	**342**	⇓*i*P	**P**	**13 45 20.5**	**-1.3**
	comp=Z,89nm,1.9s						
SHLS	**Shalkode**	**37.63**	**342**	*d i*P	**P**	**13 45 20.4**	**-1.3**
SHLS				pmax	pmax		
	comp=Z,89nm,1.9s						
JMDO	**Jabal Madar**	**37.69**	**297**	P	**P**	**13 45 24.5**	**+2.2**
	SNR=6.1						
BJT	**Baijiatuau**	**37.71**	**28**	IAMs_20	IAMs_20	14 01 52.3	
	comp=Z,3µm,20.0s						
BJI	**Beijing**	**37.73**	**28**	P	**P**	**13 45 23.8**	**+1.5**
BJI				PP	**PP**	**13 46 50.8**	**+2.0**
BJI				S	**S**	**13 51 14.0**	**+3.1**
BJI				pmax	pmax		
	comp=Z,23nm,1.1s						
BJI				LR	LR		
	comp=Z,4µm,15.3s						
BJI				LR	LR		
	comp=Z,4µm,14.3s						
BJI				LR	LR		
	comp=Z,2µm,21.6s						
UZB	**Uzynbulak**	**37.76**	**342**	⇓*e*P	**P**	**13 45 22.3**	**-0.5**
	comp=Z,88nm,2.5s						
UZB	**Uzynbulak**	**37.76**	**342**	*de*P	**P**	**13 45 22.2**	**-0.5**
UZB				pmax	pmax		
	comp=Z,88nm,2.5s						
SATY	**Saty**	**37.88**	**341**	*e*P	**P**	**13 45 22.0**	**-1.7**
SATY	**Saty**	**37.88**	**341**	*e*P	**P**	**13 45 22.0**	**-1.7**
GAR	**Garm**	**37.88**	**329**	IAMs_20	IAMs_20	14 01 44.2	
	comp=Z,6µm,20.0s						
SWI	**Sorong**	**37.90**	**101**	P	**P**	**13 45 26.9**	**+2.7**
	comp=Z,2µmcomp=Z,160nm,1.1s						
SIJI	**Sorong**	**37.90**	**101**	P	**P**	**13 45 25.1**	**+0.9**
	comp=Z,35nm,0.8s,baz=297,slow=6.1,SNR=13						
SMDO	**Samad**	**37.94**	**298**	P	**P**	**13 45 26.0**	**+1.5**
BIDO	**Bidbid**	**38.02**	**299**	P	**P**	**13 45 27.8**	**+2.7**
	SNR=10						
KZA	**Kyzart**	**38.14**	**337**	P	**P**	**13 45 26.1**	**-0.2**
	SNR=9.1						
KPKS	**Kokpek**	**38.15**	**342**	⇓*e*P	**P**	**13 45 25.4**	**-0.6**
	comp=Z,98nm,2.3s						
KPKS	**Kokpek**	**38.15**	**342**	*de*P	**P**	**13 45 25.4**	**-0.6**
KPKS				pmax	pmax		
	comp=Z,98nm,2.3s						
CHGR	**Chuyangaron**	**38.22**	**328**	IAMs_20	IAMs_20	14 03 04.5	
	comp=Z,4µm,19.0s						
MDOK	**Medeo**	**38.42**	**340**	*e*P	**P**	**13 45 27.9**	**-0.5**
MDOK	**Medeo**	**38.42**	**340**	*e*P	**P**	**13 45 27.8**	**-0.6**
BTK	**Batken**	**38.44**	**331**	P	**P**	**13 45 29.1**	**+0.6**
BTK				pmax	pmax		
	comp=Z,150nm,1.2s						
BTK				MLR	MLR		
	comp=Z,4µm,21.0s						
BTK	**Batken**	**38.44**	**331**	P	**P**	**13 45 29.1**	**+0.6**
BTK				IAmb	IAmb	13 45 43.2	
	comp=Z,150nm,1.1s						
BTK				IAMs_20	IAMs_20	14 02 10.9	
	comp=Z,4µm,21.0s						
AAA	**Alma-Ata**	**38.51**	**340**	*e*P	**P**	**13 45 27.9**	**-1.2**
AAA	**Alma-Ata**	**38.51**	**340**	*e*P	**P**	**13 45 27.8**	**-1.2**
UCH	**Uchtor**	**38.56**	**336**	P	**P**	**13 45 29.6**	**-0.3**
	SNR=24						
BSY	**Bisya**	**38.59**	**297**	P	**P**	**13 45 31.9**	**+1.9**
	SNR=15						
HOQ	**Hoqain**	**38.75**	**298**	P	**P**	**13 45 33.4**	**+2.2**
KBK	**Karagaybulak**	**38.75**	**337**	P	**P**	**13 45 31.5**	**+0.4**
	SNR=33						
AML	**Almayashu**	**38.81**	**335**	P	**P**	**13 45 31.9**	**0.0**
	SNR=72						
AAK	**Ala-Archa**	**38.91**	**337**	P	**P**	**13 45 32.6**	**+0.1**
	comp=Z,20nm,1.0s,baz=150,slow=6.7,SNR=54						
AAK				PcP	**PcP**	**13 47 44.0**	**+1.1**
	comp=Z,15nm,0.7s,baz=118,slow=4.5,SNR=8.9						
AAK	**Ala-Archa**	**38.91**	**337**	P	**P**	**13 45 32.6**	**+0.1**
	SNR=24						
AAK	**Ala-Archa**	**38.91**	**337**	*i* P	**P**	**13 45 32.4**	**-0.1**
	SNR=38						
AAK	**Ala-Archa**	**38.91**	**337**	*de*P	**P**	**13 45 32.4**	**-0.1**
AAK				pmax	pmax		
	comp=Z,38nm,1.0s						
AAK	**Ala-Archa**	**38.91**	**337**	P	**P**	**13 45 32.7**	**+0.2**
AAK					**PcP**	**13 47 44.2**	**+1.2**
AAK	**Ala-Archa**	**38.91**	**337**	IAMs_20	IAMs_20	14 03 03.1	
	comp=Z,4µm,20.0s						
FRU1	**Bishkek**	**39.00**	**337**	IAMs_20	IAMs_20	14 02 59.5	
	comp=Z,4µm,21.0s						
CHMS	**Chumysh**	**39.12**	**337**	P	**P**	**13 45 33.6**	**-0.5**
	SNR=14						
EKS2	**Erkin-Say**	**39.22**	**336**	P	**P**	**13 45 35.3**	**+0.3**
	SNR=18						
KUU	**Kurty**	**39.31**	**339**	*e*P	**P**	**13 45 32.5**	**-3.2**
KUU	**Kurty**	**39.31**	**339**	*e*P	**P**	**13 45 32.4**	**-3.2**
ARQ	**Araqi**	**39.37**	**298**	P	**P**	**13 45 38.5**	**+2.1**
	SNR=8.4						
FAKI	**Fak Fak**	**39.37**	**104**	P	**P**	**13 45 37.4**	**+0.8**
	comp=Z,57nm,1.2s						
USP	**Ospenovka**	**39.44**	**337**	P	**P**	**13 45 36.4**	**-0.4**
	SNR=30						
SGDS	**Sogindy**	**39.55**	**337**	*e*P	**P**	**13 45 35.0**	**-2.7**
SOHO	**SOHO**	**39.59**	**299**	P	**P**	**13 45 40.5**	**+2.2**
TDK	**Taldyqorghan**	**39.63**	**342**	*e*P	**P**	**13 45 36.1**	**-2.2**
TDK				*e*LR	LR	14 02 09.9	
	comp=Z,1µm,20.2s						
TDK	**Taldyqorghan**	**39.63**	**342**	*e*P	**P**	**13 45 36.0**	**-2.2**
TDK				MLR	MLR		
	comp=Z,1µm,20.0s						
DL2	**Dalian**	**39.67**	**34**	P	**P**	**13 45 40.8**	**+2.1**
DL2				sP	**pwP**	**13 45 48.4**	**-1.3**
DL2				S	**S**	**13 51 44.5**	**+4.2**
DL2				SS	**SS**	**13 54 33.3**	**-3.1**
DL2				pmax	pmax		
	comp=Z,38nm,0.6s						
DL2				pmax	pmax		
	comp=Z,590nm,6.9s						
DL2				LR	LR		
	comp=Z,3µm,13.9s						
DL2				LR	LR		
	comp=Z,4µm,12.5s						
DL2				LR	LR		
	comp=Z,3µm,11.7s						
SOCY	**Socotra**	**39.86**	**280**	P	**P**	**13 45 43.4**	**+2.7**
	SNR=11						
ASHO	**Ashiyiah**	**40.18**	**299**	P	**P**	**13 45 46.5**	**+3.3**
RBK	**Rabkut**	**40.18**	**288**	P	P	13 45 48.4	+5.1
FITZ	**Fitzroy Crossi**	**40.23**	**130**	P	**P**	**13 45 42.7**	**-0.9**
	comp=Z,6.0nm,0.8s,baz=191,slow=1.7,SNR=11						
MK31	**Makanchi Array**	**40.28**	**347**	P	**P**	**13 45 43.3**	**-0.4**
MK31				pmax	pmax		
	comp=Z,54nm,1.0s						
MK31	**Makanchi Array**	**40.28**	**347**	P	**P**	**13 45 43.3**	**-0.4**
MKAR	**Makanchi Array**	**40.28**	**347**	P	**P**	**13 45 43.0**	**-0.7**
	comp=Z,60nm,0.8s,baz=165,slow=8.2,SNR=502						
MKAR				LR	LR	14 05 45.9	
	comp=Z,1µm,18.3s,baz=167,slow=41						
MAKZ	**Makanchi**	**40.37**	**347**	P	**P**	**13 45 43.9**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,40nm,0.7s						
MAKZ				MLR	MLR		
	comp=Z,1µm,19.0s						
MAKZ	**Makanchi**	**40.37**	**347**	P	**P**	**13 45 43.9**	**-0.5**
ZSN	**Zaisan**	**40.42**	**350**	*e*P	**P**	**13 45 43.1**	**-1.7**
ZSN	**Zaisan**	**40.42**	**350**	*e*P	**P**	**13 45 43.1**	**-1.7**
IUG	**Iuzhnay**	**40.43**	**332**	⇓*i*P	**P**	**13 45 44.4**	**-0.7**
IUG				*e*PP	**PP**	**13 47 15.9**	**-2.6**
IUG	**Iuzhnay**	**40.43**	**332**	*d i*P	**P**	**13 45 44.4**	**-0.7**
IUG				*e*		13 47 15.8	
MSEY	**Mahe Island**	**40.56**	**254**	IAMs_20	IAMs_20	13 58 48.4	
	comp=Z,5µm,21.0s						
WHFO	**Wadi Hawf**	**40.65**	**289**	P	**P**	**13 45 50.0**	**+2.8**
KK31	**Karatay Array**	**40.96**	**333**	P	**P**	**13 45 49.0**	**-0.4**
KK31				pmax	pmax		
	comp=Z,27nm,1.0s						
KK31	**Karatay Array**	**40.96**	**333**	P	**P**	**13 45 49.0**	**-0.4**
KKAR	**Karatay Array**	**40.96**	**333**	P	**P**	**13 45 49.0**	**-0.4**
KKAR				pmax	pmax		
	comp=Z,27nm,1.0s						
KKAR	**Karatay Array**	**40.96**	**333**	P	**P**	**13 45 49.0**	**-0.4**
KKAR	**Karatay Array**	**40.96**	**333**	P	**P**	**13 45 49.0**	**-0.4**
ABTO	**Aybut**	**41.01**	**288**	P	**P**	**13 45 53.2**	**+3.0**
BTLS	**Baital**	**41.12**	**338**	*e*P	**P**	**13 45 48.8**	**-1.9**
BTLS	**Baital**	**41.12**	**338**	*e*P	**P**	**13 45 48.7**	**-1.9**
SONM	**Songino Array**	**41.32**	**12**	P	**P**	**13 45 52.5**	**+0.1**
	comp=Z,24nm,0.8s,baz=196,slow=8.3,SNR=128						
SONM				PcP	**PcP**	**13 47 50.9**	**+0.4**
	comp=Z,7.5nm,0.7s,baz=207,slow=3.6,SNR=6.1						
SONM				ScP	**ScP**	**13 51 37.2**	**-1.4**
	comp=Z,2.4nm,0.9s,baz=200,slow=3.9,SNR=4.9						
SONM				LR	LR	14 05 28.3	
	comp=Z,3µm,18.8s,baz=188,slow=40						
SONM	**Songino Array**	**41.32**	**12**	P	**P**	**13 45 52.9**	**+0.5**
TJN	**Taejon**	**41.56**	**42**	*ce*P	**P**	**13 45 54.8**	**+0.5**
INCN	**Inchon**	**41.74**	**40**	IAMs_20	IAMs_20	14 04 45.7	
	comp=Z,5µm,18.0s						
JNU	**Nakatsue**	**42.30**	**48**	P	**P**	**13 46 01.0**	**+0.4**
	comp=Z,23nm,0.8s,baz=189,slow=1.0,SNR=10						
JNU	**Nakatsue**	**42.30**	**48**	P	**P**	**13 46 01.7**	**+1.1**
JNU				IAmb	IAmb	13 46 05.4	
	comp=Z,243nm,2.0s						
KSRS	**Korea Array**	**42.55**	**41**	P	**P**	**13 46 03.1**	**+0.8**
	comp=Z,7.7nm,0.9s,baz=232,slow=9.2,SNR=24						
KSRS				LR	LR	14 04 49.1	
	comp=Z,3µm,19.4s,baz=226,slow=38						
SNY	**Shenyang**	**42.78**	**33**	⇑P	**P**	**13 46 05.8**	**+1.6**
SNY				PP	**PP**	**13 47 47.6**	**+3.8**
SNY				S	**S**	**13 52 29.8**	**+3.4**
SNY				pmax	pmax		
	comp=Z,29nm,1.3s						
SNY				pmax	pmax		
	comp=Z,760nm,6.1s						
SNY				LR	LR		
	comp=Z,3µm,12.6s						
SNY				LR	LR		
	comp=Z,3µm,13.5s						
SNY				LR	LR		
	comp=Z,5µm,15.7s						
ZAK	**Zakamensk**	**43.22**	**8**	*e*P	**P**	**13 46 07.4**	**-0.4**
ZAK				*e*		13 47 55.6	
ZAK				pmax	pmax		
	comp=Z,13nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
SEM	**Semipalatinsk**	**44.15**	**347**	*e*P	**P**	**13 46 12.1**	**-3.3**
SEM	**Semipalatinsk**	**44.15**	**347**	*e*P	**P**	**13 46 12.0**	**-3.3**
MOY	**Mondy**	**44.20**	**6**	*e*P	**P**	**13 46 15.6**	**0.0**
MOY				pmax	pmax		
	comp=Z,46nm,3.4s						
ASHT	**Ashkhabad**	**44.22**	**318**	IAMs_20	IAMs_20	14 07 36.0	
	comp=Z,3µm,18.0s						
GEYT	**Alibeck**	**44.39**	**318**	P	**P**	**13 46 17.9**	**+0.6**
	comp=Z,32nm,0.7s,baz=156,slow=8.1,SNR=64						
GEYT				PcP	**PcP**	**13 48 00.7**	**-0.2**
	comp=Z,10nm,0.7s,baz=151,slow=3.3,SNR=2.5						
GEYT				LR	LR	14 07 59.8	
	comp=Z,3µm,18.6s,baz=110,slow=40						
TLY	**Talaya**	**44.54**	**8**	P	**P**	**13 46 18.9**	**+0.7**
	comp=Z,9.8nm,0.7s,baz=212,slow=6.8,SNR=15						
TLY	**Talaya**	**44.54**	**8**	*e*P	**P**	**13 46 18.7**	**+0.5**
TLY				*e*S	**S**	**13 52 53.0**	**+1.1**
TLY				*e*SS	**ScS**	**13 56 17.1**	**+3.1**
TLY				pmax	pmax		
	comp=Z,38nm,0.8s						
TLY				MLR	MLR		
	comp=Z,3µm,11.0s						
TLY	**Talaya**	**44.54**	**8**	IAMs_20	IAMs_20	14 05 54.0	
	comp=Z,2µm,18.0s						
KURBB	**Kurchatov Arra**	**44.74**	**346**	P	**P**	**13 46 19.4**	**-0.5**
KURK	**Kurchatov**	**44.81**	**346**	*ce*P	**P**	**13 46 20.0**	**-0.4**
KURK				pmax	pmax		
	comp=Z,189nm,1.6s						
KURK	**Kurchatov**	**44.81**	**346**	P	**P**	**13 46 20.4**	**+0.1**
KURK				IAmb	IAmb	13 46 20.8	
	comp=Z,96nm,1.0s						
CN2	**Changchun**	**45.14**	**32**	*e*P	**P**	**13 46 24.6**	**+1.5**
CN2				*e*S	**S**	**13 53 00.5**	**-0.3**
CN2				SS	**ScS**	**13 56 16.8**	**-1.3**
CN2				pmax	pmax		
	comp=Z,30nm,1.3s						
CN2				pmax	pmax		
	comp=Z,590nm,6.0s						
CN2				LR	LR		
	comp=Z,3µm,16.0s						
CN2				LR	LR		

	comp=Z,4µm,16.0s						
CN2				LR	LR		
	comp=Z,3µm,16.0s						
IRK	**Irkutsk**	**45.18**	**9**	*e*P	**P**	**13 46 22.9**	**-0.4**
IRK				pmax	pmax		
	comp=Z,47nm,3.2s						
SMPI	**Sarmi**	**45.40**	**100**	P	**P**	**13 46 29.4**	**+3.7**
	comp=Z,61nm,1.0s						
BRZS	**Berezniki**	**45.84**	**341**	*e*P	**P**	**13 46 26.2**	**-2.5**
BRZS	**Berezniki**	**45.84**	**341**	*e*P	**P**	**13 46 26.1**	**-2.5**
NWAO	**Narrogin (SRO)**	**45.95**	**153**	P	**P**	**13 46 29.6**	**-0.1**
	comp=Z,13nm,0.5s,baz=317,slow=5.3,SNR=8.5						
HIA	**Hailar**	**46.66**	**23**	P	**P**	**13 46 35.8**	**+0.7**
HIA				pmax	pmax		
	comp=Z,36nm,1.0s						
HIA				MLR	MLR		
	comp=Z,3µm,19.0s						
HIA	**Hailar**	**46.66**	**23**	P	**P**	**13 46 35.8**	**+0.7**
HIA				IAmb	IAmb	13 46 47.6	
	comp=Z,36nm,1.0s						
HIA	**Hailar**	**46.66**	**23**	IAMs_20	IAMs_20	14 08 30.3	
	comp=Z,3µm,19.0s						
ZAA0	**Zalesovo Array**	**46.75**	**352**	P	**P**	**13 46 35.6**	**-0.1**
ZALV	**Zalesovo Beam**	**46.75**	**352**	P	**P**	**13 46 35.6**	**-0.1**
	comp=Z,70nm,0.6s,baz=177,slow=8.2,SNR=229						
ZALV				PcP	**PcP**	**13 48 07.9**	**-0.8**
	comp=Z,4.5nm,0.4s,baz=161,slow=4.3,SNR=2.6						
ZALV				LR	LR	14 10 48.7	
	comp=Z,2µm,19.6s,baz=188,slow=42						
ZALV	**Zalesovo Beam**	**46.75**	**352**	P	**P**	**13 46 35.7**	**+0.1**
ZALV					**PcP**	**13 48 06.7**	**-2.0**
GENI	**Genyem**	**46.96**	**101**	P	**P**	**13 46 40.3**	**+2.4**
	comp=Z,47nm,1.1s						
CIT	**Chita**	**46.96**	**16**	*e*P	**P**	**13 46 36.3**	**-1.1**
CIT				*e*		13 46 45.5	
INU	**Inuyama**	**47.85**	**49**	IAMs_20	IAMs_20	14 08 16.1	
	comp=Z,3µm,18.0s						
MDJ	**Mudanjiang**	**47.91**	**34**	P	**P**	**13 46 46.9**	**+2.0**
MDJ				S	S	13 53 50.4	+10
MDJ				pmax	pmax		
	comp=Z,33nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,690nm,6.8s						
MDJ				LR	LR		
	comp=Z,3µm,15.2s						
MDJ				LR	LR		
	comp=Z,3µm,14.6s						
MDJ				LR	LR		
	comp=Z,4µm,13.0s						
MDJ	**Mudanjiang**	**47.91**	**34**	IAMs_20	IAMs_20	14 07 42.7	
	comp=Z,3µm,18.0s						
WRAB	**Tennant Creek**	**48.09**	**125**	*ce*P	**P**	**13 46 45.7**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,52nm,2.5s						
WRAB	**Tennant Creek**	**48.09**	**125**	P	**P**	**13 46 45.9**	**-0.8**
WRAB				IAmb	IAmb	13 46 56.2	
	comp=Z,48nm,1.1s						
WRAB	**Tennant Creek**	**48.09**	**125**	IAMs_20	IAMs_20	14 08 14.5	
	comp=Z,3µm,21.0s						
VLA	**Vladivostok**	**48.31**	**37**	*i* P	**P**	**13 46 48.1**	**+0.1**
VLA				pmax	pmax		
	comp=Z,16nm,1.1s						
USA0B	**Ussuriysk Arra**	**49.01**	**36**	*i* P	**P**	**13 46 54.5**	**+1.2**
USRK	**Ussuriysk Ar.**	**49.01**	**36**	P	**P**	**13 46 52.9**	**-0.5**
	comp=Z,3.3nm,0.8s,baz=241,slow=3.9,SNR=5.1						
USRK				LR	LR	14 07 41.6	
	comp=Z,1µm,18.0s,baz=208,slow=36						
BVAR	**Borovoye Array**	**49.19**	**341**	P	**P**	**13 46 53.6**	**-0.9**
	comp=Z,20nm,0.8s,baz=140,slow=7.8,SNR=94						
BVAR				PcP	**PcP**	**13 48 17.9**	**+0.4**
	comp=Z,10nm,0.7s,baz=147,slow=3.5,SNR=7.0						
MJB9	**Matsu-Tunnel**	**49.22**	**48**	IAMs_20	IAMs_20	14 10 08.2	
	comp=Z,3µm,18.0s						
MAJO	**Matsushiro**	**49.22**	**48**	IAMs_20	IAMs_20	14 10 07.2	
	comp=Z,3µm,18.0s						
MAT	**Matsushiro**	**49.22**	**48**	P	**P**	**13 46 55.6**	**+0.5**
MAT				S	**S**	**13 54 00.8**	**+1.6**
MJAR	**Matsushiro Arr**	**49.22**	**48**	P	**P**	**13 46 55.7**	**+0.5**
	comp=Z,6.6nm,0.8s,baz=237,slow=9.6,SNR=16						
MJAR				PcP	**PcP**	**13 48 17.9**	**-0.1**
	comp=Z,11nm,0.8s,baz=245,slow=4.4,SNR=8.8						
MJAR				LR	LR	14 10 20.8	
	comp=Z,2µm,18.1s,baz=240,slow=39						
RAYN	**Ar Rayn**	**49.24**	**294**	*i* P	**P**	**13 46 56.5**	**+1.0**
	SNR=45						
RAYN	**Ar Rayn**	**49.24**	**294**	P	**P**	**13 46 57.1**	**+1.6**
RAYN				pmax	pmax		
	comp=Z,91nm,0.9s						
RAYN	**Ar Rayn**	**49.24**	**294**	P	**P**	**13 46 57.1**	**+1.6**
BRVK	**Borovoye**	**49.25**	**341**	*ce*P	**P**	**13 46 54.0**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,27nm,0.8s						
BRVK	**Borovoye**	**49.25**	**341**	P	**P**	**13 46 54.0**	**-1.1**
BRVK				IAmb	IAmb	13 46 55.4	
	comp=Z,26nm,0.8s						
DAMY	**Dhamar**	**49.29**	**283**	P	**P**	**13 46 59.5**	**+3.2**
	SNR=9.8						
ASAR	**Alice Springs**	**49.73**	**130**	P	**P**	**13 46 58.5**	**-0.8**
	comp=Z,4.5nm,0.6s,baz=302,slow=7.2,SNR=67						
ASAR				PcP	**PcP**	**13 48 19.7**	**-0.4**
	comp=Z,7.0nm,0.8s,baz=312,slow=5.7,SNR=4.7						
ASAR				ScP	**ScP**	**13 52 12.9**	**-0.8**
	comp=Z,1.0nm,0.6s,baz=305,slow=4.6,SNR=5.6						
ASAR				LR	LR	14 09 56.9	
	comp=Z,1µm,20.4s,baz=300,slow=38						
AB31	**Akbulak array**	**50.43**	**331**	*i* P	**P**	**13 47 03.6**	**-0.5**
ABKAR	**Akbulak array**	**50.43**	**331**	P	**P**	**13 47 03.9**	**-0.1**
ABKAR				IAmb	IAmb	13 47 18.9	
	comp=Z,63nm,1.2s						
ATD	**Arta Tunnel**	**50.75**	**279**	P	**P**	**13 47 07.5**	**+0.4**
	comp=Z,9.5nm,0.7s,baz=49,slow=7.4,SNR=7.1						
KLR	**Kul'dur**	**52.00**	**30**	P	**P**	**13 47 16.6**	**+0.8**
	comp=Z,1.1nm,0.4s,baz=232,slow=7.3,SNR=6.8						
KLR	**Kul'dur**	**52.00**	**30**	*i* P	**P**	**13 47 16.1**	**+0.3**
KLR				pmax	pmax		
	comp=Z,13nm,1.4s						
KLR				MLR	MLR		
	comp=Z,1µm,15.0s						
AKTO	**Aktyubinsk**	**52.15**	**331**	P	**P**	**13 47 16.3**	**-0.6**
	comp=Z,7.9nm,0.5s,baz=132,slow=8.8,SNR=22						
AKTO				PcP	**PcP**	**13 48 28.6**	**+0.1**
	comp=Z,18nm,0.8s,baz=78,slow=3.2,SNR=6.6						
AKTO				ScP	**ScP**	**13 52 23.1**	**-0.5**
	comp=Z,3.9nm,0.8s,baz=169,slow=5.1,SNR=4.6						
BOD	**Bodaibo**	**52.31**	**13**	*e*P	**P**	**13 47 17.5**	**-0.5**
BOD				pmax	pmax		
	comp=Z,56nm,1.2s						
ZEA	**Zeya**	**53.09**	**24**	*e*P	**P**	**13 47 24.8**	**+1.0**
ZEA				pmax	pmax		
	comp=Z,500nm,6.0s						
ZEA				pmax	pmax		
	comp=N,29nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,46nm,1.2s						
ZEA				MLR	MLR		
	comp=Z,6µm,16.0s						
ZEA				MLR	MLR		
	comp=E,2µm,13.0s						
ZEA				MLR	MLR		
	comp=N,4µm,16.0s						
AKT	**Akhty**	**53.10**	**317**	*e*P	**P**	**13 47 21.6**	**-2.7**
AKT				*e*		13 48 32.3	
AKT				pmax	pmax		
	comp=Z,22nm,0.6s						
OPO	**Ambohidratompo**	**53.23**	**240**	P	**P**	**13 47 27.3**	**+1.8**
	comp=Z,7.4nm,0.6s,baz=78,slow=5.1,SNR=7.9						
ABPO	**Ambohimpanom**	**53.38**	**240**	IAMs_20	IAMs_20	14 05 29.9	
	comp=Z,2µm,20.0s						
GNBR	**Gunib**	**54.01**	**318**	*i* P	**P**	**13 47 30.8**	**-0.1**
GNI	**Garni**	**54.63**	**314**	P	**P**	**13 47 35.3**	**-0.3**
FURI	**Furi**	**54.94**	**275**	IAMs_20	IAMs_20	14 08 04.1	
	comp=Z,4µm,21.0s						
GROC	**Groznyy**	**55.14**	**318**	*e*P	**P**	**13 47 38.1**	**-0.9**
GROC				*e*		13 48 42.0	
GROC				*e*		13 49 42.0	
GROC				pmax	pmax		
	comp=Z,38nm,0.7s						
GRNR	**Gornyy**	**55.32**	**31**	⇓*i*P	**P**	**13 47 41.0**	**+0.8**
GRNR				*e*S	**S**	**13 55 28.9**	**+6.5**
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GRNR				smax	smax		
	comp=E,2.0nm,1.3s						
GRNR				MLR	MLR		
	comp=Z,860nm,20.0s						
PMG	**Port Moresby**	**55.40**	**107**	*ce*P	**P**	**13 47 42.2**	**+0.9**
PMG				pmax	pmax		
	comp=Z,56nm,0.8s						
SVE	**Sverdlovsk**	**55.60**	**338**	*c i*P	**P**	**13 47 42.0**	**-0.1**
SVE				pmax	pmax		
	comp=Z,148nm,1.8s						
SVE				MLR	MLR		
	comp=Z,3µm,20.0s						
ARU	**Arti**	**56.09**	**337**	*c i*P	**P**	**13 47 45.5**	**-0.1**
ARU						13 49 46.2	
ARU				S	**S**	**13 55 31.5**	**-0.9**
ARU				SS	**SS**	**13 59 21.1**	**+2.2**
ARU				pmax	pmax		
	comp=Z,146nm,2.0s						
ARU				MLR	MLR		
	comp=Z,3µm,19.0s						
ARU	**Arti**	**56.09**	**337**	P	**P**	**13 47 44.6**	**-1.0**
ZEI	**Tsey**	**56.23**	**317**	*e*P	**P**	**13 47 45.6**	**-1.5**
ZEI				pmax	pmax		
	comp=Z,21nm,0.9s						
NCK	**Nalchik**	**56.72**	**318**	*i* P	**P**	**13 47 49.7**	**-0.7**
NCK				pmax	pmax		
	comp=Z,12nm,0.6s						
YSS	**Yuzh-Sakhalins**	**56.88**	**38**	*e*P	**P**	**13 47 52.0**	**+0.7**
YSS				*e*		13 48 00.5	
YSS				*e*S	**S**	**13 55 45.0**	**+1.9**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
YSS				MLR	MLR		
	comp=Z,2µm,17.0s						
YSS				MLR	MLR		
	comp=N,2µm,15.0s						
YSS				MLR	MLR		
	comp=E,1µm,19.0s						
YSS	**Yuzh-Sakhalins**	**56.88**	**38**	IAMs_20	IAMs_20	14 12 39.9	
	comp=Z,2µm,19.0s						
KIBK	**Kibwezi**	**56.92**	**262**	P	**P**	**13 47 55.2**	**+2.9**
	SNR=7.4						
NEY	**Neytrino**	**57.21**	**317**	*i* P	**P**	**13 47 54.3**	**+0.3**
NEY				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KBZ	**Khabaz**	**57.28**	**318**	P	**P**	**13 47 53.8**	**-0.5**
	comp=Z,11nm,0.9s,baz=166,slow=5.6,SNR=20						
KBZ				PcP	**PcP**	**13 48 49.0**	**+0.7**
	comp=Z,11nm,0.8s,baz=143,slow=2.6,SNR=5.2						
KBZ				LR	LR	14 15 58.5	
	comp=Z,669nm,20.5s,baz=117,slow=40						
KBZ	**Khabaz**	**57.28**	**318**	*d i*P	**P**	**13 47 52.9**	**-1.3**
KBZ				pmax	pmax		
	comp=Z,21nm,1.0s						
SHA1	**Shidzhatmaz**	**57.45**	**318**	*i* P	**P**	**13 47 53.6**	**-2.1**
KMBO	**Kilima Mbogo**	**57.49**	**264**	P	**P**	**13 47 58.2**	**+1.7**
	comp=Z,10.0nm,0.8s,baz=54,slow=10,SNR=22						
KMBO				LR	LR	14 09 38.6	
	comp=Z,2µm,19.6s,baz=86,slow=33						
KMBO	**Kilima Mbogo**	**57.49**	**264**	*i* P	**P**	**13 47 58.8**	**+2.3**
	SNR=11						
KMBO	**Kilima Mbogo**	**57.49**	**264**	IAMs_20	IAMs_20	14 09 16.9	
	comp=Z,2µm,20.0s						
KIV	**Kislovodsk**	**57.51**	**318**	P	**P**	**13 47 55.1**	**-0.9**
KIV	**Kislovodsk**	**57.51**	**318**	*e*P	**P**	**13 47 54.9**	**-1.1**
KIV				pmax	pmax		
	comp=Z,113nm,1.0s						
KIV				MLR	MLR		
	comp=Z,2µm,17.0s						
YUK	**Yuzh-Kuril'sk**	**57.60**	**42**	*e*P	P	13 47 49.3	-7.2
YUK				*e*		13 48 45.3	
YUK				*e*S	S	13 55 43.0	-10
YUK				*e*		13 57 40.7	
YUK				pmax	pmax		
	comp=Z,340nm,2.5s						
YUK				pmax	pmax		
	comp=Z,210nm,0.9s						
YUK				pmax	pmax		
	comp=N,40nm,0.6s						
YUK				MLR	MLR		
	comp=Z,779nm,17.0s						
YUK				MLR	MLR		
	comp=N,2µm,18.0s						
YUK				MLR	MLR		
	comp=E,1µm,14.0s						
GOF	**Gofitskoye**	**57.72**	**319**	⇑*e*P	**P**	**13 48 01.2**	**+3.9**
CTAO	**Charters Tower**	**58.14**	**119**	IAMs_20	IAMs_20	14 13 40.6	
	comp=Z,2µm,22.0s						
STKA	**Stephens Creek**	**59.92**	**134**	P	**P**	**13 48 12.1**	**-0.7**
	comp=Z,4.8nm,0.8s,baz=307,slow=9.0,SNR=9.8						
STKA				LR	LR	14 14 48.3	
	comp=Z,2µm,22.0s,baz=296,slow=37						
STKA	**Stephens Creek**	**59.92**	**134**	P	**P**	**13 48 12.1**	**-0.7**
YAK	**Yakutsk**	**60.14**	**18**	P	**P**	**13 48 12.6**	**-1.2**
	comp=Z,38nm,0.7s,baz=250,slow=0.2,SNR=39						
YAK	**Yakutsk**	**60.14**	**18**	*d i*P	**P**	**13 48 13.2**	**-0.6**
YAK				*e*		13 49 00.5	
YAK				*e*		13 50 25.0	
YAK				*e*S	**S**	**13 56 24.4**	**-0.7**
YAK				*e**SS	sS	13 56 55.0	+16
YAK				*e*		13 58 05.4	
YAK				*e*SS	**SS**	**14 00 21.4**	**-0.9**
YAK				pmax	pmax		
	comp=Z,66nm,0.9s						
YAK				pmax	pmax		
	comp=E,27nm,1.3s						
YAK				pmax	pmax		
	comp=N,28nm,1.2s						
YAK				pmax	pmax		
	comp=Z,86nm,2.2s						
YAK				pmax	pmax		
	comp=E,73nm,2.3s						
YAK				pmax	pmax		
	comp=N,62nm,1.9s						
YAK				smax	smax		
	comp=N,96nm,3.8s						
YAK				smax	smax		
	comp=E,78nm,2.8s						
YAK				MLR	MLR		
	comp=Z,3µm,19.0s						
YAK				MLR	MLR		
	comp=N,2µm,18.0s						
YAK				MLR	MLR		
	comp=E,996nm,22.0s						
YAK	**Yakutsk**	**60.14**	**18**	P	**P**	**13 48 11.8**	**-1.9**
YAK				IAMs_20	IAMs_20	14 16 29.6	
	comp=Z,3µm,21.0s						
VRH	**Novokhopyorsk**	**61.13**	**325**	*e*P	**P**	**13 48 19.1**	**-1.6**
VRH				pmax	pmax		
	comp=Z,70nm,0.7s						
NRIK	**Noril'sk**	**61.73**	**357**	P	**P**	**13 48 24.1**	**-0.3**
	comp=Z,26nm,0.6s,baz=161,slow=5.4,SNR=23						
NRIK				LR	LR	14 19 38.5	
	comp=Z,2µm,19.4s,baz=186,slow=40						
VSR	**Storozhevoye**	**62.59**	**324**	*d i*P	**P**	**13 48 28.9**	**-1.7**
VSR				pmax	pmax		
	comp=Z,47nm,0.9s						
BR131	**Keskin Array S**	**62.61**	**311**	P	**P**	**13 48 29.2**	**-2.0**
	SNR=11						
BR131	**Keskin Array S**	**62.61**	**311**	P	**P**	**13 48 28.9**	**-2.2**
BR131				pmax	pmax		
	comp=Z,12nm,0.8s						
BR131	**Keskin Array S**	**62.61**	**311**	P	**P**	**13 48 28.9**	**-2.2**
BRTR	**Keskin Array B**	**62.61**	**311**	P	**P**	**13 48 29.1**	**-2.0**
	comp=Z,8.3nm,0.7s,baz=126,slow=7.3,SNR=56						
BRTR				PcP	**PcP**	**13 49 10.2**	**+0.3**
	comp=Z,5.3nm,0.8s,baz=128,slow=5.4,SNR=4.1						
BRTR				LR	LR	14 18 40.2	
	comp=Z,623nm,19.4s,baz=92,slow=39						
BRTR	**Keskin Array B**	**62.61**	**311**	P	**P**	**13 48 29.4**	**-1.7**
BRTR					**PcP**	**13 49 10.7**	**+0.7**
LPSR	**Galich'ya Gora**	**63.29**	**326**	*e*P	**P**	**13 48 33.4**	**-1.8**
LPSR				pmax	pmax		
	comp=Z,50nm,0.8s						
MBAR	**Mbarara**	**63.83**	**266**	IAMs_20	IAMs_20	14 12 57.0	
	comp=Z,3µm,20.0s						
PRGR	**Permogore**	**64.55**	**337**	*e*P	**P**	**13 48 41.5**	**-1.8**
PRGR				*e*S	**S**	**13 57 18.7**	**-1.8**
PRGR				pmax	pmax		
	comp=Z,93nm,0.8s						
ELL	**Elmali**	**64.90**	**307**	IAMs_20	IAMs_20	14 20 25.0	
	comp=Z,3µm,22.0s						
MOS	**Moscow**	**65.28**	**329**	*e*P	**P**	**13 48 46.3**	**-1.9**
MOS				*i*		13 48 55.6	
MOS				pmax	pmax		
	comp=Z,129nm,0.8s						
MOS				MLR	MLR		
	comp=Z,2µm,18.0s						
OBN	**Obninsk**	**65.58**	**328**	⇓P	**P**	**13 48 49.5**	**-0.6**
OBN	**Obninsk**	**65.58**	**328**	*de*P	**P**	**13 48 49.0**	**-1.1**
OBN				*e*		13 49 24.5	
OBN				*e*		13 51 15.9	
OBN				pmax	pmax		
	comp=Z,172nm,1.8s						
MANT	**Manisa**	**66.24**	**309**	IAMs_20	IAMs_20	14 21 28.4	
	comp=Z,2µm,20.0s						
KLMR	**Klimovskoe**	**66.66**	**334**	*e*P	**P**	**13 48 53.5**	**-3.4**
KLMR				pmax	pmax		
	comp=Z,168nm,1.8s						
KLMR	**Klimovskoe**	**66.66**	**334**	*e*P	**P**	**13 48 53.6**	**-3.4**
KLMR				AMP		13 48 57.4	
	comp=Z,168nm,1.8s						
KLMR				LQ	LQ	14 09 37.5	
KLMR				LQ	LQ	14 09 37.5	
KLMR				LR	LR	14 14 32.6	
MA2	**Magadan**	**66.89**	**27**	P	**P**	**13 48 58.4**	**-0.1**
	comp=Z,14nm,0.8s,baz=226,slow=5.1,SNR=24						
MA2	**Magadan**	**66.89**	**27**	*ce*P	**P**	**13 48 58.4**	**-0.1**
MA2				pmax	pmax		
	comp=Z,18nm,0.9s						
MA2	**Magadan**	**66.89**	**27**	IAMs_20	IAMs_20	14 21 18.2	
	comp=Z,2µm,18.0s						
KARP	**Karpathos**	**66.93**	**305**	P	**P**	**13 48 59.0**	**-0.2**
CAN	**Canberra**	**66.98**	**133**	P	**P**	**13 49 00.0**	**+0.4**
CAN				pmax	pmax		
	comp=Z,83nm,1.4s						
CAN				MLR	MLR		
	comp=Z,2µm,20.0s						
CAN	**Canberra**	**66.98**	**133**	P	**P**	**13 48 60.0**	**+0.4**
CAN				IAmb	IAmb	13 49 25.4	
	comp=Z,83nm,1.4s						
CAN				IAMs_20	IAMs_20	14 18 48.8	
	comp=Z,2µm,20.0s						
TIXI	**Tiksi**	**67.39**	**11**	P	**P**	**13 49 00.7**	**-0.7**
	comp=Z,56nm,0.7s,baz=212,slow=3.8,SNR=166						
TIXI	**Tiksi**	**67.39**	**11**	*ce*P	**P**	**13 48 59.2**	**-2.2**
TIXI				pmax	pmax		
	comp=Z,48nm,0.9s						
TIXI				MLR	MLR		
	comp=Z,2µm,15.0s						
TIXI	**Tiksi**	**67.39**	**11**	P	**P**	**13 49 00.7**	**-0.7**
TIXI				IAMs_20	IAMs_20	14 22 34.9	
	comp=Z,2µm,18.0s						
TOPG	**Topolog**	**67.55**	**315**	⇑P	**P**	**13 49 01.9**	**-1.1**
CFR	**Carcaliu**	**67.78**	**316**	⇓P	**P**	**13 49 03.2**	**-1.2**
HARR	**Harsova**	**67.83**	**315**	⇑P	**P**	**13 49 03.9**	**-0.8**
PEA0B	**Petropavlovsk-**	**68.10**	**36**	IAMs_20	IAMs_20	14 20 08.7	
	comp=Z,1µm,19.0s						
PETK	**Petropavlovsk-**	**68.10**	**36**	LR	LR	14 20 37.3	
	comp=Z,1µm,18.2s,baz=238,slow=37						
SORM	**Soroca**	**68.28**	**319**	⇑P	**P**	**13 49 06.1**	**-1.3**
AKASG	**Malin Array Be**	**68.35**	**322**	P	**P**	**13 49 05.8**	**-2.0**
	comp=Z,9.6nm,0.7s,baz=86,slow=5.0,SNR=27						
AKASG				PP	**PP**	**13 51 38.1**	**-0.7**
	comp=Z,1.5nm,0.5s,baz=93,slow=7.1,SNR=4.6						
AKASG				LR	LR	14 23 57.0	
	comp=Z,668nm,18.4s,baz=105,slow=40						
APE	**Apeiranthos**	**68.42**	**307**	⇑P	**P**	**13 49 08.2**	**-0.4**
PET	**Petropavlovsk**	**68.63**	**36**	*e*P	P	13 49 04.5	-5.0
PET				*e*S	**S**	**13 58 02.7**	**-7.6**
PET				MLR	MLR		
	comp=Z,1µm,17.0s						
PET				MLR	MLR		
	comp=Z,1µm,13.0s						
PET	**Petropavlovsk**	**68.63**	**36**	IAMs_20	IAMs_20	14 17 58.6	
	comp=Z,1µm,21.0s						
TMCR	**Tamitsa**	**68.83**	**337**	*e*P	**P**	**13 49 10.1**	**-0.4**
TMCR				pmax	pmax		
	comp=Z,87nm,1.3s						
BISRR	**Bisoca**	**68.84**	**316**	⇓P	**P**	**13 49 10.8**	**-0.3**
ISR	**Istrita**	**68.88**	**315**	⇑P	**P**	**13 49 11.2**	**-0.2**
VRI	**Vrincioaia**	**68.89**	**316**	⇓P	**P**	**13 49 10.9**	**-0.5**
PLOR	**Plostina**	**68.94**	**316**	⇓P	**P**	**13 49 11.3**	**-0.4**
ELND	**Elena**	**68.97**	**313**	⇓P	**P**	**13 49 10.7**	**-1.2**
SEY	**Seymchan**	**69.06**	**25**	P	**P**	**13 49 11.9**	**-0.1**
	comp=Z,4.3nm,0.4s,baz=268,slow=5.7,SNR=15						
SEY	**Seymchan**	**69.06**	**25**	*i* P	**P**	**13 49 11.5**	**-0.5**
TESR	**Tescani**	**69.07**	**317**	⇓P	**P**	**13 49 11.8**	**-0.7**
LSZ	**Lusaka**	**69.29**	**251**	P	**P**	**13 49 15.6**	**+1.2**
LSZ				pmax	pmax		
	comp=Z,36nm,1.3s						
LSZ	**Lusaka**	**69.29**	**251**	P	**P**	**13 49 15.6**	**+1.2**
LSZ				IAmb	IAmb	13 49 26.8	
	comp=Z,36nm,1.2s						
LSZ	**Lusaka**	**69.29**	**251**	IAMs_20	IAMs_20	14 17 10.9	
	comp=Z,2µm,18.0s						
MLR	**Muntele Rosu**	**69.36**	**316**	⇑P	**P**	**13 49 14.1**	**-0.3**
DOPR	**Dopca**	**69.83**	**316**	⇑P	**P**	**13 49 16.7**	**-0.5**
PLVB	**Pleven**	**69.95**	**313**	⇑P	**P**	**13 49 17.6**	**-0.3**
VOIR		**69.97**	**316**	⇑P	**P**	**13 49 16.7**	**-1.5**
MICGM	**Minsk**	**70.13**	**325**	*e*P	**P**	**13 49 18.0**	**-0.8**
MNK	**Minsk**	**70.13**	**325**	*e*P	**P**	**13 49 18.0**	**-0.8**
BURAR	**Bucovina Array**	**70.24**	**318**	P	**P**	**13 49 19.1**	**-0.7**
ARR	**Arges**	**70.25**	**315**	⇑P	**P**	**13 49 19.0**	**-0.8**
BUR08	**Bucovina Ar. S**	**70.25**	**318**	P	**P**	**13 49 18.4**	**-1.4**
VTS	**Vitosha**	**70.85**	**312**	P	**P**	**13 49 21.8**	**-1.9**
VTS				pmax	pmax		
	comp=Z,18nm,1.0s						
VTS				MLR	MLR		
	comp=Z,600nm,21.0s						
VTS	**Vitosha**	**70.85**	**312**	P	**P**	**13 49 21.8**	**-1.9**
LIT	**Litokhoron**	**71.12**	**310**	P	**P**	**13 49 23.2**	**-2.0**
LIT	**Litokhoron**	**71.12**	**310**	P	**P**	**13 49 23.2**	**-2.0**
LIT				IAmb	IAmb	13 49 33.4	
	comp=Z,39nm,0.8s						
AGG	**Agios Georgios**	**71.14**	**309**	P	**P**	**13 49 23.0**	**-2.3**
AGG				pmax	pmax		
	comp=Z,18nm,1.1s						
AGG	**Agios Georgios**	**71.14**	**309**	P	**P**	**13 49 23.0**	**-2.3**
CJR	**Cluj-Napoca**	**71.17**	**317**	⇓P	**P**	**13 49 25.4**	**0.0**
VAY	**Valandovo**	**71.19**	**311**	*i* P	**P**	**13 49 24.0**	**-1.6**
ITM	**Ithomi**	**71.30**	**307**	P	**P**	**13 49 24.7**	**-1.6**
ITM				IAmb	IAmb	13 49 36.5	
	comp=Z,33nm,0.7s						
IZAR	**Zarasai**	**71.35**	**326**	*e*P	**P**	**13 49 25.8**	**-0.4**
ISAL	**Salakas**	**71.38**	**326**	*e*P	**P**	**13 49 25.5**	**-0.8**
LVV	**L'vov**	**71.41**	**320**	*e*P	**P**	**13 49 25.5**	**-1.2**
STIP	**Stip**	**71.52**	**311**	*i* P	**P**	**13 49 24.6**	**-3.0**
GZR	**Gura Zlata**	**71.55**	**315**	⇓P	**P**	**13 49 27.1**	**-0.7**
HERR	**Herculane**	**71.73**	**315**	⇑P	**P**	**13 49 28.1**	**-0.6**
VSU	**Vasula**	**71.79**	**329**	*e*P	**P**	**13 49 27.9**	**-0.9**
VSU	**Vasula**	**71.79**	**329**	*de*P	**P**	**13 49 27.8**	**-0.9**
VSU				pmax	pmax		
	comp=Z,226nm,0.8s						
DRGR		**71.79**	**317**	⇓P	**P**	**13 49 28.8**	**-0.4**
FNA	**Florina**	**72.04**	**310**	P	**P**	**13 49 28.6**	**-2.1**
FNA				pmax	pmax		
	comp=Z,407nm,0.7s						
FNA				MLR	MLR		
	comp=Z,900nm,21.0s						
FNA	**Florina**	**72.04**	**310**	P	**P**	**13 49 28.6**	**-2.1**
APA	**Apatity**	**72.05**	**339**	⇓*i*P	**P**	**13 49 28.4**	**-1.8**
APA				pmax	pmax		
	comp=Z,26nm,0.8s						
APA				MLR	MLR		
	comp=Z,6µm,19.0s						
MDVR	**Moldovita**	**72.22**	**314**	⇑P	**P**	**13 49 30.9**	**-0.8**
KWP	**Kalwaria Pacla**	**72.22**	**320**	*e*P	**P**	**13 49 31.4**	**-0.2**
KWP	**Kalwaria Pacla**	**72.22**	**320**	*e*P	**P**	**13 49 31.4**	**-0.2**
UZH	**Uzhgorod**	**72.34**	**319**	*e*P	**P**	**13 49 30.4**	**-1.9**
UZH				*i*		13 49 40.1	
UZH				*e*		13 49 50.5	
BZS	**Buzias**	**72.39**	**315**	⇑P	**P**	**13 49 32.0**	**-0.7**
KOLS	**Kolonicke sedl**	**72.40**	**319**	*e*P	**P**	**13 49 32.2**	**-0.5**
KOLS				pmax	pmax		
	comp=Z,51nm,1.8s						
KOLS	**Kolonicke sedl**	**72.40**	**319**	*e*P	**P**	**13 49 32.2**	**-0.5**
SIRR	**Siria**	**72.44**	**316**	⇑P	**P**	**13 49 32.7**	**-0.3**
PABE	**Paberze**	**72.56**	**326**	*e*P	**P**	**13 49 32.6**	**-0.8**
SUW	**Suwalki**	**72.70**	**324**	*e*P	**P**	**13 49 33.6**	**-0.7**
SUW	**Suwalki**	**72.70**	**324**	*e*P	**P**	**13 49 33.6**	**-0.7**
FIA1	**FINESS Array S**	**72.91**	**332**	P	**P**	**13 49 35.0**	**-0.4**
FINES	**FINESS Array B**	**72.91**	**332**	P	**P**	**13 49 34.7**	**-0.7**
	comp=Z,48nm,0.7s,baz=99,slow=5.1,SNR=83						
FINES				LR	LR	14 24 24.4	
	comp=Z,1µm,20.1s,baz=114,slow=38						
FINES	**FINESS Array B**	**72.91**	**332**	P	**P**	**13 49 34.9**	**-0.5**
KECS	**Kecovo**	**73.51**	**318**	*e*P	**P**	**13 49 38.5**	**-0.7**
KECS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KECS	**Kecovo**	**73.51**	**318**	*e*P	**P**	**13 49 38.5**	**-0.7**
NIE	**Niedzica**	**73.75**	**319**	*e*P	**P**	**13 49 40.7**	**0.0**
NIE	**Niedzica**	**73.75**	**319**	*e*P	**P**	**13 49 40.7**	**0.0**
PBUR	**Paburge**	**73.79**	**326**	*e*P	**P**	**13 49 40.1**	**-0.6**
OJC	**Ojcow**	**74.17**	**320**	*e*P	**P**	**13 49 42.9**	**-0.2**

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OJC   Ojcow              74.17 320  eP       P        13 49 42.9 -0.2
LBTB  Lobatse            74.23 241   P       P        13 49 45.3 +1.3
LBTB                                 pmax    pmax
      comp=Z,38nm,1.0s
LBTB  Lobatse            74.23 241   P       P        13 49 45.3 +1.3
LBTB                                 IAmb    IAmb     13 49 56.4
      comp=Z,38nm,1.0s
LANS  Liptovska Anna     74.26 319  eP       P        13 49 43.6 -0.1
LANS                                 pmax    pmax
      comp=Z,5.0nm,1.0s
LANS  Liptovska Anna     74.26 319  eP       P        13 49 43.6 -0.1
VYHS  Vyhne              74.60 318  eP       P        13 49 44.7 -0.9
VYHS  Vyhne              74.60 318  eP       P        13 49 44.7 -0.9
OKC   Ostrava-Krasne     75.19 319  eP       P        13 49 48.8 -0.2
OKC                                 ex       x        13 49 57.8
OKC   Ostrava-Krasne     75.19 319  eP       P        13 49 48.8 -0.2
OKC                                 e                 13 49 57.8
JAVC  Velka Javorina     75.40 318  eP       P        13 49 50.5 +0.2
ARCES ARCESS Array B     75.47 340   P       P        13 49 49.9 -0.3
      comp=Z,20nm,0.8s,baz=98,slow=6.2,SNR=42
ARCES                                LR      LR       14 25 54.6
      comp=Z,3µm,20.3s,baz=115,slow=38
ARCES ARCESS Array B     75.47 340   P       P        13 49 50.2 -0.1
ARE0  ARCESS Array S     75.47 340  eP       P        13 49 50.0 -0.2
TIP   Timpagrande        75.47 308  ⇑P       P        13 49 50.7 -0.3
SMOL  Smolenice          75.53 318  eP       P        13 49 50.8 -0.2
SMOL  Smolenice          75.53 318  eP       P        13 49 50.8 -0.2
BOSA  Boshof             75.56 238   P       P        13 49 52.1 +0.5
      comp=Z,13nm,0.8s,baz=91,slow=4.8,SNR=22
BOSA                                 LR      LR       14 18 51.4
      comp=Z,916nm,20.3s,baz=59,slow=32
BOSA  Boshof             75.56 238   P       P        13 49 50.9 -0.8
BOSA                                 pmax    pmax
      comp=Z,75nm,1.4s
BOSA  Boshof             75.56 238   P       P        13 49 50.9 -0.8
BOSA                                 IAmb    IAmb     13 50 04.4
      comp=Z,75nm,1.4s
MORC  Moravsky Berou     75.57 319  ⇓P       P        13 49 51.1 -0.2
MORC  Moravsky Berou     75.57 319  eP       P        13 49 50.8 -0.5
MODS  Modra-Piesok       75.62 318  eP       P        13 49 50.2 -1.4
MODS                                 pmax    pmax
      comp=Z,55nm,1.4s
MODS  Modra-Piesok       75.62 318  eP       P        13 49 50.2 -1.4
ZST   Bratislava         75.72 318  eP       P        13 49 50.9 -1.2
ZST                                  pmax    pmax
      comp=Z,47nm,1.1s
ZST   Bratislava         75.72 318  eP       P        13 49 50.9 -1.2
KRLC  Kraliky            76.08 320  eP       P        13 49 54.0 -0.2
KRLC  Kraliky            76.08 320  eP       P        13 49 54.0 -0.2
KTK1  Kautokeino         76.09 339  eP       P        13 49 53.6 -0.2
VRAC  Vranov             76.15 319  ⇓P       P        13 49 54.0 -0.5
VRAC  Vranov             76.15 319  eP       P        13 49 54.0 -0.5
KOGS  Kog                76.18 316  i P      P        13 49 54.2 -0.6
BILL  Bilibino           76.23  22d iP       P        13 49 53.4 -1.2
BILL                                e                 13 50 10.2
BILL                                e                 13 52 49.1
BILL                                eS       SKSac    14 00 00.0 -3.3
BILL                                 pmax    pmax
      comp=Z,33nm,1.9s
BILL                                 MLR     MLR
      comp=Z,3µm,18.0s
BILL  Bilibino           76.23  22   P       P        13 49 54.0 -0.6
BILL                                 IAmb    IAmb     13 50 02.2
      comp=Z,38nm,1.4s
KRUC  Moravsky           76.26 319  eP       P        13 49 54.4 -0.7
HAMF  Hammerfest         76.38 341  eP       P        13 49 54.8 -0.6
DPC   Dobruska-Polom     76.40 320  eP       P        13 49 56.1 +0.1
DPC                                 epP      pP       13 50 02.2 -2.5
DPC   Dobruska-Polom     76.40 320  eP       P        13 49 56.1 +0.1
DPC                                 e                 13 50 02.2
KSP   Ksiaz              76.46 320  eP       P        13 49 56.4 +0.2
KSP   Ksiaz              76.46 320  eP       P        13 49 56.4 +0.2
OSTC  Ostas              76.48 320  eP       P        13 49 56.1 -0.3
CONA  Conrad Observa     76.54 317  eP       P        13 49 56.0 -0.9
      comp=Z,3.2nm,0.6s
CHVC  Chvalec            76.59 320  eP       P        13 49 57.2 +0.2
CHVC                                ex       x        13 50 04.7
UPC   Upice              76.61 320  eP       P        13 49 56.9 -0.2
UPC                                 ex       x        13 50 05.8
UPC   Upice              76.61 320  eP       P        13 49 56.9 -0.2
UPC                                 e                 13 50 05.8
DZM   Mont Dzumac        76.64 115  eS       S        13 59 35.8 -7.2
      comp=Z,202nm,25.7s
DZM                                 eSS      SS       14 04 33.3 -5.8
      comp=Z,789nm,35.4s
DZM                                 eLR      LR       14 13 37.3
      comp=Z,2µm,27.1s
GROS  Grobnik            76.70 316  i P      P        13 49 57.0 -0.8
ARSA  Arzberg            76.73 317  eP       P        13 49 57.8  0.0
      comp=Z,1.9nm,0.3s,SNR=5.4
PERS  Pernice            76.97 316  eP       P        13 49 58.6 -0.7
SOKA  Soboth             77.03 316  eP       P        13 49 59.4 -0.3
      comp=Z,7.5nm,0.6s,SNR=18
GOPC  GO Pecny, Ondr     77.36 319  eP       P        13 50 01.4  0.0
GOPC  GO Pecny, Ondr     77.36 319  eP       P        13 50 01.4  0.0
LJU   Ljubljana          77.36 315  ePcP     PcP      13 50 10.3 -1.6
OBKA  Obir               77.36 316  eP       P        13 50 01.2 -0.3
      comp=Z,5.5nm,0.6s,SNR=10.0
PRU   Pruhonice          77.52 319  eP       P        13 50 01.9 -0.3
PRU                                 epP      pP       13 50 09.1 -1.8
PRU   Pruhonice          77.52 319  eP       P        13 50 01.9 -0.3
PRU                                 e                 13 50 09.1
MOA   Molln              77.61 317  i P      P        13 50 02.1 -0.7
      comp=Z,2.4nm,0.4s
TRO   Tromso             77.73 340  eP       P        13 50 03.3 +0.4
VOJS  Vojsko             77.81 315  eP       P        13 50 02.9 -1.1
VOJS                                ePcP     pP       13 50 12.0 -0.9
PBCC  Pribram            77.86 319  eP       P        13 50 04.1  0.0
PBCC                                ex       x        13 50 11.1
BRG   Berggiesshubel     77.95 320  eP       P        13 50 04.3 -0.3
      comp=Z,39nm,1.2s
BRG                                 ePP      PP       13 52 57.6 -3.1
      comp=Z,15nm,1.4s
BRG   Berggiesshubel     77.95 320  eP       P        13 50 04.6  0.0
      comp=Z,39nm,1.2s,baz=91,slow=5.4
BRG   Berggiesshubel     77.95 320  eP       P        13 50 04.3 -0.3
BRG                                 e                 13 52 57.6
BRG                                  pmax    pmax
      comp=Z,39nm,1.2s
BRG                                  pmax    pmax
      comp=Z,15nm,1.4s
BRG                                  MLR     MLR
      comp=N,939nm,18.0s
BRG                                  MLR     MLR
      comp=E,768nm,18.3s
BRG                                  MLR     MLR
      comp=Z,1µm,17.7s
MYKA  Terra Mystica      77.99 316  eP       P        13 50 04.2 -0.8
      comp=Z,22nm,1.1s,SNR=8.7
GEC2  GERESS Array S     78.02 318  eP       P        13 50 05.0 -0.2
      comp=Z,206nm,2.2s,baz=91,slow=5.4
GEC2                                eL       L        14 28 55.8
      comp=Z,674nm,20.8s
GEC2  GERESS Array S     78.02 318   P       P        13 50 04.2 -1.0
GEC2                                 IAmb    IAmb     13 50 16.7
      comp=Z,94nm,1.6s
GERES GERESS Array B     78.02 318   P       P        13 50 04.8 -0.4
      comp=Z,14nm,0.8s,baz=86,slow=5.5,SNR=92
GERES                                LR      LR       14 29 07.4
      comp=Z,613nm,21.1s,baz=86,slow=39
GERES GERESS Array B     78.02 318   P       P        13 50 04.6 -0.6
GERES GERESS Array B     78.02 318   P       P        13 50 04.6 -0.6
KHC   Kasperske Hory     78.11 319  eP       P        13 50 05.0 -0.6
KHC                                 epP      pP       13 50 11.6 -2.7
KHC   Kasperske Hory     78.11 319  eP       P        13 50 05.0 -0.6
KHC                                 e                 13 50 11.6
RUE   Ruedersdorf        78.12 322  eP       P        13 50 04.4 -1.1
RUE   Ruedersdorf        78.12 322  eP       P        13 50 05.5  0.0
      comp=Z,82nm,1.1s,baz=91,slow=5.4
KBA   Koelnbreinsper     78.21 316  eP       P        13 50 05.2 -1.2
      comp=Z,3.9nm,0.6s,SNR=8.5
FBE   Freiberg           78.32 320  eP       P        13 50 06.7 +0.1
      comp=Z,44nm,1.1s,baz=91,slow=5.4
MAW   Mawson             78.37 192   LR      LR       14 20 02.7
      comp=Z,648nm,19.6s,baz=42,slow=32
CLL   Collm              78.56 321  i P      P        13 50 08.1 +0.2
      comp=Z,47nm,1.7s
CLL                                 i PcP    PcP      13 50 17.5 +0.6
      comp=Z,14nm,1.0s
CLL                                 eS       S        14 00 00.0 -2.6
CLL                                 eSS      SS       14 05 06.0 -0.3
CLL                                  LmV              14 31 00.0
      comp=Z,600nm,18.8s
CLL   Collm              78.56 321  eP       P        13 50 08.2 +0.2
      comp=Z,47nm,1.7s,baz=91,slow=5.4
CLL                                 eL       L        14 31 51.2
      comp=Z,638nm,18.8s
CLL   Collm              78.56 321  i P      P        13 50 08.1 +0.2
CLL                                 eS       S        14 00 00.0 -2.6
CLL                                  pmax    pmax
      comp=Z,47nm,1.7s
CLL                                  MLR     MLR
      comp=Z,600nm,18.8s
WET   Wettzell           78.57 319  eP       P        13 50 07.9 -0.2
      comp=Z,91nm,2.0s,baz=91,slow=5.4
WET                                 eL       L        14 29 21.9
      comp=Z,535nm,20.9s
RJOB  Jochberg           78.59 317  eP       P        13 50 07.3 -1.0
      comp=Z,26nm,1.2s,baz=91,slow=5.4
STAL  STALIGIAL          78.63 316   P       P        13 50 07.8 -0.7
STAL                                 IAmb    IAmb     13 50 18.0
      comp=Z,68nm,1.1s
ABTA  Abfaltersbach      78.77 316  eP       P        13 50 08.2 -1.1
      comp=Z,15nm,1.1s,SNR=6.5
TANN  Tannenbergstha     78.87 320  eP       P        13 50 09.3 -0.5
      comp=Z,101nm,1.9s,baz=91,slow=5.4
MOR8  Moi Rana           78.88 336  eP       P        13 50 08.2 -1.2
WERN  Wernitzgruen       78.92 320  eP       P        13 50 09.9 -0.2
      comp=Z,17nm,1.2s,baz=91,slow=5.4
GUNZ  Gunzen             78.95 320  eP       P        13 50 09.9 -0.3
      comp=Z,75nm,2.0s,baz=91,slow=5.4
ROTZ  Rotzenmuhle        79.02 319  eP       P        13 50 10.8 +0.2
      comp=Z,149nm,2.0s,baz=91,slow=5.4
PLN   Plauen             79.07 320  eP       P        13 50 10.4 -0.4
      comp=Z,54nm,2.0s,baz=91,slow=5.4
MANZ  Manzenberg         79.09 319  eP       P        13 50 11.0 +0.1
      comp=Z,150nm,2.1s,baz=91,slow=5.4
NEUB  Neuenburg          79.33 321  eP       P        13 50 11.5 -0.7
      comp=Z,61nm,1.6s,baz=91,slow=5.4
WTTA  Wattenberg         79.37 317  eP       P        13 50 11.7 -1.1
      comp=Z,13nm,0.5s,SNR=9.9
WATA  Walderalm          79.42 317  eP       P        13 50 11.6 -1.4
      comp=Z,12nm,0.5s,SNR=6.0
MOX   Moxa               79.42 320  eP       P        13 50 12.3 -0.4
      comp=Z,52nm,1.8s,baz=91,slow=5.4
MOX                                 eL       L        14 31 38.9
      comp=Z,771nm,18.4s
FUR   Furstenfeldbru     79.62 318  eP       P        13 50 13.2 -0.7
      comp=Z,97nm,1.7s,baz=91,slow=5.4
FUR                                 eL       L        14 28 28.1
      comp=Z,374nm,21.8s
GRF   Grafenberg Arr     79.66 319  eP       P        13 50 14.2 +0.2
      comp=Z,149nm,2.1s,baz=91,slow=5.4
GRF                                 eL       L        14 31 19.8
      comp=Z,678nm,18.4s
SQTA  Sankt Quirin       79.67 317  i P      P        13 50 13.3 -1.0
      comp=Z,14nm,0.5s,SNR=9.5
NC405 NORSAR Array S     79.69 331   P       P        13 50 13.6 -0.4
MOTA  Moosalm            79.74 317  eP       P        13 50 13.4 -1.3
      comp=Z,30nm,1.0s,SNR=10
NC602 NORSAR Array S     79.76 330  eP       P        13 50 13.3 -1.0
NC602 NORSAR Array S     79.76 330   P       P        13 50 12.7 -1.6
NC602                                IAmb    IAmb     13 50 13.9
      comp=Z,76nm,0.8s
NSS   Namsos             79.77 334  eP       P        13 50 14.1 -0.1
NC303 NORSAR Array S     79.86 331   P       P        13 50 14.4 -0.5
NC303                                IAmb    IAmb     13 50 14.6
      comp=Z,110nm,1.1s
NB201 NORSAR Array S     79.89 331   P       P        13 50 14.5 -0.6
NB2   NORSAR Subarra     79.93 331   P       P        13 50 14.0 -1.3
      comp=Z,11nm,0.6s,baz=89,slow=6.2
NB2   NORSAR Subarra     79.93 331   P       P        13 50 14.0 -1.3
      baz=89,slow=6.2
NOA   NORSAR Array B     79.93 331   P       P        13 50 14.3 -1.0
      comp=Z,20nm,0.8s,baz=92,slow=5.6,SNR=68
NOA                                  LR      LR       14 29 36.4
      comp=Z,847nm,19.9s,baz=120,slow=39
RETA  Reutte             79.97 317  eP       P        13 50 15.1 -0.8
      comp=Z,38nm,1.1s,SNR=14
FETA  Feichten           79.99 316  eP       P        13 50 15.1 -1.0
      comp=Z,23nm,1.1s,SNR=10
HSPB  Hornsund (broa     80.01 347  eP       P        13 50 15.6 +0.3
ASSE  Asse, Remlinge     80.02 322  eP       P        13 50 15.4 -0.4
      comp=Z,61nm,1.5s,baz=91,slow=5.4
SPA0  Spitsbergen Ar     80.03 348  eP       P        13 50 15.1 -0.4
SPA0  Spitsbergen Ar     80.03 348   P       P        13 50 15.4 -0.1
SPA0                                 IAmb    IAmb     13 50 16.3
      comp=Z,85nm,1.1s
NAO01 NORSAR Array S     80.08 330   P       P        13 50 15.2 -0.9
OSL   Oslo               80.14 329  eP       P        13 50 16.4 +0.1
NBO00 NORSAR Array S     80.14 331   P       P        13 50 15.8 -0.7
CLZ   Clausthal          80.21 321  eP       P        13 50 16.7 -0.3
      comp=Z,100nm,1.7s,baz=91,slow=5.4
BSEG  Bad Segeberg       80.25 323  eP       P        13 50 17.2 +0.1
      comp=Z,100nm,1.4s,baz=91,slow=5.4
BSEG                                eL       L        14 30 45.6
      comp=Z,815nm,19.4s
SUR   Sutherland         80.30 235   P       P        13 50 19.5 +1.5
SUR                                  IAmb    IAmb     13 50 30.0
      comp=Z,55nm,1.1s
NRDL  Niedersach Rie     80.37 322  eP       P        13 50 17.9 +0.2
      comp=Z,129nm,1.7s,baz=91,slow=5.4
UBR   Ueberruh           80.41 317  eP       P        13 50 17.4 -0.8
      comp=Z,79nm,2.0s,baz=91,slow=5.4
GTTG  Gottingen          80.46 321  eP       P        13 50 18.2 -0.1
      comp=Z,51nm,1.3s,baz=91,slow=5.4
DAVA  Damuels            80.57 317  eP       P        13 50 18.6 -0.6
      comp=Z,37nm,1.2s,SNR=10
KONO  Kongsberg          80.70 329ceP        P        13 50 19.3 -0.1
KONO                                 pmax    pmax
      comp=Z,60nm,1.7s
DOMB  Dombas             80.99 332  eP       P        13 50 20.6 -0.4
KBS   Kingsbay           81.02 349  eP       P        13 50 20.0 -0.8
SKAR  Skarslia           81.35 330  eP       P        13 50 22.1 -0.8
KEST  Kesra              81.42 305   P       P        13 50 23.9  0.0
      comp=Z,9.9nm,0.8s,baz=109,slow=1.8,SNR=7.9
KEST                                 LR      LR       14 33 10.4
      comp=Z,328nm,18.7s,baz=26,slow=41
KEST  Kesra              81.42 305   P       P        13 50 24.3 +0.4
KEST                                 IAmb    IAmb     13 50 37.0
      comp=Z,100nm,1.9s
TNS   Taunus Mts         81.45 320  eP       P        13 50 23.4 -0.3
      comp=Z,78nm,2.0s,baz=91,slow=5.4
TNS                                 eL       L        14 33 42.2
      comp=Z,788nm,18.7s
BFO   Black Forest       81.59 318  eP       P        13 50 23.6 -0.9
      comp=Z,23nm,1.2s,baz=91,slow=5.4
BFO                                 eL       L        14 31 15.3
      comp=Z,532nm,19.6s
MOL   Molde              81.70 332  eP       P        13 50 24.6  0.0
IBBN  Ibbenburen         81.81 322  eP       P        13 50 25.4  0.0
      comp=Z,112nm,1.7s,baz=91,slow=5.4
BUG   Bochum--Univer     82.15 321  eP       P        13 50 27.0 -0.2
      comp=Z,76nm,1.6s,baz=91,slow=5.4
ODD1  Odda               82.20 329  eP       P        13 50 26.6 -0.8
BLS5  Blasjo             82.30 329  eP       P        13 50 28.4 +0.5
AHRW  Bad Neuenahr-A     82.31 320  eP       P        13 50 28.1  0.0
      comp=Z,76nm,1.7s,baz=91,slow=5.4
ECH   Echery             82.37 318   P       P        13 50 28.9 +0.3
ECH                                  pmax    pmax
      comp=Z,13nm,1.2s
ECH   Echery             82.37 318   P       P        13 50 28.9 +0.3
HYA   Hoyanger           82.37 331  eP       P        13 50 28.2 +0.1
SENIN Lac Senin/Sane     82.38 316   P       P        13 50 28.4 -0.5
BER   Bergen             82.83 330  eP       P        13 50 30.9 +0.3
ASK   Askoy              82.89 330  eP       P        13 50 30.7 -0.2
WLF   Walferdange        82.95 319   P       P        13 50 30.7 -0.8
      comp=Z,21nm,1.6s
WLF   Walferdange        82.95 319  eP       P        13 50 31.6 +0.1
      comp=Z,100nm,2.0s,baz=91,slow=5.4
MEM   Membach            82.99 320   P       P        13 50 30.9 -0.8
BHOU  Houvegnez          83.00 320   P       P        13 50 31.4 -0.4
BCLA  Clavier            83.45 320   P       P        13 50 33.2 -0.8
      comp=Z,17nm,1.9s
BGES  Gesves             83.59 320   P       P        13 50 34.0 -0.8
BMRD  Maredsous          83.80 320   P       P        13 50 33.5 -2.3
      comp=Z,15nm,2.0s
DOU   Dourbes            83.93 320   P       P        13 50 36.0 -0.5
SNF   Seneffe            84.09 320   P       P        13 50 36.4 -0.9
SYO   Syowa Base         85.26 197⇓iX        P        13 50 40.0 -2.7
TAM   Tamanrasset        85.88 292   IAMs_20 IAMs_20  14 28 31.5
      comp=Z,887nm,20.0s
THZ   Tophouse           86.71 133   IAmb    IAmb     13 50 58.7
      comp=Z,26nm,0.7s
ANM   Nome               87.56  25   P       P        13 50 54.0 -0.2
ANM                                  pmax    pmax
      comp=Z,36nm,1.3s
ANM   Nome               87.56  25   P       P        13 50 54.0 -0.2
ANM                                  IAmb    IAmb     13 51 02.9
      comp=Z,36nm,1.3s
DAG   Danmarks Havn      87.67 348⇓iP        P        13 50 53.2 -1.3
      comp=Z,15nm,0.8s
DAG   Danmarks Havn      87.67 348⇓iP        P        13 50 53.2 -1.3
DAG                                  pmax    pmax
      comp=Z,15nm,0.8s
RDOG  Red Dog Mine       87.69  22   P       P        13 50 53.3 -1.6
RDOG                                 IAmb    IAmb     13 51 03.2
      comp=Z,57nm,1.7s
MSWZ  Moikau Station     88.36 132   P       P        13 50 58.8 +0.3
PLWZ  Palliser           88.39 132   P       P        13 50 58.9 +0.2
TOC2  Torodi Ar. Sit     90.70 283   IAMs_20 IAMs_20  14 31 14.0
      comp=Z,1µm,20.0s
TOC3  Torodi Ar. Sit     90.70 283   IAMs_20 IAMs_20  14 31 04.0
      comp=Z,1µm,21.0s
TOB2  Torodi Ar. Sit     90.71 283   IAMs_20 IAMs_20  14 31 03.3
      comp=Z,1µm,21.0s
TOC1  Torodi Ar. Sit     90.71 283   IAMs_20 IAMs_20  14 31 01.4
      comp=Z,1µm,20.0s
TOB3  Torodi Ar. Sit     90.71 283   IAMs_20 IAMs_20  14 31 03.5
      comp=Z,1µm,20.0s
TOA2  Torodi Ar. Sit     90.72 283   IAMs_20 IAMs_20  14 31 03.5
      comp=Z,1µm,20.0s
TOC4  Torodi Ar. Sit     90.72 283   IAMs_20 IAMs_20  14 31 03.6
      comp=Z,1µm,20.0s
TOA0  Torodi Ar. Sit     90.72 283   IAMs_20 IAMs_20  14 31 04.7
      comp=Z,1µm,20.0s
TORD  Torodi Ar. Bea     90.72 283   P       P        13 51 10.3 +0.2
      comp=Z,4.2nm,0.9s,baz=88,slow=5.2,SNR=22
TORD                                 PP      PP       13 54 51.1 +5.3
      comp=Z,2.6nm,1.0s,baz=72,slow=7.3,SNR=5.6
TORD                                 PKKPbc  PKKPbc   14 08 35.6 -0.3
      comp=Z,0.6nm,0.7s,baz=311,slow=3.1,SNR=3.5
TORD                                 LR      LR       14 31 24.5
      comp=Z,850nm,19.1s,baz=45,slow=35
TOA3  Torodi Ar. Sit     90.72 283   IAMs_20 IAMs_20  14 31 03.7
      comp=Z,1µm,20.0s
TOB4  Torodi Ar. Sit     90.73 283   IAMs_20 IAMs_20  14 31 05.0
      comp=Z,998nm,20.0s
TOB5  Torodi Ar. Sit     90.73 283   IAMs_20 IAMs_20  14 31 05.0
      comp=Z,1µm,20.0s
TOC7  Torodi Ar. Sit     90.73 283   IAMs_20 IAMs_20  14 31 05.0
      comp=Z,1µm,20.0s
TOC5  Torodi Ar. Sit     90.74 283   IAMs_20 IAMs_20  14 31 04.2
      comp=Z,1µm,20.0s
ESBB  Sonseca Array      91.40 310   P       P        13 51 12.8 -0.1
ESDC  Sonseca Array      91.40 310   P       P        13 51 12.8  0.0
      comp=Z,5.9nm,0.7s,baz=57,slow=4.5,SNR=16
ESDC                                 LR      LR       14 36 43.4
      comp=Z,285nm,19.6s,baz=10.0,slow=38
PAB   San Pablo          91.72 310   P       P        13 51 13.8 -0.6
PAB                                  pmax    pmax
      comp=Z,19nm,1.2s
PAB   San Pablo          91.72 310   P       P        13 51 13.8 -0.6
PAB                                  IAmb    IAmb     13 51 24.9
      comp=Z,19nm,1.1s
IMAR  Indian Mountai     91.77  22   P       P        13 51 14.9 +1.0
TOLK  Toolik Lake Re     92.10  19   P       P        13 51 16.1 +0.6
TOLK                                 IAmb    IAmb     13 51 16.7
      comp=Z,18nm,0.8s
TOLK  Toolik Lake Re     92.10  19   P       P        13 51 16.1 +0.6
      baz=297
COLD  Coldfoot           92.53  21   P       P        13 51 17.7 +0.3
COLD                                 IAmb    IAmb     13 51 31.6
      comp=Z,32nm,1.9s
VNDA  Vanda              92.73 168   P       P        13 51 17.8 -0.3
      comp=Z,1.3nm,0.8s,baz=279,slow=7.6,SNR=3.4
VNDA                                 LR      LR       14 31 11.5
      comp=Z,651nm,18.1s,baz=308,slow=34
SVW2  Sparrevohn         92.87  27   P       P        13 51 19.7 +0.6
MLY   Manley             93.31  23   P       P        13 51 21.0 -0.1
MLY                                  IAmb    IAmb     13 51 31.5
      comp=Z,35nm,1.7s
BPAW  Bear Paw Mtn.      93.62  24   P       P        13 51 23.0 +0.5
BMAR  Burnt Mountain     94.33  19   P       P        13 51 26.9 +1.1
SUMG  Summit             94.34 347  i P      P        13 51 25.4 -0.8
      comp=Z,27nm,1.0s
SUMG  Summit             94.34 347  i P      P        13 51 25.4 -0.8
SUMG                                 pmax    pmax
      comp=Z,27nm,1.0s
SUMG  Summit             94.34 347   P       P        13 51 25.6 -0.5
SUMG                                 IAmb    IAmb     13 51 36.2
      comp=Z,37nm,1.5s
MCK   McKinley           94.59  23   P       P        13 51 26.1 -0.9
MCK                                  pmax    pmax
      comp=Z,21nm,1.2s
MCK   McKinley           94.59  23   P       P        13 51 26.1 -0.9
MCK                                  IAmb    IAmb     13 51 30.3
      comp=Z,21nm,1.2s
NVL   N'lazarevskaya     94.70 199  eP       pP       13 51 37.6 +1.5
NVL                                  pmax    pmax
      comp=Z,9.0nm,0.7s
ILAR  Eielson Array      94.88  22   P       P        13 51 27.1 -1.1
      comp=Z,1.8nm,0.8s,baz=293,slow=4.4,SNR=18
ILAR                                 PP      PP       13 55 17.9 +1.1
      comp=Z,0.9nm,1.0s,baz=297,slow=6.7,SNR=4.6
ILAR                                 PKKPbc  PKKPbc   14 08 27.9 +1.2
      comp=Z,0.7nm,0.9s,baz=173,slow=3.4,SNR=4.7
ILAR                                 LR      LR       14 37 41.4
      comp=Z,565nm,18.0s,baz=322,slow=38
TULEG Thule              95.33 356   IAmb    IAmb     13 51 37.6
      comp=Z,18nm,1.1s
TULEG                                IAMs_20 IAMs_20  14 41 16.4
      comp=Z,1µm,22.0s
KDAK  Kodiak Island      95.56  30   P       P        13 51 31.5  0.0
      comp=Z,13nm,0.8s,baz=203,slow=3.9,SNR=4.3
INK   Inuvik             97.14  16   P       P        13 51 38.1 -0.3
      comp=Z,5.6nm,0.9s,baz=330,slow=5.2,SNR=10
INK   Inuvik             97.14  16   IAmb    IAmb     13 51 39.5
      comp=Z,24nm,1.4s
EPYK  Eagle Plains       97.47  18   P       P        13 51 39.8 -0.3
      baz=309
RES   Resolute Bay       97.58   2   IAmb    IAmb     13 51 48.9
      comp=Z,13nm,0.9s
QSPA  South Pole Qui     97.59 180   IAMs_20 IAMs_20  14 28 38.7
      comp=Z,1µm,21.0s
KIC   Kosan Boka         97.98 278  ePKP1    P        13 51 42.3 -1.1
      comp=Z,7.8nm,0.9s
DBIC  Dimbokro           98.05 278   P       Pdif     13 51 44.0 +0.3
      comp=Z,1.5nm,0.6s,baz=93,slow=3.4,SNR=3.8
DBIC                                 LR      LR       14 35 52.3
      comp=Z,1µm,19.1s,baz=64,slow=35
TIC   Toumodi            98.22 278  ePKP1    P        13 51 43.6 -0.9
LIC   Lamto              98.29 277  ePKP1    P        13 51 42.9 -1.9
      comp=Z,2.9nm,0.5s
C36M  Paulatuk           98.72  13   P       P        13 51 44.9 -0.6
      baz=322
YKA   Yellowknife Ar    106.58  14   Pdiff   Pdif     13 52 20.2 -0.4
      comp=Z,0.4nm,0.9s,baz=321,slow=4.4,SNR=4.1
YKA                                  PKiKP   PKiKP    13 56 29.4 -1.8
      comp=Z,0.4nm,0.8s,baz=317,slow=2.1,SNR=4.8
YKA                                  PP      PP       13 56 42.4 -2.8
      comp=Z,2.1nm,0.8s,baz=332,slow=7.1,SNR=15
YKA                                  PKKPbc  PKKPbc   14 07 50.1 -3.0
      comp=Z,0.4nm,0.6s,baz=156,slow=3.5,SNR=6.9
TBI   Tubuai            117.14 112  eLR      LR       14 32 17.7
      comp=Z,771nm,25.0s
PPT2  Papeete2          117.21 106  ePS      PS       14 07 43.5 -4.6
      comp=Z,208nm,25.0s
PPT2  Papeete2          117.21 106  eLR      LR       14 32 16.5
      comp=Z,1µm,31.8s
J04D  Umpqua Nationa    119.52  30   P       PKiKP    13 56 57.0 +0.3
      baz=318
J05D  Fort Rock, OR     119.91  29   P       PKiKP    13 56 57.6 +0.1
      baz=318
L04D  Klamath Falls     120.17  31   P       PKPdf    13 56 57.6 -0.2
      baz=317
MSO   Missoula          120.22  22   P       PKPdf    13 56 57.6 -0.2
      baz=327
EGMT  Eagleton          120.62  18   P       PKPdf    13 56 58.3 -0.2
      baz=332
O02D  Mt. Diablo Mer    121.39  33   P       PKiKP    13 57 01.1 +0.7
      baz=316
ULM   Lac du Bonnet     121.64   8   PKP     PKPdf    13 56 59.1 -1.1
      comp=Z,8.3nm,0.7s,baz=9.6,slow=2.3,SNR=21
MATQ  Matagami          122.35 354   P       PKPdf    13 57 01.1 -0.5
      baz=9.4
LAO   LASA Array        122.88  17   P       PKiKP    13 57 03.7 +0.7
      baz=336
LSQQ  Lebel-sur-Quev    122.97 353   P       PKPdf    13 57 02.5 -0.3
      baz=10
RLMT  Red Lodge         123.34  20   P       PKiKP    13 57 04.9 +0.7
      baz=332
MDND  Maddock           123.37  11   P       PKPdf    13 57 03.4 -0.2
      baz=344
H17A  Grant Village     123.53  21   P       PKiKP    13 57 06.2 +1.6
      baz=330
LATQ  La Tuque          123.97 349   P       PKPdf    13 57 04.5 -0.3
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	baz=15						
D58A	Chemin du LacG	124.27	349	P	PKPdf	13 57 04.6	-0.8
	baz=15						
EYMN	Ely	124.38	5	P	PKPdf	13 57 05.2	-0.4
	baz=353						
E61A	Lac Etchemin	124.42	347	P	PKPdf	13 57 05.7	-0.1
	baz=18						
F64A	Sherman	124.45	345	P	PKPdf	13 57 05.4	-0.3
	baz=21						
D57A	Chemin Vers le	124.52	350	P	PKPdf	13 57 05.2	-0.7
	baz=14						
D56A	ZEC Mazanza, M	124.63	351	P	PKPdf	13 57 05.6	-0.5
	baz=13						
D55A	Sainte-Anne-du	124.77	351	P	PKPdf	13 57 06.0	-0.3
	baz=12						
D53A	Lac Vacive, Po	125.00	353	P	PKPdf	13 57 06.4	-0.4
	baz=9.6						
NVAR	Mina Array Bea	125.03	31	PKP	PKiKP	13 57 08.2	+0.4
	comp=Z,3.8nm,0.8s,baz=279,slow=1.7,SNR=34						
E58A	La Victoria	125.03	349	P	PKPdf	13 57 06.6	-0.3
	baz=15						
D50A	G1974 Best Tow	125.13	355	P	PKPdf	13 57 06.2	-0.8
	baz=7.0						
D49A	Beulah Townshi	125.14	356	P	PKPdf	13 57 06.5	-0.6
	baz=5.2						
E57A	Chemin Saint G	125.15	350	P	PKPdf	13 57 06.9	-0.3
	baz=14						
E56A	St. Veronique	125.17	351	P	PKPdf	13 57 06.8	-0.3
	baz=13						
D51A	Lot 18 Range I	125.17	355	P	PKPdf	13 57 06.4	-0.7
	baz=7.6						
F60A	Warwick	125.17	348	P	PKPdf	13 57 06.8	-0.4
	baz=17						
D48A	Paudash Townsh	125.27	357	P	PKPdf	13 57 06.5	-0.8
	baz=4.7						
BW06	Boulder Array	125.31	21	P	PKPdf	13 57 07.6	-0.3
	baz=331						
PDAR	Pinedale Array	125.31	21	PKP	PKPdf	13 57 07.3	-0.5
	comp=Z,4.3nm,0.8s,baz=55,slow=1.3,SNR=40						
PDAR				PKKPbc	PKKPab	14 06 44.2	-2.2
	comp=Z,0.4nm,0.6s,baz=138,slow=5.4,SNR=4.5						
D47A	Chapleau	125.44	358	P	PKPdf	13 57 07.2	-0.5
	baz=3.1						
G63A	Kingsbury	125.47	346	P	PKiKP	13 57 08.0	-0.1
	baz=20						
D46A	Sault St. Mari	125.64	359	P	PKPdf	13 57 07.7	-0.4
	baz=2.0						
E53A	Dumoine, Ponti	125.69	353	P	PKPdf	13 57 07.5	-0.7
	baz=9.8						
E51A	G1948 Merrick	125.73	355	P	PKPdf	13 57 07.4	-0.8
	baz=7.5						
RSSD	Black Hills	125.85	16	P	PKPdf	13 57 08.5	-0.3
	baz=338						
E52A	Mattawa	125.89	354	P	PKPdf	13 57 08.0	-0.5
	baz=8.6						
E48A	Lockeyer	125.98	357	P	PKPdf	13 57 08.3	-0.4
	baz=4.3						
PAGB	Antelope Grade	125.98	35	IAMs_20	IAMs_20	15 00 04.8	
	comp=Z,458nm,19.0s						
E47A	Iron Bridge	126.05	358	P	PKPdf	13 57 08.4	-0.4
	baz=2.9						
DUG	Dugway, Tooele	126.21	26	P	PKiKP	13 57 10.1	+0.1
	baz=326						
TAOE	Nuku Hiva Isla	126.22	95	*e*LR	LR	14 36 27.2	
	comp=Z,1μm,27.0s						
F51A	Arnstein	126.37	355	P	PKPdf	13 57 09.1	-0.3
	baz=7.1						
R11A	Troy Canyon, C	126.44	29	P	PKiKP	13 57 11.0	+0.4
	baz=322						
K22A	Casper	126.44	19	IAMs_20	IAMs_20	14 56 31.5	
	comp=Z,730nm,19.0s						
K22A	Casper	126.44	19	P	PKPdf	13 57 09.4	-0.6
	baz=334						
F48A	Evansville	126.65	357	P	PKPdf	13 57 09.1	-0.9
	baz=3.8						
SUSD	Miller	126.76	12	IAMs_20	IAMs_20	14 59 34.5	
	comp=Z,1μm,20.0s						
F45A	CMU Biological	126.87	360	P	PKPdf	13 57 10.5	+0.1
	baz=0.2						
PLVO	Plevna	126.93	352	IAMs_20	IAMs_20	14 55 23.0	
	comp=Z,1μm,22.0s						
MPMC	Manual Prospec	127.25	32	P	PKiKP	13 57 12.7	+0.4
	baz=319						
H56A	Elgin	127.26	351	P	PKPdf	13 57 11.3	+0.1
	baz=12						
G47A	Hillman	127.35	358	P	PKPdf	13 57 11.1	-0.3
	baz=2.3						
ECSD	EROS Data Cent	127.88	10	P	PKPdf	13 57 12.0	-0.4
	baz=346						
O20A	White River Ci	128.09	22	P	PKPdf	13 57 13.3	+0.1
	baz=331						
GSC	Goldstone, Bar	128.18	32	P	PKiKP	13 57 14.2	+0.2
	baz=320						
I51A	Listowel	128.57	356	P	PKPdf	13 57 13.9	+0.2
	baz=5.9						
PV04	Paradox Valley	129.34	24	IAMs_20	IAMs_20	15 03 05.7	
	comp=Z,939nm,22.0s						
JFWS	Jewell Farm	129.47	4	P	PKPdf	13 57 15.3	-0.2
	baz=354						
PV03	Paradox Valley	129.49	24	IAMs_20	IAMs_20	15 01 44.4	
	comp=Z,852nm,20.0s						
AAM	Ann Arbor	130.21	358	IAMs_20	IAMs_20	15 04 34.7	
	comp=Z,946nm,20.0s						
MVCO	Mesa Verde	130.53	24	P	PKiKP	13 57 19.1	+0.2
	baz=330						
L46A	Eue Claire	130.54	1	IAMs_20	IAMs_20	15 02 38.2	
	comp=Z,926nm,20.0s						
N58A	Sunbury	131.00	351	IAMs_20	IAMs_20	14 58 32.6	
	comp=Z,961nm,19.0s						
T25A	Trinidad	132.11	20	P	PKPdf	13 57 21.1	+0.2
	baz=335						
P43A	Skaggs, Pawnee	132.78	4	IAMs_20	IAMs_20	15 06 40.6	
	comp=Z,873nm,20.0s						
Q58A	Fox Den Farm,	133.00	351	P	PKPdf	13 57 22.1	-0.2
	baz=11						
P48A	Milroy	133.09	360	P	PKPdf	13 57 21.8	-0.6
	baz=0.3						
OLIL	Olney	133.76	3	IAMs_20	IAMs_20	15 03 13.6	
	comp=Z,828nm,21.0s						
S58A	Poland Farm, P	134.36	351	IAMs_20	IAMs_20	15 05 05.6	
	comp=Z,939nm,21.0s						
BLA	Blacksburg	135.05	354	IAMs_20	IAMs_20	14 57 49.9	
	comp=Z,773nm,21.0s						
AMTX	Amarillo	135.07	19	IAMs_20	IAMs_20	15 05 40.7	
	comp=Z,1μm,22.0s						
T45A	Paducah	135.44	3	IAMs_20	IAMs_20	15 07 07.2	
	comp=Z,708nm,18.0s						
T47A	Sharon Grove	135.54	2	IAMs_20	IAMs_20	15 03 25.6	
	comp=Z,772nm,20.0s						
U40A	Yellville	135.69	8	IAMs_20	IAMs_20	15 05 45.5	
	comp=Z,868nm,20.0s						
U40A	Yellville	135.69	8	P	PKPdf	13 57 27.9	+0.5
	baz=350						
U49A	Red Boiling Sp	136.03	0	IAMs_20	IAMs_20	15 04 18.6	
	comp=Z,769nm,19.0s						
GLAT	Glass	136.15	4	IAMs_20	IAMs_20	15 05 15.8	
	comp=Z,913nm,20.0s						
LCAR	Lake Charles	136.18	6	IAMs_20	IAMs_20	15 02 13.6	
	comp=Z,851nm,20.0s						
FCAR	Ozark Folk Cen	136.24	7	IAMs_20	IAMs_20	15 07 40.3	
	comp=Z,680nm,20.0s						
CLTN	Cedars of Leba	136.45	1	IAMs_20	IAMs_20	15 04 42.7	
	comp=Z,573nm,20.0s						
LPAR	Lepanto	136.73	5	IAMs_20	IAMs_20	14 59 58.1	
	comp=Z,707nm,20.0s						
V48A	Smith Brothers	136.79	1	IAMs_20	IAMs_20	15 04 48.7	
	comp=Z,744nm,20.0s						
WHAR	Wooly Hollow	136.81	8	IAMs_20	IAMs_20	15 06 54.4	
	comp=Z,726nm,19.0s						
KMSC	Kings Mountain	137.19	355	IAMs_20	IAMs_20	15 01 34.5	
	comp=Z,979nm,21.0s						
MET	Memphis--Engin	137.24	5	IAMs_20	IAMs_20	15 06 51.6	
	comp=Z,979nm,21.0s						
SWET	Sewanee	137.33	0	IAMs_20	IAMs_20	15 02 38.9	
	comp=Z,635nm,20.0s						
MIAR	Mount Ida	137.35	10	P	PKPdf	13 57 30.3	-0.2
	baz=348						
BG3	Lake Jocassee	137.46	357	IAMs_20	IAMs_20	15 02 03.6	
	comp=Z,686nm,21.0s						
X40A	Basin Creek Fa	137.52	9	IAMs_20	IAMs_20	15 05 25.2	
	comp=Z,874nm,20.0s						
PAULI	Pauline	137.56	355	IAMs_20	IAMs_20	15 02 08.0	
	comp=Z,898nm,21.0s						
X51A	Calhoun	137.97	359	IAMs_20	IAMs_20	15 02 00.8	
	comp=Z,994nm,22.0s						
X48A	Hartselle	138.07	2	IAMs_20	IAMs_20	15 00 55.6	
	comp=Z,649nm,20.0s						
Y58A	Scranton	138.23	352	IAMs_20	IAMs_20	15 06 58.0	
	comp=Z,786nm,20.0s						
WHTX	Lake Whitney,	139.00	15	IAMs_20	IAMs_20	15 07 07.5	
	comp=Z,868nm,19.0s						
GOGA	Godfrey	139.07	357	IAMs_20	IAMs_20	15 03 04.0	
	comp=Z,868nm,21.0s						
Z50A	Ashland	139.28	0	IAMs_20	IAMs_20	15 08 50.7	
	comp=Z,861nm,20.0s						
TXAR	Lajitas Array	139.36	24	PKhKP	PKPpre	13 57 24.9	
	comp=Z,0.5nm,0.5s,baz=271,slow=2.9,SNR=11						
TXAR				PKP	PKiKP	13 57 35.6	-1.1
	comp=Z,1.4nm,0.5s,baz=125,slow=0.9,SNR=10						
TXAR				PP	PP	14 00 25.7	-1.4
	comp=Z,1.0nm,0.8s,baz=0.0,slow=3.8,SNR=4.4						
TXAR	Lajitas Array	139.36	24	PKHKP	PKPpre	13 57 25.5	
TXAR	Lajitas Array	139.36	24	PKPpre	PKPpre	13 57 25.5	
JCT	Junction City	139.73	19	IAMs_20	IAMs_20	15 09 04.3	
	comp=Z,646nm,19.0s						
JCT	Junction City	139.73	19	P	PKPdf	13 57 34.7	-0.4
	baz=338						
SPB	Sao Paulo	140.00	242	IAMs_20	IAMs_20	14 51 34.6	
	comp=Z,742nm,21.0s						
VBMS	Vicksburg	140.06	6	IAMs_20	IAMs_20	15 10 07.3	
	comp=Z,688nm,18.0s						
255A	Hazlehurst	140.48	356	IAMs_20	IAMs_20	15 04 15.5	
	comp=Z,823nm,20.0s						
250A	Grady	140.55	1	IAMs_20	IAMs_20	15 04 41.3	
	comp=Z,597nm,20.0s						
352A	Blakely	141.04	359	IAMs_20	IAMs_20	15 05 33.4	
	comp=Z,881nm,20.0s						
BDFB	Brasilia	142.24	254	PKhKP	PKPdf	13 57 35.7	-4.3
	comp=Z,5.5nm,0.6s,baz=161,slow=3.6,SNR=7.4						
PLCA	Paso Flores	144.41	200	PKP	PKPbc	13 57 42.0	+0.4
	comp=Z,12nm,0.8s,baz=197,slow=2.0,SNR=26						
PLCA				SKPbc	SKPbc	14 01 19.4	-0.9
	comp=Z,6.0nm,0.9s,baz=195,slow=8.3,SNR=6.9						
PLCA	Paso Flores	144.41	200	PKIKP	PKPbc	13 57 42.0	+0.5
PLCA	Paso Flores	144.41	200		PKPbc	13 57 42.2	+0.6
ANWB	Willy Bob	145.41	317	*e*P	PKPbc	13 57 42.7	-2.5
GO06	Curarrehue	145.75	200		PKPab	13 57 47.2	+1.0
SMRT	St. Maarten	145.99	319		PKPbc	13 57 47.1	0.0
SMRT				IAMs_20	IAMs_20	15 04 35.4	
	comp=Z,664nm,20.0s						
SKI	Saint Kitts	146.29	318	*e*P	PKPdf	13 57 46.7	-0.2
SKI	Saint Kitts	146.29	318	PKP2	PKPbc	13 57 48.2	+0.2
SKI				MLR	MLR		
	comp=Z,600nm,21.0s						
SKI	Saint Kitts	146.29	318		PKPbc	13 57 48.1	+0.2
SKI				IAMs_20	IAMs_20	15 05 11.4	
	comp=Z,581nm,21.0s						
SEUS	St. Eustatius	146.33	318	*e*P	PKPdf	13 57 44.7	-2.3
SEUS	St. Eustatius	146.33	318	IAMs_20	IAMs_20	15 03 43.6	
	comp=Z,486nm,20.0s						
MLYT	Lee's Yard	146.35	316	*e*P	PKPbc	13 57 48.4	+0.2
SABA	Saba	146.41	319	*e*P	PKPbc	13 57 47.8	-0.5
SABA	Saba	146.41	319	IAMs_20	IAMs_20	15 00 05.6	
	comp=Z,498nm,20.0s						
DWS	Wesley	146.51	314	*e*P	PKPdf	13 57 38.5	-8.8
MDPV	Dominica, Penn	146.55	314	*e*P	PKiKP	13 57 56.4	+4.7
MDPO	Dominica; Chan	146.61	314	*e*P	PKPbc	13 57 49.2	+0.3
BBGH	Gun Hill	146.74	308	*e*P	PKPab	13 57 50.4	-0.1
FDF	Fort de France	146.94	312	*e*P	PKPdf	13 57 36.5	-12
FDF	Fort de France	146.94	312	PKP2	PKPbc	13 57 50.4	+0.4
FDF	Fort de France	146.94	312		PKPbc	13 57 50.4	+0.4
STVI	Saint Thomas	146.96	322		PKPbc	13 57 50.2	+0.3
CUPR	Culebra, Puert	147.19	322		PKPbc	13 57 50.8	+0.3
CPUP	Villa Florida	147.22	232	PKPbc	PKPdf	13 57 48.6	+0.4
	comp=Z,17nm,0.7s,baz=97,slow=2.8,SNR=47						
CPUP	Villa Florida	147.22	232		PKPbc	13 57 50.8	+0.4
SLBI	Saint Lucia, B	147.27	311	*e*P	PKPab	13 57 52.3	-0.3
SLAC	Saint Lucia, A	147.29	311	*e*P	PKPbc	13 57 51.6	+0.6
SLB	Belfond	147.45	311	*e*P	PKPab	13 57 52.6	-0.8
MTP	Monte Pirata	147.52	322		PKPbc	13 57 51.7	+0.2
GRTK	Grand Turk	147.62	334		PKPbc	13 57 51.7	0.0
SJG	San Juan	147.87	323	IAMs_20	IAMs_20	15 05 46.4	
	comp=Z,461nm,21.0s						
SSV	Crater Summit	147.88	310	*e*P	PKPbc	13 57 52.4	-0.2
SVV	Soufriere Volc	147.90	310	*e*P	PKPbc	13 57 52.8	+0.2
SVB	Belmont	147.96	310	*e*P	PKPab	13 57 55.6	+0.2
MLPR	Magueyes Islan	148.50	324		PKPbc	13 57 54.1	0.0
CRPR	Cabo Rojo, PR	148.51	324		PKPbc	13 57 54.1	0.0
TOSP	Speyside	148.59	307	*e*P	PKPab	13 57 59.1	+1.2
GRGR	Grenville	148.97	309	*e*P	PKPab	13 58 04.8	+5.4
TRN	Trinidad (W)	149.66	307	*e*P	PKiKP	13 57 58.2	+0.1
TPP	Pointe-a-Pierr	149.89	306	*e*P	PKiKP	13 57 58.7	0.0
SDDR	Presa de Saban	149.89	332	IAMs_20	IAMs_20	15 06 01.9	
	comp=Z,618nm,22.0s						
AAGR	Agrelo	150.25	210	*i* P	PKiKP	13 57 58.9	-0.2
GUIV	Guiria	150.31	308	*e*P	PKPdf	13 57 56.0	+2.5
ASAL	Salagasta	150.65	210	*i* P	PKiKP	13 57 59.7	-0.2
RTCV	Cerro Valdivia	151.08	211	*i* P	PKiKP	13 58 00.6	-0.1
APLL	PUNTA DE LOS L	151.10	216	*i* P	PKPbc	13 58 00.4	+0.2
AMOG	MOGNA	151.78	213	*i* P	PKPbc	13 58 01.8	0.0
CYA	Choya	152.04	220	*i* P	PKPbc	13 58 02.6	+0.1
ACLC	CERRO LA CRUZ	152.06	217	*i* P	PKiKP	13 58 03.1	+0.1
ACCO	Cerro Coronel	152.36	212	*i* P	PKPbc	13 58 03.6	+0.1
AROD	Rodeo	152.91	212	*i* P	PKPbc	13 58 04.4	-0.3
PTGA	Pitinga	153.37	284	IAMs_20	IAMs_20	15 05 00.9	
	comp=Z,610nm,21.0s						
SDV	Santo Domingo	157.67	317	IAMs_20	IAMs_20	15 14 40.1	
	comp=Z,498nm,21.0s						
TGUH	Tegucigalpa,Un	158.34	4	IAMs_20	IAMs_20	15 21 13.6	
	comp=Z,628nm,20.0s						
LPAZ	La Paz	160.76	242	PKP	PKPdf	13 58 07.4	-0.8
	comp=Z,2.9nm,0.8s,baz=296,slow=0.5,SNR=9.1						
ROSC	El Rosal	163.10	317	PKP	PKPdf	13 58 10.9	+0.4
	comp=Z,8.1nm,0.4s,baz=102,slow=20,SNR=2.9						

KEA 14 13:38:36.2±0.0**, 40.°65N×122.°73E, h0^{km}, ML2.6**/3**,**
Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUJ	Sinuiju	1.46	111	Pg	Pn	13 39 03.8	+0.1
SUJ				Sg	Sg	13 39 22.6	-0.3
PYS	Pyongsong	2.78	119	Sg	Sg	13 40 03.6	-1.9
PYAG	Pyongyang	2.83	123	Sg	Sg	13 40 05.6	-1.4
KGE	Kanggye	2.96	83	Sg	Sb	13 40 08.0	+1.3

NEIC ***14*** *14:28:37.4±1.5, 6.°21S±0.°08×154.°46E±0.°07, h48^{km}±5^{km},*
mb4.3/11, Error ellipse: s-maj=12.3km s-min=9.3km
az=203.0
IDC ***14*** *14:28:39.9±1.4, 6.°15S×154.°37E, h72^{km}±13^{km}, mb3.5/10,*
mb1 3.8/15, mb1mx3.6/36, mbtmp4.0/15, MS3.5/1,
Ms1 3.7/1, ms1mx3.0/14, Error ellipse: s-maj=14.2km
s-min=9.9km az=48.0
ISC 14 14:28:36.7±0.5**, 6.°08S**±0.°06×**154.°44E**±0.°06**, h35^{km}, n41,**
σ**1.^{s}95**/42**, mb4.0**/14**, Bougainville-Solomon Islands**
region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	2.94	310	Pn	Pn	14 29 18.6	-2.4
RABL				Sn	Sn	14 29 58.6	+3.4
KRVT	Keravat (AS076	2.98	306	P	Pn	14 29 24.6	+3.1
	11nm,0.3s,baz=151,slow=1.7,SNR=43						
KRVT				S	Sn	14 29 59.6	+3.5
	38nm,0.3s,baz=104,slow=23,SNR=10						
HNR	Honiara	6.39	122	P	Pn	14 30 11.4	+2.9
	8.9nm,0.3s,baz=256,slow=4.2,SNR=3.4						
HNR				S	Sn	14 31 25.4	+5.1
	2.3nm,0.3s,baz=241,slow=19,SNR=1.8						
PMG	Port Moresby	7.93	245	P	Pn	14 30 31.4	+1.8
	10nm,0.3s,baz=48,slow=8.9,SNR=56						
PMG				S	Sn	14 32 00.9	+2.7
	4.5nm,0.3s,baz=149,slow=23,SNR=6.9						
PMG	Port Moresby	7.93	245		Pn	14 30 31.8	+2.2
PMG					Sn	14 31 58.9	+0.7
CTA	Charters Tower	16.03	209	P	P	14 32 20.8	-2.0
	0.2nm,0.3s,baz=45,slow=12,SNR=6.2						
DZM	Mont Dzumac	19.68	145	P	P	14 33 02.3	-0.8
	0.5nm,0.3s,baz=307,slow=15,SNR=4.4						
DZM	Mont Dzumac	19.68	145	P	P	14 32 59.5	-3.6
DZM				IAmb	IAmb	14 33 17.4	
	comp=Z,24nm,1.4s						
WR0	Warramunga Arr	23.75	233	P	P	14 33 45.3	-0.8
WR0				IAmb	IAmb	14 34 01.5	
	comp=Z,4.5nm,0.8s						
WRAB	Tennant Creek	23.89	233	P	P	14 33 46.3	-1.1
WRA	Warramunga Arr	23.90	233	P	P	14 33 46.1	-1.4
ASAR	Alice Springs	26.38	226	P	P	14 34 08.4	-1.6
	comp=Z,0.4nm,0.5s,baz=58,slow=8.9,SNR=8.6						
STKA	Stephens Creek	28.33	203	P	P	14 34 26.0	-1.4
	comp=Z,1.5nm,0.9s,baz=36,slow=14,SNR=1.7						
STKA	Stephens Creek	28.33	203	IAmb	IAmb	14 34 35.4	
	comp=Z,1.4nm,1.4s						
FITZ	Fitzroy Crossi	30.53	244	P	P	14 34 47.2	+0.2
	comp=Z,1.4nm,0.9s,baz=174,slow=0.0,SNR=4.0						
LTZ	Lake Taylor	39.81	159	P	P	14 36 04.4	-2.2
LTZ				IAmb	IAmb	14 36 14.8	
	comp=Z,7.2nm,1.2s						
TPUB	Ta-pu	44.09	313	P	P	14 36 41.5	-0.3
SSLB	Suanglung	44.15	313	P	P	14 36 42.7	+0.4
MJAR	Matsushiro Arr	45.04	341	P	P	14 36 49.4	+0.2
	comp=Z,2.4nm,1.0s,baz=160,slow=8.4,SNR=2.8						
KSRS	Korea Array	49.88	332	P	P	14 37 25.8	-1.0
	comp=Z,0.9nm,0.7s,baz=153,slow=9.7,SNR=3.7						
CMAR	Chiang Mai Arr	59.89	295	LR	LR	15 05 43.5	
	comp=Z,37nm,18.2s,baz=348,slow=37						
SONM	Songino Array	68.27	327	P	P	14 39 34.8	+0.5
	comp=Z,0.6nm,0.4s,baz=145,slow=5.5,SNR=6.0						
SONM	Songino Array	68.27	327	IAmb	IAmb	14 39 36.4	
	comp=Z,1.4nm,1.2s						
LSA	Lhasa	70.30	304	IAmb	IAmb	14 39 48.8	
	comp=Z,4.4nm,0.9s						
TAPN	Taplejung	72.46	301	*e*P	P	14 40 00.4	-0.1
	comp=Z,16nm,0.9s						
ODAN	Odare	72.59	300	*e*P	P	14 40 01.0	-0.2
	comp=Z,22nm,0.7s						
RAMN	Ramite	73.30	300	*e*P	P	14 40 04.8	-0.6
	comp=Z,6.0nm,0.5s						
JIRN	Jiri	73.84	301	*e*P	P	14 40 08.4	-0.4
GUN	Gumba	74.17	301	*e*P	P	14 40 10.3	-0.4
	comp=Z,19nm,0.8s						
PKI	Pulchoki	74.48	301	*e*P	P	14 40 11.5	-1.0
PKIN	Phulchoki	74.50	301	*e*P	P	14 40 11.3	-1.2
KKN	Kakani	74.65	301	*e*P	P	14 40 12.2	-1.1
DMN	Daman	74.75	301	*e*P	P	14 40 13.7	-0.2
	comp=Z,28nm,0.8s						
GKN	Gorkha	75.26	301	*e*P	P	14 40 16.2	-0.5
DANN	Dangsing	76.09	301	*e*P	P	14 40 20.6	-1.1
	comp=Z,13nm,0.7s						
MKAR	Makanchi Array	82.36	319	P	P	14 40 54.2	-1.0
	comp=Z,0.3nm,0.6s,baz=99,slow=7.0,SNR=4.4						
ILAR	Eielson Array	82.73	22	P	P	14 40 56.8	+0.1
	comp=Z,0.4nm,0.8s,baz=250,slow=5.2,SNR=5.8						
NVAR	Mina Array Bea	91.59	52	P	P	14 41 39.9	-0.7
	comp=Z,0.7nm,0.8s,baz=267,slow=6.4,SNR=5.1						
NV11	Mina Array Sit	91.71	52	P	P	14 41 39.9	-1.3
NV11				IAmb	IAmb	14 41 49.6	
	comp=Z,1.3nm,0.9s						
YKA	Yellowknife Ar	95.79	28	P	P	14 41 57.5	-1.6
	comp=Z,0.2nm,0.7s,baz=239,slow=4.3,SNR=3.1						
TORD	Torodi Ar. Bea	152.24	287	PKPbc	PKPdf	14 48 27.1	+4.0
	comp=Z,1.1nm,0.6s,baz=70,slow=2.4,SNR=7.0						

INET ***14*** *14:50:07.1, 12.°43N×87.°74W, h68^{km}, ML3.7*
SNET 14 14:50:03.5±1.2**, 12.°22N×87.°69W, h16^{km}**±11^{km}**, ML3.4,**
Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	1.06	352	*e*P	Pb	14 50 23.2	-0.3
CNCH				*e*S	Sb	14 50 37.1	0.0
CNCH				IAML		14 50 37.7	
	comp=Z,2μm,0.3s						
COPN	Copaltepe	1.07	92	*e*P	Pb	14 50 22.7	-0.9
LCND	La Caada	1.10	350	*e*P	Pb	14 50 23.8	-0.3
MOMN	Momotombo	1.14	81	*e*P	Pn	14 50 22.9	-1.8
JUCU	Jucuar¡n	1.16	332	*e*P	Pn	14 50 24.5	-0.6
PACA	Pacayal	1.39	333	*e*P	Pn	14 50 27.9	-0.4
TECA	Tecapa	1.49	328	*e*P	Pn	14 50 29.6	-0.2
COEB	Comit de Eme	1.51	327	*e*P	Pn	14 50 30.0	+0.1
COEB				IAML		14 50 50.3	
	comp=Z,313nm,0.3s						
COEG	Centro de Oper	1.81	320	*e*P	Pn	14 50 33.6	-0.4
COEG				IAML		14 50 56.9	
	comp=Z,426nm,0.2s						
TGUH	Tegucigalpa,Un	1.87	12	*i* P	Pn	14 50 35.1	+0.2

SJA ***14*** *14:50:28.8±1.0, 23.°32S×68.°26W, h140^{km}±19^{km}, ML3.3,*
MW3.4
GUC ***14*** *14:50:29.7±0.6, 23.°34S×68.°32W, h147^{km}±4^{km}, ML3.6*
ISC 14 14:50:29.1±1.5**, 23.°29S**±0.°04×**68.°30W**±0.°05**,**
h152^{km}±12^{km}**, n28,** σ**0.^{s}87**/52**, 10C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	0.88	320	*e*P	Pn	14 50 53.5	0.0
LVC				*e*S	Sn	14 51 11.4	-0.7
LVC	Limon Verde	0.88	320	*i* P	Pn	14 50 53.5	0.0
LVC				*i* S	Sn	14 51 11.2	-0.8
LVC				IAML		14 51 12.6	
	comp=Z,365nm,0.2s						
PB15	IPOC Station P	1.08	274	⇑*i*P	Pn	14 50 54.5	-0.4
PB15				*e*S	Sn	14 51 13.6	-1.0
PB15	IPOC Station P	1.08	274	*i* P	Pn	14 50 55.4	+0.4
PB15				*i* S	Sn	14 51 14.9	+0.3
PB06	IPOC Station P	1.30	296	⇑*i*P	Pn	14 50 57.1	+0.1
PB06				*e*S	Sn	14 51 17.7	-0.6
PB06				IAML		14 51 19.6	
	comp=E,2μm,0.1s						
PB06	IPOC Station P	1.30	296	*i* P	Pn	14 50 57.5	+0.5
PB06				*i* P	Pn	14 50 57.5	+0.5
PB06				*i* S	Sn	14 51 18.2	0.0
PB06				*e*S		14 51 18.6	
PB09	IPOC Station P	1.72	330	⇑*i*P	Pn	14 51 02.4	+1.0
PB09				*e*S	Sn	14 51 26.9	+0.8
PB09				IAML		14 51 28.2	
	comp=E,362nm,0.5s						
PB09	IPOC Station P	1.72	330	*i* P	Pn	14 51 02.4	+1.0
PB09				*i* P		14 51 02.4	
PB09				*i* S	Sn	14 51 26.8	+0.7
PB05	IPOC Station P	1.80	284	⇑*i*P	Pn	14 51 02.5	+0.4
PB05				*e*S	Sn	14 51 27.2	-0.3
PB05	IPOC Station P	1.80	284	*i* P	Pn	14 51 02.5	+0.4
PB05				*i* P		14 51 02.7	
PB05				*i* S	Sn	14 51 27.3	-0.3
PB03	IPOC Station P	1.82	312	⇑*i*P	Pn	14 51 02.9	+0.5
PB03				*e*S	Sn	14 51 28.1	0.0
PB03				IAML		14 51 28.8	
	comp=N,571nm,0.1s						
PB03	IPOC Station P	1.82	312	*i* P	Pn	14 51 03.0	+0.5
PB03				*i* P	Pn	14 51 03.0	+0.5
PB03				*i* S	Sn	14 51 27.6	-0.4
PB04	IPOC Station P	1.95	299	⇑*i*P	Pn	14 51 04.5	+0.5
PB04				*e*S	Sn	14 51 30.6	0.0
PB04				IAML		14 51 39.0	
	comp=E,300nm,0.1s						
PB04	IPOC Station P	1.95	299	*i* P	Pn	14 51 04.6	+0.7
PB07	IPOC Station P	2.13	316	⇑*i*P	Pn	14 51 06.7	+0.6
PB07	IPOC Station P	2.13	316	*i* P	Pn	14 51 06.7	+0.6
PB07				*i* P		14 51 06.8	
PB07				*i* S	Sn	14 51 34.0	-0.6
GO02	Mina Guanaco	2.21	212	⇑*i*P	Pn	14 51 07.3	+0.2
GO02				*e*S	Sn	14 51 35.5	-0.8
GO02				IAML		14 51 36.8	
	comp=N,441nm,0.2s						
PB14	IPOC Station P	2.34	235	⇓*i*P	Pn	14 51 08.9	+0.2
PB14				*i* S	Sn	14 51 38.5	-0.6
PB14	IPOC Station P	2.34	235	*i* P	Pn	14 51 08.8	+0.2
PB14				*i* P		14 51 09.0	
PB14				*i* S	Sn	14 51 38.0	-1.0
PB02	IPOC Station P	2.45	323	⇑*i*P	Pn	14 51 10.1	+0.3
PB02				IAML		14 51 44.6	
	comp=E,287nm,0.2s						
PB02	IPOC Station P	2.45	323	*i* P	Pn	14 51 10.1	+0.3
PB02				*i* P		14 51 10.2	
PB02				*i* S	Sn	14 51 40.6	-0.6
PB01	IPOC Station P	2.49	334	⇑*i*P	Pn	14 51 10.7	+0.4
PB01				*e*S	Sn	14 51 43.0	+1.0
PB01				IAML		14 51 44.9	
	comp=E,217nm,0.1s						
YJA	Yavi	2.80	67	*i* P	Pn	14 51 14.7	+0.2
YJA				*i* P		14 51 14.9	
YJA				*i* S	Sn	14 51 49.0	-0.5
PATCX	Punta Patache	2.99	325	⇓*i*P	Pn	14 51 16.4	-0.2
PATCX	Punta Patache	2.99	325	*i* P	Pn	14 51 16.5	-0.1
PATCX				*i* S	Sn	14 51 50.2	-3.0
PB08	IPOC Station P	3.23	346	*i* P	Pn	14 51 20.8	+0.9
PB08				*i* S	Sn	14 51 55.9	-3.2
GO01	Chusmiza	3.69	347	*e*P	Pn	14 51 26.8	+0.8
ASAL	Salagasta	9.28	183	*i* P	Pn	14 52 40.5	+1.0

IDC 14 15:10:48.5±6.7, 30°.11S×177°.57W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/18, mbtmp3.8/3, Error ellipse: s-maj=269.2km s-min=53.7km az=151.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	34.91	256	P	P	15 17 42.6	+0.7
	1.3nm,0.8s,baz=124,slow=11,SNR=3.6						
ASAR	Alice Springs	43.50	266	P	P	15 18 53.4	-0.5
	0.4nm,0.4s,baz=106,slow=7.4,SNR=12						
WRA	Warramunga Arr	44.46	272	P	P	15 19 01.4	-0.2
	0.8nm,0.3s						
FINES	FINESS Array B	145.00	340	PKPbc	PKPbc	15 30 25.3	-1.0
	2.8nm,0.9s,baz=46,slow=4.0,SNR=5.2						

GCG 14 15:11:54.1±0.5, 13°.85N×92°.05W, h56km±293km, MD3.6
MEX 14 15:11:57.4±0.6, 15°.25N×91°.36W, h102km±10km, MD3.8
ISC 14 15:11:56.5±1.5, 15°.3N±0°.1×91°.4W±0°.1, h100km, n6, σ1s.42/8, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	0.59	199	eP	Pn	15 12 12.2	-1.1
FUG	Fuego 3	0.96	148	eP	Pn	15 12 17.0	+0.1
FUG				eS	Sn	15 12 34.4	+2.4
NBG	Las Nubes	1.20	124	eP	Pn	15 12 25.1	+5.6
CCIG	Comitan	1.25	324	i P	Pn	15 12 19.8	-0.2
CCIG				i S	Sn	15 12 37.6	0.0
IXG	Ixpaco	1.41	141	eP	Pn	15 12 20.5	-1.5
PCIG		1.84	284	eP	Pn	15 12 27.7	+0.7
PCIG				eS	Sn	15 12 49.6	-0.6

INET 14 15:16:56.1, 12°.42N×88°.23W, h17km, ML3.9
SNET 14 15:16:58.2±1.0, 12°.57N×88°.20W, h31km±3km, ML3.4, 1C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JUCU	Jucuar¡n	0.68	356	eP	Pn	15 17 11.8	-0.1
JUCU				eS	Sn	15 17 22.4	+1.0
JUCU				IAML		15 17 24.4	
	comp=Z,2μm,0.2s						
CNCH	Conchagua	0.79	27	⇑iP	Pn	15 17 13.2	-0.1
CNCH				eS	Sn	15 17 25.0	+0.8
LCND	La Caada	0.80	23	eP	Pn	15 17 12.6	-0.8
LCND				eS	Sb	15 17 23.9	-0.2
LCND				IAML		15 17 34.7	
	comp=Z,1μm,0.3s						
ALJI	Alcalda de J	0.83	335	eS	Sb	15 17 25.7	+0.6
LCY	Lacayo	0.85	354	eP	Pb	15 17 14.8	+0.2
BLLM	Bellamira	0.87	358	eP	Pn	15 17 14.6	+0.2
BLLM				eS	Sb	15 17 26.9	+0.7
PACA	Pacayal	0.90	353	eP	Pb	15 17 15.4	-0.1
PACA				eS	Sb	15 17 28.2	+1.0
COEB	Comit de Eme	0.98	341	eP	Pn	15 17 16.0	+0.1
COEB				eS	Sb	15 17 29.6	+0.3
COEB				IAML		15 17 31.2	
	comp=Z,832nm,0.2s						
FAGO	Alcalda de S	1.12	5	eP	Pn	15 17 18.1	+0.3
FAGO				eS	Sb	15 17 33.8	+0.4
LOMA	Loma Larga	1.43	319	eP	Pn	15 17 22.1	-0.1

IDC 14 15:26:20.9±9.3, 17°.37S×178°.96W, h583km±113km, mb3.1/5, mb1 3.4/5, mb1mx3.0/30, mbtmp4.0/5, Error ellipse: s-maj=109.5km s-min=38.0km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.43	240	P	P	15 32 53.6	-0.2
	2.5nm,0.6s,baz=90,slow=9.8,SNR=13						
WRA	Warramunga Arr	44.21	259	P	P	15 33 39.3	-0.3
	0.7nm,0.3s						
ASAR	Alice Springs	44.43	254	P	P	15 33 41.3	0.0
	13nm,0.5s,baz=89,slow=7.9,SNR=347						
ASAR				PcP	PcP	15 35 11.7	-0.3
	0.2nm,0.4s,baz=107,slow=3.7,SNR=3.7						
TXAR	Lajitas Array	86.16	58	P	P	15 38 02.1	+0.6
	0.3nm,0.7s,baz=200,slow=7.5,SNR=3.1						
PDAR	Pinedale Array	87.33	44	P	P	15 38 06.4	-0.5
	0.1nm,0.5s,baz=210,slow=3.0,SNR=2.6						

IDC 14 15:28:50.7±1.5, 22°.76N×12°.24W, h0km, mb3.8/7, mb1 4.0/9, mb1mx3.7/42, mbtmp3.9/9, ML3.8/2, Error ellipse: s-maj=35.9km s-min=24.4km az=66.0
ISC 14 15:28:50.5±1.0, 22°.26N±0°.07×12°.1W±0°.1, h10km, n26, σ2s.49/36, mb4.0/7, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TANT	Tantan	6.17	7	P	Pn	15 30 20.0	-1.7
TANT				S	Sn	15 31 33.3	+1.0
TTIG	Tnine Tigouga,	8.87	21	P	Pn	15 30 57.1	-1.7
TTIG				S	Sn	15 32 41.1	+2.2
OUK	Oukaimeden	9.67	22	P	Pn	15 31 07.8	-2.2
OUK				S	Sn	15 32 59.9	+1.0
ZGR	Zagora	9.73	35	P	Pn	15 31 07.2	-3.5
ZGR				S	Sn	15 33 03.1	+3.0
OUZM	OUZ	9.83	28	P	Pn	15 31 05.9	-6.2
OUZM				S	Sn	15 33 01.7	-1.0
TZRR	Tazzarine	10.29	33	P	Pn	15 31 18.1	-0.2
TZRR				S	Sn	15 33 16.3	+2.5
GOLM	Goulmima	11.34	32	P	Pn	15 31 29.5	-3.2
GOLM				S	Sn	15 33 40.3	+0.7
ZHG	ZHG	12.13	22	P	Pn	15 31 37.9	-5.6
ZHG				S	Sn	15 33 57.0	-1.8
MD31	MD31	12.39	30	P	Pn	15 31 52.7	+5.6
MD31				S	Sn	15 34 10.2	+4.9
CZD	Col de Zad	12.40	29	P	Pn	15 31 45.9	-1.5
CZD				S	Sn	15 34 08.7	+2.8
MDT	Midelt	12.42	31	P	Pn	15 31 46.1	-1.3
MDT				S	Sn	15 34 09.3	+3.3
FIGM	Figuig	13.74	42	P	Pn	15 32 03.8	-1.8
FIGM				S	Sn	15 34 41.7	+3.3
CHEFC	Chefchaouen	14.09	23	P	Pn	15 32 08.9	-1.3
CHEFC				S	Sn	15 34 49.9	+3.1
TORD	Torodi Ar. Bea	15.93	122	Pn	P	15 32 39.5	+1.0
	0.3nm,0.3s,baz=304,slow=12,SNR=11						
TORD				Sn	S	15 35 43.3	-2.5
	0.1nm,0.3s,baz=311,slow=21,SNR=3.0						
TORD				Lg	Lg	15 37 29.8	
	0.0nm,0.3s,baz=302,slow=25,SNR=2.3						
DBIC	Dimbokro	16.99	155	P	P	15 32 55.3	+5.0
	0.4nm,0.3s,baz=334,slow=10,SNR=4.5						
CMLA	Cha da Macela	19.32	326	eS	S	15 36 59.6	+5.1
CMLA				A	A	15 37 00.8	
	8.2nm,0.2s						
KEST	Kesra	22.98	50	P	P	15 33 55.0	-0.4
	6.9nm,1.0s,baz=180,slow=6.1,SNR=4.5						
I48TN	KESRA INFRASON	23.00	49	i		17 44 05.0	
	baz=238,slow=318,SNR=4.3						
GERES	GERESS Array B	33.50	31	P	P	15 35 28.2	-1.9
	1.0nm,0.7s,baz=218,slow=8.5,SNR=8.4						
BRTR	Keskin Array B	42.38	55	P	P	15 36 46.1	+0.8
	0.7nm,0.7s,baz=252,slow=4.8,SNR=4.2						
FINES	FINESS Array B	47.13	24	P	P	15 37 21.0	-1.5
	3.3nm,0.9s,baz=224,slow=5.3,SNR=7.2						
KBZ	Khabaz	49.84	51	P	P	15 37 44.9	+1.1
	1.2nm,0.7s,baz=258,slow=9.3,SNR=4.3						
YKA	Yellowknife Ar	76.10	332	P	P	15 40 36.5	-1.6
	0.2nm,0.5s,baz=67,slow=6.4,SNR=2.8						
MKAR	Makanchi Array	76.98	45	P	P	15 40 43.7	+0.2
	0.7nm,0.5s,baz=290,slow=5.8,SNR=18						
WRA	Warramunga Arr	148.61	92	PKPbc	PKPab	15 48 40.7	-1.4
	0.8nm,0.7s,baz=294,slow=2.3,SNR=7.3						
ASAR	Alice Springs	148.68	99	PKPbc	PKPab	15 48 41.5	-0.8
	1.1nm,0.7s,baz=296,slow=1.7,SNR=16						

SJA 14 15:31:01.9±0.4, 30°.43S×71°.76W, h40km±999km, ML3.0, MW3.2
GUC 14 15:31:03.2±0.7, 30°.43S×71°.41W, h40km±8km, ML3.4
ISC 14 15:31:02.9±3.2, 30°.43S±0°.07×71°.5W±0°.1, h3km±15km, n9, σ0s.58/14, 2C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO04	Tololo Observa	0.69	69	⇑iP	Pg	15 31 16.3	+0.2
GO04				eS	Sb	15 31 26.6	-1.1
GO04				IAML		15 31 28.7	
	comp=N,4μm,0.5s						
CO03	El Pedregal	0.84	119	⇓eP	Pg	15 31 18.9	-0.1
CO03				eS	Sg	15 31 29.9	-0.1
CO02	Combarbal	0.90	149	⇓eP	Pg	15 31 20.1	-0.1
CO02				eS	Sg	15 31 32.7	+0.8
CO02				IAML		15 31 36.3	
	comp=N,2μm,0.3s						
AROD	Rodeo	1.81	82	i P	Pn	15 31 35.5	+0.2
AROD				i S	Sg	15 32 00.6	-0.4
ACCO	Cerro Coronel	2.14	95	i P	Pn	15 31 40.4	+0.5
ACCO				IAML		15 32 16.3	
	comp=Z,55nm,0.9s						
RTLS	Leoncito	2.36	126	i P	Pn	15 31 42.9	0.0
RTLS				IAML		15 32 25.2	
	comp=Z,20nm,0.6s						
ROCH	El Roble	2.58	170	⇑iP	Pn	15 31 45.2	-0.6
ROCH				i S	Sn	15 32 18.2	+0.5
ROCH				IAML		15 32 30.2	
	comp=N,171nm,0.5s						
AMOG	MOGNA	2.67	102	i P	Pn	15 31 47.4	+0.5
AMOG				IAML		15 32 38.5	
	comp=Z,72nm,0.5s						
VCA	Vinchina	3.36	61	i P	Pn	15 31 56.8	+0.4
VCA				IAML		15 32 54.3	
	comp=Z,73nm,0.7s						

NEIC 14 15:31:17.9±2.5, 19°.45S±0°.04×69°.29W±0°.09, h91km±3km, Error ellipse: s-maj=12.0km s-min=6.2km az=95.0
VAO 14 15:31:18.4±0.6, 19°.32S×69°.23W, h90km±5km, mb4.6
GUC 14 15:31:18.7±0.6, 19°.46S×69°.45W, h93km±2km, ML4.9
IDC 14 15:31:19.0±0.5, 19°.39S×69°.25W, h98km±4km, mb4.2/17, mb1 4.3/22, mb1mx4.2/37, mbtmp4.6/22, MS3.4/3, Ms1 3.4/3, ms1mx3.0/30, Error ellipse: s-maj=13.1km s-min=8.4km az=90.0
ISC 14 15:31:18.0±0.4, 19°.43S±0°.03×69°.38W±0°.05, h91km±3km, n128, σ1s.21/149, mb4.5/22, 4C-7D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO01	Chusmiza	0.30	143	⇓iP	Pn	15 31 33.0	+0.7
GO01				i S	Sn	15 31 44.2	+1.5
GO01				IAML		15 31 46.4	
	comp=E,87μm,0.1s						
GO01	Chusmiza	0.30	143		Pn	15 31 33.0	+0.7
GO01				Sn	Sn	15 31 44.7	+2.0
MNMC	Minye Minye	0.35	326	⇑iP	Pn	15 31 33.0	+0.7
MNMC				i S	Sn	15 31 43.8	+1.0
MNMC				IAML		15 31 46.2	
	comp=E,159μm,0.4s						
MNMC	Minye Minye	0.35	326		Pn	15 31 33.1	+0.8
MNMC				Sn	Sn	15 31 43.8	+1.0
PB11	IPOC Station P	0.42	218	⇓iP	Pn	15 31 32.2	-0.3
PB11				i S	Sn	15 31 43.0	-0.3
PB11				IAML		15 31 43.7	
	comp=N,53μm,0.2s						
PB11	IPOC Station P	0.42	218		Pn	15 31 31.6	-0.9
PB11				Sn	Sn	15 31 43.0	-0.3
PSGC	Pisagua	0.72	256	⇑iP	Pn	15 31 34.2	-0.7
PSGC				i S	Sn	15 31 46.2	-1.4
PB08	IPOC Station P	0.74	163	⇑iP	Pn	15 31 36.3	+0.8
PB08				i S	Sn	15 31 49.7	+1.2
PATCX	Punta Patache	1.56	207	⇓iP	Pn	15 31 43.8	-1.0
PATCX				i S	Sn	15 32 03.6	-1.4
PATCX				IAML		15 32 07.9	
	comp=E,14μm,0.6s						
PB01	IPOC Station P	1.61	183	⇓iP	Pn	15 31 45.6	+0.3
PB01				i S	Sn	15 32 05.6	-0.5
PB01				IAML		15 32 10.8	
	comp=E,14μm,0.5s						
PB01	IPOC Station P	1.61	183		Pn	15 31 45.8	+0.5
PB02	IPOC Station P	1.94	194	⇓iP	Pn	15 31 49.3	-0.4
PB02				IAML		15 32 21.5	
	comp=N,27μm,0.6s						
PB07	IPOC Station P	2.34	192	⇓iP	Pn	15 31 54.5	-0.4
PB07				i S	Sn	15 32 22.2	-0.9
PB07				IAML		15 32 29.6	
	comp=E,12μm,0.7s						
PB09	IPOC Station P	2.36	177	eP	Pn	15 31 55.8	+0.5
PB09				i S	Sn	15 32 24.1	+0.4
PB09				IAML		15 32 41.4	
	comp=N,4μm,0.4s						
PB03	IPOC Station P	2.63	187	⇓iP	Pn	15 31 58.2	-0.6
PB03				IAML		15 32 40.2	
	comp=E,4μm,0.4s						
PB04	IPOC Station P	2.98	194	⇑eP	Pn	15 32 02.6	-0.8
PB04				i S	Sn	15 32 42.0	+3.5
PB04	IPOC Station P	2.98	194	Pn	Pn	15 32 05.1	+1.7
LVC	Limon Verde	3.20	172	P	Pn	15 32 07.6	+1.0
	comp=E,42nm,0.3s,baz=338,slow=8.6,SNR=115						
LVC				S	Sn	15 32 46.2	+2.2
	comp=E,222nm,0.3s,baz=300,slow=17,SNR=14						
LVC	Limon Verde	3.20	172		Pn	15 32 07.8	+1.2
LVC	Limon Verde	3.20	172	eP	Pn	15 32 07.7	+1.2
LVC				eS	Sn	15 32 46.3	+2.3
LPAZ	La Paz	3.34	21	P	Pn	15 32 12.4	+3.6
	comp=E,30nm,0.3s,baz=196,slow=4.0,SNR=343						
LPAZ				S	Sn	15 32 48.5	+0.7
	comp=E,11nm,0.3s,baz=123,slow=3.1,SNR=5.3						
LPAZ	La Paz	3.34	21		Pn	15 32 12.8	+4.0
GO02	Mina Guanaco	5.71	182		Pn	15 32 39.5	-1.1
SIV	San Ignacio	8.63	68	P	Pn	15 33 19.6	-0.6
	comp=E,29nm,0.3s,baz=269,slow=9.9,SNR=354						
SIV				S	Sn	15 34 54.0	-1.8
	baz=299,slow=19,SNR=2.9						
SIV				LR	LR	15 37 35.4	
	comp=E,410nm,19.7s,baz=286,slow=44						
NNA	Nana	10.31	315	P	Pn	15 33 46.2	+3.2
	comp=E,3.4nm,0.3s,baz=244,slow=5.5,SNR=4.6						
NNA				LR	LR	15 37 08.7	
	comp=E,147nm,19.6s,baz=269,slow=34						
SAML	Samuel	12.02	31		Pn	15 34 05.3	-0.9
AQDB	Aquidauana	12.91	97	eP	Pn	15 34 17.2	-0.9
CPUP	Villa Florida	13.06	124	P	Pn	15 34 18.9	-1.1
	comp=E,0.9nm,0.3s,baz=299,slow=12,SNR=14						
CPUP				LR	LR	15 39 37.9	
	comp=E,179nm,20.9s,baz=30,slow=38						
CPUP	Villa Florida	13.06	124		Pn	15 34 19.4	-0.6
CPUP	Villa Florida	13.06	124	eP	Pn	15 34 19.7	-0.3
SALV	Santo Antonio	13.51	77	eP	Pn	15 34 23.7	-2.3
ATAH	Atahualpa	15.03	323	P	Pn	15 34 48.8	+2.8
	comp=E,0.4nm,0.3s,baz=120,slow=10,SNR=3.6						
ITQB	Itaqui	15.44	134	eP	Pn	15 34 51.0	+0.3
CLDB	Colider	15.62	59	eP	Pn	15 34 51.0	-2.1
C2SB	Chapadao do Su	15.65	90	eP	Pn	15 34 52.2	-1.2
TRCB	Terra Rica	15.98	105	eP	Pn	15 34 56.7	-0.9
PTGB	Pitanga	16.89	111	eP	P	15 35 08.8	-0.6
PCMB	Pacaembu	17.11	100	eP	Pn	15 35 10.5	-1.1
ARAG	Araguaiana, MT	17.16	80	eP	Pn	15 35 10.8	-1.3
ITAB	Concordia	17.64	119	eP	P	15 35 17.2	-0.4
ITRB	Iturama	17.93	94	eP	P	15 35 19.9	-1.0
CPSB	Cacapava Do Su	18.11	130	eP	P	15 35 22.8	+0.1
PLTB	Pedras Altas	18.77	134	eP	P	15 35 30.0	-0.1
FRTB	Fartura	18.86	105	eP	P	15 35 30.8	-0.3
CNLB	Canela	19.52	124	eP	P	15 35 37.9	-0.3
BB19B	Bebedouro	19.64	98	eP	P	15 35 38.7	-0.9
TRQA	Tornquist	19.65	162	eP	P	15 35 40.6	+1.0
OGAUY	Aigu	19.76	142	eP	P	15 35 41.0	+0.4
IPMB	Ipameri, GO	20.11	89	eP	P	15 35 43.8	-0.9
GO06	Curarrehue	20.17	185	P	P	15 35 44.6	-0.7
GO06				IAmb	IAmb	15 35 46.6	
	comp=Z,28nm,0.8s						
RCLB	Rio Claro- Sao	20.63	102	eP	P	15 35 49.5	-0.8
BDFB	Brasilia	20.72	83	P	P	15 35 51.6	+0.2
	comp=Z,17nm,0.5s,baz=260,slow=9.2,SNR=21						
BDFB	Brasilia	20.72	83	P	P	15 35 51.6	+0.2
BDFB				IAmb	IAmb	15 35 54.6	
	comp=Z,18nm,0.5s						
PTGA	Pitinga	20.75	28	P	P	15 35 49.9	-1.5
	comp=Z,15nm,0.3s,baz=198,slow=17,SNR=48						
PTGA	Pitinga	20.75	28	P	P	15 35 50.0	-1.5
PTGA				IAmb	IAmb	15 35 51.7	
	comp=Z,32nm,1.1s						
PTGA	Pitinga	20.75	28	eP	P	15 35 50.0	-1.5
SPB	Sao Paulo	20.84	105	eP	P	15 35 52.0	-0.4
VAO	Valinhos	21.20	104	eP	P	15 35 55.4	-1.0
PLCA	Paso Flores	21.26	182	P	P	15 35 57.0	+0.1
	comp=Z,15nm,0.8s,baz=19,slow=11,SNR=27						
PLCA	Paso Flores	21.26	182	P	P	15 35 57.2	+0.3
OTAV	Otavalo	21.47	334	eP	P	15 36 00.0	+0.3
PARB	Paraibuna	22.46	104	eP	P	15 36 08.5	-1.4
BSCB	Bom Sucesso	23.14	98	eP	P	15 36 15.4	-1.3
ESAR	Angra dos Reis	23.52	103	eP	P	15 36 19.3	-0.7
SMTB	Santa Maria do	23.57	67	eP	P	15 36 19.6	-1.0
JANB	Januaria	24.33	84	eP	P	15 36 26.1	-1.3
RUSC	La Rusia	25.42	351	P	P	15 36 37.5	-0.3
SJMB	Sao Joao De Ma	26.65	93	eP	P	15 36 47.7	-0.8
BSFB	Barra de Sao F	26.96	94	eP	P	15 36 50.4	-0.8
SDV	Santo Domingo	28.16	357	P	P	15 37 02.0	-0.1
	comp=Z,2.6nm,0.4s,baz=174,slow=9.2,SNR=5.4						
SDV	Santo Domingo	28.16	357	P	P	15 37 02.0	-0.1
SDV	Santo Domingo	28.16	357	eP	P	15 37 01.7	-0.4
NBIT	Itapeh - BA	28.94	86	eP	P	15 37 08.1	-0.7
NBPN	Ponto Novo - B	29.40	77	eP	P	15 37 12.0	-0.9
MDP	Montagnes des	29.42	36	P	P	15 37 12.6	-0.5
	comp=Z,13nm,0.9s,baz=214,slow=7.7,SNR=5.4						
NBPS	Pedro II - PI	31.07	65	eP	P	15 37 26.3	-1.5
NBLA	Lagarto - SE	31.57	79	eP	P	15 37 31.6	-0.5
NBTA	Tacaratu-PE	31.98	76	eP	P	15 37 34.7	-1.1
NBMA	Muriti-CE	32.04	72	eP	P	15 37 35.4	-0.9
NBPB	Pedra_Branca-C	32.12	68	eP	P	15 37 36.2	-0.8
NBMO	Morrinhos-CE	32.83	64	eP	P	15 37 42.2	-1.0
NBAN	Anadia - AL	33.42	78	eP	P	15 37 47.6	-0.8
NBCL	Cascavel-CE	33.88	68	eP	P	15 37 51.4	-0.9
NBPA	Parau_RN	34.22	71	eP	P	15 37 54.2	-1.0
RCBR	Riachuelo	35.27	72	P	P	15 38 02.6	-1.7
	comp=Z,6.8nm,0.5s,baz=247,slow=8.5,SNR=7.1						
NBPV	Pedro Velho	35.57	73	eP	P	15 38 05.8	-1.0
TXAR	Lajitas Array	58.68	325	P	P	15 41 05.6	-0.6
	comp=Z,0.8nm,0.5s,baz=146,slow=7.4,SNR=9.0						
MNTX	Cornudas Mount	61.45	325	P	P	15 41 24.1	-0.9
MNTX				IAmb	IAmb	15 41 25.5	
	comp=Z,3.2nm,0.8s						
VNA1	Neumayer--Stat	62.38	161	P	P	15 41 38.5	+7.9
SNAA	Sanae	64.38	161	P	P	15 41 45.0	+1.1
SDCO	Great Sand Dun	66.25	329	P	P	15 41 57.9	+1.2
SDCO				IAmb	IAmb	15 41 58.6	
	comp=Z,7.1nm,1.2s						
LIC	Lamto	68.26	75	eP	P	15 42 09.2	-0.4
	comp=Z,22nm,0.8s						
TIC	Toumodi	68.43	74	eP	P	15 42 10.4	-0.3
KIC	Kosan Boka	68.57	75	eP	P	15 42 11.4	-0.2
	comp=Z,8.7nm,0.5s						
DBIC	Dimbokro	68.59	74	P	P	15 42 11.4	-0.3
	comp=Z,5.4nm,0.5s,baz=224,slow=6.6,SNR=10						
DBIC				pP	PcP	15 42 36.1	-0.1
	comp=Z,8.4nm,1.0s,baz=223,slow=7.0,SNR=3.2						
DBIC				sP	sP	15 42 46.5	-0.4
	comp=Z,14nm,0.9s,baz=216,slow=5.3,SNR=7.4						
DBIC	Dimbokro	68.59	74	P	P	15 42 09.9	-1.8
U15A	North Rim	68.77	324	P	P	15 42 13.8	+1.2
QSPA	South Pole Qui	70.75	180	P	P	15 42 25.0	+0.8
	comp=Z,2.3nm,0.5s,baz=124,slow=1.7,SNR=46						
QSPA	South Pole Qui	70.75	180	P	P	15 42 25.6	+1.3
QSPA				IAmb	IAmb	15 42 26.4	
	comp=Z,8.6nm,1.1s						
TPNV	Topopah Spring	71.39	322	P	P	15 42 30.6	+2.0
TPNV				IAmb	IAmb	15 42 31.4	
	comp=Z,9.2nm,1.3s						
PDAR	Pinedale Array	72.10	330	P	P	15 42 33.0	+0.3
	comp=Z,0.5nm,0.6s,baz=122,slow=8.1,SNR=5.9						
ULM	Lac du Bonnet	73.22	343	P	P	15 42 38.3	-0.5
	comp=Z,4.3nm,0.5s,baz=148,slow=6.2,SNR=11						
ULM	Lac du Bonnet	73.22	343	P	P	15 42 37.7	-1.2
NVAR	Mina Array Bea	73.59	322	P	P	15 42 42.3	+0.7
	comp=Z,2.2nm,0.8s,baz=155,slow=6.3,SNR=13						
NVAR	Mina Array Bea	73.59	322	P	P	15 42 38.6	-3.0
SCHQ	Schefferville	73.99	2	P	P	15 42 43.4	+0.1
	comp=Z,2.3nm,0.9s,baz=229,slow=9.3,SNR=3.0						
YNE	Yellowstone No	74.03	331	P	P	15 42 45.1	+1.0
YHH	Holmes Hill	74.25	331	P	P	15 42 46.1	+0.7
YHB	Horse Butte	74.38	330	P	P	15 42 46.2	+0.1
PAHR	Pah Rah Range	75.07	322	P	P	15 42 50.3	+0.1
PAHR				IAmb	IAmb	15 42 52.8	
	comp=Z,8.9nm,0.8s						
TOA0	Torodi Ar. Sit	77.09	71	P	P	15 43 01.1	-0.8
TOA0				IAmb	IAmb	15 43 28.4	
	comp=Z,6.5nm,0.8s						
TORD	Torodi Ar. Bea	77.09	71	P	P	15 43 00.9	-1.0
	comp=Z,3.3nm,0.3s,baz=251,slow=5.2,SNR=39						
TORD				pP	pP	15 43 26.8	-0.3
	comp=Z,5.4nm,0.9s,baz=257,slow=5.4,SNR=3.8						
TORD				sP	sP	15 43 37.5	0.0
	comp=Z,3.5nm,0.7s,baz=251,slow=5.4,SNR=2.8						
TORD	Torodi Ar. Bea	77.09	71	P	P	15 43 01.1	-0.8
VNDA	Vanda	78.81	190	P	P	15 43 11.2	+0.9
	comp=Z,1.3nm,0.9s,baz=92,slow=3.9,SNR=4.4						
ESDC	Sonseca Array	84.68	45	P	P	15 43 42.3	+0.5
	comp=Z,0.9nm,0.4s,baz=216,slow=9.1,SNR=6.2						
YKA	Yellowknife Ar	89.09	341	P	P	15 44 03.0	+0.4
	comp=Z,7.7nm,0.7s,baz=136,slow=5.0,SNR=132						
YKA				pP	pP	15 44 28.3	+0.4
	comp=Z,4.5nm,0.9s,baz=137,slow=5.2,SNR=3.7						
ASAR	Alice Springs	131.52	209	PKP	PKPdf	15 50 20.8	0.0
	comp=Z,1.0nm,0.7s,baz=138,slow=1.9,SNR=8.9						
WRA	Warramunga Arr	134.49	212	PKP	PKPdf	15 50 26.4	-0.1
	comp=Z,1.6nm,0.6s,baz=159,slow=1.7,SNR=18						
WRA	Warramunga Arr	134.49	212		PKPdf	15 50 26.0	-0.4
ZALV	Zalesovo Beam	140.26	24	PKP	PKPdf	15 50 36.6	+0.7
	comp=Z,1.5nm,0.6s,baz=338,slow=3.2,SNR=5.3						
ZALV				pPKP	pPKPdf	15 51 04.0	+1.7
	comp=Z,0.9nm,0.4s,baz=330,slow=2.4,SNR=2.1						
KSH	Kashi	144.11	49	PKPbc	PKPbc	15 50 42.8	+1.1
KSH				pPKP	pPKPdf	15 51 09.1	-1.0
KSH				PP	PP	15 54 02.3	+3.7
KSH				PKS	PKSdf	15 54 17.3	-1.9
KSH				SKKS		16 00 40.3	
MK31	Makanchi Array	144.19	34		PKPbc	15 50 42.0	+0.3
MKAR	Makanchi Array	144.19	34	PKP	PKPab	15 50 41.2	0.0
	comp=Z,0.3nm,0.5s,baz=344,slow=2.6,SNR=6.9						
MKAR	Makanchi Array	144.19	34		PKPbc	15 50 41.8	+0.2
USRK	Ussuriysk Ar.	149.52	329	PKPbc	PKPbc	15 50 57.7	+0.9
	comp=Z,2.8nm,0.7s,baz=48,slow=2.8,SNR=5.7						
MJAR	Matsushiro Arr	150.41	311	PKPbc	PKPbc	15 50 59.6	+0.3
	comp=Z,4.4nm,0.7s,baz=96,slow=1.6,SNR=10						
SONM	Songino Array	151.46	6	PKPbc	PKiKP	15 51 02.5	+0.6
	comp=Z,3.1nm,0.5s,baz=313,slow=1.3,SNR=20						
LZH	Lanzhou	162.36	18	ePKP	PKPdf	15 51 08.3	-1.3
LZH				pPKP	pPKPdf	15 51 33.0	-3.1
LZH				sPKP		15 51 43.5	
LZH				PKP	PP	15 55 59.0	+18

IDC 14 15:33:47.6±2.5, 16°.94S×168°.65E, h234km±21km, mb3.6/13, mb1 3.7/14, mb1mx3.6/33, mbtmp4.1/14, Error ellipse: s-maj=21.2km s-min=16.6km az=30.0
ISC 14 15:33:48.8±0.7, 17°.00S±0°.10×168°.7E±0°.1, h250km, n24, σ1s.25/27, mb3.8/12, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	5.47	202	P	Pn	15 35 09.5	-0.9
	2.0nm,0.3s,baz=42,slow=12,SNR=41						
DZM				S	S	15 36 15.1	-0.6
	1.6nm,0.3s,baz=307,slow=20,SNR=2.9						
CTA	Charters Tower	21.49	258	P	P	15 38 18.2	0.0
	1.2nm,0.4s,baz=68,slow=13,SNR=5.5						
PMG	Port Moresby	22.26	287	P	P	15 38 25.8	+0.5
	5.8nm,0.4s,baz=245,slow=12,SNR=5.5						
URZ	Urewera	22.43	162	P	P	15 38 28.0	+1.3
	5.3nm,0.6s,baz=310,slow=5.4,SNR=6.0						
STKA	Stephens Creek	28.66	234	P	P	15 39 23.4	+0.7
	1.4nm,0.5s,baz=67,slow=17,SNR=5.1						
WRA	Warramunga Arr	32.68	259	P	P	15 39 56.9	-1.1
	0.3nm,0.3s,baz=84,slow=8.5,SNR=13						
ASAR	Alice Springs	33.22	253	P	P	15 40 02.0	-0.7
	6.5nm,0.6s,baz=79,slow=9.2,SNR=121						
ASAR				PcP	PcP	15 42 39.7	+0.5
	0.2nm,0.5s,baz=90,slow=4.2,SNR=3.2						
ASAR				ScP	ScP	15 46 01.6	+2.0
	0.4nm,0.7s,baz=98,slow=4.0,SNR=6.1						
FITZ	Fitzroy Crossi	40.99	262	P	P	15 41 08.0	+0.1
	5.6nm,0.7s,baz=106,slow=1.3,SNR=13						
QSPA	South Pole Qui	73.04	180	P	P	15 44 52.3	+0.9
	12nm,1.4s,baz=39,slow=2.2,SNR=4.8						
CMAR	Chiang Mai Arr	77.11	294	P	P	15 45 17.1	+1.9
	0.5nm,0.3s,baz=126,slow=3.4,SNR=7.7						
SONM	Songino Array	85.12	323	P	P	15 45 57.1	+0.2
	0.5nm,0.5s,baz=141,slow=4.2,SNR=3.7						
NVAR	Mina Array Bea	87.72	49	P	P	15 46 10.1	+0.4
	0.3nm,0.7s,baz=230,slow=7.0,SNR=2.9						
ILAR	Eielson Array	88.26	17	P	P	15 46 10.7	-0.7
	0.4nm,0.7s,baz=239,slow=5.1,SNR=6.0						
MKAR	Makanchi Array	99.78	316	P	Pdif	15 47 05.3	+0.8
	0.1nm,0.5s,baz=47,slow=5.3,SNR=4.3						
ARCES	ARCESS Array B	122.78	345	PKP	PKiKP	15 52 14.2	-0.3
	2.7nm,0.8s,baz=47,slow=2.8,SNR=6.4						

SOKA	Soboth	143.24	329	*i* PKPdf	PKPdf	15 52 51.4	-1.9
	1.8nm,0.5s						
MYKA	Terra Mystica	143.94	330	*e*PKPdf	PKPdf	15 52 53.2	-1.3
	2.2nm,0.4s						
WTTA	Wattenberg	144.38	333	*e*PKPab	PKPdf	15 52 54.9	-0.5
	1.2nm,0.4s						
ABTA	Abfaltersbach	144.38	332	*i* PKPab	PKPdf	15 52 54.5	-0.7
	5.1nm,0.7s						
MOTA	Moosalm	144.54	333	*i* PKPdf	PKPdf	15 52 55.7	+0.1
	7.5nm,1.1s						
RETA	Reutte	144.58	334	*i* PKPdf	PKPdf	15 52 55.9	+0.3
	2.7nm,0.5s						
SQTA	Sankt Quirin	144.60	333	*i* PKPdf	PKPdf	15 52 56.0	+0.3
	4.5nm,0.6s						
FETA	Feichten	144.96	333	*e*PKPdf	PKiKP	15 52 57.5	-2.8
	6.2nm,0.8s						
DAVA	Damuels	145.10	335	*i* PKPab	PKiKP	15 52 57.8	-2.8
	5.6nm,1.0s						

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*THE **14** 15:43:46.7, 38°.17N×20°.29E, h2^{km}±13^{km}, ML2.3/12, Error ellipse: s-maj=13.4km s-min=0.4km az=80.0*

*ATH **14** 15:43:46.8, 38°.18N×20°.32E, h9^{km}±1^{km}, ML2.5/9, Error ellipse: s-maj=1.8km s-min=1.1km az=243.0*

ISC 14 15:43:47.3±1.3**, 38°.18N**±0°.04×**20°.33E**±0°.06**, h8**^{km}±5^{km}**, n36, σ0**^{s}**70**/63**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.03	36	P	Pg	15 43 48.6	-0.1
KEF3				S	Sg	15 43 49.5	-0.2
LXRA	Lixouri, Kepha	0.09	78	P	Pg	15 43 49.5	+0.1
LXRA				S	Sg	15 43 51.1	+0.2
KEF4	Livadi, Kephal	0.11	45	P	Pg	15 43 49.6	-0.1
KEF4				S	Sg	15 43 51.6	+0.1
ARGA	Argostoli. Kep	0.12	92	P	Pg	15 43 50.0	+0.1
ARGA				S	Sg	15 43 52.2	+0.5
KEF2	Argostoli. Kep	0.13	97	P	Pg	15 43 50.1	+0.1
KEF2				S	Sg	15 43 52.1	+0.2
KEF1	Kardakata, Kep	0.15	49	P	Pg	15 43 50.2	-0.2
KEF1				S	Sg	15 43 52.5	0.0
VLS	Valsamata	0.21	91	P	Pg	15 43 51.3	-0.2
VLS				S	Sg	15 43 54.5	+0.2
VLS	Valsamata	0.21	91	P	Pg	15 43 51.2	-0.2
VLS				S	Sg	15 43 54.2	0.0
VLS				AML	AML	15 43 54.6	
	comp=N,12796µm,0.2s						
VLS				AML	AML	15 43 54.7	
	comp=E,10030µm,0.1s						
KONA	Konidatara, Ke	0.31	38	P	Pg	15 43 53.1	-0.3
KONA				S	Sg	15 43 57.9	+0.3
KONA				AML	AML	15 43 58.3	
	comp=N,3105µm,0.3s						
KONA				AML	AML	15 43 59.6	
	comp=E,2127µm,0.3s						
FSK	Fiskardo	0.33	34	P	Pg	15 43 53.4	-0.4
FSK				S	Sg	15 43 58.4	+0.2
	comp=E,3µm,0.2s						
FSK	Fiskardo	0.33	34	P	Pg	15 43 53.4	-0.4
FSK				S	Sg	15 43 58.4	+0.2
FSK				AML	AML	15 43 59.2	
	comp=E,7438µm,0.2s						
FSK				AML	AML	15 43 59.3	
	comp=N,3464µm,0.5s						
KFL	Anninata	0.37	101	P	Pg	15 43 54.4	-0.1
KFL				S	Sg	15 43 59.5	+0.1
	comp=N,2µm,0.3s						
KFL	Anninata	0.37	101	P	Pg	15 43 54.3	-0.1
KFL				S	Sg	15 43 59.9	+0.5
KFL				AML	AML	15 44 02.8	
	comp=E,3554µm,0.3s						
KFL				AML	AML	15 44 02.9	
	comp=N,3671µm,0.3s						
MGNA	Meganis	0.60	37	P	Pg	15 43 57.9	-0.9
MGNA				S	Sg	15 44 06.7	+0.1
LKD2	Lefkada island	0.66	23	P	Pg	15 43 59.2	-0.8
LKD2				S	Sb	15 44 09.5	-1.0
	comp=N,162nm,0.4s						
LKD2	Lefkada island	0.66	23	P	Pg	15 43 59.3	-0.8
LKD2				S	Sg	15 44 09.3	+0.7
LKD2				AML	AML	15 44 18.0	
	comp=N,359µm,0.4s						
LKD2				AML	AML	15 44 19.5	
	comp=E,309µm,0.3s						
PDO	Prodromos	0.79	58	P	Pg	15 44 01.8	-0.7
PDO				S	Sb	15 44 14.4	+0.2
	comp=E,432nm,0.3s						
PDO	Prodromos	0.79	58	P	Pg	15 44 01.7	-0.8
PDO				S	Sg	15 44 13.4	+0.6
PDO				AML	AML	15 44 15.0	
	comp=E,601µm,0.3s						
PDO				AML	AML	15 44 15.0	
	comp=N,626µm,0.4s						
RLS	Riolos of Patr	0.91	97	P	Pg	15 44 04.1	-0.6
RLS				S	Sb	15 44 17.8	+0.3
	comp=N,108nm,0.4s						
RLS	Riolos of Patr	0.91	97	P	Pg	15 44 04.2	-0.6
PVO	Paravola	1.04	65	P	Pg	15 44 06.5	-0.7
PVO				AML	AML	15 44 24.0	
	comp=E,584µm,0.4s						
PVO				AML	AML	15 44 31.3	
	comp=N,362µm,0.3s						
DRO	Drossia	1.11	101	P	Pg	15 44 08.1	-0.6
DRO				S	Sn	15 44 25.2	+0.3
	comp=N,230nm,0.4s						
DRO	Drossia	1.11	101	P	Pg	15 44 08.0	-0.6
DRO				S	Sg	15 44 22.9	-0.3
DRO				AML	AML	15 44 33.1	
	comp=E,371µm,0.3s						
DRO				AML	AML	15 44 33.3	
	comp=N,449µm,0.5s						
EFP	Efpalio	1.27	78	P	Pn	15 44 10.0	-1.3
EFP				S	Sn	15 44 28.9	+0.4
	comp=N,92nm,0.4s						
AMT	Artemida-Makis	1.27	120	P	Pb	15 44 12.4	+0.9
AMT				S	Sn	15 44 30.8	+2.1
	comp=N,130nm,0.3s						
ANX	Ano Chora	1.32	71	P	Pn	15 44 11.3	-0.8
ANX				S	Sn	15 44 32.2	+2.2
	comp=N,118nm,0.5s						
ANX	Ano Chora	1.32	71	P	Pn	15 44 11.4	-0.7
ANX				AML	AML	15 44 37.1	
	comp=E,227µm,0.6s						
ANX				AML	AML	15 44 40.0	
	comp=N,243µm,0.5s						
IGT	Igoumenitsa	1.35	0	P	Pg	15 44 13.1	-0.1
IGT				S	Sn	15 44 32.2	+1.6
	comp=N,40nm,0.5s						
TRIZ	Trizonia	1.39	82	P	Pn	15 44 11.9	-1.0
TRIZ				S	Sg	15 44 32.5	+0.7
	comp=N,120nm,0.4s						
KALE	Kalithea	1.44	81	P	Pn	15 44 13.0	-0.8
KLV	Kalavryta, Ach	1.44	95	P	Pn	15 44 13.3	-0.5
KLV				S	Sg	15 44 33.9	+0.2
	comp=N,40nm,0.7s						
KEK	Kerkira	1.58	345	P	Pn	15 44 15.8	+0.1
ITM	Ithomi	1.61	128	P	Pb	15 44 16.9	-0.5
MAKR	Makrakomi, Fth	1.64	59	P	Pb	15 44 18.0	+0.2
DSF	Desfina	1.75	82	P	Pn	15 44 18.1	+0.1
DYR	Agios Nikonas	2.13	131	P	Pb	15 44 24.9	-1.3

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*ANF **14** 16:03:50.7±0.3, 40°.56N×111°.30W, h0^{km}, ML3.5/12, Error ellipse: s-maj=3.7km s-min=2.7km az=159.0*

*IDC **14** 16:03:50.4±1.3, 40°.62N×111°.23W, h0^{km}, mb2.9/1, mb1 3.5/5, mb1mx3.4/51, mbtmp3.2/5, ML3.2/4, Error ellipse: s-maj=18.5km s-min=6.2km az=149.0*

*UUSS **14** 16:03:51.1±3.4, 40°.56N±0°.03×111°.27W±0°.04, h14^{km}±5^{km}, ML3.2/21, Mwr3.4/8(SLM), Error ellipse: s-maj=4.8km s-min=4.6km az=77.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.92; $M_{\theta\theta}$-0.08; $M_{\phi\phi}$1.00; $M_{r\theta}$0.33; $M_{\theta\phi}$0.07; $M_{\phi r}$-0.94;*

*NEIC **14** 16:03:52.2±2.6, 40°.58N±0°.03×111°.29W±0°.03, h11^{km}±6^{km} Error ellipse: s-maj=5.0km s-min=2.4km az=222.0*

ISC 14 16:03:52.2±1.0**, 40°.58N**±0°.02×**111°.32W**±0°.03**, h10**^{km}±8^{km}**, n70, σ1**^{s}**95**/88**, Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JLU	Jordanelle	0.10	284		Pg	16 03 55.4	+0.3
CTU	Camp Tracy	0.35	289		Pg	16 03 59.2	0.0
CTU				Sg	Sg	16 04 04.3	+0.5
TCUT	Toone Canyon	0.54	353		Pg	16 04 03.0	+0.1
MPU	Maple Canyon	0.61	203		Pg	16 04 03.6	-0.5
NLU	North Lily Min	0.85	223		Pg	16 04 08.0	-0.6
NLU				Sg	Sg	16 04 19.9	+0.2
HWUT	Hardware Ranch	1.04	350		Pg	16 04 11.5	-0.8
SPUT	South Promonto	1.12	311		Pg	16 04 13.2	-0.6
SPUT					Sb	16 04 29.2	+0.7
P17A	Butcher Ranch,	1.19	158		Pg	16 04 12.7	-2.4
DUG	Dugway, Tooele	1.20	252		Pb	16 04 14.8	-0.4
DUG	Dugway, Tooele	1.20	252	P	Pb	16 04 13.7	-1.4
	baz=73						
DUG				S	Sg	16 04 30.2	-0.8
	baz=73						
TMUT	Trail Mountain	1.28	176		Pn	16 04 15.9	-0.5
RDMU	Red Mountain	1.33	90		Pn	16 04 15.4	-1.7
BGU	Big Grassy Mou	1.34	286		Pn	16 04 16.0	-1.2
SRU	San Rafael Swe	1.59	157		Pn	16 04 20.1	-0.5
Q16A	Castle Valley	1.66	176		Pn	16 04 21.1	-0.5
MSU	Marysvale	2.17	198		Pn	16 04 28.1	-0.4
AHID	Auburn Hatcher	2.19	4		Pb	16 04 30.6	-1.4
O20A	White River Ci	2.39	100		Pb	16 04 33.5	-2.0
O20A	White River Ci	2.39	100	Pb	Pb	16 04 33.3	-2.3
	baz=281						
O20A				Sb	Sb	16 05 04.2	-0.9
	baz=281						
BW06	Boulder Array	2.56	31		Pn	16 04 34.7	+0.8
BW06	Boulder Array	2.56	31	P	Pn	16 04 33.8	-0.1
	baz=211						
BW06				S	Sn	16 05 06.6	+1.4
	baz=211						
PD31	Pinedale Array	2.56	31		Pn	16 04 34.6	+0.6
PDAR	Pinedale Array	2.56	31	Pn	Pn	16 04 33.8	-0.1
	5.5nm,0.3s,baz=207,slow=12,SNR=112						
PDAR				Lg	Lg	16 05 09.3	
	30nm,0.3s,baz=203,slow=31,SNR=18						
PDAR	Pinedale Array	2.56	31		Pn	16 04 34.5	+0.6
MTPU	Mount Pierson	2.62	195		Pn	16 04 35.6	+0.7
REDW	Red Top Meadow	2.80	7		Pn	16 04 37.6	+0.2
PV10	Paradox Valley	2.82	140		Pn	16 04 39.1	+1.5
PSUT	Pine Spring	2.83	225		Pn	16 04 38.6	+1.0
TPAW	Teton Pass	2.92	5		Pn	16 04 38.3	-0.7
PV12	Saucer Basin,	2.98	138		Pn	16 04 40.3	+0.6
ELK	Elko	2.98	274	Pn	Pn	16 04 40.1	+0.3
	0.6nm,0.3s,baz=96,slow=12,SNR=9.2						
ELK				Pg	Pb	16 04 46.7	+1.1
	4.5nm,0.3s,baz=87,slow=12,SNR=69						
ELK				Lg	Lg	16 05 25.7	
	6.8nm,0.3s,baz=188,slow=21,SNR=14						
ELK	Elko	2.98	274		Pn	16 04 42.3	+2.5
PV18	Skein Mesa, Pa	2.98	140		Pn	16 04 40.2	+0.4
PV05	Paradox Valley	3.03	145		Pn	16 04 41.3	+0.8
FXWY	Fox Creek	3.07	4		Pn	16 04 41.2	+0.3
PV13	Radium Mtn., P	3.10	140		Pn	16 04 42.1	+0.7
RWWY	Rawlins	3.30	69		Pn	16 04 43.7	-0.4
FLWY	Flagg Ranch	3.53	7		Pn	16 04 48.1	+0.8
H17A	Grant Village	3.85	8	Sb	Sb	16 05 50.3	+3.1
	baz=188						
R11A	Troy Canyon, C	3.98	237	P	Pn	16 04 54.1	+0.7
	baz=55						
R11A				Sb	Sb	16 05 54.5	+3.7
	baz=55						
MVCO	Mesa Verde	4.02	146		Pn	16 04 54.4	+0.4
MVCO	Mesa Verde	4.02	146	P	Pn	16 04 53.6	-0.4
	baz=328						
MVCO				Sb	Sb	16 05 52.4	+0.4
	baz=328						
N23A	Red Feather La	4.10	84	P	Pn	16 04 56.0	+0.9
	baz=267						
N23A				Sb	Sb	16 05 54.7	+0.5
	baz=267						
K22A	Casper	4.15	58		Pn	16 04 57.1	+1.3
K22A	Casper	4.15	58	P	Pn	16 04 56.4	+0.6
	baz=241						
K22A				Sb	Sb	16 05 57.2	+1.6
	baz=241						
ISCO	Idaho Springs	4.44	98		Pn	16 05 02.6	+2.7
ISCO	Idaho Springs	4.44	98	P	Pn	16 05 00.3	+0.4
	baz=282						
ISCO				Sb	Sb	16 06 04.3	+0.2
	baz=282						
S22A	4UR Ranch, Cre	4.49	128		Pn	16 05 01.1	+0.5
S22A	4UR Ranch, Cre	4.49	128	P	Pn	16 05 00.8	+0.2
	baz=310						
S22A				Sb	Sb	16 06 07.9	+2.2
	baz=310						
RLMT	Red Lodge	4.79	18		Pn	16 05 05.8	+1.3
RLMT	Red Lodge	4.79	18	P	Pn	16 05 05.8	+1.3
	baz=198						
RLMT				Sb	Sb	16 06 17.2	+3.2
	baz=198						
Q24A	Divide	5.02	107	Pb	Pb	16 05 19.5	-0.9
	baz=291						
Q24A				Sb	Sb	16 06 23.6	+2.7
	baz=291						
TPNV	Topopah Spring	5.29	228	P	Pn	16 05 11.7	+0.3
	baz=46						
SDCO	Great Sand Dun	5.33	120		Pn	16 05 12.4	+0.3
SDCO	Great Sand Dun	5.33	120	P	Pn	16 05 11.5	-0.6
	baz=304						
KVN	Kaiserville	5.44	256		Pn	16 05 15.2	+1.7
W18A	Petrified Fore	5.59	167	Sb	Sb	16 06 42.2	+5.0
	baz=348						
NVAR	Mina Array Bea	5.81	251	Pn	Pn	16 05 20.9	+2.2
	0.2nm,0.3s,baz=70,slow=12,SNR=8.4						
NVAR				Lg	Lg	16 06 53.3	
	1.8nm,0.3s,baz=115,slow=25,SNR=7.1						
T25A	Trinidad	6.39	120		Pn	16 05 27.8	+1.2
T25A	Trinidad	6.39	120	P	Pn	16 05 25.8	-0.8
	baz=305						
T25A				Sb	Sb	16 07 06.3	+6.1
	baz=305						
RSSD	Black Hills	6.45	54		Pn	16 05 27.0	-0.5
RSSD	Black Hills	6.45	54	P	Pn	16 05 26.9	-0.6
	baz=239						
RSSD				Sb	Sb	16 07 06.3	+4.3
	baz=239						
ANMO	Albuquerque	6.81	144	Pg	Pb	16 05 54.0	+3.1
	0.4nm,0.3s,baz=333,slow=15,SNR=5.3						
ANMO				Lg	Lg	16 07 19.2	
	0.5nm,0.3s,baz=333,slow=16,SNR=4.0						
ANMO	Albuquerque	6.81	144	Sb	Sb	16 07 17.3	+4.9
	baz=327						
KSCO	Kaye Shedlock’	6.88	100	Sb	Sb	16 07 19.9	+5.9
	baz=286						
OGNE	Ogallala	7.06	84	Sb	Sb	16 07 24.4	+5.1
	baz=270						
LAO	LASA Array	7.14	29		Pn	16 05 35.2	-1.5
LAO	LASA Array	7.14	29	P	Pn	16 05 35.5	-1.1
	baz=212						
LAO				S	Sn	16 06 57.1	-0.8
	baz=212						
ULM	Lac du Bonnet	14.51	43	Pn	Pn	16 07 12.9	-4.5
	0.5nm,0.3s,baz=218,slow=14,SNR=7.0						
YKA	Yellowknife Ar	22.04	356	P	P	16 08 46.2	-0.4
	0.6nm,0.8s,baz=170,slow=10.0,SNR=6.4						

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*IDC **14** 16:07:46.2±1.9, 52°.08N×174°.94E, h0^{km}, mb3.7/8, mb1 4.0/10, mb1mx3.6/63, mbtmp3.8/10, ML3.4/2, Error ellipse: s-maj=58.5km s-min=19.5km az=171.0*

*NEIC **14** 16:07:51.8±1.5, 52°.1N±0°.1×174°.98E±0°.09, h38^{km}±10^{km}, mb4.1/6, Error ellipse: s-maj=19.0km s-min=7.8km az=180.0*

ISC 14 16:07:52.1±1.1**, 52°.2N**±0°.2×**174°.97E**±0°.07**, h39**^{km}**, n24, σ0**^{s}**57**/18**, mb3.9**/10**, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	0.78	317		Pn	16 08 06.3	-0.2
ATKA	Atka Island	6.66	85	Pn	Pn	16 09 27.0	-0.3
PETK	Petropavlovsk-	10.54	282	Pn	Pn	16 10 20.3	-0.2
	0.3nm,0.3s,baz=100,slow=19,SNR=5.9						
CNBA	Chernabura Isl	15.34	70	P	P	16 11 30.2	+0.5
CNBA				IAmb	IAmb	16 11 30.2	
	comp=Z,25nm,0.8s						
CHGN	Chignik	16.05	65	Pn	Pn	16 11 34.0	-0.6
SVW2	Sparrevohn	18.35	49	P	P	16 12 01.5	-1.5
SVW2				IAmb	IAmb	16 12 06.7	
	comp=Z,21nm,1.0s						
KDAK	Kodiak Island	19.32	60	P	P	16 12 13.7	+0.1
	comp=Z,0.5nm,0.3s,baz=231,slow=14,SNR=5.0						
ILAR	Eielson Array	23.16	42	P	P	16 12 55.3	+0.6
	comp=Z,0.3nm,0.5s,baz=253,slow=7.6,SNR=5.6						
H11N2	WAKE ISLAND Hy	32.98	194	T	T	16 49 11.7	
	baz=9.4,slow=76,SNR=44						
H11N3	WAKE ISLAND Hy	32.99	194	T	T	16 49 11.0	
	baz=9.4,slow=76,SNR=61						
H11N1	WAKE ISLAND Hy	33.00	194	T	T	16 49 12.8	
	baz=9.4,slow=76,SNR=64						
H11S1	WAKE ISLAND Hy	34.21	194	T	T	16 50 43.4	
	baz=9.3,slow=76,SNR=59						
H11S3	WAKE ISLAND Hy	34.23	194	T	T	16 50 44.6	
	baz=9.3,slow=76,SNR=45						
H11S2	WAKE ISLAND Hy	34.23	194	T	T	16 50 44.7	
	baz=9.3,slow=76,SNR=31						
SONM	Songino Array	42.80	293	P	P	16 15 45.8	0.0
	comp=Z,0.5nm,0.5s,baz=57,slow=5.3,SNR=3.1						
MK31	Makanchi Array	56.45	305	P	P	16 17 29.1	-0.5
MK31				IAmb	IAmb	16 17 29.4	
	comp=Z,0.8nm,0.6s						
MKAR	Makanchi Array	56.45	305	P	P	16 17 29.0	-0.6
	comp=Z,0.8nm,0.4s,baz=51,slow=5.9,SNR=23						
ARCES	ARCESS Array B	56.57	348	P	P	16 17 30.3	+0.3
	comp=Z,5.5nm,1.1s,baz=20,slow=8.0,SNR=3.4						
MAKZ	Makanchi	56.60	305	P	P	16 17 30.1	-0.5
BRVK	Borovoye	57.73	316	P	P	16 17 38.8	+0.3
BRVK				IAmb	IAmb	16 17 57.9	
	comp=Z,1.0nm,0.8s						
SCHQ	Schefferville	61.69	35	P	P	16 18 06.1	+0.4
	comp=Z,0.9nm,0.7s,baz=211,slow=18,SNR=3.3						
TXAR	Lajitas Array	62.30	77	P	P	16 18 10.4	+0.1
	comp=Z,0.3nm,0.8s,baz=318,slow=1.7,SNR=3.6						
CMAR	Chiang Mai Arr	67.10	271	P	P	16 18 41.6	0.0
	comp=Z,0.5nm,0.6s,baz=25,slow=7.0,SNR=3.5						
BRTR	Keskin Array B	82.50	331	P	P	16 20 11.1	+0.5
	comp=Z,0.6nm,0.7s,baz=64,slow=2.9,SNR=4.5						

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*IDC **14** 16:23:44.0±1.3, 22°.21S×174°.96W, h0^{km}, mb4.1/7, mb1 4.3/9, mb1mx4.0/46, mbtmp4.1/9, ML3.9/2, MS3.5/3, Ms1 3.5/3, ms1mx3.0/40, Error ellipse: s-maj=50.6km s-min=21.0km az=145.0*

*NEIC **14** 16:23:46.8±1.5, 22°.1S±0°.1×175°.0W±0°.2, h20^{km}±4^{km}, mb4.6/11, Error ellipse: s-maj=25.0km s-min=10.7km az=124.0*

ISC 14 16:23:48.8±0.8**, 22°.0S**±0°.1×**175°.0W**±0°.2**, h33**^{km}**, n28, σ1**^{s}**77**/24**, mb4.4**/11**, MS3.5**/3**, 1D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	8.61	21	Pn	Pn	16 25 51.4	+0.3
	1.5nm,0.3s,baz=185,slow=12,SNR=3.4						
AFI				Sn	Sn	16 27 22.1	-5.1
	1.5nm,0.3s,baz=198,slow=20,SNR=2.9						
URZ	Urewera	17.57	201	Pn	Pn	16 27 48.2	-2.9
	0.4nm,0.3s,baz=281,slow=5.8,SNR=3.0						
URZ				Sn	Sn	16 30 44.9	-21
	0.3nm,0.3s,baz=350,slow=17,SNR=2.9						
URZ	Urewera	17.57	201	IAmb	IAmb	16 28 00.8	
	comp=Z,33nm,1.3s						
CAN	Canberra	34.07	239	P	P	16 30 27.5	-2.7
PMG	Port Moresby	38.40	283	P	P	16 31 08.8	+1.4
	comp=Z,11nm,1.1s,baz=154,slow=12,SNR=3.8						
PMG	Port Moresby	38.40	283	P	P	16 31 07.0	-0.3
PMG				IAmb	IAmb	16 31 10.6	
	comp=Z,15nm,1.2s						
STKA	Stephens Creek	39.70	246	P	P	16 31 18.1	0.0
	comp=Z,1.4nm,0.6s,baz=100,slow=8.8,SNR=5.0						
STKA	Stephens Creek	39.70	246	P	P	16 31 18.5	+0.4
AS31	Alice Springs	46.91	258	P	P	16 32 16.2	-0.3
ASAR	Alice Springs	46.91	258	P	P	16 32 16.3	-0.2
	comp=Z,6.6nm,0.9s,baz=91,slow=8.1,SNR=34						
ASAR	Alice Springs	46.91	258	P	P	16 32 17.3	+0.8
WR0	Warramunga Arr	46.98	263	P	P	16 32 17.1	+0.1
WR0				IAmb	IAmb	16 32 23.4	
	comp=Z,8.8nm,1.3s						
WB0	Warramunga Arr	47.16	263	P	P	16 32 18.0	-0.4
WB0				IAmb	IAmb	16 32 20.6	
	comp=Z,3.7nm,0.8s						
WB2	Warramunga Arr	47.16	263	P	P	16 32 18.4	-0.1
WRAB	Tennant Creek	47.16	263	P	P	16 32 17.6	-0.9
WRAB				IAmb	IAmb	16 32 20.1	
	comp=Z,3.3nm,0.8s						
WRA	Warramunga Arr	47.17	263	P	P	16 32 17.9	-0.6
	comp=Z,4.0nm,0.9s,baz=90,slow=5.9,SNR=20						
WRA	Warramunga Arr	47.17	263	P	P	16 32 16.9	-1.7
GUMO	Guam	52.91	308	LR	LR	16 53 48.5	
	comp=Z,25nm,18.8s,baz=64,slow=34						
QSPA	South Pole Qui	68.08	180	P	P	16 34 44.5	-0.6
QSPA				IAmb	IAmb	16 35 01.8	
	comp=Z,8.7nm,1.4s						
KSRS	Korea Array	79.86	317	LR	LR	17 10 44.9	
	comp=Z,18nm,18.0s,baz=298,slow=35						
TXAR	Lajitas Array	85.54	56	P	P	16 36 24.5	+0.6
	comp=Z,0.4nm,0.9s,baz=213,slow=6.5,SNR=3.0						
SYO	Syowa Base	85.87	192	⇓*e*X	P	16 36 18.0	-6.8
PDAR	Pinedale Array	88.16	42	P	P	16 36 37.5	+0.9
	comp=Z,0.3nm,0.6s,baz=210,slow=7.1,SNR=2.4						
ILAR	Eielson Array	89.18	12	P	P	16 36 42.8	+2.2
	comp=Z,0.6nm,0.8s,baz=218,slow=5.7,SNR=4.3						
NNA	Nana	92.99	104	LR	LR	17 09 42.5	
	comp=Z,39nm,20.1s,baz=248,slow=30						
AKASG	Malin Array Be	145.65	332	PKPbc	PKPab	16 43 24.5	+0.4
	comp=Z,1.3nm,0.5s,baz=43,slow=4.2,SNR=8.5						
BRTR	Keskin Array B	149.90	312	PKPbc	PKPbc	16 43 36.5	+0.5
	comp=Z,1.0nm,0.8s,baz=107,slow=1.3,SNR=3.9						
CLL	Collm	150.08	350	*e*PKPbc	PKPbc	16 43 39.0	+3.2

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*BJI **14** 16:28:56.4±0.0, 25°.22N×141°.62E, h502^{km}, mB4.9/50, mb5.0/69*

*NEIC **14** 16:28:57.9±1.7, 25°.11N±0°.08×141°.6E±0°.1, h513^{km}±6^{km}, mb4.9/296, Error ellipse: s-maj=14.7km s-min=11.8km az=92.0*

*IDC **14** 16:28:59.1±0.7, 25°.12N×141°.58E, h530^{km}±7^{km}, mb4.3/41, mb1 4.4/49, mb1mx4.3/62, mbtmp5.2/49, Error ellipse: s-maj=7.6km s-min=5.4km az=90.0*

*JMA **14** 16:28:59.4, 25°.39N×141°.49E, h512^{km}, M5.5*

ISC 14 16:28:58.2±0.5**, 25°.12N**±0°.04×**141°.66E**±0°.05**, h521**^{km}±4^{km}**, n607, σ1**^{s}**17**/555**, mb5.0**/235**, 14C-11D, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	1.58	17	⇑P	P	16 30 03.7	+0.4
JHH2				*e*S	S	16 30 54.6	-1.8
JCJ	Chichijima	2.02	13	P	P	16 30 05.2	-0.1
	286nm,0.3s,baz=289,slow=23,SNR=102						
JCJ				S	S	16 30 57.8	-2.1
	853nm,0.3s,baz=287,slow=19,SNR=16						
CBIJ	Chichi jima	2.03	13	⇑P	P	16 30 05.1	-0.1
CBIJ				S	S	16 30 56.6	-3.3
JHCJ	Hachijojimakas	8.09	349	P	P	16 30 54.4	-1.5
JHCJ				*e*S	S	16 32 26.8	-5.8
JHJ2	Mitsune	8.13	349	P	P	16 30 55.6	-0.6
JHJ2	Mitsune	8.13	349	P	P	16 30 55.8	-0.5
JHJ2					S	16 32 30.3	-2.9
JHJ	Hachijo jima 2	8.14	349	P	P	16 30 55.8	-0.6
	65nm,0.3s,baz=73,slow=19,SNR=34						
JHJ				S	S	16 32 27.6	-5.9
	42nm,0.3s,baz=98,slow=19,SNR=5.0						
JMKN	Mikurajimanish	8.93	349	P	P	16 31 03.9	-0.6
JKO	Kozu shima	9.30	347	P	P	16 31 07.8	-0.5
BSO3	Boso 3	9.70	354	P	P	16 31 12.2	0.0
JIE	Ise	10.20	336	P	P	16 31 17.9	+0.3
JKN2	Miekihoku	10.22	334	P	P	16 31 18.3	+0.4
JYN	Shimob	10.69	346	P	P	16 31 22.2	-0.7
JAO	Obara	10.81	340	P	P	16 31 23.5	-0.6
INU	Inuyama	10.96	340	P	P	16 31 25.1	-0.6
JEG	Eigenji	10.97	337	P	P	16 31 25.8	0.0
JRY	Ryogami san	11.12	348	P	P	16 31 26.6	-0.8
JAM	Amami Oshima	11.26	290	P	P	16 31 30.4	+1.5
JYTA	Yamagatataniai	11.27	339	P	P	16 31 28.0	-0.9
JAG	Ashikaga	11.43	351	P	P	16 31 29.5	-1.1
JHO	Hitachi	11.50	356	P	P	16 31 31.0	-0.2
JKIT	Kitakata	11.66	312	P	P	16 31 34.5	+1.5
JNG	Nsakai	11.66	346	P	P	16 31 32.1	-1.0
MJAR	Matsushiro Arr	11.77	346	P	P	16 31 32.8	-1.3
	4.8nm,0.3s,baz=159,slow=10,SNR=230						
MJAR				ScP	ScP	16 39 17.3	-1.2
	0.1nm,0.3s,baz=160,slow=3.0,SNR=4.7						
MJAR	Matsushiro Arr	11.77	346	P	P	16 31 31.9	-2.2
MAJO	Matsushiro	11.77	346	P	P	16 31 33.1	-1.1
MAT	Matsushiro	11.77	346	P	P	16 31 32.8	-1.4
MAT	Matsushiro	11.77	346	P	P	16 31 32.7	-1.4
MAT				S	S	16 33 38.3	-4.3
MJB9	Matsu-Tunnel	11.77	346	P	P	16 31 33.0	-1.2
JKT	Katashina	11.79	350	P	P	16 31 33.4	-1.1
GUMO	Guam	11.86	165	P	P	16 31 36.3	+1.0

	15nm,0.3s,baz=356,slow=12,SNR=4.3						
JFFD	Fukushimafurud	11.97	356	P	P	16 31 36.3	0.0
JYRO	Yoronjima	12.03	282	P	P	16 31 37.5	+0.5
JOW	Kunigami	12.17	281	P	P	16 31 39.0	+0.5
JOW	Kunigami	12.17	281	P	P	16 31 38.9	+0.5
	3.4nm,0.3s,baz=130,slow=13,SNR=28						
JOW	Kunigami	12.17	281	P	P	16 31 38.3	-0.2
JHK	Hiroka	12.30	350	P	P	16 31 38.9	-0.8
JJN	Nakama	12.32	347	P	P	16 31 38.9	-1.0
JNU	Nakatsue	12.34	313	P	P	16 31 40.9	+0.6
	2.5nm,0.3s,baz=58,slow=3.0,SNR=29						
JNU				S	S	16 34 04.2	+10
	0.8nm,0.3s,baz=207,slow=21,SNR=19						
JNU	Nakatsue	12.34	313	P	P	16 31 40.7	+0.4
JFY	Yanaizu	12.37	353	P	P	16 31 40.3	-0.1
JNTH	Nagotoyohara	12.37	279	P	P	16 31 41.0	+0.4
JFT	Otama	12.41	355	P	P	16 31 41.3	+0.4
JIH	Iheya	12.46	282	P	P	16 31 42.9	+1.4
JJT3	Tamagusuku3	12.56	278	P	P	16 31 43.7	+1.1
JMST	Minamisoumatoc	12.59	357	P	P	16 31 42.8	+0.1
JMM	Marumori	12.73	357	P	P	16 31 44.6	+0.4
JNS	Sasagawa	12.82	352	P	P	16 31 45.1	0.0
JYAR	Yonezawaarcadi	12.82	355	P	P	16 31 45.9	+0.7
JIKH	Ishinomakikobu	13.15	359	P	P	16 31 48.7	+0.1
JOU	Okura	13.24	357	P	P	16 31 50.1	+0.6
JIO	Ouri	13.30	359	P	P	16 31 50.3	+0.2
JKE	Kume jima 2	13.47	278	P	P	16 31 51.9	-0.2
JKMT	Kesennumamotoy	13.65	359	P	P	16 31 53.9	+0.1
JMK	Ichinoseki	13.80	359	P	P	16 31 55.5	+0.2
JYK	Kaneyama	13.80	356	P	P	16 31 55.7	+0.3
OFUJ	Ofunato	13.92	0	P	P	16 31 56.7	+0.1
JRG	Rokugo	14.27	357	P	P	16 32 00.7	+0.5
JOM	Ohasama	14.32	359	P	P	16 32 00.8	0.0
MIYJ	Miyakonagasawa	14.42	0	P	P	16 32 01.9	+0.1
JYW	Yuwa	14.43	355	P	P	16 32 02.6	+0.6
JSZI	Iwateshizukuis	14.60	358	P	P	16 32 04.2	+0.5
JTH	Tanohata	14.78	1	P	P	16 32 05.3	-0.3
JKEN	Kujiedanarisaw	15.05	0	P	P	16 32 08.0	-0.4
JAH	Hinai	15.05	357	P	P	16 32 08.6	+0.1
JIW	Iwasaki	15.49	355	P	P	16 32 13.0	-0.1
JHHS	Hirosakihyakuz	15.53	356	P	P	16 32 13.7	+0.3
JISG	Ishigakijimahi	15.76	272	P	P	16 32 14.6	-1.4
JARK	Aomorirokkasho	15.85	359	P	P	16 32 16.1	-0.6
JIJ	Ishigaki jima	15.94	271	P	P	16 32 18.2	+0.3
JKRS	Kuro-shima	16.07	271	P	P	16 32 20.1	+0.9
JOT	Ohata	16.23	358	P	P	16 32 20.2	-0.3
IRIF	Iriomote-Funau	16.32	271	P	P	16 32 20.0	-1.7
ERM	Erimo	16.90	4	P	P	16 32 28.0	+0.9
YOJ	Yonaguni jima	16.95	272	P	P	16 32 25.9	-2.0
KSRS	Korea Array	16.98	320	P	P	16 32 28.2	+0.2
	12nm,0.3s,baz=147,slow=8.6,SNR=206						
KSRS				S	S	16 35 20.9	+1.5
	baz=147,slow=15,SNR=12						
KSRS				ScP	ScP	16 39 27.4	-0.2
	0.1nm,0.3s,baz=121,slow=0.8,SNR=22						
KSAR	Wonju Array Be	17.00	320	P	P	16 32 28.7	+0.6
KS19	Wonju Array Si	17.05	320	P	P	16 32 28.4	-0.2
INCN	Inchon	17.77	317	P	P	16 32 35.4	0.0
NACB	Ninganchiao	18.27	271	P	P	16 32 38.6	-1.4
TATO	Taipei	18.28	274	P	P	16 32 39.0	-1.1
YHNB	Yeheng	18.41	273	P	P	16 32 40.5	-1.0
YULB	Yu-li	18.65	269	P	P	16 32 44.1	+0.6
BBP	Basco	18.75	260	eP	P	16 32 40.4	-4.0
SSLB	Suanglung	18.90	270	P	P	16 32 46.6	+0.8
TWG	Pinlang	18.96	267	P	P	16 32 45.4	-0.9
ASAJ	Asahikawa	18.97	2	P	P	16 32 47.1	+1.0
	18nm,0.3s,baz=235,slow=9.7,SNR=109						
JKA	Kamikawa-asahi	18.97	2	P	P	16 32 47.1	+1.0
TPUB	Ta-pu	19.27	269	P	P	16 32 49.7	+0.5
SGCP	Mt. Cagua	19.46	253	eP	P	16 32 51.2	+0.3
PALP	Palanan	19.64	250	eP	P	16 32 52.8	+0.2
PVCP	Virac	20.08	238	eP	P	16 32 56.9	+0.3
APYP	Conner	20.31	253	eP	P	16 32 57.4	-1.3
CNP	Catarman	20.37	235	eP	P	16 33 00.3	+1.1
USA0B	Ussuriysk Arra	20.61	340	P	P	16 33 01.4	+0.5
USA0B				IAmb	IAmb	16 33 03.5	
	comp=Z,30nm,0.7s						
USRK	Ussuriysk Ar.	20.61	340	P	P	16 33 01.6	+0.7
	comp=Z,27nm,0.6s,baz=150,slow=7.5,SNR=87						
USRK	Ussuriysk Ar.	20.61	340	P	P	16 33 01.4	+0.4
ABRA	Dolores	20.86	253	eP	P	16 33 01.5	-2.1
QZH	Quanzhou	20.91	274	⇓iP	P	16 33 04.0	0.0
QZH				pmax	pmax		
	comp=Z,100nm,0.7s						
BALP	Baler	20.98	247	eP	P	16 33 05.9	+1.1
KNMB	Chin-men Tao	21.14	273	P	P	16 33 06.1	0.0
NJ2	Nanjing	21.17	294	eP	P	16 33 05.8	-0.5
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
POLP	Polilio Island	21.20	245	eP	P	16 33 06.9	+0.2
SMPP	San Manuel, Pa	21.55	250	eP	P	16 33 07.6	-2.3
MDJ	Mudanjiang	21.78	336	P	P	16 33 12.4	+0.8
MDJ				pmax	pmax		
	comp=Z,29nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,320nm,5.3s						
MDJ	Mudanjiang	21.78	336	P	P	16 33 12.1	+0.4
MDJ				IAmb	IAmb	16 33 13.3	
	comp=Z,36nm,1.2s						
DL2	Dalian	21.79	314	P	P	16 33 14.0	+2.2
DL2				eS	S	16 36 40.8	+4.0
DL2				ScP	ScP	16 39 38.3	-0.5
DL2				pmax	pmax		
	comp=Z,29nm,0.5s						
YSS	Yuzh-Sakhalins	21.81	2	P	P	16 33 11.8	0.0
BOAC	Boac	21.98	242	eP	P	16 33 13.7	-0.1
BUTP	Butuan	22.16	226	eP	P	16 33 15.5	0.0
TGY	Tagaytay City	22.36	245	P	P	16 33 17.9	+0.6
	comp=Z,189nm,0.4s,baz=359,slow=15,SNR=6.9						
SNY	Shenyang	22.41	323	⇓P	P	16 33 16.5	-0.7
SNY				pmax	pmax		
	comp=Z,33nm,0.8s						
SNY				pmax	pmax		
	comp=Z,510nm,7.9s						
OTRP	Odiongan	22.48	239	eP	P	16 33 18.1	-0.1
SJMP	San Jose	23.13	241	eP	P	16 33 25.4	+1.3
MATI	Mati	23.32	222	eP	P	16 33 25.1	-0.7
BUKP	Musuan	23.34	226	eP	P	16 33 26.0	-0.1
KCP	Kidapawan	23.99	224	⇑iP	P	16 33 31.3	-0.5
BUSP	Coron	24.12	241	eP	P	16 33 33.2	+0.3
DDMP	Don Marcelino,	24.31	222	eP	P	16 33 31.6	-3.0
CTBH	Cotabato--PC H	24.37	226	⇑iP	P	16 33 35.6	+0.5
PAGZ	Pagadian	24.48	229	eP	P	16 33 36.8	+0.7
SKMP	Bagumbayan, Su	24.71	224	eP	P	16 33 37.1	-1.0
WHN	Wuhan	24.72	289	P	P	16 33 37.9	-0.1
KLR	Kul'dur	25.29	345	P	P	16 33 43.3	+0.5
	comp=Z,63nm,0.6s,baz=164,slow=8.5,SNR=280						
KLR				S	S	16 37 30.9	-0.6
	comp=Z,2.6nm,0.8s,baz=167,slow=18,SNR=4.5						
SMPI	Sarmi	27.10	186	P	P	16 33 59.3	+0.1
	comp=Z,51nm,0.7s						
RKPI	Ransiki, Papua	27.45	196	P	P	16 34 02.2	-0.1
	comp=Z,120nm,0.6s						
GENI	Genyem	27.58	183	P	P	16 34 03.7	+0.3
	comp=Z,20nm,0.8s						
SWI	Sorong	27.72	203	P	P	16 34 04.5	-0.2
	comp=Z,1µmcomp=Z,137nm,0.7s						
SIJI	Sorong	27.73	203	P	P	16 34 05.0	+0.3
	comp=Z,75nm,0.5s,baz=20,slow=10,SNR=38						
TNTI	Ternate	27.87	212	P	P	16 34 05.8	-0.2
	comp=Z,27nm,0.5s						
ENH	Enshi	28.89	288	P	P	16 34 14.2	-0.6
ENH				IAmb	IAmb	16 34 15.9	
	comp=Z,35nm,1.2s						
FAKI	Fak Fak	29.33	199	P	P	16 34 18.3	-0.4
	comp=Z,892nmcomp=Z,74nm,0.6s						
FAKI	Fak Fak	29.33	199	P	P	16 34 18.4	-0.4
HHC	Hu-ho-hao-te	29.54	310	eP	P	16 34 19.8	-0.6
HHC				pmax	pmax		
	comp=Z,210nm,0.8s						
HHC				pmax	pmax		
	comp=Z,1µm,3.9s						
HIA	Hailar	29.56	330	P	P	16 34 20.6	+0.3
HIA				IAmb	IAmb	16 34 21.0	
	comp=Z,34nm,0.5s						
XAN	Xi'an	29.73	295	P	P	16 34 21.8	-0.2
XAN				pmax	pmax		
	comp=Z,24nm,0.6s						
XAN	Xi'an	29.73	295	P	P	16 34 21.9	-0.2
XAN				IAmb	IAmb	16 34 22.2	
	comp=Z,18nm,0.6s						
KMSI	Cibinong	29.79	218	P	P	16 34 22.8	+0.1
	comp=Z,2µmcomp=Z,270nm,0.7s						
QIZ	Qiongzhong	30.06	265	P	P	16 34 25.8	+0.9
PEA0B	Petropavlovsk-	30.45	19	P	P	16 34 29.1	+1.2
PEA0B				IAmb	IAmb	16 34 29.4	
	comp=Z,45nm,0.9s						
PETK	Petropavlovsk-	30.45	19	P	P	16 34 28.7	+0.8
	comp=Z,22nm,0.7s,baz=216,slow=9.6,SNR=50						
PETK				PcP	PcP	16 37 10.8	-0.3
	comp=Z,6.6nm,0.8s,baz=201,slow=2.5,SNR=3.5						
PETK				ScP	ScP	16 40 02.3	-1.9
	comp=Z,1.8nm,0.6s,baz=199,slow=5.1,SNR=4.7						
PETK	Petropavlovsk-	30.45	19	P	P	16 34 29.0	+1.1
PETK					PcP	16 37 11.6	+0.4
PETK					ScP	16 40 02.5	-1.7
PET	Petropavlovsk	30.67	20	P	P	16 34 30.8	+1.1
MSAI	Masohi	30.88	205	P	P	16 34 32.5	+0.4
	comp=Z,454nmcomp=Z,33nm,0.7s						
KKM	Kota Kinabalu	30.88	236	P	P	16 34 33.0	+0.8
SANI	Sanana	30.99	212	P	P	16 34 31.8	-1.2
	comp=Z,1µmcomp=Z,113nm,0.8s						
MRSI	Marisa	31.04	221	P	P	16 34 34.1	+0.6
	comp=Z,3µmcomp=Z,396nm,0.7s						
AAI	Ambon	31.48	206	P	P	16 34 37.3	+0.1
	comp=Z,2µmcomp=Z,115nm,0.6s						
GYA	Guiyang	31.49	280	⇑iP	P	16 34 37.8	+0.5
GYA				pP	pP	16 36 02.1	-2.7
GYA				PP	pwP	16 36 03.8	-4.3
GYA				PcP	PcP	16 37 15.8	+1.2
GYA				S	S	16 39 06.0	-2.7
GYA				ScP	ScP	16 40 08.3	-0.1
GYA				SS	SS	16 41 53.4	-26
GYA				pmax	pmax		
	comp=Z,70nm,0.9s						
GYA				pmax	pmax		
	comp=Z,180nm,4.9s						
NLAI	Namlea	31.53	209	P	P	16 34 37.3	-0.4
	comp=Z,70nm,0.5s						
SPMM	Sapulut	31.57	234	P	P	16 34 39.0	+0.9
BNDI	Bandanaira	31.60	203	P	P	16 34 37.6	-0.6
	comp=Z,184nm,0.7s						
LUWI	Luwuk	31.80	218	P	P	16 34 38.4	-1.5
	comp=Z,4µmcomp=Z,392nm,0.7s						
LUWI	Luwuk	31.80	218	P	P	16 34 38.7	-1.2
APSI	Ampana	32.33	220	P	P	16 34 44.1	-0.4
	comp=Z,3µmcomp=Z,315nm,0.5s						
MPSI	Mapaga	32.40	224	P	P	16 34 44.8	-0.3
	comp=Z,1µmcomp=Z,60nm,0.6s						
CD2	Chengdu	33.84	289	P	P	16 34 57.4	+0.2
CD2				pmax	pmax		
	comp=Z,140nm,0.5s						
DLV	T Lat	33.97	253	P	P	16 34 59.2	+0.6
LZH	Lanzhou	34.15	298	⇑P	P	16 35 00.8	+1.0
LZH				pP	pP	16 36 29.8	+2.0
LZH				sP	sP	16 37 26.5	-0.7
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
LZH				pmax	pmax		
	comp=Z,110nm,5.4s						
SAUI	Saumlaki	34.41	198	P	P	16 35 03.1	+1.0
	comp=Z,178nm,1.0s						
SAUI	Saumlaki	34.41	198	P	P	16 35 01.8	-0.3
PMG	Port Moresby	34.73	170	P	P	16 35 04.6	-0.1
SLVN	Son La	34.83	272	P	P	16 35 06.1	+0.5
SLVN				IAmb	IAmb	16 35 07.6	
	comp=Z,36nm,0.8s						
MA2	Magadan	35.02	8	P	P	16 35 07.2	+0.6
TTSI	Tana Toraja	35.12	220	P	P	16 35 06.8	-1.1
	comp=Z,38nm,1.0s						
KMI	Kunming	35.16	278	P	P	16 35 09.0	+0.5
KMI				sP	sP	16 37 31.1	-5.2
KMI				S	S	16 40 03.8	-0.9
KMI				pmax	pmax		
	comp=Z,35nm,0.5s						
KMI				pmax	pmax		
	comp=Z,140nm,4.1s						
UBPT	Khong Chiam	35.25	261	P	P	16 35 09.7	+0.6
UBPT				IAmb	IAmb	16 35 26.1	
	comp=Z,42nm,1.3s						
ULN	Ulaanbaatar	35.46	319	P	P	16 35 11.4	+0.8
BKB	Balikpapan	35.54	226	P	P	16 35 11.0	-0.5
	comp=Z,3µmcomp=Z,407nm,0.8s						
BKB	Balikpapan	35.54	226	P	P	16 35 12.2	+0.7
BBSI	Bau Bau	35.64	214	P	P	16 35 13.8	+1.5
	comp=Z,8.9nm,0.6s						
SONM	Songino Array	35.84	318	P	P	16 35 13.9	+0.1
	comp=Z,8.1nm,0.4s,baz=130,slow=7.9,SNR=103						
SONM				PcP	PcP	16 37 26.6	-0.3
	comp=Z,1.6nm,0.5s,baz=114,slow=2.2,SNR=3.8						
SONM				S	S	16 40 13.5	-0.7
	comp=Z,1.0nm,0.9s,baz=108,slow=9.1,SNR=3.2						
SONM				ScP	ScP	16 40 22.3	-1.2
	comp=Z,2.9nm,0.6s,baz=138,slow=3.9,SNR=8.2						
SONM	Songino Array	35.84	318	P	P	16 35 14.3	+0.5
SONM					PcP	16 37 25.6	-1.3
SONM					ScP	16 40 22.8	-0.7
SPSI	Sidrap Palu	35.89	219	P	P	16 35 14.3	-0.1
	comp=Z,2µmcomp=Z,276nm,0.7s						
BNSI	Bone	36.05	219	P	P	16 35 15.7	0.0
	comp=Z,1µmcomp=Z,143nm,0.7s						
SBUM	Sibu	36.23	236	P	P	16 35 17.9	+0.6
SBUM	Sibu	36.23	236	P	P	16 35 18.0	+0.8
KAPI	Kappang	36.75	218	P	P	16 35 21.3	-0.2
	comp=Z,70nm,0.7s,baz=26,slow=3.1,SNR=44						
BKSI	Bulukumba	36.80	218	P	P	16 35 21.6	-0.3
	comp=Z,596nmcomp=Z,78nm,0.9s						
SMY	Shemya	36.83	33	P	P	16 35 23.4	+1.7
KBKI	Kotabaru	37.55	225	P	P	16 35 27.9	-0.2
	comp=Z,451nmcomp=Z,43nm,0.8s						
YAK	Yakutsk	37.78	351	P	P	16 35 29.0	-0.2
GTA	Gaotai	37.81	303	⇑P	P	16 35 30.4	+0.3
GTA				pP	pP	16 36 57.3	-2.9
GTA				ScP	ScP	16 40 31.1	0.0
GTA				ScS	ScS	16 44 41.4	-0.7
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,110nm,4.4s						
KSM	Kuching	38.31	237	IAmb	IAmb	16 35 37.1	
	comp=Z,32nm,0.6s						
KSM	Kuching	38.31	237	P	P	16 35 34.0	-0.3
MMRI	Maumere	38.52	212	P	P	16 35 35.9	0.0
	comp=Z,1µmcomp=Z,132nm,0.8s						
MMRI	Maumere	38.52	212	P	P	16 35 36.0	+0.1
SOEI	Soe	38.59	208	P	P	16 35 35.7	-0.9
	comp=Z,79nm,0.5s						
SOEI	Soe	38.59	208	P	P	16 35 36.1	-0.6
SOEI				IAmb	IAmb	16 35 56.5	
	comp=Z,59nm,0.8s						
PBKT	Sadao Pong	38.85	265	P	P	16 35 39.4	+0.8
PBKT				IAmb	IAmb	16 35 40.3	
	comp=Z,46nm,0.7s						
CHTO	Chiang Mai	39.99	270	P	P	16 35 48.1	+0.3
CHTO				IAmb	IAmb	16 35 48.9	
	comp=Z,47nm,1.1s						
CM31	Chiang Mai Arr	40.09	269	P	P	16 35 49.4	+0.7
CM31				IAmb	IAmb	16 35 50.0	
	comp=Z,40nm,0.7s						
CMAR	Chiang Mai Arr	40.09	269	P	P	16 35 48.8	+0.1
	comp=Z,32nm,0.7s,baz=59,slow=7.8,SNR=267						
CMAR				ScP	ScP	16 40 40.5	+0.3
	comp=Z,2.7nm,0.8s,baz=81,slow=2.1,SNR=10						
CMAR	Chiang Mai Arr	40.09	269	P	P	16 35 48.9	+0.3
CMAR					ScP	16 40 40.8	+0.6
BASI	Baing, Sumba	40.70	213	P	P	16 35 51.6	-1.8
	comp=Z,935nmcomp=Z,81nm,0.9s						
WBSI	Waikabubak, Su	40.80	215	P	P	16 35 52.2	-2.2
	comp=Z,65nm,0.7s						
PLAI	Plampang	40.99	218	P	P	16 35 54.6	-1.2
	comp=Z,102nm,0.6s						
ADK	Adak	41.31	39	P	P	16 35 58.1	+0.2
SRBI	Singaraja	41.87	221	P	P	16 36 02.8	+0.1
	comp=Z,43nm,0.7s						
DNP	Denpasar	42.34	221	P	P	16 36 05.4	-1.1
	comp=Z,106nm,0.5s						
GRJI	Gresik	42.67	226	P	P	16 36 08.5	-0.6
	comp=Z,82nm,0.8s						
JAGI	Jajag, Banyuwa	42.81	222	P	P	16 36 08.7	-1.5
	comp=Z,122nm,0.6s						
JAGI	Jajag, Banyuwa	42.81	222	P	P	16 36 08.9	-1.3
ATKA	Atka Island	42.85	39	P	P	16 36 10.6	+0.6
GMJI	Gumukmas	43.09	223	P	P	16 36 11.6	-0.8
	comp=Z,80nm,1.1s						
MYKOM	Kota Tinggi	43.20	244	P	P	16 36 14.3	+1.0
MYKOM				IAmb	IAmb	16 36 15.4	
	comp=Z,77nm,1.0s						
MYKOM	Kota Tinggi	43.20	244	P	P	16 36 15.0	+1.7
KULM	Kulim	43.96	250	P	P	16 36 19.4	+0.2
KULM	Kulim	43.96	250	P	P	16 36 20.0	+0.8
IPM	Ipoh	44.06	249	P	P	16 36 19.9	-0.1
IPM				IAmb	IAmb	16 36 21.1	
	comp=Z,61nm,0.8s						
IPM	Ipoh	44.06	249	P	P	16 36 20.0	-0.1
SMRI	Semarang	44.11	228	P	P	16 36 19.0	-1.3
	comp=Z,102nm,1.4s						
WOJI	Wonogiri, Jawa	44.37	226	P	P	16 36 20.6	-1.7
	comp=Z,30nm,0.7s						
PCJI	Pacitan	44.48	226	P	P	16 36 21.8	-1.3
	comp=Z,54nm,0.9s						
UGM	Wanagama	44.69	227	P	P	16 36 24.5	-0.4
	comp=Z,111nm,1.2s						
UGM	Wanagama	44.69	227	P	P	16 36 24.0	-0.9
SHL	Shillong	44.77	282	P	P	16 36 25.8	+0.2
LSA	Lhasa	44.79	288	P	P	16 36 27.9	+1.9
LSA				IAmb	IAmb	16 36 29.5	
	comp=Z,21nm,0.4s						
WB0	Warramunga Arr	45.17	190	P	P	16 36 28.6	+0.2
WB0					S	16 42 27.8	-2.1
WR0	Warramunga Arr	45.34	189	P	P	16 36 29.8	+0.2
KPJI	Karang Pucung	45.34	229	P	P	16 36 29.1	-0.7
	comp=Z,3µmcomp=Z,298nm,0.7s						
WRAB	Tennant Creek	45.34	190	P	P	16 36 29.7	+0.1
WRAB					S	16 42 31.5	-0.8
WB2	Warramunga Arr	45.35	190	P	P	16 36 29.9	+0.2
WRA	Warramunga Arr	45.35	190	P	P	16 36 29.9	+0.1
	comp=Z,71nm,0.7s,baz=7.5,slow=7.8,SNR=200						
WRA				PcP	PcP	16 37 55.6	-2.7
	comp=Z,2.8nm,0.5s,baz=18,slow=4.7,SNR=2.7						
WRA				ScP	ScP	16 41 01.4	+0.1
	comp=Z,4.9nm,1.0s,baz=3.5,slow=4.7,SNR=6.1						
WRA				S	S	16 42 30.1	-2.4
	comp=Z,5.0nm,0.8s,baz=11,slow=14,SNR=8.5						
WRA	Warramunga Arr	45.35	190	P	P	16 36 29.1	-0.7
PMBI	Palembang	45.36	237	P	P	16 36 29.8	-0.2
	comp=Z,6µmcomp=Z,322nm,0.8s						
BILL	Bilibino	45.48	13	P	P	16 36 30.9	+0.8
RGRI	Rengat	45.68	242	P	P	16 36 29.0	-3.4
LEM	Lembang	45.89	231	P	P	16 36 33.9	-0.3
	comp=Z,1µmcomp=Z,135nm,0.9s						
NIKH	Nikolski High	46.18	40	P	P	16 36 35.9	+0.2
CISI	Cisompet, Garu	46.27	230	P	P	16 36 35.8	-1.1
	comp=Z,1µmcomp=Z,92nm,0.7s						
CISI	Cisompet, Garu	46.27	230	P	P	16 36 34.8	-2.1
DBJI	Dramaga	46.31	232	P	P	16 36 36.5	-0.7
	comp=Z,2µmcomp=Z,48nm,1.4s						
BKNI	Bangkinang	46.34	244	P	P	16 36 37.8	+0.4
	comp=Z,80nm,0.9s						
CNJI	Cibinong	46.57	231	P	P	16 36 37.1	-2.1
	comp=Z,74nm,0.6s						
SDSI	Sungai Dareh	46.75	242	P	P	16 36 40.3	-0.3
	comp=Z,702nmcomp=Z,48nm,0.9s						
RPSI	Rantau Prapat	46.78	248	P	P	16 36 40.9	+0.1
MDSI	Maura Dua	46.81	236	P	P	16 36 39.6	-1.4
	comp=Z,770nmcomp=Z,67nm,1.1s						
TIXI	Tiksi	47.12	355	P	P	16 36 42.5	0.0
TIXI				IAmb	IAmb	16 36 45.1	
	comp=Z,26nm,0.8s						
LWLI	Liwa	47.25	236	P	P	16 36 42.7	-1.8
	comp=Z,9µmcomp=Z,38nm,0.8s						
KASI	Kota Agung	47.26	235	P	P	16 36 42.0	-2.3
WMQ	Urumqi	47.37	307	eP	P	16 36 46.6	+1.7
WMQ				pmax	pmax		
	comp=Z,26nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,170nm,6.7s						
KRJI	Kerinci	47.42	241	P	P	16 36 46.0	+0.3
	comp=Z,3µmcomp=Z,328nm,0.9s						
KSI	Kapahiang	47.49	239	P	P	16 36 44.9	-1.3
	comp=Z,4µmcomp=Z,90nm,0.6s						
PDSI	Padang	47.52	243	P	P	16 36 45.7	-0.7
	comp=Z,400nmcomp=Z,13nm,0.4s						
MNAI	Manna	47.66	238	P	P	16 36 46.4	-1.0
	comp=Z,4µmcomp=Z,234nm,1.0s						
MNAI	Manna	47.66	238	P	P	16 36 46.1	-1.4
UNV	Unalaska Valle	47.78	39	P	P	16 36 48.0	+0.3
UNV				IAmb	IAmb	16 36 48.6	
	comp=Z,78nm,1.0s						
TPTI		47.97	250	P	P	16 36 47.8	-1.9
	comp=Z,15nm,0.9s						
MLSI	Meulaboh, Aceh	48.12	252	P	P	16 36 49.6	-1.3
	comp=Z,79nm,1.1s						
TAPN	Taplejung	48.13	285	eP	P	16 36 52.0	+0.8
	comp=Z,52nm,0.7s						
AKUT	Akutan	48.27	39	P	P	16 36 51.9	+0.6
ODAN	Odare	48.50	284	eP	P	16 36 54.6	+0.7
	comp=Z,81nm,0.6s						
PBSI	Pulau Batu	48.82	246	P	P	16 36 54.8	-1.3
	comp=Z,76nm,1.0s						
SISI	Saibi	48.88	244	P	P	16 36 55.5	-1.0
	comp=Z,56nm,1.0s						
PPSI	Pulau Pagai	48.98	242	P	P	16 36 56.3	-0.9
	comp=Z,4µmcomp=Z,232nm,0.9s						
ASAR	Alice Springs	49.07	189	P	P	16 36 57.5	-0.3
	comp=Z,9.6nm,0.7s,baz=8.3,slow=6.3,SNR=185						
ASAR				PcP	PcP	16 38 12.3	+0.5
	comp=Z,3.8nm,0.7s,baz=19,slow=4.0,SNR=9.4						
ASAR				ScP	ScP	16 41 17.1	+0.1
	comp=Z,2.1nm,0.9s,baz=6.4,slow=4.3,SNR=4.9						
ASAR				S	S	16 43 21.8	-2.3
	comp=Z,0.7nm,0.7s,baz=18,slow=22,SNR=4.8						
ASAR	Alice Springs	49.07	189	P	P	16 36 57.6	-0.2
GAMB	Gambell	49.10	25	IAmb	IAmb	16 36 59.6	
	comp=Z,32nm,0.8s						
SNSI	Sinabang, Aceh	49.13	250	P	P	16 36 57.4	-1.0
	comp=Z,136nm,0.8s						
RAMN	Ramite	49.18	285	eP	P	16 36 59.5	+0.6
	comp=Z,75nm,0.7s						
JIRN	Jiri	49.41	286	eP	P	16 37 01.7	+1.0
	comp=Z,81nm,0.4s						
GUN	Gumba	49.63	286	eP	P	16 37 03.2	+0.8
	comp=Z,93nm,0.4s						
PKI	Pulchoki	50.10	286	eP	P	16 37 06.0	+0.2
	comp=Z,44nm,0.5s						
PKIN	Phulchoki	50.11	286	eP	P	16 37 06.0	+0.2
	comp=Z,37nm,0.5s						
KKN	Kakani	50.18	286	eP	P	16 37 06.6	+0.4
	comp=Z,46nm,0.6s						
DMN	Daman	50.36	286	eP	P	16 37 08.1	+0.5
	comp=Z,49nm,0.5s						
ZAA0	Zalesovo Array	50.69	320	IAmb	IAmb	16 37 09.6	
	comp=Z,21nm,0.7s						
ZALV	Zalesovo Beam	50.69	320	P	P	16 37 08.9	-0.3
	comp=Z,31nm,0.5s,baz=108,slow=7.6,SNR=68						
ZALV				PcP	PcP	16 38 16.6	-0.7
	comp=Z,2.7nm,0.4s,baz=121,slow=5.3,SNR=3.9						
ZALV				S	S	16 43 43.1	-2.0
	comp=Z,2.4nm,0.8s,baz=101,slow=12,SNR=6.0						
ZALV	Zalesovo Beam	50.69	320	P	P	16 37 09.2	0.0
GKN	Gorkha	50.70	287	eP	P	16 37 10.5	+0.6
MKAR	Makanchi Array	51.39	311	P	P	16 37 14.7	+0.2
	comp=Z,14nm,0.4s,baz=87,slow=9.3,SNR=382						
MKAR				PcP	PcP	16 38 20.3	+0.1
	comp=Z,1.4nm,0.4s,baz=95,slow=5.2,SNR=2.3						
MKAR				ScP	ScP	16 41 26.1	-0.8
	comp=Z,4.3nm,0.5s,baz=81,slow=4.7,SNR=23						
MKAR				S	S	16 43 54.8	-0.1
	comp=Z,2.6nm,1.0s,baz=88,slow=16,SNR=9.6						
MKAR	Makanchi Array	51.39	311	P	P	16 37 15.2	+0.7
MKAR					ScP	16 41 26.2	-0.6
DANN	Dangsing	51.39	287	eP	P	16 37 16.1	+0.9
	comp=Z,256nm,0.5s						
MAKZ	Makanchi	51.60	311	P	P	16 37 16.7	+0.6
ANM	Nome	51.94	26	IAmb	IAmb	16 37 20.6	
	comp=Z,75nm,1.1s						
CHGN	Chignik	52.86	37	P	P	16 37 24.6	-0.2
KURK	Kurchatov	54.05	316	P	P	16 37 33.6	+0.2
KURBB	Kurchatov Arra	54.10	315	S	S	16 44 28.4	-2.2
	comp=Z,1.6nm,0.8s,baz=92,slow=11,SNR=14						
RDOG	Red Dog Mine	54.23	22	IAmb	IAmb	16 37 36.5	
	comp=Z,59nm,0.7s						
NRIK	Noril'sk	54.32	339	P	P	16 37 35.1	+0.1
	comp=Z,31nm,0.6s,baz=112,slow=8.8,SNR=75						
NRIK				PcP	PcP	16 38 31.1	+0.2
	comp=Z,13nm,0.7s,baz=196,slow=2.9,SNR=4.0						
NRIK				S	S	16 44 30.8	-2.2
	comp=Z,3.3nm,0.6s,baz=141,slow=6.5,SNR=10						
SVW2	Sparrevohn	55.21	32	IAmb	IAmb	16 37 43.7	
	comp=Z,68nm,0.8s						
KSH	Kashi	56.21	302	P	P	16 37 52.9	+4.1
KSH				pP	pP	16 39 31.4	+2.1
KSH				PP	PP	16 40 06.3	+4.8
KSH				PcS	PcS	16 42 40.3	-0.2
KSH				S	S	16 45 02.1	+3.3

KSH				SS	SS	16 49 02.9	+7.2
KSH				pmax	pmax		
	comp=Z,41nm,0.8s						
KSH				pmax	pmax		
	comp=Z,440nm,7.1s						
KDAK	Kodiak Island	56.23	36	P	P	16 37 49.1	+0.7
	comp=Z,60nm,0.3s,baz=256,slow=3.1,SNR=113						
KDAK	Kodiak Island	56.23	36	P	P	16 37 49.2	+0.7
RSO	Redoubt South	56.47	33	P	P	16 37 50.9	+0.5
KZA	Kyzart	56.50	305	P	P	16 37 53.6	+2.4
	SNR=8.4						
STKA	Stephens Creek	56.67	180	P	P	16 37 51.9	0.0
	comp=Z,13nm,0.5s,baz=350,slow=7.3,SNR=48						
KBK	Karagaybulak	56.68	306	P	P	16 37 53.2	+1.1
	SNR=8.8						
USP	Ospenovka	56.95	307	P	P	16 37 54.5	+0.7
	SNR=7.1						
AAK	Ala-Archa	57.01	306	P	P	16 37 55.2	+0.8
IMAR	Indian Mountai	57.02	26	P	P	16 37 55.0	+1.2
UCH	Uchtor	57.04	305	P	P	16 37 56.5	+1.6
	SNR=14						
PPLA	Purkeypile	57.10	30	IAmb	IAmb	16 37 57.0	
	comp=Z,42nm,0.7s						
CNPM	China Poot	57.11	34	IAmb	IAmb	16 37 55.4	
	comp=Z,101nm,0.8s						
EKS2	Erkin-Say	57.54	306	P	P	16 37 59.4	+1.5
	SNR=7.0						
AML	Almayashu	57.65	305	P	P	16 38 00.5	+1.4
	SNR=14						
RC01	Rabbit Creek A	58.02	32	IAmb	IAmb	16 38 01.6	
	comp=Z,47nm,0.7s						
TRF	Thorofare Moun	58.03	29	IAmb	IAmb	16 38 02.4	
	comp=Z,77nm,0.7s						
SEW	Seward	58.07	33	IAmb	IAmb	16 38 02.1	
	comp=Z,98nm,1.1s						
MLY	Manley	58.07	28	IAmb	IAmb	16 38 02.8	
	comp=Z,40nm,0.6s						
PMR	Palmer	58.36	32	IAmb	IAmb	16 38 03.8	
	comp=Z,65nm,0.9s						
GHO	Glory Hole Cre	58.47	31	IAmb	IAmb	16 38 04.9	
	comp=Z,56nm,0.6s						
BWN	Browne	58.49	29	IAmb	IAmb	16 38 06.9	
	comp=Z,118nm,1.2s						
RND	Reindeer	58.67	30	IAmb	IAmb	16 38 06.1	
	comp=Z,29nm,0.6s						
HYB	Hyderabad	58.87	276	*i* P	P	16 38 07.0	-0.2
MDM	Murphy Dome	59.12	28	IAmb	IAmb	16 38 09.9	
	comp=Z,46nm,0.6s						
TOLK	Toolik Lake Re	59.13	23	IAmb	IAmb	16 38 10.3	
	comp=Z,40nm,0.8s						
TOLK	Toolik Lake Re	59.13	23	P	P	16 38 09.4	+1.3
	baz=260						
BVAR	Borovoye Array	59.19	318	ScP	ScP	16 42 00.4	-0.6
	comp=Z,0.9nm,0.5s,baz=101,slow=6.0,SNR=4.2						
BVAR				S	S	16 45 35.6	-0.5
	comp=Z,3.3nm,0.8s,baz=87,slow=12,SNR=12						
SCM	Sheep Creek Mo	59.23	31	IAmb	IAmb	16 38 10.4	
	comp=Z,90nm,0.9s						
BRVK	Borovoye	59.25	318	P	P	16 38 09.7	+0.6
BRVK				IAmb	IAmb	16 38 10.3	
	comp=Z,43nm,0.7s						
TCOL	CIGO, UAF Yank	59.26	28	P	P	16 38 09.1	+0.1
	baz=264						
NIL	Nilore	59.27	296	P	P	16 38 10.6	+0.9
NIL				IAmb	IAmb	16 38 12.1	
	comp=Z,45nm,0.6s						
POKR	Poker Plat Res	59.47	28	P	P	16 38 10.6	+0.2
	baz=264						
HDA	Harding Lake	59.61	28	IAmb	IAmb	16 38 12.0	
	comp=Z,157nm,1.6s						
HDA	Harding Lake	59.61	28	P	P	16 38 11.1	-0.2
	baz=265						
IL31		59.67	28	P	P	16 38 11.3	-0.3
IL31				IAmb	IAmb	16 38 12.2	
	comp=Z,36nm,0.8s						
ILAR	Eielson Array	59.67	28	P	P	16 38 11.2	-0.5
	comp=Z,26nm,0.8s,baz=260,slow=5.5,SNR=169						
ILAR	Eielson Array	59.67	28	P	P	16 38 11.4	-0.3
KKAR	Karatay Array	59.87	307	P	P	16 38 14.1	+0.6
KKAR	Karatay Array	59.87	307	IAmb	IAmb	16 38 15.2	
	comp=Z,13nm,0.9s						
PAX	Paxson	60.16	30	IAmb	IAmb	16 38 16.8	
	comp=Z,34nm,0.8s						
PRP	Porcupine Dome	60.31	27	IAmb	IAmb	16 38 17.5	
	comp=Z,31nm,0.5s						
FYU	Fort Yukon	60.51	26	IAmb	IAmb	16 38 20.4	
	comp=Z,98nm,1.0s						
GAR	Garm	60.63	302	IAmb	IAmb	16 38 20.4	
	comp=Z,37nm,0.9s						
BMAR	Burnt Mountain	60.84	25	P	P	16 38 21.3	+1.9
GLB	Gilahina Butte	60.89	32	IAmb	IAmb	16 38 21.6	
	comp=Z,41nm,0.8s						
MENT	Mentasta	60.96	30	P	P	16 38 21.4	+1.0
MENT				IAmb	IAmb	16 38 22.2	
	comp=Z,29nm,0.6s						
MCARA	McCarthy VSAT	61.27	32	IAmb	IAmb	16 38 24.2	
	comp=Z,66nm,0.8s						
TGL	Tana Glacier	61.37	33	IAmb	IAmb	16 38 24.8	
	comp=Z,48nm,0.6s						
BALM	Baldy	61.60	32	IAmb	IAmb	16 38 26.0	
	comp=Z,50nm,0.7s						
BCAR	Beaver Creek A	61.85	30	P	P	16 38 27.3	+1.1
BARN	Barnard Glacie	61.94	32	IAmb	IAmb	16 38 28.6	
	comp=Z,26nm,0.7s						
CTGM	Chitina Glacie	62.10	33	IAmb	IAmb	16 38 29.7	
	comp=Z,24nm,0.9s						
EGAK	Eagle	62.12	28	IAmb	IAmb	16 38 28.9	
	comp=Z,25nm,0.6s						
KBL	Kabul	62.50	297	P	P	16 38 31.4	+0.2
KBL				IAmb	IAmb	16 38 32.9	
	comp=Z,35nm,0.7s						
DAWY	Dawson	62.90	29	IAmb	IAmb	16 38 34.4	
	comp=Z,24nm,0.6s						
EPYK	Eagle Plains	63.92	26	P	P	16 38 40.5	+1.0
	baz=273						
HYT	Haines Junctio	63.98	33	IAmb	IAmb	16 38 42.5	
	comp=Z,71nm,1.2s						
INK	Inuvik	65.02	24	P	P	16 38 46.4	+0.2
	comp=Z,43nm,0.5s,baz=292,slow=5.4,SNR=138						
INK				S	S	16 46 45.6	-1.4
	comp=Z,2.0nm,1.1s,baz=341,slow=3.9,SNR=6.7						
INK	Inuvik	65.02	24	IAmb	IAmb	16 38 47.3	
	comp=Z,41nm,0.7s						
SKAG	Skagway	65.21	34	IAmb	IAmb	16 38 50.0	
	comp=Z,56nm,1.1s						
WHY	Whitehorse	65.28	33	IAmb	IAmb	16 38 50.5	
	comp=Z,33nm,0.7s						
ARU	Arti	65.70	323	P	P	16 38 50.8	0.0
	comp=Z,19nm,0.4s,baz=94,slow=6.3,SNR=18						
ARU				S	S	16 46 53.5	-2.1
	comp=Z,0.5nm,0.4s,baz=108,slow=20,SNR=7.2						
ARU	Arti	65.70	323	P	P	16 38 50.9	+0.1
ABKAR	Akbulak array	66.14	315	P	P	16 38 53.6	-0.2
ABKAR	Akbulak array	66.14	315	IAmb	IAmb	16 38 54.2	
	comp=Z,9.1nm,0.7s						
AKTO	Aktyubinsk	67.13	316	P	P	16 38 59.3	-0.5
	comp=Z,3.9nm,0.6s,baz=91,slow=8.3,SNR=18						
DLBC	Dease Lake	68.09	35	P	P	16 39 06.8	+1.1
	comp=Z,20nm,0.6s,baz=287,slow=4.7,SNR=49						
DLBC	Dease Lake	68.09	35	IAmb	IAmb	16 39 08.3	
	comp=Z,80nm,1.4s						
C36M	Paulatuk	68.24	22	P	P	16 39 06.3	+0.1
	baz=283						
KIRV	Kirov	70.06	326	P	P	16 39 17.5	+0.1
	comp=Z,44nm,0.6s,baz=110,slow=1.0,SNR=19						
GEYT	Alibeck	70.19	303	P	P	16 39 18.8	+0.2
	comp=Z,4.4nm,0.8s,baz=153,slow=0.3,SNR=11						
BBB	Bella Bella	70.70	41	P	P	16 39 21.8	+0.5
	comp=Z,20nm,0.8s,baz=308,slow=7.3,SNR=4.0						
BKZ	Black Stump Fm	71.76	152	P	P	16 39 27.5	-0.1
BKZ				IAmb	IAmb	16 39 28.2	
	comp=Z,16nm,0.5s						
SPA0	Spitsbergen Ar	72.24	350	*e*P	P	16 39 30.3	+0.4
KBS	Kingsbay	72.41	351	*e*P	P	16 39 31.0	+0.2
HSPB	Hornsund (broa	73.13	349	*e*P	P	16 39 35.5	+0.5
KLMR	Klimovskoe	74.05	330	*e*P	P	16 39 37.2	-3.3
KLMR				AMP		16 39 40.9	
	comp=Z,28nm,1.1s						
RES	Resolute Bay	74.08	13	IAmb	IAmb	16 39 41.8	
	comp=Z,25nm,0.8s						
YKA	Yellowknife Ar	74.10	28	P	P	16 39 40.9	+0.2
	comp=Z,35nm,0.5s,baz=292,slow=5.5,SNR=359						
WSAR	Wadi Sarin	74.53	289	P	P	16 39 44.3	+0.3
	baz=11,slow=5.2						
A04D	Lummi Island	75.08	43	P	P	16 39 47.0	+0.5
	baz=291						
HAMF	Hammerfest	75.16	342	*e*P	P	16 39 46.5	-0.1
ARCES	ARCESS Array B	75.25	341	P	P	16 39 47.3	+0.2
	comp=Z,28nm,0.8s,baz=82,slow=8.7,SNR=81						
ARCES	ARCESS Array B	75.25	341	P	P	16 39 47.1	0.0
ARE0	ARCESS Array S	75.25	341	*e*P	P	16 39 46.9	-0.2
D03D	Eldon	75.27	44	P	P	16 39 49.6	+2.0
	baz=291						
E03A	Lebam	75.32	45	IAmb	IAmb	16 39 50.4	
	comp=Z,68nm,0.9s						
B05A	Bryant	75.63	43	P	P	16 39 51.1	+1.6
	baz=292						
E04D	Cinebar	75.96	45	P	P	16 39 53.1	+1.7
	baz=292						
G03D	McMinnville, O	76.00	47	P	P	16 39 53.3	+1.6
	baz=292						
I02D	Swisshome	76.02	48	P	P	16 39 53.6	+1.8
	baz=291						
KTK1	Kautokeino	76.21	341	*e*P	P	16 39 52.7	+0.3
J01E	Myrtle Point	76.30	49	P	P	16 39 55.1	+1.7
	baz=292						
I03D	Drain, OR	76.50	48	P	P	16 39 55.9	+1.4
	baz=292,SNR=7.6						
C06D	Leavenworth	76.50	43	P	P	16 39 55.7	+1.3
	baz=292						
H04D	Lebanon	76.60	47	P	P	16 39 56.3	+1.3
	baz=292						
K02D	Willamette Mer	76.66	49	P	P	16 39 56.6	+1.1
	baz=292,SNR=5.9						
TULEG	Thule	76.86	7	IAmb	IAmb	16 39 57.0	
	comp=Z,33nm,0.8s						
LTY	Liberty	76.90	44	IAmb	IAmb	16 39 58.0	
	comp=Z,18nm,0.6s						
L02E	Cave Junction	76.90	50	P	P	16 39 58.2	+1.5
	baz=292,SNR=6.8						
H04A	Detroit Lake	76.91	47	IAmb	IAmb	16 39 58.8	
	comp=Z,21nm,0.6s						
F05D	White Salmon	76.92	45	P	P	16 39 58.3	+1.5
	baz=292						
TRO	Tromso	77.07	342	*e*P	P	16 39 56.5	-0.5
G05D	Wamic, OR	77.26	46	P	P	16 39 59.9	+1.2
	baz=293						
KHMM	Horse Mountain	77.29	51	IAmb	IAmb	16 40 01.8	
	comp=Z,28nm,0.8s						
B08A	Colville Reser	77.30	42	IAmb	IAmb	16 40 00.7	
	comp=Z,36nm,0.7s						
J04D	Umpqua Nationa	77.51	48	P	P	16 40 01.7	+1.4
	baz=293,SNR=6.3						
I05D	Terrebonne, OR	77.60	47	P	P	16 40 01.8	+1.3
	baz=293						
DAG	Danmarks Havn	77.63	355	⇓*i*P	P	16 39 59.7	-0.3
YBH	Yreka Blue Hor	77.68	50	IAmb	IAmb	16 40 03.5	
	comp=Z,24nm,0.8s						
E07A	Sunnyside	77.69	44	IAmb	IAmb	16 40 02.8	
	comp=Z,28nm,0.6s						
M02C	Callahan	77.71	50	P	P	16 40 02.9	+1.6
	baz=293,SNR=13						
L04D	Klamath Falls	77.77	49	P	P	16 40 02.7	+1.1
	baz=293,SNR=17						
KCPM	Cahto Peak	77.85	52	IAmb	IAmb	16 40 04.4	
	comp=Z,60nm,0.9s						
F07A	Phinny Hill Vi	77.90	45	IAmb	IAmb	16 40 04.5	
	comp=Z,40nm,1.1s						
HAWA	Hanford	77.96	44	IAmb	IAmb	16 40 04.1	
	comp=Z,27nm,0.5s						
N02D	Trinity Center	77.97	50	P	P	16 40 04.1	+1.5
	baz=293,SNR=10						
K04D	Chiloquin, OR	77.99	49	P	P	16 40 04.1	+1.4
	baz=293,SNR=11						
D08A	Wollman Farm,	78.07	44	IAmb	IAmb	16 40 05.0	
	comp=Z,36nm,1.0s						
PINE	Pine Mountain	78.08	47	IAmb	IAmb	16 40 05.9	
	comp=Z,61nm,0.7s						
J05D	Fort Rock, OR	78.08	48	P	P	16 40 04.8	+1.5
	baz=293,SNR=23						
C09A	Chrisman Ranch	78.17	43	IAmb	IAmb	16 40 05.0	
	comp=Z,35nm,0.5s						
O02D	Mt. Diablo Mer	78.22	51	P	P	16 40 05.7	+1.7
	baz=293,SNR=14						
M04C	Macdoel	78.26	49	P	P	16 40 05.5	+1.2
	baz=293,SNR=20						
NEW	Newport	78.68	42	P	P	16 40 06.5	+0.2
	comp=Z,38nm,0.6s,baz=295,slow=4.4,SNR=62						
NEW	Newport	78.68	42	IAmb	IAmb	16 40 08.2	
	comp=Z,42nm,0.7s						
E09A	Wood Farm, Sta	78.78	44	IAmb	IAmb	16 40 09.0	
	comp=Z,40nm,0.9s						
O03E	Paynes Creek	78.87	51	P	P	16 40 08.0	+0.5
	baz=293,SNR=8.7						
KBZ	Khabaz	79.01	313	P	P	16 40 08.2	+0.2
	comp=Z,11nm,0.6s,baz=120,slow=2.9,SNR=46						
STEI	Steigen	79.20	342	*e*P	P	16 40 08.5	0.0
FIA1	FINESS Array S	79.51	334	IAmb	IAmb	16 40 10.3	
	comp=Z,30nm,0.6s						
FINES	FINESS Array B	79.51	334	P	P	16 40 09.6	-0.7
	comp=Z,27nm,0.5s,baz=66,slow=5.2,SNR=246						
FINES	FINESS Array B	79.51	334	P	P	16 40 09.8	-0.5
KULLO	Kullorsuaq	79.79	5	*i* P	P	16 40 11.7	+0.1
J08A	Circle Bar Ran	79.89	47	IAmb	IAmb	16 40 14.9	
	comp=Z,27nm,0.7s						
BEKR	Beckworth	80.06	51	IAmb	IAmb	16 40 15.4	
	comp=Z,26nm,0.7s						
JTMT	Jette	80.62	42	IAmb	IAmb	16 40 18.6	
	comp=Z,42nm,0.6s						
MOR8	Moi Rana	80.62	341	*e*P	P	16 40 14.7	-1.4
KONS	Konsvik	80.78	341	*e*P	P	16 40 17.2	+0.4
CMB	Columbia Colle	80.79	52	IAmb	IAmb	16 40 19.4	
	comp=Z,22nm,0.8s						
PNTR	Pine Nut	80.91	51	IAmb	IAmb	16 40 20.4	
	comp=Z,20nm,0.8s						
MSO	Missoula	81.25	42	P	P	16 40 20.1	+0.3
	baz=297						
MFID	Camas Ranch	81.60	46	IAmb	IAmb	16 40 23.8	
	comp=Z,25nm,0.9s						
KVN	Kaiserville	81.98	51	IAmb	IAmb	16 40 25.2	
	comp=Z,14nm,0.6s						
MLAC	Mammoth, Mammo	82.08	52	P	P	16 40 24.7	+0.2
	baz=296						
NVAR	Mina Array Bea	82.11	51	P	P	16 40 25.4	+0.8
	comp=Z,14nm,0.7s,baz=285,slow=5.8,SNR=97						
NVAR	Mina Array Bea	82.11	51	P	P	16 40 25.7	+1.1
SMMC	Simmler	82.22	55	P	P	16 40 25.5	+0.5
	baz=295						
NSS	Namsos	82.52	340	*e*P	P	16 40 24.9	-0.9
PKM	Mcpherson Peak	82.53	55	P	P	16 40 27.9	+1.2
	baz=295						
SUMG	Summit	82.56	0	⇓*i*P	P	16 40 26.9	+0.5
	comp=Z,63nm,0.5s						
SUMG	Summit	82.56	0	P	P	16 40 26.8	+0.4
SUMG				IAmb	IAmb	16 40 27.4	
	comp=Z,24nm,0.5s						
VES	Vestal, Richgr	82.67	54	P	P	16 40 27.4	+0.3
	baz=296						
DLMT	Dillon	82.76	43	IAmb	IAmb	16 40 29.7	
	comp=Z,24nm,0.8s						
TIN	Tinemaha, Big	82.76	53	P	P	16 40 28.7	+0.9
	baz=296,SNR=7.3						
CWC	Cottonwood Cre	83.14	53	P	P	16 40 30.0	+0.2
	baz=296						
EGMT	Eagleton	83.17	40	IAmb	IAmb	16 40 31.2	
	comp=Z,33nm,0.9s						
EGMT	Eagleton	83.17	40	P	P	16 40 30.1	+0.6
	baz=300						
ISA	Isabella, Lake	83.19	54	P	P	16 40 30.1	+0.2
	baz=296,SNR=8.2						
ELK	Elko	83.20	48	P	P	16 40 30.9	+0.9
	comp=Z,12nm,0.5s,baz=307,slow=5.4,SNR=59						
ELK	Elko	83.20	48	IAmb	IAmb	16 40 31.6	
	comp=Z,14nm,0.6s						
GRAC	Grapevine Rang	83.41	52	P	P	16 40 31.9	+0.9
	baz=296						
BLG	Laguna Peak, P	83.43	56	P	P	16 40 31.6	+0.5
	baz=296						
SNCC	San Nicolas Is	83.46	56	P	P	16 40 32.3	+1.1
	baz=296						
FFC	Flin Flon	83.66	32	P	P	16 40 32.1	+0.3
FFC				IAmb	IAmb	16 40 33.1	
	comp=Z,36nm,1.0s						
MPMC	Manual Prospec	83.73	53	P	P	16 40 33.6	+0.9
	baz=296,SNR=32						
LRMC	Laurel Mtn Rad	83.85	54	P	P	16 40 34.1	+0.8
	baz=296,SNR=36						
EDW2	Edwards Air Fo	83.89	54	P	P	16 40 34.3	+0.9
	baz=296,SNR=13						
AKASG	Malin Array Be	83.93	324	P	P	16 40 32.0	-1.1
	comp=Z,4.5nm,0.4s,baz=52,slow=5.3,SNR=42						
AKASG	Malin Array Be	83.93	324	P	P	16 40 31.9	-1.1
FURC	Furnace Creek,	84.00	53	P	P	16 40 34.8	+1.1
	baz=297,SNR=16						
R11A	Troy Canyon, C	84.06	50	P	P	16 40 35.1	+0.8
	baz=297,SNR=30						
TPNV	Topopah Spring	84.23	52	IAmb	IAmb	16 40 36.9	
	comp=Z,42nm,0.7s						
TPNV	Topopah Spring	84.23	52	P	P	16 40 35.9	+0.8
	baz=297,SNR=63						
BFSC	Mount Baldy Ra	84.42	55	P	P	16 40 36.4	+0.3
	baz=297						
H17A	Grant Village	84.49	43	IAmb	IAmb	16 40 40.4	
	comp=Z,71nm,1.4s						
H17A	Grant Village	84.49	43	P	P	16 40 39.6	+3.2
	baz=300						
LKWY	Lake	84.51	43	IAmb	IAmb	16 40 40.5	
	comp=Z,46nm,0.8s						
FLWY	Flagg Ranch	84.56	44	IAmb	IAmb	16 40 39.6	
	comp=Z,32nm,0.7s						
GSC	Goldstone, Bar	84.57	54	IAmb	IAmb	16 40 38.5	
	comp=Z,35nm,0.8s						
GSC	Goldstone, Bar	84.57	54	P	P	16 40 37.7	+1.0
	baz=297,SNR=32						
FCC	Fort Churchill	84.58	26	P	P	16 40 34.7	-1.4
FCC				IAmb	IAmb	16 40 36.8	
	comp=Z,21nm,0.8s						
SHOC	Shoshone, Teco	84.69	53	P	P	16 40 38.2	+1.0
	baz=297,SNR=5.1						
MURC	Murrieta	85.05	55	P	P	16 40 39.7	+0.6
	baz=297						
SUW	Suwalki	85.09	329	*e*P	P	16 40 38.0	-0.7
DUG	Dugway, Tooele	85.09	48	IAmb	IAmb	16 40 41.1	
	comp=Z,17nm,0.8s						
DUG	Dugway, Tooele	85.09	48	P	P	16 40 40.2	+0.9
	baz=299						
HEC	Hector,Ludlow	85.13	54	P	P	16 40 40.4	+0.9
	baz=297,SNR=11						
TUQ	Turquoise Moun	85.15	53	P	P	16 40 40.6	+0.9
	baz=297,SNR=12						
DOMB	Dombas	85.23	340	*e*P	P	16 40 38.2	-1.2
HWUT	Hardware Ranch	85.23	46	IAmb	IAmb	16 40 42.5	
	comp=Z,22nm,1.1s						
NB2	NORSAR Subarra	85.27	338	P	P	16 40 37.9	-1.6
	comp=Z,13nm,0.8s,baz=46,slow=5.1						
NB2	NORSAR Subarra	85.27	338	P	P	16 40 37.9	-1.6
	baz=46,slow=5.1						
NOA	NORSAR Array B	85.27	338	P	P	16 40 38.3	-1.2
	comp=Z,5.4nm,0.7s,baz=54,slow=6.6,SNR=25						
NOA				PP	PP	16 44 05.2	-0.7
	comp=Z,2.3nm,0.8s,baz=47,slow=7.5,SNR=4.8						
MOL	Molde	85.30	341	*e*P	P	16 40 38.9	-0.7
NC602	NORSAR Array S	85.38	338	*e*P	P	16 40 39.0	-1.0
109C	Camp Elliot, M	85.44	56	P	P	16 40 41.6	+0.7
	baz=297						
RAYN	Ar Rayn	85.51	294	P	P	16 40 41.4	-0.1
PFO	Pinyon Flats O	85.59	55	P	P	16 40 42.5	+0.7
	comp=Z,20nm,0.8s,baz=300,slow=4.6,SNR=32						
PFO	Pinyon Flats O	85.59	55	P	P	16 40 42.8	+1.0
PFO				IAmb	IAmb	16 40 43.4	
	comp=Z,26nm,0.9s						
PFO	Pinyon Flats O	85.59	55	P	P	16 40 42.4	+0.7
	baz=297,SNR=15						
XPFO	Pion Flat	85.59	55	P	P	16 40 42.8	+1.0
XPFO				IAmb	IAmb	16 40 43.4	
	comp=Z,26nm,0.9s						
GMRC	Granite Mounta	85.64	54	P	P	16 40 42.9	+0.9
	baz=298,SNR=19						
BELC	Belle Mtn. Jos	85.75	54	P	P	16 40 43.0	+0.4
	baz=297,SNR=20						
BAR	Barrett	85.86	56	IAmb	IAmb	16 40 44.4	
	comp=Z,16nm,0.7s						
LAO	LASA Array	85.91	40	IAmb	IAmb	16 40 44.9	
	comp=Z,19nm,1.0s						
LAO	LASA Array	85.91	40	P	P	16 40 43.9	+0.9
	baz=303						
BW06	Boulder Array	85.95	44	P	P	16 40 43.8	+0.3
	baz=301						
MONP2	Monument Peak	85.95	56	P	P	16 40 44.3	+0.7
	baz=297,SNR=12						
PDAR	Pinedale Array	85.95	44	P	P	16 40 43.5	+0.1
	comp=Z,2.7nm,0.6s,baz=258,slow=1.8,SNR=28						
PDAR				PP	PP	16 44 11.4	-0.8
	comp=Z,1.9nm,0.8s,baz=305,slow=5.2,SNR=8.2						
PDAR	Pinedale Array	85.95	44	P	P	16 40 43.9	+0.5
DGMT	Dagmar	86.08	37	IAmb	IAmb	16 40 44.9	
	comp=Z,18nm,0.8s						
DGMT	Dagmar	86.08	37	P	P	16 40 43.9	+0.2
	baz=304						
IKP	In-Ko-Pah, Jac	86.29	56	P	P	16 40 45.9	+0.8
	baz=298,SNR=8.5						
IRM	Iron Mountain	86.31	54	P	P	16 40 46.1	+1.0
	baz=298,SNR=9.9						
BC3	Big Chuckawall	86.31	55	P	P	16 40 46.1	+0.8
	baz=298,SNR=17						
SWSC	Sam W. Stewart	86.39	55	P	P	16 40 46.2	+0.8
	baz=298						
SKAR	Skarslia	86.50	339	*e*P	P	16 40 44.4	-1.0
Y12C	Blythe	86.96	54	P	P	16 40 49.0	+0.9
	baz=298						
PDMCI	Parker Dam,Lak	86.97	53	P	P	16 40 49.1	+1.0
	baz=298						
BRTR	Keskin Array B	87.00	313	P	P	16 40 47.1	-1.2
	comp=Z,3.2nm,0.6s,baz=87,slow=2.9,SNR=22						
BRTR	Keskin Array B	87.00	313	P	P	16 40 47.5	-0.8
GLA	Glamis	87.06	55	IAmb	IAmb	16 40 50.6	
	comp=Z,15nm,0.6s						
GLA	Glamis	87.06	55	P	P	16 40 49.8	+1.1
	baz=298,SNR=7.6						
U15A	North Rim	87.28	51	IAmb	IAmb	16 40 51.9	
	comp=Z,10nm,0.7s						
CFR	Carcaliu	87.57	320	⇓P	P	16 40 49.5	-1.1
TOPG	Topolog	87.59	319	⇓P	P	16 40 50.3	-0.5
ODD1	Odda	87.62	339	*e*P	P	16 40 49.9	-0.9
TESR	Tescani	87.68	321	⇓P	P	16 40 50.2	-1.1
BUR08	Bucovina Ar. S	87.83	323	IAmb	IAmb	16 44 22.4	
	comp=Z,25nm,1.9s						
BURAR	Bucovina Array	87.84	323	⇓P	P	16 40 51.6	-0.5
BURAR	Bucovina Array	87.84	323	P	P	16 40 52.2	+0.1
K22A	Casper	87.91	43	P	P	16 40 53.2	+0.5
	baz=303						
Y14A	Wickenburg	87.98	53	IAmb	IAmb	16 40 54.8	
	comp=Z,31nm,1.4s						
PLOR	Plostina	88.05	321	⇑P	P	16 40 59.8	+6.7
O20A	White River Ci	88.15	46	IAmb	IAmb	16 40 56.9	
	comp=Z,6.9nm,0.6s						
O20A	White River Ci	88.15	46	P	P	16 40 54.5	+0.7
	baz=302						
WUAZ	Wupatki	88.37	51	IAmb	IAmb	16 40 57.0	
	comp=Z,13nm,0.9s						
WUAZ	Wupatki	88.37	51	P	P	16 40 55.9	+1.0
	baz=300						
PV23	Carpenter Ridg	88.52	48	IAmb	IAmb	16 40 59.0	
	comp=Z,12nm,0.7s						
PV10	Paradox Valley	88.54	48	IAmb	IAmb	16 40 57.6	
	comp=Z,19nm,1.0s						
PV14	Lion Creek, Pa	88.55	48	IAmb	IAmb	16 40 57.3	
	comp=Z,15nm,0.6s						
PV20	West Nyswonger	88.60	48	IAmb	IAmb	16 40 58.9	
	comp=Z,7.8nm,0.6s						
PV19	Morning Glory	88.61	48	IAmb	IAmb	16 40 57.7	
	comp=Z,12nm,0.8s						
RSSD	Black Hills	88.61	41	P	P	16 40 56.6	+0.7
RSSD				IAmb	IAmb	16 40 58.2	
	comp=Z,13nm,0.9s						
RSSD	Black Hills	88.61	41	P	P	16 40 56.6	+0.7
	baz=304						
PV04	Paradox Valley	88.62	48	IAmb	IAmb	16 40 57.7	
	comp=Z,24nm,1.6s						
KOLS	Kolonicke sedl	88.63	325	*e*P	P	16 40 54.9	-0.7
PV17	East Wray Mesa	88.64	48	IAmb	IAmb	16 40 57.8	
	comp=Z,13nm,0.9s						
PV05	Paradox Valley	88.65	48	IAmb	IAmb	16 40 57.9	
	comp=Z,13nm,1.1s						
PV16	Nyswonger Mesa	88.65	48	IAmb	IAmb	16 40 57.8	
	comp=Z,16nm,1.3s						
MLR	Muntele Rosu	88.66	321	⇓P	P	16 40 55.0	-1.0
PV11	David Mesa, Pa	88.69	48	IAmb	IAmb	16 41 01.9	
	comp=Z,12nm,0.6s						
PV18	Skein Mesa, Pa	88.69	48	IAmb	IAmb	16 40 57.9	
	comp=Z,17nm,1.2s						
PV03	Paradox Valley	88.73	48	IAmb	IAmb	16 40 58.1	
	comp=Z,16nm,1.2s						
PV13	Radium Mtn., P	88.80	48	IAmb	IAmb	16 40 58.3	
	comp=Z,8.9nm,0.6s						
MDND	Maddock	88.94	36	P	P	16 40 57.7	+0.6
	baz=307						
TRPA	Tarpa	88.98	324	⇑P	P	16 40 56.6	-0.6
CRVS	Cervenica-Dubn	89.07	325	*e*P	P	16 40 58.0	+0.3
214A	Organ Pipe Nat	89.08	55	P	P	16 40 59.4	+1.3
	baz=299						
MMAI	Mount Meron Ar	89.10	306	P	P	16 40 57.7	-0.6

	comp=Z,1.4nm,0.6s,baz=58,slow=3.1,SNR=4.1						
VOIR		89.21	321	⇑P	P	16 40 58.3	-0.2
N23A	Red Feather La	89.23	45	P	P	16 41 00.2	+1.3
	baz=303						
NIE	Niedzica	89.34	326	eP	P	16 40 59.3	+0.3
ULM	Lac du Bonnet	89.35	33	P	P	16 40 58.9	-0.1
	comp=Z,4.9nm,0.7s,baz=308,slow=4.6,SNR=9.9						
SMCO	Snowmass	89.49	46	IAmb	IAmb	16 41 02.4	
	comp=Z,12nm,1.0s						
MVCO	Mesa Verde	89.51	49	P	P	16 41 00.9	+0.6
	baz=302						
DRGR		89.70	323	⇓P	P	16 41 00.0	-0.7
W18A	Petrified Fore	89.73	51	P	P	16 41 02.3	+1.0
	baz=301						
LANS	Liptovska Anna	89.93	326	eP	P	16 41 01.6	-0.1
ISCO	Idaho Springs	90.04	45	IAmb	IAmb	16 41 04.8	
	comp=Z,11nm,0.8s						
ISCO	Idaho Springs	90.04	45	P	P	16 41 03.9	+1.1
	baz=303						
ELND	Elena	90.18	319	⇑P	P	16 41 02.4	-0.5
S22A	4UR Ranch, Cre	90.35	48	P	P	16 41 05.2	+1.0
	baz=303						
KSP	Ksiaz	90.36	329	eP	P	16 41 03.4	-0.2
TUC	Tucson	90.40	54	P	P	16 41 05.2	+0.9
	baz=300						
MORC	Moravsky Berou	90.47	328	⇑P	P	16 41 03.9	-0.3
PSZ	Piszkesteto	90.50	325	⇑P	P	16 41 05.1	+0.7
AGMN	Agassiz Nation	90.62	34	IAmb	IAmb	16 41 05.7	
	comp=Z,16nm,0.8s						
AGMN	Agassiz Nation	90.62	34	P	P	16 41 04.9	0.0
	baz=310						
KRLC	Kraliky	90.64	328	eP	P	16 41 04.2	-0.8
VYHS	Vyhne	90.67	326	eP	P	16 41 05.0	-0.1
DPC	Dobruska-Polom	90.68	328	eP	P	16 41 04.8	-0.3
HERR	Herculane	91.03	322	⇓P	P	16 40 58.8	-8.1
SDCO	Great Sand Dun	91.24	47	IAmb	IAmb	16 41 10.1	
	comp=Z,11nm,0.7s						
SDCO	Great Sand Dun	91.24	47	P	P	16 41 09.2	+0.9
	baz=303						
VRAC	Vranov	91.25	328	⇑P	P	16 41 07.6	-0.1
BRG	Berggiesshubel	91.42	330	eP	P	16 41 07.5	-1.0
	comp=Z,5.7nm,1.1s						
BRG				e		16 43 50.1	
	comp=Z,13nm,1.5s						
CLL	Collm	91.54	331	i P	P	16 41 08.8	-0.2
	comp=Z,6.0nm,0.8s						
OGNE	Ogallala	91.65	43	IAmb	IAmb	16 41 11.2	
	comp=Z,25nm,1.3s						
OGNE	Ogallala	91.65	43	P	P	16 41 10.1	+0.2
	baz=306						
ANMO	Albuquerque	92.11	50	P	P	16 41 12.9	+0.6
	comp=Z,2.3nm,0.5s,baz=280,slow=5.1,SNR=11						
ANMO	Albuquerque	92.11	50	P	P	16 41 14.1	+1.9
ANMO	Albuquerque	92.11	50	P	P	16 41 13.4	+1.1
	baz=303						
T25A	Trinidad	92.29	47	P	P	16 41 14.1	+1.0
	baz=304						
KHC	Kasperske Hory	92.81	329	eP	P	16 41 12.8	-2.2
GERES	GERESS Array B	92.95	329	P	P	16 41 14.1	-1.6
	comp=Z,1.3nm,0.6s,baz=45,slow=5.8,SNR=11						
GERES				PP	PP	16 45 05.4	-1.2
	comp=Z,0.6nm,0.6s,baz=39,slow=7.2,SNR=4.5						
GERES	GERESS Array B	92.95	329	P	P	16 41 14.5	-1.2
EYMN	Ely	93.03	33	IAmb	IAmb	16 41 16.6	
	comp=Z,9.2nm,1.2s						
EYMN	Ely	93.03	33	P	P	16 41 16.1	+0.2
	baz=314						
ECSD	EROS Data Cent	93.14	38	P	P	16 41 16.9	+0.4
	baz=310						
E38A	The Farm, Brul	93.93	34	IAmb	IAmb	16 41 20.4	
	comp=Z,10.0nm,0.7s						
EKA	Eskdalemuir Ar	94.41	341	PP	PP	16 45 17.6	+0.2
	comp=Z,1.6nm,0.5s,baz=32,slow=6.8,SNR=5.5						
MNTX	Cornudas Mount	94.62	52	P	P	16 41 24.5	+0.9
	baz=303						
SCHQ	Schefferville	96.70	16	P	P	16 41 32.0	-0.4
	comp=Z,1.8nm,0.6s,baz=266,slow=8.6,SNR=5.7						
TX31	Lajitas Ar. Si	97.16	53	IAmb	IAmb	16 41 40.8	
	comp=Z,17nm,1.9s						
TX32	Lajitas Array	97.16	53	IAmb	IAmb	16 41 40.8	
	comp=Z,17nm,1.9s						
TXAR	Lajitas Array	97.16	53	P	Pdif	16 41 35.5	+0.3
	comp=Z,1.7nm,0.6s,baz=275,slow=1.8,SNR=25						
TXAR	Lajitas Array	97.16	53	P	Pdif	16 41 36.0	+0.9
G54A	Lake Saint Pet	101.04	27	P	Pdif	16 41 51.8	-0.1
	baz=324						
TORD	Torodi Ar. Bea	125.50	310	PKP	PKPdf	16 47 00.9	0.0
	comp=Z,0.8nm,0.5s,baz=23,slow=3.3,SNR=6.5						
DR12	Loma Pena Alta	126.92	38		PKiKP	16 47 06.8	+2.6
SNAA	Sanae	129.34	194	PKPdf	PKiKP	16 47 07.0	-0.4
VNA2	Neumayer--Watz	130.87	193	PKPdf	PKiKP	16 47 10.3	0.0
VNA3	Neumayer Olymp	131.05	192	PKPdf	PKiKP	16 47 10.5	-0.3
DBIC	Dimbokro	134.62	310	PKP	PKPdf	16 47 17.4	-0.8
	comp=Z,1.2nm,0.5s,baz=33,slow=5.4,SNR=2.6						
PTGA	Pitinga	147.99	44		PKPbc	16 47 46.0	+0.3
PLCA	Paso Flores	149.01	128	PKPbc	PKiKP	16 47 48.6	+0.1
	comp=Z,4.1nm,0.7s,baz=280,slow=3.7,SNR=9.5						
PLCA	Paso Flores	149.01	128		PKiKP	16 47 48.8	+0.3
MNMC	Minye Minye	150.48	85		PKiKP	16 47 53.2	+0.8
PB11	IPOC Station P	150.61	86		PKiKP	16 47 52.9	+0.3
LPAZ	La Paz	150.83	78	PKPbc	PKiKP	16 47 53.9	+0.3
	comp=Z,13nm,0.6s,baz=353,slow=2.4,SNR=55						
SAML	Samuel	151.40	60		PKiKP	16 47 54.1	0.0
GO02	Mina Guanaco	151.74	97		PKiKP	16 47 55.4	+0.5

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*ISU **14** 14:29:11.8, 40˚.75N×69˚.65E, h5^{km}*
*KRNET **14** 16:29:11.4±0.1, 40˚.78N×69˚.71E, mb3.3*
*NNC **14** 16:29:15.1±2.2, 40˚.90N×69˚.78E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=14.7km s-min=8.5km az=36.0*
*SOME **14** 16:29:15.3, 40˚.85N×69˚.90E, h5^{km}*
ISC 14 16:29:11.8±1.4**, 40˚.74N**±0˚.04×**69˚.62E**±0˚.04**, h4**^{km}±10^{km}**,**
n31, σ**2**^{s}**00**/56**, 23C-10D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAS	Tashkent	0.64	337	⇑iP	Pg	16 29 23.5	-0.5
	baz=31						
TAS				⇑iS	Sg	16 29 32.5	+0.2
	baz=31						
TAS	Tashkent	0.64	337	eP	Pg	16 29 23.6	-0.5
TAS				eS	Sg	16 29 32.9	+0.6
CHRV	Charvak	0.94	15	eP	Pg	16 29 28.6	-1.2
CHRV				S	Sb	16 29 40.8	-2.7
BTK	Batken	1.14	126	⇑iP	Pb	16 29 32.9	-1.2
	baz=30						
BTK				⇑iS	Sb	16 29 48.0	-1.3
	baz=30						
BTK	Batken	1.14	126	i P	Pb	16 29 32.8	-1.3
BTK				i S	Sb	16 29 47.9	-1.3
IUG	Iuzhnay	1.44	12	eP	Pg	16 29 39.5	0.0
	24nm,0.1s						
IUG				eS	Sn	16 29 57.0	-1.3
	116nm,0.2s						
IUG	Iuzhnay	1.44	12	P	Pg	16 29 39.5	0.0
	24nm,0.5s						
IUG				S	Sn	16 29 56.5	-1.7
	73nm,0.4s						
NAM	Namangan	1.57	80	eP	Pn	16 29 41.0	+0.6
NAM				S	Sg	16 30 05.8	+3.7
CHM	Chimkent	1.58	360	eP	Pg	16 29 44.0	+1.9
	109nm,0.1s						
CHM				eS	Sg	16 30 04.1	+1.5
	219nm,0.2s						
FRG	Fergana	1.65	89	⇓iP	Pg	16 29 44.4	+1.1
FRG				eS	Sg	16 30 10.4	+5.8
SHAK	Shakhimardan	1.80	115	P	Pn	16 29 43.0	-0.7
SHAK				S	Sn	16 30 06.6	-0.5
ARK	Arkit	2.06	58	⇓iP	Pn	16 29 48.3	+1.0
	baz=59						
ARK				⇓iS	Sg	16 30 15.0	-3.0
	baz=59						
KK31	Karatay Array	2.46	15	⇑Pg	Pb	16 29 55.8	-0.7
	1.8nm,0.3s,baz=200,slow=17,SNR=62						
KK31				⇑Lg	Lg	16 30 28.2	
	13nm,0.3s,baz=194,slow=28,SNR=25						
ARSB	Arslanbob	2.61	76	⇑iP	Pn	16 29 56.2	+1.3
	baz=77						
ARSB				⇑eS	Sb	16 30 28.2	-3.5
	baz=77						
ARSB	Arslanbob	2.61	76	eP	Pn	16 29 56.7	+1.8
ARSB				eS	Sb	16 30 31.9	+0.2
MRKS	Merke	3.36	52	eP	Pg	16 30 14.4	-1.8
	3.5nm,0.2s						
MRKS				eS	Sg	16 30 57.0	-2.8
	20nm,0.3s						
MRKS	Merke	3.36	52	Pg	Pb	16 30 13.0	+1.0
	3.8nm,0.5s						
MRKS				Lg	Lg	16 30 55.9	
	17nm,0.5s						
AML	Almayashu	3.37	64	⇑iP	Pn	16 30 06.6	+1.1
	baz=64						
AML				⇑iS	Sn	16 30 47.3	+1.2
	baz=64						
EKS2	Erkin-Say	3.66	57	⇑iP	Pn	16 30 10.8	+1.5
	baz=57						
EKS2				⇑iS	Sn	16 30 53.9	+1.0
	baz=57						
ARLS	Aral	3.72	71	⇑iP	Pn	16 30 11.7	+1.6
	baz=71						
ARLS				⇑iS	Sn	16 30 55.7	+1.3
	baz=71						
UCH	Uchtor	3.97	66	⇑eP	Pn	16 30 15.4	+1.6
	baz=67						
UCH				⇑iS	Sn	16 31 01.7	+0.7
	baz=67						
AAK	Ala-Archa	4.12	61	⇑iP	Pn	16 30 17.2	+1.6
	baz=61						
AAK				⇑iS	Sn	16 31 04.7	+0.5
	baz=61						
AAK	Ala-Archa	4.12	61	⇓Pg	Pb	16 30 26.1	+1.3
	2.5nm,0.4s						
AAK				⇓Lg	Lg	16 31 18.4	
	6.0nm,0.6s						
KBK	Karagaybulak	4.43	63	⇓iP	Pn	16 30 21.4	+1.5
	baz=63						
KBK				⇓iS	Sn	16 31 12.4	+0.5
	baz=63						
KZA	Kyzart	4.44	71	⇓iP	Pn	16 30 21.6	+1.3
	baz=71						
KZA				⇓iS	Sn	16 31 12.7	+0.1
	baz=71						
CHMS	Chumysh	4.45	58	⇑iP	Pn	16 30 21.7	+1.7
	baz=58						
CHMS				⇑iS	Sn	16 31 13.0	+0.7
	baz=58						
CHMS	Chumysh	4.45	58	⇑Pg	Pb	16 30 32.5	+2.1
	5.4nm,0.8s						
CHMS				⇓Lg	Lg	16 31 28.9	
	5.5nm,0.5s						
NRN	Naryn	4.87	80	⇑iP	Pn	16 30 27.1	+1.0
	baz=80						
NRN				⇑iS	Sn	16 31 22.7	-0.4
	baz=80						
KST	Kastek	5.27	62	eP	Pg	16 30 48.9	-3.8
	1.8nm,0.2s						
KST				eS	Sg	16 31 55.8	-5.1
	13nm,0.6s						
KST	Kastek	5.27	62	Pg	Pb	16 30 48.3	+3.8
	2.4nm,0.5s						
KST				Lg	Lg	16 31 55.9	
	8.3nm,0.7s						
MDOK	Medeo	6.05	64	Pn	Pn	16 30 44.7	+2.6
	2.1nm,0.6s						
MDOK				Lg	Lg	16 32 18.8	
	8.4nm,1.1s						

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*ISK **14** 16:30:01.2, 40˚.75N×25˚.56E, h14^{km}, ML2.9/18*
*ATH **14** 16:30:01.2, 40˚.77N×25˚.57E, h23^{km}±1^{km}, ML2.5/8, Error ellipse: s-maj=2.2km s-min=1.0km az=113.0*
*DDA **14** 16:30:02.4, 40˚.72N×25˚.66E, h9^{km}±4^{km}, ML2.5*
*THE **14** 16:30:02.2, 40˚.76N×25˚.54E, h4^{km}±1^{km}, ML2.5/8, Error ellipse: s-maj=1.5km s-min=0.7km az=119.0*
ISC 14 16:30:02.2±0.9**, 40˚.75N**±0˚.02×**25˚.57E**±0˚.02**, h13**^{km}±7^{km}**,**
n75, σ**1**^{s}**33**/104**, 13C-7D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMTH	Samothraki Isl	0.28	186	P	Pg	16 30 07.8	-0.2
SMTH				S	Sg	16 30 12.5	+0.6
	540nm,0.1s						
SMTH	Samothraki Isl	0.28	186	P	Pg	16 30 07.9	-0.2
SMTH				S	Sg	16 30 12.5	+0.6
SMTH				AML	AML	16 30 13.9	
	comp=E,1094µm,0.1s						
SMTH				AML	AML	16 30 16.3	
	comp=N,1013µm,0.1s						
ALN	Alexandroupoli	0.39	67	P	Pg	16 30 09.7	-0.4
ALN				S	Sg	16 30 15.6	+0.3
	comp=N,945nm,0.4s						
ALN	Alexandroupoli	0.39	67	P	Pg	16 30 09.7	-0.4
ALN				S	Sg	16 30 15.3	0.0
ALN				AML	AML	16 30 15.4	
	comp=E,1386µm,0.4s						
ALN				AML	AML	16 30 16.1	
	comp=N,2160µm,0.5s						
RDO	Rodhopi	0.40	357	P	Pg	16 30 09.7	-0.5
RDO	Rodhopi	0.40	357	P	Pg	16 30 09.6	-0.5
RDO				S	Sg	16 30 15.0	-0.6
RDO				AML	AML	16 30 21.1	
	comp=N,933µm,0.1s						
RDO				AML	AML	16 30 21.4	
	comp=E,1159µm,0.2s						
RDO	Rodhopi	0.40	357	PG	Pg	16 30 09.7	-0.5
ENEZ	Enez	0.45	91	PG	Pg	16 30 10.9	-0.1
ENEZ				SG	Sb	16 30 17.8	-0.7
ENZZ	Sultanice-Enez	0.46	108	PG	Pg	16 30 10.9	-0.4
THAS	Thassos island	0.66	258	P	Pg	16 30 14.6	-0.4
THAS				S	Sg	16 30 23.6	-0.2
	comp=E,460nm,0.2s						
THAS	Thassos island	0.66	258	P	Pg	16 30 14.7	-0.4
THAS				S	Sg	16 30 23.6	-0.2
THAS				AML	AML	16 30 25.9	
	comp=E,787µm,0.2s						
THAS				AML	AML	16 30 27.1	
	comp=N,1041µm,0.2s						
ERIK	Erikli-Kesan	0.72	96	PG	Pg	16 30 15.3	-0.9
ERIK				SG	Sg	16 30 25.5	-0.2
GELI	Tayfur-Gelibol	0.77	117	PG	Pg	16 30 16.9	-0.3
KAVA	Kavala	0.84	288	P	Pg	16 30 17.8	-0.6
KAVA				S	Sg	16 30 28.9	-0.5
	comp=N,512nm,0.2s						
KAVA	Kavala	0.84	288	P	Pg	16 30 17.8	-0.6
KAVA				AML	AML	16 30 33.0	
	comp=E,1146µm,0.2s						
KAVA				AML	AML	16 30 33.7	
	comp=N,862µm,0.2s						
KESN	Edirne-Kesan	0.85	84	i P	Pg	16 30 17.7	-1.0
KESN				i S	Sg	16 30 29.3	-0.6
KESN				IAML		16 30 33.0	
	comp=E,707nm,0.3s						
KESN				IAML		16 30 34.0	
	comp=N,384nm,0.2s						
UKOP	Uzunkopru-Edir	0.89	64	PG	Pb	16 30 18.9	-0.6
LIA	Limnos Island	0.90	199	P	Pb	16 30 19.3	-0.3
LIA				S	Sg	16 30 31.8	+0.5
	comp=N,222nm,0.3s						
LIA	Limnos Island	0.90	199	P	Pb	16 30 19.2	-0.4
LIA				S	Sg	16 30 31.8	+0.5
LIA				AML	AML	16 30 34.5	
	comp=N,275µm,0.3s						
LIA				AML	AML	16 30 35.6	
	comp=E,609µm,0.4s						
KDZ	Kurdzhali	0.91	353	PG	Pb	16 30 18.6	-1.3
BOZC	Bozcaada	0.98	158	PG	Pb	16 30 20.8	-0.2
BOZC				SG	Sg	16 30 34.3	+0.5
BOZC	Bozcaada	0.98	158	i P	Pb	16 30 20.8	-0.2
BOZC				i S	Sb	16 30 33.6	-0.2
BOZC				IAML		16 30 34.0	
	comp=N,160nm,0.5s						
BOZC				IAML		16 30 36.0	
	comp=E,190nm,0.3s						
LPK	Lapseki	0.98	112	PG	Pb	16 30 20.6	-0.5
EZN	Ezine	1.09	148	PN	Pb	16 30 22.6	-0.3
RKY	Sarkoy-Tekirda	1.23	92	PN	Pn	16 30 24.5	-0.6
SART	Tekirdag	1.23	92	i P	Pn	16 30 25.0	-0.2
SART				i S	Sb	16 30 39.9	-1.2
SART				IAML		16 30 47.0	
	comp=E,47nm,0.3s						
BAYC	CANAKKALE_Bayr	1.25	143	i P	Pb	16 30 25.7	0.0
BAYC				i S	Sb	16 30 42.1	+0.3
BAYC				IAML		16 30 44.0	
	comp=N,164nm,0.4s						
BAYC				IAML		16 30 44.0	
	comp=E,230nm,0.4s						
OUR	Ouranopolis	1.28	252	P	Pn	16 30 25.0	-0.7
OUR				S	Sg	16 30 43.2	-0.2
	comp=E,418nm,0.3s						
OUR	Ouranopolis	1.28	252	P	Pn	16 30 25.0	-0.7
OUR				AML	AML	16 30 45.3	
	comp=E,990µm,0.4s						
OUR				AML	AML	16 30 45.9	
	comp=N,704µm,0.3s						
KRBG	Karabiga-Canak	1.36	104	PN	Pn	16 30 26.6	-0.3
EDRB	Edirne	1.41	39	PN	Pn	16 30 26.9	-0.7
NVR	Nevrokopi	1.42	296	P	Pn	16 30 27.9	+0.1
NVR				S	Sb	16 30 46.6	-0.1
	comp=N,152nm,0.2s						
NVR	Nevrokopi	1.42	296	P	Pn	16 30 27.7	-0.1
NVR				S	Sn	16 30 45.9	-0.5
NVR				AML	AML	16 30 49.1	
	comp=N,321µm,0.3s						
NVR				AML	AML	16 30 50.9	
	comp=E,290µm,0.2s						
PLD	Plovdiv	1.50	335	PN	Pn	16 30 27.8	-1.1
SRS	Serrai	1.54	284	P	Pn	16 30 29.0	-0.4
SRS				S	Sg	16 30 50.8	-1.0
	comp=E,148nm,0.2s						
SRS	Serrai	1.54	284	P	Pn	16 30 29.2	-0.2
KIRK	Kırklareli	1.55	48	i P	Pn	16 30 29.4	-0.1
KIRK				i S	Sn	16 30 47.7	-1.7
KIRK				IAML		16 30 54.0	
	comp=N,39nm,0.5s						
MRMT	Marmara Adasi	1.55	95	PN	Pn	16 30 28.9	-0.7
SIGR	SIGRI	1.55	172	P	Pn	16 30 30.1	+0.6
SIGR	SIGRI	1.55	172	P	Pn	16 30 30.0	+0.6
PRK	Paraskevi	1.59	160	P	Pb	16 30 31.4	-0.1
AYVA	Ayvalik	1.68	149	i P	Pn	16 30 31.2	0.0
AYVA				i S	Sb	16 30 55.1	+1.2
AYVA				IAML		16 30 56.0	
	comp=E,177nm,0.7s						
PHSR	Pinarhisar	1.72	59	PN	Pn	16 30 30.9	-0.9
GONE	Gonen-Balikesi	1.76	113	PN	Pn	16 30 31.6	-0.8
EDC	Edincik	1.79	102	PN	Pn	16 30 32.5	-0.4
DKL	Dikili	1.96	148	PN	Pn	16 30 35.3	+0.1
SLVT	Silivri	2.06	76	PN	Pn	16 30 35.8	-0.7
BALB	Balikesir	2.09	121	PN	Pn	16 30 36.5	-0.4
ZEDA	zmir-Bergama	2.12	146	i P	Pn	16 30 37.4	0.0
ZEDA				IAML		16 31 10.0	
	comp=E,38nm,0.5s						
ZEDA				IAML		16 31 13.0	
	comp=N,29nm,0.5s						
STEP	BALIKESIR_Sava	2.15	129	i P	Pb	16 30 41.4	+0.4
STEP				i S	Sb	16 31 08.6	+1.1
STEP				IAML		16 31 15.0	
	comp=E,103nm,0.9s						
STEP				IAML		16 31 17.0	
	comp=N,148nm,0.9s						
KCTX	Karacabey (Bur	2.18	102	PN	Pn	16 30 37.8	-0.4
ELND	Elena	2.19	6	⇑P	Pn	16 30 38.2	-0.1
ELND				⇓S	Sg	16 31 14.5	+1.8
ELBA	Catalca	2.21	79	i P	Pn	16 30 38.1	-0.5
ELBA				i S	Sn	16 31 04.5	-1.2
CTKS	Kestanelik-??a	2.28	77	PN	Pn	16 30 39.1	-0.4
DURS	Dursunbey	2.50	116	i P	Pn	16 30 44.9	+2.2
DURS				i S	Sb	16 31 19.9	+2.0
DURS				IAML		16 31 23.0	
	comp=N,29nm,0.3s						
DURS				IAML		16 31 23.0	
	comp=E,37nm,0.5s						
ARMT	Armutlu	2.51	93	PN	Pn	16 30 42.5	-0.3
URLA	Izmir	2.51	161	i P	Pb	16 30 47.4	+0.2
URLA				i S	Sb	16 31 20.5	+2.4
URLA				IAML		16 31 25.0	
	comp=E,18nm,0.6s						
URLA				IAML		16 31 30.0	
	comp=N,19nm,1.3s						
AKHS	Akhisar	2.54	136	i P	Pn	16 30 42.4	-0.8
AKHS				i S	Sb	16 31 20.9	+2.0
AKHS				IAML		16 31 26.0	
	comp=E,13nm,0.3s						
VTS	Vitosha	2.56	318	⇑P	Pg	16 30 49.5	-1.7
ISK	Istanbul-Kandi	2.67	82	PN	Pn	16 30 44.5	-0.3
KAVV	Kandilli-Istan	2.67	82	PN	Pn	16 30 44.6	-0.2
KLYT	Kilyos	2.68	78	PN	Pn	16 30 44.6	-0.4
PLVB	Pleven	2.73	345	⇓P	Pg	16 30 53.9	-0.7
PLVB				⇑S	Sg	16 31 27.5	-2.4
DGB	zmir	2.88	159	i P	Pn	16 30 44.6	-3.1
RAZG	Razgrad	2.90	14	⇓P	Pg	16 30 56.4	-1.4
RAZG				⇑S	Sg	16 31 40.5	+5.1
MANT	Manisa	3.23	133	i P	Pg	16 31 03.7	-0.4
BLKB	Belogradchik	3.59	324	⇑S	Sb	16 31 51.5	+2.6
ICOR	Ion Corvin	3.75	25	⇑P	Pg	16 31 30.7	+17
ICOR				⇓S	Sg	16 32 05.0	+2.4
TIRR	Tirgusor	4.26	29	⇓P	Pg	16 31 37.8	+14
TIRR				⇑S	Sg	16 32 19.4	+0.4
TOPG	Topolog	4.62	26	⇑P	Pg	16 31 42.8	+12
TOPG				⇑S	Sg	16 32 26.6	-3.7
VOIR		4.70	356	⇑P	Pg	16 31 38.7	+6.5
HERR	Herculane	4.74	332	⇓P	Pg	16 31 39.6	+6.7
CFR	Carcaliu	4.81	22	⇑P	Pg	16 31 43.9	+10
CFR				⇑S	Sb	16 32 29.9	+5.8
GZR	Gura Zlata	5.07	337	⇑P	Pg	16 31 43.5	+4.2
BZS	Buzias	5.66	331	⇓P	Pg	16 31 51.7	+1.1

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*IDC **14** 16:32:32.8±2.6, 40˚.45N×124˚.45W, h0^{km}, mb2.9/1, mb1 3.7/5, mb1mx3.4/50, mbtmp3.4/5, ML3.9/3, MS3.0/3, Ms1 3.0/3, ms1mx2.7/12, Error ellipse: s-maj=29.9km s-min=10.5km az=104.0*
*NEIC **14** 16:32:32.2±1.8, 40˚.30N±0˚.04×124˚.85W±0˚.10, h20^{km}±8^{km}, Error ellipse: s-maj=11.2km s-min=6.2km az=81.0*
*ANF **14** 16:32:34.3±1.1, 40˚.54N×124˚.39W, h5^{km}±7^{km}, ML3.5/13, Error ellipse: s-maj=8.6km s-min=4.4km az=52.0*
*NEIC **14** 16:32:35.2, 40˚.35N×124˚.61W, h21^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.25; $M_{\theta\theta}$-1.25; $M_{\phi\phi}$1.00; $M_{r\theta}$0.01; $M_{\theta\phi}$-0.51; $M_{\phi r}$0.10; Fault plane solution: $M_0$1.26000×10^{15} NP1:ϕ_s32.95000°, δ86.13000°, λ5.29000°. NP2:ϕ_s302.59000°, δ84.73000°, λ176.11000°. Principal axes: T 1.1184, Plg6.0000°, Azm258.0000°; N 0.2433, Plg83.0000°, Azm69.0000°; P -1.3617, Plg1.0000°, Azm168.0000°;*
*NCEDC **14** 16:32:35.2±2.5, 40˚.35N±0˚.04×124˚.61W±0˚.06, h20^{km}±4^{km}, Mwr4.0/13 Error ellipse: s-maj=6.8km s-min=5.1km az=93.0*
ISC 14 16:32:33.7±1.2**, 40˚.35N**±0˚.03×**124˚.72W**±0˚.05**, h19**^{km}±3^{km}**,**
n144, σ**1**^{s}**36**/155**, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	0.32	66		Pb	16 32 42.0	+1.1
KCTM					Sb	16 32 47.5	+1.7
KSMM	Slide Mountain	0.45	111		Pg	16 32 43.1	+0.2
KMPM	Mount Pierce	0.47	81		Pg	16 32 43.7	+0.5
KMPM					Sb	16 32 50.1	+0.1
KCRM	Chalk Rock	0.69	83		Pb	16 32 47.0	-0.2
JCC	Jacoby Creek,	0.71	48		Pb	16 32 46.8	-0.6
KMRM	Mail Ridge	0.79	99		Pb	16 32 48.9	+0.1
KHMM	Horse Mountain	0.92	55		Pb	16 32 50.4	-0.8
KHMM	Horse Mountain	0.92	55		Sb	16 33 01.6	-1.5
KCSM	Cold Springs	0.94	78		Pb	16 32 50.7	-0.8
KBSM	Bell Springs	0.96	116		Pb	16 32 51.0	-0.9
KRPM	Rodgers	0.97	33		Pb	16 32 51.1	-0.9
KPPM	Pickett Peak	1.04	89		Pn	16 32 52.2	-1.3
KIPM	Iron Peak	1.09	119		Pn	16 32 52.8	-1.3
KCPM	Cahto Peak	1.09	127	Pn	Pn	16 32 52.8	-1.3
KHBM	Hayfork Bally	1.19	74		Pn	16 32 53.9	-1.6
KFPM	Farley Peak	1.22	125		Pn	16 32 54.5	-1.3
KBNM	Bluenose Ridge	1.26	111		Pn	16 32 55.4	-1.0
GTC	Three Chop Rid	1.30	136		Pn	16 32 55.6	-1.3
KRMB	Red Mountain	1.33	27		Pn	16 32 56.3	-1.1
KRMB	Red Mountain	1.33	27		Sn	16 33 11.2	-3.4
KOMM	Orleans Mounta	1.34	46		Pn	16 32 56.4	-1.1
LBPM	Beegum Peak	1.41	90		Pn	16 32 57.0	-1.4
KRKM	Rackout Spring	1.42	123		Pn	16 32 57.4	-1.2
GNAM	Navarro Ridge	1.42	143		Pn	16 32 57.2	-1.3
O02D	Mt. Diablo Mer	1.49	96		Pn	16 32 58.5	-1.1
O02D	Mt. Diablo Mer	1.49	96	P	Pn	16 32 58.4	-1.1
	baz=278,SNR=753						
O02D				S	Sn	16 33 16.3	-2.2
	baz=278						
LGPM	Granite Peak	1.55	68		Pn	16 32 59.1	-1.3
GHOM	Hamilton Openi	1.59	145		Pn	16 32 59.5	-1.4
KSXB	Camp Six Broad	1.62	23		Pn	16 33 00.2	-1.1
KSXB					Sn	16 33 18.6	-3.1
GHMM	Hull Mountain	1.62	121		Pn	16 33 00.0	-1.3
GROM	Round Mountain	1.63	105		Pn	16 33 00.8	-0.7
N02D	Trinity Center	1.66	67		Pn	16 33 00.6	-1.3
N02D					Sn	16 33 19.9	-2.8

N02D	Trinity Center	1.66	67	P	Pn	16 33 00.6	-1.3
	baz=247,SNR=1000						
N02D				S	Sn	16 33 19.7	-3.0
	baz=247						
GVV	Valley View	1.67	109		Pn	16 33 01.1	-1.0
WDC	Whiskeytown Da	1.68	81		Pn	16 33 00.7	-1.4
GASB	Alder Springs	1.69	113		Pn	16 33 01.1	-1.2
LBKM	Bonanza King	1.73	64		Pn	16 33 01.7	-1.2
GGUM	Gualala	1.76	147		Pn	16 33 01.8	-1.5
M02C	Callahan	1.76	53		Pn	16 33 02.1	-1.1
M02C	Callahan	1.76	53	P	Pn	16 33 01.8	-1.5
	baz=232,SNR=1000						
M02C				S	Sn	16 33 22.6	-2.7
	baz=232						
GSNM	Snow Mountain	1.83	139		Pn	16 33 03.1	-1.2
GHLM	Highland Sprin	1.85	134		Pn	16 33 03.2	-1.3
HOPS	Hopland Field	1.86	136		Pn	16 33 03.3	-1.2
KTRM	Thompson Ridge	1.86	33		Pn	16 33 03.7	-1.1
KBO	Bosley Butte	1.90	11		Pn	16 33 03.9	-1.3
GCK	Clark Valley	1.93	114		Pn	16 33 05.6	+0.1
GTSM	Trough Springs	1.93	122		Pn	16 33 04.6	-1.0
GDCM	Dry Creek	1.95	143		Pn	16 33 04.4	-1.4
LTCM	Tuscan Springs	1.99	93		Pn	16 33 05.5	-0.9
L02E	Cave Junction	2.00	25		Pn	16 33 05.6	-0.9
L02E	Cave Junction	2.00	25	P	Pn	16 33 05.6	-0.9
	baz=203,SNR=390						
L02E				S	Sn	16 33 28.8	-2.2
	baz=203						
GPMM	Pine Mountain	2.03	137		Pn	16 33 06.0	-0.9
LAMM	Antelope Mount	2.03	51		Pn	16 33 06.2	-0.8
GCVM	Cloverdale	2.05	139		Pn	16 33 06.0	-1.2
GACM	Adobe Creek	2.06	135		Pn	16 33 06.2	-1.2
YBH	Yreka Blue Hor	2.06	47	Pg	Pn	16 33 06.5	-0.8
	21nm,0.3s,baz=238,slow=9.5,SNR=240						
YBH				Lg	Lg	16 33 30.4	
	77nm,0.3s,baz=330,slow=20,SNR=27						
YBH				LR	LR	16 33 37.3	
	comp=Z,47nm,19.2s,baz=302,slow=35						
LCSM	College of the	2.07	58		Pn	16 33 07.0	-0.5
LSHM	Sage Hen Hill	2.09	77		Pn	16 33 07.0	-0.8
GBMM	Baldy Mountain	2.10	124		Pn	16 33 07.7	-0.2
GSSM	Skaggs Springs	2.11	141		Pn	16 33 06.6	-1.3
GFC	Funks Creek	2.13	118		Pn	16 33 08.7	+0.4
GDXM	Geysers	2.14	135		Pn	16 33 07.5	-1.0
GSGM	Seigler Mounta	2.14	133		Pb	16 33 09.8	-2.1
GWKM	Walker Ridge	2.15	126		Pn	16 33 09.5	+0.9
LGBM	Gray Butte	2.16	62		Pn	16 33 08.6	-0.4
M03C	McCloud	2.18	64		Pn	16 33 08.6	-0.4
GCRM	Castle Rock Sp	2.21	135		Pn	16 33 08.5	-0.8
O03E	Paynes Creek	2.23	90		Pn	16 33 08.3	-1.5
O03E	Paynes Creek	2.23	90	P	Pn	16 33 08.3	-1.5
	baz=272,SNR=47						
O03E				S	Sn	16 33 34.7	-2.1
	baz=272						
NMCNC	Mill Creek, So	2.24	141		Pn	16 33 08.4	-1.3
LDBM	Digger Butte	2.25	87		Pn	16 33 08.5	-1.5
LMPM	Military Pass	2.25	59		Pn	16 33 10.5	+0.3
LHEM	Herd Peak	2.29	55		Pn	16 33 10.5	-0.2
MNRC	McLaughlin Min	2.29	129		Pn	16 33 10.5	0.0
NMTM	Middletown	2.34	130		Pn	16 33 11.1	-0.1
NHSM	Mount Saint He	2.35	135		Pn	16 33 10.3	-1.0
MAC	Mark West Spri	2.37	139		Pn	16 33 11.1	-0.4
LBFM	Black Fox Moun	2.37	64		Pn	16 33 11.5	-0.3
LMEM	Manzanita Entr	2.41	84		Pn	16 33 11.4	-0.9
NSHM	Saint Helena R	2.45	137		Pn	16 33 12.3	-0.3
OSUM	Sutter Buttes	2.46	115		Pn	16 33 11.6	-1.1
LCMM	Colby Mountain	2.46	94		Pn	16 33 11.8	-1.2
K02D	Willamette Mer	2.48	18	P	Pn	16 33 12.2	-1.0
	baz=197,SNR=17						
K02D				S	Sn	16 33 40.1	-2.9
	baz=197						
MGL	Magalia	2.49	101		Pn	16 33 11.9	-1.3
LRDM	Redding Peak	2.49	86		Pn	16 33 12.9	-0.4
LGMM	Garner Mountai	2.52	59		Pn	16 33 13.6	-0.2
NTYM	Taylor	2.52	140		Pn	16 33 12.7	-0.9
SUTB	Sutter Butte	2.52	115		Pn	16 33 12.6	-1.1
HATC	Hat Creek Radi	2.53	78		Pn	16 33 13.6	-0.2
NBPM	Berryessa Peak	2.58	130		Pn	16 33 14.4	0.0
LTIM	Timbered Crate	2.59	70		Pn	16 33 14.1	-0.6
ORV	Oroville	2.60	107		Pn	16 33 13.6	-1.1
ORV	Oroville	2.60	107		Pn	16 33 13.6	-1.1
M04C	Macdoel	2.61	56		Pn	16 33 14.6	-0.4
M04C	Macdoel	2.61	56	Pb	Pn	16 33 14.7	-0.3
	baz=236,SNR=73						
M04C				S	Sn	16 33 42.9	-3.3
	baz=236						
L04D	Klamath Falls	2.61	43		Pn	16 33 16.1	+1.1
L04D	Klamath Falls	2.61	43	Pb	Pn	16 33 16.0	+0.9
	baz=224,SNR=157						
L04D				Sb	Sn	16 33 46.8	+0.5
	baz=224						
LBCM	Butte Creek Ri	2.62	78		Pn	16 33 14.5	-0.6
HUMO	Hull Mountain	2.62	30		Pn	16 33 14.5	-0.5
MCCM	Marconi Confer	2.62	146		Pn	16 33 13.7	-1.2
PAM	Palermo	2.62	109		Pn	16 33 13.7	-1.3
LMHM	Little Mount H	2.63	61		Pn	16 33 14.8	-0.5
CVS	Carmenet Viney	2.66	138		Pn	16 33 14.8	-0.8
OHCM	Honcut	2.69	111		Pn	16 33 14.3	-1.6
LASM	Arnica Sink	2.69	61		Pn	16 33 15.5	-0.7
NPRM	Point Reyes	2.69	150		Pn	16 33 14.8	-1.2
NAPC	Atlas Peak	2.70	134		Pn	16 33 15.5	-0.7
NOLM	Olema	2.75	146		Pn	16 33 15.4	-1.3
SNT	Sears Point	2.79	140		Pn	16 33 16.1	-1.2
J01E	Myrtle Point	2.88	12	P	Pn	16 33 17.8	-0.7
	baz=190						
J01E				S	Sn	16 33 50.2	-2.4
	baz=190						
K04D	Chiloquin, OR	3.19	43	P	Pn	16 33 22.3	-0.6
	baz=224,SNR=16						
K04D				S	Sn	16 33 58.4	-2.1
	baz=224						
AFDM	Forest Hills D	3.21	115		Pn	16 33 22.5	-0.7
BEKR	Beckworth	3.38	97		Pn	16 33 25.1	-0.5
I03D	Drain, OR	3.50	17	P	Pn	16 33 26.8	-0.3
	baz=196,SNR=7.1						
I03D				S	Sn	16 34 04.5	-3.5
	baz=196						
MOD	Modoc Plateau	3.68	64		Pn	16 33 28.4	-1.3
RUBR	Rubicon Trail	3.75	109		Pn	16 33 31.6	+0.8
I02D	Swisshome	3.81	10	P	Pn	16 33 31.8	+0.4
	baz=189,SNR=18						
I02D				S	Sn	16 34 13.0	-2.7
	baz=189						
J05D	Fort Rock, OR	3.93	40	P	Pn	16 33 33.1	0.0
	baz=222,SNR=7.4						
J05D				S	Sn	16 34 16.1	-2.6
	baz=222						
PNTR	Pine Nut	4.14	106		Pn	16 33 37.4	+1.2
PAHR	Pah Rah Range	4.15	97		Pn	16 33 35.2	-0.9
SAO	San Andreas Ge	4.40	143		Pn	16 33 37.6	-1.9
H04D	Lebanon	4.43	19	S	Sn	16 34 28.5	-2.3
	baz=199						
YERR	Yerington	4.44	106		Pn	16 33 40.3	+0.1
PINE	Pine Mountain	4.45	38		Pn	16 33 41.2	+0.9
WVOR	Wild Horse Val	5.03	64		Pn	16 33 47.0	-1.2
RYN	Ryan	5.09	108		Pn	16 33 49.6	+0.4
PMPB	Monarch Peak	5.15	142		Pn	16 33 49.4	-0.5
MDPB	Devils Postpil	5.16	120		Pn	16 33 52.5	+2.3
KVN	Kaiserville	5.27	102		Pn	16 33 51.3	-0.3
NVAR	Mina Array Bea	5.33	109	Pn	Pn	16 33 52.9	+0.5
	1.2nm,0.3s,baz=289,slow=14,SNR=24						
NV11	Mina Array Sit	5.43	108		Pn	16 33 54.0	+0.2
ELK	Elko	7.24	84	Pn	Pn	16 34 19.0	+0.4
	0.1nm,0.3s,baz=279,slow=14,SNR=5.3						
ELK				LR	LR	16 37 19.8	
	comp=Z,96nm,21.6s,baz=303,slow=41						
PFO	Pinyon Flats O	9.42	133	Pn	Pn	16 34 49.7	+1.1
	1.0nm,0.3s,baz=318,slow=8.5,SNR=8.0						
NEW	Newport	9.61	32	LR	LR	16 38 18.2	
	comp=Z,109nm,18.6s,baz=269,slow=37						
PDAR	Pinedale Array	11.62	73	Pn	Pn	16 35 21.6	+2.9
	0.1nm,0.3s,baz=263,slow=11,SNR=7.8						
ANMO	Albuquerque	15.43	105	LR	LR	16 42 42.3	
	comp=Z,46nm,20.0s,baz=239,slow=40						
YKA	Yellowknife Ar	23.00	12	P	P	16 37 38.5	+1.5
	0.9nm,0.9s,baz=198,slow=11,SNR=4.2						
H11N3	WAKE ISLAND Hy	61.20	272	T	T	17 49 27.8	
	baz=53,slow=75,SNR=10.0						
H11N2	WAKE ISLAND Hy	61.20	272	T	T	17 49 27.4	
	baz=53,slow=75,SNR=9.4						
H11N1	WAKE ISLAND Hy	61.22	272	T	T	17 49 28.4	
	baz=53,slow=75,SNR=8.5						
NB2	NORSAR Subarra	72.78	21	P	P	16 44 05.8	+5.3
	comp=Z,2.8nm,0.8s,baz=48,slow=7.4						
KHC	Kasperske Hory	83.60	26	*e*P	P	16 45 02.0	+1.4
HHC	Hu-ho-hao-te	84.36	321	*e*P	P	16 45 04.8	+0.1
WMQ	Urumqi	91.27	337	*e*P	P	16 45 40.6	+2.8

IDC 14 16:45:17.8±1.9**,6°.40S**×**130°.87E,h0^{km},mb3.4**/1**,**
mb1 3.6/4**,mb1mx3.3**/37**,mbtmp3.4**/4**,ML3.5**/3**,Error ellipse: s-maj=91.2km s-min=28.0km az=80.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.51	4	Pn	Pn	16 46 39.8	-1.3
	3.5nm,0.3s,baz=187,slow=16,SNR=9.6						
SIJI				Sn	Sn	16 47 35.1	-10
	2.0nm,0.3s,baz=234,slow=23,SNR=6.2						
WRA	Warramunga Arr	13.88	166	Pn	Pn	16 48 35.5	-0.5
	0.2nm,0.3s,baz=347,slow=13,SNR=16						
WRA				Sn	Sn	16 51 01.9	-9.1
	0.2nm,0.3s,baz=358,slow=22,SNR=5.0						
ASAR	Alice Springs	17.42	171	P	Pn	16 49 22.2	-0.2
	0.1nm,0.3s,baz=350,slow=9.5,SNR=14						
MKAR	Makanchi Array	68.20	326	P	P	16 56 20.8	+0.6
	0.2nm,0.4s,baz=112,slow=6.9,SNR=3.2						

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*IDC **14** 16:49:05.2±2.0,7°.44N×93°.89E,h0^{km},mb3.7/6,mb1 3.8/7, mb1mx3.5/54,mbtmp3.7/7,ML4.0/1,Error ellipse: s-maj=76.0km s-min=20.0km az=62.0*

ISC 14 16:49:10.2±0.9**,7°.6N**±0°.1×**94°.2E**±0°.2**,h20^{km},n11,**σ**1^s.34**/9**,**
mb3.6/6**,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.68	207	*e*P	Pn	16 49 24.9	+0.2
CMBY				*e*S	Sn	16 49 35.8	+1.1
CMAR	Chiang Mai Arr	11.71	23	Pn	Pn	16 51 58.4	+2.1
	0.3nm,0.3s,baz=213,slow=14,SNR=10						
H08S3	Diego Garcia H	26.45	236	T	T	17 21 40.4	
	baz=54,slow=74						
H08S2	Diego Garcia H	26.45	236	T	T	17 21 30.9	
	baz=54,slow=74						
H08S1	Diego Carcia H	26.47	236	T	T	17 21 43.3	
	baz=54						
MKAR	Makanchi Array	40.35	347	P	P	16 56 45.1	-1.5
	0.8nm,0.7s,baz=170,slow=8.3,SNR=11						
SONM	Songino Array	41.39	12	P	P	16 56 54.9	-0.4
	0.3nm,0.4s,baz=189,slow=7.3,SNR=3.3						
KURBB	Kurchatov Arra	44.81	346	P	P	16 57 21.8	-0.9
	1.0nm,0.6s,baz=167,slow=7.3,SNR=16						
ZALV	Zalesovo Beam	46.82	352	P	P	16 57 37.7	-0.8
	0.9nm,0.3s,baz=185,slow=5.8,SNR=5.0						
WRA	Warramunga Arr	48.04	125	P	P	16 57 47.7	-0.9
	0.6nm,1.0s,baz=304,slow=9.0,SNR=2.8						
ASAR	Alice Springs	49.68	130	P	P	16 58 00.6	-0.5
	0.4nm,1.0s,baz=310,slow=8.0,SNR=3.3						

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*MAN **14** 16:49:51.5,6°.81N×126°.29E,h40^{km},mb4.8,ML3.7,MS3.6*
*IDC **14** 16:49:54.2±2.8,6°.95N×126°.27E,h52^{km}±23^{km},mb3.4/6, mb1 3.6/7,mb1mx3.2/51,mbtmp3.7/7,ML3.8/1,Error ellipse: s-maj=49.9km s-min=15.7km az=57.0*

ISC 14 16:49:54.4±0.9**,6°.84N**±0°.05×**126°.17E**±0°.06**,h46^{km}**±9^{km}**,**
n18,σ**1^s.95**/26**,mb3.6**/6**,2C-1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	0.14	40	*e*P	Pn	16 49 59.2	-2.8
MATI				*e*S	Sn	16 50 05.8	-1.6
DAV	Davao City (W)	0.63	292	P	Pn	16 50 07.8	+0.7
	245nm,0.3s,baz=68,slow=19,SNR=24						
DAV				S	Sn	16 50 19.8	+3.6
	173nm,0.3s,baz=270,slow=20,SNR=8.3						
DAV				LR	LR	16 50 40.9	
	comp=Z,230nm,20.2s,baz=87,slow=67						
DDMP	Don Marcelino,	0.86	212	*e*P	Pn	16 50 08.7	-1.4
DDMP				*e*S	Sn	16 50 20.1	-1.5
KCP	Kidapawan	1.08	279⇓	*e*P	Pn	16 50 13.0	-0.2
KCP				*i* S	Sn	16 50 28.2	+1.0
GSPH	General Santos	1.42	238⇑	*i*P	Pn	16 50 22.5	+4.6
BUKP	Musuan	1.51	313	*e*P	Pn	16 50 17.8	-1.3
BUKP				*e*S	Sn	16 50 37.7	+0.1
SKMP	Bagumbayan, Su	1.64	259	*e*P	Pn	16 50 20.4	-0.4
SKMP				*e*S	Sn	16 50 39.0	-1.8
CTBH	Cotabato--PC H	1.94	281⇑	*e*P	Pn	16 50 25.4	+0.5
BUTP	Butuan	2.19	346	*e*P	Pn	16 50 30.1	+1.8
BUTP				*e*S	Sn	16 50 59.1	+4.9
PAGZ	Pagadian	2.94	290	*e*P	Pn	16 50 38.1	-0.5
PAGZ				*e*S	Sn	16 51 11.9	-0.8
MSLP	Maasin	3.52	339	*e*P	Pn	16 50 45.5	-1.2
MSLP				*e*S	Sn	16 51 26.9	-0.2
SIJI	Sorong	9.19	146	P	Pn	16 52 06.1	+1.6
	1.0nm,0.3s,baz=355,slow=16,SNR=4.9						
FITZ	Fitzroy Crossi	24.78	181	P	P	16 55 12.9	+0.8
	1.4nm,0.7s,baz=356,slow=5.7,SNR=4.7						
WRA	Warramunga Arr	27.80	163	P	P	16 55 38.9	-0.5
	0.5nm,0.7s,baz=343,slow=10,SNR=3.9						
ASAR	Alice Springs	31.24	166	P	P	16 56 09.4	-0.4
	0.4nm,0.4s,baz=342,slow=7.0,SNR=18						
STKA	Stephens Creek	41.22	160	P	P	16 57 35.2	+0.3
	1.1nm,0.6s,baz=326,slow=11,SNR=2.9						
MKAR	Makanchi Array	54.71	324	P	P	16 59 18.9	-0.2
	0.2nm,0.5s,baz=120,slow=7.2,SNR=6.1						
KURBB	Kurchatov Arra	58.84	327	P	P	16 59 46.6	-1.7
	0.5nm,0.8s,baz=125,slow=6.2,SNR=5.0						

VAO 14 17:02:04.5±0.2**,22°.92S**×**47°.68W,h0^{km},mb3.7,Brazil**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCLB	Rio Claro- Sao	0.52	15	*e*P	Pg	17 02 13.7	-0.7
RCLB				*e*S	Sg	17 02 20.9	-0.3
VAO	Valinhos	0.66	97	*e*P	Pg	17 02 16.6	-0.5
VAO				*e*S	Sg	17 02 25.8	0.0
SPB	Sao Paulo	0.71	161	*e*P	Pg	17 02 18.4	+0.3
SPB				*e*S	Sg	17 02 27.7	+0.5
FRTB	Fartura	1.79	256	*e*P	Pn	17 02 36.3	-0.4
FRTB				*e*S	Sn	17 02 59.9	-0.2
PARB	Paraibuna	1.94	103	*e*P	Pn	17 02 38.8	0.0
PARB				*e*S	Sn	17 03 03.1	-0.8
BB19B	Bebedouro	2.01	337	*e*P	Pn	17 02 40.5	+0.8
BB19B				*e*S	Sb	17 03 07.0	-0.5
BSCB	Bom Sucesso	3.31	55	*e*P	Pn	17 02 57.6	-0.1
BSCB				*e*S	Sn	17 03 38.6	+0.9
PCMB	Pacaembu	3.57	291	*e*P	Pn	17 03 00.8	-0.4
PCMB				*e*S	Sn	17 03 44.3	+0.2
TRCB	Terra Rica	4.57	271	*e*P	Pn	17 03 15.6	+0.6
IPMB	Ipameri, GO	4.94	354	*e*P	Pn	17 03 19.1	-0.9
ITAB	Concordia	5.89	222	*e*P	Pn	17 03 33.0	-0.2
ITAB				*e*S	Sn	17 04 40.6	-0.8
CNLB	Canela	6.98	203	*e*P	Pn	17 03 47.6	-0.5
CNLB				*e*S	Sn	17 05 08.8	+0.6
SJMB	Sao Joao De Ma	7.38	57	*e*P	Pn	17 03 53.7	+0.1
SJMB				*e*S	Sn	17 05 19.2	+1.1
BSFB	Barra de Sao F	7.57	59	*e*P	Pn	17 03 56.3	+0.1
BSFB				*e*S	Sn	17 05 24.2	+1.4
ARAG	Araguaiana, MT	8.17	331	*e*P	Pn	17 04 03.5	-0.9
ARAG				*e*S	Sn	17 05 37.7	+0.2
JANB	Januaria	8.44	23	*e*P	Pn	17 04 09.6	+1.4
JANB				*e*S	Sn	17 05 43.6	-0.7
CPUP	Villa Florida	9.41	247	*e*S	Sn	17 06 09.8	+1.7

WEL 14 17:30:37.5,45°S±3°×**16°8E**±°**,h136^{km}**±4^{km}**,M3.6**/19**,**
MLv3.6/19**,Error ellipse: s-maj=0.0km s-min=0.0km az=70.7,South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.45	213	P	Pn	17 30 57.1	+0.2
DCZ				S	Sn	17 31 11.9	+0.1
MSZ	Milford Sound	0.51	36	P	Pn	17 30 57.6	+0.3
MSZ				S	Sn	17 31 11.7	-0.5
MLZ	Mavora Lakes	0.52	123	P	Pn	17 30 57.9	+0.6
MLZ				S	Sn	17 31 12.9	+0.5
WHZ	Wether Hill Ro	0.86	159	P	Pn	17 31 00.6	+0.8
WHZ				S	Sn	17 31 17.1	+0.4
WKZ	Wanaka	1.10	77	P	Pn	17 31 02.5	+0.5
WKZ				S	Sn	17 31 20.6	+0.1
EAZ	Earnscleugh	1.28	97	P	Pn	17 31 04.2	+0.5
EAZ				S	Sn	17 31 22.7	-0.9
JCZ	Jackson Bay	1.36	43	P	Pn	17 31 04.2	-0.5
JCZ				S	Sn	17 31 23.9	-1.4
TUZ	Tuapeka	1.73	121	P	Pn	17 31 09.3	+0.8
APZ	The Paps	1.78	169	P	Pn	17 31 09.9	+0.7
SYZ	Scrubby Hill	1.85	142	P	Pn	17 31 10.7	+0.9
LBZ	Lake Benmore	2.03	71	P	Pn	17 31 11.1	-1.1
ODZ	Otahua Downs	2.23	90	P	Pn	17 31 14.1	-0.4
FOZ	Fox Glacier	2.27	48	P	Pn	17 31 13.3	-1.8
HHSZ	Highcliff Hill	2.32	111	P	Pn	17 31 16.2	+0.5
RPZ	Rata Peaks	2.89	63	P	Pn	17 31 21.1	-1.8
WVZ	Waitaha Valley	3.08	50	P	Pn	17 31 23.1	-2.2
INZ	Inchbonnie	3.70	52	P	Pn	17 31 31.6	-1.8
OXZ	Oxford	3.70	63	P	Pn	17 31 30.8	-2.6
MQZ	McQueen’s Vall	3.94	71	P	Pn	17 31 35.1	-1.5
AKCZ	Akaroa Harbour	4.05	74	P	Pn	17 31 36.9	-1.2
LTZ	Lake Taylor	4.14	58	P	Pn	17 31 36.7	-2.6
AMCZ	Amberley	4.17	65	P	Pn	17 31 37.9	-1.6
OKCZ	Okains Bay	4.21	73	P	Pn	17 31 39.4	-0.7
GVZ	Greta Valley S	4.51	64	P	Pn	17 31 43.5	-0.6
DSZ	Denniston Nort	4.58	45	P	Pn	17 31 42.8	-2.3
KHZ	Kahutara	5.12	61	P	Pn	17 31 51.0	-1.2
THZ	Tophouse	5.15	52	P	Pn	17 31 50.3	-2.3
QRZ	Quartz Range	5.63	43	P	Pn	17 31 57.2	-1.9
CAW	Cannon Point	6.81	57	P	Pn	17 32 13.1	-1.8

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*IDC **14** 17:34:36.4±0.6,41°.19S×91°.10W,h0^{km},mb4.4/13, mb1 4.6/14,mb1mx4.4/30,mbtmp4.4/14,ML3.8/1,MS4.2/23, Ms1 4.2/23,ms1mx4.1/35,Error ellipse: s-maj=20.7km s-min=15.8km az=123.0*

*NEIC **14** 17:34:38.5±1.9,41°.13S±0°.10×91°.0W±0°.1,h16^{km}±3^{km}, mb5.0/229,Error ellipse: s-maj=15.2km s-min=13.8km az=131.0*

*GCMT **14** 17:34:39.5±0.2,41°.02S±0°.02×91°.23W±0°.01,h12^{km}, MW5.1/119,Moment Tensor Solution. s50,c70; s119,c175; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.11±.09; M$_{\theta\theta}$-0.60±.09; M$_{\phi\phi}$4.72±.08; M$_{r\theta}$2.69±.30; M$_{\theta\phi}$-0.39±.07; M$_{\phi r}$-0.22±.25; Best double couple: M$_0$5.17000×10^{16} NP1:φ$_s$201.00000°,δ49.00000°, λ-51.00000°. NP2:φ$_s$330.00000°,δ54.00000°, λ-126.00000°. Principal axes: T 4.7710, Plg3.0000°, Azm84.0000°; N 0.8020, Plg28.0000°, Azm353.0000°; P -5.5680, Plg62.0000°, Azm180.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 17:34:37.5±0.3**,41°.07S**±0°.07×**91°.13W**±0°.07**,h10^{km},n352,**
σ**1^s.16**/339**,mb5.0**/107**,MS4.2**/26**,1C,Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO06	Curarrehue	15.07	91		Pn	17 38 12.1	+1.6
PLCA	Paso Flores	15.56	96	Pn	Pn	17 38 18.9	+1.9
	0.1nm,0.3s,baz=297,slow=15,SNR=2.5						
PLCA				LR	LR	17 42 55.0	
	comp=Z,4μm,19.6s,baz=328,slow=32						
PLCA	Paso Flores	15.56	96		Pn	17 38 18.6	+1.6
GO05	Huala	16.28	74	Pn	Pn	17 38 26.4	+0.2
ROC1	El Roble	17.95	70	P	Pn	17 38 45.3	-2.1
PEL	Peldehue	18.10	71	P	P	17 38 50.5	+1.1
GO04	Tololo Observa	19.74	63	P	P	17 39 07.3	-0.2
USHA	Ushuaia	20.38	140	LR	LR	17 45 31.1	
	comp=Z,2μm,18.6s,baz=295,slow=32						
CFA	Coronel Fontan	20.67	70	P	P	17 39 18.0	+0.5
	9.1nm,0.9s,baz=241,slow=9.2,SNR=9.2						
CFA				LR	LR	17 45 33.6	
	comp=Z,2μm,20.1s,baz=259,slow=32						
GO03	Copiap	21.80	58	P	P	17 39 30.6	+0.8
GO02	Mina Guanaco	23.93	55	P	P	17 39 51.0	-1.0
PB10	IPOC Station P	24.58	51	P	P	17 39 55.8	-1.9
EFI	East Falkland	24.95	126	P	P	17 40 00.7	-0.1
PB04	IPOC Station P	25.72	50	P	P	17 40 08.8	+0.6
PB04				IAmb	IAmb	17 40 19.0	
	comp=Z,60nm,1.5s						
LVC	Limon Verde	26.24	52	P	P	17 40 14.3	+1.2
	comp=Z,6.6nm,0.8s,baz=231,slow=8.5,SNR=7.3						
LVC				LR	LR	17 48 01.6	
	comp=Z,934nm,19.4s,baz=220,slow=31						
LVC	Limon Verde	26.24	52	P	P	17 40 13.6	+0.4
LVC	Limon Verde	26.24	52	*e*P	P	17 40 14.7	+1.6
PB01	IPOC Station P	27.11	49	P	P	17 40 21.5	+0.8
PB11	IPOC Station P	28.04	47	P	P	17 40 27.0	-2.1
PMSA	Palmer Station	28.38	156	LR	LR	17 48 28.4	
	comp=Z,678nm,21.9s,baz=296,slow=29						
MNMC	Minye Minye	28.58	46	P	P	17 40 34.7	+0.7
MNMC				IAmb	IAmb	17 40 54.9	
	comp=Z,69nm,1.8s						
CPUP	Villa Florida	31.51	73	P	P	17 40 59.1	-0.5
	comp=Z,0.8nm,0.4s,baz=284,slow=4.3,SNR=3.5						
CPUP				LR	LR	17 52 19.8	
	comp=Z,989nm,21.3s,baz=234,slow=34						
CPUP	Villa Florida	31.51	73	P	P	17 40 58.4	-1.2
CPUP				IAmb	IAmb	17 41 13.6	
	comp=Z,34nm,2.0s						
NNA	Nana	31.57	27	P	P	17 41 00.9	+0.6
NNA				IAmb	IAmb	17 41 02.9	
	comp=Z,21nm,0.8s						
LPAZ	La Paz	31.70	46	P	P	17 41 04.2	+2.2
	comp=Z,4.7nm,0.6s,baz=201,slow=4.2,SNR=20						
LPAZ				LR	LR	17 51 06.0	
	comp=Z,524nm,18.6s,baz=207,slow=31						
LPAZ	La Paz	31.70	46	P	P	17 41 03.1	+1.1
LPAZ	La Paz	31.70	46	*e*P	P	17 41 03.9	+1.9
AQDB	Aquidauana	36.37	66	*e*P	P	17 41 42.3	+0.5
HOPE	Hope Point	38.12	129	P	P	17 41 55.8	-0.5
SALV	Santo Antonio	39.56	61	*e*P	P	17 42 09.7	+0.9
PAYG	Puerto Ayora	40.22	1	P	P	17 42 15.3	+1.0
PAYG				IAmb	IAmb	17 43 16.2	
	comp=Z,33nm,1.1s						
SAML	Samuel	40.45	46	P	P	17 42 16.6	+0.4
SAML	Samuel	40.45	46	*e*P	P	17 42 16.9	+0.7
OTAV	Otavalo	42.70	19	P	P	17 42 36.5	+1.3
FLOC	Florencia	44.73	22	P	P	17 42 52.2	+1.2
BDFB	Brasilia	45.00	69	P	P	17 42 53.5	+0.2
	comp=Z,1.2nm,0.3s,baz=231,slow=6.5,SNR=2.4						
BDFB				LR	LR	18 01 02.6	
	comp=Z,984nm,18.6s,baz=256,slow=35						
BDFB	Brasilia	45.00	69	P	P	17 42 52.1	-1.2
JANB	Januaria	48.02	71	*e*P	P	17 43 17.9	+0.9
ROSC	El Rosal	48.21	23	P	P	17 43 21.0	+2.2
	comp=Z,7.3nm,0.3s,baz=131,slow=13,SNR=9.3						
ROSC				LR	LR	18 00 46.7	
	comp=Z,221nm,21.7s,baz=235,slow=32						
ROSC	El Rosal	48.21	23	P	P	17 43 18.1	-0.7
VNA3	Neumayer Olymp	49.03	155	P	P	17 43 24.8	+0.7
PTGA	Pitinga	49.06	43	P	P	17 43 24.5	-0.5
	comp=Z,5.1nm,0.7s,baz=213,slow=9.5,SNR=10						
PTGA	Pitinga	49.06	43	P	P	17 43 24.6	-0.3
PTGA	Pitinga	49.06	43	*e*P	P	17 43 25.2	+0.3
QSPA	South Pole Qui	49.16	180	P	P	17 43 25.4	+0.1
	comp=Z,2.0nm,0.8s,baz=138,slow=2.5,SNR=9.4						
QSPA	South Pole Qui	49.16	180	P	P	17 43 24.9	-0.4
QSPA				IAmb	IAmb	17 43 39.6	
	comp=Z,32nm,1.8s						
RUSC	La Rusia	49.58	24	P	P	17 43 30.0	+0.6
VNA1	Neumayer--Stat	49.58	154	P	P	17 43 29.0	+0.8
VNA2	Neumayer--Watz	49.82	155	P	P	17 43 30.7	+0.7
	baz=275,slow=13						
SMTB	Santa Maria do	50.08	63	*e*P	P	17 43 34.1	+1.4
SNAA	Sanae	51.10	156	P	P	17 43 39.8	+0.1
SNAA	Sanae	51.10	156	P	P	17 43 39.4	-0.4
SNAA				IAmb	IAmb	17 43 43.0	
	comp=Z,49nm,1.9s						
TBI	Tubuai	51.48	271	*e*S	S	17 51 04.3	+0.9
	comp=Z,456nm,26.8s						
TBI				*e*LR	LR	17 58 31.8	
	comp=Z,2μm,27.5s,baz=128						
SBA	Scott Base	52.70	195	P	P	17 43 53.1	+1.6
SBA				IAmb	IAmb	17 43 59.6	
	comp=Z,54nm,2.0s						
ACON	Acoyapa	53.06	7	P	P	17 43 56.4	+1.5
ACON				IAmb	IAmb	17 45 54.3	
	comp=Z,39nm,1.4s						
SDV	Santo Domingo	53.17	26	P	P	17 43 55.3	-0.7
SDV	Santo Domingo	53.17	26	*e*P	P	17 43 56.4	+0.4
VNDA	Vanda	53.79	195	P	P	17 43 59.9	+0.3
	comp=Z,2.4nm,0.8s,baz=108,slow=9.8,SNR=6.5						
VNDA				LR	LR	18 01 40.5	
	comp=Z,146nm,21.4s,baz=112,slow=30						
VNDA	Vanda	53.79	195	P	P	17 44 00.1	+0.5
TAOE	Nuku Hiva Isla	53.84	292	*e*LR	LR	17 59 41.1	
	comp=Z,969nm,23.6s						
PPT2	Papeete2	54.98	277	*e*S	S	17 51 51.5	+0.3

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      comp=Z,443nm,25.2s
PPT2                          eLR     LR      17 59 59.6
      comp=Z,1µm,27.5s,baz=113
PPT   Papeete          54.99 277  LR      LR      18 02 06.1
      comp=Z,129nm,20.6s,baz=154,slow=30
URIC  Uribia, Colomb   55.41  23  P       P       17 44 11.6  -0.4
CCIG  Comitan          57.07 359  P       P       17 44 23.9  -0.1
CCIG                              IAmb    IAmb    17 44 26.5
      comp=Z,40nm,1.6s
TLIG  Tlapa            58.74 352  P       P       17 44 35.1  -0.6
TLIG                              IAmb    IAmb    17 44 40.2
      comp=Z,21nm,1.4s
RCBR  Riachuelo        60.33  70  P       P       17 44 44.8  -2.0
MLPR  Magueyes Islan   62.85  26  P       P       17 45 03.1  -0.4
MLPR                              IAmb    IAmb    17 45 44.5
      comp=Z,21nm,1.1s
CRPR  Cabo Rojo, PR    62.87  26  P       P       17 45 03.7  +0.1
CRPR                              IAmb    IAmb    17 45 10.5
      comp=Z,16nm,1.0s
ICMP  Isla Caja de M   62.95  26  P       P       17 45 02.9  -1.3
MPR   Mayaguez         63.05  26  P       P       17 45 03.9  -0.9
OBIP  Obispado Ponce   63.07  26  P       P       17 45 03.5  -1.5
OBIP                              IAmb    IAmb    17 45 04.6
      comp=Z,18nm,0.9s
PDPR  Patillas Dam,    63.24  27  P       P       17 45 04.6  -1.5
PDPR                              IAmb    IAmb    17 45 06.3
      comp=Z,14nm,1.0s
SJG   San Juan         63.28  27  P       P       17 45 05.8  -0.5
SJG                               IAmb    IAmb    17 45 11.8
      comp=Z,14nm,0.9s
AGPR  Aguadilla, PR    63.29  26  P       P       17 45 05.1  -1.3
AOPR  Arecibo Observ   63.30  26  P       P       17 45 05.2  -1.3
AOPR                              IAmb    IAmb    17 46 27.3
      comp=Z,16nm,0.9s
GCPR  Guaynabo City    63.49  27  P       P       17 45 06.7  -1.1
GCPR                              IAmb    IAmb    17 45 14.6
      comp=Z,13nm,1.0s
CBYP  Canovanas        63.53  27  P       P       17 45 06.3  -1.8
CUPR  Culebra, Puert   63.76  27  P       P       17 45 08.5  -1.0
CUPR                              IAmb    IAmb    17 45 13.2
      comp=Z,22nm,1.2s
SYO   Syowa Base       64.35 162⇑epP      P       17 45 14.4  +1.5
ZAIG  Zacatecas        64.40 348  P       P       17 45 15.5  +1.5
MSWZ  Moikau Station   66.71 235  P       P       17 45 28.4  -0.2
URZ   Urewera          67.34 239  LR      LR      18 06 36.5
      comp=Z,629nm,21.7s,baz=11,slow=28
THZ   Tophouse         67.94 233  P       P       17 45 36.7  +0.2
NNZ   Nelson           67.97 234  P       P       17 45 36.5   0.0
PYZ   Puysegur Point   68.92 227  P       P       17 45 43.8  +1.3
HPIG                   69.00 346  P       P       17 45 44.5  +1.4
HPIG                              IAmb    IAmb    17 45 53.1
      comp=Z,12nm,1.0s
RAO   Raoul Island     69.19 249  P       P       17 45 45.1  +0.7
MAW   Mawson           69.87 170  P       P       17 45 48.1  +0.2
      comp=Z,8.8nm,0.9s,baz=270,slow=10,SNR=3.4
MAW   Mawson           69.87 170  P       P       17 45 47.1  -0.8
HKT   Hockley          70.80 356  P       P       17 45 53.2  -0.7
HKT                               IAmb    IAmb    17 48 12.5
      comp=Z,17nm,1.6s
TX31  Lajitas Ar. Si   71.01 348  P       P       17 45 55.8  +0.5
TX31                              IAmb    IAmb    17 46 10.3
      comp=Z,15nm,1.4s
TX32  Lajitas Array    71.01 348  P       P       17 45 55.8  +0.5
TX32                              IAmb    IAmb    17 46 10.3
      comp=Z,17nm,1.5s
TXAR  Lajitas Array    71.01 348  P       P       17 45 57.2  +1.9
      comp=Z,1.9nm,0.8s,baz=171,slow=9.4,SNR=15
TXAR                              LR      LR      18 11 18.6
      comp=Z,88nm,21.5s,baz=0.0,slow=31
TXAR  Lajitas Array    71.01 348  P       P       17 45 56.2  +0.9
JCT   Junction City    71.64 352  P       P       17 45 59.6  +0.5
342A  Flagon Creek P   72.09 359  P       P       17 46 02.0  +0.3
HSIG                   72.12 342  P       P       17 46 01.9  -0.1
HSIG                              IAmb    IAmb    17 46 12.0
      comp=Z,17nm,1.3s
NATX  Nacogdoches      72.54 357  P       P       17 46 04.6  +0.2
WHTX  Lake Whitney,    72.94 354  P       P       17 46 05.8  -0.9
143A  Socs Landing,    73.41 360  P       P       17 46 10.8  +1.3
MNTX  Cornudas Mount   73.60 347  P       P       17 46 10.6  -0.1
152A  Waverly Hall     73.61   6  P       P       17 46 09.8  -0.9
152A                              IAmb    IAmb    17 46 27.6
      comp=Z,33nm,1.6s
LRAL  Lakeview Retre   73.84   4  P       P       17 46 11.7  -0.3
LRAL  Lakeview Retre   73.84   4  P       P       17 46 12.7  +0.6
      baz=183
319A  Douglas          74.02 344  P       P       17 46 12.1  -1.2
Z50A  Ashland          74.11   5  P       P       17 46 14.5  +0.8
      baz=184
Z51A  Franklin         74.23   5  P       P       17 46 14.8  +0.5
Z51A                              IAmb    IAmb    17 46 15.6
      comp=Z,9.5nm,0.8s
GOGA  Godfrey          74.45   7  P       P       17 46 16.3  +0.7
GOGA  Godfrey          74.45   7  P       P       17 46 16.9  +1.3
      baz=186
NHSC  New Hope         74.50  10          P       17 46 16.6  +0.8
Z57A  Bowman           74.62   9  P       P       17 46 18.3  +1.7
      baz=188
121A  Cookes Peak, D   74.84 345  P       P       17 46 18.4  +0.3
Y55A  Saluda           75.13   8  P       P       17 46 21.0  +1.5
      baz=187
OXF   Oxford           75.23   1  P       P       17 46 21.1  +1.0
TUC   Tucson           75.24 343  P       P       17 46 21.0  +0.6
TUC                               IAmb    IAmb    17 46 30.7
      comp=Z,30nm,1.8s
TUC   Tucson           75.24 343  P       P       17 46 22.9  +2.6
      baz=165
MIAR  Mount Ida        75.28 358  P       P       17 46 20.8  +0.4
MIAR                              IAmb    IAmb    17 48 34.0
      comp=Z,37nm,1.9s
MIAR  Mount Ida        75.28 358  P       P       17 46 21.5  +1.1
      baz=178
214A  Organ Pipe Nat   75.38 341  P       P       17 46 23.7  +2.7
      baz=163
HODGE Hodges           75.38   8  P       P       17 46 21.4  +0.5
HODGE                             IAmb    IAmb    17 49 09.1
      comp=Z,12nm,0.9s
MSTX  Muleshoe         75.44 350  P       P       17 46 22.9  +1.4
      baz=171
X53A  Estanollee       75.55   7  P       P       17 46 23.7  +1.8
      baz=186
X34A  Smith Ranch, M   75.56 354  P       P       17 46 20.2  -1.7
X34A                              IAmb    IAmb    17 47 23.8
      comp=Z,41nm,1.9s
X55A  Gracelyn & Ava   75.68   8  P       P       17 46 24.2  +1.5
      baz=187
X54A  Belton           75.68   7  P       P       17 46 24.2  +1.5
      baz=187
PLAL  Pickwick Lake    75.74   3  P       P       17 46 22.7  -0.3
PLAL                              IAmb    IAmb    17 48 49.4
      comp=Z,13nm,1.2s
X56A  White Oak        75.77   9  P       P       17 46 24.5  +1.3
      baz=188
WMOK  Wichita Mounta   75.77 354  P       P       17 46 24.7  +1.5
W45A  Hickory Valley   75.88   2  P       P       17 46 22.7  -1.1
W41B  Gary Mavity, V   75.88 359  P       P       17 46 23.8   0.0
W41B                              IAmb    IAmb    17 46 24.9
      comp=Z,43nm,1.9s
W41B  Gary Mavity, V   75.88 359  P       P       17 46 24.9  +1.1
      baz=179
W39A  Magazine         75.94 358  P       P       17 46 24.4  +0.2
W39A                              IAmb    IAmb    17 46 38.9
      comp=Z,35nm,1.7s
W39A  Magazine         75.94 358  P       P       17 46 25.6  +1.5
      baz=178
BIRD  Birdtown, Kers   75.98   9  P       P       17 46 24.4   0.0
BIRD                              IAmb    IAmb    17 47 12.4
      comp=Z,44nm,1.8s
WHAR  Wooly Hollow     76.00 359  P       P       17 46 24.4  -0.1
PAULI Pauline          76.01   8  P       P       17 46 24.1  -0.4
PAULI                             IAmb    IAmb    17 48 04.9
      comp=Z,27nm,1.2s
SWET  Sewanee          76.07   4  P       P       17 46 24.7  -0.2
SWET                              IAmb    IAmb    17 46 27.9
      comp=Z,41nm,1.7s
BG3   Lake Jocassee    76.07   7  P       P       17 46 24.0  -0.9
BG3                               IAmb    IAmb    17 46 33.2
      comp=Z,16nm,1.2s
W50A  Signal Mountai   76.09   5  P       P       17 46 25.3  +0.2
CPCT  Cooper Cave      76.39   6  P       P       17 46 26.5  -0.2
CPCT                              IAmb    IAmb    17 46 34.5
      comp=Z,11nm,1.0s
FCAR  Ozark Folk Cen   76.59 359  P       P       17 46 28.4  +0.5
FCAR                              IAmb    IAmb    17 46 36.1
      comp=Z,25nm,1.8s
TKL   Tuckaleechee C   76.66   6  LR      LR      18 14 18.8
      comp=Z,76nm,21.6s,baz=160,slow=31
TKL   Tuckaleechee C   76.66   6  P       P       17 46 27.7  -0.5
TKL                               IAmb    IAmb    17 48 13.1
      comp=Z,22nm,1.4s
LCAR  Lake Charles     76.77 360  P       P       17 46 27.5  -1.3
LCAR                              IAmb    IAmb    17 46 32.1
      comp=Z,15nm,1.4s
V52A  Sevierville      76.85   6  P       P       17 46 28.1  -1.2
WVT   Waverly          76.89   3  P       P       17 46 28.4  -1.1
CLTN  Cedars of Leba   76.92   4  P       P       17 46 29.4  -0.3
GLA   Glamis           76.93 340  P       P       17 46 28.7  -1.2
ANMO  Albuquerque      76.95 347  LR      LR      18 16 03.8
      comp=Z,75nm,18.8s,baz=176,slow=32
ANMO  Albuquerque      76.95 347  P       P       17 46 29.3  -0.8
ANMO  Albuquerque      76.95 347  P       P       17 46 31.4  +1.2
      baz=168
HHAR  Hobbs            77.02 358  P       P       17 46 29.8  -0.5
HHAR                              IAmb    IAmb    17 46 38.0
      comp=Z,31nm,1.9s
U38A  Gravette         77.20 357  P       P       17 46 31.2   0.0
U38A                              IAmb    IAmb    17 46 34.2
      comp=Z,39nm,1.9s
X18A  Snowflake        77.20 344  P       P       17 46 32.9  +1.4
X18A                              IAmb    IAmb    17 46 36.6
      comp=Z,31nm,1.8s
Y14A  Wickenburg       77.32 341  P       P       17 46 32.9  +0.8
X16A  Lo Mia Camp, P   77.41 343  P       P       17 46 34.5  +1.8
X16A                              IAmb    IAmb    17 46 43.2
      comp=Z,17nm,1.6s
U32A  Winter Ranch,    77.42 353  P       P       17 46 33.8  +1.2
Y12C  Blythe           77.51 340  P       P       17 46 35.7  +2.6
      baz=162
TZTN  Tazewell         77.55   6  P       P       17 46 33.7  +0.5
TZTN                              IAmb    IAmb    17 46 46.0
      comp=Z,12nm,0.9s
BC3   Big Chuckawall   77.67 339  P       P       17 46 36.6  +2.5
      baz=161
MGMO  Mountain Grove   77.86 359  P       P       17 46 34.4  -0.6
MGMO                              IAmb    IAmb    17 46 49.2
      comp=Z,16nm,1.2s
TPFO  Pinon Flats      77.89 339  P       P       17 46 38.4  +3.0
      baz=161
XPFO  Pion Flat        77.90 339  P       P       17 46 36.1  +0.8
XPFO                              IAmb    IAmb    17 46 40.1
      comp=Z,17nm,1.5s
PFO   Pinyon Flats O   77.90 339  LR      LR      18 13 33.8
      comp=Z,74nm,18.3s,baz=168,slow=30
PFO   Pinyon Flats O   77.90 339  P       P       17 46 36.1  +0.8
PFO                               IAmb    IAmb    17 46 40.1
      comp=Z,17nm,1.5s
PFO   Pinyon Flats O   77.90 339  P       P       17 46 38.1  +2.7
      baz=161
IRM   Iron Mountain    78.06 340  P       P       17 46 38.2  +2.0
      baz=162
BELC  Belle Mtn. Jos   78.14 339  P       P       17 46 39.3  +2.6
      baz=161
WUAZ  Wupatki          78.45 343  P       P       17 46 38.6  +0.1
W13A  Hualapai Mount   78.64 341  P       P       17 46 40.5  +0.9
S51A  Beattyville      78.64   6  P       P       17 46 40.3  +1.0
      baz=186
USIN  University of    78.72   3  P       P       17 46 40.1  +0.5
CCM   Cathedral Cave   78.75 360  P       P       17 46 40.2  +0.4
CCM                               IAmb    IAmb    17 46 41.4
      comp=Z,13nm,0.9s
CCM   Cathedral Cave   78.75 360  P       P       17 46 40.8  +1.0
      baz=180
T25A  Trinidad         78.78 349  P       P       17 46 41.2  +0.9
T25A                              IAmb    IAmb    17 46 50.4
      comp=Z,31nm,1.9s
GMRC  Granite Mounta   78.79 340  P       P       17 46 42.9  +2.6
      baz=161
MWC   Mount Wilson     78.92 338  P       P       17 46 40.7  -0.4
MWC                               IAmb    IAmb    17 49 14.2
      comp=Z,26nm,1.6s
HEC   Hector,Ludlow    79.01 339  P       P       17 46 43.9  +2.4
      baz=161
WCI   Wyandotte Cave   79.05   4  P       P       17 46 41.0  -0.4
WCI                               IAmb    IAmb    17 46 48.9
      comp=Z,52nm,1.8s
WCI   Wyandotte Cave   79.05   4  P       P       17 46 41.9  +0.5
      baz=184
R50A  Paris            79.22   5  P       P       17 46 43.3  +0.9
      baz=185
OLIL  Olney            79.48   2  P       P       17 46 44.1  +0.3
OLIL                              IAmb    IAmb    17 49 00.5
      comp=Z,18nm,1.0s
MVCO  Mesa Verde       79.52 346  P       P       17 46 44.5  +0.1
MVCO                              IAmb    IAmb    17 46 59.4
      comp=Z,32nm,1.8s
U15A  North Rim        79.53 343  P       P       17 46 45.8  +1.3
SDCO  Great Sand Dun   79.54 348  P       P       17 46 45.0  +0.5
GSC   Goldstone, Bar   79.58 339  P       P       17 46 45.4  +0.8
GSC                               IAmb    IAmb    17 46 54.8
      comp=Z,25nm,1.9s
GSC   Goldstone, Bar   79.58 339  P       P       17 46 46.8  +2.2
      baz=160
R55A  Marlinton        79.62   9  P       P       17 46 44.6  -0.1
S22A  4UR Ranch, Cre   79.75 347  P       P       17 46 47.9  +2.2
      baz=168
CBKS  Cedar Bluff      79.90 353  P       P       17 46 46.8  +0.7
CBKS                              IAmb    IAmb    17 47 00.7
      comp=Z,38nm,1.6s
KNB   Kanab            80.22 343  P       P       17 46 47.3  -0.8
SHPR  Sheep Range      80.29 341  P       P       17 46 49.2  +0.7
SHPR                              IAmb    IAmb    17 47 11.2
      comp=Z,26nm,1.9s
LCMT  Little Creek M   80.31 342  P       P       17 46 49.9  +1.4
P48A  Milroy           80.32   4  P       P       17 46 51.1  +2.7
      baz=184
ISA   Isabella, Lake   80.39 338  P       P       17 46 50.7  +1.8
ISA   Isabella, Lake   80.39 338  P       P       17 46 51.3  +2.4
      baz=159
PV05  Paradox Valley   80.47 346  P       P       17 46 50.6  +1.1
PV13  Radium Mtn., P   80.50 346  P       P       17 46 49.6   0.0
PV13                              IAmb    IAmb    17 46 58.7
      comp=Z,28nm,1.7s
PKCU  Pink Cliffs      80.51 343  P       P       17 46 50.9  +1.0
PV02  Paradox Valley   80.53 346  P       P       17 46 50.7  +0.9
PV03  Paradox Valley   80.59 346  P       P       17 46 51.0  +0.8
PV18  Skein Mesa, Pa   80.60 346  P       P       17 46 50.1  -0.1
PV15  Paradox Valley   80.61 346  P       P       17 46 51.0  +0.7
PV15                              IAmb    IAmb    17 47 00.6
      comp=Z,34nm,1.7s
PV17  East Wray Mesa   80.64 346  P       P       17 46 51.9  +1.5
PV17                              IAmb    IAmb    17 46 59.4
      comp=Z,29nm,1.7s
PV11  David Mesa, Pa   80.64 346  P       P       17 46 49.6  -0.8
PV12  Saucer Basin,    80.65 346  P       P       17 46 50.9  +0.4
PV12                              IAmb    IAmb    17 47 02.9
      comp=Z,31nm,1.5s
PV16  Nyswonger Mesa   80.66 346  P       P       17 46 51.1  +0.6
PV16                              IAmb    IAmb    17 47 00.3
      comp=Z,19nm,1.5s
PV19  Morning Glory    80.67 346  P       P       17 46 51.0  +0.4
PV19                              IAmb    IAmb    17 46 59.5
      comp=Z,45nm,2.0s
Q24A  Divide           80.68 349  P       P       17 46 52.4  +1.7
PV20  West Nyswonger   80.70 346  P       P       17 46 49.5  -1.2
PV20                              IAmb    IAmb    17 47 03.8
      comp=Z,24nm,1.6s
PV07  Paradox Valley   80.73 346  P       P       17 46 51.9  +1.0
PV04  Paradox Valley   80.74 346  P       P       17 46 51.1  +0.2
PV04                              IAmb    IAmb    17 46 56.0
      comp=Z,20nm,1.4s
PV14  Lion Creek, Pa   80.74 346  P       P       17 46 52.0  +1.1
PV14                              IAmb    IAmb    17 47 11.6
      comp=Z,25nm,1.5s
PV10  Paradox Valley   80.75 346  P       P       17 46 49.9  -1.1
PV23  Carpenter Ridg   80.82 346  P       P       17 46 52.7  +1.3
SZCU  Shurtz Canyon    80.83 342  P       P       17 46 52.6  +1.2
CCUT  Cedar City       80.85 342  P       P       17 46 53.3  +1.7
PV22  Blue Mesa, Par   80.86 346  P       P       17 46 52.4  +0.9
PV09  Paradox Valley   80.88 346  P       P       17 46 51.1  -0.6
TPNV  Topopah Spring   80.99 340  P       P       17 46 54.3  +2.0
TPNV  Topopah Spring   80.99 340  P       P       17 46 54.9  +2.7
      baz=161
MTPU  Mount Pierson    81.06 343  P       P       17 46 54.7  +1.9
O49A  Covington        81.12   5  P       P       17 46 53.7  +1.1
      baz=185
SMCO  Snowmass         81.17 348  P       P       17 46 54.7  +1.3
SMCO                              IAmb    IAmb    17 47 07.6
      comp=Z,18nm,1.4s
O51A  Pataskala        81.21   7  P       P       17 46 54.3  +1.2
      baz=186
MSU   Marysvale        81.51 343  P       P       17 46 55.5  +0.5
TCRU  Three Creeks R   81.66 343  P       P       17 46 56.7  +0.9
Q16A  Castle Valley    81.69 344  P       P       17 46 57.6  +1.7
SRU   San Rafael Swe   81.74 345  P       P       17 46 57.1  +0.9
PSUT  Pine Spring      81.90 342  P       P       17 46 55.4  -1.6
TMUT  Trail Mountain   82.06 344  P       P       17 46 59.4  +1.4
P17A  Butcher Ranch,   82.14 345  P       P       17 46 58.1  -0.1
R11A  Troy Canyon, C   82.14 341  P       P       17 47 00.3  +2.0
R11A                              IAmb    IAmb    17 47 12.5
      comp=Z,26nm,1.9s
R11A  Troy Canyon, C   82.14 341  P       P       17 47 00.8  +2.5
      baz=162
OMMB  Old Mammoth Mi   82.36 338  P       P       17 46 59.8  +0.2
N23A  Red Feather La   82.69 349  P       P       17 47 02.0  +0.8
N23A                              IAmb    IAmb    17 47 06.0
      comp=Z,34nm,2.0s
L40A  Anamosa          82.75 360  P       P       17 47 01.4  +0.3
MPU   Maple Canyon     82.84 344  P       P       17 47 03.7  +1.8
NLU   North Lily Min   82.87 344  P       P       17 47 02.7  +0.6
NV11  Mina Array Sit   82.89 339  P       P       17 47 03.7  +1.5
NV11                              IAmb    IAmb    17 47 06.7
      comp=Z,21nm,1.6s
NVAR  Mina Array Bea   82.93 339  P       P       17 47 04.4  +1.9
      comp=Z,5.2nm,0.9s,baz=172,slow=6.4,SNR=24
NVAR                              LR      LR      18 15 41.1
      comp=Z,68nm,21.8s,baz=300,slow=30
NVAR  Mina Array Bea   82.93 339  P       P       17 47 03.5  +1.1
RDMU  Red Mountain     82.97 346  P       P       17 47 03.0  +0.4
CMB   Columbia Colle   83.15 337  P       P       17 47 04.7  +1.3
CMB                               IAmb    IAmb    17 47 13.1
      comp=Z,19nm,1.6s
RYN   Ryan             83.17 339  P       P       17 47 05.3  +1.7
RYN                               IAmb    IAmb    17 47 09.0
      comp=Z,18nm,1.5s
DUG   Dugway, Tooele   83.26 343  P       P       17 47 05.2  +1.2
DUG                               IAmb    IAmb    17 47 13.2
      comp=Z,11nm,1.1s
DUG   Dugway, Tooele   83.26 343  P       P       17 47 06.5  +2.5
      baz=164
JLU   Jordanelle       83.37 345  P       P       17 47 05.9  +1.2
KVN   Kaiserville      83.45 339  P       P       17 47 06.6  +1.5
SACV  Santiago Islan   83.60  64  P       P       17 47 04.4  -1.8
JFWS  Jewell Farm      83.61   1  P       P       17 47 06.0  +0.5
RWWY  Rawlins          83.66 348  P       P       17 47 06.2  +0.1
YERR  Yerington        83.70 338  P       P       17 47 06.4   0.0
YERR                              IAmb    IAmb    17 47 16.6
      comp=Z,18nm,1.4s
TCUT  Toone Canyon     83.85 345  P       P       17 47 06.9  -0.3
PNTR  Pine Nut         83.90 338  P       P       17 47 08.7  +1.2
BGU   Big Grassy Mou   84.00 343  P       P       17 47 08.9  +1.0
RUBR  Rubicon Trail    84.03 338  P       P       17 47 09.0  +0.9
VCNR  Virginia City    84.11 338  P       P       17 47 09.4  +0.9
VCNR                              IAmb    IAmb    17 49 08.6
      comp=Z,8.4nm,0.6s
AFDM  Forest Hills D   84.17 337  P       P       17 47 09.7  +1.2
AFDM                              IAmb    IAmb    17 47 18.2
      comp=Z,19nm,1.6s
SPUT  South Promonto   84.25 344  P       P       17 47 09.6  +0.5
ELK   Elko             84.33 342  LR      LR      18 17 13.1
      comp=Z,75nm,19.9s,baz=174,slow=30
ELK   Elko             84.33 342  P       P       17 47 10.4  +0.8
HWUT  Hardware Ranch   84.36 345  P       P       17 47 10.6  +0.9
HWUT                              IAmb    IAmb    17 47 13.5
      comp=Z,30nm,1.9s
PAHR  Pah Rah Range    84.42 338  P       P       17 47 11.3  +1.3
PAHR                              IAmb    IAmb    17 47 19.0
      comp=Z,9.2nm,1.2s
K22A  Casper           84.49 349  P       P       17 47 12.3  +2.0
      baz=168
SDHHI Sand Hill        84.55 301  P       P       17 47 09.8  -1.2
HATHI Halema‘uma‘u T   84.55 301  P       P       17 47 10.2  -0.8
NPH   North Pit        84.56 301  P       P       17 47 11.3  +0.2
OBL   Observatory Le   84.56 301  P       P       17 47 11.6  +0.5
UWB   Uwekahuna B      84.56 301  P       P       17 47 10.2  -1.0
WRMHI West Rim         84.56 301  P       P       17 47 10.7  -0.5
ECSD  EROS Data Cent   84.57 356  P       P       17 47 10.7  +0.2
ECSD  EROS Data Cent   84.57 356  P       P       17 47 11.4  +1.0
      baz=176
K58A  Earlville        84.62  11  P       P       17 47 11.6  +0.9
      baz=192
DZM   Mont Dzumac      84.63 245 eLR      LR      18 13 57.2
      comp=Z,541nm,27.0s
BEKR  Beckworth        84.84 338  P       P       17 47 11.7  -0.4
ORV   Oroville         84.88 337  P       P       17 47 12.4  +0.2
ORV                               IAmb    IAmb    17 47 17.5
      comp=Z,13nm,1.4s
BW06  Boulder Array    85.10 346  P       P       17 47 13.9  +0.4
BW06                              IAmb    IAmb    17 47 17.2
      comp=Z,16nm,1.4s
BW06  Boulder Array    85.10 346  P       P       17 47 15.1  +1.6
      baz=166
PD31  Pinedale Array   85.10 346  P       P       17 47 14.3  +0.9
PD31                              IAmb    IAmb    17 47 17.3
      comp=Z,16nm,1.5s
PDAR  Pinedale Array   85.10 346  P       P       17 47 14.8  +1.3
      comp=Z,2.8nm,0.9s,baz=164,slow=6.0,SNR=20
PDAR                              LR      LR      18 19 37.3
      comp=Z,93nm,19.1s,baz=170,slow=32
PDAR  Pinedale Array   85.10 346  P       P       17 47 14.4  +1.0
AHID  Auburn Hatcher   85.38 345  P       P       17 47 13.6  -1.2
AHID                              IAmb    IAmb    17 47 17.8
      comp=Z,28nm,1.8s
RSSD  Black Hills      85.60 351  P       P       17 47 16.4  +0.5
RSSD  Black Hills      85.60 351  P       P       17 47 16.5  +0.5
      baz=170
REDW  Red Top Meadow   85.91 346  P       P       17 47 17.9  +0.5
REDW                              IAmb    IAmb    17 47 43.5
      comp=Z,13nm,1.2s
SNOW  Snow King Moun   85.99 346  P       P       17 47 18.7  +0.8
SNOW                              IAmb    IAmb    17 47 27.2
      comp=Z,11nm,1.2s
NCB   Newcomb          86.02  12  P       P       17 47 19.3  +1.6
TPAW  Teton Pass       86.06 346  P       P       17 47 18.4  +0.1
TPAW                              IAmb    IAmb    17 47 35.8
      comp=Z,14nm,1.2s
SADO  Sadowa           86.13   9  LR      LR      18 21 22.4
      comp=Z,82nm,18.3s,baz=226,slow=32
WDC   Whiskeytown Da   86.14 337  P       P       17 47 18.7  +0.4
WDC                               IAmb    IAmb    17 47 44.4
      comp=Z,19nm,1.6s
FXWY  Fox Creek        86.21 346  P       P       17 47 19.8  +0.9
FLWY  Flagg Ranch      86.58 346  P       P       17 47 22.4  +1.7
MOD   Modoc Plateau    86.72 339  P       P       17 47 22.2  +0.9
MOD                               IAmb    IAmb    17 47 30.0
      comp=Z,14nm,1.6s
WVOR  Wild Horse Val   86.77 340  P       P       17 47 22.5  +1.0
YPP   Pitchstone Pla   86.78 346  P       P       17 47 22.1  +0.3
H17A  Grant Village    86.86 346  P       P       17 47 23.1  +1.0
H17A                              IAmb    IAmb    17 47 34.3
      comp=Z,16nm,1.7s
LKWY  Lake             86.99 346  P       P       17 47 24.1  +1.3
LKWY                              IAmb    IAmb    17 47 41.5
      comp=Z,24nm,1.9s
YNR   Norris Junctio   87.19 346  P       P       17 47 23.8  +0.1
YMR   Madison River    87.20 346  P       P       17 47 25.3  +1.6
YBH   Yreka Blue Hor   87.25 337  LR      LR      18 18 01.8
      comp=Z,68nm,18.4s,baz=170,slow=30
YHH   Holmes Hill      87.29 346  P       P       17 47 25.6  +1.3
YHL   Hebgen Lake      87.41 346  P       P       17 47 26.1  +1.2
QLMT  Earthquake Lak   87.44 346  P       P       17 47 26.6  +1.7
J08A  Circle Bar Ran   87.59 340  P       P       17 47 26.2  +0.7
J08A                              IAmb    IAmb    17 47 29.9
      comp=Z,11nm,1.2s
MCMT  McKenzie Canyo   87.71 345  P       P       17 47 27.4  +1.2
DLMT  Dillon           88.17 345  P       P       17 47 29.1  +0.7
DLMT                              IAmb    IAmb    17 47 49.5
      comp=Z,15nm,1.6s
LAO   LASA Array       88.41 350  P       P       17 47 30.4  +1.1
LAO                               IAmb    IAmb    17 47 32.6
      comp=Z,8.9nm,1.1s
D53A  Lac Vacive, Po   88.58   9  P       P       17 47 30.1  +0.1
D53A  Lac Vacive, Po   88.58   9  P       P       17 47 30.1  +0.1
      baz=190
D55A  Sainte-Anne-du   88.81  11  P       P       17 47 31.3  +0.2
      baz=192
G08A  Pilot Rock       89.52 341  P       P       17 47 36.0  +1.4
G08A                              IAmb    IAmb    17 47 39.1
      comp=Z,16nm,1.4s
PQI   Presque Isle     89.76  16  P       P       17 47 34.5  -0.9
MSO   Missoula         89.85 345  P       P       17 47 31.2  -4.9
MSO                               IAmb    IAmb    17 48 26.4
      comp=Z,17nm,1.8s
DGMT  Dagmar           89.91 351  P       P       17 47 34.3  -1.9
E08A  Dider Farm, El   90.67 341  P       P       17 47 39.8  +0.1
E08A                              IAmb    IAmb    17 47 42.5
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	comp=Z,8.6nm,1.0s						
HAWA	**Hanford**	**90.69**	**341**	P	**P**	**17 47 40.2**	**+0.3**
HAWA				IAmb	IAmb	17 47 46.3	
	comp=Z,22nm,1.6s						
E07A	**Sunnyside**	**90.93**	**341**	P	**P**	**17 47 40.8**	**-0.2**
D08A	**Wollman Farm,**	**91.17**	**341**	P	**P**	**17 47 41.2**	**-0.9**
D08A				IAmb	IAmb	17 47 44.7	
	comp=Z,9.5nm,1.1s						
DBIC	**Dimbokro**	**91.53**	**83**	LR	LR	18 23 02.5	
	comp=Z,244nm,21.9s,baz=158,slow=32						
BBB	**Bella Bella**	**98.27**	**338**	LR	LR	18 25 06.9	
	comp=Z,54nm,18.0s,baz=113,slow=31						
GERES	**GERESS Array B**	**128.26**	**54**	PKP	**PKPdf**	**17 53 42.8**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=143,slow=0.7,SNR=5.4						
GERES	**GERESS Array B**	**128.26**	**54**		**PKPdf**	**17 53 41.9**	**-1.7**
VYHS	**Vyhne**	**131.33**	**56**	*e*PKP	**PKiKP**	**17 53 50.4**	**+0.1**
AKASG	**Malin Array Be**	**138.42**	**56**	PKP	**PKPdf**	**17 54 01.3**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=263,slow=2.1,SNR=4.7						
AKASG	**Malin Array Be**	**138.42**	**56**		**PKPdf**	**17 54 01.5**	**-1.0**
BRTR	**Keskin Array B**	**138.51**	**73**	PKP	**PKiKP**	**17 54 04.8**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=165,slow=3.0,SNR=6.2						
BRTR	**Keskin Array B**	**138.51**	**73**		**PKPdf**	**17 54 00.8**	**-2.5**
OBN	**Obninsk**	**143.26**	**49**	PKhKP	PKPab	17 54 06.9	0.0
	comp=Z,2.9nm,0.4s,baz=58,slow=9.0,SNR=3.5						
TIXI	**Tiksi**	**143.54**	**340**	PKhKP	PKPab	17 54 06.8	-0.7
	comp=Z,2.9nm,0.8s,baz=306,slow=16,SNR=16						
TIXI	**Tiksi**	**143.54**	**340**		PKPab	17 54 06.6	-0.9
KLMR	**Klimovskoe**	**144.27**	**40**	*e*PKPdf	**PKPab**	**17 54 08.1**	**-2.5**
KLMR				AMP		17 54 19.2	
	comp=Z,87nm,1.6s						
KIV	**Kislovodsk**	**146.17**	**69**		**PKPdf**	**17 54 16.1**	**-0.5**
AKH	**Akhalkalaki**	**146.18**	**74**		**PKPdf**	**17 54 14.7**	**-2.1**
KBZ	**Khabaz**	**146.28**	**70**	PKPbc	**PKPbc**	**17 54 18.0**	**+0.2**
	comp=Z,5.1nm,0.8s,baz=340,slow=4.5,SNR=11						
YAK	**Yakutsk**	**147.89**	**325**	PKPbc	**PKPbc**	**17 54 20.9**	**-0.9**
	comp=Z,8.7nm,0.7s,baz=290,slow=0.2,SNR=11						
YAK	**Yakutsk**	**147.89**	**325**		**PKPbc**	**17 54 20.4**	**-1.4**
USRK	**Ussuriysk Ar.**	**148.39**	**290**	PKPbc	**PKPbc**	**17 54 22.9**	**-0.8**
	comp=Z,5.9nm,0.7s,baz=144,slow=41,SNR=11						
KSRS	**Korea Array**	**149.72**	**276**	PKPbc	**PKPbc**	**17 54 27.1**	**-0.2**
	comp=Z,3.3nm,1.0s,baz=116,slow=2.3,SNR=9.7						
KSAR	**Wonju Array Be**	**149.75**	**276**		**PKPbc**	**17 54 26.7**	**-0.6**
MDJ	**Mudanjiang**	**150.16**	**291**		**PKPbc**	**17 54 26.8**	**-1.3**
CMAR	**Chiang Mai Arr**	**155.86**	**204**	PKPbc	PKPbc	17 54 43.5	
	comp=Z,0.7nm,1.0s,baz=241,slow=1.9,SNR=4.7						
GEYT	**Alibeck**	**156.12**	**87**	PKPab	**PKPab**	**17 54 59.0**	**-0.7**
	comp=Z,2.7nm,0.7s,baz=266,slow=7.3,SNR=6.6						
GEYT	**Alibeck**	**156.12**	**87**	PKPdf	**PKPdf**	**17 54 30.8**	**-1.1**
GEYT					**PKPab**	**17 54 58.9**	**-0.7**
ABKAR	**Akbulak array**	**158.13**	**58**		**PKPdf**	**17 54 34.1**	**+0.1**
ABKAR				PKPab	**PKPab**	**17 55 07.8**	**-0.1**
ABKAR	**Akbulak array**	**158.13**	**58**		**PKPdf**	**17 54 33.5**	**-0.6**
ABKAR				PKPab	**PKPab**	**17 55 07.8**	**-0.1**
CD2	**Chengdu**	**164.27**	**235**	PKP	**PKPdf**	**17 54 40.5**	**-0.7**
SONM	**Songino Array**	**165.79**	**304**	PKPab	**PKPab**	**17 55 41.9**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=134,slow=4.3,SNR=4.4						
SONM	**Songino Array**	**165.79**	**304**		**PKPab**	**17 55 40.9**	**-0.8**
LZH	**Lanzhou**	**167.28**	**252**	*e*PKP	**PKPdf**	**17 54 43.3**	**-0.4**
LZH				pPKP	sPKPdf	17 54 47.8	+1.1
LZH				sPKP		17 54 49.5	
LZH				PKP	**pPKPab**	**17 55 50.4**	**-0.4**
KSH	**Kashi**	**170.02**	**95**	PKP	**PKPdf**	**17 54 47.1**	**+1.8**
KSH				PKS	**PKSdf**	**17 58 17.9**	**+0.1**
KSH				PP	**PP**	**17 59 52.8**	**+1.5**
KSH	**Kashi**	**170.02**	**95**	SKKS	**SKKSac**	**18 06 38.0**	**+0.1**

WEL 14 17:37:07.6±0.8,35°S±5°×18°0W±1°0,h33^{km},M4.1/11, ML4.4/11,MLv4.1/11,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**3.44**	**208**	P	Pn	17 38 00.1	+1.3
WMGZ				S	Sn	17 38 39.0	+0.6
PKGZ	**Pakihiroa**	**3.63**	**211**	P	Pn	17 38 02.3	+0.7
PKGZ				S	Sn	17 38 44.3	+1.0
HAZ	**Te Kaha**	**3.66**	**215**	P	Pn	17 38 02.8	+1.0
HAZ				S	Sn	17 38 45.7	+1.9
PUZ	**Puketiti**	**3.72**	**208**	P	Pn	17 38 03.7	+0.9
PUZ				S	Sn	17 38 46.3	+1.0
RUGZ	**Raukumara Rang**	**3.87**	**214**	P	Pn	17 38 05.3	+0.3
TWGZ	**Tauwhareparae**	**3.92**	**210**	P	Pn	17 38 05.7	+0.2
TWGZ				S	Sn	17 38 51.4	+1.0
TKGZ	**Te Karaka**	**4.20**	**209**	P	Pn	17 38 08.8	-0.5
MWZ	**Matawai**	**4.24**	**213**	P	Pn	17 38 09.5	-0.4
MWZ				S	Sn	17 38 58.5	+0.2
OPRZ	**Ohinepanea**	**4.38**	**225**	P	Pn	17 38 11.9	+0.1
URZ	**Urewera**	**4.38**	**217**	P	Pn	17 38 10.8	-0.9
URZ				S	Sn	17 39 01.1	-0.5
RAGZ	**Rawiri**	**4.43**	**213**	P	Pn	17 38 12.2	-0.4
RIGZ	**Rimuhau**	**4.46**	**208**	P	Pn	17 38 13.3	+0.3
SNGZ	**Shannon Statio**	**4.70**	**211**	P	Pn	17 38 16.4	+0.2
MUGZ	**Murupara**	**4.72**	**218**	P	Pn	17 38 12.9	-3.5
OUZ	**Omahuta**	**5.64**	**264**	P	Pn	17 38 30.1	+0.9

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*IDC **14** 17:43:25.1±1.6,41°.50S×91°.19W,h0^{km},mb3.9/4, mb1 4.2/4,mb1mx3.9/29,mbtmp3.9/4,MS4.1/7,Ms1 4.1/7, ms1mx3.7/23,Error ellipse: s-maj=61.5km s-min=35.5km az=162.0*

*NEIC **14** 17:43:28.0±1.2,41°.2S±0°.1×91°.2W±0°.2,h15^{km}±4^{km}, mb4.7/7,Error ellipse: s-maj=28.1km s-min=12.8km az=128.0*

*GCMT **14** 17:43:29.0±0.3,41°.15S±0°.05×91°.21W±0°.03,h19^{km}±1^{km}, MW4.9/74,Moment Tensor Solution. s21,c25; s74,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.13±.25; M$_{\theta\theta}$0.36±.15; M$_{\phi\phi}$2.78±.16; M$_{r\theta}$-0.38±.45; M$_{\theta\phi}$-0.36±.09; M$_{\phi r}$-0.40±.31; Best double couple: M$_0$3.02800×10^{16} NP1:ϕ_s165.00000°,δ42.00000°,λ-100.00000°. NP2: ϕ_s359.00000°,δ49.00000°,λ-81.00000°. Principal axes: T 2.8520, Plg3.0000°, Azm82.0000°; N 0.3590, Plg7.0000°, Azm173.0000°; P -3.2030, Plg82.0000°, Azm327.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 17:43:27.3±0.8,41°.2S±0°.1×91°.3W±0°.2,h10^{km},n26, σ1^{s}09/17,mb4.4/7,MS4.1/8,Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**15.66**	**95**	LR	LR	17 51 44.5	
	comp=Z,2μm,19.5s,baz=318,slow=32						
LVC	**Limon Verde**	**26.39**	**52**	P	**P**	**17 49 05.3**	**+1.0**
	2.6nm,0.6s,baz=233,slow=8.6,SNR=2.7						
LVC	**Limon Verde**	**26.39**	**52**	P	**P**	**17 49 04.0**	**-0.3**
LVC				IAmb	IAmb	17 49 08.8	
	comp=Z,28nm,1.8s						
CPUP	**Villa Florida**	**31.64**	**73**	LR	LR	18 01 08.9	
	comp=Z,483nm,20.0s,baz=222,slow=34						
LPAZ	**La Paz**	**31.85**	**46**	P	**P**	**17 49 53.9**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=32,slow=3.1,SNR=4.5						
LPAZ				LR	LR	17 59 55.4	
	comp=Z,274nm,18.6s,baz=184,slow=31						
LPAZ	**La Paz**	**31.85**	**46**	P	**P**	**17 49 53.6**	**+0.4**
LPAZ				IAmb	IAmb	17 50 09.0	
	comp=Z,9.2nm,1.2s						
SAML	**Samuel**	**40.60**	**46**	P	**P**	**17 51 06.8**	**-0.5**
QSPA	**South Pole Qui**	**49.05**	**180**	P	**P**	**17 52 15.8**	**+1.6**
SNAA	**Sanae**	**51.03**	**156**	P	**P**	**17 52 29.9**	**+0.8**
SNAA				IAmb	IAmb	17 52 37.3	
	comp=Z,14nm,1.4s						
TBI	**Tubuai**	**51.38**	**271**	*e*LR	LR	18 07 17.3	
	comp=Z,811nm,28.5s,baz=123						
SBA	**Scott Base**	**52.56**	**195**	P	**P**	**17 52 40.1**	**-0.2**
SBA				IAmb	IAmb	17 52 59.2	
	comp=Z,37nm,1.8s						
VNDA	**Vanda**	**53.66**	**195**	LR	LR	18 11 20.0	
	comp=Z,89nm,18.4s,baz=104,slow=31						
VNDA	**Vanda**	**53.66**	**195**	P	**P**	**17 52 45.9**	**-2.5**
VNDA				IAmb	IAmb	17 53 51.9	
	comp=Z,16nm,1.9s						
PPT2	**Papeete2**	**54.89**	**277**	*e*LR	LR	18 08 51.1	
	comp=Z,586nm,27.2s						
PPT	**Papeete**	**54.90**	**277**	LR	LR	18 11 05.8	
	comp=Z,105nm,21.5s,baz=160,slow=30						
CMIG	**Matias Romero**	**58.08**	**356**	LR	LR	18 12 23.0	
	comp=Z,72nm,19.8s,baz=190,slow=30						
NVAR	**Mina Array Bea**	**83.00**	**339**	P	**P**	**17 55 54.0**	**+1.4**
	comp=Z,0.7nm,0.7s,baz=170,slow=7.1,SNR=4.9						
NVAR	**Mina Array Bea**	**83.00**	**339**	P	**P**	**17 55 53.4**	**+0.8**
DZM	**Mont Dzumac**	**84.49**	**246**	*e*LR	LR	18 22 32.9	
	comp=Z,264nm,26.1s						
DZM	**Mont Dzumac**	**84.49**	**246**	LR	LR	18 29 33.7	
	comp=Z,119nm,18.1s,baz=221,slow=33						
PDAR	**Pinedale Array**	**85.19**	**347**	P	**P**	**17 56 04.1**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=145,slow=6.5,SNR=3.9						
PDAR	**Pinedale Array**	**85.19**	**347**	P	**P**	**17 56 03.7**	**0.0**
KBZ	**Khabaz**	**146.41**	**70**	PKPbc	**PKPdf**	**18 03 06.5**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=268,slow=9.2,SNR=4.0						
KSRS	**Korea Array**	**149.63**	**276**	PKPbc	**PKPbc**	**18 03 16.6**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=112,slow=3.4,SNR=5.4						
GEYT	**Alibeck**	**156.23**	**88**	PKPab	**PKPab**	**18 03 48.7**	**-1.2**
	comp=Z,1.5nm,0.5s,baz=278,slow=10,SNR=3.8						
ABKAR	**Akbulak array**	**158.27**	**58**		**PKPdf**	**18 03 23.1**	**-0.9**

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*IDC **14** 17:49:20.5±0.4,0°.02S×67°.10E,h0^{km},mb4.4/31, mb1 4.5/32,mb1mx4.4/51,mbtmp4.4/32,ML5.2/1,MS4.3/25, Ms1 4.3/25,ms1mx4.2/39,Error ellipse: s-maj=13.8km s-min=11.7km az=170.0*

*MOS **14** 17:49:20.1±1.0,0°.06N×67°.10E,h10^{km},mb4.9/20,Error ellipse: s-maj=6.3km s-min=4.7km az=101.5*

*BJI **14** 17:49:21.0±0.0,0°.00N×67°.20E,h10^{km},mB5.2/43, mb4.6/48,Ms4.9/33,Ms7 4.6/34*

*NEIC **14** 17:49:22.1±2.2,0°.03S±0°.08×67°.21E±0°.07,h13^{km}±3^{km}, mb5.0/149,Error ellipse: s-maj=11.0km s-min=9.6km az=162.0*

*GCMT **14** 17:49:24.0±0.2,0°.07S±0°.01×67°.12E±0°.01,h12^{km}, MW5.0/125,Moment Tensor Solution. s70,c92; s125,c203; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.52±.07; M$_{\theta\theta}$2.92±.07; M$_{\phi\phi}$1.60±.07; M$_{r\theta}$1.87±.24; M$_{\theta\phi}$-1.77±.06; M$_{\phi r}$-0.33±.24; Best double couple: M$_0$4.72500×10^{16} NP1:ϕ_s132.00000°,δ35.00000°, λ-76.00000°. NP2:ϕ_s296.00000°,δ56.00000°, λ-99.00000°. Principal axes: T 4.4850, Plg11.0000°, Azm33.0000°; N 0.4800, Plg8.0000°, Azm301.0000°; P -4.9650, Plg76.0000°, Azm177.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 17:49:21.7±0.3,0°.01S±0°.05×67°.18E±0°.05,h10^{km},n489, σ1^{s}21/492,mb4.9/154,MS4.4/36,25C-6D,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAAM	**Kaadhehdhoo**	**5.83**	**85**		**Pn**	**17 50 45.1**	**-3.3**
DGAR	**Diego Garcia**	**9.04**	**145**	P	**Pn**	**17 51 34.5**	**+2.0**
DGAR	**Diego Garcia**	**9.04**	**145**	Pn	**Pn**	**17 51 34.5**	**+2.0**
H08S3	**Diego Garcia H**	**9.24**	**145**	T	T	18 01 01.9	
	baz=300,slow=80,SNR=7.9						
H08S1	**Diego Carcia H**	**9.24**	**145**	T	T	18 01 03.0	
	baz=300,slow=80,SNR=4.6						
H08S2	**Diego Garcia H**	**9.26**	**145**	T	T	18 01 10.4	
	baz=300,slow=80,SNR=4.9						
MNCI	**Minicoy**	**10.10**	**35**		**Pn**	**17 51 48.7**	**+1.7**
MSEY	**Mahe Island**	**12.57**	**248**	P	**Pn**	**17 52 21.1**	**+0.2**
MSEY	**Mahe Island**	**12.57**	**248**		**Pn**	**17 52 21.1**	**+0.2**
PALK	**Pallekele**	**15.30**	**62**	Pn	**Pn**	**17 52 58.7**	**+0.6**
	9.1nm,0.3s,baz=235,slow=8.6,SNR=44						
PALK				LR	LR	17 57 38.2	
	comp=Z,3μm,19.8s,baz=231,slow=32						
SOCY	**Socotra**	**17.84**	**313**	P	**P**	**17 53 36.2**	**+5.2**
POO	**Poona**	**19.55**	**19**	*e*P	**Pn**	**17 53 51.5**	**+0.4**
HYB	**Hyderabad**	**20.62**	**32**	*i* P	Pn	17 54 05.0	+1.3
WSAR	**Wadi Sarin**	**24.55**	**341**	LR	LR	18 02 29.4	
	comp=Z,692nm,19.9s,baz=172,slow=32						
ATD	**Arta Tunnel**	**26.75**	**296**	LR	LR	18 03 54.6	
	comp=Z,182nm,18.2s,baz=102,slow=33						
DAMY	**Dhamar**	**26.79**	**304**	P	**P**	**17 55 03.9**	**+1.3**
DAMY				IAmb	IAmb	17 55 26.2	
	comp=Z,39nm,1.3s						
OPO	**Ambohidratompo**	**26.95**	**226**	LR	LR	18 02 58.6	
	comp=Z,705nm,18.2s,baz=192,slow=30						
UOSS	**Minazif**	**26.98**	**338**	P	**P**	**17 55 03.7**	**-0.1**
UOSS				IAmb	IAmb	17 55 57.4	
	comp=Z,103nm,1.7s						
ABPO	**Ambohimpanom**	**27.21**	**225**	P	**P**	**17 55 06.9**	**+0.7**
ABPO				pmax	pmax		
	comp=Z,21nm,1.5s						
ABPO	**Ambohimpanom**	**27.21**	**225**	P	**P**	**17 55 06.9**	**+0.7**
FURI	**Furi**	**29.73**	**288**	P	**P**	**17 55 30.0**	**+1.1**
KMBO	**Kilima Mbogo**	**29.95**	**268**	P	**P**	**17 55 31.5**	**+0.8**
	comp=Z,2.8nm,0.8s,baz=58,slow=9.2,SNR=6.1						
KMBO				LR	LR	18 06 49.0	
	comp=Z,596nm,18.3s,baz=97,slow=35						
KMBO	**Kilima Mbogo**	**29.95**	**268**	P	**P**	**17 55 31.1**	**+0.3**
RAYN	**Ar Rayn**	**31.47**	**319**	P	**P**	**17 55 44.6**	**+0.8**
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
RAYN	**Ar Rayn**	**31.47**	**319**	P	**P**	**17 55 44.6**	**+0.8**
COCO	**West Island**	**31.82**	**113**	P	**P**	**17 55 46.8**	**-0.2**
COCO				pmax	pmax		
	comp=Z,138nm,1.1s						
COCO	**West Island**	**31.82**	**113**	P	**P**	**17 55 46.8**	**-0.2**
RPSI	**Rantau Prapat**	**31.84**	**85**	P	**P**	**17 55 47.1**	**-0.2**
PSI	**Prapat**	**31.85**	**85**	P	**P**	**17 55 47.1**	**-0.3**
PSI				pmax	pmax		
	comp=Z,15nm,1.2s						
KULM	**Kulim**	**33.83**	**81**	P	**P**	**17 56 04.5**	**-0.1**
KULM				IAmb	IAmb	17 56 13.1	
	comp=Z,29nm,1.3s						
BKNI	**Bangkinang**	**33.86**	**89**	P	**P**	**17 56 04.8**	**-0.1**
NIL	**Nilore**	**33.96**	**9**	P	**P**	**17 56 04.8**	**-0.7**
NIL				pmax	pmax		
	comp=Z,40nm,1.8s						
NIL	**Nilore**	**33.96**	**9**	P	**P**	**17 56 04.8**	**-0.7**
NIL				IAmb	IAmb	17 56 29.5	
	comp=Z,40nm,1.8s						
IPM	**Ipoh**	**34.10**	**82**	P	**P**	**17 56 06.7**	**-0.3**
IPM				IAmb	IAmb	17 56 16.7	
	comp=Z,18nm,1.2s						
KBL	**Kabul**	**34.41**	**3**	P	**P**	**17 56 09.9**	**+0.3**
KBL				pmax	pmax		
	comp=Z,42nm,2.0s						
KBL	**Kabul**	**34.41**	**3**	P	**P**	**17 56 09.9**	**+0.3**
KBL				IAmb	IAmb	17 56 14.8	
	comp=Z,42nm,2.0s						
HRA	**Herat**	**34.52**	**353**	P	**P**	**17 56 11.9**	**+1.3**
HRA					**PcP**	**17 58 46.1**	**+0.5**
SHL	**Shillong**	**34.86**	**41**	P	**P**	**17 56 15.0**	**+1.4**
SHL				pmax	pmax		
	comp=Z,75nm,1.5s						
SHL	**Shillong**	**34.86**	**41**	P	**P**	**17 56 15.0**	**+1.4**
CM31	**Chiang Mai Arr**	**36.20**	**58**	P	**P**	**17 56 25.9**	**+0.9**
CM31				IAmb	IAmb	17 56 34.5	
	comp=Z,29nm,1.4s						
CMAR	**Chiang Mai Arr**	**36.20**	**58**	P	**P**	**17 56 27.3**	**+2.3**
	comp=Z,3.3nm,1.0s,baz=245,slow=11,SNR=25						
CMAR				PcP	**PcP**	**17 58 51.6**	**+1.0**
	comp=Z,2.0nm,0.9s,baz=240,slow=4.6,SNR=7.8						
CMAR				LR	LR	18 09 51.7	
	comp=Z,521nm,20.7s,baz=245,slow=34						
CMAR	**Chiang Mai Arr**	**36.20**	**58**	P	**P**	**17 56 26.1**	**+1.1**
CMAR						17 58 50.7	
CMAR	**Chiang Mai Arr**	**36.20**	**58**	P	**P**	**17 56 26.1**	**+1.1**
CMAR					**PcP**	**17 58 50.7**	**+0.1**
CHTO	**Chiang Mai**	**36.36**	**57**	P	**P**	**17 56 28.1**	**+1.8**
CHTO				pmax	pmax		
	comp=Z,56nm,1.4s						
CHTO	**Chiang Mai**	**36.36**	**57**	P	**P**	**17 56 28.1**	**+1.8**
CHTO				IAmb	IAmb	17 56 36.5	
	comp=Z,56nm,1.4s						
MBAR	**Mbarara**	**36.45**	**269**	P	**P**	**17 56 27.9**	**+0.5**
MBAR				pmax	pmax		
	comp=Z,15nm,1.2s						
MBAR	**Mbarara**	**36.45**	**269**	P	**P**	**17 56 27.9**	**+0.5**
MYKOM	**Kota Tinggi**	**36.71**	**87**	P	**P**	**17 56 30.7**	**+1.2**
PBKT	**Sadao Pong**	**37.16**	**62**	P	**P**	**17 56 34.5**	**+1.3**
PBKT				IAmb	IAmb	17 56 43.1	
	comp=Z,30nm,1.2s						
LSA	**Lhasa**	**37.35**	**36**	P	**P**	**17 56 35.9**	**+0.7**
LSA				pmax	pmax		
	comp=Z,26nm,1.2s						
LSA	**Lhasa**	**37.35**	**36**	P	**P**	**17 56 35.9**	**+0.7**
LSA				IAmb	IAmb	17 56 45.9	
	comp=Z,26nm,1.2s						
GEYT	**Alibeck**	**38.66**	**348**	P	**P**	**17 56 46.7**	**+1.1**
	comp=Z,1.8nm,0.7s,baz=173,slow=13,SNR=4.0						
GEYT				PcP	**PcP**	**17 58 59.1**	**+1.4**
	comp=Z,0.9nm,0.6s,baz=247,slow=7.4,SNR=3.0						
GEYT				LR	LR	18 12 06.2	
	comp=Z,540nm,19.9s,baz=115,slow=35						
GEYT	**Alibeck**	**38.66**	**348**	P	**P**	**17 56 46.9**	**+1.2**
GEYT					**PcP**	**17 58 58.2**	**+0.5**
GYA0B	**ALIBECK ARRAY**	**38.66**	**348**	P	**P**	**17 56 47.0**	**+1.4**
BTK	**Batken**	**40.01**	**4**	P	**P**	**17 56 57.3**	**+0.4**
BTK				pmax	pmax		
	comp=Z,12nm,1.2s						
BTK	**Batken**	**40.01**	**4**	P	**P**	**17 56 57.3**	**+0.4**
KSH	**Kashi**	**40.15**	**11**	P	**P**	**17 56 56.6**	**-1.5**
KSH				sP	pwP	17 57 04.6	+0.4
KSH				PcP	**PcP**	**17 59 01.8**	**-0.7**
KSH				PcS	**PcS**	**18 02 49.6**	**-3.4**
KSH				S	**S**	**18 02 58.8**	**-6.1**
KSH				ScS	**ScS**	**18 06 58.4**	**-7.1**
KSH				pmax	pmax		
	comp=Z,41nm,1.4s						
KSH				pmax	pmax		
	comp=Z,250nm,5.2s						
KSH				LR	LR		
	comp=Z,500nm,10.3s						
KSH				LR	LR		
	comp=Z,410nm,10.3s						
KSH				LR	LR		
	comp=Z,480nm,10.4s						
LEM	**Lembang**	**40.90**	**100**	P	**P**	**17 57 06.8**	**+2.0**
	comp=Z,13nm,0.6s,baz=189,slow=14,SNR=7.1						
CISI	**Cisompet, Garu**	**41.20**	**101**	P	**P**	**17 57 04.3**	**-2.9**
CISI				IAmb	IAmb	17 58 14.9	
	comp=Z,70nm,1.4s						
LSZ	**Lusaka**	**41.40**	**247**	P	**P**	**17 57 09.9**	**+1.0**
	comp=Z,17nm,1.1s,baz=72,slow=7.5,SNR=17						
LSZ				PcP	**PcP**	**17 59 07.6**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=48,slow=4.0,SNR=3.8						
LSZ	**Lusaka**	**41.40**	**247**	P	**P**	**17 57 09.7**	**+0.9**
SLVN	**Son La**	**41.65**	**57**	P	**P**	**17 57 11.7**	**+0.9**
NRN	**Naryn**	**42.01**	**10**	P	**P**	**17 57 15.0**	**+1.3**
NRN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NRN	**Naryn**	**42.01**	**10**	P	**P**	**17 57 15.0**	**+1.3**
KMI	**Kunming**	**42.49**	**51**	P	**P**	**17 57 17.8**	**+0.1**
KMI				pP	pwP	17 57 22.8	-1.0
KMI				sP	sP	17 57 25.1	+4.2
KMI				pmax	pmax		
	comp=Z,17nm,0.5s						
KMI				pmax	pmax		
	comp=Z,120nm,3.8s						
KDJ	**Kajisay**	**42.90**	**11**	P	**P**	**17 57 22.0**	**+1.2**
KDJ				pmax	pmax		
	comp=Z,17nm,1.2s						
KDJ	**Kajisay**	**42.90**	**11**	P	**P**	**17 57 22.0**	**+1.2**
MATP	**Matopo**	**42.93**	**239**	P	**P**	**17 57 19.2**	**-2.1**
	comp=Z,8.8nm,1.1s,baz=52,slow=8.3,SNR=7.4						
AAK	**Ala-Archa**	**42.96**	**8**	*ce*P	**P**	**17 57 21.3**	**+0.1**
AAK				pmax	pmax		
	comp=Z,15nm,1.7s						
AAK	**Ala-Archa**	**42.96**	**8**	P	**P**	**17 57 20.9**	**-0.3**
KK31	**Karatay Array**	**43.02**	**4**	P	**P**	**17 57 20.4**	**-1.1**
KK31				pmax	pmax		
	comp=Z,15nm,2.0s						
KK31	**Karatay Array**	**43.02**	**4**	P	**P**	**17 57 20.4**	**-1.1**
KKAR	**Karatay Array**	**43.02**	**4**	P	**P**	**17 57 20.9**	**-0.6**
KKAR	**Karatay Array**	**43.02**	**4**	P	**P**	**17 57 20.9**	**-0.6**
KKAR					**PcP**	**17 59 12.4**	**+0.7**
KKAR	**Karatay Array**	**43.02**	**4**	P	**P**	**17 57 20.6**	**-1.0**
KKAR				IAmb	IAmb	17 58 24.2	
	comp=Z,15nm,1.9s						
KKAR				PcP	**PcP**	**17 59 11.9**	**+0.2**
FRU1	**Bishkek**	**43.15**	**8**	P	**P**	**17 57 20.4**	**-2.2**
FRU1				pmax	pmax		
	comp=Z,16nm,1.2s						
FRU1	**Bishkek**	**43.15**	**8**		**P**	**17 57 20.4**	**-2.2**
PRZ	**Przheval'sk**	**43.49**	**12**	P	**P**	**17 57 26.3**	**+0.8**
PRZ				pmax	pmax		
	comp=Z,92nm,2.0s						
PRZ	**Przheval'sk**	**43.49**	**12**	P	**P**	**17 57 26.3**	**+0.8**
PRZ				IAmb	IAmb	17 57 29.4	
	comp=Z,92nm,2.0s						
SMRI	**Semarang**	**43.71**	**100**	P	**P**	**17 57 27.0**	**-0.5**
UGM	**Wanagama**	**43.91**	**101**	P	**P**	**17 57 27.9**	**-1.3**
GNI	**Garni**	**44.89**	**336**	*ce*P	**P**	**17 57 39.3**	**+2.5**
GNI				pmax	pmax		
	comp=Z,189nm,2.5s						
GNI	**Garni**	**44.89**	**336**	P	**P**	**17 57 35.9**	**-0.9**
GNI				IAmb	IAmb	17 57 52.8	
	comp=Z,49nm,1.3s						
SBUM	**Sibu**	**45.09**	**87**	P	**P**	**17 57 37.1**	**-1.5**
QIZ	**Qiongzhong**	**45.92**	**63**	P	**P**	**17 57 44.9**	**-0.2**
QIZ				S	**S**	**18 04 30.4**	**+0.4**
QIZ				LR	LR		
	comp=Z,380nm,19.4s						
QIZ				LR	LR		
	comp=Z,420nm,23.2s						
GAZ	**Gaziantep**	**46.22**	**326**	P	**P**	**17 57 47.7**	**+0.4**
GYA	**Guiyang**	**46.22**	**52**	⇑*i*P	**P**	**17 57 49.3**	**+1.8**
GYA				S	**S**	**18 04 38.8**	**+4.4**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,140nm,4.9s						
GYA				LR	LR		
	comp=Z,370nm,15.6s						
GYA				LR	LR		
	comp=Z,330nm,15.2s						
GYA				LR	LR		
	comp=Z,320nm,15.5s						
AKH	**Akhalkalaki**	**46.47**	**335**	P	**P**	**17 57 49.3**	**+0.1**
AKH				pmax	pmax		
	comp=Z,29nm,1.8s						
AKH	**Akhalkalaki**	**46.47**	**335**	P	**P**	**17 57 49.3**	**+0.1**
AKH				IAmb	IAmb	17 57 52.3	
	comp=Z,29nm,1.8s						
LBTB	**Lobatse**	**47.26**	**235**	P	**P**	**17 57 56.2**	**+0.5**
	comp=Z,6.1nm,0.9s,baz=57,slow=9.1,SNR=5.3						
LBTB	**Lobatse**	**47.26**	**235**	P	**P**	**17 57 55.4**	**-0.2**
LBTB				IAmb	IAmb	17 58 08.1	
	comp=Z,37nm,1.8s						
WMQ	**Urumqi**	**47.32**	**20**	*e*P	**P**	**17 57 56.9**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,14nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,140nm,6.7s						
WMQ				LR	LR		
	comp=Z,480nm,21.7s						
WMQ				LR	LR		
	comp=Z,160nm,21.7s						
WMQ				LR	LR		
	comp=Z,560nm,24.1s						
WMQ	**Urumqi**	**47.32**	**20**	P	**P**	**17 57 56.4**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,81nm,1.8s						
WMQ	**Urumqi**	**47.32**	**20**	P	**P**	**17 57 56.4**	**+0.6**
JAGI	**Jajag, Banyuwa**	**47.54**	**101**	P	**P**	**17 57 57.0**	**-0.9**
CRZF	**Crozet Islands**	**48.15**	**194**	P	**P**	**17 58 02.0**	**-0.1**
MAKZ	**Makanchi**	**48.39**	**14**	⇑Pn	P	17 58 11.9	+7.9
	comp=Z,2.7nm,0.8s						
MAKZ				⇑Lg	Lg	17 59 19.2	
	comp=Z,5.1nm,1.1s						
MAKZ	**Makanchi**	**48.39**	**14**	P	**P**	**17 58 04.5**	**+0.5**
MAKZ				pmax	pmax		
	comp=Z,14nm,1.4s						
MAKZ	**Makanchi**	**48.39**	**14**	P	**P**	**17 58 04.5**	**+0.5**
MK31	**Makanchi Array**	**48.45**	**14**	⇑Pn	P	17 58 09.4	+4.9
	comp=Z,1.1nm,0.6s,baz=129,slow=12,SNR=19						
MK31				⇑Lg	Lg	17 59 15.3	
	comp=Z,1.9nm,0.5s,baz=124,slow=27,SNR=5.9						
MK31	**Makanchi Array**	**48.45**	**14**	P	**P**	**17 58 04.6**	**+0.2**
MK31				pmax	pmax		
	comp=Z,10.0nm,1.5s						
MK31	**Makanchi Array**	**48.45**	**14**	P	**P**	**17 58 04.6**	**+0.2**
MKAR	**Makanchi Array**	**48.45**	**14**	P	**P**	**17 58 04.9**	**+0.5**
	comp=Z,2.4nm,1.0s,baz=188,slow=7.9,SNR=13						
MKAR	**Makanchi Array**	**48.45**	**14**	P	**P**	**17 58 04.5**	**+0.1**
KBZ	**Khabaz**	**48.64**	**337**	P	**P**	**17 58 07.0**	**+1.1**
	comp=Z,6.1nm,0.9s,baz=159,slow=5.1,SNR=11						
KBZ				LR	LR	18 19 05.8	
	comp=Z,137nm,21.4s,baz=142,slow=37						
KBZ	**Khabaz**	**48.64**	**337**	P	**P**	**17 58 07.0**	**+1.1**
KIV	**Kislovodsk**	**48.92**	**337**	*e*P	**P**	**17 58 08.3**	**+0.2**
KIV				pmax	pmax		
	comp=Z,17nm,1.0s						
KIV				MLR	MLR		
	comp=Z,217nm,16.0s						
KIV	**Kislovodsk**	**48.92**	**337**		**P**	**17 58 08.4**	**+0.2**
BOSA	**Boshof**	**49.14**	**231**	P	**P**	**17 58 10.7**	**+0.5**
	comp=Z,12nm,1.0s,baz=44,slow=9.0,SNR=9.6						
BOSA				LR	LR	18 16 03.8	
	comp=Z,649nm,20.3s,baz=54,slow=33						
BOSA	**Boshof**	**49.14**	**231**	P	**P**	**17 58 10.0**	**-0.2**

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BOSA                             pmax   pmax
      comp=Z,19nm,1.1s
BOSA  Boshof            49.14 231   P      P        17 58 10.0  -0.2
BOSA                             IAmb   IAmb     17 58 13.1
      comp=Z,20nm,1.1s
GTA   Gaotai            49.28  33  eP      P        17 58 11.8 +0.7
GTA                                 pP     sP       17 58 15.8 +1.6
GTA                                 sP     pwP      17 58 18.6 +1.5
GTA                                 S      S        18 05 19.5 +2.0
GTA                                 sS     sS       18 05 27.4 +6.4
GTA                                 pmax   pmax
      comp=Z,71nm,5.1s
GTA                                 LR     LR
      comp=Z,450nm,15.9s
GTA                                 LR     LR
      comp=Z,520nm,17.1s
GTA                                 LR     LR
      comp=Z,610nm,17.1s
ABKAR Akbulak array     49.47 354   P      P        17 58 11.9  -0.2
ABKAR Akbulak array     49.47 354   P      P        17 58 12.8 +0.7
ABKAR                               IAmb   IAmb     17 58 14.3
      comp=Z,22nm,1.4s
LZH   Lanzhou           49.48  40  eP      P        17 58 13.5 +0.8
LZH                                 pP     sP       17 58 17.1 +1.3
LZH                                 sP     pwP      17 58 20.1 +1.4
LZH                                 sS     sS       18 05 28.3 +4.3
LZH                                 pmax   pmax
      comp=Z,23nm,1.3s
LZH                                 pmax   pmax
      comp=Z,140nm,7.0s
LZH                                 LR     LR
      comp=Z,430nm,14.2s
LZH                                 LR     LR
      comp=Z,490nm,14.3s
LZH                                 LR     LR
      comp=Z,700nm,16.7s
BRTR  Keskin Array B    50.00 326   P      P        17 58 17.2 +0.6
      comp=Z,4.7nm,0.8s,baz=142,slow=11,SNR=28
BRTR                                LR     LR       18 19 33.4
      comp=Z,125nm,20.0s,baz=122,slow=36
BRTR  Keskin Array B    50.00 326 i P      P        17 58 17.7 +1.1
BRTR                                pmax   pmax
      comp=Z,5.0nm,0.8s
BRTR  Keskin Array B    50.00 326   P      P        17 58 16.6   0.0
BRTR                                PcP    PcP      17 59 37.3 +0.7
BR131 Keskin Array S    50.00 326   P      P        17 58 16.9 +0.3
BR131                                               17 59 36.2
BR131                               pmax   pmax
      comp=Z,7.0nm,1.0s
BR131 Keskin Array S    50.00 326   P      P        17 58 16.9 +0.3
BR131                               PcP    PcP      17 59 36.2  -0.4
ENH   Enshi             50.23  49   P      P        17 58 16.7  -1.6
ENH                                 IAmb   IAmb     17 58 32.6
      comp=Z,17nm,1.1s
ELL   Elmali            50.27 321   P      P        17 58 18.7   0.0
ELL                                 pmax   pmax
      comp=Z,142nm,1.8s
ELL   Elmali            50.27 321   P      P        17 58 18.7   0.0
ANTO  Ankara            50.57 326   P      P        17 58 21.1 +0.3
ANTO                                pmax   pmax
      comp=Z,9.0nm,0.6s
ANTO  Ankara            50.57 326   P      P        17 58 21.1 +0.3
ANTO                                IAmb   IAmb     17 58 24.6
      comp=Z,9.0nm,0.6s
ILGA  Ilgaz             50.89 327   P      P        17 58 22.9  -0.4
ILGA                                IAmb   IAmb     17 58 47.8
      comp=Z,24nm,1.4s
KURK  Kurchatov         51.46   9ceP      P        17 58 28.5 +1.3
KURK                                pmax   pmax
      comp=Z,28nm,1.7s
KURK  Kurchatov         51.46   9   P      P        17 58 28.0 +0.8
KURK                                IAmb   IAmb     17 58 29.3
      comp=Z,16nm,1.1s
XAN   Xi'an             51.72  45   P      P        17 58 30.3 +0.8
XAN                                 S      S        18 05 54.6 +3.2
XAN                                 pmax   pmax
      comp=Z,23nm,1.2s
XAN                                 pmax   pmax
      comp=Z,190nm,5.3s
XAN                                 LR     LR
      comp=Z,280nm,19.3s
XAN                                 LR     LR
      comp=Z,220nm,20.3s
XAN                                 LR     LR
      comp=Z,370nm,20.3s
XAN   Xi'an             51.72  45   P      P        17 58 29.9 +0.4
XAN                                 pmax   pmax
      comp=Z,35nm,1.2s
XAN   Xi'an             51.72  45   P      P        17 58 29.9 +0.4
XAN                                 IAmb   IAmb     17 58 37.9
      comp=Z,35nm,1.2s
MDUB  Mudurnu           51.88 325   P      P        17 58 31.6 +0.9
MANT  Manisa            52.19 322   P      P        17 58 32.3  -0.9
BRVK  Borovoye          52.94   2ceP      P        17 58 40.1 +2.0
BRVK                                pmax   pmax
      comp=Z,15nm,2.5s
BRVK  Borovoye          52.94   2   P      P        17 58 37.2  -0.9
BRVK                                IAmb   IAmb     17 58 40.5
      comp=Z,27nm,1.8s
SANT  Santorini         52.96 318   P      P        17 58 38.5  -0.1
ALN   Alexandroupoli    55.19 323   P      P        17 58 55.6 +0.8
ALN                                 pmax   pmax
      comp=Z,13nm,1.1s
ALN   Alexandroupoli    55.19 323   P      P        17 58 55.6 +0.8
ALN                                 IAmb   IAmb     17 58 56.8
      comp=Z,13nm,1.1s
ZAA0  Zalesovo Array    55.72  13   P      P        17 58 58.0  -0.4
ZALV  Zalesovo Beam     55.72  13   P      P        17 58 58.8 +0.4
      comp=Z,5.8nm,0.8s,baz=216,slow=7.6,SNR=18
ZALV                                PcP    PcP      17 59 57.3  -0.3
      comp=Z,1.4nm,0.7s,baz=188,slow=5.8,SNR=2.3
ZALV                                LR     LR       18 23 39.9
      comp=Z,280nm,19.8s,baz=189,slow=37
ZALV  Zalesovo Beam     55.72  13   P      P        17 58 58.3   0.0
ZALV                                PcP    PcP      17 59 56.8  -0.7
H01W3 Cape Leeuwin H    55.86 133   T      T        18 59 11.4
      baz=299
H01W2 Cape Leeuwin H    55.87 133   T      T        18 59 15.3
      baz=299
H01W1 Cape Leeuwin H    55.88 133   T      T        18 59 12.5
      baz=299
TIRR  Tirgusor          56.06 327   P      P        17 59 01.1 +0.1
TIRR                                pmax   pmax
      comp=Z,25nm,1.1s
TIRR  Tirgusor          56.06 327   P      P        17 59 01.1 +0.1
TIRR                                IAmb   IAmb     17 59 01.9
      comp=Z,25nm,1.1s
HARR  Harsova           56.48 327 ⇓P      P        17 59 05.0 +1.1
AGG   Agios Georgios    56.48 319   P      P        17 59 03.6  -0.6
AGG                                 pmax   pmax
      comp=Z,13nm,1.0s
AGG   Agios Georgios    56.48 319   P      P        17 59 03.6  -0.6
AGG                                 IAmb   IAmb     17 59 04.5
      comp=Z,13nm,1.0s
CFR   Carcaliu          56.68 328 ⇑P      P        17 59 06.0 +0.6
ARU   Arti              56.69 354   P      P        17 59 05.3 +0.1
      comp=Z,0.8nm,0.5s,baz=124,slow=4.5,SNR=5.3
ARU   Arti              56.69 354c iP      P        17 59 04.2  -1.0
ARU                                 S      S        18 06 58.9 +1.3
ARU                                 SS     SS       18 10 46.3 +0.8
ARU                                 pmax   pmax
      comp=Z,11nm,1.1s
ARU   Arti              56.69 354   P      P        17 59 05.8 +0.5
ARU                                 IAmb   IAmb     17 59 07.0
      comp=Z,17nm,1.4s
SVE   Sverdlovsk        56.90 356  eP      P        17 59 06.8 +0.1
LIT   Litokhoron        56.96 320   P      P        17 59 06.4  -1.2
LIT                                 pmax   pmax
      comp=Z,9.0nm,1.3s
LIT   Litokhoron        56.96 320   P      P        17 59 06.3  -1.2
TWG   Pinlang           57.06  63   P      P        17 59 08.1  -0.5
HHC   Hu-ho-hao-te      57.17  39  eP      P        17 59 11.1 +2.0
HHC                                 pmax   pmax
      comp=Z,410nm,5.4s
HHC                                 LR     LR
      comp=Z,830nm,14.8s
HHC                                 LR     LR
      comp=Z,610nm,15.2s
HHC                                 LR     LR
      comp=Z,800nm,14.9s
SOEI  Soe               57.61 101   P      P        17 59 12.1  -0.6
SOEI                                IAmb   IAmb     17 59 47.0
      comp=Z,28nm,1.2s
VRI   Vrincioaia        57.88 328 ⇑P      P        17 59 15.2 +1.3
VTS   Vitosha           57.90 323 ⇑P      P        17 59 15.0 +0.7
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VTS   Vitosha           57.90 323   P      P        17 59 14.0  -0.3
VTS                                 pmax   pmax
      comp=Z,28nm,2.0s
VTS   Vitosha           57.90 323   P      P        17 59 14.0  -0.3
VTS                                 IAmb   IAmb     17 59 36.2
      comp=Z,28nm,2.0s
PLOR  Plostina          57.91 328 ⇓P      P        17 59 15.5 +1.3
MLR   Muntele Rosu      58.07 327 ⇑P      P        17 59 16.2 +0.9
MLR   Muntele Rosu      58.07 327   P      P        17 59 15.9 +0.5
MLR                                 pmax   pmax
      comp=Z,19nm,1.5s
MLR   Muntele Rosu      58.07 327   P      P        17 59 15.9 +0.5
MLR                                 IAmb   IAmb     17 59 17.7
      comp=Z,19nm,1.5s
NJ2   Nanjing           58.23  52  eP      P        17 59 16.8 +0.2
NJ2                                 pmax   pmax
      comp=Z,7.0nm,0.6s
NJ2                                 LR     LR
      comp=Z,300nm,10.4s
NJ2                                 LR     LR
      comp=Z,380nm,11.8s
NJ2                                 LR     LR
      comp=Z,490nm,13.3s
TESR  Tescani           58.34 328 ⇑P      P        17 59 17.8 +0.7
VOIR                    58.53 326 ⇑P      P        17 59 18.7 +0.1
OZUR                    58.53 327 ⇑P      P        17 59 18.6 +0.1
SONM  Songino Array     58.54  30   P      P        17 59 20.0 +1.4
      comp=Z,7.0nm,1.1s,baz=224,slow=6.8,SNR=33
SONM                                LR     LR       18 24 40.8
      comp=Z,2µm,19.2s,baz=207,slow=36
SONM  Songino Array     58.54  30   P      P        17 59 19.2 +0.6
SORM  Soroca            58.55 331 ⇓P      P        17 59 18.4   0.0
DOPR  Dopca             58.67 327 ⇑P      P        17 59 19.5 +0.1
ULN   Ulaanbaatar       58.89  30   P      P        17 59 21.8 +0.7
ULN                                 pmax   pmax
      comp=Z,25nm,2.0s
ULN   Ulaanbaatar       58.89  30   P      P        17 59 21.8 +0.7
ULN                                 IAmb   IAmb     17 59 49.1
      comp=Z,25nm,1.9s
TIR   Tirane            59.31 320   P      P        17 59 24.3 +0.4
TIR                                 pmax   pmax
      comp=Z,17nm,0.7s
TIR   Tirane            59.31 320   P      P        17 59 24.3 +0.4
TIR                                 IAmb   IAmb     17 59 26.6
      comp=Z,17nm,0.7s
SCTE  Santa Cesarea     59.58 318   P      P        17 59 25.2  -0.6
SCTE                                IAmb   IAmb     17 59 27.0
      comp=Z,13nm,0.9s
HERR  Herculane         59.69 325 ⇑P      P        17 59 26.5   0.0
BJT   Baijiatuau        59.74  42   P      P        17 59 26.5  -0.5
BJT                                 pmax   pmax
      comp=Z,7.0nm,0.5s
BJT   Baijiatuau        59.74  42   P      P        17 59 26.5  -0.5
BJT                                 IAmb   IAmb     18 00 41.8
      comp=Z,7.2nm,0.5s
GZR   Gura Zlata        59.78 325   P      P        17 59 27.7 +0.5
BURAR Bucovina Array    59.80 328 ⇓P      P        17 59 28.4 +1.0
BURAR Bucovina Array    59.80 328   P      P        17 59 27.6 +0.3
BUR08 Bucovina Ar. S    59.83 328   P      P        17 59 28.1 +0.6
BUR08                               IAmb   IAmb     18 00 33.6
      comp=Z,25nm,1.9s
AKASG Malin Array Be    59.91 333   P      P        17 59 27.0  -0.9
      comp=Z,1.1nm,0.6s,baz=124,slow=6.0,SNR=11
AKASG                               LR     LR       18 27 45.3
      comp=Z,59nm,21.9s,baz=110,slow=38
AKASG Malin Array Be    59.91 333 i P      P        17 59 27.5  -0.4
AKASG                               pmax   pmax
      comp=Z,1.0nm,0.5s
AKASG Malin Array Be    59.91 333   P      P        17 59 26.8  -1.1
AKBB  Malin Array Si    59.91 333   P      P        17 59 26.8  -1.1
AKBB                                pmax   pmax
      comp=Z,37nm,2.0s
AKBB  Malin Array Si    59.91 333   P      P        17 59 26.8  -1.1
AKBB                                IAmb   IAmb     18 00 07.6
      comp=Z,36nm,2.0s
TLY   Talaya            59.96  25  eP      P        17 59 28.9 +0.7
TLY                                eS      S        18 07 35.4  -5.1
TLY                                 pmax   pmax
      comp=Z,28nm,1.5s
TLY                                 MLR    MLR
      comp=Z,159nm,5.0s
TLY   Talaya            59.96  25   P      P        17 59 27.6  -0.6
TLY                                 IAmb   IAmb     17 59 31.4
      comp=Z,20nm,1.6s
MDVR  Moldovita         60.04 324   P      P        17 59 29.2 +0.2
TNTI  Ternate           60.19  89   P      P        17 59 29.2  -1.3
PDG   Podgorica         60.26 321   P      P        17 59 30.3  -0.2
TIP   Timpagrande       60.32 316   P      P        17 59 29.8  -1.3
TIP                                 IAmb   IAmb     18 00 00.1
      comp=Z,22nm,1.6s
OBN   Obninsk           60.37 340⇑eP      P        17 59 30.1  -0.8
OBN                                e                18 00 21.9
OBN                                e                18 01 40.7
OBN                                eS      S        18 08 13.3  +28
OBN                                 pmax   pmax
      comp=Z,4.0nm,0.9s
OBN                                 MLR    MLR
      comp=Z,113nm,11.0s
OBN   Obninsk           60.37 340   P      P        17 59 30.4  -0.5
MOS   Moscow            60.53 341  eP      P        17 59 30.5  -1.5
MOS                                e                18 00 12.0
BZS   Buzias            60.57 325 ⇓P      P        17 59 32.6 +0.1
MATE  Matera            61.04 318 ⇓P      P        17 59 36.5 +0.7
TRPA  Tarpa             61.54 328 ⇑P      P        17 59 39.5 +0.5
ACER  Acerenza          61.62 318   P      P        17 59 40.2 +0.3
UZH   Uzhgorod          61.97 328  eP      P        17 59 39.1  -2.8
UZH                                e                17 59 42.2
KOLS  Kolonicke sedl    62.16 328  eP      P        17 59 43.8 +0.6
KOLS  Kolonicke sedl    62.16 328  eP      P        17 59 43.8 +0.6
SGRT  San Giovanni R    62.20 319   P      P        17 59 44.4 +0.6
CORL  Corleone          62.20 314   P      P        17 59 44.0 +0.2
KWP   Kalwaria Pacla    62.36 329   P      P        17 59 44.8 +0.2
KWP                                 pmax   pmax
      comp=Z,139nm,2.0s
KWP   Kalwaria Pacla    62.36 329   P      P        17 59 44.8 +0.2
CRVS  Cervenica-Dubn    62.57 328  eP      P        17 59 46.2 +0.2
CRVS  Cervenica-Dubn    62.57 328  eP      P        17 59 46.2 +0.2
PAOL  Paolisi           62.66 317   P      P        17 59 45.5  -1.3
PAOL                                IAmb   IAmb     17 59 47.7
      comp=Z,19nm,1.4s
BLY   Banja Luka        62.74 322   P      P        17 59 46.1  -1.1
PSZ   Piszkesteto       62.86 326   P      P        17 59 48.0   0.0
PSZ   Piszkesteto       62.86 326   P      P        17 59 46.4  -1.6
PSZ                                 pmax   pmax
      comp=Z,28nm,1.9s
PSZ   Piszkesteto       62.86 326   P      P        17 59 46.4  -1.6
PSZ                                 IAmb   IAmb     18 01 47.5
      comp=Z,28nm,1.9s
INTR  Introdacqua       63.54 318   P      P        17 59 52.2  -0.5
INTR                                IAmb   IAmb     17 59 53.6
      comp=Z,17nm,1.2s
VYHS  Vyhne             63.76 326  eP      P        17 59 53.6  -0.3
VYHS  Vyhne             63.76 326  eP      P        17 59 53.6  -0.3
LANS  Liptovska Anna    63.79 327  eP      P        17 59 54.2 +0.1
LANS                                pmax   pmax
      comp=Z,4.0nm,1.0s
LANS  Liptovska Anna    63.79 327  eP      P        17 59 54.2 +0.1
TAM   Tamanrasset       64.02 295   P      P        17 59 55.2  -1.1
TAM                                 pmax   pmax
      comp=Z,10.0nm,1.6s
TAM   Tamanrasset       64.02 295   P      P        17 59 55.2  -1.1
AQU   L'Aquila          64.03 318   P      P        17 59 55.0  -0.8
AQU                                 pmax   pmax
      comp=Z,12nm,0.5s
AQU   L'Aquila          64.03 318   P      P        17 59 55.0  -0.8
OJC   Ojcow             64.22 328   P      P        17 59 55.2  -1.7
OJC                                 pmax   pmax
      comp=Z,32nm,1.7s
OJC   Ojcow             64.22 328   P      P        17 59 55.2  -1.7
OJC                                 IAmb   IAmb     18 01 10.3
      comp=Z,32nm,1.7s
BOJS  Bojanci           64.30 322 i P      P        17 59 57.6 +0.1
KLMR  Klimovskoe        64.31 345  eP      P        17 59 55.6  -1.6
KLMR                                pmax   pmax
      comp=Z,71nm,1.9s
KLMR  Klimovskoe        64.31 345  eP      P        17 59 55.6  -1.6
KLMR                                AMP             18 00 00.2
      comp=Z,71nm,1.9s
NRCA  Norcia            64.43 319   P      P        17 59 58.0  -0.5
MODS  Modra-Piesok      64.57 326  eP      P        17 59 57.8  -1.4
MODS  Modra-Piesok      64.57 326  eP      P        17 59 57.8  -1.4
VISS  Visnje            64.70 322 i P      P        18 00 00.1   0.0
SUW   Suwalki           64.88 333   P      P        17 59 59.8  -1.3
SUW                                 pmax   pmax
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      comp=Z,103nm,1.8s
SUW   Suwalki           64.88 333   P      P        17 59 59.8  -1.3
ARSA  Arzberg           65.00 324  eP      P        18 00 02.3 +0.2
      comp=Z,8.3nm,1.4s
MURB  Monte Urbino      65.00 319   P      P        18 00 02.2   0.0
MURB                                IAmb   IAmb     18 00 04.4
      comp=Z,10nm,1.0s
LJU   Ljubljana         65.01 322 i P      P        18 00 02.2 +0.1
SOKA  Soboth            65.01 323  eP      P        18 00 02.1  -0.1
      comp=Z,5.0nm,1.1s
FAKI  Fak Fak           65.10  93   P      P        18 00 03.5 +0.2
CONA  Conrad Observa    65.15 325  eP      P        18 00 03.0  -0.1
      comp=Z,15nm,1.1s
MORC  Moravsky Berou    65.18 327   P      P        18 00 03.1  -0.1
MORC  Moravsky Berou    65.18 327   P      P        18 00 02.1  -1.1
MORC                                pmax   pmax
      comp=Z,17nm,1.4s
MORC  Moravsky Berou    65.18 327   P      P        18 00 02.1  -1.1
MORC                                IAmb   IAmb     18 00 04.0
      comp=Z,17nm,1.4s
LATE  Laterza           65.20 318   P      P        18 00 02.4  -1.2
LATE                                IAmb   IAmb     18 00 04.3
      comp=Z,18nm,1.4s
OBKA  Obir              65.22 323  eP      P        18 00 03.6   0.0
      comp=Z,4.8nm,1.2s
TRI   Trieste           65.32 322   P      P        18 00 02.9  -1.2
TRI                                 pmax   pmax
      comp=Z,9.0nm,0.8s
TRI   Trieste           65.32 322   P      P        18 00 02.9  -1.2
TRI                                 IAmb   IAmb     18 00 04.3
      comp=Z,9.4nm,0.8s
VRAC  Vranov            65.45 326   P      P        18 00 03.8  -1.1
      comp=Z,1.9nm,0.5s,baz=85,slow=1.7,SNR=3.8
CASP  Castiglione de    65.91 318   P      P        18 00 06.8  -1.2
CASP                                IAmb   IAmb     18 00 08.6
      comp=Z,16nm,1.0s
MOA   Molln             66.04 324  eP      P        18 00 08.5  -0.3
      comp=Z,6.3nm,1.1s
TOA0  Torodi Ar. Sit    66.16 284   P      P        18 00 09.2  -1.0
TOA0                                IAmb   IAmb     18 00 18.9
      comp=Z,21nm,1.9s
TORD  Torodi Ar. Bea    66.16 284   P      P        18 00 09.9  -0.2
      comp=Z,0.9nm,1.0s,baz=120,slow=5.3,SNR=4.8
TORD                                LR     LR       18 28 25.1
      comp=Z,398nm,21.0s,baz=80,slow=36
TORD  Torodi Ar. Bea    66.16 284   P      P        18 00 10.1  -0.1
STAL  STALIGIAL         66.23 322   P      P        18 00 08.6  -1.4
STAL                                IAmb   IAmb     18 00 30.6
      comp=Z,26nm,2.0s
VSU   Vasula            66.43 338ceP      P        18 00 10.1  -0.9
VSU                                 pmax   pmax
      comp=Z,118nm,2.5s
TEOL  Teolo             66.47 321   P      P        18 00 11.1  -0.5
TEOL                                IAmb   IAmb     18 00 12.4
      comp=Z,12nm,0.7s
ZCCA  Zocca             66.48 319   P      P        18 00 12.7 +0.9
HIA   Hailar            66.54  35   P      P        18 00 12.7 +0.7
HIA                                 pmax   pmax
      comp=Z,24nm,1.4s
HIA   Hailar            66.54  35   P      P        18 00 12.7 +0.7
HIA                                 IAmb   IAmb     18 00 14.7
      comp=Z,24nm,1.4s
ABTA  Abfaltersbach     66.57 322  eP      P        18 00 12.1  -0.1
      comp=Z,8.4nm,1.5s
CTI   Castel Tesino     66.79 321   P      P        18 00 12.9  -0.8
CTI                                 pmax   pmax
      comp=Z,5.0nm,0.8s
CTI   Castel Tesino     66.79 321   P      P        18 00 12.9  -0.8
VLC   Villacollemand    66.79 319   P      P        18 00 12.3  -1.3
VLC                                 IAmb   IAmb     18 00 17.6
      comp=Z,6.9nm,0.7s
GEC2  GERESS Array S    66.85 325   P      P        18 00 12.6  -1.5
KHC   Kasperske Hory    67.06 325  eP      P        18 00 13.0  -2.3
KHC   Kasperske Hory    67.06 325 i P      P        18 00 13.6  -1.7
KHC                                 pmax   pmax
      comp=Z,5.0nm,1.2s
KSAR  Wonju Array Be    67.08  49   P      P        18 00 15.4  -0.2
KSAR  Wonju Array Be    67.08  49   P      P        18 00 15.4  -0.2
KS19  Wonju Array Si    67.09  49   P      P        18 00 14.5  -1.2
PRMA  PARMA             67.09 320   P      P        18 00 14.4  -1.1
KSRS  Korea Array       67.11  49   P      P        18 00 17.0 +1.2
      comp=Z,0.7nm,0.7s,baz=228,slow=8.5,SNR=4.2
KSRS                                LR     LR       18 32 00.8
      comp=Z,257nm,18.3s,baz=238,slow=38
SALO  Salr              67.31 321   P      P        18 00 15.6  -1.3
SALO                                IAmb   IAmb     18 01 29.0
      comp=Z,11nm,0.8s
WTTA  Wattenberg        67.34 323  eP      P        18 00 16.7  -0.6
      comp=Z,4.4nm,0.8s
WATA  Walderalm         67.41 323  eP      P        18 00 16.8  -0.9
      comp=Z,4.1nm,1.1s
MSSA  Maissana          67.42 319   P      P        18 00 16.4  -1.4
MSSA                                IAmb   IAmb     18 01 15.8
      comp=Z,28nm,1.9s
SQTA  Sankt Quirin      67.58 322  eP      P        18 00 18.1  -0.7
      comp=Z,5.0nm,0.9s
MOTA  Moosalm           67.70 322  eP      P        18 00 18.6  -0.9
      comp=Z,6.6nm,0.9s
BRG   Berggiesshubel    67.72 327  eP      P        18 00 19.2  -0.2
      comp=Z,38nm,2.1s
BRG   Berggiesshubel    67.72 327  eP      P        18 00 19.2  -0.2
BRG                                 pmax   pmax
      comp=Z,38nm,2.1s
FETA  Feichten          67.79 322  eP      P        18 00 19.9  -0.2
      comp=Z,5.9nm,1.0s
RETA  Reutte            67.97 322  eP      P        18 00 20.4  -0.7
      comp=Z,1.5nm,0.5s
TUE   Stuetta           68.41 321   P      P        18 00 23.3  -0.8
TUE                                 IAmb   IAmb     18 00 40.0
      comp=Z,35nm,1.8s
DAVA  Damuels           68.42 322  eP      P        18 00 24.0  -0.1
      comp=Z,13nm,0.8s
CLL   Collm             68.45 327 i P      P        18 00 24.8 +0.8
      comp=Z,13nm,1.2s
CLL   Collm             68.45 327 i P      P        18 00 24.8 +0.8
CLL                                 pmax   pmax
      comp=Z,13nm,1.2s
CLL   Collm             68.45 327   P      P        18 00 24.0   0.0
CLL                                 IAmb   IAmb     18 00 26.2
      comp=Z,11nm,1.1s
WRA   Warramunga Arr    68.58 111   P      P        18 00 25.8 +0.3
      comp=Z,6.0nm,0.7s,baz=287,slow=5.9,SNR=30
WRA                                 LR     LR       18 26 30.7
      comp=Z,105nm,21.6s,baz=235,slow=32
WRA   Warramunga Arr    68.58 111   P      P        18 00 24.7  -0.7
WRAB  Tennant Creek     68.59 111   P      P        18 00 25.5   0.0
WRAB                                pmax   pmax
      comp=Z,58nm,1.7s
WRAB  Tennant Creek     68.59 111   P      P        18 00 25.5   0.0
WRAB  Tennant Creek     68.59 111   IAmb   IAmb     18 00 27.4
      comp=Z,58nm,1.6s
WB2   Warramunga Arr    68.59 111   P      P        18 00 25.5   0.0
WB0   Warramunga Arr    68.61 111   P      P        18 00 25.3  -0.3
WB0                                 IAmb   IAmb     18 00 26.4
      comp=Z,14nm,1.1s
GRA1  Grafenberg Arr    68.69 325   P      P        18 00 24.7  -0.8
GRF   Grafenberg Arr    68.69 325   P      P        18 00 24.7  -0.8
GRF                                 pmax   pmax
      comp=Z,46nm,1.6s
ASAR  Alice Springs     68.75 115   P      P        18 00 26.6 +0.1
      comp=Z,3.7nm,0.7s,baz=285,slow=5.9,SNR=46
ASAR                                LR     LR       18 26 34.5
      comp=Z,116nm,22.0s,baz=189,slow=32
AS31  Alice Springs     68.76 115   P      P        18 00 26.0  -0.5
WR0   Warramunga Arr    68.77 111   IAmb   IAmb     18 00 35.8
      comp=Z,23nm,1.2s
FINES FINESS Array B    68.78 340   P      P        18 00 26.5 +0.7
      comp=Z,5.0nm,0.9s,baz=160,slow=6.1,SNR=4.8
FINES                               LR     LR       18 33 18.2
      comp=Z,131nm,18.0s,baz=148,slow=38
FINES FINESS Array B    68.78 340   P      P        18 00 26.2 +0.4
BNI   Bardonecchia      69.58 319   P      P        18 00 30.6  -0.7
BNI                                 pmax   pmax
      comp=Z,27nm,2.0s
BNI   Bardonecchia      69.58 319   P      P        18 00 30.6  -0.7
BNI                                 IAmb   IAmb     18 00 53.4
      comp=Z,27nm,2.0s
SENIN Lac Senin/Sane    69.67 320   P      P        18 00 31.2  -0.7
SENIN                               IAmb   IAmb     18 00 32.4
      comp=Z,7.4nm,0.8s
BFO   Black Forest      69.81 323   P      P        18 00 31.9  -0.6
BFO                                 pmax   pmax
      comp=Z,11nm,1.2s
BFO   Black Forest      69.81 323   P      P        18 00 31.9  -0.6
BFO                                 IAmb   IAmb     18 00 32.8
      comp=Z,11nm,1.2s
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ECH   Echery            70.48 322   P      P        18 00 35.8 -0.9
ECH                                 pmax   pmax
      comp=Z,8.0nm,1.2s
ECH   Echery            70.48 322   P      P        18 00 35.8 -0.9
NRIK  Noril'sk          70.57   8   P      P        18 00 37.3 +0.6
      comp=Z,1.2nm,0.3s,baz=198,slow=7.4,SNR=7.4
NRIK                                LR     LR       18 34 34.2
      comp=Z,208nm,18.1s,baz=199,slow=38
MDJ   Mudanjiang        70.69  42   P      P        18 00 37.4 -0.6
MDJ                                 IAmb   IAmb     18 01 00.9
      comp=Z,36nm,1.7s
SSB   Saint Sauveur     71.07 318   P      P        18 00 38.8 -1.5
SSB                                 pmax   pmax
      comp=Z,15nm,1.6s
SSB   Saint Sauveur     71.07 318   P      P        18 00 38.8 -1.5
SSB                                 IAmb   IAmb     18 00 40.5
      comp=Z,15nm,1.6s
WLF   Walferdange       71.66 323   P      P        18 00 43.2 -0.5
WLF                                 pmax   pmax
      comp=Z,14nm,1.1s
WLF   Walferdange       71.66 323   P      P        18 00 43.2 -0.5
WLF                                 IAmb   IAmb     18 00 44.7
      comp=Z,14nm,1.1s
KIC   Kosan Boka        72.04 277  eP      P        18 00 47.3 +0.6
      comp=Z,21nm,1.2s
MEM   Membach           72.11 324   P      P        18 00 46.4 -0.1
DBIC  Dimbokro          72.16 277   P      P        18 00 47.8 +0.4
      comp=Z,3.2nm,0.8s,baz=105,slow=7.4,SNR=5.4
DBIC  Dimbokro          72.16 277   IAmb   IAmb     18 00 50.6
      comp=Z,25nm,1.6s
USRK  Ussuriysk Ar.     72.18  43   LR     LR       18 33 40.1
      comp=Z,170nm,20.1s,baz=191,slow=37
USRK  Ussuriysk Ar.     72.18  43   P      P        18 00 45.5 -1.4
USRK  Ussuriysk Ar.     72.18  43   P      P        18 00 45.5 -1.4
LIC   Lamto             72.32 276  eP      P        18 00 48.9 +0.5
      comp=Z,36nm,1.3s
TIC   Toumodi           72.32 277  eP      P        18 00 48.9 +0.5
HFS   Hagfors           72.68 335   P      P        18 00 49.8 +0.2
      comp=Z,6.8nm,0.7s,baz=90,slow=8.9,SNR=9.3
DOU   Dourbes           72.75 323   P      P        18 00 50.3  0.0
ZEA   Zeya              72.76  33  eP      P        18 00 51.0 +0.8
ZEA                                 pmax   pmax
      comp=Z,21nm,1.2s
ZEA                                 MLR    MLR
      comp=Z,900nm,16.0s
ZEA                                 MLR    MLR
      comp=E,600nm,18.0s
ZEA                                 MLR    MLR
      comp=N,500nm,17.0s
CLF   Chambon-Foret     73.47 321   P      P        18 00 54.2 -0.3
CLF                                 IAmb   IAmb     18 00 55.9
      comp=Z,28nm,1.2s
KLR   Kul'dur           73.65  38 i P      P        18 00 55.4 -0.2
KLR                                 pmax   pmax
      comp=Z,13nm,1.8s
NOA   NORSAR Array B    74.20 335   P      P        18 00 58.5 -0.1
      comp=Z,3.7nm,0.9s,baz=112,slow=6.2,SNR=3.2
NOA                                 LR     LR       18 35 35.5
      comp=Z,60nm,19.4s,baz=220,slow=37
NC303 NORSAR Array S    74.23 335   P      P        18 00 58.0 -0.7
NAO01 NORSAR Array S    74.24 335   P      P        18 00 58.7 -0.1
NBO00 NORSAR Array S    74.38 335   P      P        18 01 00.5 +0.9
ARCES ARCESS Array B    74.77 346   P      P        18 01 00.7 -1.0
      comp=Z,5.9nm,1.1s,baz=66,slow=3.0,SNR=5.7
ARCES                               LR     LR       18 35 28.0
      comp=Z,212nm,18.2s,baz=149,slow=37
ARCES ARCESS Array B    74.77 346   P      P        18 01 01.0 -0.8
ARCES ARCESS Array B    74.77 346   P      P        18 01 01.0 -0.8
MJAR  Matsushiro Arr    74.83  52   P      P        18 01 03.2 +0.4
      comp=Z,1.6nm,0.7s,baz=260,slow=7.3,SNR=4.4
MJAR  Matsushiro Arr    74.83  52   P      P        18 01 01.4 -1.3
ESBB  Sonseca Array     75.56 311   P      P        18 01 06.6 -0.4
ESDC  Sonseca Array     75.56 311   P      P        18 01 05.8 -1.2
      comp=Z,2.8nm,0.7s,baz=85,slow=4.5,SNR=13
ESDC  Sonseca Array     75.56 311   P      P        18 01 05.9 -1.0
PAB   San Pablo         75.82 311   P      P        18 01 08.5  0.0
PAB                                 pmax   pmax
      comp=Z,13nm,1.3s
PAB   San Pablo         75.82 311   P      P        18 01 08.5  0.0
PAB                                 IAmb   IAmb     18 01 10.2
      comp=Z,13nm,1.2s
STKA  Stephens Creek    76.78 123   P      P        18 01 13.1 -1.0
      comp=Z,3.5nm,0.9s,baz=286,slow=6.3,SNR=3.2
STKA  Stephens Creek    76.78 123   P      P        18 01 13.9 -0.1
STKA                                pmax   pmax
      comp=Z,2.0nm,1.2s
STKA  Stephens Creek    76.78 123   P      P        18 01 13.9 -0.1
YAK   Yakutsk           77.43  25   P      P        18 01 15.7 -1.2
YAK                                 pmax   pmax
      comp=Z,8.0nm,0.6s
YAK   Yakutsk           77.43  25   P      P        18 01 15.7 -1.2
YAK                                 IAmb   IAmb     18 03 42.8
      comp=Z,7.7nm,0.6s
PESTR Estremoz          78.17 310   P      P        18 01 19.0 -2.6
PESTR                               IAmb   IAmb     18 02 49.0
      comp=Z,25nm,1.1s
MTE   Manteigas         78.40 311   P      P        18 01 23.1 +0.2
MTE                                 IAmb   IAmb     18 01 35.9
      comp=Z,36nm,1.9s
PMG   Port Moresby      80.11  99   P      P        18 01 34.0 +1.3
      comp=Z,3.2nm,0.8s,baz=86,slow=22,SNR=4.4
PMG   Port Moresby      80.11  99   P      P        18 01 33.7 +1.0
PMG                                 IAmb   IAmb     18 01 51.7
      comp=Z,17nm,1.2s
YSS   Yuzh-Sakhalins    80.18  42⇑eP     P        18 01 32.9 +0.5
YSS                                 pmax   pmax
      comp=Z,10.0nm,1.2s
YSS   Yuzh-Sakhalins    80.18  42   P      P        18 01 32.4  0.0
YSS                                 IAmb   IAmb     18 01 33.7
      comp=Z,39nm,1.4s
TIXI  Tiksi             81.36  16   P      P        18 01 39.0 +0.8
      comp=Z,7.3nm,1.1s,baz=234,slow=2.4,SNR=20
TIXI  Tiksi             81.36  16ceP     P        18 01 38.8 +0.6
TIXI                                pmax   pmax
      comp=Z,47nm,2.5s
TIXI  Tiksi             81.36  16   P      P        18 01 38.1 -0.1
TIXI                                IAmb   IAmb     18 01 39.9
      comp=Z,42nm,1.6s
ASCN  Ascension         81.62 262   P      P        18 01 38.5 -2.4
SPA0  Spitsbergen Ar    82.52 351   P      P        18 01 43.9 -0.4
SNAA  Sanae             83.79 197   P      P        18 01 51.8 +0.8
SNAA  Sanae             83.79 197   LR     LR       18 31 09.8
      comp=Z,249nm,20.9s,baz=44,slow=30
VNA3  Neumayer Olymp    85.78 198   P      P        18 02 00.2 -0.8
MA2   Magadan           86.75  30ceP     P        18 02 05.5 -0.4
MA2                                 pmax   pmax
      comp=Z,11nm,1.7s
SEY   Seymchan          87.81  27 i P      P        18 02 11.3 +0.3
PETK  Petropavlovsk-    90.32  37   LR     LR       18 43 59.6
      comp=Z,196nm,21.7s,baz=241,slow=36
VNDA  Vanda             91.01 167   LR     LR       18 38 27.7
      comp=Z,210nm,19.5s,baz=264,slow=32
BILL  Bilibino          93.41  22 i P      P        18 02 37.4 +0.4
BILL                                pmax   pmax
      comp=Z,2.0nm,1.0s
TOLK  Toolik Lake Re   107.07  13   P      PKiKP    18 07 46.0 -1.7
      baz=321
YKA   Yellowknife Ar   117.66   1   PKP    PKPdf    18 08 07.5 -0.4
      comp=Z,1.7nm,1.0s,baz=360,slow=1.7,SNR=11
YKA                                 PP     PP       18 09 20.5 +0.8
      comp=Z,0.5nm,0.9s,baz=358,slow=6.6,SNR=5.3
K63A  Dunstable        123.64 324   P      PKPdf    18 08 20.1 +0.1
      baz=52
LONY  Lake Ozonia      124.12 328   P      PKPdf    18 08 19.9 -1.1
      baz=48
E54A  Lac Daplat, Po   124.21 331   P      PKPdf    18 08 19.9 -1.1
      baz=45
H56A  Elgin            125.03 329   P      PKPdf    18 08 22.4 -0.2
      baz=47
F52A  Sundridge        125.70 332   P      PKPdf    18 08 24.2 +0.3
      baz=43
H53A  Bobcaygeon       126.22 330   P      PKPdf    18 08 23.9 -1.0
      baz=44
M60A  Port Jervis      126.30 325   P      PKPdf    18 08 24.5 -0.6
      baz=50
D47A  Chapleau         126.43 335   P      PKPdf    18 08 24.9 -0.3
      baz=38
E48A  Lockeyer         126.48 334   P      PKPdf    18 08 25.5 +0.1
      baz=39
M59A  Waymart          126.62 325   P      PKPdf    18 08 24.7 -1.1
      baz=49
E47A  Iron Bridge      126.98 335   P      PKPdf    18 08 26.2 -0.1
      baz=38
N59A  State Game Lan   127.22 325   P      PKPdf    18 08 26.9 -0.1
      baz=49
K55A  Perry            127.26 328   P      PKPdf    18 08 26.1 -0.9
      baz=46
N58A  Sunbury          127.81 326   P      PKPdf    18 08 27.2 -0.9
      baz=48
O59A  Robesonia        127.86 325   P      PKPdf    18 08 27.7 -0.5
      baz=49
ULM   Lac du Bonnet    127.89 346   PKP    PKPdf    18 08 26.5 -1.4
      comp=Z,1.3nm,0.5s,baz=51,slow=4.9,SNR=4.0
ULM   Lac du Bonnet    127.89 346   PKIKP  PKPdf    18 08 26.9 -1.1
ULM   Lac du Bonnet    127.89 346          PKPdf    18 08 26.9 -1.1
P59A  Jarrettsville    128.46 324   P      PKPdf    18 08 29.1 -0.3
      baz=49
EYMN  Ely              128.78 342   P      PKPdf    18 08 30.4 +0.7
      baz=28
R60A  Leonardtown, M   129.41 323   P      PKPdf    18 08 30.2 -0.9
      baz=50
L50A  Kingsville       130.17 331   P      PKPdf    18 08 32.3 -0.2
      baz=41
MSO   Missoula         133.36   1   P      PKPdf    18 08 38.7 +0.2
      baz=358
P48A  Milroy           133.42 331   P      PKPdf    18 08 38.8  0.0
      baz=39
F10A  Beach Ranch, E   134.06   4          PKPpre   18 08 30.5
TZTN  Tazewell         134.63 326   P      PKPdf    18 08 41.1  0.0
      baz=43
DLMT  Dillon           134.83 360          PKPdf    18 08 42.4 +0.9
X54A  Belton           135.37 323   P      PKPdf    18 08 43.3 +0.7
      baz=46
I03D  Drain, OR        135.49  11   P      PKPdf    18 08 43.1 +0.6
      baz=345
FXWY  Fox Creek        136.53 358          PKPdf    18 08 45.2 +0.4
TPAW  Teton Pass       136.67 358          PKPdf    18 08 44.2 -0.9
BW06  Boulder Array    137.33 356   P      PKPdf    18 08 46.3  0.0
      baz=4.8
PD31  Pinedale Array   137.33 356          PKPdf    18 08 45.7 -0.6
PDAR  Pinedale Array   137.33 356   PKP    PKPdf    18 08 45.6 -0.6
      comp=Z,1.7nm,0.8s,baz=52,slow=2.0,SNR=12
PDAR  Pinedale Array   137.33 356   PKPpre PKPpre   18 08 39.2
PDAR                                       PKPdf    18 08 45.4 -0.9
N02D  Trinity Center   138.25  11   P      PKPdf    18 08 48.4 +0.6
      baz=345
ELK   Elko             139.39   3   PKhKP  PKPdf    18 08 45.2 -5.0
      comp=Z,0.3nm,0.4s,baz=343,slow=20,SNR=1.6
ELK   Elko             139.39   3   PKIKP  PKPdf    18 08 45.4 -4.7
ELK   Elko             139.39   3          PKPdf    18 08 45.4 -4.7
RDMU  Red Mountain     139.52 356          PKPdf    18 08 50.3  0.0
MIAR  Mount Ida        141.20 334   PKIKP  PKPdf    18 08 53.9 +0.6
MIAR  Mount Ida        141.20 334          PKPdf    18 08 53.9 +0.6
MIAR  Mount Ida        141.20 334   P      PKPdf    18 08 53.9 +0.6
      baz=32
NVAR  Mina Array Bea   141.43   7   PKhKP  PKPdf    18 08 48.9 -5.0
      comp=Z,0.3nm,0.5s,baz=174,slow=1.7,SNR=3.1
NVAR  Mina Array Bea   141.43   7          PKPdf    18 08 48.6 -5.3
NVAR                                PKPdf  PKPdf    18 08 53.1 -0.8
NV11  Mina Array Sit   141.45   7          PKPdf    18 08 52.8 -1.0
PV22  Blue Mesa, Par   141.48 355          PKPdf    18 08 53.2 -0.7
PSUT  Pine Spring      141.65   1          PKPdf    18 08 50.9 -3.4
PV12  Saucer Basin,    141.69 355          PKPdf    18 08 52.5 -1.9
R11A  Troy Canyon, C   141.76   4   P      PKPdf    18 08 54.9 +0.5
      baz=356
SDCO  Great Sand Dun   141.84 351   P      PKPdf    18 08 53.1 -1.6
      baz=12
PV13  Radium Mtn., P   141.85 355          PKPdf    18 08 52.1 -2.6
MTPU  Mount Pierson    142.15 359          PKPdf    18 08 52.9 -2.5
PKCU  Pink Cliffs      142.74 359          PKPdf    18 08 55.2 -1.2
WMOK  Wichita Mounta   143.03 341   P      PKPdf    18 08 55.7 -0.8
      baz=24
LCMT  Little Creek M   143.18   1          PKPbc    18 08 54.6 +0.8
U15A  North Rim        143.76 359          PKPdf    18 08 57.3 -0.8
MPMC  Manual Prospec   143.87   6   P      PKPbc    18 08 57.1 +1.3
      baz=352
LRMC  Laurel Mtn Rad   144.42   7   P      PKPbc    18 08 58.5 +1.0
      baz=352,SNR=5.7
TUQ   Turquoise Moun   144.63   4   P      PKPdf    18 08 59.4 -0.1
      baz=355
WUAZ  Wupatki          144.64 358          PKPbc    18 08 59.0 +0.8
WUAZ  Wupatki          144.64 358   P      PKPdf    18 09 00.4 +0.8
      baz=2.5
GSC   Goldstone, Bar   144.69   6   PKIKP  PKPbc    18 08 59.2 +0.9
GSC   Goldstone, Bar   144.69   6          PKPbc    18 08 59.2 +1.0
GSC   Goldstone, Bar   144.69   6   P      PKPdf    18 08 59.6  0.0
      baz=353,SNR=7.1
ANMO  Albuquerque      144.73 351   PKP    PKPdf    18 08 59.8  0.0
      comp=Z,12nm,1.1s,baz=21,slow=2.3,SNR=29
ANMO  Albuquerque      144.73 351   P      PKPbc    18 08 59.5 +1.0
      baz=11
MSTX  Muleshoe         144.92 345   P      PKPbc    18 08 59.6 +0.5
      baz=18
W18A  Petrified Fore   144.95 356   P      PKPdf    18 09 00.4 +0.3
      baz=5.3
EDW2  Edwards Air Fo   144.97   7   P      PKPdf    18 09 00.6 +0.6
      baz=351,SNR=12
W13A  Hualapai Mount   145.07   2          PKPdf    18 09 00.6 +0.2
HEC   Hector,Ludlow    145.20   5   P      PKPdf    18 09 01.5 +1.0
      baz=354,SNR=8.7
ABTX  Abilene, Hawle   145.25 340   P      PKPab    18 09 00.8 +0.6
      baz=24,SNR=5.9
GMRC  Granite Mounta   145.30   4   P      PKPdf    18 09 01.6 +1.0
      baz=355,SNR=9.4
X18A  Snowflake        145.55 356          PKPab    18 09 02.4 +0.9
BLG   Laguna Peak, P   145.57   9   P      PKPab    18 09 02.3 +1.0
      baz=349
OTAV  Otavalo          145.63 270   PKIKP  PKPab    18 09 03.2 +0.5
OTAV  Otavalo          145.63 270          PKPab    18 09 03.2 +0.5
PASC  Pasadena Art C   145.64   8          PKPdf    18 09 00.7 -0.4
BFSC  Mount Baldy Ra   145.64   7   P      PKPab    18 09 02.1 +0.4
      baz=351,SNR=6.2
X16A  Lo Mia Camp, P   145.74 358          PKPab    18 09 02.5 +0.4
PDMCI Parker Dam,Lak   145.86   2   P      PKPab    18 09 03.0 +0.7
      baz=358
IRM   Iron Mountain    145.96   3   P      PKPab    18 09 03.4 +0.7
      baz=356,SNR=10
BELC  Belle Mtn. Jos   146.05   5   P      PKPab    18 09 03.9 +0.7
      baz=354,SNR=5.2
HKT   Hockley          146.11 333   PKP2   PKPab    18 09 03.9 +0.6
HKT   Hockley          146.11 333          PKPab    18 09 03.9 +0.6
Y12C  Blythe           146.39   3   P      PKPab    18 09 04.8 +0.5
      baz=357
PFO   Pinyon Flats O   146.40   5   PKPbc  PKPab    18 09 04.8 +0.3
      comp=Z,5.9nm,0.8s,baz=356,slow=3.9,SNR=7.8
PFO   Pinyon Flats O   146.40   5          PKPbc    18 09 04.2 +0.4
PFO   Pinyon Flats O   146.40   5   P      PKPab    18 09 04.8 +0.3
      baz=353
XPFO  Pion Flat        146.40   5          PKPbc    18 09 04.3 +0.6
BC3   Big Chuckawall   146.44   4   P      PKPbc    18 09 04.4 +0.5
      baz=355,SNR=8.1
SCI2  San Clemente I   146.76   9   P      PKPbc    18 09 05.3 +0.7
      baz=350
GLA   Glamis           147.07   3   PKP2   PKPbc    18 09 06.3 +0.7
GLA   Glamis           147.07   3          PKPbc    18 09 06.3 +0.7
GLA   Glamis           147.07   3   P      PKPab    18 09 07.0 -0.1
      baz=356
MONP2 Monument Peak    147.11   6   P      PKPbc    18 09 07.1 +1.1
      baz=353
SWSC  Sam W. Stewart   147.12   5   P      PKPab    18 09 06.8 -0.3
      baz=354
JCT   Junction City    147.26 339   PKP2   PKPbc    18 09 05.8 -0.4
JCT   Junction City    147.26 339          PKPbc    18 09 05.8 -0.4
JCT   Junction City    147.26 339   P      PKPbc    18 09 06.7 +0.4
      baz=24
BAR   Barrett          147.30   6   PKPdf  PKPdf    18 09 01.2 -2.8
BAR                                        PKPbc    18 09 06.9 +0.7
121A  Cookes Peak, D   147.30 352          PKPbc    18 09 06.1 -0.3
121A  Cookes Peak, D   147.30 352   P      PKPbc    18 09 07.3 +0.8
      baz=9.3,SNR=6.2
IKP   In-Ko-Pah, Jac   147.38   5   P      PKPbc    18 09 07.7 +1.2
      baz=354
MNTX  Cornudas Mount   147.70 348          PKPdf    18 09 05.0 +0.4
MNTX                                PKPbc  PKPbc    18 09 09.1 +1.8
MNTX  Cornudas Mount   147.70 348   P      PKPbc    18 09 08.0 +0.7
      baz=14,SNR=9.9
TUC   Tucson           147.81 357   PKP2   PKPbc    18 09 08.8 +1.0
TUC   Tucson           147.81 357          PKPbc    18 09 08.8 +1.0
TUC   Tucson           147.81 357   P      PKPbc    18 09 08.5 +0.8
      baz=3.8
214A  Organ Pipe Nat   148.22 360   P      PKPbc    18 09 09.6 +0.8
      baz=0.0
833A  Chaparral WMA,   149.04 337   P      PKPbc    18 09 11.9 +0.9
      baz=27
TX31  Lajitas Ar. Si   149.55 344          PKPdf    18 09 08.5 +0.6
TX31                                PKPbc  PKPbc    18 09 13.2 +0.9
TX32  Lajitas Array    149.55 344          PKPdf    18 09 08.2 +0.4
TX32                                PKPbc  PKPbc    18 09 13.1 +0.8
TXAR  Lajitas Array    149.55 344   PKP    PKPdf    18 09 08.3 +0.4
      comp=Z,2.3nm,1.0s,baz=52,slow=2.1,SNR=45
TXAR                                PKPbc  PKPbc    18 09 13.5 +1.1
      comp=Z,8.3nm,0.9s,baz=58,slow=3.5,SNR=48
TXAR  Lajitas Array    149.55 344          PKPdf    18 09 07.8  0.0
TXAR                                PKPbc  PKPbc    18 09 13.1 +0.8
TGUH  Tegucigalpa,Un   151.11 300          PKiKP    18 09 17.3 +0.3
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PDG ***14*** *17:50:27.2±0.1, 43.44N×17.51E, h2km, ML2.7/13, Error ellipse: s-maj=0.2km s-min=0.4km az=0.0*
BEO ***14*** *17:50:27.4±0.5, 43.45N×17.39E, h5km±3km, ML2.5/12*
RHSSO ***14*** *17:50:27.7±0.3, 43.45N×17.47E, h3km±2km, ML2.5/11*
ISC 14 17:50:27.3±1.1**, 43.44N**±0.02×**17.46E**±0.02**, h4**km±9km**,**
n56, σ0.95/94**, 9C-5D, Northwestern Balkan Peninsula**

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Code  Station Name       Δ°  AZ°   Phase ID         Time      Res
                                   Op     ISC       h  m  s   ISC
RICI  Ricice            0.24 284 i Pg     Pg        17 50 32.0  0.0
RICI                               Sg     Sg        17 50 36.0 +0.8
MAKA  Makarska          0.35 245 i Pg     Pg        17 50 33.8 -0.3
MAKA                               Sg     Sg        17 50 39.6 +0.9
STON  Ston              0.59 162  ePg     Pg        17 50 38.2 -0.5
STON                              eSg     Sb        17 50 48.6 -0.2
STON  Ston              0.59 162 i Pg     Pg        17 50 38.2 -0.5
STON                               Sg     Sg        17 50 47.8 +1.5
STON  Ston              0.59 162  ePg     Pg        17 50 38.0 -0.6
STON                              eSg     Sg        17 50 47.8 +1.5
HVAR  Hvar              0.78 251 i Pg     Pg        17 50 41.1 -1.1
HVAR                               Sg     Sb        17 50 53.3 -1.0
DBRK  Dubrovnik         0.92 146 i Pg     Pg        17 50 44.1 -0.8
DBRK                               Sg     Sb        17 50 59.0 +0.7
KIJV  Kijevo            0.95 307  ePg     Pg        17 50 44.6 -1.0
KIJV                               Sg     Sn        17 51 00.1 -1.4
BRY   Bratogost         0.95 124  ePg     Pg        17 50 44.4 -1.2
BRY                               eSg     Sg        17 50 58.5 +0.5
TREB  Trebinje          0.97 137  ePg     Pg        17 50 44.6 -1.3
TREB                              eSg     Sg        17 50 59.9 +1.4
TREB  Trebinje          0.97 137  ePg     Pg        17 50 44.7 -1.2
TREB                              eSg     Sg        17 50 58.9 +0.4
MGRS  Mrkonjic Grad     1.02 345  ePg     Pg        17 50 45.9 -0.9
MGRS                              eSg     Sg        17 50 59.1 -0.9
UPM   Unac-Piva         1.08 102  ePg     Pg        17 50 47.3 -0.7
UPM                               eSg     Sg        17 51 02.3 +0.2
HCY   Herceg Novi       1.25 142  ePg     Pg        17 50 49.5 -1.7
HCY                               eSg     Sg        17 51 07.4  0.0
HAPS  Han Pijesak,Bl    1.26  58  ePg     Pg        17 50 50.3 -1.2
HAPS                              eSg     Sb        17 51 09.1 +0.8
HAPS  Han Pijesak,Bl    1.26  58  ePg     Pg        17 50 49.8 -1.7
HAPS                              eSg     Sg        17 51 07.3 -0.6
BLY   Banja Luka        1.33 352  ePg     Pn        17 50 51.8 -0.8
BLY                               eSg     Sb        17 51 10.2 +0.1
BLY   Banja Luka        1.33 352  ⇑P      Pb        17 50 52.9 +0.2
BLY                               ⇑S      Sn        17 51 10.8 +0.1
BLY   Banja Luka        1.33 352  ePg     Pn        17 50 51.6 -1.0
BLY                               eSg     Sb        17 51 10.0 -0.1
ZIRJ  Zirje             1.34 280  ePg     Pn        17 50 51.5 -1.2
MORI  Morici            1.34 289 i Pg     Pn        17 50 51.1 -1.7
RUDO  Rudo              1.40  82  ePg     Pn        17 50 52.9 -0.7
RUDO                              eSg     Sb        17 51 11.9 -0.4
BBLS  Lazi&#263;i       1.48  72  ePn     Pn        17 50 55.1 +0.4
BBLS                              eSn     Sg        17 51 16.5 +1.7
BBLS  Lazi&#263;i       1.48  72  ePn     Pn        17 50 54.4 -0.3
BBLS                              eSn     Sn        17 51 14.9 +0.4
UDBI  Udbina            1.64 312  ePn     Pb        17 50 57.7 -0.4
PDG   Podgorica         1.66 127  ePn     Pn        17 50 57.8 +0.7
PDG                               eSg     Sg        17 51 21.1 +0.5
PDG   Podgorica         1.66 127  ⇓P      Pn        17 50 57.0 -0.1
PDG                               ⇑S      Sn        17 51 17.8 -1.1
PDG   Podgorica         1.66 127  ePg     Pn        17 50 57.2 +0.1
PDG                               eSg     Sb        17 51 20.6 +1.0
DRME  Dracevica, Mon    1.78 134  ePn     Pn        17 50 59.6 +0.8
DRME                              eSn     Sn        17 51 21.9  0.0
DUGI  Dugi Otok         1.83 289  ePn     Pn        17 50 59.7 +0.2
SJES  Sjenica           1.84  95  ePn     Pb        17 51 01.5 -0.1
TEKS  Tekeris           1.86  53  eSn     Sn        17 51 24.3 +0.3
DIVS  Divibare          1.95  69  ePn     Pn        17 51 01.9 +0.6
DIVS  Divibare          1.95  69  ePn     Pn        17 51 01.2 -0.1
DIVS                              eSn     Sn        17 51 26.5 +0.3
IVAS  Ivanjica          1.97  85  ePn     Pn        17 51 02.4 +1.0
IVAS                              eSn     Sn        17 51 27.5 +1.0
NVLJ  Novalja           2.18 302  ePn     Pn        17 51 05.1 +0.8
MOSL  Moslavina         2.23 347  ePn     Pn        17 51 04.1 -0.9
TRUS  Trudelj           2.27  69  ePn     Pn        17 51 04.9 -0.7
GRUS  Gruza             2.41  78  ePn     Pn        17 51 07.9 +0.5
OZLJ  Ozalj             2.60 328 i Pn     Pn        17 51 11.6 +1.5
SELS  Selova            2.68  93  ePn     Pn        17 51 12.6 +1.4
CRES  Cresnjev          2.78 330  ePn     Pn        17 51 13.3 +0.7
CRES                              eSn     Sn        17 51 47.1 +0.5
MATE  Matera            2.84 192  ⇓P      Pn        17 51 12.8 -0.5
MATE                              ⇑S      Sn        17 51 45.8 -2.2
CEY   Cerknica          3.16 318  ePn     Pn        17 51 18.6 +0.8
CEY                               eSn     Sn        17 51 56.7 +0.7
BARS  Barje             3.25  99  ePn     Pn        17 51 19.7 +0.7
BARS                              eSn     Sn        17 51 58.5 +0.4
MDVR  Moldovita         3.35  65  ⇑P      Pn        17 51 20.1 -0.3
MDVR                              ⇑S      Sn        17 52 00.2 -0.4
SOKA  Soboth            3.67 333 i Pn     Pn        17 51 25.7 +0.9
      1.9nm,0.3s
SOKA                              eSn     Sn        17 52 07.5 -1.1
      2.0nm,0.6s
BZS   Buzias            3.69  52  ⇑P      Pn        17 51 25.4 +0.4
BZS                               ⇑S      Sn        17 52 08.1 -0.8
OBKA  Obir              3.70 327  ePg     Pg        17 51 37.8 -0.4
      3.8nm,0.5s
OBKA                              eSn     Sn        17 52 11.3 +1.9
      2.8nm,0.3s
BLKB  Belogradchik      3.80  85  ⇓S      Sn        17 52 12.1 +0.4
HERR  Herculane         3.85  66  ⇓P      Pn        17 51 26.6 -0.6
HERR                              ⇑S      Sn        17 52 12.6 -0.3
ARSA  Arzberg           4.05 341 i Pn     Pn        17 51 30.4 +0.3
      1.7nm,0.2s
ARSA                              eSn     Sn        17 52 17.4 -0.5
      0.5nm,0.2s
GZR   Gura Zlata        4.28  61  ⇓P      Pn        17 51 33.6 +0.3
MOA   Molln             4.95 334  ePn     Pn        17 51 44.2 +1.8
      1.4nm,0.3s
MOA                               eSn     Sn        17 52 43.0 +3.0
      1.5nm,0.3s
WTTA  Wattenberg        5.61 315  ePn     Pn        17 51 52.6 +1.0
      2.3nm,0.4s
WATA  Walderalm         5.69 315 i Pn     Pn        17 51 59.8 +7.2
      1.7nm,0.3s
```

NEIC ***14*** *17:51:55.1±1.1, 15.8S±0.4×179.0W±0.1, h547km±17km, mb4.6/8, Error ellipse: s-maj=57.8km s-min=6.2km az=161.0*
IDC ***14*** *17:51:55.2±1.9, 17.05S×178.96W, h512km±37km, mb3.1/3, mb1 3.3/4, mb1mx2.9/33, mbtmp4.1/4, Error ellipse: s-maj=113.2km s-min=22.0km az=150.0*
ISC 14 17:51:56.6±0.7**, 15.8S**±0.2×**179.1W**±0.1**, h550**km**, n18,**
σ2.01/20**, 1D, Fiji Islands region**

```
Code  Station Name       Δ°  AZ°   Phase ID         Time      Res
                                   Op     ISC       h  m  s   ISC
MSVF  Nonsavu           3.29 235   P      P         17 53 12.7 -0.8
AFI   Afiamalu          7.37  76   P      P         17 53 46.6 -1.7
      2.8nm,0.3s,baz=108,slow=16,SNR=2.8
AFI                                S      S         17 55 22.6 +2.8
      3.6nm,0.3s,baz=135,slow=17,SNR=3.9
AFI   Afiamalu          7.37  76   P      P         17 53 45.0 -3.3
STKA  Stephens Creek   39.06 239   P      P         17 58 33.7 -3.0
      1.1nm,0.4s,baz=87,slow=14,SNR=5.4
STKA  Stephens Creek   39.06 239   P      P         17 58 34.2 -2.5
WR0   Warramunga Arr   44.17 258   P      P         17 59 18.6 +1.3
WB0   Warramunga Arr   44.31 258   P      P         17 59 18.7 +0.3
WB2   Warramunga Arr   44.35 258   P      P         17 59 19.0 +0.4
WRAB  Tennant Creek    44.35 258   P      P         17 59 18.9 +0.2
WRA   Warramunga Arr   44.36 258   P      P         17 59 18.8 +0.1
      0.8nm,0.7s,baz=95,slow=7.5,SNR=6.2
AS31  Alice Springs    44.72 252   P      P         17 59 21.4 -0.1
ASAR  Alice Springs    44.72 252   P      P         17 59 21.4 -0.1
      4.1nm,0.5s,baz=89,slow=7.9,SNR=93
ASAR                               PcP    PcP       18 00 53.5 +1.5
      0.2nm,0.4s,baz=94,slow=3.8,SNR=4.3
ASAR  Alice Springs    44.72 252   P      P         17 59 20.8 -0.7
SOEI  Soe              55.39 269   P      P         18 00 43.4 +3.6
SOEI                               IAmb   IAmb      18 00 49.3
      comp=Z,37nm,1.7s
KSAR  Wonju Array Be   72.71 318   P      P         18 02 27.0 -2.2
KS19  Wonju Array Si   72.76 318   P      P         18 02 28.3 -1.2
SYO   Syowa Base       91.01 193⇓eX     P         18 04 04.0 +2.0
GERES GERESS Array B  145.44 345   PKPbc  PKiKP     18 10 38.2 +1.6
```

comp=Z,0.4nm,0.4s,baz=28,slow=2.8,SNR=4.7

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*IDC **14** 17:52:08.6±2.6, 10°.28S×160°.67E, h0^{km}, mb3.3/4, mb1 3.5/5, mb1mx3.4/35, mbtmp3.4/5, ML3.8/1, MS4.3/1, Ms1 4.3/1, ms1mx3.1/9, Error ellipse: s-maj=51.3km s-min=23.6km az=84.0*

ISC 14 17:52:14.7±2.0, **10°.3S**±0°.1×**160°.6E**±0°.3, **h42^{km}, n14, σ1^{s}73**/9, **mb3.1**/4, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.06	322	Pn	Pn	17 52 31.3	-1.8
	165nm,0.3s,baz=232,slow=23,SNR=62						
HNR				Sn	Sn	17 52 48.0	+1.4
	312nm,0.3s,baz=112,slow=4.0,SNR=14						
HNR	Honiara	1.06	322	*i* P	Pn	17 52 31.0	-2.1
HNR				*i* S	Sn	17 52 48.0	+1.4
CTA	Charters Tower	16.93	233	Pn	Pn	17 56 08.9	+0.2
	0.2nm,0.3s,baz=76,slow=15,SNR=2.5						
WRA	Warramunga Arr	27.08	246	P	P	17 57 53.7	0.0
	0.2nm,0.8s,baz=77,slow=9.0,SNR=3.3						
RAO	Raoul Island	27.57	136	LR	LR	18 05 20.9	
	comp=Z,616nm,21.2s,baz=74,slow=29						
ASAR	Alice Springs	28.73	239	P	P	17 58 08.0	-0.5
	0.3nm,0.8s,baz=64,slow=10,SNR=8.2						
H11S2	WAKE ISLAND Hy	29.21	12	T	T	18 27 05.9	
	baz=194,slow=74,SNR=3.6						
H11S3	WAKE ISLAND Hy	29.21	12	T	T	18 27 21.4	
	baz=194,slow=74,SNR=4.6						
H11S1	WAKE ISLAND Hy	29.22	12	T	T	18 27 14.9	
	baz=194						
H11N1	WAKE ISLAND Hy	30.43	12	T	T	18 28 27.7	
	baz=198						
H11N3	WAKE ISLAND Hy	30.44	12	T	T	18 28 36.6	
	baz=198						
H11N2	WAKE ISLAND Hy	30.45	12	T	T	18 28 33.0	
	baz=198						
SONM	Songino Array	75.12	326	P	P	18 03 51.6	-0.9
	0.2nm,0.6s,baz=140,slow=7.5,SNR=2.4						
MKAR	Makanchi Array	89.53	318	P	P	18 05 10.1	+2.4
	0.1nm,0.5s,baz=119,slow=5.1,SNR=2.6						

IDC 14 18:21:06.0±2.8, **5°.89S**×**147°.40E, h224^{km}**±43^{km}, **mb2.7**/3, **mb1 2.8**/5, **mb1mx2.7**/30, **mbtmp3.2**/5, **Error ellipse: s-maj=92.2km s-min=28.8km az=112.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.50	184	P	Pn	18 22 02.8	+0.1
	1.4nm,0.3s,baz=14,slow=4.2,SNR=8.1						
PMG				S	S	18 22 48.0	+0.7
	0.4nm,0.3s,baz=196,slow=18,SNR=2.1						
WRA	Warramunga Arr	18.87	221	P	P	18 25 09.4	-0.4
	0.2nm,0.3s,baz=47,slow=12,SNR=14						
ASAR	Alice Springs	21.93	215	P	P	18 25 42.0	+0.3
	0.3nm,0.7s,baz=42,slow=8.7,SNR=6.9						
FITZ	Fitzroy Crossi	24.46	238	P	P	18 26 04.8	+0.2
	0.7nm,0.4s,baz=171,slow=0.9,SNR=6.6						
MKAR	Makanchi Array	77.67	320	P	P	18 32 37.7	-0.1
	0.1nm,0.4s,baz=110,slow=8.4,SNR=2.6						

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*IDC **14** 18:27:55.8±0.7, 56°.17S×25°.79W, h0^{km}, mb4.3/6, mb1 4.3/7, mb1mx4.0/27, mbtmp4.3/7, ML3.6/1, MS3.8/5, Ms1 3.7/5, ms1mx3.4/20, Error ellipse: s-maj=32.4km s-min=19.1km az=78.0*

*NEIC **14** 18:27:57.2±1.7, 56°.19S±0°.09×26°.0W±0°.2, h10^{km}±4^{km}, mb4.8/20, Error ellipse: s-maj=15.3km s-min=12.5km az=86.0*

ISC 14 18:27:57.1±0.5, **56°.20S**±0°.09×**25°.90W**±0°.10, **h10^{km}, n44, σ0^{s}90**/42, **mb4.6**/12, **MS3.7**/5, **1C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	6.35	283	Pn	Pn	18 29 31.2	+0.6
VNA1	Neumayer--Stat	16.40	159	P	P	18 31 49.3	-0.5
VNA3	Neumayer Olymp	16.62	162	P	P	18 31 51.8	-0.5
SNAA	Sanae	18.32	157	P	P	18 32 13.6	+2.5
SNAA	Sanae	18.32	157	P	P	18 32 11.2	+0.1
	0.2nm,0.3s,baz=27,slow=11,SNR=19						
SNAA	Sanae	18.32	157	P	Pn	18 32 10.2	-0.8
EFI	East Falkland	19.36	270	P	P	18 32 20.1	-2.3
EFI				IAmb	IAmb	18 32 50.1	
	comp=Z,136nm,1.6s						
PMSA	Palmer Station	20.35	230	LR	LR	18 39 27.2	
	comp=Z,296nm,19.1s,baz=108,slow=34						
PMSA	Palmer Station	20.35	230	P	P	18 32 32.0	-1.2
SYO	Syowa Base	31.02	140	⇑*e*P	P	18 34 23.8	+10
PLCA	Paso Flores	32.73	279	P	P	18 34 31.4	+1.5
PLCA				IAmb	IAmb	18 35 04.1	
	comp=Z,14nm,1.6s						
QSPA	South Pole Qui	34.05	180	P	P	18 34 41.4	+0.2
	comp=Z,7.6nm,0.6s,baz=205,slow=3.4,SNR=59						
QSPA	South Pole Qui	34.05	180	P	P	18 34 41.3	+0.1
QSPA				IAmb	IAmb	18 34 48.0	
	comp=Z,18nm,1.1s						
CPUP	Villa Florida	37.45	310	P	P	18 35 10.8	+0.4
	comp=Z,1.3nm,0.5s,baz=155,slow=11,SNR=3.7						
CPUP	Villa Florida	37.45	310	P	P	18 35 10.3	-0.1
ROC1	El Roble	38.67	288	P	P	18 35 19.1	-1.9
MAW	Mawson	39.60	143	LR	LR	18 49 54.7	
	comp=Z,84nm,19.5s,baz=244,slow=33						
GO02	Mina Guanaco	44.20	296	P	P	18 36 05.9	-0.6
GO02				IAmb	IAmb	18 36 10.4	
	comp=Z,21nm,1.3s						
BOSA	Boshof	45.31	74	LR	LR	18 52 10.2	
	comp=Z,184nm,19.0s,baz=211,slow=32						
PB10	IPOC Station P	46.05	296	P	P	18 36 21.9	+1.0
VNDA	Vanda	46.46	182	P	P	18 36 24.0	+0.6
	comp=Z,1.9nm,0.7s,baz=178,slow=6.1,SNR=8.9						
VNDA	Vanda	46.46	182	P	P	18 36 24.1	+0.7
PB01	IPOC Station P	47.61	299	P	P	18 36 33.1	0.0
GO01	Chusmiza	48.64	301	P	P	18 36 41.4	-0.2
GO01				IAmb	IAmb	18 36 46.6	
	comp=Z,7.1nm,0.8s						
PB11	IPOC Station P	48.78	300	P	P	18 36 42.6	+0.3
MNMC	Minye Minye	49.29	301	P	P	18 36 45.8	-0.5
MNMC				IAmb	IAmb	18 36 58.7	
	comp=Z,17nm,1.4s						
RCBR	Riachuelo	50.85	347	P	P	18 36 58.0	0.0
RCBR				IAmb	IAmb	18 36 58.8	
	comp=Z,19nm,1.2s						
LPAZ	La Paz	51.05	304	P	P	18 37 00.9	+0.8
	comp=Z,1.5nm,0.3s,baz=152,slow=5.9,SNR=12						
LPAZ	La Paz	51.05	304	P	P	18 36 59.8	-0.3
LPAZ	La Paz	51.05	304		P	18 37 01.1	+1.0
LPAZ				IAmb	IAmb	18 37 01.8	
	comp=Z,9.6nm,1.3s						
DBIC	Dimbokro	65.01	23	P	P	18 38 36.7	-0.5
	comp=Z,2.7nm,0.9s,baz=194,slow=4.4,SNR=3.4						
DBIC				LR	LR	19 00 31.4	
	comp=Z,62nm,19.0s,baz=156,slow=30						
DBIC	Dimbokro	65.01	23	P	P	18 38 36.4	-0.7
DBIC				IAmb	IAmb	18 38 37.6	
	comp=Z,9.4nm,1.3s						
FLOC	Florencia	70.23	306	P	P	18 39 11.0	+0.8
OTAV	Otavalo	70.34	303	P	P	18 39 11.6	+0.2
OTAV				IAmb	IAmb	18 39 17.4	
	comp=Z,4.0nm,0.8s						
MBAR	Mbarara	71.58	62	P	P	18 39 17.9	-0.8
TORD	Torodi Ar. Bea	72.83	28	P	P	18 39 26.1	+0.3
	comp=Z,2.5nm,0.8s,baz=203,slow=6.7,SNR=11						
TORD				LR	LR	19 05 20.4	
	comp=Z,43nm,20.0s,baz=55,slow=31						
TORD	Torodi Ar. Bea	72.83	28	P	P	18 39 25.8	-0.1
CMAR	Chiang Mai Arr	124.34	109	PKP	PKiKP	18 46 56.6	+0.2
	comp=Z,0.3nm,0.5s,baz=229,slow=5.5,SNR=3.6						
YKA	Yellowknife Ar	136.76	317	PKP	PKPdf	18 47 18.6	+0.4
	comp=Z,0.2nm,0.6s,baz=137,slow=2.7,SNR=3.6						
INK	Inuvik	146.37	320		PKPbc	18 47 36.4	-0.1
SONM	Songino Array	150.02	86	PKPbc	PKPbc	18 47 46.7	-0.3
	comp=Z,1.6nm,1.0s,baz=192,slow=3.2,SNR=3.9						
SONM	Songino Array	150.02	86	PKPdf	PKPdf	18 47 41.5	-0.5
SONM					PKPbc	18 47 48.9	+1.9
ILAR	Eielson Array	150.75	311	PKPbc	PKPbc	18 47 47.5	-0.4
	comp=Z,3.4nm,1.0s,baz=90,slow=1.2,SNR=16						
ILAR	Eielson Array	150.75	311	PKPdf	PKPdf	18 47 42.3	-0.1
ILAR					PKPbc	18 47 47.6	-0.4

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*IDC **14** 18:33:39.4±2.3, 39°.19N×143°.31E, h0^{km}, mb3.5/3, mb1 3.7/4, mb1mx3.4/34, mbtmp3.5/4, ML2.5/1, Error ellipse: s-maj=47.8km s-min=36.1km az=54.0*

*JMA **14** 18:33:43.1±0.1, 39°.00N×142°.71E, h20^{km}±2^{km}, M3.6*

ISC 14 18:33:43.3±2.2, **39°.02N**±0°.05×**142°.66E**±0°.09, **h11^{km}**±12^{km}, **n21, σ1^{s}20**/26, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.77	275	P	Pg	18 33 58.6	+0.4
OFUJ				S	Sb	18 34 09.4	+0.2
MIYJ	Miyakonagasawa	0.85	311	P	Pg	18 33 59.6	-0.2
MIYJ				S	Sb	18 34 11.6	0.0
JKMT	Kesennumamotoy	0.95	257	P	Pb	18 34 01.0	-0.7
JKMT				S	Sg	18 34 13.7	-0.2
JTH	Tanohata	1.10	326	P	Pb	18 34 04.0	-0.4
JMK	Ichinoseki	1.12	267	P	Pb	18 34 04.2	-0.5
JMK				S	Sb	18 34 18.9	-0.4
JOM	Ohasama	1.15	293	P	Pb	18 34 04.7	-0.5
JOM				S	Sb	18 34 20.4	+0.2
JIO	Ouri	1.17	241	P	Pn	18 34 04.1	-1.5
JIO				S	Sb	18 34 18.7	-2.0
JKZ	Kuzumaki	1.41	313	P	Pn	18 34 08.9	0.0
JKZ				*e*S	Sb	18 34 27.7	+0.1
JANG	Nango	1.61	327	P	Pn	18 34 11.7	0.0
JANG				S	Sb	18 34 33.2	-0.2
JRG	Rokugo	1.61	284	P	Pb	18 34 13.0	-0.1
JRG				S	Sb	18 34 34.3	+0.8
JOU	Okura	1.69	248	P	Pn	18 34 13.0	+0.2
JOU				S	Sn	18 34 34.3	-0.2
MJAR	Matsushiro Arr	4.31	236	Pn	Pn	18 34 53.4	+4.6
	0.2nm,0.3s,baz=31,slow=15,SNR=8.8						
MJAR				Sn	Sb	18 35 50.3	-0.7
	0.1nm,0.3s,baz=79,slow=19,SNR=3.1						
H11N2	WAKE ISLAND Hy	28.41	126	T	T	19 09 17.3	
	baz=318,slow=74,SNR=32						
H11N1	WAKE ISLAND Hy	28.42	126	T	T	19 09 14.0	
	baz=318,slow=74,SNR=15						
H11N3	WAKE ISLAND Hy	28.43	126	T	T	19 09 18.5	
	baz=318,slow=74,SNR=21						
H11S1	WAKE ISLAND Hy	29.20	128	T	T	19 10 15.4	
	baz=320,SNR=3.3						
H11S3	WAKE ISLAND Hy	29.21	128	T	T	19 10 15.7	
	baz=320						
H11S2	WAKE ISLAND Hy	29.22	128	T	T	19 10 15.4	
	baz=320						
MKAR	Makanchi Array	43.92	301	P	P	18 41 50.5	+0.5
	0.3nm,0.8s,baz=79,slow=9.8,SNR=3.3						
WRA	Warramunga Arr	59.17	189	P	P	18 43 43.4	-0.9
	0.6nm,0.5s,baz=5.4,slow=6.9,SNR=16						
ASAR	Alice Springs	62.90	189	P	P	18 44 09.4	-0.2
	0.2nm,0.4s,baz=15,slow=7.7,SNR=5.9						

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*IDC **14** 18:49:26.3±0.6, 0°.49N×126°.39E, h0^{km}, mb4.2/13, mb1 4.3/15, mb1mx4.1/35, mbtmp4.2/15, ML4.0/2, MS3.3/3, Ms1 3.3/3, ms1mx2.7/41, Error ellipse: s-maj=23.0km s-min=13.0km az=67.0*

*NEIC **14** 18:49:31.2±2.5, 0°.62N±0°.08×126°.56E±0°.03, h41^{km}±6^{km}, mb4.6/45, Error ellipse: s-maj=11.5km s-min=4.4km az=169.0*

*DJA **14** 18:49:31.3±0.6, 1°N±2°×12°7E±°, h24^{km}±6^{km}, M4.4/18, mB4.9/5, mb4.7/16, MLv4.3/18, Mw(mB)4.2/5*

ISC 14 18:49:32.0±0.4, **0°.58N**±0°.04×**126°.62E**±0°.04, **h47^{km}, n124, σ1^{s}63**/135, **mb4.6**/33, **2C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.77	75	P	Pn	18 49 46.5	0.0
TNTI				S	Sn	18 49 57.7	+0.5
TNTI	Ternate	0.77	75		Pn	18 49 46.6	0.0
TNTI				Sn	Sn	18 49 58.2	+1.1
KMSI	Cibinong	2.64	270	P	Pn	18 50 10.2	-1.9
KMSI				S	Sn	18 50 44.1	+1.2
SANI	Sanana	2.68	194	P	Pn	18 50 10.5	-2.2
SANI				S	Sn	18 50 44.8	+0.8
NLAI	Namlea	3.82	173	P	Pn	18 50 27.7	-0.6
NLAI				S	Sn	18 51 11.7	-0.3
LUWI	Luwuk	4.17	247	P	Pn	18 50 33.4	+0.3
LUWI				S	Sn	18 51 26.2	+5.6
LUWI	Luwuk	4.17	247		Pn	18 50 32.7	-0.4
LUWI				Sn	Sn	18 51 21.9	+1.3
AAI	Ambon	4.52	160	P	Pn	18 50 38.6	+0.7
MSAI	Masohi	4.53	149	P	Pn	18 50 41.8	+3.7
MRSI	Marisa	4.68	269	P	Pn	18 50 39.4	-0.7
SWI	Sorong	4.86	107	P	Pn	18 50 44.1	+1.6
SIJI	Sorong	4.86	107	Pn	Pn	18 50 45.3	+2.7
	5.0nm,0.3s,baz=221,slow=22,SNR=17						
SIJI				Sn	Sn	18 51 42.5	+4.7
	0.7nm,0.3s,baz=18,slow=19,SNR=2.2						
APSI	Ampana	5.19	253	P	Pn	18 50 46.3	-0.8
	0.5nm1µm94nm,0.7s						
SKMP	Bagumbayan, Su	6.26	341	*e*P	Pn	18 51 02.5	+0.7
KCP	Kidapawan	6.57	347	⇑*e*P	Pn	18 51 11.8	+5.6
FAKI	Fak Fak	6.61	122	P	Pn	18 51 07.6	+1.0
	0.1nm25nm,1.4s						
FAKI	Fak Fak	6.61	122	Pn	Pn	18 51 07.7	+1.0
MPSI	Mapaga	6.73	268	P	Pn	18 51 08.8	+0.6
	0.1nm19nm,0.7s						
CTBH	Cotabato--PC H	7.01	340	⇑*i*P	Pn	18 51 15.7	+3.5
BBSI	Bau Bau	7.25	214	P	Pn	18 51 16.0	+0.5
	0.0nm282nm14nm,0.9s						
TTSI	Tana Toraja	7.69	242	P	Pn	18 51 20.5	-1.0
	0.3nm954nm76nm,0.6s						
PAGZ	Pagadian	7.91	336	*e*P	Pn	18 51 24.4	-0.1
BNSI	Bone	8.17	233	P	Pn	18 51 27.3	-0.8
	77nm,0.6s						
SPSI	Sidrap Palu	8.20	237	P	Pn	18 51 28.0	-0.4
	2µm147nm,0.6s						
BKSI	Bulukumba	8.74	228	P	Pn	18 51 36.2	+0.3
	465nm49nm,0.6s						
KAPI	Kappang	8.83	231	Pn	Pn	18 51 36.0	-1.0
	7.5nm,0.3s,baz=217,slow=1.7,SNR=12						
KAPI				Sn	Sn	18 53 09.6	-5.6
	0.4nm,0.3s,baz=150,slow=20,SNR=2.1						
BKB	Balikpapan	9.89	259	Pn	Pn	18 51 51.4	-0.2
SOEI	Soe	10.53	193	P	Pn	18 52 03.2	+2.7
	30nm,0.8s						
SOEI	Soe	10.53	193	Pn	Pn	18 52 02.9	+2.5
PLAI	Plampang	12.84	223	P	P	18 52 43.9	+2.2
SBUM	Sibu	14.51	278	P	P	18 52 59.6	-0.7
JAGI	Jajag, Banyuwa	15.34	234	P	P	18 53 08.4	-1.0
KSM	Kuching	16.33	273	P	Pn	18 53 19.0	+0.7
KSM				IAmb	IAmb	18 53 21.3	
	comp=Z,35nm,0.8s						
SZP	Santa	17.93	341	P	Pn	18 53 37.8	-0.1
UGM	Wanagama	18.13	242	P	Pn	18 53 42.3	+1.7
UGM				IAmb	IAmb	18 53 43.0	
	comp=Z,77nm,1.2s						
FITZ	Fitzroy Crossi	18.58	183	P	P	18 53 44.3	-1.0
	comp=Z,0.5nm,0.3s,baz=168,slow=0.3,SNR=19						
FITZ				LR	LR	19 02 26.4	
	comp=Z,38nm,18.1s,baz=95,slow=42						
KPJI	Karang Pucung	19.32	246	P	Pn	18 53 54.6	-0.2
	comp=Z,27nm,0.7s						
LEM	Lembang	20.34	248	P	P	18 54 03.8	-0.9
	comp=Z,9.8nm,0.4s,baz=311,slow=6.4,SNR=4.9						
CISI	Cisompet, Garu	20.42	246	P	P	18 54 05.7	+0.2
CISI				IAmb	IAmb	18 54 13.8	
	comp=Z,25nm,0.8s						
DLV	T Lat	21.25	303	P	P	18 54 14.3	-0.2
DLV				IAmb	IAmb	18 54 44.2	
	comp=Z,43nm,1.3s						
WB0	Warramunga Arr	21.61	160	P	P	18 54 17.4	-0.8
WRAB	Tennant Creek	21.75	160	P	P	18 54 18.7	-1.0
WRAB				IAmb	IAmb	18 54 22.2	
	comp=Z,22nm,0.8s						
WRA	Warramunga Arr	21.75	160	P	P	18 54 19.0	-0.7
	comp=Z,17nm,0.5s,baz=334,slow=11,SNR=88						
WRA				S	S	18 58 15.8	-2.2
	comp=Z,4.4nm,1.1s,baz=338,slow=17,SNR=5.8						
WRA	Warramunga Arr	21.75	160	P	P	18 54 18.3	-1.4
WB2	Warramunga Arr	21.75	160	P	P	18 54 18.5	-1.2
WB2				IAmb	IAmb	18 54 22.3	
	comp=Z,23nm,0.7s						
PMG	Port Moresby	22.73	116	LR	LR	19 05 43.9	
	comp=Z,99nm,18.3s,baz=316,slow=43						
MDSI	Maura Dua	22.98	257	P	P	18 54 35.9	+3.1
	comp=Z,6.1nm,0.8s						
YULB	Yu-li	23.26	348	P	P	18 54 33.1	-2.4
YULB				IAmb	IAmb	18 55 08.2	
	comp=Z,30nm,1.3s						
TPUB	Ta-pu	23.32	346	P	P	18 54 33.5	-2.7
TPUB				IAmb	IAmb	18 54 49.3	
	comp=Z,38nm,1.3s						
SSLB	Suanglung	23.72	347	P	P	18 54 37.9	-2.0
MNAI	Manna	24.15	258	P	P	18 54 43.1	-0.8
AS31	Alice Springs	25.12	164	P	P	18 54 52.4	-0.3
ASAR	Alice Springs	25.12	164	P	P	18 54 53.5	+0.8
	comp=Z,17nm,0.7s,baz=346,slow=12,SNR=137						
ASAR				PcP	PcP	18 58 26.2	0.0
	comp=Z,0.5nm,0.4s,baz=355,slow=2.7,SNR=4.0						
ASAR				S	S	18 59 12.9	-1.5
	comp=Z,0.3nm,0.8s,baz=338,slow=12,SNR=4.1						
ASAR	Alice Springs	25.12	164	P	P	18 54 52.1	-0.6
ASAR					PcP	18 58 25.5	-0.7
SDSI	Sungai Dareh	25.23	267	P	P	18 54 56.8	+3.0
	comp=Z,8.1nm,0.9s						
UBPT	Khong Chiam	25.49	306	P	P	18 54 54.5	-1.6
UBPT				IAmb	IAmb	18 55 09.4	
	comp=Z,40nm,1.6s						
BKNI	Bangkinang	25.58	270	P	P	18 54 57.8	+0.8
IPM	Ipoh	25.86	279	P	P	18 54 58.0	-1.5
PDSI	Padang	26.20	267	P	P	18 55 06.3	+3.7
KULM	Kulim	26.35	281	P	P	18 55 01.8	-2.1
WHN	Wuhan	32.00	340	P	P	18 55 59.8	+5.9
NJ2	Nanjing	32.15	348	*e*P	P	18 55 56.3	+1.1
CMAR	Chiang Mai Arr	32.47	305	P	P	18 55 58.3	+0.1
	comp=Z,0.3nm,0.6s,baz=137,slow=6.8,SNR=3.9						
CMAR	Chiang Mai Arr	32.47	305	P	P	18 55 59.1	+0.9
ENH	Enshi	33.73	333	P	P	18 56 08.9	-0.2
ENH				IAmb	IAmb	18 56 33.5	
	comp=Z,14nm,1.5s						
HNR	Honiara	34.64	108	LR	LR	19 10 21.2	
	comp=Z,51nm,18.5s,baz=192,slow=36						
JHJ2	Mitsune	34.66	20	P	P	18 56 17.1	+0.1
STKA	Stephens Creek	35.26	158	P	P	18 56 22.4	+0.1
	comp=Z,4.9nm,0.5s,baz=327,slow=8.2,SNR=16						
STKA	Stephens Creek	35.26	158	P	P	18 56 21.9	-0.4
KSRS	Korea Array	36.72	2	P	P	18 56 37.4	+2.8
	comp=Z,1.1nm,0.7s,baz=178,slow=8.5,SNR=3.6						
LZH	Lanzhou	41.18	332	*e*P	P	18 57 11.3	-0.9
LZH				pP	pP	18 57 25.3	+1.0
LZH				sP	sP	18 57 31.9	+2.4
LZH				*e*PP	PnPn	18 58 50.8	-1.9
CAN	Canberra	41.38	152	P	P	18 57 14.9	+1.2
HHC	Hu-ho-hao-te	42.35	343	*e*P	P	18 57 23.5	+1.8
HHC				SS	SS	19 06 40.6	-9.3
USRK	Ussuriysk Ar.	43.70	6	P	P	18 57 33.5	+1.1
	comp=Z,2.4nm,0.7s,baz=176,slow=6.6,SNR=6.6						
USRK	Ussuriysk Ar.	43.70	6	P	P	18 57 33.1	+0.8
LSA	Lhasa	44.48	314	P	P	18 57 40.0	+0.5
GTA	Gaotai	45.75	331	*e*P	P	18 57 50.6	+1.6
GTA				pP	pP	18 57 55.3	-5.9
GTA				sP	pwP	18 57 57.6	-6.3
TAPN	Taplejung	45.84	309	*e*P	P	18 57 48.2	-1.9
	comp=Z,7.1nm,0.6s						
ODAN	Odare	45.86	308	*e*P	P	18 57 48.4	-1.8
	comp=Z,11nm,0.8s						
TARA	Tarawa	46.30	89	P	P	18 57 51.3	-2.3
RAMN	Ramite	46.52	308	*e*P	P	18 57 54.1	-1.3
	comp=Z,8.6nm,0.5s						
JIRN	Jiri	47.17	308	*e*P	P	18 57 58.9	-1.7
	comp=Z,19nm,0.7s						
GUN	Gumba	47.53	308	*e*P	P	18 58 01.7	-1.7
	comp=Z,25nm,0.7s						
PKIN	Phulchoki	47.76	308	*e*P	P	18 58 02.7	-2.4
	comp=Z,4.3nm,0.6s						
KKN	Kakani	47.95	308	*e*P	P	18 58 04.5	-2.0
DMN	Daman	48.01	308	*e*P	P	18 58 05.0	-2.0
YSS	Yuzh-Sakhalins	48.30	15	P	P	18 58 08.9	+0.5
YSS				IAmb	IAmb	18 58 25.2	
	comp=Z,7.5nm,0.8s						
GKN	Gorkha	48.55	308	*e*P	P	18 58 10.0	-1.1
DANN	Dangsing	49.40	308	*e*P	P	18 58 15.8	-1.9
	comp=Z,23nm,0.7s						
ULN	Ulaanbaatar	50.07	343	P	P	18 58 23.0	+0.7
SONM	Songino Array	50.24	342	P	P	18 58 23.9	+0.3
	comp=Z,0.4nm,0.4s,baz=161,slow=7.9,SNR=4.2						
SONM	Songino Array	50.24	342	P	P	18 58 22.9	-0.6
WMQ	Urumqi	55.25	326	*e*P	P	18 59 01.6	+1.0
PETK	Petropavlovsk-	58.38	21	P	P	18 59 25.4	+2.9
	comp=Z,3.5nm,0.8s,baz=183,slow=6.2,SNR=7.5						
PETK	Petropavlovsk-	58.38	21	P	P	18 59 23.9	+1.4
MK31	Makanchi Array	60.08	326	P	P	18 59 33.9	-0.5
MK31				IAmb	IAmb	18 59 37.9	
	comp=Z,2.9nm,0.7s						
MKAR	Makanchi Array	60.08	326	P	P	18 59 34.3	-0.1
	comp=Z,3.5nm,0.4s,baz=123,slow=8.8,SNR=68						
MKAR	Makanchi Array	60.08	326	P	P	18 59 33.5	-0.9
KSH	Kashi	60.21	316	P	P	18 59 36.9	+1.3
KSH				pP	sP	18 59 53.8	+0.6
KSH				PcP	PcP	19 00 21.3	+0.6
KSH				S	S	19 07 44.5	-1.8
KSH				sS	sS	19 08 12.5	+4.7
KSH				ScS	SKKSac	19 09 18.1	-4.3
MAKZ	Makanchi	60.27	326	P	P	18 59 34.7	-1.0
MAKZ				IAmb	IAmb	18 59 40.6	
	comp=Z,4.2nm,0.5s						
BKZ	Black Stump Fm	60.35	137	P	P	18 59 35.3	-1.1
URZ	Urewera	60.35	136	P	P	18 59 35.1	-1.3
BHW	Baring Head	60.38	140	P	P	18 59 35.5	-0.9
NRN	Naryn	61.08	318	P	P	18 59 39.6	-2.1
NRN				IAmb	IAmb	18 59 42.4	
	comp=Z,3.0nm,0.5s						
AAK	Ala-Archa	62.63	319	P	P	18 59 52.3	+0.4
ARSB	Arslanbob	63.06	317	P	P	18 59 54.1	-0.6
ARSB				IAmb	IAmb	19 00 18.8	
	comp=Z,6.8nm,1.2s						
ZAA0	Zalesovo Array	63.34	334	P	P	18 59 55.5	-0.7
ZAA0				IAmb	IAmb	19 00 02.2	
	comp=Z,3.1nm,0.8s						
ZALV	Zalesovo Beam	63.34	334	P	P	18 59 55.4	-0.8
	comp=Z,1.5nm,0.5s,baz=116,slow=6.8,SNR=6.3						
ZALV	Zalesovo Beam	63.34	334	P	P	18 59 55.0	-1.1
KBL	Kabul	63.37	309	P	P	18 59 55.7	-1.3
KBL				IAmb	IAmb	19 00 00.3	
	comp=Z,3.6nm,0.6s						
KURK	Kurchatov	64.34	328	P	P	19 00 02.4	-0.3
KK31	Karatay Array	65.47	318	P	P	19 00 09.5	-0.8
KK31				IAmb	IAmb	19 00 25.8	
	comp=Z,6.5nm,1.4s						
KKAR	Karatay Array	65.47	318	P	P	19 00 09.3	-1.1
KKAR				IAmb	IAmb	19 00 25.8	
	comp=Z,6.5nm,1.4s						
BRVK	Borovoye	69.97	328	P	P	19 00 37.6	-0.8
BRVK				IAmb	IAmb	19 00 39.5	
	comp=Z,6.6nm,0.8s						
GEYT	Alibeck	72.79	310	P	P	19 00 55.6	-0.2
	comp=Z,1.3nm,0.6s,baz=145,slow=5.3,SNR=3.1						
GEYT	Alibeck	72.79	310	P	P	19 00 55.4	-0.4
ABKAR	Akbulak array	74.52	321	P	P	19 01 05.4	-0.3
ABKAR	Akbulak array	74.52	321	P	P	19 01 05.3	-0.3
ABKAR				IAmb	IAmb	19 01 06.5	
	comp=Z,4.6nm,0.8s						
MAW	Mawson	80.78	200	P	P	19 01 39.8	-0.4
RAYN	Ar Rayn	81.62	294	P	P	19 01 44.5	-1.2
RAYN				IAmb	IAmb	19 01 49.7	
	comp=Z,4.9nm,0.9s						
BRTR	Keskin Array B	91.93	310	P	P	19 02 38.5	+2.5
	comp=Z,0.8nm,0.9s,baz=116,slow=6.6,SNR=3.3						
BRTR	Keskin Array B	91.93	310	P	P	19 02 37.6	+1.6
TORD	Torodi Ar. Bea	123.74	286	PKP	PKiKP	19 08 26.3	+0.4
	comp=Z,0.4nm,0.7s,baz=18,slow=4.0,SNR=2.8						
S39A	Bolivar	127.02	40		PKPpre	19 08 14.6	

DJA 14 18:59:39.9±0.5, **1°S**±9°×**13°4E**±°, **h10^{km}, M4.0**/6, **mb4.6**/1, **MLv3.7**/6, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RKPI	Ransiki, Papua	0.20	114	P	Pg	18 59 45.2	+1.2
RKPI				S	Sg	18 59 48.6	+1.8
FAKI	Fak Fak	2.29	230	P	Pn	19 00 17.8	0.0
SWI	Sorong	2.80	282	P	Pn	19 00 25.4	+0.7
BNDI	Bandanaira	5.12	233	P	Pn	19 00 56.4	-0.2

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*IDC **14** 19:14:22.2±6.8, 18°.02N×94°.71E, h64^{km}±57^{km}, mb3.4/7, mb1 3.4/8, mb1mx3.1/64, mbtmp3.6/8, ML3.7/1, MS3.7/1, Ms1 3.7/1, ms1mx2.6/26, Error ellipse: s-maj=50.3km s-min=16.8km az=57.0*

ISC 14 19:14:19.0±1.4, **17°.9N**±0°.2×**94°.5E**±0°.1, **h35^{km}, n18, σ0^{s}77**/18, **mb3.6**/7, **Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	4.22	82	P	Pn	19 15 22.5	+1.6
	1.2nm,0.3s,baz=261,slow=14,SNR=24						
CMAR				S	Sn	19 16 08.2	-0.9
	2.4nm,0.3s,baz=258,slow=16,SNR=7.0						
ODAN	Odare	11.06	325	*e*P	Pn	19 16 55.6	+0.6
	5.4nm,0.2s						
TAPN	Taplejung	11.29	327	*e*P	Pn	19 16 57.7	-0.4
	5.2nm,0.3s						
RAMN	Ramite	11.58	322	*e*P	Pn	19 17 02.3	+0.2
	6.5nm,0.4s						
JIRN	Jiri	12.36	323	*e*P	Pn	19 17 13.1	+0.3
	7.7nm,0.2s						
GUN	Gumba	12.73	323	*e*P	Pn	19 17 17.1	-0.7
	7.8nm,0.4s						
PKI	Pulchoki	12.75	320	*e*P	Pn	19 17 19.1	+1.0
	4.1nm,0.3s						
PKIN	Phulchoki	12.76	320	*e*P	Pn	19 17 18.8	+0.5
	4.6nm,0.2s						
GKN	Gorkha	13.54	320	*e*P	Pn	19 17 29.8	+1.1
	14nm,0.3s						
DANN	Dangsing	14.33	318	*e*P	Pn	19 17 40.0	+0.4
	5.3nm,0.4s						
MKAR	Makanchi Array	30.50	343	P	P	19 20 28.8	+0.1
	0.4nm,0.5s,baz=165,slow=7.6,SNR=11						
SONM	Songino Array	31.36	15	P	P	19 20 36.6	+0.2
	0.2nm,0.3s,baz=195,slow=10,SNR=5.0						
KURBB	Kurchatov Arra	35.03	342	P	P	19 21 07.6	-0.5
	0.4nm,0.4s,baz=153,slow=8.5,SNR=4.6						
ZALV	Zalesovo Beam	36.72	350	P	P	19 21 22.5	-0.2
	1.1nm,0.4s,baz=197,slow=7.2,SNR=3.4						
ARU	Arti	46.96	333	LR	LR	19 45 41.9	
	comp=Z,74nm,18.4s,baz=258,slow=40						
WRA	Warramunga Arr	54.25	132	P	P	19 23 41.2	-0.6
	0.6nm,1.0s,baz=314,slow=7.2,SNR=6.3						
ASAR	Alice Springs	56.45	136	P	P	19 23 57.4	-0.2
	0.2nm,0.5s,baz=339,slow=9.6,SNR=6.2						
TIXI	Tiksi	57.36	12	P	P	19 24 02.2	-1.1
	0.3nm,0.4s,baz=247,slow=3.7,SNR=5.3						

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*UCR **14** 19:20:47.1±2.6, 11.°09N×86.°30W, h0^{km}±21^{km}, MD4.1, MW4.4, mb4.3(NEIC)*
*INET **14** 19:20:47.3, 11.°01N×86.°42W, h14^{km}, ML4.1*
*NEIC **14** 19:20:49.5±2.8, 11.°04N±0.°08×86.°22W±0.°06, h67^{km}±10^{km}, mb4.3/13, Error ellipse: s-maj=11.5km s-min=8.4km az=208.0*
*IDC **14** 19:20:50.7±1.5, 10.°93N×86.°20W, h99^{km}±11^{km}, mb3.5/6, mb1 3.7/7, mb1mx3.4/39, mbtmp3.8/7, MS3.5/8, Ms1 3.5/8, ms1mx3.1/27, Error ellipse: s-maj=52.8km s-min=12.3km az=38.0*
ISC 14 19:20:44.7±1.4**, 11.°32N**±0.°06×**86.°32W**±0.°06**, h14**^{km}±8^{km}**, n67,** σ**1^{s}90**/71**, mb4.0**/11**, MS3.5**/5**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBS3	Finca Las Img	1.01	122	*i* P	Pn	19 21 04.8	+0.3
GBS3				*i* S	Sb	19 21 17.9	+0.7
NY14	Universidad de	1.03	131	*i* P	Pg	19 21 04.0	-0.6
LAPC	Finca la Perla	1.03	122	*i* P	Pg	19 21 04.2	-0.5
LAPC				*i* S	Sb	19 21 18.1	+0.1
GB1A	Borinquen Arri	1.04	119	*i* P	Pn	19 21 05.7	+0.7
BUEV	Buena Vista	1.04	120	*i* P	Pb	19 21 05.0	+0.3
BUAI	Buenos Aires	1.07	114	*i* S	Sn	19 21 21.0	+0.9
GPS3	Bodega del ICE	1.10	121	*i* P	Pb	19 21 06.1	+0.5
GPS3				*i* S	Sn	19 21 21.6	+0.7
GPS1	Guardaparques	1.10	120	*i* P	Pb	19 21 05.8	+0.1
GUAB	Guayabo de Bag	1.24	120	*i* P	Pn	19 21 08.3	+0.5
GUAB				*i* S	Sn	19 21 24.7	+0.4
COLC	Colonia	1.28	121	*i* P	Pb	19 21 08.8	+0.1
CUI	Cuipilapa	1.32	120	*i* P	Pg	19 21 09.6	-0.5
CUI				*e*S	Sn	19 21 27.2	+0.9
PLVR	Palo Verde	1.36	135	*e*P	Pn	19 21 07.9	-1.7
PLVR				*e*S	Sb	19 21 27.4	-0.1
ACAL	Aguas Claras	1.44	118	*i* P	Pg	19 21 11.8	-0.6
PTEN	Parque Tenorio	1.45	115	*i* P	Pg	19 21 11.8	-0.8
PTEN				*i* S	Sn	19 21 32.2	+2.8
JTS	Las Juntas de	1.69	127	P	Pn	19 21 13.3	-0.7
	76nm,0.3s,baz=4.6,slow=8.1,SNR=150						
JTS				S	Sn	19 21 34.5	-1.0
	73nm,0.3s,baz=76,slow=20,SNR=7.1						
JTS	Las Juntas de	1.69	127		Pn	19 21 13.8	-0.2
JTS					Sn	19 21 35.9	+0.3
CEDE	Laguna Cedeo	1.79	117	*i* P	Pb	19 21 17.1	-0.4
CEDE				*e*S	Sg	19 21 43.1	+0.5
FORC	Fortuna	1.83	118	*i* P	Pb	19 21 17.5	-0.6
CSGN	Cosiguina Volc	2.04	324		Pg	19 21 23.6	-0.3
ESPN	Las Esperanzas	2.16	66		Pg	19 21 24.5	-1.7
SRA1	San Ramn	2.19	124	*e*P	Pb	19 21 24.0	-0.3
HDC	Heredia	2.54	121	*e*P	Pn	19 21 28.2	+2.5
HDC	Heredia	2.54	121		Pn	19 21 27.7	+2.0
LCR2	La Lucha 2	2.77	124	*e*P	Pn	19 21 30.8	+1.8
TGUH	Tegucigalpa,Un	2.87	341		Pb	19 21 36.1	+0.2
EDPN	Palmar Norte	3.67	129	*e*P	Pb	19 21 46.3	-3.2
BRU2	Volcan	4.37	125	*e*P	Pn	19 21 52.8	+1.8
APG	El Apazote	5.45	313	P	Pb	19 22 14.6	-5.3
	0.4nm,0.3s,baz=359,slow=21,SNR=2.8						
APG				S	Sb	19 23 19.9	-5.3
	0.5nm,0.3s,baz=11,slow=6.1,SNR=3.8						
BCIP	Isla Barro Col	6.73	108	Pn	Pn	19 22 24.4	+1.1
TEIG	Tepich	9.05	348	LR	LR	19 27 10.4	
	comp=Z,274nm,18.9s,baz=260,slow=40						
CMIG	Matias Romero	10.09	306	P	Pn	19 23 13.0	+3.7
	0.8nm,0.3s,baz=114,slow=11,SNR=8.0						
TLIG	Tlapa	13.38	299		Pn	19 23 59.0	+4.5
SDV	Santo Domingo	15.63	97	P	P	19 24 26.9	-2.3
	0.4nm,0.3s,baz=279,slow=6.4,SNR=9.1						
SDV				LR	LR	19 32 54.9	
	comp=Z,78nm,19.0s,baz=292,slow=47						
SDV	Santo Domingo	15.63	97	P	P	19 24 27.1	-2.1
MPR	Mayaguez	19.76	67	P	P	19 25 12.7	-1.9
ATAH	Atahualpa	19.96	156	LR	LR	19 31 49.8	
	comp=Z,109nm,20.2s,baz=341,slow=34						
TX32	Lajitas Array	24.14	320	P	P	19 26 02.2	+1.6
TX32				IAmb	IAmb	19 26 13.9	
	comp=Z,4.0nm,0.9s						
TXAR	Lajitas Array	24.14	320	P	P	19 26 02.3	+1.6
	comp=Z,3.1nm,0.8s,baz=146,slow=8.4,SNR=21						
TXAR	Lajitas Array	24.14	320	P	P	19 26 02.0	+1.3
TX31	Lajitas Ar. Si	24.14	320	P	P	19 26 02.1	+1.4
CLTN	Cedars of Leba	24.66	360	P	P	19 26 06.5	+1.3
CLTN				IAmb	IAmb	19 26 12.4	
	comp=Z,15nm,1.7s						
U54A	Nelsons Funny	25.41	8	P	P	19 26 16.1	+4.1
U54A				IAmb	IAmb	19 26 26.9	
	comp=Z,9.6nm,0.7s						
U40A	Yellville	25.61	348	P	P	19 26 15.6	+1.7
U40A				IAmb	IAmb	19 26 25.9	
	comp=Z,6.1nm,0.8s						
WMOK	Wichita Mounta	25.92	336	P	P	19 26 20.3	+3.6
WMOK				IAmb	IAmb	19 26 30.5	
	comp=Z,8.9nm,1.0s						
SDCO	Great Sand Dun	31.43	330	P	P	19 27 08.2	+2.1
PV17	East Wray Mesa	33.61	327	P	P	19 27 27.6	+2.5
SADO	Sadowa	33.89	9	LR	LR	19 41 28.4	
	comp=Z,86nm,19.4s,baz=168,slow=36						
PDAR	Pinedale Array	37.28	331	P	P	19 27 57.2	+0.6
	comp=Z,0.7nm,0.8s,baz=135,slow=8.8,SNR=6.8						
PDAR	Pinedale Array	37.28	331	P	P	19 27 56.7	0.0
H17A	Grant Village	39.01	332	P	P	19 28 11.8	+0.6
ULM	Lac du Bonnet	39.60	350	P	P	19 28 15.1	-0.7
	comp=Z,1.2nm,0.6s,baz=194,slow=8.3,SNR=3.0						
ULM	Lac du Bonnet	39.60	350	P	P	19 28 14.8	-0.9
ULM				IAmb	IAmb	19 28 29.7	
	comp=Z,11nm,1.6s						
SCHQ	Schefferville	46.05	16	P	P	19 29 06.8	-1.2
	comp=Z,2.6nm,0.8s,baz=210,slow=6.2,SNR=4.0						
SCHQ	Schefferville	46.05	16	P	P	19 29 07.4	-0.6
SCHQ				IAmb	IAmb	19 29 17.8	
	comp=Z,6.2nm,1.1s						
BDFB	Brasilia	46.43	124	LR	LR	19 50 05.0	
	comp=Z,54nm,18.8s,baz=331,slow=38						
FRB	Frobisher Bay	53.84	10	LR	LR	19 53 30.5	
	comp=Z,96nm,18.8s,baz=203,slow=36						
YKA	Yellowknife Ar	54.98	344	P	P	19 30 14.0	-1.4
	comp=Z,0.3nm,0.6s,baz=143,slow=7.0,SNR=5.4						
ILAR	Eielson Array	67.49	336	P	P	19 31 38.8	-1.4
	comp=Z,0.3nm,0.6s,baz=129,slow=4.0,SNR=8.4						
ILAR	Eielson Array	67.49	336	P	P	19 31 40.1	0.0
NOA	NORSAR Array B	83.81	29	LR	LR	20 08 52.6	
	comp=Z,12nm,19.2s,baz=285,slow=34						
AKASG	Malin Array Be	96.80	35	LR	LR	20 18 49.2	
	comp=Z,25nm,18.1s,baz=155,slow=36						
MKAR	Makanchi Array	121.25	9	PKP	PKPdf	19 39 34.5	-3.2
	comp=Z,0.1nm,0.5s,baz=316,slow=3.2,SNR=3.4						
MKAR	Makanchi Array	121.25	9		PKPdf	19 39 35.2	-2.5
KSH	Kashi	126.81	17	PKP	PKiKP	19 39 52.6	+3.4
KSH				PP	PP	19 41 53.8	+9.3
KSH				PKS	PKSdf	19 43 27.4	+1.9
KSH				SKKS		19 48 45.9	
ASAR	Alice Springs	139.86	247	PKP	PKPdf	19 40 09.0	-4.5
	comp=Z,0.5nm,0.9s,baz=90,slow=1.9,SNR=2.5						
WRA	Warramunga Arr	140.00	252	PKP	PKPdf	19 40 07.5	-6.3
	comp=Z,0.7nm,0.3s,baz=114,slow=16,SNR=24						
CMAR	Chiang Mai Arr	149.96	350	PKPbc	PKPdf	19 40 29.1	-1.8
	comp=Z,0.7nm,0.6s,baz=295,slow=2.5,SNR=5.4						
CMAR				PKPab	PKPbc	19 40 36.0	+0.2
	comp=Z,0.9nm,0.8s,baz=348,slow=3.9,SNR=9.0						

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*GCG **14** 19:24:37.6±0.6, 12.°63N×88.°45W, h50^{km}±347^{km}, MD4.1*
*INET **14** 19:24:39.4, 12.°82N×88.°60W, h17^{km}, ML3.9*
*IDC **14** 19:24:39.3±1.2, 13.°14N×88.°25W, h74^{km}±16^{km}, mb3.6/5, mb1 3.9/8, mb1mx3.5/38, mbtmp3.9/8, MS3.1/1, Ms1 3.1/1, ms1mx2.4/29, Error ellipse: s-maj=48.8km s-min=8.8km az=41.0*
*UCR **14** 19:24:40.0±1.7, 12.°85N×88.°59W, h61^{km}±16^{km}, ML4.1, MW3.7, mb4.6(NEIC)*
*SNET **14** 19:24:40.1±0.9, 12.°89N×88.°59W, h67^{km}±8^{km}, ML4.1*
*NEIC **14** 19:24:40.6±2.7, 13.°06N±0.°08×88.°45W±0.°06, h82^{km}±8^{km}, mb4.6/8, Md4.1(SNET), Error ellipse: s-maj=14.8km s-min=1.6km az=216.0*
ISC 14 19:24:39.3±0.8**, 12.°93N**±0.°06×**88.°51W**±0.°04**, h84**^{km}±6^{km}**, n88,** σ**1^{s}31**/118**, mb4.2**/8**, 1C-5D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JUCU	Jucuar¡n	0.41	38	*e*P	Pn	19 24 52.6	-0.2
JUCU				*e*S	Sn	19 25 02.6	-0.1
JUCU				IAML		19 25 06.6	
	comp=Z,9µm,0.4s						
JUCU	Jucuar¡n	0.41	38	*e*P	Pn	19 24 52.6	-0.2
JUCU				*e*S	Sn	19 25 02.6	-0.1
JUCU				IAML		19 25 06.6	
	comp=Z,9µm,0.4s						
LCY	Lacayo	0.53	23	*e*P	Pn	19 24 54.1	+0.3
LCY	Lacayo	0.53	23	*e*P	Pn	19 24 54.1	+0.3
RANC	El Ranchito	0.54	23	*e*P	Pn	19 24 54.4	+0.4
RANC				*e*S	Sn	19 25 05.9	+1.0
RANC				IAML		19 25 09.7	
	comp=Z,4µm,0.2s						
RANC	El Ranchito	0.54	23	*e*P	Pn	19 24 54.4	+0.4
RANC				*e*S	Sn	19 25 05.9	+1.0
RANC				IAML		19 25 09.7	
	comp=Z,4µm,0.2s						
COEB	Comit de Eme	0.56	358	*e*P	Pn	19 24 54.1	0.0
COEB				*e*S	Sn	19 25 04.8	-0.2
COEB				IAML		19 25 07.8	
	comp=Z,5µm,0.3s						
COEB	Comit de Eme	0.56	358	*e*P	Pn	19 24 54.1	0.0
COEB				*e*S	Sn	19 25 04.8	-0.2
COEB				IAML		19 25 07.8	
	comp=Z,5µm,0.3s						
PACA	Pacayal	0.56	19	⇓*i*P	Pn	19 24 54.5	+0.3
PACA				*e*S	Sn	19 25 06.2	+1.0
PACA	Pacayal	0.56	19	⇓*i*P	Pn	19 24 54.5	+0.3
PACA				*e*S	Sn	19 25 06.2	+1.0
BLLM	Bellamira	0.57	27	*e*P	Pn	19 24 54.5	+0.3
BLLM	Bellamira	0.57	27	*e*P	Pn	19 24 54.5	+0.3
LCND	La Caada	0.71	58	*e*P	Pn	19 24 56.1	+0.7
LCND				*e*S	Sn	19 25 08.4	+1.1
LCND				IAML		19 25 13.8	
	comp=Z,4µm,0.3s						
LCND	La Caada	0.71	58	*e*P	Pn	19 24 56.1	+0.7
LCND				*e*S	Sn	19 25 08.4	+1.1
LCND				IAML		19 25 13.8	
	comp=Z,4µm,0.3s						
CNCH	Conchagua	0.74	62	*e*P	Pn	19 24 56.4	+0.5
CNCH				*e*S	Sn	19 25 09.2	+1.1
CNCH				IAML		19 25 16.1	
	comp=Z,8µm,0.4s						
CNCH	Conchagua	0.74	62	*e*P	Pn	19 24 56.4	+0.5
CNCH				*e*S	Sn	19 25 09.2	+1.1
CNCH				IAML		19 25 16.1	
	comp=Z,8µm,0.4s						
FAGO	Alcalda de S	0.85	27	*e*P	Pn	19 24 57.5	+0.5
FAGO				*e*S	Sn	19 25 11.1	+1.0
FAGO	Alcalda de S	0.85	27	*e*P	Pn	19 24 57.5	+0.5
FAGO				*e*S	Sn	19 25 11.1	+1.0
LFRS	El Faro	0.87	322	*e*P	Pn	19 24 57.0	-0.2
CSGN	Cosiguina Volc	0.93	87		Pn	19 24 59.4	+1.6
LBRS	Las Brisas	0.95	327	*e*P	Pn	19 24 58.3	+0.1
LOMA	Loma Larga	0.96	318	*e*P	Pn	19 24 58.0	-0.2
LOMA				*e*S	Sn	19 25 12.0	-0.4
LOMA	Loma Larga	0.96	318	*e*P	Pn	19 24 58.0	-0.2
LOMA				*e*S	Sn	19 25 12.0	-0.4
AEIL	Aeropuerto Ilo	0.96	322	*e*P	Pn	19 24 58.5	+0.2
AEIL	Aeropuerto Ilo	0.96	322	*e*P	Pn	19 24 58.5	+0.2
LALI	Alcalda de L	0.97	305	*e*P	Pn	19 24 57.5	-0.7
LALI				*e*S	Sn	19 25 10.7	-1.6
LALI	Alcalda de L	0.97	305	*e*P	Pn	19 24 57.5	-0.7
LALI				*e*S	Sn	19 25 10.7	-1.6
CUSC	Alcaldia de Cu	1.03	320	*e*P	Pn	19 24 59.1	+0.1
CUSC				IAML		19 25 00.4	
	comp=Z,3µm,0.2s						
CUSC				*e*S	Sn	19 25 13.6	-0.1
CUSC	Alcaldia de Cu	1.03	320	*e*P	Pn	19 24 59.1	+0.1
CUSC				IAML		19 25 00.4	
	comp=Z,3µm,0.2s						
CUSC				*e*S	Sn	19 25 13.6	-0.1
SNET	Serv Nac Est T	1.03	317		Pn	19 24 58.8	-0.2
BOQS	Boqueron	1.10	317	⇓*i*P	Pn	19 25 00.2	+0.2
BOQS				*e*S	Sn	19 25 15.5	+0.1
LLGN	La Laguna	1.29	341	*e*P	Pn	19 25 02.7	+0.4
LLGN	La Laguna	1.29	341	*e*P	Pn	19 25 02.7	+0.4
CEVE	Cerro Verde	1.41	309	*e*P	Pn	19 25 03.9	+0.1
CEVE				*e*S	Sn	19 25 23.7	+1.4
CEVE				IAML		19 25 25.5	
	comp=Z,3µm,0.3s						
CEVE	Cerro Verde	1.41	309	*e*P	Pn	19 25 03.9	+0.1
CEVE				*e*S	Sn	19 25 23.7	+1.4
CEVE				IAML		19 25 25.5	
	comp=Z,3µm,0.3s						
TGUH	Tegucigalpa,Un	1.64	47		Pn	19 25 07.2	+0.5
MTO3	Montecristo	1.68	330	⇓*i*P	Pn	19 25 07.9	+0.6
MTO3	Montecristo	1.68	330	⇓*i*P	Pn	19 25 07.9	+0.6
COPN	Copaltepe	2.01	112	*e*P	Pn	19 25 12.7	+1.2
COPN	Copaltepe	2.01	112	*e*P	Pn	19 25 12.7	+1.2
IXG	Ixpaco	2.25	303	⇑*e*P	Pn	19 25 15.8	+1.0
NBG	Las Nubes	2.43	313	*e*P	Pn	19 25 19.5	+2.2
FUG	Fuego 3	2.72	304	*e*P	Pn	19 25 22.9	+1.7
FUG				*e*S	Sn	19 25 58.1	+4.7
APG	El Apazote	2.80	318	P	Pn	19 25 23.6	+1.3
	comp=Z,5.2nm,0.3s,baz=113,slow=7.1,SNR=14						
APG				S	Sn	19 25 56.2	+1.0
	comp=Z,3.9nm,0.3s,baz=14,slow=21,SNR=2.3						
ACON	Acoyapa	3.39	106	Pn	Pn	19 25 27.9	-2.2
STG3	Santiaguito 3,	3.46	301	*e*P	Pn	19 25 33.1	+1.9
STG3				*e*S	Sn	19 26 12.1	+0.9
GBS3	Finca Las Img	3.67	125	*e*P	Pn	19 25 35.7	+1.8
NY14	Universidad de	3.69	128	*i* P	Pn	19 25 36.4	+2.3
LAPC	Finca la Perla	3.70	125	*e*P	Pn	19 25 26.9	-7.4
BUEV	Buena Vista	3.70	125	*e*P	Pn	19 25 35.1	+0.8
BUAI	Buenos Aires	3.72	123	*e*P	Pn	19 25 35.8	+1.3
MESS	Mesas	3.91	124	*e*P	Pn	19 25 38.2	+1.1
COLC	Colonia	3.94	125	*e*P	Pn	19 25 39.2	+1.7
GUAI	GUAI	3.95	132	*e*P	Pn	19 25 39.2	+1.6
CUI	Cuipilapa	3.98	124	*e*P	Pn	19 25 40.0	+2.0
CUI				*e*S	Sn	19 26 23.2	-0.4
PLVR	Palo Verde	4.02	129	*e*P	Pn	19 25 40.5	+1.8
PLVR				*e*S	Sn	19 26 22.9	-1.9
ACAL	Aguas Claras	4.10	124	*e*P	Pn	19 25 41.3	+1.6
ESPN	Las Esperanzas	4.17	100	Pn	Pn	19 25 41.0	+0.4
JTS	Las Juntas de	4.36	127	P	Pn	19 25 44.2	+1.0
	comp=Z,8.6nm,0.3s,baz=172,slow=21,SNR=9.2						
JTS				S	Sn	19 26 31.0	-1.9
	comp=Z,6.2nm,0.3s,baz=9.0,slow=22,SNR=3.1						
JTS	Las Juntas de	4.36	127		Pn	19 25 44.5	+1.2
JTS					Sn	19 26 30.4	-2.5
CEDE	Laguna Cedeo	4.45	123	*e*P	Pn	19 25 47.5	+3.1
CCIG	Comitan	4.84	314		Pn	19 25 51.9	+2.0
LCR2	La Lucha 2	5.44	125	*e*P	Pn	19 26 00.2	+2.2
LCR2				*e*S	Sn	19 26 59.6	+0.1
TEIG	Tepich	7.25	2	P	Pn	19 26 25.5	+2.8
	comp=Z,2.7nm,0.3s,baz=134,slow=0.0,SNR=8.4						
TEIG	Tepich	7.25	2		Pn	19 26 24.3	+1.6
CMIG	Matias Romero	7.42	305	P	Pn	19 26 26.9	+1.9
	comp=Z,1.1nm,0.3s,baz=134,slow=12,SNR=8.6						
CMIG				S	Sn	19 27 47.8	+0.2
	comp=Z,1.0nm,0.3s,baz=323,slow=20,SNR=2.8						
TLIG	Tlapa	10.74	297	Pn	Pn	19 27 12.3	+1.9
ROSC	El Rosal	16.15	119	LR	LR	19 35 30.3	
	comp=Z,70nm,19.8s,baz=107,slow=41						
TX31	Lajitas Ar. Si	21.55	322	P	P	19 29 23.6	+1.5
TX32	Lajitas Array	21.55	322	P	P	19 29 23.1	+1.0
TX32				IAmb	IAmb	19 29 25.2	
	comp=Z,13nm,1.8s						
TXAR	Lajitas Array	21.55	322	P	P	19 29 23.7	+1.7
	comp=Z,1.5nm,0.7s,baz=138,slow=9.8,SNR=12						
TXAR	Lajitas Array	21.55	322	P	P	19 29 23.4	+1.4
FNO	Franklin	23.64	342	P	P	19 29 43.4	+0.4
MSTX	Muleshoe	24.64	331	P	P	19 29 52.8	+0.6
MSTX				IAmb	IAmb	19 29 53.4	
	comp=Z,7.1nm,0.7s						
U61A	Possum Corner	25.70	23	P	P	19 29 58.6	-3.0
L56A	Greenwood	30.61	16	P	P	19 30 43.0	-2.5
L56A				IAmb	IAmb	19 30 47.7	
	comp=Z,35nm,1.5s						
PDAR	Pinedale Array	34.87	332	P	P	19 31 23.9	+1.1
	comp=Z,0.5nm,0.6s,baz=129,slow=10,SNR=4.9						
PDAR	Pinedale Array	34.87	332	P	P	19 31 22.9	+0.1
ULM	Lac du Bonnet	37.70	352	P	P	19 31 45.6	-0.9
	comp=Z,3.0nm,0.5s,baz=175,slow=6.4,SNR=7.9						
ULM	Lac du Bonnet	37.70	352	P	P	19 31 45.1	-1.4
ULM				IAmb	IAmb	19 33 11.2	
	comp=Z,27nm,2.0s						
SCHQ	Schefferville	45.12	18	P	P	19 32 46.2	-1.0
	comp=Z,0.8nm,0.4s,baz=222,slow=12,SNR=3.6						
SCHQ	Schefferville	45.12	18	P	P	19 32 46.3	-1.0
SCHQ				IAmb	IAmb	19 33 07.1	
	comp=Z,26nm,1.8s						
YKA	Yellowknife Ar	52.88	345	P	P	19 33 46.1	-0.2
	comp=Z,1.4nm,0.8s,baz=141,slow=8.0,SNR=16						
WRA	Warramunga Arr	138.41	255	PKP	PKiKP	19 43 59.4	+1.3
	comp=Z,0.8nm,0.6s,baz=90,slow=2.5,SNR=19						
ASAR	Alice Springs	138.49	249	PKP	PKiKP	19 43 59.2	+1.1
	comp=Z,0.3nm,0.6s,baz=88,slow=1.9,SNR=5.4						
ASAR	Alice Springs	138.49	249		PKiKP	19 43 59.8	+1.6
CMAR	Chiang Mai Arr	147.95	347	PKPbc	PKPbc	19 44 14.7	-1.1
	comp=Z,0.3nm,0.6s,baz=349,slow=3.7,SNR=3.7						
CMAR	Chiang Mai Arr	147.95	347		PKPbc	19 44 14.0	-1.9

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*DJA **14** 20:11:18.2±0.4, 3°S±3°×14°0E±°, h10^{km}, M4.2/5, mb4.4/2, MLv4.1/5*
*IDC **14** 20:11:20.6±3.4, 3.°44S×139.°55E, h112^{km}±29^{km}, mb3.1/2, mb1 3.3/5, mb1mx3.1/37, mbtmp3.7/5, Error ellipse: s-maj=28.7km s-min=17.3km az=105.0*
ISC 14 20:11:13.6±1.1**, 3.°61S**±0.°07×**139.°82E**±0.°10**, h37**^{km}**, n10,** σ**2^{s}94**/14**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	1.06	19	P	Pn	20 11 34.0	+2.0
GENI				S	Sn	20 11 45.2	-0.3
WAMI	Wamena	1.14	256	P	Pn	20 11 39.5	+6.5
WAMI				S	Sn	20 11 55.1	+7.7
SMPI	Sarmi	1.95	325	P	Pn	20 11 45.3	+1.1
SMPI				S	Sn	20 12 05.5	-1.9
RKPI	Ransiki, Papua	6.01	290	P	Pn	20 12 42.7	+2.7
	0.2nm48nm,0.7s						
FAKI	Fak Fak	7.59	275	P	Pn	20 13 04.7	+3.0
SIJI	Sorong	8.97	287	P	Pn	20 13 23.6	+2.9
	2.5nm,0.3s,baz=204,slow=22,SNR=26						
SIJI				S	Sn	20 14 59.4	-1.1
	1.0nm,0.3s,baz=288,slow=22,SNR=3.4						
WRA	Warramunga Arr	17.10	198	P	Pn	20 15 12.0	+2.1
	0.5nm,0.3s,baz=11,slow=12,SNR=35						
WRA				S	Sn	20 18 13.8	-5.2
	0.2nm,0.3s,baz=166,slow=29,SNR=3.5						
FITZ	Fitzroy Crossi	20.01	223	P	P	20 15 44.1	+0.9
	0.2nm,0.3s,baz=358,slow=1.3,SNR=7.9						
FITZ				S	S	20 19 23.2	-3.2
	0.4nm,0.3s,baz=354,slow=1.6,SNR=16						
ASAR	Alice Springs	20.75	195	P	P	20 15 54.0	+2.6
	1.7nm,0.7s,baz=25,slow=9.8,SNR=19						
ASAR				S	Sn	20 19 48.0	+0.8
	0.2nm,0.4s,baz=16,slow=28,SNR=3.0						
MKAR	Makanchi Array	71.17	322	P	P	20 22 25.4	-3.2
	0.1nm,0.4s,baz=114,slow=7.8,SNR=3.4						

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*SOME **14** 20:23:55.2, 43.°38N×81.°32E, h10^{km}*
*NNC **14** 20:23:56.8±0.9, 43.°45N×81.°28E, h0^{km}, mb3.5, mpv3.3, Error ellipse: s-maj=7.6km s-min=3.8km az=139.0*
ISC 14 20:23:54.3±2.1**, 43.°34N**±0.°06×**81.°32E**±0.°07**, h11**^{km}±14^{km}**, n35,** σ**2^{s}18**/58**, 7C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	0.72	279	*e*P	Pb	20 24 09.8	+0.9
	90nm,0.1s						
KTMS				*e*S	Sb	20 24 20.4	+1.7
	441nm,0.2s						
SHLS	Shalkode	1.37	263	*e*P	Pn	20 24 16.5	-3.0
SHLS				*e*S	Sb	20 24 32.4	-5.2
	315nm,0.1s						
SHLS	Shalkode	1.37	263	P	Pn	20 24 17.3	-2.1
SHLS				S	Sb	20 24 32.3	-5.3
	412nm,0.3s						
DJR	Jarkent	1.49	312	*e*P	Pb	20 24 22.6	+0.6
	3.3nm,0.1s						
DJR				*e*S	Sg	20 24 42.9	+0.7
	121nm,0.2s						
DJR	Jarkent	1.49	312	P	Pg	20 24 23.1	+0.2
	3.2nm,0.2s						
DJR				S	Sg	20 24 42.9	+0.7
	104nm,0.5s						
UZB	Uzynbulak	1.69	264	*e*P	Pg	20 24 27.2	+0.4
	24nm,0.1s						
UZB				*e*S	Sg	20 24 50.6	+1.9
	132nm,0.1s						
UZB	Uzynbulak	1.69	264	P	Pg	20 24 28.2	+1.5
	24nm,0.2s						
UZB				S	Sg	20 24 51.0	+2.3
	99nm,0.2s						
KPKS	Kokpek	1.93	275	*e*P	Pb	20 24 31.0	+1.6
	35nm,0.1s						
KPKS				*e*S	Sg	20 24 57.2	+1.0
	173nm,0.1s						
KURS	Kuram	2.30	275	*e*P	Pg	20 24 38.0	-0.4
	3.9nm,0.1s						
KURS				*e*S	Sg	20 25 09.1	+0.9
	54nm,0.4s						
KURS	Kuram	2.30	275	Pg	Pg	20 24 38.7	+0.3
	11nm,0.7s						
KURS				Lg	Lg	20 25 09.3	
	52nm,0.6s						
KAPS	Kapalarasan	2.41	325	*e*P	Pb	20 24 38.4	+0.8
	6.7nm,0.1s						
KAPS				*e*S	Sg	20 25 09.9	-1.6
	102nm,0.2s						
KAPS	Kapalarasan	2.41	325	Pg	Pb	20 24 38.9	+1.4
	9.2nm,0.4s						
KAPS				Lg	Lg	20 25 09.9	
	62nm,0.5s						
TDK	Taldyqorghan	2.68	309	*e*P	Pb	20 24 43.6	+1.4
	13nm,0.1s						
TDK				*e*S	Sg	20 25 18.6	-1.7
	158nm,0.3s						
TDK	Taldyqorghan	2.68	309	Pg	Pb	20 24 44.1	+1.9
	27nm,0.8s						
TDK				Lg	Lg	20 25 18.3	
	142nm,0.6s						
ARXS	Arharly	2.68	290	*e*P	Pb	20 24 43.5	+1.3
	4.1nm,0.1s						
ARXS				*e*S	Sg	20 25 18.3	-2.0
	82nm,0.3s						
KOTS	Kotyrbulak	3.08	270	*e*P	Pb	20 24 52.0	+2.9
	7.9nm,0.1s						
KOTS				*e*S	Sg	20 25 32.9	-0.2
	50nm,0.2s						
MDOK	Medeo	3.13	268	*e*P	Pb	20 24 52.0	+2.1
	2.1nm,0.2s						
MDOK				*e*S	Sg	20 25 33.2	-1.5
	20nm,0.3s						
MDOK	Medeo	3.13	268	⇑Pg	Pg	20 24 53.2	-1.0

	6.6nm,0.4s						
MDOK				Lg	Lg	20 25 32.2	
	14nm,0.5s						
MDOK	**Medeo**	**3.13**	**268**	Pg	**Pb**	**20 24 52.6**	**+2.7**
	12nm,0.5s						
MDOK				Lg	Lg	20 25 33.0	
	18nm,0.9s						
CHKK	**Chushkaly**	**3.19**	**281**	*e*P	**Pb**	**20 24 52.5**	**+1.6**
	1.5nm,0.0s						
CHKK				*e*S	**Sb**	**20 25 33.7**	**+3.9**
	26nm,0.2s						
TNSS	**Tian-Shan**	**3.21**	**266**	*e*P	**Pg**	**20 24 54.9**	**-1.0**
	5.6nm,0.1s						
TNSS				*e*S	**Sg**	**20 25 38.1**	**+0.6**
	25nm,0.3s						
TNSS	**Tian-Shan**	**3.21**	**266**	Pg	**Pb**	**20 24 54.3**	**+2.8**
	6.9nm,0.5s						
TNSS				Lg	Lg	20 25 35.7	
	25nm,0.6s						
KTBS	**Karatobe**	**3.40**	**278**	*e*P	**Pb**	**20 24 55.8**	**+1.4**
	1.8nm,0.2s						
KTBS				*e*S	**Sb**	**20 25 39.4**	**+3.6**
	27nm,0.2s						
IZV	**Izvestkoviy**	**3.46**	**267**	*e*P	**Pb**	**20 24 58.6**	**+3.0**
	2.2nm,0.1s						
IZV				*e*S	**Sg**	**20 25 44.1**	**-1.2**
	29nm,0.2s						
MAKZ	**Makanchi**	**3.50**	**7**	⇓Pn	**Pn**	**20 24 49.8**	**+1.2**
	0.7nm,0.3s						
MAKZ				⇓Pg	**Pg**	**20 24 59.7**	**-1.6**
	6.1nm,0.6s						
MAKZ				⇑Lg	Lg	20 25 42.7	
	2.7nm,0.3s						
MK31	**Makanchi Array**	**3.52**	**11**	Pn	**Pn**	**20 24 50.2**	**+1.2**
	0.4nm,0.3s,baz=203,slow=14,SNR=176						
MK31				⇑Pg	**Pg**	**20 24 59.8**	**-2.0**
	2.2nm,0.3s,baz=201,slow=14,SNR=40						
MK31				⇓Lg	Lg	20 25 43.5	
	8.8nm,0.6s,baz=195,slow=29,SNR=5.1						
MTBS	**Maitube**	**3.58**	**268**	*e*P	**Pb**	**20 25 01.2**	**+3.5**
	1.0nm,0.1s						
MTBS				*e*S	**Sg**	**20 25 48.7**	**-0.5**
	18nm,0.3s						
MTBS	**Maitube**	**3.58**	**268**	Pg	**Pg**	**20 25 01.9**	**-1.0**
	5.1nm,0.5s						
MTBS				Lg	Lg	20 25 48.8	
	16nm,0.6s						
KUU	**Kurty**	**3.66**	**280**	*e*P	**Pb**	**20 25 02.4**	**+3.5**
	2.0nm,0.2s						
KUU				*e*S	**Sg**	**20 25 50.8**	**-1.0**
	17nm,0.2s						
KUU	**Kurty**	**3.66**	**280**	Pg	**Pb**	**20 25 01.4**	**+2.4**
	2.7nm,0.7s						
KUU				Lg	Lg	20 25 48.1	
	9.4nm,0.9s						
KST	**Kastek**	**3.93**	**268**	*e*P	**Pg**	**20 25 07.5**	**-2.0**
	2.9nm,0.1s						
KST				*e*S	**Sg**	**20 25 59.8**	**-0.6**
	18nm,0.3s						
KST	**Kastek**	**3.93**	**268**	Pg	**Pg**	**20 25 08.2**	**-1.4**
KST				Lg	Lg	20 25 59.9	
	15nm,0.9s						
CHMS	**Chumysh**	**4.82**	**268**	⇑Pg	**Pb**	**20 25 21.8**	**+3.1**
	2.2nm,0.8s						
CHMS				⇑Lg	Lg	20 26 28.0	
	8.0nm,0.8s						
AAK	**Ala-Archa**	**5.06**	**264**	⇑Pg	**Pg**	**20 25 28.0**	**-3.1**
	1.9nm,0.7s						
AAK				⇓Lg	Lg	20 26 33.8	
	12nm,1.0s						
KK31	**Karatay Array**	**7.90**	**272**	⇓Pg	**Pg**	**20 26 22.8**	**-2.6**
	0.4nm,0.6s,baz=77,slow=15,SNR=3.9						
KK31				⇑Lg	Lg	20 28 04.7	
	0.8nm,0.4s,baz=82,slow=25,SNR=4.1						

IDC ***14*** *20:26:19.1±3.7, 43°.87N×86°.49E, h0^{km}, mb1 3.5/5, mb1mx3.2/55, mbtmp3.5/5, ML3.2/5, Error ellipse: s-maj=47.5km s-min=21.5km az=19.0*

BJI ***14*** *20:26:19.3±0.0, 43°.66N×86°.66E, h12^{km}, mb3.5/3, ML3.4/10*

ISC 14 20:26:20.1±1.4, **43°.9N**±0°.1×**86°.70E**±0°.08, **h10^{km}, n9,** σ**1^{s}.82**/16, **2C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**0.73**	**99**	Pg	**Pg**	**20 26 33.8**	**-0.4**
WMQ				Sg	**Sg**	**20 26 43.8**	**+0.1**
WMQ				smax	smax		
	comp=N,400nm,0.9s						
WMQ				smax	smax		
	comp=E,620nm,0.7s						
MK31	**Makanchi Array**	**4.22**	**314**	⇓Pn	**Pn**	**20 27 24.9**	**+0.4**
	2.0nm,0.3s,baz=131,slow=13,SNR=14						
MK31				Sn	**Sn**	**20 28 15.8**	**+1.8**
	9.5nm,0.5s,baz=145,slow=29,SNR=5.2						
MK31				⇓Lg	Lg	20 28 33.1	
	37nm,0.7s,baz=128,slow=29,SNR=3.7						
MKAR	**Makanchi Array**	**4.22**	**314**	Pn	**Pn**	**20 27 24.9**	**+0.3**
	2.0nm,0.3s,baz=131,slow=15,SNR=9.0						
MKAR				Pg	**Pb**	**20 27 34.5**	**0.0**
	3.0nm,0.3s,baz=131,slow=18,SNR=6.9						
MKAR				Sn	**Sn**	**20 28 15.7**	**+1.7**
	8.0nm,0.3s,baz=129,slow=27,SNR=7.3						
MKAR				Lg	Lg	20 28 33.8	
	11nm,0.3s,baz=92,slow=26,SNR=8.0						
MAKZ	**Makanchi**	**4.40**	**312**	⇑Pn	**Pn**	**20 27 27.2**	**+0.2**
	4.0nm,0.5s						
MAKZ				⇑Sn	**Sn**	**20 28 18.8**	**+0.5**
	22nm,0.7s						
MAKZ				⇓Lg	Lg	20 28 38.4	
	23nm,0.6s						
KURBB	**Kurchatov Arra**	**8.69**	**323**	Pn	**Pn**	**20 28 25.6**	**-0.2**
	0.2nm,0.3s,baz=132,slow=12,SNR=4.7						
KURBB				Sn	**Sn**	**20 30 02.0**	**-1.9**
	0.2nm,0.3s,baz=179,slow=18,SNR=3.2						
KURBB				Lg	Lg	20 30 55.4	
	0.3nm,0.3s,baz=130,slow=33,SNR=5.8						
ZALV	**Zalesovo Beam**	**10.10**	**354**	Pn	**Pn**	**20 28 43.9**	**-1.2**
	0.9nm,0.3s,baz=174,slow=13,SNR=14						
ZALV				Sn	**Sn**	**20 30 36.8**	**-1.6**
	0.7nm,0.3s,baz=170,slow=25,SNR=4.4						
GTA	**Gaotai**	**10.80**	**110**	*e*P	**Pn**	**20 28 52.6**	**-2.2**
GTA				pP		20 28 57.0	
GTA				sP		20 28 59.6	
GTA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BVAR	**Borovoye Array**	**14.11**	**316**	Pn	**Pn**	**20 29 37.3**	**-2.6**
	0.1nm,0.3s,baz=124,slow=15,SNR=3.5						
BVAR				Lg	Lg	20 33 55.3	
	0.1nm,0.3s,baz=121,slow=22,SNR=3.9						
SONM	**Songino Array**	**14.25**	**67**	Pn	**Pn**	**20 29 46.2**	**+4.1**
	0.2nm,0.3s,baz=264,slow=9.7,SNR=11						
SONM				Lg	Lg	20 34 00.4	
	0.1nm,0.3s,baz=263,slow=23,SNR=5.6						

DJA ***14*** *20:30:29.2±0.3, 3°S±4°×12°8E±°, h10^{km}, M3.4/8, MLv3.4/8*

IDC ***14*** *20:30:30.8±2.7, 3°.96S×126°.84E, h0^{km}, mb3.2/2, mb1 3.4/3, mb1mx3.1/47, mbtmp3.2/3, ML3.0/1, Error ellipse: s-maj=361.2km s-min=27.1km az=65.0*

ISC 14 20:30:29.4±1.0, **3°.30S**±0°.08×**128°.43E**±0°.05, **h10^{km}, n9,** σ**1^{s}.46**/13, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.45**	**212**	P	**Pb**	**20 30 40.6**	**+1.2**
AAI				S	**Sg**	**20 30 40.8**	**-3.3**
MSAI	**Masohi**	**0.50**	**95**	P	**Pg**	**20 30 38.3**	**-0.8**
MSAI				S	**Sg**	**20 30 44.5**	**-1.3**
NLAI	**Namlea**	**1.33**	**273**	P	**Pn**	**20 30 53.8**	**-0.2**
NLAI				S	**Pn**	**20 30 53.8**	**-0.2**
SANI	**Sanana**	**2.74**	**297**	P	**Pn**	**20 31 12.8**	**-0.6**
SWI	**Sorong**	**3.73**	**49**	P	**Pn**	**20 31 25.8**	**-1.2**
SWI				S	**Pn**	**20 31 25.9**	**-1.1**
FAKI	**Fak Fak**	**3.83**	**84**	P	**Pn**	**20 31 29.3**	**+0.8**
WRA	**Warramunga Arr**	**17.52**	**161**	P	**P**	**20 34 35.6**	**+0.6**
	0.1nm,0.3s,baz=333,slow=13,SNR=5.7						
ASAR	**Alice Springs**	**20.93**	**166**	P	**P**	**20 35 13.7**	**+1.3**
	1.1nm,0.7s,baz=340,slow=9.6,SNR=10						
MKAR	**Makanchi Array**	**64.30**	**327**	P	**P**	**20 41 06.1**	**+1.0**
	0.2nm,0.7s,baz=124,slow=7.2,SNR=2.9						

BJI ***14*** *20:32:08.0±0.0, 53°.66S×25°.47E, h8^{km}, mB5.9/2, mb5.3/4, Ms5.4/8, Ms7 5.1/6*

IDC ***14*** *20:32:08.7±0.3, 53°.49S×25°.37E, h0^{km}, mb4.9/26, mb1 5.0/26, mb1mx4.9/34, mbtmp4.9/26, MS4.7/25, Ms1 4.7/25, ms1mx4.6/30, Error ellipse: s-maj=13.8km s-min=8.5km az=76.0*

MOS ***14*** *20:32:08.8±1.4, 53°.46S×25°.17E, h10^{km}, mb5.2/11, Error ellipse: s-maj=21.4km s-min=9.3km az=85.7*

NEIC ***14*** *20:32:09.6±1.4, 53°.51S±0°.09×25°.2E±0°.2, h11^{km}±3^{km}, mb5.3/71, Mwb5.5/10, Mwc5.5(GCMT), Error ellipse: s-maj=14.8km s-min=13.3km az=106.0*

NEIC ***14*** *20:32:10, 53°.51S×25°.16E, h13^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.16; M$_{\theta\theta}$1.66; M$_{\phi\phi}$-1.82; M$_{r\theta}$-0.11; M$_{\theta\phi}$1.30; M$_{\phi r}$-0.35; Fault plane solution: M$_0$2.21000×10^{17} NP1:φ$_s$26.58000°, δ89.61000°, λ-170.41000°. NP2:φ$_s$296.51000°, δ80.41000°, λ-0.40000°. Principal axes: T 2.1157, Plg6.0000°, Azm161.0000°; N 0.1700, Plg80.0000°, Azm29.0000°; P -2.2857, Plg7.0000°, Azm252.0000°;*

GCMT ***14*** *20:32:11.6±0.1, 53°.47S±0°.01×25°.54E±0°.01, h15^{km}, MW5.5/147, Moment Tensor Solution. s121,c206; s147,c272; Duration: 1^{s}.3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.07±.02; M$_{\theta\theta}$1.38±.03; M$_{\phi\phi}$-1.45±.03; M$_{r\theta}$0.21±.04; M$_{\theta\phi}$1.42±.02; M$_{\phi r}$0.06±.04; Best double couple: M$_0$2.01700×10^{17} NP1:φ$_s$22.00000°, δ85.00000°, λ176.00000°. NP2:φ$_s$113.00000°, δ86.00000°, λ5.00000°. Principal axes: T 1.9940, Plg6.0000°, Azm337.0000°; N 0.0470, Plg83.0000°, Azm152.0000°; P -2.0400, Plg1.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***14*** *20:32:13, 53°.48S×25°.59E, h13^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.05; M$_{\theta\theta}$1.43; M$_{\phi\phi}$-1.48; M$_{r\theta}$0.00; M$_{\theta\phi}$1.47; M$_{\phi r}$-0.21; Fault plane solution: M$_0$2.08000×10^{17} NP1:φ$_s$22.00000°, δ88.00000°, λ-175.00000°. NP2:φ$_s$292.00000°, δ85.00000°, λ-2.00000°. Principal axes: T 2.0477, Plg2.0000°, Azm157.0000°; N 0.0614, Plg84.0000°, Azm44.0000°; P -2.1091, Plg5.0000°, Azm247.0000°;*

ISC 14 20:32:09.7±0.2, **53°.56S**±0°.05×**25°.34E**±0°.07, **h10^{km}, n317,** σ**1^{s}.58**/311, **mb5.3**/66, **MS4.9**/35, **1C-3D, South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SYO	**Syowa Base**	**16.86**	**162**	⇓*i*Pn	**Pn**	**20 36 01.4**	**-4.1**
SYO	**Syowa Base**	**16.86**	**162**	⇓*i*Pn	**Pn**	**20 36 03.0**	**-2.5**
SYO	**Syowa Base**	**16.86**	**162**	⇓*i*P	P	20 36 15.4	+7.9
NVL	**N'lazarevskaya**	**18.30**	**194**	⇑*i*P	**Pn**	**20 36 21.2**	**-2.0**
NVL				*e*S	**Sn**	**20 39 41.7**	**-5.5**
NVL				pmax	pmax		
	comp=Z,32nm,0.7s						
NVL				MLR	MLR		
	comp=Z,1μm,10.0s						
CRZF	**Crozet Islands**	**18.41**	**78**	P	**Pn**	**20 36 25.1**	**+0.3**
CRZF				IAmb	IAmb	20 36 33.1	
	comp=Z,307nm,1.0s						
SUR	**Sutherland**	**21.42**	**349**	P	**P**	**20 36 57.8**	**0.0**
	comp=Z,469nm,0.8s,baz=163,slow=10,SNR=216						
SUR				S	**S**	**20 40 55.0**	**-0.4**
	comp=Z,9.4nm,0.6s,baz=203,slow=20,SNR=3.2						
SUR				LR	LR	20 43 13.0	
	comp=Z,6μm,21.4s,baz=164,slow=31						
SUR	**Sutherland**	**21.42**	**349**	P	**P**	**20 36 57.6**	**-0.2**
SNAA	**Sanae**	**21.92**	**204**	P	**P**	**20 37 04.4**	**+1.6**
SNAA	**Sanae**	**21.92**	**204**	P	**P**	**20 37 03.8**	**+1.0**
	comp=Z,34nm,0.8s,baz=47,slow=10,SNR=73						
SNAA				S	**S**	**20 41 04.0**	**-0.5**
	comp=Z,3.1nm,0.5s,baz=110,slow=21,SNR=5.4						
SNAA	**Sanae**	**21.92**	**204**	P	**P**	**20 37 03.6**	**+0.8**
SNAA				pmax	pmax		
	comp=Z,133nm,1.1s						
SNAA	**Sanae**	**21.92**	**204**	P	**P**	**20 37 03.6**	**+0.8**
SNAA				IAmb	IAmb	20 37 22.2	
	comp=Z,133nm,1.1s						
VNA2	**Neumayer--Watz**	**22.64**	**208**	P	**P**	**20 37 12.3**	**+1.9**
	baz=53,slow=11						
MAW	**Mawson**	**22.69**	**143**	P	**P**	**20 37 10.8**	**-0.1**
	comp=Z,33nm,1.0s,baz=293,slow=11,SNR=9.9						
MAW				S	**S**	**20 41 22.7**	**+3.8**
	comp=Z,9.6nm,0.5s,baz=85,slow=20,SNR=8.9						
MAW				LR	LR	20 44 11.9	
	comp=Z,4μm,21.6s,baz=290,slow=32						
MAW	**Mawson**	**22.69**	**143**	P	**P**	**20 37 11.9**	**+0.9**
MAW				pmax	pmax		
	comp=Z,11nm,0.9s						
MAW	**Mawson**	**22.69**	**143**	P	**P**	**20 37 11.9**	**+0.9**
VNA1	**Neumayer--Stat**	**22.74**	**209**	P	**P**	**20 37 15.9**	**+4.5**
VNA3	**Neumayer Olymp**	**23.44**	**208**	P	**P**	**20 37 21.9**	**+3.2**
BOSA	**Boshof**	**24.92**	**360**	*i* P	**P**	**20 37 33.8**	**+0.8**
BOSA	**Boshof**	**24.92**	**360**	P	**P**	**20 37 32.5**	**-0.5**
	comp=Z,32nm,0.8s,baz=174,slow=9.5,SNR=29						
BOSA				S	**S**	**20 41 47.8**	**-8.5**
	comp=Z,2.1nm,0.5s,baz=129,slow=17,SNR=1.2						
BOSA				LR	LR	20 45 24.3	
	comp=Z,4μm,20.5s,baz=174,slow=32						
BOSA	**Boshof**	**24.92**	**360**	*i* P	**P**	**20 37 33.8**	**+0.8**
BOSA	**Boshof**	**24.92**	**360**	P	**P**	**20 37 31.9**	**-1.0**
BOSA				pmax	pmax		
	comp=Z,85nm,1.1s						
BOSA	**Boshof**	**24.92**	**360**	P	**P**	**20 37 31.9**	**-1.0**
BOSA				IAmb	IAmb	20 37 47.6	
	comp=Z,85nm,1.1s						
LBTB	**Lobatse**	**28.51**	**0**	*i* P	**P**	**20 38 04.1**	**-1.1**
LBTB	**Lobatse**	**28.51**	**0**	P	**P**	**20 38 04.1**	**-1.1**
	comp=Z,52nm,0.9s,baz=178,slow=9.8,SNR=32						
LBTB				S	S	20 42 42.8	-10
	comp=Z,4.9nm,0.7s,baz=119,slow=19,SNR=2.0						
LBTB				LR	LR	20 47 31.6	
	comp=Z,4μm,18.4s,baz=178,slow=32						
LBTB	**Lobatse**	**28.51**	**0**	*i* P	**P**	**20 38 04.1**	**-1.1**
LBTB	**Lobatse**	**28.51**	**0**	P	**P**	**20 38 03.7**	**-1.5**
LBTB				pmax	pmax		
	comp=Z,53nm,0.9s						
LBTB	**Lobatse**	**28.51**	**0**	P	**P**	**20 38 03.7**	**-1.5**
LBTB				IAmb	IAmb	20 38 07.7	
	comp=Z,53nm,0.8s						
MSNA	**Messina**	**31.37**	**8**	*i* P	**P**	**20 38 27.3**	**-3.2**
MSNA	**Messina**	**31.37**	**8**	*i* P	**P**	**20 38 27.3**	**-3.2**
MATP	**Matopo**	**33.16**	**5**	*i* P	**P**	**20 38 43.0**	**-3.3**
MATP	**Matopo**	**33.16**	**5**	*i* P	**P**	**20 38 43.0**	**-3.3**
TSUM	**Tsumeb**	**34.81**	**347**	*i* P	**P**	**20 39 02.7**	**+2.0**
TSUM	**Tsumeb**	**34.81**	**347**	*i* P	**P**	**20 39 02.7**	**+2.0**
QSPA	**South Pole Qui**	**36.66**	**180**	P	**P**	**20 39 16.4**	**+0.2**
	comp=Z,34nm,0.8s,baz=252,slow=2.3,SNR=60						
QSPA	**South Pole Qui**	**36.66**	**180**	P	**P**	**20 39 16.1**	**-0.1**
QSPA				IAmb	IAmb	20 39 32.7	
	comp=Z,72nm,0.8s						
LSZ	**Lusaka**	**38.26**	**4**	P	**P**	**20 39 29.4**	**-0.7**
	comp=Z,24nm,0.7s,baz=180,slow=9.4,SNR=29						
LSZ	**Lusaka**	**38.26**	**4**	P	**P**	**20 39 29.1**	**-1.0**
LSZ				pmax	pmax		
	comp=Z,25nm,0.8s						
LSZ	**Lusaka**	**38.26**	**4**	P	**P**	**20 39 29.1**	**-1.0**
ABPO	**Ambohimpanom**	**38.40**	**35**	P	**P**	**20 39 32.0**	**+0.7**
ABPO				pmax	pmax		
	comp=Z,78nm,0.9s						
ABPO	**Ambohimpanom**	**38.40**	**35**	P	**P**	**20 39 32.0**	**+0.7**
ABPO				IAmb	IAmb	20 39 33.8	
	comp=Z,78nm,0.9s						
OPO	**Ambohidratompo**	**38.80**	**34**	P	**P**	**20 39 35.1**	**+0.4**
	comp=Z,22nm,1.0s,baz=203,slow=9.4,SNR=17						
CASY	**Casey**	**41.05**	**142**	P	**P**	**20 39 53.9**	**+1.2**
CASY				IAmb	IAmb	20 40 18.7	
	comp=Z,140nm,1.8s						
VNDA	**Vanda**	**46.43**	**168**	P	**P**	**20 40 35.6**	**-0.3**
	comp=Z,14nm,0.8s,baz=238,slow=8.2,SNR=40						
VNDA				LR	LR	20 59 43.3	
	comp=Z,3μm,20.9s,baz=204,slow=36						
VNDA	**Vanda**	**46.43**	**168**	P	**P**	**20 40 36.2**	**+0.3**
VNDA				pmax	pmax		
	comp=Z,21nm,0.9s						
VNDA	**Vanda**	**46.43**	**168**	P	**P**	**20 40 36.2**	**+0.3**
VNDA				IAmb	IAmb	20 40 49.7	
	comp=Z,21nm,0.8s						
SBA	**Scott Base**	**46.72**	**170**	P	**P**	**20 40 39.1**	**+1.0**
SBA				pmax	pmax		
	comp=Z,143nm,1.6s						
SBA	**Scott Base**	**46.72**	**170**	P	**P**	**20 40 39.1**	**+1.0**
EFI	**East Falkland**	**47.88**	**236**	P	**P**	**20 40 46.7**	**-0.8**
EFI				pmax	pmax		
	comp=Z,237nm,1.7s						
EFI	**East Falkland**	**47.88**	**236**	P	**P**	**20 40 46.6**	**-0.8**
MBAR	**Mbarara**	**52.97**	**7**	*i* P	**P**	**20 41 25.1**	**-1.4**
MBAR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MBAR	**Mbarara**	**52.97**	**7**	P	**P**	**20 41 26.2**	**-0.3**
KMBO	**Kilima Mbogo**	**53.18**	**15**	P	**P**	**20 41 28.6**	**+0.5**
	comp=Z,8.7nm,1.0s,baz=189,slow=5.8,SNR=15						
KMBO				LR	LR	21 02 20.7	
	comp=Z,1μm,19.6s,baz=169,slow=34						
KMBO	**Kilima Mbogo**	**53.18**	**15**	P	**P**	**20 41 28.9**	**+0.8**
KMBO				pmax	pmax		
	comp=Z,11nm,1.0s						
KMBO	**Kilima Mbogo**	**53.18**	**15**	P	**P**	**20 41 28.9**	**+0.8**
H10S2	**ASCENSION HYDR**	**54.85**	**309**	T	T	21 40 38.1	
	baz=150,slow=74,SNR=297						
H10S3	**ASCENSION HYDR**	**54.86**	**309**	T	T	21 40 58.6	
	baz=70,slow=74,SNR=436						
H10N1	**ASCENSION HYDR**	**55.75**	**310**	T	T	21 41 48.4	
	baz=150,slow=74,SNR=3.4						
H10N3	**ASCENSION HYDR**	**55.77**	**310**	T	T	21 41 48.2	
	baz=150,slow=74,SNR=5.8						
H10N2	**ASCENSION HYDR**	**55.77**	**310**	T	T	21 41 49.1	
	baz=150,slow=74,SNR=4.1						
CNLB	**Canela**	**58.99**	**262**	*e*P	**P**	**20 42 13.1**	**+3.7**
BSFB	**Barra de Sao F**	**60.95**	**278**	*e*P	**P**	**20 42 24.2**	**+1.4**
SJMB	**Sao Joao De Ma**	**61.25**	**277**	*e*P	**P**	**20 42 26.2**	**+1.3**
BSCB	**Bom Sucesso**	**61.61**	**273**	*e*P	**P**	**20 42 27.0**	**-0.4**
PLCA	**Paso Flores**	**61.63**	**239**	P	**P**	**20 42 26.6**	**-0.7**
	comp=Z,19nm,0.9s,baz=151,slow=6.6,SNR=21						
PLCA				LR	LR	21 05 00.9	
	comp=Z,237nm,21.8s,baz=158,slow=32						
PLCA	**Paso Flores**	**61.63**	**239**	*e*P	**P**	**20 42 27.3**	**-0.1**
PLCA				pmax	pmax		
	comp=Z,19nm,0.9s						
PLCA	**Paso Flores**	**61.63**	**239**	P	**P**	**20 42 26.8**	**-0.7**
PLCA				IAmb	IAmb	20 42 31.4	
	comp=Z,22nm,0.9s						
H01W2	**Cape Leeuwin H**	**62.13**	**112**	T	T	21 50 57.7	
	baz=222,slow=75,SNR=14						
H01W3	**Cape Leeuwin H**	**62.15**	**112**	T	T	21 50 54.7	
	baz=222,slow=75,SNR=18						
H01W1	**Cape Leeuwin H**	**62.15**	**112**	T	T	21 50 54.0	
	baz=222,slow=75,SNR=14						
GO06	**Curarrehue**	**62.96**	**239**	P	**P**	**20 42 35.6**	**-0.7**
GO06				IAmb	IAmb	20 42 50.1	
	comp=Z,33nm,0.9s						
FURI	**Furi**	**63.24**	**15**	P	**P**	**20 42 38.0**	**-0.6**
LIC	**Lamto**	**64.83**	**326**	*e*P	**P**	**20 42 48.4**	**-0.3**
	comp=Z,93nm,1.1s						
KIC	**Kosan Boka**	**64.86**	**327**	*e*P	**P**	**20 42 48.5**	**-0.4**
	comp=Z,39nm,1.2s						
PCMB	**Pacaembu**	**65.01**	**267**	*e*P	**P**	**20 42 51.2**	**+1.3**
CPUP	**Villa Florida**	**65.02**	**259**	P	**P**	**20 42 49.5**	**-0.3**
	comp=Z,7.5nm,0.9s,baz=128,slow=8.9,SNR=6.2						
CPUP				LR	LR	21 06 08.5	
	comp=Z,425nm,21.8s,baz=148,slow=31						
CPUP	**Villa Florida**	**65.02**	**259**	P	**P**	**20 42 49.2**	**-0.7**
CPUP				pmax	pmax		
	comp=Z,16nm,1.1s						
CPUP	**Villa Florida**	**65.02**	**259**	P	**P**	**20 42 49.2**	**-0.7**
CPUP				IAmb	IAmb	20 43 09.0	
	comp=Z,16nm,1.1s						
DBIC	**Dimbokro**	**65.19**	**327**	P	**P**	**20 42 50.8**	**-0.2**
	comp=Z,37nm,1.0s,baz=140,slow=8.0,SNR=20						
DBIC				LR	LR	21 04 33.0	
	comp=Z,1μm,21.9s,baz=131,slow=30						
DBIC	**Dimbokro**	**65.19**	**327**	P	**P**	**20 42 50.0**	**-1.0**
DBIC				pmax	pmax		
	comp=Z,31nm,0.9s						
DBIC	**Dimbokro**	**65.19**	**327**	P	**P**	**20 42 50.0**	**-1.0**
DBIC				IAmb	IAmb	20 42 53.8	
	comp=Z,31nm,0.9s						
TIC	**Toumodi**	**65.22**	**326**	*e*P	**P**	**20 42 51.0**	**-0.2**
	comp=Z,95nm,0.8s						
JANB	**Januaria**	**65.95**	**277**	*e*P	**P**	**20 42 55.2**	**-0.9**
IPMB	**Ipameri, GO**	**65.98**	**272**	*e*P	**P**	**20 42 57.9**	**+1.7**
ATD	**Arta Tunnel**	**66.53**	**19**	LR	LR	21 10 41.1	
	comp=Z,280nm,19.4s,baz=179,slow=35						
GO05	**Huala**	**66.65**	**242**	P	**P**	**20 42 59.1**	**-1.2**
GO05				IAmb	IAmb	20 43 25.1	
	comp=Z,31nm,1.1s						
PEL	**Peldehue**	**67.41**	**245**	P	**P**	**20 43 05.3**	**+0.1**
PEL				pmax	pmax		
	comp=Z,181nm,0.9s						
PEL	**Peldehue**	**67.41**	**245**	P	**P**	**20 43 05.3**	**+0.1**
BDFB	**Brasilia**	**67.69**	**274**	P	**P**	**20 43 08.7**	**+1.4**
	comp=Z,27nm,1.0s,baz=127,slow=4.2,SNR=16						
BDFB				LR	LR	21 06 58.3	
	comp=Z,469nm,19.3s,baz=130,slow=31						
BDFB	**Brasilia**	**67.69**	**274**	P	**P**	**20 43 07.8**	**+0.6**
BDFB				pmax	pmax		
	comp=Z,30nm,1.0s						
BDFB	**Brasilia**	**67.69**	**274**	P	**P**	**20 43 07.8**	**+0.6**
BDFB				IAmb	IAmb	20 43 12.2	
	comp=Z,30nm,1.0s						
ROC1	**El Roble**	**67.71**	**245**	P	**P**	**20 43 06.9**	**-0.5**
TOA0	**Torodi Ar. Sit**	**69.45**	**335**	P	**P**	**20 43 17.0**	**-1.0**
TOA0				IAmb	IAmb	20 43 21.3	
	comp=Z,26nm,1.0s						
TORD	**Torodi Ar. Bea**	**69.45**	**335**	P	**P**	**20 43 16.9**	**-1.1**
	comp=Z,23nm,1.0s,baz=173,slow=6.1,SNR=30						
TORD				PKKPbc	PKKPdf	21 03 30.1	+21
	comp=Z,1.3nm,1.1s,baz=144,slow=2.7,SNR=4.3						
TORD				LR	LR	21 07 43.9	
	comp=Z,991nm,21.9s,baz=150,slow=31						
TORD	**Torodi Ar. Bea**	**69.45**	**335**	P	**P**	**20 43 16.8**	**-1.1**
ARAG	**Araguaiana, MT**	**69.90**	**271**	*e*P	**P**	**20 43 21.9**	**+1.1**
SOCY	**Socotra**	**69.91**	**30**	P	**P**	**20 43 22.1**	**+1.3**
SOCY				IAmb	IAmb	20 43 34.9	
	comp=Z,27nm,1.0s						
GO03	**Copiap**	**71.44**	**249**	P	**P**	**20 43 29.0**	**-1.2**
SALV	**Santo Antonio**	**72.06**	**267**	*e*P	**P**	**20 43 35.1**	**+1.1**
SMTB	**Santa Maria do**	**72.79**	**279**	*e*P	**P**	**20 43 38.8**	**+0.4**
GO02	**Mina Guanaco**	**72.97**	**251**	P	**P**	**20 43 37.9**	**-1.8**
GO02				IAmb	IAmb	20 44 04.5	
	comp=Z,60nm,1.9s						
LVC	**Limon Verde**	**74.58**	**253**	P	**P**	**20 43 48.0**	**-1.3**
LVC				pmax	pmax		
	comp=Z,12nm,1.0s						
LVC	**Limon Verde**	**74.58**	**253**	P	**P**	**20 43 48.0**	**-1.3**
LVC	**Limon Verde**	**74.58**	**253**	*e*P	**P**	**20 43 51.8**	**+2.6**
WHZ	**Wether Hill Ro**	**75.92**	**154**	P	**P**	**20 43 55.6**	**-0.5**
CLDB	**Colider**	**76.07**	**271**	*e*P	**P**	**20 43 58.0**	**+0.5**
DCZ	**Deep Cove**	**76.10**	**153**	P	**P**	**20 43 58.5**	**+1.3**
PB01	**IPOC Station P**	**76.14**	**253**	P	**P**	**20 43 57.2**	**-0.7**
PB01				IAmb	IAmb	20 44 07.3	
	comp=Z,33nm,1.6s						
PALK	**Pallekele**	**76.38**	**57**	LR	LR	21 11 24.7	
	comp=Z,367nm,18.1s,baz=206,slow=31						
GO01	**Chusmiza**	**77.05**	**255**	P	**P**	**20 44 02.3**	**-1.3**
WKZ	**Wanaka**	**77.18**	**154**	P	**P**	**20 44 03.5**	**+0.1**
PB11	**IPOC Station P**	**77.25**	**254**	P	**P**	**20 44 02.1**	**-2.1**
PB11				IAmb	IAmb	20 44 25.1	
	comp=Z,33nm,0.9s						
ODZ	**Otahua Downs**	**77.39**	**156**	P	**P**	**20 44 05.9**	**+1.4**
ODZ				IAmb	IAmb	20 44 32.1	
	comp=Z,47nm,1.5s						
MNMC	**Minye Minye**	**77.71**	**255**	P	**P**	**20 44 04.9**	**-2.1**
LBZ	**Lake Benmore**	**77.89**	**155**	P	**P**	**20 44 07.4**	**+0.1**
LBZ				IAmb	IAmb	20 44 27.2	
	comp=Z,42nm,1.2s						
TAM	**Tamanrasset**	**77.95**	**341**	P	**P**	**20 44 07.6**	**-0.2**
TAM				pmax	pmax		
	comp=Z,15nm,1.0s						
TAM	**Tamanrasset**	**77.95**	**341**	P	**P**	**20 44 07.6**	**-0.2**
FOZ	**Fox Glacier**	**78.60**	**154**	P	**P**	**20 44 11.1**	**-0.1**
FOZ				IAmb	IAmb	20 44 40.3	
	comp=Z,65nm,1.4s						
STKA	**Stephens Creek**	**78.62**	**129**	P	**P**	**20 44 12.0**	**+0.4**
	comp=Z,5.9nm,0.8s,baz=209,slow=5.4,SNR=9.7						
STKA				LR	LR	21 14 20.6	
	comp=Z,291nm,18.3s,baz=209,slow=32						
STKA	**Stephens Creek**	**78.62**	**129**	P	**P**	**20 44 11.5**	**-0.1**
RAYN	**Ar Rayn**	**78.72**	**19**	P	**P**	**20 44 12.7**	**+0.7**
RAYN				pmax	pmax		
	comp=Z,23nm,1.3s						
RAYN	**Ar Rayn**	**78.72**	**19**	P	**P**	**20 44 12.7**	**+0.7**
RPZ	**Rata Peaks**	**78.74**	**155**	P	**P**	**20 44 12.2**	**+0.2**
RPZ				IAmb	IAmb	20 44 24.1	
	comp=Z,37nm,1.2s						
LPAZ	**La Paz**	**79.11**	**257**	P	**P**	**20 44 15.4**	**+0.3**
	comp=Z,3.3nm,0.6s,baz=122,slow=6.1,SNR=13						
LPAZ				LR	LR	21 17 28.9	
	comp=Z,179nm,19.3s,baz=114,slow=34						
LPAZ	**La Paz**	**79.11**	**257**	*e*P	**P**	**20 44 17.4**	**+2.3**
LPAZ				pmax	pmax		

	comp=Z,3.0nm,0.6s						
LPAZ	La Paz	79.11	257	P	P	20 44 13.1	-2.0
LPAZ	La Paz	79.11	257	eP	P	20 44 16.9	+1.8
MQZ	McQueen's Vall	79.14	156	P	P	20 44 13.5	-0.7
MQZ				IAmb	IAmb	20 44 26.1	
	comp=Z,33nm,1.0s						
MNAI	Manna	79.15	83	P	P	20 44 15.5	+0.8
OXZ	Oxford	79.35	156	P	P	20 44 15.8	+0.5
OXZ				IAmb	IAmb	20 44 41.1	
	comp=Z,43nm,1.3s						
CISI	Cisompet, Garu	79.50	88	P	P	20 44 15.3	-1.3
CISI				IAmb	IAmb	20 44 34.8	
	comp=Z,64nm,1.4s						
LTZ	Lake Taylor	79.92	156	P	P	20 44 19.3	+0.8
LEM	Lembang	79.96	88	LR	LR	21 12 01.8	
	comp=Z,681nm,20.8s,baz=216,slow=30						
KHZ	Kahutara	80.57	157	P	P	20 44 21.6	-0.3
KHZ				IAmb	IAmb	20 44 40.8	
	comp=Z,50nm,1.4s						
UGM	Wanagama	80.83	91	P	P	20 44 24.8	+1.1
THZ	Tophouse	81.03	156	P	P	20 44 24.9	+0.4
THZ				IAmb	IAmb	20 44 38.7	
	comp=Z,42nm,1.1s						
ASAR	Alice Springs	81.59	119	P	P	20 44 28.2	+0.5
	comp=Z,5.1nm,0.6s,baz=206,slow=5.2,SNR=80						
ASAR				LR	LR	21 14 27.5	
	comp=Z,299nm,20.8s,baz=208,slow=31						
ASAR	Alice Springs	81.59	119	P	P	20 44 27.6	-0.2
AS31	Alice Springs	81.59	119	P	P	20 44 28.1	+0.4
WSAR	Wadi Sarin	81.73	31	P	P	20 44 28.6	+0.5
	comp=Z,34nm,0.8s,baz=230,slow=7.4,SNR=17						
SAML	Samuel	82.00	266	P	P	20 44 30.1	+0.2
SAML				pmax	pmax		
	comp=Z,21nm,1.2s						
SAML	Samuel	82.00	266	P	P	20 44 30.1	+0.2
SAML	Samuel	82.00	266	eP	P	20 44 30.3	+0.4
RPSI	Rantau Prapat	82.48	75	P	P	20 44 32.8	+0.5
PSI	Prapat	82.56	75	P	P	20 44 32.8	-0.2
PSI				pmax	pmax		
	comp=Z,12nm,0.9s						
EIL	Elat	83.30	8	P	P	20 44 35.8	-0.4
	comp=Z,2.7nm,0.8s,baz=112,slow=6.6,SNR=2.9						
HYB	Hyderabad	84.13	50	i P	P	20 44 40.0	-0.8
WRA	Warramunga Arr	84.87	117	P	P	20 44 45.3	+0.5
	comp=Z,9.4nm,1.1s,baz=211,slow=3.7,SNR=22						
WRA				LR	LR	21 17 20.1	
	comp=Z,431nm,18.7s,baz=215,slow=32						
WRA	Warramunga Arr	84.87	117	eP	P	20 44 45.2	+0.5
WRA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WRA	Warramunga Arr	84.87	117	P	P	20 44 45.0	+0.3
WB2	Warramunga Arr	84.88	117	P	P	20 44 45.5	+0.8
WRAB	Tennant Creek	84.88	117	P	P	20 44 44.7	-0.1
WRAB				pmax	pmax		
	comp=Z,43nm,1.2s						
WRAB	Tennant Creek	84.88	117	P	P	20 44 44.7	-0.1
WB0	Warramunga Arr	85.04	117	P	P	20 44 45.4	-0.2
PTGA	Pitinga	86.62	273	P	P	20 44 52.5	-0.9
PTGA				IAmb	IAmb	20 45 04.7	
	comp=Z,20nm,1.3s						
PTGA	Pitinga	86.62	273	eP	P	20 44 54.0	+0.6
NNA	Nana	87.57	253	LR	LR	21 20 29.6	
	comp=Z,178nm,21.2s,baz=118,slow=33						
KEST	Kesra	90.00	347	P	P	20 45 10.3	+1.4
	comp=Z,9.5nm,0.9s,baz=201,slow=8.8,SNR=4.3						
KEST				LR	LR	21 26 39.8	
	comp=Z,642nm,18.8s,baz=149,slow=36						
KEST	Kesra	90.00	347	P	P	20 45 08.6	-0.3
KEST				IAmb	IAmb	20 45 25.1	
	comp=Z,28nm,1.1s						
AGG	Agios Georgios	92.25	358	P	P	20 45 18.9	-0.3
AGG				pmax	pmax		
	comp=Z,24nm,1.1s						
AGG	Agios Georgios	92.25	358	P	P	20 45 18.9	-0.3
AGG				IAmb	IAmb	20 45 29.2	
	comp=Z,24nm,1.1s						
BRTR	Keskin Array B	93.19	6	P	P	20 45 24.4	+0.8
	comp=Z,2.4nm,0.9s,baz=169,slow=10,SNR=13						
BRTR				LR	LR	21 27 40.8	
	comp=Z,264nm,21.5s,baz=198,slow=36						
BRTR	Keskin Array B	93.19	6	P	P	20 45 23.5	-0.2
BRTR	Keskin Array B	93.19	6	P	P	20 45 23.5	-0.2
BR131	Keskin Array S	93.19	6	P	P	20 45 23.4	-0.2
BR131				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BR131	Keskin Array S	93.19	6	P	P	20 45 23.4	-0.2
HRA	Herat	93.25	30	P	P	20 45 23.5	-0.7
HRA				IAmb	IAmb	20 45 34.4	
	comp=Z,9.7nm,1.1s						
LIT	Litokhoron	93.32	358	P	P	20 45 23.4	-0.7
LIT				pmax	pmax		
	comp=Z,11nm,1.0s						
LIT	Litokhoron	93.32	358	P	P	20 45 23.4	-0.7
LIT				IAmb	IAmb	20 45 47.8	
	comp=Z,11nm,1.0s						
ALN	Alexandroupoli	94.08	1	P	P	20 45 26.8	-0.8
ALN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ALN	Alexandroupoli	94.08	1	P	P	20 45 26.8	-0.8
OHR	Ohrid	94.38	357	i P	P	20 45 34.4	+5.3
VAY	Valandovo	94.54	358	i P	P	20 45 34.5	+4.9
GNI	Garni	94.83	15	i P	P	20 45 31.3	+0.1
GNI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
STIP	Stip	94.92	358	i P	P	20 45 36.6	+5.2
CMAR	Chiang Mai Arr	95.32	66	P	P	20 45 34.1	+0.2
	comp=Z,1.3nm,0.9s,baz=223,slow=5.1,SNR=9.0						
CMAR				LR	LR	21 20 48.4	
	comp=Z,198nm,21.8s,baz=223,slow=31						
CMAR	Chiang Mai Arr	95.32	66	P	P	20 45 33.2	-0.6
GEYT	Alibeck	95.43	25	P	P	20 45 34.1	+0.2
	comp=Z,1.1nm,0.5s,baz=141,slow=52,SNR=2.9						
GEYT	Alibeck	95.43	25	P	P	20 45 33.3	-0.6
CHTO	Chiang Mai	95.61	66	P	P	20 45 34.6	-0.6
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CHTO	Chiang Mai	95.61	66	P	P	20 45 34.6	-0.6
PDG	Podgorica	95.76	355	P	P	20 45 33.1	-2.1
PDG				IAmb	IAmb	20 45 46.2	
	comp=Z,11nm,1.2s						
VTS	Vitosha	95.82	358	P	P	20 45 36.0	+0.3
VTS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VTS	Vitosha	95.82	358	P	P	20 45 36.0	+0.3
ESDC	Sonseca Array	96.25	338	P	P	20 45 39.2	+1.6
	comp=Z,1.3nm,0.7s,baz=160,slow=4.1,SNR=3.5						
ESDC				LR	LR	21 24 29.5	
	comp=Z,228nm,21.6s,baz=165,slow=33						
NIL	Nilore	96.26	39	P	P	20 45 37.0	-0.8
NIL				pmax	pmax		
	comp=Z,19nm,1.1s						
NIL	Nilore	96.26	39	P	P	20 45 37.0	-0.8
DZM	Mont Dzumac	97.52	144	ePS	PS	20 58 30.4	-1.0
	comp=Z,219nm,35.0s						
DZM	Mont Dzumac	97.52	144	eLR	LR	21 17 19.8	
	comp=Z,689nm,27.5s						
KBZ	Khabaz	98.08	13	LR	LR	21 33 45.3	
	comp=Z,244nm,18.1s,baz=196,slow=38						
KIV	Kislovodsk	98.27	13	eP	Pdif	20 45 47.2	+0.5
KIV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,618nm,21.0s						
CHGR	Chuyangaron	99.34	33	P	Pdif	20 45 51.4	-0.2
ROSC	El Rosal	99.62	265	LR	LR	21 26 49.9	
	comp=Z,586nm,19.4s,baz=176,slow=33						
UZH	Uzhgorod	101.85	358	eP	Pdif	20 46 06.1	+3.8
KSH	Kashi	102.47	38	P	Pdif	20 46 05.8	+0.3
KSH				pP	sPdif	20 46 10.9	+2.2
KSH				SKS		20 56 42.3	
KSH				S	Sdif	20 57 43.9	-5.5
KSH				sS	sS	20 57 51.0	-2.7
KSH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KSH				LR	LR		
	comp=Z,230nm,12.2s						
KSH				LR	LR		
	comp=Z,280nm,11.6s						
KSH				LR	LR		
	comp=Z,490nm,11.6s						
GERES	GERESS Array B	102.50	352	PP	PP	20 50 18.5	-0.6
	comp=Z,1.1nm,0.9s,baz=163,slow=4.1,SNR=6.0						
KMI	Kunming	102.76	65	P	Pdif	20 46 07.3	0.0
KMI				PP	PKiKP	20 50 25.4	-2.5
KMI				S	Sdif	20 57 47.1	-5.6
KMI				LR	LR		
	comp=Z,200nm,10.3s						
KMI				LR	LR		
	comp=Z,170nm,11.6s						
KMI				LR	LR		
	comp=Z,280nm,13.0s						
TBI	Tubuai	103.28	185	eLR	LR	21 19 51.4	
	comp=Z,630nm,29.0s						
AAK	Ala-Archa	104.70	35	Pdiff	Pdif	20 46 15.9	+0.5
	comp=Z,0.6nm,0.5s,baz=171,slow=4.3,SNR=4.7						
AAK	Ala-Archa	104.70	35	P	Pdif	20 46 15.7	+0.3
AAK	Ala-Archa	104.70	35		Pdif	20 46 15.7	+0.3
CLL	Collm	105.01	352	ePS	PS	20 59 53.0	+1.9
CLL				eSS	SS	21 05 35.0	+3.4
CLL				eSSS	SSS	21 09 30.0	
CLL				LmV		21 33 00.0	
	comp=Z,700nm,21.9s						
CD2	Chengdu	107.89	62	Pdif	Pdif	20 46 30.3	+0.5
PPT2	Papeete2	109.01	185	ePS	PS	21 00 25.2	-6.8
	comp=Z,186nm,25.5s						
PPT2	Papeete2	109.01	185	eLR	LR	21 22 41.1	
	comp=Z,440nm,23.0s						
WMQ	Urumqi	110.69	43	ePKP	PKiKP	20 50 42.1	+0.2
WMQ				LR	LR		
	comp=Z,180nm,21.5s						
WMQ				LR	LR		
	comp=Z,67nm,20.5s						
MKAR	Makanchi Array	111.08	38	Pdiff	Pdif	20 46 49.2	+5.7
	comp=Z,0.4nm,0.8s,baz=225,slow=4.8,SNR=4.2						
LZH	Lanzhou	111.98	59	ePKP	PKiKP	20 50 42.8	-1.9
LZH				sPKP		20 50 48.0	
LZH				SS	SS	21 07 10.4	+3.8
LZH				LR	LR		
	comp=Z,320nm,17.3s						
LZH				LR	LR		
	comp=Z,390nm,19.0s						
LZH				LR	LR		
	comp=Z,380nm,19.5s						
GTA	Gaotai	112.57	54	PKP	PKiKP	20 50 50.0	+4.4
GTA				LR	LR		
	comp=Z,230nm,19.0s						
GTA				LR	LR		
	comp=Z,230nm,20.3s						
FINES	FINESS Array B	114.66	0	PKP	PKiKP	20 50 52.9	+4.2
	comp=Z,1.1nm,0.6s,baz=143,slow=6.7,SNR=6.0						
FINES	FINESS Array B	114.66	0	i PKIKP	PKiKP	20 50 51.6	+2.9
FINES	FINESS Array B	114.66	0	PKiKP	PKiKP	20 50 51.6	+2.9
NJ2	Nanjing	117.06	72	ePKP	PKiKP	20 50 55.3	+1.0
HHC	Hu-ho-hao-te	119.54	60	ePKP	PKPdf	20 50 57.0	-2.0
HHC				LR	LR		
	comp=Z,680nm,19.0s						
HHC				LR	LR		
	comp=Z,560nm,19.0s						
HHC				LR	LR		
	comp=Z,760nm,19.5s						
SONM	Songino Array	122.04	52	PKP	PKiKP	20 51 04.9	+1.1
	comp=Z,1.4nm,0.8s,baz=192,slow=2.6,SNR=9.7						
SONM	Songino Array	122.04	52	ePKIKP	PKiKP	20 51 06.0	+2.3
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	122.04	52		PKPdf	20 51 02.1	-1.5
ZAK	Zakamensk	122.46	48	ePKIKP	PKPdf	20 51 03.7	-0.6
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARCES	ARCESS Array B	122.78	0	PKP	PKPdf	20 51 04.2	+0.1
	comp=Z,2.3nm,0.8s,baz=197,slow=3.8,SNR=8.4						
ARCES	ARCESS Array B	122.78	0	ePKIKP	PKiKP	20 51 07.7	+3.3
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARCES	ARCESS Array B	122.78	0	PKPdf	PKPdf	20 51 03.6	-0.6
TLY	Talaya	123.55	47	ePKIKP	PKiKP	20 51 13.4	+7.0
TLY				pmax	pmax		
	comp=Z,12nm,1.5s						
KSRS	Korea Array	126.11	74	PKP	PKiKP	20 51 13.6	+1.7
	comp=Z,0.3nm,0.3s,baz=211,slow=19,SNR=3.1						
NRIK	Noril'sk	130.66	24	PKP	PKiKP	20 51 19.9	-0.2
	comp=Z,1.6nm,0.4s,baz=180,slow=4.0,SNR=2.4						
SCHQ	Schefferville	131.89	309	PKP	PKiKP	20 51 23.6	+0.5
	comp=Z,2.8nm,0.8s,baz=207,slow=4.0,SNR=4.8						
SCHQ	Schefferville	131.89	309	PKPdf	PKPdf	20 51 22.4	+0.4
USRK	Ussuriysk Ar.	132.88	70	PKP	PKiKP	20 51 25.6	+0.3
	comp=Z,0.7nm,0.6s,baz=144,slow=37,SNR=2.4						
USRK	Ussuriysk Ar.	132.88	70		PKPdf	20 51 24.6	+0.5
KLR	Kul'dur	135.77	64	i PKIKP	PKiKP	20 51 31.5	+0.5
KLR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TXAR	Lajitas Array	135.98	258	PKP	PKiKP	20 51 32.6	+0.3
	comp=Z,0.8nm,0.9s,baz=192,slow=2.3,SNR=5.0						
FRB	Frobisher Bay	137.46	319	PKP	PKPdf	20 51 32.8	+0.8
	comp=Z,1.0nm,0.4s,baz=75,slow=4.1,SNR=2.8						
YSS	Yuzh-Sakhalins	140.61	73	ePKHKP	PKPdf	20 51 33.4	-5.0
YSS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
TIXI	Tiksi	143.65	31	i PKIKP	PKPdf	20 51 42.1	-0.9
TIXI				pmax	pmax		
	comp=Z,42nm,0.7s						
S22A	4UR Ranch, Cre	143.78	264		PKPdf	20 51 44.2	-0.6
X16A	Lo Mia Camp, P	144.19	255		PKPdf	20 51 44.8	-0.7
ISCO	Idaho Springs	144.38	268	PKIKP	PKPdf	20 51 45.1	-0.7
ISCO	Idaho Springs	144.38	268		PKPdf	20 51 45.1	-0.7
ISCO	Idaho Springs	144.38	268	P	PKiKP	20 51 48.1	-1.3
	baz=129						
MVCO	Mesa Verde	144.41	262		PKPdf	20 51 45.6	-0.2
ULM	Lac du Bonnet	144.47	289	PKP	PKPdf	20 51 44.6	-0.5
	comp=Z,4.8nm,0.8s,baz=115,slow=3.7,SNR=8.3						
ULM	Lac du Bonnet	144.47	289	ePKIKP	PKPab	20 51 43.5	0.0
ULM				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ULM	Lac du Bonnet	144.47	289		PKPbc	20 51 44.0	+0.3
WUAZ	Wupatki	144.93	257		PKPab	20 51 45.4	-0.5
WUAZ	Wupatki	144.93	257	P	PKPdf	20 51 48.4	+1.7
	baz=135						
PV15	Paradox Valley	145.15	263		PKPbc	20 51 46.0	-0.7
MDND	Maddock	145.42	283		PKPdf	20 51 46.0	-0.9
MDND	Maddock	145.42	283	P	PKPab	20 51 47.5	+0.4
	baz=120						
PV22	Blue Mesa, Par	145.46	263		PKPdf	20 51 47.3	-0.3
Y12C	Blythe	145.47	251	P	PKiKP	20 51 49.8	-1.6
	baz=137						
PDMCI	Parker Dam,Lak	145.66	252	P	PKiKP	20 51 50.2	-1.6
	baz=137						
MONP2	Monument Peak	145.90	248	P	PKPab	20 51 51.1	+1.5
	baz=139						
BC3	Big Chuckawall	145.92	250	P	PKiKP	20 51 51.2	-1.3
	baz=138						
RSSD	Black Hills	146.03	275	P	PKiKP	20 51 51.7	-0.8
	baz=124						
IRM	Iron Mountain	146.12	251	P	PKiKP	20 51 52.3	-0.5
	baz=137						
BELC	Belle Mtn. Jos	146.48	250	P	PKiKP	20 51 53.1	-0.6
	baz=138						
GMRC	Granite Mounta	146.87	251	P	PKPab	20 51 53.6	+0.4
	baz=137						
FCC	Fort Churchill	146.90	304	PKP2	PKPbc	20 51 50.9	0.0
FCC	Fort Churchill	146.90	304		PKPbc	20 51 50.9	0.0
SHPR	Sheep Range	147.81	254		PKPbc	20 51 54.9	+0.5
GSC	Goldstone, Bar	147.89	251	PKP2	PKiKP	20 51 55.7	-0.8
GSC	Goldstone, Bar	147.89	251		PKiKP	20 51 55.7	-0.8
MPU	Maple Canyon	148.10	263		PKPbc	20 51 55.9	+0.8
NLU	North Lily Min	148.32	262		PKiKP	20 51 56.8	-0.5
JLU	Jordanelle	148.36	264		PKiKP	20 51 56.8	-0.7
PSUT	Pine Spring	148.44	258		PKPdf	20 51 53.1	+0.5
PSUT					PKPab	20 51 58.1	-1.3
PD31	Pinedale Array	148.55	269		PKiKP	20 51 57.3	-0.4
PDAR	Pinedale Array	148.55	269	PKPbc	PKiKP	20 51 57.1	-0.6
	comp=Z,3.3nm,0.9s,baz=99,slow=4.7,SNR=16						
PDAR	Pinedale Array	148.55	269	PKPdf	PKPdf	20 51 50.2	-2.4
PDAR					PKPbc	20 51 56.9	+0.7
BW06	Boulder Array	148.55	269	PKPdf	PKPdf	20 51 52.0	-0.6
BW06					PKPbc	20 51 56.8	+0.5
CTU	Camp Tracy	148.59	263		PKiKP	20 51 57.7	-0.2
RES	Resolute Bay	148.60	334	PKIKP	PKPdf	20 51 51.1	-0.3
RES	Resolute Bay	148.60	334		PKPdf	20 51 51.0	-0.3
TCUT	Toone Canyon	148.66	264		PKPdf	20 51 51.9	-0.9
LAO	LASA Array	148.72	277		PKPdf	20 51 52.4	-0.1
LAO	LASA Array	148.72	277	P	PKiKP	20 51 58.6	+0.9
	baz=121						
TPNV	Topopah Spring	148.74	254	PKP2	PKiKP	20 51 58.6	+0.3
TPNV	Topopah Spring	148.74	254		PKiKP	20 51 58.6	+0.3
TPNV	Topopah Spring	148.74	254	P	PKPab	20 51 59.7	-1.0
	baz=134						
MPMC	Manual Prospec	148.82	251	P	PKiKP	20 51 58.7	+0.2
	baz=136						
DUG	Dugway, Tooele	148.91	262	PKP2	PKiKP	20 51 58.2	-0.3
DUG	Dugway, Tooele	148.91	262		PKiKP	20 51 58.2	-0.3
HWUT	Hardware Ranch	149.05	265		PKPbc	20 51 57.6	+0.1
ISA	Isabella, Lake	149.09	249	PKP2	PKPbc	20 51 57.6	-0.1
ISA	Isabella, Lake	149.09	249		PKPbc	20 51 57.6	-0.1
R11A	Troy Canyon, C	149.32	256		PKPbc	20 51 57.8	-0.5
SPUT	South Promonto	149.39	264	PKPdf	PKPdf	20 51 51.1	-2.8
SPUT					PKPbc	20 51 57.9	-0.5
AHID	Auburn Hatcher	149.47	267		PKPdf	20 51 53.2	-0.8
BGU	Big Grassy Mou	149.50	263		PKPbc	20 51 57.8	-0.8
REDW	Red Top Meadow	149.66	268		PKPbc	20 51 58.9	-0.2
RLMT	Red Lodge	149.70	273		PKPbc	20 51 59.1	0.0
RLMT	Red Lodge	149.70	273	P	PKPdf	20 51 56.7	+2.3
	baz=123						
FFC	Flin Flon	149.72	294	PKP2	PKiKP	20 52 00.2	+0.7
FFC	Flin Flon	149.72	294		PKiKP	20 52 00.2	+0.7
FXWY	Fox Creek	149.93	269		PKPbc	20 51 57.5	-2.2
MA2	Magadan	150.09	56	PKIKP	PKPbc	20 51 58.6	-0.6
MA2	Magadan	150.09	56		PKPbc	20 51 58.6	-0.6
YHH	Holmes Hill	150.46	271		PKPdf	20 51 53.7	-2.0
ELK	Elko	150.69	260	PKIKP	PKPbc	20 51 59.4	-2.2
ELK	Elko	150.69	260		PKPbc	20 51 59.4	-2.2
NVAR	Mina Array Bea	150.94	253	PKP	PKPdf	20 51 58.2	+1.7
	comp=Z,1.2nm,0.8s,baz=158,slow=2.6,SNR=4.9						
NVAR				PKPbc	PKPbc	20 52 04.5	+2.3
	comp=Z,7.3nm,0.9s,baz=143,slow=3.3,SNR=19						
NVAR				PKPab	PKPab	20 52 11.1	+1.4
	comp=Z,4.5nm,0.6s,baz=144,slow=2.1,SNR=12						
NVAR	Mina Array Bea	150.94	253		PKPdf	20 51 56.0	-0.5
NVAR					PKPbc	20 52 04.8	+2.6
YERR	Yerington	151.86	253		PKPbc	20 52 04.1	-0.2
PETK	Petropavlovsk-	151.96	71	PKPbc	PKPbc	20 52 01.9	-1.9
	comp=Z,10nm,0.9s,baz=199,slow=3.1,SNR=5.0						
PETK				PKPab	PKPab	20 52 12.6	-0.7
	comp=Z,19nm,0.8s,baz=221,slow=3.4,SNR=9.2						
PETK	Petropavlovsk-	151.96	71		PKPbc	20 52 01.3	-2.5
AFDM	Forest Hills D	152.81	251		PKPbc	20 52 05.3	-1.0
AFDM					PKPab	20 52 16.7	-0.6
BMO	Blue Mountains	154.35	265	PKP2	PKPab	20 52 22.4	-1.3
BMO	Blue Mountains	154.35	265	PKPdf	PKPdf	20 52 03.8	+2.6
BMO					PKPab	20 52 22.4	-1.3
F10A	Beach Ranch, E	154.90	268	PKPdf	PKPdf	20 52 02.6	+0.7
F10A					PKPab	20 52 25.9	-0.1
N02D	Trinity Center	155.16	253	P	PKPdf	20 52 04.8	+2.4
	baz=131						
BILL	Bilibino	156.61	37	i PKIKP	PKPdf	20 52 05.0	+1.7
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BILL	Bilibino	156.61	37	PKPdf	PKPdf	20 52 03.6	+0.3
YKA	Yellowknife Ar	157.34	309	PKP	PKPdf	20 52 05.0	+0.6
	comp=Z,1.5nm,1.1s,baz=90,slow=1.1,SNR=8.4						
YKA				PKPab	PKPab	20 52 38.3	+2.4
	comp=Z,8.3nm,0.9s,baz=93,slow=4.9,SNR=13						
GAMB	Gambell	166.51	34		PKPab	20 53 16.0	+0.1
ANM	Nome	167.69	22	PKP2	PKPab	20 53 20.5	-0.6
ANM	Nome	167.69	22		PKPab	20 53 20.5	-0.6
ILAR	Eielson Array	168.08	344	PKPab	PKPab	20 53 24.6	+1.7
	comp=Z,1.2nm,0.8s,baz=353,slow=3.2,SNR=6.1						
ILAR	Eielson Array	168.08	344	PKP2	PKPab	20 53 23.3	+0.4
ILAR	Eielson Array	168.08	344		PKPab	20 53 23.2	+0.4

IASPEI ***14*** *20:43:35.7±0.9, 47°.54N±0°.02×122°.76W±0°.02, h26^{km}±6^{km}, Error ellipse: s-maj=3.4km s-min=2.8km az=76.7, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

ANF ***14*** *20:43:35.5±0.4, 47°.56N×122°.82W, h29^{km}±4^{km}, ML2.8/7, Error ellipse: s-maj=6.2km s-min=2.7km az=101.0*

NEIC ***14*** *20:43:35.3±1.2, 47°.56N±0°.03×122°.80W±0°.03, h18^{km}±2^{km}, Error ellipse: s-maj=4.7km s-min=3.2km az=180.0*

PNSN ***14*** *20:43:36.8, 47°.51N×122°.78W, h22^{km}, MD2.6, Fault plane solution: NP1:ϕ_s140.00000°, δ50.00000°, λ-130.00000°., Hypocentre not reviewed by the ISC*

SEA ***14*** *20:43:36.7, 47°.52N×122°.78W, h22^{km}, ML2.6, ML2.0/16, Washington*

ISC 14 20:43:35.9±0.9, **47°.55N**±0°.02×**122°.78W**±0°.02, **h27**^{km}±5^{km}, **n72,** σ**0^{s}.89**/97, **Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GNW	Green Mountain	0.03	301	P	Pb	20 43 40.2	-0.3
GNW				S	Sb	20 43 42.9	-0.8
D03D	Eldon	0.21	267	P	Pb	20 43 41.8	-0.1
	baz=95,SNR=1000						
D03D				S	Sb	20 43 45.7	-0.3
	baz=95						
HDW	Hoodsport	0.21	299	P	Pb	20 43 42.1	0.0
D04E	Lakebay	0.37	179	P	Pb	20 43 44.2	+0.1
	baz=359,SNR=25						
D04E				S	Sn	20 43 50.8	-0.9
	baz=359						
SMW	South Mountain	0.44	239	P	Pb	20 43 45.4	+0.1
BLN	Blyn Mountain	0.48	345	P	Pn	20 43 45.9	-1.1
CPW	Capitol Peak	0.62	203	P	Pb	20 43 47.6	-0.7
D05A	Enumclaw	0.65	123	P	Pb	20 43 48.5	-0.2
D05A	Enumclaw	0.65	123		Pb	20 43 48.4	-0.2
D05A				Sg	Sb	20 43 57.3	0.0
OSD	Olympics--Snow	0.68	294	P	Pn	20 43 50.0	-0.1
SVOH	Skagit Valley	0.75	8	P	Pn	20 43 50.3	-0.5
C05A	Tolt Reservoir	0.75	78	P	Pb	20 43 49.6	-0.8
C05A				S	Sb	20 43 59.4	-1.0
NLWA	Neilton Lookou	0.75	259		Pn	20 43 50.4	-0.4
NLWA				Sg	Sn	20 44 01.4	0.0
WISH	Wishkah	0.80	238	P	Pb	20 43 50.6	-0.6
B05A	Bryant	0.85	32	P	Pb	20 43 51.7	-0.5
	baz=212,SNR=8.2						
B05A				S	Sb	20 44 03.0	-0.2
	baz=212						
JCW	Jim Creek	0.86	41	P	Pb	20 43 51.8	-0.5
VGZ	Gonzales	0.94	337	P	Pn	20 43 53.0	-0.4
VGZ				S	Sn	20 44 06.2	+0.2
FMW	Mount Fremont	0.97	129	P	Pb	20 43 53.2	-1.1
CMW	Cultus Mountai	0.98	27	P	Pn	20 43 54.9	+0.8
E04D	Cinebar	1.00	171	P	Pb	20 43 53.4	-1.2
	baz=352,SNR=19						
E04D				S	Sb	20 44 06.9	-0.5
	baz=352						
OBC	Olympics--Boni	1.00	300	P	Pn	20 43 56.1	+1.8
LON	Longmire	1.04	140	P	Pn	20 43 54.0	-0.8
LON				S	Sb	20 44 06.7	-1.8
LON	Longmire	1.04	140		Pn	20 43 54.0	-0.8
LON				Sg	Sb	20 44 06.7	-1.8
SOKB	Sooke	1.04	325	P	Pn	20 43 55.5	+0.8
SOKB				S	Sn	20 44 08.4	+0.1
MCW	Mount Constitu	1.13	358	P	Pb	20 43 56.6	-0.4
E03A	Lebam	1.14	208	P	Pn	20 43 56.1	+0.1
E03A				S	Sn	20 44 11.6	+1.0
E03A	Lebam	1.14	208		Pn	20 43 56.1	+0.1
E03A					Sn	20 44 11.3	+0.7
E03A					Sn	20 44 11.7	+1.0
PA05	PA05 Willingdo	1.19	338	S	Sn	20 44 13.6	+1.5
PA12	PA12 Sannich	1.19	338	S	Sn	20 44 12.8	+0.7
B009	North Saanich	1.19	338	P	Pb	20 43 56.9	-0.9
B009				S	Sn	20 44 13.2	+1.1
B011	North Saanich	1.19	338	S	Sn	20 44 12.4	+0.3
B010	North Saanich	1.19	338	P	Pb	20 43 57.0	-0.9
B010				S	Sn	20 44 12.6	+0.5
PGC	Sidney	1.19	338	P	Pn	20 43 56.5	-0.3
PGC				S	Sn	20 44 13.9	+1.8
PGC	Sidney	1.19	338		Pn	20 43 56.4	-0.4
GPW	Glacier Peak	1.25	62	P	Pb	20 43 58.5	-0.5
SNB	Saturna Island	1.26	348	P	Pb	20 43 58.7	-0.2
SNB				S	Sb	20 44 15.3	+0.6
LZB	Mount Lazard	1.27	327	P	Pb	20 43 58.3	-1.0
LZB				S	Sb	20 44 15.2	-0.1
B06A	Marblemount	1.30	41	P	Pb	20 43 59.5	-0.3
B06A				S	Sb	20 44 15.4	-0.7
C06D	Leavenworth	1.33	73	P	Pn	20 43 58.8	+0.1
	baz=253						
C06D				S	Sn	20 44 16.0	+0.5
	baz=253						
MBW	Mount Baker	1.37	25	P	Pb	20 44 00.6	-0.4
LTY	Liberty	1.46	101	P	Pn	20 44 01.4	+0.8
LTY				S	Sn	20 44 19.9	+0.9
LTY	Liberty	1.46	101		Pn	20 44 01.3	+0.6
LTY				Sn	Sb	20 44 20.1	-0.6
F04D	Rainier, OR	1.47	186	Sb	Sb	20 44 21.7	+0.8
	baz=6.3						
GOBB	Galiano Island	1.49	341	P	Pb	20 44 02.7	-0.1

PFB	Port Renfrew	1.51	313	S	Sb	20 44 21.7	-0.4
A05A	Maple Falls	1.53	18	Pn	Pn	20 44 01.1	-0.4
VDB	Vedder Mountai	1.55	17	P	Pb	20 44 03.2	-0.7
F04A	Amboy	1.63	171		Pn	20 44 03.0	+0.1
YOUB	Youbou, Lake C	1.68	324	P	Pb	20 44 04.9	-1.2
F03A	Seaside	1.70	199	Pn	Pn	20 44 04.0	+0.1
HNBB	Haney	1.75	4	P	Pb	20 44 06.0	-1.3
HNBB				S	Sb	20 44 28.4	-0.5
NLLB	Nanaimo Lost L	1.86	335	S	Sb	20 44 31.3	-0.9
BIB	Bowen Island	1.89	350	P	Pb	20 44 08.5	-1.3
F05D	White Salmon	1.90	151	Sb	Sb	20 44 33.3	+0.2
	baz=332						
B928	Bamfield	2.03	310	S	Sn	20 44 34.0	+1.2
WPB	Watts Point	2.13	352	P	Pb	20 44 11.9	-1.9
E07A	Sunnyside	2.23	115	Pn	Pn	20 44 11.0	-0.2
B08A	Colville Reser	2.46	69	Sg	Sb	20 44 49.6	+0.4
B08A	Colville Reser	2.46	69	Pn	Pn	20 44 13.7	-0.6
HAWA	Hanford	2.51	116		Pn	20 44 16.9	+2.0
F07A	Phinny Hill Vi	2.57	129	Pn	Pn	20 44 17.1	+1.4
D08A	Wollman Farm,	2.67	99	Pn	Pn	20 44 18.0	+0.8
G06A	Carlson Farm,	2.75	146	Pn	Pn	20 44 19.8	+1.5
PNT	Penticton	2.75	49	Sg	Sb	20 44 59.9	+2.1
E08A	Dider Farm, El	2.76	111	Pn	Pn	20 44 19.8	+1.5
H04A	Detroit Lake	2.89	172	Pn	Pn	20 44 21.2	+0.9
C09A	Chrisman Ranch	3.06	84	Pn	Pn	20 44 24.3	+1.8
LLLB	Lillooet	3.12	11	Pn	Pn	20 44 24.3	+0.9
E09A	Wood Farm, Sta	3.33	106	Pn	Pn	20 44 25.5	-0.8
G08A	Pilot Rock	3.48	129	Pn	Pn	20 44 27.7	-0.6
NEW	Newport	3.87	77	Pn	Pn	20 44 33.9	+0.2
F10A	Beach Ranch, E	4.13	110	Pn	Pn	20 44 37.6	+0.3

IDC ***14*** *20:53:52.6±0.6, 2°.03S×79°.67W, h81^{km}±4^{km}, mb4.1/28, mb1 4.3/36, mb1mx4.3/49, mbtmp4.5/36, MS3.4/4, Ms1 3.4/4, ms1mx3.1/37, Error ellipse: s-maj=14.1km s-min=8.0km az=54.0*

NEIC ***14*** *20:53:53.7±1.8, 2°.05S±0°.05×79°.61W±0°.08, h96^{km}±4^{km}, mb4.9/352, Error ellipse: s-maj=11.3km s-min=7.9km az=83.0*

IGQ ***14*** *20:53:54.9±0.3, 2°S±3°×8°0W±°, h52^{km}, M5.1*

ISC 14 20:53:52.9±0.3**, 2°.12S**±0°.03×**79°.77W**±0°.04**, h89**^{km}±3^{km}**, h89**^{km}**:pP-P, n787,** σ1^{s}.**28**/859**, mb4.9**/183**, 3C-1D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMIL	Milagro (Trans	0.18	96	P	Pn	20 54 05.8	+0.2
AGUAY	Guayaquil	0.19	289	S	Sn	20 54 13.4	-1.7
AGUAY	Guayaquil	0.19	289	P	Pn	20 54 04.7	-0.9
COHC	Cochancay	0.62	124	S	Sn	20 54 20.1	-0.1
COHC	Cochancay	0.62	124	P	Pn	20 54 08.2	-0.3
MORR	Playas El Morr	0.77	227	P	Pn	20 54 10.2	+0.2
MORR	Playas El Morr	0.77	227	S	Sn	20 54 24.3	+1.6
AQUE	Quevedo	1.10	15	P	Pn	20 54 13.7	0.0
PPLP	Puerto Lpez	1.15	299	P	Pn	20 54 13.5	-0.8
ARIO	Riobamba	1.17	67	P	Pn	20 54 15.7	+0.8
SALI	Salinas	1.22	267	P	Pn	20 54 14.7	-0.4
BIL2	Estacion Bilba	1.43	63	P	Pn	20 54 20.7	+2.7
BMAS	Trigal station	1.43	65	P	Pn	20 54 19.4	+1.4
AAM2	Ambato 2 (Merc	1.43	54	P	Pn	20 54 20.6	+2.6
BBIL	Ulba Tungurahu	1.44	63	P	Pn	20 54 19.8	+1.6
SAGO	Sagoatoa	1.46	49	P	Pn	20 54 19.9	+1.3
BPAT	Tungurahua Vol	1.47	66	P	Pn	20 54 20.1	+1.5
RETU	Refugio	1.48	64	P	Pn	20 54 20.5	+1.7
RUN5	Runtun	1.52	63	P	Pn	20 54 20.7	+1.6
BRUN	Tungurahua Vol	1.52	63	P	Pn	20 54 20.8	+1.6
APUJ	Pujili	1.57	43	P	Pn	20 54 21.6	+1.7
PIS1	Pisayambo	1.74	53	P	Pn	20 54 24.0	+1.9
PISA	Pisayambo	1.74	53	P	Pn	20 54 23.9	+1.7
ILLI	Illinizas Sur	1.74	37	P	Pn	20 54 23.2	+1.0
APUY	Puyo	1.89	70	P	Pn	20 54 26.0	+2.3
VCES	Cotopaxi	1.90	46	P	Pn	20 54 26.1	+1.9
BMOR	Cotopaxi Volca	1.90	44	P	Pn	20 54 26.0	+1.7
BNAS	Cotopaxi Volca	1.93	42	P	Pn	20 54 26.7	+2.1
BREF	Cotopaxi Volca	1.96	43	P	Pn	20 54 27.2	+2.1
BTAM	Cotopaxi Volca	1.98	44	P	Pn	20 54 27.3	+1.9
TAMB	Tambo	1.99	45	P	Pn	20 54 27.3	+1.8
VC1	Cotopaxi 1	2.00	43	P	Pn	20 54 27.6	+2.0
MAG1	Magdalena	2.03	360	P	Pn	20 54 25.5	0.0
GONZ	Gonzanam	2.14	170	P	Pn	20 54 28.8	+1.5
ANTM	Antisana-La Mi	2.21	45	P	Pn	20 54 29.6	+1.3
ANTG	Antisana-Guama	2.21	43	P	Pn	20 54 29.7	+1.4
GGPC	Guagua Pichinc	2.25	31	P	Pn	20 54 30.5	+1.5
TERV	Terraza Guagua	2.25	31	P	Pn	20 54 30.7	+1.7
GGP	Refugio Guagua	2.26	31	P	Pn	20 54 30.8	+1.7
PINO	Pino	2.27	31	P	Pn	20 54 30.4	+1.3
ANTS	Antisana-Sarah	2.27	45	P	Pn	20 54 30.8	+1.6
YANA	Yana	2.32	31	P	Pn	20 54 30.9	+1.1
APR2	Miler	2.32	20	P	Pn	20 54 28.4	-1.1
GOLV	Golondrinas	2.40	15	P	Pn	20 54 30.6	+0.2
PULU	Pululahua	2.47	31	P	Pn	20 54 33.0	+1.3
PAC1	Pacto, Paraso	2.56	23	P	Pn	20 54 32.1	-0.6
OTAV	Otavalo	2.69	29	⇑*i*P	Pn	20 54 35.6	+0.9
OTAV	Otavalo	2.69	29		Pn	20 54 35.5	+0.9
OTAV	Otavalo	2.69	29	P	Pn	20 54 35.6	+0.9
CUSW	Cuicocha Oeste	2.78	31	P	Pn	20 54 37.1	+1.3
CUIC	Cuicocha-Domo	2.79	30	P	Pn	20 54 37.2	+1.2
CAYA	Cayambe	2.81	39	P	Pn	20 54 38.2	+1.8
COTA	Cotacachi	2.83	30	P	Pn	20 54 37.8	+1.2
IMBA	Imbabura, San	2.85	33	P	Pn	20 54 39.2	+2.4
URCU	Urcuqui	2.96	31	P	Pn	20 54 39.6	+1.3
YAHU	Yahuarcocha	3.00	35	P	Pn	20 54 40.2	+1.4
CMBC	Cumbal	3.61	33	*e*P	Pn	20 54 48.0	+0.9
TUMC	Tumaco	4.05	15	*e*P	Pn	20 54 51.5	-1.1
TUMC				*e*S	Sn	20 55 40.0	+1.1
TUMC	Tumaco	4.05	15		Pn	20 54 52.7	+0.1
CPAS1	Pasto	4.10	37	*e*P	Pn	20 54 55.6	+2.0
CCUFI	Cufio, Nario	4.11	36	*e*P	Pn	20 54 55.9	+1.9
CRUC	La Cruz	4.62	38	*e*P	Pn	20 55 01.5	+0.8
BBAC	Balboa, Cauca	4.82	32	*e*P	Pn	20 55 03.1	-0.3
BBAC				*e*S	Sn	20 55 56.5	-1.6
ATAH	Atahualpa	5.17	165	P	Pn	20 55 10.2	+2.0
	21nm,0.3s,baz=11,slow=10,SNR=87						
ATAH				S	Sn	20 56 10.4	+3.6
	24nm,0.3s,baz=18,slow=11,SNR=6.4						
SOTA	Rioblanco	5.28	37	⇑*i*P	Pn	20 55 10.7	+0.9
GR1C	Gorgona, Isla	5.33	18	*e*P	Pn	20 55 08.0	-2.1
GR1C				*e*P		20 55 08.5	
FLOC	Florencia	5.52	48	*e*P	Pn	20 55 11.9	-0.7
FLOC				⇑*i*P		20 55 12.0	
FLOC	Florencia	5.52	48		Pn	20 55 12.0	-0.7
PCON	Cinco Dias	5.56	37	*e*P	Pn	20 55 14.2	+0.5
POPC	Popayan, Colom	5.57	34	*e*P	Pn	20 55 12.5	-1.0
GARC	Garzon, Huila	6.05	45	*e*P	Pn	20 55 19.9	-0.2
MALC	Bahia Malaga	6.56	22	*e*P	Pn	20 55 27.2	+0.4
YOTC	Yotoco, Valle	6.96	29	*e*P	Pn	20 55 29.3	-3.1
MACC	Macarena, Meta	7.28	54	*e*P	Pn	20 55 35.6	-1.0
ORTC	Ortega, Tolima	7.50	37	*e*P	Pn	20 55 37.6	-2.1
ORTC				*e*P		20 55 38.3	
PLMC	San Jos del P	7.80	27	*e*P	Pn	20 55 44.5	+0.7
ANIL	Santa Ana	7.88	34	*e*P	Pn	20 55 41.9	-3.2
GUVC	San Jose del G	8.51	57	*e*P	Pn	20 55 53.9	+0.4
GUY2C	Guyana, Caldas	8.52	31	*e*P	Pn	20 55 56.6	+2.6
VILC	Villavicencio,	8.67	44	*e*P	Pn	20 55 54.5	-1.2
CBOC	Ciudad Bolivar	8.77	25	*e*P	Pn	20 55 56.8	-0.4
CBOC				*e*P		20 55 57.1	
ROSC	El Rosal	8.80	38	P	Pn	20 55 55.6	-2.1
	3.1nm,0.3s,baz=251,slow=18,SNR=3.6						
ROSC				S	Sn	20 57 40.9	+5.5
	1.1nm,0.3s,baz=20,slow=17,SNR=1.6						
ROSC				LR	LR	20 59 50.1	
	comp=Z,1µm,18.9s,baz=224,slow=41						
ROSC	El Rosal	8.80	38		Pn	20 55 53.2	-4.5
CHIC	Chingaza	9.02	42	*e*P	Pn	20 56 00.3	-0.4
NORC	Norcasia	9.06	33	*e*P	Pn	20 55 55.7	-5.3
DBBC	Dabeiba	9.74	21	*e*P	Pn	20 56 13.3	+3.0
PTBC	PUERTO BERRIO,	10.10	32	*e*P	Pn	20 56 17.4	+2.2
NNA	Nana	10.23	164	P	Pn	20 56 17.0	+0.1
	18nm,0.3s,baz=343,slow=9.5,SNR=21						
NNA				S	Sn	20 58 08.1	-1.7
	40nm,0.3s,baz=323,slow=6.3,SNR=17						
NNA				LR	LR	21 00 07.0	
	comp=Z,133nm,21.8s,baz=319,slow=36						
NNA	Nana	10.23	164		Pn	20 56 17.0	+0.1
RUSC	La Rusia	10.39	40	*e*P	Pn	20 56 21.7	+2.3
RUSC	La Rusia	10.39	40		Pn	20 56 20.6	+1.2
PAYG	Puerto Ayora	10.61	278	Pn	Pn	20 56 26.6	+4.6
BARC	Barichara	10.87	37	*e*P	Pn	20 56 23.0	-2.8
BCIP	Isla Barro Col	11.21	360	Pn	Pn	20 56 34.2	+4.0
PAMC	Pamplona, Colo	11.75	37	*e*P	Pn	20 56 38.1	+0.1
SMLC	San Martn de	12.24	28	*e*P	Pn	20 56 41.8	-2.3
JTS	Las Juntas de	13.36	337	P	Pn	20 56 58.3	-0.7
	0.3nm,0.3s,baz=109,slow=13,SNR=1.8						
JTS	Las Juntas de	13.36	337		Pn	20 57 01.8	+2.7
SDV	Santo Domingo	14.23	40	P	Pn	20 57 08.9	-1.6
	2.2nm,0.3s,baz=220,slow=14,SNR=7.5						
SDV	Santo Domingo	14.23	40		Pn	20 57 09.2	-1.3
ESPN	Las Esperanzas	14.91	343	P	P	20 57 23.7	+1.1
ACON	Acoyapa	14.99	339	Pn	Pn	20 57 20.2	+0.1
URIC	Uribia, Colomb	15.76	29	P	P	20 57 30.1	-1.9
SAML	Samuel	17.84	113	P	P	20 57 52.5	-2.5
LPAZ	La Paz	18.16	142	P	Pn	20 58 00.6	+0.7
	0.4nm,0.3s,baz=338,slow=11,SNR=12						
LPAZ				S	S	21 01 09.5	-13
	2.0nm,0.3s,baz=215,slow=17,SNR=3.8						
LPAZ	La Paz	18.16	142	P	P	20 57 56.9	-2.2
LPAZ	La Paz	18.16	142		Pn	20 57 59.2	-0.7
PCRV	Puerto La Cruz	19.40	51	P	Pn	20 58 13.1	-0.9
	8.7nm,0.3s,baz=328,slow=2.3,SNR=20						
PLCV	Puerto La Cruz	19.42	51		Pn	20 58 13.1	-1.2
MNMC	Minye Minye	19.63	150	P	Pn	20 58 17.3	+0.3
PTGA	Pitinga	19.85	86	P	P	20 58 16.5	-0.5
	1.6nm,0.3s,baz=264,slow=9.2,SNR=26						
PTGA	Pitinga	19.85	86	P	P	20 58 16.0	-0.9
APG	El Apazote	20.04	328	P	P	20 58 20.9	+1.7
	9.1nm,0.9s,baz=174,slow=5.6,SNR=4.3						
APG				LR	LR	21 05 12.9	
	comp=Z,48nm,19.2s,baz=121,slow=34						
PB11	IPOC Station P	20.13	151	P	Pn	20 58 21.6	-1.1
GO01	Chusmiza	20.28	150	P	Pn	20 58 24.4	-0.5
MTDJ	Mount Denham	20.33	6	P	Pn	20 58 25.5	+0.5
MTDJ				IAmb	IAmb	20 58 33.0	
	comp=Z,92nm,1.1s						
PB01	IPOC Station P	21.32	153	P	P	20 58 36.4	+3.6
LGNH	Logne	21.68	19	P	P	20 58 38.8	+2.3
LGNH				IAmb	IAmb	20 58 45.6	
	comp=Z,67nm,1.1s						
PB04	IPOC Station P	22.16	156	P	P	20 58 41.6	-0.3
PB04				IAmb	IAmb	20 59 14.0	
	comp=Z,130nm,1.5s						
SDDR	Presa de Saban	22.57	21	P	P	20 58 43.9	-2.2
SIV	San Ignacio	23.01	128	P	P	20 58 50.1	-0.4
	comp=Z,5.9nm,0.7s,baz=307,slow=9.5,SNR=25						
PB10	IPOC Station P	23.07	158	P	P	20 58 50.9	-0.1
TOSP	Speyside	23.32	55	P	P	20 58 52.2	-1.3
TOSP				IAmb	IAmb	20 58 55.2	
	comp=Z,34nm,0.7s						
CRPR	Cabo Rojo, PR	23.57	31	P	P	20 58 55.0	-0.7
MLPR	Magueyes Islan	23.57	32	P	P	20 58 56.0	+0.3
TEIG	Tepich	23.72	340	P	P	20 58 57.4	+0.4
	comp=Z,12nm,0.6s,baz=124,slow=0.0,SNR=12						
TEIG				LR	LR	21 07 38.4	
	comp=Z,74nm,18.8s,baz=264,slow=35						
TEIG	Tepich	23.72	340	P	P	20 58 57.7	+0.7
ICMP	Isla Caja de M	23.78	33	P	P	20 58 55.9	-1.6
ICMP				IAmb	IAmb	20 59 31.9	
	comp=Z,59nm,0.9s						
OBIP	Obispado Ponce	23.86	32	P	P	20 58 57.2	-1.1
AOPR	Arecibo Observ	24.04	32	P	P	20 59 00.5	+0.6
AOPR				IAmb	IAmb	20 59 08.0	
	comp=Z,26nm,0.8s						
PDPR	Patillas Dam,	24.16	34	P	P	20 58 59.8	-1.2
SJG	San Juan	24.17	33	P	P	20 59 01.5	+0.5
	comp=Z,6.7nm,0.3s,baz=214,slow=5.0,SNR=3.9						
SJG	San Juan	24.17	33	P	P	20 58 58.9	-2.1
CMIG	Matias Romero	24.22	323	P	P	20 59 02.0	+0.5
	comp=Z,6.7nm,0.8s,baz=156,slow=7.0,SNR=9.1						
HUMP	Col San Antoni	24.36	34	P	P	20 59 03.1	+0.3
GCPR	Guaynabo City	24.36	33	P	P	20 59 02.7	-0.1
GCPR				IAmb	IAmb	20 59 08.3	
	comp=Z,41nm,1.1s						
CBYP	Canovanas	24.46	33	P	P	20 59 04.0	+0.2
CBYP				IAmb	IAmb	20 59 11.3	
	comp=Z,28nm,0.8s						
MTP	Monte Pirata	24.49	34	P	P	20 59 01.9	-2.0
CUPR	Culebra, Puert	24.81	35	P	P	20 59 04.8	-2.0
ANWB	Willy Bob	26.47	41	P	P	20 59 21.9	0.0
MDP	Montagnes des	28.04	75	P	P	20 59 35.7	-0.3
	comp=Z,8.0nm,0.4s,baz=255,slow=7.9,SNR=13						
ZAIG	Zacatecas	33.26	319	P	P	21 00 23.8	+1.5
BDFB	Brasilia	34.06	115	P	P	21 00 27.9	-1.2
	comp=Z,1.3nm,0.5s,baz=302,slow=9.5,SNR=2.5						
152A	Waverly Hall	34.91	353	P	P	21 00 35.3	-0.8
152A				IAmb	IAmb	21 01 04.9	
	comp=Z,15nm,0.9s						
Z59A	Georgetown, SC	35.17	1	P	P	21 00 37.5	-0.8
	baz=180						
HKT	Hockley	35.39	336	P	P	21 00 40.0	-0.2
HKT				IAmb	IAmb	21 01 11.6	
	comp=Z,24nm,1.8s						
GOGA	Godfrey	35.51	355	P	P	21 00 40.6	-0.6
GOGA	Godfrey	35.51	355	P	P	21 00 40.7	-0.6
	baz=173						
LRAL	Lakeview Retre	35.62	350	P	P	21 00 41.4	-0.8
LRAL				IAmb	IAmb	21 01 11.2	
	comp=Z,12nm,0.8s						
LRAL	Lakeview Retre	35.62	350	P	P	21 00 41.8	-0.5
	baz=167,SNR=5.4						
833A	Chaparral WMA,	35.66	329	P	P	21 00 42.9	+0.3
833A				IAmb	IAmb	21 01 17.0	
	comp=Z,10.0nm,0.8s						
Z50A	Ashland	35.66	351	P	P	21 00 41.3	-1.3
Z50A				IAmb	IAmb	21 01 11.5	
	comp=Z,15nm,1.0s						
Z50A	Ashland	35.66	351	P	P	21 00 42.3	-0.3
	baz=169						
Y55A	Saluda	35.92	357	P	P	21 00 44.8	+0.1
	baz=176						
Y60A	Bolivia	35.96	2	P	P	21 00 45.6	+0.5
	baz=182						
Y52A	Lilburn	36.02	354	P	P	21 00 44.6	-1.0
Y52A				IAmb	IAmb	21 01 12.4	
	comp=Z,25nm,1.6s						
Y52A	Lilburn	36.02	354	P	P	21 00 45.2	-0.4
	baz=172						
X55A	Gracelyn & Ava	36.44	357	P	P	21 00 48.8	-0.3
	baz=176						
X56A	White Oak	36.44	358	P	P	21 00 49.0	-0.1
	baz=178						
X53A	Estanollee	36.58	355	P	P	21 00 49.7	-0.6
	baz=174						
PAULI	Pauline	36.79	357	P	P	21 00 49.0	-3.1
PAULI				IAmb	IAmb	21 00 52.5	
	comp=Z,11nm,0.6s						
435B	Jarrell	36.86	334	P	P	21 00 53.2	+0.4
435B				IAmb	IAmb	21 00 55.0	
	comp=Z,14nm,0.9s						
FPAL	Fort Paine	36.87	352	P	P	21 00 51.6	-1.3
FPAL				IAmb	IAmb	21 01 21.4	
	comp=Z,15nm,1.0s						
W58A	Raeford	36.95	1	P	P	21 00 53.2	-0.3
	baz=180						
X48A	Hartselle	37.01	350	P	P	21 00 52.5	-1.6
X48A				IAmb	IAmb	21 01 22.5	
	comp=Z,8.8nm,0.8s						
BG3	Lake Jocassee	37.03	356	P	P	21 00 53.0	-1.3
BG3				IAmb	IAmb	21 01 23.4	
	comp=Z,10.0nm,0.8s						
W57A	Gilead	37.08	360	P	P	21 00 54.0	-0.6
W57A	Gilead	37.08	360	P	P	21 00 54.3	-0.2
	baz=179						
W54A	Cherokee Point	37.08	357	P	P	21 00 54.8	+0.2
	baz=176						
KMSC	Kings Mountain	37.09	358	P	P	21 00 53.3	-1.4
KMSC				IAmb	IAmb	21 01 23.8	
	comp=Z,10nm,0.8s						
KMSC	Kings Mountain	37.09	358	P	P	21 00 54.3	-0.4
	baz=177						
237A	Washetta, Mont	37.19	337	P	P	21 00 56.1	+0.5
237A				IAmb	IAmb	21 00 58.3	
	comp=Z,18nm,0.8s						
W52A	Murphy	37.22	354	P	P	21 00 55.3	-0.5
W50A	Signal Mountai	37.48	353	P	P	21 00 57.1	-1.0
W50A				IAmb	IAmb	21 01 26.9	
	comp=Z,11nm,1.0s						
OXF	Oxford	37.54	347	P	P	21 00 57.5	-1.1
OXF	Oxford	37.54	347	P	P	21 00 57.5	-1.1
	baz=164						
JCT	Junction City	37.63	331	P	P	21 00 59.7	+0.3
JCT	Junction City	37.63	331	P	P	21 01 00.5	+1.2
	baz=146						
CPCT	Cooper Cave	37.63	354	P	P	21 00 58.5	-0.8
CPCT				IAmb	IAmb	21 00 59.9	
	comp=Z,19nm,1.1s						
PLAL	Pickwick Lake	37.72	349	P	P	21 00 58.6	-1.3
PLAL				IAmb	IAmb	21 01 28.3	
	comp=Z,14nm,1.1s						
PLAL					PcP	21 03 14.6	-0.8
V58A	Windy Hill, Pi	37.72	1	P	P	21 00 59.1	-0.9
V58A				IAmb	IAmb	21 01 28.8	
	comp=Z,13nm,0.9s						
V54A	Nebo	37.75	357	P	P	21 01 00.3	0.0
	baz=176						
TKL	Tuckaleechee C	37.76	355	P	P	21 00 59.6	-0.8
V55A	Taylorsville	37.80	358	P	P	21 00 59.5	-1.2
V55A				IAmb	IAmb	21 01 07.8	
	comp=Z,22nm,1.4s						
V55A	Taylorsville	37.80	358	P	P	21 00 59.9	-0.8
	baz=177						
WHTX	Lake Whitney,	37.84	335	P	P	21 01 01.7	+0.5
WHTX				IAmb	IAmb	21 01 02.6	
	comp=Z,19nm,0.8s						
WHTX	Lake Whitney,	37.84	335	P	P	21 01 01.1	0.0
	baz=150						
V52A	Sevierville	37.93	355	P	P	21 01 01.2	-0.6
V52A				IAmb	IAmb	21 01 30.6	
	comp=Z,22nm,1.3s						
V51A	Loudon	37.97	354	P	P	21 01 01.1	-1.0
V51A				IAmb	IAmb	21 01 02.6	
	comp=Z,19nm,1.2s						
HPIG		38.18	321	P	P	21 01 05.1	+0.8
V48A	Smith Brothers	38.23	351	P	P	21 01 03.3	-1.0
V48A				IAmb	IAmb	21 01 32.9	
	comp=Z,12nm,0.9s						
U57A	Blanch	38.35	1	P	P	21 01 03.6	-1.7
	baz=180						
MIAR	Mount Ida	38.71	342	P	P	21 01 08.3	0.0
MIAR	Mount Ida	38.71	342	P	P	21 01 08.3	0.0
	baz=157						
TXAR	Lajitas Array	38.75	326	P	P	21 01 09.9	+1.1
	comp=Z,2.5nm,0.8s,baz=148,slow=9.8,SNR=7.5						
TXAR				PcP	PcP	21 03 19.7	+0.8
	comp=Z,4.8nm,0.7s,baz=153,slow=6.2,SNR=23						
TXAR	Lajitas Array	38.75	326	P	P	21 01 09.5	+0.6
TXAR					PcP	21 03 19.1	+0.2
TX31	Lajitas Ar. Si	38.75	326	P	P	21 01 08.4	-0.5
TX31					PcP	21 03 19.4	+0.5
TX32	Lajitas Array	38.75	326	P	P	21 01 08.1	-0.8
TX32					PcP	21 03 19.4	+0.4
WVT	Waverly	38.79	350	P	P	21 01 06.8	-2.2
WVT	Waverly	38.79	350	P	P	21 01 07.5	-1.5
	baz=167						
U49A	Red Boiling Sp	38.84	352	P	P	21 01 06.8	-2.6
U49A				IAmb	IAmb	21 01 07.6	
	comp=Z,11nm,0.8s						
W41B	Gary Mavity, V	38.90	344	P	P	21 01 09.2	-0.7
W41B				IAmb	IAmb	21 01 39.0	
	comp=Z,17nm,1.2s						
W41B	Gary Mavity, V	38.90	344	P	P	21 01 09.7	-0.2
	baz=160						
Z35A	Perchaven, San	38.93	336	P	P	21 01 11.0	+0.8
WHAR	Wooly Hollow	39.02	344	P	P	21 01 10.2	-0.7
WHAR				IAmb	IAmb	21 01 39.9	
	comp=Z,16nm,1.0s						
T52A	Hallie	39.14	356	P	P	21 01 11.2	-0.7
T52A				IAmb	IAmb	21 01 40.6	
	comp=Z,26nm,1.1s						
T52A	Hallie	39.14	356	P	P	21 01 11.8	-0.1
	baz=174						
T50A	Nancy	39.22	354	P	P	21 01 11.6	-0.9
	baz=172						
PLCA	Paso Flores	39.34	169	P	P	21 01 15.0	+1.4
	comp=Z,3.1nm,1.0s,baz=342,slow=9.2,SNR=5.2						
PLCA				PcP	PcP	21 03 19.2	-1.3
	comp=Z,2.9nm,0.8s,baz=333,slow=5.3,SNR=4.2						
PLCA	Paso Flores	39.34	169	P	P	21 01 14.4	+0.8
PLCA				IAmb	IAmb	21 01 18.6	
	comp=Z,25nm,1.6s						
PLCA					PcP	21 03 21.5	+1.0
ABTX	Abilene, Hawle	39.34	333	P	P	21 01 14.1	+0.4
ABTX				IAmb	IAmb	21 01 15.8	
	comp=Z,20nm,0.9s						
ABTX	Abilene, Hawle	39.34	333	P	P	21 01 14.7	+1.0
	baz=147						
X37A	Clayton	39.34	340	P	P	21 01 14.6	+1.0
X37A				IAmb	IAmb	21 01 44.1	
	comp=Z,30nm,1.7s						
W39A	Magazine	39.37	342	P	P	21 01 13.5	-0.4
W39A				IAmb	IAmb	21 01 44.5	
	comp=Z,29nm,1.6s						
W39A	Magazine	39.37	342	P	P	21 01 14.2	+0.4
	baz=157						
T49A	Edmonton	39.39	353	P	P	21 01 12.7	-1.2
T49A	Edmonton	39.39	353	P	P	21 01 13.5	-0.5
	baz=170						
LCAR	Lake Charles	39.45	345	P	P	21 01 13.2	-1.3
LCAR				IAmb	IAmb	21 01 43.1	
	comp=Z,18nm,1.0s						
T47A	Sharon Grove	39.50	351	P	P	21 01 13.1	-1.8
T47A					PcP	21 03 20.4	-0.6
S51A	Beattyville	39.71	355	P	P	21 01 15.5	-1.2
S51A				IAmb	IAmb	21 01 16.2	
	comp=Z,15nm,0.8s						
R58B	Mineral	39.92	2	P	P	21 01 17.7	-0.6
	baz=182						
S49A	Springfield	40.03	353	P	P	21 01 17.8	-1.4
	baz=171,SNR=5.7						
U40A	Yellville	40.17	344	P	P	21 01 19.5	-1.0
U40A				IAmb	IAmb	21 01 49.8	
	comp=Z,13nm,0.8s						
U40A	Yellville	40.17	344	P	P	21 01 20.3	-0.2
	baz=159,SNR=6.6						
R58A	Rapidan	40.25	2	P	P	21 01 20.5	-0.5
	baz=182						
X34A	Smith Ranch, M	40.27	337	P	P	21 01 21.7	+0.3
R53A	Hurricane	40.30	357	P	P	21 01 20.6	-0.8
R53A				IAmb	IAmb	21 01 21.5	
	comp=Z,17nm,1.1s						
T42A	Van Buren	40.34	346	P	P	21 01 20.0	-1.9
T42A				IAmb	IAmb	21 01 50.2	
	comp=Z,13nm,1.0s						
W35A	Tecumseh	40.39	338	P	P	21 01 22.0	-0.3
R50A	Paris	40.42	354	P	P	21 01 21.3	-1.1
R50A				IAmb	IAmb	21 01 21.8	
	comp=Z,8.7nm,0.6s						
HHAR	Hobbs	40.42	342	P	P	21 01 21.9	-0.7
R49A	Shelbyville	40.52	353	P	P	21 01 21.9	-1.3
R49A				IAmb	IAmb	21 01 22.9	
	comp=Z,21nm,1.1s						
R49A	Shelbyville	40.52	353	P	P	21 01 22.3	-1.0
	baz=171						
USIN	University of	40.55	350	P	P	21 01 21.9	-1.6
WCI	Wyandotte Cave	40.59	352	P	P	21 01 21.8	-2.1
WCI				IAmb	IAmb	21 01 56.3	
	comp=Z,16nm,0.8s						
WCI	Wyandotte Cave	40.59	352	P	P	21 01 22.1	-1.8
	baz=170						
FNO	Franklin	40.68	338	P	P	21 01 24.1	-0.6
TUL1	Leonard	40.68	340	P	P	21 01 23.8	-0.9
TUL1				pP	pP	21 01 52.5	+6.9
TUL1				IAmb	IAmb	21 01 55.3	
	comp=Z,18nm,1.1s						
U38A	Gravette	40.70	342	P	P	21 01 24.5	-0.4
MGMO	Mountain Grove	40.76	345	P	P	21 01 23.6	-1.7
MGMO				IAmb	IAmb	21 01 54.5	
	comp=Z,15nm,1.1s						
WMOK	Wichita Mounta	40.77	336	P	P	21 01 25.6	+0.1
WMOK					PcP	21 03 25.4	+0.1
WMOK	Wichita Mounta	40.77	336	P	P	21 01 25.9	+0.4
	baz=150,SNR=6.2						
Q53A	Leroy	40.80	358	P	P	21 01 24.9	-0.7
	baz=177,SNR=5.3						
Q58A	Fox Den Farm,	40.90	2	P	P	21 01 26.6	+0.2
	baz=183						
Q54A	Coxs Mills	40.91	359	P	P	21 01 25.2	-1.3
Q54A	Coxs Mills	40.91	359	P	P	21 01 25.4	-1.1
	baz=178						
Q55A	Buckhannon	40.91	360	P	P	21 01 26.4	-0.2
	baz=179						
Q48A	North Vernon	41.21	353	P	P	21 01 27.9	-1.0
	baz=171						
CCM	Cathedral Cave	41.36	346	P	P	21 01 28.9	-1.3
CCM				IAmb	IAmb	21 01 58.7	
	comp=Z,23nm,1.4s						
CCM				PcP	PcP	21 03 26.3	-0.7
OLIL	Olney	41.37	350	P	P	21 01 28.8	-1.5
OLIL				IAmb	IAmb	21 01 29.6	
	comp=Z,24nm,0.9s						
P53A	Whipple	41.43	358	P	P	21 01 30.0	-0.7
P53A				IAmb	IAmb	21 01 31.2	

	comp=Z,23nm,1.2s						
P53A	Whipple	41.43	358	P	P	21 01 29.5	-1.2
	baz=177						
P56A	Dayton Farm, R	41.43	1	P	P	21 01 30.5	-0.2
	baz=181						
P58A	Pank, Wackersv	41.47	3	P	P	21 01 30.4	-0.6
	baz=183						
MNTX	Cornudas Mount	41.50	326	P	P	21 01 31.8	+0.3
MNTX				IAmb	IAmb	21 01 33.4	
	comp=Z,16nm,1.1s						
MNTX	Cornudas Mount	41.50	326	P	P	21 01 32.3	+0.8
	baz=139,SNR=13						
P54A	Burton	41.52	359	P	P	21 01 30.6	-0.9
	baz=179						
S39A	Bolivar	41.55	344	P	P	21 01 31.3	-0.5
S39A					PcP	21 03 26.6	-1.0
P49A	Miami Univ. Ec	41.70	354	P	P	21 01 30.8	-2.2
	baz=172						
Q44A	Meyer Farm, Va	41.70	349	P	P	21 01 31.2	-1.7
Q44A				IAmb	IAmb	21 02 00.9	
	comp=Z,15nm,0.8s						
T35A	Sooner Cattle	41.84	340	P	P	21 01 34.7	+0.5
T35A				PcP	PcP	21 03 28.8	+0.1
MSTX	Muleshoe	41.92	331	P	P	21 01 35.6	+0.6
MSTX	Muleshoe	41.92	331	P	P	21 01 35.8	+0.8
	baz=144,SNR=13						
MVL	Millersville	42.03	4	P	P	21 01 35.5	-0.1
MVL				IAmb	IAmb	21 02 05.7	
	comp=Z,17nm,1.0s						
O52A	Adamsville	42.07	358	P	P	21 01 34.8	-1.2
O52A				IAmb	IAmb	21 02 04.5	
	comp=Z,12nm,0.8s						
P46A	Rosedale	42.09	351	P	P	21 01 34.6	-1.5
P46A				IAmb	IAmb	21 02 08.3	
	comp=Z,23nm,1.4s						
O54A	Avella	42.10	359	P	P	21 01 34.8	-1.4
O54A				IAmb	IAmb	21 01 35.7	
	comp=Z,35nm,1.4s						
O54A	Avella	42.10	359	P	P	21 01 36.0	-0.2
	baz=179						
O58A	Lewisberry	42.12	3	P	P	21 01 36.6	+0.2
	baz=184						
O55A	Ligonier	42.12	1	P	P	21 01 35.6	-0.9
	baz=180						
AMTX	Amarillo	42.16	333	P	P	21 01 36.8	-0.1
AMTX				IAmb	IAmb	21 01 38.6	
	comp=Z,28nm,1.1s						
AMTX				PcP	PcP	21 03 29.4	-0.4
AMTX	Amarillo	42.16	333	P	P	21 01 37.3	+0.5
	baz=146						
O57A	Amberson	42.17	2	P	P	21 01 36.5	-0.3
	baz=183						
O53A	New Philadelph	42.18	358	P	P	21 01 36.2	-0.7
	baz=178						
O56A	Blue Knob Stat	42.20	1	P	P	21 01 36.7	-0.4
	baz=181						
ACSO	Alum Creek Sta	42.25	356	P	P	21 01 36.2	-1.2
ACSO				pP	pP	21 02 02.5	+4.1
ACSO					S	21 07 49.9	-1.6
U32A	Winter Ranch,	42.29	337	P	P	21 01 37.8	-0.1
O49A	Covington	42.31	355	P	P	21 01 36.2	-1.7
O49A				IAmb	IAmb	21 02 06.5	
	comp=Z,20nm,1.3s						
P43A	Skaggs, Pawnee	42.51	349	P	P	21 01 38.1	-1.4
P43A				IAmb	IAmb	21 01 59.8	
	comp=Z,10nm,0.6s						
SSPA	Standing Stone	42.58	2	P	P	21 01 39.7	-0.4
	baz=182						
N55A	Marion Center	42.70	1	P	P	21 01 40.6	-0.5
	baz=181						
LUPA	Lehigh Univers	42.70	5	P	P	21 01 40.9	-0.2
O44A	Mansfield	42.81	350	P	P	21 01 39.7	-2.3
O44A				IAmb	IAmb	21 01 40.5	
	comp=Z,13nm,0.6s						
O44A				pP	pP	21 02 09.0	+5.9
SFIN	Lafayette	42.82	352	P	P	21 01 39.8	-2.2
SFIN				pP	pP	21 02 08.4	+5.3
SFIN				IAmb	IAmb	21 02 09.4	
	comp=Z,21nm,1.2s						
N58A	Sunbury	42.84	3	P	P	21 01 42.0	-0.2
N58A	Sunbury	42.84	3	P	P	21 01 42.8	+0.6
	baz=184						
N56A	West Decatur	42.85	2	P	P	21 01 42.3	0.0
	baz=182						
N54A	Moraine State	42.87	360	P	P	21 01 41.7	-0.8
N54A				IAmb	IAmb	21 02 11.3	
	comp=Z,20nm,1.1s						
N51A	Ashland	42.90	357	P	P	21 01 40.8	-1.9
N51A				IAmb	IAmb	21 01 48.2	
	comp=Z,22nm,1.1s						
N59A	State Game Lan	42.98	4	P	P	21 01 42.8	-0.6
N59A				IAmb	IAmb	21 01 44.9	
	comp=Z,21nm,1.1s						
N59A	State Game Lan	42.98	4	P	P	21 01 43.4	-0.1
	baz=186						
N60A	Cedar Hill Far	42.99	5	P	P	21 01 42.6	-0.8
	baz=186						
HSIG		43.02	318	P	P	21 01 44.1	+0.2
N49A	Columbus Grove	43.02	355	P	P	21 01 41.3	-2.3
N49A				IAmb	IAmb	21 01 48.6	
	comp=Z,22nm,1.3s						
N49A	Columbus Grove	43.02	355	P	P	21 01 42.8	-0.9
	baz=173						
M51A	Elyria	43.30	357	P	P	21 01 44.8	-1.1
	baz=176						
M57A	Sunshine Farm,	43.32	3	P	P	21 01 45.8	-0.2
M57A				IAmb	IAmb	21 01 46.7	
	comp=Z,14nm,0.8s						
M57A	Sunshine Farm,	43.32	3	P	P	21 01 45.9	-0.2
	baz=184						
HDIL	Hopedale	43.35	349	P	P	21 01 45.1	-1.2
	baz=166						
M58A	Price's Panora	43.39	4	P	P	21 01 47.0	+0.4
	baz=184						
M55A	Ridgway	43.39	1	P	P	21 01 45.7	-1.0
M55A				IAmb	IAmb	21 02 10.9	
	comp=Z,35nm,1.6s						
M55A	Ridgway	43.39	1	P	P	21 01 46.6	-0.1
	baz=181						
M50A	Fremont	43.42	356	P	P	21 01 45.3	-1.6
M50A	Fremont	43.42	356	P	P	21 01 46.1	-0.7
	baz=175						
M56A	Emporium	43.42	2	P	P	21 01 46.3	-0.6
M56A				IAmb	IAmb	21 01 47.3	
	comp=Z,17nm,0.9s						
M56A	Emporium	43.42	2	P	P	21 01 46.4	-0.5
	baz=182						
M54A	Oil Creek Stat	43.42	0	P	P	21 01 45.8	-1.1
M54A	Oil Creek Stat	43.42	0	P	P	21 01 46.4	-0.5
	baz=180						
121A	Cookes Peak, D	43.48	325	P	P	21 01 49.5	+1.8
121A				IAmb	IAmb	21 01 51.0	
	comp=Z,20nm,0.9s						
121A	Cookes Peak, D	43.48	325	P	P	21 01 49.8	+2.0
	baz=137,SNR=10						
319A	Douglas	43.54	322	P	P	21 01 49.6	+1.4
M49A	Liberty Center	43.55	355	P	P	21 01 46.7	-1.3
	baz=174						
KSU1	Kansas State U	43.85	341	P	P	21 01 50.5	+0.1
	baz=155,SNR=5.7						
L53A	Girard	43.87	359	P	P	21 01 50.2	-0.2
	baz=179						
R32A	Long Quarter,	43.97	338	P	P	21 01 51.9	+0.6
R32A					PP	21 03 35.8	+0.3
L57A	Andrews Acres	43.99	3	P	P	21 01 51.7	+0.2
	baz=184						
ERPA	Erie	44.03	360	P	P	21 01 50.9	-0.8
	baz=179						
L50A	Kingsville	44.04	357	P	P	21 01 50.9	-0.9
	baz=175						
L56A	Greenwood	44.09	2	P	P	21 01 51.6	-0.7
	baz=183						
L58A	Harry Jones Me	44.10	4	P	P	21 01 52.2	-0.1
	baz=185						
L55A	Hinsdale	44.11	1	P	P	21 01 52.1	-0.3
	baz=182						
L47A	Sherwood	44.16	354	P	P	21 01 51.0	-1.8
	baz=172						
L49A	Milan	44.17	356	P	P	21 01 52.0	-0.9
	baz=174						
L60A	Shokan	44.19	6	P	P	21 01 53.4	+0.4
	baz=188						
BINY	Binghamton	44.24	4	P	P	21 01 53.5	0.0
BINY				IAmb	IAmb	21 01 54.2	
	comp=Z,22nm,1.0s						
BINY	Binghamton	44.24	4	P	P	21 01 53.7	+0.2
	baz=185						
L63A	North Scituate	44.40	9	P	P	21 01 55.9	+1.3
	baz=191						
K54A	Basiliko Farm,	44.53	1	P	P	21 01 55.4	-0.4
	baz=181						
ANMO	Albuquerque	44.55	328	P	P	21 01 57.8	+1.5
	comp=Z,34nm,0.8s,baz=168,slow=7.3,SNR=27						
ANMO	Albuquerque	44.55	328	P	P	21 01 56.7	+0.4
ANMO	Albuquerque	44.55	328	P	P	21 01 57.9	+1.6
	baz=140						
CBKS	Cedar Bluff	44.69	338	P	P	21 01 57.2	0.0
CBKS	Cedar Bluff	44.69	338	P	P	21 01 58.2	+1.1
	baz=151,SNR=5.4						
K57A	Scipio Center	44.74	3	P	P	21 01 56.9	-0.5
	baz=184						
L61B	Northampton	44.82	7	P	P	21 01 56.8	-1.3
	baz=190						
K58A	Earlville	44.83	4	P	P	21 01 58.0	-0.2
	baz=186						
K47A	Vermontville	44.83	355	P	P	21 01 56.7	-1.4
	baz=172						
K48A	Perry	44.89	355	P	P	21 01 56.9	-1.6
	baz=174						
K59A	Cooperstown	44.91	5	P	P	21 01 58.4	-0.4
	baz=187						
TUC	Tucson	45.11	322	P	P	21 02 01.0	+0.4
TUC	Tucson	45.11	322	P	P	21 02 01.8	+1.1
	baz=133						
L40A	Anamosa	45.18	348	P	P	21 01 59.0	-1.9
L40A				IAmb	IAmb	21 02 00.4	
	comp=Z,20nm,1.0s						
J56A	Wolcott	45.26	3	P	P	21 02 00.2	-1.3
J56A				IAmb	IAmb	21 02 01.2	
	comp=Z,22nm,0.9s						
J56A	Wolcott	45.26	3	P	P	21 02 00.7	-0.8
	baz=184						
T25A	Trinidad	45.27	332	P	P	21 02 03.3	+1.3
T25A				IAmb	IAmb	21 02 04.7	
	comp=Z,23nm,1.2s						
T25A	Trinidad	45.27	332	P	P	21 02 03.4	+1.5
	baz=144,SNR=13						
J48A	Bridge Port	45.35	356	P	P	21 02 00.2	-2.1
J48A	Bridge Port	45.35	356	P	P	21 02 00.6	-1.6
	baz=174						
J49A	Marlette	45.37	357	P	P	21 02 00.6	-1.8
	baz=175						
J47A	Sunmer	45.38	355	P	P	21 02 01.0	-1.5
J47A	Sunmer	45.38	355	P	P	21 02 01.5	-0.9
	baz=173						
J57A	Williamstown	45.45	4	P	P	21 02 03.4	+0.4
	baz=185						
J58A	Remsen	45.45	5	P	P	21 02 02.9	-0.2
	baz=186						
SCIA	State Center	45.48	346	P	P	21 02 02.1	-1.2
SCIA				IAmb	IAmb	21 02 03.2	
	comp=Z,22nm,0.8s						
SCIA	State Center	45.48	346	P	P	21 02 01.9	-1.4
	baz=161						
J60A	Lant Hill Farm	45.52	7	P	P	21 02 03.7	+0.2
	baz=188						
J46A	Howard City	45.57	354	P	P	21 02 02.1	-1.8
	baz=171						
J59A	Piesco	45.62	5	P	P	21 02 03.8	-0.6
J59A				IAmb	IAmb	21 02 05.2	
	comp=Z,17nm,1.0s						
J59A	Piesco	45.62	5	P	P	21 02 04.0	-0.4
	baz=187						
J62A	Henniker	45.70	8	P	P	21 02 04.2	-0.8
	baz=191						
I51A	Listowel	45.73	359	P	P	21 02 03.7	-1.5
	baz=178						
JFWS	Jewell Farm	45.81	349	P	P	21 02 04.2	-1.7
JFWS	Jewell Farm	45.81	349	P	P	21 02 04.2	-1.7
	baz=165,SNR=5.7						
I49A	Point Hope	45.93	357	P	P	21 02 05.2	-1.6
I49A	Point Hope	45.93	357	P	P	21 02 05.0	-1.8
	baz=175						
I57A	Carthage	46.00	4	P	P	21 02 07.9	+0.6
	baz=185						
I59A	Olmsteadville	46.01	6	P	P	21 02 07.8	+0.4
	baz=188						
KSCO	Kaye Shedlock'	46.02	335	P	P	21 02 08.4	+0.7
KSCO				IAmb	IAmb	21 02 09.9	
	comp=Z,30nm,1.2s						
KSCO	Kaye Shedlock'	46.02	335	P	P	21 02 08.2	+0.4
	baz=147						
HNH	Hanover	46.11	8	P	P	21 02 08.8	+0.6
I60A	Shoreham	46.12	7	P	P	21 02 08.3	+0.1
	baz=189						
I47A	Gladwin	46.13	355	P	P	21 02 06.8	-1.5
I47A	Gladwin	46.13	355	P	P	21 02 07.4	-0.9
	baz=173						
I46A	Reed City	46.13	354	P	P	21 02 06.8	-1.6
	baz=172						
214A	Organ Pipe Nat	46.15	320	P	P	21 02 10.0	+1.2
214A				IAmb	IAmb	21 02 11.7	
	comp=Z,34nm,1.4s						
214A	Organ Pipe Nat	46.15	320	P	P	21 02 10.3	+1.5
	baz=131,SNR=8.2						
I55A	Frankford	46.16	2	P	P	21 02 07.7	-0.9
	baz=182						
X18A	Snowflake	46.17	325	P	P	21 02 10.3	+1.2
X18A				IAmb	IAmb	21 02 11.7	
	comp=Z,16nm,0.9s						
I48A	Sherman Twp	46.23	356	P	P	21 02 08.4	-0.7
	baz=174						
SDCO	Great Sand Dun	46.27	332	P	P	21 02 11.1	+1.1
SDCO				IAmb	IAmb	21 02 12.4	
	comp=Z,22nm,1.2s						
SDCO					S	21 08 53.0	+2.5
SDCO	Great Sand Dun	46.27	332	P	P	21 02 11.0	+1.1
	baz=143,SNR=22						
I61A	Oroboro, Fairl	46.34	8	P	P	21 02 09.5	-0.5
	baz=190						
BGNE	Belgrade	46.43	341	P	P	21 02 10.3	-0.6
BGNE	Belgrade	46.43	341	P	P	21 02 10.7	-0.2
	baz=154						
W18A	Petrified Fore	46.47	326	P	P	21 02 12.4	+0.9
W18A	Petrified Fore	46.47	326	P	P	21 02 12.8	+1.4
	baz=136						
H53A	Bobcaygeon	46.50	1	P	P	21 02 10.0	-1.2
	baz=181						
H55A	Tweed	46.52	3	P	P	21 02 10.7	-0.6
	baz=183						
I42A	Draeger Farm,	46.53	351	P	P	21 02 10.0	-1.5
I42A				IAmb	IAmb	21 02 39.9	
	comp=Z,38nm,1.6s						
H57A	Richville	46.54	4	P	P	21 02 11.2	-0.3
	baz=186						
H52A	Wyevale	46.55	360	P	P	21 02 10.6	-1.0
	baz=180						
H58A	Gabriels	46.60	6	P	P	21 02 11.1	-0.9
	baz=187						
H56A	Elgin	46.61	3	P	P	21 02 11.8	-0.3
	baz=184						
LBNH	Lisbon	46.68	8	P	P	21 02 13.5	+0.8
LBNH	Lisbon	46.68	8	P	P	21 02 13.4	+0.7
	baz=190						
I40A	Norwalk	46.82	349	P	P	21 02 11.7	-2.1
H59A	Cadyville	46.87	6	P	P	21 02 14.3	+0.2
	baz=188						
S22A	4UR Ranch, Cre	46.91	330	P	P	21 02 15.6	+0.6
S22A	4UR Ranch, Cre	46.91	330	P	P	21 02 16.2	+1.2
	baz=141,SNR=6.9						
H43A	Windswept, Lux	46.93	352	P	P	21 02 13.2	-1.4
X16A	Lo Mia Camp, P	46.96	324	P	P	21 02 16.8	+1.5
X16A				IAmb	IAmb	21 02 18.0	
	comp=Z,19nm,0.8s						
H61A	Lyndonville	46.97	8	P	P	21 02 14.1	-0.8
	baz=190						
G53A	Haliburton	47.04	1	P	P	21 02 14.5	-1.0
	baz=181						
Q24A	Divide	47.08	333	P	P	21 02 17.2	+0.9
H62A	Milan	47.12	8	P	P	21 02 15.8	-0.3
G57A	Newington	47.21	5	P	P	21 02 17.1	+0.4
	baz=186						
G47A	Hillman	47.22	356	P	P	21 02 15.6	-1.3
	baz=174						
G55A	Calabogie	47.24	3	P	P	21 02 16.2	-0.8
	baz=184						
G45A	Suttons Bay	47.24	354	P	P	21 02 15.9	-1.1
	baz=172						
G54A	Lake Saint Pet	47.33	2	P	P	21 02 16.5	-1.2
	baz=182						
G58A	Ormstown	47.33	6	P	P	21 02 16.8	-0.9
	baz=187						
MVCO	Mesa Verde	47.35	329	P	P	21 02 18.7	+0.4
MVCO				IAmb	IAmb	21 02 22.5	
	comp=Z,14nm,1.1s						
MVCO	Mesa Verde	47.35	329	P	P	21 02 19.3	+1.0
	baz=139						
OGNE	Ogallala	47.42	337	P	P	21 02 18.9	+0.3
	baz=149						
G60A	Masonville	47.47	7	P	P	21 02 19.5	+0.7
	baz=190						
Y14A	Wickenburg	47.58	322	P	P	21 02 20.8	+0.9
Y14A				IAmb	IAmb	21 02 22.3	
	comp=Z,15nm,0.6s						
WUAZ	Wupatki	47.69	325	P	P	21 02 22.4	+1.5
WUAZ	Wupatki	47.69	325	P	P	21 02 22.6	+1.7
	baz=135,SNR=25						
F49A	Sandfield	47.72	358	P	P	21 02 18.6	-2.0
	baz=177						
G61A	St-Isidore-de-	47.76	8	P	P	21 02 21.9	+0.9
	baz=191						
F48A	Evansville	47.80	357	P	P	21 02 19.3	-2.0
	baz=176						
G62A	West of Eustis	47.84	9	P	P	21 02 21.2	-0.5
G62A	West of Eustis	47.84	9	P	P	21 02 22.3	+0.6
	baz=192						
F45A	CMU Biological	47.87	355	P	P	21 02 20.6	-1.3
	baz=172						
G63A	Kingsbury	47.89	10	P	P	21 02 22.5	+0.4
	baz=193						
ISCO	Idaho Springs	47.97	333	P	P	21 02 23.9	+0.8
ISCO				PcP	PcP	21 03 50.3	+0.2
ISCO	Idaho Springs	47.97	333	P	P	21 02 24.1	+0.9
	baz=144						
G40A	Rib Lake	48.08	350	P	P	21 02 24.1	+0.5
G40A					PcP	21 03 50.1	+0.1
ECSD	EROS Data Cent	48.08	344	P	P	21 02 22.4	-1.2
ECSD				IAmb	IAmb	21 02 23.2	
	comp=Z,8.9nm,0.7s						
ECSD	EROS Data Cent	48.08	344	P	P	21 02 22.8	-0.8
	baz=157,SNR=9.8						
SMCO	Snowmass	48.11	331	P	P	21 02 24.8	+0.4
SMCO					S	21 09 19.7	+2.9
GLA	Glamis	48.16	320	P	P	21 02 25.6	+1.2
GLA				IAmb	IAmb	21 02 26.9	
	comp=Z,17nm,0.9s						
GLA	Glamis	48.16	320	P	P	21 02 25.6	+1.2
	baz=130,SNR=5.4						
PV15	Paradox Valley	48.20	330	P	P	21 02 26.2	+1.3
PV15					PcP	21 03 49.0	-1.9
E52A	Mattawa	48.20	1	P	P	21 02 22.9	-1.6
	baz=181						
PV02	Paradox Valley	48.23	329	P	P	21 02 26.0	+0.9
PV13	Radium Mtn., P	48.23	329	P	P	21 02 25.8	+0.7
F42A	Maple Grove Fa	48.24	352	P	P	21 02 22.8	-1.9
PV05	Paradox Valley	48.31	329	P	P	21 02 26.3	+0.6
PV05				IAmb	IAmb	21 02 27.5	
	comp=Z,19nm,0.8s						
PV03	Paradox Valley	48.32	329	P	P	21 02 26.4	+0.7
E53A	Dumoine, Ponti	48.33	2	P	P	21 02 24.1	-1.3
	baz=182						
PV12	Saucer Basin,	48.34	329	P	P	21 02 26.8	+0.8
PV18	Skein Mesa, Pa	48.34	329	P	P	21 02 26.5	+0.6
TRQ	Mont Tremblant	48.35	5	P	P	21 02 24.7	-0.9
PV07	Paradox Valley	48.36	330	P	P	21 02 26.2	+0.2
PV07				IAmb	IAmb	21 02 28.3	
	comp=Z,18nm,1.0s						
PV11	David Mesa, Pa	48.37	329	P	P	21 02 26.3	+0.2
PV17	East Wray Mesa	48.40	329	P	P	21 02 27.0	+0.7
PV16	Nyswonger Mesa	48.40	329	P	P	21 02 27.3	+1.0
PV16				IAmb	IAmb	21 02 28.4	
	comp=Z,27nm,1.2s						
E54A	Lac Daplat, Po	48.40	2	P	P	21 02 24.0	-1.9
	baz=183						
Y12C	Blythe	48.41	321	P	P	21 02 26.6	+0.3
Y12C	Blythe	48.41	321	P	P	21 02 27.5	+1.3
	baz=130						
PV19	Morning Glory	48.43	329	P	P	21 02 27.6	+1.0
PV19				IAmb	IAmb	21 02 28.5	
	comp=Z,17nm,1.2s						
E48A	Lockeyer	48.44	358	P	P	21 02 24.1	-2.1
	baz=176,SNR=7.9						
E51A	G1948 Merrick	48.44	0	P	P	21 02 24.5	-1.8
	baz=180,SNR=7.1						
PV20	West Nyswonger	48.45	329	P	P	21 02 27.1	+0.4
PV20				IAmb	IAmb	21 02 28.6	
	comp=Z,23nm,1.4s						
PV04	Paradox Valley	48.45	329	P	P	21 02 28.0	+1.2
PV04				IAmb	IAmb	21 02 28.9	
	comp=Z,35nm,1.4s						
E47A	Iron Bridge	48.46	357	P	P	21 02 24.9	-1.5
	baz=175						
PV14	Lion Creek, Pa	48.50	329	P	P	21 02 27.6	+0.4
PV14				IAmb	IAmb	21 02 29.0	
	comp=Z,32nm,1.4s						
PV14				PcP	PcP	21 03 52.2	+0.2
PV22	Blue Mesa, Par	48.50	329	P	P	21 02 28.0	+0.8
PV22				IAmb	IAmb	21 02 29.2	
	comp=Z,21nm,1.3s						
PV22					PcP	21 03 52.5	+0.5
PV10	Paradox Valley	48.51	329	P	P	21 02 26.6	-0.7
PV10				IAmb	IAmb	21 02 28.7	
	comp=Z,22nm,1.0s						
SPMN	Marine on St.	48.54	348	P	P	21 02 25.3	-1.8
SPMN				IAmb	IAmb	21 02 26.3	
	comp=Z,14nm,1.0s						
SPMN	Marine on St.	48.54	348	P	P	21 02 25.7	-1.4
	baz=162						
PV23	Carpenter Ridg	48.55	329	P	P	21 02 28.5	+0.9
E57A	Chemin Saint G	48.58	5	P	P	21 02 26.5	-0.9
	baz=187,SNR=5.6						
E58A	La Victoria	48.62	6	P	P	21 02 26.7	-0.9
	baz=188						
E56A	St. Veronique	48.63	4	P	P	21 02 27.0	-0.7
	baz=186						
PV09	Paradox Valley	48.65	329	P	P	21 02 29.0	+0.6
E43A	Lone Tree Farm	48.71	353	P	P	21 02 26.3	-2.0
E43A				PcP	PcP	21 03 52.6	+0.4
COWI	Conover	48.72	351		PcP	21 03 52.0	-0.3
SWSC	Sam W. Stewart	48.72	319	P	P	21 02 29.8	+1.2
	baz=128						
IKP	In-Ko-Pah, Jac	48.74	318	P	P	21 02 30.0	+1.0
	baz=128						
F64A	Sherman	48.84	11	P	P	21 02 29.4	+0.1
F64A				IAmb	IAmb	21 02 58.6	
	comp=Z,38nm,1.7s						
E60A	Ste Agathe de	48.84	8	P	P	21 02 27.4	-1.9
	baz=191						
U15A	North Rim	48.86	325	P	P	21 02 31.7	+1.6
U15A				IAmb	IAmb	21 02 32.9	
	comp=Z,12nm,0.8s						
W13A	Hualapai Mount	48.90	322	P	P	21 02 31.7	+1.5
W13A				IAmb	IAmb	21 02 33.0	
	comp=Z,15nm,0.8s						
BC3	Big Chuckawall	48.94	320	P	P	21 02 31.9	+1.4
	baz=129,SNR=10						
D46A	Sault St. Mari	48.95	356	P	P	21 02 28.1	-2.0
	baz=174						
D53A	Lac Vacive, Po	49.02	2	P	P	21 02 29.3	-1.4
D53A				IAmb	IAmb	21 02 57.9	
	comp=Z,29nm,1.6s						
D53A	Lac Vacive, Po	49.02	2	P	P	21 02 29.5	-1.2
	baz=182						
E61A	Lac Etchemin	49.03	8	P	P	21 02 30.4	-0.4
	baz=192						
D47A	Chapleau	49.05	357	P	P	21 02 29.1	-1.9
	baz=175						
IRM	Iron Mountain	49.06	321	P	P	21 02 32.7	+1.4
	baz=130,SNR=13						
D55A	Sainte-Anne-du	49.08	4	P	P	21 02 29.9	-1.3
	baz=185						
D50A	G1974 Best Tow	49.08	360	P	P	21 02 29.4	-1.7
	baz=180						
MONP2	Monument Peak	49.10	318	P	P	21 02 32.5	+0.7
	baz=128						
D48A	Paudash Townsh	49.12	358	P	P	21 02 29.4	-2.1
	baz=177						
BAR	Barrett	49.14	318	P	P	21 02 32.9	+1.0
BAR				IAmb	IAmb	21 02 34.4	
	comp=Z,9.8nm,1.0s						
D54A	Lac Fusel, La	49.14	3	P	P	21 02 30.0	-1.6
	baz=184						
D56A	ZEC Mazanza, M	49.16	5	P	P	21 02 30.8	-0.9
	baz=186						
D57A	Chemin Vers le	49.20	5	P	P	21 02 31.2	-0.9
	baz=187						
E63A	Oxbow	49.36	10	P	P	21 02 33.9	+0.6
E63A	Oxbow	49.36	10	P	P	21 02 33.0	-0.3
	baz=195						

D58A	Chemin du LacG	49.38	6	P	P	21 02 33.2	-0.2
	baz=189						
SUSD	Miller	49.42	342	P	P	21 02 33.3	-0.6
SUSD	Miller	49.42	342	P	P	21 02 33.5	-0.3
	baz=154						
D60A	Saint Jean D'O	49.44	8	P	P	21 02 34.4	+0.5
	baz=191						
O20A	White River Ci	49.46	331	P	P	21 02 35.2	+0.8
O20A				IAmb	IAmb	21 02 36.5	
	comp=Z,15nm,1.4s						
O20A	White River Ci	49.46	331	P	P	21 02 35.1	+0.7
	baz=141						
E64A	Bridgewater	49.47	11	P	P	21 02 34.3	+0.3
	baz=195						
BELC	Belle Mtn. Jos	49.51	320	P	P	21 02 35.6	+0.8
	baz=129						
XPFO	Pion Flat	49.57	319	P	P	21 02 35.4	+0.1
XPFO				IAmb	IAmb	21 02 37.9	
	comp=Z,11nm,0.9s						
PFO	Pinyon Flats O	49.57	319	P	P	21 02 36.9	+1.6
	comp=Z,8.0nm,0.9s,baz=110,slow=6.3,SNR=9.5						
PFO	Pinyon Flats O	49.57	319	P	P	21 02 37.0	+1.7
PFO				IAmb	IAmb	21 02 37.9	
	comp=Z,11nm,0.9s						
PFO	Pinyon Flats O	49.57	319	P	P	21 02 36.6	+1.3
	baz=128,SNR=6.7						
LMN	Caledonia Moun	49.57	14	P	P	21 02 35.1	+0.2
KNB	Kanab	49.58	325	P	P	21 02 37.4	+2.0
D41A	Chassel	49.58	352	P	P	21 02 33.7	-1.2
PKCU	Pink Cliffs	49.59	326	P	P	21 02 37.6	+2.0
LATQ	La Tuque	49.67	6	P	P	21 02 35.5	-0.2
LATQ				IAmb	IAmb	21 02 36.2	
	comp=Z,7.2nm,0.7s						
LATQ	La Tuque	49.67	6	P	P	21 02 35.1	-0.5
	baz=189						
GMRC	Granite Mounta	49.79	321	P	P	21 02 38.4	+1.4
	baz=130,SNR=8.3						
LCMT	Little Creek M	49.81	325	P	P	21 02 38.0	+0.9
SRU	San Rafael Swe	49.83	329	P	P	21 02 37.7	+0.5
SRU					PcP	21 03 56.3	-0.4
D61A	St Aubert, Com	49.83	9	P	P	21 02 37.5	+0.7
	baz=192						
D62A	Allapoint, All	49.89	10	P	P	21 02 37.6	+0.3
D62A				IAmb	IAmb	21 03 08.2	
	comp=Z,18nm,1.0s						
D62A	Allapoint, All	49.89	10	P	P	21 02 37.6	+0.3
	baz=194						
MTPU	Mount Pierson	49.94	326	P	P	21 02 39.3	+1.0
MTPU				PcP	PcP	21 03 57.8	+0.4
D63A	Stockholm	50.01	10	P	P	21 02 38.3	+0.1
	baz=195						
Q16A	Castle Valley	50.02	328	P	P	21 02 39.2	+0.5
MURC	Murrieta	50.05	319	P	P	21 02 40.1	+1.3
	baz=128						
VLDQ	Val d'Or	50.06	2	PcP	PcP	21 03 57.2	+0.2
SZCU	Shurtz Canyon	50.13	325	P	P	21 02 41.2	+1.6
P17A	Butcher Ranch,	50.21	329	P	P	21 02 40.6	+0.5
RWWY	Rawlins	50.21	333	P	P	21 02 40.1	-0.1
HEC	Hector,Ludlow	50.25	320	P	P	21 02 42.0	+1.6
	baz=129,SNR=7.4						
CCUT	Cedar City	50.26	325	P	P	21 02 42.4	+1.8
BBRC	Big Bear Solar	50.27	319	P	P	21 02 41.9	+1.2
	baz=128						
MSU	Marysvale	50.27	327	P	P	21 02 41.1	+0.5
MSU					PcP	21 03 59.2	+0.8
TMUT	Trail Mountain	50.32	328	P	P	21 02 41.9	+0.7
TUQ	Turquoise Moun	50.38	321	P	P	21 02 42.7	+1.4
	baz=130						
RDMU	Red Mountain	50.44	331	P	P	21 02 42.4	+0.5
RDMU				PcP	PcP	21 03 58.8	-0.3
TCRU	Three Creeks R	50.49	327	P	P	21 02 43.9	+1.6
SCI2	San Clemente I	50.58	317	P	P	21 02 44.1	+1.3
	baz=126						
SHPR	Sheep Range	50.60	323	P	P	21 02 44.6	+1.5
SHPR				IAmb	IAmb	21 02 45.8	
	comp=Z,17nm,1.1s						
BATG	Bathurst New B	50.64	12	P	P	21 02 43.4	+0.4
BFSC	Mount Baldy Ra	50.74	319	P	P	21 02 45.4	+1.2
	baz=128,SNR=8.7						
GSC	Goldstone, Bar	50.85	321	P	P	21 02 46.2	+1.4
GSC	Goldstone, Bar	50.85	321	P	P	21 02 46.4	+1.6
	baz=129,SNR=11						
SHOC	Shoshone, Teco	50.89	322	P	P	21 02 47.1	+2.0
	baz=130,SNR=5.8						
RSSD	Black Hills	50.90	338	P	P	21 02 46.8	+1.6
RSSD				IAmb	IAmb	21 02 47.1	
	comp=Z,6.0nm,0.6s						
RSSD	Black Hills	50.90	338	P	P	21 02 45.9	+0.7
	baz=148						
EYMN	Ely	50.90	350	P	P	21 02 43.5	-1.3
EYMN				IAmb	IAmb	21 02 44.5	
	comp=Z,10nm,1.1s						
EYMN					PcP	21 03 59.9	-0.4
EYMN	Ely	50.90	350	P	P	21 02 43.6	-1.3
	baz=165						
MWC	Mount Wilson	50.99	319	P	P	21 02 47.1	+1.0
LSQQ	Lebel-sur-Quev	51.03	2	P	P	21 02 44.2	-1.6
	baz=183						
PASC	Pasadena Art C	51.05	319	P	P	21 02 47.3	+1.0
PASC				IAmb	IAmb	21 02 48.9	
	comp=Z,13nm,1.0s						
MPU	Maple Canyon	51.07	329	P	P	21 02 46.7	0.0
PSUT	Pine Spring	51.22	326	P	P	21 02 49.0	+1.3
NLU	North Lily Min	51.26	328	P	P	21 02 48.1	+0.1
EDW2	Edwards Air Fo	51.35	319	P	P	21 02 49.7	+1.1
	baz=128,SNR=16						
GO10	Punta Arenas	51.38	173	P	P	21 02 48.6	+0.1
JLU	Jordanelle	51.41	329	P	P	21 02 49.6	+0.4
LRMC	Laurel Mtn Rad	51.52	320	P	P	21 02 51.4	+1.5
	baz=128,SNR=9.3						
TPNV	Topopah Spring	51.55	323	P	P	21 02 51.6	+1.4
TPNV				IAmb	IAmb	21 02 53.1	
	comp=Z,14nm,0.9s						
TPNV	Topopah Spring	51.55	323	P	P	21 02 51.9	+1.7
	baz=130,SNR=18						
BLG	Laguna Peak, P	51.59	318	P	P	21 02 51.8	+1.4
	baz=126						
FURC	Furnace Creek,	51.62	322	P	P	21 02 52.4	+2.0
	baz=130,SNR=7.3						
CTU	Camp Tracy	51.63	329	P	P	21 02 51.9	+1.2
MATQ	Matagami	51.70	2	P	P	21 02 48.6	-2.3
	baz=182						
MPMC	Manual Prospec	51.75	321	P	P	21 02 52.8	+1.0
	baz=129,SNR=11						
TCUT	Toone Canyon	51.77	330	P	P	21 02 52.6	+0.8
TCUT					PcP	21 04 02.4	-1.6
DUG	Dugway, Tooele	51.82	328	P	P	21 02 53.0	+0.8
DUG	Dugway, Tooele	51.82	328	P	P	21 02 53.4	+1.2
	baz=136,SNR=8.1						
SCZ2	Santa Cruz Isl	51.91	317	P	P	21 02 56.0	+3.3
	baz=125						
ARVC	Arvin	52.04	319	P	P	21 02 55.7	+2.0
	baz=127						
R11A	Troy Canyon, C	52.08	324	P	P	21 02 55.4	+1.2
R11A				IAmb	IAmb	21 02 56.9	
	comp=Z,13nm,1.0s						
R11A	Troy Canyon, C	52.08	324	P	P	21 02 55.6	+1.4
	baz=132,SNR=17						
PD31	Pinedale Array	52.13	332	P	P	21 02 54.3	-0.2
PD31				PcP	PcP	21 04 04.3	-0.9
PDAR	Pinedale Array	52.13	332	P	P	21 02 54.7	+0.2
	comp=Z,3.0nm,0.8s,baz=126,slow=7.5,SNR=18						
PDAR				PcP	PcP	21 04 04.9	-0.4
	comp=Z,1.1nm,0.6s,baz=134,slow=5.1,SNR=6.4						
PDAR	Pinedale Array	52.13	332	P	P	21 02 54.1	-0.3
PDAR					PcP	21 04 04.3	-0.9
AGMN	Agassiz Nation	52.13	346	P	P	21 02 53.3	-0.7
AGMN				IAmb	IAmb	21 02 54.0	
	comp=Z,10nm,0.7s						
AGMN				PcP	PcP	21 04 03.5	-1.3
AGMN	Agassiz Nation	52.13	346	P	P	21 02 53.5	-0.6
	baz=159,SNR=6.9						
BW06	Boulder Array	52.13	332	P	P	21 02 53.8	-0.8
BW06					PcP	21 04 03.4	-1.9
BW06	Boulder Array	52.13	332	P	P	21 02 54.2	-0.3
	baz=141						
ISA	Isabella, Lake	52.14	320	P	P	21 02 55.8	+1.3
ISA	Isabella, Lake	52.14	320	P	P	21 02 55.9	+1.5
	baz=128,SNR=6.4						
HWUT	Hardware Ranch	52.22	330	P	P	21 02 55.4	+0.4
HWUT				IAmb	IAmb	21 02 56.6	
	comp=Z,14nm,0.8s						
HWUT					PcP	21 04 04.7	-0.8
CWC	Cottonwood Cre	52.37	321	P	P	21 02 57.4	+1.1
	baz=128						
SPUT	South Promonto	52.44	329	P	P	21 02 57.1	+0.4
BGU	Big Grassy Mou	52.46	328	P	P	21 02 56.8	-0.1
PKM	Mcpherson Peak	52.55	318	P	P	21 02 58.9	+1.2
	baz=126						
VES	Vestal, Richgr	52.64	320	P	P	21 02 59.7	+1.7
	baz=127						
MDND	Maddock	52.69	343	P	P	21 02 58.5	+0.3
MDND	Maddock	52.69	343	P	P	21 02 58.7	+0.5
	baz=154						
TIN	Tinemaha, Big	52.84	321	P	P	21 03 01.8	+2.1
	baz=129						
AHID	Auburn Hatcher	52.86	331	P	P	21 02 59.3	-0.6
REDW	Red Top Meadow	53.19	332	P	P	21 03 02.8	+0.5
REDW				IAmb	IAmb	21 03 04.0	
	comp=Z,29nm,1.6s						
SNOW	Snow King Moun	53.23	332	P	P	21 03 03.2	+0.6
PAGB	Antelope Grade	53.34	319	P	P	21 03 02.7	-0.6
PAGB				IAmb	IAmb	21 03 08.6	
	comp=Z,22nm,1.5s						
TPAW	Teton Pass	53.34	332	P	P	21 03 02.8	-0.7
TPAW				IAmb	IAmb	21 03 38.9	
	comp=Z,13nm,1.4s						
FXWY	Fox Creek	53.49	332	P	P	21 03 04.0	-0.5
ELK	Elko	53.52	327	P	P	21 03 05.5	+0.7
	comp=Z,1.9nm,0.7s,baz=149,slow=2.4,SNR=6.5						
ELK				PcP	PcP	21 04 10.4	-0.2
	comp=Z,2.1nm,1.0s,baz=180,slow=2.0,SNR=4.0						
ELK	Elko	53.52	327	P	P	21 03 05.3	+0.6
ELK					PcP	21 04 09.8	-0.7
NV11	Mina Array Sit	53.66	323	P	P	21 03 06.5	+0.7
NV11				IAmb	IAmb	21 03 08.3	
	comp=Z,12nm,0.8s						
OMMB	Old Mammoth Mi	53.67	321	P	P	21 03 07.5	+1.5
FLWY	Flagg Ranch	53.68	333	P	P	21 03 05.9	+0.1
FLWY				IAmb	IAmb	21 03 07.1	
	comp=Z,12nm,1.1s						
MDPB	Devils Postpil	53.73	321	P	P	21 03 07.3	+0.9
NVAR	Mina Array Bea	53.75	323	P	P	21 03 08.3	+1.8
	comp=Z,9.7nm,0.7s,baz=141,slow=7.3,SNR=51						
NVAR				PcP	PcP	21 04 12.1	+0.6
	comp=Z,1.9nm,0.7s,baz=144,slow=4.7,SNR=4.1						
NVAR	Mina Array Bea	53.75	323	P	P	21 03 07.4	+0.9
NVAR					PcP	21 04 11.2	-0.3
RLMT	Red Lodge	53.85	334	P	P	21 03 07.0	-0.1
RLMT	Red Lodge	53.85	334	P	P	21 03 07.5	+0.4
	baz=142						
YPP	Pitchstone Pla	53.87	333	P	P	21 03 07.6	+0.2
LKWY	Lake	53.91	333	P	P	21 03 08.3	+0.7
ULM	Lac du Bonnet	53.97	347	P	P	21 03 06.5	-1.0
	comp=Z,8.5nm,0.5s,baz=158,slow=7.6,SNR=24						
ULM				pP	pP	21 03 27.3	-2.1
	comp=Z,5.7nm,0.7s,baz=167,slow=7.5,SNR=4.8						
ULM				PcP	PcP	21 04 10.7	-1.0
	comp=Z,1.1nm,0.4s,baz=179,slow=4.3,SNR=4.0						
ULM	Lac du Bonnet	53.97	347	P	P	21 03 06.1	-1.4
ULM					pP	21 03 27.1	-2.3
PMPB	Monarch Peak	53.98	319	P	P	21 03 09.1	+1.1
RYN	Ryan	54.01	323	P	P	21 03 09.3	+1.0
RYN				IAmb	IAmb	21 03 10.7	
	comp=Z,12nm,1.3s						
KVN	Kaiserville	54.03	323	P	P	21 03 09.0	+0.5
KVN				IAmb	IAmb	21 03 10.5	
	comp=Z,8.1nm,0.9s						
YNE	Yellowstone No	54.08	334	P	P	21 03 09.1	+0.3
YNR	Norris Junctio	54.16	333	P	P	21 03 08.6	-0.8
YMR	Madison River	54.25	333	P	P	21 03 10.3	+0.3
YHH	Holmes Hill	54.29	333	P	P	21 03 11.6	+1.2
YHB	Horse Butte	54.42	333	P	P	21 03 11.4	+0.2
YHL	Hebgen Lake	54.49	333	P	P	21 03 13.2	+1.3
QLMT	Earthquake Lak	54.59	333	P	P	21 03 13.4	+1.0
YERR	Yerington	54.67	323	P	P	21 03 14.3	+1.2
CMB	Columbia Colle	54.80	321	P	P	21 03 14.6	+0.7
PNTR	Pine Nut	54.95	322	P	P	21 03 16.6	+1.4
PNTR				IAmb	IAmb	21 03 17.7	
	comp=Z,11nm,1.0s						
VCNR	Virginia City	55.12	323	P	P	21 03 17.6	+1.3
VCNR				IAmb	IAmb	21 03 18.8	
	comp=Z,7.4nm,0.6s						
PAHR	Pah Rah Range	55.21	323	P	P	21 03 17.7	+0.7
PAHR				IAmb	IAmb	21 03 49.5	
	comp=Z,13nm,1.6s						
MCMT	McKenzie Canyo	55.24	332	P	P	21 03 17.8	+0.6
RUBR	Rubicon Trail	55.27	322	P	P	21 03 18.3	+0.8
RUBR				IAmb	IAmb	21 03 22.5	
	comp=Z,14nm,1.0s						
DLMT	Dillon	55.53	332	P	P	21 03 19.4	+0.3
MFID	Camas Ranch	55.70	329	P	P	21 03 20.8	+0.5
MFID				IAmb	IAmb	21 03 22.5	
	comp=Z,17nm,1.0s						
MFID					sP	21 03 50.3	-1.9
AFDM	Forest Hills D	55.71	322	P	P	21 03 21.1	+0.7
BEKR	Beckworth	55.90	323	P	P	21 03 23.0	+1.1
BEKR				IAmb	IAmb	21 03 24.3	
	comp=Z,14nm,1.1s						
EGMT	Eagleton	56.37	336	P	P	21 03 24.8	-0.1
EGMT	Eagleton	56.37	336	P	P	21 03 25.4	+0.4
	baz=143						
ORV	Oroville	56.41	322	P	P	21 03 26.6	+1.3
O03E	Paynes Creek	57.04	322	P	P	21 03 30.1	+0.2
	baz=127						
J08A	Circle Bar Ran	57.06	327	P	P	21 03 30.2	+0.1
J08A				IAmb	IAmb	21 03 31.3	
	comp=Z,22nm,1.6s						
MOD	Modoc Plateau	57.14	325	P	P	21 03 30.8	+0.1
MOD				IAmb	IAmb	21 03 32.3	
	comp=Z,26nm,1.6s						
MSO	Missoula	57.24	333	P	P	21 03 31.3	+0.1
MSO				IAmb	IAmb	21 03 32.9	
	comp=Z,12nm,1.4s						
MSO	Missoula	57.24	333	P	P	21 03 31.3	+0.1
	baz=138						
BMO	Blue Mountains	57.46	329	P	P	21 03 32.4	-0.4
O02D	Mt. Diablo Mer	57.57	322	P	P	21 03 33.6	0.0
	baz=126						
WDC	Whiskeytown Da	57.66	322	P	P	21 03 33.1	-1.0
SCHQ	Schefferville	57.75	9	P	P	21 03 33.7	-0.8
	comp=Z,3.1nm,0.7s,baz=210,slow=7.5,SNR=8.6						
SCHQ	Schefferville	57.75	9	P	P	21 03 33.1	-1.4
SCHQ				IAmb	IAmb	21 03 49.8	
	comp=Z,18nm,1.6s						
M04C	Macdoel	57.96	324	P	P	21 03 37.1	+0.7
	baz=128,SNR=5.1						
N02D	Trinity Center	57.99	323	P	P	21 03 36.6	0.0
	baz=126						
JTMT	Jette	58.09	333	P	P	21 03 37.4	+0.3
JTMT				IAmb	IAmb	21 03 38.8	
	comp=Z,13nm,1.2s						
I07A	Izee	58.10	327	P	P	21 03 36.8	-0.6
M02C	Callahan	58.33	323	P	P	21 03 38.9	0.0
	baz=126						
YBH	Yreka Blue Hor	58.45	323	P	P	21 03 39.4	-0.4
	comp=Z,4.3nm,0.8s,baz=107,slow=4.9,SNR=13						
YBH				pP	pP	21 04 00.7	-1.2
	comp=Z,2.4nm,0.8s,baz=103,slow=9.6,SNR=2.8						
YBH	Yreka Blue Hor	58.45	323	P	P	21 03 39.4	-0.4
L04D	Klamath Falls	58.50	324	P	P	21 03 40.6	+0.5
	baz=128,SNR=5.4						
J05D	Fort Rock, OR	58.55	325	P	P	21 03 41.4	+0.9
	baz=129,SNR=6.6						
KHMM	Horse Mountain	58.56	322	P	P	21 03 41.7	+1.1
G08A	Pilot Rock	58.62	329	P	P	21 03 41.4	+0.5
PINE	Pine Mountain	58.70	326	P	P	21 03 42.2	+0.6
WALA	Waterton Lakes	58.91	334	P	P	21 03 42.8	0.0
WALA				IAmb	IAmb	21 03 43.8	
	comp=Z,8.3nm,0.7s						
J04D	Umpqua Nationa	59.02	325	P	P	21 03 44.6	+0.8
	baz=128						
E09A	Wood Farm, Sta	59.03	330	P	P	21 03 43.4	-0.2
KRMB	Red Mountain	59.05	322	P	P	21 03 43.6	-0.4
HUMO	Hull Mountain	59.12	324	P	P	21 03 43.0	-1.4
HUMO				IAmb	IAmb	21 03 52.9	
	comp=Z,24nm,1.8s						
L02E	Cave Junction	59.24	323	P	P	21 03 46.1	+1.0
	baz=126						
I05D	Terrebonne, OR	59.27	326	P	P	21 03 46.5	+1.2
	baz=129						
G06A	Carlson Farm,	59.47	328	P	P	21 03 45.1	-1.6
E08A	Dider Farm, El	59.48	329	P	P	21 03 45.8	-0.8
I04A	Tendick Farm,	59.53	325	P	P	21 03 48.7	+1.6
	baz=128						
FFC	Flin Flon	59.55	345	P	P	21 03 46.2	-0.7
FFC				IAmb	IAmb	21 03 47.8	
	comp=Z,15nm,1.4s						
K02D	Willamette Mer	59.59	324	P	P	21 03 47.8	+0.2
	baz=126						
KBO	Bosley Butte	59.64	323	P	P	21 03 49.4	+1.4
NEW	Newport	59.77	332	P	P	21 03 48.7	0.0
	comp=Z,1.6nm,0.6s,baz=187,slow=5.4,SNR=5.7						
NEW	Newport	59.77	332	P	P	21 03 48.9	+0.3
NEW	Newport	59.77	332	P	P	21 03 49.4	+0.7
	baz=135						
D08A	Wollman Farm,	59.80	330	P	P	21 03 48.8	0.0
G05D	Wamic, OR	59.84	327	P	P	21 03 50.8	+1.6
	baz=130						
E07A	Sunnyside	59.93	329	P	P	21 03 49.4	-0.3
E07A				IAmb	IAmb	21 03 51.8	
	comp=Z,9.4nm,0.9s						
C09A	Chrisman Ranch	59.99	331	P	P	21 03 51.3	+1.1
J01E	Myrtle Point	60.03	324	P	P	21 03 51.7	+1.3
	baz=126						
LON	Longmire	61.07	328	P	P	21 03 57.5	-0.1
E04D	Cinebar	61.35	328	P	P	21 03 58.6	-0.7
	baz=129						
FCC	Fort Churchill	61.75	352	P	P	21 04 00.6	-1.2
FCC				IAmb	IAmb	21 04 01.7	
	comp=Z,15nm,1.0s						
FCC					pP	21 04 29.1	+4.9
YKA	Yellowknife Ar	69.61	344	P	P	21 04 51.7	-0.6
	comp=Z,4.0nm,0.6s,baz=142,slow=6.1,SNR=58						
YKA				pP	PcP	21 05 14.0	-0.8
	comp=Z,2.3nm,0.8s,baz=146,slow=5.1,SNR=6.2						
DLBC	Dease Lake	72.25	335	P	P	21 05 09.0	+0.6
	comp=Z,10nm,1.0s,baz=118,slow=7.0,SNR=9.1						
DLBC	Dease Lake	72.25	335	P	P	21 05 09.1	+0.6
DLBC				IAmb	IAmb	21 05 10.5	
	comp=Z,12nm,0.9s						
BESE	Bessie Mountai	74.43	334	P	P	21 05 22.0	+0.8
BESE				IAmb	IAmb	21 05 49.2	
	comp=Z,25nm,1.2s						
LIC	Lamto	75.08	83	*e*P	P	21 05 25.5	-0.4
	comp=Z,14nm,0.4s						
TIC	Toumodi	75.12	83	*e*P	P	21 05 25.7	-0.4
DBIC	Dimbokro	75.28	83	P	P	21 05 27.0	0.0
	comp=Z,4.9nm,0.5s,baz=271,slow=5.3,SNR=9.0						
DBIC	Dimbokro	75.28	83	P	P	21 05 26.2	-0.8
KIC	Kosan Boka	75.37	83	*e*P	P	21 05 27.5	-0.1
	comp=Z,18nm,0.5s						
RES	Resolute Bay	77.23	356	P	P	21 05 35.5	-1.3
C36M	Paulatuk	77.32	345	P	P	21 05 36.3	-1.1
	baz=134						
MDT	Midelt	78.72	56	P	P	21 05 47.1	+1.0
	comp=Z,3.2nm,1.0s,baz=354,slow=2.7,SNR=4.3						
TULEG	Thule	78.80	3	P	P	21 05 44.6	-0.9
TULEG				IAmb	IAmb	21 05 46.8	
	comp=Z,28nm,1.6s						
BALM	Baldy	78.93	334	P	P	21 05 47.5	+0.8
BALM				IAmb	IAmb	21 06 09.1	
	comp=Z,34nm,1.4s						
SUMG	Summit	78.98	12	*i* P	P	21 05 46.9	-0.2
	comp=Z,58nm,1.1s						
SUMG	Summit	78.98	12	P	P	21 05 46.2	-0.9
SUMG				IAmb	IAmb	21 05 47.9	
	comp=Z,18nm,1.0s						
TGL	Tana Glacier	79.03	334	P	P	21 05 45.9	-1.3
DAWY	Dawson	79.09	337	P	P	21 05 47.3	-0.1
EPYK	Eagle Plains	79.27	340	P	P	21 05 47.8	-0.5
EPYK				IAmb	IAmb	21 05 49.8	
	comp=Z,16nm,1.1s						
EPYK	Eagle Plains	79.27	340	P	P	21 05 48.5	+0.1
	baz=121						
INK	Inuvik	79.30	342	P	P	21 05 48.2	-0.2
INK				IAmb	IAmb	21 05 49.8	
	comp=Z,23nm,1.1s						
BCAR	Beaver Creek A	79.58	336	P	P	21 05 50.1	0.0
GLB	Gilahina Butte	79.74	334	P	P	21 05 51.2	+0.2
GLB				IAmb	IAmb	21 06 03.1	
	comp=Z,25nm,1.4s						
EGAK	Eagle	80.10	338	P	P	21 05 52.8	0.0
EGAK				IAmb	IAmb	21 05 54.0	
	comp=Z,15nm,1.0s						
PAB	San Pablo	80.14	49	P	P	21 05 53.2	-0.5
ESDC	Sonseca Array	80.46	49	P	P	21 05 55.3	-0.1
	comp=Z,0.9nm,0.6s,baz=268,slow=5.5,SNR=4.1						
SCM	Sheep Creek Mo	81.45	334	P	P	21 06 00.3	+0.1
SCM				IAmb	IAmb	21 06 00.6	
	comp=Z,13nm,0.7s						
VNA3	Neumayer Olymp	81.68	162	P	P	21 06 02.0	+0.9
SCO	Scoresbysund	81.70	17	P	P	21 06 01.4	+0.2
SCO				IAmb	IAmb	21 06 26.1	
	comp=Z,30nm,1.7s						
SML	Sawmill	81.88	333	P	P	21 06 01.9	-0.5
GHO	Glory Hole Cre	82.14	333	P	P	21 06 03.3	-0.4
TOA0	Torodi Ar. Sit	82.17	77	P	P	21 06 03.2	-1.6
TORD	Torodi Ar. Bea	82.17	77	P	P	21 06 04.2	-0.6
	comp=Z,4.4nm,0.9s,baz=280,slow=5.2,SNR=16						
TORD	Torodi Ar. Bea	82.17	77	P	P	21 06 03.5	-1.3
HDA	Harding Lake	82.22	336	P	P	21 06 03.8	-0.2
HDA	Harding Lake	82.22	336	P	P	21 06 03.5	-0.5
	baz=111						
RC01	Rabbit Creek A	82.28	333	P	P	21 06 04.2	-0.2
RC01				IAmb	IAmb	21 06 16.2	
	comp=Z,28nm,1.2s						
IL31		82.33	337	P	P	21 06 03.9	-0.6
ILAR	Eielson Array	82.33	337	P	P	21 06 04.0	-0.6
	comp=Z,2.7nm,0.8s,baz=128,slow=3.5,SNR=20						
ILAR	Eielson Array	82.33	337	P	P	21 06 03.6	-1.0
FYU	Fort Yukon	82.39	338	P	P	21 06 05.1	+0.3
BMAR	Burnt Mountain	82.51	339	P	P	21 06 06.0	+0.4
RND	Reindeer	82.66	335	P	P	21 06 06.5	+0.1
RND				IAmb	IAmb	21 06 08.4	
	comp=Z,21nm,1.1s						
POKR	Poker Plat Res	82.68	337	P	P	21 06 06.2	-0.2
	baz=111						
MCK	McKinley	82.80	335	P	P	21 06 07.0	-0.1
MDM	Murphy Dome	82.94	336	P	P	21 06 07.5	-0.3
KTH	Kantishna Hill	83.58	335	P	P	21 06 11.1	-0.1
BPAW	Bear Paw Mtn.	83.78	335	P	P	21 06 11.7	-0.4
BPAW				IAmb	IAmb	21 06 12.7	
	comp=Z,16nm,1.0s						
SNAA	Sanae	83.90	162	P	P	21 06 13.3	+0.6
SNAA	Sanae	83.90	162	P	P	21 06 13.1	+0.4
PPLA	Purkeypile	83.94	334	P	P	21 06 12.8	-0.3
MLY	Manley	83.97	336	P	P	21 06 12.6	-0.5
MLY				IAmb	IAmb	21 06 14.3	
	comp=Z,16nm,1.1s						
EKA	Eskdalemuir Ar	84.14	34	P	P	21 06 13.9	-0.2
	comp=Z,1.3nm,0.5s,baz=265,slow=3.7,SNR=6.3						
COLD	Coldfoot	84.46	338	P	P	21 06 15.8	+0.3
TOLK	Toolik Lake Re	84.71	340	P	P	21 06 16.4	-0.3
TOLK				IAmb	IAmb	21 06 42.5	
	comp=Z,19nm,1.8s						
TOLK	Toolik Lake Re	84.71	340	P	P	21 06 16.8	+0.1
	baz=109						
SVW2	Sparrevohn	85.01	332	P	P	21 06 17.1	-1.3
IMAR	Indian Mountai	85.44	337	P	P	21 06 19.6	-0.8
DAG	Danmarks Havn	85.67	12	*i* P	P	21 06 20.8	-0.5
	comp=Z,3.8nm,0.8s						
DAG				*i*		21 06 43.0	
QSPA	South Pole Qui	87.95	180	P	P	21 06 33.6	+0.8
QSPA				IAmb	IAmb	21 06 35.1	
	comp=Z,16nm,1.0s						
DOU	Dourbes	87.99	40	PcP	P	21 06 33.6	+0.5
WLF	Walferdange	88.95	40	PcP	P	21 06 37.9	+0.2
RDOG	Red Dog Mine	89.38	338	P	P	21 06 39.5	+0.2
ANM	Nome	90.00	334	P	P	21 06 42.8	+0.5
ANM				IAmb	IAmb	21 06 43.4	
	comp=Z,6.2nm,0.9s						
DAVOX	Davos/Dischmat	91.29	43	P	P	21 06 49.5	+0.6
	comp=Z,1.5nm,0.6s,baz=324,slow=5.9,SNR=4.7						
CTI	Castel Tesino	92.50	44	P	P	21 06 53.9	-0.5
CTI				IAmb	IAmb	21 06 55.2	
	comp=Z,4.3nm,0.7s						
LATE	Laterza	92.58	48	P	P	21 06 54.3	-0.5
LATE				IAmb	IAmb	21 06 56.6	
	comp=Z,10nm,1.4s						
GAMB	Gambell	92.74	334	P	P	21 06 55.5	+0.6
GAMB				IAmb	IAmb	21 06 56.7	
	comp=Z,3.7nm,0.9s						
SBA	Scott Base	92.78	191	P	P	21 06 57.5	+2.6
GERES	GERESS Array B	93.87	41	P	P	21 07 02.1	+1.5
	comp=Z,0.3nm,0.6s,baz=330,slow=3.5,SNR=3.2						
GERES	GERESS Array B	93.87	41	P	P	21 07 01.5	+0.8
TSUM	Tsumeb	96.25	109	P	P	21 07 13.2	+1.0
ABKAR	Akbulak array	121.82	30		PKiKP	21 12 36.7	-0.3
ABKAR					pPKPdf	21 12 59.8	-1.7
ABKAR	Akbulak array	121.82	30		PKiKP	21 12 37.2	+0.2
ZAA0	Zalesovo Array	126.80	11		PKPdf	21 12 45.8	-0.4
ZAA0					pPKPdf	21 13 08.4	-2.5
ZALV	Zalesovo Beam	126.80	11	PKP	PKPdf	21 12 45.6	-0.6
	comp=Z,3.2nm,0.6s,baz=286,slow=2.3,SNR=14						

ZALV				pPKP	pPKPdf	21 13 08.2	-2.7
	comp=Z,2.1nm,0.6s,baz=270,slow=3.0,SNR=3.3						
ZALV	Zalesovo Beam	126.80	11		PKPdf	21 12 45.4	-0.8
ZALV					pPKPdf	21 13 08.0	-2.9
GEYT	Alibeck	127.49	42	PKP	PKiKP	21 12 48.3	-0.4
	comp=Z,2.5nm,0.6s,baz=270,slow=4.2,SNR=6.6						
GEYT	Alibeck	127.49	42		PKPdf	21 12 47.7	-0.4
STKA	Stephens Creek	128.23	226	PKP	PKPdf	21 12 49.4	-0.3
	comp=Z,0.8nm,0.4s,baz=334,slow=4.5,SNR=4.7						
STKA	Stephens Creek	128.23	226		PKPdf	21 12 49.2	-0.4
KURK	Kurchatov	128.24	17		PKPdf	21 12 48.6	-0.4
KURK					pPKPdf	21 13 11.5	-2.2
USRK	Ussuriysk Ar.	129.54	331	PKP	PKPdf	21 12 51.9	+0.1
	comp=Z,2.5nm,0.8s,baz=24,slow=3.9,SNR=4.5						
USRK	Ussuriysk Ar.	129.54	331		PKPdf	21 12 51.3	-0.5
HRA	Herat	132.22	43		PKPdf	21 12 56.6	-0.9
MAKZ	Makanchi	132.73	17		PKPdf	21 12 56.9	-0.9
MAKZ					pPKPdf	21 13 19.2	-3.3
MK31	Makanchi Array	132.84	17		PKPdf	21 12 56.9	-1.0
MKAR	Makanchi Array	132.84	17	PKP	PKPdf	21 12 57.4	-0.6
	comp=Z,1.1nm,0.6s,baz=311,slow=2.4,SNR=25						
MKAR				pPKP	pPKPdf	21 13 20.5	-2.2
	comp=Z,1.4nm,0.9s,baz=328,slow=1.9,SNR=4.5						
MKAR	Makanchi Array	132.84	17		PKPdf	21 12 57.4	-0.6
MKAR				pPKPdf	pPKPdf	21 13 20.0	-2.7
AAK	Ala-Archa	133.55	26		PKPdf	21 12 59.9	+0.2
AAK					pPKPdf	21 13 22.6	-1.7
CHGR	Chuyangaron	133.87	34		PKPdf	21 12 59.7	-0.5
SONM	Songino Array	134.15	354	PKP	PKPdf	21 13 00.4	-0.1
	comp=Z,1.0nm,0.7s,baz=21,slow=0.9,SNR=9.0						
SONM				pPKP	pPKPdf	21 13 22.8	-2.5
	comp=Z,0.8nm,0.7s,baz=324,slow=2.4,SNR=4.2						
SONM	Songino Array	134.15	354		PKPdf	21 13 00.2	-0.3
SONM					pPKPdf	21 13 22.5	-2.8
NRN	Naryn	135.19	26		PKPdf	21 13 02.8	-0.2
KSRS	Korea Array	136.58	327	PKP	PKPdf	21 13 05.4	+0.2
	comp=Z,4.4nm,0.9s,baz=37,slow=0.4,SNR=12						
KSRS				pPKP	pPKPdf	21 13 27.4	-2.5
	comp=Z,1.9nm,0.8s,baz=41,slow=0.6,SNR=3.3						
KSAR	Wonju Array Be	136.61	327		PKPdf	21 13 04.7	-0.6
KSH	Kashi	136.72	28	PKP	PKiKP	21 13 06.9	-0.5
KSH				sPKP		21 13 44.3	
KSH				PP	PP	21 15 53.4	+5.6
KSH				PKS	PKSdf	21 16 42.3	+0.3
KSH	Kashi	136.72	28	SS	SS	21 33 46.3	+2.2
ASAR	Alice Springs	138.41	230	PKhKP	PKPpre	21 12 58.9	
	comp=Z,1.2nm,0.7s,baz=112,slow=3.7,SNR=15						
ASAR				PKP	PKPdf	21 13 09.2	+0.2
	comp=Z,1.1nm,0.7s,baz=107,slow=2.0,SNR=7.6						
ASAR	Alice Springs	138.41	230		PKPpre	21 12 56.0	
ASAR				PKPdf	PKPdf	21 13 08.4	-0.7
WRA	Warramunga Arr	139.99	235	PKhKP	PKPpre	21 13 05.3	
	comp=Z,1.5nm,0.6s,baz=121,slow=2.1,SNR=18						
WRA				PKP	PKPdf	21 13 11.8	-0.2
	comp=Z,2.4nm,0.8s,baz=127,slow=1.4,SNR=9.4						
WRA	Warramunga Arr	139.99	235		PKPpre	21 13 05.2	
WRA					PKPdf	21 13 11.6	-0.4
GTA	Gaotai	142.88	1	*e*PKP	PKPdf	21 13 12.6	-4.2
GTA				pPKP	pPKPdf	21 13 39.1	-2.4
GTA				sPKP		21 13 50.3	
GTA				PP	PP	21 16 24.0	-1.1
LZH	Lanzhou	146.03	355	⇓PKP	PKPab	21 13 23.6	-0.3
LZH				PKP	PKiKP	21 13 26.8	+0.2
LZH				*i*		21 13 46.0	
LZH				pPKP	sPKPdf	21 13 55.4	-1.0
LZH				sPKP		21 14 08.9	
XAN	Xi'an	147.22	347	PKP	PKPbc	21 13 25.9	-0.7
XAN				pPKP	pPKPdf	21 13 41.0	-8.1
XAN				sP	pPKPbc	21 13 48.4	-2.7
XAN	Xi'an	147.22	347		PKPbc	21 13 25.5	-1.1
WHN	Wuhan	148.72	336	PKPbc	PKPdf	21 13 26.3	-0.5
ENH	Enshi	150.65	344		PKPbc	21 13 34.6	-0.9
ENH					pPKPdf	21 13 57.1	+2.4
CD2	Chengdu	151.17	354	PKP	PKPdf	21 13 29.0	-1.7
LSA	Lhasa	151.24	17		PKPdf	21 13 31.1	-0.4
LSA				PKPbc	PKiKP	21 13 37.6	-0.3
LSA					pPKPdf	21 14 00.4	+4.2
CMAR	Chiang Mai Arr	163.71	4	PKP	PKPdf	21 13 46.8	+0.2
	comp=Z,1.3nm,0.9s,baz=285,slow=1.9,SNR=9.4						
CMAR				PKPab	PKPab	21 14 37.6	-1.0
	comp=Z,2.0nm,0.7s,baz=334,slow=5.0,SNR=14						
CMAR				pPKPab	pPKPab	21 14 59.9	-2.6
	comp=Z,2.6nm,0.9s,baz=335,slow=5.1,SNR=7.9						
CMAR	Chiang Mai Arr	163.71	4		PKPdf	21 13 45.8	-0.8
CMAR					PKPab	21 14 37.1	-1.6
CMAR					pPKPab	21 14 59.5	-3.0

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*IDC **14** 20:56:54.8±1.2, 34°.63N×24°.85E, h0^{km}, mb3.4/4, mb1 3.6/9, mb1mx3.4/62, mbtmp3.5/9, ML3.6/5, Error ellipse: s-maj=23.4km s-min=16.6km az=87.0*

*ISK **14** 20:56:57.6, 34°.65N×24°.81E, h63^{km}, ML3.2/8*

*ATH **14** 20:57:00.8, 34°.83N×24°.71E, h38^{km}±1^{km}, ML2.9/9, Error ellipse: s-maj=2.1km s-min=0.9km az=1.0*

*THE **14** 20:57:01.3, 34°.71N×24°.73E, h18^{km}±1^{km}, ML3.0/7, Error ellipse: s-maj=2.0km s-min=0.9km az=352.0*

ISC 14 20:56:58.8±1.2**, 34°.62N**±0°.05×**24°.77E**±0°.03**, h31**^{km}±8^{km}**, n88, σ1^{s}.18**/111**, mb3.3**/4**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIVA	Sivas	0.40	4	P	Pb	20 57 08.2	+0.4
SIVA				S	Sb	20 57 13.8	-0.1
	8µm,0.4s						
SIVA	Sivas	0.40	4	P	Pb	20 57 08.1	+0.4
SIVA				S	Sb	20 57 12.9	-1.0
SIVA				AML	AML	20 57 15.9	
	comp=N,12007µm,0.2s						
SIVA				AML	AML	20 57 17.1	
	comp=E,18515µm,0.7s						
TMBK	Timbaki Herakl	0.46	359	P	Pb	20 57 08.9	+0.3
GVD	Gavdhos	0.61	292	P	Pn	20 57 11.7	+0.4
GVD				S	Sn	20 57 21.2	+1.1
	comp=E,4µm,0.3s						
GVD	Gavdhos	0.61	292	P	Pn	20 57 11.8	+0.4
GVD				S	Sn	20 57 20.9	+0.7
GVD				AML	AML	20 57 25.4	
	comp=N,6959µm,0.3s						
GVD				AML	AML	20 57 26.2	
	comp=E,10080µm,0.3s						
GVD	Gavdhos	0.61	292	PG	Pn	20 57 11.9	+0.5
GVDS	Gavdos	0.61	292	P	Pn	20 57 12.2	+0.9
GVDS				S	Sn	20 57 20.9	+0.8
	comp=E,3µm,0.4s						
GVDS	Gavdos	0.61	292	PG	Pn	20 57 12.2	+0.9
GVDS				SG	Sn	20 57 22.2	+2.1
IDI	Anoyia	0.68	8	P	Pb	20 57 11.7	-0.5
IDI				S	Sb	20 57 21.4	0.0
	comp=E,815nm,0.4s						
IDI	Anoyia	0.68	8	Pn	Pb	20 57 12.0	-0.2
	comp=E,64nm,0.3s,baz=199,slow=14,SNR=314						
IDI				Sn	Sn	20 57 22.2	+0.2
	comp=E,72nm,0.3s,baz=309,slow=23,SNR=23						
IDI				LR	LR	20 57 39.5	
	comp=E,223nm,20.3s,baz=226,slow=68						
IDI	Anoyia	0.68	8	P	Pb	20 57 11.8	-0.5
IDI				S	Sb	20 57 19.9	-1.5
IDI				AML	AML	20 57 27.1	
	comp=E,1810µm,0.4s						
IDI				AML	AML	20 57 27.8	
	comp=N,1417µm,0.4s						
IDI	Anoyia	0.68	8	PG	Pb	20 57 12.2	-0.1
IDI				SG	Sn	20 57 22.6	+0.6
KSTL	Kastelli Herak	0.73	19	P	Pn	20 57 15.1	+2.1
KSTL				S	Sn	20 57 24.5	+1.4
IACM	Heraklion	0.73	19	P	Pn	20 57 13.9	+0.9
IACM	Heraklion	0.73	19	P	Pn	20 57 13.5	+0.4
HRKL	Herakleio	0.74	21	P	Pn	20 57 14.4	+1.2
HRKL	Herakleio	0.74	21	PG	Pb	20 57 12.9	-0.4
PRNS	Prines Rethymn	0.78	343	P	Pb	20 57 13.4	-0.5
PRNS				S	Sb	20 57 23.4	-0.8
LAST	Lasithi	0.80	47	P	Pn	20 57 15.5	+1.5
LAST				S	Sn	20 57 27.7	+2.8
	comp=N,590nm,0.6s						
LAST	Lasithi	0.80	47	P	Pn	20 57 15.5	+1.5
LAST				S	Sn	20 57 25.3	+0.4
LAST				AML	AML	20 57 31.0	
	comp=E,1350µm,0.6s						
LAST				AML	AML	20 57 31.9	
	comp=N,1031µm,0.6s						
VAM	Vamos	0.92	329	P	Pb	20 57 15.5	-0.8
VAM				S	Sn	20 57 29.1	+1.3
	comp=N,1µm,0.4s						
VAM	Vamos	0.92	329	P	Pb	20 57 15.5	-0.8
VAM				S	Sb	20 57 26.1	-2.0
VAM				AML	AML	20 57 33.0	
	comp=N,2787µm,0.3s						
VAM				AML	AML	20 57 33.4	
	comp=E,2394µm,0.4s						
NPS	Neapolis	0.94	47	P	Pn	20 57 18.4	+2.4
NPS	Neapolis	0.94	47	P	Pn	20 57 17.8	+1.8
NPS				S	Sn	20 57 29.6	+1.2
NPS				AML	AML	20 57 33.1	
	comp=E,977µm,0.7s						
NPS				AML	AML	20 57 36.4	
	comp=N,829µm,0.5s						
IMMV	Iera Moni Meta	1.06	323	P	Pn	20 57 17.8	+0.1
IMMV	Iera Moni Meta	1.06	323	P	Pn	20 57 17.9	+0.1
IMMV				S	Sb	20 57 30.6	-1.7
IMMV				AML	AML	20 57 41.9	
	comp=N,1444µm,0.4s						
IMMV				AML	AML	20 57 44.3	
	comp=E,1874µm,0.6s						
IMMV	Iera Moni Meta	1.06	323	PG	Pn	20 57 17.7	+0.1
CHAN	Chania	1.08	327	P	Pb	20 57 18.9	-0.1
CHAN				S	Sn	20 57 33.8	+2.0
	comp=E,285nm,0.7s						
KNDR	Palaiochora Ch	1.09	305	P	Pb	20 57 19.5	+0.5
KNDR	Palaiochora Ch	1.09	305	PN	Pn	20 57 18.1	+0.2
KNDR				SN	Sn	20 57 34.2	+2.3
RODP	Rodopos	1.26	319	P	Pb	20 57 21.5	-0.5
RODP	Rodopos	1.26	319	PN	Pn	20 57 20.2	-0.1
ZKR	Zakros	1.29	67	P	Pb	20 57 24.1	+1.6
ZKR	Zakros	1.29	67	P	Pb	20 57 24.1	+1.6
ZKR				S	Sb	20 57 41.1	+2.4
ZKR				AML	AML	20 57 52.7	
	comp=N,191µm,0.5s						
ZKR				AML	AML	20 57 55.3	
	comp=E,423µm,0.8s						
ZKR	Zakros	1.29	67	PN	Pn	20 57 19.9	-0.8
ANKY	Antikythira Is	1.73	316	P	Pn	20 57 28.2	+1.3
ANKY	Antikythira Is	1.73	316	P	Pn	20 57 27.7	+0.8
ANKY				S	Sn	20 57 47.3	-0.7
ANKY				AML	AML	20 58 02.8	
	comp=E,434µm,0.9s						
ANKY				AML	AML	20 58 10.8	
	comp=N,391µm,0.9s						
THR6	Thira Island,	1.81	16	P	Pn	20 57 29.1	+1.2
THR6	Thira Island,	1.81	16	P	Pn	20 57 29.2	+1.2
SANT	Santorini	1.84	18	P	Pn	20 57 28.8	+0.4
SANT	Santorini	1.84	18	PN	Pn	20 57 27.1	-1.2
STAX	Taxiarchis Har	1.85	16	P	Pn	20 57 29.1	+0.6
THR5	Thira Island,	1.86	14	P	Pn	20 57 29.4	+0.8
THR5	Thira Island,	1.86	14	P	Pn	20 57 29.4	+0.8
THR3	Thira Island,	1.86	16	P	Pn	20 57 29.3	+0.7
THR3	Thira Island,	1.86	16	P	Pn	20 57 29.6	+1.0
THT2	Imerovigli	1.89	16	PN	Pn	20 57 27.5	-1.5
ANAF	Anafi Island	1.92	25	P	Pn	20 57 29.9	+0.5
MHLO	Agia Marina, M	2.09	352	P	Pn	20 57 31.9	+0.1
MHLO	Agia Marina, M	2.09	352	P	Pn	20 57 31.7	-0.1
IOSP	Ios island	2.14	11	P	Pn	20 57 32.8	+0.3
MHLA	Plaka, Milos I	2.14	352	P	Pn	20 57 32.8	+0.3
KTHA	Kythira Island	2.15	320	P	Pn	20 57 34.0	+1.4
KTHA	Kythira Island	2.15	320	P	Pn	20 57 33.7	+1.1
KTHA	Kythira Island	2.15	320	PN	Pn	20 57 32.4	-0.2
KARP	Karpathos	2.17	64	P	Pb	20 57 36.0	-1.4
KARP	Karpathos	2.17	64	PN	Pn	20 57 32.0	-0.8
KTHR	Kythira	2.19	319	P	Pn	20 57 34.4	+1.3
APE	Apeiranthos	2.52	14	P	Pn	20 57 37.6	-0.2
APE	Apeiranthos	2.52	14	PN	Pn	20 57 36.6	-1.2
VLI	Veliai	2.58	325	P	Pn	20 57 38.6	+0.2
VLI	Veliai	2.58	325	P	Pn	20 57 38.7	+0.3
DAT	Datca	3.11	46	PN	Pn	20 57 45.3	-0.5
DID	Didima	3.14	337	P	Pn	20 57 45.9	-0.4
ARG	Arkhangelos	3.17	59	P	Pn	20 57 48.5	+1.9
ARG	Arkhangelos	3.17	59	PN	Pn	20 57 45.9	-0.7
ITM	Ithomi	3.45	319	PN	Pn	20 57 50.1	-0.3
YER	Yerkesik	3.80	48	PN	Pn	20 57 55.4	+0.1
TURN	Turunc	3.84	53	PN	Pn	20 57 51.8	-4.0
DALY	Dalyan (Mula)	3.85	54	PN	Pn	20 57 55.6	-0.3
CHOS	Chios island	3.90	15	PN	Pn	20 57 56.2	-0.5
URLA	Izmir	4.01	21	PN	Pn	20 57 58.3	+0.1
FETY	Fethiye	4.05	59	PN	Pn	20 57 59.0	+0.3
AKAS	Kas	4.26	66	PN	Pn	20 58 02.1	+0.4
AOS	Alonnisos	4.60	351	PN	Pn	20 58 06.8	+0.5
ELL	Elmali	4.69	62	PN	Pn	20 58 08.2	+0.6
AGG	Agios Georgios	4.81	337	PN	Pn	20 58 09.5	+0.3
KORT	Korkueli	5.12	61	PN	Pn	20 58 13.8	+0.3
MMAI	Mount Meron Ar	8.99	97	Pn	Pn	20 59 07.2	+0.6
	comp=N,0.5nm,0.3s,baz=282,slow=12,SNR=4.9						
MMAI				Sn	Sn	21 00 43.5	-3.3
	comp=N,0.9nm,0.3s,baz=274,slow=22,SNR=4.5						
EIL	Elat	9.94	117	Pn	Pn	20 59 19.1	-0.4
	comp=N,0.2nm,0.3s,baz=8.7,slow=1.9,SNR=6.4						
EIL				Sn	Sn	21 01 04.7	-5.3
	comp=N,0.3nm,0.3s,baz=326,slow=2.8,SNR=5.4						
VRAC	Vranov	15.88	340	Pn	P	21 00 43.7	+0.3
	comp=N,0.4nm,0.3s,baz=150,slow=16,SNR=3.1						
AKASG	Malin Array Be	16.40	10	Pn	Pn	21 00 47.0	+0.4
	comp=N,0.8nm,0.3s,baz=200,slow=10,SNR=5.5						
GERES	GERESS Array B	16.42	333	Pn	Pn	21 00 48.7	+1.8
	comp=N,0.1nm,0.3s,baz=138,slow=12,SNR=5.9						
KBZ	Khabaz	16.71	52	Pn	Pn	21 00 50.7	+0.1
	comp=N,0.1nm,0.3s,baz=265,slow=8.2,SNR=4.4						
TORD	Torodi Ar. Bea	29.90	230	P	P	21 03 04.5	+0.6
	comp=N,0.2nm,0.4s,baz=30,slow=8.9,SNR=4.7						
KURBB	Kurchatov Arra	41.71	51	P	P	21 04 44.0	-0.6
	comp=N,0.1nm,0.3s,baz=270,slow=8.6,SNR=4.5						
MKAR	Makanchi Array	44.34	56	P	P	21 05 05.7	-0.4
	comp=N,0.5nm,0.6s,baz=271,slow=8.2,SNR=8.6						
SONM	Songino Array	60.08	50	P	P	21 07 03.1	0.0
	comp=N,0.1nm,0.4s,baz=280,slow=5.8,SNR=2.4						

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*IDC **14** 21:05:45.8±1.6, 12°.69N×90°.48W, h0^{km}, mb3.5/5, mb1 3.9/10, mb1mx3.7/45, mbtmp3.7/10, ML3.3/4, Error ellipse: s-maj=38.2km s-min=18.3km az=41.0*

*UCR **14** 21:05:46.6±0.8, 12°.68N×90°.49W, h5^{km}±9^{km}, ML3.9, mb4.2(NEIC)*

*SNET **14** 21:05:46.4±0.9, 12°.66N×90°.52W, h9^{km}±11^{km}, ML4.1*

*GCG **14** 21:05:47.4±0.4, 12°.60N×90°.80W, h36^{km}±999^{km}, MD3.9*

*NEIC **14** 21:05:47.1±1.6, 12°.62N±0°.06×90°.54W±0°.05, h18^{km}±9^{km}, mb4.2/5, Md4.1(SNET), Error ellipse: s-maj=9.8km s-min=6.3km az=155.0*

ISC 14 21:05:46.4±2.8**, 12°.68N**±0°.06×**90°.55W**±0°.05**, h8**^{km}±16^{km}**, n47, σ0^{s}.81**/62**, mb3.8**/7**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEVE	Cerro Verde	1.45	38	*e*P	Pn	21 06 12.7	-0.5
CEVE				*e*S	Sg	21 06 33.7	+0.5
CEVE				IAML		21 06 36.5	
	comp=Z,2µm,0.3s						
CEVE	Cerro Verde	1.45	38	*e*P	Pn	21 06 12.7	-0.5
CEVE				*e*S	Sg	21 06 33.7	+0.5
CEVE				IAML		21 06 36.5	
	comp=Z,2µm,0.3s						
IXG	Ixpaco	1.48	4	*e*P	Pn	21 06 12.7	-0.9
BOQS	Boqueron	1.62	50	*e*P	Pn	21 06 15.1	-0.4
SNET	Serv Nac Est T	1.62	52		Pn	21 06 15.5	+0.1
LOMA	Loma Larga	1.65	54	*e*P	Pn	21 06 15.1	-0.7
LOMA	Loma Larga	1.65	54	*e*P	Pn	21 06 15.1	-0.7
LFRS	El Faro	1.72	57	*e*P	Pn	21 06 15.9	-0.9
FUG	Fuego 3	1.78	351	*e*P	Pn	21 06 17.2	-0.5
FUG				*e*S	Sb	21 06 42.0	0.0
LBRS	Las Brisas	1.80	54	*e*P	Pn	21 06 17.5	-0.4
NBG	Las Nubes	1.91	6	*e*P	Pn	21 06 20.1	+0.7
NBG				*i* S	Sb	21 06 45.4	-0.2
MTO3	Montecristo	2.06	34	*e*P	Pn	21 06 21.5	0.0
MTO3				*e*S	Sb	21 06 49.3	-0.8
MTO3	Montecristo	2.06	34	*e*P	Pn	21 06 21.5	0.0
MTO3				*e*S	Sb	21 06 49.3	-0.8
STG3	Santiaguito 3,	2.25	334	*e*P	Pn	21 06 22.4	-1.7
STG3				*e*S	Sn	21 06 50.2	-2.0
PACA	Pacayal	2.30	70	*e*P	Pn	21 06 24.8	0.0
PACA				*e*S	Sn	21 06 53.3	-0.1
PACA	Pacayal	2.30	70	*e*P	Pn	21 06 24.8	0.0
PACA				*e*S	Sn	21 06 53.3	-0.1
APG	El Apazote	2.31	2	Pn	Pn	21 06 25.2	+0.2
	comp=Z,22nm,0.3s,baz=132,slow=8.1,SNR=75						
APG				Sn	Sn	21 06 55.0	+1.3
	comp=Z,20nm,0.3s,baz=329,slow=2.1,SNR=13						
LCY	Lacayo	2.32	71	*e*P	Pn	21 06 24.8	-0.2
LCY	Lacayo	2.32	71	*e*P	Pn	21 06 24.8	-0.2
BLLM	Bellamira	2.37	71	*e*P	Pn	21 06 25.6	-0.2
BLLM	Bellamira	2.37	71	*e*P	Pn	21 06 25.6	-0.2
LCND	La Caada	2.66	76	*e*P	Pn	21 06 29.3	-0.4
LCND				*e*S	Sn	21 07 02.2	+0.1
LCND				IAML		21 07 05.8	
	comp=Z,737nm,0.4s						
LCND	La Caada	2.66	76	*e*P	Pn	21 06 29.3	-0.4
LCND				*e*S	Sn	21 07 02.2	+0.1
LCND				IAML		21 07 05.8	
	comp=Z,737nm,0.4s						
CNCH	Conchagua	2.71	77	*e*P	Pn	21 06 29.6	-0.8
CNCH				*e*S	Sn	21 07 04.0	+0.6
CNCH				IAML		21 07 08.4	
	comp=Z,1µm,0.2s						
CNCH	Conchagua	2.71	77	*e*P	Pn	21 06 29.6	-0.8
CNCH				*e*S	Sn	21 07 04.0	+0.6
CNCH				IAML		21 07 08.4	
	comp=Z,1µm,0.2s						
CSGN	Cosiguina Volc	2.93	84		Pn	21 06 33.6	+0.2
TGUH	Tegucigalpa,Un	3.47	66	Pn	Pn	21 06 39.8	-1.1
CCIG	Comitan	3.90	337	Pn	Pn	21 06 47.8	+1.0
JTS	Las Juntas de	5.98	113	Pn	Pn	21 07 15.1	-0.2
	comp=Z,0.5nm,0.3s,baz=289,slow=18,SNR=2.6						
JTS				Sn	Sn	21 08 24.2	+0.2
	comp=Z,1.1nm,0.3s,baz=204,slow=22,SNR=3.3						
CMIG	Matias Romero	6.07	317	Pn	Pn	21 07 16.6	+0.2
	comp=Z,0.7nm,0.3s,baz=116,slow=11,SNR=5.9						
CMIG				Sn	Sn	21 08 28.0	+1.8
	comp=Z,1.0nm,0.3s,baz=261,slow=22,SNR=4.3						
TEIG	Tepich	7.81	16	Pn	Pn	21 07 40.4	-0.1
TLIG	Tlapa	9.14	303	Pn	Pn	21 07 58.0	-0.7
SDV	Santo Domingo	19.92	99	P	P	21 10 18.8	-0.1
	comp=Z,0.4nm,0.3s,baz=311,slow=13,SNR=4.0						
SDV	Santo Domingo	19.92	99	P	P	21 10 18.9	-0.1
SDV				IAmb	IAmb	21 10 36.0	
	comp=Z,2.8nm,0.8s						
TXAR	Lajitas Array	20.57	326	P	Pn	21 10 27.6	-0.6
	comp=Z,0.6nm,0.6s,baz=151,slow=11,SNR=5.1						
TXAR	Lajitas Array	20.57	326	P	P	21 10 25.5	-0.4
V48A	Smith Brothers	23.20	8	P	P	21 10 53.2	-0.6
V48A				IAmb	IAmb	21 11 11.2	
	comp=Z,13nm,1.1s						
MNTX	Cornudas Mount	23.34	327	P	P	21 10 56.3	+1.1
MNTX				IAmb	IAmb	21 11 12.0	
	comp=Z,3.5nm,0.8s						
T49A	Edmonton	24.73	10	P	P	21 11 06.8	-1.5
T49A				IAmb	IAmb	21 11 08.9	
	comp=Z,8.1nm,0.9s						
WCI	Wyandotte Cave	25.72	8	P	P	21 11 16.3	-1.0
NVAR	Mina Array Bea	35.58	321	P	P	21 12 46.1	+1.4
	comp=Z,1.1nm,0.7s,baz=143,slow=7.8,SNR=5.4						
NVAR	Mina Array Bea	35.58	321	P	P	21 12 44.8	+0.1
GCMT	Greycliff	36.77	337	P	P	21 12 54.1	-0.6
ULM	Lac du Bonnet	37.72	354	P	P	21 13 01.6	-0.8
	comp=Z,0.9nm,0.7s,baz=124,slow=12,SNR=2.9						
YKA	Yellowknife Ar	52.63	346	P	P	21 15 03.3	+2.6
	comp=Z,0.1nm,0.5s,baz=147,slow=8.3,SNR=3.0						
ILAR	Eielson Array	64.60	337	P	P	21 16 23.9	-0.3
	comp=Z,0.6nm,0.9s,baz=101,slow=5.6,SNR=4.3						
CMAR	Chiang Mai Arr	147.67	343	PKPbc	PKPbc	21 25 31.9	-0.6
	comp=Z,0.9nm,0.7s,baz=344,slow=3.3,SNR=7.4						

MAN 14 21:24:14.9, 11°.12N×123°.75E, h89^{km}, mb4.2, ML3.0, MS2.7, 1C, Cebu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LLP	Lapu-Lapu	0.82	165	*e*P	Pn	21 24 33.8	+1.2
LLP				*e*S	Sn	21 24 47.9	+2.1
RCP	Roxas	1.08	294	⇑*e*P	Pn	21 24 36.3	+0.8
RCP				*i* S	Sn	21 24 51.6	+0.8
GUIM	Jordan	1.24	247	*e*P	Pn	21 24 38.0	+0.7
GUIM				*e*S	Sn	21 24 55.4	+1.1
TBP	Tagbilaran	1.42	175	*e*P	Pn	21 24 44.7	+5.1
MSLP	Maasin	1.47	132	*e*P	Pn	21 24 41.1	+0.9
MSLP				*e*S	Sn	21 25 05.2	+5.9

DJA 14 21:37:42.5±1.0**, 2°N**±7°×**12°9E**±°**, h189**^{km}±7^{km}**, M4.2**/6**, mB4.6**/1**, mb4.2**/1**, MLv4.2**/6**, Mw(mB)3.8**/1**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	4.82	251	P	Pn	21 38 54.2	-0.2
KMSI				S	Sn	21 39 51.3	+0.5
SANI	Sanana	4.87	212	P	Pn	21 38 56.1	+1.1
SANI				S	Sn	21 39 51.9	-0.2
LUWI	Luwuk	6.58	242	P	Pn	21 39 17.8	+0.6

IDC 14 21:40:41.9±2.5**, 7°.68N×93°.95E, h0**^{km}**, mb3.4**/4**, mb1 3.5**/5**, mb1mx3.2**/81**, mbtmp3.4**/5**, ML3.8**/1**, MS3.0**/3**, Ms1 3.1**/3**, ms1mx2.9**/23**, Error ellipse: s-maj=83.5km s-min=22.8km az=67.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	6.93	134	LR	LR	21 45 15.9	
	comp=Z,144nm,20.4s,baz=333,slow=39						
CMAR	Chiang Mai Arr	11.76	24	Pn	Pn	21 43 30.1	-0.9
	0.2nm,0.3s,baz=211,slow=14,SNR=6.7						
CMAR				LR	LR	21 48 07.8	
	comp=Z,39nm,19.0s,baz=220,slow=38						
LEM	Lembang	19.84	136	LR	LR	21 53 26.9	
	comp=Z,78nm,21.2s,baz=10.0,slow=39						
H08S3	Diego Garcia H	26.26	235	T	T	22 13 09.0	
	baz=54,slow=74						
H08S2	Diego Garcia H	26.26	235	T	T	22 13 06.6	
	baz=250,slow=74,SNR=4.1						
H08S1	Diego Carcia H	26.27	235	T	T	22 13 10.3	
MKAR	Makanchi Array	40.23	348	P	P	21 48 19.5	-0.8
	0.5nm,0.6s,baz=169,slow=7.6,SNR=8.0						
SONM	Songino Array	41.39	13	P	P	21 48 30.8	+0.8
	0.3nm,0.5s,baz=187,slow=10,SNR=3.0						
WRA	Warramunga Arr	48.30	125	P	P	21 49 25.9	+0.5
	0.5nm,0.8s,baz=308,slow=8.7,SNR=2.6						
ASAR	Alice Springs	49.94	130	P	P	21 49 37.1	-0.8
	0.2nm,0.8s,baz=311,slow=6.0,SNR=3.0						

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*SJA **14** 21:42:23.2±1.0, 37°.21S×73°.03W, h46^{km}±15^{km}, ML4.0, MW4.1*

*NEIC **14** 21:42:26.9±1.6, 37°.21S±0°.06×72°.7W±0°.2, h43^{km}±7^{km}, Error ellipse: s-maj=21.3km s-min=8.0km az=95.0*

*IDC **14** 21:42:27.2±0.9, 37°.19S×72°.88W, h53^{km}±7^{km}, mb3.9/10, mb1 4.0/13, mb1mx3.8/43, mbtmp4.1/13, MS3.2/6, Ms1 3.2/6, ms1mx3.0/24, Error ellipse: s-maj=24.7km s-min=13.9km az=101.0*

*GUC **14** 21:42:27.1±0.5, 37°.23S×72°.80W, h41^{km}±1^{km}, ML4.5*

*VAO **14** 21:42:29.1±0.7, 37°.03S×71°.88W, h10^{km}, mb4.6*

ISC 14 21:42:27.0±0.6**, 37°.20S**±0°.04×**72°.89W**±0°.06**, h51**^{km}±5^{km}**, n77, σ1^{s}.23**/88**, mb4.1**/12**, 7C, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BI03	Tigo	0.37	343	⇑*i*P	Pn	21 42 36.1	-0.7
BI03				*e*S	Sn	21 42 43.6	-0.3
BI03				IAML		21 42 47.3	
	comp=E,38µm,0.4s						
CCSP	San Pedro de C	0.39	333	⇑*i*P	Pn	21 42 36.5	-0.6
CCSP				*e*S	Sn	21 42 44.2	-0.1
CCSP				IAML		21 42 46.9	
	comp=N,11µm,0.2s						
CCHI	Chillan	0.88	48	⇑*i*P	Pn	21 42 42.2	-0.9
CCHI				*e*S	Sn	21 42 54.0	-1.0
CCHI				IAML		21 42 55.2	
	comp=N,16µm,0.2s						
CCHI	Chillan	0.88	48	*i* P	Pn	21 42 42.4	-0.8
CCHI				*i* S	Sn	21 42 54.7	-0.3
CANA	Caviahue	1.61	116	*i* P	Pn	21 42 51.9	-1.3
CANA				*i* S	Sn	21 43 13.8	+1.0
GO05	Huala	2.32	20	⇑*i*P	Pn	21 43 03.4	+0.6
GO05				*e*S	Sn	21 43 31.2	+1.2
GO05				IAML		21 43 42.2	
	comp=E,2µm,0.5s						
GO05	Huala	2.32	20		Pn	21 43 02.5	-0.2
GO06	Curarrehue	2.63	155	⇑*i*P	Pn	21 43 06.9	-0.2
GO06				*e*S	Sn	21 43 37.3	-0.6
GO06	Curarrehue	2.63	155		Pn	21 43 07.0	-0.2
EDS3	Malargue	3.15	64	*i* P	Pn	21 43 16.5	+2.2
LAMA	Las Malvinas	3.74	54	*i* P	Pn	21 43 23.6	+1.4
LAMA				*i* S	Sn	21 44 07.3	+2.4
PLCA	Paso Flores	3.97	153	P	Pn	21 43 26.4	+0.9
	comp=E,3.7nm,0.3s,baz=348,slow=11,SNR=117						

PLCA				S	Sn	21 44 24.9	+14
	comp=E,11nm,0.3s,baz=244,slow=21,SNR=3.6						
PLCA				LR	LR	21 44 56.6	
	comp=E,137nm,20.7s,baz=354,slow=38						
PLCA	**Paso Flores**	3.97	153		Pn	21 43 25.8	+0.3
PLCA	**Paso Flores**	3.97	153	*e*P	Pn	21 43 27.1	+1.7
LMEL	**Las Melosas**	4.00	34	⇑*i*P	Pn	21 43 26.5	+0.6
LMEL				*e*S	Sn	21 44 11.9	+0.4
ANTU	**Antumapu**	4.06	28	⇑*i*P	Pn	21 43 27.4	+0.7
ANTU				*e*S	Sn	21 44 13.0	0.0
MT03	**Universidad Ad**	4.17	28	*e*P	Pn	21 43 27.7	-0.6
MT03				*i* S	Sn	21 44 16.0	+0.2
MT03				IAML		21 44 33.7	
	comp=E,1µm,0.4s						
PEL	**Peldehue**	4.43	25		Pn	21 43 31.0	-0.7
PEL	**Peldehue**	4.43	25	*i* P	Pn	21 43 31.2	-0.5
PEL				*i* S	Sn	21 44 22.7	+0.6
ROC1	**El Roble**	4.48	21		Pn	21 43 32.0	-0.6
AAGR	**Agrelo**	5.28	40	*i* P	Pn	21 43 43.8	+0.4
AAGR				IAML		21 45 17.2	
	comp=Z,51nm,1.0s						
ARCO	**CERRO ARCO**	5.42	38	*i* P	Pn	21 43 45.8	+0.3
ARCO				IAML		21 45 25.3	
	comp=Z,49nm,0.8s						
ASAL	**Salagasta**	5.67	37	*i* P	Pn	21 43 49.3	+0.5
ASAL				IAML		21 45 36.2	
	comp=Z,50nm,1.4s						
GO07	**Milladeo Hill,**	5.94	185		Pn	21 43 52.3	0.0
RTLS	**Leoncito**	6.15	30	*i* P	Pn	21 43 55.7	+0.2
RTLS				IAML		21 45 43.5	
	comp=Z,34nm,1.3s						
RTCV	**Cerro Valdivia**	6.42	35	*i* P	Pn	21 43 58.2	-0.8
RTCV				IAML		21 45 50.8	
	comp=Z,46nm,2.9s						
ZON	**Zonda**	6.62	33	*i* P	Pn	21 44 00.9	-0.9
ZON				IAML		21 46 02.7	
	comp=Z,25nm,1.0s						
CFA	**Coronel Fontan**	6.77	36	P	Pn	21 44 02.4	-1.5
	comp=Z,10nm,0.3s,baz=216,slow=13,SNR=114						
CFA				S	Sn	21 45 22.6	+2.9
	comp=Z,2.7nm,0.3s,baz=310,slow=20,SNR=2.5						
CFA				LR	LR	21 46 49.4	
	comp=Z,143nm,20.3s,baz=240,slow=39						
ACAN	**Cantantal**	6.79	45	*i* P	Pn	21 44 03.5	-0.6
ACAN				IAML		21 46 42.9	
	comp=Z,34nm,4.3s						
RTLL	**Cerro Villicun**	6.90	33	*i* P	Pn	21 44 04.4	-1.2
RTLL				*i* S	Sn	21 45 21.0	-1.8
RTLL				IAML		21 45 49.2	
	comp=Z,41nm,0.5s						
GO04	**Tololo Observa**	7.22	15		Pn	21 44 08.8	-1.3
AMOG	**MOGNA**	7.23	32	*i* P	Pn	21 44 08.5	-1.6
LCO	**Las Campanas**	8.37	13	Pn	Pn	21 44 26.1	+0.1
GO03	**Copiap**	9.83	14	Pn	Pn	21 44 44.1	-1.8
GO02	**Mina Guanaco**	12.32	14	Pn	Pn	21 45 20.1	0.0
PB10	**IPOC Station P**	13.79	9	Pn	Pn	21 45 36.7	-3.1
LVC	**Limon Verde**	14.94	14	LR	LR	21 50 55.6	
	comp=Z,87nm,19.9s,baz=266,slow=34						
LVC	**Limon Verde**	14.94	14	*e*P	Pn	21 45 55.8	+0.5
CPUP	**Villa Florida**	17.08	55	P	Pn	21 46 20.4	-1.8
	comp=Z,0.2nm,0.3s,baz=239,slow=13,SNR=2.8						
CPUP				LR	LR	21 53 19.8	
	comp=Z,98nm,21.4s,baz=220,slow=38						
USHA	**Ushuaia**	17.90	172	LR	LR	21 54 12.9	
	comp=Z,118nm,21.0s,baz=300,slow=39						
CNLB	**Canela**	20.01	73	*e*P	P	21 46 53.4	-2.1
ITAB	**Concordia**	20.14	66	*e*P	P	21 46 55.5	-1.4
LPAZ	**La Paz**	21.25	13	P	P	21 47 10.4	+0.9
	comp=Z,3.8nm,0.8s,baz=144,slow=4.0,SNR=6.5						
LPAZ	**La Paz**	21.25	13		P	21 47 13.2	+3.7
LPAZ	**La Paz**	21.25	13	P	P	21 47 09.8	+0.2
LPAZ				IAmb	IAmb	21 47 16.0	
	comp=Z,7.5nm,1.1s						
LPAZ	**La Paz**	21.25	13	*e*P	P	21 47 11.7	+2.1
PTGB	**Pitanga**	21.71	61	*e*P	P	21 47 11.2	-2.7
SIV	**San Ignacio**	23.57	30	P	P	21 47 31.9	-1.2
	comp=Z,2.7nm,0.6s,baz=217,slow=9.2,SNR=15						
PCMB	**Pacaembu**	24.34	56	*e*P	P	21 47 37.8	-2.3
SPB	**Sao Paulo**	25.71	65	*e*P	P	21 47 52.6	+0.1
ITRB	**Iturama**	26.28	55	*e*P	P	21 47 57.3	-0.5
RCLB	**Rio Claro- Sao**	26.37	63	*e*P	P	21 47 58.4	-0.2
VAO	**Valinhos**	26.41	65	*e*P	P	21 47 59.3	+0.4
BB19B	**Bebedouro**	26.56	60	*e*P	P	21 47 59.8	-0.4
PMSA	**Palmer Station**	28.11	172	LR	LR	21 58 21.5	
	comp=Z,121nm,18.1s,baz=270,slow=34						
PMSA	**Palmer Station**	28.11	172	*e*P	P	21 48 22.3	+8.6
SAML	**Samuel**	29.46	20	P	P	21 48 25.8	-0.3
BDFB	**Brasilia**	30.77	52	P	P	21 48 38.9	+1.0
	comp=Z,1.9nm,0.6s,baz=239,slow=12,SNR=2.9						
SJMB	**Sao Joao De Ma**	33.30	65	*e*P	P	21 49 01.1	+1.2
RUSC	**La Rusia**	42.87	360	P	P	21 50 22.2	+1.3
MDP	**Montagnes des**	46.13	29	P	P	21 50 45.8	-0.6
	comp=Z,9.7nm,0.7s,baz=217,slow=8.1,SNR=5.2						
SNAA	**Sanae**	48.91	157	P	P	21 51 07.4	-0.1
	comp=Z,2.1nm,0.8s,baz=277,slow=7.4,SNR=7.9						
SNAA	**Sanae**	48.91	157	IAmb	IAmb	21 51 25.1	
	comp=Z,3.4nm,0.9s						
QSPA	**South Pole Qui**	53.05	180	P	P	21 51 40.0	+1.3
	comp=Z,1.0nm,0.5s,baz=127,slow=1.0,SNR=6.9						
TXAR	**Lajitas Array**	72.20	332	P	P	21 53 48.1	+1.5
	comp=Z,0.2nm,0.5s,baz=154,slow=8.9,SNR=4.7						
TXAR				pP	pP	21 54 00.1	-1.0
	comp=Z,0.6nm,0.5s,baz=151,slow=8.9,SNR=8.0						
SWET	**Sewanee**	73.06	349	P	P	21 53 52.6	+1.1
LIC	**Lamto**	76.45	71	*e*P	P	21 54 10.9	-0.7
	comp=Z,20nm,0.8s						
TIC	**Toumodi**	76.72	71	*e*P	P	21 54 12.8	-0.4
KIC	**Kosan Boka**	76.75	71	*e*P	P	21 54 12.8	-0.5
	comp=Z,13nm,0.6s						
DBIC	**Dimbokro**	76.86	71	P	P	21 54 13.6	-0.3
	comp=Z,4.0nm,0.5s,baz=191,slow=6.1,SNR=6.2						
DBIC				pP	pP	21 54 29.9	+1.3
	comp=Z,3.6nm,0.5s,baz=230,slow=5.4,SNR=3.0						
DBIC	**Dimbokro**	76.86	71	IAmb	IAmb	21 54 31.0	
	comp=Z,4.0nm,0.7s						
BOSA	**Boshof**	79.20	118	P	P	21 54 25.4	-1.6
	comp=Z,1.9nm,0.9s,baz=188,slow=7.1,SNR=2.4						
BOSA	**Boshof**	79.20	118	P	P	21 54 25.6	-1.3
BOSA				IAmb	IAmb	21 54 34.5	
	comp=Z,2.4nm,0.7s						
TORD	**Torodi Ar. Bea**	85.94	70	P	P	21 55 00.9	-1.1
	comp=Z,1.3nm,0.9s,baz=247,slow=5.8,SNR=4.0						
TORD				pP	pP	21 55 18.0	+1.2
	comp=Z,0.9nm,0.8s,baz=292,slow=3.9,SNR=2.6						
TIXI	**Tiksi**	143.70	349	PKP	PKPbc	22 01 52.2	-0.5
	comp=Z,1.2nm,0.7s,baz=28,slow=2.7,SNR=6.4						
MKAR	**Makanchi Array**	159.28	55	PKPab	PKPab	22 02 56.3	-0.6
	comp=Z,0.9nm,0.7s,baz=282,slow=4.6,SNR=8.1						
MKAR	**Makanchi Array**	159.28	55	PKPdf	PKPdf	22 02 18.9	-0.4
MKAR				PKPab	PKPab	22 02 57.4	+0.6

MAN 14 21:43:13.3, 13°.60N×121°.76E, h20^{km}, mb4.4, ML3.3, MS3.1, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOAC	**Boac**	0.16	150	*e*P	Pb	21 43 18.5	+0.5
BOAC				*e*S	Sb	21 43 22.1	+1.1
LQP	**Lukban**	0.56	337	*e*P	Pb	21 43 24.6	0.0
LQP				*i* S	Sn	21 43 35.1	-0.1
GQP	**Guinayangan**	0.73	65	⇓*e*P	Pb	21 43 27.9	+0.5
GQP				*e*S	Sn	21 43 39.1	0.0
POLP	**Polilio Island**	1.14	9	*e*P	Pb	21 43 35.0	+0.6
POLP				*e*S	Sn	21 43 50.5	+1.3
OTRP	**Odiongan**	1.25	168	*e*P	Pn	21 43 35.7	0.0
OTRP				*e*S	Sn	21 43 52.5	+0.5
LUBP	**Lubang**	1.48	275	*e*P	Pn	21 43 39.0	+0.2
LUBP				*e*S	Sn	21 43 58.0	+0.3

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*IDC **14** 21:48:43.8±3.0, 6°.39S×154°.93E, h95^{km}±23^{km}, mb3.6/7, mb1 3.8/10, mb1mx3.6/39, mbtmp4.0/10, Error ellipse: s-maj=28.5km s-min=17.2km az=74.0*

*NEIC **14** 21:48:44.5±0.8, 6°.4S±0°.1×154°.9E±0°.1, h100^{km}±7^{km}, mb4.1/12, Error ellipse: s-maj=19.3km s-min=14.9km az=196.0*

ISC 14 21:48:44.4±0.6, **6°.38S**±0°.09×**154°.88E**±0°.09, **h100**^{km}, **n31**, σ**0^{s}.62**/28, **mb4.0**/12, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	3.51	306	P	Pn	21 49 35.8	-1.2
	3.7nm,0.3s,baz=158,slow=5.4,SNR=2.8						
KRVT				S	Sn	21 50 18.9	+1.3
	15nm,0.3s,baz=183,slow=12,SNR=3.9						
HNR	**Honiara**	5.87	121	Pn	Pn	21 50 09.5	+0.6
PMG	**Port Moresby**	8.22	248	P	Pn	21 50 40.7	-0.2
	3.0nm,0.3s,baz=59,slow=7.6,SNR=11						
DZM	**Mont Dzumac**	19.19	146	P	P	21 53 00.3	-0.2
	0.5nm,0.3s,baz=286,slow=12,SNR=6.0						
DZM	**Mont Dzumac**	19.19	146	IAmb	IAmb	21 53 03.5	
	comp=Z,6.8nm,0.9s						
WR0	**Warramunga Arr**	23.93	234	P	P	21 53 49.5	+0.2
WB0	**Warramunga Arr**	23.95	234	P	P	21 53 49.6	0.0
WB0				IAmb	IAmb	21 53 54.3	
	comp=Z,6.9nm,1.1s						
WRAB	**Tennant Creek**	24.07	234	P	P	21 53 51.3	+0.7
WB2	**Warramunga Arr**	24.07	234	P	P	21 53 50.9	+0.2
WRA	**Warramunga Arr**	24.08	234	P	P	21 53 51.0	+0.3
	comp=Z,2.5nm,0.7s,baz=60,slow=9.2,SNR=12						
ASAR	**Alice Springs**	26.50	227	P	P	21 54 12.6	-0.1
	comp=Z,0.8nm,0.6s,baz=56,slow=8.8,SNR=11						
H11S3	**WAKE ISLAND Hy**	27.32	25	T	T	22 22 38.0	
	baz=205,slow=75,SNR=12						
H11S2	**WAKE ISLAND Hy**	27.32	25	T	T	22 22 26.9	
	baz=205,slow=75,SNR=20						
H11S1	**WAKE ISLAND Hy**	27.34	25	T	T	22 22 29.1	
	baz=205,slow=75,SNR=9.3						
BKZ	**Black Stump Fm**	38.03	152	P	P	21 55 52.4	-0.7
TUWZ	**Tuamarina**	38.82	157	P	P	21 55 58.9	-0.6
CM31	**Chiang Mai Arr**	60.42	295	P	P	21 58 43.7	-0.2
CMAR	**Chiang Mai Arr**	60.42	295	P	P	21 58 44.9	+1.0
	comp=Z,2.8nm,0.8s,baz=117,slow=5.0,SNR=25						
CMAR	**Chiang Mai Arr**	60.42	295	P	P	21 58 43.6	-0.3
SONM	**Songino Array**	68.76	327	P	P	21 59 37.9	+0.2
	comp=Z,0.2nm,0.5s,baz=161,slow=3.6,SNR=4.1						
IMAR	**Indian Mountai**	81.18	19	P	P	22 00 48.9	+0.2
RND	**Reindeer**	81.38	22	P	P	22 00 49.7	-0.2
RND				IAmb	IAmb	22 01 06.0	
	comp=Z,5.7nm,1.0s						
PAF	**Port-aux-Franc**	81.73	221	P	P	22 00 51.7	-0.3
MK31	**Makanchi Array**	82.87	319	P	P	22 00 58.0	0.0
MKAR	**Makanchi Array**	82.87	319	P	P	22 00 57.9	-0.1
	comp=Z,1.4nm,0.8s,baz=102,slow=5.6,SNR=9.7						
MAKZ	**Makanchi**	83.08	319	P	P	22 00 58.1	-0.9
MAKZ				IAmb	IAmb	22 01 00.2	
	comp=Z,1.9nm,1.0s						
QSPA	**South Pole Qui**	83.59	180	P	P	22 01 01.7	+0.2
QSPA				IAmb	IAmb	22 01 06.6	
	comp=Z,2.7nm,1.1s						
ZALV	**Zalesovo Beam**	83.61	326	P	P	22 01 00.4	-1.2
	comp=Z,0.6nm,0.3s,baz=104,slow=4.8,SNR=3.0						
DHAK	**Deception Hill**	83.87	29	P	P	22 01 03.5	+0.6
MAW	**Mawson**	84.92	203	P	P	22 01 08.0	+0.1
MAW				IAmb	IAmb	22 01 08.4	
	comp=Z,4.0nm,1.1s						
YKA	**Yellowknife Ar**	95.85	28	P	P	22 02 00.0	+0.7
	comp=Z,0.2nm,0.4s,baz=264,slow=4.7,SNR=2.9						

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*IDC **14** 21:50:53.4±1.2, 33°.77N×4°.11W, h0^{km}, mb3.6/4, mb1 3.9/6, mb1mx3.5/48, mbtmp3.7/6, ML3.9/2, Error ellipse: s-maj=35.7km s-min=9.8km az=116.0*

*CNRM **14** 21:50:55.5, 33°.70N×4°.14W, h11^{km}*

*IGIL **14** 21:50:56.4, 33°.87N×4°.10W, h6^{km}, ML3.4*

*NEIC **14** 21:50:56.1±2.1, 33°.80N±0°.04×4°.13W±0°.06, h18^{km}±6^{km}, mb4.2/12, Error ellipse: s-maj=7.1km s-min=6.0km az=52.0*

*MDD **14** 21:50:57.6±1.1, 33°.76N×4°.16W, h22^{km}±22^{km}, mb4.6/42, Error ellipse: s-maj=23.2km s-min=5.9km az=1.0, PRXIMO*

*LDG **14** 21:50:58.3±0.5, 34°.13N×3°.96W, h10^{km}, Ml2.9/4*

*SFS **14** 21:50:58.0, 33°.87N×4°.10W, h15^{km}, ML4.4, TAHALA (MARRUECOS)*

*INMG **14** 21:50:58.6±2.4, 33°.92N×4°.14W, h18^{km}±14^{km}, ML3.3, Error ellipse: s-maj=9.4km s-min=3.8km az=170.0*

*CRAAG **14** 21:50:59.0, 34°.09N×4°.19W, Ml4.0*

ISC 14 21:50:56.5±1.3, **33°.93N**±0°.04×**4°.17W**±0°.03, **h16**^{km}±9^{km}, **n214**, σ**2^{s}.08**/310, **mb4.1**/5, **2C-5D, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IFR	**Ifrane**	0.90	243	⇓*i*P	Pg	21 51 12.9	-1.1
IFR				*e*S	Sg	21 51 24.5	-1.5
SICH	**Sidi Chahed**	0.97	280	P	Pg	21 51 16.5	+1.2
SICH				S	Sn	21 51 32.4	+3.6
CZD	**Col de Zad**	1.16	219	P	Pn	21 51 15.7	-2.5
CZD				S	Sb	21 51 30.6	-2.6
MD31	**MD31**	1.17	205	P	Pn	21 51 14.3	-4.0
MD31				S	Sb	21 51 28.4	-5.0
MDT	**Midelt**	1.18	198	Pg	Pn	21 51 13.7	-4.6
	278nm,0.3s,baz=36,slow=17,SNR=3495						
MDT				Lg	Lg	21 51 27.4	
	675nm,0.3s,baz=342,slow=22,SNR=49						
MDT	**Midelt**	1.18	198	P	Pn	21 51 13.9	-4.4
	SNR=662						
MDT				S	Sb	21 51 27.3	-6.2
PVLZ	**Peæn de**	1.24	355	⇑*e*P	Pn	21 51 22.4	+3.3
PVLZ				*e*S	Sn	21 51 41.5	+5.9
PALE	**Palemas**	1.29	8	P	Pn	21 51 23.1	+3.2
PALE				S	Sn	21 51 45.5	+8.6
CHEFC	**Chefchaouen**	1.52	321	P	Pg	21 51 26.8	+1.0
CHEFC				Lg	Lg	21 51 52.9	
RSA	**Sarsar**	1.67	305	P	Pb	21 51 27.9	+1.1
RSA				Lg	Lg	21 51 56.3	
EMEL	**Melilla**	1.69	36	Pn	Pn	21 51 25.8	+0.5
	861nm,0.4s,SNR=9.6						
EMEL				Sn	Sn	21 51 47.1	+0.5
	380nm,0.2s,SNR=6.7						
EMLI	**Melilla**	1.69	36		Pn	21 51 25.8	+0.4
EMLI					Sn	21 51 47.1	+0.4
TDRA	**Tendrara**	2.00	116	P	Pn	21 51 27.0	-2.7
TDRA				Lg	Lg	21 51 51.1	
SMIR	**Smir Dam**	2.01	331	P	Pb	21 51 33.5	+0.8
ZHG	**ZHG**	2.12	257	P	Pn	21 51 30.6	-0.8
ZHG				Lg	Lg	21 52 01.3	
CEU	**Ceuta**	2.20	333	*e*P	Pb	21 51 35.3	-0.5
CEU				*e*S	Sg	21 52 04.3	-2.9
ECEU	**Ceuta**	2.20	333	Pn	Pn	21 51 33.9	+1.6
	4.0nm,0.1s,SNR=4.5						
ECEU				Sn	Sb	21 52 01.3	-1.5
	64nm,0.5s						
ECEU	**Ceuta**	2.20	333		Pn	21 51 33.9	+1.6
ECEU					Sb	21 52 01.9	-0.9
EALB	**Alboran**	2.21	25		Pn	21 51 33.2	+0.8
RTC	**Rabat Centre**	2.24	272	Pn	Pn	21 51 33.4	+0.6
GOLM	**Goulmima**	2.32	197	P	Pn	21 51 33.4	-0.7
GOLM				Lg	Lg	21 52 02.1	
ARF	**Arif**	2.49	181	P	Pn	21 51 32.9	-3.5
ARF				Lg	Lg	21 52 04.1	
EMIJ	**Mijas**	2.67	349	⇑Pn	Pn	21 51 39.3	+0.4
	16nm,0.3s,SNR=18						
EMIJ				Sn	Sn	21 52 11.6	+0.7
	25nm,0.2s,SNR=6.0						
EMIJ	**Mijas**	2.67	349		Pn	21 51 39.3	+0.4
EMIJ					Sn	21 52 12.6	+1.7
REAL	**Reales**	2.68	342	Pn	Pn	21 51 40.9	+1.8
REAL	**Reales**	2.68	342	*e*P	Pn	21 51 40.9	+1.8
MOMI	**Momias**	2.71	332	Pn	Pg	21 51 52.0	+3.6
MOMI	**Momias**	2.71	332	*e*P	Pg	21 51 52.0	+3.6
AVE	**Averroes**	2.78	258	⇓*i*P	Pn	21 51 40.0	-0.4
AVE				*e*S	Sn	21 52 15.2	+1.6
EMAL	**Malaga-Limoner**	2.83	356	Sn	Sb	21 52 17.6	-3.4
EMAL	**Malaga-Limoner**	2.83	356	⇓*i*P	Pn	21 51 42.6	+1.6
EMAL				*e*S	Sb	21 52 17.6	-3.4
ALJ	**Aljibe**	2.86	335	Pn	Pg	21 51 49.7	-1.6
ALJ	**Aljibe**	2.86	335	*e*P	Pg	21 51 49.7	-1.6
ELGU	**Los Guajares,**	2.96	8	Pn	Pn	21 51 44.1	+1.3
	10nm,0.1s,SNR=7.9						
ELGU				Sn	Sn	21 52 17.8	-0.3
	48nm,0.3s,SNR=7.9						
ELGU	**Los Guajares,**	2.96	8		Pn	21 51 44.1	+1.3
ELGU					Sn	21 52 17.8	-0.3
SFS	**San Fernando**	3.03	327	Pn	Pn	21 51 41.7	-2.0
LIJA	**Lijar**	3.13	342	Pn	Pb	21 51 49.4	-2.4
LIJA				Sn	Sb	21 52 31.1	+1.3
LIJA	**Lijar**	3.13	342	*e*P	Pb	21 51 49.4	-2.4
LIJA				*e*S	Sb	21 52 31.1	+1.3
EBER	**Berja**	3.14	19	Pn	Pn	21 51 46.6	+1.2
	20nm,0.3s,SNR=29						
EBER				Sn	Sn	21 52 22.5	-0.1
	35nm,0.4s,SNR=5.1						
EBER	**Berja**	3.14	19		Pn	21 51 46.6	+1.2
EBER					Sn	21 52 22.5	-0.1
ESPR	**Espera**	3.24	335	Pn	Pn	21 51 49.3	+2.7
	4.7nm,0.2s,SNR=17						
ESPR				Sn	Sn	21 52 26.5	+1.8
	15nm,0.2s,SNR=5.7						
ESPR	**Espera**	3.24	335		Pn	21 51 49.3	+2.7
ESPR					Sn	21 52 26.5	+1.8
EQUE	**Quentar**	3.32	10	Pn	Pn	21 51 49.7	+1.9
	14nm,0.3s,SNR=38						
EQUE				Sn	Sn	21 52 27.2	+0.3
	11nm,0.3s,SNR=5.2						
ENIJ	**Nijar**	3.43	27	Pn	Pn	21 51 49.8	+0.6
	27nm,0.4s,SNR=7.9						
ENIJ				Sn	Sn	21 52 28.7	-0.8
	55nm,0.4s,SNR=7.9						
ENIJ	**Nijar**	3.43	27		Pn	21 51 49.9	+0.6
ENIJ					Sn	21 52 28.8	-0.8
ODJA	**Bouhanifia**	3.59	66	P	Pn	21 51 56.0	+4.5
ODJA	**Bouhanifia**	3.59	66	P	Pn	21 51 56.0	+4.5
ODJA	**Bouhanifia**	3.59	66	P	Pn	21 51 56.0	+4.5
GORA	**Gorafe**	3.65	14	Pn	Pn	21 51 55.6	+3.2
	35nm,0.2s,SNR=7.9						
GORA				Sn	Sn	21 52 32.9	-2.3
	24nm,0.4s,SNR=7.9						
EQES	**Quesada**	3.96	13	Pn	Pn	21 52 00.1	+3.4
	17nm,0.2s,SNR=167						
EQES				Sn	Sn	21 52 42.8	0.0
	10nm,0.3s						
EADA	**Adamuz**	4.24	356	Pn	Pn	21 52 03.4	+3.0
	11nm,0.2s,SNR=84						
EADA				Sn	Sn	21 52 48.9	-0.6
	16nm,0.3s,SNR=4.7						
ECAB	**El Cabril**	4.26	347	Pn	Pn	21 52 02.4	+1.7
	14nm,0.3s,SNR=75						
ECAB				Sn	Sn	21 52 49.9	-0.1
	21nm,0.3s,SNR=5.7						
EMIN	**Mina Concepcio**	4.33	333	Pn	Pn	21 52 03.4	+1.8
	12nm,0.1s,SNR=149						
EMIN				Sn	Sn	21 52 52.0	+0.2
	7.4nm,0.1s,SNR=7.3						
SESP	**Santiago Espad**	4.38	17	Pn	Pn	21 52 05.3	+2.9
	32nm,0.4s,SNR=7.9						
SESP				Sn	Sn	21 52 52.3	-0.9
	69nm,0.5s,SNR=7.9						
CART	**Cartagena**	4.46	34	Pn	Pn	21 52 04.2	+0.8
OKGL	**Djebel Kef Gue**	4.47	61	Pn	Pn	21 52 04.1	+0.5
	23nm,0.2s,SNR=7.9						
OKGL				Sn	Sn	21 52 54.2	-1.1
	75nm,0.3s,SNR=7.9						
OKGL	**Djebel Kef Gue**	4.47	61		Pn	21 52 04.4	+0.8
EGRO	**El Granado**	4.49	324	⇓Pn	Pn	21 52 04.8	+0.9
	20nm,0.1s,SNR=18						
EGRO				Sn	Sn	21 52 55.1	-0.6
	10.0nm,0.3s,SNR=4.9						
PBDV	**Barranco-do-Ve**	4.51	318	Pn	Pn	21 52 04.5	+0.4
PBDV				Sn	Sn	21 52 56.4	+0.2
	24nm,0.4s						
PBDV	**Barranco-do-Ve**	4.51	318	⇓*e*Pn	Pn	21 52 04.5	+0.4
PBDV				*e*Sn	Sn	21 52 56.4	+0.2
PBDV				A	A	21 53 04.8	
	24nm,0.4s						
PVAQ	**Vaqueiros**	4.51	321	Pn	Pn	21 52 04.1	0.0
PVAQ				Sn	Sn	21 52 55.1	-1.1
	58nm,0.4s						
PVAQ	**Vaqueiros**	4.51	321	Pn	Pn	21 52 04.9	+0.8
PVAQ				Sn	Sn	21 52 54.7	-1.5
PVAQ	**Vaqueiros**	4.51	321	*e*Pn	Pn	21 52 04.1	0.0
PVAQ				*e*Sn	Sn	21 52 55.1	-1.1
PVAQ				A	A	21 52 59.2	
	58nm,0.4s						
EMUR	**La Murta**	4.57	30	Pn	Pn	21 52 06.3	+1.4
	21nm,0.3s,SNR=39						
EMUR				Sn	Sn	21 52 55.9	-1.7
	18nm,0.4s						
EANR	**'Ain N'Sour**	4.77	64	P	Pn	21 52 08.2	+0.5
EANR	**'Ain N'Sour**	4.77	64	P	Pn	21 52 08.2	+0.5
EANR	**'Ain N'Sour**	4.77	64	P	Pn	21 52 08.2	+0.5
PBAR	**Barrancos**	4.83	332	Pn	Pn	21 52 09.9	+1.4
PBAR				Sn	Sn	21 53 04.6	+0.5
	41nm,0.5s						
PBAR	**Barrancos**	4.83	332	*e*Pn	Pn	21 52 09.9	+1.4
PBAR				*e*Sn	Sn	21 53 04.6	+0.5
PBAR				A	A	21 53 10.9	
	41nm,0.5s						
PCVE	**Castro Verde**	4.85	321	Pn	Pn	21 52 10.3	+1.5
PCVE				Sn	Sn	21 53 04.0	-0.6
	26nm,0.3s						
PCVE	**Castro Verde**	4.85	321	*e*Pn	Pn	21 52 10.3	+1.5
PCVE				*e*Sn	Sn	21 53 04.0	-0.6
PCVE				A	A	21 53 06.9	
	26nm,0.3s						
PFVI	**Vila Bisbo**	4.96	311	Pn	Pn	21 52 10.1	-0.2
	14nm,0.1s,SNR=20						
PFVI				Sn	Sn	21 53 06.6	-0.7
	5.4nm,0.2s,SNR=6.2						
PFVI	**Vila Bisbo**	4.96	311	Pn	Pn	21 52 11.3	+1.0
PFVI					Sn	21 53 07.9	+0.5
PFVI	**Vila Bisbo**	4.96	311	*e*Pn	Pn	21 52 10.3	0.0
PFVI				*e*Sn	Sn	21 53 06.7	-0.7
PFVI				A	A	21 53 15.4	
	26nm,0.8s						
MORF	**Marmelete**	4.97	314	*e*P	Pn	21 52 10.3	-0.1
MORF				*e*S	Sn	21 53 05.0	-2.5
MORF				AML	AML	21 53 08.9	
	comp=E,57nm,0.4s						
MORF	**Marmelete**	4.97	314	Pn	Pn	21 52 10.3	-0.1
MORF				Sn	Sn	21 53 05.0	-2.5
	comp=E,57nm,0.4s						
MORF	**Marmelete**	4.97	314	*e*Pn	Pn	21 52 10.3	-0.1
MORF				*e*Sn	Sn	21 53 07.0	-0.5
MORF				A	A	21 53 10.9	
	comp=E,20nm,0.3s						
ECHF	**Ech Chlef**	5.03	62	P	Pn	21 52 11.5	+0.2
ECHA	**Ech Chlef**	5.05	62	P	Pn	21 52 11.5	0.0
ECHA	**Ech Chlef**	5.05	62	P	Pn	21 52 11.5	0.0
PBEJ	**Beja**	5.07	325	Pn	Pn	21 52 13.1	+1.3
PBEJ				Sn	Sn	21 53 09.6	-0.3
	comp=E,10nm,0.3s						
PBEJ	**Beja**	5.07	325	*e*Pn	Pn	21 52 13.1	+1.3
PBEJ				*e*Sn	Sn	21 53 09.6	-0.3
PBEJ				A	A	21 53 14.1	
	comp=E,20nm,0.3s						
MESJ	**Messejana**	5.10	321	*e*P	Pn	21 52 12.6	+0.4
MESJ				*e*S	Sn	21 53 07.6	-3.1
MESJ				AML	AML	21 53 13.7	
	comp=N,48nm,0.4s						
MESJ	**Messejana**	5.10	321	Pn	Pn	21 52 12.6	+0.4
MESJ				Sn	Sn	21 53 07.6	-3.1
	comp=N,48nm,0.4s						
MESJ	**Messejana**	5.10	321	*e*Pn	Pn	21 52 13.0	+0.8
MESJ				*e*Sn	Sn	21 53 09.7	-1.0
MESJ				A	A	21 53 12.6	
	comp=N,28nm,0.3s						
ETOB	**Tobarra**	5.16	23	Pn	Pn	21 52 15.6	+2.6
	comp=N,10nm,0.2s,SNR=89						
ETOB				Sn	Sn	21 53 13.5	+1.4
	comp=N,11nm,0.5s,SNR=6.5						
PTEO	**Sao Teotonio**	5.17	315	Pn	Pn	21 52 13.4	+0.3
PTEO				Sn	Sn	21 53 12.4	0.0
	comp=N,9.9nm,0.3s						
PTEO	**Sao Teotonio**	5.17	315	*e*Pn	Pn	21 52 13.4	+0.3
PTEO				*e*Sn	Sn	21 53 12.4	0.0
PTEO				A	A	21 53 19.9	
	comp=N,20nm,0.3s						
EBNR	**Beni Rached**	5.23	62	P	Pn	21 52 14.6	+0.6
EBNR	**Beni Rached**	5.23	62	P	Pn	21 52 14.6	+0.6
EBAD	**Badajoz**	5.33	335	Pn	Pn	21 52 17.2	+1.8
	comp=N,25nm,0.1s,SNR=237						
EBAD				Sn	Sn	21 53 15.3	-1.2
	comp=N,49nm,0.2s,SNR=6.5						
PNCL	**Nicolau / Gran**	5.47	321	Pn	Pn	21 52 18.0	+0.8
PNCL				Sn	Sn	21 53 19.3	-0.4
	comp=N,16nm,0.3s						
PNCL	**Nicolau / Gran**	5.47	321	*e*Pn	Pn	21 52 18.0	+0.8
PNCL				*e*Sn	Sn	21 53 19.3	-0.4
PNCL				A	A	21 53 21.1	
	comp=N,16nm,0.3s						
AFON	**Font Roja**	5.55	31	Pn	Pn	21 52 21.3	+2.8
	comp=N,6.1nm,0.2s,SNR=8.7						
AFON				Sn	Sn	21 53 23.7	+1.6
	comp=N,4.9nm,0.3s,SNR=7.9						
PAB	**San Pablo**	5.60	359	Pn	Pn	21 52 21.4	+2.2
	comp=N,2.2nm,0.2s,SNR=7.9						
PAB				Sn	Sn	21 53 22.0	-1.3
	comp=N,8.2nm,0.4s,SNR=7.9						
PAB	**San Pablo**	5.60	359		Pn	21 52 21.2	+2.0
PAB					Sn	21 53 25.9	+2.7

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PESTR Estremoz          5.64 332 ePn   Pn    21 52 21.5 +1.8
PESTR                            eSn   Sn    21 53 23.6 -0.6
PESTR                             A    A     21 53 37.9
      comp=N,18nm,0.9s
EBEN2 Beniarda presa    5.72  33  Pn   Pn    21 52 22.0 +1.3
      comp=N,9.4nm,0.3s,SNR=7.9
EBEN2                             Sn   Sn    21 53 23.1 -2.9
      comp=N,7.9nm,0.3s,SNR=7.9
ESDC  Sonseca Array     5.73   2  Pn   Pn    21 52 23.5 +2.6
      comp=N,1.8nm,0.3s,baz=185,slow=13,SNR=16
ESDC                              Sn   Sn    21 53 30.1 +3.7
      comp=N,2.1nm,0.3s,baz=181,slow=22,SNR=6.0
ESDC  Sonseca Array     5.73   2  Pn   Pn    21 52 23.2 +2.3
      comp=N,3.9nm,0.3s,baz=178,slow=12,SNR=18
ESDC                              Sn   Sn    21 53 24.8 -1.6
      comp=N,3.1nm,0.6s,baz=184,slow=22,SNR=5.6
ESBB  Sonseca Array     5.73   2  Pn   Pn    21 52 23.1 +2.1
PMRV  Marv??o           6.07 336  Pn   Pn    21 52 27.2 +1.7
PMRV                              Sn   Sn    21 53 33.8 -0.7
      comp=N,13nm,0.5s
PMRV  Marv??o           6.07 336 ePn   Pn    21 52 27.2 +1.7
PMRV                             eSn   Sn    21 53 33.8 -0.7
PMRV                              A    A     21 53 47.1
      comp=N,13nm,0.5s
PMTG  Montargil         6.08 329  Pn   Pn    21 52 25.2 -0.4
PMTG                              Sn   Sn    21 53 32.5 -2.3
      comp=N,24nm,0.4s
PMTG  Montargil         6.08 329 ePn   Pn    21 52 25.2 -0.4
PMTG                             eSn   Sn    21 53 32.5 -2.3
PMTG                              A    A     21 53 47.1
      comp=N,24nm,0.4s
ECHE  Chera             6.20  24  Pn   Pn    21 52 28.7 +1.3
      comp=N,5.3nm,0.5s,SNR=7.9
ECHE                              Sn   Sn    21 53 34.4 -3.5
      comp=N,3.7nm,0.6s,SNR=7.9
EPLA  Plasencia         6.31 347  Pn   Pn    21 52 30.8 +2.0
      comp=N,8.8nm,0.1s,SNR=66
EPLA                              Sn   Sn    21 53 39.2 -1.3
      comp=N,14nm,0.3s
UCM   Universidad Co    6.41   6  Pn   Pn    21 52 32.8 +2.6
UCM                               Sn   Sn    21 53 45.9 +3.0
UCM   Universidad Co    6.41   6 eP    Pn    21 52 32.8 +2.6
UCM                              eS    Sn    21 53 45.9 +3.0
PCBR  Castelo Branco    6.46 337  Pn   Pn    21 52 32.7 +1.8
PCBR                              Sn   Sn    21 53 42.9 -1.4
      comp=N,5.1nm,0.6s
PCBR  Castelo Branco    6.46 337 ePn   Pn    21 52 32.7 +1.8
PCBR                             eSn   Sn    21 53 42.9 -1.4
PCBR                              A    A     21 53 47.9
      comp=N,10nm,0.6s
PMAFR Mafra             6.49 322  Pn   Pn    21 52 32.7 +1.4
      comp=N,58nm,0.4s,SNR=9.5
PMAFR                             Sn   Sn    21 53 43.7 -1.2
      comp=N,50nm,0.5s,SNR=10
PMAFR Mafra             6.49 322 ePn   Pn    21 52 32.7 +1.4
PMAFR                            eSn   Sn    21 53 44.4 -0.6
PMAFR                             A    A     21 54 00.3
      comp=N,22nm,0.6s
PTOM  Tomar             6.62 330  Pn   Pn    21 52 34.6 +1.6
PTOM                              Sn   Sn    21 53 46.6 -1.5
      comp=N,15nm,0.3s
PTOM  Tomar             6.62 330 ePn   Pn    21 52 34.6 +1.6
PTOM                             eSn   Sn    21 53 46.6 -1.5
PTOM                              A    A     21 53 49.5
      comp=N,29nm,0.3s
PSBE  So Bento          6.70 328 ePn   Pn    21 52 35.6 +1.5
PSBE                             eSn   Sn    21 53 49.1 -1.0
PSBE                              A    A     21 53 54.7
      comp=N,18nm,0.4s
GUD   Guadarrama        6.70   0  Pn   Pn    21 52 36.2 +1.9
      comp=N,3.9nm,0.5s,SNR=11
GUD                               Sn   Sn    21 53 51.2 +0.9
      comp=N,6.3nm,0.6s
EIBI  Ibiza             6.75  40  Pn   Pn    21 52 36.2 +1.4
      comp=N,14nm,0.3s,SNR=21
EIBI                              Sn   Sn    21 53 47.9 -3.4
      comp=N,15nm,0.6s,SNR=7.9
MTE   Manteigas         6.99 338  Pn   Pn    21 52 39.8 +1.5
MTE                               Sn   Sn    21 53 58.2 +0.7
      comp=N,9.2nm,0.6s
MTE   Manteigas         6.99 338       Pn    21 52 40.0 +1.7
MTE                                    Sn    21 53 58.5 +1.0
MTE   Manteigas         6.99 338 ePn   Pn    21 52 39.8 +1.5
MTE                              eSn   Sn    21 53 58.2 +0.7
MTE                               A    A     21 54 25.3
      comp=N,18nm,0.6s
PCAS  Casmilo, Conde    7.02 332  Pn   Pn    21 52 40.1 +1.5
PCAS                              Sn   Sn    21 53 58.0 -0.1
      comp=N,14nm,0.4s
PCAS  Casmilo, Conde    7.02 332 ePn   Pn    21 52 40.1 +1.5
PCAS                             eSn   Sn    21 53 58.0 -0.1
PCAS                              A    A     21 54 22.6
      comp=N,14nm,0.4s
EMOS  Mosqueruela       7.06  24  Pn   Pn    21 52 40.9 +1.6
      comp=N,7.4nm,0.9s,SNR=8.5
ETOR  Torete            7.08  13  Pn   Pn    21 52 41.4 +2.0
      comp=N,11nm,0.3s,SNR=18
ETOR                              Sn   Sn    21 53 56.0 -3.5
      comp=N,6.2nm,0.7s
COI   Coimbra           7.12 333  Pn   Pn    21 52 41.9 +1.9
COI   Coimbra           7.12 333  Pn   Pn    21 52 41.8 +1.9
COI   Coimbra           7.12 333 ePn   Pn    21 52 41.9 +1.9
PVIS  Viseu             7.39 337  Pn   Pn    21 52 44.8 +1.1
PVIS                              Sn   Sn    21 54 06.2 -1.0
      comp=N,5.5nm,0.5s
PVIS  Viseu             7.39 337 ePn   Pn    21 52 44.8 +1.1
PVIS                             eSn   Sn    21 54 06.2 -1.0
PVIS                              A    A     21 54 21.1
      comp=N,11nm,0.5s
MVO   Moncorvo          7.57 343  Pn   Pn    21 52 48.0 +1.8
      comp=N,2.8nm,0.1s,SNR=18
MVO                               Sn   Sn    21 54 08.5 -3.0
      comp=N,11nm,0.3s,SNR=7.9
MVO   Moncorvo          7.57 343 ePn   Pn    21 52 48.0 +1.8
MVO                              eSn   Sn    21 54 09.3 -2.3
MVO                               A    A     21 54 25.0
      comp=N,12nm,0.7s
PVRL  Vila Real         7.85 340  Pn   Pn    21 52 51.2 +1.2
PVRL                              Sn   Sn    21 54 14.9 -3.6
      comp=N,8.4nm,0.2s
PVRL  Vila Real         7.85 340 ePn   Pn    21 52 51.2 +1.2
PVRL                             eSn   Sn    21 54 14.9 -3.6
PVRL                              A    A     21 54 21.8
      comp=N,17nm,0.2s
ERTA  Horta de San J    7.87  26  Pn   Pn    21 52 52.4 +2.2
      comp=N,12nm,0.5s,SNR=18
ETOS  Mallorca          8.07  42  Pn   Pn    21 52 54.2 +1.1
      comp=N,9.0nm,0.4s,SNR=18
ETOS                              Sn   Sn    21 54 20.8 -3.2
      comp=N,4.4nm,0.9s,SNR=4.0
ETOS  Mallorca          8.07  42       Pn    21 52 54.2 +1.1
PBRG  Braganca          8.12 346  Pn   Pn    21 52 55.7 +2.0
PBRG                              Sn   Sn    21 54 24.2 -0.9
      comp=N,2.6nm,0.4s
PBRG  Braganca          8.12 346 ePn   Pn    21 52 55.7 +2.0
PBRG                             eSn   Sn    21 54 24.2 -0.9
PBRG                              A    A     21 54 38.4
      comp=N,5.2nm,0.4s
ECAL  Calabor           8.25 347  Pn   Pn    21 52 57.5 +2.0
      comp=N,5.1nm,0.3s,SNR=6.8
ECAL                              Sn   Sn    21 54 25.1 -3.2
      comp=N,11nm,0.4s,SNR=6.0
PCAB  Cabril            8.34 340  Pn   Pn    21 52 58.6 +1.9
PCAB                              Sn   Sn    21 54 27.9 -2.7
      comp=N,6.2nm,0.5s
PCAB  Cabril            8.34 340 ePn   Pn    21 52 58.6 +1.9
PCAB                             eSn   Sn    21 54 27.9 -2.7
PCAB                              A    A     21 54 54.8
      comp=N,12nm,0.5s
EPOB  Poblet            8.49  28  Pn   Pn    21 53 00.3 +1.5
      comp=N,2.0nm,0.4s,SNR=7.9
ELOB  Lobios            8.50 340  Pn   Pn    21 53 00.9 +2.0
      comp=N,6.3nm,0.3s,SNR=16
ELOB                              Sn   Sn    21 54 31.0 -3.4
      comp=N,4.0nm,0.5s,SNR=7.8
PGAV  Gavieira, Arco    8.65 339  Pn   Pn    21 53 03.2 +2.2
PGAV                              Sn   Sn    21 54 35.9 -2.3
      comp=N,9.5nm,0.5s
PGAV  Gavieira, Arco    8.65 339 ePn   Pn    21 53 03.2 +2.2
PGAV                             eSn   Sn    21 54 35.9 -2.3
PGAV                              A    A     21 54 50.8
      comp=N,9.5nm,0.5s
EZAM  Zamans            8.94 338  Pn   Pn    21 53 07.0 +2.1
      comp=N,6.8nm,0.3s,SNR=7.9
EMIR  Miracle           9.15  28  Pn   Pn    21 53 10.1 +2.4
      comp=N,0.8nm,0.2s,SNR=7.9
EORO  Oroz-Betelu       9.22  13  Pn   Pn    21 53 11.6 +2.8
      comp=N,2.9nm,0.3s,SNR=9.5
ELAN  Lanestosa         9.30   3  Pn   Pn    21 53 13.2 +3.3
      comp=N,1.5nm,0.4s,SNR=7.9
ELAN                              Sn   Sn    21 54 49.6 -4.6
      comp=N,2.5nm,0.4s,SNR=4.0
EAGO  Agolada(Pontev    9.37 342  Pn   Pn    21 53 13.0 +2.2
      comp=N,0.5nm,0.1s,SNR=7.9
EAGO                              Sn   Sn    21 54 51.5 -4.4
      comp=N,2.2nm,0.4s,SNR=7.9
ETSF  Etsaut            9.39  16 eP    Pn    21 53 14.7 +3.6
ETSF                             eSn   Sn    21 54 44.4  -12
      comp=N,0.6nm,0.2s
EARI  Arriondas         9.39 355  Pn   Pn    21 53 13.2 +2.1
      comp=N,0.9nm,0.3s,SNR=5.3
EARI                              Sn   Sn    21 54 52.1 -4.2
      comp=N,1.8nm,0.5s,SNR=7.9
CFON  Fontmartina       9.39  32  Pn   Pn    21 53 13.0 +1.8
      comp=N,1.7nm,0.2s,SNR=8.3
CSOR  Sort              9.40  25  Pn   Pn    21 53 13.4 +2.1
      comp=N,7.2nm,0.6s,SNR=12
SJPF  Ste Jean          9.45  13 eP    Pn    21 53 15.1 +3.2
SJPF                             eSn   Sn    21 54 45.9  -12
      comp=N,0.9nm,0.4s
EALK  Alkurruntz        9.50  12  Pn   Pn    21 53 14.9 +2.2
      comp=N,8.4nm,0.4s,SNR=22
EALK                              Sn   Sn    21 54 55.3 -3.9
      comp=N,7.6nm,0.5s,SNR=7.9
ATE   Arette            9.53  16  Pn   Pn    21 53 17.3 +4.3
      comp=N,1.8nm,0.3s,SNR=7.9
EPON  Pontenova         9.66 347  Pn   Pn    21 53 17.5 +2.7
      comp=N,2.7nm,0.4s,SNR=4.8
EPON                              Sn   Sn    21 54 59.0 -4.0
      comp=N,3.0nm,0.3s,SNR=4.7
EPF   Esparros          9.74  20 eP    Pn    21 53 19.0 +3.0
EPF                              eSn   Sn    21 54 53.8  -11
      comp=N,0.6nm,0.3s
EMAZ  Mazaricos         9.76 339  Pn   Pn    21 53 18.0 +1.9
      comp=N,2.3nm,0.2s,SNR=7.9
EMAZ                              Sn   Sn    21 55 00.6 -4.7
      comp=N,1.0nm,0.3s,SNR=7.9
PMPST Porto Santo, M   10.20 269 eSn   Sn    21 55 07.6 -8.5
PMPS  Porto Santo      10.20 268 eSn   Sn    21 55 10.5 -5.7
PMAR  Madeira          10.73 267 eSn   Sn    21 55 21.9 -7.7
PMAR                              A    A     21 55 30.5
      comp=N,14nm,0.3s
PMOZ  Porto Moniz, M   10.95 268 ePn   Pn    21 53 35.4 +2.8
PMOZ                             eSn   Sn    21 55 27.9 -6.9
KEST  Kesra            11.25  77  Pn   Pn    21 53 36.7 +0.1
      comp=N,0.5nm,0.3s,baz=259,slow=10,SNR=9.1
KEST                              Sn   Sn    21 55 40.7 -1.3
      comp=N,0.1nm,0.3s,baz=132,slow=21,SNR=2.7
LFF   La Frestale      11.62  18 eP    Pn    21 53 45.2 +3.6
LFF   La Frestale      11.62  18  Pn   Pn    21 53 45.2 +3.6
CAF   Calviac          11.98  22 ePn   Pn    21 53 43.6 -3.0
CAF   Calviac          11.98  22 eP    Pn    21 53 49.1 +2.5
CAF   Calviac          11.98  22  Pn   Pn    21 53 43.6 -3.0
LMR   La Mourre        12.55  38 ePn   Pn    21 53 50.5 -3.8
LMR   La Mourre        12.55  38 eP    Pn    21 53 56.4 +2.1
LMR   La Mourre        12.55  38  Pn   Pn    21 53 50.5 -3.8
LMR                               Pn   Pn    21 53 56.4 +2.1
SMRF  Simiane la Rot   12.56  34 ePn   Pn    21 53 50.5 -4.0
SMRF  Simiane la Rot   12.56  34  Pn   Pn    21 53 50.5 -4.0
FRF   La Foret Royal   12.78  38 eP    Pn    21 53 59.4 +2.0
FRF   La Foret Royal   12.78  38  Pn   Pn    21 53 59.4 +2.0
MFF   Saint Martin d   13.02  12 eP    Pn    21 54 04.6 +3.9
MFF   Saint Martin d   13.02  12  Pn   Pn    21 54 04.6 +3.9
SBF   Sospel           13.40  39 eP    Pn    21 54 07.7 +1.7
SBF   Sospel           13.40  39  Pn   Pn    21 54 07.7 +1.7
PGF   Pioggiola        13.44  46 ePn   Pn    21 54 02.0 -4.6
PGF   Pioggiola        13.44  46 eP    Pn    21 54 08.3 +1.7
PGF                              eSn   Sn    21 56 24.9  -11
      comp=N,0.1nm,0.3s
PGF   Pioggiola        13.44  46  Pn   Pn    21 54 08.3 +1.7
PGF                               Sn   Sn    21 56 24.9  -11
      comp=N,0.1nm,0.3s
QUIF  Quistinic        13.99   3 eP    Pn    21 54 16.7 +2.8
QUIF  Quistinic        13.99   3  Pn   Pn    21 54 16.7 +2.8
SGMF  Saint Gilles     14.36   4 eP    Pn    21 54 21.0 +2.0
SGMF  Saint Gilles     14.36   4  Pn   Pn    21 54 21.0 +2.0
ROSF  Rostrenen        14.40   2 eP    Pn    21 54 22.7 +3.1
ROSF  Rostrenen        14.40   2  Pn   Pn    21 54 22.7 +3.1
GRR   Gorron           14.65   9 eP    Pn    21 54 24.8 +1.8
GRR   Gorron           14.65   9  Pn   Pn    21 54 24.8 +1.8
MSSA  Maissana         14.82  42  Pn   Pn    21 54 27.1 +1.7
BFO   Black Forest     17.15  29  Pn   Pn    21 54 53.8 -1.6
WLF   Walferdange      17.47  23       Pn    21 55 00.9 +1.6
WLF                               IAmb IAmb  21 55 19.9
      comp=Z,25nm,1.6s
TIP   Timpagrande      17.60  67       Pn    21 55 00.3 -0.7
TIP                               IAmb IAmb  21 55 50.7
      comp=Z,22nm,1.9s
SCTE  Santa Cesarea    19.06  65  P    P     21 55 17.3 -0.7
SCTE                              IAmb IAmb  21 55 48.4
      comp=Z,13nm,1.4s
GRA1  Grafenberg Arr   19.42  31  P    P     21 55 22.1 +0.2
GRA1                              IAmb IAmb  21 55 32.1
      comp=Z,36nm,1.8s
GEC2  GERESS Array S   19.97  36  P    P     21 55 28.4 +0.5
GERES GERESS Array B   19.97  36  P    P     21 55 29.1 +1.2
      comp=Z,1.0nm,0.5s,baz=224,slow=11,SNR=10
GERES GERESS Array B   19.97  36  P    P     21 55 29.3 +1.3
KHC   Kasperske Hory   20.10  36 eP    P     21 55 31.1 +1.8
KHC   Kasperske Hory   20.10  36  P    P     21 55 31.2 +1.9
TORD  Torodi Ar. Bea   21.37 164  P    P     21 55 40.5 -2.8
      comp=Z,1.4nm,0.8s,baz=345,slow=11,SNR=4.4
ESK   Eskdalemuir      21.39   2  P    P     21 55 42.0 -1.2
MODS  Modra-Piesok     21.55  42 eP    P     21 55 45.4 +0.4
VRAC  Vranov           21.73  39  P    P     21 55 47.2 +0.3
      comp=Z,1.6nm,0.7s,baz=253,slow=11,SNR=3.7
AGG   Agios Georgios   21.87  69  P    P     21 55 50.3 +1.8
AGG                               IAmb IAmb  21 56 13.5
      comp=Z,17nm,1.6s
SACV  Santiago Islan   25.79 228  P    P     21 56 28.0 +1.2
BUR08 Bucovina Ar. S   25.93  49  P    P     21 56 29.8 +1.9
BUR08                             IAmb IAmb  21 57 24.5
      comp=Z,23nm,1.9s
BURAR Bucovina Array   25.93  49  P    P     21 56 27.8 -0.2
TIRR  Tirgusor         27.18  58  P    P     21 56 39.1  0.0
FINES FINESS Array B   33.65  26  P    P     21 57 35.7 -0.4
      comp=Z,2.5nm,0.9s,baz=232,slow=8.7,SNR=7.1
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*THE **14** 21:55:05.9, 37.°57N×25.°65E, h5^{km}±2^{km}, ML2.7/9, Error ellipse: s-maj=2.8km s-min=0.7km az=126.0*
*ATH **14** 21:55:05.1, 37.°55N×25.°64E, h27^{km}±1^{km}, ML2.7/8, Error ellipse: s-maj=1.5km s-min=0.8km az=134.0*
*DDA **14** 21:55:07.5, 37.°59N×25.°74E, h4^{km}±5^{km}, ML2.0*
ISC 14 21:55:05.7±1.0**, 37.°56N**±0.°02×**25.°66E**±0.°02**, h8**^{km}±10^{km}**,**
n56, σ0.^{s}80/80**, Dodecanese Islands**

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Code  Station Name       Δ°  AZ°    Phase ID          Time     Res
                                   Op    ISC        h  m  s   ISC
TNSA  Tinos             0.39 267  P    Pg    21 55 13.7 +0.3
TNSA                              S    Sg    21 55 19.0 +0.5
TNSA                              AML  AML   21 55 19.3
      comp=E,1583µm,0.2s
TNSA                              AML  AML   21 55 19.3
      comp=N,1398µm,0.1s
APE   Apeiranthos       0.50 192  P    Pg    21 55 15.5  0.0
APE   Apeiranthos       0.50 192  P    Pg    21 55 15.4  0.0
APE                               S    Sg    21 55 22.3 +0.4
APE                               AML  AML   21 55 27.6
      comp=E,929µm,0.2s
APE                               AML  AML   21 55 28.7
      comp=N,888µm,0.1s
AMGA  Amorgos Island    0.75 165  P    Pg    21 55 20.0 -0.2
AMGA                              S    Sb    21 55 31.4  0.0
      comp=N,638nm,0.2s
AMGA  Amorgos Island    0.75 165  P    Pg    21 55 20.0 -0.2
AMGA                              S    Sg    21 55 30.3 +0.4
AMGA                              AML  AML   21 55 33.6
      comp=N,1301µm,0.2s
AMGA                              AML  AML   21 55 33.6
      comp=E,1224µm,0.3s
IOSP  Ios island        0.88 200  P    Pg    21 55 22.9 +0.2
IOSP                              S    Sg    21 55 35.1 +0.9
      comp=E,668nm,0.2s
IOSP  Ios island        0.88 200  P    Pg    21 55 22.7 -0.1
IOSP                              S    Sg    21 55 34.5 +0.3
IOSP                              AML  AML   21 55 38.1
      comp=E,1158µm,0.2s
IOSP                              AML  AML   21 55 38.2
      comp=N,1465µm,0.2s
CHOS  Chios island      0.89  21  P    Pg    21 55 22.9 +0.1
CHOS                              S    Sb    21 55 35.6 +0.2
      comp=N,842nm,0.3s
CHOS  Chios island      0.89  21  P    Pg    21 55 22.7  0.0
CHOS                              S    Sb    21 55 35.1 -0.2
CHOS                              AML  AML   21 55 40.4
      comp=N,1118µm,0.3s
CHOS                              AML  AML   21 55 40.4
      comp=E,2209µm,0.4s
SMG   Samos             0.95  81  P    Pg    21 55 23.7 -0.3
SMG                               S    Sg    21 55 37.0 +0.7
      comp=E,345nm,0.3s
SMG   Samos             0.95  81  P    Pg    21 55 23.7 -0.3
SMG                               S    Sg    21 55 36.8 +0.5
SMG                               AML  AML   21 55 38.6
      comp=E,646µm,0.3s
SMG                               AML  AML   21 55 39.5
      comp=N,723µm,0.3s
PSRA  Psara             0.98 356  P    Pg    21 55 24.6  0.0
SERI  Serifos           1.01 247  P    Pg    21 55 24.6 -0.6
SERI                              S    Sg    21 55 38.5 +0.1
      comp=N,612nm,0.2s
SERI  Serifos           1.01 247  P    Pg    21 55 24.7 -0.6
SERI                              S    Sg    21 55 38.1 -0.3
SERI                              AML  AML   21 55 38.8
      comp=E,1316µm,0.3s
SERI                              AML  AML   21 55 39.0
      comp=N,1100µm,0.2s
KARY  Karystos          1.08 296  P    Pg    21 55 26.0 -0.4
KARY                              S    Sg    21 55 40.5 +0.1
      comp=N,360nm,0.2s
KARY  Karystos          1.08 296  P    Pg    21 55 25.7 -0.7
DGB   zmir              1.09  63 iP    Pg    21 55 25.3 -1.4
DGB                              iS    Sg    21 55 39.1 -1.7
DGB                               IAML       21 55 41.0
      comp=N,88nm,0.6s
DGB                               IAML       21 55 42.0
      comp=E,70nm,0.4s
URLA  Izmir             1.09  43 iP    Pg    21 55 25.1 -1.6
URLA                             iS    Sg    21 55 40.4 -0.5
URLA                              IAML       21 55 42.0
      comp=E,37nm,0.3s
URLA                              IAML       21 55 48.0
      comp=N,58nm,0.4s
CMBO  Columbo, Santo    1.10 191  P    Pb    21 55 27.5 +0.5
THR2  Thira island,     1.12 189  P    Pg    21 55 27.0 -0.3
THT2  Imerovigli        1.14 190  P    Pg    21 55 26.9 -0.7
THT2                              S    Sn    21 55 44.5 +0.8
      comp=N,128nm,0.4s
SAP3  Santorini-Thir    1.15 193  P    Pg    21 55 28.1 +0.3
SAP3  Santorini-Thir    1.15 193  P    Pg    21 55 27.5 -0.3
THR8  Santorini-Mono    1.16 187  P    Pg    21 55 27.7 -0.3
THR3  Thira Island,     1.17 190  P    Pg    21 55 28.2 +0.1
THR5  Thira Island,     1.17 192  P    Pg    21 55 27.6 -0.5
STAX  Taxiarchis Har    1.18 190  P    Pg    21 55 28.2 -0.1
THT1  Athinios (Pele    1.19 189  P    Pb    21 55 28.9 +0.5
SANT  Santorini         1.20 188  P    Pg    21 55 27.6 -1.1
SANT  Santorini         1.20 188  P    Pg    21 55 27.6 -1.1
ANAF  Anafi Island      1.20 176  P    Pg    21 55 27.8 -1.0
ANAF                              S    Sb    21 55 45.3 +0.9
      comp=N,682nm,0.3s
ANAF  Anafi Island      1.20 176  P    Pg    21 55 27.7 -1.1
ANAF                              S    Sg    21 55 43.9 -0.5
ANAF                              AML  AML   21 55 47.8
      comp=E,1530µm,0.3s
ANAF                              AML  AML   21 55 49.4
      comp=N,1151µm,0.2s
THR6  Thira Island,     1.22 190  P    Pg    21 55 28.8 -0.3
GCAM  G?zelcaml?        1.26  83 iP    Pg    21 55 29.1 -0.8
GCAM                             iS    Sg    21 55 45.6 -0.6
GCAM                              IAML       21 55 50.0
      comp=N,68nm,0.2s
GCAM                              IAML       21 55 50.0
      comp=E,38nm,0.4s
MHLA  Plaka, Milos I    1.28 231  P    Pg    21 55 28.8 -1.5
MHLA                              S    Sg    21 55 46.6 -0.3
MHLO  Agia Marina, M    1.33 230  P    Pn    21 55 29.1 -1.4
MHLO  Agia Marina, M    1.33 230  P    Pn    21 55 29.3 -1.2
PTL   Penteli           1.50 290  P    Pn    21 55 33.0 +0.1
PTL                               S    Sn    21 55 53.2 +0.5
      comp=E,98nm,0.3s
PTL   Penteli           1.50 290  P    Pn    21 55 31.8 -1.1
VLY   Voula,Athens      1.51 282  P    Pn    21 55 32.1 -0.9
ATHU  Athens Univers    1.54 286  P    Pn    21 55 33.5 +0.1
SIGR  SIGRI             1.66   5  P    Pn    21 55 33.5 -1.5
SIGR  SIGRI             1.66   5  P    Pn    21 55 33.5 -1.5
DAT   Datca             1.74 118 iP    Pn    21 55 35.9 -0.5
PRK   Paraskevi         1.75  16  P    Pn    21 55 36.0 -0.4
PRK   Paraskevi         1.75  16  P    Pn    21 55 35.9 -0.5
AYDN  Tasoluk           1.77  86 iP    Pb    21 55 39.1 +0.7
ZEDA  zmir-Bergama      1.80  38 iP    Pg    21 55 42.1 +1.9
ZEDA                             iS    Sg    21 56 04.5 +1.0
DID   Didima            1.92 269  P    Pn    21 55 37.9 -0.9
AYVA  Ayvalik           1.93  25 iP    Pn    21 55 38.5 -0.2
AYVA                             iS    Sb    21 56 06.2 +1.0
VILL  Villia            1.95 289  P    Pn    21 55 38.4 -0.8
KRND  KRANIDI           2.00 266  P    Pn    21 55 39.1 -0.7
SKIA  Skiathos          2.35 314  P    Pn    21 55 44.0 -0.7
LIA   Limnos Island     2.37 351  P    Pn    21 55 43.3 -1.5
LIA   Limnos Island     2.37 351  P    Pn    21 55 43.2 -1.5
MANT  Manisa            2.47  67 iP    Pb    21 55 50.8 +0.3
MANT                             iS    Sb    21 56 22.3 +1.1
MANT                              IAML       21 56 24.0
      comp=E,4.8nm,0.4s
MANT                              IAML       21 56 28.0
      comp=N,8.6nm,0.9s
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*UPA **14** 22:24:49.3±0.3, 9.°70N×84.°32W, h9^{km}±5^{km}, MW3.9*
*UCR **14** 22:24:50.5±1.5, 9.°76N×84.°29W, h44^{km}±3^{km}, MD3.7*
ISC 14 22:24:51.5±1.2**, 9.°80N**±0.°07×**84.°27W**±0.°06**, h41**^{km}±14^{km}**,**
n28, σ1.^{s}17/42**, 2C, Costa Rica**

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Code  Station Name       Δ°  AZ°    Phase ID          Time     Res
                                   Op    ISC        h  m  s   ISC
SJS   Escuela Geolog    0.26  57 eP    Pn    22 24 59.1 -0.6
SJS                              eS    Sn    22 25 06.4 +1.1
EDDO  Dominical         0.68 143⥣eP    Pn    22 25 03.2 -1.5
EDDO                             eS    Sn    22 25 14.0 -0.1
FORC  Fortuna           0.77 330 iP    Pn    22 25 05.3 -0.7
FORC                             iS    Sn    22 25 17.3 +0.8
ARE1  Arenal 1          0.79 326 eP    Pn    22 25 05.9 -0.5
CEDE  Laguna Cedeo      0.81 328 iP    Pn    22 25 05.9 -0.6
CEDE                             iS    Sn    22 25 18.0 +0.6
JTS   Las Juntas de     0.83 306 eP    Pn    22 25 05.9 -0.9
JTS                              eS    Sn    22 25 18.4 +0.5
EDLM  Las Mercedes      0.85 127 eP    Pn    22 25 05.8 -1.4
EDLM                             eS    Sn    22 25 18.8 +0.3
ACAL  Aguas Claras      1.12 318 iP    Pn    22 25 10.1 -0.8
PTEN  Parque Tenorio    1.15 322 iP    Pn    22 25 11.1 -0.2
EDPN  Palmar Norte      1.16 136 eP    Pn    22 25 10.2 -1.0
EDPN                             eS    Sn    22 25 26.4 +0.4
EDBA  Buenos Aires      1.17 123⥣eP    Pn    22 25 09.7 -1.8
EDBA                             eS    Sn    22 25 25.1 -1.2
PLVR  Palo Verde        1.19 297 eP    Pn    22 25 10.8 -1.2
PLVR                             eS    Sn    22 25 28.6 +1.5
CUI   Cuipilapa         1.22 314 eP    Pn    22 25 11.7 -0.6
CUI                              iS    Sn    22 25 28.4 +0.7
COLC  Colonia           1.26 313 iP    Pn    22 25 12.1 -0.6
GUAB  Guayabo de Bag    1.30 314 iP    Pn    22 25 12.6 -0.7
GUAI  GUAI              1.31 291 iP    Pn    22 25 11.7 -1.7
LIM1  Limonal           1.31 313 eP    Pn    22 25 06.0 -7.5
GPS3  Bodega del ICE    1.43 312 iP    Pn    22 25 14.4 -0.8
NY14  Universidad de    1.50 304 iP    Pn    22 25 15.6 -0.4
PTJ1  Puerto Jimnez     1.58 143 eP    Pn    22 25 17.6 +0.5
EDSV  San Vito          1.61 127 eP    Pn    22 25 19.7 +2.1
CNI2  El Empalme, Bo    1.82 102 eP    Pn    22 25 17.8 -2.5
CNI2                             eS    Sn    22 25 41.9 -0.3
BRU2  Volcan            1.85 122 eP    Pn    22 25 20.6 -0.4
BRU2                             eS    Sn    22 25 45.8 +2.5
BRU2  Volcan            1.85 122 eP    Pn    22 25 19.9 -1.1
BCO2  Palmira           2.03 122 eP    Pn    22 25 23.3 -0.1
BCO2                             eS    Sn    22 25 49.4 +1.8
DVD   David             2.25 127 eP    Pn    22 25 25.9 -0.4
DVD                              eS    Sn    22 25 54.5 +1.6
CHGR2 Aguacate          2.27 112 eP    Pn    22 25 26.6  0.0
CHGR2                            eS    Sn    22 25 54.9 +1.6
ACON  Acoyapa           2.33 338 eP    Pn    22 25 26.5 -0.9
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*IDC **14** 22:49:54.9±0.4, 23.°30S×175.°34W, h0^{km}, mb4.9/33,* *mb1 5.0/33, mb1mx4.9/48, mbtmp4.9/33, MS4.6/26, Ms1 4.6/26, ms1mx4.4/48, Error ellipse: s-maj=15.3km s-min=13.4km az=149.0*

NEIC ***14*** *22:49:56.3±1.8, 23°.31S±0°.07×175°.18W±0°.09, h10^{km}±1^{km}, mb4.9/135, Error ellipse: s-maj=14.3km s-min=12.0km az=106.0*

MOS ***14*** *22:49:58.1±1.1, 23°.22S×175°.42W, h26^{km}, mb5.1/17, Error ellipse: s-maj=12.6km s-min=9.8km az=129.5*

GCMT ***14*** *22:49:58.3±0.2, 23°.49S±0°.02×174°.77W±0°.01, h15^{km}, MW5.1/130, Moment Tensor Solution. s68,c103; s130,c197; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.71±.15; $M_{\theta\theta}$-1.27±.10; $M_{\phi\phi}$-3.43±.10; $M_{r\theta}$0.61±.21; $M_{\theta\phi}$-1.49±.07; $M_{\phi r}$2.17±.19; Best double couple: $M_0$4.98600×10^{16} NP1:ϕ_s211.00000°, δ32.00000°, λ97.00000°. NP2:ϕ_s22.00000°, δ58.00000°, λ86.00000°. Principal axes: T 5.2610, Plg76.0000°, Azm279.0000°; N -0.5390, Plg4.0000°, Azm25.0000°; P -4.7120, Plg13.0000°, Azm116.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI ***14*** *22:49:58.0±0.0, 23°.00S×174°.99W, h26^{km}, mB5.6/23, mb5.4/48, Ms5.2/27, Ms7 4.9/27*

ISC 14 22:49:56.7±0.7, **23°.37S**±0°.06×**175°.26W**±0°.07, **h14**^{km}±3^{km}, **h14**^{km}**:pP-P, n400,** σ1^{s}.**41**/367, **mb5.0**/116, **MS4.7**/37, **48C-14D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**6.32**	**202**	P	**Pn**	**22 51 25.7**	**-3.8**
RAO	**Raoul Island**	**6.32**	**202**	Pn	**Pn**	**22 51 25.7**	**-3.8**
NIUE	**Niue**	**6.56**	**50**	P	Pn	22 51 25.6	-7.1
	baz=6.1,SNR=12						
MSVF	**Nonsavu**	**8.41**	**311**	*i* P	**Pn**	**22 51 58.7**	**+0.3**
MSVF	**Nonsavu**	**8.41**	**311**		**Pn**	**22 51 58.5**	**+0.2**
AFI	**Afiamalu**	**9.97**	**20**	Pn	Pn	22 52 13.8	-6.0
	6.5nm,0.3s,baz=61,slow=2.6,SNR=11						
AFI				Sn	Sn	22 53 55.9	-16
	7.6nm,0.3s,baz=49,slow=18,SNR=4.6						
RAR	**Rarotonga**	**14.49**	**84**	Pn	Pn	22 53 13.0	-8.5
	5.1nm,0.3s,baz=257,slow=9.9,SNR=7.5						
RAR				LR	LR	22 58 13.1	
	comp=Z,3µm,20.0s,baz=260,slow=34						
RAR	**Rarotonga**	**14.49**	**84**		Pn	22 53 14.0	-7.5
FUNA	**Funafuti**	**15.69**	**339**		**Pn**	**22 53 38.4**	**+0.9**
URZ	**Urewera**	**16.21**	**202**	Pn	**P**	**22 53 48.1**	**+1.0**
	0.5nm,0.3s,baz=5.4,slow=2.6,SNR=5.0						
URZ				Sn	Sn	22 56 31.7	-12
	0.4nm,0.3s,baz=338,slow=23,SNR=4.7						
URZ				LR	LR	22 58 45.7	
	comp=Z,541nm,21.5s,baz=310,slow=33						
URZ	**Urewera**	**16.21**	**202**	IAmb	IAmb	22 53 54.5	
	comp=Z,47nm,1.1s						
DZM	**Mont Dzumac**	**16.93**	**271**	*e*P	**P**	**22 53 56.4**	**+1.0**
	comp=Z,224nm,1.4s						
DZM				*e*LR	LR	22 58 05.3	
	comp=Z,2µm,21.8s						
DZM	**Mont Dzumac**	**16.93**	**271**	Pn	**P**	**22 53 56.3**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=86,slow=17,SNR=12						
DZM	**Mont Dzumac**	**16.93**	**271**		**P**	**22 53 54.7**	**-0.8**
BFZ	**Birch Farm**	**18.68**	**201**	P	**Pn**	**22 54 15.9**	**+1.1**
BFZ				IAmb	IAmb	22 54 18.6	
	comp=Z,52nm,0.9s						
MSWZ	**Moikau Station**	**19.67**	**202**	P	**P**	**22 54 26.0**	**+0.7**
KHZ	**Kahutara**	**21.16**	**203**	P	**P**	**22 54 39.9**	**-1.5**
OXZ	**Oxford**	**22.50**	**205**	P	**P**	**22 54 57.0**	**+1.1**
FOZ	**Fox Glacier**	**23.58**	**208**	P	**P**	**22 55 07.4**	**+0.5**
FOZ				IAmb	IAmb	22 55 10.3	
	comp=Z,32nm,0.9s						
TBI	**Tubuai**	**23.67**	**95**	*e*LQ	LQ	22 59 30.9	
	comp=Z,1µm,27.8s						
TBI				*e*LR	LR	23 00 29.0	
	comp=Z,3µm,22.2s,baz=268						
PPT2	**Papeete2**	**24.72**	**81**	*e*LQ	LQ	22 59 55.0	
	comp=Z,2µm,24.2s						
PPT2				*e*LR	LR	23 00 51.9	
	comp=Z,3µm,21.8s,baz=248						
PPT	**Papeete**	**24.72**	**81**	LR	LR	23 02 45.1	
	comp=Z,2µm,20.5s,baz=264,slow=31						
MLZ	**Mavora Lakes**	**25.78**	**208**	P	**P**	**22 55 28.0**	**+0.8**
MLZ				IAmb	IAmb	22 55 28.5	
	comp=Z,44nm,1.1s						
WHZ	**Wether Hill Ro**	**26.27**	**207**	P	**P**	**22 55 31.9**	**+0.3**
WHZ				IAmb	IAmb	22 55 32.5	
	comp=Z,36nm,1.2s						
DCZ	**Deep Cove**	**26.27**	**209**	P	**P**	**22 55 31.7**	**+0.2**
DCZ				IAmb	IAmb	22 55 33.5	
	comp=Z,21nm,1.0s						
HNR	**Honiara**	**27.47**	**296**	LR	LR	23 06 07.3	
	comp=Z,596nm,19.9s,baz=146,slow=36						
EIDS	**Eidsvold**	**30.68**	**259**	P	**P**	**22 56 11.5**	**+0.3**
	baz=31,SNR=3.8						
RMQ	**Roma**	**32.72**	**257**	P	**P**	**22 56 30.5**	**+1.4**
	baz=33,SNR=7.6						
YNG	**Young**	**33.49**	**243**	P	**P**	**22 56 36.3**	**+0.6**
	baz=34,SNR=5.4						
CMSA	**Cobar Meteorol**	**35.45**	**248**	P	**P**	**22 56 52.5**	**-0.2**
	baz=36,SNR=8.8						
CTA	**Charters Tower**	**35.84**	**268**	P	**P**	**22 56 56.1**	**-0.1**
	comp=Z,22nm,0.8s,baz=93,slow=11,SNR=23						
TOO	**Toolangi**	**36.40**	**238**	P	**P**	**22 57 01.7**	**+0.8**
	baz=37,SNR=4.2						
TAOE	**Nuku Hiva Isla**	**36.56**	**73**	*e*LR	LR	23 06 15.9	
	comp=Z,1µm,21.9s						
QLP	**Quilpie**	**36.76**	**256**	P	**P**	**22 57 04.3**	**+0.4**
	baz=37,SNR=4.5						
KRVT	**Keravat (AS076**	**36.83**	**296**	P	**P**	**22 57 02.9**	**-1.8**
	comp=Z,26nm,0.5s,baz=29,slow=16,SNR=4.0						
PMG	**Port Moresby**	**38.50**	**285**	P	**P**	**22 57 17.8**	**-1.0**
	comp=Z,59nm,0.9s,baz=112,slow=2.9,SNR=15						
PMG	**Port Moresby**	**38.50**	**285**	*ce*P	**P**	**22 57 18.2**	**-0.7**
PMG				pmax	pmax		
	comp=Z,285nm,1.0s						
PMG	**Port Moresby**	**38.50**	**285**	P	**P**	**22 57 18.3**	**-0.5**
STKA	**Stephens Creek**	**38.95**	**248**	P	**P**	**22 57 22.5**	**0.0**
	baz=39,SNR=4.3						
STKA	**Stephens Creek**	**38.95**	**248**	P	**P**	**22 57 21.6**	**-0.8**
	comp=Z,8.4nm,1.0s,baz=86,slow=11,SNR=6.7						
STKA				LR	LR	23 13 08.9	
	comp=Z,1µm,18.2s,baz=83,slow=36						
STKA	**Stephens Creek**	**38.95**	**248**	P	**P**	**22 57 22.4**	**0.0**
STKA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
STKA	**Stephens Creek**	**38.95**	**248**	P	**P**	**22 57 22.4**	**0.0**
HTT	**Hallett**	**41.25**	**245**	P	**P**	**22 57 41.1**	**-0.5**
	baz=42,SNR=4.5						
QIS	**Mount Isa**	**41.83**	**265**	P	**P**	**22 57 45.9**	**-0.6**
	baz=42,SNR=4.0						
BBOO	**Buckleboo**	**43.65**	**246**	P	**P**	**22 58 01.1**	**0.0**
	baz=44,SNR=5.3						
ASAR	**Alice Springs**	**46.41**	**259**	P	**P**	**22 58 22.6**	**-0.7**
	comp=Z,13nm,0.9s,baz=91,slow=7.9,SNR=51						
ASAR	**Alice Springs**	**46.41**	**259**	P	**P**	**22 58 21.5**	**-1.7**
WB2	**Warramunga Arr**	**46.77**	**264**	P	**P**	**22 58 25.1**	**-1.0**
WRAB	**Tennant Creek**	**46.78**	**264**	*ce*P	**P**	**22 58 25.2**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,28nm,1.2s						
WRAB	**Tennant Creek**	**46.78**	**264**	P	**P**	**22 58 25.7**	**-0.4**
WRA	**Warramunga Arr**	**46.79**	**264**	P	**P**	**22 58 24.4**	**-1.8**
	comp=Z,13nm,1.0s,baz=89,slow=5.9,SNR=27						
WRA				LR	LR	23 18 10.1	
	comp=Z,1µm,18.4s,baz=110,slow=36						
WRA	**Warramunga Arr**	**46.79**	**264**	*ce*P	**P**	**22 58 24.3**	**-1.9**
WRA				pmax	pmax		
	comp=Z,13nm,1.0s						
WRA	**Warramunga Arr**	**46.79**	**264**	P	**P**	**22 58 24.6**	**-1.6**
HLK	**Haleakala**	**47.62**	**24**	P	**P**	**22 58 32.4**	**-0.4**
KDU	**Kakadu**	**50.59**	**273**	P	**P**	**22 58 54.4**	**-1.1**
	baz=51,SNR=4.7						
MTN	**Manton Dam**	**51.77**	**272**	P	P	22 58 56.7	-7.7
	baz=52,SNR=4.5						
KNRA	**Kununurra**	**53.05**	**268**	P	**P**	**22 59 13.0**	**-0.8**
	baz=54,SNR=17						
GUMO	**Guam**	**53.59**	**309**	LR	LR	23 20 29.0	
	comp=Z,252nm,20.3s,baz=116,slow=34						
FITZ	**Fitzroy Crossi**	**55.21**	**264**	P	**P**	**22 59 30.0**	**+0.5**
	baz=56,SNR=5.6						
FITZ	**Fitzroy Crossi**	**55.21**	**264**	P	**P**	**22 59 29.1**	**-0.5**
	comp=Z,30nm,1.1s,baz=173,slow=0.5,SNR=12						
VNDA	**Vanda**	**55.31**	**186**	P	**P**	**22 59 31.3**	**+1.9**
	comp=Z,5.0nm,0.9s,baz=19,slow=6.2,SNR=15						
VNDA				LR	LR	23 18 09.6	
	comp=Z,286nm,21.7s,baz=14,slow=31						
VNDA	**Vanda**	**55.31**	**186**	P	**P**	**22 59 31.6**	**+2.2**
VNDA				IAmb	IAmb	22 59 34.8	
	comp=Z,7.1nm,1.0s						
SIJI	**Sorong**	**56.44**	**285**	P	**P**	**22 59 37.6**	**-0.9**
	comp=Z,72nm,0.9s,baz=58,slow=7.0,SNR=20						
SWI	**Sorong**	**56.45**	**285**	P	**P**	**22 59 38.4**	**-0.1**
	comp=Z,89nm,1.0s						
AAI	**Ambon**	**57.95**	**281**	P	**P**	**22 59 48.7**	**-0.4**
	comp=Z,24nm,0.7s						
NLAI	**Namlea**	**59.13**	**281**	P	**P**	**22 59 56.8**	**-0.5**
	comp=Z,29nm,1.1s						
SOEI	**Soe**	**59.15**	**272**	P	**P**	**22 59 58.3**	**+0.6**
	comp=Z,79nm,1.1s						
KLBR	**Kellerberrin**	**59.19**	**246**	P	**P**	**22 59 57.5**	**-0.1**
	baz=60,SNR=5.6						
MBWA	**Marble Bar**	**59.74**	**258**	P	**P**	**23 00 03.0**	**+1.4**
SANI	**Sanana**	**60.64**	**281**	P	**P**	**23 00 05.5**	**-2.2**
	comp=Z,31nm,1.0s						
TNTI	**Ternate**	**60.66**	**285**	P	**P**	**23 00 07.3**	**-0.5**
	comp=Z,44nm,1.1s						
WBSI	**Waikabubak, Su**	**63.67**	**271**	P	**P**	**23 00 27.5**	**-0.7**
	comp=Z,30nm,1.0s						
PLAI	**Plampang**	**65.45**	**271**	P	**P**	**23 00 38.9**	**-0.9**
	comp=Z,37nm,0.9s						
SPSI	**Sidrap Palu**	**65.49**	**277**	P	**P**	**23 00 38.8**	**-1.2**
	comp=Z,9.2nm,1.1s						
QSPA	**South Pole Qui**	**66.71**	**180**	P	**P**	**23 00 47.9**	**+0.7**
	comp=Z,15nm,1.0s,baz=33,slow=2.8,SNR=20						
QSPA				LR	LR	23 25 14.7	
	comp=Z,702nm,21.1s,baz=55,slow=32						
QSPA	**South Pole Qui**	**66.71**	**180**	P	**P**	**23 00 48.7**	**+1.5**
KKM	**Kota Kinabalu**	**72.95**	**285**	P	**P**	**23 01 25.1**	**-1.3**
KKM				IAmb	IAmb	23 01 28.0	
	comp=Z,17nm,1.0s						
MJAR	**Matsushiro Arr**	**74.03**	**323**	P	**P**	**23 01 31.7**	**-0.4**
	comp=Z,2.9nm,0.7s,baz=145,slow=5.4,SNR=6.9						
MJAR				LR	LR	23 30 18.2	
	comp=Z,107nm,21.9s,baz=140,slow=33						
MJAR	**Matsushiro Arr**	**74.03**	**323**	P	**P**	**23 01 31.7**	**-0.4**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MJAR	**Matsushiro Arr**	**74.03**	**323**	IAmb	IAmb	23 01 33.6	
	comp=Z,1.7nm,0.8s						
LEM	**Lembang**	**75.53**	**269**	P	**P**	**23 01 41.9**	**+0.3**
	comp=Z,42nm,0.9s,baz=78,slow=2.5,SNR=6.7						
JNU	**Nakatsue**	**76.10**	**316**	P	**P**	**23 01 43.8**	**-0.4**
	comp=Z,10nm,0.9s,baz=122,slow=5.9,SNR=4.2						
JNU	**Nakatsue**	**76.10**	**316**	IAmb	IAmb	23 01 49.3	
	comp=Z,17nm,1.1s						
KSM	**Kuching**	**76.33**	**278**	P	**P**	**23 01 46.5**	**+0.6**
ASAJ	**Asahikawa**	**77.46**	**330**	P	**P**	**23 01 52.7**	**+1.2**
	comp=Z,50nm,0.9s,baz=220,slow=8.8,SNR=19						
PMSA	**Palmer Station**	**77.64**	**156**	LR	LR	23 29 07.3	
	comp=Z,293nm,21.1s,baz=283,slow=30						
SSLB	**Suanglung**	**77.67**	**303**	IAmb	IAmb	23 01 53.5	
	comp=Z,19nm,1.0s						
KMRM	**Mail Ridge**	**79.41**	**38**	IAmb	IAmb	23 02 06.7	
	comp=Z,19nm,1.0s						
YSS	**Yuzh-Sakhalins**	**79.60**	**332**	⇑ *e*P	**P**	**23 02 04.9**	**+1.6**
YSS				*e**PP	**pwP**	**23 02 16.8**	**+3.9**
YSS				*e*S	**S**	**23 12 03.3**	**-1.4**
YSS				pmax	pmax		
	comp=Z,70nm,1.0s						
YSS				pmax	pmax		
	comp=Z,600nm,5.9s						
YSS				smax	smax		
	comp=N,400nm,4.9s						
YSS	**Yuzh-Sakhalins**	**79.60**	**332**	P	**P**	**23 02 05.1**	**+1.9**
PETK	**Petropavlovsk-**	**79.71**	**344**	P	**P**	**23 02 04.2**	**+0.4**
	comp=N,27nm,1.0s,baz=111,slow=6.5,SNR=9.0						
MAW	**Mawson**	**79.72**	**199**	P	**P**	**23 02 05.8**	**+2.1**
	comp=N,10nm,0.9s,baz=116,slow=6.2,SNR=3.7						
MAW				LR	LR	23 36 41.6	
	comp=N,606nm,19.2s,baz=91,slow=35						
MAW	**Mawson**	**79.72**	**199**	P	**P**	**23 02 05.8**	**+2.1**
MAW				pmax	pmax		
	comp=Z,6.0nm,1.2s						
CMB	**Columbia Colle**	**79.89**	**41**	IAmb	IAmb	23 02 07.6	
	comp=Z,11nm,1.1s						
CMB					pwP	23 02 14.9	-0.9
AFDM	**Forest Hills D**	**80.14**	**40**	IAmb	IAmb	23 02 09.3	
	comp=Z,8.2nm,1.0s						
ORV	**Oroville**	**80.22**	**39**	IAmb	IAmb	23 02 09.8	
	comp=Z,8.0nm,1.1s						
WDC	**Whiskeytown Da**	**80.31**	**38**	IAmb	IAmb	23 02 09.3	
	comp=Z,8.0nm,1.1s						
USHA	**Ushuaia**	**80.33**	**146**	LR	LR	23 32 27.3	
	comp=Z,501nm,19.2s,baz=254,slow=32						
MDPB	**Devils Postpil**	**80.43**	**42**	IAmb	IAmb	23 02 11.5	
	comp=Z,9.7nm,0.9s						
OMMB	**Old Mammoth Mi**	**80.47**	**42**	IAmb	IAmb	23 02 26.6	
	comp=Z,8.7nm,1.2s						
KSRS	**Korea Array**	**80.72**	**318**	P	**P**	**23 02 11.1**	**+1.6**
	comp=Z,8.6nm,0.9s,baz=139,slow=6.1,SNR=19						
KSRS				LR	LR	23 34 45.4	
	comp=Z,145nm,18.9s,baz=125,slow=33						
KSAR	**Wonju Array Be**	**80.73**	**318**	P	**P**	**23 02 09.9**	**+0.3**
KSAR	**Wonju Array Be**	**80.73**	**318**	P	**P**	**23 02 09.9**	**+0.3**
YBH	**Yreka Blue Hor**	**80.99**	**37**	P	**P**	**23 02 11.7**	**+0.6**
	comp=Z,4.9nm,1.0s,baz=196,slow=4.2,SNR=13						
PNTR	**Pine Nut**	**81.04**	**41**	P	**P**	**23 02 10.9**	**-0.6**
PNTR				IAmb	IAmb	23 02 14.8	
	comp=Z,13nm,0.9s						
BEKR	**Beckworth**	**81.09**	**40**	P	**P**	**23 02 09.5**	**-2.3**
BEKR				IAmb	IAmb	23 02 09.9	
	comp=Z,8.1nm,1.1s						
YERR	**Yerington**	**81.19**	**41**	IAmb	IAmb	23 02 13.4	
	comp=Z,7.6nm,0.9s						
NVAR	**Mina Array Bea**	**81.41**	**42**	P	**P**	**23 02 13.8**	**+0.3**
	comp=Z,6.1nm,0.9s,baz=221,slow=8.6,SNR=16						
NVAR				LR	LR	23 30 34.5	
	comp=Z,506nm,21.9s,baz=217,slow=30						
HUMO	**Hull Mountain**	**81.44**	**36**	IAmb	IAmb	23 02 17.1	
	comp=Z,9.6nm,1.1s						
NV11	**Mina Array Sit**	**81.50**	**42**	IAmb	IAmb	23 02 17.1	
	comp=Z,11nm,1.1s						
KVN	**Kaiserville**	**81.92**	**41**	IAmb	IAmb	23 02 19.2	
	comp=Z,8.0nm,1.2s						
VLA	**Vladivostok**	**82.09**	**324**	*i* P	**P**	**23 02 16.4**	**-0.3**
VLA				pmax	pmax		
	comp=Z,26nm,1.1s						
MSHR	**Mys Shultsa**	**82.13**	**323**	*i* P	**P**	**23 02 15.7**	**-1.2**
SHPR	**Sheep Range**	**82.22**	**45**	P	**P**	**23 02 17.2**	**-0.5**
W13A	**Hualapai Mount**	**82.23**	**47**	P	**P**	**23 02 17.6**	**-0.3**
MOD	**Modoc Plateau**	**82.45**	**38**	P	**P**	**23 02 18.6**	**-0.2**
MOD				IAmb	IAmb	23 02 27.8	
	comp=Z,5.5nm,0.9s						
USA0B	**Ussuriysk Arra**	**82.77**	**325**	*i* P	**P**	**23 02 20.7**	**+0.5**
USA0B	**Ussuriysk Arra**	**82.77**	**325**	P	**P**	**23 02 22.2**	**+2.0**
USRK	**Ussuriysk Ar.**	**82.77**	**325**	P	**P**	**23 02 21.7**	**+1.5**
	comp=Z,34nm,0.9s,baz=136,slow=3.3,SNR=39						
USRK	**Ussuriysk Ar.**	**82.77**	**325**	P	**P**	**23 02 21.2**	**+1.0**
H04A	**Detroit Lake**	**83.26**	**35**	P	**P**	**23 02 21.6**	**-1.2**
H04A				IAmb	IAmb	23 02 39.1	
	comp=Z,12nm,1.0s						
PINE	**Pine Mountain**	**83.33**	**36**	P	**P**	**23 02 23.1**	**-0.3**
319A	**Douglas**	**83.36**	**52**	P	**P**	**23 02 25.0**	**+1.3**
319A				IAmb	IAmb	23 02 26.4	
	comp=Z,6.6nm,0.9s						
X16A	**Lo Mia Camp, P**	**83.50**	**48**	P	**P**	**23 02 23.8**	**-0.7**
NJ2	**Nanjing**	**83.66**	**309**	*e*P	**P**	**23 02 26.4**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,18nm,0.6s						
U15A	**North Rim**	**84.05**	**46**	IAmb	IAmb	23 02 31.2	
	comp=Z,14nm,1.1s						
WUAZ	**Wupatki**	**84.15**	**47**	P	**P**	**23 02 27.5**	**-0.3**
WUAZ				IAmb	IAmb	23 02 34.0	
	comp=Z,5.3nm,0.9s						
SZCU	**Shurtz Canyon**	**84.20**	**45**	P	**P**	**23 02 26.8**	**-1.2**
ZAIG	**Zacatecas**	**84.23**	**62**	P	**P**	**23 02 26.8**	**-1.8**
ZAIG				IAmb	IAmb	23 02 40.3	
	comp=Z,2.8nm,0.5s						
PSUT	**Pine Spring**	**84.25**	**44**	P	**P**	**23 02 28.7**	**+0.4**
I07A	**Izee**	**84.31**	**37**	P	**P**	**23 02 27.4**	**-0.9**
I07A				IAmb	IAmb	23 02 31.4	
	comp=Z,12nm,1.1s						
MDJ	**Mudanjiang**	**84.33**	**324**	P	**P**	**23 02 29.9**	**+1.7**
MDJ				pmax	pmax		
	comp=Z,39nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,480nm,5.8s						
MDJ	**Mudanjiang**	**84.33**	**324**	P	**P**	**23 02 29.1**	**+0.9**
J08A	**Circle Bar Ran**	**84.42**	**38**	P	**P**	**23 02 27.7**	**-1.2**
J08A				IAmb	IAmb	23 02 31.9	
	comp=Z,14nm,1.0s						
G06A	**Carlson Farm,**	**84.45**	**35**	P	**P**	**23 02 29.5**	**+0.6**
SYO	**Syowa Base**	**84.48**	**192**	⇑ *i*P	**P**	**23 02 28.0**	**-0.7**
SYO	**Syowa Base**	**84.48**	**192**	⇓ *i*pP	pP	23 02 31.4	-0.2
PKCU	**Pink Cliffs**	**84.62**	**45**	P	**P**	**23 02 30.1**	**-0.2**
ELK	**Elko**	**84.70**	**41**	IAmb	IAmb	23 02 33.3	
	comp=Z,7.8nm,1.1s						
MTPU	**Mount Pierson**	**85.04**	**45**	P	**P**	**23 02 33.0**	**+0.5**
D05A	**Enumclaw**	**85.05**	**33**	P	**P**	**23 02 32.7**	**+1.0**
SNAA	**Sanae**	**85.06**	**178**	P	**P**	**23 02 32.7**	**+0.9**
SNAA	**Sanae**	**85.06**	**178**	LR	LR	23 35 41.5	
	comp=Z,730nm,21.3s,baz=182,slow=32						
SNAA	**Sanae**	**85.06**	**178**	*i* P	**P**	**23 02 32.7**	**+0.9**
SNAA	**Sanae**	**85.06**	**178**	P	**P**	**23 02 32.6**	**+0.8**
SNAA				IAmb	IAmb	23 02 34.8	
	comp=Z,13nm,1.1s						
VNA3	**Neumayer Olymp**	**85.10**	**175**	P	**P**	**23 02 32.6**	**+0.7**
GRNR	**Gornyy**	**85.22**	**332**	⇑ *i*P	**P**	**23 02 34.0**	**+1.4**
GRNR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GRNR				MLR	MLR		
	comp=Z,90nm,12.0s						
MSU	**Marysvale**	**85.31**	**45**	P	**P**	**23 02 34.4**	**+0.7**
MSU	**Marysvale**	**85.31**	**45**	P	**P**	**23 02 34.4**	**+0.7**
GO06	**Curarrehue**	**85.34**	**131**	P	**P**	**23 02 34.9**	**+1.0**
GO06				IAmb	IAmb	23 02 36.1	
	comp=Z,13nm,1.1s						
PLCA	**Paso Flores**	**85.46**	**132**	P	**P**	**23 02 36.3**	**+1.9**
	comp=Z,5.1nm,1.1s,baz=262,slow=9.3,SNR=4.6						
PLCA				LR	LR	23 32 00.2	
	comp=Z,294nm,21.3s,baz=264,slow=30						
PLCA	**Paso Flores**	**85.46**	**132**	P	**P**	**23 02 36.3**	**+1.9**
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
PLCA	**Paso Flores**	**85.46**	**132**	IAmb	IAmb	23 02 38.1	
	comp=Z,2.2nm,0.8s						
VNA2	**Neumayer--Watz**	**85.57**	**176**	P	**P**	**23 02 35.5**	**+1.2**
	baz=172,slow=3.9						
E07A	**Sunnyside**	**85.72**	**35**	P	**P**	**23 02 34.9**	**-0.4**
E07A				IAmb	IAmb	23 02 38.4	
	comp=Z,7.6nm,0.7s						
LTY	**Liberty**	**85.76**	**34**	P	**P**	**23 02 35.0**	**-0.4**
HAWA	**Hanford**	**85.79**	**35**	P	**P**	**23 02 35.6**	**+0.1**
HAWA				IAmb	IAmb	23 02 38.0	
	comp=Z,5.0nm,0.9s						
VNA1	**Neumayer--Stat**	**85.79**	**176**	P	**P**	**23 02 35.7**	**+0.4**
MFID	**Camas Ranch**	**85.96**	**39**	IAmb	IAmb	23 02 53.3	
	comp=Z,7.2nm,1.1s						
NVL	**N'lazarevskaya**	**85.99**	**182**	*e*P	P	23 02 30.3	-5.9
NVL				*e*S	S	23 12 58.6	-11
NVL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
IPM	**Ipoh**	**86.01**	**277**	P	**P**	**23 02 37.6**	**+0.2**
CN2	**Changchun**	**86.12**	**321**	*e*P	**P**	**23 02 38.3**	**+1.1**
CN2				pmax	pmax		
	comp=Z,40nm,1.3s						
WHN	**Wuhan**	**86.19**	**305**	P	**P**	**23 02 39.3**	**+1.5**
WHN				pmax	pmax		
	comp=Z,60nm,1.2s						
Q16A	**Castle Valley**	**86.19**	**45**	P	**P**	**23 02 38.7**	**+0.7**
KLR	**Kul'dur**	**86.29**	**328**	P	**P**	**23 02 38.8**	**+0.8**
	comp=Z,4.1nm,0.9s,baz=112,slow=3.6,SNR=8.0						
KLR	**Kul'dur**	**86.29**	**328**	*i* P	**P**	**23 02 37.0**	**-0.9**
KLR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MNTX	**Cornudas Mount**	**86.37**	**53**	P	**P**	**23 02 38.1**	**-0.7**
MNTX				IAmb	IAmb	23 02 41.7	
	comp=Z,5.3nm,1.1s						
TXAR	**Lajitas Array**	**86.50**	**56**	P	**P**	**23 02 39.3**	**-0.3**
	comp=Z,2.4nm,0.9s,baz=211,slow=5.6,SNR=15						
TXAR	**Lajitas Array**	**86.50**	**56**	P	**P**	**23 02 39.7**	**+0.2**
TXAR	**Lajitas Array**	**86.50**	**56**	P	**P**	**23 02 39.7**	**+0.2**
MPU	**Maple Canyon**	**86.51**	**44**	P	**P**	**23 02 38.2**	**-1.3**
KULM	**Kulim**	**86.67**	**277**	P	**P**	**23 02 42.1**	**+1.4**
SPUT	**South Promonto**	**86.73**	**42**	P	**P**	**23 02 40.7**	**+0.1**
P17A	**Butcher Ranch,**	**86.78**	**44**	P	**P**	**23 02 41.1**	**+0.3**
GAMB	**Gambell**	**86.90**	**2**	IAmb	IAmb	23 02 46.8	
	comp=Z,11nm,1.1s						
TIA	**Tai'an**	**87.08**	**312**	P	**P**	**23 02 43.3**	**+1.2**
TIA				pmax	pmax		
	comp=Z,37nm,1.0s						
B08A	**Colville Reser**	**87.16**	**34**	IAmb	IAmb	23 02 58.5	
	comp=Z,4.8nm,1.0s						
MA2	**Magadan**	**87.23**	**343**	P	**P**	**23 02 41.8**	**-0.5**
	comp=Z,5.2nm,0.7s,baz=175,slow=8.7,SNR=5.8						
MA2	**Magadan**	**87.23**	**343**	*ce*P	**P**	**23 02 41.9**	**-0.4**
MA2				pmax	pmax		
	comp=Z,15nm,1.7s						
MA2	**Magadan**	**87.23**	**343**	IAmb	IAmb	23 02 50.2	
	comp=Z,9.8nm,1.1s						
ANMO	**Albuquerque**	**87.25**	**50**	*ce*P	**P**	**23 02 43.0**	**-0.2**
ANMO				pmax	pmax		
	comp=Z,13nm,2.5s						
ANMO	**Albuquerque**	**87.25**	**50**	P	**P**	**23 02 44.1**	**+0.9**
PSI	**Prapat**	**87.26**	**274**	P	**P**	**23 02 43.6**	**-0.1**
	comp=Z,42nm,1.0s,baz=164,slow=5.1,SNR=29						
TCUT	**Toone Canyon**	**87.27**	**43**	P	**P**	**23 02 42.3**	**-1.0**
PV17	**East Wray Mesa**	**87.29**	**46**	P	**P**	**23 02 42.8**	**-0.5**
PV17				IAmb	IAmb	23 02 58.1	
	comp=Z,5.7nm,0.6s						
PV19	**Morning Glory**	**87.29**	**46**	P	**P**	**23 02 43.1**	**-0.3**
PV19				IAmb	IAmb	23 02 57.5	
	comp=Z,3.8nm,0.8s						
PV09	**Paradox Valley**	**87.29**	**46**	P	**P**	**23 02 43.4**	**-0.1**
PV18	**Skein Mesa, Pa**	**87.30**	**46**	P	**P**	**23 02 43.9**	**+0.5**
PV18				IAmb	IAmb	23 02 44.0	
	comp=Z,4.3nm,1.1s						
PV16	**Nyswonger Mesa**	**87.33**	**46**	P	**P**	**23 02 40.5**	**-3.1**
PV12	**Saucer Basin,**	**87.41**	**46**	P	**P**	**23 02 41.5**	**-2.5**
NEW	**Newport**	**88.24**	**35**	P	**P**	**23 02 47.0**	**-0.5**
NEW				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NEW	**Newport**	**88.24**	**35**	P	**P**	**23 02 47.0**	**-0.5**
NEW				IAmb	IAmb	23 02 49.2	
	comp=Z,4.3nm,0.9s						
AHID	**Auburn Hatcher**	**88.39**	**42**	P	**P**	**23 02 48.0**	**-0.5**
REDW	**Red Top Meadow**	**88.88**	**41**	P	**P**	**23 02 51.4**	**+0.6**
FXWY	**Fox Creek**	**88.92**	**41**	P	**P**	**23 02 51.7**	**+0.6**
RND	**Reindeer**	**88.96**	**12**	P	**P**	**23 02 50.5**	**0.0**
RND				pmax	pmax		
	comp=Z,6.0nm,1.0s						
RND	**Reindeer**	**88.96**	**12**	P	**P**	**23 02 50.5**	**0.0**
RND				IAmb	IAmb	23 03 04.4	
	comp=Z,6.2nm,1.0s						
BW06	**Boulder Array**	**89.33**	**42**	P	**P**	**23 02 52.8**	**-0.2**
BW06				IAmb	IAmb	23 02 54.5	
	comp=Z,5.6nm,1.1s						
PDAR	**Pinedale Array**	**89.34**	**42**	P	**P**	**23 02 52.2**	**-0.8**
	comp=Z,2.4nm,1.0s,baz=222,slow=2.0,SNR=13						
PDAR				LR	LR	23 35 27.5	
	comp=Z,293nm,22.0s,baz=263,slow=31						
PDAR	**Pinedale Array**	**89.34**	**42**	P	**P**	**23 02 52.4**	**-0.6**
QLMT	**Earthquake Lak**	**89.36**	**40**	P	**P**	**23 02 52.5**	**-0.5**
YHL	**Hebgen Lake**	**89.51**	**40**	P	**P**	**23 02 51.3**	**-2.6**
BJI	**Beijing**	**89.72**	**314**	P	**P**	**23 02 55.9**	**+1.4**
BJI				pmax	pmax		
	comp=Z,15nm,2.2s						
DLBC	**Dease Lake**	**89.72**	**22**	P	**P**	**23 02 55.0**	**+0.8**
	comp=Z,3.5nm,0.8s,baz=240,slow=22,SNR=3.8						
SEY	**Seymchan**	**89.75**	**346**	P	**P**	**23 02 54.2**	**+0.1**
	comp=Z,6.3nm,1.0s,baz=108,slow=8.2,SNR=14						
SEY	**Seymchan**	**89.75**	**346**	*i* P	**P**	**23 02 53.6**	**-0.5**
WRH	**Wood River Hil**	**90.07**	**11**	IAmb	IAmb	23 02 56.9	
	comp=Z,11nm,1.1s						
BCAR	**Beaver Creek A**	**90.12**	**15**	P	**P**	**23 02 56.4**	**+0.4**
GYA	**Guiyang**	**90.27**	**299**	⇑ *i*P	**P**	**23 02 59.3**	**+1.7**
GYA				S	**S**	**23 13 50.1**	**-1.7**
GYA				sS	ScS	23 14 06.8	+11
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,5.5s						
GYA				LR	LR		
	comp=Z,430nm,16.9s						
GYA				LR	LR		
	comp=Z,410nm,18.0s						
GYA				LR	LR		
	comp=Z,450nm,17.7s						
YNE	**Yellowstone No**	**90.29**	**40**	P	**P**	**23 02 57.6**	**+0.2**
SLVN	**Son La**	**90.36**	**293**	P	**P**	**23 02 58.8**	**+0.8**
SLVN				IAmb	IAmb	23 03 12.6	
	comp=Z,7.2nm,1.1s						
WALA	**Waterton Lakes**	**90.42**	**35**	IAmb	IAmb	23 03 13.8	
	comp=Z,7.0nm,1.1s						
SCRK	**Sand Creek**	**90.43**	**13**	P	**P**	**23 02 57.6**	**+0.1**
SCRK				IAmb	IAmb	23 03 00.1	
	comp=Z,5.1nm,1.0s						
COLA	**College**	**90.48**	**11**	P	**P**	**23 02 56.6**	**-0.8**

COLA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
COLA	**College**	90.48	11	P	**P**	**23 02 56.6**	**-0.8**
COLA				IAmb	IAmb	23 03 09.6	
	comp=Z,6.9nm,0.8s						
MDM	**Murphy Dome**	90.49	11	P	**P**	**23 02 57.3**	**-0.3**
MDM				IAmb	IAmb	23 03 07.1	
	comp=Z,5.8nm,0.8s						
ILAR	**Eielson Array**	90.57	12	P	**P**	**23 02 57.7**	**-0.2**
	comp=Z,3.9nm,1.1s,baz=216,slow=5.2,SNR=11						
ILAR	**Eielson Array**	90.57	12	P	**P**	**23 02 57.4**	**-0.5**
IMAR	**Indian Mountai**	90.57	9	P	**P**	**23 02 58.1**	**+0.2**
RLMT	**Red Lodge**	90.80	40	P	**P**	**23 03 00.0**	**+0.3**
RLMT				IAmb	IAmb	23 03 03.0	
	comp=Z,4.6nm,1.0s						
PBKT	**Sadao Pong**	90.93	288	P	**P**	**23 03 01.2**	**+0.6**
ABTX	**Abilene, Hawle**	91.09	55	P	**P**	**23 03 01.3**	**+0.1**
ABTX				IAmb	IAmb	23 03 19.1	
	comp=Z,9.1nm,1.1s						
CFA	**Coronel Fontan**	91.36	125	LR	LR	23 34 47.0	
	comp=Z,473nm,21.0s,baz=256,slow=29						
ZEA	**Zeya**	91.37	330	*e*P	**P**	**23 03 03.2**	**+1.3**
ZEA				pmax	pmax		
	comp=Z,17nm,1.0s						
DAWY	**Dawson**	91.54	15	IAmb	IAmb	23 03 06.0	
	comp=Z,8.7nm,1.1s						
RDOG	**Red Dog Mine**	91.61	5	P	**P**	**23 03 02.9**	**+0.2**
RDOG				IAmb	IAmb	23 03 17.1	
	comp=Z,2.6nm,0.8s						
EGAK	**Eagle**	91.74	14	IAmb	IAmb	23 03 20.3	
	comp=Z,6.9nm,1.0s						
XAN	**Xi'an**	91.89	306	P	**P**	**23 03 06.4**	**+1.6**
XAN				pP	pwP	23 03 20.3	+5.8
XAN				SKS	**SKSac**	**23 13 38.8**	**+1.2**
XAN				pmax	pmax		
	comp=Z,43nm,0.9s						
XAN				LR	LR		
	comp=Z,210nm,16.0s						
XAN				LR	LR		
	comp=Z,250nm,22.5s						
BILL	**Bilibino**	92.16	353	⇓*e*P	**P**	**23 03 04.5**	**-0.7**
BILL				*e*		23 06 43.4	
BILL				pmax	pmax		
	comp=Z,20nm,2.7s						
NNA	**Nana**	92.88	104	LR	LR	23 35 22.8	
	comp=Z,771nm,20.8s,baz=208,slow=29						
KMI	**Kunming**	92.91	296	P	**P**	**23 03 10.6**	**+0.6**
KMI				pmax	pmax		
	comp=Z,30nm,1.0s						
KMI	**Kunming**	92.91	296	P	**P**	**23 03 10.6**	**+0.6**
HHC	**Hu-ho-hao-te**	93.17	313	*e*P	**P**	**23 03 12.0**	**+1.3**
HHC				pP	pwP	23 03 17.6	-2.7
HHC				sP	sP	23 03 26.3	+12
HHC				S	**S**	**23 14 22.0**	**+4.6**
HHC				SS	**SS**	**23 20 28.8**	**-4.5**
HHC				pmax	pmax		
	comp=Z,300nm,7.2s						
HHC				LR	LR		
	comp=Z,690nm,18.8s						
HHC				LR	LR		
	comp=Z,570nm,17.2s						
HHC				LR	LR		
	comp=Z,650nm,17.1s						
BMAR	**Burnt Mountain**	93.37	11	P	**P**	**23 03 11.9**	**+1.0**
ATAH	**Atahualpa**	93.45	99	LR	LR	23 35 41.2	
	comp=Z,622nm,20.3s,baz=220,slow=29						
CM31	**Chiang Mai Arr**	93.46	288	P	**P**	**23 03 13.0**	**+0.7**
CMAR	**Chiang Mai Arr**	93.46	288	P	**P**	**23 03 14.3**	**+1.9**
	comp=Z,20nm,1.0s,baz=123,slow=3.0,SNR=103						
CMAR				LR	LR	23 46 05.5	
	comp=Z,113nm,18.7s,baz=130,slow=36						
CMAR	**Chiang Mai Arr**	93.46	288	P	**P**	**23 03 13.9**	**+1.5**
CMAR	**Chiang Mai Arr**	93.46	288	P	**P**	**23 03 13.9**	**+1.5**
RSSD	**Black Hills**	93.47	43	P	**P**	**23 03 12.8**	**+0.6**
RSSD				pmax	pmax		
	comp=Z,9.0nm,1.1s						
RSSD	**Black Hills**	93.47	43	P	**P**	**23 03 12.8**	**+0.6**
RSSD				IAmb	IAmb	23 03 14.4	
	comp=Z,8.6nm,1.1s						
CHTO	**Chiang Mai**	93.59	289	P	**P**	**23 03 14.1**	**+1.1**
CHTO				pmax	pmax		
	comp=Z,32nm,1.1s						
CHTO	**Chiang Mai**	93.59	289	P	**P**	**23 03 14.1**	**+1.1**
R32A	**Long Quarter,**	94.37	50	P	**P**	**23 03 16.3**	**+0.2**
R32A				IAmb	IAmb	23 03 18.5	
	comp=Z,8.2nm,0.8s						
CD2	**Chengdu**	94.47	302	P	**P**	**23 03 16.0**	**-0.8**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LVC	**Limon Verde**	95.06	117	LR	LR	23 36 18.1	
	comp=Z,360nm,21.6s,baz=282,slow=29						
TEIG	**Tepich**	95.17	70	LR	LR	23 38 42.7	
	comp=Z,353nm,20.2s,baz=70,slow=31						
YAK	**Yakutsk**	95.73	337	LR	LR	23 39 50.9	
	comp=Z,78nm,21.6s,baz=157,slow=31						
YAK	**Yakutsk**	95.73	337	*i* P	**P**	**23 03 20.7**	**-1.0**
YAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
INK	**Inuvik**	96.39	14	P	**P**	**23 03 23.8**	**-0.8**
	comp=Z,1.8nm,1.0s,baz=168,slow=4.9,SNR=4.2						
LZH	**Lanzhou**	96.52	306	*e*P	**P**	**23 03 28.3**	**+2.1**
LZH				pP	pwP	23 03 37.6	+1.7
LZH				sP	sP	23 03 40.8	+11
LZH				*e*PP	**PP**	**23 07 25.3**	**+4.5**
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
LZH				pmax	pmax		
	comp=Z,89nm,6.3s						
LZH				LR	LR		
	comp=Z,190nm,17.3s						
LZH				LR	LR		
	comp=Z,190nm,17.0s						
LZH				LR	LR		
	comp=Z,270nm,19.7s						
YKA	**Yellowknife Ar**	98.06	24	P	**P**	**23 03 31.6**	**-0.7**
	comp=Z,0.8nm,0.9s,baz=230,slow=4.4,SNR=8.1						
YKA				PKKPbc	**PKKPbc**	**23 20 06.4**	**-1.3**
	comp=Z,0.4nm,0.9s,baz=44,slow=1.9,SNR=4.0						
SONM	**Songino Array**	99.58	318	P	**Pdif**	**23 03 38.6**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=129,slow=6.1,SNR=2.7						
SONM				PP	**PP**	**23 07 40.2**	**-3.8**
	comp=Z,0.8nm,1.0s,baz=125,slow=7.4,SNR=4.3						
SONM				LR	LR	23 45 10.6	
	comp=Z,68nm,19.2s,baz=135,slow=33						
GTA	**Gaotai**	100.75	308	*e*P	**Pdif**	**23 03 46.8**	**+1.7**
GTA				pP	pwP	23 03 57.0	+2.2
GTA				sP	sP	23 04 01.4	+12
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				LR	LR		
	comp=Z,100nm,18.4s						
GTA				LR	LR		
	comp=Z,210nm,19.4s						
GTA				LR	LR		
	comp=Z,210nm,18.1s						
TIXI	**Tiksi**	102.17	344	*i* P	**Pdif**	**23 03 50.6**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.1s						
WMQ	**Urumqi**	110.72	310	*e*PKP	**PKiKP**	**23 08 29.4**	**+0.1**
WMQ				LR	LR		
	comp=Z,63nm,22.1s						
WMQ				LR	LR		
	comp=Z,150nm,21.3s						
WMQ				LR	LR		
	comp=Z,250nm,22.1s						
MKAR	**Makanchi Array**	115.01	312	PKP	PKPdf	23 08 36.0	-1.3
	comp=Z,0.9nm,0.8s,baz=64,slow=2.8,SNR=7.2						
MKAR	**Makanchi Array**	115.01	312*c*	*i*PKIKP	PKPdf	23 08 36.7	-0.6
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	115.01	312		PKPdf	23 08 36.8	-0.5
KURK	**Kurchatov**	117.82	316*c*	*i*PKIKP	**PKiKP**	**23 08 42.5**	**0.0**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURK	**Kurchatov**	117.82	316		**PKPdf**	**23 08 42.0**	**-0.5**
KURBB	**Kurchatov Arra**	117.87	316	PKP	**PKPdf**	**23 08 41.5**	**-1.1**
	comp=Z,1.4nm,0.8s,baz=98,slow=2.1,SNR=11						
KSH	**Kashi**	118.60	303	PKP	**PKPdf**	**23 08 43.6**	**-1.0**
KSH				sPKP		23 08 57.3	
KSH				PP	**PP**	**23 10 09.3**	**+6.9**
KSH				PKS		23 12 18.8	
KSH				SKKS		23 16 55.4	
KSH				LR	LR		
	comp=Z,380nm,13.0s						
KSH				LR	LR		
	comp=Z,290nm,11.1s						
KSH				LR	LR		
	comp=Z,280nm,10.5s						
AAK	**Ala-Archa**	120.06	307	*i* PKIKP	**PKPdf**	**23 08 45.7**	**-1.6**
BRVK	**Borovoye**	122.97	319*c*	*i*PKIKP	**PKiKP**	**23 08 52.6**	**0.0**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BRVK	**Borovoye**	122.97	319		**PKiKP**	**23 08 52.2**	**-0.3**
KKAR	**Karatay Array**	123.01	307	PKIKP	**PKPdf**	**23 08 52.3**	**-0.5**
KKAR	**Karatay Array**	123.01	307		**PKPdf**	**23 08 52.3**	**-0.5**
KBL	**Kabul**	123.48	297	PKIKP	**PKiKP**	**23 08 54.7**	**+0.3**
KBL	**Kabul**	123.48	297		**PKiKP**	**23 08 54.7**	**+0.3**
BOSA	**Boshof**	124.66	202	PKP	**PKiKP**	**23 08 56.9**	**-0.1**
	comp=Z,7.1nm,0.9s,baz=140,slow=5.7,SNR=8.1						
BOSA	**Boshof**	124.66	202	PKIKP	**PKiKP**	**23 08 58.4**	**+1.4**
BOSA	**Boshof**	124.66	202		**PKiKP**	**23 08 58.4**	**+1.4**
ARU	**Arti**	129.00	325	*i* PKIKP	**PKPdf**	**23 09 01.8**	**-2.0**
ARU						23 11 08.1	
ARU						23 16 09.9	
ARU				SS	SS	23 28 22.6	-7.7
ABKAR	**Akbulak array**	129.91	315		**PKiKP**	**23 09 06.1**	**-0.4**
GEYT	**Alibeck**	132.45	301	PKP	**PKPdf**	**23 09 11.2**	**+0.2**
	comp=Z,2.4nm,0.9s,baz=215,slow=4.7,SNR=6.5						
GEYT	**Alibeck**	132.45	301		**PKiKP**	**23 09 11.7**	**-0.4**
KMBO	**Kilima Mbogo**	140.09	237	PKhKP	**PKPdf**	**23 09 20.2**	**-6.0**
	comp=Z,1.0nm,0.4s,baz=84,slow=1.7,SNR=8.3						
KMBO	**Kilima Mbogo**	140.09	237	PKIKP	**PKPdf**	**23 09 21.2**	**-4.9**
KMBO	**Kilima Mbogo**	140.09	237		**PKPdf**	**23 09 21.2**	**-4.9**
OBN	**Obninsk**	140.48	332	⇑*e*PKIKP	**PKPdf**	**23 09 25.1**	**-0.1**
OBN				*e*		23 16 25.3	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,239nm,18.0s						
RAYN	**Ar Rayn**	142.70	279	PKIKP	**PKPdf**	**23 09 27.6**	**-2.7**
RAYN	**Ar Rayn**	142.70	279		**PKPdf**	**23 09 27.6**	**-2.7**
KIV	**Kislovodsk**	142.77	313	⇑P	**PKPdf**	**23 09 22.5**	**-7.3**
KIV	**Kislovodsk**	142.77	313	*i* PKIKP	**PKPdf**	**23 09 26.1**	**-3.8**
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
KIV				MLR	MLR		
	comp=Z,682nm,24.0s						
SHA1	**Shidzhatmaz**	142.87	312	*i* PKIKP	**PKPdf**	**23 09 28.2**	**-2.0**
AKH	**Akhalkalaki**	143.03	308	⇓P	PKPab	23 09 24.7	-1.1
BATM	**Batumi**	144.26	309	⇓P	**PKPdf**	**23 09 31.6**	**-0.9**
BCA	**Borcka**	144.36	309	⇓P	PKPbc	23 09 31.4	+0.4
SOC	**Sochi**	144.90	314	*e*PKIKP	**PKPab**	**23 09 32.2**	**-0.4**
SOC				*i*		23 09 35.5	
SOC				*e*		23 12 47.6	
SOC				*e*PPP	PPP	23 16 01.7	
SOC				*e*SS	SS	23 31 35.0	-5.1
SOC				*e*SSS	SSS	23 37 07.3	
SOC				pmax	pmax		
	comp=Z,14nm,0.7s						
SOC				pmax	pmax		
	comp=Z,19nm,0.9s						
MBAR	**Mbarara**	145.26	230	PKIKP	**PKPdf**	**23 09 36.6**	**+1.4**
MBAR	**Mbarara**	145.26	230		**PKPdf**	**23 09 36.6**	**+1.4**
KTUT	**Trabzon**	145.84	309	⇓P	**PKiKP**	**23 09 45.5**	**+6.2**
SUW	**Suwalki**	146.40	340	*e*PKP	**PKPab**	**23 09 37.2**	**-0.6**
SUW	**Suwalki**	146.40	340	*e*PKP2	**PKPab**	**23 09 37.2**	**-0.6**
AKASG	**Malin Array Be**	146.75	331	PKPbc	**PKPbc**	**23 09 37.6**	**-0.4**
	comp=Z,19nm,1.0s,baz=38,slow=4.1,SNR=30						
SORM	**Soroca**	148.97	329	⇑P	**PKPbc**	**23 09 44.3**	**+0.1**
BZK	**Bozkurt**	149.39	314	⇓P	**PKiKP**	**23 09 46.1**	**-0.4**
LVV	**L'vov**	149.58	335	*e*PKP2	**PKPbc**	**23 09 45.3**	**-0.3**
KWP	**Kalwaria Pacla**	150.24	336	*e*PKP	**PKiKP**	**23 09 48.1**	**0.0**
KWP	**Kalwaria Pacla**	150.24	336	*e*PKIKP	**PKiKP**	**23 09 48.1**	**0.0**
BR131	**Keskin Array S**	150.64	311	PKIKP	**PKiKP**	**23 09 48.8**	**-0.6**
BR131	**Keskin Array S**	150.64	311		**PKiKP**	**23 09 48.8**	**-0.6**
BRTR	**Keskin Array B**	150.64	311	PKPbc	**PKiKP**	**23 09 48.9**	**-0.6**
	comp=Z,8.4nm,0.9s,baz=138,slow=1.9,SNR=37						
BRTR	**Keskin Array B**	150.64	311	PKIKP	**PKPbc**	**23 09 48.7**	**0.0**
BRTR	**Keskin Array B**	150.64	311		**PKPbc**	**23 09 48.7**	**0.0**
OJC	**Ojcow**	150.73	340	*e*PKP	**PKiKP**	**23 09 48.9**	**-0.1**
OJC	**Ojcow**	150.73	340	*e*PKIKP	**PKiKP**	**23 09 48.9**	**-0.1**
BUR08	**Bucovina Ar. S**	150.79	331		**PKiKP**	**23 09 49.5**	**+0.1**
BURAR	**Bucovina Array**	150.80	331	⇑P	**PKiKP**	**23 09 50.2**	**+0.8**
BURAR	**Bucovina Array**	150.80	331		**PKiKP**	**23 09 49.5**	**+0.1**
GHRR		150.88	327	⇓P	**PKiKP**	**23 09 50.3**	**+0.9**
TESR	**Tescani**	150.94	328	⇓P	**PKPbc**	**23 09 48.8**	**-0.2**
KOLS	**Kolonicke sedl**	150.97	336	*e*PKIKP	**PKiKP**	**23 09 49.8**	**+0.2**
KOLS				*e*		23 09 57.1	
KOLS	**Kolonicke sedl**	150.97	336	*e*PKP	**PKiKP**	**23 09 49.8**	**+0.2**
KOLS				*e*		23 09 57.1	
CFR	**Carcaliu**	151.09	324	⇑P	**PKiKP**	**23 09 49.7**	**-0.3**
KSP	**Ksiaz**	151.15	345	*e*PKP	**PKiKP**	**23 09 50.7**	**+0.8**
KSP	**Ksiaz**	151.15	345	*e*PKIKP	**PKiKP**	**23 09 50.7**	**+0.8**
TOPG	**Topolog**	151.16	324	⇑P	**PKiKP**	**23 09 50.8**	**+0.7**
ANTO	**Ankara**	151.17	311	⇓P	**PKiKP**	**23 09 50.5**	**+0.1**
ANTO	**Ankara**	151.17	311	PKIKP	**PKiKP**	**23 09 50.9**	**+0.5**
ANTO	**Ankara**	151.17	311		**PKiKP**	**23 09 50.9**	**+0.5**
UZH	**Uzhgorod**	151.21	335	*e*PKIKP	**PKPbc**	**23 09 48.3**	**-1.2**
UZH				*i*		23 09 54.5	
UZH				*i*		23 09 56.8	
NIE	**Niedzica**	151.26	339	*e*PKP	**PKiKP**	**23 09 51.1**	**+0.9**
NIE	**Niedzica**	151.26	339	*e*PKIKP	**PKiKP**	**23 09 51.1**	**+0.9**
CRVS	**Cervenica-Dubn**	151.30	337	*e*PKIKP	**PKiKP**	**23 09 50.9**	**+0.6**
CRVS				*e*		23 09 58.1	
CRVS	**Cervenica-Dubn**	151.30	337	*e*PKP	**PKiKP**	**23 09 50.9**	**+0.6**
CRVS				*e*		23 09 58.1	
VRI	**Vrincioaia**	151.35	327	⇑P	**PKiKP**	**23 09 49.9**	**-0.6**
CLL	**Collm**	151.39	349	*i* PKPbc	**PKiKP**	**23 09 51.1**	**+0.7**
	comp=Z,17nm,1.3s						
CLL	**Collm**	151.39	349	*i* PKIKP	**PKiKP**	**23 09 51.1**	**+0.7**
CLL				pmax	pmax		
	comp=Z,17nm,1.3s						
CLL	**Collm**	151.39	349		**PKiKP**	**23 09 51.3**	**+0.9**
PLOR	**Plostina**	151.40	327	⇑P	**PKiKP**	**23 09 51.0**	**+0.3**
TIRR	**Tirgusor**	151.41	323	⇓P	**PKiKP**	**23 09 50.9**	**+0.3**
OSTC	**Ostas**	151.43	345	⇑*e*PKP	**PKiKP**	**23 09 50.6**	**+0.1**
OSTC				*e*x	x	23 10 04.4	
CHVC	**Chvalec**	151.44	345	⇑*e*PKP	**PKiKP**	**23 09 50.2**	**-0.3**
HARR	**Harsova**	151.52	324	⇑P	**PKiKP**	**23 09 51.5**	**+0.6**
TRPA	**Tarpa**	151.52	335	⇑P	**PKPbc**	**23 09 50.0**	**-0.3**
UPC	**Upice**	151.53	345	⇑*e*PKP	**PKiKP**	**23 09 51.0**	**+0.3**
UPC	**Upice**	151.53	345	*e*PKIKP	**PKiKP**	**23 09 51.0**	**+0.3**
ARCR	**ARCALIA**	151.59	331	⇑P	**PKiKP**	**23 09 52.0**	**+1.0**
DPC	**Dobruska-Polom**	151.59	344	⇑*e*PKP	**PKiKP**	**23 09 51.4**	**+0.5**
DPC				*e*PKPAB	**PKPab**	**23 10 00.4**	**+1.4**
DPC	**Dobruska-Polom**	151.59	344	*e*PKIKP	**PKiKP**	**23 09 51.4**	**+0.5**
DPC				*e*		23 10 00.4	
BRG	**Berggiesshubel**	151.63	348	*e*PKP	**PKiKP**	**23 09 50.7**	**-0.2**
	comp=Z,13nm,1.1s						
BRG	**Berggiesshubel**	151.63	348	*e*PKIKP	**PKiKP**	**23 09 50.7**	**-0.2**
BRG				pmax	pmax		
	comp=Z,13nm,1.1s						
OZUR		151.65	328	⇑P	**PKPbc**	**23 09 49.3**	**-1.5**
MANR	**Mangalia**	151.71	322	⇑P	**PKiKP**	**23 09 52.3**	**+1.1**
KRLC	**Kraliky**	151.73	344	⇑*e*PKP	**PKiKP**	**23 09 51.0**	**-0.2**
KRLC				*e*pPKP	**sPKPab**	**23 10 04.0**	**+0.5**
KRLC	**Kraliky**	151.73	344	*e*PKIKP	**PKiKP**	**23 09 51.0**	**-0.2**
KRLC				*e*		23 10 04.0	
LANS	**Liptovska Anna**	151.77	339	*e*PKIKP	**PKiKP**	**23 09 52.5**	**+1.2**
LANS	**Liptovska Anna**	151.77	339	*e*PKP	**PKiKP**	**23 09 52.5**	**+1.2**
MORC	**Moravsky Berou**	151.80	342	⇑P	**PKiKP**	**23 09 52.4**	**+1.0**
MORC	**Moravsky Berou**	151.80	342	*e*P	**PKiKP**	**23 09 51.8**	**+0.5**
PVCC	**Panska Ves**	151.83	347	⇑*e*PKP	**PKiKP**	**23 09 52.0**	**+0.7**
PVCC	**Panska Ves**	151.83	347	*e*PKIKP	**PKiKP**	**23 09 52.0**	**+0.7**
DOPR	**Dopca**	151.94	328	⇑P	**PKiKP**	**23 09 52.4**	**+0.6**
MDUB	**Mudurnu**	151.97	314		**PKiKP**	**23 09 52.4**	**+0.3**
MLR	**Muntele Rosu**	152.01	327	⇑P	**PKiKP**	**23 09 52.3**	**+0.3**
MLR	**Muntele Rosu**	152.01	327	PKIKP	**PKPbc**	**23 09 50.9**	**-0.8**
MLR	**Muntele Rosu**	152.01	327		**PKPbc**	**23 09 50.9**	**-0.8**
CJR	**Cluj-Napoca**	152.20	332	⇓P	**PKiKP**	**23 09 53.7**	**+1.4**
PRU	**Pruhonice**	152.35	346	⇑*e*PKP	**PKiKP**	**23 09 52.5**	**+0.1**
PRU	**Pruhonice**	152.35	346	*e*PKIKP	**PKiKP**	**23 09 52.5**	**+0.1**
VRAC	**Vranov**	152.48	343	⇑P	**PKiKP**	**23 09 53.1**	**+0.4**
VRAC	**Vranov**	152.48	343	*e*P	**PKiKP**	**23 09 53.1**	**+0.4**
VOIR		152.49	328	⇑P	**PKiKP**	**23 09 54.3**	**+1.3**
DRGR		152.52	333	⇑P	**PKiKP**	**23 09 53.6**	**+0.6**
VYHS	**Vyhne**	152.55	339	*e*PKIKP	**PKiKP**	**23 09 53.1**	**+0.2**
VYHS				*e*		23 10 03.6	
VYHS	**Vyhne**	152.55	339	*e*PKP	**PKiKP**	**23 09 53.1**	**+0.2**
VYHS				*e*		23 10 03.6	
JAVC	**Velka Javorina**	152.59	341	*e*P	**PKiKP**	**23 09 54.5**	**+1.5**
CSS	**Mathiatis**	152.59	301		**PKPbc**	**23 09 52.7**	**-0.4**
CSS					**pPKPab**	**23 10 04.3**	**-2.3**
PSZ	**Piszkesteto**	152.69	337	⇑P	**PKPbc**	**23 09 52.7**	**-0.3**
ARR	**Arges**	152.74	328	⇓P	**PKPdf**	**23 09 47.1**	**+0.9**
KRUC	**Moravsky**	152.76	343	*e*P	**PKiKP**	**23 09 53.6**	**+0.3**
LEF	**Lefka**	152.89	302	⇑P	**PKiKP**	**23 09 54.7**	**+0.7**
MODS	**Modra-Piesok**	153.14	341	*e*PKP	**PKPab**	**23 10 05.9**	**+0.4**
HUMR	**Humele**	153.17	327	⇑P	**PKiKP**	**23 09 54.5**	**+0.2**
KHC	**Kasperske Hory**	153.36	347	*e*PKPDF	**PKPdf**	**23 09 47.0**	**+0.1**
KHC				⇑*e*PKP	**PKiKP**	**23 09 54.7**	**+0.1**
KHC				*e*PKPAB	**PKPab**	**23 10 04.8**	**-1.6**
KHC	**Kasperske Hory**	153.36	347	*e*PKIKP	**PKiKP**	**23 09 54.7**	**+0.1**
KHC				*e*		23 10 04.8	
SIRR	**Siria**	153.38	333	⇑P	**PKiKP**	**23 09 55.0**	**+0.4**
GZR	**Gura Zlata**	153.59	331	⇑P	**PKPbc**	**23 09 54.7**	**-0.4**
GERES	**GERESS Array B**	153.61	347	PKPbc	**PKPbc**	**23 09 54.7**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=350,slow=5.4,SNR=6.0						
GERES	**GERESS Array B**	153.61	347		**PKiKP**	**23 09 55.0**	**-0.1**
GERES				PKPab	**sPKPab**	**23 10 09.3**	**-2.1**
ELND	**Elena**	153.80	323	⇑P	**PKPab**	**23 10 09.8**	**+1.3**
BZS	**Buzias**	153.92	332	⇑P	**PKiKP**	**23 09 56.0**	**+0.2**
CONA	**Conrad Observa**	153.94	343	*e*PKiKP	**PKiKP**	**23 09 57.1**	**+1.2**
	comp=Z,6.6nm,1.4s						
CONA				*e*pPKPab	**sPKPab**	**23 10 10.7**	**-2.1**
	comp=Z,12nm,1.2s						
HERR	**Herculane**	154.14	330	⇓P	**PKiKP**	**23 10 02.0**	**+5.7**
PLVB	**Pleven**	154.16	325	⇑P	**PKiKP**	**23 09 57.5**	**+1.1**
BFO	**Black Forest**	154.93	354	PKP2	**PKPab**	**23 10 12.9**	**-0.2**
BFO	**Black Forest**	154.93	354		**PKPab**	**23 10 12.9**	**-0.2**
KBA	**Koelnbreinsper**	155.36	346	*e*PKPdf	**PKPdf**	**23 09 50.0**	**+0.1**
	comp=Z,2.4nm,1.0s						
KBA				*e*pPKPbc	pPKPbc	23 10 00.2	-1.7
	comp=Z,0.9nm,0.5s						
VTS	**Vitosha**	155.42	326	⇑P	PKPab	23 10 04.0	-12
WATA	**Walderalm**	155.47	349	*e*PKPdf	**PKPdf**	**23 09 50.4**	**+0.4**
	comp=Z,2.3nm,0.5s						
WATA				*e*PKPab	**PKPab**	**23 10 14.3**	**-1.2**
	comp=Z,6.4nm,1.3s						
WTTA	**Wattenberg**	155.53	349	*e*PKPab	**PKPab**	**23 10 14.3**	**-1.5**
	comp=Z,0.5nm,0.3s						
MOTA	**Moosalm**	155.54	350	*e*PKPdf	**PKPdf**	**23 09 50.0**	**-0.1**
	comp=Z,0.8nm,0.6s						
OBKA	**Obir**	155.60	343	*e*PKPab	**PKPab**	**23 10 15.0**	**-1.1**
	comp=Z,1.7nm,0.8s						
ABTA	**Abfaltersbach**	155.85	347	*e*PKPdf	**PKPdf**	**23 09 50.5**	**0.0**
	comp=Z,1.4nm,0.8s						
ABTA				*e*PKPab	**PKPab**	**23 10 15.6**	**-1.6**
	comp=Z,8.2nm,1.3s						
FETA	**Feichten**	155.92	350	*e*PKPdf	**PKPdf**	**23 09 50.7**	**0.0**
	comp=Z,1.0nm,0.5s						
FETA				*e*PKPab	**PKPab**	**23 10 17.0**	**-0.5**
	comp=Z,6.6nm,1.2s						
DBIC	**Dimbokro**	161.00	149	PKP	**PKPdf**	**23 09 57.9**	**+0.3**
	comp=Z,4.6nm,0.9s,baz=175,slow=0.9,SNR=5.4						
TORD	**Torodi Ar. Bea**	169.43	164	PKP	**PKPdf**	**23 10 02.7**	**-1.9**
	comp=Z,2.3nm,1.0s,baz=338,slow=0.9,SNR=11						
TORD				PKPab	**PKPab**	**23 11 17.6**	**+0.5**
	comp=Z,1.0nm,1.0s,baz=226,slow=4.9,SNR=3.0						
TORD	**Torodi Ar. Bea**	169.43	164	PKPdf	**PKPdf**	**23 10 03.7**	**-0.9**

TIR ***14*** *22:50:18.3, 39°.70N×20°.48E, h17^{km}, Md2.8/8*
ATH ***14*** *22:50:19.5, 39°.74N×20°.47E, h12^{km}±2^{km}, ML2.5/10, Error ellipse: s-maj=2.9km s-min=0.7km az=223.0*
THE ***14*** *22:50:20.2, 39°.72N×20°.48E, h0^{km}±2^{km}, ML2.5/14, Error ellipse: s-maj=2.6km s-min=0.8km az=286.0*
ISC 14 22:50:19.5±0.8**, 39°.73N**±0°.02×**20°.46E**±0°.02**, h13**^{km}±6^{km}**, n77, σ0^{s}.88**/114**, Greece-Albania border region**
PDG 14 22:50:20.4±0.4**, 39°.72N**×**20°.33E, h23**^{km}**, ML2.9**/11**, Error ellipse: s-maj=1.0km s-min=0.9km az=90.0, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	0.22	206	P	**Pg**	**22 50 23.6**	**-0.7**
IGT				S	**Sg**	**22 50 28.2**	**+0.6**
	4μm,0.4s						
IGT	**Igoumenitsa**	0.22	206	*i* PG	**Pg**	**22 50 23.6**	**-0.7**
IGT				*i* SG	**Sg**	**22 50 27.5**	**0.0**
IGT	**Igoumenitsa**	0.22	206	P	**Pg**	**22 50 24.1**	**-0.2**
IGT				S	**Sg**	**22 50 28.1**	**+0.6**
IGT				AML	AML	22 50 29.2	
	comp=E,6181μm,0.3s						
IGT				AML	AML	22 50 29.2	
	comp=N,8564μm,0.3s						
JAN	**Janina**	0.31	104	P	**Pg**	**22 50 25.4**	**-0.4**
JAN				S	**Sg**	**22 50 30.6**	**+0.5**
	comp=N,4μm,0.3s						
JAN	**Janina**	0.31	104	P	**Pg**	**22 50 25.4**	**-0.4**
JAN				S	**Sg**	**22 50 30.2**	**+0.1**
JAN				AML	AML	22 50 30.8	
	comp=N,6278μm,0.4s						
JAN				AML	AML	22 50 32.1	
	comp=E,10603μm,0.3s						
SRN	**Sarande**	0.38	293	P	**Pg**	**22 50 27.3**	**+0.1**
SRN				S	**Sb**	**22 50 34.7**	**+0.7**
	comp=E,638nm,0.3s						
SRN	**Sarande**	0.38	293	*i* PG	**Pg**	**22 50 27.0**	**-0.2**
SRN				*i* SG	**Sb**	**22 50 33.6**	**-0.5**
KASA	**Kassiopi**	0.41	272	P	**Pg**	**22 50 27.7**	**+0.1**
KASA				S	**Sb**	**22 50 34.1**	**-0.6**
KASA				AML	AML	22 50 36.1	
	comp=E,1730μm,0.2s						
KASA				AML	AML	22 50 37.0	
	comp=N,1097μm,0.3s						
KEK	**Kerkira**	0.51	268	P	**Pg**	**22 50 29.3**	**-0.2**
KEK				S	**Sb**	**22 50 38.9**	**+1.2**
	comp=N,650nm,0.5s						
KEK	**Kerkira**	0.51	268	P	**Pg**	**22 50 29.1**	**-0.4**
KEK				S	**Sg**	**22 50 37.1**	**+0.7**
KEK				AML	AML	22 50 42.5	
	comp=N,1218μm,0.5s						
KEK				AML	AML	22 50 44.4	
	comp=E,1349μm,0.5s						
MEV	**Metsovon**	0.59	85	P	**Pg**	**22 50 30.8**	**-0.3**
TPE	**Tepelena**	0.66	329	P	**Pb**	**22 50 33.0**	**+0.1**
TPE				S	**Sn**	**22 50 44.2**	**-0.7**
	comp=E,938nm,0.4s						
TPE	**Tepelena**	0.66	329	*i* PG	**Pg**	**22 50 32.3**	**0.0**
TPE				*i* SG	**Sb**	**22 50 42.7**	**+0.7**
PENT	**Pentalofos**	0.70	48	P	**Pg**	**22 50 32.9**	**-0.1**
PENT				S	**Sg**	**22 50 41.8**	**-0.4**
PENT				AML	AML	22 50 45.5	
	comp=N,695μm,0.3s						
PENT				AML	AML	22 50 47.3	
	comp=E,874μm,0.4s						
KPRO	**Kipourio**	0.73	72	P	**Pg**	**22 50 32.9**	**-0.8**
KPRO				S	**Sb**	**22 50 43.8**	**-0.3**
	comp=E,1μm,0.5s						
KPRO	**Kipourio**	0.73	72	P	**Pg**	**22 50 32.9**	**-0.8**
KPRO				S	**Sg**	**22 50 42.9**	**-0.3**
KPRO				AML	AML	22 50 46.3	
	comp=N,1904μm,0.5s						
KPRO				AML	AML	22 50 46.3	
	comp=E,2759μm,0.5s						
NEST	**Nestorio**	0.82	33	P	**Pg**	**22 50 35.4**	**+0.1**
NEST	**Nestorio**	0.82	33	P	**Pg**	**22 50 35.2**	**-0.1**
NEST				S	**Sb**	**22 50 46.5**	**-0.2**
NEST				AML	AML	22 50 50.4	
	comp=E,445μm,0.5s						
NEST				AML	AML	22 50 50.5	
	comp=N,540μm,0.3s						
TSLK	**Tsoukalades, L**	0.92	170	P	**Pg**	**22 50 36.4**	**-0.8**
TSLK				S	**Sn**	**22 50 50.5**	**-0.7**
	comp=N,175nm,0.5s						
TSLK	**Tsoukalades, L**	0.92	170	P	**Pg**	**22 50 36.4**	**-0.8**
LKD2	**Lefkada island**	0.95	171	P	**Pg**	**22 50 36.8**	**-1.2**
LKD2				S	**Sn**	**22 50 52.9**	**+0.7**
	comp=N,130nm,0.4s						
LKD2	**Lefkada island**	0.95	171	P	**Pg**	**22 50 36.7**	**-1.2**
VLO	**Vlora**	1.04	315	*i* PG	**Pb**	**22 50 39.0**	**-0.5**
VLO				*i* SG	**Sn**	**22 50 54.8**	**+0.5**
EVGI	**Lefkada island**	1.12	172	P	**Pb**	**22 50 40.3**	**-0.4**
KZN	**Kozani**	1.16	60	P	**Pb**	**22 50 40.6**	**-0.8**
KZN	**Kozani**	1.16	60	P	**Pb**	**22 50 41.0**	**-0.5**
THL	**Klokotos Trika**	1.21	97	P	**Pb**	**22 50 42.2**	**-0.1**
THL				S	**Sg**	**22 51 00.0**	**+1.4**
	comp=N,102nm,0.7s						
THL	**Klokotos Trika**	1.21	97	P	**Pb**	**22 50 42.3**	**-0.1**
THL				S	**Sg**	**22 50 58.8**	**+0.3**
THL				AML	AML	22 51 04.5	
	comp=E,176μm,0.2s						
THL				AML	AML	22 51 05.6	
	comp=N,212μm,0.5s						
FNA	**Florina**	1.26	33	P	**Pn**	**22 50 42.9**	**0.0**
FNA				S	**Sg**	**22 51 02.7**	**+2.5**
	comp=N,172nm,0.5s						
FNA	**Florina**	1.26	33	P	**Pn**	**22 50 42.9**	**0.0**
FNA				S	**Sg**	**22 51 00.6**	**+0.4**
FNA				AML	AML	22 51 07.1	

	comp=E,348µm,0.3s						
FNA				AML	AML	22 51 08.5	
	comp=N,315µm,0.6s						
FSK	**Fiskardo**	**1.27**	**176**	P	**Pb**	**22 50 43.5**	**+0.1**
FSK	**Fiskardo**	**1.27**	**176**	P	**Pb**	**22 50 43.7**	**+0.3**
EVR	**Evrytania**	**1.32**	**128**	P	**Pn**	**22 50 43.9**	**+0.1**
EVR				S	**Sg**	**22 51 04.9**	**+2.7**
	comp=N,170nm,0.6s						
EVR	**Evrytania**	**1.32**	**128**	P	**Pb**	**22 50 44.2**	**-0.1**
EVR				S	**Sg**	**22 51 02.5**	**+0.2**
EVR				AML	AML	22 51 10.1	
	comp=N,361µm,0.6s						
EVR				AML	AML	22 51 11.2	
	comp=E,316µm,0.7s						
PVO	**Paravola**	**1.39**	**143**	P	**Pg**	**22 50 46.2**	**0.0**
PVO	**Paravola**	**1.39**	**143**	P	**Pg**	**22 50 46.0**	**-0.1**
OHR	**Ohrid**	**1.40**	**11**	*i* Pn	**Pg**	**22 50 48.5**	**+2.1**
KTI	**Kastanea**	**1.43**	**62**	P	**Pb**	**22 50 46.0**	**-0.1**
KEF1	**Kardakata, Kep**	**1.45**	**180**	P	**Pg**	**22 50 47.5**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.48**	**118**	P	**Pb**	**22 50 47.0**	**+0.1**
MAKR				S	**Sg**	**22 51 08.7**	**+1.5**
	comp=E,280nm,0.5s						
MAKR	**Makrakomi, Fth**	**1.48**	**118**	P	**Pb**	**22 50 47.2**	**+0.3**
KEF2	**Argostoli. Kep**	**1.56**	**179**	P	**Pg**	**22 50 49.7**	**+0.2**
SCTE	**Santa Cesarea**	**1.57**	**283**	P	**Pn**	**22 50 47.5**	**+0.4**
LIT	**Litokhoron**	**1.60**	**76**	P	**Pb**	**22 50 48.9**	**-0.1**
LIT				S	**Sg**	**22 51 11.2**	**+0.1**
	comp=E,152nm,0.5s						
LIT	**Litokhoron**	**1.60**	**76**	P	**Pb**	**22 50 49.6**	**+0.6**
ANX	**Ano Chora**	**1.61**	**135**	P	**Pg**	**22 50 49.8**	**-0.5**
ANX	**Ano Chora**	**1.61**	**135**	P	**Pg**	**22 50 49.9**	**-0.5**
AGG	**Agios Georgios**	**1.61**	**115**	P	**Pb**	**22 50 49.2**	**0.0**
AGG				S	**Sg**	**22 51 12.5**	**+1.1**
	comp=E,122nm,0.4s						
TIR	**Tirane**	**1.68**	**344**	*i* PN	**Pb**	**22 50 50.7**	**+0.5**
TIR				*i* SN	**Sg**	**22 51 13.7**	**+0.3**
TIR	**Tirane**	**1.68**	**344**	P	**Pb**	**22 50 50.9**	**+0.7**
SERG	**Sergoula**	**1.81**	**136**	P	**Pb**	**22 50 52.9**	**+0.4**
TRIZ	**Trizonia**	**1.85**	**137**	P	**Pb**	**22 50 53.5**	**+0.3**
TRIZ	**Trizonia**	**1.85**	**137**	P	**Pg**	**22 50 54.4**	**-0.7**
KALE	**Kalithea**	**1.87**	**135**	P	**Pb**	**22 50 53.6**	**0.0**
GRG	**Griva**	**1.92**	**50**	P	**Pb**	**22 50 54.2**	**-0.2**
GRG	**Griva**	**1.92**	**50**	P	**Pb**	**22 50 53.6**	**-0.9**
PHP	**Peshkopia**	**1.95**	**360**	P	**Pb**	**22 50 54.8**	**-0.1**
PHP	**Peshkopia**	**1.95**	**360**	*i* PN	**Pb**	**22 50 53.8**	**-1.1**
PHP				*i* SN	**Sg**	**22 51 21.3**	**-0.9**
XOR	**Xorichti**	**2.14**	**99**	P	**Pb**	**22 50 57.1**	**-1.1**
NEO	**Neokhori**	**2.18**	**100**	P	**Pb**	**22 50 57.5**	**-1.3**
VAY	**Valandovo**	**2.26**	**45**	*i* Pn	**Pb**	**22 50 59.1**	**-1.1**
PUK	**Puka**	**2.35**	**350**	*i* PN	**Pn**	**22 50 59.8**	**+1.9**
PUK				*i* SN	**Sb**	**22 51 32.2**	**+1.6**
STIP	**Stip**	**2.36**	**33**	*i* Pn	**Pb**	**22 51 02.4**	**+0.5**
PAIG	**Paliouri**	**2.49**	**84**	P	**Pn**	**22 51 01.2**	**+1.5**
BCI	**Bajram Curri**	**2.65**	**354**	*i* PN	**Pb**	**22 51 04.8**	**-2.0**
BAI	**Bari**	**3.06**	**298**	*e*Pn	**Pn**	**22 51 07.7**	**+0.1**
SG1	**Sgolgore (BA)**	**3.10**	**292**	*e*Pn	**Pn**	**22 51 08.6**	**+0.5**
DBRK	**Dubrovnik**	**3.41**	**330**	*e*Pn	**Pn**	**22 51 12.8**	**+0.3**
DBRK				Sn	**Sn**	**22 51 51.5**	**-1.3**
STON	**Ston**	**3.76**	**327**	*e*Pn	**Pn**	**22 51 17.2**	**0.0**
STON				Sn	**Sn**	**22 51 59.6**	**-1.8**
MAKA	**Makarska**	**4.39**	**325**	*e*Pn	**Pn**	**22 51 26.1**	**+0.2**
MAKA				Sn	**Sn**	**22 52 14.7**	**-2.2**
RICI	**Ricice**	**4.51**	**328**	*e*Pn	**Pn**	**22 51 27.9**	**+0.4**
RICI				Sn	**Sn**	**22 52 18.4**	**-1.5**
KIJV	**Kijevo**	**5.23**	**326**	*i* Pn	**Pn**	**22 51 38.2**	**+0.8**
KIJV				Sn	**Sn**	**22 52 36.7**	**-1.0**
ZIRJ	**Zirje**	**5.32**	**319**	*i* Pn	**Pn**	**22 51 38.2**	**-0.5**
MORI	**Morici**	**5.45**	**321**	*e*Pn	**Pn**	**22 51 40.9**	**+0.5**
MORI				Sn	**Sn**	**22 52 40.2**	**-2.7**
DUGI	**Dugi Otok**	**5.86**	**318**	*e*Pn	**Pn**	**22 51 46.6**	**+0.5**
UDBI	**Udbina**	**5.93**	**325**	*i* Pn	**Pn**	**22 51 48.5**	**+1.5**
NVLJ	**Novalja**	**6.37**	**321**	*e*Pn	**Pn**	**22 51 53.6**	**+0.6**

ROM 14 23:07:22.1±0.0**, 43°.498N**±0°.003×**12°.381E**±0°.003**,**
h10^{km}, ML1.0/5**, 1D, Error ellipse: s-maj=0.2km**
s-min=0.2km az=193.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BADI	**Badiali**	**0.10**	**277**	P	Pg	23 07 25.0	+0.3
BADI				S	Sg	23 07 26.8	+0.3
BADI				AML	AML		
	comp=E,150µm,0.1s						
BADI				AML	AML		
	comp=N,188µm,1.2s						
BADI				AML	AML		
	comp=E,150µm,0.1s						
BADI				AML	AML		
	comp=N,188µm,1.2s						
CDCA	**Citt' di Caste**	**0.11**	**250**	P	Pg	23 07 25.2	+0.4
CDCA				S	Sg	23 07 27.5	+0.7
ATVO	**AVT- Monte Val**	**0.12**	**171**	P	Pg	23 07 25.4	+0.5
ATVO				S	Sg	23 07 27.7	+0.8
ATVO				AML	AML		
	comp=E,86µm,0.3s						
ATVO				AML	AML		
	comp=N,85µm,0.2s						
ATVO				AML	AML		
	comp=E,86µm,0.3s						
ATVO				AML	AML		
	comp=N,85µm,0.2s						
PIEI	**Pieia**	**0.12**	**71**	P	Pg	23 07 25.4	+0.5
PIEI				S	Sg	23 07 27.8	+0.8
ATMI	**Monte Miggiano**	**0.18**	**207**	P	Pg	23 07 26.8	+0.8
ATMI				S	Sg	23 07 30.1	+1.4
ATMI				AML	AML		
	comp=N,40µm,0.3s						
ATMI				AML	AML		
	comp=E,51µm,0.6s						
PARC	**Parchiule**	**0.18**	**326**	P	Pg	23 07 26.8	+0.8
PARC				S	Sg	23 07 30.2	+1.5
NARO	**Abbazia di Nar**	**0.18**	**52**	P	Pg	23 07 26.5	+0.5
NARO				S	Sg	23 07 29.9	+1.3
ATFO	**Monte Foce - G**	**0.19**	**133**	P	Pg	23 07 26.8	+0.7
ATFO				S	Sg	23 07 30.1	+1.2
PE3	**Peglio**	**0.21**	**23**	⇓P	Pg	23 07 24.3	-2.3
PE3				AML	AML		
	comp=E,60µm,0.3s						
PE3				AML	AML		
	comp=N,47µm,0.9s						
FRON	**Frontone**	**0.25**	**85**	P	Pg	23 07 27.7	+0.5
FRON				S	Sb	23 07 32.2	-1.1
MURB	**Monte Urbino**	**0.26**	**156**	P	Pb	23 07 28.1	-0.8
MURB				S	Sb	23 07 32.6	-0.9
MURB				AML	AML		
	comp=E,67µm,1.3s						
MURB				AML	AML		
	comp=N,53µm,1.2s						
MURB				AML	AML		
	comp=N,53µm,1.2s						
ATTE	**AVT- Monte Tez**	**0.30**	**184**	P	Pg	23 07 28.7	+0.6
FSSB	**Fossombrone**	**0.35**	**56**	P	Pg	23 07 29.7	+0.6
ATCC	**AVT- Casa Cast**	**0.36**	**149**	P	Pb	23 07 30.2	-0.5

IDC ***14*** *23:10:25.7±0.6, 55°.96S×27°.35W, h0^{km}, mb4.3/8,*
mb1 4.4/9, mb1mx4.2/22, mbtmp4.4/9, ML4.9/1, Error
ellipse: s-maj=23.2km s-min=18.4km az=84.0
NEIC ***14*** *23:10:36.8±1.6, 56°.0S±0°.1×27°.43W±0°.09, h88^{km}±6^{km},*
mb4.5/26, Error ellipse: s-maj=17.7km s-min=7.6km
az=182.0
ISC 14 23:10:37.6±0.5**, 56°.02S**±0°.08×**27°.52W**±0°.08**, h100**^{km}**, n61,**
σ1^{s}.06/53**, mb4.5**/18**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.43**	**285**		**Pn**	**23 11 55.5**	**-0.5**
VNA1	**Neumayer--Stat**	**16.89**	**158**	P	**P**	**23 14 27.4**	**-0.4**
VNA3	**Neumayer Olymp**	**17.08**	**160**	P	**P**	**23 14 29.9**	**0.0**
VNA2	**Neumayer--Watz**	**17.29**	**158**	P	**Pn**	**23 14 32.5**	**+0.2**
	baz=317,slow=14						
EFI	**East Falkland**	**18.45**	**271**	P	**Pn**	**23 14 45.5**	**-0.9**
SNAA	**Sanae**	**18.84**	**156**	P	**P**	**23 14 49.2**	**-0.1**
SNAA	**Sanae**	**18.84**	**156**	P	**P**	**23 14 48.8**	**-0.5**
	3.6nm,0.3s,baz=305,slow=11,SNR=175						
SNAA	**Sanae**	**18.84**	**156**	P	**P**	**23 14 49.0**	**-0.3**
SNAA				IAmb	IAmb	23 14 49.9	
	comp=Z,22nm,0.6s						
PMSA	**Palmer Station**	**19.78**	**229**	P	**Pn**	**23 15 01.1**	**-0.7**
PMSA				IAmb	IAmb	23 15 08.6	
	comp=Z,30nm,1.1s						
GO09	**Cerro Castillo**	**26.62**	**261**	P	**P**	**23 16 07.4**	**+1.1**
GO09				IAmb	IAmb	23 16 24.3	
	comp=Z,18nm,1.1s						
QSPA	**South Pole Qui**	**34.23**	**180**	P	**P**	**23 17 14.2**	**+0.8**
	comp=Z,3.3nm,0.6s,baz=32,slow=3.9,SNR=29						
QSPA	**South Pole Qui**	**34.23**	**180**	P	**P**	**23 17 14.3**	**+0.9**
QSPA				IAmb	IAmb	23 17 19.0	
	comp=Z,2.8nm,0.6s						
CPUP	**Villa Florida**	**36.65**	**312**	P	**P**	**23 17 35.3**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=149,slow=8.1,SNR=3.1						
CPUP	**Villa Florida**	**36.65**	**312**	IAmb	IAmb	23 17 38.0	
	comp=Z,2.1nm,0.8s						
ROC1	**El Roble**	**37.76**	**289**	P	**P**	**23 17 43.2**	**-0.7**
GO04	**Tololo Observa**	**39.84**	**292**	P	**P**	**23 18 00.9**	**-0.5**
GO04				IAmb	IAmb	23 18 12.5	
	comp=Z,8.3nm,0.9s						
MAW	**Mawson**	**40.28**	**144**	P	**P**	**23 18 04.0**	**-0.2**
GO02	**Mina Guanaco**	**43.31**	**298**	P	**P**	**23 18 30.5**	**+0.7**
GO02				IAmb	IAmb	23 18 31.7	
	comp=Z,11nm,1.1s						
LVC	**Limon Verde**	**45.13**	**300**	P	**P**	**23 18 45.2**	**+0.9**
LVC				IAmb	IAmb	23 18 47.6	
	comp=Z,6.3nm,0.8s						
SBA	**Scott Base**	**46.09**	**184**	P	**P**	**23 18 52.6**	**+1.8**
BOSA	**Boshof**	**46.14**	**76**	P	**P**	**23 18 50.7**	**-1.3**
	comp=Z,2.9nm,0.8s,baz=218,slow=7.1,SNR=6.4						
VNDA	**Vanda**	**46.59**	**183**	P	**P**	**23 18 55.3**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=186,slow=7.5,SNR=13						
VNDA	**Vanda**	**46.59**	**183**	P	**P**	**23 18 55.9**	**+1.2**
PB01	**IPOC Station P**	**46.74**	**301**	P	**P**	**23 18 57.0**	**+0.4**
PB01				IAmb	IAmb	23 18 58.1	
	comp=Z,5.6nm,0.6s						
GO01	**Chusmiza**	**47.77**	**302**	P	**P**	**23 19 06.6**	**+1.5**
PB11	**IPOC Station P**	**47.91**	**302**	P	**P**	**23 19 05.9**	**0.0**
PB11				IAmb	IAmb	23 19 16.6	
	comp=Z,5.7nm,0.8s						
H10S2	**ASCENSION HYDR**	**48.03**	**17**	T	T	00 11 29.2	
	baz=189,slow=74,SNR=3.1						
H10S3	**ASCENSION HYDR**	**48.03**	**17**	T	T	00 11 29.2	
	baz=31,slow=74,SNR=23						
MNMC	**Minye Minye**	**48.43**	**302**	P	**P**	**23 19 11.0**	**+1.1**
H10N1	**ASCENSION HYDR**	**49.15**	**17**	T	T	00 12 51.3	
	baz=194,SNR=2.6						
H10N3	**ASCENSION HYDR**	**49.15**	**17**	T	T	00 12 51.3	
	baz=194,SNR=6.8						
H10N2	**ASCENSION HYDR**	**49.16**	**17**	T	T	00 12 51.3	
	baz=194,SNR=4.3						
LBTB	**Lobatse**	**49.18**	**74**	P	**P**	**23 19 14.2**	**-1.2**
	comp=Z,2.8nm,0.7s,baz=218,slow=11,SNR=5.5						
LBTB	**Lobatse**	**49.18**	**74**	IAmb	IAmb	23 19 25.1	
	comp=Z,3.7nm,0.9s						
TSUM	**Tsumeb**	**49.83**	**61**	P	**P**	**23 19 21.3**	**+0.9**
TSUM				IAmb	IAmb	23 19 22.2	
	comp=Z,3.8nm,0.8s						
LPAZ	**La Paz**	**50.21**	**306**	P	**P**	**23 19 24.3**	**+0.4**
	comp=Z,2.1nm,0.4s,baz=114,slow=7.0,SNR=15						
LPAZ	**La Paz**	**50.21**	**306**		**P**	**23 19 25.2**	**+1.3**
LPAZ	**La Paz**	**50.21**	**306**	P	**P**	**23 19 25.1**	**+1.2**
LPAZ				IAmb	IAmb	23 19 26.2	
	comp=Z,2.2nm,0.5s						
SAML	**Samuel**	**54.65**	**315**	P	**P**	**23 19 56.3**	**+0.3**
LSZ	**Lusaka**	**58.53**	**69**	P	**P**	**23 20 23.7**	**+0.1**
PTGA	**Pitinga**	**61.04**	**322**	P	**P**	**23 20 39.7**	**-0.9**
PTGA				IAmb	IAmb	23 20 40.2	
	comp=Z,4.5nm,1.1s						
LIC	**Lamto**	**64.75**	**25**	*e*P	**P**	**23 21 06.5**	**+1.4**
	comp=Z,24nm,0.8s						
KIC	**Kosan Boka**	**64.95**	**25**	*e*P	**P**	**23 21 07.7**	**+1.3**
	comp=Z,15nm,0.8s						
TIC	**Toumodi**	**65.16**	**25**	*e*P	**P**	**23 21 08.8**	**+1.0**
DBIC	**Dimbokro**	**65.22**	**25**	P	**P**	**23 21 09.5**	**+1.4**
	comp=Z,5.7nm,0.7s,baz=173,slow=7.3,SNR=8.0						
DBIC	**Dimbokro**	**65.22**	**25**	P	**P**	**23 21 08.4**	**+0.2**
TOA0	**Torodi Ar. Sit**	**73.12**	**30**	P	**P**	**23 21 58.6**	**+1.6**
TORD	**Torodi Ar. Bea**	**73.12**	**30**	P	**P**	**23 21 58.5**	**+1.5**
	comp=Z,11nm,0.6s,baz=200,slow=6.4,SNR=72						
TORD	**Torodi Ar. Bea**	**73.12**	**30**	P	**P**	**23 21 57.8**	**+0.9**
FINES	**FINESS Array B**	**124.44**	**28**	PKP	**PKiKP**	**23 29 23.5**	**-0.2**
	comp=Z,2.2nm,0.7s,baz=344,slow=0.4,SNR=11						
I07A	**Izee**	**126.00**	**297**		PKPpre	23 29 19.4	
ARCES	**ARCESS Array B**	**130.99**	**22**	PKP	**PKiKP**	**23 29 35.7**	**-0.9**
	comp=Z,6.6nm,1.1s,baz=139,slow=2.6,SNR=7.2						
YKA	**Yellowknife Ar**	**136.03**	**318**	PKP	**PKiKP**	**23 29 45.3**	**-1.6**
	comp=Z,0.8nm,0.6s,baz=132,slow=2.8,SNR=8.9						
MKAR	**Makanchi Array**	**137.05**	**72**	PKP	**PKPdf**	**23 29 47.7**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=214,slow=2.8,SNR=6.4						
MKAR	**Makanchi Array**	**137.05**	**72**	PKPdf	**PKiKP**	**23 29 48.8**	**-0.8**
ZALV	**Zalesovo Beam**	**142.52**	**64**	PKhKP	**PKPdf**	**23 29 53.6**	**-3.8**
	comp=Z,1.1nm,0.3s,baz=243,slow=4.3,SNR=5.4						
NRIK	**Noril'sk**	**149.10**	**39**	PKPbc	**PKiKP**	**23 30 12.8**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=58,slow=1.5,SNR=5.9						
ILAR	**Eielson Array**	**149.96**	**312**	PKPbc	**PKiKP**	**23 30 15.1**	**-0.5**
	comp=Z,5.1nm,0.8s,baz=123,slow=1.6,SNR=41						
ILAR	**Eielson Array**	**149.96**	**312**		**PKiKP**	**23 30 15.0**	**-0.5**
SONM	**Songino Array**	**150.91**	**87**	PKPbc	**PKiKP**	**23 30 18.0**	**-0.2**
	comp=Z,5.6nm,0.6s,baz=220,slow=3.7,SNR=46						
SONM	**Songino Array**	**150.91**	**87**		**PKiKP**	**23 30 17.9**	**-0.3**

THE ***14*** *23:25:51.9, 39°.15N×21°.91E, h1^{km}±1^{km}, ML2.7/19, Error*
ellipse: s-maj=1.9km s-min=0.5km az=106.0
ATH ***14*** *23:25:51.5, 39°.13N×21°.90E, h20^{km}±2^{km}, ML2.7/15, Error*
ellipse: s-maj=2.0km s-min=0.6km az=128.0
ISC 14 23:25:52.0±0.8**, 39°.14N**±0°.01×**21°.91E**±0°.02**, h15**^{km}±6^{km}**,**
n96, σ0^{s}.97/141**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAKR	**Makrakomi, Fth**	**0.21**	**125**	P	**Pb**	**23 25 57.2**	**-0.4**
MAKR				S	**Sg**	**23 26 00.6**	**+0.4**
	5µm,0.4s						
MAKR	**Makrakomi, Fth**	**0.21**	**125**	P	**Pb**	**23 25 57.3**	**-0.4**
MAKR				S	**Sg**	**23 26 00.7**	**+0.4**
MAKR				AML	AML	23 26 02.0	
	comp=N,9952µm,0.5s						
MAKR				AML	AML	23 26 02.3	
	comp=E,8462µm,0.2s						
EVR	**Evrytania**	**0.23**	**200**	P	**Pg**	**23 25 57.0**	**-0.3**
EVR				S	**Sg**	**23 26 00.8**	**-0.1**
	comp=E,5µm,0.4s						
EVR	**Evrytania**	**0.23**	**200**	P	**Pg**	**23 25 57.0**	**-0.3**
EVR				S	**Sg**	**23 26 00.8**	**-0.1**
EVR				AML	AML	23 26 01.5	
	comp=N,11036µm,0.3s						
EVR				AML	AML	23 26 01.6	
	comp=E,7030µm,0.5s						
AGG	**Agios Georgios**	**0.35**	**109**	P	**Pb**	**23 25 59.4**	**-0.5**
AGG	**Agios Georgios**	**0.35**	**109**	P	**Pb**	**23 25 59.4**	**-0.5**
AGG				S	**Sb**	**23 26 05.4**	**+0.2**
AGG				AML	AML	23 26 06.3	
	comp=E,2905µm,0.6s						
AGG				AML	AML	23 26 06.8	
	comp=N,2858µm,0.4s						
THL	**Klokotos Trika**	**0.43**	**11**	P	**Pg**	**23 26 00.3**	**-0.5**
THL				S	**Sb**	**23 26 07.3**	**-0.4**
	comp=N,615nm,0.7s						
THL	**Klokotos Trika**	**0.43**	**11**	P	**Pg**	**23 26 00.4**	**-0.4**
THL				S	**Sb**	**23 26 07.0**	**-0.7**
THL				AML	AML	23 26 08.3	
	comp=E,1578µm,0.7s						
THL				AML	AML	23 26 08.8	
	comp=N,864µm,0.8s						
ANX	**Ano Chora**	**0.54**	**179**	P	**Pg**	**23 26 02.2**	**-0.6**
ANX	**Ano Chora**	**0.54**	**179**	P	**Pg**	**23 26 02.3**	**-0.5**
ANX				S	**Sg**	**23 26 09.8**	**-0.2**
ANX				AML	AML	23 26 13.6	
	comp=N,2819µm,0.4s						
ANX				AML	AML	23 26 17.1	
	comp=E,4544µm,0.5s						
PVO	**Paravola**	**0.60**	**210**	P	**Pg**	**23 26 03.1**	**-0.7**
PVO				S	**Sg**	**23 26 11.5**	**-0.2**
	comp=E,640nm,0.3s						
PVO	**Paravola**	**0.60**	**210**	P	**Pg**	**23 26 03.1**	**-0.7**
PVO				S	**Sg**	**23 26 11.6**	**-0.2**
PVO				AML	AML	23 26 15.6	
	comp=E,1506µm,0.3s						
PVO				AML	AML	23 26 16.6	
	comp=N,1047µm,0.4s						
LRSO	**Larissa Observ**	**0.65**	**35**	P	**Pg**	**23 26 03.8**	**-1.0**
AXAR	**Agios Charalam**	**0.69**	**122**	P	**Pb**	**23 26 05.8**	**0.0**
AXAR	**Agios Charalam**	**0.69**	**122**	P	**Pg**	**23 26 05.3**	**-0.2**
AXAR				S	**Sb**	**23 26 15.1**	**0.0**
AXAR				AML	AML	23 26 19.5	
	comp=N,1367µm,0.3s						
AXAR				AML	AML	23 26 20.9	
	comp=E,1370µm,0.5s						
EFP	**Efpalio**	**0.71**	**180**	P	**Pg**	**23 26 05.0**	**-0.8**
EFP				S	**Sb**	**23 26 15.8**	**+0.2**
	comp=E,1µm,0.3s						
EFP	**Efpalio**	**0.71**	**180**	P	**Pg**	**23 26 05.0**	**-0.8**
EFP				S	**Sb**	**23 26 15.7**	**+0.2**
EFP				AML	AML	23 26 18.4	
	comp=N,2228µm,0.4s						
EFP				AML	AML	23 26 21.5	
	comp=E,2122µm,0.3s						
SERG	**Sergoula**	**0.73**	**171**	P	**Pg**	**23 26 05.5**	**-0.8**
SERG				S	**Sb**	**23 26 16.6**	**+0.4**
	comp=E,720nm,0.3s						
SERG	**Sergoula**	**0.73**	**171**	P	**Pg**	**23 26 05.5**	**-0.8**
SERG				S	**Sg**	**23 26 16.0**	**0.0**
SERG				AML	AML	23 26 17.8	
	comp=N,1389µm,0.5s						
SERG				AML	AML	23 26 20.4	
	comp=E,1529µm,0.4s						
KALE	**Kalithea**	**0.77**	**166**	P	**Pg**	**23 26 06.3**	**-0.6**
KALE				S	**Sb**	**23 26 17.3**	**0.0**
	comp=E,755nm,0.3s						
KALE	**Kalithea**	**0.77**	**166**	P	**Pg**	**23 26 06.3**	**-0.6**
KALE				S	**Sb**	**23 26 17.6**	**+0.4**
KALE				AML	AML	23 26 19.8	
	comp=E,1152µm,0.3s						
KALE				AML	AML	23 26 20.5	
	comp=N,1885µm,0.3s						
PDO	**Prodromos**	**0.78**	**227**	P	**Pb**	**23 26 07.2**	**-0.1**
PDO				S	**Sb**	**23 26 18.5**	**+0.9**
	comp=N,1µm,0.4s						
TRIZ	**Trizonia**	**0.78**	**170**	P	**Pg**	**23 26 06.3**	**-0.9**
TRIZ				S	**Sb**	**23 26 17.9**	**+0.3**
	comp=N,720nm,0.3s						
TRIZ	**Trizonia**	**0.78**	**170**	P	**Pg**	**23 26 06.2**	**-0.9**
DLFA	**Delphi**	**0.80**	**145**	P	**Pg**	**23 26 06.9**	**-0.8**
MEV	**Metsovon**	**0.83**	**321**	P	**Pg**	**23 26 07.1**	**-1.2**
MEV	**Metsovon**	**0.83**	**321**	P	**Pg**	**23 26 07.3**	**-1.0**
DSF	**Desfina**	**0.87**	**146**	P	**Pg**	**23 26 08.4**	**-0.6**
DSF				S	**Sg**	**23 26 20.1**	**-0.3**
	comp=N,372nm,0.3s						
DSF	**Desfina**	**0.87**	**146**	P	**Pg**	**23 26 08.3**	**-0.6**
DSF				S	**Sb**	**23 26 20.4**	**+0.1**
DSF				AML	AML	23 26 22.8	
	comp=E,530µm,0.2s						
DSF				AML	AML	23 26 25.1	
	comp=N,819µm,0.2s						
ALIK	**Aliki, Aigiali**	**0.89**	**170**	P	**Pg**	**23 26 08.6**	**-0.7**
KPRO	**Kipourio**	**0.92**	**333**	P	**Pg**	**23 26 08.5**	**-1.4**
KPRO				S	**Sb**	**23 26 22.8**	**+1.0**
	comp=N,410nm,0.5s						
KPRO	**Kipourio**	**0.92**	**333**	P	**Pg**	**23 26 08.8**	**-1.1**
KPRO				S	**Sn**	**23 26 23.0**	**-0.4**
KPRO				AML	AML	23 26 24.1	
	comp=E,717µm,0.5s						
KPRO				AML	AML	23 26 28.7	
	comp=N,924µm,0.4s						
JAN	**Janina**	**0.97**	**303**	P	**Pg**	**23 26 09.3**	**-1.5**
JAN	**Janina**	**0.97**	**303**	P	**Pg**	**23 26 09.6**	**-1.2**
LKR	**Lokris**	**0.98**	**119**	P	**Pg**	**23 26 10.5**	**-0.5**
LKR				S	**Sb**	**23 26 23.9**	**+0.5**
	comp=N,128nm,0.3s						
LKR	**Lokris**	**0.98**	**119**	P	**Pg**	**23 26 10.6**	**-0.4**
XOR	**Xorichti**	**1.02**	**77**	P	**Pb**	**23 26 11.8**	**+0.4**
XOR	**Xorichti**	**1.02**	**77**	P	**Pb**	**23 26 11.8**	**+0.4**
XOR				S	**Sn**	**23 26 26.1**	**+0.2**
XOR				AML	AML	23 26 30.9	
	comp=E,228µm,0.4s						
XOR				AML	AML	23 26 31.1	
	comp=N,365µm,0.5s						
TSLK	**Tsoukalades, L**	**1.02**	**253**	P	**Pg**	**23 26 11.4**	**-0.4**
TSLK	**Tsoukalades, L**	**1.02**	**253**	P	**Pg**	**23 26 11.1**	**-0.7**
TSLK				S	**Sb**	**23 26 25.0**	**+0.3**
TSLK				AML	AML	23 26 32.8	
	comp=E,391µm,0.3s						
TSLK				AML	AML	23 26 34.1	
	comp=N,449µm,0.6s						
LKD2	**Lefkada island**	**1.03**	**251**	P	**Pg**	**23 26 11.3**	**-0.7**
LKD2				S	**Sn**	**23 26 26.8**	**+0.6**
	comp=N,362nm,0.4s						
LKD2	**Lefkada island**	**1.03**	**251**	P	**Pg**	**23 26 11.3**	**-0.7**
NEO	**Neokhori**	**1.03**	**80**	P	**Pg**	**23 26 11.6**	**-0.4**
NEO	**Neokhori**	**1.03**	**80**	P	**Pg**	**23 26 11.4**	**-0.7**
NEO				S	**Sg**	**23 26 25.3**	**-0.3**
NEO				AML	AML	23 26 30.3	
	comp=E,233µm,0.3s						
NEO				AML	AML	23 26 37.5	
	comp=N,306µm,0.7s						
LIT	**Litokhoron**	**1.06**	**25**	P	**Pg**	**23 26 12.1**	**-0.5**
LIT				S	**Sb**	**23 26 26.1**	**+0.3**
	comp=N,590nm,0.5s						
LIT	**Litokhoron**	**1.06**	**25**	P	**Pg**	**23 26 12.1**	**-0.5**
EVGI	**Lefkada island**	**1.10**	**243**	P	**Pb**	**23 26 12.3**	**-0.5**
EVGI	**Lefkada island**	**1.10**	**243**	P	**Pb**	**23 26 12.7**	**-0.1**
KLV	**Kalavryta, Ach**	**1.11**	**170**	P	**Pb**	**23 26 12.4**	**-0.5**
KLV	**Kalavryta, Ach**	**1.11**	**170**	P	**Pb**	**23 26 12.4**	**-0.5**
RLS	**Riolos of Patr**	**1.13**	**198**	P	**Pb**	**23 26 13.2**	**0.0**
RLS				S	**Sn**	**23 26 30.6**	**+2.1**
	comp=N,225nm,0.4s						
RLS	**Riolos of Patr**	**1.13**	**198**	P	**Pb**	**23 26 13.4**	**+0.1**
PROD	**Prodromos**	**1.17**	**138**	P	**Pb**	**23 26 13.3**	**-0.6**
KZN	**Kozani**	**1.17**	**355**	P	**Pb**	**23 26 12.8**	**-1.2**
KZN				S	**Sn**	**23 26 29.9**	**+0.2**
	comp=N,348nm,0.4s						
KZN	**Kozani**	**1.17**	**355**	P	**Pb**	**23 26 13.2**	**-0.9**
DRO	**Drossia**	**1.19**	**188**	P	**Pb**	**23 26 14.0**	**-0.3**
DRO	**Drossia**	**1.19**	**188**	P	**Pb**	**23 26 14.2**	**-0.1**
FSK	**Fiskardo**	**1.25**	**238**	P	**Pn**	**23 26 12.2**	**-2.7**
IGT	**Igoumenitsa**	**1.28**	**288**	P	**Pn**	**23 26 15.4**	**0.0**
KFL	**Anninata**	**1.35**	**221**	P	**Pb**	**23 26 17.2**	**+0.2**
KFL	**Anninata**	**1.35**	**221**	P	**Pg**	**23 26 17.5**	**-0.5**
MRKA	**Markates**	**1.38**	**108**	P	**Pn**	**23 26 17.0**	**+0.3**
LTK	**Loutraki**	**1.39**	**143**	P	**Pn**	**23 26 17.0**	**+0.2**
LTK	**Loutraki**	**1.39**	**143**	P	**Pn**	**23 26 17.0**	**+0.2**
VIL2	**Platees**	**1.41**	**131**	P	**Pg**	**23 26 18.8**	**-0.3**
NEST	**Nestorio**	**1.44**	**333**	P	**Pg**	**23 26 19.1**	**-0.6**
NEST				S	**Sg**	**23 26 38.6**	**+0.1**
	comp=N,172nm,0.6s						
NEST	**Nestorio**	**1.44**	**333**	P	**Pg**	**23 26 18.9**	**-0.8**
AOS	**Alonnisos**	**1.53**	**88**	P	**Pn**	**23 26 18.2**	**-0.6**
AOS	**Alonnisos**	**1.53**	**88**	P	**Pn**	**23 26 18.1**	**-0.6**
AMT	**Artemida-Makis**	**1.61**	**186**	P	**Pb**	**23 26 22.0**	**+0.6**
SRN	**Sarande**	**1.65**	**297**	P	**Pb**	**23 26 22.2**	**+0.1**
SRN				S	**Sg**	**23 26 45.4**	**+0.2**
	comp=N,135nm,0.7s						
SRN	**Sarande**	**1.65**	**297**	*i* PN	**Pn**	**23 26 21.4**	**+1.0**
SRN				*i* SN	**Sg**	**23 26 44.1**	**-1.1**
FNA	**Florina**	**1.70**	**346**	P	**Pn**	**23 26 21.5**	**+0.4**
FNA				S	**Sb**	**23 26 43.8**	**-0.3**
	comp=N,272nm,0.5s						
FNA	**Florina**	**1.70**	**346**	*i* PN	**Pn**	**23 26 21.9**	**+0.8**
FNA				*i* SN	**Sb**	**23 26 44.6**	**+0.5**
KEK	**Kerkira**	**1.73**	**290**	P	**Pb**	**23 26 23.7**	**+0.2**
VLX	**Vlachokerasia**	**1.80**	**168**	P	**Pb**	**23 26 24.7**	**0.0**
GRG	**Griva**	**1.86**	**12**	P	**Pn**	**23 26 23.6**	**+0.3**
TPE	**Tepelena**	**1.87**	**309**	*i* PN	**Pb**	**23 26 26.2**	**+0.4**
TPE				*i* SN	**Sb**	**23 26 50.1**	**+1.2**
DID	**Didima**	**1.93**	**147**	P	**Pn**	**23 26 24.1**	**-0.2**
ITM	**Ithomi**	**1.95**	**180**	P	**Pb**	**23 26 27.4**	**+0.1**
VLY	**Voula,Athens**	**1.96**	**130**	P	**Pn**	**23 26 25.2**	**+0.6**
KRND	**KRANIDI**	**2.00**	**150**	P	**Pn**	**23 26 25.5**	**+0.2**
STIP	**Stip**	**2.56**	**5**	*i* Pn	**Pn**	**23 26 34.9**	**+1.9**
PHP	**Peshkopia**	**2.78**	**337**	*i* PN	**Pn**	**23 26 37.8**	**+1.8**
MMB	**Musomiste**	**2.82**	**29**	*i* P	**Pn**	**23 26 36.4**	**-0.1**
PUK	**Puka**	**3.28**	**333**	*i* PN	**Pn**	**23 26 46.6**	**+3.6**
PUK				*i* SN	**Sn**	**23 27 25.5**	**+3.7**
RZN	**Rozhen**	**3.33**	**39**	*i* P	**Pn**	**23 26 43.7**	**0.0**
BCI	**Bajram Curri**	**3.52**	**337**	*i* PN	**Pn**	**23 26 48.8**	**+2.7**
VTS	**Vitosha**	**3.62**	**16**	*i* P	**Pn**	**23 26 48.3**	**+0.7**
STON	**Ston**	**4.91**	**321**	*i* Pn	**Pn**	**23 27 05.7**	**+0.6**
STON				Sn	**Sn**	**23 28 00.8**	**-0.8**
MAKA	**Makarska**	**5.55**	**320**	*i* Pn	**Pn**	**23 27 16.2**	**+2.3**
MAKA				Sn	**Sn**	**23 28 15.0**	**-2.4**
RICI	**Ricice**	**5.65**	**322**	*e*Pn	**Pn**	**23 27 17.5**	**+2.2**
RICI				Sn	**Sn**	**23 28 19.3**	**-0.6**
KIJV	**Kijevo**	**6.38**	**321**	*e*Pn	**Pn**	**23 27 25.2**	**-0.2**
KIJV				Sn	**Sn**	**23 28 37.3**	**-0.6**
ZIRJ	**Zirje**	**6.52**	**316**	*e*Pn	**Pn**	**23 27 29.0**	**+1.7**
ZIRJ				Sn	**Sn**	**23 28 39.7**	**-1.7**
MORI	**Morici**	**6.63**	**317**	*e*Pn	**Pn**	**23 27 30.8**	**+2.0**
MORI				Sn	**Sn**	**23 28 42.3**	**-1.8**
DUGI	**Dugi Otok**	**7.06**	**316**	*e*Pn	**Pn**	**23 27 36.7**	**+1.9**
DUGI				Sn	**Sn**	**23 28 53.2**	**-1.6**

IDC **14** *23:26:35.9±0.3, 10°.20N×72°.99W, h130^{km}±2^{km}, mb4.4/30, mb1 4.6/34, mb1mx4.5/43, mbtmp4.9/34, MS4.1/10, Ms1 4.1/10, ms1mx3.5/39, Error ellipse: s-maj=9.4km s-min=5.7km az=50.0*

NEIC **14** *23:26:36.1±1.8, 10°.28N±0°.06×72°.89W±0°.06, h128^{km}±5^{km}, mb4.7/282, Error ellipse: s-maj=9.1km s-min=8.0km az=119.0*

UPA **14** *23:26:36.8±3.1, 10°.21N×73°.34W, h0^{km}±55^{km}, MW5.3*

RSNC **14** *23:26:36.3±2.0, 10°.24N×73°.01W, h134^{km}±10^{km}, ML5.5, Mw5.4, Fault plane solution: NP1:ϕ_s83.00000°, δ68.00000°, λ-22.00000°.*

OSPL **14** *23:26:36.5±4.4, 10°.21N×72°.77W, h295^{km}±602^{km}, ML6.2*

VAO **14** *23:26:38.5±0.4, 10°.00N×72°.90W, h149^{km}±1^{km}, mb5.3*

GCMT **14** *23:26:40.1±0.3, 10°.36N±0°.02×73°.07W±0°.02, h115^{km}±3^{km}, MW5.0/90, Moment Tensor Solution. s24,c26; s90,c128; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.62±.11; $M_{\theta\theta}$0.04±.14; $M_{\phi\phi}$-0.66±.15; $M_{r\theta}$-1.40±.08; $M_{\theta\phi}$4.12±.12; $M_{\phi r}$-0.04±.10; Best double couple: $M_0$4.38100×10^{16} NP1:ϕ_s182.00000°, δ71.00000°, λ175.00000°. NP2: ϕ_s274.00000°, δ85.00000°, λ20.00000°. Principal axes: T 4.1530, Plg17.0000°, Azm139.0000°; N 0.4570, Plg70.0000°, Azm287.0000°; P -4.6100, Plg10.0000°, Azm46.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 23:26:35.6±0.2**, 10°.28N**±0°.03×**72°.95W**±0°.03**, h131**^{km}±2^{km}**, h132**^{km}**:pP-P, n939,** σ**2**^{s}**.27**/1023**, mb4.7**/198**, 23C-40D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CODC	Agustn Codazz	0.59	235	⇓iP	Pn	23 26 56.4	+1.1
CODC				eS	Sn	23 27 10.4	+0.1
CODC				i		23 27 11.8	
	comp=Z,85µm,0.5s						
ARGC	Ariguani, Magd	1.34	252	⇓iP	Pn	23 27 03.2	+1.1
ARGC				eS	Sn	23 27 22.0	-0.1
ARGC				i		23 27 23.8	
	comp=Z,38µm,0.5s						
SMRC	Santa Marta, M	1.53	305	⇑iP	Pn	23 27 04.0	-0.1
SMRC				eS	Sn	23 27 24.4	-1.5
SMRC				i		23 27 27.1	
	comp=Z,41µm,0.5s						
URIC	Uribia, Colomb	1.70	34	⇓iP	Pn	23 27 07.0	+0.9
URIC				eS	Sn	23 27 30.1	+0.6
URIC	Uribia, Colomb	1.70	34		Pn	23 27 06.5	+0.3
SMLC	San Martn de	1.83	217	⇓iP	Pn	23 27 07.9	+0.3
SMLC				eS	Sn	23 27 31.2	-1.0
OCAC	Ocana	2.06	190	⇓iP	Pn	23 27 11.2	+0.7
OCAC				eS	Sn	23 27 37.0	-0.3
SJCC	San Jacinto, C	2.22	260	⇓iP	Pn	23 27 12.4	-0.1
SJCC				eS	Sn	23 27 40.0	-0.7
SJCC				i		23 27 43.9	
	comp=Z,26µm,0.7s						
SJCC	San Jacinto, C	2.22	260	eP	Pn	23 27 12.5	-0.1
SJCC				eS	Sn	23 27 39.8	-1.0
DABV	Dabajuro	2.37	74	⇓iP	Pn	23 27 15.8	+1.6
DABV				eS	Sn	23 27 44.6	+0.8
SDV	Santo Domingo	2.67	121	P	Pn	23 27 20.3	+2.0
	comp=Z,1µm,0.3s,baz=311,slow=5.6						
SDV				S	Sn	23 27 51.5	+0.5
	comp=Z,5µm,0.3s,baz=14,slow=8.2,SNR=7.9						
SDV	Santo Domingo	2.67	121	⇑iP	Pn	23 27 20.2	+2.0
SDV				eS	Sn	23 27 51.3	+0.2
SDV				i		23 27 53.5	
	comp=Z,13µm,0.3s						
SDV	Santo Domingo	2.67	121		Pn	23 27 20.0	+1.8
SDV				Sn	Sn	23 27 52.2	+1.2
SDV	Santo Domingo	2.67	121	eP	Pn	23 27 20.3	+2.0
SDV				eS	Sn	23 27 51.2	+0.2
SOCV	Socops	2.86	134	⇑iP	Pn	23 27 22.5	+2.0
SOCV				eS	Sn	23 27 51.5	-3.7
PAMC	Pamplona, Colo	2.93	175	⇑iP	Pn	23 27 23.3	+1.5
PAMC				eS	Sn	23 27 57.5	+0.1
PAMC				i		23 28 02.6	
	comp=Z,18µm,0.4s						
ZARC	Zaragoza, Cauc	3.34	214	⇓iP	Pn	23 27 26.8	-0.1
ZARC				eS	Sn	23 28 04.4	-2.0
ZARC				i		23 28 13.9	
	comp=Z,7µm,0.3s						
UREC	San Jos de Ur	3.57	226	⇓iP	Pn	23 27 28.9	-0.9
UREC				eS	Sn	23 28 08.1	-3.6
UREC				i		23 28 13.6	
	comp=Z,4µm,0.2s						
LCBC	Los crdobas,	3.65	248	⇓iP	Pn	23 27 30.6	-0.2
LCBC				eS	Sn	23 28 08.6	-5.0
LCBC				i		23 28 16.2	
	comp=Z,11µm,0.4s						
BARC	Barichara	3.67	184	⇑iP	Pn	23 27 32.5	+1.3
BARC				eS	Sn	23 28 14.2	-0.1
TAMC	Tame, Arauca	3.98	163	⇑iP	Pn	23 27 36.9	+1.6
TAMC				eS	Sn	23 28 20.1	-1.4
TAMC				i		23 28 32.7	
	comp=Z,7µm,1.2s						
PTBC	PUERTO BERRIO,	4.00	202	⇓iP	Pn	23 27 35.2	-0.2
PTBC				eS	Sn	23 28 20.5	-1.4
PTBC				i		23 28 27.7	
	comp=Z,9µm,0.7s						
RUSC	La Rusia	4.36	182	⇓iP	Pn	23 27 40.5	-0.2
RUSC	La Rusia	4.36	182	Pn	Pn	23 27 40.8	+0.1
DBBC	Dabeiba	4.56	225	⇓eP	Pn	23 27 41.9	-1.1
CAPC	Capurgana	4.63	250	⇓iP	Pn	23 27 41.8	-2.0
	comp=Z,4µm,0.8s						
CAPC				eS	Sn	23 28 30.3	-6.6
CAPC				i		23 28 34.8	
	comp=Z,4µm,0.8s						
SPBC	San Pablo de B	4.72	194	⇓eP	Pn	23 27 45.4	+0.2
SPBC				eS	Sn	23 28 37.1	-2.2
SPBC				i		23 28 42.7	
	comp=Z,4µm,0.4s						
ELOV	Elorza	4.73	133	⇑iP	Pn	23 27 46.3	+1.2
HELC	Santa Helena	4.79	212	⇓iP	Pn	23 27 45.4	-0.9
HELC				eS	Sn	23 28 38.0	-3.3
HELC				i		23 28 53.2	
	comp=Z,4µm,1.1s						
HELC	Santa Helena	4.79	212	eP	Pn	23 27 48.4	+2.1
HELC				eS	Sn	23 28 40.4	-0.8
BAUV	El Baul	5.02	105	⇑iP	Pn	23 27 49.9	+0.9
BAUV	El Baul	5.02	105	eS	Sn	23 28 45.1	-1.1
NORC	Norcasia	5.05	202	⇓iP	Pn	23 27 49.1	-0.4
NORC				eS	Sn	23 28 42.0	-5.1
NORC				i		23 28 57.6	
	comp=Z,4µm,0.8s						
CBOC	Ciudad Bolivar	5.33	215	⇓eP	Pn	23 27 53.1	-0.2
CBOC				eS	Sn	23 28 51.7	-2.2
GUY2C	Guyana, Caldas	5.56	206	⇓iP	Pn	23 27 56.7	0.0
GUY2C				eS	Sn	23 28 59.3	-0.5
GUY2C				i		23 29 11.6	
	comp=Z,3µm,1.7s						
ROSC	El Rosal	5.57	194	P	Pn	23 27 59.2	+2.5
	comp=Z,167nm,0.3s,baz=9.3,slow=8.9,SNR=72						
ROSC				S	Sn	23 28 57.5	-2.5
	comp=Z,266nm,0.3s,baz=43,slow=21,SNR=3.7						
ROSC	El Rosal	5.57	194	⇓iP	Pn	23 27 58.3	+1.6
ROSC				eS	Sn	23 28 57.8	-2.1
ROSC				i		23 29 13.2	
	comp=Z,2µm,1.2s						
ROSC	El Rosal	5.57	194		Pn	23 27 58.4	+1.6
CHIC	Chingaza	5.66	188	⇓eP	Pn	23 27 58.4	+0.4
CHIC				eS	Sn	23 29 02.0	-0.2
CHIC				i		23 29 14.1	
	comp=Z,2µm,0.6s						
PTAC	Punta Ardita,	5.72	237	⇓iP	Pn	23 27 58.0	-0.4
PTAC				eS	Sn	23 28 57.0	-6.0
RREF	El Recreo	5.84	204	⇓iP	Pn	23 28 00.9	+0.2
RREF				eS	Sn	23 29 05.8	-1.1
RREF				i		23 29 17.9	
	comp=Z,3µm,0.5s						
SOLC	Bahia Solano	5.97	228	⇓eP	Pn	23 28 02.3	+0.6
SOLC				eS	Sn	23 29 05.7	-3.3
TOLC	Tolima	6.12	203	eP	Pn	23 28 05.3	+1.2
TOLC				eS	Sn	23 29 12.0	-1.1
VILC	Villavicencio,	6.17	187	eP	Pn	23 28 05.7	+1.1
VILC				eS	Sn	23 29 04.7	-9.3
VILC				i		23 29 21.7	
	comp=Z,2µm,0.3s						
CHPO	Chepo, Panama	6.17	260	eP	Pn	23 28 03.0	-1.5
CHPO				eS	Sn	23 29 10.5	-3.4
ANIL	Santa Ana	6.24	203	⇓eP	Pn	23 28 06.0	+0.3
ANIL				eS	Sn	23 29 15.6	-0.4
ANIL				i		23 29 31.7	
	comp=Z,3µm,0.4s						
PLMC	San Jos del P	6.27	212	⇓eP	Pn	23 28 07.0	+1.0
PLMC				eS	Sn	23 29 14.0	-2.5
UPA	Univ. de Panam	6.62	259	eP	Pn	23 28 07.0	-3.4
UPA				eS	Sn	23 29 21.3	-3.3
UPA	Univ. de Panam	6.62	259	eP	Pn	23 28 09.3	-1.1
UPA				eS	Sn	23 29 19.4	-5.2
MAD3	Madden Dam	6.65	261	eP	Pn	23 28 10.6	-0.4
MAD3				eS	Sn	23 29 19.7	-5.8
MFS3	Miraflores	6.67	260	eP	Pn	23 28 10.5	-0.7
MFS3				eS	Sn	23 29 21.4	-4.5
MFS3	Miraflores	6.67	260	eP	Pn	23 28 10.1	-1.0
MFS3				eS	Sn	23 29 20.6	-5.3
TABO3	Taboga, Panama	6.67	258	eP	Pn	23 28 09.2	-2.0
TABO3				eS	Sn	23 29 21.1	-5.0
TABO3	Taboga, Panama	6.67	258	eP	Pn	23 28 09.8	-1.5
TABO3				eS	Sn	23 29 21.1	-5.0
PML3	Paraiso	6.69	260	eP	Pn	23 28 11.6	+0.2
PML3				eS	Sn	23 29 19.9	-6.4
PML3	Paraiso	6.69	260	eP	Pn	23 28 10.6	-0.8
PML3				eS	Sn	23 29 20.2	-6.1
ORTC	Ortega, Tolima	6.72	200	⇓iP	Pn	23 28 13.5	+1.6
ORTC				eS	Sn	23 29 24.9	-2.3
ORTC				i		23 29 34.8	
	comp=Z,1µm,0.6s						
PIZC	Pizarro, Choco	6.85	220	eP	Pn	23 28 14.5	+0.9
CHOR3	La Chorrera	6.86	259	eP	Pn	23 28 12.8	-0.9
CHOR3				eS	Sn	23 29 25.6	-4.8
BCIP	Isla Barro Col	6.88	261	⇓eP	Pn	23 28 12.6	-1.3
BCIP				eS	Sn	23 29 25.1	-5.8
BCIP	Isla Barro Col	6.88	261	eP	Pn	23 28 13.4	-0.5
BCIP				eS	Sn	23 29 24.6	-6.3
BCIP	Isla Barro Col	6.88	261	eP	Pn	23 28 13.2	-0.8
BCIP				eS	Sn	23 29 26.8	-4.1
BCIP	Isla Barro Col	6.88	261		Pn	23 28 12.9	-1.1
ZANG	Zanguenga, Cho	6.94	260	eP	Pn	23 28 13.9	-1.0
ZANG				eS	Sn	23 29 30.6	-1.9
ZANG	Zanguenga, Cho	6.94	260	eP	Pn	23 28 13.8	-1.0
ZANG				eS	Sn	23 29 30.6	-1.9
SPIL	Cristobal, Col	6.95	262	eP	Pn	23 28 13.6	-1.4
SPIL				eS	Sn	23 29 30.7	-2.0
SPIL	Cristobal, Col	6.95	262	eP	Pn	23 28 14.4	-0.5
SPIL				eS	Sn	23 29 30.2	-2.5
PINA	Piqa, Costa Ab	7.08	262	eP	Pn	23 28 16.6	-0.2
PINA				eS	Sn	23 29 34.1	-1.8
PINA	Piqa, Costa Ab	7.08	262	eP	Pn	23 28 16.7	-0.1
PINA				eS	Sn	23 29 33.1	-2.8
YOTC	Yotoco, Valle	7.10	209	⇓eP	Pn	23 28 16.3	-0.8
YOTC				eS	Sn	23 29 32.6	-3.9
VTON	El Valle, Cocl	7.25	257	eP	Pn	23 28 18.1	-1.0
VTON				eS	Sn	23 29 35.4	-4.8
VTON	El Valle, Cocl	7.25	257	eP	Pn	23 28 18.2	-1.0
VTON				eS	Sn	23 29 35.2	-4.9
AZU	Azuero	7.64	252	⇓iP	Pn	23 28 23.6	-0.7
AZU				eS	Sn	23 29 40.1	-9.3
AZU	Azuero	7.64	252	eP	Pn	23 28 23.5	-0.7
AZU				eS	Sn	23 29 42.1	-7.2
AZU	Azuero	7.64	252	eP	Pn	23 28 23.6	-0.7
AZU				eS	Sn	23 29 42.7	-6.7
CALO3	Calobre, Verag	8.02	257	eP	Pn	23 28 28.3	-1.1
CALO3				eS	Sn	23 29 54.4	-4.3
PCRV	Puerto La Cruz	8.19	90	P	Pn	23 28 32.6	+0.9
	comp=Z,77nm,0.3s,baz=308,slow=4.2,SNR=185						
PCRV				S	Sn	23 30 00.5	-2.2
	comp=Z,24nm,0.3s,baz=142,slow=18,SNR=3.8						
LGNH	Logne	8.20	2	i P	Pn	23 28 32.6	+0.9
LGNH				eS	Sn	23 29 57.6	-5.2
LGNH	Logne	8.20	2	Pn	Pn	23 28 32.5	+0.7
PLCV	Puerto La Cruz	8.23	90		Pn	23 28 32.6	+0.4
PLCV					Sn	23 30 00.5	-3.3
LONE1	Neyba	8.29	10	i P	Pn	23 28 37.3	+4.3
LONE1				eS	Sn	23 30 02.6	-2.5
CACAO	El Cacao, Vera	8.34	250	eP	Pn	23 28 32.9	-0.7
CACAO				eS	Sn	23 30 04.9	-1.5
GARC	Garzon, Huila	8.42	198	eP	Pn	23 28 34.6	-0.5
GARC				eS	Sn	23 30 01.8	-6.9
BANI	BANI	8.45	17		Pn	23 28 32.8	-2.5
PCJ	Portland Cotta	8.47	332	eP	Pn	23 28 34.5	-0.9
CMJ	Castle Mountai	8.49	337	i P	Pn	23 28 37.2	+1.5
POPC	Popayan, Colom	8.53	206	⇓eP	Pn	23 28 35.4	-1.0
POPC				i		23 30 17.6	
	comp=Z,576nm,0.9s						
GMAL	Guarumal, Vera	8.55	254	eP	Pn	23 28 35.5	-1.0
GMAL				eS	Sn	23 30 07.0	-4.4
GMAL	Guarumal, Vera	8.55	254	eP	Pn	23 28 36.8	+0.3
GMAL				eS	Sn	23 30 08.4	-3.1
GWJ	Greenwich	8.57	335	eP	Pn	23 28 37.5	+0.5
PCON	Cinco Dias	8.60	204	⇓eP	Pn	23 28 38.4	+0.6
PCON				eS	Sn	23 30 10.2	-3.3
STH	Stony Hill	8.61	335	⇓eP	Pn	23 28 36.5	-0.8
SDD	Santo Domingo	8.65	20	i P	Pn	23 28 38.8	+0.9
SDD				eS	Sn	23 30 06.2	-7.6
SDD				IAML		23 30 14.2	
	comp=Z,342nm,0.3s						
SDD	Santo Domingo	8.65	20		Pn	23 28 37.1	-0.7
PRVC	Isla de Provid	8.79	291	⇑iP	Pn	23 28 37.6	-2.1
PRVC				eS	Sn	23 30 06.9	-10
PRVC				i		23 30 12.9	
	comp=Z,503nm,0.4s						
SDDR	Presa de Saban	8.80	10	i P	Pn	23 28 41.9	+1.9
SDDR				eS	Sn	23 30 14.7	-3.0
SDDR				IAML		23 30 24.7	
	comp=Z,1µm,0.6s						
SDDR	Presa de Saban	8.80	10		Pn	23 28 41.8	+1.8
MCJ	Malvern	8.88	329	⇓eP	Pn	23 28 39.1	-2.0
MCJ				i S	Sn	23 30 11.7	-7.9
BNJ	Bonny Gate	8.89	335	eP	Pn	23 28 40.8	-0.2
FLOC	Florencia	9.04	197	eP	Pn	23 28 42.5	-0.7
FLOC				eS	Sn	23 30 20.8	-2.6
FLOC	Florencia	9.04	197	Pn	Pn	23 28 43.6	+0.4
MTDJ	Mount Denham	9.06	331		Pn	23 28 41.9	-1.6
BBJ	Bamboo Saint A	9.08	333	eP	Pn	23 28 43.0	-0.7
DR12	Loma Pena Alta	9.14	22		Pn	23 28 41.8	-2.7
BBAC	Balboa, Cauca	9.24	208	eP	Pn	23 28 46.0	-0.1
BBAC				eS	Sn	23 30 22.4	-6.1
BBAC				i		23 30 37.2	
	comp=Z,242nm,0.8s						
PCDR	Punta Cana, DR	9.31	28	i P	Pn	23 28 44.6	-2.1
PCDR				eS	Sn	23 30 19.8	-10
PCDR				IAML		23 30 33.6	
	comp=Z,1µm,0.6s						
SC01	Santiago de lo	9.35	13	i P	Pn	23 28 49.1	+1.9
SC01				IAML		23 30 42.5	
	comp=Z,2µm,0.8s						
CNI2	El Empalme, Bo	9.42	266	eP	Pn	23 28 48.1	-0.1
CNI2				eS	Sn	23 30 26.7	-5.7
ORIV	Oritupano	9.49	96	eP	Pn	23 28 47.8	-1.3
ORIV	Oritupano	9.49	96	eS	Sn	23 30 29.9	-4.2
CRUC	La Cruz	9.52	205	eP	Pn	23 28 50.2	+0.3
DVD	David	9.55	260	eP	Pn	23 28 49.8	-0.2
DVD				eS	Sn	23 30 35.0	-0.6
DVD	David	9.55	260	eP	Pn	23 28 49.9	0.0
DVD				eS	Sn	23 30 33.3	-2.3
BCO2	Palmira	9.57	262	eP	Pn	23 28 50.5	+0.1
BCO2				eS	Sn	23 30 30.3	-6.1
BCO2	Palmira	9.57	262	eP	Pn	23 28 50.5	+0.1
BCO2				eS	Sn	23 30 30.1	-6.3
MPR	Mayaguez	9.69	35	i P	Pn	23 28 48.7	-3.2
MPR				eS	Sn	23 30 31.2	-7.8
BRU2	Volcan	9.72	262	eP	Pn	23 28 52.3	-0.1
BRU2				eS	Sn	23 30 36.0	-3.9
BRU2	Volcan	9.72	262	eP	Pn	23 28 51.3	-1.0
BRU2				i S	Sn	23 30 37.2	-2.7
BRU2				eS	Sn	23 30 37.2	-2.7
GTBY	Guantanamo Bay	9.82	348	i P	Pn	23 28 52.7	-0.8
GTBY				eS	Sn	23 30 34.6	-7.5
GTBY				IAML		23 30 43.0	
	comp=Z,332nm,0.5s						
GTBY	Guantanamo Bay	9.82	348		Pn	23 28 52.9	-0.7
AGPR	Aguadilla, PR	9.92	34	i P	Pn	23 28 51.5	-3.4
AGPR				eS	Sn	23 30 35.2	-9.2
AGPR				IAML		23 30 44.3	
	comp=Z,438nm,0.5s						
GCUF	Volcan Galeras	9.99	206	eP	Pn	23 28 55.5	-0.9
GCUF				eS	Sn	23 30 40.2	-6.9
TUMC	Tumaco	10.17	215		Pn	23 28 57.5	-0.7
SJG	San Juan	10.21	39	P	Pn	23 28 54.8	-3.9
	comp=Z,302nm,0.3s,baz=221,slow=12,SNR=418						
SJG				S	Sn	23 30 41.5	-10
	comp=Z,71nm,0.3s,baz=233,slow=23,SNR=8.6						
SJG	San Juan	10.21	39	eP	Pn	23 28 54.5	-4.2
SJG				⇓ePg	Pn	23 28 54.6	-4.2
SJG				eS	Sn	23 30 40.9	-11
GUIV	Guiria	10.56	87	eP	Pn	23 29 03.2	-0.3
GUIV	Guiria	10.56	87	eS	Sn	23 30 46.1	-14
HDC	Heredia	10.99	270	eP	Pn	23 29 14.5	+5.1
HDC				eS	Sn	23 31 03.8	-7.0
HDC	Heredia	10.99	270		Pn	23 29 10.7	+1.3
GRFF	Grenada Fort F	11.15	80	eP	Pn	23 29 07.7	-3.7
GRFF	Grenada Fort F	11.15	80	eS	Sn	23 31 07.4	-6.9
STVI	Saint Thomas	11.16	43		Pn	23 29 07.9	-3.5
GRGR	Grenville	11.24	79	eP	Pn	23 29 09.4	-3.2
GRGR	Grenville	11.24	79	eS	Sn	23 31 08.0	-8.5
GRGR	Grenville	11.24	79		Pn	23 29 09.4	-3.2
GRHS	Sauteurs	11.26	79	eP	Pn	23 29 10.0	-2.9
GRHS	Sauteurs	11.26	79	eS	Sn	23 31 10.1	-7.0
GRSS	Sisters	11.30	79	eP	Pn	23 29 11.5	-1.9
GRSS	Sisters	11.30	79	eS	Sn	23 31 11.2	-6.9
GRTK	Grand Turk	11.31	9		Pn	23 29 13.5	+0.1
TPP	Pointe-a-Pierr	11.32	89	eP	Pn	23 29 15.6	+2.0
TRN	Trinidad (W)	11.37	87	eP	Pn	23 29 13.9	-0.3
TRN	Trinidad (W)	11.37	87	eS	Sn	23 31 17.2	-2.3
OTAV	Otavalo	11.37	209		Pn	23 29 14.1	-0.6
OTAV	Otavalo	11.37	209	eP	Pn	23 29 15.9	+1.2
OTAV				eS	Sn	23 31 17.9	-2.5
CBCY	The Bluff, Cay	11.47	326		Pn	23 29 15.6	0.0
TBH	Brigand Hill	11.70	88	eP	Pn	23 29 21.1	+2.5
JTS	Las Juntas de	11.81	271	P	Pn	23 29 20.9	+0.8
	comp=Z,5.4nm,0.3s,baz=150,slow=23,SNR=13						
JTS				S	Sn	23 31 23.5	-6.8
	comp=Z,12nm,0.3s,baz=68,slow=8.2,SNR=4.0						
JTS	Las Juntas de	11.81	271	eP	P	23 29 24.8	-3.0
JTS				eS	Sn	23 31 23.8	-6.5
JTS	Las Juntas de	11.81	271	eP	Pn	23 29 23.2	+3.1
JTS				eS	Sn	23 31 25.3	-5.0
JTS	Las Juntas de	11.81	271		Pn	23 29 21.2	+1.2
SVB	Belmont	11.84	74	eP	Pn	23 29 15.4	-5.1
SVB	Belmont	11.84	74	eS	Sn	23 31 23.2	-7.8
SVB	Belmont	11.84	74		Pn	23 29 15.4	-5.1
SVV	Soufriere Volc	11.88	74	eP	Pn	23 29 16.1	-5.0
SSV	Crater Summit	11.91	74	eP	Pn	23 29 16.6	-4.8
SABA	Saba	11.92	51	eP	Pn	23 29 18.1	-3.4
SABA	Saba	11.92	51	eS	Sn	23 31 25.6	-7.3
SABA	Saba	11.92	51		Pn	23 29 18.1	-3.4
SVCV	St. Vincent, C	11.94	74	eP	Pn	23 29 16.2	-5.6
SVCV	St. Vincent, C	11.94	74	eS	Sn	23 31 25.4	-8.0
SEUS	St. Eustatius	12.05	52	eP	Pn	23 29 19.8	-3.4
SEUS	St. Eustatius	12.05	52	eS	Sn	23 31 28.1	-7.9
SEUS	St. Eustatius	12.05	52	Pn	Pn	23 29 20.2	-2.9
ACON	Acoyapa	12.11	279		Pn	23 29 24.0	0.0
SKI	Saint Kitts	12.15	54	eP	Pn	23 29 20.8	-3.7
SKI	Saint Kitts	12.15	54	eS	Sn	23 31 24.6	-14
SKI	Saint Kitts	12.15	54		Pn	23 29 20.8	-3.7
SLB	Belfond	12.17	72	eP	Pn	23 29 20.2	-4.6
SLB	Belfond	12.17	72	eS	Sn	23 31 26.2	-13
MCLT	Moule a Chique	12.24	73	eP	Pn	23 29 19.7	-5.9
MCLT	Moule a Chique	12.24	73	eS	Sn	23 31 30.7	-10
MCLT	Moule a Chique	12.24	73		Pn	23 29 20.1	-5.6
TOSP	Speyside	12.24	84	eP	Pn	23 29 27.0	+1.3
TOSP	Speyside	12.24	84	eS	S	23 31 54.0	-5.6
TOSP	Speyside	12.24	84		Pn	23 29 26.7	+1.0
MLYT	Lee's Yard	12.27	57	eP	Pn	23 29 22.1	-4.0
MLYT	Lee's Yard	12.27	57	eS	Sn	23 31 27.8	-14
SLBI	Saint Lucia, B	12.29	71	eP	Pn	23 29 20.2	-6.1
SLBI	Saint Lucia, B	12.29	71	eS	Sn	23 31 30.8	-11
SMRT	St. Maarten	12.30	50	eP	Pn	23 29 23.3	-3.2
SMRT	St. Maarten	12.30	50	eS	Sn	23 31 31.1	-11
SMRT	St. Maarten	12.30	50	Pn	Pn	23 29 23.6	-2.9
SLAC	Saint Lucia, A	12.33	72	eP	Pn	23 29 20.2	-6.6
SLAC	Saint Lucia, A	12.33	72	eS	Sn	23 31 32.7	-10
FDF	Fort de France	12.35	68	eP	Pn	23 29 21.7	-5.4
FDF	Fort de France	12.35	68	eS	Sn	23 31 31.3	-12
FDF	Fort de France	12.35	68		Pn	23 29 21.7	-5.4
MDPO	Dominica; Chan	12.39	64	eP	Pn	23 29 23.2	-4.3
MDPO	Dominica; Chan	12.39	64	eS	Sn	23 31 36.6	-7.6
MDPV	Dominica, Penn	12.43	63	eS	Sn	23 31 39.1	-6.3
DWS	Wesley	12.51	64	eP	Pn	23 29 24.7	-4.5
DWS	Wesley	12.51	64	eS	Sn	23 31 39.6	-7.5
ANWB	Willy Bob	13.09	55	eP	Pn	23 29 33.4	-3.3
ANWB	Willy Bob	13.09	55	eS	Sn	23 31 50.4	-11
ANWB	Willy Bob	13.09	55		Pn	23 29 33.4	-3.3
BCHC	Barbados, Cave	13.35	76	eP	P	23 29 46.8	+1.8
BCHC	Barbados, Cave	13.35	76	eS	S	23 32 18.8	-3.2
BBGH	Gun Hill	13.42	76	eP	P	23 29 45.7	-0.1
BBGH	Gun Hill	13.42	76	eS	S	23 32 22.2	-1.3
BBGH	Gun Hill	13.42	76	Pn	Pn	23 29 39.8	-1.2
BBSP	Saint Philip	13.51	77	eP	P	23 29 46.2	-0.5
BBSP	Saint Philip	13.51	77	eS	S	23 32 23.5	-1.8
TGUH	Tegucigalpa,Un	14.49	286		Pn	23 29 55.3	+0.5
CSGN	Cosiguina Volc	14.56	282	Pn	Pn	23 29 56.9	+1.3
PTGA	Pitinga	16.93	129	P	Pn	23 30 25.8	+1.0
	comp=Z,14nm,0.3s,baz=312,slow=12,SNR=126						
PTGA				LR	LR	23 36 54.7	
	comp=Z,352nm,19.5s,baz=316,slow=37						
PTGA	Pitinga	16.93	129	P	Pn	23 30 25.2	+0.5
PTGA	Pitinga	16.93	129	eP	Pn	23 30 25.0	+0.3
PTGA				eS	Sn	23 33 31.0	-2.7
061Z	Ochoppi	17.24	335		P	23 30 25.6	-2.3
APG	El Apazote	17.72	287	P	Pn	23 30 35.8	+1.3
	comp=Z,3.4nm,0.3s,baz=112,slow=7.4,SNR=47						
APG				LR	LR	23 37 37.0	
	comp=Z,393nm,20.9s,baz=122,slow=37						
TEIG	Tepich	17.77	306	P	Pn	23 30 36.1	+1.2
060A	Indiantown	18.08	338	P	P	23 30 36.1	-1.0
ATAH	Atahualpa	18.12	198	P	Pn	23 30 40.9	+1.3
	comp=Z,4.6nm,0.3s,baz=34,slow=5.8,SNR=33						
CCIG	Comitan	19.59	290	P	Pn	23 30 56.5	0.0
PAYG	Puerto Ayora	20.39	239	P	P	23 31 03.8	+1.5
MDP	Montagnes des	20.77	103	P	P	23 31 06.5	+0.1
	comp=Z,20nm,0.6s,baz=284,slow=8.2,SNR=20						
SAML	Samuel	21.43	153	P	P	23 31 11.9	-1.5
SAML	Samuel	21.43	153	eP	P	23 31 11.8	-1.7
SAML				eS	S	23 34 58.3	-5.3
CMIG	Matias Romero	22.35	290	P	P	23 31 20.9	-2.0
	comp=Z,7.4nm,0.8s,baz=92,slow=8.2,SNR=9.6						
CMIG				LR	LR	23 40 33.7	
	comp=Z,367nm,18.5s,baz=106,slow=38						
NNA	Nana	22.45	190	P	P	23 31 24.4	+0.4
	comp=Z,191nm,0.8s,baz=359,slow=8.4,SNR=78						
NNA	Nana	22.45	190	P	P	23 31 24.3	+0.3
TIGA	Tifton	23.26	336	P	P	23 31 32.9	+1.4
	baz=153						
NHSC	New Hope	23.68	345	P	P	23 31 37.2	+2.0
	baz=162						
Z58A	St. Stephen	23.80	346	P	P	23 31 38.5	+2.1
	baz=163						
352A	Blakely	23.84	334	P	P	23 31 38.8	+2.0
352A				IAmb	IAmb	23 31 48.7	
	comp=Z,64nm,1.3s						
Z57A	Bowman	24.00	344	P	P	23 31 40.0	+1.8
	baz=161						
Y60A	Bolivia	24.11	349	P	P	23 31 40.9	+1.8
Y60A	Bolivia	24.11	349	P	P	23 31 40.9	+1.8
	baz=167						
Z56A	Williston	24.21	343	P	P	23 31 40.9	+0.8
Z56A				IAmb	IAmb	23 31 43.4	
	comp=Z,26nm,0.7s						
Z56A	Williston	24.21	343	P	P	23 31 41.5	+1.4
	baz=159						
Y59A	Loris	24.22	348	P	P	23 31 40.3	+0.2
Y59A	Loris	24.22	348	P	P	23 31 41.8	+1.7
	baz=166						
Y58A	Scranton	24.31	346	P	P	23 31 42.1	+1.1
Y58A	Scranton	24.31	346	P	P	23 31 42.7	+1.7
	baz=164						
BRAL	Brewton	24.57	330	P	P	23 31 44.8	+1.4
	baz=145						
Y57A	Sumter	24.60	345	P	P	23 31 45.6	+2.0
	baz=162						
X60A	Albert Glenn T	24.62	350	P	P	23 31 45.7	+1.9
	baz=168						
Y56A	Pelion	24.63	343	P	P	23 31 45.4	+1.4
	baz=160						
152A	Waverly Hall	24.79	336	P	P	23 31 47.9	+2.6
250A	Grady	24.86	332	P	P	23 31 47.0	+1.0
250A				IAmb	IAmb	23 31 56.5	
	comp=Z,24nm,1.1s						
X58A	Rowland	24.86	347	P	P	23 31 45.2	-0.8
X58A				IAmb	IAmb	23 31 50.9	
	comp=Z,16nm,0.8s						
X58A	Rowland	24.86	347	P	P	23 31 47.8	+1.8

	baz=165						
Y55A	Saluda	24.93	342	P	P	23 31 48.7	+2.0
	baz=159,SNR=7.2						
X57A	Johnson Farm,	24.95	346	P	P	23 31 49.1	+2.3
	baz=163						
GOGA	Godfrey	24.97	339	P	P	23 31 48.0	+1.0
GOGA				IAmb	IAmb	23 31 50.3	
	comp=Z,25nm,1.4s						
GOGA	Godfrey	24.97	339	P	P	23 31 48.6	+1.6
	baz=155						
W60A	Pink Hill	25.05	351	P	P	23 31 49.7	+2.1
	baz=169						
W61A	Ground Anchor	25.06	352	P	P	23 31 50.0	+2.3
	baz=171						
JSC	Jenkinsville	25.08	344	P	P	23 31 49.8	+1.8
BIRD	Birdtown, Kers	25.21	345	P	P	23 31 50.5	+1.3
X56A	White Oak	25.21	344	P	P	23 31 51.4	+2.2
	baz=161						
CNNC	Cliffs of the	25.25	350	P	P	23 31 50.3	+0.7
W58A	Raeford	25.29	348	P	P	23 31 52.1	+2.2
	baz=165						
V62A	Hyde County Ai	25.32	354	P	P	23 31 50.1	0.0
V62A	Hyde County Ai	25.32	354	P	P	23 31 52.3	+2.2
	baz=173						
HODGE	Hodges	25.32	342	P	P	23 31 51.9	+1.7
HODGE				IAmb	IAmb	23 31 53.3	
	comp=Z,16nm,0.8s						
X55A	Gracelyn & Ava	25.36	343	P	P	23 31 52.2	+1.7
	baz=160						
Z51A	Franklin	25.54	336	IAmb	IAmb	23 31 56.4	
	comp=Z,11nm,0.7s						
545A	Edgard	25.58	323	P	P	23 31 54.3	+1.8
W57A	Gilead	25.58	347	P	P	23 31 53.9	+1.3
W57A	Gilead	25.58	347	P	P	23 31 54.2	+1.6
	baz=164						
Y52A	Lilburn	25.60	338	P	P	23 31 54.6	+1.9
	baz=154						
X54A	Belton	25.65	342	P	P	23 31 54.8	+1.7
	baz=158						
V60A	Jim Taylor Roa	25.68	352	P	P	23 31 54.2	+0.9
V60A				IAmb	IAmb	23 31 55.9	
	comp=Z,26nm,0.6s						
V60A	Jim Taylor Roa	25.68	352	P	P	23 31 54.8	+1.5
	baz=170						
W56A	Indian Trail	25.71	345	P	P	23 31 55.1	+1.5
	baz=162						
Z50A	Ashland	25.80	334	P	P	23 31 56.5	+2.0
	baz=150						
V59A	Middlesex	25.83	350	P	P	23 31 56.4	+1.7
	baz=168,SNR=6.0						
TLIG	Tlapa	25.87	289	P	P	23 31 59.3	+3.7
TLIG				IAmb	IAmb	23 32 03.1	
	comp=Z,13nm,0.9s						
KMSC	Kings Mountain	25.91	344	P	P	23 31 56.8	+1.3
KMSC				IAmb	IAmb	23 32 00.7	
	comp=Z,9.8nm,0.8s						
KMSC	Kings Mountain	25.91	344	P	P	23 31 57.5	+2.0
	baz=161						
X53A	Estanollee	25.91	340	P	P	23 31 57.5	+2.0
	baz=156						
346A	Big Creek Wild	26.00	326	P	P	23 31 57.8	+1.5
346A				IAmb	IAmb	23 32 01.0	
	comp=Z,28nm,0.8s						
V58A	Windy Hill, Pi	26.02	349	P	P	23 31 57.4	+1.0
V58A	Windy Hill, Pi	26.02	349	P	P	23 31 57.9	+1.5
	baz=166						
LRAL	Lakeview Retre	26.08	332	P	P	23 31 59.1	+2.0
LRAL				IAmb	IAmb	23 32 05.8	
	comp=Z,12nm,1.0s						
LRAL	Lakeview Retre	26.08	332	P	P	23 31 58.9	+1.8
	baz=147						
W54A	Cherokee Point	26.09	343	P	P	23 31 58.8	+1.6
	baz=159						
BG3	Lake Jocassee	26.24	341	P	P	23 32 00.4	+1.9
V57A	Coltrane Farms	26.24	347	P	P	23 32 00.7	+2.3
	baz=165						
V56A	Mocksville	26.33	346	P	P	23 32 01.1	+1.8
	baz=163						
U59A	Littleton	26.33	351	P	P	23 31 58.9	-0.3
U59A	Littleton	26.33	351	P	P	23 32 01.4	+2.1
	baz=169						
U60A	Pendleton	26.36	352	P	P	23 32 01.6	+2.2
	baz=171						
U58A	Oxford	26.49	350	P	P	23 32 02.4	+1.7
	baz=168,SNR=6.5						
X51A	Calhoun	26.52	338	P	P	23 32 01.9	+1.0
X51A				IAmb	IAmb	23 32 18.5	
	comp=Z,26nm,1.4s						
Y49A	Blount Mountai	26.52	334	P	P	23 32 03.6	+2.5
V55A	Taylorsville	26.55	345	P	P	23 32 03.0	+1.8
V55A				IAmb	IAmb	23 32 22.0	
	comp=Z,19nm,1.4s						
V55A	Taylorsville	26.55	345	P	P	23 32 03.0	+1.8
	baz=162						
W52A	Murphy	26.66	340	P	P	23 32 03.9	+1.6
V54A	Nebo	26.67	344	P	P	23 32 04.4	+2.1
	baz=160						
U57A	Blanch	26.68	348	P	P	23 32 04.0	+1.6
	baz=166						
344A	Westbrook Farm	26.75	325	P	P	23 32 04.3	+1.2
344A				IAmb	IAmb	23 32 07.6	
	comp=Z,34nm,1.0s						
FPAL	Fort Paine	26.79	336	P	P	23 32 04.6	+1.2
U56A	King	26.82	347	P	P	23 32 04.7	+1.1
LPAZ	La Paz	26.82	170	P	P	23 32 04.7	+0.1
	comp=Z,34nm,0.5s,baz=346,slow=7.0,SNR=46						
LPAZ	La Paz	26.82	170	P	P	23 32 04.6	+0.1
LPAZ	La Paz	26.82	170	*e*P	P	23 32 02.2	-2.3
LPAZ				*e*S	S	23 36 27.2	-4.5
T59A	Double "B" Far	26.90	352	IAmb	IAmb	23 32 06.8	
	comp=Z,23nm,0.8s						
T59A	Double "B" Far	26.90	352	P	P	23 32 06.1	+1.7
	baz=170,SNR=7.4						
T60A	Surry	26.96	353	P	P	23 32 04.1	-0.8
T60A	Surry	26.96	353	P	P	23 32 06.5	+1.6
	baz=172						
T58A	Grand View Acr	27.03	350	P	P	23 32 06.8	+1.3
	baz=168,SNR=6.5						
CLDB	Colider	27.06	140	*e*P	P	23 32 03.6	-2.4
TKL	Tuckaleechee C	27.12	340	LR	LR	23 43 43.7	
	comp=Z,345nm,21.1s,baz=174,slow=38						
U55A	TA2, Sparta	27.12	346	P	P	23 32 08.2	+1.7
	baz=162						
CPCT	Cooper Cave	27.18	339	P	P	23 32 09.0	+2.1
T57A	Hurt	27.21	349	IAmb	IAmb	23 32 09.5	
	comp=Z,18nm,0.9s						
T57A	Hurt	27.21	349	P	P	23 32 08.6	+1.5
	baz=166,SNR=6.7						
V52A	Sevierville	27.23	341	P	P	23 32 09.2	+1.9
W50A	Signal Mountai	27.25	337	P	P	23 32 09.3	+1.7
X48A	Hartselle	27.30	334	P	P	23 32 10.1	+2.1
U54A	Nelsons Funny	27.34	344	P	P	23 32 09.9	+1.5
U54A				IAmb	IAmb	23 32 11.6	
	comp=Z,12nm,0.8s						
U54A	Nelsons Funny	27.34	344	P	P	23 32 10.4	+2.0
	baz=161						
T56A	Rocky Mt	27.39	348	P	P	23 32 10.3	+1.5
	baz=165						
SWET	Sewanee	27.50	337	P	P	23 32 12.9	+3.1
S60A	Water View	27.52	354	P	P	23 32 11.9	+2.1
	baz=172						
S58A	Poland Farm, P	27.60	351	P	P	23 32 10.9	+0.3
S58A				IAmb	IAmb	23 32 15.4	
	comp=Z,13nm,0.9s						
S58A	Poland Farm, P	27.60	351	P	P	23 32 12.0	+1.4
	baz=169						
342A	Flagon Creek P	27.63	322	P	P	23 32 12.7	+1.8
342A				IAmb	IAmb	23 32 14.4	
	comp=Z,18nm,0.8s						
S59A	Mechanicsville	27.65	353	P	P	23 32 13.2	+2.2
	baz=171						
BLA	Blacksburg	27.65	347	P	P	23 32 11.8	+0.7
BLA				IAmb	IAmb	23 32 14.3	
	comp=Z,13nm,1.1s						
BLA	Blacksburg	27.65	347	P	P	23 32 13.2	+2.0
	baz=164						
441A	DeRidder	27.73	320	P	P	23 32 13.2	+1.3
T54A	Tazewell	27.78	345	P	P	23 32 14.1	+1.8
	baz=162						
S57A	Dark Hollow, R	27.89	350	P	P	23 32 13.8	+0.5
S57A				IAmb	IAmb	23 32 15.7	
	comp=Z,14nm,0.8s						
S57A	Dark Hollow, R	27.89	350	P	P	23 32 14.9	+1.7
	baz=167,SNR=5.0						
T53A	Wise	27.96	343	P	P	23 32 15.9	+2.0
	baz=160						
R61A	Willards	28.02	356	P	P	23 32 14.1	-0.2
R59A	King George, V	28.06	353	P	P	23 32 16.6	+1.9
	baz=171						
CBN	Corbin Frederi	28.09	353	P	P	23 32 15.6	+0.7
CBN				IAmb	IAmb	23 32 22.3	
	comp=Z,19nm,0.7s						
S55A	Lewisburg	28.21	347	P	P	23 32 17.8	+1.7
	baz=164						
T52A	Hallie	28.21	343	P	P	23 32 16.6	+0.6
T52A	Hallie	28.21	343	P	P	23 32 18.1	+2.0
	baz=159						
R58A	Rapidan	28.27	352	P	P	23 32 18.8	+2.2
	baz=169						
V48A	Smith Brothers	28.31	336	IAmb	IAmb	23 32 28.1	
	comp=Z,18nm,1.3s						
R57A	Stanardsville	28.35	351	P	P	23 32 19.2	+2.0
	baz=168						
T51A	Gray	28.37	341	P	P	23 32 19.3	+1.8
	baz=157,SNR=6.8						
OXF	Oxford	28.43	331	P	P	23 32 18.9	+0.8
OXF				IAmb	IAmb	23 32 27.4	
	comp=Z,14nm,1.0s						
U49A	Red Boiling Sp	28.59	338	P	P	23 32 22.1	+2.7
R56A	Bull Pasture M	28.60	349	P	P	23 32 21.7	+2.1
	baz=167						
R55A	Marlinton	28.62	348	P	P	23 32 21.9	+2.2
	baz=165						
SIV	San Ignacio	28.62	156	P	P	23 32 18.9	-1.1
	comp=Z,187nm,0.8s,baz=356,slow=9.2,SNR=133						
SIV				LR	LR	23 43 44.9	
	comp=Z,499nm,18.9s,baz=278,slow=36						
R54A	Victor	28.71	347	P	P	23 32 22.9	+2.4
	baz=163						
T50A	Nancy	28.71	340	P	P	23 32 22.5	+2.0
	baz=155						
W45A	Hickory Valley	28.85	332	P	P	23 32 24.3	+2.6
S51A	Beattyville	28.88	342	P	P	23 32 23.0	+1.0
S51A	Beattyville	28.88	342	P	P	23 32 24.3	+2.3
	baz=158						
HKT	Hockley	28.96	316	P	P	23 32 24.3	+1.7
HKT				IAmb	IAmb	23 32 25.9	
	comp=Z,13nm,1.1s						
T49A	Edmonton	29.03	339	P	P	23 32 25.2	+1.9
T49A	Edmonton	29.03	339	P	P	23 32 25.8	+2.5
	baz=154						
Q57A	Strasburg	29.05	351	P	P	23 32 25.6	+2.1
	baz=169						
WVT	Waverly	29.07	335	P	P	23 32 25.5	+1.9
WVT	Waverly	29.07	335	P	P	23 32 25.3	+1.7
	baz=149						
R53A	Hurricane	29.08	345	P	P	23 32 24.8	+1.0
R53A				IAmb	IAmb	23 32 26.3	
	comp=Z,25nm,1.4s						
S50A	Richmond	29.17	341	P	P	23 32 26.6	+2.0
	baz=156						
Q56A	Snyder Ridge,	29.18	350	P	P	23 32 27.1	+2.5
	baz=167						
Q55A	Buckhannon	29.30	349	P	P	23 32 27.8	+2.1
	baz=166						
P57A	Homestead Farm	29.43	352	P	P	23 32 29.2	+2.3
	baz=170						
Q54A	Coxs Mills	29.44	347	IAmb	IAmb	23 32 29.8	
	comp=Z,11nm,0.9s						
Q54A	Coxs Mills	29.44	347	P	P	23 32 29.3	+2.4
	baz=164						
Q53A	Leroy	29.48	346	P	P	23 32 29.5	+2.2
	baz=163						
P60A	Greenville	29.51	356	P	P	23 32 30.1	+2.6
	baz=175						
S49A	Springfield	29.55	340	P	P	23 32 29.9	+1.9
	baz=155,SNR=5.3						
P56A	Dayton Farm, R	29.58	351	P	P	23 32 30.4	+2.3
	baz=168,SNR=6.4						
R50A	Paris	29.70	342	IAmb	IAmb	23 32 32.3	
	comp=Z,8.4nm,0.7s						
R50A	Paris	29.70	342	P	P	23 32 31.6	+2.4
	baz=157						
P55A	Reedsville	29.75	349	P	P	23 32 32.4	+2.7
	baz=166						
WLAR	White Oak Lake	29.75	325	IAmb	IAmb	23 32 33.5	
	comp=Z,22nm,1.1s						
Q52A	Bidwell	29.76	345	P	P	23 32 32.1	+2.4
	baz=161						
MCWV	Mont Chateau	29.90	349	P	P	23 32 33.3	+2.4
	baz=166						
O58A	Lewisberry	29.93	354	P	P	23 32 33.8	+2.5
	baz=172						
P53A	Whipple	30.05	347	P	P	23 32 34.5	+2.2
	baz=163						
Q51A	Peebles	30.10	344	P	P	23 32 35.4	+2.6
	baz=159						
O57A	Amberson	30.10	353	P	P	23 32 35.2	+2.4
	baz=171						
Q50A	Georgetown	30.11	343	P	P	23 32 35.1	+2.3
	baz=158						
X40A	Basin Creek Fa	30.19	326	P	P	23 32 36.2	+2.6
	baz=138						
O56A	Blue Knob Stat	30.28	351	IAmb	IAmb	23 32 38.0	
	comp=Z,20nm,0.9s						
O56A	Blue Knob Stat	30.28	351	P	P	23 32 37.0	+2.6
	baz=169,SNR=6.4						
O55A	Ligonier	30.34	350	P	P	23 32 37.1	+2.2
	baz=168						
P52A	Corning	30.36	346	P	P	23 32 37.1	+2.1
	baz=162						
N61A	South Mountain	30.38	358	P	P	23 32 37.3	+2.2
	baz=177						
W41B	Gary Mavity, V	30.39	328	P	P	23 32 37.6	+2.2
	baz=140						
P51A	Williamsport	30.45	344	P	P	23 32 37.9	+2.1
	baz=160						
WHAR	Wooly Hollow	30.50	328	IAmb	IAmb	23 32 45.8	
	comp=Z,14nm,1.2s						
O54A	Avella	30.51	349	IAmb	IAmb	23 32 40.4	
	comp=Z,8.4nm,0.8s						
O54A	Avella	30.51	349	P	P	23 32 38.3	+2.0
	baz=166						
N60A	Cedar Hill Far	30.53	357	P	P	23 32 38.7	+2.2
	baz=176						
SSPA	Standing Stone	30.55	353	P	P	23 32 39.4	+2.7
SSPA				IAmb	IAmb	23 32 39.6	
	comp=Z,15nm,0.9s						
SSPA	Standing Stone	30.55	353	P	P	23 32 39.0	+2.3
	baz=170						
PAL	Palisades	30.62	359	P	P	23 32 39.7	+2.4
	baz=178						
N59A	State Game Lan	30.62	356	P	P	23 32 38.1	+0.8
N59A				IAmb	IAmb	23 32 40.7	
	comp=Z,17nm,0.8s						
N59A	State Game Lan	30.62	356	P	P	23 32 39.5	+2.1
	baz=174						
833A	Chaparral WMA,	30.62	310	P	P	23 32 37.8	+0.3
833A				IAmb	IAmb	23 32 39.1	
	comp=Z,12nm,0.7s						
833A	Chaparral WMA,	30.62	310	P	P	23 32 38.5	+1.0
	baz=121						
N58A	Sunbury	30.62	354	P	P	23 32 37.6	+0.2
N58A				IAmb	IAmb	23 32 41.7	
	comp=Z,17nm,1.2s						
N58A	Sunbury	30.62	354	P	P	23 32 39.7	+2.4
	baz=173						
MIAR	Mount Ida	30.64	325	P	P	23 32 39.6	+2.0
	baz=137						
435B	Jarrell	30.66	315	P	P	23 32 40.1	+2.2
435B	Jarrell	30.66	315	P	P	23 32 40.1	+2.2
	baz=126,SNR=6.0						
Q48A	North Vernon	30.74	340	P	P	23 32 40.1	+1.8
	baz=155						
O53A	New Philadelph	30.74	348	P	P	23 32 40.6	+2.2
	baz=164						
O52A	Adamsville	30.75	347	P	P	23 32 39.6	+1.2
O52A				IAmb	IAmb	23 32 41.7	
	comp=Z,17nm,1.0s						
O52A	Adamsville	30.75	347	P	P	23 32 40.3	+1.8
	baz=163						
P50A	Jamestown	30.77	343	P	P	23 32 40.8	+2.1
	baz=159						
N55A	Marion Center	30.85	351	P	P	23 32 41.5	+2.1
	baz=168,SNR=5.2						
FCAR	Ozark Folk Cen	30.88	329	IAmb	IAmb	23 32 42.7	
	comp=Z,8.8nm,1.0s						
N56A	West Decatur	30.88	352	P	P	23 32 41.7	+2.0
	baz=170						
ZAIG	Zacatecas	30.92	297	IAmb	IAmb	23 32 43.9	
	comp=Z,27nm,1.5s						
YLE	Yale	30.92	0	P	P	23 32 40.9	+1.1
M61A	Granite Spring	30.92	359	P	P	23 32 42.3	+2.4
	baz=178						
O51A	Pataskala	30.96	346	P	P	23 32 42.7	+2.4
	baz=161						
M60A	Port Jervis	30.96	358	P	P	23 32 42.2	+1.9
	baz=177						
M63A	Gales Ferry	31.02	1	P	P	23 32 42.2	+1.5
	baz=182						
SALV	Santo Antonio	31.12	146	*e*P	P	23 32 40.8	-1.1
M58A	Price’s Panora	31.13	355	P	P	23 32 44.2	+2.4
	baz=173						
ACSO	Alum Creek Sta	31.14	345	P	P	23 32 43.0	+1.2
ACSO				IAmb	IAmb	23 32 45.1	
	comp=Z,10nm,0.8s						
ACSO	Alum Creek Sta	31.14	345	P	P	23 32 44.1	+2.3
	baz=161						
M57A	Sunshine Farm,	31.16	354	P	P	23 32 43.1	+1.1
M57A				IAmb	IAmb	23 32 45.6	
	comp=Z,22nm,0.9s						
M57A	Sunshine Farm,	31.16	354	P	P	23 32 44.1	+2.1
	baz=172,SNR=5.6						
M64A	Tiverton	31.19	3	P	P	23 32 44.6	+2.3
	baz=183						
N54A	Moraine State	31.19	350	IAmb	IAmb	23 32 45.7	
	comp=Z,15nm,0.8s						
N54A	Moraine State	31.19	350	P	P	23 32 44.6	+2.2
	baz=166						
N53A	Lisbon	31.20	348	P	P	23 32 44.4	+2.0
	baz=165						
M59A	Waymart	31.22	356	P	P	23 32 44.9	+2.3
	baz=175,SNR=5.2						
O50A	Cable	31.22	344	P	P	23 32 44.9	+2.2
	baz=159,SNR=7.1						
W39A	Magazine	31.24	326	IAmb	IAmb	23 32 47.6	
	comp=Z,17nm,1.2s						
W39A	Magazine	31.24	326	P	P	23 32 44.9	+2.1
	baz=138						
T42A	Van Buren	31.27	331	P	P	23 32 44.5	+1.4
WHTX	Lake Whitney,	31.31	317	P	P	23 32 44.8	+1.3
WHTX				IAmb	IAmb	23 32 46.0	
	comp=Z,9.1nm,0.8s						
WHTX	Lake Whitney,	31.31	317	P	P	23 32 45.9	+2.4
	baz=128						
N52A	McGinn’s Farm,	31.38	347	P	P	23 32 46.5	+2.5
	baz=163						
OLIL	Olney	31.41	337	P	P	23 32 45.9	+1.6
OLIL				IAmb	IAmb	23 32 54.0	
	comp=Z,10nm,0.8s						
M56A	Emporium	31.43	352	P	P	23 32 45.8	+1.4
M56A				IAmb	IAmb	23 32 47.2	
	comp=Z,16nm,0.8s						
M56A	Emporium	31.43	352	P	P	23 32 46.8	+2.4
	baz=170						
O49A	Covington	31.46	343	P	P	23 32 45.9	+1.2
O49A				IAmb	IAmb	23 32 47.7	
	comp=Z,33nm,1.4s						
O49A	Covington	31.46	343	P	P	23 32 47.0	+2.3
	baz=158						
L63A	North Scituate	31.49	2	P	P	23 32 46.7	+1.8
	baz=182						
M55A	Ridgway	31.49	352	IAmb	IAmb	23 32 47.9	
	comp=Z,12nm,0.8s						
M55A	Ridgway	31.49	352	P	P	23 32 47.5	+2.6
	baz=169						
SMTB	Santa Maria do	31.60	126	*e*P	P	23 32 45.9	-0.4
SMTB				*e*pP	pP	23 33 17.4	+2.8
SMTB				*e*S	S	23 37 42.1	-3.7
L60A	Shokan	31.61	358	P	P	23 32 48.4	+2.4
	baz=178						
U40A	Yellville	31.61	328	IAmb	IAmb	23 32 50.5	
	comp=Z,10nm,0.8s						
U40A	Yellville	31.61	328	P	P	23 32 48.4	+2.2
	baz=140						
N51A	Ashland	31.64	346	IAmb	IAmb	23 32 49.1	
	comp=Z,14nm,1.1s						
N51A	Ashland	31.64	346	P	P	23 32 48.3	+2.0
	baz=162						
M54A	Oil Creek Stat	31.67	350	P	P	23 32 48.7	+2.2
	baz=167,SNR=6.4						
N50A	Nevada	31.69	345	P	P	23 32 48.7	+2.0
	baz=161						
L58A	Harry Jones Me	31.75	356	P	P	23 32 49.6	+2.3
	baz=174						
O48A	Farmland	31.76	342	P	P	23 32 49.3	+2.0
	baz=157						
M53A	WI Miller and	31.78	349	P	P	23 32 49.7	+2.2
	baz=165						
L57A	Andrews Acres	31.79	354	P	P	23 32 50.0	+2.4
	baz=173						
L61A	Hillsdale 1, H	31.80	359	P	P	23 32 50.2	+2.6
	baz=179						
L59A	Walton	31.84	357	P	P	23 32 50.6	+2.5
	baz=176						
P46A	Rosedale	31.86	339	IAmb	IAmb	23 32 51.1	
	comp=Z,16nm,0.7s						
ALLY	Alegheny Colle	31.89	350	P	P	23 32 50.0	+1.6
BINY	Binghamton	31.91	356	P	P	23 32 51.1	+2.5
	baz=174						
BCX	Boston College	31.98	2	P	P	23 32 50.6	+1.5
M51A	Elyria	31.99	347	P	P	23 32 51.6	+2.3
	baz=163						
L56A	Greenwood	31.99	354	IAmb	IAmb	23 32 52.5	
	comp=Z,22nm,0.8s						
L56A	Greenwood	31.99	354	P	P	23 32 51.7	+2.3
	baz=171,SNR=6.6						
M52A	Chesterland	32.01	348	P	P	23 32 51.4	+1.9
	baz=164						
Z35A	Perchaven, San	32.02	319	P	P	23 32 51.6	+1.9
Z35A				IAmb	IAmb	23 32 52.4	
	comp=Z,14nm,0.8s						
L61B	Northampton	32.05	0	P	P	23 32 52.3	+2.5
	baz=180						
JCT	Junction City	32.06	313	P	P	23 32 51.3	+1.2
JCT				IAmb	IAmb	23 32 52.4	
	comp=Z,12nm,1.1s						
JCT	Junction City	32.06	313	P	P	23 32 52.3	+2.1
	baz=123						
N49A	Columbus Grove	32.10	344	IAmb	IAmb	23 32 52.9	
	comp=Z,15nm,0.9s						
N49A	Columbus Grove	32.10	344	P	P	23 32 52.4	+2.1
	baz=159						
HRV	Adam Dziewonsk	32.13	2	P	P	23 32 52.8	+2.2
	baz=182						
L55A	Hinsdale	32.15	352	P	P	23 32 52.8	+2.1
	baz=170,SNR=5.5						
CCM	Cathedral Cave	32.17	332	P	P	23 32 52.7	+1.7
CCM				IAmb	IAmb	23 33 00.3	
	comp=Z,10nm,1.0s						
CCM	Cathedral Cave	32.17	332	P	P	23 32 53.0	+2.1
	baz=145						
L53A	Girard	32.20	350	P	P	23 32 53.1	+2.0
	baz=166						
K60A	Five Rivers En	32.23	359	P	P	23 32 54.1	+2.8
	baz=178						
K61A	Williamstown	32.27	360	P	P	23 32 53.8	+2.0
	baz=179						
K62A	Royalston	32.27	1	P	P	23 32 53.8	+2.0
	baz=181						
N48A	Decatur	32.28	343	P	P	23 32 53.3	+1.4
	baz=157						
K63A	Dunstable	32.31	2	P	P	23 32 54.7	+2.6
	baz=183						
ERPA	Erie	32.31	350	P	P	23 32 53.2	+1.1
ERPA				IAmb	IAmb	23 32 55.8	
	comp=Z,16nm,0.6s						
ERPA	Erie	32.31	350	P	P	23 32 54.1	+2.0
	baz=167						
L54A	Sinclairville	32.32	351	P	P	23 32 54.3	+2.1
	baz=168,SNR=5.3						
WVNY	West Valley, N	32.39	352	P	P	23 32 53.8	+1.0
WVNY				IAmb	IAmb	23 32 56.0	
	comp=Z,18nm,0.8s						
K58A	Earlville	32.45	356	P	P	23 32 54.3	+1.0
K58A				IAmb	IAmb	23 32 56.5	
	comp=Z,18nm,0.9s						
K58A	Earlville	32.45	356	P	P	23 32 55.3	+2.0
	baz=175						
K57A	Scipio Center	32.48	355	P	P	23 32 55.6	+2.0
	baz=173						
U38A	Gravette	32.48	327	P	P	23 32 54.2	+0.4
U38A				IAmb	IAmb	23 32 55.5	
	comp=Z,12nm,1.4s						
N47A	Urbana	32.50	342	P	P	23 32 55.6	+1.8
	baz=156						
SFIN	Lafayette	32.50	340	P	P	23 32 55.4	+1.6
	baz=153						
PB04	IPOC Station P	32.52	175	P	P	23 32 52.4	-2.0
PB04				IAmb	IAmb	23 33 04.6	

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      comp=Z,18nm,0.7s
K56A  Middlesex         32.52 354  P      P      23 32 56.1 +2.0
      baz=172
M49A  Liberty Center    32.56 345  P      P      23 32 56.3 +2.0
      baz=160
K54A  Basiliko Farm,    32.60 352  P      P      23 32 56.6 +2.0
      baz=170
K55A  Perry             32.64 353  P      P      23 32 56.9 +1.9
      baz=171
P43A  Skaggs, Pawnee    32.76 336  IAmb   IAmb   23 32 59.0
      comp=Z,15nm,0.7s
L50A  Kingsville        32.81 346  P      P      23 32 58.7 +2.2
      baz=162
J62A  Henniker          32.84   2  P      P      23 32 58.9 +2.2
      baz=182
J60A  Lant Hill Farm    32.85 359  P      P      23 32 59.4 +2.6
      baz=179,SNR=5.0
TUL1  Leonard           32.88 325  P      P      23 32 58.4 +1.2
TUL1                               IAmb   IAmb   23 32 59.1
      comp=Z,16nm,1.3s
TUL1  Leonard           32.88 325  P      P      23 32 59.0 +1.8
      baz=135
M47A  Cromwell          32.91 342  P      P      23 32 59.4 +2.0
      baz=157
LVC   Limon Verde       32.92 173  P      P      23 32 56.2 -1.8
      comp=Z,14nm,0.6s,baz=348,slow=5.4,SNR=19
LVC   Limon Verde       32.92 173  P      P      23 32 56.2 -1.8
LVC                                IAmb   IAmb   23 32 57.8
      comp=Z,16nm,0.7s
LVC   Limon Verde       32.92 173  eP     P      23 32 55.9 -2.1
LVC                                eS     S      23 38 02.1 -4.6
J63A  Strafford         32.92   3  P      P      23 32 59.7 +2.3
      baz=183
J61A  Chester           32.95   1  P      P      23 33 00.1 +2.5
      baz=181
J58A  Remsen            33.02 357  P      P      23 33 00.3 +2.0
J58A                               IAmb   IAmb   23 33 01.4
      comp=Z,26nm,1.2s
J58A  Remsen            33.02 357  P      P      23 33 00.5 +2.2
      baz=176
J56A  Wolcott           33.05 355  P      P      23 32 59.0 +0.4
J56A  Wolcott           33.05 355  P      P      23 33 00.9 +2.3
      baz=173,SNR=5.1
K52A  Tillsonburg       33.09 350  P      P      23 33 01.2 +2.4
      baz=166
J59A  Piesco            33.09 358  P      P      23 33 00.2 +1.2
J59A                               IAmb   IAmb   23 33 01.6
      comp=Z,16nm,1.1s
J59A  Piesco            33.09 358  P      P      23 33 00.9 +1.9
      baz=177
L49A  Milan             33.10 345  P      P      23 33 01.2 +2.2
      baz=160
MEDO  Medina            33.12 353  P      P      23 32 59.0 -0.1
J57A  Williamstown      33.12 356  IAmb   IAmb   23 33 01.9
      comp=Z,22nm,0.8s
J57A  Williamstown      33.12 356  P      P      23 33 01.0 +1.9
      baz=174,SNR=5.3
L48A  N Adams           33.12 344  P      P      23 33 01.1 +1.9
      baz=159
J55A  Hilton            33.14 353  P      P      23 32 58.9 -0.4
J55A                               IAmb   IAmb   23 33 02.0
      comp=Z,20nm,0.7s
J55A  Hilton            33.14 353  P      P      23 33 01.4 +2.1
      baz=171
ABTX  Abilene, Hawle    33.16 316  P      P      23 33 00.9 +1.2
ABTX                               IAmb   IAmb   23 33 02.3
      comp=Z,28nm,1.1s
ABTX                                      pP     23 33 28.9 +0.1
ABTX                               sP     sP     23 33 43.4 -0.8
ABTX  Abilene, Hawle    33.16 316  P      P      23 33 01.5 +1.7
      baz=126,SNR=9.1
ARAG  Araguaiana, MT    33.24 141  eP     P      23 32 58.7 -1.7
AAM   Ann Arbor         33.25 345  P      P      23 33 01.1 +0.8
AAM                                IAmb   IAmb   23 33 04.5
      comp=Z,14nm,0.8s
I58A  Old Forge         33.34 357  P      P      23 33 03.0 +2.0
      baz=176,SNR=7.1
L47A  Sherwood          33.36 343  P      P      23 33 02.7 +1.4
      baz=158
I59A  Olmsteadville     33.41 359  P      P      23 33 03.9 +2.2
      baz=178
I60A  Shoreham          33.45 360  P      P      23 33 04.3 +2.4
      baz=179
HDIL  Hopedale          33.45 337  P      P      23 33 03.7 +1.6
      baz=150
K50A  Casco             33.46 347  P      P      23 33 02.9 +0.8
K50A  Casco             33.46 347  P      P      23 33 04.2 +2.1
      baz=163
J52A  Paris             33.49 350  P      P      23 33 04.2 +1.8
      baz=166
I61A  Oroboro, Fairl    33.54   1  P      P      23 33 04.9 +2.1
      baz=181
NCB   Newcomb           33.59 358  IAmb   IAmb   23 33 06.5
      comp=Z,19nm,0.9s
I57A  Carthage          33.62 356  P      P      23 33 05.6 +2.1
      baz=175
I64A  Boothbay          33.64   4  P      P      23 33 06.2 +2.5
      baz=186
K49A  Clarkson          33.66 346  P      P      23 33 05.6 +1.7
      baz=161
I63A  Otisfield         33.71   3  P      P      23 33 06.9 +2.7
      baz=184
K48A  Perry             33.84 345  P      P      23 33 07.1 +1.7
      baz=160
LBNH  Lisbon            33.85   1  P      P      23 33 07.8 +2.3
      baz=182,SNR=5.1
WMOK  Wichita Mounta    33.89 320  IAmb   IAmb   23 33 09.2
      comp=Z,9.1nm,0.6s
WMOK  Wichita Mounta    33.89 320  P      P      23 33 07.8 +1.8
      baz=130
I53A  Kortright Cn E    33.92 351  P      P      23 33 07.9 +1.8
      baz=168
K47A  Vermontville      33.95 344  P      P      23 33 07.8 +1.4
      baz=158
H58A  Gabriels          34.03 358  P      P      23 33 08.8 +1.7
      baz=178
I55A  Frankford         34.06 354  P      P      23 33 09.1 +1.8
      baz=172
H57A  Richville         34.13 357  P      P      23 33 09.5 +1.7
      baz=176
I51A  Listowel          34.13 350  P      P      23 33 10.0 +2.1
      baz=166,SNR=10
J49A  Marlette          34.13 347  P      P      23 33 09.3 +1.4
      baz=162
H61A  Lyndonville       34.15   1  P      P      23 33 10.1 +2.1
      baz=182
H60A  Morristown        34.16   0  P      P      23 33 10.5 +2.3
      baz=180,SNR=6.1
K46A  Dorr              34.18 343  P      P      23 33 09.7 +1.3
      baz=157
H62A  Milan             34.21   2  P      P      23 33 11.0 +2.4
      baz=183
J48A  Bridge Port       34.23 346  P      P      23 33 10.8 +2.0
      baz=161
H59A  Cadyville         34.25 359  P      P      23 33 11.0 +2.1
      baz=179
H56A  Elgin             34.31 356  P      P      23 33 11.4 +1.9
      baz=174,SNR=6.7
H55A  Tweed             34.35 355  P      P      23 33 11.9 +2.2
      baz=173
H63A  New Sharon        34.35   4  P      P      23 33 12.2 +2.4
      baz=185
TXAR  Lajitas Array     34.39 308  P      P      23 33 11.2 +0.7
      comp=Z,3.4nm,0.8s,baz=128,slow=8.7,SNR=40
TXAR                               pP     pP     23 33 39.6 -0.8
      comp=Z,1.9nm,0.6s,baz=106,slow=9.2,SNR=5.2
TXAR                               sP     sP     23 33 54.2 -1.8
      comp=Z,5.0nm,0.7s,baz=119,slow=8.1,SNR=6.5
TXAR  Lajitas Array     34.39 308  P      P      23 33 11.5 +1.0
H64A  Troy              34.39   5  P      P      23 33 12.5 +2.4
      baz=186
J47A  Sunmer            34.43 345  P      P      23 33 12.0 +1.5
      baz=159
FRNY  Flat Rock         34.44 359  IAmb   IAmb   23 33 13.2
      comp=Z,14nm,0.9s
H53A  Bobcaygeon        34.52 353  P      P      23 33 13.1 +1.8
      baz=170
H65A  Eastbrook         34.54   6  P      P      23 33 14.0 +2.7
      baz=188
I49A  Point Hope        34.62 347  P      P      23 33 14.2 +2.1
      baz=163
G60A  Masonville        34.70   1  P      P      23 33 14.9 +2.0
      baz=181
H66A  Whiting           34.73   7  P      P      23 33 15.2 +2.2
      baz=190
G57A  Newington         34.75 357  P      P      23 33 15.5 +2.4
      baz=176,SNR=13
J46A  Howard City       34.75 344  P      P      23 33 14.6 +1.3
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      baz=158
G58A  Ormstown          34.76 359  P      P      23 33 15.3 +2.0
      baz=178
H52A  Wyevale           34.76 351  P      P      23 33 15.2 +1.9
      baz=168,SNR=5.1
SADO  Sadowa            34.78 352  IAmb   IAmb   23 33 15.6
      comp=Z,15nm,0.7s
PLVO  Plevna            34.82 355  IAmb   IAmb   23 33 16.6
      comp=Z,25nm,1.1s
G63A  Kingsbury         34.83   4  P      P      23 33 16.6 +2.6
      baz=186
G62A  West of Eustis    34.88   3  P      P      23 33 16.3 +1.9
G62A  West of Eustis    34.88   3  P      P      23 33 17.0 +2.7
      baz=184,SNR=11
G61A  St-Isidore-de-    34.91   2  P      P      23 33 17.3 +2.7
      baz=182
G55A  Calabogie         35.00 355  P      P      23 33 17.4 +2.0
      baz=174
PKME  Peaks-Kenny Pk    35.01   5  P      P      23 33 16.2 +0.8
PKME  Peaks-Kenny Pk    35.01   5  P      P      23 33 17.5 +2.1
      baz=186
G64A  Maxfield          35.04   5  P      P      23 33 17.9 +2.2
      baz=187
J45A  Montague          35.05 343  P      P      23 33 17.3 +1.5
      baz=157
I48A  Sherman Twp       35.05 346  P      P      23 33 17.4 +1.7
      baz=161
G53A  Haliburton        35.06 353  P      P      23 33 17.5 +1.6
      baz=170,SNR=5.3
GGN   Saint George      35.12   8  P      P      23 33 16.4 +0.1
G54A  Lake Saint Pet    35.28 354  P      P      23 33 19.7 +1.9
      baz=171,SNR=6.8
F59A  Saint Guilaume    35.45   0  P      P      23 33 21.7 +2.5
      baz=180
F63A  Nahmakanta, Br    35.46   5  P      P      23 33 21.5 +2.2
      baz=186
F55A  Otter Lake        35.55 356  P      P      23 33 21.6 +1.6
      baz=174
F60A  Warwick           35.58   1  P      P      23 33 22.4 +2.1
      baz=182
F61A  St Evariste       35.61   2  P      P      23 33 22.6 +1.9
      baz=183
KSU1  Kansas State U    35.63 328  P      P      23 33 22.6 +1.7
      baz=137
BDFB  Brasilia          35.68 136  P      P      23 33 20.5 -1.2
      comp=Z,75nm,0.6s,baz=292,slow=12,SNR=40
BDFB                               LR     LR     23 51 24.6
      comp=Z,357nm,19.1s,baz=229,slow=42
F64A  Sherman           35.68   6  P      P      23 33 22.5 +1.4
F64A  Sherman           35.68   6  P      P      23 33 23.5 +2.3
      baz=188
F52A  Sundridge         35.81 352  P      P      23 33 24.1 +1.8
      baz=169,SNR=6.6
ALGO  Algonquin Park    35.82 354  P      P      23 33 24.0 +1.6
      baz=171
JFWS  Jewell Farm       35.85 338  P      P      23 33 23.1 +0.4
JFWS                               IAmb   IAmb   23 33 25.3
      comp=Z,14nm,0.8s
JFWS  Jewell Farm       35.85 338  P      P      23 33 24.1 +1.4
      baz=150
TRQ   Mont Tremblant    35.85 358  P      P      23 33 23.1 +0.4
AMTX  Amarillo          35.87 318  IAmb   IAmb   23 33 27.2
      comp=Z,18nm,0.9s
AMTX  Amarillo          35.87 318  P      P      23 33 25.0 +1.9
      baz=126
E58A  La Victoria       35.97 360  P      P      23 33 25.7 +2.0
      baz=179,SNR=5.5
E60A  Ste Agathe de     35.99   2  P      P      23 33 26.0 +2.1
      baz=182
G47A  Hillman           36.02 347  P      P      23 33 26.0 +2.0
      baz=162,SNR=8.4
F51A  Arnstein          36.02 352  P      P      23 33 26.0 +1.9
      baz=168,SNR=7.8
E57A  Chemin Saint G    36.03 359  P      P      23 33 26.0 +1.8
      baz=178,SNR=24
H45A  Beulah            36.04 344  P      P      23 33 26.0 +1.7
      baz=158
MSTX  Muleshoe          36.08 315  IAmb   IAmb   23 33 27.0
      comp=Z,20nm,1.0s
E61A  Lac Etchemin      36.09   3  P      P      23 33 26.8 +2.1
      baz=184
E56A  St. Veronique     36.19 358  P      P      23 33 27.1 +1.6
      baz=176
E53A  Dumoine, Ponti    36.20 354  P      P      23 33 27.2 +1.6
      baz=172,SNR=8.8
F49A  Sandfield         36.21 349  P      P      23 33 27.3 +1.6
      baz=165,SNR=6.6
E52A  Mattawa           36.22 353  P      P      23 33 27.4 +1.7
      baz=170,SNR=9.2
E54A  Lac Daplat, Po    36.22 355  P      P      23 33 27.2 +1.5
      baz=173
E63A  Oxbow             36.23   5  P      P      23 33 26.5 +0.6
E63A                               IAmb   IAmb   23 33 28.5
      comp=Z,13nm,0.8s
E63A  Oxbow             36.23   5  P      P      23 33 27.8 +2.0
      baz=188
E64A  Bridgewater       36.28   6  P      P      23 33 28.6 +2.3
      baz=188,SNR=5.8
R32A  Long Quarter,     36.30 325  P      P      23 33 27.2 +0.6
R32A                               IAmb   IAmb   23 33 29.0
      comp=Z,16nm,1.2s
G45A  Suttons Bay       36.33 345  P      P      23 33 27.5 +0.8
G45A                               IAmb   IAmb   23 33 29.2
      comp=Z,18nm,0.8s
G45A  Suttons Bay       36.33 345  P      P      23 33 28.2 +1.5
      baz=159,SNR=5.5
F48A  Evansville        36.38 349  P      P      23 33 28.7 +1.6
      baz=164,SNR=6.9
H43A  Windswept, Lux    36.40 342  P      P      23 33 27.7 +0.4
H43A                               IAmb   IAmb   23 33 29.3
      comp=Z,13nm,0.7s
D60A  Saint Jean D'O    36.55   2  P      P      23 33 30.9 +2.3
      baz=183,SNR=5.1
E51A  G1948 Merrick     36.56 352  P      P      23 33 30.5 +1.9
      baz=169,SNR=12
D59A  Saint-Raymond     36.62   1  P      P      23 33 31.4 +2.2
      baz=182
D57A  Chemin Vers le    36.63 359  P      P      23 33 31.1 +1.9
      baz=178,SNR=9.3
D56A  ZEC Mazanza, M    36.68 358  P      P      23 33 31.6 +1.9
      baz=177,SNR=9.1
D55A  Sainte-Anne-du    36.68 357  P      P      23 33 31.7 +2.0
      baz=176,SNR=7.5
D58A  Chemin du LacG    36.70   0  P      P      23 33 31.8 +2.0
      baz=180
MNTX  Cornudas Mount    36.80 310  P      P      23 33 32.0 +1.0
MNTX                               IAmb   IAmb   23 33 35.1
      comp=Z,6.4nm,0.8s
MNTX  Cornudas Mount    36.80 310  P      P      23 33 32.7 +1.7
      baz=118
D62A  Allapoint, All    36.83   4  P      P      23 33 32.7 +1.8
D62A  Allapoint, All    36.83   4  P      P      23 33 33.0 +2.0
      baz=186,SNR=8.5
D63A  Stockholm         36.87   6  P      P      23 33 33.5 +2.3
      baz=188,SNR=9.5
D61A  St Aubert, Com    36.88   3  P      P      23 33 33.7 +2.4
      baz=184,SNR=14
D54A  Lac Fusel, La     36.89 356  P      P      23 33 33.3 +1.8
      baz=174,SNR=14
F45A  CMU Biological    36.89 345  P      P      23 33 32.9 +1.5
      baz=159
D53A  Lac Vacive, Po    36.90 355  P      P      23 33 32.8 +1.2
D53A                               IAmb   IAmb   23 33 34.4
      comp=Z,19nm,0.8s
D53A  Lac Vacive, Po    36.90 355  P      P      23 33 33.6 +2.0
      baz=172,SNR=7.6
E48A  Lockeyer          36.93 349  P      P      23 33 33.5 +1.8
      baz=165,SNR=9.9
LATQ  La Tuque          36.98   0  IAmb   IAmb   23 33 36.1
      comp=Z,7.3nm,0.9s
LATQ  La Tuque          36.98   0  P      P      23 33 34.5 +2.3
      baz=180
D51A  Lot 18 Range I    37.09 353  P      P      23 33 34.8 +1.6
      baz=170,SNR=9.5
E47A  Iron Bridge       37.11 348  P      P      23 33 35.2 +1.9
      baz=163,SNR=7.8
CBKS  Cedar Bluff       37.16 324  P      P      23 33 34.6 +0.7
CBKS                               IAmb   IAmb   23 33 35.9
      comp=Z,35nm,1.5s
CBKS  Cedar Bluff       37.16 324  P      P      23 33 35.4 +1.5
      baz=133
IPMB  Ipameri, GO       37.22 139  eP     P      23 33 33.0 -1.6
IPMB                               eS     S      23 39 09.3 -2.9
D50A  G1974 Best Tow    37.23 352  P      P      23 33 36.0 +1.7
      baz=169,SNR=5.9
BATG  Bathurst New B    37.34   8  P      P      23 33 37.4 +2.2
D48A  Paudash Townsh    37.53 350  P      P      23 33 38.7 +1.8
      baz=166,SNR=20
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D47A  Chapleau          37.66 349  P      P      23 33 39.5 +1.6
      baz=164,SNR=9.4
D46A  Sault St. Mari    37.69 348  P      P      23 33 39.6 +1.4
      baz=162,SNR=9.4
GO03  Copiap            37.73 176  IAmb   IAmb   23 33 42.2
      comp=Z,20nm,0.9s
VLDQ  Val d'Or          37.90 355  IAmb   IAmb   23 33 43.4
      comp=Z,15nm,0.8s
E43A  Lone Tree Farm    37.92 344  IAmb   IAmb   23 33 42.1
      comp=Z,7.4nm,0.7s
JANB  Januaria          37.94 131  eP     P      23 33 38.9 -1.8
JANB                               epP    pP     23 34 12.8 +3.1
JANB                               eS     S      23 39 21.1 -2.0
PCMB  Pacaembu          38.18 146  eP     P      23 33 41.5 -1.1
PCMB                               eS     S      23 39 24.4 -2.1
COWI  Conover           38.28 342  IAmb   IAmb   23 33 45.4
      comp=Z,13nm,0.8s
TRCB  Terra Rica        38.42 149  eP     P      23 33 43.5 -1.2
TRCB                               epP    pP     23 34 15.4 +1.6
LSQQ  Lebel-sur-Quev    38.81 356  P      P      23 33 49.5 +2.0
      baz=174
T25A  Trinidad          38.98 318  P      P      23 33 51.5 +2.1
T25A                               IAmb   IAmb   23 33 59.5
      comp=Z,7.3nm,0.9s
T25A  Trinidad          38.98 318  P      P      23 33 51.1 +1.7
      baz=125
D41A  Chassel           38.98 343  IAmb   IAmb   23 33 51.2
      comp=Z,13nm,0.8s
121A  Cookes Peak, D    38.99 310  IAmb   IAmb   23 33 54.5
      comp=Z,9.1nm,1.1s
121A  Cookes Peak, D    38.99 310  P      P      23 33 52.0 +2.5
      baz=117
ANMO  Albuquerque       39.18 314  P      P      23 33 52.3 +1.2
ANMO  Albuquerque       39.18 314  P      P      23 33 53.3 +2.2
      baz=121
BB19B Bebedouro         39.32 142  eP     P      23 33 51.0 -1.2
CPUP  Villa Florida     39.43 158  P      P      23 33 52.6 -0.4
      comp=Z,11nm,0.7s,baz=340,slow=8.6,SNR=18
CPUP                               PP     PP     23 35 26.6 +0.3
      comp=Z,33nm,0.9s,baz=334,slow=11,SNR=9.0
CPUP  Villa Florida     39.43 158  P      P      23 33 52.2 -0.8
CPUP                               IAmb   IAmb   23 33 53.2
      comp=Z,15nm,0.8s
CPUP  Villa Florida     39.43 158  eP     P      23 33 49.4 -3.6
E38A  The Farm, Brul    39.52 340  P      P      23 33 54.6 +1.2
E38A                               IAmb   IAmb   23 34 06.2
      comp=Z,14nm,1.1s
E38A                               pP     pP     23 34 23.3 -0.1
MATQ  Matagami          39.55 355  P      P      23 33 55.2 +1.5
      baz=173,SNR=14
319A  Douglas           39.65 307  P      P      23 33 57.0 +2.1
319A                               IAmb   IAmb   23 33 58.4
      comp=Z,15nm,1.0s
OGNE  Ogallala          39.89 325  P      P      23 33 57.0 +0.2
OGNE                               IAmb   IAmb   23 34 09.0
      comp=Z,8.0nm,0.7s
OGNE  Ogallala          39.89 325  P      P      23 33 57.9 +1.1
      baz=132
SDCO  Great Sand Dun    40.03 318  P      P      23 34 00.1 +1.9
SDCO  Great Sand Dun    40.03 318  P      P      23 34 00.3 +2.1
      baz=125,SNR=8.6
HSIG                    40.11 303  P      P      23 34 00.4 +1.8
RCBR  Riachuelo         40.22 112  P      P      23 33 59.6 -0.1
      comp=Z,33nm,0.6s,baz=272,slow=7.8,SNR=37
RCBR  Riachuelo         40.22 112  P      P      23 33 59.6 -0.1
RCBR  Riachuelo         40.22 112  eP     P      23 33 59.8  0.0
RCBR                               epP    pP     23 34 32.6 +3.5
GO04  Tololo Observa    40.27 177  P      P      23 34 01.8 +1.7
PTGB  Pitanga           40.31 150  eP     P      23 33 58.5 -1.8
PTGB                               epP    pP     23 34 32.1 +2.4
FRTB  Fartura           40.50 146  eP     P      23 34 01.1 -0.8
FRTB                               epP    pP     23 34 32.2 +1.0
NBCP  Cabaceiras do     40.51 123  epP    pP     23 34 33.3 +1.9
EYMN  Ely               40.67 341  IAmb   IAmb   23 34 04.7
      comp=Z,17nm,0.8s
EYMN  Ely               40.67 341  P      P      23 34 04.0 +1.1
      baz=151,SNR=7.8
S22A  4UR Ranch, Cre    40.91 318  P      P      23 34 07.7 +2.3
      baz=123,SNR=9.7
DRLN  Deer Lake         40.94  15  P      P      23 34 06.5 +1.4
RCLB  Rio Claro- Sao    40.95 143  eP     P      23 34 04.8 -0.9
RCLB                               epP    pP     23 34 37.0 +2.0
TUC   Tucson            41.19 308  P      P      23 34 09.9 +2.3
TUC   Tucson            41.19 308  P      P      23 34 10.1 +2.5
      baz=114
ISCO  Idaho Springs     41.30 321  P      P      23 34 10.2 +1.6
      baz=126
BSCB  Bom Sucesso       41.63 138  eP     P      23 34 10.7 -0.6
VAO   Valinhos          41.73 143  eP     P      23 34 11.1 -0.9
MVCO  Mesa Verde        41.75 316  P      P      23 34 14.4 +2.2
      baz=121
CFA   Coronel Fontan    41.88 174  P      P      23 34 15.3 +2.2
      comp=Z,19nm,0.7s,baz=343,slow=7.8,SNR=25
SPB   Sao Paulo         41.91 144  P      P      23 34 11.7 -1.6
SPB   Sao Paulo         41.91 144  eP     P      23 34 12.1 -1.2
SPB                                epP    pP     23 34 44.8 +2.0
PV15  Paradox Valley    42.33 317  IAmb   IAmb   23 34 20.6
      comp=Z,21nm,1.4s
ITAB  Concordia         42.41 152  eP     P      23 34 15.4 -1.9
ITAB                               epP    pP     23 34 49.2 +2.3
PV13  Radium Mtn., P    42.46 317  IAmb   IAmb   23 34 23.7
      comp=Z,10.0nm,1.1s
PV07  Paradox Valley    42.49 317  IAmb   IAmb   23 34 22.3
      comp=Z,9.9nm,1.1s
AGMN  Agassiz Nation    42.50 337  P      P      23 34 19.5 +1.7
      baz=146
PV03  Paradox Valley    42.53 317  IAmb   IAmb   23 34 22.7
      comp=Z,12nm,1.4s
PV12  Saucer Basin,     42.53 317  IAmb   IAmb   23 34 22.8
      comp=Z,35nm,1.5s
SJMB  Sao Joao De Ma    42.56 132  eP     P      23 34 18.7  0.0
214A  Organ Pipe Nat    42.65 306  P      P      23 34 22.0 +2.6
      baz=112,SNR=6.7
PARB  Paraibuna         42.79 142  eP     P      23 34 19.9 -0.7
BSFB  Barra de Sao F    42.88 132  eP     P      23 34 21.5 +0.2
WUAZ  Wupatki           42.99 312  IAmb   IAmb   23 34 25.6
      comp=Z,12nm,1.2s
WUAZ  Wupatki           42.99 312  P      P      23 34 24.6 +2.4
      baz=116
ROC1  El Roble          43.05 178  P      P      23 34 21.8 -0.9
RSSD  Black Hills       43.12 327  P      P      23 34 25.0 +1.8
      baz=132
O20A  White River Ci    43.14 320  P      P      23 34 25.7 +2.2
      baz=124
K22A  Casper            43.56 324  P      P      23 34 29.2 +2.5
      baz=128
ULM   Lac du Bonnet     44.13 339  P      P      23 34 31.2 +0.4
      comp=Z,8.0nm,0.7s,baz=146,slow=9.3,SNR=20
ULM                                pP     pP     23 35 00.6 -0.2
      comp=Z,33nm,0.9s,baz=145,slow=9.4,SNR=18
ULM   Lac du Bonnet     44.13 339  IAmb   IAmb   23 34 32.1
      comp=Z,12nm,1.0s
GLA   Glamis            44.63 307  P      P      23 34 37.5 +2.2
      baz=111
SCHQ  Schefferville     44.71   5  P      P      23 34 37.0 +1.6
      comp=Z,46nm,0.7s,baz=195,slow=6.5,SNR=135
CNLB  Canela            44.76 152  eP     P      23 34 33.8 -2.5
IRM   Iron Mountain     45.27 308  P      P      23 34 42.1 +1.8
      baz=112
BC3   Big Chuckawall    45.33 308  P      P      23 34 42.2 +1.3
      baz=111
PDAR  Pinedale Array    45.44 322  P      P      23 34 43.1 +1.4
      comp=Z,2.3nm,0.5s,baz=126,slow=9.9,SNR=36
PDAR                               pP     pP     23 35 11.7 -1.0
      comp=Z,2.9nm,0.6s,baz=119,slow=8.6,SNR=5.4
PDAR                               sP     sP     23 35 25.8 -2.0
      comp=Z,3.6nm,0.7s,baz=116,slow=10,SNR=4.0
PDAR                               PP     PP     23 36 50.1  +19
      comp=Z,2.7nm,0.6s,baz=140,slow=12,SNR=6.5
PDAR  Pinedale Array    45.44 322  P      P      23 34 42.8 +1.1
BW06  Boulder Array     45.44 322  P      P      23 34 43.5 +1.8
      baz=125
GMRC  Granite Mounta    45.90 309  P      P      23 34 47.4 +2.1
      baz=112
PFO   Pinyon Flats O    46.10 307  P      P      23 34 45.9 -1.1
PSUT  Pine Spring       46.10 315  P      P      23 34 47.9 +0.9
DUG   Dugway, Tooele    46.16 317  P      P      23 34 48.9 +1.6
SHPR  Sheep Range       46.19 311  P      P      23 34 49.6 +2.0
DGMT  Dagmar            46.19 331  P      P      23 34 48.9 +1.6
DGMT                               IAmb   IAmb   23 34 54.7
      comp=Z,16nm,1.2s
TUQ   Turquoise Moun    46.34 310  P      P      23 34 51.2 +2.3
      baz=112
109C  Camp Elliot, M    46.38 306  P      P      23 34 50.0 +1.0
109C                               IAmb   IAmb   23 35 04.6
      comp=Z,11nm,1.1s
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SPUT	South Promonto	46.47	319	P	P	23 34 50.5	+0.7
SNOW	Snow King Moun	46.55	322	P	P	23 34 52.1	+1.6
SNOW				IAmb	IAmb	23 34 59.7	
	comp=Z,5.9nm,0.7s						
REDW	Red Top Meadow	46.56	322	IAmb	IAmb	23 34 58.5	
	comp=Z,9.6nm,1.0s						
RLMT	Red Lodge	46.64	325	P	P	23 34 52.5	+1.5
	baz=127						
TPAW	Teton Pass	46.69	322	P	P	23 34 53.1	+1.6
GSC	Goldstone, Bar	46.96	309	P	P	23 34 55.4	+1.8
	baz=111						
H17A	Grant Village	46.97	323		pP	23 35 27.1	+2.2
TPNV	Topopah Spring	47.16	311	P	P	23 34 57.3	+2.1
	baz=113						
R11A	Troy Canyon, C	47.25	314	P	P	23 34 57.3	+1.4
R11A	Troy Canyon, C	47.25	314	P	P	23 34 57.7	+1.8
	baz=115						
FURC	Furnace Creek,	47.44	311	P	P	23 34 59.0	+1.9
	baz=112						
YHB	Horse Butte	47.54	323	P	P	23 35 00.0	+1.9
EDW2	Edwards Air Fo	47.73	308	P	P	23 35 01.1	+1.5
	baz=110						
MPMC	Manual Prospec	47.76	310	P	P	23 35 01.6	+1.7
	baz=111						
ELK	Elko	48.06	317	pP	pP	23 35 32.6	-0.3
	comp=Z,2.3nm,0.7s,baz=111,slow=8.1,SNR=3.9						
ELK				sP	sP	23 35 46.8	-1.1
	comp=Z,3.2nm,0.7s,baz=42,slow=1.4,SNR=4.6						
CWC	Cottonwood Cre	48.34	310	P	P	23 35 06.1	+1.9
	baz=111						
ISA	Isabella, Lake	48.37	309	P	P	23 35 05.8	+1.4
SNCC	San Nicolas Is	48.42	306	P	P	23 35 04.8	0.0
SNCC	San Nicolas Is	48.42	306	P	P	23 35 06.0	+1.2
	baz=107						
NVAR	Mina Array Bea	49.24	312	P	P	23 35 11.8	+0.6
	comp=Z,0.5nm,0.5s,baz=115,slow=7.1,SNR=4.7						
NVAR				pP	pP	23 35 42.4	-0.4
	comp=Z,6.5nm,0.9s,baz=121,slow=7.3,SNR=12						
NVAR				sP	sP	23 35 57.3	-0.7
	comp=Z,3.7nm,0.6s,baz=115,slow=6.8,SNR=7.8						
NVAR				PP	PP	23 37 07.8	+1.5
	comp=Z,1.6nm,0.5s,baz=134,slow=4.4,SNR=6.2						
NVAR				LR	LR	23 59 59.2	
	comp=Z,99nm,18.3s,baz=215,slow=41						
GO06	Curarrehue	49.62	178	P	P	23 35 13.8	-0.1
GO06				IAmb	IAmb	23 35 15.4	
	comp=Z,16nm,1.2s						
FFC	Flin Flon	49.94	338	P	P	23 35 16.4	+0.5
FFC				IAmb	IAmb	23 35 16.9	
	comp=Z,5.1nm,0.8s						
PMPB	Monarch Peak	50.33	309	P	P	23 35 20.1	+0.8
PMPB				IAmb	IAmb	23 35 34.6	
	comp=Z,22nm,1.1s						
PLCA	Paso Flores	50.80	178	P	P	23 35 21.6	-1.0
	comp=Z,17nm,0.8s,baz=11,slow=8.6,SNR=45						
PLCA				pP	pP	23 35 52.8	-0.5
	comp=Z,18nm,0.8s,baz=18,slow=8.1,SNR=6.7						
PLCA	Paso Flores	50.80	178	*e*P	P	23 35 22.0	-0.6
PLCA				*e*pP	pP	23 35 54.1	+0.8
NEW	Newport	52.88	324	pP	pP	23 36 08.3	-1.3
	comp=Z,15nm,1.0s,baz=124,slow=7.4,SNR=11						
NEW				sP	sP	23 36 23.5	-1.1
	comp=Z,6.8nm,0.9s,baz=106,slow=6.3,SNR=4.3						
J05D	Fort Rock, OR	53.18	317	P	P	23 35 42.1	+1.7
	baz=114						
YBH	Yreka Blue Hor	53.60	315	P	P	23 35 42.8	-0.6
	comp=Z,2.1nm,0.9s,baz=90,slow=4.6,SNR=5.3						
YBH				pP	pP	23 36 13.5	-1.6
	comp=Z,3.5nm,0.6s,baz=98,slow=4.1,SNR=6.5						
J04D	Umpqua Nationa	53.75	317	P	P	23 35 46.4	+1.8
	baz=113						
B08A	Colville Reser	54.21	323	IAmb	IAmb	23 35 49.9	
	comp=Z,5.4nm,0.9s						
YKA	Yellowknife Ar	60.11	339	P	P	23 36 29.3	+0.5
	comp=Z,8.2nm,0.8s,baz=130,slow=7.5,SNR=112						
YKA				pP	pP	23 36 59.9	-0.7
	comp=Z,12nm,0.7s,baz=128,slow=7.6,SNR=13						
YKA				sP	PcP	23 37 14.1	+0.9
	comp=Z,20nm,0.8s,baz=130,slow=7.5,SNR=9.5						
GO09	Cerro Castillo	61.29	180	P	P	23 36 37.2	+0.3
GO10	Punta Arenas	63.20	179	P	P	23 36 51.4	+1.7
PFVI	Vila Bisbo	63.27	54	*e*P	P	23 36 51.6	+1.1
MORF	Marmelete	63.43	53	*e*P	P	23 36 52.0	+0.3
MORF				AMb	AMB	23 36 55.0	
	comp=Z,30nm,1.6s						
MORF	Marmelete	63.43	53	*e*P	P	23 36 53.7	+2.0
MORF				*i* LQ	LQ	23 37 40.3	
PNCL	Nicolau / Gran	63.64	53	*e*P	P	23 36 54.7	+1.8
MESJ	Messejana	63.84	53	*e*P	P	23 36 54.7	+0.4
MESJ				AMb	AMB	23 36 56.0	
	comp=Z,24nm,1.7s						
MESJ	Messejana	63.84	53	*e*P	P	23 36 56.3	+2.0
MESJ				*i* LQ	LQ	23 37 43.4	
PCAS	Casmilo, Conde	63.94	50	*e*P	P	23 36 56.7	+1.8
	comp=Z,34nm,1.4s						
PTOM	Tomar	63.94	51	*e*P	P	23 36 56.5	+1.6
	comp=Z,24nm,1.7s						
PMTG	Montargil	64.00	52	*e*P	P	23 36 55.5	+0.2
	comp=Z,19nm,1.0s						
PMTG				*i* LQ	LQ	23 37 41.9	
COI	Coimbra	64.03	50	*e*P	P	23 36 57.5	+2.1
	comp=Z,38nm,1.2s						
COI				*i* LQ	LQ	23 37 44.6	
PBEJ	Beja	64.14	53	*e*P	P	23 36 58.2	+1.9
PVAQ	Vaqueiros	64.18	53	*e*P	P	23 36 58.4	+1.9
PVAQ	Vaqueiros	64.18	53	*e*LR	LR	00 14 48.3	
	comp=Z,294nm,20.0s						
DLBC	Dease Lake	64.40	331	P	P	23 36 59.2	+1.6
	comp=Z,2.6nm,0.7s,baz=151,slow=10,SNR=3.1						
DLBC				pP	pP	23 37 30.3	+0.4
	comp=Z,4.9nm,0.8s,baz=152,slow=5.6,SNR=3.7						
DLBC	Dease Lake	64.40	331	IAmb	IAmb	23 37 02.7	
	comp=Z,9.6nm,1.4s						
PGAV	Gavieira, Arco	64.41	48	*e*P	P	23 36 59.5	+1.4
	comp=Z,24nm,1.5s						
PGAV				*i* LQ	LQ	23 37 45.9	
PGAV	Gavieira, Arco	64.41	48	*e*LR	LR	00 13 08.5	
	comp=Z,378nm,22.0s						
PVIS	Viseu	64.49	50	*e*P	P	23 36 59.7	+1.1
PVIS				*i* LQ	LQ	23 37 46.3	
PCAB	Cabril	64.55	49	*e*P	P	23 37 00.1	+1.2
PCBR	Castelo Branco	64.68	51	*e*P	P	23 37 01.1	+1.4
	comp=Z,21nm,1.6s						
PCBR				*i* LQ	LQ	23 37 47.4	
PMRV	Marv??o	64.69	51	*e*P	P	23 37 00.9	+1.1
PMRV	Marv??o	64.69	51	*e*LR	LR	00 13 02.7	
	comp=Z,466nm,22.0s						
MTE	Manteigas	64.71	50	IAmb	IAmb	23 37 02.2	
	comp=Z,11nm,0.8s						
MTE	Manteigas	64.71	50	*e*P	P	23 37 01.6	+1.6
MTE				*i* LQ	LQ	23 37 46.5	
MTE	Manteigas	64.71	50	*e*LR	LR	00 13 03.4	
	comp=Z,396nm,20.0s						
PVRL	Vila Real	64.71	49	*e*P	P	23 37 01.5	+1.5
	comp=Z,27nm,1.1s						
PVRL				*i* LQ	LQ	23 37 47.9	
USHA	Ushuaia	64.97	177	P	P	23 37 01.6	+0.5
	comp=Z,42nm,0.8s,baz=196,slow=3.6,SNR=16						
BORG	Borgarnes	65.03	22	LR	LR	00 02 41.5	
	comp=Z,150nm,20.8s,baz=331,slow=33						
MVO	Moncorvo	65.21	49	*e*P	P	23 37 04.7	+1.5
	comp=Z,24nm,1.3s						
MVO				*i* LQ	LQ	23 37 51.2	
MVO	Moncorvo	65.21	49	*e*LR	LR	00 11 05.0	
	comp=Z,309nm,20.0s						
PBRG	Braganca	65.51	49	*e*P	P	23 37 06.5	+1.4
	comp=Z,13nm,2.0s						
RES	Resolute Bay	65.58	354	P	P	23 37 04.6	-0.3
	comp=Z,3.3nm,0.8s,baz=177,slow=8.5,SNR=14						
RES				pP	pP	23 37 36.6	-0.2
	comp=Z,2.6nm,0.8s,baz=187,slow=9.3,SNR=3.6						
RES	Resolute Bay	65.58	354	P	P	23 37 04.6	-0.3
RES				IAmb	IAmb	23 37 06.3	
	comp=Z,5.3nm,1.0s						
SUMG	Summit	65.59	11	⇓*i*P	P	23 37 06.3	+0.9
	comp=Z,63nm,0.7s						
SUMG				*i*		23 37 37.2	
SUMG	Summit	65.59	11	P	P	23 37 05.8	+0.4
TULEG	Thule	66.28	1	P	P	23 37 10.0	+0.7
MDT	Midelt	66.33	59	P	P	23 37 11.9	+1.3
	comp=Z,5.1nm,0.8s,baz=291,slow=6.7,SNR=10.0						
PAB	San Pablo	67.05	51	P	P	23 37 16.2	+1.2
PAB				IAmb	IAmb	23 37 16.9	
	comp=Z,4.6nm,0.8s						
TIC	Toumodi	67.19	87	*e*P	pP	23 37 50.8	+2.5
TIC	Toumodi	67.19	87	⇑*i*P	P	23 37 16.2	-0.1
	comp=Z,15nm,0.5s						
LIC	Lamto	67.25	88	*e*P	pP	23 37 50.6	+2.0
	comp=Z,52nm,0.9s						
LIC	Lamto	67.25	88	⇑*i*P	P	23 37 16.8	+0.2
	comp=Z,84nm,0.7s						
DBIC	Dimbokro	67.35	87	P	P	23 37 17.5	+0.3
	comp=Z,14nm,0.5s,baz=271,slow=5.7,SNR=38						
DBIC				pP	pP	23 37 50.5	+1.3
	comp=Z,5.0nm,0.6s,baz=294,slow=4.7,SNR=2.3						
ESDC	Sonseca Array	67.36	51	P	P	23 37 17.7	+0.8
	comp=Z,1.9nm,0.6s,baz=266,slow=6.1,SNR=10						
ESDC				pP	pP	23 37 50.0	+1.0
	comp=Z,0.9nm,0.5s,baz=258,slow=6.3,SNR=3.4						
ESDC	Sonseca Array	67.36	51	P	P	23 37 17.6	+0.8
ESDC					pP	23 37 50.5	+1.5
KIC	Kosan Boka	67.51	87	*e*P	pP	23 37 52.4	+2.1
	comp=Z,31nm,0.7s						
KIC	Kosan Boka	67.51	87	⇑*i*P	P	23 37 18.5	+0.3
	comp=Z,71nm,0.7s						
RSBS	Rosebush, Pemb	68.57	38	*e*P	P	23 37 25.6	+1.4
RSBS				IAmb	IAmb	23 37 26.0	
	comp=Z,18nm,0.9s						
GAL1	Galloway	69.18	35	*e*P	P	23 37 29.1	+1.2
KPL	Plockton	69.22	32	*e*P	P	23 37 28.7	+0.6
KPL				IAmb	IAmb	23 37 30.2	
	comp=Z,103nm,1.4s						
KAC	Achnashellach	69.44	32	*e*P	P	23 37 30.4	+1.0
PGBU	Glenifferbraes	69.50	34	*e*P	P	23 37 30.5	+0.7
MCH1	Michaelchurch	69.64	38	*e*P	P	23 37 31.6	+0.8
FOEL	Foel Wylfa	69.67	37	*e*P	P	23 37 31.8	+0.8
MONM	Monmouth	69.74	38	*e*P	P	23 37 32.0	+0.6
MONM				IAmb	IAmb	23 37 32.2	
	comp=Z,92nm,1.4s						
HLM1	Long Mynd	69.80	38	*e*P	P	23 37 33.1	+1.3
INK	Inuvik	69.86	340	P	P	23 37 32.6	+0.8
	comp=Z,4.4nm,0.7s,baz=97,slow=6.4,SNR=18						
INK				pP	pP	23 38 03.9	-0.2
	comp=Z,4.2nm,0.7s,baz=99,slow=5.7,SNR=5.2						
INK	Inuvik	69.86	340	P	P	23 37 32.4	+0.7
INK				pP	pP	23 38 03.6	-0.5
INVG	Invergeldie, C	69.87	34	*e*P	P	23 37 33.0	+0.9
INVG				IAmb	IAmb	23 37 33.2	
	comp=Z,67nm,1.1s						
CWF	Charnwood Fore	70.78	38	*e*P	P	23 37 38.4	+0.7
BCAR	Beaver Creek A	71.36	333	P	P	23 37 42.8	+1.8
DAG	Danmarks Havn	72.26	11	*i* P	P	23 37 46.3	+0.2
	comp=Z,8.3nm,0.8s						
DAG				*i*		23 38 17.8	
TORD	Torodi Ar. Bea	72.91	79	P	P	23 37 51.5	+0.3
	comp=Z,6.4nm,0.7s,baz=287,slow=5.7,SNR=59						
TORD				pP	pP	23 38 25.2	+1.5
	comp=Z,5.3nm,0.6s,baz=285,slow=6.6,SNR=6.7						
ILAR	Eielson Array	73.93	335	P	P	23 37 56.6	+0.5
	comp=Z,1.4nm,0.8s,baz=111,slow=4.4,SNR=12						
ILAR				pP	pP	23 38 28.6	-0.4
	comp=Z,1.3nm,0.6s,baz=103,slow=4.6,SNR=6.2						
ILAR				sP	sP	23 38 41.5	-1.8
	comp=Z,3.3nm,0.8s,baz=106,slow=4.0,SNR=6.9						
ILAR				LR	LR	00 12 47.9	
	comp=Z,85nm,18.4s,baz=112,slow=38						
DOU	Dourbes	74.20	41	P	P	23 37 59.3	+1.3
POKR	Poker Plat Res	74.22	335	P	P	23 37 58.8	+1.0
	baz=100						
BMRD	Maredsous	74.32	41	P	P	23 38 00.2	+1.5
RND	Reindeer	74.56	333	IAmb	IAmb	23 38 03.2	
	comp=Z,16nm,1.0s						
BHOU	Houvegnez	75.12	41	P	P	23 38 05.5	+2.2
MEM	Membach	75.13	40	P	P	23 38 04.9	+1.6
	comp=Z,11nm,0.7s						
PMSA	Palmer Station	75.13	176	P	P	23 38 03.6	+0.7
	comp=Z,25nm,0.8s,baz=14,slow=5.2,SNR=8.0						
PMSA	Palmer Station	75.13	176	IAmb	IAmb	23 38 04.1	
	comp=Z,37nm,0.9s						
WLF	Walferdange	75.19	41	P	P	23 38 05.8	+2.0
BNI	Bardonecchia	75.49	46	IAmb	IAmb	23 38 09.0	
	comp=Z,8.8nm,0.9s						
TOLK	Toolik Lake Re	75.62	338	P	P	23 38 06.8	+0.9
	baz=99						
ECH	Echery	75.83	43	IAmb	IAmb	23 38 09.7	
	comp=Z,12nm,1.0s						
SENIN	Lac Senin/Sane	75.92	45	IAmb	IAmb	23 38 10.5	
	comp=Z,7.7nm,0.8s						
BFO	Black Forest	76.61	43	P	P	23 38 13.2	+1.3
IMAR	Indian Mountai	76.93	335	P	P	23 38 13.4	+0.1
STU	Stuttgart	77.18	42	P	P	23 38 15.4	+0.3
STU				IAmb	IAmb	23 38 17.3	
	comp=Z,18nm,0.7s						
TUE	Stuetta	77.34	45	P	P	23 38 16.4	+0.2
TUE				IAmb	IAmb	23 38 19.2	
	comp=Z,14nm,1.2s						
DAVA	Damuels	77.68	44	*e*P	P	23 38 20.2	+2.2
	comp=Z,22nm,0.9s,SNR=7.2						
DAVA				*e*pP	pP	23 38 54.4	+3.3
	comp=Z,15nm,1.1s						
DAVA				*i* sP	sP	23 39 07.3	+2.0
	comp=Z,16nm,1.1s						
VLC	Villacollemand	78.16	47	IAmb	IAmb	23 38 21.9	
	comp=Z,9.7nm,0.8s						
NB2	NORSAR Subarra	78.26	30	P	P	23 38 23.0	+2.2
	comp=Z,4.8nm,0.7s,baz=270,slow=5.9						
NOA	NORSAR Array B	78.26	30	P	P	23 38 22.7	+1.9
	comp=Z,9.6nm,0.8s,baz=271,slow=5.7,SNR=15						
NOA				pP	pP	23 38 54.9	+0.9
	comp=Z,1.9nm,0.6s,baz=272,slow=5.7,SNR=3.5						
FETA	Feichten	78.27	44	*e*P	P	23 38 23.5	+2.2
	comp=Z,21nm,1.1s,SNR=10						
FETA				*e*pP	pP	23 38 57.7	+3.2
	comp=Z,7.6nm,0.9s						
FETA				*i* sP	sP	23 39 10.5	+1.9
	comp=Z,16nm,0.9s						
RETA	Reutte	78.27	44	*e*P	P	23 38 23.2	+2.0
	comp=Z,11nm,1.4s						
RETA				*e*pP	pP	23 38 57.3	+3.0
	comp=Z,14nm,1.3s						
NC405	NORSAR Array S	78.50	30	P	P	23 38 24.7	+2.6
MOTA	Moosalm	78.51	44	*e*P	P	23 38 24.3	+1.7
	comp=Z,7.8nm,0.8s						
MOTA				*e*pP	pP	23 38 58.4	+2.6
	comp=Z,9.9nm,0.9s						
MOTA				*e*sP	sP	23 39 11.4	+1.5
	comp=Z,14nm,1.7s						
ZCCA	Zocca	78.57	47	IAmb	IAmb	23 38 25.4	
	comp=Z,9.6nm,0.8s						
SQTA	Sankt Quirin	78.59	44	*e*P	P	23 38 24.9	+1.9
	comp=Z,9.0nm,0.8s						
SQTA				*e*pP	pP	23 38 59.0	+2.8
	comp=Z,10nm,1.2s						
WATA	Walderalm	78.83	44	*e*P	P	23 38 25.3	+1.0
	comp=Z,5.5nm,1.2s						
WATA				*e*pP	pP	23 38 58.8	+1.2
	comp=Z,3.3nm,0.7s						
WATA				*i* sP	sP	23 39 13.2	+1.5
	comp=Z,5.6nm,1.0s						
WTTA	Wattenberg	78.88	44	*e*P	P	23 38 26.3	+1.7
	comp=Z,4.3nm,0.7s						
WTTA				*e*pP	pP	23 39 00.7	+2.8
	comp=Z,8.0nm,1.1s						
WTTA				*i* sP	sP	23 39 12.6	+0.6
	comp=Z,9.4nm,1.2s						
CTI	Castel Tesino	78.95	45	IAmb	IAmb	23 38 27.1	
	comp=Z,8.7nm,0.8s						
LATE	Laterza	79.28	48	IAmb	IAmb	23 38 35.3	
	comp=Z,8.0nm,0.9s						
ABTA	Abfaltersbach	79.50	44	*e*P	P	23 38 29.8	+1.8
	comp=Z,7.0nm,0.8s,SNR=5.8						
ABTA				*e*pP	pP	23 39 04.0	+2.8
	comp=Z,8.2nm,1.1s						
ABTA				*i* sP	sP	23 39 15.8	+0.5
	comp=Z,12nm,0.9s						
MURB	Monte Urbino	79.76	48	IAmb	IAmb	23 38 30.5	
	comp=Z,6.9nm,0.8s						
KBA	Koelnbreinsper	80.05	44	*e*P	P	23 38 32.6	+1.6
	comp=Z,5.5nm,1.0s						
KBA				*e*pP	pP	23 39 06.9	+2.6
	comp=Z,7.8nm,0.9s						
KBA				*i* sP	sP	23 39 18.9	+0.5
	comp=Z,11nm,1.0s						
KHC	Kasperske Hory	80.05	42	*e*P	P	23 38 32.2	+1.4
KHC				*e*pP	pP	23 39 05.3	+1.2
GERES	GERESS Array B	80.16	42	P	P	23 38 32.9	+1.4
	comp=Z,3.9nm,0.7s,baz=286,slow=3.8,SNR=23						
GERES				pP	pP	23 39 05.2	+0.4
	comp=Z,2.1nm,0.5s,baz=278,slow=4.1,SNR=6.6						
GERES	GERESS Array B	80.16	42	P	P	23 38 32.5	+1.1
ROBS	Robic	80.23	45	*i* P	P	23 38 32.9	+1.2
ROBS				*e*pP	pP	23 39 07.2	+2.2
MYKA	Terra Mystica	80.29	44	*i* P	P	23 38 33.7	+1.6
	comp=Z,4.7nm,0.8s						
MYKA				*i* sP	sP	23 39 21.1	+1.5
	comp=Z,6.8nm,0.8s						
MOA	Molln	80.61	43	*e*P	P	23 38 35.4	+1.6
	comp=Z,9.0nm,1.5s						
MOA				*e*pP	pP	23 39 09.6	+2.4
	comp=Z,9.9nm,1.4s						
PRU	Pruhonice	80.61	41	*e*P	P	23 38 35.6	+1.9
PRU				*e*pP	pP	23 39 08.8	+1.8
JAVS	Javornik	80.64	45	*i* P	P	23 38 35.8	+1.7
JAVS				*e*pP	pP	23 39 09.3	+1.9
OBKA	Obir	80.92	44	*i* P	P	23 38 36.9	+1.3
	comp=Z,5.0nm,1.3s						
OBKA				*e*pP	pP	23 39 10.0	+1.1
	comp=Z,5.4nm,1.4s						
LJU	Ljubljana	80.95	45	*i* P	P	23 38 37.4	+1.8
SOKA	Soboth	81.24	44	*e*P	P	23 38 38.4	+1.1
	comp=Z,4.0nm,1.0s						
UPC	Upice	81.50	40	*e*P	P	23 38 40.8	+2.3
LEGS	Legarje	81.51	45	*e*P	P	23 38 40.2	+1.6
ARSA	Arzberg	81.52	44	*e*P	P	23 38 40.2	+1.6
	comp=Z,5.1nm,0.8s						
ARSA				*e*pP	pP	23 39 13.2	+1.2
	comp=Z,5.8nm,1.4s						
ARSA				*e*sP	sP	23 39 26.2	+0.1
	comp=Z,5.1nm,1.0s						
CHVC	Chvalec	81.52	40	*e*P	P	23 38 40.7	+2.1
CHVC				*e*pP	pP	23 39 14.3	+2.3
OSTC	Ostas	81.63	40	*e*P	P	23 38 41.1	+2.0
OSTC				*e*pP	pP	23 39 12.9	+0.4
CONA	Conrad Observa	81.67	43	*e*P	P	23 38 41.4	+1.9
	comp=Z,6.1nm,0.9s						
CONA				*e*pP	pP	23 39 14.5	+1.6
	comp=Z,7.3nm,1.4s						
DPC	Dobruska-Polom	81.72	40	*e*P	P	23 38 41.3	+1.7
VRAC	Vranov	82.01	41	⇑P	P	23 38 43.4	+2.3
KRLC	Kraliky	82.04	41	*e*P	P	23 38 43.6	+2.3
KRLC				*e*pP	pP	23 39 17.2	+2.4
MODS	Modra-Piesok	82.56	42	*e*P	P	23 38 45.0	+0.9
MODS				*e*PDIFF		00 05 15.9	
ARCES	ARCESS Array B	83.40	20	P	P	23 38 48.5	+0.6
	comp=Z,4.6nm,0.7s,baz=292,slow=3.3,SNR=10						
ARCES				pP	pP	23 39 21.4	0.0
	comp=Z,2.8nm,0.6s,baz=259,slow=4.3,SNR=2.6						
VYHS	Vyhne	83.58	42	*e*P	P	23 38 51.1	+1.8
VYHS				*e*PDIFF		00 05 21.0	
SCTE	Santa Cesarea	84.55	50	P	P	23 38 54.7	+0.3
SCTE				IAmb	IAmb	23 38 57.2	
	comp=Z,8.6nm,1.0s						
GAMB	Gambell	84.71	334	P	P	23 38 56.1	+1.5
PDG	Podgorica	84.78	48	⇑P	P	23 38 57.8	+2.4
PDG	Podgorica	84.78	48	P	P	23 38 56.5	+1.1
PDG				IAmb	IAmb	23 38 58.4	
	comp=Z,5.7nm,0.9s						
FINES	FINESS Array B	85.34	28	P	P	23 38 58.6	+0.8
	comp=Z,1.8nm,0.6s,baz=282,slow=5.5,SNR=10						
FINES				pP	pP	23 39 31.9	+0.4
	comp=Z,3.4nm,0.8s,baz=288,slow=6.3,SNR=1.6						
SIRR	Siria	85.83	44	⇑P	P	23 39 02.8	+2.1
BZS	Buzias	85.92	45	⇓P	P	23 39 02.7	+1.7
VTS	Vitosha	87.64	47	⇑P	P	23 39 11.4	+1.8
BURAR	Bucovina Array	87.94	42	⇓P	P	23 39 13.4	+2.5
ARR	Arges	88.05	44	⇑P	P	23 39 13.6	+2.2
VOIR		88.32	44	⇑P	P	23 39 15.0	+2.3
MLR	Muntele Rosu	88.92	44	⇑P	P	23 39 18.0	+2.4
MLR	Muntele Rosu	88.92	44	IAmb	IAmb	23 39 18.6	
	comp=Z,7.5nm,0.7s						
ELND	Elena	89.47	47	⇓P	P	23 39 19.1	+1.1
AKASG	Malin Array Be	89.73	38	P	P	23 39 19.8	+0.7
	comp=Z,1.1nm,0.7s,baz=275,slow=3.7,SNR=5.1						
AKASG				pP	pP	23 39 53.6	+0.5
	comp=Z,0.2nm,0.3s,baz=282,slow=3.7,SNR=2.3						
AKASG				LR	LR	00 13 59.4	
	comp=Z,189nm,21.9s,baz=275,slow=32						
AKASG	Malin Array Be	89.73	38	IAmb	IAmb	23 39 21.0	
	comp=Z,1.5nm,1.0s						
SORM	Soroca	89.87	41	⇑P	P	23 39 21.5	+1.7
CFR	Carcaliu	90.49	44	⇓P	P	23 39 24.0	+1.3
TIRR	Tirgusor	90.87	45	⇑P	P	23 39 26.2	+1.7
JURR	Jurilovca	91.11	44	⇑P	P	23 39 28.1	+2.5
VNA3	Neumayer Olymp	91.41	163	P	P	23 39 27.5	+1.1
VNA1	Neumayer--Stat	91.54	162	P	P	23 39 28.7	+1.8
VNA2	Neumayer--Watz	91.92	163	P	P	23 39 30.1	+1.4
	baz=314,slow=5.4						
SNAA	Sanae	93.57	163	P	P	23 39 37.3	+0.9
SNAA	Sanae	93.57	163	P	P	23 39 37.1	+0.7
TSUM	Tsumeb	93.82	109	P	P	23 39 40.4	+1.6
BR131	Keskin Array S	95.97	48	IAmb	IAmb	23 39 59.7	
	comp=Z,2.4nm,1.1s						
BRTR	Keskin Array B	95.97	48	P	P	23 39 49.1	+0.8
	comp=Z,1.2nm,0.8s,baz=266,slow=3.0,SNR=8.0						
BRTR				pP	pP	23 40 23.2	+1.0
	comp=Z,2.7nm,0.9s,baz=261,slow=3.2,SNR=8.6						
MKAR	Makanchi Array	119.03	19	PKP	PKiKP	23 45 10.2	+1.0
	comp=Z,0.4nm,0.8s,baz=325,slow=4.0,SNR=4.2						
MKAR				pPKP	pPKPdf	23 45 41.3	-3.6
	comp=Z,0.3nm,0.4s,baz=326,slow=2.6,SNR=3.4						
MKAR				PKKPab	PKKPab	23 55 35.4	+7.6
	comp=Z,0.4nm,0.7s,baz=156,slow=6.4,SNR=3.6						
KSH	Kashi	122.67	28	PKP	PKPdf	23 45 12.6	-3.8
KSH	Kashi	122.67	28	sPKP	sPKiKP	23 46 11.1	+4.9
KSH	Kashi	122.67	28	PP	PP	23 46 54.4	-0.1
KSH	Kashi	122.67	28	PKS	PKSdf	23 48 48.0	-5.2
WMQ	Urumqi	123.36	17	*e*P	PKPdf	23 45 17.5	-0.1
HHC	Hu-ho-hao-te	128.96	356	*e*P	PKPdf	23 45 26.5	-1.9
GTA	Gaotai	130.12	7	*e*PKP	PKiKP	23 45 35.3	+3.8
GTA	Gaotai	130.12	7	*e*P	pPKiKP	23 46 06.8	-0.2
GTA				pPKP	pPKPdf	23 46 07.1	+0.9
GTA				pP	sPKPdf	23 46 17.1	-2.7
GTA				sP	sPKiKP	23 46 20.9	+0.2
GTA				sPKP		23 46 24.6	
LZH	Lanzhou	133.79	4	⇑PKP	PKPdf	23 45 36.5	-1.3
LZH				pPKP	pPKPdf	23 46 11.3	-2.1
LZH				sPKP		23 46 25.6	
NJ2	Nanjing	136.42	345	*e*P	PKPdf	23 45 41.3	-1.2
CD2	Chengdu	138.93	4	PKP	PKPdf	23 45 46.0	-1.3
CMAR	Chiang Mai Arr	150.35	16	PKPbc	PKPbc	23 46 12.8	+0.3
	comp=Z,3.2nm,0.9s,baz=326,slow=2.7,SNR=10						
CMAR				pPKPbc	pPKPbc	23 46 47.3	-0.9
	comp=Z,3.8nm,0.8s,baz=320,slow=3.2,SNR=3.2						
CMAR	Chiang Mai Arr	150.35	16		PKiKP	23 46 13.1	-0.1
CMAR					pPKPbc	23 46 47.5	-0.7
AS31	Alice Springs	151.14	239		PKiKP	23 46 14.6	-0.2
ASAR	Alice Springs	151.14	239	PKPbc	PKPbc	23 46 14.3	+0.1
	comp=Z,13nm,0.8s,baz=112,slow=2.4,SNR=27						
ASAR				pPKPbc	pPKPbc	23 46 49.6	+0.1
	comp=Z,15nm,0.7s,baz=110,slow=2.4,SNR=6.4						
ASAR	Alice Springs	151.14	239		PKPdf	23 46 09.0	+0.8
WB2	Warramunga Arr	151.98	247		PKiKP	23 46 16.8	+0.2
WB0	Warramunga Arr	151.99	247		PKiKP	23 46 16.8	+0.2
WRA	Warramunga Arr	151.99	247	PKP	PKPdf	23 46 10.2	+0.6
	comp=Z,2.0nm,0.9s,baz=89,slow=1.1,SNR=8.1						
WRA				PKPbc	PKiKP	23 46 16.7	+0.1
	comp=Z,14nm,0.6s,baz=104,slow=2.8,SNR=99						
WRA				pPKPbc	pPKPbc	23 46 51.6	-0.1
	comp=Z,11nm,0.5s,baz=105,slow=2.9,SNR=5.0						
WRA	Warramunga Arr	151.99	247		PKPdf	23 46 10.7	+1.1

IDC ***14*** *23:36:34.9±2.2, 29°.07N×140°.62E, h109^{km}±29^{km}, mb3.6/12, mb1 3.7/13, mb1mx3.4/66, mbtmp4.0/13, Error ellipse: s-maj=58.3km s-min=16.3km az=74.0*

JMA ***14*** *23:36:36.5, 29°.22N×141°.10E, h104^{km}, M4.0*

ISC 14 23:36:34.6±0.7**, 28°.99N**±0°.08×**140°.4E**±0°.2**, h100**^{km}**, n26, σ1^{s}.17**/27**, mb4.0**/12**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.47	139	P	Pn	23 37 13.8	+0.5
CBIJ				*e*S	Sn	23 37 42.4	-0.7
JCJ	Chichijima	2.47	139	P	Pn	23 37 14.0	+0.6
	73nm,0.3s,baz=355,slow=22,SNR=28						
JCJ				S	Sn	23 37 42.6	-0.4
	84nm,0.3s,baz=292,slow=20,SNR=7.5						
JHH2	Haha-jima-NKT2	2.84	145	P	Pn	23 37 19.7	+1.5
JHH2				*e*S	Sn	23 37 52.7	+1.0
JHJ2	Mitsune	4.14	353	*e*S	Sn	23 38 23.2	+0.3
BSO1	Boso 1	5.67	5	P	Pn	23 37 56.9	+1.0
BSO3	Boso 3	5.80	1	P	Pn	23 37 58.3	+0.5
BSO4	Boso 4	5.98	360	P	Pn	23 38 02.1	+1.6
JKN2	Miekihoku	6.29	327	P	Pn	23 38 10.6	+5.7
JTNC	Tanabenakahech	6.31	321	P	Pn	23 38 11.7	+6.7
JOD2	Odawara 2	6.35	350	P	Pn	23 38 08.7	+3.1
JHU	Hanno	6.91	353	P	Pn	23 38 14.8	+1.6

JRY	Ryogami san	7.12	350	P	Pn	23 38 18.3	+2.2
JAG	Ashikaga	7.46	354	P	Pn	23 38 20.4	-0.2
JHO	Hitachi	7.60	1	P	Pn	23 38 22.1	-0.5
KLR	Kul'dur	21.27	344	P	P	23 41 12.5	-0.2
	4.3nm,0.7s,baz=192,slow=5.6,SNR=13						
ZALV	Zalesovo Beam	47.02	318	P	P	23 44 55.4	-0.3
	0.4nm,0.4s,baz=90,slow=8.6,SNR=2.1						
MKAR	Makanchi Array	48.05	308	P	P	23 45 03.4	-0.4
	0.1nm,0.3s,baz=84,slow=9.9,SNR=6.5						
WRA	Warramunga Arr	48.99	188	P	P	23 45 12.8	+1.6
	0.3nm,0.7s,baz=3.5,slow=7.6,SNR=4.9						
NRIK	Noril'sk	50.31	338	P	P	23 45 20.4	-0.2
	1.2nm,0.3s,baz=105,slow=8.7,SNR=5.3						
BVAR	Borovoye Array	55.57	317	P	P	23 45 59.2	-0.4
	0.8nm,0.4s,baz=112,slow=8.6,SNR=9.4						
STKA	Stephens Creek	60.54	179	P	P	23 46 33.1	-1.2
	1.7nm,0.6s,baz=311,slow=11,SNR=3.4						
ARU	Arti	61.95	321	P	P	23 46 42.9	-0.7
	0.5nm,0.4s,baz=215,slow=19,SNR=3.7						
ARCES	ARCESS Array B	71.23	340	P	P	23 47 42.2	-0.3
	7.3nm,1.1s,baz=53,slow=6.0,SNR=1.6						
FINES	FINESS Array B	75.55	333	P	P	23 48 07.5	-0.3
	1.3nm,0.4s,baz=79,slow=5.1,SNR=26						
KBZ	Khabaz	75.56	312	P	P	23 48 08.1	-0.2
	1.2nm,0.7s,baz=57,slow=7.0,SNR=4.3						
HFS	Hagfors	81.06	336	P	P	23 48 37.0	-1.3
	4.5nm,1.0s,baz=100,slow=6.2,SNR=9.7						

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*IDC **14** 23:38:35.3±1.0, 53°.14N×170°.97E, h0^{km}, mb4.0/23, mb1 4.2/24, mb1mx3.9/69, mbtmp4.0/24, ML3.1/1, MS3.8/2, Ms1 3.8/2, ms1mx3.0/50, Error ellipse: s-maj=28.7km s-min=13.1km az=1.0*

*NEIC **14** 23:38:39.2±1.1, 53°.0N±0°.1×170°.88E±0°.09, h30^{km}±5^{km}, mb4.4/75, Error ellipse: s-maj=16.8km s-min=7.8km az=173.0*

ISC 14 23:38:38.0±0.6**, 52°.9N**±0°.1×**170°.96E**±0°.05**, h24**^{km}**, n144, σ0^{s}.98**/131**, mb4.3**/55**, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	1.91	94		Pb	23 39 10.7	-1.4
PET	Petropavlovsk	7.44	276	Pn	Pn	23 40 23.4	-1.4
ADK	Adak	7.63	93	Pn	Pn	23 40 28.5	+1.0
GSTR	Great Sitkin T	7.97	91	Pn	Pn	23 40 33.1	+1.0
PEA0B	Petropavlovsk-	8.01	277	Pn	Pn	23 40 33.0	+0.4
PETK	Petropavlovsk-	8.01	277	Pn	Pn	23 40 34.4	+1.7
	1.4nm,0.3s,baz=96,slow=19,SNR=22						
PETK	Petropavlovsk-	8.01	277	Pn	Pn	23 40 33.0	+0.4
NIKH	Nikolski High	12.18	82	Pn	Pn	23 41 31.1	+1.4
MA2	Magadan	13.03	309	LR	LR	23 47 13.0	
	comp=Z,260nm,19.4s,baz=126,slow=40						
ANM	Nome	16.82	37	Pn	P	23 42 30.5	-3.0
SDPT	Sand Point	16.87	70	Pn	P	23 42 32.7	-1.4
SDPT				IAmb	IAmb	23 42 35.2	
	comp=Z,46nm,1.2s						
SVW2	Sparrevohn	19.78	52	P	Pn	23 43 06.8	-1.0
OHAK	Old Harbor	20.76	64	P	Pn	23 43 17.3	-2.0
OHAK				IAmb	IAmb	23 43 27.8	
	comp=Z,35nm,1.2s						
KDAK	Kodiak Island	21.11	62	P	P	23 43 21.9	+1.4
KDAK				IAmb	IAmb	23 43 32.5	
	comp=Z,16nm,1.0s						
ERM	Erimo	21.59	251	P	P	23 43 22.4	-3.3
CNPM	China Poot	21.80	57		P	23 43 26.5	-1.4
CNPM				IAmb	IAmb	23 43 36.3	
	comp=Z,18nm,1.0s						
IMAR	Indian Mountai	21.82	40	P	P	23 43 28.2	+0.1
BRLK	Bradley Lake	21.98	57	P	P	23 43 31.6	+1.8
SUA	Susitna One	22.15	52	P	P	23 43 32.3	+0.6
KTH	Kantishna Hill	22.36	47	P	P	23 43 34.8	+0.9
BPAW	Bear Paw Mtn.	22.43	45	P	P	23 43 35.9	+1.2
TRF	Thorofare Moun	22.62	47	P	P	23 43 36.9	+0.1
WRH	Wood River Hil	23.75	45	P	P	23 43 48.1	+0.1
CCB	Clear Creek Bu	23.90	44	P	P	23 43 49.6	+0.2
TOLK	Toolik Lake Re	24.26	35	P	P	23 43 52.8	-0.1
IL31		24.31	44	P	P	23 43 53.5	+0.3
ILAR	Eielson Array	24.31	44	P	P	23 43 51.6	-1.6
	comp=Z,1.6nm,1.0s,baz=254,slow=7.7,SNR=10.0						
ILAR	Eielson Array	24.31	44	P	P	23 43 53.5	+0.2
EYAK	Cordova Ski Ar	24.55	55	P	P	23 43 55.3	-0.1
KLR	Kul'dur	24.70	277	P	P	23 43 58.1	+1.2
	comp=Z,0.3nm,0.4s,baz=44,slow=6.8,SNR=4.2						
PAX	Paxson	24.73	49	P	P	23 43 57.6	+0.4
FYU	Fort Yukon	25.30	40	P	P	23 44 03.0	+0.9
FYU				IAmb	IAmb	23 44 09.8	
	comp=Z,13nm,1.2s						
GLB	Gilahina Butte	25.47	52	P	P	23 44 02.6	-1.3
VRDI	Verde Repeater	25.65	53	P	P	23 44 06.3	+0.6
VRDI				IAmb	IAmb	23 44 21.9	
	comp=Z,7.0nm,1.2s						
BMAR	Burnt Mountain	25.72	39	P	P	23 44 05.9	-0.2
CRQM	Cirque	25.82	54	P	P	23 44 07.8	+0.6
TIXI	Tiksi	26.22	331	P	P	23 44 09.5	-0.9
	comp=Z,3.1nm,0.7s,baz=116,slow=10,SNR=8.6						
TIXI	Tiksi	26.22	331	P	P	23 44 10.0	-0.4
BCAR	Beaver Creek A	26.41	49	P	P	23 44 12.5	+0.1
BARN	Barnard Glacie	26.53	53	P	P	23 44 14.5	+0.9
CTGM	Chitina Glacie	26.69	53	P	P	23 44 15.8	+0.8
CTGM				IAmb	IAmb	23 44 25.7	
	comp=Z,6.2nm,1.1s						
EGAK	Eagle	26.75	45	P	P	23 44 15.9	+0.6
USRK	Ussuriysk Ar.	26.94	267	P	P	23 44 18.2	+1.0
PCA	Pinnacle	27.30	55	P	P	23 44 18.6	-1.9
HYT	Haines Junctio	28.57	53	P	P	23 44 32.0	+0.3
HYT				IAmb	IAmb	23 44 32.8	
	comp=Z,5.6nm,1.0s						
BESE	Bessie Mountai	30.29	57	P	P	23 44 46.8	-0.2
BESE				IAmb	IAmb	23 44 58.9	
	comp=Z,9.1nm,1.0s						
H11N2	WAKE ISLAND Hy	33.26	187	T	T	00 20 31.0	
	baz=4.7,slow=76,SNR=613						
H11N3	WAKE ISLAND Hy	33.27	187	T	T	00 20 28.7	
	baz=4.7,slow=76,SNR=702						
H11N1	WAKE ISLAND Hy	33.28	187	T	T	00 20 29.1	
	baz=4.7,slow=76,SNR=651						
H11S1	WAKE ISLAND Hy	34.49	187	T	T	00 22 03.1	
	baz=4.6,slow=76,SNR=958						
H11S3	WAKE ISLAND Hy	34.50	187	T	T	00 22 00.9	
	baz=4.6,slow=76,SNR=754						
H11S2	WAKE ISLAND Hy	34.51	187	T	T	00 22 02.0	
	baz=4.6,slow=76,SNR=582						
YKA	Yellowknife Ar	38.72	46	P	P	23 45 59.5	-0.1
	comp=Z,0.4nm,0.5s,baz=292,slow=7.7,SNR=4.4						
YKA				PcP	PcP	23 48 10.9	+0.1
	comp=Z,0.4nm,0.7s,baz=294,slow=3.0,SNR=4.2						
TLY	Talaya	39.82	296	LR	LR	00 04 45.7	
	comp=Z,154nm,18.0s,baz=94,slow=40						
SONM	Songino Array	40.25	290	P	P	23 46 13.8	+1.1
	comp=Z,1.0nm,0.8s,baz=64,slow=7.2,SNR=6.1						
SONM	Songino Array	40.25	290	P	P	23 46 12.9	+0.3
LLLB	Lillooet	40.26	65	P	P	23 46 13.7	+1.0
LLLB				IAmb	IAmb	23 46 15.4	
	comp=Z,3.2nm,0.7s						
PGC	Sidney	40.40	69	P	P	23 46 13.2	-0.5
RES	Resolute Bay	40.93	24	PcP	PcP	23 48 17.7	0.0
	comp=Z,1.0nm,0.8s,baz=304,slow=4.9,SNR=4.0						
HHC	Hu-ho-hao-te	41.20	278	*e*P	P	23 46 19.6	-1.0
HAWA	Hanford	43.86	69	P	P	23 46 41.9	-0.1
HAWA				IAmb	IAmb	23 46 44.3	
	comp=Z,4.8nm,0.8s						
G06A	Carlson Farm,	43.90	71	P	P	23 46 39.5	-2.9
NEW	Newport	44.14	66	P	P	23 46 44.6	+0.2
	comp=Z,2.1nm,0.5s,baz=331,slow=12,SNR=3.7						
NEW	Newport	44.14	66	P	P	23 46 44.5	+0.2
WALA	Waterton Lakes	45.45	63	P	P	23 46 56.1	+1.3
MSO	Missoula	46.73	66	P	P	23 47 05.7	+0.8
LRM	Limekiln Ridge	48.16	66	P	P	23 47 15.8	-0.4
SPITS	Spitsbergen Ar	48.26	353	P	P	23 47 15.6	-0.6
	comp=Z,10nm,1.0s,baz=51,slow=8.0,SNR=5.7						
MCMT	McKenzie Canyo	48.55	67	P	P	23 47 19.4	+0.1
FCC	Fort Churchill	49.32	43	P	P	23 47 26.1	+1.6
FCC				IAmb	IAmb	23 47 44.5	
	comp=Z,3.5nm,1.1s						
NVAR	Mina Array Bea	49.50	77	P	P	23 47 27.1	+0.5
	comp=Z,0.4nm,0.5s,baz=285,slow=9.3,SNR=4.1						
NVAR	Mina Array Bea	49.50	77	P	P	23 47 26.1	-0.5
YHB	Horse Butte	49.52	66	P	P	23 47 26.9	+0.2
YHH	Holmes Hill	49.69	66	P	P	23 47 29.1	+1.1
FLWY	Flagg Ranch	50.22	67	P	P	23 47 32.5	+0.5
FLWY				IAmb	IAmb	23 47 34.4	
	comp=Z,4.5nm,0.7s						
RLMT	Red Lodge	50.35	65	P	P	23 47 33.5	+0.5
RLMT				IAmb	IAmb	23 47 35.5	
	comp=Z,2.9nm,0.7s						
TPNV	Topopah Spring	51.70	77	P	P	23 47 43.5	+0.4
BW06	Boulder Array	51.70	67	P	P	23 47 42.6	-0.5
BW06				IAmb	IAmb	23 47 44.8	
	comp=Z,2.1nm,0.8s						
PD31	Pinedale Array	51.70	67	P	P	23 47 43.7	+0.6
PDAR	Pinedale Array	51.70	67	P	P	23 47 44.1	+1.0
	comp=Z,2.1nm,0.7s,baz=304,slow=2.9,SNR=19						
PDAR	Pinedale Array	51.70	67	P	P	23 47 43.5	+0.4
MSU	Marysvale	53.03	73	P	P	23 47 53.2	+0.2
WMQ	Urumqi	53.10	296	*e*P	P	23 47 54.5	+1.2
RDMU	Red Mountain	53.14	69	P	P	23 47 54.8	+1.0
KURK	Kurchatov	53.24	308	P	P	23 47 53.8	-0.3
KURK				IAmb	IAmb	23 47 54.5	
	comp=Z,3.7nm,0.8s						
KURBB	Kurchatov Arra	53.34	308	P	P	23 47 54.5	-0.4
	comp=Z,2.8nm,0.8s,baz=53,slow=7.5,SNR=12						
RSSD	Black Hills	53.84	63	P	P	23 47 59.1	+0.2
RSSD				IAmb	IAmb	23 48 00.4	
	comp=Z,3.9nm,0.7s						
ULM	Lac du Bonnet	53.94	52	P	P	23 47 59.0	-0.2
	comp=Z,1.9nm,0.8s,baz=298,slow=7.3,SNR=4.7						
ULM	Lac du Bonnet	53.94	52	P	P	23 47 59.2	0.0
ULM				IAmb	IAmb	23 48 00.4	
	comp=Z,2.1nm,0.9s						
MK31	Makanchi Array	54.00	302	P	P	23 47 58.7	-1.0
MKAR	Makanchi Array	54.00	302	P	P	23 47 58.7	-1.0
	comp=Z,0.5nm,0.6s,baz=56,slow=6.9,SNR=4.7						
MKAR	Makanchi Array	54.00	302	P	P	23 47 58.6	-1.2
O20A	White River Ci	54.19	69	P	P	23 48 02.1	+0.6
O20A				IAmb	IAmb	23 48 03.3	
	comp=Z,2.4nm,0.6s						
PV03	Paradox Valley	55.12	71	P	P	23 48 09.7	+1.5
PV03				IAmb	IAmb	23 48 10.3	
	comp=Z,1.9nm,0.8s						
PV13	Radium Mtn., P	55.20	71	P	P	23 48 10.5	+1.6
BVAR	Borovoye Array	55.46	314	P	P	23 48 09.6	-0.6
	comp=Z,1.9nm,0.7s,baz=54,slow=7.5,SNR=11						
BRVK	Borovoye	55.48	314	P	P	23 48 09.2	-1.1
BRVK				IAmb	IAmb	23 48 11.0	
	comp=Z,3.2nm,0.8s						
SFJD	Kangerlussuaq	56.39	18		P	23 48 16.2	-0.3
214A	Organ Pipe Nat	57.20	79	P	P	23 48 23.9	+0.9
214A				IAmb	IAmb	23 48 25.6	
	comp=Z,2.0nm,0.7s						
EYMN	Ely	57.62	52	P	P	23 48 26.0	+0.3
ARU	Arti	57.77	323	P	P	23 48 26.1	-0.4
ARU				IAmb	IAmb	23 48 27.2	
	comp=Z,3.0nm,0.7s						
ECSD	EROS Data Cent	58.02	59	P	P	23 48 28.9	+0.3
ECSD				IAmb	IAmb	23 48 30.0	
	comp=Z,3.1nm,1.0s						
E43A	Lone Tree Farm	60.88	51	P	P	23 48 48.4	+0.2
I42A	Draeger Farm,	61.79	54	P	P	23 48 54.7	+0.3
I42A				IAmb	IAmb	23 48 55.2	
	comp=Z,4.3nm,0.8s						
KSH	Kashi	62.38	300	P	P	23 49 02.0	+3.4
KSH	Kashi	62.38	300	sP	sP	23 49 11.5	+2.6
KSH	Kashi	62.38	300	PP	PP	23 51 21.0	+5.5
KSH	Kashi	62.38	300	S	S	23 57 26.9	+3.1
KSH	Kashi	62.38	300	sS	sS	23 57 36.8	+1.0
SCHQ	Schefferville	62.47	34	P	P	23 48 59.2	+0.4
	comp=Z,2.7nm,0.8s,baz=324,slow=8.9,SNR=4.1						
SCHQ	Schefferville	62.47	34	IAmb	IAmb	23 49 00.9	
	comp=Z,4.3nm,0.9s						
KKAR	Karatay Array	62.53	306	P	P	23 48 58.1	-1.3
AKTO	Aktyubinsk	62.57	318	P	P	23 48 59.2	-0.3
	comp=Z,2.1nm,0.6s,baz=47,slow=8.8,SNR=8.2						
ABKAR	Akbulak array	62.69	317	P	P	23 49 00.5	+0.1
ABKAR	Akbulak array	62.69	317	P	P	23 48 59.7	-0.7
TX31	Lajitas Ar. Si	64.50	75	P	P	23 49 12.9	+0.2
TX31				IAmb	IAmb	23 49 14.7	
	comp=Z,1.7nm,0.9s						
TX32	Lajitas Array	64.50	75	P	P	23 49 13.2	+0.5
TX32				IAmb	IAmb	23 49 14.7	
	comp=Z,1.8nm,0.9s						
TXAR	Lajitas Array	64.50	75	P	P	23 49 13.2	+0.5
	comp=Z,1.4nm,0.8s,baz=305,slow=4.5,SNR=13						
TXAR	Lajitas Array	64.50	75	P	P	23 49 12.9	+0.2
D53A	Lac Vacive, Po	64.52	45	P	P	23 49 11.3	-1.2
NB2	NORSAR Subarra	65.26	349	P	P	23 49 17.2	+0.1
	comp=Z,0.9nm,0.6s,baz=12,slow=6.9						
NOA	NORSAR Array B	65.26	349	P	P	23 49 16.6	-0.5
	comp=Z,2.0nm,0.8s,baz=352,slow=4.3,SNR=4.9						
HFS	Hagfors	65.84	348	P	P	23 49 20.3	-0.5
	comp=Z,2.5nm,0.6s,baz=29,slow=3.4,SNR=7.8						
FCAR	Ozark Folk Cen	66.10	62	P	P	23 49 21.8	-1.0
TRQ	Mont Tremblant	66.52	44	P	P	23 49 23.1	-2.4
CHGR	Chuyangaron	66.55	303	P	P	23 49 25.2	-0.6
CHGR				IAmb	IAmb	23 49 26.6	
	comp=Z,3.7nm,0.7s						
N54A	Moraine State	68.29	50	P	P	23 49 36.9	+0.2
M55A	Ridgway	68.46	49	P	P	23 49 38.1	+0.4
M55A				IAmb	IAmb	23 49 42.5	
	comp=Z,4.1nm,0.8s						
PLAL	Pickwick Lake	68.93	60	P	P	23 49 40.6	-0.1
PLAL				IAmb	IAmb	23 49 41.0	
	comp=Z,2.7nm,0.8s						
G62A	West of Eustis	68.99	42	P	P	23 49 41.0	0.0
G62A				IAmb	IAmb	23 49 41.2	
	comp=Z,1.9nm,0.5s						
BATG	Bathurst New B	69.01	38	P	P	23 49 40.7	-0.4
BATG				IAmb	IAmb	23 49 55.9	
	comp=Z,4.1nm,1.1s						
H62A	Milan	69.26	42	P	P	23 49 42.8	+0.1
M57A	Sunshine Farm,	69.31	48	P	P	23 49 43.3	+0.2
M57A				IAmb	IAmb	23 50 00.7	
	comp=Z,5.8nm,1.0s						
F64A	Sherman	69.32	40	P	P	23 49 42.9	-0.1
O56A	Blue Knob Stat	69.50	50	P	P	23 49 44.5	+0.2
O56A				IAmb	IAmb	23 49 59.8	
	comp=Z,4.6nm,0.9s						
SSPA	Standing Stone	69.52	49	P	P	23 49 43.7	-0.7
SSPA				IAmb	IAmb	23 50 01.7	
	comp=Z,3.4nm,1.0s						
L59A	Walton	69.55	46	P	P	23 49 43.7	-0.9
KBL	Kabul	69.77	301	P	P	23 49 45.2	-1.0
EKA	Eskdalemuir Ar	72.02	356	P	P	23 49 59.5	+0.3
	comp=Z,1.6nm,0.8s,baz=48,slow=1.2,SNR=4.5						
KBZ	Khabaz	73.90	324	P	P	23 50 11.2	+0.7
	comp=Z,2.0nm,0.8s,baz=193,slow=16,SNR=5.2						
GERES	GERESS Array B	76.80	345	P	P	23 50 27.4	+0.1
	comp=Z,0.7nm,0.7s,baz=31,slow=3.6,SNR=4.3						
BRTR	Keskin Array B	80.61	328	P	P	23 50 49.0	+0.4
	comp=Z,1.2nm,0.8s,baz=62,slow=2.8,SNR=8.7						
BRTR	Keskin Array B	80.61	328	P	P	23 50 49.1	+0.6
ASAR	Alice Springs	82.78	214	P	P	23 51 01.5	+1.7
	comp=Z,0.9nm,0.9s,baz=19,slow=6.9,SNR=3.0						

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*TAP **14** 23:55:43.6, 23°.97N×122°.47E, h27^{km}, ML2.9, D*

*JMA **14** 23:55:43.2±0.2, 23°.95N×122°.45E, h26^{km}±4^{km}, M2.4*

ISC 14 23:55:43.2±1.1**, 23°.97N**±0°.03×**122°.46E**±0°.02**, h27**^{km}±12^{km}**, n59, σ0^{s}.46**/84**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.65	42	P	Pb	23 55 56.1	+0.1
JYNG				*e*S	Sb	23 56 04.4	-0.3
EOS1	EOS1	0.65	332	*i* P	Pb	23 55 56.2	+0.1
	baz=331						
EOS1				*e*S	Sb	23 56 05.3	+0.6
	baz=331						
YOJ	Yonaguni jima	0.70	45	P	Pb	23 55 56.9	+0.1
YOJ				*e*S	Sb	23 56 06.0	-0.1
TWD	Chiawan	0.80	278	*e*P	Pn	23 55 58.8	0.0
	baz=277						
ENA	Nanau	0.80	305	*i* P	Pb	23 55 58.5	-0.1
	baz=304						
ENA				*e*S	Sb	23 56 09.4	+0.4
	baz=304						
NACB	Ninganchiao	0.82	285	*e*P	Pb	23 55 58.5	-0.4
	baz=284						
NACB				*e*S	Sb	23 56 09.8	+0.3
	baz=284						
TWC	Suao	0.85	319	P	Pb	23 55 58.7	-0.6
	baz=318						
TWC				*e*S	Sb	23 56 09.2	-1.1
	baz=318						
ETLH	Xiulin Townshi	0.93	285	*e*P	Pn	23 56 00.1	-0.5
	baz=284						
ETLH				*e*S	Sb	23 56 12.8	+0.1
	baz=284						
TWE	Neicheng	1.04	316	*e*P	Pn	23 56 02.4	+0.3
	baz=316						
NTC	Toucheng	1.05	327	*e*P	Pb	23 56 02.8	0.0
	baz=326						
NTC				*e*S	Sb	23 56 16.2	0.0
	baz=326						
ENTT	Nioudou	1.06	309	*i* P	Pn	23 56 02.4	+0.1
	baz=309						
ENTT				*e*S	Sb	23 56 16.5	+0.2
	baz=309						
HGSD	Ruisui	1.06	244	*e*P	Pn	23 56 02.6	+0.2
	baz=243						
HGSD				*e*S	Sb	23 56 16.6	+0.2
	baz=243						
NDT	Datong Townshi	1.07	306	*e*P	Pb	23 56 03.3	+0.2
	baz=305						
NDT				*e*S	Sb	23 56 16.8	+0.1
	baz=305						
SLBB	Yuanshan	1.09	316	*e*P	Pn	23 56 02.4	-0.4
	baz=315						
NNSB	Datong	1.09	295	*i* P	Pn	23 56 03.0	+0.2
	baz=294						
NNSB				*e*S	Sn	23 56 17.1	0.0
	baz=294						
NNSH	Datong	1.09	295	P	Pn	23 56 02.9	+0.1
	baz=294						
NNSH				*e*S	Sb	23 56 17.6	+0.4
	baz=294						
NNS	Nan Shan	1.10	295	*i* P	Pn	23 56 03.1	+0.1
	baz=294						
NNS				*e*S	Sn	23 56 17.2	-0.2
	baz=294						
TWB1	Santiao Chiao	1.12	337	*e*P	Pn	23 56 03.0	-0.2
	baz=337						
EHY	Hungye	1.14	246	*i* P	Pn	23 56 03.8	+0.3
	baz=245						
EHY				*e*S	Sn	23 56 18.2	-0.1
	baz=245						
TIPB	Shuangxi	1.16	330	*i* P	Pn	23 56 03.8	+0.1
	baz=329						
TIPB				*e*S	Sn	23 56 18.3	-0.3
	baz=329						
OWD	Renai	1.18	270	*i* P	Pn	23 56 04.3	+0.2
	baz=269						
CHGB	Renai	1.18	275	*i* P	Pn	23 56 04.4	+0.2
	baz=274						
NWLT	Wulai	1.19	313	P	Pn	23 56 04.6	+0.5
	baz=312						
NWLT				*e*S	Sn	23 56 19.7	+0.2
	baz=312						
YHNB	Yeheng	1.21	305	P	Pn	23 56 04.9	+0.4
	baz=304						
IRIF	Iriomote-Funau	1.21	72	P	Pn	23 56 04.9	+0.5
IRIF				*e*S	Sb	23 56 20.8	0.0
YULB	Yu-li	1.21	242	P	Pn	23 56 04.7	+0.3
	baz=241						
YULB				*e*S	Sn	23 56 19.7	-0.3
	baz=241						
TDCB	Techi	1.23	284	*e*P	Pn	23 56 05.3	+0.6
	baz=283						
NSK	Sanguang	1.23	305	*i* P	Pn	23 56 05.0	+0.3
	baz=304						
VWDT	VWDT	1.23	260	*e*P	Pb	23 56 05.3	-0.5
	baz=259						
VWDT				*e*S	Sb	23 56 21.1	-0.1
	baz=259						
HATJ	Hateruma jima	1.23	86	P	Pb	23 56 05.4	-0.4
HATJ				S	Sb	23 56 21.4	+0.1
TWF1	Yuli	1.23	240	P	Pn	23 56 05.2	+0.5
	baz=239						
TWF1				S	Sn	23 56 20.7	+0.2
	baz=239						
NWF	Wu-fen Shan	1.26	331	*e*P	Pn	23 56 05.4	+0.2
	baz=330						
WFSB	Wu-fen Shan	1.26	331	*e*P	Pn	23 56 05.3	+0.2
	baz=330						
FULB	Fuli	1.32	235	*e*P	Pn	23 56 06.5	+0.5
	baz=234						
SSLB	Suanglung	1.39	263	*e*P	Pn	23 56 07.6	+0.6
	baz=262						
DPDB	Guoxing	1.41	273	*e*P	Pn	23 56 07.7	+0.6
	baz=272						
WHP	Taichung City	1.42	283	*e*P	Pb	23 56 09.6	+0.5
	baz=282						
YM01	YM01	1.43	325	*e*P	Pb	23 56 09.0	-0.1
	baz=325						
SMLT	Sun Moon Lake	1.43	267	*e*P	Pn	23 56 08.4	+0.8
	baz=266						
JKRS	Kuro-shima	1.44	79	P	Pb	23 56 08.7	-0.6
JKRS				S	Sb	23 56 27.2	0.0
YM04	YM04	1.45	325	*e*P	Pn	23 56 08.6	+0.8
	baz=324						
TYC	Yuchr	1.47	268	*e*P	Pn	23 56 08.8	+0.8
	baz=267						
LIOB	Emei	1.48	297	*e*P	Pb	23 56 09.7	-0.4
	baz=296						
TWH	Lutao	1.55	216	*e*P	Pn	23 56 09.2	+0.2
	baz=214						
JIJ	Ishigaki jima	1.58	75	P	Pn	23 56 09.8	+0.3
JIJ				S	Sn	23 56 29.0	-0.2
CHN5	Tsauling	1.68	258	*e*P	Pb	23 56 12.8	-0.6
	baz=257						
TWGBT	Beinan	1.71	228	*e*P	Pn	23 56 12.0	+0.7
	baz=227						
TWG	Pinlang	1.71	228	*e*P	Pn	23 56 11.9	+0.5
	baz=227						
TWG				*e*S	Sn	23 56 32.0	-0.4
	baz=227						
JISG	Ishigakijimahi	1.79	70	S	Sn	23 56 34.3	-0.1
TPUB	Ta-pu	1.81	249	*e*P	Pb	23 56 14.9	-0.7
	baz=248						
CHN4	Tsaushan	1.82	251	*e*P	Pb	23 56 15.5	-0.4
	baz=250						
WTP	Ta-pu	1.84	247	*e*P	Pb	23 56 15.2	-1.0
	baz=246						
SLGT	Liugui	1.93	240	*e*P	Pb	23 56 17.5	-0.3
	baz=239						
CHN1	Nanshi	1.94	247	*e*P	Pb	23 56 17.2	-0.7
	baz=246						
TWK	Hsinying	1.94	249	*e*P	Pb	23 56 17.0	-1.0
	baz=248						
SNST	Tainan City	1.95	248	*e*P	Pb	23 56 17.8	-0.2
	baz=247						
EAST	Anshuo	2.17	224	*e*P	Pn	23 56 19.3	+1.7
	baz=223						
VWUC	VWUC	2.93	291	*e*P	Pn	23 56 27.9	-0.1
	baz=290						
PTMZ	Houxiangcun	3.23	290	*e*P	Pn	23 56 32.1	-0.1
	baz=289						

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*JMA **14** 23:59:53.0±0.2, 34°.70N×140°.05E, h92^{km}±3^{km}, M2.9*

*IDC **14** 23:59:54.5±3.4, 34°.70N×139°.97E, h97^{km}±15^{km}, mb3.2/3, mb1 3.4/4, mb1mx3.0/50, mbtmp3.5/4, Error ellipse: s-maj=76.7km s-min=6.0km az=72.0*

ISC 14 23:59:53.7±1.0**, 34°.73N**±0°.04×**140°.08E**±0°.06**, h90**^{km}±7^{km}**, n17, σ0^{s}.69**/27**, mb3.5**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO4	Boso 4	0.34	39	P	Pn	00 00 07.7	+0.4
TATJ	Tateyama 2	0.34	333	P	Pn	00 00 07.7	+0.3
TATJ				S	Sn	00 00 18.8	+1.2
BSO3	Boso 3	0.36	78	P	Pn	00 00 07.4	+0.2
BSO3				X		00 00 19.1	
JKUC	kamogawauchiur	0.45	13	P	Pn	00 00 07.9	-0.2
JKUC				S	Sn	00 00 19.1	+0.4
KTR	Katsuura	0.46	25	P	Pn	00 00 08.1	-0.1
KTR				S	Sn	00 00 19.2	+0.2
JIM2	Oshima 3	0.53	269	P	Pn	00 00 08.3	-0.5
JIM2				S	Sn	00 00 19.3	-0.7
BSO1	Boso 1	0.74	95	P	Pn	00 00 10.2	+0.2
JMKN	Mikurajimanish	0.92	206	P	Pn	00 00 12.8	+0.2
JMKN				S	Sn	00 00 27.0	+0.3
JOD2	Odawara 2	0.97	304	P	Pn	00 00 12.6	-0.6
JOD2				S	Sn	00 00 27.2	-0.5
JYN	Shimob	1.48	302	P	Pn	00 00 19.8	+0.6
JYN				S	Sn	00 00 40.1	+1.6
JHJ	Hachijo jima 2	1.62	189	P	Pn	00 00 21.8	+0.8
	42nm,0.3s,baz=140,slow=22,SNR=8.2						
JHJ				S	Sn	00 00 42.3	+0.6
	51nm,0.3s,baz=320,slow=24,SNR=15						
JHJ2	Mitsune	1.62	188	P	Pn	00 00 21.7	+0.6
MJAR	Matsushiro Arr	2.37	320	P	Pn	00 00 31.6	+0.8
	0.7nm,0.3s,baz=140,slow=12,SNR=15						
MJAR				S	Sn	00 00 59.0	-0.2
	1.0nm,0.3s,baz=261,slow=12,SNR=13						

MAT	Matsushiro	2.37	320	P	Pn	00 00 31.9	+1.1
MAT				S	Sn	00 00 59.7	+0.5
MKAR	Makanchi Array	44.47	304	P	P	00 07 55.4	-0.4
	0.4nm,0.5s,baz=88,slow=9.3,SNR=6.0						
KURBB	Kurchatov Arra	46.60	310	P	P	00 08 12.7	+0.2
	0.2nm,0.4s,baz=82,slow=7.2,SNR=6.9						
WRA	Warramunga Arr	54.64	187	P	P	00 09 12.3	-0.9
	0.7nm,0.6s,baz=4.3,slow=7.6,SNR=8.4						

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*NEIC **15** 00:06:32.0±1.1, 13°.65N±0°.09×120°.7E±0°.1, h108km±6km, mb4.3/29, Error ellipse: s-maj=18.8km s-min=13.2km az=94.0*

*IDC **15** 00:06:32.0±0.7, 13°.73N×120°.84E, h105km±5km, mb3.8/18, mb1 3.9/18, mb1mx3.7/59, mbtmp4.1/18, MS3.7/2, Ms1 3.7/2, ms1mx2.8/41, Error ellipse: s-maj=23.8km s-min=14.2km az=66.0*

*MAN **15** 00:06:31.8, 13°.70N×120°.50E, h89km, mb4.6, ML3.5, MS3.4*

ISC 15 00:06:32.2±0.6, **13°.68N**±0°.04×**120°.48E**±0°.05, **h102**km±5km, **n96**, σ**1ˢ.86**/110, **mb4.2**/32, **2C-2D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.23	283	eP	Pn	00 06 46.6	-0.1
LUBP				eS	Sn	00 06 56.7	-0.9
PGP	Puerto Galera	0.50	111	⇑eP	Pn	00 06 47.7	-0.6
TGY	Tagaytay City	0.61	47	P	Pn	00 06 49.0	-0.2
	2μm,0.3s,baz=244,slow=1.9,SNR=52						
TGY				S	Sn	00 07 01.0	-0.9
	5μm,0.3s,baz=308,slow=19,SNR=69						
TGY	Tagaytay City	0.61	47	⇑iP	Pn	00 06 49.1	-0.1
TGY				i S	Sn	00 07 01.4	-0.5
LQP	Lukban	1.12	67	eP	Pn	00 06 54.0	-0.3
LQP				i S	Sn	00 07 18.7	+7.8
BOAC	Boac	1.35	99	eP	Pn	00 06 55.8	-0.9
BOAC				eS	Sn	00 07 14.0	-1.3
POLP	Polilio Island	1.76	54	eP	Pn	00 07 01.7	0.0
POLP				eS	Sn	00 07 24.7	+0.4
GQP	Guinayangan	1.93	83	⇓eP	Pn	00 07 05.4	+1.5
GQP				eS	Sn	00 07 29.9	+1.8
PCPH	Palayan	1.96	18	⇓eP	Pn	00 07 03.6	-0.8
PCPH				eS	Sn	00 07 27.9	-1.0
OTRP	Odiongan	2.00	131	eP	Pn	00 07 04.9	+0.1
OTRP				eS	Sn	00 07 28.4	-1.3
SCZP	Santa Cruz	2.15	345	eP	Pn	00 07 06.0	-0.8
SCZP				eS	Sn	00 07 32.7	-0.6
ENPP	El Nido	2.67	203	eP	Pn	00 07 13.5	-0.1
ENPP				eS	Sn	00 07 46.6	+1.3
CUYO	Cuyo Island	2.86	169	eP	Pn	00 07 15.9	-0.4
CAUP	Cauayan	3.49	22	eP	Pn	00 07 23.8	-0.8
SZP	Santa	3.85	360	Pn	Pn	00 07 29.7	+0.4
CMAR	Chiang Mai Arr	21.22	286	P	P	00 11 13.1	+3.1
	2.4nm,0.6s,baz=100,slow=7.9,SNR=17						
CMAR	Chiang Mai Arr	21.22	286	P	P	00 11 12.3	+2.4
CHTO	Chiang Mai	21.29	287	P	P	00 11 12.1	+1.5
MMRI	Maumere	22.24	175	PKP	P	00 11 20.6	-0.1
MMRI				PKP	P	00 11 25.1	+4.4
SRBI	Singaraja	22.25	194	PKP	P	00 11 27.0	+6.2
PLAI	Plampang	22.52	187	PKP	P	00 11 25.3	+1.6
PLAI				PKP	P	00 11 26.3	+2.6
JAGI	Jajag, Banyuwa	22.89	196	PKP	P	00 11 29.0	+1.7
JAGI				PKP	P	00 11 29.5	+2.2
WOJI	Wonogiri, Jawa	23.39	204	PKP	P	00 11 30.9	-1.1
UGM	Wanagama	23.62	205	PKP	P	00 11 30.9	-3.3
SDSI	Sungai Dareh	23.82	234	PKP	P	00 11 37.8	+1.9
LEM	Lembang	24.04	213	PKP	P	00 11 34.5	-3.6
LEM				PKP	P	00 11 35.3	-2.8
MDSI	Maura Dua	24.24	223	PKP	P	00 11 34.8	-4.9
KRJI	Kerinci	24.52	232	PKP	P	00 11 39.7	-2.7
KSAR	Wonju Array Be	24.57	14	P	P	00 11 40.1	-2.4
PDSI	Padang	24.57	235	PKP	P	00 11 39.0	-3.8
SHL	Shillong	29.34	298	P	P	00 12 27.2	+1.5
LSA	Lhasa	31.44	305	P	P	00 12 45.6	+1.1
LSA				IAmb	IAmb	00 12 48.5	
	comp=Z,5.5nm,0.7s						
TAPN	Taplejung	33.45	299	eP	P	00 13 03.8	+1.9
ODAN	Odare	33.58	298	eP	P	00 13 04.8	+1.8
	comp=Z,43nm,0.7s						
RAMN	Ramite	34.28	298	eP	P	00 13 11.1	+2.0
	comp=Z,34nm,0.7s						
JIRN	Jiri	34.83	299	eP	P	00 13 15.8	+1.9
GUN	Gumba	35.16	299	eP	P	00 13 18.4	+1.6
	comp=Z,38nm,0.8s						
PKI	Pulchoki	35.47	298	eP	P	00 13 20.5	+1.1
PKIN	Phulchoki	35.48	298	eP	P	00 13 20.5	+1.1
KKN	Kakani	35.64	299	eP	P	00 13 22.1	+1.4
DMN	Daman	35.74	298	eP	P	00 13 22.9	+1.3
	comp=Z,25nm,0.9s						
SONM	Songino Array	36.01	344	P	P	00 13 23.7	+0.2
	comp=Z,2.9nm,0.6s,baz=163,slow=9.7,SNR=27						
SONM	Songino Array	36.01	344	P	P	00 13 23.6	+0.1
WRA	Warramunga Arr	36.09	158	P	P	00 13 23.0	-1.4
	comp=Z,1.0nm,0.7s,baz=337,slow=9.4,SNR=4.7						
WRA				pP	pP	00 13 46.6	-0.8
	comp=Z,1.0nm,0.7s,baz=336,slow=9.6,SNR=3.4						
WRA				LR	LR	00 30 31.9	
	comp=Z,38nm,19.4s,baz=175,slow=40						
WRA	Warramunga Arr	36.09	158	IAmb	IAmb	00 13 23.2	
	comp=Z,0.2nm,1.1s						
GKN	Gorkha	36.24	299	eP	P	00 13 26.7	+0.9
KLR	Kul'dur	36.64	12	P	P	00 13 27.9	-0.7
	comp=Z,1.1nm,0.6s,baz=207,slow=8.0,SNR=4.1						
DANN	Dangsing	37.08	299	eP	P	00 13 33.7	+0.6
ASAR	Alice Springs	39.37	160	P	P	00 13 50.9	-1.0
	comp=Z,0.6nm,0.5s,baz=338,slow=6.8,SNR=9.0						
ASAR				pP	pP	00 14 15.3	-0.1
	comp=Z,0.6nm,0.6s,baz=344,slow=7.2,SNR=3.8						
ASAR	Alice Springs	39.37	160	P	P	00 13 47.9	-4.1
MK31	Makanchi Array	45.92	324	P	P	00 14 45.9	+1.3
MK31				IAmb	IAmb	00 14 46.9	
	comp=Z,3.1nm,0.8s						
MKAR	Makanchi Array	45.92	324	P	P	00 14 46.1	+1.5
	comp=Z,2.9nm,0.7s,baz=129,slow=8.9,SNR=38						
MKAR				PcP	PcP	00 16 20.5	+0.5
	comp=Z,0.3nm,0.7s,baz=127,slow=3.8,SNR=2.2						
MKAR	Makanchi Array	45.92	324	P	P	00 14 45.5	+0.9
MAKZ	Makanchi	46.10	324	P	P	00 14 47.6	+1.5
MAKZ				IAmb	IAmb	00 14 47.7	
	comp=Z,2.8nm,0.8s						
NIL	Nilore	47.13	303	P	P	00 14 54.7	+0.4
NIL				IAmb	IAmb	00 14 56.2	
	comp=Z,6.3nm,1.1s						
NRN	Naryn	47.43	314	P	P	00 14 57.3	+0.4
NRN				IAmb	IAmb	00 14 59.5	
	comp=Z,3.9nm,0.8s						
KZA	Kyzart	48.20	315	P	P	00 15 05.5	+2.6
	SNR=6.3						
KBK	Karagaybulak	48.62	315	P	P	00 15 08.1	+2.2
	SNR=5.5						
UCH	Uchtor	48.76	315	P	P	00 15 09.9	+2.7
	SNR=7.4						
AAK	Ala-Archa	48.93	315	P	P	00 15 09.1	+0.9
	comp=Z,1.2nm,0.6s,baz=139,slow=10,SNR=8.9						
AAK	Ala-Archa	48.93	315	P	P	00 15 09.4	+1.2
ZAA0	Zalesovo Array	48.97	333	P	P	00 15 07.4	-0.7
ZALV	Zalesovo Beam	48.97	333	P	P	00 15 07.9	-0.2
	comp=Z,1.5nm,0.5s,baz=126,slow=6.7,SNR=5.3						
AML	Almayashu	49.29	314	P	P	00 15 13.3	+2.1
	SNR=5.7						
EKS2	Erkin-Say	49.43	315	P	P	00 15 14.2	+2.3
	SNR=5.8						
ARSB	Arslanbob	49.51	313	P	P	00 15 12.7	+0.1
ARSB				IAmb	IAmb	00 15 14.9	
	comp=Z,4.0nm,0.7s						
KURBB	Kurchatov Arra	50.08	326	P	P	00 15 17.7	+1.1
	comp=Z,8.4nm,0.8s,baz=125,slow=7.7,SNR=54						
KURK	Kurchatov	50.08	326	P	P	00 15 17.7	+1.1
BTK	Batken	50.68	311	P	P	00 15 22.4	+1.0
BTK				IAmb	IAmb	00 15 24.4	
	comp=Z,2.1nm,0.9s						
KBL	Kabul	50.74	304	P	P	00 15 21.8	-0.2
KBL				IAmb	IAmb	00 15 24.2	
	comp=Z,2.1nm,0.7s						
KK31	Karatay Array	51.83	314	P	P	00 15 30.5	+0.6
KK31				IAmb	IAmb	00 15 31.8	
	comp=Z,4.1nm,0.8s						
KKAR	Karatay Array	51.83	314	P	P	00 15 30.8	+0.9
KKAR	Karatay Array	51.83	314	IAmb	IAmb	00 15 31.8	
	comp=Z,4.1nm,0.8s						
BVAR	Borovoye Array	55.66	326	P	P	00 15 58.4	+0.8
	comp=Z,2.4nm,0.6s,baz=100,slow=7.7,SNR=16						
BRVK	Borovoye	55.74	326	P	P	00 15 59.4	+1.3
HRA	Herat	56.27	302	IAmb	IAmb	00 16 03.9	
	comp=Z,2.6nm,1.1s						
NRIK	Noril'sk	59.38	347	P	P	00 16 22.7	-0.7
	comp=Z,0.8nm,0.4s,baz=142,slow=5.7,SNR=8.4						
GEYT	Alibeck	59.97	306	P	P	00 16 29.8	+1.7
	comp=Z,3.1nm,0.8s,baz=113,slow=3.9,SNR=8.3						
GEYT	Alibeck	59.97	306	P	P	00 16 27.4	-0.6
ABKAR	Akbulak array	60.60	319	P	P	00 16 32.5	+0.4
ABKAR	Akbulak array	60.60	319	P	P	00 16 32.7	+0.6
ABKAR				IAmb	IAmb	00 16 33.6	
	comp=Z,2.9nm,0.6s						
RAYN	Ar Rayn	71.06	290	P	P	00 17 40.5	+0.7
RAYN				IAmb	IAmb	00 17 41.8	
	comp=Z,4.9nm,0.9s						
KBZ	Khabaz	71.73	312	P	P	00 17 43.7	+0.4
	comp=Z,2.1nm,0.9s,baz=76,slow=5.2,SNR=4.4						
KIV	Kislovodsk	71.88	312	P	P	00 17 43.7	-0.7
KIV				IAmb	IAmb	00 17 45.9	
	comp=Z,4.3nm,0.8s						
IMAR	Indian Mountai	75.89	25	P	P	00 18 06.0	-1.2
BRTR	Keskin Array B	78.99	308	P	P	00 18 25.2	0.0
	comp=Z,0.8nm,0.8s,baz=125,slow=2.0,SNR=5.8						
ARCES	ARCESS Array B	79.02	339	P	P	00 18 24.1	-0.5
	comp=Z,5.0nm,1.0s,baz=77,slow=7.6,SNR=4.8						
BMAR	Burnt Mountain	79.37	23	P	P	00 18 26.0	-0.6
INK	Inuvik	83.19	21	P	P	00 18 44.9	-1.7
	comp=Z,1.7nm,0.9s,baz=315,slow=2.9						
BURAR	Bucovina Array	83.52	317	P	P	00 18 49.3	+0.3
BUR08	Bucovina Ar. S	83.53	317	P	P	00 18 48.9	-0.1
KMBO	Kilima Mbogo	83.68	267	P	P	00 18 51.6	+1.1
	comp=Z,0.5nm,0.3s,baz=47,slow=13,SNR=3.6						
KARP	Karpathos	84.82	305	P	P	00 18 55.4	-0.3
C36M	Paulatuk	85.90	19	P	P	00 18 59.7	-0.6
YKA	Yellowknife Ar	92.88	22	P	P	00 19 31.6	-1.7
	comp=Z,0.3nm,0.8s,baz=292,slow=4.1,SNR=3.6						
NEW	Newport	99.97	35	LR	LR	01 01 45.6	
	comp=Z,83nm,19.0s,baz=248,slow=33						

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*IDC **15** 00:14:42.9±1.6, 4°.55S×153°.38E, h69km±11km, mb3.8/16, mb1 3.9/16, mb1mx3.8/36, mbtmp4.1/16, MS3.1/2, Ms1 3.1/2, ms1mx2.7/29, Error ellipse: s-maj=15.2km s-min=11.7km az=117.0*

*NEIC **15** 00:14:43.6±1.3, 4°.5S±0°.1×153°.4E±0°.1, h75km±6km, mb4.3/12, Error ellipse: s-maj=21.2km s-min=14.2km az=146.0*

ISC 15 00:14:44.5±0.5, **4°.57S**±0°.08×**153°.34E**±0°.08, **h85**km, **n40**, σ**1ˢ.43**/47, **mb4.2**/22, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.33	281	P	Pn	00 15 06.5	-1.4
	147nm,0.3s,baz=320,slow=0.8,SNR=46						
KRVT				LR	LR	00 15 15.0	
	comp=Z,71nm,21.9s,baz=51,slow=24						
KRVT				S	Sn	00 15 23.5	-2.1
	254nm,0.3s,baz=15,slow=20,SNR=35						
PMG	Port Moresby	7.79	232	S	Sn	00 18 00.1	-1.7
	3.7nm,0.3s,baz=197,slow=17,SNR=4.7						
PMG				LR	LR	00 19 36.7	
	comp=Z,70nm,19.5s,baz=280,slow=38						
HNR	Honiara	8.15	127	S	Sn	00 18 07.5	-3.2
	25nm,0.3s,baz=191,slow=16,SNR=3.4						
DZM	Mont Dzumac	21.54	145	P	P	00 19 26.9	-0.2
	5.6nm,0.9s,baz=313,slow=19,SNR=4.8						
WB2	Warramunga Arr	23.99	229	P	P	00 19 52.4	+0.9
WB2				IAmb	IAmb	00 19 57.0	
	comp=Z,8.8nm,0.5s						
WRA	Warramunga Arr	24.00	229	P	P	00 19 51.9	+0.4
	comp=Z,5.2nm,0.5s,baz=49,slow=10.0,SNR=31						
WRA				PcP	PcP	00 23 32.2	+0.5
	comp=Z,0.3nm,0.4s,baz=54,slow=2.6,SNR=3.5						
WRA				S	S	00 24 04.3	+1.7
	comp=Z,0.7nm,0.9s,baz=46,slow=16,SNR=3.2						
WRA				ScP	ScP	00 27 06.3	+3.5
	comp=Z,1.1nm,0.8s,baz=50,slow=2.8,SNR=9.1						
WRA	Warramunga Arr	24.00	229	P	P	00 19 51.6	+0.1
ASAR	Alice Springs	26.68	223	P	P	00 20 16.6	+0.8
	comp=Z,0.3nm,0.5s,baz=59,slow=9.3,SNR=3.4						
ASAR				PcP	PcP	00 23 38.4	+0.7
	comp=Z,0.4nm,0.7s,baz=73,slow=3.0,SNR=4.2						
ASAR				ScP	ScP	00 27 14.2	+3.8
	comp=Z,0.8nm,0.9s,baz=28,slow=5.7,SNR=4.7						
STKA	Stephens Creek	29.31	201	P	P	00 20 38.0	-1.2
	comp=Z,0.8nm,0.4s,baz=2.4,slow=16,SNR=2.8						
STKA	Stephens Creek	29.31	201	IAmb	IAmb	00 20 43.8	
	comp=Z,0.7nm,1.1s						
FITZ	Fitzroy Crossi	30.24	241	P	P	00 20 46.2	-1.2
	comp=Z,2.8nm,0.6s,baz=178,slow=0.7,SNR=20						
KSRS	Korea Array	48.04	333	P	P	00 23 15.3	0.0
	comp=Z,0.8nm,0.3s,baz=162,slow=7.6,SNR=4.4						
USRK	Ussuriysk Ar.	52.21	341	P	P	00 23 45.9	-0.8
	comp=Z,3.2nm,0.7s,baz=148,slow=4.4,SNR=5.0						
PPT	Papeete	57.29	108	LR	LR	00 44 47.0	
	comp=Z,29nm,19.6s,baz=355,slow=32						
PETK	Petropavlovsk-	57.58	3	P	P	00 24 25.6	+0.2
	comp=Z,18nm,1.2s,baz=177,slow=7.8,SNR=3.6						
CMAR	Chiang Mai Arr	58.26	295	P	P	00 24 31.2	+0.4
	comp=Z,0.8nm,0.5s,baz=122,slow=4.8,SNR=6.8						
SONM	Songino Array	66.42	328	P	P	00 25 25.2	+0.4
	comp=Z,0.7nm,0.5s,baz=150,slow=6.4,SNR=7.1						
SONM				pP	pwP	00 25 47.8	+1.2
	comp=Z,0.4nm,0.7s,baz=151,slow=6.5,SNR=1.9						
SONM				PcP	PcP	00 25 53.6	-0.3
	comp=Z,0.7nm,0.5s,baz=156,slow=3.0,SNR=6.2						
SONM	Songino Array	66.42	328	IAmb	IAmb	00 25 28.7	
	comp=Z,0.7nm,0.6s						
VNDA	Vanda	73.04	178	P	P	00 26 06.2	+1.3
	comp=Z,1.0nm,0.6s,baz=338,slow=7.0,SNR=6.1						
VNDA				pP	pP	00 26 28.3	+2.9
	comp=Z,1.2nm,0.6s,baz=346,slow=5.3,SNR=3.8						
MKAR	Makanchi Array	80.50	319	P	P	00 26 47.9	+0.5
	comp=Z,1.9nm,0.9s,baz=103,slow=7.8,SNR=11						
MKAR	Makanchi Array	80.50	319	P	P	00 26 47.7	+0.3
MAKZ	Makanchi	80.72	319	P	P	00 26 49.0	+0.5
MAKZ				IAmb	IAmb	00 26 50.0	
	comp=Z,2.9nm,0.8s						
ZALV	Zalesovo Beam	81.26	326	P	P	00 26 51.0	-0.3
	comp=Z,0.8nm,0.4s,baz=110,slow=6.1,SNR=3.1						
ILAR	Eielson Array	81.75	22	P	P	00 26 52.1	-1.4
	comp=Z,0.2nm,0.5s,baz=247,slow=6.5,SNR=4.6						
KURK	Kurchatov	83.92	322	P	P	00 27 05.4	+0.3
KURK				IAmb	IAmb	00 27 06.1	
	comp=Z,3.7nm,1.1s						
KZA	Kyzart	84.24	313	P	P	00 27 09.2	+1.7
	SNR=6.8						
NIL	Nilore	84.29	304	P	P	00 27 08.2	+0.7
NIL				IAmb	IAmb	00 27 08.7	
	comp=Z,5.8nm,0.7s						
CHMS	Chumysh	84.78	314	P	P	00 27 10.9	+1.2
	SNR=8.0						
UCH	Uchtor	84.81	313	P	P	00 27 11.9	+1.5
	SNR=5.8						
AAK	Ala-Archa	84.90	313	P	P	00 27 11.7	+1.2
	SNR=7.4						
AAK	Ala-Archa	84.90	313	P	P	00 27 11.6	+1.2
AML	Almayashu	85.39	313	P	P	00 27 14.9	+1.6
	SNR=9.8						
EKS2	Erkin-Say	85.42	313	P	P	00 27 14.7	+1.6
	SNR=9.1						
NRIK	Noril'sk	85.92	341	P	P	00 27 14.5	-0.2
	comp=Z,2.1nm,0.4s,baz=106,slow=4.2,SNR=5.8						
KK31	Karatay Array	87.86	313	P	P	00 27 24.3	-0.5
KK31				IAmb	IAmb	00 27 25.7	
	comp=Z,1.5nm,0.8s						
KKAR	Karatay Array	87.86	313	P	P	00 27 24.8	0.0
KKAR	Karatay Array	87.86	313	P	P	00 27 23.9	-0.9
KKAR				IAmb	IAmb	00 27 25.7	
	comp=Z,1.5nm,0.8s						
CHGR	Chuyangaron	88.28	309	P	P	00 27 26.1	-0.9
YKA	Yellowknife Ar	94.97	28	P	P	00 27 56.3	-1.0
	comp=Z,0.1nm,0.6s,baz=267,slow=4.9,SNR=3.1						
YKA				PKiKP	PKiKP	00 32 40.0	+1.5
	comp=Z,0.1nm,0.3s,baz=271,slow=0.7,SNR=4.1						
TORD	Torodi Ar. Bea	150.74	289	PKPbc	PKPbc	00 34 28.0	-0.1
	comp=Z,2.8nm,0.6s,baz=91,slow=2.0,SNR=31						

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*IDC **15** 00:26:39.5±1.6, 10°.29S×125°.05E, h0km, mb3.7/1, mb1 3.8/4, mb1mx3.5/27, mbtmp3.6/4, ML3.5/3, Error ellipse: s-maj=97.1km s-min=26.1km az=65.0*

*DJA **15** 00:26:44.5±1.3, 10°S±7°×12°5E±°, h14km±5km, M3.5/4, MLv3.5/4*

ISC 15 00:26:43.6±1.1, **10°.5S**±0°.1×**125°.1E**±0°.2, **h35**km, **n6**, σ**2ˢ.56**/11, **Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.09	313	P	Pn	00 27 01.6	-1.0
SOEI				S	Sn	00 27 15.0	-1.6
MMRI	Maumere	3.37	303	P	Pn	00 27 34.6	+0.9
MMRI				S	Sn	00 28 12.2	-0.3
FITZ	Fitzroy Crossi	7.57	176	Pn	Pn	00 28 35.3	+3.8
	0.7nm,0.3s,baz=243,slow=1.0,SNR=29						
FITZ				Sn	Sn	00 29 55.2	-0.9
	0.6nm,0.3s,baz=3.9,slow=0.1,SNR=9.6						
WRA	Warramunga Arr	12.95	138	Pn	Pn	00 29 46.4	+1.2
	0.2nm,0.3s,baz=310,slow=14,SNR=10						
WRA				Sn	Sn	00 32 06.2	-2.0
	0.6nm,0.3s,baz=316,slow=23,SNR=6.0						
ASAR	Alice Springs	15.56	148	Pn	Pn	00 30 22.4	+1.9
	0.2nm,0.3s,baz=319,slow=12,SNR=13						
ASAR				Sn	Sn	00 33 07.0	-4.9
	0.2nm,0.3s,baz=316,slow=18,SNR=5.5						
MKAR	Makanchi Array	68.64	330	P	P	00 37 43.4	+0.1
	0.4nm,0.5s,baz=130,slow=6.9,SNR=12						

MAN 15 00:35:58.6, 13°.30N×119°.71E, h27km, mb4.1, ML2.9, MS2.6, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.67	50	eP	Pn	00 36 12.2	-0.2
LUBP				eS	Sn	00 36 23.0	+0.9
PGP	Puerto Galera	1.22	81	⇓eP	Pb	00 36 24.1	+3.0
PGP				eS	Sb	00 36 43.2	+6.7
BUSP	Coron	1.38	160	eP	Pb	00 36 23.7	0.0
BUSP				eS	Sb	00 36 45.6	+4.7
ENPP	El Nido	2.10	188	eP	Pn	00 36 32.5	+0.4
ENPP				eS	Sn	00 36 58.5	+1.1

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*SJA **15** 00:52:29.6±0.3, 37°.78S×76°.45W, h33km, ML4.4, MW4.3*

*GUC **15** 00:53:07.8±0.6, 36°.19S×73°.57W, h33km±7km, ML4.1*

*NEIC **15** 00:53:07.8±2.2, 36°.15S±0°.04×73°.8W±0°.2, h44km±9km, Error ellipse: s-maj=21.2km s-min=5.4km az=92.0*

*IDC **15** 00:53:12.2±4.2, 36°.22S×73°.25W, h40km±36km, mb3.5/7, mb1 3.8/9, mb1mx3.6/28, mbtmp3.7/9, ML3.7/2, MS3.1/5, Ms1 3.1/5, ms1mx2.9/17, Error ellipse: s-maj=40.7km s-min=26.2km az=95.0*

ISC 15 00:53:06.7±1.7, **36°.25S**±0°.04×**73°.58W**±0°.08, **h16**km±10km, **n45**, σ**2ˢ.09**/55, **mb3.8**/7, **5C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCSP	San Pedro de C	0.70	148	eP	Pg	00 53 21.4	+0.9
CCSP				eS	Sb	00 53 31.3	+1.3
CCSP				IAML		00 53 33.2	
	comp=N,17μm,0.8s						
BI03	Tigo	0.74	143	⇑iP	Pg	00 53 21.7	+0.5
BI03				eS	Sg	00 53 32.2	+1.2
CCHI	Chillan	1.26	107	⇑iP	Pn	00 53 29.4	-0.2
CCHI				eS	Sb	00 53 45.8	-0.2
CCHI				IAML		00 53 50.3	
	comp=E,6μm,0.6s						
GO05	Huala	1.83	48	⇑iP	Pn	00 53 36.8	-0.7
GO05				eS	Sb	00 54 02.3	-0.1
GO05	Huala	1.83	48		Pn	00 53 37.2	-0.3
LC01	Cunco	2.97	153	eP	Pn	00 53 54.5	+1.2
LC01				eS	Sb	00 54 33.9	-1.4
LC01				IAML		00 54 44.2	
	comp=E,239nm,0.5s						
MT01	Popeta	3.05	39	eP	Pn	00 53 54.0	-0.3
MT01				IAML		00 54 46.9	
	comp=E,236nm,0.6s						
GO06	Curarrehue	3.72	154		Pn	00 54 05.8	+2.2
MT03	Universidad Ad	3.73	43	⇑iP	Pn	00 54 04.0	+0.2
MT03				eS	Sb	00 55 01.4	+4.0
MT03				IAML		00 55 12.3	
	comp=N,422nm,0.4s						
ROC1	El Roble	3.89	34		Pn	00 54 05.8	-0.3
ROCH	El Roble	3.90	34	eP	Pn	00 54 05.7	-0.5
ROCH				eS	Sn	00 54 50.3	-1.4
ROCH				IAML		00 55 15.5	
	comp=N,171nm,0.6s						
PEL	Peldehue	3.91	38	⇓iP	Pn	00 54 06.0	-0.1
PEL				eS	Sn	00 54 50.7	-1.1
PEL				IAML		00 55 23.9	
	comp=N,258nm,0.3s						
PEL	Peldehue	3.91	38		Pn	00 54 06.5	+0.4
FCH	Farellones	3.98	44	⇑iP	Pn	00 54 07.5	+0.2
FCH				eS	Sn	00 54 52.7	-1.1
FCH				IAML		00 55 12.0	
	comp=E,152nm,0.1s						
AAGR	Agrelo	5.03	52	i P	Pn	00 54 23.4	+1.8
AAGR				eS	Sg	00 55 48.5	+0.3
AAGR				IAML		00 55 59.7	
	comp=Z,51nm,1.2s						
PLCA	Paso Flores	5.07	153	Pn	Pn	00 54 24.5	+2.4
	comp=Z,0.4nm,0.3s,baz=352,slow=11,SNR=11						
PLCA				Lg	Lg	00 55 40.7	
	comp=Z,1.1nm,0.3s,baz=22,slow=15,SNR=3.5						
PLCA				LR	LR	00 56 43.2	
	comp=Z,171nm,18.1s,baz=358,slow=42						
PLCA	Paso Flores	5.07	153		Pn	00 54 24.9	+2.8
ARCO	CERRO ARCO	5.12	50	i P	Pn	00 54 25.4	+2.5
ARCO				IAML		00 57 05.7	
	comp=Z,12nm,1.6s						
RTLS	Leoncito	5.69	40	i P	Pn	00 54 32.5	+1.6
RTLS				eS	Sg	00 56 03.1	-6.2
RTLS				IAML		00 56 16.2	
	comp=Z,19nm,0.9s						
RTCV	Cerro Valdivia	6.05	45	i P	Pn	00 54 37.1	+1.5
RTCV				eS	Sb	00 56 10.4	+6.3
RTCV				IAML		00 56 27.1	
	comp=Z,54nm,2.1s						
CFA	Coronel Fontan	6.42	45	Pn	Pn	00 54 40.9	+0.3
	comp=Z,8.2nm,0.3s,baz=217,slow=10,SNR=31						
CFA				Sn	Sn	00 55 52.4	-1.2
	comp=Z,2.1nm,0.3s,baz=106,slow=23,SNR=2.9						
CFA				LR	LR	00 57 31.3	
	comp=Z,214nm,20.5s,baz=260,slow=42						
GO04	Tololo Observa	6.49	22		Pn	00 54 41.2	-0.6
ACAN	Cantantal	6.61	55	i P	Pn	00 54 44.0	+0.7
AMOG	MOGNA	6.79	40	i P	Pn	00 54 45.9	+0.2
AROD	Rodeo	6.97	31	i P	Pn	00 54 49.8	+1.2
APLL	PUNTA DE LOS L	8.30	47	i P	Pn	00 55 05.4	-1.1
ACLC	CERRO LA CRUZ	8.79	41	i P	Pn	00 55 12.6	-0.8
PB10	IPOC Station P	12.96	12	Pn	Pn	00 56 07.1	-3.2
LVC	Limon Verde	14.18	18	LR	LR	01 02 06.0	
	comp=Z,57nm,19.9s,baz=218,slow=38						
EFI	East Falkland	18.98	149	P	P	00 57 25.0	-2.2
EFI				IAmb	IAmb	00 57 29.7	
	comp=Z,9.9nm,0.9s						
LPAZ	La Paz	20.46	15	P	Pn	00 57 46.5	0.0
	comp=Z,1.3nm,0.6s,baz=180,slow=9.7,SNR=7.1						
LPAZ	La Paz	20.46	15	P	P	00 57 41.2	-3.2
LPAZ	La Paz	20.46	15		P	00 57 42.0	-2.4
LPAZ				IAmb	IAmb	00 57 55.3	
	comp=Z,3.4nm,0.9s						
SIV	San Ignacio	23.05	32	P	P	00 58 12.4	+1.0
	comp=Z,3.7nm,0.9s,baz=221,slow=13,SNR=15						
SIV				LR	LR	01 08 51.3	
	comp=Z,70nm,18.8s,baz=116,slow=41						
PMSA	Palmer Station	29.13	172	LR	LR	01 11 24.6	
	comp=Z,34nm,20.4s,baz=300,slow=38						
SNAA	Sanae	50.00	157	P	P	01 01 57.8	-2.0
QSPA	South Pole Qui	53.99	180	P	P	01 02 26.6	-3.2
QSPA				IAmb	IAmb	01 02 36.9	
	comp=Z,3.3nm,1.4s						
TXAR	Lajitas Array	71.11	332	P	P	01 04 26.8	+2.4
	comp=Z,0.3nm,0.6s,baz=149,slow=8.8,SNR=4.1						
TXAR	Lajitas Array	71.11	332	P	P	01 04 23.2	-1.2
NVAR	Mina Array Bea	85.03	326	P	P	01 05 44.1	+2.6
	comp=Z,0.2nm,0.3s,baz=133,slow=6.3,SNR=2.9						
PDAR	Pinedale Array	85.22	334	P	P	01 05 45.5	+3.1
	comp=Z,0.2nm,0.7s,baz=111,slow=4.9,SNR=2.6						
TORD	Torodi Ar. Bea	86.15	71	P	P	01 05 47.9	+0.4
	comp=Z,0.5nm,0.9s,baz=219,slow=1.8,SNR=2.1						
ULM	Lac du Bonnet	88.35	346	P	P	01 05 58.5	+1.3
	comp=Z,0.7nm,0.4s,baz=185,slow=5.9,SNR=4.0						
ZALV	Zalesovo Beam	156.80	34	PKP	PKPdf	01 13 02.1	+1.5
	comp=Z,0.3nm,0.3s,baz=321,slow=2.0,SNR=2.5						
MKAR	Makanchi Array	159.16	52	PKP	PKPdf	01 13 05.2	+1.4
	comp=Z,0.3nm,0.8s,baz=259,slow=1.5,SNR=2.6						

IDC **15** *00:58:19.4±0.7, 41.°71N×48.°91E, h0km, mb3.9/12, mb1 3.9/21, mb1mx3.8/58, mbtmp3.9/21, ML3.2/9, MS3.0/8, Ms1 3.0/8, ms1mx2.7/56, Error ellipse: s-maj=12.8km s-min=7.0km az=163.0*

MOS **15** *00:58:21.6±1.3, 41.°74N×49.°18E, h22km, mb4.2/10, Error ellipse: s-maj=5.8km s-min=3.7km az=28.8*

AZER **15** *00:58:23.0, 41.°66N×48.°88E, h13km, ML4.1*

NEIC **15** *00:58:24.7±1.6, 41.°85N±0.°07×49.°11E±0.°07, h40km±7km, mb4.0/31, Error ellipse: s-maj=10.7km s-min=7.6km az=157.0*

DRS **15** *00:58:24.5±0.0, 41.°79N×48.°95E, h17km*

NNC **15** *00:58:28.0±1.8, 42.°06N×49.°91E, h0km, mb4.3, Error ellipse: s-maj=21.3km s-min=9.6km az=74.0*

ISC 15 00:58:22.4±0.7**, 41.°78N**±0.°02×**49.°11E**±0.°02**, h16**km±4km**, n255,** σ1**§92**/332**, mb4.1**/20**, 20C-19D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QUBA	Quba, Azerbaij	0.62	228	P	Pg	00 58 34.2	-0.5
	SNR=2269						
QUBA				S	Sg	00 58 42.2	-0.8
DRN	Derbent	0.63	294	ePg	Pg	00 58 34.2	-0.7
	5µm,0.6s						
DRN				eSg	Sb	00 58 42.8	-1.0
	30µm,0.7s						
DRN	Derbent	0.63	294	⇑iPG	Pb	00 58 34.7	-0.4
DRN				i		00 58 43.4	
DRN				pmax	pmax		
	comp=Z,5µm,0.6s						
QSAR	Qusar	0.68	248	P	Pg	00 58 34.8	-1.0
	SNR=3102						
QSAR				S	Sg	00 58 43.2	-1.7
SIZA	Siyzn	0.72	193	P	Pg	00 58 36.4	0.0
	SNR=446						
SIZA				S	Sg	00 58 46.1	+0.2
KSMR	Kasumkent	0.75	257	i Pg	Pg	00 58 36.0	-1.1
	comp=Z,2µm,0.2s						
KSMR				eSg	Sg	00 58 45.0	-2.1
KSMR	Kasumkent	0.75	257	i PG	Pg	00 58 36.0	-1.1
KSMR				eS	Sg	00 58 45.0	-2.1
KSMR				pmax	pmax		
	comp=Z,2µm,0.2s						
ATGJ	Altiaghaj	0.92	188	P	Pb	00 58 40.4	+0.3
	SNR=73						
ATGJ				S	Sb	00 58 53.0	+0.7
XNQ	Khinaliq	0.94	231	P	Pg	00 58 39.3	-1.5
	SNR=731						
XNQ				S	Sg	00 58 50.9	-2.2
PQL	Pirkuli	1.06	202	P	Pg	00 58 42.6	-0.3
	SNR=101						
PQL				S	Sb	00 58 56.9	+0.8
AKT	Akhty	1.07	254	ePg	Pg	00 58 41.1	-2.1
	comp=Z,2µm,0.3s						
AKT				eSg	Sg	00 58 53.7	-3.5
	comp=Z,10µm,0.7s						
AKT	Akhty	1.07	254	⇓iPG	Pg	00 58 41.0	-2.1
AKT				pmax	pmax		
	comp=Z,2µm,0.3s						
URKR	Urkarakh	1.17	290	ePg	Pb	00 58 42.9	-1.5
URKR				eSg	Sg	00 58 57.3	-2.9
URKR	Urkarakh	1.17	290	⇑ePG	Pb	00 58 42.8	-1.5
URKR				pmax	pmax		
	comp=Z,741nm,0.3s						
IML	Ismayilli	1.20	216	P	Pb	00 58 44.0	-0.9
	SNR=90						
IML				S	Sb	00 58 59.8	-0.5
GBS	Qobustan	1.25	186	P	Pg	00 58 47.2	+0.7
	SNR=53						
GBS				S	Sb	00 59 01.7	+0.2
QBL	Gabala	1.26	229	P	Pn	00 58 44.4	-1.1
	SNR=161						
QBL				S	Sb	00 58 59.4	-2.6
NDR	Nardaran	1.37	151	Pn	Pg	00 58 49.2	+0.5
	SNR=30						
NDR				Sn	Sg	00 59 10.2	+3.7
GOBA	Gobu	1.45	161	Pn	Pg	00 58 51.9	+1.5
	SNR=26						
GOBA				Sn	Sg	00 59 10.2	+0.9
KMKR	Kumukh	1.54	284	ePg	Pn	00 58 49.0	-0.5
	comp=Z,221nm,0.3s						
KMKR				eSg	Sb	00 59 10.0	-0.1
	comp=Z,3µm,0.0s						
KMKR	Kumukh	1.54	284	ePG	Pn	00 58 49.0	-0.5
KMKR				pmax	pmax		
	comp=Z,221nm,0.3s						
SEKA	Sheki	1.54	249	PG	Pn	00 58 48.8	-0.6
SEKA	Sheki	1.54	249	P	Pn	00 58 48.7	-0.6
	SNR=146						
SEKA				S	Sn	00 59 07.6	-1.5
KDMR	Kurdemir	1.56	207	Pn	Pn	00 58 50.3	+0.7
	SNR=11						
KDMR				Sn	Sb	00 59 11.5	+1.0
GALA	Gala	1.58	149	Pn	Pg	00 58 52.7	0.0
	SNR=6.6						
GALA				Sn	Sg	00 59 13.9	+0.7
MAK	Makhachkala	1.68	316	⇓iPN	Pb	00 58 52.7	-0.2
MAK				e		00 59 17.8	
MAK				pmax	pmax		
	comp=Z,1µm,0.4s						
MAK				smax	smax		
	comp=E,4µm,0.5s						
MAK				smax	smax		
	comp=E,5µm,0.6s						
GNBR	Gunib	1.71	292	ePg	Pn	00 58 51.8	+0.1
	comp=E,434nm,0.7s						
GNBR				eSg	Sn	00 59 12.1	-1.1
	comp=E,4µm,0.6s						
GNBR	Gunib	1.71	292	⇓ePN	Pn	00 58 52.5	+0.8
GNBR				pmax	pmax		
	comp=Z,782nm,0.6s						
ARKR	Arakani	1.77	298	ePg	Pn	00 58 53.0	+0.4
	comp=Z,640nm,0.0s						
ARKR				eSg	Sg	00 59 19.0	-0.5
	comp=Z,2µm,0.0s						
ARKR	Arakani	1.77	298	ePN	Pn	00 58 53.0	+0.4
ARKR				eS	Sg	00 59 19.0	-0.5
BUJR	Buynaksk	1.81	306	ePg	Pn	00 58 54.2	+1.1
BUJR				eSg	Sn	00 59 16.5	+0.7
BUJR	Buynaksk	1.81	306	⇓ePN	Pg	00 58 56.6	-0.7
BUJR				e		00 59 21.2	
BUJR				pmax	pmax		
	comp=Z,751nm,0.6s						
BUJR				smax	smax		
	comp=N,5µm,0.7s						
ALIB	Äli-Bayra	1.82	182	Pn	Pb	00 58 56.1	+0.8
	SNR=15						
ALIB				Sn	Sn	00 59 16.8	+1.0
MNGR	Mingechevir, A	1.82	237	PN	Pn	00 58 54.1	+0.9
MNGR	Mingechevir, A	1.82	237	Pn	Pn	00 58 53.6	+0.5
	SNR=16						
MNGR				Sn	Sn	00 59 15.5	-0.4
ZRD	Zardab	1.84	216	Pn	Pn	00 58 54.1	+0.7
	SNR=48						
ZRD				Sn	Sn	00 59 16.6	+0.3
ZKTA	Zakatala	1.86	267	Pn	Pn	00 58 54.3	+0.5
	SNR=162						
ZKTA				Sn	Sn	00 59 15.6	-1.4
KRNR	Karanay	1.94	304	ePg	Pn	00 58 55.6	+0.6
KRNR				eSg	Sn	00 59 18.4	-0.7
KRNR	Karanay	1.94	304	ePN	Pn	00 58 55.5	+0.6
XNZR	Khunzakh	1.94	294	ePg	Pn	00 58 55.6	+0.6
XNZR				eSg	Sn	00 59 18.4	-0.8
XNZR	Khunzakh	1.94	294	ePN	Pn	00 58 55.6	+0.6
UNCR	Uncukul	1.96	299	i Pg	Pb	00 58 57.0	-0.7
	comp=N,671nm,0.4s						
UNCR				i Sg	Sg	00 59 26.0	+0.6
UNCR	Uncukul	1.96	299	i PN	Pb	00 58 57.0	-0.7
UNCR				i S	Sg	00 59 26.0	+0.6
UNCR				pmax	pmax		
	comp=Z,671nm,0.4s						
SAAT	Saatly	1.98	195	Pn	Pn	00 58 55.0	-0.3
SAAT				Sn	Sn	00 59 19.7	-0.2
BRDA	Brd	2.10	225	Pn	Pn	00 58 57.9	+0.9
	SNR=30						
BRDA				Sn	Sn	00 59 22.4	-0.4
LGD	Lagodekhi	2.14	273	P	Pn	00 58 59.0	+1.5
DLMR	Dylym	2.24	306	ePg	Pb	00 59 02.0	-0.6
DLMR				eSg	Sg	00 59 33.0	-1.6
DLMR	Dylym	2.24	306	ePN	Pb	00 59 02.0	-0.6
DLMR				eS	Sg	00 59 33.0	-1.6
AGDM	Agdam	2.25	223	Pn	Pn	00 58 59.0	-0.1
	SNR=43						
AGDM				Sn	Sn	00 59 26.6	+0.1
DDFL	Dedoflistskaro	2.26	263	P	Pb	00 59 01.3	-1.7
BTLR	Botlikh	2.32	293	ePg	Pb	00 59 02.8	-1.1
	comp=Z,158nm,0.7s						
BTLR				eSg	Sb	00 59 33.3	+0.9
	comp=Z,1µm,0.8s						
BTLR	Botlikh	2.32	293	⇓ePN	Pb	00 59 03.7	-0.2
BTLR				e		00 59 36.1	
BTLR				pmax	pmax		
	comp=Z,385nm,0.7s						
BTLR				smax	smax		
	comp=E,1µm,0.8s						
BLQ	Beylaqan	2.37	210	Pn	Pn	00 59 00.7	+0.1
	SNR=20						
BLQ				Sn	Sn	00 59 28.5	-0.9
GANJ	Ganja	2.38	243	Pn	Pn	00 59 00.1	-0.8
	SNR=68						
GANJ				Sn	Sn	00 59 28.7	-1.1
GLBA	Clilabad	2.59	192	Pn	Pn	00 59 04.0	+0.3
	SNR=22						
GLBA				Sn	Sn	00 59 37.6	+2.7
QRD	Qoradiz	2.68	211	Pn	Pn	00 59 04.6	-0.4
	SNR=6.1						
QRD				Sn	Sn	00 59 36.1	-1.1
GDB	GEDABAY	2.74	248	Pn	Pn	00 59 05.4	-0.5
	SNR=96						
GDB				Sn	Sn	00 59 37.0	-1.8
DGRG	David-gareji	2.82	265	P	Pn	00 59 07.8	+0.9
DGRG				S	Sg	00 59 51.2	-1.7
GROC	Groznyy	2.83	301	ePN	Pn	00 59 07.6	+0.5
GROC				e		00 59 14.1	
GROC				e		00 59 43.9	
GROC				e		00 59 56.3	
GROC				pmax	pmax		
	comp=Z,51nm,0.6s						
GROC				pmax	pmax		
	comp=Z,191nm,0.6s						
GROC				smax	smax		
	comp=N,213nm,0.9s						
GROC				smax	smax		
	comp=E,320nm,0.7s						
GROC				smax	smax		
	comp=E,610nm,0.8s						
GROC				smax	smax		
	comp=N,692nm,0.6s						
GROC				smax	smax		
	comp=E,215nm,0.5s						
GROC				MLR	MLR		
	comp=Z,2µm,2.0s						
QZX	Qazax, Azerbai	2.90	257	Pn	Pn	00 59 07.9	-0.1
	SNR=16						
QZX				Sn	Sn	00 59 40.6	-1.9
YRD	Yardimli	2.93	193	Pn	Pn	00 59 08.3	-0.3
	SNR=23						
YRD				Sn	Sn	00 59 42.4	-1.2
LKRN	Lenkeran, Azer	3.07	185	Pn	Pn	00 59 10.3	0.0
	SNR=9.9						
LKRN				Sn	Sn	00 59 46.5	-0.3
LRK	Lerik	3.18	191	Pn	Pn	00 59 11.5	-0.5
	SNR=20						
LRK				Sn	Sn	00 59 51.8	+2.1
ASTR	Astara	3.22	184	Pn	Pn	00 59 12.1	-0.3
	SNR=5.0						
ASTR				Sn	Sn	00 59 49.2	-1.2
BTNK	Botanikuri	3.22	270	P	Pn	00 59 15.8	+3.3
BTNK				S	Sb	00 59 59.7	+1.3
TBLG	Delisi	3.27	271	P	Pb	00 59 16.9	-3.2
TBLG				S	Sb	01 00 00.8	+1.2
TBLG	Delisi	3.27	271	eP	Pn	00 59 12.6	-0.5
TBLG	Delisi	3.27	271	PN	Pn	00 59 14.1	+1.0
TBLG	Delisi	3.27	271		Pn	00 59 14.1	+1.0
KMGR	Komgaron	3.39	294	ePN	Pn	00 59 17.1	+2.3
KMGR				S	Sb	01 00 00.0	-3.2
GUDG	Gudauri	3.51	283	P	Pb	00 59 23.3	-1.1
VLKR	Vladikavkaz	3.52	293	ePN	Pn	00 59 18.5	+2.0
KZRT	Kazreti	3.55	265	P	Pn	00 59 16.1	-0.9
KZRT	Kazreti	3.55	265	PN	Pn	00 59 16.1	-0.9
SBZ	Shahbuz	3.60	230	Pn	Pn	00 59 18.9	+1.2
	SNR=8.7						
GNI	Garni	3.68	245	Pn	Pn	00 59 19.2	+0.3
	comp=Z,2.3nm,0.3s,baz=9.7,slow=12,SNR=12						
GNI				Pg	Pb	00 59 26.5	-0.7
	comp=Z,5.0nm,0.3s,baz=0.0,slow=3.0,SNR=29						
GNI				Lg	Lg	01 00 11.6	
	comp=Z,6.1nm,0.3s,baz=310,slow=18,SNR=2.1						
GNI				LR	LR	01 00 45.9	
	comp=Z,56nm,20.0s,baz=350,slow=42						
GNI	Garni	3.68	245	eP	Pn	00 59 18.9	0.0
GNI	Garni	3.68	245		Pn	00 59 20.1	+1.2
ORD	Ordubad	3.71	221	Pn	Pn	00 59 19.3	+0.1
	SNR=20						
ORD				Sn	Sn	00 59 58.9	-3.7
LACR	Lac	3.72	288	cePN	Pn	00 59 21.0	+1.6
BTKR	Batakoyurt	3.73	297	ePN	Pn	00 59 21.6	+2.2
BTKR				eS	Sb	01 00 10.9	-2.0
TRLG	Trialeti	3.76	268	P	Pn	00 59 20.9	+1.0
TRLG				S	Sb	01 00 14.0	+0.2
TRKR	Terskaya	3.76	303	ePN	Pn	00 59 22.2	+2.4
TRKR				eS	Sn	01 00 06.7	+2.9
NAX	Nakhchivan	3.79	228	PN	Pb	00 59 25.6	-3.4
NAX	Nakhchivan	3.79	228	Pg	Pb	00 59 27.5	-1.4
	SNR=22						
NAX				Sg	Sb	01 00 15.1	+0.5
HYR	Heyderabad	3.83	239	Pg	Pb	00 59 28.1	-1.5
	SNR=6.3						
ARNR	Ardon	3.83	293	i PN	Pn	00 59 22.8	+2.0
ARNR				eS	Sn	01 00 07.1	+1.5
ZEI	Tsey	3.99	286	ePN	Pn	00 59 22.4	-0.8
ZEI				i S	Sn	01 00 09.7	-0.1
STDR	Stavd-Durt	4.05	295	ePN	Pn	00 59 25.5	+1.7
STDR				S	Sn	01 00 15.8	+4.9
PRTR	Priterechnaya	4.06	301	ePN	Pn	00 59 27.1	+3.1
PRTR				eS	Sn	01 00 12.7	+1.5
TASB	TASBURUN-IGDIR	4.10	246	eP	Pn	00 59 25.3	+0.7
BGD	Bogdanovka	4.17	265	P	Pn	00 59 30.3	+4.7
BKRG	Bakuriani	4.18	272	P	Pn	00 59 28.2	+2.5
BKRG				S	Sb	01 00 29.6	+3.6
LSNR	Lesken	4.18	293	ePN	Pn	00 59 30.0	+4.4
LSNR				eS	Sn	01 00 14.1	-0.1
AKH	Akhalkalaki	4.22	267	eP	Pn	00 59 25.8	-0.6
AKH	Akhalkalaki	4.22	267	PN	Pn	00 59 26.9	+0.5
AKH	Akhalkalaki	4.22	267		Pn	00 59 26.9	+0.5
DIGR	Digorskoe uzhe	4.25	287	ePN	Pn	00 59 31.4	+4.7
DIGR				S	Sn	01 00 16.7	+0.6
ONI	Oni	4.28	283	P	Pb	00 59 33.5	-3.8
ONI	Oni	4.28	283	eP	Pn	00 59 26.5	-0.5
NCK	Nalchik	4.41	295	ePN	Pn	00 59 33.3	+4.5
NCK				i S	Sn	01 00 21.4	+1.5
TKB	Tkibuli	4.59	279	P	Pb	00 59 40.1	-2.5
TKB				S	Sb	01 00 41.8	+4.2
KBTC	Kuba-Taba	4.66	298	ePN	Pb	00 59 38.5	-5.4
KBTC				eS	Sn	01 00 31.8	+5.7
CLDR	Caldiran	4.75	238	eP	Pn	00 59 35.3	+1.6
NEY	Neytrino	4.94	289	ePN	Pb	00 59 43.1	-5.6
NEY				eS	Sn	01 00 37.0	+3.8
KBZ	Khabaz	4.97	295	Pn	Pn	00 59 35.8	-0.6
	comp=Z,0.5nm,0.3s,baz=140,slow=4.7,SNR=16						
KBZ				Sn	Sn	01 00 30.4	-3.1
	comp=Z,2.3nm,0.3s,baz=84,slow=3.1,SNR=4.1						
KBZ				LR	LR	01 01 45.9	
	comp=Z,190nm,20.6s,baz=159,slow=42						
KBZ	Khabaz	4.97	295	ePN	Pn	00 59 37.3	+0.9
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BEYR	Belyy Ugol+	5.13	298	ePN	Pn	00 59 39.0	+0.3
SHA1	Shidzhatmaz	5.14	295	cePN	Pn	00 59 39.6	+0.7
AGRB	Hanur-Agry	5.14	247	eP	Pn	00 59 39.9	+0.9
KVAR	Kislovodsk Arr	5.19	297	Pn	Pn	00 59 40.1	+0.5
	baz=90,slow=20,SNR=12						
KVAR				Sn	Sn	01 00 37.5	-1.7
	baz=141,slow=6.5,SNR=3.5						
KVAR				LR	LR	01 01 54.9	
	comp=Z,189nm,20.5s,baz=148,slow=42						
KIV	Kislovodsk	5.20	297	eP	Pn	00 59 39.5	-0.1
KIV	Kislovodsk	5.20	297	ePN	Pn	00 59 40.9	+1.3
KIV				eS	Sn	01 00 42.3	+3.0
KIV				pmax	pmax		
	comp=Z,68nm,0.9s						
KIV				MLR	MLR		
	comp=Z,117nm,9.0s						
KIV	Kislovodsk	5.20	297		Pn	00 59 39.9	+0.2
SENK	Senkaya-Erzuru	5.24	259	eP	Pn	00 59 40.4	0.0
VANB	Van	5.41	236	eP	Pn	00 59 45.5	+2.9
GOF	Gofitskoye	5.50	309	⇑eP	Pb	00 59 53.2	-4.9
GOF				pmax	pmax		
	comp=Z,21nm,0.6s						
BATM	Batumi	5.55	271	eP	Pn	00 59 44.5	+0.1
BCA	Borcka	5.62	269	eP	Pn	00 59 45.9	+0.5
KOPR	Koprukoy-ERZUR	5.78	254	eP	Pn	00 59 48.7	+1.0
ARXR	Arkhyz	6.04	290	eP	Pn	00 59 59.3	+8.0
GUZR	Guzeripl'	6.96	292	eP	Pn	01 00 11.8	+7.9
GUZR				eS	Sn	01 01 31.3	+8.5
SOC	Sochi	7.15	288	eP	Pn	01 00 04.8	-1.6
SOC				e		01 01 27.6	
SOC				MLR	MLR		
	comp=Z,139nm,13.0s						
GEYT	Alibeck	7.92	116	Pn	Pn	01 00 17.4	+0.3
	comp=Z,0.8nm,0.3s,baz=302,slow=16,SNR=10						
GEYT				Sn	Sn	01 01 43.1	-3.3
	comp=Z,0.9nm,0.3s,baz=354,slow=29,SNR=3.9						
GEYT				Lg	Lg	01 02 39.4	
	comp=Z,1.0nm,0.3s,baz=291,slow=32,SNR=2.6						
GYA0B	ALIBECK ARRAY	7.92	116	⇑P	Pn	01 00 20.2	+3.2
GYA0B				⇓S	Sn	01 01 46.7	+0.3
GYA0B	ALIBECK ARRAY	7.92	116		Pn	01 00 17.9	+0.9
AKTO	Aktyubinsk	10.63	32	Pn	Pn	01 00 53.3	-0.8
	comp=Z,0.6nm,0.3s,baz=202,slow=12,SNR=17						
AKTO				Sn	Sn	01 02 46.0	-6.9
	comp=Z,0.8nm,0.3s,baz=0.0,slow=20,SNR=4.6						
AKTO				LR	LR	01 06 26.0	
	comp=Z,63nm,18.7s,baz=252,slow=45						
AKTO	Aktyubinsk	10.63	32	⇓P	Pn	01 00 54.1	0.0
	comp=Z,4.7nm,0.6s						
AKTO				⇓S	Sn	01 02 50.8	-2.1
	comp=Z,11nm,0.7s						
AB31	Akbulak array	10.66	42	P	Pn	01 00 53.7	-0.7
	comp=Z,5.0nm,0.8s,baz=219,slow=11,SNR=40						
AB31				⇑S	Sn	01 02 48.0	-5.4
	comp=Z,7.9nm,0.8s,baz=223,slow=23,SNR=4.4						
AB31	Akbulak array	10.66	42	eP	Pn	01 00 53.7	-0.7
AB31				S	Sn	01 02 53.6	+0.2
ABKAR	Akbulak array	10.66	42		Pn	01 00 54.0	-0.5
ABKAR	Akbulak array	10.66	42		Pn	01 00 54.2	-0.2
VRH	Novokhopyorsk	10.71	334	eP	Pn	01 00 57.6	+2.5
VRH				pmax	pmax		
	comp=Z,9.0nm,0.5s						
VSR	Storozhevoye	11.65	327	eP	Pn	01 01 10.7	+2.7
VSR				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BRTR	Keskin Array B	11.91	265	Pn	Pn	01 01 13.2	+1.5
	comp=Z,0.0nm,0.3s,baz=79,slow=7.8,SNR=2.4						
BRTR				LR	LR	01 06 01.7	
	comp=Z,41nm,18.6s,baz=39,slow=39						
LPSR	Galich'ya Gora	12.84	331	eP	Pn	01 01 25.0	+0.8
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TIRR	Tirgusor	15.35	287	⇑P	P	01 02 07.5	+4.6
TOPG	Topolog	15.39	289	⇑P	P	01 02 08.0	+4.5
CFR	Carcaliu	15.59	290	⇓P	P	01 02 10.9	+5.3
CHGR	Chuyangaron	15.63	95		Pn	01 02 01.7	-0.4
ELL	Elmali	15.69	258	P	Pn	01 02 02.6	-0.3
ELL				pmax	pmax		
	comp=Z,53nm,1.2s						
ELL	Elmali	15.69	258		Pn	01 02 02.6	-0.3
OBN	Obninsk	15.69	333	eP	Pn	01 02 04.2	+1.5
OBN				eS	Sn	01 05 01.5	+5.4
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,80nm,17.0s						
KK31	Karatay Array	15.86	78	P	Pn	01 02 03.8	-1.2
	comp=Z,7.0nm,0.7s,baz=270,slow=17,SNR=67						
KK31				⇓S	Sn	01 04 52.8	-7.6
	comp=Z,6.4nm,0.7s,baz=281,slow=24,SNR=4.5						
KK31	Karatay Array	15.86	78	P	Pn	01 02 04.7	-0.3
KK31				pmax	pmax		
	comp=Z,12nm,0.9s						
KK31	Karatay Array	15.86	78		Pn	01 02 04.7	-0.3
KK31				IAmb	IAmb	01 02 06.3	
	comp=Z,12nm,0.8s						
KKAR	Karatay Array	15.86	78	P	Pn	01 02 04.3	-0.7
KKAR	Karatay Array	15.86	78		Pn	01 02 03.8	-1.2
KKAR				IAmb	IAmb	01 02 06.3	
	comp=Z,12nm,0.8s						
KKAR	Karatay Array	15.86	78		Pn	01 02 04.3	-0.7
ARU	Arti	15.89	19	Pn	Pn	01 02 02.6	-2.7
	comp=Z,0.0nm,0.3s,baz=132,slow=2.5,SNR=9.5						
ARU				Sn	Sn	01 04 46.7	-14
	comp=Z,0.0nm,0.3s,baz=210,slow=20,SNR=4.1						
ARU	Arti	15.89	19	d iP	Pn	01 02 01.4	-3.9
ARU				S	Sn	01 04 57.5	-3.6
ARU				pmax	pmax		
	comp=Z,13nm,1.9s						
ARU	Arti	15.89	19		Pn	01 02 02.7	-2.7
ARU				IAmb	IAmb	01 02 11.9	
	comp=Z,8.9nm,1.1s						
AKASG	Malin Array Be	16.36	310	Pn	Pn	01 02 07.2	-4.0
	comp=Z,0.6nm,0.3s,baz=120,slow=11,SNR=8.5						
AKASG	Malin Array Be	16.36	310	eP	Pn	01 02 11.5	+0.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	16.36	310		Pn	01 02 10.4	-0.8
AKBB	Malin Array Si	16.36	310	P	Pn	01 02 10.2	-1.0
AKBB				pmax	pmax		
	comp=Z,11nm,0.8s						
AKBB	Malin Array Si	16.36	310		Pn	01 02 10.2	-1.0
AKBB				IAmb	IAmb	01 02 13.2	
	comp=Z,11nm,0.8s						
GAR	Garm	16.39	93		Pn	01 02 11.9	-0.1
GAR				IAmb	IAmb	01 02 23.6	
	comp=Z,10nm,0.7s						
BTK	Batken	16.50	89	P	Pn	01 02 12.9	-0.4
BTK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BTK	Batken	16.50	89	Pn	Pn	01 02 12.9	-0.4
BTK				IAmb	IAmb	01 02 31.3	
	comp=Z,6.7nm,0.8s						
BISRR	Bisoca	16.63	291	⇑P	P	01 02 19.9	+2.7
VRI	Vrincioaia	16.64	292	⇑P	P	01 02 20.2	+2.8
PLOR	Plostina	16.70	292	⇓P	P	01 02 21.8	+3.8
TESR	Tescani	16.78	294	⇓P	P	01 02 22.4	+3.5
SVE	Sverdlovsk	16.80	22	eP	P	01 02 19.5	+0.5
SVE				eS	Sn	01 05 14.2	-8.8
SVE				pmax	pmax		
	comp=Z,13nm,0.8s						
KIRV	Kirov	16.83	1	Pn	Pn	01 02 15.6	-1.6
	comp=Z,0.6nm,0.3s,baz=141,slow=15,SNR=2.0						
KIRV				Sn	Sn	01 05 10.2	-14
	baz=42,slow=13,SNR=3.2						
KIRV				LR	LR	01 10 42.1	
	comp=Z,117nm,18.6s,baz=93,slow=44						
MLR	Muntele Rosu	17.16	290	LR	LR	01 10 00.3	
	comp=Z,82nm,18.4s,baz=88,slow=41						
MLR	Muntele Rosu	17.16	290	⇓P	P	01 02 25.8	+2.6
MLR	Muntele Rosu	17.16	290	P	Pn	01 02 21.3	-0.3
MLR				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MLR	Muntele Rosu	17.16	290		Pn	01 02 21.3	-0.3
KBL	Kabul	17.24	108	P	Pn	01 02 23.1	+0.3
KBL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KBL	Kabul	17.24	108		Pn	01 02 23.1	+0.3
ALN	Alexandroupoli	17.34	275	P	Pn	01 02 23.0	-0.7
ALN				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ALN	Alexandroupoli	17.34	275	Pn	Pn	01 02 23.0	-0.7
VOIR		17.78	290	⇑P	P	01 02 31.8	+1.8
UOSS	Minazif	17.79	158		Pn	01 02 29.9	+0.5
ARSB	Arslanbob	17.87	83	P	Pn	01 02 30.5	0.0
ARSB				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ARSB	Arslanbob	17.87	83	P	Pn	01 02 30.5	0.0
ARSB				IAmb	IAmb	01 02 35.5	
	comp=Z,6.7nm,1.1s						
BURAR	Bucovina Array	17.93	297	⇑P	P	01 02 33.4	+1.7
BURAR	Bucovina Array	17.93	297	P	Pn	01 02 29.0	-2.1
BUR08	Bucovina Ar. S	17.94	297	P	Pn	01 02 30.4	-0.9
ARR	Arges	18.07	290	⇑P	P	01 02 34.1	+0.9
BRVK	Borovoye	18.16	44	⇓P	Pn	01 02 32.8	-1.1
	comp=Z,5.8nm,0.9s						
BRVK	Borovoye	18.16	44	i P	Pn	01 02 32.9	-1.0
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BRVK	Borovoye	18.16	44	P	Pn	01 02 32.7	-1.1
BVAR	Borovoye Array	18.20	45	P	Pn	01 02 33.4	-1.0
	comp=Z,0.5nm,0.3s,baz=231,slow=13,SNR=22						
BVAR				S	Sn	01 05 50.9	-6.2
	comp=Z,0.1nm,0.3s,baz=232,slow=23,SNR=3.6						
RAYN	Ar Rayn	18.45	190	P	Pn	01 02 38.4	+0.8

RAYN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
RAYN	Ar Rayn	18.45	190	P	Pn	01 02 38.4	+0.8
AAK	Ala-Archa	18.81	79	P	P	01 02 40.6	-0.9
	comp=Z,0.2nm,0.3s,baz=247,slow=11,SNR=8.2						
AAK	Ala-Archa	18.81	79	*i* P	P	01 02 42.3	+0.8
AAK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
AAK	Ala-Archa	18.81	79	P	P	01 02 41.3	-0.2
AAK				IAmb	IAmb	01 02 44.4	
	comp=Z,10.0nm,1.2s						
VTS	Vitosha	19.17	281	⇑P	Pn	01 02 46.9	+0.6
VTS	Vitosha	19.17	281	P	P	01 02 45.5	+0.1
VTS				pmax	pmax		
	comp=Z,1.0nm,0.8s						
VTS	Vitosha	19.17	281	P	P	01 02 45.5	+0.1
SOH	Sokhos	19.35	276	P	P	01 02 48.2	+0.9
SOH				pmax	pmax		
	comp=Z,4.0nm,1.5s						
GZR	Gura Zlata	19.38	290	⇑P	P	01 02 48.4	+0.8
DRGR		19.51	294	⇓P	P	01 02 48.9	0.0
TRPA	Tarpa	19.79	298	⇓P	P	01 02 52.1	+0.2
KLMR	Klimovskoe	19.98	346	*e*P	P	01 02 55.3	+1.4
KLMR				pmax	pmax		
	comp=Z,12nm,1.0s						
KLMR	Klimovskoe	19.98	346	*e*Pn	P	01 02 55.4	+1.5
KLMR				AMP		01 03 05.5	
	comp=Z,12nm,1.0s						
IDI	Anoyia	19.99	259	P	P	01 02 51.3	-3.0
	comp=Z,0.2nm,0.3s,baz=52,slow=22,SNR=2.8						
PRGR	Permogore	20.00	355	*e*P	P	01 02 52.0	-2.1
PRGR				*e*		01 06 25.6	
PRGR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
NRN	Naryn	20.09	82	P	P	01 02 53.6	-2.0
NRN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
NRN	Naryn	20.09	82	P	P	01 02 53.6	-2.0
NRN				IAmb	IAmb	01 03 07.0	
	comp=Z,6.3nm,1.3s						
KOLS	Kolonicke sedl	20.10	300	*e*P	P	01 02 56.1	+0.8
KOLS	Kolonicke sedl	20.10	300	*e*P	P	01 02 56.1	+0.8
SIRR	Siria	20.19	292	⇑P	P	01 02 56.7	+0.3
BZS	Buzias	20.20	290	⇑P	P	01 02 55.0	-1.4
KSH	Kashi	20.48	87	P	P	01 02 59.3	-0.4
KSH				S	S	01 06 41.4	-7.1
KSH				SS	SnSn	01 07 10.4	+3.4
KSH				PcP	PcP	01 07 13.8	+2.7
ITM	Ithomi	21.43	267	P	P	01 03 10.2	+0.4
ITM				IAmb	IAmb	01 03 20.3	
	comp=Z,4.1nm,0.8s						
PSZ	Piszkesteto	21.52	297	P	P	01 03 10.1	-0.7
PSZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PSZ	Piszkesteto	21.52	297	P	P	01 03 10.1	-0.7
PSZ				IAmb	IAmb	01 03 23.1	
	comp=Z,8.3nm,1.0s						
KURBB	Kurchatov Arra	22.08	56	P	P	01 03 17.9	+1.2
	comp=Z,7.2nm,0.7s,baz=261,slow=11,SNR=99						
KURBB	Kurchatov Arra	22.08	56	⇓P	P	01 03 17.8	+1.1
	comp=Z,11nm,0.9s						
KURBB	Kurchatov Arra	22.08	56	P	P	01 03 16.7	0.0
KURK	Kurchatov	22.16	56	⇑P	P	01 03 18.7	+1.2
	comp=Z,12nm,0.8s						
KURK	Kurchatov	22.16	56	*i* P	P	01 03 17.8	+0.3
KURK				pmax	pmax		
	comp=Z,13nm,0.8s						
KURK	Kurchatov	22.16	56	P	P	01 03 17.6	+0.1
VYHS	Vyhne	22.29	298	*e*P	P	01 03 18.1	-0.8
VYHS	Vyhne	22.29	298	*e*P	P	01 03 18.1	-0.8
SCTE	Santa Cesarea	23.16	276	P	P	01 03 25.3	-2.8
TMCR	Tamitsa	23.33	348	*e*P	P	01 03 32.5	+2.9
TMCR				pmax	pmax		
	comp=Z,34nm,1.1s						
VRAC	Vranov	23.84	300	P	P	01 03 33.1	-1.7
	comp=Z,1.8nm,0.6s,baz=72,slow=20,SNR=2.9						
MAKZ	Makanchi	23.95	67	⇓P	P	01 03 36.5	+0.6
	comp=Z,4.3nm,0.8s						
MAKZ	Makanchi	23.95	67	P	P	01 03 35.0	-0.9
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MAKZ	Makanchi	23.95	67	P	P	01 03 35.0	-0.9
MAKZ				IAmb	IAmb	01 03 38.1	
	comp=Z,4.6nm,0.7s						
FIA1	FINESS Array S	24.10	333	P	P	01 03 36.7	-0.4
FINES	FINESS Array B	24.10	333	P	P	01 03 35.9	-1.2
	comp=Z,1.1nm,0.6s,baz=151,slow=8.3,SNR=8.9						
FINES	FINESS Array B	24.10	333	*e*P	P	01 03 36.7	-0.4
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	FINESS Array B	24.10	333	P	P	01 03 36.6	-0.4
MK31	Makanchi Array	24.17	67	⇑P	P	01 03 39.1	+1.1
	comp=Z,3.7nm,0.6s,baz=272,slow=7.3,SNR=68						
MK31	Makanchi Array	24.17	67	P	P	01 03 39.0	+1.1
MK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MK31	Makanchi Array	24.17	67	P	P	01 03 39.0	+1.1
MK31				IAmb	IAmb	01 03 40.3	
	comp=Z,4.4nm,0.8s						
MKAR	Makanchi Array	24.17	67	P	P	01 03 39.1	+1.2
	comp=Z,5.4nm,0.7s,baz=272,slow=7.4,SNR=86						
TIP	Timpagrande	24.66	275	P	P	01 03 40.6	-1.9
TIP				IAmb	IAmb	01 03 50.0	
	comp=Z,11nm,1.5s						
ZALV	Zalesovo Beam	26.58	50	P	P	01 03 59.5	-0.1
	comp=Z,1.5nm,0.6s,baz=271,slow=11,SNR=7.0						
ZALV	Zalesovo Beam	26.58	50	*e*P	P	01 04 00.8	+1.2
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WMQ	Urumqi	28.22	73	*e*P	P	01 04 14.9	+0.3
HFS	Hagfors	28.39	322	P	P	01 04 14.9	-0.9
	comp=Z,2.4nm,0.7s,baz=127,slow=9.6,SNR=4.6						
NOA	NORSAR Array B	29.88	323	P	P	01 04 27.9	-1.2
	comp=Z,0.5nm,0.6s,baz=117,slow=8.2,SNR=3.2						
NOA				LR	LR	01 18 05.6	
	comp=Z,24nm,18.3s,baz=10.0,slow=40						
ARCES	ARCESS Array B	30.41	344	P	P	01 04 34.0	+0.3
	comp=Z,2.9nm,0.9s,baz=141,slow=10,SNR=3.3						
ARCES	ARCESS Array B	30.41	344	P	P	01 04 34.0	+0.3
LZH	Lanzhou	42.35	79	*e*P	P	01 06 16.3	+0.3
LZH				pP	sP	01 06 30.1	+7.6
LZH				sP	pP	01 06 35.0	+14
LZH				PP	PcP	01 08 03.3	-6.0
HHC	Hu-ho-hao-te	45.99	69	*e*P	P	01 06 43.6	-1.4
CMAR	Chiang Mai Arr	48.18	103	P	P	01 07 02.7	+0.5
	comp=Z,1.0nm,0.4s,baz=312,slow=7.5,SNR=4.7						
CMAR	Chiang Mai Arr	48.18	103	*e*P	P	01 07 04.0	+1.8
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TORD	Torodi Ar. Bea	49.98	249	P	P	01 07 13.4	-2.7
	comp=Z,0.7nm,1.1s,baz=33,slow=6.4,SNR=2.6						
TORD	Torodi Ar. Bea	49.98	249	P	P	01 07 13.7	-2.3
SEY	Seymchan	59.23	31	P	P	01 08 24.1	+1.6
	comp=Z,1.3nm,0.6s,baz=289,slow=7.2,SNR=4.1						
BILL	Bilibino	60.89	23	*i* P	P	01 08 32.3	-1.6
BILL				*i*		01 08 40.5	
BILL				*i*		01 09 20.9	
BILL				*i*		01 10 51.4	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.3s						
IMAR	Indian Mountai	71.13	10	P	P	01 09 37.3	-2.4
KTH	Kantishna Hill	73.81	9	P	P	01 09 54.0	-1.8
YKA	Yellowknife Ar	75.26	352	P	P	01 10 03.1	-1.0
	comp=Z,0.1nm,0.4s,baz=11,slow=5.1,SNR=3.7						
E63A	Oxbow	76.11	321	P	P	01 10 08.3	-0.9
WRA	Warramunga Arr	99.59	108	*i* P	Pdif	01 12 04.9	-0.3

IDC 15 01:11:31.7±1.9**, 0°.52S**×**127°.04E, h0^{km}, mb3.2**/3**, mb1 3.5**/3**, mb1mx3.3**/37**, mbtmp3.3**/3**, Error ellipse: s-maj=167.9km s-min=25.0km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.59	160	P	P	01 16 12.3	-0.1
	0.2nm,0.3s,baz=339,slow=11,SNR=8.6						
ASAR	Alice Springs	23.95	164	P	P	01 16 48.0	+0.1
	0.4nm,0.5s,baz=342,slow=11,SNR=5.9						
MKAR	Makanchi Array	61.22	327	P	P	01 21 48.5	-0.1
	0.2nm,0.3s,baz=116,slow=7.8,SNR=12						

IDC 15 01:16:55.0±437.0**, 39°.57N**×**117°.13W, h0^{km}, Error ellipse: s-maj=166.5km s-min=106.0km az=176.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I57US	PINON FLAT INF	5.98	175	*i*		01 55 50.0	
	baz=356,slow=327,SNR=0.6						
I56US	NEWPORT INFRAS	8.69	0	*i*		02 13 50.0	
	baz=183,slow=327,SNR=1.5						
I10CA	LAC DU BONNET	18.28	48	*i*		03 02 30.0	
	baz=239,slow=337,SNR=1.4						

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*IDC **15** 01:19:57.7±2.4, 19°.07N×145°.75E, h138^{km}±23^{km}, mb3.7/17, mb1 3.8/19, mb1mx3.7/40, mbtmp4.0/19, MS3.5/2, Ms1 3.5/2, ms1mx2.7/36, Error ellipse: s-maj=19.0km s-min=12.6km az=86.0*

*NEIC **15** 01:19:58.5±1.5, 19°.07N±0°.10×145°.7E±0°.2, h147^{km}±6^{km}, mb4.2/6, Error ellipse: s-maj=23.7km s-min=13.9km az=101.0*

ISC 15 01:19:58.7±0.7**, 19°.04N**±0°.07×**145°.8E**±0°.2**, h150^{km}, n30, σ0^s.75**/22**, mb3.9**/18**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.48	189	P	Pn	01 21 18.7	+0.1
	8.0nm,0.3s,baz=336,slow=20,SNR=2.4						
GUMO				S	Sn	01 22 19.8	-1.1
	8.3nm,0.3s,baz=0.0,slow=20,SNR=1.9						
MJAR	Matsushiro Arr	18.66	341	P	P	01 24 04.4	-0.8
	0.1nm,0.3s,baz=149,slow=8.6,SNR=2.8						
MJAR	Matsushiro Arr	18.66	341	IAmb	IAmb	01 24 13.8	
	comp=Z,2.7nm,1.0s						
H11S3	WAKE ISLAND Hy	19.83	88	T	T	01 45 09.7	
	baz=275,slow=74,SNR=8.1						
H11S1	WAKE ISLAND Hy	19.84	88	T	T	01 45 08.1	
	baz=275,slow=74,SNR=9.0						
H11S2	WAKE ISLAND Hy	19.85	88	T	T	01 45 08.2	
	baz=275,slow=74,SNR=9.1						
H11N1	WAKE ISLAND Hy	19.95	85	T	T	01 45 35.4	
	baz=267,slow=74,SNR=7.5						
H11N2	WAKE ISLAND Hy	19.96	85	T	T	01 45 32.7	
	baz=267,slow=74,SNR=6.2						
H11N3	WAKE ISLAND Hy	19.97	85	T	T	01 45 28.0	
	baz=267,slow=74,SNR=5.3						
KSRS	Korea Array	24.08	323	P	P	01 25 00.2	0.0
	comp=Z,1.5nm,0.5s,baz=150,slow=9.0,SNR=7.9						
USRK	Ussuriysk Ar.	27.61	338	P	P	01 25 31.5	-0.5
	comp=Z,0.8nm,0.6s,baz=138,slow=9.3,SNR=4.0						
WRA	Warramunga Arr	40.32	197	P	P	01 27 21.8	+0.1
	comp=Z,2.3nm,0.7s,baz=13,slow=8.0,SNR=18						
SONM	Songino Array	42.91	321	P	P	01 27 42.8	+0.2
	comp=Z,0.6nm,0.4s,baz=130,slow=6.8,SNR=5.5						
SONM	Songino Array	42.91	321	IAmb	IAmb	01 27 44.5	
	comp=Z,0.8nm,0.6s						
ASAR	Alice Springs	43.99	196	P	P	01 27 52.0	+0.6
	comp=Z,0.6nm,0.4s,baz=24,slow=9.7,SNR=15						
ASAR				LR	LR	01 48 07.2	
	comp=Z,36nm,19.0s,baz=208,slow=38						
SEY	Seymchan	44.10	4	P	P	01 27 52.4	+0.7
	comp=Z,1.2nm,0.6s,baz=165,slow=12,SNR=5.1						
CMAR	Chiang Mai Arr	44.23	277	P	P	01 27 54.9	+1.5
	comp=Z,0.7nm,0.3s,baz=76,slow=7.5,SNR=2.8						
ZAA0	Zalesovo Array	57.78	322	P	P	01 29 33.0	-1.0
ZAA0				IAmb	IAmb	01 31 10.2	
	comp=Z,2.5nm,1.1s						
ZALV	Zalesovo Beam	57.78	322	P	P	01 29 33.5	-0.6
	comp=Z,0.9nm,0.4s,baz=102,slow=8.1,SNR=3.2						
MK31	Makanchi Array	58.27	314	P	P	01 29 37.9	+0.3
MK31				IAmb	IAmb	01 31 06.3	
	comp=Z,7.5nm,2.0s						
MKAR	Makanchi Array	58.27	314	P	P	01 29 37.6	0.0
	comp=Z,0.3nm,0.4s,baz=88,slow=8.2,SNR=11						
MKAR				PcP	sP	01 30 27.2	-0.6
	comp=Z,0.4nm,0.6s,baz=105,slow=3.8,SNR=4.2						
NRIK	Noril'sk	61.31	340	P	P	01 29 57.1	-0.8
	comp=Z,1.7nm,0.4s,baz=53,slow=5.1,SNR=2.8						
ILAR	Eielson Array	63.32	26	P	P	01 30 10.9	-0.5
	comp=Z,0.3nm,0.4s,baz=240,slow=6.2,SNR=7.4						
INK	Inuvik	69.04	23	P	P	01 30 48.5	+0.7
	comp=Z,1.9nm,0.7s,baz=270,slow=7.9,SNR=7.2						
YKA	Yellowknife Ar	77.67	28	P	P	01 31 39.2	+0.8
	comp=Z,1.4nm,0.6s,baz=287,slow=5.2,SNR=20						
ARCES	ARCESS Array B	82.19	342	P	P	01 32 02.5	-0.1
	comp=Z,4.2nm,0.9s,baz=86,slow=8.3,SNR=14						
NVAR	Mina Array Bea	82.89	52	P	P	01 32 07.1	0.0
	comp=Z,1.5nm,0.7s,baz=267,slow=4.1,SNR=7.3						
FINES	FINESS Array B	86.60	335	P	P	01 32 23.6	-1.3
	comp=Z,1.7nm,0.4s,baz=70,slow=5.0,SNR=32						
VNDA	Vanda	96.82	177	LR	LR	02 15 57.1	
	comp=Z,24nm,19.1s,baz=338,slow=35						
TXAR	Lajitas Array	97.61	56	P	Pdif	01 33 17.6	+0.9
	comp=Z,0.1nm,0.4s,baz=251,slow=5.5,SNR=2.3						

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*IDC **15** 01:59:26.1±0.8, 20°.87N×145°.22E, h0^{km}, mb3.6/9, mb1 3.8/9, mb1mx3.6/54, mbtmp3.6/9, MS3.2/1, Ms1 3.2/1, ms1mx2.4/40, Error ellipse: s-maj=30.5km s-min=20.7km az=102.0*

ISC 15 01:59:36.5±1.0**, 20°.8N**±0°.2×**145°.2E**±0°.3**, h83^{km}, n10, σ0^s.59**/9**, mb3.6**/9**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	33.39	153	LR	LR	02 18 17.6	
	comp=Z,39nm,19.8s,baz=160,slow=34						
WRA	Warramunga Arr	41.87	195	P	P	02 07 19.2	+0.4
	0.5nm,0.6s,baz=9.3,slow=9.2,SNR=2.9						
ASAR	Alice Springs	45.56	195	P	P	02 07 47.8	-0.5
	0.5nm,0.7s,baz=7.5,slow=8.8,SNR=6.2						
MKAR	Makanchi Array	56.64	313	P	P	02 09 11.0	-0.1
	0.3nm,0.6s,baz=90,slow=8.1,SNR=3.3						
KURBB	Kurchatov Arra	59.42	317	P	P	02 09 30.2	-0.1
	0.2nm,0.5s,baz=89,slow=7.3,SNR=3.3						
ILAR	Eielson Array	61.98	27	P	P	02 09 47.5	-0.1
	0.6nm,0.9s,baz=245,slow=6.9,SNR=4.5						
BVAR	Borovoye Array	64.53	320	P	P	02 10 05.1	+0.5
	0.5nm,0.5s,baz=79,slow=8.1,SNR=2.7						
INK	Inuvik	67.64	23	P	P	02 10 23.2	-0.9
	0.7nm,0.6s,baz=159,slow=1.6,SNR=3.8						
YKA	Yellowknife Ar	76.36	28	P	P	02 11 17.1	+0.7
	0.6nm,0.6s,baz=289,slow=5.2,SNR=7.9						
NVAR	Mina Array Bea	82.24	52	P	P	02 11 49.2	0.0
	0.2nm,0.3s,baz=270,slow=3.6,SNR=3.2						

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*MEX **15** 02:01:29.9±0.4, 15°.98N×98°.67W, h5^{km}, MD4.2*

*IDC **15** 02:01:30.5±1.1, 16°.33N×98°.43W, h0^{km}, mb4.3/13, mb1 4.4/18, mb1mx4.2/50, mbtmp4.2/18, ML3.6/4, MS3.5/11, Ms1 3.5/11, ms1mx3.2/35, Error ellipse: s-maj=23.7km s-min=12.7km az=30.0*

*NEIC **15** 02:01:32.1±1.2, 16°.25N±0°.09×98°.45W±0°.09, h14^{km}±6^{km}, mb4.5/232, Md4.4/12(MEX), Error ellipse: s-maj=16.2km s-min=6.8km az=222.0*

ISC 15 02:01:28.8±2.8**, 16°.08N**±0°.07×**98°.63W**±0°.04**, h2^{km}**±17^{km}**, n373, σ1^s.32**/306**, mb4.6**/94**, MS3.5**/7**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOIG	Yosondua	1.30	53	*e*P	Pn	02 01 52.4	-1.9
YOIG				*e*S	Sg	02 02 09.6	-0.9
ACP2	Acapulco	1.44	304	*e*P	Pn	02 01 53.4	-2.6
ACP2				*i* S	Sn	02 02 11.8	-3.7
ACP2	Acapulco	1.44	304		Pn	02 01 53.4	-2.6
TLIG	Tlapa	1.48	2	*e*P	Pn	02 01 54.8	-1.8
TLIG				*i* S	Sn	02 02 14.9	-1.7
TLIG	Tlapa	1.48	2		Pn	02 01 54.8	-1.8
TLIG					Sn	02 02 14.9	-1.7
CAIG	El Cayaco	1.84	302	*e*P	Pn	02 01 59.0	-2.5
CAIG				*i* S	Sn	02 02 21.6	-3.8
CAIG	El Cayaco	1.84	302		Pn	02 01 59.0	-2.5
HLIG	Huajuapan de L	1.92	24	*e*P	Pn	02 02 01.3	-1.4
HLIG				*e*S	Sn	02 02 26.2	-1.4
VHO	Vista Hermosa	2.07	61	*e*P	Pn	02 02 03.7	-1.1
VHO				*e*S	Sn	02 02 28.9	-2.5
HUIG	Huatulco	2.45	97	*e*P	Pn	02 02 08.1	-1.7
HUIG				*i* S	Sn	02 02 37.4	-2.9
HUIG	Huatulco	2.45	97		Pn	02 02 08.1	-1.7
UNM	Universidad Na	3.28	351		Pn	02 02 21.2	-0.3
CMIG	Matias Romero	3.73	74	Pn	Pn	02 02 26.2	-1.3
	12nm,0.3s,baz=259,slow=11,SNR=225						
CMIG				Sn	Sn	02 03 08.8	-3.2
	28nm,0.3s,baz=37,slow=22,SNR=5.4						
CMIG				Lg	Lg	02 03 22.2	
	35nm,0.3s,baz=253,slow=7.2,SNR=6.0						
MOIG	Morelia	4.33	326		Pn	02 02 38.2	+2.3
CCIG	Comitan	6.24	87		Pn	02 03 01.3	-0.9
ZAIG	Zacatecas	7.62	331		Pn	02 03 22.2	+0.9
APG	El Apazote	7.94	97	Pn	Pn	02 03 26.4	+0.8
	0.5nm,0.3s,baz=328,slow=17,SNR=6.7						
APG				Sn	Sn	02 04 45.2	-11
	0.4nm,0.3s,baz=24,slow=20,SNR=1.9						
APG				LR	LR	02 06 13.1	
	comp=Z,110nm,21.2s,baz=280,slow=36						
TEIG	Tepich	10.67	66	Pn	Pn	02 04 00.4	-2.4
	baz=288,slow=0.0						
TEIG				LR	LR	02 08 49.7	
	comp=Z,334nm,18.5s,baz=76,slow=42						
H06E1	SOCORRO T-PHAS	12.04	285	T	T	02 16 30.3	
	SNR=180						
H06S1	SOCORRO T	12.06	284	T	T	02 16 33.8	
	SNR=35						
833A	Chaparral WMA,	12.21	357	Pn	Pn	02 04 24.1	+0.3
LPIG	La Paz	13.56	308	LR	LR	02 09 03.6	
	comp=Z,272nm,18.1s,baz=30,slow=33						
TX31	Lajitas Ar. Si	13.99	342		Pn	02 04 49.1	+0.9
TX32	Lajitas Array	13.99	342		Pn	02 04 48.6	+0.4
TXAR	Lajitas Array	13.99	342	Pn	Pn	02 04 48.4	+0.2
	0.0nm,0.3s,baz=163,slow=15,SNR=11						
TXAR				Lg	Lg	02 08 47.9	
	0.0nm,0.3s,baz=161,slow=35,SNR=2.4						
TXAR				LR	LR	02 10 10.1	
	comp=Z,121nm,18.5s,baz=0.0,slow=38						
JCT	Junction City	14.38	356		Pn	02 04 53.4	-0.1
435B	Jarrell	14.67	4	Pn	Pn	02 04 54.5	-3.0
WHTX	Lake Whitney,	15.88	4	P	Pn	02 05 17.0	+3.5
WHTX				IAmb	IAmb	02 05 18.5	
	comp=Z,47nm,1.1s						
WHTX	Lake Whitney,	15.88	4	P	P	02 05 17.8	+0.4
	baz=184,SNR=11						
NATX	Nacogdoches	16.03	12	Pn	Pn	02 05 15.7	+0.3
NATX				IAmb	IAmb	02 05 19.3	
	comp=Z,31nm,0.8s						
NATX	Nacogdoches	16.03	12	P	Pn	02 05 18.5	+3.1
	baz=194						
237A	Washetta, Mont	16.06	9	Pn	Pn	02 05 15.0	-0.8
237A				IAmb	IAmb	02 05 20.7	
	comp=Z,48nm,1.1s						
ABTX	Abilene, Hawle	16.50	357	Pn	Pn	02 05 18.8	-2.8
ABTX				IAmb	IAmb	02 05 26.2	
	comp=Z,32nm,0.9s						
ABTX	Abilene, Hawle	16.50	357	P	P	02 05 24.8	+0.5
	baz=176,SNR=18						
MNTX	Cornudas Mount	16.72	340	P	Pn	02 05 25.2	+0.8
	baz=156,SNR=16						
344A	Westbrook Farm	16.92	24	Pn	Pn	02 05 24.9	-1.9
FSCY	Frank Sound, G	16.93	76	Pn	Pn	02 05 25.4	-1.6
HSIG		17.17	321	Pn	Pn	02 05 31.1	+1.1
Z35A	Perchaven, San	17.23	4	P	Pn	02 05 30.5	-0.1
Z35A				IAmb	IAmb	02 05 32.8	
	comp=Z,22nm,0.8s						
346A	Big Creek Wild	17.38	27		Pn	02 05 32.5	-0.1
346A				IAmb	IAmb	02 05 37.5	
	comp=Z,18nm,0.7s						
Z38A	Mt. Pleasant	17.42	10		Pn	02 05 32.5	-0.6
Z38A				IAmb	IAmb	02 05 35.2	
	comp=Z,24nm,0.9s						
Z41A	Richland Creek	17.90	16	IAmb	IAmb	02 05 41.2	
	comp=Z,28nm,0.8s						
Z41A	Richland Creek	17.90	16	P	Pn	02 05 39.9	+0.8
	baz=198						
MSTX	Muleshoe	18.20	349	P	Pn	02 05 43.1	+0.2
	baz=167,SNR=6.7						
WLAR	White Oak Lake	18.23	15	IAmb	IAmb	02 05 53.7	
	comp=Z,29nm,1.0s						
121A	Cookes Peak, D	18.37	335	P	Pn	02 05 47.0	+2.0
	baz=150,SNR=7.5						
WMOK	Wichita Mounta	18.58	360	P	P	02 05 45.9	-1.4
	baz=179						
AMTX	Amarillo	18.93	352	P	P	02 05 50.6	-0.5
	baz=170						
MIAR	Mount Ida	18.94	13	P	P	02 05 50.1	-1.1
MIAR	Mount Ida	18.94	13	P	P	02 05 50.8	-0.4
	baz=195,SNR=7.3						
X40A	Basin Creek Fa	19.06	15	P	P	02 05 52.8	+0.4
	baz=197						
W35A	Tecumseh	19.06	4	P	P	02 05 52.0	-0.5
OKCSW	OKLAHOMA CITY	19.28	3	P	P	02 05 54.0	-0.9
OKCFA	Oklahoma City	19.29	3	IAmb	IAmb	02 05 55.5	
	comp=Z,38nm,0.9s						
W39A	Magazine	19.53	12	P	P	02 05 57.3	-0.3
W39A	Magazine	19.53	12	P	P	02 05 58.5	+0.9
	baz=194,SNR=11						
TUC	Tucson	19.57	328	P	P	02 05 59.4	+1.2
TUC	Tucson	19.57	328	P	Pn	02 06 00.6	+1.1
	baz=142						
W41B	Gary Mavity, V	19.86	16	P	P	02 06 01.9	+0.7
	baz=198,SNR=5.5						
LRAL	Lakeview Retre	19.90	30	P	P	02 06 01.4	-0.2
	baz=214,SNR=8.2						
TUL1	Leonard	19.91	7	IAmb	IAmb	02 06 02.9	
	comp=Z,16nm,0.8s						
TUL1	Leonard	19.91	7	P	P	02 06 00.8	-1.0
	baz=188,SNR=6.6						
WHAR	Wooly Hollow	19.96	15	IAmb	IAmb	02 06 09.2	
	comp=Z,20nm,0.9s						
ANMO	Albuquerque	20.06	341	P	P	02 06 05.1	+1.5
	comp=Z,0.3nm,0.3s,baz=144,slow=12,SNR=28						
ANMO				LR	LR	02 14 28.2	
	comp=Z,293nm,21.9s,baz=148,slow=39						
ANMO	Albuquerque	20.06	341	P	P	02 06 04.6	+1.0
ANMO	Albuquerque	20.06	341	P	P	02 06 05.2	+1.6
	baz=157						
OXF	Oxford	20.14	23	P	P	02 06 03.9	-0.4
	baz=206						
U32A	Winter Ranch,	20.22	359	IAmb	IAmb	02 06 06.0	
	comp=Z,37nm,1.1s						
214A	Organ Pipe Nat	20.40	323	P	P	02 06 07.7	+0.5
214A	Organ Pipe Nat	20.40	323	P	Pn	02 06 09.8	+0.6
	baz=137						
FCAR	Ozark Folk Cen	20.57	15	IAmb	IAmb	02 06 13.8	
	comp=Z,16nm,0.8s						
Z50A	Ashland	20.60	32	IAmb	IAmb	02 06 09.8	
	comp=Z,13nm,0.8s						
Z50A	Ashland	20.60	32	P	P	02 06 09.0	-0.3
	baz=217,SNR=6.2						
152A	Waverly Hall	20.78	35	P	P	02 06 10.6	-0.7
W45A	Hickory Valley	20.80	22	P	P	02 06 13.4	+2.0
T35A	Sooner Cattle	20.84	5	IAmb	IAmb	02 06 11.4	
	comp=Z,24nm,0.8s						
U40A	Yellville	20.84	13	IAmb	IAmb	02 06 16.9	
	comp=Z,29nm,0.8s						
U40A	Yellville	20.84	13	P	P	02 06 11.1	-0.9
	baz=195,SNR=28						
Y49A	Blount Mountai	20.85	30	IAmb	IAmb	02 06 12.0	
	comp=Z,20nm,0.8s						
X18A	Snowflake	21.00	333	P	P	02 06 14.9	+1.1
X18A				IAmb	IAmb	02 06 20.1	
	comp=Z,15nm,0.8s						
Z51A	Franklin	21.04	33	P	P	02 06 13.2	-0.8
X48A	Hartselle	21.05	28	IAmb	IAmb	02 06 13.6	
	comp=Z,19nm,0.8s						
PLAL	Pickwick Lake	21.07	25	IAmb	IAmb	02 06 18.5	
	comp=Z,22nm,0.7s						
GNAR	Gosnell	21.25	20	P	P	02 06 16.2	0.0
W18A	Petrified Fore	21.41	334	P	P	02 06 19.3	+1.0
W18A	Petrified Fore	21.41	334	P	P	02 06 20.1	+1.8
	baz=149						
PEBM	Pemiscott Bayo	21.43	20	P	P	02 06 17.9	-0.3
X16A	Lo Mia Camp, P	21.59	330	IAmb	IAmb	02 06 23.5	
	comp=Z,15nm,0.9s						
T25A	Trinidad	21.60	347	P	P	02 06 22.7	+2.4
T25A				IAmb	IAmb	02 06 25.6	
	comp=Z,31nm,1.2s						
T25A	Trinidad	21.60	347	P	P	02 06 23.3	+3.0
	baz=164,SNR=7.4						
154A	Montrose	21.66	38	P	P	02 06 21.4	+0.7
MGMO	Mountain Grove	21.74	14	P	P	02 06 22.2	+0.6
MGMO				IAmb	IAmb	02 06 24.9	
	comp=Z,15nm,0.8s						
GLAT	Glass	21.76	21	P	P	02 06 21.7	-0.1
FPAL	Fort Paine	21.79	30	IAmb	IAmb	02 06 22.2	
	comp=Z,18nm,0.9s						
PBMO	Poplar Bluff	21.87	18	P	P	02 06 22.3	-0.6
UTMT	University of	21.98	21	P	P	02 06 23.9	-0.2
Y14A	Wickenburg	22.00	327	P	P	02 06 25.5	+1.0
Y14A				IAmb	IAmb	02 06 27.7	
	comp=Z,16nm,1.0s						
GOGA	Godfrey	22.03	36	P	P	02 06 23.2	-1.5
GOGA				IAmb	IAmb	02 06 36.9	
	comp=Z,16nm,1.1s						

GOGA	Godfrey	22.03	36	P	P	02 06 23.2	-1.5
	baz=222						
S39A	Bolivar	22.04	11	IAmb	IAmb	02 06 27.1	
	comp=Z,20nm,0.8s						
Y52A	Lilburn	22.05	34	IAmb	IAmb	02 06 25.0	
	comp=Z,24nm,0.8s						
Y52A	Lilburn	22.05	34	P	P	02 06 24.1	-0.8
	baz=220,SNR=9.5						
WVT	Waverly	22.17	24	P	P	02 06 26.3	+0.1
WVT	Waverly	22.17	24	P	P	02 06 27.1	+0.9
	baz=208						
X51A	Calhoun	22.18	31	IAmb	IAmb	02 06 35.8	
	comp=Z,30nm,1.2s						
X51A	Calhoun	22.18	31	P	P	02 06 25.5	-0.9
	baz=217						
SWET	Sewanee	22.19	28	IAmb	IAmb	02 06 25.9	
	comp=Z,23nm,0.8s						
V48A	Smith Brothers	22.24	26	P	P	02 06 25.6	-1.4
V48A				IAmb	IAmb	02 06 28.9	
	comp=Z,17nm,0.8s						
R32A	Long Quarter,	22.26	360	IAmb	IAmb	02 06 30.1	
	comp=Z,22nm,1.0s						
GLA	Glamis	22.37	322	P	P	02 06 30.1	+1.6
GLA				IAmb	IAmb	02 06 31.7	
	comp=Z,16nm,0.8s						
GLA	Glamis	22.37	322	P	P	02 06 30.9	+2.5
	baz=135						
SDCO	Great Sand Dun	22.42	346	P	P	02 06 30.2	+1.0
	baz=162,SNR=10						
WUAZ	Wupatki	22.46	332	P	P	02 06 31.9	+2.4
WUAZ				IAmb	IAmb	02 06 34.5	
	comp=Z,27nm,0.9s						
WUAZ	Wupatki	22.46	332	P	P	02 06 32.8	+3.2
	baz=146,SNR=26						
CBKS	Cedar Bluff	22.67	358	IAmb	IAmb	02 06 45.3	
	comp=Z,12nm,0.9s						
CBKS	Cedar Bluff	22.67	358	P	P	02 06 32.8	+1.2
	baz=177						
Y12C	Blythe	22.69	324	P	P	02 06 34.8	+3.0
	baz=137						
CLTN	Cedars of Leba	22.75	26	IAmb	IAmb	02 06 40.5	
	comp=Z,18nm,1.0s						
S22A	4UR Ranch, Cre	22.77	343	P	P	02 06 34.3	+1.4
	baz=159,SNR=10						
MVCO	Mesa Verde	22.79	339	IAmb	IAmb	02 06 35.2	
	comp=Z,32nm,1.1s						
MVCO	Mesa Verde	22.79	339	P	P	02 06 34.3	+1.2
	baz=154,SNR=14						
CCM	Cathedral Cave	22.84	15	P	P	02 06 32.5	-0.8
CCM				IAmb	IAmb	02 06 38.0	
	comp=Z,22nm,1.1s						
CCM	Cathedral Cave	22.84	15	P	P	02 06 33.0	-0.3
	baz=198						
PDMCI	Parker Dam,Lak	22.89	325	P	P	02 06 36.2	+2.4
	baz=138						
X53A	Estanollee	22.94	34	P	P	02 06 33.4	-1.0
	baz=220,SNR=6.8						
157A	Early Branch	22.99	41	P	P	02 06 35.1	+0.2
	baz=228						
CPCT	Cooper Cave	23.05	31	IAmb	IAmb	02 06 35.4	
	comp=Z,17nm,0.8s						
S44A	Carbondale	23.07	19	P	P	02 06 34.9	-0.9
KSCO	Kaye Shedlock’	23.12	352	P	P	02 06 37.1	+0.8
	baz=170						
BC3	Big Chuckawall	23.16	322	P	P	02 06 39.1	+2.2
	baz=135						
T47A	Sharon Grove	23.20	24	P	P	02 06 36.5	-0.6
MONP2	Monument Peak	23.23	319	P	P	02 06 39.6	+2.0
	baz=132						
HODGE	Hodges	23.32	36	IAmb	IAmb	02 06 38.1	
	comp=Z,13nm,0.9s						
Y55A	Saluda	23.34	37	P	P	02 06 37.3	-1.2
	baz=224						
U49A	Red Boiling Sp	23.34	27	IAmb	IAmb	02 06 39.3	
	comp=Z,23nm,1.0s						
IRM	Iron Mountain	23.34	323	P	P	02 06 42.4	+3.8
	baz=136,SNR=8.3						
X54A	Belton	23.48	35	P	P	02 06 39.3	-0.7
	baz=222						
Q24A	Divide	23.51	347	P	P	02 06 42.2	+1.6
	baz=164						
TKL	Tuckaleechee C	23.59	31	P	P	02 06 40.0	-1.0
	comp=Z,3.9nm,0.7s,baz=196,slow=11,SNR=7.7						
TKL	Tuckaleechee C	23.59	31	P	P	02 06 40.5	-0.5
TKL				IAmb	IAmb	02 06 42.3	
	comp=Z,23nm,1.4s						
Z57A	Bowman	23.59	40	P	P	02 06 41.9	+0.9
	baz=228						
U15A	North Rim	23.63	332	P	P	02 06 42.4	+0.7
SLM	Saint Louis	23.65	17	P	P	02 06 40.7	-0.9
SLM				IAmb	IAmb	02 06 42.5	
	comp=Z,23nm,0.9s						
BELC	Belle Mtn. Jos	23.73	322	P	P	02 06 44.4	+1.9
	baz=134						
XPFO	Pion Flat	23.73	321	P	P	02 06 43.2	+0.5
PFO	Pinyon Flats O	23.74	321	P	P	02 06 44.3	+1.7
	comp=Z,4.4nm,0.9s,baz=121,slow=5.2,SNR=5.2						
PFO				LR	LR	02 16 54.2	
	comp=Z,192nm,18.1s,baz=140,slow=39						
PFO	Pinyon Flats O	23.74	321	P	P	02 06 42.9	+0.2
PFO	Pinyon Flats O	23.74	321	P	P	02 06 44.8	+2.1
	baz=133						
PV13	Radium Mtn., P	23.76	340	IAmb	IAmb	02 06 44.8	
	comp=Z,11nm,0.8s						
PV05	Paradox Valley	23.78	339	P	P	02 06 42.9	-0.2
NHSC	New Hope	23.79	41	P	P	02 06 43.6	+0.6
NHSC	New Hope	23.79	41	P	P	02 06 44.1	+1.1
	baz=229						
PV15	Paradox Valley	23.82	341	IAmb	IAmb	02 06 46.1	
	comp=Z,18nm,0.9s						
X55A	Gracelyn & Ava	23.84	37	P	P	02 06 43.0	-0.5
	baz=224						
PV03	Paradox Valley	23.86	340	IAmb	IAmb	02 06 45.8	
	comp=Z,11nm,0.9s						
PV18	Skein Mesa, Pa	23.87	340	IAmb	IAmb	02 06 45.8	
	comp=Z,11nm,0.8s						
PV12	Saucer Basin,	23.90	340	IAmb	IAmb	02 06 46.5	
	comp=Z,17nm,0.8s						
PV11	David Mesa, Pa	23.90	340	IAmb	IAmb	02 06 45.7	
	comp=Z,10nm,0.8s						
PV17	East Wray Mesa	23.91	340	IAmb	IAmb	02 06 46.2	
	comp=Z,13nm,0.9s						
JSC	Jenkinsville	23.93	38	P	P	02 06 42.7	-1.6
PV16	Nyswonger Mesa	23.93	340	IAmb	IAmb	02 06 46.4	
	comp=Z,8.5nm,0.7s						
T49A	Edmonton	23.95	27	IAmb	IAmb	02 06 45.8	
	comp=Z,11nm,0.9s						
T49A	Edmonton	23.95	27	P	P	02 06 43.7	-0.8
	baz=212						
PV19	Morning Glory	23.95	340	IAmb	IAmb	02 06 46.1	
	comp=Z,12nm,1.0s						
PV07	Paradox Valley	23.96	340	IAmb	IAmb	02 06 47.3	
	comp=Z,16nm,1.0s						
W54A	Cherokee Point	23.98	35	P	P	02 06 45.5	+0.6
	baz=222,SNR=5.3						
PAULI	Pauline	24.00	36	IAmb	IAmb	02 06 46.0	
	comp=Z,8.1nm,0.8s						
PV04	Paradox Valley	24.00	340	IAmb	IAmb	02 06 46.9	
	comp=Z,15nm,0.9s						
PV10	Paradox Valley	24.03	340	P	P	02 06 45.3	-0.3
PV10				IAmb	IAmb	02 06 51.9	
	comp=Z,13nm,0.8s						
PV23	Carpenter Ridg	24.09	340	IAmb	IAmb	02 06 52.2	
	comp=Z,11nm,0.8s						
GMRC	Granite Mounta	24.09	324	P	P	02 06 48.2	+2.2
	baz=136						
PV22	Blue Mesa, Par	24.09	340	IAmb	IAmb	02 06 47.8	
	comp=Z,8.4nm,0.9s						
SMCO	Snowmass	24.15	344	IAmb	IAmb	02 06 49.5	
	comp=Z,23nm,1.2s						
T50A	Nancy	24.18	28	P	P	02 06 45.7	-1.0
	baz=214						
X56A	White Oak	24.21	38	P	P	02 06 46.4	-0.5
	baz=225						
Y57A	Sumter	24.26	39	P	P	02 06 46.8	-0.6
Y57A	Sumter	24.26	39	P	P	02 06 46.8	-0.6
	baz=227						
TZTN	Tazewell	24.40	30	IAmb	IAmb	02 06 50.2	
	comp=Z,23nm,1.1s						
TZTN	Tazewell	24.40	30	P	P	02 06 48.1	-0.6
	baz=217						
ISCO	Idaho Springs	24.41	347	IAmb	IAmb	02 06 51.4	
	comp=Z,15nm,0.9s						
ISCO	Idaho Springs	24.41	347	P	P	02 06 50.5	+1.4
	baz=163,SNR=16						
PKCU	Pink Cliffs	24.48	333	P	P	02 06 50.9	+1.0
KMSC	Kings Mountain	24.50	36	IAmb	IAmb	02 07 03.7	
	comp=Z,30nm,1.5s						
KMSC	Kings Mountain	24.50	36	P	P	02 06 49.2	-0.4
	baz=223						
T51A	Gray	24.55	29	P	P	02 06 49.6	-0.4
	baz=216,SNR=9.8						
WCI	Wyandotte Cave	24.60	24	P	P	02 06 49.8	-0.6
WCI	Wyandotte Cave	24.60	24	P	P	02 06 50.2	-0.2
	baz=209						
S49A	Springfield	24.62	26	P	P	02 06 49.9	-0.8
	baz=212,SNR=13						
V54A	Nebo	24.63	34	P	P	02 06 50.8	0.0
	baz=221						
BIRD	Birdtown, Kers	24.65	38	IAmb	IAmb	02 06 52.8	
	comp=Z,17nm,1.1s						
TUQ	Turquoise Moun	24.71	325	P	P	02 06 53.9	+2.2
	baz=137,SNR=12						
X57A	Johnson Farm,	24.75	39	P	P	02 06 51.6	-0.2
	baz=227						
P43A	Skaggs, Pawnee	24.79	17	P	P	02 06 52.0	-0.1
P43A				IAmb	IAmb	02 07 01.3	
	comp=Z,16nm,0.9s						
BFSC	Mount Baldy Ra	24.90	320	P	P	02 06 55.7	+2.3
	baz=132						
S50A	Richmond	24.92	28	P	P	02 06 52.9	-0.4
	baz=214,SNR=6.7						
W56A	Indian Trail	24.93	37	P	P	02 06 53.4	0.0
	baz=225						
OGNE	Ogallala	24.95	354	P	P	02 06 55.4	+1.7
	baz=172						
LGNH	Logne	24.96	81	P	P	02 06 54.2	+0.3
V55A	Taylorsville	25.08	35	IAmb	IAmb	02 07 05.5	
	comp=Z,29nm,1.4s						
V55A	Taylorsville	25.08	35	P	P	02 06 54.6	-0.2
	baz=222						
R49A	Shelbyville	25.10	26	IAmb	IAmb	02 06 59.2	
	comp=Z,9.3nm,0.8s						
R49A	Shelbyville	25.10	26	P	P	02 06 54.4	-0.6
	baz=212						
GSC	Goldstone, Bar	25.12	323	IAmb	IAmb	02 06 59.8	
	comp=Z,12nm,1.3s						
GSC	Goldstone, Bar	25.12	323	P	P	02 06 57.4	+2.1
	baz=135						
T52A	Hallie	25.12	31	P	P	02 06 55.3	+0.1
	baz=217,SNR=5.5						
T53A	Wise	25.24	31	P	P	02 06 56.1	-0.2
	baz=218						
S51A	Beattyville	25.25	29	P	P	02 06 56.0	-0.3
	baz=216,SNR=19						
U54A	Nelsons Funny	25.25	33	P	P	02 06 56.3	-0.2
	baz=220,SNR=7.9						
X58A	Rowland	25.27	40	P	P	02 06 57.1	+0.6
X58A	Rowland	25.27	40	P	P	02 06 56.9	+0.3
	baz=228						
W57A	Gilead	25.28	38	P	P	02 06 56.4	-0.3
	baz=226,SNR=7.1						
O20A	White River Ci	25.39	343	IAmb	IAmb	02 07 02.3	
	comp=Z,21nm,1.1s						
O20A	White River Ci	25.39	343	P	P	02 06 59.6	+1.8
	baz=158,SNR=8.3						
Q48A	North Vernon	25.42	24	P	P	02 06 57.7	-0.2
	baz=210,SNR=15						
R50A	Paris	25.45	27	IAmb	IAmb	02 06 58.2	
	comp=Z,12nm,0.8s						
R50A	Paris	25.45	27	P	P	02 06 57.6	-0.6
	baz=213,SNR=6.0						
V56A	Mocksville	25.45	36	P	P	02 06 57.9	-0.3
	baz=224						
N23A	Red Feather La	25.53	347	IAmb	IAmb	02 07 02.3	
	comp=Z,12nm,0.8s						
N23A	Red Feather La	25.53	347	P	P	02 07 01.0	+1.8
	baz=163,SNR=12						
W58A	Raeford	25.64	39	P	P	02 07 00.3	+0.4
	baz=227,SNR=5.8						
U55A	TA2, Sparta	25.65	34	P	P	02 07 00.0	-0.1
	baz=222,SNR=6.1						
HDIL	Hopedale	25.70	17	P	P	02 07 00.3	-0.2
	baz=201,SNR=6.4						
T54A	Tazewell	25.79	33	P	P	02 07 00.1	-1.2
	baz=220						
R51A	Hillsboro	25.80	28	P	P	02 07 00.9	-0.4
	baz=215,SNR=23						
Q49A	Aurora	25.82	25	P	P	02 07 00.8	-0.7
	baz=211,SNR=6.1						
V57A	Coltrane Farms	25.92	37	P	P	02 07 03.2	+0.8
	baz=225						
P48A	Milroy	26.00	24	IAmb	IAmb	02 07 03.3	
	comp=Z,19nm,1.2s						
P48A	Milroy	26.00	24	P	P	02 07 02.3	-0.8
	baz=210						
TPNV	Topopah Spring	26.00	326	P	P	02 07 05.5	+2.0
	baz=138,SNR=6.0						
MPMC	Manual Prospec	26.04	323	P	P	02 07 05.4	+1.5
	baz=135						
Q50A	Georgetown	26.07	27	P	P	02 07 03.0	-0.8
	baz=213,SNR=8.5						
SCIA	State Center	26.16	9	P	P	02 07 04.9	+0.3
	baz=192,SNR=5.3						
SFIN	Lafayette	26.21	20	IAmb	IAmb	02 07 06.6	
	comp=Z,15nm,0.9s						
SFIN	Lafayette	26.21	20	P	P	02 07 04.9	-0.1
	baz=206						
V58A	Windy Hill, Pi	26.24	38	P	P	02 07 05.2	-0.2
	baz=226,SNR=6.2						
R52A	Catlettsburg	26.26	29	P	P	02 07 05.8	+0.3
	baz=216						
P49A	Miami Univ. Ec	26.34	25	P	P	02 07 05.5	-0.7
	baz=211						
Q51A	Peebles	26.50	27	P	P	02 07 07.2	-0.5
	baz=214,SNR=7.8						
BLA	Blacksburg	26.52	34	IAmb	IAmb	02 07 10.9	
	comp=Z,17nm,1.0s						
BLA	Blacksburg	26.52	34	P	P	02 07 07.1	-0.8
	baz=222						
U57A	Blanch	26.56	37	P	P	02 07 07.5	-0.7
	baz=225						
R53A	Hurricane	26.59	30	P	P	02 07 08.6	+0.1
	baz=218,SNR=7.2						
T56A	Rocky Mt	26.59	35	P	P	02 07 08.1	-0.4
	baz=223						
GRAC	Grapevine Rang	26.64	325	P	P	02 07 11.4	+2.4
	baz=136						
L40A	Anamosa	26.67	12	IAmb	IAmb	02 07 09.6	
	comp=Z,14nm,0.9s						
R11A	Troy Canyon, C	26.73	329	P	P	02 07 12.0	+1.9
	baz=141						
V59A	Middlesex	26.75	39	P	P	02 07 10.7	+0.8
	baz=228,SNR=8.5						
P50A	Jamestown	26.79	26	P	P	02 07 09.4	-0.9
	baz=213						
O48A	Farmland	26.80	23	P	P	02 07 09.5	-0.8
	baz=210,SNR=11						
S55A	Lewisburg	26.89	33	P	P	02 07 10.9	-0.4
	baz=221						
Q52A	Bidwell	26.94	29	P	P	02 07 11.2	-0.4
	baz=216						
R54A	Victor	26.95	32	P	P	02 07 11.4	-0.4
	baz=220						
U58A	Oxford	26.99	38	P	P	02 07 13.5	+1.4
	baz=226,SNR=6.8						
P51A	Williamsport	27.00	27	P	P	02 07 11.5	-0.6
	baz=214						
DUG	Dugway, Tooele	27.02	336	P	P	02 07 14.5	+2.0
	baz=148						
O49A	Covington	27.05	25	P	P	02 07 12.7	0.0
	baz=211,SNR=8.6						
N47A	Urbana	27.14	22	P	P	02 07 12.9	-0.5
	baz=208,SNR=7.1						
Q53A	Leroy	27.21	30	P	P	02 07 13.9	-0.2
	baz=218						
O50A	Cable	27.31	26	P	P	02 07 14.2	-0.8
	baz=213						
N48A	Decatur	27.37	23	P	P	02 07 14.9	-0.6
	baz=209,SNR=8.5						
R55A	Marlinton	27.47	33	IAmb	IAmb	02 07 21.4	
	comp=Z,14nm,0.8s						
R55A	Marlinton	27.47	33	P	P	02 07 16.4	-0.2
	baz=221						
M47A	Cromwell	27.59	21	P	P	02 07 17.2	-0.3
	baz=208						
ECSD	EROS Data Cent	27.62	3	P	P	02 07 17.6	-0.1
	baz=184						
Q54A	Coxs Mills	27.64	31	IAmb	IAmb	02 07 22.7	
	comp=Z,14nm,1.1s						
Q54A	Coxs Mills	27.64	31	P	P	02 07 17.9	-0.1
	baz=219						
ACSO	Alum Creek Sta	27.65	26	P	P	02 07 17.7	-0.3
	baz=214						
JFWS	Jewell Farm	27.69	13	IAmb	IAmb	02 07 19.1	
	comp=Z,14nm,0.8s						
JFWS	Jewell Farm	27.69	13	P	P	02 07 18.0	-0.3
	baz=197,SNR=5.0						
O51A	Pataskala	27.75	27	P	P	02 07 18.3	-0.6
	baz=214						
U60A	Pendleton	27.87	39	P	P	02 07 21.0	+1.1
	baz=229						
M48A	Edgerton	28.02	23	P	P	02 07 21.6	+0.2
	baz=209						
Q55A	Buckhannon	28.03	32	P	P	02 07 25.8	+4.3
	baz=220						
N50A	Nevada	28.03	26	P	P	02 07 20.3	-1.2
	baz=213						
O52A	Adamsville	28.06	28	P	P	02 07 22.3	+0.6
	baz=216						
NV11	Mina Array Sit	28.12	326	IAmb	IAmb	02 07 25.9	
	comp=Z,7.0nm,1.1s						
NVAR	Mina Array Bea	28.20	326	P	P	02 07 25.3	+2.1
	comp=Z,3.4nm,0.9s,baz=154,slow=9.7,SNR=14						
NVAR				LR	LR	02 20 10.5	
	comp=Z,120nm,19.8s,baz=202,slow=40						
NVAR	Mina Array Bea	28.20	326	P	P	02 07 24.7	+1.5
BW06	Boulder Array	28.20	343	P	P	02 07 24.5	+1.3
	baz=157						
PDAR	Pinedale Array	28.20	343	P	P	02 07 23.9	+0.8
	comp=Z,3.9nm,1.0s,baz=135,slow=9.5,SNR=16						
PDAR				LR	LR	02 19 21.4	
	comp=Z,183nm,18.4s,baz=166,slow=38						
PDAR	Pinedale Array	28.20	343	P	P	02 07 23.6	+0.5
SDV	Santo Domingo	28.23	101	P	P	02 07 25.3	+1.6
	comp=Z,4.5nm,0.8s,baz=338,slow=7.1,SNR=8.3						
SDV				LR	LR	02 20 11.9	
	comp=Z,72nm,18.1s,baz=26,slow=40						
SDV	Santo Domingo	28.23	101	P	P	02 07 24.8	+1.1
SDV				IAmb	IAmb	02 07 27.5	
	comp=Z,4.5nm,0.8s						
L47A	Sherwood	28.28	21	P	P	02 07 23.2	-0.4
	baz=208						
P54A	Burton	28.29	31	P	P	02 07 23.5	-0.3
	baz=219						
L48A	N Adams	28.53	23	P	P	02 07 25.4	-0.5
	baz=209						
K46A	Dorr	28.71	20	P	P	02 07 26.4	-1.0
	baz=206						
I42A	Draeger Farm,	28.93	15	P	P	02 07 28.9	-0.5
I42A				IAmb	IAmb	02 07 29.3	
	comp=Z,8.4nm,0.9s						
K47A	Vermontville	28.96	21	P	P	02 07 29.1	-0.6
	baz=208						
PCDR	Punta Cana, DR	28.97	81	P	P	02 07 29.6	-0.4
N53A	Lisbon	29.07	29	IAmb	IAmb	02 07 31.7	
	comp=Z,11nm,0.9s						
N53A	Lisbon	29.07	29	P	P	02 07 29.9	-0.8
	baz=217						
REDW	Red Top Meadow	29.12	342	IAmb	IAmb	02 07 46.5	
	comp=Z,7.0nm,1.2s						
SNOW	Snow King Moun	29.19	342	IAmb	IAmb	02 07 39.8	
	comp=Z,11nm,0.9s						
K48A	Perry	29.39	22	P	P	02 07 32.9	-0.6
	baz=209						
SPMN	Marine on St.	29.47	8	IAmb	IAmb	02 07 34.5	
	comp=Z,6.5nm,0.7s						
SPMN	Marine on St.	29.47	8	P	P	02 07 33.8	-0.3
	baz=191						
M53A	WI Miller and	29.65	28	P	P	02 07 35.1	-0.7
	baz=217						
J48A	Bridge Port	29.94	22	P	P	02 07 37.8	-0.5
	baz=209						
G40A	Rib Lake	29.95	12	IAmb	IAmb	02 07 38.2	
	comp=Z,7.4nm,1.1s						
I47A	Gladwin	30.32	20	P	P	02 07 42.3	+0.6
	baz=207						
BEKR	Beckworth	30.34	326	IAmb	IAmb	02 07 45.2	
	comp=Z,5.7nm,1.0s						
H45A	Beulah	30.38	18	P	P	02 07 41.7	-0.5
	baz=204						
ATAH	Atahualpa	30.55	138	LR	LR	02 17 50.5	
	comp=Z,50nm,21.7s,baz=341,slow=32						
M55A	Ridgway	30.56	30	P	P	02 07 43.5	-0.4
	baz=220						
G45A	Suttons Bay	30.88	18	P	P	02 07 45.5	-1.1
	baz=205						
MFID	Camas Ranch	30.94	335	P	P	02 07 48.0	+0.6
COWI	Conover	30.97	13	IAmb	IAmb	02 07 48.1	
	comp=Z,6.5nm,0.8s						
MCMT	McKenzie Canyo	31.07	340	P	P	02 07 49.4	+0.8
PDPR	Patillas Dam,	31.21	82	P	P	02 07 49.0	-0.9
PDPR				IAmb	IAmb	02 07 50.0	
	comp=Z,11nm,1.1s						
I51A	Listowel	31.43	25	P	P	02 07 50.5	-1.0
	baz=214						
DLMT	Dillon	31.47	341	IAmb	IAmb	02 07 55.6	
	comp=Z,9.5nm,1.1s						
F45A	CMU Biological	31.50	18	P	P	02 07 51.5	-0.5
	baz=204,SNR=5.5						
MTP	Monte Pirata	31.66	82	P	P	02 07 53.7	-0.1
MDND	Maddock	31.69	359	P	P	02 07 54.3	+0.6
	baz=178,SNR=8.2						
MOD	Modoc Plateau	31.78	328	P	P	02 07 54.9	+0.1
MOD				IAmb	IAmb	02 07 57.4	
	comp=Z,3.6nm,0.8s						
J08A	Circle Bar Ran	32.02	332	P	P	02 07 58.4	+1.6
J08A				IAmb	IAmb	02 07 59.6	
	comp=Z,9.5nm,1.0s						
K56A	Middlesex	32.20	30	P	P	02 07 58.3	+0.1
	baz=221						
AGMN	Agassiz Nation	32.21	3	P	P	02 07 58.4	0.0
	baz=185,SNR=14						
E44A	Grand Marais A	32.24	17	P	P	02 07 57.9	-0.7
L58A	Harry Jones Me	32.45	33	P	P	02 08 00.1	-0.5
	baz=224						
DGMT	Dagmar	32.63	353	P	P	02 08 02.8	+0.8
F49A	Sandfield	32.70	22	P	P	02 08 01.4	-1.2
	baz=210						
PAL	Palisades	32.78	36	P	P	02 08 02.7	-0.6
J56A	Wolcott	32.85	30	P	P	02 08 03.1	-0.9
E47A	Iron Bridge	32.88	20	P	P	02 08 03.6	-0.6
	baz=208						
D46A	Sault St. Mari	33.03	18	P	P	02 08 04.9	-0.6
	baz=206						
EGMT	Eagleton	33.15	346	P	P	02 08 08.3	+1.6
	baz=160						
MSO	Missoula	33.20	341	P	P	02 08 07.8	+0.7
MSO				IAmb	IAmb	02 08 17.7	
	comp=Z,5.6nm,1.1s						
J57A	Williamstown	33.37	31	P	P	02 08 07.9	-0.6
J57A	Williamstown	33.37	31	P	P	02 08 08.4	-0.1
	baz=222						
F10A	Beach Ranch, E	33.62	336	IAmb	IAmb	02 08 12.7	
	comp=Z,8.9nm,0.9s						
F52A	Sundridge	33.76	25	P	P	02 08 10.7	-1.2
	baz=215						
G08A	Pilot Rock	33.77	334	P	P	02 08 12.1	0.0
G08A				IAmb	IAmb	02 08 14.0	
	comp=Z,4.5nm,0.9s						
G54A	Lake Saint Pet	33.94	26	P	P	02 08 12.2	-1.3
	baz=217						
D48A	Paudash Townsh	34.00	21	P	P	02 08 14.0	0.0
	baz=210						
ULM	Lac du Bonnet	34.16	3	P	P	02 08 14.2	-1.1
	comp=Z,3.8nm,0.8s,baz=186,slow=9.0,SNR=11						
ULM	Lac du Bonnet	34.16	3	IAmb	IAmb	02 08 15.3	
	comp=Z,6.0nm,0.8s						
E51A	G1948 Merrick	34.30	24	P	P	02 08 15.5	-1.1
	baz=214						
D50A	G1974 Best Tow	34.69	23	P	P	02 08 19.7	-0.3
	baz=213						
D51A	Lot 18 Range I	34.81	23	P	P	02 08 19.9	-1.1
	baz=214						
E54A	Lac Daplat, Po	35.15	26	P	P	02 08 23.0	-0.9
	baz=217						
NEW	Newport	35.52	339	P	P	02 08 27.7	+0.6
C09A	Chrisman Ranch	35.54	337	P	P	02 08 27.7	+0.4
C09A				IAmb	IAmb	02 08 29.5	
	comp=Z,6.7nm,0.8s						
D54A	Lac Fusel, La	35.94	26	P	P	02 08 30.4	-0.3
	baz=218						
D55A	Sainte-Anne-du	36.34	27	P	P	02 08 33.4	-0.8
	baz=219						
D56A	ZEC Mazanza, M	36.68	28	P	P	02 08 36.3	-0.8
	baz=220						
D57A	Chemin Vers le	37.05	28	P	P	02 08 40.1	-0.1
	baz=222						
LSQQ	Lebel-sur-Quev	37.34	24	P	P	02 08 41.4	-1.2
	baz=216						
FFC	Flin Flon	38.66	357	P	P	02 08 53.6	-0.1
FFC				IAmb	IAmb	02 08 54.7	

	comp=Z,12nm,1.2s						
D61A	St Aubert, Com	38.95	31	P	P	02 08 56.1	-0.1
	baz=227						
PTGA	Pitinga	41.66	110	P	P	02 09 19.9	+0.8
	comp=Z,2.7nm,0.7s,baz=286,slow=9.2,SNR=4.8						
PTGA	Pitinga	41.66	110	IAmb	IAmb	02 09 23.2	
	comp=Z,9.2nm,1.4s						
FCC	Fort Churchill	42.75	3	P	P	02 09 27.2	-0.1
SCHQ	Schefferville	45.80	25	P	P	02 09 51.1	-0.8
	comp=Z,14nm,0.8s,baz=232,slow=6.8,SNR=30						
SCHQ				LR	LR	02 33 53.7	
	comp=Z,59nm,18.9s,baz=350,slow=43						
SCHQ	Schefferville	45.80	25	P	P	02 09 51.5	-0.4
YKA	Yellowknife Ar	47.71	350	P	P	02 10 06.1	-0.6
	comp=Z,2.1nm,0.8s,baz=160,slow=7.9,SNR=24						
FRB	Frobisher Bay	51.94	16	P	P	02 10 38.8	-0.1
	comp=Z,3.8nm,0.9s,baz=233,slow=8.7,SNR=4.5						
CFA	Coronel Fontan	55.66	148	P	P	02 11 08.9	+2.2
	comp=Z,0.9nm,0.4s,baz=336,slow=20,SNR=2.7						
INK	Inuvik	56.73	345	P	P	02 11 14.2	+0.5
	comp=Z,4.3nm,0.8s,baz=120,slow=7.9,SNR=16						
INK	Inuvik	56.73	345	IAmb	IAmb	02 11 15.1	
	comp=Z,6.2nm,0.9s						
HDA	Harding Lake	58.29	338	P	P	02 11 25.9	+1.0
	baz=122						
IL31		58.47	338	P	P	02 11 26.8	+0.8
IL31				IAmb	IAmb	02 11 27.8	
	comp=Z,8.4nm,1.1s						
ILAR	Eielson Array	58.47	338	P	P	02 11 27.1	+1.1
	comp=Z,2.3nm,0.8s,baz=144,slow=5.5,SNR=20						
ILAR	Eielson Array	58.47	338	P	P	02 11 26.3	+0.3
RES	Resolute Bay	58.65	1	P	P	02 11 26.6	-0.6
	baz=204,slow=6.1						
COLA	College	58.87	338		PcP	02 12 18.8	+0.6
TRF	Thorofare Moun	59.08	336	P	P	02 11 30.8	+0.3
MLY	Manley	60.01	337	P	P	02 11 37.6	+0.8
SUMG	Summit	66.02	17	*i* P	P	02 12 17.0	0.0
	comp=Z,13nm,0.8s						
DAG	Danmarks Havn	72.16	14	*i* P	P	02 12 53.8	-0.8
	comp=Z,3.0nm,0.8s						
LZH	Lanzhou	123.93	338	*e*PKP	PKPdf	02 20 23.8	-5.6
LZH				pPKP	sPKPdf	02 20 34.6	+5.1
LZH				sPKP		02 20 38.9	
KSH	Kashi	124.47	5	PKP	PKPdf	02 20 30.8	+0.5
KSH				PP	PP	02 22 19.8	+5.1
KSH				PKS	PKSdf	02 24 07.8	+0.7
KSH				SKKS		02 29 12.8	

IDC 15 02:12:26.1±7.7**, 11°.61S×166°.10E, h104**^{km}±60^{km}**, mb3.7**/4**, mb1 3.8**/5**, mb1mx3.4**/47**, mbtmp4.0**/5**, Error ellipse: s-maj=58.1km s-min=35.6km az=32.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.41	178	P	Pn	02 14 52.7	+0.2
	0.1nm,0.3s,baz=53,slow=20,SNR=2.2						
DZM				S	Sn	02 16 38.8	-8.5
	0.1nm,0.3s,baz=323,slow=20,SNR=1.7						
WRA	Warramunga Arr	31.62	251	P	P	02 18 39.6	+0.1
	1.2nm,0.8s,baz=84,slow=9.5,SNR=6.2						
ASAR	Alice Springs	32.86	244	P	P	02 18 50.1	-0.2
	1.6nm,0.8s,baz=67,slow=10,SNR=15						
ASAR				PcP	PcP	02 21 33.2	+0.3
	0.5nm,0.8s,baz=72,slow=3.0,SNR=3.3						
QSPA	South Pole Qui	78.40	180	P	P	02 24 15.1	-0.1
	1.0nm,0.9s,baz=0.0,slow=3.0,SNR=6.6						
MKAR	Makanchi Array	94.17	317	P	P	02 25 32.8	-0.5
	0.7nm,0.6s,baz=89,slow=6.1,SNR=10						

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*IDC **15** 02:20:49.7±1.6, 38°.89N×48°.66E, h0^{km}, mb3.9/7, mb1 4.0/15, mb1mx3.7/55, mbtmp4.0/15, ML2.7/2, MS2.8/3, Ms1 2.8/3, ms1mx2.4/38, Error ellipse: s-maj=27.9km s-min=10.0km az=14.0*

*AZER **15** 02:20:52.6, 38°.87N×48°.58E, h20^{km}, ML4.2*

*MOS **15** 02:20:52.0±1.3, 38°.98N×48°.97E, h22^{km}, mb4.3/9, Error ellipse: s-maj=8.1km s-min=5.0km az=112.6*

*TEH **15** 02:20:53.3, 38°.87N×48°.70E, h28^{km}, ML4.2*

*THR **15** 02:20:53.7±0.4, 38°.68N×48°.60E, h14^{km}±5^{km}, ML4.1*

*NEIC **15** 02:20:56.8±1.9, 39°.23N±0°.08×49°.11E±0°.09, h39^{km}±8^{km}, mb4.0/13, Error ellipse: s-maj=13.5km s-min=7.7km az=216.0*

*NNC **15** 02:21:08.1±7.8, 39°.85N×50°.41E, h0^{km}, mb4.1, Error ellipse: s-maj=67.7km s-min=33.0km az=75.0*

ISC 15 02:20:54.0±0.8**, 38°.88N**±0°.02×**48°.63E**±0°.02**, h35**^{km}±2^{km}**, n191, σ2^{s}20**/225**, mb4.0**/15**, 11C-5D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKRN	Lenkeran, Azer	0.20	144	P	Pb	02 21 00.2	-0.6
	SNR=491						
LKRN				S	Sn	02 21 04.9	+2.3
LKRN	Lenkeran, Azer	0.20	144	*e*Pg	Pb	02 21 00.1	-0.6
YRD	Yardimli	0.30	278	P	Pb	02 21 01.0	-1.1
YRD				S	Sb	02 21 06.4	-1.2
YRD	Yardimli	0.30	278	*e*Pg	Pb	02 21 01.0	-1.1
LRK	Lerik	0.32	224	P	Pb	02 21 01.6	-0.8
	SNR=8950						
LRK				S	Sb	02 21 07.5	-0.5
LRK	Lerik	0.32	224	*e*Pg	Pb	02 21 01.5	-0.8
ASTR	Astara	0.34	158	P	Pb	02 21 01.8	-0.6
	SNR=4412						
ASTR				S	Sb	02 21 07.8	-0.3
ASTR	Astara	0.34	158	*e*Pg	Pb	02 21 01.8	-0.6
GLBA	Clilabad	0.41	334	P	Pb	02 21 02.8	-0.6
	SNR=2583						
GLBA				S	Sn	02 21 10.0	+0.2
GLBA	Clilabad	0.41	334	*e*Pg	Pb	02 21 02.7	-0.6
GRMI	Germi	0.57	263	*e*Pg	Pb	02 21 04.8	-1.1
GRMI				*e*Sg	Sb	02 21 13.1	-1.1
GRMI				IAML		02 21 13.9	
	comp=E,12µm,0.4s						
SAAT	Saatly	1.00	351	P	Pb	02 21 12.1	-0.7
	SNR=14						
SAAT				S	Sb	02 21 26.8	+1.1
SAAT	Saatly	1.00	351	*e*Pg	Pb	02 21 12.0	-0.7
ALIB	Äli-Bayra	1.12	15	P	Pb	02 21 15.1	+0.2
	SNR=61						
ALIB				S	Sb	02 21 30.3	+1.1
ALIB	Äli-Bayra	1.12	15	*e*Pg	Pb	02 21 15.1	+0.2
QRD	Qoradiz	1.17	300	P	Pn	02 21 13.8	-0.1
	SNR=246						
QRD				S	Sn	02 21 29.2	+0.6
QRD	Qoradiz	1.17	300	*e*Pg	Pn	02 21 13.8	-0.1
BLQ	Beylaqan	1.18	316	P	Pn	02 21 14.3	+0.2
	SNR=213						
BLQ				S	Sb	02 21 30.1	-0.9
BLQ	Beylaqan	1.18	316	*e*Pg	Pn	02 21 14.2	+0.2
IHSH	Hashtrud	1.21	242	*e*Pn	Sn	02 21 26.4	-3.7
IHSH				*e*		02 21 28.9	
AHAR	Ahar	1.29	253	*e*Pn	Pn	02 21 16.3	+0.6
IHRS	Heris	1.36	246	*e*Pn	Pn	02 21 17.7	+1.0
IHRS				*e*		02 21 37.6	
KDMR	Kurdemir	1.54	347	Pn	Pn	02 21 20.0	+1.0
	SNR=19						
KDMR				Sn	Sb	02 21 41.9	+0.9
KDMR	Kurdemir	1.54	347	*e*Pg	Pn	02 21 19.9	+1.0
TVRZ	Varzaqan	1.58	257	*e*Pn	Pb	02 21 21.4	-1.3
TVRZ				*e*		02 21 47.7	
ZRD	Zardab	1.58	333	Pn	Pn	02 21 20.7	+1.2
	SNR=184						
ZRD				Sn	Sb	02 21 43.3	+1.1
ZRD	Zardab	1.58	333	*e*Pn	Pn	02 21 20.6	+1.2
GBS	Qobustan	1.68	8	Pn	Pb	02 21 23.0	-1.3
	SNR=127						
GBS				Sn	Sb	02 21 48.3	+3.3
GBS	Qobustan	1.68	8	*e*Pn	Pb	02 21 23.0	-1.3
AGDM	Agdam	1.70	317	Pn	Pn	02 21 22.0	+0.8
	SNR=65						
AGDM				Sn	Sb	02 21 44.1	-1.6
GOBA	Gobu	1.75	29	Pn	Pb	02 21 24.4	-1.1
GOBA				Sn	Sb	02 21 47.1	+0.1
GOBA	Gobu	1.75	29	*e*Pn	Pb	02 21 24.3	-1.1
BRDA	Brd	1.78	322	Pn	Pn	02 21 23.9	+1.7
	SNR=208						
BRDA				Sn	Sb	02 21 48.6	+0.7
BRDA	Brd	1.78	322	*e*Pn	Pn	02 21 23.9	+1.7
PQL	Pirkuli	1.91	359	Pn	Pn	02 21 25.5	+1.2
	SNR=56						
PQL				Sn	Sb	02 21 51.9	0.0
PQL	Pirkuli	1.91	359	*e*Pn	Pn	02 21 25.4	+1.2
IML	Ismayilli	1.94	350	Pn	Pn	02 21 25.4	+0.8
	SNR=155						
IML				Sn	Sb	02 21 53.3	+0.6
IML	Ismayilli	1.94	350	*e*Pn	Pn	02 21 25.4	+0.8
ATGJ	Altiaghaj	2.00	7	Pn	Pn	02 21 27.0	+1.7
	SNR=73						
ATGJ	Altiaghaj	2.00	7	*e*Pn	Pn	02 21 27.0	+1.7
NDR	Nardaran	2.00	31	Pn	Pn	02 21 26.4	+1.1
	SNR=7.0						
NDR				Sn	Sb	02 21 53.8	-0.4
NDR	Nardaran	2.00	31	*e*Pn	Pn	02 21 26.3	+1.1
ITBZ	Tabriz	2.05	252	*e*Pn	Pn	02 21 28.3	+2.2
ITBZ				*e*		02 21 58.2	
ORD	Ordubad	2.05	272	Pn	Pn	02 21 27.9	+1.8
	SNR=69						
ORD				Sn	Sb	02 21 53.9	-1.9
QBL	Gabala	2.15	344	Pn	Pn	02 21 28.4	+0.9
	SNR=115						
QBL				Sn	Sb	02 21 57.1	-1.6
QBL	Gabala	2.15	344	*e*Pn	Pn	02 21 28.3	+0.9
ZNJK	Zanjan	2.20	179	*e*Pn	Pn	02 21 29.3	+1.0
ZNJK				*e*Sg	Sn	02 21 57.1	+2.7
SIZA	Siyzn	2.21	5	Pn	Pn	02 21 29.9	+1.7
	SNR=33						
SIZA				Sn	Sb	02 21 59.7	-0.6
SIZA	Siyzn	2.21	5	*e*Pn	Pn	02 21 29.9	+1.7
MNGR	Mingechevir, A	2.23	328	Pn	Pn	02 21 30.2	+1.6
	SNR=5.8						
MNGR				Sn	Sb	02 21 59.2	-1.7
MNGR	Mingechevir, A	2.23	328	*e*Pn	Pn	02 21 30.1	+1.6
XNQ	Khinaliq	2.32	351	Pn	Pn	02 21 30.6	+0.7
	SNR=131						
XNQ				Sn	Sb	02 22 00.5	-3.3
XNQ	Khinaliq	2.32	351	*e*Pn	Pn	02 21 30.6	+0.7
SBZ	Shahbuz	2.44	283	Pn	Pn	02 21 33.2	+1.6
	SNR=119						
SBZ				Sn	Sb	02 22 06.4	-0.7
SBZ	Shahbuz	2.44	283	*e*Pn	Pn	02 21 33.1	+1.6
NAX	Nakhchivan	2.46	278	Pg	Pb	02 21 35.6	-1.9
	SNR=70						
NAX				Sg	Sb	02 22 07.4	0.0
NAX	Nakhchivan	2.46	278	*e*Pn	Pb	02 21 35.6	-1.9
QUBA	Quba, Azerbaij	2.48	358	Pn	Pn	02 21 33.4	+1.5
	SNR=28						
QUBA				Sn	Sb	02 22 06.1	-1.9
GANJ	Ganja	2.50	316	Pn	Pn	02 21 33.1	+0.8
	SNR=50						
GANJ				Sn	Sn	02 22 03.5	+1.9
GANJ	Ganja	2.50	316	*e*Pn	Pn	02 21 33.0	+0.8
QUB	Quba	2.51	355	*e*Pn	Pn	02 21 33.3	+0.9
SEKA	Sheki	2.58	335	Pn	Pn	02 21 34.2	+0.9
	SNR=160						
SEKA				Sn	Sn	02 22 06.0	+2.6
SEKA	Sheki	2.58	335	*e*Pn	Pn	02 21 34.1	+0.9
QSAR	Qusar	2.65	354	Pn	Pn	02 21 35.6	+1.3
	SNR=42						
QSAR				Sn	Sn	02 22 08.2	+2.9
QSAR	Qusar	2.65	354	*e*Pn	Pn	02 21 35.5	+1.3
AKT	Akhty	2.69	346	*e*PN	Pn	02 21 35.9	+1.0
AKT				*e*		02 21 43.6	
AKT				*e*S	Sb	02 22 11.8	-2.3
AKT				*e*		02 22 18.6	
AKT				*e*		02 22 24.8	
AKT				pmax	pmax		
	comp=Z,116nm,0.5s						
AKT				smax	smax		
	comp=N,474nm,0.4s						
AKT				smax	smax		
	comp=E,382nm,0.4s						
AKT				smax	smax		
	comp=N,468nm,0.5s						
AKT				MLR	MLR		
	comp=Z,211nm,3.0s						
IGZV	Ghazvin	2.79	153	*e*Pn	Pn	02 21 36.7	+0.3
IGZV				*e*		02 22 12.0	
GDB	GEDABAY	2.88	311	Pn	Pn	02 21 39.2	+1.6
	SNR=60						
GDB				Sn	Sn	02 22 14.0	+3.0
GDB	GEDABAY	2.88	311	*e*Pn	Pn	02 21 39.1	+1.6
QALM	Alamut, Qazvin	2.92	146	*e*Pn	Pn	02 21 38.0	-0.2
QALM				*e*		02 22 12.0	
HYR	Heyderabad	3.05	287	Pg	Pb	02 21 45.8	-1.7
	SNR=65						
HYR				Sg	Sb	02 22 26.3	+2.0
MAHB	Mahabad	3.13	229	*e*Pn	Pn	02 21 43.5	+2.6
ZKT	Zaqatala	3.15	332	*e*Pn	Pn	02 21 42.9	+1.7
ZKTA	Zakatala	3.16	332	Pn	Pn	02 21 42.9	+1.7
	SNR=46						
ZKTA				Sn	Sn	02 22 19.7	+2.1
DDFL	Dedoflistskaro	3.21	324	P	Pn	02 21 45.0	+3.1
QABG	Abgarm-Qazvin	3.25	166	*e*Pn	Pn	02 21 42.9	+0.1
GNI	Garni	3.26	294	Pn	Pn	02 21 45.7	+2.9
	comp=Z,0.9nm,0.3s,baz=130,slow=17,SNR=5.7						
GNI				Lg	Lg	02 22 33.6	
	comp=Z,19nm,0.3s,baz=152,slow=23,SNR=8.2						
GNI	Garni	3.26	294	*e*P	Pn	02 21 46.4	+3.6
GNI	Garni	3.26	294		Pb	02 21 48.6	-2.7
QZX	Qazax, Azerbai	3.32	312	Pn	Pn	02 21 45.2	+1.8
	SNR=23						
QZX				Sn	Sn	02 22 24.2	+2.5
LGD	Lagodekhi	3.47	329	P	Pn	02 21 46.8	+1.3
CHTH	Charan	3.57	145	*e*Pn	Pn	02 21 48.6	+1.5
TASB	TASBURUN-IGDIR	3.57	289	*e*P	Pn	02 21 51.7	+4.7
IMHD	Mahdasht	3.58	152	*e*Pn	Pn	02 21 48.4	+1.3
IMHD				*e*		02 22 33.7	
DGRG	David-gareji	3.58	317	P	Pn	02 21 49.3	+2.2
IRAZ	Razeghan	3.62	163	*e*Pn	Pn	02 21 48.6	+0.8
IRAZ				*e*		02 22 55.0	
CLDR	Caldiran	3.68	276	*e*P	Pb	02 21 55.8	-2.6
GNBR	Gunib	3.73	341	*i* PN	Pn	02 21 52.0	+2.9
SNGE	Sanandaj	3.91	196	*e*Pn	Pn	02 21 52.9	+1.1
BTNK	Botanikuri	4.05	315	P	Pn	02 21 52.0	-1.5
KZRT	Kazreti	4.10	309	P	Pb	02 22 02.7	-2.7
KZRT				S	Sb	02 22 53.7	-0.8
VANB	Van	4.10	268	*e*P	Pb	02 22 02.7	-2.8
TBLG	Delisi	4.12	315	P	Pn	02 21 56.9	+2.5
TBLG	Delisi	4.12	315	*e*P	Pn	02 21 52.3	-2.1
TBLG	Delisi	4.12	315	PN	Pn	02 21 56.8	+2.4
TBLG	Delisi	4.12	315	Pn	Pn	02 21 56.8	+2.4
MAK	Makhachkala	4.17	349	⇓*e*PN	Pn	02 21 57.1	+2.0
MAK				*e*		02 22 07.9	
MAK				*e*		02 22 46.2	
MAK				*e*		02 22 59.1	
MAK				*e*		02 23 08.4	
MAK				pmax	pmax		
	comp=Z,161nm,0.3s						
MAK				smax	smax		
	comp=E,404nm,0.6s						
MAK				smax	smax		
	comp=E,322nm,0.5s						
BTLR	Botlikh	4.20	335	*c i*PN	Pn	02 21 57.8	+2.2
AGRB	Hanur-Agry	4.43	281	*e*P	Pb	02 22 05.1	-6.0
AKDM	Akdamar-Van	4.46	265	*e*P	Pb	02 22 07.2	-4.4
ASAO	Ashtian	4.46	165	*e*Pn	Pn	02 22 00.9	+1.5
AKH	Akhalkalaki	4.68	304	*e*P	Pn	02 22 02.7	+0.5
AKH	Akhalkalaki	4.68	304	PN	Pn	02 22 07.5	+5.3
AKH	Akhalkalaki	4.68	304		Pn	02 22 07.5	+5.3
MLAZ	Malazgirt-MUS	4.74	275	*e*P	Pb	02 22 10.4	-6.0
GUDG	Gudauri	4.77	320	P	Pn	02 22 04.7	+1.1
GUDG				S	Sn	02 22 59.4	+1.6
GROC	Groznyy	4.82	335	*e*PN	Pn	02 22 05.1	+1.0
GROC				*e*		02 22 59.0	
GROC				pmax	pmax		
	comp=Z,38nm,0.4s						
GROC				smax	smax		
	comp=E,27nm,0.6s						
GROC				smax	smax		
	comp=N,50nm,0.4s						
GROC				smax	smax		
	comp=N,50nm,0.4s						
GROC				MLR	MLR		
	comp=Z,61nm,2.0s						
BKRG	Bakuriani	4.85	308	P	Pn	02 22 11.3	+6.8
BKRG				S	Sb	02 23 17.8	+1.7
GHVR	GHOM	4.88	153	*e*Pn	Pn	02 22 06.4	+1.4
SIRT	Sirnak	5.06	256	*e*P	Pb	02 22 16.8	-5.0
SENK	Senkaya-Erzuru	5.12	291	*e*P	Pn	02 22 11.7	+3.3
ZEI	Tsey	5.30	319	*e*P	Pn	02 22 12.3	+1.5
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ONI	Oni	5.40	315	P	Pn	02 22 15.3	+3.2
ONI	Oni	5.40	315	*e*P	Pn	02 22 09.9	-2.2
IMND	Minoodasht	5.59	105	*e*Pn	Pn	02 22 13.6	-1.0
SVAN	Silvan-Diyarba	5.87	265	*e*P	Pn	02 22 27.1	+8.6
NEY	Neytrino	6.24	316	*i* P	Pn	02 22 27.6	+3.9
KBZ	Khabaz	6.49	320	Pn	Pn	02 22 29.2	+2.3
	comp=Z,0.2nm,0.3s,baz=204,slow=2.2,SNR=6.3						
KBZ	Khabaz	6.49	320	*i* P	Pn	02 22 30.4	+3.5
SHA1	Shidzhatmaz	6.62	319	*i* P	Pn	02 22 32.2	+3.3
KVAR	Kislovodsk Arr	6.75	321	Pn	Pn	02 22 33.3	+2.6
	baz=328,slow=19,SNR=2.9						
KVAR				Sn	Sn	02 23 50.8	+4.4
	baz=270,slow=4.0,SNR=1.8						
KIV	Kislovodsk	6.76	321	*e*P	Pn	02 22 33.6	+2.9
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
KIV	Kislovodsk	6.76	321	Pn	Pn	02 22 33.3	+2.6
GEYT	Alibeck	7.51	94	Pn	Pn	02 22 39.7	-1.4
	comp=Z,8.1nm,0.3s,baz=285,slow=4.6,SNR=80						
GEYT				Sn	Sn	02 23 59.1	-6.0
	comp=Z,2.6nm,0.3s,baz=301,slow=23,SNR=3.3						
GEYT	Alibeck	7.51	94		Pn	02 22 38.9	-2.2
GYA0B	ALIBECK ARRAY	7.51	94	⇑P	Pn	02 22 40.1	-1.0
GYA0B				⇓S	Sn	02 23 58.4	-6.7
GYA0B	ALIBECK ARRAY	7.51	94		Pn	02 22 39.4	-1.7
ISFR	Sfrayin	7.63	101	*e*Pn	Pn	02 22 42.8	-0.1
IEMG	Emamgholi	8.04	97	*e*Pn	Pn	02 22 47.3	-1.2
SOC	Sochi	8.19	308	*i* P	Pn	02 22 52.0	+1.7
SOC				pmax	pmax		
	comp=Z,12nm,0.3s						
BR131	Keskin Array S	11.64	279	*i* P	Pn	02 23 43.5	+5.7
BRTR	Keskin Array B	11.64	279	LR	LR	02 29 04.9	
	comp=Z,27nm,21.5s,baz=43,slow=42						
AB31	Akbulak array	13.17	34	⇑P	Pn	02 23 55.0	-3.4
	comp=Z,0.6nm,0.3s,baz=206,slow=13,SNR=61						
AB31				⇓S	Sn	02 26 06.8	-17
	comp=Z,4.1nm,0.5s,baz=208,slow=24,SNR=9.9						
AB31	Akbulak array	13.17	34	P	Pn	02 23 55.0	-3.4
AB31				S	Sn	02 26 12.6	-11
ABKAR	Akbulak array	13.17	34		Pn	02 23 54.0	-4.4
AKTO	Aktyubinsk	13.34	27	Pn	Pn	02 23 57.1	-3.6
	comp=Z,1.7nm,0.3s,baz=207,slow=5.7,SNR=20						
AKTO				Sn	Sn	02 26 15.9	-12
	comp=Z,0.8nm,0.3s,baz=221,slow=19,SNR=9.4						
AKTO	Aktyubinsk	13.34	27	⇑P	Pn	02 23 56.4	-4.3
	comp=Z,4.7nm,0.6s						
AKTO				⇑S	Sn	02 26 14.5	-13
	comp=Z,9.0nm,0.8s						
VSR	Storozhevoye	14.02	335	*i* P	Pn	02 24 13.3	+3.4
EIL	Elat	14.55	235	LR	LR	02 31 13.2	
	comp=Z,28nm,20.5s,baz=41,slow=43						
KBL	Kabul	16.93	98	P	Pn	02 24 46.2	-2.2
KBL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KBL	Kabul	16.93	98	Pn	Pn	02 24 46.1	-2.2
KK31	Karatay Array	17.04	69	⇑P	Pn	02 24 47.4	-2.1
	comp=Z,0.9nm,0.5s,baz=272,slow=13,SNR=12						
KK31				⇑S	Sn	02 27 41.4	-16
	comp=Z,0.7nm,0.5s,baz=289,slow=23,SNR=4.5						
KK31	Karatay Array	17.04	69	P	Pn	02 24 45.9	-3.6
KK31				pmax	pmax		
	comp=Z,12nm,1.7s						
KK31	Karatay Array	17.04	69	Pn	Pn	02 24 45.9	-3.6
KKAR	Karatay Array	17.04	69	P	Pn	02 24 45.5	-4.0
KKAR	Karatay Array	17.04	69	Pn	Pn	02 24 45.5	-4.0
AKASG	Malin Array Be	18.09	317	P	P	02 25 03.7	+1.3
	comp=Z,0.6nm,0.3s,baz=122,slow=12,SNR=3.3						
OBN	Obninsk	18.16	337	*e*P	P	02 25 06.5	+3.3
OBN				pmax	pmax		
	comp=Z,14nm,0.5s						
ARU	Arti	18.76	17	P	P	02 25 07.1	-2.7
	comp=Z,0.0nm,0.3s,baz=197,slow=14,SNR=6.9						
ARU	Arti	18.76	17	*c i*P	P	02 25 07.8	-2.0
ARU				S	Sn	02 28 32.0	-7.1
ARU				pmax	pmax		
	comp=Z,16nm,2.0s						
ARU	Arti	18.76	17	IAmb	IAmb	02 25 23.5	
	comp=Z,5.7nm,0.5s						
ARSB	Arslanbob	18.78	75	P	P	02 25 07.7	-2.6
ARSB				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ARSB	Arslanbob	18.78	75	P	P	02 25 07.7	-2.6
SVE	Sverdlovsk	19.63	20	*e*P	P	02 25 20.0	+0.7
KIRV	Kirov	19.73	1	P	P	02 25 20.4	+0.1
	comp=Z,2.5nm,0.3s,baz=166,slow=8.3,SNR=4.4						
AAK	Ala-Archa	19.93	71	P	Pn	02 25 24.8	+0.1
	comp=Z,0.5nm,0.3s,baz=235,slow=5.2,SNR=37						
AAK				LR	LR	02 34 26.0	
	comp=Z,48nm,18.6s,baz=271,slow=41						
AAK	Ala-Archa	19.93	71	⇑P	Pn	02 25 25.0	+0.3
	comp=Z,13nm,0.8s						
AAK	Ala-Archa	19.93	71	*i* P	Pn	02 25 25.3	+0.6
AAK				pmax	pmax		
	comp=Z,12nm,0.8s						
AAK	Ala-Archa	19.93	71	P	Pn	02 25 24.4	-0.3
NIL	Nilore	20.51	97	P	P	02 25 29.7	+0.6
NIL				pmax	pmax		
	comp=Z,12nm,0.8s						
NIL	Nilore	20.51	97	P	P	02 25 29.6	+0.6
BRVK	Borovoye	20.57	39	⇓P	P	02 25 30.4	+0.9
	comp=Z,7.4nm,0.9s						
BRVK				⇓S	S	02 29 04.3	-13
	comp=Z,2.0nm,0.5s						
BRVK	Borovoye	20.57	39	*i* P	P	02 25 30.7	+1.1
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BRVK	Borovoye	20.57	39	P	P	02 25 29.2	-0.4
BRVK				IAmb	IAmb	02 25 32.8	
	comp=Z,6.6nm,0.9s						
BVAR	Borovoye Array	20.60	40	P	P	02 25 30.4	+0.5
	comp=Z,2.0nm,0.3s,baz=239,slow=10.0,SNR=17						
BVAR				S	S	02 29 05.4	-13
	comp=Z,2.5nm,0.6s,baz=230,slow=25,SNR=9.7						
NRN	Naryn	21.05	74	P	P	02 25 35.4	+0.2
NRN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NRN	Naryn	21.05	74	P	P	02 25 35.4	+0.2
KSH	Kashi	21.18	80	P	P	02 25 34.8	-1.6
KSH				sP	pP	02 25 41.8	-3.8
KSH				S	S	02 29 20.6	-10
KSH				sS	Sn	02 29 27.3	-11
KSH				PcP	PcP	02 29 44.4	+3.4
KSH				SS	SnSn	02 29 52.1	-0.7
CRVS	Cervenica-Dubn	21.89	306	*e*P	P	02 25 45.5	+1.7
CRVS				*e*		02 25 52.1	
CRVS	Cervenica-Dubn	21.89	306	*e*P	P	02 25 45.5	+1.7
CRVS	Cervenica-Dubn	21.89	306	*e*PN	pP	02 25 52.1	-1.0
KLMR	Klimovskoe	22.73	348	*e*P	P	02 25 52.2	-0.4
KLMR				pmax	pmax		
	comp=Z,17nm,0.8s						
KLMR	Klimovskoe	22.73	348	*e*P	P	02 25 52.2	-0.4
KLMR				AMP		02 25 55.3	
	comp=Z,17nm,0.8s						
PRGR	Permogore	22.86	356	*e*P	P	02 25 47.7	-6.3
PRGR				pmax	pmax		
	comp=Z,11nm,1.1s						
KURBB	Kurchatov Arra	24.10	51	P	P	02 26 07.3	+1.2
	comp=Z,1.8nm,0.6s,baz=258,slow=9.4,SNR=16						
KURK	Kurchatov	24.18	51	*ce*P	P	02 26 09.1	+2.2
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KURK	Kurchatov	24.18	51	P	P	02 26 04.6	-2.2
MAKZ	Makanchi	25.56	61	P	P	02 26 18.5	-1.0
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAKZ	Makanchi	25.56	61	P	P	02 26 18.5	-1.0
MAKZ				IAmb	IAmb	02 26 23.4	
	comp=Z,3.5nm,0.9s						
MK31	Makanchi Array	25.77	61	P	P	02 26 21.9	+0.4
MK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MK31	Makanchi Array	25.77	61	P	P	02 26 21.9	+0.4
MK31				IAmb	IAmb	02 26 25.1	
	comp=Z,3.2nm,0.8s						
MKAR	Makanchi Array	25.77	61	P	P	02 26 22.6	+1.2
	comp=Z,4.4nm,0.8s,baz=261,slow=8.0,SNR=35						
MKAR	Makanchi Array	25.77	61	P	P	02 26 21.7	+0.3
FINES	FINESS Array B	26.55	336	P	P	02 26 28.2	0.0
	comp=Z,4.0nm,1.0s,baz=140,slow=9.2,SNR=10						
FINES	FINESS Array B	26.55	336	*e*P	P	02 26 30.9	+2.7
FINES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GERES	GERESS Array B	26.87	303	P	P	02 26 32.3	+0.9
	comp=Z,0.2nm,0.4s,baz=80,slow=8.1,SNR=2.4						
ARCES	ARCESS Array B	33.11	345	P	P	02 27 26.5	+0.2
	comp=Z,2.2nm,0.8s,baz=134,slow=8.7,SNR=7.3						
TIXI	Tiksi	50.59	24	*i* P	P	02 29 51.0	+2.2

TIXI				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KSRS	Korea Array	60.41	64	P	P	02 30 58.7	-1.1
	comp=Z,0.6nm,0.5s,baz=309,slow=7.1,SNR=3.7						
MA2	Magadan	62.97	34	*ce*P	P	02 31 21.4	+4.7
MA2				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BILL	Bilibino	63.71	22	*i* P	P	02 31 24.2	+2.7
BILL				*i*		02 31 34.8	
BILL				*i*		02 31 56.4	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						

IDC 15 02:28:31.1±2.8**, 2°.86N**×**127°.92E, h0^{km}, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/30**, mbtmp3.3**/3**, Error ellipse: s-maj=234.1km s-min=26.0km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.52	165	P	P	02 33 43.1	+0.1
	0.2nm,0.3s,baz=344,slow=10,SNR=2.0						
ASAR	Alice Springs	27.00	168	P	P	02 34 14.6	-0.4
	0.2nm,0.6s,baz=351,slow=7.3,SNR=4.3						
MKAR	Makanchi Array	58.95	325	P	P	02 38 32.5	+0.1
	0.2nm,0.4s,baz=113,slow=8.6,SNR=6.6						

*GUC **15** 02:34:58.0±0.6, 30°.57S×71°.31W, h25^{km}±4^{km}, ML3.6*
*SJA **15** 02:34:58.7±0.7, 30°.44S×71°.40W, h16^{km}±4^{km}, ML3.2, MW3.2*
ISC 15 02:34:57.8±1.3**, 30°.53S**±0°.04×**71°.44W**±0°.08**, h10^{km}, n28, σ1^{s}.96**/36**, 1C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO04	Tololo Observa	0.66	57	*i* P	Pg	02 35 10.6	-0.1
GO04				*e*S	Sg	02 35 19.5	+0.1
CO03	El Pedregal	0.72	116	⇑*i*P	Pg	02 35 10.6	-1.1
CO03				*i* S	Sg	02 35 19.8	-1.4
AROD	Rodeo	1.74	78	*i* P	Pb	02 35 29.6	-0.5
ACDV	Cuesta del Vie	2.04	80	*i* P	Pb	02 35 34.8	-0.3
ACCO	Cerro Coronel	2.05	92	*i* P	Pb	02 35 35.1	-0.2
RTLS	Leoncito	2.23	125	*i* P	Pb	02 35 37.8	-0.7
RTLS				IAML		02 36 07.2	
	comp=Z,233nm,0.4s						
ROCH	El Roble	2.46	172	*e*P	Pn	02 35 39.4	+1.1
ROCH				*i* S	Sn	02 36 10.3	+1.8
ROCH				IAML		02 36 18.4	
	comp=E,292nm,0.6s						
AMOG	MOGNA	2.57	100	*i* P	Pb	02 35 42.0	-2.1
ZON	Zonda	2.58	114	*i* P	Pb	02 35 42.3	-2.0
ZON				IAML		02 36 25.3	
	comp=Z,55nm,0.5s						
RTLL	Cerro Villicun	2.67	108	*i* P	Pb	02 35 43.5	-2.2
PEL	Peldehue	2.68	166	*e*P	Pn	02 35 42.6	+1.4
PEL				*i* S	Sn	02 36 15.8	+2.0
PEL				IAML		02 36 21.8	
	comp=E,243nm,0.4s						
PEL	Peldehue	2.68	166	*i* P	Pn	02 35 42.9	+1.7
PEL				*e*S	Sb	02 36 17.3	-1.7
RTCV	Cerro Valdivia	2.82	119	*i* P	Pb	02 35 46.1	-2.2
CFA	Coronel Fontan	2.95	112	*i* P	Pn	02 35 47.5	+2.7
FCH	Farellones	2.96	161	IAML		02 36 33.6	
	comp=N,111nm,0.3s						
CLCH	Cerro Calan	2.96	165	*e*P	Pb	02 35 49.4	-1.3
CLCH				*i* S	Sn	02 36 23.4	+2.8
ASAL	Salagasta	3.03	133	*i* P	Pb	02 35 49.4	-2.5
MT03	Universidad Ad	3.06	165	*e*P	Pn	02 35 47.1	+0.8
MT03				*i* S	Sn	02 36 24.4	+1.3
MT03				IAML		02 36 34.3	
	comp=N,422nm,0.5s						
GO03	Copiap	3.11	20	*e*P	Pn	02 35 48.3	+1.3
GO03				*i* S	Sb	02 36 28.0	-3.4
GO03				IAML		02 36 37.3	
	comp=E,134nm,0.4s						
GO03	Copiap	3.11	20	*i* P	Pn	02 35 48.4	+1.3
ARCO	CERRO ARCO	3.14	138	*i* P	Pb	02 35 51.5	-2.4
ARCO				IAML		02 36 39.5	
	comp=Z,104nm,0.8s						
VCA	Vinchina	3.34	58	*i* P	Pn	02 35 52.7	+2.4
AAGR	Agrelo	3.38	140	*i* P	Pb	02 35 57.2	-0.7
LMEL	Las Melosas	3.47	163	*e*P	Pn	02 35 54.4	+2.3
LMEL				*i* S	Sn	02 36 36.3	+3.0
LMEL				IAML		02 36 45.8	
	comp=N,138nm,0.2s						
ACAN	Cantantal	4.03	117	*i* P	Pn	02 36 03.4	+3.7
ACLC	CERRO LA CRUZ	4.05	75	*i* P	Pn	02 36 02.3	+2.2
APLL	PUNTA DE LOS L	4.24	89	*i* P	Pn	02 36 04.4	+1.7
APLL				IAML		02 36 19.2	
	comp=Z,20nm,0.5s						
MRA	San Martin	5.24	113	*i* P	Pn	02 36 16.8	+0.4

*GUC **15** 02:40:40.6±0.7, 19°.42S×71°.05W, h27^{km}±2^{km}, ML3.5*
*IDC **15** 02:40:43.4±4.8, 19°.40S×70°.86W, h52^{km}±41^{km}, mb3.8/5, mb1 3.9/7, mb1mx3.5/29, mbtmp4.0/7, ML3.3/2, MS2.6/4, Ms1 2.6/4, ms1mx2.5/25, Error ellipse: s-maj=47.9km s-min=18.5km az=97.0*
ISC 15 02:40:38.3±2.8**, 19°.42S**±0°.03×**71°.04W**±0°.09**, h11^{km}**±16^{km}**, n26, σ1^{s}.39**/41**, mb4.0**/5**, 7C-8D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.88	102	⇑*i*P	Pb	02 40 55.5	-0.3
PSGC				*e*S	Sg	02 41 07.3	+0.4
PB12	IPOC Station P	1.05	40	⇓*i*P	Pb	02 40 58.2	-0.4
PB12				*e*S	Sb	02 41 12.0	-0.3
PB12				IAML		02 41 18.0	
	comp=E,1µm,0.6s						
AP01	Chacalluta	1.24	32	⇓*i*P	Pn	02 41 01.2	-0.4
AP01				*e*S	Sn	02 41 17.9	-0.5
AP01				IAML		02 41 21.9	
	comp=N,2µm,0.2s						
PB11	IPOC Station P	1.35	105	⇓*i*P	Pn	02 41 03.5	+0.2
PB11				*e*S	Sg	02 41 20.8	-0.9
PB11				IAML		02 41 24.3	
	comp=N,1µm,0.6s						
MNMC	Minye Minye	1.39	78	⇓*i*P	Pn	02 41 04.1	+0.1
MNMC				*e*S	Sg	02 41 22.4	-0.9
MNMC				IAML		02 41 26.8	
	comp=E,2µm,0.5s						
TA01	Diego Aracena	1.40	145	⇑*i*P	Pn	02 41 03.8	0.0
TA01				*e*S	Sn	02 41 21.5	-0.8
TA01				IAML		02 41 29.5	
	comp=E,2µm,0.8s						
PATCX	Punta Patache	1.62	149	⇓*i*P	Pn	02 41 07.4	+0.4
PATCX				IAML		02 41 40.0	
	comp=E,642nm,0.5s						
GO01	Chusmiza	1.76	98	⇑*i*P	Pb	02 41 10.3	-0.6
GO01				*e*S	Sg	02 41 33.8	-1.1
GO01				IAML		02 41 36.9	
	comp=N,1µm,0.2s						
PB16	IPOC Station P	1.81	54	⇓*i*P	Pn	02 41 11.1	+1.0
PB16				*i* S	Sg	02 41 35.6	-1.0
PB16				IAML		02 41 45.0	
	comp=N,678nm,0.8s						
PB08	IPOC Station P	1.91	112	⇑*i*P	Pn	02 41 12.3	+1.0
PB08				*i* S	Sb	02 41 37.3	-0.4
PB02	IPOC Station P	2.17	151	⇓*i*P	Pn	02 41 15.2	+0.6
PB02				*e*S	Sn	02 41 42.6	+0.9
PB02				IAML		02 41 54.3	
	comp=E,997nm,0.6s						
PB01	IPOC Station P	2.17	138	⇑*i*P	Pn	02 41 15.2	+0.5
PB01				*e*S	Sn	02 41 42.4	+0.7
PB01				IAML		02 41 52.0	
	comp=N,333nm,0.3s						
PB07	IPOC Station P	2.54	155	⇓*e*P	Pn	02 41 19.9	+0.2
PB07				*i* S	Sn	02 41 51.1	+0.4
PB03	IPOC Station P	2.88	156	*i* P	Pn	02 41 24.8	+0.4
PB03				*i* S	Sb	02 42 02.8	-2.4
PB03				IAML		02 42 20.9	
	comp=E,211nm,0.6s						
PB09	IPOC Station P	2.90	145	⇑*e*P	Pn	02 41 25.9	+1.2
PB09				*i* S	Sn	02 42 00.4	+0.7
LVC	Limon Verde	3.74	148	P	Pn	02 41 38.3	+1.8
	comp=E,1.8nm,0.3s,baz=349,slow=11,SNR=27						
LVC				S	Sn	02 42 21.1	+0.3
	comp=E,7.1nm,0.3s,baz=268,slow=8.8,SNR=4.9						
LVC				Lg	Lg	02 42 33.9	
	comp=E,8.4nm,0.3s,baz=25,slow=16,SNR=6.0						
LVC				LR	LR	02 43 06.6	
	comp=E,55nm,21.5s,baz=332,slow=39						
LPAZ	La Paz	4.17	42	P	Pn	02 41 46.6	+4.1
	comp=E,0.4nm,0.3s,baz=191,slow=7.1,SNR=15						
LPAZ				Lg	Lg	02 42 47.9	
	baz=271,slow=32,SNR=2.0						
LPAZ				LR	LR	02 42 53.6	
	comp=E,31nm,20.4s,baz=271,slow=32						
LPAZ	La Paz	4.17	42	⇑*i*P	Pn	02 41 45.3	+2.7
SIV	San Ignacio	10.09	72	P	Pn	02 43 04.9	+1.5
	comp=E,0.3nm,0.3s,baz=269,slow=12,SNR=7.4						
SIV				LR	LR	02 47 41.7	
	comp=E,103nm,18.8s,baz=280,slow=42						
CPUP	Villa Florida	14.38	121	P	Pn	02 44 05.9	+3.9
	comp=E,0.1nm,0.3s,baz=282,slow=11,SNR=5.2						
PLCA	Paso Flores	21.25	179	P	P	02 45 24.6	0.0
	comp=E,2.4nm,1.1s,baz=6.3,slow=9.2,SNR=3.3						
PTGA	Pitinga	21.51	32	P	P	02 45 25.3	-2.3
	comp=E,2.9nm,0.4s,baz=215,slow=16,SNR=9.6						
PTGA				LR	LR	02 54 55.4	
	comp=E,13nm,19.9s,baz=214,slow=40						
PMSA	Palmer Station	45.57	176	P	P	02 48 56.8	-1.2
	comp=E,23nm,1.1s,baz=10,slow=11,SNR=3.6						
TORD	Torodi Ar. Bea	78.57	72	P	P	02 52 39.2	-1.4
	comp=E,1.5nm,0.9s,baz=253,slow=5.0,SNR=7.1						
YKA	Yellowknife Ar	88.58	341	P	P	02 53 31.2	+0.3
	comp=E,0.6nm,0.7s,baz=135,slow=5.2,SNR=8.4						
MKAR	Makanchi Array	145.05	33	PKP	PKPab	03 00 15.0	-0.4
	comp=E,0.6nm,0.8s,baz=318,slow=3.3,SNR=7.0						

IDC 15 02:46:56.6±2.6**, 20°.35S**×**71°.23W, h0^{km}, mb3.5**/2**, mb1 3.5**/4**, mb1mx3.4**/21**, mbtmp3.4**/4**, ML3.2**/2**, Error ellipse: s-maj=69.1km s-min=42.3km az=148.0, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	5.00	37	Pn	Pn	02 48 13.6	+0.1
	0.6nm,0.3s,baz=220,slow=7.6,SNR=14						
LPAZ				Sn	Sn	02 49 13.9	+1.6
	baz=234,slow=8.7,SNR=1.4						
SIV	San Ignacio	10.58	67	Pn	Pn	02 49 29.0	-0.7
	0.2nm,0.3s,baz=304,slow=12,SNR=3.5						
PTGA	Pitinga	22.39	31	P	P	02 51 49.8	-7.1
	1.2nm,0.3s,baz=203,slow=13,SNR=5.2						
TORD	Torodi Ar. Bea	79.03	72	P	P	02 59 03.5	+0.3
	0.3nm,0.5s,baz=256,slow=5.8,SNR=2.2						
YKA	Yellowknife Ar	89.39	341	P	P	02 59 54.6	-0.2
	0.1nm,0.4s,baz=138,slow=5.5,SNR=2.8						

*GCMT **15** 02:59:27.9±0.2, 13°.72N±0°.01×57°.22E±0°.01, h12^{km}, MW5.0/129, Moment Tensor Solution. s49,c62; s129,c209; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.45±.07; M$_{\theta\theta}$1.98±.08; M$_{\phi\phi}$2.47±.08; M$_{r\theta}$0.96±.26; M$_{\theta\phi}$-1.81±.06; M$_{\phi r}$-1.68±.25; Best double couple: M$_0$4.66800×10^{16} NP1:φ$_s$135.00000°, δ33.00000°, λ-97.00000°. NP2:φ$_s$323.00000°, δ57.00000°, λ-86.00000°. Principal axes: T 4.4570, Plg12.0000°, Azm50.0000°; N 0.4240, Plg4.0000°, Azm141.0000°; P -4.8800, Plg77.0000°, Azm248.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **15** 02:59:27.4±0.4, 13°.80N×57°.22E, h0^{km}, mb4.8/43, mb1 4.8/45, mb1mx4.8/53, mbtmp4.7/45, ML3.7/2, MS4.3/47, Ms1 4.3/47, ms1mx4.3/58 Error ellipse: s-maj=10.8km s-min=9.8km az=151.0*
*BJI **15** 02:59:27.0±0.0, 13°.70N×57°.30E, h10^{km}, mB5.2/50, mb4.9/62, Ms4.9/51, Ms7 4.7/50*
*NEIC **15** 02:59:28.9±1.4, 13°.77N±0°.06×57°.11E±0°.08, h10^{km}±1^{km}, mb5.2/158, Error ellipse: s-maj=13.3km s-min=9.4km az=109.0*
*OMAN **15** 02:59:32.3±0.4, 14°.01N×57°.12E, h28^{km}±88^{km}, ml4.3/5, ms4.2/1, Mwp5.0/5, Error ellipse: s-maj=76.6km s-min=8.0km az=266.0*
ISC 15 02:59:30.9±1.0**, 13°.84N**±0°.04×**57°.17E**±0°.04**, h21^{km}**±10^{km}**, n449, σ1^{s}.54**/484**, mb5.1**/157**, MS4.4**/56**, 19C-25D, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCY	Socotra	3.50	242	P	Pn	03 00 18.0	-6.3
	SNR=189						
SOCY				S	Sn	03 00 54.3	-11
SOCY	Socotra	3.50	242		Pn	03 00 17.9	-6.3
DMTO	DMTO	4.41	331	P	Pn	03 00 35.2	-1.4
	SNR=79						
DMTO				S	Sn	03 01 23.9	-3.4
SHAO	Shalim	4.42	341	*i* Pn	Pn	03 00 34.8	-2.0
	SNR=32						
SHAO	Shalim	4.42	341	P	Pn	03 00 35.0	-1.8
	SNR=31						
SHAO				P	Pn	03 00 35.0	-1.8
	SNR=31						
SHAO				S	Sn	03 01 22.8	-4.9
RBK	Rabkut	4.63	322	P	Pn	03 00 38.9	-0.8
RBK				P	Pn	03 00 38.9	-0.8
RBK				S	Sn	03 01 30.3	-2.5
RBK				S	Sn	03 01 30.3	-2.5
ABTO	Aybut	5.11	314	P	Pn	03 00 45.8	-0.6
ABTO				P	Pn	03 00 45.8	-0.6
WHFO	Wadi Hawf	5.21	322	P	Pn	03 00 47.5	-0.2
	SNR=20						
WHFO				P	Pn	03 00 47.5	-0.2
	SNR=20						
WHFO				S	Sn	03 01 46.4	-0.8
WHFO				S	Sn	03 01 46.4	-0.8
DQM	DQM	6.07	3	P	Pn	03 00 57.8	-1.7
DQM				S	Sn	03 02 04.3	-4.0
MHTO	MHTO	7.15	6	P	Pn	03 01 13.3	-1.1
	SNR=17						
MHTO				P	Pn	03 01 13.3	-1.1
	SNR=17						
WSAR	Wadi Sarin	9.46	8	Pn	Pn	03 01 44.7	-1.2
	0.4nm,0.3s,baz=200,slow=15,SNR=3.5						
WSAR				LR	LR	03 05 07.2	
	comp=Z,5µm,20.7s,baz=200,slow=36						
ASHO	Ashiyiah	10.84	355	Pn	Pn	03 02 02.4	-2.6
UOSS	Minazif	11.09	355	Pn	Pn	03 02 06.3	-2.0
NAZ	Nazwa, Dubai	11.18	353	Pn	Pn	03 02 10.1	+0.4
DAMY	Dhamar	12.41	275	Pn	Pn	03 02 25.0	-1.7
ATD	Arta Tunnel	14.16	262	Pn	Pn	03 02 51.0	+0.7
	0.6nm,0.3s,baz=104,slow=19,SNR=2.3						
ATD				LR	LR	03 06 42.9	
	comp=Z,2µm,20.8s,baz=84,slow=31						
ATD	Arta Tunnel	14.16	262	Pn	Pn	03 02 47.8	-2.6
RAYN	Ar Rayn	14.65	313	*i* Pn	Pn	03 02 56.0	-1.1
	SNR=39						
RAYN	Ar Rayn	14.65	313		Pn	03 02 56.0	-1.1
POO	Poona	16.69	72	*e*P	Pn	03 03 24.0	+0.4
MSEY	Mahe Island	18.47	185	*i* P	P	03 03 44.5	-1.0
	SNR=9.7						
MSEY	Mahe Island	18.47	185	P	P	03 03 44.5	-1.0
MSEY				IAmb	IAmb	03 03 47.4	
	comp=Z,136nm,1.4s						
KAAM	Kaadhehdhoo	20.53	129	P	P	03 04 07.5	-0.5
KAAM				IAmb	IAmb	03 04 11.9	
	comp=Z,383nm,1.7s						
HYB	Hyderabad	20.90	77	*i* P	P	03 04 12.0	-0.1
HRA	Herat	20.97	12	P	P	03 04 13.3	+0.4
HRA				IAmb	IAmb	03 04 22.6	
	comp=Z,117nm,1.2s						
THW	Thamme Wali	23.09	33	P	P	03 04 36.4	+1.0
KBL	Kabul	23.25	25	P	P	03 04 39.1	+2.0
KBL				IAmb	IAmb	03 04 59.0	
	comp=Z,55nm,1.3s						
NDI	New Delhi	23.77	48	*e*P	P	03 04 44.0	+1.9
CEP	Cherat	23.98	31	P	P	03 04 44.9	+0.7
GEYT	Alibeck	24.01	2	P	P	03 04 44.8	+0.4
	comp=Z,25nm,1.1s,baz=202,slow=6.4,SNR=44						
GEYT				LR	LR	03 15 09.7	
	comp=Z,497nm,20.0s,baz=170,slow=39						
GEYT	Alibeck	24.01	2	P	P	03 04 44.1	-0.2
GYA0B	ALIBECK ARRAY	24.01	2	P	P	03 04 44.0	-0.3
GYA0B				IAmb	IAmb	03 04 50.7	
	comp=Z,85nm,1.3s						
PALK	Pallekele	24.03	103	P	P	03 04 45.2	+0.5
	comp=Z,11nm,0.9s,baz=273,slow=9.6,SNR=4.4						
PALK				LR	LR	03 12 32.3	
	comp=Z,1µm,19.3s,baz=208,slow=33						
PALK	Pallekele	24.03	103	P	P	03 04 45.0	+0.3
PALK				IAmb	IAmb	03 04 56.6	
	comp=Z,96nm,1.6s						
NIL	Nilore	24.55	34	P	P	03 04 50.5	+1.2
NIL				IAmb	IAmb	03 04 56.3	
	comp=Z,79nm,1.3s						
CHCP	Chirah Chowk	24.56	34	P	P	03 04 51.5	+2.1
KMBO	Kilima Mbogo	24.71	235	P	P	03 04 51.6	+0.5
	comp=Z,13nm,0.9s,baz=45,slow=10,SNR=38						
KMBO				LR	LR	03 14 23.7	
	comp=Z,1µm,19.3s,baz=88,slow=36						
KMBO	Kilima Mbogo	24.71	235	*i* P	P	03 04 51.6	+0.5
	SNR=28						
KMBO	Kilima Mbogo	24.71	235	P	P	03 04 50.5	-0.6
EIL	Elat	25.89	311	P	P	03 05 02.5	+1.1
	comp=Z,24nm,1.0s,baz=132,slow=4.6,SNR=19						
EIL				LR	LR	03 15 14.2	
	comp=Z,1µm,18.7s,baz=126,slow=36						
CHGR	Chuyangaron	26.91	21	P	P	03 05 12.6	+2.0
CHGR				IAmb	IAmb	03 05 19.7	
	comp=Z,56nm,1.1s						
MMAI	Mount Meron Ar	27.52	318	P	P	03 05 18.0	+1.8
	comp=Z,12nm,0.8s,baz=127,slow=9.2,SNR=6.7						
MMAI				LR	LR	03 16 53.3	
	comp=Z,736nm,18.4s,baz=140,slow=38						
GAR	Garm	27.63	22	P	P	03 05 18.6	+1.4
GAR				IAmb	IAmb	03 05 28.1	
	comp=Z,67nm,1.5s						
GNI	Garni	28.39	340	P	P	03 05 25.7	+1.7
	comp=Z,30nm,1.0s,baz=237,slow=2.5,SNR=19						
GNI				LR	LR	03 16 46.7	
	comp=Z,178nm,22.0s,baz=144,slow=36						
GNI	Garni	28.39	340	*i* P	P	03 05 25.4	+1.4
	SNR=19						
GNI	Garni	28.39	340	P	P	03 05 24.9	+0.9
BTK	Batken	28.74	22	P	P	03 05 28.9	+1.8
BTK				IAmb	IAmb	03 05 35.6	
	comp=Z,106nm,1.2s						
GAZ	Gaziantep	29.27	326	P	P	03 05 33.2	+1.4
GAZ				IAmb	IAmb	03 05 36.1	
	comp=Z,47nm,1.4s						
TAS	Tashkent	29.36	19	P	P	03 05 33.1	+0.7
MBAR	Mbarara	29.85	243	LR	LR	03 17 52.3	
	comp=Z,2µm,18.3s,baz=60,slow=37						
KSH	Kashi	30.47	29	P	P	03 05 39.4	-3.1
KSH				pP	pP	03 05 44.3	-3.8
KSH				PcP	PcP	03 08 40.5	-1.1
KSH				S	S	03 10 36.3	-6.4
KSH				PcS	PcS	03 12 20.8	-4.5
KSH				ScS	ScS	03 16 13.4	-5.8
KSH				pmax	pmax		
	comp=Z,74nm,1.4s						
KSH				pmax	pmax		
	comp=Z,230nm,5.9s						
KSH				LR	LR		
	comp=Z,3µm,15.7s						
KSH				LR	LR		
	comp=Z,1µm,17.1s						
KSH				LR	LR		
	comp=Z,4µm,17.4s						
ARSB	Arslanbob	30.66	24	P	P	03 05 44.7	+0.6
KK31	Karatay Array	31.35	19	P	P	03 05 50.5	+0.5
KKAR	Karatay Array	31.35	19	P	P	03 05 51.1	+1.1
KKAR					PcP	03 08 44.1	+0.4
AML	Almayashu	31.62	24	P	P	03 05 54.5	+1.6
	SNR=12						
NRN	Naryn	32.01	27	P	P	03 05 57.3	+1.1
UCH	Uchtor	32.03	25	P	P	03 05 58.9	+2.3
	SNR=9.8						
EKS2	Erkin-Say	32.11	23	P	P	03 05 59.8	+3.0
	SNR=24						
KBZ	Khabaz	32.21	340	P	P	03 05 58.4	+0.9
	comp=Z,12nm,1.0s,baz=149,slow=5.8,SNR=17						
KBZ				LR	LR	03 20 50.0	
	comp=Z,460nm,20.7s,baz=144,slow=40						
KZA	Kyzart	32.21	26	P	P	03 06 00.6	+2.5
	SNR=14						
AAK	Ala-Archa	32.37	24	P	P	03 06 00.5	+1.4
	comp=Z,18nm,1.0s,baz=194,slow=7.0,SNR=33						
AAK				LR	LR	03 20 19.6	
	comp=Z,688nm,21.1s,baz=188,slow=39						
AAK	Ala-Archa	32.37	24	P	P	03 06 01.7	+2.5
	SNR=17						
AAK	Ala-Archa	32.37	24	*i* P	P	03 06 01.7	+2.5
	SNR=6.4						
AAK	Ala-Archa	32.37	24	P	P	03 06 01.0	+1.8
KVAR	Kislovodsk Arr	32.47	340	P	P	03 06 01.5	+1.5
	comp=Z,1.7nm,0.3s,baz=73,slow=20,SNR=10						
KIV	Kislovodsk	32.48	340	*i* P	P	03 06 01.8	+1.8
	SNR=6.7						
KIV	Kislovodsk	32.48	340	P	P	03 06 01.2	+1.2
KIV				IAmb	IAmb	03 06 02.9	
	comp=Z,71nm,1.5s						
FRU1	Bishkek	32.57	24	P	P	03 06 02.9	+2.1
KBK	Karagaybulak	32.57	25	P	P	03 06 04.5	+3.6
	SNR=6.6						
CHMS	Chumysh	32.77	24	P	P	03 06 05.4	+2.9
	SNR=8.3						
ULHL	Ulahol	32.77	27	P	P	03 06 08.9	+6.1
	SNR=5.8						
BOOM	Boomskoye usch	32.84	26	P	P	03 06 04.6	+1.3
USP	Ospenovka	32.90	24	P	P	03 06 05.7	+2.1
	SNR=7.5						
BR131	Keskin Array S	33.06	326	P	P	03 06 05.7	+0.5
BR131				IAmb	IAmb	03 06 21.4	
	comp=Z,41nm,1.7s						
BRTR	Keskin Array B	33.06	326	P	P	03 06 05.8	+0.6
	comp=Z,3.9nm,0.8s,baz=140,slow=11,SNR=20						
BRTR				PcP	PcP	03 08 48.2	-0.3
	comp=Z,2.1nm,0.8s,baz=131,slow=4.6,SNR=4.7						
BRTR				LR	LR	03 21 16.5	
	comp=Z,568nm,20.3s,baz=105,slow=40						
BRTR	Keskin Array B	33.06	326	P	P	03 06 05.5	+0.3
ELL	Elmali	33.37	318	P	P	03 06 08.5	+0.5
BR231	Keskin MP Arra	33.62	325	P	P	03 06 10.6	+0.6
ANTO	Ankara	33.62	325	⇑P	P	03 06 11.7	+1.7
ANTO	Ankara	33.62	325	P	P	03 06 10.8	+0.8
ANTO				IAmb	IAmb	03 06 13.2	
	comp=Z,104nm,1.8s						
ISP	Isparta	33.63	320	P	P	03 06 11.0	+0.8
OPO	Ambohidratompo	33.67	197	P	P	03 06 10.7	0.0
	comp=Z,4.7nm,1.0s,baz=354,slow=9.7,SNR=2.8						
BRDH	Bariadhala	33.83	70	P	P	03 06 12.9	+0.9
	comp=Z,61nm,0.3s,baz=256,slow=19,SNR=3.0						
ILGA	Ilgaz	33.96	327	P	P	03 06 13.6	+0.4
ABPO	Ambohimpanom	34.08	197	P	P	03 06 13.4	-0.9
ABPO				IAmb	IAmb	03 06 17.4	
	comp=Z,91nm,1.6s						
KARP	Karpathos	34.56	314	P	P	03 06 18.4	+0.2
KARP				IAmb	IAmb	03 06 24.9	
	comp=Z,38nm,1.0s						
SHL	Shillong	34.60	65	P	P	03 06 18.6	-0.2
SHL				IAmb	IAmb	03 06 28.2	
	comp=Z,80nm,1.5s						
PBA	Port Blair	34.75	89	P	P	03 06 20.6	+0.6
RER	Riviere de l'E	34.80	182	P	P	03 06 20.1	-0.3
MDUB	Mudurnu	34.93	324	P	P	03 06 21.1	-0.4
LSA	Lhasa	35.12	58	P	P	03 06 23.4	-0.3
ABKAR	Akbulak array	35.39	3	P	P	03 06 25.2	+0.1
IDI	Anoyia	36.05	312	P	P	03 06 32.4	+1.4
SANT	Santorini	36.17	314	P	P	03 06 32.5	+0.5
SANT				IAmb	IAmb	03 06 34.2	
	comp=Z,59nm,1.2s						
AKTO	Aktyubinsk	36.51	1	LR	LR	03 23 47.7	
	comp=Z,368nm,19.1s,baz=167,slow=40						
PRK	Paraskevi	37.16	319	P	P	03 06 42.9	+2.6
SERI	Serifos	37.24	315	P	P	03 06 42.1	+0.9
VLY	Voula,Athens	38.06	315	P	P	03 06 49.5	+1.4
PTL	Penteli	38.11	315	P	P	03 06 48.0	-0.5
ALN	Alexandroupoli	38.25	321	P	P	03 06 50.9	+1.4
DID	Didima	38.28	314	P	P	03 06 49.8	-0.1
SMTH	Samothraki Isl	38.32	320	P	P	03 06 50.7	+0.5
VILL	Villia	38.55	315	P	P	03 06 52.6	+0.4
DYR	Agios Nikonas	38.56	313	P	P	03 06 52.5	+0.2
AOS	Alonnisos	38.67	317	P	P	03 06 53.5	+0.3
RDO	Rodhopi	38.70	321	P	P	03 06 54.5	+1.1
MAKZ	Makanchi	38.89	27	P	P	03 06 55.4	+0.4
MAKZ				IAmb	IAmb	03 07 12.6	
	comp=Z,47nm,1.5s						
THAS	Thassos island	38.91	319	P	P	03 06 56.5	+1.4
MKAR	Makanchi Array	39.02	28	P	P	03 06 56.7	+0.7
	comp=Z,8.0nm,0.7s,baz=214,slow=8.0,SNR=73						
MKAR				PcP	PcP	03 09 06.6	+0.6
	comp=Z,3.6nm,1.0s,baz=220,slow=3.2,SNR=4.6						
MKAR				LR	LR	03 24 55.0	
	comp=Z,582nm,19.3s,baz=216,slow=39						

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MKAR  Makanchi Array      39.02  28 P      P      03 06 56.5 +0.5
MKAR                                       PcP    03 09 06.4 +0.4
ITM   Ithomi              39.05 313 P      P      03 06 55.6 -0.8
ITM   Ithomi              39.05 313 IAmb   IAmb   03 06 58.2
      comp=Z,126nm,1.8s
JURR  Jurilovca           39.10 328 ⇓P     P      03 06 58.6 +2.0
TIRR  Tirgusor            39.13 327 ⇓P     P      03 06 56.8 -0.1
TIRR  Tirgusor            39.13 327 P      P      03 06 56.8 -0.1
TIRR                                IAmb   IAmb   03 07 03.1
      comp=Z,48nm,1.1s
PAIG  Paliouri            39.20 318 P      P      03 06 58.4 +0.8
OUR   Ouranopolis         39.23 319 P      P      03 06 58.5 +0.7
XOR   Xorichti            39.23 317 P      P      03 06 58.5 +0.6
TOPG  Topolog             39.43 327 ⇓P     P      03 07 00.3 +0.8
TRIZ  Trizonia            39.50 315 P      P      03 07 00.5 +0.4
SERG  Sergoula            39.53 315 P      P      03 07 00.3 -0.1
HARR  Harsova             39.54 327 ⇓P     P      03 07 01.5 +1.1
DRO   Drossia             39.55 314 P      P      03 07 01.8 +1.2
ELND  Elena               39.56 323 ⇓P     P      03 07 01.8 +1.2
RAZG  Razgrad             39.59 324 ⇓P     P      03 07 01.9 +1.1
AGG   Agios Georgios      39.64 316 P      P      03 07 01.3  0.0
EFP   Efpalio             39.64 315 P      P      03 07 02.5 +1.2
WMQ   Urumqi              39.68  35 eP     P      03 07 03.9 +2.2
WMQ                                 pP     pP     03 07 06.6 -0.7
WMQ                                 PP     PnPn   03 08 37.9 +1.8
WMQ                                 S      S      03 13 08.0 +3.9
WMQ                                 pmax   pmax
      comp=Z,14nm,0.7s
WMQ                                 pmax   pmax
      comp=Z,20nm,3.7s
WMQ                                 LR     LR
      comp=Z,450nm,14.5s
WMQ                                 LR     LR
      comp=Z,560nm,15.3s
WMQ                                 LR     LR
      comp=Z,550nm,18.3s
WMQ   Urumqi              39.68  35 P      P      03 07 02.4 +0.8
ANX   Ano Chora           39.71 315 P      P      03 07 02.6 +0.6
CFR   Carcaliu            39.76 328 ⇓P     P      03 07 03.3 +1.2
RLS   Riolos of Patr      39.77 314 P      P      03 07 03.3 +0.9
NVR   Nevrokopi           39.86 320 P      P      03 07 04.1 +1.0
SRS   Serrai              39.90 319 P      P      03 07 03.8 +0.4
HORT  Hortiatis           39.94 318 P      P      03 07 04.3 +0.5
PVO   Paravola            39.99 315 P      P      03 07 04.3 +0.1
LIT   Litokhoron          40.08 317 P      P      03 07 05.6 +0.7
CM31  Chiang Mai Arr      40.33  78 P      P      03 07 07.4 +0.1
CM31                                IAmb   IAmb   03 07 09.3
      comp=Z,77nm,1.4s
CMAR  Chiang Mai Arr      40.33  78 P      P      03 07 08.0 +0.7
      comp=Z,19nm,0.9s,baz=275,slow=8.9,SNR=72
CMAR                                PcP    PcP    03 09 10.2 -0.5
      comp=Z,3.2nm,0.8s,baz=262,slow=4.6,SNR=5.1
CMAR                                LR     LR     03 24 30.8
      comp=Z,152nm,20.1s,baz=267,slow=37
CMAR  Chiang Mai Arr      40.33  78 P      P      03 07 07.5 +0.2
CHTO  Chiang Mai          40.33  77 P      P      03 07 06.8 -0.5
KNT   Kendrikon           40.37 319 P      P      03 07 07.5 +0.2
BVAR  Borovoye Array      40.48  12 P      P      03 07 08.6 +0.5
      comp=Z,4.3nm,0.9s,baz=193,slow=6.1,SNR=13
BVAR                                PcP    PcP    03 09 10.5  0.0
      comp=Z,5.6nm,0.9s,baz=177,slow=3.0,SNR=6.8
BRVK  Borovoye            40.49  12 P      P      03 07 08.8 +0.6
ISR   Istrita             40.57 326 ⇑P     P      03 07 10.0 +1.0
PLVB  Pleven              40.57 323 ⇑P     P      03 07 10.5 +1.5
GRG   Griva               40.58 318 P      P      03 07 09.2 +0.1
KURBB Kurchatov Arra      40.59  21 P      P      03 07 09.6 +0.6
      comp=Z,10.0nm,0.9s,baz=217,slow=8.5,SNR=47
KURBB                               PcP    PcP    03 09 11.0 +0.1
      comp=Z,5.5nm,1.1s,baz=224,slow=3.3,SNR=6.6
VAY   Valandovo           40.66 319 i P    P      03 07 09.7  0.0
COPA  Copaceanca          40.68 324 ⇑P     P      03 07 11.4 +1.7
KURK  Kurchatov           40.70  21        PcP    03 09 11.0 -0.2
KURK  Kurchatov           40.70  21 P      P      03 07 10.4 +0.6
LSZ   Lusaka              40.72 226 P      P      03 07 11.2 +0.6
      comp=Z,14nm,1.0s,baz=49,slow=9.4,SNR=17
LSZ   Lusaka              40.72 226 P      P      03 07 11.1 +0.5
GHRR                      40.73 328 ⇓P     P      03 07 11.7 +1.4
BISRR Bisoca              40.76 327 ⇑P     P      03 07 12.8 +2.2
VTS   Vitosha             40.95 321 ⇑P     P      03 07 12.8 +0.5
VTS   Vitosha             40.95 321 IAmb   IAmb   03 07 15.8
      comp=Z,58nm,1.6s
VRI   Vrincioaia          40.96 327 ⇓P     P      03 07 13.6 +1.5
PLOR  Plostina            40.99 327 ⇑P     P      03 07 13.3 +0.9
VLAD  Vladila             41.06 324 ⇓P     P      03 07 14.1 +1.1
STIP  Stip                41.10 319 i P    P      03 07 12.4 -0.9
MLR   Muntele Rosu        41.13 326 ⇑P     P      03 07 14.4 +0.7
MLR   Muntele Rosu        41.13 326 IAmb   IAmb   03 07 34.3
      comp=Z,51nm,1.3s
FNA   Florina             41.15 318 P      P      03 07 12.9 -1.0
TESR  Tescani             41.43 328 ⇑P     P      03 07 16.4 +0.5
VOIR                      41.58 326 ⇓P     P      03 07 18.3 +0.9
OZUR                      41.60 327 ⇓P     P      03 07 18.2 +0.8
SRN   Sarande             41.63 316 P      P      03 07 17.6 -0.1
SORM  Soroca              41.71 331 ⇓P     P      03 07 17.2 -1.0
SKO   Skopje              41.72 319 i P    P      03 07 18.9 +0.4
DOPR  Dopca               41.73 327 ⇓P     P      03 07 20.0 +1.5
ARR   Arges               41.77 325 ⇓P     P      03 07 19.6 +0.8
PUNG  Punghina            42.08 323 ⇓P     P      03 07 22.2 +0.9
LOT   Lotru               42.30 325 ⇓P     P      03 07 25.0 +1.8
PBKT  Sadao Pong          42.30  81 P      P      03 07 24.2 +0.7
PBKT                                IAmb   IAmb   03 07 25.2
      comp=Z,61nm,1.5s
PBKT                                       PcP    03 09 17.7 +0.6
ARU   Arti                42.52   1 LR     LR     03 26 16.9
      comp=Z,109nm,18.2s,baz=149,slow=38
ARU   Arti                42.52   1 P      P      03 07 24.7  0.0
ARU                                 IAmb   IAmb   03 07 26.4
      comp=Z,111nm,1.9s
PSI   Prapat              42.67 101 P      P      03 07 27.2 +0.5
      comp=Z,3.3nm,0.3s,baz=270,slow=9.6,SNR=7.7
PSI                                 PcP    PcP    03 09 18.4 -0.1
      comp=Z,8.9nm,1.1s,baz=231,slow=5.6,SNR=4.5
PSI                                 LR     LR     03 22 54.8
      comp=Z,513nm,21.4s,baz=262,slow=33
RPSI  Rantau Prapat       42.70 101 P      P      03 07 27.2 +0.4
RPSI                                       PcP    03 09 18.4 -0.1
RPSI  Rantau Prapat       42.70 101        PcP    03 09 18.2 -0.3
HERR  Herculane           42.73 323 ⇓P     P      03 07 27.1 +0.5
SCTE  Santa Cesarea       42.77 315 P      P      03 07 26.1 -0.9
SCTE                                IAmb   IAmb   03 07 42.7
      comp=Z,45nm,1.2s
GZR   Gura Zlata          42.82 324 ⇓P     P      03 07 28.2 +0.7
BURAR Bucovina Array      42.89 328 ⇑P     P      03 07 29.1 +1.1
BURAR Bucovina Array      42.89 328 P      P      03 07 28.0  0.0
BUR08 Bucovina Ar. S      42.92 328 P      P      03 07 28.4 +0.2
ARCR  ARCALIA             43.00 327 ⇓P     P      03 07 30.1 +1.4
MDVR  Moldovita           43.09 323 ⇑P     P      03 07 30.7 +1.1
AKASG Malin Array Be      43.19 334 P      P      03 07 29.0 -1.2
      comp=Z,5.2nm,0.7s,baz=135,slow=7.8,SNR=41
AKASG                               PP     PP     03 09 08.5 -2.2
      comp=Z,18nm,1.1s,baz=136,slow=10,SNR=18
AKASG                               LR     LR     03 28 20.2
      comp=Z,225nm,19.8s,baz=120,slow=40
AKASG Malin Array Be      43.19 334 P      P      03 07 30.1 -0.1
PDG   Podgorica           43.35 318 ⇓P     P      03 07 31.9 +0.3
TIP   Timpagrande         43.58 313 ⇑P     P      03 07 35.6 +2.0
TIP   Timpagrande         43.58 313 P      P      03 07 33.6  0.0
BZS   Buzias              43.62 324 ⇓P     P      03 07 34.4 +0.6
KULM  Kulim               43.65  97 P      P      03 07 33.7 -0.7
KULM  Kulim               43.65  97 P      P      03 07 35.0 +0.5
DRGR                      43.70 326 ⇑P     P      03 07 34.8 +0.3
WDD   Wied Dalam          44.02 308 P      P      03 07 35.0 -2.1
MATP  Matopo              44.20 220 P      P      03 07 35.6 -3.2
      comp=Z,30nm,0.9s,baz=33,slow=10,SNR=40
OBN   Obninsk             44.20 343 ⇓P     P      03 07 39.3 +1.1
OBN   Obninsk             44.20 343 P      P      03 07 38.0 -0.2
KMI   Kunming             44.22  68 P      P      03 07 39.3 +0.1
KMI                                 pP     pP     03 07 43.8 -1.0
KMI                                 sP     sP     03 07 45.3 -1.7
KMI                                 S      S      03 14 13.1 +1.1
KMI                                 sS     pS     03 14 19.3 +0.7
KMI                                 pmax   pmax
      comp=Z,27nm,1.1s
KMI                                 pmax   pmax
      comp=Z,160nm,6.0s
KMI                                 LR     LR
      comp=Z,540nm,21.8s
KMI                                 LR     LR
      comp=Z,440nm,21.5s
KMI                                 LR     LR
      comp=Z,770nm,24.6s
KMI   Kunming             44.22  68 P      P      03 07 39.4 +0.1
KMI                                 IAmb   IAmb   03 07 40.4
      comp=Z,58nm,1.5s
MATE  Matera              44.23 315 ⇑P     P      03 07 41.0 +2.2
TRPA  Tarpa               44.61 327 ⇑P     P      03 07 41.9 +0.2
ACER  Acerenza            44.81 315 IAmb   IAmb   03 08 00.1
      comp=Z,68nm,1.5s
KIRV  Kirov               45.04 354 P      P      03 07 44.7 -0.2
      comp=Z,11nm,0.6s,baz=176,slow=7.3,SNR=11
SLVN  Son La              45.04  74 P      P      03 07 46.3 +0.7
SLVN                                IAmb   IAmb   03 07 55.3
      comp=Z,39nm,1.5s
KOLS  Kolonicke sedl      45.25 328 eP     P      03 07 47.6 +0.8
KOLS                                ePP    PP     03 09 38.5 +5.8
GTA   Gaotai              45.27  48 ⇑P     P      03 07 47.9 +0.6
GTA                                 pP     pP     03 07 52.6 -0.3
GTA                                 sP     sP     03 07 54.9 -0.6
GTA                                 PcP    PcP    03 09 28.1 +1.1
GTA                                 S      S      03 14 33.1 +6.4
GTA                                 sS     sS     03 14 41.4 +5.8
GTA                                 pmax   pmax
      comp=Z,10.0nm,1.3s
GTA                                 pmax   pmax
      comp=Z,180nm,4.4s
GTA                                 LR     LR
      comp=Z,440nm,18.4s
GTA                                 LR     LR
      comp=Z,910nm,18.4s
GTA                                 LR     LR
      comp=Z,1µm,20.6s
SGRT  San Giovanni R      45.36 316 P      P      03 07 47.9 +0.1
SGRT                                IAmb   IAmb   03 09 27.7
      comp=Z,38nm,1.9s
BKNI  Bangkinang          45.45 103 P      P      03 07 48.8 -0.1
KWP   Kalwaria Pacla      45.47 329 P      P      03 07 48.6 +0.1
KWP                                 IAmb   IAmb   03 07 59.5
      comp=Z,41nm,1.3s
ZAA0  Zalesovo Array      45.55  23 IAmb   IAmb   03 07 50.8
      comp=Z,15nm,0.8s
ZALV  Zalesovo Beam       45.55  23 P      P      03 07 48.7 -0.4
      comp=Z,13nm,0.7s,baz=222,slow=7.6,SNR=45
ZALV                                LR     LR     03 29 20.8
      comp=Z,580nm,18.8s,baz=228,slow=39
ZALV  Zalesovo Beam       45.55  23 P      P      03 07 48.9 -0.1
CRVS  Cervenica-Dubn      45.65 327 eP     P      03 07 51.2 +1.2
CRVS                                ePP    PP     03 09 39.2 +2.2
BLY   Banja Luka          45.81 320 ⇓P     P      03 07 52.3 +1.0
BLY   Banja Luka          45.81 320 IAmb   IAmb   03 08 08.1
      comp=Z,33nm,1.2s
PAOL  Paolisi             45.87 314 P      P      03 07 51.6 -0.2
PAOL                                IAmb   IAmb   03 08 13.6
      comp=Z,56nm,2.0s
CD2   Chengdu             45.96  60 P      P      03 07 51.8 -0.9
CD2                                 S      S      03 14 41.9 +5.2
CD2                                 pmax   pmax
      comp=Z,20nm,0.4s
CD2                                 LR     LR
      comp=Z,670nm,18.4s
CD2                                 LR     LR
      comp=Z,500nm,17.9s
CD2                                 LR     LR
      comp=Z,740nm,21.1s
MICGM Minsk               46.59 337 eP     P      03 07 56.0 -1.2
INTR  Introdacqua         46.72 315 IAmb   IAmb   03 08 25.5
      comp=Z,24nm,1.3s
VYHS  Vyhne               46.82 326 eP     P      03 07 58.9 -0.3
LANS  Liptovska Anna      46.85 327 eP     P      03 08 01.3 +1.8
LANS                                ePP    PP     03 09 48.1 -1.7
AQU   L'Aquila            47.20 316 P      P      03 08 02.5 +0.2
AQU                                 IAmb   IAmb   03 08 34.1
      comp=Z,16nm,1.2s
LZH   Lanzhou             47.22  53 ⇑P     P      03 08 02.1 -0.6
LZH                                 pP     pP     03 08 06.8 -1.6
LZH                                 sP     sP     03 08 10.0 -0.6
LZH                                 sS     sS     03 15 04.8 +0.9
LZH                                 pmax   pmax
      comp=Z,23nm,1.1s
LZH                                 pmax   pmax
      comp=Z,180nm,4.8s
LZH                                 LR     LR
      comp=Z,760nm,17.5s
LZH                                 LR     LR
      comp=Z,910nm,17.5s
LZH                                 LR     LR
      comp=Z,1µm,18.4s
MODS  Modra-Piesok        47.62 325 eP     P      03 08 06.1 +0.7
MODS                                ePP    PP     03 09 57.3 +0.2
JAVC  Velka Javorina      47.66 325 eP     P      03 08 10.4 +4.6
JAVC                                ePP    PP     03 09 57.3 -0.2
MYKOM Kota Tinggi         47.67 100 P      P      03 08 06.2 -0.1
MYKOM Kota Tinggi         47.67 100 P      P      03 08 07.0 +0.7
GYA   Guiyang             47.87  67 ⇑iP    P      03 08 07.8  0.0
GYA                                 PcP    PcP    03 09 37.4 +1.0
GYA                                 PP     PP     03 09 55.8 -4.0
GYA                                 S      S      03 15 01.4 -2.8
GYA                                 pmax   pmax
      comp=Z,40nm,1.0s
GYA                                 pmax   pmax
      comp=Z,310nm,5.5s
GYA                                 LR     LR
      comp=Z,390nm,18.9s
GYA                                 LR     LR
      comp=Z,230nm,18.9s
GYA                                 LR     LR
      comp=Z,350nm,20.7s
OKC   Ostrava-Krasne      47.95 327 eP     P      03 08 04.3 -3.6
KEST  Kesra               48.02 306 LR     LR     03 30 36.7
      comp=Z,223nm,19.2s,baz=40,slow=39
ARSA  Arzberg             48.05 323 eP     P      03 08 08.9 +0.1
      comp=Z,8.7nm,1.4s
ARSA                                ePcP   PcP    03 09 38.2 +1.7
      comp=Z,6.8nm,1.0s
SOKA  Soboth              48.06 322 epP    P      03 08 09.8 +0.9
      comp=Z,12nm,1.1s
SOKA                                ePcP   PcP    03 09 38.1 +1.5
      comp=Z,3.7nm,0.7s
ISAL  Salakas             48.06 337 eP     P      03 08 09.2 +0.5
MURB  Monte Urbino        48.15 316 P      P      03 08 10.1 +0.4
MURB                                IAmb   IAmb   03 08 26.3
      comp=Z,17nm,1.2s
IZAR  Zarasai             48.15 337 eP     P      03 08 09.8 +0.5
CONA  Conrad Observa      48.19 323 eP     P      03 08 09.5 -0.5
      comp=Z,19nm,1.5s
CONA                                ePP    PP     03 09 59.9 -2.4
      comp=Z,12nm,1.8s
MORC  Moravsky Berou      48.24 326 eP     P      03 08 10.4 +0.1
MORC                                ePP    PP     03 10 04.0 +1.3
MORC  Moravsky Berou      48.24 326 IAmb   IAmb   03 08 25.4
      comp=Z,33nm,1.5s
OBKA  Obir                48.27 321 pP     P      03 08 12.6 +2.0
      comp=Z,16nm,1.2s
LATE  Laterza             48.38 315 P      P      03 08 11.2 -0.3
LATE                                       PcP    03 09 37.8  0.0
LATE                                IAmb   IAmb   03 09 40.0
      comp=Z,46nm,1.3s
TRI   Trieste             48.39 320 IAmb   IAmb   03 08 27.2
      comp=Z,15nm,1.1s
KRUC  Moravsky            48.48 325 eP     P      03 08 11.9 -0.1
KRUC                                ePP    PP     03 10 07.1 +2.3
VRAC  Vranov              48.50 325 eP     P      03 08 12.3 +0.1
VRAC                                ePP    PP     03 10 07.5 +2.5
KLMR  Klimovskoe          48.67 349 eP     P      03 08 10.4 -2.9
KLMR                                AMP           03 08 15.5
      comp=Z,309nm,1.5s
PABE  Paberze             48.86 336 eP     P      03 08 15.0 +0.2
MYKA  Terra Mystica       48.88 321 P      P      03 08 15.0 -0.3
      comp=Z,16nm,1.2s
MYKA                                PcP    PcP    03 09 39.6  0.0
      comp=Z,19nm,1.8s
MYKA                                ePP    PP     03 10 12.1 +3.4
      comp=Z,27nm,1.7s
MOA   Molln               49.09 323 epP    P      03 08 17.4 +0.7
      comp=Z,9.2nm,1.1s
MOA                                 PP     PP     03 10 13.7 +3.2
      comp=Z,11nm,1.4s
CASP  Castiglione de      49.09 315 IAmb   IAmb   03 08 22.9
      comp=Z,16nm,1.0s
OSSC  Osservatorio P      49.11 316 P      P      03 08 16.7 -0.3
TREC  Trest               49.11 325 eP     P      03 08 15.5 -1.4
DPC   Dobruska-Polom      49.21 326 eP     P      03 08 16.3 -1.4
KBA   Koelnbreinsper      49.27 321 eP     P      03 08 17.5 -0.9
      comp=Z,6.7nm,1.2s
KBA                                 PP     PP     03 10 17.2 +4.9
      comp=Z,9.9nm,1.3s
STAL  STALIGIAL           49.29 320 IAmb   IAmb   03 08 34.1
      comp=Z,22nm,1.3s
UPC   Upice               49.47 326 eP     P      03 08 19.8 +0.2
CHVC  Chvalec             49.49 327 eP     P      03 08 19.9 +0.1
ZCCA  Zocca               49.61 317 P      P      03 08 20.9  0.0
ZCCA                                IAmb   IAmb   03 09 03.5
      comp=Z,57nm,1.5s
TAM   Tamanrasset         49.62 288 IAmb   IAmb   03 08 27.4
      comp=Z,22nm,1.1s
ABTA  Abfaltersbach       49.63 321 eP     P      03 08 20.1 -0.9
      comp=Z,8.4nm,1.1s
ABTA                                ePcP   PcP    03 09 41.1 -1.2
      comp=Z,15nm,1.8s
ABTA                                ePP    PP     03 10 20.9 +5.4
      comp=Z,13nm,1.5s
CTI   Castel Tesino       49.87 319 P      P      03 08 22.4 -0.5
CTI                                        PcP    03 09 43.6 +0.4
GERES GERESS Array B      49.90 324 P      P      03 08 23.7 +0.7
      comp=Z,0.7nm,0.7s,baz=126,slow=2.5,SNR=2.2
GERES                               PcP    PcP    03 09 42.6 -0.6
      comp=Z,1.0nm,0.6s,baz=108,slow=3.0,SNR=5.0
GERES                               LR     LR     03 32 03.4
      comp=Z,178nm,18.1s,baz=119,slow=39
GERES GERESS Array B      49.90 324 P      P      03 08 23.1 +0.1
GERES                                      PcP    03 09 43.7 +0.5
VLC   Villacollemand      49.93 317 P      P      03 08 22.9 -0.4
PRU   Pruhonice           49.99 325 eP     P      03 08 24.8 +1.2
PRU                                 ex     x      03 08 36.2
VSU   Vasula              50.03 340 eP     P      03 08 23.3 -0.4
MDSI  Maura Dua           50.07 108 P      P      03 08 25.3 +0.6
      comp=Z,2µmcomp=Z,10nm,1.4s
KHC   Kasperske Hory      50.11 324 eP     P      03 08 22.4 -2.1
KHC                                 ex     x      03 08 37.5
PRMA  PARMA               50.21 317 P      P      03 08 25.5 +0.3
PRMA                                IAmb   IAmb   03 08 41.2
      comp=Z,31nm,1.2s
PVCC  Panska Ves          50.26 326 eP     P      03 08 25.4 -0.2
PVCC                                ex     x      03 08 39.5
WTTA  Wattenberg          50.40 321 eP     P      03 08 26.5 -0.5
      comp=Z,18nm,1.0s
WTTA                                ePcP   PcP    03 09 46.4 +1.1
      comp=Z,12nm,1.4s
WTTA                                ePP    PP     03 10 28.4 +5.9
      comp=Z,14nm,1.3s
SALO  Salr                50.41 319 P      P      03 08 26.6 -0.2
SALO                                IAmb   IAmb   03 09 47.1
      comp=Z,12nm,0.8s
WATA  Walderalm           50.47 321 eP     P      03 08 26.3 -1.1
      comp=Z,11nm,0.8s
WATA                                i PcP  PcP    03 09 46.4 +1.0
      comp=Z,8.5nm,1.0s
WATA                                ePP    PP     03 10 28.5 +5.4
      comp=Z,24nm,1.6s
MSSA  Maissana            50.57 317 P      P      03 08 27.0 -1.1
SQTA  Sankt Quirin        50.64 321 eP     P      03 08 28.4 -0.3
      comp=Z,14nm,0.9s
SQTA                                ePcP   PcP    03 09 47.4 +1.3
      comp=Z,16nm,1.9s
SQTA                                PP     PP     03 10 30.7 +6.0
      comp=Z,17nm,1.6s
QIZ   Qiongzhong          50.64  77 P      P      03 08 27.5 -1.5
QIZ                                 S      S      03 15 43.4 +0.3
QIZ                                 LR     LR
      comp=Z,380nm,6.1s
QIZ                                 LR     LR
      comp=Z,370nm,13.2s
QIZ                                 LR     LR
      comp=Z,300nm,16.5s
KASI  Kota Agung          50.76 109 P      P      03 08 31.7 +1.8
      comp=Z,42nm,0.9s
MOTA  Moosalm             50.76 321 eP     P      03 08 28.7 -0.9
      comp=Z,12nm,1.0s
MOTA                                ePcP   PcP    03 09 47.7 +1.1
      comp=Z,10nm,1.7s
MOTA                                ePP    PP     03 10 29.9 +4.0
      comp=Z,11nm,1.3s
BRG   Berggiesshubel      50.78 326 eP     P      03 08 28.8 -0.7
      comp=Z,5.1nm,1.0s
BRG                                 e             03 08 43.1
      comp=Z,27nm,1.8s
XAN   Xi'an               50.82  57 P      P      03 08 29.5 -0.7
XAN                                 S      S      03 15 45.4  0.0
XAN                                 pmax   pmax
      comp=Z,17nm,1.0s
XAN                                 LR     LR
      comp=Z,180nm,18.2s
XAN                                 LR     LR
      comp=Z,360nm,21.4s
XAN                                 LR     LR
      comp=Z,540nm,23.5s
XAN   Xi'an               50.82  57 IAmb   IAmb   03 08 39.1
      comp=Z,31nm,1.2s
FETA  Feichten            50.85 320 eP     P      03 08 30.3 -0.1
      comp=Z,13nm,1.2s
TSUM  Tsumeb              50.96 231 P      P      03 08 32.6 +1.1
TSUM                                IAmb   IAmb   03 08 34.2
      comp=Z,29nm,0.9s
RETA  Reutte              51.03 321 eP     P      03 08 31.9 +0.3
      comp=Z,7.0nm,1.2s
RETA                                ePcP   PcP    03 09 47.0 -0.5
      comp=Z,17nm,1.5s
RETA                                ePP    PP     03 10 33.8 +5.6
      comp=Z,15nm,1.4s
NKC   Novy Kostel         51.29 325 eP     P      03 08 32.0 -1.4
NKC                                 ex     x      03 08 47.7
DAVA  Damuels             51.49 320 eP     P      03 08 34.7 -0.4
      comp=Z,15nm,0.9s
DAVA                                ePcP   PcP    03 09 50.6 +1.3
      comp=Z,14nm,1.4s
DAVA                                ePP    PP     03 10 38.6 +6.2
      comp=Z,20nm,1.6s
TUE   Stuetta             51.50 319 P      P      03 08 36.1 +0.8
CLL   Collm               51.51 326 i P    P      03 08 35.8 +0.8
      comp=Z,33nm,1.7s
CLL                                 i             03 08 51.2
      comp=Z,39nm,1.6s
CLL   Collm               51.51 326 P      P      03 08 35.0 +0.1
CLL                                 IAmb   IAmb   03 08 52.0
      comp=Z,36nm,1.5s
GRA1  Grafenberg Arr      51.73 324 P      P      03 08 35.1 -1.6
GRA1                                IAmb   IAmb   03 08 52.4
      comp=Z,17nm,1.1s
BOSA  Boshof              52.28 216 P      P      03 08 40.5 -0.7
      comp=Z,4.4nm,0.9s,baz=45,slow=8.2,SNR=5.5
BOSA                                LR     LR     03 29 40.4
      comp=Z,739nm,19.1s,baz=30,slow=35
BOSA  Boshof              52.28 216 P      P      03 08 40.7 -0.5
BOSA                                IAmb   IAmb   03 08 43.0
      comp=Z,22nm,1.4s
FINES FINESS Array B      52.55 342 P      P      03 08 42.3 -0.2
      comp=Z,46nm,0.8s,baz=129,slow=7.7,SNR=64
FINES                               LR     LR     03 35 37.9
      comp=Z,268nm,18.5s,baz=147,slow=41
FINES FINESS Array B      52.55 342 P      P      03 08 42.1 -0.5
SENIN Lac Senin/Sane      52.77 318 P      P      03 08 45.1 +0.4
BFO   Black Forest        52.87 321 P      P      03 08 44.4 -0.8
SONM  Songino Array       52.92  40 P      P      03 08 45.8 +0.1
      comp=Z,2.9nm,0.8s,baz=238,slow=7.5,SNR=18
SONM                                PcP    PcP    03 09 54.7 +0.2
      comp=Z,2.7nm,0.8s,baz=268,slow=4.1,SNR=6.3
SONM                                LR     LR     03 32 09.7
      comp=Z,489nm,19.7s,baz=221,slow=37
SONM  Songino Array       52.92  40 P      P      03 08 46.0 +0.3
TLY   Talaya              52.96  34 PcP    PcP    03 09 54.4  0.0
      comp=Z,2.3nm,0.7s,baz=216,slow=5.0,SNR=4.6
TLY                                 LR     LR     03 32 41.4
      comp=Z,426nm,20.2s,baz=214,slow=38
TLY   Talaya              52.96  34 P      P      03 08 46.6 +0.8
BTO   Baotou              53.09  49 eP     P      03 08 45.3 -1.7
ECH   Echery              53.54 320 P      P      03 08 49.4 -0.8
TORD  Torodi Ar. Bea      53.84 276 P      P      03 08 52.3 -0.5
      comp=Z,9.7nm,0.9s,baz=88,slow=7.5,SNR=40
TORD                                PcP    PcP    03 09 58.8 +0.3
      comp=Z,3.0nm,1.0s,baz=87,slow=2.8,SNR=4.9
TORD                                LR     LR     03 31 59.5
      comp=Z,281nm,19.2s,baz=50,slow=36
TORD  Torodi Ar. Bea      53.84 276 P      P      03 08 51.8 -1.0
CNJI  Cibinong            53.86 110 P      P      03 08 53.4 +0.5
      comp=Z,3µmcomp=Z,56nm,1.4s
KSM   Kuching             53.95  98 IAmb   IAmb   03 08 54.9
      comp=Z,66nm,1.5s
KSM   Kuching             53.95  98 P      P      03 08 54.0 +0.4
LEM   Lembang             54.12 109 LR     LR     03 29 05.4
      comp=Z,296nm,19.2s,baz=226,slow=33
SSB   Saint Sauveur       54.22 316 IAmb   IAmb   03 08 59.5
      comp=Z,17nm,1.2s
HHC   Hu-ho-hao-te        54.28  49 eP     P      03 08 56.8 +1.0
HHC                                 sP     pwP    03 09 04.9 -0.4
HHC                                 S      S      03 16 28.6 -4.0
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HHC				SS	SS	03 20 14.3	-0.4
HHC				pmax	pmax		
	comp=Z,110nm,1.0s						
HHC				pmax	pmax		
	comp=Z,430nm,5.2s						
HHC				LR	LR		
	comp=Z,920nm,15.9s						
HHC				LR	LR		
	comp=Z,1µm,16.0s						
HHC				LR	LR		
	comp=Z,1µm,15.7s						
CISI	Cisompet, Garu	54.58	110	P	P	03 08 57.1	-1.1
WLF	Walferdange	54.71	322	P	P	03 08 58.8	+0.2
WLF				IAmb	IAmb	03 09 00.6	
	comp=Z,27nm,1.3s						
WHN	Wuhan	54.95	62	P	P	03 09 01.4	+0.7
KPJI	Karang Pucung	55.52	109	P	P	03 09 04.9	-0.1
	comp=Z,40nm,1.5s						
SBUM	Sibu	55.53	97	P	P	03 09 04.0	-1.1
SBUM				IAmb	IAmb	03 09 06.7	
	comp=Z,34nm,1.6s						
SBUM	Sibu	55.53	97	P	P	03 09 06.0	+0.9
DOU	Dourbes	55.80	322	P	P	03 09 07.8	+1.3
LVZ	Lovozero	55.98	350	P	P	03 09 06.9	-0.6
UCC	Uccle	56.20	323	P	P	03 09 09.1	-0.2
UCC				IAmb	IAmb	03 09 10.4	
	comp=Z,76nm,2.0s						
CART	Cartagena	56.54	306	P	P	03 09 10.8	-1.2
CART				IAmb	IAmb	03 09 25.9	
	comp=Z,36nm,1.3s						
WOJI	Wonogiri, Jawa	57.54	109	P	P	03 09 19.2	-0.1
	comp=Z,17nm,1.4s						
BJT	Baijiatuau	57.56	51	P	P	03 09 19.5	+0.3
BJT				IAmb	IAmb	03 09 20.4	
	comp=Z,25nm,1.3s						
NB2	NORSAR Subarra	57.57	336	P	P	03 09 17.5	-1.4
	comp=Z,22nm,1.1s,baz=124,slow=7.4						
NB2	NORSAR Subarra	57.57	336	P	P	03 09 17.5	-1.4
	baz=124,slow=7.4						
NOA	NORSAR Array B	57.57	336	P	P	03 09 17.6	-1.4
	comp=Z,7.9nm,0.9s,baz=119,slow=7.5,SNR=8.4						
NOA				LR	LR	03 37 03.4	
	comp=Z,147nm,19.0s,baz=105,slow=39						
BJI	Beijing	57.57	51	P	P	03 09 19.3	+0.1
BJI				pmax	pmax		
	comp=Z,13nm,1.2s						
NC303	NORSAR Array S	57.61	336	*e*P	P	03 09 19.2	+0.1
SUR	Sutherland	57.64	216	P	P	03 09 19.6	-0.4
TIA	Tai'an	57.79	56	P	P	03 09 20.4	-0.5
TIA				LR	LR		
	comp=Z,330nm,19.2s						
TIA				LR	LR		
	comp=Z,280nm,15.7s						
TIA				LR	LR		
	comp=Z,470nm,18.5s						
PCJI	Pacitan	57.90	109	P	P	03 09 21.0	-0.9
	comp=Z,41nm,1.5s						
KKM	Kota Kinabalu	58.55	91	P	P	03 09 25.6	-1.1
NRIK	Noril'sk	58.70	12	P	P	03 09 26.4	-0.2
	comp=Z,5.1nm,0.3s,baz=210,slow=6.6,SNR=22						
NRIK				LR	LR	03 39 13.9	
	comp=Z,309nm,18.4s,baz=210,slow=41						
NJ2	Nanjing	58.89	61	*e*P	P	03 09 28.4	-0.2
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
KEV	Kevo	58.99	348	P	P	03 09 28.5	-0.2
SPMM	Sapulut	59.09	93	P	P	03 09 31.0	+0.7
ARCES	ARCESS Array B	59.12	348	P	P	03 09 28.7	-0.8
	comp=Z,30nm,0.7s,baz=148,slow=5.3,SNR=50						
ARCES				LR	LR	03 39 36.9	
	comp=Z,211nm,18.0s,baz=160,slow=41						
ARCES	ARCESS Array B	59.12	348	P	P	03 09 28.9	-0.7
ARE0	ARCESS Array S	59.12	348	*e*P	P	03 09 29.1	-0.5
ESBB	Sonseca Array	59.13	308	IAmb	IAmb	03 09 35.8	
	comp=Z,21nm,1.6s						
ESDC	Sonseca Array	59.13	308	P	P	03 09 28.5	-1.7
	comp=Z,1.5nm,0.7s,baz=77,slow=5.4,SNR=5.4						
ESDC				LR	LR	03 37 04.2	
	comp=Z,115nm,18.9s,baz=135,slow=38						
ESDC	Sonseca Array	59.13	308	P	P	03 09 29.0	-1.2
KTK1	Kautokeino	59.20	346	*e*P	P	03 09 29.5	-0.6
NSS	Namsos	59.32	339	*e*	P	03 09 37.4	+6.4
PAB	San Pablo	59.41	308	P	P	03 09 31.8	-0.4
PAB				IAmb	IAmb	03 09 37.9	
	comp=Z,13nm,1.4s						
MOR8	Moi Rana	59.53	341	*e*P	P	03 09 31.3	-1.1
HYA	Hoyanger	59.71	334	*e*P	P	03 09 33.4	-0.3
KONS	Konsvik	60.15	341	*e*P	P	03 09 36.0	-0.7
HAMF	Hammerfest	60.38	348	*e*P	P	03 09 37.7	-0.5
STEI	Steigen	60.45	343	*e*P	P	03 09 36.0	-2.7
TRO	Tromso	60.68	346	*e*P	P	03 09 38.6	-1.6
JAGI	Jajag, Banyuwa	60.74	108	P	P	03 09 39.8	-1.8
	comp=Z,38nm,1.5s						
KIC	Kosan Boka	61.26	270	*e*P	P	03 09 45.8	+0.6
	comp=Z,81nm,1.4s						
DBIC	Dimbokro	61.31	270	P	P	03 09 45.3	-0.2
	comp=Z,7.4nm,0.9s,baz=58,slow=7.4,SNR=9.1						
DBIC				PcP	PcP	03 10 29.1	+1.2
	comp=Z,8.7nm,1.1s,baz=53,slow=5.7,SNR=4.2						
DBIC				LR	LR	03 37 25.1	
	comp=Z,158nm,18.5s,baz=64,slow=37						
DBIC	Dimbokro	61.31	270	P	P	03 09 45.0	-0.5
DBIC				IAmb	IAmb	03 09 47.5	
	comp=Z,50nm,1.7s						
TIC	Toumodi	61.47	270	*e*P	P	03 09 47.2	+0.6
	comp=Z,4.0nm,0.3s						
LIC	Lamto	61.57	270	*e*P	P	03 09 47.9	+0.7
	comp=Z,79nm,1.5s						
SRBI	Singaraja	61.59	107	P	P	03 09 53.3	+6.0
HIA	Hailar	61.80	41	P	P	03 09 48.5	+0.3
HIA				IAmb	IAmb	03 09 53.6	
	comp=Z,16nm,1.3s						
MPSI	Mapaga	63.49	97	P	P	03 10 00.6	+0.5
PLAI	Plampang	64.22	107	P	P	03 10 02.8	-2.1
	comp=Z,593nmcomp=Z,21nm,1.4s						
TTSI	Tana Toraja	64.34	100	P	P	03 10 05.6	-0.1
	comp=Z,26nm,1.4s						
SPSI	Sidrap Palu	64.56	101	P	P	03 10 07.5	+0.4
	comp=Z,19nm,1.3s						
BNSI	Bone	65.01	102	P	P	03 10 09.9	-0.1
	comp=Z,51nm,1.5s						
BKSI	Bulukumba	65.30	103	P	P	03 10 11.2	-0.7
	comp=Z,578nmcomp=Z,35nm,1.5s						
MRSI	Marisa	65.42	96	P	P	03 10 11.7	-1.0
	comp=Z,3µmcomp=Z,81nm,1.5s						
WBSI	Waikabubak, Su	66.00	107	P	P	03 10 15.6	-0.9
	comp=Z,49nm,1.5s						
KSAR	Wonju Array Be	66.47	55	P	P	03 10 18.2	-0.9
KSRS	Korea Array	66.51	55	P	P	03 10 17.3	-2.0
	comp=Z,6.6nm,0.8s,baz=264,slow=7.1,SNR=20						
KSRS				LR	LR	03 41 44.5	
	comp=Z,343nm,18.9s,baz=273,slow=38						
LUWI	Luwuk	66.62	97	P	P	03 10 19.5	-0.9
BASI	Baing, Sumba	67.29	107	P	P	03 10 32.9	+8.2
SPA0	Spitsbergen Ar	67.41	352	*e*P	P	03 10 25.2	+0.9
SPITS	Spitsbergen Ar	67.41	352	P	P	03 10 23.8	-0.6
	comp=Z,66nm,1.0s,baz=141,slow=5.2,SNR=7.4						
MMRI	Maumere	68.32	105	P	P	03 10 28.2	-3.0
KBS	Kingsbay	68.57	352	P	P	03 10 32.0	+0.4
KLR	Kul'dur	69.59	42	P	P	03 10 37.5	-1.0
	comp=Z,5.1nm,0.9s,baz=279,slow=6.9,SNR=14						
KLR				LR	LR	03 43 19.1	
	comp=Z,697nm,22.0s,baz=226,slow=38						
USRK	Ussuriysk Ar.	69.64	48	P	P	03 10 38.0	-0.8
	comp=Z,6.1nm,0.9s,baz=263,slow=6.0,SNR=7.4						
USRK				LR	LR	03 43 06.7	
	comp=Z,491nm,18.8s,baz=251,slow=38						
USRK	Ussuriysk Ar.	69.64	48	P	P	03 10 38.1	-0.7
YAK	Yakutsk	69.69	29	P	P	03 10 37.9	-0.9
	comp=Z,7.1nm,0.3s,baz=256,slow=4.2,SNR=6.6						
YAK				LR	LR	03 44 11.4	
	comp=Z,259nm,18.3s,baz=252,slow=38						
YAK	Yakutsk	69.69	29	P	P	03 10 38.2	-0.6
SANI	Sanana	69.99	97	P	P	03 10 40.0	-1.5
	comp=Z,42nm,1.1s						
SOEI	Soe	70.58	106	P	P	03 10 44.7	-0.6
	comp=Z,69nm,1.3s						
TNTI	Ternate	70.60	94	P	P	03 10 46.2	+0.9
	comp=Z,8µmcomp=Z,85nm,1.3s						
TIXI	Tiksi	71.22	19	P	P	03 10 47.0	-1.0
	comp=Z,21nm,0.8s,baz=275,slow=3.6,SNR=41						
TIXI	Tiksi	71.22	19	P	P	03 10 46.9	-1.0
H01W3	Cape Leeuwin H	72.54	134	T	T	04 29 53.6	
	baz=302,slow=75,SNR=66						
H01W2	Cape Leeuwin H	72.55	134	T	T	04 29 52.5	
	baz=302,slow=75,SNR=76						
H01W1	Cape Leeuwin H	72.56	134	T	T	04 29 53.6	
	baz=302,slow=75,SNR=77						
DAG	Danmarks Havn	73.38	347	⇓*i*P	P	03 11 00.4	-0.4
	comp=Z,42nm,1.2s						
SCO	Scoresbysund	73.41	340	*i* P	P	03 11 01.7	+0.5
	comp=Z,32nm,1.2s						
SCO	Scoresbysund	73.41	340	P	P	03 11 01.6	+0.5
SCO				IAmb	IAmb	03 11 03.8	
	comp=Z,28nm,1.1s						
MJAR	Matsushiro Arr	74.77	56	P	P	03 11 09.2	-0.6
	comp=Z,4.6nm,0.7s,baz=273,slow=5.6,SNR=11						
MJAR				LR	LR	03 46 25.5	
	comp=Z,152nm,18.9s,baz=270,slow=38						
MJAR	Matsushiro Arr	74.77	56	P	P	03 11 10.5	+0.7
SWI	Sorong	74.78	95	P	P	03 11 09.6	-0.5
	comp=Z,56nm,1.1s						
FAKI	Fak Fak	76.25	97	P	P	03 11 18.0	-0.7
ASAJ	Asahikawa	77.26	47	P	P	03 11 23.5	-0.3
	comp=Z,6.4nm,0.8s,baz=285,slow=12,SNR=3.7						
ASAJ				LR	LR	03 47 49.7	
	comp=Z,259nm,18.7s,baz=162,slow=38						
SUMG	Summit	78.58	342	*i* P	P	03 11 31.0	-0.1
	comp=Z,225nm,1.6s						
SUMG	Summit	78.58	342	IAmb	IAmb	03 11 33.7	
	comp=Z,67nm,1.5s						
MA2	Magadan	80.01	31	P	P	03 11 38.5	-0.1
	comp=Z,12nm,0.7s,baz=266,slow=4.7,SNR=11						
MA2				LR	LR	03 49 25.8	
	comp=Z,234nm,19.2s,baz=270,slow=38						
MA2	Magadan	80.01	31	P	P	03 11 37.8	-0.8
SEY	Seymchan	80.16	28	P	P	03 11 39.6	+0.3
	comp=Z,26nm,0.8s,baz=263,slow=6.2,SNR=41						
MAW	Mawson	81.32	178	LR	LR	03 40 50.3	
	comp=Z,224nm,19.3s,baz=50,slow=30						
MAW	Mawson	81.32	178	P	P	03 11 45.4	+0.2
WB0	Warramunga Arr	82.97	112	IAmb	IAmb	03 11 55.3	
	comp=Z,32nm,1.1s						
WRA	Warramunga Arr	82.98	112	P	P	03 11 53.4	-1.7
	comp=Z,14nm,0.8s,baz=298,slow=4.1,SNR=47						
WRA				LR	LR	03 43 22.1	
	comp=Z,60nm,21.6s,baz=295,slow=32						
WRA	Warramunga Arr	82.98	112	P	P	03 11 53.3	-1.7
WRAB	Tennant Creek	82.98	112	P	P	03 11 53.4	-1.7
SYO	Syowa Base	83.57	186	⇑*e*X	P	03 11 55.0	-2.0
ASAR	Alice Springs	83.72	116	P	P	03 11 57.4	-1.5
	comp=Z,12nm,0.9s,baz=291,slow=4.7,SNR=45						
ASAR				LR	LR	03 44 52.0	
	comp=Z,103nm,19.2s,baz=294,slow=33						
ASAR	Alice Springs	83.72	116	P	P	03 11 57.0	-1.9
AS31	Alice Springs	83.72	116	P	P	03 11 57.3	-1.6
BILL	Bilibino	84.23	21	P	P	03 12 00.9	+0.3
BILL				IAmb	IAmb	03 12 03.0	
	comp=Z,32nm,1.1s						
TULEG	Thule	84.42	349	IAmb	IAmb	03 12 06.7	
	comp=Z,24nm,1.3s						
IVI	Ivigtut	85.21	332	P	P	03 12 05.8	+0.2
PETK	Petropavlovsk-	85.27	36	LR	LR	03 54 33.2	
	comp=Z,333nm,19.6s,baz=243,slow=39						
PETK	Petropavlovsk-	85.27	36	P	P	03 12 04.6	-1.6
RES	Resolute Bay	89.94	353	LR	LR	03 58 44.6	
	comp=Z,127nm,19.3s,baz=348,slow=40						
RES	Resolute Bay	89.94	353	IAmb	IAmb	03 13 23.3	
	comp=Z,23nm,1.9s						
PMG	Port Moresby	92.20	99	P	P	03 12 39.4	-0.5
STKA	Stephens Creek	92.56	122	LR	LR	03 53 42.7	
	comp=Z,65nm,18.1s,baz=228,slow=35						
RDOG	Red Dog Mine	93.39	14	P	P	03 12 44.1	-0.2
GAMB	Gambell	94.07	20	P	P	03 12 47.9	+0.4
GAMB				IAmb	IAmb	03 12 49.5	
	comp=Z,22nm,1.1s						
SNAA	Sanae	94.12	196	LR	LR	03 46 53.7	
	comp=Z,137nm,22.0s,baz=106,slow=30						
ANM	Nome	95.44	17	IAmb	IAmb	03 12 56.3	
	comp=Z,16nm,1.1s						
IMAR	Indian Mountai	97.14	12	P	P	03 13 01.3	-0.2
BMAR	Burnt Mountain	97.42	8	P	Pdif	03 13 03.4	+0.6
INK	Inuvik	97.72	4	P	P	03 13 02.7	-1.2
	comp=Z,1.9nm,1.0s,baz=353,slow=5.7,SNR=5.1						
MLY	Manley	98.58	12	IAmb	IAmb	03 13 13.3	
	comp=Z,6.2nm,1.0s						
ILAR	Eielson Array	99.52	10	P	Pdif	03 13 11.3	-0.8
	comp=Z,1.3nm,1.0s,baz=314,slow=2.8,SNR=7.5						
ILAR				PP	PP	03 17 16.1	+1.0
	comp=Z,0.9nm,0.9s,baz=314,slow=4.4,SNR=4.3						
ILAR				LR	LR	04 02 47.2	
	comp=Z,62nm,20.4s,baz=322,slow=38						
ILAR	Eielson Array	99.52	10	P	Pdif	03 13 11.1	-1.1
YKA	Yellowknife Ar	103.64	356	Pdiff	Pdif	03 13 30.6	+0.1
	comp=Z,0.3nm,0.6s,baz=0.7,slow=3.9,SNR=3.5						
YKA				PP	PP	03 17 44.3	-1.7
	comp=Z,2.5nm,0.8s,baz=7.3,slow=7.0,SNR=6.9						
ULM	Lac du Bonnet	111.94	342	PP	PP	03 18 46.1	-0.8
	comp=Z,4.8nm,1.1s,baz=27,slow=9.0,SNR=5.2						
PDAR	Pinedale Array	122.37	348	PKP	PKPdf	03 18 24.4	-0.7
	comp=Z,1.5nm,0.8s,baz=77,slow=1.9,SNR=12						
PDAR				PP	PP	03 20 01.4	+1.5
	comp=Z,0.5nm,0.7s,baz=35,slow=3.8,SNR=4.8						
PDAR	Pinedale Array	122.37	348		PKPdf	03 18 24.1	-1.0
SMCO	Snowmass	125.22	345		PKiKP	03 18 31.2	-0.1
LPAZ	La Paz	127.25	260	PKP	PKPdf	03 18 35.2	-0.3
	comp=Z,2.5nm,0.9s,baz=86,slow=4.6,SNR=9.1						
LPAZ	La Paz	127.25	260		PKPdf	03 18 33.1	-2.5
PLCA	Paso Flores	127.30	229	PKP	PKiKP	03 18 34.8	-0.1
	comp=Z,5.8nm,1.0s,baz=18,slow=1.7,SNR=7.8						
PLCA	Paso Flores	127.30	229		PKPdf	03 18 33.9	-0.4
NVAR	Mina Array Bea	127.84	355	PKP	PKiKP	03 18 36.7	+0.4
	comp=Z,2.0nm,0.7s,baz=20,slow=0.3,SNR=14						
NVAR	Mina Array Bea	127.84	355		PKPdf	03 18 35.9	+0.2
PB11	IPOC Station P	128.91	256		PKPdf	03 18 36.7	-1.4
121A	Cookes Peak, D	131.70	343		PKPdf	03 18 43.2	0.0
TUC	Tucson	132.69	346		PKPdf	03 18 44.3	-0.6
TXAR	Lajitas Array	133.26	337	PKP	PKPdf	03 18 46.0	-0.1
	comp=Z,1.0nm,0.7s,baz=114,slow=0.5,SNR=9.0						
TXAR	Lajitas Array	133.26	337		PKPdf	03 18 45.9	-0.2
OTAV	Otavalo	133.88	284		PKPdf	03 18 48.2	+0.1

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*IDC **15** 03:11:09.3±0.8, 51°.62N×175°.38W, h0km, mb3.9/12, mb1 4.0/14, mb1mx3.7/58, mbtmp3.9/14, ML3.9/2, Error ellipse: s-maj=24.3km s-min=16.5km az=164.0*

*AEIC **15** 03:11:15.7±2.1, 51°.6N±0°.1×175°.26W±0°.06, h37km±5km, ML3.7/20, mb4.1/9(NEIC), Error ellipse: s-maj=14.9km s-min=4.1km az=168.0*

*NEIC **15** 03:11:16.3±1.5, 51°.67N±0°.06×175°.25W±0°.04, h48km±5km, Error ellipse: s-maj=9.4km s-min=3.8km az=179.0*

ISC 15 03:11:15.1±0.8**, 51°.6N**±0°.1×**175°.20W**±0°.04**, h40km, n44, σ1§62**/43**, mb4.0**/12**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSMY	Great Sitkin M	0.67	307		Pn	03 11 29.1	+1.0
GSTR	Great Sitkin T	0.70	311		Pn	03 11 30.0	+1.4
GSTD	Great Sitkin T	0.72	305		Pn	03 11 29.9	+1.1
ETKA	Kagalaska Isla	0.78	287		Pn	03 11 30.0	+0.4
ETKA					Sn	03 11 40.5	+0.3
ATKA	Atka Island	0.84	48		Pn	03 11 31.2	+0.8
ATKA					Sn	03 11 42.2	+0.8
KOKL	Mount Kliuchef	0.92	42		Pn	03 11 33.1	+1.5
KOFP	Korovin Flat P	0.93	47		Pn	03 11 33.2	+1.4
ADAG	Mount Adagdak	0.93	292		Pn	03 11 33.1	+1.4
ADK	Adak	0.95	285		Pn	03 11 31.6	-0.4
KIKV	Kanaga Island	1.25	282		Pn	03 11 36.6	+0.6
KICM	Kanaga Island	1.27	283		Pn	03 11 37.2	+0.9
KICM					Sn	03 11 53.6	+1.4
KIMD	Kanaga Island	1.27	276		Pn	03 11 36.5	+0.2
TAPA	Tanaga Point A	1.63	277		Pn	03 11 42.2	+0.8
TAPA					Sn	03 12 01.3	+0.1
TAFP	Tanaga Falls P	1.75	280		Pn	03 11 44.0	+1.1
TASE	Tanaga Southea	1.77	277		Pn	03 11 44.5	+1.2
KDAK	Kodiak Island	14.40	56	Pn	Pn	03 14 36.9	+0.8
	0.5nm,0.3s,baz=275,slow=3.4,SNR=8.2						
KDAK				Sn	S	03 17 24.9	-8.0
	0.2nm,0.3s,baz=324,slow=19,SNR=2.3						
BILL	Bilibino	18.75	338	P	P	03 15 30.0	-0.3
HDA	Harding Lake	19.45	38	P	P	03 15 39.5	+1.6
IL31		19.65	37	P	P	03 15 41.6	+1.6
IL31				IAmb	IAmb	03 16 23.8	
	comp=Z,19nm,1.9s						
ILAR	Eielson Array	19.65	37	P	P	03 15 39.5	-0.6
	comp=Z,0.3nm,0.3s,baz=240,slow=10.0,SNR=30						
SCRK	Sand Creek	20.45	41	P	P	03 15 49.7	+0.8
SEY	Seymchan	20.59	316	P	P	03 15 47.6	-2.6
	comp=Z,1.0nm,0.2s,baz=17,slow=20,SNR=4.1						
INK	Inuvik	25.96	34	P	P	03 16 43.7	+0.4
	comp=Z,0.7nm,0.6s,baz=175,slow=8.0,SNR=4.9						
KLR	Kul'dur	33.26	287	P	P	03 17 48.1	-0.2
	comp=Z,1.0nm,0.4s,baz=45,slow=5.5,SNR=6.3						
H11N2	WAKE ISLAND Hy	34.81	210	T	T	03 54 46.1	
	baz=18,slow=76,SNR=44						
H11N3	WAKE ISLAND Hy	34.82	210	T	T	03 54 45.4	
	baz=18,slow=76,SNR=37						
H11N1	WAKE ISLAND Hy	34.83	210	T	T	03 54 48.3	
	baz=18,slow=76,SNR=55						
H11S1	WAKE ISLAND Hy	36.02	210	T	T	03 56 38.5	
	baz=19,slow=76,SNR=47						
H11S2	WAKE ISLAND Hy	36.04	210	T	T	03 56 39.0	
	baz=19,slow=76,SNR=35						
H11S3	WAKE ISLAND Hy	36.04	210	T	T	03 56 38.2	
	baz=19,slow=76,SNR=21						
PDAR	Pinedale Array	44.08	75	P	P	03 19 21.0	+1.8
	comp=Z,1.5nm,0.6s,baz=316,slow=3.8,SNR=13						
ULM	Lac du Bonnet	47.64	59	P	P	03 19 46.7	-0.2
	comp=Z,0.9nm,0.5s,baz=310,slow=5.5,SNR=3.2						
SPITS	Spitsbergen Ar	50.25	357	P	P	03 20 06.5	-0.1
	comp=Z,6.4nm,1.1s,baz=23,slow=7.8,SNR=4.9						
TXAR	Lajitas Array	56.39	84	P	P	03 20 53.1	+0.7
	comp=Z,0.2nm,0.5s,baz=276,slow=3.4,SNR=3.8						
ARCES	ARCESS Array B	58.19	352	P	P	03 21 04.8	+0.4
	comp=Z,7.2nm,0.9s,baz=15,slow=7.5,SNR=3.2						
KURK	Kurchatov	60.44	315	P	P	03 21 20.7	+0.5
KURBB	Kurchatov Arra	60.54	315	P	P	03 21 20.7	-0.2
	comp=Z,0.4nm,0.4s,baz=42,slow=6.0,SNR=6.1						
MK31	Makanchi Array	61.60	310	P	P	03 21 27.1	-1.1
MK31				IAmb	IAmb	03 21 31.0	
	comp=Z,1.2nm,0.9s						
BVAR	Borovoye Array	62.11	322	P	P	03 21 31.4	-0.1
	comp=Z,0.4nm,0.3s,baz=63,slow=6.8,SNR=7.2						
WRA	Warramunga Arr	83.80	227	P	P	03 23 39.5	-0.6
	comp=Z,0.4nm,0.8s,baz=33,slow=5.9,SNR=4.0						
ASAR	Alice Springs	87.24	225	P	P	03 23 55.8	-1.3
	comp=Z,0.4nm,0.8s,baz=26,slow=6.6,SNR=3.7						
TORD	Torodi Ar. Bea	115.42	3	PKP	PKiKP	03 29 52.1	-0.5
	comp=Z,0.2nm,0.6s,baz=358,slow=3.2,SNR=3.6						
MAW	Mawson	148.07	218	PKPbc	PKPbc	03 30 55.8	+1.0
	comp=Z,5.3nm,1.0s,baz=20,slow=7.7,SNR=2.9						
BOSA	Boshof	152.37	319	PKPbc	PKPbc	03 31 07.2	+0.6
	comp=Z,1.0nm,0.5s,baz=14,slow=1.8,SNR=7.9						

IDC 15 03:41:45.7±5.6**, 7°.48N**×**94°.15E, h0km, mb3.5**/4**, mb1 3.6**/5**, mb1mx3.3**/50**, mbtmp3.5**/5**, ML3.4**/1**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.4**/42**, Error ellipse: s-maj=271.6km s-min=21.7km az=58.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	6.65	134	Pn	Pn	03 43 26.5	+1.7
	0.7nm,0.3s,baz=323,slow=20,SNR=5.3						
PSI				Sn	Sn	03 44 43.1	+1.7
	0.2nm,0.3s,baz=308,slow=19,SNR=1.9						
PSI				LR	LR	03 45 56.4	
	comp=Z,87nm,18.7s,baz=178,slow=37						
H08S3	Diego Garcia H	26.31	236	T	T	04 14 10.2	
	baz=49,slow=74,SNR=5.9						
H08S2	Diego Garcia H	26.31	236	T	T	04 14 10.8	
	baz=49,slow=74,SNR=3.8						
H08S1	Diego Carcia H	26.32	236	T	T	04 14 09.0	
	baz=49						
MKAR	Makanchi Array	40.47	347	P	P	03 49 24.9	-1.2
	0.3nm,0.7s,baz=176,slow=8.0,SNR=2.4						
ZALV	Zalesovo Beam	46.95	352	P	P	03 50 18.9	+0.8
	0.5nm,0.3s,baz=181,slow=8.9,SNR=4.1						
WRA	Warramunga Arr	48.02	125	P	P	03 50 27.0	0.0
	0.5nm,0.9s,baz=307,slow=8.4,SNR=3.4						
ASAR	Alice Springs	49.66	130	P	P	03 50 39.2	-0.4
	0.2nm,0.4s,baz=297,slow=7.5,SNR=4.2						

PGC 15 03:43:05.0±4.9**, 50°.48N**×**130°.32W, h10km, MLSn3.3**/26**, Mw3.9**/26**, Mw3.9**/27**, 206km west of Pt. Hardy, Bc Vancouver Island, Canada Region, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	Holberg	1.41	83	Pn	Pn	03 43 28.5	-2.1
HOLB				Sn	Sn	03 43 44.0	-5.3
BPBC	Brooks Peninsu	1.67	100	Pn	Pn	03 43 31.8	-2.5
BPBC				Sn	Sn	03 43 50.1	-5.6
PHC	Port Hardy	1.86	82	Pn	Pn	03 43 35.0	-1.8
PHC				Sn	Sn	03 43 55.7	-4.5
MAYB	Maynard	2.02	91	Pn	Pn	03 43 37.2	-2.0
EDB	Eliza Dome	2.15	105	Pn	Pn	03 43 39.0	-1.9
BBB	Bella Bella	2.20	38	Pn	Pn	03 43 39.7	-1.8
BBB				Sn	Sn	03 44 03.4	-5.3
HG3B	Hotspring	2.21	342	Pn	Pn	03 43 39.9	-1.8
HG3B				Sn	Sn	03 44 06.0	-3.0
TLCB	Telegraph Cove	2.23	87	Pn	Pn	03 43 40.4	-1.5
BNB	Barry Inlet	2.28	338	Pn	Pn	03 43 41.0	-1.7
BNB				Sn	Sn	03 44 06.9	-3.9
WOSB	Woss	2.43	96	Pn	Pn	03 43 43.5	-1.3
NCRB	Newcastle Ridg	2.73	90	Pn	Pn	03 43 47.4	-1.5
GDR	Gold River	2.85	103	Pn	Pn	03 43 49.0	-1.5
MOBC	Moresby Island	2.85	340	Pn	Pn	03 43 48.3	-2.3
MOBC				Sn	Sn	03 44 21.8	-3.2
BCBC	Bella Coola	2.93	48	Pn	Pn	03 43 51.4	-0.1
BCBC				Sn	Sn	03 44 22.5	-4.2
DIB	Dawson Inlet,	3.03	335	Sn	Sn	03 44 26.3	-3.0
SPLB	Strathcona Par	3.06	99	Pn	Pn	03 43 52.2	-1.1
CBB	Campbell River	3.21	96	Pn	Pn	03 43 54.4	-1.1
BTB	Buttle Lake	3.26	106	Pn	Pn	03 43 55.0	-1.3
RUBB	Prince Rupert	3.85	1	Pn	Pn	03 44 03.2	-1.0
MGB	Mount Grey	3.94	110	Pn	Pn	03 44 04.6	-1.0
YOUB	Youbou, Lake C	4.24	110	Pn	Pn	03 44 09.7	0.0
SHB	Sechelt	4.25	100	Pn	Pn	03 44 07.5	-2.3
PFB	Port Renfrew	4.28	114	Pn	Pn	03 44 09.6	-0.6
NLLB	Nanaimo Lost L	4.29	105	Pn	Pn	03 44 10.5	+0.3
OCP	Olym-Cheeka Pk	4.32	118	Pn	Pn	03 44 10.9	+0.2
UBRB	Upper Baezaeko	4.57	56	Pn	Pn	03 44 14.8	+0.6
UBRB				Sn	Sn	03 45 05.3	-2.1
WPB	Watts Point	4.66	97	Pn	Pn	03 44 15.3	0.0
BIB	Bowen Island	4.66	101	Pn	Pn	03 44 15.0	-0.3
GOBB	Galiano Island	4.68	107	Pn	Pn	03 44 15.4	-0.2
WSLR	Whistler	4.76	91	Pn	Pn	03 44 16.1	-0.6
OBC	Olympics--Boni	4.77	119	Pn	Pn	03 44 17.1	+0.2
OSD	Olympics--Snow	5.10	119	Pn	Pn	03 44 22.4	+0.8
HNBB	Haney	5.15	100	Pn	Pn	03 44 22.6	+0.5
MCW	Mount Constitu	5.20	107	Pn	Pn	03 44 23.2	+0.4
LLLB	Lillooet	5.38	85	Pn	Pn	03 44 24.8	-0.5
FSB	Fort Saint Jam	5.42	40	Pn	Pn	03 44 25.6	-0.3
VDB	Vedder Mountai	5.53	102	Pn	Pn	03 44 28.2	+1.0
HDW	Hoodsport	5.56	118	Pn	Pn	03 44 28.8	+1.1
MBW	Mount Baker	5.73	104	Pn	Pn	03 44 31.4	+1.2
JCW	Jim Creek	5.95	109	Pn	Pn	03 44 34.0	+0.9
GPW	Glacier Peak	6.46	108	Pn	Pn	03 44 41.7	+1.4
FMW	Mount Fremont	6.74	119	Pn	Pn	03 44 46.0	+1.9
LON	Longmire	6.77	120	Pn	Pn	03 44 46.1	+1.8
PNT	Penticton	7.01	95	Pn	Pn	03 44 48.4	+0.7
LTY	Liberty	7.14	113	Pn	Pn	03 44 51.2	+1.7
B08A	Colville Reser	7.48	102	Pn	Pn	03 44 54.0	0.0
DLBC	Dease Lake	7.97	1	Pn	Pn	03 45 02.0	+1.2
NBC5	NorthernBC 5	8.36	30	P	Pn	03 45 07.3	+1.1

IDC 15 03:52:19.3±1.7**, 9°.96S**×**155°.97E, h0km, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.6**/29**, mbtmp3.7**/4**, ML4.5**/1**, MS3.1**/3**, Ms1 3.1**/3**, ms1mx2.7**/26**, Error ellipse: s-maj=55.2km s-min=29.0km az=150.0, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.96	83	Pn	Pn	03 53 21.8	+0.5
	32nm,0.3s,baz=201,slow=14,SNR=3.6						
PMG	Port Moresby	8.70	273	LR	LR	03 57 37.4	
	comp=Z,87nm,19.4s,baz=137,slow=36						
WRA	Warramunga Arr	23.10	242	P	P	03 57 26.9	-0.2
	0.9nm,0.8s,baz=65,slow=9.3,SNR=4.5						
ASAR	Alice Springs	25.08	234	P	P	03 57 45.4	-0.4
	1.1nm,0.8s,baz=66,slow=8.9,SNR=8.8						
ASAR				LR	LR	04 07 14.3	
	comp=Z,41nm,20.7s,baz=208,slow=36						
MJAR	Matsushiro Arr	49.18	341	LR	LR	04 20 59.2	
	comp=Z,24nm,19.0s,baz=235,slow=35						
SONM	Songino Array	72.34	327	P	P	04 03 47.6	+0.5
	0.4nm,0.6s,baz=136,slow=7.6,SNR=3.3						

IDC ***15*** *04:05:12.4±2.1, 13°.56N×56°.92E, h0^{km}, mb3.8/8, mb1 4.0/8, mb1mx3.5/69, mbtmp3.8/8, MS2.9/3, Ms1 2.9/3, ms1mx2.5/47, Error ellipse: s-maj=51.1km s-min=26.5km az=42.0*

NEIC ***15*** *04:05:15.0±2.5, 13°.69N±0°.10×57°.1E±0°.1, h10^{km}±1^{km}, mb4.0/4, Error ellipse: s-maj=20.4km s-min=16.8km az=83.0*

ISC 15 04:05:14.4±1.0**, 13°.6N**±0°.2×**57°.0E**±0°.1**, h10^{km}, n18, σ1^s.09**/12**, mb4.0**/9**, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCY	Socotra	3.27	245		Pn	04 06 05.7	-0.1
WSAR	Wadi Sarin	9.72	9	LR	LR	04 10 47.4	
	comp=Z,38nm,18.5s,baz=226,slow=34						
RAYN	Ar Rayn	14.72	314		Pn	04 08 44.0	+1.1
AAK	Ala-Archa	32.65	24	LR	LR	04 27 16.2	
	comp=Z,60nm,19.0s,baz=215,slow=40						
IDI	Anoyia	36.11	312	LR	LR	04 28 35.6	
	comp=Z,12nm,18.2s,baz=38,slow=39						
MK31	Makanchi Array	39.31	28	P	P	04 12 44.1	+0.5
MK31				IAmb	IAmb	04 12 60.0	
	comp=Z,7.2nm,1.9s						
MKAR	Makanchi Array	39.31	28	P	P	04 12 44.0	+0.3
	comp=Z,0.2nm,0.7s,baz=212,slow=8.0,SNR=2.8						
CMAR	Chiang Mai Arr	40.52	77	P	P	04 12 55.1	+1.0
	comp=Z,1.2nm,0.3s,baz=276,slow=9.0,SNR=7.0						
KURBB	Kurchatov Arra	40.87	21	P	P	04 12 55.2	-1.3
	comp=Z,0.2nm,0.3s,baz=217,slow=8.6,SNR=4.8						
KURK	Kurchatov	40.98	21	P	P	04 12 55.2	-2.2
AKASG	Malin Array Be	43.35	334	P	P	04 13 16.7	-0.1
	comp=Z,0.1nm,0.3s,baz=141,slow=10,SNR=2.8						
ZALV	Zalesovo Beam	45.84	23	P	P	04 13 36.8	+0.2
	comp=Z,0.4nm,0.3s,baz=224,slow=8.1,SNR=1.9						
FINES	FINESS Array B	52.74	342	P	P	04 14 28.1	-1.1
	comp=Z,6.0nm,1.0s,baz=144,slow=8.3,SNR=4.7						
ARCES	ARCESS Array B	59.33	348	P	P	04 15 16.2	-0.1
	comp=Z,3.2nm,0.9s,baz=134,slow=8.7,SNR=5.2						
H01W3	Cape Leeuwin H	72.48	134	T	T	05 35 50.1	
	baz=302,slow=75,SNR=4.3						
H01W2	Cape Leeuwin H	72.48	134	T	T	05 35 51.9	
	baz=302,slow=75,SNR=6.0						
H01W1	Cape Leeuwin H	72.49	134	T	T	05 35 51.6	
	baz=302,slow=75,SNR=5.0						
WRA	Warramunga Arr	83.01	112	P	P	04 17 40.3	-0.3
	comp=Z,1.3nm,0.9s,baz=304,slow=4.2,SNR=4.5						

IDC ***15*** *04:09:32.9±1.4, 0°.29N×98°.43E, h0^{km}, mb3.8/8, mb1 3.9/9, mb1mx3.6/53, mbtmp3.8/9, ML3.5/1, MS3.1/4, Ms1 3.1/4, ms1mx2.7/42, Error ellipse: s-maj=50.2km s-min=19.1km az=57.0*

DJA ***15*** *04:09:38.4±0.4, 0°N±2°×9°8E±°, h36^{km}±6^{km}, M4.4/9, mb4.0/1, MLv4.6/9*

NEIC ***15*** *04:09:42.4±1.4, 0°.62N±0°.10×98°.2E±0°.1, h52^{km}±11^{km}, mb4.2/4, Error ellipse: s-maj=21.7km s-min=12.7km az=72.0*

ISC 15 04:09:38.2±0.7**, 0°.48N**±0°.04×**98°.22E**±0°.07**, h29^{km}, n33, σ1^s.93**/33**, mb4.0**/10**, MS3.3**/3**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBSI	Pulau Batu	0.54	173	P	Pn	04 09 50.4	+0.5
PBSI				S	Sn	04 09 57.5	-0.5
SISI	Saibi	2.00	154	P	Pn	04 10 10.5	+0.5
SISI				S	Sn	04 10 32.7	-1.4
RPSI	Rantau Prapat	2.31	18		Pn	04 10 15.5	+1.1
RPSI	Rantau Prapat	2.31	18		Sn	04 10 39.9	-2.0
PSI	Prapat	2.41	17	Pn	Pn	04 10 13.4	-2.4
	10nm,0.3s,baz=342,slow=1.0,SNR=24						
PSI				Sn	Sn	04 10 39.9	-4.7
	34nm,0.3s,baz=180,slow=15,SNR=7.6						
PSI				LR	LR	04 10 56.1	
	comp=Z,87nm,19.6s,baz=1.5,slow=34						
PDSI	Padang	2.64	122	P	Pn	04 10 17.1	-1.8
PDSI				S	Sn	04 10 49.3	-0.7
BKNI	Bangkinang	2.83	93	P	Pn	04 10 23.1	+1.6
BKNI	Bangkinang	2.83	93		Pn	04 10 24.3	+2.8
KCSI	Kotacane, Aceh	3.05	352	P	Pn	04 10 25.1	+0.5
KCSI				S	Sn	04 11 01.8	+1.6
SDSI	Sungai Dareh	3.50	114	P	Pn	04 10 31.1	+0.3
SDSI				S	Sn	04 11 10.9	-0.5
KRJI	Kerinci	4.13	128	P	Pn	04 10 38.8	-0.7
IPM	Ipoh	4.86	35		Pn	04 10 52.2	+2.7
KULM	Kulim	5.36	27		Pn	04 10 59.9	+3.5
MNAI	Manna	6.75	135		Pn	04 11 15.2	-0.3
MDSI	Maura Dua	7.74	130	P	Pn	04 11 28.2	-0.8
BRDH	Bariadhala	22.97	344	LR	LR	04 24 56.3	
	comp=Z,60nm,19.3s,baz=160,slow=40						
SHL	Shillong	25.68	347	P	P	04 15 06.0	-0.1
H08S2	Diego Garcia H	26.89	252	T	T	04 42 46.1	
	baz=73,slow=76,SNR=78						
H08S3	Diego Garcia H	26.89	252	T	T	04 42 44.4	
	baz=73,slow=76,SNR=187						
H08S1	Diego Carcia H	26.91	252	T	T	04 42 47.6	
	baz=73,slow=76,SNR=56						
MBWA	Marble Bar	30.08	137	P	P	04 15 48.7	+3.4
WRA	Warramunga Arr	40.80	122	P	P	04 17 13.8	-3.6
	0.4nm,0.7s,baz=304,slow=9.0,SNR=2.7						
ASAR	Alice Springs	42.15	127	P	P	04 17 25.2	-3.3
	0.3nm,0.5s,baz=294,slow=7.0,SNR=2.7						
AAK	Ala-Archa	47.06	336	LR	LR	04 42 01.5	
	comp=Z,33nm,19.8s,baz=87,slow=41						
SONM	Songino Array	47.70	7	P	P	04 18 13.0	+0.6
	0.5nm,0.4s,baz=193,slow=9.6,SNR=5.2						
MK31	Makanchi Array	48.19	345	P	P	04 18 16.4	+0.4
MK31				IAmb	IAmb	04 18 31.1	
	comp=Z,2.4nm,1.1s						
MKAR	Makanchi Array	48.19	345	P	P	04 18 17.0	+0.9
	comp=Z,1.3nm,0.6s,baz=153,slow=7.4,SNR=18						
MAKZ	Makanchi	48.28	345	P	P	04 18 15.8	-1.0
MAKZ				IAmb	IAmb	04 18 32.2	
	comp=Z,1.8nm,0.8s						
STKA	Stephens Creek	52.12	132	LR	LR	04 41 31.6	
	comp=Z,33nm,19.4s,baz=216,slow=37						
ZALV	Zalesovo Beam	54.43	350	P	P	04 19 03.3	+0.6
	comp=Z,1.9nm,0.5s,baz=167,slow=7.1,SNR=6.3						
KLR	Kul'dur	56.45	26	P	P	04 19 17.1	-0.2
	comp=Z,0.9nm,0.5s,baz=258,slow=8.4,SNR=3.8						
AKTO	Aktyubinsk	60.34	332	P	P	04 19 45.4	+0.9
	comp=Z,0.3nm,0.4s,baz=114,slow=12,SNR=2.6						
FINES	FINESS Array B	81.10	332	P	P	04 21 51.0	+0.5
	comp=Z,1.3nm,0.8s,baz=122,slow=10.0,SNR=3.9						

IDC ***15*** *04:26:25.2±16.0, 18°.47N×145°.45E, h265^{km}±161^{km}, mb3.0/8, mb1 3.3/8, mb1mx3.0/42, mbtmp3.6/8, Error ellipse: s-maj=31.3km s-min=24.6km az=63.0*

ISC 15 04:26:23.7±0.9**, 18°.5N**±0°.2×**145°.4E**±0°.3**, h250^{km}, n8, σ1^s.08**/9**, mb3.4**/8**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	39.71	196	P	P	04 33 31.9	-0.4
	1.2nm,0.7s,baz=19,slow=9.1,SNR=13						
ASAR	Alice Springs	43.38	195	P	P	04 34 02.2	+0.3
	0.5nm,0.6s,baz=12,slow=6.3,SNR=6.6						
MKAR	Makanchi Array	58.40	314	P	P	04 35 54.4	+1.1
	0.2nm,0.4s,baz=104,slow=6.7,SNR=3.9						
MKAR				PcP	PcP	04 36 39.6	-1.6
	0.4nm,0.8s,baz=93,slow=4.9,SNR=3.9						
KURBB	Kurchatov Arra	61.28	318	P	P	04 36 12.9	+0.2
	0.2nm,0.4s,baz=95,slow=7.6,SNR=4.9						
ILAR	Eielson Array	63.95	26	P	P	04 36 28.8	-1.3
	0.6nm,0.8s,baz=244,slow=5.3,SNR=5.3						
BVAR	Borovoye Array	66.45	320	P	P	04 36 46.7	+0.4
	0.6nm,0.5s,baz=88,slow=8.5,SNR=5.1						
YKA	Yellowknife Ar	78.30	28	P	P	04 37 56.3	+0.4
	0.4nm,0.5s,baz=286,slow=5.4,SNR=9.2						
NVAR	Mina Array Bea	83.49	52	P	P	04 38 25.0	+1.0
	0.5nm,0.7s,baz=254,slow=5.9,SNR=4.6						

MEX ***15*** *05:05:11.5±0.5, 14°.15N×92°.79W, h16^{km}±90^{km}, MD4.0*

GCG ***15*** *05:05:13.9±0.6, 15°.67N×92°.04W, h26^{km}±999^{km}, MD3.7*

ISC 15 05:05:10.4±3.9**, 14°.3N**±0°.1×**92°.79W**±0°.10**, h15^{km}**±17^{km}**, n7, σ0^s.72**/14**, 1C, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.77	41	i P	Pb	05 05 25.1	-0.3
THIG				i S	Sg	05 05 35.9	+0.3
STG3	Santiaguito 3,	1.24	72	⇑eP	Pn	05 05 33.8	+0.5
STG3				i S	Sb	05 05 48.6	-0.8
PCIG		1.44	343	eP	Pn	05 05 35.8	0.0
PCIG				i S	Sn	05 05 53.8	-0.6
FUG	Fuego 3	1.89	86	eP	Pn	05 05 41.8	-0.4
FUG				eS	Sn	05 06 05.4	-0.4
CCIG	Comitan	2.05	18	i P	Pn	05 05 45.0	+0.6
CCIG				eS	Sn	05 06 09.9	+0.1
IXG	Ixpaco	2.28	93	eP	Pn	05 05 48.5	+0.9
IXG				eS	Sn	05 06 15.8	+0.4
TGIG		2.47	352	eP	Pn	05 05 50.0	-0.1
TGIG				eS	Sn	05 06 21.4	+1.4

SJA ***15*** *05:09:12.6±0.5, 24°.29S×67°.21W, h193^{km}±5^{km}, ML3.1, MW3.2*

IDC ***15*** *05:09:14.9±2.5, 24°.02S×67°.07W, h174^{km}±41^{km}, mb2.9/1, mb1 3.0/6, mb1mx2.9/28, mbtmp3.4/6, Error ellipse: s-maj=49.2km s-min=26.9km az=127.0*

GUC ***15*** *05:09:15.9±0.6, 24°.13S×67°.64W, h221^{km}±10^{km}, ML3.7*

ISC 15 05:09:14.2±0.9**, 24°.18S**±0°.06×**67°.26W**±0°.04**, h182^{km}**±9^{km}**, n27, σ1^s.25**/43**, 7C-4D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.69	109	i P	Pn	05 09 47.8	-0.5
SLA				⇓eS	Sn	05 10 13.5	-1.2
HJA	Humahuaca	1.95	61	i P	Pn	05 09 51.7	+0.4
HJA				eS	Sn	05 10 20.7	+0.7
AZAP	Zapla	2.00	92	i P	Pn	05 09 50.9	-0.8
AZAP				eS	Sn	05 10 19.8	-0.9
LVC	Limon Verde	2.18	315	P	Pn	05 09 54.8	+1.0
	5.2nm,0.3s,baz=136,slow=7.9,SNR=67						
LVC				S	Sn	05 10 24.6	+0.2
	8.1nm,0.3s,baz=198,slow=2.5,SNR=43						
PB15	IPOC Station P	2.25	295	⇑iP	Pn	05 09 55.1	+0.8
PB15				eS	Sn	05 10 25.3	-0.2
PB15	IPOC Station P	2.25	295	i P	Pn	05 09 55.2	+0.8
PB15				eS	Sn	05 10 26.3	+0.8
GO02	Mina Guanaco	2.34	245	⇑iP	Pn	05 09 55.7	+0.2
GO02				eS	Sn	05 10 27.2	-0.3
GO02				IAML		05 10 29.1	
	comp=N,167nm,0.1s						
YJA	Yavi	2.56	39	i P	Pn	05 09 59.3	+1.1
YJA				eS	Sn	05 10 33.5	+1.2
PB06	IPOC Station P	2.58	304	⇑iP	Pn	05 09 58.9	+0.7
PB06				eS	Sn	05 10 31.7	-0.6
PB06				IAML		05 10 33.6	
	comp=N,217nm,0.3s						
PB06	IPOC Station P	2.58	304	i P	Pn	05 09 58.9	+0.7
PB06				IAML		05 10 36.6	
	comp=Z,67nm,0.1s						
PB14	IPOC Station P	2.90	260	i P	Pn	05 10 02.0	-0.1
PB14				IAML		05 10 41.8	
	comp=Z,24nm,0.3s						
PB09	IPOC Station P	2.99	322	⇓iP	Pn	05 10 04.5	+1.4
PB09				eS	Sn	05 10 41.5	+0.3
PB09				IAML		05 10 43.4	
	comp=N,70nm,0.3s						
PB09	IPOC Station P	2.99	322	i P	Pn	05 10 04.3	+1.2
PB09				IAML		05 10 46.4	
	comp=Z,41nm,0.5s						
PB05	IPOC Station P	3.01	295	⇑iP	Pn	05 10 03.5	+0.3
PB05				eS	Sn	05 10 39.4	-1.9
PB05				IAML		05 10 41.3	
	comp=N,84nm,0.2s						
PB05	IPOC Station P	3.01	295	i P	Pn	05 10 03.5	+0.3
PB05				IAML		05 10 45.3	
	comp=Z,37nm,0.3s						
PB10	IPOC Station P	3.09	282	⇑iP	Pn	05 10 04.3	+0.3
PB10				eS	Sn	05 10 39.6	-3.3
PB10				IAML		05 10 46.9	
	comp=N,67nm,0.3s						
PB10	IPOC Station P	3.09	282	i P	Pn	05 10 04.6	+0.5
PB10				IAML		05 10 47.4	
	comp=Z,29nm,0.4s						
PB03	IPOC Station P	3.12	312	⇓iP	Pn	05 10 05.3	+0.7
PB03				eS	Sn	05 10 42.6	-1.4
PB03				IAML		05 10 43.7	
	comp=E,172nm,0.3s						
PB04	IPOC Station P	3.23	304	⇑iP	Pn	05 10 06.4	+0.4
PB04				eS	Sn	05 10 44.4	-1.9
PB04	IPOC Station P	3.23	304	i P	Pn	05 10 06.6	+0.6
PB07	IPOC Station P	3.44	315	⇓iP	Pn	05 10 08.8	+0.3
PB07				eS	Sn	05 10 49.3	-1.6
PB07				IAML		05 10 50.9	
	comp=N,131nm,0.3s						
PB01	IPOC Station P	3.74	326	⇑iP	Pn	05 10 12.3	+0.1
PB01				eS	Sn	05 10 55.8	-1.7
PB01				IAML		05 10 56.8	
	comp=E,62nm,0.4s						
LPAZ	La Paz	7.89	354	P	Pn	05 11 07.5	+0.8
	comp=E,0.2nm,0.3s,baz=168,slow=6.8,SNR=11						
SIV	San Ignacio	10.00	37	P	Pn	05 11 31.0	-2.8
	comp=E,0.2nm,0.3s,baz=231,slow=18,SNR=4.0						
PLCA	Paso Flores	16.74	189	P	Pn	05 13 01.3	+3.0
	comp=E,0.0nm,0.3s,baz=354,slow=10,SNR=2.5						
BDFB	Brasilia	19.97	68	P	P	05 13 31.8	-0.9
	comp=E,0.3nm,0.3s,baz=239,slow=5.9,SNR=3.6						
TORD	Torodi Ar. Bea	76.85	69	P	P	05 20 46.4	-0.1
	comp=E,0.2nm,0.6s,baz=247,slow=5.5,SNR=2.3						

IDC ***15*** *05:09:12.8±2.8, 23°.82N×93°.89E, h72^{km}±32^{km}, mb3.5/7, mb1 3.6/9, mb1mx3.3/58, mbtmp3.8/9, ML4.0/2, Error ellipse: s-maj=24.2km s-min=14.6km az=61.0*

NEIC ***15*** *05:09:12.1±2.2, 23°.90N±0°.07×93°.9E±0°.1, h63^{km}±8^{km}, mb4.3/8, Error ellipse: s-maj=18.9km s-min=10.1km az=85.0*

ISC 15 05:09:14.1±0.8**, 23°.92N**±0°.07×**93°.58E**±0°.07**, h100^{km}, n33, σ1^s.73**/39**, mb3.9**/11**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRDH	Bariadhala	2.17	236	P	Pn	05 09 49.1	+0.2
	34nm,0.3s,baz=283,slow=18,SNR=2.3						
BRDH				S	Sn	05 10 17.8	+2.4
	73nm,0.3s,baz=287,slow=19,SNR=15						
SHL	Shillong	2.26	317		Pn	05 09 49.9	-0.3
SHL				Sn	Sn	05 10 15.7	-2.2
LSA	Lhasa	6.16	340	Pn	Pn	05 10 43.7	+0.7
TAPN	Taplejung	6.31	304	ePn	Pn	05 10 45.4	+0.5
ODAN	Odare	6.32	299	ePn	Pn	05 10 45.8	+0.8
ODAN				eSn	Sn	05 11 55.3	-0.6
	88nm,0.2s						
RAMN	Ramite	7.00	297	ePn	Pn	05 10 54.9	+0.7
CMAR	Chiang Mai Arr	7.38	136	P	Pn	05 10 54.5	-4.7
	0.7nm,0.3s,baz=312,slow=13,SNR=6.2						
JIRN	Jiri	7.63	301	ePn	Pn	05 11 03.1	+0.1
JIRN				eSn	Sn	05 12 26.9	-1.2
	165nm,0.3s						
GUN	Gumba	8.00	301	ePn	Pn	05 11 07.7	-0.2
GUN				eSn	Sn	05 12 34.5	-2.3
	202nm,0.7s						
PKI	Pulchoki	8.22	298	ePn	Pn	05 11 10.6	-0.3
PKI				eSn	Sn	05 12 40.3	-1.9
	51nm,0.6s						
PKIN	Phulchoki	8.23	298	ePn	Pn	05 11 10.9	-0.1
KKN	Kakani	8.41	299	ePn	Pn	05 11 13.5	+0.1
DMN	Daman	8.48	297	ePn	Pn	05 11 14.5	+0.1
DMN				eSn	Sn	05 12 46.6	-1.9
	44nm,0.5s						
GKN	Gorkha	9.02	299	ePn	Pn	05 11 21.4	-0.2
GKN				eSn	Sn	05 12 59.0	-2.5
	103nm,0.6s						
DANN	Dangsing	9.87	299	ePn	Pn	05 11 32.7	-0.6
DANN				eSn	Sn	05 13 19.9	-2.4
	38nm,0.5s						
MK31	Makanchi Array	24.56	341	P	P	05 14 27.6	+3.0
MKAR	Makanchi Array	24.56	341	P	P	05 14 27.9	+3.4
	1.3nm,0.7s,baz=149,slow=8.9,SNR=15						
MKAR	Makanchi Array	24.56	341	P	P	05 14 27.7	+3.2
SONM	Songino Array	25.96	20	P	P	05 14 38.7	+1.4
	0.8nm,0.7s,baz=200,slow=11,SNR=6.1						
SONM	Songino Array	25.96	20	P	P	05 14 38.9	+1.6
KURBB	Kurchatov Arra	29.11	340	P	P	05 15 08.4	+3.1
	0.5nm,0.5s,baz=155,slow=7.7,SNR=4.4						
KURK	Kurchatov	29.16	340	P	P	05 15 08.1	+2.4
KURK				IAmb	IAmb	05 15 09.4	
	comp=Z,2.4nm,1.0s						
ZALV	Zalesovo Beam	30.71	350	P	P	05 15 20.5	+1.2
	comp=Z,0.8nm,0.4s,baz=161,slow=9.2,SNR=2.8						
BVAR	Borovoye Array	33.97	335	P	P	05 15 51.2	+3.3
	comp=Z,0.4nm,0.5s,baz=132,slow=8.5,SNR=2.2						
SOEI	Soe	44.93	135		S	05 23 52.1	+1.7
WB0	Warramunga Arr	58.88	134	P	P	05 19 02.6	-0.2
WB0				IAmb	IAmb	05 19 08.7	
	comp=Z,5.0nm,1.1s						
WRA	Warramunga Arr	58.97	134	P	P	05 19 02.9	-0.5
	comp=Z,1.5nm,1.0s,baz=322,slow=7.4,SNR=17						
WRA	Warramunga Arr	58.97	134	IAmb	IAmb	05 19 07.9	
	comp=Z,0.1nm,0.6s						
WB2	Warramunga Arr	58.98	134	P	P	05 19 03.3	-0.2
WB2				IAmb	IAmb	05 19 13.4	
	comp=Z,3.1nm,0.6s						
WR0	Warramunga Arr	59.12	134	P	P	05 19 04.1	-0.3
AS31	Alice Springs	61.39	137	P	P	05 19 20.3	+0.4
AS31				IAmb	IAmb	05 19 25.0	
	comp=Z,2.5nm,1.4s						
ASAR	Alice Springs	61.39	137	P	P	05 19 20.1	+0.2
	comp=Z,0.7nm,0.4s,baz=316,slow=6.5,SNR=12						
ASAR	Alice Springs	61.39	137	P	P	05 19 20.2	+0.3

ROM 15 05:28:39.1±0.1**, 38°.520N**±0°.004×**16°.162E**±0°.006**, h9^{km}, ML1.7**/1**, 3C-2D, Error ellipse: s-maj=0.5km s-min=0.2km az=141.0, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAC	Placanica	0.23	108	⇑P	Pg	05 28 44.7	+0.9
PLAC				S	Sg	05 28 48.3	+1.4
PLAC				AML	AML		
	comp=E,267μm,0.2s						
PLAC				AML	AML		
	comp=N,412μm,0.2s						
PLAC				AML	AML		
	comp=E,422μm,0.2s						
PLAC				AML	AML		
	comp=N,227μm,0.5s						
JOPP	Joppolo	0.23	292	⇑P	Pg	05 28 44.7	+0.8
JOPP				S	Sg	05 28 48.2	+1.1
JOPP				AML	AML		
	comp=E,210μm,0.6s						
JOPP				AML	AML		
	comp=N,182μm,0.2s						
CEL	Celeste	0.34	219	P	Pg	05 28 46.3	+0.5
GRI	Girifalco	0.36	34	P	Pg	05 28 46.9	+0.6
GRI				S	Sg	05 28 52.3	+1.2
GRI				AML	AML		
	comp=E,118μm,0.4s						
GRI				AML	AML		
	comp=N,131μm,0.2s						
MSCL	Scilla	0.41	226	P	Pg	05 28 47.8	+0.6
GMB	Gambarie	0.44	217	⇑P	Pg	05 28 48.2	+0.5
GMB				S	Sg	05 28 54.6	+1.1
GMB				AML	AML		
	comp=E,367μm,1.3s						
GMB				AML	AML		
	comp=N,319μm,1.6s						
SOI	Samo	0.46	191	⇓P	Pb	05 28 48.7	-0.6
SOI				S	Sb	05 28 55.2	-1.0
MSRU	Castanea	0.57	244	P	Pb	05 28 50.8	-0.5
MSRU				S	Sb	05 28 59.5	-0.1
MSRU				AML	AML		
	comp=E,75μm,0.8s						
MSRU				AML	AML		
	comp=N,91μm,0.8s						
MPAZ	Palizzi	0.58	192	P	Pb	05 28 51.0	-0.5
MPAZ				S	Sb	05 28 59.2	-0.6
CAR1	CAROLEI	0.73	3	⇓P	Pb	05 28 53.8	-0.3
CAR1				S	Sb	05 29 04.0	-0.3
CAR1				AML	AML		
	comp=E,120μm,0.4s						
CAR1				AML	AML		
	comp=N,78μm,0.7s						

IDC ***15*** *05:29:32.6±0.8, 37°.56N×25°.61E, h0^{km}, mb3.9/14, mb1 3.9/22, mb1mx3.8/43, mbtmp3.8/22, ML3.5/8, MS3.2/14, Ms1 3.2/14, ms1mx2.9/64, Error ellipse: s-maj=14.6km s-min=13.5km az=21.0*

DDA ***15*** *05:29:34.3, 37°.62N×25°.50E, h15^{km}±2^{km}, MW4.1*

ATH ***15*** *05:29:34.0, 37°.56N×25°.64E, h28^{km}, ML4.0/22, Error ellipse: s-maj=0.8km s-min=0.5km az=108.0*

ISK ***15*** *05:29:34.4, 37°.59N×25°.63E, h66^{km}±2^{km}, ML4.2/38*

MED_RC ***15*** *05:29:34.0±0.8, 37°.46N×25°.10E, h18^{km}±3^{km}, MW4.4/9, Moment Tensor Solution.Mantle waves: s9,c12; Duration: 1^s.0 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.86±.90; $M_{\theta\theta}$3.07±.51; $M_{\phi\phi}$-0.22±.65; $M_{r\theta}$-2.92±.85; $M_{\theta\phi}$-3.00±.38; $M_{\phi r}$2.83±1.12; Best double couple: $M_0$5.67000×10^{15} NP1:ϕ_s276.00000°, δ26.00000°, λ-127.00000°. NP2: ϕ_s136.00000°, δ70.00000°, λ-74.00000°. Principal axes: T 6.5300, Plg23.0000°, Azm213.0000°; N -1.7400, Plg15.0000°, Azm310.0000°; P -4.8000, Plg62.0000°, Azm70.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

THE ***15*** *05:29:34.8, 37°.56N×25°.65E, h5^{km}, ML4.0/10 Error ellipse: s-maj=0.6km s-min=0.2km az=147.0*

NEIC ***15*** *05:29:36.0±2.5, 37°.50N±0°.05×25°.67E±0°.06, h17^{km}±3^{km}, Error ellipse: s-maj=7.0km s-min=7.0km az=172.0*

ISC 15 05:29:35.5±0.9**, 37°.56N**±0°.02×**25°.65E**±0°.01**, h17^{km}**±6^{km}**, n336, σ1^s.46**/382**, mb4.0**/21**, MS3.2**/7**, 17C-14D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNSA	Tinos	0.39	267	P	Pg	05 29 42.8	-0.7
TNSA				S	Sg	05 29 48.2	-0.6
TNSA				AML	AML	05 29 48.6	
	comp=E,21281μm,0.3s						
TNSA				AML	AML	05 29 48.8	
	comp=N,23856μm,0.3s						
APE	Apeiranthos	0.50	191	P	Pg	05 29 44.5	-0.9
APE				S	Sg	05 29 51.8	-0.4
APE	Apeiranthos	0.50	191	P	Pg	05 29 44.3	-1.1
APE				S	Sg	05 29 51.4	-0.8
APE				AML	AML	05 29 57.0	
	comp=E,12968μm,0.3s						
APE				AML	AML	05 29 57.1	
	comp=N,11719μm,0.2s						
AMGA	Amorgos Island	0.75	165	P	Pg	05 29 49.1	-1.0
AMGA				S	Sb	05 30 00.4	+0.3
	comp=N,19μm,0.7s						
AMGA	Amorgos Island	0.75	165	P	Pg	05 29 48.9	-1.3
AMGA				S	Sb	05 30 00.0	-0.1
AMGA				AML	AML	05 30 01.9	
	comp=E,29444μm,0.6s						
AMGA				AML	AML	05 30 04.6	
	comp=N,27509μm,0.6s						
IOSP	Ios island	0.88	199	P	Pg	05 29 51.5	-1.1
IOSP				S	Sb	05 30 04.3	+0.5
	comp=N,13μm,0.5s						
IOSP	Ios island	0.88	199	P	Pg	05 29 51.6	-1.0
IOSP				S	Sb	05 30 03.7	-0.1
IOSP				AML	AML	05 30 06.1	
	comp=E,30203μm,0.6s						
IOSP				AML	AML	05 30 07.7	
	comp=N,23586μm,0.3s						
CHOS	Chios island	0.89	21	P	Pg	05 29 51.4	-1.3
CHOS	Chios island	0.89	21	P	Pg	05 29 51.4	-1.3
CHOS				S	Sb	05 30 04.2	+0.1
CHOS				AML	AML	05 30 09.2	
	comp=N,46429μm,0.4s						
CHOS				AML	AML	05 30 09.6	
	comp=E,78566μm,0.4s						
CHOS	Chios island	0.89	21	PG	Pg	05 29 51.6	-1.1
SMG	Samos	0.95	81	P	Pb	05 29 52.7	-0.9
SMG				S	Sg	05 30 06.3	-0.2
	comp=E,21μm,0.4s						
SMG	Samos	0.95	81	P	Pb	05 29 52.6	-0.9
SMG				S	Sb	05 30 05.7	-0.3
SMG				AML	AML	05 30 07.8	
	comp=E,39440μm,0.5s						
SMG				AML	AML	05 30 08.4	
	comp=N,42016μm,0.3s						
PSRA	Psara	0.98	356	P	Pn	05 29 53.9	-0.6
PSRA				S	Sn	05 30 07.6	-0.5
PSRA				AML	AML	05 30 09.4	
	comp=N,28335μm,0.4s						
PSRA				AML	AML	05 30 10.1	
	comp=E,82650μm,0.7s						
SERI	Serifos	1.01	247	P	Pb	05 29 53.8	-0.7
SERI				S	Sg	05 30 07.8	-0.5
	comp=E,7μm,0.3s						
SERI	Serifos	1.01	247	P	Pb	05 29 53.5	-1.0
SERI				S	Sg	05 30 07.2	-1.1

SERI				AML	AML	05 30 08.3	
	comp=E,15012µm,0.3s						
SERI				AML	AML	05 30 08.6	
	comp=N,12316µm,0.3s						
KARY	Karystos	1.07	297	P	Pb	05 29 54.8	-0.8
KARY				S	Sn	05 30 09.7	-0.5
	comp=N,6µm,0.6s						
KARY	Karystos	1.07	297	P	Pb	05 29 54.7	-0.9
KARY				S	Sg	05 30 09.2	-1.1
KARY				AML	AML	05 30 10.6	
	comp=N,16634µm,0.6s						
KARY				AML	AML	05 30 11.1	
	comp=E,7950µm,0.5s						
DGB	zmir	1.09	63	*i* P	Pb	05 29 54.6	-1.3
DGB				*i* S	Sb	05 30 09.1	-0.8
DGB				IAML		05 30 11.0	
	comp=E,5µm,0.4s						
DGB				IAML		05 30 11.0	
	comp=N,7µm,0.6s						
URLA	Izmir	1.09	43	PN	Pb	05 29 54.4	-1.6
URLA				SN	Sb	05 30 09.3	-0.7
URLA	Izmir	1.09	43	*i* P	Pb	05 29 54.7	-1.3
URLA				IAML		05 30 12.0	
	comp=E,2µm,0.3s						
CMBO	Columbo, Santo	1.10	190	P	Pb	05 29 55.3	-0.8
CMBO	Columbo, Santo	1.10	190	P	Pb	05 29 55.5	-0.6
SAP4	Santorini-Oia	1.10	192	P	Pb	05 29 55.6	-0.5
THR2	Thira island,	1.12	189	P	Pb	05 29 55.7	-0.7
GMLD	Gumuldur	1.13	62	PN	Pb	05 29 55.0	-1.5
GMLD				SN	Sb	05 30 10.6	-0.3
THT2	Imerovigli	1.14	189	PN	Pb	05 29 55.8	-0.9
SAP3	Santorini-Thir	1.15	192	P	Pb	05 29 56.1	-0.7
SAP3	Santorini-Thir	1.15	192	P	Pb	05 29 55.9	-1.0
SAP2K	Karterados	1.16	188	P	Pn	05 29 55.6	-1.3
THR8	Santorini-Mono	1.16	187	P	Pn	05 29 56.1	-0.8
THR3	Thira Island,	1.16	190	P	Pn	05 29 56.5	-0.5
THR5	Thira Island,	1.16	192	P	Pn	05 29 56.3	-0.7
STAX	Taxiarchis Har	1.17	190	P	Pn	05 29 56.4	-0.7
SANT	Santorini	1.20	187	P	Pn	05 29 56.6	-0.9
SANT				S	Sn	05 30 13.0	-0.3
SANT				AML	AML	05 30 18.6	
	comp=E,4435µm,0.4s						
SANT				AML	AML	05 30 22.4	
	comp=N,3282µm,0.9s						
SANT	Santorini	1.20	187	PN	Pn	05 29 56.4	-1.1
SANT	Santorini	1.20	187		Pn	05 29 56.4	-1.1
ANAF	Anafi Island	1.20	175	P	Pn	05 29 56.9	-0.7
ANAF	Anafi Island	1.20	175	P	Pn	05 29 56.6	-1.0
ANAF				S	Sn	05 30 13.4	-0.1
ANAF				AML	AML	05 30 17.4	
	comp=N,32779µm,0.5s						
ANAF				AML	AML	05 30 18.2	
	comp=E,32068µm,0.4s						
SAP1	Santorini-Akro	1.22	190	P	Pn	05 29 57.2	-0.5
KRBN	Karaburun	1.26	34	PN	Pn	05 29 57.0	-1.3
GCAM	G?zelcaml?	1.27	83	PN	Pn	05 29 56.8	-1.6
GCAM	G?zelcaml?	1.27	83	*i* P	Pb	05 29 58.4	-0.5
GCAM				*i* S	Sg	05 30 15.7	-0.7
GCAM				IAML		05 30 19.0	
	comp=N,4µm,0.3s						
GCAM				IAML		05 30 20.0	
	comp=E,3µm,0.6s						
MHLA	Plaka, Milos I	1.27	231	P	Pn	05 29 57.3	-1.2
MHLA				S	Sn	05 30 15.3	+0.1
MHLA				AML	AML	05 30 23.0	
	comp=E,21203µm,1.1s						
MHLA				AML	AML	05 30 24.2	
	comp=N,22519µm,0.8s						
DIDI	Didim-Aydin	1.28	98	PN	Pn	05 29 57.6	-0.9
MHLO	Agia Marina, M	1.32	229	P	Pn	05 29 58.5	-0.7
MHLO				S	Sg	05 30 17.1	-1.1
	comp=N,12µm,0.8s						
MHLO	Agia Marina, M	1.32	229	P	Pn	05 29 58.1	-1.0
MHLO				S	Sb	05 30 16.0	-0.5
MHLO				AML	AML	05 30 28.9	
	comp=N,32428µm,0.9s						
MHLO				AML	AML	05 30 29.9	
	comp=E,30245µm,1.0s						
KOSK	Kos Island	1.33	127	PN	Pn	05 29 58.1	-1.2
YKAV	Yalikavak-Bodr	1.37	108	PN	Pn	05 29 57.9	-1.9
BLCB	Balcova	1.38	53	PN	Pn	05 29 57.9	-2.0
BODT	Bodrum	1.41	110	PN	Pn	05 29 59.2	-1.2
FOCM	Foa	1.43	36	PN	Pn	05 29 59.2	-1.5
DION	Dionisos Attik	1.46	291	P	Pn	05 30 00.7	-0.3
DION				S	Sb	05 30 20.3	-0.1
DION	Dionisos Attik	1.46	291	P	Pn	05 30 00.8	-0.3
DION				S	Sb	05 30 20.1	-0.3
PTL	Penteli	1.50	290	P	Pn	05 30 01.3	-0.3
PTL				S	Sg	05 30 21.9	-1.9
	comp=E,2µm,0.8s						
PTL	Penteli	1.50	290	P	Pn	05 30 00.9	-0.7
PTL				S	Sn	05 30 20.4	-0.4
PTL				AML	AML	05 30 27.9	
	comp=N,5466µm,0.7s						
PTL				AML	AML	05 30 32.5	
	comp=E,3852µm,0.5s						
VLY	Voula,Athens	1.50	282	P	Pn	05 30 01.2	-0.4
VLY				S	Sb	05 30 21.4	-0.3
	comp=E,6µm,0.4s						
VLY	Voula,Athens	1.50	282	P	Pn	05 30 01.1	-0.6
VLY				S	Sn	05 30 20.2	-0.7
VLY				AML	AML	05 30 23.4	
	comp=E,9778µm,0.5s						
VLY				AML	AML	05 30 24.1	
	comp=N,12988µm,0.3s						
BDRM	Kayabasi	1.51	108	*i* P	Pg	05 30 03.6	-0.9
BDRM				*i* S	Sg	05 30 24.6	+0.3
NISR	Nisiros	1.51	128	P	Pn	05 30 01.5	-0.3
NISR				S	Sb	05 30 22.4	+0.4
	comp=N,3µm,0.3s						
NISR	Nisiros	1.51	128	P	Pn	05 30 01.4	-0.3
NISR				S	Sb	05 30 22.0	0.0
ATHU	Athens Univers	1.53	286	P	Pn	05 30 01.6	-0.5
ATHU				S	Sb	05 30 22.1	-0.5
	comp=N,1µm,0.5s						
ATHU	Athens Univers	1.53	286	P	Pn	05 30 01.4	-0.7
ATHU				S	Sn	05 30 21.1	-0.5
ATHU				AML	AML	05 30 27.0	
	comp=E,2310µm,0.3s						
ATHU				AML	AML	05 30 28.4	
	comp=N,2186µm,0.4s						
SKY	Skiros Island	1.58	327	P	Pn	05 30 02.1	-0.6
SKY	Skiros Island	1.58	327	P	Pn	05 30 01.9	-0.8
SKY				S	Sb	05 30 23.3	-0.6
SKY				AML	AML	05 30 30.3	
	comp=N,7097µm,0.7s						
SKY				AML	AML	05 30 32.2	
	comp=E,6501µm,0.8s						
ATH	Athens Observa	1.59	286	P	Pn	05 30 02.7	-0.1
ATH	Athens Observa	1.59	286	P	Pn	05 30 02.3	-0.5
ATH				S	Sb	05 30 23.3	-0.9
ATH				AML	AML	05 30 28.1	
	comp=E,7467µm,0.3s						
ATH				AML	AML	05 30 31.0	
	comp=N,7111µm,0.7s						
SIGR	SIGRI	1.66	6	P	Pn	05 30 02.6	-1.2
SIGR				S	Sn	05 30 24.9	+0.2
SIGR				AML	AML	05 30 30.6	
	comp=E,11685µm,0.7s						
SIGR				AML	AML	05 30 32.0	
	comp=N,11188µm,0.6s						
DAT	Datca	1.75	118	PN	Pn	05 30 03.6	-1.5
DAT	Datca	1.75	118	*i* P	Pn	05 30 04.7	-0.5
PRK	Paraskevi	1.75	16	P	Pn	05 30 05.0	-0.1
PRK				S	Sn	05 30 27.5	+0.4
PRK				AML	AML	05 30 38.6	
	comp=E,26337µm,1.2s						
PRK				AML	AML	05 30 40.5	
	comp=N,15287µm,0.7s						
AYDN	Tasoluk	1.77	86	*i* P	Pb	05 30 07.9	+0.3
AYDN				*i* S	Sg	05 30 32.0	-0.6
DATC	Datca-Mugla	1.79	116	PN	Pn	05 30 04.8	-0.8
ZEDA	zmir-Bergama	1.80	38	*i* P	Pn	05 30 04.7	-1.1
ZEDA				*i* S	Sn	05 30 28.2	0.0
ZEDA				IAML		05 30 39.0	
	comp=N,948nm,0.4s						
ZEDA				IAML		05 30 40.0	
	comp=E,1µm,1.2s						
DKL	Dikili	1.81	33	PN	Pn	05 30 04.5	-1.3
AYDB	Zeytinkoy-Aydi	1.82	77	PN	Pn	05 30 04.7	-1.4
DID	Didima	1.92	269	P	Pn	05 30 07.1	-0.3
DID	Didima	1.92	269	P	Pn	05 30 07.0	-0.5
DID				S	Sn	05 30 30.9	-0.4
DID				AML	AML	05 30 39.8	
	comp=N,2445µm,0.4s						
DID				AML	AML	05 30 43.0	
	comp=E,3096µm,1.1s						
AYVA	Ayvalik	1.93	25	*i* P	Pn	05 30 06.5	-1.0
AYVA				*i* S	Sg	05 30 35.5	-2.0
VILL	Villia	1.95	289	P	Pn	05 30 07.4	-0.4
VILL				S	Sn	05 30 32.4	+0.5
MRKA	Markates	1.99	306	P	Pn	05 30 08.0	-0.4
MRKA	Markates	1.99	306	P	Pn	05 30 08.0	-0.4
VIL2	Platees	2.00	290	P	Pn	05 30 07.5	-0.9
KRND	KRANIDI	2.00	266	P	Pn	05 30 08.1	-0.4
KRND	KRANIDI	2.00	266	P	Pn	05 30 08.1	-0.4
GOMA	Golmarmara-Man	2.12	57	PN	Pn	05 30 09.0	-1.2
AOS	Alonnisos	2.13	320	P	Pn	05 30 09.8	-0.5
AOS	Alonnisos	2.13	320	P	Pn	05 30 09.8	-0.5
AOS				S	Sn	05 30 36.2	-0.1
AOS				AML	AML	05 30 52.2	
	comp=E,1615µm,0.7s						
AOS				AML	AML	05 30 52.7	
	comp=N,1853µm,0.7s						
YER	Yerkesik	2.14	101	PN	Pn	05 30 09.5	-1.0
AKHS	Akhisar	2.15	52	*i* P	Pn	05 30 09.6	-1.1
AKS	Akhisar	2.15	52	PN	Pn	05 30 08.9	-1.7
LTK	Loutraki	2.18	283	P	Pn	05 30 10.7	-0.3
MRSB	Marmaris-Mugla	2.20	112	PN	Pn	05 30 10.4	-0.9
HRKL	Herakleio	2.29	191	PN	Pn	05 30 11.6	-0.8
BAYC	CANAKKALE_Bayr	2.29	18	*i* P	Pn	05 30 11.3	-1.2
NPS	Neapolis	2.29	181	P	Pn	05 30 12.2	-0.3
NPS	Neapolis	2.29	181	P	Pn	05 30 12.1	-0.4
BOZC	Bozcaada	2.30	8	PN	Pn	05 30 10.5	-2.2
BOZC	Bozcaada	2.30	8	*i* P	Pn	05 30 11.0	-1.7
BOZC				*i* S	Sn	05 30 39.7	-0.9
EZN	Ezine	2.33	13	PN	Pn	05 30 11.1	-1.9
VLI	Veliai	2.33	250	P	Pn	05 30 12.4	-0.6
VLI	Veliai	2.33	250	P	Pn	05 30 12.0	-1.0
IDI	Anoyia	2.35	195	Pn	Pn	05 30 12.3	-1.1
	comp=N,6.9nm,0.3s,baz=0.9,slow=9.1,SNR=52						
IDI				Sn	Sn	05 30 42.6	+0.8
	comp=N,27nm,0.3s,baz=354,slow=12,SNR=6.6						
IDI				LR	LR	05 31 23.3	
	comp=N,620nm,21.3s,baz=317,slow=47						
IDI	Anoyia	2.35	195	P	Pn	05 30 12.2	-1.1
IDI	Anoyia	2.35	195	PN	Pn	05 30 12.2	-1.1
KARP	Karpathos	2.35	148	P	Pn	05 30 13.0	-0.3
KARP	Karpathos	2.35	148	P	Pn	05 30 13.0	-0.3
KARP	Karpathos	2.35	148	PN	Pn	05 30 12.8	-0.5
KARP	Karpathos	2.35	148		Pn	05 30 12.9	-0.3
SKIA	Skiathos	2.35	314	P	Pn	05 30 13.1	-0.3
SKIA	Skiathos	2.35	314	P	Pn	05 30 13.0	-0.3
LKR	Lokris	2.36	298	P	Pn	05 30 12.9	-0.5
LIA	Limnos Island	2.37	351	P	Pn	05 30 12.4	-1.1
ARG	Arkhangelos	2.40	123	P	Pn	05 30 13.9	0.0
ARG				S	Sn	05 30 43.6	+0.7
ARG	Arkhangelos	2.40	123	P	Pn	05 30 13.9	0.0
ARG	Arkhangelos	2.40	123	PN	Pn	05 30 13.3	-0.6
STEP	BALIKESIR_Sava	2.44	41	*i* P	Pn	05 30 13.6	-1.0
STEP				*i* S	Sg	05 30 52.1	-1.7
VAM	Vamos	2.44	209	P	Pn	05 30 14.1	-0.5
VAM	Vamos	2.44	209	P	Pn	05 30 13.7	-0.9
KTHA	Kythira Island	2.45	239	P	Pn	05 30 14.2	-0.5
KTHA	Kythira Island	2.45	239	P	Pn	05 30 13.9	-0.8
KTHA	Kythira Island	2.45	239	PN	Pn	05 30 13.5	-1.2
TURN	Turunc	2.45	105	PN	Pn	05 30 10.6	-4.1
TURN	Turunc	2.45	105	*i* P	Pn	05 30 10.2	-4.5
ZKR	Zakros	2.48	169	P	Pn	05 30 15.4	+0.3
ZKR	Zakros	2.48	169	PN	Pn	05 30 14.9	-0.2
IMMV	Iera Moni Meta	2.49	213	P	Pn	05 30 15.6	+0.4
IMMV	Iera Moni Meta	2.49	213	PN	Pn	05 30 14.4	-0.8
RODP	Rodopos	2.51	218	PN	Pn	05 30 14.5	-1.0
DALY	Dalyan (Mula)	2.51	106	PN	Pn	05 30 15.2	-0.3
DALY	Dalyan (Mula)	2.51	106	*i* P	Pn	05 30 15.8	+0.3
DALY				IAML		05 31 02.0	
	comp=N,828nm,0.7s						
ANKY	Antikythira Is	2.53	229	P	Pn	05 30 15.7	-0.1
ANKY	Antikythira Is	2.53	229	P	Pn	05 30 15.5	-0.3
KULA	Kula-Manisa	2.56	67	PN	Pn	05 30 15.3	-1.0
TAVA	DENIZLI_Tavas	2.60	91	*i* P	Pn	05 30 16.6	-0.2
DENT	Denizli	2.69	85	PN	Pn	05 30 16.6	-1.5
BALB	Balikesir	2.71	39	PN	Pn	05 30 16.9	-1.4
DYR	Agios Nikonas	2.77	254	P	Pn	05 30 19.4	+0.3
KNDR	Palaiochora Ch	2.81	215	PN	Pn	05 30 19.0	-0.6
PAIG	Paliouri	2.82	328	P	Pn	05 30 19.3	-0.5
PAIG	Paliouri	2.82	328	P	Pn	05 30 19.0	-0.8
DEMI	Demirci	2.83	57	*i* P	Pn	05 30 19.4	-0.6
FETY	Fethiye	2.90	108	PN	Pn	05 30 20.2	-0.6
FETY	Fethiye	2.90	108	*i* P	Pn	05 30 21.8	+1.0
FETY				*i* S	Sn	05 30 57.9	+2.6
USAK	Uak-Merkez	2.90	65	*i* P	Pn	05 30 20.8	0.0
GELI	Tayfur-Gelibol	2.91	13	PN	Pn	05 30 19.6	-1.4
SMTH	Samothraki Isl	2.91	358	P	Pn	05 30 19.6	-1.5
LPK	Lapseki	2.94	17	PN	Pn	05 30 20.3	-1.1
GONE	Gonen-Balikesi	2.95	32	PN	Pn	05 30 20.4	-1.2
GVDS	Gavdos	2.99	205	PN	Pn	05 30 21.9	-0.2
ITM	Ithomi	2.99	264	PN	Pn	05 30 20.8	-1.3
ITM	Ithomi	2.99	264		Pn	05 30 23.7	+1.5
AGG	Agios Georgios	2.99	300	P	Pn	05 30 22.8	+0.6
GVD	Gavdhos	2.99	205	PN	Pn	05 30 21.1	-1.1
DURS	Dursunbey	3.01	46	*i* P	Pn	05 30 21.7	-0.8
SIMA	Simav-Kutahya	3.03	59	PN	Pn	05 30 21.8	-1.0
OUR	Ouranopolis	3.06	335	P	Pn	05 30 22.6	-0.5
ENZZ	Sultanice-Enez	3.07	7	PN	Pn	05 30 22.2	-1.0
KRBG	Karabiga-Canak	3.11	24	PN	Pn	05 30 22.7	-1.0
GOLH	Golhisar	3.13	95	*i* P	Pn	05 30 25.6	+1.5
KHAL	Karahalli	3.14	74	*i* P	Pn	05 30 24.6	+0.3
ERIK	Erikli-Kesan	3.18	12	PN	Pn	05 30 23.6	-1.1
ENEZ	Enez	3.20	7	PN	Pn	05 30 23.4	-1.5
EDC	Edincik	3.28	31	PN	Pn	05 30 24.8	-1.2
GEDZ	Gediz	3.31	62	PN	Pn	05 30 25.9	-0.7
SART	Tekirdag	3.34	20	*i* P	Pn	05 30 26.3	-0.8
SART				*i* S	Sb	05 31 18.0	+3.2
ALN	Alexandroupoli	3.35	5	P	Pn	05 30 25.8	-1.2
KESN	Edirne-Kesan	3.36	13	*i* P	Pn	05 30 26.5	-1.0
GDZ	Gediz	3.38	62	*i* P	Pn	05 30 27.4	-0.2
GDZ				*i* S	Sb	05 31 19.3	+3.4
AKAS	Kas	3.44	111	PN	Pn	05 30 28.5	+0.1
AKAS	Kas	3.44	111	*i* P	Pn	05 30 31.0	+2.6
AKAS				*i* S	Sn	05 31 10.9	+2.2
KSL	Kastellorizon	3.45	113	P	Pn	05 30 30.2	+1.8
ELL	Elmali	3.50	102	PN	Pn	05 30 28.7	-0.5
ELL	Elmali	3.50	102		Pn	05 30 31.2	+2.0
BRDR	BURDUR-Merkez	3.50	86	*i* P	Pn	05 30 30.6	+1.3
BASM	Basmaki-Afyon	3.51	83	PN	Pn	05 30 28.5	-0.8
LIT	Litokhoron	3.54	317	P	Pn	05 30 29.7	0.0
KAVA	Kavala	3.54	346	P	Pn	05 30 29.1	-0.6
KZIL	AFYON_Kizioren	3.62	78	*i* P	Pn	05 30 31.4	+0.5
ULDT	Uludag	3.75	45	*i* P	Pn	05 30 31.5	-1.2
ULDT				*i* S	Sg	05 31 36.3	+0.4
KORT	Korkueli	3.79	97	*i* P	Pn	05 30 36.3	+3.1
AFYO	Afyonkarahisar	3.86	70	*i* P	Pn	05 30 25.7	-8.5
ISP	Isparta	3.87	85	Pn	Pn	05 30 35.2	+0.8
AKUM	Antalya-Kumluc	3.96	107	*i* P	Pn	05 30 37.2	+1.8
KDZ	Kurdzhali	4.09	358	*i* P	Pn	05 30 35.9	-1.4
BAGO	Egridir - ISPA	4.09	82	*i* P	Pn	05 30 37.1	-0.3
RZN	Rozhen	4.19	350	*i* P	Pn	05 30 38.4	-0.3
BOLV	Bolvadin	4.34	73	*i* P	Pn	05 30 38.9	-1.9
KIRK	Kırklareli	4.36	14	*i* P	Pn	05 30 39.6	-1.4
BORA	Eskisehir	4.41	57	*i* P	Pn	05 30 43.7	+1.9
FNA	Florina	4.63	315	Pn	Pn	05 30 45.7	+1.1
GEYV	SAKARYA_Geyve	4.65	50	*i* P	Pg	05 31 01.6	-2.9
GEYV				*i* S	Sg	05 32 08.2	+3.5
KKB	Krupnik	4.74	336	*i* P	Pn	05 30 50.5	+4.4
DOGA	KONYA_Doganhis	4.79	82	*i* P	Pn	05 30 46.9	-0.2
KEPZ	Antalya-Kepez	4.80	96	*i* P	Pn	05 30 47.8	+0.8
STIP	Stip	4.92	328	*i* Pn	Pn	05 30 48.5	-0.1
KAND	Kocaeli-Kandir	4.99	44	*i* P	Pn	05 30 48.5	-1.0
BTAS	Taskesti	5.14	53	*i* P	Pn	05 30 50.0	-1.7
KDHN	Kadinhani	5.19	77	*i* P	Pn	05 30 48.2	-4.4
MDUB	Mudurnu	5.21	54		Pn	05 30 56.6	+4.0
SAHE	Sakarya_HENDEK	5.21	49	*i* P	Pn	05 30 52.5	-0.1
KONT	Konya--Tatoy	5.33	84	*i* P	Pn	05 30 52.8	-1.5
ELND	Elena	5.37	2	⇑P	Pn	05 30 54.0	-0.7
VTS	Vitosha	5.38	341	⇓P	Pn	05 30 54.7	-0.4
VTS	Vitosha	5.38	341	*i* P	Pn	05 30 55.7	+0.6
VTS	Vitosha	5.38	341		Pn	05 30 55.0	-0.2
GAZI	Gazipasa	5.50	102	*i* P	Pn	05 30 56.7	0.0
KIBS	BOLU	5.61	57	*i* P	Pb	05 31 05.9	-7.1
PRD	Provadia	5.79	13	*i* P	Pn	05 30 59.2	-1.4
TIR	Tirane	5.86	312	⇑P	Pn	05 31 03.6	+2.0
TIR	Tirane	5.86	312		Pn	05 31 03.3	+1.7
PLVB	Pleven	5.88	353	⇑P	Pn	05 30 57.9	-3.8
BCAM	Yenicaga	5.95	55	*i* P	Pn	05 31 06.6	+3.7
MPEP	Malo Peshtene	5.97	346	*i* P	Pn	05 31 03.3	+0.2
RAZG	Razgrad	6.04	6	⇑P	Pn	05 31 03.2	-0.7
CMDR	Camlidere-ANKA	6.07	59	*i* P	Pb	05 31 25.1	+4.3
SCTE	Santa Cesarea	6.14	296	Pn	Pn	05 31 10.4	+4.9
BR131	Keskin Array S	6.62	68		Pn	05 31 13.7	+1.6
BRTR	Keskin Array B	6.62	68	Pn	Pn	05 31 13.4	+1.3
	comp=N,0.6nm,0.3s,baz=252,slow=13,SNR=44						
BRTR				LR	LR	05 34 33.6	
	comp=N,43nm,20.5s,baz=234,slow=45						
BRTR	Keskin Array B	6.62	68		Pn	05 31 13.5	+1.4
MANR	Mangalia	6.64	19	⇑P	Pn	05 31 16.3	+4.1
KIRS	Kırehir-Merke	6.69	74	*i* P	Pn	05 31 14.4	+1.4
ELDT	Eldivan	6.72	62	*i* P	Pg	05 31 41.0	-3.2
ICOR	Ion Corvin	6.75	13	⇓P	Pn	05 31 13.5	-0.3
DRME	Dracevica, Mon	6.79	315	*e*Pn	Pn	05 31 15.8	+1.5
DELI	KIRIKKALE	6.91	67	*i* P	Pn	05 31 17.2	+1.2
PDG	Podgorica	6.91	317	⇑P	Pn	05 31 15.6	-0.4
PDG	Podgorica	6.91	317	*e*Pn	Pn	05 31 17.8	+1.8
PDG	Podgorica	6.91	317		Pn	05 31 17.7	+1.8
TIP	Timpagrande	7.17	286	⇑P	Pn	05 31 20.7	+1.0
TIP	Timpagrande	7.17	286		Pn	05 31 20.6	+1.0
TIRR	Tirgusor	7.20	16	⇑P	Pn	05 31 19.2	-0.7
TIRR	Tirgusor	7.20	16	⇑P	Pn	05 31 19.2	-0.7
TIRR	Tirgusor	7.20	16		Pn	05 31 18.9	-1.0
HARR	Harsova	7.33	13	⇑P	Pn	05 31 21.6	-0.1
TOPG	Topolog	7.59	15	⇓P	Pn	05 31 28.7	+3.4
JURR	Jurilovca	7.60	18	⇓P	Pn	05 31 29.3	+3.9
TREB	Trebinje	7.60	315	*e*Pn	Pn	05 31 24.3	-1.2
MATE	Matera	7.61	297	⇓P	Pn	05 31 26.6	+1.0
BRY	Bratogost	7.62	317	*e*Pn	Pn	05 31 27.0	+1.2
SG1	Sgolgore (BA)	7.70	298	*e*Pn	Pn	05 31 26.8	0.0
HERR	Herculane	7.71	343	⇓P	Pn	05 31 21.2	-5.8
MDVR	Moldovita	7.80	339	⇓P	Pn	05 31 23.0	-5.3
DIVS	Divibare	7.81	328	*e*Pn	Pn	05 31 30.2	+1.8
CFR	Carcaliu	7.84	13	⇓P	Pn	05 31 30.1	+1.5
ARR	Arges	7.84	355	⇑P	Pn	05 31 28.1	-0.7
BBLS	Lazići	7.88	325	*e*Pn	Pn	05 31 31.2	+1.8
VOIR		7.88	357	⇑P	Pn	05 31 28.8	-0.6
MLR	Muntele Rosu	7.93	2	Pn	Pn	05 31 30.6	+0.5
	comp=N,0.4nm,0.3s,baz=168,slow=9.6,SNR=25						
MLR	Muntele Rosu	7.93	2	⇓P	Pn	05 31 30.0	0.0
LOT	Lotru	8.01	350	⇑P	Pn	05 31 26.9	-4.2
BISRR	Bisoca	8.02	5	⇓P	Pn	05 31 30.8	-0.4
GZR	Gura Zlata	8.12	346	⇓P	Pn	05 31 27.1	-5.5
HAPS	Han Pijesak,Bl	8.26	324	*e*Pn	Pn	05 31 33.9	-0.7
PLOR	Plostina	8.32	5	⇑P	Pn	05 31 36.0	+0.7
VRI	Vrincioaia	8.34	5	⇑P	Pn	05 31 35.9	+0.3
DOPR	Dopca	8.40	359	⇓P	Pn	05 31 33.5	-3.0
BZS	Buzias	8.60	341	⇑P	Pn	05 31 38.5	-0.6
SGRT	San Giovanni R	8.71	302		Pn	05 31 39.1	-1.7
TESR	Tescani	8.98	4	⇑P	Pn	05 31 43.5	-0.8
MMAI	Mount Meron Ar	9.17	117	Pn	Pn	05 31 46.1	-0.9
	comp=N,1.3nm,0.3s,baz=302,slow=13,SNR=5.8						
MMAI				Sn	Sn	05 33 24.6	-5.3
	comp=N,1.5nm,0.3s,baz=315,slow=25,SNR=5.2						
PAOL	Paolisi	9.26	295		Pn	05 31 50.0	+1.7
DRGR		9.48	348	⇓P	Pn	05 31 46.1	-5.1
BLY	Banja Luka	9.61	321		Pn	05 31 54.5	+1.6
BURAR	Bucovina Array	10.06	358	⇓P	Pn	05 31 57.0	-2.2
BURAR	Bucovina Array	10.06	358		Pn	05 32 00.2	+1.0
INTR	Introdacqua	10.07	300		Pn	05 32 00.8	+1.4
BUR08	Bucovina Ar. S	10.09	358	Pn	Pn	05 32 01.6	+2.0
AQU	L'Aquila	10.55	301	Pn	Pn	05 32 09.1	+3.2
NRCA	Norcia	10.94	303		Pn	05 32 13.4	+2.1
EIL	Elat	11.04	133	Pn	Pn	05 32 11.1	-1.6
	comp=N,0.6nm,0.3s,baz=339,slow=13,SNR=6.1						
EIL				Sn	Sn	05 34 07.7	-8.0
	comp=N,0.2nm,0.3s,baz=344,slow=19,SNR=2.0						
CRES	Cresnjev	11.23	321	*e*Pn	Pn	05 32 14.4	-0.8
CEY	Cerknica	11.71	318	*e*Pn	Pn	05 32 20.8	-0.9
VYHS	Vyhne	12.01	338	*e*PN	Pn	05 32 27.3	+1.5
KBA	Koelnbreinsper	13.15	320	*e*Pn	Pn	05 32 41.5	0.0
	comp=N,0.8nm,0.6s						
ABTA	Abfaltersbach	13.37	317	*e*Pn	Pn	05 32 44.7	+0.2
	comp=N,1.0nm,0.6s						
VRAC	Vranov	13.45	334	LR	LR	05 38 25.6	
	comp=N,67nm,19.7s,baz=134,slow=40						
WTTA	Wattenberg	14.16	318	*e*Pn	Pn	05 32 56.5	+1.1
	comp=N,1.9nm,0.5s						
GERES	GERESS Array B	14.23	326	Pn	Pn	05 32 57.2	+0.9
	comp=N,0.1nm,0.3s,baz=94,slow=11,SNR=3.6						
GERES				LR	LR	05 38 37.8	
	comp=N,57nm,19.2s,baz=330,slow=38						
GERES	GERESS Array B	14.23	326	P	P	05 33 04.7	+1.2
KBZ	Khabaz	14.46	59	Pn	Pn	05 33 01.0	+1.7
	comp=N,0.0nm,0.3s,baz=246,slow=15,SNR=2.4						
KBZ				LR	LR	05 39 29.3	
	comp=N,62nm,18.6s,baz=248,slow=41						
KHC	Kasperske Hory	14.50	327	P	Pn	05 33 00.4	+0.5
FETA	Feichten	14.52	315	*e*Pn	P	05 33 03.5	-3.3
	comp=N,0.8nm,0.5s						
RETA	Reutte	14.77	317	*e*P	P	05 33 09.6	+0.1
	comp=N,0.6nm,0.2s						
DAVOX	Davos/Dischmat	14.87	313	Pn	Pn	05 33 03.6	-1.4
	comp=N,0.1nm,0.3s,baz=49,slow=14,SNR=1.9						
DAVOX				LR	LR	05 39 02.7	
	comp=N,83nm,18.7s,baz=106,slow=38						
GNI	Garni	15.10	74	LR	LR	05 38 51.7	
	comp=N,70nm,19.1s,baz=275,slow=37						
DAVA	Damuels	15.14	315	*e*P	P	05 33 14.3	+0.6
	comp=N,3.6nm,0.7s						
SENIN	Lac Senin/Sane	16.21	309	P	P	05 33 28.0	+2.4
ESBB	Sonseca Array	23.19	284	P	P	05 34 42.6	+1.2
ESBB				IAmb	IAmb	05 34 48.5	
	comp=Z,15nm,1.2s						
ESDC	Sonseca Array	23.19	284	P	P	05 34 40.0	-1.4
	comp=Z,2.1nm,0.8s,baz=78,slow=9.0,SNR=6.9						
ESDC	Sonseca Array	23.19	284	P	P	05 34 42.3	+0.9
PAB	San Pablo	23.50	284	P	P	05 34 48.6	+4.1
PAB				IAmb	IAmb	05 34 50.8	
	comp=Z,10nm,1.1s						
HFS	Hagfors	23.85	345	P	P	05 34 45.4	-2.2
	comp=Z,5.2nm,0.9s,baz=152,slow=6.7,SNR=4.7						
HFS				LR	LR	05 44 58.5	
	comp=Z,89nm,19.9s,baz=338,slow=39						
FINES	FINESS Array B	23.91	1	P	P	05 34 47.5	-0.7
	comp=Z,1.7nm,0.6s,baz=171,slow=13,SNR=9.2						
FINES				LR	LR	05 45 20.4	
	comp=Z,92nm,19.8s,baz=162,slow=40						
FIA1	FINESS Array S	23.91	1	P	P	05 34 47.9	-0.3
FIA1				IAmb	IAmb	05 35 06.6	
	comp=Z,28nm,1.3s						
NC602	NORSAR Array S	24.86	343	P	P	05 34 57.6	+0.8
KLMR	Klimovskoe	24.91	16	*e*P	P	05 34 55.7	-1.6
KLMR				AMP		05 35 02.8	
	comp=Z,44nm,1.9s						
NAO01	NORSAR Array S	25.10	343	P	P	05 34 59.4	+0.4
NB201	NORSAR Array S	25.19	344	P	P	05 35 01.2	+1.3
NB201				IAmb	IAmb	05 35 20.2	
	comp=Z,4.2nm,0.7s						
NB2	NORSAR Subarra	25.20	343	P	P	05 35 00.0	0.0
	comp=Z,4.7nm,1.0s,baz=148,slow=10						
NOA	NORSAR Array B	25.20	343	P	P	05 35 00.2	+0.2
	comp=Z,2.4nm,0.8s,baz=147,slow=9.2,SNR=6.3						
NOA				LR	LR	05 45 22.8	
	comp=Z,23nm,21.5s,baz=0.0,slow=38						
GEYT	Alibeck	25.61	79	P	P	05 35 04.1	+0.1
	comp=Z,1.0nm,0.4s,baz=282,slow=10,SNR=3.7						
GEYT	Alibeck	25.61	79	P	P	05 35 06.3	+2.4
KIRV	Kirov	26.10	29	LR	LR	05 46 21.2	
	comp=Z,54nm,19.2s,baz=205,slow=39						
EKA	Eskdalemuir Ar	26.36	322	P	P	05 35 11.5	+1.0
	comp=Z,1.7nm,0.6s,baz=121,slow=10,SNR=5.6						
AKTO	Aktyubinsk	26.37	50	P	P	05 35 11.5	+0.8
	comp=Z,1.1nm,0.6s,baz=261,slow=11,SNR=3.8						
AKTO				LR	LR	05 46 38.1	
	comp=Z,30nm,21.5s,baz=319,slow=39						
TORD	Torodi Ar. Bea	32.37	228	P	P	05 36 04.4	+0.2
	comp=Z,0.9nm,0.7s,baz=32,slow=9.1,SNR=6.3						
TORD	Torodi Ar. Bea	32.37	228	P	P	05 36 04.5	+0.3
KK31	Karatay Array	34.33	66	P	P	05 36 21.8	+0.7
KK31				IAmb	IAmb	05 36 24.6	
	comp=Z,5.2nm,1.4s						
KKAR	Karatay Array	34.33	66	P	P	05 36 20.8	-0.3
GAR	Garm	34.83	74	P	P	05 36 27.7	+2.0
AAK	Ala-Archa	37.29	67	P	P	05 36 47.4	+0.7
	comp=Z,0.7nm,0.4s,baz=291,slow=8.6,SNR=2.3						
AAK	Ala-Archa	37.29	67	P	P	05 36 48.0	+1.3
AAK				IAmb	IAmb	05 36 49.5	
	comp=Z,5.4nm,1.4s						
KSH	Kashi	39.00	71	P	P	05 36 58.1	-3.0
KSH				sP	sP	05 37 07.3	-0.9

KSH				PcP	PcP	05 39 10.9	-0.3
KSH				S	S	05 42 52.8	-6.5
KSH				PcS	PcS	05 43 58.3	+57
KSH				SS	SnSn	05 45 34.6	-16
KURK	Kurchatov	39.39	53	P	P	05 37 05.7	+1.6
MK31	Makanchi Array	42.16	59	P	P	05 37 27.7	+0.7
MKAR	Makanchi Array	42.16	59	P	P	05 37 27.8	+0.8
	comp=Z,1.4nm,0.8s,baz=270,slow=7.5,SNR=14						
MKAR	Makanchi Array	42.16	59	P	P	05 37 27.5	+0.4
ZALV	Zalesovo Beam	43.08	48	P	P	05 37 34.0	-0.4
	comp=Z,0.6nm,0.3s,baz=243,slow=9.8,SNR=3.6						
ZALV	Zalesovo Beam	43.08	48	P	P	05 37 34.2	-0.1
WMQ	Urumqi	46.49	62	*e*P	P	05 38 04.0	+2.2
GTA	Gaotai	56.51	63	*e*P	P	05 39 10.8	-6.1
GTA				pP	pP	05 39 15.0	-7.0
GTA				sP	sP	05 39 17.9	-6.2
SONM	Songino Array	57.68	52	P	P	05 39 25.3	+0.3
	comp=Z,0.4nm,0.6s,baz=285,slow=7.5,SNR=3.8						
SONM	Songino Array	57.68	52	P	P	05 39 25.9	+0.8
LZH	Lanzhou	60.81	65	*e*P	P	05 39 45.1	-1.9
LZH				pP	pP	05 39 51.8	-0.5
LZH				sP	sP	05 39 57.8	+3.6
LZH				PP	PP	05 42 01.3	+0.6
SCHQ	Schefferville	61.63	319	P	P	05 39 52.5	+0.5
HHC	Hu-ho-hao-te	63.99	57	*e*P	P	05 40 09.3	+1.2
CMAR	Chiang Mai Arr	65.93	85	P	P	05 40 20.6	-0.2
	comp=Z,0.8nm,0.3s,baz=302,slow=7.6,SNR=8.6						
CMAR	Chiang Mai Arr	65.93	85	P	P	05 40 20.8	0.0
D62A	Allapoint, All	66.51	312	P	P	05 40 24.8	+0.7
D62A				IAmb	IAmb	05 40 36.2	
	comp=Z,4.3nm,0.8s						
NJ2	Nanjing	73.57	62	*e*P	P	05 41 09.1	+1.4
YKA	Yellowknife Ar	75.29	342	P	P	05 41 15.3	-1.9
	comp=Z,0.2nm,0.8s,baz=38,slow=5.5,SNR=3.5						
IMAR	Indian Mountai	76.79	360	P	P	05 41 26.4	+0.7
PETK	Petropavlovsk-	80.60	27	LR	LR	06 21 41.9	
	comp=Z,39nm,18.2s,baz=242,slow=39						
LRAL	Lakeview Retre	85.86	309	P	P	05 42 12.9	-1.4
LRAL				IAmb	IAmb	05 42 15.0	
	comp=Z,5.3nm,0.9s						
TUL1	Leonard	88.97	316	P	P	05 42 28.7	-0.7
YBH	Yreka Blue Hor	95.96	337	LR	LR	06 28 03.7	
	comp=Z,70nm,18.5s,baz=348,slow=37						

*IDC **15** 05:45:59.5±2.3, 19°.79S×71°.02W, h0^{km}, mb3.9/2, mb1 3.8/4, mb1mx3.5/20, mbtmp3.6/4, ML3.1/2, Error ellipse: s-maj=62.2km s-min=45.9km az=31.0*

*GUC **15** 05:46:04.0±0.8, 19°.41S×71°.08W, h12^{km}±7^{km}, ML3.6*

ISC 15 05:46:01.3±2.0**, 19°.45S**±0°.03×**71°.03W**±0°.07**, h4**^{km}±11^{km}**, n19, σ1s.11**/32**, 7C-3D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.87	100	⇑*i*P	Pb	05 46 19.5	+0.4
PSGC				*e*S	Sb	05 46 31.5	+0.4
PSGC				IAML		05 46 34.3	
	comp=N,2µm,0.2s						
PB12	IPOC Station P	1.07	39	⇓*i*P	Pb	05 46 22.3	-0.1
PB12				*e*S	Sb	05 46 36.5	-0.3
PB12				IAML		05 46 38.4	
	comp=N,2µm,0.8s						
AP01	Chacalluta	1.26	31	⇑*i*P	Pg	05 46 25.4	-0.1
AP01				*e*S	Sb	05 46 42.0	-0.2
AP01				IAML		05 46 46.5	
	comp=N,3µm,0.5s						
PB11	IPOC Station P	1.33	104	⇑*i*P	Pn	05 46 27.7	+0.8
PB11				*e*S	Sn	05 46 45.6	+0.4
PB11				IAML		05 46 50.1	
	comp=N,3µm,0.5s						
TA01	Diego Aracena	1.37	144	*i* P	Pb	05 46 28.0	+0.5
TA01				*i* S	Sb	05 46 45.9	+0.6
TA01				IAML		05 46 53.4	
	comp=E,1µm,0.5s						
MNMC	Minye Minye	1.39	77	*e*P	Pb	05 46 28.4	+0.3
MNMC				*e*S	Sn	05 46 47.1	+0.3
PATCX	Punta Patache	1.59	149	*e*P	Pn	05 46 31.3	+0.9
PATCX				IAML		05 47 02.0	
	comp=N,678nm,0.4s						
GO01	Chusmiza	1.75	97	⇓*i*P	Pg	05 46 34.5	-0.4
GO01				*e*S	Sg	05 46 58.5	+0.9
GO01				IAML		05 47 01.8	
	comp=N,2µm,0.3s						
PB16	IPOC Station P	1.82	53	⇓*i*P	Pb	05 46 35.3	-0.2
PB16				*e*S	Sg	05 46 59.5	-0.4
PB16				IAML		05 47 03.6	
	comp=N,1µm,0.6s						
PB08	IPOC Station P	1.90	112	⇑*i*P	Pb	05 46 36.3	-0.5
PB08				*e*S	Sg	05 47 02.5	+0.1
PB08				IAML		05 47 05.4	
	comp=N,525nm,0.2s						
PB02	IPOC Station P	2.14	150	*e*P	Pn	05 46 39.1	+1.1
PB02				*i* S	Sb	05 47 08.3	+0.5
PB02				IAML		05 47 16.2	
	comp=E,695nm,0.4s						
PB01	IPOC Station P	2.15	138	⇑*e*P	Pn	05 46 39.2	+1.2
PB01				*e*S	Sb	05 47 08.0	+0.1
PB01				IAML		05 47 15.7	
	comp=E,490nm,0.2s						
PB07	IPOC Station P	2.51	155	⇑*i*P	Pn	05 46 43.8	+0.7
PB07				*i* S	Sn	05 47 15.9	+1.7
PB09	IPOC Station P	2.87	145	⇑*e*P	Pn	05 46 50.2	+2.1
PB09				*i* S	Sb	05 47 26.9	-2.1
LPAZ	La Paz	4.19	42	Pn	Pn	05 47 09.4	+2.8
	comp=E,0.2nm,0.3s,baz=226,slow=7.9,SNR=8.1						
CPUP	Villa Florida	14.36	121	Pn	Pn	05 49 23.5	-2.0
	comp=E,0.1nm,0.3s,baz=293,slow=13,SNR=1.5						
TORD	Torodi Ar. Bea	78.57	72	P	P	05 58 03.1	-1.6
	comp=E,1.3nm,0.8s,baz=257,slow=5.7,SNR=6.0						
YKA	Yellowknife Ar	88.61	341	P	P	05 58 55.5	+0.3
	comp=E,0.3nm,0.6s,baz=139,slow=4.7,SNR=6.4						
MKAR	Makanchi Array	145.07	33	PKPbc	PKPbc	06 05 39.6	+0.1
	comp=E,0.3nm,0.7s,baz=317,slow=2.5,SNR=2.9						

*ARE **15** 06:05:43±4.5, 14°.14S±0°.06×76°.3W±0°.1, h34^{km}±4^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=158.0*

*IDC **15** 06:05:47.1±0.7, 14°.08S×75°.94W, h41^{km}±4^{km}, mb3.7/11, mb1 3.9/14, mb1mx3.7/47, mbtmp3.9/14, ML3.8/3, MS3.4/11, Ms1 3.4/11, ms1mx3.3/24, Error ellipse: s-maj=24.8km s-min=8.6km az=60.0*

*NEIC **15** 06:05:48.4±2.1, 13°.90S±0°.08×75°.8W±0°.1, h41^{km}±6^{km}, mb4.8/37, ML4.6(ARE), Error ellipse: s-maj=17.9km s-min=8.1km az=61.0*

ISC 15 06:05:47.9±0.5**, 13°.98S**±0°.06×**75°.90W**±0°.09**, h41**^{km}±4^{km}**, h41**^{km}**:pP-P, n110, σ1s.54**/131**, mb4.7**/23**, MS3.5**/8**, 1D, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	2.18	335	P	Pn	06 06 20.8	-1.0
	71nm,0.3s,baz=200,slow=12,SNR=95						
NNA				S	Sn	06 06 50.2	+2.6
	259nm,0.3s,baz=209,slow=15,SNR=10						
NNA	Nana	2.18	335		Pn	06 06 20.5	-1.3
ATAH	Atahualpa	7.23	340	P	Pn	06 07 33.4	+1.9
	2.6nm,0.3s,baz=178,slow=4.9,SNR=13						
ATAH				S	Sn	06 08 54.9	+2.3
	0.5nm,0.3s,baz=323,slow=20,SNR=2.0						
ATAH				LR	LR	06 10 41.1	
	comp=Z,160nm,19.9s,baz=178,slow=40						
LPAZ	La Paz	7.85	108	P	Pn	06 07 44.4	+4.2
	5.2nm,0.3s,baz=279,slow=8.1,SNR=77						
LPAZ	La Paz	7.85	108		Pn	06 07 45.2	+5.0
MNMC	Minye Minye	7.92	131		Pn	06 07 41.4	+0.5
PB11	IPOC Station P	8.29	135		Pn	06 07 45.3	-0.5
GO01	Chusmiza	8.56	132		Pn	06 07 50.5	+0.7
PB01	IPOC Station P	9.31	140		Pn	06 08 01.4	+1.6
PB04	IPOC Station P	9.94	148		Pn	06 08 09.8	+1.2
PB10	IPOC Station P	10.75	153	Pn	Pn	06 08 18.9	-0.5
LVC	Limon Verde	10.85	143	P	Pn	06 08 23.0	+1.9
	2.5nm,0.3s,baz=315,slow=7.2,SNR=15						
LVC				S	Sn	06 10 20.3	-1.1
	0.7nm,0.3s,baz=100,slow=19,SNR=2.7						
LVC				LR	LR	06 12 23.9	
	comp=Z,112nm,19.4s,baz=314,slow=37						
LVC	Limon Verde	10.85	143		Pn	06 08 23.3	+2.2
GO02	Mina Guanaco	12.61	153		Pn	06 08 45.8	+0.7
SAML	Samuel	13.43	70		Pn	06 08 54.6	-1.4
OTAV	Otavalo	14.35	350	*e*P	Pn	06 09 12.0	+3.0
OTAV	Otavalo	14.35	350	P	P	06 09 15.4	+0.1
SIV	San Ignacio	14.46	100	P	Pn	06 09 09.6	-0.6
	0.1nm,0.3s,baz=260,slow=13,SNR=8.2						
GCUF	Volcan Galeras	15.17	354	*e*P	P	06 09 23.2	-1.3
FLOC	Florencia	15.46	1	*e*P	Pn	06 09 23.5	+0.1
FLOC	Florencia	15.46	1	P	Pn	06 09 24.1	+0.7
SOTA	Rioblanco	16.02	357	*e*P	Pn	06 09 31.6	+0.6
GARC	Garzon, Huila	16.07	1	*e*P	P	06 09 36.3	+2.1
MACC	Macarena, Meta	16.15	7	*e*P	P	06 09 36.5	+1.6
PCON	Cinco Dias	16.21	358	*e*P	P	06 09 38.9	+2.8
GO04	Tololo Observa	16.79	165	P	P	06 09 43.4	+1.3
GO04				IAmb	IAmb	06 09 57.9	
	comp=Z,51nm,1.2s						
YOTC	Yotoco, Valle	17.85	359	*e*P	P	06 10 01.8	+7.9
CHIC	Chingaza	18.61	7	*e*P	Pn	06 10 06.6	+3.5
CFA	Coronel Fontan	18.90	159	P	Pn	06 10 05.8	-0.2
	comp=Z,0.9nm,0.3s,baz=334,slow=12,SNR=33						
CFA				LR	LR	06 16 21.8	
	comp=Z,128nm,21.8s,baz=324,slow=34						
GUY2C	Guyana, Caldas	19.09	2	*e*P	Pn	06 10 09.5	+0.7
ROC1	El Roble	19.43	168	P	Pn	06 10 16.9	+4.3
NORC	Norcasia	19.44	3	*e*P	Pn	06 10 14.1	+1.4
PEL	Peldehue	19.66	167	P	Pn	06 10 16.5	+1.3
PEL				IAmb	IAmb	06 10 18.7	
	comp=Z,33nm,1.2s						
CBOC	Ciudad Bolivar	19.71	360	*e*P	Pn	06 10 17.5	+1.5
RUSC	La Rusia	19.94	8	P	Pn	06 10 21.2	+2.3
PTBC	PUERTO BERRIO,	20.43	4	*e*P	P	06 10 21.5	-0.5
PTGA	Pitinga	20.54	51	P	P	06 10 21.9	-1.2
	comp=Z,1.5nm,0.4s,baz=197,slow=13,SNR=6.6						
PTGA	Pitinga	20.54	51	P	P	06 10 23.3	+0.2
DBBC	Dabeiba	20.86	359	*e*P	Pn	06 10 29.0	-0.3
CPUP	Villa Florida	21.30	128	P	P	06 10 31.5	+0.3
	comp=Z,6.6nm,0.9s,baz=310,slow=12,SNR=10						
CPUP				LR	LR	06 21 05.9	
	comp=Z,79nm,19.0s,baz=340,slow=43						
CPUP	Villa Florida	21.30	128	P	P	06 10 32.4	+1.2
ZARC	Zaragoza, Cauc	21.36	3	*e*P	P	06 10 32.4	+0.5
SMLC	San Martn de	22.70	5	*e*P	P	06 10 41.3	-5.0
SDV	Santo Domingo	23.31	13	P	P	06 10 52.3	-0.4
	comp=Z,3.0nm,0.8s,baz=160,slow=13,SNR=5.0						
SDV	Santo Domingo	23.31	13	*e*P	P	06 10 50.4	-2.3
SDV	Santo Domingo	23.31	13	P	P	06 10 51.8	-0.9
SJCC	San Jacinto, C	23.73	2	*e*P	P	06 10 56.9	+0.4
BDFB	Brasilia	27.00	97	LR	LR	06 23 20.0	
	comp=Z,124nm,18.8s,baz=273,slow=39						
PLCA	Paso Flores	27.06	171	P	P	06 11 26.2	-0.4
	comp=Z,2.1nm,0.7s,baz=9.2,slow=10,SNR=12						
PLCA				LR	LR	06 20 04.2	
	comp=Z,31nm,18.9s,baz=19,slow=32						
PLCA	Paso Flores	27.06	171	P	P	06 11 27.0	+0.3
GRGR	Grenville	29.54	29	P	P	06 11 47.9	-1.0
EFI	East Falkland	40.25	163	P	P	06 13 21.1	+0.4
344A	Westbrook Farm	47.36	343	P	P	06 14 20.2	+2.2
JSC	Jenkinsville	48.26	354	P	P	06 14 24.2	-0.7
TKL	Tuckaleechee C	49.92	352	LR	LR	06 39 31.4	
	comp=Z,52nm,19.1s,baz=110,slow=40						
WLAR	White Oak Lake	50.16	341	P	P	06 14 40.6	+1.2
TXAR	Lajitas Array	50.72	328	P	P	06 14 43.4	-0.6
	comp=Z,0.5nm,0.8s,baz=151,slow=8.5,SNR=5.3						
TXAR				pP	pP	06 14 56.0	+0.2
	comp=Z,2.5nm,0.8s,baz=148,slow=9.0,SNR=20						
TXAR				LR	LR	06 33 20.7	
	comp=Z,36nm,20.9s,baz=0.0,slow=33						
TXAR	Lajitas Array	50.72	328	P	P	06 14 44.0	0.0
TXAR					pP	06 14 55.7	-0.1
TX31	Lajitas Ar. Si	50.73	328	P	P	06 14 43.9	-0.1
TX31					pP	06 14 56.1	+0.2
TX32	Lajitas Array	50.73	328		P	06 14 43.7	-0.3
TX32					pP	06 14 56.1	+0.3
PMSA	Palmer Station	51.39	174	P	P	06 14 50.1	+1.8
ABTX	Abilene, Hawle	51.60	334	P	P	06 14 53.7	+3.2
ABTX				pP	pP	06 15 02.2	-0.1
ABTX				IAmb	IAmb	06 15 03.3	
	comp=Z,23nm,1.3s						
T45A	Paducah	52.13	347	P	P	06 14 53.2	-0.9
T45A					pP	06 15 06.5	+0.5
U40A	Yellville	52.56	343	P	P	06 14 58.5	+1.1
U40A					pP	06 15 08.1	-1.2
U40A				IAmb	IAmb	06 15 09.1	
	comp=Z,7.6nm,0.9s						
X34A	Smith Ranch, M	52.62	337		P	06 14 58.6	+0.7
X34A					pP	06 15 09.7	-0.1
X34A				IAmb	IAmb	06 15 10.9	
	comp=Z,11nm,0.8s						
TUL1	Leonard	53.07	340	P	P	06 15 01.1	-0.1
TUL1					pP	06 15 12.4	-0.7
TUL1				IAmb	IAmb	06 15 13.6	
	comp=Z,18nm,1.2s						
T35A	Sooner Cattle	54.22	340	P	P	06 15 11.8	+2.2
T35A				pP	pP	06 15 21.1	-0.5
T35A				IAmb	IAmb	06 15 22.9	
	comp=Z,21nm,1.2s						
N58A	Sunbury	54.54	359	P	P	06 15 12.0	+0.1
N58A				IAmb	IAmb	06 15 15.1	
	comp=Z,7.6nm,1.0s						
319A	Douglas	55.32	325	P	P	06 15 21.1	+3.2
319A					pP	06 15 30.4	+0.6
319A				IAmb	IAmb	06 15 30.9	
	comp=Z,11nm,1.1s						
R32A	Long Quarter,	56.34	339	P	P	06 15 25.6	+0.7
R32A				pP	pP	06 15 35.9	-1.0
R32A				IAmb	IAmb	06 15 37.5	
	comp=Z,19nm,1.1s						
X16A	Lo Mia Camp, P	58.80	326	P	P	06 15 44.8	+2.2
X16A				pP	pP	06 15 54.8	+0.2
X16A				IAmb	IAmb	06 15 56.2	
	comp=Z,3.6nm,0.9s						
SRU	San Rafael Swe	61.92	330	P	P	06 16 05.1	+1.3
SRU				pP	pP	06 16 14.9	-1.0
P17A	Butcher Ranch,	62.31	330	P	P	06 16 06.9	+0.6
P17A				pP	pP	06 16 17.5	-1.0
RDMU	Red Mountain	62.62	332	P	P	06 16 09.8	+1.3
RDMU					pP	06 16 19.8	-0.8
PDAR	Pinedale Array	64.36	333	P	P	06 16 18.6	-1.4
	comp=Z,0.2nm,0.5s,baz=108,slow=4.8,SNR=3.1						
PDAR				pP	pP	06 16 31.1	-1.0
	comp=Z,1.1nm,0.8s,baz=134,slow=6.4,SNR=8.3						
PDAR				LR	LR	06 46 17.6	
	comp=Z,27nm,19.9s,baz=326,slow=38						
PDAR	Pinedale Array	64.36	333	P	P	06 16 18.1	-1.9
PDAR					pP	06 16 31.1	-1.0
NVAR	Mina Array Bea	65.52	324	P	P	06 16 26.8	-0.7
	comp=Z,0.1nm,0.3s,baz=159,slow=6.4,SNR=2.9						
NVAR				pP	pP	06 16 38.9	-0.8
	comp=Z,1.3nm,0.8s,baz=148,slow=7.5,SNR=6.9						
NVAR				LR	LR	06 40 50.0	
	comp=Z,60nm,19.5s,baz=316,slow=32						
NVAR	Mina Array Bea	65.52	324	P	P	06 16 25.9	-1.6
NVAR					pP	06 16 40.1	+0.4
FLWY	Flagg Ranch	65.92	333		P	06 16 30.9	+0.9
FLWY					pP	06 16 42.3	+0.1
FLWY				IAmb	IAmb	06 16 43.5	
	comp=Z,11nm,1.0s						
RLMT	Red Lodge	66.14	335	P	P	06 16 33.2	+1.9
RLMT					pP	06 16 43.1	-0.5
ULM	Lac du Bonnet	66.32	346	P	P	06 16 30.1	-1.9
	comp=Z,1.7nm,0.7s,baz=166,slow=6.3,SNR=4.8						
YNE	Yellowstone No	66.36	334	P	P	06 16 32.9	+0.1
YNE				pP	pP	06 16 44.8	-0.2
YHB	Horse Butte	66.66	333	P	P	06 16 35.9	+1.2
YHB					pP	06 16 46.5	-0.5
SNAA	Sanae	71.51	161	P	P	06 17 04.8	+0.6
LIC	Lamto	73.12	79	*e*P	P	06 17 14.2	-0.6
	comp=Z,10nm,0.8s						
TIC	Toumodi	73.25	79	*e*P	P	06 17 15.1	-0.5
DBIC	Dimbokro	73.41	79	P	P	06 17 15.7	-0.8
	comp=Z,2.8nm,0.5s,baz=247,slow=5.5,SNR=6.2						
DBIC				LR	LR	06 49 22.4	
	comp=Z,34nm,18.2s,baz=236,slow=36						
DBIC	Dimbokro	73.41	79	P	P	06 17 15.5	-1.0
DBIC				IAmb	IAmb	06 17 16.4	
	comp=Z,8.7nm,1.2s						
KIC	Kosan Boka	73.43	79	*e*P	P	06 17 16.3	-0.3
	comp=Z,11nm,0.6s						
TOA0	Torodi Ar. Sit	81.44	74	P	P	06 18 01.5	+0.2
TOA0				IAmb	IAmb	06 18 04.3	
	comp=Z,7.4nm,0.8s						
TORD	Torodi Ar. Bea	81.44	74	P	P	06 18 01.6	+0.2
	comp=Z,7.3nm,0.8s,baz=257,slow=4.8,SNR=32						
TORD				pP	pP	06 18 14.1	+0.1
	comp=Z,2.7nm,0.9s,baz=254,slow=4.8,SNR=4.4						
TORD	Torodi Ar. Bea	81.44	74	P	P	06 18 00.8	-0.5
YKA	Yellowknife Ar	82.00	343	P	P	06 18 02.5	-0.8
	comp=Z,0.4nm,0.7s,baz=142,slow=6.2,SNR=7.6						
YKA				pP	pP	06 18 14.3	-1.5
	comp=Z,2.3nm,0.8s,baz=140,slow=6.4,SNR=18						
SYO	Syowa Base	85.79	161	⇓*e*pP	pP	06 18 32.0	-3.3
H11N3	WAKE ISLAND Hy	119.89	285	T	T	08 35 12.0	
	baz=96,slow=74						
H11N2	WAKE ISLAND Hy	119.91	285	T	T	08 35 11.4	
	baz=96,slow=74						
H11N1	WAKE ISLAND Hy	119.91	285	T	T	08 35 13.3	
	baz=96,slow=74						
H11S2	WAKE ISLAND Hy	119.97	283	T	T	08 35 13.0	
	baz=97						
H11S1	WAKE ISLAND Hy	119.98	283	T	T	08 35 14.2	
	baz=97						
H11S3	WAKE ISLAND Hy	119.99	283	T	T	08 35 14.9	
	baz=97						
WRA	Warramunga Arr	135.04	222	PKP	PKPdf	06 25 00.6	-3.1
	comp=Z,0.6nm,0.8s,baz=134,slow=2.2,SNR=3.8						
WRA	Warramunga Arr	135.04	222		PKPdf	06 25 00.8	-2.9
MKAR	Makanchi Array	142.53	25	PKP	PKPdf	06 25 14.7	-1.9
	comp=Z,0.3nm,0.8s,baz=27,slow=1.6,SNR=3.7						
MKAR				pPKP	pPKPdf	06 25 26.7	-3.0
	comp=Z,0.5nm,0.4s,baz=186,slow=25,SNR=6.8						
MKAR	Makanchi Array	142.53	25		PKPdf	06 25 14.3	-2.3
KSH	Kashi	144.52	39	PKP	PKPdf	06 25 20.8	+0.3
KSH				sPKP		06 25 35.0	
KSH				PP	PP	06 28 39.8	+3.4
KSH				PKS	PKSdf	06 28 53.9	-2.3
SONM	Songino Array	146.19	357	PKPbc	PKPdf	06 25 23.4	+0.3
	comp=Z,1.8nm,0.7s,baz=329,slow=2.2,SNR=12						
SONM				pPKPbc	pPKPdf	06 25 36.2	0.0
	comp=Z,2.2nm,0.9s,baz=358,slow=1.8,SNR=6.2						
WMQ	Urumqi	147.10	22	*e*P	PKPdf	06 25 24.3	-0.4
NJ2	Nanjing	157.51	326	*e*P	PKPdf	06 25 38.9	-1.4
LZH	Lanzhou	157.98	1	*e*PKP	PKPdf	06 25 39.9	-1.1
LZH				pPKP	pPKPdf	06 25 52.0	-2.1
LZH				sPKP		06 25 57.8	
CD2	Chengdu	163.14	1	PKP	PKPdf	06 25 45.0	-1.6

IDC 15 06:06:39.0±1.9**, 7°.60N**×**93°.38E, h0**^{km}**, mb3.6**/6**, mb1 3.7**/6**, mb1mx3.5**/54**, mbtmp3.6**/6**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.6**/33**, Error ellipse: s-maj=82.3km s-min=21.4km az=59.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S3	Diego Garcia H	25.75	234	T	T	06 38 53.2	
	baz=55,slow=76,SNR=9.1						
H08S2	Diego Garcia H	25.75	234	T	T	06 38 54.9	
	baz=55,slow=76,SNR=7.2						
H08S1	Diego Carcia H	25.76	234	T	T	06 38 57.0	
	baz=55,slow=76,SNR=3.9						
MKAR	Makanchi Array	40.20	348	P	P	06 14 17.2	0.0
	0.5nm,0.7s,baz=179,slow=8.0,SNR=5.5						
SONM	Songino Array	41.60	13	P	P	06 14 28.7	-0.2
	0.3nm,0.7s,baz=191,slow=5.9,SNR=2.1						
ZALV	Zalesovo Beam	46.73	353	P	P	06 15 09.8	0.0
	0.6nm,0.3s,baz=180,slow=8.8,SNR=2.8						
ZALV				LR	LR	06 37 24.9	
	comp=Z,40nm,21.9s,baz=70,slow=40						
WRA	Warramunga Arr	48.72	125	P	P	06 15 25.4	-0.3
	0.4nm,0.5s,baz=307,slow=8.3,SNR=5.1						
ASAR	Alice Springs	50.32	129	P	P	06 15 38.1	+0.2
	0.2nm,0.5s,baz=308,slow=7.5,SNR=5.2						
FINES	FINESS Array B	72.60	332	P	P	06 18 08.0	-0.1
	4.7nm,1.1s,baz=103,slow=12,SNR=2.5						

*ISK **15** 06:17:17.8, 37°.26N×26°.83E, h8^{km}, ML2.7/12*

*DDA **15** 06:17:18.3, 37°.25N×26°.87E, h7^{km}±3^{km}, ML2.0*

*ATH **15** 06:17:18.4, 37°.28N×26°.82E, h27^{km}±1^{km}, ML2.4/5, Error ellipse: s-maj=2.1km s-min=0.9km az=327.0*

ISC 15 06:17:18.5±1.0**, 37°.26N**±0°.02×**26°.85E**±0°.02**, h11**^{km}±10^{km}**, n31, σ0s.71**/42**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YKAV	Yalikavak-Bodr	0.37	112	PG	Pg	06 17 25.9	+0.1
BODT	Bodrum	0.42	119	PG	Pg	06 17 26.8	+0.1
BODT				SG	Sg	06 17 33.1	+0.8
SMG	Samos	0.45	358	P	Pg	06 17 27.6	+0.4
SMG				S	Sb	06 17 34.3	-0.8
SMG				AML	AML	06 17 35.5	
	comp=E,1858µm,0.3s						
SMG				AML	AML	06 17 36.5	
	comp=N,1551µm,0.2s						
BDRM	Kayabasi	0.51	112	*i* P	Pg	06 17 27.9	-0.6
BDRM				*i* S	Sg	06 17 35.3	0.0
BDRM				IAML		06 17 36.0	
	comp=E,188nm,0.3s						
GCAM	G?zelcaml?	0.53	35	PG	Pg	06 17 29.1	+0.2
GCAM				SG	Sb	06 17 37.3	-0.2
GCAM	G?zelcaml?	0.53	35	*i* P	Pg	06 17 29.1	+0.2
GCAM				*i* S	Sb	06 17 37.3	-0.2
GCAM				IAML		06 17 38.0	
	comp=E,332nm,0.3s						
NISR	Nisiros	0.69	161	P	Pb	06 17 32.7	+0.3
DGB	zmir	0.79	2	*i* P	Pg	06 17 33.4	-0.3
DGB				*i* S	Sb	06 17 45.5	+0.6
DGB				IAML		06 17 48.0	
	comp=N,45nm,0.4s						
DGB				IAML		06 17 50.0	
	comp=E,38nm,0.2s						
DAT	Datca	0.79	132	PG	Pg	06 17 33.9	+0.2
DAT	Datca	0.79	132	*i* P	Pg	06 17 34.0	+0.2
DAT				*i* S	Sg	06 17 44.4	+0.3
DAT				IAML		06 17 50.0	
	comp=N,58nm,0.6s						
DAT				IAML		06 17 50.0	
	comp=E,54nm,0.6s						
DATC	Datca-Mugla	0.82	128	PG	Pg	06 17 34.5	+0.2
AMGA	Amorgos Island	0.88	241	P	Pb	06 17 35.7	-0.1
AMGA				S	Sb	06 17 47.3	-0.3
AMGA				AML	AML	06 17 50.3	
	comp=E,357µm,0.3s						
AMGA				AML	AML	06 17 51.4	
	comp=N,472µm,0.2s						
AYDB	Zeytinkoy-Aydi	1.07	50	PN	Pg	06 17 38.7	-0.4
APE	Apeiranthos	1.07	260	P	Pg	06 17 38.9	-0.2
APE				S	Sb	06 17 53.4	+0.3
APE	Apeiranthos	1.07	260	PG	Pg	06 17 38.3	-0.8
URLA	Izmir	1.11	350	PN	Pb	06 17 39.5	-0.3
URLA	Izmir	1.11	350	*i* P	Pn	06 17 40.0	0.0
URLA				*i* S	Sn	06 17 57.2	+1.7
URLA				IAML		06 18 01.0	
	comp=N,20nm,0.6s						
URLA				IAML		06 18 02.0	
	comp=E,25nm,0.7s						
BLCB	Balcova	1.13	8	PN	Pb	06 17 39.7	-0.3
YER	Yerkesik	1.15	96	PN	Pb	06 17 40.2	-0.2
ANAF	Anafi Island	1.25	224	P	Pn	06 17 42.0	0.0
ANAF				S	Sn	06 17 58.9	+0.1
ANAF				AML	AML	06 18 03.4	
	comp=E,636µm,0.4s						
ANAF				AML	AML	06 18 04.2	
	comp=N,721µm,0.2s						
CHOS	Chios island	1.29	331	P	Pn	06 17 42.2	-0.3
CHOS				AML	AML	06 18 04.5	
	comp=N,108µm,0.5s						
CHOS				AML	AML	06 18 04.5	
	comp=E,81µm,0.7s						
CHOS	Chios island	1.29	331	PN	Pb	06 17 42.8	0.0
IOSP	Ios island	1.36	247	P	Pn	06 17 43.2	-0.2
IOSP				S	Sg	06 18 01.9	-0.4
IOSP				AML	AML	06 18 05.8	
	comp=E,146µm,0.4s						
IOSP				AML	AML	06 18 06.5	
	comp=N,213µm,0.3s						
TURN	Turunc	1.45	105	PN	Pn	06 17 41.4	-3.3
TURN	Turunc	1.45	105	*i* P	Pn	06 17 34.4	-10
TURN				IAML		06 18 01.0	
	comp=N,44nm,0.5s						
TURN				IAML		06 18 02.0	
	comp=E,41nm,0.5s						
ARG	Arkhangelos	1.46	135	PN	Pb	06 17 45.4	-0.3
KARP	Karpathos	1.73	172	P	Pn	06 17 48.8	+0.3
KARP	Karpathos	1.73	172	PN	Pn	06 17 48.7	+0.2
FETY	Fethiye	1.89	109	PN	Pn	06 17 51.7	+0.9
FETY	Fethiye	1.89	109	*i* P	Pb	06 17 52.8	-0.2
USAK	Uak-Merkez	2.24	49	*i* P	Pg	06 18 01.7	+0.2

*TAP **15** 06:24:19.8, 24°.86N×122°.15E, h12^{km}, ML3.2, B*

*JMA **15** 06:24:20.0±0.1, 24°.77N×122°.16E, h43^{km}, M2.6*

ISC 15 06:24:18.9±0.9**, 24°.85N**±0°.03×**122°.18E**±0°.02**, h15**^{km}±8^{km}**,**

n58,σ0ˢ49/71,1C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.24	313	⇑iP	Pg	06 24 24.0	-0.2
	baz=316						
TWB1				S	Sg	06 24 27.1	-0.6
	baz=316						
EOS1	EOS1	0.30	189	P	Pb	06 24 26.2	+0.3
	baz=183						
EOS1				eS	Sb	06 24 31.0	+0.4
	baz=183						
NTC	Toucheng	0.32	272	eP	Pg	06 24 25.8	+0.3
	baz=269						
NTC				eS	Sg	06 24 30.2	+0.1
	baz=269						
TIPB	Shuangxi	0.35	291	i P	Pg	06 24 26.1	+0.1
	baz=290						
TIPB				eS	Sg	06 24 31.1	+0.2
	baz=290						
TWC	Suao	0.38	232	P	Pg	06 24 26.5	-0.2
	baz=226						
NWF	Wu-fen Shan	0.43	302	eP	Pb	06 24 28.0	-0.2
	baz=302						
WFSB	Wu-fen Shan	0.43	302	eP	Pb	06 24 28.0	-0.1
	baz=302						
TWE	Neicheng	0.48	255	P	Pg	06 24 28.5	0.0
	baz=251						
SLBB	Yuanshan	0.50	260	eP	Pg	06 24 28.2	-0.7
	baz=257						
TWA	Mucha	0.56	284	eP	Pn	06 24 31.6	-0.8
	baz=283						
ENA	Nanau	0.58	224	P	Pb	06 24 30.5	-0.1
	baz=220						
ENTT	Nioudou	0.59	250	P	Pg	06 24 30.7	+0.1
	baz=247						
NWLT	Wulai	0.62	264	P	Pg	06 24 31.0	0.0
	baz=262						
YM01	YM01	0.63	299	eP	Pb	06 24 32.1	+0.5
	baz=298						
YM11	YM11	0.64	300	eP	Pb	06 24 32.2	+0.5
	baz=300						
YM10	YM10	0.64	299	eP	Pb	06 24 32.4	+0.5
	baz=298						
TATO	Taipei	0.64	282	eP	Pn	06 24 33.3	-0.1
	baz=280						
NDT	Datong Townshi	0.65	248	eP	Pg	06 24 31.7	0.0
	baz=246						
YM04	YM04	0.66	298	eP	Pb	06 24 32.5	+0.4
	baz=297						
TWY	Chenhua	0.68	309	eP	Pb	06 24 32.9	+0.5
	baz=309						
TWS1	Kuangyinshan	0.74	290	eP	Pn	06 24 35.2	+0.4
	baz=290						
YHNB	Yeheng	0.75	257	eP	Pg	06 24 33.3	-0.2
	baz=255						
NSK	Sanguang	0.77	257	P	Pg	06 24 33.5	-0.4
	baz=255						
PCYT	Pengchaiyu	0.79	353	eP	Pg	06 24 33.9	-0.3
	baz=355						
JYNG	Yonagunijimaku	0.80	119	P	Pb	06 24 34.7	+0.3
JYNG				eS	Sb	06 24 45.7	+0.6
NNSB	Datong	0.84	240	eP	Pg	06 24 35.0	-0.1
	baz=238						
NNSH	Datong	0.84	240	eP	Pg	06 24 35.0	-0.2
	baz=238						
NNSH				eS	Sb	06 24 46.3	0.0
	baz=238						
NNS	Nan Shan	0.84	241	eP	Pg	06 24 35.1	-0.1
	baz=239						
YOJ	Yonaguni jima	0.85	117	eP	Pg	06 24 35.5	+0.2
	baz=116						
YOJ				eS	Sn	06 24 47.7	-0.7
	baz=116						
YOJ	Yonaguni jima	0.85	117	P	Pb	06 24 35.2	-0.1
YOJ				eS	Sb	06 24 47.1	+0.7
NACB	Ninganchiao	0.86	219	P	Pb	06 24 35.4	-0.1
	baz=216						
NACB				eS	Sg	06 24 46.3	-0.5
	baz=216						
ETLH	Xiulin Townshi	0.90	225	i P	Pb	06 24 36.2	0.0
	baz=223						
ETLH				eS	Sb	06 24 47.8	-0.3
	baz=223						
TWD	Chiawan	0.93	215	eP	Pb	06 24 36.8	+0.1
	baz=212						
TWD				eS	Sg	06 24 49.1	+0.1
	baz=212						
LIOB	Emei	1.08	260	eP	Pg	06 24 41.1	+1.4
	baz=258						
WHF	Hehuan Shan	1.09	230	eP	Pg	06 24 40.0	0.0
	baz=228						
WHF				eS	Sn	06 24 55.0	+0.1
	baz=228						
TWT	Tachien	1.09	237	eP	Pg	06 24 41.2	+1.3
	baz=236						
TDCB	Techi	1.10	238	eP	Pg	06 24 40.1	-0.1
	baz=236						
CHGB	Renai	1.21	230	eP	Pb	06 24 41.7	+0.2
	baz=228						
WHP	Taichung City	1.26	244	eP	Pg	06 24 43.3	+0.2
	baz=242						
OWD	Renai	1.27	226	eP	Pb	06 24 43.0	+0.3
	baz=224						
VWDT	VWDT	1.44	221	eP	Pg	06 24 46.4	-0.2
	baz=219						
IRIF	Iriomote-Funau	1.50	109	P	Pn	06 24 44.4	-0.8
SMLT	Sun Moon Lake	1.51	231	eP	Pg	06 24 47.7	-0.2
	baz=229						
HGSD	Ruisui	1.51	207	eP	Pg	06 24 48.0	0.0
	baz=206						
TYC	Yuchr	1.53	232	eP	Pg	06 24 48.0	-0.2
	baz=230						
SSLB	Suanglung	1.54	227	eP	Pb	06 24 47.8	+0.7
	baz=225						
YULB	Yu-li	1.66	209	eP	Pb	06 24 49.9	+0.8
	baz=208						
HATJ	Hateruma jima	1.68	118	P	Pn	06 24 48.0	+0.3
HATJ				eS	Sn	06 25 07.5	-1.4
YUS	Yu-Shan	1.76	220	eP	Pb	06 24 51.6	+0.5
	baz=218						
JKRS	Kuro-shima	1.77	110	P	Pn	06 24 48.8	-0.2
ALS	Alishan	1.83	224	eP	Pg	06 24 53.7	-0.3
	baz=222						
FULB	Fuli	1.83	207	eP	Pb	06 24 51.8	-0.3
	baz=205						
JIJ	Ishigaki jima	1.85	105	P	Pn	06 24 50.3	+0.3
CHN5	Tsauling	1.85	228	eP	Pg	06 24 54.0	-0.4
	baz=226						
JISG	Ishigakijimahi	1.95	97	P	Pn	06 24 52.6	+1.1
CHN4	Tsaushan	2.08	225	eP	Pb	06 24 57.1	+0.8
	baz=223						
TPUB	Ta-pu	2.09	223	eP	Pb	06 24 56.8	+0.3
	baz=221						
TWK	Hsinying	2.21	225	eP	Pb	06 24 59.2	+0.7
	baz=223						

NDI ***15*** *06:30:41.8±3.0, 7°.19N×94°.88E, h33km, ML4.9, mb4.8(NEIC)*

BJI ***15*** *06:30:43.7±0.0, 7°.19N×94°.09E, h34km, mB5.0/32, mb4.7/49, Ms4.5/25, Ms7 4.2/17*

NEIC ***15*** *06:30:45.0±1.8, 7°.59N±0°.07×94°.18E±0°.08, h10km±1km, mb4.8/66, Error ellipse: s-maj=16.2km s-min=9.7km az=232.0*

KLM ***15*** *06:30:45.0, 7°.69N×94°.16E, h10km, mb4.5*

IDC ***15*** *06:30:48.7±4.4, 7°.66N×94°.26E, h33km±32km, mb4.3/26, mb1 4.4/29, mb1mx4.3/39, mbtmp4.5/29, ML4.3/3, MS3.7/25, Ms1 3.7/25, ms1mx3.6/50, Error ellipse: s-maj=16.4km s-min=11.1km az=48.0*

DJA ***15*** *06:30:54.3±0.4, 8°N±3°×9°5E±°, h122km±8km, M4.4/10, mb4.5/10, mB4.8/7, MLv4.6/8, Mw(mB)4.1/7*

ISC 15 06:30:48.4±1.6**, 7°.55N**±0°.04×**94°.24E**±0°.04**, h30**km±11km**, n230, σ1ˢ51**/239**, mb4.7**/77**, MS3.8**/28**, 11C, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.62	210	eP	Pn	06 31 01.4	+0.3
CMBY				eS	Sn	06 31 11.7	+1.7
CMBY				IAML		06 31 14.1	
	comp=N,50μm,0.3s						
CMBY				IAML		06 31 15.5	
	comp=E,24μm,0.3s						
LHMI	Lhok Sumawe	3.55	130	P	Pn	06 31 42.0	+0.6
LHMI				S	Sn	06 32 21.9	-0.5
LHMI	Lhok Sumawe	3.55	130	Pn	Pn	06 31 42.7	+1.3
LHMI					Sn	06 32 23.6	+1.2
MLSI	Meulaboh, Aceh	3.91	146	P	Pb	06 31 51.9	-4.8
PBA	Port Blair	4.33	340	eP	Pn	06 31 54.7	+2.5
PBA				eS	Sn	06 32 45.5	+3.7
PBA	Port Blair	4.33	340	Pn	Pn	06 31 51.6	-0.6
TPTI		5.17	145	P	Pn	06 32 07.2	+3.4
TPTI				S	Sb	06 33 12.0	-7.9
KCSI	Kotacane, Aceh	5.33	138	P	Pn	06 32 09.7	+3.7
	comp=E,0.4nmcomp=E,974nmcomp=E,80nm,0.8s						
DGPR	DIGLIPUR	5.74	347	eP	Pn	06 32 09.8	-1.7
DGPR				eS	Sn	06 33 18.9	+2.6
PSI	Prapat	6.64	135	Pn	Pn	06 32 26.9	+2.9
	comp=E,3.8nm,0.3s,baz=343,slow=12,SNR=14						
PSI				Sn	Sn	06 33 41.3	+2.5
	comp=E,2.6nm,0.3s,baz=261,slow=19,SNR=8.2						
PSI				LR	LR	06 35 20.7	
	comp=E,918nm,21.1s,baz=307,slow=40						
RPSI	Rantau Prapat	6.71	136		Pn	06 32 27.5	+2.5
RPSI	Rantau Prapat	6.71	136		Pn	06 32 26.9	+2.0
RPSI					Sn	06 33 41.3	+0.8
KULM	Kulim	6.76	109		Pn	06 32 25.6	0.0
KULM	Kulim	6.76	109	P	Pn	06 32 26.0	+0.4
IPM	Ipoh	7.41	114		Pn	06 32 33.6	-0.9
IPM	Ipoh	7.41	114	P	Pn	06 32 34.0	-0.6
PDSI	Padang	10.45	143	P	Pn	06 33 30.4	+14
SDSI	Sungai Dareh	11.07	139	P	Pn	06 33 34.0	+9.3
PBKT	Sadao Pong	11.12	36		Pn	06 33 26.2	+0.8
CMAR	Chiang Mai Arr	11.77	22	Pn	Pn	06 33 34.5	+0.2
	comp=E,2.1nm,0.3s,baz=214,slow=14,SNR=14						
CMAR				LR	LR	06 38 18.0	
	comp=E,310nm,18.3s,baz=205,slow=38						
CMAR	Chiang Mai Arr	11.77	22		Pn	06 33 34.3	0.0
CHTO	Chiang Mai	12.09	22		Pn	06 33 40.6	+1.9
PALK	Pallekele	13.42	270	Pn	Pn	06 33 58.2	+1.2
	comp=E,0.5nm,0.3s,baz=74,slow=15,SNR=2.1						
PALK				Sn	Sn	06 36 13.2	-12
	comp=E,0.9nm,0.3s,baz=22,slow=11,SNR=4.2						
PALK				LR	LR	06 38 33.4	
	comp=E,661nm,21.5s,baz=85,slow=34						
BRDH	Bariadhala	15.24	351	LR	LR	06 42 02.2	
	comp=E,385nm,18.6s,baz=158,slow=44						
MDSI	Maura Dua	15.54	140	P	P	06 34 30.7	+1.2
SLVN	Son La	16.58	33	P	P	06 34 43.1	+2.0
BOK	Bokaro	18.03	335	eP	P	06 34 57.4	+0.4
SHL	Shillong	18.05	353	P	Pn	06 34 53.6	-3.7
HYB	Hyderabad	18.17	304	i P	P	06 35 01.0	+2.4
SBUM	Sibu	18.61	105	P	Pn	06 35 06.0	+2.0
QIZ	Qiongzhong	18.98	52	P	P	06 35 07.1	-0.4
QIZ				S	Sn	06 38 39.4	-0.7
QIZ				LR	LR		
	comp=E,1μm,11.8s						
QIZ				LR	LR		
	comp=E,530nm,12.7s						
QIZ				LR	LR		
	comp=E,620nm,10.4s						
KMI	Kunming	19.27	24	P	Pn	06 35 14.8	+2.7
KMI				pP	sP	06 35 22.6	+0.5
KMI				sP	pwP	06 35 26.6	+5.5
KMI				S	Sn	06 38 45.8	-1.6
KMI				sS	sS	06 38 58.1	-1.8
KMI				pmax	pmax		
	comp=E,37nm,1.2s						
KMI				pmax	pmax		
	comp=E,260nm,6.7s						
KMI				LR	LR		
	comp=E,320nm,13.8s						
KMI				LR	LR		
	comp=E,210nm,14.5s						
LEM	Lembang	19.55	137	LR	LR	06 42 53.7	
	comp=E,266nm,18.7s,baz=256,slow=37						
NGP	Nagpur	19.95	314	ex	P	06 35 21.8	+3.6
NGP				ex	x	06 38 29.6	
ODAN	Odare	20.27	342	eP	P	06 35 21.8	-0.1
RAMN	Ramite	20.61	340	eP	P	06 35 25.4	-0.1
	comp=E,121nm,0.7s						
TAPN	Taplejung	20.64	343	eP	P	06 35 25.3	-0.6
JIRN	Jiri	21.40	340	eP	P	06 35 32.8	-1.4
	comp=E,174nm,1.0s						
PKI	Pulchoki	21.60	338	eP	P	06 35 34.9	-1.3
	comp=E,46nm,0.7s						
PKIN	Phulchoki	21.61	338	eP	P	06 35 34.9	-1.4
GUN	Gumba	21.74	340	eP	P	06 35 36.3	-1.5
	comp=E,127nm,1.0s						
DMN	Daman	21.74	338	eP	P	06 35 36.7	-1.0
	comp=E,90nm,1.0s						
KKN	Kakani	21.84	338	eP	P	06 35 37.3	-1.4
GYA	Guiyang	22.21	31	⇑iP	P	06 35 44.3	+1.7
GYA				PP	PnPn	06 36 14.8	+9.2
GYA				S	S	06 39 44.8	-0.9
GYA				SS	Sn	06 40 23.8	+26
GYA				pmax	pmax		
	comp=E,20nm,1.0s						
GYA				pmax	pmax		
	comp=E,240nm,4.8s						
GYA				LR	LR		
	comp=E,290nm,15.7s						
GYA				LR	LR		
	comp=E,320nm,10.4s						
LSA	Lhasa	22.22	353	P	P	06 35 44.7	+1.7
LSA				IAmb	IAmb	06 35 46.0	
	comp=Z,43nm,0.7s						
GKN	Gorkha	22.28	337	eP	P	06 35 42.0	-1.4
	comp=Z,34nm,0.4s						
UGM	Wanagama	22.35	133	P	P	06 35 46.2	+2.1
UGM				IAmb	IAmb	06 35 47.7	
	comp=Z,68nm,1.4s						
WOJI	Wonogiri, Jawa	22.60	132	P	P	06 35 59.2	+13
DANN	Dangsing	22.93	336	eP	P	06 35 48.5	-2.0
	comp=Z,61nm,0.7s						
CD2	Chengdu	24.89	20	P	P	06 36 09.6	+0.9
CD2				S	S	06 40 28.8	-1.3
CD2				sS	sS	06 40 48.5	+5.1
CD2				SS		06 41 27.3	
CD2				pmax	pmax		
	comp=Z,30nm,0.8s						
CD2				LR	LR		
	comp=Z,350nm,8.7s						
CD2				LR	LR		
	comp=Z,450nm,10.8s						
CD2				LR	LR		
	comp=Z,600nm,10.3s						
SRBI	Singaraja	26.05	126	P	P	06 36 38.5	+19
H08S3	Diego Garcia H	26.42	236	T	T	07 03 04.7	
	baz=55,slow=76						
H08S2	Diego Garcia H	26.42	236	T	T	07 03 10.5	
	baz=55,slow=76						
H08S1	Diego Carcia H	26.43	236	T	T	07 03 11.9	
	baz=55,slow=76						
MPSI	Mapaga	26.57	104	P	P	06 36 27.6	+3.5
WHN	Wuhan	29.63	37	P	P	06 36 52.6	+1.4
WHN				pmax	pmax		
	comp=Z,78nm,1.2s						
XAN	Xi'an	29.64	25	P	P	06 36 51.4	+0.1
XAN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XAN				LR	LR		
	comp=Z,350nm,12.8s						
XAN				LR	LR		
	comp=Z,240nm,12.8s						
LZH	Lanzhou	29.73	16	eP	P	06 36 52.4	+0.2
LZH				pP	sP	06 37 04.3	+0.4
LZH				sP	pwP	06 37 09.6	+6.6
LZH				PP	PnPn	06 37 50.9	+2.6
LZH				pmax	pmax		
	comp=Z,14nm,1.3s						
LZH				pmax	pmax		
	comp=Z,180nm,4.3s						
LZH				LR	LR		
	comp=Z,280nm,13.6s						
LZH				LR	LR		
	comp=Z,250nm,13.6s						
LZH				LR	LR		
	comp=Z,330nm,14.3s						
WSI	Waingapu	31.09	123	P	P	06 37 22.8	+19
GTA	Gaotai	32.11	8	P	P	06 37 12.9	-0.3
GTA				pP	pP	06 37 22.1	+0.6
GTA				sP	sP	06 37 26.3	+1.4
GTA				PcP	PcP	06 40 03.0	+1.0
GTA				ScS	ScS	06 47 40.6	-1.9
GTA				pmax	pmax		
	comp=Z,13nm,0.9s						
GTA				pmax	pmax		
	comp=Z,62nm,4.1s						
GTA				LR	LR		
	comp=Z,110nm,14.6s						
GTA				LR	LR		
	comp=Z,150nm,16.5s						
NIL	Nilore	32.42	326	P	P	06 37 14.9	-0.8
NJ2	Nanjing	33.45	40	eP	P	06 37 24.9	+0.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KBL	Kabul	35.48	323	P	P	06 37 40.6	-2.1
KSH	Kashi	35.80	336	P	P	06 37 46.8	+1.6
KSH				pP	pwP	06 37 56.5	+0.2
KSH				PP	PP	06 39 08.8	+1.9
KSH				S	S	06 43 22.0	+1.1
KSH				pmax	pmax		
	comp=Z,21nm,0.8s						
KSH				pmax	pmax		
	comp=Z,300nm,4.6s						
KSH				LR	LR		
	comp=Z,230nm,10.2s						
KSH				LR	LR		
	comp=Z,250nm,10.2s						
KSH				LR	LR		
	comp=Z,170nm,14.4s						
HHC	Hu-ho-hao-te	36.58	22	eP	P	06 37 53.0	+1.2
HHC				PP	PP	06 39 16.4	+1.0
HHC				S	S	06 43 34.0	+1.3
HHC				pmax	pmax		
	comp=Z,89nm,0.9s						
HHC				pmax	pmax		
	comp=Z,340nm,4.7s						
HHC				LR	LR		
	comp=Z,770nm,14.4s						
HHC				LR	LR		
	comp=Z,560nm,14.1s						
HHC				LR	LR		
	comp=Z,850nm,14.3s						
WMQ	Urumqi	36.58	352	P	P	06 37 52.0	+0.3
WMQ				pP	pP	06 38 00.1	+0.1
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,120nm,5.3s						
WMQ				LR	LR		
	comp=Z,960nm,29.1s						
WMQ				LR	LR		
	comp=Z,950nm,29.1s						
WMQ				LR	LR		
	comp=Z,830nm,29.0s						
WMQ	Urumqi	36.58	352	P	P	06 37 51.6	-0.1
WMQ				IAmb	IAmb	06 37 53.8	
	comp=Z,14nm,0.8s						
GAR	Garm	38.00	329	P	P	06 38 02.7	-1.2
GAR				IAmb	IAmb	06 38 11.3	
	comp=Z,15nm,0.8s						
CHGR	Chuyangaron	38.34	328	P	P	06 38 04.9	-1.9
CHGR				IAmb	IAmb	06 38 06.3	
	comp=Z,23nm,0.9s						
BTK	Batken	38.56	331	P	P	06 38 07.9	-0.6
BTK				IAmb	IAmb	06 38 11.3	
	comp=Z,29nm,1.4s						
ARSB	Arslanbob	38.57	334	P	P	06 38 07.7	-1.0
ARSB				IAmb	IAmb	06 38 09.3	
	comp=Z,15nm,0.9s						
AAK	Ala-Archa	39.04	337	P	P	06 38 12.4	-0.3
FITZ	Fitzroy Crossi	40.13	130	P	P	06 38 21.1	-0.8
	comp=Z,1.5nm,0.9s,baz=180,slow=19,SNR=3.2						
FITZ				PcP	PcP	06 40 26.1	+0.1
	comp=Z,1.6nm,0.7s,baz=0.7,slow=2.5,SNR=3.5						
MK31	Makanchi Array	40.42	347	P	P	06 38 22.7	-1.2
MKAR	Makanchi Array	40.42	347	P	P	06 38 22.9	-1.1
	comp=Z,14nm,0.8s,baz=165,slow=8.3,SNR=141						
MKAR				PcP	PcP	06 40 26.6	+0.1
	comp=Z,1.9nm,0.7s,baz=158,slow=3.8,SNR=5.5						
MKAR				LR	LR	06 57 44.0	
	comp=Z,42nm,18.3s,baz=168,slow=40						
MKAR	Makanchi Array	40.42	347	P	P	06 38 22.4	-1.5
MKAR					PcP	06 40 25.7	-0.8
MAKZ	Makanchi	40.50	347	P	P	06 38 23.2	-1.4
MAKZ				IAmb	IAmb	06 38 24.4	
	comp=Z,12nm,0.8s						
KK31	Karatay Array	41.09	333	P	P	06 38 28.3	-1.2
KKAR	Karatay Array	41.09	333	P	P	06 38 28.3	-1.2
SONM	Songino Array	41.45	12	P	P	06 38 32.1	-0.4
	comp=Z,7.5nm,0.9s,baz=195,slow=8.3,SNR=34						
SONM				PcP	PcP	06 40 30.1	+0.1
	comp=Z,2.7nm,0.7s,baz=197,slow=3.4,SNR=9.8						
SONM	Songino Array	41.45	12	P	P	06 38 31.9	-0.6
ULN	Ulaanbaatar	41.63	13	P	P	06 38 33.5	-0.5
JNU	Nakatsue	42.39	48	LR	LR	06 57 57.9	
	comp=Z,129nm,18.3s,baz=231,slow=38						
KSAR	Wonju Array Be	42.61	41	P	P	06 38 43.1	+1.1
KSRS	Korea Array	42.65	41	P	P	06 38 42.0	-0.2
	comp=Z,2.3nm,0.9s,baz=235,slow=8.7,SNR=5.4						
KSRS				LR	LR	06 59 18.8	
	comp=Z,80nm,18.1s,baz=214,slow=40						
GEYT	Alibeck	44.50	318	P	P	06 38 57.4	+0.1
	comp=Z,14nm,0.8s,baz=155,slow=8.2,SNR=18						
GEYT				PcP	PcP	06 40 40.5	+0.1
	comp=Z,2.5nm,0.6s,baz=103,slow=4.6,SNR=3.6						
GEYT				LR	LR	06 58 48.6	
	comp=Z,103nm,20.2s,baz=0.0,slow=38						
GEYT	Alibeck	44.50	318	P	P	06 38 57.5	+0.3
GEYT					PcP	06 40 40.7	+0.3
GYA0B	ALIBECK ARRAY	44.50	318	P	P	06 38 57.7	+0.4
GYA0B				IAmb	IAmb	06 38 58.6	
	comp=Z,11nm,0.8s						
TLY	Talaya	44.67	8	LR	LR	06 58 59.3	
	comp=Z,74nm,19.8s,baz=164,slow=38						
TLY	Talaya	44.67	8	P	P	06 38 58.6	+0.2
KURK	Kurchatov	44.94	346	P	P	06 38 59.7	-0.8
CN2	Changchun	45.25	32	eP	P	06 39 05.1	+2.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HIA	Hailar	46.78	23	P	P	06 39 15.8	+0.7
HIA				IAmb	IAmb	06 39 18.4	
	comp=Z,6.5nm,0.9s						
ZAA0	Zalesovo Array	46.88	352	P	P	06 39 15.1	-0.7
ZALV	Zalesovo Beam	46.88	352	P	P	06 39 15.4	-0.4
	comp=Z,26nm,0.7s,baz=178,slow=8.2,SNR=69						
ZALV				LR	LR	06 59 58.6	
	comp=Z,62nm,19.2s,baz=96,slow=37						
ZALV	Zalesovo Beam	46.88	352	P	P	06 39 15.1	-0.7
WB0	Warramunga Arr	47.95	125	P	P	06 39 24.4	-0.2
WB0				IAmb	IAmb	06 39 37.0	
	comp=Z,10nm,1.3s						
WRA	Warramunga Arr	48.00	125	P	P	06 39 24.3	-0.7
	comp=Z,1.7nm,0.6s,baz=306,slow=8.2,SNR=28						
WRA				PcP	PcP	06 40 52.6	-0.3
	comp=Z,1.3nm,1.0s,baz=307,slow=3.1,SNR=4.6						
WRA				LR	LR	07 01 25.3	
	comp=Z,50nm,20.9s,baz=310,slow=38						
WRA	Warramunga Arr	48.00	125	IAmb	IAmb	06 39 28.4	
	comp=Z,0.5nm,1.4s						
WB2	Warramunga Arr	48.01	125	P	P	06 39 24.8	-0.3
WB2				IAmb	IAmb	06 39 34.5	
	comp=Z,7.2nm,1.1s						
RAYN	Ar Rayn	49.30	294	P	P	06 39 37.0	+2.0
MJAR	Matsushiro Arr	49.31	48	P	P	06 39 34.6	-0.3
	comp=Z,1.8nm,0.5s,baz=242,slow=10,SNR=7.6						
MJAR				PcP	PcP	06 40 57.5	+0.1
	comp=Z,3.6nm,0.7s,baz=247,slow=5.0,SNR=6.9						
MJAR	Matsushiro Arr	49.31	48	P	P	06 39 33.8	-1.0
MJAR					PcP	06 40 57.6	+0.3
BRVK	Borovoye	49.38	341	P	P	06 39 34.1	-0.9
BRVK				IAmb	IAmb	06 39 35.1	
	comp=Z,8.8nm,0.9s						
ASAR	Alice Springs	49.64	130	P	P	06 39 37.0	-0.5
	comp=Z,1.8nm,0.7s,baz=305,slow=7.1,SNR=25						
ASAR				PcP	PcP	06 40 58.8	0.0
	comp=Z,2.7nm,0.8s,baz=313,slow=3.9,SNR=14						
ASAR				LR	LR	07 02 56.3	
	comp=Z,84nm,19.6s,baz=310,slow=39						
ASAR	Alice Springs	49.64	130	P	P	06 39 37.0	-0.5
ABKAR	Akbulak array	50.56	331	P	P	06 39 43.3	-0.8
ABKAR				IAmb	IAmb	06 39 44.8	
	comp=Z,9.4nm,1.1s						
ARU	Arti	56.22	337	P	P	06 40 25.1	-0.4
KBZ	Khabaz	57.39	318	P	P	06 40 32.9	-1.1
	comp=Z,3.6nm,0.9s,baz=200,slow=1.5,SNR=8.1						
KBZ				PcP	PcP	06 41 28.0	+0.2
	comp=Z,3.1nm,0.8s,baz=135,slow=3.3,SNR=6.3						
KBZ				LR	LR	07 07 45.0	
	comp=Z,38nm,19.0s,baz=144,slow=39						
KMBO	Kilima Mbogo	57.48	264	P	P	06 40 37.5	+2.0
	comp=Z,1.8nm,0.3s,baz=53,slow=10,SNR=6.1						
KMBO				LR	LR	07 02 28.4	
	comp=Z,87nm,19.8s,baz=92,slow=33						

STKA	Stephens Creek	59.82	134	LR	LR	07 11 05.6	
	comp=Z,60nm,18.3s,baz=298,slow=40						
YAK	Yakutsk	60.27	18	P	P	06 40 53.0	-0.7
NRIK	Noril'sk	61.87	357	P	P	06 41 03.8	-0.7
	comp=Z,8.2nm,0.7s,baz=161,slow=7.1,SNR=14						
BR131	Keskin Array S	62.71	311	P	P	06 41 08.7	-2.2
BRTR	Keskin Array B	62.71	311	P	P	06 41 08.7	-2.2
	comp=Z,2.5nm,0.7s,baz=130,slow=7.1,SNR=19						
BRTR				PcP	PcP	06 41 48.9	-0.5
	comp=Z,0.9nm,0.7s,baz=110,slow=1.7,SNR=2.5						
BRTR				LR	LR	07 09 01.3	
	comp=Z,25nm,21.8s,baz=88,slow=37						
BRTR	Keskin Array B	62.71	311	P	P	06 41 08.1	-2.8
BRTR					PcP	06 41 48.3	-1.1
ELL	Elmali	64.99	307	P	P	06 41 25.2	-0.8
KARP	Karpathos	67.01	305	P	P	06 41 38.6	-0.3
JURR	Jurilovca	67.29	315	⇑P	P	06 41 59.4	+19
TIXI	Tiksi	67.53	11	P	P	06 41 40.5	-0.8
PETK	Petropavlovsk-	68.21	36	LR	LR	07 15 53.3	
	comp=Z,45nm,19.4s,baz=46,slow=40						
AKASG	Malin Array Be	68.46	322	P	P	06 41 45.6	-2.0
	comp=Z,3.7nm,0.8s,baz=88,slow=5.1,SNR=11						
AKASG	Malin Array Be	68.46	322	P	P	06 41 45.0	-2.6
VRI	Vrincioaia	69.00	316	⇑P	P	06 41 51.1	0.0
PLOR	Plostina	69.05	316	⇑P	P	06 41 51.4	-0.1
TESR	Tescani	69.17	317	⇑P	P	06 41 51.5	-0.6
MLR	Muntele Rosu	69.47	316	⇑P	P	06 41 53.9	-0.3
MLR	Muntele Rosu	69.47	316	P	P	06 41 53.3	-0.8
MLR				IAmb	IAmb	06 42 02.3	
	comp=Z,11nm,1.1s						
VOIR		70.08	316	⇑P	P	06 41 54.0	-3.8
BURAR	Bucovina Array	70.35	318	P	P	06 41 58.6	-0.9
ARR	Arges	70.35	315	⇑P	P	06 41 57.9	-1.7
VTS	Vitosha	70.95	312	P	P	06 42 02.1	-1.2
LIT	Litokhoron	71.22	310	P	P	06 42 03.4	-1.5
LIT				IAmb	IAmb	06 42 04.0	
	comp=Z,8.2nm,0.7s						
ITM	Ithomi	71.39	307	P	P	06 42 04.5	-1.4
ITM				IAmb	IAmb	06 42 05.1	
	comp=Z,9.6nm,1.0s						
HERR	Herculane	71.83	315	⇑P	P	06 42 06.3	-2.1
DRGR		71.90	317	⇑P	P	06 42 07.8	-1.0
CRVS	Cervenica-Dubn	73.03	319	eP	P	06 42 16.4	+0.9
FIA1	FINESS Array S	73.04	332	P	P	06 42 14.0	-1.2
FINES	FINESS Array B	73.04	332	P	P	06 42 14.0	-1.2
	comp=Z,13nm,0.7s,baz=106,slow=4.7,SNR=36						
FINES				LR	LR	07 15 58.6	
	comp=Z,27nm,19.7s,baz=177,slow=37						
FINES	FINESS Array B	73.04	332	P	P	06 42 14.4	-0.9
LBTB	Lobatse	74.17	241	P	P	06 42 24.7	+2.0
LBTB				IAmb	IAmb	06 42 25.4	
	comp=Z,5.8nm,0.9s						
OJC	Ojcow	74.28	320	P	P	06 42 21.6	-1.2
OJC				IAmb	IAmb	06 42 23.2	
	comp=Z,9.1nm,0.9s						
LANS	Liptovska Anna	74.36	319	eP	P	06 42 21.9	-1.5
VYHS	Vyhne	74.71	318	eP	P	06 42 24.9	-0.4
KEV	Kevo	75.17	341	P	P	06 42 27.1	-0.4
BOSA	Boshof	75.50	238	P	P	06 42 31.6	+1.3
	comp=Z,5.7nm,0.8s,baz=81,slow=4.2,SNR=11						
BOSA				LR	LR	07 11 30.5	
	comp=Z,40nm,19.7s,baz=94,slow=32						
BOSA	Boshof	75.50	238	P	P	06 42 31.9	+1.5
BOSA				IAmb	IAmb	06 42 32.4	
	comp=Z,5.6nm,0.8s						
ARCES	ARCESS Array B	75.60	340	P	P	06 42 29.2	-0.8
	comp=Z,8.3nm,0.9s,baz=87,slow=5.1,SNR=11						
ARCES				LR	LR	07 18 24.0	
	comp=Z,159nm,18.7s,baz=138,slow=38						
ARCES	ARCESS Array B	75.60	340	P	P	06 42 29.9	-0.1
ARE0	ARCESS Array S	75.60	340	P	P	06 42 30.0	0.0
BILL	Bilibino	76.35	22	P	P	06 42 33.5	-0.8
DPC	Dobruska-Polom	76.51	320	eP	P	06 42 35.9	+0.2
CHVC	Chvalec	76.70	320	eP	P	06 42 36.8	+0.1
ARSA	Arzberg	76.83	317	eP	P	06 42 36.0	-1.5
	comp=Z,5.9nm,1.1s						
SOKA	Soboth	77.14	316	eP	P	06 42 39.3	-0.1
	comp=Z,9.0nm,1.2s						
OBKA	Obir	77.47	316	eP	P	06 42 41.2	0.0
	comp=Z,2.4nm,0.6s						
BRG	Berggiesshubel	78.06	320	eP	P	06 42 47.4	+3.2
	comp=Z,7.3nm,1.2s						
GEC2	GERESS Array S	78.13	318	P	P	06 42 44.9	+0.1
GEC2				IAmb	IAmb	06 42 45.0	
	comp=Z,6.1nm,0.8s						
GERES	GERESS Array B	78.13	318	P	P	06 42 44.5	-0.3
	comp=Z,4.3nm,0.9s,baz=98,slow=5.5,SNR=13						
GERES				LR	LR	07 22 04.0	
	comp=Z,33nm,18.7s,baz=302,slow=39						
GERES	GERESS Array B	78.13	318	P	P	06 42 44.8	0.0
KHC	Kasperske Hory	78.22	319	eP	P	06 42 44.9	-0.3
CLL	Collm	78.67	321	⇑iP	P	06 42 48.3	+0.7
	comp=Z,16nm,1.3s						
CLL				i PcP	PcP	06 42 54.4	-2.1
STAL	STALIGIAL	78.73	316	P	P	06 42 46.8	-1.4
STAL				IAmb	IAmb	06 42 48.4	
	comp=Z,20nm,1.3s						
HFS	Hagfors	78.78	330	P	P	06 42 47.5	-0.6
	comp=Z,12nm,0.6s,baz=102,slow=6.4,SNR=34						
ABTA	Abfaltersbach	78.88	316	eP	P	06 42 48.1	-0.9
	comp=Z,3.3nm,0.9s						
CTI	Castel Tesino	79.47	315	P	P	06 42 51.3	-0.9
CTI				IAmb	IAmb	06 42 52.4	
	comp=Z,7.3nm,0.8s						
WTTA	Wattenberg	79.48	317	eP	P	06 42 51.2	-1.2
	comp=Z,4.9nm,0.6s						
WATA	Walderalm	79.52	317	eP	P	06 42 51.4	-1.2
	comp=Z,4.5nm,0.7s						
SQTA	Sankt Quirin	79.77	317	eP	P	06 42 53.1	-0.8
	comp=Z,4.2nm,0.5s						
NC405	NORSAR Array S	79.82	331	P	P	06 42 53.5	-0.1
MOTA	Moosalm	79.84	317	eP	P	06 42 52.5	-1.9
	comp=Z,5.5nm,0.9s						
ZCCA	Zocca	79.95	314	P	P	06 42 55.5	+0.6
ZCCA				IAmb	IAmb	06 42 56.7	
	comp=Z,11nm,0.8s						
NB2	NORSAR Subarra	80.06	331	P	P	06 42 54.3	-0.7
	comp=Z,3.4nm,0.6s,baz=96,slow=5.1						
NOA	NORSAR Array B	80.06	331	P	P	06 42 53.9	-1.2
	comp=Z,5.5nm,0.7s,baz=93,slow=5.5,SNR=19						
NOA				LR	LR	07 21 56.9	
	comp=Z,47nm,18.2s,baz=100,slow=38						
RETA	Reutte	80.07	317	eP	P	06 42 54.9	-0.5
	comp=Z,9.4nm,1.0s,SNR=5.3						
FETA	Feichten	80.10	316	eP	P	06 42 55.2	-0.5
	comp=Z,5.0nm,1.0s						
SPA0	Spitsbergen Ar	80.17	348	P	P	06 42 55.1	-0.2
NBO00	NORSAR Array S	80.27	331	P	P	06 42 56.1	0.0
DAVA	Damuels	80.67	317	eP	P	06 42 58.6	-0.3
	comp=Z,4.2nm,0.8s						
DAVOX	Davos/Dischmat	80.69	316	P	P	06 42 58.3	-0.6
	comp=Z,5.4nm,0.8s,baz=157,slow=22,SNR=11						
KEST	Kesra	81.50	305	P	P	06 43 02.8	-0.6
	comp=Z,4.7nm,0.9s,baz=127,slow=5.1,SNR=3.7						
KEST	Kesra	81.50	305	IAmb	IAmb	06 43 11.0	
	comp=Z,20nm,1.3s						
SENIN	Lac Senin/Sane	82.48	316	P	P	06 43 08.3	-0.1
BNI	Bardonecchia	82.99	314	P	P	06 43 11.1	+0.1
BNI				IAmb	IAmb	06 43 14.1	
	comp=Z,5.8nm,1.0s						
GAMB	Gambell	85.08	26	P	P	06 43 21.1	+0.1
GAMB				IAmb	IAmb	06 43 31.7	
	comp=Z,9.0nm,1.4s						
ANM	Nome	87.68	25	P	P	06 43 35.0	+1.1
ANM				IAmb	IAmb	06 43 35.4	
	comp=Z,4.9nm,1.0s						
EKA	Eskdalemuir Ar	88.04	325	P	P	06 43 35.5	-0.2
	comp=Z,5.4nm,0.7s,baz=95,slow=5.2,SNR=11						
TORD	Torodi Ar. Bea	90.76	283	P	P	06 43 49.5	+0.2
	comp=Z,1.3nm,0.9s,baz=94,slow=5.3,SNR=7.2						
TORD				LR	LR	07 24 02.6	
	comp=Z,46nm,19.2s,baz=50,slow=35						
TORD	Torodi Ar. Bea	90.76	283	P	P	06 43 49.1	-0.2
ESDC	Sonseca Array	91.50	310	P	P	06 43 51.9	-0.5
	comp=Z,1.4nm,0.6s,baz=60,slow=4.7,SNR=7.1						
ESDC	Sonseca Array	91.50	310	P	P	06 43 52.0	-0.3
IMAR	Indian Mountai	91.89	22	P	P	06 43 54.4	+0.8
TOLK	Toolik Lake Re	92.22	19	P	P	06 43 55.6	+0.5
TOLK				IAmb	IAmb	06 43 56.2	
	comp=Z,6.2nm,0.9s						
BMAR	Burnt Mountain	94.46	19	P	P	06 44 06.5	+1.1
ILAR	Eielson Array	95.00	22	P	P	06 44 06.6	-1.3
	comp=Z,0.6nm,0.7s,baz=296,slow=5.1,SNR=7.4						
ILAR	Eielson Array	95.00	22	P	P	06 44 06.0	-1.9
INK	Inuvik	97.27	16	P	P	06 44 17.4	-0.7
INK				IAmb	IAmb	06 44 18.4	
	comp=Z,4.2nm,1.1s						
RES	Resolute Bay	97.72	2	P	Pdif	06 44 20.0	0.0
RES				IAmb	IAmb	06 44 21.4	
	comp=Z,3.3nm,0.8s						
DBIC	Dimbokro	98.08	278	LR	LR	07 28 31.4	
	comp=Z,61nm,18.8s,baz=58,slow=35						
YKA	Yellowknife Ar	106.71	14	PP	PP	06 49 22.3	-2.9
	comp=Z,0.3nm,0.7s,baz=336,slow=6.7,SNR=6.7						
YKA				PKKPab	PKKPab	07 00 44.9	-1.8
	comp=Z,0.1nm,0.8s,baz=143,slow=5.9,SNR=5.9						
LRM	Limekiln Ridge	121.74	22		PKPdf	06 49 37.9	-2.1
ULM	Lac du Bonnet	121.77	8	PKP	PKPdf	06 49 38.4	-1.1
	comp=Z,2.7nm,0.7s,baz=350,slow=3.5,SNR=8.9						
GCMT	Greycliff	122.75	20		PKPdf	06 49 41.2	-0.6
NVAR	Mina Array Bea	125.14	31	PKP	PKiKP	06 49 47.0	-0.1
	comp=Z,1.5nm,0.8s,baz=288,slow=1.6,SNR=12						
NVAR	Mina Array Bea	125.14	31		PKiKP	06 49 47.2	+0.1
PD31	Pinedale Array	125.43	21		PKPdf	06 49 46.4	-0.7
PDAR	Pinedale Array	125.43	21	PKP	PKPdf	06 49 46.4	-0.7
	comp=Z,1.4nm,0.8s,baz=57,slow=1.5,SNR=12						
ECSD	EROS Data Cent	128.02	10		PKPdf	06 49 51.6	-0.1
O20A	White River Ci	128.21	22		PKPdf	06 49 51.6	-0.9
SZCU	Shurtz Canyon	128.34	28		PKPpre	06 49 40.6	
SZCU				PKPdf	PKiKP	06 49 53.4	-0.1
X16A	Lo Mia Camp, P	131.70	29		PKPdf	06 49 59.2	-0.1
HHAR	Hobbs	135.73	9		PKPdf	06 50 05.4	-1.2
W35A	Tecumseh	136.25	13		PKPpre	06 49 55.8	
TXAR	Lajitas Array	139.48	24	PKP	PKPdf	06 50 14.1	+0.4
	comp=Z,0.8nm,0.7s,baz=267,slow=1.1,SNR=8.8						
JCT	Junction City	139.86	19	PKPpre	PKPpre	06 50 06.7	
JCT					PKPdf	06 50 14.1	-0.3
PLCA	Paso Flores	144.28	200	PKP	PKPbc	06 50 20.6	+0.5
	comp=Z,7.2nm,0.9s,baz=149,slow=3.2,SNR=17						
PLCA	Paso Flores	144.28	200		PKPdf	06 50 21.0	-1.0
ZAIG	Zacatecas	145.67	28		PKPab	06 50 26.5	+0.9
FDF	Fort de France	147.04	312		PKPbc	06 50 29.1	-0.2
CPUP	Villa Florida	147.14	232	PKPbc	PKPbc	06 50 29.2	-0.1
	comp=Z,6.6nm,0.8s,baz=129,slow=2.2,SNR=15						
CPUP	Villa Florida	147.14	232		PKPdf	06 50 27.9	+0.8
CUPR	Culebra, Puert	147.31	322		PKPdf	06 50 28.3	+0.7
MTP	Monte Pirata	147.63	322		PKPbc	06 50 30.6	-0.2
HUMP	Col San Antoni	147.78	323		PKPbc	06 50 31.7	+0.5
GCPR	Guaynabo City	147.79	323		PKPbc	06 50 30.1	-1.2
PDPR	Patillas Dam,	147.98	323		PKPbc	06 50 30.1	-1.7
OBIP	Obispado Ponce	148.30	324		PKPbc	06 50 31.6	-1.0
MLPR	Magueyes Islan	148.62	324		PKPbc	06 50 33.1	-0.4
LPAZ	La Paz	160.70	242	PKP	PKPdf	06 50 47.6	+0.4
	comp=Z,1.1nm,0.8s,baz=70,slow=5.7,SNR=5.0						
LPAZ	La Paz	160.70	242		PKPdf	06 50 47.2	0.0

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*IDC **15** 06:55:38.7±0.9, 4°.03N×71°.43W, h0^{km}, mb3.5/7, mb1 3.9/11, mb1mx3.7/32, mbtmp3.7/11, ML2.8/3, MS2.7/1, Ms1 2.7/1, ms1mx2.3/30, Error ellipse: s-maj=18.2km s-min=14.7km az=86.0*

*NEIC **15** 06:55:41.0±1.7, 3°.93N±0°.04×71°.36W±0°.06, h14^{km}±4^{km}, mb4.3/7, Mwr3.7(RSNC), Error ellipse: s-maj=8.9km s-min=3.4km az=60.0*

*RSNC **15** 06:55:43.0±1.1, 3°.90N×71°.55W, h4^{km}±8^{km}, ML3.5, Mw3.7*

ISC 15 06:55:38.5±1.6**, 3°.88N**±0°.03×**71°.36W**±0°.04**, h1**^{km}±10^{km}**, n64, σ1^{s}.70**/89**, mb3.6**/9**, 1C-1D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTGC	Puerto Gaitan,	0.83	292	⇑iPg	Pg	06 55 53.7	-0.9
PTGC				eSg	Sg	06 56 02.4	-3.0
PTGC				i		06 56 04.5	
	comp=Z,714nm,0.3s						
GUVC	San Jose del G	1.83	224	eP	Pn	06 56 11.6	+0.3
GUVC				eS	Sn	06 56 35.2	0.0
GUVC				i		06 56 39.5	
	comp=Z,705nm,0.4s						
VILC	Villavicencio,	2.34	276	eP	Pn	06 56 18.9	+0.6
VILC				eS	Sn	06 56 50.1	+2.2
VILC				i		06 57 04.8	
	comp=Z,547nm,0.5s						
CHIC	Chingaza	2.48	288	eP	Pn	06 56 20.6	+0.1
CHIC				eS	Sn	06 56 51.0	-0.7
CHIC				i		06 56 55.3	
	comp=Z,292nm,0.3s						
TAMC	Tame, Arauca	2.58	350	eP	Pn	06 56 23.6	+2.1
TAMC				eS	Sb	06 56 58.4	+0.5
TAMC				i		06 57 07.2	
	comp=Z,426nm,0.5s						
RUSC	La Rusia	2.64	319	⇓eP	Pn	06 56 23.5	+0.7
RUSC				eS	Sn	06 56 56.1	+0.5
RUSC				i		06 57 18.8	
	comp=Z,227nm,0.8s						
RUSC	La Rusia	2.64	319		Pn	06 56 23.4	+0.7
MACC	Macarena, Meta	3.02	235	eP	Pn	06 56 29.9	+2.2
MACC				eS	Sb	06 57 09.7	-1.0
MACC				i		06 57 19.1	
	comp=Z,225nm,0.5s						
ROSC	El Rosal	3.10	288	Pn	Pn	06 56 29.5	+0.5
	comp=Z,5.1nm,0.3s,baz=46,slow=21,SNR=11						
ROSC				Pg	Pg	06 56 39.4	+1.4
	comp=Z,14nm,0.3s,baz=134,slow=15,SNR=16						
ROSC				Sn	Sn	06 57 04.3	-2.8
	comp=Z,14nm,0.3s,baz=166,slow=19,SNR=3.5						
ROSC				Lg	Lg	06 57 18.7	
	comp=Z,23nm,0.3s,baz=66,slow=20,SNR=4.3						
ROSC	El Rosal	3.10	288	eP	Pn	06 56 30.6	+1.5
ROSC				i		06 57 24.7	
	comp=Z,69nm,0.7s						
ROSC	El Rosal	3.10	288		Pn	06 56 30.5	+1.5
SPBC	San Pablo de B	3.23	303	eP	Pn	06 56 30.5	0.0
SPBC				eS	Sb	06 57 17.4	+0.8
SPBC				i		06 57 30.5	
	comp=Z,86nm,0.8s						
BARC	Barichara	3.25	326	eP	Pn	06 56 32.1	+1.1
BARC				eS	Sb	06 57 16.9	-0.6
BARC				i		06 57 31.0	
	comp=Z,610nm,0.8s						
PAMC	Pamplona, Colo	3.69	339	eP	Pn	06 56 37.9	+0.7
PAMC				eS	Sb	06 57 33.6	+3.3
PAMC				i		06 57 52.1	
	comp=Z,147nm,0.8s						
NORC	Norcasia	3.88	296	eP	Pn	06 56 40.3	+0.8
NORC				i		06 57 50.8	
	comp=Z,50nm,1.3s						
ORTC	Ortega, Tolima	3.88	271	eP	Pn	06 56 39.7	+0.3
ORTC				eS	Sb	06 57 38.5	+3.2
ORTC				i		06 57 51.2	
	comp=Z,162nm,0.6s						
TOLC	Tolima	4.01	280	eP	Pn	06 56 42.2	+0.7
TOLC				i		06 57 50.2	
	comp=Z,39nm,1.0s						
PTBC	PUERTO BERRIO,	4.06	311	eP	Pn	06 56 43.7	+1.8
PTBC				i		06 57 53.5	
	comp=Z,46nm,0.6s						
ANIL	Santa Ana	4.08	279	eP	Pn	06 56 42.7	+0.3
ANIL				eS	Sb	06 57 42.4	+1.0
ANIL				i		06 57 54.1	
	comp=Z,180nm,0.4s						
RREF	El Recreo	4.10	284	eP	Pn	06 56 44.3	+1.2
RREF				eS	Sb	06 57 42.1	-0.3
RREF				i		06 58 02.6	
	comp=Z,57nm,1.5s						
GUY2C	Guyana, Caldas	4.21	289	eP	Pn	06 56 44.9	+0.5
GUY2C				eS	Sn	06 57 30.8	-3.7
GUY2C				i		06 57 48.7	
	comp=Z,42nm,0.5s						
GARC	Garzon, Huila	4.46	248	eP	Pn	06 56 48.0	+0.4
GARC				eS	Sb	06 57 48.8	-3.4
GARC				i		06 57 60.0	
	comp=Z,242nm,0.3s						
HELC	Santa Helena	4.75	299	eP	Pn	06 56 51.7	0.0
HELC				i		06 58 09.9	
	comp=Z,14nm,0.6s						
OCAC	Ocana	4.75	336	eP	Pn	06 56 52.5	+0.9
OCAC				eS	Sb	06 58 05.1	+4.6
OCAC				i		06 58 19.7	
	comp=Z,93nm,0.7s						
FLOC	Florencia	4.86	242	eP	Pn	06 56 58.2	+5.3
FLOC				eS	Sb	06 58 05.9	+2.4
FLOC				i		06 58 16.2	
	comp=Z,106nm,0.6s						
FLOC	Florencia	4.86	242		Pn	06 56 54.3	+1.4
YOTC	Yotoco, Valle	4.97	271	eP	Pn	06 56 54.1	-0.5
YOTC				eS	Sb	06 58 10.4	+3.4
YOTC				i		06 58 20.7	
	comp=Z,21nm,1.7s						
ZARC	Zaragoza, Cauc	5.00	316	eP	Pn	06 56 56.3	+1.5
ZARC				eS	Sn	06 57 50.2	-3.2
ZARC				i		06 58 16.7	
	comp=Z,23nm,0.6s						
PLMC	San Jos del P	5.01	282	eP	Pn	06 56 57.5	+2.4
PLMC				i		06 58 21.2	
	comp=Z,13nm,0.8s						
SDV	Santo Domingo	5.03	8	Pn	Pn	06 56 55.0	-0.3
	comp=Z,9.3nm,0.3s,baz=185,slow=4.2,SNR=58						
SDV				Pg	Pb	06 57 06.6	-0.9
	comp=Z,20nm,0.3s,baz=241,slow=2.3,SNR=18						
SDV				Sn	Sn	06 57 54.1	-0.2
	comp=Z,28nm,0.3s,baz=116,slow=23,SNR=8.6						
SDV				Lg	Lg	06 58 14.0	
	comp=Z,9.0nm,0.3s,baz=328,slow=13,SNR=3.8						
SDV	Santo Domingo	5.03	8	eP	Pn	06 56 55.4	0.0
SDV				eS	Sn	06 57 55.3	+1.0
SDV				i		06 58 21.5	
	comp=Z,88nm,0.5s						
SDV	Santo Domingo	5.03	8		Pn	06 56 55.3	0.0
SDV				Sn	Sn	06 57 55.8	+1.5
CBOC	Ciudad Bolivar	5.04	293	eP	Pn	06 56 56.2	+0.7
PCON	Cinco Dias	5.26	253	eP	Pb	06 57 07.9	-3.8
PCON				i		06 58 28.3	
	comp=Z,74nm,0.7s						
SMLC	San Martn de	5.58	331	eP	Pn	06 57 01.8	-1.0
SMLC				i		06 58 15.3	
	comp=Z,16nm,1.0s						
CODC	Agustn Codazz	6.36	341	eP	Pn	06 57 17.6	+4.0
CODC				i		06 58 56.9	
	comp=Z,10nm,0.5s						
SJCC	San Jacinto, C	7.08	328	eP	Pn	06 57 23.0	-0.5
SJCC				eS	Sn	06 58 41.1	-3.6
SJCC				i		06 58 47.6	
	comp=Z,10.0nm,0.8s						
URIC	Uribia, Colomb	7.80	355	eP	Pn	06 57 32.1	-1.2
URIC				i		06 59 01.7	
	comp=Z,7.7nm,0.9s						
URIC	Uribia, Colomb	7.80	355	Pn	Pn	06 57 32.9	-0.3
OTAV	Otavalo	7.96	243	Sn	Sn	06 59 06.9	+0.1
PCRV	Puerto La Cruz	9.14	46	Pn	Pn	06 57 52.9	+1.1
	comp=Z,3.6nm,0.3s,baz=211,slow=9.1,SNR=17						
PCRV				Sn	Sn	06 59 35.4	-0.2
	comp=Z,1.4nm,0.3s,baz=184,slow=15,SNR=2.8						
PCRV				Lg	Lg	07 00 27.9	
	comp=Z,1.5nm,0.3s,baz=108,slow=19,SNR=2.8						
PLCV	Puerto La Cruz	9.17	47		Pn	06 57 52.9	+0.8
PLCV					Sn	06 59 35.4	-0.8
PTGA	Pitinga	12.27	112	Pn	Pn	06 58 36.0	+1.3
	comp=Z,0.3nm,0.3s,baz=300,slow=20,SNR=4.4						
PTGA				Sn	Sn	07 00 48.0	-4.3
	comp=Z,1.1nm,0.3s,baz=16,slow=7.9,SNR=5.1						
PTGA				Lg	Lg	07 02 08.9	
	comp=Z,2.4nm,0.3s,baz=22,slow=23,SNR=7.9						
PTGA				LR	LR	07 03 04.1	
	comp=Z,33nm,20.7s,baz=198,slow=36						
PTGA	Pitinga	12.27	112		Pn	06 58 35.4	+0.7
PDPR	Patillas Dam,	14.99	20	Pn	Pn	06 59 10.1	-1.7
SAML	Samuel	15.13	147	Pn	Pn	06 59 14.3	+0.7
LPAZ	La Paz	20.29	171	P	Pn	07 00 20.1	+1.5
	comp=Z,2.4nm,0.8s,baz=347,slow=13,SNR=11						
LPAZ	La Paz	20.29	171	P	Pn	07 00 19.4	+0.9
SIV	San Ignacio	22.21	153	P	P	07 00 39.7	+3.0
	comp=Z,0.8nm,0.7s,baz=337,slow=14,SNR=5.2						
Y49A	Blount Mountai	32.96	337	P	P	07 02 15.4	+0.4
Y49A				IAmb	IAmb	07 02 34.0	
	comp=Z,10nm,1.4s						
V48A	Smith Brothers	34.78	338	P	P	07 02 31.7	+1.0
V48A				IAmb	IAmb	07 02 32.4	
	comp=Z,3.1nm,0.7s						
L56A	Greenwood	38.49	353	P	P	07 03 04.2	+1.7
TXAR	Lajitas Array	39.73	313	P	P	07 03 12.7	-0.4
	comp=Z,0.6nm,0.7s,baz=131,slow=8.7,SNR=8.5						
TXAR	Lajitas Array	39.73	313	P	P	07 03 12.9	-0.1
MNTX	Cornudas Mount	42.27	315	P	P	07 03 34.2	+0.3
MNTX				IAmb	IAmb	07 03 34.7	
	comp=Z,2.9nm,0.9s						
SCHQ	Schefferville	50.93	3	P	P	07 04 42.0	+0.6
	comp=Z,1.2nm,0.7s,baz=192,slow=4.9,SNR=6.7						
SCHQ	Schefferville	50.93	3	P	P	07 04 42.1	+0.6
SCHQ				IAmb	IAmb	07 04 42.6	
	comp=Z,3.4nm,0.8s						
PDAR	Pinedale Array	51.47	324	P	P	07 04 44.5	-1.6
	comp=Z,0.5nm,0.9s,baz=134,slow=5.2,SNR=3.6						
YKA	Yellowknife Ar	66.61	340	P	P	07 06 28.6	-1.9
	comp=Z,0.3nm,0.7s,baz=134,slow=6.3,SNR=5.8						
SUMG	Summit	71.55	10	P	P	07 07 01.7	+0.2
TORD	Torodi Ar. Bea	72.64	78	P	P	07 07 08.1	-0.5
	comp=Z,0.3nm,0.6s,baz=290,slow=5.9,SNR=2.5						
TORD	Torodi Ar. Bea	72.64	78	P	P	07 07 08.4	-0.2
ASAR	Alice Springs	148.66	229	PKPbc	PKPdf	07 15 26.7	+1.8
	comp=Z,0.3nm,0.6s,baz=119,slow=3.8,SNR=5.9						
ASAR	Alice Springs	148.66	229		PKPbc	07 15 28.4	-0.2

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*DJA **15** 07:03:35.9±1.3, 11°S±11°×12°0E±°, h10^{km}, M3.8/7, mb4.2/2, MLv3.6/7*

*IDC **15** 07:03:51.4±3.2, 12°.49S×121°.82E, h0^{km}, mb3.5/1, mb1 3.4/3, mb1mx3.3/27, mbtmp3.2/3, ML3.2/2, Error ellipse: s-maj=205.2km s-min=28.4km az=46.0*

ISC 15 07:03:30.6±1.3**, 11°.5S**±0°.1×**120°.43E**±0°.07**, h10**^{km}**, n9, σ1^{s}.82**/10**, South of Sumba**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BASI	Baing, Sumba	1.27	6	P	Pn	07 03 56.5	+2.0
WBSI	Waikabubak, Su	2.10	331	P	Pn	07 04 07.2	+1.2
WBSI				S	Sn	07 04 31.3	-1.0
EDFI	Ende, Flores	2.99	25	P	Pn	07 04 19.7	+1.4
PLAI	Plampang	3.72	315	P	Pn	07 04 28.6	+0.4
PLAI				S	Sn	07 05 10.6	-1.5
SOEI	Soe	4.14	66	P	Pb	07 04 42.9	-0.9
IGBI	Denpasar	5.84	297	P	Pn	07 04 59.0	+1.6
WRA	Warramunga Arr	15.80	124	Pn	Pn	07 07 11.0	-2.3
	0.1nm,0.3s,baz=296,slow=14,SNR=5.7						
WRA				Sn	Sn	07 09 51.9	-17
	0.3nm,0.3s,baz=279,slow=21,SNR=12						
ASAR	Alice Springs	17.63	135	Pn	Pn	07 07 38.4	+1.8
	0.1nm,0.3s,baz=314,slow=13,SNR=5.3						
ASAR				Sn	Sn	07 10 39.3	-14
	0.0nm,0.3s,baz=304,slow=22,SNR=2.7						
MKAR	Makanchi Array	67.30	333	P	P	07 14 57.6	+32
	0.3nm,0.6s,baz=156,slow=7.4,SNR=3.6						

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*IDC **15** 07:10:41.2±7.3, 35°.89S×104°.97W, h0^{km}, mb3.5/3, mb1 4.0/3, mb1mx3.7/29, mbtmp3.5/3, MS3.4/4, Ms1 3.5/4, ms1mx3.3/12, Error ellipse: s-maj=457.9km s-min=81.2km az=107.0*

ISC 15 07:10:49.8±3.3**, 34°.2S**±0°.7×**101°.9W**±0°.4**, h10**^{km}**, n19, σ1^{s}.79**/13**, mb3.7**/3**, MS3.4**/4**, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	25.61	114	LR	LR	07 24 45.9	
	comp=Z,58nm,21.6s,baz=306,slow=31						
LPAZ	La Paz	35.11	68	LR	LR	07 30 33.5	
	comp=Z,49nm,21.1s,baz=246,slow=31						
CPUP	Villa Florida	39.01	91	LR	LR	07 34 04.7	
	comp=Z,63nm,19.0s,baz=230,slow=34						
ROSC	El Rosal	46.71	39	LR	LR	07 37 32.7	
	comp=Z,68nm,18.5s,baz=225,slow=32						
SLBI	Saint Lucia, B	61.73	46	eP	P	07 21 15.5	+7.0
BIM	Bigot	62.06	46	eP	P	07 21 12.6	+1.8
ZAM	Aeronautique	62.12	46	eP	P	07 21 10.9	-0.3
MPOM	Morne Pois Mar	62.12	46	eP	P	07 21 10.0	-1.1
LPMF	Morne Lapointe	62.16	46	eP	P	07 21 09.7	-1.7
FDF	Fort de France	62.18	46	eP	P	07 21 12.1	+0.5
PML	Morne Lenard	62.20	45	eP	P	07 21 11.9	+0.2
PCM	Pelee Case Pet	62.21	45	eP	P	07 21 12.1	+0.4
GBMF	Grand Be	62.22	45	eP	P	07 21 12.1	+0.2
BAMF	Morne Balai	62.24	45	eP	P	07 21 07.9	-4.1
TDBA	Terre de Bas,	62.78	44	eP	P	07 21 18.1	+2.6
TXAR	Lajitas Array	63.19	358	P	P	07 21 23.6	+5.4
	0.2nm,0.6s,baz=186,slow=8.1,SNR=3.5						
NVAR	Mina Array Bea	73.84	347	P	P	07 22 24.7	0.0
	0.7nm,0.8s,baz=173,slow=7.9,SNR=5.4						
PDAR	Pinedale Array	76.90	354	P	P	07 22 41.8	-0.4
	0.6nm,0.8s,baz=167,slow=8.3,SNR=4.2						
SONM	Songino Array	154.85	311	PKPbc	PKPdf	07 30 42.7	+0.1
	0.8nm,0.9s,baz=96,slow=2.9,SNR=3.6						

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*NEIC **15** 07:15:33.0±1.2, 21°.1S±0°.2×178°.7W±0°.1, h570^{km}±10^{km},*

mb4.1/9, Error ellipse: s-maj=26.3km s-min=6.0km az=144.0

*IDC **15** 07:15:35.1±5.5, 21°.36S×178°.68W, h607km±71km, mb2.7/6, mb1 3.2/7, mb1mx2.9/37, mbtmp3.8/7, Error ellipse: s-maj=49.1km s-min=25.0km az=171.0*

ISC 15 07:15:34.6±0.7**, 21°.0S**±0°.1×**179°.0W**±0°.2**, h600**km**, n26, σ1s.66**/26**, mb3.5**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.25	319	P	P	07 16 59.0	-3.1
URZ	Urewera	17.53	190	P	P	07 19 02.8	-3.0
	0.5nm,0.3s,baz=21,slow=8.6,SNR=3.6						
URZ	Urewera	17.53	190	P	P	07 19 03.7	-2.0
WHZ	Wether Hill Ro	27.04	200	P	P	07 20 30.6	+0.1
WR0	Warramunga Arr	43.39	263	P	P	07 22 48.6	+2.7
AS31	Alice Springs	43.47	257	P	P	07 22 49.5	+3.0
ASAR	Alice Springs	43.47	257	P	P	07 22 48.9	+2.4
	0.8nm,0.5s,baz=97,slow=7.8,SNR=16						
ASAR				PcP	PcP	07 24 21.4	+0.5
	0.3nm,0.6s,baz=110,slow=4.3,SNR=4.6						
WB0	Warramunga Arr	43.56	263	P	P	07 22 49.2	+2.0
WB0				IAmb	IAmb	07 22 52.3	
	comp=Z,8.0nm,1.3s						
WRAB	Tennant Creek	43.57	263	P	P	07 22 47.1	-0.2
WRAB				IAmb	IAmb	07 22 53.1	
	comp=Z,6.5nm,1.3s						
WRA	Warramunga Arr	43.58	263	P	P	07 22 49.1	+1.7
	comp=Z,0.3nm,0.2s,baz=96,slow=7.2,SNR=9.4						
WRA	Warramunga Arr	43.58	263	IAmb	IAmb	07 22 49.9	
	comp=Z,0.2nm,1.2s						
QSPA	South Pole Qui	69.08	180	P	P	07 25 42.4	+1.0
NVAR	Mina Array Bea	82.04	44	P	P	07 26 54.4	+0.9
	comp=Z,0.5nm,0.7s,baz=224,slow=6.3,SNR=3.3						
NVAR	Mina Array Bea	82.04	44	P	P	07 26 54.6	+1.1
TRF	Thorofare Moun	87.13	12	P	P	07 27 18.3	+0.7
TRF				IAmb	IAmb	07 27 18.3	
	comp=Z,4.9nm,1.0s						
TXAR	Lajitas Array	88.13	58	P	P	07 27 22.6	-0.3
	comp=Z,0.4nm,0.9s,baz=227,slow=3.4,SNR=3.8						
MLY	Manley	88.46	12	P	P	07 27 24.1	+0.6
MLY				IAmb	IAmb	07 27 36.7	
	comp=Z,4.4nm,1.4s						
CCB	Clear Creek Bu	88.70	13	P	P	07 27 25.3	+0.7
IMAR	Indian Mountai	88.80	10	P	P	07 27 26.2	+1.2
ILAR	Eielson Array	89.01	13	P	P	07 27 25.9	-0.1
	comp=Z,0.3nm,0.6s,baz=225,slow=5.1,SNR=4.5						
ILAR	Eielson Array	89.01	13	P	P	07 27 27.5	+1.4
PDAR	Pinedale Array	89.98	44	P	P	07 27 32.1	+0.7
	comp=Z,0.3nm,0.5s,baz=243,slow=6.0,SNR=3.1						
PDAR	Pinedale Array	89.98	44	P	P	07 27 32.6	+1.2
AKASG	Malin Array Be	142.96	330	PKP	PKPdf	07 33 59.8	-0.9
	comp=Z,1.1nm,0.4s,baz=44,slow=4.1,SNR=8.4						
BRTR	Keskin Array B	146.44	311	PKPbc	PKiKP	07 34 10.9	-1.0
	comp=Z,0.5nm,0.5s,baz=126,slow=4.9,SNR=3.5						
BRTR	Keskin Array B	146.44	311		PKPab	07 34 12.0	-0.6

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*TAP **15** 08:22:41.2, 23°.26N×122°.49E, h44km±1km, ML2.7, D*

*JMA **15** 08:22:41.2±0.1, 23°.32N×122°.41E, h50km, M2.5*

ISC 15 08:22:38.0±1.2**, 23°.30N**±0°.04×**122°.45E**±0°.02**, h8**km±10km**, n36, σ0s.48**/53**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HGSD	Ruisui	0.96	282	eP	Pn	08 22 57.5	-0.3
	baz=283						
ENLB	Shoufeng	0.98	308	eP	Pn	08 22 59.0	+0.9
	baz=308						
EHY	Hungye	1.06	282	eP	Pn	08 23 00.2	+1.0
	baz=282						
YULB	Yu-li	1.06	275	eP	Pn	08 22 59.7	+0.4
	baz=276						
YULB				eS	Sn	08 23 14.1	-0.1
	baz=276						
FULB	Fuli	1.07	265	i P	Pn	08 22 59.1	-0.2
	baz=266						
FULB				eS	Sg	08 23 12.2	-0.2
	baz=266						
TWH	Lutao	1.07	237	i P	Pn	08 22 59.5	+0.2
	baz=237						
TWH				S	Sg	08 23 12.5	+0.1
	baz=237						
NACB	Ninganchiao	1.17	318	i P	Pn	08 23 00.7	-0.1
	baz=310						
NACB				S	Sg	08 23 15.2	-0.6
	baz=310						
ETLH	Xiulin Townshi	1.27	316	eP	Pg	08 23 02.2	-0.1
	baz=306						
EOS1	EOS1	1.28	347	eP	Pg	08 23 03.8	+1.2
	baz=336						
VWDT	VWDT	1.28	291	eP	Pg	08 23 03.2	+0.6
	baz=291						
VWDT				eS	Sn	08 23 19.7	0.0
	baz=291						
ELDTW	Lidau	1.32	266	i P	Pb	08 23 03.1	0.0
	baz=266						
OWD	Renai	1.34	300	i P	Pg	08 23 03.8	+0.1
	baz=300						
OWD				eS	Sb	08 23 19.9	-0.9
	baz=300						
TWGBT	Beinan	1.35	250	eP	Pg	08 23 03.9	0.0
	baz=251						
TWG	Pinlang	1.35	250	eP	Pg	08 23 04.6	+0.6
	baz=251						
WHF	Hehuan Shan	1.38	308	i P	Pg	08 23 04.5	0.0
	baz=308						
WHF				S	Sb	08 23 21.8	-0.3
	baz=308						
YUS	Yu-Shan	1.39	278	eP	Pg	08 23 05.6	+0.9
	baz=286						
YUS				eS	Sn	08 23 23.3	+0.4
	baz=286						
CHGB	Renai	1.39	303	eP	Pg	08 23 05.1	+0.3
	baz=303						
CHGB				eS	Sb	08 23 22.3	-0.2
	baz=303						
HATJ	Hateruma jima	1.46	58	P	Pg	08 23 05.8	-0.1
HATJ				eS	Sb	08 23 23.9	-0.1
SSLB	Suanglung	1.46	290	eP	Pg	08 23 05.8	-0.2
	baz=290						
NNSB	Datong	1.49	319	P	Pg	08 23 06.3	-0.3
	baz=309						
NNSB				eS	Sn	08 23 24.9	-0.1
	baz=309						
NNSH	Datong	1.49	319	eP	Pg	08 23 06.3	-0.3
	baz=310						
NNSH				eS	Sn	08 23 23.9	-1.1
	baz=310						
TWT	Tachien	1.51	309	eP	Pg	08 23 07.2	+0.3
	baz=309						
TDCB	Techi	1.52	309	eP	Pg	08 23 07.3	+0.1
	baz=309						
IRIF	Iriomote-Funau	1.56	48	P	Pg	08 23 07.5	-0.5
IRIF				eS	Sb	08 23 27.3	+0.2
TYC	Yuchr	1.58	293	eP	Pg	08 23 08.4	+0.1
	baz=293						
TPUB	Ta-pu	1.67	270	eP	Pg	08 23 09.6	-0.5
	baz=271						
YHNB	Yeheng	1.68	325	eP	Pb	08 23 09.4	+0.1
	baz=323						
WHP	Taichung City	1.69	306	eP	Pg	08 23 10.4	+0.1
	baz=305						
WHP				eS	Sb	08 23 30.7	-0.2
	baz=305						
WTP	Ta-pu	1.69	269	eP	Pg	08 23 09.9	-0.5
	baz=263						
NSK	Sanguang	1.70	324	eP	Pb	08 23 09.8	+0.3
	baz=323						
CHN4	Tsaushan	1.71	272	eP	Pg	08 23 10.7	0.0
	baz=272						
JKRS	Kuro-shima	1.71	56	P	Pb	08 23 09.7	0.0
JKRS				eS	Sb	08 23 30.6	-0.7
TIPB	Shuangxi	1.76	341	eP	Pb	08 23 10.7	+0.1
	baz=352						
JIJ	Ishigaki jima	1.88	55	P	Pb	08 23 12.1	-0.5
JIJ				S	Sn	08 23 34.5	+0.1
JISG	Ishigakijimahi	2.13	53	P	Pn	08 23 14.8	+0.9
JISG				eS	Sn	08 23 40.3	-0.3
JTJ	Tarama	2.46	57	eS	Sn	08 23 49.1	+0.5

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*IDC **15** 08:34:22.3±1.2, 26°.96N×144°.82E, h0km, mb3.5/4, mb1 3.8/5, mb1mx3.5/30, mbtmp3.5/5, ML2.7/1, Error ellipse: s-maj=47.9km s-min=24.1km az=91.0*

*NEIC **15** 08:34:27.4±1.1, 27°.11N±0°.10×144°.6E±0°.2, h37km±7km, mb4.6/6, Error ellipse: s-maj=29.0km s-min=3.9km az=61.0*

ISC 15 08:34:27.4±1.0**, 27°.1N**±0°.1×**144°.6E**±0°.2**, h35**km**, n16, σ0s.93**/16**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	10.89	332	Pn	Pn	08 37 01.0	+0.3
	0.1nm,0.3s,baz=162,slow=12,SNR=4.2						
MJAR	Matsushiro Arr	10.89	332		Pn	08 37 01.2	+0.5
MAJO	Matsushiro	10.89	332	Pn	Pn	08 36 59.8	-1.0
MJB9	Matsu-Tunnel	10.90	332	Pn	Pn	08 36 59.7	-1.1
USRK	Ussuriysk Ar.	19.89	332	P	P	08 38 54.1	-1.5
WB0	Warramunga Arr	47.62	193	P	P	08 43 00.1	-0.1
WB0				IAmb	IAmb	08 43 03.9	
	comp=Z,9.8nm,1.3s						
WR0	Warramunga Arr	47.78	193	P	P	08 43 01.3	-0.1
WR0				IAmb	IAmb	08 43 14.3	
	comp=Z,7.8nm,1.2s						
WRAB	Tennant Creek	47.79	193	P	P	08 43 01.1	-0.4
WB2	Warramunga Arr	47.80	193	P	P	08 43 01.6	0.0
WB2				IAmb	IAmb	08 43 01.8	
	comp=Z,3.6nm,0.8s						
WRA	Warramunga Arr	47.81	193	P	P	08 43 01.4	-0.1
	comp=Z,1.2nm,0.5s,baz=15,slow=8.7,SNR=4.9						
WRA	Warramunga Arr	47.81	193	P	P	08 43 01.0	-0.5
ASAR	Alice Springs	51.51	193	P	P	08 43 28.7	-1.1
	comp=Z,0.3nm,0.8s,baz=10.0,slow=6.5,SNR=5.0						
MK31	Makanchi Array	52.16	310	P	P	08 43 35.7	+1.2
MKAR	Makanchi Array	52.16	310	P	P	08 43 36.1	+1.6
	comp=Z,0.7nm,0.7s,baz=99,slow=8.3,SNR=5.8						
YKA	Yellowknife Ar	71.10	29	P	P	08 45 42.5	+0.7
	comp=Z,0.2nm,0.8s,baz=284,slow=5.3,SNR=2.8						
MCMT	McKenzie Canyo	79.59	45	P	P	08 46 31.0	-0.3

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*SKHL **15** 08:41:19.9±0.7, 48°.47N×155°.63E, h67km±7km, mb4.3/4*

*KRSC **15** 08:41:23.2±1.2, 48°.89N×155°.95E, h50km±21km, ML4.2*

ISC 15 08:41:20.8±1.7**, 48°.7N**±0°.2×**155°.4E**±0°.2**, h35**km**, n23, σ1s.53**/36**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.07	13	eP	Pn	08 41 53.3	+0.3
SKR				eS	Sn	08 42 15.9	-1.7
SKR	Severo-Kuril's	2.07	13	eP	Pn	08 41 53.3	+0.3
SKR				eS	Sn	08 42 17.0	-0.6
SKR				A	A	08 42 19.6	
	210nm,0.2s						
SKR				A	A	08 42 19.6	
	180nm,0.2s						
ALID	Alaid	2.20	3	eP	Pn	08 41 55.7	+0.7
ALID				eS	Sn	08 42 20.2	-0.8
PAU	Pauzhetka	2.95	18	eP	Pn	08 42 06.2	+1.1
PAU				eS	Sn	08 42 38.0	-1.2
PAU	Pauzhetka	2.95	18	eP	Pn	08 42 07.5	+2.4
MIPR	Malaya Ipel'ka	3.71	13	eP	Pn	08 42 18.0	+2.3
ASAK	Asacha	4.05	23	eP	Pn	08 42 21.6	+1.3
MTVR	Mutnovka	4.21	24	eP	Pn	08 42 23.8	+1.1
MTVR				eS	Sn	08 43 09.1	-1.6
GRL	Gorelyy	4.25	23	eP	Pn	08 42 24.5	+1.4
GRL				eS	Sn	08 43 10.2	-1.3
RUS	Russkaya	4.26	27	eP	Pn	08 42 24.3	+1.1
RUS				eS	Sn	08 43 09.5	-2.2
KRMR	Karymshinskiy	4.52	22	eP	Pn	08 42 27.9	+1.3
KRMR				eS	Sn	08 43 15.9	-2.0
PET	Petropavlovsk	4.83	24	eP	Pn	08 42 31.6	+0.7
PET				eS	Sn	08 43 25.3	-0.2
PET				A	A	08 43 34.4	
	50nm,0.4s						
DALK	Dalny	4.86	25	eP	Pn	08 42 32.5	+1.1
DALK				eS	Sn	08 43 24.2	-2.2
UGLR	Uglovaya	5.04	24	eP	Pn	08 42 35.0	+1.0
KOK	Koryaka	5.06	23	eP	Pn	08 42 36.9	+2.6
AVH	Avacha	5.07	24	eP	Pn	08 42 36.6	+2.3
KRX	Arik	5.13	23	eP	Pn	08 42 36.6	+1.4
KUR	Kuril'sk	6.18	239	eP	Pn	08 42 51.2	+1.7
KUR				AMB	AMB	08 42 54.0	
	10.0nm,0.4s						
KUR				eS	Sn	08 43 58.5	-0.3
KUR				A	A	08 44 04.0	
	30nm,0.3s						
KUR				A	A	08 44 04.0	
	50nm,0.3s						
TUMR	Tumrok	7.25	22	eP	Pn	08 43 06.5	+2.3
SHO	Shikotan	7.62	234	eP	Pn	08 43 08.2	-1.0
SHO				AMB	AMB	08 43 10.0	
	10.0nm,0.5s						
YUK	Yuzh-Kuril'sk	8.04	238	eP	Pn	08 43 16.6	+1.5
YUK				AMB	AMB	08 43 16.8	
	10.0nm,0.4s						
YUK				eS	Sn	08 44 43.6	-1.1
GRPR	Tuman	8.12	238	eP	Pn	08 43 17.2	+1.1
GRPR				AMB	AMB	08 43 19.0	
	10.0nm,0.5s						
GRPR				eS	Sn	08 44 45.7	-0.9
NMR	Nemuro--Hokkai	8.55	235	eP	Pn	08 43 20.6	-1.4

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*IDC **15** 08:50:25.8±23.0, 51°.95N×173°.24W, h0km, mb3.2/3, mb1 3.7/3, mb1mx3.2/76, mbtmp3.2/3, Error ellipse: s-maj=443.7km s-min=94.0km az=78.0*

*AEIC **15** 08:50:38.7±2.2, 52°.4N±0°.1×171°.7W±0°.1, h42km±9km, ML2.8/9, Error ellipse: s-maj=20.9km s-min=2.3km az=151.0*

*NEIC **15** 08:50:39.4±1.7, 52°.2N±0°.3×171°.7W±0°.1, h44km±24km, Error ellipse: s-maj=44.7km s-min=1.6km az=164.0*

ISC 15 08:50:39.2±1.3**, 52°.2N**±0°.3×**171°.68W**±0°.08**, h44**km**, n20, σ0s.95**/15**, mb3.3**/3**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	1.49	275		Pn	08 51 03.8	+0.3
ATKA	Atka Island	1.55	273		Sn	08 51 21.8	-1.2
ATKA	Atka Island	1.55	273		Pn	08 51 03.8	-0.4
NIKH	Nikolski High	1.91	64		Pn	08 51 07.7	-1.5
NIKH	Nikolski High	1.91	64		Sn	08 51 30.3	-1.7
OKSP	Okmok Steeple	2.34	61		Pn	08 51 15.1	0.0
OKFG	Magazine Ridge	2.61	60		Pn	08 51 19.4	+0.6
OKFG					Sn	08 51 50.0	+0.7
GSTR	Great Sitkin T	2.70	270	Pn	Pn	08 51 21.0	+0.9
GSTD	Great Sitkin T	2.75	270		Pn	08 51 21.0	+0.2
ADK	Adak	3.10	267	Pn	Pn	08 51 25.9	+0.3
UNV	Unalaska Valle	3.55	60	Pn	Pn	08 51 32.9	+1.2
YKA	Yellowknife Ar	31.45	48	P	P	08 56 55.8	-0.1
	0.1nm,0.4s,baz=276,slow=7.6,SNR=4.6						
H11N2	WAKE ISLAND Hy	36.43	215	T	T	09 36 07.3	
	baz=22						
H11N3	WAKE ISLAND Hy	36.44	215	T	T	09 36 09.4	
	baz=22						
H11N1	WAKE ISLAND Hy	36.45	215	T	T	09 36 06.1	
	baz=22						
H11S1	WAKE ISLAND Hy	37.63	215	T	T	09 37 37.4	
	baz=22						
H11S2	WAKE ISLAND Hy	37.64	215	T	T	09 37 41.3	
	baz=22						
H11S3	WAKE ISLAND Hy	37.64	215	T	T	09 37 41.2	
	baz=22						
PDAR	Pinedale Array	41.84	77	P	P	08 58 25.6	+0.8
	0.3nm,0.4s,baz=336,slow=3.5,SNR=5.0						
TXAR	Lajitas Array	54.17	87	P	P	08 59 59.8	-0.3
	0.2nm,0.5s,baz=322,slow=5.7,SNR=3.9						

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*BJI **15** 08:59:19.2±0.0, 14°.09S×76°.29W, h10km, mB6.0/55, Ms6.3/65, Ms7 6.3/56*

*VAO **15** 08:59:19.3±0.2, 14°.09S×76°.42W, h10km, mb5.6*

*IDC **15** 08:59:20.6±3.3, 14°.10S×76°.34W, h12km±19km, mb5.2/40, mb1 5.3/45, mb1mx5.3/52, mbtmp5.3/45, ML4.8/5, MS6.0/38, Ms1 6.0/38, ms1mx5.9/41, Error ellipse: s-maj=13.6km s-min=7.5km az=59.0*

*NEIC **15** 08:59:21, 14°.10S×76°.30W, h20km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.87; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$-0.86; $M_{r\theta}$-0.08; $M_{\theta\phi}$0.34; $M_{\phi r}$-0.83; Fault plane solution: $M_0$1.25000×10^{18} NP1:ϕ_s323.34000°, δ27.57000°, λ59.03000°. NP2:ϕ_s177.44000°, δ66.62000°, λ105.04000°. Principal axes: T 1.2389, Plg65.0000°, Azm113.0000°; N 0.0208, Plg14.0000°, Azm351.0000°; P -1.2597, Plg20.0000°, Azm256.0000°;*

*NEIC **15** 08:59:21.9±2.1, 14°.09S±0°.05×76°.31W±0°.08, h20km±1km, mb5.8/571, Ms_20 5.9/639, Mwb6.0/76, Mwc6.2/32, Mww6.1, ML6.2(ARE), Mwc6.2(GCMT) Error ellipse: s-maj=13.5km s-min=7.6km az=245.0*

*MOS **15** 08:59:21.1±1.3, 13°.98S×76°.34W, h22km, mb5.8/88, MS5.9/57, Error ellipse: s-maj=8.5km s-min=4.5km az=104.9*

*GCMT **15** 08:59:25.9±0.1, 14°.10S×76°.53W, h22km, MW6.1/160, Moment Tensor Solution. s156,c356; s160,c565; Duration: 2s.9 Moment tensor: Scale 10^{18}Nm; M_{rr}1.18±.01; $M_{\theta\theta}$-0.05±.01; $M_{\phi\phi}$-1.13±.01; $M_{r\theta}$0.29±.01; $M_{\theta\phi}$0.42±.01; $M_{\phi r}$-1.56±.02; Best double couple: $M_0$2.00500×10^{18} NP1:ϕ_s333.00000°, δ19.00000°, λ76.00000°. NP2:ϕ_s168.00000°, δ71.00000°, λ95.00000°. Principal axes: T 1.9680, Plg63.0000°, Azm86.0000°; N 0.0700, Plg5.0000°, Azm346.0000°; P -2.0420, Plg26.0000°, Azm254.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **15** 08:59:26, 14°.14S×76°.51W, h21km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.14; $M_{\theta\theta}$-0.07; $M_{\phi\phi}$-1.07; $M_{r\theta}$0.49; $M_{\theta\phi}$0.44; $M_{\phi r}$-1.72; Fault plane solution: $M_0$2.15000×10^{18} NP1:ϕ_s164.00000°, δ73.00000°, λ93.00000°. NP2:ϕ_s335.00000°, δ17.00000°, λ82.00000°. Principal axes: T 2.1003, Plg62.0000°, Azm77.0000°; N 0.0910, Plg2.0000°, Azm343.0000°; P -2.1913, Plg28.0000°, Azm251.0000°;*

*NEIC **15** 08:59:28, 14°.16S×76°.02W, h24km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.73; $M_{\theta\theta}$-0.24; $M_{\phi\phi}$-0.49; $M_{r\theta}$0.21; $M_{\theta\phi}$0.30; $M_{\phi r}$-1.34; Fault plane solution: $M_0$1.53000×10^{18} NP1:ϕ_s168.00000°, δ77.00000°, λ99.00000°. NP2:ϕ_s313.00000°, δ16.00000°, λ57.00000°. Principal axes: T 1.5919, Plg57.0000°, Azm89.0000°; N -0.1268, Plg9.0000°, Azm346.0000°; P -1.4652, Plg31.0000°, Azm250.0000°;*

*NEIC **15** 08:59:36.9, 14°.25S×76°.35W, h23km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.35; $M_{\theta\theta}$-0.18; $M_{\phi\phi}$-1.17; $M_{r\theta}$0.74; $M_{\theta\phi}$0.38; $M_{\phi r}$-1.74; Fault plane solution: $M_0$2.31000×10^{18} NP1:ϕ_s344.18000°, δ17.57000°, λ96.10000°. NP2:ϕ_s157.79000°, δ72.53000°, λ88.07000°. Principal axes: T 2.3395, Plg62.0000°, Azm65.0000°; N -0.0564, Plg2.0000°, Azm158.0000°; P -2.2830, Plg28.0000°, Azm249.0000°;*

ISC 15 08:59:20.2±0.2**, 14°.10S**±0°.03×**76°.35W**±0°.04**, h10**km**, n1822, σ1s.82**/2009**, mb5.8**/376**, MS5.9**/406**, 26C-12D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	2.15	347	Pn	Pn	08 59 55.8	-0.4
	210nm,0.3s,baz=167,slow=12,SNR=84						
NNA				Sn	Sn	09 00 20.6	-2.5
	8µm,0.3s,baz=273,slow=19,SNR=16						
NNA				Lg	Lg	09 00 28.9	
	8µm,0.3s,baz=197,slow=14,SNR=16						
NNA	Nana	2.15	347		Pn	08 59 56.1	-0.1
NNA				Sn	Sn	09 00 20.4	-2.7
AP01	Chacalluta	7.17	127	eP	Pn	09 01 05.5	+0.4
ATAH	Atahualpa	7.21	344	Pn	Pn	09 01 07.9	+1.8
	16nm,0.3s,baz=185,slow=5.5,SNR=60						
ATAH				Sn	Sn	09 02 27.3	-1.0
	59nm,0.3s,baz=25,slow=17,SNR=2.8						
PB12	IPOC Station P	7.32	129	eP	Pn	09 01 05.8	-1.5
PB16	IPOC Station P	7.81	124	i P	Pn	09 01 14.3	-0.1
MNMC	Minye Minye	8.18	129		Pn	09 01 19.4	+0.1
LPAZ	La Paz	8.23	106	Pn	Pn	09 01 24.9	+4.7
	3.8nm,0.3s,baz=286,slow=8.8,SNR=152						
LPAZ				Sn	Sn	09 02 51.6	-2.1
	baz=328,slow=15,SNR=1.8						
LPAZ				LR	LR	09 05 04.7	
	comp=Z,103µm,20.6s,baz=295,slow=42						
LPAZ	La Paz	8.23	106	P	Pn	09 01 23.8	+3.5
LPAZ	La Paz	8.23	106		Pn	09 01 23.8	+3.5
PB11	IPOC Station P	8.53	132		Pn	09 01 23.7	-0.3
GO01	Chusmiza	8.81	130		Pn	09 01 27.1	-1.0
PB01	IPOC Station P	9.51	137		Pn	09 01 36.4	-1.0
PB04	IPOC Station P	10.09	145		Pn	09 01 44.4	-1.0
PB10	IPOC Station P	10.85	150		Pn	09 01 54.3	-1.4
LVC	Limon Verde	11.02	141	Pn	Pn	09 01 58.7	+0.4
	36nm,0.3s,baz=314,slow=9.4,SNR=72						
LVC				Sn	Sn	09 03 58.8	-3.1
	9.8nm,0.3s,baz=342,slow=15,SNR=2.2						
LVC				Lg	Lg	09 04 57.2	
	9.7nm,0.3s,baz=149,slow=14,SNR=8.9						
LVC				LR	LR	09 05 50.0	
	comp=Z,41µm,21.5s,baz=309,slow=35						
LVC	Limon Verde	11.02	141		Pn	09 01 58.6	+0.3
LVC	Limon Verde	11.02	141	eP	Pn	09 01 58.3	0.0
LVC				eS	Sn	09 04 03.2	+1.3
GO02	Mina Guanaco	12.71	151		Pn	09 02 20.6	-0.7
SAML	Samuel	13.88	70	P	Pn	09 02 36.3	-0.8
SAML	Samuel	13.88	70		Pn	09 02 36.3	-0.8
SAML	Samuel	13.88	70	eS	Sn	09 05 13.0	+1.5
OTAV	Otavalo	14.40	352	eP	Pn	09 02 49.1	+4.5
OTAV	Otavalo	14.40	352	P	Pn	09 02 46.2	+1.6
OTAV	Otavalo	14.40	352		Pn	09 02 46.2	+1.6
OTAV	Otavalo	14.40	352	eP	Pn	09 02 43.5	-1.1
GO03	Copiap	14.59	158		Pn	09 02 47.0	+0.2
SIV	San Ignacio	14.88	99	Pn	Pn	09 02 51.2	+0.4
	2.0nm,0.3s,baz=297,slow=9.1,SNR=31						
SIV				Sn	Sn	09 05 36.0	+0.2
	baz=24,slow=20,SNR=1.9						
SIV				LR	LR	09 09 23.3	
	comp=Z,230µm,18.3s,baz=290,slow=40						
CMBC	Cumbal	15.02	354	eP	P	09 03 00.2	+1.6
CPAS2	Pasto	15.25	357	eP	P	09 03 03.9	+2.9
GCUF	Volcan Galeras	15.26	356	eP	P	09 03 03.6	+2.3
CRUC	La Cruz	15.58	358	eP	P	09 03 06.3	+1.6
FLOC	Florencia	15.60	3	eP	P	09 03 04.6	0.0
FLOC	Florencia	15.60	3		Pn	09 02 59.8	-0.5
TUMC	Tumaco	16.00	351	eP	P	09 03 09.2	+0.3
BBAC	Balboa, Cauca	16.04	357	eP	P	09 03 11.5	+1.7
SOTA	Rioblanco	16.13	359	eP	P	09 03 12.5	+1.5
GARC	Garzon, Huila	16.21	3	eP	P	09 03 13.5	+2.0
PCON	Cinco Dias	16.32	360	eP	P	09 03 13.6	+0.5
MACC	Macarena, Meta	16.33	9	eP	Pn	09 03 09.1	-0.6
GO04	Tololo Observa	16.80	163		Pn	09 03 15.8	0.0
GUVC	San Jose del G	16.95	13	eP	P	09 03 21.7	+2.2
GR1C	Gorgona, Isla	17.09	354	eP	P	09 03 23.1	+2.0
ORTC	Ortega, Tolima	17.93	4	eP	P	09 03 33.2	+2.8
YOTC	Yotoco, Valle	17.97	0	eP	Pn	09 03 25.0	-5.4
MALC	Bahia Malaga	18.02	357	eP	Pn	09 03 23.2	-7.8
VILC	Villavicencio,	18.29	8	eP	P	09 03 37.6	+3.2
ANIL	Santa Ana	18.50	3	eP	Pn	09 03 43.6	+6.6
TOLC	Tolima	18.59	3	eP	Pn	09 03 44.9	+6.6
CVER	Cruz Verde, Cu	18.64	7	eP	Pn	09 03 44.3	+5.3
PTGC	Puerto Gaitan,	18.66	13	eP	Pn	09 03 41.7	+3.0
CHIC	Chingaza	18.79	8	eP	Pn	09 03 43.3	+2.5
PLMC	San Jos del P	18.88	0	eP	Pn	09 03 43.7	+2.2
RREF	El Recreo	18.91	3	eP	Pn	09 03 45.9	+3.6
ROSC	El Rosal	18.93	6	P	Pn	09 03 45.3	+2.9
	1.5nm,0.3s,baz=171,slow=8.8,SNR=34						
ROSC				S	S	09 07 20.7	+3.5
	1.3nm,0.3s,baz=0.0,slow=20,SNR=1.8						
ROSC				LR	LR	09 12 04.3	
	comp=Z,102µm,18.6s,baz=210,slow=40						
ROSC	El Rosal	18.93	6	eP	Pn	09 03 47.0	+4.6
ROSC	El Rosal	18.93	6	P	Pn	09 03 44.6	+2.3
CFA	Coronel Fontan	18.94	158	P	P	09 03 42.1	+0.6
	3.3nm,0.3s,baz=338,slow=11,SNR=115						
CFA				S	Sn	09 07 14.9	+0.5
	0.1nm,0.3s,baz=200,slow=11,SNR=1.6						
CFA				LR	LR	09 10 08.1	
	comp=Z,24µm,19.1s,baz=349,slow=34						
PIZC	Pizarro, Choco	18.97	357	eP	P	09 03 42.0	+0.2
PAYG	Puerto Ayora	19.18	313	P	P	09 03 46.1	+1.9
GUY2C	Guyana, Caldas	19.23	3	eP	Pn	09 03 48.2	+2.1
ROC1	El Roble	19.41	166	P	P	09 03 47.1	+0.3
NORC	Norcasia	19.59	4	eP	Pn	09 03 51.7	+1.7
PEL	Peldehue	19.65	166	P	Pn	09 03 52.2	+1.6
PEL				pmax	pmax		
	comp=Z,235nm,1.0s						
PEL	Peldehue	19.65	166	P	Pn	09 03 52.2	+1.6
SPBC	San Pablo de B	19.75	7	eP	Pn	09 03 53.9	+1.9
CBOC	Ciudad Bolivar	19.84	1	eP	P	09 03 53.2	+1.6
SALV	Santo Antonio	20.04	98	eP	P	09 03 52.4	-1.2
SALV				eS	S	09 07 40.2	+1.3

RUSC	La Rusia	20.13	9	eP	Pn	09 03 58.1	+1.3
RUSC	La Rusia	20.13	9	P	P	09 03 57.0	+2.0
HELC	Santa Helena	20.18	2	eP	P	09 03 57.2	+1.8
SOLC	Bahia Solano	20.22	357	eP	Pn	09 04 01.9	+4.4
CLDB	Colider	20.32	83	eP	P	09 03 55.6	-1.1
CLDB				eS	S	09 07 45.7	+1.0
PTBC	PUERTO BERRIO,	20.59	5	eP	P	09 04 00.5	+0.9
AQDB	Aquidauana	20.70	111	eP	P	09 04 01.6	+0.9
BARC	Barichara	20.80	9	eP	P	09 04 04.1	+2.1
TAMC	Tame, Arauca	20.90	13	eP	P	09 04 05.4	+2.5
PTGA	Pitinga	20.96	52	P	P	09 04 03.8	+0.3
	comp=Z,71nm,0.6s,baz=231,slow=12,SNR=40						
PTGA				S	S	09 07 54.6	-2.7
	comp=Z,61nm,0.8s,baz=191,slow=10,SNR=5.5						
PTGA				LR	LR	09 12 43.8	
	comp=Z,214µm,18.4s,baz=236,slow=38						
PTGA	Pitinga	20.96	52	P	P	09 04 03.8	+0.3
PTGA	Pitinga	20.96	52	eP	P	09 04 03.5	-0.1
PTGA				eS	S	09 07 58.6	+1.3
DBBC	Dabeiba	20.98	0	eP	P	09 04 06.8	+3.0
PTAC	Punta Ardita,	21.16	356	eP	P	09 04 08.2	+2.5
GO05	Huala	21.20	170	P	P	09 04 05.8	-0.2
GO05				IAmb	IAmb	09 04 21.7	
	comp=Z,323nm,1.1s						
CPUP	Villa Florida	21.57	127	P	P	09 04 10.2	+0.2
	comp=Z,86nm,0.9s,baz=308,slow=11,SNR=56						
CPUP				S	S	09 08 11.2	+2.0
	comp=Z,17nm,1.0s,baz=150,slow=20,SNR=2.0						
CPUP				LR	LR	09 14 09.7	
	comp=Z,52µm,18.7s,baz=306,slow=41						
CPUP	Villa Florida	21.57	127	P	P	09 04 10.2	+0.2
CPUP				pmax	pmax		
	comp=Z,353nm,1.2s						
CPUP	Villa Florida	21.57	127	P	P	09 04 10.2	+0.2
CPUP				IAmb	IAmb	09 04 29.1	
	comp=Z,352nm,1.2s						
CPUP	Villa Florida	21.57	127	eP	P	09 04 10.2	+0.2
PAMC	Pamplona, Colo	21.61	10	eP	P	09 04 13.7	+2.7
UREC	San Jos de Ur	21.73	2	eP	P	09 04 12.3	+0.5
OCAC	Ocana	22.40	8	eP	P	09 04 19.7	+0.6
LCBC	Los crdobas,	22.81	360	eP	P	09 04 25.8	+2.4
SMLC	San Martn de	22.87	6	eP	P	09 04 24.9	+0.9
C2SB	Chapadao do Su	23.02	105	eP	P	09 04 25.4	-0.2
BCIP	Isla Barro Col	23.37	351	eP	P	09 04 31.8	+2.7
BCIP	Isla Barro Col	23.37	351	P	P	09 04 30.8	+1.6
BCIP				pmax	pmax		
	comp=Z,258nm,1.1s						
BCIP				MLR	MLR		
	comp=Z,19µm,20.0s						
BCIP	Isla Barro Col	23.37	351	P	P	09 04 30.8	+1.6
BCIP				IAmb	IAmb	09 04 47.4	
	comp=Z,258nm,1.1s						
SDV	Santo Domingo	23.53	14	P	P	09 04 31.0	+0.1
	comp=Z,118nm,0.7s,baz=195,slow=8.1,SNR=78						
SDV				S	S	09 08 44.8	-0.5
	comp=Z,67nm,1.1s,baz=254,slow=19,SNR=2.4						
SDV				LR	LR	09 14 41.3	
	comp=Z,30µm,18.3s,baz=202,slow=39						
SDV	Santo Domingo	23.53	14	eP	P	09 04 32.5	+1.5
SDV	Santo Domingo	23.53	14	P	P	09 04 31.4	+0.4
SDV				IAmb	IAmb	09 04 46.3	
	comp=Z,487nm,1.2s						
SDV	Santo Domingo	23.53	14	IAMs_20	IAMs_20	09 14 30.2	
	comp=Z,34µm,19.0s						
SDV	Santo Domingo	23.53	14	eP	P	09 04 30.5	-0.5
SDV				eS	S	09 08 44.6	-0.6
ARAG	Araguaiana, MT	23.77	97	eP	P	09 04 31.4	-1.7
ARAG				eS	S	09 08 48.5	-0.2
SJCC	San Jacinto, C	23.87	3	eP	P	09 04 36.0	+1.9
ARGC	Ariguani, Magd	23.90	5	eP	P	09 04 38.3	+4.0
ITQB	Itaqui	23.92	134	eP	P	09 04 34.1	-0.4
CODC	Agustn Codazz	24.05	7	eP	P	09 04 35.9	+0.2
TRCB	Terra Rica	24.08	115	eP	P	09 04 35.8	-0.2
BAUV	El Baul	24.34	20	⇑iP	P	09 04 38.9	+0.6
PCMB	Pacaembu	25.00	111	eP	P	09 04 44.6	+0.2
PCMB				eS	S	09 09 10.4	+1.9
HDC	Heredia	25.15	342	P	P	09 04 49.1	+3.1
HDC				IAmb	IAmb	09 04 59.1	
	comp=Z,186nm,1.0s						
HDC				IAMs_20	IAMs_20	09 15 22.1	
	comp=Z,29µm,18.0s						
PTGB	Pitanga	25.18	118	eP	P	09 04 46.1	0.0
SMRC	Santa Marta, M	25.19	5	eP	P	09 04 46.4	+0.3
ITRB	Iturama	25.47	106	eP	P	09 04 48.3	-0.4
JTS	Las Juntas de	25.69	340	P	P	09 04 52.6	+1.9
	comp=Z,34nm,1.2s,baz=201,slow=4.1,SNR=11						
JTS				LR	LR	09 14 47.1	
	comp=Z,34µm,18.3s,baz=228,slow=36						
JTS	Las Juntas de	25.69	340	ceP	P	09 04 51.8	+1.1
JTS				pmax	pmax		
	comp=Z,139nm,1.5s						
JTS				MLR	MLR		
	comp=Z,31µm,18.0s						
JTS	Las Juntas de	25.69	340	P	P	09 04 53.4	+2.7
JTS	Las Juntas de	25.69	340	IAMs_20	IAMs_20	09 14 34.4	
	comp=Z,32µm,18.0s						
GO06	Curarrehue	25.75	171	P	P	09 04 51.5	+0.4
URIC	Uribia, Colomb	26.00	10	eP	P	09 04 48.2	-5.2
URIC	Uribia, Colomb	26.00	10	P	P	09 04 51.7	-1.7
ITAB	Concordia	26.10	124	eP	P	09 04 53.8	-0.5
ITAB				eS	S	09 09 26.0	+0.2
ORIV	Oritupano	26.36	30	⇑iP	P	09 04 57.1	+0.4
LPA	La Plata	26.56	144	i P	P	09 04 52.0	-6.3
LPA				PP	PnPn	09 05 41.4	+2.7
LPA				PCP	PcP	09 08 22.1	-0.8
LPA				S	S	09 09 27.5	-5.4
LPA				PS	PgS	09 09 51.7	+4.7
LPA				SSS	SSS	09 10 44.5	
CPSB	Cacapava Do Su	26.62	131	eP	P	09 04 58.5	-0.5
PCRV	Puerto La Cruz	26.77	26	P	P	09 05 01.8	+1.3
	comp=Z,28nm,0.6s,baz=211,slow=4.1,SNR=18						
PCRV				S	S	09 09 34.6	-2.0
	comp=Z,17nm,0.9s,baz=234,slow=18,SNR=2.0						
PCRV				Lg	Lg	09 13 32.0	
	comp=Z,289nm,1.2s,baz=0.6,slow=19,SNR=4.3						
PCRV				LR	LR	09 16 47.7	
	comp=Z,82µm,19.1s,slow=39						
PLCV	Puerto La Cruz	26.78	26	P	P	09 05 01.8	+1.2
PLCV					S	09 09 34.6	-2.1
FRTB	Fartura	26.94	114	eP	P	09 05 01.2	-0.8
FRTB				eS	S	09 09 40.7	+1.4
PLCA	Paso Flores	27.01	170	P	P	09 05 02.2	-0.3
	comp=Z,63nm,1.0s,baz=6.8,slow=11,SNR=44						
PLCA				LR	LR	09 13 31.1	
	comp=Z,14µm,21.4s,baz=1.5,slow=32						
PLCA	Paso Flores	27.01	170	P	P	09 05 02.0	-0.5
PLCA				pmax	pmax		
	comp=Z,84nm,1.0s						
PLCA	Paso Flores	27.01	170	P	P	09 05 02.0	-0.5
PLCA	Paso Flores	27.01	170	eP	P	09 05 01.1	-1.4
PLTB	Pedras Altas	27.25	134	eP	P	09 05 04.0	-0.7
ESPN	Las Esperanzas	27.29	343	P	P	09 05 06.4	+1.4
ESPN				IAmb	IAmb	09 05 19.5	
	comp=Z,264nm,1.3s						
ESPN				IAMs_20	IAMs_20	09 15 53.7	
	comp=Z,37µm,20.0s						
IPMB	Ipameri, GO	27.30	102	eP	P	09 05 04.7	-0.7
ACON	Acoyapa	27.34	341	P	P	09 05 06.5	+0.9
ACON				IAmb	IAmb	09 05 23.8	
	comp=Z,229nm,1.4s						
ACON				IAMs_20	IAMs_20	09 15 31.0	
	comp=Z,35µm,20.0s						
BB19B	Bebedouro	27.39	109	eP	P	09 05 05.6	-0.4
BDFB	Brasilia	27.42	97	P	P	09 05 05.7	-0.8
	comp=Z,16nm,0.7s,baz=264,slow=13,SNR=16						
BDFB				LR	LR	09 16 57.4	
	comp=Z,91µm,20.2s,baz=269,slow=39						
BDFB	Brasilia	27.42	97	P	P	09 05 05.5	-1.0
BDFB				pmax	pmax		
	comp=Z,154nm,1.4s						
BDFB				MLR	MLR		
	comp=Z,102µm,21.0s						
BDFB	Brasilia	27.42	97	P	P	09 05 05.5	-1.0
PRVC	Isla de Provid	27.75	349	eP	P	09 05 09.6	+0.4
CNLB	Canela	28.02	127	eP	P	09 05 11.3	-0.4
CNLB				eS	S	09 09 57.9	+1.6
OGAUY	Aigu	28.09	140	eP	P	09 05 11.9	-0.2
GUIV	Guiria	28.30	30	eP	P	09 05 13.5	-0.6
TPP	Pointe-a-Pierr	28.41	32	eP	P	09 05 18.2	+3.1
RCLB	Rio Claro- Sao	28.55	111	eP	P	09 05 16.1	-0.4
SMTB	Santa Maria do	28.65	83	eP	P	09 05 17.5	+0.1
TRN	Trinidad (W)	28.71	32	eP	P	09 05 17.6	-0.2
SPB	Sao Paulo	28.90	113	P	P	09 05 19.8	+0.3
SPB	Sao Paulo	28.90	113	eP	P	09 05 19.1	-0.4
SPB				eS	S	09 10 12.3	+2.2
VAO	Valinhos	29.18	112	eP	P	09 05 21.1	-1.1
VAO				eS	S	09 10 14.8	0.0
TOSP	Speyside	29.71	33	eP	P	09 05 27.5	+0.9
TOSP	Speyside	29.71	33	P	P	09 05 26.9	+0.2
TOSP				IAmb	IAmb	09 05 40.6	
	comp=Z,169nm,1.0s						
GRFF	Grenada Fort F	29.75	30	eP	P	09 05 24.8	-2.2
GRGR	Grenville	29.86	30	eP	P	09 05 27.1	-0.9
GRGR	Grenville	29.86	30	P	P	09 05 28.0	0.0
GRHS	Sauteurs	29.94	30	eP	P	09 05 28.1	-0.6
TGUH	Tegucigalpa,Un	29.99	338	P	P	09 05 30.5	+1.2
TGUH				IAmb	IAmb	09 05 45.9	
	comp=Z,111nm,0.9s						
GRSS	Sisters	30.02	30	eP	P	09 05 29.7	+0.3
MDP	Montagnes des	30.29	53	P	P	09 05 31.4	-0.5
	comp=Z,18nm,0.8s,baz=207,slow=6.7,SNR=4.1						
MDP				LR	LR	09 18 09.9	
	comp=Z,148µm,19.1s,baz=231,slow=37						
SNET	Serv Nac Est T	30.41	335	IAMs_20	IAMs_20	09 16 31.7	
	comp=Z,23µm,19.0s						
PARB	Paraibuna	30.46	112	eP	P	09 05 32.9	-0.6
PARB				eS	S	09 10 36.1	+1.3
BSCB	Bom Sucesso	30.84	107	eP	P	09 05 36.4	-0.5
BSCB				eS	S	09 10 42.7	+1.9
JANB	Januaria	31.01	96	eP	P	09 05 37.2	-1.1
SVB	Belmont	31.04	29	eP	P	09 05 35.7	-2.7
SVB	Belmont	31.04	29	P	P	09 05 38.1	-0.3
SVCV	St. Vincent, C	31.09	30	eP	P	09 05 40.1	+1.3
SVV	Soufriere Volc	31.09	29	eP	P	09 05 41.0	+2.1
ESAR	Angra dos Reis	31.47	111	eP	P	09 05 42.2	0.0
MCLT	Moule a Chique	31.57	30	eP	P	09 05 40.4	-2.7
MCLT	Moule a Chique	31.57	30	P	P	09 05 47.8	+4.7
BCHC	Barbados, Cave	31.73	32	eP	P	09 05 45.0	+0.6
SLAC	Saint Lucia, A	31.75	29	eP	P	09 05 34.0	-11
BBGH	Gun Hill	31.77	32	eP	P	09 05 49.3	+4.4
BBSP	Saint Philip	31.79	33	eP	P	09 05 50.9	+5.9
SLBI	Saint Lucia, B	31.82	29	eP	P	09 05 39.9	-5.4
APG	El Apazote	32.11	334	P	P	09 05 50.0	+1.9
	comp=Z,11nm,1.1s,baz=322,slow=8.0,SNR=6.8						
APG				LR	LR	09 17 44.8	
	comp=Z,34µm,18.6s,baz=161,slow=34						
MTDJ	Mount Denham	32.14	358	P	P	09 05 50.4	+2.2
MTDJ				IAmb	IAmb	09 05 53.6	
	comp=Z,134nm,0.9s						
FDF	Fort de France	32.36	28	eP	P	09 05 47.0	-3.1
FDF	Fort de France	32.36	28	P	P	09 05 48.0	-2.1
FDF				pmax	pmax		
	comp=Z,431nm,1.2s						
FDF				MLR	MLR		
	comp=Z,40µm,21.0s						
FDF	Fort de France	32.36	28	P	P	09 05 48.0	-2.1
FDF				IAMs_20	IAMs_20	09 19 54.0	
	comp=Z,40µm,21.0s						
BANI	BANI	32.82	11	P	P	09 05 55.0	+0.8
SDD	Santo Domingo	32.97	11	P	P	09 05 56.0	+0.7
SDD				IAMs_20	IAMs_20	09 20 15.5	
	comp=Z,40µm,22.0s						
DWS	Wesley	33.02	27	eP	P	09 05 53.0	-2.8
MLPR	Magueyes Islan	33.16	16	P	P	09 05 56.5	-0.5
MLPR				IAmb	IAmb	09 06 07.4	
	comp=Z,176nm,1.0s						
CRPR	Cabo Rojo, PR	33.18	16	P	P	09 05 57.4	+0.2
CRPR				IAmb	IAmb	09 06 07.5	
	comp=Z,154nm,0.9s						
ICMP	Isla Caja de M	33.23	17	P	P	09 05 57.5	-0.1
SDDR	Presa de Saban	33.25	9	IAMs_20	IAMs_20	09 20 43.9	
	comp=Z,23µm,22.0s						
PCDR	Punta Cana, DR	33.35	14	P	P	09 05 59.3	+0.7
OBIP	Obispado Ponce	33.36	17	P	P	09 05 57.7	-1.0
RPN	Rapa Nui	33.37	242	LR	LR	09 15 52.9	
	comp=Z,17µm,18.2s,baz=102,slow=30						
MPR	Mayaguez	33.37	16	P	P	09 05 58.6	-0.2
DR12	Loma Pena Alta	33.40	12	P	P	09 05 58.5	-0.7
PDPR	Patillas Dam,	33.50	18	P	P	09 05 59.2	-0.7
PDPR				IAmb	IAmb	09 06 10.9	
	comp=Z,258nm,1.4s						
SJG	San Juan	33.55	18	P	P	09 05 60.0	-0.4
	comp=Z,82nm,0.7s,baz=208,slow=1.9,SNR=37						
SJG	San Juan	33.55	18	eP	P	09 06 00.1	-0.3
SJG	San Juan	33.55	18	P	P	09 05 59.8	-0.6
SJG				pmax	pmax		
	comp=Z,105nm,0.8s						
SJG				MLR	MLR		
	comp=Z,27µm,20.0s						
SJG	San Juan	33.55	18	P	P	09 05 59.8	-0.6
SJG				IAmb	IAmb	09 06 04.6	
	comp=Z,105nm,0.8s						
SJG	San Juan	33.55	18	IAMs_20	IAMs_20	09 21 51.9	
	comp=Z,27µm,20.0s						
AOPR	Arecibo Observ	33.60	17	P	P	09 06 00.7	-0.2
AGPR	Aguadilla, PR	33.62	16	P	P	09 06 01.2	+0.2
AGPR				IAmb	IAmb	09 06 10.8	
	comp=Z,261nm,1.4s						
CDVI	St. Croix	33.65	20	P	P	09 06 00.4	-0.9
MLYT	Lee's Yard	33.67	25	eP	P	09 05 59.5	-2.0
HUMP	Col San Antoni	33.67	18	P	P	09 06 00.7	-0.8
MTP	Monte Pirata	33.72	19	P	P	09 06 01.4	-0.5
MTP				IAmb	IAmb	09 06 04.6	
	comp=Z,98nm,1.0s						
GCPR	Guaynabo City	33.76	18	P	P	09 06 01.5	-0.8
GCPR				IAmb	IAmb	09 06 06.0	
	comp=Z,98nm,0.9s						
SC01	Santiago de lo	33.77	10	P	P	09 06 03.5	+1.2
SC01				IAMs_20	IAMs_20	09 21 57.0	
	comp=Z,18µm,19.0s						
EMPR	Esperanza - Ma	33.79	17	P	P	09 06 01.2	-1.3
EMPR				IAmb	IAmb	09 06 14.6	
	comp=Z,99nm,0.8s						
GTBY	Guantanamo Bay	33.84	2	IAMs_20	IAMs_20	09 21 18.8	
	comp=Z,20µm,21.0s						
CCIG	Comitan	33.98	332	P	P	09 06 04.7	+0.3
CCIG				IAMs_20	IAMs_20	09 18 22.2	
	comp=Z,32µm,19.0s						
SKI	Saint Kitts	34.00	24	eP	P	09 06 02.6	-1.8
SKI	Saint Kitts	34.00	24	P	P	09 06 04.8	+0.4
SKI				pmax	pmax		
	comp=Z,220nm,1.0s						
SKI	Saint Kitts	34.00	24	P	P	09 06 04.8	+0.4
CUPR	Culebra, Puert	34.00	19	P	P	09 06 02.5	-1.8
SJMB	Sao Joao De Ma	34.01	103	eP	P	09 06 04.1	-0.4
SJMB				eS	S	09 11 32.0	+1.9
SEUS	St. Eustatius	34.05	23	eP	P	09 06 03.6	-1.2
SABA	Saba	34.07	23	eP	P	09 06 00.7	-4.2
STVI	Saint Thomas	34.15	20	P	P	09 06 04.3	-1.3
BSFB	Barra de Sao F	34.33	103	eP	P	09 06 07.3	-0.1
SMRT	St. Maarten	34.53	23	eP	P	09 06 05.5	-3.4
SMRT	St. Maarten	34.53	23	P	P	09 06 07.6	-1.4
SMRT				IAmb	IAmb	09 06 10.6	
	comp=Z,145nm,1.1s						
ANWB	Willy Bob	34.69	25	i P	P	09 06 07.7	-2.6
ANWB	Willy Bob	34.69	25	P	P	09 06 08.5	-1.7
ANWB				IAMs_20	IAMs_20	09 20 56.6	
	comp=Z,25µm,21.0s						
NBPN	Ponto Novo - B	35.42	89	eP	P	09 06 15.8	-1.1
NBIT	Itapeh - BA	35.72	96	eP	P	09 06 18.9	-0.4
NBPS	Pedro II - PI	35.73	78	eP	P	09 06 18.9	-0.6
CMIG	Matias Romero	35.99	329	P	P	09 06 22.6	+1.0
	comp=Z,10nm,0.7s,baz=112,slow=6.1,SNR=24						
CMIG				LR	LR	09 19 11.9	
	comp=Z,18µm,18.7s,baz=143,slow=33						
TEIG	Tepich	36.07	341	LR	LR	09 20 40.4	
	comp=Z,14µm,20.8s,baz=253,slow=36						
TEIG	Tepich	36.07	341	P	P	09 06 22.3	+0.2
TEIG	Tepich	36.07	341	IAMs_20	IAMs_20	09 20 39.5	
	comp=Z,18µm,20.0s						
NBPB	Pedra_Branca-C	37.17	80	eP	P	09 06 31.1	-0.6
GO09	Cerro Castillo	37.21	176	P	P	09 06 33.4	+1.8
NBMO	Morrinhos-CE	37.40	77	eP	P	09 06 33.0	-0.6
NBMA	Muriti-CE	37.49	84	eP	P	09 06 34.0	-0.6
NBLA	Lagarto - SE	37.74	90	eP	P	09 06 35.7	-0.9
NBTA	Tacaratu-PE	37.80	87	eP	P	09 06 36.4	-0.7
TLIG	Tlapa	38.35	324	P	P	09 06 43.4	+1.7
NBCL	Cascavel-CE	38.78	79	eP	P	09 06 45.4	+0.1
NBAN	Anadia - AL	39.43	88	eP	P	09 06 50.0	-0.8
NBPA	Parau_RN	39.48	82	eP	P	09 06 50.5	-0.8
061Z	Ochoppi	39.97	354	P	P	09 06 55.9	+0.9
061Z				IAmb	IAmb	09 06 57.0	
	comp=Z,384nm,1.4s						
EFI	East Falkland	40.26	162	⇑eP	P	09 06 57.6	+0.4
EFI				pmax	pmax		
	comp=Z,172nm,1.2s						
EFI				MLR	MLR		
	comp=Z,12µm,16.0s						
EFI	East Falkland	40.26	162	IAMs_20	IAMs_20	09 22 02.6	
	comp=Z,15µm,21.0s						
RCBR	Riachuelo	40.63	82	P	P	09 07 00.4	-0.4
	comp=Z,44nm,0.8s,baz=245,slow=9.8,SNR=19						
RCBR	Riachuelo	40.63	82	P	P	09 07 00.8	0.0
RCBR				pmax	pmax		
	comp=Z,113nm,1.1s						
RCBR				MLR	MLR		
	comp=Z,42µm,18.0s						
RCBR	Riachuelo	40.63	82	P	P	09 07 00.8	0.0
RCBR	Riachuelo	40.63	82	eP	P	09 07 00.6	-0.1
RCBR				eS	S	09 13 12.2	+1.3
NBRF	Rio Formoso -	40.73	87	eP	P	09 07 01.1	-0.5
NBPV	Pedro Velho	41.07	84	eP	P	09 07 03.9	-0.5
USHA	Ushuaia	41.11	173	P	P	09 07 04.5	+0.4
	comp=Z,66nm,0.8s,baz=330,slow=3.9,SNR=18						
DWPF	Disney Wildern	42.25	353	IAMs_20	IAMs_20	09 26 23.8	
	comp=Z,11µm,18.0s						
656A	Willston	43.63	352	P	P	09 07 25.0	+0.1
656A				IAmb	IAmb	09 07 26.8	
	comp=Z,179nm,1.3s						
656A				IAMs_20	IAMs_20	09 27 07.3	
	comp=Z,12µm,18.0s						
553A	Crawfordville	44.72	350	P	P	09 07 34.4	+0.8
553A				IAMs_20	IAMs_20	09 26 50.2	
	comp=Z,12µm,19.0s						
ZAIG	Zacatecas	44.74	325	P	P	09 07 36.3	+2.0
456A	Hilliard	44.90	353	P	P	09 07 35.0	0.0
456A				IAmb	IAmb	09 07 41.5	
	comp=Z,131nm,0.8s						
451A	Vernon	45.37	349	P	P	09 07 39.6	+0.8
TIGA	Tifton	45.81	351	P	P	09 07 40.8	-1.5
TIGA				IAmb	IAmb	09 07 43.4	
	comp=Z,141nm,1.4s						
TIGA				IAMs_20	IAMs_20	09 28 06.2	
	comp=Z,11µm,19.0s						
TIGA	Tifton	45.81	351	P	P	09 07 41.8	-0.5
	baz=170						
TIGA				S	S	09 14 23.0	-3.2
	baz=170						
545A	Edgard	45.96	343	IAMs_20	IAMs_20	09 25 46.2	
	comp=Z,17µm,19.0s						
352A	Blakely	46.06	350	P	P	09 07 44.0	-0.3
352A				IAMs_20	IAMs_20	09 28 32.9	
	comp=Z,9µm,18.0s						
255A	Hazlehurst	46.14	353	P	P	09 07 44.7	-0.2
BRAL	Brewton	46.17	347	P	P	09 07 45.4	+0.3
BRAL	Brewton	46.17	347	P	P	09 07 45.5	+0.4
	baz=166						
KVTX	Kingsville	46.37	333	P	P	09 07 48.4	+1.6
158A	Hollywood	46.72	356	P	P	09 07 51.1	+1.7
	baz=175						
157A	Early Branch	46.73	355	P	P	09 07 50.6	+1.1
	baz=174						
250A	Grady	46.79	348	P	P	09 07 49.7	-0.3
RGRS	Roger Stewart	46.89	356	P	P	09 07 50.3	-0.4
154A	Montrose	46.90	352	P	P	09 07 50.8	0.0
154A				IAMs_20	IAMs_20	09 28 59.7	
	comp=Z,10µm,18.0s						
346A	Big Creek Wild	46.95	345	P	P	09 07 51.2	0.0
346A				IAmb	IAmb	09 08 02.7	
	comp=Z,156nm,1.1s						
CSU	Charleston Sou	46.96	356	P	P	09 07 51.3	0.0
NHSC	New Hope	47.08	356	P	P	09 07 53.0	+0.7
NHSC				IAMs_20	IAMs_20	09 29 36.8	
	comp=Z,16µm,21.0s						
NHSC	New Hope	47.08	356	P	P	09 07 52.2	0.0
	baz=175,SNR=17						
Z59A	Georgetown, SC	47.16	357	P	P	09 07 54.1	+1.3
	baz=176						
152A	Waverly Hall	47.19	350	P	P	09 07 52.4	-0.7
152A				IAmb	IAmb	09 08 04.2	
	comp=Z,187nm,1.4s						
152A				IAMs_20	IAMs_20	09 28 17.4	
	comp=Z,12µm,20.0s						
Z58A	St. Stephen	47.28	356	P	P	09 07 54.0	+0.2
	baz=175						
Z57A	Bowman	47.31	355	P	P	09 07 53.9	-0.2
	baz=174,SNR=11						
344A	Westbrook Farm	47.35	343	P	P	09 07 55.0	+0.7
Z56A	Williston	47.40	354	P	P	09 07 54.9	+0.1
Z56A	Williston	47.40	354	P	P	09 07 54.5	-0.2
	baz=173,SNR=14						
441A	DeRidder	47.44	340	P	P	09 07 56.9	+1.8
735A	Kenedy	47.48	334	P	P	09 07 56.7	+1.3
735A				IAmb	IAmb	09 07 59.2	
	comp=Z,85nm,0.9s						
BBSR	BB Station	47.54	13	P	P	09 07 56.2	+0.4
BBSR				IAmb	IAmb	09 07 57.5	
	comp=Z,133nm,1.2s						
HKT	Hockley	47.65	337	P	P	09 07 58.1	+1.4
HKT				pmax	pmax		
	comp=Z,118nm,1.5s						
HKT				MLR	MLR		
	comp=Z,7µm,18.0s						
HKT	Hockley	47.65	337	P	P	09 07 58.1	+1.4
HKT				IAmb	IAmb	09 08 03.4	
	comp=Z,118nm,1.5s						
833A	Chaparral WMA,	47.71	332	P	P	09 07 58.1	+0.9
833A				IAmb	IAmb	09 08 00.8	
	comp=Z,76nm,1.1s						
833A	Chaparral WMA,	47.71	332	P	P	09 07 58.0	+0.7
	baz=149,SNR=21						
833A				S	S	09 14 53.5	0.0
	baz=149						
GOGA	Godfrey	47.73	352	P	P	09 07 56.6	-0.7
GOGA				pmax	pmax		
	comp=Z,193nm,1.5s						
GOGA				MLR	MLR		
	comp=Z,9µm,18.0s						
GOGA	Godfrey	47.73	352	P	P	09 07 56.6	-0.7
GOGA				IAmb	IAmb	09 08 08.4	
	comp=Z,193nm,1.4s						
GOGA	Godfrey	47.73	352	IAMs_20	IAMs_20	09 29 24.8	
	comp=Z,9µm,18.0s						
GOGA	Godfrey	47.73	352	P	P	09 07 56.6	-0.7
	baz=171,SNR=30						
GOGA				S	S	09 14 49.2	-4.4
	baz=171						
342A	Flagon Creek P	47.75	341	P	P	09 07 58.8	+1.4
Y58A	Scranton	47.84	356	P	P	09 07 58.2	0.0
Y58A	Scranton	47.84	356	P	P	09 07 58.1	0.0
	baz=176,SNR=10						
Y58A				S	S	09 14 53.6	-1.6
	baz=176						
Y56A	Pelion	47.86	354	P	P	09 07 58.1	-0.2
	baz=174,SNR=17						
Y56A				S	S	09 14 51.9	-3.5
	baz=174						
Y60A	Bolivia	47.87	358	P	P	09 07 57.0	-1.4
Y60A				IAMs_20	IAMs_20	09 29 30.4	
	comp=Z,12µm,20.0s						
Y60A	Bolivia	47.87	358	P	P	09 07 58.4	+0.1
	baz=178						
Y60A				S	S	09 14 55.0	-0.6
	baz=178						
Y59A	Loris	47.88	357	P	P	09 07 58.5	0.0
Y59A				IAMs_20	IAMs_20	09 30 46.7	
	comp=Z,13µm,18.0s						
Y59A	Loris	47.88	357	P	P	09 07 58.6	+0.1
	baz=177,SNR=5.2						
Z51A	Franklin	47.90	350	P	P	09 07 57.9	-0.7
Z51A				IAmb	IAmb	09 08 09.1	
	comp=Z,165nm,1.4s						
Z51A				IAMs_20	IAMs_20	09 28 28.2	
	comp=Z,11µm,20.0s						
LRAL	Lakeview Retre	47.96	348	P	P	09 07 58.3	-0.8
LRAL				IAmb	IAmb	09 08 12.5	
	comp=Z,142nm,1.1s						
LRAL	Lakeview Retre	47.96	348	P	P	09 07 58.5	-0.6
	baz=166,SNR=49						
LRAL				S	S	09 14 52.7	-4.2
	baz=166						
Z50A	Ashland	47.97	349	P	P	09 07 57.9	-1.3
Z50A	Ashland	47.97	349	P	P	09 07 58.5	-0.7
	baz=168,SNR=30						
Z50A				S	S	09 14 52.5	-4.5
	baz=168						
Y57A	Sumter	48.00	355	P	P	09 07 59.1	-0.3
Y57A	Sumter	48.00	355	P	P	09 07 58.9	-0.5
	baz=175,SNR=19						
Y57A				S	S	09 14 55.1	-2.4
	baz=175						
VBMS	Vicksburg	48.01	344	P	P	09 07 59.1	-0.4

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VBMS                             IAmb     IAmb     09 08 13.1
       comp=Z,164nm,1.3s
VBMS   Vicksburg         48.01 344  P        P        09 07 59.6 +0.1
       baz=161,SNR=8.3
Y55A   Saluda            48.06 354  P        P        09 07 59.3 -0.5
       baz=173,SNR=37
Y55A                                S        S        09 14 55.5 -2.8
       baz=173
Y52A   Lilburn           48.26 351  P        P        09 08 00.9 -0.6
Y52A                                IAmb     IAmb     09 08 11.7
       comp=Z,126nm,1.4s
Y52A                                IAMs_20  IAMs_20  09 28 24.8
       comp=Z,11µm,20.0s
Y52A   Lilburn           48.26 351  P        P        09 08 00.7 -0.8
       baz=170,SNR=20
Y52A                                S        S        09 14 56.7 -4.5
       baz=170
JSC    Jenkinsville      48.34 355  P        P        09 08 01.3 -0.7
JSC                                 pmax     pmax
       comp=Z,33nm,0.9s
JSC    Jenkinsville      48.34 355  P        P        09 08 01.3 -0.7
HODGE  Hodges            48.39 353  P        P        09 08 01.2 -1.2
HODGE                               IAmb     IAmb     09 08 15.2
       comp=Z,65nm,0.9s
X57A   Johnson Farm,     48.43 356  P        P        09 08 02.5 -0.2
       baz=175
X57A                                S        S        09 15 01.2 -2.3
       baz=175
X60A   Albert Glenn T    48.43 358  P        P        09 08 02.7  0.0
       baz=178,SNR=9.2
X59A   McDuffie Farm,    48.45 358  P        P        09 08 02.6 -0.2
       baz=177,SNR=9.3
X59A                                S        S        09 15 03.3 -0.4
       baz=177
X58A   Rowland           48.47 357  P        P        09 08 03.1 +0.2
X58A                                IAmb     IAmb     09 08 05.0
       comp=Z,95nm,0.9s
X58A   Rowland           48.47 357  P        P        09 08 02.9 -0.1
       baz=176,SNR=7.6
X58A                                S        S        09 15 02.0 -2.0
       baz=176
X56A   White Oak         48.53 355  P        P        09 08 03.0 -0.5
       baz=174,SNR=29
X56A                                S        S        09 15 02.0 -2.9
       baz=174
X55A   Gracelyn & Ava    48.56 354  P        P        09 08 03.4 -0.3
       baz=173,SNR=34
X55A                                S        S        09 15 02.3 -3.0
       baz=173
BIRD   Birdtown, Kers    48.63 355  P        P        09 08 03.9 -0.4
BIRD                                IAmb     IAmb     09 08 06.1
       comp=Z,132nm,1.1s
Y49A   Blount Mountai    48.65 349  P        P        09 08 03.1 -1.3
Y49A                                IAmb     IAmb     09 08 14.4
       comp=Z,119nm,1.4s
143A   Socs Landing,     48.72 343  P        P        09 08 04.7 -0.3
X54A   Belton            48.72 353  P        P        09 08 04.5 -0.4
       baz=172,SNR=33
X54A                                S        S        09 15 04.0 -3.5
       baz=172
X53A   Estanollee        48.78 352  P        P        09 08 04.6 -0.9
       baz=171,SNR=22
X53A                                S        S        09 15 03.8 -4.7
       baz=171
NATX   Nacogdoches       48.87 339  P        P        09 08 06.8 +0.6
NATX   Nacogdoches       48.87 339  P        P        09 08 07.1 +1.0
       baz=156,SNR=12
NATX                                S        S        09 15 11.4 +1.6
       baz=156
W60A   Pink Hill         48.90 359  P        P        09 08 06.5 +0.2
       baz=178,SNR=11
W60A                                S        S        09 15 08.9 -1.2
       baz=178
W58A   Raeford           48.93 357  P        P        09 08 06.4 -0.1
       baz=176,SNR=58
W58A                                S        S        09 15 08.8 -1.7
       baz=176
PAULI  Pauline           48.93 354  P        P        09 08 05.7 -0.8
PAULI                               IAmb     IAmb     09 08 19.5
       comp=Z,116nm,0.8s
W61A   Ground Anchor     49.01 359  P        P        09 08 07.4 +0.3
       baz=179,SNR=9.2
W59A   Clinton           49.04 358  P        P        09 08 07.2 -0.1
       baz=177,SNR=13
W59A                                S        S        09 15 10.6 -1.4
       baz=177
X51A   Calhoun           49.07 351  P        P        09 08 07.1 -0.5
X51A   Calhoun           49.07 351  P        P        09 08 06.9 -0.8
       baz=169,SNR=18
X51A                                S        S        09 15 08.3 -4.2
       baz=169
435B   Jarrell           49.08 336  P        P        09 08 08.1 +0.3
435B                                IAmb     IAmb     09 08 16.7
       comp=Z,60nm,0.8s
435B   Jarrell           49.08 336  P        P        09 08 08.0 +0.2
       baz=152,SNR=8.0
435B                                S        S        09 15 11.7 -1.1
       baz=152
CNNC   Cliffs of the     49.09 358  P        P        09 08 07.9 +0.1
       baz=178,SNR=6.7
CNNC                                S        S        09 15 12.0 -0.8
       baz=178
W57A   Gilead            49.10 356  P        P        09 08 07.2 -0.7
W57A                                IAMs_20  IAMs_20  09 30 19.1
       comp=Z,13µm,21.0s
W57A   Gilead            49.10 356  P        P        09 08 07.4 -0.5
       baz=175,SNR=50
W57A                                S        S        09 15 10.2 -2.7
       baz=175
W56A   Indian Trail      49.13 355  P        P        09 08 07.5 -0.6
       baz=174,SNR=19
W56A                                S        S        09 15 09.9 -3.4
       baz=174
FPAL   Fort Paine        49.17 350  P        P        09 08 07.3 -1.2
FPAL                                IAMs_20  IAMs_20  09 30 37.8
       comp=Z,9µm,19.0s
KMSC   Kings Mountain    49.20 355  P        P        09 08 08.1 -0.5
KMSC                                IAmb     IAmb     09 08 21.6
       comp=Z,117nm,0.8s
KMSC                                IAMs_20  IAMs_20  09 30 42.8
       comp=Z,14µm,21.0s
KMSC   Kings Mountain    49.20 355  P        P        09 08 08.2 -0.4
       baz=174,SNR=46
KMSC                                S        S        09 15 11.3 -3.0
       baz=174
BG3    Lake Jocassee     49.22 353  P        P        09 08 07.8 -1.0
W54A   Cherokee Point    49.23 354  P        P        09 08 08.6 -0.2
       baz=172,SNR=29
W54A                                S        S        09 15 11.9 -2.8
       baz=172
X48A   Hartselle         49.34 348  P        P        09 08 08.4 -1.4
X48A                                IAmb     IAmb     09 08 19.9
       comp=Z,162nm,1.3s
237A   Washetta, Mont    49.49 338  P        P        09 08 12.0 +1.1
V60A   Jim Taylor Roa    49.60 359  P        P        09 08 11.8 +0.2
V60A                                IAmb     IAmb     09 08 13.5
       comp=Z,118nm,0.9s
V60A   Jim Taylor Roa    49.60 359  P        P        09 08 11.7  0.0
       baz=179,SNR=15
V60A                                S        S        09 15 19.1 -0.8
       baz=179
V61A   Roper             49.62 360  P        P        09 08 11.1 -0.7
V61A   Roper             49.62 360  P        P        09 08 12.0 +0.2
       baz=180,SNR=5.5
V59A   Middlesex         49.63 358  P        P        09 08 11.9  0.0
       baz=178,SNR=40
V59A                                S        S        09 15 19.2 -1.1
       baz=178
Z41A   Richland Creek    49.64 342  P        P        09 08 12.4 +0.4
Z41A   Richland Creek    49.64 342  P        P        09 08 12.5 +0.4
       baz=159,SNR=25
Z41A                                S        S        09 15 21.7 +1.1
       baz=159
V58A   Windy Hill, Pi    49.69 357  P        P        09 08 11.3 -1.1
V58A   Windy Hill, Pi    49.69 357  P        P        09 08 11.8 -0.5
       baz=176,SNR=32
V58A                                S        S        09 15 19.4 -1.8
       baz=176
JCT    Junction City     49.74 333  P        P        09 08 13.1 +0.2
JCT                                 pmax     pmax
       comp=Z,94nm,1.2s
JCT                                 MLR      MLR
       comp=Z,5µm,19.0s
JCT    Junction City     49.74 333  P        P        09 08 13.1 +0.2
JCT                                 IAmb     IAmb     09 08 22.4
       comp=Z,94nm,1.2s
JCT    Junction City     49.74 333  P        P        09 08 13.0  0.0
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       baz=150,SNR=24
JCT                                 S        S        09 15 21.1 -1.1
       baz=150
HPIG                     49.74 325  P        P        09 08 14.2 +1.0
HPIG                                IAmb     IAmb     09 08 20.6
       comp=Z,137nm,1.4s
HPIG                                IAMs_20  IAMs_20  09 26 39.6
       comp=Z,11µm,21.0s
V56A   Mocksville        49.79 356  P        P        09 08 12.9 -0.3
       baz=175,SNR=28
V56A                                S        S        09 15 20.7 -1.9
       baz=175
V57A   Coltrane Farms    49.82 356  P        P        09 08 13.0 -0.4
       baz=176,SNR=26
V57A                                S        S        09 15 20.8 -2.2
       baz=176
SWET   Sewanee           49.88 350  P        P        09 08 12.7 -1.1
SWET                                IAmb     IAmb     09 08 21.9
       comp=Z,111nm,1.0s
SWET                                IAMs_20  IAMs_20  09 30 59.7
       comp=Z,10µm,20.0s
CPCT   Cooper Cave       49.88 351  P        P        09 08 12.6 -1.2
CPCT                                IAMs_20  IAMs_20  09 29 23.8
       comp=Z,11µm,20.0s
V54A   Nebo              49.89 354  P        P        09 08 13.6 -0.3
       baz=173,SNR=40
V54A                                S        S        09 15 21.3 -2.7
       baz=173
V55A   Taylorsville      49.89 355  P        P        09 08 12.8 -1.1
V55A                                IAmb     IAmb     09 08 23.0
       comp=Z,145nm,1.4s
V55A   Taylorsville      49.89 355  P        P        09 08 13.6 -0.3
       baz=174,SNR=19
V55A                                S        S        09 15 21.4 -2.7
       baz=174
OXF    Oxford            49.91 346  P        P        09 08 13.1 -1.0
OXF                                 pmax     pmax
       comp=Z,349nm,1.4s
OXF                                 MLR      MLR
       comp=Z,5µm,21.0s
OXF    Oxford            49.91 346  P        P        09 08 13.1 -1.0
OXF    Oxford            49.91 346  P        P        09 08 12.8 -1.3
       baz=163,SNR=17
CCAR   Cane Creek        49.96 343  P        P        09 08 14.7 +0.3
TKL    Tuckaleechee C    49.98 352  P        P        09 08 14.0 -0.6
       comp=Z,81nm,1.1s,baz=145,slow=6.1,SNR=35
TKL    Tuckaleechee C    49.98 352  P        P        09 08 13.8 -0.8
TKL                                 pmax     pmax
       comp=Z,307nm,1.5s
TKL                                 MLR      MLR
       comp=Z,12µm,19.0s
TKL    Tuckaleechee C    49.98 352  P        P        09 08 13.8 -0.8
TKL                                 IAMs_20  IAMs_20  09 30 44.4
       comp=Z,12µm,19.0s
PLAL   Pickwick Lake     50.07 347  P        P        09 08 14.0 -1.2
PLAL                                IAmb     IAmb     09 08 25.6
       comp=Z,123nm,1.1s
WHTX   Lake Whitney,     50.10 336  P        P        09 08 15.6 +0.1
WHTX                                IAmb     IAmb     09 08 22.2
       comp=Z,151nm,1.1s
WHTX   Lake Whitney,     50.10 336  P        P        09 08 15.8 +0.3
       baz=153,SNR=44
WHTX                                S        S        09 15 25.6 -1.4
       baz=153
WLAR   White Oak Lake    50.14 342  P        P        09 08 17.0 +1.2
V52A   Sevierville       50.14 352  P        P        09 08 14.8 -1.0
U61A   Possum Corner     50.16 360  P        P        09 08 16.6 +0.7
U61A   Possum Corner     50.16 360  P        P        09 08 16.4 +0.5
       baz=180,SNR=6.8
U59A   Littleton         50.20 358  P        P        09 08 16.5 +0.3
U59A   Littleton         50.20 358  P        P        09 08 16.4 +0.2
       baz=178,SNR=29
U59A                                S        S        09 15 27.1 -1.1
       baz=178
U58A   Oxford            50.26 358  P        P        09 08 16.6 -0.1
       baz=177,SNR=18
U58A                                S        S        09 15 27.9 -1.3
       baz=177
X43A   Marvell           50.28 344  P        P        09 08 17.2 +0.3
X43A   Marvell           50.28 344  P        P        09 08 17.1 +0.2
       baz=162,SNR=7.4
U60A   Pendleton         50.30 359  P        P        09 08 17.2 +0.2
       baz=179,SNR=13
U60A                                S        S        09 15 28.9 -0.8
       baz=179
U56A   King              50.32 356  P        P        09 08 17.1  0.0
U56A   King              50.32 356  P        P        09 08 17.4 +0.2
       baz=175,SNR=35
U56A                                S        S        09 15 27.7 -2.3
       baz=175
U57A   Blanch            50.34 357  P        P        09 08 17.1 -0.2
       baz=176,SNR=37
U57A                                S        S        09 15 28.1 -2.1
       baz=176
LPIG   La Paz            50.42 319  LR       LR       09 25 11.9
       comp=Z,6µm,20.8s,baz=106,slow=31
W45A   Hickory Valley    50.48 346  P        P        09 08 18.1 -0.3
U55A   TA2, Sparta       50.52 355  P        P        09 08 18.5 -0.2
       baz=174,SNR=11
U55A                                S        S        09 15 30.4 -2.6
       baz=174
V48A   Smith Brothers    50.55 349  P        P        09 08 17.8 -1.1
TX31   Lajitas Ar. Si    50.60 329  P        P        09 08 19.0 -0.5
TX32   Lajitas Array     50.60 329  P        P        09 08 19.8 +0.3
TXAR   Lajitas Array     50.60 329  P        P        09 08 19.6  0.0
       comp=Z,29nm,1.0s,baz=150,slow=8.0,SNR=102
TXAR                                LR       LR       09 28 35.2
       comp=Z,10µm,18.0s,baz=0.0,slow=35
TXAR   Lajitas Array     50.60 329  P        P        09 08 19.3 -0.2
U54A   Nelsons Funny     50.61 354  P        P        09 08 19.4 -0.1
U54A                                IAmb     IAmb     09 08 32.2
       comp=Z,124nm,0.9s
U54A                                IAMs_20  IAMs_20  09 31 26.0
       comp=Z,14µm,20.0s
U54A   Nelsons Funny     50.61 354  P        P        09 08 18.9 -0.6
       baz=173,SNR=21
U54A                                S        S        09 15 31.3 -2.9
       baz=173
MET    Memphis--Engin    50.62 346  P        P        09 08 18.6 -0.8
HOPE   Hope Point        50.74 151  P        P        09 08 21.2 +1.0
HOPE                                pmax     pmax
       comp=Z,124nm,0.9s
HOPE   Hope Point        50.74 151  P        P        09 08 21.1 +1.0
HOPE                                IAmb     IAmb     09 08 24.6
       comp=Z,124nm,0.8s
HOPE   Hope Point        50.74 151  IAMs_20  IAMs_20  09 28 18.1
       comp=Z,15µm,22.0s
X40A   Basin Creek Fa    50.80 342  P        P        09 08 20.4 -0.4
X40A   Basin Creek Fa    50.80 342  P        P        09 08 20.0 -0.7
       baz=159,SNR=13
X40A                                S        S        09 15 34.5 -2.2
       baz=159
CLTN   Cedars of Leba    50.80 350  P        P        09 08 19.4 -1.3
CLTN                                IAmb     IAmb     09 08 30.7
       comp=Z,128nm,1.2s
T59A   Double "B" Far    50.81 359  P        P        09 08 20.9 +0.1
T59A                                IAmb     IAmb     09 08 22.6
       comp=Z,150nm,1.0s
T59A   Double "B" Far    50.81 359  P        P        09 08 20.9 +0.1
       baz=178,SNR=32
T59A                                S        S        09 15 36.0 -0.8
       baz=178
T58A   Grand View Acr    50.81 358  P        P        09 08 20.6 -0.3
       baz=177,SNR=52
T58A                                S        S        09 15 35.3 -1.5
       baz=177
TZTN   Tazewell          50.83 353  P        P        09 08 20.0 -1.0
TZTN                                IAmb     IAmb     09 08 33.5
       comp=Z,145nm,1.0s
TZTN                                IAMs_20  IAMs_20  09 31 46.8
       comp=Z,15µm,20.0s
TZTN   Tazewell          50.83 353  P        P        09 08 20.3 -0.7
       baz=171,SNR=24
TZTN                                S        S        09 15 33.1 -3.9
       baz=171
T57A   Hurt              50.90 357  P        P        09 08 21.5  0.0
T57A   Hurt              50.90 357  P        P        09 08 21.4 -0.1
       baz=176,SNR=59
T57A                                S        S        09 15 36.8 -1.2
       baz=176
UALR   University of     50.92 343  P        P        09 08 21.3 -0.4
UALR                                IAmb     IAmb     09 08 30.9
       comp=Z,200nm,1.1s
T60A   Surry             50.97 360  P        P        09 08 20.2 -1.7
T60A                                IAmb     IAmb     09 08 24.4
       comp=Z,170nm,0.9s
T60A   Surry             50.97 360  P        P        09 08 22.4 +0.4
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       baz=180
T56A   Rocky Mt          50.97 356  P        P        09 08 22.2 +0.1
       baz=175,SNR=36
T56A                                S        S        09 15 37.5 -1.6
       baz=175
MIAR   Mount Ida         51.07 342  P        P        09 08 22.9  0.0
MIAR                                pmax     pmax
       comp=Z,78nm,0.9s
MIAR   Mount Ida         51.07 342  P        P        09 08 22.9  0.0
MIAR                                IAmb     IAmb     09 08 38.4
       comp=Z,78nm,0.9s
MIAR   Mount Ida         51.07 342  P        P        09 08 22.7 -0.1
       baz=158,SNR=56
MIAR                                S        S        09 15 39.4 -1.1
       baz=158
T55A   Pulaski           51.11 355  P        P        09 08 23.2  0.0
       baz=174,SNR=25
T55A                                S        S        09 15 39.0 -2.1
       baz=174
U49A   Red Boiling Sp    51.12 350  P        P        09 08 22.4 -0.8
U49A                                IAMs_20  IAMs_20  09 31 56.6
       comp=Z,9µm,18.0s
WVT    Waverly           51.12 348  P        P        09 08 21.4 -1.8
WVT                                 pmax     pmax
       comp=Z,123nm,1.2s
WVT    Waverly           51.12 348  P        P        09 08 21.4 -1.8
WVT                                 IAmb     IAmb     09 08 33.3
       comp=Z,123nm,1.2s
WVT    Waverly           51.12 348  P        P        09 08 21.4 -1.8
       baz=166
WVT                                 S        S        09 15 34.8 -6.3
       baz=166
T54A   Tazewell          51.12 355  P        P        09 08 22.6 -0.7
       baz=174,SNR=21
T54A                                S        S        09 15 38.1 -3.2
       baz=174
T53A   Wise              51.14 354  P        P        09 08 22.3 -1.1
       baz=172,SNR=25
T53A                                S        S        09 15 37.1 -4.4
       baz=172
LPAR   Lepanto           51.17 345  P        P        09 08 23.6  0.0
BLA    Blacksburg        51.18 356  P        P        09 08 23.2 -0.5
BLA                                 pmax     pmax
       comp=Z,110nm,1.0s
BLA    Blacksburg        51.18 356  P        P        09 08 23.2 -0.5
BLA                                 IAmb     IAmb     09 08 38.3
       comp=Z,110nm,1.0s
BLA    Blacksburg        51.18 356  P        P        09 08 23.6 -0.1
       baz=175,SNR=18
BLA                                 S        S        09 15 39.8 -2.2
       baz=175
Z35A   Perchaven, San    51.21 337  P        P        09 08 24.7 +0.8
HALT   Halls             51.23 346  P        P        09 08 23.2 -0.8
HALT                                IAmb     IAmb     09 08 35.3
       comp=Z,195nm,1.3s
W41B   Gary Mavity, V    51.27 343  P        P        09 08 23.9 -0.4
W41B                                IAmb     IAmb     09 08 33.4
       comp=Z,169nm,1.2s
W41B   Gary Mavity, V    51.27 343  P        P        09 08 23.9 -0.4
       baz=160,SNR=42
W41B                                S        S        09 15 41.3 -2.0
       baz=160
T51A   Gray              51.29 352  P        P        09 08 23.7 -0.8
       baz=170,SNR=49
T51A                                S        S        09 15 38.4 -5.1
       baz=170
T52A   Hallie            51.32 353  P        P        09 08 23.6 -1.1
T52A                                IAmb     IAmb     09 08 37.2
       comp=Z,126nm,0.9s
T52A   Hallie            51.32 353  P        P        09 08 23.8 -0.9
       baz=172,SNR=24
T52A                                S        S        09 15 39.3 -4.5
       baz=172
PMSA   Palmer Station    51.32 173  P        P        09 08 25.3 +1.0
PMSA                                IAmb     IAmb     09 08 38.9
       comp=Z,135nm,1.0s
PMSA   Palmer Station    51.32 173 eP        P        09 08 23.6 -0.7
WHAR   Wooly Hollow      51.39 343  P        P        09 08 25.1 -0.2
GNAR   Gosnell           51.45 346  P        P        09 08 25.3 -0.3
LNXT   Lenox             51.45 346  P        P        09 08 25.6  0.0
LNXT                                IAmb     IAmb     09 08 38.1
       comp=Z,207nm,1.2s
S58A   Poland Farm, P    51.46 358  P        P        09 08 25.9 +0.2
S58A                                IAmb     IAmb     09 08 27.9
       comp=Z,101nm,0.9s
S58A                                IAMs_20  IAMs_20  09 31 45.5
       comp=Z,10µm,20.0s
S58A   Poland Farm, P    51.46 358  P        P        09 08 25.8 +0.1
       baz=178,SNR=21
S58A                                S        S        09 15 44.9 -0.9
       baz=178
T50A   Nancy             51.47 351  P        P        09 08 24.6 -1.2
       baz=169,SNR=21
T50A                                S        S        09 15 41.3 -4.6
       baz=169
PTCN   Pitcairn Islan    51.51 249  IAMs_20  IAMs_20  09 24 04.8
       comp=Z,16µm,20.0s
ABTX   Abilene, Hawle    51.53 335  P        P        09 08 26.8 +0.4
ABTX                                IAmb     IAmb     09 08 37.6
       comp=Z,140nm,0.9s
ABTX   Abilene, Hawle    51.53 335  P        P        09 08 26.7 +0.4
       baz=151,SNR=42
ABTX                                S        S        09 15 46.2 -0.8
       baz=151
S60A   Water View        51.53 360  P        P        09 08 26.5 +0.3
       baz=180
UTMT   University of     51.54 347  P        P        09 08 25.6 -0.8
PEBM   Pemiscott Bayo    51.55 346  P        P        09 08 26.1 -0.3
GLAT   Glass             51.57 347  P        P        09 08 25.9 -0.6
S56A   Natural Bridge    51.59 357  P        P        09 08 26.5 -0.2
       baz=176,SNR=16
S56A                                S        S        09 15 45.7 -1.9
       baz=176
S59A   Mechanicsville    51.59 359  P        P        09 08 27.0 +0.3
       baz=179,SNR=12
S59A                                S        S        09 15 47.8 +0.3
       baz=179
S57A   Dark Hollow, R    51.64 357  P        P        09 08 26.4 -0.6
S57A                                IAMs_20  IAMs_20  09 31 33.3
       comp=Z,11µm,20.0s
S57A   Dark Hollow, R    51.64 357  P        P        09 08 27.1  0.0
       baz=177,SNR=37
S57A                                S        S        09 15 47.2 -1.1
       baz=177
T49A   Edmonton          51.66 351  P        P        09 08 26.1 -1.2
T49A                                IAmb     IAmb     09 08 39.6
       comp=Z,115nm,0.9s
T49A                                IAMs_20  IAMs_20  09 32 04.8
       comp=Z,10µm,20.0s
T49A   Edmonton          51.66 351  P        P        09 08 26.3 -1.0
       baz=169,SNR=50
T49A                                S        S        09 15 43.7 -4.8
       baz=169
W39A   Magazine          51.74 342  P        P        09 08 28.1 +0.3
W39A                                IAmb     IAmb     09 08 44.4
       comp=Z,126nm,1.0s
W39A   Magazine          51.74 342  P        P        09 08 28.5 +0.7
       baz=158,SNR=48
W39A                                S        S        09 15 49.7  0.0
       baz=158
S55A   Lewisburg         51.74 356  P        P        09 08 27.8 -0.1
       baz=175,SNR=27
S55A                                S        S        09 15 47.7 -2.1
       baz=175
S53A   Williamson        51.79 354  P        P        09 08 27.4 -0.8
       baz=173,SNR=20
S53A                                S        S        09 15 46.5 -4.0
       baz=173
R58B   Mineral           51.81 358  P        P        09 08 28.2  0.0
R58B                                IAMs_20  IAMs_20  09 32 41.6
       comp=Z,9µm,18.0s
R58B   Mineral           51.81 358  P        P        09 08 28.7 +0.4
       baz=178,SNR=28
R58B                                S        S        09 15 50.2 -0.3
       baz=178
HICK   Hickman           51.81 347  P        P        09 08 27.7 -0.7
T47A   Sharon Grove      51.81 349  P        P        09 08 27.6 -0.7
PENMO  Penman            51.82 346  P        P        09 08 27.7 -0.7
LCAR   Lake Charles      51.83 345  P        P        09 08 27.2 -1.2
LCAR                                IAmb     IAmb     09 08 36.9
       comp=Z,214nm,1.4s
S54A   Dingess, Beckl    51.83 355  P        P        09 08 28.2 -0.4
S54A                                IAmb     IAmb     09 08 39.0
       comp=Z,232nm,1.2s
S54A   Dingess, Beckl    51.83 355  P        P        09 08 28.0 -0.5
       baz=174,SNR=28
S54A                                S        S        09 15 47.4 -3.6
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	baz=174						
S52A	Salyersville	51.89	353	P	P	09 08 28.0	-0.9
	baz=172,SNR=22						
FCAR	Ozark Folk Cen	51.91	344	P	P	09 08 28.3	-0.8
FCAR				IAmb	IAmb	09 08 37.7	
	comp=Z,160nm,1.3s						
S51A	Beattyville	51.91	353	P	P	09 08 28.5	-0.6
S51A				IAmb	IAmb	09 08 39.3	
	comp=Z,151nm,1.1s						
S51A				IAMs_20	IAMs_20	09 32 39.4	
	comp=Z,18µm,20.0s						
S51A	Beattyville	51.91	353	P	P	09 08 28.3	-0.8
	baz=171,SNR=21						
S51A				S	S	09 15 47.1	-4.9
	baz=171						
R59A	King George, V	52.03	359	P	P	09 08 30.3	+0.4
	baz=179,SNR=8.4						
R59A				S	S	09 15 54.3	+0.8
	baz=179						
CBN	Corbin Frederi	52.04	359	P	P	09 08 29.9	-0.1
CBN				IAmb	IAmb	09 08 36.5	
	comp=Z,86nm,0.8s						
CBN	Corbin Frederi	52.04	359	P	P	09 08 30.4	+0.4
	baz=179,SNR=9.1						
CBN				S	S	09 15 53.5	-0.1
	baz=179						
HENM	Henderson Moun	52.04	347	P	P	09 08 29.6	-0.4
PARMO	Parma	52.05	346	P	P	09 08 29.3	-0.8
S50A	Richmond	52.06	352	P	P	09 08 29.3	-0.9
	baz=170,SNR=76						
S50A				S	S	09 15 49.5	-4.4
	baz=170						
R60A	Leonardtown, M	52.09	360	P	P	09 08 31.1	+0.7
	baz=180						
R58A	Rapidan	52.15	358	P	P	09 08 31.0	+0.2
	baz=178,SNR=23						
R58A				S	S	09 15 54.8	-0.4
	baz=178						
T45A	Paducah	52.15	348	P	P	09 08 29.9	-1.0
R57A	Stanardsville	52.16	358	P	P	09 08 30.9	0.0
	baz=177,SNR=24						
R57A				S	S	09 15 54.4	-1.0
	baz=177						
R54A	Victor	52.19	355	P	P	09 08 30.4	-0.8
	baz=174,SNR=20						
R54A				S	S	09 15 52.6	-3.2
	baz=174						
R55A	Marlinton	52.23	356	P	P	09 08 30.9	-0.6
R55A				IAmb	IAmb	09 08 40.2	
	comp=Z,163nm,1.4s						
R55A				IAMs_20	IAMs_20	09 30 49.7	
	comp=Z,11µm,22.0s						
R55A	Marlinton	52.23	356	P	P	09 08 31.3	-0.2
	baz=175,SNR=19						
R55A				S	S	09 15 54.8	-1.6
	baz=175						
S49A	Springfield	52.29	351	P	P	09 08 30.6	-1.3
	baz=169,SNR=47						
S49A				S	S	09 15 51.9	-5.3
	baz=169						
R56A	Bull Pasture M	52.31	357	P	P	09 08 32.1	0.0
	baz=176,SNR=8.1						
R56A				S	S	09 15 56.4	-1.2
	baz=176						
PBMO	Poplar Bluff	52.32	346	P	P	09 08 31.0	-1.1
R53A	Hurricane	52.42	354	P	P	09 08 32.0	-0.9
R53A				IAmb	IAmb	09 08 43.1	
	comp=Z,150nm,1.2s						
R53A				IAMs_20	IAMs_20	09 32 40.8	
	comp=Z,12µm,20.0s						
R53A	Hurricane	52.42	354	P	P	09 08 31.8	-1.0
	baz=173,SNR=15						
R52A	Catlettsburg	52.49	354	P	P	09 08 32.2	-1.2
	baz=172,SNR=8.5						
U40A	Yellville	52.55	343	P	P	09 08 32.7	-1.1
U40A				IAmb	IAmb	09 08 42.7	
	comp=Z,173nm,1.0s						
U40A	Yellville	52.55	343	P	P	09 08 33.5	-0.4
	baz=160,SNR=114						
U40A				S	S	09 15 58.7	-2.1
	baz=160						
X34A	Smith Ranch, M	52.56	338	P	P	09 08 34.0	0.0
R51A	Hillsboro	52.56	353	P	P	09 08 33.0	-0.9
	baz=171,SNR=35						
R51A				S	S	09 15 56.4	-4.5
	baz=171						
R50A	Paris	52.64	352	P	P	09 08 33.1	-1.4
R50A				IAmb	IAmb	09 08 47.1	
	comp=Z,154nm,1.0s						
R50A				IAMs_20	IAMs_20	09 32 43.6	
	comp=Z,13µm,20.0s						
R50A	Paris	52.64	352	P	P	09 08 33.5	-1.0
	baz=170,SNR=47						
R50A				S	S	09 15 57.7	-4.2
	baz=170						
Q59A	Harwood	52.69	360	P	P	09 08 35.1	+0.3
	baz=180						
Q59A				S	S	09 16 03.2	+0.6
	baz=180						
W35A	Tecumseh	52.71	339	P	P	09 08 34.2	-0.9
R49A	Shelbyville	52.77	351	P	P	09 08 34.3	-1.1
R49A				IAMs_20	IAMs_20	09 33 17.0	
	comp=Z,12µm,20.0s						
R49A	Shelbyville	52.77	351	P	P	09 08 34.1	-1.3
	baz=169,SNR=35						
R49A				S	S	09 15 59.2	-4.5
	baz=169						
Q58A	Fox Den Farm,	52.78	359	P	P	09 08 35.6	+0.2
	baz=178,SNR=26						
Q58A				S	S	09 16 04.1	+0.3
	baz=178						
HHAR	Hobbs	52.79	342	P	P	09 08 34.7	-1.0
HHAR				IAmb	IAmb	09 08 46.6	
	comp=Z,244nm,1.5s						
Q60A	Greensboro	52.83	0	P	P	09 08 35.9	+0.1
Q60A				IAmb	IAmb	09 08 38.1	
	comp=Z,152nm,0.9s						
Q60A				IAMs_20	IAMs_20	09 31 32.6	
	comp=Z,9µm,21.0s						
Q60A	Greensboro	52.83	0	P	P	09 08 36.5	+0.7
	baz=181						
USIN	University of	52.87	349	P	P	09 08 35.3	-0.8
USIN				IAmb	IAmb	09 08 44.2	
	comp=Z,175nm,0.9s						
WCI	Wyandotte Cave	52.88	350	P	P	09 08 34.7	-1.5
WCI				pmax	pmax		
	comp=Z,200nm,1.0s						
WCI				MLR	MLR		
	comp=Z,10µm,20.0s						
WCI	Wyandotte Cave	52.88	350	P	P	09 08 34.7	-1.5
WCI	Wyandotte Cave	52.88	350	IAMs_20	IAMs_20	09 32 43.0	
	comp=Z,10µm,20.0s						
WCI	Wyandotte Cave	52.88	350	P	P	09 08 34.8	-1.5
	baz=168						
WCI				S	S	09 16 00.4	-4.9
	baz=168						
Q57A	Strasburg	52.89	358	P	P	09 08 36.5	+0.2
	baz=177,SNR=30						
Q57A				S	S	09 16 05.2	-0.2
	baz=177						
Q53A	Leroy	52.90	355	P	P	09 08 35.6	-0.8
	baz=174,SNR=27						
S44A	Carbondale	52.93	347	P	P	09 08 35.6	-1.0
Q56A	Snyder Ridge,	52.93	357	P	P	09 08 36.7	0.0
Q56A				IAmb	IAmb	09 08 49.8	
	comp=Z,217nm,1.4s						
Q56A				IAMs_20	IAMs_20	09 32 11.3	
	comp=Z,9µm,21.0s						
Q56A	Snyder Ridge,	52.93	357	P	P	09 08 36.9	+0.3
	baz=176,SNR=19						
Q56A				S	S	09 16 05.3	-0.6
	baz=176						
Q55A	Buckhannon	52.93	356	P	P	09 08 36.8	+0.1
	baz=175,SNR=13						
Q55A				S	S	09 16 04.7	-1.3
	baz=175						
Q54A	Coxs Mills	52.97	356	P	P	09 08 36.3	-0.6
Q54A				IAmb	IAmb	09 08 47.0	
	comp=Z,154nm,1.4s						
Q54A				IAMs_20	IAMs_20	09 32 14.5	
	comp=Z,9µm,22.0s						
Q54A	Coxs Mills	52.97	356	P	P	09 08 35.8	-1.1
	baz=174,SNR=17						
FNO	Franklin	52.99	338	P	P	09 08 37.1	0.0
TUL1	Leonard	53.03	340	P	P	09 08 37.1	-0.3
TUL1	Leonard	53.03	340	P	P	09 08 37.1	-0.3
	baz=156,SNR=54						
TUL1				S	S	09 16 06.1	-1.3
	baz=156						
WMOK	Wichita Mounta	53.04	337	P	P	09 08 36.7	-0.8
WMOK				pmax	pmax		
	comp=Z,84nm,1.4s						
WMOK				MLR	MLR		
	comp=Z,4µm,22.0s						
WMOK	Wichita Mounta	53.04	337	P	P	09 08 36.7	-0.8
WMOK	Wichita Mounta	53.04	337	P	P	09 08 36.7	-0.8
	baz=152,SNR=38						
WMOK				S	S	09 16 06.5	-1.1
	baz=152						
Q52A	Bidwell	53.07	354	P	P	09 08 36.7	-1.0
	baz=173,SNR=17						
U38A	Gravette	53.07	342	P	P	09 08 37.6	-0.2
MGMO	Mountain Grove	53.14	344	P	P	09 08 37.5	-0.7
Q50A	Georgetown	53.15	353	P	P	09 08 37.2	-1.1
	baz=171,SNR=18						
OKCFA	Oklahoma City	53.15	338	P	P	09 08 37.6	-0.7
OKCFA				IAmb	IAmb	09 08 48.8	
	comp=Z,121nm,1.2s						
SDMD	Soldier's Deli	53.23	360	P	P	09 08 38.8	-0.1
Q51A	Peebles	53.25	353	P	P	09 08 38.0	-1.0
Q51A				IAmb	IAmb	09 08 49.2	
	comp=Z,156nm,1.2s						
Q51A	Peebles	53.25	353	P	P	09 08 38.0	-1.0
	baz=172,SNR=20						
P58A	Pank, Wackersv	53.32	359	P	P	09 08 39.7	+0.2
	baz=179,SNR=27						
P57A	Homestead Farm	53.33	358	P	P	09 08 39.5	-0.1
P57A				IAmb	IAmb	09 08 41.7	
	comp=Z,120nm,1.4s						
P57A				IAMs_20	IAMs_20	09 33 45.9	
	comp=Z,9µm,18.0s						
P57A	Homestead Farm	53.33	358	P	P	09 08 40.0	+0.5
	baz=178,SNR=7.9						
P56A	Dayton Farm, R	53.38	358	P	P	09 08 40.3	+0.4
	baz=177,SNR=17						
MNTX	Cornudas Mount	53.38	329	P	P	09 08 40.3	+0.2
MNTX				IAMs_20	IAMs_20	09 29 18.7	
	comp=Z,12µm,19.0s						
MNTX	Cornudas Mount	53.38	329	P	P	09 08 39.7	-0.4
	baz=144,SNR=59						
P55A	Reedsville	53.43	357	P	P	09 08 39.8	-0.5
	baz=176,SNR=7.5						
Q49A	Aurora	53.43	352	P	P	09 08 39.1	-1.2
	baz=170,SNR=40						
P59A	Jarrettsville	53.43	360	P	P	09 08 40.8	+0.5
	baz=180,SNR=11						
Q48A	North Vernon	53.48	351	P	P	09 08 39.5	-1.2
	baz=169,SNR=36						
P61A	Hammonton	53.52	1	P	P	09 08 41.6	+0.8
P61A	Hammonton	53.52	1	P	P	09 08 41.7	+0.8
	baz=182,SNR=5.8						
P53A	Whipple	53.52	355	P	P	09 08 40.5	-0.5
P53A				IAmb	IAmb	09 08 51.4	
	comp=Z,105nm,1.2s						
P53A	Whipple	53.52	355	P	P	09 08 40.1	-0.8
	baz=174,SNR=16						
P54A	Burton	53.56	356	P	P	09 08 40.2	-1.1
	baz=175						
MCWV	Mont Chateau	53.58	357	P	P	09 08 40.9	-0.5
MCWV	Mont Chateau	53.58	357	P	P	09 08 40.9	-0.5
	baz=176,SNR=7.1						
P60A	Greenville	53.64	1	P	P	09 08 42.0	+0.2
P60A				IAmb	IAmb	09 08 57.5	
	comp=Z,140nm,1.4s						
P60A				IAMs_20	IAMs_20	09 30 57.1	
	comp=Z,10µm,22.0s						
P60A	Greenville	53.64	1	P	P	09 08 41.9	+0.2
	baz=181,SNR=8.0						
P51A	Williamsport	53.67	354	P	P	09 08 40.2	-1.8
P51A				IAMs_20	IAMs_20	09 33 01.9	
	comp=Z,15µm,20.0s						
P51A	Williamsport	53.67	354	P	P	09 08 40.8	-1.3
	baz=172,SNR=18						
OLIL	Olney	53.70	349	P	P	09 08 40.9	-1.4
P52A	Corning	53.73	354	P	P	09 08 41.0	-1.5
	baz=173,SNR=19						
CCM	Cathedral Cave	53.73	345	P	P	09 08 41.0	-1.5
CCM				pmax	pmax		
	comp=Z,195nm,1.5s						
CCM				MLR	MLR		
	comp=Z,5µm,20.0s						
CCM	Cathedral Cave	53.73	345	P	P	09 08 41.0	-1.5
CCM				IAmb	IAmb	09 08 52.8	
	comp=Z,195nm,1.4s						
CCM	Cathedral Cave	53.73	345	P	P	09 08 41.4	-1.2
	baz=162						
PSUB	Penn St. - Bra	53.76	1	P	P	09 08 42.9	+0.2
PSUB				IAmb	IAmb	09 08 55.1	
	comp=Z,108nm,1.2s						
MVL	Millersville	53.82	0	P	P	09 08 43.1	-0.1
BLO	Bloomington	53.84	350	P	P	09 08 41.8	-1.5
BLO				pmax	pmax		
	comp=Z,180nm,1.1s						
BLO				MLR	MLR		
	comp=Z,12µm,20.0s						
BLO	Bloomington	53.84	350	P	P	09 08 41.8	-1.5
BLO				IAMs_20	IAMs_20	09 33 33.4	
	comp=Z,12µm,20.0s						
P50A	Jamestown	53.88	353	P	P	09 08 42.5	-1.1
	baz=171,SNR=26						
P49A	Miami Univ. Ec	53.92	352	P	P	09 08 42.4	-1.5
	baz=170,SNR=35						
S39A	Bolivar	53.93	343	P	P	09 08 43.4	-0.6
S39A				IAmb	IAmb	09 08 52.7	
	comp=Z,160nm,1.1s						
O61A	Allentown	53.94	2	P	P	09 08 44.5	+0.5
	baz=182,SNR=11						
O58A	Lewisberry	53.95	359	P	P	09 08 44.4	+0.3
	baz=179,SNR=22						
P48A	Milroy	53.95	351	P	P	09 08 42.5	-1.7
P48A				IAMs_20	IAMs_20	09 34 02.4	
	comp=Z,12µm,20.0s						
P48A	Milroy	53.95	351	P	P	09 08 42.2	-1.9
	baz=169,SNR=24						
MSTX	Muleshoe	54.02	333	P	P	09 08 44.3	-0.6
MSTX				IAmb	IAmb	09 08 53.7	
	comp=Z,72nm,0.9s						
MSTX	Muleshoe	54.02	333	P	P	09 08 44.5	-0.4
	baz=148,SNR=30						
O57A	Amberson	54.05	359	P	P	09 08 45.1	+0.3
	baz=178,SNR=44						
SLM	Saint Louis	54.05	347	P	P	09 08 44.0	-0.8
SLM				pmax	pmax		
	comp=Z,192nm,1.3s						
SLM				MLR	MLR		
	comp=Z,4µm,19.0s						
SLM	Saint Louis	54.05	347	P	P	09 08 44.0	-0.8
PAGS	Pennsylvania G	54.05	360	P	P	09 08 44.9	+0.1
PAGS				IAmb	IAmb	09 08 57.7	
	comp=Z,135nm,1.4s						
O55A	Ligonier	54.10	357	P	P	09 08 44.8	-0.4
	baz=176,SNR=14						
O56A	Blue Knob Stat	54.13	358	P	P	09 08 45.6	+0.2
O56A				IAmb	IAmb	09 08 49.0	
	comp=Z,66nm,0.8s						
O56A				IAMs_20	IAMs_20	09 33 26.1	
	comp=Z,9µm,20.0s						
O56A	Blue Knob Stat	54.13	358	P	P	09 08 45.3	-0.2
	baz=177,SNR=16						
O54A	Avella	54.13	356	P	P	09 08 43.9	-1.6
O54A				IAMs_20	IAMs_20	09 33 18.2	
	comp=Z,9µm,21.0s						
O59A	Robesonia	54.13	0	P	P	09 08 46.0	+0.6
	baz=180,SNR=14						
O60A	Telford	54.15	1	P	P	09 08 45.9	+0.4
	baz=181,SNR=18						
O52A	Adamsville	54.18	355	P	P	09 08 43.9	-1.8
O52A	Adamsville	54.18	355	P	P	09 08 44.7	-1.1
	baz=173,SNR=13						
T35A	Sooner Cattle	54.19	340	P	P	09 08 45.9	0.0
O53A	New Philadelph	54.26	355	P	P	09 08 45.0	-1.4
	baz=174,SNR=11						
O51A	Pataskala	54.28	354	P	P	09 08 45.4	-1.2
	baz=172,SNR=22						
AMTX	Amarillo	54.33	334	P	P	09 08 46.0	-1.1
AMTX				IAmb	IAmb	09 08 52.1	
	comp=Z,107nm,1.5s						
AMTX	Amarillo	54.33	334	P	P	09 08 46.9	-0.2
	baz=149						
HSIG		54.36	322	P	P	09 08 48.6	+1.3
HSIG				IAMs_20	IAMs_20	09 30 53.1	
	comp=Z,14µm,18.0s						
O50A	Cable	54.39	353	P	P	09 08 46.0	-1.4
	baz=171,SNR=30						
P46A	Rosedale	54.39	350	P	P	09 08 45.4	-1.9
P46A				IAMs_20	IAMs_20	09 33 41.0	
	comp=Z,10µm,20.0s						
ACSO	Alum Creek Sta	54.40	354	P	P	09 08 46.5	-0.9
ACSO				IAMs_20	IAMs_20	09 33 33.3	
	comp=Z,14µm,20.0s						
ACSO	Alum Creek Sta	54.40	354	P	P	09 08 46.3	-1.2
	baz=172,SNR=16						
LUPA	Lehigh Univers	54.43	1	P	P	09 08 48.5	+0.9
SSPA	Standing Stone	54.48	359	P	P	09 08 48.0	+0.1
SSPA	Standing Stone	54.48	359	IAMs_20	IAMs_20	09 34 38.2	
	comp=Z,8µm,18.0s						
SSPA	Standing Stone	54.48	359	P	P	09 08 47.6	-0.3
	baz=178						
O49A	Covington	54.52	352	P	P	09 08 46.3	-1.9
O49A				IAmb	IAmb	09 09 00.8	
	comp=Z,99nm,1.0s						
O49A	Covington	54.52	352	P	P	09 08 46.6	-1.6
	baz=170,SNR=27						
BRNJ	Basking Ridge	54.53	2	P	P	09 08 48.9	+0.6
BRNJ				IAmb	IAmb	09 08 56.8	
	comp=Z,55nm,0.8s						
U32A	Winter Ranch,	54.58	338	P	P	09 08 48.3	-0.5
U32A				IAmb	IAmb	09 08 57.7	
	comp=Z,102nm,0.9s						
N61A	South Mountain	54.61	2	P	P	09 08 49.5	+0.6
	baz=182,SNR=14						
N55A	Marion Center	54.66	358	P	P	09 08 49.0	-0.2
	baz=177,SNR=25						
CPNY	Central Park	54.66	2	P	P	09 08 49.6	+0.4
CPNY				IAmb	IAmb	09 08 51.5	
	comp=Z,110nm,1.1s						
N58A	Sunbury	54.66	360	P	P	09 08 49.6	+0.3
N58A				IAmb	IAmb	09 08 52.9	
	comp=Z,92nm,0.8s						
N58A	Sunbury	54.66	360	P	P	09 08 49.5	+0.3
	baz=180,SNR=26						
O48A	Farmland	54.70	352	P	P	09 08 48.1	-1.4
	baz=170,SNR=38						
N60A	Cedar Hill Far	54.70	1	P	P	09 08 49.8	+0.3
	baz=181,SNR=8.5						
N59A	State Game Lan	54.74	1	P	P	09 08 51.1	+1.3
N59A	State Game Lan	54.74	1	P	P	09 08 50.4	+0.5
	baz=181,SNR=25						
N56A	West Decatur	54.77	358	P	P	09 08 50.0	0.0
	baz=178,SNR=26						
N53A	Lisbon	54.78	356	P	P	09 08 48.5	-1.7
N53A				IAmb	IAmb	09 09 02.1	
	comp=Z,97nm,1.2s						
N53A				IAMs_20	IAMs_20	09 33 40.4	
	comp=Z,10µm,21.0s						
N53A	Lisbon	54.78	356	P	P	09 08 49.3	-0.9
	baz=175,SNR=13						
N62A	Caumsett State	54.82	3	P	P	09 08 50.7	+0.4
	baz=183						
P43A	Skaggs, Pawnee	54.85	348	P	P	09 08 49.2	-1.5
N52A	McGinn's Farm,	54.86	355	P	P	09 08 49.2	-1.5
	baz=174,SNR=11						
PAL	Palisades	54.87	2	P	P	09 08 50.9	+0.1
PAL				pmax	pmax		
	comp=Z,146nm,1.1s						
PAL	Palisades	54.87	2	P	P	09 08 50.9	+0.1
PAL				IAmb	IAmb	09 08 53.1	
	comp=Z,146nm,1.1s						
PAL	Palisades	54.87	2	P	P	09 08 50.9	+0.1
	baz=183,SNR=12						
N54A	Moraine State	54.89	357	P	P	09 08 50.4	-0.5
N54A				IAmb	IAmb	09 09 01.4	
	comp=Z,187nm,1.4s						
N54A				IAMs_20	IAMs_20	09 33 58.1	
	comp=Z,9µm,21.0s						
N54A	Moraine State	54.89	357	P	P	09 08 50.4	-0.5
	baz=176,SNR=17						
ODNJ	Ogdensburg	54.93	2	P	P	09 08 50.0	-1.2
N50A	Nevada	54.95	354	P	P	09 08 50.2	-1.2
	baz=172,SNR=23						
N51A	Ashland	55.02	354	P	P	09 08 50.2	-1.7
N51A				IAmb	IAmb	09 09 01.6	
	comp=Z,158nm,1.4s						
N51A				IAMs_20	IAMs_20	09 34 28.7	
	comp=Z,10µm,19.0s						
N51A	Ashland	55.02	354	P	P	09 08 50.4	-1.5
	baz=173,SNR=14						
SFIN	Lafayette	55.11	350	P	P	09 08 50.8	-1.8
SFIN				IAmb	IAmb	09 09 02.6	
	comp=Z,178nm,1.4s						
SFIN				IAMs_20	IAMs_20	09 34 13.1	
	comp=Z,13µm,20.0s						
SFIN	Lafayette	55.11	350	P	P	09 08 48.7	-3.8
	baz=167						
O44A	Mansfield	55.14	349	P	P	09 08 51.4	-1.4
M57A	Sunshine Farm,	55.16	359	P	P	09 08 53.1	+0.2
M57A				IAmb	IAmb	09 09 06.6	
	comp=Z,134nm,0.9s						
M57A	Sunshine Farm,	55.16	359	P	P	09 08 53.4	+0.5
	baz=179,SNR=23						
M60A	Port Jervis	55.17	2	P	P	09 08 53.3	+0.3
	baz=182,SNR=9.7						
M60A				S	S	09 16 36.2	+0.1
	baz=182						
319A	Douglas	55.17	326	P	P	09 08 54.5	+1.2
319A				IAMs_20	IAMs_20	09 30 17.5	
	comp=Z,14µm,21.0s						
M61A	Granite Spring	55.18	2	P	P	09 08 53.1	+0.1
	baz=183,SNR=8.4						
M61A				S	S	09 16 36.6	+0.4
	baz=183						
M58A	Price's Panora	55.19	360	P	P	09 08 53.8	+0.7
	baz=180,SNR=20						
M58A				S	S	09 16 35.5	-1.0
	baz=180						
N49A	Columbus Grove	55.22	353	P	P	09 08 51.8	-1.5
N49A				IAmb	IAmb	09 09 06.1	
	comp=Z,119nm,1.1s						
N49A	Columbus Grove	55.22	353	P	P	09 08 52.1	-1.2
	baz=171,SNR=23						
YLE	Yale	55.23	3	P	P	09 08 54.0	+0.7
YLE				IAMs_20	IAMs_20	09 32 60.0	
	comp=Z,11µm,22.0s						
121A	Cookes Peak, D	55.27	328	P	P	09 08 55.2	+1.1
121A				IAmb	IAmb	09 09 13.1	
	comp=Z,119nm,1.0s						
121A	Cookes Peak, D	55.27	328	P	P	09 08 55.1	+1.1
	baz=142,SNR=52						
121A				S	S	09 16 40.2	+2.1
	baz=142						
N48A	Decatur	55.27	352	P	P	09 08 52.2	-1.4
	baz=170,SNR=11						
M56A	Emporium	55.33	358	P	P	09 08 54.0	-0.1
M56A				IAmb	IAmb	09 08 58.5	
	comp=Z,84nm,1.1s						
M56A				IAMs_20	IAMs_20	09 35 04.9	
	comp=Z,9µm,19.0s						
M56A	Emporium	55.33	358	P	P	09 08 53.8	-0.4
	baz=178,SNR=21						
M55A	Ridgway	55.33	358	P	P	09 08 53.1	-1.0
M55A				IAmb	IAmb	09 08 58.4	
	comp=Z,113nm,1.1s						
M55A				IAMs_20	IAMs_20	09 34 13.0	
	comp=Z,9µm,18.0s						
M55A	Ridgway	55.33	358	P	P	09 08 53.8	-0.4
	baz=177,SNR=20						
M62A	Hamden	55.35	3	P	P	09 08 55.1	+0.8
	baz=184,SNR=28						
M62A				S	S	09 16 38.7	+0.2
	baz=184						
M63A	Gales Ferry	55.37	4	P	P	09 08 54.9	+0.5
	baz=185,SNR=6.2						
M63A				S	S	09 16 38.6	-0.1
	baz=185						
M59A	Waymart	55.37	1	P	P	09 08 54.9	+0.5
	baz=181,SNR=24						
M59A				S	S	09 16 39.1	+0.3
	baz=181						
N47A	Urbana	55.38	351	P	P	09 08 51.9	-2.6
N47A				IAmb	IAmb	09 09 06.8	
	comp=Z,114nm,0.9s						
N47A				IAMs_20	IAMs_20	09 35 04.2	
	comp=Z,13µm,20.0s						
N47A	Urbana	55.38	351	P	P	09 08 52.9	-1.6
	baz=169,SNR=36						
M53A	WI Miller and	55.40	356	P	P	09 08 53.5	-1.1
	baz=175,SNR=14						
M54A	Oil Creek Stat	55.41	357	P	P	09 08 54.1	-0.7
M54A				IAmb	IAmb	09 08 56.1	
	comp=Z,107nm,1.1s						
M54A				IAMs_20	IAMs_20	09 33 59.0	

	comp=Z,8µm,21.0s						
M54A	**Oil Creek Stat**	55.41	357	P	P	09 08 54.0	-0.7
	baz=176,SNR=27						
M51A	**Elyria**	55.42	355	P	P	09 08 53.4	-1.3
	baz=173,SNR=9.8						
M52A	**Chesterland**	55.55	355	P	P	09 08 54.7	-1.0
M52A				IAMs_20	IAMs_20	09 34 15.8	
	comp=Z,8µm,21.0s						
M52A	**Chesterland**	55.55	355	P	P	09 08 54.5	-1.2
	baz=174,SNR=8.5						
M50A	**Fremont**	55.57	354	P	P	09 08 54.6	-1.2
M50A				IAmb	IAmb	09 09 08.5	
	comp=Z,102nm,0.8s						
M50A				IAMs_20	IAMs_20	09 34 19.2	
	comp=Z,13µm,19.0s						
M50A	**Fremont**	55.57	354	P	P	09 08 54.6	-1.2
	baz=172,SNR=21						
M64A	**Tiverton**	55.58	5	P	P	09 08 55.9	+0.1
	baz=186						
M64A				S	S	09 16 41.5	+0.1
	baz=186						
ALLY	**Alegheny Colle**	55.58	357	P	P	09 08 54.5	-1.4
ALLY				IAmb	IAmb	09 09 08.4	
	comp=Z,97nm,1.0s						
KSCT	**Kent School, K**	55.61	3	P	P	09 08 56.2	+0.1
KSCT				IAmb	IAmb	09 09 09.1	
	comp=Z,153nm,1.1s						
M65A	**Busby, Falmout**	55.63	5	IAMs_20	IAMs_20	09 33 24.9	
	comp=Z,10µm,21.0s						
HDIL	**Hopedale**	55.69	348	P	P	09 08 55.5	-1.2
HDIL	**Hopedale**	55.69	348	P	P	09 08 55.1	-1.5
	baz=165,SNR=10						
M49A	**Liberty Center**	55.74	353	P	P	09 08 55.8	-1.2
	baz=171,SNR=18						
M49A				S	S	09 16 38.8	-4.9
	baz=171						
L57A	**Andrews Acres**	55.82	360	P	P	09 08 57.7	0.0
	baz=179,SNR=18						
L57A				S	S	09 16 43.0	-1.9
	baz=179						
M47A	**Cromwell**	55.84	352	P	P	09 08 56.2	-1.5
	baz=169,SNR=10						
M47A				S	S	09 16 38.5	-6.5
	baz=169						
L60A	**Shokan**	55.84	2	P	P	09 08 58.6	+0.8
	baz=182,SNR=30						
L60A				S	S	09 16 45.6	+0.5
	baz=182						
M48A	**Edgerton**	55.84	352	P	P	09 08 56.3	-1.5
M48A				IAMs_20	IAMs_20	09 33 59.4	
	comp=Z,15µm,20.0s						
M48A	**Edgerton**	55.84	352	P	P	09 08 56.3	-1.5
	baz=170						
M48A				S	S	09 16 39.4	-5.7
	baz=170						
L63A	**North Scituate**	55.85	4	P	P	09 08 58.2	+0.4
	baz=186,SNR=9.3						
L58A	**Harry Jones Me**	55.87	0	P	P	09 08 58.5	+0.5
	baz=180,SNR=21						
L58A				S	S	09 16 44.5	-0.9
	baz=180						
L53A	**Girard**	55.89	356	P	P	09 08 57.1	-1.1
	baz=175,SNR=22						
L53A				S	S	09 16 40.5	-5.2
	baz=175						
BRYW	**Bryant College**	55.91	4	P	P	09 08 58.9	+0.6
L62A	**Suffield**	55.96	3	P	P	09 08 58.9	+0.3
	baz=184,SNR=9.2						
L56A	**Greenwood**	55.97	359	P	P	09 08 58.4	-0.4
L56A				IAmb	IAmb	09 09 14.0	
	comp=Z,124nm,1.1s						
L56A	**Greenwood**	55.97	359	P	P	09 08 58.4	-0.4
	baz=178,SNR=23						
L56A				S	S	09 16 44.6	-2.2
	baz=178						
L64A	**Middleborough**	55.99	5	P	P	09 08 59.2	+0.4
	baz=186,SNR=6.4						
BINY	**Binghamton**	56.02	0	P	P	09 08 59.0	-0.1
BINY				IAmb	IAmb	09 09 12.9	
	comp=Z,104nm,0.9s						
BINY	**Binghamton**	56.02	0	P	P	09 08 59.5	+0.5
	baz=180,SNR=21						
L59A	**Walton**	56.02	1	P	P	09 08 59.7	+0.6
L59A	**Walton**	56.02	1	P	P	09 08 59.7	+0.6
	baz=182,SNR=41						
L59A				S	S	09 16 46.5	-1.0
	baz=182						
L55A	**Hinsdale**	56.03	358	P	P	09 08 58.5	-0.7
	baz=178,SNR=24						
L55A				S	S	09 16 44.6	-3.1
	baz=178						
ERPA	**Erie**	56.04	357	P	P	09 08 58.3	-0.9
ERPA				IAmb	IAmb	09 09 12.1	
	comp=Z,127nm,1.1s						
ERPA	**Erie**	56.04	357	P	P	09 08 58.3	-0.9
	baz=176,SNR=13						
L61A	**Hillsdale 1, H**	56.07	3	P	P	09 08 60.0	+0.6
	baz=183,SNR=17						
L61A				S	S	09 16 48.6	+0.5
	baz=183						
L54A	**Sinclairville**	56.12	357	P	P	09 08 58.9	-0.9
	baz=176,SNR=34						
L54A				S	S	09 16 44.4	-4.4
	baz=176						
N41A	**Harden Midland**	56.16	347	P	P	09 08 58.9	-1.2
N41A				IAmb	IAmb	09 09 09.9	
	comp=Z,161nm,1.1s						
L50A	**Kingsville**	56.18	354	P	P	09 08 58.6	-1.6
	baz=172,SNR=10						
KSU1	**Kansas State U**	56.21	341	P	P	09 08 59.6	-0.8
	baz=156,SNR=20						
KSU1				S	S	09 16 47.5	-2.5
	baz=156						
QUA2	**Belchertown**	56.22	4	P	P	09 09 00.7	+0.2
QUA2				IAmb	IAmb	09 09 14.0	
	comp=Z,105nm,1.1s						
QUA2				IAMs_20	IAMs_20	09 33 02.4	
	comp=Z,13µm,22.0s						
M44A	**Midewin, Midew**	56.26	349	IAMs_20	IAMs_20	09 34 48.4	
	comp=Z,10µm,21.0s						
L48A	**N Adams**	56.26	353	P	P	09 08 59.1	-1.6
	baz=170,SNR=17						
L48A				S	S	09 16 44.8	-5.9
	baz=170						
WVNY	**West Valley, N**	56.26	358	P	P	09 09 00.8	-0.1
R32A	**Long Quarter,**	56.29	339	P	P	09 09 00.5	-0.6
L49A	**Milan**	56.34	353	P	P	09 09 00.3	-1.1
	baz=171,SNR=23						
L49A				S	S	09 16 46.4	-5.4
	baz=171						
L61B	**Northampton**	56.37	3	P	P	09 09 01.9	+0.3
	baz=184,SNR=12						
L61B				S	S	09 16 51.7	-0.3
	baz=184						
L47A	**Sherwood**	56.39	352	P	P	09 08 59.9	-1.8
	baz=170,SNR=13						
L47A				S	S	09 16 45.8	-6.5
	baz=170						
WES	**Weston**	56.40	4	P	P	09 09 01.8	+0.1
WES				pmax	pmax		
	comp=Z,70nm,0.9s						
WES	**Weston**	56.40	4	P	P	09 09 01.8	+0.1
WES				IAmb	IAmb	09 09 04.7	
	comp=Z,70nm,0.9s						
K54A	**Basiliko Farm,**	56.47	358	P	P	09 09 01.6	-0.6
	baz=177,SNR=18						
K54A				S	S	09 16 49.1	-4.3
	baz=177						
K60A	**Five Rivers En**	56.48	2	P	P	09 09 03.0	+0.7
	baz=183,SNR=15						
K60A				S	S	09 16 54.0	+0.5
	baz=183						
HRV	**Adam Dziewonsk**	56.50	4	P	P	09 09 03.1	+0.7
HRV				pmax	pmax		
	comp=Z,96nm,0.9s						
HRV				MLR	MLR		
	comp=Z,8µm,22.0s						
HRV	**Adam Dziewonsk**	56.50	4	P	P	09 09 03.1	+0.7
HRV				IAmb	IAmb	09 09 06.5	
	comp=Z,96nm,0.8s						
HRV	**Adam Dziewonsk**	56.50	4	IAMs_20	IAMs_20	09 33 42.8	
	comp=Z,8µm,22.0s						
HRV	**Adam Dziewonsk**	56.50	4	P	P	09 09 03.2	+0.8
	baz=186						
AAM	**Ann Arbor**	56.52	354	P	P	09 09 01.4	-1.2
	baz=172,SNR=6.1						
AAM				S	S	09 16 48.4	-5.7

	baz=172						
K56A	**Middlesex**	56.52	359	P	P	09 09 02.3	-0.4
	baz=179,SNR=11						
K56A				S	S	09 16 50.9	-3.3
	baz=179						
ANMO	**Albuquerque**	56.53	330	P	P	09 09 03.2	+0.2
	comp=Z,41nm,1.1s,baz=137,slow=8.8,SNR=69						
ANMO	**Albuquerque**	56.53	330*c*	*i*P	P	09 09 02.7	-0.4
ANMO				pmax	pmax		
	comp=Z,68nm,0.9s						
ANMO	**Albuquerque**	56.53	330	P	P	09 09 03.0	-0.1
ANMO				IAmb	IAmb	09 09 12.1	
	comp=Z,65nm,0.9s						
ANMO	**Albuquerque**	56.53	330	IAMs_20	IAMs_20	09 31 44.1	
	comp=Z,9µm,19.0s						
ANMO	**Albuquerque**	56.53	330	P	P	09 09 03.4	+0.3
	baz=144						
ANMO				S	S	09 16 54.5	-0.4
	baz=144						
K57A	**Scipio Center**	56.55	360	P	P	09 09 02.5	-0.3
	baz=180,SNR=22						
K57A				S	S	09 16 51.8	-2.7
	baz=180						
K61A	**Williamstown**	56.56	3	P	P	09 09 03.5	+0.6
	baz=184,SNR=14						
K55A	**Perry**	56.57	358	P	P	09 09 02.4	-0.6
	baz=178,SNR=15						
K55A				S	S	09 16 51.4	-3.3
	baz=178						
L46A	**Eue Claire**	56.58	351	P	P	09 09 02.0	-1.1
L46A				IAmb	IAmb	09 09 14.4	
	comp=Z,144nm,1.1s						
L46A				IAMs_20	IAMs_20	09 35 50.0	
	comp=Z,11µm,20.0s						
L46A	**Eue Claire**	56.58	351	P	P	09 09 01.0	-2.0
	baz=168,SNR=5.8						
L46A				S	S	09 16 47.2	-7.7
	baz=168						
K58A	**Earlville**	56.59	1	P	P	09 09 03.4	+0.3
K58A				IAMs_20	IAMs_20	09 33 46.1	
	comp=Z,8µm,22.0s						
K58A	**Earlville**	56.59	1	P	P	09 09 03.3	+0.2
	baz=181,SNR=20						
K58A				S	S	09 16 53.3	-1.7
	baz=181						
TRY	**Troy**	56.60	2	P	P	09 09 03.1	0.0
K59A	**Cooperstown**	56.61	1	P	P	09 09 03.7	+0.4
	baz=182,SNR=24						
K59A				S	S	09 16 54.7	-0.6
	baz=182						
K62A	**Royalston**	56.61	4	P	P	09 09 03.9	+0.6
K62A				IAmb	IAmb	09 09 07.2	
	comp=Z,98nm,0.9s						
K62A				IAMs_20	IAMs_20	09 33 13.4	
	comp=Z,14µm,22.0s						
K62A	**Royalston**	56.61	4	P	P	09 09 03.7	+0.5
	baz=185,SNR=8.5						
K63A	**Dunstable**	56.68	4	P	P	09 09 04.0	+0.3
	baz=186,SNR=5.8						
K63A				S	S	09 16 57.4	+1.3
	baz=186						
TUC	**Tucson**	56.71	325	P	P	09 09 04.4	+0.1
TUC				pmax	pmax		
	comp=Z,53nm,1.0s						
TUC	**Tucson**	56.71	325	P	P	09 09 04.4	+0.1
TUC	**Tucson**	56.71	325	P	P	09 09 05.0	+0.7
	baz=139						
TUC				S	S	09 16 58.4	+1.2
	baz=139						
K51A	**Iona Station**	56.74	355	P	P	09 09 02.0	-2.1
	baz=174						
K52A	**Tillsonburg**	56.74	356	P	P	09 09 03.0	-1.2
	baz=175,SNR=16						
K50A	**Casco**	56.89	354	P	P	09 09 03.7	-1.5
K50A				IAmb	IAmb	09 09 06.3	
	comp=Z,156nm,1.1s						
K50A				IAMs_20	IAMs_20	09 34 39.1	
	comp=Z,12µm,21.0s						
K50A	**Casco**	56.89	354	P	P	09 09 03.5	-1.7
	baz=173,SNR=14						
K50A				S	S	09 16 52.9	-5.9
	baz=173						
K49A	**Clarkson**	56.98	354	P	P	09 09 03.9	-1.9
	baz=172,SNR=10						
K49A				S	S	09 16 53.8	-6.3
	baz=172						
CBKS	**Cedar Bluff**	57.00	338	P	P	09 09 06.1	-0.1
CBKS				pmax	pmax		
	comp=Z,133nm,1.0s						
CBKS				MLR	MLR		
	comp=Z,4µm,22.0s						
CBKS	**Cedar Bluff**	57.00	338	P	P	09 09 06.1	-0.1
CBKS				IAmb	IAmb	09 09 19.4	
	comp=Z,133nm,0.9s						
CBKS	**Cedar Bluff**	57.00	338	P	P	09 09 05.7	-0.5
	baz=153,SNR=33						
CBKS				S	S	09 16 58.5	-2.2
	baz=153						
L44A	**Lake County Fo**	57.00	350	P	P	09 09 04.7	-1.3
L44A				IAmb	IAmb	09 09 05.7	
	comp=Z,106nm,1.3s						
L44A				IAMs_20	IAMs_20	09 35 30.1	
	comp=Z,12µm,20.0s						
L44A	**Lake County Fo**	57.00	350	P	P	09 09 03.7	-2.4
	baz=167						
L44A				S	S	09 16 53.0	-7.4
	baz=167						
MEDO	**Medina**	57.02	358	P	P	09 09 05.3	-0.8
MEDO				IAMs_20	IAMs_20	09 36 23.5	
	comp=Z,8µm,18.0s						
K47A	**Vermontville**	57.05	352	P	P	09 09 04.5	-1.8
	baz=170,SNR=12						
K47A				S	S	09 16 55.2	-5.8
	baz=170						
K48A	**Perry**	57.07	353	P	P	09 09 05.0	-1.5
	baz=171,SNR=38						
K48A				S	S	09 16 54.7	-6.6
	baz=171						
J56A	**Wolcott**	57.10	360	P	P	09 09 05.6	-1.1
J56A				IAMs_20	IAMs_20	09 34 06.6	
	comp=Z,8µm,21.0s						
J56A	**Wolcott**	57.10	360	P	P	09 09 06.2	-0.5
	baz=179,SNR=20						
J56A				S	S	09 16 58.4	-3.2
	baz=179						
J55A	**Hilton**	57.10	359	P	P	09 09 06.0	-0.7
J55A				IAmb	IAmb	09 09 19.5	
	comp=Z,127nm,1.1s						
J55A	**Hilton**	57.10	359	P	P	09 09 06.0	-0.7
	baz=178,SNR=8.4						
J55A				S	S	09 16 57.9	-3.7
	baz=178						
J60A	**Lant Hill Farm**	57.13	3	P	P	09 09 07.8	+0.9
	baz=183,SNR=35						
J60A				S	S	09 17 03.8	+1.8
	baz=183						
J54A	**Appleton**	57.13	358	P	P	09 09 05.7	-1.2
J54A				IAMs_20	IAMs_20	09 36 09.5	
	comp=Z,7µm,19.0s						
J54A	**Appleton**	57.13	358	P	P	09 09 06.1	-0.8
	baz=177						
K46A	**Dorr**	57.17	352	P	P	09 09 04.9	-2.3
	baz=169,SNR=8.8						
J52A	**Paris**	57.19	356	P	P	09 09 06.1	-1.2
	baz=175,SNR=47						
J58A	**Remsen**	57.19	1	P	P	09 09 06.9	-0.5
J58A				IAmb	IAmb	09 09 23.0	
	comp=Z,82nm,1.1s						
J58A	**Remsen**	57.19	1	P	P	09 09 07.5	+0.1
	baz=181,SNR=14						
J58A				S	S	09 17 01.4	-1.5
	baz=181						
J62A	**Henniker**	57.20	4	P	P	09 09 07.8	+0.4
	baz=185						
J57A	**Williamstown**	57.23	0	P	P	09 09 07.2	-0.4
J57A				IAmb	IAmb	09 09 20.8	
	comp=Z,107nm,1.0s						
J57A				IAMs_20	IAMs_20	09 34 06.2	
	comp=Z,9µm,22.0s						
J57A	**Williamstown**	57.23	0	P	P	09 09 07.5	-0.1
	baz=180,SNR=18						
J57A				S	S	09 17 01.2	-2.2
	baz=180						
ACCN	**Adirondack Com**	57.26	2	P	P	09 09 07.9	+0.1
J61A	**Chester**	57.27	3	P	P	09 09 08.7	+0.8
	baz=184,SNR=20						
J61A				S	S	09 17 05.7	+1.7

	baz=184						
J63A	**Strafford**	57.30	5	P	P	09 09 08.3	+0.2
	baz=186						
J63A				S	S	09 17 05.4	+1.1
	baz=186						
J59A	**Piesco**	57.31	2	P	P	09 09 07.9	-0.3
J59A				IAmb	IAmb	09 09 21.3	
	comp=Z,137nm,1.1s						
J59A				IAMs_20	IAMs_20	09 37 03.2	
	comp=Z,7µm,19.0s						
J59A	**Piesco**	57.31	2	P	P	09 09 08.3	+0.1
	baz=182,SNR=14						
J59A				S	S	09 17 04.2	-0.3
	baz=182						
T25A	**Trinidad**	57.41	334	P	P	09 09 09.0	-0.3
T25A				IAmb	IAmb	09 09 18.2	
	comp=Z,62nm,0.8s						
T25A	**Trinidad**	57.41	334	P	P	09 09 10.1	+0.8
	baz=147,SNR=38						
T25A				S	S	09 17 07.0	+0.5
	baz=147						
FFD	**Franklin Falls**	57.45	4	P	P	09 09 09.9	+0.8
FFD				IAmb	IAmb	09 09 13.3	
	comp=Z,61nm,0.8s						
FFD				IAMs_20	IAMs_20	09 34 11.0	
	comp=Z,10µm,22.0s						
J49A	**Marlette**	57.52	354	P	P	09 09 07.7	-2.0
	baz=172,SNR=14						
I58A	**Old Forge**	57.52	1	P	P	09 09 09.8	+0.1
	baz=182,SNR=18						
J48A	**Bridge Port**	57.52	354	P	P	09 09 07.8	-1.9
J48A	**Bridge Port**	57.52	354	P	P	09 09 08.1	-1.6
	baz=171,SNR=24						
L40A	**Anamosa**	57.54	347	P	P	09 09 08.7	-1.2
L40A				IAmb	IAmb	09 09 19.6	
	comp=Z,131nm,1.1s						
J47A	**Sunmer**	57.58	353	P	P	09 09 08.6	-1.5
J47A	**Sunmer**	57.58	353	P	P	09 09 09.1	-1.0
	baz=170,SNR=20						
J47A				S	S	09 17 01.3	-6.7
	baz=170						
K43A	**Burlington**	57.59	350	P	P	09 09 09.5	-0.6
K43A				IAmb	IAmb	09 09 21.1	
	comp=Z,118nm,1.0s						
K43A				IAMs_20	IAMs_20	09 35 58.6	
	comp=Z,11µm,20.0s						
214A	**Organ Pipe Nat**	57.60	323	P	P	09 09 11.6	+1.1
214A				IAmb	IAmb	09 09 20.8	
	comp=Z,166nm,1.4s						
214A				IAMs_20	IAMs_20	09 32 53.5	
	comp=Z,13µm,18.0s						
214A	**Organ Pipe Nat**	57.60	323	P	P	09 09 11.6	+1.1
	baz=137,SNR=33						
214A				S	S	09 17 10.6	+1.8
	baz=137						
HNH	**Hanover**	57.64	3	P	P	09 09 11.7	+1.2
HNH				IAmb	IAmb	09 09 13.2	
	comp=Z,128nm,1.1s						
HNH				IAMs_20	IAMs_20	09 34 29.8	
	comp=Z,8µm,22.0s						
I59A	**Olmsteadville**	57.66	2	P	P	09 09 11.0	+0.4
	baz=183,SNR=34						
I59A				S	S	09 17 08.8	-0.3
	baz=183						
I53A	**Kortright Cn E**	57.72	357	P	P	09 09 09.8	-1.2
	baz=176						
I60A	**Shoreham**	57.73	3	P	P	09 09 11.8	+0.6
	baz=183,SNR=43						
I60A				S	S	09 17 11.3	+1.4
	baz=183						
PECO	**Prince Edward**	57.76	359	P	P	09 09 11.3	0.0
PECO				IAmb	IAmb	09 09 24.2	
	comp=Z,140nm,1.1s						
PECO				IAMs_20	IAMs_20	09 34 38.1	
	comp=Z,8µm,21.0s						
I57A	**Carthage**	57.76	1	P	P	09 09 11.4	+0.1
	baz=181,SNR=9.1						
I57A				S	S	09 17 08.8	-1.6
	baz=181						
I51A	**Listowel**	57.78	356	P	P	09 09 09.7	-1.8
	baz=175,SNR=16						
I51A				S	S	09 17 04.0	-6.7
	baz=175						
J46A	**Howard City**	57.80	352	P	P	09 09 09.4	-2.2
	baz=169						
NCB	**Newcomb**	57.82	2	P	P	09 09 11.8	0.0
NCB				IAmb	IAmb	09 09 22.2	
	comp=Z,133nm,1.3s						
SCIA	**State Center**	57.86	345	P	P	09 09 11.6	-0.5
SCIA				IAmb	IAmb	09 09 22.4	
	comp=Z,182nm,1.3s						
SCIA	**State Center**	57.86	345	P	P	09 09 11.1	-1.0
	baz=161,SNR=7.4						
SCIA				S	S	09 17 06.1	-5.7
	baz=161						
I61A	**Oroboro, Fairl**	57.88	4	P	P	09 09 13.1	+1.0
	baz=185,SNR=27						
I61A				S	S	09 17 14.0	+2.2
	baz=185						
I62A	**Tamworth**	57.88	4	IAMs_20	IAMs_20	09 34 22.6	
	comp=Z,9µm,22.0s						
I62A	**Tamworth**	57.88	4	P	P	09 09 12.6	+0.4
	baz=186						
X18A	**Snowflake**	57.95	327	P	P	09 09 14.6	+1.4
J45A	**Montague**	57.99	351	IAMs_20	IAMs_20	09 34 43.2	
	comp=Z,9µm,20.0s						
J45A	**Montague**	57.99	351	P	P	09 09 10.6	-2.4
	baz=168						
I52A	**Shelburne**	57.99	357	P	P	09 09 11.8	-1.3
	baz=176,SNR=12						
I52A				S	S	09 17 07.9	-5.5
	baz=176						
I55A	**Frankford**	58.05	359	P	P	09 09 12.3	-1.0
	baz=178,SNR=11						
I55A				S	S	09 17 09.8	-4.3
	baz=178						
I49A	**Point Hope**	58.06	354	P	P	09 09 12.1	-1.3
I49A				IAmb	IAmb	09 09 25.6	
	comp=Z,100nm,0.9s						
I49A				IAMs_20	IAMs_20	09 35 24.1	
	comp=Z,11µm,20.0s						
I49A	**Point Hope**	58.06	354	P	P	09 09 11.8	-1.6
	baz=173,SNR=9.2						
I64A	**Boothbay**	58.06	6	P	P	09 09 14.1	+0.7
	baz=188						
I63A	**Otisfield**	58.11	5	P	P	09 09 14.6	+0.8
I63A				IAmb	IAmb	09 09 26.7	
	comp=Z,90nm,1.2s						
I63A	**Otisfield**	58.11	5	P	P	09 09 14.5	+0.8
	baz=186						
JFWS	**Jewell Farm**	58.15	348	P	P	09 09 12.8	-1.3
JFWS				pmax	pmax		
	comp=Z,49nm,1.1s						
JFWS				MLR	MLR		
	comp=Z,7µm,19.0s						
JFWS	**Jewell Farm**	58.15	348	P	P	09 09 12.8	-1.3
JFWS	**Jewell Farm**	58.15	348	IAMs_20	IAMs_20	09 37 24.6	
	comp=Z,7µm,19.0s						
JFWS	**Jewell Farm**	58.15	348	P	P	09 09 12.7	-1.5
	baz=164						
JFWS				S	S	09 17 10.3	-5.3
	baz=164						
LBNH	**Lisbon**	58.20	4	P	P	09 09 14.4	0.0
LBNH				pmax	pmax		
	comp=Z,157nm,1.3s						
LBNH				MLR	MLR		
	comp=Z,10µm,22.0s						
LBNH	**Lisbon**	58.20	4	P	P	09 09 14.4	0.0
LBNH				IAmb	IAmb	09 09 28.1	
	comp=Z,157nm,1.3s						
LBNH				IAMs_20	IAMs_20	09 34 10.2	
	comp=Z,11µm,22.0s						
LBNH	**Lisbon**	58.20	4	P	P	09 09 13.1	-1.4
	baz=185,SNR=14						
LBNH				S	S	09 17 17.3	+1.2
	baz=185						
KSCO	**Kaye Shedlock’**	58.26	336	P	P	09 09 15.0	-0.1
KSCO				IAmb	IAmb	09 09 21.4	
	comp=Z,149nm,1.3s						
KSCO	**Kaye Shedlock’**	58.26	336	P	P	09 09 14.9	-0.3
	baz=150,SNR=15						
H58A	**Gabriels**	58.27	2	P	P	09 09 14.7	-0.2
	baz=182,SNR=20						
H58A				S	S	09 17 16.4	-0.6
	baz=182						
H57A	**Richville**	58.29	1	P	P	09 09 14.7	-0.3
	baz=181,SNR=42						

H57A				S	S	09 17 14.8	-2.4
	baz=181						
W18A	Petrified Fore	58.30	328	P	P	09 09 16.3	+0.7
W18A	Petrified Fore	58.30	328	P	P	09 09 16.1	+0.6
	baz=141,SNR=67						
W18A				S	S	09 17 20.8	+2.7
	baz=141						
I47A	Gladwin	58.32	353	P	P	09 09 13.2	-2.0
I47A				IAmb	IAmb	09 09 24.6	
	comp=Z,149nm,1.1s						
I47A	Gladwin	58.32	353	P	P	09 09 13.7	-1.6
	baz=171,SNR=18						
I47A				S	S	09 17 11.4	-6.2
	baz=171						
DELO	Deloro Mine	58.35	359	P	P	09 09 14.1	-1.3
DELO				IAmb	IAmb	09 09 16.9	
	comp=Z,137nm,1.3s						
DELO				IAMs_20	IAMs_20	09 34 57.7	
	comp=Z,8µm,21.0s						
I46A	Reed City	58.35	352	P	P	09 09 14.2	-1.3
	baz=170,SNR=7.8						
H55A	Tweed	58.37	359	P	P	09 09 15.1	-0.5
	baz=179,SNR=13						
H55A				S	S	09 17 13.8	-4.5
	baz=179						
SDCO	Great Sand Dun	58.39	333	P	P	09 09 16.2	-0.1
SDCO				IAmb	IAmb	09 09 25.2	
	comp=Z,55nm,0.8s						
SDCO	Great Sand Dun	58.39	333	P	P	09 09 16.3	0.0
	baz=146,SNR=117						
SDCO				S	S	09 17 19.4	0.0
	baz=146						
I48A	Sherman Twp	58.39	354	P	P	09 09 14.7	-1.0
	baz=172,SNR=12						
I48A				S	S	09 17 12.2	-6.4
	baz=172						
H56A	Elgin	58.41	0	P	P	09 09 16.0	+0.1
	baz=180,SNR=33						
H56A				S	S	09 17 15.6	-3.2
	baz=180						
H53A	Bobcaygeon	58.43	358	P	P	09 09 15.0	-1.0
	baz=177,SNR=15						
H53A				S	S	09 17 13.7	-5.4
	baz=177						
LONY	Lake Ozonia	58.46	1	IAMs_20	IAMs_20	09 37 46.7	
	comp=Z,8µm,18.0s						
LONY	Lake Ozonia	58.46	1	P	P	09 09 16.5	+0.2
	baz=182						
H60A	Morristown	58.47	3	P	P	09 09 16.9	+0.6
	baz=184,SNR=13						
H60A				S	S	09 17 20.9	+1.2
	baz=184						
H61A	Lyndonville	58.49	4	P	P	09 09 17.3	+0.8
	baz=185,SNR=16						
H61A				S	S	09 17 22.1	+2.1
	baz=185						
H59A	Cadyville	58.51	2	P	P	09 09 17.0	+0.4
	baz=183,SNR=50						
H59A				S	S	09 17 20.0	-0.2
	baz=183						
H52A	Wyevale	58.55	357	P	P	09 09 15.4	-1.4
	baz=176						
I45A	Fountain	58.55	352	IAMs_20	IAMs_20	09 35 10.2	
	comp=Z,11µm,21.0s						
I45A	Fountain	58.55	352	P	P	09 09 15.0	-1.9
	baz=169						
I45A				S	S	09 17 13.6	-7.1
	baz=169						
H62A	Milan	58.58	4	P	P	09 09 18.4	+1.3
H62A				IAmb	IAmb	09 09 30.1	
	comp=Z,69nm,1.1s						
H62A				IAMs_20	IAMs_20	09 35 06.4	
	comp=Z,8µm,21.0s						
H62A	Milan	58.58	4	P	P	09 09 18.8	+1.7
	baz=186,SNR=5.5						
H62A				S	S	09 17 23.6	+2.4
	baz=186						
SADO	Sadowa	58.64	358	P	P	09 09 16.3	-1.2
	comp=Z,36nm,0.8s,baz=231,slow=3.0,SNR=29						
SADO	Sadowa	58.64	358	P	P	09 09 17.1	-0.4
SADO				IAmb	IAmb	09 09 29.6	
	comp=Z,62nm,1.0s						
SADO				IAMs_20	IAMs_20	09 33 34.5	
	comp=Z,9µm,22.0s						
X16A	Lo Mia Camp, P	58.66	326	P	P	09 09 18.5	+0.4
X16A				IAmb	IAmb	09 09 28.3	
	comp=Z,56nm,0.9s						
WVL	Waterville	58.70	6	P	P	09 09 18.6	+0.7
WVL				IAmb	IAmb	09 09 31.3	
	comp=Z,73nm,1.0s						
WVL				IAMs_20	IAMs_20	09 37 39.4	
	comp=Z,8µm,21.0s						
FRNY	Flat Rock	58.71	2	P	P	09 09 18.6	+0.7
H63A	New Sharon	58.76	5	P	P	09 09 19.2	+0.9
	baz=187,SNR=14						
H63A				S	S	09 17 24.1	+0.7
	baz=187						
BGNE	Belgrade	58.79	341	P	P	09 09 18.4	-0.3
BGNE	Belgrade	58.79	341	P	P	09 09 17.9	-0.7
	baz=155,SNR=20						
BGNE				S	S	09 17 21.0	-3.0
	baz=155						
H64A	Troy	58.82	6	P	P	09 09 18.0	-0.7
	baz=188						
I42A	Draeger Farm,	58.84	349	P	P	09 09 18.0	-0.9
I42A				IAmb	IAmb	09 09 30.0	
	comp=Z,87nm,1.0s						
I42A				IAMs_20	IAMs_20	09 36 36.8	
	comp=Z,11µm,20.0s						
H47A	Mio	58.85	353	P	P	09 09 17.3	-1.7
	baz=171						
H48A	Harrisville	58.86	354	P	P	09 09 17.4	-1.6
H48A				IAmb	IAmb	09 09 28.5	
	comp=Z,84nm,0.8s						
H48A				IAMs_20	IAMs_20	09 35 38.9	
	comp=Z,11µm,20.0s						
H48A	Harrisville	58.86	354	P	P	09 09 17.5	-1.6
	baz=172,SNR=8.7						
PLVO	Plevna	58.86	359	P	P	09 09 17.5	-1.5
PLVO				IAmb	IAmb	09 09 33.5	
	comp=Z,69nm,0.9s						
H46A	Fife Lake	58.91	353	S	S	09 17 18.9	-6.5
	baz=170						
G57A	Newington	58.94	1	P	P	09 09 19.6	+0.1
	baz=182,SNR=24						
G57A				S	S	09 17 24.0	-1.6
	baz=182						
G59A	Clarenceville	58.97	3	P	P	09 09 20.1	+0.4
	baz=184,SNR=16						
G53A	Haliburton	58.98	358	P	P	09 09 18.9	-0.9
	baz=177,SNR=20						
S22A	4UR Ranch, Cre	58.98	332	P	P	09 09 20.2	-0.2
S22A	4UR Ranch, Cre	58.98	332	P	P	09 09 20.7	+0.3
	baz=145,SNR=39						
S22A				S	S	09 17 26.7	-0.5
	baz=145						
G58A	Ormstown	59.00	2	P	P	09 09 20.3	+0.3
	baz=182,SNR=33						
G58A				S	S	09 17 26.4	-0.1
	baz=182						
G60A	Masonville	59.03	3	P	P	09 09 20.7	+0.5
	baz=184,SNR=13						
G60A				S	S	09 17 28.2	+1.3
	baz=184						
G55A	Calabogie	59.07	360	P	P	09 09 20.1	-0.4
	baz=180,SNR=31						
EMMW	East Machias	59.09	7	IAMs_20	IAMs_20	09 36 10.3	
	comp=Z,7µm,19.0s						
H45A	Beulah	59.10	352	P	P	09 09 19.5	-1.2
	baz=169						
GLMI	Grayling	59.12	353	P	P	09 09 19.5	-1.3
GLMI				IAmb	IAmb	09 09 34.3	
	comp=Z,65nm,0.7s						
GLMI	Grayling	59.12	353	P	P	09 09 19.4	-1.5
	baz=171						
Y14A	Wickenburg	59.16	325	P	P	09 09 22.3	+0.9
Y14A				IAmb	IAmb	09 09 31.5	
	comp=Z,72nm,1.1s						
Y14A				IAMs_20	IAMs_20	09 34 27.1	
	comp=Z,11µm,18.0s						
I40A	Norwalk	59.16	348	P	P	09 09 20.3	-0.9
I40A				IAmb	IAmb	09 09 32.0	
	comp=Z,140nm,1.4s						
I40A				IAMs_20	IAMs_20	09 32 50.4	
	comp=Z,8µm,20.0s						
H66A	Whiting	59.18	7	P	P	09 09 21.8	+0.6
	baz=190						
H43A	Windswept, Lux	59.21	351	P	P	09 09 20.1	-1.3
H43A				IAmb	IAmb	09 09 31.3	
	comp=Z,73nm,0.8s						
H43A				IAMs_20	IAMs_20	09 37 21.5	
	comp=Z,11µm,20.0s						
G54A	Lake Saint Pet	59.24	359	P	P	09 09 20.9	-0.8
	baz=178,SNR=24						
G54A				S	S	09 17 23.9	-5.7
	baz=178						
G63A	Kingsbury	59.25	6	P	P	09 09 22.6	+0.8
	baz=188,SNR=7.0						
G63A				S	S	09 17 31.0	+1.3
	baz=188						
Q24A	Divide	59.25	334	P	P	09 09 21.1	-1.2
Q24A				IAmb	IAmb	09 09 25.2	
	comp=Z,67nm,1.1s						
Q24A	Divide	59.25	334	P	P	09 09 23.8	+1.5
	baz=147,SNR=27						
Q24A				S	S	09 17 31.7	+1.0
	baz=147						
G61A	St-Isidore-de-	59.26	4	P	P	09 09 22.9	+1.1
	baz=185,SNR=31						
G61A				S	S	09 17 31.6	+1.7
	baz=185						
G62A	West of Eustis	59.27	5	P	P	09 09 22.7	+0.8
G62A				IAMs_20	IAMs_20	09 35 26.6	
	comp=Z,8µm,20.0s						
G62A	West of Eustis	59.27	5	P	P	09 09 23.0	+1.1
	baz=186,SNR=20						
G62A				S	S	09 17 31.4	+1.4
	baz=186						
MVCO	Mesa Verde	59.33	330	P	P	09 09 23.2	+0.4
MVCO				IAmb	IAmb	09 09 31.6	
	comp=Z,60nm,1.0s						
MVCO	Mesa Verde	59.33	330	P	P	09 09 23.0	+0.2
	baz=143,SNR=33						
MVCO				S	S	09 17 32.5	+0.9
	baz=143						
G47A	Hillman	59.38	354	P	P	09 09 21.2	-1.4
	baz=172,SNR=8.0						
PKME	Peaks-Kenny Pk	59.43	6	P	P	09 09 24.4	+1.5
PKME				IAmb	IAmb	09 09 25.2	
	comp=Z,119nm,1.2s						
PKME				IAMs_20	IAMs_20	09 38 09.7	
	comp=Z,8µm,20.0s						
PKME	Peaks-Kenny Pk	59.43	6	P	P	09 09 23.7	+0.7
	baz=188,SNR=8.0						
PKME				S	S	09 17 32.3	+0.3
	baz=188						
WUAZ	Wupatki	59.46	327	P	P	09 09 24.8	+1.2
WUAZ				IAmb	IAmb	09 09 33.9	
	comp=Z,113nm,1.1s						
WUAZ	Wupatki	59.46	327	P	P	09 09 24.6	+1.1
	baz=140,SNR=38						
WUAZ				S	S	09 17 36.5	+3.4
	baz=140						
G45A	Suttons Bay	59.46	352	P	P	09 09 21.5	-1.7
G45A				IAmb	IAmb	09 09 31.9	
	comp=Z,95nm,1.2s						
G45A				IAMs_20	IAMs_20	09 36 19.2	
	comp=Z,14µm,21.0s						
G45A	Suttons Bay	59.46	352	P	P	09 09 21.6	-1.6
	baz=170						
G64A	Maxfield	59.47	6	P	P	09 09 23.7	+0.4
	baz=188						
GGN	Saint George	59.57	8	IAMs_20	IAMs_20	09 33 57.3	
	comp=Z,7µm,22.0s						
GLA	Glamis	59.57	323	P	P	09 09 24.9	+0.6
GLA				pmax	pmax		
	comp=Z,60nm,1.3s						
GLA	Glamis	59.57	323	P	P	09 09 24.9	+0.6
GLA				IAMs_20	IAMs_20	09 33 42.0	
	comp=Z,7µm,18.0s						
GLA	Glamis	59.57	323	P	P	09 09 25.0	+0.8
	baz=136,SNR=9.0						
GLA				S	S	09 17 37.3	+2.9
	baz=136						
HAL	Halifax	59.60	11	IAMs_20	IAMs_20	09 33 25.9	
	comp=Z,8µm,22.0s						
SACV	Santiago Islan	59.63	63	IAMs_20	IAMs_20	09 33 01.8	
	comp=Z,15µm,21.0s						
G46A	Petoskey	59.64	353	P	P	09 09 22.9	-1.5
	baz=170						
F55A	Otter Lake	59.65	0	P	P	09 09 24.0	-0.4
	baz=180						
F55A				S	S	09 17 32.4	-2.5
	baz=180						
F52A	Sundridge	59.67	358	P	P	09 09 23.5	-1.1
	baz=177,SNR=13						
OGNE	Ogallala	59.71	338	P	P	09 09 25.4	+0.2
OGNE	Ogallala	59.71	338	P	P	09 09 25.5	+0.4
	baz=151,SNR=14						
F59A	Saint Guilaume	59.76	3	P	P	09 09 25.4	+0.2
	baz=184						
ALGO	Algonquin Park	59.79	359	P	P	09 09 24.8	-0.6
	baz=178,SNR=27						
F49A	Sandfield	59.80	355	P	P	09 09 23.9	-1.6
	baz=174,SNR=19						
F51A	Arnstein	59.83	357	P	P	09 09 24.6	-1.2
	baz=176,SNR=12						
F63A	Nahmakanta, Br	59.88	6	P	P	09 09 27.0	+0.9
F63A				IAMs_20	IAMs_20	09 38 23.7	
	comp=Z,8µm,20.0s						
F63A	Nahmakanta, Br	59.88	6	P	P	09 09 27.6	+1.5
	baz=188						
F63A				S	S	09 17 38.2	+0.3
	baz=188						
Y12C	Blythe	59.89	323	P	P	09 09 27.5	+1.1
Y12C				IAmb	IAmb	09 09 36.7	
	comp=Z,74nm,1.1s						
Y12C	Blythe	59.89	323	P	P	09 09 28.0	+1.6
	baz=136,SNR=14						
Y12C				S	S	09 17 41.2	+2.7
	baz=136						
F48A	Evansville	59.91	355	P	P	09 09 24.9	-1.4
	baz=173,SNR=20						
F60A	Warwick	59.92	4	P	P	09 09 26.8	+0.4
	baz=185,SNR=18						
F61A	St Evariste	59.99	4	P	P	09 09 27.1	+0.3
	baz=186						
F61A				S	S	09 17 39.4	+0.1
	baz=186						
IKP	In-Ko-Pah, Jac	60.05	321	P	P	09 09 29.3	+1.7
	baz=134						
TRQ	Mont Tremblant	60.06	1	P	P	09 09 27.0	-0.4
SWSC	Sam W. Stewart	60.07	322	P	P	09 09 29.9	+2.2
	baz=135						
PDMCI	Parker Dam,Lak	60.07	324	P	P	09 09 29.3	+1.7
	baz=137,SNR=11						
F45A	CMU Biological	60.08	353	P	P	09 09 26.3	-1.1
	baz=170,SNR=11						
F45A				S	S	09 17 34.0	-6.3
	baz=170						
F64A	Sherman	60.12	6	IAMs_20	IAMs_20	09 34 40.0	
	comp=Z,9µm,22.0s						
F64A	Sherman	60.12	6	P	P	09 09 28.5	+0.8
	baz=189,SNR=7.2						
E52A	Mattawa	60.14	358	P	P	09 09 26.9	-0.9
	baz=177,SNR=13						
ISCO	Idaho Springs	60.15	334	P	P	09 09 27.6	-0.9
ISCO				pmax	pmax		
	comp=Z,32nm,0.9s						
ISCO				MLR	MLR		
	comp=Z,6µm,22.0s						
ISCO	Idaho Springs	60.15	334	P	P	09 09 27.6	-0.9
ISCO	Idaho Springs	60.15	334	P	P	09 09 28.2	-0.2
	baz=147,SNR=40						
ISCO				S	S	09 17 41.7	-0.5
	baz=147						
E53A	Dumoine, Ponti	60.21	359	P	P	09 09 27.9	-0.4
	baz=178						
SMCO	Snowmass	60.22	333	P	P	09 09 29.5	+0.5
SMCO				IAmb	IAmb	09 09 38.2	
	comp=Z,64nm,0.9s						
SMCO				IAMs_20	IAMs_20	09 37 15.7	
	comp=Z,9µm,18.0s						
PV15	Paradox Valley	60.23	331	P	P	09 09 28.7	-0.3
PV15				IAmb	IAmb	09 09 38.3	
	comp=Z,109nm,1.0s						
PV15				IAMs_20	IAMs_20	09 34 05.0	
	comp=Z,7µm,20.0s						
PV02	Paradox Valley	60.24	331	P	P	09 09 29.7	+0.7
PV02				IAmb	IAmb	09 09 33.1	
	comp=Z,75nm,1.2s						
PV02				IAMs_20	IAMs_20	09 36 08.3	
	comp=Z,9µm,19.0s						
PV13	Radium Mtn., P	60.24	331	P	P	09 09 28.9	-0.1
PV13				IAmb	IAmb	09 09 43.5	
	comp=Z,80nm,1.1s						
E58A	La Victoria	60.25	2	P	P	09 09 29.1	+0.5
	baz=183,SNR=23						
E58A				S	S	09 17 41.9	-0.7
	baz=183						
E54A	Lac Daplat, Po	60.26	359	P	P	09 09 28.4	-0.3
	baz=179						
E57A	Chemin Saint G	60.26	2	P	P	09 09 28.5	-0.2
	baz=182,SNR=58						
E55A	Montcerf-Lytto	60.27	0	P	P	09 09 27.9	-0.8
	baz=180,SNR=15						
PV05	Paradox Valley	60.31	331	P	P	09 09 29.0	-0.4
PV05				IAmb	IAmb	09 09 36.1	
	comp=Z,74nm,1.3s						
PV03	Paradox Valley	60.33	331	P	P	09 09 29.4	-0.2
PV03				IAMs_20	IAMs_20	09 34 24.7	
	comp=Z,9µm,20.0s						
E60A	Ste Agathe de	60.35	4	P	P	09 09 29.5	+0.2
	baz=185,SNR=8.5						
E60A				S	S	09 17 43.7	-0.1
	baz=185						
PV18	Skein Mesa, Pa	60.35	331	P	P	09 09 29.8	0.0
PV18				IAmb	IAmb	09 09 40.9	
	comp=Z,46nm,0.8s						
PV18				IAMs_20	IAMs_20	09 34 24.3	
	comp=Z,10µm,20.0s						
PV12	Saucer Basin,	60.36	331	P	P	09 09 30.0	+0.2
PV12				IAmb	IAmb	09 09 39.8	
	comp=Z,79nm,0.9s						
PV12				IAMs_20	IAMs_20	09 34 26.5	
	comp=Z,9µm,20.0s						
BC3	Big Chuckawall	60.37	323	P	P	09 09 31.5	+1.7
	baz=135,SNR=22						
BC3				S	S	09 17 48.6	+3.8
	baz=135						
E56A	St. Veronique	60.37	1	P	P	09 09 29.1	-0.3
	baz=181,SNR=48						
E56A				S	S	09 17 42.6	-1.5
	baz=181						
PV11	David Mesa, Pa	60.38	331	P	P	09 09 30.8	+0.9
PV11				IAMs_20	IAMs_20	09 34 26.0	
	comp=Z,10µm,19.0s						
PV07	Paradox Valley	60.38	331	P	P	09 09 30.4	+0.5
PV07				IAmb	IAmb	09 09 39.9	
	comp=Z,76nm,1.4s						
PV07				IAMs_20	IAMs_20	09 35 53.1	
	comp=Z,8µm,19.0s						
E59A	St. Maurice	60.40	3	P	P	09 09 29.9	+0.4
	baz=184						
E59A				S	S	09 17 43.7	-0.8
	baz=184						
PV17	East Wray Mesa	60.40	331	P	P	09 09 30.0	-0.1
PV17				IAMs_20	IAMs_20	09 34 25.6	
	comp=Z,13µm,19.0s						
MONP2	Monument Peak	60.41	321	P	P	09 09 31.3	+1.1
	baz=134,SNR=7.4						
G40A	Rib Lake	60.41	349	IAMs_20	IAMs_20	09 37 47.2	
	comp=Z,11µm,21.0s						
PV16	Nyswonger Mesa	60.41	331	P	P	09 09 30.2	0.0
PV16				IAMs_20	IAMs_20	09 34 26.8	
	comp=Z,10µm,20.0s						
E51A	G1948 Merrick	60.42	358	P	P	09 09 28.3	-1.4
	baz=176,SNR=20						
PV19	Morning Glory	60.44	331	P	P	09 09 30.8	+0.4
PV19				IAMs_20	IAMs_20	09 34 26.6	
	comp=Z,11µm,19.0s						
PV20	West Nyswonger	60.46	331	P	P	09 09 30.6	+0.2
ECSD	EROS Data Cent	60.46	343	P	P	09 09 29.1	-1.1
	baz=157,SNR=33						
ECSD				S	S	09 17 41.7	-3.7
	baz=157						
PV04	Paradox Valley	60.47	331	P	P	09 09 30.7	+0.2
PV04				IAMs_20	IAMs_20	09 34 28.3	
	comp=Z,11µm,20.0s						
E61A	Lac Etchemin	60.48	5	P	P	09 09 31.0	+0.8
	baz=186						
E61A				S	S	09 17 46.6	+1.0
	baz=186						
W13A	Hualapai Mount	60.51	325	P	P	09 09 31.9	+1.0
W13A				IAmb	IAmb	09 09 41.3	
	comp=Z,88nm,1.2s						
W13A				IAMs_20	IAMs_20	09 34 42.7	
	comp=Z,8µm,18.0s						
PV10	Paradox Valley	60.52	331	P	P	09 09 31.4	+0.4
PV10				IAmb	IAmb	09 09 40.2	
	comp=Z,54nm,0.9s						
F42A	Maple Grove Fa	60.52	351	P	P	09 09 29.6	-0.8
F42A				IAmb	IAmb	09 09 40.5	
	comp=Z,78nm,1.1s						
F42A				IAMs_20	IAMs_20	09 38 09.3	
	comp=Z,10µm,20.0s						
E48A	Lockeyer	60.53	355	P	P	09 09 29.0	-1.5
	baz=174,SNR=23						
PV22	Blue Mesa, Par	60.53	331	P	P	09 09 31.4	+0.4
IRM	Iron Mountain	60.54	323	P	P	09 09 32.0	+1.1
	baz=136,SNR=57						
IRM				S	S	09 17 50.0	+3.1
	baz=136						
PV23	Carpenter Ridg	60.57	331	P	P	09 09 31.1	-0.2
PV23				IAMs_20	IAMs_20	09 34 31.9	
	comp=Z,13µm,20.0s						
LMN	Caledonia Moun	60.58	9	P	P	09 09 30.8	-0.1
LMN				IAmb	IAmb	09 09 43.9	
	comp=Z,126nm,1.1s						
LMN				IAMs_20	IAMs_20	09 35 27.0	
	comp=Z,8µm,22.0s						
E47A	Iron Bridge	60.60	355	P	P	09 09 29.4	-1.6
	baz=172,SNR=25						
E47A				S	S	09 17 39.7	-7.3
	baz=172						
E46A	Sault Ste Mari	60.61	354	P	P	09 09 30.0	-1.1
E46A				IAmb	IAmb	09 09 49.3	
	comp=Z,65nm,1.1s						
U15A	North Rim	60.63	327	P	P	09 09 32.9	+1.1
PV09	Paradox Valley	60.66	331	P	P	09 09 32.7	+0.7
E63A	Oxbow	60.66	6	IAMs_20	IAMs_20	09 37 39.4	
	comp=Z,8µm,20.0s						
E63A	Oxbow	60.66	6	P	P	09 09 32.1	+0.7
	baz=189,SNR=5.1						
NEE2	Needles Airpor	60.68	324	P	P	09 09 33.7	+1.9
	baz=136						
NEE2				S	S	09 17 50.9	+2.4
	baz=136						
E64A	Bridgewater	60.73	7	P	P	09 09 32.4	+0.6
	baz=189,SNR=8.7						
E64A				S	S	09 17 49.4	+0.8
	baz=189						
GBN	Guysborough	60.73	12	P	P	09 09 32.4	+0.5
GBN				IAmb	IAmb	09 09 48.2	
	comp=Z,78nm,1.1s						
GBN				IAMs_20	IAMs_20	09 37 40.2	
	comp=Z,9µm,19.0s						
109C	Camp Elliot, M	60.82	321	P	P	09 09 34.2	+1.4
109C	Camp Elliot, M	60.82	321	P	P	09 09 35.5	+2.7
	baz=134						
D55A	Sainte-Anne-du	60.84	1	P	P	09 09 32.3	-0.4
	baz=181,SNR=44						
D57A	Chemin Vers le	60.88	2	P	P	09 09 32.9	0.0
	baz=183,SNR=45						
D57A				S	S	09 17 49.8	-0.8
	baz=183						
D56A	ZEC Mazanza, M	60.88	1	P	P	09 09 32.7	-0.2
	baz=182,SNR=29						
D56A				S	S	09 17 48.7	-2.0
	baz=182						
SPMN	Marine on St.	60.90	347	P	P	09 09 32.1	-1.0
SPMN	Marine on St.	60.90	347	P	P	09 09 32.0	-1.1
	baz=162,SNR=21						
SPMN				S	S	09 17 47.2	-3.8
	baz=162						
D53A	Lac Vacive, Po	60.91	359	P	P	09 09 31.9	-1.2
D53A				IAmb	IAmb	09 09 48.1	
	comp=Z,70nm,1.0s						
D53A				IAMs_20	IAMs_20	09 36 22.5	
	comp=Z,11µm,21.0s						
D53A	Lac Vacive, Po	60.91	359	P	P	09 09 32.1	-1.0
	baz=178						
TPFO	Pinon Flats	60.92	322	P	P	09 09 34.6	+1.0
	baz=134,SNR=25						
XPFO	Pion Flat	60.93	322	P	P	09 09 34.6	+1.0
XPFO				IAmb	IAmb	09 09 44.0	
	comp=Z,103nm,1.2s						
XPFO	Pion Flat	60.93	322	IAMs_20	IAMs_20	09 30 38.9	
	comp=Z,8µm,22.0s						
D60A	Saint Jean D’O	60.93	4	P	P	09 09 33.4	+0.3
	baz=186,SNR=18						

D60A				S	S	09 17 51.1	-0.1
	baz=186						
BELC	Belle Mtn. Jos	60.93	323	P	P	09 09 34.7	+1.0
	baz=135,SNR=16						
BELC				S	S	09 17 55.5	+3.4
	baz=135						
PFO	Pinyon Flats O	60.93	322	P	P	09 09 34.6	+0.9
	comp=Z,32nm,1.1s,baz=111,slow=3.0,SNR=21						
PFO	Pinyon Flats O	60.93	322	P	P	09 09 35.1	+1.4
PFO				pmax	pmax		
	comp=Z,103nm,1.3s						
PFO	Pinyon Flats O	60.93	322	P	P	09 09 35.0	+1.4
PFO				IAmb	IAmb	09 09 44.0	
	comp=Z,103nm,1.2s						
PFO	Pinyon Flats O	60.93	322	IAMs_20	IAMs_20	09 30 39.9	
	comp=Z,8µm,22.0s						
PFO	Pinyon Flats O	60.93	322	P	P	09 09 34.7	+1.1
	baz=134,SNR=25						
PFO				S	S	09 17 56.6	+4.5
	baz=134						
PQI	Presque Isle	60.95	7	P	P	09 09 34.4	+1.0
PQI				IAmb	IAmb	09 09 46.6	
	comp=Z,102nm,1.1s						
PQI				IAMs_20	IAMs_20	09 35 05.0	
	comp=Z,10µm,22.0s						
E43A	Lone Tree Farm	60.95	352	P	P	09 09 33.0	-0.4
E43A				IAMs_20	IAMs_20	09 36 43.7	
	comp=Z,12µm,22.0s						
D59A	Saint-Raymond	60.96	4	P	P	09 09 33.5	+0.1
	baz=185,SNR=9.5						
D59A				S	S	09 17 51.5	-0.2
	baz=185						
D51A	Lot 18 Range I	60.97	358	P	P	09 09 31.7	-1.7
	baz=177,SNR=7.5						
D54A	Lac Fusel, La	60.97	360	P	P	09 09 32.5	-1.0
	baz=180,SNR=27						
D58A	Chemin du LacG	60.99	3	P	P	09 09 34.0	+0.4
	baz=184,SNR=55						
D58A				S	S	09 17 50.9	-1.2
	baz=184						
COWI	Conover	61.02	350	P	P	09 09 32.5	-1.4
COWI				IAMs_20	IAMs_20	09 38 18.1	
	comp=Z,12µm,19.0s						
E44A	Grand Marais A	61.05	352	P	P	09 09 34.0	0.0
E44A				IAmb	IAmb	09 09 44.2	
	comp=Z,151nm,1.4s						
E44A	Grand Marais A	61.05	352	P	P	09 09 34.1	+0.1
	baz=169						
D50A	G1974 Best Tow	61.07	357	P	P	09 09 32.7	-1.5
	baz=176,SNR=22						
D50A				S	S	09 17 46.1	-6.9
	baz=176						
D46A	Sault St. Mari	61.10	354	P	P	09 09 32.4	-2.0
	baz=172,SNR=16						
D46A				S	S	09 17 46.5	-7.0
	baz=172						
D47A	Chapleau	61.18	355	P	P	09 09 32.9	-2.0
	baz=172,SNR=24						
D48A	Paudash Townsh	61.19	356	P	P	09 09 33.0	-2.0
	baz=174,SNR=21						
N23A	Red Feather La	61.20	335	P	P	09 09 35.0	-0.6
N23A	Red Feather La	61.20	335	P	P	09 09 35.5	-0.1
	baz=147,SNR=17						
N23A				S	S	09 17 55.8	+0.2
	baz=147						
D62A	Allapoint, All	61.25	6	P	P	09 09 35.7	+0.3
D62A				IAmb	IAmb	09 09 48.8	
	comp=Z,101nm,1.1s						
D62A				IAMs_20	IAMs_20	09 39 14.0	
	comp=Z,8µm,19.0s						
D62A	Allapoint, All	61.25	6	P	P	09 09 35.8	+0.3
	baz=188,SNR=16						
D61A	St Aubert, Com	61.27	5	P	P	09 09 36.2	+0.7
	baz=187,SNR=16						
D61A				S	S	09 17 56.5	+1.0
	baz=187						
LATQ	La Tuque	61.29	3	P	P	09 09 35.6	0.0
LATQ				IAmb	IAmb	09 09 48.6	
	comp=Z,59nm,1.0s						
LATQ	La Tuque	61.29	3	P	P	09 09 35.7	0.0
	baz=184,SNR=19						
LATQ				S	S	09 17 54.8	-1.0
	baz=184						
GMRC	Granite Mounta	61.29	324	P	P	09 09 36.9	+0.8
	baz=136,SNR=21						
GMRC				S	S	09 17 59.6	+3.1
	baz=136						
D63A	Stockholm	61.30	6	P	P	09 09 36.1	+0.3
	baz=189,SNR=11						
KNB	Kanab	61.36	327	P	P	09 09 37.7	+1.1
KNB				pmax	pmax		
	comp=Z,152nm,1.3s						
KNB	Kanab	61.36	327	P	P	09 09 37.7	+1.1
MURC	Murrieta	61.36	322	P	P	09 09 37.8	+1.3
	baz=134,SNR=10						
PKCU	Pink Cliffs	61.41	328	P	P	09 09 37.9	+0.8
O20A	White River Ci	61.57	333	P	P	09 09 37.5	-0.5
O20A				IAmb	IAmb	09 09 56.6	
	comp=Z,82nm,1.0s						
O20A				IAMs_20	IAMs_20	09 35 28.4	
	comp=Z,12µm,19.0s						
O20A	White River Ci	61.57	333	P	P	09 09 38.4	+0.4
	baz=144,SNR=21						
LCMT	Little Creek M	61.58	327	P	P	09 09 39.0	+1.0
BBRC	Big Bear Solar	61.66	322	P	P	09 09 40.2	+1.5
	baz=134,SNR=31						
BBRC				S	S	09 18 04.6	+3.1
	baz=134						
HEC	Hector,Ludlow	61.71	323	P	P	09 09 39.9	+1.0
	baz=135,SNR=12						
HEC				S	S	09 18 04.7	+2.9
	baz=135						
SCI2	San Clemente I	61.77	320	P	P	09 09 44.4	+5.2
	baz=132						
BATG	Bathurst New B	61.79	8	P	P	09 09 39.0	0.0
BATG				IAmb	IAmb	09 09 52.4	
	comp=Z,90nm,1.1s						
SUSD	Miller	61.79	342	P	P	09 09 38.1	-1.0
SUSD	Miller	61.79	342	P	P	09 09 37.9	-1.2
	baz=155						
SUSD				S	S	09 17 58.8	-3.6
	baz=155						
MTPU	Mount Pierson	61.80	328	P	P	09 09 40.7	+0.9
SRU	San Rafael Swe	61.81	330	P	P	09 09 39.5	-0.1
SRU				pmax	pmax		
	comp=Z,58nm,1.0s						
SRU	San Rafael Swe	61.81	330	P	P	09 09 39.5	-0.1
D41A	Chassel	61.86	351	P	P	09 09 39.1	-0.4
D41A				IAMs_20	IAMs_20	09 37 02.6	
	comp=Z,9µm,22.0s						
TUQ	Turquoise Moun	61.90	324	P	P	09 09 42.0	+1.8
	baz=136						
TUQ				S	S	09 18 07.3	+2.9
	baz=136						
SZCU	Shurtz Canyon	61.93	327	P	P	09 09 41.3	+0.8
VLDQ	Val d'Or	61.94	359	P	P	09 09 39.8	-0.2
VLDQ				IAmb	IAmb	09 09 55.2	
	comp=Z,74nm,0.9s						
VLDQ				IAMs_20	IAMs_20	09 37 17.0	
	comp=Z,10µm,20.0s						
E38A	The Farm, Brul	61.95	348	P	P	09 09 40.0	-0.1
E38A				IAmb	IAmb	09 09 55.4	
	comp=Z,90nm,1.3s						
E38A				IAMs_20	IAMs_20	09 38 36.2	
	comp=Z,9µm,21.0s						
CIS	Catalina Islan	61.97	321	P	P	09 09 43.2	+2.6
	baz=133						
CIS				S	S	09 18 09.0	+3.9
	baz=133						
CCUT	Cedar City	62.04	327	P	P	09 09 42.4	+1.2
BFSC	Mount Baldy Ra	62.08	322	P	P	09 09 43.1	+1.7
	baz=134,SNR=30						
BFSC				S	S	09 18 11.0	+4.4
	baz=134						
RRX	Edison Barstow	62.13	323	P	P	09 09 44.0	+2.3
	baz=134						
RRX				S	S	09 18 10.8	+3.7
	baz=134						
MSU	Marysvale	62.16	329	P	P	09 09 43.4	+1.4
MSU	Marysvale	62.16	329	P	P	09 09 43.4	+1.4
P17A	Butcher Ranch,	62.20	330	P	P	09 09 41.7	-0.5
SHPR	Sheep Range	62.24	325	P	P	09 09 44.0	+1.5
TMUT	Trail Mountain	62.28	330	P	P	09 09 44.3	+1.4
MWC	Mount Wilson	62.31	321	P	P	09 09 45.1	+2.0
MWC				pmax	pmax		
	comp=Z,125nm,1.3s						
MWC	Mount Wilson	62.31	321	P	P	09 09 45.1	+2.0
MWC				IAmb	IAmb	09 09 54.2	
	comp=Z,125nm,1.2s						
GSC	Goldstone, Bar	62.32	323	P	P	09 09 44.2	+1.2
GSC				pmax	pmax		
	comp=Z,47nm,1.2s						
GSC	Goldstone, Bar	62.32	323	P	P	09 09 44.1	+1.2
GSC				IAMs_20	IAMs_20	09 35 37.3	
	comp=Z,11µm,18.0s						
GSC	Goldstone, Bar	62.32	323	P	P	09 09 45.1	+2.1
	baz=135,SNR=14						
GSC				S	S	09 18 12.8	+3.3
	baz=135						
PASC	Pasadena Art C	62.35	321	P	P	09 09 45.1	+2.0
RWWY	Rawlins	62.39	334	P	P	09 09 43.1	-0.4
RWWY				IAMs_20	IAMs_20	09 36 04.5	
	comp=Z,7µm,20.0s						
SHOC	Shoshone, Teco	62.43	324	P	P	09 09 45.3	+1.7
	baz=136						
SHOC				S	S	09 18 13.8	+3.0
	baz=136						
DECC	Green Verdugo	62.50	321	P	P	09 09 46.4	+2.2
	baz=133,SNR=11						
DECC				S	S	09 18 15.7	+4.0
	baz=133						
RDMU	Red Mountain	62.52	332	P	P	09 09 44.5	+0.2
TAOE	Nuku Hiva Isla	62.59	267	*e*S	S	09 18 12.9	-0.8
	comp=Z,8µm,26.1s						
TAOE				*e*LQ	LQ	09 25 43.7	
	comp=Z,12µm,28.0s						
TAOE				*e*LR	LR	09 28 28.5	
	comp=Z,35µm,24.8s,baz=102						
TAOE	Nuku Hiva Isla	62.59	267	*e*T	T	10 17 18.7	
	comp=Z,62nm,0.2s						
EDW2	Edwards Air Fo	62.72	322	P	P	09 09 47.5	+1.8
	baz=134,SNR=13						
BLG	Laguna Peak, P	62.85	321	P	P	09 09 47.5	+1.0
	baz=132						
LSQQ	Lebel-sur-Quev	62.88	360	P	P	09 09 46.0	-0.3
	baz=179						
K22A	Casper	62.91	335	P	P	09 09 47.8	+1.0
K22A				IAmb	IAmb	09 10 01.0	
	comp=Z,93nm,1.0s						
K22A	Casper	62.91	335	P	P	09 09 47.4	+0.5
	baz=147,SNR=40						
K22A				S	S	09 18 16.7	-0.1
	baz=147						
LRMC	Laurel Mtn Rad	62.95	323	P	P	09 09 48.8	+1.5
	baz=134						
OSI	Osito Audit: C	62.98	321	P	P	09 09 47.6	+0.3
OSI	Osito Audit: C	62.98	321	P	P	09 09 49.2	+1.8
	baz=133						
OSI				S	S	09 18 20.3	+2.4
	baz=133						
PSUT	Pine Spring	63.03	328	P	P	09 09 50.0	+2.2
MPU	Maple Canyon	63.05	330	P	P	09 09 48.4	+0.5
TPNV	Topopah Spring	63.17	325	P	P	09 09 50.1	+1.4
TPNV				pmax	pmax		
	comp=Z,64nm,1.2s						
TPNV	Topopah Spring	63.17	325	P	P	09 09 50.1	+1.4
TPNV				IAmb	IAmb	09 09 58.6	
	comp=Z,64nm,1.1s						
TPNV				IAMs_20	IAMs_20	09 36 40.2	
	comp=Z,9µm,18.0s						
TPNV	Topopah Spring	63.17	325	P	P	09 09 50.9	+2.2
	baz=136,SNR=31						
TPNV				S	S	09 18 23.7	+3.4
	baz=136						
FURC	Furnace Creek,	63.17	324	P	P	09 09 50.5	+2.0
	baz=135,SNR=25						
RSSD	Black Hills	63.20	338	P	P	09 09 49.2	+0.4
RSSD				pmax	pmax		
	comp=Z,97nm,1.4s						
RSSD				MLR	MLR		
	comp=Z,6µm,22.0s						
RSSD	Black Hills	63.20	338	P	P	09 09 49.2	+0.4
RSSD				IAmb	IAmb	09 10 00.2	
	comp=Z,97nm,1.4s						
RSSD	Black Hills	63.20	338	P	P	09 09 49.5	+0.6
	baz=150						
RSSD				S	S	09 18 20.2	-0.4
	baz=150						
NLU	North Lily Min	63.22	330	P	P	09 09 49.6	+0.6
EYMN	Ely	63.23	349	P	P	09 09 48.1	-0.5
EYMN	Ely	63.23	349	IAMs_20	IAMs_20	09 39 31.9	
	comp=Z,11µm,21.0s						
EYMN	Ely	63.23	349	P	P	09 09 48.2	-0.5
	baz=164,SNR=15						
EYMN				S	S	09 18 15.1	-5.2
	baz=164						
MPMC	Manual Prospec	63.24	323	P	P	09 09 50.6	+1.4
	baz=134,SNR=26						
MPMC				S	S	09 18 24.9	+3.6
	baz=134						
ARVC	Arvin	63.39	322	P	P	09 09 52.2	+2.2
	baz=133						
ARVC				S	S	09 18 26.2	+3.4
	baz=133						
JLU	Jordanelle	63.42	331	P	P	09 09 51.2	+0.8
ISA	Isabella, Lake	63.55	322	P	P	09 09 52.1	+1.0
ISA				pmax	pmax		
	comp=Z,35nm,1.0s						
ISA	Isabella, Lake	63.55	322	P	P	09 09 52.0	+1.0
ISA	Isabella, Lake	63.55	322	P	P	09 09 52.9	+1.8
	baz=134,SNR=14						
ISA				S	S	09 18 28.2	+3.4
	baz=134						
MATQ	Matagami	63.59	359	P	P	09 09 50.2	-0.8
	baz=179,SNR=52						
CTU	Camp Tracy	63.63	331	P	P	09 09 52.3	+0.6
D32A	Dogwood Acres,	63.71	344	P	P	09 09 51.5	-0.4
DUG	Dugway, Tooele	63.76	330	P	P	09 09 53.8	+1.2
DUG				pmax	pmax		
	comp=Z,96nm,1.0s						
DUG	Dugway, Tooele	63.76	330	P	P	09 09 53.8	+1.2
DUG				IAmb	IAmb	09 10 02.2	
	comp=Z,96nm,0.9s						
DUG				IAMs_20	IAMs_20	09 36 32.6	
	comp=Z,10µm,18.0s						
DUG	Dugway, Tooele	63.76	330	P	P	09 09 54.1	+1.5
	baz=140,SNR=72						
DUG				S	S	09 18 28.6	+1.0
	baz=140						
TCUT	Toone Canyon	63.80	331	P	P	09 09 53.7	+0.8
R11A	Troy Canyon, C	63.81	326	P	P	09 09 53.3	+0.3
R11A				IAMs_20	IAMs_20	09 37 03.1	
	comp=Z,7µm,18.0s						
R11A	Troy Canyon, C	63.81	326	P	P	09 09 54.5	+1.5
	baz=137,SNR=41						
R11A				S	S	09 18 31.5	+3.1
	baz=137						
PKM	Mcpherson Peak	63.83	321	P	P	09 09 54.8	+1.6
	baz=132,SNR=11						
GRAC	Grapevine Rang	63.83	324	P	P	09 09 55.2	+2.3
	baz=135,SNR=5.4						
GRAC				S	S	09 18 32.1	+3.8
	baz=135						
CWC	Cottonwood Cre	63.85	323	P	P	09 09 54.7	+1.4
	baz=134						
CWC				S	S	09 18 33.1	+4.3
	baz=134						
VES	Vestal, Richgr	64.03	322	P	P	09 09 56.2	+2.0
	baz=133,SNR=20						
VES				S	S	09 18 34.7	+4.0
	baz=133						
SMMC	Simmler	64.22	321	P	P	09 09 57.6	+2.1
	baz=132,SNR=15						
HWUT	Hardware Ranch	64.26	331	P	P	09 09 55.9	+0.1
HWUT				IAmb	IAmb	09 10 14.3	
	comp=Z,104nm,0.9s						
BW06	Boulder Array	64.28	333	P	P	09 09 56.0	0.0
BW06				IAMs_20	IAMs_20	09 37 36.1	
	comp=Z,8µm,20.0s						
BW06	Boulder Array	64.28	333	P	P	09 09 56.6	+0.6
	baz=144,SNR=20						
BW06				S	S	09 18 32.4	-1.6
	baz=144						
PD31	Pinedale Array	64.28	333	P	P	09 09 56.2	+0.2
PDAR	Pinedale Array	64.28	333	P	P	09 09 55.8	-0.2
	comp=Z,16nm,1.1s,baz=134,slow=6.4,SNR=60						
PDAR				LR	LR	09 37 46.4	
	comp=Z,6µm,20.5s,baz=148,slow=36						
PDAR				PKP2bc		09 38 50.2	
	comp=Z,0.4nm,0.7s,baz=290,slow=4.4,SNR=3.5						
PDAR	Pinedale Array	64.28	333	P	P	09 09 55.3	-0.7
TIN	Tinemaha, Big	64.36	324	P	P	09 09 58.8	+2.3
	baz=134						
TIN				S	S	09 18 39.5	+4.4
	baz=134						
BGU	Big Grassy Mou	64.43	330	P	P	09 09 57.4	+0.5
SPUT	South Promonto	64.44	331	P	P	09 09 58.0	+0.9
AGMN	Agassiz Nation	64.50	346	P	P	09 09 56.0	-1.0
AGMN				IAmb	IAmb	09 10 10.4	
	comp=Z,134nm,1.2s						
AGMN				IAMs_20	IAMs_20	09 40 49.9	
	comp=Z,8µm,21.0s						
AGMN	Agassiz Nation	64.50	346	P	P	09 09 56.9	-0.2
	baz=159						
AGMN				S	S	09 18 33.4	-2.7
	baz=159						
VOG	Valley Oaks Go	64.53	322	P	P	09 09 58.4	+1.0
	baz=133						
AHID	Auburn Hatcher	64.96	332	P	P	09 10 00.1	-0.3
AHID				IAmb	IAmb	09 10 08.9	
	comp=Z,55nm,1.1s						
AHID				IAMs_20	IAMs_20	09 37 28.1	
	comp=Z,11µm,20.0s						
HVU	Hansel Valley	64.96	331	P	P	09 10 00.7	+0.3
HVU				pmax	pmax		
	comp=Z,67nm,0.9s						
HVU	Hansel Valley	64.96	331	P	P	09 10 00.7	+0.3
MDND	Maddock	65.07	343	P	P	09 10 00.9	+0.1
MDND	Maddock	65.07	343	P	P	09 10 00.9	+0.1
	baz=155,SNR=20						
MLAC	Mammoth, Mammo	65.11	324	P	P	09 10 03.3	+1.7
	baz=134,SNR=29						
OMMB	Old Mammoth Mi	65.19	324	P	P	09 10 03.2	+1.1
OMMB				IAMs_20	IAMs_20	09 37 22.4	
	comp=Z,8µm,19.0s						
DRLN	Deer Lake	65.25	13	P	P	09 10 02.5	+0.7
DRLN				IAMs_20	IAMs_20	09 37 08.5	
	comp=Z,9µm,21.0s						
MDPB	Devils Postpil	65.25	324	P	P	09 10 03.6	+1.1
MDPB				IAmb	IAmb	09 10 13.3	
	comp=Z,94nm,1.5s						
MDPB				IAMs_20	IAMs_20	09 37 25.0	
	comp=Z,7µm,19.0s						
NV11	Mina Array Sit	65.28	325	P	P	09 10 04.1	+1.6
NV11				IAMs_20	IAMs_20	09 37 56.2	
	comp=Z,6µm,19.0s						
PMPB	Monarch Peak	65.31	321	P	P	09 10 04.3	+1.6
REDW	Red Top Meadow	65.32	333	P	P	09 10 02.7	-0.1
REDW				IAmb	IAmb	09 10 15.9	
	comp=Z,108nm,1.4s						
REDW				IAMs_20	IAMs_20	09 38 12.7	
	comp=Z,8µm,20.0s						
SNOW	Snow King Moun	65.36	333	P	P	09 10 03.8	+0.7
SNOW				IAMs_20	IAMs_20	09 37 32.7	
	comp=Z,9µm,21.0s						
NVAR	Mina Array Bea	65.36	325	P	P	09 10 04.2	+1.1
	comp=Z,9.8nm,0.7s,baz=142,slow=6.5,SNR=73						
NVAR				LR	LR	09 38 06.8	
	comp=Z,5µm,18.6s,baz=136,slow=36						
NVAR				PKP2bc		09 38 47.9	
	comp=Z,1.2nm,0.8s,baz=180,slow=3.0,SNR=3.7						
NVAR	Mina Array Bea	65.36	325	P	P	09 10 04.0	+0.8
ELK	Elko	65.39	328	P	P	09 10 04.0	+0.6
	comp=Z,15nm,0.9s,baz=132,slow=3.9,SNR=37						
ELK	Elko	65.39	328	P	P	09 10 03.6	+0.3
ELK				pmax	pmax		
	comp=Z,36nm,1.0s						
ELK	Elko	65.39	328	P	P	09 10 03.6	+0.3
TPAW	Teton Pass	65.47	333	P	P	09 10 02.1	-1.6
TPAW				IAMs_20	IAMs_20	09 38 17.6	
	comp=Z,7µm,21.0s						
FXWY	Fox Creek	65.62	333	P	P	09 10 04.6	-0.1
FXWY				IAMs_20	IAMs_20	09 37 28.6	
	comp=Z,7µm,21.0s						
RYN	Ryan	65.62	325	P	P	09 10 05.8	+1.0
RYN				IAMs_20	IAMs_20	09 38 07.2	
	comp=Z,7µm,19.0s						
KVN	Kaiserville	65.69	325	P	P	09 10 05.6	+0.4
KVN				pmax	pmax		
	comp=Z,50nm,1.3s						
KVN	Kaiserville	65.69	325	P	P	09 10 05.6	+0.4
FLWY	Flagg Ranch	65.83	334	P	P	09 10 06.8	+0.8
FLWY				IAMs_20	IAMs_20	09 38 10.1	
	comp=Z,8µm,20.0s						
YPP	Pitchstone Pla	66.03	334	P	P	09 10 07.9	+0.5
H17A	Grant Village	66.03	334	P	P	09 10 09.2	+1.8
H17A				IAmb	IAmb	09 10 20.3	
	comp=Z,80nm,1.4s						
H17A	Grant Village	66.03	334	P	P	09 10 11.5	+4.2
	baz=143,SNR=16						
H17A				S	S	09 18 57.1	+1.6
	baz=143						
SAO	San Andreas Ge	66.06	322	IAMs_20	IAMs_20	09 37 25.0	
	comp=Z,6µm,18.0s						
RLMT	Red Lodge	66.07	335	P	P	09 10 07.2	-0.3
RLMT				IAmb	IAmb	09 10 26.0	
	comp=Z,67nm,1.1s						
RLMT				IAMs_20	IAMs_20	09 38 06.4	
	comp=Z,7µm,18.0s						
RLMT	Red Lodge	66.07	335	P	P	09 10 07.6	+0.1
	baz=145,SNR=22						
LKWY	Lake	66.09	334	P	P	09 10 09.6	+1.8
LKWY				pmax	pmax		
	comp=Z,113nm,1.2s						
LKWY				MLR	MLR		
	comp=Z,9µm,19.0s						
LKWY	Lake	66.09	334	P	P	09 10 09.6	+1.8
LKWY				IAmb	IAmb	09 10 28.0	
	comp=Z,112nm,1.2s						
LKWY				IAMs_20	IAMs_20	09 39 29.0	
	comp=Z,9µm,19.0s						
YMP	Mirror Lake Pl	66.13	334	P	P	09 10 08.6	+0.5
LAO	LASA Array	66.20	338	P	P	09 10 07.7	-0.5
LAO				IAmb	IAmb	09 10 22.1	
	comp=Z,63nm,1.1s						
LAO	LASA Array	66.20	338	P	P	09 10 07.9	-0.3
	baz=148,SNR=15						
YUF	Upper Falls	66.25	334	P	P	09 10 10.2	+1.4
YERR	Yerington	66.28	325	P	P	09 10 10.4	+1.5
YERR				IAmb	IAmb	09 10 23.5	
	comp=Z,81nm,1.3s						
YERR				IAMs_20	IAMs_20	09 38 36.5	
	comp=Z,6µm,18.0s						
YNE	Yellowstone No	66.28	335	P	P	09 10 08.8	-0.1
CMB	Columbia Colle	66.28	323	P	P	09 10 10.1	+1.2
CMB				pmax	pmax		
	comp=Z,48nm,1.2s						
CMB	Columbia Colle	66.28	323	P	P	09 10 10.1	+1.2
CMB				IAMs_20	IAMs_20	09 37 53.5	
	comp=Z,6µm,20.0s						
YNR	Norris Junctio	66.33	334	P	P	09 10 10.2	+1.0
ULM	Lac du Bonnet	66.33	346	P	P	09 10 08.0	-0.9
	comp=Z,48nm,1.0s,baz=160,slow=6.4,SNR=44						
ULM				PKP2bc		09 38 45.5	
	comp=Z,5.1nm,1.1s,baz=1.9,slow=5.3,SNR=5.0						
ULM				LR	LR	09 41 07.1	
	comp=Z,6µm,19.9s,baz=149,slow=38						
ULM	Lac du Bonnet	66.33	346	*c i*P	P	09 10 07.5	-1.3
ULM	Lac du Bonnet	66.33	346	P	P	09 10 07.2	-1.6
ULM				IAmb	IAmb	09 10 22.6	
	comp=Z,87nm,0.8s						
ULM					P'P'bc	09 38 45.8	+4.0
ULM				IAMs_20	IAMs_20	09 40 56.0	
	comp=Z,7µm,20.0s						
YMR	Madison River	66.41	334	P	P	09 10 10.2	+0.5
YHH	Holmes Hill	66.46	334	P	P	09 10 10.4	+0.2
PNTR	Pine Nut	66.55	324	P	P	09 10 12.5	+1.7
PNTR				IAmb	IAmb	09 10 24.6	
	comp=Z,67nm,1.1s						
PNTR				IAMs_20	IAMs_20	09 38 37.7	
	comp=Z,5µm,18.0s						
YHB	Horse Butte	66.58	334	P	P	09 10 12.5	+1.7
YHL	Hebgen Lake	66.65	334	P	P	09 10 12.5	+1.1
VCNR	Virginia City	66.72	325	P	P	09 10 13.3	+1.5
QLMT	Earthquake Lak	66.74	334	P	P	09 10 13.3	+1.4
RUBR	Rubicon Trail	66.84	324	P	P	09 10 13.9	+1.3
RUBR				IAMs_20	IAMs_20	09 38 37.4	
	comp=Z,10µm,19.0s						
PAHR	Pah Rah Range	66.86	325	P	P	09 10 14.6	+2.0
PAHR				IAmb	IAmb	09 10 32.2	
	comp=Z,71nm,1.0s						
DGMT	Dagmar	67.03	340	P	P	09 10 13.7	+0.3
DGMT	Dagmar	67.03	340	P	P	09 10 13.7	+0.3
	baz=150,SNR=18						
AFDM	Forest Hills D	67.23	324	P	P	09 10 15.9	+1.0
MCMT	McKenzie Canyo	67.36	333	P	P	09 10 17.0	+1.1
BEKR	Beckworth	67.51	325	P	P	09 10 17.5	+0.7
BEKR				IAMs_20	IAMs_20	09 39 11.2	
	comp=Z,6µm,18.0s						

DLMT	**Dillon**	**67.67**	**333**	P	**P**	**09 10 18.8**	**+1.1**
DLMT				IAMs_20	IAMs_20	09 38 43.8	
	comp=Z,6μm,20.0s						
MFID	**Camas Ranch**	**67.67**	**330**	P	**P**	**09 10 18.2**	**+0.5**
MFID				IAmb	IAmb	09 10 27.2	
	comp=Z,99nm,0.9s						
MFID				IAMs_20	IAMs_20	09 38 59.0	
	comp=Z,9μm,18.0s						
H07S1	**FLORES T-PHASE**	**67.83**	**36**	*e*P	**P**	**09 10 20.1**	**+1.5**
MCCM	**Marconi Confer**	**67.83**	**322**	IAMs_20	IAMs_20	09 38 50.7	
	comp=Z,5μm,18.0s						
ORV	**Oroville**	**67.95**	**324**	P	**P**	**09 10 20.4**	**+1.0**
ORV				pmax	pmax		
	comp=Z,150nm,1.2s						
ORV	**Oroville**	**67.95**	**324**	P	**P**	**09 10 20.4**	**+1.0**
ORV				IAMs_20	IAMs_20	09 39 08.3	
	comp=Z,6μm,20.0s						
H07N1	**FLORES T-PHASE**	**68.09**	**36**	*e*P	**P**	**09 10 20.9**	**+0.6**
GDXM	**Geysers**	**68.21**	**322**	IAMs_20	IAMs_20	09 36 56.3	
	comp=Z,6μm,20.0s						
WVOR	**Wild Horse Val**	**68.37**	**328**	P	**P**	**09 10 22.9**	**+0.8**
WVOR				pmax	pmax		
	comp=Z,74nm,1.5s						
WVOR	**Wild Horse Val**	**68.37**	**328**	P	**P**	**09 10 22.9**	**+0.8**
WVOR				IAMs_20	IAMs_20	09 39 26.8	
	comp=Z,7μm,20.0s						
O03E	**Paynes Creek**	**68.61**	**324**	P	**P**	**09 10 23.5**	**-0.1**
	baz=132,SNR=13						
EGMT	**Eagleton**	**68.64**	**337**	P	**P**	**09 10 22.3**	**-1.2**
EGMT				IAmb	IAmb	09 10 37.7	
	comp=Z,68nm,1.0s						
EGMT				IAMs_20	IAMs_20	09 40 53.3	
	comp=Z,6μm,18.0s						
EGMT	**Eagleton**	**68.64**	**337**	P	**P**	**09 10 23.4**	**-0.2**
	baz=145,SNR=12						
EGMT				S	**S**	**09 19 25.1**	**-1.3**
	baz=145						
HOR	**Horta**	**68.79**	**38**	*e*P	**P**	**09 10 25.9**	**+1.3**
	comp=Z,30nm,0.4s						
PCED	**Cedros**	**68.81**	**38**	*e*P	**P**	**09 10 26.5**	**+1.7**
	comp=Z,134nm,0.7s						
PCAN	**Candelaria**	**68.84**	**39**	*e*P	**P**	**09 10 26.6**	**+1.6**
	comp=Z,106nm,1.2s						
MOD	**Modoc Plateau**	**68.88**	**326**	P	**P**	**09 10 26.2**	**+0.9**
MOD				IAmb	IAmb	09 10 36.2	
	comp=Z,94nm,1.1s						
MOD				IAMs_20	IAMs_20	09 40 32.2	
	comp=Z,7μm,18.0s						
PICO	**Pico**	**68.90**	**39**	*e*P	**P**	**09 10 27.3**	**+1.9**
	comp=Z,215nm,1.5s						
J08A	**Circle Bar Ran**	**68.94**	**328**	P	**P**	**09 10 25.6**	**0.0**
O02D	**Mt. Diablo Mer**	**69.10**	**324**	P	**P**	**09 10 27.4**	**+0.7**
	baz=131,SNR=12						
SCHQ	**Schefferville**	**69.14**	**6**	P	**P**	**09 10 25.9**	**-0.5**
	comp=Z,19nm,0.8s,baz=186,slow=5.1,SNR=21						
SCHQ				LR	LR	09 42 20.8	
	comp=Z,4μm,19.8s,baz=196,slow=37						
SCHQ	**Schefferville**	**69.14**	**6**	P	**P**	**09 10 24.5**	**-2.0**
SCHQ				IAMs_20	IAMs_20	09 39 58.5	
	comp=Z,8μm,22.0s						
ROSA	**Rosais**	**69.15**	**39**	*e*P	**P**	**09 10 29.1**	**+2.2**
	comp=Z,223nm,1.4s						
ROSA	**Rosais**	**69.15**	**39**	P	**P**	**09 10 27.5**	**+0.6**
ROSA				IAMs_20	IAMs_20	09 37 16.6	
	comp=Z,10μm,21.0s						
PMAN	**Manadas**	**69.19**	**39**	*e*P	**P**	**09 10 28.1**	**+1.0**
	comp=Z,193nm,1.2s						
WDC	**Whiskeytown Da**	**69.22**	**324**	P	**P**	**09 10 27.0**	**-0.3**
WDC				pmax	pmax		
	comp=Z,18nm,0.9s						
WDC	**Whiskeytown Da**	**69.22**	**324**	P	**P**	**09 10 27.0**	**-0.3**
TBI	**Tubuai**	**69.24**	**250**	*e*S	**S**	**09 19 33.2**	**-1.2**
	comp=Z,2μm,28.8s						
TBI				*e*LQ	LQ	09 28 22.7	
	comp=Z,2μm,25.5s						
TBI				*e*LR	LR	09 31 34.0	
	comp=Z,19μm,26.2s,baz=91						
TBI	**Tubuai**	**69.24**	**250**	*e*T	T	10 25 30.3	
	comp=Z,43nm,0.3s						
KCPM	**Cahto Peak**	**69.24**	**323**	P	**P**	**09 10 28.4**	**+0.8**
KCPM				IAmb	IAmb	09 10 39.1	
	comp=Z,58nm,1.0s						
KCPM				IAMs_20	IAMs_20	09 39 48.7	
	comp=Z,6μm,18.0s						
VNA3	**Neumayer Olymp**	**69.31**	**161**	P	**P**	**09 10 28.2**	**+0.8**
MSO	**Missoula**	**69.40**	**333**	P	**P**	**09 10 28.5**	**+0.1**
MSO				IAmb	IAmb	09 10 42.0	
	comp=Z,114nm,1.3s						
MSO				IAMs_20	IAMs_20	09 39 56.6	
	comp=Z,6μm,20.0s						
MSO	**Missoula**	**69.40**	**333**	P	**P**	**09 10 29.1**	**+0.7**
	baz=141,SNR=44						
BMO	**Blue Mountains**	**69.45**	**330**	P	**P**	**09 10 28.9**	**+0.2**
BMO				pmax	pmax		
	comp=Z,27nm,1.0s						
BMO	**Blue Mountains**	**69.45**	**330**	P	**P**	**09 10 28.9**	**+0.2**
SRBC	**Serra Branca**	**69.47**	**38**	*e*P	**P**	**09 10 29.5**	**+0.6**
	comp=Z,386nm,0.9s						
PGRA	**Graciosa**	**69.50**	**38**	*e*P	**P**	**09 10 29.6**	**+0.5**
	comp=Z,297nm,2.0s						
N02D	**Trinity Center**	**69.58**	**324**	P	**P**	**09 10 29.3**	**-0.3**
	baz=132,SNR=14						
VNA1	**Neumayer--Stat**	**69.58**	**161**	P	**P**	**09 10 30.2**	**+1.1**
M04C	**Macdoel**	**69.63**	**325**	P	**P**	**09 10 30.6**	**+0.6**
	baz=132,SNR=7.1						
KMRM	**Mail Ridge**	**69.66**	**323**	P	**P**	**09 10 30.3**	**+0.2**
KMRM				IAmb	IAmb	09 10 34.0	
	comp=Z,113nm,1.4s						
KMRM				IAMs_20	IAMs_20	09 40 03.5	
	comp=Z,6μm,19.0s						
ADH	**Angra Heroismo**	**69.72**	**39**	*e*P	**P**	**09 10 31.7**	**+1.3**
TIAR	**Tiarei**	**69.92**	**256**	*e*T	T	10 26 24.9	
	comp=Z,8.3nm,0.2s						
VNA2	**Neumayer--Watz**	**69.93**	**161**	P	**P**	**09 10 31.8**	**+0.6**
	baz=296,slow=5.7						
M02C	**Callahan**	**69.94**	**324**	P	**P**	**09 10 32.2**	**+0.4**
	baz=132,SNR=16						
I07A	**Izee**	**69.98**	**328**	P	**P**	**09 10 32.6**	**+0.5**
I07A				IAmb	IAmb	09 10 42.4	
	comp=Z,152nm,1.5s						
I07A				IAMs_20	IAMs_20	09 40 09.3	
	comp=Z,10μm,20.0s						
PSMA	**Santa Maria**	**70.03**	**42**	*e*P	**P**	**09 10 30.8**	**-1.6**
	comp=Z,169nm,1.6s						
PSMN	**Pico do Norte,**	**70.08**	**42**	*e*P	**P**	**09 10 34.9**	**+2.2**
	comp=Z,138nm,1.6s						
YBH	**Yreka Blue Hor**	**70.08**	**325**	P	**P**	**09 10 32.2**	**-0.5**
	comp=Z,19nm,1.1s,baz=80,slow=3.2,SNR=41						
YBH	**Yreka Blue Hor**	**70.08**	**325**	P	**P**	**09 10 32.8**	**+0.1**
YBH				pmax	pmax		
	comp=Z,26nm,0.9s						
YBH	**Yreka Blue Hor**	**70.08**	**325**	P	**P**	**09 10 32.8**	**+0.1**
YBH				IAMs_20	IAMs_20	09 40 14.2	
	comp=Z,6μm,19.0s						
KHMM	**Horse Mountain**	**70.10**	**324**	P	**P**	**09 10 33.4**	**+0.5**
KHMM				IAMs_20	IAMs_20	09 36 13.4	
	comp=Z,6μm,20.0s						
PPT2	**Papeete2**	**70.13**	**256**	*e*S	**S**	**09 19 41.1**	**-4.2**
	comp=Z,6μm,23.5s						
PPT2	**Papeete2**	**70.13**	**256**	*e*LR	LR	09 31 51.2	
	comp=Z,11μm,27.2s,baz=101						
PPT	**Papeete**	**70.14**	**256**	LR	LR	09 34 38.4	
	comp=Z,3μm,18.7s,baz=96,slow=30						
PDA	**Ponta Delgada**	**70.14**	**41**	*e*P	**P**	**09 10 33.9**	**+0.9**
	comp=Z,57nm,0.4s						
PSET	**Sete Cidades**	**70.15**	**41**	*e*P	**P**	**09 10 33.4**	**+0.3**
	comp=Z,224nm,1.1s						
K04D	**Chiloquin, OR**	**70.16**	**326**	P	**P**	**09 10 34.3**	**+1.1**
	baz=133,SNR=13						
L04D	**Klamath Falls**	**70.18**	**325**	P	**P**	**09 10 33.9**	**+0.5**
	baz=132,SNR=12						
JCC	**Jacoby Creek,**	**70.23**	**323**	P	**P**	**09 10 34.9**	**+1.4**
JCC				IAmb	IAmb	09 10 43.2	
	comp=Z,85nm,1.1s						
JCC				IAMs_20	IAMs_20	09 39 26.4	
	comp=Z,5μm,18.0s						
F10A	**Beach Ranch, E**	**70.24**	**331**	P	**P**	**09 10 34.5**	**+0.9**
F10A				IAMs_20	IAMs_20	09 42 30.8	
	comp=Z,9μm,19.0s						
CMLA	**Cha da Macela**	**70.24**	**41**	*e*P	**P**	**09 10 35.2**	**+1.5**
	comp=Z,184nm,0.9s						
CMLA	**Cha da Macela**	**70.24**	**41**	IAMs_20	IAMs_20	09 38 31.6	
	comp=Z,9μm,20.0s						
PCALD	**Caldeiras da R**	**70.28**	**41**	*e*P	**P**	**09 10 33.6**	**-0.3**
	comp=Z,204nm,0.9s						
J05D	**Fort Rock, OR**	**70.33**	**327**	P	**P**	**09 10 35.4**	**+1.1**
	baz=133,SNR=26						
J05D				S	**S**	**09 19 50.1**	**+3.4**
	baz=133						
BART	**Pico Bartolome**	**70.47**	**41**	*e*P	**P**	**09 10 35.5**	**+0.3**
	comp=Z,368nm,1.3s						
PINE	**Pine Mountain**	**70.52**	**327**	P	**P**	**09 10 36.6**	**+1.1**
PINE				IAMs_20	IAMs_20	09 42 19.6	
	comp=Z,8μm,19.0s						
G08A	**Pilot Rock**	**70.57**	**330**	P	**P**	**09 10 36.3**	**+0.6**
KRMB	**Red Mountain**	**70.62**	**324**	P	**P**	**09 10 38.2**	**+2.1**
KRMB				IAmb	IAmb	09 10 51.1	
	comp=Z,73nm,1.2s						
J04D	**Umpqua Nationa**	**70.77**	**326**	P	**P**	**09 10 38.3**	**+1.3**
	baz=133,SNR=11						
HUMO	**Hull Mountain**	**70.80**	**325**	IAMs_20	IAMs_20	09 40 59.1	
	comp=Z,6μm,19.0s						
L02E	**Cave Junction**	**70.86**	**325**	P	**P**	**09 10 38.9**	**+1.5**
	baz=131,SNR=12						
E09A	**Wood Farm, Sta**	**71.07**	**331**	P	**P**	**09 10 39.1**	**+0.7**
E09A				IAMs_20	IAMs_20	09 41 20.7	
	comp=Z,9μm,19.0s						
I05D	**Terrebonne, OR**	**71.11**	**328**	P	**P**	**09 10 40.3**	**+1.5**
	baz=134,SNR=20						
WALA	**Waterton Lakes**	**71.12**	**335**	P	**P**	**09 10 39.8**	**+0.9**
WALA				IAMs_20	IAMs_20	09 41 05.1	
	comp=Z,10μm,20.0s						
K02D	**Willamette Mer**	**71.25**	**325**	P	**P**	**09 10 41.6**	**+1.8**
	baz=131,SNR=17						
I04A	**Tendick Farm,**	**71.30**	**327**	P	**P**	**09 10 41.2**	**+1.1**
	baz=132,SNR=7.5						
G06A	**Carlson Farm,**	**71.37**	**329**	P	**P**	**09 10 41.3**	**+0.9**
F07A	**Phinny Hill Vi**	**71.48**	**329**	P	**P**	**09 10 42.5**	**+1.5**
E08A	**Dider Farm, El**	**71.48**	**330**	P	**P**	**09 10 42.4**	**+1.4**
E08A				IAMs_20	IAMs_20	09 41 20.9	
	comp=Z,10μm,19.0s						
SNAA	**Sanae**	**71.53**	**161**	P	**P**	**09 10 41.3**	**+0.2**
SNAA	**Sanae**	**71.53**	**161**	*de*P	**P**	**09 10 40.2**	**-0.9**
SNAA	**Sanae**	**71.53**	**161**	P	**P**	**09 10 41.0**	**-0.1**
SNAA				IAmb	IAmb	09 10 46.4	
	comp=Z,112nm,0.9s						
SNAA				IAMs_20	IAMs_20	09 37 28.6	
	comp=Z,7μm,22.0s						
MACI	**Morro de la Ar**	**71.58**	**54**	P	**P**	**09 10 43.8**	**+1.6**
HAWA	**Hanford**	**71.64**	**330**	P	**P**	**09 10 43.7**	**+1.8**
J01E	**Myrtle Point**	**71.71**	**325**	P	**P**	**09 10 43.5**	**+1.1**
	baz=131						
J01E				S	**S**	**09 20 06.2**	**+3.8**
	baz=131						
G05D	**Wamic, OR**	**71.72**	**328**	P	**P**	**09 10 45.0**	**+2.5**
	baz=134,SNR=7.5						
I03D	**Drain, OR**	**71.74**	**326**	P	**P**	**09 10 44.4**	**+1.8**
	baz=132,SNR=5.4						
H04A	**Detroit Lake**	**71.79**	**327**	P	**P**	**09 10 43.1**	**+0.2**
H04A				IAMs_20	IAMs_20	09 42 25.0	
	comp=Z,7μm,19.0s						
D08A	**Wollman Farm,**	**71.83**	**331**	P	**P**	**09 10 43.1**	**0.0**
D08A				IAMs_20	IAMs_20	09 41 53.2	
	comp=Z,9μm,20.0s						
NEW	**Newport**	**71.89**	**333**	P	**P**	**09 10 43.7**	**+0.2**
NEW				pmax	pmax		
	comp=Z,51nm,1.2s						
NEW				MLR	MLR		
	comp=Z,7μm,19.0s						
NEW	**Newport**	**71.89**	**333**	P	**P**	**09 10 43.7**	**+0.2**
NEW	**Newport**	**71.89**	**333**	IAMs_20	IAMs_20	09 41 45.5	
	comp=Z,7μm,19.0s						
NEW	**Newport**	**71.89**	**333**	P	**P**	**09 10 44.2**	**+0.7**
	baz=138,SNR=28						
NEW				S	**S**	**09 20 05.4**	**+1.0**
	baz=138						
E07A	**Sunnyside**	**71.92**	**330**	P	**P**	**09 10 45.0**	**+1.3**
E07A				IAmb	IAmb	09 10 54.0	
	comp=Z,74nm,1.0s						
FFC	**Flin Flon**	**71.92**	**345**	P	**P**	**09 10 42.4**	**-1.1**
FFC	**Flin Flon**	**71.92**	**345**	P	**P**	**09 10 42.4**	**-1.1**
FFC	**Flin Flon**	**71.92**	**345**	IAMs_20	IAMs_20	09 42 55.0	
	comp=Z,6μm,20.0s						
H04D	**Lebanon**	**71.97**	**327**	P	**P**	**09 10 45.2**	**+1.3**
	baz=132						
C09A	**Chrisman Ranch**	**72.07**	**332**	P	**P**	**09 10 45.5**	**+0.9**
C09A				IAMs_20	IAMs_20	09 41 38.3	
	comp=Z,5μm,21.0s						
F05D	**White Salmon**	**72.24**	**329**	P	**P**	**09 10 47.6**	**+2.1**
	baz=134						
I02D	**Swisshome**	**72.28**	**326**	P	**P**	**09 10 48.2**	**+2.4**
	baz=131						
COR	**Corvallis**	**72.31**	**327**	P	**P**	**09 10 47.4**	**+1.4**
COR				pmax	pmax		
	comp=Z,242nm,1.4s						
COR				MLR	MLR		
	comp=Z,7μm,19.0s						
COR	**Corvallis**	**72.31**	**327**	P	**P**	**09 10 47.4**	**+1.4**
COR	**Corvallis**	**72.31**	**327**	IAMs_20	IAMs_20	09 42 19.9	
	comp=Z,7μm,19.0s						
G03D	**McMinnville, O**	**72.71**	**327**	P	**P**	**09 10 50.0**	**+1.6**
	baz=132						
F04A	**Amboy**	**72.76**	**328**	P	**P**	**09 10 49.3**	**+0.7**
F04A				IAmb	IAmb	09 10 58.3	
	comp=Z,92nm,0.9s						
F04A				IAMs_20	IAMs_20	09 41 58.8	
	comp=Z,10μm,20.0s						
LTY	**Liberty**	**72.81**	**330**	P	**P**	**09 10 50.0**	**+1.0**
B08A	**Colville Reser**	**72.96**	**332**	P	**P**	**09 10 50.6**	**+0.8**
B08A				IAMs_20	IAMs_20	09 42 04.9	
	comp=Z,7μm,19.0s						
LON	**Longmire**	**73.01**	**329**	P	**P**	**09 10 51.1**	**+0.9**
LON				pmax	pmax		
	comp=Z,15nm,1.0s						
LON	**Longmire**	**73.01**	**329**	P	**P**	**09 10 51.1**	**+0.9**
PMOZ	**Porto Moniz, M**	**73.25**	**49**	P	**P**	**09 10 52.8**	**+0.8**
PMOZ	**Porto Moniz, M**	**73.25**	**49**	*e*P	**P**	**09 10 53.0**	**+1.0**
	comp=Z,184nm,1.2s						
PMOZ				*e*S	**SKiKP**	**09 20 33.7**	**+9.4**
PMOZ	**Porto Moniz, M**	**73.25**	**49**	*e*LQ	LQ	09 32 17.1	
PMOZ				*e*LR	LR	09 34 03.4	
	comp=Z,6μm,24.0s						
E04D	**Cinebar**	**73.26**	**329**	P	**P**	**09 10 53.9**	**+2.3**
	baz=133						
F03A	**Seaside**	**73.34**	**328**	IAMs_20	IAMs_20	09 42 31.2	
	comp=Z,7μm,20.0s						
C06D	**Leavenworth**	**73.38**	**331**	P	**P**	**09 10 53.9**	**+1.6**
	baz=135						
D05A	**Enumclaw**	**73.40**	**329**	P	**P**	**09 10 52.7**	**+0.3**
D05A				IAmb	IAmb	09 11 02.1	
	comp=Z,73nm,0.9s						
PMAR	**Madeira**	**73.41**	**49**	*e*P	**P**	**09 10 52.4**	**-0.6**
	comp=Z,228nm,1.5s						
LIC	**Lamto**	**73.57**	**79**	*e*P	**P**	**09 10 53.7**	**-0.5**
	comp=Z,423nm,1.6s						
TIC	**Toumodi**	**73.70**	**79**	*e*P	**P**	**09 10 54.6**	**-0.3**
	comp=Z,313nm,1.2s						
D04E	**Lakebay**	**73.78**	**329**	P	**P**	**09 10 56.7**	**+2.0**
	baz=133						
DBIC	**Dimbokro**	**73.86**	**79**	P	**P**	**09 10 55.7**	**-0.2**
	comp=Z,44nm,0.5s,baz=230,slow=6.6,SNR=50						
DBIC				LR	LR	09 43 01.0	
	comp=Z,20μm,18.9s,baz=226,slow=36						
DBIC	**Dimbokro**	**73.86**	**79**	P	**P**	**09 10 55.8**	**0.0**
DBIC				pmax	pmax		
	comp=Z,110nm,1.0s						
DBIC	**Dimbokro**	**73.86**	**79**	P	**P**	**09 10 55.8**	**0.0**
DBIC				IAmb	IAmb	09 10 57.7	
	comp=Z,110nm,0.9s						
KIC	**Kosan Boka**	**73.88**	**79**	*e*P	**P**	**09 10 56.0**	**0.0**
	comp=Z,235nm,0.8s						
PMPS	**Porto Santo**	**73.99**	**49**	*e*P	**P**	**09 10 57.2**	**+1.0**
	comp=Z,391nm,1.8s						
PMPST	**Porto Santo, M**	**74.00**	**49**	*e*P	**P**	**09 10 57.7**	**+1.4**
	comp=Z,361nm,2.0s						
FCC	**Fort Churchill**	**74.04**	**350**	P	**P**	**09 10 55.0**	**-0.9**
FCC				pmax	pmax		
	comp=Z,109nm,1.3s						
FCC	**Fort Churchill**	**74.04**	**350**	P	**P**	**09 10 55.0**	**-0.9**
FCC				IAmb	IAmb	09 11 09.4	
	comp=Z,109nm,1.2s						
D03D	**Eldon**	**74.19**	**329**	P	**P**	**09 10 58.9**	**+1.9**
	baz=133,SNR=11						
B05A	**Bryant**	**74.20**	**330**	P	**P**	**09 10 58.2**	**+1.2**
	baz=134,SNR=16						
NLWA	**Neilton Lookou**	**74.48**	**329**	P	**P**	**09 11 01.0**	**+2.2**
NLWA				IAmb	IAmb	09 11 09.4	
	comp=Z,100nm,1.1s						
A04D	**Lummi Island**	**74.81**	**330**	P	**P**	**09 11 02.9**	**+2.3**
	baz=133,SNR=5.7						
PGC	**Sidney**	**75.12**	**330**	P	**P**	**09 11 04.7**	**+2.3**
PGC				IAmb	IAmb	09 11 12.2	
	comp=Z,62nm,0.9s						
LLLB	**Lillooet**	**75.73**	**332**	P	**P**	**09 11 06.9**	**+1.0**
QSPA	**South Pole Qui**	**76.04**	**180**	P	**P**	**09 11 07.7**	**0.0**
QSPA				IAmb	IAmb	09 11 20.0	
	comp=Z,109nm,0.9s						
QSPA	**South Pole Qui**	**76.04**	**180**	IAMs_20	IAMs_20	09 48 00.8	
	comp=Z,4μm,19.0s						
NVL	**N'lazarevskaya**	**76.20**	**160**	⇓*i*P	**P**	**09 11 08.2**	**-0.1**
NVL				*i* S	**S**	**09 20 46.0**	**-6.2**
NVL				pmax	pmax		
	comp=Z,139nm,1.2s						
NVL				MLR	MLR		
	comp=Z,2μm,18.0s						
FRB	**Frobisher Bay**	**77.84**	**4**	P	**P**	**09 11 16.8**	**-0.6**
	comp=Z,23nm,0.9s,baz=200,slow=6.6,SNR=33						
IVI	**Ivigtut**	**78.33**	**14**	P	**P**	**09 11 20.9**	**+0.6**
IVI				IAmb	IAmb	09 11 36.0	
	comp=Z,137nm,1.2s						
PFVI	**Vila Bisbo**	**81.32**	**48**	P	**P**	**09 11 39.4**	**+2.4**
PFVI				IAmb	IAmb	09 11 40.8	
	comp=Z,121nm,1.0s						
PFVI	**Vila Bisbo**	**81.32**	**48**	*e*P	**P**	**09 11 37.4**	**+0.3**
	comp=Z,295nm,1.7s						
PFVI	**Vila Bisbo**	**81.32**	**48**	*e*SKS	**SKSac**	**09 21 54.7**	**-2.0**
MORF	**Marmelete**	**81.52**	**48**	*e*P	**P**	**09 11 39.3**	**+1.1**
MORF				*e*S	**S**	**09 21 50.2**	**-0.1**
MORF				AMS	AMS	09 47 58.6	
	comp=Z,10μm,13.2s						
MORF	**Marmelete**	**81.52**	**48**	*e*P	**P**	**09 11 39.3**	**+1.1**
MORF				*e*S	**S**	**09 21 50.1**	**-0.1**
MORF	**Marmelete**	**81.52**	**48**	*e*P	**P**	**09 11 39.9**	**+1.7**
	comp=Z,314nm,1.5s						
MORF	**Marmelete**	**81.52**	**48**	*e*SKS	**SKSac**	**09 21 58.5**	**+0.3**
PTEO	**Sao Teotonio**	**81.57**	**48**	*e*P	**P**	**09 11 39.9**	**+1.6**
	comp=Z,366nm,1.5s						
SBA	**Scott Base**	**81.74**	**191**	IAMs_20	IAMs_20	09 40 27.5	
	comp=Z,5μm,20.0s						
LIS	**Lisbon**	**81.76**	**47**	*e*P	**P**	**09 11 40.2**	**+0.9**
LIS				*e*S	**S**	**09 21 52.9**	**+0.4**
LIS				AMS	AMS	09 44 40.0	
	comp=Z,20μm,21.0s						
LIS	**Lisbon**	**81.76**	**47**	*e*P	**P**	**09 11 40.2**	**+0.9**
LIS				*e*S	**S**	**09 21 52.9**	**+0.4**
LIS	**Lisbon**	**81.76**	**47**	*e*P	**P**	**09 11 41.0**	**+1.7**
	comp=Z,290nm,1.8s						
PMAFR	**Mafra**	**81.77**	**47**	*e*P	**P**	**09 11 40.4**	**+1.0**
	comp=Z,272nm,1.4s						
PMAFR	**Mafra**	**81.77**	**47**	*e*SKS	**SKSac**	**09 21 57.2**	**-2.5**
TOA0	**Torodi Ar. Sit**	**81.89**	**74**	P	**P**	**09 11 41.1**	**+0.6**
TORD	**Torodi Ar. Bea**	**81.89**	**74**	P	**P**	**09 11 40.6**	**+0.1**
	comp=Z,208nm,0.8s,baz=259,slow=3.8,SNR=184						
TORD				LR	LR	09 46 49.0	
	comp=Z,13μm,21.2s,baz=280,slow=35						
TORD	**Torodi Ar. Bea**	**81.89**	**74**	P	**P**	**09 11 41.3**	**+0.7**
PNCL	**Nicolau / Gran**	**81.95**	**48**	*e*P	**P**	**09 11 40.9**	**+0.6**
	comp=Z,200nm,1.6s						
PNCL	**Nicolau / Gran**	**81.95**	**48**	*e*SKS	**SKSac**	**09 21 58.8**	**-2.1**
YKA	**Yellowknife Ar**	**81.99**	**343**	P	**P**	**09 11 39.0**	**-1.0**
	comp=Z,12nm,0.7s,baz=146,slow=6.2,SNR=88						
YKA				PKKPbc	**PKKPbc**	**09 30 11.2**	**-1.9**
	comp=Z,1.0nm,1.0s,baz=316,slow=1.8,SNR=5.1						
YKA				PKPPKP	**P'P'df**	**09 38 15.6**	**+4.5**
	comp=Z,0.6nm,0.9s,baz=346,slow=2.6,SNR=4.5						
YKA				LR	LR	09 50 34.6	
	comp=Z,6μm,18.5s,baz=0.0,slow=38						
YKA	**Yellowknife Ar**	**81.99**	**343**	P	**P**	**09 11 39.0**	**-1.0**
PBDV	**Barranco-do-Ve**	**82.02**	**49**	*e*P	**P**	**09 11 41.7**	**+0.9**
	comp=Z,227nm,1.8s						
PBDV	**Barranco-do-Ve**	**82.02**	**49**	*e*SKS	**SKSac**	**09 22 01.3**	**-0.2**
MESJ	**Messejana**	**82.06**	**48**	*e*P	**P**	**09 11 41.7**	**+0.8**
MESJ				*e*S	**S**	**09 21 55.5**	**-0.1**
MESJ				AMS	AMS	09 44 28.7	
	comp=Z,10μm,23.9s						
MESJ	**Messejana**	**82.06**	**48**	*e*P	**P**	**09 11 41.7**	**+0.8**
MESJ				*e*S	**S**	**09 21 55.5**	**-0.1**
MESJ	**Messejana**	**82.06**	**48**	*e*P	**P**	**09 11 42.1**	**+1.2**
	comp=Z,192nm,1.5s						
PCVE	**Castro Verde**	**82.10**	**48**	*e*P	**P**	**09 11 42.4**	**+1.2**
	comp=Z,288nm,1.3s						
PCVE	**Castro Verde**	**82.10**	**48**	*e*SKS	**SKSac**	**09 21 59.7**	**-2.2**
PVAQ	**Vaqueiros**	**82.24**	**48**	P	**P**	**09 11 43.6**	**+1.6**
PVAQ				IAmb	IAmb	09 11 50.3	
	comp=Z,89nm,1.2s						
PVAQ	**Vaqueiros**	**82.24**	**48**	*e*P	**P**	**09 11 43.5**	**+1.6**
	comp=Z,210nm,1.7s						
PVAQ	**Vaqueiros**	**82.24**	**48**	*e*SKS	**SKSac**	**09 22 02.2**	**-0.7**
PVAQ	**Vaqueiros**	**82.24**	**48**	*e*LR	LR	09 38 56.4	
	comp=Z,9μm,22.0s						
PSBE	**So Bento**	**82.35**	**46**	*e*P	**P**	**09 11 43.3**	**+0.8**
	comp=Z,285nm,1.4s						
PSBE	**So Bento**	**82.35**	**46**	*e*SKS	**SKSac**	**09 22 04.2**	**+0.6**
PBEJ	**Beja**	**82.39**	**48**	*e*P	**P**	**09 11 43.9**	**+1.2**
	comp=Z,217nm,1.6s						
PMTG	**Montargil**	**82.56**	**47**	*e*P	**P**	**09 11 42.7**	**-0.9**
	comp=Z,316nm,1.4s						
PMTG	**Montargil**	**82.56**	**47**	*e*SKS	**SKSac**	**09 22 03.2**	**-1.8**
PTOM	**Tomar**	**82.66**	**46**	*e*P	**P**	**09 11 45.6**	**+1.5**
	comp=Z,256nm,1.2s						
PCAS	**Casmilo, Conde**	**82.79**	**46**	*e*P	**P**	**09 11 45.3**	**+0.6**
	comp=Z,209nm,2.1s						
PCAS	**Casmilo, Conde**	**82.79**	**46**	*e*SKS	**SKSac**	**09 22 06.8**	**+0.3**
MDT	**Midelt**	**82.80**	**54**	P	**P**	**09 11 46.3**	**+1.2**
	comp=Z,27nm,0.9s,baz=247,slow=5.5,SNR=44						
VNDA	**Vanda**	**82.81**	**191**	P	**P**	**09 11 45.6**	**+1.4**
	comp=Z,4.9nm,0.9s,baz=141,slow=3.6,SNR=9.5						
VNDA				LR	LR	09 41 33.1	
	comp=Z,5μm,20.3s,baz=123,slow=31						
VNDA	**Vanda**	**82.81**	**191**	P	**P**	**09 11 45.4**	**+1.2**
VNDA				pmax	pmax		
	comp=Z,20nm,1.1s						
VNDA	**Vanda**	**82.81**	**191**	P	**P**	**09 11 45.4**	**+1.2**
COI	**Coimbra**	**82.91**	**46**	P	**P**	**09 11 46.7**	**+1.4**
COI				pmax	pmax		
	comp=Z,165nm,0.9s						
COI	**Coimbra**	**82.91**	**46**	P	**P**	**09 11 46.7**	**+1.4**
COI	**Coimbra**	**82.91**	**46**	*e*P	**P**	**09 11 46.3**	**+1.0**
	comp=Z,358nm,1.2s						
COI	**Coimbra**	**82.91**	**46**	*e*SKS	**SKSac**	**09 22 07.8**	**+0.6**
PESTR	**Estremoz**	**82.93**	**47**	P	**P**	**09 11 46.5**	**+1.0**
PESTR				IAmb	IAmb	09 11 48.8	
	comp=Z,104nm,1.5s						
PESTR	**Estremoz**	**82.93**	**47**	*e*SKS	**SKSac**	**09 22 08.7**	**+1.2**
SFJD	**Kangerlussuaq**	**83.06**	**10**	IAMs_20	IAMs_20	09 52 41.0	
	comp=Z,4μm,19.0s						
PMRV	**Marv??o**	**83.30**	**47**	*e*P	**P**	**09 11 47.7**	**+0.3**
	comp=Z,79nm,2.0s						
PMRV	**Marv??o**	**83.30**	**47**	*e*SKS	**SKSac**	**09 22 08.6**	**-1.3**
PMRV	**Marv??o**	**83.30**	**47**	*e*LR	LR	09 38 51.7	
	comp=Z,16μm,20.0s						
PCBR	**Castelo Branco**	**83.41**	**46**	*e*P	**P**	**09 11 48.2**	**+0.3**
	comp=Z,129nm,2.0s						
PVIS	**Viseu**	**83.48**	**45**	*e*P	**P**	**09 11 49.4**	**+1.0**
	comp=Z,154nm,1.4s						
MTE	**Manteigas**	**83.59**	**46**	P	**P**	**09 11 49.1**	**+0.1**
MTE				IAmb	IAmb	09 12 07.4	
	comp=Z,90nm,1.2s						
MTE	**Manteigas**	**83.59**	**46**	*e*P	**P**	**09 11 49.0**	**+0.1**
	comp=Z,123nm,1.3s						
MTE	**Manteigas**	**83.59**	**46**	*e*SKS	**SKKSac**	**09 22 14.1**	**-2.4**
MTE	**Manteigas**	**83.59**	**46**	*e*LQ	LQ	09 34 18.3	
MTE				*e*LR	LR	09 38 49.3	
	comp=Z,15μm,20.0s						
PGAV	**Gavieira, Arco**	**83.75**	**44**	*e*P	**P**	**09 11 49.1**	**-0.7**
	comp=Z,128nm,1.9s						
PGAV	**Gavieira, Arco**	**83.75**	**44**	*e*SKS	**SKKSac**	**09 22 14.8**	**-2.9**
PGAV	**Gavieira, Arco**	**83.75**	**44**	*e*LQ	LQ	09 34 11.2	
PGAV				*e*LR	LR	09 39 17.8	
	comp=Z,9μm,22.0s						
PCAB	**Cabril**	**83.81**	**44**	*e*P	**P**	**09 11 50.1**	**+0.1**
	comp=Z,136nm,1.9s						
PVRL	**Vila Real**	**83.84**	**45**	*e*P	**P**	**09 11 50.9**	**+0.7**
	comp=Z,113nm,1.9s						
MVO	**Moncorvo**	**84.27**	**45**	*e*P	**P**	**09 11 52.7**	**+0.3**
	comp=Z,108nm,1.6s						
MVO	**Moncorvo**	**84.27**	**45**	*e*SKS	**SKKSac**	**09 22 20.7**	**-0.9**
MVO	**Moncorvo**	**84.27**	**45**	*e*LQ	LQ	09 34 25.8	
MVO				*e*LR	LR	09 38 49.3	
	comp=Z,10μm,22.0s						
DLBC	**Dease Lake**	**84.47**	**335**	P	**P**	**09 11 53.2**	**+0.2**
	comp=Z,46nm,1.1s,baz=136,slow=5.1,SNR=27						
DLBC	**Dease Lake**	**84.47**	**335**	P	**P**	**09 11 54.6**	**+1.6**
DLBC				IAmb	IAmb	09 12 06.4	
	comp=Z,48nm,0.9s						
ANGG	**Ammassalik, Gr**	**84.60**	**15**	IAMs_20	IAMs_20	09 51 36.1	
	comp=Z,5μm,19.0s						
PBRG	**Braganca**	**84.72**	**45**	*e*P	**P**	**09 11 55.0**	**+0.3**
	comp=Z,72nm,1.9s						

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PBRG  Braganca          84.72  45  eSKS     SKKSac   09 22 23.6 -1.3
MLOA  Mauna Loa Obse    84.80 292   IAMs_20 IAMs_20  09 41 28.0
      comp=Z,7µm,20.0s
POHA  Pohakuloa         84.83 292   IAMs_20 IAMs_20  09 41 28.5
      comp=Z,7µm,19.0s
HPAH  Hawaii Prepara    85.05 292   IAMs_20 IAMs_20  09 41 34.7
      comp=Z,7µm,20.0s
KHLU  Kahalu`u          85.10 291   IAMs_20 IAMs_20  09 41 17.1
      comp=Z,7µm,19.0s
PAB   San Pablo         85.51  48   P       P        09 11 59.4 +0.7
PAB                                 pmax    pmax
      comp=Z,31nm,0.9s
PAB   San Pablo         85.51  48   P       P        09 11 59.4 +0.7
SYO   Syowa Base        85.82 161⇑eP        P        09 11 56.0 -3.6
SYO   Syowa Base        85.82 161⇑iPcP      P        09 11 58.4 -1.2
SYO   Syowa Base        85.82 161⇓iX        P        09 12 11.4 +12
ESDC  Sonseca Array     85.84  48   P       P        09 12 01.0 +0.7
      comp=Z,12nm,0.8s,baz=251,slow=5.6,SNR=27
ESDC                                LR      LR       09 46 27.5
      comp=Z,10µm,20.9s,baz=245,slow=33
ESDC  Sonseca Array     85.84  48   IAmb    IAmb     09 12 04.5
      comp=Z,13nm,0.9s
ESBB  Sonseca Array     85.84  48   P       P        09 12 00.6 +0.3
JIS   Juneau Island     86.22 333   P       P        09 12 02.2 +0.6
JIS                                 IAmb    IAmb     09 12 18.3
      comp=Z,85nm,1.4s
BESE  Bessie Mountai    86.60 333   P       P        09 12 05.2 +1.6
BESE                                IAmb    IAmb     09 12 13.6
      comp=Z,78nm,1.2s
CART  Cartagena         87.26  50   IAMs_20 IAMs_20  09 48 20.7
      comp=Z,4µm,21.0s
SKAG  Skagway           87.29 334   P       P        09 12 08.2 +1.3
WHY   Whitehorse        87.78 335   P       P        09 12 09.4  0.0
TAM   Tamanrasset       88.09  66   P       P        09 12 13.0 +1.2
TAM                                 pmax    pmax
      comp=Z,93nm,1.5s
TAM                                 MLR     MLR
      comp=Z,31µm,19.0s
TAM   Tamanrasset       88.09  66   P       P        09 12 13.0 +1.2
TAM                                 IAmb    IAmb     09 12 15.0
      comp=Z,93nm,1.5s
HYT   Haines Junctio    88.95 335   P       P        09 12 15.9 +1.0
HYT                                 IAmb    IAmb     09 12 27.0
      comp=Z,56nm,1.3s
TSUM  Tsumeb            89.07 109   P       P        09 12 15.9 -0.6
TSUM                                IAmb    IAmb     09 12 20.8
      comp=Z,50nm,1.3s
KULLO Kullorsuaq        89.31   5 i P       P        09 12 16.1  0.0
      comp=Z,61nm,1.1s
KULLO Kullorsuaq        89.31   5 i P       P        09 12 16.1  0.0
KULLO                               pmax    pmax
      comp=Z,61nm,1.1s
RES   Resolute Bay      89.37 355   P       P        09 12 16.1 -0.3
      comp=Z,11nm,0.9s,baz=178,slow=9.0,SNR=24
RES   Resolute Bay      89.37 355   P       P        09 12 16.4  0.0
RES                                 pmax    pmax
      comp=Z,35nm,1.2s
RES                                 MLR     MLR
      comp=Z,6µm,20.0s
RES   Resolute Bay      89.37 355   P       P        09 12 16.4  0.0
RES                                 IAMs_20 IAMs_20  09 53 20.5
      comp=Z,6µm,20.0s
C36M  Paulatuk          89.70 345   IAMs_20 IAMs_20  09 53 48.6
      comp=Z,6µm,20.0s
C36M  Paulatuk          89.70 345   P       P        09 12 17.1 -0.9
      baz=134
SUMG  Summit            90.01  11 i P       P        09 12 20.4 +0.4
      comp=Z,123nm,0.9s
SUMG  Summit            90.01  11   P       P        09 12 19.6 -0.3
SUMG                                pmax    pmax
      comp=Z,96nm,1.0s
SUMG                                MLR     MLR
      comp=Z,5µm,20.0s
SUMG  Summit            90.01  11   P       P        09 12 19.6 -0.3
SUMG                                IAMs_20 IAMs_20  09 51 48.6
      comp=Z,5µm,20.0s
TULEG Thule             90.57   2   P       P        09 12 21.9  0.0
TULEG                               IAMs_20 IAMs_20  09 56 23.7
      comp=Z,4µm,18.0s
CTGM  Chitina Glacie    90.64 334   P       P        09 12 22.6 -0.3
CTGM                                IAmb    IAmb     09 12 25.2
      comp=Z,80nm,1.5s
CTGM                                IAMs_20 IAMs_20  09 52 54.2
      comp=Z,5µm,21.0s
TGL   Tana Glacier      91.19 333   IAMs_20 IAMs_20  09 52 22.6
      comp=Z,6µm,21.0s
CRQM  Cirque            91.33 333   P       P        09 12 26.2 +0.2
CRQM                                IAmb    IAmb     09 12 36.6
      comp=Z,50nm,1.0s
CRQM                                IAMs_20 IAMs_20  09 58 44.7
      comp=Z,5µm,20.0s
DAWY  Dawson            91.38 337   P       P        09 12 25.9 -0.1
DAWY                                IAmb    IAmb     09 12 37.1
      comp=Z,33nm,0.9s
MCARA McCarthy VSAT     91.56 334   P       P        09 12 26.7 -0.2
MCARA                               IAmb    IAmb     09 12 29.0
      comp=Z,67nm,1.2s
MCARA                               IAMs_20 IAMs_20  09 53 20.4
      comp=Z,6µm,20.0s
EPYK  Eagle Plains      91.61 339   P       P        09 12 27.3 +0.2
EPYK                                IAmb    IAmb     09 12 29.1
      comp=Z,55nm,1.3s
EPYK                                IAMs_20 IAMs_20  09 55 14.5
      comp=Z,6µm,18.0s
EPYK  Eagle Plains      91.61 339   P       P        09 12 28.1 +0.9
      baz=122,SNR=11
INK   Inuvik            91.67 342   P       P        09 12 26.6 -0.7
      comp=Z,40nm,1.1s,baz=114,slow=4.5,SNR=31
INK                                 LR      LR       09 56 41.0
      comp=Z,8µm,21.2s,baz=114,slow=38
INK   Inuvik            91.67 342   P       P        09 12 27.1 -0.1
INK                                 pmax    pmax
      comp=Z,47nm,1.2s
INK                                 MLR     MLR
      comp=Z,12µm,22.0s
INK   Inuvik            91.67 342   P       P        09 12 27.1 -0.1
INK                                 IAmb    IAmb     09 12 29.6
      comp=Z,47nm,1.1s
VRDI  Verde Repeater    91.67 334   P       P        09 12 28.2 +0.5
VRDI                                IAmb    IAmb     09 12 41.5
      comp=Z,29nm,1.0s
VRDI                                IAMs_20 IAMs_20  09 52 50.5
      comp=Z,6µm,21.0s
AFI   Afiamalu          91.79 255   LR      LR       09 46 02.4
      comp=Z,6µm,18.2s,baz=100,slow=30
BCAR  Beaver Creek A    91.83 336   P       P        09 12 28.4 +0.3
GLB   Gilahina Butte    91.92 334   P       P        09 12 28.8 +0.1
GLB                                 IAMs_20 IAMs_20  09 52 49.1
      comp=Z,6µm,21.0s
ESK   Eskdalemuir       92.17  33   IAMs_20 IAMs_20  09 48 30.2
      comp=Z,5µm,20.0s
SCO   Scoresbysund      92.19  16 i P       P        09 12 30.0 +0.4
      comp=Z,29nm,0.9s
SCO   Scoresbysund      92.19  16   P       P        09 12 30.3 +0.7
SCO                                 pmax    pmax
      comp=Z,31nm,0.9s
SCO   Scoresbysund      92.19  16   P       P        09 12 30.3 +0.7
SCO                                 IAmb    IAmb     09 12 34.6
      comp=Z,31nm,0.9s
EKA   Eskdalemuir Ar    92.20  33   P       P        09 12 29.4 -0.6
      comp=Z,7.4nm,0.8s,baz=260,slow=4.2,SNR=10.0
EYAK  Cordova Ski Ar    92.39 332   IAMs_20 IAMs_20  09 54 35.5
      comp=Z,7µm,20.0s
EGAK  Eagle             92.39 337   P       P        09 12 30.8 +0.1
EGAK                                IAmb    IAmb     09 12 39.7
      comp=Z,61nm,1.3s
EGAK                                IAMs_20 IAMs_20  09 55 04.3
      comp=Z,6µm,19.0s
MENT  Mentasta          92.55 335   IAMs_20 IAMs_20  09 55 45.5
      comp=Z,5µm,19.0s
FID   Port Fidalgo      92.80 332   IAMs_20 IAMs_20  09 54 49.5
      comp=Z,6µm,21.0s
CLF   Chambon-Foret     92.92  41   P       P        09 12 32.7 -0.7
CLF                                 IAmb    IAmb     09 12 35.1
      comp=Z,82nm,1.5s
CLF                                 IAMs_20 IAMs_20  09 57 11.2
      comp=Z,5µm,19.0s
RAO   Raoul Island      93.00 239   LR      LR       09 44 39.3
      comp=Z,5µm,21.5s,baz=119,slow=29
SCRK  Sand Creek        93.12 336   P       P        09 12 34.3 +0.1
SCRK                                IAMs_20 IAMs_20  09 54 40.5
      comp=Z,6µm,20.0s
GLI   Glacier Island    93.13 332   IAMs_20 IAMs_20  09 55 11.1
      comp=Z,4µm,20.0s
BOSA  Boshof            93.23 120   P       P        09 12 34.8 -0.9
      comp=Z,8.2nm,0.7s,baz=244,slow=4.1,SNR=16
BOSA                                LR      LR       09 51 20.0
      comp=Z,11µm,21.1s,baz=260,slow=34
BOSA  Boshof            93.23 120   P       P        09 12 34.7 -0.9
BOSA                                pmax    pmax
      comp=Z,24nm,1.1s
BOSA  Boshof            93.23 120   P       P        09 12 34.7 -1.0
PAX   Paxson            93.29 335   IAMs_20 IAMs_20  09 54 15.0
      comp=Z,7µm,21.0s
MAW   Mawson            93.32 165   P       P        09 12 34.4 -0.6
      comp=Z,10nm,0.5s,baz=167,slow=5.0,SNR=14
MAW                                 LR      LR       09 51 17.5
      comp=Z,7µm,21.7s,baz=231,slow=33
MAW   Mawson            93.32 165   P       P        09 12 36.1 +1.1
MAW                                 pmax    pmax
      comp=Z,18nm,1.5s
MAW   Mawson            93.32 165   P       P        09 12 36.1 +1.1
RIDG  Independent Ri    93.36 336   P       P        09 12 34.6 -0.7
RIDG                                IAmb    IAmb     09 12 44.8
      comp=Z,47nm,1.0s
SCM   Sheep Creek Mo    93.61 333   P       P        09 12 34.8 -1.7
SCM                                 pmax    pmax
      comp=Z,27nm,1.0s
SCM   Sheep Creek Mo    93.61 333   P       P        09 12 34.8 -1.7
SCM                                 IAMs_20 IAMs_20  10 00 01.8
      comp=Z,5µm,21.0s
SSB   Saint Sauveur     93.61  44   P       P        09 12 37.3 +0.5
SSB                                 pmax    pmax
      comp=Z,44nm,1.4s
SSB                                 MLR     MLR
      comp=Z,6µm,20.0s
SSB   Saint Sauveur     93.61  44   P       P        09 12 37.3 +0.5
SSB                                 IAmb    IAmb     09 12 38.8
      comp=Z,44nm,1.4s
SSB   Saint Sauveur     93.61  44   IAMs_20 IAMs_20  09 54 01.8
      comp=Z,6µm,20.0s
URZ   Urewera           93.91 229   LR      LR       09 45 53.8
      comp=Z,4µm,20.3s,baz=134,slow=30
SEW   Seward            93.91 331   IAMs_20 IAMs_20  10 00 01.0
      comp=Z,5µm,21.0s
KNK   Knik Glacier      93.95 333   IAMs_20 IAMs_20  10 00 19.6
      comp=Z,7µm,21.0s
SML   Sawmill           94.04 333   P       P        09 12 38.4  0.0
SML                                 IAmb    IAmb     09 12 48.5
      comp=Z,28nm,0.9s
SML                                 IAMs_20 IAMs_20  10 00 27.1
      comp=Z,4µm,21.0s
DHY   Denali Highway    94.12 334   P       P        09 12 39.6 +0.7
DHY                                 IAmb    IAmb     09 12 47.5
      comp=Z,43nm,1.3s
GHO   Glory Hole Cre    94.29 333   IAMs_20 IAMs_20  09 55 57.7
      comp=Z,5µm,20.0s
PMR   Palmer            94.32 333   IAMs_20 IAMs_20  10 00 39.3
      comp=Z,6µm,21.0s
RC01  Rabbit Creek A    94.40 332   IAMs_20 IAMs_20  09 52 52.7
      comp=Z,5µm,22.0s
BRLK  Bradley Lake      94.47 331   IAMs_20 IAMs_20  09 55 04.8
      comp=Z,3µm,19.0s
HDA   Harding Lake      94.48 336   P       P        09 12 39.7 -0.6
HDA                                 IAMs_20 IAMs_20  09 56 32.4
      comp=Z,4µm,20.0s
HDA   Harding Lake      94.48 336   P       P        09 12 40.0 -0.3
      baz=113
IL31                    94.60 336   P       P        09 12 39.9 -0.9
ILAR  Eielson Array     94.60 336   P       P        09 12 39.5 -1.3
      comp=Z,4.2nm,0.9s,baz=162,slow=3.0,SNR=24
ILAR                                PP      PP       09 16 30.1 +1.1
      comp=Z,3.9nm,1.0s,baz=101,slow=8.3,SNR=4.7
ILAR                                LR      LR       09 58 30.1
      comp=Z,2µm,19.4s,baz=120,slow=38
ILAR  Eielson Array     94.60 336   P       P        09 12 40.0 -0.9
ILAR                                                 09 16 30.1
ILAR  Eielson Array     94.60 336   P       P        09 12 40.0 -0.9
LBTB  Lobatse           94.61 117   P       P        09 12 41.6 -0.5
LBTB                                pmax    pmax
      comp=Z,37nm,1.5s
LBTB  Lobatse           94.61 117   P       P        09 12 41.6 -0.5
KDAK  Kodiak Island     94.63 329   IAMs_20 IAMs_20  10 00 06.2
      comp=Z,4µm,19.0s
KEST  Kesra             94.68  54   P       P        09 12 42.3 +0.3
      comp=Z,11nm,1.0s,baz=342,slow=4.0,SNR=5.0
KEST                                LR      LR       09 54 57.8
      comp=Z,5µm,20.9s,baz=220,slow=35
KEST  Kesra             94.68  54   IAmb    IAmb     09 12 45.2
      comp=Z,25nm,1.2s
KEST                                IAMs_20 IAMs_20  09 51 45.4
      comp=Z,9µm,22.0s
FYU   Fort Yukon        94.71 338   P       P        09 12 42.0 +0.7
FYU                                 IAmb    IAmb     09 12 51.4
      comp=Z,63nm,1.2s
BMAR  Burnt Mountain    94.84 339   P       P        09 12 42.7 +0.7
RND   Reindeer          94.87 334   P       P        09 12 41.4 -0.8
RND                                 pmax    pmax
      comp=Z,58nm,1.3s
RND   Reindeer          94.87 334   P       P        09 12 41.4 -0.8
RND                                 IAmb    IAmb     09 12 54.6
      comp=Z,58nm,1.3s
RND                                 IAMs_20 IAMs_20  10 01 29.9
      comp=Z,3µm,20.0s
CCB   Clear Creek Bu    94.91 336   P       P        09 12 41.4 -0.8
CCB                                 IAMs_20 IAMs_20  09 56 54.9
      comp=Z,4µm,19.0s
POKR  Poker Plat Res    94.95 336   P       P        09 12 42.3 -0.2
      baz=113
WRH   Wood River Hil    94.96 336   P       P        09 12 42.3 -0.2
WRH                                 IAMs_20 IAMs_20  10 02 11.2
      comp=Z,4µm,19.0s
SUA   Susitna One       94.99 332   IAMs_20 IAMs_20  10 01 05.3
      comp=Z,5µm,22.0s
BNI   Bardonecchia      95.01  45   P       P        09 12 44.5 +1.1
BNI                                 pmax    pmax
      comp=Z,28nm,1.5s
BNI                                 MLR     MLR
      comp=Z,7µm,20.0s
BNI   Bardonecchia      95.01  45   P       P        09 12 44.5 +1.1
COLA  College           95.02 336   P       P        09 12 42.9 +0.2
COLA                                pmax    pmax
      comp=Z,34nm,1.0s
COLA                                MLR     MLR
      comp=Z,4µm,20.0s
COLA  College           95.02 336   P       P        09 12 42.9 +0.2
COLA                                IAmb    IAmb     09 12 53.4
      comp=Z,34nm,0.9s
COLA  College           95.02 336   IAMs_20 IAMs_20  09 56 13.8
      comp=Z,4µm,20.0s
TCOL  CIGO, UAF Yank    95.02 336   P       P        09 12 43.3 +0.6
      baz=112
MCK   McKinley          95.03 335   P       P        09 12 42.1 -0.8
MCK                                 pmax    pmax
      comp=Z,27nm,1.2s
MCK                                 MLR     MLR
      comp=Z,6µm,20.0s
MCK   McKinley          95.03 335   P       P        09 12 42.1 -0.8
MCK                                 IAMs_20 IAMs_20  09 54 57.0
      comp=Z,6µm,20.0s
UCC   Uccle             95.03  39   IAMs_20 IAMs_20  09 58 13.1
      comp=Z,5µm,20.0s
MDM   Murphy Dome       95.20 336   P       P        09 12 43.0 -0.6
MDM                                 IAmb    IAmb     09 12 53.0
      comp=Z,42nm,1.0s
NEA   Nenana            95.39 336   IAMs_20 IAMs_20  10 02 42.7
      comp=Z,3µm,19.0s
BWN   Browne            95.40 335   P       P        09 12 44.2 -0.3
BWN                                 IAMs_20 IAMs_20  09 55 27.1
      comp=Z,6µm,20.0s
TRF   Thorofare Moun    95.49 334   P       P        09 12 47.0 +1.8
TRF                                 IAMs_20 IAMs_20  10 02 13.2
      comp=Z,5µm,20.0s
SKT   Skwentna          95.52 333   IAMs_20 IAMs_20  09 56 12.2
      comp=Z,5µm,20.0s
SENIN Lac Senin/Sane    95.76  44   P       P        09 12 46.5 -0.4
KTH   Kantishna Hill    95.79 334   P       P        09 12 45.2 -1.2
KTH                                 IAmb    IAmb     09 12 57.3
      comp=Z,33nm,1.2s
KTH                                 IAMs_20 IAMs_20  10 02 29.2
      comp=Z,4µm,20.0s
RPZ   Rata Peaks        95.94 222   LR      LR       09 47 53.9
      comp=Z,8µm,18.1s,baz=90,slow=30
BPAW  Bear Paw Mtn.     96.00 335   P       P        09 12 46.8 -0.5
BPAW                                IAMs_20 IAMs_20  09 56 12.8
      comp=Z,4µm,20.0s
PPLA  Purkeypile        96.11 333   P       P        09 12 47.5 -0.5
PPLA                                IAMs_20 IAMs_20  09 55 31.8
      comp=Z,4µm,20.0s
ECH   Echery            96.12  42   P       P        09 12 47.9 -0.3
ECH                                 pmax    pmax
      comp=Z,44nm,1.4s
ECH                                 MLR     MLR
      comp=Z,4µm,20.0s
ECH   Echery            96.12  42   P       P        09 12 47.9 -0.3
ECH                                 IAmb    IAmb     09 12 49.7
      comp=Z,44nm,1.4s
ECH                                 IAMs_20 IAMs_20  09 54 32.0
      comp=Z,4µm,20.0s
MLY   Manley            96.22 336   P       P        09 12 47.8 -0.5
MLY                                 IAMs_20 IAMs_20  09 56 01.5
      comp=Z,5µm,19.0s
DAG   Danmarks Havn     96.67  11 i P       P        09 12 50.0  0.0
      comp=Z,9.1nm,1.1s
DAG   Danmarks Havn     96.67  11 i P       P        09 12 50.0  0.0
DAG                                 pmax    pmax
      comp=Z,9.0nm,1.1s
COLD  Coldfoot          96.77 338   P       P        09 12 51.0 +0.3
COLD                                IAMs_20 IAMs_20  09 58 26.0
      comp=Z,5µm,20.0s
BFO   Black Forest      96.91  42   IAMs_20 IAMs_20  09 54 54.9
      comp=Z,4µm,20.0s
TOLK  Toolik Lake Re    97.05 339   P       P        09 12 52.3 +0.4
TOLK  Toolik Lake Re    97.05 339   P       P        09 12 52.4 +0.4
      baz=111
SVW2  Sparrevohn        97.09 331   IAMs_20 IAMs_20  10 02 30.5
      comp=Z,4µm,20.0s
TUE   Stuetta           97.16  44   P       P        09 12 53.1 -0.1
TUE                                 IAmb    IAmb     09 13 01.0
      comp=Z,22nm,0.8s
CNBA  Chernabura Isl    97.55 325   IAMs_20 IAMs_20  09 53 13.7
      comp=Z,3µm,20.0s
DAVOX Davos/Dischmat    97.59  44   P       P        09 12 55.9 +0.8
      comp=Z,40nm,0.8s,baz=240,slow=5.3,SNR=44
DAVA  Damuels           97.70  43  ePcP     P        09 12 55.9 +0.3
      comp=Z,33nm,1.1s,SNR=9.3
IMAR  Indian Mountai    97.72 336   P       P        09 12 54.4 -0.6
ITZ   Itezhi-Tezhi      97.75 108  eP       P        09 12 52.5 -4.0
ITZ                                eS       PP       09 16 53.3 -1.1
OSSC  Osservatorio P    97.85  47   P       P        09 12 56.0 -0.1
OSSC                                IAMs_20 IAMs_20  09 55 27.0
      comp=Z,6µm,22.0s
FETA  Feichten          98.21  44  ePcP     P        09 12 58.4 +0.5
      comp=Z,32nm,1.3s,SNR=14
RETA  Reutte            98.33  43  ePdiff   P        09 12 58.6 +0.4
      comp=Z,31nm,1.3s,SNR=11
TEOL  Teolo             98.52  45   P       P        09 12 58.4 -0.7
TEOL                                IAmb    IAmb     09 13 03.7
      comp=Z,32nm,0.8s
MOTA  Moosalm           98.52  43 i Pdiff   P        09 12 59.6 +0.4
      comp=Z,51nm,0.8s,SNR=20
SQTA  Sankt Quirin      98.57  44  ePdiff   P        09 12 60.0 +0.5
      comp=Z,41nm,0.9s,SNR=20
CTI   Castel Tesino     98.64  45   P       P        09 12 59.5 -0.3
CTI                                 pmax    pmax
      comp=Z,31nm,1.0s
CTI                                 MLR     MLR
      comp=Z,16µm,20.0s
CTI   Castel Tesino     98.64  45   P       P        09 12 59.5 -0.3
CTI                                 IAmb    IAmb     09 13 02.1
      comp=Z,31nm,1.0s
MURB  Monte Urbino      98.71  48   P       P        09 12 59.1 -1.0
MURB                                IAmb    IAmb     09 13 13.2
      comp=Z,36nm,1.4s
WATA  Walderalm         98.84  43  ePdiff   P        09 13 01.0 +0.3
      comp=Z,54nm,1.4s,SNR=13
WTTA  Wattenberg        98.86  44  ePdiff   P        09 13 01.4 +0.6
      comp=Z,58nm,1.0s,SNR=24
GRA1  Grafenberg Arr    99.06  41   IAMs_20 IAMs_20  09 56 09.7
      comp=Z,4µm,20.0s
AQU   L'Aquila          99.17  49   IAMs_20 IAMs_20  09 56 53.2
      comp=Z,6µm,20.0s
ABTA  Abfaltersbach     99.36  44  ePdiff   Pdif     09 13 03.3 +0.4
      comp=Z,49nm,1.0s,SNR=25
STAL  STALIGIAL         99.40  45   P       Pdif     09 13 02.3 -0.7
INTR  Introdacqua       99.48  49   P       Pdif     09 13 03.1 -0.5
INTR                                IAmb    IAmb     09 13 12.5
      comp=Z,23nm,1.0s
PAOL  Paolisi           99.79  50   IAMs_20 IAMs_20  09 53 59.6
      comp=Z,5µm,21.0s
NKC   Novy Kostel       99.94  41  ePP      PP       09 17 08.5 -2.0
NKC                                 AMS     AMS      09 54 20.0
      comp=Z,6µm,23.1s
KBA   Koelnbreinsper    99.97  44  ePdiff   Pdif     09 13 06.3 +0.5
      comp=Z,20nm,1.0s,SNR=9.3
KONO  Kongsberg        100.01  31⇑ eP       Pdif     09 13 03.9 -1.4
KONO                                pmax    pmax
      comp=Z,152nm,2.4s
CADS  Cadrg            100.10  45  ePdiff   Pdif     09 13 06.5 +0.3
MYKA  Terra Mystica    100.10  44  ePdiff   Pdif     09 13 07.0 +0.8
      comp=Z,23nm,1.0s,SNR=11
CEL   Celeste          100.33  53   IAMs_20 IAMs_20  09 57 20.8
      comp=Z,6µm,21.0s
CLL   Collm            100.46  40  ePdif    Pdif     09 13 11.0 +3.4
CLL                                ePP      PP       09 17 19.0 +4.6
CLL                                ePPP     PPP      09 19 30.0
CLL                                esSKSac  sSKSac   09 23 59.0 +6.8
CLL                                eSdif    Sdif     09 24 47.0 +2.9
CLL                                ePS      PS       09 26 14.0 -0.9
CLL                                ePPS     PPS      09 27 09.0
CLL                                eSS      SS       09 31 48.0 +8.0
CLL                                eSSS     SSS      09 35 24.0
CLL                                 Lmax             09 54 00.0
CLL   Collm            100.46  40  eP       Pdif     09 13 11.0 +3.4
CLL                                eS       Sdif     09 24 47.0 +2.9
KHC   Kasperske Hory   100.47  42  ePDIFF   Pdif     09 13 08.4 +0.6
KHC                                epP      sP       09 13 15.3 +3.0
KHC                                ex       x        09 17 06.9
KHC                                eSKS              09 23 47.9
KHC                                 AMS     AMS      09 56 40.0
      comp=Z,7µm,20.5s
KHC   Kasperske Hory   100.47  42⇓ eP       Pdif     09 13 08.2 +0.4
KHC                                 pmax    pmax
      comp=Z,74nm,3.1s
KHC                                 MLR     MLR
      comp=Z,13µm,19.0s
KHC   Kasperske Hory   100.47  42   IAMs_20 IAMs_20  09 57 04.2
      comp=Z,3µm,20.0s
GERES GERESS Array B   100.51  42   P       Pdif     09 13 08.4 +0.4
      comp=Z,4.2nm,0.8s,baz=205,slow=2.8,SNR=8.1
GERES GERESS Array B   100.51  42           Pdif     09 13 08.2 +0.2
GBAS  Gorenja Brezov   100.53  45 i Pdiff   Pdif     09 13 09.9 +1.8
GBAS                               eSKSac   SKSac    09 23 47.5 +0.2
GBAS                               eSdiff   Sdif     09 24 50.4 +5.4
GBAS                              i PS      PS       09 26 20.0 +4.1
LJU   Ljubljana        100.61  45 i Pdiff   Pdif     09 13 09.2 +0.8
LJU                                eSKSac   SKSac    09 23 48.4 +0.8
LJU                                eSdiff   Sdif     09 24 51.2 +5.6
LJU                                ePS      PS       09 26 21.2 +4.6
OBKA  Obir             100.70  45  ePdiff   Pdif     09 13 09.8 +0.9
      comp=Z,13nm,1.2s,SNR=5.7
MOA   Molln            100.72  43  ePdiff   Pdif     09 13 09.8 +0.9
      comp=Z,31nm,1.2s,SNR=14
ACER  Acerenza         100.78  51   IAMs_20 IAMs_20  09 56 58.7
      comp=Z,5µm,20.0s
BRG   Berggiesshubel   100.98  40  eP       Pdif     09 13 11.9 +2.0
BRG                                                  09 17 14.0
BRG                                                  09 23 46.0
BRG                                 S       Sdif     09 24 46.0 -2.4
BRG                                 SS      SS       09 31 38.0 -9.2
BRG                                 pmax    pmax
      comp=Z,22nm,1.8s
BRG                                 pmax    pmax
      comp=Z,23nm,1.8s
BRG                                 MLR     MLR
      comp=N,2µm,27.2s
BRG                                 MLR     MLR
      comp=E,5µm,21.8s
BRG                                 MLR     MLR
      comp=Z,7µm,22.8s
BRG   Berggiesshubel   100.98  40  ePDIFF   Pdif     09 13 11.9 +2.0
      comp=Z,22nm,1.8s
BRG                                 PP      PP       09 17 14.0 -4.3
BRG                                 SKS              09 23 46.0
BRG                                 S       Sdif     09 24 46.0 -2.4
BRG                                ePKKP    PKKPdf   09 29 29.7 +0.1
      comp=Z,23nm,1.8s
BRG                                 SS      SS       09 31 38.0 -9.2
NOA   NORSAR Array B   101.04  30   P       Pdif     09 13 10.0  0.0
      comp=Z,4.7nm,1.2s,baz=260,slow=4.8,SNR=2.7
NOA   NORSAR Array B   101.04  30   P       Pdif     09 13 10.0  0.0
SOKA  Soboth           101.05  45  ePdiff   Pdif     09 13 11.5 +1.0
      comp=Z,5.7nm,1.0s
PRA   Prague           101.17  41   AMS     AMS      09 56 00.0
      comp=Z,4µm,20.9s
PRU   Pruhonice        101.23  41  ePDIFF   Pdif     09 13 11.7 +0.7
PRU                                eSKS              09 23 50.8
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PRU				AMS	AMS	09 56 00.0	
	comp=Z,4µm,23.0s						
PRU	**Pruhonice**	101.23	41	*e*P	Pdif	09 13 11.7	+0.7
PRU				*e*S	SKSac	09 23 50.8	+0.4
PRU				MLR	MLR		
	comp=Z,4µm,23.0s						
PVCC	**Panska Ves**	101.32	41	AMS	AMS	09 55 10.0	
	comp=Z,7µm,23.4s						
ARSA	**Arzberg**	101.47	44	*e*Pdiff	Pdif	09 13 13.6	+1.4
	comp=Z,7.4nm,0.9s						
RDOG	**Red Dog Mine**	101.68	337	IAMs_20	IAMs_20	10 03 43.6	
	comp=Z,4µm,22.0s						
TREC	**Trest**	101.73	42	AMS	AMS	09 58 30.0	
	comp=Z,8µm,18.7s						
CONA	**Conrad Observa**	101.79	43	*e*Pdiff	Pdif	09 13 14.8	+1.1
	comp=Z,17nm,1.3s						
UPC	**Upice**	102.23	41	*e*SKS	SKSac	09 23 55.3	+0.1
UPC				AMS	AMS	09 59 50.0	
	comp=Z,6µm,18.1s						
BLY	**Banja Luka**	102.27	47	IAMs_20	IAMs_20	10 00 43.9	
	comp=Z,3µm,20.0s						
CHVC	**Chvalec**	102.27	41	AMS	AMS	09 56 10.0	
	comp=Z,7µm,21.8s						
KRUC	**Moravsky**	102.30	42	*e*PDIFF	Pdif	09 13 16.9	+1.1
KRUC				*e*PP	PP	09 17 25.8	-2.5
OSTC	**Ostas**	102.37	41	*e*PDIFF	Pdif	09 13 18.2	+2.1
OSTC				AMS	AMS	09 56 20.0	
	comp=Z,8µm,20.8s						
DPC	**Dobruska-Polom**	102.41	41	*e*PDIFF	Pdif	09 13 17.9	+1.5
DPC				AMS	AMS	09 57 10.0	
	comp=Z,5µm,19.4s						
DPC	**Dobruska-Polom**	102.41	41	*e*P	Pdif	09 13 17.9	+1.5
DPC				MLR	MLR		
	comp=Z,5µm,19.4s						
VRAC	**Vranov**	102.45	42	*e*PDIFF	Pdif	09 13 17.7	+1.2
VRAC				*e*PP	PP	09 17 26.1	-3.4
SCTE	**Santa Cesarea**	102.58	52	IAMs_20	IAMs_20	09 57 00.4	
	comp=Z,4µm,21.0s						
KRLC	**Kraliky**	102.67	41	AMS	AMS	09 59 00.0	
	comp=Z,20µm,19.4s						
MODS	**Modra-Piesok**	102.79	43	*e*P	Pdif	09 13 18.7	+0.6
MODS	**Modra-Piesok**	102.79	43	*e*PDIFF	Pdif	09 13 18.7	+0.6
JAVC	**Velka Javorina**	103.11	43	*e*PP	PKiKP	09 17 36.9	-2.4
MORC	**Moravsky Berou**	103.12	42	*e*PDIFF	Pdif	09 13 21.1	+1.6
MORC				*e*PP	PP	09 17 33.1	-1.4
KBS	**Kingsbay**	103.41	11	IAMs_20	IAMs_20	10 06 46.7	
	comp=Z,4µm,19.0s						
OKC	**Ostrava-Krasne**	103.52	42	*e*SKS	SKSac	09 24 17.2	+16
OKC				AMS	AMS	10 00 10.0	
	comp=Z,4µm,15.9s						
TIR	**Tirane**	103.80	50	IAMs_20	IAMs_20	09 58 04.5	
	comp=Z,4µm,22.0s						
SPIA	**Saint Paul Isl**	103.83	326	IAMs_20	IAMs_20	10 08 28.3	
	comp=Z,5µm,20.0s						
VYHS	**Vyhne**	103.83	43	*e*P	Pdif	09 13 24.5	+1.8
VYHS	**Vyhne**	103.83	43	*e*PDIFF	Pdif	09 13 24.5	+1.8
PSZ	**Piszkesteto**	104.49	44	IAMs_20	IAMs_20	09 59 03.4	
	comp=Z,5µm,21.0s						
FNA	**Florina**	104.87	51	IAMs_20	IAMs_20	10 09 57.1	
	comp=Z,3µm,20.0s						
GAMB	**Gambell**	104.90	333	IAMs_20	IAMs_20	10 06 03.3	
	comp=Z,3µm,20.0s						
ITM	**Ithomi**	104.91	55	IAMs_20	IAMs_20	10 01 45.2	
	comp=Z,4µm,20.0s						
AGG	**Agios Georgios**	105.42	53	IAMs_20	IAMs_20	10 02 17.8	
	comp=Z,5µm,21.0s						
ADK	**Adak**	107.33	320	IAMs_20	IAMs_20	09 51 37.5	
	comp=Z,3µm,21.0s						
SANT	**Santorini**	107.65	56	IAMs_20	IAMs_20	10 04 26.1	
	comp=Z,4µm,21.0s						
ALN	**Alexandroupoli**	108.41	51	IAMs_20	IAMs_20	10 03 27.8	
	comp=Z,3µm,20.0s						
DZM	**Mont Dzumac**	108.72	241	*e*PP	PP	09 18 12.4	-3.9
	comp=Z,609nm,26.2s						
DZM				*e*SKSac	SKSac	09 24 24.8	-1.1
	comp=Z,2µm,27.4s						
DZM				*e*SP	SP	09 27 45.4	+4.8
	comp=Z,2µm,24.6s						
DZM				*e*SS	SS	09 33 37.9	+3.8
	comp=Z,6µm,27.9s						
DZM	**Mont Dzumac**	108.72	241	*e*LR	LR	09 49 49.8	
	comp=Z,9µm,27.9s						
KARP	**Karpathos**	108.97	57	IAMs_20	IAMs_20	10 06 40.6	
	comp=Z,5µm,21.0s						
APA	**Apatity**	110.45	23	⇓*i*PKIKP	PKiKP	09 17 56.4	+4.2
APA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
APA				MLR	MLR		
	comp=Z,5µm,17.0s						
KIS	**Kishinev**	110.50	45	*e*PP	PP	09 18 23.0	-5.8
AKASG	**Malin Array Be**	110.64	41	PKiKP	PKiKP	09 17 52.2	-0.9
	comp=Z,0.4nm,0.4s,baz=265,slow=3.2,SNR=5.3						
AKASG				PP	PP	09 18 27.1	-2.5
	comp=Z,0.2nm,0.3s,baz=266,slow=6.7,SNR=6.5						
AKASG	**Malin Array Be**	110.64	41	*c i*PKIKP	PKiKP	09 17 54.0	+0.9
ISP	**Isparta**	111.77	55	IAMs_20	IAMs_20	10 08 29.6	
	comp=Z,3µm,20.0s						
KMBO	**Kilima Mbogo**	112.56	97	PP	PP	09 18 43.5	-1.2
	comp=Z,1.6nm,0.4s,baz=240,slow=9.1,SNR=5.8						
BILL	**Bilibino**	113.09	339	*i* PKIKP	PKiKP	09 17 52.6	-4.7
BILL				*i*		09 18 57.3	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.3s						
ANTO	**Ankara**	113.55	52	IAMs_20	IAMs_20	10 06 27.7	
	comp=Z,3µm,21.0s						
BR131	**Keskin Array S**	114.20	53	⇑*i*PKIKP	PKPdf	09 18 00.1	-0.3
BRTR	**Keskin Array B**	114.20	53	PKP	PKPdf	09 18 00.6	+0.1
	comp=Z,3.2nm,0.9s,baz=204,slow=2.7,SNR=11						
BRTR				PP	PP	09 18 55.0	-0.6
	comp=Z,2.2nm,0.9s,baz=305,slow=4.4,SNR=4.7						
BRTR	**Keskin Array B**	114.20	53	*c i*PKIKP	PKPdf	09 18 01.2	+0.8
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRTR	**Keskin Array B**	114.20	53		PKPdf	09 17 59.7	-0.7
ILGA	**Ilgaz**	114.22	51	IAMs_20	IAMs_20	10 09 14.4	
	comp=Z,3µm,20.0s						
SIM	**Simferopol'**	114.29	47	P	Pdif	09 14 17.7	+8.4
SIM				*e*		09 18 58.0	
SIM						09 25 13.0	
SIM				pmax	pmax		
	comp=Z,110nm,17.0s						
SIM				pmax	pmax		
	comp=Z,330nm,10.7s						
SIM				pmax	pmax		
	comp=E,2µm,17.0s						
OBN	**Obninsk**	114.54	36	⇓*i*PKIKP	PKPdf	09 18 00.0	-0.3
OBN				*i*		09 18 55.4	
OBN				*i* PS	PKKPbc	09 28 41.3	+0.6
OBN				*i* SS	SS	09 34 58.7	+8.5
OBN				pmax	pmax		
	comp=Z,16nm,0.7s						
OBN				MLR	MLR		
	comp=Z,4µm,20.0s						
OBN	**Obninsk**	114.54	36	IAMs_20	IAMs_20	10 05 37.7	
	comp=Z,5µm,21.0s						
KLMR	**Klimovskoe**	114.73	29	*e*PKPdf	PKPpre	09 17 43.2	
KLMR				AMP		09 18 02.9	
	comp=Z,69nm,2.3s						
KLMR				PP	PP	09 19 00.1	+1.7
KLMR				*e*PKKPab	PKKPbc	09 28 31.6	-8.6
KLMR				LQ	LQ	09 49 38.9	
KLMR				LQ	LQ	09 49 38.9	
KLMR				LR	LR	09 56 45.3	
KLMR				AMP		10 02 47.9	
	comp=Z,4µm,17.7s						
LPSR	**Galich'ya Gora**	116.40	38	*i* PKIKP	PKPdf	09 18 03.4	-0.6
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LPSR				MLR	MLR		
	comp=Z,4µm,17.0s						
ANN	**Anapa**	116.65	47	*e*P	Pdif	09 14 18.9	-0.8
ANN				*e*SS	SS	09 35 23.2	+4.5
ANN				pmax	pmax		
	comp=Z,181nm,1.4s						
VORR	**Voronezh**	116.75	39	*e*PKIKP	PKPdf	09 18 02.0	-2.7
VORR				pmax	pmax		
	comp=Z,250nm,1.0s						
VSR	**Storozhevoye**	116.81	39	⇑*i*PKIKP	PKPdf	09 18 04.4	-0.5
VSR				MLR	MLR		
	comp=Z,5µm,20.0s						
PRGR	**Permogore**	117.27	27	*e*PKIKP	PKPdf	09 17 59.5	-5.9
PRGR				pmax	pmax		
	comp=Z,13nm,0.9s						
VRH	**Novokhopyorsk**	118.39	39	*i* PKIKP	PKPdf	09 18 05.2	-2.7
VRH				pmax	pmax		
	comp=Z,30nm,1.0s						
VRH				MLR	MLR		
	comp=Z,3µm,17.0s						
SOC	**Sochi**	118.44	48	*i* PKIKP	PKPdf	09 18 03.7	-4.6
SOC				*e*PPP	PPP	09 22 01.6	
SOC				*e*PS	PS	09 29 16.4	+4.7
SOC				*e*SS	SS	09 35 46.1	+4.2
SOC				*e*SSS	SSS	09 40 04.8	
SOC				MLR	MLR		
	comp=Z,2µm,19.0s						
H11N3	**WAKE ISLAND Hy**	119.50	285	T	T	11 28 46.9	
	baz=96,slow=74						
H11N2	**WAKE ISLAND Hy**	119.52	285	T	T	11 28 39.2	
	baz=96,slow=74						
H11N1	**WAKE ISLAND Hy**	119.52	285	T	T	11 28 39.0	
	baz=96,slow=74						
H11S2	**WAKE ISLAND Hy**	119.57	283	T	T	11 28 45.2	
	baz=97,slow=75						
H11S1	**WAKE ISLAND Hy**	119.58	283	T	T	11 28 47.3	
	baz=97,slow=75						
H11S3	**WAKE ISLAND Hy**	119.59	283	T	T	11 28 43.3	
	baz=97,slow=75						
KIV	**Kislovodsk**	120.50	47	*i* PKIKP	PKPdf	09 18 09.7	-2.7
KIV				*e*		09 19 36.3	
KIV				*e*PS	PS	09 29 27.2	-3.3
KIV				*e*SS	SS	09 36 06.0	-2.8
KIV				pmax	pmax		
	comp=Z,32nm,1.0s						
KIV				MLR	MLR		
	comp=Z,8µm,22.0s						
KIV	**Kislovodsk**	120.50	47	IAMs_20	IAMs_20	10 11 43.4	
	comp=Z,3µm,20.0s						
TIXI	**Tiksi**	120.51	351	PKP	PKPdf	09 18 10.7	-0.7
	comp=Z,2.3nm,0.7s,baz=34,slow=3.7,SNR=5.0						
TIXI				PP	PP	09 19 37.3	-0.7
	comp=Z,0.5nm,0.3s,baz=51,slow=7.6,SNR=3.3						
TIXI	**Tiksi**	120.51	351	⇑*i*PKIKP	PKPdf	09 18 10.6	-0.8
TIXI	**Tiksi**	120.51	351		PKPdf	09 18 10.0	-1.4
TIXI	**Tiksi**	120.51	351	IAMs_20	IAMs_20	10 19 06.1	
	comp=Z,3µm,18.0s						
SEY	**Seymchan**	120.53	336	⇑*i*PKIKP	PKPdf	09 18 12.2	+0.5
KBZ	**Khabaz**	120.69	47	PKP	PKPdf	09 18 12.3	-0.2
	comp=Z,16nm,0.9s,baz=271,slow=1.6,SNR=29						
AKH	**Akhalkalaki**	121.52	50	IAMs_20	IAMs_20	10 15 50.5	
	comp=Z,3µm,21.0s						
STKA	**Stephens Creek**	121.58	218	PKP	PKPdf	09 18 14.5	-0.3
	comp=Z,3.5nm,0.7s,baz=102,slow=4.5,SNR=4.7						
STKA	**Stephens Creek**	121.58	218	PKIKP	PKPdf	09 18 14.5	-0.3
STKA				MLR	MLR		
	comp=Z,1µm,18.0s						
ZEI	**Tsey**	121.58	48	*i* PKIKP	PKPdf	09 18 15.3	+0.7
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PETK	**Petropavlovsk-**	122.45	325	PKP	PKPdf	09 18 15.4	-0.3
	comp=Z,6.1nm,0.8s,baz=113,slow=3.8,SNR=4.5						
GNI	**Garni**	122.65	51	*c i*PKIKP	PKPdf	09 18 18.3	+1.6
GNI				pmax	pmax		
	comp=Z,33nm,0.8s						
MA2	**Magadan**	122.98	334	⇓*i*PKIKP	PKPdf	09 18 17.3	+0.8
MA2	**Magadan**	122.98	334	IAMs_20	IAMs_20	10 19 57.1	
	comp=Z,3µm,19.0s						
NRIK	**Noril'sk**	123.86	7	PKP	PKPdf	09 18 18.9	+1.0
	comp=Z,1.9nm,0.5s,baz=61,slow=3.4,SNR=3.5						
MAK	**Makhachkala**	124.14	47	*e*P	Pdif	09 14 42.6	-10
MAK				pmax	pmax		
	comp=Z,32nm,0.3s						
MAK				MLR	MLR		
	comp=Z,3µm,19.0s						
RAYN	**Ar Rayn**	124.48	71	PKIKP	PKPdf	09 18 18.8	-1.8
RAYN				MLR	MLR		
	comp=Z,16µm,20.0s						
RAYN	**Ar Rayn**	124.48	71		PKPdf	09 18 18.8	-1.8
ARU	**Arti**	125.58	29	*i* PKIKP	PKPdf	09 18 21.8	+0.2
ARU						09 20 13.4	
ARU						09 25 33.0	
ARU				SS	SS	09 37 12.9	+1.1
ARU				MLR	MLR		
	comp=Z,5µm,21.0s						
ARU	**Arti**	125.58	29		PKPdf	09 18 21.1	-0.5
SVE	**Sverdlovsk**	126.32	28	*i* PKIKP	PKPdf	09 18 22.3	-0.7
SVE				MLR	MLR		
	comp=Z,4µm,20.0s						
YAK	**Yakutsk**	128.65	345	PKP	PKPdf	09 18 26.7	-0.5
	comp=Z,5.2nm,0.3s,baz=271,slow=0.9,SNR=7.3						
YAK	**Yakutsk**	128.65	345	*e*PKIKP	PKPdf	09 18 27.1	-0.1
YAK				*e*		09 20 33.4	
YAK				*e*		09 25 36.3	
YAK				pmax	pmax		
	comp=Z,30nm,0.9s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,84nm,2.8s						
YAK				pmax	pmax		
	comp=N,170nm,2.9s						
YAK				pmax	pmax		
	comp=E,63nm,2.8s						
YAK	**Yakutsk**	128.65	345		PKPdf	09 18 26.4	-0.8
YAK				IAMs_20	IAMs_20	10 23 42.8	
	comp=Z,3µm,18.0s						
ABKAR	**Akbulak array**	129.97	36		PKPdf	09 18 30.7	+0.5
ABKAR	**Akbulak array**	129.97	36		PKPdf	09 18 30.1	-0.1
PMG	**Port Moresby**	130.92	244	IAMs_20	IAMs_20	10 10 43.2	
	comp=Z,3µm,18.0s						
ASAR	**Alice Springs**	132.21	219	PKP	PKPdf	09 18 34.4	-1.0
	comp=Z,7.8nm,0.8s,baz=144,slow=2.4,SNR=28						
ASAR	**Alice Springs**	132.21	219		PKPdf	09 18 35.4	+0.1
AS31	**Alice Springs**	132.21	219		PKPdf	09 18 35.8	+0.5
BRVK	**Borovoye**	133.01	27	⇑*i*PKIKP	PKPdf	09 18 36.1	+0.3
BRVK				pmax	pmax		
	comp=Z,23nm,1.7s						
BRVK				MLR	MLR		
	comp=Z,6µm,20.0s						
BRVK	**Borovoye**	133.01	27		PKPdf	09 18 35.9	+0.1
GEYT	**Alibeck**	133.29	51	PKP	PKPdf	09 18 36.6	-0.3
	comp=Z,4.1nm,0.7s,baz=282,slow=7.0,SNR=7.0						
ASHT	**Ashkhabad**	133.49	51	IAMs_20	IAMs_20	10 23 44.4	
	comp=Z,3µm,20.0s						
YSS	**Yuzh-Sakhalins**	133.80	323	*e*PKIKP	PKPdf	09 18 35.7	-1.8
YSS				*i*		09 18 46.7	
YSS				*e*		09 21 10.0	
YSS				*e*SS	SS	09 38 55.1	+1.7
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,2µm,19.0s						
WB2	**Warramunga Arr**	134.65	222		PKPdf	09 18 39.3	-0.6
WRA	**Warramunga Arr**	134.66	222	PKP	PKPdf	09 18 39.4	-0.6
	comp=Z,15nm,0.8s,baz=132,slow=1.9,SNR=34						
WRA	**Warramunga Arr**	134.66	222	PKIKP	PKPdf	09 18 36.7	-3.3
WRA	**Warramunga Arr**	134.66	222		PKPdf	09 18 36.7	-3.3
WRAB	**Tennant Creek**	134.66	222	*de*PKIKP	PKPdf	09 18 40.2	+0.2
WRAB	**Tennant Creek**	134.66	222		PKPdf	09 18 39.6	-0.4
WB0	**Warramunga Arr**	134.75	223		PKPdf	09 18 39.8	-0.3
JKA	**Kamikawa-asahi**	135.35	320		PKPdf	09 18 40.1	-0.4
ASAJ	**Asahikawa**	135.35	320	PKP	PKPdf	09 18 40.1	-0.4
	comp=Z,9.4nm,0.8s,baz=99,slow=3.2,SNR=6.6						
BOD	**Bodaibo**	135.67	352	*e*PKHKP	PKPpre	09 18 29.1	
BOD				pmax	pmax		
	comp=Z,9.0nm,1.8s						
ZEA	**Zeya**	136.30	340	*e*PKIKP	PKPdf	09 18 41.2	-0.7
ZEA				*e*		09 21 21.0	
ZEA				*e*		09 39 22.0	
ZEA				pmax	pmax		
	comp=Z,18nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,600nm,12.0s						
ZEA				pmax	pmax		
	comp=Z,1µm,11.0s						
ZEA				MLR	MLR		
	comp=Z,6µm,15.0s						
ZEA				MLR	MLR		
	comp=E,2µm,17.0s						
ZEA				MLR	MLR		
	comp=N,5µm,16.0s						
HRA	**Herat**	137.56	54		PKPdf	09 18 45.3	+0.1
ZAA0	**Zalesovo Array**	137.57	16		PKPpre	09 18 36.1	
ZAA0				PKPdf	PKPdf	09 18 45.1	+0.8
ZALV	**Zalesovo Beam**	137.57	16	PKhKP	PKPpre	09 18 36.4	
	comp=N,2.7nm,0.6s,baz=291,slow=3.1,SNR=9.8						
ZALV				PKP	PKPdf	09 18 44.5	+0.2
	comp=N,48nm,0.8s,baz=306,slow=2.5,SNR=44						
ZALV	**Zalesovo Beam**	137.57	16	PKIKP	PKPdf	09 18 44.3	0.0
ZALV	**Zalesovo Beam**	137.57	16		PKPpre	09 18 35.1	
ZALV				PKPdf	PKPdf	09 18 44.3	0.0
KLR	**Kul'dur**	138.06	332	*de*PKIKP	PKPdf	09 18 46.3	+0.9
KLR				MLR	MLR		
	comp=Z,4µm,17.0s						
KURK	**Kurchatov**	138.23	24	⇑*e*PKIKP	PKPdf	09 18 44.5	-1.1
KURK	**Kurchatov**	138.23	24		PKPdf	09 18 45.9	+0.3
TEY	**Ternei**	138.41	324	*e*PKIKP	PKiKP	09 18 55.7	+7.5
KK31	**Karatay Array**	139.46	38	⇑Pg	PKPdf	09 18 48.9	+0.8
	comp=Z,5.1nm,0.8s,baz=161,slow=16,SNR=8.2						
KK31				⇓Lg	Lg	09 19 19.6	
	comp=Z,1.7nm,0.5s,baz=161,slow=26,SNR=6.5						
KK31	**Karatay Array**	139.46	38	PKIKP	PKPdf	09 18 48.5	+0.4
KK31	**Karatay Array**	139.46	38		PKPdf	09 18 48.5	+0.4
KKAR	**Karatay Array**	139.46	38	PKIKP	PKPdf	09 18 48.5	+0.4
KKAR	**Karatay Array**	139.46	38		PKPdf	09 18 48.5	+0.4
IUG	**Iuzhnay**	139.71	40	*e*PKP	PKPdf	09 18 47.2	-1.6
IUG	**Iuzhnay**	139.71	40	*e*PKIKP	PKPdf	09 18 47.1	-1.6
BTLS	**Baital**	140.25	33	*e*PKP	PKPdf	09 18 45.0	-4.6
BTLS	**Baital**	140.25	33	*e*PKIKP	PKPdf	09 18 44.9	-4.6
USA0B	**Ussuriysk Arra**	141.48	327	⇑*e*PKIKP	PKPdf	09 18 48.6	-3.1
USRK	**Ussuriysk Ar.**	141.48	327	PKhKP	PKPdf	09 18 44.5	-7.3
	comp=Z,4.9nm,0.9s,baz=34,slow=4.4,SNR=6.4						
USRK	**Ussuriysk Ar.**	141.48	327	PKHKP	PKPdf	09 18 44.8	-6.9
USRK	**Ussuriysk Ar.**	141.48	327		PKPdf	09 18 44.8	-6.9
SGDS	**Sogindy**	141.61	35	*e*PKP	PKPdf	09 18 47.8	-4.3
MJAR	**Matsushiro Arr**	141.91	312	PKhKP	PKPdf	09 18 46.9	-5.9
	comp=Z,9.4nm,0.9s,baz=139,slow=1.4,SNR=14						
MJAR	**Matsushiro Arr**	141.91	312	PKHKP	PKPdf	09 18 47.4	-5.4
MJAR	**Matsushiro Arr**	141.91	312		PKPdf	09 18 47.4	-5.4
MAJO	**Matsushiro**	141.91	312	PKHKP	PKPdf	09 18 46.3	-6.5
MAJO	**Matsushiro**	141.91	312		PKPdf	09 18 46.3	-6.5
MAT	**Matsushiro**	141.91	312	PKP	PKPdf	09 18 47.2	-5.6
MJB9	**Matsu-Tunnel**	141.91	312		PKPdf	09 18 47.4	-5.4
IRK	**Irkutsk**	141.95	359	*e*PKIKP	PKPdf	09 18 51.6	-0.8
IRK				pmax	pmax		
	comp=Z,70nm,3.1s						
AAK	**Ala-Archa**	142.06	36	⇓*e*PKIKP	PKPdf	09 18 50.0	-3.1
KUU	**Kurty**	142.24	33	*e*PKP	PKPdf	09 18 47.2	-6.0
MDJ	**Mudanjiang**	142.43	329	PKP	PKPdf	09 18 54.0	+0.6
MDJ				PP	PP	09 22 01.8	+1.9
MDJ				SKS	SKSdf	09 26 04.3	+0.8
MDJ				LR	LR		
	comp=Z,5µm,13.1s						
MDJ				LR	LR		
	comp=Z,7µm,14.8s						
MDJ	**Mudanjiang**	142.43	329		PKPdf	09 18 55.4	+1.9
MDJ				IAMs_20	IAMs_20	10 23 54.2	
	comp=Z,3µm,19.0s						
MOY	**Mondy**	142.47	3	*e*PKIKP	PKPdf	09 18 50.4	-3.0
MOY				pmax	pmax		
	comp=Z,41nm,1.6s						
TLY	**Talaya**	142.52	0	*c i*PKHKP	PKPdf	09 18 48.4	-5.0
TLY				*e*		09 21 57.1	
TLY				pmax	pmax		
	comp=Z,26nm,1.7s						
TLY				MLR	MLR		
	comp=Z,6µm,17.0s						
TLY	**Talaya**	142.52	0	IAMs_20	IAMs_20	10 15 32.3	
	comp=Z,3µm,18.0s						
HIA	**Hailar**	142.52	343	⇑*e*PKIKP	PKPdf	09 18 52.8	-0.7
MAKZ	**Makanchi**	142.68	25	PKHKP	PKPdf	09 18 48.8	-5.1
MAKZ				MLR	MLR		
	comp=Z,5µm,21.0s						
MAKZ	**Makanchi**	142.68	25		PKPdf	09 18 48.8	-5.1
KBL	**Kabul**	142.74	51	PKHKP	PKPdf	09 18 48.1	-6.5
KBL	**Kabul**	142.74	51		PKPdf	09 18 48.1	-6.5
MK31	**Makanchi Array**	142.82	24	PKHKP	PKPdf	09 18 49.0	-5.1
MK31	**Makanchi Array**	142.82	24		PKPdf	09 18 49.0	-5.1
MKAR	**Makanchi Array**	142.82	24	PKhKP	PKPdf	09 18 49.4	-4.7
	comp=Z,2.1nm,0.5s,baz=326,slow=4.6,SNR=21						
MKAR	**Makanchi Array**	142.82	24	PKIKP	PKPdf	09 18 49.3	-4.8
MKAR	**Makanchi Array**	142.82	24		PKPdf	09 18 49.3	-4.8
MDOK	**Medeo**	143.11	33	*e*PKP	PKPab	09 18 49.5	-0.8
MDOK				*e*PP	PP	09 22 02.3	-2.1
KPKS	**Kokpek**	143.74	31	*e*PKP	PKPab	09 18 53.1	+0.4
KPKS	**Kokpek**	143.74	31	*e*PKIKP	PKPab	09 18 53.0	+0.3
ZAK	**Zakamensk**	143.82	0	*e*PKIKP	PKPab	09 18 52.6	-0.2
ZAK				pmax	pmax		
	comp=Z,20nm,1.3s						
KDJ	**Kajisay**	143.89	34	PKIKP	PKPab	09 18 55.0	+1.6
KDJ				MLR	MLR		
	comp=Z,6µm,22.0s						
KDJ	**Kajisay**	143.89	34		PKPab	09 18 55.0	+1.5
UZB	**Uzynbulak**	144.15	31	*e*PKP	PKPab	09 18 54.5	+0.1
UZB	**Uzynbulak**	144.15	31	*e*PKIKP	PKPab	09 18 54.4	+0.1
PRZ	**Przheval'sk**	144.30	33	PKIKP	PKPbc	09 18 57.0	+1.7
PRZ	**Przheval'sk**	144.30	33		PKPbc	09 18 57.0	+1.7
SHLS	**Shalkode**	144.36	31	*e*PKP	PKPab	09 18 56.3	+1.2
SHLS	**Shalkode**	144.36	31	*e*PKIKP	PKPab	09 18 56.3	+1.2
KSH	**Kashi**	144.89	39	PKP	PKPab	09 18 57.8	+0.6
KSH				PP	PP	09 22 17.4	+2.1
KSH				PKS		09 22 32.5	
KSH				SKKS		09 29 07.0	
KSH				AMB	AMB		
	comp=Z,2µm,6.0s						
KSH				LR	LR		
	comp=Z,930nm,10.8s						
KSH				LR	LR		
	comp=Z,2µm,13.6s						
KSH				LR	LR		
	comp=Z,3µm,12.5s						
CN2	**Changchun**	145.01	332	PKPbc	PKPbc	09 18 56.0	-1.3
CN2				*e*PP	PP	09 22 18.8	+3.4
CN2				*e*SS	SS	09 41 07.6	+2.9
CN2				AMB	AMB		
	comp=Z,700nm,9.0s						
CN2				LR	LR		
	comp=Z,3µm,18.0s						
CN2				LR	LR		
	comp=Z,3µm,20.0s						
ULN	**Ulaanbaatar**	146.22	356	PKP2	PKPdf	09 19 00.9	+0.7
ULN	**Ulaanbaatar**	146.22	356		PKPdf	09 19 00.8	+0.7
ULN	**Ulaanbaatar**	146.22	356	IAMs_20	IAMs_20	10 16 04.3	
	comp=Z,3µm,19.0s						
NIL	**Nilore**	146.26	49	PKIKP	PKPdf	09 18 59.0	-1.5
NIL	**Nilore**	146.26	49		PKPdf	09 18 59.0	-1.5
SONM	**Songino Array**	146.29	357	PKPbc	PKPdf	09 19 01.0	+0.8
	comp=Z,37nm,0.7s,baz=323,slow=1.5,SNR=115						
BHUJ	**Bhuj**	146.60	69	*e*P	PKPdf	09 18 57.9	-3.4
BHUJ				*i* PP	PP	09 22 24.0	-2.4
FAKI	**Fak Fak**	146.98	241		PKPdf	09 19 04.9	+2.7
WMQ	**Urumqi**	147.38	22	*e*PKPbc	PKPdf	09 19 02.3	+0.2
WMQ				PKPab	PKPab	09 19 07.9	+1.5
WMQ				PP	PP	09 22 28.4	-0.9
WMQ				SS	SS	09 41 33.5	+2.0
WMQ				AMB	AMB		
	comp=Z,930nm,11.5s						
WMQ				LR	LR		
	comp=Z,2µm,16.1s						
WMQ				LR	LR		
	comp=Z,2µm,18.5s						
WMQ				LR	LR		
	comp=Z,4µm,21.7s						
WMQ	**Urumqi**	147.38	22	PKP2	PKPdf	09 19 03.0	+0.9
WMQ				MLR	MLR		
	comp=Z,5µm,22.0s						
WMQ	**Urumqi**	147.38	22		PKPdf	09 19 03.0	+0.9
SNY	**Shenyang**	147.41	332	⇑PKPbc	PKPdf	09 19 01.5	-0.6
SNY				PP	PP	09 22 30.9	+1.3
SNY				SKKS		09 29 23.3	
SNY				SS	SS	09 41 31.9	-0.1
SNY				AMB	AMB		
	comp=Z,1µm,9.5s						
SNY				LR	LR		
	comp=Z,2µm,15.9s						
SNY				LR	LR		
	comp=Z,7µm,13.3s						
KSRS	**Korea Array**	148.26	322	PKPbc	PKPdf	09 19 05.4	+1.8
	comp=Z,44nm,1.1s,baz=42,slow=2.2,SNR=23						
KS19	**Wonju Array Si**	148.26	322		PKPdf	09 19 05.9	+2.2
KSAR	**Wonju Array Be**	148.29	322	PKIKP	PKPdf	09 19 03.7	0.0
KSAR						09 19 07.4	
KSAR	**Wonju Array Be**	148.29	322		PKPdf	09 19 03.7	0.0
KSAR				PKPbc	PKPbc	09 19 07.4	+0.4
SOEI	**Soe**	148.69	222		PKPdf	09 19 08.6	+3.5
JNU	**Nakatsue**	148.83	312		PKPdf	09 19 07.9	+3.1
INCN	**Inchon**	149.01	323	PKP2	PKPdf	09 19 08.1	+3.2
INCN				MLR	MLR		
	comp=Z,3µm,20.0s						
INCN	**Inchon**	149.01	323		PKPdf	09 19 08.1	+3.2
INCN	**Inchon**	149.01	323	IAMs_20	IAMs_20	10 27 54.5	
	comp=Z,3µm,20.0s						
DHRM	**DHARAMSHALA**	149.18	49	*e*P	PKPdf	09 19 05.6	0.0

TJN	Taejon	149.30	321	d iPKP2	PKPbc	09 19 09.8	+0.1
BHK	Bhakra	149.67	51	ex	PKiKP	09 19 12.7	+0.9
SMLA	Simla	150.38	51	i x	PKPdf	09 19 06.6	-0.6
SMLA				ex	x	09 21 02.6	
DL2	Dalian	150.63	331	PKPbc	PKPdf	09 19 06.6	-0.8
DL2				PKPab	PKPab	09 19 20.6	+1.1
DL2				PP	PP	09 22 51.0	+2.7
DL2				AMB	AMB		
	comp=Z,970nm,6.1s						
DL2				LR	LR		
	comp=Z,4µm,13.5s						
DL2				LR	LR		
	comp=Z,6µm,13.7s						
MMRI	Maumere	150.84	220		PKPbc	09 19 13.1	-0.9
MMRI					PKPab	09 19 21.9	+0.8
POO	Poona	151.08	77	i x	PKPdf	09 19 05.4	-3.3
POO				ex	x	09 22 49.3	
POO	Poona	151.08	77	eP	PKPdf	09 19 06.0	-2.7
GOA	Goa	151.14	83	i P	PKPdf	09 19 08.3	-0.5
GOA				ePP	PP	09 22 50.5	-2.5
DDI	Dehra Dun	151.43	51	ex	PKPdf	09 19 05.2	-3.8
NDI	New Delhi	151.52	55	eP	PKPbc	09 19 15.0	-0.2
BJI	Beijing	151.92	339	PKPbc	PKPbc	09 19 14.5	-1.3
BJI				PP	PP	09 22 54.3	-1.1
BJI				SKS	SKSdf	09 26 17.8	+0.9
BJT	Baijiatuau	151.94	339	PKIKP	PKPdf	09 19 08.4	-0.9
BJT						09 19 15.0	
BJT	Baijiatuau	151.94	339	PKPdf	PKPdf	09 19 08.4	-0.9
BJT					PKPbc	09 19 15.0	-0.8
HHC	Hu-ho-hao-te	152.47	347	ePKPbc	PKPdf	09 19 10.1	-0.2
HHC				PP	PP	09 22 58.1	-0.4
HHC				SS	SS	09 42 26.3	-1.6
HHC				AMB	AMB		
	comp=Z,2µm,9.6s						
HHC				LR	LR		
	comp=Z,3µm,20.1s						
HHC				LR	LR		
	comp=Z,5µm,20.1s						
BTO	Baotou	153.01	349	ePKPbc	PKPdf	09 19 04.8	-6.3
BHPL	Bhopal	153.58	66	i x	PKPdf	09 19 11.9	-0.4
BHPL				ex	x	09 23 01.2	
KLRI	Killari	153.72	78	ePKPdf	PKPdf	09 19 11.7	-1.0
JOW	Kunigami	153.74	303	IAMs_20	IAMs_20	10 20 45.7	
	comp=Z,2µm,20.0s						
URV	Uravakonda	154.44	85	ePKPdf	PKPdf	09 19 13.2	-0.6
GTA	Gaotai	154.56	7	⇑PKPbc	PKPdf	09 19 13.6	+0.2
GTA				PP	PP	09 23 09.8	-0.5
GTA				SS	SS	09 42 49.8	-0.8
GTA				AMB	AMB		
	comp=Z,1µm,9.5s						
GTA				LR	LR		
	comp=Z,3µm,21.3s						
GTA				LR	LR		
	comp=Z,2µm,21.6s						
GTA				LR	LR		
	comp=Z,5µm,20.6s						
TIA	Tai'an	154.89	334	PKPbc	PKPdf	09 19 13.3	-0.4
TIA				PP	PP	09 23 10.1	-2.3
TIA				LR	LR		
	comp=Z,950nm,20.6s						
TIA				LR	LR		
	comp=Z,2µm,21.4s						
TIA				LR	LR		
	comp=Z,3µm,16.4s						
TIY	Taiyuan	155.22	343	ePKP	PKPdf	09 19 13.4	-0.8
TIY				PKPab	PKPab	09 19 40.3	+1.4
TIY				PP	PP	09 23 16.3	+2.2
TIY				SS	SS	09 42 58.5	+0.6
TIY				AMB	AMB		
	comp=Z,430nm,6.7s						
TIY				LR	LR		
	comp=Z,4µm,11.6s						
TIY				LR	LR		
	comp=Z,5µm,11.4s						
SRSP	Sriramsagar	155.28	75	ePKPdf	PKPdf	09 19 13.6	-1.1
NGP	Nagpur	155.55	70	i x	PKPdf	09 19 16.4	+1.3
NGP				ex	x	09 23 15.8	
HYBB	Hyderabad (bro	155.63	79	ePKPdf	PKPdf	09 19 14.2	-1.1
HYB	Hyderabad	155.63	79	i PKP	PKPdf	09 19 15.0	-0.3
HYB				e		09 19 24.5	
HYB				e		09 19 41.0	
HYB				ePP	PP	09 23 18.0	-0.5
HYB	Hyderabad	155.63	79	i x	PKPdf	09 19 21.1	+5.8
HYB				ex	x	09 23 17.2	
SRLM	Srisailam	156.02	82	ePKPdf	PKPdf	09 19 15.1	-0.8
RPR	Rampur	156.18	75	ePKPdf	PKPdf	09 19 14.9	-1.0
NJS	Nagarjunasagar	156.40	81	ePKPdf	PKPdf	09 19 15.3	-0.9
SSE	Sheshan	156.64	319	PKP	PKPdf	09 19 11.8	-4.4
SSE				PP	PP	09 23 22.6	-0.1
SSE				SS	SS	09 43 08.4	-6.2
SSE				AMB	AMB		
	comp=Z,190nm,9.0s						
SSE				LR	LR		
	comp=Z,3µm,13.7s						
DANN	Dangsing	156.71	49	eP	PKPdf	09 19 16.8	0.0
	comp=Z,120nm,0.9s						
SKHT	Srikalahasti	156.76	88	ePKPdf	PKPdf	09 19 16.3	-0.5
ADKI	Addanki	157.06	83	ePKPdf	PKPdf	09 19 16.5	-0.6
GGR	Gangavaram	157.16	78	ePKPdf	PKPdf	09 19 15.6	-1.7
MDRS	Chennai	157.23	90	i P	PKPdf	09 19 17.4	+0.1
MDRS				ePP	PP	09 23 20.6	-6.7
NJ2	Nanjing	157.36	325	ePKP	PKPdf	09 19 16.8	-0.3
NJ2				PKPab	pPKPab	09 19 51.8	+0.3
NJ2				PP	PP	09 23 27.3	+0.9
NJ2				SKKS		09 30 12.8	
NJ2				SS	SS	09 43 25.3	+3.5
NJ2				AMB	AMB		
	comp=Z,720nm,8.8s						
NJ2				LR	LR		
	comp=Z,7µm,22.2s						
NJ2				LR	LR		
	comp=Z,7µm,25.0s						
GKN	Gorkha	157.55	49	eP	PKPdf	09 19 17.2	-0.5
MYLAV	Mylavaram	157.66	80	ePKPdf	PKPdf	09 19 15.5	-2.3
LZH	Lanzhou	158.11	360	⇑PKP	PKPdf	09 19 18.4	+0.3
LZH				PP	PP	09 23 29.0	-0.9
LZH				SS	SS	09 43 26.8	-1.9
LZH				AMB	AMB		
	comp=Z,1µm,6.5s						
LZH				LR	LR		
	comp=Z,4µm,19.6s						
LZH				LR	LR		
	comp=Z,2µm,17.9s						
LZH				LR	LR		
	comp=Z,6µm,20.1s						
DMN	Daman	158.11	49	eP	PKPdf	09 19 18.1	-0.4
KKN	Kakani	158.14	49	eP	PKPdf	09 19 17.7	-0.8
PKIN	Phulchoki	158.34	49	eP	PKPdf	09 19 18.1	-0.7
PKI	Pulchoki	158.36	49	eP	PKPdf	09 19 17.8	-1.1
GUN	Gumba	158.50	47	eP	PKPdf	09 19 18.8	-0.3
PVM	Polavaram	158.57	79	ePKPdf	PKPdf	09 19 18.7	-0.3
JIRN	Jiri	158.87	48	eP	PKPdf	09 19 19.0	-0.6
RAMN	Ramite	159.58	49	eP	PKPdf	09 19 20.1	-0.2
XAN	Xi'an	159.58	347	PKP	PKPdf	09 19 20.3	+0.5
XAN				AMB	AMB		
	comp=Z,680nm,8.4s						
XAN				LR	LR		
	comp=Z,2µm,22.1s						
XAN				LR	LR		
	comp=Z,2µm,20.1s						
XAN				LR	LR		
	comp=Z,3µm,19.6s						
XAN	Xi'an	159.58	347	PKIKP	PKPdf	09 19 20.5	+0.7
XAN	Xi'an	159.58	347		PKPdf	09 19 20.5	+0.7
TAPN	Taplejung	160.13	46	eP	PKPdf	09 19 20.7	-0.2
LSA	Lhasa	160.65	35	PKIKP	PKPdf	09 19 22.5	+0.9
LSA	Lhasa	160.65	35		PKPdf	09 19 22.5	+0.9
CHLP	Challavanipeta	160.70	74	ePKPdf	PKPdf	09 19 20.9	-0.5
GTK	Tadong	160.76	45	i x	PKPdf	09 19 24.5	+3.1
GTK				ePP	PP	09 23 43.1	-2.5
WHN	Wuhan	160.90	331	⇑PKP	PKPdf	09 19 21.4	+0.1
WHN				PP	PP	09 23 44.4	-1.0
WHN				SKKS		09 30 37.6	
WHN				SS	SS	09 43 58.5	-0.4
WHN				AMB	AMB		
	comp=Z,2µm,8.9s						
WHN				LR	LR		
	comp=Z,3µm,14.7s						
WHN				LR	LR		
	comp=Z,3µm,16.8s						
WHN				LR	LR		
	comp=Z,8µm,19.8s						
BWNR	Bhubaneshwar	161.88	68	i x	PKPdf	09 19 16.6	-6.0
BWNR				ex	x	09 23 48.4	
QZH	Quanzhou	162.28	310	i PKP	PKPdf	09 19 20.9	-2.0
QZH				PP	PP	09 23 57.3	+3.6
QZH				SS	SS	09 44 18.8	+3.9
QZH				LR	LR		
	comp=Z,2µm,18.6s						
QZH				LR	LR		
	comp=Z,2µm,20.4s						
QZH				LR	LR		
	comp=Z,3µm,20.5s						
CD2	Chengdu	163.27	360	PKP	PKPdf	09 19 25.0	+1.2
CD2				PP	PP	09 23 57.8	+0.2
CD2				SKS	SKSdf	09 26 21.3	-7.5
CD2				SKKS	SKKSac	09 30 50.0	+2.6
CD2				AMB	AMB		
	comp=Z,2µm,10.3s						
CD2				LR	LR		
	comp=Z,10µm,12.5s						
SHL	Shillong	164.12	42	i x	PKPdf	09 19 23.2	-1.7
SHL				ex	x	09 23 58.0	
SHL	Shillong	164.12	42	PKIKP	PKPdf	09 19 24.5	-0.4
SHL						09 20 18.1	
SHL	Shillong	164.12	42	PKPdf	PKPdf	09 19 24.5	-0.4
SHL					PKPab	09 20 18.1	-0.1
AGT	Agartala	164.78	48	i P	PKPdf	09 19 21.5	-3.7
AGT				ePP	PP	09 24 09.1	+2.3
LKP	Lekhapani	164.96	28	i x	PKPdf	09 19 27.1	+1.8
LKP				ex	x	09 24 08.5	
BELO	BELONIA	165.30	50	i x	PKPdf	09 19 29.2	+3.5
BELO				ex	x	09 24 11.4	
KOHI	KOHIMA	165.38	36	i x	PKPdf	09 19 28.6	+2.7
KOHI				ex	x	09 24 06.0	
GZH	Guangzhou	167.19	316	PKP	PKPdf	09 19 26.6	-0.6
GZH				PKPab	PKPab	09 20 30.8	-0.7
GZH				PP	PP	09 24 17.6	-1.5
GZH				LR	LR		
	comp=Z,3µm,12.3s						
GZH				LR	LR		
	comp=Z,2µm,13.4s						
GYA	Guiyang	167.38	348	PKP	PKPdf	09 19 27.9	+0.5
GYA				PP	PP	09 24 18.0	-1.2
GYA				SKKS		09 31 02.9	
GYA				AMB	AMB		
	comp=Z,970nm,14.1s						
GYA				LR	LR		
	comp=Z,1µm,15.4s						
GYA				LR	LR		
	comp=Z,2µm,21.0s						
GYA				LR	LR		
	comp=Z,3µm,20.1s						
RPSI	Rantau Prapat	167.74	157		PKPdf	09 19 27.2	-0.7
PSI	Prapat	167.84	157	PKIKP	PKPdf	09 19 27.2	-0.9
KMI	Kunming	169.00	4	PKP	PKPdf	09 19 27.5	-1.2
KMI				pPKP	pPKPdf	09 19 31.8	-0.3
KMI				sPKP		09 19 34.3	
DGPR	DIGLIPUR	169.54	94	i P	PKPdf	09 19 28.6	-0.4
DGPR				ex	x	09 20 43.6	
QIZ	Qiongzhong	172.30	310	PKP	PKPdf	09 19 28.8	-1.5
QIZ				PP	PP	09 24 44.5	-0.6
QIZ				SS	SS	09 45 55.8	-0.3
QIZ				AMB	AMB		
	comp=Z,800nm,7.7s						
QIZ				LR	LR		
	comp=Z,990nm,17.2s						
QIZ				LR	LR		
	comp=Z,2µm,23.9s						
QIZ				LR	LR		
	comp=Z,3µm,20.2s						
CHTO	Chiang Mai	173.50	43	PKP2	PKPab	09 20 59.5	0.0
CHTO						10 19 31.1	
CHTO	Chiang Mai	173.50	43		PKPdf	09 19 31.1	+0.3
CHTO				PKPab	PKPab	09 20 59.5	0.0
CMAR	Chiang Mai Arr	173.74	46	PKP	PKPdf	09 19 31.1	+0.1
	comp=Z,7.0nm,1.0s,baz=279,slow=1.8,SNR=27						
CMAR				PKPab	PKPab	09 21 01.6	+0.9
	comp=Z,8.5nm,0.9s,baz=306,slow=5.4,SNR=9.8						
CMAR				PP	PP	09 24 53.4	+1.3
	comp=Z,1.0nm,0.4s,baz=300,slow=7.2,SNR=3.3						
PBKT	Sadao Pong	176.44	46		PKPdf	09 19 32.0	+0.3
PBKT					PKPab	09 21 13.4	+0.8

IDC ***15*** *08:59:38.4±1.4, 12°.08N×43°.79W, h0^{km}, mb4.0/8, mb1 4.1/9, mb1mx3.8/70, mbtmp4.0/9, ML4.3/1, Error ellipse: s-maj=41.6km s-min=23.0km az=18.0*

NEIC ***15*** *08:59:40.7±1.6, 12°.0N±0°.1×43°.9W±0°.1, h10^{km}±1^{km}, mb4.4/14, Error ellipse: s-maj=22.4km s-min=11.1km az=140.0*

ISC 15 08:59:41.3±0.7**, 12°.0N**±0°.1×**43°.82W**±0°.10**, h14**^{km}**, n32, σ1^{s}12**/26**, mb4.2**/14**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDP	Montagnes des	11.09	233	Pn	Pn	09 02 19.5	-0.1
	2.2nm,0.3s,baz=40,slow=13,SNR=22						
MDP				Sn	Sn	09 04 13.3	-10
	0.5nm,0.3s,baz=142,slow=18,SNR=3.3						
SVB	Belmont	17.06	276		P	09 03 40.1	-1.2
FDF	Fort de France	17.08	281	P	P	09 03 42.0	+0.5
H05N1	Guadeloupe/Mar	17.25	286	T	T	09 21 16.0	
	SNR=23						
PDPR	Patillas Dam,	22.25	288	P	P	09 04 39.8	+1.8
PDPR				IAmb	IAmb	09 04 45.5	
	comp=Z,37nm,1.4s						
OBIP	Obispado Ponce	22.80	288	P	P	09 04 42.5	-1.3
OBIP				IAmb	IAmb	09 04 48.3	
	comp=Z,11nm,1.1s						
H10N3	ASCENSION HYDR	35.19	123	T	T	09 43 54.1	
	baz=303,slow=75						
H10N2	ASCENSION HYDR	35.20	123	T	T	09 43 54.7	
	baz=303,slow=75						
H10N1	ASCENSION HYDR	35.21	123	T	T	09 43 55.2	
	baz=303,slow=75						
DBIC	Dimbokro	38.78	94	P	P	09 07 05.4	-0.5
	comp=Z,1.7nm,0.7s,baz=296,slow=8.1,SNR=3.3						
DBIC	Dimbokro	38.78	94	P	P	09 07 06.3	+0.5
PQI	Presque Isle	40.15	334	P	P	09 07 16.2	-0.6
PQI				IAmb	IAmb	09 07 21.1	
	comp=Z,18nm,1.3s						
L56A	Greenwood	41.99	322	P	P	09 07 31.8	-0.3
TKL	Tuckaleechee C	43.05	310	P	P	09 07 43.0	+2.1
TOA0	Torodi Ar. Sit	44.39	83	P	P	09 07 52.3	+0.4
TOA0				IAmb	IAmb	09 07 58.8	
	comp=Z,4.7nm,1.1s						
TORD	Torodi Ar. Bea	44.39	83	P	P	09 07 50.5	-1.4
	comp=Z,2.0nm,0.8s,baz=271,slow=9.9,SNR=6.9						
D53A	Lac Vacive, Po	45.09	327	P	P	09 07 57.2	+0.2
D53A				IAmb	IAmb	09 08 03.1	
	comp=Z,2.9nm,0.9s						
SCHQ	Schefferville	46.41	342	P	P	09 08 06.8	-0.5
	comp=Z,1.9nm,0.5s,baz=147,slow=7.5,SNR=5.7						
SCHQ	Schefferville	46.41	342	P	P	09 08 07.6	+0.3
SCHQ				IAmb	IAmb	09 08 12.7	
	comp=Z,8.9nm,1.2s						
G40A	Rib Lake	51.47	319	P	P	09 08 45.6	-0.7
G40A				IAmb	IAmb	09 08 48.5	
	comp=Z,9.0nm,1.2s						
ROC1	El Roble	51.71	209	P	P	09 08 49.1	+0.6
ULM	Lac du Bonnet	57.00	323	P	P	09 09 24.9	-1.7
	comp=Z,2.4nm,0.9s,baz=92,slow=6.3,SNR=4.5						
ULM	Lac du Bonnet	57.00	323	IAmb	IAmb	09 09 30.1	
	comp=Z,4.0nm,1.1s						
H09W1	TRISTAN DA CUN	57.11	150	T	T	10 11 16.9	
	SNR=30						
CLL	Collm	60.20	37	e(P)	P	09 09 51.0	+2.2
FFC	Flin Flon	62.11	326	P	P	09 10 01.5	-0.2
YKA	Yellowknife Ar	70.58	332	P	P	09 10 54.0	-1.8
	comp=Z,1.4nm,0.9s,baz=107,slow=6.6,SNR=9.1						
BRTR	Keskin Array B	72.82	52	P	P	09 11 08.6	-1.4
	comp=Z,0.6nm,0.7s,baz=321,slow=3.7,SNR=2.7						
BRTR	Keskin Array B	72.82	52	P	P	09 11 09.9	0.0
INK	Inuvik	78.83	338	P	P	09 11 44.0	+0.5
	comp=Z,1.7nm,1.0s,baz=55,slow=9.2,SNR=2.8						
INK	Inuvik	78.83	338	P	P	09 11 44.0	+0.5
ILAR	Eielson Array	84.73	335	P	P	09 12 14.3	-0.4
	comp=Z,1.7nm,1.1s,baz=83,slow=3.9,SNR=6.3						

PRU 15 09:01:45.0±0.0**, 51°.47N**×**16°.05E, h0**^{km}**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHVC	Chvalec	0.88	180	ePG	Pg	09 02 02.0	+0.1
CHVC				eSG	Sg	09 02 14.1	+0.8
OSTC	Ostas	0.92	173	eSG	Sg	09 02 14.9	+0.4
UPC	Upice	0.96	181	ePG	Pg	09 02 03.0	-0.4
UPC				eSG	Sg	09 02 15.7	-0.2
	comp=Z,8.6nm,0.4s						
DPC	Dobruska-Polom	1.13	171	ePG	Pg	09 02 05.8	-0.9
DPC				eSG	Sg	09 02 20.4	-1.0
BRG	Berggiesshubel	1.46	247	PG	Pn	09 02 11.7	-0.8
BRG				SG	Sb	09 02 32.0	0.0
	7.4nm,0.3s						
PRU	Pruhonice	1.77	213	eSG	Sb	09 02 41.0	+0.1
CLL	Collm	1.92	266	eSg	Sg	09 02 47.0	+0.5
KHC	Kasperske Hory	2.83	215	eSG	Sg	09 03 15.2	-0.6

NIC ***15*** *09:03:03.4±0.0, 34°.26N×25°.47E, h11^{km}±1^{km}, Ml3.7/2*

HLW ***15*** *09:03:06.5, 34°.72N×25°.68E, h21^{km}±15^{km}, Md3.8*

NEIC ***15*** *09:03:07.2±1.6, 34°.73N±0°.06×25°.34E±0°.04, h48^{km}±6^{km}, Error ellipse: s-maj=8.6km s-min=4.8km az=171.0*

IDC ***15*** *09:03:08.2±1.4, 34°.96N×25°.20E, h54^{km}±8^{km}, mb4.0/16, mb1 4.0/17, mb1mx3.8/60, mbtmp4.2/17, MS2.7/2, Ms1 2.7/2, ms1mx2.4/51, Error ellipse: s-maj=22.1km s-min=14.7km az=160.0*

ISK ***15*** *09:03:08.4, 34°.91N×25°.33E, h30^{km}, ML3.7/11*

ATH ***15*** *09:03:08.1, 34°.88N×25°.30E, h50^{km}±2^{km}, ML3.5/8, Error ellipse: s-maj=2.7km s-min=1.0km az=355.0*

DDA ***15*** *09:03:09.0, 34°.86N×25°.42E, h39^{km}±178^{km}, MW3.7*

THE ***15*** *09:03:09.5, 34°.86N×25°.31E, h45^{km}±2^{km}, ML3.6/4, Error ellipse: s-maj=2.9km s-min=1.1km az=351.0*

GII ***15*** *09:03:11.4±0.0, 34°.47N×26°.17E, h1^{km}, MD3.6/2*

ISC 15 09:03:07.3±0.7**, 34°.73N**±0°.04×**25°.35E**±0°.03**, h55**^{km}±6^{km}**, n190, σ1^{s}68**/224**, mb4.1**/21**, 7C, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAST	Lasithi	0.44	13	P	Pn	09 03 17.2	-1.2
LAST				S	Sn	09 03 25.1	-1.2
	7µm,0.5s						
LAST	Lasithi	0.44	13	P	Pn	09 03 17.1	-1.2
LAST				S	Sn	09 03 25.2	-1.2
LAST				AML	AML	09 03 27.2	
	comp=N,15741µm,0.6s						
LAST				AML	AML	09 03 29.0	
	comp=E,13139µm,0.5s						
LAST	Lasithi	0.44	13		Pn	09 03 17.2	-1.2
LAST					Sn	09 03 25.1	-1.2
SIVA	Sivas	0.53	303	P	Pn	09 03 18.9	-0.3
SIVA				S	Sn	09 03 27.0	-0.9
	comp=E,23µm,0.7s						
SIVA	Sivas	0.53	303	P	Pn	09 03 18.7	-0.6
SIVA				S	Sn	09 03 27.2	-0.7
SIVA				AML	AML	09 03 28.4	
	comp=E,49515µm,0.7s						
SIVA				AML	AML	09 03 30.8	
	comp=N,43274µm,0.6s						
SIVA	Sivas	0.53	303		Pn	09 03 18.9	-0.3
SIVA					Sn	09 03 27.0	-0.9
NPS	Neapolis	0.57	22	P	Pn	09 03 19.2	-0.5
NPS				S	Sn	09 03 28.8	+0.1
	comp=N,5µm,0.6s						
NPS	Neapolis	0.57	22	P	Pn	09 03 19.2	-0.5
NPS				S	Sn	09 03 28.2	-0.6
NPS				AML	AML	09 03 32.6	
	comp=E,10678µm,0.4s						
NPS				AML	AML	09 03 33.0	
	comp=N,8325µm,0.6s						
NPS	Neapolis	0.57	22		Pn	09 03 19.2	-0.5
HRKL	Herakleio	0.61	340	PG	Pn	09 03 19.1	-1.1
HRKL				SG	Sn	09 03 25.8	-3.8
IACM	Heraklion	0.62	338	P	Pn	09 03 19.9	-0.3
IACM	Heraklion	0.62	338	P	Pn	09 03 20.0	-0.3
IACM	Heraklion	0.62	338		Pn	09 03 19.9	-0.3
IDI	Anoyia	0.67	326	P	Pn	09 03 20.2	-0.8
IDI	Anoyia	0.67	326	P	Pn	09 03 20.2	-0.8
	comp=N,49nm,0.3s,baz=155,slow=11,SNR=205						
IDI				S	Sn	09 03 29.1	-1.9
	comp=N,111nm,0.3s,baz=221,slow=19,SNR=33						
IDI	Anoyia	0.67	326	P	Pn	09 03 20.2	-0.8
IDI				S	Sn	09 03 29.5	-1.5
IDI				AML	AML	09 03 35.7	
	comp=N,4389µm,0.5s						
IDI				AML	AML	09 03 36.0	
	comp=E,4336µm,0.4s						
IDI	Anoyia	0.67	326	PG	Pn	09 03 20.0	-1.0
IDI				SG	Sn	09 03 28.3	-2.7
ZKR	Zakros	0.81	61	P	Pn	09 03 23.6	+1.0
ZKR				S	Sn	09 03 35.2	+1.4
	comp=E,3µm,0.6s						
ZKR	Zakros	0.81	61	P	Pn	09 03 23.7	+1.1
ZKR				S	Sn	09 03 35.5	+1.7
ZKR				AML	AML	09 03 40.7	
	comp=E,7391µm,0.5s						
ZKR				AML	AML	09 03 41.4	
	comp=N,6123µm,0.8s						
ZKR	Zakros	0.81	61	PG	Pn	09 03 23.3	+0.7
ZKR				SG	Sn	09 03 34.1	+0.3
ZKR	Zakros	0.81	61	⇑P	Pn	09 03 23.6	+1.1
ZKR				S	Sn	09 03 38.5	+4.6
ZKR				AML	AML	09 03 40.1	
	comp=N,7.5nm,0.5s						
ZKR				AML	AML	09 03 40.1	
	comp=N,7.5nm,0.5s						
ZKR				AML	AML	09 03 40.6	
	comp=N,6.1nm,0.8s						
ZKR				AML	AML	09 03 40.6	
	comp=N,6.1nm,0.8s						
GVDS	Gavdos	1.05	277	PG	Pn	09 03 26.8	+1.0
GVD	Gavdhos	1.05	276	P	Pn	09 03 26.6	+0.8
GVD	Gavdhos	1.05	276	P	Pn	09 03 26.6	+0.8
GVD				S	Sn	09 03 40.1	+0.6
GVD				AML	AML	09 03 50.2	
	comp=E,3829µm,0.4s						
GVD				AML	AML	09 03 55.2	
	comp=N,5081µm,0.6s						
GVD	Gavdhos	1.05	276	PG	Pn	09 03 26.6	+0.8
VAM	Vamos	1.16	306	P	Pn	09 03 28.1	+0.8
VAM	Vamos	1.16	306	P	Pn	09 03 28.1	+0.8
VAM				S	Sn	09 03 41.4	-0.8
VAM				AML	AML	09 03 49.5	
	comp=E,4687µm,0.5s						
VAM				AML	AML	09 03 51.9	
	comp=N,4015µm,0.5s						
IMMV	Iera Moni Meta	1.34	303	P	Pn	09 03 31.5	+1.8
IMMV	Iera Moni Meta	1.34	303	P	Pn	09 03 30.6	+0.9
IMMV				S	Sn	09 03 45.8	-0.7
IMMV	Iera Moni Meta	1.34	303	PN	Pn	09 03 30.6	+0.9
RODP	Rodopos	1.55	303	PN	Pn	09 03 33.7	+1.2
THR6	Thira Island,	1.62	1	P	Pn	09 03 33.4	-0.1
THR6	Thira Island,	1.62	1	P	Pn	09 03 33.7	+0.1
THR9	Santorini-Faro	1.62	0	P	Pn	09 03 33.7	+0.2
SANT	Santorini	1.64	3	P	Pn	09 03 33.4	-0.4
SANT	Santorini	1.64	3	P	Pn	09 03 33.6	-0.2
SANT	Santorini	1.64	3	PN	Pn	09 03 33.2	-0.6
SANT	Santorini	1.64	3	i P	Pn	09 03 33.6	-0.2
SANT				i S	Sn	09 03 51.1	-2.7
SANT	Santorini	1.64	3		Pn	09 03 33.4	-0.4
ANAF	Anafi Island	1.66	12	P	Pn	09 03 33.9	-0.1
ANAF	Anafi Island	1.66	12	P	Pn	09 03 34.0	-0.1
STAX	Taxiarchis Har	1.67	1	P	Pn	09 03 33.9	-0.2
STAX	Taxiarchis Har	1.67	1	P	Pn	09 03 34.0	-0.2
THR3	Thira Island,	1.68	1	P	Pn	09 03 34.0	-0.2
THR8	Santorini-Mono	1.68	3	P	Pn	09 03 34.1	-0.1
THR5	Thira Island,	1.68	360	P	Pn	09 03 34.3	0.0
KARP	Karpathos	1.69	61	P	Pn	09 03 36.7	+2.2
KARP	Karpathos	1.69	61	P	Pn	09 03 36.6	+2.1
KARP				S	Sn	09 03 57.0	+1.9
KARP				AML	AML	09 04 14.5	
	comp=N,3111µm,0.6s						
KARP				AML	AML	09 04 15.2	
	comp=E,2259µm,0.8s						
KARP	Karpathos	1.69	61	PN	Pn	09 03 36.3	+1.8
KARP	Karpathos	1.69	61		Pn	09 03 36.5	+2.1
KARP	Karpathos	1.69	61	⇑P	Pn	09 03 36.4	+1.9
KARP				S	Sn	09 04 00.4	+5.4
KARP				AML	AML	09 04 11.2	
	comp=E,2.2nm,1.0s						
KARP				AML	AML	09 04 11.2	
	comp=E,2.2nm,1.0s						
KARP				AML	AML	09 04 14.1	
	comp=E,3.1nm,0.7s						
KARP				AML	AML	09 04 14.1	
	comp=E,3.1nm,0.7s						
SAP3	Santorini-Thir	1.70	360	P	Pn	09 03 34.4	-0.2

CMBO	Columbo, Santo	1.74	1	P	Pn	09 03 35.1	0.0
CMBO	Columbo, Santo	1.74	1	P	Pn	09 03 35.6	+0.5
IOSP	Ios island	1.99	358	P	Pn	09 03 38.2	-0.3
IOSP	Ios island	1.99	358	P	Pn	09 03 38.0	-0.5
ANKY	Antikythira Is	2.03	305	P	Pn	09 03 40.0	+1.0
ANKY	Antikythira Is	2.03	305	P	Pn	09 03 39.8	+0.8
MHLO	Agia Marina, M	2.10	339	P	Pn	09 03 39.9	-0.2
MHLO	Agia Marina, M	2.10	339	P	Pn	09 03 39.9	-0.2
AMGA	Amorgos Island	2.14	12	P	Pn	09 03 40.3	-0.3
AMGA	Amorgos Island	2.14	12	P	Pn	09 03 40.2	-0.4
MHLA	Plaka, Milos I	2.15	340	P	Pn	09 03 41.1	+0.4
APE	Apeiranthos	2.34	3	P	Pn	09 03 42.9	-0.4
APE	Apeiranthos	2.34	3	PN	Pn	09 03 42.7	-0.6
APE	Apeiranthos	2.34	3	*i* P	Pn	09 03 42.4	-1.0
APE				*i* S	Sn	09 04 01.6	-9.3
KOSK	Kos Island	2.41	33	PN	Pn	09 03 44.7	+0.4
KTHA	Kythira Island	2.41	310	P	Pn	09 03 44.5	+0.2
KTHA	Kythira Island	2.41	310	P	Pn	09 03 44.5	+0.2
KTHA	Kythira Island	2.41	310	PN	Pn	09 03 44.6	+0.2
SERI	Serifos	2.52	344	P	Pn	09 03 45.4	-0.5
SERI	Serifos	2.52	344	P	Pn	09 03 45.6	-0.3
DAT	Datca	2.69	42	PN	Pn	09 03 49.2	+1.0
ARG	Arkhangelos	2.70	56	P	Pn	09 03 49.5	+1.2
ARG	Arkhangelos	2.70	56	PN	Pn	09 03 49.9	+1.6
ARG	Arkhangelos	2.70	56	⇑P	Pn	09 03 50.4	+2.2
VLI	Veliai	2.79	316	P	Pn	09 03 49.1	-0.4
BODT	Bodrum	2.82	34	PN	Pn	09 03 50.6	+0.7
DYR	Agios Nikonas	3.19	310	P	Pn	09 03 55.2	+0.3
SLUM	Salum	3.23	182	P	Pn	09 03 56.1	+0.5
	baz=188						
SLUM				S	Sn	09 04 31.8	-1.0
	baz=188						
DID	Didima	3.26	329	P	Pn	09 03 55.0	-0.9
DID	Didima	3.26	329	P	Pn	09 03 54.9	-0.9
YER	Yerkesik	3.38	44	PN	Pn	09 03 58.8	+1.2
TURN	Turunc	3.40	50	PN	Pn	09 03 54.8	-3.0
TURN	Turunc	3.40	50	*i* P	Pn	09 03 54.6	-3.1
TURN				*i* S	Sn	09 04 23.3	-13
PTL	Penteli	3.52	340	P	Pn	09 03 59.5	0.0
DGB	zmir	3.54	20	*i* P	Pn	09 03 59.0	-0.7
AYDN	Tasoluk	3.57	34	*i* P	Pn	09 04 01.1	+0.9
ITM	Ithomi	3.70	312		Pn	09 04 01.8	-0.2
KSL	Kastellorizon	3.73	66	P	Pn	09 04 02.7	+0.3
KSL	Kastellorizon	3.73	66	⇑P	Pn	09 04 02.7	+0.3
URLA	Izmir	3.76	15	*i* P	Pn	09 04 02.4	-0.4
URLA				*i* S	Sn	09 04 38.6	-7.1
AKAS	Kas	3.78	65	*i* P	Pn	09 04 03.2	0.0
AKAS				*i* S	Sn	09 04 36.0	-10
AKAS				IAML		09 04 47.0	
	comp=E,51nm,0.4s						
AKAS				IAML		09 04 49.0	
	comp=N,82nm,0.4s						
TAVA	DENIZLI_Tavas	3.97	46	*i* P	Pn	09 04 06.7	+1.0
TAVA				*i* S	Sn	09 04 45.6	-5.4
ELL	Elmali	4.22	60		Pn	09 04 10.2	+1.0
ELL	Elmali	4.22	60	P	Pn	09 04 10.1	+1.0
AKUM	Antalya-Kumluc	4.37	67	*i* P	Pn	09 04 11.4	+0.4
AKUM				*i* S	Sn	09 04 53.7	-7.0
AKUM				IAML		09 04 55.0	
	comp=N,33nm,0.9s						
AKUM				IAML		09 05 01.0	
	comp=E,62nm,0.3s						
MANT	Manisa	4.55	34	*i* P	Pn	09 04 14.4	+0.6
MANT	Manisa	4.55	34		Pn	09 04 14.7	+0.9
KORT	Korkueli	4.65	59	*i* P	Pn	09 04 16.6	+1.6
KORT				*i* S	Sn	09 04 56.8	-11
AGG	Agios Georgios	4.92	331	*i* P	Pn	09 04 20.3	+1.6
AGG	Agios Georgios	4.92	331		Pn	09 04 19.7	+1.0
KHAL	Karahalli	4.93	41	*i* P	Pn	09 04 19.1	+0.3
KHAL				*i* S	Sn	09 05 11.4	-3.2
USAK	Uak-Merkez	4.95	35	*i* P	Pn	09 04 19.9	+0.9
DEMI	Demirci	5.08	31	*i* P	Pn	09 04 22.0	+1.1
ISP	Isparta	5.19	52	Pn	Pn	09 04 23.1	+0.6
KZIL	AFYON_Kizioren	5.22	46	*i* P	Pn	09 04 23.3	+0.4
DURS	Dursunbey	5.46	26	*i* P	Pn	09 04 26.4	+0.3
SWA2		5.47	179	P	Pn	09 04 26.5	+0.2
	baz=183						
SWA2				S	Sn	09 05 25.3	-2.6
	baz=183						
KEPZ	Antalya-Kepez	5.52	65	*i* P	Pn	09 04 27.2	+0.3
KEPZ				*i* S	Sn	09 05 19.5	-10
KEPZ				IAML		09 05 33.0	
	comp=N,20nm,0.6s						
KEPZ				IAML		09 05 34.0	
	comp=E,18nm,0.4s						
AKMS	Akamas	5.75	85	P	Pn	09 04 28.8	-1.2
LIT	Litokhoron	5.82	338		Pn	09 04 31.5	+0.5
GAZI	Gazipasa	5.88	73	*i* P	Pn	09 04 30.2	-1.5
GAZI				*i* S	Sn	09 05 24.4	-13
GAZI				IAML		09 05 34.0	
	comp=E,62nm,0.6s						
GAZI				IAML		09 05 35.0	
	comp=N,67nm,0.3s						
NATA	Nata	5.94	87	P	Pn	09 04 31.7	-0.9
ALFC	Alefka	5.96	84	⇑P	Pn	09 04 31.9	-1.1
OSC2	CSNet OBS 4	5.98	104	P	Pn	09 04 31.2	-2.0
OSC2				S	Sn	09 05 38.2	-2.1
ALN	Alexandroupoli	6.18	5	Pn	Pn	09 04 37.0	+1.1
SZAC	Souni	6.20	88	P	Pn	09 04 34.9	-1.3
ASGA	Asgata	6.50	87	P	Pn	09 04 39.3	-1.0
CSS	Mathiatis	6.56	86	*i* P	Pn	09 04 39.8	-1.4
CSS	Mathiatis	6.56	86	Pn	Pn	09 04 40.8	-0.4
CSS	Mathiatis	6.56	86		Pn	09 04 40.3	-0.9
CSS	Mathiatis	6.56	86	⇑P	Pn	09 04 39.9	-1.4
MVOU	Mavrovouni	6.81	85	⇑P	Pn	09 04 44.1	-0.4
GULN	MERSIN_Gulnar	6.84	75	*i* P	Pn	09 04 44.0	-0.9
KOT	Kottamia	7.28	129	P	Pn	09 04 49.6	-1.4
	baz=130						
KOT				S	Sn	09 06 03.7	-8.6
	baz=130						
GLL	Jalalah	7.44	132	P	Pn	09 04 51.9	-1.4
	baz=133						
KERG	Konya-Eregli	7.59	67	*i* P	Pn	09 04 56.0	+0.6
NBNS	Bani Suef	7.92	139	P	Pn	09 04 58.1	-1.7
	baz=140						
HFRF	Wahat Farafira	7.97	161	P	Pn	09 04 59.8	-0.8
	baz=162						
HFRF				S	Sn	09 06 23.9	-5.5
	baz=162						
TIP	Timpagrande	8.19	305		Pn	09 05 02.1	-1.3
BRTR	Keskin Array B	8.28	51	P	Pn	09 05 03.8	-1.0
	comp=N,0.3nm,0.3s,baz=223,slow=14,SNR=7.1						
BRTR				LR	LR	09 08 09.5	
	comp=N,28nm,19.8s,baz=265,slow=37						
BRTR	Keskin Array B	8.28	51	Pn	Pn	09 05 06.2	+1.4
HNTI	Hanita	8.33	99	Pn	Pn	09 05 04.4	-1.0
HNTI				Sn	Sn	09 06 32.4	-5.6
SLTI	Sal'it	8.46	104	Pn	Pn	09 05 05.4	-1.8
SLTI				Sn	Sn	09 06 34.9	-6.4
KZIT	Kziot	8.51	114	Pn	Pn	09 05 07.1	-0.8
KZIT				Sn	Sn	09 06 34.7	-7.8
MMAI	Mount Meron Ar	8.53	99	P	Pn	09 05 06.0	-2.3
	comp=N,4.5nm,0.3s,baz=306,slow=13,SNR=9.9						
MMAI				S	Sn	09 06 37.5	-5.6
	comp=N,7.5nm,0.3s,baz=312,slow=28,SNR=8.6						
AMAZ	Amatzia	8.63	109	Pn	Pn	09 05 07.3	-2.2
AMAZ				Sn	Sn	09 06 38.7	-6.7
KSDI	Kefar Szold	8.70	97	Pn	Pn	09 05 08.4	-2.0
NATI	Neve Ativ	8.74	97	Pn	Pn	09 05 09.1	-1.9
HMDT	Nahal Hemdat	8.85	103	Pn	Pn	09 05 11.6	-0.9
YTIR	Yattir	8.86	110	Pn	Pn	09 05 11.1	-1.6
YTIR				Sn	Sn	09 06 43.9	-7.2
DSI	Dead Sea	8.98	108	Pn	Pn	09 05 12.1	-2.2
DSI				Sn	Sn	09 06 47.2	-6.7
MDBI	Mazsada	9.06	109	Pn	Pn	09 05 14.4	-1.0
MDBI				Sn	Sn	09 06 48.9	-7.1
GHAJ	Ghor Haditha	9.23	109	Pn	Pn	09 05 17.1	-0.6
PRNI	Paran	9.24	116	Pn	Pn	09 05 16.9	-1.0
HRFI	Mount Harif	9.43	117	Pn	Pn	09 05 19.6	-0.9
HRFI				Sn	Sn	09 06 58.7	-6.3
MBRI	Mt Berech	9.47	119	Pn	Pn	09 05 19.6	-1.5
MBRI				Sn	Sn	09 07 00.2	-5.9
EIL	Elat	9.57	119	P	Pn	09 05 21.5	-0.8
	comp=N,1.4nm,0.3s,baz=336,slow=4.7,SNR=9.9						
EIL				S	Sn	09 07 02.0	-6.4
	comp=N,2.0nm,0.3s,baz=189,slow=5.4,SNR=9.2						
MLR	Muntele Rosu	10.76	2	LR	LR	09 10 21.3	
	comp=N,72nm,19.0s,baz=134,slow=41						
AKASG	Malin Array Be	16.21	9	P	Pn	09 06 51.9	+0.7
	comp=N,3.5nm,0.3s,baz=202,slow=10,SNR=14						
AKASG	Malin Array Be	16.21	9		Pn	09 06 52.1	+0.9
AKBB	Malin Array Si	16.21	9		Pn	09 06 52.6	+1.4
KBZ	Khabaz	16.27	51	P	P	09 06 56.6	+2.4
	comp=N,0.6nm,0.3s,baz=232,slow=8.1,SNR=26						
GERES	GERESS Array B	16.54	332	P	Pn	09 06 56.3	+0.8
	comp=N,0.2nm,0.3s,baz=150,slow=12,SNR=3.2						
SENIN	Lac Senin/Sane	17.93	316	P	P	09 07 13.9	+1.1
MDT	Midelt	24.94	274	P	P	09 08 23.6	-1.9
	comp=N,1.1nm,0.6s,baz=45,slow=16,SNR=7.2						
HFS	Hagfors	26.53	347	P	P	09 08 40.2	+0.7
	comp=N,4.1nm,0.9s,baz=183,slow=12,SNR=3.5						
FIA1	FINESS Array S	26.73	1	P	P	09 08 39.6	-1.7
FINES	FINESS Array B	26.73	1	P	P	09 08 39.1	-2.2
	comp=N,5.1nm,1.0s,baz=162,slow=10,SNR=12						
FINES				PcP	PcP	09 12 03.8	+0.6
	comp=N,2.5nm,1.0s,baz=155,slow=6.9,SNR=5.1						
FINES	FINESS Array B	26.73	1	P	P	09 08 39.6	-1.7
AKTO	Aktyubinsk	28.43	46	P	P	09 08 56.6	0.0
	comp=N,2.7nm,0.5s,baz=252,slow=8.7,SNR=14						
EKA	Eskdalemuir Ar	28.48	325	P	P	09 08 56.3	-0.7
	comp=N,1.0nm,0.5s,baz=124,slow=11,SNR=5.0						
ABKAR	Akbulak array	29.23	50	P	P	09 09 04.8	+1.1
ABKAR	Akbulak array	29.23	50	P	P	09 09 04.5	+0.8
ABKAR				IAmb	IAmb	09 09 21.1	
	comp=Z,5.8nm,1.4s						
TOA0	Torodi Ar. Sit	30.34	231	P	P	09 09 15.3	+1.5
TORD	Torodi Ar. Bea	30.34	231	P	P	09 09 15.2	+1.3
	comp=Z,1.6nm,0.4s,baz=35,slow=8.7,SNR=23						
ARCES	ARCESS Array B	34.86	0	P	P	09 09 50.4	-2.4
	comp=Z,1.3nm,0.5s,baz=171,slow=8.9,SNR=21						
ARCES	ARCESS Array B	34.86	0	P	P	09 09 51.4	-1.4
ARE0	ARCESS Array S	34.86	0	P	P	09 09 51.4	-1.4
KK31	Karatay Array	35.76	63	P	P	09 10 02.5	+1.7
KK31				IAmb	IAmb	09 10 03.0	
	comp=Z,1.4nm,0.7s						
KKAR	Karatay Array	35.76	63	P	P	09 10 01.4	+0.6
KKAR	Karatay Array	35.76	63	P	P	09 10 01.9	+1.0
KKAR				IAmb	IAmb	09 10 03.0	
	comp=Z,1.4nm,0.7s						
KURK	Kurchatov	41.33	50	P	P	09 10 48.3	+0.9
MAKZ	Makanchi	43.66	56	P	P	09 11 07.8	+1.3
MAKZ				IAmb	IAmb	09 11 08.6	
	comp=Z,1.6nm,1.1s						
SPITS	Spitsbergen Ar	43.72	357	P	P	09 11 05.3	-1.3
	comp=Z,5.7nm,0.8s,baz=196,slow=18,SNR=5.5						
MK31	Makanchi Array	43.88	56	P	P	09 11 09.4	+1.1
MK31				IAmb	IAmb	09 11 09.7	
	comp=Z,1.7nm,0.5s						
MKAR	Makanchi Array	43.88	56	P	P	09 11 09.3	+1.0
	comp=Z,1.5nm,0.4s,baz=270,slow=7.5,SNR=45						
MKAR				PcP	PcP	09 12 54.7	+1.1
	comp=Z,0.3nm,0.5s,baz=277,slow=4.5,SNR=2.9						
MKAR	Makanchi Array	43.88	56	P	P	09 11 09.5	+1.3
ZAA0	Zalesovo Array	45.19	46	P	P	09 11 18.8	+0.3
ZALV	Zalesovo Beam	45.19	46	P	P	09 11 18.5	0.0
	comp=Z,5.8nm,0.4s,baz=270,slow=8.7,SNR=23						
ZALV	Zalesovo Beam	45.19	46	P	P	09 11 18.8	+0.3
SONM	Songino Array	59.63	50	P	P	09 13 06.9	+1.1
	comp=Z,2.0nm,0.4s,baz=290,slow=7.1,SNR=17						
SONM	Songino Array	59.63	50	P	P	09 13 07.5	+1.8
TIXI	Tiksi	61.51	21	P	P	09 13 17.8	-0.2
	comp=Z,0.7nm,0.4s,baz=331,slow=8.9,SNR=3.0						
SCHQ	Schefferville	63.62	320	P	P	09 13 32.6	+0.3
	comp=Z,8.8nm,0.8s,baz=0.4,slow=1.2,SNR=5.3						
SCHQ	Schefferville	63.62	320	P	P	09 13 32.9	+0.6
USRK	Ussuriysk Ar.	77.03	45	P	P	09 14 54.8	+0.4
	comp=Z,2.2nm,0.5s,baz=288,slow=4.6,SNR=12						
YKA	Yellowknife Ar	77.91	342	P	P	09 14 58.7	-0.2
	comp=Z,1.0nm,0.6s,baz=34,slow=5.1,SNR=4.5						
KSRS	Korea Array	78.42	52	P	P	09 15 02.9	+0.8
	comp=Z,1.5nm,0.5s,baz=306,slow=4.6,SNR=8.8						

BEO 15 09:05:32.4±0.4**, 44°.38N**×**22°.15E, h0km, ML1.4**/5**, 5C-4D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDVR	Moldovita	0.51	322	⇑P	Pg	09 05 41.4	-0.7
MDVR				⇑S	Sg	09 05 48.6	-0.1
HERR	Herculane	0.54	21	⇓P	Pg	09 05 41.8	-0.9
HERR				⇓S	Sg	09 05 49.0	-0.7
ZAGS	Zajecar	0.57	174	*e*Pg	Pg	09 05 41.9	-1.4
ZAGS				*e*Sg	Sg	09 05 50.1	-0.6
BOVS	Bovan	0.81	203	*e*Pg	Pg	09 05 47.3	-0.6
BOVS				*e*Sg	Sg	09 05 57.9	-0.5
BLKB	Belogradchik	0.85	153	⇑S	Sg	09 05 59.1	-0.6
GZR	Gura Zlata	1.11	24	⇓P	Pg	09 05 53.0	-0.6
GZR				⇓S	Sg	09 06 06.5	-1.5
GRUS	Gruza	1.14	245	*e*Pg	Pg	09 05 54.5	+0.2
ZAPS	Zavoj	1.16	162	*e*Pg	Pg	09 05 53.9	-0.7
ZAPS				*e*Sg	Sg	09 06 10.0	+0.3
BZS	Buzias	1.29	343	*e*Pg	Pg	09 05 55.6	-1.6
BZS				*e*Sg	Sg	09 06 12.7	-1.2
BZS	Buzias	1.29	343	⇑P	Pg	09 05 55.8	-1.4
BZS				⇑S	Sg	09 06 12.8	-1.1
SELS	Selova	1.38	213	*e*Sg	Sg	09 06 16.1	-0.6

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*NEIC **15** 09:09:04.9±1.6, 15°.38S±0°.08×72°.2W±0°.1, h106km±6km, mb4.7/18, Error ellipse: s-maj=18.2km s-min=8.9km az=64.0*

*IDC **15** 09:09:07.7±0.6, 15°.33S×72°.23W, h132km±5km, mb4.0/9, mb1 4.3/13, mb1mx3.9/39, mbtmp4.6/13, Error ellipse: s-maj=15.2km s-min=11.7km az=38.0*

ISC 15 09:09:07.6±0.4**, 15°.49S**±0°.05×**72°.40W**±0°.07**, h150km, n63, σ2s.71**/72**, mb4.7**/19**, 2D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	4.18	102	P	Pn	09 10 10.4	-0.5
	12nm,0.3s,baz=301,slow=6.3,SNR=42						
LPAZ				S	Sn	09 10 57.5	-2.4
	3.0nm,0.3s,baz=180,slow=19,SNR=3.2						
LPAZ	La Paz	4.18	102		Pn	09 10 11.2	+0.4
MNMC	Minye Minye	4.50	144	Pn	Pn	09 10 12.1	-2.6
PB11	IPOC Station P	4.99	149	Pn	Pn	09 10 17.9	-3.1
PB11				Sn	Sn	09 11 10.6	-7.7
GO01	Chusmiza	5.16	144	Pn	Pn	09 10 21.8	-1.8
GO01				Sn	Sn	09 11 20.4	-2.4
NNA	Nana	5.55	308	S	Sn	09 11 24.2	-7.3
	35nm,0.3s,baz=31,slow=12,SNR=6.3						
PB01	IPOC Station P	6.18	154	Pn	Pn	09 10 33.3	-3.5
PB04	IPOC Station P	7.13	163	Pn	Pn	09 10 45.6	-4.0
LVC	Limon Verde	7.81	156	P	Pn	09 10 55.9	-2.9
	3.5nm,0.3s,baz=353,slow=9.8,SNR=23						
LVC				S	Sn	09 12 18.4	-7.8
	6.8nm,0.3s,baz=141,slow=23,SNR=11						
GO02	Mina Guanaco	9.98	165	Pn	Pn	09 11 24.5	-3.1
ATAH	Atahualpa	10.17	324	P	Pn	09 11 27.5	-2.9
	0.6nm,0.3s,baz=114,slow=20,SNR=2.1						
ATAH				S	Sn	09 13 21.6	-1.7
	0.6nm,0.3s,baz=308,slow=19,SNR=2.1						
SIV	San Ignacio	10.92	94	P	Pn	09 11 36.5	-3.4
	5.5nm,0.3s,baz=254,slow=20,SNR=5.0						
SAML	Samuel	11.10	55	Pn	Pn	09 11 38.6	-3.7
GO04	Tololo Observa	14.69	175	Pn	Pn	09 12 29.0	+0.6
CFA	Coronel Fontan	16.48	167	P	Pn	09 12 51.7	+1.4
	0.8nm,0.3s,baz=345,slow=13,SNR=10						
ROC1	El Roble	17.45	176	P	Pn	09 13 03.2	+1.0
PTGA	Pitinga	19.12	41	P	P	09 13 18.5	-0.8
	5.9nm,0.3s,baz=293,slow=23,SNR=5.6						
GO06	Curarrehue	24.02	178	P	P	09 14 11.7	+3.0
GO06				IAmb	IAmb	09 14 12.6	
	comp=Z,37nm,0.9s						
PLCA	Paso Flores	25.20	177	P	P	09 14 21.7	+2.3
	comp=Z,18nm,0.8s,baz=17,slow=10,SNR=36						
PLCA				PcP	PcP	09 17 51.9	+2.7
	comp=Z,1.3nm,0.7s,baz=324,slow=1.9,SNR=4.0						
PLCA	Paso Flores	25.20	177	P	P	09 14 22.2	+2.8
PLCA				IAmb	IAmb	09 14 24.4	
	comp=Z,22nm,0.8s						
ANWB	Willy Bob	34.57	18	P	P	09 15 40.4	-1.7
SMRT	St. Maarten	34.57	16	P	P	09 15 41.1	-1.1
USHA	Ushuaia	39.38	176	P	P	09 16 24.8	+2.4
	comp=Z,6.8nm,0.7s,baz=259,slow=3.8,SNR=5.7						
Z50A	Ashland	50.16	345	P	P	09 17 49.8	+1.9
Z50A				IAmb	IAmb	09 17 54.7	
	comp=Z,4.2nm,0.7s						
T49A	Edmonton	53.76	347	P	P	09 18 15.4	+0.9
TXAR	Lajitas Array	53.83	326	P	P	09 18 17.1	+1.9
	comp=Z,0.5nm,0.6s,baz=148,slow=9.4,SNR=8.0						
TXAR				pP	pP	09 18 46.4	-5.0
	comp=Z,0.8nm,0.8s,baz=148,slow=7.0,SNR=3.2						
TXAR	Lajitas Array	53.83	326	P	P	09 18 17.5	+2.2
TX31	Lajitas Ar. Si	53.83	326	P	P	09 18 17.5	+2.2
PKME	Peaks-Kenny Pk	60.53	3	P	P	09 19 04.3	+2.5
D62A	Allapoint, All	62.35	3	P	P	09 19 16.6	+2.5
D62A				IAmb	IAmb	09 19 16.9	
	comp=Z,7.9nm,0.7s						
BATG	Bathurst New B	62.73	5	P	P	09 19 18.6	+2.0
BATG				IAmb	IAmb	09 19 22.8	
	comp=Z,16nm,1.2s						
DRLN	Deer Lake	65.80	11	P	P	09 19 37.6	+1.1
DRLN				IAmb	IAmb	09 19 38.4	
	comp=Z,12nm,0.9s						
ULM	Lac du Bonnet	68.64	344	P	P	09 19 54.6	+0.3
	comp=Z,1.4nm,0.6s,baz=142,slow=4.0,SNR=4.0						
ULM	Lac du Bonnet	68.64	344	P	P	09 19 55.7	+1.3
SNAA	Sanae	69.00	161	P	P	09 19 59.4	+2.9
SNAA				IAmb	IAmb	09 19 60.0	
	comp=Z,13nm,0.7s						
LIC	Lamto	70.11	77	*e*P	P	09 20 04.5	+0.3
	comp=Z,20nm,0.8s						
LIC	Lamto	70.11	77	P	P	09 20 04.5	+0.3
TIC	Toumodi	70.25	77	*e*P	P	09 20 05.5	+0.4
TIC	Toumodi	70.25	77	P	P	09 20 05.5	+0.4
DBIC	Dimbokro	70.41	77	P	P	09 20 06.4	+0.3
	comp=Z,7.4nm,0.6s,baz=241,slow=6.5,SNR=11						
DBIC	Dimbokro	70.41	77	P	P	09 20 07.1	+1.0
DBIC				IAmb	IAmb	09 20 07.2	
	comp=Z,9.3nm,0.8s						
KIC	Kosan Boka	70.42	77	*e*P	P	09 20 06.7	+0.6
	comp=Z,25nm,0.7s						
KIC	Kosan Boka	70.42	77	P	P	09 20 06.7	+0.6
QSPA	South Pole Qui	74.67	180	P	P	09 20 33.8	+3.3
QSPA				IAmb	IAmb	09 20 34.6	
	comp=Z,16nm,1.1s						
TOA0	Torodi Ar. Sit	78.61	73	P	P	09 20 54.4	+1.0
TOA0				IAmb	IAmb	09 20 55.6	
	comp=Z,7.4nm,0.8s						
TORD	Torodi Ar. Bea	78.61	73	P	P	09 20 54.0	+0.6
	comp=Z,8.2nm,0.9s,baz=253,slow=5.8,SNR=16						
VNDA	Vanda	82.15	190	P	P	09 21 14.9	+3.8
	comp=Z,2.9nm,0.8s,baz=142,slow=4.7,SNR=9.2						
VNDA	Vanda	82.15	190	P	P	09 21 15.7	+4.5
SYO	Syowa Base	83.25	160	⇓*i*P	P	09 21 18.4	+1.4
SYO	Syowa Base	83.25	160	⇓*e*PcP	PcP	09 21 23.0	+1.9
ESDC	Sonseca Array	83.99	46	P	P	09 21 21.7	+0.4
	comp=Z,1.7nm,0.6s,baz=260,slow=4.6,SNR=9.9						
YKA	Yellowknife Ar	84.46	342	P	P	09 21 24.6	+1.5
	comp=Z,1.3nm,0.8s,baz=138,slow=5.6,SNR=12						
YKA				pP	pP	09 21 57.9	-4.4
	comp=Z,2.4nm,1.0s,baz=139,slow=5.6,SNR=5.9						
DIB	Dawson Inlet,	85.57	328	P	P	09 21 30.3	+1.6
ASAR	Alice Springs	133.36	214	PKP	PKiKP	09 28 09.2	+1.2
	comp=Z,0.8nm,0.5s,baz=112,slow=1.7,SNR=10						
WRA	Warramunga Arr	136.06	218	PKP	PKiKP	09 28 14.2	+0.7
	comp=Z,3.2nm,0.8s,baz=142,slow=1.6,SNR=4.9						
ZALV	Zalesovo Beam	137.69	20	PKP	PKiKP	09 28 16.0	+0.2
	comp=Z,0.9nm,0.6s,baz=318,slow=3.9,SNR=3.0						
ZALV	Zalesovo Beam	137.69	20	PKPdf	PKiKP	09 28 15.7	0.0
USRK	Ussuriysk Ar.	144.69	329	PKP	PKiKP	09 28 28.1	-2.3
	comp=Z,1.4nm,0.8s,baz=223,slow=5.9,SNR=2.4						
USRK	Ussuriysk Ar.	144.69	329		PKiKP	09 28 28.7	-1.7
MJAR	Matsushiro Arr	145.65	313	PKPbc	PKiKP	09 28 31.1	-1.5
	comp=Z,4.8nm,0.8s,baz=171,slow=1.2,SNR=12						
MJAR				pPKPbc	pPKPdf	09 29 05.0	-5.0
	comp=Z,2.8nm,0.9s,baz=80,slow=1.5,SNR=3.7						
MJAR	Matsushiro Arr	145.65	313		PKiKP	09 28 31.6	-1.1
SONM	Songino Array	147.73	2	PKPbc	PKPab	09 28 37.1	-0.4
	comp=Z,0.7nm,0.6s,baz=336,slow=3.2,SNR=3.7						
SONM				pPKPbc	pPKPdf	09 29 12.0	-1.1
	comp=Z,1.7nm,0.8s,baz=279,slow=1.6,SNR=4.0						
KSRS	Korea Array	151.67	324	PKPbc	PKiKP	09 28 47.0	+2.0
	comp=Z,3.8nm,0.9s,baz=9.4,slow=2.3,SNR=6.6						

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*IDC **15** 09:26:12.9±1.9, 6°.95S×129°.77E, h150km±19km, mb3.7/4, mb1 3.6/8, mb1mx3.4/45, mbtmp4.0/8, Error ellipse: s-maj=47.3km s-min=15.4km az=91.0*

ISC 15 09:26:12.0±0.8**, 7°.08S**±0°.06×**129°.7E**±0°.1**, h150km, n8, σ2s.75**/13**, mb3.8**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.36	14	P	Pn	09 27 43.9	+0.3
	1.8nm,0.3s,baz=191,slow=22,SNR=15						
SIJI				S	Sn	09 28 51.3	-3.9
	4.5nm,0.3s,baz=233,slow=23,SNR=9.1						
FITZ	Fitzroy Crossi	11.66	200	P	Pn	09 28 54.5	+0.7
	0.2nm,0.3s,baz=349,slow=1.0,SNR=4.9						
FITZ				S	Sn	09 30 58.4	-4.4
	0.8nm,0.3s,baz=0.7,slow=3.2,SNR=4.4						
WRA	Warramunga Arr	13.54	161	P	Pn	09 29 20.2	+2.0
	0.6nm,0.3s,baz=342,slow=13,SNR=5.4						
WRA				S	Sn	09 31 43.7	-4.5
	1.3nm,0.3s,baz=337,slow=20,SNR=6.1						
ASAR	Alice Springs	16.97	167	P	Pn	09 30 04.1	+3.5
	0.5nm,0.3s,baz=349,slow=12,SNR=45						
ASAR				S	S	09 33 09.5	+0.2
	0.3nm,0.3s,baz=352,slow=26,SNR=4.8						
ASAR				ScP	ScP	09 37 57.8	-1.2
	0.1nm,0.3s,baz=354,slow=1.7,SNR=7.4						
SONM	Songino Array	58.44	342	P	P	09 35 52.9	+0.8
	0.5nm,0.5s,baz=172,slow=6.7,SNR=3.6						
MKAR	Makanchi Array	68.15	327	P	P	09 36 56.8	+0.8
	2.2nm,0.4s,baz=120,slow=7.9,SNR=52						
ZALV	Zalesovo Beam	71.54	334	P	P	09 37 15.5	-1.0
	1.0nm,0.4s,baz=124,slow=6.0,SNR=4.1						
BVAR	Borovoye Array	78.00	328	P	P	09 37 54.0	+0.4
	1.3nm,0.8s,baz=123,slow=5.3,SNR=5.2						

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*IDC **15** 09:31:17.8±1.5, 19°.44S×70°.62W, h0km, mb4.0/4, mb1 4.1/5, mb1mx3.7/31, mbtmp3.9/5, ML2.2/2, MS4.8/2, Ms1 4.8/2, ms1mx4.0/36, Error ellipse: s-maj=40.9km s-min=18.7km az=94.0*

*NEIC **15** 09:31:21.5±2.4, 19°.44S±0°.05×71°.06W±0°.04, h31km±10km, mb4.2/1, ML3.6(GUC), Error ellipse: s-maj=7.6km s-min=5.7km az=191.0*

*GUC **15** 09:31:21.5±0.5, 19°.41S×71°.07W, h30km±2km, ML3.7*

ISC 15 09:31:18.0±1.6**, 19°.44S**±0°.03×**71°.03W**±0°.06**, h12km**±9km**, n29, σ1s.42**/42**, mb4.0**/4**, 4C-4D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.87	100	*e*P	Pn	09 31 36.5	+0.3
PSGC				*i* S	Sn	09 31 48.6	-0.3
PSGC				IAML		09 31 52.0	
	comp=N,2μm,0.8s						
PB12	IPOC Station P	1.06	39	⇓*i*P	Pn	09 31 39.2	+0.4
PB12				*i* S	Sn	09 31 53.3	-0.3
PB12				IAML		09 31 55.6	
	comp=N,2μm,0.6s						
AP01	Chacalluta	1.25	32	⇑*i*P	Pg	09 31 42.3	+0.2
AP01				*i* S	Sg	09 31 58.5	+0.2
AP01				IAML		09 32 10.9	
	comp=E,5μm,0.7s						
PB11	IPOC Station P	1.33	104	⇑*i*P	Pg	09 31 44.3	+0.6
PB11				*i* S	Sg	09 32 02.3	+1.3
PB11				IAML		09 32 05.4	
	comp=N,3μm,0.7s						
PB11	IPOC Station P	1.33	104		Pg	09 31 44.3	+0.6
PB11				Sn	Sg	09 32 02.4	+1.3
TA01	Diego Aracena	1.37	145	⇓*i*P	Pg	09 31 45.0	+0.6
TA01				*i* S	Sg	09 32 02.8	+0.5
TA01				IAML		09 32 09.7	
	comp=E,2μm,0.5s						
MNMC	Minye Minye	1.39	77	⇓*i*P	Pg	09 31 45.1	+0.3
MNMC				*i* S	Sg	09 32 04.1	+1.2
MNMC				IAML		09 32 11.5	
	comp=E,4μm,0.6s						
MNMC	Minye Minye	1.39	77		Pg	09 31 45.5	+0.7
MNMC				Sn	Sg	09 32 03.7	+0.8
PATCX	Punta Patache	1.60	149	⇓*i*P	Pg	09 31 48.2	-0.6
PATCX				*i* S	Sb	09 32 07.6	-0.3
GO01	Chusmiza	1.75	98		Pg	09 31 51.4	-0.3
PB16	IPOC Station P	1.81	53	⇑*i*P	Pg	09 31 52.0	-0.9
PB16				*i* S	Sg	09 32 16.1	-0.5
PB16				IAML		09 32 20.9	
	comp=N,1μm,0.7s						
PB08	IPOC Station P	1.90	112	⇑*i*P	Pb	09 31 53.4	+0.5
PB08				*i* S	Sb	09 32 18.3	+1.5
PB08				IAML		09 32 22.8	
	comp=N,500nm,0.3s						
PB01	IPOC Station P	2.15	138	IAML		09 32 35.5	
	comp=E,692nm,0.4s						
PB01	IPOC Station P	2.15	138		Pb	09 31 56.3	-0.8

PB01				Sn	Sb	09 32 22.4	-1.4
PB04	IPOC Station P	2.99	164		Pn	09 32 06.9	+1.4
LVC	Limon Verde	3.72	148	Pn	Pn	09 32 13.2	-2.5
	comp=E,1.6nm,0.3s,baz=179,slow=6.6,SNR=20						
LVC				Pg	Pb	09 32 21.5	-2.5
	comp=E,2.7nm,0.3s,baz=330,slow=13,SNR=14						
LVC				Sn	Sn	09 33 00.7	+0.9
	comp=E,12nm,0.3s,baz=353,slow=18,SNR=4.1						
LVC				Lg	Lg	09 33 13.9	
	comp=E,14nm,0.3s,baz=12,slow=16,SNR=6.4						
PB10	IPOC Station P	4.07	174		Pn	09 32 20.8	+0.5
PB10					Sn	09 33 07.0	-0.9
LPAZ	La Paz	4.18	42	Pn	Pn	09 32 20.4	-1.9
	comp=E,0.0nm,0.3s,baz=221,slow=17,SNR=1.7						
LPAZ				Pg	Pb	09 32 29.8	-2.2
	comp=E,0.8nm,0.3s,baz=233,slow=14,SNR=18						
LPAZ				Lg	Lg	09 33 29.8	
	baz=263,slow=8.1,SNR=1.6						
LPAZ	La Paz	4.18	42		Pn	09 32 25.0	+2.8
NNA	Nana	9.29	322	LR	LR	09 36 58.2	
	comp=E,4µm,18.3s,baz=0.5,slow=36						
SIV	San Ignacio	10.09	72	Pn	Pn	09 33 42.5	-0.5
	comp=E,0.1nm,0.3s,baz=247,slow=13,SNR=4.8						
CPUP	Villa Florida	14.36	121	Pn	P	09 34 44.8	-3.5
	comp=E,0.1nm,0.3s,baz=304,slow=12,SNR=8.0						
PLCA	Paso Flores	21.22	179	P	P	09 36 06.8	+2.9
	comp=E,3.0nm,1.1s,baz=17,slow=10,SNR=5.0						
PTGA	Pitinga	21.53	32	P	P	09 36 06.5	-0.8
	comp=E,3.6nm,0.3s,baz=211,slow=17,SNR=11						
PTGA	Pitinga	21.53	32	P	P	09 36 07.1	-0.1
PTGA				IAmb	IAmb	09 36 12.0	
	comp=Z,12nm,1.2s						
RUSC	La Rusia	25.26	355	P	P	09 36 47.2	+2.4
APG	El Apazote	39.21	329	LR	LR	09 54 17.1	
	comp=Z,1µm,20.0s,baz=152,slow=35						
TORD	Torodi Ar. Bea	78.57	72	P	P	09 43 20.0	-0.1
	comp=Z,2.1nm,0.8s,baz=256,slow=5.2,SNR=8.3						
YKA	Yellowknife Ar	88.60	341	P	P	09 44 12.2	+1.7
	comp=Z,0.5nm,0.7s,baz=136,slow=5.1,SNR=11						

BJI ***15*** *09:37:20.5±0.0, 4°.66S×100°.43E, h10^{km}, mB5.7/55, mb5.3/72, Ms5.6/74, Ms7 5.5/63*

IDC ***15*** *09:37:25.4±0.3, 4°.02S×100°.38E, h0^{km}, mb4.9/46, mb1 5.0/49, mb1mx4.9/62, mbtmp5.0/49, ML4.6/3, MS5.2/10, Ms1 5.2/10, ms1mx4.8/45, Error ellipse: s-maj=12.7km s-min=8.4km az=50.0*

NEIC ***15*** *09:37:27.7±1.5, 3°.99S±0°.06×100°.43E±0°.07, h14^{km}±3^{km}, mb5.3/107, Ms_20 5.2/60, Error ellipse: s-maj=11.4km s-min=7.5km az=50.0*

DJA ***15*** *09:37:27.7±0.2, 4°S±2°×10°0E±°, h10^{km}, M5.3/55, mB5.7/42, mb5.4/55, MLv5.5/23, Mw(mB)5.2/42, Mwp5.4/3*

KLM ***15*** *09:37:27.0, 4°.08S×100°.38E, h10^{km}, mb5.2*

GCMT ***15*** *09:37:28.7±0.2, 4°.23S±0°.02×100°.00E±0°.02, h12^{km}, MW5.5/77, Moment Tensor Solution. s41,c52; s77,c90; Duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M_{rr}1.36±.04; $M_{\theta\theta}$-0.62±.04; $M_{\phi\phi}$-0.74±.05; $M_{r\theta}$0.96±.12; $M_{\theta\phi}$0.43±.03; $M_{\phi r}$-1.04±.13; Best double couple: $M_0$1.88000×10^{17} NP1:ϕ_s320.00000°, δ21.00000°, λ92.00000°. NP2:ϕ_s138.00000°, δ69.00000°, λ89.00000°. Principal axes: T 2.0020, Plg66.0000°, Azm47.0000°; N -0.2440, Plg1.0000°, Azm138.0000°; P -1.7580, Plg24.0000°, Azm228.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***15*** *09:37:28.3±1.0, 3°.94S×100°.46E, h28^{km}, mb5.4/71, MS5.4/11 Error ellipse: s-maj=7.3km s-min=4.3km az=110.6*

ISC 15 09:37:29.0±0.6**, 4°.00S**±0°.03×**100°.37E**±0°.04**, h25**^{km}±3^{km}**, n845, σ1^{s}44**/849**, mb5.2**/166**, MS5.3**/57**, 40C-22D, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	1.28	344	P	Pb	09 37 51.3	-1.2
PPSI				S	Sb	09 38 08.3	-0.3
KRJI	Kerinci	2.19	30	P	Pb	09 38 04.7	-3.3
KSI	Kapahiang	2.24	81	P	Pn	09 38 04.1	-0.5
MNAI	Manna	2.60	98	P	Pn	09 38 09.6	+0.1
MNAI	Manna	2.60	98		Pn	09 38 09.2	-0.3
SISI	Saibi	2.95	334	P	Pn	09 38 12.9	-1.4
PDSI	Padang	3.07	2	P	Pn	09 38 15.8	-0.2
SDSI	Sungai Dareh	3.23	19	P	Pn	09 38 18.7	+0.6
LWLI	Liwa	3.81	105	P	Pn	09 38 26.5	+0.3
MDSI	Maura Dua	3.82	97	P	Pn	09 38 26.1	-0.2
RGRI	Rengat	4.12	28	P	Pb	09 38 41.6	+0.7
BKNI	Bangkinang	4.35	9	P	Pn	09 38 33.8	+0.2
BKNI	Bangkinang	4.35	9		Pn	09 38 33.7	+0.1
KASI	Kota Agung	4.38	110	P	Pn	09 38 33.4	-0.5
PBSI	Pulau Batu	4.45	332	P	Pn	09 38 33.6	-1.3
PMBI	Palembang	4.52	76	P	Pn	09 38 36.7	+0.8
PMBI	Palembang	4.52	76		Pn	09 38 36.5	+0.6
SBJI	Serang	6.11	110	P	Pn	09 38 57.6	-0.1
	3.0nm7µm504nm,0.7s						
TPRI	Tanjung Pinang	6.41	40	P	Pn	09 39 02.9	+1.0
	2.8nm39µm313nm,1.1s						
TNG	Tangerang	6.61	109	P	Pn	09 39 04.2	-0.4
	6.0nm2µm,0.7s						
MYKOM	Kota Tinggi	6.72	31		Pn	09 39 06.8	+0.6
MYKOM	Kota Tinggi	6.72	31	P	Pn	09 39 07.0	+0.8
RPSI	Rantau Prapat	6.81	348		Pn	09 39 06.7	-0.7
RPSI	Rantau Prapat	6.81	348		Pn	09 39 06.9	-0.5
RPSI					Sn	09 40 23.1	-1.1
DBJI	Dramaga	6.83	112	P	Pn	09 39 07.2	-0.5
	3.1nm413nm,0.8s						
SKJI	Sukabumi	6.84	116	P	Pn	09 39 07.7	-0.1
	3.4nm9µm1µm,0.7s						
CBJI	Citeko	6.88	111	P	Pn	09 39 10.7	+2.3
	8.8nm21µm3µm,0.7s						
PSI	Prapat	6.91	348	Pn	Pn	09 39 06.9	-2.0
	3.6nm,0.3s,baz=151,slow=7.7,SNR=12						
PSI				Sn	Sn	09 40 23.1	-3.8
	0.3nm,0.3s,baz=68,slow=19,SNR=1.8						
CNJI	Cibinong	7.48	116	P	Pn	09 39 15.5	-1.1
	4.3nm10µm2µm,0.8s						
SNSI	Sinabang, Aceh	7.55	328	P	Pn	09 39 17.3	-0.2
	1.7nm6µm316nm,0.8s						
LEM	Lembang	7.74	112	Pn	Pn	09 39 21.1	+0.8
	19nm,0.3s,baz=199,slow=23,SNR=69						
LEM				Sn	Sn	09 40 45.9	-1.4
	baz=315,slow=20,SNR=1.2						
LEM				LR	LR	09 42 42.0	
	comp=Z,12µm,20.0s,baz=285,slow=41						
LEM	Lembang	7.74	112	P	Pn	09 39 20.8	+0.5
	2.1nm5µm6µm716nm,0.9s						
TPTI		7.89	336	P	Pn	09 39 22.5	+0.3
	0.2nm652nm30nm,0.7s						
KCSI	Kotacane, Aceh	7.92	341	P	Pn	09 39 22.5	-0.1
	1.4nm2µm86nm,0.6s						
CISI	Cisompet, Garu	8.20	116	P	Pn	09 39 26.0	-0.5
	13µm2µm,0.7s						
CISI	Cisompet, Garu	8.20	116		Pn	09 39 24.1	-2.4
IPM	Ipoh	8.45	4		Pn	09 39 29.4	-0.6
IPM	Ipoh	8.45	4	P	Pn	09 39 31.0	+1.0
MLSI	Meulaboh, Aceh	9.12	334	P	Pn	09 39 39.5	+0.4
	4µm277nm,0.7s						
KPJI	Karang Pucung	9.13	112	P	Pn	09 39 38.6	-0.7
	6µm496nm,0.9s						
KULM	Kulim	9.24	2		Pn	09 39 40.6	-0.1
KULM	Kulim	9.24	2	P	Pn	09 39 42.0	+1.3
SMRI	Semarang	10.47	107	P	Pn	09 39 57.8	+0.2
	6µm486nm,0.8s						
SMRI	Semarang	10.47	107		Pn	09 39 58.0	+0.4
UWJI	Ujung Watu	10.80	103	P	Pn	09 40 07.0	+4.9
UGM	Wanagama	10.81	112	P	Pn	09 40 00.8	-1.6
	4µm365nm,0.8s						
UGM	Wanagama	10.81	112		Pn	09 40 01.2	-1.1
WOJI	Wonogiri, Jawa	11.16	110	P	Pn	09 40 06.0	-1.1
	1µm106nm,0.8s						
KSM	Kuching	11.32	61		Pn	09 40 10.7	+1.4
PBKI	Pangkalan Bun	11.35	84	P	Pn	09 40 13.2	+3.5
PCJI	Pacitan	11.52	112	P	Pn	09 40 09.9	-2.1
	136nm,0.8s						
PWJI	Pagerwojo	12.05	110	P	Pn	09 40 17.4	-1.8
	2µm148nm,0.8s						
GRJI	Gresik	12.39	104	P	Pn	09 40 25.0	+1.1
	2µm191nm,1.0s						
SBUM	Sibu	13.46	62		P	09 40 41.6	-6.0
GMJI	Gumukmas	13.67	109	P	Pn	09 40 43.1	+1.7
	1µm70nm,0.8s						
JAGI	Jajag, Banyuwa	14.39	109	P	Pn	09 40 48.4	-2.9
JAGI	Jajag, Banyuwa	14.39	109		Pn	09 40 47.9	-3.5
SRBI	Singaraja	15.30	106	P	Pn	09 41 02.1	-1.4
	2µm168nm,0.7s						
BKB	Balikpapan	16.73	81	P	P	09 41 31.7	+7.8
DLV	T Lat	17.78	27	P	P	09 41 33.6	-2.2
PLAI	Plampang	17.94	106	P	P	09 41 36.3	-1.1
	2µm121nm,0.7s						
KKM	Kota Kinabalu	18.70	58	P	Pn	09 41 44.2	-2.1
KAPI	Kappang	19.34	94	P	Pn	09 41 52.0	-2.0
	3.4nm,0.3s,baz=263,slow=10,SNR=66						
SPSI	Sidrap Palu	19.35	91	P	Pn	09 41 52.6	-1.4
	4µm206nm,0.9s						
TTSI	Tana Toraja	19.43	88	P	Pn	09 41 54.4	-0.6
	3µm97nm,0.8s						
BNSI	Bone	19.68	92	P	Pn	09 41 57.5	-0.5
	6µm273nm,0.9s						
WBSI	Waikabubak, Su	19.69	108	P	P	09 41 54.7	-1.9
	3µm307nm,0.7s						
BKSI	Bulukumba	19.73	95	P	Pn	09 41 56.7	-1.9
	3µm249nm,1.0s						
UBPT	Khong Chiam	19.81	15	P	Pn	09 41 56.8	-2.7
MPSI	Mapaga	19.98	78	P	Pn	09 42 00.6	-1.0
	3µm154nm,1.0s						
PBKT	Sadao Pong	20.45	2	P	P	09 42 03.9	-0.9
WSI	Waingapu	20.56	107	P	Pn	09 42 21.7	+13
BASI	Baing, Sumba	20.97	108	P	P	09 42 09.7	-0.8
	4µm424nm,0.9s						
BATP	Bataraza	21.53	54	*e*P	P	09 42 16.9	+0.3
MRSI	Marisa	22.01	79	P	P	09 42 22.0	+0.4
	3µm180nm,0.7s						
BBSI	Bau Bau	22.17	95	P	P	09 42 24.9	+1.5
	608nm62nm,0.8s						
MMRI	Maumere	22.21	103	P	P	09 42 24.8	+1.0
	4µm116nm,0.8s						
MMRI	Maumere	22.21	103	P	P	09 42 19.4	-4.4
MMRI				IAmb	IAmb	09 42 29.1	
	comp=Z,73nm,0.7s						
CM31	Chiang Mai Arr	22.36	356	P	P	09 42 25.1	-0.3
CMAR	Chiang Mai Arr	22.36	356	P	P	09 42 25.2	-0.2
	comp=Z,20nm,0.8s,baz=185,slow=10.0,SNR=76						
CMAR				PcP	PcP	09 46 22.5	+2.1
	comp=Z,1.8nm,0.4s,baz=214,slow=3.2,SNR=4.4						
CMAR				LR	LR	09 52 13.3	
	comp=Z,3µm,18.9s,baz=206,slow=40						
LUWI	Luwuk	22.57	83	P	P	09 42 28.6	+0.9
	comp=Z,6µmcomp=Z,318nm,1.0s						
LUWI	Luwuk	22.57	83	P	P	09 42 26.9	-0.8
LUWI				IAmb	IAmb	09 42 40.7	
	comp=Z,119nm,0.9s						
PALK	Pallekele	22.60	300	P	P	09 42 28.6	+0.5
	comp=Z,14nm,1.1s,baz=77,slow=4.4,SNR=2.2						
PALK	Pallekele	22.60	300	⇑*e*P	P	09 42 29.9	+1.8
PALK				pmax	pmax		
	comp=Z,29nm,1.4s						
PALK	Pallekele	22.60	300	IAmb	IAmb	09 42 36.9	
	comp=Z,27nm,1.1s						
PALK				IAMs_20	IAMs_20	09 52 24.0	
	comp=Z,4µm,18.0s						
CHTO	Chiang Mai	22.72	356	P	P	09 42 28.6	-0.6
CHTO				pmax	pmax		
	comp=Z,127nm,1.5s						
CHTO	Chiang Mai	22.72	356	P	P	09 42 28.6	-0.6
CHTO				IAmb	IAmb	09 42 33.8	
	comp=Z,127nm,1.4s						
KMSI	Cibinong	24.02	80	P	P	09 42 46.3	+4.1
ENPP	El Nido	24.24	51	*e*P	P	09 42 44.4	+0.2
SOEI	Soe	24.39	105	P	P	09 42 43.2	-2.5
SOEI	Soe	24.39	105	P	P	09 42 42.6	-3.1
SOEI				IAMs_20	IAMs_20	09 53 56.4	
	comp=Z,8µm,22.0s						
QIZ	Qiongzhong	24.71	22	P	P	09 42 48.0	-0.4
QIZ				S	S	09 47 12.3	+3.2
QIZ				pmax	pmax		
	comp=Z,62nm,1.6s						
QIZ				pmax	pmax		
	comp=Z,2µm,2.8s						
QIZ				LR	LR		
	comp=Z,10µm,14.1s						
QIZ				LR	LR		
	comp=Z,11µm,16.3s						
QIZ				LR	LR		
	comp=Z,7µm,14.8s						
QIZ	Qiongzhong	24.71	22	P	P	09 42 49.2	+0.8
QIZ				IAmb	IAmb	09 42 49.7	
	comp=Z,156nm,1.5s						
CUYO	Cuyo Island	25.30	54	*e*P	P	09 42 59.0	+5.2
BUSP	Coron	25.33	51	*e*P	P	09 42 55.9	+1.8
MBWA	Marble Bar	25.39	134	IAMs_20	IAMs_20	09 54 08.6	
	comp=Z,3µm,18.0s						
SLVN	Son La	25.42	8	P	P	09 42 55.7	+0.9
SLVN				IAmb	IAmb	09 42 57.7	
	comp=Z,85nm,1.0s						
SANI	Sanana	25.65	86	P	P	09 42 56.4	-0.6
	comp=Z,2µmcomp=Z,78nm,1.1s						
PAGZ	Pagadian	25.80	63	*e*P	P	09 42 58.6	+0.3
SKMP	Bagumbayan, Su	26.30	67	*e*P	P	09 43 01.8	-1.1
CTBH	Cotabato--PC H	26.30	65	⇓*i*P	P	09 43 03.3	+0.4
LUBP	Lubang	26.45	48	*e*P	P	09 43 03.4	-0.8
GUIM	Jordan	26.47	57	*e*P	P	09 43 04.9	+0.5
OTRP	Odiongan	26.97	53	*e*P	P	09 43 09.0	+0.1
KCP	Kidapawan	26.99	66	⇑*e*P	P	09 43 04.5	-4.6
RCP	Roxas	27.10	55	⇑*e*P	P	09 43 10.2	+0.2
TGY	Tagaytay City	27.20	48	P	P	09 43 11.5	+0.5
	comp=Z,191nm,0.3s,baz=179,slow=13,SNR=4.7						
DDMP	Don Marcelino,	27.22	68	*e*P	P	09 43 10.5	-0.7
BUKP	Musuan	27.31	64	*e*P	P	09 43 12.3	+0.2
TNTI	Ternate	27.39	81	P	P	09 43 11.2	-1.5
TNTI				IAmb	IAmb	09 43 19.3	
	comp=Z,67nm,1.0s						
BRDH	Bariadhala	27.86	343	P	P	09 43 18.6	+1.8
	comp=Z,57nm,0.3s,baz=78,slow=7.9,SNR=7.2						
H08S2	Diego Garcia H	27.97	261	T	T	10 12 17.3	
	baz=84,slow=76						
H08S3	Diego Garcia H	27.97	261	T	T	10 12 16.2	
	baz=84,slow=76						
H08S1	Diego Carcia H	27.98	261	T	T	10 12 17.1	
	baz=84,slow=76						
MSLP	Maasin	28.14	60	*e*P	P	09 43 32.1	+13
FITZ	Fitzroy Crossi	28.42	121	P	P	09 43 22.0	+0.2
	baz=28,SNR=57						
FITZ	Fitzroy Crossi	28.42	121	P	P	09 43 22.0	+0.2
	comp=Z,41nm,0.8s,baz=354,slow=0.0,SNR=80						
MEEK	Meekatharra	28.48	144	P	P	09 43 24.1	+1.8
	baz=29,SNR=4.5						
KMI	Kunming	29.04	4	P	P	09 43 29.8	+2.2
KMI				pP	pP	09 43 34.4	+0.1
KMI				sP	sP	09 43 36.5	-0.6
KMI				PP	PP	09 44 26.5	-7.0
KMI				S	S	09 48 19.0	+1.1
KMI				SS	SnSn	09 49 56.3	+14
KMI				pmax	pmax		
	comp=Z,34nm,1.7s						
KMI				pmax	pmax		
	comp=Z,610nm,4.2s						
KMI				LR	LR		
	comp=Z,5µm,14.4s						
KMI				LR	LR		
	comp=Z,5µm,24.1s						
KMI	Kunming	29.04	4	IAMs_20	IAMs_20	09 56 57.7	
	comp=Z,4µm,18.0s						
CAUP	Cauayan	29.70	45	*e*P	P	09 43 33.3	0.0
MNCI	Minicoy	29.85	294	IAMs_20	IAMs_20	09 53 05.8	
	comp=Z,3µm,18.0s						
KNRA	Kununurra	30.23	115	P	P	09 43 37.4	-0.6
	baz=30,SNR=15						
HYB	Hyderabad	30.28	315	*i* P	P	09 43 39.0	+0.5
HYB				*e*sP	sP	09 43 47.0	-0.7
SHL	Shillong	30.53	345	P	P	09 43 41.5	+0.8
SHL				pmax	pmax		
	comp=Z,51nm,0.7s						
SHL	Shillong	30.53	345	P	P	09 43 41.5	+0.8
SHL				IAmb	IAmb	09 43 52.6	
	comp=Z,51nm,0.7s						
GYA	Guiyang	30.89	11	⇑*i*P	P	09 43 45.0	+1.2
GYA				PP	PnPn	09 44 45.1	+0.3
GYA				S	S	09 48 46.8	+0.2
GYA				pmax	pmax		
	comp=Z,60nm,0.9s						
GYA				pmax	pmax		
	comp=Z,800nm,5.5s						
GYA				LR	LR		
	comp=Z,7µm,12.9s						
GYA				LR	LR		
	comp=Z,8µm,14.4s						
SAUI	Saumlaki	31.00	99	P	P	09 43 40.3	-4.5
SWI	Sorong	31.01	85	P	P	09 43 45.4	+0.5
	comp=Z,64nm,0.8s						
MUN	Mundaring	31.55	154	P	P	09 43 50.8	+1.4
	baz=32,SNR=4.0						
FAKI	Fak Fak	31.83	89	P	P	09 43 52.5	+0.3
	comp=Z,1µmcomp=Z,49nm,0.9s						
FAKI	Fak Fak	31.83	89	P	P	09 43 48.9	-3.3
FAKI				IAmb	IAmb	09 43 53.7	
	comp=Z,29nm,0.9s						
NWAO	Narrogin (SRO)	32.81	153	P	P	09 44 01.8	+1.2
	baz=33,SNR=4.3						
NWAO	Narrogin (SRO)	32.81	153	P	P	09 44 00.2	-0.3
	comp=Z,38nm,0.9s,baz=319,slow=10,SNR=8.3						
KDU	Kakadu	32.87	107	P	P	09 44 00.0	-1.3
	baz=33,SNR=26						
ODAN	Odare	33.15	338	*e*P	P	09 44 05.7	+1.9
	comp=Z,110nm,0.6s						
H01W3	Cape Leeuwin H	33.27	159	T	T	10 18 57.4	
	baz=336,slow=76						
H01W2	Cape Leeuwin H	33.28	159	T	T	10 19 00.0	
	baz=336,slow=76						
KNMB	Chin-men Tao	33.29	31	IAMs_20	IAMs_20	09 58 57.6	
	comp=Z,2µm,21.0s						
H01W1	Cape Leeuwin H	33.29	159	T	T	10 19 18.8	
	baz=336,slow=76						
TAPN	Taplejung	33.48	339	*e*P	P	09 44 08.9	+2.1
	comp=Z,129nm,0.8s						
RAMN	Ramite	33.53	337	*e*P	P	09 44 09.3	+2.2
	comp=Z,81nm,0.6s						
QZH	Quanzhou	33.78	31	P	P	09 44 08.9	-0.2
QZH				S	S	09 49 33.9	+2.4
QZH				LR	LR		
	comp=Z,3µm,15.3s						
QZH				LR	LR		
	comp=Z,5µm,12.5s						
WRKA	Warakurna	34.03	131	P	P	09 44 12.2	+0.9
	baz=34,SNR=8.6						
JIRN	Jiri	34.33	337	*e*P	P	09 44 16.0	+1.8
	comp=Z,197nm,0.7s						
POO	Poona	34.41	311	*e*P	P	09 44 06.0	-8.7
PKI	Pulchoki	34.55	336	*e*P	P	09 44 17.4	+1.3
PKIN	Phulchoki	34.56	336	*e*P	P	09 44 17.4	+1.3
	comp=Z,40nm,0.7s						
LSA	Lhasa	34.66	346	P	P	09 44 19.3	+2.2
LSA				pmax	pmax		
	comp=Z,46nm,0.9s						
LSA	Lhasa	34.66	346	P	P	09 44 19.3	+2.2
LSA				IAmb	IAmb	09 44 23.0	
	comp=Z,46nm,0.9s						
GUN	Gumba	34.67	337	*e*P	P	09 44 18.9	+1.8
	comp=Z,114nm,0.6s						
DMN	Daman	34.71	336	*e*P	P	09 44 18.8	+1.4
	comp=Z,67nm,0.9s						
KKN	Kakani	34.80	336	*e*P	P	09 44 19.7	+1.6
	comp=Z,72nm,0.6s						
CD2	Chengdu	34.87	5	P	P	09 44 18.9	+0.5
CD2				sP	sP	09 44 29.3	+1.3
CD2				S	S	09 49 52.5	+4.3
CD2				sS	sS	09 50 02.8	+3.5
CD2				pmax	pmax		
	comp=Z,90nm,1.2s						
CD2				pmax	pmax		
	comp=Z,820nm,7.6s						
CD2				LR	LR		
	comp=Z,10µm,13.0s						
ENH	Enshi	35.18	14	P	P	09 44 21.6	+0.4
ENH				IAMs_20	IAMs_20	09 59 47.2	
	comp=Z,3µm,21.0s						
GKN	Gorkha	35.25	335	*e*P	P	09 44 23.5	+1.6
	comp=Z,56nm,0.5s						
DANN	Dangsing	35.92	335	*e*P	P	09 44 29.2	+1.3
	comp=Z,75nm,0.7s						
WB0	Warramunga Arr	36.67	118	P	P	09 44 34.0	-0.2
WB0				IAmb	IAmb	09 44 39.8	
	comp=Z,30nm,0.8s						
WRA	Warramunga Arr	36.69	118	P	P	09 44 34.0	-0.3
	comp=Z,22nm,0.9s,baz=298,slow=8.9,SNR=60						
WRA				PcP	PcP	09 46 57.5	+0.7
	comp=Z,3.3nm,0.6s,baz=317,slow=2.2,SNR=3.8						
WRA	Warramunga Arr	36.69	118	P	P	09 44 34.0	-0.3
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WRA	Warramunga Arr	36.69	118	P	P	09 44 34.0	-0.3
WRAB	Tennant Creek	36.70	118	*c i*P	P	09 44 34.0	-0.3
WRAB				pmax	pmax		
	comp=Z,35nm,0.8s						
WRAB	Tennant Creek	36.70	118	P	P	09 44 34.7	+0.4
WRAB				IAmb	IAmb	09 44 48.0	
	comp=Z,42nm,0.8s						
WB2	Warramunga Arr	36.70	118	P	P	09 44 34.4	+0.1
WB2				IAmb	IAmb	09 44 48.0	
	comp=Z,37nm,0.8s						
WC2	Warramunga Arr	36.71	118	IAMs_20	IAMs_20	09 55 48.6	
	comp=Z,3µm,20.0s						
WHN	Wuhan	36.86	20	P	P	09 44 36.3	+0.9
WHN				PP	PP	09 46 07.9	+8.2
WHN				S	S	09 50 17.1	-1.6
WHN				pmax	pmax		
	comp=Z,2µm,8.6s						
WHN				LR	LR		
	comp=Z,5µm,9.9s						
AS31	Alice Springs	37.80	124	P	P	09 44 44.4	+0.8
ASAR	Alice Springs	37.80	124	P	P	09 44 44.1	+0.4
	comp=Z,11nm,0.7s,baz=297,slow=7.6,SNR=101						
ASAR				PcP	PcP	09 47 01.1	+0.9
	comp=Z,4.1nm,0.7s,baz=306,slow=2.8,SNR=4.8						
ASAR	Alice Springs	37.80	124	P	P	09 44 44.5	+0.8
XAN	Xi'an	38.69	11	P	P	09 44 51.3	+0.3
XAN				pP	sP	09 45 01.8	+1.3
XAN				sP	pwP	09 45 06.0	+5.0
XAN				S	S	09 50 45.0	-1.5
XAN				pmax	pmax		
	comp=Z,98nm,1.2s						
XAN				pmax	pmax		
	comp=Z,1µm,4.0s						
XAN				LR	LR		
	comp=Z,7µm,13.3s						
XAN				LR	LR		
	comp=Z,10µm,13.5s						
XAN	Xi'an	38.69	11	P	P	09 44 51.5	+0.5
XAN				pmax	pmax		
	comp=Z,77nm,0.9s						
XAN				MLR	MLR		
	comp=Z,6µm,19.0s						
XAN	Xi'an	38.69	11	P	P	09 44 51.5	+0.5
XAN				IAmb	IAmb	09 44 52.1	
	comp=Z,77nm,0.9s						
XAN	Xi'an	38.69	11	IAMs_20	IAMs_20	10 02 56.8	
	comp=Z,5µm,19.0s						
NDI	New Delhi	39.40	327	*e*P	P	09 45 06.0	+9.1
NJ2	Nanjing	39.93	25	*e*P	P	09 44 59.8	-1.5
NJ2				S	S	09 51 09.6	+4.5
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,1µm,7.1s						
NJ2				LR	LR		
	comp=Z,7µm,12.8s						
NJ2				LR	LR		
	comp=Z,7µm,14.9s						
LZH	Lanzhou	40.01	4	⇑P	P	09 45 03.6	+1.5
LZH				pP	pP	09 45 08.8	-0.1
LZH				sP	sP	09 45 11.5	-0.2
LZH				PP	PnPn	09 46 45.0	+7.1
LZH				S	S	09 51 08.8	+2.3
LZH				sS	sS	09 51 19.0	+1.2
LZH				pmax	pmax		
	comp=Z,64nm,1.4s						
LZH				pmax	pmax		
	comp=Z,980nm,5.4s						
LZH				LR	LR		
	comp=Z,2µm,14.6s						
LZH				LR	LR		
	comp=Z,1µm,14.1s						
LZH				LR	LR		
	comp=Z,3µm,15.6s						
SSE	Sheshan	40.16	28	IAMs_20	IAMs_20	10 02 30.7	
	comp=Z,2µm,20.0s						
QIS	Mount Isa	41.55	117	P	P	09 45 15.3	+0.3
	baz=42,SNR=25						
BHK	Bhakra	41.98	329	*e*x	P	09 45 29.6	+11
TIA	Tai'an	42.97	20	P	P	09 45 26.0	-0.2
TIA				S	S	09 51 57.3	+7.3
TIA				pmax	pmax		
	comp=Z,480nm,4.8s						
TIA				LR	LR		

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      comp=Z,2µm,13.5s
TIY   Taiyuan            42.99  14 eP      P        09 45 27.9 +1.5
TIY                                 S       S        09 51 52.1 +1.6
TIY                                 pmax    pmax
      comp=Z,45nm,0.8s
TIY                                 pmax    pmax
      comp=Z,690nm,8.7s
TIY                                 LR      LR
      comp=Z,4µm,11.6s
TIY                                 LR      LR
      comp=Z,5µm,12.2s
GTA   Gaotai             43.20 359 ⇑P      P        09 45 29.3 +1.1
GTA                                 S       S        09 51 59.3 +5.7
GTA                                 pmax    pmax
      comp=Z,24nm,2.3s
GTA                                 LR      LR
      comp=Z,4µm,14.9s
GTA                                 LR      LR
      comp=Z,5µm,14.6s
COEN  Coen               43.34 106  P       P        09 45 30.4 +0.9
      baz=43,SNR=7.3
BBOO  Buckleboo          43.97 135  P       P        09 45 34.9 +0.6
      baz=44,SNR=9.9
BTO   Baotou             45.27  10 eP      P        09 45 46.3 +1.7
BTO                                 S       S        09 52 27.4 +3.8
NIL   Nilore             45.38 328  P       P        09 45 46.0 +0.4
NIL                                 pmax    pmax
      comp=Z,87nm,1.0s
NIL   Nilore             45.38 328  P       P        09 45 46.0 +0.4
HHC   Hu-ho-hao-te       45.80  12 eP      P        09 45 50.8 +1.9
HHC                                 pP      pP       09 45 55.8  0.0
HHC                                 sP      sP       09 45 59.4 +0.9
HHC                                 PP      PP       09 47 38.0 +1.5
HHC                                 S       S        09 52 35.6 +4.3
HHC                                 SS      SS       09 55 49.4 -6.8
HHC                                 pmax    pmax
      comp=Z,220nm,1.0s
HHC                                 pmax    pmax
      comp=Z,1µm,5.0s
HHC                                 LR      LR
      comp=Z,2µm,14.6s
HHC                                 LR      LR
      comp=Z,3µm,15.6s
HHC                                 LR      LR
      comp=Z,3µm,14.1s
BJT   Baijiatuau         46.15  17  P       P        09 45 53.1 +1.6
BJT                                 pmax    pmax
      comp=Z,33nm,0.8s
BJT                                 MLR     MLR
      comp=Z,8µm,18.0s
BJT   Baijiatuau         46.15  17  P       P        09 45 53.1 +1.6
BJT                                 IAmb    IAmb     09 45 53.5
      comp=Z,33nm,0.8s
BJT   Baijiatuau         46.15  17  IAMs_20 IAMs_20  10 08 46.7
      comp=Z,8µm,18.0s
BJI   Beijing            46.17  17  P       P        09 45 52.9 +1.2
BJI                                 S       S        09 52 41.3 +4.9
BJI                                 pmax    pmax
      comp=Z,43nm,0.7s
BJI                                 LR      LR
      comp=Z,5µm,14.3s
BJI                                 LR      LR
      comp=Z,6µm,16.7s
HTT   Hallett            46.33 134  P       P        09 45 54.4 +1.2
      baz=46,SNR=12
PMG   Port Moresby       46.74  99  P       P        09 45 56.2 -0.4
      comp=Z,26nm,0.7s,baz=274,slow=2.6,SNR=8.3
PMG   Port Moresby       46.74  99⇓eP      P        09 45 57.2 +0.6
PMG                                 pmax    pmax
      comp=Z,130nm,0.7s
PMG   Port Moresby       46.74  99  P       P        09 45 57.0 +0.4
PMG                                 IAmb    IAmb     09 45 59.5
      comp=Z,33nm,0.8s
PMG   Port Moresby       46.74  99  IAMs_20 IAMs_20  10 06 26.9
      comp=Z,3µm,21.0s
JNU   Nakatsue           46.88  36  P       P        09 45 57.7 +0.3
DL2   Dalian             47.00  23  P       P        09 45 59.1 +0.9
DL2                                eS       S        09 52 52.6 +4.3
DL2                                 pmax    pmax
      comp=Z,30nm,2.0s
DL2                                 pmax    pmax
      comp=Z,840nm,6.9s
DL2                                 LR      LR
      comp=Z,2µm,14.7s
DL2                                 LR      LR
      comp=Z,2µm,17.1s
DL2                                 LR      LR
      comp=Z,2µm,18.4s
CTA   Charters Tower     47.43 114  P       P        09 46 02.3 +0.3
      comp=Z,30nm,0.8s,baz=279,slow=9.7,SNR=40
CTAO  Charters Tower     47.43 114  IAMs_20 IAMs_20  10 05 27.8
      comp=Z,5µm,20.0s
TJN   Taejon             47.43  30⇑eP      P        09 45 59.7 -1.9
QLP   Quilpie            47.55 123  P       P        09 46 04.4 +1.6
      baz=48,SNR=3.5
STKA  Stephens Creek     47.56 131  P       P        09 46 03.7 +1.0
      baz=48,SNR=22
STKA  Stephens Creek     47.56 131  P       P        09 46 03.4 +0.7
      comp=Z,22nm,0.7s,baz=309,slow=9.2,SNR=29
STKA  Stephens Creek     47.56 131  P       P        09 45 59.9 -2.8
INCN  Inchon             47.96  28  IAMs_20 IAMs_20  10 08 19.0
      comp=Z,2µm,19.0s
KBL   Kabul              48.37 325  P       P        09 46 11.0 +1.8
KBL                                 pmax    pmax
      comp=Z,10.0nm,0.7s
KBL   Kabul              48.37 325  P       P        09 46 11.0 +1.8
KSAR  Wonju Array Be     48.53  29  P       P        09 46 09.1 -1.0
KSAR  Wonju Array Be     48.53  29  P       P        09 46 09.1 -1.0
KSRS  Korea Array        48.56  29  P       P        09 46 10.8 +0.5
      comp=Z,23nm,0.9s,baz=220,slow=8.4,SNR=45
KS19  Wonju Array Si     48.57  29  P       P        09 46 11.3 +0.9
KSH   Kashi              48.79 335  P       P        09 46 11.9 -0.4
KSH                                 pP      pP       09 46 15.6 -3.6
KSH                                 PcP     PcP      09 47 36.0 -0.9
KSH                                 S       S        09 53 13.0 -1.0
KSH                                 ScS     ScS      09 56 00.9 -2.5
KSH                                 pmax    pmax
      comp=Z,32nm,0.7s
KSH                                 pmax    pmax
      comp=Z,850nm,4.2s
KSH                                 LR      LR
      comp=Z,550nm,12.0s
KSH                                 LR      LR
      comp=Z,1µm,12.9s
KSH                                 LR      LR
      comp=Z,2µm,18.3s
SOCY  Socotra            48.83 290  IAMs_20 IAMs_20  10 08 26.8
      comp=Z,3µm,20.0s
WMQ   Urumqi             48.96 348⇑iP      P        09 46 15.4 +2.0
WMQ                                 sP      sP       09 46 23.5 +0.5
WMQ                                 PcP     PcP      09 47 37.5 +0.2
WMQ                                 S       S        09 53 19.3 +3.2
WMQ                                 pmax    pmax
      comp=Z,100nm,1.1s
WMQ                                 pmax    pmax
      comp=Z,670nm,5.3s
WMQ                                 LR      LR
      comp=Z,2µm,13.7s
WMQ                                 LR      LR
      comp=Z,1µm,19.3s
WMQ                                 LR      LR
      comp=Z,4µm,24.7s
WMQ   Urumqi             48.96 348  P       P        09 46 16.0 +2.6
WMQ                                 pmax    pmax
      comp=Z,82nm,0.7s
WMQ                                 MLR     MLR
      comp=Z,2µm,22.0s
WMQ   Urumqi             48.96 348  P       P        09 46 16.0 +2.6
WMQ   Urumqi             48.96 348  IAMs_20 IAMs_20  10 09 41.0
      comp=Z,2µm,22.0s
PRZ   Przheval'sk        50.38 339  P       P        09 46 27.1 +2.7
PRZ                                 pmax    pmax
      comp=Z,31nm,0.8s
PRZ   Przheval'sk        50.38 339  P       P        09 46 27.1 +2.7
PRZ                                 IAmb    IAmb     09 46 42.6
      comp=Z,31nm,0.8s
NRN   Naryn              50.39 336  P       P        09 46 25.7 +1.1
NRN                                 pmax    pmax
      comp=Z,28nm,1.0s
NRN                                 MLR     MLR
      comp=Z,2µm,21.0s
NRN   Naryn              50.39 336  P       P        09 46 25.7 +1.1
NRN                                 IAmb    IAmb     09 46 37.0
      comp=Z,28nm,1.0s
NRN                                 IAMs_20 IAMs_20  10 09 16.2
      comp=Z,2µm,21.0s
KDJ   Kajisay            50.52 338  P       P        09 46 27.2 +1.7
KDJ                                 pmax    pmax
      comp=Z,47nm,0.9s
KDJ   Kajisay            50.52 338  P       P        09 46 27.2 +1.7
CMSA  Cobar Meteorol     50.58 128  P       P        09 46 27.0 +1.2
      baz=51,SNR=28
GAR   Garm               51.00 330  P       P        09 46 28.8 -0.3
KZA   Kyzart             51.24 336  P       P        09 46 32.4 +1.3
      SNR=10
BOOM  Boomskoye usch     51.31 337  P       P        09 46 33.0 +1.6
BOOM                                pmax    pmax
      comp=Z,31nm,0.9s
BOOM  Boomskoye usch     51.31 337  P       P        09 46 33.0 +1.6
BOOM                                IAmb    IAmb     09 46 50.3
      comp=Z,31nm,0.9s
CHGR  Chuyangaron        51.33 329  P       P        09 46 31.0 -0.5
RMQ   Roma               51.35 121  P       P        09 46 33.7 +1.9
      baz=51,SNR=12
UCH   Uchtor             51.66 336  P       P        09 46 35.6 +1.2
      SNR=11
KBK   Karagaybulak       51.84 336  P       P        09 46 37.1 +1.8
      SNR=11
SONM  Songino Array      51.89   5  P       P        09 46 37.3 +1.8
      comp=Z,46nm,0.8s,baz=186,slow=8.9,SNR=274
SONM  Songino Array      51.89   5  P       P        09 46 36.5 +1.0
AML   Almayashu          51.92 335  P       P        09 46 37.5 +1.2
      SNR=27
ULN   Ulaanbaatar        51.98   6  P       P        09 46 37.7 +1.4
ULN                                 pmax    pmax
      comp=Z,43nm,1.0s
ULN   Ulaanbaatar        51.98   6  P       P        09 46 37.7 +1.4
ULN                                 IAmb    IAmb     09 46 38.7
      comp=Z,43nm,0.9s
AAK   Ala-Archa          52.01 336  P       P        09 46 37.8 +1.2
      comp=Z,3.3nm,0.6s,baz=154,slow=5.1,SNR=16
AAK   Ala-Archa          52.01 336  P       P        09 46 38.0 +1.4
      SNR=5.5
AAK   Ala-Archa          52.01 336  P       P        09 46 38.0 +1.4
AAK                                 pmax    pmax
      comp=Z,12nm,1.1s
AAK   Ala-Archa          52.01 336  P       P        09 46 38.0 +1.4
INU   Inuyama            52.09  38  IAMs_20 IAMs_20  10 11 59.8
      comp=Z,4µm,19.0s
CHMS  Chumysh            52.21 336  P       P        09 46 38.8 +0.9
      SNR=6.6
CHMS  Chumysh            52.21 336 iP      P        09 46 38.0 +0.1
CHMS                                pmax    pmax
      comp=Z,19nm,1.1s
EKS2  Erkin-Say          52.33 335  P       P        09 46 40.4 +1.5
      SNR=32
HRA   Herat              52.41 320  P       P        09 46 41.2 +1.4
USP   Ospenovka          52.53 336  P       P        09 46 41.3 +1.0
      SNR=19
CN2   Changchun          52.67  23 ⇑P      P        09 46 41.5 +0.3
CN2                                esP      pP       09 46 48.0 -0.2
CN2                                eS       S        09 54 07.3 -0.1
CN2                                 pmax    pmax
      comp=Z,50nm,0.9s
CN2                                 pmax    pmax
      comp=Z,600nm,5.0s
CN2                                 LR      LR
      comp=Z,2µm,14.0s
CN2                                 LR      LR
      comp=Z,3µm,16.0s
MK31  Makanchi Array     53.05 345  P       P        09 46 45.0 +1.0
MK31                                pmax    pmax
      comp=Z,24nm,0.7s
MK31  Makanchi Array     53.05 345  P       P        09 46 45.0 +1.0
MK31                                IAmb    IAmb     09 46 46.2
      comp=Z,24nm,0.7s
MKAR  Makanchi Array     53.05 345  P       P        09 46 45.0 +1.0
      comp=Z,35nm,0.7s,baz=147,slow=8.3,SNR=366
MKAR  Makanchi Array     53.05 345  P       P        09 46 45.0 +1.0
MKAR  Makanchi Array     53.05 345  P       P        09 46 44.0 -0.1
EIDS  Eidsvold           53.05 119  P       P        09 46 45.8 +1.3
      baz=53,SNR=4.9
MAKZ  Makanchi           53.14 344  P       P        09 46 45.5 +0.8
MAKZ                                pmax    pmax
      comp=Z,19nm,1.0s
MAKZ                                MLR     MLR
      comp=Z,700nm,21.0s
MAKZ  Makanchi           53.14 344  P       P        09 46 45.5 +0.8
MAJO  Matsushiro         53.60  38  P       P        09 46 47.7 -0.6
MAJO                                pmax    pmax
      comp=Z,23nm,1.0s
MAJO                                MLR     MLR
      comp=Z,6µm,20.0s
MAJO  Matsushiro         53.60  38  P       P        09 46 47.7 -0.6
MAJO                                IAmb    IAmb     09 47 03.2
      comp=Z,23nm,0.9s
MAJO  Matsushiro         53.60  38  IAMs_20 IAMs_20  10 11 09.6
      comp=Z,6µm,20.0s
MAT   Matsushiro         53.60  38  P       P        09 46 47.6 -0.7
MJB9  Matsu-Tunnel       53.60  38  P       P        09 46 47.7 -0.6
MJB9                                IAmb    IAmb     09 47 03.2
      comp=Z,23nm,0.9s
MJAR  Matsushiro Arr     53.60  38  P       P        09 46 47.8 -0.5
      comp=Z,17nm,0.8s,baz=215,slow=6.9,SNR=48
MJAR                                LR      LR       10 10 28.4
      comp=Z,5µm,21.4s,baz=85,slow=37
MJAR  Matsushiro Arr     53.60  38  P       P        09 46 47.7 -0.5
MJAR                                pmax    pmax
      comp=Z,11nm,0.9s
MJAR  Matsushiro Arr     53.60  38  P       P        09 46 47.7 -0.6
YNG   Young              53.75 130  P       P        09 46 50.9 +1.5
      baz=54,SNR=6.8
OPO   Ambohidratompo     53.91 250  P       P        09 46 52.0 +0.9
      comp=Z,7.9nm,0.8s,baz=75,slow=8.3,SNR=8.4
ABPO  Ambohimpanom       53.95 249  P       P        09 46 52.7 +1.4
ABPO                                pmax    pmax
      comp=Z,23nm,1.2s
ABPO  Ambohimpanom       53.95 249  P       P        09 46 52.7 +1.4
ABPO                                IAmb    IAmb     09 46 54.3
      comp=Z,23nm,1.1s
KK31  Karatay Array      54.10 333  P       P        09 46 51.5 -0.3
KKAR  Karatay Array      54.10 333  P       P        09 46 51.7 -0.1
KKAR                                pmax    pmax
      comp=Z,16nm,1.2s
KKAR  Karatay Array      54.10 333  P       P        09 46 51.7 -0.1
KKAR  Karatay Array      54.10 333  P       P        09 46 51.8  0.0
KKAR                                IAmb    IAmb     09 47 05.0
      comp=Z,16nm,1.2s
MSHR  Mys Shultsa        54.11  28⇑iP      P        09 46 52.3 +0.5
ZAK   Zakamensk          54.23   2 eP      P        09 46 53.4 +0.7
ZAK                                 pmax    pmax
      comp=Z,11nm,0.9s
CAN   Canberra           54.61 131  P       P        09 46 55.9 +0.1
CAN                                 pmax    pmax
      comp=Z,34nm,1.0s
CAN   Canberra           54.61 131  P       P        09 46 55.9 +0.1
CAN                                 IAmb    IAmb     09 47 09.4
      comp=Z,34nm,1.0s
ARMA  Armidale           54.95 125  P       P        09 46 59.2 +0.8
      baz=55,SNR=5.2
MDJ   Mudanjiang         55.02  25  P       P        09 46 59.8 +1.4
MDJ                                 pP      pP       09 47 03.0 -2.3
MDJ                                 sP      pwP      09 47 04.3 -4.9
MDJ                                 PP      PP       09 49 02.6 +0.7
MDJ                                 S       S        09 54 42.0 +2.8
MDJ                                 SS      SS       09 58 26.4 +3.0
MDJ                                 pmax    pmax
      comp=Z,15nm,0.7s
MDJ                                 pmax    pmax
      comp=Z,770nm,11.8s
MDJ                                 LR      LR
      comp=Z,4µm,13.8s
MDJ                                 LR      LR
      comp=Z,3µm,19.6s
MDJ   Mudanjiang         55.02  25  P       P        09 46 59.0 +0.5
MDJ                                 IAMs_20 IAMs_20  10 11 42.5
      comp=Z,2µm,19.0s
MILA  Mila               55.42 133  P       P        09 47 02.2 +0.6
      baz=56,SNR=3.6
MOY   Mondy              55.46   0 eP      P        09 47 02.7 +1.1
MOY                                 pmax    pmax
      comp=Z,69nm,2.6s
TLY   Talaya             55.54   2  P       P        09 47 03.9 +1.8
      comp=Z,14nm,0.7s,baz=203,slow=6.5,SNR=30
TLY   Talaya             55.54   2c iP     P        09 47 03.9 +1.8
TLY                                e                 09 49 03.6
TLY                                eS       S        09 54 53.5 +7.5
TLY                                 pmax    pmax
      comp=Z,83nm,1.1s
TLY                                 MLR     MLR
      comp=Z,5µm,9.0s
TLY   Talaya             55.54   2  P       P        09 47 03.2 +1.1
TLY                                 IAmb    IAmb     09 47 04.7
      comp=Z,21nm,0.8s
HIA   Hailar             55.66  15c iP     P        09 47 03.4 +0.4
HIA                                 pmax    pmax
      comp=Z,13nm,1.0s
HIA   Hailar             55.66  15  P       P        09 47 03.5 +0.5
HIA   Hailar             55.66  15  IAMs_20 IAMs_20  10 15 12.5
      comp=Z,5µm,18.0s
USA0B Ussuriysk Arra     55.75  27c iP     P        09 47 04.4 +0.7
USA0B Ussuriysk Arra     55.75  27  P       P        09 47 04.2 +0.5
USRK  Ussuriysk Ar.      55.75  27  P       P        09 47 04.5 +0.8
      comp=Z,64nm,0.8s,baz=221,slow=5.7,SNR=124
USRK  Ussuriysk Ar.      55.75  27  P       P        09 47 04.0 +0.4
IRK   Irkutsk            56.13   3 eP      P        09 47 07.1 +0.8
IRK                                 pmax    pmax
      comp=Z,120nm,2.5s
ASHT  Ashkhabad          57.06 321  IAMs_20 IAMs_20  10 16 06.5
      comp=Z,2µm,21.0s
GEYT  Alibeck            57.22 321  P       P        09 47 14.9 +0.6
      comp=Z,11nm,0.8s,baz=145,slow=5.4,SNR=19
KURBB Kurchatov Arra     57.56 344  P       P        09 47 17.0 +0.6
      comp=Z,12nm,0.8s,baz=164,slow=6.7,SNR=102
KURBB Kurchatov Arra     57.56 344  P       P        09 47 16.6 +0.1
KURK  Kurchatov          57.62 344  P       P        09 47 17.5 +0.7
KURK                                pmax    pmax
      comp=Z,32nm,0.9s
KURK                                MLR     MLR
      comp=Z,3µm,20.0s
KURK  Kurchatov          57.62 344  P       P        09 47 17.5 +0.7
KURK                                IAmb    IAmb     09 47 33.7
      comp=Z,32nm,0.8s
KURK  Kurchatov          57.62 344  IAMs_20 IAMs_20  10 16 32.8
      comp=Z,3µm,20.0s
DAMY  Dhamar             58.46 290  IAMs_20 IAMs_20  10 09 47.7
      comp=Z,10µm,21.0s
TEY   Ternei             58.56  29 eP      P        09 47 23.6 +0.1
ZAA0  Zalesovo Array     59.19 349  P       P        09 47 28.6 +0.8
ZAA0                                IAMs_20 IAMs_20  10 17 34.0
      comp=Z,1µm,20.0s
ZALV  Zalesovo Beam      59.19 349  P       P        09 47 28.6 +0.8
      comp=Z,56nm,0.8s,baz=189,slow=5.0,SNR=199
ZALV  Zalesovo Beam      59.19 349  P       P        09 47 28.3 +0.5
ATD   Arta Tunnel        59.26 286  LR      LR       10 08 00.2
      comp=Z,6µm,21.7s,baz=260,slow=31
ATD   Arta Tunnel        59.26 286  IAMs_20 IAMs_20  10 07 38.9
      comp=Z,7µm,22.0s
KLR   Kul'dur            59.61  23c iP     P        09 47 31.3 +0.6
KLR                                 pmax    pmax
      comp=Z,29nm,0.9s
RAYN  Ar Rayn            60.04 300  P       P        09 47 35.1 +0.8
RAYN                                pmax    pmax
      comp=Z,11nm,0.9s
RAYN  Ar Rayn            60.04 300  P       P        09 47 35.1 +0.8
ERM   Erimo              60.04  36  IAMs_20 IAMs_20  10 17 38.0
      comp=Z,5µm,18.0s
ZEA   Zeya               61.78  18 eP      P        09 47 46.2 +0.7
ZEA                                 pmax    pmax
      comp=Z,96nm,1.8s
BVAR  Borovoye Array     62.18 340  P       P        09 47 48.1 -0.1
      comp=Z,9.0nm,0.6s,baz=141,slow=8.8,SNR=50
BRVK  Borovoye           62.25 340⇓eP      P        09 47 48.8 +0.2
BRVK                                pmax    pmax
      comp=Z,63nm,3.8s
BRVK  Borovoye           62.25 340  P       P        09 47 48.5 -0.1
BRVK                                IAmb    IAmb     09 48 06.1
      comp=Z,10nm,0.7s
BRVK  Borovoye           62.25 340  IAMs_20 IAMs_20  10 17 46.0
      comp=Z,6µm,20.0s
BOD   Bodaibo            62.60   8 eP      P        09 47 51.0 +0.2
BOD                                 pmax    pmax
      comp=Z,77nm,1.7s
GRNR  Gornyy             62.70  25 eP      P        09 47 51.9 +0.2
GRNR                                pmax    pmax
      comp=Z,10.0nm,0.9s
GRNR                                MLR     MLR
      comp=Z,2µm,15.0s
YSS   Yuzh-Sakhalins     62.98  31⇑iP      P        09 47 54.3 +0.7
YSS                                e                 09 48 00.9
YSS                                 pmax    pmax
      comp=Z,80nm,0.9s
YSS   Yuzh-Sakhalins     62.98  31  P       P        09 47 54.2 +0.6
KMBO  Kilima Mbogo       63.11 271  P       P        09 47 55.9 +0.5
      comp=Z,1.5nm,0.3s,baz=45,slow=20,SNR=6.9
AB31  Akbulak array      63.57 332  P       P        09 47 56.6 -0.9
ABKAR Akbulak array      63.57 332  P       P        09 47 57.5 +0.1
ABKAR Akbulak array      63.57 332  P       P        09 47 57.3 -0.2
AKTO  Aktyubinsk         65.29 332  P       P        09 48 08.3 -0.4
      comp=Z,4.6nm,0.7s,baz=118,slow=8.5,SNR=12
TYV   Tymovskoe          65.54  28 eP      P        09 48 09.2 -1.1
TYV                                eS       S        09 56 43.9  -10
TYV                                 pmax    pmax
      comp=Z,17nm,1.3s
TYV                                 pmax    pmax
      comp=Z,600nm,4.6s
TYV                                 smax    smax
      comp=E,1µm,5.7s
AKT   Akhty              65.86 319 eP      P        09 48 13.2 +0.5
AKT                                e                 09 48 42.9
AKT                                 pmax    pmax
      comp=Z,52nm,1.1s
MAK   Makhachkala        66.74 320 eP      P        09 48 13.0 -5.1
MAK                                eS       S        09 57 05.2 -3.5
MAK                                 pmax    pmax
      comp=Z,30nm,0.3s
MAK                                 MLR     MLR
      comp=Z,2µm,17.0s
GNI   Garni              67.23 317  P       P        09 48 22.4 +0.8
      comp=Z,3.6nm,0.4s,baz=225,slow=2.8,SNR=4.3
GNI   Garni              67.23 317deP      P        09 48 22.8 +1.2
GNI                                 pmax    pmax
      comp=Z,18nm,1.6s
GNI   Garni              67.23 317  P       P        09 48 21.8 +0.2
GNI                                 IAmb    IAmb     09 48 29.8
      comp=Z,19nm,0.9s
GNI   Garni              67.23 317  IAMs_20 IAMs_20  10 09 23.3
      comp=Z,3µm,22.0s
GROC  Groznyy            67.95 320 eP      P        09 48 23.1 -2.7
GROC                               e                 09 48 47.1
GROC                               eS       S        09 57 24.8 +1.5
GROC                               e                 09 58 25.6
GROC                                pmax    pmax
      comp=Z,108nm,1.3s
TBLG  Delisi             67.95 318  P       P        09 48 26.3 +0.4
TBLG                                pmax    pmax
      comp=Z,59nm,1.2s
TBLG  Delisi             67.95 318  P       P        09 48 26.3 +0.4
MAW   Mawson             68.45 195  P       P        09 48 28.6 +0.1
      comp=Z,17nm,0.9s,baz=41,slow=7.5,SNR=5.3
MAW                                 LR      LR       10 11 36.7
      comp=Z,2µm,20.9s,baz=335,slow=30
MAW   Mawson             68.45 195  P       P        09 48 29.9 +1.4
MAW                                 pmax    pmax
      comp=Z,5.0nm,1.0s
MAW   Mawson             68.45 195  P       P        09 48 29.9 +1.4
AKH   Akhalkalaki        68.64 317  P       P        09 48 30.8 +0.3
AKH                                 pmax    pmax
      comp=Z,10.0nm,0.6s
AKH   Akhalkalaki        68.64 317  P       P        09 48 30.8 +0.3
AKH                                 IAmb    IAmb     09 48 44.0
      comp=Z,9.5nm,0.6s
SVE   Sverdlovsk         68.67 338d iP     P        09 48 30.8 +0.7
SVE                                 pmax    pmax
      comp=Z,35nm,1.1s
ZEI   Tsey               68.98 319 eP      P        09 48 32.9 +0.3
ZEI                                 pmax    pmax
      comp=Z,15nm,0.7s
ARU   Arti               69.18 337  P       P        09 48 33.0 -0.2
      comp=Z,3.0nm,0.6s,baz=50,slow=0.1,SNR=13
ARU   Arti               69.18 337c iP     P        09 48 33.4 +0.1
ARU                                                  09 48 55.2
ARU                                                  09 51 02.5
ARU                                 S       S        09 57 40.6 +3.1
ARU                                 SS      SS       10 02 01.1 -3.2
ARU                                 pmax    pmax
      comp=Z,52nm,2.3s
ARU   Arti               69.18 337  P       P        09 48 33.6 +0.3
ARU                                 IAmb    IAmb     09 48 45.5
      comp=Z,24nm,1.1s
YAK   Yakutsk            69.58  14c iP     P        09 48 35.3 -0.3
YAK                                e*PP     pP       09 48 42.3 -0.4
YAK                                eS       S        09 57 39.2 -2.7
YAK                                e*SS     sS       09 58 05.1  +11
YAK                                e                 09 58 33.7
YAK                                eSS      SS       10 02 03.9 -6.3
YAK                                 pmax    pmax
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	comp=Z,68nm,0.8s						
YAK				pmax	pmax		
	comp=N,22nm,1.1s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,315nm,4.4s						
YAK				pmax	pmax		
	comp=N,228nm,4.8s						
YAK				smax	smax		
	comp=N,339nm,4.2s						
YAK				smax	smax		
	comp=E,140nm,4.1s						
YAK				MLR	MLR		
	comp=Z,2µm,20.0s						
YAK				MLR	MLR		
	comp=N,3µm,15.0s						
YAK				MLR	MLR		
	comp=E,2µm,13.0s						
YAK	Yakutsk	69.58	14	P	P	09 48 35.4	-0.2
MBAR	Mbarara	69.64	271	⇑eP	P	09 48 37.2	0.0
MBAR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MBAR	Mbarara	69.64	271	P	P	09 48 36.7	-0.5
KBZ	Khabaz	70.06	319	P	P	09 48 40.0	+1.0
	comp=Z,11nm,0.7s,baz=125,slow=5.7,SNR=37						
KBZ	Khabaz	70.06	319	ceP	P	09 48 39.7	+0.8
KBZ				pmax	pmax		
	comp=Z,27nm,0.9s						
KIV	Kislovodsk	70.30	320	eP	P	09 48 41.5	+0.9
KIV				pmax	pmax		
	comp=Z,78nm,1.0s						
KIV	Kislovodsk	70.30	320	P	P	09 48 41.3	+0.8
KIV				IAmb	IAmb	09 48 52.1	
	comp=Z,32nm,1.1s						
EIL	Elat	70.92	303	P	P	09 48 45.2	+0.7
	comp=Z,9.9nm,0.8s,baz=330,slow=2.8,SNR=8.9						
SOC	Sochi	72.09	318	eP	P	09 48 54.2	+2.9
SOC				e		09 51 33.0	
SOC				ePPP	PPP	09 53 14.8	
SOC				eS	SKiKP	09 58 19.1	-7.8
SOC				eSS	SS	10 02 52.1	+2.6
RPZ	Rata Peaks	73.32	134	P	P	09 48 57.9	-0.8
	comp=Z,7.8nm,0.8s,baz=284,slow=5.0,SNR=4.4						
NRIK	Noril'sk	73.72	355	P	P	09 48 59.2	-1.2
	comp=Z,27nm,1.0s,baz=155,slow=5.5,SNR=34						
CSS	Mathiatis	73.74	308	P	P	09 49 01.2	-0.1
CSS				IAmb	IAmb	09 49 15.9	
	comp=Z,32nm,1.1s						
CSS				IAMs_20	IAMs_20	10 12 16.3	
	comp=Z,3µm,21.0s						
VRH	Novokhopyorsk	74.18	326	eP	P	09 49 02.8	-0.7
VRH				pmax	pmax		
	comp=Z,40nm,0.6s						
KIRV	Kirov	74.33	335	P	P	09 49 04.8	+0.7
	comp=Z,24nm,0.6s,baz=264,slow=3.0,SNR=6.4						
PETK	Petropavlovsk-	74.37	32	P	P	09 49 04.5	-0.1
	comp=Z,12nm,0.8s,baz=201,slow=5.8,SNR=7.3						
LBTB	Lobatse	74.52	245	LR	LR	10 18 10.1	
	comp=Z,1µm,18.5s,baz=6.0,slow=33						
MA2	Magadan	74.69	24	P	P	09 49 06.9	+0.6
	comp=Z,26nm,0.8s,baz=214,slow=6.9,SNR=24						
MA2	Magadan	74.69	24	c iP	P	09 49 07.1	+0.8
MA2				pmax	pmax		
	comp=Z,25nm,0.7s						
MA2	Magadan	74.69	24	P	P	09 49 07.7	+1.4
MA2				IAmb	IAmb	09 49 08.4	
	comp=Z,27nm,0.8s						
PET	Petropavlovsk	74.84	32	eP	P	09 49 07.2	0.0
PET				pmax	pmax		
	comp=Z,58nm,0.9s						
BR131	Keskin Array S	74.95	313	ceP	P	09 49 08.0	-0.3
BR131	Keskin Array S	74.95	313	P	P	09 49 08.1	-0.3
BRTR	Keskin Array B	74.95	313	P	P	09 49 08.4	0.0
	comp=Z,7.5nm,0.6s,baz=134,slow=7.3,SNR=48						
BRTR	Keskin Array B	74.95	313	i P	P	09 49 08.3	-0.1
BRTR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BRTR	Keskin Array B	74.95	313	P	P	09 49 08.1	-0.3
BOSA	Boshof	75.03	242	P	P	09 49 09.9	+0.8
	comp=Z,5.2nm,0.9s,baz=75,slow=4.2,SNR=7.0						
BOSA	Boshof	75.03	242	P	P	09 49 09.1	0.0
BOSA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BOSA	Boshof	75.03	242	P	P	09 49 09.1	0.0
ILGA	Ilgaz	75.31	314	P	P	09 49 11.0	+0.4
ILGA				IAmb	IAmb	09 49 19.8	
	comp=Z,22nm,1.0s						
BZK	Bozkurt	75.40	315	⇑P	P	09 49 11.8	+1.0
ANTO	Ankara	75.61	313	P	P	09 49 12.7	+0.6
ANTO				pmax	pmax		
	comp=Z,14nm,0.9s						
ANTO	Ankara	75.61	313	P	P	09 49 12.7	+0.6
ANTO				IAmb	IAmb	09 49 22.5	
	comp=Z,14nm,0.8s						
VSR	Storozhevoye	75.62	325	⇑iP	P	09 49 11.2	-0.6
VSR				pmax	pmax		
	comp=Z,29nm,0.7s						
SYO	Syowa Base	76.10	199	⇓eP	P	09 49 14.0	-0.2
SYO	Syowa Base	76.10	199	⇑epP	pP	09 49 21.0	-0.4
SIM	Simferopol'	76.33	318	eP	P	09 49 16.8	+0.8
LPSR	Galich'ya Gora	76.36	327	eP	P	09 49 15.6	-0.3
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
BKZ	Black Stump Fm	76.72	129	P	P	09 49 18.6	+0.2
ELL	Elmali	76.90	309	P	P	09 49 19.8	+0.2
ELL				pmax	pmax		
	comp=Z,42nm,0.8s						
ELL	Elmali	76.90	309	P	P	09 49 19.8	+0.2
MDUB	Mudurnu	76.96	313	P	P	09 49 19.9	+0.2
MSVF	Nonsavu	77.06	107	⇑eP	P	09 49 21.9	+1.1
MSVF				pmax	pmax		
	comp=Z,15nm,1.0s						
MSVF	Nonsavu	77.06	107	P	P	09 49 20.7	-0.1
MSVF				IAmb	IAmb	09 49 22.8	
	comp=Z,22nm,1.1s						
SEY	Seymchan	77.34	22	P	P	09 49 21.8	+0.5
	comp=Z,13nm,0.7s,baz=233,slow=4.9,SNR=39						
SEY	Seymchan	77.34	22	⇑iP	P	09 49 22.0	+0.7
PRGR	Permogore	77.64	336	eP	P	09 49 22.7	-0.3
PRGR				pmax	pmax		
	comp=Z,44nm,0.7s						
TIXI	Tiksi	77.77	9	P	P	09 49 23.1	-0.4
	comp=Z,7.5nm,0.5s,baz=183,slow=3.3,SNR=34						
TIXI				LR	LR	10 29 03.8	
	comp=Z,3µm,18.7s,baz=200,slow=40						
TIXI	Tiksi	77.77	9	c iP	P	09 49 23.0	-0.4
TIXI				pmax	pmax		
	comp=Z,42nm,1.7s						
TIXI	Tiksi	77.77	9	P	P	09 49 23.1	-0.4
TIXI				IAmb	IAmb	09 49 35.8	
	comp=Z,31nm,1.2s						
MANT	Manisa	78.39	310	P	P	09 49 28.4	+0.5
MANT				IAmb	IAmb	09 49 38.5	
	comp=Z,26nm,0.9s						
MOS	Moscow	78.40	329	eP	P	09 49 26.3	-1.0
MOS				eS	S	09 59 17.4	-4.0
MOS				pmax	pmax		
	comp=Z,76nm,1.1s						
OBN	Obninsk	78.68	328	P	P	09 49 29.6	+0.7
	comp=Z,4.8nm,0.4s,baz=173,slow=11,SNR=4.2						
OBN	Obninsk	78.68	328	d iP	P	09 49 29.8	+0.9
OBN				e		09 52 26.7	
OBN				pmax	pmax		
	comp=Z,65nm,1.7s						
OBN	Obninsk	78.68	328	P	P	09 49 29.0	+0.2
KARP	Karpathos	78.77	307	P	P	09 49 29.7	-0.2
SUR	Sutherland	79.05	238	LR	LR	10 19 31.0	
	comp=Z,1µm,19.3s,baz=56,slow=32						
SUR	Sutherland	79.05	238	P	P	09 49 31.5	-0.3
SUR				IAmb	IAmb	09 49 36.4	
	comp=Z,26nm,1.1s						
KLMR	Klimovskoe	79.78	334	eP	P	09 49 33.9	-0.8
KLMR				e		09 52 40.5	
KLMR				pmax	pmax		
	comp=Z,56nm,1.2s						
KLMR	Klimovskoe	79.78	334	eP	P	09 49 34.0	-0.8
KLMR				AMP		09 49 47.6	
	comp=Z,56nm,1.2s						
KLMR				ePP	PP	09 52 40.6	+4.4
TIRR	Tirgusor	80.05	316	⇓P	P	09 49 37.6	+1.0
TIRR	Tirgusor	80.05	316	P	P	09 49 37.0	+0.4
TIRR				pmax	pmax		
	comp=Z,68nm,1.2s						
TIRR	Tirgusor	80.05	316	P	P	09 49 37.0	+0.4
VNDA	Vanda	80.14	169	P	P	09 49 37.6	+1.1
	comp=Z,9.4nm,1.0s,baz=292,slow=5.5,SNR=22						
VNDA	Vanda	80.14	169	P	P	09 49 37.5	+1.1
VNDA				pmax	pmax		
	comp=Z,14nm,1.0s						
VNDA	Vanda	80.14	169	P	P	09 49 37.5	+1.1
ALN	Alexandroupoli	80.85	312	P	P	09 49 41.0	0.0
ALN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ALN	Alexandroupoli	80.85	312	P	P	09 49 41.0	0.0
SORM	Soroca	81.10	320	⇓P	P	09 49 42.6	+0.4
AKASG	Malin Array Be	81.29	322	P	P	09 49 43.0	-0.1
	comp=Z,2.6nm,0.7s,baz=87,slow=4.7,SNR=9.5						
AKASG	Malin Array Be	81.29	322	P	P	09 49 42.5	-0.6
AKASG				pmax	pmax		
	comp=Z,12nm,1.4s						
AKASG	Malin Array Be	81.29	322	P	P	09 49 42.5	-0.6
AKBB	Malin Array Si	81.29	322	⇓eP	P	09 49 43.0	-0.1
AKBB	Malin Array Si	81.29	322	P	P	09 49 42.9	-0.2
VRI	Vrincioaia	81.57	317	⇓P	P	09 49 46.4	+1.6
PLOR	Plostina	81.62	317	⇓P	P	09 49 46.6	+1.6
TESR	Tescani	81.78	318	⇓P	P	09 49 46.9	+1.1
TMCR	Tamitsa	81.92	337	eP	P	09 49 45.5	-0.6
TMCR				pmax	pmax		
	comp=Z,41nm,0.5s						
MLR	Muntele Rosu	82.01	317	P	P	09 49 47.8	+0.6
	baz=166,slow=4.2						
MLR	Muntele Rosu	82.01	317	⇓P	P	09 49 48.3	+1.0
MLR	Muntele Rosu	82.01	317	P	P	09 49 48.2	+1.0
MLR				pmax	pmax		
	comp=Z,57nm,1.2s						
MLR	Muntele Rosu	82.01	317	P	P	09 49 48.2	+1.0
PLVB	Pleven	82.44	315	⇓P	P	09 49 50.7	+1.4
DOPR	Dopca	82.50	317	⇑P	P	09 49 50.1	+0.5
VOIR		82.61	317	⇓P	P	09 49 50.9	+0.6
VLAD	Vladila	82.73	315	⇓P	P	09 49 52.0	+1.2
ARR	Arges	82.88	316	⇑P	P	09 49 52.2	+0.5
BURAR	Bucovina Array	83.00	319	⇓P	P	09 49 54.5	+2.2
BURAR	Bucovina Array	83.00	319	P	P	09 49 53.4	+1.1
BUR08	Bucovina Ar. S	83.02	319	P	P	09 49 53.5	+1.0
BUR08				IAmb	IAmb	09 50 07.0	
	comp=Z,25nm,1.1s						
AGG	Agios Georgios	83.25	310	P	P	09 49 53.6	-0.1
AGG				pmax	pmax		
	comp=Z,15nm,1.2s						
AGG	Agios Georgios	83.25	310	P	P	09 49 53.6	-0.1
VTS	Vitosha	83.28	314	⇓P	P	09 49 54.8	+0.8
VTS	Vitosha	83.28	314	P	P	09 49 53.7	-0.2
VTS				pmax	pmax		
	comp=Z,14nm,1.0s						
VTS	Vitosha	83.28	314	P	P	09 49 53.7	-0.2
VTS				IAmb	IAmb	09 50 05.8	
	comp=Z,14nm,1.0s						
LIT	Litokhoron	83.33	311	P	P	09 49 53.9	-0.2
LIT				pmax	pmax		
	comp=Z,18nm,0.9s						
LIT	Litokhoron	83.33	311	P	P	09 49 53.9	-0.2
LIT				IAmb	IAmb	09 50 05.8	
	comp=Z,18nm,0.9s						
VAY	Valandovo	83.50	312	i P	P	09 49 55.4	+0.5
STIP	Stip	83.86	312	i P	P	09 49 56.3	-0.4
GZR	Gura Zlata	84.16	316	⇑P	P	09 49 59.7	+1.5
DEV	Deva	84.17	317	⇑P	P	09 49 59.9	+1.7
DRGR		84.49	318	⇑P	P	09 50 02.2	+2.3
LVZ	Lovozero	84.78	340	⇑eP	P	09 50 00.5	-0.4
LVZ				pmax	pmax		
	comp=Z,28nm,1.1s						
MDVR	Moldovita	84.78	315	⇓P	P	09 50 02.2	+0.8
BILL	Bilibino	84.90	20	i P	P	09 50 01.8	+0.4
BILL				i		09 50 12.7	
BILL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BILL	Bilibino	84.90	20	P	P	09 50 01.6	+0.2
BILL				IAmb	IAmb	09 50 15.5	
	comp=Z,14nm,1.0s						
VSU	Vasula	84.91	330	⇑eP	P	09 50 02.4	+0.8
VSU				pmax	pmax		
	comp=Z,212nm,2.3s						
BZS	Buzias	85.00	316	⇑P	P	09 50 03.8	+1.4
APA	Apatity	85.08	339	⇑iP	P	09 49 59.2	-3.1
APA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,3µm,20.0s						
UZH	Uzhgorod	85.14	319	eP	P	09 50 09.3	+6.3
UZH				e		09 50 18.0	
UZH				i		09 50 24.2	
KOLS	Kolonicke sedl	85.21	320	eP	P	09 50 05.0	+1.6
KOLS				e		09 50 14.6	
KOLS				pmax	pmax		
	comp=Z,16nm,1.0s						
KOLS	Kolonicke sedl	85.21	320	eP	P	09 50 05.0	+1.6
KOLS				e		09 50 14.6	
QSPA	South Pole Qui	85.97	180	P	P	09 50 08.0	+0.9
QSPA				IAmb	IAmb	09 50 11.4	
	comp=Z,28nm,1.4s						
FINES	FINESS Array B	86.05	332	P	P	09 50 08.1	+0.8
	comp=Z,7.7nm,0.8s,baz=107,slow=5.2,SNR=15						
FINES	FINESS Array B	86.05	332	i P	P	09 50 08.3	+1.1
FINES				pmax	pmax		
	comp=Z,8.0nm,0.8s						
FINES	FINESS Array B	86.05	332	P	P	09 50 07.0	-0.2
PDG	Podgorica	86.14	313	P	P	09 50 07.5	-0.6
PSZ	Piszkesteto	86.58	318	⇑P	P	09 50 12.5	+2.2
VYHS	Vyhne	87.37	319	eP	P	09 50 15.8	+1.7
VYHS	Vyhne	87.37	319	eP	P	09 50 15.8	+1.7
TIP	Timpagrande	87.56	309	⇓P	P	09 50 17.1	+1.8
BLY	Banja Luka	87.96	315	⇓P	P	09 50 18.5	+1.6
BLY	Banja Luka	87.96	315	P	P	09 50 17.4	+0.5
BLY				IAmb	IAmb	09 50 29.5	
	comp=Z,23nm,1.1s						
JAVC	Velka Javorina	88.19	319	eP	P	09 50 30.9	+13
ACER	Acerenza	88.37	311	P	P	09 50 20.2	+1.2
MORC	Moravsky Berou	88.40	320	⇑P	P	09 50 20.5	+1.5
MORC	Moravsky Berou	88.40	320	P	P	09 50 19.6	+0.6
MORC				pmax	pmax		
	comp=Z,12nm,1.1s						
MORC	Moravsky Berou	88.40	320	eP	P	09 50 29.9	+11
MORC	Moravsky Berou	88.40	320	P	P	09 50 19.6	+0.6
MORC				IAmb	IAmb	09 50 33.4	
	comp=Z,12nm,1.1s						
ARCES	ARCESS Array B	88.47	340	P	P	09 50 19.6	+0.7
	comp=Z,12nm,0.8s,baz=73,slow=4.1,SNR=13						
ARCES				LR	LR	10 33 16.3	
	comp=Z,1µm,20.6s,baz=166,slow=38						
ARCES	ARCESS Array B	88.47	340	P	P	09 50 18.9	+0.1
SGRT	San Giovanni R	88.63	312	P	P	09 50 21.5	+1.1
SGRT				IAmb	IAmb	09 50 34.2	
	comp=Z,26nm,1.4s						
VRAC	Vranov	88.95	319	eP	P	09 50 32.9	+11
KRUC	Moravsky	89.05	319	eP	P	09 50 32.7	+11
GOLS	Golise	89.20	316	i P	P	09 50 24.2	+1.4
DPC	Dobruska-Polom	89.26	320	eP	P	09 50 24.7	+1.7
DPC	Dobruska-Polom	89.26	320	eP	P	09 50 24.7	+1.7
CONA	Conrad Observa	89.27	318	i PcP	P	09 50 23.6	+0.4
	comp=Z,3.9nm,0.9s						
BOJS	Bojanci	89.41	316	i P	P	09 50 24.9	+1.2
ARSA	Arzberg	89.42	317	i P	P	09 50 24.2	+0.4
	comp=Z,6.1nm,0.9s						
CHVC	Chvalec	89.46	321	eP	P	09 50 25.7	+1.8
SOKA	Soboth	89.69	317	ePcP	P	09 50 26.4	+1.3
	comp=Z,6.1nm,0.9s						
OBKA	Obir	90.00	316	PcP	P	09 50 28.0	+1.3
	comp=Z,1.4nm,0.5s						
MOA	Molln	90.32	318	i PcP	P	09 50 28.6	+0.5
	comp=Z,2.8nm,0.8s						
PRU	Pruhonice	90.35	320	eP	P	09 50 29.8	+1.7
PRU	Pruhonice	90.35	320	eP	P	09 50 29.8	+1.7
SNAA	Sanae	90.36	198	P	P	09 50 29.8	+2.0
SNAA	Sanae	90.36	198	P	P	09 50 29.6	+1.8
SNAA				pmax	pmax		
	comp=Z,14nm,1.0s						
SNAA	Sanae	90.36	198	P	P	09 50 29.6	+1.8
SNAA				IAmb	IAmb	09 50 31.9	
	comp=Z,14nm,1.0s						
MYKA	Terra Mystica	90.64	317	ePcP	P	09 50 30.8	+1.2
	comp=Z,2.8nm,0.9s						
PBCC	Pribram	90.68	320	eP	P	09 50 31.1	+1.5
NRCA	Norcia	90.68	313	P	P	09 50 30.4	+0.5
NRCA				IAmb	IAmb	09 50 42.7	
	comp=Z,21nm,1.5s						
GEC2	GERESS Array S	90.79	319	P	P	09 50 30.9	+0.7
GEC2				IAmb	IAmb	09 50 44.4	
	comp=Z,19nm,1.2s						
GERES	GERESS Array B	90.79	319	P	P	09 50 31.4	+1.1
	comp=Z,1.9nm,0.6s,baz=87,slow=4.5,SNR=4.4						
GERES	GERESS Array B	90.79	319	P	P	09 50 30.9	+0.7
BRG	Berggiesshubel	90.82	321	eP	P	09 50 31.9	+1.7
	comp=Z,8.8nm,1.1s						
BRG				e		09 50 41.2	
	comp=Z,22nm,1.5s						
BRG	Berggiesshubel	90.82	321	eP	P	09 50 31.9	+1.7
BRG				e		09 50 41.2	
BRG				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BRG				pmax	pmax		
	comp=Z,22nm,1.5s						
KBA	Koelnbreinsper	90.88	317	ePcP	P	09 50 31.7	+0.9
	comp=Z,2.0nm,0.7s						
KHC	Kasperske Hory	90.90	319	eP	P	09 50 28.5	-2.2
KHC	Kasperske Hory	90.90	319	⇑eP	P	09 50 30.0	-0.7
KHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
STAL	STALIGIAL	91.25	316	P	P	09 50 33.2	+0.8
ABTA	Abfaltersbach	91.42	317	ePcP	P	09 50 34.3	+1.0
	comp=Z,5.1nm,1.2s						
HFS	Hagfors	91.78	330	P	P	09 50 35.2	+0.7
	comp=Z,5.6nm,0.8s,baz=84,slow=6.4,SNR=4.7						
CTI	Castel Tesino	91.97	316	P	P	09 50 36.8	+1.0
CTI				pmax	pmax		
	comp=Z,15nm,1.1s						
CTI	Castel Tesino	91.97	316	P	P	09 50 36.8	+1.0
CTI				IAmb	IAmb	09 50 49.9	
	comp=Z,15nm,1.1s						
VNA2	Neumayer--Watz	91.98	198	P	P	09 50 37.8	+2.6
WTTA	Wattenberg	92.05	317	ePcP	P	09 50 38.0	+1.7
	comp=Z,7.1nm,1.1s						
WATA	Walderalm	92.10	317	ePcP	P	09 50 37.8	+1.4
	comp=Z,2.3nm,0.5s						
GAMB	Gambell	92.64	26	P	P	09 50 38.8	+0.5
GAMB				IAmb	IAmb	09 50 51.0	
	comp=Z,10nm,1.0s						
GAMB				IAMs_20	IAMs_20	10 33 03.3	
	comp=Z,1µm,19.0s						
FETA	Feichten	92.66	317	ePcP	P	09 50 40.8	+1.7
	comp=Z,1.2nm,0.8s						
RETA	Reutte	92.66	317	ePcP	P	09 50 39.6	+0.7
	comp=Z,3.4nm,1.0s						
NB2	NORSAR Subarra	93.06	331	P	P	09 50 38.7	-1.8
	comp=Z,27nm,2.0s,baz=94,slow=4.8						
NB2	NORSAR Subarra	93.06	331	P	P	09 50 38.7	-1.8
	baz=94,slow=4.8						
NOA	NORSAR Array B	93.06	331	P	P	09 50 39.8	-0.6
	comp=Z,2.0nm,0.9s,baz=93,slow=4.7,SNR=4.2						
NOA				LR	LR	10 35 47.6	
	comp=Z,500nm,21.9s,baz=80,slow=38						
DAVOX	Davos/Dischmat	93.23	317	P	P	09 50 41.4	-0.3
	comp=Z,1.4nm,0.6s,baz=37,slow=10,SNR=2.7						
DAVA	Damuels	93.25	317	ePcP	P	09 50 42.3	+0.5
	comp=Z,2.1nm,0.7s						
MEM	Membach	95.85	320	P	P	09 50 52.5	-0.8
DOU	Dourbes	96.76	320	sP	sP	09 51 02.7	-4.9
TOLK	Toolik Lake Re	100.94	21	Pdiff	Pdif	09 51 16.9	+1.0
	baz=287						
ILAR	Eielson Array	103.18	24	PKKPbc	PKKPbc	10 07 22.6	-1.4
	comp=Z,0.5nm,0.7s,baz=115,slow=1.9,SNR=4.0						
ILAR				PKKP	PKKPdf	10 07 33.2	+1.2
	comp=Z,0.6nm,0.8s,baz=169,slow=1.8,SNR=4.2						
YKA	Yellowknife Ar	116.16	17	PKP	PKPdf	09 56 09.6	-0.2
	comp=Z,1.0nm,0.7s,baz=333,slow=1.7,SNR=17						
YKA				PKKPbc	PKKPbc	10 06 40.6	-1.4
	comp=Z,0.3nm,0.7s,baz=147,slow=4.9,SNR=4.0						
B05A	Bryant	122.91	33	P	PKiKP	09 56 24.5	+1.1
	baz=307						
I03D	Drain, OR	124.80	38	P	PKiKP	09 56 28.5	+1.2
	baz=303						
D08A	Wollman Farm,	125.34	32		PKiKP	09 56 29.2	+1.0
HAWA	Hanford	125.43	33		PKiKP	09 56 29.1	+0.7
L02E	Cave Junction	125.46	39	P	PKiKP	09 56 30.4	+1.7
	baz=302						
HUMO	Hull Mountain	125.63	39		PKiKP	09 56 29.5	+0.5
J04D	Umpqua Nationa	125.80	37	P	PKiKP	09 56 31.1	+1.5
	baz=304						
PINE	Pine Mountain	126.19	36		PKiKP	09 56 31.5	+1.2
L04D	Klamath Falls	126.24	39	P	PKiKP	09 56 31.5	+1.1
	baz=303						
YBH	Yreka Blue Hor	126.25	39	PKP	PKiKP	09 56 30.7	+0.4
	comp=Z,0.8nm,0.8s,baz=318,slow=10,SNR=4.0						
FFC	Flin Flon	126.28	16	PKIKP	PKiKP	09 56 29.4	-0.5
FFC	Flin Flon	126.28	16	PKPdf	PKiKP	09 56 29.4	-0.5
J05D	Fort Rock, OR	126.31	37	P	PKiKP	09 56 31.8	+1.3
	baz=305						
M02C	Callahan	126.34	40	P	PKiKP	09 56 32.0	+1.5
	baz=302						
N02D	Trinity Center	126.66	40	P	PKiKP	09 56 32.8	+1.7
	baz=302						
M04C	Macdoel	126.77	39	P	PKiKP	09 56 32.7	+1.2
	baz=303						
F10A	Beach Ranch, E	126.94	32	PKPdf	PKiKP	09 56 32.0	+0.4
O02D	Mt. Diablo Mer	127.02	41	P	PKiKP	09 56 33.6	+1.6
	baz=301						
O03E	Paynes Creek	127.60	40	P	PKiKP	09 56 33.5	+0.4
	baz=302						
MOD	Modoc Plateau	127.66	38	PKPdf	PKiKP	09 56 32.4	-0.8
MSO	Missoula	128.04	29		PKiKP	09 56 34.8	+1.0
MSO	Missoula	128.04	29	P	PKiKP	09 56 34.2	+0.4
	baz=314						
SCHQ	Schefferville	128.27	351	PKP	PKiKP	09 56 33.8	-0.1
	comp=Z,4.0nm,0.8s,baz=259,slow=0.6,SNR=7.2						
SCHQ	Schefferville	128.27	351		PKiKP	09 56 34.8	+0.9
NVAR	Mina Array Bea	130.89	40	SKPbc	SKPab	10 00 03.1	+1.2
	comp=Z,1.6nm,0.9s,baz=282,slow=4.2,SNR=3.7						
ULM	Lac du Bonnet	131.92	14	PKP	PKiKP	09 56 40.4	-1.0
	comp=Z,3.9nm,0.7s,baz=354,slow=3.0,SNR=16						
ULM	Lac du Bonnet	131.92	14	PKIKP	PKiKP	09 56 41.8	+0.5
ULM	Lac du Bonnet	131.92	14		PKiKP	09 56 41.8	+0.5
EDW2	Edwards Air Fo	133.04	44	P	PKiKP	09 56 45.2	+1.1
	baz=302						
LSQQ	Lebel-sur-Quev	135.05	358	P	PKiKP	09 56 47.0	-0.7
	baz=3.6						
D61A	St Aubert, Com	136.20	351	P	PKiKP	09 56 50.2	+0.1
	baz=14						
PV16	Nyswonger Mesa	136.66	34	IAMs_20	IAMs_20	10 41 22.7	
	comp=Z,1µm,21.0s						
D57A	Chemin Vers le	136.87	354	P	PKiKP	09 56 51.2	-0.3
	baz=8.2						
D54A	Lac Fusel, La	136.94	357	P	PKiKP	09 56 49.9	-1.7
	baz=4.2						
D48A	Paudash Townsh	136.95	2	P	PKiKP	09 56 50.2	-1.4
	baz=357						
E61A	Lac Etchemin	137.00	351	P	PKiKP	09 56 50.0	-1.8
	baz=13						
D55A	Sainte-Anne-du	137.00	356	P	PKiKP	09 56 50.5	-1.3
	baz=5.9						
D50A	G1974 Best Tow	137.00	0	P	PKiKP	09 56 49.8	-2.0
	baz=360						
D47A	Chapleau	137.01	3	P	PKiKP	09 56 50.1	-1.7
	baz=355						
D46A	Sault St. Mari	137.11	4	P	PKiKP	09 56 50.7	-1.3
	baz=353						
E56A	St. Veronique	137.44	355	P	PKiKP	09 56 51.2	-1.4
	baz=6.6						
F63A	Nahmakanta, Br	137.46	349	P	PKiKP	09 56 52.4	-0.3
	baz=15						
E57A	Chemin Saint G	137.49	354	P	PKiKP	09 56 51.3	-1.6
	baz=7.9						
E47A	Iron Bridge	137.60	4	P	PKiKP	09 56 50.9	-2.0
	baz=354						
E46A	Sault Ste Mari	137.61	5		PKiKP	09 56 51.6	-1.4
E48A	Lockeyer	137.63	3	P	PKiKP	09 56 51.6	-1.4
	baz=356						
ECSD	EROS Data Cent	137.68	18	PKPdf	PKiKP	09 56 52.6	-0.7
ECSD	EROS Data Cent	137.68	18	P	PKiKP	09 56 51.9	-1.4
	baz=334						
E52A	Mattawa	137.88	359	P	PKiKP	09 56 52.8	-0.8
	baz=1.3						
G59A	Clarenceville	138.70	353	P	PKPdf	09 56 52.8	-0.3
	baz=9.6,SNR=8.0						
G47A	Hillman	138.83	5	P	PKiKP	09 56 54.2	-1.4
	baz=353						
SADO	Sadowa	139.40	359	PKP	PKPdf	09 56 53.2	-1.2
	comp=Z,4.3nm,0.9s,baz=73,slow=5.1,SNR=3.4						
J48A	Bridge Port	140.70	5	P	PKiKP	09 56 58.4	-1.0
	baz=353						
BINY	Binghamton	141.83	356	P	PKiKP	09 57 02.2	+0.4
	baz=5.7						
CPUP	Villa Florida	142.91	214	PKP	PKPdf	09 56 59.3	-2.0
	comp=Z,3.3nm,0.9s,baz=165,slow=4.1,SNR=3.0						
BDFB	Brasilia	143.12	237	PKP	PKPdf	09 56 59.7	-2.3
	comp=Z,2.4nm,0.4s,baz=33,slow=9.5,SNR=3.3						
MSTX	Muleshoe	143.22	33	P	PKiKP	09 57 05.2	+0.2

	baz=319						
N50A	Nevada	143.26	4	P	PKiKP	09 57 04.9	+0.1
	baz=354						
MNTX	Cornudas Mount	143.33	38		PKPdf	09 57 01.5	-0.4
MNTX	Cornudas Mount	143.33	38	P	PKPdf	09 57 00.6	-1.3
	baz=314						
N53A	Lisbon	143.34	2	P	PKPdf	09 57 00.3	-1.3
	baz=358						
O48A	Farmland	143.57	7	P	PKPbc	09 56 58.8	-0.6
	baz=350						
O50A	Cable	143.84	5	P	PKPbc	09 57 00.0	-0.1
	baz=353						
O53A	New Philadelph	143.89	2	P	PKPdf	09 57 00.4	-2.2
	baz=357						
P46A	Rosedale	143.89	10		PKPdf	09 57 01.2	-1.4
O51A	Pataskala	143.92	4	P	PKPdf	09 57 00.4	-2.3
	baz=355						
O52A	Adamsville	144.00	3	P	PKPdf	09 57 00.9	-1.9
	baz=356						
P48A	Milroy	144.32	8	P	PKPdf	09 57 02.1	-1.3
	baz=350						
P49A	Miami Univ. Ec	144.33	7	P	PKPdf	09 57 01.5	-1.9
	baz=351						
P50A	Jamestown	144.36	6	P	PKPdf	09 57 01.7	-1.7
	baz=353,SNR=13						
BLO	Bloomington	144.44	9	PKIKP	PKPdf	09 57 02.5	-1.1
BLO	Bloomington	144.44	9		PKPdf	09 57 02.5	-1.1
P59A	Jarrettsville	144.44	356	P	PKPdf	09 57 02.5	-1.1
	baz=5.3						
P52A	Corning	144.46	3	P	PKPdf	09 57 02.0	-1.6
	baz=356,SNR=6.7						
CCM	Cathedral Cave	144.49	16	PKIKP	PKPdf	09 57 02.7	-1.0
CCM	Cathedral Cave	144.49	16		PKPdf	09 57 02.7	-1.0
CCM	Cathedral Cave	144.49	16	P	PKPdf	09 57 02.3	-1.4
	baz=340						
MCWV	Mont Chateau	144.51	0	P	PKPdf	09 57 03.0	-0.8
	baz=359						
P51A	Williamsport	144.55	5	P	PKPdf	09 57 02.2	-1.5
	baz=354						
P54A	Burton	144.56	1	P	PKPdf	09 57 03.2	-0.7
	baz=358						
OLIL	Olney	144.58	11		PKPdf	09 57 03.2	-0.7
P58A	Pank, Wackersv	144.61	357	P	PKPdf	09 57 03.0	-0.9
	baz=3.8						
WMOK	Wichita Mounta	144.63	28	PKIKP	PKPdf	09 57 03.0	-1.1
WMOK	Wichita Mounta	144.63	28		PKPdf	09 57 03.0	-1.1
WMOK	Wichita Mounta	144.63	28	P	PKPdf	09 57 03.4	-0.7
	baz=326,SNR=50						
P53A	Whipple	144.64	2		PKPdf	09 57 02.9	-1.0
P53A	Whipple	144.64	2	P	PKPdf	09 57 03.1	-0.8
	baz=357,SNR=11						
P57A	Homestead Farm	144.65	358	P	PKPdf	09 57 03.3	-0.6
	baz=2.6,SNR=5.7						
P56A	Dayton Farm, R	144.66	359	P	PKPdf	09 57 03.4	-0.6
	baz=1.2,SNR=6.6						
P55A	Reedsville	144.66	0	P	PKPdf	09 57 03.4	-0.7
	baz=360,SNR=5.7						
OKCFA	Oklahoma City	144.66	26		PKPdf	09 57 03.6	-0.6
Q48A	North Vernon	144.79	8	P	PKPdf	09 57 03.5	-0.7
	baz=349,SNR=8.9						
FNO	Franklin	144.82	26		PKPdf	09 57 04.2	-0.2
Q49A	Aurora	144.83	7	P	PKPdf	09 57 03.7	-0.6
	baz=351,SNR=7.3						
TUL1	Leonard	144.92	23		PKPdf	09 57 04.2	-0.4
TUL1	Leonard	144.92	23	P	PKPdf	09 57 04.5	0.0
	baz=331,SNR=20						
Q51A	Peebles	144.98	5		PKPdf	09 57 03.8	-0.8
Q51A	Peebles	144.98	5	P	PKPdf	09 57 04.1	-0.4
	baz=353,SNR=22						
U38A	Gravette	144.98	21		PKPdf	09 57 04.1	-0.5
GO04	Tololo Observa	144.98	193		PKPdf	09 57 05.5	+0.3
Q50A	Georgetown	145.10	6	P	PKPdf	09 57 04.4	-0.4
	baz=352,SNR=7.3						
Q57A	Strasburg	145.11	358	P	PKPdf	09 57 04.9	+0.2
	baz=1.9,SNR=25						
Q52A	Bidwell	145.12	4	P	PKPdf	09 57 04.6	-0.2
	baz=355,SNR=13						
Q56A	Snyder Ridge,	145.12	359		PKPdf	09 57 04.7	-0.1
Q56A	Snyder Ridge,	145.12	359	P	PKPdf	09 57 04.8	0.0
	baz=0.6,SNR=5.5						
W35A	Tecumseh	145.13	25		PKPdf	09 57 05.0	0.0
Q54A	Coxs Mills	145.16	2		PKPdf	09 57 04.9	+0.1
Q54A	Coxs Mills	145.16	2	P	PKPdf	09 57 04.9	+0.1
	baz=358,SNR=18						
Q55A	Buckhannon	145.17	1	P	PKPdf	09 57 05.0	+0.1
	baz=359,SNR=20						
X34A	Smith Ranch, M	145.18	27		PKPdf	09 57 05.5	+0.5
Q58A	Fox Den Farm,	145.18	357	P	PKPdf	09 57 04.4	-0.5
	baz=3.2						
Q59A	Harwood	145.20	356	P	PKPdf	09 57 05.3	+0.5
	baz=5.0						
Q53A	Leroy	145.26	3	P	PKPdf	09 57 05.3	+0.2
	baz=356,SNR=12						
HHAR	Hobbs	145.28	21		PKPdf	09 57 04.8	-0.4
S44A	Carbondale	145.33	13		PKPdf	09 57 05.1	0.0
WCI	Wyandotte Cave	145.40	9	PKIKP	PKPdf	09 57 05.4	+0.1
WCI	Wyandotte Cave	145.40	9		PKPdf	09 57 05.4	+0.1
WCI	Wyandotte Cave	145.40	9	P	PKPdf	09 57 05.7	+0.4
	baz=348						
USIN	University of	145.41	11		PKPdf	09 57 05.1	-0.2
R49A	Shelbyville	145.50	8		PKPab	09 57 05.6	-0.1
R49A	Shelbyville	145.50	8	P	PKPab	09 57 05.5	-0.1
	baz=350,SNR=14						
U40A	Yellville	145.58	19		PKPab	09 57 05.3	-0.8
U40A	Yellville	145.58	19	P	PKPab	09 57 06.0	0.0
	baz=336,SNR=28						
R61A	Willards	145.61	354	P	PKiKP	09 57 06.8	-2.8
	baz=7.3						
R50A	Paris	145.61	7		PKPab	09 57 05.5	-0.6
R50A	Paris	145.61	7	P	PKPab	09 57 06.0	-0.1
	baz=352,SNR=14						
R51A	Hillsboro	145.67	6	P	PKPab	09 57 06.1	-0.2
	baz=353,SNR=7.8						
R52A	Catlettsburg	145.72	4	P	PKPab	09 57 06.5	0.0
	baz=354,SNR=9.6						
R56A	Bull Pasture M	145.76	360	P	PKiKP	09 57 07.1	-3.0
	baz=0.2,SNR=7.0						
R53A	Hurricane	145.77	3		PKPab	09 57 05.9	-0.7
R53A	Hurricane	145.77	3	P	PKPab	09 57 06.7	+0.1
	baz=356,SNR=13						
R58A	Rapidan	145.83	358	P	PKPab	09 57 07.1	+0.2
	baz=2.7,SNR=8.2						
R57A	Stanardsville	145.85	358	P	PKiKP	09 57 07.5	-2.7
	baz=1.8,SNR=9.7						
R55A	Marlinton	145.88	1		PKPab	09 57 07.1	-0.1
R55A	Marlinton	145.88	1	P	PKPab	09 57 07.3	+0.2
	baz=359,SNR=6.7						
PBMO	Poplar Bluff	145.90	16		PKPab	09 57 06.4	-0.8
ABTX	Abilene, Hawle	145.91	31		PKiKP	09 57 07.8	-2.8
ABTX	Abilene, Hawle	145.91	31	P	PKiKP	09 57 08.1	-2.4
	baz=322						
R54A	Victor	145.96	2	P	PKPab	09 57 06.9	-0.6
	baz=357						
S49A	Springfield	145.98	8	P	PKPab	09 57 06.6	-0.8
	baz=350,SNR=8.8						
TX31	Lajitas Ar. Si	146.03	40		PKiKP	09 57 08.1	-2.9
TX32	Lajitas Array	146.03	40		PKiKP	09 57 08.1	-2.9
TXAR	Lajitas Array	146.03	40	PKPbc	PKPab	09 57 07.9	-0.2
	comp=Z,23nm,0.7s,baz=277,slow=1.1,SNR=170						
TXAR	Lajitas Array	146.03	40		PKPab	09 57 07.7	-0.4
T45A	Paducah	146.12	13		PKPab	09 57 07.7	-0.2
R58B	Mineral	146.16	358		PKPab	09 57 07.9	-0.2
R58B	Mineral	146.16	358	P	PKPab	09 57 07.9	-0.2
	baz=2.9,SNR=7.9						
PARMO	Parma	146.19	15		PKPab	09 57 07.5	-0.8
S50A	Richmond	146.20	7	P	PKPab	09 57 07.3	-1.1
	baz=351,SNR=7.7						
FCAR	Ozark Folk Cen	146.24	18		PKPab	09 57 07.0	-1.5
HPIG		146.25	45		PKPab	09 57 08.6	-0.5
W39A	Magazine	146.31	21		PKPab	09 57 07.6	-1.2
W39A	Magazine	146.31	21	P	PKPab	09 57 08.3	-0.5
	baz=334,SNR=6.5						
S51A	Beattyville	146.33	6		PKPab	09 57 07.6	-1.2
S51A	Beattyville	146.33	6	P	PKPab	09 57 08.4	-0.4
	baz=353,SNR=19						
S54A	Dingess, Beckl	146.33	2		PKPbc	09 57 07.0	-1.1
S54A	Dingess, Beckl	146.33	2	P	PKPab	09 57 08.4	-0.5
	baz=357,SNR=9.1						
S59A	Mechanicsville	146.33	357	P	PKPab	09 57 08.5	-0.2
	baz=4.0,SNR=7.5						
S52A	Salyersville	146.34	5	P	PKPab	09 57 08.5	-0.3
	baz=354,SNR=12						
LCAR	Lake Charles	146.37	17		PKPab	09 57 08.0	-1.0
S55A	Lewisburg	146.38	1	P	PKPab	09 57 08.3	-0.7
	baz=358						
S57A	Dark Hollow, R	146.40	359		PKPab	09 57 08.8	-0.2
S57A	Dark Hollow, R	146.40	359	P	PKiKP	09 57 09.1	-2.3
	baz=1.0,SNR=9.7						
S53A	Williamson	146.40	4	P	PKPab	09 57 08.6	-0.5
	baz=355,SNR=13						
HICK	Hickman	146.44	14		PKPab	09 57 07.5	-1.8
T47A	Sharon Grove	146.46	11		PKPbc	09 57 06.8	-1.6
T47A				PKPbc	PKPab	09 57 08.7	-0.6
S56A	Natural Bridge	146.49	360	P	PKPab	09 57 09.0	-0.5
	baz=360,SNR=5.5						
Z35A	Perchaven, San	146.50	27		PKPab	09 57 07.8	-1.8
S58A	Poland Farm, P	146.52	358		PKPab	09 57 08.1	-1.4
S58A				PKPbc	PKiKP	09 57 09.3	-2.3
S58A	Poland Farm, P	146.52	358	P	PKiKP	09 57 09.2	-2.3
	baz=2.6,SNR=7.0						
T49A	Edmonton	146.61	9		PKPbc	09 57 07.6	-1.3
T49A	Edmonton	146.61	9	P	PKPab	09 57 08.9	-1.0
	baz=349,SNR=5.0						
WHAR	Wooly Hollow	146.73	19		PKPbc	09 57 08.0	-1.3
T50A	Nancy	146.79	8	P	PKPab	09 57 09.1	-1.6
	baz=350						
W41B	Gary Mavity, V	146.85	19		PKPab	09 57 09.1	-1.8
W41B	Gary Mavity, V	146.85	19	P	PKPab	09 57 09.3	-1.6
	baz=336						
T52A	Hallie	146.91	5		PKPbc	09 57 07.6	-2.2
T52A				PKPbc	PKPab	09 57 10.2	-0.9
T52A	Hallie	146.91	5	P	PKPab	09 57 10.2	-0.9
	baz=354,SNR=7.5						
BLA	Blacksburg	146.94	1	P	PKPab	09 57 10.3	-1.0
	baz=358						
T51A	Gray	146.96	6	P	PKPab	09 57 10.1	-1.1
	baz=352,SNR=8.2						
MIAR	Mount Ida	146.96	21	PKP2	PKPbc	09 57 08.6	-1.4
MIAR	Mount Ida	146.96	21		PKPbc	09 57 08.6	-1.4
MIAR	Mount Ida	146.96	21	P	PKiKP	09 57 10.8	-1.7
	baz=334,SNR=17						
T55A	Pulaski	147.03	2	P	PKPab	09 57 10.6	-1.0
	baz=358						
T54A	Tazewell	147.05	3	P	PKPab	09 57 10.6	-1.1
	baz=356,SNR=10						
T53A	Wise	147.07	4	P	PKPab	09 57 10.7	-1.0
	baz=354,SNR=9.4						
T56A	Rocky Mt	147.13	1	P	PKPab	09 57 10.8	-1.2
	baz=359,SNR=9.1						
T59A	Double "B" Far	147.13	357		PKiKP	09 57 11.1	-1.7
T59A	Double "B" Far	147.13	357	P	PKiKP	09 57 11.2	-1.7
	baz=3.6,SNR=7.2						
WVT	Waverly	147.15	12	PKP2	PKPbc	09 57 08.7	-1.8
WVT	Waverly	147.15	12		PKPbc	09 57 08.7	-1.8
WVT				PKPbc	PKiKP	09 57 11.1	-1.8
WVT	Waverly	147.15	12	P	PKPab	09 57 10.8	-1.2
	baz=345						
U49A	Red Boiling Sp	147.16	9		PKPab	09 57 10.1	-1.9
T57A	Hurt	147.16	359		PKPdf	09 57 07.8	-0.5
T57A				PKPbc	PKiKP	09 57 11.4	-1.5
T57A	Hurt	147.16	359	P	PKPab	09 57 10.9	-1.2
	baz=0.5,SNR=7.0						
UALR	University of	147.19	20		PKPdf	09 57 07.4	-1.0
UALR				PKPbc	PKiKP	09 57 11.3	-1.7
T58A	Grand View Acr	147.20	358	P	PKiKP	09 57 11.4	-1.6
	baz=1.8,SNR=7.5						
X40A	Basin Creek Fa	147.28	20		PKPdf	09 57 08.3	-0.3
X40A				PKPbc	PKiKP	09 57 11.6	-1.7
X40A	Basin Creek Fa	147.28	20	P	PKiKP	09 57 11.8	-1.4
	baz=335						
GO03	Copiap	147.31	196		PKiKP	09 57 12.7	-0.9
TZTN	Tazewell	147.42	6		PKPab	09 57 11.5	-1.6
TZTN	Tazewell	147.42	6	P	PKPab	09 57 11.5	-1.6
	baz=353,SNR=11						
CLTN	Cedars of Leba	147.47	10		PKPab	09 57 12.0	-1.3
JCT	Junction City	147.50	34	PKP2	PKPbc	09 57 10.1	-1.6
JCT	Junction City	147.50	34		PKPbc	09 57 10.1	-1.6
JCT				PKPbc	PKiKP	09 57 12.8	-1.0
JCT	Junction City	147.50	34	P	PKPbc	09 57 10.7	-1.0
	baz=320						
WHTX	Lake Whitney,	147.51	29		PKiKP	09 57 12.6	-1.2
WHTX	Lake Whitney,	147.51	29	P	PKiKP	09 57 12.5	-1.3
	baz=325						
U54A	Nelsons Funny	147.58	3		PKPab	09 57 12.1	-1.7
U54A	Nelsons Funny	147.58	3	P	PKPab	09 57 12.0	-1.7
	baz=356						
U60A	Pendleton	147.61	356	P	PKiKP	09 57 12.5	-1.3
	baz=4.4						
U55A	TA2, Sparta	147.63	2	P	PKPab	09 57 12.0	-2.1
	baz=357,SNR=11						
V48A	Smith Brothers	147.73	11		PKiKP	09 57 12.3	-1.8
U57A	Blanch	147.73	360	P	PKiKP	09 57 12.7	-1.4
	baz=0.3,SNR=8.6						
U58A	Oxford	147.75	358	P	PKPab	09 57 13.1	-1.3
	baz=1.8,SNR=8.8						
U59A	Littleton	147.76	357		PKiKP	09 57 12.4	-1.7
U59A	Littleton	147.76	357	P	PKPab	09 57 13.0	-1.4
	baz=3.2						
U56A	King	147.81	1		PKiKP	09 57 12.9	-1.4
U56A	King	147.81	1	P	PKiKP	09 57 12.7	-1.6
	baz=358						
X43A	Marvell	147.89	18		PKiKP	09 57 13.2	-1.2
X43A	Marvell	147.89	18	P	PKiKP	09 57 13.2	-1.2
	baz=338						
WLAR	White Oak Lake	147.90	21		PKPab	09 57 13.5	-1.5
CCAR	Cane Creek	148.16	19		PKPab	09 57 14.2	-1.8
PLAL	Pickwick Lake	148.20	13		PKiKP	09 57 13.4	-1.7
TKL	Tuckaleechee C	148.27	6	PKPbc	PKiKP	09 57 13.8	-1.5
	comp=Z,17nm,0.7s,baz=116,slow=1.9,SNR=28						
V57A	Coltrane Farms	148.27	0	P	PKiKP	09 57 13.9	-1.4
	baz=360,SNR=6.8						
V55A	Taylorsville	148.27	2		PKiKP	09 57 13.9	-1.3
V55A	Taylorsville	148.27	2	P	PKiKP	09 57 14.0	-1.3
	baz=357,SNR=7.1						
237A	Washetta, Mont	148.28	27		PKPab	09 57 14.7	-1.9
V54A	Nebo	148.31	4	P	PKiKP	09 57 14.1	-1.2
	baz=355,SNR=6.9						
OXF	Oxford	148.31	15	PKP2	PKiKP	09 57 13.7	-1.6
OXF	Oxford	148.31	15		PKiKP	09 57 13.7	-1.6
OXF	Oxford	148.31	15	P	PKiKP	09 57 14.0	-1.3
	baz=341,SNR=5.7						
V60A	Jim Taylor Roa	148.32	356	P	PKPab	09 57 14.8	-1.8
	baz=4.3						
V56A	Mocksville	148.34	1	P	PKiKP	09 57 14.5	-0.9
	baz=358,SNR=5.9						
V58A	Windy Hill, Pi	148.36	359		PKiKP	09 57 14.4	-1.0
V58A	Windy Hill, Pi	148.36	359	P	PKiKP	09 57 14.4	-1.0
	baz=0.8						
V59A	Middlesex	148.37	358	P	PKiKP	09 57 14.4	-1.0
	baz=2.4						
CPCT	Cooper Cave	148.38	8		PKiKP	09 57 14.2	-1.2
SWET	Sewanee	148.40	10		PKiKP	09 57 13.6	-2.0
Z41A	Richland Creek	148.40	21		PKiKP	09 57 14.3	-1.2
Z41A	Richland Creek	148.40	21	P	PKiKP	09 57 14.8	-0.8
	baz=334						
435B	Jarrell	148.43	30		PKiKP	09 57 15.1	-0.6
435B	Jarrell	148.43	30	P	PKPab	09 57 15.5	-1.9
	baz=324						
CNNC	Cliffs of the	148.88	357	P	PKPab	09 57 16.4	-2.5
	baz=3.1						
X48A	Hartselle	148.93	12		PKiKP	09 57 15.4	-1.2
KMSC	Kings Mountain	148.98	3		PKiKP	09 57 15.5	-1.2
KMSC	Kings Mountain	148.98	3	P	PKiKP	09 57 15.7	-1.0
	baz=356,SNR=10.0						
W54A	Cherokee Point	148.98	4	P	PKiKP	09 57 15.8	-1.0
	baz=355,SNR=9.0						
NATX	Nacogdoches	148.99	25		PKiKP	09 57 16.7	-0.1
NATX	Nacogdoches	148.99	25	P	PKPab	09 57 16.8	-2.6
	baz=330						
W57A	Gilead	149.00	1		PKiKP	09 57 16.2	-0.5
W57A	Gilead	149.00	1	P	PKiKP	09 57 16.0	-0.7
	baz=359,SNR=6.1						
W56A	Indian Trail	149.01	2	P	PKiKP	09 57 15.7	-1.0
	baz=358,SNR=5.1						
BG3	Lake Jocassee	149.01	5		PKiKP	09 57 16.1	-0.7
W60A	Pink Hill	149.06	357	P	PKiKP	09 57 16.6	-0.2
	baz=3.5						
FPAL	Fort Paine	149.11	10		PKiKP	09 57 16.2	-0.8
W58A	Raeford	149.13	359	P	PKiKP	09 57 16.4	-0.6
	baz=0.5						
X51A	Calhoun	149.21	8		PKiKP	09 57 17.1	-0.1
X51A	Calhoun	149.21	8	P	PKiKP	09 57 16.7	-0.5
	baz=350						
PAULI	Pauline	149.27	4		PKiKP	09 57 16.3	-1.0
143A	Socs Landing,	149.39	20		PKiKP	09 57 17.3	-0.3
GO02	Mina Guanaco	149.41	198		PKiKP	09 57 18.3	0.0
X53A	Estanollee	149.46	6	P	PKiKP	09 57 17.5	-0.2
	baz=353,SNR=10						
BIRD	Birdtown, Kers	149.50	1		PKiKP	09 57 17.8	0.0
X54A	Belton	149.50	4	P	PKiKP	09 57 17.4	-0.4
	baz=354,SNR=11						
X60A	Albert Glenn T	149.54	357	P	PKiKP	09 57 17.9	+0.1
	baz=3.0						
X59A	McDuffie Farm,	149.57	358	P	PKiKP	09 57 17.9	0.0
	baz=1.8						
X58A	Rowland	149.60	360		PKiKP	09 57 17.9	0.0
X58A	Rowland	149.60	360	P	PKiKP	09 57 17.5	-0.5
	baz=0.3						
X55A	Gracelyn & Ava	149.63	3	P	PKiKP	09 57 17.4	-0.6
	baz=356,SNR=7.0						
Y49A	Blount Mountai	149.63	11		PKiKP	09 57 17.6	-0.6
X56A	White Oak	149.64	2	P	PKiKP	09 57 17.5	-0.6
	baz=357,SNR=5.0						
X57A	Johnson Farm,	149.69	1	P	PKiKP	09 57 17.7	-0.5
	baz=359						
HODGE	Hodges	149.82	4		PKiKP	09 57 18.0	-0.4
HKT	Hockley	149.98	29	PKP2	PKiKP	09 57 19.3	+0.5
HKT	Hockley	149.98	29		PKiKP	09 57 19.3	+0.5
Y52A	Lilburn	150.00	7		PKPdf	09 57 12.6	-0.5
Y52A				PKPbc	PKiKP	09 57 18.9	0.0
Y52A	Lilburn	150.00	7	P	PKiKP	09 57 18.9	0.0
	baz=351,SNR=7.2						
Y60A	Bolivia	150.12	358	P	PKiKP	09 57 19.3	+0.2
	baz=2.6						
VBMS	Vicksburg	150.13	19	PKPdf	PKPdf	09 57 12.4	-0.8
VBMS					pPKPdf	09 57 19.4	-1.4
VBMS	Vicksburg	150.13	19	P	PKiKP	09 57 19.6	+0.5
	baz=338						
Y57A	Sumter	150.13	1		PKiKP	09 57 19.2	+0.1
Y57A	Sumter	150.13	1	P	PKiKP	09 57 18.9	-0.2
	baz=358,SNR=7.6						
Y55A	Saluda	150.15	4	P	PKiKP	09 57 19.1	0.0
	baz=355,SNR=5.6						
Y59A	Loris	150.16	359	P	PKiKP	09 57 19.3	+0.1
	baz=1.3						
Y58A	Scranton	150.25	0		PKiKP	09 57 19.5	+0.2
Y58A	Scranton	150.25	0	P	PKiKP	09 57 19.8	+0.5
	baz=360						
LRAL	Lakeview Retre	150.31	13		PKiKP	09 57 19.0	-0.5
LRAL	Lakeview Retre	150.31	13	P	PKiKP	09 57 18.8	-0.7
	baz=345						
Z50A	Ashland	150.31	11		PKiKP	09 57 19.1	-0.5
Z50A	Ashland	150.31	11	P	PKiKP	09 57 18.5	-1.0
	baz=347,SNR=6.5						
Y56A	Pelion	150.32	3	P	PKiKP	09 57 19.4	-0.1
	baz=356						
Z51A	Franklin	150.38	9		PKiKP	09 57 19.6	-0.1
GOGA	Godfrey	150.52	7	PKIKP	PKiKP	09 57 20.2	+0.3
GOGA	Godfrey	150.52	7		PKiKP	09 57 20.2	+0.3
GOGA	Godfrey	150.52	7	P	PKiKP	09 57 20.0	+0.1
	baz=352						
344A	Westbrook Farm	150.76	20		PKiKP	09 57 20.8	+0.4
Z58A	St. Stephen	150.82	0	P	PKiKP	09 57 20.9	+0.4
	baz=359						
Z57A	Bowman	150.84	2	P	PKiKP	09 57 20.8	+0.2
	baz=358						
ZAIG	Zacatecas	151.00	48		PKiKP	09 57 22.7	+1.1
152A	Waverly Hall	151.09	9		PKiKP	09 57 21.1	0.0
346A	Big Creek Wild	151.23	18		PKiKP	09 57 21.7	+0.2
250A	Grady	151.48	12		PKiKP	09 57 22.5	+0.5
LVC	Limon Verde	151.55	201	PKIKP	PKiKP	09 57 23.7	+0.8
LVC	Limon Verde	151.55	201		PKiKP	09 57 23.6	+0.8
BRAL	Brewton	152.09	14		PKiKP	09 57 24.1	+0.9
BRAL	Brewton	152.09	14	P	PKiKP	09 57 24.4	+1.2
	baz=344						
255A	Hazlehurst	152.09	5		PKiKP	09 57 23.3	+0.1
352A	Blakely	152.22	10		PKiKP	09 57 23.6	+0.1
TIGA	Tifton	152.46	7		PKiKP	09 57 24.5	+0.5
TIGA	Tifton	152.46	7	P	PKiKP	09 57 24.9	+1.0
	baz=351						
PB01	IPOC Station P	153.20	201		PKPdf	09 57 18.6	+0.2
GO01	Chusmiza	154.34	203	PKPdf	PKPdf	09 57 20.1	-0.4
GO01					PKPab	09 57 44.9	+2.3
SMRT	St. Maarten	158.61	312	IAMs_20	IAMs_20	11 15 11.8	
	comp=Z,406nm,22.0s						
SEUS	St. Eustatius	158.89	311	IAMs_20	IAMs_20	11 19 23.6	
	comp=Z,507nm,21.0s						
SABA	Saba	159.00	311	IAMs_20	IAMs_20	11 22 26.6	
	comp=Z,572nm,20.0s						
CMIG	Matias Romero	160.17	48	PKPab	PKPab	09 58 07.0	-0.4
	comp=Z,4.0nm,0.9s,baz=326,slow=4.7,SNR=5.9						

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*IDC **15** 09:43:21.6±0.7, 3°.95S×100°.37E, h0^{km}, mb4.5/27, mb1 4.6/30, mb1mx4.4/67, mbtmp4.6/30, ML4.0/2, MS5.2/2, Ms1 5.2/2, ms1mx4.4/38, Error ellipse: s-maj=23.1km s-min=11.9km az=53.0*

*NEIC **15** 09:43:23.0±1.4, 4°.13S±0°.10×100°.37E±0°.09, h14^{km}±4^{km}, mb4.8/44, Error ellipse: s-maj=17.2km s-min=9.0km az=221.0*

*DJA **15** 09:43:24.4±0.5, 4°S±4°×10°0E±°, h10^{km}, M4.9/9, mb4.9/9, MLv4.8/8*

ISC 15 09:43:25.1±0.5**, 4°.05S**±0°.07×**100°.36E**±0°.07**, h27^{km}, n155,** σ1^{s}**13**/149**, mb4.7**/42**, 2C, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPSI	Pulau Pagai	1.32	345	P	Pn	09 43 46.1	-1.7
PPSI				S	Sb	09 44 06.4	+0.5
KRJI	Kerinci	2.23	29	P	Pn	09 44 01.2	+0.8
KSI	Kapahiang	2.26	80	P	Pn	09 43 45.6	-15
KSI				S	Sn	09 44 29.2	+1.4
MNAI	Manna	2.60	97	P	Pn	09 44 05.8	+0.4
MNAI	Manna	2.60	97	Pn	Pn	09 44 04.0	-1.5
PDSI	Padang	3.12	2	P	Pn	09 44 12.7	+0.2
SDSI	Sungai Dareh	3.27	19	P	Pn	09 44 14.9	+0.3
LWLI	Liwa	3.81	105	P	Pn	09 44 22.3	+0.2
MDSI	Maura Dua	3.83	97	P	Pn	09 44 22.9	+0.6
DBJI	Dramaga	6.83	112	P	Pb	09 45 13.8	-9.3
RPSI	Rantau Prapat	6.85	348		Pn	09 45 03.9	0.0
PSI	Prapat	6.95	348	Pn	Pn	09 45 03.9	-1.5
	1.3nm,0.3s,baz=201,slow=8.6,SNR=3.4						
CNJI	Cibinong	7.47	116	P	Pn	09 45 12.3	-0.1
	1.2nm280nm,0.9s						
LEM	Lembang	7.73	111	Pn	Pn	09 45 17.9	+1.8
	4.9nm,0.3s,baz=209,slow=11,SNR=12						
LEM				Sn	Sn	09 46 43.5	+0.6
	3.9nm,0.3s,baz=39,slow=20,SNR=1.9						
CISI	Cisompet, Garu	8.19	116	P	Pn	09 45 21.9	-0.4
	392nm,0.8s						
CISI	Cisompet, Garu	8.19	116		Pn	09 45 20.9	-1.5
CISI				Sn	Sn	09 46 52.8	-1.3
IPM	Ipoh	8.50	4	Pn	Pn	09 45 28.9	+2.4
KULM	Kulim	9.28	2	Pn	Pn	09 45 36.8	-0.4
JAGI	Jajag, Banyuwa	14.39	108	Pn	Pn	09 46 45.3	-1.9
KKM	Kota Kinabalu	18.74	58	P	P	09 47 40.1	-1.9
KAPI	Kappang	19.35	94	P	P	09 47 49.1	+0.4
	baz=270,slow=9.4,SNR=14						
SPSI	Sidrap Palu	19.36	90	P	Pn	09 47 59.5	+9.5
TTSI	Tana Toraja	19.44	88	P	Pn	09 48 12.8	+22
BNSI	Bone	19.69	92	P	Pn	09 47 54.6	+0.6
	67nm,1.8s						
BKSI	Bulukumba	19.73	94	P	Pn	09 47 54.1	-0.4
	65nm,1.1s						
UBPT	Khong Chiam	19.86	15	P	P	09 47 54.3	+0.1
MPSI	Mapaga	20.00	78	P	Pn	09 48 12.4	+15
PBKT	Sadao Pong	20.50	2	P	P	09 48 01.3	+0.2
CMAR	Chiang Mai Arr	22.41	356	P	P	09 48 20.7	-1.0
	18nm,1.2s,baz=184,slow=8.9,SNR=13						
CMAR	Chiang Mai Arr	22.41	356	P	P	09 48 21.1	-0.6
CHTO	Chiang Mai	22.76	357	P	P	09 48 25.9	+0.4
CHTO				IAmb	IAmb	09 48 28.2	
	comp=Z,26nm,1.3s						
SLVN	Son La	25.46	8	P	P	09 48 51.7	+0.6
SLVN				IAmb	IAmb	09 48 53.7	
	comp=Z,20nm,0.9s						
H08S2	Diego Garcia H	27.95	261	T	T	10 18 16.0	
	baz=84						
H08S3	Diego Garcia H	27.96	261	T	T	10 18 13.0	
	baz=84,slow=74						
H08S1	Diego Carcia H	27.97	261	T	T	10 18 13.3	
	baz=84,slow=74						
FITZ	Fitzroy Crossi	28.41	121	P	P	09 49 18.3	+0.7
	comp=Z,9.6nm,0.9s,baz=1.2,slow=0.9,SNR=4.8						
ODAN	Odare	33.19	339	*e*P	P	09 50 01.8	+1.8
H01W3	Cape Leeuwin H	33.23	159	T	T	10 24 56.9	
	baz=336,slow=76						
H01W2	Cape Leeuwin H	33.25	159	T	T	10 24 55.2	
	baz=336,slow=76						
H01W1	Cape Leeuwin H	33.25	159	T	T	10 24 54.8	
	baz=336,slow=76						
TAPN	Taplejung	33.52	339	*e*P	P	09 50 05.1	+2.2
	comp=Z,59nm,0.9s						
RAMN	Ramite	33.57	337	*e*P	P	09 50 05.4	+2.1
JIRN	Jiri	34.36	337	*e*P	P	09 50 12.1	+1.8

LSA	Lhasa	34.70	346	P	P	09 50 12.0	-1.3
LSA				IAmb	IAmb	09 50 23.9	
	comp=Z,12nm,0.8s						
GUN	Gumba	34.71	337	eP	P	09 50 15.0	+1.7
	comp=Z,47nm,0.6s						
KKN	Kakani	34.84	336	eP	P	09 50 15.8	+1.6
ENH	Enshi	35.23	14	P	P	09 50 17.6	+0.3
WB0	Warramunga Arr	36.66	118	P	P	09 50 31.0	+1.2
WB0				IAmb	IAmb	09 50 34.5	
	comp=Z,19nm,1.2s						
WRA	Warramunga Arr	36.68	118	P	P	09 50 29.7	-0.3
	comp=Z,9.2nm,1.0s,baz=300,slow=10.0,SNR=4.6						
WRA	Warramunga Arr	36.68	118	P	P	09 50 28.0	-2.0
WRAB	Tennant Creek	36.68	118	P	P	09 50 25.7	-4.3
WRAB				IAmb	IAmb	09 50 34.7	
	comp=Z,17nm,1.1s						
WR0	Warramunga Arr	36.86	118	P	P	09 50 32.3	+0.8
ASAR	Alice Springs	37.78	124	P	P	09 50 38.8	-0.6
	comp=Z,7.5nm,1.0s,baz=292,slow=16,SNR=4.8						
ASAR				PcP	PcP	09 52 57.0	+1.1
	comp=Z,1.2nm,0.8s,baz=322,slow=2.8,SNR=3.8						
ASAR				LR	LR	10 08 04.7	
	comp=Z,3µm,19.3s,baz=97,slow=39						
ASAR	Alice Springs	37.78	124	P	P	09 50 37.5	-1.9
AS31	Alice Springs	37.78	124	P	P	09 50 39.4	0.0
XAN	Xi'an	38.73	11	P	P	09 50 47.1	-0.1
NIL	Nilore	45.41	328	P	P	09 51 42.0	+0.3
PMG	Port Moresby	46.75	99	P	P	09 51 51.2	-1.3
JNU	Nakatsue	46.92	36	P	P	09 51 52.1	-1.4
	comp=Z,7.6nm,0.9s,baz=189,slow=13,SNR=2.9						
JNU	Nakatsue	46.92	36	P	P	09 51 52.7	-0.9
CTA	Charters Tower	47.43	114	P	P	09 51 58.1	+0.4
	comp=Z,11nm,1.0s,baz=288,slow=8.7,SNR=5.7						
STKA	Stephens Creek	47.54	131	P	P	09 51 59.4	+1.0
	comp=Z,7.6nm,0.9s,baz=312,slow=5.0,SNR=5.0						
STKA	Stephens Creek	47.54	131	P	P	09 51 57.3	-1.1
KSAR	Wonju Array Be	48.57	29	P	P	09 52 06.6	+0.3
KSRS	Korea Array	48.60	29	P	P	09 52 06.2	-0.3
	comp=Z,6.3nm,0.9s,baz=222,slow=8.3,SNR=14						
WMQ	Urumqi	49.00	348	P	P	09 52 11.4	+1.9
NRN	Naryn	50.43	336	P	P	09 52 20.3	-0.4
NRN				IAmb	IAmb	09 52 33.9	
	comp=Z,13nm,1.4s						
KDJ	Kajisay	50.56	338	P	P	09 52 22.5	+0.9
KDJ				IAmb	IAmb	09 52 28.9	
	comp=Z,17nm,1.1s						
BOOM	Boomskoye usch	51.35	337	P	P	09 52 27.8	+0.3
BTK	Batken	51.60	331	P	P	09 52 29.8	+0.5
BTK				IAmb	IAmb	09 52 44.5	
	comp=Z,8.8nm,1.1s						
SONM	Songino Array	51.94	5	P	P	09 52 32.9	+1.2
	comp=Z,11nm,0.8s,baz=184,slow=9.0,SNR=32						
SONM	Songino Array	51.94	5	P	P	09 52 33.5	+1.8
ULN	Ulaanbaatar	52.03	6	P	P	09 52 33.0	+0.5
ULN					P	09 52 33.6	+1.2
ULN				IAmb	IAmb	09 52 35.2	
	comp=Z,12nm,1.0s						
JHJ	Hachijo jima 2	52.51	42	LR	LR	10 15 00.0	
	comp=Z,2µm,19.3s,baz=124,slow=36						
MK31	Makanchi Array	53.09	345	P	P	09 52 40.9	+0.8
MK31				IAmb	IAmb	09 52 42.1	
	comp=Z,7.9nm,0.9s						
MKAR	Makanchi Array	53.09	345	P	P	09 52 40.1	0.0
	comp=Z,7.3nm,0.7s,baz=149,slow=8.6,SNR=27						
MKAR	Makanchi Array	53.09	345	P	P	09 52 40.8	+0.7
MAKZ	Makanchi	53.18	344	P	P	09 52 41.4	+0.5
MAJO	Matsushiro	53.64	38	P	P	09 52 43.3	-1.1
MJAR	Matsushiro Arr	53.64	38	P	P	09 52 43.8	-0.6
	comp=Z,6.3nm,1.0s,baz=221,slow=8.1,SNR=10.0						
MJAR	Matsushiro Arr	53.64	38	P	P	09 52 43.6	-0.8
KKAR	Karatay Array	54.13	333	P	P	09 52 47.8	-0.1
USA0B	Ussuriysk Arra	55.79	27	P	P	09 53 00.3	+0.5
USRK	Ussuriysk Ar.	55.79	27	P	P	09 53 00.4	+0.6
	comp=Z,14nm,0.8s,baz=218,slow=6.2,SNR=25						
USRK	Ussuriysk Ar.	55.79	27	P	P	09 53 00.1	+0.4
GEYT	Alibeck	57.25	321	P	P	09 53 10.8	+0.4
	comp=Z,2.2nm,0.7s,baz=116,slow=6.8,SNR=3.8						
KURK	Kurchatov	57.66	344	P	P	09 53 13.8	+0.9
KURK				IAmb	IAmb	09 53 29.6	
	comp=Z,11nm,0.9s						
ZAA0	Zalesovo Array	59.23	349	P	P	09 53 24.7	+0.9
ZALV	Zalesovo Beam	59.23	349	P	P	09 53 23.9	0.0
	comp=Z,14nm,0.9s,baz=180,slow=5.0,SNR=23						
ZALV	Zalesovo Beam	59.23	349	P	P	09 53 24.4	+0.6
KLR	Kul'dur	59.65	23	P	P	09 53 27.2	+0.4
	comp=Z,6.3nm,0.9s,baz=235,slow=6.4,SNR=16						
ASAJ	Asahikawa	61.10	34	P	P	09 53 37.4	+0.6
	comp=Z,5.8nm,0.8s,baz=201,slow=9.3,SNR=5.6						
JKA	Kamikawa-asahi	61.10	34	P	P	09 53 37.4	+0.6
BVAR	Borovoye Array	62.22	340	P	P	09 53 44.2	-0.1
	comp=Z,1.6nm,0.7s,baz=145,slow=8.5,SNR=5.2						
YSS	Yuzh-Sakhalins	63.02	31	P	P	09 53 49.5	-0.2
ABKAR	Akbulak array	63.60	332	P	P	09 53 53.4	-0.1
ABKAR				IAmb	IAmb	09 53 54.7	
	comp=Z,7.1nm,0.8s						
AKTO	Aktyubinsk	65.32	332	P	P	09 54 04.7	0.0
	comp=Z,1.8nm,0.9s,baz=118,slow=18,SNR=2.8						
ARU	Arti	69.22	337	P	P	09 54 29.5	+0.2
ARU				IAmb	IAmb	09 54 38.8	
	comp=Z,15nm,1.5s						
YAK	Yakutsk	69.62	14	P	P	09 54 30.9	-0.8
	comp=Z,7.2nm,0.3s,baz=322,slow=2.6,SNR=5.6						
YAK	Yakutsk	69.62	14	P	P	09 54 30.2	-1.4
KBZ	Khabaz	70.09	319	P	P	09 54 35.1	+0.3
	comp=Z,1.9nm,0.7s,baz=118,slow=6.1,SNR=5.8						
NRIK	Noril'sk	73.76	355	P	P	09 54 56.9	+0.4
	comp=Z,4.6nm,0.6s,baz=170,slow=6.0,SNR=5.9						
MA2	Magadan	74.74	24	P	P	09 55 02.5	+0.1
	comp=Z,4.7nm,0.7s,baz=252,slow=6.2,SNR=5.2						
MA2	Magadan	74.74	24	P	P	09 55 02.9	+0.5
MA2				IAmb	IAmb	09 55 16.8	
	comp=Z,15nm,1.1s						
BR131	Keskin Array S	74.97	313	P	P	09 55 03.8	-0.6
BRTR	Keskin Array B	74.97	313	P	P	09 55 03.7	-0.6
	comp=Z,1.6nm,0.7s,baz=127,slow=7.0,SNR=6.3						
BRTR	Keskin Array B	74.97	313	P	P	09 55 01.8	-2.5
SYO	Syowa Base	76.06	199	⇑eP	P	09 55 10.4	+0.6
SYO	Syowa Base	76.06	199	⇑esP	sP	09 55 17.4	-2.8
SEY	Seymchan	77.38	22	P	P	09 55 17.5	+0.2
	comp=Z,4.0nm,1.0s,baz=216,slow=8.9,SNR=6.2						
TIXI	Tiksi	77.81	9	P	P	09 55 19.1	-0.4
	comp=Z,1.7nm,0.5s,baz=140,slow=6.7,SNR=3.1						
TIXI	Tiksi	77.81	9	P	P	09 55 19.1	-0.4
TIXI				IAmb	IAmb	09 55 31.7	
	comp=Z,7.1nm,1.2s						
KLMR	Klimovskoe	79.82	334	e	P	09 55 28.2	-2.6
KLMR				AMP		09 55 34.0	
	comp=Z,39nm,1.7s						
VNDA	Vanda	80.09	169	P	P	09 55 35.2	+3.1
	comp=Z,4.6nm,1.2s,baz=290,slow=4.8,SNR=4.5						
VNDA	Vanda	80.09	169	P	P	09 55 36.3	+4.2
BURAR	Bucovina Array	83.03	319	P	P	09 55 46.5	-1.8
VTS	Vitosha	83.30	314	P	P	09 55 50.1	+0.3
VTS				IAmb	IAmb	09 56 05.6	
	comp=Z,6.0nm,1.4s						
BILL	Bilibino	84.94	20	P	P	09 55 58.2	+0.8
BILL				IAmb	IAmb	09 56 08.6	
	comp=Z,3.3nm,0.8s						
FINES	FINESS Array B	86.08	332	P	P	09 56 03.2	0.0
	comp=Z,3.9nm,1.0s,baz=187,slow=9.7,SNR=3.1						
PDG	Podgorica	86.16	313	P	P	09 56 04.0	0.0
ACER	Acerenza	88.39	311	P	P	09 56 13.0	-2.0
WMOK	Wichita Mounta	144.67	28		PKPbc	10 02 58.9	+0.2
FNO	Franklin	144.86	26		PKPdf	10 02 59.7	-0.6
TUL1	Leonard	144.96	23		PKPdf	10 03 00.1	-0.3
Q51A	Peebles	145.02	5		PKPdf	10 03 00.4	-0.1
U38A	Gravette	145.02	21		PKPdf	10 03 00.1	-0.4
MGMO	Mountain Grove	145.07	18		PKPab	10 02 59.9	0.0
Q54A	Coxs Mills	145.21	2		PKPdf	10 03 00.7	0.0
X34A	Smith Ranch, M	145.22	27		PKPdf	10 03 02.1	+1.2
HHAR	Hobbs	145.32	21		PKPdf	10 03 01.0	0.0
WCI	Wyandotte Cave	145.44	9		PKPab	10 03 01.9	+0.7
R49A	Shelbyville	145.54	8		PKPab	10 03 02.0	+0.4
U40A	Yellville	145.62	19		PKPab	10 03 02.4	+0.4
R50A	Paris	145.66	7		PKPab	10 03 02.0	0.0
PBMO	Poplar Bluff	145.95	16		PKPab	10 03 02.9	-0.2
TX31	Lajitas Ar. Si	146.07	40		PKiKP	10 03 05.5	-1.3
TX32	Lajitas Array	146.07	40		PKPdf	10 03 02.3	-0.4
TX32				PKPbc	PKiKP	10 03 05.5	-1.3
TXAR	Lajitas Array	146.07	40	PKPbc	PKPab	10 03 05.2	+1.2
	comp=Z,3.8nm,0.7s,baz=291,slow=1.6,SNR=21						
FCAR	Ozark Folk Cen	146.28	18		PKPdf	10 03 02.0	-0.7
S51A	Beattyville	146.37	6		PKPdf	10 03 01.5	-1.3
LCAR	Lake Charles	146.41	17		PKPab	10 03 04.5	-0.5
MIAR	Mount Ida	147.01	21		PKPab	10 03 06.8	-0.5
T59A	Double "B" Far	147.18	357	PKPbc	PKPab	10 03 07.4	-0.5
WVT	Waverly	147.19	12		PKPbc	10 03 07.0	+0.7
CLTN	Cedars of Leba	147.52	10		PKPbc	10 03 07.8	+0.6
JCT	Junction City	147.54	34		PKPab	10 03 08.7	-0.9
V48A	Smith Brothers	147.77	11		PKPbc	10 03 08.2	+0.3
WLAR	White Oak Lake	147.95	21	PKPdf	PKPdf	10 03 03.6	-1.9
WLAR					PKiKP	10 03 09.5	-0.9
PLAL	Pickwick Lake	148.24	13		PKPbc	10 03 09.2	-0.1
TKL	Tuckaleechee C	148.31	6	PKPbc	PKPbc	10 03 08.6	-0.9
	comp=Z,2.8nm,0.7s,baz=109,slow=3.2,SNR=3.6						
TKL	Tuckaleechee C	148.31	6		PKPbc	10 03 08.9	-0.6
CPCT	Cooper Cave	148.43	8		PKPbc	10 03 10.4	+0.7
X48A	Hartselle	148.97	12		PKPbc	10 03 11.4	+0.3
BG3	Lake Jocassee	149.06	5		PKiKP	10 03 12.5	-0.2
Y49A	Blount Mountai	149.68	11		PKPdf	10 03 07.2	-1.1

NEIC ***15*** *09:48:46.4±2.3, 21°.30S±0°.03×69°.91W±0°.04, h52km±5km, Error ellipse: s-maj=6.7km s-min=2.1km az=224.0*
IDC ***15*** *09:48:47.2±0.4, 21°.19S×69°.76W, h58km±3km, mb4.0/16, mb1 4.1/20, mb1mx3.9/42, mbtmp4.2/20, Error ellipse: s-maj=16.0km s-min=5.5km az=66.0*
GUC ***15*** *09:48:47.8±0.7, 21°.32S×69°.86W, h55km±2km, ML4.5*
SJA ***15*** *09:48:47.2±0.7, 21°.38S×69°.91W, h51km±3km, ML3.8, MW3.7*
VAO ***15*** *09:48:48.0±0.6, 21°.31S×69°.87W, h78km±6km, mb4.5*
ISC 15 09:48:46.7±0.3, **21°.31S**±0°.02×**69°.92W**±0°.04, **h55**km±2km, **n158**, σ1°.**39**/206, **mb4.7**/38, **15C-6D**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB02	IPOC Station P	0.02	125	⇑iP	Pn	09 48 55.9	+0.8
PB02				iS	Sn	09 49 01.7	+0.6
PB02	IPOC Station P	0.02	125	iP	Pn	09 48 55.9	+0.8
PB02				eS	Sn	09 49 01.8	+0.8
PB07	IPOC Station P	0.42	176	iP	Pn	09 48 58.2	+0.6
PB07				iS	Sn	09 49 06.0	+0.6
PB07				IAML		09 49 06.3	
	comp=E,54µm,0.2s						
PB01	IPOC Station P	0.48	57	⇓iP	Pn	09 48 58.4	+0.2
PB01				iS	Sn	09 49 06.4	0.0
PB01	IPOC Station P	0.48	57		Pn	09 48 57.9	-0.2
PB01					Sn	09 49 06.3	0.0
PATCX	Punta Patache	0.53	335	⇑iP	Pn	09 48 59.4	+0.7
PATCX				iS	Sn	09 49 08.6	+1.2
PATCX				IAML		09 49 09.7	
	comp=E,51µm,0.3s						
PB03	IPOC Station P	0.75	168	⇑iP	Pn	09 49 01.9	+0.4
PB03				iS	Sn	09 49 12.6	+0.3
PB03				IAML		09 49 14.8	
	comp=E,21µm,0.4s						
TA01	Diego Aracena	0.78	341	⇑iP	Pn	09 49 02.1	+0.4
TA01				iS	Sn	09 49 13.4	+0.9
PB09	IPOC Station P	0.79	128	⇓iP	Pn	09 49 02.6	+0.6
PB09				iS	Sn	09 49 13.6	+0.4
PB09				IAML		09 49 14.2	
	comp=E,42µm,0.2s						
PB09	IPOC Station P	0.79	128	iP	Pn	09 49 02.8	+0.7
PB09				eS	Sn	09 49 13.9	+0.7
PB04	IPOC Station P	1.04	192	⇑iP	Pn	09 49 05.8	+0.5
PB04				iS	Sn	09 49 20.4	+1.3
PB04				IAML		09 49 23.9	
	comp=N,23µm,0.8s						
PB04	IPOC Station P	1.04	192		Pn	09 49 05.6	+0.3
PB04	IPOC Station P	1.04	192	iP	Pn	09 49 05.7	+0.4
PB04				eS	Sn	09 49 19.9	+0.8
PB08	IPOC Station P	1.36	32	⇓iP	Pn	09 49 10.6	+0.9
PB08				iS	Sn	09 49 27.9	+1.0
PB08				IAML		09 49 31.9	
	comp=N,9µm,0.1s						
PB06	IPOC Station P	1.43	167	⇑iP	Pn	09 49 10.7	+0.2
PB06				iS	Sn	09 49 29.0	+0.7
PB06				IAML		09 49 32.4	
	comp=N,10µm,0.2s						
PB06	IPOC Station P	1.43	167	iP	Pn	09 49 11.1	+0.7
PB11	IPOC Station P	1.56	9	⇑iP	Pn	09 49 13.3	+1.1
PB11				iS	Sn	09 49 33.0	+1.7
PB11				IAML		09 49 36.5	
	comp=N,8µm,0.4s						
PB11	IPOC Station P	1.56	9		Pn	09 49 13.1	+0.9
PB05	IPOC Station P	1.56	190	⇓iP	Pn	09 49 12.8	+0.6
PB05				iS	Sn	09 49 32.5	+1.1
PB05				IAML		09 49 37.2	
	comp=N,8µm,0.5s						
PB05	IPOC Station P	1.56	190	iP	Pn	09 49 13.1	+0.9
LVC	Limon Verde	1.60	144	P	Pn	09 49 14.6	+1.6
	baz=331,slow=12						
LVC				S	Sn	09 49 34.1	+1.5
	comp=N,898nm,0.3s,baz=90,slow=18,SNR=44						
LVC	Limon Verde	1.60	144	⇓iP	Pn	09 49 14.5	+1.6
LVC				iS	Sn	09 49 33.9	+1.2
LVC	Limon Verde	1.60	144		Pn	09 49 15.0	+2.0
LVC	Limon Verde	1.60	144	eP	Pn	09 49 14.6	+1.6
LVC	Limon Verde	1.60	144	iP	Pn	09 49 14.4	+1.5
LVC				eS	Sn	09 49 34.3	+1.7
LVC				IAML		09 49 38.1	
	comp=Z,2µm,0.4s						
PSGC	Pisagua	1.71	353	⇑iP	Pn	09 49 14.8	+0.5
PSGC				iS	Sn	09 49 35.6	+0.5
GO01	Chusmiza	1.77	23	⇑eP	Pn	09 49 16.4	+1.1
GO01				iS	Sn	09 49 38.4	+1.5
GO01				IAML		09 49 42.4	
	comp=N,17µm,0.1s						
GO01	Chusmiza	1.77	23		Pn	09 49 16.9	+1.6
PB15	IPOC Station P	1.94	168	⇑eP	Pn	09 49 18.4	+1.0
PB15				iS	Sn	09 49 42.3	+1.5
PB15	IPOC Station P	1.94	168	iP	Pn	09 49 18.4	+1.0
MNMC	Minye Minye	2.19	8	eP	Pn	09 49 22.1	+1.3
MNMC				iS	Sn	09 49 50.2	+3.3
MNMC	Minye Minye	2.19	8		Pn	09 49 22.9	+2.0
PB10	IPOC Station P	2.27	195	⇓iP	Pn	09 49 21.5	-0.4
PB10				iS	Sn	09 49 49.4	+0.7
PB10				IAML		09 50 00.9	
	comp=E,3µm,0.4s						
PB10	IPOC Station P	2.27	195		Pn	09 49 22.0	+0.1
PB10	IPOC Station P	2.27	195	iP	Pn	09 49 23.1	+1.3
PB12	IPOC Station P	2.71	352	⇑iP	Pn	09 49 28.2	+0.4
PB12				iS	Sn	09 50 00.5	+1.0
PB12				IAML		09 50 13.2	
	comp=N,2µm,0.3s						
AP01	Chacalluta	2.95	352	⇑eP	Pn	09 49 32.0	+1.0
AP01				iS	Sn	09 50 07.1	+1.9
PB16	IPOC Station P	2.98	7	⇑iP	Pn	09 49 33.5	+1.5
PB16				iS	Sn	09 50 09.2	+2.3
PB14	IPOC Station P	3.33	188	eP	Pn	09 49 35.4	-1.3
PB14				iS	Sn	09 50 16.2	+1.1
PB14				IAML		09 50 28.8	
	comp=E,630nm,0.7s						
PB14	IPOC Station P	3.33	188	iP	Pn	09 49 34.6	-2.0
GO02	Mina Guanaco	3.85	176		Pn	09 49 44.3	+0.6
YJA	Yavi	4.18	103	iP	Pn	09 49 51.9	+3.6
YJA				IAML		09 49 56.3	
	comp=Z,40nm,0.7s						
HJA	Humahuaca	4.58	115	iP	Pn	09 49 57.8	+4.0
HJA				IAML		09 50 01.7	
	comp=Z,90nm,0.6s						
LPAZ	La Paz	5.27	19	P	Pn	09 50 07.4	+3.9
	comp=Z,4.3nm,0.3s,baz=186,slow=7.2,SNR=102						
LPAZ	La Paz	5.27	19		Pn	09 50 07.7	+4.2
LPAZ	La Paz	5.27	19	eP	Pn	09 50 05.2	+1.7
AZAP	Zapla	5.33	124	iP	Pn	09 50 06.5	+2.5
GO03	Copiap	6.27	183		Pn	09 50 16.5	-0.1
AHML	Horco Molle	6.87	143	iP	Pn	09 50 28.4	+3.5
SIV	San Ignacio	9.91	59	P	Pn	09 51 04.6	-1.9
	comp=Z,5.1nm,0.3s,baz=254,slow=10,SNR=70						
CFA	Coronel Fontan	10.37	172	P	Pn	09 51 13.3	+0.6
	comp=Z,1.0nm,0.3s,baz=317,slow=14,SNR=12						
CFA				S	Sn	09 53 24.5	+17
	comp=Z,1.7nm,0.3s,baz=158,slow=16,SNR=6.1						
CPUP	Villa Florida	12.56	116	P	Pn	09 51 43.0	+0.5
	comp=Z,0.3nm,0.3s,baz=308,slow=12,SNR=8.7						
CPUP	Villa Florida	12.56	116		Pn	09 51 43.8	+1.2
AQDB	Aquidauana	13.31	89	eP	Pn	09 51 53.3	+0.3
SAML	Samuel	13.89	29		Pn	09 52 00.6	-0.3
SAML	Samuel	13.89	29	eP	Pn	09 52 00.6	-0.3
SALV	Santo Antonio	14.51	71	eP	Pn	09 52 06.9	-2.2
ITQB	Itaqui	14.60	127	eP	Pn	09 52 10.4	+0.3
TRCB	Terra Rica	16.09	98	eP	Pn	09 52 29.2	-0.3
C2SB	Chapadao do Su	16.25	84	eP	Pn	09 52 31.9	+0.5
PTGB	Pitanga	16.78	105	eP	P	09 52 39.3	-0.3
CLDB	Colider	17.06	55	eP	Pn	09 52 39.5	-2.1
ITAB	Concordia	17.25	113	eP	Pn	09 52 43.4	-0.4
CPSB	Cacapava Do Su	17.36	125	eP	Pn	09 52 45.1	-0.1
PCMB	Pacaembu	17.37	94	eP	Pn	09 52 45.8	+0.4
ARAG	Araguaiana, MT	18.04	75	eP	P	09 52 52.7	-0.8
FRTB	Fartura	18.94	100	eP	P	09 53 01.6	-1.8
PLCA	Paso Flores	19.37	181	P	P	09 53 09.1	+1.1
	comp=Z,0.1nm,0.3s,baz=47,slow=12,SNR=5.4						
PLCA				pP	pP	09 53 21.6	+1.1
	comp=Z,0.3nm,0.3s,baz=20,slow=9.5,SNR=8.4						
PLCA	Paso Flores	19.37	181	P	P	09 53 07.8	-0.2
PLCA	Paso Flores	19.37	181	eP	P	09 53 06.1	-1.8
BB19B	Bebedouro	19.95	93	eP	P	09 53 12.0	-2.3
IPMB	Ipameri, GO	20.70	85	eP	P	09 53 22.1	-0.5
RCLB	Rio Claro- Sao	20.80	97	eP	P	09 53 22.5	-1.2
SPB	Sao Paulo	20.90	100	P	P	09 53 21.6	-3.1
VAO	Valinhos	21.32	99	eP	P	09 53 29.8	+0.5
BDFB	Brasilia	21.51	79	P	P	09 53 30.1	-1.2
	comp=Z,3.3nm,0.5s,baz=239,slow=10,SNR=5.5						
BDFB				pP	pP	09 53 43.5	-0.5
	comp=Z,5.2nm,0.8s,baz=198,slow=27,SNR=2.9						
BDFB	Brasilia	21.51	79	P	P	09 53 31.1	-0.3
PARB	Paraibuna	22.56	100	eP	P	09 53 39.7	-2.8
PTGA	Pitinga	22.64	27	P	P	09 53 40.8	-2.5
	comp=Z,4.3nm,0.5s,baz=200,slow=14,SNR=12						
PTGA				pP	pP	09 53 56.1	+0.2
	comp=Z,3.3nm,0.4s,baz=170,slow=21,SNR=3.3						
PTGA	Pitinga	22.64	27	P	P	09 53 40.9	-2.4
PTGA	Pitinga	22.64	27	eP	P	09 53 42.9	-0.4
OTAV	Otavalo	22.98	338	eP	P	09 53 46.2	-1.1
FLOC	Florencia	23.43	345	P	P	09 53 50.2	-1.0
BSCB	Bom Sucesso	23.45	94	eP	P	09 53 49.9	-1.6
SMTB	Santa Maria do	24.81	63	eP	P	09 54 04.0	+0.1
JANB	Januaria	25.09	80	eP	P	09 54 05.0	-1.5
RUSC	La Rusia	27.21	353	P	P	09 54 25.3	-0.7
SDV	Santo Domingo	30.01	359	P	P	09 54 49.2	-1.4
	comp=Z,1.1nm,0.3s,baz=269,slow=7.7,SNR=3.9						
SDV				pP	pP	09 55 04.1	-0.6
	comp=Z,1.5nm,0.4s,baz=243,slow=17,SNR=2.5						
SDV	Santo Domingo	30.01	359	eP	P	09 54 49.3	-1.4
NBPN	Ponto Novo - B	30.33	75	eP	P	09 54 52.1	-1.3
BCIP	Isla Barro Col	31.81	341	P	P	09 55 03.2	-3.0
TOSP	Speyside	33.69	17	P	P	09 55 22.6	0.0
NBAN	Anadia - AL	34.34	76	eP	P	09 55 27.1	-1.4
RCBR	Riachuelo	36.35	70	P	P	09 55 47.4	+1.7
	comp=Z,6.8nm,0.6s,baz=209,slow=7.7,SNR=4.5						
MLPR	Magueyes Islan	39.13	4	P	P	09 56 07.6	-1.4
MLPR				IAmb	IAmb	09 56 08.1	
	comp=Z,13nm,0.9s						
CRPR	Cabo Rojo, PR	39.17	4	P	P	09 56 07.6	-1.7
CRPR				IAmb	IAmb	09 56 07.9	
	comp=Z,16nm,0.8s						
OBIP	Obispado Ponce	39.24	5	P	P	09 56 08.8	-1.2
OBIP				IAmb	IAmb	09 56 08.9	
	comp=Z,16nm,0.7s						
PDPR	Patillas Dam,	39.27	6	P	P	09 56 08.2	-2.0
PDPR				IAmb	IAmb	09 56 08.6	
	comp=Z,15nm,0.7s						
SJG	San Juan	39.35	6	P	P	09 56 09.0	-1.9
SJG				IAmb	IAmb	09 56 09.2	
	comp=Z,15nm,0.8s						
MTP	Monte Pirata	39.39	7	P	P	09 56 08.8	-2.4
MTP				IAmb	IAmb	09 56 09.2	
	comp=Z,10nm,0.8s						
EMPR	Esperanza - Ma	39.68	5	P	P	09 56 11.2	-2.3
PMSA	Palmer Station	43.62	176	P	P	09 56 49.7	+4.4
	comp=Z,4.0nm,0.5s,baz=323,slow=14,SNR=11						
TEIG	Tepich	45.01	335	P	P	09 56 57.1	+0.1
	comp=Z,7.1nm,0.9s,baz=144,slow=0.0,SNR=4.7						
TEIG	Tepich	45.01	335	P	P	09 56 57.7	+0.7
TEIG				IAmb	IAmb	09 57 12.6	
	comp=Z,30nm,1.3s						
Q56A	Snyder Ridge,	60.66	352	P	P	09 58 52.7	+0.6
PBMO	Poplar Bluff	60.93	341	P	P	09 58 53.6	-0.3
PBMO				IAmb	IAmb	09 58 55.6	
	comp=Z,6.9nm,0.7s						
P57A	Homestead Farm	60.94	353	P	P	09 58 55.7	+1.8
P57A				IAmb	IAmb	09 58 55.9	
	comp=Z,11nm,0.8s						
HHAR	Hobbs	61.62	338	P	P	09 58 59.2	+0.6
HHAR				IAmb	IAmb	09 58 60.0	
	comp=Z,10nm,1.1s						
SSPA	Standing Stone	62.07	353	P	P	09 59 02.3	+0.8
SSPA				IAmb	IAmb	09 59 09.5	
	comp=Z,10nm,1.1s						
BLO	Bloomington	62.14	345	P	P	09 59 01.2	-0.8
M57A	Sunshine Farm,	62.68	354	P	P	09 59 06.6	+0.9
S39A	Bolivar	62.68	339	P	P	09 59 05.7	-0.1
S39A				IAmb	IAmb	09 59 05.9	
	comp=Z,8.4nm,0.7s						
MNTX	Cornudas Mount	62.71	326	P	P	09 59 06.6	+0.5
SNAA	Sanae	62.77	161	P	P	09 59 06.5	+0.5
SNAA				IAmb	IAmb	09 59 22.1	
	comp=Z,4.6nm,0.8s						
P43A	Skaggs, Pawnee	63.34	343	P	P	09 59 09.3	-0.7
L59A	Walton	63.35	356	P	P	09 59 11.6	+1.4
HRV	Adam Dziewonsk	63.51	359	P	P	09 59 11.2	+0.1
L56A	Greenwood	63.52	354	P	P	09 59 12.0	+0.8
L56A				IAmb	IAmb	09 59 15.8	
	comp=Z,12nm,1.3s						
HDIL	Hopedale	64.14	344	P	P	09 59 14.2	-1.1
HDIL				IAmb	IAmb	09 59 14.7	
	comp=Z,6.6nm,0.6s						
P38A	Dawn	64.51	340	P	P	09 59 17.6	-0.1
ANMO	Albuquerque	65.83	328	P	P	09 59 27.2	+0.5
	comp=Z,1.0nm,0.7s,baz=90,slow=10,SNR=2.5						
K43A	Burlington	65.92	345	P	P	09 59 26.3	-0.5
SADO	Sadowa	66.29	353	P	P	09 59 28.4	-0.8
	comp=Z,2.2nm,0.5s,baz=245,slow=3.8,SNR=3.5						
JFWS	Jewell Farm	66.59	344	P	P	09 59 30.8	-0.4
JFWS				IAmb	IAmb	09 59 41.8	
	comp=Z,20nm,1.4s						
I42A	Draeger Farm,	67.18	345	P	P	09 59 34.6	-0.2
I42A				IAmb	IAmb	09 59 47.6	
	comp=Z,20nm,1.3s						
D53A	Lac Vacive, Po	68.43	354	P	P	09 59 42.5	0.0
D53A				IAmb	IAmb	09 59 47.4	
	comp=Z,19nm,1.4s						
QSPA	South Pole Qui	68.88	180	P	P	09 59 47.0	+1.5
QSPA				IAmb	IAmb	10 00 03.0	
	comp=Z,21nm,1.4s						
SMCO	Snowmass	69.45	330	P	P	09 59 51.7	+2.0
DBIC	Dimbokro	69.58	74	P	P	09 59 49.4	-1.1
	comp=Z,2.4nm,0.7s,baz=240,slow=7.9,SNR=5.6						
DBIC				sP	sP	10 00 11.7	-0.5
	comp=Z,3.7nm,0.6s,baz=229,slow=8.7,SNR=5.0						
DBIC	Dimbokro	69.58	74	P	P	09 59 49.7	-0.8
DRLN	Deer Lake	71.11	9	P	P	09 59 58.4	-0.6
DRLN				IAmb	IAmb	10 00 17.1	
	comp=Z,15nm,1.4s						
PDAR	Pinedale Array	73.48	331	P	P	10 00 13.5	-0.1
	comp=Z,0.4nm,0.6s,baz=141,slow=5.8,SNR=3.5						
NVAR	Mina Array Bea	74.77	323	P	P	10 00 22.6	+1.4
	comp=Z,1.2nm,0.9s,baz=165,slow=5.4,SNR=3.6						
NVAR				pP	pP	10 00 38.0	+1.2
	comp=Z,0.8nm,0.8s,baz=166,slow=6.7,SNR=3.5						
ULM	Lac du Bonnet	74.86	343	P	P	10 00 20.5	-0.7
	comp=Z,1.7nm,0.6s,baz=134,slow=6.4,SNR=4.6						
ULM	Lac du Bonnet	74.86	343	P	P	10 00 21.4	+0.2
YNE	Yellowstone No	75.44	332	P	P	10 00 26.8	+1.8
SCHQ	Schefferville	75.87	2	P	P	10 00 26.4	-0.6
	comp=Z,2.0nm,0.8s,baz=214,slow=8.4,SNR=3.9						
SYO	Syowa Base	77.01	160	⇑eP	P	10 00 27.5	-5.8
SYO	Syowa Base	77.01	160	⇑ipP	pP	10 00 48.5	-0.5
TOA0	Torodi Ar. Sit	78.17	71	P	P	10 00 39.6	-1.2
TOA0				IAmb	IAmb	10 00 40.5	
	comp=Z,4.7nm,0.7s						
TORD	Torodi Ar. Bea	78.17	71	P	P	10 00 39.4	-1.3
	comp=Z,4.8nm,0.7s,baz=252,slow=5.4,SNR=26						
TORD				pP	pP	10 00 55.8	-0.7
	comp=Z,2.0nm,0.7s,baz=252,slow=5.5,SNR=3.9						
TORD				sP	sP	10 01 01.4	-1.2
	comp=Z,3.8nm,0.7s,baz=257,slow=5.2,SNR=6.8						
TORD	Torodi Ar. Bea	78.17	71	P	P	10 00 39.3	-1.5
MDT	Midelt	82.35	51	P	P	10 01 03.1	+0.1
	comp=Z,3.5nm,0.9s,baz=2.6,slow=0.7,SNR=5.7						
MDT				sP	sP	10 01 25.7	+0.7
	comp=Z,5.9nm,1.0s,baz=304,slow=3.5,SNR=6.3						
BOSA	Boshof	84.36	118	P	P	10 01 12.9	-0.7
	comp=Z,2.6nm,0.8s,baz=244,slow=5.7,SNR=4.2						
BOSA	Boshof	84.36	118	P	P	10 01 13.4	-0.2
MAW	Mawson	84.78	164	P	P	10 01 13.8	-0.9
	comp=Z,7.4nm,0.9s,baz=310,slow=7.9,SNR=3.0						
YKA	Yellowknife Ar	90.70	341	P	P	10 01 42.9	-0.1
	comp=Z,1.4nm,0.8s,baz=137,slow=5.0,SNR=18						

YKA				pP	pP	10 01 58.8	-0.2
	comp=Z,0.9nm,0.7s,baz=136,slow=5.0,SNR=8.8						
YKA				sP	sP	10 02 06.3	+1.2
	comp=Z,0.9nm,0.6s,baz=140,slow=4.3,SNR=5.8						
GAZ	Gaziantep	115.89	58		PKPdf	10 07 22.7	-0.9
ASAR	Alice Springs	129.64	209	PKP	PKPdf	10 07 50.1	-0.3
	comp=Z,0.2nm,0.5s,baz=144,slow=2.0,SNR=4.5						
ASAR				pPKP	pPKPdf	10 08 06.7	-0.3
	comp=Z,0.9nm,0.9s,baz=138,slow=2.0,SNR=3.9						
WRA	Warramunga Arr	132.63	212	PKP	PKPdf	10 07 56.1	0.0
	comp=Z,0.4nm,0.6s,baz=160,slow=1.7,SNR=8.2						
WRA				pPKP	pPKPdf	10 08 12.2	-0.5
	comp=Z,0.4nm,0.5s,baz=142,slow=1.8,SNR=2.8						
ZALV	Zalesovo Beam	142.17	24	PKP	PKPdf	10 08 12.1	-0.4
	comp=Z,2.3nm,0.6s,baz=286,slow=2.1,SNR=9.5						
ZALV				pPKP	pPKPdf	10 08 29.9	+0.6
	comp=Z,3.0nm,0.6s,baz=298,slow=3.3,SNR=7.2						
ZALV	Zalesovo Beam	142.17	24		PKPdf	10 08 12.9	+0.3
KSH	Kashi	145.70	50	PKPbc	PKPbc	10 08 20.4	+0.6
KSH				pPKP	pPKPdf	10 08 30.8	-5.3
KSH				PP	PP	10 11 46.9	+5.9
KSH				SKS	SKSdf	10 15 24.1	0.0
MAKZ	Makanchi	145.84	35		PKPdf	10 08 20.0	+0.7
MK31	Makanchi Array	146.02	35		PKPdf	10 08 19.2	-0.4
MK31				PKPbc	PKPbc	10 08 20.8	+0.4
MKAR	Makanchi Array	146.02	35	PKPbc	PKPdf	10 08 20.1	+0.5
	comp=Z,5.4nm,0.6s,baz=323,slow=3.9,SNR=68						
MKAR				pPKPbc	pPKPdf	10 08 36.7	+0.5
	comp=Z,3.3nm,0.6s,baz=335,slow=3.0,SNR=8.9						
USRK	Ussuriysk Ar.	150.84	327	PKPbc	PKPbc	10 08 33.8	+0.8
	comp=Z,1.3nm,0.6s,baz=75,slow=6.1,SNR=3.8						
USRK				pPKPbc	pPKPbc	10 08 49.9	+0.3
	comp=Z,2.7nm,0.8s,baz=28,slow=3.4,SNR=5.1						
SONM	Songino Array	153.37	6	PKP	PKPdf	10 08 31.5	+0.3
	comp=Z,0.6nm,0.7s,baz=226,slow=3.8,SNR=3.4						
SONM				PKPbc	PKPbc	10 08 38.9	0.0
	comp=Z,0.8nm,0.5s,baz=284,slow=2.0,SNR=5.6						
SONM				pPKP	pPKPdf	10 08 48.7	+0.7
	comp=Z,1.2nm,0.8s,baz=305,slow=2.4,SNR=5.9						
SONM				pPKPbc	pPKPbc	10 08 55.6	+0.1
	comp=Z,2.1nm,0.8s,baz=305,slow=1.8,SNR=7.3						

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*NIC **15** 09:53:14.0±0.0, 34°.45N×34°.12E, h17^{km}±1^{km}, Ml2.7/3*
*GII **15** 09:53:16.3±0.0, 34°.59N×34°.08E, h9^{km}, MD1.1/1*
ISC 15 09:53:15.4±1.9, **34°.53N**±0°.06×**34°.08E**±0°.06, **h3**^{km}±16^{km}, **n19**, σ**0ˢ.45**/28, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PARAL	Paralimni	0.46	356	P	Pg	09 53 24.6	+0.3
PARAL				AML	AML	09 53 32.9	
	2.7nm,0.3s						
PARAL				AML	AML	09 53 32.9	
	2.7nm,0.3s						
PARAL				S	Sb	09 53 33.6	+0.2
PARAL				AML	AML	09 53 35.9	
	2.8nm,0.6s						
PARAL				AML	AML	09 53 35.9	
	2.8nm,0.6s						
MVOU	Mavrovouni	0.61	323	P	Pg	09 53 26.9	-0.2
MVOU				S	Sb	09 53 37.8	+0.2
ASGA	Asgata	0.73	290	P	Pg	09 53 29.5	+0.1
ASGA				S	Sb	09 53 41.0	-0.2
ASGA				AML	AML	09 53 41.5	
	0.8nm,0.5s						
ASGA				AML	AML	09 53 41.5	
	0.8nm,0.5s						
ASGA				AML	AML	09 53 48.8	
	0.7nm,0.4s						
ASGA				AML	AML	09 53 48.8	
	0.7nm,0.4s						
CSS	Mathiatis	0.75	305	Pg	Pg	09 53 29.9	+0.1
CSS				Sg	Sg	09 53 39.3	-0.3
CSS	Mathiatis	0.75	305	P	Pg	09 53 30.0	+0.1
CSS				S	Sb	09 53 42.0	+0.2
ATHAL	Athalassa	0.83	317	P	Pg	09 53 31.1	-0.2
SZAC	Souni	1.01	283	P	Pg	09 53 34.7	-0.2
SZAC				S	Sb	09 53 49.4	0.0
SZAC				AML	AML	09 53 49.4	
	1.0nm,0.4s						
SZAC				AML	AML	09 53 49.4	
	1.0nm,0.4s						
SZAC				AML	AML	09 53 50.4	
	0.5nm,0.3s						
SZAC				AML	AML	09 53 50.4	
	0.5nm,0.3s						
HNTI	Hanita	1.71	148	Pn	Pn	09 53 45.6	-0.5
KSDI	Kefar Szold	1.88	135	Pn	Pn	09 53 47.7	-0.6
KSDI				Sn	Sn	09 54 11.7	-0.8
OFRI	`Ofer	2.05	158	Pn	Pn	09 53 50.1	-0.7
MMLI	Mount Malkishu	2.37	151	Pn	Pn	09 53 55.6	+0.4
MMLI				Sn	Sn	09 54 24.8	0.0
QRNJ	Al-Qirein	2.52	150	Pn	Pn	09 53 57.8	+0.6
HMDT	Nahal Hemdat	2.58	152	Pn	Pn	09 53 58.6	+0.6
AMAZ	Amatzia	3.07	167	Pn	Pn	09 54 05.4	+0.5
DSI	Dead Sea	3.15	159	Pn	Pn	09 54 06.6	+0.7
DSI				Sn	Sn	09 54 44.1	+0.1
YTIR	Yattir	3.28	164	Pn	Pn	09 54 08.5	+0.7
PRNI	Paran	4.24	169	Pn	Pn	09 54 21.2	+0.3
HRFI	Mount Harif	4.56	170	Pn	Pn	09 54 25.7	+0.4
MBRI	Mt Berech	4.78	171	Pn	Pn	09 54 28.8	+0.4

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*IDC **15** 09:54:25.0±1.1, 38°.84N×111°.42W, h0^{km}, mb3.0/1, mb1 3.1/5, mb1mx3.1/53, mbtmp2.8/5, ML2.8/4, Error ellipse: s-maj=12.0km s-min=8.3km az=162.0*
*UUSS **15** 09:54:26.9±2.2, 38°.95N±0°.03×111°.38W±0°.04, h3^{km}±7^{km}, ML2.7/16, Error ellipse: s-maj=6.5km s-min=0.9km az=138.0*
ISC 15 09:54:25.7±0.9, **38°.87N**±0°.02×**111°.44W**±0°.02, **h7**^{km}, **n66**, σ**1ˢ.67**/68, **Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
Q16A	Castle Valley	0.22	77		Pg	09 54 30.9	+0.8
TMUT	Trail Mountain	0.46	23		Pg	09 54 34.1	-0.7
MSU	Marysvale	0.68	238		Pn	09 54 41.2	-0.8
SRU	San Rafael Swe	0.76	71		Pb	09 54 39.9	-1.5
P17A	Butcher Ranch,	0.81	42		Pg	09 54 40.2	-1.2
TCRU	Three Creeks R	0.83	252		Pn	09 54 43.9	-0.2
MTPU	Mount Pierson	1.01	215		Pn	09 54 47.6	+0.9
MPU	Maple Canyon	1.15	353		Pg	09 54 46.7	-1.2
NLU	North Lily Min	1.19	336		Pg	09 54 48.1	-0.5
PKCU	Pink Cliffs	1.58	206		Pg	09 54 58.2	+2.1
DUG	Dugway, Tooele	1.70	322		Pb	09 54 56.3	-1.1
JLU	Jordanelle	1.73	360		Pb	09 54 57.3	-0.7
SZCU	Shurtz Canyon	1.82	226		Pg	09 55 01.0	+0.4
CTU	Camp Tracy	1.83	353		Pn	09 54 58.1	+0.2
PV09	Paradox Valley	1.84	101		Pg	09 55 01.1	0.0
PSUT	Pine Spring	1.92	261		Pg	09 55 01.7	-0.8
PV10	Paradox Valley	1.95	104		Pg	09 55 03.0	0.0
PV23	Carpenter Ridg	1.95	102		Pg	09 55 02.7	-0.4
PV14	Lion Creek, Pa	1.96	104		Pg	09 55 02.8	-0.5
CCUT	Cedar City	2.01	230		Pg	09 55 03.5	-0.7
PV19	Morning Glory	2.01	105		Pg	09 55 03.5	-0.7
PV20	West Nyswonger	2.01	104		Pg	09 55 03.5	-0.8
PV17	East Wray Mesa	2.03	106		Pg	09 55 03.9	-0.8
PV04	Paradox Valley	2.04	103		Pg	09 55 04.0	-1.0
PV16	Nyswonger Mesa	2.06	105		Pg	09 55 04.0	-1.1
PV18	Skein Mesa, Pa	2.08	107		Pg	09 55 04.4	-1.2
PV11	David Mesa, Pa	2.09	105		Pg	09 55 04.7	-1.2
PV22	Blue Mesa, Par	2.10	98		Pg	09 55 04.8	-1.3
PV03	Paradox Valley	2.12	106		Pg	09 55 04.7	-1.8
PV12	Saucer Basin,	2.14	104		Pg	09 55 05.4	-1.3
KNB	Kanab	2.15	211		Pg	09 55 06.3	-0.7
PV13	Radium Mtn., P	2.18	108		Pg	09 55 05.8	-1.7
PV02	Paradox Valley	2.22	106		Pg	09 55 06.4	-2.0
RDMU	Red Mountain	2.23	40		Pb	09 55 06.1	-0.4
PV07	Paradox Valley	2.23	100		Pg	09 55 06.7	-1.8
TCUT	Toone Canyon	2.25	1		Pb	09 55 04.7	-2.1
LCMT	Little Creek M	2.34	218		Pg	09 55 09.1	-1.5
PV15	Paradox Valley	2.38	102		Pb	09 55 08.7	-0.4
BGU	Big Grassy Mou	2.39	330		Pn	09 55 05.7	+0.2
U15A	North Rim	2.53	196		Pg	09 55 13.5	-0.8
SPUT	South Promonto	2.56	343		Pn	09 55 08.0	+0.2
HWUT	Hardware Ranch	2.73	358		Pn	09 55 11.0	+0.8
O20A	White River Ci	2.78	62		Pb	09 55 14.4	-1.5
MVCO	Mesa Verde	2.85	125		Pb	09 55 16.1	-1.0
HVU	Hansel Valley	3.08	341		Pn	09 55 15.6	+0.6
WUAZ	Wupatki	3.35	179	Pn	Pb	09 55 25.3	-0.2
ELK	Elko	3.47	304	Pn	Pn	09 55 23.4	+3.0
	0.2nm,0.3s,baz=128,slow=14,SNR=4.2						
ELK				Pg	Pb	09 55 28.2	+0.6
	0.3nm,0.3s,baz=163,slow=14,SNR=11						
ELK				Lg	Lg	09 56 14.7	
	0.5nm,0.3s,baz=219,slow=20,SNR=7.3						
SMCO	Snowmass	3.49	84		Pb	09 55 23.6	-4.6
SHPR	Sheep Range	3.78	232		Pb	09 55 28.4	-4.4
S22A	4UR Ranch, Cre	3.80	106		Pb	09 55 28.5	-4.8
W18A	Petrified Fore	3.99	159	Pn	Pb	09 55 30.6	-5.9
PD31	Pinedale Array	4.15	20		Pn	09 55 30.7	+1.0
PDAR	Pinedale Array	4.15	20	Pn	Pn	09 55 31.0	+1.3
	0.3nm,0.3s,baz=181,slow=11,SNR=12						
PDAR				Pg	Pb	09 55 39.5	+0.3
	0.7nm,0.3s,baz=204,slow=13,SNR=19						
PDAR				Lg	Lg	09 56 36.6	
	0.5nm,0.3s,baz=185,slow=29,SNR=4.7						
PDAR	Pinedale Array	4.15	20		Pn	09 55 30.9	+1.2
RWWY	Rawlins	4.29	48		Pn	09 55 31.4	-0.2
X18A	Snowflake	4.50	164		Pb	09 55 38.5	-6.6
ISCO	Idaho Springs	4.61	77	Pn	Pn	09 55 37.8	+1.6
SNOW	Snow King Moun	4.62	6	Pn	Pn	09 55 37.2	+1.0
FXWY	Fox Creek	4.77	4	Pn	Pn	09 55 39.3	+0.9
SDCO	Great Sand Dun	4.80	102	Pn	Pn	09 55 41.2	+2.4
KVN	Kaiserville	5.19	274	Pn	Pn	09 55 47.7	+3.7
K22A	Casper	5.31	43	Pn	Pn	09 55 46.5	+0.9
NVAR	Mina Array Bea	5.39	267	Pn	Pn	09 55 46.8	+0.1
	0.1nm,0.3s,baz=81,slow=12,SNR=2.4						
NVAR				Pg	Pb	09 55 59.6	-0.7
	0.1nm,0.3s,baz=84,slow=14,SNR=5.0						
NVAR				Lg	Lg	09 57 12.9	
	baz=109,slow=33,SNR=1.9						
ANMO	Albuquerque	5.59	133	Pn	Pn	09 55 51.1	+1.6
	0.5nm,0.3s,baz=318,slow=11,SNR=24						
ANMO				Pg	Pb	09 56 06.6	+2.8
	0.2nm,0.3s,baz=312,slow=15,SNR=6.4						
ANMO				Lg	Lg	09 57 20.6	
	0.3nm,0.3s,baz=256,slow=5.7,SNR=6.5						
ANMO	Albuquerque	5.59	133	Pn	Pn	09 55 52.8	+3.3
YKA	Yellowknife Ar	23.73	356	P	P	09 59 40.5	+2.3
	0.4nm,0.8s,baz=172,slow=9.9,SNR=5.1						

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*KRNET **15** 10:03:28.5±0.1, 40°.34N×69°.62E, mb2.5*
ISC 15 10:03:31.7±3.4, **40°.1N**±0°.1×**69°.8E**±0°.2, **h25**^{km}, **n7**, σ**1ˢ.10**/13, **8C-6D**, **Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	0.81	92	⇑iP	Pb	10 03 46.5	-0.7
	baz=7.0						
BTK				⇑iS	Sn	10 03 59.8	+1.0
	baz=7.0						
ARK	Arkit	2.38	44	⇓iP	Pn	10 04 08.4	-0.9
	baz=50						
ARK				⇓iS	Sn	10 04 37.5	-0.3
	baz=50						
ARSB	Arslanbob	2.74	62	⇑iP	Pn	10 04 14.7	+0.5
	baz=68						
ARSB				⇑iS	Sn	10 04 48.1	+1.5
	baz=68						
KK31	Karatay Array	3.06	10	⇓Pg	Pn	10 04 19.1	+0.6
	0.4nm,0.2s,baz=193,slow=16,SNR=23						
KK31				⇓Lg	Lg	10 04 54.1	
	1.6nm,0.2s,baz=198,slow=32,SNR=20						
AML	Almayashu	3.60	54	⇑iP	Pn	10 04 26.8	+0.5
	baz=58						
AML				⇑iS	Sn	10 05 09.5	+1.3
	baz=58						
ARLS	Aral	3.88	61	⇑iP	Pn	10 04 30.2	+0.4
	baz=65						
ARLS				⇑iS	Sn	10 05 15.5	+0.8
	baz=65						
UCH	Uchtor	4.17	58	⇓iP	Pn	10 04 33.2	-1.0
	baz=61						
UCH				⇓iS	Sn	10 05 20.6	-1.7
	baz=61						

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*IDC **15** 10:06:11.3±0.8, 53°.51S×25°.37E, h0^{km}, mb4.3/8, mb1 4.4/8, mb1mx4.1/34, mbtmp4.3/8, Error ellipse: s-maj=37.1km s-min=17.4km az=84.0*
*NEIC **15** 10:06:13.8±1.6, 53°.6S±0°.1×25°.1E±0°.3, h10^{km}±1^{km}, mb4.3/6, Error ellipse: s-maj=35.4km s-min=14.7km az=106.0*
ISC 15 10:06:12.9±0.8, **53°.5S**±0°.1×**25°.3E**±0°.3, **h10**^{km}, **n19**, σ**0ˢ.97**/19, **mb4.2**/8, **South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	Sutherland	21.37	350	P	P	10 11 00.8	+0.2
	22nm,0.9s,baz=157,slow=9.4,SNR=12						
SUR	Sutherland	21.37	350	P	P	10 11 02.4	+1.8
SNAA	Sanae	21.95	204	P	P	10 11 06.8	+0.5
	7.8nm,0.9s,baz=54,slow=9.8,SNR=12						
SNAA	Sanae	21.95	204	P	P	10 11 07.1	+0.7
SNAA				IAmb	IAmb	10 11 09.7	
	comp=Z,13nm,1.0s						
BOSA	Boshof	24.88	360	P	P	10 11 35.9	0.0
	comp=Z,2.9nm,0.9s,baz=170,slow=8.5,SNR=4.1						
BOSA	Boshof	24.88	360	P	P	10 11 35.9	0.0
BOSA				IAmb	IAmb	10 11 39.6	
	comp=Z,4.2nm,0.9s						
LBTB	Lobatse	28.47	1	P	P	10 12 08.4	+0.3
	comp=Z,2.9nm,0.8s,baz=133,slow=5.4,SNR=4.6						
LBTB	Lobatse	28.47	1	P	P	10 12 09.5	+1.4
QSPA	South Pole Qui	36.70	180	P	P	10 13 19.9	+0.1
	comp=Z,7.5nm,0.9s,baz=255,slow=5.2,SNR=14						
QSPA	South Pole Qui	36.70	180	P	P	10 13 20.2	+0.3
QSPA				IAmb	IAmb	10 13 29.2	
	comp=Z,11nm,1.1s						
TORD	Torodi Ar. Bea	69.41	335	P	P	10 17 20.3	-0.6
	comp=Z,0.9nm,0.9s,baz=174,slow=6.0,SNR=3.7						
TORD	Torodi Ar. Bea	69.41	335	P	P	10 17 21.4	+0.5
ASAR	Alice Springs	81.63	119	P	P	10 18 32.1	+0.9
	comp=Z,1.4nm,0.9s,baz=207,slow=4.6,SNR=8.9						
ASAR	Alice Springs	81.63	119	P	P	10 18 32.8	+1.5
WRA	Warramunga Arr	84.91	117	P	P	10 18 46.8	-1.4
	comp=Z,5.6nm,0.6s,baz=211,slow=4.9,SNR=15						
TIXI	Tiksi	143.63	31	PKP	PKPdf	10 25 45.1	-1.2
	comp=Z,1.3nm,0.7s,baz=349,slow=2.1,SNR=3.8						
RLMT	Red Lodge	149.68	273	PKPdf	PKPdf	10 25 56.5	-1.1
NVAR	Mina Array Bea	150.93	254	PKPbc	PKPbc	10 26 05.0	-0.5
	comp=Z,0.7nm,0.9s,baz=134,slow=2.6,SNR=2.9						
YKA	Yellowknife Ar	157.30	309	PKPab	PKPab	10 26 38.4	-0.5
	comp=Z,0.5nm,0.8s,baz=92,slow=5.1,SNR=5.3						

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*IDC **15** 10:06:22.6±1.8, 1°.05N×124°.78E, h0^{km}, mb3.6/3, mb1 3.9/3, mb1mx3.4/42, mbtmp3.6/3, Error ellipse: s-maj=222.4km s-min=25.9km az=64.0*
*DJA **15** 10:06:29.9±0.7, 1°N±8°×12°5E±°, h78^{km}±9^{km}, M4.1/7, mB5.6/1, mb4.3/2, MLv4.0/7, Mw(mB)5.0/1*
ISC 15 10:06:31.6±0.9, **1°.21N**±0°.06×**125°.43E**±0°.07, **h84**^{km}, **n13**, σ**3ˢ.17**/18, **mb3.6**/3, **1C**, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	1.58	246	P	Pn	10 06 57.5	-0.6
TNTI	Ternate	1.98	103	P	Pn	10 07 01.0	-2.3
SANI	Sanana	3.29	170	P	Pn	10 07 19.8	-1.1
LUWI	Luwuk	3.48	230	P	Pn	10 07 22.9	-0.6
MRSI	Marisa	3.57	258	P	Pn	10 07 24.0	-0.7
NLAI	Namlea	4.72	159	P	Pn	10 07 39.4	-1.1
SKMP	Bagumbayan, Su	5.35	350	eP	Pn	10 07 47.2	-1.8
SKMP				eS	Sn	10 08 44.9	-4.3
KCP	Kidapawan	5.77	357	⇑iP	Pn	10 07 56.0	+1.3
KCP				i S	Sn	10 09 03.5	+3.9
BUKP	Musuan	6.63	357	eP	Pn	10 08 08.2	+1.7
BUKP				eS	Sn	10 09 26.1	+5.4
PAGZ	Pagadian	6.90	343	eP	Pn	10 08 09.1	-1.0
PAGZ				eS	Sn	10 09 19.2	-8.0
WRA	Warramunga Arr	22.77	158	P	P	10 11 27.4	+0.2
	0.7nm,0.3s,baz=334,slow=10,SNR=5.3						
ASAR	Alice Springs	26.07	162	P	P	10 11 58.8	+1.4
	1.1nm,0.6s,baz=338,slow=10,SNR=25						
ASAR				PcP	PcP	10 15 25.7	+2.3
	0.3nm,0.4s,baz=352,slow=2.0,SNR=5.1						
MKAR	Makanchi Array	58.90	327	P	P	10 16 22.1	+0.2
	0.2nm,0.4s,baz=124,slow=7.9,SNR=5.0						

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*GUC **15** 10:15:35.9±0.8, 22°.93S×68°.99W, h110^{km}±3^{km}, ML3.7*
*SJA **15** 10:15:35.7±0.8, 22°.93S×69°.00W, h102^{km}±4^{km}, ML3.1, MW3.2*
ISC 15 10:15:36.4±1.4, **22°.90S**±0°.04×**69°.02W**±0°.05, **h105**^{km}±8^{km}, **n29**, σ**1ˢ.01**/47, **12C-1D**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	0.31	19	⇑iP	Pn	10 15 51.7	-0.3
LVC				i S	Sn	10 16 02.9	-0.7
LVC	Limon Verde	0.31	19	i P	Pn	10 15 51.8	-0.2
LVC				eS	Sn	10 16 03.2	-0.5
LVC				IAML		10 16 03.5	
	comp=Z,882nm,0.3s						
PB15	IPOC Station P	0.52	234	⇑iP	Pn	10 15 53.2	+0.1
PB15				i S	Sn	10 16 05.9	+0.5
PB15	IPOC Station P	0.52	234	i P	Pn	10 15 53.1	+0.1
PB15				eS	Sn	10 16 05.5	0.0
PB15				IAML		10 16 06.0	
	comp=Z,12µm,0.2s						
PB06	IPOC Station P	0.55	291	⇑iP	Pn	10 15 53.4	+0.2
PB06				i S	Sn	10 16 06.2	+0.4
PB06				IAML		10 16 06.5	
	comp=N,7µm,0.2s						
PB06	IPOC Station P	0.55	291	i P	Pn	10 15 53.3	+0.2
PB06				eS	Sn	10 16 06.4	+0.6
PB06				IAML		10 16 08.0	
	comp=Z,2µm,0.1s						
PB03	IPOC Station P	1.09	321	⇑iP	Pn	10 15 58.7	+0.4
PB03				i S	Sn	10 16 15.1	+0.3
PB03				IAML		10 16 16.3	
	comp=N,3µm,0.3s						
PB05	IPOC Station P	1.09	272	⇑iP	Pn	10 15 58.4	+0.2
PB05				i S	Sn	10 16 15.4	+0.6
PB05				IAML		10 16 16.3	
	comp=E,825nm,0.4s						
PB05	IPOC Station P	1.09	272	i P	Pn	10 15 58.4	+0.2
PB05				eS	Sn	10 16 15.6	+0.8
PB05				IAML		10 16 16.0	
	comp=Z,529nm,0.3s						
PB09	IPOC Station P	1.12	349	⇓iP	Pn	10 15 59.5	+0.8
PB09				i S	Sn	10 16 16.5	+1.1
PB09				IAML		10 16 17.7	
	comp=E,1µm,0.5s						
PB04	IPOC Station P	1.19	298	⇑iP	Pn	10 15 59.6	+0.3
PB04				i S	Sn	10 16 17.4	+0.7
PB04				IAML		10 16 19.8	
	comp=N,2µm,0.1s						
PB04	IPOC Station P	1.19	298	i P	Pn	10 15 59.7	+0.3
PB07	IPOC Station P	1.42	325	⇑iP	Pn	10 16 02.4	+0.3
PB07				i S	Sn	10 16 22.0	+0.4
PB07				IAML		10 16 24.5	
	comp=E,2µm,0.3s						
PB10	IPOC Station P	1.54	246	⇑iP	Pn	10 16 03.3	0.0
PB10				i S	Sn	10 16 23.7	-0.1
PB10	IPOC Station P	1.54	246	i P	Pn	10 16 03.3	0.0
PB10				IAML		10 16 27.8	
	comp=Z,174nm,0.2s						
PB02	IPOC Station P	1.77	333	⇑iP	Pn	10 16 06.6	+0.3
PB02				i S	Sn	10 16 29.9	+0.7
PB02				IAML		10 16 31.5	
	comp=E,1µm,0.4s						
PB02				IAML		10 16 31.5	
	comp=N,1µm,0.3s						
PB01	IPOC Station P	1.90	347	eP	Pn	10 16 08.2	+0.2
PB01				i S	Sn	10 16 32.5	+0.5
PB01				IAML		10 16 33.8	
	comp=N,1µm,0.4s						
PB14	IPOC Station P	2.13	216	i P	Pn	10 16 11.7	+0.5
PB14				IAML		10 16 42.1	
	comp=Z,185nm,0.3s						
GO02	Mina Guanaco	2.31	193	eP	Pn	10 16 13.3	-0.1
GO02				i S	Sn	10 16 41.9	+0.2
GO02				IAML		10 16 45.1	
	comp=N,302nm,0.2s						
PATCX	Punta Patache	2.32	333	⇑iP	Pn	10 16 12.8	-0.6
PATCX				i S	Sn	10 16 42.0	+0.2
PATCX				IAML		10 16 46.8	
	comp=E,293nm,0.7s						
PB08	IPOC Station P	2.75	357	⇑iP	Pn	10 16 19.5	+0.2
PB08				i S	Sn	10 16 47.8	-4.5
GO01	Chusmiza	3.22	357	⇑iP	Pn	10 16 25.4	-0.3
YJA	Yavi	3.32	78	i P	Pn	10 16 28.2	+1.3
YJA				IAML		10 17 35.9	
	comp=Z,5.3nm,3.5s						
HJA	Humahuaca	3.34	96	i P	Pn	10 16 28.2	+1.1
HJA				IAML		10 17 09.3	
	comp=Z,5.2nm,0.7s						
AZAP	Zapla	3.86	111	i P	Pn	10 16 35.0	+1.0
AZAP				IAML		10 17 21.5	
	comp=Z,4.9nm,1.0s						
AGUA	GUANDACOL	6.58	176	i P	Pn	10 17 09.9	-0.7
AGUA				IAML		10 18 27.0	
	comp=Z,1.5nm,1.5s						
ACDV	Cuesta del Vie	7.24	181	i P	Pn	10 17 18.7	-0.9
ACDV				IAML		10 19 21.7	
	comp=Z,6.6nm,3.4s						
ACCO	Cerro Coronel	7.66	180	i P	Pn	10 17 23.7	-1.7
AMOG	MOGNA	8.02	177	i P	Pn	10 17 27.3	-2.8
AMOG				IAML		10 19 13.4	
	comp=Z,2.2nm,1.0s						

KEA 15 10:20:17.2±0.0, **40°.67N**×**123°.01E**, **h0**^{km}, **ML2.9**/1, **Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUJ	Sinuiju	1.27	116	Pg	Pg	10 20 41.3	-0.2
SUJ				Sg	Sg	10 20 57.7	-0.3
PYS	Pyongsong	2.61	122	Sg	Sb	10 21 36.0	-1.4
PYAG	Pyongyang	2.67	127	Sg	Sn	10 21 36.7	+2.3
KGE	Kanggye	2.75	83	Sg	Sb	10 21 42.7	+1.2
HJU	Haeju	3.37	140	Sg	Sb	10 22 00.0	+0.8

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*IDC **15** 10:30:33.6±2.6, 6°.32S×130°.22E, h127^{km}±30^{km}, mb4.0/4, mb1 4.1/8, mb1mx3.7/36, mbtmp4.4/8, Error ellipse: s-maj=51.8km s-min=19.6km az=86.0*
*NEIC **15** 10:30:35.3±1.6, 6°.18S±0°.05×130°.30E±0°.09, h142^{km}±9^{km}, mb4.2/15, Error ellipse: s-maj=14.1km s-min=5.3km az=111.0*
*DJA **15** 10:30:36.3±0.6, 6°S±4°×13°1E±°, h150^{km}±8^{km}, M4.5/11, mB5.8/3, mb4.5/3, MLv4.5/11, Mw(mB)5.3/3*
ISC 15 10:30:35.3±0.6, **6°.20S**±0°.05×**130°.47E**±0°.07, **h150**^{km}, **n56**, σ**1ˢ.34**/62, **mb4.1**/10, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.75	341	P	Pn	10 31 08.8	+1.2
BNDI				S	Sn	10 31 33.6	+1.1
SAUI	Saumlaki	1.96	155	P	Pn	10 31 11.0	+1.1
SAUI				S	Sn	10 31 38.2	+1.6
SAUI	Saumlaki	1.96	155		Pn	10 31 10.6	+0.7
SAUI				Sn	Sn	10 31 35.8	-0.8
MSAI	Masohi	3.22	331	P	Pn	10 31 26.3	+0.8
MSAI				S	Sn	10 32 03.4	-1.0
AAI	Ambon	3.37	318	P	Pn	10 31 28.4	+1.0
AAI				S	Sn	10 32 09.1	+1.3
FAKI	Fak Fak	3.71	29	P	Pn	10 31 32.3	+0.5
FAKI	Fak Fak	3.71	29		Pn	10 31 32.3	+0.5
FAKI				Sn	Sn	10 32 16.4	+0.7
NLAI	Namlea	4.46	311	P	Pn	10 31 42.9	+1.3
SIJI	Sorong	5.35	9	P	Pn	10 31 53.7	+0.3
	25nm,0.3s,baz=39,slow=4.7,SNR=115						
SIJI				S	Sn	10 32 50.4	-4.0
	56nm,0.3s,baz=244,slow=23,SNR=7.2						
SWI	Sorong	5.36	9	P	Pn	10 31 54.2	+0.7
	2.8nm14µm63nm,0.4s						
RKPI	Ransiki, Papua	5.95	39	P	Pn	10 32 01.9	+0.6
SANI	Sanana	6.08	312	P	Pn	10 32 03.9	+0.8
SOEI	Soe	7.09	240		Pn	10 32 15.2	-1.4
TNTI	Ternate	7.58	336	Pn	Pn	10 32 22.6	-0.5
FITZ	Fitzroy Crossi	12.73	201	P	Pn	10 33 26.8	-4.3
	2.1nm,0.3s,baz=355,slow=0.3,SNR=32						
FITZ				S	Sn	10 35 36.7	-15
	2.9nm,0.3s,baz=154,slow=0.1,SNR=5.2						
WB0	Warramunga Arr	14.02	165		Pn	10 33 44.1	-3.4
WRAB	Tennant Creek	14.17	165		Pn	10 33 47.0	-2.4
WRA	Warramunga Arr	14.17	165	P	Pn	10 33 47.0	-2.5
	1.6nm,0.3s,baz=348,slow=14,SNR=19						
WRA				S	Sn	10 36 15.1	-12
	4.9nm,0.3s,baz=306,slow=32,SNR=13						
WRA	Warramunga Arr	14.17	165		Pn	10 33 46.6	-2.8
WB2	Warramunga Arr	14.18	165		Pn	10 33 47.3	-2.2
WR0	Warramunga Arr	14.24	164	Pn	Pn	10 33 47.5	-2.8
AS31	Alice Springs	17.68	170	P	P	10 34 32.9	+1.7
ASAR	Alice Springs	17.68	170	P	P	10 34 32.1	+0.9

	0.6nm,0.3s,baz=345,slow=10,SNR=60						
ASAR				S	S	10 37 36.3	-11
	0.7nm,0.3s,baz=348,slow=26,SNR=11						
ASAR	**Alice Springs**	**17.68**	**170**	P	**P**	**10 34 32.6**	**+1.5**
KKM	**Kota Kinabalu**	**18.71**	**310**	P	**P**	**10 34 41.3**	**-1.3**
KKM				IAmb	IAmb	10 34 52.1	
	comp=Z,29nm,1.2s						
SBUM	**Sibu**	**20.14**	**295**	P	**P**	**10 34 58.4**	**+0.5**
SBUM				IAmb	IAmb	10 35 00.8	
	comp=Z,4.4nm,0.6s						
CISI	**Cisompet, Garu**	**22.53**	**265**	P	**P**	**10 35 21.8**	**-1.2**
CMAR	**Chiang Mai Arr**	**39.58**	**309**	P	**P**	**10 37 52.0**	**-0.2**
	comp=Z,2.6nm,0.6s,baz=136,slow=7.2,SNR=20						
ODAN	**Odare**	**53.09**	**310**	*e*P	**P**	**10 39 37.6**	**-0.2**
	comp=Z,17nm,0.7s						
TAPN	**Taplejung**	**53.11**	**311**	*e*P	**P**	**10 39 37.9**	**-0.1**
RAMN	**Ramite**	**53.74**	**310**	*e*P	**P**	**10 39 42.7**	**+0.1**
	comp=Z,42nm,0.6s						
JIRN	**Jiri**	**54.42**	**310**	*e*P	**P**	**10 39 47.4**	**-0.2**
GUN	**Gumba**	**54.78**	**310**	*e*P	**P**	**10 39 50.0**	**-0.2**
	comp=Z,27nm,0.7s						
PKI	**Pulchoki**	**54.97**	**310**	*e*P	**P**	**10 39 50.7**	**-0.8**
PKIN	**Phulchoki**	**54.98**	**310**	*e*P	**P**	**10 39 50.3**	**-1.2**
	comp=Z,9.1nm,0.6s						
KKN	**Kakani**	**55.17**	**310**	*e*P	**P**	**10 39 52.6**	**-0.3**
DMN	**Daman**	**55.22**	**310**	*e*P	**P**	**10 39 53.0**	**-0.2**
DANN	**Dangsing**	**56.62**	**310**	*e*P	**P**	**10 40 03.0**	**-0.2**
SONM	**Songino Array**	**57.84**	**341**	P	**P**	**10 40 12.4**	**+1.1**
	comp=Z,0.8nm,0.5s,baz=161,slow=4.7,SNR=5.6						
SONM	**Songino Array**	**57.84**	**341**	P	**P**	**10 40 13.2**	**+2.0**
MK31	**Makanchi Array**	**67.81**	**326**	P	**P**	**10 41 18.1**	**+1.0**
MK31				IAmb	IAmb	10 41 18.5	
	comp=Z,3.2nm,0.6s						
MKAR	**Makanchi Array**	**67.81**	**326**	P	**P**	**10 41 18.0**	**+0.8**
	comp=Z,5.1nm,0.4s,baz=113,slow=8.7,SNR=146						
MKAR	**Makanchi Array**	**67.81**	**326**	P	**P**	**10 41 18.1**	**+1.0**
MAKZ	**Makanchi**	**68.00**	**326**	P	**P**	**10 41 19.3**	**+1.0**
AAK	**Ala-Archa**	**70.23**	**319**	P	**P**	**10 41 34.2**	**+1.9**
AAK				IAmb	IAmb	10 41 34.5	
	comp=Z,2.0nm,0.8s						
ARSB	**Arslanbob**	**70.61**	**318**	P	**P**	**10 41 34.7**	**0.0**
ARSB				IAmb	IAmb	10 41 36.5	
	comp=Z,4.4nm,0.7s						
ZAA0	**Zalesovo Array**	**71.08**	**333**	P	**P**	**10 41 36.5**	**-0.5**
ZAA0				IAmb	IAmb	10 41 39.0	
	comp=Z,4.2nm,1.4s						
ZALV	**Zalesovo Beam**	**71.08**	**333**	P	**P**	**10 41 36.8**	**-0.1**
	comp=Z,1.7nm,0.5s,baz=131,slow=5.0,SNR=6.0						
KURK	**Kurchatov**	**72.08**	**328**	P	**P**	**10 41 42.2**	**-0.9**
KURK				IAmb	IAmb	10 41 44.1	
	comp=Z,2.1nm,0.6s						
KK31	**Karatay Array**	**73.05**	**318**	P	**P**	**10 41 49.7**	**+0.7**
KKAR	**Karatay Array**	**73.05**	**318**	P	**P**	**10 41 49.3**	**+0.3**
KKAR	**Karatay Array**	**73.05**	**318**	P	**P**	**10 41 49.5**	**+0.6**
KKAR				IAmb	IAmb	10 41 50.6	
	comp=Z,1.7nm,0.7s						
SOCY	**Socotra**	**78.19**	**284**	P	**P**	**10 42 18.9**	**0.0**
ABKAR	**Akbulak array**	**82.17**	**321**	P	**P**	**10 42 39.5**	**+0.1**
ABKAR	**Akbulak array**	**82.17**	**321**	P	**P**	**10 42 39.7**	**+0.3**
ABKAR				IAmb	IAmb	10 42 45.5	
	comp=Z,2.8nm,1.5s						
QSPA	**South Pole Qui**	**83.78**	**180**	P	**P**	**10 42 48.1**	**+0.5**

KRNET 15 10:40:43.3±0.1, 41°.10N×70°.74E, h15^{km}, mb2.3, 11C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	**Batken**	**1.04**	**177**	⇑*i*P	Pg	10 41 03.3	-0.2
	baz=77						
BTK				⇑*i*S	Sn	10 41 17.7	-0.1
	baz=77						
TAS	**Tashkent**	**1.11**	**282**	⇑*e*P	Pg	10 41 04.7	0.0
	baz=82						
TAS				⇑*e*S	Sn	10 41 19.6	+0.2
	baz=82						
ARK	**Arkit**	**1.16**	**53**	⇑*i*P	Pn	10 41 05.1	+0.1
	baz=54						
ARK				⇑*i*S	Sg	10 41 21.4	+0.7
	baz=54						
ARSB	**Arslanbob**	**1.71**	**82**	⇓*i*P	Pb	10 41 15.0	+0.5
	baz=82						
ARSB				⇓*i*S	Sg	10 41 38.5	+0.2
	baz=82						
KK31	**Karatay Array**	**2.01**	**355**	⇑Pg	Pg	10 41 21.2	-0.6
	0.6nm,0.3s,baz=180,slow=17,SNR=5.0						
AML	**Almayashu**	**2.44**	**64**	⇑*i*P	Pb	10 41 26.6	-0.6
	baz=64						
AML				⇑*i*S	Sb	10 41 57.5	+0.2
	baz=64						
ARLS	**Aral**	**2.80**	**73**	⇑*e*P	Pb	10 41 31.5	-1.6
	baz=73						
ARLS				⇑*i*S	Sb	10 42 06.5	-0.8
	baz=73						
UCH	**Uchtor**	**3.04**	**67**	⇓*i*P	Pb	10 41 34.9	-2.5
	baz=67						
UCH				⇓*i*S	Sb	10 42 13.0	-1.6
	baz=67						

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*CNRM **15** 10:46:25.8, 36°.65N×8°.25W, h12^{km}*

*SFS **15** 10:46:29.0, 36°.80N×8°.20W, h19^{km}, ML3.3, GOLFO DE CADIZ*

*INMG **15** 10:46:29.4±2.0, 36°.80N×8°.30W, h19^{km}±3^{km}, MD3.1, ML3.1, Error ellipse: s-maj=3.9km s-min=2.1km az=57.0*

*IGIL **15** 10:46:29.6, 36°.81N×8°.30W, h20^{km}, ML3.4*

*MDD **15** 10:46:29.9±0.5, 36°.87N×8°.29W, h21^{km}±1^{km}, mbLg3.3/13, Error ellipse: s-maj=5.1km s-min=3.0km az=23.0, PRXIMO*

ISC 15 10:46:28.1±1.2, 36°.81N±0°.03×8°.28W±0°.03, h18^{km}±3^{km}, n95, σ2^s.37/162, 9C-5D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.52**	**33**	Pg	**Pg**	**10 46 39.8**	**+1.3**
PBDV				Lg	Lg	10 46 47.4	
	254nm,0.6s						
PBDV	**Barranco-do-Ve**	**0.52**	**33**	⇑*i*Pg	**Pg**	**10 46 39.8**	**+1.3**
PBDV				*e*Sg	**Sb**	**10 46 47.4**	**+1.6**
PBDV				A	A	10 46 51.7	
	254nm,0.6s						
PFVI	**Vila Bisbo**	**0.54**	**307**	⇓Pg	**Pb**	**10 46 39.7**	**+0.7**
	284nm,0.1s,SNR=18						
PFVI				Lg	Lg	10 46 46.5	
	944nm,0.1s,SNR=20						
PFVI	**Vila Bisbo**	**0.54**	**307**	P	**Pb**	**10 46 39.3**	**+0.3**
PFVI				S	**Sg**	**10 46 46.4**	**0.0**
PFVI	**Vila Bisbo**	**0.54**	**307**	⇓*i*Pg	**Pb**	**10 46 39.7**	**+0.7**
PFVI				*e*Sg	**Sg**	**10 46 46.6**	**+0.2**
PFVI				A	A	10 46 48.8	
	567nm,0.1s						
MORF	**Marmelete**	**0.58**	**329**	*e*P	**Pb**	**10 46 40.2**	**+0.6**
MORF				*e*S	**Sb**	**10 46 47.7**	**+0.2**
MORF				AML	AML	10 46 49.9	
	comp=E,3µm,0.2s						
MORF	**Marmelete**	**0.58**	**329**	Pg	**Pb**	**10 46 40.2**	**+0.6**
MORF				Pg	**Pb**	**10 46 40.2**	**+0.6**
MORF				Lg	Lg	10 46 47.7	
	comp=E,3µm,0.2s						
MORF	**Marmelete**	**0.58**	**329**	⇓*e*Pg	**Pb**	**10 46 40.2**	**+0.6**
MORF				*e*Sg	**Sb**	**10 46 48.1**	**+0.6**
MORF				A	A	10 46 49.2	
	comp=E,2µm,0.1s						
PVAQ	**Vaqueiros**	**0.75**	**37**	Pg	**Pb**	**10 46 43.1**	**+0.6**
PVAQ				Lg	Lg	10 46 53.4	
	comp=E,786nm,0.3s						
PVAQ	**Vaqueiros**	**0.75**	**37**	P	**Pb**	**10 46 42.9**	**+0.3**
PVAQ				S	**Sb**	**10 46 53.6**	**+1.2**
PVAQ	**Vaqueiros**	**0.75**	**37**	⇑*e*P	**Pb**	**10 46 43.1**	**+0.6**
PVAQ				*e*S	**Sb**	**10 46 53.4**	**+1.0**
PVAQ				A	A	10 46 54.8	
	comp=E,786nm,0.3s						
PTEO	**Sao Teotonio**	**0.82**	**334**	Pg	**Pb**	**10 46 44.3**	**+0.6**
PTEO				Lg	Lg	10 46 54.9	
	comp=E,210nm,0.2s						
PTEO	**Sao Teotonio**	**0.82**	**334**	⇓*e*P	**Pb**	**10 46 44.3**	**+0.6**
PTEO				*e*S	**Sb**	**10 46 54.9**	**+0.5**
PTEO				A	A	10 46 55.7	
	comp=E,420nm,0.2s						
PCVE	**Castro Verde**	**0.84**	**13**	Pg	**Pb**	**10 46 44.8**	**+0.6**
PCVE				Lg	Lg	10 46 56.3	
	comp=E,572nm,0.3s						
PCVE	**Castro Verde**	**0.84**	**13**	⇑*e*P	**Pb**	**10 46 44.8**	**+0.6**
PCVE				*e*S	**Sb**	**10 46 56.3**	**+1.1**
PCVE				A	A	10 46 56.9	
	comp=E,572nm,0.3s						
EGRO	**El Granado**	**0.97**	**41**	⇑Pg	**Pb**	**10 46 46.4**	**+0.1**
	comp=E,8.5nm,0.1s,SNR=18						
EGRO				Lg	Lg	10 46 59.0	
	comp=E,256nm,0.1s,SNR=26						
MESJ	**Messejana**	**1.03**	**3**	*e*P	**Pb**	**10 46 47.3**	**-0.1**
MESJ				*e*S	**Sb**	**10 47 00.3**	**-0.3**
MESJ				AML	AML	10 47 02.9	
	comp=E,547nm,0.1s						
MESJ	**Messejana**	**1.03**	**3**	Pg	**Pb**	**10 46 47.3**	**-0.1**
MESJ				Lg	Lg	10 47 00.3	
	comp=E,547nm,0.1s						
MESJ	**Messejana**	**1.03**	**3**	⇑*e*P	**Pb**	**10 46 47.3**	**-0.1**
MESJ				*e*S	**Sb**	**10 47 01.1**	**+0.5**
MESJ				A	A	10 47 01.5	
	comp=E,681nm,0.2s						
PBEJ	**Beja**	**1.26**	**15**	Pg	**Pn**	**10 46 50.2**	**-0.6**
PBEJ	**Beja**	**1.26**	**15**	*e*P	**Pn**	**10 46 50.2**	**-0.6**
PBEJ				A	A	10 47 09.5	
	comp=E,182nm,0.2s						
PNCL	**Nicolau / Gran**	**1.32**	**351**	Pn	**Pn**	**10 46 51.1**	**-0.4**
PNCL				Lg	Lg	10 47 09.8	
	comp=E,559nm,0.2s						
PNCL	**Nicolau / Gran**	**1.32**	**351**	*e*Pn	**Pn**	**10 46 51.1**	**-0.4**
PNCL				*e*Sg	**Sn**	**10 47 09.8**	**+1.2**
PNCL				A	A	10 47 10.6	
	comp=E,559nm,0.2s						
EMIN	**Mina Concepcio**	**1.60**	**53**	Pn	**Pn**	**10 46 54.6**	**-0.8**
	comp=E,0.4nm,0.0s,SNR=41						
EMIN				Pg	**Pb**	**10 46 56.2**	**-0.9**
	comp=E,15nm,0.1s,SNR=7.9						
EMIN				Lg	Lg	10 47 18.3	
	comp=E,63nm,0.1s,SNR=11						
PBAR	**Barrancos**	**1.69**	**36**	Pn	**Pn**	**10 46 56.2**	**-0.4**
PBAR				Lg	Lg	10 47 21.0	
	comp=E,84nm,0.2s						
PBAR	**Barrancos**	**1.69**	**36**	*e*Pn	**Pn**	**10 46 56.2**	**-0.4**
PBAR				*e*Sg	**Sb**	**10 47 21.0**	**+1.6**
PBAR				A	A	10 47 26.0	
	comp=E,84nm,0.2s						
ESPR	**Espera**	**1.95**	**87**	Pn	**Pn**	**10 47 00.4**	**+0.2**
	comp=E,4.1nm,0.1s,SNR=8.5						
ESPR				Pg	**Pb**	**10 47 04.2**	**+1.2**
	comp=E,22nm,0.2s,SNR=7.9						
ESPR				Sn	**Sn**	**10 47 23.2**	**-1.0**
	comp=E,51nm,0.2s,SNR=5.8						
ESPR				Lg	Lg	10 47 30.4	
	comp=E,102nm,0.2s,SNR=6.1						
LIS	**Lisbon**	**2.03**	**340**	Lg	Lg	10 47 33.4	
	comp=E,126nm,0.5s						
LIS	**Lisbon**	**2.03**	**340**	*e*Sg	**Sg**	**10 47 33.4**	**+0.1**
LIS				A	A	10 47 38.5	
	comp=E,126nm,0.5s						
PESTR	**Estremoz**	**2.13**	**15**	S	**Sb**	**10 47 33.2**	**+1.1**
PESTR	**Estremoz**	**2.13**	**15**	*e*Pn	**Pn**	**10 47 02.9**	**+0.2**
PESTR	**Estremoz**	**2.13**	**15**	*e*Pg	**Pb**	**10 47 08.1**	**+2.0**
PESTR				*e*Sn	**Sn**	**10 47 27.2**	**-1.5**
PESTR				*e*Sg	**Sb**	**10 47 35.7**	**+3.6**
PESTR				A	A	10 47 38.9	
	comp=E,60nm,0.3s						
EBAD	**Badajoz**	**2.19**	**27**	⇑Pn	**Pn**	**10 47 02.6**	**-1.0**
	comp=E,0.1nm,0.2s,SNR=18						
EBAD				Pg	**Pb**	**10 47 09.5**	**+2.4**
	comp=E,38nm,0.2s,SNR=7.9						
EBAD				Sn	**Sn**	**10 47 28.4**	**-1.7**
	comp=E,28nm,0.1s,SNR=4.5						
EBAD				Lg	Lg	10 47 35.3	
	comp=E,134nm,0.2s,SNR=5.0						
PMTG	**Montargil**	**2.26**	**1**	Pn	**Pn**	**10 47 02.3**	**-2.2**
PMTG				Pg	**Pb**	**10 47 09.1**	**+0.8**
PMTG				Lg	Lg	10 47 37.2	
	comp=E,124nm,0.3s						
PMTG	**Montargil**	**2.26**	**1**	⇑*e*Pn	**Pn**	**10 47 02.3**	**-2.2**
PMTG	**Montargil**	**2.26**	**1**	*e*Pg	**Pb**	**10 47 09.1**	**+0.8**
PMTG				*e*Sg	**Sb**	**10 47 37.2**	**+1.3**
PMTG				A	A	10 47 41.7	
	comp=E,124nm,0.3s						
PMAFR	**Mafra**	**2.29**	**340**	Pn	**Pn**	**10 47 05.1**	**+0.2**
	comp=E,5.1nm,0.1s,SNR=17						
PMAFR				Sn	**Sn**	**10 47 31.8**	**-0.7**
	comp=E,29nm,0.1s,SNR=6.2						
PMAFR				Lg	Lg	10 47 39.7	
	comp=E,220nm,0.3s,SNR=9.5						
PMAFR	**Mafra**	**2.29**	**340**	⇑*e*Pn	**Pn**	**10 47 05.0**	**+0.1**
PMAFR				A	A	10 47 43.3	
	comp=E,107nm,0.2s						
LIJA	**Lijar**	**2.31**	**87**	*e*P	**Pg**	**10 47 14.0**	**+1.6**
CEU	**Ceuta**	**2.52**	**110**	Pn	**Pb**	**10 47 12.9**	**+0.2**
CEU	**Ceuta**	**2.52**	**110**	*e*P	**Pb**	**10 47 12.9**	**+0.2**
ECAB	**El Cabril**	**2.61**	**60**	Pn	**Pn**	**10 47 09.0**	**-0.3**
	comp=E,2.9nm,0.1s,SNR=36						
ECAB				Pg	**Pb**	**10 47 16.6**	**+2.3**
	comp=E,3.0nm,0.1s,SNR=7.9						
ECAB				Sn	**Sn**	**10 47 39.3**	**-1.2**
	comp=E,4.2nm,0.1s,SNR=5.6						
ECAB				Lg	Lg	10 47 47.6	
	comp=E,40nm,0.2s,SNR=7.6						
HORN	**Hornachuelos**	**2.62**	**66**	P	**Pn**	**10 47 08.7**	**-0.8**
PMRV	**Marv??o**	**2.71**	**15**	Pn	**Pn**	**10 47 10.0**	**-0.7**
PMRV				Sn	**Sn**	**10 47 41.6**	**-1.4**
PMRV				Lg	Lg	10 47 51.8	
	comp=E,51nm,0.2s						
PMRV	**Marv??o**	**2.71**	**15**	⇑*e*Pn	**Pn**	**10 47 10.0**	**-0.7**
PMRV				*e*Sn	**Sn**	**10 47 41.6**	**-1.4**
PMRV				*e*Sg	**Sb**	**10 47 51.8**	**+2.9**
PMRV				A	A	10 47 57.3	
	comp=E,51nm,0.2s						
PSBE	**So Bento**	**2.73**	**352**	*e*Pn	**Pn**	**10 47 11.3**	**+0.3**
PSBE				*e*Sn	**Sn**	**10 47 41.8**	**-1.8**
PSBE				*e*Sg	**Sb**	**10 47 53.7**	**+4.1**
PSBE				A	A	10 47 57.4	
	comp=E,68nm,0.3s						
RSA	**Sarsar**	**2.77**	**133**	P	Pn	10 47 05.3	-6.3
RSA				S	**Sn**	**10 47 39.8**	**-4.8**
PTOM	**Tomar**	**2.81**	**358**	Pn	**Pn**	**10 47 11.7**	**-0.3**
PTOM				Sn	**Sn**	**10 47 41.8**	**-3.6**
PTOM				Lg	Lg	10 47 55.8	
	comp=E,53nm,0.3s						
PTOM	**Tomar**	**2.81**	**358**	*e*Pn	**Pn**	**10 47 11.7**	**-0.3**
PTOM				*e*Sn	**Sn**	**10 47 41.8**	**-3.6**
PTOM				*e*Sg	**Sb**	**10 47 55.8**	**+4.1**
PTOM				A	A	10 47 58.5	
	comp=E,106nm,0.3s						
EMIJ	**Mijas**	**2.83**	**94**	Pn	**Pn**	**10 47 12.7**	**+0.4**
	comp=E,0.3nm,0.1s,SNR=7.9						
EMIJ				Sn	**Sn**	**10 47 46.3**	**+0.3**
	comp=E,8.8nm,0.4s,SNR=7.9						
PCBR	**Castelo Branco**	**3.09**	**12**	Pn	**Pn**	**10 47 15.5**	**-0.5**
PCBR				Sn	**Sn**	**10 47 50.4**	**-2.0**
PCBR				Lg	Lg	10 48 04.7	
	comp=E,18nm,0.3s						
PCBR	**Castelo Branco**	**3.09**	**12**	*e*Pn	**Pn**	**10 47 15.5**	**-0.5**
PCBR				*e*Sn	**Sn**	**10 47 50.4**	**-2.0**
PCBR				*e*Sg	**Sb**	**10 48 04.7**	**+4.8**
PCBR				A	A	10 48 09.7	
	comp=E,36nm,0.3s						
EADA	**Adamuz**	**3.24**	**64**	Pn	**Pn**	**10 47 17.8**	**-0.2**
	comp=E,3.4nm,0.2s,SNR=30						
EADA				Sn	**Sn**	**10 47 54.2**	**-2.1**
	comp=E,9.4nm,0.2s						
EADA				Lg	Lg	10 48 08.8	
	comp=E,25nm,0.1s,SNR=5.0						
PCAS	**Casmilo, Conde**	**3.25**	**357**	Pn	**Pn**	**10 47 17.8**	**-0.3**
PCAS				Sn	**Sn**	**10 47 53.8**	**-2.4**
PCAS				Lg	Lg	10 48 09.0	
	comp=E,42nm,0.4s						
PCAS	**Casmilo, Conde**	**3.25**	**357**	*e*Pn	**Pn**	**10 47 17.8**	**-0.3**
PCAS				*e*Sn	**Sn**	**10 47 53.8**	**-2.4**
PCAS				*e*Sg	**Sb**	**10 48 09.0**	**+4.7**
PCAS				A	A	10 48 16.7	
	comp=E,42nm,0.4s						
COI	**Coimbra**	**3.40**	**358**	Sn	**Sn**	**10 47 57.0**	**-2.9**
	comp=E,22nm,0.6s						
COI	**Coimbra**	**3.40**	**358**	*e*Sn	**Sn**	**10 47 57.0**	**-2.9**
COI				A	A	10 48 27.1	
	comp=E,45nm,0.6s						
ZHG	**ZHG**	**3.61**	**158**	P	**Pn**	**10 47 22.4**	**-0.8**
ZHG				S	**Sn**	**10 48 03.3**	**-2.1**
MTE	**Manteigas**	**3.63**	**9**	Pn	**Pn**	**10 47 21.6**	**-1.8**
MTE				Sn	**Sn**	**10 48 02.9**	**-3.0**
MTE				Lg	Lg	10 48 21.5	
	comp=E,29nm,0.6s						
MTE	**Manteigas**	**3.63**	**9**	*e*Pn	**Pn**	**10 47 21.6**	**-1.8**
MTE				*e*Sn	**Sn**	**10 48 02.9**	**-3.0**
MTE				*e*Sg	**Sb**	**10 48 21.5**	**+6.0**
MTE				A	A	10 48 29.5	
	comp=E,59nm,0.6s						
EPLA	**Plasencia**	**3.68**	**27**	Pn	**Pn**	**10 47 23.1**	**-1.0**
	comp=E,0.4nm,0.1s,SNR=7.4						
EPLA				Sn	**Sn**	**10 48 04.7**	**-2.3**
	comp=E,14nm,0.2s,SNR=12						
ELGU	**Los Guajares,**	**3.73**	**88**	Pn	**Pn**	**10 47 27.2**	**+2.4**
	comp=E,1.0nm,0.1s,SNR=7.9						
ELGU				Sn	**Sn**	**10 48 08.0**	**-0.4**
	comp=E,6.5nm,0.2s,SNR=7.9						
PALE	**Palemas**	**3.86**	**113**	S	**Sn**	**10 48 09.7**	**-1.8**
EQUE	**Quentar**	**3.90**	**83**	Sn	**Sn**	**10 48 11.6**	**-0.8**
	comp=E,2.0nm,0.2s,SNR=7.9						
PVIS	**Viseu**	**3.91**	**4**	Sn	**Sn**	**10 48 09.6**	**-3.2**
	comp=E,13nm,0.3s						
PVIS	**Viseu**	**3.91**	**4**	*e*Sn	**Sn**	**10 48 09.6**	**-3.2**
PVIS				A	A	10 48 34.6	
	comp=E,26nm,0.3s						
PAB	**San Pablo**	**4.13**	**47**	⇓Pn	**Pn**	**10 47 29.9**	**-0.4**
	comp=E,1.1nm,0.1s,SNR=18						
PAB				Sn	**Sn**	**10 48 14.7**	**-3.5**
	comp=E,4.2nm,0.2s,SNR=7.9						
PAB				Lg	Lg	10 48 36.7	
	comp=E,3.9nm,0.1s,SNR=7.9						
IFR	**Ifrane**	**4.18**	**141**	*e*P	Pn	10 47 37.0	+6.0
EQES	**Quesada**	**4.27**	**75**	Pn	**Pn**	**10 47 31.6**	**-0.6**
	comp=E,0.7nm,0.1s,SNR=7.9						
EQES				Sn	**Sn**	**10 48 18.4**	**-3.2**
	comp=E,4.1nm,0.4s,SNR=7.9						
EBER	**Berja**	**4.33**	**87**	Pn	**Pn**	**10 47 33.9**	**+0.8**
	comp=E,0.8nm,0.3s,SNR=7.9						
EBER				Sn	**Sn**	**10 48 22.1**	**-1.0**
	comp=E,7.9nm,0.5s,SNR=7.9						
SRHM	**Skhour des Reh**	**4.34**	**176**	P	**Pn**	**10 47 33.4**	**+0.2**
ESDC	**Sonseca Array**	**4.44**	**49**	Pn	**Pn**	**10 47 33.9**	**-0.6**
	comp=E,0.6nm,0.1s,baz=233,slow=13,SNR=7.2						
ESDC				Sn	**Sn**	**10 48 22.7**	**-3.1**
	comp=E,1.8nm,0.2s,baz=234,slow=24,SNR=10						
ESDC				Lg	Lg	10 48 45.5	
	comp=E,2.4nm,0.5s,baz=231,slow=46,SNR=8.4						
MVO	**Moncorvo**	**4.46**	**12**	Sn	**Sn**	**10 48 21.7**	**-4.5**
	comp=E,14nm,0.2s,SNR=7.9						
MVO				Lg	Lg	10 48 47.2	
	comp=E,10.0nm,0.2s,SNR=4.0						
MVO	**Moncorvo**	**4.46**	**12**	*e*Sn	**Sn**	**10 48 21.7**	**-4.5**
MVO				*e*Sg	**Sg**	**10 48 49.8**	**-1.4**
MVO				A	A	10 48 53.6	
	comp=E,21nm,0.5s						
CZD	**Col de Zad**	**4.61**	**144**	P	**Pn**	**10 47 35.4**	**-1.7**
CZD				S	**Sn**	**10 48 25.7**	**-4.6**
SESP	**Santiago Espad**	**4.75**	**72**	Sn	**Sn**	**10 48 28.7**	**-4.8**
	comp=E,7.2nm,0.2s,SNR=4.0						
SESP	**Santiago Espad**	**4.75**	**72**	P	**Pn**	**10 47 38.2**	**-0.6**
MD31	**MD31**	**4.88**	**143**	P	**Pn**	**10 47 40.1**	**-0.5**
MD31				S	**Sn**	**10 48 32.2**	**-4.5**
PCAB	**Cabril**	**4.90**	**2**	Pn	**Pn**	**10 47 40.2**	**-0.6**
PCAB				Sn	**Sn**	**10 48 32.4**	**-4.6**
	comp=E,7.7nm,0.4s						
PCAB	**Cabril**	**4.90**	**2**	*e*Pn	**Pn**	**10 47 40.2**	**-0.6**
PCAB				*e*Sn	**Sn**	**10 48 32.4**	**-4.6**
PCAB				A	A	10 49 08.6	
	comp=E,15nm,0.4s						
MDT	**Midelt**	**5.00**	**142**	P	**Pn**	**10 47 41.3**	**-1.0**
MDT				S	**Sn**	**10 48 34.7**	**-4.9**
GUD	**Guadarrama**	**5.01**	**39**	Pn	**Pn**	**10 47 41.7**	**-0.7**
	comp=E,0.1nm,0.3s,SNR=5.6						
GUD				Sn	**Sn**	**10 48 36.6**	**-3.3**
	comp=E,3.6nm,0.3s,SNR=5.5						
GUD				Lg	Lg	10 49 02.8	
	comp=E,8.5nm,0.4s,SNR=7.9						
ELOB	**Lobios**	**5.06**	**2**	Pn	**Pn**	**10 47 42.5**	**-0.5**
	comp=E,0.5nm,0.2s,SNR=12						
ELOB				Sn	**Sn**	**10 48 35.4**	**-5.6**
	comp=E,2.8nm,0.3s,SNR=9.4						
ELOB				Lg	Lg	10 49 05.7	
	comp=E,15nm,0.3s,SNR=7.9						
PBRG	**Braganca**	**5.13**	**13**	Pn	**Pn**	**10 47 43.2**	**-0.8**
PBRG				Sn	**Sn**	**10 48 38.4**	**-4.4**
	comp=E,6.6nm,0.5s						
PBRG	**Braganca**	**5.13**	**13**	*e*Pn	**Pn**	**10 47 43.2**	**-0.8**
PBRG				*e*Sn	**Sn**	**10 48 38.4**	**-4.4**
PBRG				A	A	10 49 17.9	
	comp=E,13nm,0.5s						
PGAV	**Gavieira, Arco**	**5.15**	**0**	Pn	**Pn**	**10 47 43.9**	**-0.4**
PGAV				Sn	**Sn**	**10 48 37.4**	**-5.9**
	comp=E,10nm,0.8s						
PGAV	**Gavieira, Arco**	**5.15**	**0**	*e*Pn	**Pn**	**10 47 43.9**	**-0.4**
PGAV				*e*Sn	**Sn**	**10 48 37.4**	**-5.9**
PGAV				A	A	10 49 19.7	
	comp=E,10nm,0.8s						
ECAL	**Calabor**	**5.26**	**13**	Pn	**Pn**	**10 47 45.0**	**-0.8**
	comp=E,0.8nm,0.1s,SNR=10						
ECAL				Sn	**Sn**	**10 48 42.6**	**-3.5**
	comp=E,12nm,0.4s,SNR=5.0						
ECAL				Lg	Lg	10 49 13.5	
	comp=E,39nm,0.5s,SNR=8.7						
JBK	**JBK**	**5.27**	**116**	P	**Pn**	**10 47 43.8**	**-2.3**
JBK				S	**Sn**	**10 48 41.1**	**-5.3**
OUK	**Oukaimeden**	**5.60**	**176**	S	**Sn**	**10 48 50.9**	**-3.8**
ETOB	**Tobarra**	**5.64**	**69**	Pn	**Pn**	**10 47 50.2**	**-0.9**
	comp=E,1.0nm,0.1s,SNR=6.4						
ETOB				Sn	**Sn**	**10 48 51.9**	**-3.6**
	comp=E,1.1nm,0.2s,SNR=7.9						
ETOB				Lg	Lg	10 49 23.9	
	comp=E,12nm,0.7s,SNR=7.9						
EAGO	**Agolada(Pontev**	**5.99**	**1**	Pn	**Pn**	**10 47 55.4**	**-0.4**
	comp=E,0.4nm,0.1s,SNR=7.9						
EAGO				Sn	**Sn**	**10 48 58.0**	**-5.9**
	comp=E,2.5nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**6.16**	**355**	Pn	**Pn**	**10 47 58.6**	**+0.5**
	comp=E,0.6nm,0.1s,SNR=7.9						
EMAZ				Sn	**Sn**	**10 49 02.1**	**-5.9**
	comp=E,2.4nm,0.2s,SNR=7.9						
TTIG	**Tnine Tigouga,**	**6.25**	**181**	P	Pn	10 47 55.2	-4.2
ETOR	**Torete**	**6.30**	**49**	Pn	**Pn**	**10 48 00.5**	**+0.5**
	comp=E,7.3nm,0.3s,SNR=6.6						
ETOR				Sn	**Sn**	**10 49 07.8**	**-3.8**
	comp=E,3.9nm,0.1s,SNR=7.9						
ETOR				Lg	Lg	10 49 50.0	
	comp=E,12nm,0.8s,SNR=5.0						

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*ATH **15** 10:52:10.8, 37°.92N×21°.08E, h18^{km}±1^{km}, ML3.3/18, Error ellipse: s-maj=1.3km s-min=0.5km az=343.0*

*THE **15** 10:52:11.1, 37°.89N×21°.08E, h21^{km}, ML3.5/6, Error ellipse: s-maj=0.9km s-min=0.4km az=206.0*

*IDC **15** 10:52:12.9±2.3, 37°.91N×21°.00E, h38^{km}±24^{km}, mb3.7/7, mb1 3.7/12, mb1mx3.4/56, mbtmp3.7/12, ML3.3/5, MS4.3/2, Ms1 4.4/2, ms1mx3.3/70, Error ellipse: s-maj=20.3km s-min=17.6km az=129.0*

ISC 15 10:52:10.8±0.8, 37°.89N±0°.03×21°.04E±0°.02, h19^{km}±2^{km}, n92, σ1^s.16/127, mb3.9/7, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTN	**Vitineika**	**0.12**	**77**	P	**Pg**	**10 52 14.7**	**-0.1**
VTN				S	**Sg**	**10 52 18.3**	**+0.8**
VTN	**Vitineika**	**0.12**	**77**	P	**Pg**	**10 52 14.7**	**-0.1**
KFL	**Anninata**	**0.30**	**317**	P	**Pb**	**10 52 17.7**	**+0.2**
KFL				S	**Sb**	**10 52 23.3**	**+1.3**
	7µm,0.3s						
KFL	**Anninata**	**0.30**	**317**	P	**Pb**	**10 52 17.8**	**+0.2**
KFL				S	**Sb**	**10 52 22.3**	**+0.3**
KFL				AML	AML	10 52 27.4	
	comp=N,16086µm,0.4s						
KFL				AML	AML	10 52 30.2	
	comp=E,12169µm,0.3s						
RLS	**Riolos of Patr**	**0.37**	**63**	P	**Pg**	**10 52 18.2**	**-0.5**
RLS				S	**Sg**	**10 52 24.0**	**-0.1**
	comp=E,18µm,0.4s						
RLS	**Riolos of Patr**	**0.37**	**63**	P	**Pg**	**10 52 18.3**	**-0.5**
RLS				S	**Sg**	**10 52 23.5**	**-0.5**
RLS				AML	AML	10 52 24.7	
	comp=N,42661µm,0.4s						
RLS				AML	AML	10 52 24.7	
	comp=E,30619µm,0.3s						
VLS	**Valsamata**	**0.46**	**309**	P	**Pg**	**10 52 20.3**	**+0.1**
VLS				S	**Sb**	**10 52 28.0**	**+1.2**
	comp=E,4µm,0.1s						
VLS	**Valsamata**	**0.46**	**309**	P	**Pg**	**10 52 20.3**	**+0.1**
VLS				S	**Sb**	**10 52 26.8**	**0.0**
VLS				AML	AML	10 52 29.1	
	comp=N,6772µm,0.2s						
VLS				AML	AML	10 52 29.1	
	comp=E,8820µm,0.1s						

KEF2	Argostoli. Kep	0.52	302	P	Pg	10 52 21.4	+0.1
ARGA	Argostoli. Kep	0.53	303	P	Pb	10 52 21.4	0.0
DRO	Drossia	0.53	83	P	Pb	10 52 20.9	-0.6
DRO				S	Sb	10 52 28.7	0.0
	comp=E,12µm,0.4s						
DRO	Drossia	0.53	83	P	Pb	10 52 20.7	-0.8
DRO				S	Sb	10 52 27.6	-1.1
DRO				AML	AML	10 52 29.7	
	comp=E,27130µm,0.5s						
DRO				AML	AML	10 52 31.7	
	comp=N,19814µm,0.4s						
KEF1	Kardakata, Kep	0.59	311	P	Pb	10 52 22.5	0.0
KEF4	Livadi, Kephal	0.61	307	P	Pg	10 52 23.2	+0.2
KEF3	Kipouria, Keph	0.63	300	P	Pb	10 52 23.3	+0.2
AMT	Artemida-Makis	0.64	124	P	Pb	10 52 22.7	-0.6
AMT				S	Sg	10 52 32.3	+0.3
	comp=N,3µm,0.7s						
AMT	Artemida-Makis	0.64	124	P	Pb	10 52 22.8	-0.5
AMT				S	Sg	10 52 32.3	+0.3
AMT				AML	AML	10 52 33.5	
	comp=E,5841µm,0.6s						
AMT				AML	AML	10 52 33.9	
	comp=N,6222µm,0.8s						
KONA	Konidatara, Ke	0.65	325	P	Pb	10 52 23.6	+0.1
KONA				S	Sg	10 52 32.7	+0.3
KONA				AML	AML	10 52 43.5	
	comp=N,4886µm,0.4s						
KONA				AML	AML	10 52 45.1	
	comp=E,3027µm,0.3s						
FSK	Fiskardo	0.68	326	P	Pb	10 52 23.9	-0.2
FSK	Fiskardo	0.68	326	P	Pb	10 52 23.7	-0.4
FSK				S	Sg	10 52 34.0	+0.5
FSK				AML	AML	10 52 42.9	
	comp=N,2259µm,0.3s						
FSK				AML	AML	10 52 44.9	
	comp=E,2734µm,0.5s						
UPR	University Cam	0.70	56	P	Pb	10 52 24.5	+0.1
PDO	Prodromos	0.71	9	P	Pb	10 52 24.7	+0.1
PDO	Prodromos	0.71	9	P	Pb	10 52 24.1	-0.5
PDO				S	Sb	10 52 33.8	-0.2
PDO				AML	AML	10 52 39.3	
	comp=E,9271µm,0.3s						
PDO				AML	AML	10 52 39.4	
	comp=N,16866µm,0.4s						
MGNA	Meganis	0.79	345	P	Pb	10 52 25.7	-0.2
MGNA				S	Sb	10 52 36.4	+0.2
MGNA				AML	AML	10 52 39.5	
	comp=E,4911µm,0.2s						
MGNA				AML	AML	10 52 40.0	
	comp=N,2698µm,0.1s						
EVGI	Lefkada island	0.79	337	P	Pb	10 52 25.9	0.0
EVGI	Lefkada island	0.79	337	P	Pb	10 52 25.8	-0.1
PVO	Paravola	0.82	28	P	Pb	10 52 26.2	-0.2
PVO	Paravola	0.82	28	P	Pb	10 52 25.7	-0.7
PVO				S	Sb	10 52 36.6	-0.4
PVO				AML	AML	10 52 41.3	
	comp=N,6061µm,0.3s						
PVO				AML	AML	10 52 43.9	
	comp=E,4188µm,0.4s						
EFP	Efpalio	0.86	52	P	Pb	10 52 26.4	-0.8
EFP	Efpalio	0.86	52	P	Pb	10 52 26.4	-0.8
EFP				S	Sb	10 52 38.6	+0.2
EFP				AML	AML	10 52 43.3	
	comp=E,4052µm,0.5s						
EFP				AML	AML	10 52 44.5	
	comp=N,3169µm,0.3s						
KLV	Kalavryta, Ach	0.89	80	P	Pb	10 52 26.7	-0.9
KLV				S	Sb	10 52 39.4	+0.3
KLV				AML	AML	10 52 46.2	
	comp=E,2557µm,0.8s						
KLV				AML	AML	10 52 46.3	
	comp=N,2240µm,0.4s						
ALIK	Aliki, Aigiali	0.92	66	P	Pb	10 52 27.2	-0.9
TRIZ	Trizonia	0.94	59	P	Pb	10 52 27.5	-0.9
LKD2	Lefkada island	0.95	341	P	Pb	10 52 28.6	-0.1
LKD2				S	Sn	10 52 42.7	+0.6
	comp=N,6µm,0.6s						
LKD2	Lefkada island	0.95	341	P	Pb	10 52 28.5	-0.1
LKD2				S	Sg	10 52 41.6	-0.2
LKD2				AML	AML	10 52 49.8	
	comp=N,11825µm,0.9s						
LKD2				AML	AML	10 52 50.1	
	comp=E,10937µm,0.3s						
SERG	Sergoula	0.95	57	P	Pb	10 52 27.8	-0.9
SERG				S	Sb	10 52 41.3	+0.3
SERG				AML	AML	10 52 45.1	
	comp=N,4467µm,0.5s						
SERG				AML	AML	10 52 46.5	
	comp=E,2763µm,0.3s						
ANX	Ano Chora	0.98	44	P	Pb	10 52 28.7	-0.6
ANX				S	Sb	10 52 41.9	0.0
ANX	Ano Chora	0.98	44	P	Pb	10 52 28.7	-0.6
ANX				S	Sb	10 52 42.2	+0.2
ANX				AML	AML	10 52 46.5	
	comp=N,5640µm,0.3s						
ANX				AML	AML	10 52 47.3	
	comp=E,5828µm,0.4s						
KALE	Kalithea	1.00	60	P	Pb	10 52 28.6	-0.9
KALE				S	Sb	10 52 42.9	+0.6
KALE				AML	AML	10 52 47.2	
	comp=N,5909µm,0.5s						
KALE				AML	AML	10 52 47.9	
	comp=E,4343µm,0.3s						
ITM	Ithomi	1.00	135	P	Pb	10 52 28.9	-0.6
ITM	Ithomi	1.00	135	P	Pb	10 52 29.4	-0.1
ITM				S	Sn	10 52 43.2	-0.2
ITM				AML	AML	10 52 50.8	
	comp=N,1764µm,0.5s						
ITM				AML	AML	10 52 53.8	
	comp=E,1468µm,0.6s						
PYL	PYLOS	1.14	151	P	Pn	10 52 30.9	-0.8
PYL	PYLOS	1.14	151	P	Pn	10 52 31.0	-0.7
VLX	Vlachokerasia	1.18	116	P	Pb	10 52 33.1	+0.5
EVR	Evrytania	1.19	30	P	Pn	10 52 32.5	0.0
EVR				S	Sn	10 52 48.0	-0.1
EVR				AML	AML	10 52 57.2	
	comp=E,1909µm,0.4s						
EVR				AML	AML	10 52 59.2	
	comp=N,1861µm,0.6s						
DLFA	Delphi	1.28	62	P	Pb	10 52 34.6	+0.2
MAKR	Makrakomi, Fth	1.41	37	P	Pb	10 52 36.7	+0.2
PROD	Prodromos	1.51	75	P	Pb	10 52 38.8	+0.6
AGG	Agios Georgios	1.52	41	P	Pb	10 52 38.8	+0.5
DYR	Agios Nikonas	1.53	137	P	Pg	10 52 39.6	-0.6
LTK	Loutraki	1.53	84	P	Pb	10 52 38.3	-0.2
AXAR	Agios Charalam	1.54	55	P	Pb	10 52 38.3	-0.4
LKR	Lokris	1.72	63	P	Pb	10 52 42.0	+0.3
IGT	Igoumenitsa	1.73	341	P	Pb	10 52 41.7	-0.3
KRND	KRANIDI	1.75	106	P	Pb	10 52 42.4	+0.2
DID	Didima	1.78	102	P	Pb	10 52 42.3	-0.6
VIL2	Platees	1.79	79	P	Pb	10 52 43.4	+0.5
THL	Klokotos Trika	1.83	24	P	Pb	10 52 43.6	-0.2
MEV	Metsovon	1.90	4	P	Pb	10 52 45.4	+0.5
VLI	Veliai	1.91	127	P	Pb	10 52 45.2	+0.2
KEK	Kerkira	2.06	332	P	Pb	10 52 47.3	-0.3
KPRO	Kipourio	2.08	7	P	Pb	10 52 47.6	-0.3
XOR	Xorichti	2.24	48	P	Pb	10 52 49.2	-1.4
SCTE	Santa Cesarea	2.96	318	P	Pn	10 52 58.2	+1.4
TIP	Timpagrande	3.60	292	P	Pn	10 53 06.4	+0.8
VAY	Valandovo	3.62	19	*e*Pn	Pb	10 53 16.2	+2.0
STIP	Stip	3.90	13	*e*Pn	Pn	10 53 14.1	+4.4
IDI	Anoyia	4.04	129	Pn	Pn	10 53 12.8	+1.1
	comp=N,0.3nm,0.3s,baz=312,slow=17,SNR=3.6						
IDI				Sn	Sn	10 53 58.5	0.0
	comp=N,1.3nm,0.3s,baz=70,slow=21,SNR=2.8						
SG1	Sgolgore (BA)	4.49	312	*e*Pn	Pn	10 53 19.2	+1.5
SG1				Sn	Sn	10 54 08.7	-0.7
BAI	Bari	4.55	316	*e*Pn	Pb	10 53 25.9	-4.1
DBRK	Dubrovnik	5.26	336	*i* Pn	Pn	10 53 28.9	+0.5
DBRK				Sn	Sn	10 54 26.3	-2.2
VAE	Valguarnera	5.28	268	Pn	Pn	10 53 29.2	+0.6
	comp=N,3.2nm,0.3s,baz=68,slow=19,SNR=3.0						
VAE				Sn	Sn	10 54 27.1	-1.8
	comp=N,1.6nm,0.3s,baz=242,slow=5.9,SNR=1.4						
STON	Ston	5.59	334	*e*Pn	Pn	10 53 32.5	-0.3
STON				Sn	Sn	10 54 33.9	-2.6
MAKA	Makarska	6.20	332	*e*Pn	Pn	10 53 40.7	-0.6
MAKA				Sn	Sn	10 54 49.2	-2.3
RICI	Ricice	6.34	333	*e*Pn	Pn	10 53 42.8	-0.4
RICI				Sn	Sn	10 54 53.4	-1.6
ZIRJ	Zirje	7.07	326	*e*Pn	Pn	10 53 52.9	-0.2
ZIRJ				Sn	Sn	10 55 08.2	-4.7
MORI	Morici	7.21	328	*e*Pn	Pn	10 53 55.4	+0.3
MORI				Sn	Sn	10 55 13.9	-2.4
DUGI	Dugi Otok	7.59	325	*e*Pn	Pn	10 54 01.9	+1.5
DUGI				Sn	Sn	10 55 23.1	-2.7
UDBI	Udbina	7.73	331	*e*Pn	Pn	10 54 04.6	+2.2
NVLJ	Novalja	8.13	327	*e*Pn	Pn	10 54 08.4	+0.8
NVLJ				Sn	Sn	10 55 36.6	-2.3
MLR	Muntele Rosu	8.43	24	Pn	Pn	10 54 14.7	+2.8
	comp=N,0.2nm,0.3s,baz=188,slow=15,SNR=1.8						
BRTR	Keskin Array B	10.00	76	Pn	Pn	10 54 36.9	+3.4
	comp=N,0.1nm,0.3s,baz=261,slow=14,SNR=3.3						
MMAI	Mount Meron Ar	12.68	108	LR	LR	11 01 29.2	
	comp=N,626nm,18.1s,baz=195,slow=44						
AKASG	Malin Array Be	14.07	22	Pn	Pn	10 55 29.3	+0.4
	comp=N,0.9nm,0.3s,baz=210,slow=8.5,SNR=2.9						
HFS	Hagfors	22.75	350	P	P	10 57 11.9	+0.3
	comp=N,7.5nm,1.0s,baz=155,slow=11,SNR=4.7						
FINES	FINESS Array B	23.79	6	P	P	10 57 21.0	-0.9
	comp=N,2.9nm,0.8s,baz=190,slow=9.7,SNR=5.2						
NOA	NORSAR Array B	23.98	348	P	P	10 57 22.5	-1.3
	comp=N,0.9nm,0.9s,baz=173,slow=10,SNR=2.7						
TORD	Torodi Ar. Bea	30.07	220	P	P	10 58 19.2	+0.3
	comp=N,1.0nm,0.7s,baz=32,slow=9.5,SNR=6.2						
ARCES	ARCESS Array B	31.80	3	P	P	10 58 33.1	-0.5
	comp=N,6.5nm,1.1s,baz=188,slow=10.0,SNR=4.1						
MKAR	Makanchi Array	45.10	58	P	P	11 00 25.7	0.0
	comp=N,0.4nm,0.4s,baz=277,slow=7.0,SNR=20						
ZALV	Zalesovo Beam	45.58	48	P	P	11 00 28.2	-1.0
	comp=N,0.9nm,0.5s,baz=295,slow=7.3,SNR=3.6						
NVAR	Mina Array Bea	95.33	329	LR	LR	11 51 47.0	
	comp=N,289nm,19.3s,baz=324,slow=38						

BJI ***15*** *10:55:05.5±0.0, 10°.14N×126°.90E, h5^{km}, mB5.5/54, mb5.3/77, Ms5.0/65, Ms7 4.8/60*

MOS ***15*** *10:55:09.8±1.0, 10°.54N×126°.71E, h11^{km}, mb5.5/74, Error ellipse: s-maj=8.7km s-min=4.7km az=110.8*

IDC ***15*** *10:55:10.0±0.3, 10°.53N×126°.72E, h0^{km}, mb5.1/50, mb1 5.1/53, mb1mx5.1/64, mbtmp5.1/53, ML4.8/2, MS4.6/22, Ms1 4.6/22, ms1mx4.2/63, Error ellipse: s-maj=12.7km s-min=7.7km az=78.0*

NEIC ***15*** *10:55:11.7±1.4, 10°.58N±0°.06×126°.70E±0°.08, h10^{km}±1^{km}, mb5.3/148, Error ellipse: s-maj=13.8km s-min=10.1km az=78.0*

MAN ***15*** *10:55:12.8, 10°.65N×126°.89E, h32^{km}, mb5.8, ML4.8, MS5.2*

MAN Intensity III - Libjo Dinagat Province; Intensity II - Dapa Siargao Surigao del Norte; Intensity I - Surigao City.

DJA ***15*** *10:55:13.9±1.1, 11°N±3°×12°7E±°, h27^{km}±9^{km}, M5.4/45, mb5.5/45, mB5.8/29, MLv5.6/1, Mw(mB)5.3/29*

GCMT ***15*** *10:55:14.7±0.2, 10°.65N±0°.02×126°.88E±0°.01, h17^{km}, MW5.3/126, Moment Tensor Solution. s49,c54; s126,c203; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.75±.04; $M_{\theta\theta}$-0.02±.02; $M_{\phi\phi}$0.77±.03; $M_{r\theta}$0.21±.06; $M_{\theta\phi}$-0.01±.01; $M_{\phi r}$-0.56±.06; Best double couple: $M_0$0.96600×10^{17} NP1:ϕ_s191.00000°, δ28.00000°, λ-69.00000°. NP2:ϕ_s347.00000°, δ64.00000°, λ-101.00000°. Principal axes: T 0.9590, Plg18.0000°, Azm86.0000°; N 0.0160, Plg10.0000°, Azm352.0000°; P -0.9740, Plg69.0000°, Azm236.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

KLM ***15*** *10:55:16.0, 10°.67N×127°.08E, h10^{km}, mb5.5*

ISC 15 10:55:11.7±0.8**, 10°.57N**±0°.03×**126°.79E**±0°.04**, h11**^{km}±4^{km}**, n684, **σ**1^{s}40**/727**, mb5.4**/201**, MS4.7**/33**, 47C-39D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	1.50	239	⇑*i*P	Pb	10 55 39.3	-0.3
SCPH				*i* S	Sb	10 55 58.7	+0.1
MSLP	Maasin	1.95	257	*e*P	Pn	10 55 46.0	+1.3
MSLP				*e*S	Sn	10 56 09.8	+0.6
BUTP	Butuan	1.96	216	*e*P	Pn	10 55 45.1	+0.2
BUTP				*e*S	Sn	10 56 08.1	-1.5
LLP	Lapu-Lapu	2.79	265	⇓*i*P	Pn	10 55 57.9	+1.6
LLP				*i* S	Sn	10 56 30.2	+0.2
CNP	Catarman	2.84	313	*e*P	Pn	10 55 55.3	-1.7
CNP				*e*S	Sn	10 56 31.4	+0.2
TBP	Tagbilaran	3.01	253	*e*P	Pn	10 56 01.4	+1.9
TBP				*i* S	Sn	10 56 37.9	+2.3
BUKP	Musuan	3.17	213	*e*P	Pn	10 56 04.2	+2.5
BUKP				*e*S	Sn	10 56 42.0	+2.5
MMPH	Masbate	3.58	300	⇑*e*P	Pn	10 56 07.8	+0.6
MMPH				*i* S	Sn	10 56 50.0	+0.6
MATI	Mati	3.64	188	*e*P	Pn	10 56 08.6	+0.6
MATI				*e*S	Sn	10 56 46.5	-4.5
DAV	Davao City (W)	3.68	199	P	Pn	10 56 08.4	-0.1
DAV	Davao City (W)	3.68	199		Pn	10 56 08.5	-0.1
DMPH	Davao City--Mi	3.69	200	⇑*e*P	Pb	10 56 13.3	-3.6
DMPH				*e*S	Sb	10 57 04.8	+3.1
SNPH	Sibulan	3.71	251	⇑*e*P	Pn	10 56 11.9	+2.9
SNPH				*e*S	Sn	10 56 55.7	+2.9
KCP	Kidapawan	3.92	206	⇑*e*P	Pn	10 56 14.5	+2.6
DCPH	Dipolog City	3.92	240	⇑*e*P	Pn	10 56 14.2	+2.3
PVCP	Virac	3.96	320	*e*P	Pn	10 56 09.4	-3.0
PVCP				*e*S	Sn	10 56 59.0	+0.1
RCP	Roxas	4.09	284	⇓*e*P	Pn	10 56 15.9	+1.6
RCP				*e*S	Sn	10 57 03.4	+1.2
GUIM	Jordan	4.13	271	*e*P	Pn	10 56 16.0	+1.2
GUIM				*e*S	Sn	10 57 00.9	-2.2
CTBH	Cotabato--PC H	4.17	217	⇓*e*P	Pn	10 56 18.3	+3.0
PAGZ	Pagadian	4.32	231	*e*P	Pn	10 56 18.2	+0.8
PAGZ				*e*S	Sn	10 57 10.2	+2.5
DDMP	Don Marcelino,	4.56	194	*e*P	Pn	10 56 21.8	+1.0
SKMP	Bagumbayan, Su	4.60	209	*e*P	Pn	10 56 22.4	+1.1
SKMP				*e*S	Sb	10 57 23.8	-4.1
GSPH	General Santos	4.81	202	⇓*i*P	Pn	10 56 27.5	+3.2
GQP	Guinayangan	5.39	308	⇓*e*P	Pn	10 56 32.7	+0.6
GQP				*e*S	Sn	10 57 35.6	+1.5
BOAC	Boac	5.63	301	*e*P	Pn	10 56 34.7	-0.7
LQP	Lukban	6.22	305	*e*P	Pn	10 56 44.0	+0.2
LQP				*i* S	Sn	10 57 58.9	+3.9
PGP	Puerto Galera	6.41	298	⇓*e*P	Pn	10 56 49.9	+3.7
TGY	Tagaytay City	6.71	302	Pn	Pn	10 56 49.8	-0.6
	baz=186,slow=19,SNR=3.0						
TGY				LR	LR	10 59 39.7	
	comp=Z,4µm,20.2s,baz=146,slow=40						
PCPH	Palayan	7.44	312	⇑*e*P	Pn	10 57 00.8	+0.5
SMPP	San Manuel, Pa	8.13	314	*e*P	Pn	10 57 08.5	-1.3
TNTI	Ternate	9.75	177	P	Pn	10 57 33.2	+1.2
	4µm389nm,0.7s						
TNTI	Ternate	9.75	177		Pn	10 57 32.3	+0.3
KKM	Kota Kinabalu	11.39	248		Pn	10 57 54.7	+0.2
SWI	Sorong	12.20	158	P	Pn	10 58 05.7	+0.2
	2µm121nm,0.7s						
SIJI	Sorong	12.20	158	Pn	Pn	10 58 05.3	-0.3
	6.2nm,0.3s,baz=355,slow=11,SNR=20						
SIJI				Sn	Sn	11 00 06.5	-15
	0.6nm,0.3s,baz=236,slow=23,SNR=1.7						
SIJI				LR	LR	11 02 16.7	
	comp=Z,1µm,21.4s,baz=341,slow=35						
LUWI	Luwuk	12.21	199	P	Pn	10 58 07.7	+2.0
	3µm212nm,0.7s						
LUWI	Luwuk	12.21	199		Pn	10 58 06.0	+0.3
SANI	Sanana	12.56	184	P	Pn	10 58 07.1	-3.4
TWG	Pinlang	13.35	337		Pn	10 58 18.8	-2.5
NLAI	Namlea	13.72	179	P	Pn	10 58 24.2	-2.2
YULB	Yu-li	13.79	338		Pn	10 58 26.4	-0.9
TPUB	Ta-pu	13.96	336		Pn	10 58 28.5	-1.1
MSAI	Masohi	13.99	171	P	Pn	10 58 31.0	+1.0
	597nm45nm,0.7s						
RKPI	Ransiki, Papua	14.07	148	P	Pn	10 58 31.4	+0.2
	9µm225nm,0.8s						
AAI	Ambon	14.23	174	P	Pn	10 58 34.3	+0.9
	2µm184nm,0.7s						
SSLB	Suanglung	14.27	338	P	P	10 58 40.3	-0.9
FAKI	Fak Fak	14.46	158	P	Pn	10 58 32.1	-4.4
SMKI	Samarinda	14.51	222	P	P	10 58 48.6	+4.7
YHNB	Yeheng	14.94	341	P	P	10 58 46.2	-2.4
BKB	Balikpapan	15.33	221	P	P	10 58 55.8	+2.8
BKB	Balikpapan	15.33	221	P	P	10 58 51.0	-2.0
KNMB	Chin-men Tao	15.96	331		Pn	10 58 55.0	-1.4
JOW	Kunigami	16.24	5	Pn	P	10 59 04.6	+1.6
	1.6nm,0.3s,baz=161,slow=13,SNR=26						
JOW	Kunigami	16.24	5		Pn	10 58 58.7	-1.2
QZH	Quanzhou	16.28	332	P	Pn	10 59 01.8	+1.4
QZH				S	S	11 02 10.6	-3.3
QZH				LR	LR		
	comp=N,810nm,14.1s						
QZH				LR	LR		
	comp=E,2µm,16.2s						
QZH				LR	LR		
	comp=Z,2µm,16.9s						
SBUM	Sibu	16.56	242	P	P	10 59 06.4	-0.3
SBUM				IAmb	IAmb	10 59 11.8	
	comp=Z,95nm,0.6s						
SBUM	Sibu	16.56	242	P	P	10 59 07.0	+0.3
KAPI	Kappang	16.99	205	Pn	Pn	10 59 10.3	+0.7
	comp=Z,2.6nm,0.3s,baz=182,slow=14,SNR=4.3						
SMPI	Sarmi	17.22	136	P	P	10 59 14.6	+0.7
	comp=Z,4µmcomp=Z,187nm,1.1s						
GUMO	Guam	17.93	79	LR	LR	11 05 49.3	
	comp=Z,2µm,19.6s,baz=282,slow=36						
DLV	T Lat	18.00	276	P	P	10 59 23.7	+0.8
QIZ	Qiongzhong	18.41	299	P	P	10 59 25.8	-1.2
QIZ				S	Sn	11 02 51.6	-1.2
QIZ				pmax	pmax		
	comp=Z,29nm,1.7s						
QIZ	Qiongzhong	18.41	299	P	P	10 59 26.0	-1.1
GENI	Genyem	18.66	134	P	Pn	10 59 34.3	+4.1
KSM	Kuching	18.70	242	P	Pn	10 59 32.6	+1.9
KSM				IAmb	IAmb	10 59 35.1	
	comp=Z,363nm,0.7s						
KSM	Kuching	18.70	242	P	Pn	10 59 34.0	+3.3
SAUI	Saumlaki	18.97	166	P	Pn	10 59 41.0	+7.1
SAUI	Saumlaki	18.97	166	P	P	10 59 33.8	+0.5
SAUI				IAmb	IAmb	10 59 43.7	
	comp=Z,142nm,0.7s						
MMRI	Maumere	19.61	194	P	P	10 59 40.5	+0.3
PBKI	Pangkalan Bun	20.01	230	P	Pn	10 59 46.4	0.0
	comp=Z,6µmcomp=Z,607nm,0.8s						
SOEI	Soe	20.35	187	P	Pn	10 59 49.7	-0.8
	comp=Z,4µmcomp=Z,391nm,0.7s						
SOEI	Soe	20.35	187	P	P	10 59 48.5	+0.1
SOEI				IAmb	IAmb	10 59 56.9	
	comp=Z,267nm,0.8s						
SSE	Sheshan	21.08	347	P	P	10 59 55.8	-0.3
SSE				S	S	11 03 52.3	+1.6
SSE				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SSE				pmax	pmax		
	comp=Z,170nm,3.8s						
SSE				LR	LR		
	comp=Z,880nm,15.9s						
SSE				LR	LR		
	comp=Z,420nm,16.5s						
PLAI	Plampang	21.25	205	P	P	10 59 59.8	+1.7
	comp=Z,2µmcomp=Z,299nm,0.7s						
UBPT	Khong Chiam	21.30	285	P	P	10 59 57.8	-0.8
KMMI	Kalianget	21.66	217	P	P	11 00 08.6	+6.1
SRBI	Singaraja	21.82	212	P	P	11 00 06.5	+2.3
	comp=Z,138nm,0.7s						
JCJ	Chichijima	21.93	39	P	P	11 00 05.8	+0.6
	comp=Z,259nm,0.7s,baz=265,slow=5.8,SNR=6.7						
DNP	Denpasar	22.32	211	P	P	11 00 14.5	+4.9
IGBI	Denpasar	22.48	211	P	P	11 00 13.4	+2.2
	comp=Z,2µmcomp=Z,108nm,0.7s						
NJ2	Nanjing	22.60	342	*e*P	P	11 00 15.3	+2.9
NJ2				S	S	11 04 21.3	+1.2
NJ2				pmax	pmax		
	comp=Z,51nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,630nm,5.0s						
NJ2				LR	LR		
	comp=Z,2µm,10.0s						
NJ2				LR	LR		
	comp=Z,860nm,7.3s						
NJ2				LR	LR		
	comp=Z,2µm,16.6s						
JAGI	Jajag, Banyuwa	22.71	214	P	P	11 00 14.6	+0.8
	comp=Z,2µmcomp=Z,188nm,0.7s						
JAGI	Jajag, Banyuwa	22.71	214	P	P	11 00 11.9	-1.9
JAGI				IAmb	IAmb	11 00 18.0	
	comp=Z,131nm,0.7s						
JNU	Nakatsue	22.76	9	P	P	11 00 14.1	0.0
	comp=Z,16nm,0.9s,baz=294,slow=7.2,SNR=6.6						
JNU				LR	LR	11 10 39.3	
	comp=Z,1µm,18.2s,baz=194,slow=41						
JNU	Nakatsue	22.76	9	P	P	11 00 14.1	0.0
WHN	Wuhan	23.00	332	⇓P	P	11 00 17.8	+1.2
WHN				S	S	11 04 31.9	+4.8
WHN				pmax	pmax		
	comp=Z,92nm,0.9s						
WHN				pmax	pmax		
	comp=Z,2µm,6.6s						
WHN				LR	LR		
	comp=Z,4µm,15.7s						
WHN				LR	LR		
	comp=Z,2µm,14.8s						
WHN				LR	LR		
	comp=Z,4µm,15.2s						
UWJI	Ujung Watu	23.10	224	P	P	11 00 23.3	+5.5
SMRI	Semarang	23.90	224	P	P	11 00 32.1	+6.3
SMRI	Semarang	23.90	224	P	P	11 00 25.8	0.0
WOJI	Wonogiri, Jawa	24.16	221	P	P	11 00 27.7	-0.5
	comp=Z,3µmcomp=Z,320nm,1.0s						
SLVN	Son La	24.43	299	P	P	11 00 29.1	-1.7
UGM	Wanagama	24.48	222	P	P	11 00 33.8	+2.6
	comp=Z,394nm,0.8s						
UGM	Wanagama	24.48	222	P	P	11 00 30.6	-0.5
GYA	Guiyang	24.72	312	⇓*i*P	P	11 00 33.4	+0.1
GYA				S	S	11 04 53.0	-2.4
GYA				SS	SnSn	11 05 50.8	+9.1
GYA				pmax	pmax		
	comp=Z,30nm,0.9s						
GYA				pmax	pmax		
	comp=Z,730nm,5.9s						
GYA				LR	LR		
	comp=Z,1µm,16.0s						
GYA				LR	LR		
	comp=Z,900nm,16.9s						
GYA				LR	LR		
	comp=Z,2µm,19.1s						
ENH	Enshi	25.37	323	P	P	11 00 39.2	+0.1
ENH				IAmb	IAmb	11 00 47.4	
	comp=Z,172nm,1.0s						
JHJ	Hachijo jima 2	25.43	26	LR	LR	11 08 47.6	
	comp=Z,1µm,20.7s,baz=239,slow=32						
PMBI	Palembang	25.69	240	P	P	11 00 42.7	+0.6
	comp=Z,13µmcomp=Z,868nm,0.8s						
PMBI	Palembang	25.69	240	P	P	11 00 41.2	-0.9
LEM	Lembang	25.75	229	P	P	11 00 42.2	-0.6
	comp=Z,191nm,0.6s,baz=359,slow=18,SNR=32						
PBKT	Sadao Pong	25.78	286	P	P	11 00 42.1	-0.8
PBKT				IAmb	IAmb	11 00 45.8	
	comp=Z,30nm,0.8s						
CISI	Cisompet, Garu	26.10	227	P	P	11 00 46.1	+0.3
	comp=Z,2µmcomp=Z,222nm,0.8s						
CISI	Cisompet, Garu	26.10	227	P	P	11 00 44.1	-1.8
INU	Inuyama	26.37	19	P	P	11 00 47.9	-0.1
SBJI	Serang	26.42	232	P	P	11 00 52.5	+3.8
KSAR	Wonju Array Be	26.77	2	P	P	11 00 51.9	+0.2
KSAR	Wonju Array Be	26.77	2	P	P	11 00 51.9	+0.2
KSRS	Korea Array	26.79	2	P	P	11 00 51.8	0.0
	comp=Z,8.5nm,0.7s,baz=174,slow=9.9,SNR=28						
KSRS				LR	LR	11 11 37.9	
	comp=Z,1µm,19.7s,baz=208,slow=37						
KS19	Wonju Array Si	26.83	2	P	P	11 00 51.7	-0.5
TIA	Tai'an	26.99	343	P	P	11 00 53.8	+0.2
TIA				pmax	pmax		
	comp=Z,30nm,0.9s						
KMI	Kunming	27.02	306	P	P	11 00 53.8	-0.5
KMI				pP	sP	11 00 59.6	+3.7
KMI				sP	pwP	11 01 02.1	-4.5
KMI				pmax	pmax		
	comp=Z,40nm,0.9s						
KMI				LR	LR		
	comp=Z,830nm,31.2s						
KMI				LR	LR		
	comp=Z,2µm,18.9s						
KMI				LR	LR		
	comp=Z,2µm,17.6s						
KMI	Kunming	27.02	306	P	P	11 00 53.3	-1.0
KMI				pmax	pmax		
	comp=Z,93nm,1.5s						
KMI	Kunming	27.02	306	P	P	11 00 53.2	-1.0
KMI				IAmb	IAmb	11 00 54.7	
	comp=Z,92nm,1.5s						
KASI	Kota Agung	27.36	235	P	P	11 00 57.8	+0.7
	comp=Z,2µmcomp=Z,247nm,0.8s						
LWLI	Liwa	27.42	237	P	P	11 00 57.5	-0.4
	comp=Z,8µmcomp=Z,322nm,0.8s						
MAJO	Matsushiro	27.85	20	⇓*e*P	P	11 00 59.5	-1.8
MAJO				pmax	pmax		
	comp=Z,37nm,2.9s						

MAJO	**Matsushiro**	**27.85**	**20**	P	**P**	**11 01 01.6**	**+0.2**
MAT	**Matsushiro**	**27.85**	**20**	P	**P**	**11 01 00.0**	**-1.3**
MJAR	**Matsushiro Arr**	**27.85**	**20**	P	**P**	**11 01 00.3**	**-1.1**
	comp=Z,6.5nm,0.8s,baz=190,slow=8.9,SNR=13						
MJAR				PcP	**PcP**	**11 04 17.7**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=193,slow=3.8,SNR=4.4						
MJAR				LR	LR	11 12 35.2	
	comp=Z,2µm,18.2s,baz=220,slow=37						
MJAR	**Matsushiro Arr**	**27.85**	**20**	P	**P**	**11 01 01.6**	**+0.3**
MJB9	**Matsu-Tunnel**	**27.85**	**20**	P	**P**	**11 01 01.2**	**-0.1**
CM31	**Chiang Mai Arr**	**28.05**	**289**	P	**P**	**11 01 02.8**	**-0.6**
CM31				IAmb	IAmb	11 01 05.8	
	comp=Z,28nm,0.8s						
CMAR	**Chiang Mai Arr**	**28.05**	**289**	P	**P**	**11 01 02.4**	**-1.0**
	comp=Z,16nm,0.7s,baz=102,slow=7.3,SNR=89						
CMAR				LR	LR	11 12 58.7	
	comp=Z,1µm,18.4s,baz=72,slow=38						
CMAR	**Chiang Mai Arr**	**28.05**	**289**	*i* P	**P**	**11 01 02.0**	**-1.3**
CMAR				pmax	pmax		
	comp=Z,18nm,0.8s						
CMAR	**Chiang Mai Arr**	**28.05**	**289**	P	**P**	**11 01 03.3**	**-0.1**
CHTO	**Chiang Mai**	**28.12**	**290**	P	**P**	**11 01 03.0**	**-1.0**
CHTO				pmax	pmax		
	comp=Z,19nm,0.8s						
CHTO	**Chiang Mai**	**28.12**	**290**	P	**P**	**11 01 03.0**	**-1.0**
PMG	**Port Moresby**	**28.36**	**134**	P	**P**	**11 01 05.7**	**-0.4**
	comp=Z,6.4nm,0.6s,baz=308,slow=19,SNR=2.9						
PMG	**Port Moresby**	**28.36**	**134**	P	**P**	**11 01 06.6**	**+0.4**
PMG				pmax	pmax		
	comp=Z,35nm,1.0s						
PMG	**Port Moresby**	**28.36**	**134**	P	**P**	**11 01 06.6**	**+0.4**
PMG				IAmb	IAmb	11 01 21.0	
	comp=Z,35nm,0.9s						
FITZ	**Fitzroy Crossi**	**28.51**	**182**	P	**P**	**11 01 06.4**	**-1.0**
	comp=Z,14nm,0.5s,baz=185,slow=0.1,SNR=33						
XAN	**Xi'an**	**28.52**	**328**	P	**P**	**11 01 07.4**	**0.0**
XAN				pmax	pmax		
	comp=Z,140nm,0.9s						
XAN				LR	LR		
	comp=Z,830nm,17.1s						
XAN				LR	LR		
	comp=Z,1µm,15.0s						
XAN				LR	LR		
	comp=Z,1µm,16.2s						
XAN	**Xi'an**	**28.52**	**328**	P	**P**	**11 01 07.6**	**+0.2**
XAN				pmax	pmax		
	comp=Z,106nm,0.8s						
XAN	**Xi'an**	**28.52**	**328**	P	**P**	**11 01 07.6**	**+0.2**
XAN				IAmb	IAmb	11 01 09.7	
	comp=Z,106nm,0.8s						
PSI	**Prapat**	**28.71**	**256**	LR	LR	11 14 04.0	
	comp=Z,1µm,18.8s,baz=99,slow=40						
CD2	**Chengdu**	**29.44**	**317**	P	**P**	**11 01 14.9**	**-0.7**
CD2				sP	sP	11 01 20.3	+3.1
CD2				S	**S**	**11 06 04.3**	**-5.5**
CD2				pmax	pmax		
	comp=Z,90nm,0.8s						
CD2				pmax	pmax		
	comp=Z,640nm,5.3s						
CD2				LR	LR		
	comp=Z,3µm,15.7s						
CD2				LR	LR		
	comp=Z,3µm,15.7s						
CD2				LR	LR		
	comp=Z,5µm,17.3s						
TIY	**Taiyuan**	**29.95**	**337**	*e*P	**P**	**11 01 21.8**	**+1.7**
BJT	**Baijiatuau**	**30.81**	**344**	P	**P**	**11 01 26.3**	**-1.3**
BJT				pmax	pmax		
	comp=Z,12nm,0.7s						
BJT	**Baijiatuau**	**30.81**	**344**	P	**P**	**11 01 26.3**	**-1.3**
BJI	**Beijing**	**30.83**	**344**	P	**P**	**11 01 28.1**	**+0.4**
BJI				pmax	pmax		
	comp=Z,13nm,1.0s						
WB0	**Warramunga Arr**	**31.06**	**166**	P	**P**	**11 01 28.4**	**-1.6**
WB0				IAmb	IAmb	11 01 42.0	
	comp=Z,16nm,0.7s						
WRAB	**Tennant Creek**	**31.21**	**166**	*de*P	**P**	**11 01 29.1**	**-2.2**
WRAB				pmax	pmax		
	comp=Z,33nm,2.1s						
WRAB	**Tennant Creek**	**31.21**	**166**	P	**P**	**11 01 29.9**	**-1.4**
WRAB				IAmb	IAmb	11 01 43.1	
	comp=Z,13nm,0.6s						
WRA	**Warramunga Arr**	**31.22**	**166**	P	**P**	**11 01 29.9**	**-1.5**
	comp=Z,5.2nm,0.5s,baz=352,slow=8.8,SNR=52						
WRA				PcP	**PcP**	**11 04 26.0**	**-0.2**
	comp=Z,7.5nm,0.7s,baz=356,slow=3.0,SNR=6.2						
WRA	**Warramunga Arr**	**31.22**	**166**	*i* P	**P**	**11 01 28.0**	**-3.4**
WRA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
WRA	**Warramunga Arr**	**31.22**	**166**	P	**P**	**11 01 29.4**	**-2.0**
WB2	**Warramunga Arr**	**31.22**	**166**	P	**P**	**11 01 30.1**	**-1.3**
WB2				IAmb	IAmb	11 01 42.7	
	comp=Z,20nm,0.9s						
SNY	**Shenyang**	**31.26**	**355**	⇓P	**P**	**11 01 32.3**	**+0.8**
SNY				pmax	pmax		
	comp=Z,23nm,0.9s						
WR0	**Warramunga Arr**	**31.28**	**166**	P	**P**	**11 01 30.5**	**-1.4**
MSHR	**Mys Shultsa**	**32.12**	**6**	⇑*e*P	**P**	**11 01 38.2**	**-0.8**
LZH	**Lanzhou**	**32.83**	**324**	⇑P	**P**	**11 01 46.8**	**+1.2**
LZH				pP	sP	11 01 50.3	+3.1
LZH				sP	pwP	11 01 53.5	-3.1
LZH				PP	**PnPn**	**11 02 56.3**	**+2.1**
LZH				pmax	pmax		
	comp=Z,98nm,1.1s						
LZH				pmax	pmax		
	comp=Z,600nm,4.3s						
LZH				LR	LR		
	comp=Z,1µm,17.3s						
LZH				LR	LR		
	comp=Z,1µm,17.9s						
LZH				LR	LR		
	comp=Z,2µm,16.8s						
HHC	**Hu-ho-hao-te**	**33.02**	**339**	*e*P	**P**	**11 01 48.3**	**+1.1**
HHC				pP	sP	11 01 51.6	+2.9
HHC				sP	pwP	11 01 55.5	-2.8
HHC				S	**S**	**11 07 09.6**	**+3.8**
HHC				ScS	**ScS**	**11 12 10.1**	**-5.4**
HHC				LR	LR		
	comp=Z,3µm,11.7s						
HHC				LR	LR		
	comp=Z,2µm,12.4s						
HHC				LR	LR		
	comp=Z,3µm,12.0s						
CN2	**Changchun**	**33.13**	**358**	*e*P	**P**	**11 01 49.6**	**+1.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BTO	**Baotou**	**33.39**	**336**	*e*P	**P**	**11 01 48.9**	**-1.5**
USRK	**Ussuriysk Ar.**	**33.81**	**7**	P	**P**	**11 01 54.6**	**+0.8**
	comp=Z,15nm,0.7s,baz=187,slow=8.8,SNR=31						
USRK				PcP	**PcP**	**11 04 32.6**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=197,slow=1.5,SNR=2.5						
USRK				LR	LR	11 14 12.2	
	comp=Z,673nm,21.5s,baz=170,slow=34						
MDJ	**Mudanjiang**	**34.01**	**4**	P	**P**	**11 01 56.6**	**+1.0**
MDJ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,1µm,5.8s						
MDJ	**Mudanjiang**	**34.01**	**4**	P	**P**	**11 01 55.8**	**+0.2**
MDJ				IAmb	IAmb	11 01 59.5	
	comp=Z,27nm,1.1s						
SAIH	**SAIHA**	**34.42**	**294**	*e*P	**P**	**11 01 58.2**	**-1.4**
SAIH				IAmb	IAmb	11 02 01.4	
	comp=Z,104nm,0.2s						
AS31	**Alice Springs**	**34.73**	**169**	P	**P**	**11 02 00.8**	**-1.3**
ASAR	**Alice Springs**	**34.73**	**169**	P	**P**	**11 02 01.1**	**-1.0**
	comp=Z,12nm,0.5s,baz=352,slow=6.7,SNR=182						
ASAR				PcP	**PcP**	**11 04 35.6**	**-0.3**
	comp=Z,6.8nm,0.6s,baz=338,slow=2.5,SNR=8.3						
ASAR	**Alice Springs**	**34.73**	**169**	P	**P**	**11 02 00.8**	**-1.3**
TEY	**Ternei**	**35.37**	**12**	⇑*e*P	**P**	**11 02 09.6**	**+2.3**
TEY				pmax	pmax		
	comp=Z,30nm,0.7s						
BRDH	**Bariadhala**	**35.67**	**294**	P	**P**	**11 02 09.3**	**-0.9**
	comp=Z,118nm,0.3s,baz=268,slow=22,SNR=5.9						
BRDH				LR	LR	11 17 58.2	
	comp=Z,734nm,19.9s,baz=157,slow=38						
TEZP	**TEZPUR**	**35.80**	**301**	*e*P	**P**	**11 02 09.4**	**-1.9**
TEZP				IAmb	IAmb	11 02 11.6	
	comp=Z,45nm,0.8s						
CTA	**Charters Tower**	**35.99**	**148**	P	**P**	**11 02 13.2**	**+0.3**
	comp=Z,8.9nm,0.8s,baz=335,slow=12,SNR=12						
ASAJ	**Asahikawa**	**36.12**	**19**	P	**P**	**11 02 15.6**	**+1.9**
	comp=Z,7.8nm,0.6s,baz=230,slow=7.4,SNR=12						
JKA	**Kamikawa-asahi**	**36.12**	**19**	P	**P**	**11 02 15.6**	**+1.9**
SHL	**Shillong**	**36.24**	**299**	*e*P	**P**	**11 02 12.8**	**-2.6**
SHL				IAmb	IAmb	11 02 14.7	
	comp=Z,66nm,0.8s						
SHL	**Shillong**	**36.24**	**299**	P	**P**	**11 02 13.7**	**-1.6**
SHL				pmax	pmax		
	comp=Z,103nm,0.8s						
SHL	**Shillong**	**36.24**	**299**	P	**P**	**11 02 13.7**	**-1.6**
GUWA	**GUWAHATI**	**36.60**	**300**	IAmb	IAmb	11 03 50.0	
	comp=Z,77nm,0.5s						
GTA	**Gaotai**	**37.43**	**325**	⇓P	**P**	**11 02 26.3**	**+1.1**
GTA				pP	pwP	11 02 33.1	-3.1
GTA				sP	sP	11 02 36.5	+10
GTA				PcP	**PcP**	**11 04 44.8**	**+0.9**
GTA				S	**S**	**11 08 15.3**	**+1.6**
GTA				sS	ScP	11 08 24.9	-6.4
GTA				ScP	ScP	11 08 31.8	+0.5
GTA				pmax	pmax		
	comp=Z,140nm,0.9s						
GTA				pmax	pmax		
	comp=Z,800nm,5.4s						
GTA				LR	LR		
	comp=Z,640nm,17.1s						
GTA				LR	LR		
	comp=Z,1µm,17.1s						
GTA				LR	LR		
	comp=Z,1µm,16.5s						
GTA	**Gaotai**	**37.43**	**325**	*e*P	**PcP**	**11 04 45.0**	**+1.1**
LSA	**Lhasa**	**38.27**	**305**	P	**P**	**11 02 33.0**	**+0.1**
LSA	**Lhasa**	**38.27**	**305**	P	**P**	**11 02 32.6**	**-0.2**
LSA				pmax	pmax		
	comp=Z,29nm,0.8s						
LSA	**Lhasa**	**38.27**	**305**	P	**P**	**11 02 32.6**	**-0.2**
LSA				IAmb	IAmb	11 02 36.7	
	comp=Z,29nm,0.8s						
HNR	**Honiara**	**38.51**	**120**	LR	LR	11 16 12.0	
	comp=Z,668nm,21.1s,baz=282,slow=33						
YSS	**Yuzh-Sakhalins**	**38.71**	**18**	*e*P	**P**	**11 02 36.3**	**+0.6**
YSS				*e*		11 02 40.1	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YSS	**Yuzh-Sakhalins**	**38.71**	**18**	P	**P**	**11 02 36.8**	**+1.1**
YSS				IAmb	IAmb	11 02 41.4	
	comp=Z,43nm,1.4s						
KLR	**Kul'dur**	**38.76**	**5**	P	**P**	**11 02 37.0**	**+0.9**
	comp=Z,13nm,0.7s,baz=202,slow=5.4,SNR=49						
KLR				PcP	**PcP**	**11 04 47.4**	**-0.2**
	comp=Z,3.0nm,0.7s,baz=204,slow=5.7,SNR=3.9						
HIA	**Hailar**	**39.02**	**353**	P	**P**	**11 02 37.9**	**-0.4**
HIA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HIA	**Hailar**	**39.02**	**353**	P	**P**	**11 02 37.9**	**-0.4**
GTK	**Tadong**	**39.58**	**300**	*e*P	**P**	**11 02 42.8**	**-0.6**
GTK				IAmb	IAmb	11 02 43.7	
	comp=Z,56nm,0.5s						
H11N1	**WAKE ISLAND Hy**	**39.68**	**72**	T	T	11 46 20.5	
	baz=265,slow=74,SNR=38						
H11N2	**WAKE ISLAND Hy**	**39.68**	**72**	T	T	11 46 33.1	
	baz=265,slow=74,SNR=38						
H11N3	**WAKE ISLAND Hy**	**39.69**	**72**	T	T	11 46 22.2	
	baz=265,slow=74,SNR=35						
TAPN	**Taplejung**	**40.34**	**300**	*e*P	**P**	**11 02 49.0**	**-1.0**
	comp=Z,54nm,0.4s						
ODAN	**Odare**	**40.48**	**299**	*e*P	**P**	**11 02 50.0**	**-1.1**
	comp=Z,202nm,0.8s						
ULN	**Ulaanbaatar**	**40.72**	**340**	P	**P**	**11 02 52.8**	**+0.2**
ULN				pmax	pmax		
	comp=Z,17nm,0.8s						
ULN	**Ulaanbaatar**	**40.72**	**340**	P	**P**	**11 02 52.8**	**+0.2**
GRNR	**Gornyy**	**40.86**	**9**	⇓*i*P	**P**	**11 02 54.9**	**+1.4**
GRNR				*e*S	**S**	**11 09 09.8**	**+5.1**
GRNR				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GRNR				smax	smax		
	comp=N,2.0nm,1.1s						
GRNR				MLR	MLR		
	comp=Z,560nm,16.0s						
SONM	**Songino Array**	**40.92**	**339**	P	**P**	**11 02 55.0**	**+0.7**
	comp=Z,18nm,0.8s,baz=157,slow=8.8,SNR=69						
SONM				PcP	**PcP**	**11 04 54.5**	**-0.2**
	comp=Z,4.7nm,0.7s,baz=158,slow=3.7,SNR=4.3						
SONM	**Songino Array**	**40.92**	**339**	P	**P**	**11 02 55.0**	**+0.7**
SONM				pmax	pmax		
	comp=Z,15nm,0.8s						
SONM	**Songino Array**	**40.92**	**339**	P	**P**	**11 02 55.0**	**+0.7**
BOK	**Bokaro**	**41.08**	**294**	*e*x	**P**	**11 02 56.0**	**+0.2**
BOK				*e*P	**P**	**11 02 56.0**	**+0.2**
BOK				IAmb	IAmb	11 02 58.1	
	comp=Z,12nm,0.7s						
RAMN	**Ramite**	**41.18**	**299**	*e*P	**P**	**11 02 55.8**	**-1.1**
	comp=Z,72nm,0.7s						
JIRN	**Jiri**	**41.73**	**300**	*e*P	**P**	**11 03 00.4**	**-1.1**
	comp=Z,181nm,0.8s						
CHLP	**Challavanipeta**	**42.03**	**286**	*e*P	**P**	**11 03 03.2**	**-0.4**
GUN	**Gumba**	**42.06**	**300**	*e*P	**P**	**11 03 02.9**	**-1.3**
	comp=Z,169nm,0.9s						
PKI	**Pulchoki**	**42.37**	**299**	*e*P	**P**	**11 03 04.9**	**-1.8**
PKIN	**Phulchoki**	**42.38**	**299**	*e*P	**P**	**11 03 04.9**	**-1.8**
	comp=Z,54nm,0.7s						
KKN	**Kakani**	**42.54**	**300**	*e*P	**P**	**11 03 06.4**	**-1.5**
	comp=Z,60nm,0.8s						
DMN	**Daman**	**42.64**	**299**	*e*P	**P**	**11 03 07.1**	**-1.7**
	comp=Z,71nm,0.8s						
ZEA	**Zeya**	**43.06**	**0**	*e*P	**P**	**11 03 10.8**	**-0.6**
ZEA				pmax	pmax		
	comp=Z,26nm,0.8s						
GKN	**Gorkha**	**43.14**	**300**	*e*P	**P**	**11 03 11.0**	**-1.8**
	comp=Z,30nm,0.4s						
DANN	**Dangsing**	**43.98**	**300**	*e*P	**P**	**11 03 18.1**	**-1.6**
	comp=Z,89nm,0.5s						
ZAK	**Zakamensk**	**44.17**	**339**	*e*P	**P**	**11 03 20.4**	**-0.3**
ZAK				*e*		11 05 04.2	
ZAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NWAO	**Narrogin (SRO)**	**44.20**	**192**	P	**P**	**11 03 20.6**	**-0.3**
	comp=Z,23nm,0.3s,baz=26,slow=8.4,SNR=25						
PVM	**Polavaram**	**44.26**	**284**	*e*P	**P**	**11 03 20.6**	**-1.1**
STKA	**Stephens Creek**	**44.52**	**162**	P	**P**	**11 03 23.5**	**0.0**
	comp=Z,22nm,0.7s,baz=337,slow=8.9,SNR=23						
STKA	**Stephens Creek**	**44.52**	**162**	P	**P**	**11 03 23.5**	**0.0**
STKA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
STKA	**Stephens Creek**	**44.52**	**162**	P	**P**	**11 03 23.5**	**0.0**
TLY	**Talaya**	**45.13**	**340**	P	**P**	**11 03 28.5**	**+0.4**
	comp=Z,22nm,0.7s,baz=182,slow=4.5,SNR=24						
TLY	**Talaya**	**45.13**	**340**	*de*P	**P**	**11 03 29.1**	**+0.9**
TLY				pmax	pmax		
	comp=Z,23nm,0.7s						
TLY	**Talaya**	**45.13**	**340**	P	**P**	**11 03 28.2**	**0.0**
TLY				IAmb	IAmb	11 03 30.3	
	comp=Z,25nm,0.8s						
MYLAV	**Mylavaram**	**45.19**	**283**	*e*P	**P**	**11 03 28.3**	**-0.8**
IRK	**Irkutsk**	**45.40**	**341**	*e*P	**P**	**11 03 29.0**	**-1.3**
IRK				pmax	pmax		
	comp=Z,60nm,2.3s						
GGR	**Gangavaram**	**45.64**	**285**	*e*P	**P**	**11 03 31.9**	**-0.9**
ADKI	**Addanki**	**45.81**	**282**	*e*P	**P**	**11 03 33.4**	**-0.6**
MOY	**Mondy**	**46.06**	**338**	*e*P	**P**	**11 03 36.5**	**+0.9**
MOY				pmax	pmax		
	comp=Z,56nm,2.6s						
NJS	**Nagarjunasagar**	**46.46**	**283**	*e*P	**P**	**11 03 37.9**	**-1.2**
RPR	**Rampur**	**46.55**	**286**	*e*P	**P**	**11 03 39.1**	**-0.8**
SRLM	**Srisailam**	**46.85**	**282**	*e*P	**P**	**11 03 41.0**	**-1.3**
HYB	**Hyderabad**	**47.20**	**284**	*i* P	**P**	**11 03 43.0**	**-2.0**
HYB	**Hyderabad**	**47.20**	**284**	*e*x	**P**	**11 03 44.6**	**-0.4**
HYB				IAmb	IAmb	11 03 47.3	
	comp=Z,21nm,0.6s						
HYBB	**Hyderabad (bro**	**47.20**	**284**	*e*P	**P**	**11 03 44.3**	**-0.7**
WMQ	**Urumqi**	**47.30**	**322**	P	**P**	**11 03 46.8**	**+1.3**
WMQ				sP	pwP	11 03 57.8	+1.3
WMQ				pmax	pmax		
	comp=Z,44nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,300nm,4.9s						
WMQ				LR	LR		
	comp=Z,940nm,16.1s						
WMQ				LR	LR		
	comp=Z,560nm,29.9s						
WMQ				LR	LR		
	comp=Z,660nm,17.3s						
WMQ	**Urumqi**	**47.30**	**322**	P	**P**	**11 03 46.7**	**+1.3**
WMQ				pmax	pmax		
	comp=Z,76nm,0.9s						
WMQ	**Urumqi**	**47.30**	**322**	P	**P**	**11 03 46.7**	**+1.3**
SRSP	**Sriramsagar**	**47.46**	**286**	*e*P	**P**	**11 03 45.9**	**-1.1**
BOD	**Bodaibo**	**48.16**	**351**	*e*P	**P**	**11 03 51.5**	**-0.2**
BOD				pmax	pmax		
	comp=Z,17nm,1.2s						
BHPL	**Bhopal**	**48.66**	**292**	*e*P	**P**	**11 03 54.7**	**-1.6**
BHPL				*e*x	x	11 04 31.8	
KLRI	**Killari**	**49.08**	**285**	*e*P	**P**	**11 03 58.8**	**-0.8**
PEA0B	**Petropavlovsk-**	**49.16**	**24**	P	**P**	**11 04 01.0**	**+1.5**
PEA0B				pmax	pmax		
	comp=Z,20nm,0.9s						
PEA0B	**Petropavlovsk-**	**49.16**	**24**	P	**P**	**11 04 01.0**	**+1.5**
PEA0B				IAmb	IAmb	11 04 13.1	
	comp=Z,20nm,0.8s						
PETK	**Petropavlovsk-**	**49.16**	**24**	P	**P**	**11 04 00.9**	**+1.4**
	comp=Z,12nm,0.8s,baz=200,slow=4.5,SNR=16						
PETK				LR	LR	11 24 18.2	
	comp=Z,877nm,19.8s,baz=243,slow=36						
PETK	**Petropavlovsk-**	**49.16**	**24**	P	**P**	**11 04 01.3**	**+1.8**
PETK	**Petropavlovsk-**	**49.16**	**24**	P	**P**	**11 04 01.3**	**+1.8**
SMLA	**Simla**	**50.21**	**302**	*e*P	**P**	**11 04 07.1**	**-0.9**
SMLA				IAmb	IAmb	11 04 10.2	
	comp=Z,15nm,0.3s						
CAN	**Canberra**	**50.24**	**156**	P	**P**	**11 04 09.9**	**+1.8**
CAN				pmax	pmax		
	comp=Z,22nm,1.0s						
CAN	**Canberra**	**50.24**	**156**	P	**P**	**11 04 09.9**	**+1.8**
CAN				IAmb	IAmb	11 04 24.5	
	comp=Z,22nm,1.0s						
DZM	**Mont Dzumac**	**50.65**	**130**	P	**P**	**11 04 11.5**	**+0.1**
	comp=Z,7.2nm,0.6s,baz=312,slow=7.5,SNR=7.5						
DZM	**Mont Dzumac**	**50.65**	**130**	P	**P**	**11 04 11.5**	**+0.1**
DZM					**P**	**11 04 11.6**	**+0.2**
DZM				IAmb	IAmb	11 04 15.5	
	comp=Z,56nm,1.5s						
DHRM	**DHARAMSHALA**	**51.18**	**303**	*e*P	**P**	**11 04 13.4**	**-2.1**
DHRM				IAmb	IAmb	11 04 16.2	
	comp=Z,30nm,0.9s						
YAK	**Yakutsk**	**51.41**	**2**	P	**P**	**11 04 16.8**	**+0.4**
	comp=Z,8.5nm,0.4s,baz=302,slow=1.7,SNR=5.4						
YAK	**Yakutsk**	**51.41**	**2**	*e*P	**P**	**11 04 16.9**	**+0.4**
YAK				*e*S	**S**	**11 11 34.5**	**-1.4**
YAK				*e**SS	sS	11 11 49.5	+12
YAK				*e*SS	**SS**	**11 15 11.0**	**-0.7**
YAK				pmax	pmax		
	comp=Z,28nm,1.0s						
YAK				pmax	pmax		
	comp=N,14nm,1.0s						
YAK				smax	smax		
	comp=N,187nm,3.4s						
YAK				smax	smax		
	comp=E,95nm,3.0s						
YAK	**Yakutsk**	**51.41**	**2**	P	**P**	**11 04 16.5**	**+0.1**
YAK				IAmb	IAmb	11 04 19.5	
	comp=Z,38nm,1.1s						
MK31	**Makanchi Array**	**52.10**	**322**	P	**P**	**11 04 23.4**	**+1.5**
MK31				pmax	pmax		
	comp=Z,95nm,0.8s						
MK31	**Makanchi Array**	**52.10**	**322**	P	**P**	**11 04 23.4**	**+1.5**
MKAR	**Makanchi Array**	**52.10**	**322**	P	**P**	**11 04 22.8**	**+0.8**
	comp=Z,131nm,0.8s,baz=120,slow=7.7,SNR=823						
MKAR				PcP	**PcP**	**11 05 33.8**	**-0.1**
	comp=Z,5.1nm,0.4s,baz=130,slow=2.3,SNR=4.4						
MKAR				P4KPbc		11 41 49.7	
	comp=Z,0.5nm,0.8s,baz=131,slow=4.6,SNR=5.6						
MKAR	**Makanchi Array**	**52.10**	**322**	P	**P**	**11 04 23.4**	**+1.5**
MA2	**Magadan**	**52.11**	**15**	P	**P**	**11 04 21.6**	**-0.1**
	comp=Z,5.6nm,0.8s,baz=205,slow=8.9,SNR=4.7						
MA2				PcP	**PcP**	**11 05 34.1**	**+0.5**
	comp=Z,5.5nm,0.6s,baz=211,slow=3.4,SNR=3.8						
MA2	**Magadan**	**52.11**	**15**	⇓*e*P	**P**	**11 04 22.2**	**+0.5**
MA2				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MA2	**Magadan**	**52.11**	**15**	P	**P**	**11 04 23.1**	**+1.4**
MAKZ	**Makanchi**	**52.30**	**322**	P	**P**	**11 04 24.9**	**+1.5**
MAKZ				pmax	pmax		
	comp=Z,178nm,1.1s						
MAKZ	**Makanchi**	**52.30**	**322**	P	**P**	**11 04 24.9**	**+1.5**
PRZ	**Przheval'sk**	**52.73**	**316**	P	**P**	**11 04 28.2**	**+1.4**
PRZ				pmax	pmax		
	comp=Z,137nm,0.8s						
PRZ	**Przheval'sk**	**52.73**	**316**	P	**P**	**11 04 28.2**	**+1.4**
KSH	**Kashi**	**53.41**	**312**	P	**P**	**11 04 33.8**	**+1.9**
KSH				pP	sP	11 04 37.9	+4.3
KSH				PcP	**PcP**	**11 05 39.8**	**+0.7**
KSH				PcS	**PcS**	**11 09 38.9**	**+0.7**
KSH				S	**S**	**11 12 05.9**	**+1.6**
KSH				SS	**SS**	**11 15 45.8**	**+1.4**
KSH				pmax	pmax		
	comp=Z,71nm,1.0s						
KSH				pmax	pmax		
	comp=Z,1µm,8.9s						
KSH				LR	LR		
	comp=Z,1µm,15.7s						
KSH				LR	LR		
	comp=Z,1µm,15.2s						
KSH				LR	LR		
	comp=Z,2µm,21.0s						
KDJ	**Kajisay**	**53.44**	**315**	P	**P**	**11 04 33.1**	**+1.0**
KDJ				pmax	pmax		
	comp=Z,62nm,0.7s						
KDJ	**Kajisay**	**53.44**	**315**	P	**P**	**11 04 33.1**	**+1.0**
KDJ				IAmb	IAmb	11 04 34.5	
	comp=Z,62nm,0.7s						
NIL	**Nilore**	**53.99**	**304**	P	**P**	**11 04 35.7**	**-0.4**
NIL				pmax	pmax		
	comp=Z,54nm,0.9s						
NIL	**Nilore**	**53.99**	**304**	P	**P**	**11 04 35.6**	**-0.4**
NIL				IAmb	IAmb	11 04 36.8	
	comp=Z,54nm,0.9s						
NRN	**Naryn**	**54.02**	**314**	P	**P**	**11 04 36.9**	**+0.3**
NRN				pmax	pmax		
	comp=Z,76nm,1.0s						
NRN	**Naryn**	**54.02**	**314**	P	**P**	**11 04 36.9**	**+0.3**
NRN				IAmb	IAmb	11 04 38.3	
	comp=Z,76nm,1.0s						
ULHL	**Ulahol**	**54.13**	**315**	P	**P**	**11 04 37.9**	**+0.7**
	SNR=38						
BOOM	**Boomskoye usch**	**54.42**	**315**	P	**P**	**11 04 39.4**	**+0.1**
BOOM				pmax	pmax		
	comp=Z,61nm,1.3s						
BOOM	**Boomskoye usch**	**54.42**	**315**	P	**P**	**11 04 39.4**	**+0.1**
BOOM				IAmb	IAmb	11 04 41.0	
	comp=Z,61nm,1.3s						
ZAA0	**Zalesovo Array**	**54.61**	**331**	P	**P**	**11 04 40.0**	**-0.2**
ZAA0				IAmb	IAmb	11 04 42.1	
	comp=Z,37nm,1.0s						
ZALV	**Zalesovo Beam**	**54.61**	**331**	P	**P**	**11 04 40.2**	**0.0**
	comp=Z,18nm,0.5s,baz=117,slow=5.9,SNR=72						
ZALV	**Zalesovo Beam**	**54.61**	**331**	P	**P**	**11 04 40.0**	**-0.2**
KZA	**Kyzart**	**54.76**	**314**	P	**P**	**11 04 43.2**	**+1.1**
	SNR=120						
KBK	**Karagaybulak**	**55.17**	**315**	P	**P**	**11 04 45.5**	**+0.8**
	SNR=42						
UCH	**Uchtor**	**55.33**	**314**	P	**P**	**11 04 47.3**	**+1.1**
	SNR=186						
SEY	**Seymchan**	**55.41**	**14**	P	**P**	**11 04 47.7**	**+1.9**
	comp=Z,5.9nm,0.7s,baz=233,slow=4.3,SNR=20						
SEY	**Seymchan**	**55.41**	**14**	⇓*e*P	**P**	**11 04 47.3**	**+1.5**
CHMS	**Chumysh**	**55.42**	**315**	P	**P**	**11 04 46.6**	**+0.3**
	SNR=40						
FRU1	**Bishkek**	**55.44**	**315**	P	**P**	**11 04 47.1**	**+0.6**
FRU1				pmax	pmax		
	comp=Z,57nm,1.1s						
FRU1	**Bishkek**	**55.44**	**315**	P	**P**	**11 04 47.1**	**+0.6**
FRU1				IAmb	IAmb	11 04 48.7	
	comp=Z,57nm,1.1s						
AAK	**Ala-Archa**	**55.48**	**315**	P	**P**	**11 04 47.6**	**+0.7**
	SNR=15						
AAK	**Ala-Archa**	**55.48**	**315**	*i* P	**P**	**11 04 47.1**	**+0.2**
	SNR=26						
AAK	**Ala-Archa**	**55.48**	**315**	*de*P	**P**	**11 04 47.1**	**+0.2**
AAK				pmax	pmax		
	comp=Z,42nm,1.9s						
AAK	**Ala-Archa**	**55.48**	**315**	P	**P**	**11 04 47.3**	**+0.3**
AAK				IAmb	IAmb	11 04 56.7	
	comp=Z,30nm,1.2s						
USP	**Ospenovka**	**55.68**	**316**	P	**P**	**11 04 48.6**	**+0.4**
	SNR=73						
AML	**Almayashu**	**55.88**	**314**	P	**P**	**11 04 50.9**	**+0.8**
	SNR=15						
EKS2	**Erkin-Say**	**55.99**	**315**	P	**P**	**11 04 51.2**	**+0.7**
	SNR=79						
KURK	**Kurchatov**	**56.11**	**325**	*d i*P	**P**	**11 04 51.5**	**+0.4**
KURK				pmax	pmax		

	comp=Z,184nm,0.9s						
KURK	Kurchatov	56.11	325	P	P	11 04 51.8	+0.7
KURBB	Kurchatov Arra	56.12	325	P	P	11 04 50.5	-0.6
BTK	Batken	57.38	311	P	P	11 05 00.5	+0.1
BTK				pmax	pmax		
	comp=Z,70nm,1.4s						
BTK	Batken	57.38	311	P	P	11 05 00.5	+0.1
BTK				IAmb	IAmb	11 05 06.8	
	comp=Z,70nm,1.4s						
GAR	Garm	57.49	310	P	P	11 05 00.8	-0.5
KBL	Kabul	57.59	304	P	P	11 05 01.0	-1.1
KBL				pmax	pmax		
	comp=Z,42nm,0.6s						
KBL	Kabul	57.59	304	P	P	11 05 01.0	-1.1
KBL				IAmb	IAmb	11 05 04.1	
	comp=Z,42nm,0.6s						
MSVF	Nonsavu	57.91	119	⇓eP	P	11 05 04.6	+0.2
MSVF				pmax	pmax		
	comp=Z,13nm,1.3s						
MSVF	Nonsavu	57.91	119	P	P	11 05 05.3	+0.9
CHGR	Chuyangaron	58.30	309	P	P	11 05 06.6	-0.3
KK31	Karatay Array	58.41	314	P	P	11 05 07.4	-0.1
KK31				pmax	pmax		
	comp=Z,37nm,0.8s						
KK31	Karatay Array	58.41	314	P	P	11 05 07.4	-0.1
KK31				IAmb	IAmb	11 05 11.2	
	comp=Z,37nm,0.8s						
KKAR	Karatay Array	58.41	314	P	P	11 05 07.5	0.0
KKAR				pmax	pmax		
	comp=Z,37nm,0.8s						
KKAR	Karatay Array	58.41	314	P	P	11 05 07.5	0.0
KKAR				IAmb	IAmb	11 05 11.2	
	comp=Z,37nm,0.8s						
KKAR	Karatay Array	58.41	314	P	P	11 05 07.4	-0.1
TIXI	Tiksi	61.05	1	LR	LR	11 32 00.3	
	comp=Z,647nm,21.0s,baz=182,slow=36						
TIXI	Tiksi	61.05	1	d iP	P	11 05 24.3	-0.8
TIXI				pmax	pmax		
	comp=Z,13nm,0.9s						
TIXI	Tiksi	61.05	1	P	P	11 05 24.9	-0.2
TIXI				IAmb	IAmb	11 05 32.4	
	comp=Z,16nm,0.9s						
BVAR	Borovoye Array	61.71	325	P4KPbc		11 42 30.5	
	comp=Z,1.3nm,0.8s,baz=112,slow=6.4,SNR=6.0						
BRVK	Borovoye	61.78	325	P	P	11 05 30.6	+0.1
BRVK				pmax	pmax		
	comp=Z,78nm,1.1s						
BRVK	Borovoye	61.78	325	P	P	11 05 30.6	+0.1
BILL	Bilibino	62.98	16	i P	P	11 05 37.9	-0.3
BILL				i		11 06 17.1	
BILL				i		11 08 01.6	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BILL	Bilibino	62.98	16	P	P	11 05 39.3	+1.1
BILL				IAmb	IAmb	11 05 57.9	
	comp=Z,15nm,1.2s						
HRA	Herat	63.13	303	P	P	11 05 38.7	-1.4
HRA				IAmb	IAmb	11 05 42.3	
	comp=Z,17nm,0.7s						
NRIK	Noril'sk	63.85	346	P	P	11 05 43.9	0.0
	comp=Z,25nm,1.0s,baz=116,slow=7.0,SNR=20						
GEYT	Alibeck	66.78	307	P	P	11 06 03.7	+0.1
	comp=Z,7.1nm,0.6s,baz=144,slow=3.5,SNR=14						
GEYT				LR	LR	11 37 49.3	
	comp=Z,324nm,20.5s,baz=75,slow=38						
GEYT	Alibeck	66.78	307	P	P	11 06 03.6	0.0
GYA0B	ALIBECK ARRAY	66.78	307	P	P	11 06 03.6	0.0
AB31	Akbulak array	66.98	319	P	P	11 06 03.6	-1.0
ABKAR	Akbulak array	66.98	319	P	P	11 06 04.7	+0.1
ABKAR	Akbulak array	66.98	319	P	P	11 06 04.5	-0.1
URZ	Urewera	67.55	139	P	P	11 06 09.3	+1.0
	comp=Z,10nm,0.7s,baz=315,slow=5.7,SNR=2.4						
BKZ	Black Stump Fm	67.68	140	P	P	11 06 09.2	0.0
BKZ				IAmb	IAmb	11 06 14.6	
	comp=Z,32nm,1.0s						
UOSS	Minazif	68.09	293	P	P	11 06 11.1	-0.9
UOSS	Minazif	68.09	293	P	P	11 06 11.0	-1.0
UOSS				IAmb	IAmb	11 06 24.5	
	comp=Z,41nm,1.4s						
HATD	Hatta, Dubai	68.16	293	P	P	11 06 11.9	-0.7
GAMB	Gambell	68.18	25	P	P	11 06 10.5	-1.3
ASHO	Ashiyiah	68.23	292	P	P	11 06 09.5	-3.5
SVE	Sverdlovsk	68.24	327	d eP	P	11 06 12.4	+0.1
SVE				pmax	pmax		
	comp=Z,45nm,0.9s						
AKTO	Aktyubinsk	68.42	320	P	P	11 06 13.7	+0.1
	comp=Z,35nm,0.7s,baz=93,slow=7.5,SNR=131						
ALNE	Al Ain	68.53	292	P	P	11 06 14.2	-0.7
ARU	Arti	69.26	327	d iP	P	11 06 18.3	-0.5
ARU						11 06 43.8	
ARU						11 08 52.3	
ARU				S	S	11 15 25.3	+0.4
ARU				pmax	pmax		
	comp=Z,37nm,0.6s						
ARU	Arti	69.26	327	P	P	11 06 18.2	-0.5
ANM	Nome	71.06	25	P	P	11 06 31.1	+1.5
ANM				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ANM	Nome	71.06	25	P	P	11 06 31.1	+1.5
SOCY	Socotra	71.19	279	P	P	11 06 29.2	-2.2
SOCY				IAmb	IAmb	11 06 30.1	
	comp=Z,42nm,0.7s						
KIRV	Kirov	74.47	328	P	P	11 06 49.9	-0.1
	comp=Z,89nm,0.8s,baz=77,slow=2.4,SNR=29						
TTA	Tatalina	74.83	28	P	P	11 06 53.3	+1.2
TTA	Tatalina	74.83	28	P	P	11 06 53.3	+1.2
SVW2	Sparrevohn	74.83	29	P	P	11 06 53.8	+1.7
AKT	Akhty	74.90	310	eP	P	11 06 52.8	-0.2
AKT				e		11 07 05.8	
AKT				pmax	pmax		
	comp=Z,55nm,1.0s						
IMAR	Indian Mountai	76.12	24	P	P	11 07 00.5	+1.1
RSO	Redoubt South	76.17	30	P	P	11 07 00.5	+0.5
GROC	Groznyy	76.30	312	eP	P	11 06 58.8	-2.0
GROC				e		11 07 09.2	
GROC				eS	S	11 16 46.4	+0.8
GROC				e		11 17 13.1	
GROC				pmax	pmax		
	comp=Z,73nm,0.9s						
PPLA	Purkeypile	76.57	28	P	P	11 07 02.9	+0.7
PPLA				IAmb	IAmb	11 07 17.1	
	comp=Z,18nm,1.3s						
PRGR	Permogore	76.57	331	eP	P	11 07 00.7	-1.3
PRGR				pmax	pmax		
	comp=Z,50nm,0.8s						
CNPM	China Poot	76.89	31	P	P	11 07 04.3	+0.4
CNPM				IAmb	IAmb	11 07 20.9	
	comp=Z,74nm,1.5s						
BRLK	Bradley Lake	77.08	31	P	P	11 07 05.0	+0.1
BRLK				IAmb	IAmb	11 07 19.9	
	comp=Z,20nm,0.9s						
BPAW	Bear Paw Mtn.	77.16	27	P	P	11 07 06.4	+1.0
BPAW				IAmb	IAmb	11 07 19.5	
	comp=Z,14nm,0.8s						
SUA	Susitna One	77.19	29	P	P	11 07 05.7	+0.1
SUA				IAmb	IAmb	11 07 20.9	
	comp=Z,34nm,1.0s						
GNI	Garni	77.22	309	P	P	11 07 06.7	+0.4
	comp=Z,6.8nm,0.6s,baz=55,slow=3.2,SNR=14						
GNI	Garni	77.22	309	d eP	P	11 07 06.8	+0.5
GNI				pmax	pmax		
	comp=Z,47nm,1.4s						
MLY	Manley	77.31	26	P	P	11 07 07.3	+1.1
TRF	Thorofare Moun	77.45	27	P	P	11 07 08.0	+0.8
TRF				IAmb	IAmb	11 07 20.7	
	comp=Z,12nm,0.9s						
CASY	Casey	77.57	187	P	P	11 07 08.0	+0.7
COLD	Coldfoot	77.62	23	P	P	11 07 09.3	+1.5
RC01	Rabbit Creek A	77.67	30	P	P	11 07 08.5	+0.3
RC01				IAmb	IAmb	11 07 12.5	
	comp=Z,30nm,1.3s						
ZEI	Tsey	77.70	312	eP	P	11 07 06.5	-2.5
ZEI				pmax	pmax		
	comp=Z,64nm,0.8s						
TOLK	Toolik Lake Re	77.91	22	P	P	11 07 10.9	+1.4
TOLK	Toolik Lake Re	77.91	22	P	P	11 07 10.9	+1.4
	baz=268						
RAYN	Ar Rayn	77.93	292	i P	P	11 07 09.9	-0.6
	SNR=32						
RAYN	Ar Rayn	77.93	292	P	P	11 07 10.2	-0.3
RAYN				pmax	pmax		
	comp=Z,27nm,0.8s						
RAYN	Ar Rayn	77.93	292	P	P	11 07 10.2	-0.3
RAYN				IAmb	IAmb	11 07 12.3	
	comp=Z,27nm,0.8s						
PMR	Palmer	77.96	29	P	P	11 07 09.9	+0.1
PMR				pmax	pmax		
	comp=Z,26nm,1.4s						
PMR	Palmer	77.96	29	P	P	11 07 09.9	+0.1
PMR				IAmb	IAmb	11 07 14.2	
	comp=Z,26nm,1.4s						
GHO	Glory Hole Cre	78.06	29	P	P	11 07 10.8	+0.4
GHO				IAmb	IAmb	11 07 14.7	
	comp=Z,28nm,1.3s						
MCK	McKinley	78.06	27	P	P	11 07 10.8	+0.4
MCK				pmax	pmax		
	comp=Z,19nm,0.8s						
MCK	McKinley	78.06	27	P	P	11 07 10.8	+0.4
MCK				IAmb	IAmb	11 07 23.8	
	comp=Z,19nm,0.8s						
AKH	Akhalkalaki	78.09	310	⇑P	P	11 07 12.4	+1.2
GOF	Gofitskoye	78.20	314	⇑eP	P	11 07 11.5	0.0
GOF				pmax	pmax		
	comp=Z,44nm,0.8s						
SML	Sawmill	78.34	29	P	P	11 07 12.3	+0.3
SML				IAmb	IAmb	11 07 27.9	
	comp=Z,35nm,1.3s						
KBZ	Khabaz	78.38	313	P	P	11 07 12.5	0.0
	comp=Z,30nm,0.9s,baz=109,slow=2.6,SNR=52						
KBZ				LR	LR	11 47 04.4	
	comp=Z,232nm,18.1s,baz=85,slow=40						
KBZ	Khabaz	78.38	313	d iP	P	11 07 11.9	-0.6
KBZ				pmax	pmax		
	comp=Z,45nm,1.0s						
WRH	Wood River Hil	78.44	26	P	P	11 07 12.8	+0.4
KVAR	Kislovodsk Arr	78.52	313	P	P	11 07 14.6	+1.2
	comp=Z,21nm,0.7s,baz=280,slow=19,SNR=26						
KIV	Kislovodsk	78.52	313	⇑P	P	11 07 14.3	+0.9
KIV	Kislovodsk	78.52	313	i P	P	11 07 13.9	+0.5
	SNR=17						
KIV	Kislovodsk	78.52	313	eP	P	11 07 13.1	-0.3
KIV				pmax	pmax		
	comp=Z,252nm,1.0s						
KIV	Kislovodsk	78.52	313	P	P	11 07 14.4	+1.0
CCB	Clear Creek Bu	78.56	26	P	P	11 07 13.3	+0.3
RAR	Rarotonga	78.70	114	LR	LR	11 36 14.6	
	comp=Z,594nm,20.1s,baz=142,slow=31						
POKR	Poker Plat Res	78.71	25	P	P	11 07 15.1	+1.2
	baz=271						
VRH	Novokhopyorsk	78.77	320	eP	P	11 07 13.5	-0.9
VRH				pmax	pmax		
	comp=Z,130nm,0.9s						
SCM	Sheep Creek Mo	78.82	29	P	P	11 07 15.4	+0.8
SCM				pmax	pmax		
	comp=Z,20nm,0.9s						
SCM	Sheep Creek Mo	78.82	29	P	P	11 07 15.4	+0.8
SCM				IAmb	IAmb	11 07 17.4	
	comp=Z,20nm,0.9s						
HDA	Harding Lake	78.93	26	P	P	11 07 14.8	-0.4
HDA	Harding Lake	78.93	26	P	P	11 07 14.7	-0.4
	baz=271						
IL31		78.95	26	P	P	11 07 15.4	+0.3
ILAR	Eielson Array	78.95	26	P	P	11 07 14.2	-1.0
	comp=Z,3.1nm,0.7s,baz=244,slow=4.8,SNR=43						
ILAR				PKKPbc	PKKPbc	11 26 07.3	-3.3
	comp=Z,0.3nm,0.4s,baz=129,slow=2.1,SNR=5.0						
ILAR	Eielson Array	78.95	26	P	P	11 07 14.8	-0.4
ILAR	Eielson Array	78.95	26	P	P	11 07 14.8	-0.4
KLMR	Klimovskoe	79.52	330	eP	P	11 07 15.6	-2.8
KLMR				pmax	pmax		
	comp=Z,54nm,0.7s						
KLMR	Klimovskoe	79.52	330	eP	P	11 07 15.6	-2.8
KLMR				AMP		11 07 18.7	
	comp=Z,54nm,0.7s						
BMAR	Burnt Mountain	79.79	23	P	P	11 07 21.8	+2.0
TMCR	Tamitsa	80.03	334	eP	P	11 07 20.8	-0.2
TMCR				pmax	pmax		
	comp=Z,40nm,0.9s						
SCRK	Sand Creek	80.25	27	P	P	11 07 23.1	+0.7
VSR	Storozhevoye	80.37	320	d iP	P	11 07 22.3	-0.9
VSR				pmax	pmax		
	comp=Z,105nm,0.9s						
LPSR	Galich'ya Gora	80.40	322	eP	P	11 07 22.7	-0.6
LPSR				pmax	pmax		
	comp=Z,110nm,0.8s						
MOS	Moscow	80.89	325	eP	P	11 07 24.2	-1.6
MOS				pmax	pmax		
	comp=Z,120nm,0.8s						
LVZ	Lovozero	81.09	337	⇑eP	P	11 07 27.0	+0.2
LVZ				pmax	pmax		
	comp=Z,25nm,1.3s						
LVZ	Lovozero	81.09	337	P	P	11 07 27.2	+0.4
LVZ				IAmb	IAmb	11 07 28.5	
	comp=Z,70nm,1.5s						
EGAK	Eagle	81.40	26	P	P	11 07 29.3	+0.9
OBN	Obninsk	81.55	324	P	P	11 07 28.9	-0.4
	comp=Z,17nm,0.9s,baz=291,slow=1.6,SNR=8.4						
OBN	Obninsk	81.55	324	d iP	P	11 07 28.7	-0.6
OBN				i		11 07 33.7	
OBN				pmax	pmax		
	comp=Z,61nm,0.9s						
APA	Apatity	81.61	337	⇓iP	P	11 07 28.5	-0.9
APA				pmax	pmax		
	comp=Z,40nm,0.7s						
APA				MLR	MLR		
	comp=Z,1µm,19.0s						
ANN	Anapa	82.19	314	eP	P	11 07 32.0	-1.0
ANN				e*PP	sP	11 07 35.2	+0.8
ANN				e		11 17 55.0	
ANN				pmax	pmax		
	comp=Z,138nm,0.9s						
DAWY	Dawson	82.25	26	P	P	11 07 34.1	+1.2
EPYK	Eagle Plains	82.99	24	P	P	11 07 37.6	+0.8
EPYK				IAmb	IAmb	11 07 40.7	
	comp=Z,8.1nm,0.8s						
EPYK	Eagle Plains	82.99	24	P	P	11 07 37.6	+0.8
	baz=280						
KEV	Kevo	83.53	340	P	P	11 07 39.6	+0.2
KEV				pmax	pmax		
	comp=Z,80nm,1.4s						
KEV	Kevo	83.53	340	P	P	11 07 39.6	+0.2
ABPO	Ambohimpanom	83.71	249	P	P	11 07 40.8	-0.8
ABPO				pmax	pmax		
	comp=Z,17nm,1.0s						
ABPO	Ambohimpanom	83.71	249	P	P	11 07 40.8	-0.8
ABPO				IAmb	IAmb	11 07 46.2	
	comp=Z,18nm,1.0s						
INK	Inuvik	83.82	22	P	P	11 07 41.0	+0.1
	comp=Z,3.6nm,0.9s,baz=270,slow=4.5,SNR=15						
INK	Inuvik	83.82	22	P	P	11 07 41.2	+0.2
SPA0	Spitsbergen Ar	83.82	349	eP	P	11 07 40.9	0.0
SPA0	Spitsbergen Ar	83.82	349	P	P	11 07 41.1	+0.3
SPA0				IAmb	IAmb	11 07 54.6	
	comp=Z,67nm,1.3s						
SPITS	Spitsbergen Ar	83.82	349	PKKPbc	PKKPbc	11 25 56.2	-3.6
	comp=Z,9.6nm,1.0s,baz=239,slow=4.7,SNR=4.6						
ARCES	ARCESS Array B	84.09	340	P	P	11 07 42.5	+0.2
	comp=Z,32nm,0.7s,baz=80,slow=6.6,SNR=94						
ARE0	ARCESS Array S	84.09	340	eP	P	11 07 42.0	-0.4
ARE0	ARCESS Array S	84.09	340	P	P	11 07 42.7	+0.4
PUL	Pulkovo	84.19	330	⇑eP	P	11 07 43.2	+0.2
PUL				pmax	pmax		
	comp=Z,66nm,1.2s						
KBS	Kingsbay	84.32	350	eP	P	11 07 42.4	-1.0
HAMF	Hammerfest	84.41	341	eP	P	11 07 43.5	-0.3
HSPB	Hornsund (broa	84.44	348	eP	P	11 07 43.6	-0.4
SIM	Simferopol'	84.51	315	eP	P	11 07 44.7	-0.2
SIM				pmax	pmax		
	comp=Z,92nm,0.8s						
HWQ	Hawqa	84.83	304	eP	P	11 07 47.8	+0.9
WHY	Whitehorse	84.93	29	P	P	11 07 48.7	+1.9
WHY				IAmb	IAmb	11 08 01.2	
	comp=Z,28nm,1.3s						
KTK1	Kautokeino	85.01	339	eP	P	11 07 46.8	-0.2
BZK	Bozkurt	85.08	312	⇑P	P	11 07 48.3	+0.4
BHL	Bhannes	85.13	303	eP	P	11 07 48.7	+0.3
SHBL	Chebaa	85.14	303	eP	P	11 07 49.1	+0.5
DQRL	Deir Qamar	85.23	303	eP	P	11 07 49.3	+0.3
BR131	Keskin Array S	85.74	309	d iP	P	11 07 50.5	-0.9
BR131	Keskin Array S	85.74	309	P	P	11 07 51.0	-0.4
BRTR	Keskin Array B	85.74	309	P	P	11 07 50.8	-0.7
	comp=Z,36nm,0.8s,baz=112,slow=4.3,SNR=178						
BRTR				LR	LR	11 51 29.4	
	comp=Z,102nm,18.7s,baz=72,slow=39						
BRTR	Keskin Array B	85.74	309	i P	P	11 07 50.7	-0.7
BRTR				pmax	pmax		
	comp=Z,38nm,0.7s						
BRTR	Keskin Array B	85.74	309	P	P	11 07 51.2	-0.2
FIA1	FINESS Array S	85.87	332	P	P	11 07 51.2	-0.2
FINES	FINESS Array B	85.87	332	P	P	11 07 51.1	-0.2
	comp=Z,23nm,0.5s,baz=83,slow=4.8,SNR=286						
FINES				PKKPbc	PKKPbc	11 25 54.5	0.0
	comp=Z,10nm,1.1s,baz=226,slow=10,SNR=4.3						
FINES				LR	LR	11 50 28.4	
	comp=Z,325nm,19.2s,baz=53,slow=39						
FINES	FINESS Array B	85.87	332	P	P	11 07 51.4	0.0
VSU	Vasula	86.28	329	c iP	P	11 07 53.3	-0.2
VSU				pmax	pmax		
	comp=Z,223nm,0.9s						
ANTO	Ankara	86.35	310	⇑P	P	11 07 53.8	-0.6
ANTO	Ankara	86.35	310	P	P	11 07 54.6	+0.2
ANTO				pmax	pmax		
	comp=Z,55nm,0.8s						
ANTO	Ankara	86.35	310	P	P	11 07 54.6	+0.2
AKASG	Malin Array Be	86.66	321	P	P	11 07 54.8	-0.7
	comp=Z,38nm,0.9s,baz=63,slow=4.9,SNR=63						
AKASG	Malin Array Be	86.66	321	i P	P	11 07 54.7	-0.8
AKASG				pmax	pmax		
	comp=Z,12nm,0.5s						
AKBB	Malin Array Si	86.66	321	⇑eP	P	11 07 55.2	-0.3
C36M	Paulatuk	86.79	20	P	P	11 07 56.1	+0.3
C36M				IAmb	IAmb	11 07 57.1	
	comp=Z,13nm,0.7s						
C36M	Paulatuk	86.79	20	P	P	11 07 56.0	+0.3
	baz=292						
CSS	Mathiatis	86.83	305	P	P	11 07 57.1	+0.4
NACGM	Naroch	87.13	325	e	P	11 07 57.0	-0.7
PPT	Papeete	87.17	108	LR	LR	11 42 25.9	
	comp=Z,203nm,18.1s,baz=308,slow=32						
TLCR		88.14	316	⇑P	P	11 08 02.9	+0.1
STEI	Steigen	88.15	339	eP	P	11 08 01.2	-1.2
JURR	Jurilovca	88.20	315	⇑P	P	11 08 02.8	-0.2
TOPG	Topolog	88.52	315	⇑P	P	11 08 04.7	+0.1
TIRR	Tirgusor	88.59	315	⇓P	P	11 08 04.9	0.0
TIRR	Tirgusor	88.59	315	⇓P	P	11 08 04.9	0.0
TIRR	Tirgusor	88.59	315	P	P	11 08 05.1	+0.2
TIRR				pmax	pmax		
	comp=Z,90nm,0.8s						
TIRR	Tirgusor	88.59	315	P	P	11 08 05.1	+0.2
CFR	Carcaliu	88.61	316	⇑P	P	11 08 05.0	0.0
MANR	Mangalia	88.61	314	⇑P	P	11 08 04.3	-0.7
LOF	Lofoten	88.65	340	eP	P	11 08 03.0	-1.7
HARR	Harsova	88.87	315	⇓P	P	11 08 06.7	+0.5
PETR	Petresti	89.10	316	⇑P	P	11 08 07.0	-0.3
MOR8	Moi Rana	89.16	338	eP	P	11 08 04.8	-2.4
ELL	Elmali	89.20	307	P	P	11 08 07.7	-0.5
ELL				pmax	pmax		
	comp=Z,116nm,0.8s						
ELL	Elmali	89.20	307	P	P	11 08 07.7	-0.5
TESR	Tescani	89.30	317	⇑P	P	11 08 08.4	+0.2
VRI	Vrincioaia	89.41	317	⇑P	P	11 08 09.3	+0.5
PLOR	Plostina	89.47	317	⇑P	P	11 08 09.6	+0.5
BISRR	Bisoca	89.50	316	⇓P	P	11 08 10.4	+1.1
KMBO	Kilima Mbogo	89.75	269	P	P	11 08 11.2	-0.1
	comp=Z,2.2nm,0.2s,baz=60,slow=3.6,SNR=10						
KMBO				LR	LR	11 49 53.4	
	comp=Z,313nm,18.0s,baz=92,slow=37						
BURAR	Bucovina Array	89.96	318	⇑P	P	11 08 12.1	+0.6
BURAR	Bucovina Array	89.96	318	P	P	11 08 12.0	+0.5
BUR08	Bucovina Ar. S	89.96	319	P	P	11 08 12.1	+0.6
BUR08				IAmb	IAmb	11 08 12.7	
	comp=Z,35nm,1.0s						
MLR	Muntele Rosu	90.03	316	P	P	11 08 11.6	-0.3
	comp=Z,14nm,0.8s,baz=179,slow=1.5,SNR=18						
MLR	Muntele Rosu	90.03	316	⇑P	P	11 08 11.9	0.0
MAW	Mawson	90.15	200	P	P	11 08 11.6	0.0
	comp=Z,19nm,0.8s,baz=26,slow=5.1,SNR=9.4						
MAW	Mawson	90.15	200	P	P	11 08 12.0	+0.4
MAW				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MAW	Mawson	90.15	200	P	P	11 08 12.0	+0.4
VNDA	Vanda	90.16	173	P	P	11 08 11.6	+0.1
	comp=Z,13nm,0.8s,baz=318,slow=6.5,SNR=50						
VNDA	Vanda	90.16	173	P	P	11 08 12.0	+0.5
VNDA				pmax	pmax		
	comp=Z,13nm,0.8s						
VNDA	Vanda	90.16	173	P	P	11 08 12.0	+0.5
VNDA				IAmb	IAmb	11 08 16.0	
	comp=Z,13nm,0.8s						
DOPR	Dopca	90.28	317	⇓P	P	11 08 13.5	+0.6
DAG	Danmarks Havn	90.53	352	i P	P	11 08 12.0	-1.3
	comp=Z,12nm,0.8s						
DAG	Danmarks Havn	90.53	352	i P	P	11 08 12.0	-1.3
DAG				pmax	pmax		
	comp=Z,12nm,0.8s						
ARCR	ARCALIA	90.67	318	⇑P	P	11 08 15.6	+1.0
ELND	Elena	90.75	314	⇑P	P	11 08 15.2	+0.1
NSS	Namsos	90.81	337	eP	P	11 08 13.6	-1.3
HUMR	Humele	90.95	316	⇑P	P	11 08 15.6	-0.4
ARR	Arges	90.96	316	⇑P	P	11 08 16.2	+0.1
RES	Resolute Bay	91.11	10	P	P	11 08 16.8	+0.7
RES				pmax	pmax		
	comp=Z,13nm,0.8s						
RES	Resolute Bay	91.11	10	P	P	11 08 16.8	+0.7
RES				IAmb	IAmb	11 08 17.8	
	comp=Z,13nm,0.8s						
ALN	Alexandroupoli	91.15	312	P	P	11 08 16.3	-0.7
ALN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ALN	Alexandroupoli	91.15	312	P	P	11 08 16.2	-0.7
ALN				IAmb	IAmb	11 08 16.8	
	comp=Z,6.1nm,0.7s						
KOLS	Kolonicke sedl	91.46	320	eP	P	11 08 18.5	+0.2
KOLS	Kolonicke sedl	91.46	320	eP	P	11 08 18.5	+0.2
VLAD	Vladila	91.49	315	⇑P	P	11 08 17.7	-0.8
TRPA	Tarpa	91.54	319	⇑P	P	11 08 18.8	+0.2
UZH	Uzhgorod	91.54	320	⇓iP	P	11 08 19.0	+0.4
UZH				i		11 08 23.4	
KARP	Karpathos	91.64	306	P	P	11 08 18.7	-0.8
DRGR		91.83	318	⇓P	P	11 08 20.4	+0.3
DEV	Deva	91.97	317	⇑P	P	11 08 20.8	+0.1
CRVS	Cervenica-Dubn	91.98	320	eP	P	11 08 21.3	+0.6
CRVS				pmax	pmax		
	comp=Z,58nm,1.0s						
CRVS	Cervenica-Dubn	91.98	320	eP	P	11 08 21.3	+0.6
HFS	Hagfors	92.02	333	P	P	11 08 19.5	-1.1
	comp=Z,16nm,0.6s,baz=84,slow=6.1,SNR=62						
GZR	Gura Zlata	92.20	317	⇑P	P	11 08 21.8	-0.1
NC405	NORSAR Array S	92.47	334	P	P	11 08 21.9	-0.8
APE	Apeiranthos	92.53	308	⇑P	P	11 08 21.6	-1.9
HERR	Herculane	92.60	316	⇑P	P	11 08 23.6	0.0
VTS	Vitosha	92.70	314	⇑P	P	11 08 24.5	+0.1
VTS	Vitosha	92.70	314	P	P	11 08 24.5	+0.1
VTS				pmax	pmax		
	comp=Z,15nm,0.9s						
VTS	Vitosha	92.70	314	P	P	11 08 24.5	+0.1
VTS				IAmb	IAmb	11 08 24.7	
	comp=Z,15nm,0.9s						
NC602	NORSAR Array S	92.71	334	eP	P	11 08 22.8	-1.0
NB2	NORSAR Subarra	92.72	334	P	P	11 08 22.5	-1.4
	comp=Z,9.7nm,0.7s,baz=63,slow=4.6						
NB2	NORSAR Subarra	92.72	334	P	P	11 08 22.5	-1.4
	baz=63,slow=4.6						
NOA	NORSAR Array B	92.72	334	P	P	11 08 22.7	-1.2
	comp=Z,9.6nm,0.8s,baz=64,slow=4.6,SNR=29						
NOA				LR	LR	11 56 05.1	
	comp=Z,303nm,18.0s,baz=80,slow=39						
KECS	Kecovo	92.73	320	eP	P	11 08 24.4	+0.3
KECS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KECS	Kecovo	92.73	320	eP	P	11 08 24.4	+0.3
SANT	Santorini	92.77	308	P	P	11 08 21.8	-2.9
NC204	NORSAR Array S	92.80	334	P	P	11 08 23.5	-0.8
BZS	Buzias	92.91	317	⇑P	P	11 08 24.5	-0.5
MDVR	Moldovita	93.11	316	⇑P	P	11 08 25.7	-0.4
LANS	Liptovska Anna	93.14	321	eP	P	11 08 26.9	+0.8
LANS				pmax	pmax		
	comp=Z,4.0nm,0.6s						
LANS	Liptovska Anna	93.14	321	eP	P	11 08 26.9	+0.8
DOMB	Dombas	93.14	335	eP	P	11 08 24.8	-1.0
YKA	Yellowknife Ar	93.28	24	P	P	11 08 26.6	+0.2
	comp=Z,3.6nm,0.7s,baz=297,slow=4.4,SNR=70						
YKA				PKKP	PKKPdf	11 25 32.3	-1.5
	comp=Z,0.9nm,0.7s,baz=127,slow=2.5,SNR=10						
PSZ	Piszkesteto	93.29	320	⇑P	P	11 08 26.8	0.0
PSZ	Piszkesteto	93.29	320	P	P	11 08 27.1	+0.2
PSZ				pmax	pmax		
	comp=Z,20nm,1.0s						
PSZ	Piszkesteto	93.29	320	P	P	11 08 27.1	+0.2
PSZ				IAmb	IAmb	11 08 29.7	
	comp=Z,20nm,1.0s						
MOL	Molde	93.49	336	eP	P	11 08 26.5	-0.8
VAY	Valandovo	93.56	313	i P	P	11 08 27.0	-1.1

OKC	Ostrava-Krasne	93.71	322	eP	P	11 08 28.8	+0.2
OKC	Ostrava-Krasne	93.71	322	eP	P	11 08 28.8	+0.2
STIP	Stip	93.72	313	i P	P	11 08 26.6	-2.3
VYHS	Vyhne	93.76	321	eP	P	11 08 28.8	-0.1
VYHS	Vyhne	93.76	321	eP	P	11 08 28.8	-0.1
LIT	Litokhoron	93.98	312	P	P	11 08 28.6	-1.5
LIT				pmax	pmax		
	comp=Z,19nm,0.7s						
LIT	Litokhoron	93.98	312	P	P	11 08 28.6	-1.5
LIT				IAmb	IAmb	11 08 29.3	
	comp=Z,19nm,0.7s						
KONO	Kongsberg	94.08	333	eP	P	11 08 28.5	-1.6
SKAR	Skarslia	94.14	334	eP	P	11 08 29.6	-0.8
AGG	Agios Georgios	94.42	311	P	P	11 08 29.8	-2.4
AGG				pmax	pmax		
	comp=Z,20nm,1.1s						
AGG	Agios Georgios	94.42	311	P	P	11 08 29.8	-2.4
AGG				IAmb	IAmb	11 08 30.5	
	comp=Z,20nm,1.1s						
FNA	Florina	94.58	313	P	P	11 08 31.7	-1.2
FNA				pmax	pmax		
	comp=Z,12nm,0.8s						
FNA	Florina	94.58	313	P	P	11 08 31.7	-1.2
FNA				IAmb	IAmb	11 08 31.8	
	comp=Z,12nm,0.8s						
DPC	Dobruska-Polom	94.61	323	eP	P	11 08 33.3	+0.5
DPC	Dobruska-Polom	94.61	323	eP	P	11 08 33.3	+0.5
VRAC	Vranov	94.84	322	P	P	11 08 34.2	+0.3
	comp=Z,5.1nm,0.8s,baz=102,slow=5.9,SNR=5.8						
VRAC	Vranov	94.84	322	⇑P	P	11 08 34.7	+0.8
OHR	Ohrid	94.89	313	i P	P	11 08 20.8	-14
ITM	Ithomi	95.27	309	P	P	11 08 34.8	-1.3
TIR	Tirane	95.48	314	⇓P	P	11 08 36.6	-0.4
TIR	Tirane	95.48	314	P	P	11 08 37.1	+0.1
TIR				pmax	pmax		
	comp=Z,50nm,0.8s						
TIR	Tirane	95.48	314	P	P	11 08 37.0	+0.1
ASK	Askoy	95.55	335	eP	P	11 08 36.0	-0.8
PDG	Podgorica	95.56	315	⇑P	P	11 08 36.8	-0.5
PDG	Podgorica	95.56	315	P	P	11 08 37.2	0.0
BLS5	Blasjo	95.58	334	eP	P	11 08 36.4	-0.7
BRG	Berggiesshubel	95.79	324	eP	P	11 08 38.0	-0.1
	comp=Z,13nm,1.1s						
BRG	Berggiesshubel	95.79	324	eP	P	11 08 38.0	-0.1
BRG				pmax	pmax		
	comp=Z,13nm,1.1s						
PRU	Pruhonice	95.80	323	eP	P	11 08 38.4	+0.2
PRU	Pruhonice	95.80	323	eP	P	11 08 38.4	+0.2
CONA	Conrad Observa	95.82	321	epP	P	11 08 38.8	+0.3
	comp=Z,13nm,1.3s						
CLL	Collm	96.15	325	ePdif	P	11 08 41.0	+1.3
	comp=Z,10.0nm,0.9s						
CLL	Collm	96.15	325	P	P	11 08 40.5	+0.8
CLL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CLL	Collm	96.15	325	P	P	11 08 40.5	+0.8
CLL				IAmb	IAmb	11 08 42.3	
	comp=Z,10nm,0.9s						
ARSA	Arzberg	96.29	320	i pP	P	11 08 40.6	0.0
	comp=Z,12nm,1.0s						
KHC	Kasperske Hory	96.73	323	eP	P	11 08 42.6	+0.1
KHC	Kasperske Hory	96.73	323	⇓eP	P	11 08 42.4	-0.1
KHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GEC2	GERESS Array S	96.77	322	P	P	11 08 42.2	-0.5
GEC2				IAmb	IAmb	11 08 43.2	
	comp=Z,6.9nm,1.0s						
GERES	GERESS Array B	96.77	322	P	P	11 08 42.6	-0.2
	comp=Z,2.1nm,0.7s,baz=27,slow=6.3,SNR=5.0						
GERES	GERESS Array B	96.77	322	P	P	11 08 42.4	-0.4
PERS	Pernice	96.79	320	i P	P	11 08 42.5	-0.4
SOKA	Soboth	96.82	320	epP	P	11 08 43.1	0.0
	comp=Z,12nm,0.7s,SNR=7.9						
MOA	Molln	96.83	321	epP	P	11 08 43.4	+0.4
	comp=Z,16nm,0.9s,SNR=7.6						
OBKA	Obir	97.20	320	epP	P	11 08 44.7	0.0
	comp=Z,13nm,0.9s,SNR=5.4						
LJU	Ljubljana	97.39	319	i P	P	11 08 45.0	-0.5
MYKA	Terra Mystica	97.72	320	i PcP	P	11 08 46.4	-0.6
	comp=Z,4.0nm,0.5s						
KBA	Koelnbreinsper	97.72	321	ePcP	P	11 08 46.7	-0.5
	comp=Z,12nm,0.9s,SNR=9.4						
CADS	Cadrg	97.82	320	i P	P	11 08 46.7	-0.8
SGRT	San Giovanni R	98.24	315	P	P	11 08 48.4	-1.1
SGRT				IAmb	IAmb	11 08 51.2	
	comp=Z,9.6nm,0.9s						
ABTA	Abfaltersbach	98.38	321	ePcP	P	11 08 49.2	-0.8
	comp=Z,5.5nm,0.7s,SNR=6.4						
STAL	STALIGIAL	98.46	320	P	P	11 08 49.3	-1.1
ACER	Acerenza	98.46	314	P	P	11 08 49.6	-0.9
TIP	Timpagrande	98.46	312	⇑P	P	11 08 50.5	-0.1
TIP	Timpagrande	98.46	312	P	P	11 08 50.4	-0.1
TIP				IAmb	IAmb	11 08 52.9	
	comp=Z,13nm,1.1s						
WTTA	Wattenberg	98.70	321	epPdiff	P	11 08 51.3	-0.3
	comp=Z,5.8nm,0.5s,SNR=6.5						
WATA	Walderalm	98.70	321	epPdiff	P	11 08 51.3	-0.3
	comp=Z,4.8nm,0.5s						
SYO	Syowa Base	98.78	201	⇓iPdiff	P	11 08 49.6	-1.5
SYO	Syowa Base	98.78	201	⇓eX	Pdif	11 08 51.6	+0.5
SQTA	Sankt Quirin	98.98	322	i pPdiff	P	11 08 52.6	-0.2
	comp=Z,5.4nm,0.5s						
MOTA	Moosalm	98.99	322	i pPdiff	P	11 08 52.5	-0.4
	comp=Z,5.7nm,1.0s						
RETA	Reutte	99.13	322	epPdiff	Pdif	11 08 54.0	+0.6
	comp=Z,1.3nm,0.6s						
FETA	Feichten	99.36	321	epPdiff	Pdif	11 08 54.5	-0.1
	comp=Z,3.1nm,0.8s						
CEL	Celeste	99.42	312	P	Pdif	11 08 53.9	-1.0
DAVA	Damuels	99.76	322	ePdiff	Pdif	11 08 54.1	-2.2
	comp=Z,7.6nm,0.9s						
DAVOX	Davos/Dischmat	99.99	322	P	Pdif	11 08 57.5	+0.1
	comp=Z,7.6nm,1.0s,baz=123,slow=5.0,SNR=10						
QSPA	South Pole Qui	100.43	180	P	Pdif	11 08 58.6	-0.1
	comp=Z,2.9nm,0.9s,baz=164,slow=1.6,SNR=11						
EKA	Eskdalemuir Ar	102.19	333	P	Pdif	11 09 06.8	+0.1
	comp=Z,0.2nm,0.3s,baz=52,slow=4.6,SNR=3.5						
NVAR	Mina Array Bea	102.26	47	P	Pdif	11 09 07.9	+0.2
	comp=Z,0.7nm,0.7s,baz=275,slow=4.8,SNR=5.9						
NVAR				PKKPbc	PKKPbc	11 25 08.1	-2.8
	comp=Z,1.5nm,0.8s,baz=130,slow=4.5,SNR=11						
PDAR	Pinedale Array	106.14	40	PP	PP	11 13 47.0	-1.2
	comp=Z,0.6nm,1.0s,baz=298,slow=1.9,SNR=2.8						
PDAR				PKKP	PKKPdf	11 25 11.4	+0.8
	comp=Z,1.3nm,0.7s,baz=121,slow=6.6,SNR=10						
ULM	Lac du Bonnet	108.93	27	PKKPab	PKKPab	11 24 59.0	-4.4
	comp=Z,2.7nm,0.7s,baz=128,slow=4.2,SNR=6.9						
D46A	Sault St. Mari	116.52	23	P	PKPdf	11 13 56.0	0.0
	baz=326						
D47A	Chapleau	116.73	22	P	PKPdf	11 13 56.2	-0.2
	baz=327						
TX31	Lajitas Ar. Si	117.24	49		PKPdf	11 13 58.0	0.0
TX32	Lajitas Array	117.24	49		PKPdf	11 13 57.9	-0.2
TXAR	Lajitas Array	117.24	49	PKP	PKPdf	11 13 57.7	-0.4
	comp=Z,0.6nm,0.5s,baz=351,slow=4.7,SNR=14						
TXAR	Lajitas Array	117.24	49	PKIKP	PKiKP	11 13 58.1	+0.1
TXAR	Lajitas Array	117.24	49		PKiKP	11 13 58.1	+0.1
E48A	Lockeyer	117.57	22	P	PKPdf	11 13 57.9	-0.1
	baz=328						
S39A	Bolivar	119.05	36		PKPdf	11 13 59.9	-1.2
J47A	Sunmer	119.18	26	P	PKPdf	11 14 01.2	0.0
	baz=324						
JCT	Junction City	119.43	46	PKIKP	PKPdf	11 14 02.2	+0.1
JCT	Junction City	119.43	46		PKPdf	11 14 02.2	+0.1
LATQ	La Tuque	119.73	15	P	PKPdf	11 14 01.9	-0.2
	baz=338						
CCM	Cathedral Cave	119.97	34	P	PKPdf	11 14 02.5	-0.4
	baz=316						
L47A	Sherwood	120.03	27	P	PKPdf	11 14 01.7	-1.2
	baz=323						
U40A	Yellville	120.24	37		PKPdf	11 14 02.5	-1.0
U40A	Yellville	120.24	37	P	PKPdf	11 14 02.9	-0.6
	baz=314						
L48A	N Adams	120.39	27	P	PKPdf	11 14 03.1	-0.5
	baz=324						
L49A	Milan	120.55	26	P	PKPdf	11 14 03.4	-0.5
	baz=325						
TOA0	Torodi Ar. Sit	120.63	292		PKPdf	11 14 03.4	-1.3
TORD	Torodi Ar. Bea	120.63	292	PKP	PKPdf	11 14 03.8	-0.9
	comp=Z,11nm,0.6s,baz=69,slow=2.2,SNR=35						
TORD				PKKPbc	PKKPbc	11 24 09.1	-0.4
	comp=Z,0.5nm,0.6s,baz=274,slow=3.7,SNR=3.4						
MIAR	Mount Ida	121.03	39	P	PKiKP	11 14 05.3	+0.1
	baz=312						
O49A	Covington	121.85	28	P	PKPdf	11 14 05.9	-0.6
	baz=323						
P49A	Miami Univ. Ec	122.19	29	P	PKPdf	11 14 06.6	-0.5
	baz=323						
O51A	Pataskala	122.66	27	P	PKPdf	11 14 07.9	-0.1
	baz=325						
J58A	Remsen	122.68	19	P	PKPdf	11 14 07.8	-0.2
	baz=334						
S49A	Springfield	123.29	30	P	PKPdf	11 14 09.0	-0.3
	baz=322						
M56A	Emporium	123.33	22	P	PKPdf	11 14 09.3	0.0
	baz=330						
PLAL	Pickwick Lake	123.95	34		PKPdf	11 14 09.6	-1.0
T50A	Nancy	124.11	30	P	PKPdf	11 14 10.5	-0.4
	baz=322						
LRAL	Lakeview Retre	125.98	35	P	PKiKP	11 14 14.9	-0.1
	baz=318						
KIC	Kosan Boka	128.90	287	ePKIKP	PKPdf	11 14 20.8	+0.2
	comp=Z,33nm,0.7s						
DBIC	Dimbokro	128.90	287	PKP	PKPdf	11 14 20.8	+0.1
	comp=Z,9.5nm,0.8s,baz=65,slow=3.6,SNR=13						
DBIC	Dimbokro	128.90	287		PKPdf	11 14 20.1	-0.6
TIC	Toumodi	129.06	288	ePKIKP	PKPdf	11 14 21.0	0.0
	comp=Z,11nm,0.4s						
LIC	Lamto	129.21	287	ePKIKP	PKPdf	11 14 21.2	0.0
	comp=Z,49nm,0.7s						
SDDR	Presa de Saban	145.65	31		PKPab	11 14 52.0	+0.2
PLCA	Paso Flores	146.27	156	PKPbc	PKPbc	11 14 52.6	-0.2
	comp=Z,25nm,0.7s,baz=256,slow=2.7,SNR=123						
PLCA	Paso Flores	146.27	156	PKP2	PKPbc	11 14 53.1	+0.2
PLCA	Paso Flores	146.27	156		PKPbc	11 14 53.1	+0.2
DR12	Loma Pena Alta	146.75	29		PKPbc	11 14 55.3	+0.5
GO06	Curarrehue	146.85	154		PKPbc	11 14 54.7	+0.1
SJG	San Juan	148.77	24	PKPbc	PKPbc	11 14 59.9	-0.3
	comp=Z,5.7nm,0.2s,baz=13,slow=6.0,SNR=6.3						
SMRC	Santa Marta, M	149.96	45	eP	PKPbc	11 15 02.7	-0.6
SJCC	San Jacinto, C	150.15	48	eP	PKPbc	11 15 02.7	-1.2
DBBC	Dabeiba	151.20	54	eP	PKiKP	11 15 07.6	+0.7
UREC	San Jos de Ur	151.28	52	eP	PKPbc	11 15 04.8	-1.7
CODC	Agustn Codazz	151.36	45	eP	PKPbc	11 15 06.9	+0.3
PIZC	Pizarro, Choco	151.43	58	eP	PKPab	11 15 15.4	+0.4
SMLC	San Martn de	151.69	48	eP	PKPbc	11 15 05.5	-1.9
GR1C	Gorgona, Isla	151.73	63	eP	PKPbc	11 15 07.6	+0.1
ZARC	Zaragoza, Cauc	151.96	51	eP	PKiKP	11 15 08.3	-0.1
CBOC	Ciudad Bolivar	152.03	55	eP	PKiKP	11 15 09.8	+0.9
HELC	Santa Helena	152.23	54	eP	PKPbc	11 15 08.3	-0.8
OCAC	Ocana	152.62	48	eP	PKPdf	11 15 01.3	-1.4
YOTC	Yotoco, Valle	152.81	59	eP	PKPbc	11 15 09.1	-1.1
PTBC	PUERTO BERRIO,	152.86	52	eP	PKPbc	11 15 07.7	-2.5
GUY2C	Guyana, Caldas	152.93	56	eP	PKPbc	11 15 10.4	-0.4
BBAC	Balboa, Cauca	153.01	64	eP	PKPbc	11 15 09.8	-1.0
RREF	El Recreo	153.13	56	eP	PKPbc	11 15 11.2	-0.3
NORC	Norcasia	153.13	54	eP	PKiKP	11 15 14.7	+3.7
SOTA	Rioblanco	153.51	63	eP	PKiKP	11 15 12.6	+0.3
PCON	Cinco Dias	153.60	62	eP	PKiKP	11 15 13.3	+0.7
PAMC	Pamplona, Colo	153.68	48	eP	PKPbc	11 15 11.2	-1.3
SPBC	San Pablo de B	153.71	53	eP	PKPbc	11 15 10.5	-1.6
BARC	Barichara	153.81	50	eP	PKPbc	11 15 10.4	-2.0
ROSC	El Rosal	154.00	55	eP	PKPbc	11 15 11.2	-1.9
SDV	Santo Domingo	154.03	43	PKP	PKPdf	11 15 05.0	+0.2
	comp=Z,5.2nm,0.9s,baz=250,slow=6.3,SNR=5.1						
SDV				PKPbc	PKPbc	11 15 12.5	-0.4
	comp=Z,9.4nm,0.6s,baz=280,slow=3.9,SNR=14						
SDV	Santo Domingo	154.03	43	eP	PKiKP	11 15 13.3	+0.3
SDV	Santo Domingo	154.03	43		PKiKP	11 15 13.2	+0.3
RUSC	La Rusia	154.33	51	eP	PKPbc	11 15 12.6	-1.3
GARC	Garzon, Huila	154.46	61	eP	PKPdf	11 15 06.2	+0.7
CHIC	Chingaza	154.59	55	eP	PKPdf	11 15 05.5	-0.4
FLOC	Florencia	154.61	63	eP	PKPdf	11 14 59.9	-5.5
PTGC	Puerto Gaitan,	156.12	53	eP	PKPdf	11 15 10.5	+3.0
GUVC	San Jose del G	156.69	57	eP	PKPdf	11 15 08.3	+0.1
CPUP	Villa Florida	163.85	167	PKP	PKPdf	11 15 14.7	-1.1
	comp=Z,4.7nm,0.9s,baz=305,slow=0.9,SNR=6.6						
CPUP				PKPab	PKPab	11 16 08.2	+0.3
	comp=Z,4.2nm,0.9s,baz=242,slow=7.6,SNR=4.1						
CPUP	Villa Florida	163.85	167	PKIKP	PKPdf	11 15 16.7	+0.9
CPUP	Villa Florida	163.85	167		PKPdf	11 15 16.7	+0.9
LPAZ	La Paz	164.42	113	PKP	PKPdf	11 15 17.2	-0.1
	comp=Z,2.2nm,0.9s,baz=216,slow=1.2,SNR=7.7						
LPAZ				PKPab	PKPab	11 16 13.6	+1.8
	comp=Z,2.7nm,0.8s,baz=220,slow=4.3,SNR=4.7						
LPAZ	La Paz	164.42	113	PKP2	PKPab	11 16 14.0	+2.2
LPAZ						12 15 18.3	
LPAZ	La Paz	164.42	113		PKPdf	11 15 18.3	+1.0
LPAZ					PKPab	11 16 14.0	+2.2
PTGA	Pitinga	168.14	35	PKPab	PKPab	11 16 27.0	-0.3
	comp=Z,3.7nm,0.8s,baz=353,slow=7.3,SNR=6.5						
PTGA	Pitinga	168.14	35		PKPab	11 16 27.5	+0.2

BGR ***15*** *10:58:28.9±0.0, 1°.67N×98°.23E, h33^{km}, mb5.9, mB_BB5.9, Ms4.8*

BJI ***15*** *10:58:40.4±0.0, 2°.30N×99°.06E, h173^{km}, mB5.2/38, mb5.1/61*

DJA ***15*** *10:58:45.9±0.1, 3°N±2°×9°9E±°, h158^{km}±1^{km}, M5.4/61, mB5.8/36, mb5.7/61, MLv5.5/19, Mw(mB)5.3/36*

MOS ***15*** *10:58:45.0±0.8, 2°.76N×99°.07E, h180^{km}, mb5.7/86, Error ellipse: s-maj=8.9km s-min=5.4km az=99.5*

IDC ***15*** *10:58:45.3±0.2, 2°.80N×99°.05E, h165^{km}±1^{km}, mb5.2/60, mb1 5.2/61, mb1mx5.2/69, mbtmp5.6/61, Error ellipse: s-maj=6.3km s-min=5.4km az=49.0*

NEIC ***15*** *10:58:46.2±1.8, 2°.84N±0°.04×99°.07E±0°.04, h172^{km}±3^{km}, mb5.6/198, Mwc5.4(GCMT), Error ellipse: s-maj=9.0km s-min=0.5km az=223.0*

KLM ***15*** *10:58:47.0, 2°.87N×99°.03E, h154^{km}, mb5.2*

GCMT ***15*** *10:58:48.2±0.2, 2°.86N±0°.01×98°.92E±0°.01, h178^{km}±2^{km}, MW5.3/123, Moment Tensor Solution. s48,c58; s123,c193; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.14±.03; $M_{\theta\theta}$-0.18±.03; $M_{\phi\phi}$0.31±.04; $M_{r\theta}$-0.08±.02; $M_{\theta\phi}$0.04±.04; $M_{\phi r}$-1.28±.03; Best double couple: $M_0$1.30300×10^{17} NP1:ϕ_s189.00000°, δ5.00000°, λ-85.00000°. NP2:ϕ_s4.00000°, δ85.00000°, λ-90.00000°. Principal axes: T 1.3960, Plg40.0000°, Azm94.0000°; N -0.1860, Plg0.0000°, Azm4.0000°; P -1.2100, Plg50.0000°, Azm273.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***15*** *10:58:49, 2°.84N×98°.93E, h172^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.19; $M_{\theta\theta}$-0.15; $M_{\phi\phi}$0.34; $M_{r\theta}$-0.14; $M_{\theta\phi}$0.10; $M_{\phi r}$-1.29; Fault plane solution: $M_0$1.33000×10^{17} NP1:ϕ_s6.00000°, δ84.00000°, λ-92.00000°. NP2:ϕ_s203.00000°, δ6.00000°, λ-73.00000°. Principal axes: T 1.4100, Plg39.0000°, Azm98.0000°; N -0.1666, Plg2.0000°, Azm6.0000°; P -1.2435, Plg51.0000°, Azm274.0000°;*

ISC 15 10:58:45.7±0.3**, 2°.81N**±0°.03×**99°.02E**±0°.03**, h171**^{km}±1^{km}**, h172**^{km}**:pP-P, n1572,** σ1^{s}**06**/1737**, mb5.6**/287**, 73C-81D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	0.10	263	P	Pn	10 59 08.6	0.0
	4μm,0.3s,baz=243,slow=3.1,SNR=8434						
PSI				S	Sn	10 59 25.1	-0.9
	4μm,0.3s,baz=128,slow=23,SNR=151						
PSI				ScS	ScS	11 13 41.6	-1.5
	1.3nm,0.3s,baz=208,slow=22,SNR=19						
RPSI	Rantau Prapat	0.15	220		Pn	10 59 08.6	+0.1
RPSI				Sn	Sn	10 59 25.8	-0.1
RPSI	Rantau Prapat	0.15	220		Pn	10 59 08.6	+0.1
KCSI	Kotacane, Aceh	1.43	299	P	Pn	10 59 16.1	-0.2
KCSI				S	Sn	10 59 39.1	-0.9
TPTI		1.89	284	P	Pn	10 59 20.6	-0.4
TPTI				S	Sn	10 59 46.4	-1.9
IPM	Ipoh	2.59	50		Pn	10 59 29.9	+0.8
IPM				Sn	Sn	11 00 02.0	-0.8
IPM	Ipoh	2.59	50	P	Pn	10 59 30.0	+0.9
SNSI	Sinabang, Aceh	2.72	262	P	Pn	10 59 30.0	-0.6
PBSI	Pulau Batu	2.94	195	P	Pn	10 59 32.3	-1.0
KULM	Kulim	2.95	33		Pn	10 59 33.5	+0.2
KULM				Sn	Sn	11 00 08.6	-1.8
KULM	Kulim	2.95	33	P	Pn	10 59 34.0	+0.7
MLSI	Meulaboh, Aceh	2.99	299	P	Pn	10 59 32.6	-1.2
LHMI	Lhok Sumawe	3.17	319	P	Pn	10 59 36.0	-0.1
LHMI	Lhok Sumawe	3.17	319		Pn	10 59 37.0	+0.9
BKNI	Bangkinang	3.19	141		Pn	10 59 36.9	+0.6
PDSI	Padang	3.97	159	P	Pn	10 59 45.7	-0.5
SISI	Saibi	4.11	179	P	Pn	10 59 45.3	-2.7
SDSI	Sungai Dareh	4.43	147	P	Pn	10 59 52.0	-0.1
RGRI	Rengat	4.56	133	P	Pn	10 59 55.3	+1.4
MYKOM	Kota Tinggi	4.93	102		Pn	10 59 58.6	0.0
KRJI	Kerinci	5.45	153	P	Pn	11 00 03.3	-2.2
	12nm18μm2μm,0.9s						
PPSI	Pulau Pagai	5.63	170	P	Pn	11 00 04.4	-3.4
	12nm11μm578nm,0.5s						
TPRI	Tanjung Pinang	5.81	109	P	Pn	11 00 10.9	+0.7
	1.8nm316nm,0.7s						
CMBY	CAMPBELL BAY	6.57	310	ex	Pn	11 00 19.1	-1.1
MNAI	Manna	8.14	151	P	Pn	11 00 39.6	-1.3
	4.9nm7μm534nm,0.7s						
MNAI	Manna	8.14	151		Pn	11 00 39.0	-1.9
MDSI	Maura Dua	8.89	145	P	Pn	11 00 48.8	-2.1
	0.7nm2μm194nm,0.8s						
PBA	Port Blair	10.77	325		Pn	11 01 13.4	-2.0
KSM	Kuching	11.36	97		Pn	11 01 23.6	+0.4
KSM	Kuching	11.36	97	P	Pn	11 01 24.0	+0.8
DGPR	DIGLIPUR	11.93	330	ex	Pn	11 01 28.1	-2.4
LEM	Lembang	12.86	138	ScP	ScP	11 10 21.6	+0.8
	3.0nm,0.3s,baz=288,slow=20,SNR=2.6						
LEM				ScS	ScS	11 13 57.6	-0.1
	2.9nm,0.3s,baz=301,slow=22,SNR=6.4						
DLV	T Lat	13.05	45	P	P	11 01 47.7	-1.3
SBUM	Sibu	13.19	91	P	P	11 01 48.5	-1.9
SBUM	Sibu	13.19	91	P	P	11 01 49.0	-1.5
PBKI	Pangkalan Bun	13.78	113	P	P	11 01 56.6	-0.4
	8μm615nm,1.2s						
PBKT	Sadao Pong	13.80	8		P	11 01 56.6	-0.6
UBPT	Khong Chiam	13.92	27	P	P	11 01 57.9	-0.7
SMRI	Semarang	15.03	131	P	P	11 02 11.1	+0.2
SMRI				IAmb	IAmb	11 02 12.4	
	comp=Z,215nm,0.8s						
UWJI	Ujung Watu	15.03	128	P	P	11 02 11.8	+0.9
	comp=Z,6μmcomp=Z,555nm,1.4s						
COCO	West Island	15.06	188	P	P	11 02 13.0	+1.8
COCO				pmax	pmax		
	comp=Z,484nm,1.6s						
COCO	West Island	15.06	188	P	P	11 02 13.0	+1.8
COCO				IAmb	IAmb	11 02 15.4	
	comp=Z,484nm,1.6s						
CM31	Chiang Mai Arr	15.55	360	P	P	11 02 18.6	+2.0
	SNR=8.6						
CM31	Chiang Mai Arr	15.55	360	P	P	11 02 17.6	+1.0
CMAR	Chiang Mai Arr	15.55	360	P	P	11 02 17.9	+1.3
	comp=Z,14nm,0.3s,baz=191,slow=11,SNR=73						
CMAR				S	Sn	11 05 08.0	-1.7
	baz=186,slow=18,SNR=1.9						
CMAR				ScP	ScP	11 10 26.4	+1.2
	comp=Z,0.9nm,0.3s,baz=219,slow=3.2,SNR=27						
CMAR				ScS	ScS	11 14 03.6	-0.3
	comp=Z,0.3nm,0.3s,baz=178,slow=2.6,SNR=4.5						
CMAR	Chiang Mai Arr	15.55	360	i P	P	11 02 17.8	+1.2
CMAR				pmax	pmax		
	comp=Z,76nm,0.6s						
CMAR	Chiang Mai Arr	15.55	360	P	P	11 02 16.8	+0.2
UGM	Wanagama	15.66	133	P	P	11 02 21.4	+3.5
UGM	Wanagama	15.66	133		Pn	11 02 15.1	-2.3
UGM				IAmb	IAmb	11 02 31.3	
	comp=Z,211nm,0.9s						
CHTO	Chiang Mai	15.90	360	P	P	11 02 21.8	+1.3
CHTO				pmax	pmax		
	comp=Z,53nm,0.7s						
CHTO	Chiang Mai	15.90	360	P	P	11 02 21.8	+1.3
WOJI	Wonogiri, Jawa	15.90	132	P	P	11 02 21.7	+1.1
	comp=Z,2μmcomp=Z,120nm,0.7s						
KKM	Kota Kinabalu	17.44	79	P	Pn	11 02 40.1	+1.2
SPMM	Sapulut	17.51	83	P	Pn	11 02 41.0	+1.3
KMMI	Kalianget	17.85	123	P	Pn	11 02 44.3	+0.7
	comp=Z,8μmcomp=Z,754nm,0.7s						
SIMRM	Sittwe	18.23	341	P	P	11 02 45.4	-0.6
BKB	Balikpapan	18.32	103	P	Pn	11 02 50.1	+0.9
	comp=Z,15μmcomp=Z,2μm,0.8s						
BKB	Balikpapan	18.32	103	P	Pn	11 02 49.8	+0.5
SMKI	Samarinda	18.47	100	P	Pn	11 02 52.2	+1.3
	comp=Z,12μmcomp=Z,1μm,0.9s						
PALK	Pallekele	18.77	284	P	Pn	11 02 55.0	+0.4
	comp=Z,31nm,0.3s,baz=86,slow=5.9,SNR=273						
PALK				S	S	11 06 13.1	-3.8
	comp=Z,5.4nm,0.3s,baz=196,slow=23,SNR=17						
PALK	Pallekele	18.77	284	Pn	Pn	11 02 54.9	+0.3
PALK	Pallekele	18.77	284	P	Pn	11 02 55.3	+0.7
PALK	Pallekele	18.77	284	P	Pn	11 02 55.1	+0.4
JAGI	Jajag, Banyuwa	18.80	127	P	Pn	11 02 53.7	-1.1
	comp=Z,4μmcomp=Z,496nm,0.9s						
JAGI	Jajag, Banyuwa	18.80	127	P	P	11 02 52.8	+0.5
JAGI				IAmb	IAmb	11 02 59.0	
	comp=Z,393nm,0.9s						
SLVN	Son La	19.01	14	P	Pn	11 02 56.1	-1.3
QIZ	Qiongzhong	19.28	33	P	P	11 02 58.3	+0.8
QIZ				S	S	11 06 28.5	+1.8
QIZ				pmax	pmax		
	comp=Z,52nm,0.9s						
QIZ	Qiongzhong	19.28	33	P	Pn	11 02 59.3	-1.2
SRBI	Singaraja	19.44	124	P	Pn	11 03 00.8	-1.6
	comp=Z,11μmcomp=Z,1μm,0.7s						
BATP	Bataraza	19.60	72	eP	Pn	11 03 02.7	-1.6
DNP	Denpasar	19.77	125	P	Pn	11 03 10.4	+4.1
IGBI	Denpasar	19.80	126	P	P	11 03 03.3	+0.2
	comp=Z,2μmcomp=Z,124nm,1.0s						
BRDH	Bariadhala	21.00	341	P	P	11 03 16.2	+0.3
	comp=Z,194nm,0.4s,baz=63,slow=11,SNR=5.5						
BRDH				S	S	11 07 00.2	+0.1
	comp=Z,120nm,0.4s,baz=233,slow=16,SNR=4.1						
CHLP	Challavanipeta	21.40	318	eP	P	11 03 21.7	+1.5
CHLP				IAmb	IAmb	11 03 23.3	
	comp=Z,58nm,0.8s						
CHLP				eS	S	11 07 07.8	+0.6
ENPP	El Nido	21.88	67	eP	P	11 03 24.8	-0.4
SKHT	Srikalahasti	21.95	301	eP	P	11 03 28.0	+2.0
SKHT				IAmb	IAmb	11 03 29.1	
	comp=Z,352nm,0.8s						
SKHT				eS	S	11 07 18.2	+1.8
PLAI	Plampang	21.98	122	P	P	11 03 25.1	-1.2
	comp=Z,2μmcomp=Z,278nm,0.8s						
KAPI	Kappang	22.12	111	P	P	11 03 28.7	+1.1
	comp=Z,259nm,0.5s,baz=285,slow=8.7,SNR=101						
KAPI				ScP	ScP	11 10 40.3	+0.4
	comp=Z,56nm,1.0s,baz=251,slow=4.2,SNR=21						
PVM	Polavaram	22.31	311	eP	P	11 03 29.3	-0.1
PVM				IAmb	IAmb	11 03 31.2	
	comp=Z,90nm,0.7s						
PVM				eS	S	11 07 22.8	+0.7
KMI	Kunming	22.47	9	P	P	11 03 32.0	+1.0
KMI				pP	pP	11 04 05.5	+3.7
KMI				PP	PnPn	11 04 11.3	+5.4
KMI				sP	PP	11 04 25.3	-0.8
KMI				S	S	11 07 26.3	+1.3
KMI				pmax	pmax		
	comp=Z,42nm,0.8s						
KMI				pmax	pmax		
	comp=Z,230nm,4.7s						
KMI				LR	LR		
	comp=Z,810nm,18.3s						
KMI				LR	LR		
	comp=Z,2μm,15.4s						
KMI				LR	LR		
	comp=Z,2μm,17.6s						
KMI	Kunming	22.47	9	P	P	11 03 30.0	-1.1
KMI				pmax	pmax		
	comp=Z,49nm,0.9s						
KMI	Kunming	22.47	9	P	P	11 03 30.0	-1.1
MYLAV	Mylavaram	22.77	309	eP	P	11 03 34.2	+0.6
MYLAV				IAmb	IAmb	11 03 35.9	
	comp=Z,110nm,0.8s						
MYLAV				epP	pP	11 04 05.6	+0.2
MYLAV				eS	S	11 07 30.1	+0.5
ADKI	Addanki	22.80	306	eP	P	11 03 35.3	+1.4
ADKI				IAmb	IAmb	11 03 36.5	
	comp=Z,141nm,0.8s						
ADKI				epP	pP	11 04 06.4	+0.8
ADKI				eS	S	11 07 31.0	+1.0
BUSP	Coron	22.88	65	eP	P	11 03 36.2	+1.5
LUBP	Lubang	23.61	61	eP	P	11 03 40.7	-0.6
SHL	Shillong	23.64	344	P	P	11 03 41.5	-0.2
	SNR=8.4						
SHL	Shillong	23.64	344	P	P	11 03 41.3	-0.4
SHL				pmax	pmax		
	comp=Z,175nm,0.5s						
SHL	Shillong	23.64	344	P	P	11 03 41.3	-0.4
NJS	Nagarjunasagar	23.71	306	eP	P	11 03 43.3	+1.1
NJS				IAmb	IAmb	11 03 44.4	
	comp=Z,222nm,0.8s						
NJS				epP	pP	11 04 17.6	+2.1
NJS				eS	S	11 07 45.0	+0.2
GGR	Gangavaram	23.73	310	eP	P	11 03 43.1	+0.7

GGR				IAmb	IAmb	11 03 44.4	
	comp=Z,45nm,0.8s						
GGR				epP	pP	11 04 16.0	+0.3
GGR				eS	S	11 07 45.2	0.0
SRLM	**Srisailam**	23.81	305	eP	P	11 03 44.2	+1.1
SRLM				IAmb	IAmb	11 03 45.1	
	comp=Z,94nm,0.7s						
SRLM				epP	pP	11 04 16.7	+0.2
SRLM				eS	S	11 07 46.7	+0.3
LUWI	**Luwuk**	24.05	99	P	P	11 03 46.5	+1.2
	comp=Z,9µmcomp=Z,589nm,0.8s						
LUWI	**Luwuk**	24.05	99	P	P	11 03 46.2	+0.8
TGY	**Tagaytay City**	24.37	61	P	P	11 03 50.0	+1.7
	comp=Z,589nm,0.8s,baz=287,slow=2.0,SNR=11						
TGY	**Tagaytay City**	24.37	61	P	P	11 03 50.0	+1.7
URV	**Uravakonda**	24.61	301	eP	P	11 03 51.9	+1.4
URV				IAmb	IAmb	11 03 52.6	
	comp=Z,403nm,0.7s						
URV				eS	S	11 07 59.5	+0.2
GYA	**Guiyang**	24.63	17	ScP	ScP	11 10 47.3	+0.7
GYA	**Guiyang**	24.63	17	ScS	ScS	11 14 33.4	-1.5
GUIM	**Jordan**	24.64	71	eP	P	11 03 50.3	-0.3
OTRP	**Odiongan**	24.67	66	eP	P	11 03 51.1	+0.2
PAGZ	**Pagadian**	24.76	77	eP	P	11 03 53.3	+1.5
HYB	**Hyderabad**	24.79	307	i P	P	11 03 53.0	+1.0
	comp=Z,192nm,0.8s						
HYBB	**Hyderabad (bro**	24.79	307	eP	P	11 03 53.0	+0.9
HYBB				IAmb	IAmb	11 03 54.3	
	comp=Z,132nm,0.6s						
HYBB				epP	pP	11 04 27.3	+0.2
HYBB				eS	S	11 08 02.1	+0.1
BOAC	**Boac**	24.91	64	eP	P	11 03 52.3	-0.8
RPR	**Rampur**	25.04	311	eP	P	11 03 55.0	+0.7
RPR				IAmb	IAmb	11 03 56.5	
	comp=Z,50nm,0.6s						
BASI	**Baing, Sumba**	25.07	121	P	P	11 03 54.0	-0.5
	comp=Z,2µmcomp=Z,243nm,0.8s						
CTBH	**Cotabato--PC H**	25.50	79	⇓iP	P	11 03 59.9	+1.4
SZP	**Santa**	25.63	54	P	P	11 03 60.0	+0.4
SZP				IAmb	IAmb	11 04 36.7	
	comp=Z,226nm,1.0s						
BALP	**Baler**	25.66	59	eP	pP	11 04 35.7	+0.7
SKMP	**Bagumbayan, Su**	25.70	81	eP	P	11 04 00.3	0.0
MMRI	**Maumere**	25.79	116	P	P	11 04 01.0	-0.1
MMRI				IAmb	IAmb	11 04 39.1	
	comp=Z,154nm,1.1s						
SRSP	**Sriramsagar**	25.81	310	eP	P	11 04 02.0	+0.8
SRSP				IAmb	IAmb	11 04 03.2	
	comp=Z,73nm,0.6s						
SRSP				eS	S	11 08 17.6	-0.4
KAAM	**Kaadhehdhoo**	26.12	265	P	P	11 04 05.9	+1.8
KAAM				IAmb	IAmb	11 04 11.4	
	comp=Z,131nm,0.7s						
KCP	**Kidapawan**	26.30	80	⇑iP	P	11 04 06.4	+0.6
ODAN	**Odare**	26.38	336	eP	P	11 04 07.1	+0.6
	comp=Z,167nm,0.5s						
MNCI	**Minicoy**	26.40	283	P	P	11 04 08.3	+1.8
MNCI				IAmb	IAmb	11 04 09.8	
	comp=Z,138nm,0.8s						
BUKP	**Musuan**	26.40	78	eP	P	11 04 08.4	+1.8
APYP	**Conner**	26.43	54	eP	P	11 04 08.6	+1.8
CAUP	**Cauayan**	26.44	56	eP	P	11 04 06.4	-0.4
OCLP	**Ormoc**	26.66	71	eP	P	11 04 13.3	+4.4
MSLP	**Maasin**	26.66	73	eP	P	11 04 07.4	-1.5
TAPN	**Taplejung**	26.69	337	eP	P	11 04 10.3	+0.9
	comp=Z,194nm,0.4s						
KLRI	**Killari**	26.70	306	eP	P	11 04 10.2	+0.9
KLRI				IAmb	IAmb	11 04 11.0	
	comp=Z,202nm,1.3s						
KLRI				epP	pP	11 04 45.1	+0.2
KLRI				eS	S	11 08 31.8	-0.5
DAV	**Davao City (W)**	26.79	80	P	P	11 04 09.5	-0.5
RAMN	**Ramite**	26.79	335	eP	P	11 04 11.1	+0.9
	comp=Z,181nm,0.5s						
DDMP	**Don Marcelino,**	26.80	82	eP	P	11 04 09.5	-0.7
PVCP	**Virac**	27.05	65	eP	P	11 04 09.1	-3.2
SANI	**Sanana**	27.39	100	P	P	11 04 16.0	+0.6
	comp=Z,49nm,0.7s						
MATI	**Mati**	27.44	80	eP	P	11 04 14.7	-1.2
JIRN	**Jiri**	27.59	335	eP	P	11 04 17.8	+0.4
	comp=Z,141nm,0.4s						
LSA	**Lhasa**	27.77	345	P	P	11 04 20.3	+1.1
LSA	**Lhasa**	27.77	345	P	P	11 04 20.2	+1.1
LSA	**Lhasa**	27.77	345	P	P	11 04 20.2	+1.1
LSA				pmax	pmax		
	comp=Z,134nm,0.5s						
LSA	**Lhasa**	27.77	345	P	P	11 04 20.2	+1.1
PKI	**Pulchoki**	27.85	333	eP	P	11 04 19.7	0.0
	comp=Z,53nm,0.4s						
PKIN	**Phulchoki**	27.86	333	eP	P	11 04 19.7	0.0
	comp=Z,50nm,0.4s						
GUN	**Gumba**	27.94	335	eP	P	11 04 21.1	+0.6
	comp=Z,275nm,0.4s						
DMN	**Daman**	28.02	333	eP	P	11 04 21.2	+0.1
	comp=Z,74nm,0.5s						
SOEI	**Soe**	28.08	117	P	P	11 04 20.7	-1.0
SOEI				IAmb	IAmb	11 05 26.2	
	comp=Z,114nm,0.9s						
KKN	**Kakani**	28.09	333	eP	P	11 04 21.9	+0.1
	comp=Z,173nm,0.5s						
CD2	**Chengdu**	28.30	9	P	P	11 04 24.6	+1.2
CD2				pmax	pmax		
	comp=Z,50nm,0.5s						
DGAR	**Diego Garcia**	28.39	249	P	P	11 04 25.3	+1.0
DGAR				pmax	pmax		
	comp=Z,102nm,1.0s						
DGAR	**Diego Garcia**	28.39	249	P	P	11 04 25.3	+1.0
DGAR				IAmb	IAmb	11 05 03.8	
	comp=Z,102nm,0.9s						
TNTI	**Ternate**	28.40	94	P	P	11 04 24.6	+0.2
TNTI				IAmb	IAmb	11 05 28.8	
	comp=Z,110nm,1.1s						
GKN	**Gorkha**	28.57	333	eP	P	11 04 26.1	+0.2
	comp=Z,143nm,0.3s						
NLAI	**Namlea**	28.70	102	P	P	11 04 30.2	+3.1
	comp=Z,261nm,0.7s						
ENH	**Enshi**	29.05	19	P	P	11 04 29.6	-0.4
TPUB	**Ta-pu**	29.20	44	P	P	11 04 30.9	-0.5
TPUB				IAmb	IAmb	11 05 09.2	
	comp=Z,89nm,1.1s						
DANN	**Dangsing**	29.27	332	eP	P	11 04 32.5	+0.2
	comp=Z,387nm,0.4s						
GIRL	**Giralia**	29.34	150	P	P	11 04 33.2	+0.7
	baz=30,SNR=4.0						
YULB	**Yu-li**	29.72	45	P	P	11 04 36.7	+0.7
YULB				IAmb	IAmb	11 05 15.2	
	comp=Z,148nm,1.7s						
SSLB	**Suanglung**	29.74	44	P	P	11 04 36.3	+0.2
AAI	**Ambon**	29.86	102	P	P	11 04 37.5	+0.1
	comp=Z,348nm,0.7s						
MSAI	**Masohi**	30.51	101	P	P	11 04 43.2	+0.1
	comp=Z,627nmcomp=Z,62nm,0.6s						
YHNB	**Yeheng**	30.61	43	P	P	11 04 44.0	+0.1
YHNB				IAmb	IAmb	11 04 54.8	
	comp=Z,202nm,2.0s						
WHN	**Wuhan**	31.16	26	P	P	11 04 49.3	+0.8
WHN				pmax	pmax		
	comp=Z,54nm,1.0s						
MBWA	**Marble Bar**	31.29	141	P	P	11 04 48.2	-1.6
XAN	**Xi'an**	32.41	15	P	P	11 04 58.8	-0.8
XAN				pP	pP	11 05 34.1	-1.3
XAN				sP	sP	11 05 52.4	-2.7
XAN				S	S	11 09 57.8	-3.5
XAN				pmax	pmax		
	comp=Z,62nm,0.6s						
XAN				LR	LR		
	comp=Z,930nm,12.9s						
XAN				LR	LR		
	comp=Z,820nm,14.7s						
XAN	**Xi'an**	32.41	15	P	P	11 04 58.7	-0.8
XAN				S	S	11 10 06.9	+5.6
XAN				pmax	pmax		
	comp=Z,47nm,0.7s						
XAN	**Xi'an**	32.41	15	P	P	11 04 58.7	-0.8
XAN					S	11 10 06.9	+5.6
SWI	**Sorong**	32.43	96	P	P	11 05 00.0	+0.1
	comp=Z,527nm,0.7s						
SIJI	**Sorong**	32.44	96	P	P	11 05 00.3	+0.3
	comp=Z,478nm,0.7s,baz=309,slow=7.6,SNR=120						
SIJI				ScP	ScP	11 11 11.3	+0.2
	comp=Z,29nm,0.9s,baz=210,slow=0.8,SNR=5.7						
LZH	**Lanzhou**	33.41	7	⇑P	P	11 05 09.6	+1.3
LZH				pP	pP	11 05 46.4	+2.1
LZH				sP	sP	11 06 03.4	-0.6
LZH				PP	PP	11 06 27.4	-0.1
LZH				pmax	pmax		
	comp=Z,41nm,1.1s						
LZH				pmax	pmax		
	comp=Z,370nm,5.5s						
LZH				LR	LR		
	comp=Z,720nm,14.1s						
LZH				LR	LR		
	comp=Z,710nm,13.6s						
LZH				LR	LR		
	comp=Z,880nm,14.6s						
FITZ	**Fitzroy Crossi**	33.46	129	P	P	11 05 07.7	-1.1
	baz=34,SNR=30						
FITZ	**Fitzroy Crossi**	33.46	129	P	P	11 05 07.5	-1.2
	comp=Z,77nm,0.7s,baz=157,slow=0.2,SNR=45						
FITZ				PcP	PcP	11 07 46.0	0.0
	comp=Z,6.8nm,0.5s,baz=22,slow=0.0,SNR=3.9						
FITZ				ScP	ScP	11 11 14.0	-0.5
	comp=Z,4.5nm,0.6s,baz=177,slow=0.0,SNR=5.8						
FAKI	**Fak Fak**	33.70	99	P	P	11 05 10.7	-0.2
	comp=Z,188nm,0.9s						
FAKI	**Fak Fak**	33.70	99	P	P	11 05 10.8	-0.1
FAKI				IAmb	IAmb	11 05 11.8	
	comp=Z,131nm,0.8s						
SAUI	**Saumlaki**	33.94	109	P	P	11 05 13.0	+0.1
SAUI				IAmb	IAmb	11 05 13.7	
	comp=Z,122nm,0.8s						
NJ2	**Nanjing**	34.55	31	eP	P	11 05 17.4	-0.6
NJ2				pmax	pmax		
	comp=Z,17nm,0.7s						
KNRA	**Kununurra**	34.68	123	P	P	11 05 17.9	-1.5
	baz=35,SNR=8.7						
MEEK	**Meekatharra**	34.87	148	P	P	11 05 20.0	-0.8
	baz=35,SNR=7.4						
RKPI	**Ransiki, Papua**	35.41	97	P	P	11 05 26.9	+1.3
	comp=Z,5µmcomp=Z,364nm,0.8s						
MTN	**Manton Dam**	35.48	117	P	P	11 05 25.6	-0.5
	baz=36,SNR=12						
MORW	**Morawa**	35.66	154	P	P	11 05 27.7	+0.2
	baz=36,SNR=9.1						
GTA	**Gaotai**	36.43	1	⇓P	P	11 05 35.0	+0.9
GTA				pP	pP	11 06 11.9	+1.3
GTA				sP	sP	11 06 32.4	+2.3
GTA				PcP	PcP	11 07 55.6	+1.1
GTA				ScP	ScP	11 11 25.1	0.0
GTA				ScS	ScS	11 15 29.8	-2.1
GTA				pmax	pmax		
	comp=Z,25nm,0.8s						
GTA				pmax	pmax		
	comp=Z,140nm,6.7s						
GTA				LR	LR		
	comp=Z,650nm,14.3s						
GTA				LR	LR		
	comp=Z,1µm,15.9s						
GTA				LR	LR		
	comp=Z,1µm,15.9s						
KDU	**Kakadu**	36.62	116	P	P	11 05 34.8	-1.0
	baz=37,SNR=12						
JOW	**Kunigami**	36.82	47	P	P	11 05 37.6	+0.2
	comp=Z,1.7nm,0.4s,baz=186,slow=14,SNR=9.7						
JOW	**Kunigami**	36.82	47	P	P	11 05 37.0	-0.4
TIA	**Tai'an**	37.21	25	P	P	11 05 40.3	-0.2
TIA				pmax	pmax		
	comp=Z,13nm,0.6s						
MUN	**Mundaring**	38.26	156	P	P	11 05 50.0	+0.6
	baz=38,SNR=12						
KLBR	**Kellerberrin**	38.58	154	P	P	11 05 52.1	+0.1
	baz=39,SNR=10						
BTO	**Baotou**	38.91	13	eP	pP	11 06 32.4	+0.7
NIL	**Nilore**	39.00	325	P	P	11 05 55.2	-0.4
NIL				pmax	pmax		
	comp=Z,205nm,0.8s						
NIL	**Nilore**	39.00	325	P	P	11 05 55.2	-0.4
NWAO	**Narrogin (SRO)**	39.51	156	P	P	11 06 00.5	+0.7
	baz=40,SNR=6.7						
NWAO	**Narrogin (SRO)**	39.51	156	P	P	11 05 59.5	-0.3
	comp=Z,39nm,0.8s,baz=318,slow=7.3,SNR=14						
HHC	**Hu-ho-hao-te**	39.52	15	eP	P	11 06 00.8	+0.9
HHC				pP	pP	11 06 38.9	+2.1
HHC				sP	sP	11 06 55.9	-0.4
HHC				pmax	pmax		
	comp=Z,2µm,4.8s						
WRKA	**Warakurna**	39.66	136	P	P	11 06 00.3	-1.0
	baz=40,SNR=7.2						
SMPI	**Sarmi**	39.96	96	P	P	11 06 04.7	+0.9
	comp=Z,130nm,1.0s						
BJT	**Baijiatuau**	40.16	21	P	P	11 06 06.3	+1.2
BJT				pmax	pmax		
	comp=Z,56nm,1.1s						
BJT	**Baijiatuau**	40.16	21	P	P	11 06 06.3	+1.2
BJI	**Beijing**	40.19	21	P	P	11 06 06.4	+1.2
BJI				pP	pP	11 06 43.9	+1.6
BJI				pmax	pmax		
	comp=Z,34nm,0.7s						
RKGY	**Rocky Gully**	40.87	157	P	P	11 06 12.1	+1.2
	baz=41,SNR=7.0						
WB0	**Warramunga Arr**	41.35	124	P	P	11 06 14.4	-0.7
WB0				IAmb	IAmb	11 06 15.5	
	comp=Z,114nm,1.0s						
WRA	**Warramunga Arr**	41.39	125	P	P	11 06 14.8	-0.7
	comp=Z,89nm,0.6s,baz=328,slow=12,SNR=158						
WRA				pP	pP	11 06 51.3	-1.4
	comp=Z,33nm,0.9s,baz=299,slow=9.7,SNR=2.4						
WRA				PcP	PcP	11 08 10.4	0.0
	comp=Z,9.2nm,0.4s,baz=316,slow=2.5,SNR=4.6						
WRA				ScP	ScP	11 11 43.4	-1.0
	comp=Z,8.9nm,0.9s,baz=309,slow=3.4,SNR=8.7						
WRA				S	S	11 12 11.8	-5.9
	comp=Z,11nm,1.0s,baz=294,slow=16,SNR=11						
WRA	**Warramunga Arr**	41.39	125	P	P	11 06 13.8	-1.7
WRA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WRA	**Warramunga Arr**	41.39	125	P	P	11 06 13.8	-1.7
WRAB	**Tennant Creek**	41.40	125	P	P	11 06 14.9	-0.6
WRAB				pmax	pmax		
	comp=Z,121nm,0.7s						
WRAB	**Tennant Creek**	41.40	125	P	P	11 06 14.9	-0.6
WRAB				IAmb	IAmb	11 06 16.5	
	comp=Z,121nm,0.7s						
WB2	**Warramunga Arr**	41.40	125	P	P	11 06 14.9	-0.7
WB2				IAmb	IAmb	11 06 16.5	
	comp=Z,107nm,0.7s						
DL2	**Dalian**	41.41	27	P	P	11 06 16.3	+1.0
DL2				pP	pP	11 06 54.6	+2.1
DL2				sP	sP	11 07 12.9	+1.0
DL2				eS	S	11 12 20.9	+3.5
DL2				pmax	pmax		
	comp=Z,61nm,0.7s						
GENI	**Genyem**	41.48	97	P	P	11 06 16.1	-0.2
	comp=Z,153nm,0.5s						
WR0	**Warramunga Arr**	41.57	125	P	P	11 06 16.4	-0.5
WR0				IAmb	IAmb	11 06 18.3	
	comp=Z,186nm,0.8s						
WMQ	**Urumqi**	42.05	348	P	P	11 06 22.1	+1.6
WMQ				pP	pP	11 06 57.3	-0.6
WMQ				sP	sP	11 07 16.6	-0.6
WMQ				PcP	PcP	11 08 13.3	+1.1
WMQ				ScP	ScP	11 11 47.5	+0.9
WMQ				S	S	11 12 26.6	-0.2
WMQ				ScS	ScS	11 15 57.3	-7.3
WMQ				pmax	pmax		
	comp=Z,81nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,370nm,9.7s						
WMQ				LR	LR		
	comp=Z,830nm,15.3s						
WMQ				LR	LR		
	comp=Z,500nm,16.3s						
WMQ				LR	LR		
	comp=Z,690nm,17.3s						
WMQ	**Urumqi**	42.05	348	P	P	11 06 21.3	+0.8
WMQ				pmax	pmax		
	comp=Z,99nm,0.8s						
WMQ	**Urumqi**	42.05	348	P	P	11 06 21.3	+0.8
WMQ				IAmb	IAmb	11 06 22.8	
	comp=Z,99nm,0.8s						
KSH	**Kashi**	42.11	333	P	P	11 06 20.3	-0.9
KSH				pP	pP	11 06 57.8	-0.7
KSH				PP	PP	11 08 04.5	+2.2
KSH				PcS	PcS	11 11 59.6	-5.0
KSH				S	S	11 12 23.8	-4.1
KSH				ScS	ScS	11 16 00.8	-4.5
KSH				pmax	pmax		
	comp=Z,790nm,7.1s						
KSH				LR	LR		
	comp=Z,3µm,15.6s						
KSH				LR	LR		
	comp=Z,1µm,12.3s						
KSH				LR	LR		
	comp=Z,1µm,18.3s						
KBL	**Kabul**	42.12	322	P	P	11 06 21.3	-0.1
KBL	**Kabul**	42.12	322	P	P	11 06 21.5	0.0
KBL				pmax	pmax		
	comp=Z,69nm,0.6s						
KBL	**Kabul**	42.12	322	P	P	11 06 21.5	0.0
KBL				IAmb	IAmb	11 06 22.8	
	comp=Z,69nm,0.6s						
JNU	**Nakatsue**	42.40	41	P	P	11 06 23.4	-0.1
	comp=Z,12nm,0.5s,baz=242,slow=5.7,SNR=20						
JNU	**Nakatsue**	42.40	41	P	P	11 06 23.7	+0.2
TJN	**Taejon**	42.42	35	ceP	P	11 06 23.4	-0.1
INCN	**Inchon**	42.81	33	P	P	11 06 26.5	-0.2
AS31	**Alice Springs**	42.96	130	P	P	11 06 27.4	-0.8
ASAR	**Alice Springs**	42.96	130	P	P	11 06 27.4	-0.7
	comp=Z,62nm,0.5s,baz=300,slow=7.0,SNR=69						
ASAR				pP	pP	11 07 04.3	-1.3
	comp=Z,10nm,0.8s,baz=305,slow=8.5,SNR=1.2						
ASAR				PcP	PcP	11 08 15.8	+0.1
	comp=Z,5.8nm,0.6s,baz=316,slow=4.7,SNR=4.6						
ASAR				ScP	ScP	11 11 49.8	-0.9
	comp=Z,6.9nm,0.7s,baz=305,slow=4.3,SNR=11						
ASAR				S	S	11 12 37.3	-3.4
	comp=Z,5.8nm,0.9s,baz=296,slow=14,SNR=11						
JLN	**Jalan Bani Buh**	42.98	300	P	P	11 06 29.9	+1.6
FORT	**Forrest**	43.38	143	P	P	11 06 31.0	-0.3
	baz=44,SNR=41						
KSAR	**Wonju Array Be**	43.47	34	P	P	11 06 31.9	0.0
KSAR	**Wonju Array Be**	43.47	34	P	P	11 06 31.9	0.0
KSRS	**Korea Array**	43.50	34	P	P	11 06 32.1	-0.1
	comp=Z,32nm,0.6s,baz=220,slow=8.7,SNR=154						
KSRS				pP	pP	11 07 09.0	-0.6
	comp=Z,22nm,0.7s,baz=223,slow=8.9,SNR=5.2						
KSRS				sP	sP	11 07 27.3	-1.7
	comp=Z,32nm,1.0s,baz=221,slow=8.9,SNR=4.0						
KSRS				ScP	ScP	11 11 52.7	+0.2
	comp=Z,4.6nm,0.9s,baz=205,slow=3.8,SNR=11						
KS19	**Wonju Array Si**	43.50	34	P	P	11 06 32.0	-0.2
WBK	**Wadi Bani Khal**	43.52	300	P	P	11 06 34.4	+1.8
	SNR=11						
PRZ	**Przheval'sk**	43.59	338	P	P	11 06 34.5	+1.4
PRZ				pmax	pmax		
	comp=Z,335nm,1.3s						
PRZ	**Przheval'sk**	43.59	338	P	P	11 06 34.5	+1.4
PRZ				IAmb	IAmb	11 06 35.9	
	comp=Z,335nm,1.3s						
NRN	**Naryn**	43.67	335	P	P	11 06 34.3	+0.4
NRN				pmax	pmax		
	comp=Z,361nm,1.1s						
NRN	**Naryn**	43.67	335	P	P	11 06 34.3	+0.4
KDJ	**Kajisay**	43.76	336	P	P	11 06 35.7	+1.3
KDJ				pmax	pmax		
	comp=Z,225nm,0.8s						
KDJ	**Kajisay**	43.76	336	P	P	11 06 35.7	+1.3
MHTO	**MHTO**	43.85	298	P	P	11 06 35.5	+0.2
	SNR=5.3						
WSAR	**Wadi Sarin**	44.04	301	P	P	11 06 38.6	+1.9
	SNR=13						
MSEY	**Mahe Island**	44.14	260	i P	P	11 06 39.9	+2.2
	SNR=11						
MSEY	**Mahe Island**	44.14	260	P	P	11 06 40.2	+2.5
MSEY	**Mahe Island**	44.14	260	P	P	11 06 38.5	+0.8
MSEY				pmax	pmax		
	comp=Z,64nm,0.9s						
MSEY	**Mahe Island**	44.14	260	P	P	11 06 38.5	+0.8
JMDO	**Jabal Madar**	44.19	300	P	P	11 06 39.4	+1.4
	SNR=9.7						
SMDO	**Samad**	44.47	300	P	P	11 06 41.9	+1.6
GAR	**Garm**	44.51	328	P	P	11 06 39.7	-0.7
GAR				IAmb	IAmb	11 06 42.2	
	comp=Z,233nm,0.8s						
BOOM	**Boomskoye usch**	44.57	336	P	P	11 06 41.2	+0.3
BOOM				pmax	pmax		
	comp=Z,112nm,0.7s						
BOOM	**Boomskoye usch**	44.57	336	P	P	11 06 41.2	+0.3
BOOM				IAmb	IAmb	11 06 42.6	
	comp=Z,112nm,0.7s						
BIDO	**Bidbid**	44.57	301	P	P	11 06 42.8	+1.8
	SNR=22						
SNY	**Shenyang**	44.65	26	⇑P	P	11 06 39.8	-1.5
SNY				pmax	pmax		
	comp=Z,24nm,1.0s						
KNDC	**Almaty**	44.76	337	P	P	11 06 43.4	+1.1
CHGR	**Chuyangaron**	44.89	326	P	P	11 06 42.7	-0.6
CHGR				IAmb	IAmb	11 06 43.8	
	comp=Z,342nm,1.1s						
ARSB	**Arslanbob**	44.93	332	P	P	11 06 44.6	+0.9
ARSB				pmax	pmax		
	comp=Z,616nm,0.7s						
ARSB	**Arslanbob**	44.93	332	P	P	11 06 44.6	+0.9
BTK	**Batken**	45.02	329	P	P	11 06 45.4	+1.0
BTK				pmax	pmax		
	comp=Z,211nm,0.9s						
BTK	**Batken**	45.02	329	P	P	11 06 45.4	+1.0
BTK				IAmb	IAmb	11 06 46.6	
	comp=Z,211nm,0.9s						
BSY	**Bisya**	45.10	300	P	P	11 06 46.8	+1.6
	SNR=19						
SHAO	**Shalim**	45.12	293	i P	P	11 06 46.7	+1.3
	SNR=12						
SHAO	**Shalim**	45.12	293	P	P	11 06 46.7	+1.3
HOQ	**Hoqain**	45.29	301	P	P	11 06 48.2	+1.5
	SNR=12						
AAK	**Ala-Archa**	45.30	334	ScP	ScP	11 12 01.2	+1.2
	comp=Z,22nm,0.8s,baz=160,slow=5.3,SNR=14						
AAK				S	S	11 13 14.8	+0.6
	comp=Z,5.0nm,1.0s,baz=271,slow=19,SNR=8.0						
AAK	**Ala-Archa**	45.30	334	i P	P	11 06 47.8	+1.3
	SNR=57						
AAK	**Ala-Archa**	45.30	334	P	P	11 06 47.8	+1.3
AAK	**Ala-Archa**	45.30	334	d iP	P	11 06 47.6	+1.0
AAK				pmax	pmax		
	comp=Z,131nm,0.9s						
AAK	**Ala-Archa**	45.30	334	P	P	11 06 47.5	+1.0
AAK				IAmb	IAmb	11 06 50.1	
	comp=Z,106nm,0.8s						
SONM	**Songino Array**	45.30	7	P	P	11 06 47.3	+0.8
	comp=Z,16nm,0.4s,baz=190,slow=8.4,SNR=66						
SONM				pP	pP	11 07 25.6	+1.4
	comp=Z,53nm,0.8s,baz=192,slow=9.5,SNR=11						
SONM				sP	sP	11 07 42.5	-1.0
	comp=Z,8.0nm,0.6s,baz=193,slow=8.8,SNR=1.3						
SONM				PcP	PcP	11 08 23.8	+0.6
	comp=Z,9.7nm,0.6s,baz=185,slow=3.9,SNR=4.8						
SONM				ScP	ScP	11 11 59.4	-0.4
	comp=Z,12nm,0.7s,baz=194,slow=3.8,SNR=18						
SONM	**Songino Array**	45.30	7	P	P	11 06 47.2	+0.8
FRU1	**Bishkek**	45.38	335	P	P	11 06 48.2	+1.1
FRU1				pmax	pmax		
	comp=Z,402nm,1.5s						
FRU1	**Bishkek**	45.38	335	P	P	11 06 48.2	+1.1
FRU1				IAmb	IAmb	11 06 49.5	
	comp=Z,402nm,1.4s						
ULN	**Ulaanbaatar**	45.41	8	P	P	11 06 47.5	+0.1
ULN				pmax	pmax		
	comp=Z,39nm,0.8s						
ULN	**Ulaanbaatar**	45.41	8	P	P	11 06 47.5	+0.1
ULN					P	11 06 48.1	+0.7
SOCY	**Socotra**	45.54	284	P	P	11 06 49.5	+0.6
SOCY	**Socotra**	45.54	284	P	P	11 06 49.4	+0.6
SOCY				IAmb	IAmb	11 06 50.2	
	comp=Z,88nm,0.6s						
DMTO	**DMTO**	45.68	292	P	P	11 06 50.7	+1.0
ARQ	**Araqi**	45.89	300	P	P	11 06 52.7	+1.4
	SNR=12						
QIS	**Mount Isa**	46.07	122	P	P	11 06 52.8	0.0
	baz=46,SNR=37						
SOHO	**SOHO**	46.15	301	P	P	11 06 54.3	+1.0
	SNR=9.8						
MK31	**Makanchi Array**	46.16	344	P	P	11 06 53.6	+0.5
MK31				pmax	pmax		
	comp=Z,207nm,1.4s						
MK31	**Makanchi Array**	46.16	344	P	P	11 06 53.6	+0.5
MK31				IAmb	IAmb	11 06 54.4	
	comp=Z,207nm,1.4s						
MKAR	**Makanchi Array**	46.16	344	P	P	11 06 53.6	+0.5
	comp=Z,91nm,0.4s,baz=163,slow=7.9,SNR=189						
MKAR				PcP	PcP	11 08 25.9	-0.3
	comp=Z,11nm,0.6s,baz=138,slow=3.5,SNR=3.4						
MKAR				ScP	ScP	11 12 03.9	+0.6
	comp=Z,6.9nm,0.8s,baz=147,slow=6.9,SNR=7.8						
MKAR				S	S	11 13 24.5	-1.6
	comp=Z,3.4nm,1.1s,baz=155,slow=14,SNR=4.0						

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MKAR                                ScS    ScS       11 16 29.6  -0.9
       comp=Z,1.5nm,1.0s,baz=171,slow=14,SNR=5.5
MKAR   Makanchi Array   46.16 344   P      P         11 06 53.4 +0.3
MAKZ   Makanchi         46.26 344   P      P         11 06 54.3 +0.4
MAKZ                                pmax   pmax
       comp=Z,107nm,1.0s
MAKZ   Makanchi         46.26 344   P      P         11 06 54.3 +0.4
MAKZ                                IAmb   IAmb      11 06 55.0
       comp=Z,107nm,0.9s
RBK    Rabkut           46.32 292   P      P         11 06 55.9 +1.1
HRA    Herat            46.45 317   P      P         11 06 55.7  -0.1
UOSS   Minazif          46.72 302   P      P         11 06 58.8 +1.0
UOSS   Minazif          46.72 302   P      P         11 06 58.3 +0.5
TAS    Tashkent         46.74 329   P      P         11 06 58.6 +0.9
TAS                                 pmax   pmax
       comp=Z,251nm,0.6s
TAS    Tashkent         46.74 329   P      P         11 06 58.6 +0.9
HATD   Hatta, Dubai     46.74 302 i P      P         11 06 59.1 +1.1
       SNR=16
HATD   Hatta, Dubai     46.74 302   P      P         11 06 59.1 +1.1
ASHO   Ashiyiah         46.75 302 i P      P         11 06 59.0 +0.8
       SNR=21
ASHO   Ashiyiah         46.75 302   P      P         11 06 59.0 +0.8
ALNE   Al Ain           46.80 301 i P      P         11 06 59.9 +1.5
       SNR=8.7
WHFO   Wadi Hawf        46.81 292   P      P         11 06 59.4 +0.7
COEN   Coen             46.84 112   P      P         11 06 57.9  -0.9
       baz=47,SNR=35
MSFE   Esma-Masafi      46.91 303 i P      P         11 07 00.3 +1.0
       SNR=5.7
BANOM  Banah            47.00 303   P      P         11 07 01.3 +1.3
CN2    Changchun        47.06  26 ⇑P     P         11 06 59.9  -0.2
CN2                               epP    pP        11 07 38.3 +0.1
CN2                               eS     S         11 13 37.5  -1.4
CN2                                 pmax   pmax
       comp=Z,40nm,0.7s
CN2                                 pmax   pmax
       comp=Z,500nm,6.0s
ABTO   Aybut            47.13 291   P      P         11 07 02.0 +0.9
       SNR=5.6
FAQ    Al Faqa, Dubai   47.17 302 i P      P         11 07 02.3 +1.0
       SNR=8.1
FAQ    Al Faqa, Dubai   47.17 302   P      P         11 07 02.3 +1.0
SHME   Shamm            47.18 303   P      P         11 07 02.1 +0.7
NAZ    Nazwa, Dubai     47.20 302 i P      P         11 07 03.1 +1.6
       SNR=8.7
KK31   Karatay Array    47.47 332 eP     P         11 07 03.5 +0.2
KK31   Karatay Array    47.47 332   P      P         11 07 03.4  0.0
KK31                                IAmb   IAmb      11 07 05.6
       comp=Z,296nm,1.6s
KKAR   Karatay Array    47.47 332   P      P         11 07 03.4 +0.1
KKAR   Karatay Array    47.47 332   P      P         11 07 03.4 +0.1
KKAR   Karatay Array    47.47 332   P      P         11 07 03.3 +0.1
KKAR                                IAmb   IAmb      11 07 05.6
       comp=Z,296nm,1.6s
AJN    Ajban            47.62 301 i P      P         11 07 05.9 +1.0
       SNR=42
AJN    Ajban            47.62 301   P      P         11 07 05.8 +1.0
       SNR=19
JCJ    Chichijima       47.81  55   P      P         11 07 05.8  -0.4
       comp=Z,136nm,0.6s,baz=278,slow=9.4,SNR=5.2
INU    Inuyama          47.81  43   P      P         11 07 05.3  -0.7
RER    Riviere de l'E   48.60 239   P      P         11 07 14.6 +2.1
RER                                 IAmb   IAmb      11 07 16.0
       comp=Z,209nm,0.8s
MOY    Mondy            48.71   2 eP     P         11 07 14.7 +1.9
MOY                               e                11 07 52.8
TLY    Talaya           48.85   4   P      P         11 07 13.9 +0.2
       comp=Z,5.4nm,0.5s,baz=213,slow=10.0,SNR=4.9
TLY    Talaya           48.85   4deP     P         11 07 14.5 +0.7
TLY                                 pmax   pmax
       comp=Z,7.0nm,0.8s
TLY    Talaya           48.85   4   P      P         11 07 14.4 +0.6
MSHR   Mys Shultsa      48.88  31ceP     P         11 07 14.2 +0.1
MJB9   Matsu-Tunnel     49.28  42   P      P         11 07 17.1  -0.2
MAJO   Matsushiro       49.28  42⇑eP     P         11 07 17.5 +0.2
MAJO                              i *PP    pP        11 07 55.7  0.0
MAJO                                pmax   pmax
       comp=Z,11nm,0.8s
MAJO   Matsushiro       49.28  42   P      P         11 07 17.1  -0.2
MAT    Matsushiro       49.28  42   P      P         11 07 17.2  -0.1
MJAR   Matsushiro Arr   49.28  42   P      P         11 07 16.9  -0.4
       comp=Z,11nm,0.7s,baz=224,slow=6.1,SNR=30
MJAR                                pP     pP        11 07 54.8  -0.9
       comp=Z,22nm,1.0s,baz=225,slow=8.1,SNR=7.5
MJAR                                ScP    ScP       11 12 17.3 +0.6
       comp=Z,10nm,1.1s,baz=220,slow=5.1,SNR=12
MJAR   Matsushiro Arr   49.28  42   P      P         11 07 20.1 +2.8
MJAR                                pmax   pmax
       comp=Z,20nm,1.1s
MJAR   Matsushiro Arr   49.28  42   P      P         11 07 20.1 +2.8
PMG    Port Moresby     49.47 105   P      P         11 07 19.2 +0.2
       comp=Z,158nm,0.8s,baz=299,slow=3.2,SNR=40
PMG    Port Moresby     49.47 105c iP      P         11 07 19.1  0.0
PMG                                 pmax   pmax
       comp=Z,556nm,0.7s
PMG    Port Moresby     49.47 105   P      P         11 07 18.6  -0.5
PMG                                 IAmb   IAmb      11 07 20.6
       comp=Z,156nm,0.8s
HIA    Hailar           49.55  18   P      P         11 07 18.7  -0.4
HIA                                 pmax   pmax
       comp=Z,12nm,0.8s
HIA    Hailar           49.55  18   P      P         11 07 18.7  -0.4
MDJ    Mudanjiang       49.59  28   P      P         11 07 21.3 +1.9
MDJ                                 PP     PP        11 09 11.8  -3.7
MDJ                                 S      S         11 14 18.8 +4.5
MDJ                                 SS     SS        11 17 48.4  -0.5
MDJ                                 pmax   pmax
       comp=Z,24nm,0.8s
MDJ                                 pmax   pmax
       comp=Z,770nm,11.8s
MDJ                                 LR     LR
       comp=Z,740nm,17.3s
MDJ                                 LR     LR
       comp=Z,1µm,10.0s
MDJ    Mudanjiang       49.59  28   P      P         11 07 19.1  -0.3
BBOO   Buckleboo        49.82 138   P      P         11 07 20.4  -1.0
       baz=50,SNR=20
USRK   Ussuriysk Ar.    50.46  30   P      P         11 07 26.6 +0.6
       comp=Z,21nm,0.6s,baz=224,slow=5.9,SNR=98
USRK                                pP     pP        11 08 05.0 +0.4
       comp=Z,9.7nm,0.7s,baz=236,slow=6.5,SNR=2.4
USRK                                sP     sP        11 08 22.1  -1.5
       comp=Z,24nm,0.9s,baz=223,slow=5.9,SNR=4.1
KURBB  Kurchatov Arra   50.69 343   ScP    ScP       11 12 23.2 +0.8
       comp=Z,14nm,0.8s,baz=157,slow=3.4,SNR=16
KURBB                               S      S         11 14 28.1  -1.2
       comp=Z,3.5nm,0.8s,baz=160,slow=14,SNR=8.0
KURBB  Kurchatov Arra   50.69 343   P      P         11 07 27.9 +0.3
KURK   Kurchatov        50.74 343   P      P         11 07 28.5 +0.5
KURK                                pmax   pmax
       comp=Z,80nm,0.8s
KURK   Kurchatov        50.74 343   P      P         11 07 28.5 +0.5
KURK                                IAmb   IAmb      11 07 29.0
       comp=Z,80nm,0.8s
ASHT   Ashkhabad        51.02 319   P      P         11 07 31.8 +1.5
ASHT                                pmax   pmax
       comp=Z,341nm,1.1s
ASHT   Ashkhabad        51.02 319   P      P         11 07 31.8 +1.5
GEYT   Alibeck          51.19 318   P      P         11 07 32.3 +0.7
       comp=Z,149nm,0.7s,baz=147,slow=8.3,SNR=69
GEYT                                PcP    PcP       11 08 44.9 +0.3
       comp=Z,36nm,0.8s,baz=157,slow=4.7,SNR=4.9
GEYT                                PP     PP        11 09 29.7  -0.6
       comp=Z,9.1nm,0.7s,baz=104,slow=6.1,SNR=2.5
CTA    Charters Tower   51.62 118   P      P         11 07 34.9  -0.2
       comp=Z,18nm,0.8s,baz=284,slow=11,SNR=20
CTA                                 pP     pP        11 08 13.8  -0.1
       comp=Z,12nm,0.8s,baz=300,slow=9.3,SNR=3.6
CTA                                 ScP    ScP       11 12 26.4  -0.8
       comp=Z,7.5nm,0.8s,baz=290,slow=3.6,SNR=5.5
HTT    Hallett          52.12 137   P      P         11 07 38.3  -0.3
       baz=52,SNR=13
ZAA0   Zalesovo Array   52.29 349   P      P         11 07 39.6 +0.2
ZAA0                                IAmb   IAmb      11 07 40.5
       comp=Z,107nm,0.6s
ZALV   Zalesovo Beam    52.29 349   P      P         11 07 39.7 +0.3
       comp=Z,102nm,0.4s,baz=166,slow=7.3,SNR=150
ZALV                                PcP    PcP       11 08 47.9  -0.3
       comp=Z,15nm,0.4s,baz=178,slow=3.4,SNR=2.7
ZALV                                ScP    ScP       11 12 28.1  -1.1
       comp=Z,7.7nm,0.8s,baz=163,slow=1.5,SNR=5.2
ZALV                                S      S         11 14 49.6  -1.5
       comp=Z,2.6nm,0.6s,baz=173,slow=13,SNR=5.7
ZALV                                ScS    ScS       11 17 06.9  -4.7
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       comp=Z,4.9nm,0.8s,baz=179,slow=7.2,SNR=8.2
ZALV   Zalesovo Beam    52.29 349   P      P         11 07 39.5 +0.1
QLP    Quilpie          52.53 127   P      P         11 07 42.2 +0.6
       baz=53,SNR=66
STKA   Stephens Creek   53.12 134   P      P         11 07 45.6  -0.3
       baz=53,SNR=35
STKA   Stephens Creek   53.12 134   P      P         11 07 45.6  -0.3
       comp=Z,66nm,0.6s,baz=311,slow=6.7,SNR=42
STKA   Stephens Creek   53.12 134   P      P         11 07 45.6  -0.3
STKA                                pmax   pmax
       comp=Z,16nm,0.7s
STKA   Stephens Creek   53.12 134   P      P         11 07 45.6  -0.3
KLR    Kul'dur          54.01  26   P      P         11 07 52.8 +0.7
       comp=Z,42nm,0.6s,baz=238,slow=7.5,SNR=91
KLR    Kul'dur          54.01  26c iP      P         11 07 52.7 +0.7
KLR                                 pmax   pmax
       comp=Z,57nm,0.9s
DAMY   Dhamar           55.11 286   P      P         11 08 02.8 +1.8
       SNR=10
DAMY   Dhamar           55.11 286   P      P         11 08 02.5 +1.5
ABPO   Ambohimpanom     55.34 245   P      P         11 08 04.1 +1.7
ABPO                                pmax   pmax
       comp=Z,50nm,0.8s
ABPO   Ambohimpanom     55.34 245   P      P         11 08 04.1 +1.7
ABPO                                IAmb   IAmb      11 08 04.7
       comp=Z,50nm,0.8s
BVAR   Borovoye Array   55.36 339   ScP    ScP       11 12 42.7  -0.1
       comp=Z,9.4nm,1.0s,baz=149,slow=6.1,SNR=6.2
BVAR                                S      S         11 15 31.2  -1.4
       comp=Z,4.6nm,0.7s,baz=130,slow=18,SNR=9.8
BRVK   Borovoye         55.43 339d iP      P         11 08 01.9  -0.3
BRVK                                pmax   pmax
       comp=Z,121nm,0.6s
BRVK   Borovoye         55.43 339   P      P         11 08 02.0  -0.1
RAYN   Ar Rayn          55.64 297 i P      P         11 08 04.8 +0.5
       SNR=27
RAYN   Ar Rayn          55.64 297   P      P         11 08 04.5 +0.2
RAYN                                pmax   pmax
       comp=Z,148nm,1.0s
RAYN   Ar Rayn          55.64 297   P      P         11 08 04.5 +0.2
RAYN                                IAmb   IAmb      11 08 05.8
       comp=Z,148nm,0.9s
ZEA    Zeya             55.80  20 eP     P         11 08 05.6 +0.7
ZEA                               e                11 08 45.2
ZEA                                 pmax   pmax
       comp=Z,29nm,1.0s
CMSA   Cobar Meteorol   55.95 131   P      P         11 08 06.6 +0.3
       baz=56,SNR=101
BOD    Bodaibo          56.11  10 eP     P         11 08 07.5 +0.5
BOD                                 pmax   pmax
       comp=Z,20nm,1.8s
RMQ    Roma             56.16 125   P      P         11 08 09.0 +1.1
       baz=56,SNR=14
ASAJ   Asahikawa        56.29  37   P      P         11 08 09.2 +0.7
       comp=Z,18nm,0.4s,baz=248,slow=10,SNR=98
ASAJ                                pP     pP        11 08 46.5  -1.3
       comp=Z,36nm,1.0s,baz=228,slow=12,SNR=3.6
JKA    Kamikawa-asahi   56.29  37   P      P         11 08 09.2 +0.7
ATD    Arta Tunnel      56.32 282   P      P         11 08 10.8 +1.5
       SNR=5.4
ATD    Arta Tunnel      56.32 282   P      P         11 08 10.5 +1.2
ATD                                 IAmb   IAmb      11 08 11.3
       comp=Z,48nm,0.8s
AB31   Akbulak array    56.99 330 eP     P         11 08 12.7  -0.6
ABKAR  Akbulak array    56.99 330   P      P         11 08 13.3  0.0
ABKAR  Akbulak array    56.99 330   P      P         11 08 13.3  0.0
ABKAR                               IAmb   IAmb      11 08 14.1
       comp=Z,129nm,0.7s
GRNR   Gornyy           57.21  27⇑iP     P         11 08 15.6 +0.7
GRNR                              eS     S         11 15 59.4 +2.3
GRNR                                pmax   pmax
       comp=Z,20nm,0.7s
GRNR                                smax   smax
       comp=N,2.0nm,0.9s
GRNR                                MLR    MLR
       comp=Z,160nm,16.0s
EIDS   Eidsvold         57.67 122   P      P         11 08 18.7 +0.1
       baz=58,SNR=16
YSS    Yuzh-Sakhalins   58.00  34⇑iP     P         11 08 21.2 +0.7
YSS                               e                11 09 01.3
YSS                                 pmax   pmax
       comp=Z,60nm,1.2s
YSS    Yuzh-Sakhalins   58.00  34   P      P         11 08 21.1 +0.7
YSS                                 IAmb   IAmb      11 09 02.3
       comp=Z,130nm,1.1s
AKTO   Aktyubinsk       58.70 331   P      P         11 08 24.9  -0.4
       comp=Z,48nm,0.5s,baz=116,slow=7.0,SNR=52
AKTO                                ScP    ScP       11 12 57.8 +0.2
       comp=Z,12nm,0.8s,baz=155,slow=4.4,SNR=10.0
AKTO                                S      S         11 16 13.1  -3.3
       comp=Z,5.1nm,0.9s,baz=280,slow=22,SNR=12
TOO    Toolangi         58.87 138   P      P         11 08 27.6 +0.9
       baz=59,SNR=12
YNG    Young            59.27 133   P      P         11 08 29.4  -0.1
       baz=59,SNR=19
AKT    Akhty            59.90 317⇓iP     P         11 08 33.9 +0.1
AKT                               e*PP   pP        11 09 11.6  -2.1
AKT                               e                11 09 17.4
AKT                                 pmax   pmax
       comp=Z,148nm,0.9s
ARMA   Armidale         60.04 128   P      P         11 08 36.4 +1.4
       baz=60,SNR=20
CAN    Canberra         60.19 134   P      P         11 08 35.8  0.0
CAN                                 pmax   pmax
       comp=Z,66nm,0.7s
CAN    Canberra         60.19 134   P      P         11 08 35.8  0.0
CAN                                 IAmb   IAmb      11 08 39.8
       comp=Z,66nm,0.7s
CNB    Canberra Magne   60.45 134   P      P         11 08 37.4  -0.1
       baz=61,SNR=11
RIV    Riverview        61.10 131   P      P         11 08 42.7 +0.8
       baz=61,SNR=3.8
GNI    Garni            61.43 315   P      P         11 08 44.8 +0.6
       comp=Z,65nm,0.8s,baz=148,slow=0.9,SNR=15
GNI                                 S      S         11 16 47.6  -4.3
       comp=Z,16nm,0.7s,baz=130,slow=3.9,SNR=7.1
GNI    Garni            61.43 315 i P      P         11 08 44.9 +0.6
       SNR=18
GNI    Garni            61.43 315 eP     P         11 08 44.8 +0.6
GNI    Garni            61.43 315d iP      P         11 08 44.4 +0.2
GNI                                 pmax   pmax
       comp=Z,157nm,1.0s
GNI    Garni            61.43 315   P      P         11 08 44.5 +0.3
GNI                                 IAmb   IAmb      11 08 50.6
       comp=Z,105nm,0.8s
CLDR   Caldiran         61.64 314 eP     P         11 08 46.2 +0.4
TASB   TASBURUN-IGDIR   61.72 315 eP     P         11 08 46.5 +0.4
VANB   Van              61.83 313 eP     P         11 08 47.8 +0.9
KMBO   Kilima Mbogo     61.88 267   P      P         11 08 49.2 +1.4
       comp=Z,38nm,0.7s,baz=67,slow=9.6,SNR=48
SVE    Sverdlovsk       61.89 337c iP      P         11 08 47.1 +0.3
SVE                               eS     S         11 16 55.3  -1.5
SVE                                 pmax   pmax
       comp=Z,150nm,0.9s
HNR    Honiara          61.90 102   P      P         11 08 46.4  -1.1
       comp=Z,170nm,0.9s,baz=254,slow=3.0,SNR=4.7
HNR    Honiara          61.90 102   P      P         11 08 46.5  -1.1
HNR                                 pmax   pmax
       comp=Z,202nm,1.0s
HNR    Honiara          61.90 102   P      P         11 08 46.5  -1.1
GROC   Groznyy          61.93 318 eP     P         11 08 46.8  -0.5
GROC                              e                11 09 22.1
GROC                              e                11 11 05.9
GROC                              eS     S         11 16 55.6  -2.2
GROC                                pmax   pmax
       comp=Z,193nm,0.9s
AKDM   Akdamar-Van      62.04 312 eP     P         11 08 48.5 +0.1
TBLG   Delisi           62.05 317 eP     P         11 08 48.6 +0.4
TBLG   Delisi           62.05 317   P      P         11 08 48.5 +0.4
TBLG                                pmax   pmax
       comp=Z,218nm,0.9s
TBLG   Delisi           62.05 317   P      P         11 08 48.5 +0.4
SIRT   Sirnak           62.16 311 eP     P         11 08 48.8  -0.3
ARU    Arti             62.44 336   P      P         11 08 50.1  -0.3
       comp=Z,14nm,0.4s,baz=153,slow=2.3,SNR=17
ARU    Arti             62.44 336d iP      P         11 08 50.0  -0.4
ARU                                 *PP    PcP       11 09 28.3 +0.1
ARU                                                  11 11 07.9
ARU                                 S      S         11 17 05.5 +1.9
ARU                                 pmax   pmax
       comp=Z,109nm,1.3s
ARU    Arti             62.44 336   P      P         11 08 49.9  -0.4
ARU                                 IAmb   IAmb      11 08 51.1
       comp=Z,114nm,1.2s
AGRB   Hanur-Agry       62.47 314 eP     P         11 08 51.9 +0.7
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MLAZ   Malazgirt-MUS    62.63 313 eP     P         11 08 53.2 +0.9
BGD    Bogdanovka       62.66 316 eP     P         11 08 52.9 +0.4
AKH    Akhalkalaki      62.78 316 ⇑P     P         11 08 54.3 +1.0
AKH    Akhalkalaki      62.78 316 eP     P         11 08 53.9 +0.6
AKH    Akhalkalaki      62.78 316   P      P         11 08 53.4 +0.1
AKH                                 pmax   pmax
       comp=Z,89nm,0.8s
AKH    Akhalkalaki      62.78 316   P      P         11 08 53.4 +0.1
AKH                                 IAmb   IAmb      11 08 55.0
       comp=Z,89nm,0.8s
GURO   Guroymak-BITLI   62.81 312 eP     P         11 08 54.2 +0.7
TAU    Tasmania Unive   62.93 142   P      P         11 08 54.2 +0.3
TAU                                 pmax   pmax
       comp=Z,100nm,1.5s
TAU    Tasmania Unive   62.93 142   P      P         11 08 54.2 +0.3
TAU                                 IAmb   IAmb      11 09 46.3
       comp=Z,100nm,1.4s
ZEI    Tsey             63.03 317 eP     P         11 08 53.2  -1.7
ZEI                                 pmax   pmax
       comp=Z,173nm,0.6s
ONI    Oni              63.26 317 eP     P         11 08 56.3 +0.1
SENK   Senkaya-Erzuru   63.28 315 eP     P         11 08 57.4 +0.8
SVAN   Silvan-Diyarba   63.30 312 eP     P         11 08 56.9 +0.3
YAK    Yakutsk          63.38  16   P      P         11 08 56.6 +0.1
       comp=Z,22nm,0.3s,baz=224,slow=1.9,SNR=7.5
YAK                                 S      S         11 17 13.5  -1.7
       comp=Z,2.9nm,0.4s,baz=23,slow=4.5,SNR=1.1
YAK    Yakutsk          63.38  16 eP     P         11 08 56.6 +0.1
YAK                               e*PP   pP        11 09 35.8  -1.0
YAK                               eS     S         11 17 14.4  -0.7
YAK                                 pmax   pmax
       comp=Z,20nm,0.7s
YAK                                 pmax   pmax
       comp=N,7.0nm,0.9s
YAK                                 pmax   pmax
       comp=E,8.0nm,1.0s
YAK                                 pmax   pmax
       comp=Z,240nm,4.3s
YAK                                 pmax   pmax
       comp=N,340nm,4.2s
YAK                                 pmax   pmax
       comp=E,191nm,4.4s
YAK                                 smax   smax
       comp=N,293nm,4.6s
YAK                                 smax   smax
       comp=E,143nm,4.3s
YAK    Yakutsk          63.38  16   P      P         11 08 57.0 +0.5
YAK                                 IAmb   IAmb      11 08 57.4
       comp=Z,37nm,0.7s
KOPR   Koprukoy-ERZUR   63.43 314 eP     P         11 08 58.5 +0.9
VRTB   Varto-Mus        63.44 313 eP     P         11 08 58.7 +1.1
LODK   Lodwar           63.56 272   P      P         11 09 00.5 +1.8
       SNR=14
MAZI   Mazidag          63.65 311 eP     P         11 08 59.2 +0.3
KARO   Karliova-Bingo   63.79 313 eP     P         11 09 00.9 +1.0
BNGB   Bingl            63.96 312 eP     P         11 09 01.5 +0.6
DYBB   Diyarbakir       64.03 311 eP     P         11 09 02.2 +0.8
KBZ    Khabaz           64.08 318   P      P         11 09 01.6 +0.2
       comp=Z,107nm,0.8s,baz=125,slow=5.7,SNR=42
KBZ    Khabaz           64.08 318d iP      P         11 09 01.4  0.0
KBZ                                 pmax   pmax
       comp=Z,164nm,0.9s
BCA    Borcka           64.11 315 ⇑P     P         11 09 01.3  -0.4
BATM   Batumi           64.11 315 ⇓P     P         11 09 02.1 +0.3
BATM   Batumi           64.11 315 eP     P         11 09 01.9 +0.2
YEDI   Yedisu-Bingol    64.20 313 eP     P         11 09 03.2 +0.6
KIV    Kislovodsk       64.31 318 ⇑P     P         11 09 03.5 +0.4
KIV    Kislovodsk       64.31 318 i P      P         11 09 03.2 +0.2
       SNR=16
KIV    Kislovodsk       64.31 318 eP     P         11 09 03.3 +0.2
KIV    Kislovodsk       64.31 318 eP     P         11 09 02.9  -0.2
KIV                               eS     S         11 17 26.1  -1.4
KIV                                 pmax   pmax
       comp=Z,439nm,1.1s
KIV                                 pmax   pmax
       comp=Z,89nm,4.2s
KIV    Kislovodsk       64.31 318   P      P         11 09 03.2 +0.2
KIV                                 IAmb   IAmb      11 09 04.3
       comp=Z,115nm,0.9s
GOF    Gofitskoye       64.50 319⇑eP     P         11 09 04.2  0.0
GOF                               eS     S         11 17 28.8  -0.8
GOF                                 pmax   pmax
       comp=Z,157nm,1.2s
GOF                                 smax   smax
       comp=E,158nm,1.4s
SVRC   Sivrice-ELAZID   64.78 311 eP     P         11 09 06.7 +0.3
URFA   Urfa             64.88 310 eP     P         11 09 07.8 +0.9
PTK    Pertek           64.88 312 eP     P         11 09 07.3 +0.3
KTUT   Trabzon          65.27 314 ⇑P     P         11 09 09.8 +0.6
MALT   Malatya          65.43 311 eP     P         11 09 11.2 +0.7
ARPR   Arapgir-MALATY   65.72 312 eP     P         11 09 13.3 +0.9
ESPY   Espiye-Giresun   65.99 314 eP     P         11 09 14.4 +0.5
GAZ    Gaziantep        66.03 310 eP     P         11 09 15.5 +1.2
GAZ    Gaziantep        66.03 310   P      P         11 09 15.3 +1.0
HRFI   Mount Harif      66.16 302 eP     P         11 09 16.4 +1.2
EIL    Elat             66.17 301 eP     P         11 09 16.3 +1.1
SOC    Sochi            66.17 317 eP     P         11 09 13.8  -1.2
SOC                               ePPP   PPP       11 13 24.1
SOC                               eS     S         11 17 51.3 +1.3
SOC                               eSSS   SSS       11 25 10.7
SOC                                 pmax   pmax
       comp=Z,309nm,0.6s
DARE   Darende-Malaty   66.21 311 eP     P         11 09 16.3 +0.8
MMLI   Mount Malkishu   66.33 304 eP     P         11 09 17.8 +1.6
KMRS   Kahramanmaras    66.36 310 eP     P         11 09 17.2 +0.8
MMAI   Mount Meron Ar   66.46 305   P      P         11 09 18.5 +1.4
       comp=Z,52nm,0.5s,baz=94,slow=11,SNR=98
RSDY   Resadiye-TOKAT   66.85 313 eP     P         11 09 20.2 +0.8
NRIK   Noril'sk         66.86 356   P      P         11 09 18.7  -0.1
       comp=Z,11nm,0.4s,baz=129,slow=4.0,SNR=12
KZIT   Kziot            66.87 302 eP     P         11 09 20.7 +1.0
SVSK   Karacayir        66.95 312 eP     P         11 09 20.9 +0.9
CEYT   Ceyhan           67.12 309 eP     P         11 09 22.1 +1.0
YURE   YUREGIR          67.17 309 eP     P         11 09 22.6 +1.1
TOKT   Tokat            67.40 313 eP     P         11 09 23.5 +0.6
BNN    Bunyan           67.52 311 eP     P         11 09 24.1 +0.3
KIRV   Kirov            67.63 334   P      P         11 09 23.9  0.0
       comp=Z,104nm,0.5s,baz=143,slow=1.3,SNR=25
KARA   Karaisali        67.72 309 eP     P         11 09 25.5 +0.6
VRH    Novokhopyorsk    67.83 325 eP     P         11 09 24.3  -0.9
VRH                               eS     S         11 18 04.9  -4.6
VRH                                 pmax   pmax
       comp=Z,440nm,0.6s
VRH                                 pmax   pmax
       comp=Z,400nm,0.6s
VRH                                 smax   smax
       comp=E,370nm,1.7s
CMRD   Camardi-Nigde    67.87 310 eP     P         11 09 26.9 +0.9
KVT    Kavak            67.98 313 eP     P         11 09 27.0 +0.5
MERS   Mersin           68.04 309 eP     P         11 09 27.4 +0.4
YOZ    Yozgat           68.12 312 eP     P         11 09 27.5  0.0
ANN    Anapa            68.13 318 eP     P         11 09 26.2  -1.0
ANN                                 pmax   pmax
       comp=Z,139nm,1.3s
MBAR   Mbarara          68.34 268d iP      P         11 09 30.3 +0.9
MBAR                                pmax   pmax
       comp=Z,42nm,1.0s
SILI   Silifke-Mersin   68.39 308 eP     P         11 09 29.2 +0.1
IKL    Isikli           68.55 308 eP     P         11 09 30.0  -0.1
CSS    Mathiatis        68.56 306 eP     P         11 09 30.8 +0.6
CSS    Mathiatis        68.56 306   P      P         11 09 30.5 +0.3
KEBE   Keben-Mersin     68.58 308 eP     P         11 09 30.7 +0.4
DIKM   Dikmen           68.70 314 ⇑P     P         11 09 31.6 +0.7
DIKM   Dikmen           68.70 314 eP     P         11 09 31.2 +0.3
CORM   Corum            68.77 312 eP     P         11 09 31.8 +0.3
TEVE   Tevekalti-Mers   68.79 308 eP     P         11 09 32.1 +0.5
YESY   Yesilyurt        68.86 309 eP     P         11 09 32.2 +0.1
BERE   Bereket-Mersin   68.94 308 eP     P         11 09 33.2 +0.5
LEF    Lefka            68.95 307 ⇑P     P         11 09 33.5 +1.0
LEF    Lefka            68.95 307 eP     P         11 09 33.2 +0.7
TEKE   Tekeli-Mersin    68.98 308 eP     P         11 09 33.1 +0.4
YAYX   Yaylak           69.08 311 eP     P         11 09 33.4  0.0
MA2    Magadan          69.10  25   P      P         11 09 34.0 +1.0
       comp=Z,15nm,0.6s,baz=206,slow=4.3,SNR=19
MA2    Magadan          69.10  25c iP      P         11 09 33.6 +0.6
MA2                                 pmax   pmax
       comp=Z,67nm,1.8s
MA2    Magadan          69.10  25   P      P         11 09 33.2 +0.2
MA2                                 IAmb   IAmb      11 09 35.0
       comp=Z,125nm,1.8s
SULT   Sultanhani-AKS   69.13 310 eP     P         11 09 34.3 +0.6
SERE   Sereflikochisa   69.27 311 eP     P         11 09 34.5  -0.1
VSR    Storozhevoye     69.31 324d iP      P         11 09 33.3  -1.1
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VSR				pmax	pmax		
	comp=Z,304nm,0.8s						
PETK	Petropavlovsk-	69.39	33	P	P	11 09 35.3	+0.4
	comp=Z,22nm,0.8s,baz=257,slow=4.4,SNR=26						
PETK	Petropavlovsk-	69.39	33	P	P	11 09 35.5	+0.6
PETK	Petropavlovsk-	69.39	33	P	P	11 09 35.5	+0.6
BR131	Keskin Array S	69.40	311	P	P	11 09 35.1	-0.3
	SNR=27						
BR131	Keskin Array S	69.40	311	P	P	11 09 34.9	-0.5
BR131				pmax	pmax		
	comp=Z,118nm,0.8s						
BR131	Keskin Array S	69.40	311	P	P	11 09 34.9	-0.6
BR131				IAmb	IAmb	11 09 36.0	
	comp=Z,118nm,0.8s						
BRTR	Keskin Array B	69.40	311	P	P	11 09 35.0	-0.5
	comp=Z,85nm,0.6s,baz=135,slow=5.4,SNR=88						
BRTR				S	S	11 18 26.5	-2.3
	comp=Z,1.2nm,1.0s,baz=91,slow=7.2,SNR=5.1						
BRTR	Keskin Array B	69.40	311	P	P	11 09 35.0	-0.5
BRTR	Keskin Array B	69.40	311	P	P	11 09 34.9	-0.6
VORR	Voronezh	69.46	325	*e*P	P	11 09 36.0	+0.7
VORR				pmax	pmax		
	comp=Z,500nm,1.0s						
CANT	Cankiri	69.63	312	*e*P	P	11 09 37.2	+0.5
GAZI	Gazipasa	69.63	308	*e*P	P	11 09 36.6	-0.2
HDMB	Hadim	69.65	308	*e*P	P	11 09 37.1	0.0
ILGA	Ilgaz	69.67	313	P	P	11 09 37.0	-0.1
BZK	Bozkurt	69.69	314	⇓P	P	11 09 37.7	+0.8
BZK	Bozkurt	69.69	314	*e*P	P	11 09 37.5	+0.6
AFSR	Afar-Bala (An	69.76	311	*e*P	P	11 09 37.9	+0.3
PET	Petropavlovsk	69.89	34	*e*P	P	11 09 38.5	+0.6
PET				pmax	pmax		
	comp=Z,177nm,0.6s						
KONT	Konya--Tatoy	69.96	309	*e*P	P	11 09 38.8	0.0
LPSR	Galich'ya Gora	69.98	326	*e*P	P	11 09 37.5	-1.0
LPSR				*e*S	S	11 18 30.9	-3.9
LPSR				pmax	pmax		
	comp=Z,310nm,1.3s						
LPSR				pmax	pmax		
	comp=Z,310nm,1.3s						
LPSR				smax	smax		
	comp=N,60nm,1.4s						
LADK	Ladik-KONYA	70.01	310	*e*P	P	11 09 38.6	-0.6
ANTO	Ankara	70.06	311	⇑P	P	11 09 39.7	+0.3
ANTO	Ankara	70.06	311	*e*P	P	11 09 39.4	0.0
ANTO	Ankara	70.06	311	P	P	11 09 39.2	-0.2
ANTO				pmax	pmax		
	comp=Z,143nm,0.9s						
ANTO	Ankara	70.06	311	P	P	11 09 39.2	-0.2
ANTO				IAmb	IAmb	11 09 40.3	
	comp=Z,143nm,0.9s						
BR231	Keskin MP Arra	70.07	311	P	P	11 09 39.5	0.0
BR231				IAmb	IAmb	11 09 40.4	
	comp=Z,124nm,0.8s						
LOD	Lodumlu	70.09	311	*e*P	P	11 09 39.6	0.0
SEYD	Seydisehir-KON	70.25	309	*e*P	P	11 09 41.2	+0.6
DZM	Mont Dzumac	70.28	115	P	P	11 09 41.1	+0.1
	comp=Z,18nm,0.8s,baz=207,slow=10,SNR=11						
DZM	Mont Dzumac	70.28	115	P	P	11 09 41.5	+0.5
SIM	Simferopol'	70.42	317	*e*P	P	11 09 41.5	+0.1
SIM				pmax	pmax		
	comp=Z,232nm,0.7s						
KIZT	Kizilcal	70.53	310	*e*P	P	11 09 41.7	-0.6
KURC	Kurucasile-Bar	70.57	314	*e*P	P	11 09 42.1	-0.2
PRGR	Permogore	70.90	336	⇓*i*P	P	11 09 43.8	-0.1
PRGR				*e*S	S	11 18 42.2	-2.9
PRGR				pmax	pmax		
	comp=Z,224nm,0.6s						
AUSIV	SIVRIHISAR	70.91	311	*e*P	P	11 09 44.6	0.0
SVRH	Sivrihisar-ESK	70.92	311	*e*P	P	11 09 44.7	+0.1
YUVA	Yuva-Kibriscik	71.01	312	*e*P	P	11 09 44.9	-0.3
CIFT	Cifteler, Eski	71.25	311	*e*P	P	11 09 46.6	0.0
TIXI	Tiksi	71.30	10	*d i*P	P	11 09 46.0	-0.1
TIXI				pmax	pmax		
	comp=Z,11nm,0.4s						
TIXI	Tiksi	71.30	10	P	P	11 09 45.7	-0.4
TIXI				IAmb	IAmb	11 09 47.9	
	comp=Z,128nm,1.8s						
KORT	Korkueli	71.33	308	*e*P	P	11 09 48.1	+0.9
ISP	Isparta	71.36	309	*e*P	P	11 09 46.7	-0.6
ISP	Isparta	71.36	309	P	P	11 09 47.0	-0.3
ISP				pmax	pmax		
	comp=Z,79nm,0.6s						
ISP	Isparta	71.36	309	P	P	11 09 47.0	-0.3
ISP				IAmb	IAmb	11 09 47.9	
	comp=Z,79nm,0.6s						
MDUB	Mudurnu	71.39	312	*e*P	P	11 09 47.5	+0.1
MDUB	Mudurnu	71.39	312	P	P	11 09 47.4	-0.1
KDZE	Karadeniz Ereo	71.39	313	⇑P	P	11 09 47.1	-0.2
SHUT	Suhut-Afyon	71.48	310	*e*P	P	11 09 47.9	-0.1
SEY	Seymchan	71.58	23	P	P	11 09 48.6	+0.7
	comp=Z,11nm,0.7s,baz=239,slow=6.1,SNR=29						
SEY				S	S	11 18 53.1	+0.2
	comp=Z,1.9nm,0.8s,baz=50,slow=17,SNR=8.4						
SEY	Seymchan	71.58	23	⇑*e*P	P	11 09 48.5	+0.6
ELL	Elmali	71.64	308	*e*P	P	11 09 49.0	0.0
ELL	Elmali	71.64	308	P	P	11 09 49.0	0.0
ELL				pmax	pmax		
	comp=Z,575nm,1.0s						
ELL	Elmali	71.64	308	P	P	11 09 49.0	0.0
SRCK	Saricakaya, Es	71.73	311	*e*P	P	11 09 49.0	-0.3
MSNA	Messina	71.76	246	*i* P	P	11 09 51.2	+1.3
MSNA	Messina	71.76	246	*i* P	P	11 09 51.2	+1.3
AKAS	Kas	71.78	307	*e*P	P	11 09 48.8	-1.1
BORA	Eskisehir	71.82	311	*e*P	P	11 09 49.8	-0.2
GULT	Gulveren	71.89	312	*e*P	P	11 09 50.1	-0.3
MOS	Moscow	71.90	329	*e*P	P	11 09 48.7	-1.3
MOS				*e*		11 10 07.3	
MOS				*e**PP	pP	11 10 27.6	-3.7
MOS				*e**SP	sP	11 10 46.4	-3.2
MOS				*e*S	S	11 18 52.2	-4.6
MOS				pmax	pmax		
	comp=Z,331nm,0.8s						
MOS				pmax	pmax		
	comp=Z,400nm,0.8s						
SAUV	Serdivan-Sakar	72.09	312	*e*P	P	11 09 51.2	-0.3
OBN	Obninsk	72.22	328	P	P	11 09 51.6	-0.3
	comp=Z,32nm,0.5s,baz=4.6,slow=2.4,SNR=21						
OBN	Obninsk	72.22	328	⇑P	P	11 09 51.8	-0.1
OBN	Obninsk	72.22	328	⇓*i*P	P	11 09 51.8	-0.1
OBN				*i*		11 10 08.7	
OBN				*i* *PP	pP	11 10 32.1	-1.1
OBN				*e*		11 12 34.3	
OBN				*i* S	S	11 18 57.8	-2.7
OBN				pmax	pmax		
	comp=Z,135nm,0.6s						
OBN	Obninsk	72.22	328	P	P	11 09 52.0	+0.1
FETY	Fethiye	72.27	308	*e*P	P	11 09 52.2	-0.5
ORH	Orhaniye	72.31	312	P	pP	11 10 21.3	-13
LSZ	Lusaka	72.32	253	P	P	11 09 54.7	+1.2
LSZ				pmax	pmax		
	comp=Z,68nm,0.7s						
LSZ	Lusaka	72.32	253	P	P	11 09 54.7	+1.2
LSZ				IAmb	IAmb	11 09 55.5	
	comp=Z,68nm,0.7s						
CAVI	Cavuskoy	72.35	311	*e*P	P	11 09 52.9	-0.1
ADVT	Abdulvahap	72.47	312	*e*P	P	11 09 53.6	-0.1
TVSB	Tavsanli	72.49	310	*e*P	P	11 09 53.9	-0.1
HRT	Hereke	72.60	312	*e*P	P	11 09 54.3	-0.3
DALY	Dalyan (Mula)	72.64	308	*e*P	P	11 09 54.5	-0.3
SILT	Sile	72.69	312	*e*P	P	11 09 54.4	-0.6
TURN	Turunc	72.69	308	*e*P	P	11 09 56.8	+1.7
YLV	Yalova	72.77	312	*e*P	P	11 09 55.6	0.0
SIMA	Simav-Kutahya	72.78	310	*e*P	P	11 09 55.6	-0.1
MATP	Matopo	72.82	248	*i* P	P	11 09 54.9	-1.4
MATP	Matopo	72.82	248	*i* P	P	11 09 54.9	-1.4
KULA	Kula-Manisa	72.93	309	*e*P	P	11 09 56.7	+0.1
ARG	Arkhangelos	72.96	307	*e*P	P	11 09 56.8	+0.1
YER	Yerkesik	72.99	308	*e*P	P	11 09 56.6	-0.3
MANT	Manisa	73.00	309	P	P	11 09 57.3	+0.1
KAVV	Kandilli-Istan	73.10	312	*e*P	P	11 09 57.4	0.0
ISK	Istanbul-Kandi	73.10	312	*e*P	P	11 09 57.4	0.0
KLMR	Klimovskoe	73.10	334	*e*P	P	11 09 57.0	0.0
KLMR				pmax	pmax		
	comp=Z,107nm,1.5s						
KLMR	Klimovskoe	73.10	334	*e*P	P	11 09 57.0	0.0
KLMR				AMP		11 09 57.9	
	comp=Z,107nm,1.5s						
ARMT	Armutlu	73.15	312	*e*P	P	11 09 57.4	-0.4
AYDB	Zeytinkoy-Aydi	73.43	309	*e*P	P	11 09 59.9	+0.3
KCTX	Karacabey (Bur	73.47	311	*e*P	P	11 09 59.3	-0.4
DAT	Datca	73.48	307	*e*P	P	11 09 59.3	-0.6
KARP	Karpathos	73.63	306	*e*P	P	11 10 01.2	+0.4
KARP	Karpathos	73.63	306	P	P	11 10 01.1	+0.4
BALB	Balikesir	73.72	310	*e*P	P	11 10 01.2	+0.1
BODT	Bodrum	73.74	308	*e*P	P	11 10 00.8	-0.5
SLVT	Silivri	73.76	312	*e*P	P	11 10 01.2	-0.1
EDC	Edincik	73.86	311	*e*P	P	11 10 01.8	-0.1
JURR	Jurilovca	73.99	316	⇑P	P	11 10 02.8	+0.3
MANR	Mangalia	73.99	315	⇑P	P	11 10 03.2	+0.7
TSCT	Constanta Port	74.01	315	⇑P	P	11 10 03.0	+0.3
EFOR	EFORIE	74.02	315	⇑P	P	11 10 02.9	+0.2
MRMT	Marmara Adasi	74.11	311	*e*P	P	11 10 03.1	-0.3
TLCR		74.12	316	⇑P	P	11 10 03.5	+0.3
BLCB	Balcova	74.16	309	*e*P	P	11 10 04.1	+0.4
MFTR	Murfatlar	74.18	315	⇑P	P	11 10 04.2	+0.5
TIRR	Tirgusor	74.25	315	⇓P	P	11 10 04.3	+0.3
TIRR	Tirgusor	74.25	315	⇓P	P	11 10 04.3	+0.3
TIRR	Tirgusor	74.25	315	P	P	11 10 04.2	+0.2
TIRR				pmax	pmax		
	comp=Z,496nm,0.8s						
TIRR	Tirgusor	74.25	315	P	P	11 10 04.2	+0.2
PSN	Preselentsi	74.25	315	*i* P	P	11 10 04.5	+0.4
ZKR	Zakros	74.34	306	P	P	11 10 04.8	0.0
ZKR	Zakros	74.34	306	*e*P	P	11 10 04.9	+0.1
TOPG	Topolog	74.36	316	⇑P	P	11 10 05.1	+0.5
DKL	Dikili	74.37	310	*e*P	P	11 10 05.1	+0.2
STIA	Sitia Lasithi	74.45	306	P	P	11 10 06.1	+0.7
CVDA	Cernavoda	74.48	315	⇑P	P	11 10 06.1	+0.7
URLA	Izmir	74.50	309	*e*P	P	11 10 06.0	+0.3
CFR	Carcaliu	74.59	316	⇓P	P	11 10 06.3	+0.3
GIUM	Giurgiulesti	74.60	316	⇑P	P	11 10 06.3	+0.2
ICOR	Ion Corvin	74.61	315	⇑P	P	11 10 07.0	+0.9
HARR	Harsova	74.63	316	⇑P	P	11 10 06.9	+0.6
MAW	Mawson	74.69	194	P	P	11 10 07.8	+1.7
	baz=75,SNR=9.5						
MAW	Mawson	74.69	194	P	P	11 10 07.2	+1.1
	comp=Z,29nm,0.7s,baz=55,slow=5.9,SNR=14						
MAW	Mawson	74.69	194	P	P	11 10 07.5	+1.4
MAW				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MAW	Mawson	74.69	194	P	P	11 10 07.5	+1.4
LPK	Lapseki	74.70	311	*e*P	P	11 10 07.1	+0.4
PRD	Provadia	74.72	314	*i* P	P	11 10 07.0	+0.2
LEOM	Leova	74.78	317	⇓P	P	11 10 07.7	+0.7
NEF	NEVSHA	74.82	314	*i* P	P	11 10 07.6	+0.2
AMGA	Amorgos Island	74.83	307	P	P	11 10 07.0	-0.6
NPS	Neapolis	74.85	306	P	P	11 10 08.0	+0.3
ANAF	Anafi Island	74.86	307	P	P	11 10 07.2	-0.6
PRK	Paraskevi	74.89	310	P	P	11 10 08.8	+1.0
GELI	Tayfur-Gelibol	74.92	311	*e*P	P	11 10 07.9	-0.1
CHOS	Chios island	74.93	309	P	P	11 10 08.6	+0.4
ERIK	Erikli-Kesan	74.93	311	*e*P	P	11 10 07.8	-0.2
EZN	Ezine	74.94	310	*e*P	P	11 10 08.1	0.0
LAST	Lasithi	74.94	306	P	P	11 10 08.6	+0.2
EDRB	Edirne	74.96	313	*e*P	P	11 10 07.9	-0.3
SORM	Soroca	75.07	319	⇓P	P	11 10 08.9	+0.2
THR8	Santorini-Mono	75.10	307	P	P	11 10 08.4	-0.7
AKASG	Malin Array Be	75.11	322	P	P	11 10 08.3	-0.5
	comp=Z,53nm,0.4s,baz=86,slow=5.1,SNR=148						
AKASG				PP	PP	11 12 59.2	-0.2
	comp=Z,16nm,0.9s,baz=89,slow=6.8,SNR=7.6						
AKASG				S	S	11 19 29.2	-3.9
	comp=Z,3.7nm,0.7s,baz=97,slow=11,SNR=16						
AKASG	Malin Array Be	75.11	322	P	P	11 10 08.4	-0.5
AKASG				pmax	pmax		
	comp=Z,30nm,0.7s						
AKASG	Malin Array Be	75.11	322	P	P	11 10 08.4	-0.5
AKBB	Malin Array Si	75.11	322	*d i*P	P	11 10 08.3	-0.5
AKBB	Malin Array Si	75.11	322	P	P	11 10 08.5	-0.4
AKBB				IAmb	IAmb	11 10 08.8	
	comp=Z,107nm,0.6s						
SANT	Santorini	75.11	307	P	P	11 10 08.2	-1.1
SANT				IAmb	IAmb	11 10 09.1	
	comp=Z,92nm,0.7s						
THR2	Thira island,	75.14	307	P	P	11 10 08.9	-0.5
BOZC	Bozcaada	75.15	310	*e*P	P	11 10 09.2	-0.1
APE	Apeiranthos	75.15	307	⇑P	P	11 10 09.0	-0.5
APE	Apeiranthos	75.15	307	*e*P	P	11 10 08.7	-0.8
STAX	Taxiarchis Har	75.16	307	P	P	11 10 08.9	-0.6
THR6	Thira Island,	75.16	307	P	P	11 10 08.9	-0.6
TMCR	Tamitsa	75.16	337	*e*P	P	11 10 07.0	-1.8
TMCR				pmax	pmax		
	comp=Z,195nm,0.5s						
THR3	Thira Island,	75.17	307	P	P	11 10 09.0	-0.5
CMBO	Columbo, Santo	75.17	307	P	P	11 10 09.0	-0.5
JMB	Yambol	75.18	313	*i* P	P	11 10 09.8	+0.4
SIGR	SIGRI	75.20	310	P	P	11 10 09.5	-0.2
SIGR	SIGRI	75.20	310	*e*P	P	11 10 09.4	-0.2
ENEZ	Enez	75.21	311	*e*P	P	11 10 09.7	+0.1
GHRR		75.26	317	⇑P	P	11 10 11.3	+1.4
IOSP	Ios island	75.30	307	P	P	11 10 09.6	-0.6
ALN	Alexandroupoli	75.32	311	P	P	11 10 10.1	-0.1
ALN	Alexandroupoli	75.32	311	*e*P	P	11 10 10.2	-0.1
ALN	Alexandroupoli	75.32	311	P	P	11 10 10.2	-0.1
ALN				pmax	pmax		
	comp=Z,50nm,1.0s						
ALN	Alexandroupoli	75.32	311	P	P	11 10 10.2	-0.1
PETR	Petresti	75.32	317	⇑P	P	11 10 11.4	+1.2
LEHL	Lehliu	75.37	315	⇓P	P	11 10 11.6	+1.1
IAS	Iasi	75.39	318	⇑P	P	11 10 11.0	+0.4
RAZG	Razgrad	75.43	314	⇓P	P	11 10 11.5	+0.6
IDI	Anoyia	75.44	306	P	P	11 10 10.9	-0.2
IDI	Anoyia	75.44	306	P	P	11 10 11.1	-0.1
	comp=Z,90nm,0.7s,baz=81,slow=7.1,SNR=47						
IDI	Anoyia	75.44	306	*e*P	P	11 10 11.0	-0.2
ODBI	Odobesti	75.45	317	⇓P	P	11 10 12.8	+2.0
SIVA	Sivas	75.47	305	P	P	11 10 11.6	+0.4
SMTH	Samothraki Isl	75.64	311	P	P	11 10 11.8	-0.3
BISRR	Bisoca	75.64	316	⇓P	P	11 10 14.0	+1.8
ISR	Istrita	75.68	316	⇑P	P	11 10 13.7	+1.3
VRI	Vrincioaia	75.69	317	⇓P	P	11 10 13.8	+1.5
VRI	Vrincioaia	75.69	317	*e*P	P	11 10 13.4	+1.1
RDO	Rodhopi	75.74	312	P	P	11 10 12.2	-0.4
RDO	Rodhopi	75.74	312	*e*P	P	11 10 11.7	-0.9
PLOR	Plostina	75.74	317	⇑P	P	11 10 14.0	+1.3
ELND	Elena	75.77	314	⇑P	P	11 10 13.4	+0.6
SZH	Strazhica	75.79	314	*i* P	P	11 10 12.8	-0.1
LIA	Limnos Island	75.82	310	P	P	11 10 12.8	-0.3
TESR	Tescani	75.87	317	⇑P	P	11 10 14.4	+1.1
DIM	Dimitrovgrad	75.88	313	*i* P	P	11 10 13.5	+0.1
KDZ	Kurdzhali	75.90	312	*i* P	P	11 10 13.6	0.0
KDZ	Kurdzhali	75.90	312	*e*P	P	11 10 13.4	-0.2
PLAR	PLOIESTI	76.00	316	⇑P	P	11 10 15.6	+1.5
VAM	Vamos	76.01	306	P	P	11 10 15.1	+0.8
GVDS	Gavdos	76.04	305	P	P	11 10 14.5	0.0
GVDS	Gavdos	76.04	305	*e*P	P	11 10 14.5	0.0
GVD	Gavdhos	76.04	305	P	P	11 10 14.4	-0.1
GVD	Gavdhos	76.04	305	*e*P	P	11 10 14.4	-0.1
CHAN	Chania	76.15	306	P	P	11 10 16.1	+1.0
MLR	Muntele Rosu	76.16	316	P	P	11 10 15.9	+0.7
	comp=Z,126nm,0.7s,baz=168,slow=1.5,SNR=66						
MLR				PP	PP	11 13 09.9	+1.4
	comp=Z,17nm,0.9s,baz=130,slow=3.6,SNR=4.3						
MLR	Muntele Rosu	76.16	316	⇑P	P	11 10 16.3	+1.1
MLR	Muntele Rosu	76.16	316	P	P	11 10 15.8	+0.7
IMMV	Iera Moni Meta	76.19	306	P	P	11 10 16.0	+0.7
IMMV	Iera Moni Meta	76.19	306	*e*P	P	11 10 16.1	+0.7
PVL	Pavlikeni	76.21	314	*i* P	P	11 10 16.2	+0.9
LBTB	Lobatse	76.23	244	*i* P	P	11 10 16.8	+0.9
LBTB	Lobatse	76.23	244	*i* P	P	11 10 16.8	+0.9
LBTB	Lobatse	76.23	244	P	P	11 10 17.3	+1.4
LBTB				pmax	pmax		
	comp=Z,149nm,1.0s						
LBTB	Lobatse	76.23	244	P	P	11 10 17.3	+1.4
LBTB				IAmb	IAmb	11 10 18.1	
	comp=Z,149nm,0.9s						
ZIMR		76.26	314	⇑P	P	11 10 15.7	+0.1
THAS	Thassos island	76.27	311	P	P	11 10 15.2	-0.5
RODP	Rodopos	76.39	306	P	P	11 10 17.5	+1.0
RODP	Rodopos	76.39	306	*e*P	P	11 10 17.1	+0.6
KNDR	Palaiochora Ch	76.41	305	P	P	11 10 16.9	+0.3
KNDR	Palaiochora Ch	76.41	305	*e*P	P	11 10 17.1	+0.5
RZN	Rozhen	76.43	312	*i* P	P	11 10 16.6	-0.2
COPA	Copaceanca	76.44	315	⇑P	P	11 10 17.2	+0.6
KAVA	Kavala	76.48	311	P	P	11 10 16.7	-0.1
PLD	Plovdiv	76.50	313	*i* P	P	11 10 16.7	-0.2
PTL	Penteli	76.59	308	P	P	11 10 16.8	-0.8
VLY	Voula,Athens	76.62	308	P	P	11 10 16.6	-1.1
DOPR	Dopca	76.63	317	⇓P	P	11 10 17.8	+0.2
ATHU	Athens Univers	76.64	308	P	P	11 10 17.0	-0.9
HUMR	Humele	76.67	315	⇑P	P	11 10 18.4	+0.5
ATH	Athens Observa	76.70	308	P	P	11 10 17.3	-0.8
AOS	Alonnisos	76.72	309	P	P	11 10 17.5	-0.7
AOS	Alonnisos	76.72	309	*e*P	P	11 10 17.5	-0.7
MTUR	Matau	76.73	316	⇑P	P	11 10 18.0	-0.3
GOLR		76.74	315	⇑P	P	11 10 19.0	+0.8
PLVB	Pleven	76.75	314	⇓P	P	11 10 19.0	+0.6
VOIR		76.77	316	⇑P	P	11 10 18.6	+0.1
ANKY	Antikythira Is	76.79	306	P	P	11 10 19.3	+0.6
OUR	Ouranopolis	76.79	311	P	P	11 10 18.4	-0.2
DCZ	Deep Cove	76.87	138	P	P	11 10 19.4	+0.5
PAIG	Paliouri	76.97	310	P	P	11 10 19.3	-0.3
VLAD	Vladila	77.00	314	⇑P	P	11 10 20.4	+0.7
NVR	Nevrokopi	77.02	312	P	P	11 10 19.6	-0.3
DID	Didima	77.02	308	P	P	11 10 18.5	-1.5
KTHA	Kythira Island	77.02	306	P	P	11 10 19.6	-0.4
KTHA	Kythira Island	77.02	306	*e*P	P	11 10 19.6	-0.4
BURAR	Bucovina Array	77.03	318	⇓P	P	11 10 21.5	+1.6
BURAR	Bucovina Array	77.03	318	P	P	11 10 21.2	+1.2
VILL	Villia	77.04	308	P	P	11 10 18.6	-1.5
BUR08	Bucovina Ar. S	77.05	318	P	P	11 10 21.4	+1.3
ARR	Arges	77.05	316	⇓P	P	11 10 20.3	+0.2
KTHR	Kythira	77.07	306	P	P	11 10 20.0	-0.3
KRND	KRANIDI	77.08	308	P	P	11 10 19.1	-1.2
MMB	Musomiste	77.15	312	*i* P	P	11 10 20.0	-0.6
BOSA	Boshof	77.16	240	*i* P	P	11 10 22.4	+1.4
BOSA	Boshof	77.16	240	P	P	11 10 22.0	+1.0
	comp=Z,76nm,0.6s,baz=91,slow=4.1,SNR=253						
BOSA	Boshof	77.16	240	*i* P	P	11 10 22.4	+1.4
BOSA	Boshof	77.16	240	P	P	11 10 22.1	+1.0
BOSA				pmax	pmax		
	comp=Z,80nm,0.6s						
BOSA	Boshof	77.16	240	P	P	11 10 22.1	+1.0
BOSA				IAmb	IAmb	11 10 22.5	
	comp=Z,80nm,0.6s						
VLI	Veliai	77.17	307	P	P	11 10 19.3	-1.5
SRS	Serrai	77.19	311	P	P	11 10 20.2	-0.6
XOR	Xorichti	77.27	310	P	P	11 10 19.9	-1.5
LOUT	Loutraki	77.28	308	P	P	11 10 19.7	-1.7
LTK	Loutraki	77.29	308	P	P	11 10 19.7	-1.8
LKR	Lokris	77.34	309	P	P	11 10 20.1	-1.6
MDB	Medias	77.35	317	⇑P	P	11 10 23.3	+1.6
MPEP	Malo Peshtene	77.38	314	*i* P	P	11 10 22.3	+0.4
HORT	Hortiatis	77.49	311	P	P	11 10 21.9	-0.7
ARCR	ARCALIA	77.52	318	⇑P	P	11 10 24.2	+1.6
NACGM	Naroch	77.54	326	*e*P	P	11 10 22.0	-0.4
NACGM				PM		11 10 24.0	
	comp=Z,0.4nm,1.0s						
VTS	Vitosha	77.65	313	P	P	11 10 23.6	0.0
VTS	Vitosha	77.65	313	⇑P	P	11 10 24.0	+0.5
VTS	Vitosha	77.65	313	*i* P	P	11 10 23.5	0.0
VTS	Vitosha	77.65	313	P	P	11 10 23.5	0.0
VTS				pmax	pmax		
	comp=Z,112nm,0.8s						
VTS	Vitosha	77.65	313	P	P	11 10 23.5	0.0
VTS				IAmb	IAmb	11 10 24.6	
	comp=Z,112nm,0.8s						
IDID	Didziasalis	77.66	326	*e*P	P	11 10 24.2	+1.2
DYR	Agios Nikonas	77.66	307	P	P	11 10 23.4	-0.2
KKB	Krupnik	77.66	312	*i* P	P	11 10 23.0	-0.5
LOT	Lotru	77.67	316	⇑P	P	11 10 23.8	+0.3
DSF	Desfina	77.68	309	P	P	11 10 21.8	-1.9
VLX	Vlachokerasia	77.68	307	P	P	11 10 23.0	-0.8
KNT	Kendrikon	77.71	311	P	P	11 10 23.2	-0.6
LIT	Litokhoron	77.89	310	P	P	11 10 23.9	-0.8
LIT	Litokhoron	77.89	310	P	P	11 10 24.0	-0.8
LIT				pmax	pmax		
	comp=Z,193nm,0.7s						
LIT	Litokhoron	77.89	310	P	P	11 10 24.0	-0.8
AGG	Agios Georgios	77.90	309	P	P	11 10 23.2	-1.7
AGG	Agios Georgios	77.90	309	*e*P	P	11 10 22.2	-2.7
AGG	Agios Georgios	77.90	309	P	P	11 10 23.4	-1.5
AGG				pmax	pmax		
	comp=Z,52nm,0.7s						
AGG	Agios Georgios	77.90	309	P	P	11 10 23.4	-1.5
KLV	Kalavryta, Ach	77.93	308	P	P	11 10 24.1	-1.0
LVZ	Lovozero	77.96	340	*d i*P	P	11 10 24.2	-0.4
LVZ				pmax	pmax		
	comp=Z,51nm,0.7s						
LVZ	Lovozero	77.96	340	P	P	11 10 24.6	0.0
LVZ				IAmb	IAmb	11 10 25.4	
	comp=Z,114nm,0.6s						
CJR	Cluj-Napoca	77.97	317	⇑P	P	11 10 26.8	+1.6
KALE	Kalithea	77.98	309	P	P	11 10 24.1	-1.3
ALIK	Aliki, Aigiali	77.99	308	P	P	11 10 25.2	-0.1
ITM	Ithomi	78.02	307	P	P	11 10 25.1	-0.5
ITM	Ithomi	78.02	307	*e*P	P	11 10 25.2	-0.4
ITM	Ithomi	78.02	307	P	P	11 10 25.2	-0.4
IZAR	Zarasai	78.03	326	*e*P	P	11 10 25.8	+0.6
TRIZ	Trizonia	78.03	308	P	P	11 10 24.5	-1.0
SERG	Sergoula	78.05	309	P	P	11 10 24.4	-1.3
MAKR	Makrakomi, Fth	78.05	309	P	P	11 10 24.4	-1.3
ISAL	Salakas	78.06	326	*e*P	P	11 10 26.0	+0.7
GRG	Griva	78.06	311	P	P	11 10 24.9	-0.8
GRG	Griva	78.06	311	*e*P	P	11 10 25.0	-0.8
PUNG	Punghina	78.09	315	⇓P	P	11 10 26.2	+0.5
PYL	PYLOS	78.14	307	P	P	11 10 25.4	-0.8
EFP	Efpalio	78.17	309	P	P	11 10 25.2	-1.1
ANX	Ano Chora	78.17	309	P	P	11 10 25.5	-0.9
LVV	L'vov	78.19	320	*c i*P	P	11 10 26.4	+0.2
LVV				*e**PP	pP	11 11 09.0	+0.8
LVV				*e*S	S	11 20 03.0	-3.6
LVV				pmax	pmax		
	comp=Z,300nm,1.1s						
BMR	Baia Mare	78.19	318	⇑P	P	11 10 27.8	+1.6
THL	Klokotos Trika	78.20	310	P	P	11 10 24.7	-1.7
KTI	Kastanea	78.21	311	P	P	11 10 26.4	-0.3
AMT	Artemida-Makis	78.23	308	P	P	11 10 26.3	-0.4
DRO	Drossia	78.27	308	P	P	11 10 27.5	+0.6
APA	Apatity	78.27	339	⇓*i*P	P	11 10 25.4	-0.8
APA				*i*		11 10 30.7	
APA				pmax	pmax		
	comp=Z,66nm,0.8s						
APA				MLR	MLR		
	comp=Z,2µm,22.0s						
EVR	Evrytania	78.29	309	P	P	11 10 26.2	-0.9
DEV	Deva	78.33	316	⇑P	P	11 10 28.6	+1.6
GZR	Gura Zlata	78.35	316	⇑P	P	11 10 28.0	+0.7
VSU	Vasula	78.39	329	*e*P	P	11 10 26.8	-0.3
VSU	Vasula	78.39	329	*d i*P	P	11 10 27.0	-0.1
VSU				pmax	pmax		
	comp=Z,276nm,0.6s						
RLS	Riolos of Patr	78.47	308	P	P	11 10 28.1	+0.1
PVO	Paravola	78.48	309	P	P	11 10 28.0	0.0
HERR	Herculane	78.53	315	⇑P	P	11 10 29.0	+0.8
DRGR		78.59	317	⇑P	P	11 10 29.9	+1.3
KPRO	Kipourio	78.74	310	P	P	11 10 28.0	-1.5
FNA	Florina	78.81	311	P	P	11 10 28.8	-1.1
FNA	Florina	78.81	311	*e*P	P	11 10 28.8	-1.1
FNA	Florina	78.81	311	P	P	11 10 28.9	-1.0
FNA				pmax	pmax		
	comp=Z,40nm,0.6s						
FNA	Florina	78.81	311	P	P	11 10 28.9	-1.0
PENT	Pentalofos	78.94	310	P	P	11 10 29.2	-1.4
KWP	Kalwaria Pacla	79.01	320	*e*P	P	11 10 31.5	+0.8
KWP	Kalwaria Pacla	79.01	320	*e*P	P	11 10 31.5	+0.8
KWP	Kalwaria Pacla	79.01	320	P	P	11 10 31.4	+0.8
KFL	Anninata	79.01	308	P	P	11 10 30.7	-0.2
MDVR	Moldovita	79.02	315	⇓P	P	11 10 31.4	+0.5
BILL	Bilibino	79.02	21	*i* P	P	11 10 31.6	+1.3
BILL				*i*		11 10 39.2	
BILL				*i* *PP	pP	11 11 11.7	-0.6
BILL				*i*		11 13 32.5	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.3s						
BILL	Bilibino	79.02	21	P	P	11 10 30.6	+0.3
NEST	Nestorio	79.03	310	P	P	11 10 30.1	-1.0
RPZ	Rata Peaks	79.06	135	P	P	11 10 31.0	-0.1
	comp=Z,52nm,0.6s,baz=268,slow=2.0,SNR=31						
RPZ	Rata Peaks	79.06	135	P	P	11 10 31.4	+0.3
RPZ				IAmb	IAmb	11 10 31.9	
	comp=Z,57nm,0.7s						
UZH	Uzhgorod	79.13	319	*e*P	P	11 10 32.2	+0.9
UZH				*i*		11 10 41.8	
EVGI	Lefkada island	79.16	309	P	P	11 10 31.4	-0.3
VLS	Valsamata	79.17	308	P	P	11 10 31.4	-0.4
LKD2	Lefkada island	79.17	309	P	P	11 10 31.7	-0.1
KOLS	Kolonicke sedl	79.19	319	*e*P	P	11 10 32.8	+1.1
KOLS				pmax	pmax		
	comp=Z,97nm,0.9s						
KOLS	Kolonicke sedl	79.19	319	*e*P	P	11 10 32.8	+1.1
BZS	Buzias	79.19	316	⇓P	P	11 10 32.2	+0.5
FSK	Fiskardo	79.22	308	P	P	11 10 31.3	-0.7
SIRR	Siria	79.24	316	⇓P	P	11 10 33.0	+1.0

PABE	Paberze	79.24	326	eP	P	11 10 31.8	0.0
SUW	Suwalki	79.42	324	eP	P	11 10 33.1	+0.3
SUW	Suwalki	79.42	324	eP	P	11 10 33.1	+0.3
SUW	Suwalki	79.42	324	P	P	11 10 32.5	-0.3
FIA1	FINESS Array S	79.42	332	P	P	11 10 32.3	-0.4
FINES	FINESS Array B	79.42	332	P	P	11 10 33.0	+0.4
	comp=Z,122nm,0.4s,baz=109,slow=5.3,SNR=333						
FINES				PP	PP	11 13 35.6	+0.5
	comp=Z,4.0nm,0.6s,baz=99,slow=8.6,SNR=3.3						
FINES	FINESS Array B	79.42	332	P	P	11 10 33.0	+0.4
QRZ	Quartz Range	79.43	132	P	P	11 10 32.8	-0.3
QRZ				IAmb	IAmb	11 10 34.4	
	comp=Z,140nm,0.8s						
IGT	Igoumenitsa	79.49	310	P	P	11 10 32.9	-0.6
PHP	Peshkopia	79.61	312	P	P	11 10 33.0	-1.1
OXZ	Oxford	79.66	135	P	P	11 10 33.2	-1.1
CRVS	Cervenica-Dubn	79.71	319	eP	P	11 10 35.4	+0.9
CRVS				pmax	pmax		
	comp=Z,143nm,1.2s						
CRVS	Cervenica-Dubn	79.71	319	eP	P	11 10 35.4	+0.9
KEK	Kerkira	79.92	310	P	P	11 10 35.5	-0.3
THZ	Tophouse	79.92	133	P	P	11 10 35.4	-0.4
STHS	Stebnicka Huta	79.92	320	eP	P	11 10 36.4	+0.8
STHS				pmax	pmax		
	comp=Z,87nm,0.6s						
STHS	Stebnicka Huta	79.92	320	eP	P	11 10 36.4	+0.8
TIR	Tirane	80.01	311	⇑P	P	11 10 36.5	+0.3
TIR	Tirane	80.01	311	P	P	11 10 35.7	-0.5
TIR				pmax	pmax		
	comp=Z,71nm,0.7s						
TIR	Tirane	80.01	311	P	P	11 10 35.7	-0.5
TIR				IAmb	IAmb	11 10 49.4	
	comp=Z,71nm,0.7s						
DIVS	Divibare	80.17	314	⇓iP	P	11 10 37.3	+0.1
KECS	Kecovo	80.30	319	eP	P	11 10 38.2	+0.5
KECS				pmax	pmax		
	comp=Z,39nm,0.7s						
KECS	Kecovo	80.30	319	eP	P	11 10 38.2	+0.5
FRGS	Fruska Gora	80.40	315	⇓iP	P	11 10 32.6	-5.7
MSVF	Nonsavu	80.42	108	⇑eP	P	11 10 39.9	+0.9
MSVF				pmax	pmax		
	comp=Z,15nm,1.0s						
PBUR	Paburge	80.47	326	eP	P	11 10 38.5	+0.2
KHZ	Kahutara	80.52	134	P	P	11 10 38.2	-0.7
BEL	Belsk	80.53	322	eP	P	11 10 39.5	+0.8
BEL	Belsk	80.53	322	eP	P	11 10 39.5	+0.8
NIE	Niedzica	80.53	320	eP	P	11 10 40.0	+1.1
NIE	Niedzica	80.53	320	eP	P	11 10 40.0	+1.1
PDG	Podgorica	80.55	312	⇓P	P	11 10 39.3	+0.2
PDG	Podgorica	80.55	312	⇓iP	P	11 10 38.8	-0.3
PDG	Podgorica	80.55	312	P	P	11 10 38.9	-0.3
BBLS	Lazići	80.57	314	⇓iP	P	11 10 39.7	+0.4
RUDO	Rudo	80.57	314	eP	P	11 10 38.8	-0.4
DRME	Dracevica, Mon	80.58	312	⇓iP	P	11 10 39.0	-0.3
TUWZ	Tuamarina	80.60	133	P	P	11 10 38.2	-1.1
PSZ	Piszkesteto	80.63	318	⇑P	P	11 10 39.9	+0.3
PSZ	Piszkesteto	80.63	318	P	P	11 10 39.8	+0.3
PSZ				pmax	pmax		
	comp=Z,71nm,0.6s						
PSZ	Piszkesteto	80.63	318	P	P	11 10 39.8	+0.3
PSZ				IAmb	IAmb	11 10 40.6	
	comp=Z,71nm,0.6s						
UPM	Unac-Piva	80.87	313	eP	P	11 10 40.6	-0.5
HAPS	Han Pijesak,Bl	80.92	314	⇑iP	P	11 10 40.8	-0.4
OJC	Ojcow	80.95	320	eP	P	11 10 41.7	+0.6
OJC	Ojcow	80.95	320	eP	P	11 10 41.7	+0.6
OJC	Ojcow	80.95	320	P	P	11 10 41.5	+0.4
OJC				IAmb	IAmb	11 10 42.6	
	comp=Z,109nm,0.9s						
SCTE	Santa Cesarea	80.97	310	P	P	11 10 41.3	-0.1
LANS	Liptovska Anna	81.04	319	eP	P	11 10 42.4	+0.7
LANS				pmax	pmax		
	comp=Z,21nm,0.6s						
LANS	Liptovska Anna	81.04	319	eP	P	11 10 42.4	+0.7
HCY	Herceg Novi	81.12	312	⇓iP	P	11 10 41.6	-0.5
BRY	Bratogost	81.12	313	⇓iP	P	11 10 42.0	-0.3
KEV	Kevo	81.20	340	P	P	11 10 41.7	-0.2
KEV				pmax	pmax		
	comp=Z,41nm,0.8s						
KEV	Kevo	81.20	340	P	P	11 10 41.7	-0.2
TREB	Trebinje	81.24	313	eP	P	11 10 42.1	-0.7
DBRK	Dubrovnik	81.39	313	i P	P	11 10 42.7	-0.8
VYHS	Vyhne	81.39	318	eP	P	11 10 43.9	+0.4
VYHS				pmax	pmax		
	comp=Z,45nm,0.7s						
VYHS	Vyhne	81.39	318	eP	P	11 10 43.9	+0.4
SUR	Sutherland	81.56	237	P	P	11 10 45.8	+0.9
SUR				IAmb	IAmb	11 10 48.0	
	comp=Z,87nm,0.8s						
ARCES	ARCESS Array B	81.64	340	P	P	11 10 44.9	+0.5
	comp=Z,28nm,0.5s,baz=98,slow=4.7,SNR=117						
ARE0	ARCESS Array S	81.64	340	eP	P	11 10 44.3	-0.1
ARE0	ARCESS Array S	81.64	340	P	P	11 10 45.0	+0.7
SRO	Srobarova	81.68	318	eP	P	11 10 46.0	+1.1
SRO				pmax	pmax		
	comp=Z,108nm,0.9s						
SRO	Srobarova	81.68	318	eP	P	11 10 46.0	+1.1
STON	Ston	81.73	313	i P	P	11 10 44.7	-0.6
STON	Ston	81.73	313	⇓iP	P	11 10 44.6	-0.7
HRRZ	Handcock Road	81.78	129	P	P	11 10 52.0	+6.3
OKC	Ostrava-Krasne	81.97	320	⇓iP	P	11 10 47.3	+0.9
OKC	Ostrava-Krasne	81.97	320	⇓iP	P	11 10 47.3	+0.9
BKZ	Black Stump Fm	82.08	130	P	P	11 10 47.1	-0.1
SYO	Syowa Base	82.09	198	⇓eX	P	11 10 45.6	-1.0
SYO	Syowa Base	82.09	198	⇑eX	P	11 10 50.0	+3.4
RICI	Ricice	82.18	313	P	P	11 10 47.2	-0.6
JAVC	Velka Javorina	82.19	319	⇓iP	P	11 10 49.1	+1.4
BLY	Banja Luka	82.23	315	⇓P	P	11 10 48.6	+0.7
BLY	Banja Luka	82.23	315	⇓iP	P	11 10 48.3	+0.4
BLY	Banja Luka	82.23	315	P	P	11 10 48.5	+0.6
BLY				IAmb	IAmb	11 10 49.5	
	comp=Z,140nm,0.9s						
TIP	Timpagrande	82.23	309	P	P	11 10 49.0	+0.9
TIP	Timpagrande	82.23	309	⇑P	P	11 10 49.4	+1.3
TIP	Timpagrande	82.23	309	P	P	11 10 48.8	+0.7
TIP				IAmb	IAmb	11 10 49.5	
	comp=Z,61nm,0.7s						
MAKA	Makarska	82.25	313	i P	P	11 10 47.4	-0.7
MGRS	Mrkonjic Grad	82.28	314	eP	P	11 10 48.2	0.0
MTHZ	Maungataniwha	82.29	130	P	P	11 10 48.2	-0.2
KTK1	Kautokeino	82.31	339	eP	P	11 10 48.2	+0.4
NMHZ	Naumai	82.31	130	P	P	11 10 48.6	+0.1
SMOL	Smolenice	82.33	318	eP	P	11 10 48.8	+0.5
SMOL				pmax	pmax		
	comp=Z,13nm,1.0s						
SMOL	Smolenice	82.33	318	eP	P	11 10 48.8	+0.5
MATE	Matera	82.34	310	⇑P	P	11 10 49.2	+0.7
MORC	Moravsky Berou	82.35	320	⇑P	P	11 10 49.3	+0.8
MORC	Moravsky Berou	82.35	320	P	P	11 10 49.3	+0.8
MORC				pmax	pmax		
	comp=Z,72nm,0.8s						
MORC	Moravsky Berou	82.35	320	⇓iP	P	11 10 49.3	+0.8
MORC	Moravsky Berou	82.35	320	P	P	11 10 49.3	+0.8
MORC				IAmb	IAmb	11 10 50.3	
	comp=Z,72nm,0.8s						
RTZ	Ruatahuna	82.36	129	P	P	11 10 47.7	-1.1
URZ	Urewera	82.40	129	P	P	11 10 47.5	-1.4
	comp=Z,47nm,0.6s,baz=249,slow=2.7,SNR=9.9						
URZ	Urewera	82.40	129	IAmb	IAmb	11 10 49.4	
	comp=Z,78nm,1.0s						
URZ	Urewera	82.40	129	P	P	11 10 47.6	-1.3
MODS	Modra-Piesok	82.42	318	eP	P	11 10 48.4	-0.4
MODS				pmax	pmax		
	comp=Z,45nm,0.9s						
MODS	Modra-Piesok	82.42	318	eP	P	11 10 48.4	-0.4
RAHZ	Arahi	82.49	130	P	P	11 10 49.1	-0.3
HAMF	Hammerfest	82.52	341	eP	P	11 10 48.7	-0.1
ZST	Bratislava	82.52	318	eP	P	11 10 49.1	-0.2
ZST				pmax	pmax		
	comp=Z,98nm,1.1s						
ZST	Bratislava	82.52	318	eP	P	11 10 49.1	-0.2
MOSL	Moslavina	82.58	315	i P	P	11 10 50.0	+0.2
BEHE	Becsehely	82.62	316	⇓iP	P	11 10 50.9	+1.0
KIJV	Kijevo	82.74	314	i P	P	11 10 50.4	-0.2
RUGZ	Raukumara Rang	82.80	129	P	P	11 10 49.5	-1.6
KALN	Kalnik	82.83	316	i P	P	11 10 51.2	+0.2
GKP	Gorka Klasztor	82.84	323	eP	P	11 10 51.5	+0.7
GKP	Gorka Klasztor	82.84	323	eP	P	11 10 51.5	+0.7
TSUM	Tsumeb	82.84	250	P	P	11 10 53.1	+1.4
TSUM				IAmb	IAmb	11 10 54.1	
	comp=Z,53nm,0.8s						
CEL	Celeste	82.87	308	P	P	11 10 52.6	+1.2
VRAC	Vranov	82.94	319	P	P	11 10 51.9	+0.4
	comp=Z,13nm,0.7s,baz=107,slow=4.8,SNR=14						
VRAC	Vranov	82.94	319	⇑P	P	11 10 52.4	+0.9
VRAC	Vranov	82.94	319	⇓iP	P	11 10 51.9	+0.4
KNZ	Kokohu	82.96	130	P	P	11 10 51.1	-0.6
RIGZ	Rimuhau	82.98	129	P	P	11 10 51.5	-0.4
KOGS	Kog	82.99	316	⇓iP	P	11 10 52.5	+0.7
TKGZ	Te Karaka	83.00	129	P	P	11 10 51.7	-0.3
KRUC	Moravsky	83.05	319	⇓iP	P	11 10 52.5	+0.5
ZAG	Zagreb	83.13	316	P	P	11 10 53.4	+0.9
DPC	Dobruska-Polom	83.18	320	⇓iP	P	11 10 53.8	+1.0
DPC	Dobruska-Polom	83.18	320	⇓iP	P	11 10 53.8	+1.0
UDBI	Udbina	83.23	314	i P	P	11 10 53.2	0.0
KSP	Ksiaz	83.23	321	eP	P	11 10 54.0	+1.1
KSP	Ksiaz	83.23	321	eP	P	11 10 54.0	+1.1
MORI	Morici	83.24	314	i P	P	11 10 52.6	-0.5
OSTC	Ostas	83.26	320	⇓iP	P	11 10 54.2	+1.1
ZIRJ	Zirje	83.27	313	i P	P	11 10 52.9	-0.4
CONA	Conrad Observa	83.33	318	i P	P	11 10 53.7	+0.1
	comp=Z,21nm,0.8s,SNR=7.3						
CHVC	Chvalec	83.37	320	⇓iP	P	11 10 54.7	+1.0
UPC	Upice	83.39	320	⇓iP	P	11 10 54.7	+0.9
UPC	Upice	83.39	320	⇓iP	P	11 10 54.7	+0.9
OZLJ	Ozalj	83.49	315	i P	P	11 10 54.7	+0.3
CRES	Cresnjev	83.50	316	⇓iP	P	11 10 54.8	+0.3
ARSA	Arzberg	83.53	317	i P	P	11 10 55.2	+0.6
	comp=Z,50nm,1.2s,SNR=13						
BOJS	Bojanci	83.63	315	⇓iP	P	11 10 55.7	+0.6
TREC	Trest	83.66	319	⇓eP	P	11 10 55.8	+0.6
TREC	Trest	83.66	319	eP	P	11 10 55.8	+0.6
DUGI	Dugi Otok	83.71	314	i P	P	11 10 55.3	-0.3
PERS	Pernice	83.78	316	⇓iP	P	11 10 56.5	+0.6
SOKA	Soboth	83.84	316	i P	P	11 10 56.8	+0.6
	comp=Z,91nm,0.8s,SNR=36						
NVLJ	Novalja	83.87	314	i P	P	11 10 55.5	-0.8
WDD	Wied Dalam	83.90	306	P	P	11 10 56.9	+0.2
TRO	Tromso	83.92	340	eP	P	11 10 56.0	0.0
PAOL	Paolisi	83.98	311	P	P	11 10 57.1	+0.1
VAE	Valguarnera	84.02	307	P	P	11 10 59.6	+2.3
	comp=Z,83nm,0.9s,baz=60,slow=2.4,SNR=11						
LJU	Ljubljana	84.16	316	⇓iP	P	11 10 58.7	+1.0
LJU	Ljubljana	84.16	316	⇓iP	P	11 10 58.4	+0.6
OBKA	Obir	84.16	316	i P	P	11 10 58.5	+0.6
	comp=Z,42nm,0.7s,SNR=18						
RIY	Rijeka	84.17	315	P	P	11 10 57.6	-0.2
CEY	Cerknica	84.22	316	⇓iP	P	11 10 58.2	+0.1
PVCC	Panska Ves	84.31	320	⇓eP	P	11 10 59.5	+1.1
PVCC	Panska Ves	84.31	320	eP	P	11 10 59.5	+1.1
BSD	Bornholm Skovb	84.33	325	i P	P	11 10 58.7	+0.3
BSD	Bornholm Skovb	84.33	325	i P	P	11 10 58.7	+0.3
PRA	Prague	84.38	320	⇓eP	P	11 10 59.8	+1.1
PRA	Prague	84.38	320	eP	P	11 10 59.8	+1.1
MOA	Molln	84.40	318	i P	P	11 10 59.1	+0.1
	comp=Z,24nm,0.7s,SNR=8.4						
INTR	Introdacqua	84.50	312	P	P	11 10 59.4	-0.3
INTR				IAmb	IAmb	11 11 01.5	
	comp=Z,84nm,0.7s						
PBCC	Pribram	84.65	319	⇓iP	P	11 11 00.8	+0.7
TRI	Trieste	84.68	315	P	P	11 11 00.3	-0.1
TRI				pmax	pmax		
	comp=Z,101nm,0.7s						
TRI	Trieste	84.68	315	P	P	11 11 00.3	-0.1
TRI				IAmb	IAmb	11 11 01.1	
	comp=Z,101nm,0.7s						
CADS	Cadrg	84.72	316	⇓iP	P	11 11 00.8	+0.2
BRG	Berggiesshubel	84.72	321	eP	P	11 11 01.3	+0.9
	comp=Z,54nm,0.8s						
BRG				epP	pP	11 11 41.5	-1.6
	comp=Z,15nm,1.0s						
BRG				esP	sP	11 12 01.2	0.0
	comp=Z,7.9nm,0.9s						
BRG				ePP	PP	11 14 22.0	+3.1
	comp=Z,5.1nm,0.6s						
BRG				ePKKP	PKKPdf	11 28 50.7	-12
	comp=Z,7.3nm,1.2s						
BRG	Berggiesshubel	84.72	321	eP	P	11 11 01.4	+0.9
	comp=Z,54nm,0.8s,baz=91,slow=4.9						
BRG	Berggiesshubel	84.72	321	eP	P	11 11 01.3	+0.9
BRG				e*PP	pP	11 11 41.5	-1.6
BRG				e*SP	sP	11 12 01.2	0.0
BRG				e		11 14 22.0	
BRG				pmax	pmax		
	comp=Z,54nm,0.8s						
BRG				pmax	pmax		
	comp=Z,15nm,1.0s						
BRG				pmax	pmax		
	comp=N,8.0nm,0.9s						
BRG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BRG				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MYKA	Terra Mystica	84.79	316	i P	P	11 11 01.2	+0.2
	comp=Z,29nm,0.5s,SNR=21						
GEC2	GERESS Array S	84.81	319	eP	P	11 11 01.9	+0.8
	comp=Z,70nm,1.1s,baz=91,slow=4.9						
GEC2	GERESS Array S	84.81	319	P	P	11 11 01.5	+0.4
GEC2				IAmb	IAmb	11 11 03.0	
	comp=Z,239nm,1.8s						
GERES	GERESS Array B	84.81	319	P	P	11 11 01.7	+0.6
	comp=Z,20nm,0.5s,baz=100,slow=5.4,SNR=94						
AQU	L'Aquila	84.88	312	⇓iP	P	11 11 01.9	+0.4
AQU	L'Aquila	84.88	312	P	P	11 11 02.1	+0.6
AQU				pmax	pmax		
	comp=Z,186nm,0.8s						
AQU	L'Aquila	84.88	312	P	P	11 11 02.1	+0.6
RUE	Ruedersdorf	84.88	322	eP	P	11 11 02.2	+1.1
RUE	Ruedersdorf	84.88	322	eP	P	11 11 02.4	+1.2
	comp=Z,365nm,0.9s,baz=91,slow=4.9						
KHC	Kasperske Hory	84.90	319	⇓iP	P	11 11 02.0	+0.5
KHC	Kasperske Hory	84.90	319	⇓iP	P	11 11 02.0	+0.5
KHC	Kasperske Hory	84.90	319	P	P	11 11 01.8	+0.3
CORL	Corleone	84.91	308	P	P	11 11 01.2	-0.6
CORL				IAmb	IAmb	11 11 09.1	
	comp=Z,75nm,0.7s						
KBA	Koelnbreinsper	85.01	317	i P	P	11 11 01.9	-0.3
	comp=Z,18nm,0.5s,SNR=20						
STEI	Steigen	85.06	338	eP	P	11 11 02.1	+0.3
STEI				eP	P	11 11 02.1	+0.3
FBE	Freiberg	85.09	321	eP	P	11 11 03.5	+1.2
	comp=Z,70nm,0.7s,baz=91,slow=4.9						
NRCA	Norcia	85.10	313	P	P	11 11 02.9	+0.3
NRCA				IAmb	IAmb	11 11 04.0	
	comp=Z,89nm,1.0s						
HFS	Hagfors	85.24	330	P	P	11 11 03.3	+0.5
	comp=Z,104nm,0.5s,baz=148,slow=3.3,SNR=132						
HFS				PP	PP	11 14 18.6	-4.3
	comp=Z,6.6nm,0.6s,baz=96,slow=10,SNR=3.2						
MOR8	Moi Rana	85.25	336	eP	P	11 11 02.5	-0.3
CLL	Collm	85.33	321	i P	P	11 11 04.9	+1.4
	comp=Z,71nm,1.3s						
CLL				epP	pP	11 11 45.0	-1.2
CLL	Collm	85.33	321	eP	P	11 11 05.1	+1.6
	comp=Z,71nm,1.3s,baz=91,slow=4.9						
CLL	Collm	85.33	321	i P	P	11 11 04.9	+1.4
CLL				pmax	pmax		
	comp=Z,71nm,1.3s						
CLL	Collm	85.33	321	P	P	11 11 04.2	+0.7
WET	Wettzell	85.36	319	eP	P	11 11 04.7	+0.9
	comp=Z,53nm,0.7s,baz=91,slow=4.9						
RJOB	Jochberg	85.39	317	eP	P	11 11 03.9	0.0
	comp=Z,57nm,1.3s,baz=91,slow=4.9						
STAL	STALIGIAL	85.43	316	P	P	11 11 04.4	+0.2
STAL				IAmb	IAmb	11 11 05.4	
	comp=Z,151nm,1.1s						
ABTA	Abfaltersbach	85.57	316	i P	P	11 11 04.5	-0.4
	comp=Z,37nm,1.1s,SNR=19						
TANN	Tannenbergstha	85.65	320	eP	P	11 11 05.9	+0.7
	comp=Z,51nm,1.0s,baz=91,slow=4.9						
NKC	Novy Kostel	85.66	320	⇓eP	P	11 11 06.2	+1.0
NKC	Novy Kostel	85.66	320	eP	P	11 11 06.2	+1.0
WERN	Wernitzgruen	85.70	320	eP	P	11 11 06.3	+0.9
	comp=Z,28nm,0.8s,baz=91,slow=4.9						
LOF	Lofoten	85.72	338	eP	P	11 11 05.2	+0.2
GUNZ	Gunzen	85.73	320	eP	P	11 11 06.5	+0.9
	comp=Z,33nm,0.8s,baz=91,slow=4.9						
SPA0	Spitsbergen Ar	85.75	348	eP	P	11 11 05.0	0.0
SPA0	Spitsbergen Ar	85.75	348	P	P	11 11 05.1	0.0
SPA0				IAmb	IAmb	11 11 05.6	
	comp=Z,62nm,0.7s						
SPITS	Spitsbergen Ar	85.75	348	P	P	11 11 05.1	0.0
	comp=Z,49nm,0.5s,baz=107,slow=10,SNR=227						
COP	Copenhagen	85.77	325	i P	P	11 11 06.8	+1.3
COP	Copenhagen	85.77	325	i P	P	11 11 06.8	+1.3
KONS	Konsvik	85.80	336	eP	P	11 11 05.8	+0.4
HSPB	Hornsund (broa	85.81	347	eP	P	11 11 05.7	+0.4
ROTZ	Rotzenmuhle	85.81	320	eP	P	11 11 07.1	+1.2
	comp=Z,53nm,0.7s,baz=91,slow=4.9						
PLN	Plauen	85.85	320	eP	P	11 11 06.9	+0.8
	comp=Z,29nm,0.8s,baz=91,slow=4.9						
MANZ	Manzenberg	85.87	320	eP	P	11 11 07.5	+1.2
	comp=Z,64nm,1.0s,baz=91,slow=4.9						
LATE	Laterza	86.06	312	P	P	11 11 07.4	0.0
NEUB	Neuenburg	86.10	321	eP	P	11 11 08.1	+0.8
	comp=Z,100nm,0.7s,baz=91,slow=4.9						
CTI	Castel Tesino	86.17	316	P	P	11 11 08.4	+0.5
CTI				pmax	pmax		
	comp=Z,106nm,0.8s						
CTI	Castel Tesino	86.17	316	P	P	11 11 08.4	+0.5
CTI				IAmb	IAmb	11 11 09.6	
	comp=Z,106nm,0.8s						
WTTA	Wattenberg	86.17	317	i P	P	11 11 07.7	-0.2
	comp=Z,73nm,0.5s,SNR=36						
MOX	Moxa	86.19	320	eP	P	11 11 08.7	+0.9
	comp=Z,40nm,0.8s,baz=91,slow=4.9						
MOX				eL	L	11 58 02.0	
	comp=Z,308nm,19.3s						
NSS	Namsos	86.21	334	eP	P	11 11 07.9	+0.4
WATA	Walderalm	86.22	317	i P	P	11 11 07.7	-0.5
	comp=Z,44nm,0.5s,SNR=24						
NC405	NORSAR Array S	86.25	331	P	P	11 11 08.2	+0.3
NC405				IAmb	IAmb	11 11 19.3	
	comp=Z,216nm,1.7s						
NC602	NORSAR Array S	86.33	331	eP	P	11 11 08.4	+0.2
NC602	NORSAR Array S	86.33	331	P	P	11 11 08.0	-0.2
FUR	Furstenfeldbru	86.42	318	eP	P	11 11 09.2	+0.2
	comp=Z,59nm,0.7s,baz=91,slow=4.9						
NC303	NORSAR Array S	86.42	331	P	P	11 11 08.0	-0.6
GRA1	Grafenberg Arr	86.45	319	P	P	11 11 10.0	+0.9
GRA1				IAmb	IAmb	11 11 11.2	
	comp=Z,60nm,0.7s						
GRF	Grafenberg Arr	86.45	319	eP	P	11 11 10.2	+1.1
	comp=Z,74nm,0.9s,baz=91,slow=4.9						
GRF				eL	L	11 59 13.2	
	comp=Z,463nm,18.4s						
GRF	Grafenberg Arr	86.45	319	P	P	11 11 10.0	+0.9
GRF				pmax	pmax		
	comp=Z,60nm,0.7s						
NB201	NORSAR Array S	86.45	331	P	P	11 11 08.3	-0.5
OSSC	Osservatorio P	86.47	313	P	P	11 11 08.2	-1.1
SQTA	Sankt Quirin	86.47	317	i P	P	11 11 09.2	-0.1
	comp=Z,92nm,0.5s,SNR=45						
NB2	NORSAR Subarra	86.49	331	P	P	11 11 08.9	-0.1
	comp=Z,50nm,0.8s,baz=92,slow=4.6						
NB2	NORSAR Subarra	86.49	331	P	P	11 11 08.9	-0.1
	baz=92,slow=4.6						
NOA	NORSAR Array B	86.49	331	P	P	11 11 09.0	-0.1
	comp=Z,9.8nm,0.5s,baz=95,slow=5.0,SNR=75						
NOA				PP	PP	11 14 34.4	+1.5
	comp=Z,5.3nm,0.7s,baz=88,slow=7.7,SNR=7.2						
NOA	NORSAR Array B	86.49	331	P	P	11 11 09.0	-0.1
MOTA	Moosalm	86.54	317	i P	P	11 11 09.5	-0.2
	comp=Z,68nm,0.8s,SNR=34						
NAO01	NORSAR Array S	86.65	331	P	P	11 11 10.1	+0.3
NAO01				IAmb	IAmb	11 11 11.0	
	comp=Z,134nm,1.1s						
ZCCA	Zocca	86.65	314	P	P	11 11 11.3	+1.1
ZCCA				IAmb	IAmb	11 11 13.1	
	comp=Z,79nm,0.6s						
KBS	Kingsbay	86.69	349	eP	P	11 11 09.4	-0.2
KBS	Kingsbay	86.69	349	ceP	P	11 11 09.6	0.0
KBS				pmax	pmax		
	comp=Z,41nm,0.9s						
NBO00	NORSAR Array S	86.70	331	P	P	11 11 10.6	+0.6
NC204	NORSAR Array S	86.71	331	P	P	11 11 10.5	+0.3
OSL	Oslo	86.73	330	eP	P	11 11 11.2	+1.1
RETA	Reutte	86.77	317	i P	P	11 11 10.8	+0.1
	comp=Z,89nm,0.5s,SNR=52						
ASSE	Asse, Remlinge	86.78	322	eP	P	11 11 11.5	+1.0
	comp=Z,102nm,0.9s,baz=91,slow=4.9						
FETA	Feichten	86.80	317	i P	P	11 11 11.1	+0.1
	comp=Z,39nm,0.7s,SNR=20						
CLZ	Clausthal	86.97	322	eP	P	11 11 12.7	+1.1
	comp=Z,141nm,0.7s,baz=91,slow=4.9						
BSEG	Bad Segeberg	86.98	324	eP	P	11 11 12.8	+1.4
	comp=Z,139nm,1.2s,baz=91,slow=4.9						
VNDA	Vanda	87.04	169	P	P	11 11 11.7	+0.3
	comp=Z,2.8nm,0.7s,baz=322,slow=7.3,SNR=4.4						
VNDA	Vanda	87.04	169	P	P	11 11 12.2	+0.8
VLC	Villacollemand	87.08	314	P	P	11 11 12.1	-0.2
PRMA	PARMA	87.12	315	P	P	11 11 13.8	+1.4
PRMA				IAmb	IAmb	11 11 14.7	
	comp=Z,91nm,0.7s						
NRDL	Niedersach Rie	87.13	322	eP	P	11 11 13.7	+1.6
	comp=Z,185nm,1.2s,baz=91,slow=4.9						
GAMB	Gambell	87.17	26	P	P	11 11 13.3	+1.1
UBR	Ueberruh	87.21	317	eP	P	11 11 13.1	+0.3
	comp=Z,54nm,0.6s,baz=91,slow=4.9						
UBBA	Unterbreizbach	87.22	321	eP	P	11 11 13.5	+1.0
	comp=Z,87nm,1.7s,baz=91,slow=4.9						
GTTG	Gottingen	87.23	321	eP	P	11 11 13.9	+1.2
	comp=Z,145nm,1.1s,baz=91,slow=4.9						
KONO	Kongsberg	87.30	329	eP	P	11 11 13.6	+0.7
KONO	Kongsberg	87.30	329	P	P	11 11 13.2	+0.3
KONO				pmax	pmax		
	comp=Z,42nm,0.7s						
KONO	Kongsberg	87.30	329	P	P	11 11 13.2	+0.3
KONO				IAmb	IAmb	11 11 14.5	
	comp=Z,42nm,0.7s						
DAVA	Damuels	87.37	317	i P	P	11 11 14.2	+0.5
	comp=Z,47nm,0.7s,SNR=19						
DAVOX	Davos/Dischmat	87.38	317	P	P	11 11 14.7	+0.8
	comp=Z,146nm,0.6s,baz=144,slow=3.4,SNR=247						
DAVOX				S	SKSac	11 21 22.4	-3.2
	comp=Z,5.7nm,0.8s,baz=308,slow=18,SNR=14						
DOMB	Dombas	87.52	332	eP	P	11 11 14.6	+0.6
TUE	Stuetta	87.76	316	P	P	11 11 15.8	+0.2
STU	Stuttgart	87.79	319	eP	P	11 11 16.2	+0.7
	comp=Z,48nm,0.7s,baz=91,slow=4.9						
STU	Stuttgart	87.79	319	P	P	11 11 15.8	+0.3
STU				pmax	pmax		
	comp=Z,42nm,0.7s						
STU	Stuttgart	87.79	319	P	P	11 11 15.8	+0.3
STU				IAmb	IAmb	11 11 17.0	
	comp=Z,42nm,0.7s						
SKAR	Skarslia	87.92	330	eP	P	11 11 17.4	+1.5
KEST	Kesra	88.11	306	P	P	11 11 19.1	+1.7
	comp=Z,147nm,0.7s,baz=34,slow=1.1,SNR=113						
KEST	Kesra	88.11	306	P	P	11 11 19.1	+1.7
MOL	Molde	88.21	332	eP	P	11 11 18.1	+1.0
TNS	Taunus Mts	88.23	320	eP	P	11 11 18.9	+1.3
	comp=Z,152nm,0.8s,baz=91,slow=4.9						
BFO	Black Forest	88.38	318	eP	P	11 11 18.7	+0.4
	comp=Z,45nm,1.0s,baz=91,slow=4.9						
BFO	Black Forest	88.38	318	P	P	11 11 18.4	+0.1
BFO				pmax	pmax		
	comp=Z,41nm,0.9s						
BFO	Black Forest	88.38	318	P	P	11 11 18.4	+0.1
BFO				IAmb	IAmb	11 11 19.7	
	comp=Z,41nm,0.9s						
IBBN	Ibbenburen	88.57	322	eP	P	11 11 20.4	+1.3
	comp=Z,152nm,1.1s,baz=91,slow=4.9						
ODD1	Odda	88.79	330	eP	P	11 11 21.2	+1.2
BLS5	Blasjo	88.91	329	eP	P	11 11 21.8	+1.3
BUG	Bochum--Univer	88.92	321	eP	P	11 11 21.8	+1.2
	comp=Z,112nm,0.9s,baz=91,slow=4.9						
AHRW	Bad Neuenahr-A	89.09	320	eP	P	11 11 22.9	+1.4
	comp=Z,84nm,0.9s,baz=91,slow=4.9						
ECH	Echery	89.17	318	P	P	11 11 22.3	+0.3
ECH				pmax	pmax		
	comp=Z,41nm,0.8s						
ECH	Echery	89.17	318	P	P	11 11 22.3	+0.3
ECH				IAmb	IAmb	11 11 24.1	
	comp=Z,41nm,0.8s						
SENIN	Lac Senin/Sane	89.18	316	P	P	11 11 23.1	+0.7
SENIN				IAmb	IAmb	11 11 25.1	
	comp=Z,76nm,0.8s						
BNI	Bardonecchia	89.69	315	P	P	11 11 24.3	-0.4
BNI				pmax	pmax		
	comp=Z,43nm,0.8s						
BNI	Bardonecchia	89.69	315	P	P	11 11 24.3	-0.4
BNI				IAmb	IAmb	11 11 29.0	
	comp=Z,43nm,0.8s						
WLF	Walferdange	89.74	320	P	P	11 11 25.8	+1.2
	comp=Z,51nm,1.1s						
WLF	Walferdange	89.74	320	eP	P	11 11 26.0	+1.4
	comp=Z,65nm,0.9s,baz=91,slow=4.9						
WLF	Walferdange	89.74	320	P	P	11 11 25.8	+1.2
WLF				pmax	pmax		
	comp=Z,58nm,0.8s						
WLF	Walferdange	89.74	320	P	P	11 11 25.8	+1.2

WLF				IAmb	IAmb	11 11 27.0	
	comp=Z,58nm,0.8s						
MEM	Membach	89.77	320	P	P	11 11 25.5	+0.8
	comp=Z,46nm,0.8s						
MEM				PcP	P	11 11 26.0	+1.3
BHOU	Houvegnez	89.78	320	P	P	11 11 26.2	+1.4
BHOU				PcP	P	11 11 26.9	+2.1
BSTI	Sart Tilman	90.05	320	P	P	11 11 27.4	+1.4
BSTI				PcP	P	11 11 28.9	+2.9
BSTI				pP	pP	11 12 10.0	+0.9
BSTI				sP	sP	11 12 27.7	+0.6
BCLA	Clavier	90.23	320	P	P	11 11 27.8	+1.0
	comp=Z,32nm,1.0s						
BCLA				PcP	P	11 11 28.1	+1.3
BCLA				pP	pP	11 12 09.6	-0.3
BGES	Gesves	90.37	320	P	P	11 11 27.9	+0.4
	comp=Z,30nm,0.8s						
BGES				PcP	P	11 11 28.7	+1.2
BMRD	Maredsous	90.58	320	P	P	11 11 29.1	+0.6
	comp=Z,26nm,1.0s						
DOU	Dourbes	90.71	320	P	P	11 11 30.0	+0.9
	comp=Z,26nm,0.8s						
DOU				PcP	P	11 11 30.4	+1.4
SNF	Seneffe	90.87	320	P	P	11 11 30.6	+0.8
SNF				PcP	P	11 11 31.5	+1.7
SSB	Saint Sauveur	91.18	315	P	P	11 11 32.2	+0.7
SSB				pmax	pmax		
	comp=Z,96nm,0.9s						
SSB	Saint Sauveur	91.18	315	P	P	11 11 32.2	+0.7
TAM	Tamanrasset	92.15	293	P	P	11 11 37.7	+1.1
TAM				pmax	pmax		
	comp=Z,27nm,0.9s						
TAM	Tamanrasset	92.15	293	P	P	11 11 37.7	+1.1
CLF	Chambon-Foret	92.45	318	P	P	11 11 38.1	+0.9
CLF				IAmb	IAmb	11 11 39.3	
	comp=Z,46nm,0.9s						
QSPA	South Pole Qui	92.74	180	P	P	11 11 39.2	+0.9
	comp=Z,8.1nm,0.5s,baz=128,slow=0.5,SNR=44						
QSPA				PKKP	PKKPdf	11 28 49.0	-0.9
	comp=Z,0.9nm,0.6s,baz=188,slow=0.5,SNR=7.2						
QSPA	South Pole Qui	92.74	180	IAmb	IAmb	11 11 39.9	
	comp=Z,9.3nm,0.6s						
DAG	Danmarks Havn	93.41	348	⇓*i*P	P	11 11 40.5	-0.5
	comp=Z,29nm,1.1s						
DAG	Danmarks Havn	93.41	348	⇓*i*P	P	11 11 40.5	-0.5
DAG				pmax	pmax		
	comp=Z,29nm,1.1s						
IMAR	Indian Mountai	94.39	23	P	P	11 11 45.8	0.0
EKA	Eskdalemuir Ar	94.61	326	P	P	11 11 47.6	+0.6
	comp=Z,15nm,0.6s,baz=93,slow=5.3,SNR=43						
EKA				PP	PP	11 15 37.0	-0.1
	comp=Z,1.8nm,0.6s,baz=84,slow=8.5,SNR=4.4						
ESK	Eskdalemuir	94.64	326	P	P	11 11 48.1	+1.0
ESK				pmax	pmax		
	comp=Z,127nm,1.9s						
ESK	Eskdalemuir	94.64	326	P	P	11 11 48.1	+1.0
TOLK	Toolik Lake Re	95.06	20	P	P	11 11 50.2	+1.3
TOLK	Toolik Lake Re	95.06	20	P	P	11 11 50.8	+1.9
	baz=291						
TOA0	Torodi Ar. Sit	96.49	283	P	P	11 11 56.1	-0.3
TOA0				IAmb	IAmb	11 14 05.5	
	comp=Z,12nm,0.7s						
TORD	Torodi Ar. Bea	96.49	283	P	P	11 11 56.3	-0.1
	comp=Z,3.3nm,0.8s,baz=84,slow=5.3,SNR=17						
TORD				PP	PP	11 15 52.4	-0.5
	comp=Z,5.5nm,0.9s,baz=73,slow=5.8,SNR=7.7						
TORD				PKKP	PKKPbc	11 28 40.4	+0.3
	comp=Z,0.9nm,0.3s,baz=308,slow=2.4,SNR=14						
TORD				SKKPbc	SKKPbc	11 32 04.0	+0.3
	comp=Z,0.6nm,0.6s,baz=305,slow=3.2,SNR=4.0						
ILAR	Eielson Array	97.51	23	P	Pdif	11 12 00.2	+0.2
	comp=Z,0.3nm,0.5s,baz=289,slow=3.4,SNR=6.5						
ILAR				PP	PP	11 15 57.0	-2.0
	comp=Z,1.0nm,1.0s,baz=287,slow=7.8,SNR=4.5						
ILAR				PKiKP	PKiKP	11 16 32.7	-0.9
	comp=Z,0.6nm,0.8s,baz=314,slow=4.2,SNR=3.6						
ILAR				PKKPbc	PKKPbc	11 28 35.9	-3.3
	comp=Z,1.0nm,0.7s,baz=164,slow=2.7,SNR=8.8						
ESDC	Sonseca Array	98.18	311	P	Pdif	11 12 03.9	+0.3
	comp=Z,3.1nm,0.6s,baz=59,slow=4.0,SNR=8.0						
ESDC				PP	PP	11 16 05.0	-0.1
	comp=Z,0.6nm,0.3s,baz=70,slow=8.5,SNR=5.4						
ESDC	Sonseca Array	98.18	311	P	Pdif	11 12 03.9	+0.3
SUMG	Summit	100.09	348	*i* P	Pdif	11 12 12.7	+0.9
SUMG	Summit	100.09	348	*i* P	Pdif	11 12 12.7	+0.9
EPYK	Eagle Plains	100.49	20	Pdiff	Pdif	11 12 13.8	+0.5
	baz=303						
C36M	Paulatuk	102.31	14	Pdiff	Pdif	11 12 21.0	-0.2
	baz=316						
DBIC	Dimbokro	103.44	277	PKKPbc	PKKPbc	11 28 19.5	-0.9
	comp=Z,1.3nm,0.6s,baz=252,slow=3.2,SNR=3.1						
YKA	Yellowknife Ar	110.06	16	Pdiff	Pdif	11 12 56.8	+1.0
	comp=Z,0.4nm,0.9s,baz=324,slow=4.8,SNR=3.1						
YKA				PKiKP	PKiKP	11 16 55.9	-0.7
	comp=Z,0.6nm,0.5s,baz=354,slow=1.7,SNR=15						
YKA				PP	PP	11 17 31.5	-0.5
	comp=Z,0.5nm,0.7s,baz=335,slow=7.4,SNR=4.7						
YKA				PKKPbc	PKKPbc	11 27 58.5	-3.2
	comp=Z,1.1nm,0.8s,baz=149,slow=3.1,SNR=14						
YKA				PKKPab	PKKPab	11 28 10.4	-1.6
	comp=Z,0.5nm,0.7s,baz=144,slow=4.8,SNR=5.4						
B05A	Bryant	117.81	30	P	PKiKP	11 17 12.7	+0.9
	baz=312						
E04D	Cinebar	118.70	31	P	PKiKP	11 17 14.7	+1.1
	baz=311						
F04A	Amboy	119.19	32		PKPdf	11 17 14.6	0.0
LTY	Liberty	119.20	30		PKPdf	11 17 14.7	0.0
C09A	Chrisman Ranch	119.98	28		PKiKP	11 17 16.4	+0.3
FFC	Flin Flon	120.08	14	PKIKP	PKPdf	11 17 15.7	-0.3
FFC	Flin Flon	120.08	14		PKPdf	11 17 15.7	-0.3
I03D	Drain, OR	120.11	34	P	PKiKP	11 17 17.6	+1.1
	baz=309						
J01E	Myrtle Point	120.11	35	P	PKiKP	11 17 17.6	+1.1
	baz=308						
NEW	Newport	120.18	27	PKIKP	PKiKP	11 17 17.0	+0.4
NEW	Newport	120.18	27		PKiKP	11 17 16.9	+0.4
NEW	Newport	120.18	27	P	PKiKP	11 17 16.9	+0.3
	baz=317						
D08A	Wollman Farm,	120.20	29		PKiKP	11 17 17.6	+1.0
HAWA	Hanford	120.36	30		PKiKP	11 17 17.3	+0.3
E08A	Dider Farm, El	120.53	30		PKPdf	11 17 16.8	-0.4
K02D	Willamette Mer	120.55	35	P	PKiKP	11 17 18.3	+0.7
	baz=308						
I04A	Tendick Farm,	120.57	34	P	PKiKP	11 17 18.2	+0.7
	baz=310						
I05D	Terrebonne, OR	120.81	33	P	PKiKP	11 17 19.0	+1.0
	baz=311						
L02E	Cave Junction	120.92	36	P	PKiKP	11 17 19.1	+0.9
	baz=308						
E09A	Wood Farm, Sta	120.96	29		PKPdf	11 17 18.0	0.0
WALA	Waterton Lakes	120.98	25		PKiKP	11 17 18.6	+0.4
HUMO	Hull Mountain	121.02	35		PKiKP	11 17 19.6	+1.3
J04D	Umpqua Nationa	121.10	34	P	PKiKP	11 17 19.6	+0.9
	baz=310						
SCHQ	Schefferville	121.37	350	PKP	PKPdf	11 17 18.6	0.0
	comp=Z,10nm,0.5s,baz=22,slow=2.4,SNR=39						
SCHQ				PP	PP	11 18 51.9	+0.9
	comp=Z,2.5nm,0.6s,baz=36,slow=7.1,SNR=4.1						
SCHQ				SKP		11 20 38.4	
	comp=Z,2.7nm,0.9s,baz=46,slow=2.9,SNR=4.2						
PINE	Pine Mountain	121.38	33		PKiKP	11 17 20.6	+1.4
G08A	Pilot Rock	121.41	31		PKiKP	11 17 19.9	+0.7
J05D	Fort Rock, OR	121.56	34	P	PKiKP	11 17 20.7	+1.2
	baz=311						
L04D	Klamath Falls	121.64	35	P	PKiKP	11 17 20.2	+0.5
	baz=309						
F10A	Beach Ranch, E	121.79	29		PKiKP	11 17 20.4	+0.5
M02C	Callahan	121.83	36	P	PKiKP	11 17 21.1	+1.0
	baz=308						
I07A	Izee	121.96	32		PKiKP	11 17 21.5	+1.2
M04C	Macdoel	122.18	35	P	PKiKP	11 17 21.4	+0.5
	baz=310						
N02D	Trinity Center	122.18	37	P	PKiKP	11 17 22.0	+1.2
	baz=308						
BMO	Blue Mountains	122.55	30	PKIKP	PKPdf	11 17 20.9	-0.4
BMO	Blue Mountains	122.55	30		PKPdf	11 17 20.9	-0.4
O02D	Mt. Diablo Mer	122.62	37	P	PKiKP	11 17 22.8	+1.1
	baz=308						
MSO	Missoula	122.68	26		PKiKP	11 17 21.6	0.0
MSO	Missoula	122.68	26	P	PKiKP	11 17 21.6	0.0
	baz=320,SNR=12						
MOD	Modoc Plateau	122.98	34		PKiKP	11 17 23.4	+1.0
J08A	Circle Bar Ran	123.00	32		PKiKP	11 17 23.5	+1.1
O03E	Paynes Creek	123.14	37	P	PKiKP	11 17 22.9	+0.2
	baz=309						
EGMT	Eagleton	123.47	23	P	PKiKP	11 17 23.5	+0.4
	baz=325						
WVOR	Wild Horse Val	123.55	33	PKIKP	PKiKP	11 17 24.6	+1.1
WVOR	Wild Horse Val	123.55	33		PKiKP	11 17 24.6	+1.1
BEKR	Beckworth	124.27	36		PKiKP	11 17 25.9	+0.8
MFID	Camas Ranch	124.33	30		PKiKP	11 17 25.8	+0.7
DLMT	Dillon	124.41	27		PKiKP	11 17 25.9	+0.7
AFDM	Forest Hills D	124.48	37		PKiKP	11 17 26.0	+0.7
PAHR	Pah Rah Range	124.94	36		PKiKP	11 17 27.2	+0.8
VCNR	Virginia City	125.05	36		PKiKP	11 17 27.6	+0.9
DGMT	Dagmar	125.06	19		PKiKP	11 17 26.6	+0.4
DGMT	Dagmar	125.06	19	P	PKiKP	11 17 26.9	+0.7
	baz=331						
PNTR	Pine Nut	125.22	36		PKiKP	11 17 28.1	+1.0
QLMT	Earthquake Lak	125.34	26		PKiKP	11 17 28.6	+1.4
YHL	Hebgen Lake	125.43	26		PKiKP	11 17 28.7	+1.3
YHB	Horse Butte	125.50	26		PKiKP	11 17 28.8	+1.3
ULM	Lac du Bonnet	125.61	12	PKP	PKPdf	11 17 26.8	0.0
	comp=Z,16nm,0.5s,baz=348,slow=1.9,SNR=52						
ULM				SKPbc	SKPbc	11 20 26.6	
	comp=Z,1.8nm,0.5s,baz=268,slow=8.1,SNR=3.1						
ULM				SKP		11 20 46.1	
	comp=Z,4.3nm,0.6s,baz=337,slow=2.1,SNR=5.6						
ULM	Lac du Bonnet	125.61	12		PKPdf	11 17 26.6	-0.2
ULM					SKPdf	11 20 46.6	+0.4
YHH	Holmes Hill	125.63	26		PKiKP	11 17 29.2	+1.4
YNE	Yellowstone No	125.81	25		PKiKP	11 17 29.9	+1.8
LAO	LASA Array	125.91	21	P	PKiKP	11 17 29.3	+1.3
	baz=328						
RLMT	Red Lodge	126.03	25	P	PKiKP	11 17 29.5	+1.0
	baz=324						
H17A	Grant Village	126.06	26	P	PKiKP	11 17 30.8	+2.2
	baz=322						
KVN	Kaiserville	126.12	36	PKIKP	PKiKP	11 17 29.5	+0.7
KVN	Kaiserville	126.12	36		PKiKP	11 17 29.5	+0.7
RYN	Ryan	126.15	36		PKiKP	11 17 30.3	+1.5
NVAR	Mina Array Bea	126.41	36	PKP	PKiKP	11 17 30.2	+0.7
	comp=Z,5.0nm,0.8s,baz=283,slow=2.2,SNR=34						
NVAR				pPKP	pPKPdf	11 18 12.9	-1.2
	comp=Z,4.5nm,0.9s,baz=259,slow=1.7,SNR=4.2						
NVAR				SKPbc	SKPbc	11 20 29.7	
	comp=Z,1.6nm,0.7s,baz=273,slow=3.1,SNR=4.9						
NVAR				PKKPab	PKKPbc	11 27 01.9	-0.7
	comp=Z,1.0nm,0.7s,baz=141,slow=4.9,SNR=6.9						
FXWY	Fox Creek	126.45	27		PKiKP	11 17 30.4	+0.9
NV11	Mina Array Sit	126.50	36		PKiKP	11 17 30.6	+1.0
ELK	Elko	126.55	32	PKIKP	PKiKP	11 17 30.6	+0.9
ELK	Elko	126.55	32		PKiKP	11 17 30.6	+0.9
TPAW	Teton Pass	126.60	27		PKiKP	11 17 29.7	-0.1
SNOW	Snow King Moun	126.71	27		PKiKP	11 17 31.2	+1.3
REDW	Red Top Meadow	126.75	27		PKiKP	11 17 30.9	+0.9
MDND	Maddock	126.98	16	P	PKiKP	11 17 29.9	-0.1
	baz=336						
AGMN	Agassiz Nation	127.47	12		PKPdf	11 17 30.6	+0.2
AGMN	Agassiz Nation	127.47	12	P	PKPdf	11 17 30.4	0.0
	baz=341						
MATQ	Matagami	127.56	357	P	PKPdf	11 17 30.7	+0.1
	baz=4.1						
VES	Vestal, Richgr	127.60	39	P	PKiKP	11 17 31.7	+0.1
	baz=309						
HWUT	Hardware Ranch	127.77	29		PKiKP	11 17 32.8	+0.7
BW06	Boulder Array	127.80	26	P	PKPdf	11 17 31.8	+0.3
	baz=323						
PD31	Pinedale Array	127.80	26		PKPdf	11 17 31.6	+0.1
PDAR	Pinedale Array	127.80	26	PKP	PKPdf	11 17 31.6	0.0
	comp=Z,2.3nm,0.5s,baz=176,slow=1.5,SNR=24						
PDAR				pPKP	pPKPdf	11 18 15.4	-1.2
	comp=Z,0.6nm,0.5s,baz=281,slow=0.8,SNR=1.8						
PDAR				PP	PP	11 19 33.8	-0.8
	comp=Z,2.0nm,1.1s,baz=337,slow=3.9,SNR=2.6						
PDAR				SKPbc	SKPbc	11 20 33.1	
	comp=Z,3.7nm,1.0s,baz=85,slow=0.4,SNR=8.4						
PDAR	Pinedale Array	127.80	26		PKPdf	11 17 31.0	-0.5
CWC	Cottonwood Cre	127.84	38	P	PKiKP	11 17 33.4	+1.1
	baz=310						
GRAC	Grapevine Rang	127.92	37	P	PKiKP	11 17 33.6	+1.3
	baz=311						
R11A	Troy Canyon, C	128.04	35		PKiKP	11 17 33.4	+0.7
R11A	Troy Canyon, C	128.04	35	P	PKiKP	11 17 33.6	+1.0
	baz=314						
ISA	Isabella, Lake	128.10	39	P	PKPdf	11 17 31.0	-1.1
	baz=310						
DUG	Dugway, Tooele	128.22	31	PKIKP	PKiKP	11 17 33.7	+0.8
DUG	Dugway, Tooele	128.22	31		PKiKP	11 17 33.6	+0.8
DUG	Dugway, Tooele	128.22	31	P	PKiKP	11 17 34.1	+1.2
	baz=318						
LSQQ	Lebel-sur-Quev	128.22	357	P	PKPdf	11 17 31.7	-0.1
	baz=5.0						
MPMC	Manual Prospec	128.46	38	P	PKiKP	11 17 34.9	+1.3
	baz=311						
FURC	Furnace Creek,	128.57	37	P	PKiKP	11 17 34.2	+0.7
	baz=312						
EYMN	Ely	128.62	9		PKPdf	11 17 33.0	+0.4
EYMN	Ely	128.62	9	P	PKPdf	11 17 33.0	+0.4
	baz=346						
NLU	North Lily Min	128.77	31		PKiKP	11 17 35.3	+1.2
PSUT	Pine Spring	128.88	33		PKiKP	11 17 35.3	+0.9
EDW2	Edwards Air Fo	128.90	39	P	PKiKP	11 17 35.3	+1.0
	baz=310						
RSSD	Black Hills	128.91	21	PKIKP	PKPdf	11 17 33.7	+0.1
RSSD	Black Hills	128.91	21		PKPdf	11 17 33.7	+0.1
RSSD	Black Hills	128.91	21	P	PKPdf	11 17 33.6	+0.1
	baz=330						
K22A	Casper	129.19	24		PKPdf	11 17 34.1	0.0
K22A	Casper	129.19	24	P	PKPdf	11 17 34.3	+0.2
	baz=326						
D62A	Allapoint, All	129.22	349	P	PKiKP	11 17 34.2	-0.3
	baz=15						
D61A	St Aubert, Com	129.30	351	P	PKPdf	11 17 34.3	+0.4
	baz=14						
GSC	Goldstone, Bar	129.37	38	P	PKiKP	11 17 36.4	+1.1
	baz=311						
LATQ	La Tuque	129.50	353		PKiKP	11 17 34.9	-0.1
LATQ	La Tuque	129.50	353	P	PKPdf	11 17 34.5	+0.2
	baz=10						
BFSC	Mount Baldy Ra	129.52	40	P	PKiKP	11 17 36.3	+0.6
	baz=309						
RDMU	Red Mountain	129.53	28		PKiKP	11 17 36.4	+0.8
TMUT	Trail Mountain	129.71	31		PKiKP	11 17 37.6	+1.4
E63A	Oxbow	129.73	349	P	PKiKP	11 17 35.3	-0.2
	baz=16						
MSU	Marysvale	129.79	32	PKIKP	PKiKP	11 17 37.7	+1.5
MSU	Marysvale	129.79	32		PKiKP	11 17 37.7	+1.5
D58A	Chemin du LacG	129.79	353	P	PKPdf	11 17 34.6	-0.3
	baz=10						
P17A	Butcher Ranch,	129.81	30		PKiKP	11 17 37.0	+0.8
D41A	Chassel	129.89	7		PKPdf	11 17 35.5	+0.4
BBRC	Big Bear Solar	129.97	39	P	PKiKP	11 17 38.2	+1.5
	baz=310						
D57A	Chemin Vers le	129.99	354	P	PKPdf	11 17 35.2	0.0
	baz=9.2						
Q16A	Castle Valley	130.01	31		PKiKP	11 17 37.8	+1.2
D56A	ZEC Mazanza, M	130.05	354	P	PKPdf	11 17 35.2	-0.1
	baz=8.0						
E61A	Lac Etchemin	130.10	351	P	PKiKP	11 17 36.0	-0.3
	baz=14						
D54A	Lac Fusel, La	130.10	356	P	PKPdf	11 17 35.0	-0.4
	baz=5.6						
MTPU	Mount Pierson	130.13	32		PKiKP	11 17 38.8	+1.7
D55A	Sainte-Anne-du	130.14	355	P	PKPdf	11 17 35.7	+0.2
	baz=7.1						
SRU	San Rafael Swe	130.19	30	PKIKP	PKiKP	11 17 37.6	+0.6
SRU	San Rafael Swe	130.19	30		PKiKP	11 17 37.6	+0.6
D48A	Paudash Townsh	130.22	1	P	PKPdf	11 17 34.9	-0.7
	baz=359						
MURC	Murrieta	130.22	40	P	PKiKP	11 17 38.1	+1.1
	baz=310						
D50A	G1974 Best Tow	130.22	359	P	PKPdf	11 17 35.1	-0.6
	baz=1.4						
D53A	Lac Vacive, Po	130.23	357	P	PKPdf	11 17 35.4	-0.4
	baz=4.2						
F64A	Sherman	130.25	348	P	PKiKP	11 17 36.4	-0.2
	baz=16						
SUSD	Miller	130.28	17	P	PKPdf	11 17 35.8	-0.1
	baz=336						
D51A	Lot 18 Range I	130.29	359	P	PKPdf	11 17 35.3	-0.5
	baz=2.0						
LCMT	Little Creek M	130.30	34		PKiKP	11 17 38.5	+1.3
D47A	Chapleau	130.31	2	P	PKPdf	11 17 35.6	-0.2
	baz=357						
E60A	Ste Agathe de	130.31	351	P	PKPdf	11 17 35.6	-0.3
	baz=12						
GMRC	Granite Mounta	130.42	38	P	PKiKP	11 17 39.2	+1.7
	baz=312						
D46A	Sault St. Mari	130.43	3	P	PKPdf	11 17 36.0	-0.1
	baz=356						
O20A	White River Ci	130.49	28		PKiKP	11 17 37.3	-0.3
O20A	White River Ci	130.49	28	P	PKiKP	11 17 37.5	-0.1
	baz=323						
E58A	La Victoria	130.55	353	P	PKiKP	11 17 36.8	-0.4
	baz=10						
E56A	St. Veronique	130.57	355	P	PKPdf	11 17 36.4	0.0
	baz=7.7						
E44A	Grand Marais A	130.58	4	P	PKiKP	11 17 37.0	-0.3
	baz=354						
E57A	Chemin Saint G	130.61	354	P	PKPdf	11 17 36.6	+0.1
	baz=8.9						
F61A	St Evariste	130.62	351	P	PKiKP	11 17 37.0	-0.4
	baz=13						
E43A	Lone Tree Farm	130.73	5		PKPdf	11 17 36.9	+0.2
COWI	Conover	130.76	7		PKPdf	11 17 37.0	+0.2
F60A	Warwick	130.77	352	P	PKPdf	11 17 36.6	-0.1
	baz=12						
E51A	G1948 Merrick	130.85	359	P	PKPdf	11 17 36.7	-0.2
	baz=1.9						
E54A	Lac Daplat, Po	130.85	357	P	PKPdf	11 17 36.3	-0.6
	baz=4.9						
N23A	Red Feather La	130.89	25	P	PKiKP	11 17 38.1	-0.3
	baz=326						
E47A	Iron Bridge	130.90	2	P	PKPdf	11 17 37.3	+0.3
	baz=357						
E48A	Lockeyer	130.91	1	P	PKPdf	11 17 36.8	-0.2
	baz=358						
E53A	Dumoine, Ponti	130.93	357	P	PKPdf	11 17 36.7	-0.3
	baz=4.3						
E46A	Sault Ste Mari	130.94	3		PKPdf	11 17 37.3	+0.2
SPMN	Marine on St.	131.03	11		PKiKP	11 17 37.8	-0.4
SPMN	Marine on St.	131.03	11	P	PKPdf	11 17 37.4	+0.1
	baz=344						
E52A	Mattawa	131.07	358	P	PKPdf	11 17 36.9	-0.4
	baz=3.0						
MONP2	Monument Peak	131.17	40	P	PKiKP	11 17 39.6	+0.4
	baz=310						
U15A	North Rim	131.25	34		PKiKP	11 17 40.4	+1.1
W13A	Hualapai Mount	131.28	36		PKiKP	11 17 40.6	+1.3
G40A	Rib Lake	131.43	9		PKPdf	11 17 38.3	+0.2
PV23	Carpenter Ridg	131.45	29		PKiKP	11 17 41.0	+1.3
F51A	Arnstein	131.46	359	P	PKPdf	11 17 37.8	-0.3
	baz=1.4						
PV22	Blue Mesa, Par	131.50	29		PKiKP	11 17 40.1	+0.5
PV10	Paradox Valley	131.50	30		PKiKP	11 17 41.2	+1.5
PV14	Lion Creek, Pa	131.51	30		PKiKP	11 17 40.3	+0.6
IKP	In-Ko-Pah, Jac	131.52	40	P	PKiKP	11 17 41.0	+1.3
	baz=310						
F45A	CMU Biological	131.54	4	P	PKPdf	11 17 38.4	+0.2
	baz=354						
F48A	Evansville	131.55	2	P	PKPdf	11 17 38.0	-0.2
	baz=358						
PV04	Paradox Valley	131.55	29		PKiKP	11 17 41.3	+1.6
PV20	West Nyswonger	131.56	30		PKiKP	11 17 41.1	+1.3
ECSD	EROS Data Cent	131.58	15		PKPdf	11 17 38.9	+0.5
ECSD	EROS Data Cent	131.58	15	P	PKPdf	11 17 38.7	+0.3
	baz=339						
F52A	Sundridge	131.58	358	P	PKPdf	11 17 38.0	-0.3
	baz=2.1						
PV16	Nyswonger Mesa	131.61	30		PKiKP	11 17 41.2	+1.3
F49A	Sandfield	131.62	1	P	PKPdf	11 17 38.3	0.0
	baz=358						
PV07	Paradox Valley	131.64	29		PKiKP	11 17 41.2	+1.3
PV12	Saucer Basin,	131.66	29		PKiKP	11 17 40.1	+0.1
PDMCI	Parker Dam,Lak	131.67	37	P	PKiKP	11 17 41.4	+1.6
	baz=313						
PV03	Paradox Valley	131.69	30		PKiKP	11 17 41.3	+1.2
PV05	Paradox Valley	131.70	30		PKiKP	11 17 41.4	+1.3
PV13	Radium Mtn., P	131.78	30		PKiKP	11 17 40.8	+0.5
PV02	Paradox Valley	131.78	29		PKiKP	11 17 41.5	+1.2
PV15	Paradox Valley	131.80	29		PKiKP	11 17 40.8	+0.5
G54A	Lake Saint Pet	131.93	357	P	PKPdf	11 17 38.5	-0.5
	baz=3.8						
ISCO	Idaho Springs	131.94	26	P	PKiKP	11 17 40.5	-0.1
	baz=326						
G46A	Petoskey	131.96	4	P	PKPdf	11 17 39.1	+0.1
	baz=355						
GLA	Glamis	132.08	39	P	PKiKP	11 17 42.5	+1.7
	baz=312						
G47A	Hillman	132.16	3	P	PKPdf	11 17 39.9	+0.5
	baz=356						
H61A	Lyndonville	132.17	351	P	PKiKP	11 17 40.5	-0.1
	baz=12						
G53A	Haliburton	132.23	358	P	PKPdf	11 17 39.5	-0.1
	baz=3.1						
H59A	Cadyville	132.30	353	P	PKiKP	11 17 40.7	-0.1
	baz=9.8						
WUAZ	Wupatki	132.42	34	P	PKiKP	11 17 42.3	+0.7
	baz=317						
LONY	Lake Ozonia	132.43	354		PKiKP	11 17 40.8	-0.3
LONY	Lake Ozonia	132.43	354	P	PKiKP	11 17 40.8	-0.3
	baz=8.6						
H58A	Gabriels	132.59	353	P	PKPdf	11 17 40.5	+0.2
	baz=9.2						
SADO	Sadowa	132.60	358	PKP	PKPdf	11 17 39.8	-0.4
	baz=336,slow=1.6						
SADO				SKPbc	SKPbc	11 20 50.8	-0.7
	comp=Z,18nm,0.9s,baz=297,slow=2.5,SNR=12						
Y14A	Wickenburg	132.60	37		PKiKP	11 17 43.2	+1.4
H56A	Elgin	132.62	355	P	PKPdf	11 17 40.6	+0.3
	baz=6.3						
MVCO	Mesa Verde	132.67	30		PKiKP	11 17 43.3	+1.2
MVCO	Mesa Verde	132.67	30	P	PKiKP	11 17 42.6	+0.5
	baz=321						
I40A	Norwalk	132.71	9		PKPdf	11 17 40.1	-0.4
H47A	Mio	132.71	3	P	PKiKP	11 17 41.7	0.0
	baz=356						
H53A	Bobcaygeon	132.78	358	P	PKPdf	11 17 40.5	-0.1
	baz=3.2						
Q24A	Divide	132.83	26	P	PKiKP	11 17 42.5	0.0
	baz=326						
I60A	Shoreham	133.04	352	P	PKiKP	11 17 41.9	-0.4
	baz=10						
S22A	4UR Ranch, Cre	133.06	28	P	PKiKP	11 17 43.1	+0.1
	baz=324						
I59A	Olmsteadville	133.16	353	P	PKiKP	11 17 42.5	0.0
	baz=9.7						
X16A	Lo Mia Camp, P	133.18	35		PKiKP	11 17 44.0	+0.8
I57A	Carthage	133.22	355	P	PKPdf	11 17 41.6	+0.2
	baz=7.2						
BGNE	Belgrade	133.29	18		PKPdf	11 17 41.6	-0.1
BGNE	Belgrade	133.29	18	P	PKPdf	11 17 41.6	-0.1
	baz=336						
I58A	Old Forge	133.39	354	P	PKiKP	11 17 43.1	0.0
	baz=8.2						
J59A	Piesco	133.56	353	P	PKPdf	11 17 42.3	+0.1
	baz=8.8						
W18A	Petrified Fore	133.62	33		PKiKP	11 17 45.0	+0.9
W18A	Petrified Fore	133.62	33	P	PKiKP	11 17 44.6	+0.6
	baz=318						
SDCO	Great Sand Dun	133.68	27	P	PKPdf	11 17 43.2	+0.3
	baz=325						
JFWS	Jewell Farm	133.72	9	PKIKP	PKPdf	11 17 42.0	-0.5
JFWS	Jewell Farm	133.72	9		PKPdf	11 17 42.0	-0.5
JFWS	Jewell Farm	133.72	9	P	PKPdf	11 17 41.9	-0.6
	baz=347						
J58A	Remsen	133.75	354	P	PKPdf	11 17 42.7	+0.2
	baz=7.8						
X18A	Snowflake	133.94	34		PKiKP	11 17 45.1	+0.4
J49A	Marlette	134.00	2	P	PKPdf	11 17 42.7	-0.2
	baz=357						
SCIA	State Center	134.12	13	P	PKPdf	11 17 43.9	+0.7
	baz=343						
L40A	Anamosa	134.38	11		PKPdf	11 17 43.2	-0.5
K58A	Earlville	134.38	355	P	PKPdf	11 17 44.0	+0.3
	baz=7.4						
K57A	Scipio Center	134.49	355	P	PKiKP	11 17 45.4	+0.1
	baz=6.2						
K48A	Perry	134.50	3	P	PKPdf	11 17 44.3	+0.4
	baz=356						
T25A	Trinidad	134.67	27		PKiKP	11 17 45.5	-0.6
T25A	Trinidad	134.67	27	P	PKiKP	11 17 46.8	+0.6
	baz=326						
L42A	Oliver, Polo	134.70	9		PKPdf	11 17 43.3	-1.0
K54A	Basiliko Farm,	134.74	358	P	PKPdf	11 17 44.6	+0.3
	baz=3.1						
BINY	Binghamton	134.97	355	P	PKiKP	11 17 46.5	+0.2
	baz=7.0						
TUC	Tucson	135.07	37	P	PKiKP	11 17 48.1	+1.2
	baz=315						
L58A	Harry Jones Me	135.11	355	P	PKPdf	11 17 45.4	+0.3
	baz=7.2						
L54A	Sinclairville	135.14	358	P	PKPdf	11 17 44.5	-0.6
	baz=2.3						
L56A	Greenwood	135.15	356	P	PKPdf	11 17 45.2	0.0
	baz=4.8						

L55A	Hinsdale	135.15	357	P	PKPdf	11 17 45.4	+0.2
	baz=3.5						
L49A	Milan	135.22	3	P	PKPdf	11 17 45.5	+0.3
	baz=356						
L57A	Andrews Acres	135.24	356	P	PKiKP	11 17 47.1	+0.2
	baz=5.8						
L47A	Sherwood	135.26	4	P	PKPdf	11 17 45.0	-0.3
	baz=354						
L48A	N Adams	135.34	4	P	PKPdf	11 17 45.4	-0.1
	baz=355						
ANMO	Albuquerque	135.47	30	PKIKP	PKiKP	11 17 48.0	+0.2
ANMO	Albuquerque	135.47	30		PKiKP	11 17 48.0	+0.2
ANMO	Albuquerque	135.47	30	P	PKiKP	11 17 48.0	+0.2
	baz=322						
N41A	Harden Midland	135.75	11		PKPdf	11 17 45.6	-0.6
M58A	Price's Panora	135.83	355	P	PKPdf	11 17 45.6	-0.9
	baz=6.4						
M47A	Cromwell	135.83	5	P	PKiKP	11 17 47.8	-0.2
	baz=353						
M49A	Liberty Center	135.84	3	P	PKiKP	11 17 47.3	-0.8
	baz=356						
M56A	Emporium	135.84	357		PKPdf	11 17 46.7	+0.2
M56A	Emporium	135.84	357	P	PKPdf	11 17 46.7	+0.2
	baz=3.9						
M54A	Oil Creek Stat	135.87	359		PKPdf	11 17 46.8	+0.2
M54A	Oil Creek Stat	135.87	359	P	PKPdf	11 17 46.7	+0.2
	baz=1.8						
KSU1	Kansas State U	135.87	18	P	PKPdf	11 17 46.9	+0.3
	baz=337						
M55A	Ridgway	135.88	358	P	PKPdf	11 17 46.8	+0.2
	baz=3.1						
M57A	Sunshine Farm,	135.92	356	P	PKiKP	11 17 48.4	+0.2
	baz=5.4						
M53A	WI Miller and	135.96	360	P	PKiKP	11 17 47.7	-0.6
	baz=0.4						
HDIL	Hopedale	136.17	9	P	PKPdf	11 17 46.9	-0.1
	baz=348						
N47A	Urbana	136.30	5	P	PKiKP	11 17 48.5	-0.5
	baz=353						
N49A	Columbus Grove	136.38	4	P	PKPdf	11 17 47.6	+0.1
	baz=355						
N48A	Decatur	136.38	4	P	PKPdf	11 17 47.3	-0.1
	baz=354						
N58A	Sunbury	136.38	355	P	PKPdf	11 17 47.7	+0.3
	baz=6.1						
N52A	McGinn's Farm,	136.58	1	P	PKPdf	11 17 47.9	0.0
	baz=359						
N50A	Nevada	136.58	2	P	PKPdf	11 17 48.2	+0.4
	baz=357						
N53A	Lisbon	136.59	360	P	PKPdf	11 17 47.7	-0.1
	baz=0.1						
121A	Cookes Peak, D	136.63	34	P	PKiKP	11 17 49.7	-0.5
	baz=319						
SFIN	Lafayette	136.65	7	P	PKPdf	11 17 48.2	+0.3
	baz=351						
SSPA	Standing Stone	136.67	357	P	PKPdf	11 17 48.3	+0.3
	baz=4.4						
O48A	Farmland	136.97	5	P	PKPdf	11 17 48.2	-0.4
	baz=354						
P43A	Skaggs, Pawnee	137.03	10		PKiKP	11 17 50.8	+0.2
O56A	Blue Knob Stat	137.07	357	P	PKiKP	11 17 50.9	+0.3
	baz=3.5						
O49A	Covington	137.10	4		PKiKP	11 17 50.0	-0.7
O49A	Covington	137.10	4	P	PKiKP	11 17 50.0	-0.7
	baz=355						
ACSO	Alum Creek Sta	137.12	2		PKPdf	11 17 49.0	+0.2
ACSO	Alum Creek Sta	137.12	2	P	PKPdf	11 17 49.0	+0.2
	baz=357						
O50A	Cable	137.18	3	P	PKPdf	11 17 49.1	+0.1
	baz=356						
O54A	Avella	137.21	359	P	PKiKP	11 17 51.2	+0.3
	baz=0.8						
O51A	Pataskala	137.22	2	P	PKPdf	11 17 49.1	0.0
	baz=358						
O52A	Adamsville	137.27	1		PKPdf	11 17 49.3	+0.2
O52A	Adamsville	137.27	1	P	PKPdf	11 17 49.2	0.0
	baz=359						
P46A	Rosedale	137.39	7		PKPdf	11 17 49.9	+0.6
P59A	Jarrettsville	137.58	355	P	PKPdf	11 17 50.4	+0.7
	baz=6.6						
P50A	Jamestown	137.71	3	P	PKPdf	11 17 49.7	-0.2
	baz=356						
P48A	Milroy	137.73	5		PKPpre	11 17 43.6	
P48A	Milroy	137.73	5	P	PKPdf	11 17 49.8	-0.2
	baz=353						
P52A	Corning	137.75	1	P	PKPdf	11 17 50.2	+0.1
	baz=358						
P54A	Burton	137.79	359	P	PKPdf	11 17 50.3	+0.2
	baz=0.7						
P57A	Homestead Farm	137.82	357	P	PKPdf	11 17 50.9	+0.8
	baz=4.3						
P51A	Williamsport	137.87	2		PKiKP	11 17 51.8	-0.5
P51A	Williamsport	137.87	2	P	PKiKP	11 17 51.6	-0.7
	baz=357						
P55A	Reedsville	137.87	359	P	PKPdf	11 17 50.6	+0.3
	baz=1.6						
BLO	Bloomington	137.91	6	PKIKP	PKiKP	11 17 52.5	+0.1
BLO	Bloomington	137.91	6		PKiKP	11 17 52.5	+0.1
T35A	Sooner Cattle	137.91	19		PKPdf	11 17 50.1	-0.3
MSTX	Muleshoe	138.04	27		PKPdf	11 17 51.5	+0.6
MSTX	Muleshoe	138.04	27	P	PKPdf	11 17 51.5	+0.6
	baz=326						
Q48A	North Vernon	138.23	6	P	PKPdf	11 17 50.8	-0.1
	baz=353						
CCM	Cathedral Cave	138.24	12	PKIKP	PKPdf	11 17 50.7	-0.2
CCM	Cathedral Cave	138.24	12		PKPdf	11 17 50.7	-0.2
CCM	Cathedral Cave	138.24	12	P	PKPdf	11 17 50.5	-0.4
	baz=344						
Q55A	Buckhannon	138.39	359	P	PKPdf	11 17 51.4	+0.1
	baz=1.3						
Q54A	Coxs Mills	138.41	360		PKPdf	11 17 51.4	+0.2
Q54A	Coxs Mills	138.41	360	P	PKPdf	11 17 51.4	+0.2
	baz=0.1						
Q52A	Bidwell	138.41	2	P	PKPdf	11 17 51.4	+0.1
	baz=358						
MNTX	Cornudas Mount	138.57	32		PKiKP	11 17 52.9	-1.0
MNTX	Cornudas Mount	138.57	32	P	PKPdf	11 17 52.7	+0.9
	baz=322						
WCI	Wyandotte Cave	138.87	6	PKIKP	PKPdf	11 17 51.9	-0.2
WCI	Wyandotte Cave	138.87	6		PKPdf	11 17 51.9	-0.2
R56A	Bull Pasture M	138.96	358	P	PKPdf	11 17 53.2	+0.8
	baz=2.3						
U38A	Gravette	138.99	17		PKPdf	11 17 51.1	-1.3
R58A	Rapidan	139.00	356	P	PKiKP	11 17 54.5	-0.1
	baz=4.4						
R57A	Stanardsville	139.03	357	P	PKPdf	11 17 53.3	+0.9
	baz=3.7						
TUL1	Leonard	139.06	18		PKPdf	11 17 53.3	+0.8
TUL1	Leonard	139.06	18	P	PKiKP	11 17 54.6	-0.2
	baz=337						
U40A	Yellville	139.49	15	P	PKPdf	11 17 53.3	0.0
	baz=342						
S50A	Richmond	139.59	4	P	PKPdf	11 17 52.8	-0.6
	baz=355						
PBMO	Poplar Bluff	139.64	12		PKPdf	11 17 53.7	+0.2
S58A	Poland Farm, P	139.69	356	P	PKiKP	11 17 56.4	+0.4
	baz=4.4						
T50A	Nancy	140.21	5	P	PKPdf	11 17 54.7	+0.1
	baz=354						
T54A	Tazewell	140.32	1	P	PKiKP	11 17 56.8	-0.7
	baz=359						
W39A	Magazine	140.33	17	P	PKiKP	11 17 57.1	-0.3
	baz=340						
T56A	Rocky Mt	140.35	359	P	PKiKP	11 17 57.0	-0.4
	baz=1.4						
ABTX	Abilene, Hawle	140.57	25		PKPdf	11 17 56.2	+0.8
ABTX	Abilene, Hawle	140.57	25	P	PKPdf	11 17 56.3	+0.8
	baz=330						
WVT	Waverly	140.73	9	P	PKPdf	11 17 55.7	+0.2
	baz=349						
W41B	Gary Mavity, V	140.76	15	P	PKPdf	11 17 56.8	+1.2
	baz=342						
TZTN	Tazewell	140.77	3	P	PKiKP	11 17 58.0	-0.3
	baz=356						
U55A	TA2, Sparta	140.89	0	P	PKPdf	11 17 56.4	+0.5
	baz=360						
MIAR	Mount Ida	141.00	17	P	PKPdf	11 17 50.7	-5.4
	baz=340						
PLCA	Paso Flores	141.09	193	PKhKP	PKPpre	11 17 51.2	
	comp=Z,3.0nm,0.7s,baz=195,slow=0.9,SNR=7.9						
PLCA				SKPbc	SKPbc	11 21 17.1	0.0
	comp=Z,4.6nm,0.8s,baz=212,slow=4.3,SNR=4.8						
TXAR	Lajitas Array	141.34	33	PKhKP	PKPpre	11 17 52.1	
	comp=Z,1.2nm,0.5s,baz=154,slow=0.1,SNR=15						
TXAR				SKPbc	SKPbc	11 21 18.3	+0.1
	comp=Z,11nm,0.7s,baz=283,slow=0.5,SNR=29						
TKL	Tuckaleechee C	141.64	4	PKhKP	PKPpre	11 17 50.3	
	comp=Z,1.9nm,0.4s,baz=134,slow=5.2,SNR=5.9						
TKL				PKP	PKPdf	11 17 57.1	-0.1
	comp=Z,5.9nm,0.6s,baz=129,slow=8.0,SNR=10						
TKL				SKPbc	SKPbc	11 21 17.9	-0.7
	comp=Z,13nm,0.8s,baz=118,slow=2.3,SNR=8.5						
OXF	Oxford	142.03	11	P	PKPdf	11 17 54.2	-3.7
	baz=346						
KMSC	Kings Mountain	142.24	0	P	PKPdf	11 17 53.6	-4.7
	baz=359						
JCT	Junction City	142.33	27	PKIKP	PKPdf	11 17 56.8	-1.9
JCT	Junction City	142.33	27		PKPdf	11 17 56.8	-1.9
JCT	Junction City	142.33	27	P	PKPdf	11 17 56.8	-1.9
	baz=328						
237A	Washetta, Mont	142.62	21		PKPdf	11 17 57.3	-1.7
X54A	Belton	142.81	2	P	PKPdf	11 17 56.8	-2.5
	baz=358						
X56A	White Oak	142.89	0	P	PKPdf	11 17 56.0	-3.4
	baz=360						
X55A	Gracelyn & Ava	142.91	1	P	PKPdf	11 17 56.6	-2.9
	baz=359						
X57A	Johnson Farm,	142.91	359	P	PKPdf	11 17 56.0	-3.5
	baz=1.4						
NATX	Nacogdoches	143.24	20		PKPbc	11 17 58.0	+0.4
NATX	Nacogdoches	143.24	20	P	PKPbc	11 17 57.8	+0.2
	baz=337						
Y52A	Lilburn	143.40	4	P	PKPab	11 17 57.4	+0.6
	baz=355						
Z50A	Ashland	143.82	7		PKPbc	11 17 59.1	-0.2
Z50A	Ashland	143.82	7	P	PKPbc	11 17 59.0	-0.2
	baz=352						
GOGA	Godfrey	143.89	4	P	PKPbc	11 17 59.7	+0.3
	baz=356						
LRAL	Lakeview Retre	143.89	9		PKPab	11 17 59.1	+0.4
LRAL	Lakeview Retre	143.89	9	P	PKPab	11 17 59.0	+0.2
	baz=350						
VBMS	Vicksburg	144.00	14	P	PKPbc	11 17 59.7	0.0
	baz=344						
Z58A	St. Stephen	144.03	358	P	PKPab	11 17 59.4	+0.2
	baz=1.9						
Z57A	Bowman	144.08	360	P	PKPbc	11 18 00.3	+0.4
	baz=0.4						
342A	Flagon Creek P	144.33	17		PKPdf	11 18 02.0	0.0
833A	Chaparral WMA,	144.34	29		PKPdf	11 18 02.5	+0.3
833A	Chaparral WMA,	144.34	29	P	PKPdf	11 18 02.4	+0.3
	baz=327						
152A	Waverly Hall	144.53	5		PKPbc	11 18 01.7	+0.3
344A	Westbrook Farm	144.68	15		PKPdf	11 18 03.0	+0.4
157A	Early Branch	144.70	0	P	PKPdf	11 18 02.4	-0.3
	baz=360						
154A	Montrose	144.71	3		PKPdf	11 18 02.5	-0.2
250A	Grady	145.04	8		PKPdf	11 18 03.5	+0.2
346A	Big Creek Wild	145.04	13		PKPdf	11 18 04.0	+0.8
BDFB	Brasilia	145.13	246	PKPbc	PKPab	11 18 04.7	+0.6
	comp=Z,65nm,0.7s,baz=112,slow=3.1,SNR=55						
BDFB				SKPbc	SKPbc	11 21 28.2	+0.6
	comp=Z,23nm,0.9s,baz=70,slow=3.2,SNR=8.1						
255A	Hazlehurst	145.42	2		PKPab	11 18 05.0	+0.5
352A	Blakely	145.69	6	PKPdf	PKPdf	11 18 04.3	-0.1
BRAL	Brewton	145.72	9		PKPdf	11 18 03.4	-1.0
BRAL	Brewton	145.72	9	P	PKPab	11 18 06.2	+0.6
	baz=349						
TIGA	Tifton	145.85	4		PKPbc	11 18 05.7	+0.2
TIGA	Tifton	145.85	4	P	PKPab	11 18 05.9	-0.2
	baz=355						
451A	Vernon	146.45	7		PKPab	11 18 08.8	+0.3
456A	Hilliard	146.63	2		PKPab	11 18 08.8	-0.3
GO05	Huala	146.88	194		PKPbc	11 18 09.0	+0.5
ZAIG	Zacatecas	146.98	39		PKPab	11 18 11.4	+0.3
CPUP	Villa Florida	147.42	222	PKPbc	PKPbc	11 18 10.2	+0.1
	comp=Z,25nm,0.7s,baz=107,slow=1.8,SNR=25						
CPUP				pPKPbc	pPKPdf	11 18 53.5	+0.7
	comp=Z,23nm,1.0s,baz=103,slow=4.8,SNR=5.0						
CPUP				SKPbc	SKPbc	11 21 31.6	-0.7
	comp=Z,6.3nm,1.0s,baz=106,slow=2.0,SNR=3.0						
656A	Willston	147.97	3		PKPbc	11 18 12.2	+0.8
PEL	Peldehue	148.32	197	PKP2	PKPbc	11 18 13.0	+0.6
PEL	Peldehue	148.32	197		PKPbc	11 18 13.0	+0.6
ROC1	El Roble	148.57	196		PKPbc	11 18 13.2	-0.1
CFA	Coronel Fontan	148.95	201	PKPbc	PKPbc	11 18 14.3	+0.2
	comp=Z,55nm,0.6s,baz=251,slow=2.5,SNR=67						
DWPF	Disney Wildern	149.25	1		PKPbc	11 18 15.3	+0.5
DWPF	Disney Wildern	149.25	1	P	PKPbc	11 18 15.2	+0.4
	baz=359						
MOIG	Morelia	150.10	41		PKiKP	11 18 18.4	+0.2
MDP	Montagnes des	150.62	285	PKPbc	PKiKP	11 18 19.0	-0.1
	comp=Z,31nm,0.6s,baz=62,slow=2.4,SNR=20						
GO04	Tololo Observa	151.13	198		PKPbc	11 18 19.6	0.0
SMRT	St. Maarten	152.78	320		PKPdf	11 18 14.9	-1.1
SMRT				PKPbc	PKPbc	11 18 23.0	-0.3
SMRT				PKPab	PKPab	11 18 35.0	+0.3
GO03	Copiap	153.30	202		PKPbc	11 18 24.3	0.0
SJG	San Juan	154.59	325	PKPbc	PKPbc	11 18 26.9	-0.2
	comp=Z,3.4nm,0.3s,baz=275,slow=12,SNR=2.9						
SJG				PKPab	PKPab	11 18 42.4	+0.1
	comp=Z,15nm,0.5s,baz=25,slow=5.1,SNR=6.8						
SJG	San Juan	154.59	325	PKP2	PKPab	11 18 43.1	+0.8
SJG	San Juan	154.59	325		PKPab	11 18 43.1	+0.8
DR12	Loma Pena Alta	155.69	332		PKPab	11 18 48.0	+0.9
CMIG	Matias Romero	155.93	34	PKP	PKPdf	11 18 20.9	+0.5
	comp=Z,1.6nm,0.6s,baz=244,slow=2.3,SNR=3.9						
CMIG				PKPab	PKPab	11 18 47.5	-0.5
	comp=Z,2.5nm,0.4s,baz=302,slow=3.9,SNR=5.5						
SDDR	Presa de Saban	156.34	337		PKPab	11 18 50.0	+0.2
SIV	San Ignacio	156.44	235	PKP	PKPdf	11 18 21.3	+0.1
	comp=Z,2.7nm,0.7s,baz=134,slow=7.1,SNR=7.4						
SIV				PKPab	PKPab	11 18 51.0	+0.5
	comp=Z,7.8nm,0.6s,baz=120,slow=5.9,SNR=15						
SIV				PP	PP	11 22 29.2	+0.7
	comp=Z,3.2nm,0.9s,baz=124,slow=6.4,SNR=4.7						
LVC	Limon Verde	157.10	210	PKPab	PKPab	11 18 54.6	+1.2
	comp=Z,26nm,0.7s,baz=187,slow=0.7,SNR=28						
LVC	Limon Verde	157.10	210		PKPab	11 18 55.1	+1.6
PB01	IPOC Station P	158.70	211		PKPab	11 19 01.4	+1.3
PTGA	Pitinga	158.90	275	PKPab	PKPab	11 19 01.5	+0.2
	comp=Z,26nm,0.7s,baz=82,slow=4.9,SNR=35						
PTGA	Pitinga	158.90	275	PKPdf	PKPdf	11 18 23.7	-0.6
PTGA					PKPab	11 19 02.2	+0.9
PLCV	Puerto La Cruz	159.20	309		PKPab	11 19 01.1	-1.3
PCRV	Puerto La Cruz	159.23	309	PKPab	PKPab	11 19 01.1	-1.5
	comp=Z,7.0nm,0.5s,baz=12,slow=5.8,SNR=5.7						
GO01	Chusmiza	159.67	214		PKPab	11 19 05.7	+0.8
PB11	IPOC Station P	159.85	212		PKPab	11 19 06.4	+1.2
MNMC	Minye Minye	160.33	214		PKPab	11 19 08.7	+1.3
SAML	Samuel	161.29	250	PKP2	PKPab	11 19 11.4	-0.3
SAML	Samuel	161.29	250		PKPab	11 19 11.4	-0.3
LPAZ	La Paz	161.59	223	PKP	PKPdf	11 18 28.6	+0.6
	comp=Z,8.1nm,0.8s,baz=68,slow=1.2,SNR=13						
LPAZ				PKPab	PKPab	11 19 13.7	+0.2
	comp=Z,12nm,0.7s,baz=139,slow=3.2,SNR=17						
LPAZ				PP	PP	11 22 55.5	-1.1
	comp=Z,1.7nm,0.9s,baz=57,slow=3.9,SNR=4.4						
LPAZ	La Paz	161.59	223		PKPdf	11 18 28.2	+0.3
LPAZ					PKPab	11 19 13.9	+0.4
SDV	Santo Domingo	164.46	319	PKPab	PKPab	11 19 25.8	+0.2
	comp=Z,45nm,0.7s,baz=30,slow=3.3,SNR=35						
SDV				PP	PP	11 23 11.4	+0.2
	comp=Z,9.1nm,0.8s,baz=357,slow=2.5,SNR=7.8						
SDV	Santo Domingo	164.46	319	PKPdf	PKPdf	11 18 29.1	-1.1
SDV					PKPab	11 19 26.0	+0.4
ROSC	El Rosal	169.90	319	PKP	PKPdf	11 18 34.9	+0.5
	comp=Z,4.8nm,0.3s,baz=353,slow=23,SNR=4.8						
ROSC				PKPab	PKPab	11 19 50.8	+0.9
	comp=Z,27nm,0.6s,baz=86,slow=7.1,SNR=8.9						
ROSC				PP	PP	11 23 40.8	+1.5
	comp=Z,11nm,0.5s,baz=86,slow=10,SNR=4.6						
ROSC	El Rosal	169.90	319	PKPdf	PKPdf	11 18 35.0	+0.5
ROSC					PKPab	11 19 49.4	-0.5
OTAV	Otavalo	176.06	320	PKP2	PKPab	11 20 18.4	+1.1
OTAV						12 18 37.2	
OTAV	Otavalo	176.06	320		PKPdf	11 18 37.2	+0.1
OTAV					PKPab	11 20 18.4	+1.1

*IDC **15** 11:06:41.2±1.9, 33°.41S×178°.75W, h0km, mb3.9/2, mb1 4.2/3, mb1mx3.9/40, mbtmp4.0/3, ML4.1/1, Error ellipse: s-maj=63.8km s-min=38.1km az=138.0*
*WEL **15** 11:06:45.9±0.6, 33°S±12°×17°9W±2°8, h33km, M4.8/7, mB4.7/2, ML4.8/7, MLv4.8/7, Mw(mB)4.0/2*
*NEIC **15** 11:06:45.2±0.9, 33°.7S±0°.1×178°.6W±0°.2, h35km±2km, mb4.2/5, Error ellipse: s-maj=25.4km s-min=18.6km az=134.0*
ISC 15 11:06:45.1±1.0, **33°.55S**±0°.08×**178°.6W**±0°.1, **h35km, n29,** σ**0ˢ.98**/39, **mb4.2**/5, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	4.32	8	S	Sn	11 08 35.0	-2.4
RUGZ	Raukumara Rang	5.33	213	P	Pn	11 08 03.0	+0.7
RUGZ				S	Sn	11 09 03.1	+0.6
TKGZ	Te Karaka	5.65	209	P	Pn	11 08 08.1	+1.5
TKGZ				S	Sn	11 09 09.4	-0.8
MWZ	Matawai	5.70	212	P	Pn	11 08 07.5	+0.2
MWZ				S	Sn	11 09 10.9	-0.6
URZ	Urewera	5.83	215	Pn	Pn	11 08 09.3	+0.2
	5.3nm,0.3s,baz=271,slow=4.3,SNR=18						
URZ				Sn	Sn	11 09 12.5	-2.2
	3.9nm,0.3s,baz=115,slow=23,SNR=6.5						
URZ	Urewera	5.83	215		Pn	11 08 08.5	-0.5
URZ					Sn	11 09 13.4	-1.2
URZ	Urewera	5.83	215	P	Pn	11 08 09.4	+0.3
URZ				S	Sn	11 09 14.4	-0.2
RIGZ	Rimuhau	5.91	209	P	Pn	11 08 10.4	+0.2
RIGZ				S	Sn	11 09 15.4	-1.3
KNZ	Kokohu	6.22	208	P	Pn	11 08 16.3	+1.9
RAHZ	Arahi	6.37	212	P	Pn	11 08 17.1	+0.6
RAHZ				S	Sn	11 09 27.1	-1.0
MTHZ	Maungataniwha	6.43	213	P	Pn	11 08 18.3	+1.0
MTHZ				S	Sn	11 09 28.7	-0.8
OUZ	Omahuta	6.64	253	Pn	Pn	11 08 20.9	+0.7
NMHZ	Naumai	6.65	212	P	Pn	11 08 20.8	+0.5
NMHZ				S	Sn	11 09 34.5	-0.3
BKZ	Black Stump Fm	6.84	214	Pn	Pn	11 08 22.0	-1.1
HIZ	Hauiti	7.23	225	Pn	Pn	11 08 28.4	+0.1
LTZ	Lake Taylor	11.66	215	Pn	Pn	11 09 27.7	-1.3
STKA	Stephens Creek	33.37	262	P	P	11 13 20.6	+0.5
STKA				IAmb	IAmb	11 13 30.4	
	comp=Z,5.0nm,1.5s						
AS31	Alice Springs	42.50	271	P	P	11 14 37.2	-0.1
ASAR	Alice Springs	42.50	271	P	P	11 14 37.5	+0.2
	comp=Z,1.1nm,0.7s,baz=105,slow=7.6,SNR=4.5						
ASAR	Alice Springs	42.50	271	P	P	11 14 36.6	-0.7
WR0	Warramunga Arr	43.60	276	P	P	11 14 46.5	+0.3
WB2	Warramunga Arr	43.77	276	P	P	11 14 48.1	+0.6
WB2				IAmb	IAmb	11 14 56.3	
	comp=Z,9.3nm,1.4s						
WRA	Warramunga Arr	43.78	276	P	P	11 14 48.2	+0.6
	comp=Z,0.7nm,0.4s,baz=116,slow=8.3,SNR=7.5						
WB0	Warramunga Arr	43.81	276	P	P	11 14 48.6	+0.7
WB0				IAmb	IAmb	11 14 50.6	
	comp=Z,3.7nm,0.9s						
QSPA	South Pole Qui	56.57	180	P	P	11 16 23.2	-0.8
FINES	FINESS Array B	147.88	338	PKPbc	PKPbc	11 26 26.6	+0.9
	comp=Z,2.5nm,0.8s,baz=48,slow=2.1,SNR=11						
FINES	FINESS Array B	147.88	338		PKPbc	11 26 26.8	+1.1
NOA	NORSAR Array B	151.76	350	PKPbc	PKiKP	11 26 36.6	+0.9
	comp=Z,0.6nm,0.6s,baz=13,slow=4.1,SNR=2.4						
BRTR	Keskin Array B	153.47	293	PKPbc	PKiKP	11 26 40.8	+0.7
	comp=Z,0.6nm,0.7s,baz=80,slow=3.2,SNR=3.5						

*ATH **15** 11:15:12.5, 37°.56N×25°.62E, h27km±1km, ML2.6/14, Error ellipse: s-maj=1.2km s-min=0.8km az=344.0*
*THE **15** 11:15:13.8, 37°.56N×25°.61E, h8km±1km, ML2.7/6, Error ellipse: s-maj=1.4km s-min=0.5km az=98.0*
*DDA **15** 11:15:26.2, 38°.01N×26°.94E, h41km±3km, ML1.5*
ISC 15 11:15:13.4±0.9, **37°.57N**±0°.02×**25°.66E**±0°.02, **h22km**±9km, **n41,** σ**0ˢ.98**/64, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNSA	Tinos	0.40	266	P	Pb	11 15 21.2	-0.6
TNSA				S	Sb	11 15 26.5	-1.0
TNSA				AML	AML	11 15 27.0	
	comp=N,1529µm,0.2s						
TNSA				AML	AML	11 15 27.0	
	comp=E,1669µm,0.3s						
APE	Apeiranthos	0.51	192	P	Pb	11 15 23.1	-0.6
APE				S	Sb	11 15 31.2	+0.5
APE	Apeiranthos	0.51	192	P	Pb	11 15 22.9	-0.9
APE				AML	AML	11 15 34.7	
	comp=N,605µm,0.2s						
APE				AML	AML	11 15 35.8	
	comp=E,477µm,0.2s						
AMGA	Amorgos Island	0.76	166	P	Pb	11 15 27.8	-0.1
AMGA				S	Sn	11 15 39.9	+0.4
	comp=E,608nm,0.3s						
AMGA	Amorgos Island	0.76	166	P	Pb	11 15 27.6	-0.3
AMGA				S	Sb	11 15 37.9	+0.1
AMGA				AML	AML	11 15 40.5	
	comp=E,1182µm,0.2s						
AMGA				AML	AML	11 15 41.4	
	comp=N,1061µm,0.3s						
CHOS	Chios island	0.88	21	P	Pn	11 15 30.6	+0.1
CHOS				S	Sn	11 15 43.9	+1.3
	comp=N,462nm,0.3s						
CHOS	Chios island	0.88	21	P	Pn	11 15 30.0	-0.5
CHOS				S	Sb	11 15 41.6	+0.3
CHOS				AML	AML	11 15 47.7	
	comp=E,1125µm,0.3s						
CHOS				AML	AML	11 15 47.7	
	comp=N,752µm,0.3s						
IOSP	Ios island	0.89	200	P	Pb	11 15 30.5	+0.3
IOSP				S	Sn	11 15 42.8	-0.1
	comp=N,775nm,0.2s						
IOSP	Ios island	0.89	200	P	Pn	11 15 30.4	-0.3
IOSP				S	Sn	11 15 42.4	-0.5
IOSP				AML	AML	11 15 45.1	
	comp=E,1671µm,0.3s						
IOSP				AML	AML	11 15 45.9	
	comp=N,1389µm,0.2s						
SMG	Samos	0.94	81	P	Pb	11 15 32.0	+0.9
SMG	Samos	0.94	81	P	Pn	11 15 31.3	-0.1
SMG				S	Sb	11 15 44.2	+1.1
SMG				AML	AML	11 15 46.6	
	comp=E,439µm,0.4s						
SMG				AML	AML	11 15 47.2	
	comp=N,344µm,0.4s						
PSRA	Psara	0.98	355	P	Pb	11 15 32.4	+0.7
PSRA				S	Sn	11 15 45.5	+0.6
SERI	Serifos	1.02	247	P	Pb	11 15 32.5	0.0
SERI	Serifos	1.02	247	P	Pn	11 15 32.1	-0.4
SERI				S	Sn	11 15 45.2	-0.9
SERI				AML	AML	11 15 46.4	
	comp=E,998µm,0.4s						
SERI				AML	AML	11 15 46.7	
	comp=N,951µm,0.4s						
KARY	Karystos	1.08	296	P	Pb	11 15 33.3	-0.1
KARY				S	Sb	11 15 48.1	+1.1
	comp=N,170nm,0.3s						
KARY	Karystos	1.08	296	P	Pn	11 15 33.0	-0.2
KARY				S	Sn	11 15 46.5	-1.0
KARY				AML	AML	11 15 48.5	
	comp=E,218µm,0.2s						
KARY				AML	AML	11 15 49.1	
	comp=N,457µm,0.4s						
DGB	zmir	1.08	63	*i* P	Pn	11 15 33.1	-0.2
DGB				*i* S	Sn	11 15 43.7	-3.8
DGB				IAML		11 15 49.0	
	comp=E,48nm,0.4s						
DGB				IAML		11 15 49.0	
	comp=N,65nm,0.5s						
URLA	Izmir	1.08	43	*i* P	Pn	11 15 33.1	-0.2
URLA				*i* S	Sn	11 15 43.6	-4.1
URLA				IAML		11 15 50.0	
	comp=E,32nm,0.4s						
URLA				IAML		11 15 56.0	
	comp=N,32nm,0.5s						
SAP3	Santorini-Thir	1.16	193	P	Pb	11 15 34.6	-0.1
SAP3				S	Sb	11 15 51.0	+1.7
THR3	Thira Island,	1.17	190	P	Pb	11 15 35.6	+0.6
THR5	Thira Island,	1.18	193	P	Pn	11 15 34.2	-0.3
STAX	Taxiarchis Har	1.18	190	P	Pb	11 15 35.3	+0.1
ANAF	Anafi Island	1.21	176	P	Pn	11 15 35.5	+0.5
ANAF				S	Sb	11 15 53.3	+2.4
	comp=N,918nm,0.3s						
ANAF	Anafi Island	1.21	176	P	Pb	11 15 35.9	+0.2
ANAF				S	Sb	11 15 51.9	+1.0
ANAF				AML	AML	11 15 55.5	
	comp=N,1568µm,0.3s						
ANAF				AML	AML	11 15 57.4	
	comp=E,2046µm,0.3s						
GCAM	G?zelcaml?	1.25	83	*i* P	Pn	11 15 35.1	-0.5
MHLA	Plaka, Milos I	1.29	231	P	Pb	11 15 36.6	-0.4
MHLA				S	Sb	11 15 52.5	-0.6
MHLA				AML	AML	11 16 02.5	
	comp=N,908µm,0.7s						
MHLA				AML	AML	11 16 04.5	

	comp=E,555µm,0.5s						
MHLO	Agia Marina, M	1.33	229	P	Pn	11 15 36.9	+0.1
MHLO				S	Sb	11 15 54.2	-0.3
MHLO	comp=N,1487µm,0.3s			AML	AML	11 15 59.4	
MHLO	comp=E,1830µm,0.4s			AML	AML	11 16 00.4	
DION	Dionisos Attik	1.46	291	P	Pn	11 15 38.7	+0.2
PTL	Penteli	1.50	289	P	Pn	11 15 39.5	+0.4
VLY	Voula,Athens	1.51	281	P	Pn	11 15 39.6	+0.5
VLY	comp=E,140nm,0.5s			S	Sb	11 15 59.5	0.0
VLY	Voula,Athens	1.51	281	P	Pn	11 15 39.3	+0.2
VLY	comp=E,254µm,0.5s			AML	AML	11 16 02.6	
VLY	comp=N,305µm,0.5s			AML	AML	11 16 04.0	
ATHU	Athens Univers	1.54	286	P	Pn	11 15 39.9	+0.3
SIGR	SIGRI	1.65	5	P	Pn	11 15 41.0	0.0
SIGR				S	Sb	11 16 03.8	+0.3
PRK	Paraskevi	1.74	16	P	Pn	11 15 43.8	+1.4
DID	Didima	1.93	269	P	Pn	11 15 45.2	+0.3
DID				S	Sn	11 16 09.0	+0.5
DID	comp=N,105µm,0.3s			AML	AML	11 16 19.7	
DID	comp=E,88µm,0.6s			AML	AML	11 16 20.2	
VIL2	Platees	2.00	290	P	Pn	11 15 46.1	+0.2
VIL2	comp=E,130µm,0.5s			AML	AML	11 16 21.4	
VIL2	comp=N,116µm,0.6s			AML	AML	11 16 24.1	
LTK	Loutraki	2.18	283	P	Pn	11 15 49.1	+0.7
SKIA	Skiathos	2.35	313	P	Pn	11 15 51.3	+0.6
IDI	Anoyia	2.36	196	P	Pn	11 15 50.7	-0.2
KTHA	Kythira Island	2.46	239	P	Pn	11 15 51.9	-0.3
ANKY	Antikythira Is	2.54	229	P	Pn	11 15 54.1	+0.8

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*IDC **15** 11:36:14.9±3.1, 22.°17N×121.°14E, h0^{km}, mb3.3/4, mb1 3.5/4, mb1mx3.2/52, mbtmp3.3/4, Error ellipse: s-maj=291.0km s-min=25.1km az=63.0*

*TAP **15** 11:36:18.7, 21.°93N×120.°55E, h48^{km}, ML3.4, D*

ISC 15 11:36:20.2±1.0**, 21.°91N**±0.°05×**120.°48E**±0.°03**, h40**^{km}±7^{km}**, n95,** σ1^{s}**21**/161**, mb3.3**/4**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HEN	Hengchun baz=78	0.26	68	*i* P	Pn	11 36 26.9	-1.1
HEN	baz=78			*i* S	Sn	11 36 32.8	-0.7
TWK1	Hengchun baz=87	0.30	83	P	Pn	11 36 27.5	-1.0
TWK1	baz=87			S	Sn	11 36 33.8	-0.5
TWKBT	Hengchun baz=87	0.31	84	P	Pn	11 36 27.4	-1.1
TWKBT	baz=87			S	Sn	11 36 33.7	-0.7
TSEB	Hengchuen, Pin baz=96	0.39	91⇑	*i*P	Pn	11 36 28.4	-1.1
TSEB	baz=96			*i* S	Sn	11 36 35.6	-0.4
TWP	Hsiaoliuchiu baz=328	0.45	346	P	Pn	11 36 30.4	+0.1
TWP	baz=328			*i* S	Sn	11 36 39.5	+2.1
WLCH	Liuqiu baz=329	0.45	348	P	Pn	11 36 30.2	-0.1
WLCH	baz=329			S	Sn	11 36 39.3	+1.9
SCZT	Fangliau baz=9.0	0.48	15	*i* P	Pn	11 36 29.4	-1.2
SCZT	baz=9.0			S	Sn	11 36 36.7	-1.4
SSPT	Xinbi baz=9.0	0.58	8	*i* P	Pn	11 36 31.2	-0.8
SSPT	baz=9.0			S	Sn	11 36 40.4	+0.1
EAST	Anshuo baz=40	0.58	36	*i* P	Pn	11 36 31.1	-1.0
EAST	baz=40			*i* S	Sn	11 36 40.0	-0.6
TAW	Tawu baz=37	0.59	41	*i* P	Pn	11 36 31.1	-1.0
TAW	baz=37			*i* S	Sn	11 36 39.9	-0.8
KAU	Kaohsiung baz=341	0.68	346	*e*S	Sn	11 36 43.9	+1.2
MASBT	Mashibuluo baz=17	0.71	11	P	Pn	11 36 32.4	-1.4
MASBT	baz=17			*e*S	Sn	11 36 42.7	-1.0
WSSB	Gushan baz=340	0.76	344	P	Pn	11 36 33.8	-0.7
WSSB	baz=340			S	Sn	11 36 45.4	+0.6
ECL	Taimali baz=26	0.81	32	*i* P	Pn	11 36 34.1	-1.1
ECL	baz=26			*e*S	Sn	11 36 45.0	-1.0
SNJT	Kaohsiung City baz=335	0.85	351	*e*P	Pn	11 36 35.1	-0.7
SNJT	baz=335			*e*S	Sn	11 36 47.8	+0.8
TWM1	Shoushan baz=353	0.91	357	P	Pn	11 36 36.7	+0.1
TWM1	baz=353			*e*S	Sn	11 36 49.1	+0.6
LAY	Lan-yu baz=75	1.00	82	P	Pn	11 36 36.6	-1.1
TWG	Pinlang baz=39	1.06	31	P	Pn	11 36 38.0	-0.6
TWGBT	Beinan baz=38	1.06	31	P	Pn	11 36 37.5	-1.1
TWGBT	baz=38			*e*S	Sn	11 36 50.9	-1.2
SLGT	Liugui baz=5.0	1.09	8	P	Pn	11 36 38.2	-0.9
SLGT	baz=5.0			*e*S	Sn	11 36 51.8	-1.1
CHN3	Shinhua baz=352	1.17	355	*e*P	Pn	11 36 39.4	-0.6
CHN3	baz=352			*e*S	Sn	11 36 57.3	+2.5
SGST	Jiashian baz=2.0	1.17	5	P	Pn	11 36 38.9	-1.3
TWH	Lutao baz=44	1.22	49	P	Pn	11 36 39.3	-1.4
TWH	baz=44			*e*S	Sn	11 36 53.6	-2.5
CHN1	Nanshi baz=348	1.27	2	*i* P	Pn	11 36 40.8	-0.8
CHN1	baz=348			*e*S	Sn	11 36 57.2	-0.2
STYT	Tauyuan	1.27	11	P	Pn	11 36 40.0	-1.6
SCLT	Jiali baz=346	1.29	348	*e*S	Sn	11 36 57.5	-0.2
SNST	Tainan City baz=358	1.30	1	P	Pn	11 36 41.8	-0.2
WTP	Ta-pu baz=3.0	1.34	5	P	Pn	11 36 41.2	-1.2
WTP	baz=3.0			*e*S	Sn	11 36 58.7	-0.4
TWK	Hsinying baz=358	1.35	0	*e*P	Pn	11 36 42.6	-0.1
TWK	baz=358			*e*S	Sn	11 36 59.3	-0.1
ELDTW	Lidau baz=8.0	1.37	21	*i* P	Pn	11 36 42.2	-0.7
TPUB	Ta-pu baz=352	1.39	6	P	Pn	11 36 41.9	-1.3
CHN4	Tsaushan baz=350	1.44	4	*i* P	Pn	11 36 42.5	-1.3
FULB	Fuli baz=38	1.49	30	*i* P	Pn	11 36 44.5	0.0
WDGT	Dungji baz=329	1.54	331	*i* P	Pn	11 36 43.6	-1.6
WDGT	baz=329			S	Sn	11 37 01.4	-2.7
CHY	Chiayi baz=356	1.58	358	*e*S	Sn	11 37 02.9	-2.2
VCHM	Qimei baz=332	1.62	323	P	Pn	11 36 44.5	-1.7
VCHM	baz=332			S	Sn	11 37 03.8	-2.1
TWF1	Yuli baz=15	1.62	27	*i* P	Pn	11 36 46.9	+0.6
TWF1	baz=15			*i* S	Sn	11 37 05.6	-0.4
YUS	Yu-Shan baz=4.0	1.63	15	P	Pn	11 36 45.9	-1.0
YULB	Yu-li baz=38	1.66	27	P	Pn	11 36 46.9	+0.1
YULB	baz=38			*e*S	Sn	11 37 05.5	-1.4
CHN5	Tsauling baz=354	1.69	6	P	Pn	11 36 46.1	-1.2
CHN5	baz=354			*e*S	Sn	11 37 06.8	-1.0
WSF	Szhu baz=350	1.74	352	*e*P	Pn	11 36 47.6	-0.3
WSF	baz=350			S	Sn	11 37 07.2	-1.7
EHY	Hungye baz=24	1.77	26	*i* P	Pn	11 36 48.1	-0.2
EHY	baz=24			*e*S	Sn	11 37 08.6	-1.1
WDLH	Douliu baz=350	1.77	2	P	Pn	11 36 47.3	-1.1
WDLH	baz=350			S	Sn	11 37 08.3	-1.4
HGSD	Ruisui baz=17	1.80	29	*e*P	Pn	11 36 49.4	+0.6
HGSD	baz=17			*e*S	Sn	11 37 11.3	+0.9
PHUB	P'eng-hu baz=331	1.81	332	P	Pn	11 36 46.9	-1.9
PHUB	baz=331			S	Sn	11 37 07.2	-3.3
WHYT	Xinyi Township baz=359	1.81	11	P	Pn	11 36 48.2	-0.8
WHYT	baz=359			*e*S	Sn	11 37 10.0	-0.7
PNG	Penghu baz=331	1.86	333	P	Pn	11 36 47.8	-1.8
PNG	baz=331			S	Sn	11 37 10.8	-1.0
WJS	Zhushan baz=355	1.92	7	P	Pn	11 36 49.4	-1.0
SSLB	Suanglung baz=11	1.92	13	P	Pn	11 36 49.6	-0.8
SSLB	baz=11			*e*S	Sn	11 37 13.9	+0.4
VWDT	VWDT baz=5.0	1.94	18	P	Pn	11 36 50.5	-0.1
VWDT	baz=5.0			*e*S	Sn	11 37 13.5	-0.1
EGFH	Guangfu baz=37	1.96	26	P	Pn	11 36 50.1	-0.9
EGFH	baz=37			*e*S	Sn	11 37 13.0	-1.3
WNT	Mingjian baz=4.0	1.97	5	*e*P	Pn	11 36 49.9	-1.2
WNT	baz=4.0			S	Sn	11 37 13.2	-1.3
RLNB	Erlin baz=355	1.98	357	*e*P	Pn	11 36 50.4	-0.8
RLNB	baz=355			S	Sn	11 37 14.0	-0.7
SMLT	Sun Moon Lake baz=358	2.00	11	P	Pn	11 36 50.9	-0.7
SMLT	baz=358			*e*S	Sn	11 37 15.8	+0.3
TYC	Yuchr baz=358	2.02	10	P	Pn	11 36 50.5	-1.2
TYC	baz=358			S	Sn	11 37 14.7	-1.0
ESL	Shilin baz=35	2.09	25	*i* P	Pn	11 36 53.1	+0.4
ESL	baz=35			*e*S	Sn	11 37 16.0	-1.6
OWD	Renai baz=6.0	2.13	17	P	Pn	11 36 53.0	-0.5
OWD	baz=6.0			S	Sn	11 37 18.0	-0.9
DPDB	Guoxing baz=359	2.15	11	P	Pn	11 36 53.0	-0.7
WCHH	Zhanghua	2.16	2	*e*S	Sn	11 37 18.5	-0.8
CHGB	Renai baz=5.0	2.23	16	P	Pn	11 36 54.8	-0.2
TCU	Taichung baz=3.0	2.24	5	*e*P	Pn	11 36 54.0	-0.7
TCU	baz=3.0			*e*S	Sn	11 37 20.5	-0.6
WHP	Taichung City baz=9.0	2.40	10	*i* P	Pn	11 36 56.3	-0.7
WHP	baz=9.0			S	Sn	11 37 24.5	-0.7
TDCB	Techi baz=4.0	2.42	15	*e*P	Pn	11 36 56.9	-0.5
TDCB	baz=4.0			*e*S	Sn	11 37 25.7	-0.1
TWT	Tachien baz=4.0	2.42	15	*e*S	Sn	11 37 25.3	-0.6
WDJ	Dajia District baz=2.0	2.43	3	*e*S	Sn	11 37 25.8	-0.2
TWQ1	Liyutan baz=5.0	2.44	6	S	Sn	11 37 26.0	-0.3
ETLH	Xiulin Townshi baz=10.0	2.47	22	P	Pn	11 36 57.8	-0.2
ETLH	baz=10.0			*e*S	Sn	11 37 26.3	-0.7
NACB	Ninganchiao baz=23	2.48	24	P	Pn	11 36 57.0	-1.1
NACB	baz=23			*e*S	Sn	11 37 25.1	-2.0
NNSB	Datong baz=17	2.64	18	P	Pn	11 37 00.8	+0.4
NNSB	baz=17			*e*S	Sn	11 37 30.5	-0.8
NNSH	Datong baz=17	2.64	18	P	Pn	11 37 00.7	+0.2
NNSH	baz=17			*e*S	Sn	11 37 29.9	-1.4
NNS	Nan Shan baz=6.0	2.65	18	P	Pn	11 37 01.4	+0.9
NSTT	Nanjuang baz=9.0	2.75	10	*e*P	Pn	11 37 01.1	-0.7
NSTT	baz=9.0			S	Sn	11 37 33.3	-0.5
ENA	Nanau baz=24	2.76	25	*e*S	Sn	11 37 30.8	-3.4
LIOB	Emei baz=357	2.77	10	P	Pn	11 37 01.8	-0.3
LIOB	baz=357			S	Sn	11 37 33.1	-1.2
NDT	Datong Townshi baz=7.0	2.84	19	P	Pn	11 37 04.6	+1.4
NDT	baz=7.0			*e*S	Sn	11 37 36.2	+0.1
YHNB	Yeheng baz=15	2.87	16	P	Pn	11 37 03.9	+0.3
YHNB	baz=15			*e*S	Sn	11 37 36.4	-0.5
NSK	Sanguang baz=15	2.87	16	P	Pn	11 37 04.5	+0.9
NSK	baz=15			*e*S	Sn	11 37 36.1	-0.8
ENTT	Nioudou baz=31	2.90	20	P	Pn	11 37 05.0	+1.2
ENTT	baz=31			*e*S	Sn	11 37 35.6	-1.8
NWLT	Wulai baz=6.0	3.01	18	*e*P	Pn	11 37 05.3	-0.1
EOS1	EOS1 baz=38	3.03	30	S	Sn	11 37 39.4	-1.3
KNM	Kinmen baz=320	3.13	323	S	Sn	11 37 43.3	+0.2
KNMB	Chin-men Tao baz=322	3.19	323	P	Pn	11 37 07.2	-0.7
KNMB	baz=322			*e*S	Sn	11 37 43.1	-1.5
VWUC	VWUC baz=342	3.21	343	P	Pn	11 37 07.0	-1.1
VWUC	baz=342			*e*S	Sn	11 37 43.6	-1.6
ZPLA	Ao Xicun baz=308	3.22	309	P	Pn	11 37 07.2	-1.1
ZPLA	baz=308			S	Sn	11 37 44.4	-1.1
TIPB	Shuangxi baz=29	3.29	22	P	Pn	11 37 09.9	+0.6
TIPB	baz=29			*e*S	Sn	11 37 45.1	-2.1
PTMZ	Houxiangcun baz=337	3.36	338	*e*P	Pn	11 37 10.0	-0.1
PTMZ	baz=337			*e*S	Sn	11 37 47.4	-1.4
AXDP	Jialang baz=322	3.77	323	*e*P	Pn	11 37 14.9	-0.9
AXDP	baz=322			*e*S	Sn	11 37 57.4	-1.5
MATB	Ma-tsu baz=2.0	4.25	353	*e*P	Pn	11 37 20.9	-1.6
MATB	baz=2.0			*e*S	Sn	11 38 07.5	-3.3
MHZQ	Yeshan baz=342	4.38	343	*e*P	Pn	11 37 23.2	-1.0
MHZQ	baz=342			*e*S	Sn	11 38 11.6	-2.4
LYJJ	Jianjiangzhen baz=1.0	4.67	352	*e*P	Pn	11 37 27.5	-0.7
LYJJ	baz=1.0			*e*S	Sn	11 38 19.9	-1.1
XPSS	Dashiqiu baz=5.0	5.01	357	*e*P	Pn	11 37 31.9	-0.9
XPSS	baz=5.0			*e*S	Sn	11 38 26.3	-3.1
MKAR	Makanchi Array 0.2nm,0.5s,baz=116,slow=9.2,SNR=3.3	39.55	318	P	P	11 43 49.3	+1.9
ZALV	Zalesovo Beam 0.6nm,0.5s,baz=134,slow=8.3,SNR=2.0	41.82	329	P	P	11 44 07.2	+1.2
WRA	Warramunga Arr 0.2nm,0.6s,baz=344,slow=9.1,SNR=1.3	43.74	161	P	P	11 44 22.5	+0.7
ASAR	Alice Springs 0.4nm,0.8s,baz=337,slow=6.4,SNR=1.6	47.15	163	P	P	11 44 49.7	+0.9

MAN 15 11:57:25.0, 12.°72N×121.°51E, h24^{km}, mb4.7, ML3.6, MS3.5, 1C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OTRP	Odiongan	0.61	126	*e*P	Pn	11 57 37.8	-0.5
OTRP				*e*S	Sn	11 57 53.0	+5.6
BOAC	Boac	0.80	24	*e*P	Pn	11 57 41.0	+0.1
BOAC				*e*S	Sn	11 57 52.6	+0.5
PGP	Puerto Galera	0.95	325⇑	*e*P	Pb	11 57 41.4	-1.5
PGP				*e*S	Sb	11 57 55.1	+0.1
LQP	Lukban	1.38	1	*e*P	Pb	11 57 52.9	+2.6
LQP				*i* S	Sb	11 58 16.7	+9.0
TGY	Tagaytay City	1.48	338⇓	*e*P	Pb	11 57 52.2	+0.3
LUBP	Lubang	1.59	309	*e*P	Pn	11 57 52.4	+0.7
LUBP				*e*S	Sb	11 58 12.6	-0.8
CUYO	Cuyo Island	1.92	195	*e*P	Pn	11 57 56.1	-0.2
CUYO				*e*S	Sn	11 58 20.0	+0.3
ENPP	El Nido	2.54	234	*e*P	Pn	11 58 05.8	+1.0
ENPP				*e*S	Sn	11 58 36.6	+1.7

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*NEIC **15** 11:57:48.3±1.6, 27.°4N±0.°1×34.°7E±0.°1, h14^{km}±7^{km}, mb4.0/10, Md4.3(GII), Error ellipse: s-maj=19.7km s-min=14.3km az=125.0*

*GII **15** 11:57:49.3±0.0, 27.°56N×34.°77E, h6^{km}±1^{km}, mb4.4/3, MD4.3/3, Mm3.9/6*

*HLW **15** 11:57:54.0, 27.°85N×34.°66E, h12^{km}±3^{km}, Md3.5*

*IDC **15** 11:57:54.0±1.5, 28.°07N×34.°35E, h0^{km}, mb3.6/9, mb1 3.8/12, mb1mx3.6/57, mbtmp3.7/12, ML3.6/3, MS3.3/1, Ms1 3.3/1, ms1mx2.6/46, Error ellipse: s-maj=28.5km s-min=18.6km az=147.0*

*SGS **15** 11:57:56, 27.°87N×34.°69E, h16^{km}, Ml3.7*

ISC 15 11:57:53.5±1.3**, 27.°85N**±0.°03×**34.°64E**±0.°03**, h12**^{km}±9^{km}**, n108,** σ**0**^{s}**97**/121**, mb3.6**/11**, Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSHS		0.47	18	P	Pb	11 58 04.0	+0.3
RSHS				S	Sb	11 58 10.3	-0.4
TR1	Tor 1 baz=285	0.62	284	P	Pb	11 58 06.7	+0.3
TR1	baz=285			S	Sb	11 58 15.1	-0.1
BDAS	Al Bad`	0.71	35	P	Pb	11 58 07.8	0.0
BDAS				S	Sb	11 58 17.7	+0.2
MWLHS	Almuwaylih	0.79	97	P	Pb	11 58 09.1	0.0
MWLHS				S	Sb	11 58 19.3	-0.5
HDHB	Dhahab baz=358	0.87	359	P	Pg	11 58 10.3	0.0
HKAT	Jabal Katrina baz=319	0.88	320	P	Pb	11 58 10.9	+0.1
HKAT	baz=319			S	Sg	11 58 22.1	+0.1
HHRG	Al Ghardaqah baz=230	1.14	237	P	Pb	11 58 15.0	-0.2
WTBKS	WTBKS	1.15	78	P	Pb	11 58 15.2	-0.3
JLOS		1.16	40	P	Pb	11 58 15.2	-0.4
JLOS				S	Sb	11 58 29.6	-1.1
NUB	Nuweibaa baz=0.0	1.17	0	P	Pb	11 58 14.0	-1.8
HAQS	Haql	1.22	12	P	Pn	11 58 15.5	-0.9
HBST	Basata baz=2.0	1.36	4	P	Pn	11 58 17.5	-0.9
HRDS	Abu Rudays baz=306	1.46	306	P	Pn	11 58 19.6	-0.2
HQLS		1.49	14	P	Pn	11 58 19.8	-0.5
GRB	Gharib baz=285	1.69	285	P	Pn	11 58 22.3	-0.6
TBKS	Tabuk	1.72	77	P	Pn	11 58 24.1	+0.7
EIL	Elat 12nm,0.3s,baz=165,slow=3.7,SNR=180	1.83	9	Pg	Pn	11 58 24.0	-1.0
EIL	63nm,0.3s,baz=74,slow=6.3,SNR=6.3			Lg	Lg	11 58 51.9	
EIL	Elat	1.83	9	Pn	Pn	11 58 23.9	-1.0
EIL				Sn	Sg	11 58 51.6	-0.9
EIL	Elat	1.83	9	Pn	Pn	11 58 23.9	-1.0
EIL				Sn	Sg	11 58 53.2	+0.7
AQBJ	Aqaba	1.90	11	Pn	Pn	11 58 25.3	-0.6
AQBJ	Aqaba	1.90	11	Pn	Pn	11 58 25.3	-0.6
AQBJ				Sn	Sg	11 58 54.3	-0.5
WJHS		1.92	125	P	Pn	11 58 25.7	-0.4
MBRI	Mt Berech	1.95	7	Pn	Pn	11 58 25.8	-0.8
MBRI	Mt Berech	1.95	7	Pn	Pn	11 58 25.8	-0.8
ZNM	Zenema baz=315	2.17	315	P	Pn	11 58 30.4	+0.9
HRFI	Mount Harif	2.20	9	Pn	Pn	11 58 29.4	-0.6
HRFI				Sn	Sb	11 59 01.3	+0.6
HRFI	Mount Harif	2.20	9	Pn	Pn	11 58 29.4	-0.6
KRMI	Paran Flat	2.26	2	Pn	Pn	11 58 30.7	-0.1
KRMI	Paran Flat	2.26	2	Pn	Pn	11 58 30.7	-0.1
BIDS	Bi'r al Bayda'	2.29	115	P	Pn	11 58 31.5	+0.4
ZAF	Zafarana baz=309	2.32	308	P	Pn	11 58 32.1	+0.5
EWJHS	Al Wajh	2.47	133	P	Pn	11 58 33.3	-0.4
NADB	Abo Dabab baz=184	2.50	183	P	Pn	11 58 33.7	-0.5
NADB	baz=184			S	Sn	11 59 02.7	-2.0
PRNI	Paran	2.51	7	Pn	Pn	11 58 34.1	-0.2
PRNI	Paran	2.51	7	Pn	Pn	11 58 34.1	-0.2
SUZ	Suez baz=322	2.54	322	P	Pn	11 58 35.2	+0.6
ZFRI	Zfri	2.73	10	Pn	Pn	11 58 37.4	+0.1
ZFRI	Zfri	2.73	10	Pn	Pn	11 58 37.4	+0.1
ASUT	baz=262	2.77	261	P	Pn	11 58 38.1	+0.4
NBNS	Bani Suef baz=286	3.05	285	P	Pn	11 58 42.3	+0.7
KZIT	Kziot	3.05	356	Pn	Pn	11 58 42.0	+0.3
KZIT				Sn	Sb	11 59 23.1	-1.9
KZIT	Kziot	3.05	356	Pn	Pn	11 58 42.0	+0.3
KZIT				Sn	Sb	11 59 24.9	-0.1
HHAG	Hagoal baz=314	3.06	314	P	Pn	11 58 42.3	+0.6
GLL	Jalalah baz=305	3.09	304	P	Pn	11 58 42.7	+0.5
KOT	Kottamia baz=311	3.21	311	P	Pn	11 58 44.6	+0.7
HSAF	As Saff baz=304	3.23	304	P	Pn	11 58 44.6	+0.5
TAMRE	El Minia baz=268	3.30	268	P	Pn	11 58 45.2	+0.2
KARJ	KARJ	3.38	15	Pn	Pg	11 58 58.3	+0.1
KARJ	KARJ	3.38	15	Pn	Pg	11 58 58.3	+0.1
DAMI2	DAM2	3.38	12	Pn	Pn	11 58 46.8	+0.7
HAGS	Hagol baz=175	3.47	175	P	Pn	11 58 47.5	0.0
YTIR	Yattir	3.52	7	Pn	Pn	11 58 48.9	+0.7

YTIR	Yattir	3.52	7	Pn	Pn	11 58 48.9	+0.7
GHAJ	Ghor Haditha	3.53	13	Pn	Pn	11 58 48.2	-0.1
GHAJ	Ghor Haditha	3.53	13	Pn	Pn	11 58 48.2	-0.1
AMAZ	Amatzia	3.67	4	Pn	Pn	11 58 50.6	+0.3
AMAZ	Amatzia	3.67	4	Pn	Pn	11 58 50.6	+0.3
DSI	Dead Sea	3.76	10	Pn	Pn	11 58 51.4	0.0
BRNS	Bernies	4.01	187	P	Pn	11 58 55.7	+0.8
	baz=188						
BRNS				S	Sn	11 59 39.4	-2.3
	baz=188						
SLTI	Sal'it	4.39	4	Pn	Pn	11 59 00.6	+0.6
SLTI	Sal'it	4.39	4	Pn	Pn	11 59 00.6	+0.6
HMDT	Nahal Hemdat	4.45	10	Pn	Pn	11 59 01.3	+0.4
HMDT	Nahal Hemdat	4.45	10	Pn	Pn	11 59 01.3	+0.4
MMLI	Mount Malkishu	4.62	8	Pn	Pn	11 59 04.1	+0.8
MMLI	Mount Malkishu	4.62	8	Pn	Pn	11 59 04.1	+0.8
OFRI	`Ofer	4.76	4	Pn	Pn	11 59 06.4	+1.2
OFRI	`Ofer	4.76	4	Pn	Pn	11 59 06.4	+1.2
MMA0B	Mount Meron ar	5.19	7	Pn	Pn	11 59 11.6	+0.5
MMA0B	Mount Meron ar	5.19	7	Pn	Pn	11 59 11.6	+0.5
MMAI	Mount Meron Ar	5.19	7	Pn	Pn	11 59 11.7	+0.6
	6.6nm,0.3s,baz=165,slow=16,SNR=29						
MMAI				Pg	Pb	11 59 26.9	+2.7
	5.7nm,0.3s,baz=195,slow=16,SNR=7.8						
MMAI				Lg	Lg	12 00 39.7	
	11nm,0.3s,baz=193,slow=16,SNR=3.0						
KSHT	Keshet	5.21	11	Pn	Pn	11 59 11.8	+0.4
KSHT	Keshet	5.21	11	Pn	Pn	11 59 11.8	+0.4
HNTI	Hanita	5.23	5	Pn	Pn	11 59 12.4	+0.7
HNTI	Hanita	5.23	5	Pn	Pn	11 59 12.4	+0.7
NATI	Neve Ativ	5.47	10	Pn	Pn	11 59 14.9	0.0
NATI	Neve Ativ	5.47	10	Pn	Pn	11 59 14.9	0.0
CSS	Mathiatis	7.17	351	Pn	Pn	11 59 38.4	0.0
KARP	Karpathos	9.97	322	Pn	Pn	12 00 15.8	-0.8
IDI	Anoyia	11.13	314	Pn	Pn	12 00 30.9	-1.7
	0.4nm,0.3s,baz=153,slow=9.0,SNR=4.0						
IDI				Sn	Sn	12 02 38.1	+1.0
	0.3nm,0.3s,baz=294,slow=21,SNR=1.3						
SANT	Santorini	11.51	320	Pn	Pn	12 00 37.5	-0.3
MANT	Manisa	11.76	336	Pn	Pn	12 00 41.5	+0.1
BRTR	Keskin Array B	11.87	356	Pn	Pn	12 00 45.4	+2.6
	0.0nm,0.3s,baz=170,slow=18,SNR=2.8						
BRTR	Keskin Array B	11.87	356		Pn	12 00 43.8	+0.9
ITM	Ithomi	14.18	314	Pn	Pn	12 01 12.0	-2.3
ALN	Alexandroupoli	14.81	334	Pn	Pn	12 01 23.1	+0.3
AGG	Agios Georgios	15.14	321	Pn	Pn	12 01 26.1	-1.1
AGG				IAmb	IAmb	12 01 35.3	
	comp=Z,10nm,1.6s						
KBZ	Khabaz	17.18	21	P	P	12 01 55.7	+0.7
	comp=Z,0.1nm,0.3s,baz=222,slow=14,SNR=1.7						
TIP	Timpagrande	18.67	312	P	P	12 02 10.8	-0.8
TIP				IAmb	IAmb	12 02 22.1	
	comp=Z,7.8nm,1.2s						
ACER	Acerenza	20.07	315	P	P	12 02 26.8	-0.1
BUR08	Bucovina Ar. S	21.09	342	P	P	12 02 36.4	-1.5
INTR	Introdacqua	22.02	315	P	P	12 02 47.6	-0.4
INTR				IAmb	IAmb	12 03 04.2	
	comp=Z,4.2nm,0.5s						
GEYT	Alibeck	22.08	57	P	P	12 02 50.9	+2.4
	comp=Z,3.0nm,0.8s,baz=305,slow=5.2,SNR=5.5						
KEST	Kesra	22.84	296	P	P	12 02 55.4	-1.4
	comp=Z,2.3nm,0.8s,baz=124,slow=3.6,SNR=1.6						
AKASG	Malin Array Be	23.19	351	P	P	12 02 59.2	-0.8
	comp=Z,1.2nm,0.6s,baz=157,slow=8.8,SNR=4.7						
AKASG	Malin Array Be	23.19	351	P	P	12 03 00.2	+0.2
AKBB	Malin Array Si	23.19	351	P	P	12 03 01.2	+1.2
AKBB				IAmb	IAmb	12 03 02.9	
	comp=Z,6.7nm,0.9s						
GERES	GERESS Array B	26.46	328	P	P	12 03 30.1	-0.5
	comp=Z,0.8nm,0.7s,baz=121,slow=7.4,SNR=4.2						
GERES	GERESS Array B	26.46	328	P	P	12 03 30.2	-0.3
TOA0	Torodi Ar. Sit	34.02	251		P	12 04 31.6	-6.0
TORD	Torodi Ar. Bea	34.02	251	P	P	12 04 38.5	+0.9
	comp=Z,0.5nm,0.8s,baz=72,slow=6.2,SNR=3.3						
TORD	Torodi Ar. Bea	34.02	251	P	P	12 04 31.7	-5.9
FINES	FINESS Array B	34.08	353	P	P	12 04 35.9	-1.6
	comp=Z,3.6nm,1.0s,baz=188,slow=8.4,SNR=2.3						
FINES	FINESS Array B	34.08	353	P	P	12 04 36.1	-1.5
KURBB	Kurchatov Arra	40.12	43	P	P	12 05 32.0	+2.9
	comp=Z,1.1nm,0.9s,baz=258,slow=8.4,SNR=3.2						
KURK	Kurchatov	40.20	43	P	P	12 05 27.5	-2.2
MKAR	Makanchi Array	41.63	50	P	P	12 05 44.3	+2.7
	comp=Z,0.5nm,0.7s,baz=275,slow=6.7,SNR=5.2						
PALK	Pallekele	48.09	106	LR	LR	12 26 17.9	
	comp=Z,32nm,20.8s,baz=343,slow=35						
YKA	Yellowknife Ar	86.66	346	P	P	12 10 37.9	+1.1
	comp=Z,0.3nm,0.8s,baz=32,slow=5.5,SNR=4.8						

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*NEIC **15** 12:19:44.5±1.7, 13°.8S±0°.1×66°.6E±0°.1, h10^{km}±1^{km}, mb4.4/10, Error ellipse: s-maj=22.5km s-min=19.8km az=192.0*

*IDC **15** 12:19:44.2±1.1, 13°.69S×66°.52E, h0^{km}, mb3.8/5, mb1 3.9/6, mb1mx3.6/41, mbtmp3.8/6, ML3.7/1, Error ellipse: s-maj=37.1km s-min=30.6km az=16.0*

ISC 15 12:19:44.4±0.8, **13°.7S**±0°.2×**66°.5E**±0°.1, **h10**^{km}, **n27**, σ**1^{s}.22**/24, **mb4.1**/9, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RER	Riviere de l'E	12.64	233	Pn	Pn	12 22 44.2	-0.2
OPO	Ambohidratompo	19.16	253	P	Pn	12 24 09.4	+0.2
	0.2nm,0.3s,baz=84,slow=13,SNR=2.3						
ABPO	Ambohimpanom	19.22	252	P	P	12 24 07.9	-1.2
SHL	Shillong	46.24	32	P	P	12 28 09.9	-0.3
NIL	Nilore	47.56	8	P	P	12 28 21.0	+0.7
NIL				IAmb	IAmb	12 28 26.7	
	comp=Z,4.7nm,1.1s						
H01W3	Cape Leeuwin H	47.72	125	T	T	13 19 28.7	
	baz=284,slow=75,SNR=5.2						
H01W2	Cape Leeuwin H	47.72	125	T	T	13 19 28.9	
	baz=284,slow=75,SNR=6.0						
H01W1	Cape Leeuwin H	47.73	125	T	T	13 19 29.9	
	baz=284,slow=75,SNR=5.3						
MK31	Makanchi Array	61.90	12	P	P	12 30 01.9	-2.2
MK31				IAmb	IAmb	12 30 09.6	
	comp=Z,2.3nm,1.1s						
MKAR	Makanchi Array	61.90	12	P	P	12 30 03.5	-0.6
	comp=Z,0.4nm,0.7s,baz=209,slow=6.2,SNR=3.2						
XAN	Xi'an	62.34	39	P	P	12 30 04.3	-3.1
XAN				IAmb	IAmb	12 30 12.5	
	comp=Z,3.9nm,1.0s						
ABKAR	Akbulak array	62.99	355	P	P	12 30 12.4	+1.2
ASAR	Alice Springs	64.11	110	P	P	12 30 20.3	+1.0
	comp=Z,0.8nm,1.0s,baz=266,slow=5.8,SNR=3.6						
WRA	Warramunga Arr	64.85	106	P	P	12 30 25.9	+1.7
	comp=Z,1.0nm,0.9s,baz=268,slow=5.7,SNR=3.7						
WRA	Warramunga Arr	64.85	106	P	P	12 30 23.9	-0.3
WB2	Warramunga Arr	64.86	106	P	P	12 30 24.0	-0.3
BRVK	Borovoye	66.61	2	P	P	12 30 35.7	+0.9
ZALV	Zalesovo Beam	69.21	11	P	P	12 30 53.5	+2.4
	comp=Z,0.4nm,0.3s,baz=194,slow=5.3,SNR=1.5						
ZALV	Zalesovo Beam	69.21	11	P	P	12 30 51.5	+0.3
SONM	Songino Array	70.86	27	P	P	12 31 02.5	+0.9
	comp=Z,1.0nm,0.7s,baz=216,slow=7.3,SNR=1.9						
SONM	Songino Array	70.86	27	P	P	12 31 01.6	0.0
PSZ	Piszkesteto	74.08	329	P	P	12 31 20.7	-0.1
PSZ				IAmb	IAmb	12 31 26.5	
	comp=Z,3.3nm,0.8s						
DGMT	Dagmar	144.53	349		PKPdf	12 39 21.9	+0.7
PDAR	Pinedale Array	150.88	354	PKPbc	PKiKP	12 39 39.2	+0.8
	comp=Z,0.9nm,0.6s,baz=74,slow=2.2,SNR=9.3						
PDAR	Pinedale Array	150.88	354		PKiKP	12 39 38.7	+0.2
PDAR					PKPab	12 39 45.2	+0.2
NVAR	Mina Array Bea	155.04	9	PKPbc	PKPbc	12 39 49.3	
	comp=Z,0.3nm,0.6s,baz=356,slow=3.6,SNR=2.0						
TXAR	Lajitas Array	162.01	331	PKPab	PKPab	12 40 33.7	+0.9
	comp=Z,0.2nm,0.8s,baz=57,slow=3.5,SNR=2.1						

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*IDC **15** 12:20:36.4±1.1, 14°.00S×66°.28E, h0^{km}, mb3.8/6, mb1 3.9/7, mb1mx3.6/40, mbtmp3.8/7, ML3.9/1, Error ellipse: s-maj=36.5km s-min=26.5km az=30.0*

ISC 15 12:20:37.8±1.1, **14°.0S**±0°.2×**66°.3E**±0°.2, **h10**^{km}, **n12**, σ**0^{s}.74**/9, **mb3.9**/6, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	8.79	45	T	T	12 31 33.1	
	baz=224,slow=76,SNR=119						
H08S2	Diego Garcia H	8.81	45	T	T	12 31 21.0	
	baz=224,slow=76,SNR=91						
H08S3	Diego Garcia H	8.81	45	T	T	12 31 28.3	
	baz=224,slow=76,SNR=112						
OPO	Ambohidratompo	18.85	254	P	Pn	12 24 59.5	+0.6
	0.3nm,0.3s,baz=85,slow=17,SNR=2.2						
BRTR	Keskin Array B	61.49	332	P	P	12 30 54.0	-1.0
	0.5nm,0.8s,baz=167,slow=7.0,SNR=2.5						
MKAR	Makanchi Array	62.22	12	P	P	12 30 60.0	+0.4
	0.5nm,0.6s,baz=205,slow=6.4,SNR=2.4						
ASAR	Alice Springs	64.25	110	P	P	12 31 13.6	-0.1
	0.3nm,0.5s,baz=268,slow=5.8,SNR=5.4						
WRA	Warramunga Arr	65.01	106	P	P	12 31 18.4	-0.3
	1.3nm,1.0s,baz=270,slow=6.4,SNR=4.6						
ZALV	Zalesovo Beam	69.53	12	P	P	12 31 46.7	+0.2
	0.4nm,0.4s,baz=195,slow=4.5,SNR=2.0						
SONM	Songino Array	71.21	27	P	P	12 31 58.2	+1.1
	1.1nm,0.8s,baz=211,slow=7.5,SNR=5.0						
YKA	Yellowknife Ar	131.59	1	PKP	PKiKP	12 39 50.9	-0.6
	0.2nm,0.7s,baz=345,slow=1.9,SNR=3.3						
PDAR	Pinedale Array	151.12	354	PKPbc	PKiKP	12 40 32.2	-0.2
	1.3nm,0.6s,baz=74,slow=2.1,SNR=8.6						

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*IDC **15** 12:26:22.2±0.6, 12°.02N×43°.74W, h0^{km}, mb4.0/20, mb1 4.2/21, mb1mx4.1/40, mbtmp4.1/21, ML4.3/1, MS3.7/7, Ms1 3.7/7, ms1mx3.3/34, Error ellipse: s-maj=16.5km s-min=13.6km az=150.0*

*NEIC **15** 12:26:23.6±1.0, 12°.03N±0°.06×43°.78W±0°.10, h10^{km}±1^{km}, mb4.6/34, Error ellipse: s-maj=16.5km s-min=10.5km az=98.0*

ISC 15 12:26:24.1±0.5, **12°.02N**±0°.09×**43°.77W**±0°.07, **h14**^{km}, **n73**, σ**0^{s}.60**/63, **mb4.3**/35, **MS3.6**/7, **Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDP	Montagnes des	11.14	233	Pn	Pn	12 29 03.1	0.0
	1.9nm,0.3s,baz=42,slow=10,SNR=10						
MDP				Sn	Sn	12 30 57.5	-10
	1.0nm,0.3s,baz=145,slow=15,SNR=1.2						
SVB	Belmont	17.11	276	Pn	Pn	12 30 23.0	0.0
FDF	Fort de France	17.13	281	Pn	Pn	12 30 23.0	-0.2
H05N1	Guadeloupe/Mar	17.30	286	T	T	12 47 55.2	
	SNR=20						
PTGA	Pitinga	20.48	233	P	P	12 31 00.9	-0.8
	4.2nm,0.8s,baz=40,slow=13,SNR=6.1						
PTGA	Pitinga	20.48	233	P	P	12 31 01.7	0.0
PCRV	Puerto La Cruz	20.56	267	LR	LR	12 38 49.4	
	comp=Z,318nm,21.5s,slow=36						
CDVI	St. Croix	21.07	288	P	P	12 31 07.8	-0.2
STVI	Saint Thomas	21.38	290	P	P	12 31 11.7	+0.2
STVI				IAmb	IAmb	12 31 13.1	
	comp=Z,41nm,1.4s						
PDPR	Patillas Dam,	22.30	288	P	P	12 31 21.6	+0.3
PDPR				IAmb	IAmb	12 31 29.3	
	comp=Z,18nm,0.9s						
SJG	San Juan	22.43	288	P	P	12 31 23.7	+1.0
	comp=Z,6.0nm,0.4s,baz=98,slow=9.3,SNR=4.4						
SJG				LR	LR	12 38 29.0	
	comp=Z,174nm,21.9s,baz=90,slow=32						
SJG	San Juan	22.43	288	P	P	12 31 23.1	+0.4
SJG				IAmb	IAmb	12 31 30.3	
	comp=Z,31nm,1.1s						
SDV	Santo Domingo	26.60	266	P	P	12 32 03.1	+0.6
	comp=Z,3.4nm,0.5s,baz=91,slow=9.0,SNR=4.8						
SDV	Santo Domingo	26.60	266	P	P	12 32 02.4	0.0
SDV				IAmb	IAmb	12 32 03.8	
	comp=Z,5.9nm,1.0s						
SAML	Samuel	28.40	224	P	P	12 32 17.8	-0.5
SAML				IAmb	IAmb	12 32 22.2	
	comp=Z,9.1nm,1.2s						
RUSC	La Rusia	29.57	261	P	P	12 32 27.8	-1.6
SIV	San Ignacio	32.68	212	P	P	12 32 57.1	+0.9
	comp=Z,1.4nm,0.8s,baz=66,slow=7.7,SNR=7.5						
H10N3	ASCENSION HYDR	35.16	123	T	T	13 10 36.7	
	baz=303,slow=75,SNR=25						
H10N2	ASCENSION HYDR	35.16	123	T	T	13 10 38.0	
	baz=303,slow=75,SNR=26						
H10N1	ASCENSION HYDR	35.18	123	T	T	13 10 38.1	
	baz=303,slow=75,SNR=27						
H10S3	ASCENSION HYDR	35.65	124	T	T	13 11 13.7	
	baz=279,slow=74,SNR=7.4						
H10S2	ASCENSION HYDR	35.67	124	T	T	13 11 13.5	
	baz=301,slow=74,SNR=5.1						
LPAZ	La Paz	37.04	221	P	P	12 33 34.6	+0.1
	comp=Z,4.1nm,1.0s,baz=22,slow=9.7,SNR=8.9						
LPAZ	La Paz	37.04	221	P	P	12 33 34.2	-0.3
DBIC	Dimbokro	38.73	94	P	P	12 33 48.4	+0.2
	comp=Z,4.8nm,1.0s,baz=280,slow=11,SNR=6.6						
DBIC	Dimbokro	38.73	94	P	P	12 33 48.5	+0.3
ESPN	Las Esperanzas	39.61	275	P	P	12 33 55.1	-0.4
ESPN				IAmb	IAmb	12 33 58.7	
	comp=Z,21nm,0.8s						
CPUP	Villa Florida	40.34	199	LR	LR	12 51 33.7	
	comp=Z,145nm,19.1s,baz=2.5,slow=38						
TKL	Tuckaleechee C	43.08	310	P	P	12 34 25.2	+1.3
	comp=Z,3.2nm,0.7s,baz=128,slow=7.0,SNR=2.8						
TKL	Tuckaleechee C	43.08	310	P	P	12 34 24.2	+0.4
250A	Grady	43.78	304	P	P	12 34 30.1	+0.6
250A				IAmb	IAmb	12 34 34.4	
	comp=Z,26nm,1.2s						
P51A	Williamsport	44.19	315	P	P	12 34 33.3	+0.6
P51A				IAmb	IAmb	12 34 41.0	
	comp=Z,14nm,1.3s						
TOA0	Torodi Ar. Sit	44.34	83	P	P	12 34 34.3	+0.1
TOA0				IAmb	IAmb	12 34 42.6	
	comp=Z,4.7nm,0.9s						
TORD	Torodi Ar. Bea	44.34	83	P	P	12 34 34.5	+0.3
	comp=Z,3.1nm,0.8s,baz=281,slow=7.9,SNR=13						
TORD	Torodi Ar. Bea	44.34	83	P	P	12 34 34.4	+0.1
R49A	Shelbyville	45.16	313	P	P	12 34 40.9	+0.4
R49A				IAmb	IAmb	12 34 43.0	
	comp=Z,11nm,1.0s						
WVT	Waverly	46.32	309	P	P	12 34 49.8	+0.1
WVT				IAmb	IAmb	12 34 51.6	
	comp=Z,8.1nm,0.8s						
SCHQ	Schefferville	46.40	342	P	P	12 34 50.6	+0.6
	comp=Z,2.1nm,0.6s,baz=142,slow=7.6,SNR=8.1						
SCHQ	Schefferville	46.40	342	P	P	12 34 50.5	+0.5
FCAR	Ozark Folk Cen	49.56	307	P	P	12 35 14.4	-0.4
FCAR				IAmb	IAmb	12 35 16.4	
	comp=Z,3.3nm,0.8s						
U40A	Yellville	50.26	307	P	P	12 35 19.7	-0.4
U40A				IAmb	IAmb	12 35 21.2	
	comp=Z,5.0nm,1.0s						
DAVOX	Davos/Dischmat	56.71	41	P	P	12 36 07.1	-0.4
	comp=Z,1.0nm,0.6s,baz=259,slow=10,SNR=3.0						
ULM	Lac du Bonnet	57.02	323	P	P	12 36 08.8	-0.6
	comp=Z,2.8nm,0.7s,baz=110,slow=7.9,SNR=9.0						
ULM	Lac du Bonnet	57.02	323	P	P	12 36 09.1	-0.3
MSTX	Muleshoe	57.74	303	IAmb	IAmb	12 36 16.3	
	comp=Z,6.0nm,0.8s						
TXAR	Lajitas Array	58.04	297	P	P	12 36 17.5	+0.4
	comp=Z,1.1nm,0.8s,baz=120,slow=7.7,SNR=14						
TXAR				LR	LR	12 59 47.8	
	comp=Z,28nm,21.5s,baz=0.0,slow=34						
TXAR	Lajitas Array	58.04	297	P	P	12 36 17.3	+0.1
TX32	Lajitas Array	58.04	297	P	P	12 36 17.1	-0.1
PLCA	Paso Flores	58.05	204	P	P	12 36 17.1	+0.3
	comp=Z,2.2nm,0.8s,baz=69,slow=8.7,SNR=7.3						
PLCA	Paso Flores	58.05	204	P	P	12 36 16.7	-0.1
SDCO	Great Sand Dun	60.44	307	P	P	12 36 34.2	+0.4
ISCO	Idaho Springs	60.82	309	P	P	12 36 36.9	+0.5
ISCO				IAmb	IAmb	12 36 45.5	
	comp=Z,4.4nm,1.1s						
S22A	4UR Ranch, Cre	61.48	306	IAmb	IAmb	12 36 51.1	
	comp=Z,14nm,1.9s						
NOA	NORSAR Array B	63.00	27	P	P	12 36 50.9	+0.6
	comp=Z,1.3nm,0.9s,baz=212,slow=12,SNR=3.2						
PDAR	Pinedale Array	64.19	312	P	P	12 37 00.0	+1.2
	comp=Z,0.1nm,0.4s,baz=111,slow=7.1,SNR=2.5						
PDAR				LR	LR	13 01 55.7	
	comp=Z,94nm,21.3s,baz=114,slow=33						
PDAR	Pinedale Array	64.19	312	P	P	12 36 59.2	+0.4
TUC	Tucson	64.31	300	P	P	12 36 59.2	-0.4
TUC				IAmb	IAmb	12 37 01.2	
	comp=Z,2.4nm,0.9s						
PSUT	Pine Spring	67.06	307	P	P	12 37 18.4	+0.9
MLR	Muntele Rosu	67.31	46	P	P	12 37 18.8	0.0
AKASG	Malin Array Be	70.02	40	P	P	12 37 35.3	0.0
	comp=Z,0.3nm,0.3s,baz=276,slow=4.5,SNR=2.9						
NVAR	Mina Array Bea	70.55	307	P	P	12 37 39.7	+0.5
	comp=Z,0.3nm,0.7s,baz=97,slow=6.5,SNR=3.2						
NVAR	Mina Array Bea	70.55	307	P	P	12 37 39.4	+0.2
YKA	Yellowknife Ar	70.59	332	P	P	12 37 38.2	-0.4
	comp=Z,1.5nm,0.9s,baz=106,slow=6.8,SNR=9.7						
BRTR	Keskin Array B	72.77	52	P	P	12 37 53.1	+0.7
	comp=Z,0.7nm,0.7s,baz=256,slow=6.1,SNR=4.9						
BRTR				LR	LR	13 06 31.1	
	comp=Z,20nm,21.1s,baz=290,slow=33						
BRTR	Keskin Array B	72.77	52	P	P	12 37 52.4	0.0
KLMR	Klimovskoe	76.32	30	*e*	P	12 38 10.4	-2.0
KLMR				AMP		12 38 12.6	
	comp=Z,44nm,2.2s						
BOSA	Boshof	77.92	123	LR	LR	13 07 20.3	
	comp=Z,64nm,18.8s,baz=218,slow=32						
BMAR	Burnt Mountain	83.11	338	P	P	12 38 49.7	+0.4
ILAR	Eielson Array	84.73	335	P	P	12 38 58.5	+0.9
	comp=Z,0.7nm,0.8s,baz=59,slow=4.3,SNR=7.6						
ILAR	Eielson Array	84.73	335	P	P	12 38 58.1	+0.6
SNAA	Sanae	87.85	168	P	P	12 39 13.1	+0.5
TIXI	Tiksi	96.38	2	P	P	12 39 51.8	-0.4
TIXI				IAmb	IAmb	12 40 00.3	
	comp=Z,2.6nm,0.7s						
ASAR	Alice Springs	168.21	169	PKP	PKPdf	12 46 31.3	+0.1
	comp=Z,0.3nm,0.8s,baz=223,slow=2.3,SNR=3.7						
ASAR				PKPab	PKPab	12 47 38.6	-0.5
	comp=Z,0.4nm,0.9s,baz=179,slow=4.7,SNR=6.2						

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*NEIC **15** 12:31:19.4±1.4, 40°.72N±0°.04×125°.2W±0°.1, h22^{km}±14^{km}, Error ellipse: s-maj=12.1km s-min=5.5km az=83.0*

*ANF **15** 12:31:20.2±1.2, 40°.86N×124°.89W, h0^{km}, ML2.5/4, Error ellipse: s-maj=11.0km s-min=5.3km az=59.0*

*NCEDC **15** 12:31:20.6±1.1, 40°.75N±0°.04×125°.24W±0°.07, h23^{km}±8^{km}, Md2.9/38, Error ellipse: s-maj=8.7km s-min=5.3km az=61.0*

ISC 15 12:31:20.0±1.9, **40°.74N**±0°.04×**125°.20W**±0°.08, **h24**^{km}±14^{km}, **n58**, σ**0^{s}.83**/75, **Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	0.71	111		Pb	12 31 34.1	+0.4
KCTM					Sb	12 31 44.6	+1.5
KMPM	Mount Pierce	0.88	111		Pb	12 31 36.4	-0.4
KMPM					Sb	12 31 48.6	+0.4
JCC	Jacoby Creek,	0.89	84	Pn	Pb	12 31 36.0	-0.9
JCC				Sn	Sb	12 31 48.3	-0.1
KSMM	Slide Mountain	0.96	125		Pb	12 31 37.1	-0.9
KRPM	Rodgers	0.99	64		Pb	12 31 37.3	-1.3
KCRM	Chalk Rock	1.10	106		Pn	12 31 39.5	-0.4
KHMM	Horse Mountain	1.12	82		Pn	12 31 39.6	-0.8
KMRM	Mail Ridge	1.25	114		Pn	12 31 42.2	+0.1
KRMB	Red Mountain	1.25	51		Pn	12 31 40.7	-1.5
KCSM	Cold Springs	1.30	98		Pn	12 31 42.5	-0.3
KOMM	Orleans Mounta	1.43	67		Pn	12 31 43.7	-0.8
KPPM	Pickett Peak	1.46	105		Pn	12 31 44.9	-0.1
KBSM	Bell Springs	1.48	123		Pn	12 31 44.9	-0.3
KSXB	Camp Six Broad	1.48	42		Pn	12 31 44.0	-1.3
KHBM	Hayfork Bally	1.51	92		Pn	12 31 45.1	-0.7
KIPM	Iron Peak	1.61	125		Pn	12 31 46.9	-0.2
KCPM	Cahto Peak	1.62	130		Pn	12 31 46.9	-0.3
KFPM	Farley Peak	1.75	128		Pn	12 31 48.5	-0.5
KBNM	Bluenose Ridge	1.75	118		Pn	12 31 49.5	+0.4
LGPM	Granite Peak	1.81	84		Pn	12 31 49.1	-0.7
LBPM	Beegum Peak	1.82	103		Pn	12 31 49.6	-0.3
GTC	Three Chop Rid	1.84	136		Pn	12 31 49.6	-0.5
L02E	Cave Junction	1.86	40	P	Pn	12 31 49.8	-0.7
	baz=222,SNR=17						
L02E				S	Sn	12 32 12.5	-0.7
	baz=222						
M02C	Callahan	1.89	69	P	Pn	12 31 50.2	-0.7
	baz=251,SNR=48						
M02C				S	Sn	12 32 12.9	-1.1
	baz=251						
N02D	Trinity Center	1.91	82		Pn	12 31 50.7	-0.5
N02D	Trinity Center	1.91	82	P	Pn	12 31 50.6	-0.5
	baz=264,SNR=39						
N02D				S	Sn	12 32 14.1	-0.4
	baz=264						
O02D	Mt. Diablo Mer	1.93	106		Pn	12 31 51.3	-0.1
O02D	Mt. Diablo Mer	1.93	106	P	Pn	12 31 51.3	-0.1
	baz=288,SNR=74						
O02D				S	Sn	12 32 14.7	-0.1
	baz=288						
KRKM	Rackout Spring	1.94	126		Pn	12 31 51.3	-0.3
LBKM	Bonanza King	1.95	79		Pn	12 31 51.7	-0.1
GNAM	Navarro Ridge	1.96	141		Pn	12 31 51.1	-0.6
WDC	Whiskeytown Da	2.03	94	Pn	Pn	12 31 53.0	+0.3
GROM	Round Mountain	2.10	112		Pn	12 31 54.4	+0.6
YBH	Yreka Blue Hor	2.13	61		Pn	12 31 54.1	0.0
GHMM	Hull Mountain	2.14	125		Pn	12 31 54.1	-0.2
GVV	Valley View	2.16	116		Pn	12 31 55.0	+0.3
GASB	Alder Springs	2.19	119		Pn	12 31 55.3	+0.2
K02D	Willamette Mer	2.27	30	P	Pn	12 31 55.6	-0.5
	baz=212,SNR=42						
K02D				S	Sn	12 32 22.5	-0.8
	baz=212						
HOPS	Hopland Field	2.39	136	Pn	Pn	12 31 57.7	0.0
HUMO	Hull Mountain	2.51	41		Pn	12 31 59.1	-0.3
HUMO				Sn	Sn	12 32 28.9	-0.4
J01E	Myrtle Point	2.60	21	P	Pn	12 32 01.4	+0.9
	baz=202						
J01E				S	Sn	12 32 31.4	+0.1
	baz=202						
LDBM	Digger Butte	2.62	96		Pn	12 32 00.8	-0.2
O03E	Paynes Creek	2.63	99		Pn	12 32 00.4	-0.6
O03E	Paynes Creek	2.63	99	P	Pn	12 32 00.4	-0.6
	baz=281						
O03E				S	Sn	12 32 31.5	-0.7
	baz=281						
L04D	Klamath Falls	2.63	55	P	Pn	12 32 02.7	+1.5
	baz=237,SNR=19						
L04D				S	Sn	12 32 34.7	+2.3
	baz=237						
M04C	Macdoel	2.74	67	P	Pn	12 32 03.7	+1.1
	baz=249						
ORV	Oroville	3.07	111		Pn	12 32 07.0	-0.1
ORV				Sn	Sn	12 32 43.2	+0.2
I03D	Drain, OR	3.26	24	P	Pn	12 32 10.3	+0.6
	baz=206,SNR=30						
I03D				S	Sn	12 32 47.3	-0.3
	baz=206						
I02D	Swisshome	3.51	16	P	Pn	12 32 13.9	+0.9
	baz=198,SNR=5.7						
I02D				S	Sn	12 32 52.1	-1.7
	baz=198						
AFDM	Forest Hills D	3.71	117	Pn	Pn	12 32 15.8	-0.1
BEKR	Beckworth	3.80	102		Pn	12 32 18.4	+1.1
J05D	Fort Rock, OR	3.90	48	P	Pn	12 32 20.4	+1.8
	baz=231,SNR=7.2						
J05D				S	Sn	12 33 03.5	-0.2
	baz=231						
H04D	Lebanon	4.20	25	P	Pn	12 32 23.7	+1.2
	baz=207						
H04D				S	Sn	12 33 11.0	+0.2
	baz=207						
PINE	Pine Mountain	4.39	45	Pn	Pn	12 32 26.6	+1.2
H04A	Detroit Lake	4.53	28	Pn	Pn	12 32 28.1	+1.0
PAHR	Pah Rah Range	4.57	101	Pn	Pn	12 32 28.3	+0.5
PNTR	Pine Nut	4.61	109	Pn	Pn	12 32 29.5	+1.1
I07A	Izee	5.38	50	Pn	Pn	12 32 41.2	+2.3

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*MDD **15** 12:41:12.9±2.0, 34°.07N×5°.00W, h15^{km}, mb3.6/5, Error ellipse: s-maj=17.9km s-min=11.7km az=172.0, PRXIMO*

*SFS **15** 12:41:13.0, 34°.18N×4°.88W, ML3.7, L'OULFA (MARRUECOS)*

*IGIL **15** 12:41:13.3, 34°.17N×5°.06W, h2^{km}, ML2.1*

*INMG **15** 12:41:14.0±1.6, 34°.18N×5°.03W, h14^{km}±12^{km}, ML2.1, Error ellipse: s-maj=7.1km s-min=3.6km az=77.0*

*CNRM **15** 12:41:14.4±0.4, 34°.09N×4°.88W, h10^{km}±3^{km}, Error ellipse: s-maj=2.8km s-min=2.0km az=106.0*

ISC 15 12:41:14.5±1.0, **34°.17N**±0°.03×**4°.99W**±0°.03, **h28**^{km}±12^{km}, **n47**, σ**1^{s}.88**/82, **Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SICH	Sidi Chahed	0.28	257	P	Pn	12 41 22.4	-0.3
SICH				S	Sn	12 41 27.2	-0.8
LCRM	LCR	0.49	167	P	Pb	12 41 25.0	+0.2
LCRM				S	Sb	12 41 31.9	+0.1
IFR	Ifrane	0.66	190	*e*P	Pb	12 41 26.6	-1.0
IFR				*e*S	Sb	12 41 35.1	-1.4
CHEFC	Chefchaouen	0.98	343	P	Pn	12 41 34.1	+1.6
CHEFC				S	Sn	12 41 52.1	+6.5
AKLM	AKL	1.00	69	P	Pb	12 41 30.2	-3.0
AKLM				S	Sb	12 41 45.6	-0.4
CZD	Col de Zad	1.13	182	P	Pn	12 41 34.8	+0.1

CZD				S	Sn	12 41 50.2	+0.7
MD31	MD31	1.31	171	P	Pb	12 41 38.0	-0.5
MD31				S	Sb	12 41 55.6	+0.7
PALE	Palemas	1.36	39	P	Pb	12 41 39.3	0.0
PALE				S	Sb	12 41 58.9	+2.5
MDT	Midelt	1.39	166	P	Pn	12 41 38.7	+0.6
	SNR=70						
MDT				S	Sb	12 41 57.0	-0.2
ZHG	ZHG	1.55	243	P	Pb	12 41 43.3	+0.7
ZHG				S	Sb	12 42 07.4	+5.5
JBK	JBK	2.02	85	P	Pn	12 41 46.0	-0.9
	SNR=9.2						
AVE	Averroes	2.19	247	*e*P	Pn	12 41 32.3	-17
AVE				*e*S	Pb	12 41 47.3	-6.2
TAF	Taforalt	2.23	72	P	Pn	12 41 50.4	+0.8
TAF				S	Sn	12 42 18.0	+1.8
EMIJ	Mijas	2.40	4	Pn	Pn	12 41 51.8	-0.2
	1.5nm,0.2s,SNR=7.8						
EMIJ				Sn	Sn	12 42 21.3	+0.9
	3.4nm,0.2s,SNR=6.0						
ELGU	Los Guajares,	2.92	22	Pn	Pn	12 41 58.7	-0.5
	2.0nm,0.2s,SNR=7.9						
ELGU				Sn	Sn	12 42 32.8	-0.5
	13nm,0.2s,SNR=7.9						
EBER	Berja	3.22	32	Pn	Pn	12 42 02.2	-1.2
	1.1nm,0.2s,SNR=5.2						
EBER				Sn	Sn	12 42 40.6	-0.3
	7.5nm,0.4s,SNR=7.9						
EMIN	Mina Concepcio	3.84	340	Pn	Pn	12 42 12.3	+0.5
	0.3nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	12 42 56.4	+0.4
	0.8nm,0.1s,SNR=7.9						
PBDV	Barranco-do-Ve	3.89	323	Pn	Pn	12 42 11.9	-0.6
PBDV				Sn	Sn	12 42 56.0	-1.2
	2.0nm,0.4s						
PBDV	Barranco-do-Ve	3.89	323	*e*Pn	Pn	12 42 11.9	-0.6
PBDV				*e*Sn	Sn	12 42 56.0	-1.2
PBDV				A	A	12 43 02.7	
	2.0nm,0.4s						
ECAB	El Cabril	3.92	355	Pn	Pn	12 42 14.0	+1.2
	0.8nm,0.3s,SNR=7.9						
ECAB				Sn	Sn	12 42 57.9	+0.1
	1.7nm,0.1s,SNR=7.9						
PVAQ	Vaqueiros	3.92	326	Pn	Pn	12 42 12.2	-0.6
PVAQ				Sn	Sn	12 42 55.6	-2.2
	2.9nm,0.3s						
PVAQ	Vaqueiros	3.92	326	*e*Pn	Pn	12 42 12.2	-0.6
PVAQ				*e*Sn	Sn	12 42 55.6	-2.2
PVAQ				A	A	12 43 08.3	
	2.9nm,0.3s						
EGRO	El Granado	3.92	330	Pn	Pn	12 42 13.4	+0.5
	1.5nm,0.1s,SNR=6.0						
EGRO				Sn	Sn	12 42 55.3	-2.6
	1.8nm,0.1s,SNR=7.9						
EQES	Quesada	3.95	23	Pn	Pn	12 42 16.3	+3.0
	0.8nm,0.1s,SNR=7.9						
EQES				Sn	Sn	12 43 02.7	+3.9
	5.0nm,0.4s,SNR=7.9						
EADA	Adamuz	4.01	5	Pn	Pn	12 42 16.3	+2.2
	0.3nm,0.1s,SNR=7.9						
EADA				Sn	Sn	12 42 59.2	-0.9
	2.9nm,0.2s,SNR=7.9						
PCVE	Castro Verde	4.25	325	Pn	Pn	12 42 17.7	+0.3
PCVE				Sn	Sn	12 43 04.4	-1.7
	1.6nm,0.5s						
PCVE	Castro Verde	4.25	325	*e*Pn	Pn	12 42 17.7	+0.3
PCVE				*e*Sn	Sn	12 43 04.4	-1.7
PCVE				A	A	12 43 13.6	
	1.6nm,0.5s						
MORF	Marmelete	4.32	318	Sn	Sn	12 43 08.3	+0.4
	3.0nm,0.8s						
MORF	Marmelete	4.32	318	*e*Sn	Sn	12 43 08.3	+0.4
MORF				A	A	12 43 15.7	
	3.0nm,0.8s						
MESJ	Messejana	4.50	325	*e*P	Pn	12 42 20.2	-0.6
MESJ				*e*S	Sn	12 43 08.7	-3.5
MESJ				AML	AML	12 43 11.5	
	comp=N,3.6nm,0.5s						
MESJ	Messejana	4.50	325	Pn	Pn	12 42 20.2	-0.6
MESJ				Sn	Sn	12 43 08.7	-3.5
	comp=N,3.6nm,0.5s						
MESJ	Messejana	4.50	325	*e*Pn	Pn	12 42 21.3	+0.5
MESJ				*e*Sn	Sn	12 43 11.1	-1.2
MESJ				A	A	12 43 19.1	
	comp=N,2.8nm,0.8s						
PTEO	Sao Teotonio	4.53	319	Pn	Pn	12 42 22.0	+0.8
PTEO				Sn	Sn	12 43 10.9	-2.1
PTEO	Sao Teotonio	4.53	319	*e*Pn	Pn	12 42 22.0	+0.8
PTEO				*e*Sn	Sn	12 43 10.9	-2.1
EBAD	Badajoz	4.86	341	Pn	Pn	12 42 25.4	-0.4
	comp=N,0.5nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	12 43 19.1	-2.0
	comp=N,2.0nm,0.2s,SNR=7.9						
PNCL	Nicolau / Gran	4.87	325	Pn	Pn	12 42 26.1	+0.3
PNCL				Sn	Sn	12 43 19.6	-1.6
	comp=N,1.5nm,0.7s						
PNCL	Nicolau / Gran	4.87	325	*e*Pn	Pn	12 42 26.1	+0.3
PNCL				*e*Sn	Sn	12 43 19.6	-1.6
PNCL				A	A	12 43 26.1	
	comp=N,1.5nm,0.7s						
PESTR	Estremoz	5.14	337	*e*Pn	Pn	12 42 30.5	+0.9
PESTR				*e*Sn	Sn	12 43 26.3	-1.6
ETOB	Tobarra	5.26	31	Pn	Pn	12 42 34.0	+2.7
	comp=N,2.2nm,0.2s,SNR=8.0						
PAB	San Pablo	5.39	5	Sn	Sn	12 43 32.3	-2.1
	comp=N,0.7nm,0.2s,SNR=7.9						
PMTG	Montargil	5.54	333	Pn	Pn	12 42 34.5	-0.6
PMTG				Sn	Sn	12 43 34.5	-3.3
	comp=N,1.4nm,0.8s						
PMTG	Montargil	5.54	333	*e*Pn	Pn	12 42 34.5	-0.6
PMTG				*e*Sn	Sn	12 43 34.5	-3.3
PMTG				A	A	12 43 47.4	
	comp=N,1.4nm,0.8s						
ESDC	Sonseca Array	5.56	8	Sn	Sn	12 43 36.1	-2.3
	SNR=7.9						
PMRV	Marv??o	5.59	341	Sn	Sn	12 43 37.1	-2.1
PMRV	Marv??o	5.59	341	*e*Sn	Sn	12 43 37.1	-2.1
AFON	Font Roja	5.75	37	Sn	Sn	12 43 41.9	-1.2
	comp=N,2.3nm,0.1s,SNR=7.9						
EPLA	Plasencia	5.95	352	Sn	Sn	12 43 44.4	-3.6
	comp=N,1.1nm,0.3s,SNR=7.9						

KEA 15 12:41:39.0±0.0**, 40°.38N**×**122°.24E, h0^{km}, ML2.7**/1**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUJ	Sinuiju	1.75	98	Pg	Pb	12 42 11.5	-0.4
SUJ				Sg	Sn	12 42 33.6	+0.2
PYS	Pyongsong	3.00	111	Sg	Sg	12 43 13.5	-1.9
KGE	Kanggye	3.37	79	Sg	Sb	12 43 23.4	+2.2
HJU	Haeju	3.57	130	Sg	Sg	12 43 34.7	+1.0
HHU	Hamhung	4.08	95	Sg	Sg	12 43 45.7	-4.2

IDC 15 12:59:33.9±4.0**, 27°.24N**×**96°.21E, h108^{km}**±44^{km}**, mb2.9**/4**, mb1 3.2**/5**, mb1mx2.9**/57**, mbtmp3.3**/5**, Error ellipse: s-maj=72.9km s-min=21.4km az=73.0, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	9.10	163	P	Pn	13 01 42.4	+0.1
	0.3nm,0.3s,baz=334,slow=14,SNR=2.3						
SONM	Songino Array	22.05	18	P	P	13 04 19.5	-0.3
	0.3nm,0.6s,baz=194,slow=10,SNR=2.7						
MKAR	Makanchi Array	22.39	334	P	P	13 04 23.5	+0.2
	0.2nm,0.8s,baz=141,slow=12,SNR=2.0						
WRA	Warramunga Arr	59.70	138	P	P	13 09 26.9	-0.4
	0.9nm,0.9s,baz=323,slow=7.8,SNR=3.4						
ASAR	Alice Springs	62.34	141	P	P	13 09 45.4	+0.3
	0.5nm,0.7s,baz=324,slow=6.9,SNR=3.8						

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*IDC **15** 13:08:56.0±1.3, 62°.49N×151°.10W, h61^{km}±12^{km}, mb3.6/13, mb1 3.8/17, mb1mx3.6/57, mbtmp3.8/17, MS3.2/2, Ms1 3.2/2, ms1mx2.7/48, Error ellipse: s-maj=14.0km s-min=8.9km az=107.0*

*NEIC **15** 13:08:57.7±1.4, 62°.45N±0°.03×150°.93W±0°.07, h79^{km}±6^{km}, Error ellipse: s-maj=5.1km s-min=3.5km az=75.0*

*AEIC **15** 13:08:58±1.8, 62°.45N±0°.03×150°.89W±0°.07, h68^{km}±6^{km}, ML3.9/105, mb4.4/17(NEIC), Error ellipse: s-maj=5.1km s-min=4.2km az=218.0*

ISC 15 13:08:58.4±0.5**, 62°.43N**±0°.03×**150°.91W**±0°.04**, h88^{km}, n155,** σ**1^{s}.30**/160**, mb3.8**/17**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPLA	Purkeypile	0.75	309		Sn	13 09 25.7	-2.3
PPLA	Purkeypile	0.75	309		Pn	13 09 13.9	-1.4
HUR	Hurricane	0.81	46		Pn	13 09 14.3	-1.4
HUR					Sn	13 09 26.1	-2.7
SUA	Susitna One	0.97	175		Pn	13 09 16.4	-1.3
TRF	Thorofare Moun	1.06	15		Pn	13 09 17.8	-1.0
TRF	Thorofare Moun	1.06	15		Sn	13 09 32.4	-1.7
KTH	Kantishna Hill	1.13	360		Pn	13 09 18.4	-1.0
KTH	Kantishna Hill	1.13	360		Sn	13 09 33.4	-1.9
CAST	Castle Rocks	1.13	332		Pn	13 09 18.1	-1.3
CAST					Sn	13 09 32.5	-2.8
GHO	Glory Hole Cre	1.14	124		Pn	13 09 18.7	-1.0
GHO	Glory Hole Cre	1.14	124		Sn	13 09 34.4	-1.3
WAT1	Susitna Watana	1.16	69		Pn	13 09 18.1	-1.8
PMR	Palmer	1.19	134		Pn	13 09 18.8	-1.3
PMR	Palmer	1.19	134		Sn	13 09 35.4	-1.0
WAT2	Susitna Watana	1.20	62		Pn	13 09 18.9	-1.4
FIS	Fire Island	1.33	165		Pn	13 09 21.7	-0.1
RND	Reindeer	1.36	43		Pn	13 09 21.1	-1.2
RND	Reindeer	1.36	43		Sn	13 09 38.7	-1.7
SPBG	Spurr Blockage	1.36	211		Pn	13 09 21.3	-1.0
SML	Sawmill	1.36	116		Pn	13 09 21.6	-0.7
SPCR	Spurr Chakacha	1.38	207		Pn	13 09 21.1	-1.4
RC01	Rabbit Creek A	1.46	157		Pn	13 09 21.8	-1.6
WAT6	Susitna Watana	1.48	83		Pn	13 09 22.4	-1.5
KNK	Knik Glacier	1.54	130		Pn	13 09 23.7	-0.9
MCK	McKinley	1.59	34	Pn	Pn	13 09 24.3	-0.8
CAPN	Captain Cook N	1.67	184		Pn	13 09 27.6	+1.4
BPAW	Bear Paw Mtn.	1.68	359		Pn	13 09 25.1	-1.1
DHY	Denali Highway	1.75	67		Pn	13 09 26.1	-1.2
SCM	Sheep Creek Mo	1.79	108		Pn	13 09 26.6	-1.2
BWN	Browne	1.87	20		Pn	13 09 28.1	-0.6
SLKM	Skilak Lake	1.96	170		Pn	13 09 28.3	-1.6
PWL	Port Wells	2.00	141		Pn	13 09 28.8	-1.6
DFR	Drift River	2.03	206		Pn	13 09 30.1	-0.8
RDJH	Redoubt Jeurge	2.06	207		Pn	13 09 30.6	-0.7
RDWB	Redoubt West	2.16	206		Pn	13 09 32.1	-0.6
RSO	Redoubt South	2.16	205		Pn	13 09 32.3	-0.4
RED	Redoubt Volcan	2.21	205		Pn	13 09 32.7	-0.5
NEA	Nenana	2.31	20		Pn	13 09 33.5	-1.0
GLI	Glacier Island	2.39	129		Pn	13 09 34.1	-1.6
TT01	Tatalina	2.41	284		Pn	13 09 34.3	-1.5
TTA	Tatalina	2.41	284		Pn	13 09 34.8	-1.1
WRH	Wood River Hil	2.41	30		Pn	13 09 34.8	-1.0
SEW	Seward	2.44	163		Pn	13 09 34.6	-1.6
JPK	Jack Peak	2.47	122		Pn	13 09 35.2	-1.5
PAX	Paxson	2.57	75		Pn	13 09 37.8	-0.2
PS11	TAPS Pump St11	2.57	95		Pn	13 09 38.0	0.0
SVW2	Sparrevohn	2.59	241		Pn	13 09 37.2	-1.1
ILW	Iliamna West	2.61	205		Pn	13 09 38.6	-0.1
MLY	Manley	2.61	2		Pn	13 09 37.9	-0.7
IVE	Iliamna Volcan	2.62	204		Pn	13 09 38.2	-0.6
CCB	Clear Creek Bu	2.63	31		Pn	13 09 37.6	-1.1
HDA	Harding Lake	2.67	40		Pn	13 09 38.5	-0.8
BRLK	Bradley Lake	2.67	180		Pn	13 09 40.0	+0.6
ILS	Iliamna Low So	2.69	204		Pn	13 09 39.6	-0.1
BRSE	Bradley Lake S	2.70	178		Pn	13 09 39.3	-0.5
FID	Port Fidalgo	2.71	127		Pn	13 09 38.0	-1.8
HOM	Homer	2.80	188		Pn	13 09 42.0	+0.9
PS08	TAPS Pump Stn8	2.81	39		Pn	13 09 40.3	-0.8
TCOL	CIGO, UAF Yank	2.81	28		Pn	13 09 40.3	-0.8
MDM	Murphy Dome	2.81	24		Pn	13 09 40.3	-0.9
COLA	College	2.81	28		Pn	13 09 40.2	-1.0
CNPM	China Poot	2.92	183		Pn	13 09 43.6	+0.9
HIN	Hinchinbrook I	2.94	132		Pn	13 09 41.5	-1.5
IL31		2.96	36		Pn	13 09 42.3	-0.9
ILAR	Eielson Array	2.96	36	P	Pn	13 09 42.2	-1.0
	84nm,0.3s,baz=221,slow=14,SNR=2121						
ILAR				S	Sn	13 10 14.9	-2.9
	22nm,0.3s,baz=242,slow=15,SNR=7.3						
ILAR				LR	LR	13 10 40.8	
	comp=Z,220nm,19.2s,baz=142,slow=35						
ILAR	Eielson Array	2.96	36		Pn	13 09 41.7	-1.5
RIDG	Independent Ri	3.06	62		Pn	13 09 45.4	+0.9
POKR	Poker Plat Res	3.11	28		Pn	13 09 44.5	-0.7
EYAK	Cordova Ski Ar	3.11	125		Pn	13 09 43.7	-1.5
PS07	TAPS Pump Stn7	3.12	21		Pn	13 09 44.7	-0.7
AU22	Augustine Moun	3.29	202		Pn	13 09 48.1	+0.4
AUP	Augustine Pinn	3.31	203		Pn	13 09 48.1	0.0
AUH	Augustine H	3.31	203		Pn	13 09 48.2	+0.1
AUW	Augustine West	3.31	203		Pn	13 09 48.3	+0.3
MENT	Mentasta	3.35	78		Pn	13 09 48.1	-0.5
PS06	TAPS Pump Stn6	3.48	8		Pn	13 09 49.5	-0.7
GOAT	Goat Mountain	3.50	119		Pn	13 09 48.9	-1.6
GLB	Gilahina Butte	3.50	103		Pn	13 09 49.3	-1.3
SCRK	Sand Creek	3.50	61		Pn	13 09 50.5	-0.1
RAGM	Ragged Mountai	3.63	122		Pn	13 09 51.4	-0.9
VRDI	Verde Repeater	3.74	105		Pn	13 09 52.1	-1.8
IM03		3.78	342		Pn	13 09 53.6	-0.6
IMAR	Indian Mountai	3.78	342		Pn	13 09 53.5	-0.7
MCARA	McCarthy VSAT	3.88	102		Pn	13 09 54.4	-1.2
PRP	Porcupine Dome	3.91	35		Pn	13 09 55.0	-1.1
CRQM	Cirque	4.08	111		Pn	13 09 57.1	-1.3
PTPK	Patty Peak	4.20	104		Pn	13 09 58.7	-1.4
TGL	Tana Glacier	4.21	110		Pn	13 09 58.5	-1.7
BC03		4.25	77		Pn	13 09 59.6	-0.9
BCAR	Beaver Creek A	4.25	77		Pn	13 09 59.2	-1.4
KAHC	Katmai Hardscr	4.30	210		Pn	13 10 00.7	-0.7
BALM	Baldy	4.31	105		Pn	13 09 59.7	-1.9
KIAG	Kiagna River	4.35	107		Pn	13 10 00.1	-2.1
PS05	TAPS Pump Stn5	4.40	1		Pn	13 10 02.8	+0.1
BARN	Barnard Glacie	4.61	103		Pn	13 10 04.5	-1.2
GRNC	Granite Creek	4.70	107		Pn	13 10 05.1	-1.8
KDAK	Kodiak Island	4.74	191	P	Pn	13 10 05.4	-1.8
	3.9nm,0.3s,baz=44,slow=9.8,SNR=98						
KDAK				S	Sn	13 10 56.3	-4.5
	3.8nm,0.3s,baz=313,slow=19,SNR=3.5						
KDAK	Kodiak Island	4.74	191		Pn	13 10 06.7	-0.6
YUK2	White River	4.77	93		Pn	13 10 06.9	-0.9
CTGM	Chitina Glacie	4.79	104		Pn	13 10 07.3	-0.9
FYU	Fort Yukon	4.82	28		Pn	13 10 08.1	-0.3
COLD	Coldfoot	4.83	3		Pn	13 10 08.7	+0.2
YUK1	Sand Pete Hill	4.86	89		Pn	13 10 08.8	-0.2
EGAK	Eagle	4.95	57		Pn	13 10 09.8	-0.3
YUK3	Moose Creek	4.95	93		Pn	13 10 09.5	-0.9
OHAK	Old Harbor	5.36	194		Pn	13 10 14.8	-0.9
DAWY	Dawson	5.46	67		Pn	13 10 16.5	-0.6
PCA	Pinnacle	5.65	110		Pn	13 10 17.9	-1.8
BMAR	Burnt Mountain	5.69	25		Pn	13 10 19.5	-0.8
TOLK	Toolik Lake Re	6.26	4		Pn	13 10 29.4	+1.3
HYT	Haines Junctio	6.59	98		Pn	13 10 31.2	-1.4
ANM	Nome	6.82	295		Pn	13 10 35.4	-0.2
DHAK	Deception Hill	7.06	113	Pn	Pn	13 10 38.0	-1.0
CHGN	Chignik	7.24	215		Pn	13 10 40.6	-0.7
EPYK	Eagle Plains	7.30	51		Pn	13 10 42.6	+0.4
RDOG	Red Dog Mine	7.55	324		Pn	13 10 46.4	+0.8
WHY	Whitehorse	7.86	96		Pn	13 10 47.9	-1.9
SKAG	Skagway	8.14	104		Pn	13 10 52.0	-1.6
BESE	Bessie Mountai	8.80	109	Pn	Pn	13 11 01.2	-1.4
INK	Inuvik	9.32	43	P	Pn	13 11 09.2	-0.4
	2.0nm,0.3s,baz=223,slow=15,SNR=81						
INK				S	Sn	13 12 50.5	-2.0
	0.6nm,0.3s,baz=307,slow=15,SNR=3.5						
INK	Inuvik	9.32	43		Pn	13 11 09.8	+0.2
GAMB	Gambell	9.51	287	Pn	Pn	13 11 10.8	-1.3
SIT	Sitka	9.52	117	Pn	Pn	13 11 10.2	-2.1
DLBC	Dease Lake	11.04	102	P	Pn	13 11 31.4	-1.8
	0.7nm,0.3s,baz=307,slow=9.9,SNR=15						
C36M	Paulatuk	12.87	46		Pn	13 11 54.9	-2.7
YKA	Yellowknife Ar	16.65	74	P	Pn	13 12 45.2	-0.7
	0.3nm,0.3s,baz=285,slow=9.9,SNR=16						
YKA				LR	LR	13 19 07.8	
	comp=Z,132nm,20.8s,baz=0.0,slow=37						
YKA				ScP	ScP	13 20 57.7	+1.4
	0.0nm,0.3s,baz=274,slow=2.4,SNR=3.9						
RES	Resolute Bay	22.71	35	P	P	13 13 52.1	-0.2
	0.7nm,0.5s,baz=257,slow=12,SNR=7.5						
RES				S	S	13 17 54.5	+0.8
	0.5nm,0.4s,baz=342,slow=16,SNR=4.5						
RES	Resolute Bay	22.71	35	P	P	13 13 53.2	+0.9
RES				IAmb	IAmb	13 14 23.8	
	comp=Z,4.6nm,0.5s						
NEW	Newport	23.52	111	P	P	13 14 01.6	+1.3
	comp=Z,2.1nm,0.8s,baz=322,slow=12,SNR=3.6						
WALA	Waterton Lakes	24.34	106	P	P	13 14 07.9	+0.2
SEY	Seymchan	25.32	297	P	P	13 14 16.3	0.0
	comp=Z,1.0nm,0.6s,baz=78,slow=13,SNR=3.0						
YBH	Yreka Blue Hor	26.63	128	P	P	13 14 31.1	+2.6
	comp=Z,1.3nm,0.9s,baz=299,slow=3.9,SNR=4.0						
YBH	Yreka Blue Hor	26.63	128	IAmb	IAmb	13 15 24.4	
	comp=Z,15nm,1.8s						
GCMT	Greycliff	28.69	106	P	P	13 14 49.7	+2.7
PDAR	Pinedale Array	31.12	110	P	P	13 15 10.0	+1.5
	comp=Z,0.5nm,0.4s,baz=324,slow=3.4,SNR=8.6						
NVAR	Mina Array Bea	31.16	125	P	P	13 15 10.7	+1.9
	comp=Z,1.1nm,0.7s,baz=312,slow=8.4,SNR=9.8						
ULM	Lac du Bonnet	31.80	87	P	P	13 15 15.3	+1.2
	comp=Z,1.8nm,0.7s,baz=336,slow=6.6,SNR=4.6						
ULM	Lac du Bonnet	31.80	87	IAmb	IAmb	13 16 05.1	
	comp=Z,18nm,2.0s						
CCUT	Cedar City	33.86	120	P	P	13 15 33.9	+1.4
SPITS	Spitsbergen Ar	39.42	4	P	P	13 16 18.2	-0.7
	comp=Z,12nm,1.1s,baz=19,slow=7.9,SNR=7.5						
TX31	Lajitas Ar. Si	44.99	115	P	P	13 17 06.0	+1.2
TX31				IAmb	IAmb	13 17 51.8	
	comp=Z,5.5nm,1.6s						
TX32	Lajitas Array	44.99	115	P	P	13 17 06.4	+1.6
TXAR	Lajitas Array	44.99	115	P	P	13 17 06.4	+1.6
	comp=Z,1.3nm,0.6s,baz=324,slow=6.4,SNR=21						
TXAR	Lajitas Array	44.99	115	P	P	13 17 06.5	+1.8
JCT	Junction City	45.66	110	P	P	13 17 11.0	+1.0
JCT				IAmb	IAmb	13 17 12.8	
	comp=Z,6.4nm,0.8s						
M54A	Oil Creek Stat	45.83	83	P	P	13 17 12.0	+0.8
M55A	Ridgway	46.28	82	P	P	13 17 15.5	+0.8
J58A	Remsen	46.38	77	P	P	13 17 15.5	0.0
M56A	Emporium	46.53	81	P	P	13 17 17.0	+0.3
M56A				IAmb	IAmb	13 18 01.9	
	comp=Z,34nm,1.6s						
U49A	Red Boiling Sp	47.00	92	P	P	13 17 20.2	-0.1
U49A				IAmb	IAmb	13 17 21.6	
	comp=Z,5.1nm,0.8s						
ARCES	ARCESS Array B	48.30	2	P	P	13 17 30.2	+0.2
	comp=Z,3.6nm,0.9s,baz=2.0,slow=7.6,SNR=3.5						
SONM	Songino Array	54.18	306	P	P	13 18 15.3	+1.0
	comp=Z,0.3nm,0.5s,baz=33,slow=8.8,SNR=4.1						
HHC	Hu-ho-hao-te	57.96	297	*e*P	P	13 18 41.1	-0.2
MKAR	Makanchi Array	63.15	322	P	P	13 19 15.6	-0.8
	comp=Z,0.2nm,0.5s,baz=38,slow=6.1,SNR=4.8						
AKASG	Malin Array Be	67.22	360	P	P	13 19 42.3	-0.3
	comp=Z,0.4nm,0.4s,baz=10,slow=6.7,SNR=2.9						

IDC 15 13:20:21.3±13.0**, 14°.69S**×**165°.44E, h0^{km}, mb3.8**/3**, mb1 4.0**/4**, mb1mx3.6**/32**, mbtmp3.8**/4**, ML3.7**/1**, Error ellipse: s-maj=228.5km s-min=36.6km az=54.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	7.40	173	Pn	Pn	13 22 11.2	+0.4
	1.2nm,0.3s,baz=356,slow=16,SNR=18						
DZM				Sn	Sn	13 23 34.4	-1.1
	1.2nm,0.3s,baz=172,slow=21,SNR=8.0						
STKA	Stephens Creek	27.69	228	P	P	13 26 11.6	+0.4
	7.9nm,1.1s,baz=79,slow=16,SNR=2.9						
WRA	Warramunga Arr	30.12	256	P	P	13 26 32.9	-0.2
	0.8nm,1.1s,baz=84,slow=8.6,SNR=2.6						
ASAR	Alice Springs	31.03	248	P	P	13 26 41.0	-0.1
	0.3nm,0.5s,baz=76,slow=9.5,SNR=11						

IDC 15 13:32:36.5±1.5**, 3°.00S**×**126°.38E, h0^{km}, mb3.4**/2**, mb1 3.8**/4**, mb1mx3.4**/46**, mbtmp3.6**/4**, ML3.5**/2**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.4**/20**, Error ellipse: s-maj=44.8km s-min=25.8km az=66.0, Buru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.33	67	Pn	Pn	13 33 56.8	-0.6
	1.4nm,0.3s,baz=246,slow=20,SNR=12						
SIJI				Sn	Sn	13 34 50.5	-9.0
	1.0nm,0.3s,baz=128,slow=19,SNR=2.3						
WRA	Warramunga Arr	18.54	156	P	P	13 36 54.8	-0.1
	0.2nm,0.3s,baz=332,slow=12,SNR=13						
ASAR	Alice Springs	21.79	161	P	P	13 37 30.3	+0.1
	0.8nm,0.6s,baz=342,slow=11,SNR=12						
JNU	Nakatsue	36.18	6	LR	LR	13 56 42.7	
	comp=Z,38nm,20.3s,baz=295,slow=40						
MKAR	Makanchi Array	62.93	328	P	P	13 43 04.9	+0.1
	0.5nm,0.7s,baz=131,slow=8.1,SNR=6.5						

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*KRNET **15** 13:33:56.2±0.1, 41°.15N×70°.04E, h13^{km}, mb2.5*

ISC 15 13:33:56.9±1.0**, 41°.16N**±0°.06×**70°.04E**±0°.04**, h10^{km}, n9,** σ**2^{s}.68**/17**, 12C-6D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAS	Tashkent	0.58	287	⇑*e*P	Pg	13 34 07.6	-0.6
	baz=88						
TAS				⇑*e*S	Sg	13 34 15.8	-0.1
	baz=88						
BTK	Batken	1.25	151	⇑*i*P	Pb	13 34 19.9	-0.7
	baz=51						
BTK				⇑*i*S	Sn	13 34 37.2	-0.2
	baz=51						
ARK	Arkit	1.58	65	⇑*i*P	Pb	13 34 25.8	-0.5
	baz=66						
ARK				⇑*i*S	Sg	13 34 47.3	-0.4
	baz=66						
KK31	Karatay Array	1.98	10	⇓Pn	Pg	13 34 36.4	+1.7
	0.5nm,0.3s,baz=179,slow=15,SNR=18						
KK31				⇓Lg	Lg	13 35 03.8	
	0.3nm,0.2s,baz=172,slow=26,SNR=4.2						
AML	Almayashu	2.91	69	⇑*i*P	Pb	13 34 46.3	-2.7
	baz=69						
AML				⇑*i*S	Sb	13 35 22.8	-2.0
	baz=69						
EKS2	Erkin-Say	3.17	60	⇑*e*P	Pb	13 34 49.7	-3.6
	baz=60						
EKS2				⇑*i*S	Sb	13 35 28.5	-3.6
	baz=60						
ARLS	Aral	3.29	76	⇓*e*P	Pn	13 34 51.3	+2.6
	baz=76						
ARLS				⇓*e*S	Sb	13 35 31.2	-4.5
	baz=76						
UCH	Uchtor	3.52	71	⇓*i*P	Pn	13 34 54.9	+2.9
	baz=71						
UCH				⇓*i*S	Sn	13 35 36.8	+2.9
	baz=71						
KZA	Kyzart	4.01	75	⇑*i*P	Pn	13 35 01.7	+2.9
	baz=75						
KZA				⇑*i*S	Sn	13 35 48.6	+2.5
	baz=75						

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*IDC **15** 14:00:12.3±0.8, 49°.22S×69°.55E, h0^{km}, mb4.2/9, mb1 4.3/10, mb1mx4.0/35, mbtmp4.2/10, ML4.2/1, MS3.6/6, Ms1 3.6/6, ms1mx3.3/37, Error ellipse: s-maj=26.1km s-min=22.1km az=111.0*

*NEIC **15** 14:00:13.2±2.5, 49°.2S±0°.2×69°.5E±0°.1, h10^{km}±1^{km}, mb4.3/5, Error ellipse: s-maj=29.1km s-min=7.9km az=202.0*

ISC 15 14:00:13.8±0.7**, 49°.2S**±0°.1×**69°.6E**±0°.1**, h10^{km}, n28,** σ**1^{s}.10**/20**, mb4.2**/10**, MS3.7**/5**, Kerguelen Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAF	Port-aux-Franc	0.40	112		Pg	14 00 22.2	+0.6
I23FR	KERGUELEN INFR	0.42	110	Pg	Pn	14 00 25.0	-0.8
	baz=277,slow=43,SNR=3.8						
I23FR				*i*		14 02 10.0	
	baz=260,slow=320,SNR=1.0						
MAW	Mawson	18.77	188	P	Pn	14 04 34.0	+0.9
	0.8nm,0.3s,baz=14,slow=14,SNR=6.8						
MAW				S	Sn	14 07 46.3	-16
	2.2nm,0.3s,baz=270,slow=18,SNR=5.7						
MAW				LR	LR	14 10 21.3	
	comp=Z,302nm,18.6s,baz=48,slow=32						
MAW	Mawson	18.77	188	P	Pn	14 04 35.0	+1.9
H01W2	Cape Leeuwin H	35.46	83	T	T	14 44 15.0	
	baz=232,slow=75,SNR=5.0						
H01W3	Cape Leeuwin H	35.47	83	T	T	14 44 13.7	
	baz=232,slow=75,SNR=9.3						
H01W1	Cape Leeuwin H	35.48	83	T	T	14 44 14.1	
	baz=232,slow=75,SNR=15						
BOSA	Boshof	39.49	285	LR	LR	14 20 21.2	
	comp=Z,34nm,21.5s,baz=62,slow=31						
QSPA	South Pole Qui	40.97	180	P	P	14 07 55.7	-0.7
	4.0nm,0.9s,baz=278,slow=1.2,SNR=15						
QSPA				LR	LR	14 24 27.9	
	comp=Z,97nm,19.4s,baz=250,slow=36						

QSPA	**South Pole Qui**	**40.97**	**180**	P	**P**	**14 07 56.0**	**-0.4**
VNDA	**Vanda**	**43.01**	**161**	LR	LR	14 25 08.9	
	comp=Z,154nm,20.9s,baz=248,slow=35						
VNDA	**Vanda**	**43.01**	**161**	P	**P**	**14 08 12.1**	**-0.6**
VNDA				IAmb	IAmb	14 08 25.9	
	comp=Z,7.9nm,1.4s						
LEM	**Lembang**	**52.95**	**50**	LR	LR	14 26 51.3	
	comp=Z,78nm,20.6s,baz=213,slow=30						
FITZ	**Fitzroy Crossi**	**54.41**	**76**	P	**P**	**14 09 41.9**	**+0.9**
	comp=Z,2.8nm,1.0s,baz=20,slow=0.4,SNR=3.6						
STKA	**Stephens Creek**	**55.28**	**100**	P	**P**	**14 09 48.1**	**+0.8**
	comp=Z,4.7nm,0.8s,baz=284,slow=6.6,SNR=4.8						
STKA	**Stephens Creek**	**55.28**	**100**	IAmb	IAmb	14 09 49.0	
	comp=Z,3.7nm,1.2s						
ASAR	**Alice Springs**	**55.77**	**87**	P	**P**	**14 09 51.2**	**+0.3**
	comp=Z,2.4nm,0.9s,baz=214,slow=7.5,SNR=12						
ASAR	**Alice Springs**	**55.77**	**87**	P	**P**	**14 09 48.8**	**-2.1**
WRA	**Warramunga Arr**	**58.69**	**85**	P	**P**	**14 10 11.7**	**+0.1**
	comp=Z,2.4nm,0.9s,baz=209,slow=9.5,SNR=7.0						
WRA	**Warramunga Arr**	**58.69**	**85**	IAmb	IAmb	14 10 12.5	
	comp=Z,0.5nm,1.3s						
CMAR	**Chiang Mai Arr**	**72.22**	**29**	P	**P**	**14 11 39.9**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=218,slow=6.4,SNR=7.4						
TORD	**Torodi Ar. Bea**	**86.03**	**295**	P	**P**	**14 12 54.8**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=129,slow=3.5,SNR=4.2						
BRTR	**Keskin Array B**	**94.09**	**333**	P	**P**	**14 13 32.1**	**0.0**
	comp=Z,0.3nm,0.4s,baz=193,slow=3.8,SNR=4.0						
MKAR	**Makanchi Array**	**96.25**	**9**	P	**P**	**14 13 41.8**	**+0.2**
	comp=Z,0.9nm,0.9s,baz=193,slow=4.9,SNR=7.2						
AKTO	**Aktyubinsk**	**99.76**	**352**	LR	LR	14 53 31.7	
	comp=Z,21nm,19.0s,baz=120,slow=32						
IMAR	**Indian Mountai**	**152.11**	**37**		**PKiKP**	**14 20 09.2**	**+0.9**
TXAR	**Lajitas Array**	**159.51**	**197**	PKPab	**PKPab**	**14 20 50.0**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=153,slow=7.1,SNR=4.0						
YKA	**Yellowknife Ar**	**166.47**	**8**	PKP	**PKPdf**	**14 20 15.7**	**-2.3**
	comp=Z,0.7nm,1.1s,baz=314,slow=1.6,SNR=3.4						
YKA				PKPab	**PKPab**	**14 21 19.2**	**-0.8**
	comp=Z,0.3nm,0.8s,baz=346,slow=4.8,SNR=4.8						

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*IDC **15** 14:20:57.8±0.5, 49°.34S×69°.52E, h0^{km}, mb4.5/16, mb1 4.6/17, mb1mx4.4/37, mbtmp4.6/17, ML4.2/1, MS4.3/12, Ms1 4.3/12, ms1mx4.0/28, Error ellipse: s-maj=17.5km s-min=14.6km az=8.0*

*GCMT **15** 14:20:58.5±0.2, 49°.15S±0°.02×69°.15E±0°.04, h13^{km}±1^{km}, MW5.0/89, Moment Tensor Solution. s30,c31; s89,c113; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.16±.20; $M_{\theta\theta}$2.32±.14; $M_{\phi\phi}$0.84±.13; $M_{r\theta}$2.88±.43; $M_{\theta\phi}$-1.27±.10; $M_{\phi r}$2.82±.45; Best double couple: $M_0$4.69300×10^{16} NP1:ϕ_s129.00000°, δ31.00000°, λ-39.00000°. NP2: ϕ_s253.00000°, δ71.00000°, λ-115.00000°. Principal axes: T 3.5570, Plg22.0000°, Azm2.0000°; N 2.2760, Plg24.0000°, Azm262.0000°; P -5.8280, Plg56.0000°, Azm131.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **15** 14:20:59.5±1.8, 49°.4S±0°.1×69°.45E±0°.02, h10^{km}±1^{km}, mb4.6/16 Error ellipse: s-maj=20.7km s-min=3.0km az=181.0*

ISC 15 14:20:59.2±0.4**, 49°.37S**±0°.08×**69°.49E**±0°.06**, h10**^{km}**, n80, σ1^{s}.40**/76**, mb4.7**/27**, MS4.5**/15**, 2C, Kerguelen Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAF	**Port-aux-Franc**	**0.47**	**88**		**Pb**	**14 21 09.3**	**-0.3**
PAF				Sg	**Sb**	**14 21 16.5**	**-0.1**
I23FR	**KERGUELEN INFR**	**0.49**	**87**	Pg	**Pg**	**14 21 09.1**	**+0.4**
	baz=275,slow=45,SNR=2.1						
I23FR				*i*		14 22 40.0	
	baz=252,slow=320,SNR=0.7						
MAW	**Mawson**	**18.59**	**188**	P	**Pn**	**14 25 16.7**	**+0.3**
	0.7nm,0.3s,baz=14,slow=14,SNR=8.6						
MAW				S	Sn	14 28 29.7	-14
	1.5nm,0.3s,baz=270,slow=20,SNR=7.3						
MAW				LR	LR	14 31 06.4	
	comp=Z,2µm,20.1s,baz=37,slow=33						
MAW	**Mawson**	**18.59**	**188**	P	**Pn**	**14 25 17.6**	**+1.2**
SYO	**Syowa Base**	**24.48**	**206**	⇑*e*X	**P**	**14 26 15.4**	**-2.6**
SYO	**Syowa Base**	**24.48**	**206**	⇑*i*P	**P**	**14 26 18.0**	**0.0**
H01W2	**Cape Leeuwin H**	**35.58**	**83**	T	T	15 04 59.1	
	baz=232,slow=75,SNR=25						
H01W3	**Cape Leeuwin H**	**35.59**	**83**	T	T	15 04 59.9	
	baz=232,slow=75,SNR=20						
H01W1	**Cape Leeuwin H**	**35.60**	**83**	T	T	15 05 12.1	
	baz=232,slow=75,SNR=26						
NWAO	**Narrogin (SRO)**	**38.82**	**83**	P	**P**	**14 28 25.7**	**+1.5**
	6.8nm,0.8s,baz=184,slow=14,SNR=3.1						
BOSA	**Boshof**	**39.44**	**285**	P	**P**	**14 28 29.7**	**+0.2**
	5.0nm,0.8s,baz=131,slow=8.6,SNR=8.8						
BOSA				LR	LR	14 42 05.8	
	comp=Z,98nm,19.2s,baz=136,slow=32						
BOSA	**Boshof**	**39.44**	**285**	P	**P**	**14 28 29.4**	**-0.1**
BOSA				IAmb	IAmb	14 28 30.6	
	comp=Z,9.9nm,1.0s						
QSPA	**South Pole Qui**	**40.80**	**180**	P	**P**	**14 28 40.4**	**-0.1**
	comp=Z,14nm,1.1s,baz=278,slow=3.3,SNR=20						
QSPA	**South Pole Qui**	**40.80**	**180**	P	**P**	**14 28 40.5**	**-0.1**
QSPA				IAmb	IAmb	14 28 43.6	
	comp=Z,41nm,1.4s						
LBTB	**Lobatse**	**41.79**	**289**	P	**P**	**14 28 47.8**	**-1.1**
	comp=Z,2.9nm,0.8s,baz=159,slow=7.8,SNR=3.8						
LBTB	**Lobatse**	**41.79**	**289**	IAmb	IAmb	14 28 48.5	
	comp=Z,4.5nm,0.9s						
VNDA	**Vanda**	**42.88**	**161**	P	**P**	**14 28 56.6**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=273,slow=4.5,SNR=3.2						
VNDA				LR	LR	14 46 45.0	
	comp=Z,809nm,18.4s,baz=258,slow=36						
TSUM	**Tsumeb**	**51.06**	**287**	P	**P**	**14 30 02.0**	**+0.2**
TSUM				IAmb	IAmb	14 30 03.6	
	comp=Z,6.6nm,1.1s						
LEM	**Lembang**	**53.13**	**50**	P	**P**	**14 30 18.1**	**+0.8**
	comp=Z,14nm,0.8s,baz=167,slow=23,SNR=3.6						
STKA	**Stephens Creek**	**55.35**	**100**	P	**P**	**14 30 32.9**	**-0.3**
	comp=Z,8.0nm,0.8s,baz=160,slow=6.4,SNR=11						
STKA				LR	LR	14 49 17.8	
	comp=Z,228nm,20.1s,baz=206,slow=31						
STKA	**Stephens Creek**	**55.35**	**100**	P	**P**	**14 30 32.3**	**-0.8**
STKA				IAmb	IAmb	14 30 34.5	
	comp=Z,2.4nm,0.9s						
KMBO	**Kilima Mbogo**	**55.42**	**320**	P	**P**	**14 30 35.0**	**+1.0**
	comp=Z,2.0nm,0.6s,baz=80,slow=11,SNR=3.8						
ASAR	**Alice Springs**	**55.88**	**87**	P	**P**	**14 30 36.4**	**-0.7**
	comp=Z,5.9nm,0.8s,baz=212,slow=7.3,SNR=58						
ASAR				LR	LR	14 51 31.2	
	comp=Z,123nm,18.4s,baz=213,slow=33						
ASAR	**Alice Springs**	**55.88**	**87**	P	**P**	**14 30 37.0**	**-0.1**
AS31	**Alice Springs**	**55.88**	**87**	P	**P**	**14 30 35.5**	**-1.6**
KCSI	**Kotacane, Aceh**	**58.10**	**34**	P	**P**	**14 30 53.2**	**+0.4**
	comp=Z,32nm,0.8s						
WRA	**Warramunga Arr**	**58.80**	**85**	P	**P**	**14 30 57.1**	**-0.7**
	comp=Z,4.5nm,0.8s,baz=218,slow=6.0,SNR=28						
WRA				LR	LR	14 52 27.8	
	comp=Z,218nm,20.3s,baz=200,slow=32						
WRA	**Warramunga Arr**	**58.80**	**85**	P	**P**	**14 30 57.0**	**-0.7**
SOCY	**Socotra**	**62.80**	**343**	P	**P**	**14 31 25.2**	**+0.3**
ATD	**Arta Tunnel**	**65.02**	**331**	LR	LR	14 54 29.4	
	comp=Z,215nm,21.2s,baz=127,slow=31						
LUWI	**Luwuk**	**66.14**	**61**	P	**P**	**14 31 43.5**	**-3.3**
PBKT	**Sadao Pong**	**71.33**	**32**	P	**P**	**14 32 19.4**	**+0.5**
PBKT				IAmb	IAmb	14 32 21.4	
	comp=Z,7.0nm,0.9s						
CM31	**Chiang Mai Arr**	**72.41**	**29**	P	**P**	**14 32 26.0**	**+0.5**
CM31				IAmb	IAmb	14 32 27.8	
	comp=Z,6.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**72.41**	**29**	P	**P**	**14 32 25.6**	**+0.2**
	comp=Z,4.8nm,0.8s,baz=214,slow=6.2,SNR=39						
CMAR				LR	LR	14 59 13.3	
	comp=Z,264nm,20.0s,baz=210,slow=32						
CMAR	**Chiang Mai Arr**	**72.41**	**29**	P	**P**	**14 32 25.8**	**+0.3**
WSAR	**Wadi Sarin**	**72.93**	**350**	LR	LR	14 57 06.3	
	comp=Z,244nm,22.0s,baz=190,slow=30						
PMG	**Port Moresby**	**74.89**	**87**	P	**P**	**14 32 40.8**	**+0.5**
	comp=Z,22nm,1.0s,baz=287,slow=4.6,SNR=4.6						
PMG	**Port Moresby**	**74.89**	**87**	IAmb	IAmb	14 32 42.2	
	comp=Z,28nm,1.1s						
RAMN	**Ramite**	**77.49**	**16**	*e*P	**P**	**14 32 55.0**	**0.0**
	comp=Z,15nm,1.0s						
ODAN	**Odare**	**77.55**	**16**	*e*P	**P**	**14 32 54.9**	**-0.4**
	comp=Z,19nm,0.8s						
DMN	**Daman**	**77.89**	**14**	*e*P	**P**	**14 32 55.9**	**-1.3**
	comp=Z,21nm,1.1s						
PKI	**Pulchoki**	**77.90**	**14**	*e*P	**P**	**14 32 56.9**	**-0.4**
PKIN	**Phulchoki**	**77.90**	**14**	*e*P	**P**	**14 32 57.0**	**-0.3**
TAPN	**Taplejung**	**78.08**	**17**	*e*P	**P**	**14 32 58.2**	**-0.1**
	comp=Z,15nm,0.9s						
KKN	**Kakani**	**78.09**	**14**	*e*P	**P**	**14 32 57.6**	**-0.7**
JIRN	**Jiri**	**78.12**	**15**	*e*P	**P**	**14 32 58.4**	**-0.2**
	comp=Z,20nm,0.7s						
GKN	**Gorkha**	**78.20**	**14**	*e*P	**P**	**14 32 57.5**	**-1.3**
GUN	**Gumba**	**78.31**	**15**	*e*P	**P**	**14 32 59.3**	**-0.3**
	comp=Z,29nm,0.7s						
DANN	**Dangsing**	**78.41**	**13**	*e*P	**P**	**14 32 58.4**	**-1.7**
	comp=Z,21nm,0.7s						
KMI	**Kunming**	**79.86**	**30**	P	**P**	**14 33 10.5**	**+2.5**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KMI				LR	LR		
	comp=Z,280nm,18.0s						
KMI				LR	LR		
	comp=Z,160nm,16.3s						
KMI				LR	LR		
	comp=Z,340nm,22.0s						
KBL	**Kabul**	**83.54**	**360**	P	**P**	**14 33 27.5**	**+0.3**
TOA0	**Torodi Ar. Sit**	**86.01**	**295**	P	**P**	**14 33 41.3**	**+1.4**
TOA0				IAmb	IAmb	14 33 41.9	
	comp=Z,6.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**86.01**	**295**	P	**P**	**14 33 40.3**	**+0.4**
	comp=Z,3.9nm,0.9s,baz=128,slow=4.6,SNR=18						
TORD				PP	**PP**	**14 36 58.4**	**-1.7**
	comp=Z,1.2nm,0.8s,baz=135,slow=8.7,SNR=5.3						
TORD	**Torodi Ar. Bea**	**86.01**	**295**	P	**P**	**14 33 40.6**	**+0.8**
GEYT	**Alibeck**	**87.50**	**351**	LR	LR	15 07 45.1	
	comp=Z,88nm,20.6s,baz=165,slow=32						
KSH	**Kashi**	**88.69**	**5**	P	**P**	**14 33 50.6**	**-1.8**
KSH				PP	**PP**	**14 37 20.1**	**-1.6**
KSH				SKS	**SKSac**	**14 44 15.6**	**-5.7**
KSH				S	**SKKSac**	**14 44 32.6**	**+0.1**
KSH				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KSH				LR	LR		
	comp=Z,190nm,13.0s						
KSH				LR	LR		
	comp=Z,230nm,10.6s						
KSH				LR	LR		
	comp=Z,340nm,15.6s						
WHN	**Wuhan**	**89.02**	**37**	P	P	14 34 05.8	+12
XAN	**Xi'an**	**90.14**	**32**	P	**P**	**14 33 54.8**	**-4.4**
XAN				sP	sP	14 34 07.0	+3.2
LZH	**Lanzhou**	**90.38**	**27**	*e*P	**P**	**14 34 03.4**	**+3.0**
LZH				pP	sP	14 34 06.8	+1.8
LZH				PP	**PP**	**14 37 38.1**	**+2.8**
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
LZH				pmax	pmax		
	comp=Z,200nm,5.4s						
CPUP	**Villa Florida**	**91.02**	**226**	P	**P**	**14 34 03.9**	**+0.2**
	comp=Z,4.1nm,0.8s,baz=173,slow=4.5,SNR=5.1						
CPUP	**Villa Florida**	**91.02**	**226**	IAmb	IAmb	14 34 13.9	
	comp=Z,3.3nm,1.2s						
AAK	**Ala-Archa**	**91.73**	**4**	LR	LR	15 09 35.3	
	comp=Z,193nm,21.4s,baz=176,slow=32						
KKAR	**Karatay Array**	**92.09**	**1**	P	**P**	**14 34 08.8**	**+0.8**
NJ2	**Nanjing**	**92.19**	**40**	*e*P	**P**	**14 34 10.9**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
GTA	**Gaotai**	**92.37**	**23**	*e*P	**P**	**14 34 10.3**	**+0.8**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
WMQ	**Urumqi**	**94.17**	**13**	*e*P	**P**	**14 34 19.4**	**+1.8**
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WMQ				LR	LR		
	comp=Z,620nm,28.9s						
WMQ				LR	LR		
	comp=Z,960nm,29.0s						
WMQ				LR	LR		
	comp=Z,490nm,29.2s						
BRTR	**Keskin Array B**	**94.19**	**333**	P	**P**	**14 34 17.9**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=158,slow=7.3,SNR=4.5						
KBZ	**Khabaz**	**95.60**	**341**	LR	LR	15 13 59.1	
	comp=Z,201nm,20.9s,baz=146,slow=33						
MKAR	**Makanchi Array**	**96.42**	**9**	P	**P**	**14 34 27.6**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=186,slow=5.7,SNR=22						
MKAR	**Makanchi Array**	**96.42**	**9**	P	**P**	**14 34 26.9**	**-0.9**
HHC	**Hu-ho-hao-te**	**97.18**	**31**	*e*P	Pdif	14 34 33.1	+1.5
HHC				LR	LR		
	comp=Z,640nm,17.5s						
HHC				LR	LR		
	comp=Z,310nm,17.4s						
HHC				LR	LR		
	comp=Z,640nm,17.1s						
GERES	**GERESS Array B**	**108.99**	**325**	PKiKP	**PKiKP**	**14 39 28.2**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=258,slow=1.2,SNR=4.4						
NOA	**NORSAR Array B**	**119.59**	**332**	PKP	**PKPdf**	**14 39 47.5**	**-0.5**
	comp=Z,1.6nm,0.7s,baz=151,slow=1.5,SNR=6.1						
SEY	**Seymchan**	**129.49**	**36**	PKP	**PKPdf**	**14 40 07.1**	**+0.3**
	comp=Z,1.7nm,0.9s,baz=170,slow=6.0,SNR=3.9						
SCHQ	**Schefferville**	**152.97**	**298**	PKPbc	**PKiKP**	**14 40 55.9**	**+0.1**
	comp=Z,3.3nm,0.9s,baz=76,slow=4.2,SNR=5.2						
SCHQ				PKPab	**PKPab**	**14 41 07.8**	**+0.7**
	comp=Z,8.0nm,1.0s,baz=86,slow=4.2,SNR=7.9						
ILAR	**Eielson Array**	**155.41**	**38**	PKPbc	PKPbc	14 41 00.2	
	comp=Z,0.3nm,0.7s,baz=288,slow=4.0,SNR=3.4						
ILAR				PKPab	**PKPab**	**14 41 15.6**	**-1.6**
	comp=Z,0.7nm,0.8s,baz=291,slow=4.9,SNR=5.7						
TXAR	**Lajitas Array**	**159.32**	**197**	PKPab	**PKPab**	**14 41 35.6**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=159,slow=5.3,SNR=4.4						
YKA	**Yellowknife Ar**	**166.65**	**8**	PKP	**PKPdf**	**14 41 02.7**	**-0.9**
	comp=Z,1.1nm,1.0s,baz=356,slow=0.5,SNR=6.0						
YKA				PKPab	**PKPab**	**14 42 05.7**	**-0.5**
	comp=Z,0.7nm,0.9s,baz=340,slow=4.0,SNR=9.4						
NVAR	**Mina Array Bea**	**167.71**	**150**	PKP	**PKPdf**	**14 41 05.8**	**+0.3**
	comp=Z,0.7nm,0.9s,baz=187,slow=1.7,SNR=4.0						
PDAR	**Pinedale Array**	**173.36**	**186**	PKP	**PKPdf**	**14 41 07.9**	**-0.5**
	comp=Z,1.1nm,0.9s,baz=174,slow=1.7,SNR=6.3						
PDAR				PKPab	**PKPab**	**14 42 38.4**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=192,slow=2.7,SNR=3.2						

MAN 15 14:24:43.2, 9°.72N×123°.76E, h7^{km}, mb4.7, ML3.6, MS3.5, 2C, Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBP	**Tagbilaran**	**0.10**	**107**	*e*P	Pg	14 24 46.0	+0.5
TBP				*i* S	Sg	14 24 48.8	+1.7
LLP	**Lapu-Lapu**	**0.63**	**19**	⇑*i*P	Pg	14 24 54.7	-0.5
LLP				*i* S	Sg	14 25 03.4	-0.1
SNPH	**Sibulan**	**0.64**	**234**	⇑*i*P	Pb	14 24 56.8	+0.1
SNPH				*i* S	Sn	14 25 07.6	-1.6
MSLP	**Maasin**	**1.16**	**69**	*e*P	Pg	14 25 04.8	-0.6
MSLP				*e*S	Sn	14 25 21.8	-0.1
GUIM	**Jordan**	**1.46**	**308**	*e*P	Pn	14 25 08.5	-1.5
GUIM				*e*S	Sn	14 25 27.7	-1.7
OCLP	**Ormoc**	**1.56**	**32**	*e*P	Pn	14 25 11.3	-0.1
OCLP				*e*S	Sg	14 25 33.3	-0.1
PAGZ	**Pagadian**	**1.90**	**191**	*e*P	Pn	14 25 16.3	+0.3
PAGZ				*e*S	Sn	14 25 40.1	-0.1

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*JMA **15** 14:26:13.7±0.5, 33°.88N×143°.15E, h47^{km}, M3.6*

*IDC **15** 14:26:14.2±1.3, 33°.37N×142°.47E, h0^{km}, mb3.7/3, mb1 3.7/5, mb1mx3.4/42, mbtmp3.6/5, ML2.5/1, Error ellipse: s-maj=48.9km s-min=20.5km az=85.0*

ISC 15 14:26:14.5±1.7**, 33°.92N**±0°.09×**143°.2E**±0°.1**, h35**^{km}**, n21, σ0^{s}.56**/21**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**2.01**	**292**	P	**Pn**	**14 26 45.3**	**-0.1**
BSO1				S	**Sn**	**14 27 08.9**	**-0.1**
BSO3	**Boso 3**	**2.42**	**292**	P	**Pn**	**14 26 51.4**	**0.0**
BSO3				S	**Sn**	**14 27 19.3**	**-0.3**
BSO4	**Boso 4**	**2.62**	**295**	P	**Pn**	**14 26 55.1**	**+0.8**
BSO4				S	**Sn**	**14 27 25.0**	**+0.2**
CHOJ	**Chosi**	**2.64**	**313**	P	**Pn**	**14 26 54.6**	**-0.1**
JKUC	**kamogawauchiur**	**2.79**	**297**	P	**Pn**	**14 26 56.7**	**-0.1**
JHJ2	**Mitsune**	**2.97**	**255**	P	**Pn**	**14 26 58.7**	**-0.5**
JOD2	**Odawara 2**	**3.67**	**293**	P	**Pn**	**14 27 09.0**	**+0.1**
JOD2				S	**Sn**	**14 27 50.7**	**-0.3**
JAG	**Ashikaga**	**3.98**	**310**	P	**Pn**	**14 27 13.1**	**0.0**
JAG				S	**Sn**	**14 27 57.1**	**-1.4**
JRY	**Ryogami san**	**4.13**	**302**	P	**Pn**	**14 27 15.5**	**+0.4**
JRY				S	**Sn**	**14 28 02.2**	**0.0**
JFT	**Otama**	**4.29**	**328**	P	**Pn**	**14 27 17.1**	**-0.3**
JFT				S	**Sn**	**14 28 05.9**	**-0.4**
MJAR	**Matsushiro Arr**	**4.87**	**304**	Pn	**Pn**	**14 27 26.8**	**+1.4**
	0.2nm,0.3s,baz=160,slow=13,SNR=15						
MJAR				Sn	**Sn**	**14 28 20.6**	**0.0**
	0.1nm,0.3s,baz=296,slow=18,SNR=4.2						
ASAJ	**Asahikawa**	**10.19**	**357**	Pn	Pn	14 28 47.1	+8.9
	baz=184,slow=13						
H11N2	**WAKE ISLAND Hy**	**25.33**	**118**	T	T	14 57 38.1	
	baz=309,slow=75,SNR=9.7						
H11N1	**WAKE ISLAND Hy**	**25.33**	**118**	T	T	14 57 39.1	
	baz=309,slow=75,SNR=5.3						
H11N3	**WAKE ISLAND Hy**	**25.34**	**118**	T	T	14 57 49.2	
	baz=309,slow=75,SNR=4.8						
H11S1	**WAKE ISLAND Hy**	**25.96**	**120**	T	T	14 58 30.5	
	baz=311,slow=74,SNR=5.0						
H11S3	**WAKE ISLAND Hy**	**25.96**	**120**	T	T	14 58 40.4	
	baz=311,slow=74						
H11S2	**WAKE ISLAND Hy**	**25.98**	**120**	T	T	14 58 38.6	
	baz=311						
SEY	**Seymchan**	**29.60**	**8**	P	P	14 32 26.9	+11
	0.6nm,0.5s,baz=217,slow=19						
WRA	**Warramunga Arr**	**54.23**	**190**	P	**P**	**14 35 36.7**	**-0.2**
	1.1nm,0.5s,baz=9.0,slow=7.6,SNR=16						
ASAR	**Alice Springs**	**57.95**	**190**	P	**P**	**14 36 03.9**	**+0.4**
	0.1nm,0.4s,baz=7.4,slow=7.5,SNR=4.3						

IDC 15 14:28:36.0±30.0**, 24°.29S**×**174°.47W, h0**^{km}**, mb4.1**/4**, mb1 4.3**/4**, mb1mx3.8**/37**, mbtmp4.1**/4**, Error ellipse: s-maj=542.7km s-min=146.3km az=81.0, South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**36.52**	**269**	P	P	14 35 43.5	-0.1
	1.2nm,0.4s,baz=87,slow=11,SNR=4.8						
STKA	**Stephens Creek**	**39.28**	**249**	P	P	14 36 06.4	-0.3
	1.4nm,0.4s,baz=90,slow=13,SNR=8.9						
ASAR	**Alice Springs**	**46.95**	**260**	P	P	14 37 09.0	+0.1
	1.0nm,0.4s,baz=96,slow=8.2,SNR=58						
WRA	**Warramunga Arr**	**47.41**	**265**	P	P	14 37 12.4	-0.2
	1.2nm,0.3s,baz=104,slow=8.0,SNR=26						

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*IDC **15** 14:33:16.4±2.3, 36°.92N×144°.72E, h0^{km}, mb3.6/2, mb1 3.7/4, mb1mx3.3/42, mbtmp3.6/4, ML3.2/2, Error ellipse: s-maj=44.0km s-min=31.1km az=74.0*

*JMA **15** 14:33:22.1±0.4, 37°.09N×144°.34E, h36^{km}, M3.5*

ISC 15 14:33:19.3±1.4**, 37°.09N**±0°.07×**144°.65E**±0°.10**, h26**^{km}**, n30, σ2^{s}.37**/35**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**2.81**	**297**	P	**Pn**	**14 34 03.4**	**+1.0**
JIO	**Ouri**	**2.95**	**299**	P	**Pn**	**14 34 05.3**	**+0.9**
JIO				*e*S	**Sn**	**14 34 37.6**	**-1.4**
JFK	**Kawauchi**	**3.03**	**276**	P	**Pn**	**14 34 05.7**	**+0.2**
JKMT	**Kesennumamotoy**	**3.05**	**305**	P	**Pn**	**14 34 06.4**	**+0.7**
JKMT				*e*S	**Sn**	**14 34 40.0**	**-1.3**
JMST	**Minamisoumatoc**	**3.06**	**283**	P	**Pn**	**14 34 06.1**	**+0.1**
ONAJ	**Iwakimizuishiy**	**3.08**	**271**	P	**Pn**	**14 34 06.2**	**-0.1**
JOU	**Okura**	**3.41**	**293**	P	**Pn**	**14 34 12.2**	**+1.4**
JFT	**Otama**	**3.47**	**278**	P	**Pn**	**14 34 12.7**	**+1.1**
JYK	**Kaneyama**	**3.85**	**300**	P	**Pn**	**14 34 18.2**	**+1.4**
JRG	**Rokugo**	**3.92**	**307**	P	**Pn**	**14 34 20.1**	**+2.4**
JRG				*e*S	**Sn**	**14 35 02.7**	**-0.1**
JTM	**Tenmabayashi**	**4.63**	**324**	P	**Pn**	**14 34 29.2**	**+1.7**
JTM				*e*S	**Sn**	**14 35 19.1**	**-1.4**
JRY	**Ryogami san**	**4.75**	**259**	P	**Pn**	**14 34 29.0**	**-0.2**
JOT	**Ohata**	**5.12**	**328**	*e*S	**Sn**	**14 35 31.1**	**-1.4**
MJAR	**Matsushiro Arr**	**5.20**	**266**	Pn	**Pn**	**14 34 36.6**	**+1.3**
	0.2nm,0.3s,baz=87,slow=14,SNR=21						
MJAR				Sn	**Sn**	**14 35 36.0**	**+1.5**
	0.2nm,0.3s,baz=83,slow=25,SNR=9.0						
JKB	**Kayabe**	**5.55**	**331**	P	**Pn**	**14 34 42.2**	**+2.0**
JKB				*e*S	**Sn**	**14 35 39.6**	**-3.5**
JHJ2	**Mitsune**	**5.61**	**226**	*e*S	**Sn**	**14 35 37.6**	**-6.9**
JCH	**Churui**	**5.61**	**350**	P	**Pn**	**14 34 41.8**	**+0.8**
JCH				*e*S	**Sn**	**14 35 42.0**	**-2.5**
JHJ	**Hachijo jima 2**	**5.62**	**227**	Sn	**Sn**	**14 35 40.3**	**-4.5**
	12nm,0.3s,baz=60,slow=20,SNR=3.4						
NEM2	**Nemuro 2**	**6.33**	**7**	P	**Pn**	**14 34 48.9**	**-1.9**
NEM2				*e*S	**Sn**	**14 35 57.7**	**-4.5**
JTKR	**Abashiri--Toko**	**6.90**	**356**	P	**Pn**	**14 34 59.0**	**+0.3**
JTKR				*e*S	**Sn**	**14 36 12.1**	**-4.2**
JHR	**Hokuryu**	**7.01**	**342**	P	**Pn**	**14 35 02.8**	**+2.6**
JHR				*e*S	**Sn**	**14 36 18.0**	**-1.1**
ASAJ	**Asahikawa**	**7.20**	**348**	Pn	**Pn**	**14 35 04.7**	**+1.9**
	0.7nm,0.3s,baz=215,slow=12,SNR=11						
ASAJ				Sn	**Sn**	**14 36 22.1**	**-1.5**
	0.4nm,0.3s,baz=144,slow=19,SNR=3.5						
H11N2	**WAKE ISLAND Hy**	**26.01**	**126**	T	T	15 05 47.4	
	baz=317,slow=75,SNR=61						
H11N1	**WAKE ISLAND Hy**	**26.02**	**126**	T	T	15 05 43.9	
	baz=317,slow=75,SNR=38						
H11N3	**WAKE ISLAND Hy**	**26.02**	**126**	T	T	15 05 41.3	
	baz=317,slow=75,SNR=62						
H11S1	**WAKE ISLAND Hy**	**26.77**	**128**	T	T	15 06 38.2	
	baz=319,slow=76,SNR=23						
H11S3	**WAKE ISLAND Hy**	**26.78**	**128**	T	T	15 06 39.2	
	baz=319,slow=76,SNR=17						
H11S2	**WAKE ISLAND Hy**	**26.79**	**128**	T	T	15 06 38.8	
	baz=319,slow=76,SNR=20						
MKAR	**Makanchi Array**	**46.28**	**303**	P	**P**	**14 41 44.9**	**+2.4**
	0.4nm,0.6s,baz=84,slow=9.1,SNR=5.6						
WRA	**Warramunga Arr**	**57.55**	**192**	P	**P**	**14 43 06.4**	**-0.2**
	1.4nm,1.2s,baz=11,slow=7.1,SNR=3.5						

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*NEIC **15** 14:46:27.8±2.4, 34°.74S±0°.05×71°.69W±0°.10, h43^{km}±4^{km}, Error ellipse: s-maj=12.6km s-min=6.4km az=112.0*

*IDC **15** 14:46:28.4±0.3, 34°.73S×71°.59W, h46^{km}±2^{km}, mb4.9/17, mb1 5.0/21, mb1mx5.0/23, mbtmp5.1/21, MS4.4/12, Ms1 4.4/12, ms1mx4.2/20, Error ellipse: s-maj=13.9km s-min=10.1km az=78.0*

*GUC **15** 14:46:28.8±0.6, 34°.74S×71°.78W, h45^{km}±3^{km}, ML5.2*

*MOS **15** 14:46:28.2±1.1, 34°.64S×71°.72W, h52^{km}, mb5.6/17, Error ellipse: s-maj=16.4km s-min=7.4km az=86.5*

*BJI **15** 14:46:30.0±0.0, 34°.70S×71°.60W, h54^{km}, mB5.3/19, Ms5.5/9, Ms7 5.3/10*

*NEIC **15** 14:46:31, 34°.83S×71°.62W, h46^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}6.24; $M_{\theta\theta}$0.27; $M_{\phi\phi}$-6.50; $M_{r\theta}$0.57; $M_{\theta\phi}$-0.07; $M_{\phi r}$-1.13; Fault plane solution: $M_0$6.50000×10^{16} NP1:ϕ_s175.00000°, δ50.00000°, λ83.00000°. NP2:ϕ_s6.00000°, δ40.00000°, λ98.00000°. Principal axes: T 6.3885, Plg83.0000°, Azm43.0000°; N 0.2155, Plg5.0000°, Azm180.0000°; P -6.6040, Plg5.0000°, Azm270.0000°;*

*VAO **15** 14:46:32.9±0.5, 34°.81S×71°.41W, h94^{km}±4^{km}, mb5.4*

*GCMT **15** 14:46:33.0±0.2, 34°.80S±0°.01×71°.86W±0°.02, h48^{km}±1^{km}, MW5.2/108, Moment Tensor Solution. s87,c110; s108,c152; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.14±.21; $M_{\theta\theta}$-0.15±.15; $M_{\phi\phi}$-4.98±.15; $M_{r\theta}$1.05±.10; $M_{\theta\phi}$-0.85±.10; $M_{\phi r}$-5.28±.18; Best double couple: $M_0$7.43200×10^{16} NP1:ϕ_s22.00000°, δ24.00000°, λ115.00000°. NP2:ϕ_s175.00000°, δ69.00000°, λ79.00000°. Principal axes: T 7.6110, Plg65.0000°, Azm67.0000°; N -0.3530, Plg10.0000°, Azm179.0000°; P -7.2530, Plg23.0000°, Azm273.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 14:46:28.2±0.3**, 34°.72S**±0°.03×**71°.67W**±0°.04**, h48**^{km}±2^{km}**, h48**^{km}**:pP-P, n875, σ1^{s}.24**/845**, mb5.5**/131**, MS4.6**/14**, 27C-18D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO05	**Huala**	**0.36**	**217**	⇑*i*P	**Pn**	**14 46 37.1**	**-0.6**
GO05				*i* S	**Sn**	**14 46 43.6**	**-0.9**
GO05				IAML		14 46 44.4	
	comp=N,194µm,0.3s						
GO05	**Huala**	**0.36**	**217**		**Pn**	**14 46 37.6**	**-0.2**
MT01	**Popeta**	**0.92**	**22**	⇓*i*P	**Pn**	**14 46 46.2**	**+1.3**
MT01				*i* S	**Sn**	**14 46 59.3**	**+2.2**
MT01				IAML		14 47 02.9	
	comp=E,64µm,0.2s						
ANTU	**Antumapu**	**1.44**	**37**	IAML		14 47 17.5	
	comp=E,53µm,0.6s						
LMEL	**Las Melosas**	**1.50**	**55**	⇓*i*P	**Pn**	**14 46 54.5**	**+1.7**
LMEL				*i* S	**Sn**	**14 47 15.1**	**+3.9**
LMEL				IAML		14 47 18.7	
	comp=E,32µm,0.7s						
MT03	**Universidad Ad**	**1.56**	**38**	⇓*i*P	**Pn**	**14 46 55.3**	**+1.7**

MT03				i S	Sn	14 47 16.3	+3.6
MT03				IAML		14 47 20.9	
	comp=N,74µm,0.4s						
CLCH	Cerro Calan	1.62	36	⇓iP	Pn	14 46 56.3	+1.9
CLCH				i S	Sn	14 47 17.1	+2.9
VA01	Torpederas	1.70	1	eP	Pn	14 46 56.5	+1.2
VA01				IAML		14 47 25.2	
	comp=E,18µm,0.4s						
PEL	Peldehue	1.77	28	⇑iP	Pn	14 46 58.4	+1.9
PEL				i S	Sn	14 47 20.5	+2.6
PEL				IAML		14 47 27.5	
	comp=N,50µm,0.6s						
PEL	Peldehue	1.77	28	P	Pn	14 46 58.6	+2.1
PEL						14 47 24.1	
PEL	Peldehue	1.77	28		Pn	14 46 58.6	+2.1
PEL				Sn	Sn	14 47 24.1	+6.2
FCH	Farellones	1.80	40	⇓iP	Pn	14 46 59.0	+1.9
FCH				i S	Sn	14 47 22.7	+3.7
FCH				IAML		14 47 28.9	
	comp=E,16µm,0.2s						
ROC1	El Roble	1.83	17		Pn	14 47 01.3	+3.9
ROC1				Sn	Sn	14 47 29.0	+10
ROCH	El Roble	1.83	18	⇑iP	Pn	14 46 59.3	+1.9
ROCH				i S	Sn	14 47 21.4	+1.9
ROCH				IAML		14 47 30.1	
	comp=N,47µm,0.4s						
CCHI	Chillan	1.91	190	⇓iP	Pn	14 46 58.7	+0.5
CCHI				i S	Sn	14 47 23.1	+2.1
CCHI				IAML		14 47 38.7	
	comp=E,67µm,0.5s						
CFA	Coronel Fontan	4.24	44	P	Pn	14 47 31.7	+1.4
	comp=E,30nm,0.3s,baz=237,slow=11,SNR=94						
CFA				S	Sn	14 48 19.8	+1.3
	comp=E,74nm,0.3s,baz=251,slow=18,SNR=2.6						
CFA				LR	LR	14 49 26.4	
	comp=E,7µm,21.4s,baz=229,slow=42						
GO04	Tololo Observa	4.60	9		Pn	14 47 36.0	+0.7
GO06	Curarrehue	4.85	178		Pn	14 47 39.8	+1.0
PLCA	Paso Flores	6.06	172	P	Pn	14 47 56.8	+1.5
	comp=E,14nm,0.3s,baz=358,slow=12,SNR=459						
PLCA				S	Sn	14 49 06.1	+2.7
	comp=E,16nm,0.3s,baz=167,slow=22,SNR=3.1						
PLCA				LR	LR	14 50 24.0	
	comp=E,3µm,19.8s,baz=18,slow=39						
PLCA	Paso Flores	6.06	172	P	Pn	14 47 57.4	+2.0
PLCA	Paso Flores	6.06	172		Pn	14 47 57.4	+2.0
PLCA	Paso Flores	6.06	172	eP	Pn	14 47 57.1	+1.8
GO03	Copiap	7.21	10		Pn	14 48 10.5	-0.6
GO02	Mina Guanaco	9.70	11		Pn	14 48 42.4	-3.0
PB10	IPOC Station P	11.21	5		Pn	14 49 07.8	+1.9
LPA	La Plata	11.29	95	eP	Pn	14 48 59.4	-7.5
LPA				sP		14 49 20.3	
LPA				S	Sn	14 51 07.6	-4.0
LPA				SCS	ScS	15 01 58.9	-3.8
LPA				PKIKP	PKiKP	15 02 55.8	-1.3
LPA				SKIKP		15 06 24.2	
LPA				SKIKS		15 09 54.7	
LVC	Limon Verde	12.31	12	P	Pn	14 49 21.2	+0.1
	comp=E,1.8nm,0.3s,baz=202,slow=9.2,SNR=8.1						
LVC				S	S	14 51 55.3	-8.0
	comp=E,1.3nm,0.3s,baz=248,slow=19,SNR=3.8						
LVC	Limon Verde	12.31	12	P	Pn	14 49 19.9	-1.2
LVC	Limon Verde	12.31	12		Pn	14 49 19.9	-1.2
LVC	Limon Verde	12.31	12	eS	Sn	14 51 42.0	+4.9
PB04	IPOC Station P	12.42	7		Pn	14 49 19.8	-2.7
ITQB	Itaqui	13.70	73	eP	Pn	14 49 39.2	-0.5
PB01	IPOC Station P	13.76	9		Pn	14 49 41.9	+1.1
OGAUY	Aigu	13.99	93	eP	Pn	14 49 44.4	+0.8
CPUP	Villa Florida	14.91	60	P	Pn	14 49 52.3	-3.6
	comp=E,0.2nm,0.3s,baz=230,slow=13,SNR=4.2						
CPUP				S	Sn	14 52 40.6	+0.7
	comp=E,0.8nm,0.3s,baz=151,slow=9.1,SNR=3.4						
CPUP				LR	LR	14 56 17.3	
	comp=E,4µm,19.1s,baz=236,slow=40						
CPUP	Villa Florida	14.91	60	P	P	14 49 58.7	-2.0
CPUP						14 52 40.6	
CPUP				pmax	pmax		
	comp=Z,53nm,0.9s						
CPUP	Villa Florida	14.91	60	P	P	14 49 58.6	-2.0
CPUP	Villa Florida	14.91	60	eP	Pn	14 49 56.6	+0.6
PB11	IPOC Station P	15.01	7	eP	P	14 50 04.0	+2.0
PB11	IPOC Station P	15.01	7		Pn	14 49 57.1	-0.3
PSGC	Pisagua	15.13	6	eP	P	14 50 05.3	+2.1
GO01	Chusmiza	15.16	9	eP	P	14 50 05.2	+1.2
GO01	Chusmiza	15.16	9		Pn	14 50 00.2	+0.6
PLTB	Pedras Altas	15.40	84	eP	Pn	14 50 02.7	+0.4
MNMC	Minye Minye	15.64	7	i P	P	14 50 11.5	+2.3
MNMC	Minye Minye	15.64	7	P	Pn	14 50 06.7	+1.0
MNMC				IAmb	IAmb	14 50 12.7	
	comp=Z,391nm,0.9s						
CPSB	Cacapava Do Su	15.96	79	eP	Pn	14 50 10.1	+0.7
GO09	Cerro Castillo	16.55	181	P	P	14 50 20.6	+1.9
ITAB	Concordia	18.32	71	eP	P	14 50 38.1	-0.3
GO10	Punta Arenas	18.43	179		Pn	14 50 41.7	+1.7
CNLB	Canela	18.45	79	eP	P	14 50 39.2	-0.7
LPAZ	La Paz	18.63	11	P	Pn	14 50 44.6	+1.4
	comp=Z,2.0nm,0.3s,baz=183,slow=7.3,SNR=167						
LPAZ	La Paz	18.63	11	P	Pn	14 50 45.1	+1.9
LPAZ	La Paz	18.63	11	eP	Pn	14 50 43.9	+0.6
LPAZ				epP	sP	14 51 01.7	+2.0
LPAZ				eS	Sn	14 54 11.9	+0.9
EFI	East Falkland	19.58	154	⇓eP	P	14 50 50.3	-1.7
EFI				pmax	pmax		
	comp=Z,32nm,0.9s						
EFI	East Falkland	19.58	154	P	P	14 50 50.8	-1.2
PTGB	Pitanga	19.70	65	eP	P	14 50 53.5	-0.2
AQDB	Aquidauana	20.00	49	eP	P	14 50 57.8	+0.9
USHA	Ushuaia	20.23	175	P	Pn	14 51 00.4	-1.0
	comp=Z,60nm,0.8s,baz=201,slow=8.6,SNR=24						
TRCB	Terra Rica	20.45	59	eP	P	14 51 01.4	-0.4
SIV	San Ignacio	20.94	30	P	P	14 51 07.0	0.0
	comp=Z,198nm,0.9s,baz=217,slow=9.2,SNR=560						
PCMB	Pacaembu	22.18	59	eP	P	14 51 18.7	-1.7
FRTB	Fartura	22.36	65	eP	P	14 51 20.7	-1.5
C2SB	Chapadao do Su	23.07	51	eP	P	14 51 29.1	-0.6
NNA	Nana	23.12	347	P	P	14 51 31.3	+1.1
	comp=Z,44nm,0.9s,baz=184,slow=13,SNR=15						
NNA	Nana	23.12	347	⇑eP	P	14 51 30.7	+0.5
NNA				pmax	pmax		
	comp=Z,51nm,0.6s						
NNA	Nana	23.12	347	P	P	14 51 30.4	+0.2
SALV	Santo Antonio	23.60	41	eP	P	14 51 33.4	-1.4
SPB	Sao Paulo	23.83	69	P	P	14 51 35.9	-1.0
SPB				IAmb	IAmb	14 51 38.8	
	comp=Z,202nm,1.1s						
SPB	Sao Paulo	23.83	69	eP	P	14 51 35.9	-1.0
ITRB	Iturama	24.07	57	eP	P	14 51 38.3	-0.9
RCLB	Rio Claro- Sao	24.42	66	eP	P	14 51 42.0	-0.3
BB19B	Bebedouro	24.49	62	eP	P	14 51 41.5	-1.5
VAO	Valinhos	24.52	68	eP	P	14 51 42.6	-0.7
PARB	Paraibuna	25.37	70	eP	P	14 51 50.1	-0.9
PARB				eS	S	14 56 09.2	-5.1
ARAG	Araguaiana, MT	26.01	48	eP	P	14 51 55.9	-0.9
ESAR	Angra dos Reis	26.46	71	eP	P	14 51 60.0	-0.8
IPMB	Ipameri, GO	26.73	57	eP	P	14 52 01.8	-1.5
SAML	Samuel	26.81	19	eP	P	14 52 03.9	-0.1
SAML	Samuel	26.81	19	P	P	14 52 03.7	-0.2
SAML				pmax	pmax		
	comp=Z,30nm,0.8s						
SAML	Samuel	26.81	19	P	P	14 52 03.7	-0.2
SAML	Samuel	26.81	19	eP	P	14 52 04.1	+0.1
BSCB	Bom Sucesso	27.33	67	eP	P	14 52 07.9	-0.8
CLDB	Colider	27.81	35	eP	P	14 52 11.3	-1.6
ATAH	Atahualpa	28.15	346	P	P	14 52 18.5	+2.1
	comp=Z,6.8nm,0.7s,baz=228,slow=4.8,SNR=4.3						
BDFB	Brasilia	28.50	54	P	P	14 52 18.3	-1.0
	comp=Z,37nm,0.8s,baz=218,slow=6.5,SNR=27						
BDFB				pP	pP	14 52 31.1	-0.6
	comp=Z,48nm,0.9s,baz=221,slow=6.6,SNR=10						
BDFB				LR	LR	15 04 58.1	
	comp=Z,2µm,18.1s,baz=231,slow=39						
BDFB	Brasilia	28.50	54	P	P	14 52 16.3	-2.9
BDFB				pmax	pmax		
	comp=Z,97nm,1.2s						
BDFB	Brasilia	28.50	54	P	P	14 52 16.3	-2.9
BDFB				IAmb	IAmb	14 52 37.8	
	comp=Z,97nm,1.2s						
PMSA	Palmer Station	30.44	174	P	P	14 52 39.5	+3.8
	comp=Z,18nm,1.0s,baz=331,slow=13,SNR=2.8						
PMSA	Palmer Station	30.44	174	IAmb	IAmb	14 52 55.3	
	comp=Z,164nm,1.9s						
SJMB	Sao Joao De Ma	31.40	67	eP	P	14 52 44.0	-0.8
JANB	Januaria	31.44	58	eP	P	14 52 44.3	-0.9
BSFB	Barra de Sao F	31.58	68	eP	P	14 52 45.5	-0.9
SMTB	Santa Maria do	33.91	46	eP	P	14 53 06.0	-0.7
NBIT	Itapeh - BA	35.04	64	eP	P	14 53 14.6	-2.0
OTAV	Otavalo	35.35	348	eP	P	14 53 21.3	+1.6
OTAV	Otavalo	35.35	348	P	P	14 53 19.4	-0.3
OTAV				pmax	pmax		
	comp=Z,82nm,1.6s						
OTAV	Otavalo	35.35	348	P	P	14 53 19.4	-0.3
OTAV				IAmb	IAmb	14 53 23.5	
	comp=Z,82nm,1.6s						
OTAV	Otavalo	35.35	348	eP	P	14 53 20.4	+0.7
PTGA	Pitinga	35.54	20	P	P	14 53 21.1	+0.3
PTGA	Pitinga	35.54	20	eP	P	14 53 20.8	0.0
PTGA				eS	S	14 58 50.5	-2.7
CRUC	La Cruz	36.44	351	eP	P	14 53 31.2	+2.3
MACC	Macarena, Meta	36.73	356	eP	P	14 53 31.9	+1.0
GARC	Garzon, Huila	36.89	354	eP	P	14 53 34.0	+1.5
BBAC	Balboa, Cauca	36.92	351	eP	P	14 53 33.3	+0.5
SOTA	Rioblanco	36.96	352	eP	P	14 53 35.5	+2.0
PCON	Cinco Dias	37.12	352	eP	P	14 53 38.3	+3.4
NBPN	Ponto Novo - B	37.23	58	eP	P	14 53 34.6	-0.7
POPC	Popayan, Colom	37.36	352	eP	P	14 53 37.6	+1.0
GR1C	Gorgona, Isla	38.02	349	eP	P	14 53 42.6	+0.7
ORTC	Ortega, Tolima	38.57	354	eP	P	14 53 47.5	+1.0
VILC	Villavicencio,	38.67	357	eP	P	14 53 49.0	+1.5
PTGC	Puerto Gaitan,	38.72	359	eP	P	14 53 47.5	-0.2
YOTC	Yotoco, Valle	38.75	353	eP	P	14 53 47.5	-0.6
NBLA	Lagarto - SE	38.84	61	eP	P	14 53 47.5	-1.3
CHIC	Chingaza	39.19	357	eP	P	14 53 52.5	+0.4
TOLC	Tolima	39.25	354	eP	P	14 53 54.6	+2.1
ROSC	El Rosal	39.43	356	P	P	14 53 58.1	+4.0
	comp=Z,72nm,0.7s,baz=154,slow=7.8,SNR=18						
ROSC	El Rosal	39.43	356	eP	P	14 53 58.2	+4.0
CROSA	EL ROSAL, CUND	39.44	356	eP	P	14 53 58.2	+4.0
RREF	El Recreo	39.56	354	eP	P	14 53 58.9	+3.4
PLMC	San Jos del P	39.66	353	eP	P	14 53 54.6	-1.0
GUY2C	Guyana, Caldas	39.88	354	eP	P	14 53 59.6	+1.6
NBTA	Tacaratu-PE	39.93	58	eP	P	14 53 56.7	-1.2
NORC	Norcasia	40.18	355	eP	P	14 54 02.5	+2.5
SPBC	San Pablo de B	40.22	356	eP	P	14 54 00.3	0.0
RUSC	La Rusia	40.42	358	eP	P	14 54 03.2	+0.7
RUSC	La Rusia	40.42	358	P	P	14 54 04.2	+1.7
CBOC	Ciudad Bolivar	40.58	353	eP	P	14 54 04.6	+1.2
NBMA	Muriti-CE	40.70	56	eP	P	14 54 03.6	-0.7
NBAN	Anadia - AL	40.83	61	eP	P	14 54 04.0	-1.3
HELC	Santa Helena	40.86	354	eP	P	14 54 06.0	+0.1
TAMC	Tame, Arauca	40.94	360	eP	P	14 54 06.7	+0.5
PTBC	PUERTO BERRIO,	41.12	356	eP	P	14 54 06.7	-1.0
NBPS	Pedro II - PI	41.16	50	eP	P	14 54 07.8	-0.4
NBPB	Pedra_Branca-C	41.49	53	eP	P	14 54 10.5	-0.3
ELOV	Elorza	41.55	3	eP	P	14 54 10.2	-0.9
DBBC	Dabeiba	41.74	353	eP	P	14 54 15.2	+2.4
PAMC	Pamplona, Colo	41.85	358	eP	P	14 54 14.5	+0.4
ZARC	Zaragoza, Cauc	42.09	355	eP	P	14 54 15.9	+0.3
NBRF	Rio Formoso -	42.33	61	eP	P	14 54 15.9	-1.6
UREC	San Jos de Ur	42.40	354	eP	P	14 54 15.9	-2.2
OCAC	Ocana	42.76	358	eP	P	14 54 19.5	-1.7
NBMO	Morrinhos-CE	42.88	50	eP	P	14 54 21.2	-0.9
NBPA	Parau_RN	42.99	56	eP	P	14 54 22.8	-0.2
NBCL	Cascavel-CE	43.32	53	eP	P	14 54 25.1	-0.5
SMLC	San Martn de	43.35	357	eP	P	14 54 23.8	-2.0
SDV	Santo Domingo	43.38	1	eP	P	14 54 25.2	-1.1
SDV	Santo Domingo	43.38	1	P	P	14 54 25.7	-0.5
SDV				IAmb	IAmb	14 54 27.7	
	comp=Z,56nm,0.7s						
SDV	Santo Domingo	43.38	1	eP	P	14 54 26.3	0.0
RCBR	Riachuelo	43.77	57	P	P	14 54 29.2	-0.1
RCBR				pmax	pmax		
	comp=Z,32nm,0.9s						
RCBR	Riachuelo	43.77	57	P	P	14 54 29.2	-0.1
RCBR	Riachuelo	43.77	57	eP	P	14 54 28.2	-1.1
NBPV	Pedro Velho	43.78	58	eP	P	14 54 29.1	-0.2
SJCC	San Jacinto, C	44.50	355	eP	P	14 54 35.8	+0.7
SMRC	Santa Marta, M	45.70	356	eP	P	14 54 43.6	-0.9
URIC	Uribia, Colomb	46.17	360	P	P	14 54 46.0	-2.2
JTS	Las Juntas de	46.51	342	⇓eP	P	14 54 50.1	-0.8
JTS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TOSP	Speyside	46.97	15	P	P	14 54 55.1	+0.6
GRGR	Grenville	47.56	13	P	P	14 54 57.1	-1.9
VNA3	Neumayer Olymp	48.58	158	P	P	14 55 06.9	+0.5
VNA1	Neumayer--Stat	48.89	157	P	P	14 55 07.8	-0.9
VNA2	Neumayer--Watz	49.23	157	P	P	14 55 11.8	+0.5
	baz=288,slow=8.7						
FDF	Fort de France	50.19	13	P	P	14 55 18.7	-0.6
FDF				pmax	pmax		
	comp=Z,136nm,0.9s						
FDF	Fort de France	50.19	13	P	P	14 55 18.7	-0.6
SNAA	Sanae	50.80	158	P	P	14 55 23.6	+0.3
SNAA	Sanae	50.80	158	P	P	14 55 23.8	+0.4
	comp=Z,37nm,0.9s,baz=285,slow=6.4,SNR=54						
SNAA	Sanae	50.80	158	c iP	P	14 55 23.3	0.0
SNAA	Sanae	50.80	158	P	P	14 55 23.1	-0.2
SNAA				IAmb	IAmb	14 55 24.9	
	comp=Z,57nm,1.0s						
SKI	Saint Kitts	52.46	11	P	P	14 55 35.7	-0.5
SKI				pmax	pmax		
	comp=Z,361nm,0.9s						
SKI	Saint Kitts	52.46	11	P	P	14 55 35.7	-0.5
ICMP	Isla Caja de M	52.55	6	P	P	14 55 35.2	-1.5
MLPR	Magueyes Islan	52.58	6	P	P	14 55 36.7	-0.4
CRPR	Cabo Rojo, PR	52.62	5	P	P	14 55 36.2	-1.1
SABA	Saba	52.67	10	P	P	14 55 36.1	-1.6
OBIP	Obispado Ponce	52.69	6	P	P	14 55 36.8	-1.1
PDPR	Patillas Dam,	52.72	7	P	P	14 55 37.4	-0.7
PDPR				IAmb	IAmb	14 55 38.5	
	comp=Z,69nm,1.1s						
SJG	San Juan	52.80	7	P	P	14 55 37.0	-1.7
SJG				pmax	pmax		
	comp=Z,67nm,0.9s						
SJG	San Juan	52.80	7	P	P	14 55 37.0	-1.7
SJG				IAmb	IAmb	14 55 39.1	
	comp=Z,67nm,0.9s						
AOPR	Arecibo Observ	52.98	6	IAmb	IAmb	14 55 39.7	
	comp=Z,40nm,0.9s						
GCPR	Guaynabo City	53.01	7	P	P	14 55 38.1	-2.0
GCPR				IAmb	IAmb	14 55 39.7	
	comp=Z,39nm,0.8s						
CUPR	Culebra, Puert	53.09	8	P	P	14 55 39.9	-0.8
CUPR				IAmb	IAmb	14 55 41.0	
	comp=Z,42nm,0.8s						
DR12	Loma Pena Alta	53.26	3	P	P	14 55 40.8	-1.4
SDDR	Presa de Saban	53.41	0	P	P	14 55 44.6	+1.4
QSPA	South Pole Qui	55.52	180	P	P	14 55 59.5	+1.4
NVL	N'lazarevskaya	55.54	156	⇓iP	P	14 55 57.4	-0.6
NVL				eS	S	15 03 44.0	+4.4
NVL				pmax	pmax		
	comp=Z,61nm,0.9s						
TEIG	Tepich	56.88	341	P	P	14 56 07.7	-0.5
VNDA	Vanda	63.45	191	P	P	14 56 53.9	+1.4
	comp=Z,3.2nm,0.7s,baz=136,slow=7.4,SNR=9.8						
VNDA	Vanda	63.45	191	P	P	14 56 54.0	+1.4
VNDA				pmax	pmax		
	comp=Z,72nm,2.0s						
VNDA	Vanda	63.45	191	P	P	14 56 54.0	+1.4
VNDA				IAmb	IAmb	14 57 08.6	
	comp=Z,72nm,1.9s						
SYO	Syowa Base	65.08	158	⇓iP	P	14 57 01.7	-1.5
SYO	Syowa Base	65.08	158	⇑iX	P	14 57 11.0	+7.8
TIGA	Tifton	66.76	349	P	P	14 57 14.4	0.0
	baz=169						
TAOE	Nuku Hiva Isla	67.34	275	eLR	LR	15 17 37.4	
	comp=Z,509nm,27.7s						
TBI	Tubuai	67.45	257	eLR	LR	15 17 36.5	
	comp=Z,1µm,30.0s						
NHSC	New Hope	67.95	352	P	P	14 57 22.8	+1.0
	baz=172						
833A	Chaparral WMA,	67.97	334	P	P	14 57 23.6	+1.5
	baz=156,SNR=8.6						
Z58A	St. Stephen	68.13	353	P	P	14 57 23.8	+0.8
	baz=173,SNR=5.8						
Z57A	Bowman	68.19	352	P	P	14 57 24.0	+0.6
	baz=172,SNR=8.1						
Y60A	Bolivia	68.64	354	P	P	14 57 27.1	+0.9
	baz=174						
GOGA	Godfrey	68.68	349	IAmb	IAmb	14 57 27.4	
	comp=Z,36nm,1.0s						
GOGA	Godfrey	68.68	349	P	P	14 57 26.4	0.0
	baz=170,SNR=11						
Y58A	Scranton	68.68	353	P	P	14 57 27.1	+0.7
	baz=173						
Y56A	Pelion	68.75	351	P	P	14 57 27.7	+0.8
	baz=172						
Y57A	Sumter	68.87	352	P	P	14 57 28.0	+0.4
	baz=172						
VBMS	Vicksburg	68.91	343	P	P	14 57 29.5	+1.6
	baz=164						
LRAL	Lakeview Retre	68.92	346	P	P	14 57 28.3	+0.4
	baz=167,SNR=11						
Z50A	Ashland	68.93	347	IAmb	IAmb	14 57 29.2	
	comp=Z,61nm,1.1s						
Z50A	Ashland	68.93	347	P	P	14 57 28.3	+0.2
	baz=168,SNR=22						
Y55A	Saluda	68.97	351	P	P	14 57 28.4	+0.2
	baz=171,SNR=11						
MEH	Mehetia	69.06	262	eT	T	16 12 21.8	
	comp=Z,58nm,0.2s						
X60A	Albert Glenn T	69.19	354	P	P	14 57 30.4	+0.8
	baz=174						
Y52A	Lilburn	69.21	349	IAmb	IAmb	14 57 31.0	
	comp=Z,66nm,1.0s						
Y52A	Lilburn	69.21	349	P	P	14 57 30.1	+0.3
	baz=169,SNR=15						
X57A	Johnson Farm,	69.28	353	P	P	14 57 30.5	+0.3
	baz=173						
X58A	Rowland	69.29	353	P	P	14 57 30.6	+0.4
	baz=173						
X56A	White Oak	69.41	352	P	P	14 57 31.2	+0.2
	baz=172,SNR=7.7						
X55A	Gracelyn & Ava	69.46	351	P	P	14 57 31.5	+0.2
	baz=171,SNR=12						
NATX	Nacogdoches	69.58	339	P	P	14 57 33.6	+1.5
	baz=160						
435B	Jarrell	69.58	336	P	P	14 57 33.6	+1.5
	baz=158						
X54A	Belton	69.64	351	P	P	14 57 32.8	+0.4
	baz=171,SNR=12						
W60A	Pink Hill	69.64	355	P	P	14 57 33.3	+0.9
	baz=175,SNR=5.3						
W61A	Ground Anchor	69.72	355	P	P	14 57 34.3	+1.5
	baz=175						
X53A	Estanollee	69.72	350	P	P	14 57 33.2	+0.3
	baz=170,SNR=20						
W58A	Raeford	69.74	353	P	P	14 57 33.5	+0.5
	baz=173,SNR=15						
PAULI	Pauline	69.83	351	IAmb	IAmb	14 57 34.9	
	comp=Z,50nm,0.9s						
CNNC	Cliffs of the	69.84	355	P	P	14 57 34.3	+0.7
	baz=175						
W57A	Gilead	69.95	353	IAmb	IAmb	14 57 35.3	
	comp=Z,50nm,0.9s						
W57A	Gilead	69.95	353	P	P	14 57 34.4	+0.1
	baz=173,SNR=11						
W56A	Indian Trail	70.00	352	P	P	14 57 34.6	+0.1
	baz=172						
X51A	Calhoun	70.03	348	P	P	14 57 35.3	+0.6
	baz=169,SNR=22						
JCT	Junction City	70.07	334	IAmb	IAmb	14 57 37.2	
	comp=Z,34nm,0.8s						
JCT	Junction City	70.07	334	P	P	14 57 36.2	+1.0
	baz=156,SNR=13						
KMSC	Kings Mountain	70.09	352	IAmb	IAmb	14 57 36.3	
	comp=Z,44nm,0.9s						
KMSC	Kings Mountain	70.09	352	P	P	14 57 35.3	+0.2
	baz=172,SNR=11						
W54A	Cherokee Point	70.14	351	P	P	14 57 36.0	+0.5
	baz=171,SNR=17						
BG3	Lake Jocassee	70.15	350	P	P	14 57 35.9	+0.4
BG3				IAmb	IAmb	14 57 37.0	
	comp=Z,37nm,0.9s						
TIAR	Tiarei	70.26	262	eT	T	16 13 52.3	
	comp=Z,11nm,0.2s						
X48A	Hartselle	70.31	347	IAmb	IAmb	14 57 38.2	
	comp=Z,68nm,1.1s						
V60A	Jim Taylor Roa	70.32	355	P	P	14 57 38.4	+1.9
	baz=175						
V59A	Middlesex	70.39	354	P	P	14 57 37.7	+0.7
	baz=174,SNR=9.7						
PPT2	Papeete2	70.43	262	eS	S	15 06 43.8	-3.7
	comp=Z,175nm,27.2s						
PPT2	Papeete2	70.43	262	eLR	LR	15 19 01.9	
	comp=Z,1µm,28.0s,baz=123						
PPT	Papeete	70.44	262	LR	LR	15 20 14.2	
	comp=Z,236nm,19.1s,baz=148,slow=29						
Z41A	Richland Creek	70.47	341	IAmb	IAmb	14 57 39.8	
	comp=Z,60nm,1.1s						
Z41A	Richland Creek	70.47	341	P	P	14 57 38.7	+1.2
	baz=162,SNR=5.2						
V58A	Windy Hill, Pi	70.50	354	IAmb	IAmb	14 57 38.7	
	comp=Z,53nm,0.8s						
V58A	Windy Hill, Pi	70.50	354	P	P	14 57 37.8	+0.1
	baz=174,SNR=11						
TX31	Lajitas Ar. Si	70.51	331	IAmb	IAmb	14 57 53.4	
	comp=Z,57nm,1.6s						
TXAR	Lajitas Array	70.51	331	P	P	14 57 39.2	+1.2
	comp=Z,8.7nm,0.6s,baz=158,slow=8.6,SNR=72						
TXAR				pP	pP	14 57 52.1	+0.3
	comp=Z,11nm,0.5s,baz=156,slow=8.8,SNR=30						
TXAR				LR	LR	15 24 19.7	
	comp=Z,146nm,18.1s,baz=0.0,slow=32						
V56A	Mocksville	70.65	352	P	P	14 57 38.9	+0.4
	baz=172,SNR=18						
V57A	Coltrane Farms	70.66	353	P	P	14 57 38.5	0.0
	baz=173,SNR=5.5						
WHTX	Lake Whitney,	70.66	337	IAmb	IAmb	14 57 40.4	
	comp=Z,46nm,0.8s						
WHTX	Lake Whitney,	70.66	337	P	P	14 57 39.5	+0.8
	baz=158,SNR=16						
V55A	Taylorsville	70.78	352	IAmb	IAmb	14 57 40.6	
	comp=Z,69nm,0.8s						
V55A	Taylorsville	70.78	352	P	P	14 57 39.6	+0.3
	baz=172,SNR=16						
V54A	Nebo	70.79	351	P	P	14 57 39.7	+0.2
	baz=171,SNR=16						
U61A	Possum Corner	70.83	356	P	P	14 57 40.7	+1.1
	baz=176						
CPCT	Cooper Cave	70.84	349	IAmb	IAmb	14 57 41.0	
	comp=Z,61nm,0.9s						
OXF	Oxford	70.85	345	P	P	14 57 39.9	+0.1
	baz=165,SNR=15						
TKL	Tuckaleechee C	70.93	350	IAmb	IAmb	14 57 41.1	
	comp=Z,41nm,0.8s						
U59A	Littleton	70.94	355	P	P	14 57 41.0	+0.7
	baz=175,SNR=6.7						
U60A	Pendleton	71.02	355	P	P	14 57 41.5	+0.8
	baz=175						
PLAL	Pickwick Lake	71.02	346	IAmb	IAmb	14 57 41.5	
	comp=Z,44nm,0.6s						
U58A	Oxford	71.05	354	P	P	14 57 41.3	+0.4
	baz=174,SNR=6.8						
U57A	Blanch	71.15	353	P	P	14 57 41.8	+0.2
	baz=173,SNR=7.8						
U56A	King	71.17	353	P	P	14 57 42.2	+0.4
	baz=172,SNR=6.8						
U55A	TA2, Sparta	71.40	352	P	P	14 57 43.2	+0.1
	baz=172,SNR=9.5						
U54A	Nelsons Funny	71.51	351	P	P	14 57 43.8	0.0
	baz=171,SNR=17						
T59A	Double "B" Far	71.54	355	P	P	14 57 44.6	+0.7
	baz=175,SNR=15						
T58A	Grand View Acr	71.59	354	P	P	14 57 44.7	+0.5
	baz=174,SNR=12						
X40A	Basin Creek Fa	71.65	342	P	P	14 57 45.3	+0.7
	baz=162						
T57A	Hurt	71.71	354	P	P	14 57 45.2	+0.3
	baz=174,SNR=7.3						
TZTN	Tazewell	71.76	350	P	P	14 57 45.2	-0.1
	baz=170,SNR=8.0						
CLTN	Cedars of Leba	71.77	348	IAmb	IAmb	14 57 46.7	
	comp=Z,71nm,1.0s						
T56A	Rocky Mt	71.81	353	P	P	14 57 46.2	+0.6
	baz=173,SNR=11						
MIAR	Mount Ida	71.90	341	IAmb	IAmb	14 58 00.9	
	comp=Z,60nm,1.7s						
MIAR	Mount Ida	71.90	341	P	P	14 57 46.5	+0.4
	baz=161,SNR=11						
ABTX	Abilene, Hawle	71.96	335	IAmb	IAmb	14 57 48.4	
	comp=Z,54nm,0.9s						
T55A	Pulaski	71.98	352	P	P	14 57 47.0	+0.4
	baz=172,SNR=6.7						
T54A	Tazewell	72.01	352	P	P	14 57 46.7	-0.2
	baz=172,SNR=15						
BLA	Blacksburg	72.03	353	P	P	14 57 47.3	+0.3
	baz=172						
T53A	Wise	72.06	351	P	P	14 57 46.8	-0.3
	baz=171,SNR=5.9						
U49A	Red Boiling Sp	72.08	348	IAmb	IAmb	14 57 47.8	
	comp=Z,27nm,0.6s						
WVT	Waverly	72.08	346	P	P	14 57 47.3	+0.1
WVT				pmax	pmax		
	comp=Z,173nm,0.8s						

WVT	Waverly	72.08	346	P	P	14 57 47.3	+0.1
WVT	Waverly	72.08	346	P	P	14 57 47.5	+0.3
	baz=166						
W41B	Gary Mavity, V	72.15	342	IAmb	IAmb	14 58 02.2	
	comp=Z,66nm,1.5s						
W41B	Gary Mavity, V	72.15	342	P	P	14 57 48.0	+0.4
	baz=162,SNR=17						
S58A	Poland Farm, P	72.21	355	P	P	14 57 48.9	+1.0
	baz=175						
T51A	Gray	72.23	350	P	P	14 57 48.1	0.0
	baz=170,SNR=29						
T52A	Hallie	72.24	351	P	P	14 57 48.1	-0.1
	baz=170						
WHAR	Wooly Hollow	72.27	342	IAmb	IAmb	14 58 02.9	
	comp=Z,101nm,1.6s						
S59A	Mechanicsville	72.31	355	P	P	14 57 49.4	+0.9
	baz=175,SNR=5.8						
MAW	Mawson	72.40	163	P	P	14 57 49.5	+0.7
	comp=Z,39nm,0.8s,baz=211,slow=7.4,SNR=13						
MAW				LR	LR	15 31 54.9	
	comp=Z,332nm,18.0s,baz=236,slow=38						
MAW	Mawson	72.40	163	P	P	14 57 49.5	+0.7
MAW				pmax	pmax		
	comp=Z,12nm,1.0s						
MAW	Mawson	72.40	163	P	P	14 57 49.5	+0.7
S56A	Natural Bridge	72.41	353	P	P	14 57 49.8	+0.7
	baz=173						
T50A	Nancy	72.42	349	P	P	14 57 49.1	-0.1
	baz=169,SNR=9.9						
S57A	Dark Hollow, R	72.44	354	IAmb	IAmb	14 57 50.8	
	comp=Z,52nm,0.9s						
S57A	Dark Hollow, R	72.44	354	P	P	14 57 49.8	+0.5
	baz=174,SNR=12						
R58B	Mineral	72.55	355	IAmb	IAmb	14 57 52.0	
	comp=Z,88nm,1.6s						
R58B	Mineral	72.55	355	P	P	14 57 50.9	+1.0
	baz=175,SNR=8.3						
W39A	Magazine	72.56	341	P	P	14 57 51.2	+1.1
	baz=161,SNR=62						
S55A	Lewisburg	72.59	353	P	P	14 57 50.6	+0.4
	baz=172,SNR=13						
T49A	Edmonton	72.62	348	IAmb	IAmb	14 57 51.3	
	comp=Z,58nm,0.9s						
T49A	Edmonton	72.62	348	P	P	14 57 50.4	0.0
	baz=168,SNR=22						
S53A	Williamson	72.69	351	P	P	14 57 50.6	-0.2
	baz=171,SNR=5.9						
S54A	Dingess, Beckl	72.71	352	IAmb	IAmb	14 57 51.8	
	comp=Z,55nm,0.9s						
S54A	Dingess, Beckl	72.71	352	P	P	14 57 51.0	0.0
	baz=172,SNR=7.5						
R59A	King George, V	72.73	356	P	P	14 57 51.9	+0.9
	baz=175						
LCAR	Lake Charles	72.74	344	IAmb	IAmb	14 57 52.2	
	comp=Z,52nm,0.7s						
CBN	Corbin Frederi	72.75	355	P	P	14 57 52.6	+1.5
	baz=175						
T47A	Sharon Grove	72.78	347	IAmb	IAmb	14 57 52.3	
	comp=Z,63nm,0.9s						
FCAR	Ozark Folk Cen	72.80	343	IAmb	IAmb	14 57 52.5	
	comp=Z,29nm,0.8s						
S52A	Salyersville	72.81	351	P	P	14 57 51.5	0.0
	baz=170,SNR=20						
S51A	Beattyville	72.84	350	P	P	14 57 51.9	+0.2
	baz=170						
R58A	Rapidan	72.89	355	P	P	14 57 52.8	+0.8
	baz=175,SNR=8.1						
R57A	Stanardsville	72.93	354	P	P	14 57 53.1	+0.9
	baz=174,SNR=15						
S50A	Richmond	73.00	349	P	P	14 57 52.7	+0.1
	baz=169,SNR=28						
R54A	Victor	73.05	352	P	P	14 57 53.0	+0.1
	baz=172,SNR=12						
R55A	Marlinton	73.06	353	IAmb	IAmb	14 57 54.8	
	comp=Z,71nm,0.8s						
R55A	Marlinton	73.06	353	P	P	14 57 53.8	+0.8
	baz=173,SNR=16						
R56A	Bull Pasture M	73.12	354	P	P	14 57 54.3	+0.9
	baz=173,SNR=9.0						
X34A	Smith Ranch, M	73.18	338	IAmb	IAmb	14 57 55.5	
	comp=Z,49nm,0.7s						
S49A	Springfield	73.24	349	P	P	14 57 53.6	-0.4
	baz=168,SNR=10						
PBMO	Poplar Bluff	73.25	344	IAmb	IAmb	14 57 55.2	
	comp=Z,66nm,1.1s						
MNTX	Cornudas Mount	73.29	330	P	P	14 57 54.5	0.0
	baz=152,SNR=28						
R53A	Hurricane	73.31	352	IAmb	IAmb	14 57 55.4	
	comp=Z,37nm,0.8s						
R53A	Hurricane	73.31	352	P	P	14 57 54.5	0.0
	baz=171,SNR=6.5						
R52A	Catlettsburg	73.40	351	P	P	14 57 55.0	0.0
	baz=171,SNR=6.3						
U40A	Yellville	73.42	342	IAmb	IAmb	14 57 56.4	
	comp=Z,39nm,0.7s						
U40A	Yellville	73.42	342	P	P	14 57 55.5	+0.4
	baz=162,SNR=29						
R51A	Hillsboro	73.49	350	P	P	14 57 55.7	+0.2
	baz=170,SNR=13						
Q58A	Fox Den Farm,	73.51	355	P	P	14 57 56.3	+0.7
	baz=175,SNR=6.8						
R50A	Paris	73.58	350	IAmb	IAmb	14 57 57.0	
	comp=Z,37nm,0.9s						
R50A	Paris	73.58	350	P	P	14 57 55.9	-0.1
	baz=169,SNR=10						
WMOK	Wichita Mounta	73.61	337	P	P	14 57 56.5	+0.2
	baz=157,SNR=13						
HHAR	Hobbs	73.63	341	IAmb	IAmb	14 57 57.5	
	comp=Z,33nm,0.7s						
Q57A	Strasburg	73.66	355	P	P	14 57 57.6	+1.1
	baz=174,SNR=13						
R49A	Shelbyville	73.72	349	IAmb	IAmb	14 57 57.6	
	comp=Z,40nm,0.9s						
R49A	Shelbyville	73.72	349	P	P	14 57 56.6	-0.2
	baz=169,SNR=10						
Q56A	Snyder Ridge,	73.73	354	P	P	14 57 57.8	+0.9
	baz=174,SNR=5.1						
Q55A	Buckhannon	73.76	353	P	P	14 57 57.8	+0.6
	baz=173,SNR=5.8						
Q53A	Leroy	73.78	352	P	P	14 57 57.1	-0.1
	baz=172,SNR=5.8						
TUL1	Leonard	73.79	340	IAmb	IAmb	14 57 58.5	
	comp=Z,51nm,0.7s						
TUL1	Leonard	73.79	340	P	P	14 57 57.6	+0.3
	baz=160,SNR=11						
Q54A	Coxs Mills	73.83	353	P	P	14 57 57.4	0.0
	baz=172,SNR=7.0						
WCI	Wyandotte Cave	73.84	348	P	P	14 57 57.2	-0.4
	baz=168						
S44A	Carbondale	73.88	346	IAmb	IAmb	14 57 58.7	
	comp=Z,58nm,0.9s						
Q52A	Bidwell	73.97	351	P	P	14 57 58.5	+0.2
	baz=171,SNR=9.3						
P58A	Pank, Wackersv	74.03	355	P	P	14 57 59.7	+1.1
	baz=175,SNR=14						
P57A	Homestead Farm	74.07	355	IAmb	IAmb	14 58 01.0	
	comp=Z,43nm,0.8s						
P57A	Homestead Farm	74.07	355	P	P	14 58 00.2	+1.3
	baz=175,SNR=9.5						
Q50A	Georgetown	74.08	350	P	P	14 57 59.7	+0.8
	baz=170,SNR=6.3						
P59A	Jarrettsville	74.10	356	P	P	14 58 00.3	+1.3
	baz=176,SNR=10						
P56A	Dayton Farm, R	74.16	354	P	P	14 58 00.3	+1.0
	baz=174,SNR=8.3						
Q51A	Peebles	74.17	351	IAmb	IAmb	14 58 00.6	
	comp=Z,64nm,0.8s						
Q51A	Peebles	74.17	351	P	P	14 57 59.6	+0.1
	baz=170,SNR=17						
SUR	Sutherland	74.21	119	P	P	14 58 01.5	+1.1
SUR				IAmb	IAmb	14 58 02.1	
	comp=Z,33nm,0.8s						
P55A	Reedsville	74.25	353	P	P	14 58 00.4	+0.4
	baz=173,SNR=6.9						
P60A	Greenville	74.26	357	P	P	14 58 00.7	+0.8
	baz=177						
MSTX	Muleshoe	74.29	334	IAmb	IAmb	14 58 02.0	
	comp=Z,32nm,0.8s						
MSTX	Muleshoe	74.29	334	P	P	14 58 01.1	+0.7
	baz=154,SNR=18						
Q49A	Aurora	74.38	349	P	P	14 58 00.6	-0.1
	baz=169,SNR=18						
P53A	Whipple	74.39	352	P	P	14 58 00.8	+0.1
	baz=172,SNR=6.5						
MCWV	Mont Chateau	74.40	353	P	P	14 58 01.4	+0.7
	baz=173,SNR=6.6						
P54A	Burton	74.40	353	P	P	14 58 01.0	+0.1
	baz=173						
Q48A	North Vernon	74.43	349	P	P	14 58 00.8	-0.2
	baz=168,SNR=21						
P51A	Williamsport	74.58	351	P	P	14 58 01.7	-0.2
	baz=170,SNR=8.9						
P52A	Corning	74.62	352	P	P	14 58 02.0	-0.1
	baz=171,SNR=9.6						
O58A	Lewisberry	74.64	356	P	P	14 58 03.0	+0.9
	baz=176,SNR=10						
CCM	Cathedral Cave	74.66	344	P	P	14 58 02.6	+0.3
CCM				pmax	pmax		
	comp=Z,98nm,0.9s						
CCM	Cathedral Cave	74.66	344	P	P	14 58 02.6	+0.3
CCM	Cathedral Cave	74.66	344	P	P	14 58 02.8	+0.4
	baz=164						
319A	Douglas	74.67	327	IAmb	IAmb	14 58 18.6	
	comp=Z,147nm,1.9s						
LIC	Lamto	74.72	71	⇑*i*P	P	14 58 03.1	-0.1
	comp=Z,172nm,0.8s						
AMTX	Amarillo	74.72	335	IAmb	IAmb	14 58 04.8	
	comp=Z,49nm,1.1s						
AMTX	Amarillo	74.72	335	P	P	14 58 03.8	+0.9
	baz=155						
O60A	Telford	74.75	357	P	P	14 58 03.8	+1.1
	baz=177,SNR=11						
O57A	Amberson	74.77	355	P	P	14 58 03.8	+0.8
	baz=175,SNR=8.4						
O59A	Robesonia	74.78	356	P	P	14 58 04.1	+1.1
	baz=176,SNR=11						
BLO	Bloomington	74.80	348	IAmb	IAmb	14 58 03.7	
	comp=Z,35nm,0.8s						
S39A	Bolivar	74.81	342	IAmb	IAmb	14 58 04.0	
	comp=Z,22nm,0.7s						
P50A	Jamestown	74.81	350	P	P	14 58 03.1	0.0
	baz=170,SNR=13						
P49A	Miami Univ. Ec	74.87	350	P	P	14 58 03.1	-0.3
	baz=169,SNR=13						
O56A	Blue Knob Stat	74.89	355	P	P	14 58 04.3	+0.6
	baz=174,SNR=6.1						
O55A	Ligonier	74.89	354	P	P	14 58 04.1	+0.4
	baz=174,SNR=8.2						
P48A	Milroy	74.90	349	P	P	14 58 03.3	-0.4
	baz=168,SNR=30						
T35A	Sooner Cattle	74.93	340	IAmb	IAmb	14 58 05.7	
	comp=Z,44nm,0.8s						
O54A	Avella	74.97	353	P	P	14 58 04.1	0.0
	baz=173						
TIC	Toumodi	74.98	71	⇑*i*P	P	14 58 04.9	+0.1
	comp=Z,148nm,1.1s						
121A	Cookes Peak, D	75.01	329	IAmb	IAmb	14 58 20.6	
	comp=Z,33nm,0.8s						
121A	Cookes Peak, D	75.01	329	P	P	14 58 06.6	+1.9
	baz=150,SNR=14						
KIC	Kosan Boka	75.02	71	⇑*i*P	P	14 58 05.3	+0.3
	comp=Z,220nm,0.8s						
O52A	Adamsville	75.06	352	IAmb	IAmb	14 58 05.5	
	comp=Z,52nm,0.8s						
O52A	Adamsville	75.06	352	P	P	14 58 04.5	-0.1
	baz=171,SNR=13						
O53A	New Philadelph	75.12	352	P	P	14 58 04.9	0.0
	baz=172,SNR=6.6						
DBIC	Dimbokro	75.12	71	P	P	14 58 05.9	+0.3
	comp=Z,65nm,0.7s,baz=207,slow=6.0,SNR=129						
DBIC				pP	pP	14 58 19.4	-0.2
	comp=Z,19nm,0.7s,baz=190,slow=5.3,SNR=6.4						
DBIC				LR	LR	15 28 42.7	
	comp=Z,222nm,20.1s,baz=201,slow=34						
N61A	South Mountain	75.14	358	P	P	14 58 06.1	+1.0
	baz=178						
O51A	Pataskala	75.18	351	P	P	14 58 05.2	-0.1
	baz=171,SNR=23						
SSPA	Standing Stone	75.21	355	P	P	14 58 05.3	-0.2
SSPA	Standing Stone	75.21	355	P	P	14 58 06.0	+0.5
	baz=175						
N60A	Cedar Hill Far	75.29	357	P	P	14 58 06.7	+0.8
	baz=177,SNR=12						
ACSO	Alum Creek Sta	75.31	351	P	P	14 58 06.0	0.0
	baz=170,SNR=30						
O50A	Cable	75.31	351	P	P	14 58 06.0	-0.1
	baz=170,SNR=21						
N58A	Sunbury	75.34	356	P	P	14 58 07.0	+0.8
	baz=176,SNR=5.9						
N59A	State Game Lan	75.36	357	IAmb	IAmb	14 58 08.5	
	comp=Z,40nm,0.9s						
N59A	State Game Lan	75.36	357	P	P	14 58 07.7	+1.4
	baz=177,SNR=7.7						
N55A	Marion Center	75.44	354	P	P	14 58 07.5	+0.7
	baz=174,SNR=21						
O49A	Covington	75.45	350	P	P	14 58 06.8	0.0
	baz=169,SNR=25						
ODNJ	Ogdensburg	75.48	358	IAmb	IAmb	14 58 08.8	
	comp=Z,28nm,0.8s						
N56A	West Decatur	75.52	355	P	P	14 58 07.9	+0.7
	baz=174						
N53A	Lisbon	75.63	353	P	P	14 58 08.8	+0.9
	baz=172,SNR=8.7						
O48A	Farmland	75.64	349	P	P	14 58 07.6	-0.3
	baz=169,SNR=19						
M61A	Granite Spring	75.69	358	P	P	14 58 08.9	+0.7
	baz=178						
N54A	Moraine State	75.70	354	IAmb	IAmb	14 58 09.6	
	comp=Z,47nm,0.8s						
N54A	Moraine State	75.70	354	P	P	14 58 08.6	+0.3
	baz=173,SNR=14						
M60A	Port Jervis	75.73	358	P	P	14 58 09.6	+1.2
	baz=178,SNR=10						
N52A	McGinn’s Farm,	75.73	352	P	P	14 58 08.5	0.0
	baz=172						
M62A	Hamden	75.80	359	P	P	14 58 10.3	+1.6
	baz=179,SNR=5.0						
M58A	Price’s Panora	75.85	356	P	P	14 58 09.9	+0.8
	baz=176						
M57A	Sunshine Farm,	75.86	356	P	P	14 58 09.9	+0.8
	baz=175,SNR=5.1						
N50A	Nevada	75.86	351	P	P	14 58 09.4	+0.2
	baz=170,SNR=45						
N51A	Ashland	75.91	352	IAmb	IAmb	14 58 10.3	
	comp=Z,77nm,0.9s						
N51A	Ashland	75.91	352	P	P	14 58 09.6	+0.1
	baz=171,SNR=12						
M59A	Waymart	75.97	357	P	P	14 58 10.9	+1.1
	baz=177,SNR=7.4						
M56A	Emporium	76.07	355	IAmb	IAmb	14 58 11.8	
	comp=Z,51nm,0.9s						
M56A	Emporium	76.07	355	P	P	14 58 10.8	+0.4
	baz=175,SNR=15						
SFIN	Lafayette	76.08	348	P	P	14 58 09.6	-0.8
	baz=167,SNR=8.1						
M55A	Ridgway	76.10	355	IAmb	IAmb	14 58 11.9	
	comp=Z,65nm,0.8s						
M55A	Ridgway	76.10	355	P	P	14 58 11.0	+0.4
	baz=174,SNR=20						
TUC	Tucson	76.14	327	P	P	14 58 13.1	+2.0
	baz=148						
N49A	Columbus Grove	76.15	350	P	P	14 58 10.8	0.0
	baz=170,SNR=22						
N48A	Decatur	76.21	350	P	P	14 58 10.8	-0.4
	baz=169,SNR=13						
L63A	North Scituate	76.22	0	P	P	14 58 12.4	+1.3
	baz=180						
M54A	Oil Creek Stat	76.22	354	IAmb	IAmb	14 58 12.2	
	comp=Z,30nm,0.8s						
M54A	Oil Creek Stat	76.22	354	P	P	14 58 11.2	0.0
	baz=173,SNR=11						
M53A	WI Miller and	76.24	353	P	P	14 58 11.4	+0.1
	baz=172,SNR=14						
L64A	Middleborough	76.29	1	P	P	14 58 12.6	+1.1
	baz=181						
M51A	Elyria	76.30	352	P	P	14 58 11.7	+0.1
	baz=171,SNR=7.4						
N47A	Urbana	76.33	349	P	P	14 58 11.2	-0.6
	baz=168,SNR=27						
L60A	Shokan	76.38	358	P	P	14 58 13.2	+1.1
	baz=178,SNR=5.8						
M52A	Chesterland	76.41	353	IAmb	IAmb	14 58 13.4	
	comp=Z,62nm,0.8s						
M52A	Chesterland	76.41	353	P	P	14 58 12.4	+0.1
	baz=172,SNR=10						
M50A	Fremont	76.47	351	P	P	14 58 12.6	0.0
	baz=170,SNR=7.6						
L58A	Harry Jones Me	76.49	357	P	P	14 58 13.6	+0.8
	baz=176,SNR=7.9						
L57A	Andrews Acres	76.50	356	P	P	14 58 13.4	+0.6
	baz=176,SNR=5.8						
ANMO	Albuquerque	76.56	331	*ce*P	P	14 58 13.7	+0.1
ANMO				*i* *PP	pP	14 58 27.7	+0.2
ANMO				pmax	pmax		
	comp=Z,16nm,1.3s						
ANMO	Albuquerque	76.56	331	P	P	14 58 14.8	+1.3
ANMO	Albuquerque	76.56	331	P	P	14 58 15.1	+1.6
	baz=151						
L59A	Walton	76.61	357	P	P	14 58 14.4	+1.0
L59A				IAmb	IAmb	14 58 15.3	
	comp=Z,42nm,0.8s						
L59A	Walton	76.61	357	P	P	14 58 14.3	+1.0
	baz=177,SNR=8.9						
HDIL	Hopedale	76.65	346	P	P	14 58 13.7	+0.1
	baz=165,SNR=14						
BINY	Binghamton	76.65	357	P	P	14 58 14.5	+0.8
	baz=176,SNR=5.4						
M49A	Liberty Center	76.67	351	P	P	14 58 13.8	+0.1
	baz=170,SNR=18						
L56A	Greenwood	76.68	356	IAmb	IAmb	14 58 15.4	
	comp=Z,64nm,0.9s						
L56A	Greenwood	76.68	356	P	P	14 58 14.4	+0.6
	baz=175,SNR=16						
L53A	Girard	76.71	353	P	P	14 58 14.0	+0.1
	baz=173,SNR=10						
M48A	Edgerton	76.78	350	P	P	14 58 14.4	0.0
	baz=169						
214A	Organ Pipe Nat	76.78	325	P	P	14 58 16.7	+2.0
	baz=146,SNR=7.1						
L55A	Hinsdale	76.79	355	P	P	14 58 15.0	+0.6
	baz=174,SNR=24						
L61B	Northampton	76.81	359	P	P	14 58 15.4	+1.0
	baz=179						
ERPA	Erie	76.85	354	P	P	14 58 14.9	+0.2
	baz=173,SNR=5.8						
HRV	Adam Dziewonsk	76.86	0	P	P	14 58 16.0	+1.3
	baz=180						
L54A	Sinclairville	76.91	354	P	P	14 58 15.5	+0.4
	baz=174,SNR=18						
K60A	Five Rivers En	77.00	358	P	P	14 58 16.8	+1.2
	baz=178						
KSU1	Kansas State U	77.00	340	P	P	14 58 15.9	+0.2
	baz=159,SNR=7.4						
K62A	Royalston	77.02	360	P	P	14 58 17.1	+1.4
	baz=180						
L50A	Kingsville	77.08	352	P	P	14 58 15.5	-0.5
	baz=171,SNR=9.4						
K59A	Cooperstown	77.18	358	P	P	14 58 17.3	+0.7
	baz=177,SNR=7.6						
L48A	N Adams	77.19	350	P	P	14 58 16.2	-0.5
	baz=169,SNR=13						
K58A	Earlville	77.20	357	IAmb	IAmb	14 58 18.3	
	comp=Z,53nm,0.8s						
K58A	Earlville	77.20	357	P	P	14 58 17.2	+0.5
	baz=177,SNR=15						
K57A	Scipio Center	77.21	356	P	P	14 58 16.9	+0.1
	baz=176						
K56A	Middlesex	77.22	356	P	P	14 58 17.2	+0.3
	baz=175,SNR=6.0						
K54A	Basiliko Farm,	77.23	355	P	P	14 58 17.3	+0.4
	baz=174,SNR=12						
L49A	Milan	77.26	351	P	P	14 58 17.0	-0.1
	baz=170,SNR=11						
K55A	Perry	77.30	355	P	P	14 58 17.6	+0.3
	baz=175,SNR=7.1						
L47A	Sherwood	77.33	350	P	P	14 58 16.9	-0.5
	baz=169,SNR=15						
AAM	Ann Arbor	77.44	351	P	P	14 58 17.8	-0.2
	baz=170						
L46A	Eue Claire	77.53	349	P	P	14 58 18.5	-0.1
	baz=168						
K52A	Tillsonburg	77.58	353	P	P	14 58 18.9	+0.1
	baz=172,SNR=9.1						
J62A	Henniker	77.58	360	P	P	14 58 20.4	+1.6
	baz=180,SNR=5.9						
K51A	Iona Station	77.60	353	P	P	14 58 19.1	+0.2
	baz=172						
J63A	Strafford	77.63	0	P	P	14 58 20.6	+1.5
	baz=181						
CBKS	Cedar Bluff	77.65	338	IAmb	IAmb	14 58 21.4	
	comp=Z,38nm,0.8s						
CBKS	Cedar Bluff	77.65	338	P	P	14 58 20.5	+1.1
	baz=157,SNR=13						
J61A	Chester	77.70	359	P	P	14 58 21.1	+1.6
	baz=179						
T25A	Trinidad	77.72	334	IAmb	IAmb	14 58 22.8	
	comp=Z,54nm,0.9s						
T25A	Trinidad	77.72	334	P	P	14 58 21.8	+1.8
	baz=153,SNR=47						
J56A	Wolcott	77.77	356	IAmb	IAmb	14 58 21.0	
	comp=Z,47nm,0.8s						
J56A	Wolcott	77.77	356	P	P	14 58 20.1	+0.3
	baz=176						
K50A	Casco	77.78	352	P	P	14 58 19.7	-0.2
	baz=171,SNR=9.2						
J58A	Remsen	77.78	357	P	P	14 58 20.3	+0.3
	baz=177						
J59A	Piesco	77.86	358	IAmb	IAmb	14 58 21.9	
	comp=Z,34nm,0.9s						
J59A	Piesco	77.86	358	P	P	14 58 21.1	+0.7
	baz=178,SNR=9.1						
J57A	Williamstown	77.86	357	IAmb	IAmb	14 58 21.8	
	comp=Z,55nm,0.9s						
J57A	Williamstown	77.86	357	P	P	14 58 20.8	+0.5
	baz=176,SNR=12						
J54A	Appleton	77.89	355	P	P	14 58 21.1	+0.7
	baz=174						
K47A	Vermontville	77.98	350	P	P	14 58 20.2	-0.9
	baz=169,SNR=12						
K48A	Perry	77.99	351	P	P	14 58 20.9	-0.2
	baz=170,SNR=14						
J52A	Paris	78.01	353	P	P	14 58 21.3	+0.1
	baz=173,SNR=16						
I58A	Old Forge	78.10	358	P	P	14 58 22.3	+0.6
	baz=177,SNR=12						
K46A	Dorr	78.11	349	P	P	14 58 21.3	-0.5
	baz=168						
I59A	Olmsteadville	78.17	358	P	P	14 58 22.6	+0.6
	baz=178,SNR=6.2						
I60A	Shoreham	78.21	359	P	P	14 58 23.0	+0.8
	baz=179,SNR=8.4						
X16A	Lo Mia Camp, P	78.21	327	IAmb	IAmb	14 58 38.8	
	comp=Z,40nm,1.2s						
I62A	Tamworth	78.23	0	P	P	14 58 23.5	+1.1
	baz=180						
I61A	Oroboro, Fairl	78.28	360	P	P	14 58 24.1	+1.4
	baz=180						
I57A	Carthage	78.37	357	P	P	14 58 23.8	+0.7
	baz=177,SNR=11						
I63A	Otisfield	78.41	1	P	P	14 58 25.1	+1.7
	baz=181,SNR=6.6						
J49A	Marlette	78.41	351	P	P	14 58 22.8	-0.6
	baz=170						
J48A	Bridge Port	78.44	351	P	P	14 58 23.3	-0.2
	baz=170,SNR=14						
I53A	Kortright Cn E	78.51	354	P	P	14 58 24.5	+0.6
	baz=173						
J47A	Sunmer	78.52	350	IAmb	IAmb	14 58 24.5	
	comp=Z,61nm,0.9s						
J47A	Sunmer	78.52	350	P	P	14 58 23.6	-0.4
	baz=169,SNR=9.9						
K43A	Burlington	78.55	348	IAmb	IAmb	14 58 27.2	
	comp=Z,41nm,0.9s						
LBNH	Lisbon	78.59	360	IAmb	IAmb	14 58 26.6	
	comp=Z,40nm,0.8s						
LBNH	Lisbon	78.59	360	P	P	14 58 25.6	+1.2
	baz=180,SNR=6.8						
I51A	Listowel	78.62	353	P	P	14 58 24.6	+0.1
	baz=172,SNR=22						
SDCO	Great Sand Dun	78.65	333	P	P	14 58 26.6	+1.4
	baz=152,SNR=33						
TSUM	Tsumeb	78.72	106	P	P	14 58 26.5	+0.5
TSUM				IAmb	IAmb	14 58 27.8	
	comp=Z,34nm,1.0s						
I55A	Frankford	78.76	356	P	P	14 58 25.6	+0.3
	baz=175,SNR=6.6						
KSCO	Kaye Shedlock’	78.77	336	P	P	14 58 27.5	+1.8
	baz=155						
SCIA	State Center	78.78	344	P	P	14 58 26.1	+0.6
	baz=162						
I52A	Shelburne	78.80	354	P	P	14 58 26.5	+0.9
	baz=173						
H58A	Gabriels	78.80	358	P	P	14 58 26.2	+0.6
	baz=178,SNR=10						
H61A	Lyndonville	78.89	360	P	P	14 58 27.3	+1.2
	baz=180,SNR=11						
H57A	Richville	78.89	357	P	P	14 58 26.6	+0.6
	baz=177,SNR=9.9						
H60A	Morristown	78.92	359	P	P	14 58 27.3	+1.1
	baz=179						
I49A	Point Hope	78.95	352	P	P	14 58 26.2	-0.1
	baz=171						
IKP	In-Ko-Pah, Jac	78.95	323	P	P	14 58 28.8	+2.0
	baz=144						

H59A	Cadyville	79.02	359	P	P	14 58 27.4	+0.7
	baz=178,SNR=8.4						
H63A	New Sharon	79.03	1	P	P	14 58 28.8	+2.1
	baz=181						
SWSC	Sam W. Stewart	79.04	323	P	P	14 58 29.2	+2.1
	baz=144						
H56A	Elgin	79.05	357	P	P	14 58 27.5	+0.6
	baz=176,SNR=15						
H55A	Tweed	79.06	356	P	P	14 58 27.3	+0.4
	baz=175,SNR=7.6						
Y12C	Blythe	79.08	325	P	P	14 58 29.8	+2.5
	baz=145						
WUAZ	Wupatki	79.11	328	P	P	14 58 29.6	+2.0
	baz=148						
H65A	Eastbrook	79.11	2	P	P	14 58 28.7	+1.6
	baz=183						
JFWS	Jewell Farm	79.11	346	P	P	14 58 27.3	0.0
JFWS				pmax	pmax		
	comp=Z,59nm,0.9s						
JFWS	Jewell Farm	79.11	346	P	P	14 58 27.3	0.0
JFWS				IAmb	IAmb	14 58 28.5	
	comp=Z,58nm,0.9s						
JFWS	Jewell Farm	79.11	346	P	P	14 58 27.5	+0.2
	baz=165,SNR=15						
S22A	4UR Ranch, Cre	79.16	332	P	P	14 58 29.6	+1.6
	baz=151,SNR=16						
H53A	Bobcaygeon	79.17	355	P	P	14 58 27.9	+0.4
	baz=174,SNR=10						
FRNY	Flat Rock	79.20	359	IAmb	IAmb	14 58 29.5	
	comp=Z,39nm,0.8s						
I47A	Gladwin	79.24	351	P	P	14 58 27.7	-0.3
	baz=169,SNR=8.6						
I46A	Reed City	79.29	350	P	P	14 58 27.6	-0.7
	baz=169						
I48A	Sherman Twp	79.30	351	P	P	14 58 28.3	+0.1
	baz=170						
MONP2	Monument Peak	79.30	323	P	P	14 58 31.0	+2.2
	baz=144						
MVCO	Mesa Verde	79.34	331	IAmb	IAmb	14 58 44.8	
	comp=Z,60nm,1.6s						
MVCO	Mesa Verde	79.34	331	P	P	14 58 30.5	+1.5
	baz=150,SNR=9.0						
H52A	Wyevale	79.35	354	P	P	14 58 28.9	+0.4
	baz=173						
SADO	Sadowa	79.41	355	IAmb	IAmb	14 58 30.0	
	comp=Z,38nm,0.9s						
BC3	Big Chuckawall	79.44	324	P	P	14 58 31.5	+2.1
	baz=145,SNR=6.5						
G59A	Clarenceville	79.44	359	P	P	14 58 29.3	+0.4
	baz=179						
BOSA	Boshof	79.47	117	*i* P	P	14 58 30.1	+0.1
BOSA	Boshof	79.47	117	P	P	14 58 30.2	+0.3
	comp=Z,86nm,0.8s,baz=237,slow=4.2,SNR=157						
BOSA				pP	pP	14 58 44.1	+0.1
	comp=Z,31nm,0.7s,baz=261,slow=6.3,SNR=9.0						
BOSA				LR	LR	15 28 57.8	
	comp=Z,76nm,18.6s,baz=214,slow=32						
BOSA	Boshof	79.47	117	*i* P	P	14 58 30.1	+0.1
G63A	Kingsbury	79.49	1	P	P	14 58 30.2	+0.9
	baz=182						
G57A	Newington	79.51	358	P	P	14 58 30.1	+0.7
	baz=177,SNR=12						
G58A	Ormstown	79.53	358	P	P	14 58 29.9	+0.5
	baz=178,SNR=7.1						
PLVO	Plevna	79.54	356	IAmb	IAmb	14 58 31.1	
	comp=Z,46nm,0.9s						
BGNE	Belgrade	79.58	340	P	P	14 58 31.0	+1.1
	baz=158,SNR=5.6						
G62A	West of Eustis	79.58	1	P	P	14 58 31.4	+1.6
G62A				IAmb	IAmb	14 58 31.9	
	comp=Z,44nm,0.9s						
G62A	West of Eustis	79.58	1	P	P	14 58 31.4	+1.6
	baz=181,SNR=6.0						
Q24A	Divide	79.60	334	P	P	14 58 32.2	+1.8
	baz=153,SNR=15						
G61A	St-Isidore-de-	79.63	0	P	P	14 58 31.5	+1.5
	baz=180,SNR=5.2						
PKME	Peaks-Kenny Pk	79.64	2	P	P	14 58 31.3	+1.2
	baz=182						
G64A	Maxfield	79.65	2	P	P	14 58 30.5	+0.4
	baz=182						
IRM	Iron Mountain	79.70	325	P	P	14 58 32.7	+1.9
	baz=145,SNR=7.0						
G53A	Haliburton	79.72	355	P	P	14 58 31.4	+0.8
	baz=174,SNR=19						
G55A	Calabogie	79.74	356	P	P	14 58 31.2	+0.6
	baz=176,SNR=9.4						
H48A	Harrisville	79.76	352	P	P	14 58 31.1	+0.4
	baz=170						
I42A	Draeger Farm,	79.81	347	IAmb	IAmb	14 58 32.1	
	comp=Z,47nm,0.9s						
TPFO	Pinon Flats	79.89	323	P	P	14 58 34.1	+2.2
	baz=144,SNR=8.7						
XPFO	Pion Flat	79.89	323	P	P	14 58 33.9	+2.0
PFO	Pinyon Flats O	79.90	323	*c e* P	P	14 58 32.5	+0.5
PFO				pmax	pmax		
	comp=Z,23nm,1.0s						
PFO	Pinyon Flats O	79.90	323	P	P	14 58 33.8	+1.8
PFO	Pinyon Flats O	79.90	323	P	P	14 58 34.4	+2.4
	baz=144,SNR=9.1						
G54A	Lake Saint Pet	79.96	355	P	P	14 58 32.3	+0.5
	baz=175,SNR=21						
H45A	Beulah	80.05	350	P	P	14 58 32.7	+0.4
	baz=168						
F63A	Nahmakanta, Br	80.09	2	P	P	14 58 33.9	+1.4
	baz=182						
MURC	Murrieta	80.25	323	P	P	14 58 35.7	+1.9
	baz=144						
F64A	Sherman	80.27	2	P	P	14 58 34.8	+1.3
	baz=183						
G47A	Hillman	80.29	351	P	P	14 58 34.3	+0.7
	baz=170,SNR=8.3						
F55A	Otter Lake	80.30	357	P	P	14 58 34.5	+0.9
	baz=176,SNR=7.5						
OGNE	Ogallala	80.32	337	P	P	14 58 35.6	+1.6
	baz=155						
F60A	Warwick	80.32	360	P	P	14 58 34.3	+0.6
	baz=180						
G45A	Suttons Bay	80.40	350	P	P	14 58 34.5	+0.3
	baz=168,SNR=5.2						
F52A	Sundridge	80.44	355	P	P	14 58 34.9	+0.5
	baz=174,SNR=16						
GMRC	Granite Mounta	80.46	325	P	P	14 58 37.2	+2.2
	baz=145,SNR=10						
ISCO	Idaho Springs	80.51	334	P	P	14 58 36.7	+1.4
	baz=152,SNR=13						
ALGO	Algonquin Park	80.51	355	P	P	14 58 35.0	+0.2
	baz=175						
F51A	Arnstein	80.62	354	P	P	14 58 35.5	+0.1
	baz=173,SNR=10.0						
F49A	Sandfield	80.66	353	P	P	14 58 35.5	-0.1
	baz=171,SNR=16						
E60A	Ste Agathe de	80.72	0	P	P	14 58 36.4	+0.5
	baz=180,SNR=7.2						
E58A	La Victoria	80.74	359	P	P	14 58 36.3	+0.4
	baz=179,SNR=8.8						
F48A	Evansville	80.79	352	P	P	14 58 36.5	+0.3
	baz=171,SNR=17						
E57A	Chemin Saint G	80.79	358	P	P	14 58 36.6	+0.3
	baz=178,SNR=11						
HEC	Hector,Ludlow	80.82	324	P	P	14 58 39.1	+2.3
	baz=144,SNR=7.3						
E63A	Oxbow	80.83	2	P	P	14 58 37.6	+1.1
	baz=183						
E52A	Mattawa	80.88	355	P	P	14 58 36.6	-0.1
	baz=174,SNR=5.6						
E55A	Montcerf-Lytto	80.90	357	P	P	14 58 37.3	+0.4
	baz=176,SNR=5.6						
E53A	Dumoine, Ponti	80.91	356	P	P	14 58 37.4	+0.5
	baz=175,SNR=14						
E54A	Lac Daplat, Po	80.94	356	P	P	14 58 37.4	+0.3
	baz=176,SNR=16						
E56A	St. Veronique	80.95	358	P	P	14 58 37.4	+0.3
	baz=177,SNR=15						
BFSC	Mount Baldy Ra	80.99	323	P	P	14 58 39.8	+2.0
	baz=143,SNR=8.2						
F45A	CMU Biological	81.01	350	P	P	14 58 37.5	0.0
	baz=169,SNR=7.5						
TUQ	Turquoise Moun	81.11	325	P	P	14 58 40.4	+1.9
	baz=145						
E51A	G1948 Merrick	81.19	355	P	P	14 58 38.8	+0.3
	baz=174,SNR=27						
D60A	Saint Jean D’O	81.27	1	P	P	14 58 39.6	+0.8
	baz=181,SNR=7.0						
ECSD	EROS Data Cent	81.33	342	IAmb	IAmb	14 58 40.7	
	comp=Z,65nm,0.9s						
ECSD	EROS Data Cent	81.33	342	P	P	14 58 39.7	+0.5
	baz=160,SNR=54						
E48A	Lockeyer	81.39	353	P	P	14 58 39.7	+0.3
	baz=171,SNR=18						
D57A	Chemin Vers le	81.39	358	P	P	14 58 40.2	+0.7
	baz=178,SNR=14						
GSC	Goldstone, Bar	81.43	324	P	P	14 58 42.1	+2.0
	baz=144,SNR=6.6						
D55A	Sainte-Anne-du	81.44	357	P	P	14 58 40.0	+0.3
	baz=177,SNR=14						
D56A	ZEC Mazanza, M	81.45	358	P	P	14 58 40.2	+0.5
	baz=178,SNR=7.8						
D63A	Stockholm	81.45	2	P	P	14 58 40.6	+0.9
	baz=183						
D58A	Chemin du LacG	81.45	359	P	P	14 58 40.5	+0.7
	baz=179,SNR=15						
D62A	Allapoint, All	81.47	2	P	P	14 58 40.5	+0.7
D62A				IAmb	IAmb	14 58 41.5	
	comp=Z,29nm,0.9s						
D62A	Allapoint, All	81.47	2	P	P	14 58 40.6	+0.8
	baz=182,SNR=7.7						
E47A	Iron Bridge	81.48	352	P	P	14 58 40.0	+0.1
	baz=170,SNR=34						
D61A	St Aubert, Com	81.56	1	P	P	14 58 41.4	+1.0
	baz=181						
N23A	Red Feather La	81.59	334	P	P	14 58 42.5	+1.5
	baz=152,SNR=6.5						
D53A	Lac Vacive, Po	81.61	356	P	P	14 58 41.0	+0.4
	baz=175						
D54A	Lac Fusel, La	81.63	357	P	P	14 58 40.5	-0.2
	baz=176,SNR=12						
EDW2	Edwards Air Fo	81.67	323	P	P	14 58 42.9	+1.6
	baz=143,SNR=8.1						
LBTB	Lobatse	81.72	115	*i* P	P	14 58 41.6	-0.5
LBTB	Lobatse	81.72	115	pP	pP	14 58 56.2	0.0
	baz=242,slow=6.5						
LBTB	Lobatse	81.72	115	*i* P	P	14 58 41.6	-0.5
LBTB	Lobatse	81.72	115	P	P	14 58 42.4	+0.3
LBTB				pmax	pmax		
	comp=Z,73nm,0.9s						
LBTB	Lobatse	81.72	115	P	P	14 58 42.4	+0.3
D51A	Lot 18 Range I	81.74	355	P	P	14 58 41.5	+0.3
	baz=174,SNR=16						
LATQ	La Tuque	81.74	359	P	P	14 58 42.0	+0.8
	baz=179						
O20A	White River Ci	81.77	333	P	P	14 58 43.6	+1.7
	baz=150						
D50A	G1974 Best Tow	81.85	354	P	P	14 58 42.2	+0.4
	baz=173,SNR=34						
SPMN	Marine on St.	81.85	345	IAmb	IAmb	14 58 42.5	
	comp=Z,42nm,1.0s						
SPMN	Marine on St.	81.85	345	P	P	14 58 41.7	-0.2
	baz=163,SNR=12						
E43A	Lone Tree Farm	81.90	349	IAmb	IAmb	14 58 43.5	
	comp=Z,45nm,0.8s						
E44A	Grand Marais A	81.98	350	P	P	14 58 43.6	+1.1
	baz=168						
LRMC	Laurel Mtn Rad	82.00	324	P	P	14 58 45.0	+1.9
	baz=143,SNR=5.6						
D46A	Sault St. Mari	82.00	351	P	P	14 58 42.6	-0.1
	baz=170,SNR=14						
D48A	Paudash Townsh	82.03	353	P	P	14 58 42.8	0.0
	baz=172,SNR=19						
D47A	Chapleau	82.06	352	P	P	14 58 42.8	-0.2
	baz=171,SNR=18						
MPMC	Manual Prospec	82.37	324	P	P	14 58 46.9	+1.8
	baz=144						
FURC	Furnace Creek,	82.39	325	P	P	14 58 46.8	+1.9
	baz=144						
TPNV	Topopah Spring	82.50	325	P	P	14 58 47.7	+2.0
	baz=144,SNR=9.0						
ISA	Isabella, Lake	82.53	323	P	P	14 58 48.0	+2.2
	baz=143,SNR=10						
PKM	Mcpherson Peak	82.59	322	P	P	14 58 48.5	+2.2
	baz=142						
SUSD	Miller	82.61	341	P	P	14 58 46.9	+1.0
	baz=158						
CWC	Cottonwood Cre	82.96	324	P	P	14 58 50.1	+2.0
	baz=143						
VES	Vestal, Richgr	82.97	323	P	P	14 58 50.0	+2.0
	baz=142						
SMMC	Simmler	83.02	322	P	P	14 58 50.8	+2.4
	baz=142						
R11A	Troy Canyon, C	83.33	327	P	P	14 58 52.0	+1.9
	baz=145,SNR=20						
K22A	Casper	83.34	335	P	P	14 58 51.4	+1.4
	baz=152,SNR=6.7						
TIN	Tinemaha, Big	83.52	324	P	P	14 58 53.8	+2.9
	baz=143						
LSQQ	Lebel-sur-Quev	83.55	356	P	P	14 58 51.0	+0.4
	baz=176						
DUG	Dugway, Tooele	83.65	330	IAmb	IAmb	14 59 08.2	
	comp=Z,37nm,1.2s						
DUG	Dugway, Tooele	83.65	330	P	P	14 58 53.0	+1.5
	baz=147,SNR=9.3						
RSSD	Black Hills	83.82	337	P	P	14 58 53.5	+1.0
RSSD				pmax	pmax		
	comp=Z,19nm,0.9s						
RSSD	Black Hills	83.82	337	P	P	14 58 53.5	+1.0
RSSD	Black Hills	83.82	337	P	P	14 58 53.5	+1.0
	baz=154						
TOA0	Torodi Ar. Sit	84.17	70	P	P	14 58 54.8	+0.1
TORD	Torodi Ar. Bea	84.17	70	P	P	14 58 54.9	+0.3
	comp=Z,57nm,0.8s,baz=251,slow=4.1,SNR=235						
TORD				pP	pP	14 59 07.9	-0.9
	comp=Z,13nm,0.7s,baz=237,slow=4.4,SNR=5.7						
TORD				LR	LR	15 36 40.2	
	comp=Z,248nm,18.0s,baz=275,slow=36						
TORD	Torodi Ar. Bea	84.17	70	P	P	14 58 53.9	-0.7
EYMN	Ely	84.19	347	P	P	14 58 54.0	0.0
	baz=164,SNR=11						
MATQ	Matagami	84.28	356	P	P	14 58 54.4	+0.1
	baz=175,SNR=7.1						
HWUT	Hardware Ranch	84.33	331	IAmb	IAmb	14 59 11.2	
	comp=Z,37nm,1.1s						
BW06	Boulder Array	84.55	333	P	P	14 58 56.7	+0.5
	baz=150						
PDAR	Pinedale Array	84.55	333	P	P	14 58 56.8	+0.6
	comp=Z,5.5nm,0.7s,baz=138,slow=6.1,SNR=44						
PDAR				pP	pP	14 59 10.1	-0.2
	comp=Z,3.2nm,0.6s,baz=160,slow=4.7,SNR=7.8						
PDAR				PKKPbc	PKKPbc	15 17 06.4	-1.8
	comp=Z,1.2nm,0.6s,baz=18,slow=0.2,SNR=12						
PDAR	Pinedale Array	84.55	333	P	P	14 58 55.5	-0.7
DRLN	Deer Lake	84.55	9	P	P	14 58 56.1	+0.3
NVAR	Mina Array Bea	84.65	325	P	P	14 58 58.3	+1.5
	comp=Z,6.6nm,0.8s,baz=157,slow=6.1,SNR=48						
NVAR				pP	pP	14 59 11.5	+0.6
	comp=Z,7.5nm,0.8s,baz=151,slow=6.1,SNR=16						
NVAR	Mina Array Bea	84.65	325	P	P	14 58 58.0	+1.2
AGMN	Agassiz Nation	85.43	344	IAmb	IAmb	14 59 01.3	
	comp=Z,18nm,0.7s						
AGMN	Agassiz Nation	85.43	344	P	P	14 59 00.5	+0.3
	baz=160,SNR=14						
MDND	Maddock	85.92	342	P	P	14 59 03.7	+1.1
	baz=157						
FLWY	Flagg Ranch	86.10	333	IAmb	IAmb	14 59 06.0	
	comp=Z,31nm,0.8s						
H17A	Grant Village	86.32	333	P	P	14 59 06.6	+1.6
	baz=149,SNR=7.7						
RLMT	Red Lodge	86.47	334	IAmb	IAmb	14 59 20.9	
	comp=Z,52nm,1.4s						
RLMT	Red Lodge	86.47	334	P	P	14 59 06.7	+1.0
	baz=150,SNR=14						
MATP	Matopo	86.54	112	*i* P	P	14 59 03.9	-2.8
MATP	Matopo	86.54	112	pP	pP	14 59 18.0	-2.9
	baz=227,slow=6.4						
MATP	Matopo	86.54	112	*i* P	P	14 59 03.9	-2.8
LAO	LASA Array	86.81	337	P	P	14 59 07.9	+0.8
	baz=152,SNR=6.3						
ULM	Lac du Bonnet	87.28	345	P	P	14 59 09.2	+0.1
	comp=Z,17nm,0.8s,baz=163,slow=3.8,SNR=39						
ULM				pP	pP	14 59 22.6	-0.7
	comp=Z,9.8nm,0.7s,baz=167,slow=2.7,SNR=6.7						
ULM	Lac du Bonnet	87.28	345	*c i* P	P	14 59 08.6	-0.6
ULM	Lac du Bonnet	87.28	345	IAmb	IAmb	14 59 10.2	
	comp=Z,25nm,0.9s						
DGMT	Dagmar	87.77	339	P	P	14 59 13.0	+1.3
	baz=154,SNR=19						
O03E	Paynes Creek	87.79	324	P	P	14 59 13.2	+1.2
	baz=141,SNR=5.4						
O02D	Mt. Diablo Mer	88.18	323	P	P	14 59 15.1	+1.2
	baz=140						
MOD	Modoc Plateau	88.33	326	IAmb	IAmb	14 59 30.3	
	comp=Z,23nm,1.1s						
WDC	Whiskeytown Da	88.37	324	P	P	14 59 14.7	+0.1
WDC				pmax	pmax		
	comp=Z,15nm,0.8s						
WDC	Whiskeytown Da	88.37	324	P	P	14 59 14.7	+0.1
WDC				IAmb	IAmb	14 59 15.9	
	comp=Z,15nm,0.8s						
N02D	Trinity Center	88.75	324	P	P	14 59 17.6	+1.1
	baz=140						
M04C	Macdoel	88.96	325	P	P	14 59 18.9	+1.4
	baz=141,SNR=7.3						
M02C	Callahan	89.14	324	P	P	14 59 19.8	+1.4
	baz=140,SNR=5.3						
EGMT	Eagleton	89.14	336	P	P	14 59 18.6	+0.4
	baz=150						
LSZ	Lusaka	89.29	108	P	P	14 59 19.8	0.0
	baz=215,slow=2.3						
LSZ	Lusaka	89.29	108	P	P	14 59 19.9	0.0
LSZ				IAmb	IAmb	14 59 22.7	
	comp=Z,38nm,1.1s						
SCHQ	Schefferville	89.29	3	P	P	14 59 18.3	-0.3
	comp=Z,7.0nm,1.0s,baz=173,slow=5.7,SNR=7.5						
YBH	Yreka Blue Hor	89.33	324	P	P	14 59 19.3	0.0
YBH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YBH	Yreka Blue Hor	89.33	324	P	P	14 59 19.3	0.0
L04D	Klamath Falls	89.52	325	P	P	14 59 21.1	+0.9
	baz=141						
K04D	Chiloquin, OR	89.57	326	P	P	14 59 22.1	+1.7
	baz=141						
J05D	Fort Rock, OR	89.84	326	P	P	14 59 23.4	+1.7
	baz=141,SNR=6.7						
PINE	Pine Mountain	90.11	327	IAmb	IAmb	14 59 25.7	
	comp=Z,15nm,0.8s						
J04D	Umpqua Nationa	90.21	326	P	P	14 59 24.8	+1.3
	baz=141						
K02D	Willamette Mer	90.53	324	P	P	14 59 26.3	+1.4
	baz=140						
I05D	Terrebonne, OR	90.71	327	P	P	14 59 27.4	+1.8
	baz=141						
NEW	Newport	92.05	332	P	P	14 59 31.9	+0.2
	baz=144						
PMTG	Montargil	93.97	44	*e*P	P	14 59 39.3	-1.4
FCC	Fort Churchill	95.00	348	P	P	14 59 45.0	+0.1
FCC				pmax	pmax		
	comp=Z,12nm,0.8s						
FCC	Fort Churchill	95.00	348	P	P	14 59 45.0	+0.1
FCC				IAmb	IAmb	14 59 46.1	
	comp=Z,12nm,0.8s						
MVO	Moncorvo	96.05	43	*e*P	P	14 59 50.3	0.0
PBRG	Braganca	96.64	43	*e*P	P	14 59 52.8	-0.1
ESDC	Sonseca Array	96.86	46	P	P	14 59 53.8	-0.2
	comp=Z,0.8nm,0.3s,baz=243,slow=5.6,SNR=5.5						
ESDC	Sonseca Array	96.86	46	P	P	14 59 52.2	-1.7
FRB	Frobisher Bay	98.17	1	LR	LR	15 49 39.6	
	comp=Z,73nm,18.6s,baz=174,slow=39						
BBB	Bella Bella	99.58	329	LR	LR	15 43 35.6	
	comp=Z,94nm,21.1s,baz=146,slow=34						
DZM	Mont Dzumac	101.06	233	*e*LR	LR	15 33 11.3	
	comp=Z,504nm,29.0s						
YKA	Yellowknife Ar	102.84	341	P	Pdif	15 00 19.9	-0.1
	comp=Z,1.2nm,0.7s,baz=141,slow=4.6,SNR=25						
YKA				pP	pPdif	15 00 33.2	-1.0
	comp=Z,0.8nm,0.6s,baz=142,slow=4.9,SNR=6.3						
YKA				PKiKP	PKiKP	15 04 39.5	-0.6
	comp=Z,0.8nm,0.8s,baz=164,slow=2.2,SNR=4.2						
YKA				PKKPbc	PKKPbc	15 16 16.9	-2.8
	comp=Z,0.2nm,0.6s,baz=327,slow=2.9,SNR=4.5						
GERES	GERESS Array B	112.44	45	PKiKP	PKiKP	15 04 58.0	-0.6
	comp=Z,0.5nm,0.5s,baz=224,slow=3.7,SNR=3.9						
ILAR	Eielson Array	114.98	333	PKP	PKPdf	15 05 02.8	-0.1
	comp=Z,1.6nm,0.8s,baz=145,slow=1.3,SNR=18						
ILAR				pPKP	pPKiKP	15 05 16.8	-0.7
	comp=Z,1.6nm,0.8s,baz=236,slow=0.8,SNR=8.2						
ILAR				PKKPbc	PKKPbc	15 15 38.8	-1.9
	comp=Z,0.6nm,0.9s,baz=304,slow=3.9,SNR=5.2						
ASAR	Alice Springs	117.06	206	PKP	PKPdf	15 05 07.3	-1.0
	comp=Z,1.0nm,0.7s,baz=125,slow=1.6,SNR=9.6						
ASAR				pPKP	pPKPdf	15 05 21.2	-1.8
	comp=Z,0.8nm,0.4s,baz=132,slow=1.7,SNR=6.2						
ASAR				PKKPbc	PKKPbc	15 15 32.9	+0.3
	comp=Z,1.5nm,0.7s,baz=338,slow=3.3,SNR=12						
ASAR	Alice Springs	117.06	206		PKPdf	15 05 07.2	-1.1
DRGR		117.08	50	⇑P	PKPdf	15 05 07.4	-0.1
TOLK	Toolik Lake Re	117.67	336		PKiKP	15 05 08.5	+0.6
TOLK	Toolik Lake Re	117.67	336	P	PKiKP	15 05 08.6	+0.6
	baz=115						
ARR	Arges	117.77	52	⇑P	PKPdf	15 05 08.7	-0.2
VOIR		118.07	52	⇑P	PKPdf	15 05 09.5	0.0
IMAR	Indian Mountai	118.09	333		PKiKP	15 05 09.3	+0.5
MLR	Muntele Rosu	118.67	53	⇑P	PKPdf	15 05 08.0	-2.7
BURAR	Bucovina Array	118.97	50	⇓P	PKiKP	15 05 12.4	+1.2
VRI	Vrincioaia	119.32	52	⇑P	PKPdf	15 05 11.5	-0.3
CVDA	Cernavoda	119.64	54	⇑P	pPKPdf	15 05 24.0	-3.1
HARR	Harsova	119.70	54	⇑P	PKPpre	15 04 59.7	
CFR	Carcaliu	120.00	54	⇑P	PKPdf	15 05 12.8	-0.3
WRA	Warramunga Arr	120.28	209	PKP	PKPdf	15 05 13.9	-0.7
	comp=Z,2.7nm,0.7s,baz=177,slow=2.3,SNR=13						
WRA				pPKP	pPKPdf	15 05 27.7	-1.5
	comp=Z,2.8nm,0.5s,baz=170,slow=2.0,SNR=13						
WRA				PKKPbc	PKKPbc	15 15 21.0	+0.1
	comp=Z,0.9nm,0.8s,baz=341,slow=4.3,SNR=4.3						
ANTO	Ankara	121.36	61	⇑P	PKiKP	15 05 17.1	+1.0
BR131	Keskin Array S	121.91	61	*c i*PKIKP	PKPdf	15 05 16.8	-0.4
BR131	Keskin Array S	121.91	61		PKPdf	15 05 17.1	-0.1
BRTR	Keskin Array B	121.91	61	PKP	PKPdf	15 05 17.1	-0.1
	comp=Z,6.0nm,0.8s,baz=187,slow=3.4,SNR=37						
BRTR				pPKP	pPKPdf	15 05 31.2	-0.6
	comp=Z,3.2nm,0.8s,baz=213,slow=3.5,SNR=6.8						
RDOG	Red Dog Mine	122.15	334		PKiKP	15 05 16.9	+0.2
AKASG	Malin Array Be	122.45	48	PKP	PKPdf	15 05 16.8	-0.8
	comp=Z,3.8nm,0.8s,baz=265,slow=2.4,SNR=13						
AKASG				pPKP	pPKPdf	15 05 30.9	-1.5
	comp=Z,1.7nm,0.5s,baz=260,slow=2.4,SNR=5.1						
AKBB	Malin Array Si	122.45	48	⇓*i*PKIKP	PKPdf	15 05 16.8	-0.8
SPITS	Spitsbergen Ar	123.30	14	PKP	PKPdf	15 05 18.5	-0.1
	comp=Z,21nm,1.2s,baz=153,slow=0.6,SNR=7.1						
FINES	FINESS Array B	123.41	35	PKP	PKPdf	15 05 19.0	-0.1
	comp=Z,6.5nm,1.1s,baz=75,slow=1.6,SNR=3.2						
FINES				pPKP	pPKPdf	15 05 33.1	-0.7
	comp=Z,9.7nm,1.1s,baz=208,slow=3.7,SNR=2.6						
ARCES	ARCESS Array B	124.54	25	PKP	PKPdf	15 05 21.1	0.0
	comp=Z,5.6nm,0.9s,baz=272,slow=3.2,SNR=4.9						
ARCES				pPKP	pPKPdf	15 05 35.3	-0.5
	comp=Z,3.7nm,0.8s,baz=290,slow=3.5,SNR=2.3						
RAYN	Ar Rayn	124.77	84	*i* PKiKP	PKiKP	15 05 23.6	+0.3
	SNR=8.7						
FITZ	Fitzroy Crossi	124.95	200	PKP	PKPdf	15 05 23.2	-0.3
	comp=Z,3.1nm,0.7s,baz=7.7,slow=0.6,SNR=7.4						
FITZ				pPKP	pPKPdf	15 05 37.2	-0.9
	comp=Z,2.1nm,0.5s,baz=356,slow=0.7,SNR=3.7						
H11S2	WAKE ISLAND Hy	126.06	268	T	T	17 24 00.6	
	baz=118,slow=74						
H11S1	WAKE ISLAND Hy	126.08	268	T	T	17 23 56.9	
	baz=118,slow=74						
H11S3	WAKE ISLAND Hy	126.08	268	T	T	17 24 00.4	
	baz=118,slow=74,SNR=15						
H11N3	WAKE ISLAND Hy	126.49	270	T	T	17 24 33.0	
	baz=116,slow=77						
H11N1	WAKE ISLAND Hy	126.51	270	T	T	17 24 30.6	
	baz=116,slow=77,SNR=42						
H11N2	WAKE ISLAND Hy	126.51	270	T	T	17 24 29.2	
	baz=116,slow=77,SNR=29						
SOC	Sochi	127.43	58	*i* PKIKP	PKiKP	15 05 29.1	+1.2
SOC				*e*		15 07 31.6	
SOC				*e*PPP	PPP	15 10 16.2	
SOC				*e*PS	PS	15 17 31.8	-2.5
SOC				*e*SSS	SSS	15 29 23.0	
OBN	Obninsk	127.75	44	⇓*i*PKIKP	PKPdf	15 05 27.8	+0.2
OBN				*e*		15 07 28.8	
OBN				pmax	pmax		
	comp=Z,13nm,1.0s						
BCA	Borcka	128.22	62	⇑P	PKPdf	15 05 28.9	-0.2
KIV	Kislovodsk	129.61	59	⇑P	PKiKP	15 05 32.7	+0.2
KIV	Kislovodsk	129.61	59	PKiKP	PKiKP	15 05 33.0	+0.6
KIV	Kislovodsk	129.61	59	*i* PKIKP	PKPdf	15 05 31.9	+0.2
KIV				pmax	pmax		
	comp=Z,59nm,1.0s						
KBZ	Khabaz	129.70	59	PKP	PKiKP	15 05 32.5	0.0
	comp=Z,6.1nm,0.9s,baz=275,slow=2.1,SNR=12						
KBZ	Khabaz	129.70	59	*i* PKIKP	PKiKP	15 05 32.6	+0.1
KLMR	Klimovskoe	129.81	36	*e*PKIKP	PKPdf	15 05 29.6	-1.7
KLMR				pmax	pmax		
	comp=Z,46nm,1.4s						
KLMR	Klimovskoe	129.81	36	*e*PKPdf	PKPdf	15 05 29.7	-1.6
KLMR				AMP		15 05 47.9	
	comp=Z,46nm,1.4s						
NCK	Nalchik	130.15	59	⇑*i*PKIKP	PKiKP	15 05 34.0	+0.6
GNI	Garni	130.16	64	PKiKP	PKiKP	15 05 34.3	+0.5
GNI	Garni	130.16	64	*d i*PKIKP	PKiKP	15 05 34.2	+0.4
GNI				pmax	pmax		

	comp=Z,61nm,1.7s						
ZEI	Tsey	130.20	60	*i* PKIKP	PKPdf	15 05 33.5	+0.5
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PRGR	Permogore	132.73	35	*e*PKIKP	PKPdf	15 05 34.9	-2.0
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BILL	Bilibino	133.62	334	*i* PKIKP	PKPdf	15 05 38.6	+0.2
BILL				*i*		15 05 51.2	
BILL				*i*		15 08 11.1	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.2s						
HATD	Hatta, Dubai	134.07	88	PKPdf	PKPdf	15 05 40.4	-0.2
MSFE	Esma-Masafi	134.31	87	PKiKP	PKPdf	15 05 41.6	+0.5
SHME	Shamm	134.58	86	*i* PKPdf	PKPdf	15 05 41.5	0.0
	SNR=5.5						
WSAR	Wadi Sarin	135.44	91	PKP	PKPdf	15 05 43.2	0.0
	comp=Z,20nm,0.8s,baz=175,slow=1.9,SNR=9.4						
LEM	Lembang	138.67	179	PKP	PKPdf	15 05 50.2	+0.5
	comp=Z,20nm,0.6s,baz=114,slow=7.5,SNR=4.3						
KAPI	Kappang	139.03	198	PKP	PKPdf	15 05 50.7	+0.5
	comp=Z,5.8nm,0.3s,baz=147,slow=4.7,SNR=2.4						
GEYT	Alibeck	139.81	70	PKhKP	PKPpre	15 05 42.2	
	comp=Z,2.0nm,0.8s,baz=212,slow=5.3,SNR=4.2						
GEYT				PKP	PKPdf	15 05 50.4	-0.5
	comp=Z,6.8nm,0.7s,baz=298,slow=3.2,SNR=11						
ARU	Arti	140.09	41	PKhKP	PKPpre	15 05 43.8	
	comp=Z,0.8nm,0.5s,baz=10,slow=5.7,SNR=4.4						
ARU				PKP	PKPdf	15 05 51.1	+0.4
	comp=Z,2.1nm,0.6s,baz=331,slow=5.0,SNR=6.6						
ARU	Arti	140.09	41	*i* PKIKP	PKPdf	15 05 51.1	+0.4
ARU						15 08 46.4	
ARU				SS	SS	15 27 07.6	+0.1
AKTO	Aktyubinsk	140.56	51	PKhKP	PKPpre	15 05 44.1	
	comp=Z,3.6nm,0.9s,baz=285,slow=5.3,SNR=13						
AKTO				PKP	PKPdf	15 05 52.1	+0.4
	comp=Z,4.6nm,0.8s,baz=319,slow=2.9,SNR=10						
SEY	Seymchan	140.81	330	PKhKP	PKPpre	15 05 44.9	
	comp=Z,3.0nm,0.7s,baz=107,slow=3.0,SNR=20						
SEY				PKP	PKPdf	15 05 52.6	+0.9
	comp=Z,9.5nm,0.8s,baz=104,slow=2.4,SNR=19						
PETK	Petropavlovsk-	140.88	314	PKhKP	PKPpre	15 05 46.4	
	comp=Z,3.4nm,0.7s,baz=69,slow=4.8,SNR=3.8						
PETK				PKP	PKPdf	15 05 52.4	+0.1
	comp=Z,9.5nm,0.9s,baz=115,slow=2.9,SNR=6.0						
PETK				pPKP	pPKPdf	15 06 06.8	-0.1
	comp=Z,5.3nm,0.8s,baz=138,slow=9.1,SNR=3.0						
TIXI	Tiksi	141.46	350	PKhKP	PKPpre	15 05 45.3	
	comp=Z,1.7nm,0.4s,baz=14,slow=2.0,SNR=12						
TIXI				PKP	PKPdf	15 05 51.4	-1.4
	comp=Z,2.2nm,0.6s,baz=25,slow=3.1,SNR=7.9						
AB31	Akbulak array	141.88	53	*i* PKHKP	PKPpre	15 05 48.3	
MA2	Magadan	142.89	325	PKhKP	PKPpre	15 05 51.3	
	comp=Z,6.1nm,0.7s,baz=122,slow=2.1,SNR=6.9						
MA2				PKP	PKPdf	15 05 57.0	+1.4
	comp=Z,7.9nm,0.8s,baz=88,slow=1.9,SNR=6.1						
MA2	Magadan	142.89	325	⇓*e*PKIKP	PKPdf	15 05 55.6	0.0
NRIK	Noril'sk	143.46	12	PKP	PKPdf	15 05 55.5	-0.9
	comp=Z,4.3nm,0.8s,baz=67,slow=4.8,SNR=7.9						
POO	Poona	145.42	109	⇓*i*P	PKPbc	15 05 57.5	-3.9
	comp=Z,150nm,1.0s						
URV	Uravakonda	145.82	117	*e*PKPbc	PKPdf	15 06 01.2	-0.9
SKHT	Srikalahasti	146.77	122	*e*PKPbc	PKPdf	15 06 04.2	+0.6
KSM	Kuching	146.87	184		PKPbc	15 06 06.1	+0.3
RPSI	Rantau Prapat	146.95	163		pPKPdf	15 06 19.9	+1.0
RPSI	Rantau Prapat	146.95	163		PKPbc	15 06 06.0	0.0
PSI	Prapat	147.05	163	PKPbc	PKPbc	15 06 05.9	-0.6
	comp=Z,59nm,0.8s,baz=185,slow=2.3,SNR=32						
PSI				pPKPbc	pPKPdf	15 06 19.9	+0.7
	comp=Z,59nm,0.7s,baz=205,slow=7.1,SNR=9.8						
KLRI	Killari	147.27	112	*e*PKPdf	PKPdf	15 06 04.5	-0.1
KLRI				*e*PKPbc	PKPbc	15 06 05.9	-1.0
BRVK	Borovoye	147.52	44	⇑*e*PKIKP	PKPdf	15 06 03.8	0.0
BRVK	Borovoye	147.52	44		PKPbc	15 06 07.4	+0.9
BVAR	Borovoye Array	147.59	44	PKPbc	PKPbc	15 06 05.8	-0.8
	comp=Z,27nm,0.8s,baz=259,slow=0.8,SNR=50						
BVAR				pPKPbc	pPKPbc	15 06 21.2	-0.1
	comp=Z,19nm,0.7s,baz=300,slow=3.3,SNR=13						
SRLM	Srisailam	147.76	118	*e*PKPbc	PKPbc	15 06 07.6	-0.7
HYB	Hyderabad	148.35	115	*i* PKP	PKPdf	15 06 06.5	+0.2
HYB				*e*		15 06 09.5	
HYB				*e*pPKP	pPKPbc	15 06 23.5	-0.9
HYBB	Hyderabad (bro	148.35	115	*e*PKPbc	PKPbc	15 06 08.3	-1.4
NJS	Nagarjunasagar	148.36	118	*e*PKPdf	PKPdf	15 06 06.2	-0.1
NJS				*e*PKPbc	PKPbc	15 06 08.5	-1.2
ADKI	Addanki	148.37	119	*e*PKPbc	PKPbc	15 06 09.3	-0.5
KCP	Kidapawan	148.39	213	⇓*i*P	PKPbc	15 06 09.7	-0.3
KCP				*i* S	pPKPbc	15 06 23.9	-0.7
CHGR	Chuyangaron	148.51	71		PKPbc	15 06 09.8	+0.1
SRSP	Sriramsagar	149.11	113	*e*PKPdf	PKPdf	15 06 07.1	-0.3
SRSP				*e*PKPbc	PKPbc	15 06 11.0	-0.6
IPM	Ipoh	149.15	166		PKPbc	15 06 11.6	-0.4
GAR	Garm	149.44	71		PKPbc	15 06 12.7	+0.6
MYLAV	Mylavaram	149.45	119	*e*PKPdf	PKPdf	15 06 08.1	+0.1
MYLAV				*e*PKPbc	PKPbc	15 06 11.4	-1.1
YAK	Yakutsk	149.51	340	PKP	PKPdf	15 06 06.3	-0.4
	comp=Z,13nm,0.6s,baz=276,slow=0.8,SNR=5.4						
YAK				PKPbc	PKPbc	15 06 11.3	0.0
	comp=Z,75nm,0.7s,baz=161,slow=0.1,SNR=37						
YAK				pPKPbc	pPKPbc	15 06 25.0	-0.9
	comp=Z,23nm,0.6s,baz=235,slow=1.7,SNR=3.5						
YAK	Yakutsk	149.51	340	*e*PKP2	PKPbc	15 06 11.1	-0.2
YAK				*e*		15 09 48.3	
YAK				pmax	pmax		
	comp=Z,110nm,0.8s						
YAK				pmax	pmax		
	comp=N,7.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,9.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,256nm,5.8s						
YAK				pmax	pmax		
	comp=N,342nm,5.3s						
YAK				pmax	pmax		
	comp=E,142nm,5.1s						
KK31	Karatay Array	149.61	63	*i* PKP2	PKPbc	15 06 12.1	-0.1
KKAR	Karatay Array	149.61	63	PKP2	PKPbc	15 06 12.2	0.0
KKAR	Karatay Array	149.61	63	PKPbc	PKPbc	15 06 12.2	0.0
RPR	Rampur	149.79	114	*e*PKPdf	PKPdf	15 06 08.8	+0.3
RPR				*e*PKPbc	PKPbc	15 06 12.4	-0.9
GGR	Gangavaram	149.82	117	*e*PKPdf	PKPdf	15 06 08.6	0.0
GGR				*e*PKPbc	PKPbc	15 06 12.7	-0.8
KULM	Kulim	149.86	165		PKPbc	15 06 13.3	-0.3
PVM	Polavaram	150.49	119	*e*PKPbc	PKPbc	15 06 14.0	-1.0
YSS	Yuzh-Sakhalins	151.47	306	*e*PKIKP	PKPbc	15 06 16.6	+0.2
YSS				*e*		15 06 28.7	
YSS				*e*		15 06 39.6	
YSS				pmax	pmax		
	comp=Z,60nm,0.7s						
AML	Almayashu	152.02	64	P	PKPdf	15 06 13.1	+1.2
	SNR=6.2						
EKS2	Erkin-Say	152.04	63	P	PKPdf	15 06 12.9	+1.4
	SNR=6.0						
ASAJ	Asahikawa	152.09	300	PKPbc	PKiKP	15 06 18.4	+0.1
	comp=Z,18nm,0.8s,baz=312,slow=1.7,SNR=18						
USP	Ospenovka	152.50	62	P	PKiKP	15 06 19.5	+0.3
	SNR=23						
AAK	Ala-Archa	152.57	63	PKPbc	PKiKP	15 06 19.8	+0.2
	comp=Z,58nm,0.7s,baz=203,slow=1.6,SNR=14						
AAK				PP	PP	15 10 02.8	-0.4
	comp=Z,3.3nm,0.9s,baz=250,slow=8.6,SNR=3.7						
AAK	Ala-Archa	152.57	63	P	PKiKP	15 06 20.4	+0.8
	SNR=30						
AAK	Ala-Archa	152.57	63	*i* PKPdf	PKPdf	15 06 13.5	+1.1
	SNR=46						
AAK	Ala-Archa	152.57	63	⇑*e*PKIKP	PKPdf	15 06 12.4	+0.1
AAK	Ala-Archa	152.57	63		PKiKP	15 06 20.3	+0.7
UCH	Uchtor	152.62	64	P	PKiKP	15 06 21.1	+1.0
	SNR=6.7						
CHMS	Chumysh	152.72	62	P	PKiKP	15 06 20.1	+0.5
	SNR=16						
KBK	Karagaybulak	152.90	63	P	PKiKP	15 06 20.6	+0.4
	SNR=11						
KZA	Kyzart	153.18	64	P	PKiKP	15 06 22.1	+1.0
	SNR=13						
KURBB	Kurchatov Arra	153.18	45	PKP	PKPdf	15 06 12.5	-0.2
	comp=Z,1.6nm,0.9s,baz=297,slow=1.7,SNR=12						
KURBB				PKPbc	PKPbc	15 06 20.3	+0.1
	comp=Z,13nm,0.8s,baz=303,slow=2.9,SNR=74						
KURBB				pPKPbc	pPKPbc	15 06 34.1	-0.7
	comp=Z,9.5nm,0.6s,baz=298,slow=2.9,SNR=12						
KURBB				PP	PP	15 10 06.2	+0.3
	comp=Z,2.5nm,0.9s,baz=285,slow=6.4,SNR=5.1						
KURBB	Kurchatov Arra	153.18	45	PKIKP	PKPbc	15 06 19.4	-0.7
KURK	Kurchatov	153.19	44	PKIKP	PKPdf	15 06 12.5	-0.2
KURK						15 06 34.1	
KSH	Kashi	153.84	70	PKPbc	PKPdf	15 06 15.1	+0.9
KSH				PP	PP	15 10 14.6	+4.1
KSH				SKS	SKSdf	15 13 17.9	+0.7
KSH				SS	SS	15 29 44.5	-0.2
KSH				AMB	AMB		
	comp=Z,280nm,5.0s						
KSH				LR	LR		
	comp=Z,260nm,10.2s						
KSH				LR	LR		
	comp=Z,280nm,14.8s						
KSH				LR	LR		
	comp=Z,190nm,10.1s						
ZALV	Zalesovo Beam	154.67	33	PKP	PKPdf	15 06 14.3	-0.4
	comp=Z,2.7nm,0.8s,baz=318,slow=2.0,SNR=11						
ZALV				PKPbc	PKPbc	15 06 23.3	0.0
	comp=Z,8.5nm,0.8s,baz=282,slow=2.9,SNR=20						
ZALV				PKPab	PKPab	15 06 37.7	-0.5
	comp=Z,13nm,0.7s,baz=298,slow=2.9,SNR=13						
MJAR	Matsushiro Arr	155.69	283	PKP	PKPdf	15 06 16.9	+0.2
	comp=Z,1.2nm,0.7s,baz=130,slow=1.3,SNR=5.8						
MJAR				PKPab	PKPab	15 06 42.2	-1.1
	comp=Z,1.8nm,0.6s,baz=167,slow=5.6,SNR=5.8						
BOD	Bodaibo	156.59	352	*e*PKP2	PKPab	15 06 46.0	-0.3
BOD				pmax	pmax		
	comp=Z,21nm,0.9s						
ZEA	Zeya	156.78	331	*e*PKIKP	PKPdf	15 06 15.4	-2.1
ZEA				pmax	pmax		
	comp=Z,18nm,1.4s						
MAKZ	Makanchi	156.79	51	PKIKP	PKPdf	15 06 17.2	-0.6
MK31	Makanchi Array	157.00	51	*i* PKIKP	PKPdf	15 06 17.3	-0.8
MKAR	Makanchi Array	157.00	51	PKP	PKPdf	15 06 17.7	-0.4
	comp=Z,1.8nm,0.8s,baz=286,slow=1.2,SNR=15						
MKAR				PKPbc	PKPbc	15 06 28.1	
	comp=Z,2.6nm,0.8s,baz=43,slow=2.1,SNR=4.2						
MKAR				PKPab	PKPab	15 06 48.5	0.0
	comp=Z,11nm,0.8s,baz=296,slow=3.5,SNR=21						
MKAR				PP	PP	15 10 23.0	-4.5
	comp=Z,1.5nm,0.8s,baz=320,slow=3.8,SNR=3.3						
KLR	Kul'dur	157.47	317	PKP	PKPdf	15 06 18.2	-0.4
	comp=Z,1.6nm,0.6s,baz=37,slow=3.9,SNR=12						
KLR				PKPab	PKPab	15 06 50.9	+0.5
	comp=Z,0.7nm,0.5s,baz=51,slow=4.5,SNR=3.6						
KKN	Kakani	159.14	103	*e*P	PKPdf	15 06 21.2	-0.4
PKIN	Phulchoki	159.14	104	*e*P	PKPdf	15 06 20.9	-0.7
PKI	Pulchoki	159.15	104	*e*P	PKPdf	15 06 21.2	-0.5
USRK	Ussuriysk Ar.	159.49	305	PKP	PKPdf	15 06 21.1	-0.1
	comp=Z,1.3nm,0.8s,baz=139,slow=3.1,SNR=4.1						
USRK				PKPab	PKPab	15 06 59.8	+0.4
	comp=Z,1.2nm,0.7s,baz=73,slow=5.2,SNR=3.6						
USRK				pPKPab	pPKPab	15 07 13.2	-0.5
	comp=Z,2.9nm,0.8s,baz=85,slow=2.6,SNR=4.6						
GUN	Gumba	159.67	103	*e*P	PKPdf	15 06 22.3	0.0
JIRN	Jiri	159.81	104	*e*P	PKPdf	15 06 22.2	-0.3
RAMN	Ramite	159.82	107	*e*P	PKPdf	15 06 22.6	+0.2
ODAN	Odare	160.40	108	*e*P	PKPdf	15 06 23.0	0.0
TAPN	Taplejung	160.88	107	*e*P	PKPdf	15 06 23.6	0.0
MDJ	Mudanjiang	160.93	308	PKP	PKPdf	15 06 22.3	-0.4
WMQ	Urumqi	161.66	54	*e*PKP	PKPdf	15 06 24.4	+0.8
WMQ				pPKP	pPKPdf	15 06 37.9	-0.5
WMQ				LR	LR		
	comp=Z,560nm,29.3s						
WMQ				LR	LR		
	comp=Z,1μm,29.1s						
CMAR	Chiang Mai Arr	161.77	150	PKP	PKPdf	15 06 24.3	-0.1
	comp=Z,2.5nm,0.9s,baz=251,slow=2.9,SNR=16						
CMAR				PKPab	PKPab	15 07 09.2	-0.6
	comp=Z,3.0nm,0.9s,baz=224,slow=6.1,SNR=9.7						
MOY	Mondy	162.26	15	*e*PKP2	PKPab	15 07 12.2	+0.9
TLY	Talaya	162.72	10	PKPab	PKPab	15 07 14.5	+1.3
	comp=Z,5.3nm,0.8s,baz=332,slow=4.5,SNR=8.6						
TLY				pPKPab	pPKPab	15 07 25.7	-1.7
	comp=Z,1.5nm,0.6s,baz=246,slow=2.0,SNR=2.7						
ZAK	Zakamensk	163.92	12	*e*PKP2	PKPab	15 07 18.3	-0.3
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KSRS	Korea Array	163.93	285	PKP	PKPdf	15 06 26.0	+0.1
	comp=Z,1.5nm,0.7s,baz=198,slow=0.8,SNR=5.6						
KSRS				PKPab	PKPab	15 07 20.2	+1.2
	comp=Z,1.1nm,0.7s,baz=94,slow=4.6,SNR=3.5						
KSRS				pPKPab	pPKPab	15 07 33.5	+0.2
	comp=Z,2.7nm,0.9s,baz=106,slow=4.8,SNR=4.5						
CN2	Changchun	163.97	310	*e*PKP	PKPdf	15 06 27.3	+1.5
SONM	Songino Array	166.82	6	PKP	PKPdf	15 06 27.8	-0.4
	comp=Z,0.6nm,0.8s,baz=121,slow=0.9,SNR=4.2						
SONM				PKPab	PKPab	15 07 31.8	+0.3
	comp=Z,3.9nm,0.9s,baz=339,slow=4.2,SNR=13						
SONM				pPKPab	pPKPab	15 07 45.3	-0.5
	comp=Z,3.0nm,1.0s,baz=334,slow=2.5,SNR=4.7						
SONM				PP	PP	15 11 20.8	+1.9
	comp=Z,1.1nm,0.9s,baz=2.7,slow=6.5,SNR=4.1						
NJ2	Nanjing	170.81	256	*e*PKP	PKPdf	15 06 31.5	+0.4
GTA	Gaotai	171.74	53	⇓PKP	PKPdf	15 06 32.4	+0.9
GTA				pPKP	pPKPdf	15 06 45.8	-0.6
GTA				sPKP		15 06 51.8	
GTA				PKPab	PKPab	15 07 54.5	+0.8
GTA				PP	PP	15 11 46.1	+1.2
GTA				AMB	AMB		
	comp=Z,100nm,7.9s						
HHC	Hu-ho-hao-te	173.37	338	*e*PKP	PKPdf	15 06 31.1	-1.0
HHC				LR	LR		
	comp=Z,1μm,19.0s						
HHC				LR	LR		
	comp=Z,2μm,20.7s						
WHN	Wuhan	173.43	232	PKPbc	PKPdf	15 06 42.3	+10
CD2	Chengdu	174.59	133	PKP	PKPdf	15 06 31.3	-1.5
LZH	Lanzhou	176.09	68	*e*PKP	PKPdf	15 06 33.8	+0.6
LZH				LR	LR		
	comp=Z,110nm,17.9s						
LZH				LR	LR		
	comp=Z,110nm,18.1s						
LZH				LR	LR		
	comp=Z,170nm,20.3s						
XAN	Xi'an	179.16	216	PKPbc	PKPdf	15 06 47.9	+14
XAN				pPKP	sPKPdf	15 07 02.5	+9.0
XAN				PKPab	pPKPab	15 08 34.5	-6.3

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*IDC **15** 14:56:59.3±0.7, 49°.38S×69°.68E, h0^{km}, mb4.3/9, mb1 4.4/10, mb1mx4.1/45, mbtmp4.3/10, ML3.9/1, MS4.2/4, Ms1 4.1/4, ms1mx3.8/13, Error ellipse: s-maj=24.2km s-min=18.1km az=12.0*

*NEIC **15** 14:57:01.1±2.2, 49°.2S±0°.1×69°.58E±0°.05, h16^{km}±5^{km}, mb4.7/12, Error ellipse: s-maj=14.9km s-min=4.2km az=184.0*

*GCMT **15** 14:57:01.1±0.2, 49°.26S±0°.02×69°.54E±0°.03, h12^{km}, MW5.0/94, Moment Tensor Solution. s31,c34; s94,c127; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.35±.10; M$_{\theta\theta}$1.70±.10; M$_{\phi\phi}$1.65±.11; M$_{r\theta}$2.31±.30; M$_{\theta\phi}$-1.50±.07; M$_{\phi r}$0.48±.37; Best double couple: M$_0$3.94700×10^{16} NP1:ϕ$_s$152.00000°,δ37.00000°,λ-54.00000°. NP2: ϕ$_s$290.00000°,δ61.00000°,λ-114.00000°. Principal axes: T 3.4790, Plg13.0000°, Azm37.0000°; N 0.9360, Plg21.0000°, Azm302.0000°; P -4.4150, Plg65.0000°, Azm157.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 14:57:00.6±0.6**, 49°.3S**±0°.1×**69°.57E**±0°.06**, h10^{km}, n38, σ1^{s}24**/33**, mb4.5**/13**, MS4.2**/3**, 2C, Kerguelen Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAF	Port-aux-Franc	0.42	96	Pg	Pg	14 57 08.8	-0.1
PAF				Sg	Sb	14 57 16.4	-0.3
I23FR	KERGUELEN INFR	0.44	96	Pg	Pb	14 57 11.4	+0.9
	baz=274,slow=44,SNR=3.3						
I23FR				*i*		14 58 40.0	
	baz=259,slow=324,SNR=0.8						
MAW	Mawson	18.66	188	P	P	15 01 18.8	+0.4
	0.4nm,0.3s,baz=8.8,slow=17,SNR=4.0						
MAW				S	Sn	15 04 34.0	-13
	1.8nm,0.3s,baz=276,slow=12,SNR=5.1						
MAW				LR	LR	15 07 07.9	
	comp=Z,1μm,20.5s,baz=42,slow=33						
SYO	Syowa Base	24.56	206	⇑*i*P	P	15 02 19.0	-1.2
SYO	Syowa Base	24.56	206	⇑*e*P	P	15 02 23.4	+3.2
H01W2	Cape Leeuwin H	35.52	83	T	T	15 40 58.1	
	baz=232,slow=75,SNR=19						
H01W3	Cape Leeuwin H	35.53	83	T	T	15 41 03.7	
	baz=232,slow=75,SNR=21						
H01W1	Cape Leeuwin H	35.54	83	T	T	15 41 00.2	
	baz=232,slow=75,SNR=20						
BOSA	Boshof	39.47	285	P	P	15 04 31.5	+0.3
	3.5nm,0.8s,baz=122,slow=10,SNR=4.9						
BOSA	Boshof	39.47	285	P	P	15 04 30.7	-0.5
SUR	Sutherland	39.82	277	P	P	15 04 34.4	+0.2
SUR				IAmb	IAmb	15 04 39.5	
	comp=Z,23nm,1.4s						
QSPA	South Pole Qui	40.87	180	P	P	15 04 41.4	-1.0
	comp=Z,5.0nm,0.7s,baz=307,slow=0.4,SNR=10						
QSPA	South Pole Qui	40.87	180	P	P	15 04 42.3	-0.1
QSPA				IAmb	IAmb	15 04 42.8	
	comp=Z,23nm,1.4s						
MSEY	Mahe Island	46.06	340	P	P	15 05 24.3	-0.3
LSZ	Lusaka	47.78	301	P	P	15 05 39.7	+1.5
	comp=Z,5.0nm,0.9s,baz=148,slow=7.8,SNR=4.6						
LSZ	Lusaka	47.78	301	P	P	15 05 36.0	-2.2
LSZ				IAmb	IAmb	15 05 46.6	
	comp=Z,6.0nm,0.9s						
LEM	Lembang	53.05	50	LR	LR	15 23 37.8	
	comp=Z,244nm,21.5s,baz=228,slow=30						
STKA	Stephens Creek	55.31	100	P	P	15 06 33.9	-0.4
	comp=Z,5.1nm,1.0s,baz=225,slow=3.7,SNR=6.5						
STKA	Stephens Creek	55.31	100	IAmb	IAmb	15 06 38.0	
	comp=Z,4.1nm,1.4s						
ASAR	Alice Springs	55.83	87	P	P	15 06 37.5	-0.6
	comp=Z,3.8nm,0.7s,baz=214,slow=7.1,SNR=23						
AS31	Alice Springs	55.83	87	P	P	15 06 37.7	-0.5
CAN	Canberra	57.77	108	P	P	15 06 50.8	-1.1
CAN				IAmb	IAmb	15 06 53.1	
	comp=Z,17nm,1.3s						
WRA	Warramunga Arr	58.75	85	P	P	15 06 58.4	-0.4
	comp=Z,2.5nm,0.7s,baz=215,slow=6.7,SNR=9.3						
WRA	Warramunga Arr	58.75	85	P	P	15 06 56.5	-2.3
WB2	Warramunga Arr	58.75	85	P	P	15 06 57.4	-1.5
WRAB	Tennant Creek	58.76	85	P	P	15 06 57.0	-1.9
WRAB				IAmb	IAmb	15 07 06.1	
	comp=Z,5.8nm,0.9s						
WR0	Warramunga Arr	58.87	85	P	P	15 06 57.5	-2.2
WR0				IAmb	IAmb	15 06 59.7	
	comp=Z,10.0nm,1.2s						
WB0	Warramunga Arr	58.91	84	P	P	15 06 59.6	-0.3
KAPI	Kappang	61.10	61	LR	LR	15 29 18.2	
	comp=Z,121nm,18.9s,baz=217,slow=32						
CTA	Charters Tower	66.43	94	P	P	15 07 50.9	+0.7
	comp=Z,2.2nm,0.6s,baz=82,slow=11,SNR=5.1						
CMAR	Chiang Mai Arr	72.33	29	P	P	15 08 26.9	+0.5
	comp=Z,2.8nm,0.8s,baz=211,slow=6.5,SNR=7.1						
CMAR	Chiang Mai Arr	72.33	29	P	P	15 08 27.8	+1.4
DBIC	Dimbokro	84.99	286	LR	LR	15 44 09.7	
	comp=Z,83nm,18.8s,baz=190,slow=33						
TORD	Torodi Ar. Bea	86.03	295	P	P	15 09 41.7	+0.3
	comp=Z,0.8nm,0.8s,baz=168,slow=1.7,SNR=5.1						
TORD				PP	PP	15 13 00.5	-1.2
	comp=Z,1.1nm,1.0s,baz=120,slow=5.9,SNR=4.4						
NOA	NORSAR Array B	119.56	332	PKP	PKiKP	15 15 50.2	+0.8
	comp=Z,0.8nm,0.6s,baz=271,slow=2.8,SNR=4.2						
SCHQ	Schefferville	152.99	299	PKPab	PKPab	15 17 09.3	+0.7
	comp=Z,2.6nm,0.7s,baz=40,slow=3.6,SNR=5.3						
ILAR	Eielson Array	155.33	38	PKPab	PKPab	15 17 17.5	-0.7
	comp=Z,0.3nm,0.7s,baz=317,slow=3.7,SNR=3.7						
YKA	Yellowknife Ar	166.58	8	PKPab	PKPab	15 18 08.3	+1.0
	comp=Z,0.3nm,0.7s,baz=348,slow=3.4,SNR=4.5						

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*IDC **15** 14:58:40.4±1.2, 49°.10S×69°.82E, h0^{km}, mb4.0/6, mb1 4.2/7, mb1mx3.8/43, mbtmp4.1/7, ML4.4/1, Error ellipse: s-maj=34.8km s-min=28.4km az=128.0*

ISC 15 14:58:42.0±1.1**, 49°.1S**±0°.2×**69°.8E**±0°.2**, h10^{km}, n10, σ1^{s}04**/7**, mb4.0**/6**, Kerguelen Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAW	Mawson	18.88	188	P	Pn	15 03 03.9	+1.2
	1.2nm,0.3s,baz=15,slow=15,SNR=3.7						
MAW				S	Sn	15 06 12.7	-21
	0.6nm,0.3s,baz=34,slow=18,SNR=3.1						
H01W2	Cape Leeuwin H	35.34	83	T	T	15 42 44.4	
	baz=232,slow=75,SNR=5.3						
H01W3	Cape Leeuwin H	35.35	83	T	T	15 42 41.3	
	baz=232,slow=75,SNR=4.3						
H01W1	Cape Leeuwin H	35.36	83	T	T	15 42 43.2	
	baz=232,slow=75,SNR=4.6						
QSPA	South Pole Qui	41.06	180	P	P	15 06 24.7	-0.7
	3.4nm,1.0s,baz=289,slow=3.9,SNR=3.3						
STKA	Stephens Creek	55.19	100	P	P	15 08 14.6	-0.2
	1.6nm,0.9s,baz=238,slow=13,SNR=2.8						
ASAR	Alice Springs	55.66	87	P	P	15 08 18.0	-0.3
	1.6nm,0.8s,baz=224,slow=6.1,SNR=5.3						
WRA	Warramunga Arr	58.57	84	P	P	15 08 38.4	-0.5
	1.8nm,0.8s,baz=220,slow=6.0,SNR=5.7						
CMAR	Chiang Mai Arr	72.08	29	P	P	15 10 07.5	+1.2
	0.9nm,0.8s,baz=216,slow=7.3,SNR=3.6						
TORD	Torodi Ar. Bea	86.08	295	P	P	15 11 22.3	-0.7
	0.8nm,0.8s,baz=128,slow=4.7,SNR=3.9						

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*IDC **15** 15:07:00.4±1.3, 27°.17S×173°.51E, h0^{km}, mb4.0/6, mb1 4.2/8, mb1mx3.9/27, mbtmp4.1/8, ML3.5/2, Error ellipse: s-maj=41.2km s-min=27.1km az=169.0*

*NEIC **15** 15:07:04.2±2.9, 27°.14S±0°.07×173°.4E±0°.1, h22^{km}±5^{km}, mb4.4/8, Error ellipse: s-maj=17.1km s-min=9.6km az=76.0*

ISC 15 15:07:02.6±0.7**, 27°.11S**±0°.08×**173°.38E**±0°.10**, h10^{km}, n37, σ1^{s}60**/37**, mb4.0**/10**, North of New Zealand**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.06	307	Pn	Pn	15 09 01.1	+1.2
	0.3nm,0.3s,baz=140,slow=22,SNR=10.0						
DZM				Sn	Sn	15 10 30.2	-1.1
	0.5nm,0.3s,baz=348,slow=19,SNR=2.1						
MSVF	Nonsavu	10.28	26		Pn	15 09 30.2	-0.2
HAZ	Te Kaha	11.24	162	P	Pn	15 09 44.7	+1.3
RUGZ	Raukumara Rang	11.41	163	P	Pn	15 09 45.8	0.0
PKGZ	Pakihiroa	11.45	161	P	Pn	15 09 47.4	+1.1
WMGZ	Waiomatatini S	11.49	160	P	Pn	15 09 50.3	+3.6
URZ	Urewera	11.55	165	Pn	Pn	15 09 49.1	+1.5
URZ	Urewera	11.55	165	P	Pn	15 09 49.1	+1.5
PUZ	Puketiti	11.67	161	P	Pn	15 09 51.6	+2.3
MUGZ	Murupara	11.69	167	P	Pn	15 09 52.8	+3.3
MWZ	Matawai	11.72	164	P	Pn	15 09 49.9	-0.1
TKGZ	Te Karaka	11.90	163	P	Pn	15 09 53.2	+0.8
SNGZ	Shannon Statio	12.10	165	P	Pn	15 09 56.0	+0.8
RIGZ	Rimuhau	12.13	163	P	Pn	15 09 55.0	-0.6
RAHZ	Arahi	12.17	166	P	Pn	15 09 58.0	+1.9
NMHZ	Naumai	12.29	167	P	Pn	15 10 01.1	+3.3
BKZ	Black Stump Fm	12.30	169	P	Pn	15 10 02.9	+5.0
BFZ	Birch Farm	13.74	171	P	P	15 10 23.9	-2.3
RPZ	Rata Peaks	16.67	186	Pn	Pn	15 10 56.3	-0.1
	0.4nm,0.3s,baz=329,slow=9.1,SNR=4.2						
RPZ	Rata Peaks	16.67	186		Pn	15 10 56.4	+0.1
RPZ				IAmb	IAmb	15 11 03.0	
	comp=Z,24nm,1.1s						
CTA	Charters Tower	25.79	280	P	P	15 12 35.8	+1.8
	comp=Z,1.4nm,0.5s,baz=85,slow=13,SNR=4.5						
STKA	Stephens Creek	28.01	253	P	P	15 12 54.5	+0.6
	comp=Z,1.4nm,0.6s,baz=79,slow=13,SNR=4.5						
AS31	Alice Springs	35.73	267	P	P	15 14 01.8	0.0
AS31				IAmb	IAmb	15 14 04.1	
	comp=Z,1.6nm,0.6s						
ASAR	Alice Springs	35.73	267	P	P	15 14 01.6	-0.2
	comp=Z,3.7nm,0.6s,baz=92,slow=7.6,SNR=81						
ASAR	Alice Springs	35.73	267	P	P	15 14 01.8	0.0
WR0	Warramunga Arr	36.20	273	P	P	15 14 05.1	-0.7
WR0				IAmb	IAmb	15 14 20.4	
	comp=Z,13nm,1.5s						
WB2	Warramunga Arr	36.38	273	P	P	15 14 06.2	-1.2
WB2				IAmb	IAmb	15 14 14.2	
	comp=Z,12nm,1.5s						
WRAB	Tennant Creek	36.38	273	P	P	15 14 05.1	-2.3
WRAB				IAmb	IAmb	15 14 17.4	
	comp=Z,12nm,1.5s						
WRA	Warramunga Arr	36.39	273	P	P	15 14 06.4	-1.0
	comp=Z,1.3nm,0.6s,baz=106,slow=8.3,SNR=11						
WRA	Warramunga Arr	36.39	273	P	P	15 14 04.9	-2.5
QSPA	South Pole Qui	62.98	180	P	P	15 17 27.9	-1.5
CMAR	Chiang Mai Arr	85.16	293	P	P	15 19 41.1	+1.5
	comp=Z,0.3nm,0.6s,baz=120,slow=5.3,SNR=2.8						
NVAR	Mina Array Bea	91.26	47	P	P	15 20 08.9	+0.4
	comp=Z,0.7nm,0.8s,baz=228,slow=8.5,SNR=5.1						
NOA	NORSAR Array B	144.00	345	PKP	PKPab	15 26 34.5	-0.8
	comp=Z,1.9nm,0.9s,baz=34,slow=2.7,SNR=4.0						
AKASG	Malin Array Be	144.03	321	PKP	PKPab	15 26 36.1	+0.5
	comp=Z,0.6nm,0.3s,baz=50,slow=4.3,SNR=8.7						
BRTR	Keskin Array B	144.41	301	PKP	PKPab	15 26 37.2	-0.4
	comp=Z,1.2nm,0.8s,baz=81,slow=4.2,SNR=6.3						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GERES	GERESS Array B	153.19	329	PKPbc	PKPbc	15 26 59.3	-1.3
	comp=Z,0.6nm,0.7s,baz=70,slow=3.2,SNR=2.1						

IDC ***15*** *15:12:00.6±4.1, 37°.08N×142°.47E, h0^{km}, mb3.6/3, mb1 3.4/7, mb1mx3.3/41, mbtmp3.4/7, ML2.6/4, Error ellipse: s-maj=63.8km s-min=32.0km az=131.0*

JMA ***15*** *15:12:12.4±0.1, 37°.53N×141°.61E, h42^{km}±2^{km}, M3.4*

ISC 15 15:12:11.5±1.9**, 37°.51N**±0°.07×**141°.67E**±0°.09**, h30**^{km}±13^{km}**, n26,** σ**0ˢ.93**/33**, mb3.6**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.65	257	P	Pb	15 12 24.6	+0.2
JFK				S	Sn	15 12 32.9	-1.0
JMST	Minamisoumatoc	0.66	289	P	Pn	15 12 24.5	-0.2
JMST				eS	Sn	15 12 32.9	-1.1
JMM	Marumori	0.78	297	P	Pn	15 12 26.4	0.0
JMM				eS	Sn	15 12 36.1	-1.0
ONAJ	Iwakimizuishiy	0.81	240	P	Pb	15 12 26.8	-0.3
ONAJ				eS	Sn	15 12 36.5	-1.3
JIKH	Ishinomakikobu	0.81	349	P	Pn	15 12 27.2	+0.3
JIKH				S	Sn	15 12 36.6	-1.3
JIO	Ouri	0.97	345	P	Pn	15 12 29.4	+0.3
JIO				S	Sn	15 12 40.9	-1.0
JFT	Otama	1.06	271	P	Pn	15 12 30.9	+0.6
JFT				eS	Sn	15 12 44.0	0.0
JOU	Okura	1.17	317	P	Pn	15 12 32.1	+0.3
JOU				S	Sn	15 12 46.5	-0.2
JYS	Shirataka	1.45	300	P	Pn	15 12 36.7	+1.0
JMK	Ichinoseki	1.48	346	P	Pn	15 12 37.0	+0.9
JMK				S	Sn	15 12 54.7	+0.3
JFY	Yanaizu	1.57	267	P	Pn	15 12 37.8	+0.5
JYK	Kaneyama	1.74	324	P	Pn	15 12 40.4	+0.7
JYK				eS	Sn	15 13 01.1	+0.2
MJAR	Matsushiro Arr	2.93	252	Pn	Pn	15 12 57.2	+1.1
	0.3nm,0.3s,baz=81,slow=15,SNR=26						
MJAR				Sn	Sb	15 13 37.2	-1.4
	0.2nm,0.3s,baz=81,slow=31,SNR=4.5						
MAT	Matsushiro	2.93	252	P	Pn	15 12 57.7	+1.6
MAT				eS	Sn	15 13 30.6	+0.3
ASAJ	Asahikawa	6.63	6	Pn	Pn	15 13 46.6	-0.3
	0.2nm,0.3s,baz=174,slow=18,SNR=5.3						
ASAJ				Sn	Sn	15 15 01.4	-0.1
	0.3nm,0.3s,baz=217,slow=20,SNR=1.9						
USRK	Ussuriysk Ar.	9.91	315	Pn	Pn	15 14 33.0	+1.2
	baz=124,slow=14,SNR=2.4						
KSRS	Korea Array	10.93	274	Pn	Pn	15 14 48.0	+2.2
	0.1nm,0.3s,baz=89,slow=13,SNR=2.8						
H11N2	WAKE ISLAND Hy	28.22	122	T	T	15 48 21.9	
	baz=316,slow=75,SNR=12						
H11N1	WAKE ISLAND Hy	28.23	122	T	T	15 48 32.7	
	baz=316,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	28.24	122	T	T	15 48 27.4	
	baz=316,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	28.95	124	T	T	15 49 23.8	
	baz=317,slow=76,SNR=10						
H11S3	WAKE ISLAND Hy	28.95	124	T	T	15 49 21.8	
	baz=317,slow=76,SNR=4.4						
H11S2	WAKE ISLAND Hy	28.97	124	T	T	15 49 18.8	
	baz=317,slow=76,SNR=4.3						
ZALV	Zalesovo Beam	41.74	312	P	P	15 19 57.0	-0.6
	0.4nm,0.3s,baz=80,slow=8.9,SNR=2.3						
MKAR	Makanchi Array	44.04	302	P	P	15 20 15.9	-0.5
	0.3nm,0.6s,baz=86,slow=9.9,SNR=4.2						
KURBB	Kurchatov Arra	45.87	308	P	P	15 20 30.0	-0.8
	0.8nm,0.5s,baz=84,slow=8.3,SNR=9.2						

IASPEI ***15*** *15:12:19.0±0.8, 34°.60N±0°.01×118°.63W±0°.01, h12^{km}±5^{km}, Error ellipse: s-maj=2.3km s-min=1.9km az=41.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

ANF ***15*** *15:12:18.8±0.1, 34°.61N×118°.62W, h13^{km}±1^{km}, ML4.0/43, Error ellipse: s-maj=1.3km s-min=1.2km az=108.0*

SCEDC ***15*** *15:12:19.9, 34°.61N×118°.63W, h9^{km}*

PAS ***15*** *15:12:19.9±1.5, 34°.61N±0°.02×118°.63W±0°.05, h9^{km}±6^{km}, ML3.9/251, Error ellipse: s-maj=6.3km s-min=2.2km az=98.0*

NEIC ***15*** *15:12:19.4±1.6, 34°.63N±0°.02×118°.65W±0°.05, h11^{km}±6^{km}, Error ellipse: s-maj=5.8km s-min=2.4km az=89.0*

ISC 15 15:12:19.4±0.8**, 34°.59N**±0°.01×**118°.62W**±0°.01**, h11**^{km}±5^{km}**, n160,** σ**0ˢ.91**/224**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OSI	Osito Audit: C	0.09	284		Pg	15 12 21.8	-0.3
OSI				Sg	Sg	15 12 23.4	-0.6
OSI	Osito Audit: C	0.09	284	P	Pg	15 12 21.4	-0.7
	baz=90,SNR=1000						
OSI				S	Sg	15 12 23.3	-0.6
	baz=90						
PYR	Pyramid	0.10	255		Pg	15 12 22.0	-0.3
QAL	Quail Lake	0.17	333		Pg	15 12 23.1	-0.2
OAT	Oat Mountain	0.25	179		Pb	15 12 25.6	-0.4
LEOC	Leona Valley	0.26	82		Pg	15 12 25.0	+0.2
LEOC					Sg	15 12 29.2	+0.6
IR2C	Iron Canyon	0.28	138		Pg	15 12 25.3	+0.2
ALPC	Antelope	0.28	71		Sb	15 12 29.9	-1.4
THC	Tehachapi Micr	0.32	354		Pg	15 12 25.7	-0.2
BLCC	Black Canyon	0.35	187		Pb	15 12 27.5	-0.2
BALC	Balcom Canyon	0.40	225		Pb	15 12 29.2	+0.6
DECC	Green Verdugo	0.41	145	P	Pb	15 12 28.0	-0.8
	baz=326,SNR=147						
DECC				S	Sb	15 12 34.4	-0.6
	baz=326						
TJR	Tejon Ranch	0.44	347		Sg	15 12 33.9	-0.2
AGOC	Agoura	0.46	195		Pb	15 12 29.4	-0.2
HLLC	North Hollywoo	0.47	153		Pb	15 12 29.3	-0.3
HLLC					Sb	15 12 37.3	+0.8
MPI	Mount Pinos, F	0.48	297		Pg	15 12 28.5	-0.5
MPI					Sg	15 12 35.1	-0.3
LRRC	Littlerock Res	0.49	98		Pg	15 12 29.0	0.0
DJJ	Donna J Jenkin	0.51	164		Pb	15 12 29.8	-0.5
DJJ					Sb	15 12 37.9	+0.2
GR2C	Griffith Obs.	0.54	151		Pb	15 12 30.2	-0.7
STCC	Santa Clara	0.55	238		Pb	15 12 31.7	+0.6
PASC	Pasadena Art C	0.55	139		Pg	15 12 30.1	-0.1
PASC	Pasadena Art C	0.55	139		Sb	15 12 38.4	-0.7
CHFC	Chilao Flat St	0.56	118		Sg	15 12 37.6	0.0
ARVC	Arvin	0.56	342		Sg	15 12 37.6	-0.1
ARVC	Arvin	0.56	342	P	Pg	15 12 29.9	-0.4
	baz=162,SNR=436						
ARVC				S	Sg	15 12 37.5	-0.1
	baz=162						
EDW2	Edwards Air Fo	0.59	61		Pg	15 12 30.7	-0.2
EDW2					Sg	15 12 38.6	-0.1
EDW2	Edwards Air Fo	0.59	61	P	Pg	15 12 30.5	-0.4
	baz=243,SNR=739						
EDW2				S	Sb	15 12 39.0	-1.2
	baz=243						
MWC	Mount Wilson	0.59	128		Pg	15 12 30.9	-0.1
MWC	Mount Wilson	0.59	128		Sb	15 12 39.2	-1.2
RYS	Reyes Peak	0.60	275		Pg	15 12 30.9	-0.3
BLG	Laguna Peak, P	0.61	217		Pg	15 12 31.1	-0.1
BLG	Laguna Peak, P	0.61	217	P	Pg	15 12 31.2	-0.1
	baz=35,SNR=61						
BLG				S	Sg	15 12 40.2	+0.9
	baz=35						
CBCC	Caltech Broad	0.61	138		Pb	15 12 31.4	-0.6
CBCC					Sb	15 12 40.5	-0.1
GSA	Caltech--GSA	0.61	138		Sb	15 12 40.4	-0.3
GSA	Caltech--GSA	0.61	138		Sb	15 12 40.4	-0.3
CACC	Caltech Cellar	0.61	138		Pb	15 12 31.5	-0.6
CACC					Sb	15 12 40.4	-0.4
LCGC	La Cienega, Cu	0.62	161		Pb	15 12 32.5	+0.2
TEJ	El Tejon	0.64	355		Sg	15 12 39.7	-0.5
USC	University of	0.64	154		Pb	15 12 32.4	-0.1
BHPC	Baldwin Hills	0.64	160		Pb	15 12 32.6	+0.1
SBB	Saddle Back Bu	0.66	82		Pg	15 12 31.9	-0.3
SBB					Sg	15 12 41.0	0.0
GVRC	Garvey Reservo	0.68	142		Pb	15 12 32.8	-0.5
WTT2	Watts, South G	0.71	155		Pb	15 12 34.1	+0.4
BCW	Bitter Crk WRg	0.74	298		Sg	15 12 42.5	-0.9
MAGC	SCE Magundon P	0.81	342		Pg	15 12 34.5	-0.5
PSRC	Puddingstone R	0.84	126		Sb	15 12 46.7	-0.6
BAKC	Calstate	0.85	332		Pg	15 12 35.2	-0.6
SSK	Sunset Peak	0.86	116		Pg	15 12 35.1	-0.9
RPV	Rancho Palos V	0.87	168		Pg	15 12 36.0	-0.1
RPV					Sb	15 12 48.0	0.0
BFSC	Mount Baldy Ra	0.87	114		Sg	15 12 47.1	-0.4
BFSC	Mount Baldy Ra	0.87	114	P	Pg	15 12 35.0	-1.2
	baz=295,SNR=371						
BFSC				S	Sg	15 12 47.2	-0.4
	baz=295						
SBC	Santa Barbara	0.92	261		Pg	15 12 36.6	-0.4
SBC					Sb	15 12 50.2	+0.8
SBC	Santa Barbara	0.92	261	P	Pg	15 12 36.9	-0.2
	baz=79,SNR=38						
SBC				S	Sb	15 12 50.2	+0.8
	baz=79						
FMP	Fort Macarthur	0.92	163		Pg	15 12 36.9	-0.2
FMP					Sb	15 12 49.8	+0.3
FMP	Fort Macarthur	0.92	163	P	Pg	15 12 37.0	-0.1
	baz=343,SNR=13						
FMP				S	Sb	15 12 50.5	+1.0
	baz=343						
DTP	Desert Tortois	0.93	43		Pg	15 12 36.5	-0.7
WOFM	Oak Flat	0.94	355		Pg	15 12 36.7	-0.9
BREC	Barre Substati	0.95	146		Pb	15 12 38.3	+0.5
CHNC	Chino	0.98	127		Pg	15 12 37.8	-0.5
CHNC					Sb	15 12 51.6	+0.3
ADO	Adelanto Recei	0.98	92		Pb	15 12 38.0	-0.4
ADO					Sb	15 12 52.0	+0.6
SS2	San Sevaine	1.00	112		Pg	15 12 37.8	-0.9
WBSM	Bird Springs	1.02	23		Sg	15 12 51.7	-0.7
PKM	Mcpherson Peak	1.02	287		Pg	15 12 38.2	-0.9
PKM					Sg	15 12 53.0	+0.5
PKM	Mcpherson Peak	1.02	287	P	Pg	15 12 38.2	-0.9
	baz=106,SNR=219						
PKM				S	Sg	15 12 53.0	+0.5
	baz=106						
SCZ2	Santa Cruz Isl	1.03	235		Pg	15 12 38.2	-1.0
SCZ2	Santa Cruz Isl	1.03	235	P	Pg	15 12 38.4	-0.8
	baz=53,SNR=20						
SCZ2				S	Sg	15 12 52.7	0.0
	baz=53						
MLSC	Mira Loma	1.06	124		Pg	15 12 38.7	-1.0
MLSC					Sg	15 12 52.3	-1.1
ISA	Isabella, Lake	1.07	6		Pg	15 12 38.9	-1.2
ISA	Isabella, Lake	1.07	6	P	Pg	15 12 38.9	-1.2
	baz=187,SNR=650						
ISA				S	Sb	15 12 54.4	+0.4
	baz=187						
CSP	Cedar Springs	1.08	105		Pg	15 12 39.2	-1.0
CSP					Sb	15 12 54.6	+0.2
JFS	Joseph F. Stat	1.09	46		Pg	15 12 39.2	-1.1
FON	Fontana	1.09	116		Pg	15 12 39.6	-0.8
WHFM	Hanning Flat	1.12	11		Pg	15 12 39.8	-1.2
CRNC	Corona	1.13	129		Pg	15 12 40.3	-0.8
FIGC	Figueroa Mtn.	1.14	277		Pg	15 12 40.2	-1.0
WORM	Onyx Ranch	1.14	16		Pg	15 12 40.2	-1.2
SBI	Santa Barbara	1.16	197		Pg	15 12 41.1	-0.6
SBI					Sg	15 12 56.2	-0.6
LRMC	Laurel Mtn Rad	1.17	41		Pg	15 12 41.1	-0.8
LRMC					Sb	15 12 57.0	0.0
LRMC	Laurel Mtn Rad	1.17	41	P	Pg	15 12 41.0	-0.9
	baz=222,SNR=372						
LRMC				S	Sb	15 12 56.8	-0.1
	baz=222						
CLTC	Calectric	1.19	114		Pb	15 12 41.8	-0.2
RVR	Riverside	1.19	120		Pg	15 12 41.0	-1.3
RVR					Sg	15 12 56.4	-1.4
CIAC	Catalina I. Ai	1.20	172		Pg	15 12 40.8	-1.6
CIAC					Sg	15 12 57.3	-0.8
CIS	Catalina Islan	1.20	172	P	Pg	15 12 40.9	-1.6
	baz=352,SNR=138						
CIS				S	Sg	15 12 57.5	-0.6
	baz=352						
CARC	Carrizo Plain	1.23	306		Pg	15 12 41.2	-1.8
CARC					Sg	15 12 57.5	-1.6
SME	Santa Rosa Min	1.30	126		Pg	15 12 42.8	-1.6
VES	Vestal, Richgr	1.30	343		Pn	15 12 42.3	-1.2
VES	Vestal, Richgr	1.30	343	P	Pn	15 12 42.3	-1.2
	baz=163,SNR=336						
VES				S	Sg	15 13 00.8	-0.5
	baz=163						
SRTC	Snort	1.31	33		Pn	15 12 43.6	0.0
SMMC	Simmler	1.34	303	P	Pn	15 12 42.9	-1.2
	baz=122,SNR=201						
SMMC				S	Sb	15 13 00.5	-1.1
	baz=122						
BCH	Branch Mountai	1.34	297		Pn	15 12 43.1	-1.0
SVD	Seven Oaks Dam	1.35	111		Pn	15 12 44.3	+0.1
WCHM	Chimney Peak	1.36	19		Pn	15 12 44.2	-0.4
RRX	Edison Barstow	1.37	78	P	Pn	15 12 44.3	-0.1
	baz=259,SNR=7.7						
RRX				S	Sn	15 13 02.9	+0.4
	baz=259						
CFT	Crafton Hills	1.37	114		Pn	15 12 44.6	+0.1
BTL	Butler Peak	1.38	104		Pn	15 12 44.7	-0.1
YEG	Yeguas Mountai	1.38	308		Pn	15 12 43.8	-0.9
CCCA	Chr Cany lake	1.39	48		Pn	15 12 44.3	-0.4
PEC	Perris	1.40	120		Pn	15 12 44.7	-0.2
TOW	Tower One	1.40	30		Pn	15 12 45.0	0.0
BBRC	Big Bear Solar	1.44	103		Pn	15 12 45.9	+0.2
BBRC	Big Bear Solar	1.44	103	Pb	Pn	15 12 46.0	+0.4
	baz=284,SNR=39						
BBRC				Sg	Sn	15 13 06.4	+1.7
	baz=284						
SNCC	San Nicolas Is	1.54	209		Pn	15 12 45.7	-1.1
SNCC	San Nicolas Is	1.54	209	P	Pn	15 12 45.8	-0.9
	baz=28,SNR=8.0						
MURC	Murrieta	1.54	130	P	Pn	15 12 46.5	-0.4
	baz=311,SNR=157						
MURC				S	Sn	15 13 06.7	-0.2
	baz=311						
SPG2	Springville 2	1.61	356		Pn	15 12 47.8	0.0
SCI2	San Clemente I	1.61	178	P	Pn	15 12 47.1	-0.6
	baz=358,SNR=15						
SCI2				Sb	Sg	15 13 11.5	+0.3
	baz=358						
GSC	Goldstone, Bar	1.65	64		Pn	15 12 48.0	-0.4
GSC	Goldstone, Bar	1.65	64	Pn	Pn	15 12 48.0	-0.4
	baz=246,SNR=305						
GSC				Pg	Pg	15 12 50.6	-0.5
	baz=246						
GSC				Sb	Sg	15 13 11.7	-0.8
	baz=246						
MPMC	Manual Prospec	1.73	32	P	Pn	15 12 49.3	-0.3
	baz=213,SNR=376						
PAGB	Antelope Grade	1.75	311		Pn	15 12 49.9	+0.2
VOG	Valley Oaks Go	1.83	340	P	Pn	15 12 50.7	0.0
	baz=160,SNR=5.7						
VOG				S	Sn	15 13 14.4	+0.5
	baz=160						
CWC	Cottonwood Cre	1.89	13	Pb	Pn	15 12 52.4	+0.6
	baz=194						
CWC				Sb	Sg	15 13 19.1	-1.3
	baz=194						
HEC	Hector,Ludlow	1.90	82	Pn	Pn	15 12 51.2	-0.5
	baz=264,SNR=42						
HEC				Pg	Pg	15 12 54.7	-1.1
	baz=264						
HEC				Sb	Sg	15 13 19.3	-1.1
	baz=264						
EW2	E Wide Canyon	1.94	109		Pn	15 12 52.9	+0.5
FRD	Ford Ranch, An	2.00	123		Pn	15 12 53.6	+0.4
PFO	Pinyon Flats O	2.04	118		Pn	15 12 54.1	+0.3
PFO	Pinyon Flats O	2.04	118	P	Pn	15 12 54.0	+0.3
	baz=300,SNR=85						
PFO				S	Sn	15 13 20.5	+1.2
	baz=300						
XPFO	Pion Flat	2.05	118		Pn	15 12 53.9	0.0
109C	Camp Elliot, M	2.12	143		Pn	15 12 54.6	-0.1
109C	Camp Elliot, M	2.12	143	P	Pn	15 12 54.5	-0.1
	baz=324,SNR=21						
109C				S	Sn	15 13 19.9	-1.1
	baz=324						
BELC	Belle Mtn. Jos	2.25	105	P	Pn	15 12 56.9	+0.3
	baz=286,SNR=79						
BELC				Sb	Sb	15 13 27.6	-0.4
	baz=286						
EML	El Monte Cty P	2.25	138		Pn	15 12 56.8	+0.3
SHOC	Shoshone, Teco	2.32	55	Pg	Pg	15 13 03.3	-0.6
	baz=237						
SHOC				Sg	Sg	15 13 35.4	+1.4
	baz=237						
FURC	Furnace Creek,	2.35	37	Pg	Pg	15 13 03.4	-1.1
	baz=218						
TUQ	Turquoise Moun	2.37	68	Pn	Pn	15 12 57.9	-0.4
	baz=250,SNR=27						
TUQ				Pg	Pg	15 13 03.1	-1.6
	baz=250						
TUQ				Sb	Sg	15 13 34.2	-1.3
	baz=250						
PMPB	Monarch Peak	2.41	313		Pn	15 12 58.8	0.0
GMRC	Granite Mounta	2.45	85	Pn	Pn	15 12 58.1	-1.2
	baz=267,SNR=87						
GMRC				Pb	Pb	15 13 03.7	+0.3
	baz=267						
GMRC				Sb	Sg	15 13 37.2	-0.8
	baz=267						
TIN	Tinemaha, Big	2.48	7	Pg	Pb	15 13 04.9	+1.0
	baz=188,SNR=43						
TIN				Sg	Sg	15 13 38.6	-0.3
	baz=188						
MONP2	Monument Peak	2.50	132	P	Pn	15 13 00.5	+0.4
	baz=314,SNR=49						
MONP2				S	Sn	15 13 31.7	+1.0
	baz=314						
BAR	Barrett	2.51	139		Pn	15 13 00.7	+0.6
BC3	Big Chuckawall	2.79	109	P	Pn	15 13 04.0	-0.1
	baz=291,SNR=12						
BC3				Sb	Sg	15 13 45.9	-3.1
	baz=291						
IKP	In-Ko-Pah, Jac	2.85	132	P	Pn	15 13 06.7	+1.7
	baz=314,SNR=17						
IKP				Sb	Sb	15 13 47.2	+1.9
	baz=314						
SWSC	Sam W. Stewart	2.87	124	Pb	Pb	15 13 11.1	+0.6
	baz=306,SNR=24						
SWSC				Sb	Sb	15 13 48.2	+2.5
	baz=306						
IRM	Iron Mountain	2.91	98	P	Pn	15 13 04.8	-0.8
	baz=280,SNR=15						
IRM				Sb	Sg	15 13 51.4	-1.4
	baz=280						
MLAC	Mammoth, Mammo	3.04	357	Pb	Pb	15 13 12.8	-0.8
	baz=177,SNR=12						
TPNV	Topopah Spring	3.04	39		Pn	15 13 08.2	+0.7
TPNV	Topopah Spring	3.04	39	P	Pn	15 13 07.9	+0.4
	baz=220,SNR=32						
TPNV				Sg	Sg	15 13 58.1	+1.1
	baz=220						
MDPB	Devils Postpil	3.06	353		Pn	15 13 10.4	+2.5
SAO	San Andreas Ge	3.16	314		Pn	15 13 08.0	-1.0
NEE2	Needles Airpor	3.30	86	P	Pn	15 13 11.0	0.0
	baz=268,SNR=6.1						
SHPR	Sheep Range	3.41	55		Pn	15 13 13.1	+0.5
Y12C	Blythe	3.50	103		Pn	15 13 12.4	-1.2
Y12C	Blythe	3.50	103	P	Pn	15 13 13.1	-0.6
	baz=285						
GLA	Glamis	3.51	115		Pn	15 13 14.3	+0.3
GLA	Glamis	3.51	115	P	Pn	15 13 14.8	+0.9
	baz=297						
GLA				Sb	Sb	15 14 07.6	+3.4
	baz=297						
CMB	Columbia Colle	3.72	338		Pn	15 13 17.9	+1.1
W13A	Hualapai Mount	3.93	81		Pn	15 13 19.3	-0.5
R11A	Troy Canyon, C	4.47	32	Pn	Pn	15 13 28.1	+0.8
	baz=214						
R11A				Pg	Pg	15 13 44.4	-0.7
	baz=214						
Y14A	Wickenburg	4.70	96		Pn	15 13 30.3	+0.1
AFDM	Forest Hills D	4.74	337		Pn	15 13 32.5	+1.8
LCMT	Little Creek M	4.99	60		Pn	15 13 35.8	+1.5
PAHR	Pah Rah Range	5.14	353		Pn	15 13 40.1	+3.7
CCUT	Cedar City	5.18	54		Pn	15 13 38.3	+1.3
KNB	Kanab	5.30	61		Pn	15 13 40.0	+1.4
SZCU	Shurtz Canyon	5.39	55		Pn	15 13 40.0	+0.1
U15A	North Rim	5.48	69		Pn	15 13 42.1	+0.9
PSUT	Pine Spring	5.49	43	Pn	Pn	15 13 42.4	+1.1
X16A	Lo Mia Camp, P	5.93	90		Pn	15 13 47.8	+0.5
MTPU	Mount Pierson	6.23	55		Pn	15 13 53.5	+2.0
X18A	Snowflake	7.15	88		Pn	15 14 05.7	+1.6

CRAAG ***15*** *15:37:49.6, 34°.36N×3°.48E, Ml3.7*

ISC 15 15:37:54.6±1.4**, 34°.26N**±0°.08×**3°.58E**±0°.06**, h10**^{km}**, n19,** σ**2ˢ.82**/25**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAF	Djebel Tarf	1.71	19	P	Pn	15 38 22.0	-2.5
ATAF	Djebel Tarf	1.71	19	P	Pn	15 38 22.0	-2.5
SET	Setif	2.44	37	P	Pg	15 38 42.0	+0.7
SET	Setif	2.44	37	P	Pg	15 38 42.0	+0.7
ECHA	Ech Chlef	2.61	317	P	Pb	15 38 40.0	-1.5
ECHA	Ech Chlef	2.61	317	P	Pb	15 38 40.0	-1.5
EBNR	Beni Rached	2.63	321	P	Pb	15 38 41.0	-0.8
EBNR	Beni Rached	2.63	321	P	Pb	15 38 41.0	-0.8
EANR	'Ain N'Sour	2.64	310	P	Pn	15 38 39.0	+1.7
EANR	'Ain N'Sour	2.64	310	P	Pn	15 38 39.0	+1.7
ODJA	Bouhanifia	3.25	290	P	Pg	15 38 55.0	-1.8
ODJA	Bouhanifia	3.25	290	P	Pg	15 38 55.0	-1.8
FIGM	Figuig	4.58	244	P	Pn	15 39 02.9	-1.2
FIGM				S	Sn	15 40 00.3	+2.9
TDRA	Tendrara	4.84	257	P	Pb	15 39 16.4	-3.1
TDRA				S	Sb	15 40 21.0	+3.1
TAF	Taforalt	4.98	278	P	Pg	15 39 26.6	-3.4
TAF				S	Sg	15 40 35.3	+0.8
JBK	JBK	5.09	273	P	Pb	15 39 24.4	+0.6
JBK				S	Sg	15 40 32.5	-5.5
AKLM	AKL	6.16	274	P	Pb	15 39 36.3	-5.7
AKLM				S	Sb	15 40 57.6	+1.8
MDT	Midelt	6.99	260	P	Pn	15 39 38.9	+1.9
MDT				S	Sn	15 41 04.3	+7.6
MD31	MD31	7.10	261	P	Pn	15 39 37.6	-1.0
MD31				S	Sn	15 41 01.8	+2.4

IDC ***15*** *15:42:46.9±0.8, 49°.37S×69°.86E, h0^{km}, mb4.1/7, mb1 4.3/8, mb1mx3.9/44, mbtmp4.1/8, ML4.5/1, MS3.6/2, Ms1 3.5/2, ms1mx3.0/29, Error ellipse: s-maj=24.9km s-min=23.0km az=157.0*

NEIC ***15*** *15:42:47.5±1.3, 49°.4S±0°.2×69°.58E±0°.04, h10^{km}±1^{km}, mb4.3/9, Error ellipse: s-maj=28.9km s-min=3.7km az=353.0*

ISC 15 15:42:48.1±0.7**, 49°.4S**±0°.1×**69°.65E**±0°.07**, h10**^{km}**, n20,** σ**0ˢ.83**/18**, mb4.2**/10**, Kerguelen Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAF	Port-aux-Franc	0.37	85		Pg	15 42 55.3	-0.1
PAF				Sg	Sb	15 43 03.1	+0.5
I23FR	KERGUELEN INFR	0.39	84	Pg	Pg	15 42 56.4	+0.6
	baz=285,slow=63,SNR=1.6						
I23FR				*i*		15 44 10.0	
	baz=259,slow=328,SNR=1.2						
MAW	Mawson	18.59	188	P	Pn	15 47 06.6	+1.3
	1.3nm,0.3s,baz=24,slow=15,SNR=11						
MAW				S	Sn	15 50 21.3	-11
	0.5nm,0.3s,baz=85,slow=19,SNR=4.2						
MAW				LR	LR	15 53 03.3	
	comp=Z,117nm,19.1s,baz=54,slow=33						
MAW	Mawson	18.59	188	P	P	15 47 04.2	-0.9
NWAO	Narrogin (SRO)	38.72	83	LR	LR	16 03 01.7	
	comp=Z,130nm,19.6s,baz=120,slow=32						
BOSA	Boshof	39.54	285	P	P	15 50 20.3	+1.0
	0.9nm,0.3s,baz=209,slow=13,SNR=6.7						
BOSA	Boshof	39.54	285	P	P	15 50 19.6	+0.3
BOSA				IAmb	IAmb	15 50 23.7	
	comp=Z,9.5nm,1.4s						
QSPA	South Pole Qui	40.78	180	P	P	15 50 29.2	0.0
	comp=Z,3.2nm,1.0s,baz=285,slow=5.4,SNR=9.8						
QSPA	South Pole Qui	40.78	180	P	P	15 50 29.1	-0.1
QSPA				IAmb	IAmb	15 50 36.4	
	comp=Z,17nm,1.3s						
VNDA	Vanda	42.83	161	P	P	15 50 45.4	-0.2
VNDA				IAmb	IAmb	15 50 49.1	
	comp=Z,4.2nm,1.4s						
TSUM	Tsumeb	51.16	287	P	P	15 51 50.5	-1.1
TSUM				IAmb	IAmb	15 51 51.2	
	comp=Z,3.3nm,1.1s						
ASAR	Alice Springs	55.78	87	P	P	15 52 24.5	-0.8
	comp=Z,2.2nm,0.8s,baz=212,slow=7.1,SNR=18						
WRA	Warramunga Arr	58.70	84	P	P	15 52 45.0	-1.0
	comp=Z,1.2nm,1.0s,baz=218,slow=5.9,SNR=7.0						
WRA	Warramunga Arr	58.70	84	IAmb	IAmb	15 52 47.1	
	comp=Z,0.4nm,1.5s						
WR0	Warramunga Arr	58.82	85	P	P	15 52 46.3	-0.5
WR0				IAmb	IAmb	15 52 50.3	
	comp=Z,4.4nm,1.1s						
WB0	Warramunga Arr	58.86	84	P	P	15 52 46.1	-1.0
CMAR	Chiang Mai Arr	72.38	29	P	P	15 54 14.7	+0.5

	comp=Z,2.1nm,0.8s,baz=214,slow=6.2,SNR=17						
TORD	**Torodi Ar. Bea**	**86.11**	**295**	P	**P**	**15 55 30.5**	**+1.2**
	comp=Z,1.3nm,0.8s,baz=118,slow=3.6,SNR=6.1						
TORD	**Torodi Ar. Bea**	**86.11**	**295**	IAmb	IAmb	15 55 31.3	
	comp=Z,1.2nm,0.9s						
MKAR	**Makanchi Array**	**96.42**	**9**	P	**P**	**15 56 16.0**	**-0.7**
	comp=Z,0.5nm,0.9s,baz=177,slow=5.8,SNR=4.4						

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*NEIC **15** 15:48:08.9±2.9, 49°.0S±0°.1×69°.7E±0°.1, h10^{km}±1^{km}, mb4.4/10, Error ellipse: s-maj=23.9km s-min=4.6km az=41.0*

*IDC **15** 15:48:12.7±2.5, 49°.23S×70°.13E, h0^{km}, mb3.6/3, mb1 4.0/4, mb1mx3.7/44, mbtmp3.8/4, ML4.1/1, MS3.6/1, Ms1 3.6/1, ms1mx2.8/26, Error ellipse: s-maj=69.1km s-min=37.3km az=109.0*

ISC 15 15:48:09.1±1.0**, 49°.0S**±0°.1×**69°.7E**±0°.1**, h10**^{km}**, n17, **σ**1$\overset{s}{.}$76**/16**, mb4.2**/8**, Kerguelen Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAF	**Port-aux-Franc**	**0.48**	**136**		**Pb**	**15 48 19.9**	**+0.2**
PAF				Sg	**Sb**	**15 48 27.1**	**+0.3**
I23FR	**KERGUELEN INFR**	**0.49**	**134**	Pg	**Pg**	**15 48 16.7**	**-1.9**
	baz=277,slow=48,SNR=1.9						
I23FR				*i*		15 50 10.0	
	baz=254,slow=327,SNR=0.8						
MAW	**Mawson**	**18.97**	**188**	P	**Pn**	**15 52 33.2**	**+2.4**
	0.6nm,0.3s,baz=21,slow=14,SNR=5.1						
MAW				S	Sn	15 55 45.0	-18
	0.2nm,0.3s,baz=127,slow=18,SNR=2.0						
MAW	**Mawson**	**18.97**	**188**	P	**P**	**15 52 30.1**	**-0.1**
OPO	**Ambohidratompo**	**35.39**	**321**	LR	LR	16 05 56.7	
	comp=Z,96nm,20.5s,baz=111,slow=30						
SNAA	**Sanae**	**39.06**	**209**	P	**P**	**15 55 36.6**	**+1.0**
SNAA				IAmb	IAmb	15 55 45.2	
	comp=Z,7.4nm,1.4s						
BOSA	**Boshof**	**39.47**	**284**	P	**P**	**15 55 39.2**	**-0.4**
BOSA				IAmb	IAmb	15 55 53.3	
	comp=Z,6.4nm,1.3s						
SUR	**Sutherland**	**39.87**	**276**	P	**P**	**15 55 40.9**	**-2.2**
QSPA	**South Pole Qui**	**41.16**	**180**	P	**P**	**15 55 52.4**	**-0.9**
TSUM	**Tsumeb**	**51.08**	**287**	P	**P**	**15 57 11.9**	**0.0**
TSUM				IAmb	IAmb	15 57 18.4	
	comp=Z,6.4nm,1.4s						
ASAR	**Alice Springs**	**55.73**	**87**	P	**P**	**15 57 49.0**	**+3.1**
	comp=Z,0.9nm,0.9s,baz=219,slow=6.7,SNR=5.8						
WRA	**Warramunga Arr**	**58.64**	**85**	P	**P**	**15 58 09.8**	**+3.3**
	comp=Z,0.8nm,0.9s,baz=222,slow=5.7,SNR=4.8						
WRA	**Warramunga Arr**	**58.64**	**85**	P	**P**	**15 58 07.2**	**+0.8**
WB2	**Warramunga Arr**	**58.64**	**85**	P	**P**	**15 58 06.5**	**0.0**
WB2				IAmb	IAmb	15 58 15.4	
	comp=Z,8.4nm,1.5s						
WRAB	**Tennant Creek**	**58.65**	**85**	P	**P**	**15 58 05.8**	**-0.8**
WRAB				IAmb	IAmb	15 58 14.5	
	comp=Z,6.8nm,1.2s						
WR0	**Warramunga Arr**	**58.76**	**85**	P	**P**	**15 58 05.8**	**-1.5**
CMAR	**Chiang Mai Arr**	**72.03**	**29**	P	P	15 59 38.8	+5.7
	comp=Z,0.6nm,0.8s,baz=214,slow=6.3,SNR=5.4						

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*NEIC **15** 15:54:13.9±2.6, 35°.88N±0°.07×23°.99E±0°.07, h49^{km}±11^{km}, Error ellipse: s-maj=11.3km s-min=6.1km az=211.0*

*ATH **15** 15:54:13.7, 35°.97N×24°.03E, h42^{km}±1^{km}, ML3.6/23, Error ellipse: s-maj=2.1km s-min=0.8km az=222.0*

*ISK **15** 15:54:13.9, 35°.98N×24°.04E, h32^{km}, ML3.8/7*

*IDC **15** 15:54:14.7±1.3, 35°.85N×24°.17E, h55^{km}±15^{km}, mb3.8/10, mb1 3.9/13, mb1mx3.6/47, mbtmp4.1/13, ML4.0/3, Error ellipse: s-maj=20.9km s-min=17.8km az=60.0*

*THE **15** 15:54:15.2, 35°.95N×24°.00E, h48^{km}±3^{km}, ML3.8/11, Error ellipse: s-maj=3.8km s-min=0.7km az=206.0*

*GII **15** 15:54:16.4±0.0, 35°.45N×24°.75E, h1^{km}*

*DDA **15** 15:54:20.0, 36°.34N×24°.42E, h20^{km}±17^{km}, MW3.9*

ISC 15 15:54:12.7±0.8**, 35°.98N**±0°.03×**24°.06E**±0°.03**, h41**^{km}±9^{km}**, n245, **σ**2$\overset{s}{.}$92**/289**, mb4.0**/11**, 7C-3D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RODP	**Rodopos**	**0.49**	**211**	PG	**Pn**	**15 54 25.3**	**+1.9**
RODP				SG	**Sn**	**15 54 32.1**	**+1.3**
IMMV	**Iera Moni Meta**	**0.52**	**187**	P	**Pn**	**15 54 25.8**	**+2.0**
IMMV				S	**Sn**	**15 54 32.8**	**+1.1**
	13µm,0.2s						
IMMV	**Iera Moni Meta**	**0.52**	**187**	P	**Pn**	**15 54 25.8**	**+2.0**
IMMV				S	**Sn**	**15 54 32.7**	**+1.1**
IMMV				AML	AML	15 54 33.8	
	comp=N,28753µm,0.2s						
IMMV				AML	AML	15 54 34.0	
	comp=E,21901µm,0.2s						
IMMV	**Iera Moni Meta**	**0.52**	**187**	PG	**Pn**	**15 54 25.4**	**+1.6**
IMMV				SG	**Sn**	**15 54 33.1**	**+1.5**
VAM	**Vamos**	**0.58**	**169**	P	**Pn**	**15 54 26.5**	**+1.9**
VAM				S	**Sn**	**15 54 35.0**	**+2.0**
	comp=E,11µm,0.3s						
VAM	**Vamos**	**0.58**	**169**	P	**Pn**	**15 54 26.5**	**+1.9**
VAM				S	**Sn**	**15 54 34.5**	**+1.4**
VAM				AML	AML	15 54 34.9	
	comp=E,20384µm,0.4s						
VAM				AML	AML	15 54 37.8	
	comp=N,26542µm,0.2s						
ANKY	**Antikythira Is**	**0.63**	**260**	P	**Pn**	**15 54 26.7**	**+1.5**
ANKY				S	**Sn**	**15 54 35.4**	**+1.2**
	comp=N,6µm,0.3s						
ANKY	**Antikythira Is**	**0.63**	**260**	P	**Pn**	**15 54 26.7**	**+1.5**
ANKY				S	**Sn**	**15 54 34.9**	**+0.7**
ANKY				AML	AML	15 54 36.0	
	comp=E,10361µm,0.3s						
ANKY				AML	AML	15 54 36.3	
	comp=N,14630µm,0.3s						
MHLO	**Agia Marina, M**	**0.76**	**21**	P	**Pn**	**15 54 29.6**	**+2.6**
MHLO				S	**Sn**	**15 54 40.2**	**+2.8**
	comp=N,18µm,0.4s						
MHLO	**Agia Marina, M**	**0.76**	**21**	P	**Pn**	**15 54 29.6**	**+2.6**
MHLO				S	**Sn**	**15 54 40.2**	**+2.8**
MHLO				AML	AML	15 54 40.8	
	comp=E,33524µm,0.3s						
MHLO				AML	AML	15 54 41.0	
	comp=N,37182µm,0.4s						
KNDR	**Palaiochora Ch**	**0.81**	**203**	PG	**Pn**	**15 54 30.1**	**+2.5**
KNDR				SG	**Sn**	**15 54 40.8**	**+2.4**
MHLA	**Plaka, Milos I**	**0.82**	**21**	P	**Pn**	**15 54 30.7**	**+2.9**
MHLA				AML	AML	15 54 42.1	
	comp=E,7637µm,0.8s						
MHLA				AML	AML	15 54 42.3	
	comp=N,6832µm,0.6s						
KTHA	**Kythira Island**	**0.86**	**289**	P	**Pn**	**15 54 29.8**	**+1.4**
KTHA				S	**Sn**	**15 54 40.5**	**+0.7**
	comp=N,5µm,0.4s						
KTHA	**Kythira Island**	**0.86**	**289**	P	**Pn**	**15 54 29.8**	**+1.4**
KTHA				S	**Sn**	**15 54 41.1**	**+1.3**
KTHA				AML	AML	15 54 41.4	
	comp=E,10994µm,0.2s						
KTHA				AML	AML	15 54 43.4	
	comp=N,7293µm,0.4s						
KTHA	**Kythira Island**	**0.86**	**289**	PG	**Pn**	**15 54 29.8**	**+1.4**
KTHA				SG	**Sn**	**15 54 40.8**	**+1.0**
IDI	**Anoyia**	**0.96**	**135**	P	**Pn**	**15 54 31.4**	**+1.5**
IDI	**Anoyia**	**0.96**	**135**	P	**Pn**	**15 54 31.3**	**+1.5**
	comp=N,90nm,0.3s,baz=280,slow=9.6,SNR=426						
IDI				S	**Sn**	**15 54 42.5**	**+0.1**
	comp=N,291nm,0.3s,baz=70,slow=19,SNR=25						
IDI	**Anoyia**	**0.96**	**135**	P	**Pn**	**15 54 31.3**	**+1.5**
IDI				S	**Sn**	**15 54 45.0**	**+2.5**
IDI				AML	AML	15 54 46.1	
	comp=E,5979µm,0.3s						
IDI				AML	AML	15 54 47.8	
	comp=N,3892µm,0.1s						
IDI	**Anoyia**	**0.96**	**135**	PG	**Pn**	**15 54 31.3**	**+1.5**
IACM	**Heraklion**	**1.06**	**129**	P	**Pn**	**15 54 33.2**	**+2.0**
IACM	**Heraklion**	**1.06**	**129**	P	**Pn**	**15 54 33.1**	**+2.0**
HRKL	**Herakleio**	**1.08**	**128**	PN	**Pn**	**15 54 33.5**	**+2.2**
MNVA	**Monemvasia**	**1.09**	**311**	P	**Pn**	**15 54 33.3**	**+1.7**
THR9	**Santorini-Faro**	**1.11**	**70**	P	**Pn**	**15 54 35.0**	**+3.2**
THR9	**Santorini-Faro**	**1.11**	**70**	P	**Pn**	**15 54 35.1**	**+3.2**
THR5	**Thira Island,**	**1.13**	**67**	P	**Pn**	**15 54 35.1**	**+3.1**
THR5	**Thira Island,**	**1.13**	**67**	P	**Pn**	**15 54 35.3**	**+3.2**
SAP3	**Santorini-Thir**	**1.13**	**66**	P	**Pn**	**15 54 35.1**	**+3.0**
SAP3				S	**Sn**	**15 54 50.5**	**+4.0**
	comp=N,13µm,0.5s						
SAP3	**Santorini-Thir**	**1.13**	**66**	P	**Pn**	**15 54 35.2**	**+3.1**
SIVA	**Sivas**	**1.14**	**147**	P	**Pn**	**15 54 35.2**	**+3.0**
GVD	**Gavdhos**	**1.14**	**179**	P	**Pn**	**15 54 35.6**	**+3.4**
SAP1	**Santorini-Akro**	**1.14**	**70**	P	**Pn**	**15 54 35.4**	**+3.2**
SAP1	**Santorini-Akro**	**1.14**	**70**	P	**Pn**	**15 54 35.7**	**+3.5**
THR6	**Thira Island,**	**1.14**	**70**	P	**Pn**	**15 54 35.5**	**+3.3**
THR6	**Thira Island,**	**1.14**	**70**	P	**Pn**	**15 54 35.6**	**+3.3**
STAX	**Taxiarchis Har**	**1.16**	**68**	P	**Pn**	**15 54 35.6**	**+3.1**
STAX	**Taxiarchis Har**	**1.16**	**68**	P	**Pn**	**15 54 35.6**	**+3.1**
THR3	**Thira Island,**	**1.16**	**68**	P	**Pn**	**15 54 35.6**	**+3.1**
THR3	**Thira Island,**	**1.16**	**68**	P	**Pn**	**15 54 35.7**	**+3.2**
VLI	**Veliai**	**1.17**	**309**	P	**Pn**	**15 54 34.3**	**+1.6**
VLI	**Veliai**	**1.17**	**309**	P	**Pn**	**15 54 34.2**	**+1.5**
VLI				AML	AML	15 54 53.3	
	comp=N,2713µm,0.2s						
VLI				AML	AML	15 54 54.6	
	comp=E,2843µm,0.4s						
THT1	**Athinios (Pele**	**1.18**	**69**	P	**Pn**	**15 54 35.6**	**+2.9**
THT2	**Imerovigli**	**1.19**	**67**	PN	**Pn**	**15 54 35.1**	**+2.2**
CMBO	**Columbo, Santo**	**1.19**	**65**	P	**Pn**	**15 54 36.1**	**+3.2**
CMBO				S	**Sn**	**15 54 52.2**	**+4.3**
	comp=E,4µm,0.4s						
CMBO	**Columbo, Santo**	**1.19**	**65**	P	**Pn**	**15 54 35.9**	**+3.0**
CMBO				AML	AML	15 54 52.9	
	comp=E,8460µm,0.3s						
CMBO				AML	AML	15 54 55.4	
	comp=N,8721µm,0.5s						
SANT	**Santorini**	**1.19**	**70**	P	**Pn**	**15 54 36.2**	**+3.2**
SANT				S	**Sn**	**15 54 51.4**	**+3.3**
	comp=N,3µm,0.4s						
SANT	**Santorini**	**1.19**	**70**	P	**Pn**	**15 54 36.1**	**+3.2**
SANT	**Santorini**	**1.19**	**70**	⇑P	**Pn**	**15 54 36.2**	**+3.2**
SANT				⇓S	**Sn**	**15 54 50.5**	**+2.4**
SANT	**Santorini**	**1.19**	**70**	PN	**Pn**	**15 54 35.1**	**+2.1**
SANT	**Santorini**	**1.19**	**70**	*i* P	**Pn**	**15 54 36.0**	**+2.9**
SANT				*i* S	**Sn**	**15 54 47.6**	**-0.4**
SANT	**Santorini**	**1.19**	**70**		**Pn**	**15 54 36.0**	**+2.9**
SAP2K	**Karterados**	**1.20**	**69**	P	**Pn**	**15 54 36.4**	**+3.4**
THR2	**Thira island,**	**1.20**	**67**	P	**Pn**	**15 54 36.6**	**+3.5**
THR8	**Santorini-Mono**	**1.22**	**69**	P	**Pn**	**15 54 36.2**	**+2.9**
SERI	**Serifos**	**1.23**	**16**	P	**Pn**	**15 54 35.8**	**+2.4**
SERI	**Serifos**	**1.23**	**16**	P	**Pn**	**15 54 35.9**	**+2.4**
SERI				AML	AML	15 54 51.5	
	comp=N,2287µm,0.1s						
SERI				AML	AML	15 54 51.7	
	comp=E,2124µm,0.3s						
IOSP	**Ios island**	**1.24**	**53**	P	**Pn**	**15 54 36.3**	**+2.7**
IOSP	**Ios island**	**1.24**	**53**	P	**Pn**	**15 54 36.2**	**+2.7**
IOSP				S	**Sn**	**15 54 51.5**	**+2.5**
IOSP				AML	AML	15 54 52.0	
	comp=N,13366µm,0.3s						
IOSP				AML	AML	15 54 52.3	
	comp=E,12919µm,0.2s						
LAST	**Lasithi**	**1.41**	**125**	P	**Pn**	**15 54 38.4**	**+2.3**
LAST	**Lasithi**	**1.41**	**125**	P	**Pn**	**15 54 38.3**	**+2.3**
LAST				AML	AML	15 54 57.4	
	comp=E,2700µm,0.2s						
LAST				AML	AML	15 54 57.7	
	comp=N,4267µm,0.4s						
ANAF	**Anafi Island**	**1.43**	**74**	P	**Pn**	**15 54 39.4**	**+3.1**
ANAF				S	**Sn**	**15 54 57.2**	**+3.3**
	comp=N,10µm,0.3s						
ANAF	**Anafi Island**	**1.43**	**74**	P	**Pn**	**15 54 39.4**	**+3.1**
ANAF				S	**Sn**	**15 54 56.5**	**+2.6**
ANAF				AML	AML	15 54 57.2	
	comp=N,15774µm,0.3s						
ANAF				AML	AML	15 54 58.4	
	comp=E,21763µm,0.3s						
NPS	**Neapolis**	**1.45**	**119**	P	**Pn**	**15 54 38.9**	**+2.4**
NPS	**Neapolis**	**1.45**	**119**	P	**Pn**	**15 54 38.5**	**+2.0**
NPS				AML	AML	15 54 58.3	
	comp=N,3686µm,0.2s						
NPS				AML	AML	15 54 58.9	
	comp=E,5631µm,0.2s						
YDRA	**Hydra**	**1.45**	**341**	P	**Pn**	**15 54 38.7**	**+2.2**
KRND	**KRANIDI**	**1.58**	**333**	P	**Pn**	**15 54 40.4**	**+2.1**
DYR	**Agios Nikonas**	**1.60**	**300**	P	**Pn**	**15 54 41.6**	**+3.0**
DYR	**Agios Nikonas**	**1.60**	**300**	P	**Pn**	**15 54 41.5**	**+2.9**
APE	**Apeiranthos**	**1.61**	**47**	P	**Pn**	**15 54 41.2**	**+2.5**
APE	**Apeiranthos**	**1.61**	**47**	P	**Pn**	**15 54 41.1**	**+2.4**
APE				S	**Sn**	**15 55 00.4**	**+2.2**
APE				AML	AML	15 55 00.9	
	comp=N,2290µm,0.2s						
APE				AML	AML	15 55 01.9	
	comp=E,2096µm,0.3s						
APE	**Apeiranthos**	**1.61**	**47**	⇓P	**Pn**	**15 54 41.0**	**+2.4**
APE				⇓S	**Sn**	**15 55 00.7**	**+2.5**
APE	**Apeiranthos**	**1.61**	**47**	PN	**Pn**	**15 54 41.1**	**+2.4**
APE	**Apeiranthos**	**1.61**	**47**	*i* P	**Pn**	**15 54 41.2**	**+2.5**
APE				*i* S	**Sn**	**15 54 56.9**	**-1.3**
DID	**Didima**	**1.66**	**337**	P	**Pn**	**15 54 41.3**	**+1.9**
DID				S	**Sn**	**15 55 01.3**	**+1.7**
	comp=E,1µm,0.3s						
DID	**Didima**	**1.66**	**337**	P	**Pn**	**15 54 41.4**	**+1.9**
AMGA	**Amorgos Island**	**1.70**	**59**	P	**Pn**	**15 54 43.0**	**+3.0**
AMGA	**Amorgos Island**	**1.70**	**59**	P	**Pn**	**15 54 42.9**	**+3.0**
AMGA				S	**Sn**	**15 55 02.9**	**+2.4**
AMGA				AML	AML	15 55 04.3	
	comp=E,2820µm,0.2s						
AMGA				AML	AML	15 55 05.1	
	comp=N,2786µm,0.3s						
TNSA	**Tinos**	**1.79**	**29**	P	**Pn**	**15 54 43.8**	**+2.7**
VLY	**Voula,Athens**	**1.88**	**353**	P	**Pn**	**15 54 44.8**	**+2.3**
VLX	**Vlachokerasia**	**1.94**	**316**	P	**Pn**	**15 54 45.6**	**+2.3**
VLX	**Vlachokerasia**	**1.94**	**316**	P	**Pn**	**15 54 45.5**	**+2.3**
VLX				AML	AML	15 55 11.7	
	comp=N,1425µm,0.6s						
VLX				AML	AML	15 55 12.3	
	comp=E,1693µm,0.4s						
ZKR	**Zakros**	**1.96**	**116**	P	**Pn**	**15 54 46.4**	**+2.9**
ZKR	**Zakros**	**1.96**	**116**	P	**Pn**	**15 54 46.3**	**+2.9**
ZKR	**Zakros**	**1.96**	**116**	PN	**Pn**	**15 54 46.3**	**+2.9**
ATHU	**Athens Univers**	**2.00**	**354**	P	**Pn**	**15 54 46.2**	**+2.2**
ATHU	**Athens Univers**	**2.00**	**354**	P	**Pn**	**15 54 46.1**	**+2.2**
ATHU				AML	AML	15 55 09.5	
	comp=E,316µm,0.2s						
ATHU				AML	AML	15 55 11.7	
	comp=N,449µm,0.4s						
ATH	**Athens Observa**	**2.01**	**352**	P	**Pn**	**15 54 47.9**	**+3.8**
KARY	**Karystos**	**2.07**	**8**	P	**Pn**	**15 54 47.7**	**+2.6**
KARY	**Karystos**	**2.07**	**8**	P	**Pn**	**15 54 47.6**	**+2.6**
KARY				AML	AML	15 55 12.1	
	comp=E,838µm,0.4s						
KARY				AML	AML	15 55 12.8	
	comp=N,1186µm,0.4s						
PTL	**Penteli**	**2.07**	**356**	P	**Pn**	**15 54 47.6**	**+2.5**
PTL	**Penteli**	**2.07**	**356**	P	**Pn**	**15 54 47.5**	**+2.4**
PTL				AML	AML	15 55 11.7	
	comp=N,1413µm,0.5s						
PTL				AML	AML	15 55 11.7	
	comp=E,1514µm,0.5s						
PYL	**PYLOS**	**2.08**	**297**	P	**Pn**	**15 54 47.8**	**+2.6**
PYL	**PYLOS**	**2.08**	**297**	P	**Pn**	**15 54 47.8**	**+2.6**
ITM	**Ithomi**	**2.10**	**305**	P	**Pn**	**15 54 49.1**	**+3.7**
ITM	**Ithomi**	**2.10**	**305**	PN	**Pn**	**15 54 48.8**	**+3.4**
ITM	**Ithomi**	**2.10**	**305**		**Pn**	**15 54 49.1**	**+3.7**
DION	**Dionisos Attik**	**2.10**	**357**	P	**Pn**	**15 54 48.0**	**+2.6**
DION	**Dionisos Attik**	**2.10**	**357**	P	**Pn**	**15 54 48.0**	**+2.6**
LOUT	**Loutraki**	**2.19**	**337**	P	**Pn**	**15 54 49.1**	**+2.5**
LOUT	**Loutraki**	**2.19**	**337**	P	**Pn**	**15 54 49.0**	**+2.3**
LTK	**Loutraki**	**2.22**	**337**	P	**Pn**	**15 54 49.6**	**+2.5**
LTK				S	**Sn**	**15 55 15.4**	**+2.1**
	comp=E,565nm,0.7s						
LTK	**Loutraki**	**2.22**	**337**	P	**Pn**	**15 54 49.5**	**+2.4**
VILL	**Villia**	**2.26**	**345**	P	**Pn**	**15 54 50.1**	**+2.4**
VIL2	**Platees**	**2.32**	**344**	P	**Pn**	**15 54 50.0**	**+1.6**
VIL2				AML	AML	15 55 23.8	
	comp=N,1390µm,0.4s						
VIL2				AML	AML	15 55 24.3	
	comp=E,1420µm,0.4s						
AMT	**Artemida-Makis**	**2.45**	**310**	P	**Pn**	**15 54 53.8**	**+3.7**
PROD	**Prodromos**	**2.46**	**338**	P	**Pn**	**15 54 52.8**	**+2.4**
KOSK	**Kos Island**	**2.48**	**71**	PN	**Pn**	**15 54 53.5**	**+3.0**
KARP	**Karpathos**	**2.56**	**99**	P	**Pn**	**15 54 54.1**	**+2.4**
KARP				S	**Sn**	**15 55 23.6**	**+2.0**
KARP				AML	AML	15 55 29.0	
	comp=E,2092µm,0.4s						
KARP				AML	AML	15 55 30.8	
	comp=N,1248µm,0.2s						
KARP	**Karpathos**	**2.56**	**99**	PN	**Pn**	**15 54 54.4**	**+2.7**
KARP	**Karpathos**	**2.56**	**99**		**Pn**	**15 54 54.0**	**+2.2**
NISR	**Nisiros**	**2.56**	**75**	P	**Pn**	**15 54 55.1**	**+3.4**
KLV	**Kalavryta, Ach**	**2.57**	**324**	P	**Pn**	**15 54 54.4**	**+2.5**
KLV	**Kalavryta, Ach**	**2.57**	**324**	P	**Pn**	**15 54 54.4**	**+2.5**
KLV				AML	AML	15 55 28.0	
	comp=N,680µm,0.5s						
KLV				AML	AML	15 55 29.6	
	comp=E,912µm,0.6s						
DRO	**Drossia**	**2.73**	**317**	P	**Pn**	**15 54 57.6**	**+3.6**
MRKA	**Markates**	**2.75**	**352**	P	**Pn**	**15 54 57.1**	**+2.8**
MRKA	**Markates**	**2.75**	**352**	P	**Pn**	**15 54 56.8**	**+2.4**
DLFA	**Delphi**	**2.79**	**334**	P	**Pn**	**15 54 57.3**	**+2.4**
LKR	**Lokris**	**2.80**	**343**	P	**Pn**	**15 54 57.5**	**+2.5**
LKR	**Lokris**	**2.80**	**343**	P	**Pn**	**15 54 57.6**	**+2.6**
SMG	**Samos**	**2.82**	**51**	P	**Pn**	**15 54 58.2**	**+2.9**
BODT	**Bodrum**	**2.83**	**67**	PN	**Pn**	**15 54 58.5**	**+3.0**
KALE	**Kalithea**	**2.86**	**328**	P	**Pn**	**15 54 58.0**	**+2.2**
KALE	**Kalithea**	**2.86**	**328**	P	**Pn**	**15 54 58.1**	**+2.2**
TRIZ	**Trizonia**	**2.86**	**327**	P	**Pn**	**15 54 58.5**	**+2.6**
CHOS	**Chios island**	**2.88**	**33**	P	**Pn**	**15 54 58.8**	**+2.6**
CHOS	**Chios island**	**2.88**	**33**	PN	**Pn**	**15 54 59.1**	**+2.9**
SERG	**Sergoula**	**2.91**	**327**	P	**Pn**	**15 54 59.1**	**+2.6**
SERG	**Sergoula**	**2.91**	**327**	P	**Pn**	**15 54 59.2**	**+2.6**
DAT	**Datca**	**2.93**	**74**	PN	**Pn**	**15 54 59.9**	**+2.9**
EFP	**Efpalio**	**2.99**	**325**	P	**Pn**	**15 55 00.1**	**+2.5**
AXAR	**Agios Charalam**	**3.00**	**339**	P	**Pn**	**15 55 01.1**	**+3.4**
AXAR	**Agios Charalam**	**3.00**	**339**	P	**Pn**	**15 55 01.2**	**+3.4**
DGB	**zmir**	**3.06**	**47**	*i* P	**Pn**	**15 55 00.9**	**+2.3**
DGB				*i* S	**Sn**	**15 55 27.6**	**-6.3**
GCAM	**G?zelcaml?**	**3.07**	**55**	PN	**Pn**	**15 55 02.1**	**+3.4**
GCAM	**G?zelcaml?**	**3.07**	**55**	*i* P	**Pn**	**15 55 03.4**	**+4.7**
GCAM				*i* S	**Sn**	**15 55 31.8**	**-2.4**
ANX	**Ano Chora**	**3.12**	**327**	P	**Pn**	**15 55 02.1**	**+2.6**
ANX	**Ano Chora**	**3.12**	**327**	P	**Pn**	**15 55 02.1**	**+2.6**
URLA	**Izmir**	**3.12**	**40**	*i* P	**Pn**	**15 55 02.1**	**+2.6**
URLA				*i* S	**Sn**	**15 55 29.6**	**-5.9**
SKIA	**Skiathos**	**3.22**	**352**	P	**Pn**	**15 55 03.6**	**+2.8**
SKIA	**Skiathos**	**3.22**	**352**	P	**Pn**	**15 55 03.6**	**+2.8**
ARG	**Arkhangelos**	**3.30**	**85**	P	**Pn**	**15 55 05.7**	**+3.8**
ARG	**Arkhangelos**	**3.30**	**85**	P	**Pn**	**15 55 05.7**	**+3.8**
AGG	**Agios Georgios**	**3.34**	**336**	P	**Pn**	**15 55 05.3**	**+2.9**
AGG	**Agios Georgios**	**3.34**	**336**	*i* P	**Pn**	**15 55 05.2**	**+2.7**
AGG				*i* S	**Sn**	**15 55 37.9**	**-3.0**
AGG	**Agios Georgios**	**3.34**	**336**		**Pn**	**15 55 05.4**	**+2.9**
MAKR	**Makrakomi, Fth**	**3.40**	**334**	P	**Pn**	**15 55 06.2**	**+2.9**
EVR	**Evrytania**	**3.44**	**329**	P	**Pn**	**15 55 06.6**	**+2.7**
XOR	**Xorichti**	**3.45**	**349**	P	**Pn**	**15 55 06.7**	**+2.6**
TURN	**Turunc**	**3.77**	**75**	*i* P	**Pn**	**15 55 09.0**	**+0.7**
TURN				*i* S	**Sn**	**15 55 45.1**	**-6.2**
TAVA	**DENIZLI_Tavas**	**4.17**	**68**	*i* P	Pn	15 55 19.2	+5.3
BAYC	**CANAKKALE_Bayr**	**4.24**	**27**	*i* P	**Pn**	**15 55 16.7**	**+1.9**
BAYC				*i* S	**Sn**	**15 55 57.2**	**-5.8**
LIT	**Litokhoron**	**4.30**	**344**	*i* P	**Pn**	**15 55 18.4**	**+2.7**
LIT	**Litokhoron**	**4.30**	**344**		**Pn**	**15 55 18.5**	**+2.9**
AKAS	**Kas**	**4.49**	**85**	*i* P	Pn	15 55 22.3	+3.8
AKAS				*i* S	Sn	15 56 01.5	-8.0
AKAS				IAML		15 56 20.0	
	comp=N,34nm,0.4s						
AKAS				IAML		15 56 21.0	
	comp=E,17nm,0.7s						
ELL	**Elmali**	**4.78**	**79**		Pn	15 55 27.7	+5.4
KHAL	**Karahalli**	**4.95**	**60**	*i* P	Pn	15 55 30.4	+5.7
KHAL				*i* S	**Sn**	**15 56 13.1**	**-7.5**
AKUM	**Antalya-Kumluc**	**5.09**	**84**	*i* P	Pn	15 55 31.2	+4.7
AKUM				*i* S	**Sn**	**15 56 18.0**	**-6.0**
AKUM				IAML		15 56 30.0	
	comp=N,24nm,1.0s						
AKUM				IAML		15 56 45.0	
	comp=E,19nm,0.6s						
AKUM				IAML		15 57 03.0	
	comp=Z,16nm,0.6s						
FNA	**Florina**	**5.24**	**337**	*i* P	**Pn**	**15 55 31.7**	**+3.0**
FNA	**Florina**	**5.24**	**337**		**Pn**	**15 55 31.8**	**+3.2**
SCTE	**Santa Cesarea**	**6.02**	**314**	Pn	**Pn**	**15 55 40.5**	**+1.3**
KEPZ	**Antalya-Kepez**	**6.15**	**79**	*i* P	Pn	15 55 45.9	+4.8
TIP	**Timpagrande**	**6.62**	**301**	⇑P	**Pn**	**15 55 49.1**	**+1.4**
TIP				⇑S	**Sn**	**15 57 01.3**	**-0.5**
TIP	**Timpagrande**	**6.62**	**301**		**Pn**	**15 55 49.0**	**+1.4**
TIP					**Sn**	**15 57 00.7**	**-1.1**
VTS	**Vitosha**	**6.66**	**355**	Pn	**Pn**	**15 55 51.8**	**+3.6**
GAZI	**Gazipasa**	**6.69**	**85**	*i* P	**Pn**	**15 55 50.5**	**+2.1**
KDHN	**Kadinhani**	**6.91**	**66**	*i* P	Pn	15 55 58.0	+6.5
CGL1	**Ceglie Messapi**	**6.97**	**314**	*e*Pn	**Pn**	**15 55 53.4**	**+1.1**
TAR1	**Taranto**	**7.00**	**312**	*e*Pn	**Pn**	**15 55 53.9**	**+1.2**
DRME	**Dracevica, Mon**	**7.27**	**330**	*e*Pn	**Pn**	**15 55 56.8**	**+0.5**
MATE	**Matera**	**7.43**	**311**	⇑P	Pn	15 56 05.8	+7.3
MATE				⇑S	**Sn**	**15 57 17.6**	**-3.8**
PDG	**Podgorica**	**7.44**	**331**	⇑P	**Pn**	**15 55 59.7**	**+1.0**
PDG				⇑S	**Sn**	**15 57 18.5**	**-3.4**
PDG	**Podgorica**	**7.44**	**331**	*e*Pn	**Pn**	**15 55 59.4**	**+0.7**
PDG	**Podgorica**	**7.44**	**331**		**Pn**	**15 55 59.5**	**+0.7**
PDG					**Sn**	**15 57 21.9**	**0.0**
SG1	**Sgolgore (BA)**	**7.56**	**312**	*e*Pn	**Pn**	**15 56 00.4**	**0.0**
SG1				Sn	**Sn**	**15 57 18.4**	**-6.4**
BAI	**Bari**	**7.61**	**314**	*e*Pn	**Pn**	**15 56 02.0**	**+1.0**
BAI				Sn	**Sn**	**15 57 22.0**	**-3.9**
CSS	**Mathiatis**	**7.63**	**95**	*i* P	**Pn**	**15 56 02.0**	**+0.6**
CSS	**Mathiatis**	**7.63**	**95**	Pn	**Pn**	**15 56 00.2**	**-1.2**
CSS				Sn	**Sn**	**15 57 22.5**	**-4.0**
HCY	**Herceg Novi**	**7.77**	**328**	*e*Pn	**Pn**	**15 56 02.8**	**-0.5**
VAE	**Valguarnera**	**7.89**	**284**	S	**Sn**	**15 57 34.0**	**+0.9**
	comp=Z,3.2nm,0.3s,baz=45,slow=16,SNR=3.4						
ACER	**Acerenza**	**7.98**	**309**		**Pn**	**15 56 08.5**	**+2.3**
TREB	**Trebinje**	**8.05**	**328**	*e*Pn	**Pn**	**15 56 06.3**	**-0.8**
DBRK	**Dubrovnik**	**8.10**	**327**	*i* Pn	**Pn**	**15 56 06.7**	**-1.1**
BRY	**Bratogost**	**8.13**	**330**	*e*Pn	**Pn**	**15 56 08.4**	**+0.1**
BRTR	**Keskin Array B**	**8.45**	**61**	P	Pn	15 56 18.4	+5.7
	comp=Z,0.4nm,0.3s,baz=245,slow=16,SNR=12						
BRTR	**Keskin Array B**	**8.45**	**61**		**Pn**	**15 56 15.2**	**+2.5**
BR131	**Keskin Array S**	**8.45**	**61**		Pn	15 56 17.1	+4.4
STON	**Ston**	**8.46**	**326**	*e*Pn	**Pn**	**15 56 11.2**	**-1.5**
STON				Sn	**Sn**	**15 57 39.8**	**-7.0**
STON	**Ston**	**8.46**	**326**	*e*Pn	**Pn**	**15 56 11.3**	**-1.4**
BBLS	**Lazići**	**8.65**	**337**	*e*Pn	**Pn**	**15 56 15.1**	**-0.3**
SGRT	**San Giovanni R**	**8.68**	**314**		**Pn**	**15 56 16.0**	**+0.2**
DELI	**KIRIKKALE**	**8.75**	**60**	*i* P	Pn	15 56 23.2	+6.4
CDAG	**Cicekdag**	**8.93**	**63**	*i* P	Pn	15 56 25.6	+6.3
HAPS	**Han Pijesak,BI**	**8.99**	**336**	*e*Pn	**Pn**	**15 56 19.0**	**-1.1**
MAKA	**Makarska**	**9.10**	**325**	*e*Pn	**Pn**	**15 56 20.4**	**-1.0**
RICI	**Ricice**	**9.21**	**327**	*e*Pn	**Pn**	**15 56 21.9**	**-1.1**
RICI				Sn	**Sn**	**15 57 58.3**	**-6.9**
MLR	**Muntele Rosu**	**9.61**	**8**	P	Pn	15 56 36.1	+7.6
	comp=Z,0.3nm,0.3s,baz=170,slow=9.0,SNR=4.0						
HNTI	**Hanita**	**9.61**	**104**	Pn	**Pn**	**15 56 26.9**	**-1.6**
HNTI				Sn	**Sn**	**15 58 09.3**	**-5.9**
MMA0B	**Mount Meron ar**	**9.81**	**104**	Pn	**Pn**	**15 56 29.9**	**-1.5**
MMA0B				Sn	**Sn**	**15 58 14.6**	**-5.7**
MMAI	**Mount Meron Ar**	**9.81**	**104**	P	**Pn**	**15 56 30.7**	**-0.6**
	comp=Z,2.2nm,0.3s,baz=305,slow=12,SNR=17						
MMAI				S	**Sn**	**15 58 14.8**	**-5.5**
	comp=Z,3.4nm,0.3s,baz=316,slow=27,SNR=8.2						
SLTI	**Sal'it**	**9.83**	**109**	Pn	**Pn**	**15 56 29.1**	**-2.5**
SLTI				Sn	**Sn**	**15 58 14.3**	**-6.3**
KIJV	**Kijevo**	**9.93**	**326**	*e*Pn	**Pn**	**15 56 32.0**	**-0.9**
KIJV				Sn	**Sn**	**15 58 17.3**	**-5.8**
INTR	**Introdacqua**	**9.94**	**310**		**Pn**	**15 56 33.4**	**+0.4**
KSDI	**Kefar Szold**	**9.96**	**103**	Pn	**Pn**	**15 56 32.2**	**-1.0**
KSDI				Sn	**Sn**	**15 58 17.7**	**-5.9**
NATI	**Neve Ativ**	**9.99**	**102**	Pn	**Pn**	**15 56 32.7**	**-1.0**
NATI				Sn	**Sn**	**15 58 19.7**	**-4.8**
KZIT	**Kziot**	**10.00**	**117**	Sn	**Sn**	**15 58 17.2**	**-7.6**
ZIRJ	**Zirje**	**10.03**	**322**	*e*Pn	**Pn**	**15 56 33.5**	**-0.6**
ZIRJ				Sn	Sn	15 58 16.5	-8.9
MMLI	**Mount Malkishu**	**10.05**	**107**	Sn	**Sn**	**15 58 19.4**	**-6.5**
AMAZ	**Amatzia**	**10.06**	**113**	Sn	Sn	15 58 18.2	-8.1
HMDT	**Nahal Hemdat**	**10.20**	**108**	Pn	**Pn**	**15 56 34.2**	**-2.4**
HMDT				Sn	**Sn**	**15 58 23.8**	**-5.8**
YTIR	**Yattir**	**10.29**	**113**	Pn	**Pn**	**15 56 36.8**	**-1.1**
YTIR				Sn	Sn	15 58 24.2	-7.9
DSI	**Dead Sea**	**10.39**	**112**	Pn	**Pn**	**15 56 37.1**	**-2.1**
DUGI	**Dugi Otok**	**10.57**	**322**	*e*Pn	**Pn**	**15 56 41.6**	**+0.1**
UDBI	**Udbina**	**10.63**	**326**	*e*Pn	**Pn**	**15 56 42.7**	**+0.2**
DAMI2	**DAM2**	**10.63**	**114**	Sn	**Sn**	**15 58 33.1**	**-7.0**
GHAJ	**Ghor Haditha**	**10.66**	**113**	Sn	Sn	15 58 32.5	-8.3
KRMI	**Paran Flat**	**10.68**	**120**	Pn	**Pn**	**15 56 39.9**	**-3.3**
KRMI				Sn	Sn	15 58 33.3	-8.2
PRNI	**Paran**	**10.75**	**118**	Pn	**Pn**	**15 56 42.1**	**-2.0**
PRNI				Sn	**Sn**	**15 58 35.7**	**-7.4**
ZFRI	**Zfri**	**10.76**	**117**	Pn	**Pn**	**15 56 41.9**	**-2.3**
ZFRI				Sn	Sn	15 58 34.7	-8.6
HRFI	**Mount Harif**	**10.95**	**120**	Sn	Sn	15 58 40.1	-7.9
MBRI	**Mt Berech**	**11.01**	**121**	Pn	**Pn**	**15 56 45.7**	**-2.0**
MBRI				Sn	**Sn**	**15 58 42.0**	**-7.5**
EIL	**Elat**	**11.11**	**121**	P	**Pn**	**15 56 48.8**	**-0.2**
	comp=Z,1.2nm,0.3s,baz=302,slow=2.8,SNR=36						
EIL				S	**Sn**	**15 58 45.4**	**-6.4**
	comp=Z,1.4nm,0.3s,baz=342,slow=19,SNR=6.6						

EIL	Elat	11.11	121	Pn	Pn	15 56 47.3	-1.7
EIL				Sn	Sn	15 58 43.6	-8.2
CRES	Cresnjev	11.79	329	*e*Pn	Pn	15 56 56.3	-1.9
CEY	Cerknica	12.17	326	*e*Pn	Pn	15 57 01.2	-2.2
CTI	Castel Tesino	13.73	321	Pn	Pn	15 57 22.5	-2.3
SALO	Salr	14.05	317	P	P	15 57 36.6	+0.5
GERES	GERESS Array B	14.94	333	P	P	15 57 46.0	-0.1
	comp=Z,0.2nm,0.3s,baz=144,slow=11,SNR=5.6						
GERES	GERESS Array B	14.94	333	P	P	15 57 48.0	+2.0
AKBB	Malin Array Si	15.18	13	P	P	15 57 48.9	+0.3
AKBB				IAmb	IAmb	15 58 36.5	
	comp=Z,12nm,1.6s						
CLL	Collm	17.26	336	*e*PP	P	15 58 22.0	+10
HFS	Hagfors	25.08	348	P	P	15 59 34.9	+1.8
	comp=Z,7.1nm,1.1s,baz=158,slow=12,SNR=5.1						
FINES	FINESS Array B	25.52	2	P	P	15 59 38.7	+1.6
	comp=Z,4.5nm,1.0s,baz=167,slow=9.0,SNR=7.3						
FINES				PcP	PcP	16 03 08.1	+0.6
	comp=Z,6.4nm,1.1s,baz=167,slow=2.0,SNR=4.0						
EKA	Eskdalemuir Ar	26.86	325	P	P	15 59 51.6	+2.3
	comp=Z,0.5nm,0.4s,baz=124,slow=10.0,SNR=5.9						
TORD	Torodi Ar. Bea	30.36	227	P	P	16 00 21.2	+0.4
	comp=Z,1.0nm,0.5s,baz=35,slow=9.7,SNR=8.2						
ARCES	ARCESS Array B	33.62	1	P	P	16 00 51.2	+2.3
	comp=Z,3.3nm,0.9s,baz=184,slow=12,SNR=3.2						
SPITS	Spitsbergen Ar	42.43	358	P	P	16 02 04.6	+1.6
	comp=Z,8.0nm,1.0s,baz=169,slow=8.4,SNR=2.3						
MK31	Makanchi Array	44.08	57	P	P	16 02 17.6	+0.9
MK31				IAmb	IAmb	16 02 18.1	
	comp=Z,1.2nm,0.7s						
MKAR	Makanchi Array	44.08	57	P	P	16 02 17.4	+0.8
	comp=Z,1.1nm,0.5s,baz=273,slow=8.5,SNR=34						
MKAR	Makanchi Array	44.08	57	P	P	16 02 17.3	+0.7
ZALV	Zalesovo Beam	45.09	47	P	P	16 02 25.1	+0.5
	comp=Z,1.3nm,0.3s,baz=267,slow=8.6,SNR=7.5						
SCHQ	Schefferville	61.98	319	P	P	16 04 29.2	+0.8
	comp=Z,0.7nm,0.4s,baz=58,slow=9.5,SNR=3.6						
SCHQ	Schefferville	61.98	319	P	P	16 04 29.1	+0.8
SCHQ				IAmb	IAmb	16 04 54.1	
	comp=Z,13nm,1.4s						
YKA	Yellowknife Ar	76.39	342	P	P	16 05 57.5	0.0
	comp=Z,0.3nm,0.6s,baz=33,slow=4.9,SNR=4.3						
WRA	Warramunga Arr	117.56	95	PKP	PKiKP	16 12 54.6	0.0
	comp=Z,0.4nm,0.9s,baz=319,slow=1.4,SNR=5.9						
ASAR	Alice Springs	119.07	99	PKP	PKiKP	16 12 57.7	+0.2
	comp=Z,0.2nm,0.4s,baz=310,slow=1.3,SNR=12						

SKO ***15*** *15:54:17.3, 42°.67N×23°.01E, h4^{km}*

BEO 15 15:54:17.6±0.4**, 42°.60N×22°.98E, h5**^{km}±3^{km}**, ML1.9**/6**, 9C-2D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTS	Vitosha	0.19	85	*e*Pg	Pg	15 54 20.8	-0.6
VTS				*e*Sg	Sg	15 54 23.4	-0.6
VTS	Vitosha	0.19	85	⇓P	Pg	15 54 21.0	-0.5
VTS				⇑S	Sg	15 54 23.7	-0.3
BOSS	Bosilegrad	0.38	254	*e*Pg	Pg	15 54 24.7	-0.3
BOSS				*e*Sg	Sg	15 54 29.9	-0.1
ZAPS	Zavoj	0.72	340	*e*Pg	Pg	15 54 31.3	-0.1
ZAPS				*e*Sg	Sb	15 54 42.2	-0.6
BARS	Barje	0.88	284	*e*Pg	Pg	15 54 33.4	-1.1
BARS				*e*Sg	Sg	15 54 45.3	-0.6
BARS				*e*Sg	Sb	15 54 47.8	+0.3
BLKB	Belogradchik	1.04	348	⇑S	Sn	15 54 53.9	0.0
STIP	Stip	1.08	213	*e*Pg	Pg	15 54 34.8	-3.5
STIP				*i* Sg	Sg	15 54 50.1	-2.2
VAY	Valandovo	1.31	193	*e*Pg	Pn	15 54 41.5	-1.1
VAY				*e*Sg	Sb	15 55 00.2	+0.3
VAY	Valandovo	1.31	193	*i* Pg	Pn	15 54 42.0	-0.6
VAY				*i* Sg	Sn	15 55 01.6	+1.1
ZAGS	Zajecar	1.33	336	*e*Pg	Pn	15 54 41.2	-1.6
ZAGS				*e*Sg	Sg	15 54 59.5	-0.7
BOVS	Bovan	1.39	318	*e*Pg	Pn	15 54 42.4	-1.2
BOVS				*e*Sg	Sb	15 55 01.7	-0.4
PLVB	Pleven	1.44	56	⇑P	Pg	15 54 47.3	+2.1
PLVB				⇑S	Sb	15 55 01.9	-1.6
SELS	Selova	1.50	295	*e*Pn	Pn	15 54 43.4	-1.8
SELS				*e*Sg	Sb	15 55 05.2	0.0
ELND	Elena	2.16	80	⇑P	Pb	15 54 56.7	-0.4
ELND				⇑S	Sg	15 55 26.2	-0.8
HERR	Herculane	2.31	350	⇑P	Pn	15 54 54.7	-1.6
GZR	Gura Zlata	2.79	357	⇑P	Pb	15 55 07.6	-0.4
BZS	Buzias	3.17	342	⇓P	Pn	15 55 00.9	-7.2
BZS				⇑S	Sg	15 55 58.7	-0.7

IDC 15 15:56:41.4±1.6**, 5°.52S×147°.08E, h0**^{km}**, mb3.6**/3**, mb1 3.9**/5**, mb1mx3.5**/30**, mbtmp3.7**/5**, ML3.5**/1**, Error ellipse: s-maj=57.3km s-min=25.5km az=119.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.87	179	Pn	Pn	15 57 43.1	+0.9
	4.6nm,0.3s,baz=4.3,slow=12,SNR=22						
PMG				Sn	Sn	15 58 24.4	-3.9
	6.6nm,0.3s,baz=360,slow=23,SNR=6.5						
WRA	Warramunga Arr	18.96	220	P	P	16 01 03.8	-0.6
	0.2nm,0.3s,baz=43,slow=12,SNR=14						
ASAR	Alice Springs	22.06	214	P	P	16 01 37.4	-0.7
	0.7nm,0.6s,baz=51,slow=8.9,SNR=31						
FITZ	Fitzroy Crossi	24.39	237	P	P	16 02 02.4	+0.7
	3.1nm,0.7s,baz=333,slow=0.1,SNR=11						
ILAR	Eielson Array	85.01	23	P	P	16 09 18.3	-0.2
	0.2nm,0.7s,baz=248,slow=4.8,SNR=2.6						

IDC ***15*** *16:10:01.6±2.3, 26°.49S×178°.13W, h263^{km}±24^{km}, mb3.4/5, mb1 3.6/6, mb1mx3.3/22, mbtmp4.0/6, Error ellipse: s-maj=36.5km s-min=26.1km az=175.0*

ISC 15 16:10:01.1±1.1**, 26°.4S**±0°.2×**178°.1W**±0°.2**, h250**^{km}**, n13, σ1^{s}.10**/11**, mb3.6**/5**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.84	176	P	Pn	16 10 52.1	+0.4
	185nm,0.3s,baz=52,slow=20,SNR=3.0						
RAO				S	S	16 11 16.1	-16
	383nm,0.3s,baz=4.6,slow=23,SNR=6.1						
URZ	Urewera	12.47	198	S	S	16 14 54.7	-14
	1.1nm,0.3s,baz=170,slow=22,SNR=8.2						
DZM	Mont Dzumac	14.71	284	P	Pn	16 13 18.8	+0.9
	0.2nm,0.3s,baz=103,slow=18,SNR=3.0						
ASAR	Alice Springs	43.34	263	P	P	16 17 38.4	-0.6
	0.8nm,0.7s,baz=102,slow=8.5,SNR=14						
WRA	Warramunga Arr	43.96	268	P	P	16 17 43.0	-1.0
	0.6nm,0.6s,baz=103,slow=8.3,SNR=16						
KSRS	Korea Array	81.24	319	P	P	16 21 48.2	-1.0
	0.8nm,0.7s,baz=123,slow=5.6,SNR=3.5						
PETK	Petropavlovsk-	81.93	346	P	P	16 21 53.4	+0.9
	3.4nm,0.9s,baz=124,slow=8.3,SNR=3.5						
CMAR	Chiang Mai Arr	91.96	290	P	P	16 22 42.5	+0.8
	0.7nm,0.9s,baz=149,slow=3.3,SNR=6.5						
NB2	NORSAR Subarra	144.80	352	PKP	PKPbc	16 29 04.2	-3.0
	comp=Z,0.9nm,0.7s,baz=9.4,slow=3.6						
NOA	NORSAR Array B	144.80	352	PKP	PKPbc	16 29 04.4	-2.8
	comp=Z,1.8nm,0.8s,baz=9.9,slow=2.3,SNR=4.5						
AKASG	Malin Array Be	147.98	327	PKPbc	PKPdf	16 29 14.4	+1.3
	comp=Z,0.7nm,0.4s,baz=44,slow=4.6,SNR=7.6						
BRTR	Keskin Array B	150.41	305	PKPbc	PKPbc	16 29 21.6	-1.6
	comp=Z,0.4nm,0.6s,baz=91,slow=3.5,SNR=3.3						
BRTR				PKPab	PKPab	16 29 29.8	-0.8
	comp=Z,1.5nm,0.6s,baz=99,slow=3.9,SNR=10						
TORD	Torodi Ar. Bea	166.80	179	PKPab	PKPab	16 30 41.4	-0.3
	comp=Z,0.4nm,0.8s,baz=209,slow=2.6,SNR=2.8						

IDC 15 16:11:15.0±4.8**, 21°.67S×177°.52W, h0**^{km}**, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.8**/24**, mbtmp4.0**/3**, Error ellipse: s-maj=197.3km s-min=57.1km az=145.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.70	246	P	P	16 18 31.1	-1.3
	0.8nm,0.3s,baz=59,slow=12,SNR=3.0						
ASAR	Alice Springs	44.70	258	P	P	16 19 30.3	+0.2
	1.2nm,0.7s,baz=96,slow=7.7,SNR=8.5						
WRA	Warramunga Arr	44.89	263	P	P	16 19 32.0	+0.3
	0.7nm,0.3s,baz=95,slow=8.3,SNR=31						
BRTR	Keskin Array B	147.95	311	PKPbc	PKPbc	16 31 01.9	-0.7
	0.3nm,0.6s,baz=72,slow=2.1,SNR=3.5						

IDC 15 16:23:46.2±2.6**, 3°.51S×151°.81E, h0**^{km}**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/25**, mbtmp3.4**/3**, Error ellipse: s-maj=49.3km s-min=21.2km az=54.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	0.82	165	Pn	Pn	16 24 05.7	+0.6
	21nm,0.3s,baz=290,slow=18,SNR=64						
KRVT				Sn	Sn	16 24 18.3	+0.3
	106nm,0.3s,baz=252,slow=20,SNR=38						
WRA	Warramunga Arr	23.61	225	P	P	16 28 59.1	0.0
	0.9nm,0.7s,baz=51,slow=9.1,SNR=14						
ASAR	Alice Springs	26.48	219	P	P	16 29 23.9	-1.4
	0.1nm,0.6s,baz=53,slow=9.0,SNR=7.9						
FITZ	Fitzroy Crossi	29.44	239	P	P	16 29 53.1	+1.1
	0.4nm,0.4s,baz=23,slow=0.7,SNR=3.8						
TORD	Torodi Ar. Bea	148.95	290	PKPbc	PKPbc	16 43 36.4	-0.9
	0.3nm,0.4s,baz=90,slow=2.9,SNR=4.4						

IDC ***15*** *16:26:00.5±2.2, 7°.93N×82°.96W, h0^{km}, mb3.5/6, mb1 3.8/9, mb1mx3.7/31, mbtmp3.6/9, ML3.6/3, MS2.9/3, Ms1 2.9/3, ms1mx2.6/25, Error ellipse: s-maj=84.9km s-min=25.4km az=38.0*

UPA ***15*** *16:26:07.8±1.3, 8°.31N×82°.79W, h14^{km}±2^{km}, MW4.6*

UCR ***15*** *16:26:07.1±1.7, 8°.29N×82°.81W, h8^{km}±17^{km}*

ISC 15 16:26:05.6±1.0**, 8°.18N**±0°.05×**82°.90W**±0°.03**, h31**^{km}±6^{km}**, n65, σ1^{s}.86**/80**, mb3.4**/6**, 2C-15D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBAR3	San Bartolo, C	0.14	7	⇑*i*P	Pn	16 26 11.1	-0.6
SBAR3				*i* S	Sb	16 26 17.3	+1.8
BAGA3	Bagala, Chiriq	0.47	52	⇓*i*P	Pb	16 26 15.0	-0.6
BAGA3				*i* S	Sb	16 26 22.6	+0.2
DVD	David	0.51	60	⇑*i*P	Pb	16 26 15.5	-0.8
DVD				*i* S	Sb	16 26 22.3	-1.4
PEDE3	Pedregal, Chir	0.52	67	⇓*i*P	Pb	16 26 15.7	-0.7
PEDE3				*i* S	Sb	16 26 24.0	+0.2
LOCO3	Loma Colorada,	0.53	64	⇓*i*P	Pb	16 26 15.9	-0.7
PTJ1	Puerto Jimnez	0.53	312	*e*P	Pn	16 26 17.2	+0.1
LOMA3	Las Lomas, Chi	0.56	64	⇓*i*P	Pb	16 26 16.2	-0.9
CHIR3	Chiriqui UPA,	0.60	69	⇓*i*P	Pb	16 26 16.9	-0.9
BRU2	Volcan	0.65	19	⇓*i*P	Pb	16 26 17.8	-0.8
BRU2	Volcan	0.65	19	*e*P	Pb	16 26 17.8	-0.8
BRU2				*e*S	Sb	16 26 26.2	-1.2
PTAR3	Potrerillos Ar	0.65	38	⇓*i*P	Pb	16 26 17.8	-0.8
PTAR3				*i* S	Sb	16 26 25.1	-2.4
BCO2	Palmira	0.65	34	⇓*i*P	Pb	16 26 17.8	-0.9
BCO2				*i* S	Sb	16 26 26.1	-1.6
LNBQ3	Los Naranjos,	0.76	37	⇓*i*P	Pb	16 26 19.0	-1.5
LNBQ3				*i* S	Sb	16 26 29.2	-1.4
EDPN	Palmar Norte	0.95	325	*e*P	Pn	16 26 23.1	+0.3
EDPN				*e*S	Sn	16 26 37.0	+1.6
EDBA	Buenos Aires	1.04	339	*e*P	Pb	16 26 25.6	+0.3
EDBA				*e*S	Sn	16 26 39.6	+1.9
CHGR2	Aguacate	1.06	45	⇓*i*P	Pn	16 26 23.6	-0.8
CHGR2				*i* S	Sn	16 26 36.4	-1.7
NANC3	Nancito, Chiri	1.16	87	⇓*e*P	Pn	16 26 25.6	-0.1
EDLM	Las Mercedes	1.29	328	*e*P	Pb	16 26 29.0	-0.3
EDLM				*e*S	Sb	16 26 47.1	+1.5
CNI2	El Empalme, Bo	1.31	19	*i* P	Pn	16 26 28.1	+0.4
CNI2				*i* S	Sn	16 26 43.9	-0.2
EDDO	Dominical	1.43	318	*e*P	Pb	16 26 32.1	+0.4
RGM0	Gandoca	1.43	12	⇓*e*P	Pb	16 26 31.6	-0.1
RGM0	Gandoca	1.43	12	*e*P	Pb	16 26 31.8	+0.1
CNAZ3	Canazas, Verag	1.68	84	*e*P	Pn	16 26 33.7	+0.8
GMAL	Guarumal, Vera	1.70	104	*e*P	Pn	16 26 34.0	+0.8
GMAL				*e*S	Sn	16 26 55.0	+1.1
GMAL	Guarumal, Vera	1.70	104	*e*P	Pn	16 26 33.9	+0.7
SAFE3	Santa Fe, Vera	1.83	79	*e*P	Pn	16 26 36.6	+1.6
LCR2	La Lucha 2	1.90	325	*e*P	Pb	16 26 39.7	-0.1
SFRA3	San Francisco,	1.91	88	⇓*e*P	Pn	16 26 37.5	+1.5
STIA3	Santiago, Vera	1.91	92	⇓*e*P	Pn	16 26 37.7	+1.7
PONU3	Ponuga, Veragu	1.93	99	⇓*i*P	Pb	16 26 38.6	-1.5
CALO3	Calobre, Verag	2.04	86	*i* P	Pn	16 26 39.5	+1.7
OCU3	Ocu, Herrera	2.12	96	*e*P	Pn	16 26 40.8	+1.9
HDC	Heredia	2.17	327	*i* P	Pb	16 26 43.3	-1.0
HDC	Heredia	2.17	327	*e*P	Pb	16 26 43.8	-0.6
CACAO	El Cacao, Vera	2.18	112	*i* P	Pb	16 26 42.6	-1.9
CHIT3	Chitre	2.47	95	*e*P	Pn	16 26 42.1	-1.6
TOSI3	Tonosi	2.55	107	*e*P	Pb	16 26 48.5	-2.3
AZU	Azuero	2.63	98	*i* P	Pb	16 26 49.2	-2.9
AZU				*i* S	Sn	16 27 20.8	+4.0
AZU	Azuero	2.63	98	*e*P	Pb	16 26 49.2	-2.9
VTON	El Valle, Cocl	2.79	81	*e*P	Pb	16 26 52.0	-2.9
JTS	Las Juntas de	2.92	316	Pn	Pn	16 26 51.3	+1.4
	20nm,0.3s,baz=232,slow=3.6,SNR=36						
JTS				Pg	Pb	16 26 54.4	-2.6
	32nm,0.3s,baz=150,slow=20,SNR=39						
JTS				Sn	Sb	16 27 26.7	-5.5
	13nm,0.3s,baz=185,slow=8.7,SNR=6.1						
JTS				Lg	Lg	16 27 33.3	
	17nm,0.3s,baz=288,slow=17,SNR=11						
JTS				LR	LR	16 27 41.0	
	comp=Z,57nm,18.8s,baz=199,slow=33						
JTS	Las Juntas de	2.92	316	*e*P	Pb	16 26 54.2	-2.7
JTS	Las Juntas de	2.92	316	*e*P	Pb	16 26 54.3	-2.7
JTS				*e*S	Sb	16 27 27.3	-5.0
PEDA3	Pedasi	2.92	103	*e*P	Pb	16 26 55.9	-1.1
ZANG	Zanguenga, Cho	3.10	75	*e*P	Pb	16 26 56.6	-3.4
CHOR3	La Chorrera	3.18	77	*e*P	Pb	16 26 59.9	-1.6
BCIP	Isla Barro Col	3.18	72	*i* P	Pn	16 26 55.3	+1.8
BCIP	Isla Barro Col	3.18	72	*e*P	Pn	16 26 54.7	+1.2
PLVR	Palo Verde	3.24	312	*e*P	Pb	16 26 57.8	-4.8
CUI	Cuipilapa	3.33	318	*e*P	Pb	16 27 00.8	-3.2
UPA	Univ. de Panam	3.42	76	*i* P	Pb	16 27 03.4	-2.2
ACON	Acoyapa	4.38	329	*e*P	Pn	16 27 13.3	+3.3
APG	El Apazote	10.04	313	Pn	Pn	16 28 29.6	+1.5
	0.2nm,0.3s,baz=175,slow=11,SNR=1.5						
SDV	Santo Domingo	12.15	86	LR	LR	16 34 23.6	
	comp=Z,67nm,21.4s,baz=70,slow=41						
CMIG	Matias Romero	14.66	308	Pn	Pn	16 29 32.0	+1.0
	0.2nm,0.3s,baz=145,slow=12,SNR=2.9						
TKL	Tuckaleechee C	27.36	358	LR	LR	16 43 07.5	
	comp=Z,78nm,18.9s,baz=3.0,slow=37						
PDAR	Pinedale Array	41.66	330	P	P	16 33 52.0	+0.5
	0.2nm,0.6s,baz=130,slow=9.8,SNR=3.0						
ULM	Lac du Bonnet	43.31	348	P	P	16 34 04.8	+0.3
	0.9nm,0.5s,baz=181,slow=6.9,SNR=3.1						
NVAR	Mina Array Bea	43.84	319	P	P	16 34 10.7	+1.4
	0.4nm,0.6s,baz=126,slow=6.3,SNR=3.7						
YKA	Yellowknife Ar	58.92	343	P	P	16 36 02.3	+0.8
	0.1nm,0.4s,baz=139,slow=7.1,SNR=4.5						
ILAR	Eielson Array	71.71	336	P	P	16 37 26.6	+2.2
	0.3nm,0.7s,baz=139,slow=4.6,SNR=4.3						
TORD	Torodi Ar. Bea	82.95	78	P	P	16 38 29.7	+1.5
	0.4nm,0.8s,baz=290,slow=5.5,SNR=2.7						
ASAR	Alice Springs	141.55	242	PKP	PKPdf	16 45 31.6	-3.0
	0.3nm,0.6s,baz=122,slow=3.3,SNR=6.3						
WRA	Warramunga Arr	142.13	248	PKP	PKPdf	16 45 33.8	-1.9
	0.5nm,0.8s,baz=104,slow=3.0,SNR=3.5						
CMAR	Chiang Mai Arr	153.47	356	PKPbc	PKPbc	16 46 00.9	-1.0
	0.2nm,0.4s,baz=29,slow=2.1,SNR=2.6						

KRNET ***15*** *17:13:33.5±0.1, 41°.08N×70°.85E, h35^{km}, mb2.4*

ISU ***15*** *17:13:34.0, 40°.50N×71°.70E, h5^{km}*

SOME ***15*** *17:13:38.0, 40°.95N×71°.43E, h10^{km}*

NNC ***15*** *17:13:42.1±5.8, 41°.17N×71°.54E, h0^{km}, mb3.2, mpv2.6, Error ellipse: s-maj=50.9km s-min=19.2km az=1.0*

ISC 15 17:13:36.8±1.1**, 40°.82N**±0°.03×**71°.55E**±0°.03**, h18**^{km}±10^{km}**, n20, σ1^{s}.67**/34**, 20C, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NAM	Namangan	0.19	26	*e*P	Pb	17 13 41.7	-0.1
NAM				S	Sb	17 13 47.3	+2.1
BTK	Batken	0.94	217	⇑*i*P	Pb	17 13 53.1	-1.6
	baz=81						
BTK				⇑*i*S	Sb	17 14 07.1	+0.2
	baz=81						
BTK	Batken	0.94	217	*i* P	Pb	17 13 54.0	-0.7
BTK				*i* S	Sg	17 14 08.9	+1.4
ARK	Arkit	1.03	18	⇑*i*P	Pb	17 13 54.4	-1.8
	baz=50						
ARK				⇑*i*S	Sb	17 14 08.9	-0.5
	baz=50						
ARK	Arkit	1.03	18	*e*P	Pg	17 13 56.3	-0.4
ARK				*e*S	Sg	17 14 09.6	-0.7
ARSB	Arslanbob	1.20	64	⇑*i*P	Pg	17 14 01.0	+1.1
	baz=81						
ARSB				⇑*i*S	Sg	17 14 20.6	+5.0
	baz=81						
IUG	Iuzhnay	1.75	320	*e*P	Pn	17 14 07.0	+0.6
	0.8nm,0.2s						
IUG				*e*S	Sb	17 14 29.8	-0.4
	25nm,0.3s						
IUG	Iuzhnay	1.75	320	P	Pn	17 14 07.0	+0.6
	0.8nm,0.2s						
IUG				S	Sb	17 14 29.8	-0.4
	25nm,0.3s						
TAS	Tashkent	1.78	287	⇑*e*P	Pn	17 13 55.1	-12
	baz=82						
TAS				⇑*e*S	Sn	17 14 10.8	-18
	baz=82						
AML	Almayashu	2.08	50	⇑*i*P	Pn	17 14 10.7	-0.5
	baz=63						
AML				⇑*i*S	Sb	17 14 40.2	+0.3
	baz=63						
MRKS	Merke	2.30	33	*e*P	Pg	17 14 19.6	-1.2
	5.5nm,0.2s						
MRKS				*e*S	Sg	17 14 51.5	+0.8
	11nm,0.5s						
MRKS	Merke	2.30	33	Pg	Pg	17 14 19.6	-1.2
	5.5nm,0.2s						
MRKS				Lg	Lg	17 14 51.5	
	4.1nm,0.3s						
KK31	Karatay Array	2.41	342	⇑Pn	Pb	17 14 20.8	+1.1
	0.8nm,0.2s,baz=151,slow=16,SNR=22						
KK31				⇑Lg	Lg	17 14 48.5	
	3.1nm,0.3s,baz=150,slow=27,SNR=14						
EKS2	Erkin-Say	2.48	41	⇑*i*P	Pn	17 14 14.7	-1.8
	baz=53						
EKS2				⇑*i*S	Sn	17 14 47.2	+0.7
	baz=53						
BRLS	Borolday	2.55	331	*e*P	Pn	17 14 18.3	+1.0
	0.3nm,0.1s						
BRLS				*e*S	Sn	17 14 49.4	+1.4
	4.6nm,0.2s						
BRLS	Borolday	2.55	331	Pg	Pn	17 14 18.5	+1.2
	0.3nm,0.1s						
BRLS				Lg	Lg	17 14 49.5	
	4.6nm,0.2s						
UCH	Uchtor	2.63	57	⇑*i*P	Pn	17 14 19.3	+0.4
	baz=66						
UCH				⇑*i*S	Sb	17 14 54.4	-1.5
	baz=66						
AAK	Ala-Archa	2.86	50	⇑Pg	Pg	17 14 29.7	-1.8
	2.6nm,1.1s						
AAK				⇑Lg	Lg	17 15 03.0	
	2.7nm,0.7s						
KZA	Kyzart	3.05	64	⇑*e*P	Pn	17 14 26.0	+1.4
	baz=72						
KZA				⇑*i*S	Sb	17 15 06.2	-1.8
	baz=72						
DGS	Degeres	3.97	51	*e*P	Pb	17 14 48.2	+1.9
	0.7nm,0.5s						
DGS				*e*S	Sg	17 15 40.4	-3.8
	1.6nm,0.7s						

IDC 15 17:14:54.6±1.4**, 0°.10S×125°.70E, h0**^{km}**, mb3.2**/4**, mb1 3.3**/4**, mb1mx3.2**/35**, mbtmp3.2**/4**, Error ellipse: s-maj=140.2km s-min=23.5km az=67.0, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.46	157	P	P	17 19 43.9	-0.9
	0.2nm,0.3s,baz=336,slow=11,SNR=5.0						
ASAR	Alice Springs	24.75	162	P	P	17 20 18.8	+0.7
	0.3nm,0.8s,baz=343,slow=8.5,SNR=5.0						
SONM	Songino Array	50.61	343	P	P	17 23 56.1	+0.7
	0.4nm,0.8s,baz=160,slow=4.6,SNR=3.0						
MKAR	Makanchi Array	60.14	327	P	P	17 25 03.4	-0.7
	0.1nm,0.4s,baz=131,slow=8.0,SNR=5.2						

CNRM ***15*** *17:18:09.8±0.7, 36°.47N×7°.37W, h20^{km}, Error ellipse: s-maj=9.8km s-min=3.9km az=67.0*

IGIL ***15*** *17:18:13.9, 36°.52N×7°.60W, h32^{km}, ML1.8*

MDD ***15*** *17:18:13.6±0.9, 36°.54N×7°.53W, h32^{km}±23^{km}, mbLg2.5/12, Error ellipse: s-maj=10.4km s-min=5.0km az=16.0, PRXIMO*

INMG ***15*** *17:18:14.1±1.6, 36°.53N×7°.55W, h31^{km}±12^{km}, ML1.9, Error ellipse: s-maj=4.8km s-min=4.8km az=6.0*

ISC 15 17:18:09.6±1.3**, 36°.43N**±0°.04×**7°.50W**±0°.03**, h30**^{km}±13^{km}**, n58, σ1^{s}.54**/110**, 4D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBDV	Barranco-do-Ve	0.88	337	P	Pn	17 18 27.4	+1.4
PBDV				S	Sn	17 18 37.4	-0.4
	23nm,0.1s						
PBDV	Barranco-do-Ve	0.88	337	⇓*i*P	Pn	17 18 27.4	+1.4
PBDV				*e*S	Sn	17 18 37.4	-0.4
PBDV				A	A	17 18 38.6	
	23nm,0.1s						
PVAQ	Vaqueiros	0.99	350	P	Pn	17 18 28.9	+1.5
PVAQ				S	Sb	17 18 39.7	-1.1
	28nm,0.2s						
PVAQ	Vaqueiros	0.99	350	P	Pn	17 18 28.7	+1.3
PVAQ				S	Sn	17 18 40.1	-0.3
PVAQ	Vaqueiros	0.99	350	⇓*i*P	Pn	17 18 28.9	+1.5
PVAQ				*e*S	Sb	17 18 39.7	-1.1
PVAQ				A	A	17 18 41.0	
	28nm,0.2s						
EGRO	El Granado	1.10	1	⇓P	Pb	17 18 30.7	+0.6
	2.2nm,0.0s,SNR=18						
EGRO				S	Sn	17 18 43.2	0.0
	24nm,0.1s,SNR=14						
MORF	Marmelete	1.27	314	*e*P	Pn	17 18 32.5	+1.1
MORF				*e*S	Sn	17 18 46.2	-1.2
MORF				AML	AML	17 18 48.1	
	comp=N,17nm,0.1s						
MORF	Marmelete	1.27	314	P	Pn	17 18 32.5	+1.1
MORF				S	Sn	17 18 46.2	-1.2
	comp=N,17nm,0.1s						
MORF	Marmelete	1.27	314	*e*P	Pn	17 18 32.7	+1.3
MORF				*e*S	Sn	17 18 47.4	0.0
MORF				A	A	17 18 53.1	
	comp=N,14nm,0.1s						
PFVI	Vila Bisbo	1.27	304	P	Pn	17 18 33.0	+1.6
	comp=N,1.5nm,0.1s,SNR=10						
PFVI				S	Sn	17 18 47.5	+0.1
	comp=N,10.0nm,0.1s,SNR=8.1						
PFVI	Vila Bisbo	1.27	304	*e*P	Pn	17 18 32.9	+1.6
PFVI				*e*S	Sn	17 18 47.1	-0.3
PFVI				A	A	17 18 52.1	
	comp=N,5.1nm,0.1s						
PCVE	Castro Verde	1.27	341	P	Pb	17 18 33.1	+0.1
PCVE				S	Sn	17 18 47.4	-0.1
	comp=N,14nm,0.3s						
PCVE	Castro Verde	1.27	341	*e*P	Pb	17 18 33.1	+0.1
PCVE				*e*S	Sn	17 18 47.4	-0.1
PCVE				A	A	17 18 47.7	
	comp=N,14nm,0.3s						
ESPR	Espera	1.40	71	P	Pb	17 18 36.1	+1.0
	comp=N,3.5nm,0.1s,SNR=7.6						
ESPR				S	Sn	17 18 52.5	+2.0
	comp=N,14nm,0.2s,SNR=7.9						
PTEO	Sao Teotonio	1.48	319	P	Pb	17 18 36.0	-0.5
PTEO				S	Sn	17 18 52.3	-0.3
	comp=N,3.6nm,0.5s						
PTEO	Sao Teotonio	1.48	319	*e*P	Pb	17 18 36.0	-0.5
PTEO				S	Sn	17 18 52.3	-0.3
PTEO				A	A	17 18 54.6	
	comp=N,7.1nm,0.5s						
EMIN	Mina Concepcio	1.49	26	P	Pn	17 18 36.1	+1.7
	comp=N,0.2nm,0.0s,SNR=22						
EMIN				S	Sn	17 18 52.4	-0.5
	comp=N,4.0nm,0.1s,SNR=11						
MESJ	Messejana	1.52	338	*e*P	Pn	17 18 36.2	+1.4
MESJ				*e*S	Sn	17 18 52.3	-1.2
MESJ				AML	AML	17 18 54.6	
	comp=N,10nm,0.1s						
MESJ	Messejana	1.52	338	P	Pn	17 18 36.2	+1.4
MESJ				S	Sn	17 18 52.3	-1.2
	comp=N,10nm,0.1s						
MESJ	Messejana	1.52	338	⇓*e*P	Pb	17 18 36.4	-0.8
MESJ				*e*S	Sn	17 18 53.4	-0.1
MESJ				A	A	17 18 53.9	
	comp=N,11nm,0.2s						

PBEJ	Beja	1.62	350	P	Pn	17 18 37.7	+1.6
PBEJ				S	Sn	17 18 55.3	-0.7
	comp=N,2.0nm,0.3s						
PBEJ	Beja	1.62	350	eP	Pn	17 18 37.7	+1.6
PBEJ				S	Sn	17 18 55.3	-0.7
PBEJ				A	A	17 19 01.8	
	comp=N,4.1nm,0.3s						
PBAR	Barrancos	1.78	12	Pn	Pn	17 18 40.2	+1.8
PBAR				Sn	Sn	17 19 00.8	+0.8
PBAR	Barrancos	1.78	12	ePn	Pn	17 18 40.2	+1.8
PBAR				eSn	Sn	17 19 00.8	+0.8
PNCL	Nicolau / Gran	1.87	334	Pn	Pn	17 18 41.1	+1.6
PNCL				Sn	Sn	17 19 00.6	-1.5
	comp=N,6.5nm,0.6s						
PNCL	Nicolau / Gran	1.87	334	ePn	Pn	17 18 41.1	+1.6
PNCL				eSn	Sn	17 19 00.6	-1.5
PNCL				A	A	17 19 11.8	
	comp=N,6.5nm,0.6s						
HORN	Hornachuelos	2.29	51	P	Pn	17 18 44.0	-1.3
HORN				S	Sn	17 19 12.4	0.0
ECAB	El Cabril	2.34	45	P	Pn	17 18 48.1	+2.1
	comp=N,0.2nm,0.1s,SNR=10						
ECAB				S	Sn	17 19 12.8	-1.0
	comp=N,1.1nm,0.1s,SNR=11						
EBAD	Badajoz	2.35	9	P	Pn	17 18 47.7	+1.4
	comp=N,0.9nm,0.1s,SNR=14						
EBAD				S	Sn	17 19 13.0	-1.1
	comp=N,1.6nm,0.0s,SNR=7.9						
PESTR	Estremoz	2.44	358	ePn	Pn	17 18 48.8	+1.4
PESTR				eSn	Sn	17 19 14.6	-1.5
PMTG	Montargil	2.70	348	Pn	Pn	17 18 50.8	-0.1
PMTG				Sn	Sn	17 19 20.4	-2.1
	comp=N,3.7nm,0.2s						
PMTG	Montargil	2.70	348	ePn	Pn	17 18 50.8	-0.1
PMTG				eSn	Sn	17 19 20.4	-2.1
PMTG				A	A	17 19 21.3	
	comp=N,3.7nm,0.2s						
PMAFR	Mafra	2.89	331	P	Pn	17 18 56.1	+2.5
	comp=N,1.8nm,0.1s,SNR=7.9						
PMAFR				S	Sn	17 19 27.0	-0.3
	comp=N,10nm,0.2s,SNR=5.8						
PMAFR	Mafra	2.89	331	ePn	Pn	17 18 56.1	+2.5
PMAFR				eSn	Sn	17 19 26.6	-0.7
PMAFR				A	A	17 19 28.2	
	comp=N,9.6nm,0.2s						
EADA	Adamuz	2.91	52	P	Pn	17 18 56.5	+2.7
	comp=N,0.9nm,0.1s,SNR=7.9						
EADA				S	Sn	17 19 26.9	-0.9
	comp=N,1.7nm,0.1s,SNR=7.9						
PMRV	Marv??o	3.00	2	Pn	Pn	17 18 56.6	+1.5
PMRV				Sn	Sn	17 19 29.1	-0.9
	comp=N,1.2nm,0.1s						
PMRV	Marv??o	3.00	2	ePn	Pn	17 18 56.6	+1.5
PMRV				eSn	Sn	17 19 29.1	-0.9
PMRV				A	A	17 19 32.1	
	comp=N,1.2nm,0.1s						
PSBE	So Bento	3.24	342	ePn	Pn	17 19 00.1	+1.6
PSBE				eSn	Sn	17 19 36.0	-0.1
PTOM	Tomar	3.26	348	Pn	Pn	17 19 00.8	+2.1
PTOM	Tomar	3.26	348	ePn	Pn	17 19 00.8	+2.1
PTOM				A	A	17 19 36.8	
	comp=N,5.0nm,0.4s						
PCBR	Castelo Branco	3.41	0	Pn	Pn	17 19 02.3	+1.6
PCBR				Sn	Sn	17 19 38.9	-1.1
	comp=N,1.4nm,0.4s						
PCBR	Castelo Branco	3.41	0	ePn	Pn	17 19 02.3	+1.6
PCBR				eSn	Sn	17 19 38.9	-1.1
PCBR				A	A	17 19 40.2	
	comp=N,2.7nm,0.4s						
AKLM	AKL	3.54	122	P	Pn	17 19 01.3	-1.2
AKLM				S	Sn	17 19 40.9	-2.5
PCAS	Casmilo, Conde	3.70	348	Pn	Pn	17 19 07.2	+2.4
PCAS				Sn	Sn	17 19 46.8	-0.6
	comp=N,2.6nm,0.6s						
PCAS	Casmilo, Conde	3.70	348	ePn	Pn	17 19 07.2	+2.4
PCAS				eSn	Sn	17 19 46.8	-0.6
PCAS				A	A	17 19 48.8	
	comp=N,2.6nm,0.6s						
PAB	San Pablo	3.99	38	P	Pn	17 19 11.2	+2.4
	comp=N,0.4nm,0.1s,SNR=7.9						
PAB				S	Sn	17 19 51.0	-3.5
	comp=N,0.7nm,0.1s,SNR=7.9						
MD31	MD31	4.21	147	P	Pn	17 19 14.5	+2.6
MD31				S	Sn	17 20 01.2	+1.1
ESDC	Sonseca Array	4.28	40	P	Pn	17 19 15.0	+2.2
	SNR=7.9						
ESDC				S	Sn	17 19 58.4	-3.2
	SNR=7.9						
PVIS	Viseu	4.29	356	Sn	Sn	17 20 00.4	-1.6
PVIS	Viseu	4.29	356	eSn	Sn	17 20 00.4	-1.6
SESP	Santiago Espad	4.30	65	S	Sn	17 20 02.8	+0.5
	comp=N,2.4nm,0.1s,SNR=7.9						
MDT	Midelt	4.33	146	P	Pn	17 19 14.5	+1.1
MDT				S	Sn	17 20 03.3	+0.4
JBK	JBK	4.54	116	P	Pn	17 19 17.2	+0.7
JBK				S	Sn	17 20 06.6	-1.8
MVO	Moncorvo	4.74	4	P	Pn	17 19 20.5	+1.3
	comp=N,1.1nm,0.1s,SNR=7.5						
MVO				S	Sn	17 20 09.8	-3.3
	comp=N,1.4nm,0.1s,SNR=7.9						
MVO	Moncorvo	4.74	4	ePn	Pn	17 19 20.4	+1.3
MVO				eSn	Sn	17 20 11.1	-2.0
MVO				A	A	17 20 13.4	
	comp=N,2.3nm,1.2s						
ETOB	Tobarra	5.22	63	P	Pn	17 19 27.7	+1.9
	comp=N,0.3nm,0.1s,SNR=7.9						
ETOB				S	Sn	17 20 22.6	-2.4
	comp=N,1.6nm,0.1s,SNR=7.9						
ELOB	Lobios	5.45	356	P	Pn	17 19 30.2	+1.4
	comp=N,0.5nm,0.1s,SNR=7.9						
ELOB				S	Sn	17 20 27.1	-3.4
	comp=N,1.6nm,0.1s,SNR=7.9						
ECAL	Calabor	5.54	6	P	Pn	17 19 31.5	+1.4
	comp=N,0.5nm,0.1s,SNR=4.0						

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*IDC **15** 17:30:10.7±1.4,4°.02S×102°.25E,h0km,mb3.9/8,mb1 4.0/8,mb1mx3.8/43,mbtmp3.9/8,Error ellipse: s-maj=56.4km s-min=17.8km az=55.0*

*DJA **15** 17:30:22.1±0.5,4°S±5°×10°2E±°,h80km±11km,M4.1/11,mb4.2/4,MLv4.1/11*

ISC 15 17:30:20.0±0.7,4°.03S±0°.09×102°.38E±0°.08,h65km,n29,σ2ˢ28/34,mb4.0/8,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	0.66	120	P	Pn	17 30 37.5	+3.4
MNAI				S	Sn	17 30 45.0	+0.5
MDSI	Maura Dua	1.85	104	P	Pn	17 30 52.2	+2.7
MDSI				S	Sn	17 31 15.2	+3.3
LWLI	Liwa	1.94	120	P	Pn	17 30 54.4	+3.6
LWLI				S	Sn	17 31 17.9	+3.6
KRJI	Kerinci	2.13	334	P	Pn	17 30 57.4	+3.9
KRJI				S	Sn	17 31 23.2	+4.2
KASI	Kota Agung	2.58	125	P	Pn	17 31 02.2	+2.8
PMBI	Palembang	2.63	65	P	Pn	17 31 02.1	+2.0
PPSI	Pulau Pagai	2.68	298	P	Pn	17 31 04.3	+3.5
SDSI	Sungai Dareh	3.22	343	P	Pn	17 31 11.6	+3.4
PDSI	Padang	3.64	328	P	Pn	17 31 16.7	+2.7
SISI	Saibi	4.25	309	P	Pn	17 31 24.7	+2.5
PBSI	Pulau Batu	5.69	314	P	Pn	17 31 43.8	+1.8
	0.3nm41nm,0.8s						
CISI	Cisompet, Garu	6.44	123	P	Pn	17 31 53.0	+0.7
	0.1nm18nm,0.4s						
JAGI	Jajag, Banyuwa	12.50	111	P	Pn	17 33 13.2	-2.0
PLAI	Plampang	16.02	108	P	Pn	17 34 01.2	-0.2
CMAR	Chiang Mai Arr	22.60	351	P	P	17 35 12.8	-2.7
	1.4nm,0.7s,baz=181,slow=9.2,SNR=12						
ODAN	Odare	33.96	336	eP	P	17 36 57.1	-0.5
	3.6nm,0.6s						
TAPN	Taplejung	34.26	336	eP	P	17 36 59.8	-0.5
	8.6nm,0.9s						
WRA	Warramunga Arr	34.92	120	P	P	17 37 05.5	-0.4
	0.7nm,0.3s,baz=312,slow=9.3,SNR=16						
GUN	Gumba	35.52	334	eP	P	17 37 10.9	-0.3
KKN	Kakani	35.67	333	eP	P	17 37 11.8	-0.6
ASAR	Alice Springs	36.14	126	P	P	17 37 16.2	-0.1
	0.6nm,0.4s,baz=300,slow=7.6,SNR=22						
ASAR				PcP	PcP	17 39 40.9	-0.1
	0.2nm,0.8s,baz=297,slow=2.7,SNR=2.7						
GKN	Gorkha	36.15	333	eP	P	17 37 16.0	-0.4
	7.9nm,0.3s						
DANN	Dangsing	36.85	332	eP	P	17 37 22.2	-0.3
SONM	Songino Array	51.77	3	P	P	17 39 20.9	-0.2
	1.7nm,0.7s,baz=184,slow=9.1,SNR=13						
MKAR	Makanchi Array	53.63	343	P	P	17 39 33.5	-1.3
	2.2nm,0.6s,baz=147,slow=8.4,SNR=34						
USRK	Ussuriysk Ar.	54.88	26	P	P	17 39 42.7	-1.2
	0.8nm,0.7s,baz=222,slow=9.7,SNR=3.6						
ZALV	Zalesovo Beam	59.61	348	P	P	17 40 15.6	-1.4
	1.2nm,0.3s,baz=168,slow=5.9,SNR=11						
BRTR	Keskin Array B	76.44	312	P	P	17 42 02.3	-0.7
	0.4nm,0.7s,baz=141,slow=6.3,SNR=3.6						
TXAR	Lajitas Array	144.75	42	PKP	PKPab	17 49 49.0	-0.2
	0.6nm,0.5s,baz=294,slow=1.0,SNR=4.9						

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*NEIC **15** 17:34:27.2±2.6,24°.16S±0°.06×66°.64W±0°.10,h187km±5km,mb4.0/2,Error ellipse: s-maj=13.1km s-min=9.3km az=96.0*

*SJA **15** 17:34:28.5±0.7,24°.07S×66°.80W,h205km±5km,ML3.1,MW3.2*

*IDC **15** 17:34:28.6±1.2,24°.03S×66°.68W,h186km±12km,mb3.5/5,mb1 3.6/11,mb1mx3.4/37,mbtmp3.9/11,MS2.6/2,Ms1 2.6/2,ms1mx2.3/16,Error ellipse: s-maj=17.3km s-min=14.4km az=99.0*

*GUC **15** 17:34:30.3±0.4,23°.98S×67°.22W,h246km±8km,ML4.1*

ISC 15 17:34:28.6±0.7,24°.09S±0°.04×66°.84W±0°.04,h200km±6km,n64,σ1ˢ37/91,mb3.7/6,13C-1D,Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.37	118	iP	Pn	17 35 02.8	+1.4
SLA				IAML		17 35 03.2	
	comp=Z,321nm,0.6s						
SLA				eS	S	17 35 26.6	+0.1
YJA	Yavi	2.26	33	iP	Pn	17 35 11.3	+0.9
YJA				IAML		17 35 13.4	
	comp=Z,9.6nm,0.4s						
YJA				eS	S	17 35 42.6	+0.4
LVC	Limon Verde	2.40	307	P	Pn	17 35 13.1	+1.2
	comp=Z,38nm,0.3s,baz=129,slow=7.2,SNR=110						
LVC				S	S	17 35 45.9	+1.1
	comp=Z,24nm,0.3s,baz=270,slow=21,SNR=28						
LVC				LR	LR	17 36 14.9	
	comp=Z,58nm,20.0s,baz=192,slow=43						
LVC	Limon Verde	2.40	307	iP	Pn	17 35 13.1	+1.2
LVC				iS	S	17 35 46.2	+1.4
LVC	Limon Verde	2.40	307		Pn	17 35 12.9	+1.1
LVC					S	17 35 46.0	+1.2
LVC	Limon Verde	2.40	307	iP	Pn	17 35 12.9	+1.1
LVC				IAML		17 35 14.3	
	comp=Z,97nm,0.2s						
LVC				eS	S	17 35 45.6	+0.8
PB15	IPOC Station P	2.56	289	⇑iP	Pn	17 35 14.7	+1.2
PB15				iS	S	17 35 48.3	+0.6
PB15	IPOC Station P	2.56	289	iP	Pn	17 35 14.8	+1.2
PB15				eS	S	17 35 48.7	+1.0
GO02	Mina Guanaco	2.72	246	⇑iP	Pn	17 35 16.4	+1.0
GO02				iS	S	17 35 52.2	+1.1
GO02				IAML		17 35 53.3	
	comp=N,541nm,0.4s						
GO02	Mina Guanaco	2.72	246		Pn	17 35 16.3	+0.9
PB06	IPOC Station P	2.86	298	⇑iP	Pn	17 35 17.8	+1.0
PB06				iS	S	17 35 53.9	+0.2
PB06				IAML		17 35 57.8	
	comp=N,274nm,0.3s						
AHML	Horco Molle	3.01	153	iP	Pn	17 35 19.0	+0.6
AHML				eS	S	17 35 56.4	-0.5
AHML				IAML		17 36 00.9	
	comp=Z,14nm,0.5s						
PB09	IPOC Station P	3.18	315	⇑iP	Pn	17 35 21.8	+1.3
PB09				iS	S	17 36 00.3	-0.2
PB09				IAML		17 36 03.0	
	comp=E,137nm,0.4s						
PB09	IPOC Station P	3.18	315	iP	Pn	17 35 21.8	+1.3
PB14	IPOC Station P	3.29	260	iP	Pn	17 35 23.0	+1.0
PB05	IPOC Station P	3.32	291	eP	Pn	17 35 22.6	+0.4
PB05				iS	S	17 36 02.0	-1.5
PB05	IPOC Station P	3.32	291	iP	Pn	17 35 22.9	+0.7
PB03	IPOC Station P	3.36	306	⇑iP	Pn	17 35 23.2	+0.5
PB03				iS	S	17 36 03.2	-1.3
PB03				IAML		17 36 05.5	
	comp=E,189nm,0.3s						
PB10	IPOC Station P	3.45	279	⇑iP	Pn	17 35 24.4	+0.7
PB10				iS	S	17 36 04.3	-1.8
PB10	IPOC Station P	3.45	279		Pn	17 35 24.2	+0.6
PB10	IPOC Station P	3.45	279	iP	Pn	17 35 24.5	+0.9
PB04	IPOC Station P	3.51	299	⇑iP	Pn	17 35 24.9	+0.3
PB04				iS	S	17 36 06.3	-1.3
PB04	IPOC Station P	3.51	299		Pn	17 35 24.8	+0.3
PB04	IPOC Station P	3.51	299	iP	Pn	17 35 25.5	+0.9
PB07	IPOC Station P	3.66	309	⇑iP	Pn	17 35 26.7	+0.3
PB07				iS	S	17 36 09.5	-1.6
PB01	IPOC Station P	3.89	321	⇑iP	Pn	17 35 29.2	0.0
PB01				iS	S	17 36 14.2	-1.9
PB01	IPOC Station P	3.89	321		Pn	17 35 29.3	0.0
PB02	IPOC Station P	3.94	314	⇑iP	Pn	17 35 29.7	-0.1
PB02				iS	S	17 36 14.9	-2.3
CYA	Choya	4.44	168	iP	Pn	17 35 36.8	+0.9
PATCX	Punta Patache	4.47	316	⇑iP	Pn	17 35 35.5	-0.8
PATCX				iS	S	17 36 26.2	-2.8
PB08	IPOC Station P	4.47	331	⇑iP	Pn	17 35 37.4	+0.7
PB08				iS	S	17 36 28.9	-0.8
GO03	Copiap	4.64	220	Pn	Pn	17 35 38.0	-0.5
GO03					S	17 36 31.2	-1.9
VCA	Vinchina	4.79	195	iP	Pn	17 35 41.8	+1.4
VCA				IAML		17 36 47.7	
	comp=Z,8.6nm,0.3s						
GO01	Chusmiza	4.91	333		Pn	17 35 42.6	+0.2
PB11	IPOC Station P	5.03	328	⇑iP	Pn	17 35 42.6	-1.0
PB11				iS	S	17 36 38.9	-3.4
PB11	IPOC Station P	5.03	328		Pn	17 35 42.6	-1.0
ACLC	CERRO LA CRUZ	5.32	181	iP	Pn	17 35 47.9	+0.6
MNMC	Minye Minye	5.56	332	⇓iP	Pn	17 35 50.1	-0.4
MNMC				iS	S	17 36 52.1	-2.6
MNMC	Minye Minye	5.56	332		Pn	17 35 50.0	-0.5
APLL	PUNTA DE LOS L	6.29	178	iP	Pn	17 35 59.5	-0.2
APLL				IAML		17 36 00.2	
	comp=Z,23nm,0.4s						
AROD	Rodeo	6.50	201	iP	Pn	17 36 04.1	+1.5
ACCO	Cerro Coronel	6.77	196	iP	Pn	17 36 07.4	+1.3
AMOG	MOGNA	6.98	192	iP	Pn	17 36 07.1	-1.5
GO04	Tololo Observa	7.01	209	Pn	Pn	17 36 07.7	-1.5
RTLL	Cerro Villicun	7.36	191	iP	Pn	17 36 12.8	-0.7
CFA	Coronel Fontan	7.59	189	P	Pn	17 36 15.7	-0.8
	comp=Z,1.5nm,0.3s,baz=30,slow=14,SNR=44						
CFA				S	S	17 37 36.9	-5.4
	comp=Z,3.0nm,0.3s,baz=159,slow=19,SNR=12						
LPAZ	La Paz	7.85	351	P	Pn	17 36 20.4	-0.1
	comp=Z,1.5nm,0.3s,baz=171,slow=8.8,SNR=18						
LPAZ				S	S	17 37 48.4	-1.1
	comp=Z,0.2nm,0.3s,baz=316,slow=22,SNR=2.6						
LPAZ	La Paz	7.85	351		Pn	17 36 20.1	-0.5
ACAN	Cantantal	8.16	182	iP	Pn	17 36 23.2	-0.8
SIV	San Ignacio	9.70	35	P	Pn	17 36 42.7	-1.4
	comp=Z,0.5nm,0.3s,baz=218,slow=13,SNR=5.1						
SIV				S	S	17 38 29.1	-3.8
	comp=Z,0.1nm,0.3s,baz=147,slow=23,SNR=2.9						
SIV				LR	LR	17 40 57.8	
	comp=Z,80nm,18.2s,baz=282,slow=41						
PLCA	Paso Flores	16.89	190	P	Pn	17 38 15.2	+1.7
	comp=Z,0.1nm,0.3s,baz=8.1,slow=11,SNR=3.5						
PLCA	Paso Flores	16.89	190	P	Pn	17 38 13.9	+0.4
PLCA				IAmb	IAmb	17 38 17.3	
	comp=Z,5.1nm,1.2s						
BDFB	Brasilia	19.58	68	P	P	17 38 41.8	+0.1
	comp=Z,0.8nm,0.3s,baz=241,slow=12,SNR=9.3						
BDFB	Brasilia	19.58	68	P	P	17 38 41.8	+0.1
BDFB				IAmb	IAmb	17 38 43.2	
	comp=Z,6.7nm,0.7s						
SNAA	Sanae	59.22	161	P	P	17 44 10.0	+1.7
	comp=Z,1.0nm,0.6s,baz=297,slow=11,SNR=2.6						
TORD	Torodi Ar. Bea	76.46	69	P	P	17 45 56.9	+0.2
	comp=Z,0.7nm,0.5s,baz=258,slow=6.0,SNR=9.3						
PDAR	Pinedale Array	77.30	329	P	P	17 46 02.4	+1.4
	comp=Z,0.2nm,0.4s,baz=133,slow=6.3,SNR=1.7						
ULM	Lac du Bonnet	78.35	341	P	P	17 46 07.5	+1.1
	comp=Z,1.1nm,0.5s,baz=155,slow=8.7,SNR=3.1						
MATP	Matopo	86.50	111	P	P	17 46 47.8	-1.7
	comp=Z,0.9nm,0.6s,baz=246,slow=10.0,SNR=3.1						
YKA	Yellowknife Ar	94.25	340	P	P	17 47 25.9	+1.6
	comp=Z,0.2nm,0.4s,baz=135,slow=4.6,SNR=7.6						
WRA	Warramunga Arr	131.62	207	PKP	PKiKP	17 53 20.5	+1.3
	comp=Z,0.5nm,0.9s,baz=148,slow=1.9,SNR=3.5						
ZALV	Zalesovo Beam	143.40	28	PKP	PKPdf	17 53 38.6	-0.1
	comp=Z,0.3nm,0.3s,baz=316,slow=4.0,SNR=2.8						
MKAR	Makanchi Array	146.50	40	PKPbc	PKiKP	17 53 47.7	-1.1
	comp=Z,0.3nm,0.6s,baz=301,slow=3.8,SNR=8.0						
MKAR	Makanchi Array	146.50	40		PKPab	17 53 47.4	-0.1

KEA 15 17:41:04.8±0.0,37°.61N×124°.55E,h0km,ML3.0/2,South Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HJU	Haeju	1.03	65	Pg	Pg	17 41 23.6	-0.9
HJU				Sg	Sg	17 41 36.4	-1.4
SRW	Sariwon	1.30	46	Sg	Sg	17 41 46.1	-0.5
PYAG	Pyongyang	1.73	33	Pg	Pn	17 41 36.4	+0.3
PYAG				Sg	Sn	17 41 57.6	-1.2
PYS	Pyongsong	1.93	32	Pg	Pb	17 41 40.7	-0.2
PYS				Sg	Sn	17 42 04.4	+0.4
SUJ	Sinuiju	2.49	359	Pg	Pb	17 41 51.2	+0.8
SUJ				Sg	Sb	17 42 21.3	-0.3
HHU	Hamhung	3.29	44	Sg	Sb	17 42 45.2	+0.7
KGE	Kanggye	3.70	25	Sg	Sg	17 43 00.0	-3.6

IDC 15 17:45:02.2±6.1,28°.93S×177°.88W,h0km,mb3.5/2,mb1 3.8/2,mb1mx3.5/22,mbtmp3.5/2,Error ellipse: s-maj=316.6km s-min=88.2km az=164.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.31	265	P	P	17 53 05.9	-0.3
	0.4nm,0.7s,baz=103,slow=7.8,SNR=9.1						
WRA	Warramunga Arr	44.17	271	P	P	17 53 13.0	0.0
	0.4nm,0.4s,baz=109,slow=8.1,SNR=11						
FINES	FINESS Array B	143.80	341	PKP	PKPdf	18 04 38.1	-0.6
	1.6nm,0.7s,baz=54,slow=3.6,SNR=4.3						

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*SJA **15** 18:28:35.5±0.6,24°.13S×66°.94W,h233km±12km,ML3.4,MW3.4*

*IDC **15** 18:28:37.2±1.2,24°.15S×66°.90W,h185km±24km,mb3.3/2,mb1 3.3/8,mb1mx3.1/39,mbtmp3.7/8,Error ellipse: s-maj=32.4km s-min=12.5km az=91.0*

*GUC **15** 18:28:39.8±0.5,24°.12S×67°.31W,h218km±9km,ML3.8*

ISC 15 18:28:37.4±0.9,24°.12S±0°.05×67°.04W±0°.09,h206km±12km,n29,σ1ˢ58/49,10C-2D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.29	311	P	Pn	18 29 20.8	+1.0
	8.7nm,0.3s,baz=102,slow=9.5,SNR=26						
LVC				S	S	18 29 52.5	+0.3
	25nm,0.3s,baz=298,slow=18,SNR=20						
LVC	Limon Verde	2.29	311	eP	Pn	18 29 20.6	+0.8
LVC				iS	S	18 29 52.3	+0.1
LVC	Limon Verde	2.29	311	iP	Pn	18 29 20.9	+1.2
LVC				iS	S	18 29 54.2	+2.0
LVC				IAML		18 29 56.0	
	comp=Z,50nm,1.0s						
YJA	Yavi	2.39	36	iP	Pn	18 29 21.5	+0.5
PB15	IPOC Station P	2.41	292	⇑iP	Pn	18 29 22.0	+1.1
PB15				eS	S	18 29 53.4	-0.9
PB15	IPOC Station P	2.41	292	iP	Pn	18 29 21.8	+0.9
PB15				iS	S	18 29 57.0	+2.7
GO02	Mina Guanaco	2.54	245	⇑iP	Pn	18 29 23.4	+0.9
GO02				iS	S	18 29 56.9	-0.2
GO02				IAML		18 29 58.1	
	comp=N,216nm,0.5s						
PB06	IPOC Station P	2.72	301	⇑iP	Pn	18 29 25.4	+1.0
PB06				eS	S	18 29 59.9	-0.6
PB06				IAML		18 30 01.9	
	comp=E,184nm,0.3s						
PB06	IPOC Station P	2.72	301	iP	Pn	18 29 25.4	+1.0
PB06				⇓iS	S	18 30 02.2	+1.8
PB06				IAML		18 30 03.6	
	comp=Z,127nm,0.3s						
PB09	IPOC Station P	3.08	318	eP	Pn	18 29 30.1	+1.6
PB09				eS	S	18 30 08.2	+0.2
PB09				IAML		18 30 14.5	
	comp=N,120nm,0.1s						
PB09	IPOC Station P	3.08	318	iP	Pn	18 29 29.4	+0.9
PB09				IAML		18 30 14.1	
	comp=Z,94nm,0.4s						
PB05	IPOC Station P	3.17	293	⇑iP	Pn	18 29 30.2	+0.8
PB05				iS	S	18 30 07.9	-1.8
PB05				IAML		18 30 14.3	
	comp=N,59nm,0.4s						
PB05	IPOC Station P	3.17	293	iP	Pn	18 29 30.2	+0.8
PB05				IAML		18 30 14.0	
	comp=Z,37nm,0.5s						
PB03	IPOC Station P	3.24	309	⇓eP	Pn	18 29 31.4	+0.9
PB03				eS	S	18 30 10.1	-1.3
PB03				IAML		18 30 12.5	
	comp=E,139nm,0.2s						
PB10	IPOC Station P	3.28	280	⇑iP	Pn	18 29 31.5	+0.9
PB10				iS	S	18 30 09.9	-1.9
PB04	IPOC Station P	3.37	301	⇑iP	Pn	18 29 32.8	+0.9
PB04				eS	S	18 30 12.2	-1.9
PB04				IAML		18 30 19.5	
	comp=N,135nm,0.6s						
PB04	IPOC Station P	3.37	301	iP	Pn	18 29 32.9	+0.9
PB07	IPOC Station P	3.55	312	⇑iP	Pn	18 29 34.6	+0.5
PB07				eS	S	18 30 16.4	-1.6
PB01	IPOC Station P	3.81	323	⇑iP	Pn	18 29 37.4	+0.1
PB01				iS	S	18 30 21.7	-1.9
PB02	IPOC Station P	3.84	316	⇑iP	Pn	18 29 37.7	+0.1
PB02				iS	S	18 30 21.9	-2.4
PATCX	Punta Patache	4.37	318	eP	Pn	18 29 44.2	0.0
PATCX				iS	S	18 30 31.9	-4.3
PB08	IPOC Station P	4.42	333	⇑iP	Pn	18 29 46.1	+1.0
PB08				iS	S	18 30 37.3	-0.5
CFA	Coronel Fontan	7.53	188	P	Pn	18 30 25.2	+0.7
	comp=N,0.6nm,0.3s,baz=26,slow=16,SNR=12						
CFA				S	S	18 31 45.3	-4.5
	comp=N,2.5nm,0.3s,baz=125,slow=23,SNR=14						
LPAZ	La Paz	7.86	352	P	Pn	18 30 30.8	+1.2
	comp=N,0.7nm,0.3s,baz=163,slow=10,SNR=14						
LPAZ				S	S	18 31 57.2	-1.5
	comp=N,0.1nm,0.3s,baz=311,slow=18,SNR=3.7						
SIV	San Ignacio	9.84	36	P	Pn	18 30 53.4	-1.2
	comp=N,0.9nm,0.3s,baz=242,slow=14,SNR=11						
PLCA	Paso Flores	16.82	189	P	Pn	18 32 21.8	+0.5
	comp=N,0.1nm,0.3s,baz=37,slow=15,SNR=2.3						
BDFB	Brasilia	19.76	68	P	Pn	18 32 53.5	-2.7
	comp=N,0.5nm,0.3s,baz=212,slow=9.5,SNR=4.1						
PTGA	Pitinga	24.24	17	P	P	18 33 36.0	+0.4
	comp=N,0.8nm,0.2s,baz=266,slow=13,SNR=3.8						
TORD	Torodi Ar. Bea	76.64	69	P	P	18 40 07.6	+1.7
	comp=N,0.3nm,0.4s,baz=244,slow=5.4,SNR=3.7						

IDC 15 18:43:22.7±1.9,9°.49S×124°.99E,h0km,mb3.2/1,mb1 3.9/4,mb1mx3.5/38,mbtmp3.7/4,ML3.8/3,MS3.0/1,Ms1 3.0/1,ms1mx2.4/16,Error ellipse: s-maj=98.6km s-min=28.0km az=66.0,Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	8.58	176	Pn	Pn	18 45 26.3	-1.9
	0.9nm,0.3s,baz=7.8,slow=0.2,SNR=64						
FITZ				Sn	Sn	18 46 50.7	-15
	6.8nm,0.3s,baz=0.2,slow=1.1,SNR=16						
WRA	Warramunga Arr	13.77	140	Pn	Pn	18 46 40.8	+1.4
	0.6nm,0.3s,baz=319,slow=13,SNR=19						
WRA				Sn	Sn	18 49 06.4	-6.6
	0.5nm,0.3s,baz=311,slow=24,SNR=5.5						
ASAR	Alice Springs	16.47	150	Pn	Pn	18 47 16.4	+1.0
	0.3nm,0.3s,baz=322,slow=12,SNR=20						
ASAR				Sn	Sn	18 50 09.4	-10
	0.2nm,0.3s,baz=314,slow=20,SNR=3.9						
MJAR	Matsushiro Arr	47.45	14	LR	LR	19 11 24.0	
	comp=Z,16nm,21.0s,baz=85,slow=35						
MKAR	Makanchi Array	67.72	330	P	P	18 54 22.1	+0.1
	0.1nm,0.5s,baz=123,slow=6.9,SNR=4.2						

IDC 15 19:07:02.5±2.2,5°.92S×129°.32E,h330km±33km,mb2.5/1,mb1 2.8/5,mb1mx2.5/35,mbtmp3.5/5,Error ellipse: s-maj=53.7km s-min=15.2km az=78.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.38	21	P	Pn	19 08 26.9	+1.2

	2.0nm,0.3s,baz=243,slow=23,SNR=39						
SIJI				S	S	19 09 31.6	-1.2
	0.9nm,0.3s,baz=184,slow=23,SNR=6.5						
FITZ	Fitzroy Crossi	12.63	196	P	P	19 09 50.0	-2.1
	0.1nm,0.3s,baz=180,slow=24,SNR=6.3						
FITZ				S	S	19 12 02.9	-8.9
	0.0nm,0.3s,baz=11,slow=1.0,SNR=2.5						
WRA	Warramunga Arr	14.77	161	P	Pn	19 10 17.3	-0.1
	0.1nm,0.3s,baz=341,slow=11,SNR=13						
WRA				S	S	19 12 54.5	-1.4
	0.1nm,0.3s,baz=334,slow=22,SNR=2.0						
ASAR	Alice Springs	18.19	166	P	P	19 10 53.9	+1.2
	0.2nm,0.3s,baz=345,slow=12,SNR=21						
ASAR				S	S	19 14 03.2	-0.4
	0.1nm,0.3s,baz=347,slow=17,SNR=4.4						
MKAR	Makanchi Array	66.96	327	P	P	19 17 20.4	0.0
	0.1nm,0.4s,baz=114,slow=9.6,SNR=1.7						

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*IDC **15** 19:19:30.8±3.3, 51°.28N×179°.12W, h0^{km}, mb3.5/5, mb1 3.8/5, mb1mx3.4/62, mbtmp3.5/5, Error ellipse: s-maj=86.0km s-min=32.4km az=2.0*

*AEIC **15** 19:19:38.5±1.7, 51°.29N±0°.06×178°.74W±0°.07, h27^{km}±8^{km}, ML3.2/16, Error ellipse: s-maj=9.7km s-min=4.9km az=155.0*

*NEIC **15** 19:19:39.6±1.4, 51°.34N±0°.07×178°.68W±0°.05, h27^{km}±10^{km}, Error ellipse: s-maj=11.4km s-min=2.1km az=160.0*

ISC 15 19:19:37.6±1.4, **51°.3N**±0°.2×**178°.92W**±0°.07, **h45**^{km}, **n21**, σ**1^{s}.15**/25, **mb3.4**/5, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAEA	Gareloi East	0.51	12		Pn	19 19 48.9	+0.2
TASE	Tanaga Southea	0.78	45		Pn	19 19 52.2	-0.1
TAFP	Tanaga Falls P	0.85	43		Pn	19 19 53.2	0.0
TAFP					Sn	19 20 05.2	+0.6
TAPA	Tanaga Point A	0.87	52		Pn	19 19 53.5	0.0
KIMD	Kanaga Island	1.16	65		Pn	19 19 56.8	-0.5
KIMD					Sn	19 20 10.8	-1.1
KIWB	Kanaga Island	1.24	62	Pn	Pn	19 19 58.1	-0.4
KIKV	Kanaga Island	1.24	61		Pn	19 19 58.5	0.0
ADK	Adak	1.52	66		Pn	19 20 02.1	-0.1
ADK				Sn	Sn	19 20 21.6	+0.8
ADAG	Mount Adagdak	1.60	63		Pn	19 20 04.0	+0.6
GSTD	Great Sitkin T	1.89	65		Pn	19 20 07.9	+0.4
GSTD					Sn	19 20 32.0	+1.9
GSMY	Great Sitkin M	1.94	66		Pn	19 20 08.6	+0.6
GSTR	Great Sitkin T	1.96	64	Pn	Pn	19 20 09.0	+0.7
ATKA	Atka Island	3.08	71		Pn	19 20 24.5	+0.9
ATKA	Atka Island	3.08	71		Sn	19 21 00.3	+1.2
SMY	Shemya	4.55	291	Pn	Pn	19 20 47.5	+3.8
UNV	Unalaska Valle	7.99	66	Pn	Pn	19 21 32.7	+1.8
ILAR	Eielson Array	21.36	39	P	P	19 24 20.5	-0.2
	0.4nm,0.7s,baz=248,slow=9.6,SNR=5.2						
YKA	Yellowknife Ar	35.35	46	P	P	19 26 27.7	-0.5
	0.1nm,0.4s,baz=272,slow=6.1,SNR=2.2						
PDAR	Pinedale Array	46.41	72	P	P	19 28 00.1	+0.4
	0.7nm,0.5s,baz=315,slow=4.4,SNR=9.7						
MKAR	Makanchi Array	60.03	308	P	P	19 29 38.6	-0.9
	0.1nm,0.3s,baz=57,slow=6.8,SNR=1.6						
FINES	FINESS Array B	65.86	347	P	P	19 30 17.1	-0.8
	5.1nm,1.1s,baz=43,slow=3.9,SNR=1.9						

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*NEIC **15** 19:27:16.7±0.8, 17°.3S±0°.1×174°.4W±0°.1, h91^{km}±10^{km}, mb4.3/5, Error ellipse: s-maj=18.6km s-min=15.7km az=181.0*

*IDC **15** 19:27:16.3±4.5, 17°.31S×174°.33W, h88^{km}±33^{km}, mb3.7/5, mb1 4.0/6, mb1mx3.5/36, mbtmp4.1/6, Error ellipse: s-maj=95.5km s-min=21.0km az=144.0*

ISC 15 19:27:17.6±0.8, **17°.2S**±0°.1×**174°.3W**±0°.1, **h100**^{km}, **n18**, σ**1^{s}.15**/19, **mb4.2**/8, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.02	37	P	Pn	19 28 18.1	+0.9
	8.4nm,0.3s,baz=329,slow=4.3,SNR=5.0						
AFI				S	Sn	19 29 00.6	-2.8
	32nm,0.3s,baz=68,slow=23,SNR=12						
RAR	Rarotonga	14.29	109	Pn	Pn	19 30 35.1	-0.1
TUWZ	Tuamarina	26.23	200	P	P	19 32 42.7	-0.5
WB2	Warramunga Arr	48.63	258	P	P	19 35 50.5	-1.2
WRAB	Tennant Creek	48.64	258	P	P	19 35 50.7	-1.1
WRAB				IAmb	IAmb	19 36 02.6	
	comp=Z,6.1nm,1.2s						
WRA	Warramunga Arr	48.65	258	P	P	19 35 50.6	-1.2
	comp=Z,0.5nm,0.5s,baz=98,slow=6.8,SNR=11						
AS31	Alice Springs	48.78	253	P	P	19 35 52.5	-0.4
ASAR	Alice Springs	48.79	253	P	P	19 35 52.3	-0.6
	comp=Z,2.0nm,0.6s,baz=89,slow=8.5,SNR=46						
ASAR	Alice Springs	48.79	253	P	P	19 35 52.1	-0.8
PETK	Petropavlovsk-	74.04	343	P	P	19 38 43.0	+0.7
	comp=Z,4.2nm,0.9s,baz=182,slow=8.5,SNR=1.6						
PETK	Petropavlovsk-	74.04	343	P	P	19 38 42.9	+0.6
CCB	Clear Creek Bu	84.03	11	P	P	19 39 37.5	+1.0
CCB				IAmb	IAmb	19 39 37.7	
	comp=Z,4.3nm,0.9s						
PDAR	Pinedale Array	84.12	42	P	P	19 39 38.5	+0.6
	comp=Z,0.9nm,0.6s,baz=204,slow=3.2,SNR=10.0						
PDAR	Pinedale Array	84.12	42	P	P	19 39 38.2	+0.4
SCRK	Sand Creek	84.19	13	P	P	19 39 38.5	+1.0
SCRK				IAmb	IAmb	19 39 44.9	
	comp=Z,3.4nm,1.3s						
IMAR	Indian Mountai	84.31	8	P	P	19 39 39.5	+1.5
ILAR	Eielson Array	84.32	11	P	P	19 39 38.8	+0.8
	comp=Z,0.9nm,0.7s,baz=230,slow=6.2,SNR=14						
BRTR	Keskin Array B	146.94	319	PKPbc	PKPab	19 46 49.5	-1.0
	comp=Z,0.9nm,0.9s,baz=90,slow=3.7,SNR=4.5						

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*IDC **15** 19:27:45.3±0.7, 14°.31S×65°.88E, h0^{km}, mb4.0/13, mb1 4.1/13, mb1mx3.9/48, mbtmp4.0/13, MS3.9/17, Ms1 3.9/17, ms1mx3.7/42, Error ellipse: s-maj=25.1km s-min=17.8km az=4.0*

*NEIC **15** 19:27:46.5±0.8, 14°.3S±0°.1×66°.0E±0°.1, h10^{km}±1^{km}, mb4.7/29, Error ellipse: s-maj=23.0km s-min=17.3km az=159.0*

*GCMT **15** 19:27:49.5±0.3, 14°.25S±0°.03×66°.04E±0°.02, h12^{km}±1^{km}, MW4.8/82, Moment Tensor Solution. s18,c20; s82,c109; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.10±.13; $M_{\theta\theta}$-0.82±.08; $M_{\phi\phi}$1.91±.11; $M_{r\theta}$0.14±.24; $M_{\theta\phi}$-0.83±.07; $M_{\phi r}$0.34±.22; Best double couple: $M_0$1.73900×10^{16} NP1:ϕ_s310.00000°, δ53.00000°, λ-143.00000°. NP2: ϕ_s196.00000°, δ62.00000°, λ-43.00000°. Principal axes: T 2.1660, Plg5.0000°, Azm255.0000°; N -0.8610, Plg40.0000°, Azm349.0000°; P -1.3130, Plg50.0000°, Azm159.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 19:27:47.3±0.5, **14°.3S**±0°.1×**66°.03E**±0°.09, **h13**^{km}, **n84**, σ**1^{s}.00**/67, **mb4.4**/31, **MS4.0**/16, **1D, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	9.16	44	T	T	19 39 17.7	
	baz=224,slow=75,SNR=168						
H08S2	Diego Garcia H	9.18	44	T	T	19 39 27.2	
	baz=224,slow=75,SNR=241						
H08S3	Diego Garcia H	9.18	44	T	T	19 39 20.3	
	baz=224,slow=75,SNR=390						
RER	Riviere de l'E	11.92	234	Pn	Pn	19 30 36.7	-0.5
OPO	Ambohidratompo	18.55	254	P	Pn	19 32 07.4	+3.0
	0.4nm,0.3s,baz=71,slow=15,SNR=2.8						
OPO				LR	LR	19 37 47.5	
	comp=Z,239nm,19.5s,baz=208,slow=33						
PALK	Pallekele	25.92	35	LR	LR	19 41 09.9	
	comp=Z,610nm,21.3s,baz=210,slow=31						
KMBO	Kilima Mbogo	31.32	292	LR	LR	19 44 55.9	
	comp=Z,147nm,18.4s,baz=98,slow=33						
KMBO	Kilima Mbogo	31.32	292	P	P	19 34 07.5	-0.5
KMBO				IAmb	IAmb	19 34 17.6	
	comp=Z,11nm,1.6s						
MATP	Matopo	36.27	255	P	P	19 34 48.5	-2.4
	comp=Z,1.2nm,0.6s,baz=97,slow=10,SNR=5.0						
LSZ	Lusaka	36.57	264	P	P	19 34 52.9	-0.5
	comp=Z,1.8nm,0.7s,baz=118,slow=9.6,SNR=4.6						
LSZ	Lusaka	36.57	264	P	P	19 34 54.4	+0.9
LSZ				IAmb	IAmb	19 35 03.4	
	comp=Z,20nm,1.7s						
BOSA	Boshof	40.31	243	P	P	19 35 26.9	+2.0
	comp=Z,0.4nm,0.4s,baz=28,slow=15,SNR=1.7						
BOSA				LR	LR	19 49 44.5	
	comp=Z,191nm,18.4s,baz=34,slow=33						
RAYN	Ar Rayn	42.63	332	P	P	19 35 43.6	-0.1
CM31	Chiang Mai Arr	45.97	46	P	P	19 36 09.7	-0.8
CMAR	Chiang Mai Arr	45.97	46	P	P	19 36 11.4	+1.0
	comp=Z,0.3nm,0.8s,baz=230,slow=29,SNR=4.1						
CMAR				LR	LR	19 53 24.0	
	comp=Z,165nm,19.5s,baz=220,slow=33						
CMAR	Chiang Mai Arr	45.97	46	P	P	19 36 10.5	0.0
SHL	Shillong	46.97	33	P	P	19 36 18.7	+0.2
JAGI	Jajag, Banyuwa	47.47	88	P	P	19 36 22.6	+0.2
H01W3	Cape Leeuwin H	47.78	124	T	T	20 27 29.2	
	baz=284,slow=75,SNR=17						
H01W2	Cape Leeuwin H	47.78	124	T	T	20 27 29.4	
	baz=284,slow=75,SNR=22						
H01W1	Cape Leeuwin H	47.80	124	T	T	20 27 30.8	
	baz=284,slow=75,SNR=19						
KBL	Kabul	48.67	3	P	P	19 36 30.8	-0.7
LSA	Lhasa	50.02	29	P	P	19 36 42.3	0.0
GEYT	Alibeck	52.49	352	LR	LR	19 57 31.6	
	comp=Z,35nm,18.9s,baz=20,slow=34						
MMRI	Maumere	55.27	91	P	P	19 37 20.9	0.0
ARSB	Arslanbob	55.73	6	P	P	19 37 23.6	-0.2
ARSB				IAmb	IAmb	19 37 25.8	
	comp=Z,11nm,1.4s						
SYO	Syowa Base	57.18	191	⇓*e*P	P	19 37 32.8	-0.8
KKAR	Karatay Array	57.28	4	P	P	19 37 34.5	-0.3
GNI	Garni	57.69	341	P	P	19 37 38.8	+1.0
GNI				IAmb	IAmb	19 37 50.5	
	comp=Z,14nm,1.1s						
ENH	Enshi	60.96	43	P	P	19 38 00.1	-0.4
ENH				IAmb	IAmb	19 38 08.0	
	comp=Z,7.3nm,0.9s						
WMQ	Urumqi	61.15	18	P	P	19 38 00.1	-1.4
KBZ	Khabaz	61.51	341	LR	LR	20 05 38.6	
	comp=Z,39nm,18.0s,baz=171,slow=37						
BR131	Keskin Array S	61.65	332	P	P	19 38 04.2	-0.9
BR131				IAmb	IAmb	19 38 14.5	
	comp=Z,11nm,1.8s						
BRTR	Keskin Array B	61.65	332	P	P	19 38 02.7	-2.4
	comp=Z,0.9nm,0.9s,baz=100,slow=4.3,SNR=5.3						
BRTR				LR	LR	20 04 05.7	
	comp=Z,35nm,18.3s,baz=100,slow=35						
BRTR	Keskin Array B	61.65	332	P	P	19 38 04.1	-0.9
MAKZ	Makanchi	62.51	12	P	P	19 38 09.9	-0.7
MAKZ				IAmb	IAmb	19 38 16.7	
	comp=Z,13nm,1.9s						
MK31	Makanchi Array	62.56	13	P	P	19 38 10.2	-0.7
MKAR	Makanchi Array	62.56	13	P	P	19 38 10.4	-0.5
	comp=Z,1.1nm,0.6s,baz=204,slow=8.0,SNR=14						
MKAR				PcP	PcP	19 38 50.4	+0.4
	comp=Z,1.0nm,0.8s,baz=211,slow=4.2,SNR=4.7						
MKAR	Makanchi Array	62.56	13	P	P	19 38 10.2	-0.8
XAN	Xi'an	63.08	39	P	P	19 38 14.2	-0.5
XAN				IAmb	IAmb	19 38 21.4	
	comp=Z,7.1nm,1.0s						
ABKAR	Akbulak array	63.52	356	P	P	19 38 16.9	-0.3
ASAR	Alice Springs	64.36	110	P	P	19 38 23.6	+0.1
	comp=Z,1.4nm,0.7s,baz=272,slow=6.1,SNR=22						
ASAR				LR	LR	20 04 05.9	
	comp=Z,181nm,18.1s,baz=268,slow=34						
ASAR	Alice Springs	64.36	110	P	P	19 38 23.1	-0.3
WRA	Warramunga Arr	65.15	106	P	P	19 38 29.1	+0.5
	comp=Z,1.9nm,0.6s,baz=244,slow=7.3,SNR=23						
WRA	Warramunga Arr	65.15	106	P	P	19 38 28.6	0.0
WB2	Warramunga Arr	65.16	106	P	P	19 38 29.1	+0.4
WRAB	Tennant Creek	65.16	106	P	P	19 38 28.8	+0.1
KURK	Kurchatov	65.69	9	P	P	19 38 31.2	-0.1
KURK				IAmb	IAmb	19 38 32.5	
	comp=Z,4.8nm,1.1s						
BRVK	Borovoye	67.20	3	P	P	19 38 40.7	-0.3
BRVK				IAmb	IAmb	19 38 41.5	
	comp=Z,8.2nm,1.4s						
VTS	Vitosha	68.94	327	P	P	19 38 52.2	-0.2
VTS				IAmb	IAmb	19 38 54.3	
	comp=Z,5.5nm,1.3s						
TORD	Torodi Ar. Bea	69.30	290	P	P	19 38 55.2	+0.2
	comp=Z,0.5nm,1.0s,baz=131,slow=7.6,SNR=1.9						
TORD				LR	LR	20 07 10.7	
	comp=Z,76nm,20.1s,baz=85,slow=34						
ZAA0	Zalesovo Array	69.86	12	P	P	19 38 56.9	-0.7
ZAA0				IAmb	IAmb	19 38 58.4	
	comp=Z,6.4nm,1.2s						
ZALV	Zalesovo Beam	69.86	12	P	P	19 38 56.9	-0.7
	comp=Z,0.9nm,0.5s,baz=204,slow=6.0,SNR=8.8						
STKA	Stephens Creek	70.45	119	LR	LR	20 04 57.9	
	comp=Z,121nm,21.2s,baz=228,slow=32						
SONM	Songino Array	71.58	27	P	P	19 39 09.4	+1.0
	comp=Z,2.8nm,0.9s,baz=217,slow=6.3,SNR=18						
SONM	Songino Array	71.58	27	P	P	19 39 08.2	-0.1
BURAR	Bucovina Array	71.61	332	P	P	19 39 08.5	0.0
ULN	Ulaanbaatar	71.90	28	P	P	19 39 10.1	-0.2
AKASG	Malin Array Be	72.31	336	P	P	19 39 11.1	-1.4
	comp=Z,0.8nm,0.6s,baz=143,slow=5.5,SNR=6.1						
AKASG	Malin Array Be	72.31	336	P	P	19 39 12.0	-0.5
KEST	Kesra	73.12	315	LR	LR	20 12 54.4	
	comp=Z,62nm,18.2s,baz=274,slow=37						
DBIC	Dimbokro	73.32	282	LR	LR	20 11 34.0	
	comp=Z,84nm,18.3s,slow=36						
ARSA	Arzberg	76.11	327	*e*P	P	19 39 36.7	+1.9
	comp=Z,4.3nm,0.8s						
CTA	Charters Tower	76.20	107	LR	LR	20 09 38.7	
	comp=Z,322nm,21.9s,baz=241,slow=33						
CONA	Conrad Observa	76.36	328	*e*P	P	19 39 37.4	+1.1
	comp=Z,5.1nm,1.3s						
MOA	Molln	77.14	327	*e*P	P	19 39 41.7	+1.1
	comp=Z,7.3nm,1.1s						
VNDA	Vanda	77.38	167	LR	LR	20 10 00.8	
	comp=Z,83nm,21.3s,baz=276,slow=33						
ABTA	Abfaltersbach	77.41	325	*e*pP	P	19 39 44.4	+2.1
	comp=Z,3.0nm,0.7s						
WTTA	Wattenberg	78.20	326	*e*P	P	19 39 47.3	+0.6
	comp=Z,2.0nm,0.5s						
SQTA	Sankt Quirin	78.41	325	*e*P	P	19 39 49.0	+1.1
	comp=Z,2.0nm,0.7s						
MOTA	Moosalm	78.54	325	*e*P	P	19 39 49.6	+1.0
	comp=Z,2.1nm,0.8s						
ESDC	Sonseca Array	84.27	313	P	P	19 40 20.1	+1.0
	comp=Z,0.5nm,0.3s,baz=107,slow=4.1,SNR=4.7						
JCJ	Chichijima	84.53	60	LR	LR	20 13 56.3	
	comp=Z,118nm,19.3s,baz=116,slow=33						
MJAR	Matsushiro Arr	84.65	50	P	P	19 40 23.8	+2.8
	comp=Z,1.6nm,0.9s,baz=257,slow=4.4,SNR=2.8						
MJAR	Matsushiro Arr	84.65	50	P	P	19 40 22.2	+1.1
RCBR	Riachuelo	100.05	261	LR	LR	20 21 01.2	
	comp=Z,106nm,20.3s,baz=2.5,slow=32						
ILAR	Eielson Array	124.80	16	PKP	PKPdf	19 46 46.0	-0.5
	comp=Z,1.0nm,1.0s,baz=212,slow=4.3,SNR=5.1						
ILAR	Eielson Array	124.80	16		PKPdf	19 46 46.4	-0.1
YKA	Yellowknife Ar	131.89	0	PKP	PKPdf	19 46 59.7	-0.4
	comp=Z,0.4nm,0.7s,baz=352,slow=1.8,SNR=6.3						
NEW	Newport	146.05	4	PKPbc	PKPab	19 47 27.9	+0.2
	comp=Z,7.1nm,0.7s,baz=327,slow=3.8,SNR=13						
NEW	Newport	146.05	4		PKPbc	19 47 26.9	-0.2
PDAR	Pinedale Array	151.39	353	PKPbc	PKiKP	19 47 42.0	0.0
	comp=Z,3.2nm,0.5s,baz=88,slow=2.3,SNR=26						
PDAR	Pinedale Array	151.39	353		PKiKP	19 47 42.0	0.0
NVAR	Mina Array Bea	155.68	8	PKPbc	PKPbc	19 47 51.5	
	comp=Z,0.6nm,0.8s,baz=347,slow=3.3,SNR=4.5						

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*IDC **15** 19:41:09.0±0.8, 41°.50N×131°.49E, h573^{km}±12^{km}, mb2.6/4, mb1 2.9/9, mb1mx2.6/36, mbtmp3.7/9, Error ellipse: s-maj=33.0km s-min=15.3km az=64.0*

ISC 15 19:41:09.0±0.9, **41°.4N**±0°.1×**131°.2E**±0°.2, **h550**^{km}, **n9**, σ**1^{s}.93**/10, **mb3.1**/4, **Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USRK	Ussuriysk Ar.	2.87	11	P	P	19 42 24.8	+1.8
	baz=178,slow=3.6,SNR=119						
USRK				S	S	19 43 25.4	+1.8
	baz=310,slow=39,SNR=2.2						
KSRS	Korea Array	4.68	214	P	P	19 42 39.4	+3.2
	1.0nm,0.3s,baz=26,slow=8.3,SNR=32						
MJAR	Matsushiro Arr	7.29	129	P	P	19 43 00.2	+0.3
	0.1nm,0.3s,baz=320,slow=9.5,SNR=14						
KLR	Kul'dur	7.85	3	P	P	19 43 05.5	+0.5
	0.8nm,0.3s,baz=200,slow=6.7,SNR=25						
SONM	Songino Array	18.76	298	P	P	19 44 54.7	+0.9
	0.5nm,0.3s,baz=106,slow=9.1,SNR=22						
MKAR	Makanchi Array	35.08	296	P	P	19 47 15.5	-0.8
	0.3nm,0.5s,baz=104,slow=10,SNR=5.1						
WRA	Warramunga Arr	61.09	177	P	P	19 50 28.4	-1.6
	0.4nm,0.8s,baz=353,slow=7.3,SNR=5.5						
FINES	FINESS Array B	61.10	328	P	P	19 50 27.4	-2.2
	2.6nm,0.9s,baz=141,slow=7.3,SNR=5.4						
ASAR	Alice Springs	64.77	177	P	P	19 50 53.0	-0.7
	0.2nm,0.4s,baz=360,slow=7.4,SNR=5.2						

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*IDC **15** 20:01:12.2±2.3, 5°.07S×154°.06E, h125^{km}±20^{km}, mb3.8/8, mb1 4.0/11, mb1mx3.7/41, mbtmp4.2/11, MS2.5/1, Ms1 2.5/1, ms1mx2.5/39, Error ellipse: s-maj=24.3km s-min=14.8km az=99.0*

*NEIC **15** 20:01:13.1±1.5, 5°.08S±0°.08×153°.98E±0°.09, h128^{km}±3^{km}, mb4.6/26, Error ellipse: s-maj=14.0km s-min=9.8km az=122.0*

ISC 15 20:01:11.0±0.5, **5°.00S**±0°.06×**154°.01E**±0°.06, **h105**^{km}, **n52**, σ**1^{s}.23**/53, **mb4.6**/19, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.10	289	P	Pn	20 01 47.1	+2.0
	46nm,0.3s,baz=165,slow=1.6,SNR=72						
KRVT				S	Sn	20 02 12.4	+1.4
	358nm,0.3s,baz=138,slow=22,SNR=29						
KRVT				LR	LR	20 02 20.0	
	comp=Z,109nm,18.2s,baz=106,slow=31						
HNR	Honiara	7.35	127	Pn	Pn	20 02 59.3	+3.5
PMG	Port Moresby	8.09	237	P	Pn	20 03 08.4	+2.6
	9.4nm,0.3s,baz=50,slow=7.5,SNR=19						
PMG				S	Sn	20 04 38.0	+2.4
	4.6nm,0.3s,baz=343,slow=9.1,SNR=3.8						
PMG	Port Moresby	8.09	237		Pn	20 03 08.3	+2.6
PMG					Sn	20 04 35.6	0.0
PATS	Pohnpei	12.51	20	Pn	Pn	20 04 06.7	+1.3
PATS				Sn	Sn	20 06 21.6	-1.5
CTA	Charters Tower	16.80	206	P	P	20 05 01.1	+0.7
	0.6nm,0.3s,baz=24,slow=14,SNR=16						
DZM	Mont Dzumac	20.81	146	P	P	20 05 43.0	-1.3
	6.4nm,0.8s,baz=191,slow=12,SNR=7.6						
DZM	Mont Dzumac	20.81	146	P	P	20 05 44.0	-0.3
DZM				IAmb	IAmb	20 06 02.8	
	comp=Z,29nm,1.5s						
FAKI	Fak Fak	21.81	275	P	P	20 05 54.1	-0.8
FAKI				IAmb	IAmb	20 06 05.0	
	comp=Z,60nm,1.2s						
WR0	Warramunga Arr	24.09	230	P	P	20 06 16.1	-0.9
WB0	Warramunga Arr	24.10	231	P	P	20 06 15.9	-1.2
WRAB	Tennant Creek	24.22	230	P	P	20 06 17.4	-0.9
WRAB				IAmb	IAmb	20 06 18.6	
	comp=Z,7.1nm,0.7s						
WRA	Warramunga Arr	24.24	230	P	P	20 06 17.8	-0.6
	comp=Z,4.2nm,0.6s,baz=58,slow=9.3,SNR=59						
FUNA	Funafuti	25.25	99	P	P	20 06 27.8	+0.2
H11S3	WAKE ISLAND Hy	26.48	28	T	T	20 34 41.9	
	baz=230,slow=74,SNR=18						
H11S2	WAKE ISLAND Hy	26.48	28	T	T	20 35 17.3	
	SNR=7.3						
H11S1	WAKE ISLAND Hy	26.49	28	T	T	20 34 44.9	
	baz=216,slow=74,SNR=5.5						
AS31	Alice Springs	26.84	224	P	P	20 06 40.8	-1.1
ASAR	Alice Springs	26.84	224	P	P	20 06 40.8	-1.2
	comp=Z,2.0nm,0.8s,baz=54,slow=8.7,SNR=20						
ASAR	Alice Springs	26.84	224	P	P	20 06 40.6	-1.3
STKA	Stephens Creek	29.17	202	P	P	20 07 01.0	-1.4
	comp=Z,3.2nm,0.5s,baz=7.2,slow=7.7,SNR=16						
STKA	Stephens Creek	29.17	202	P	P	20 07 01.1	-1.4
TAU	Tasmania Unive	38.22	188	P	P	20 08 20.1	-0.6
TUWZ	Tuamarina	40.42	157	P	P	20 08 38.2	-0.8
LBZ	Lake Benmore	41.73	163	P	P	20 08 48.1	-1.6
DCZ	Deep Cove	41.91	166	P	P	20 08 49.7	-1.4
JNU	Nakatsue	43.80	332	P	P	20 09 06.9	+0.3
JNU				IAmb	IAmb	20 09 07.3	
	comp=Z,22nm,1.0s						
KSM	Kuching	44.13	277	P	P	20 09 09.1	-0.4
KSM				IAmb	IAmb	20 09 25.0	
	comp=Z,15nm,1.1s						
CISI	Cisompet, Garu	45.98	264	P	P	20 09 22.8	-1.4
CISI				IAmb	IAmb	20 09 23.0	
	comp=Z,14nm,0.7s						
DLV	T Lat	48.30	291	P	P	20 09 42.5	+0.1
KSAR	Wonju Array Be	48.73	332	P	P	20 09 45.9	+0.8
PEA0B	Petropavlovsk-	57.97	3	P	P	20 10 53.3	+0.8
PETK	Petropavlovsk-	57.97	3	P	P	20 10 52.0	-0.4
	comp=Z,6.5nm,1.0s,baz=174,slow=7.1,SNR=7.7						
PETK	Petropavlovsk-	57.97	3	P	P	20 10 53.2	+0.8
CMAR	Chiang Mai Arr	59.05	295	P	P	20 10 59.7	-0.9
	comp=Z,2.2nm,0.8s,baz=119,slow=6.0,SNR=4.7						
CMAR	Chiang Mai Arr	59.05	295	P	P	20 11 01.2	+0.5
SONM	Songino Array	67.14	327	P	P	20 11 54.1	+0.4
	comp=Z,1.0nm,0.5s,baz=142,slow=5.9,SNR=6.1						
SONM	Songino Array	67.14	327	P	P	20 11 54.5	+0.8
SHL	Shillong	67.45	300	P	P	20 11 56.1	-0.1
SHL				IAmb	IAmb	20 11 57.0	
	comp=Z,11nm,0.7s						
LSA	Lhasa	69.35	304	P	P	20 12 08.8	+0.5
LSA				IAmb	IAmb	20 12 09.7	
	comp=Z,4.8nm,0.6s						
CNPM	China Poot	77.37	25	P	P	20 12 54.6	+0.4
CNPM				IAmb	IAmb	20 12 57.2	
	comp=Z,19nm,1.2s						
SML	Sawmill	79.80	24	P	P	20 13 08.0	+0.4
SML				IAmb	IAmb	20 13 15.3	
	comp=Z,11nm,1.2s						
GLI	Glacier Island	79.84	25	P	P	20 13 08.2	+0.5
GLI				IAmb	IAmb	20 13 14.1	
	comp=Z,13nm,1.0s						
IMAR	Indian Mountai	80.17	19	P	P	20 13 10.0	+0.6
MK31	Makanchi Array	81.27	319	P	P	20 13 15.2	-0.5
MAKZ	Makanchi	81.48	319	P	P	20 13 16.6	-0.2
ILAR	Eielson Array	81.89	22	P	P	20 13 17.8	-0.8
	comp=Z,0.4nm,0.7s,baz=249,slow=5.5,SNR=4.9						
ILAR	Eielson Array	81.89	22	P	P	20 13 18.0	-0.5
ZAA0	Zalesovo Array	81.99	326	P	P	20 13 18.7	-0.5
ZAA0				IAmb	IAmb	20 13 19.6	
	comp=Z,4.3nm,0.8s						
ZALV	Zalesovo Beam	81.99	326	P	P	20 13 18.2	-1.1
NIL	Nilore	85.08	304	P	P	20 13 35.1	-0.6
NIL				IAmb	IAmb	20 13 39.5	
	comp=Z,11nm,1.1s						
TORD	Torodi Ar. Bea	151.52	288	PKPbc	PKPbc	20 20 51.9	-2.1
	comp=Z,0.6nm,0.5s,baz=78,slow=2.4,SNR=5.3						

MAN 15 20:02:32.0, 6°.37N×123°.29E, h33^{km}, mb4.0, ML2.8, MS2.4, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKMP	Bagumbayan, Su	1.26	83	*e*P	Pn	20 02 53.2	-0.1
SKMP				*e*S	Sn	20 03 06.1	-3.0
CTBH	Cotabato--PC H	1.27	48	⇓*i*P	Pn	20 02 54.5	+1.0
CTBH				*i* S	Sn	20 03 10.2	+0.7
PAGZ	Pagadian	1.47	4	*e*P	Pn	20 02 56.6	+0.4
PAGZ				*e*S	Sn	20 03 13.8	-0.5

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*MEX **15** 20:03:08.1±2.5, 31°.52N×114°.40W, h10^{km}, MD3.2*

*NEIC **15** 20:03:10.0±1.6, 31°.73N±0°.02×115°.01W±0°.05, h16^{km}±5^{km}, Error ellipse: s-maj=5.8km s-min=2.5km az=74.0*

*PAS **15** 20:03:10.1±2.3, 31°.75N±0°.01×115°.03W±0°.03, h0^{km}±6^{km}, Error ellipse: s-maj=3.3km s-min=1.8km az=76.0*

*ECX **15** 20:03:10.9±0.6, 31°.78N×114°.99W, h12^{km}±3^{km}, MD2.5, ML2.7*

ISC 15 20:03:09.8±1.1, **31°.75N**±0°.02×**115°.02W**±0°.03, **h11**^{km}±10^{km}, **n39**, σ**0^{s}.63**/54, **1C-1D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECBX	El Chinero	0.28	186	⇓*i*P	Pb	20 03 16.9	0.0
ECBX				*e*S	Sb	20 03 21.4	-0.3
CPBX	Cerro Prieto	0.71	340	*e*P	Pg	20 03 23.3	-0.2
CPBX	Cerro Prieto	0.71	340		Sb	20 03 34.5	+0.5
SFX	San Felipe	0.73	169	*e*P	Pg	20 03 23.8	-0.2
SFX				*e*S	Sb	20 03 34.3	-0.3
SFX	San Felipe	0.73	169		Pg	20 03 23.6	-0.3
SFX					Sg	20 03 33.7	+0.2
SPIG	San Pedro Mart	0.80	209	*e*P	Pb	20 03 26.0	0.0
SPIG				*e*S	Sb	20 03 37.6	+0.5
SPIG	San Pedro Mart	0.80	209	*e*P	Pb	20 03 26.3	+0.2
	baz=67,slow=12						
SPIG				*e*S	Sb	20 03 37.4	+0.3
SPX	San Pedro Mart	0.81	208	*e*P	Pg	20 03 25.3	-0.2
SPX				*e*S	Sg	20 03 36.8	+0.6
SPX				IAML		20 03 37.9	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=N,205nm,0.1s						
SPX	San Pedro Mart	0.81	208		Pg	20 03 25.4	-0.2
SPX					Sb	20 03 36.9	-0.4
ESJX	Sierra Juarez	0.83	288	eP	Pg	20 03 26.0	+0.1
ESJX				eS	Sg	20 03 37.3	+0.5
ESJX	Sierra Juarez	0.83	288		Pg	20 03 25.8	-0.1
ESJX					Sg	20 03 36.8	+0.1
SGL	Mount Signal	1.07	326		Pb	20 03 30.0	-0.5
SGL					Sb	20 03 44.3	-0.3
ERPC	Ernies Place	1.13	331		Pn	20 03 32.0	+0.4
ERMX	Rumorosa	1.17	313	eP	Pb	20 03 31.4	-0.9
ERMX				eS	Sb	20 03 46.9	-0.6
ERMX				IAML		20 03 48.1	
	comp=N,134nm,0.2s						
WESC	Westside Schoo	1.17	329		Sn	20 03 48.4	+0.2
RMX	La Rumorosa	1.23	314		Pn	20 03 32.0	-1.3
IKP	In-Ko-Pah, Jac	1.29	314	eP	Pn	20 03 33.6	-0.3
IKP	In-Ko-Pah, Jac	1.29	314		Pn	20 03 33.6	-0.3
IKP					Sb	20 03 50.6	-0.2
GLA	Glamis	1.30	7		Pn	20 03 33.0	-1.1
SWSC	Sam W. Stewart	1.36	331		Sg	20 03 53.5	-0.2
SQX	San Quintin	1.39	212	eP	Pn	20 03 35.1	-0.1
CCX	Cicese	1.41	275	eP	Pn	20 03 35.4	-0.1
CCX				eS	Sn	20 03 54.0	0.0
CCX	Cicese	1.41	275		Pn	20 03 35.5	+0.1
CCX					Sn	20 03 54.1	0.0
CBX	Cerro Bola	1.50	292	eP	Pn	20 03 36.7	-0.3
CBX				eS	Sb	20 03 57.3	+0.2
CBX				⇑e		20 04 01.6	
CBX				IAML		20 04 01.6	
	comp=E,130nm,0.5s						
CBX	Cerro Bola	1.50	292		Pb	20 03 38.0	+0.1
CBKC	Canebrake	1.55	318		Pb	20 03 39.1	+0.5
TJIG	Tijuana	1.56	296	i P	Pn	20 03 36.3	-1.3
MONP2	Monument Peak	1.64	314	eP	Pn	20 03 38.5	-0.4
MONP2	Monument Peak	1.64	314		Pn	20 03 38.4	-0.5
BAR	Barrett	1.68	304	Pn	Pn	20 03 38.2	-1.1
214A	Organ Pipe Nat	1.89	83		Pn	20 03 41.6	-0.5
Y12C	Blythe	2.03	12	Pn	Pn	20 03 45.1	+1.0
109C	Camp Elliot, M	2.10	303		Pn	20 03 44.6	-0.4
XPFO	Pion Flat	2.21	327		Pn	20 03 47.5	+0.9
PFO	Pinyon Flats O	2.22	327		Pn	20 03 47.4	+0.7
Y14A	Wickenburg	2.76	37		Pn	20 03 53.3	-0.8
W13A	Hualapai Mount	3.47	16	Pn	Pn	20 04 03.8	-0.3
X16A	Lo Mia Camp, P	4.01	48	Pn	Pn	20 04 11.1	-0.3
LCMT	Little Creek M	5.45	15		Pn	20 04 33.6	+2.5

TAP 15 20:04:12.5,24°.22N×121°.04E,h9km,ML0.8,2D,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WHP	Taichung City baz=303	0.10	303	⇓iP	Pg	20 04 15.6	+0.5
WHP	baz=303			i S	Sg	20 04 17.9	+0.9
TDCB	Techi baz=76	0.11	75	P	Pg	20 04 15.7	+0.3
TDCB	baz=76			S	Sg	20 04 17.3	-0.1
CHGB	Renai baz=141	0.21	142	⇓P	Pg	20 04 17.5	+0.7
CHGB	baz=141			S	Sg	20 04 20.5	+0.6
DPDB	Guoxing baz=208	0.21	208	eP	Pg	20 04 17.3	+0.4
OWD	Renai baz=154	0.30	155	P	Pg	20 04 18.9	+0.4
OWD	baz=154			eS	Sg	20 04 22.5	0.0
NSY	Sanyi baz=308	0.32	307	eP	Pb	20 04 20.2	-0.1
NSY	baz=308			eS	Sb	20 04 26.0	+0.4
TYC	Yuchr baz=197	0.36	207	eP	Pb	20 04 20.6	-0.5
NNS	Nan Shan baz=57	0.37	55	eP	Pg	20 04 20.1	+0.2
NNS	baz=57			eS	Sg	20 04 24.6	-0.4
NNSB	Datong baz=65	0.38	57	eP	Pg	20 04 20.0	0.0
NNSH	Datong baz=64	0.38	57	eP	Pg	20 04 19.9	0.0
LIOB	Emei baz=359	0.42	357	eP	Pb	20 04 22.2	+0.1
LIOB	baz=359			eS	Sg	20 04 27.3	+1.0
SSLB	Suanglung baz=179	0.44	190	eP	Pg	20 04 21.3	+0.2
SSLB	baz=179			eS	Sg	20 04 27.3	+0.3
YHNB	Yeheng baz=32	0.54	35	eP	Pg	20 04 23.1	0.0
YHNB	baz=32			eS	Sg	20 04 29.8	-0.4

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*NIED **15** 20:04:00,22°.50N×121°.50E,h8km,Mw4.6 Best double couple: $M_0$1.03000×10^{16} NP1:ϕ_s70.00000°,δ84.00000°, λ-170.00000°. NP2:ϕ_s339.00000°,δ80.00000°, λ-7.00000°.*

*BGR **15** 20:04:22.7±0.0,19°.22N×123°.13E,h33km,mb4.8,Ms4.6*

*BJI **15** 20:04:35.0±0.0,22°.27N×121°.35E,h6km,mB5.0/50, mb4.5/60,ML4.8/6,Ms4.7/76,Ms7 4.6/72*

*NEIC **15** 20:04:35.5,22°.18N×121°.42E,h24km,Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.41; $M_{\theta\theta}$-1.18; $M_{\phi\phi}$-0.23; $M_{r\theta}$0.30; $M_{\theta\phi}$-1.16; $M_{\phi r}$1.72; Fault plane solution: $M_0$2.47000×10^{16} NP1:ϕ_s264.17000°, δ34.49000°,λ143.18000°. NP2:ϕ_s25.86000°,δ70.16000°, λ61.19000°. Principal axes: T 2.5363, Plg55.0000°, Azm259.0000°; N -0.1304, Plg27.0000°, Azm36.0000°; P -2.4058, Plg20.0000°, Azm137.0000°;*

*TAP **15** 20:04:36.8,22°.23N×121°.39E,h20km,ML5.1,C*

*NEIC **15** 20:04:36.4±1.5,22°.16N±0°.05×121°.42E±0°.07,h21km±4km, mb4.9/108,Mwr4.9/22,ML5.2(TAP),Error ellipse: s-maj=9.3km s-min=7.6km az=98.0*

*ASIES **15** 20:04:36.4,22°.23N×121°.36E,h23km,MW4.5*

*GCMT **15** 20:04:38.4±0.2,22°.18N±0°.01×121°.39E±0°.01,h20km, MW5.0/93,Moment Tensor Solution. s31,c40; s93,c149; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.71±.17; $M_{\theta\theta}$0.51±.09; $M_{\phi\phi}$-3.22±.12; $M_{r\theta}$-1.72±.19; $M_{\theta\phi}$-1.74±.06; $M_{\phi r}$-0.47±.17; Best double couple: $M_0$3.88200×10^{16} NP1:ϕ_s354.00000°,δ44.00000°,λ46.00000°. NP2: ϕ_s227.00000°,δ60.00000°,λ124.00000°. Principal axes: T 3.6790, Plg59.0000°, Azm188.0000°; N 0.4010, Plg29.0000°, Azm29.0000°; P -4.0850, Plg9.0000°, Azm294.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*JMA **15** 20:04:38.5,22°.48N×121°.51E,h11km±2km,M4.5*

*IDC **15** 20:04:39.8±1.6,22°.09N×121°.54E,h52km±14km,mb4.3/28, mb1 4.4/29,mb1mx4.4/37,mbtmp4.6/29,ML3.5/2,MS4.2/32, Ms1 4.2/32,ms1mx4.0/55,Error ellipse: s-maj=14.4km s-min=8.9km az=76.0*

ISC 15 20:04:37.8±0.5**,22°.17N**±0°.02×**121°.45E**±0°.02**,h31**km±3km**, n476,**σ1^{s}**59**/571**,mb4.8**/113**,MS4.3**/36**,19C-81D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAY	Lan-yu baz=135	0.16	143	⇓eP	Pb	20 04 42.5	-1.3
LAY	baz=135			eS	Sb	20 04 45.9	-1.9
TWH	Lutao baz=24	0.54	3	⇑iP	Pb	20 04 46.1	-2.9
TWH	baz=24			S	Sb	20 04 52.2	-4.4
TAW	Tawu baz=285	0.55	290	⇓iP	Pb	20 04 46.2	-2.8
TAW	baz=285			i S	Sb	20 04 52.7	-4.0
TSEB	Hengchuen, Pin baz=247	0.57	243	⇓iP	Pb	20 04 48.1	-1.4
TSEB	baz=247			eS	Sb	20 04 55.9	-1.5
EAST	Anshuo baz=286	0.60	291	⇓iP	Pb	20 04 47.0	-2.8
EAST	baz=286			S	Sb	20 04 54.0	-4.1
ECL	Taimali baz=298	0.63	313	⇓iP	Pb	20 04 47.2	-3.1
ECL	baz=298			S	Sb	20 04 54.6	-4.2
TWKBT	Hengchun baz=250	0.63	249	⇓P	Pb	20 04 48.2	-2.2
TWKBT	baz=250			S	Sb	20 04 55.6	-3.4
TWK1	Hengchun baz=250	0.64	250	⇓iP	Pb	20 04 48.2	-2.3
TWK1	baz=250			eS	Sb	20 04 55.5	-3.6
TTN	Taitung baz=348	0.65	335	⇓eP	Pb	20 04 49.3	-1.4
TTN	baz=348			eS	Sb	20 04 58.1	-1.3
HEN	Hengchun baz=249	0.68	256	⇓iP	Pb	20 04 49.1	-2.1
HEN	baz=249			i S	Sb	20 04 57.7	-2.6
TWGBT	Beinan baz=320	0.73	332	⇓P	Pb	20 04 49.1	-3.0
TWGBT	baz=320			eS	Sb	20 04 57.5	-4.3
TWG	Pinlang baz=320	0.74	332	⇓iP	Pb	20 04 49.0	-3.1
TWG	baz=320			eS	Sb	20 04 57.8	-4.2
TWG	Pinlang	0.74	332		Pb	20 04 48.9	-3.3
SCZT	Fangliau baz=289	0.79	285	⇓iP	Pb	20 04 50.2	-2.9
SSPT	Xinbi baz=288	0.87	291	⇓iP	Pn	20 04 52.1	-1.8
MASBT	Mashibuluo baz=298	0.88	301	⇓P	Pn	20 04 51.4	-2.6
CHKT	Chengkung baz=8.0	0.93	355	eP	Pn	20 04 52.4	-2.3
CHKT	baz=8.0			eS	Sb	20 05 04.2	-3.2
WLCH	Liuqiu baz=276	1.01	281	⇓eP	Pb	20 04 56.6	-0.1
WLCH	baz=276			S	Sn	20 05 08.3	-0.5
TWP	Hsiaoliuchiu baz=276	1.02	280	⇓eP	Pb	20 04 56.8	-0.2
TWP	baz=276			eS	Sb	20 05 10.0	0.0
FULB	Fuli baz=339	1.04	352	⇓iP	Pn	20 04 54.2	-2.0
FULB	baz=339			S	Sn	20 05 08.2	-1.4
SGLT	Jiouru baz=300	1.05	302	⇓P	Pn	20 04 55.2	-1.1
SGLT	baz=300			S	Sn	20 05 07.3	-2.5
ELDTW	Lidau baz=341	1.09	339	⇓iP	Pn	20 04 54.1	-2.9
SLGT	Liugui baz=322	1.11	318	⇓P	Pn	20 04 55.2	-2.0
SLGT	baz=322			eS	Sb	20 05 11.4	-1.1
KAU	Kaohsiung baz=288	1.13	291	eP	Pb	20 04 58.1	-0.6
KAU	baz=288			eS	Sb	20 05 13.7	+0.6
TWM1	Shoushan baz=312	1.15	305	⇓iP	Pn	20 04 57.6	-0.1
STYT	Tauyuan baz=337	1.18	327	⇓P	Pn	20 04 56.3	-1.9
STYT	baz=337			eS	Sn	20 05 12.5	-0.7
SNJT	Kaohsiung City baz=297	1.18	300	⇓P	Pb	20 04 58.6	-1.0
TWF1	Yuli baz=343	1.19	353	⇓P	Pn	20 04 55.5	-2.7
SGST	Jiashian baz=322	1.21	319	⇓P	Pn	20 04 56.7	-1.9
SGST	baz=322			eS	Sn	20 05 11.5	-2.5
YULB	Yu-li baz=344	1.23	353	⇓eP	Pn	20 04 56.0	-2.9
YULB	Yu-li	1.23	353		Pn	20 04 56.1	-2.7
HGSD	Ruisui baz=10.0	1.32	359	⇑eP	Pn	20 04 58.1	-1.9
HGSD	baz=10.0			eS	Sn	20 05 14.5	-2.1
WTP	Ta-pu baz=325	1.32	324	⇓iP	Pn	20 04 59.6	-0.6
WTP	baz=325			eS	Sn	20 05 16.6	-0.1
CHN1	Nanshi baz=320	1.32	320	⇓P	Pn	20 05 00.0	-0.1
CHN1	baz=320			eS	Sn	20 05 16.6	-0.1
EHY	Hungye baz=346	1.34	355	eP	Pn	20 04 57.7	-2.7
CHN3	Shinhua baz=311	1.35	312	⇓P	Pb	20 05 01.2	-1.2
CHN3	baz=311			eS	Sn	20 05 17.6	+0.2
TPUB	Ta-pu baz=326	1.36	326	⇓P	Pn	20 05 00.1	-0.6
TPUB	baz=326			eS	Sn	20 05 17.5	-0.1
TPUB	Ta-pu	1.36	326		Pn	20 05 00.0	-0.6
SNST	Tainan City baz=320	1.37	320	⇓P	Pn	20 05 00.7	0.0
SNST	baz=320			eS	Sb	20 05 18.2	-1.7
YUS	Yu-Shan baz=343	1.39	341	⇓eP	Pn	20 04 59.4	-2.1
TWK	Hsinying baz=321	1.41	321	⇓iP	Pn	20 05 01.1	-0.2
TWK	baz=321			eS	Sb	20 05 19.5	-1.6
CHN4	Tsaushan baz=338	1.42	326	⇓iP	Pn	20 05 01.1	-0.3
CHN4	baz=338			S	Sn	20 05 19.1	0.0
TAI1	Yung-k'ang baz=306	1.42	308	eP	Pn	20 05 01.3	-0.1
ALS	Alishan baz=337	1.46	336	⇓P	Pn	20 05 01.2	-1.1
EGFH	Guangfu baz=349	1.50	359	eP	Pn	20 05 01.7	-0.8
SCLT	Jiali baz=310	1.53	311	⇓iP	Pn	20 05 02.8	-0.2
SCLT	baz=310			S	Sn	20 05 22.2	+0.3
CHN5	Tsauling baz=334	1.59	334	⇓P	Pn	20 05 03.8	-0.1
CHN5	baz=334			eS	Sb	20 05 24.7	-1.7
VWDT	VWDT baz=6.0	1.60	350	⇓P	Pn	20 05 02.5	-1.5
VWDT	baz=6.0			eS	Sn	20 05 22.5	-1.1
WHYT	Xinyi Township baz=341	1.62	340	⇓eP	Pn	20 05 03.8	-0.4
WHYT	baz=341			eS	Sb	20 05 26.0	-1.1
CHY	Chiayi baz=324	1.63	325	⇓P	Pn	20 05 04.2	-0.1
CHY	baz=324			eS	Sn	20 05 24.6	+0.4
CHN8	Yiju baz=315	1.64	316	⇓P	Pn	20 05 04.0	-0.5
CHN8	baz=315			eS	Sb	20 05 25.7	-1.9
ESL	Shilin baz=351	1.64	359	eP	Pn	20 05 02.6	-1.9
SSLB	Suanglung baz=357	1.68	344	⇓P	Pn	20 05 04.0	-1.0
SSLB	baz=357			eS	Sn	20 05 25.8	+0.3
SSLB	Suanglung	1.68	344		Pn	20 05 03.9	-1.1
WLGB	Puzi baz=320	1.68	321	⇓iP	Pn	20 05 04.8	-0.2
WLGB	baz=320			eS	Sn	20 05 25.6	+0.1
WGK	Gukeng baz=332	1.72	332	⇓P	Pn	20 05 05.9	+0.4
WGK	baz=332			eS	Sn	20 05 27.0	+0.6
WDLH	Douliu baz=331	1.73	331	⇓eP	Pn	20 05 06.0	+0.2
WDLH	baz=331			S	Sb	20 05 28.1	-2.2
ENLB	Shoufeng baz=18	1.73	5	eP	Pn	20 05 03.9	-1.8
ENLB	baz=18			eS	Sn	20 05 25.8	-1.1
WJS	Zhushan baz=339	1.78	338	⇓P	Pn	20 05 07.2	+0.8
WJS	baz=339			eS	Sb	20 05 29.2	-2.4
SMLT	Sun Moon Lake baz=356	1.78	344	⇓eP	Pn	20 05 06.2	-0.3
SMLT	baz=356			eS	Sn	20 05 29.2	+1.0
OWD	Renai baz=6.0	1.80	352	eP	Pn	20 05 06.5	-0.3
HWA	Hwalien baz=19	1.81	5	eP	Pn	20 05 06.1	-0.7
TYC	Yuchr baz=344	1.81	343	⇓P	Pn	20 05 07.4	+0.6
TYC	baz=344			S	Sn	20 05 29.4	+0.6
WNT	Mingjian baz=339	1.84	338	⇓P	Pn	20 05 08.1	+0.8
WNT	baz=339			eS	Sb	20 05 30.8	-2.7
WSF	Szhu baz=322	1.85	323	⇓P	Pn	20 05 06.7	-0.7
WSF	baz=322			S	Sn	20 05 29.3	-0.4
CHGB	Renai baz=7.0	1.90	352	⇓eP	Pn	20 05 07.2	-1.0
CHGB	baz=7.0			eS	Sn	20 05 31.1	-0.1
TWD	Chiawan baz=355	1.91	4	eP	Pn	20 05 06.9	-1.2
TWD	baz=355			eS	Sn	20 05 30.6	-0.5
DPDB	Guoxing baz=330	1.92	346	⇓P	Pn	20 05 08.4	+0.1
DPDB	baz=330			eS	Sb	20 05 33.3	-2.5
WHF	Hehuan Shan baz=10.0	1.98	355	eP	Pn	20 05 08.7	-0.7
WDGT	Dungji baz=301	1.98	304	⇓iP	Pn	20 05 07.7	-1.4
WDGT	baz=301			eS	Sn	20 05 29.6	-3.2
RLNB	Erlin baz=330	1.99	330	⇓P	Pn	20 05 09.0	-0.2
RLNB	baz=330			eS	Sn	20 05 33.5	+0.4
NACB	Ninganchiao baz=355	2.00	4	eP	Pn	20 05 08.0	-1.4
NACB	baz=355			eS	Sn	20 05 31.5	-2.0
NACB	Ninganchiao	2.00	4		Pn	20 05 08.2	-1.2
WTCT	Ta-ch'eng baz=328	2.00	328	P	Pn	20 05 09.2	-0.2
WTCT	baz=328			eS	Sn	20 05 32.9	-0.6
ETLH	Xiulin Townshi baz=3.0	2.03	1	eP	Pn	20 05 08.8	-1.1
WCHH	Zhanghua baz=321	2.07	337	⇓P	Pn	20 05 10.7	+0.3
WCHH	baz=321			eS	Sn	20 05 36.0	+0.8
TDCB	Techi baz=6.0	2.09	353	⇓eP	Pn	20 05 10.3	-0.6
TCU	Taichung baz=324	2.10	340	eP	Pn	20 05 11.5	+0.8
VCHM	Qimei baz=297	2.13	299	⇓P	Pn	20 05 09.8	-1.5
VCHM	baz=297			eS	Sn	20 05 33.3	-3.4
WHP	Taichung City baz=1.0	2.15	348	⇓eP	Pn	20 05 12.8	+1.2
WHP	baz=1.0			eS	Sb	20 05 40.0	-2.5
PHUB	P'eng-hu baz=306	2.19	308	⇓P	Pn	20 05 10.4	-1.5
PHUB	baz=306			eS	Sn	20 05 34.7	-3.4
PNG	Penghu baz=307	2.23	309	⇓iP	Pn	20 05 11.1	-1.5
PNG	baz=307			S	Sn	20 05 37.0	-2.2
NNSB	Datong baz=1.0	2.25	358	eP	Pn	20 05 12.7	-0.3
NNSB	baz=1.0			eS	Sn	20 05 40.8	+1.0
NNSH	Datong baz=13	2.25	358	eP	Pn	20 05 13.3	+0.3
TWQ1	Liyutan baz=327	2.26	344	⇓P	Pn	20 05 14.2	+1.2
TWQ1	baz=327			eS	Sn	20 05 40.4	+0.6
NNS	Nan Shan baz=13	2.26	358	eP	Pn	20 05 13.1	-0.1
ENA	Nanau baz=358	2.27	7	eP	Pn	20 05 12.0	-1.1
WDJ	Dajia District baz=342	2.29	341	⇓eP	Pn	20 05 14.0	+0.6
WDJ	baz=342			eS	Sn	20 05 42.2	+1.6
NSY	Sanyi baz=346	2.33	344	eP	Pn	20 05 14.6	+0.7
NSY	baz=346			eS	Sn	20 05 42.0	+0.5
PTSB	Yuanli baz=344	2.37	343	eP	Pn	20 05 16.1	+1.6
PTSB	baz=344			eS	Sn	20 05 43.1	+0.6
NDT	Datong Townshi baz=4.0	2.42	1	eP	Pn	20 05 15.5	+0.3
NMLH	Miaoli baz=347	2.44	346	eP	Pn	20 05 16.1	+0.7
NMLH	baz=347			eS	Sb	20 05 47.2	-3.3
EOS1	EOS1 baz=29	2.45	15	eP	Pn	20 05 15.6	0.0
EOS1	baz=29			eS	Sn	20 05 44.5	0.0
ENTT	Nioudou baz=5.0	2.46	2	eP	Pn	20 05 15.5	-0.3
NSTT	Nanjuang baz=336	2.49	351	eP	Pn	20 05 16.7	+0.6
NSTT	baz=336			eS	Sn	20 05 47.2	+1.7
YHNB	Yeheng baz=1.0	2.49	358	⇑P	Pn	20 05 16.3	0.0
YHNB	baz=1.0			S	Sn	20 05 46.8	+1.1
YHNB	Yeheng	2.49	358		Pn	20 05 16.0	-0.2
LIOB	Emei baz=336	2.50	351	eP	Pn	20 05 17.1	+0.8
NSK	Sanguang baz=1.0	2.50	358	eP	Pn	20 05 16.5	+0.2
NSK	baz=1.0			eS	Sn	20 05 46.5	+0.7
TWE	Neicheng baz=358	2.55	4	eP	Pn	20 05 17.4	+0.4
SLBB	Yuanshan baz=6.0	2.58	4	eP	Pn	20 05 17.3	-0.1
NWLT	Wulai baz=3.0	2.60	1	eP	Pn	20 05 19.1	+1.5
ILA	Ilan baz=359	2.60	6	eP	Pn	20 05 17.8	+0.1
SBCB	Hsinchu baz=352	2.65	351	eP	Pn	20 05 19.4	+1.1
JYNG	Yonagunijimaku	2.66	31	P	Pn	20 05 18.5	+0.1
JYNG				eS	Sn	20 05 47.5	-2.1
HSN	Hsinchu baz=353	2.66	351	eP	Pn	20 05 19.2	+0.8
WLTB	Daxi baz=339	2.68	356	eP	Pn	20 05 20.2	+1.5
NTC	Toucheng baz=359	2.70	7	eP	Pn	20 05 20.4	+1.4
YOJ	Yonaguni jima	2.70	32	P	Pn	20 05 18.9	-0.1
YOJ				eS	Sn	20 05 48.4	-2.2
YOJ	Yonaguni jima	2.70	32		Pn	20 05 19.0	-0.1
NHDH	Xindian Distri baz=14	2.78	1	eP	Pn	20 05 21.5	+1.3
TATO	Taipei	2.79	1		Pn	20 05 20.7	+0.4
NCUH	Zhongli baz=339	2.80	355	eP	Pn	20 05 22.8	+2.4
NCU	National Centr baz=340	2.80	355	eP	Pn	20 05 21.2	+0.8

TWA	Mucha	2.80	3	eP	Pn	20 05 21.4	+0.9
	baz=5.0						
TIPB	Shuangxi	2.81	7	eP	Pn	20 05 21.4	+0.7
	baz=359						
TIPB				eS	Sn	20 05 54.3	+0.8
	baz=359						
TAP	Taipei	2.86	1	eP	Pn	20 05 21.5	+0.3
	baz=14						
HATJ	Hateruma jima	2.87	49	P	Pn	20 05 21.2	-0.2
HATJ				S	Sn	20 05 53.5	-1.4
TWB1	Santiao Chiao	2.87	10	eP	Pn	20 05 22.1	+0.7
	baz=1.0						
NWF	Wu-fen Shan	2.91	6	eP	Pn	20 05 22.5	+0.5
	baz=9.0						
WFSB	Wu-fen Shan	2.91	6	eP	Pn	20 05 22.9	+1.1
	baz=9.0						
TWS1	Kuangyinshan	2.92	359	eP	Pn	20 05 21.9	-0.2
	baz=14						
YM01	YM01	2.97	2	eP	Pn	20 05 23.4	+0.6
	baz=4.0						
YM10	YM10	2.98	2	eP	Pn	20 05 23.5	+0.6
	baz=4.0						
YM11	YM11	2.99	2	eP	Pn	20 05 23.1	+0.1
	baz=4.0						
ANP	Anpu	3.01	1	eP	Pn	20 05 24.4	+1.0
	baz=17						
IRIF	Iriomote-Funau	3.01	44	P	Pn	20 05 23.3	0.0
IRIF				eS	Sn	20 05 56.9	-1.4
YM08	YM08	3.01	2	eP	Pn	20 05 24.2	+0.8
	baz=5.0						
TWY	Chenhua	3.10	3	eP	Pn	20 05 27.0	+2.5
	baz=5.0						
JKRS	Kuro-shima	3.13	48	P	Pn	20 05 25.0	+0.1
JKRS				eS	Sn	20 05 59.7	-1.6
JIJ	Ishigaki jima	3.30	48	P	Pn	20 05 27.7	+0.4
JIJ				S	Sn	20 06 02.9	-2.7
VWUC	VWUC	3.36	327	⇓eP	Pn	20 05 26.7	-1.4
	baz=326						
PCYT	Pengchaiyu	3.49	9	eP	Pn	20 05 31.6	+1.6
	baz=2.0						
KNM	Kinmen	3.56	310	⇓eP	Pn	20 05 30.8	-0.1
	baz=305						
KNM				eS	Sn	20 06 11.8	-0.1
	baz=305						
JISG	Ishigakijimahi	3.57	47	P	Pn	20 05 31.0	+0.1
JISG				eS	Sn	20 06 10.0	-2.0
PTMZ	Houxiangcun	3.57	324	⇓P	Pn	20 05 29.5	-1.5
	baz=322						
PTMZ				eS	Sn	20 06 09.2	-2.9
	baz=322						
KNMB	Chin-men Tao	3.62	310	⇓eP	Pn	20 05 30.4	-1.4
	baz=307						
KNMB	Chin-men Tao	3.62	310		Pn	20 05 30.2	-1.5
PTTC	Pingtan	3.66	335	⇓P	Pn	20 05 31.2	-1.0
	baz=335						
PTTC				eS	Sn	20 06 11.4	-2.8
	baz=335						
QZH	Quanzhou	3.81	317	⇓iPn	Pn	20 05 32.6	-1.7
QZH				Sn	Sn	20 06 14.3	-3.7
QZH				LR	LR		
	comp=Z,4µm,12.5s						
ZPLA	Ao Xicun	3.83	298	⇓eP	Pn	20 05 33.2	-1.4
	baz=294						
ZPLA				eS	Sn	20 06 15.2	-3.4
	baz=294						
JTJ	Tarama	3.87	50	P	Pn	20 05 35.0	-0.1
JTJ				S	Sn	20 06 18.6	-1.0
ZZJH	Jiuhuzhen	4.19	304	⇓eP	Pn	20 05 38.3	-1.3
	baz=300						
ZZJH				eS	Sn	20 06 25.8	-1.7
	baz=300						
AXDP	Jialang	4.19	311	⇓eP	Pn	20 05 38.3	-1.3
	baz=307						
AXDP				eS	Sn	20 06 24.4	-3.1
	baz=307						
MATB	Ma-tsu	4.20	341	⇓eP	Pn	20 05 38.4	-1.2
	baz=341						
MATB				eS	Sn	20 06 23.9	-3.7
	baz=341						
JIRB	Irabujima	4.32	52	P	Pn	20 05 41.3	-0.1
JIRB				S	Sn	20 06 29.3	-1.4
JMJ2	Miyako jima3	4.39	54	P	Pn	20 05 42.5	+0.3
JMJ2				S	Sn	20 06 31.2	-1.1
JIKM	Ikemajima	4.44	51	P	Pn	20 05 42.5	-0.4
JIKM				S	Sn	20 06 31.9	-1.6
JOGS	Gusukube	4.46	54	P	Pn	20 05 43.3	+0.1
JOGS				eS	Sn	20 06 32.3	-1.7
MHZQ	Yeshan	4.50	331	⇓eP	Pn	20 05 42.6	-1.1
	baz=329						
MHZQ				eS	Sn	20 06 32.1	-2.8
	baz=329						
LYJJ	Jianjiangzhen	4.63	341	⇓eP	Pn	20 05 44.5	-1.1
	baz=341						
VDOS	Pratas Island	4.63	253	eP	Pn	20 05 45.6	0.0
	baz=250						
SZP	Santa	4.69	192		Pn	20 05 46.9	+0.5
XPSS	Dashiqiu	4.88	347	eP	Pn	20 05 48.1	-0.8
	baz=347						
PCPH	Palayan	6.58	183	⇓eP	Pn	20 06 13.9	+1.5
HKPS	Hong Kong Po S	6.77	272		Pn	20 06 14.1	-0.9
GZH	Guangzhou	7.54	279	Pn	Pn	20 06 21.6	-4.0
GZH				Sn	Sn	20 07 37.1	-13
GZH				smax	smax		
	comp=N,610nm,0.9s						
GZH				smax	smax		
	comp=E,330nm,0.8s						
JOW	Kunigami	7.76	52	P	Pn	20 06 28.1	-0.5
	1.1nm,0.3s,baz=110,slow=15,SNR=19						
JOW				S	Sn	20 07 51.6	-3.8
	0.5nm,0.3s,baz=73,slow=25,SNR=4.8						
LQP	Lukban	8.01	179	eP	Pn	20 06 31.4	-0.9
TGY	Tagaytay City	8.04	184	P	Pn	20 06 36.5	+4.0
	31nm,0.3s,baz=195,slow=8.8,SNR=3.0						
TGY				LR	LR	20 10 32.9	
	comp=Z,871nm,19.7s,baz=10.0,slow=44						
NJ2	Nanjing	10.11	347	eP	Pn	20 07 00.4	-0.4
NJ2				S	Sn	20 08 55.3	+2.1
NJ2				pmax	pmax		
	comp=Z,21nm,0.5s						
NJ2				smax	smax		
	comp=N,110nm,1.1s						
NJ2				smax	smax		
	comp=E,91nm,1.1s						
NJ2				LR	LR		
	comp=N,3µm,12.6s						
NJ2				LR	LR		
	comp=E,1µm,11.9s						
NJ2				LR	LR		
	comp=Z,4µm,12.2s						
WHN	Wuhan	10.49	324	P	Pn	20 06 58.3	-7.7
WHN				S	Sn	20 09 01.0	-1.4
QIZ	Qiongzhong	11.31	256	P	Pn	20 07 16.6	-0.7
QIZ				S	Sn	20 09 23.6	+1.0
QIZ				LR	LR		
	comp=N,3µm,17.4s						
QIZ				LR	LR		
	comp=E,1µm,19.9s						
QIZ				LR	LR		
	comp=Z,2µm,11.7s						
QIZ	Qiongzhong	11.31	256	Pn	Pn	20 07 15.5	-1.8
ENH	Enshi	13.42	309		Pn	20 07 45.2	-1.0
JNU	Nakatsue	13.73	35	P	P	20 07 58.2	-0.4
	0.3nm,0.3s,baz=236,slow=5.5,SNR=3.5						
JNU	Nakatsue	13.73	35		Pn	20 07 50.3	-0.1
GYA	Guiyang	14.14	291	⇑iP	Pn	20 07 55.8	-0.2
GYA				S	Sn	20 10 26.9	-5.1
GYA				pmax	pmax		
	comp=Z,50nm,1.0s						
GYA				pmax	pmax		
	comp=Z,180nm,4.8s						
GYA				LR	LR		
	comp=N,1µm,13.5s						
GYA				LR	LR		
	comp=E,2µm,15.4s						
GYA				LR	LR		
	comp=Z,4µm,15.4s						
TIA	Tai'an	14.49	346	P	Pn	20 08 02.9	+2.2
TIA				S	Sn	20 10 46.1	+5.8
TIA				pmax	pmax		
	comp=Z,130nm,1.7s						
TIA				LR	LR		
	comp=N,2µm,13.5s						
TIA				LR	LR		
	comp=E,680nm,11.4s						
TIA				LR	LR		
	comp=Z,3µm,12.8s						
CTBH	Cotabato--PC H	15.10	169	⇓iP	P	20 08 14.9	+1.1
KCP	Kidapawan	15.47	166	⇓eP	P	20 08 16.8	-1.3
DLV	T Lat	16.02	233	P	P	20 08 23.4	-0.9
DLV				IAmb	IAmb	20 08 29.5	
	comp=Z,253nm,1.9s						
XAN	Xi'an	16.17	320	P	Pn	20 08 22.9	+0.1
XAN				S	S	20 11 29.3	-4.4
XAN				pmax	pmax		
	comp=Z,40nm,0.9s						
XAN				LR	LR		
	comp=Z,1µm,18.2s						
XAN				LR	LR		
	comp=Z,2µm,13.1s						
XAN				LR	LR		
	comp=Z,2µm,15.7s						
XAN	Xi'an	16.17	320		Pn	20 08 22.7	-0.1
KSAR	Wonju Array Be	16.21	19	P	P	20 08 24.5	-1.5
KSRS	Korea Array	16.23	19	P	P	20 08 26.0	-0.2
	comp=Z,0.3nm,0.3s,baz=200,slow=13,SNR=34						
KSRS				LR	LR	20 15 24.0	
	comp=Z,397nm,18.7s,baz=196,slow=40						
KS19	Wonju Array Si	16.26	19		Pn	20 08 24.5	+0.7
SLVN	Son La	16.32	270		Pn	20 08 23.8	-1.0
UBPT	Khong Chiam	16.61	248	P	P	20 08 29.8	-0.8
DL2	Dalian	16.69	0	P	Pn	20 08 27.8	-1.4
DL2				S	Sn	20 11 33.3	-0.2
DL2				pmax	pmax		
	comp=Z,19nm,1.2s						
DL2				pmax	pmax		
	comp=Z,280nm,5.6s						
DL2				LR	LR		
	comp=Z,680nm,10.9s						
DL2				LR	LR		
	comp=Z,720nm,12.0s						
DL2				LR	LR		
	comp=Z,950nm,14.0s						
KKM	Kota Kinabalu	16.81	198	P	Pn	20 08 32.2	+1.2
KKM				IAmb	IAmb	20 08 37.2	
	comp=Z,269nm,1.7s						
TIY	Taiyuan	17.34	335	eP	P	20 08 40.4	+1.8
TIY				PP	sP	20 08 52.4	+2.3
TIY				S	Sn	20 11 49.3	-0.2
TIY				pmax	pmax		
	comp=Z,340nm,5.5s						
TIY				LR	LR		
	comp=Z,3µm,11.4s						
TIY				LR	LR		
	comp=Z,1µm,10.2s						
TIY				LR	LR		
	comp=Z,3µm,15.1s						
KMI	Kunming	17.39	283	P	P	20 08 39.5	0.0
KMI				pP	pP	20 08 42.4	-5.0
KMI				sP	pwP	20 08 44.9	-2.5
KMI				PP	sP	20 08 54.8	+3.8
KMI				S	Sn	20 11 48.5	-2.7
KMI				sS	S	20 11 55.1	-3.9
KMI				SS	SnSn	20 12 10.3	+5.6
KMI				pmax	pmax		
	comp=Z,15nm,1.1s						
KMI				pmax	pmax		
	comp=Z,280nm,5.3s						
KMI				LR	LR		
	comp=Z,1µm,18.9s						
KMI				LR	LR		
	comp=Z,2µm,19.5s						
KMI				LR	LR		
	comp=Z,2µm,14.3s						
KMI	Kunming	17.39	283	P	Pn	20 08 38.5	+0.1
CD2	Chengdu	18.05	303	P	P	20 08 46.8	+0.3
CD2				sP	pP	20 08 53.8	-0.5
CD2				PP	PnPn	20 09 03.5	+5.9
CD2				S	Sn	20 12 06.5	-0.3
CD2				sS	S	20 12 15.3	+3.3
CD2				pmax	pmax		
	comp=Z,70nm,1.1s						
CD2				pmax	pmax		
	comp=Z,360nm,6.1s						
CD2				LR	LR		
	comp=Z,2µm,12.1s						
CD2				LR	LR		
	comp=Z,2µm,15.0s						
CD2				LR	LR		
	comp=Z,3µm,14.2s						
BJT	Baijiatuau	18.35	347	P	Pn	20 08 50.1	+0.3
BJT				IAmb	IAmb	20 08 59.0	
	comp=Z,119nm,1.9s						
BJI	Beijing	18.37	347	P	Pn	20 08 51.4	+1.3
BJI				S	S	20 12 17.0	-1.2
BJI				pmax	pmax		
	comp=Z,14nm,0.7s						
BJI				LR	LR		
	comp=Z,1µm,13.1s						
BJI				LR	LR		
	comp=Z,540nm,12.6s						
BJI				LR	LR		
	comp=Z,660nm,16.9s						
INU	Inuyama	18.91	43	P	Pn	20 08 56.9	+0.3
INU				IAmb	IAmb	20 09 08.9	
	comp=Z,38nm,0.8s						
PBKT	Sadao Pong	20.10	258	P	P	20 09 08.5	-0.5
MAJO	Matsushiro	20.41	42	P	P	20 09 12.7	+0.4
MAJO				IAmb	IAmb	20 09 29.4	
	comp=Z,52nm,1.2s						
MAT	Matsushiro	20.41	42	P	Pn	20 09 15.6	+1.1
MAT				S	S	20 12 57.0	-2.4
MJB9	Matsu-Tunnel	20.41	42	P	Pn	20 09 13.3	-1.3
MJB9				IAmb	IAmb	20 09 29.4	
	comp=Z,54nm,1.2s						
MJAR	Matsushiro Arr	20.41	42	P	Pn	20 09 14.3	-0.2
	comp=Z,29nm,0.9s,baz=232,slow=10,SNR=56						
MJAR				LR	LR	20 18 02.3	
	comp=Z,254nm,20.0s,baz=225,slow=39						
MJAR	Matsushiro Arr	20.41	42	P	P	20 09 13.1	+0.8
HHC	Hu-ho-hao-te	20.42	338	eP	Pn	20 09 13.8	-0.8
HHC				pP	pP	20 09 18.3	-1.8
HHC				sP	sP	20 09 22.5	-1.4
HHC				PP	PnPn	20 09 32.3	+2.2
HHC				S	Sn	20 13 02.0	-1.9
HHC				SS	SnSn	20 13 29.6	+11
HHC				pmax	pmax		
	comp=Z,110nm,0.7s						
HHC				pmax	pmax		
	comp=Z,430nm,3.8s						
HHC				LR	LR		
	comp=Z,1µm,10.2s						
HHC				LR	LR		
	comp=Z,660nm,9.5s						
HHC				LR	LR		
	comp=Z,1µm,11.7s						
LZH	Lanzhou	20.66	316	⇑P	Pn	20 09 17.5	-0.1
LZH				sP	pP	20 09 22.3	-0.8
LZH				PP	PnPn	20 09 32.3	-1.2
LZH				S	Sn	20 13 09.1	-0.9
LZH				pmax	pmax		
	comp=Z,34nm,1.1s						
LZH				pmax	pmax		
	comp=Z,480nm,4.9s						
LZH				LR	LR		
	comp=Z,1µm,13.0s						
LZH				LR	LR		
	comp=Z,1µm,13.3s						
LZH				LR	LR		
	comp=Z,2µm,13.0s						
BTO	Baotou	20.77	335	eP	Pn	20 09 18.1	-0.7
CHTO	Chiang Mai	21.34	265	P	P	20 09 23.3	+0.9
CM31	Chiang Mai Arr	21.42	264	P	P	20 09 24.9	+1.6
CMAR	Chiang Mai Arr	21.42	264	P	P	20 09 25.2	+1.9
	comp=Z,12nm,0.8s,baz=73,slow=9.3,SNR=51						
CMAR				PcP	PcP	20 13 26.5	+0.2
	comp=Z,1.3nm,0.7s,baz=98,slow=0.3,SNR=7.1						
CMAR				ScP	ScP	20 16 58.5	-2.7
	comp=Z,1.0nm,0.8s,baz=42,slow=1.3,SNR=5.9						
CMAR				LR	LR	20 18 50.1	
	comp=Z,712nm,19.0s,baz=82,slow=40						
CMAR	Chiang Mai Arr	21.42	264	P	P	20 09 24.8	+1.4
SBUM	Sibu	21.55	206	P	P	20 09 24.9	+0.2
SBUM				IAmb	IAmb	20 09 28.8	
	comp=Z,51nm,1.0s						
SBUM	Sibu	21.55	206	P	P	20 09 26.0	+1.3
CN2	Changchun	21.83	8	eP	P	20 09 28.1	+0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TNTI	Ternate	22.03	164	P	P	20 09 31.9	+2.0
TNTI	Ternate	22.03	164	P	P	20 09 28.7	-1.2
TNTI				IAmb	IAmb	20 09 33.6	
	comp=Z,50nm,0.8s						
SMKI	Samarinda	22.85	191	P	P	20 09 40.8	+2.2
LUWI	Luwuk	23.10	177	P	P	20 09 39.0	-2.2
LUWI	Luwuk	23.10	177	P	P	20 09 40.0	-1.1
KSM	Kuching	23.25	209	P	P	20 09 42.4	-0.2
KSM	Kuching	23.25	209	P	P	20 09 43.0	+0.3
MDJ	Mudanjiang	23.37	15	P	P	20 09 45.0	+1.4
MDJ				pP	pP	20 09 47.8	-3.7
MDJ				PP	sP	20 10 12.8	+17
MDJ				S	S	20 13 58.6	+4.1
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,260nm,5.0s						
MDJ				LR	LR		
	comp=Z,800nm,8.3s						
MDJ				LR	LR		
	comp=Z,530nm,5.3s						
MDJ				LR	LR		
	comp=Z,950nm,13.4s						
MDJ	Mudanjiang	23.37	15	P	P	20 09 44.2	+0.6
MDJ				IAmb	IAmb	20 10 00.4	
	comp=Z,30nm,1.3s						
USA0B	Ussuriysk Arra	23.64	19	P	P	20 09 46.4	+0.2
USRK	Ussuriysk Ar.	23.64	19	P	P	20 09 48.1	+1.9
	comp=Z,3.4nm,0.7s,baz=209,slow=10,SNR=8.5						
USRK				LR	LR	20 19 39.3	
	comp=Z,367nm,19.7s,baz=176,slow=38						
USRK	Ussuriysk Ar.	23.64	19	P	P	20 09 46.9	+0.7
BKB	Balikpapan	23.70	191	P	P	20 09 48.1	+1.1
BKB	Balikpapan	23.70	191	P	P	20 09 47.2	+0.1
GUMO	Guam	23.84	107	LR	LR	20 16 59.1	
	comp=Z,270nm,21.0s,baz=262,slow=31						
SANI	Sanana	24.47	169	P	P	20 09 50.3	-3.9
SIJI	Sorong	24.82	156	P	P	20 09 55.8	-1.6
	comp=Z,13nm,0.7s,baz=340,slow=19,SNR=6.1						
GTA	Gaotai	25.21	318	⇑P	P	20 10 01.6	+0.7
GTA				pP	pP	20 10 05.4	-3.9
GTA				sP	pwP	20 10 07.8	-3.7
GTA				S	S	20 14 27.3	+2.9
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,110nm,5.6s						
GTA				LR	LR		
	comp=Z,660nm,20.3s						
GTA				LR	LR		
	comp=Z,690nm,19.4s						
GTA				LR	LR		
	comp=Z,860nm,20.3s						
KBKI	Kotabaru	25.83	192	P	P	20 10 08.9	+2.4
NLAI	Namlea	25.85	167	P	P	20 10 07.6	+1.0
	comp=Z,142nm,1.0s						
MSAI	Masohi	26.39	163	P	P	20 10 13.7	+2.1
IPM	Ipoh	26.47	231	P	P	20 10 11.8	-0.5
IPM	Ipoh	26.47	231	P	P	20 10 12.0	-0.3
MYKOM	Kota Tinggi	26.52	223	P	P	20 10 12.6	-0.1
MYKOM				IAmb	IAmb	20 10 19.7	
	comp=Z,34nm,0.9s						
MYKOM	Kota Tinggi	26.52	223	P	P	20 10 14.0	+1.3
AAI	Ambon	26.53	165	P	P	20 10 12.1	-0.7
	comp=Z,47nm,0.9s						
ERM	Erimo	26.88	38	P	P	20 10 17.0	+1.3
ERM				IAmb	IAmb	20 10 34.2	
	comp=Z,65nm,1.1s						
KAPI	Kappang	27.07	184	P	P	20 10 17.5	-0.1
	comp=Z,16nm,0.9s,baz=359,slow=6.5,SNR=17						
KAPI				LR	LR	20 21 15.6	
	comp=Z,413nm,21.7s,baz=9.5,slow=37						
FAKI	Fak Fak	27.08	156	P	P	20 10 16.9	-0.8
FAKI				IAmb	IAmb	20 10 25.7	
	comp=Z,38nm,0.9s						
HIA	Hailar	27.08	358	P	P	20 10 17.0	-0.5
SHL	Shillong	27.22	283	P	P	20 10 18.4	-0.9
SHL				IAmb	IAmb	20 10 29.4	
	comp=Z,22nm,0.9s						
BRDH	Bariadhala	27.54	277	LR	LR	20 22 54.5	
	comp=Z,451nm,19.7s,baz=116,slow=40						
ASAJ	Asahikawa	28.00	34	P	P	20 10 27.6	+1.8
	comp=Z,3.4nm,0.3s,baz=190,slow=32,SNR=6.3						
ASAJ				LR	LR	20 21 39.2	
	comp=Z,498nm,21.9s,baz=235,slow=36						
JKA	Kamikawa-asahi	28.00	34	P	P	20 10 27.6	+1.8
ULN	Ulaanbaatar	28.12	339	P	P	20 10 26.3	-0.8
LSA	Lhasa	28.20	292	P	P	20 10 28.5	+0.2
LSA				IAmb	IAmb	20 10 42.0	
	comp=Z,66nm,1.7s						
KLR	Kul'dur	28.22	14	P	P	20 10 28.0	+0.3
	comp=Z,2.5nm,0.8s,baz=200,slow=5.3,SNR=7.4						
KLR				PcP	PcP	20 13 39.6	-1.1
	comp=Z,2.0nm,0.8s,baz=176,slow=4.5,SNR=4.5						
KLR				LR	LR	20 22 09.5	
	comp=Z,448nm,21.9s,baz=208,slow=37						
SONM	Songino Array	28.32	338	P	P	20 10 28.8	0.0
	comp=Z,3.4nm,0.6s,baz=154,slow=9.5,SNR=24						
SONM				ScP	ScP	20 17 17.8	-2.2
	comp=Z,1.6nm,1.0s,baz=132,slow=4.2,SNR=5.3						
SONM				LR	LR	20 22 54.6	
	comp=Z,2µm,19.6s,baz=153,slow=38						
SONM	Songino Array	28.32	338	P	P	20 10 27.9	-0.8
PSI	Prapat	29.14	232	P	P	20 10 36.4	0.0
	comp=Z,12nm,0.9s,baz=271,slow=2.5,SNR=4.9						
PSI				LR	LR	20 22 01.1	
	comp=Z,634nm,19.9s,baz=52,slow=36						
RPSI	Rantau Prapat	29.21	232	P	P	20 10 36.4	-0.4
RPSI	Rantau Prapat	29.21	232	P	P	20 10 35.8	-1.0
RPSI				IAmb	IAmb	20 10 41.8	
	comp=Z,15nm,1.0s						
BKNI	Bangkinang	29.44	225	P	P	20 10 38.9	0.0
PMBI	Palembang	29.80	215	P	P	20 10 42.3	+0.3
YSS	Yuzh-Sakhalins	30.13	30	P	P	20 10 45.1	+0.5
YSS				IAmb	IAmb	20 11 03.3	
	comp=Z,33nm,1.0s						
SDSI	Sungai Dareh	30.14	223	P	P	20 10 46.3	+1.2
	comp=Z,21nm,1.1s						
MMRI	Maumere	30.62	178	P	P	20 10 50.0	+0.7
	comp=Z,4µmcomp=Z,98nm,1.3s						
MMRI	Maumere	30.62	178	P	P	20 10 48.4	-0.8
SRBI	Singaraja	30.68	192	P	P	20 10 50.9	+1.1
	comp=Z,30nm,1.5s						
PDSI	Padang	30.75	224	P	P	20 10 53.3	+2.8
SMRI	Semarang	30.98	202	P	P	20 10 52.8	+0.4
TAPN	Taplejung	31.01	286	eP	P	20 10 54.3	+1.3
	comp=Z,41nm,1.2s						
PLAI	Plampang	31.01	187	P	P	20 10 52.1	-0.6
	comp=Z,817nmcomp=Z,51nm,1.2s						
KRJI	Kerinci	31.02	222	P	P	20 10 53.9	+0.9
	comp=Z,2µmcomp=Z,214nm,1.0s						
JAGI	Jajag, Banyuwa	31.28	194	P	P	20 10 56.4	+1.3
	comp=Z,18nm,1.0s						
JAGI	Jajag, Banyuwa	31.28	194	P	P	20 10 55.6	+0.6
JAGI				IAmb	IAmb	20 11 01.2	
	comp=Z,18nm,1.1s						
ODAN	Odare	31.28	286	eP	P	20 10 56.5	+1.1
	comp=Z,24nm,1.1s						
MDSI	Maura Dua	31.42	215	P	P	20 10 57.4	+1.1
	comp=Z,43nm,1.1s						
WOJI	Wonogiri, Jawa	31.55	200	P	P	20 10 58.2	+0.7
	comp=Z,2µmcomp=Z,173nm,1.0s						
UGM	Wanagama	31.75	201	P	P	20 11 00.8	+1.5
	comp=Z,159nm,1.2s						
UGM	Wanagama	31.75	201	P	P	20 10 59.8	+0.5
SOEI	Soe	31.84	175	P	P	20 10 58.8	-1.4
	comp=Z,38nm,0.9s						
SOEI	Soe	31.84	175	P	P	20 10 59.9	-0.3
SOEI				IAmb	IAmb	20 11 15.4	
	comp=Z,26nm,0.8s						
LWLI	Liwa	31.93	214	P	P	20 11 01.6	+0.6
	comp=Z,54nm,0.9s						
MNAI	Manna	31.98	217	P	P	20 11 00.8	-0.4
RAMN	Ramite	31.99	286	eP	P	20 11 03.1	+1.5
	comp=Z,30nm,1.1s						
BASI	Baing, Sumba	32.20	182	P	P	20 11 14.0	+11
JIRN	Jiri	32.37	287	eP	P	20 11 06.3	+1.2
	comp=Z,62nm,1.1s						
CISI	Cisompet, Garu	32.42	206	P	P	20 10 59.5	-5.7
CISI	Cisompet, Garu	32.42	206	P	P	20 11 04.2	-1.0
TLY	Talaya	32.54	339	P	P	20 11 05.3	-0.5
GUN	Gumba	32.65	287	eP	P	20 11 08.5	+1.0
	comp=Z,44nm,1.1s						
PKI	Pulchoki	33.06	287	eP	P	20 11 12.0	+0.9
PKIN	Phulchoki	33.07	287	eP	P	20 11 12.1	+1.0
KKN	Kakani	33.18	287	eP	P	20 11 12.9	+0.9
DMN	Daman	33.33	287	eP	P	20 11 14.2	+0.8
GKN	Gorkha	33.75	288	eP	P	20 11 17.5	+0.6

	comp=Z,25nm,1.0s						
DANN	**Dangsing**	**34.54**	**288**	*e*P	**P**	**20 11 24.6**	**+0.7**
	comp=Z,38nm,1.2s						
WMQ	**Urumqi**	**35.24**	**316**	*e*P	**P**	**20 11 31.3**	**+1.8**
WMQ				pmax	pmax		
	comp=Z,13nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,120nm,4.3s						
WMQ				LR	LR		
	comp=Z,410nm,23.3s						
WMQ				LR	LR		
	comp=Z,1µm,29.2s						
WMQ				LR	LR		
	comp=Z,250nm,21.7s						
MK31	**Makanchi Array**	**39.97**	**318**	P	**P**	**20 12 09.7**	**+0.4**
MK31				IAmb	IAmb	20 12 26.2	
	comp=Z,13nm,0.8s						
MKAR	**Makanchi Array**	**39.97**	**318**	P	**P**	**20 12 10.3**	**+1.0**
	comp=Z,8.7nm,0.8s,baz=108,slow=9.3,SNR=54						
MKAR				ScP	**ScP**	**20 17 58.5**	**-2.6**
	comp=Z,0.4nm,0.6s,baz=127,slow=4.2,SNR=4.1						
MKAR				LR	LR	20 30 14.0	
	comp=Z,437nm,19.4s,baz=104,slow=38						
MKAR	**Makanchi Array**	**39.97**	**318**	P	**P**	**20 12 09.7**	**+0.3**
MAKZ	**Makanchi**	**40.17**	**317**	P	**P**	**20 12 11.1**	**0.0**
MAKZ				IAmb	IAmb	20 12 28.0	
	comp=Z,17nm,0.8s						
YAK	**Yakutsk**	**40.24**	**6**	P	**P**	**20 12 10.3**	**-1.1**
YAK				IAmb	IAmb	20 12 17.3	
	comp=Z,11nm,0.6s						
PRZ	**Przheval'sk**	**41.10**	**310**	P	**P**	**20 12 18.3**	**-0.8**
PRZ				IAmb	IAmb	20 12 34.8	
	comp=Z,19nm,1.1s						
PETK	**Petropavlovsk-**	**41.41**	**33**	LR	LR	20 28 51.5	
	comp=Z,119nm,18.6s,baz=240,slow=35						
PETK	**Petropavlovsk-**	**41.41**	**33**	P	**P**	**20 12 21.6**	**+0.4**
ZAA0	**Zalesovo Array**	**42.07**	**328**	P	**P**	**20 12 25.9**	**-0.6**
ZAA0				IAmb	IAmb	20 12 32.0	
	comp=Z,18nm,0.8s						
ZALV	**Zalesovo Beam**	**42.07**	**328**	P	**P**	**20 12 26.7**	**+0.1**
	comp=Z,10nm,0.6s,baz=118,slow=7.3,SNR=32						
ZALV				ScP	**ScP**	**20 18 05.9**	**-3.4**
	comp=Z,2.2nm,0.9s,baz=113,slow=3.9,SNR=5.6						
ZALV				LR	LR	20 31 42.4	
	comp=Z,446nm,19.2s,baz=118,slow=38						
ZALV	**Zalesovo Beam**	**42.07**	**328**	P	**P**	**20 12 25.6**	**-0.9**
KSH	**Kashi**	**42.22**	**305**	P	**P**	**20 12 31.5**	**+3.3**
KSH				pP	pP	20 12 35.8	-1.2
KSH				PcP	**PcP**	**20 14 24.3**	**+2.4**
KSH				PcS	**PcS**	**20 18 16.3**	**+2.5**
KSH				S	**S**	**20 18 52.4**	**+5.7**
KSH				ScS	**ScS**	**20 22 31.0**	**+2.7**
KSH				pmax	pmax		
	comp=Z,15nm,1.2s						
KSH				pmax	pmax		
	comp=Z,360nm,5.9s						
KSH				LR	LR		
	comp=Z,360nm,10.0s						
KSH				LR	LR		
	comp=Z,420nm,10.7s						
KSH				LR	LR		
	comp=Z,660nm,17.3s						
H11N1	**WAKE ISLAND Hy**	**42.39**	**85**	T	T	20 57 39.0	
	baz=282,slow=75,SNR=200						
H11N2	**WAKE ISLAND Hy**	**42.40**	**85**	T	T	20 57 42.3	
	baz=282,slow=75,SNR=252						
H11N3	**WAKE ISLAND Hy**	**42.41**	**85**	T	T	20 57 38.9	
	baz=282,slow=75,SNR=180						
H11S3	**WAKE ISLAND Hy**	**42.46**	**86**	T	T	20 57 50.8	
	baz=283,slow=75,SNR=589						
H11S1	**WAKE ISLAND Hy**	**42.47**	**86**	T	T	20 57 42.3	
	baz=283,slow=75,SNR=508						
H11S2	**WAKE ISLAND Hy**	**42.48**	**86**	T	T	20 57 43.0	
	baz=283,slow=75,SNR=467						
NRN	**Naryn**	**42.58**	**308**	P	**P**	**20 12 32.0**	**+0.6**
WB0	**Warramunga Arr**	**43.55**	**162**	P	**P**	**20 12 36.6**	**-2.3**
WB0				IAmb	IAmb	20 12 42.4	
	comp=Z,12nm,0.8s						
WRA	**Warramunga Arr**	**43.71**	**162**	P	**P**	**20 12 37.9**	**-2.3**
	comp=Z,7.9nm,0.5s,baz=344,slow=9.0,SNR=61						
WB2	**Warramunga Arr**	**43.71**	**162**	P	**P**	**20 12 38.1**	**-2.1**
WB2				IAmb	IAmb	20 12 43.7	
	comp=Z,19nm,0.8s						
NIL	**Nilore**	**43.75**	**296**	P	**P**	**20 12 38.5**	**-2.1**
NIL				IAmb	IAmb	20 12 42.9	
	comp=Z,10nm,0.7s						
KURK	**Kurchatov**	**43.80**	**321**	P	**P**	**20 12 40.0**	**-0.5**
AAK	**Ala-Archa**	**43.94**	**309**	P	**P**	**20 12 42.4**	**+0.3**
ARSB	**Arslanbob**	**44.79**	**307**	P	**P**	**20 12 48.4**	**-0.5**
GAR	**Garm**	**46.50**	**303**	P	**P**	**20 13 02.9**	**+0.5**
KK31	**Karatay Array**	**46.90**	**309**	P	**P**	**20 13 05.4**	**0.0**
KK31				IAmb	IAmb	20 13 21.2	
	comp=Z,10nm,0.9s						
KKAR	**Karatay Array**	**46.90**	**309**	P	**P**	**20 13 06.1**	**+0.7**
AS31	**Alice Springs**	**47.14**	**164**	P	**P**	**20 13 06.2**	**-1.1**
AS31				IAmb	IAmb	20 13 09.1	
	comp=Z,3.0nm,0.4s						
ASAR	**Alice Springs**	**47.14**	**164**	P	**P**	**20 13 05.8**	**-1.5**
	comp=Z,5.1nm,0.7s,baz=344,slow=7.9,SNR=65						
ASAR				PcP	**PcP**	**20 14 37.9**	**-0.9**
	comp=Z,3.1nm,0.9s,baz=341,slow=3.1,SNR=3.5						
ASAR				LR	LR	20 33 33.7	
	comp=Z,71nm,18.3s,baz=336,slow=37						
KBL	**Kabul**	**47.27**	**297**	P	**P**	**20 13 09.8**	**+1.3**
KBL				IAmb	IAmb	20 13 22.8	
	comp=Z,39nm,1.4s						
CHGR	**Chuyangaron**	**47.37**	**303**	P	**P**	**20 13 09.5**	**+0.4**
CTA	**Charters Tower**	**48.49**	**148**	P	**P**	**20 13 16.4**	**-1.4**
	comp=Z,7.1nm,0.8s,baz=334,slow=9.8,SNR=13						
BRVK	**Borovoye**	**49.46**	**322**	P	**P**	**20 13 25.4**	**+0.5**
BRVK				IAmb	IAmb	20 13 41.3	
	comp=Z,15nm,0.9s						
TIXI	**Tiksi**	**49.69**	**3**	P	**P**	**20 13 26.0**	**-0.3**
TIXI				IAmb	IAmb	20 13 31.6	
	comp=Z,16nm,1.5s						
NRIK	**Noril'sk**	**51.41**	**345**	P	**P**	**20 13 39.0**	**-0.4**
	comp=Z,18nm,1.0s,baz=115,slow=3.8,SNR=8.0						
NRIK				LR	LR	20 37 15.4	
	comp=Z,384nm,20.5s,baz=150,slow=38						
HRA	**Herat**	**52.89**	**297**	P	**P**	**20 13 51.5**	**+0.3**
BILL	**Bilibino**	**53.49**	**19**	P	**P**	**20 13 55.4**	**+0.5**
NWAO	**Narrogin (SRO)**	**54.93**	**184**	P	**P**	**20 14 05.7**	**0.0**
	comp=Z,12nm,0.8s,baz=358,slow=12,SNR=3.9						
ABKAR	**Akbulak array**	**55.03**	**315**	P	**P**	**20 14 06.9**	**+0.5**
GEYT	**Alibeck**	**56.04**	**302**	P	**P**	**20 14 15.3**	**+1.4**
	comp=Z,4.0nm,0.8s,baz=231,slow=0.9,SNR=12						
GEYT				LR	LR	20 42 08.1	
	comp=Z,330nm,19.4s,baz=15,slow=40						
GEYT	**Alibeck**	**56.04**	**302**	P	**P**	**20 14 15.0**	**+1.2**
GYA0B	**ALIBECK ARRAY**	**56.04**	**302**	P	**P**	**20 14 14.8**	**+0.9**
GYA0B				IAmb	IAmb	20 14 31.6	
	comp=Z,8.0nm,0.9s						
AKTO	**Aktyubinsk**	**56.39**	**317**	LR	LR	20 40 06.4	
	comp=Z,323nm,19.3s,baz=104,slow=38						
ARU	**Arti**	**56.86**	**324**	P	**P**	**20 14 19.4**	**+0.1**
ARU				IAmb	IAmb	20 14 32.6	
	comp=Z,15nm,1.0s						
STKA	**Stephens Creek**	**57.10**	**160**	P	**P**	**20 14 20.4**	**-0.8**
	comp=Z,6.5nm,0.6s,baz=335,slow=5.6,SNR=13						
STKA				LR	LR	20 40 23.1	
	comp=Z,88nm,20.8s,baz=9.2,slow=38						
STKA	**Stephens Creek**	**57.10**	**160**	P	**P**	**20 14 20.5**	**-0.8**
KIRV	**Kirov**	**62.01**	**326**	LR	LR	20 44 07.8	
	comp=Z,454nm,19.5s,baz=59,slow=38						
DZM	**Mont Dzumac**	**62.10**	**132**	P	**P**	**20 14 56.4**	**+0.4**
DZM				IAmb	IAmb	20 14 57.5	
	comp=Z,20nm,1.1s						
SOCY	**Socotra**	**64.78**	**273**	P	**P**	**20 15 13.4**	**-0.6**
SOCY				IAmb	IAmb	20 15 17.9	
	comp=Z,8.2nm,0.8s						
GNI	**Garni**	**66.15**	**305**	LR	LR	20 49 46.2	
	comp=Z,129nm,18.9s,baz=80,slow=41						
GNI	**Garni**	**66.15**	**305**	P	**P**	**20 15 23.4**	**+0.8**
GNI				IAmb	IAmb	20 15 35.2	
	comp=Z,12nm,1.1s						
AKH	**Akhalkalaki**	**66.88**	**307**	⇓P	**P**	**20 15 29.7**	**+2.4**
AKH	**Akhalkalaki**	**66.88**	**307**	P	**P**	**20 15 28.5**	**+1.3**
AKH				IAmb	IAmb	20 15 42.5	
	comp=Z,14nm,1.1s						
KBZ	**Khabaz**	**66.93**	**309**	P	**P**	**20 15 27.8**	**+0.6**
	comp=Z,3.1nm,1.0s,baz=118,slow=8.1,SNR=5.1						
KBZ				LR	LR	20 49 00.4	
	comp=Z,167nm,21.0s,baz=64,slow=40						
KLMR	**Klimovskoe**	**66.99**	**328**	*e*P	**P**	**20 15 26.8**	**-0.5**
KLMR				AMP		20 15 31.8	
	comp=Z,42nm,1.6s						
KLMR				LQ	LQ	20 37 40.7	
KLMR				LQ	LQ	20 37 40.7	
KLMR				LR	LR	20 43 29.4	
KLMR				LRM	MLR	20 47 28.7	
KLMR				AMP		20 47 49.2	
	comp=Z,874nm,17.8s						
KIV	**Kislovodsk**	**67.05**	**310**	P	**P**	**20 15 29.0**	**+0.9**
KIV				IAmb	IAmb	20 15 43.2	
	comp=Z,16nm,1.0s						
IMAR	**Indian Mountai**	**67.87**	**26**	P	**P**	**20 15 34.0**	**+1.1**
RAYN	**Ar Rayn**	**69.18**	**288**	P	**P**	**20 15 41.6**	**-0.2**
RAYN				IAmb	IAmb	20 15 55.8	
	comp=Z,20nm,1.6s						
TOLK	**Toolik Lake Re**	**69.20**	**23**	P	**P**	**20 15 41.7**	**+0.5**
RND	**Reindeer**	**70.29**	**29**	P	**P**	**20 15 47.5**	**-0.5**
RND				IAmb	IAmb	20 16 05.0	
	comp=Z,7.1nm,0.9s						
ILAR	**Eielson Array**	**70.89**	**27**	P	**P**	**20 15 51.1**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=286,slow=6.1,SNR=3.4						
ILAR	**Eielson Array**	**70.89**	**27**	P	**P**	**20 15 52.2**	**+0.7**
KEV	**Kevo**	**70.93**	**338**	P	**P**	**20 15 51.0**	**-0.7**
BMAR	**Burnt Mountain**	**71.26**	**24**	P	**P**	**20 15 54.1**	**+0.3**
ARCES	**ARCESS Array B**	**71.49**	**338**	P	**P**	**20 15 54.9**	**-0.2**
	comp=Z,5.7nm,0.8s,baz=75,slow=6.4,SNR=13						
ARCES				LR	LR	20 50 44.1	
	comp=Z,189nm,18.2s,baz=59,slow=39						
ARCES	**ARCESS Array B**	**71.49**	**338**	P	**P**	**20 15 55.0**	**0.0**
ARE0	**ARCESS Array S**	**71.49**	**338**	P	**P**	**20 15 55.1**	**0.0**
SPA0	**Spitsbergen Ar**	**71.50**	**348**	P	**P**	**20 15 54.9**	**-0.1**
FIA1	**FINESS Array S**	**73.30**	**330**	P	**P**	**20 16 05.9**	**-0.1**
FINES	**FINESS Array B**	**73.30**	**330**	P	**P**	**20 16 05.7**	**-0.3**
	comp=Z,5.7nm,0.8s,baz=83,slow=7.9,SNR=13						
FINES				LR	LR	20 51 28.4	
	comp=Z,200nm,18.2s,baz=77,slow=38						
BCAR	**Beaver Creek A**	**73.49**	**28**	P	**P**	**20 16 07.4**	**+0.3**
AKASG	**Malin Array Be**	**74.54**	**319**	P	**P**	**20 16 12.9**	**-0.5**
	comp=Z,4.0nm,0.8s,baz=62,slow=5.7,SNR=10						
AKASG				LR	LR	20 51 20.9	
	comp=Z,152nm,21.4s,baz=95,slow=38						
AKASG	**Malin Array Be**	**74.54**	**319**	P	**P**	**20 16 13.4**	**0.0**
AKBB	**Malin Array Si**	**74.54**	**319**	P	**P**	**20 16 13.9**	**+0.5**
AKBB				IAmb	IAmb	20 16 17.6	
	comp=Z,38nm,1.9s						
BR131	**Keskin Array S**	**74.57**	**307**	P	**P**	**20 16 14.2**	**+0.1**
BR131				IAmb	IAmb	20 16 26.4	
	comp=Z,23nm,1.8s						
BRTR	**Keskin Array B**	**74.57**	**307**	P	**P**	**20 16 14.1**	**0.0**
	comp=Z,1.1nm,0.4s,baz=109,slow=2.3,SNR=15						
BRTR				LR	LR	20 55 03.1	
	comp=Z,44nm,19.2s,baz=28,slow=40						
BRTR	**Keskin Array B**	**74.57**	**307**	P	**P**	**20 16 13.9**	**-0.2**
INK	**Inuvik**	**75.00**	**22**	P	**P**	**20 16 16.1**	**+0.4**
ATD	**Arta Tunnel**	**75.28**	**277**	LR	LR	20 50 45.5	
	comp=Z,102nm,19.6s,baz=64,slow=37						
SORM	**Soroca**	**75.82**	**316**	⇓P	**P**	**20 16 21.6**	**+0.8**
CFR	**Carcaliu**	**76.86**	**314**	⇑P	**P**	**20 16 28.6**	**+1.8**
CVDA	**Cernavoda**	**77.19**	**313**	⇑P	**PcP**	**20 16 40.7**	**+1.3**
TESR	**Tescani**	**77.42**	**315**	⇑P	**P**	**20 16 30.7**	**+0.7**
VRI	**Vrincioaia**	**77.58**	**315**	⇑P	**P**	**20 16 32.0**	**+1.1**
C36M	**Paulatuk**	**77.62**	**19**	P	**P**	**20 16 29.6**	**-1.0**
BURAR	**Bucovina Array**	**77.98**	**317**	⇑P	**P**	**20 16 34.3**	**+1.1**
BURAR	**Bucovina Array**	**77.98**	**317**	P	**P**	**20 16 32.7**	**-0.5**
BUR08	**Bucovina Ar. S**	**77.99**	**317**	P	**P**	**20 16 33.3**	**0.0**
BUR08				IAmb	IAmb	20 16 38.1	
	comp=Z,14nm,1.1s						
MLR	**Muntele Rosu**	**78.22**	**314**	⇑P	**P**	**20 16 34.8**	**+0.2**
ELL	**Elmali**	**78.26**	**305**	P	**P**	**20 16 34.2**	**-0.7**
DAG	**Danmarks Havn**	**78.39**	**351**	*i* P	**P**	**20 16 33.0**	**-1.8**
	comp=Z,17nm,1.2s						
MANT	**Manisa**	**78.71**	**307**	P	**P**	**20 16 36.2**	**-1.3**
ARCR	**ARCALIA**	**78.72**	**316**	⇑P	**P**	**20 16 37.5**	**+0.4**
KWP	**Kalwaria Pacla**	**78.85**	**319**	*e*P	**P**	**20 16 39.3**	**+1.5**
KWP	**Kalwaria Pacla**	**78.85**	**319**	P	**P**	**20 16 37.9**	**+0.1**
BEL	**Belsk**	**79.18**	**322**	*e*P	**P**	**20 16 39.9**	**+0.4**
HUMR	**Humele**	**79.19**	**314**	⇑P	**P**	**20 16 38.5**	**-1.3**
CJR	**Cluj-Napoca**	**79.33**	**316**	⇓P	**P**	**20 16 41.9**	**+1.3**
LOT	**Lotru**	**79.67**	**315**	⇑P	**P**	**20 16 40.6**	**-2.0**
RPZ	**Rata Peaks**	**79.79**	**146**	P	**P**	**20 16 41.7**	**-1.1**
	comp=Z,12nm,0.5s,baz=343,slow=8.9,SNR=8.8						
RPZ	**Rata Peaks**	**79.79**	**146**	P	**P**	**20 16 41.9**	**-1.0**
BKZ	**Black Stump Fm**	**79.81**	**140**	P	**P**	**20 16 42.0**	**-1.2**
PLVB	**Pleven**	**79.84**	**313**	⇑P	**P**	**20 16 43.1**	**-0.2**
DRGR		**79.87**	**316**	⇑P	**P**	**20 16 44.1**	**+0.6**
NB2	**NORSAR Subarra**	**80.11**	**332**	P	**P**	**20 16 43.6**	**-0.9**
	comp=Z,30nm,1.7s,baz=63,slow=5.6						
NB2	**NORSAR Subarra**	**80.11**	**332**	P	**P**	**20 16 43.6**	**-0.9**
	baz=63,slow=5.6						
NOA	**NORSAR Array B**	**80.11**	**332**	P	**P**	**20 16 43.9**	**-0.6**
	comp=Z,3.4nm,0.9s,baz=62,slow=5.4,SNR=6.2						
NOA				LR	LR	20 55 41.0	
	comp=Z,561nm,18.7s,baz=65,slow=38						
GZR	**Gura Zlata**	**80.34**	**315**	⇑P	**P**	**20 16 43.2**	**-2.9**
OJC	**Ojcow**	**80.37**	**320**	*e*P	**P**	**20 16 47.1**	**+1.0**
OJC	**Ojcow**	**80.37**	**320**	P	**P**	**20 16 46.2**	**+0.1**
OJC				IAmb	IAmb	20 16 51.2	
	comp=Z,23nm,0.9s						
NIE	**Niedzica**	**80.38**	**319**	*e*P	**P**	**20 16 47.5**	**+1.3**
DLBC	**Dease Lake**	**80.55**	**30**	LR	LR	20 56 25.6	
	comp=Z,254nm,18.1s,baz=144,slow=38						
RES	**Resolute Bay**	**80.61**	**9**	P	**P**	**20 16 48.3**	**+1.5**
LANS	**Liptovska Anna**	**80.99**	**319**	*e*P	**P**	**20 16 51.0**	**+1.5**
VTS	**Vitosha**	**81.06**	**312**	⇓P	**P**	**20 16 51.3**	**+1.2**
VTS	**Vitosha**	**81.06**	**312**	P	**P**	**20 16 50.4**	**+0.2**
VTS				IAmb	IAmb	20 16 55.6	
	comp=Z,17nm,0.8s						
OKC	**Ostrava-Krasne**	**81.50**	**320**	*e*P	**P**	**20 16 52.6**	**+0.5**
OKC				*e*pP	**PcP**	**20 16 55.7**	**-2.3**
VYHS	**Vyhne**	**81.64**	**319**	*e*P	**P**	**20 16 53.8**	**+0.9**
MORC	**Moravsky Berou**	**81.88**	**321**	*e*P	**P**	**20 16 54.8**	**+0.6**
VAY	**Valandovo**	**82.01**	**311**	*i* P	**P**	**20 16 55.1**	**+0.1**
STIP	**Stip**	**82.13**	**312**	*i* P	**P**	**20 16 54.7**	**-0.9**
JAVC	**Velka Javorina**	**82.19**	**320**	*e*P	**P**	**20 16 57.8**	**+2.0**
DPC	**Dobruska-Polom**	**82.35**	**321**	*e*P	**P**	**20 16 58.2**	**+1.6**
VRAC	**Vranov**	**82.64**	**320**	*e*P	**P**	**20 16 59.1**	**+1.0**
KRUC	**Moravsky**	**82.86**	**320**	*e*P	**P**	**20 17 00.2**	**+0.9**
ABPO	**Ambohimpanom**	**83.28**	**246**	P	**P**	**20 17 01.9**	**-0.2**
ABPO				IAmb	IAmb	20 17 03.0	
	comp=Z,8.5nm,0.9s						
BRG	**Berggiesshubel**	**83.48**	**323**	*e*P	**P**	**20 17 02.1**	**-0.3**
	comp=Z,9.3nm,1.2s						
BRG	**Berggiesshubel**	**83.48**	**323**	*e*P	**P**	**20 17 03.1**	**+0.7**
	comp=Z,3.4nm,0.9s,baz=61,slow=4.7						
KULLO	**Kullorsuaq**	**83.48**	**360**	*i* P	**P**	**20 17 01.9**	**0.0**
PRU	**Pruhonice**	**83.54**	**322**	*e*P	**P**	**20 17 03.2**	**+0.5**
PRU				*e*pP	**PcP**	**20 17 07.0**	**0.0**
CONA	**Conrad Observa**	**83.68**	**319**	*e*PcP	**P**	**20 17 04.2**	**+0.6**
	comp=Z,10nm,1.1s,SNR=4.8						
FBE	**Freiberg**	**83.79**	**323**	*e*P	**P**	**20 17 05.0**	**+1.0**
	comp=Z,8.1nm,0.9s,baz=61,slow=4.7						
CLL	**Collm**	**83.80**	**323**	*i* P	**P**	**20 17 05.1**	**+1.1**
	comp=Z,13nm,1.0s						
CLL				LmV		20 59 00.0	
	comp=Z,500nm,18.0s						
CLL	**Collm**	**83.80**	**323**	*e*P	**P**	**20 17 05.4**	**+1.4**
	comp=Z,6.8nm,0.8s,baz=61,slow=4.7						
CLL				*e*L	L	20 59 32.2	
	comp=Z,454nm,18.1s						
CLL	**Collm**	**83.80**	**323**	P	**P**	**20 17 04.8**	**+0.8**
CLL				IAmb	IAmb	20 17 06.0	
	comp=Z,11nm,0.9s						
PDG	**Podgorica**	**83.84**	**313**	⇑P	**P**	**20 17 04.3**	**-0.1**
PDG	**Podgorica**	**83.84**	**313**	P	**P**	**20 17 03.9**	**-0.5**
PDG				IAmb	IAmb	20 17 16.5	
	comp=Z,8.5nm,1.0s						
BSEG	**Bad Segeberg**	**83.98**	**326**	*e*L	L	20 57 32.6	
	comp=Z,346nm,19.5s						
ITM	**Ithomi**	**84.07**	**308**	P	**P**	**20 17 04.8**	**-1.0**
ARSA	**Arzberg**	**84.18**	**319**	*e*PcP	**P**	**20 17 07.2**	**+1.1**
	comp=Z,6.7nm,1.2s						
BLY	**Banja Luka**	**84.23**	**316**	P	**P**	**20 17 06.3**	**0.0**
BLY				IAmb	IAmb	20 17 08.2	
	comp=Z,9.7nm,1.0s						
KHC	**Kasperske Hory**	**84.49**	**321**	*e*P	**P**	**20 17 07.8**	**+0.2**
KHC				*e*pP	**pP**	**20 17 16.0**	**-1.0**
KHC	**Kasperske Hory**	**84.49**	**321**	P	**P**	**20 17 07.8**	**+0.2**
SUMG	**Summit**	**84.52**	**354**	*i* P	**P**	**20 17 07.0**	**-0.8**
	comp=Z,71nm,1.1s						
SUMG	**Summit**	**84.52**	**354**	P	**P**	**20 17 07.6**	**-0.2**
TANN	**Tannenbergstha**	**84.53**	**323**	*e*P	**P**	**20 17 08.2**	**+0.4**
	comp=Z,4.3nm,0.8s,baz=61,slow=4.7						
GEC2	**GERESS Array S**	**84.55**	**321**	*e*P	**P**	**20 17 08.6**	**+0.6**
	comp=Z,6.5nm,0.9s,baz=61,slow=4.7						
GEC2				*e*L	L	20 56 46.0	
	comp=Z,183nm,21.9s						
GEC2	**GERESS Array S**	**84.55**	**321**	P	**P**	**20 17 08.1**	**+0.1**
GEC2				IAmb	IAmb	20 17 12.9	
	comp=Z,11nm,0.9s						
GERES	**GERESS Array B**	**84.55**	**321**	P	**P**	**20 17 08.4**	**+0.4**
	comp=Z,6.5nm,0.9s,baz=57,slow=4.9,SNR=26						
GERES				LR	LR	20 59 03.6	
	comp=Z,231nm,18.5s,baz=94,slow=39						
GERES	**GERESS Array B**	**84.55**	**321**	P	**P**	**20 17 07.9**	**-0.2**
GUNZ	**Gunzen**	**84.62**	**323**	*e*P	**P**	**20 17 08.9**	**+0.5**
	comp=Z,5.9nm,0.9s,baz=61,slow=4.7						
WERN	**Wernitzgruen**	**84.64**	**322**	*e*P	**P**	**20 17 08.7**	**+0.4**
	comp=Z,5.8nm,1.0s,baz=61,slow=4.7						
MOA	**Molln**	**84.67**	**320**	PcP	**P**	**20 17 09.5**	**+0.9**
	comp=Z,15nm,1.0s,SNR=9.8						
YKA	**Yellowknife Ar**	**84.73**	**23**	P	**P**	**20 17 07.6**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=310,slow=4.5,SNR=12						
SOKA	**Soboth**	**84.74**	**318**	*i* PcP	**P**	**20 17 09.3**	**+0.3**
	comp=Z,11nm,0.8s						
NRDL	**Niedersach Rie**	**84.80**	**325**	*e*P	**P**	**20 17 09.9**	**+0.9**
	comp=Z,3.8nm,0.9s,baz=61,slow=4.7						
RICI	**Ricice**	**84.81**	**315**	P	**P**	**20 17 08.8**	**-0.5**
WET	**Wettzell**	**84.89**	**321**	*e*L	L	20 59 55.6	
	comp=Z,187nm,18.7s						
MOX	**Moxa**	**84.89**	**323**	*e*P	**P**	**20 17 10.1**	**+0.5**
	comp=Z,2.1nm,0.8s,baz=61,slow=4.7						
MOX				*e*L	L	20 59 21.4	
	comp=Z,360nm,19.6s						
OZLJ	**Ozalj**	**84.95**	**317**	*i* P	**P**	**20 17 10.5**	**+0.6**
ROTZ	**Rotzenmuhle**	**84.98**	**322**	*e*P	**P**	**20 17 10.7**	**+0.7**
	comp=Z,4.4nm,0.9s,baz=61,slow=4.7						
CLZ	**Clausthal**	**84.98**	**324**	*e*P	**P**	**20 17 10.9**	**+0.8**
	comp=Z,4.4nm,0.8s,baz=61,slow=4.7						
KMBO	**Kilima Mbogo**	**85.04**	**267**	P	**P**	**20 17 11.6**	**+0.3**
	comp=Z,6.4nm,0.8s,baz=32,slow=2.2,SNR=16						
KMBO	**Kilima Mbogo**	**85.04**	**267**	P	**P**	**20 17 11.6**	**+0.3**
KMBO				IAmb	IAmb	20 17 14.2	
	comp=Z,10nm,0.9s						
KIJV	**Kijevo**	**85.06**	**316**	*i* P	**P**	**20 17 10.3**	**-0.3**
OBKA	**Obir**	**85.11**	**318**	*e*PcP	**P**	**20 17 10.9**	**0.0**
	comp=Z,5.8nm,0.8s						
UDBI	**Udbina**	**85.24**	**316**	*i* P	**P**	**20 17 11.3**	**-0.2**
GRF	**Grafenberg Arr**	**85.58**	**322**	*e*L	L	20 59 47.7	
	comp=Z,238nm,20.4s						
KBA	**Koelnbreinsper**	**85.58**	**319**	*e*P	**P**	**20 17 11.9**	**-1.5**
	comp=Z,8.9nm,1.0s						
MYKA	**Terra Mystica**	**85.61**	**319**	*e*P	**P**	**20 17 12.7**	**-0.7**
	comp=Z,2.0nm,0.5s						
NVLJ	**Novalja**	**85.80**	**317**	*i* P	**P**	**20 17 13.6**	**-0.6**
IBBN	**Ibbenburen**	**86.14**	**326**	*e*P	**P**	**20 17 15.9**	**+0.2**
	comp=Z,11nm,0.8s,baz=61,slow=4.7						
ABTA	**Abfaltersbach**	**86.24**	**319**	*e*P	**P**	**20 17 15.8**	**-0.7**
	comp=Z,7.3nm,1.0s						
FUR	**Furstenfeldbru**	**86.29**	**321**	*e*L	L	20 59 55.9	
	comp=Z,211nm,20.3s						
STAL	**STALIGIAL**	**86.36**	**319**	P	**P**	**20 17 16.5**	**-0.6**
STAL				IAmb	IAmb	20 17 20.9	
	comp=Z,12nm,1.1s						
WTTA	**Wattenberg**	**86.52**	**320**	*e*PcP	**P**	**20 17 17.9**	**-0.1**
	comp=Z,9.5nm,1.0s						
WATA	**Walderalm**	**86.52**	**320**	*e*PcP	**P**	**20 17 18.1**	**+0.1**
	comp=Z,6.1nm,1.1s						
ACER	**Acerenza**	**86.79**	**313**	P	**P**	**20 17 19.3**	**0.0**
SQTA	**Sankt Quirin**	**86.80**	**320**	*e*PcP	**P**	**20 17 19.5**	**+0.3**
	comp=Z,3.9nm,0.9s						
MOTA	**Moosalm**	**86.80**	**320**	*e*PcP	**P**	**20 17 19.3**	**0.0**
	comp=Z,6.9nm,1.2s						
TNS	**Taunus Mts**	**86.86**	**324**	*e*L	L	20 57 05.5	
	comp=Z,191nm,21.9s						
RETA	**Reutte**	**86.93**	**321**	*e*PcP	**P**	**20 17 20.1**	**+0.3**
	comp=Z,3.1nm,1.2s						
FETA	**Feichten**	**87.18**	**320**	*e*PcP	**P**	**20 17 21.5**	**+0.3**
	comp=Z,4.2nm,0.9s						
DAVA	**Damuels**	**87.55**	**321**	*e*PcP	**P**	**20 17 23.4**	**+0.4**
	comp=Z,6.4nm,1.2s						
NRCA	**Norcia**	**87.73**	**316**	P	**P**	**20 17 23.9**	**+0.1**
BFO	**Black Forest**	**87.91**	**322**	*e*L	L	20 59 20.8	
	comp=Z,240nm,20.1s						
ZCCA	**Zocca**	**88.35**	**318**	P	**P**	**20 17 27.0**	**+0.3**
LSZ	**Lusaka**	**98.58**	**257**	LR	LR	20 59 55.6	
	comp=Z,95nm,19.6s,baz=114,slow=34						
USHA	**Ushuaia**	**146.55**	**170**	PKPbc	**PKPdf**	**20 24 14.7**	**+0.5**
	comp=Z,15nm,0.9s,baz=261,slow=3.1,SNR=7.1						
SDV	**Santo Domingo**	**146.94**	**22**	PKPbc	**PKPdf**	**20 24 15.7**	**-0.7**
	comp=Z,29nm,0.9s,baz=336,slow=1.8,SNR=18						
SDV	**Santo Domingo**	**146.94**	**22**		**PKPdf**	**20 24 15.8**	**-0.6**

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*NEIC **15** 20:14:23.7±2.0, 19°.40S±0°.05×71°.06W±0°.05, h5^{km}±3^{km}, mb4.8/68, Mwr4.7/18, ML4.6(GUC), Error ellipse: s-maj=7.7km s-min=6.7km az=208.0*

*IDC **15** 20:14:24.5±0.5, 19°.29S×70°.80W, h0^{km}, mb4.6/20, mb1 4.7/25, mb1mx4.5/42, mbtmp4.6/25, ML3.9/4, MS3.9/11, Ms1 3.9/11, ms1mx3.6/35, Error ellipse: s-maj=17.9km s-min=12.9km az=55.0*

*VAO **15** 20:14:26.7±0.4, 19°.29S×70°.73W, h10^{km}, mb4.6*

*NEIC **15** 20:14:27.2, 19°.42S×70°.98W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.57; $M_{\theta\theta}$-0.32; $M_{\phi\phi}$-0.25; $M_{r\theta}$0.48; $M_{\theta\phi}$0.41; $M_{\phi r}$-0.92; Fault plane solution: $M_0$1.22000×10^{16} NP1:ϕ_s149.77000°, δ75.13000°, λ101.01000°. NP2:ϕ_s292.61000°, δ18.43000°, λ54.28000°. Principal axes: T 1.1863, Plg58.0000°, Azm75.0000°; N 0.0564, Plg11.0000°, Azm327.0000°; P -1.2427, Plg29.0000°, Azm231.0000°;*

*GUC **15** 20:14:27.0±0.7, 19°.43S×71°.03W, h39^{km}±2^{km}, ML4.6*

ISC 15 20:14:26.6±0.4**, 19°.39S**±0°.03×**71°.01W**±0°.06**, h21**^{km}±3^{km}**, n235, σ1^{s}.48**/248**, mb4.8**/48**, MS3.9**/5**, 6C-6D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.86**	**104**	⇓*e*P	**Pn**	**20 14 42.4**	**-1.2**
PSGC				*e*S	**Sb**	**20 14 54.5**	**+0.4**
PB12	**IPOC Station P**	**1.01**	**40**	⇓*e*P	**Pn**	**20 14 45.2**	**-0.4**
PB12				*e*S	**Sb**	**20 14 59.4**	**+1.2**
AP01	**Chacalluta**	**1.20**	**32**	⇓*e*P	**Pn**	**20 14 48.2**	**+0.2**
AP01				*e*S	**Sb**	**20 15 04.8**	**+1.2**
AP01				IAML		20 15 09.0	
	comp=N,28µm,0.5s						
PB11	**IPOC Station P**	**1.33**	**106**	⇓*e*P	**Pn**	**20 14 50.3**	**+0.2**
PB11				*e*S	**Sb**	**20 15 08.2**	**+0.5**
PB11				IAML		20 15 13.4	
	comp=N,25µm,0.3s						
PB11	**IPOC Station P**	**1.33**	**106**		**Pn**	**20 14 50.2**	**+0.2**
PB11				Sn	**Sb**	**20 15 08.1**	**+0.5**
TA01	**Diego Aracena**	**1.41**	**146**	⇑*i*P	**Pn**	**20 14 51.2**	**+0.2**
TA01				*e*S	**Sn**	**20 15 08.4**	**-0.5**
TA01				IAML		20 15 17.1	
	comp=E,20µm,0.7s						
PATCX	**Punta Patache**	**1.64**	**151**	⇓*e*P	**Pn**	**20 14 54.3**	**+0.1**
PATCX				*e*S	**Sn**	**20 15 15.1**	**+0.3**
PATCX				IAML		20 15 27.1	
	comp=E,9µm,0.7s						
GO01	**Chusmiza**	**1.74**	**100**	⇑*i*P	**Pn**	**20 14 57.3**	**+1.4**
GO01				*e*S	**Sb**	**20 15 20.9**	**+1.2**
GO01	**Chusmiza**	**1.74**	**100**		**Pn**	**20 14 57.1**	**+1.1**
GO01				Sn	**Sb**	**20 15 20.0**	**+0.4**
PB16	**IPOC Station P**	**1.77**	**54**	⇓*e*P	**Pn**	**20 14 58.0**	**+1.5**
PB16				*e*S	**Sb**	**20 15 22.5**	**+1.9**
PB16				IAML		20 15 27.5	
	comp=N,7µm,0.4s						
PB08	**IPOC Station P**	**1.90**	**113**	⇑*i*P	**Pn**	**20 14 59.3**	**+1.2**
PB08				*e*S	**Sb**	**20 15 23.9**	**-0.4**
PB08				IAML		20 15 35.7	
	comp=E,4µm,0.5s						
PB01	**IPOC Station P**	**2.18**	**139**	⇑*i*P	**Pn**	**20 15 02.3**	**+0.6**
PB01				*e*S	**Sn**	**20 15 28.5**	**+0.3**
PB01				IAML		20 15 40.5	
	comp=E,5µm,0.6s						
PB01	**IPOC Station P**	**2.18**	**139**		**Pn**	**20 15 02.2**	**+0.4**
PB01				Sn	**Sn**	**20 15 28.2**	**+0.1**
PB09	**IPOC Station P**	**2.91**	**146**	⇑*i*P	**Pn**	**20 15 12.9**	**+1.1**
PB09				*e*S	**Sn**	**20 15 46.6**	**+0.2**
PB04	**IPOC Station P**	**3.04**	**165**		**Pn**	**20 15 12.8**	**-0.8**
PB04				Sn	**Sn**	**20 15 46.8**	**-2.6**
LVC	**Limon Verde**	**3.76**	**149**	Pn	**Pn**	**20 15 25.5**	**+1.9**
	comp=E,29nm,0.3s,baz=334,slow=7.6,SNR=52						
LVC				Sn	**Sn**	**20 16 08.7**	**+1.2**
	comp=E,70nm,0.3s,baz=328,slow=8.9,SNR=3.7						
LVC				LR	LR	20 16 38.1	
	comp=E,308nm,20.0s,baz=330,slow=36						
LVC	**Limon Verde**	**3.76**	**149**		**Pn**	**20 15 24.8**	**+1.1**
LVC				Sn	**Sn**	**20 16 08.3**	**+0.9**
LVC	**Limon Verde**	**3.76**	**149**	*e*P	**Pn**	**20 15 24.8**	**+1.1**

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PB10  IPOC Station P     4.13 174          Pn      20 15 26.9 -1.5
LPAZ  La Paz             4.13  42  Pn      Pn      20 15 33.4 +4.4
      comp=E,2.0nm,0.3s,baz=202,slow=4.9,SNR=36
LPAZ                               LR      LR      20 16 33.4
      comp=E,291nm,20.3s,baz=244,slow=33
LPAZ  La Paz             4.13  42          Pn      20 15 32.9 +3.9
GO02  Mina Guanaco       5.89 167          Pn      20 15 52.2 -0.8
GO02                               Sn      Sn      20 16 59.5 -0.6
GO03  Copiap             8.20 175          Pn      20 16 22.2 -2.2
NNA   Nana               9.26 322  Pn      Pn      20 16 40.9 +2.0
      comp=E,1.6nm,0.3s,baz=185,slow=7.0,SNR=1.8
NNA                                Sn      Sn      20 18 18.7 -3.8
      comp=E,3.4nm,0.3s,baz=178,slow=21,SNR=3.8
NNA   Nana               9.26 322  Pn      Pn      20 16 40.0 +1.1
NNA                                Sn      Sn      20 18 19.4 -3.1
SIV   San Ignacio       10.06  72  Pn      Pn      20 16 48.1 -1.8
      comp=E,0.4nm,0.3s,baz=261,slow=12,SNR=42
SIV                                LR      LR      20 21 19.4
      comp=E,2µm,21.1s,baz=280,slow=42
GO04  Tololo Observa    10.74 179  Pn      Pn      20 16 59.2 -0.2
CFA   Coronel Fontan    12.42 169  Pn      Pn      20 17 25.1 +2.9
      baz=349,slow=16,SNR=1.1
CFA                                LR      LR      20 22 23.1
      comp=E,709nm,18.1s,baz=358,slow=38
SAML  Samuel            12.85  37          Pn      20 17 27.7 -0.5
SAML  Samuel            12.85  37 eP       Pn      20 17 26.1 -2.1
PEL   Peldehue          13.70 179  Pn      Pn      20 17 40.4 +0.7
ATAH  Atahualpa         14.14 329  LR      LR      20 23 14.5
      comp=E,212nm,20.7s,baz=121,slow=37
CPUP  Villa Florida     14.37 121  Pn      Pn      20 17 49.1 +0.3
      comp=E,0.1nm,0.3s,baz=286,slow=18,SNR=13
CPUP                               LR      LR      20 23 56.6
      comp=E,593nm,19.2s,baz=310,slow=40
AQDB  Aquidauana        14.44  97 eP       Pn      20 17 48.6 -1.2
SALV  Santo Antonio     15.01  79 eP       Pn      20 17 55.0 -2.5
GO05  Huala             15.58 183          Pn      20 18 04.6 -0.4
ITQB  Itaqui            16.60 131 eP       Pn      20 18 17.6 -0.5
C2SB  Chapadao do Su    17.19  91 eP       Pn      20 18 25.1 -0.5
TRCB  Terra Rica        17.48 104 eP       Pn      20 18 27.5 -1.7
PTGB  Pitanga           18.34 110 eP       P       20 18 39.5 -0.3
PCMB  Pacaembu          18.63 100 eP       P       20 18 41.9 -1.1
ARAG  Araguaiana, MT    18.67  82 eP       P       20 18 42.1 -1.3
ITAB  Concordia         19.00 118 eP       P       20 18 46.5 -0.4
CPSB  Cacapava Do Su    19.32 128 eP       P       20 18 50.7 +0.2
ITRB  Iturama           19.47  94 eP       P       20 18 51.1 -1.1
PLTB  Pedras Altas      19.93 132 eP       P       20 18 57.0 -0.1
GO06  Curarrehue        20.13 181  P       P       20 18 59.0 -0.3
FRTB  Fartura           20.36 105 eP       P       20 19 00.9 -1.0
OGAUY Aigu              20.77 139 eP       P       20 19 06.9 +0.7
OTAV  Otavalo           20.83 339 eP       Pn      20 19 22.5  +13
OTAV  Otavalo           20.83 339  P       P       20 19 08.5 +1.1
OTAV  Otavalo           20.83 339 eP       Pn      20 19 09.1 -0.8
CNLB  Canela            20.83 122 eP       P       20 19 06.8 -0.2
BB19B Bebedouro         21.16  98 eP       P       20 19 08.8 -1.8
PLCA  Paso Flores       21.28 179  P       P       20 19 12.7 +1.0
      comp=E,8.8nm,0.8s,baz=24,slow=12,SNR=21
PLCA  Paso Flores       21.28 179  P       P       20 19 12.6 +0.9
PLCA  Paso Flores       21.28 179 eP       P       20 19 13.5 +1.8
FLOC  Florencia         21.33 347 eP       P       20 19 13.9 +1.5
FLOC  Florencia         21.33 347  P       P       20 19 13.5 +1.1
GCUF  Volcan Galeras    21.41 342 eP       P       20 19 18.2 +4.5
PTGA  Pitinga           21.47  32  P       P       20 19 13.0 -0.9
      comp=E,21nm,0.3s,baz=222,slow=23,SNR=78
PTGA                               LR      LR      20 27 33.1
      comp=E,313nm,21.4s,baz=179,slow=37
PTGA  Pitinga           21.47  32  P       P       20 19 12.6 -1.3
PTGA                               IAmb    IAmb    20 19 14.1
      comp=Z,50nm,0.8s
PTGA  Pitinga           21.47  32 eP       P       20 19 12.5 -1.4
CRUC  La Cruz           21.63 344 eP       P       20 19 22.5 +6.6
IPMB  Ipameri, GO       21.64  90 eP       P       20 19 14.4 -1.4
GARC  Garzon, Huila     21.89 348 eP       P       20 19 20.4 +1.8
SOTA  Rioblanco         22.09 345 eP       P       20 19 24.7 +3.7
RCLB  Rio Claro- Sao    22.14 102 eP       P       20 19 20.4 -0.7
BBAC  Balboa, Cauca     22.14 343 eP       P       20 19 25.1 +3.8
PCON  Cinco Dias        22.22 346 eP       P       20 19 26.1 +3.6
BDFB  Brasilia          22.24  84  P       P       20 19 21.9 -0.4
      comp=Z,4.5nm,0.7s,baz=259,slow=11,SNR=4.0
BDFB                               LR      LR      20 29 43.2
      comp=Z,467nm,19.5s,baz=277,slow=42
BDFB  Brasilia          22.24  84  P       P       20 19 21.3 -1.0
SPB   Sao Paulo         22.33 105 eP       P       20 19 22.2 -0.8
POPC  Popayan, Colom    22.49 345 eP       P       20 19 29.4 +4.3
VAO   Valinhos          22.70 103 eP       P       20 19 26.5 -0.6
ORTC  Ortega, Tolima    23.52 349 eP       P       20 19 35.4  0.0
YOTC  Yotoco, Valle     23.81 347 eP       P       20 19 40.1 +1.8
PARB  Paraibuna         23.96 104 eP       P       20 19 39.3 -0.4
ANIL  Santa Ana         24.12 349 eP       P       20 19 42.8 +1.4
ROSC  El Rosal          24.30 352  P       P       20 19 45.3 +2.2
      comp=Z,14nm,0.5s,baz=150,slow=6.7,SNR=5.7
ROSC  El Rosal          24.30 352  P       P       20 19 42.5 -0.7
ROSC                               IAmb    IAmb    20 19 49.1
      comp=Z,30nm,1.2s
RREF  El Recreo         24.51 350 eP       P       20 19 47.6 +2.3
RREF                              eP       P       20 19 48.7 +3.3
BSCB  Bom Sucesso       24.67  98 eP       P       20 19 45.3 -0.9
PLMC  San Jos del P     24.69 347 eP       P       20 19 48.7 +2.3
GUY2C Guyana, Caldas    24.83 350 eP       P       20 19 50.1 +2.1
SMTB  Santa Maria do    24.98  68 eP       P       20 19 48.2 -0.7
SPBC  San Pablo de B    25.07 353 eP       P       20 19 50.1 +0.4
NORC  Norcasia          25.09 351 eP       P       20 19 50.9 +0.9
RUSC  La Rusia          25.20 355  P       P       20 19 51.3 -0.2
CBOC  Ciudad Bolivar    25.57 348 eP       P       20 19 55.6 +1.2
HELC  Santa Helena      25.80 350 eP       P       20 19 58.4 +1.6
JANB  Januaria          25.85  85 eP       P       20 19 56.2 -0.8
BARC  Barichara         25.91 355 eP       P       20 19 59.2 +1.7
PTBC  PUERTO BERRIO,    25.99 352 eP       P       20 19 57.3 -0.7
PAMC  Pamplona, Colo    26.61 356 eP       P       20 20 05.2 +1.0
ZARC  Zaragoza, Cauc    26.98 352 eP       P       20 20 06.6 -0.4
UREC  San Jos de Ur     27.34 350 eP       P       20 20 10.2  0.0
SDV   Santo Domingo     28.10   1  P       P       20 20 18.6 +1.4
      comp=Z,4.0nm,0.8s,baz=255,slow=7.5,SNR=5.0
SDV   Santo Domingo     28.10   1  P       P       20 20 16.7 -0.5
SDV                                IAmb    IAmb    20 20 25.9
      comp=Z,7.7nm,0.8s
SDV   Santo Domingo     28.10   1 eP       P       20 20 18.3 +1.1
SMLC  San Martn de      28.17 354 eP       P       20 20 17.0 -0.7
SJMB  Sao Joao De Ma    28.19  94 eP       P       20 20 16.7 -1.2
BSFB  Barra de Sao F    28.49  94 eP       P       20 20 19.9 -0.7
SJCC  San Jacinto, C    29.39 352 eP       P       20 20 29.6 +1.0
MDP   Montagnes des     30.32  38  P       P       20 20 35.4 -1.4
      comp=Z,7.0nm,0.6s,baz=216,slow=7.0,SNR=5.7
MDP                                LR      LR      20 33 45.2
      comp=Z,262nm,20.6s,baz=198,slow=38
NBPN  Ponto Novo - B    30.89  79 eP       P       20 20 40.7 -1.3
URIC  Uribia, Colomb    30.91 358  P       P       20 20 41.6 -0.3
TOSP  Speyside          32.19  20  P       P       20 20 53.6 +0.4
NBPS  Pedro II - PI     32.46  66 eP       P       20 20 54.0 -1.7
NBLA  Lagarto - SE      33.08  80 eP       P       20 20 59.7 -1.4
NBTA  Tacaratu-PE       33.46  77 eP       P       20 21 03.6 -0.9
NBMA  Muriti-CE         33.50  74 eP       P       20 21 04.1 -0.8
NBPB  Pedra_Branca-C    33.55  70 eP       P       20 21 04.4 -0.8
NBAN  Anadia - AL       34.92  79 eP       P       20 21 16.4 -0.8
NBCL  Cascavel-CE       35.29  69 eP       P       20 21 19.5 -0.9
RCBR  Riachuelo         36.72  73  P       P       20 21 32.4 -0.3
      comp=Z,8.9nm,0.7s,baz=229,slow=9.6,SNR=7.5
RCBR  Riachuelo         36.72  73  P       P       20 21 31.8 -0.8
RCBR                               IAmb    IAmb    20 21 33.2
      comp=Z,9.4nm,0.7s
RCBR  Riachuelo         36.72  73 eP       P       20 21 32.1 -0.5
NBPV  Pedro Velho       37.03  74 eP       P       20 21 34.4 -0.9
ICMP  Isla Caja de M    37.30   7  P       P       20 21 36.3 -1.1
MLPR  Magueyes Islan    37.33   6  P       P       20 21 36.4 -1.2
PDPR  Patillas Dam,     37.50   8  P       P       20 21 38.2 -0.8
PDPR                               IAmb    IAmb    20 21 51.7
      comp=Z,21nm,0.8s
BANI  BANI              37.55   1  P       P       20 21 39.2 -0.4
MPR   Mayaguez          37.56   6  P       P       20 21 39.0 -0.5
SJG   San Juan          37.57   8  P       P       20 21 38.2 -1.3
      comp=Z,23nm,0.9s,baz=218,slow=3.4,SNR=8.9
SJG   San Juan          37.57   8  P       P       20 21 38.3 -1.3
SJG                                IAmb    IAmb    20 21 52.8
      comp=Z,23nm,0.8s
GCPR  Guaynabo City     37.77   8  P       P       20 21 40.4 -1.0
GCPR                               IAmb    IAmb    20 21 54.8
      comp=Z,24nm,0.8s
CUPR  Culebra, Puert    37.88   9  P       P       20 21 40.8 -1.5
CUPR                               IAmb    IAmb    20 21 52.2
      comp=Z,40nm,1.2s
WLAR  White Oak Lake    56.83 338  P       P       20 24 09.1 -0.5
V48A  Smith Brothers    56.84 345  P       P       20 24 08.7 -0.8
WHTX  Lake Whitney,     57.03 333  P       P       20 24 11.0  0.0
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WHTX                               IAmb    IAmb    20 24 22.7
      comp=Z,14nm,0.9s
WVT   Waverly           57.47 344  P       P       20 24 12.8 -1.2
WVT                                IAmb    IAmb    20 24 31.1
      comp=Z,5.6nm,0.7s
TX31  Lajitas Ar. Si    57.78 326  P       P       20 24 16.4 -0.1
TXAR  Lajitas Array     57.78 326  P       P       20 24 17.5 +1.0
      comp=Z,1.8nm,0.8s,baz=156,slow=9.3,SNR=6.1
TXAR  Lajitas Array     57.78 326  P       P       20 24 16.4 -0.1
T49A  Edmonton          57.84 346  P       P       20 24 16.1 -0.5
T47A  Sharon Grove      58.09 345  P       P       20 24 17.3 -1.1
T47A                               IAmb    IAmb    20 24 33.3
      comp=Z,16nm,1.1s
ABTX  Abilene, Hawle    58.52 332  P       P       20 24 21.3 -0.3
ABTX                               IAmb    IAmb    20 24 33.2
      comp=Z,12nm,0.9s
S44A  Carbondale        59.32 343  P       P       20 24 26.3 -0.6
MNTX  Cornudas Mount    60.55 326  P       P       20 24 35.2 -0.4
MNTX                               IAmb    IAmb    20 24 47.3
      comp=Z,7.5nm,1.0s
P43A  Skaggs, Pawnee    61.22 344  P       P       20 24 38.8 -1.0
P43A                               IAmb    IAmb    20 24 41.1
      comp=Z,10nm,0.8s
N49A  Columbus Grove    61.24 349  P       P       20 24 39.1 -0.9
WVNY  West Valley, N    61.88 354  P       P       20 24 43.7 -0.6
319A  Douglas           62.42 323  P       P       20 24 47.1 -1.2
VNA3  Neumayer Olymp    62.70 161  P       P       20 24 54.8 +5.3
L40A  Anamosa           63.94 343  P       P       20 24 57.6 -0.4
G62A  West of Eustis    64.30   0  P       P       20 25 01.0 +0.7
SNAA  Sanae             64.91 161  P       P       20 25 05.9 +1.7
SNAA  Sanae             64.91 161  P       P       20 25 03.6 -0.5
SNAA                               IAmb    IAmb    20 25 22.0
      comp=Z,12nm,1.1s
SDCO  Great Sand Dun    65.44 330  P       P       20 25 08.8 +0.5
SDCO                               IAmb    IAmb    20 25 20.8
      comp=Z,8.8nm,1.1s
E43A  Lone Tree Farm    67.03 348  P       P       20 25 17.2 -0.8
E43A                               IAmb    IAmb    20 25 18.9
      comp=Z,6.1nm,0.8s
ECSD  EROS Data Cent    67.06 340  P       P       20 25 18.3 +0.1
ECSD                               IAmb    IAmb    20 25 25.8
      comp=Z,9.3nm,1.1s
SPMN  Marine on St.     67.30 343  P       P       20 25 20.0 +0.3
SPMN                               IAmb    IAmb    20 25 22.7
      comp=Z,5.5nm,0.8s
D41A  Chassel           68.01 347  P       P       20 25 24.4 +0.4
D41A                               IAmb    IAmb    20 25 25.7
      comp=Z,5.7nm,0.8s
KNB   Kanab             68.57 325  P       P       20 25 29.4 +1.3
CCUT  Cedar City        69.26 325  P       P       20 25 31.8 -0.6
DRLN  Deer Lake         69.39   9  P       P       20 25 32.7 +0.1
SHPR  Sheep Range       69.50 323  P       P       20 25 35.8 +2.0
SHPR                               IAmb    IAmb    20 25 42.8
      comp=Z,5.6nm,1.0s
LIC   Lamto             69.73  75 eP       P       20 25 34.6 -1.0
      comp=Z,14nm,0.7s
TIC   Toumodi           69.90  75 eP       P       20 25 33.4 -3.2
KIC   Kosan Boka        70.05  75 eP       P       20 25 36.7 -0.8
      comp=Z,20nm,0.8s
RSSD  Black Hills       70.06 335  P       P       20 25 38.0 +0.8
RSSD                               IAmb    IAmb    20 25 40.4
      comp=Z,5.2nm,0.8s
DBIC  Dimbokro          70.06  75  P       P       20 25 36.6 -1.0
      comp=Z,11nm,0.8s,baz=230,slow=5.8,SNR=16
DBIC  Dimbokro          70.06  75  P       P       20 25 35.8 -1.8
PSUT  Pine Spring       70.24 325  P       P       20 25 39.5 +1.0
TPNV  Topopah Spring    70.43 323  P       P       20 25 39.7 +0.2
TPNV                               IAmb    IAmb    20 25 53.2
      comp=Z,5.9nm,0.9s
QSPA  South Pole Qui    70.79 180  P       P       20 25 42.2 +0.8
QSPA                               IAmb    IAmb    20 25 47.2
      comp=Z,11nm,1.5s
ISA   Isabella, Lake    70.84 321  P       P       20 25 41.6 -0.4
ISA                                IAmb    IAmb    20 25 51.1
      comp=Z,6.9nm,1.1s
DUG   Dugway, Tooele    70.92 327  P       P       20 25 41.1 -1.3
DUG                                IAmb    IAmb    20 25 51.2
      comp=Z,5.8nm,1.0s
AGMN  Agassiz Nation    70.95 343  P       P       20 25 41.8 -0.5
R11A  Troy Canyon, C    71.05 324  P       P       20 25 42.3 -1.0
PD31  Pinedale Array    71.31 331  P       P       20 25 44.0 -0.9
PDAR  Pinedale Array    71.31 331  P       P       20 25 46.1 +1.2
      comp=Z,0.7nm,0.7s,baz=116,slow=6.8,SNR=4.5
PDAR  Pinedale Array    71.31 331  P       P       20 25 43.4 -1.5
HWUT  Hardware Ranch    71.36 329  P       P       20 25 44.3 -0.8
NVAR  Mina Array Bea    72.63 323  P       P       20 25 55.0 +2.2
      comp=Z,1.7nm,0.8s,baz=148,slow=6.8,SNR=13
NVAR  Mina Array Bea    72.63 323  P       P       20 25 54.4 +1.6
ULM   Lac du Bonnet     72.73 344  P       P       20 25 53.5 +0.6
      comp=Z,1.6nm,0.6s,baz=162,slow=5.2,SNR=4.4
DGMT  Dagmar            73.77 338  P       P       20 25 58.6 -0.6
DGMT                               IAmb    IAmb    20 26 02.0
      comp=Z,10nm,0.8s
SCHQ  Schefferville     74.01   3  P       P       20 26 00.8 +0.4
      comp=Z,6.5nm,0.9s,baz=201,slow=3.3,SNR=10
SCHQ  Schefferville     74.01   3  P       P       20 25 59.7 -0.6
MCMT  McKenzie Canyo    74.42 330  P       P       20 26 03.7 +0.4
ORV   Oroville          75.23 322  P       P       20 26 08.2 +0.5
ORV                                IAmb    IAmb    20 26 21.3
      comp=Z,8.6nm,0.9s
EGMT  Eagleton          75.54 334  P       P       20 26 08.7 -0.8
EGMT                               IAmb    IAmb    20 26 16.9
      comp=Z,7.7nm,0.8s
BMO   Blue Mountains    76.59 328  P       P       20 26 15.0 -0.5
TOA0  Torodi Ar. Sit    78.53  72  P       P       20 26 26.2 -0.7
TORD  Torodi Ar. Bea    78.53  72  P       P       20 26 26.2 -0.8
      comp=Z,23nm,1.0s,baz=254,slow=5.1,SNR=62
TORD                               LR      LR      21 00 02.8
      comp=Z,177nm,19.8s,baz=285,slow=35
TORD  Torodi Ar. Bea    78.53  72  P       P       20 26 25.8 -1.1
SYO   Syowa Base        79.16 160⇑epP      P       20 26 29.6 +0.2
RAR   Rarotonga         82.08 250  LR      LR      20 57 16.0
      comp=Z,220nm,18.1s,baz=207,slow=31
TSUM  Tsumeb            82.55 108  P       P       20 26 49.7 +1.0
      comp=Z,5.5nm,0.8s,baz=237,slow=5.3,SNR=10.0
TSUM  Tsumeb            82.55 108  P       P       20 26 47.6 -1.0
TSUM                               IAmb    IAmb    20 26 50.8
      comp=Z,6.4nm,0.8s
PAB   San Pablo         85.42  45  P       P       20 27 02.2 -0.5
TAM   Tamanrasset       85.66  64  P       P       20 27 02.7 -1.6
TAM                                IAmb    IAmb    20 27 06.5
      comp=Z,6.1nm,1.0s
ESDC  Sonseca Array     85.74  45  P       P       20 27 05.8 +1.5
      comp=Z,1.4nm,0.7s,baz=245,slow=6.6,SNR=4.3
YKA   Yellowknife Ar    88.56 341  P       P       20 27 18.2 +1.0
      comp=Z,8.3nm,0.8s,baz=138,slow=5.2,SNR=109
DLBC  Dease Lake        91.44 333  P       P       20 27 32.2 +1.2
      comp=Z,5.4nm,0.9s,baz=39,slow=3.7,SNR=6.0
SUMG  Summit            94.30   9 i P      P       20 27 45.6 +1.3
      comp=Z,5.7nm,0.8s
INK   Inuvik            98.30 341  P       P       20 28 01.6 -0.4
      comp=Z,1.6nm,0.8s,baz=79,slow=6.5,SNR=4.7
KBZ   Khabaz           120.31  50  PKP     PKiKP   20 33 17.4 +1.1
      comp=Z,2.3nm,0.9s,baz=196,slow=2.6,SNR=5.0
H11S2 WAKE ISLAND Hy125.63 279     T       T       22 52 44.8
      baz=101,slow=75,SNR=36
H11S1 WAKE ISLAND Hy125.64 279     T       T       22 52 45.3
      baz=101,slow=75,SNR=26
H11S3 WAKE ISLAND Hy125.64 279     T       T       22 52 37.3
      baz=101,slow=75,SNR=22
H11N3 WAKE ISLAND Hy125.66 281     T       T       22 52 40.0
      baz=100,slow=74,SNR=8.4
H11N2 WAKE ISLAND Hy125.67 281     T       T       22 52 38.2
      baz=100,slow=74,SNR=11
H11N1 WAKE ISLAND Hy125.68 281     T       T       22 52 43.4
      baz=100,slow=74,SNR=6.1
SEY   Seymchan         127.39 337  PKP     PKiKP   20 33 31.5 +1.7
      comp=Z,2.2nm,0.8s,baz=138,slow=12,SNR=7.2
ASAR  Alice Springs    130.79 211  PKP     PKiKP   20 33 37.5 -0.5
      comp=Z,1.2nm,0.8s,baz=114,slow=1.6,SNR=10
ASAR  Alice Springs    130.79 211          PKPdf   20 33 36.8 -0.3
ABKAR Akbulak array    130.90  41          PKPdf   20 33 36.6 +0.3
WRA   Warramunga Arr   133.68 214  PKP     PKiKP   20 33 43.2 -0.6
      comp=Z,1.3nm,0.8s,baz=153,slow=1.9,SNR=12
ZAA0  Zalesovo Array   140.83  23          PKPdf   20 33 54.2 -0.4
ZALV  Zalesovo Beam    140.83  23  PKhKP   PKPpre  20 33 47.9
      comp=Z,0.4nm,0.4s,baz=317,slow=14,SNR=2.4
ZALV                               PKP     PKiKP   20 33 55.9 -1.4
      comp=Z,5.0nm,0.8s,baz=296,slow=2.0,SNR=14
ZALV  Zalesovo Beam    140.83  23          PKPdf   20 33 55.6 +1.0
NRN   Naryn            144.38  45          PKPdf   20 34 02.0 +0.2
MAKZ  Makanchi         144.84  33          PKPdf   20 34 01.9 -0.1
MK31  Makanchi Array   145.01  33          PKPdf   20 34 02.5 +0.2
MKAR  Makanchi Array   145.01  33  PKP     PKPdf   20 34 02.9 +0.5
      comp=Z,7.4nm,0.8s,baz=323,slow=3.0,SNR=85
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MKAR  Makanchi Array   145.01  33          PKPdf   20 34 02.3  0.0
NIL   Nilore           145.20  59          PKPdf   20 34 03.2 +0.1
KSH   Kashi            145.23  48  PKPbc   PKPdf   20 34 04.5 +1.4
KSH                                PP      PP      20 37 29.5 +7.3
KSH                                PKS     PKSdf   20 37 40.3 +1.6
USRK  Ussuriysk Ar.    148.68 327  PKPbc   PKiKP   20 34 14.2 +0.5
      comp=Z,6.3nm,0.8s,baz=30,slow=2.4,SNR=13
USRK  Ussuriysk Ar.    148.68 327          PKiKP   20 34 14.0 +0.3
MJAR  Matsushiro Arr   149.22 310  PKPbc   PKiKP   20 34 15.4 +0.2
      comp=Z,4.7nm,0.8s,baz=83,slow=1.9,SNR=14
MJAR  Matsushiro Arr   149.22 310          PKiKP   20 34 15.6 +0.5
MAT   Matsushiro       149.22 310  PKP     PKiKP   20 34 15.7 +0.6
MMRI  Maumere          149.24 206          PKPbc   20 34 15.1 +0.5
HYB   Hyderabad        151.07  89 i PKP    PKPbc   20 34 19.0 +0.1
SONM  Songino Array    151.55   4  PKP     PKPdf   20 34 14.4 +1.3
      comp=Z,0.5nm,0.8s,baz=340,slow=1.7,SNR=4.3
SONM                               PKPbc   PKPbc   20 34 20.9 +1.6
      comp=Z,5.8nm,0.8s,baz=327,slow=1.4,SNR=46
SONM  Songino Array    151.55   4          PKiKP   20 34 20.5 +0.8
ULN   Ulaanbaatar      151.55   3          PKiKP   20 34 20.9 +1.1
LEM   Lembang          153.91 177  PKPbc   PKiKP   20 34 27.3 +1.6
      comp=Z,11nm,0.6s,baz=285,slow=20,SNR=2.1
LZH   Lanzhou          162.76  14 ePKP     PKPdf   20 34 23.1 -4.6
LZH                                pPKP    pPKPdf  20 34 32.1 -2.0
LZH                                sPKP            20 34 36.0
CMAR  Chiang Mai Arr   170.45  94  PKPab   PKPab   20 35 51.0 +0.2
      comp=Z,1.8nm,0.9s,baz=252,slow=6.2,SNR=11
CMAR  Chiang Mai Arr   170.45  94          PKPab   20 35 50.7  0.0
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   NEIC 15 20:18:05.0±2.1,19°38S±0°08×71°13W±0°08,h19km±4km,
        mb4.4/12,ML4.1(GUC),Error ellipse: s-maj=11.5km
        s-min=10.2km az=167.0
    IDC 15 20:18:04.6±0.8,19°21S×70°71W,h0km,mb4.2/10,
        mb1 4.4/11,mb1mx4.1/42,mbtmp4.2/11,ML3.5/1,Error
        ellipse: s-maj=30.3km s-min=21.4km az=58.0
   GUC 15 20:18:07.3±0.6,19°41S×71°01W,h42km±2km,ML4.1
    ISC 15 20:18:05.8±1.1,19°36S±0°03×70°98W±0°05,h19km±4km,
        n62,σ1ˢ37/68,mb4.3/11,4C-6D,Near coast of northern
        Chile
Code  Station Name        Δ°  AZ°    Phase ID         Time     Res
                                    Op      ISC      h  m  s   ISC
PSGC  Pisagua            0.84 106⇓iP       Pn      20 18 22.5 -0.2
PSGC                             i S       Sn      20 18 34.2 -0.3
PSGC                               IAML            20 18 35.7
      comp=N,6µm,0.2s
PB12  IPOC Station P     0.97  40⇓iP       Pg      20 18 25.3 +0.7
PB12                             i S       Sn      20 18 39.4 +1.7
PB12                               IAML            20 18 40.4
      comp=E,8µm,0.5s
AP01  Chacalluta         1.16  31⇓iP       Pg      20 18 28.3 +0.1
AP01                             i S       Sg      20 18 44.6 +1.2
AP01                               IAML            20 18 48.7
      comp=N,20µm,0.6s
PB11  IPOC Station P     1.31 108⇓iP       Pg      20 18 30.3 -0.8
PB11                             i S       Sg      20 18 48.4 +0.1
PB11                               IAML            20 18 53.0
      comp=N,9µm,0.3s
PB11  IPOC Station P     1.31 108  Pn      Pg      20 18 30.7 -0.5
PB11                               Sn      Sg      20 18 48.2  0.0
TA01  Diego Aracena      1.41 148⇑iP       Pb      20 18 31.3 -0.2
TA01                             i S       Sb      20 18 48.8 -0.3
TA01                               IAML            20 18 57.0
      comp=E,5µm,0.5s
PATCX Punta Patache      1.64 152⇑iP       Pb      20 18 34.6 -0.9
PATCX                            i S       Sn      20 18 53.9 -0.5
PATCX                              IAML            20 19 07.0
      comp=N,2µm,0.5s
GO01  Chusmiza           1.71 100⇓iP       Pb      20 18 37.1 +0.3
GO01                             i S       Sg      20 19 01.0 -0.2
GO01                               IAML            20 19 05.3
      comp=N,5µm,0.2s
GO01  Chusmiza           1.71 100  Pn      Pb      20 18 37.4 +0.6
PB16  IPOC Station P     1.73  54⇓iP       Pg      20 18 38.0 -1.2
PB16                             i S       Sg      20 19 01.7  0.0
PB08  IPOC Station P     1.89 115⇑iP       Pb      20 18 39.6 -0.2
PB08                             i S       Sb      20 19 03.6 +0.5
PB08                               IAML            20 19 13.2
      comp=N,2µm,0.2s
PB01  IPOC Station P     2.18 140 eP       Pn      20 18 41.9 +0.8
PB01                             i S       Sn      20 19 08.8 +1.2
PB01                               IAML            20 19 21.0
      comp=E,2µm,0.2s
PB01  IPOC Station P     2.18 140  Pn      Pb      20 18 42.4 -2.3
PB02  IPOC Station P     2.19 153 eP       Pn      20 18 42.2 +0.9
PB02                             i S       Sn      20 19 07.3 -0.7
PB02                               IAML            20 19 24.8
      comp=E,4µm,0.5s
PB07  IPOC Station P     2.56 157⇑iP       Pn      20 18 47.3 +0.8
PB07                               IAML            20 19 36.0
      comp=E,1µm,0.6s
PB04  IPOC Station P     3.06 165  Pn      Pn      20 18 53.3 +0.1
LVC   Limon Verde        3.76 149  Pn      Pn      20 19 06.0 +2.9
      comp=E,3.8nm,0.3s,baz=349,slow=10,SNR=6.1
LVC   Limon Verde        3.76 149          Pn      20 19 05.8 +2.7
LPAZ  La Paz             4.09  42  Pn      Pb      20 19 13.6 -3.9
      comp=E,2.9nm,0.3s,baz=271,slow=1.9,SNR=6.6
PB10  IPOC Station P     4.15 175  Pn      Pn      20 19 07.1 -1.0
GO02  Mina Guanaco       5.91 168  Pn      Pn      20 19 33.0 +0.3
CPUP  Villa Florida     14.36 121  Pn      P       20 21 32.4 -2.6
      comp=E,0.1nm,0.3s,baz=328,slow=9.0,SNR=4.7
CPUP  Villa Florida     14.36 121          Pn      20 21 29.6 +1.5
GO05  Huala             15.61 183  Pn      Pn      20 21 43.2 -1.5
GO05                               IAmb    IAmb    20 21 44.0
      comp=Z,23nm,1.2s
OTAV  Otavalo           20.81 339  P       P       20 22 45.1 -1.6
PLCA  Paso Flores       21.30 179  P       P       20 22 54.3 +2.9
      comp=Z,2.9nm,0.9s,baz=40,slow=11,SNR=3.1
PLCA  Paso Flores       21.30 179  P       P       20 22 51.7 +0.4
FLOC  Florencia         21.32 347  P       P       20 22 51.6  0.0
PTGA  Pitinga           21.43  32  P       P       20 22 52.5 -0.4
      comp=Z,7.8nm,0.3s,baz=360,slow=23,SNR=9.2
PTGA  Pitinga           21.43  32  P       P       20 22 52.8 -0.1
PTGA                               IAmb    IAmb    20 22 54.2
      comp=Z,16nm,0.8s
BDFB  Brasilia          22.21  84  P       P       20 23 00.6 -0.7
BDFB                               IAmb    IAmb    20 23 08.0
      comp=Z,14nm,1.4s
RUSC  La Rusia          25.18 355  P       P       20 23 30.5 -0.2
TXAR  Lajitas Array     57.78 326  P       P       20 27 56.9 +0.9
      comp=Z,0.5nm,0.7s,baz=150,slow=11,SNR=3.1
TXAR  Lajitas Array     57.78 326  P       P       20 27 54.4 -1.6
SNCC  San Nicolas Is    69.89 318  P       P       20 29 12.6 -2.9
DBIC  Dimbokro          70.03  75  P       P       20 29 17.0 +0.2
      comp=Z,3.4nm,0.8s,baz=203,slow=7.6,SNR=4.1
DBIC  Dimbokro          70.03  75  P       P       20 29 16.1 -0.7
DBIC                               IAmb    IAmb    20 29 17.9
      comp=Z,4.8nm,0.9s
QSPA  South Pole Qui    70.81 180  P       P       20 29 20.9  0.0
PDAR  Pinedale Array    71.31 331  P       P       20 29 26.6 +2.3
      comp=Z,0.2nm,0.6s,baz=125,slow=4.5,SNR=2.7
NVAR  Mina Array Bea    72.63 323  P       P       20 29 34.9 +2.6
      comp=Z,0.7nm,0.9s,baz=163,slow=5.5,SNR=5.0
NVAR  Mina Array Bea    72.63 323  P       P       20 29 30.6 -1.7
SCHQ  Schefferville     73.98   2  P       P       20 29 41.0 +1.4
      comp=Z,2.5nm,0.9s,baz=205,slow=8.6,SNR=4.0
SCHQ  Schefferville     73.98   2  P       P       20 29 38.6 -1.0
SCHQ                               IAmb    IAmb    20 29 42.2
      comp=Z,3.9nm,1.0s
TOA0  Torodi Ar. Sit    78.50  72  P       P       20 30 05.5 -0.7
TORD  Torodi Ar. Bea    78.50  72  P       P       20 30 05.8 -0.4
      comp=Z,6.1nm,0.9s,baz=254,slow=4.7,SNR=11
YKA   Yellowknife Ar    88.55 341  P       P       20 30 58.6 +2.0
      comp=Z,3.4nm,0.8s,baz=138,slow=5.1,SNR=18
DLBC  Dease Lake        91.43 333  P       P       20 31 12.5 +2.2
      comp=Z,2.1nm,0.7s,baz=301,slow=2.3,SNR=3.1
H11S2 WAKE ISLAND Hy125.65 279     T       T       22 56 23.4
      baz=101,slow=75,SNR=2.8
H11S1 WAKE ISLAND Hy125.66 279     T       T       22 56 19.6
      baz=101,slow=75,SNR=3.7
H11S3 WAKE ISLAND Hy125.67 279     T       T       22 56 25.8
      baz=101,slow=75,SNR=2.9
H11N3 WAKE ISLAND Hy125.69 281     T       T       22 56 22.0
      SNR=9.6
H11N2 WAKE ISLAND Hy125.70 281     T       T       22 56 23.2
H11N1 WAKE ISLAND Hy125.70 281     T       T       22 56 23.2
ZALV  Zalesovo Beam    140.79  23  PKP     PKiKP   20 37 36.5 -0.2
      comp=Z,1.9nm,0.8s,baz=306,slow=4.0,SNR=5.6
ZALV  Zalesovo Beam    140.79  23          PKPdf   20 37 33.0 -1.0
MK31  Makanchi Array   144.97  33          PKPdf   20 37 41.5 -0.3
MKAR  Makanchi Array   144.97  33  PKP     PKPdf   20 37 43.0 +1.2
      comp=Z,2.9nm,0.8s,baz=320,slow=3.2,SNR=13
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MKAR	Makanchi Array	144.97	33		PKPdf	20 37 41.9	+0.1
USRK	Ussuriysk Ar.	148.67	327	PKPbc	PKiKP	20 37 53.5	+0.4
	comp=Z,3.3nm,0.8s,baz=66,slow=6.3,SNR=4.8						
MJAR	Matsushiro Arr	149.22	310	PKPbc	PKiKP	20 37 54.6	-0.1
	comp=Z,2.7nm,1.0s,baz=168,slow=1.9,SNR=4.9						
SONM	Songino Array	151.52	4	PKPbc	PKiKP	20 38 01.0	+1.9
	comp=Z,2.6nm,0.9s,baz=304,slow=1.5,SNR=9.0						
SONM	Songino Array	151.52	4		PKiKP	20 37 59.4	+0.2

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*IDC **15** 20:18:46.2±1.3, 19°.31S×70°.72W, h0km, mb4.2/4, mb1 4.5/5, mb1mx3.9/42, mbtmp4.3/5, ML4.3/1, Error ellipse: s-maj=47.3km s-min=33.6km az=57.0*

*NEIC **15** 20:18:49.9±1.6, 19°.46S±0°.07×71°.04W±0°.04, h28km±4km, mb4.2/9, Error ellipse: s-maj=10.6km s-min=5.1km az=190.0*

ISC 15 20:18:49.0±0.6**, 19°.41S**±0°.08×**70°.97W**±0°.07**, h22**km**, n27, σ1s08**/29**, mb4.4**/7**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	IPOC Station P	1.28	106	Pn	Pb	20 19 13.3	+0.7
PB11				Sn	Sb	20 19 30.4	+1.7
GO01	Chusmiza	1.69	99	Pn	Pb	20 19 18.4	-1.3
GO01				Sg	Sb	20 19 43.4	+2.7
LVC	Limon Verde	3.72	149	Pn	Pn	20 19 44.8	-0.7
	24nm,0.3s,baz=322,slow=9.6,SNR=2.4						
PB10	IPOC Station P	4.10	175	Pn	Pn	20 19 49.6	-0.8
GO02	Mina Guanaco	5.87	168	Pn	Pn	20 20 15.1	+0.2
GO03	Copiap	8.18	175	Pn	Pn	20 20 46.1	-0.3
NNA	Nana	9.30	322	Pn	Pn	20 21 02.3	+0.4
CPUP	Villa Florida	14.33	121	P	P	20 22 15.1	-2.4
GO06	Curarrehue	20.11	181	P	P	20 23 20.9	-0.5
GO06				IAmb	IAmb	20 23 27.0	
	comp=Z,6.7nm,1.0s						
PLCA	Paso Flores	21.26	179	P	P	20 23 33.8	0.0
PTGA	Pitinga	21.47	31	P	P	20 23 34.3	-1.8
	comp=Z,11nm,0.6s,baz=216,slow=17,SNR=2.9						
PTGA	Pitinga	21.47	31	P	P	20 23 35.7	-0.4
BDFB	Brasilia	22.20	84	P	P	20 23 44.3	+0.1
BDFB				IAmb	IAmb	20 23 50.5	
	comp=Z,3.9nm,0.8s						
ROSC	El Rosal	24.32	352	P	P	20 24 04.9	-0.8
ROSC				IAmb	IAmb	20 24 10.4	
	comp=Z,13nm,1.1s						
RUSC	La Rusia	25.23	355	P	P	20 24 13.9	-0.1
QSPA	South Pole Qui	70.77	180	P	P	20 30 05.0	+1.5
NVAR	Mina Array Bea	72.67	323	P	P	20 30 16.9	+1.6
	comp=Z,0.5nm,0.8s,baz=161,slow=8.5,SNR=2.3						
TOA0	Torodi Ar. Sit	78.50	72	P	P	20 30 48.5	-0.5
TOA0				IAmb	IAmb	20 30 50.7	
	comp=Z,4.4nm,0.8s						
TORD	Torodi Ar. Bea	78.50	72	P	P	20 30 48.5	-0.5
	comp=Z,3.3nm,0.6s,baz=250,slow=5.6,SNR=5.8						
TORD	Torodi Ar. Bea	78.50	72	P	P	20 30 48.7	-0.3
YKA	Yellowknife Ar	88.59	341	P	P	20 31 39.9	+0.2
	comp=Z,1.4nm,0.7s,baz=137,slow=5.2,SNR=4.2						
ZALV	Zalesovo Beam	140.83	23	PKP	PKPdf	20 38 16.7	-0.2
	comp=Z,1.0nm,0.6s,baz=134,slow=6.4,SNR=4.2						
ZALV	Zalesovo Beam	140.83	23		PKPdf	20 38 17.5	+0.6
MKAR	Makanchi Array	145.00	33	PKP	PKPdf	20 38 24.7	+0.1
	comp=Z,1.5nm,0.8s,baz=306,slow=2.9,SNR=5.3						
USRK	Ussuriysk Ar.	148.72	327	PKPbc	PKPbc	20 38 34.9	+0.3
	comp=Z,1.1nm,0.7s,baz=204,slow=27,SNR=2.1						
USRK	Ussuriysk Ar.	148.72	327		PKiKP	20 38 35.4	-0.7
SONM	Songino Array	151.56	4	PKPbc	PKiKP	20 38 42.5	+0.5
	comp=Z,1.1nm,0.5s,baz=296,slow=1.2,SNR=5.4						

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*IDC **15** 20:35:41.7±1.1, 37°.57N×25°.75E, h0km, mb3.5/7, mb1 3.6/11, mb1mx3.4/54, mbtmp3.5/11, ML3.2/4, MS2.3/1, Ms1 2.3/1, ms1mx2.0/44, Error ellipse: s-maj=22.9km s-min=18.9km az=115.0*

*DDA **15** 20:35:42.2, 37°.57N×25°.65E, h16km±2km, MW3.7*

*ISK **15** 20:35:42.6, 37°.60N×25°.62E, h14km, ML3.8/28*

*ATH **15** 20:35:43.1, 37°.56N×25°.65E, h30km±1km, ML3.7/19, Error ellipse: s-maj=1.1km s-min=0.6km az=165.0*

*THE **15** 20:35:43.7, 37°.56N×25°.65E, h4km, ML3.8/10, Error ellipse: s-maj=0.8km s-min=0.2km az=118.0*

ISC 15 20:35:43.2±1.1**, 37°.58N**±0°.02×**25°.65E**±0°.02**, h7**km±8km**, n189, σ0s82**/221**, mb3.5**/8**, 13C-3D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNSA	Tinos	0.39	264	P	Pb	20 35 52.0	-0.4
TNSA				S	Sb	20 35 57.6	-1.0
TNSA				AML	AML	20 35 57.8	
	comp=E,19461µm,0.2s						
TNSA				AML	AML	20 35 59.7	
	comp=N,7703µm,0.2s						
APE	Apeiranthos	0.52	191	P	Pg	20 35 53.5	+0.3
APE	Apeiranthos	0.52	191	P	Pg	20 35 53.4	+0.3
APE				S	Sb	20 36 02.3	-0.1
APE				AML	AML	20 36 06.0	
	comp=N,5722µm,0.2s						
APE				AML	AML	20 36 06.8	
	comp=E,4543µm,0.2s						
APE	Apeiranthos	0.52	191	⇓P	Pb	20 35 53.9	-0.7
APE				⇑S	Sn	20 36 04.3	-1.9
APE	Apeiranthos	0.52	191	PG	Pg	20 35 53.7	+0.5
AMGA	Amorgos Island	0.77	165	P	Pg	20 35 58.2	+0.2
AMGA				S	Sb	20 36 09.3	-0.3
	comp=E,4µm,0.4s						
AMGA	Amorgos Island	0.77	165	P	Pg	20 35 58.2	+0.2
AMGA				S	Sb	20 36 10.0	+0.3
AMGA				AML	AML	20 36 11.6	
	comp=E,8843µm,0.4s						
AMGA				AML	AML	20 36 14.2	
	comp=N,7986µm,0.4s						
CHOS	Chios island	0.87	22	P	Pb	20 36 00.5	-0.1
CHOS				S	Sb	20 36 13.2	+0.7
	comp=N,14µm,0.4s						
CHOS	Chios island	0.87	22	P	Pb	20 36 00.6	-0.1
CHOS				S	Sb	20 36 12.5	0.0
CHOS				AML	AML	20 36 17.9	
	comp=N,21726µm,0.4s						
CHOS				AML	AML	20 36 18.3	
	comp=E,33479µm,0.4s						
CHOS	Chios island	0.87	22	PG	Pg	20 35 59.4	-0.5
CHOS				SG	Sg	20 36 12.0	+0.8
IOSP	Ios island	0.90	199	P	Pb	20 36 00.9	-0.3
IOSP				S	Sb	20 36 13.4	0.0
	comp=E,5µm,0.3s						
IOSP	Ios island	0.90	199	P	Pb	20 36 00.7	-0.5
IOSP				S	Sb	20 36 12.9	-0.5
IOSP				AML	AML	20 36 15.6	
	comp=E,9232µm,0.3s						
IOSP				AML	AML	20 36 15.7	
	comp=N,10929µm,0.3s						
CESE	eme	0.91	34	PG	Pg	20 36 01.2	+0.5
CESE				SG	Sb	20 36 13.9	+0.3
SMG	Samos	0.95	82	P	Pg	20 36 01.6	+0.1
SMG				S	Sb	20 36 15.7	+0.8
	comp=N,5µm,0.3s						
SMG	Samos	0.95	82	P	Pg	20 36 01.5	+0.1
SMG				S	Sg	20 36 14.7	+0.9
SMG				AML	AML	20 36 17.1	
	comp=N,8870µm,0.3s						
SMG				AML	AML	20 36 17.9	
	comp=E,9504µm,0.3s						
PSRA	Psara	0.96	356	P	Pn	20 36 02.9	-0.2
PSRA				S	Sn	20 36 16.4	-0.7
PSRA				AML	AML	20 36 18.9	
	comp=E,49846µm,0.3s						
PSRA				AML	AML	20 36 19.4	
	comp=N,35519µm,0.2s						
SERI	Serifos	1.02	246	P	Pb	20 36 02.6	-0.5
SERI				S	Sn	20 36 17.2	-1.3
	comp=N,4µm,0.3s						
SERI	Serifos	1.02	246	P	Pb	20 36 02.7	-0.5
SERI				S	Sb	20 36 16.6	-0.1
SERI				AML	AML	20 36 17.2	
	comp=E,7762µm,0.4s						
SERI				AML	AML	20 36 17.6	
	comp=N,7873µm,0.3s						
KARY	Karystos	1.06	296	P	Pn	20 36 03.9	-0.6
KARY	Karystos	1.06	296	P	Pn	20 36 03.9	-0.6
KARY				S	Sb	20 36 17.6	-0.4
KARY				AML	AML	20 36 20.0	
	comp=N,18440µm,0.5s						
KARY				AML	AML	20 36 20.1	
	comp=E,7708µm,0.2s						
URLA	Izmir	1.08	44	PN	Pg	20 36 03.1	-0.8
URLA	Izmir	1.08	44	*i* P	Pg	20 36 03.5	-0.4
URLA				*i* S	Sg	20 36 18.2	+0.2
DGB	zmir	1.08	64	*i* P	Pg	20 36 03.2	-0.8
DGB				*i* S	Sg	20 36 17.3	-0.8
DGB				IAML		20 36 20.0	
	comp=N,1µm,0.6s						
GMLD	Gumuldur	1.12	63	PN	Pb	20 36 04.3	-0.6
GMLD				SN	Sb	20 36 19.9	+0.3
CMBO	Columbo, Santo	1.12	190	P	Pg	20 36 04.3	-0.4
CMBO	Columbo, Santo	1.12	190	P	Pg	20 36 04.4	-0.4
CMBO				AML	AML	20 36 29.6	
	comp=N,7634µm,0.6s						
CMBO				AML	AML	20 36 35.4	
	comp=E,5708µm,0.6s						
THR2	Thira island,	1.14	189	P	Pb	20 36 04.8	-0.5
THR2	Thira island,	1.14	189	P	Pb	20 36 04.9	-0.5
THT2	Imerovigli	1.16	189	PN	Pb	20 36 05.2	-0.3
SAP3	Santorini-Thir	1.17	192	P	Pb	20 36 05.0	-0.7
SAP3	Santorini-Thir	1.17	192	P	Pb	20 36 05.0	-0.7
THR7	Fira-Santorini	1.17	189	P	Pb	20 36 05.2	-0.5
THR8	Santorini-Mono	1.18	187	P	Pb	20 36 05.0	-0.8
THR8	Santorini-Mono	1.18	187	P	Pb	20 36 05.1	-0.8
THR3	Thira Island,	1.18	190	P	Pb	20 36 05.2	-0.8
THR5	Thira Island,	1.18	192	P	Pb	20 36 05.1	-0.9
THR5	Thira Island,	1.18	192	P	Pb	20 36 05.0	-0.9
STAX	Taxiarchis Har	1.19	190	P	Pb	20 36 05.4	-0.7
SANT	Santorini	1.22	187	P	Pb	20 36 05.6	-0.9
SANT				AML	AML	20 36 27.2	
	comp=N,888µm,0.5s						
SANT				AML	AML	20 36 27.3	
	comp=E,2774µm,0.2s						
SANT	Santorini	1.22	187	⇑S	Sn	20 36 27.0	+3.6
SANT	Santorini	1.22	187	PN	Pb	20 36 05.5	-1.0
SANT				SN	Sn	20 36 23.2	-0.2
SANT	Santorini	1.22	187	*i* P	Pb	20 36 05.2	-1.4
ANAF	Anafi Island	1.22	175	P	Pn	20 36 06.3	-0.5
ANAF				S	Sn	20 36 23.0	-0.6
	comp=E,8µm,0.4s						
ANAF	Anafi Island	1.22	175	P	Pn	20 36 05.7	-1.1
ANAF				S	Sb	20 36 22.2	-0.5
ANAF				AML	AML	20 36 26.0	
	comp=E,16626µm,0.5s						
ANAF				AML	AML	20 36 26.2	
	comp=N,14721µm,0.3s						
THR6	Thira Island,	1.24	189	P	Pn	20 36 06.0	-0.9
THR6	Thira Island,	1.24	189	P	Pn	20 36 06.1	-0.8
KRBN	Karaburun	1.24	35	PN	Pn	20 36 06.3	-0.7
THR9	Santorini-Faro	1.24	191	P	Pn	20 36 06.3	-0.7
GCAM	G?zelcaml?	1.26	84	PN	Pn	20 36 07.1	-0.2
GCAM	G?zelcaml?	1.26	84	*i* P	Pg	20 36 07.7	+0.3
GCAM				*i* S	Sb	20 36 24.2	+0.4
GCAM				IAML		20 36 31.0	
	comp=E,840nm,0.7s						
MHLA	Plaka, Milos I	1.29	230	P	Pn	20 36 06.3	-1.3
MHLO	Agia Marina, M	1.33	229	P	Pn	20 36 07.4	-0.9
MHLO				S	Sg	20 36 26.8	+0.7
	comp=E,6µm,0.7s						
MHLO	Agia Marina, M	1.33	229	P	Pn	20 36 07.3	-1.0
KOSK	Kos Island	1.34	127	PN	Pn	20 36 07.5	-0.9
BLCB	Balcova	1.36	53	PN	Pn	20 36 07.3	-1.4
FOCM	Foa	1.42	37	PN	Pn	20 36 08.9	-0.5
BODT	Bodrum	1.42	111	PN	Pn	20 36 08.8	-0.7
DION	Dionisos Attik	1.45	291	P	Pn	20 36 09.5	-0.4
DION	Dionisos Attik	1.45	291	P	Pn	20 36 09.7	-0.2
DION				AML	AML	20 36 33.6	
	comp=N,145µm,0.3s						
DION				AML	AML	20 36 34.7	
	comp=E,174µm,0.5s						
PTL	Penteli	1.49	289	P	Pn	20 36 10.1	-0.3
PTL				S	Sg	20 36 30.6	-0.5
	comp=E,2µm,0.4s						
PTL	Penteli	1.49	289	P	Pn	20 36 10.1	-0.3
PTL				AML	AML	20 36 33.8	
	comp=N,3639µm,0.5s						
PTL				AML	AML	20 36 34.8	
	comp=E,2992µm,0.3s						
VLY	Voula,Athens	1.50	281	P	Pn	20 36 10.3	-0.2
VLY				S	Sg	20 36 31.1	-0.2
	comp=E,5µm,0.4s						
VLY	Voula,Athens	1.50	281	P	Pn	20 36 10.2	-0.3
VLY				AML	AML	20 36 33.0	
	comp=E,10542µm,0.4s						
VLY				AML	AML	20 36 33.3	
	comp=N,9763µm,0.4s						
ATHU	Athens Univers	1.53	285	P	Pn	20 36 10.8	-0.1
ATHU				S	Sg	20 36 31.5	-0.8
ATHU	Athens Univers	1.53	285	P	Pn	20 36 10.6	-0.3
ATHU				AML	AML	20 36 33.0	
	comp=E,1274µm,0.3s						
ATHU				AML	AML	20 36 33.1	
	comp=N,1552µm,0.3s						
SKY	Skiros Island	1.56	327	P	Pn	20 36 11.3	-0.1
SKY	Skiros Island	1.56	327	P	Pn	20 36 11.3	-0.1
ATH	Athens Observa	1.58	285	P	Pn	20 36 11.6	-0.1
ATH				S	Sg	20 36 33.1	-0.9
	comp=N,3µm,0.5s						
ATH	Athens Observa	1.58	285	P	Pn	20 36 11.5	-0.1
SIGR	SIGRI	1.64	6	P	Pn	20 36 11.4	-1.0
SIGR				AML	AML	20 36 40.4	
	comp=E,3862µm,0.6s						
SIGR				AML	AML	20 36 40.7	
	comp=N,4863µm,0.6s						
SIGR	SIGRI	1.64	6	PN	Pn	20 36 11.5	-1.0
PRK	Paraskevi	1.73	16	P	Pn	20 36 13.8	+0.1
PRK	Paraskevi	1.73	16	P	Pn	20 36 13.9	+0.1
PRK				AML	AML	20 36 44.6	
	comp=E,8060µm,0.6s						
PRK				AML	AML	20 36 46.3	
	comp=N,4737µm,1.2s						
DAT	Datca	1.76	118	PN	Pn	20 36 14.0	-0.2
AYDN	Tasoluk	1.77	87	*i* P	Pg	20 36 17.9	+0.7
AYDN				*i* S	Sg	20 36 39.9	-0.2
ZEDA	zmir-Bergama	1.78	39	*i* P	Pn	20 36 13.3	-1.1
ZEDA				*i* S	Sn	20 36 35.0	-2.4
DKL	Dikili	1.79	33	PN	Pn	20 36 13.9	-0.6
AYDB	Zeytinkoy-Aydi	1.81	78	PN	Pn	20 36 14.5	-0.5
AYVA	Ayvalik	1.91	25	*i* P	Pg	20 36 20.0	+0.2
AYVA				*i* S	Sb	20 36 43.2	+0.7
DID	Didima	1.92	269	P	Pn	20 36 15.9	-0.4
DID	Didima	1.92	269	P	Pn	20 36 15.7	-0.6
VILL	Villia	1.94	288	P	Pn	20 36 16.6	0.0
MRKA	Markates	1.98	305	P	Pn	20 36 16.9	-0.2
MRKA	Markates	1.98	305	P	Pn	20 36 17.0	-0.1
VIL2	Platees	1.99	289	P	Pn	20 36 16.4	-0.8
KRND	KRANIDI	2.00	265	P	Pn	20 36 17.2	-0.2
KRND	KRANIDI	2.00	265	P	Pn	20 36 16.9	-0.5
KRND				AML	AML	20 36 52.3	
	comp=E,3022µm,0.6s						
KRND				AML	AML	20 36 53.0	
	comp=N,1861µm,0.5s						
AOS	Alonnisos	2.11	319	P	Pn	20 36 18.8	-0.2
AOS	Alonnisos	2.11	319	P	Pn	20 36 18.5	-0.4
AOS	Alonnisos	2.11	319	PN	Pn	20 36 18.5	-0.4
YER	Yerkesik	2.15	101	PN	Pn	20 36 20.1	+0.6
LOUT	Loutraki	2.16	282	P	Pn	20 36 19.5	-0.1
LOUT	Loutraki	2.16	282	P	Pn	20 36 19.6	-0.1
LTK	Loutraki	2.17	283	P	Pn	20 36 19.6	-0.2
LTK	Loutraki	2.17	283	P	Pn	20 36 19.8	0.0
PROD	Prodromos	2.28	288	P	Pn	20 36 21.3	+0.1
PROD	Prodromos	2.28	288	P	Pn	20 36 21.3	+0.1
BOZC	Bozcaada	2.28	8	PN	Pn	20 36 20.3	-1.0
EZN	Ezine	2.31	13	PN	Pn	20 36 20.9	-0.7
NPS	Neapolis	2.31	181	P	Pn	20 36 21.4	-0.3
NPS	Neapolis	2.31	181	P	Pn	20 36 20.9	-0.8
VLI	Veliai	2.33	249	P	Pn	20 36 21.2	-0.8
VLI	Veliai	2.33	249	P	Pn	20 36 21.0	-0.9
SKIA	Skiathos	2.34	313	P	Pn	20 36 22.1	0.0
SKIA	Skiathos	2.34	313	P	Pn	20 36 22.1	0.0
LIA	Limnos Island	2.34	351	P	Pn	20 36 21.2	-1.0
LKR	Lokris	2.35	298	P	Pn	20 36 22.0	-0.2
LKR	Lokris	2.35	298	P	Pn	20 36 22.0	-0.2
KARP	Karpathos	2.37	149	P	Pn	20 36 21.9	-0.6
KARP	Karpathos	2.37	149	P	Pn	20 36 21.7	-0.8
IDI	Anoyia	2.37	195	P	Pn	20 36 21.6	-0.9
IDI	Anoyia	2.37	195	Pn	Pn	20 36 21.6	-0.9
	comp=N,4.5nm,0.3s,baz=339,slow=8.1,SNR=51						
IDI				Sn	Sn	20 36 49.8	-2.1
	comp=N,17nm,0.3s,baz=272,slow=13,SNR=8.0						
IDI				LR	LR	20 36 57.2	
	comp=N,58nm,18.5s,baz=3.5,slow=32						
IDI	Anoyia	2.37	195	P	Pn	20 36 21.3	-1.2
IDI	Anoyia	2.37	195	PN	Pn	20 36 21.6	-0.9
ARG	Arkhangelos	2.41	124	P	Pn	20 36 22.8	-0.2
LAST	Lasithi	2.42	183	P	Pn	20 36 22.0	-1.2
KTHA	Kythira Island	2.46	238	P	Pn	20 36 23.2	-0.5
KTHA	Kythira Island	2.46	238	P	Pn	20 36 22.9	-0.8
KTHA	Kythira Island	2.46	238	PN	Pn	20 36 22.7	-1.0
TURN	Turunc	2.46	106	PN	Pn	20 36 21.4	-2.3
TURN	Turunc	2.46	106	*i* P	Pn	20 36 21.1	-2.7
VAM	Vamos	2.46	209	P	Pn	20 36 23.4	-0.4
VAM	Vamos	2.46	209	P	Pn	20 36 22.7	-1.0
ZKR	Zakros	2.50	169	P	Pn	20 36 24.0	-0.3
ZKR	Zakros	2.50	169	PN	Pn	20 36 24.6	+0.3
IMMV	Iera Moni Meta	2.50	213	P	Pn	20 36 23.6	-0.8
IMMV	Iera Moni Meta	2.50	213	PN	Pn	20 36 24.6	+0.2
DALY	Dalyan (Mula)	2.52	107	PN	Pn	20 36 25.4	+0.9
RODP	Rodopos	2.52	218	PN	Pn	20 36 24.4	-0.3
ANKY	Antikythira Is	2.54	229	P	Pn	20 36 24.7	-0.2
ANKY	Antikythira Is	2.54	229	P	Pn	20 36 24.4	-0.5
KULA	Kula-Manisa	2.55	68	PN	Pn	20 36 24.9	-0.2
NEO	Neokhori	2.57	313	P	Pn	20 36 25.3	0.0
NEO	Neokhori	2.57	313	P	Pn	20 36 25.3	0.0
DSF	Desfina	2.60	290	P	Pn	20 36 26.0	+0.2
DSF	Desfina	2.60	290	P	Pn	20 36 25.8	0.0
VLX	Vlachokerasia	2.61	266	P	Pn	20 36 26.6	+0.7
XOR	Xorichti	2.63	314	P	Pn	20 36 25.8	-0.3
AXAR	Agios Charalam	2.64	298	P	Pn	20 36 26.8	+0.6
BALB	Balikesir	2.70	40	PN	Pn	20 36 26.4	-0.6
PAIG	Paliouri	2.81	327	P	Pn	20 36 28.0	-0.5
KLV	Kalavryta, Ach	2.81	281	P	Pn	20 36 28.9	+0.3
GELI	Tayfur-Gelibol	2.89	13	PN	Pn	20 36 29.4	-0.2
SMTH	Samothraki Isl	2.89	358	P	Pn	20 36 28.7	-0.9
LPK	Lapseki	2.92	17	PN	Pn	20 36 30.0	-0.1
TRIZ	Trizonia	2.93	287	P	Pn	20 36 31.1	+0.9
SERG	Sergoula	2.96	287	P	Pn	20 36 31.1	+0.5
AGG	Agios Georgios	2.98	300	P	Pn	20 36 31.5	+0.5
ITM	Ithomi	2.99	263	P	Pn	20 36 31.9	+0.9
OUR	Ouranopolis	3.04	335	P	Pn	20 36 31.3	-0.5
OUR	Ouranopolis	3.04	335	PN	Pn	20 36 30.9	-0.8
EFP	Efpalio	3.08	287	P	Pn	20 36 33.2	+1.0
THAS	Thassos island	3.11	347	P	Pn	20 36 31.5	-1.1
ANX	Ano Chora	3.11	290	P	Pn	20 36 33.5	+0.7
MAKR	Makrakomi, Fth	3.12	298	P	Pn	20 36 33.9	+1.1
DRO	Drossia	3.14	278	P	Pn	20 36 33.8	+0.6
PYL	PYLOS	3.19	259	P	Pn	20 36 35.3	+1.5
EVR	Evrytania	3.31	295	P	Pn	20 36 36.7	+1.2
ALN	Alexandroupoli	3.33	5	P	Pn	20 36 34.8	-0.9
THL	Klokotos Trika	3.47	306	P	Pn	20 36 38.3	+0.6
LIT	Litokhoron	3.52	317	P	Pn	20 36 38.6	+0.2
SOH	Sokhos	3.70	332	P	Pn	20 36 41.0	+0.2
SRS	Serrai	3.88	336	P	Pn	20 36 43.1	-0.2
STIP	Stip	4.90	328	*i* Pn	Pn	20 36 57.6	+0.3
ELND	Elena	5.35	2	⇑P	Pn	20 37 01.9	-1.5
ELND				⇑S	Sg	20 38 34.1	-0.7
VTS	Vitosha	5.36	341	⇑P	Pn	20 37 05.1	+1.3
RAZG	Razgrad	6.02	6	⇑P	Pn	20 37 11.8	-0.9
BRTR	Keskin Array B	6.61	69	Pn	Pn	20 37 20.3	-0.6
	comp=N,0.1nm,0.3s,baz=251,slow=13,SNR=9.1						
PDG	Podgorica	6.89	317	⇓P	Pn	20 37 26.4	+1.7
VOIR		7.86	357	⇑P	Pn	20 37 37.7	-0.4
MLR	Muntele Rosu	7.91	2	Pn	Pn	20 37 38.4	-0.3
	comp=N,0.3nm,0.3s,baz=175,slow=15,SNR=3.8						
MLR	Muntele Rosu	7.91	2	⇑P	Pn	20 37 38.7	-0.1
GISR	Galati	8.06	12	⇑P	Pg	20 38 26.8	+9.3
GZR	Gura Zlata	8.10	345	⇑P	Pn	20 37 40.7	-0.6
DEV	Deva	8.55	347	⇑P	Pn	20 37 47.6	+0.2
BZS	Buzias	8.58	341	⇓P	Pn	20 37 47.4	-0.4
TESR	Tescani	8.96	4	⇑P	Pn	20 37 53.3	+0.3
MMAI	Mount Meron Ar	9.18	117	Pn	Pn	20 37 55.9	-0.3
	comp=N,0.3nm,0.3s,baz=308,slow=12,SNR=2.6						
DRGR		9.46	348	⇑P	Pn	20 38 08.8	+8.9
GERES	GERESS Array B	14.22	326	Pn	P	20 39 12.9	+0.4
	comp=N,0.1nm,0.3s,baz=163,slow=9.8,SNR=4.8						
KHC	Kasperske Hory	14.48	327	*e*P	P	20 39 16.9	+1.5
KHC				*e*x	x	20 39 22.0	
ESDC	Sonseca Array	23.18	284	P	P	20 40 54.4	+3.9
	comp=N,1.5nm,0.7s,baz=79,slow=9.1,SNR=2.6						
FINES	FINESS Array B	23.89	1	P	P	20 40 56.9	-0.3
	comp=N,3.9nm,1.0s,baz=172,slow=15,SNR=3.9						
NOA	NORSAR Array B	25.18	343	P	P	20 41 08.7	-0.3
	comp=N,1.3nm,0.9s,baz=145,slow=9.3,SNR=2.5						
EKA	Eskdalemuir Ar	26.34	322	P	P	20 41 20.7	+1.1
	comp=N,0.8nm,0.6s,baz=117,slow=8.9,SNR=4.1						
TORD	Torodi Ar. Bea	32.38	228	P	P	20 42 13.2	-0.4
	comp=N,0.2nm,0.5s,baz=47,slow=11,SNR=1.5						
KURBB	Kurchatov Arra	39.33	53	P	P	20 43 12.2	-0.6
	comp=N,0.7nm,1.0s,baz=279,slow=8.8,SNR=4.1						
MKAR	Makanchi Array	42.15	59	P	P	20 43 35.0	-1.2
	comp=N,0.4nm,0.9s,baz=267,slow=8.3,SNR=3.5						
ZALV	Zalesovo Beam	43.07	48	P	P	20 43 42.7	-0.9
	comp=N,0.3nm,0.3s,baz=268,slow=10,SNR=1.5						

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*TAP **15** 20:41:16.2, 22°.22N×121°.39E, h18km, ML3.2, C*

*JMA **15** 20:41:16.4±0.1, 22°.37N×121°.55E, h10km±3km, M3.1*

ISC 15 20:41:15.4±1.0**, 22°.21N**±0°.02×**121°.44E**±0°.02**, h15**km±8km**, n100, σ1s02**/190**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	Lan-yu	0.20	149	*i* P	Pb	20 41 21.7	+1.0
	baz=130						
LAY				*i* S	Sb	20 41 25.7	+1.5
	baz=130						
TWH	Lutao	0.50	4	P	Pg	20 41 25.5	+0.1
	baz=24						
TWH				S	Sg	20 41 32.6	+0.4
	baz=24						
TAW	Tawu	0.53	287	*i* P	Pg	20 41 25.6	-0.2
	baz=285						
TAW				*i* S	Sg	20 41 32.4	-0.6
	baz=285						
EAST	Anshuo	0.58	288	*i* P	Pg	20 41 26.3	-0.5
	baz=287						
EAST				*e*S	Sg	20 41 33.5	-1.1
	baz=287						
TSEB	Hengchuen, Pin	0.59	239	*e*P	Pg	20 41 27.5	+0.5
	baz=250						
TSEB				S	Sg	20 41 35.8	+1.0
	baz=250						
ECL	Taimali	0.60	311	P	Pg	20 41 26.6	-0.5
	baz=298						
ECL				*e*S	Sg	20 41 34.6	-0.5
	baz=298						
TTN	Taitung	0.61	333	P	Pg	20 41 27.6	+0.3
	baz=349						
TTN				*e*S	Sb	20 41 37.0	+0.9
	baz=349						
TWKBT	Hengchun	0.64	246	P	Pg	20 41 27.6	-0.4
	baz=253						
TWKBT				*e*S	Sg	20 41 36.2	-0.4
	baz=253						
TWK1	Hengchun	0.65	246	P	Pb	20 41 27.6	-0.8
	baz=253						
TWK1				*e*S	Sg	20 41 35.8	-0.9
	baz=253						
HEN	Hengchun	0.68	253	*i* P	Pb	20 41 28.3	-0.7
	baz=249						
HEN				*i* S	Sb	20 41 37.6	-0.7
	baz=249						
TWGBT	Beinan	0.69	331	P	Pb	20 41 28.6	-0.6
	baz=318						
TWGBT				*e*S	Sg	20 41 37.9	-0.3
	baz=318						
TWG	Pinlang	0.70	331	P	Pb	20 41 28.6	-0.8
	baz=318						
TWG				*e*S	Sg	20 41 39.1	+0.7
	baz=318						
SCZT	Fangliau	0.78	282	P	Pb	20 41 29.6	-1.0
	baz=281						
SCZT				*e*S	Sb	20 41 39.4	-1.7
	baz=281						
MASBT	Mashibuluo	0.85	298	P	Pb	20 41 30.9	-1.0
	baz=299						
SSPT	Xinbi	0.86	289	*e*P	Pb	20 41 31.6	-0.4
	baz=289						
CHKT	Chengkung	0.89	355	*e*P	Pb	20 41 31.4	-1.2
	baz=10.0						
CHKT				S	Sb	20 41 43.0	-1.3
	baz=10.0						
FULB	Fuli	1.00	352	P	Pb	20 41 34.5	+0.1
	baz=338						
FULB				*e*S	Sg	20 41 48.2	+0.4
	baz=338						
WLCH	Liuqiu	1.00	278	*e*P	Pn	20 41 35.8	+1.0
	baz=277						

WLCH				*e*S	Sg	20 41 49.4	+1.7
	baz=277						
TWP	Hsiaoliuchiu	1.01	278	*e*P	Pb	20 41 34.3	-0.3
	baz=276						
TWP				*e*S	Sb	20 41 48.4	+0.7
	baz=276						
SGLT	Jiouru	1.02	301	*e*P	Pb	20 41 35.3	+0.5
	baz=301						
SGLT				*e*S	Sb	20 41 47.4	-0.6
	baz=301						
ELDTW	Lidau	1.05	338	*e*P	Pb	20 41 33.8	-1.6
	baz=341						
ELDTW				*e*S	Sb	20 41 47.4	-1.7
	baz=341						
SLGT	Liugui	1.07	317	*e*P	Pb	20 41 35.1	-0.7
	baz=324						
SLGT				*e*S	Sb	20 41 49.4	-0.2
	baz=324						
TWM1	Shoushan	1.13	303	*e*P	Pg	20 41 38.0	+0.9
	baz=303						
TWM1				*e*S	Sb	20 41 52.4	+1.3
	baz=303						
STYT	Tauyuan	1.14	326	*e*P	Pn	20 41 35.8	-1.1
	baz=338						
STYT				*e*S	Sb	20 41 51.1	-0.5
	baz=338						
TWF1	Yuli	1.15	353	*e*P	Pn	20 41 36.8	-0.2
	baz=342						
TWF1				*e*S	Sb	20 41 51.1	-0.6
	baz=342						
SNJT	Kaohsiung City	1.16	298	*e*P	Pb	20 41 38.0	+0.9
	baz=298						
SGST	Jiashian	1.18	318	P	Pn	20 41 37.4	0.0
	baz=323						
SGST				*e*S	Sb	20 41 53.1	+0.5
	baz=323						
YULB	Yu-li	1.19	354	P	Pn	20 41 36.4	-1.1
	baz=342						
YULB				*e*S	Sb	20 41 51.6	-1.2
	baz=342						
HGSD	Ruisui	1.28	359	*e*P	Pn	20 41 38.0	-0.7
	baz=10.0						
HGSD				*e*S	Sb	20 41 55.1	-0.4
	baz=10.0						
WTP	Ta-pu	1.29	324	*e*P	Pn	20 41 39.5	+0.6
	baz=325						
WTP				S	Sn	20 41 56.8	+0.9
	baz=325						
CHN1	Nanshi	1.29	319	*e*P	Pn	20 41 38.8	-0.1
	baz=320						
CHN1				S	Sb	20 41 57.1	+1.3
	baz=320						
EHY	Hungye	1.30	355	P	Pn	20 41 37.8	-1.2
	baz=344						
EHY				S	Sb	20 41 54.4	-1.7
	baz=344						
CHN3	Shinhua	1.32	311	P	Pn	20 41 40.0	+0.7
	baz=311						
CHN3				*e*S	Sg	20 41 58.8	+0.8
	baz=311						
TPUB	Ta-pu	1.32	326	P	Pn	20 41 40.0	+0.7
	baz=326						
TPUB				*e*S	Sb	20 41 58.0	+1.2
	baz=326						
SNST	Tainan City	1.33	319	P	Pn	20 41 40.0	+0.5
	baz=320						
SNST				*e*S	Sb	20 41 58.3	+1.2
	baz=320						
YUS	Yu-Shan	1.35	341	*e*P	Pn	20 41 39.8	-0.5
	baz=342						
YUS				*e*S	Sn	20 41 57.1	-1.1
	baz=342						
TWK	Hsinying	1.38	320	*e*P	Pb	20 41 41.3	+0.5
	baz=321						
TWK				S	Sb	20 41 59.0	+0.8
	baz=321						
CHN4	Tsaushan	1.38	326	*e*P	Pn	20 41 40.7	+0.5
	baz=339						
CHN4				*e*S	Sg	20 42 00.9	+0.9
	baz=339						
ALS	Alishan	1.43	336	*e*P	Pn	20 41 41.8	+0.7
	baz=337						
ALS				*e*S	Sn	20 41 59.6	-0.1
	baz=337						
EGFH	Guangfu	1.46	359	*e*P	Pn	20 41 40.5	-0.7
	baz=347						
EGFH				*e*S	Sn	20 41 59.3	-0.7
	baz=347						
SCLT	Jiali	1.50	310	*e*P	Pn	20 41 41.8	-0.1
	baz=310						
SCLT				S	Sn	20 42 02.0	+0.9
	baz=310						
CHN5	Tsauling	1.55	333	*e*P	Pb	20 41 44.0	+0.1
	baz=334						
CHN5				*e*S	Sb	20 42 04.2	+0.8
	baz=334						
VWDT	VWDT	1.56	350	*e*P	Pn	20 41 43.2	+0.6
	baz=7.0						
VWDT				*e*S	Sn	20 42 03.0	+0.3
	baz=7.0						
WHYT	Xinyi Township	1.58	340	*e*P	Pb	20 41 44.2	-0.1
	baz=341						
WHYT				*e*S	Sb	20 42 05.7	+1.6
	baz=341						
CHY	Chiayi	1.59	324	P	Pn	20 41 44.0	+0.9
	baz=324						
CHY				S	Sn	20 42 04.5	+1.1
	baz=324						
CHN2	Minshiung	1.59	326	*e*S	Sb	20 42 05.5	+1.0
	baz=326						
ESL	Shilin	1.60	360	*e*P	Pn	20 41 43.5	+0.3
	baz=349						
ESL				*e*S	Sn	20 42 02.3	-1.3
	baz=349						
SSLB	Suanglung	1.64	344	*e*P	Pb	20 41 45.2	-0.1
	baz=357						
SSLB				*e*S	Sn	20 42 05.0	+0.5
	baz=357						
WLGB	Puzi	1.65	320	*e*S	Sn	20 42 06.0	+1.3
	baz=320						
WGK	Gukeng	1.68	331	*i* P	Pn	20 41 45.2	+0.9
	baz=332						
WGK				*e*S	Sb	20 42 08.0	+0.9
	baz=332						
ENLB	Shoufeng	1.69	5	*e*S	Sn	20 42 06.2	+0.3
	baz=19						
WDLH	Douliu	1.69	331	*e*P	Pn	20 41 44.5	0.0
	baz=331						
WDLH				*e*S	Sb	20 42 07.7	+0.3
	baz=331						
WJS	Zhushan	1.74	338	*e*P	Pn	20 41 46.5	+1.4
	baz=339						
WJS				S	Sb	20 42 09.4	+0.8
	baz=339						
SMLT	Sun Moon Lake	1.74	343	*e*P	Pn	20 41 46.5	+1.2
	baz=345						
SMLT				*e*S	Sb	20 42 09.7	+0.8
	baz=345						
OWD	Renai	1.76	352	*e*P	Pn	20 41 46.2	+0.7
	baz=8.0						
OWD				*e*S	Sb	20 42 08.7	-0.7
	baz=8.0						
TYC	Yuchr	1.77	342	P	Pb	20 41 47.4	-0.2
	baz=344						
TYC				*e*S	Sb	20 42 10.2	+0.5
	baz=344						
WNT	Mingjian	1.81	337	*e*P	Pn	20 41 47.2	+1.2
	baz=339						
WNT				S	Sb	20 42 10.7	+0.1
	baz=339						
WSF	Szhu	1.82	322	*e*P	Pn	20 41 45.7	-0.4
	baz=322						
WSF				S	Sn	20 42 09.4	+0.6
	baz=322						
CHGB	Renai	1.86	352	*e*P	Pn	20 41 47.2	+0.2
	baz=8.0						
CHGB				*e*S	Sn	20 42 11.2	+0.8
	baz=8.0						
TWD	Chiawan	1.87	4	*e*S	Sn	20 42 09.7	-0.5
	baz=354						
DPDB	Guoxing	1.88	345	*e*P	Pn	20 41 47.9	+0.9
	baz=347						
DPDB				*e*S	Sb	20 42 12.4	-0.4
	baz=347						
RLNB	Erlin	1.95	329	*e*P	Pn	20 41 48.7	+0.7
	baz=330						
RLNB				*e*S	Sb	20 42 14.4	-0.4
	baz=330						
WDGT	Dungji	1.95	303	*i* P	Pn	20 41 47.4	-0.6
	baz=301						
WDGT				S	Sn	20 42 10.1	-2.1
	baz=301						
NACB	Ninganchiao	1.96	4	*e*P	Pn	20 41 46.7	-1.5
	baz=354						
NACB				*e*S	Sn	20 42 11.9	-0.6
	baz=354						
ETLH	Xiulin Townshi	1.99	1	*e*P	Pn	20 41 47.7	-0.9
	baz=3.0						
ETLH				*e*S	Sn	20 42 13.9	+0.5
	baz=3.0						
WCHH	Zhanghua	2.03	337	*e*P	Pn	20 41 49.9	+0.8
	baz=320						
WCHH				*e*S	Sn	20 42 15.9	+1.6
	baz=320						
TWT	Tachien	2.05	353	*e*P	Pn	20 41 50.6	+1.1
	baz=7.0						
TWT				*e*S	Sn	20 42 16.1	+1.1
	baz=7.0						
TDCB	Techi	2.05	353	*e*P	Pn	20 41 50.4	+0.9
	baz=7.0						
TDCB				*e*S	Sn	20 42 15.9	+0.9
	baz=7.0						
TCU	Taichung	2.06	340	*e*P	Pn	20 41 51.1	+1.7
	baz=341						
TCU				*e*S	Sb	20 42 17.4	-0.5
	baz=341						
VCHM	Qimei	2.11	299	*e*P	Pn	20 41 48.2	-2.0
	baz=296						
VCHM				*e*S	Sn	20 42 14.4	-1.8
	baz=296						
WHP	Taichung City	2.11	348	*e*P	Pb	20 41 52.4	-1.1
	baz=1.0						
WHP				*e*S	Sb	20 42 18.9	-0.7
	baz=1.0						
PHUB	P'eng-hu	2.16	307	*e*P	Pn	20 41 49.9	-1.0
	baz=291						
PHUB				*e*S	Sn	20 42 15.9	-1.5
	baz=291						
PNG	Penghu	2.21	308	P	Pn	20 41 50.1	-1.3
	baz=293						
PNG				S	Sn	20 42 16.6	-1.9
	baz=293						
NNSB	Datong	2.21	359	P	Pn	20 41 52.9	+1.2
	baz=1.0						
NNSB				*e*S	Sn	20 42 18.6	-0.3
	baz=1.0						
NNSH	Datong	2.21	359	*e*P	Pn	20 41 52.9	+1.2
	baz=1.0						
NNSH				*e*S	Sn	20 42 20.1	+1.2
	baz=1.0						
TWQ1	Liyutan	2.22	344	P	Pn	20 41 53.6	+1.9
	baz=345						
TWQ1				S	Sb	20 42 21.3	-1.2
	baz=345						
NNS	Nan Shan	2.22	358	P	Pn	20 41 52.6	+0.8
	baz=1.0						
NNS				*e*S	Sn	20 42 19.6	+0.4
	baz=1.0						
ENA	Nanau	2.23	7	*e*S	Sn	20 42 20.1	+1.0
	baz=356						
NDT	Datong Townshi	2.39	2	*e*P	Pn	20 41 55.8	+1.9
	baz=4.0						
NDT				*e*S	Sn	20 42 24.0	+1.0
	baz=4.0						
EOS1	EOS1	2.42	15	*e*P	Pn	20 41 54.4	0.0
	baz=29						
EOS1				*e*S	Sn	20 42 23.8	+0.2
	baz=29						
TWC	Suao	2.42	9	*e*S	Sn	20 42 24.8	+1.0
	baz=358						
ENTT	Nioudou	2.42	3	P	Pn	20 41 55.1	+0.6
	baz=5.0						
ENTT				S	Sn	20 42 24.5	+0.6
	baz=5.0						
NSTT	Nanjuang	2.45	351	*e*P	Pn	20 41 57.1	+2.3
	baz=335						
NSTT				*e*S	Sn	20 42 26.8	+2.3
	baz=335						
YHNB	Yeheng	2.45	359	*e*P	Pn	20 41 56.6	+1.6
	baz=1.0						
YHNB				*e*S	Sn	20 42 26.3	+1.5
	baz=1.0						
LIOB	Emei	2.46	351	*e*P	Pn	20 41 56.3	+1.3
	baz=335						
LIOB				*e*S	Sn	20 42 26.3	+1.5
	baz=335						
NSK	Sanguang	2.46	358	*e*P	Pn	20 41 56.8	+1.8
	baz=14						
NSK				*e*S	Sn	20 42 27.0	+2.1
	baz=14						
TWE	Neicheng	2.51	5	*e*P	Pn	20 41 56.6	+0.9
	baz=8.0						
TWE				*e*S	Sn	20 42 27.5	+1.5
	baz=8.0						
SLBB	Yuanshan	2.54	4	*e*P	Pn	20 41 56.3	+0.2
	baz=7.0						
SLBB				*e*S	Sn	20 42 28.0	+1.1
	baz=7.0						
NWLT	Wulai	2.56	1	*e*P	Pn	20 41 57.1	+0.7
	baz=4.0						
NWLT				*e*S	Sn	20 42 29.0	+1.7
	baz=4.0						
JYNG	Yonagunijimaku	2.63	31	P	Pn	20 41 56.9	-0.4
JYNG				*e*S	Sn	20 42 26.6	-2.3
HATJ	Hateruma jima	2.85	49	P	Pn	20 42 00.6	+0.3
HATJ				*e*S	Sn	20 42 33.6	-0.8
IRIF	Iriomote-Funau	2.98	44	P	Pn	20 42 02.6	+0.4
IRIF				S	Sn	20 42 37.0	-0.7
JKRS	Kuro-shima	3.11	49	P	Pn	20 42 04.7	+0.8
JKRS				*e*S	Sn	20 42 39.7	-1.1
JIJ	Ishigaki jima	3.28	49	P	Pn	20 42 06.3	0.0
JIJ				*e*S	Sn	20 42 42.3	-2.8
JISG	Ishigakijimahi	3.54	47	P	Pn	20 42 10.0	+0.1
JISG				*e*S	Sn	20 42 49.8	-1.7
JTJ	Tarama	3.85	50	P	Pn	20 42 14.8	+0.7
JTJ				S	Sn	20 42 57.7	-1.4
JIRB	Irabujima	4.30	52	P	Pn	20 42 21.0	+0.7
JIRB				*e*S	Sn	20 43 09.4	-0.9
JMJ2	Miyako jima3	4.37	54	P	Pn	20 42 22.0	+0.8
JMJ2				*e*S	Sn	20 43 11.1	-0.8
JIKM	Ikemajima	4.42	51	P	Pn	20 42 22.7	+0.8
JIKM				S	Sn	20 43 12.2	-0.8
JOGS	Gusukube	4.44	54	*e*S	Sn	20 43 13.3	-0.3

AEIC ***15*** *20:45:06.4±2.1, 51°.59N±0°.07×175°.13W±0°.05, h26*^{km}*±4*^{km}*, ML4.5/23, mb4.6/149(NEIC), Error ellipse: s-maj=9.7km s-min=4.3km az=164.0*

NEIC ***15*** *20:45:06.3±1.6, 51°.61N±0°.08×175°.18W±0°.05, h35*^{km}*±1*^{km}*, Error ellipse: s-maj=13.2km s-min=4.5km az=168.0*

IDC ***15*** *20:45:07.9±2.7, 51°.81N×175°.30W, h48*^{km}*±25*^{km}*, mb3.9/31, mb1 4.1/33, mb1mx4.0/66, mbtmp4.1/33, ML3.9/2, MS3.8/23, Ms1 3.8/23, ms1mx3.6/37, Error ellipse: s-maj=16.8km s-min=9.7km az=171.0*

ISC 15 20:45:06.8±0.4**, 51°.63N**±0°.07×**175°.18W**±0°.04**, h40**^{km}**,**
n232, σ1^{s}**.14**/191**, mb4.5**/86**, MS3.8**/20**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSMY	Great Sitkin M	0.68	308		Pn	20 45 20.3	+0.3
GSTR	Great Sitkin T	0.72	311		Pn	20 45 21.2	+0.8
GSTD	Great Sitkin T	0.73	306		Pn	20 45 21.1	+0.4
ATKA	Atka Island	0.84	46		Pn	20 45 21.6	-0.5
ATKA					Sn	20 45 32.5	-0.8
KOKL	Mount Kliuchef	0.92	41		Pn	20 45 23.5	+0.1
KOFP	Korovin Flat P	0.93	46		Pn	20 45 23.5	+0.1
ADAG	Mount Adagdak	0.95	292		Pn	20 45 24.6	+1.0
ADK	Adak	0.97	286		Pn	20 45 24.1	+0.2
ADK				Sn	Sn	20 45 35.3	-1.1
KIKV	Kanaga Island	1.26	282		Pn	20 45 28.4	+0.5
KICM	Kanaga Island	1.28	284		Pn	20 45 28.9	+0.7
KIMD	Kanaga Island	1.28	277		Pn	20 45 28.5	+0.3
TAPA	Tanaga Point A	1.65	278		Pn	20 45 34.1	+0.9
TAFP	Tanaga Falls P	1.76	280		Pn	20 45 35.9	+1.2
TASE	Tanaga Southea	1.79	278		Pn	20 45 36.3	+1.2
NIKH	Nikolski High	4.11	68		Sn	20 46 55.5	+1.7
NIKH	Nikolski High	4.11	68		Pn	20 46 08.2	+1.2
MGOD	Makushin Gods	5.50	64		Pn	20 46 28.1	+2.0
MREP	Makushin Rep't	5.57	64		Pn	20 46 29.4	+2.3
MSW	Makushin Switc	5.59	63		Pn	20 46 29.3	+2.0
MNAT	Makushin Natee	5.63	63		Pn	20 46 29.9	+2.0
UNV	Unalaska Valle	5.72	64		Pn	20 46 30.8	+1.7
AKUT	Akutan	6.23	63		Pn	20 46 39.8	+3.8
AKUT				Sn	Sn	20 47 49.4	+3.6
SPIA	Saint Paul Isl	6.26	25	Pn	Pn	20 46 39.4	+3.0
SMY	Shemya	6.68	284	Pn	Pn	20 46 43.3	+1.0
FALS	False Pass	7.76	61		Pn	20 46 58.4	+1.4
SDPT	Sand Point	9.52	61		Pn	20 47 21.6	+0.5
CNBA	Chernabura Isl	9.88	65	Pn	Pn	20 47 25.5	-0.6
CHGN	Chignik	10.92	58		Pn	20 47 40.3	0.0
CHIR	Chirikof Islan	12.31	62	Pn	Pn	20 47 58.7	-0.5
OHAK	Old Harbor	13.89	58		Pn	20 48 18.7	-2.1
ANM	Nome	13.94	18		Pn	20 48 24.6	+3.1
SVW2	Sparrevohn	14.36	41		Pn	20 48 28.3	+1.1
KDAK	Kodiak Island	14.40	56	P	Pn	20 48 25.1	-2.6
	2.1nm,0.3s,baz=288,slow=3.4,SNR=46						
KDAK				S	Sn	20 51 02.2	-3.7
	0.2nm,0.3s,baz=135,slow=20,SNR=1.8						
KDAK				LR	LR	20 54 51.5	
	comp=Z,966nm,20.1s,baz=246,slow=41						
KDAK	Kodiak Island	14.40	56		Pn	20 48 25.4	-2.4
RSO	Redoubt South	15.27	46		Pn	20 48 40.5	+1.1
TTA	Tatalina	15.27	35		Pn	20 48 40.5	+1.1
CNPM	China Poot	15.61	50		Pn	20 48 42.6	-1.0
CNPM				IAmb	IAmb	20 48 58.8	
	comp=Z,26nm,0.8s						
BRLK	Bradley Lake	15.86	50		Pn	20 48 45.7	-1.2
BRLK				IAmb	IAmb	20 49 00.9	
	comp=Z,24nm,0.6s						
SKT	Skwentna	16.48	42	P	P	20 48 57.2	+0.2
PETK	Petropavlovsk-	16.59	286	P	Pn	20 48 57.1	+0.9
	comp=Z,0.4nm,0.3s,baz=96,slow=14,SNR=7.8						
PETK				LR	LR	20 54 44.0	
	comp=Z,326nm,21.9s,baz=62,slow=35						
PETK	Petropavlovsk-	16.59	286		P	20 48 57.6	-0.7
SEW	Seward	16.65	49		Pn	20 48 55.1	-1.7
SEW				IAmb	IAmb	20 49 06.4	
	comp=Z,28nm,1.0s						
PPLA	Purkeypile	16.68	39	P	P	20 49 00.2	+0.9
KTH	Kantishna Hill	17.51	38	IAmb	IAmb	20 49 15.9	
	comp=Z,39nm,0.9s						
RDOG	Red Dog Mine	17.53	15	P	P	20 49 10.4	+1.8
BPAW	Bear Paw Mtn.	17.78	36	IAmb	IAmb	20 49 19.0	
	comp=Z,30nm,1.2s						
IMAR	Indian Mountai	18.02	29	P	P	20 49 15.0	+1.1
MCK	McKinley	18.37	39	IAmb	IAmb	20 49 26.9	
	comp=Z,18nm,0.7s						
BWN	Browne	18.39	37	IAmb	IAmb	20 49 39.0	
	comp=Z,65nm,1.2s						
NEA	Nenana	18.74	36	P	P	20 49 22.5	+0.6
BILL	Bilibino	18.77	338	P	P	20 49 22.6	+0.5
BILL				IAmb	IAmb	20 49 25.6	
	comp=Z,30nm,1.1s						
HDA	Harding Lake	19.46	38	IAmb	IAmb	20 49 38.9	
	comp=Z,30nm,0.5s						
IL31		19.66	37	IAmb	IAmb	20 49 41.0	
	comp=Z,13nm,0.6s						
ILAR	Eielson Array	19.66	37	P	P	20 49 31.0	-0.9
	comp=Z,1.8nm,0.3s,baz=228,slow=9.8,SNR=53						
ILAR				LR	LR	20 58 12.3	
	comp=Z,160nm,19.4s,baz=224,slow=40						
ILAR	Eielson Array	19.66	37	P	P	20 49 32.4	+0.6
COLD	Coldfoot	19.91	29	P	P	20 49 35.2	+0.7
RIDG	Independent Ri	20.01	41	IAmb	IAmb	20 49 47.0	
	comp=Z,24nm,0.6s						
MENT	Mentasta	20.19	44	IAmb	IAmb	20 50 00.6	
	comp=Z,33nm,1.4s						
PRP	Porcupine Dome	20.52	36	P	P	20 49 41.3	-0.1
MA2	Magadan	20.61	306	P	P	20 49 41.9	-0.4
MA2				IAmb	IAmb	20 49 55.7	
	comp=Z,49nm,0.9s						
CTGM	Chitina Glacie	20.75	50	IAmb	IAmb	20 49 49.8	
	comp=Z,14nm,1.0s						
TOLK	Toolik Lake Re	21.01	26	IAmb	IAmb	20 50 01.1	
	comp=Z,20nm,0.7s						
BCAR	Beaver Creek A	21.07	44	P	P	20 49 46.8	-0.4
FYU	Fort Yukon	21.14	34	P	P	20 49 48.4	+0.6
FYU				IAmb	IAmb	20 50 02.7	
	comp=Z,27nm,1.0s						
BMAR	Burnt Mountain	21.80	32	P	P	20 49 55.8	+0.8
DAWY	Dawson	22.39	42	P	P	20 50 01.4	0.0
DAWY				IAmb	IAmb	20 50 17.2	
	comp=Z,14nm,0.8s						
EPYK	Eagle Plains	24.17	38	P	P	20 50 18.8	-0.1
INK	Inuvik	25.97	34	P	P	20 50 34.3	-0.8
	comp=Z,0.6nm,0.3s,baz=218,slow=6.5,SNR=7.3						
INK				LR	LR	21 02 18.2	
	comp=Z,137nm,19.9s,baz=224,slow=40						
BBB	Bella Bella	28.65	70	LR	LR	21 00 47.6	
	comp=Z,167nm,21.7s,baz=266,slow=33						
ASAJ	Asahikawa	28.96	272	LR	LR	21 01 32.5	
	comp=Z,137nm,20.5s,baz=146,slow=34						
ERM	Erimo	29.72	268	P	P	20 51 08.8	-0.1
YAK	Yakutsk	30.95	311	P	P	20 51 19.5	0.0
YAK				IAmb	IAmb	20 51 31.0	
	comp=Z,7.6nm,0.6s						
TIXI	Tiksi	31.54	330	P	P	20 51 24.4	-0.3
	comp=Z,0.4nm,0.4s,baz=112,slow=14,SNR=1.8						
TIXI				PcP	PcP	20 54 16.0	-0.2
	comp=Z,5.4nm,0.8s,baz=120,slow=5.2,SNR=15						
TIXI	Tiksi	31.54	330	P	P	20 51 24.1	-0.5
TIXI				IAmb	IAmb	20 51 38.2	
	comp=Z,6.6nm,1.4s						
LLLB	Lillooet	32.86	70	P	P	20 51 37.4	+0.9
LLLB				IAmb	IAmb	20 51 39.4	
	comp=Z,14nm,1.1s						
YKA	Yellowknife Ar	33.41	47	P	P	20 51 40.6	-0.5
	comp=Z,0.3nm,0.4s,baz=274,slow=8.4,SNR=7.5						
YKA				PcP	PcP	20 54 21.9	+0.3
	comp=Z,0.4nm,0.5s,baz=282,slow=3.1,SNR=5.7						
LON	Longmire	34.57	77	P	P	20 51 51.8	+0.4
LON				IAmb	IAmb	20 52 09.7	
	comp=Z,7.6nm,1.1s						
H11N2	WAKE ISLAND Hy	34.80	211	T	T	21 29 04.6	
	baz=19,slow=76,SNR=257						
H11N3	WAKE ISLAND Hy	34.81	210	T	T	21 28 47.4	
	baz=19,slow=76,SNR=404						
H11N1	WAKE ISLAND Hy	34.82	211	T	T	21 29 04.4	
	baz=19,slow=76,SNR=262						
USA0B	Ussuriysk Arra	35.50	279	P	P	20 51 60.0	+0.6
USA0B				IAmb	IAmb	20 52 17.1	
	comp=Z,6.1nm,1.1s						
USRK	Ussuriysk Ar.	35.50	279	P	P	20 51 58.7	-0.7
	comp=Z,2.4nm,0.7s,baz=52,slow=10,SNR=5.9						
USRK				LR	LR	21 05 28.2	
	comp=Z,193nm,21.8s,baz=35,slow=34						
USRK	Ussuriysk Ar.	35.50	279	P	P	20 51 59.0	-0.4
H11S1	WAKE ISLAND Hy	36.01	210	T	T	21 31 03.8	
	baz=20,slow=76,SNR=381						
H11S2	WAKE ISLAND Hy	36.03	210	T	T	21 30 57.5	
	baz=20,slow=76,SNR=382						
H11S3	WAKE ISLAND Hy	36.03	210	T	T	21 30 57.9	
	baz=20,slow=76,SNR=126						
MAJO	Matsushiro	36.06	264	P	P	20 52 04.2	-0.1
MAJO				IAmb	IAmb	20 52 14.7	
	comp=Z,8.5nm,0.9s						
MAT	Matsushiro	36.06	264	P	P	20 52 04.9	+0.6
MJAR	Matsushiro Arr	36.06	264	P	P	20 52 04.0	-0.2
	comp=Z,0.9nm,0.5s,baz=45,slow=9.2,SNR=2.8						
MJAR				LR	LR	21 04 48.2	
	comp=Z,152nm,21.9s,baz=75,slow=33						
MJAR	Matsushiro Arr	36.06	264	P	P	20 52 05.1	+0.8
MJB9	Matsu-Tunnel	36.06	264	P	P	20 52 04.2	-0.1
MJB9				IAmb	IAmb	20 52 14.7	
	comp=Z,8.9nm,1.0s						
HAWA	Hanford	36.12	76	P	P	20 52 04.9	+0.2
PINE	Pine Mountain	36.58	80	P	P	20 52 08.8	0.0
PINE				IAmb	IAmb	20 52 11.4	
	comp=Z,16nm,1.4s						
YBH	Yreka Blue Hor	36.61	85	P	P	20 52 10.6	+1.6
	comp=Z,1.1nm,0.7s,baz=272,slow=7.9,SNR=3.7						
NEW	Newport	36.67	72	P	P	20 52 10.4	+1.1
	comp=Z,9.4nm,0.9s,baz=307,slow=6.0,SNR=6.6						
NEW	Newport	36.67	72	IAmb	IAmb	20 52 19.0	
	comp=Z,13nm,0.8s						
E09A	Wood Farm, Sta	36.89	75	IAmb	IAmb	20 52 13.3	
	comp=Z,11nm,1.1s						
I07A	Izee	37.31	79	IAmb	IAmb	20 52 32.2	
	comp=Z,6.3nm,0.9s						
F10A	Beach Ranch, E	37.72	75	IAmb	IAmb	20 52 32.0	
	comp=Z,10nm,1.4s						
WALA	Waterton Lakes	38.18	69	IAmb	IAmb	20 52 24.4	
	comp=Z,16nm,1.2s						
BMO	Blue Mountains	38.24	77	IAmb	IAmb	20 52 35.8	
	comp=Z,6.4nm,1.2s						
J08A	Circle Bar Ran	38.33	79	IAmb	IAmb	20 52 33.2	
	comp=Z,6.3nm,0.6s						
RES	Resolute Bay	38.57	25	P	P	20 52 24.1	-1.0

	comp=Z,0.6nm,0.7s,baz=294,slow=14,SNR=2.4						
RES				PcP	PcP	20 54 36.4	-0.3
	comp=Z,2.1nm,0.8s,baz=232,slow=1.9,SNR=8.7						
WVOR	Wild Horse Val	38.73	81	P	P	20 52 27.0	0.0
WVOR				IAmb	IAmb	20 52 37.9	
	comp=Z,7.5nm,0.8s						
MSO	Missoula	39.25	72	P	P	20 52 31.6	+0.4
MSO				IAmb	IAmb	20 52 33.6	
	comp=Z,15nm,1.1s						
PAHR	Pah Rah Range	39.84	85	P	P	20 52 37.1	+0.9
PNTR	Pine Nut	40.07	86	IAmb	IAmb	20 52 51.7	
	comp=Z,7.9nm,0.8s						
NVAR	Mina Array Bea	41.28	86	P	P	20 52 49.0	+0.8
	comp=Z,1.7nm,0.9s,baz=289,slow=7.5,SNR=8.6						
NVAR				LR	LR	21 06 34.8	
	comp=Z,115nm,20.2s,baz=244,slow=31						
NVAR	Mina Array Bea	41.28	86	P	P	20 52 48.7	+0.5
MDPB	Devils Postpil	41.28	87	P	P	20 52 49.3	+0.9
KSRS	Korea Array	41.89	273	P	P	20 52 53.7	+0.8
	comp=Z,4.3nm,0.8s,baz=54,slow=7.7,SNR=12						
KSRS				LR	LR	21 09 41.3	
	comp=Z,62nm,19.7s,baz=51,slow=35						
KSAR	Wonju Array Be	41.92	273	P	P	20 52 53.2	0.0
H17A	Grant Village	42.54	73	IAmb	IAmb	20 53 02.5	
	comp=Z,22nm,1.4s						
LKWY	Lake	42.55	73	IAmb	IAmb	20 53 09.4	
	comp=Z,14nm,0.8s						
FLWY	Flagg Ranch	42.64	74	IAmb	IAmb	20 53 10.0	
	comp=Z,9.2nm,0.9s						
JNU	Nakatsue	42.85	266	P	P	20 53 01.5	+0.6
RLMT	Red Lodge	42.92	72	IAmb	IAmb	20 53 11.9	
	comp=Z,14nm,0.8s						
REDW	Red Top Meadow	42.95	75	IAmb	IAmb	20 53 16.6	
	comp=Z,9.9nm,1.2s						
R11A	Troy Canyon, C	43.01	84	P	P	20 53 02.7	+0.3
AHID	Auburn Hatcher	43.14	76	P	P	20 53 03.1	-0.2
AHID				IAmb	IAmb	20 53 13.8	
	comp=Z,5.9nm,0.9s						
TPNV	Topopah Spring	43.47	86	IAmb	IAmb	20 53 16.3	
	comp=Z,5.5nm,0.7s						
DUG	Dugway, Tooele	43.60	80	P	P	20 53 08.0	+1.0
DUG				IAmb	IAmb	20 53 17.9	
	comp=Z,7.5nm,0.9s						
TCUT	Toone Canyon	43.91	78	P	P	20 53 10.5	+0.8
PDAR	Pinedale Array	44.07	75	P	P	20 53 11.6	+0.7
	comp=Z,5.1nm,0.6s,baz=307,slow=4.3,SNR=67						
PDAR				LR	LR	21 08 42.1	
	comp=Z,102nm,21.6s,baz=318,slow=32						
PDAR	Pinedale Array	44.07	75	P	P	20 53 11.2	+0.3
NLU	North Lily Min	44.20	80	P	P	20 53 11.8	-0.1
K22A	Casper	45.95	73	IAmb	IAmb	20 53 35.1	
	comp=Z,11nm,0.8s						
U15A	North Rim	46.26	84	P	P	20 53 29.5	+1.1
U15A				IAmb	IAmb	20 53 39.1	
	comp=Z,5.8nm,0.8s						
N23A	Red Feather La	47.35	75	IAmb	IAmb	20 53 47.1	
	comp=Z,8.2nm,0.9s						
ULM	Lac du Bonnet	47.64	59	P	P	20 53 38.0	-0.6
	comp=Z,1.0nm,0.4s,baz=313,slow=6.9,SNR=3.8						
ULM				LR	LR	21 13 59.7	
	comp=Z,107nm,20.0s,baz=322,slow=36						
TLY	Talaya	47.82	304	LR	LR	21 14 45.5	
	comp=Z,119nm,20.6s,baz=49,slow=37						
SONM	Songino Array	48.54	298	P	P	20 53 44.8	-1.0
	comp=Z,0.3nm,0.6s,baz=63,slow=6.8,SNR=4.0						
SONM				PcP	PcP	20 55 09.9	-1.1
	comp=Z,1.8nm,0.8s,baz=73,slow=1.5,SNR=8.4						
SONM				ScP	ScP	20 59 01.6	-0.8
	comp=Z,0.8nm,0.8s,baz=357,slow=2.0,SNR=4.8						
SONM				LR	LR	21 14 56.9	
	comp=Z,120nm,20.2s,baz=50,slow=37						
SONM	Songino Array	48.54	298	P	P	20 53 45.2	-0.5
AGMN	Agassiz Nation	48.76	61	IAmb	IAmb	20 53 48.4	
	comp=Z,9.2nm,1.1s						
JOW	Kunigami	48.84	262	P	P	20 53 47.5	-0.7
SDCO	Great Sand Dun	49.59	78	IAmb	IAmb	20 54 08.2	
	comp=Z,3.9nm,0.8s						
HHC	Hu-ho-hao-te	49.78	288	*e*P	P	20 53 56.3	+1.0
SPA0	Spitsbergen Ar	50.27	357	P	P	20 53 59.1	+0.7
T25A	Trinidad	50.64	77	IAmb	IAmb	20 54 16.8	
	comp=Z,11nm,1.0s						
ECSD	EROS Data Cent	51.08	66	IAmb	IAmb	20 54 12.9	
	comp=Z,7.7nm,1.2s						
E38A	The Farm, Brul	52.11	60	IAmb	IAmb	20 54 13.0	
	comp=Z,12nm,1.2s						
G40A	Rib Lake	53.69	61	IAmb	IAmb	20 54 24.9	
	comp=Z,13nm,1.2s						
MSTX	Muleshoe	53.74	79	IAmb	IAmb	20 54 38.9	
	comp=Z,10nm,1.2s						
E43A	Lone Tree Farm	54.70	58	IAmb	IAmb	20 54 32.4	
	comp=Z,6.0nm,0.6s						
WHN	Wuhan	54.88	276	P	P	20 54 32.9	-0.2
ZALV	Zalesovo Beam	55.48	315	PcP	PcP	20 55 36.2	-0.5
	comp=Z,0.9nm,0.6s,baz=73,slow=5.0,SNR=5.2						
ZALV				LR	LR	21 20 07.8	
	comp=Z,104nm,18.1s,baz=90,slow=38						
SSLB	Suanglung	55.59	265	P	P	20 54 38.5	+0.1
WMOK	Wichita Mounta	55.65	76	IAmb	IAmb	20 54 47.0	
	comp=Z,4.7nm,0.8s						
XAN	Xi'an	55.82	283	P	P	20 54 39.9	0.0
TX31	Lajitas Ar. Si	56.38	84	P	P	20 54 43.8	-0.2
TX31				IAmb	IAmb	20 54 57.0	
	comp=Z,5.5nm,1.1s						
TXAR	Lajitas Array	56.38	84	P	P	20 54 44.1	+0.1
	comp=Z,2.0nm,0.9s,baz=322,slow=9.5,SNR=6.9						
TXAR				LR	LR	21 16 00.7	
	comp=Z,57nm,20.8s,baz=0.0,slow=33						
TXAR	Lajitas Array	56.38	84	P	P	20 54 43.9	-0.1
LZH	Lanzhou	57.47	288	*e*P	P	20 54 55.8	+4.1
LZH				pP	pP	20 55 02.8	-0.4
LZH				sP	sP	20 55 06.9	-0.9
LZH				PP	PP	20 57 00.8	+1.6
ENH	Enshi	58.08	280	P	P	20 54 55.5	-0.4
U40A	Yellville	58.08	70	IAmb	IAmb	20 55 04.7	
	comp=Z,6.0nm,0.8s						
ARCES	ARCESS Array B	58.20	352	P	P	20 54 54.8	-1.3
	comp=Z,3.6nm,1.0s,baz=1.1,slow=9.0,SNR=1.2						
SCHQ	Schefferville	58.38	40	P	P	20 54 56.7	-0.9
	comp=Z,2.4nm,0.8s,baz=321,slow=3.7,SNR=4.5						
X40A	Basin Creek Fa	59.38	72	IAmb	IAmb	20 55 14.1	
	comp=Z,5.2nm,0.9s						
H06E1	SOCORRO T-PHAS	59.55	98	T	T	21 59 47.6	
	SNR=6.2						
KURK	Kurchatov	60.46	315	P	P	20 55 12.1	+0.1
KURK				IAmb	IAmb	20 55 13.2	
	comp=Z,2.3nm,0.8s						
KURBB	Kurchatov Arra	60.56	315	P	P	20 55 11.6	-1.1
	comp=Z,1.5nm,0.6s,baz=44,slow=6.5,SNR=12						
WMQ	Urumqi	61.08	305	*e*P	P	20 55 19.4	+3.0
MK31	Makanchi Array	61.62	310	P	P	20 55 18.9	-1.1
MKAR	Makanchi Array	61.62	310	P	P	20 55 17.7	-2.3
	comp=Z,0.8nm,0.3s,baz=46,slow=6.6,SNR=29						
MKAR				LR	LR	21 22 23.2	
	comp=Z,101nm,21.6s,baz=6.0,slow=36						
MKAR	Makanchi Array	61.62	310	P	P	20 55 18.5	-1.5
MAKZ	Makanchi	61.76	311	P	P	20 55 20.4	-0.5
BVAR	Borovoye Array	62.13	322	P	P	20 55 21.7	-1.6
	comp=Z,1.2nm,0.3s,baz=59,slow=6.7,SNR=21						
BRVK	Borovoye	62.14	322	P	P	20 55 23.8	+0.4
BRVK				IAmb	IAmb	20 55 24.4	
	comp=Z,3.2nm,1.1s						
L56A	Greenwood	62.54	56	P	P	20 55 27.0	+0.8
TKL	Tuckaleechee C	63.81	65	P	P	20 55 35.0	+0.3
	comp=Z,0.7nm,0.3s,baz=147,slow=12,SNR=3.5						
Z50A	Ashland	64.31	68	P	P	20 55 37.6	-0.5
KMI	Kunming	65.92	280	P	P	20 55 48.9	+0.1
FINES	FINESS Array B	66.00	349	P	P	20 55 47.7	-0.8
	comp=Z,5.9nm,1.2s,baz=5.0,slow=6.4,SNR=1.4						
T59A	Double "B" Far	66.30	60	P	P	20 55 50.9	+0.1
NOA	NORSAR Array B	67.56	357	P	P	20 55 57.3	-1.2
	comp=Z,2.0nm,1.0s,baz=14,slow=4.2,SNR=3.4						
NOA				LR	LR	21 25 39.4	
	comp=Z,23nm,20.4s,baz=250,slow=36						
SLVN	Son La	68.00	277	IAmb	IAmb	20 56 03.8	
	comp=Z,10nm,1.1s						
AAK	Ala-Archa	68.41	312	P	P	20 56 03.9	-0.4
	comp=Z,1.1nm,0.5s,baz=123,slow=5.9,SNR=8.5						
AAK	Ala-Archa	68.41	312	P	P	20 56 04.2	-0.2
SIJI	Sorong	68.99	239	P	P	20 56 08.3	+0.3
	comp=Z,24nm,0.8s,baz=10.0,slow=20,SNR=6.0						
ABKAR	Akbulak array	69.07	325	P	P	20 56 08.1	0.0
LSA	Lhasa	69.46	292	P	P	20 56 12.2	+0.8
LSA				IAmb	IAmb	20 56 14.6	
	comp=Z,3.5nm,0.9s						
KK31	Karatay Array	69.85	315	P	P	20 56 12.4	-0.6
KKAR	Karatay Array	69.85	315	P	P	20 56 11.9	-1.1
KKAR	Karatay Array	69.85	315	IAmb	IAmb	20 56 14.9	
	comp=Z,1.4nm,0.7s						
KSH	Kashi	70.13	309	P	P	20 56 19.8	+4.8
KSH				sP	sP	20 56 31.3	+0.1
KSH				PP	PP	20 58 59.1	+9.2
KSH				S	S	21 05 28.3	+5.1
KSH				sS	sS	21 05 41.1	-1.8
KSH	Kashi	70.13	309	SS	SS	21 10 00.9	+8.4
FAKI	Fak Fak	70.19	237	P	P	20 56 16.2	+0.8
SHL	Shillong	72.13	289	P	P	20 56 27.2	-0.2
SHL				IAmb	IAmb	20 56 29.3	
	comp=Z,5.8nm,0.7s						
CHTO	Chiang Mai	72.95	279	P	P	20 56 31.7	-0.4
CHTO				IAmb	IAmb	20 56 33.3	
	comp=Z,7.2nm,1.1s						
TAPN	Taplejung	73.22	293	*e*P	P	20 56 33.8	-0.1
GAR	Garm	73.22	312	P	P	20 56 32.9	-0.7
GAR				IAmb	IAmb	20 56 37.8	
	comp=Z,13nm,1.3s						
CM31	Chiang Mai Arr	73.22	279	P	P	20 56 33.8	+0.1
CM31				IAmb	IAmb	20 56 36.5	
	comp=Z,4.2nm,1.0s						
CMAR	Chiang Mai Arr	73.22	279	P	P	20 56 33.9	+0.2
	comp=Z,4.8nm,0.9s,baz=26,slow=6.9,SNR=26						
CMAR				LR	LR	21 30 38.1	
	comp=Z,29nm,18.5s,baz=79,slow=37						
CMAR	Chiang Mai Arr	73.22	279	P	P	20 56 33.5	-0.2
PBKT	Sadao Pong	73.40	276	P	P	20 56 34.9	+0.2
PBKT				IAmb	IAmb	20 56 36.1	
	comp=Z,6.4nm,1.2s						
GUN	Gumba	73.83	294	*e*P	P	20 56 37.4	-0.2
	comp=Z,31nm,0.6s						
JIRN	Jiri	73.85	294	*e*P	P	20 56 37.7	0.0
	comp=Z,13nm,0.4s						
LUWI	Luwuk	73.86	247	P	P	20 56 37.2	-0.2
CHGR	Chuyangaron	74.03	313	P	P	20 56 38.2	-0.1
CHGR				IAmb	IAmb	20 56 41.1	
	comp=Z,5.2nm,0.9s						
RAMN	Ramite	74.16	293	*e*P	P	20 56 39.0	-0.4
	comp=Z,14nm,0.5s						
KKN	Kakani	74.27	295	*e*P	P	20 56 40.3	+0.3
PKI	Pulchoki	74.36	295	*e*P	P	20 56 39.9	-0.8
PKIN	Phulchoki	74.36	295	*e*P	P	20 56 40.8	+0.2
GKN	Gorkha	74.47	295	*e*P	P	20 56 41.1	+0.1
DMN	Daman	74.50	295	*e*P	P	20 56 41.0	-0.4
DANN	Dangsing	74.69	296	*e*P	P	20 56 42.2	-0.3
	comp=Z,22nm,0.8s						
SAUI	Saumlaki	74.98	236	P	P	20 56 43.0	-0.8
AKASG	Malin Array Be	75.96	344	P	P	20 56 47.7	-1.3
	comp=Z,0.8nm,0.5s,baz=18,slow=6.4,SNR=3.0						
CTA	Charters Tower	78.98	217	P	P	20 57 06.6	+0.4
	comp=Z,2.4nm,0.8s,baz=52,slow=8.4,SNR=2.8						
KSM	Kuching	79.26	259	P	P	20 57 07.2	-0.8
GEYT	Alibeck	79.39	320	P	P	20 57 08.8	+0.4
	comp=Z,1.0nm,0.4s,baz=49,slow=14,SNR=3.6						
GEYT				LR	LR	21 37 30.3	
	comp=Z,72nm,18.4s,baz=185,slow=40						
GEYT	Alibeck	79.39	320	P	P	20 57 08.4	-0.1
KBZ	Khabaz	79.46	333	LR	LR	21 36 40.2	
	comp=Z,62nm,21.4s,baz=24,slow=39						
BUR08	Bucovina Ar. S	79.57	346	P	P	20 57 09.1	-0.3
BURAR	Bucovina Array	79.60	346	P	P	20 57 08.9	-0.6
SOEI	Soe	80.19	241	P	P	20 57 12.8	-0.2
HRA	Herat	80.67	315	P	P	20 57 15.6	-0.1
WR0	Warramunga Arr	83.72	227	P	P	20 57 30.9	-0.4
WR0				IAmb	IAmb	20 57 31.9	
	comp=Z,6.1nm,1.0s						
WRAB	Tennant Creek	83.78	227	P	P	20 57 31.3	-0.4
WRAB				IAmb	IAmb	20 57 32.3	
	comp=Z,8.1nm,1.1s						
WB2	Warramunga Arr	83.79	227	P	P	20 57 31.3	-0.4
WRA	Warramunga Arr	83.80	227	P	P	20 57 31.0	-0.7
	comp=Z,1.6nm,0.6s,baz=31,slow=5.6,SNR=5.1						
PSI	Prapat	85.27	269	P	P	20 57 39.8	+0.2
	comp=Z,8.2nm,0.8s,baz=127,slow=6.1,SNR=5.3						
RPSI	Rantau Prapat	85.35	268	P	P	20 57 40.8	+1.0
AS31	Alice Springs	87.23	225	P	P	20 57 48.9	+0.1
ASAR	Alice Springs	87.24	225	P	P	20 57 49.1	+0.4
	comp=Z,2.6nm,0.8s,baz=38,slow=4.8,SNR=12						
ASAR				LR	LR	21 34 15.7	
	comp=Z,42nm,20.1s,baz=304,slow=34						
ASAR	Alice Springs	87.24	225	P	P	20 57 48.8	0.0
STKA	Stephens Creek	91.41	216	P	P	20 58 08.7	+0.6
	comp=Z,1.6nm,0.4s,baz=2.4,slow=12,SNR=3.9						
STKA				LR	LR	21 32 54.9	
	comp=Z,70nm,21.4s,baz=26,slow=31						
TORD	Torodi Ar. Bea	115.44	3	PKP	PKiKP	21 03 42.5	-1.9
	comp=Z,0.4nm,0.6s,baz=0.3,slow=3.2,SNR=2.0						
PLCA	Paso Flores	128.90	109	PKP	PKPdf	21 04 09.4	0.0
	comp=Z,2.4nm,0.8s,baz=352,slow=3.3,SNR=4.0						
PLCA	Paso Flores	128.90	109		PKPdf	21 04 09.8	+0.4
BOSA	Boshof	152.38	319	PKPbc	PKPbc	21 04 58.4	+0.1
	comp=Z,5.2nm,0.5s,baz=16,slow=3.1,SNR=18						
BOSA	Boshof	152.38	319		PKPbc	21 04 58.3	0.0

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*IDC **15** 20:47:09.5±0.7, 23°.23S×175°.43W, h0^{km}, mb4.3/14, mb1 4.6/14, mb1mx4.3/40, mbtmp4.3/14, MS3.8/5, Ms1 3.8/5, ms1mx3.4/24, Error ellipse: s-maj=27.5km s-min=17.5km az=151.0*

*NEIC **15** 20:47:11.2±2.1, 23°.03S±0°.07×175°.4W±0°.2, h10^{km}±1^{km}, mb4.6/25, Error ellipse: s-maj=27.5km s-min=9.2km az=107.0*

ISC 15 20:47:10.9±0.5**, 23°.09S**±0°.09×**175°.4W**±0°.1**, h10**^{km}**, n66,** σ1^{s}**08**/60**, mb4.5**/22**, MS3.9**/5**, 2C, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	9.73	21	Pn	Pn	20 49 27.3	-3.8
	12nm,0.3s,baz=221,slow=5.5,SNR=9.1						
AFI				Sn	Sn	20 51 05.2	-15
	1.6nm,0.3s,baz=159,slow=24,SNR=2.0						
AFI	Afiamalu	9.73	21	Pn	Pn	20 49 29.9	-1.3
URZ	Urewera	16.45	201	Pn	Pn	20 51 01.1	-0.6
URZ				IAmb	IAmb	20 51 04.3	
	comp=Z,91nm,1.4s						
DZM	Mont Dzumac	16.85	270	P	P	20 51 08.1	-1.1
BKZ	Black Stump Fm	17.47	202	P	P	20 51 16.4	+0.5
BKZ				IAmb	IAmb	20 51 27.2	
	comp=Z,49nm,1.4s						
WHZ	Wether Hill Ro	26.49	207	P	P	20 52 47.5	-0.8
CTA	Charters Tower	35.76	267	P	P	20 54 09.6	-0.7
	comp=Z,3.9nm,0.6s,baz=82,slow=8.8,SNR=10						
STKA	Stephens Creek	38.98	247	LR	LR	21 09 56.4	
	comp=Z,221nm,18.6s,baz=38,slow=35						
STKA	Stephens Creek	38.98	247		P	20 54 38.4	+0.9
AS31	Alice Springs	46.38	259	P	P	20 55 36.8	-1.0
ASAR	Alice Springs	46.38	259	P	P	20 55 37.1	-0.6
	comp=Z,2.8nm,0.9s,baz=96,slow=8.0,SNR=14						
ASAR				LR	LR	21 14 57.4	
	comp=Z,229nm,18.0s,baz=118,slow=36						
ASAR	Alice Springs	46.38	259	P	P	20 55 37.0	-0.8
WR0	Warramunga Arr	46.54	264	P	P	20 55 37.6	-1.5
WR0				IAmb	IAmb	20 55 45.5	
	comp=Z,9.3nm,1.3s						
WB2	Warramunga Arr	46.72	264	P	P	20 55 39.3	-1.2
WB2				IAmb	IAmb	20 55 40.7	
	comp=Z,9.0nm,1.1s						
WB0	Warramunga Arr	46.72	264	P	P	20 55 39.3	-1.2
WRAB	Tennant Creek	46.73	264	P	P	20 55 39.1	-1.4
WRAB				IAmb	IAmb	20 55 54.6	
	comp=Z,7.4nm,0.9s						
WRA	Warramunga Arr	46.73	264	P	P	20 55 39.5	-1.0
	comp=Z,1.3nm,0.3s,baz=90,slow=5.9,SNR=98						
WRA	Warramunga Arr	46.73	264	P	P	20 55 39.2	-1.3
FITZ	Fitzroy Crossi	55.16	263	P	P	20 56 43.0	-1.0
	comp=Z,2.4nm,0.5s,baz=12,slow=1.2,SNR=13						
QSPA	South Pole Qui	67.00	180	P	P	20 58 03.6	-0.2
	comp=Z,5.8nm,0.9s,baz=36,slow=1.3,SNR=21						
QSPA	South Pole Qui	67.00	180	P	P	20 58 04.5	+0.7
QSPA				IAmb	IAmb	20 58 11.7	
	comp=Z,5.9nm,1.1s						
MJAR	Matsushiro Arr	73.75	323	P	P	20 58 45.5	+0.3
	comp=Z,1.0nm,0.6s,baz=127,slow=6.4,SNR=3.4						
MJAR				LR	LR	21 27 57.5	
	comp=Z,29nm,21.9s,baz=135,slow=33						
MJAR	Matsushiro Arr	73.75	323	P	P	20 58 45.2	-0.1
PETK	Petropavlovsk-	79.41	344	P	P	20 59 18.2	+1.3
	comp=Z,4.2nm,0.8s,baz=110,slow=8.3,SNR=3.2						
PETK	Petropavlovsk-	79.41	344	P	P	20 59 17.5	+0.6
AFDM	Forest Hills D	79.97	40	P	P	20 59 20.7	+0.4
AFDM				IAmb	IAmb	20 59 22.6	
	comp=Z,5.9nm,1.2s						
MDPB	Devils Postpil	80.27	42	P	P	20 59 21.6	-0.7
MDPB				IAmb	IAmb	20 59 25.2	
	comp=Z,11nm,1.2s						
KSRS	Korea Array	80.45	318	LR	LR	21 30 38.8	
	comp=Z,39nm,19.6s,baz=88,slow=32						
YBH	Yreka Blue Hor	80.81	37	P	P	20 59 26.6	+1.7
	comp=Z,1.6nm,0.8s,baz=200,slow=3.6,SNR=9.1						
YBH	Yreka Blue Hor	80.81	37	P	P	20 59 24.7	-0.2
YBH				IAmb	IAmb	20 59 43.1	
	comp=Z,7.3nm,1.1s						
NVAR	Mina Array Bea	81.25	42	P	P	20 59 29.1	+1.7
	comp=Z,4.4nm,0.9s,baz=224,slow=9.2,SNR=17						
NVAR				LR	LR	21 32 42.6	
	comp=Z,53nm,19.5s,baz=0.0,slow=34						
NVAR	Mina Array Bea	81.25	42	P	P	20 59 28.6	+1.1
NV11	Mina Array Sit	81.34	42	P	P	20 59 28.8	+0.9
NV11				IAmb	IAmb	20 59 30.2	
	comp=Z,4.9nm,1.0s						
KVN	Kaiserville	81.76	41	IAmb	IAmb	20 59 32.3	
	comp=Z,3.0nm,0.9s						
USRK	Ussuriysk Ar.	82.48	325	P	P	20 59 36.0	+2.5
	comp=Z,3.2nm,0.9s,baz=137,slow=2.4,SNR=3.3						
USRK	Ussuriysk Ar.	82.48	325	P	P	20 59 34.7	+1.2
J08A	Circle Bar Ran	84.24	38	IAmb	IAmb	20 59 45.6	
	comp=Z,4.4nm,0.8s						
SYO	Syowa Base	84.74	192⇑	*e*P	P	20 59 43.0	-1.8
SYO	Syowa Base	84.74	192⇑	*e*PcP	PcP	20 59 48.4	+0.1
G08A	Pilot Rock	85.20	36	P	P	20 59 47.6	+0.1
SNAA	Sanae	85.36	178	PKPdf	P	20 59 47.6	-0.5
VNA3	Neumayer Olymp	85.40	175	PKPdf	P	20 59 48.0	-0.1
VNA2	Neumayer--Watz	85.86	176	PKPdf	P	20 59 50.7	+0.2
	baz=198,slow=1.9						
TXAR	Lajitas Array	86.40	56	P	P	20 59 54.6	+0.7
	comp=Z,1.3nm,0.9s,baz=197,slow=7.8,SNR=5.9						
PD31	Pinedale Array	89.18	42	P	P	21 00 07.2	+0.1
PDAR	Pinedale Array	89.18	42	P	P	21 00 06.7	-0.4
	comp=Z,0.6nm,0.8s,baz=198,slow=2.8,SNR=4.6						
PDAR	Pinedale Array	89.18	42	P	P	21 00 07.2	+0.1
ILAR	Eielson Array	90.30	12	P	P	21 00 11.4	0.0
	comp=Z,1.1nm,0.9s,baz=229,slow=6.1,SNR=5.0						
ILAR	Eielson Array	90.30	12	P	P	21 00 12.0	+0.5
CMAR	Chiang Mai Arr	93.28	289	P	P	21 00 27.4	+1.0
	comp=Z,5.4nm,1.0s,baz=125,slow=3.1,SNR=22						
CMAR	Chiang Mai Arr	93.28	289	P	P	21 00 28.3	+1.9
CHTO	Chiang Mai	93.42	289	P	P	21 00 28.9	+1.8
MKAR	Makanchi Array	114.75	312	PKP	PKPdf	21 05 51.1	-0.5
	comp=Z,0.3nm,0.7s,baz=88,slow=0.7,SNR=4.9						
ARCES	ARCESS Array B	131.88	350	PKP	PKiKP	21 06 24.8	0.0
	comp=Z,2.6nm,0.8s,baz=29,slow=2.8,SNR=7.2						
FINES	FINESS Array B	138.92	345	PKhKP	PKPpre	21 06 33.8	
	comp=Z,4.8nm,1.1s,baz=54,slow=10,SNR=2.8						
FINES	FINESS Array B	138.92	345		PKPdf	21 06 36.3	-0.7
MBAR	Mbarara	145.38	231		PKPdf	21 06 50.6	+0.3
AKASG	Malin Array Be	146.46	331	PKPbc	PKPdf	21 06 51.2	+0.5
	comp=Z,1.7nm,0.5s,baz=43,slow=3.9,SNR=7.7						
AKASG	Malin Array Be	146.46	331		PKPdf	21 06 51.0	+0.3
BR131	Keskin Array S	150.39	311		PKiKP	21 07 03.5	-0.3
BRTR	Keskin Array B	150.39	311	PKPbc	PKPbc	21 07 03.3	+0.3
	comp=Z,1.6nm,0.8s,baz=141,slow=4.6,SNR=8.5						
BRTR	Keskin Array B	150.39	311		PKPbc	21 07 03.1	+0.2
BURAR	Bucovina Array	150.51	331		PKiKP	21 07 04.1	+0.5
CLL	Collm	151.09	349	*i* PKPbc	PKiKP	21 07 06.0	+1.4
	comp=Z,10.0nm,1.0s						
CLL	Collm	151.09	349		PKiKP	21 07 04.8	+0.2
GERES	GERESS Array B	153.31	347	PKPbc	PKPbc	21 07 08.7	-0.5
	comp=Z,0.5nm,0.5s,baz=350,slow=5.3,SNR=3.6						

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*NEIC **15** 20:51:44.7±1.4, 56°.49N±0°.04×156°.08W±0°.07, h66^{km}±8^{km}, Error ellipse: s-maj=6.6km s-min=5.5km az=178.0*

*AEIC **15** 20:51:45±1.1, 56°.50N±0°.04×156°.04W±0°.07, h70^{km}±6^{km}, ML3.6/43, mb4.2/10(NEIC), Error ellipse: s-maj=6.5km s-min=5.4km az=179.0*

*IDC **15** 20:51:45.4±3.5, 56°.89N×156°.23W, h56^{km}±28^{km}, mb3.6/15, mb1 3.9/19, mb1mx3.7/49, mbtmp4.0/19, ML4.2/4, Error ellipse: s-maj=30.2km s-min=20.4km az=6.0*

ISC 15 20:51:44.6±0.8**, 56°.55N**±0°.06×**156°.11W**±0°.05**, h64**^{km}±8^{km}**, n97,** σ1^{s}**21**/103**, mb4.0**/19**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHIR	Chirikof Islan	0.78	159		Pn	20 52 00.2	+0.2
CHIR					Sn	20 52 12.0	+0.5
SII	Sitkinak Islan	1.07	89		Pn	20 52 04.1	+0.5
SII					Sn	20 52 18.1	+0.3
PLK3	Peulik 3	1.14	356		Pn	20 52 06.1	+1.5
PLK3					Sn	20 52 22.1	+2.6
PLK2	Peulik 2	1.22	355		Pn	20 52 07.2	+1.6
PLK1	Peulik 1	1.28	348		Pn	20 52 07.7	+1.3
CHGN	Chignik	1.30	260		Pn	20 52 07.0	+0.3
CHGN					Sn	20 52 23.7	+0.5
OHAK	Old Harbor	1.69	65		Pn	20 52 12.1	+0.3
VNNF	Veniaminof 3	1.80	263		Pn	20 52 14.5	+1.1
VNSS	Veniaminof 8	1.89	261		Pn	20 52 15.5	+0.8
KELA	Mount Kelaz	1.90	6		Pn	20 52 15.4	+0.6
VNFG	Fog Glacier, M	1.93	263		Pn	20 52 16.0	+0.8
VNWF	Veniaminof 8	1.96	260		Pn	20 52 16.4	+0.8
KAHC	Katmai Hardscr	2.18	15		Pn	20 52 19.4	+0.8
KDAK	Kodiak Island	2.28	56	P	Pn	20 52 20.1	+0.2
	94nm,0.3s,baz=188,slow=4.6,SNR=498						
KDAK				S	Sn	20 52 45.1	-1.8
	38nm,0.3s,baz=330,slow=21,SNR=8.7						
KDAK	Kodiak Island	2.28	56		Pn	20 52 20.3	+0.4
CNBA	Chernabura Isl	2.62	230		Pn	20 52 24.1	-0.4
SDPT	Sand Point	2.73	246		Pn	20 52 26.4	+0.4
PVV	Pavlof Volcano	3.40	252		Pn	20 52 35.8	+0.6
BLHA	Black Hill	3.44	258		Pn	20 52 35.4	-0.3
HAG	Hague Volcano	3.49	252		Pn	20 52 37.0	+0.7
DT1	Dutton Round H	3.77	250		Pn	20 52 40.4	+0.2
CNPM	China Poot	3.95	39		Pn	20 52 43.4	+0.8
BALA	Baldy Mountain	4.00	253		Pn	20 52 44.3	+1.0
BRLK	Bradley Lake	4.25	39		Pn	20 52 46.7	+0.1
RED	Redoubt Volcan	4.25	23		Pn	20 52 48.4	+1.6
BRSE	Bradley Lake S	4.28	39		Pn	20 52 47.3	+0.2
RSO	Redoubt South	4.30	23		Pn	20 52 48.7	+1.2
RDWB	Redoubt West	4.30	22		Pn	20 52 48.7	+1.2
DFR	Drift River	4.43	22		Pn	20 52 50.5	+1.3
SVW2	Sparrevohn	4.57	3		Pn	20 52 51.7	+0.7
SEW	Seward	5.00	42		Pn	20 52 56.3	-0.5
SLKM	Skilak Lake	5.02	35		Pn	20 52 57.1	-0.2
SPBG	Spurr Blockage	5.10	21		Pn	20 53 00.1	+1.7
RC01	Rabbit Creek A	5.62	33		Pn	20 53 05.8	+0.4
SUA	Susitna One	5.65	27		Pn	20 53 06.9	+1.0
PWL	Port Wells	5.92	40		Pn	20 53 08.9	-0.6
SKT	Skwentna	5.93	21	Pn	Pn	20 53 09.8	+0.2
MID	Middleton Isla	5.94	57	Pn	Pn	20 53 10.1	+0.3
AKUT	Akutan	6.02	250	Pn	Pn	20 53 11.0	+0.2
PMR	Palmer	6.20	33	Pn	Pn	20 53 14.1	+0.8
KNK	Knik Glacier	6.28	36		Pn	20 53 14.4	+0.1
HIN	Hinchinbrook I	6.34	49		Pn	20 53 15.0	-0.4
TT01	Tatalina	6.37	0		Pn	20 53 16.3	+0.6
TTA	Tatalina	6.40	0		Pn	20 53 16.9	+0.8
GHO	Glory Hole Cre	6.41	32		Pn	20 53 16.3	+0.1
UNV	Unalaska Valle	6.54	250	Pn	Pn	20 53 17.5	-0.4
PPLA	Purkeypile	6.66	16		Pn	20 53 20.9	+1.1
EYAK	Cordova Ski Ar	6.74	49		Pn	20 53 20.4	-0.2
RAGM	Ragged Mountai	7.12	53		Pn	20 53 25.9	-0.1
KTH	Kantishna Hill	7.49	18	Pn	Pn	20 53 31.4	+0.4
SPIA	Saint Paul Isl	7.77	280	Pn	Pn	20 53 36.4	+1.5
CRQM	Cirque	7.96	53		Pn	20 53 37.8	+0.1
BPAW	Bear Paw Mtn.	7.98	16		Pn	20 53 37.5	-0.2
GLB	Gilahina Butte	8.02	47		Pn	20 53 38.0	-0.2
BALM	Baldy	8.44	52		Pn	20 53 44.1	+0.1
BARN	Barnard Glacie	8.75	53		Pn	20 53 48.8	+0.5
PCA	Pinnacle	9.06	60	Pn	Pn	20 53 53.0	+0.5
ANM	Nome	9.23	334		Pn	20 53 56.2	+1.5
IL31		9.39	25		Pn	20 53 55.0	-1.9
ILAR	Eielson Array	9.39	25	P	Pn	20 53 54.9	-2.0
	1.0nm,0.3s,baz=212,slow=13,SNR=16						
ILAR				S	Sn	20 55 33.3	-7.5
	1.1nm,0.3s,baz=206,slow=24,SNR=7.8						
IMAR	Indian Mountai	9.53	6		Pn	20 53 59.5	+0.7
BCAR	Beaver Creek A	9.71	42	Pn	Pn	20 54 01.4	0.0
PRP	Porcupine Dome	10.34	25	Pn	Pn	20 54 08.3	-1.6
EGAK	Eagle	11.01	35	Pn	Pn	20 54 18.5	-0.4
ATKA	Atka Island	11.40	255	Pn	Pn	20 54 20.8	-3.5
JIS	Juneau Island	11.83	73	Pn	Pn	20 54 31.2	+1.1
DLBC	Dease Lake	14.12	71	P	Pn	20 55 03.6	+2.4
	0.7nm,0.3s,baz=254,slow=9.5,SNR=7.6						
INK	Inuvik	15.62	32	P	Pn	20 55 20.0	-0.3
	0.7nm,0.3s,baz=236,slow=10,SNR=12						
INK	Inuvik	15.62	32		Pn	20 55 20.4	+0.1
YKA	Yellowknife Ar	21.56	57	P	P	20 56 28.6	+0.4

	1.0nm,0.5s,baz=272,slow=9.5,SNR=6.8						
PDAR	**Pinedale Array**	**32.46**	**95**	P	**P**	**20 58 10.8**	**+2.0**
	0.7nm,0.5s,baz=326,slow=4.5,SNR=7.4						
PDAR	**Pinedale Array**	**32.46**	**95**	P	**P**	**20 58 10.6**	**+1.8**
KLR	**Kul'dur**	**42.26**	**292**	P	**P**	**20 59 30.1**	**-1.0**
	0.7nm,0.5s,baz=63,slow=2.3,SNR=3.3						
ARCES	**ARCESS Array B**	**54.21**	**359**	P	**P**	**21 01 02.5**	**-0.3**
	3.4nm,0.8s,baz=0.0,slow=5.5,SNR=9.1						
SONM	**Songino Array**	**55.48**	**306**	P	**P**	**21 01 12.6**	**+0.1**
	0.4nm,0.5s,baz=48,slow=6.0,SNR=4.8						
SONM	**Songino Array**	**55.48**	**306**	P	**P**	**21 01 12.6**	**+0.1**
ZALV	**Zalesovo Beam**	**59.16**	**323**	P	**P**	**21 01 38.2**	**+0.1**
	0.5nm,0.4s,baz=331,slow=22,SNR=2.4						
NOA	**NORSAR Array B**	**62.32**	**7**	P	**P**	**21 01 59.0**	**-0.5**
	1.5nm,0.8s,baz=354,slow=6.7,SNR=4.4						
FINES	**FINESS Array B**	**62.33**	**359**	P	**P**	**21 01 59.2**	**-0.3**
	0.7nm,0.4s,baz=20,slow=8.3,SNR=11						
BVAR	**Borovoye Array**	**64.32**	**331**	P	**P**	**21 02 12.5**	**-0.3**
	1.1nm,0.8s,baz=14,slow=6.9,SNR=6.2						
MKAR	**Makanchi Array**	**66.07**	**320**	P	**P**	**21 02 23.9**	**-0.3**
	0.4nm,0.6s,baz=48,slow=7.3,SNR=7.1						
AAK	**Ala-Archa**	**72.38**	**323**	P	**P**	**21 03 04.4**	**+0.9**
AKASG	**Malin Array Be**	**73.02**	**356**	P	**P**	**21 03 06.6**	**-0.3**
	1.9nm,0.4s,baz=7.3,slow=5.8,SNR=17						
AKASG	**Malin Array Be**	**73.02**	**356**	P	**P**	**21 03 06.7**	**-0.2**
AKBB	**Malin Array Si**	**73.02**	**356**	P	**P**	**21 03 06.7**	**-0.2**
KK31	**Karatay Array**	**73.24**	**326**	P	**P**	**21 03 08.8**	**+0.4**
KK31				IAmb	IAmb	21 03 09.4	
	comp=Z,1.4nm,0.7s						
KKAR	**Karatay Array**	**73.24**	**326**	P	**P**	**21 03 08.9**	**+0.5**
KKAR				IAmb	IAmb	21 03 09.4	
	comp=Z,1.4nm,0.7s						
KKAR	**Karatay Array**	**73.24**	**326**	P	**P**	**21 03 08.9**	**+0.5**
GERES	**GERESS Array B**	**74.63**	**7**	P	**P**	**21 03 16.7**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=352,slow=5.5,SNR=2.7						
GERES	**GERESS Array B**	**74.63**	**7**	P	**P**	**21 03 17.2**	**+0.7**
BUR08	**Bucovina Ar. S**	**76.17**	**359**	P	**P**	**21 03 25.9**	**+0.5**
BUR08				IAmb	IAmb	21 03 27.6	
	comp=Z,4.4nm,1.4s						
BURAR	**Bucovina Array**	**76.19**	**359**	P	**P**	**21 03 26.0**	**+0.5**
GAR	**Garm**	**77.03**	**325**	P	**P**	**21 03 30.6**	**+0.2**
GAR				IAmb	IAmb	21 03 32.0	
	comp=Z,7.3nm,1.2s						
CHGR	**Chuyangaron**	**77.71**	**325**	P	**P**	**21 03 34.9**	**+0.8**
GEYT	**Alibeck**	**81.51**	**333**	P	**P**	**21 03 55.1**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=272,slow=4.0,SNR=3.6						
CMAR	**Chiang Mai Arr**	**82.73**	**292**	P	**P**	**21 04 01.4**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=8.7,slow=6.8,SNR=5.9						
BRTR	**Keskin Array B**	**83.73**	**352**	P	**P**	**21 04 06.7**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=335,slow=1.8,SNR=3.9						

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*LDG **15** 20:52:53.8±0.1, 48°.32N×1°.04W, h2km, Md3.1/5, Ml2.8/38, Error ellipse: s-maj=1.2km s-min=0.9km az=176.0*
*BGS **15** 20:52:54.3±1.5, 48°.28N×1°.14W, h7km±17km, ML2.0*
*STR **15** 20:52:54.3±0.5, 48°N±3°×°±°, h15km±3km, MLv2.9/6*
ISC 15 20:52:52.2±1.0**, 48°.30N**±0°.02×**1°.02W**±0°.02**, h18**km±3km**, n66, σ1ˢ.44**/126**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRR	**Gorron**	**0.14**	**52**	ePg	**Pg**	**20 52 57.2**	**+0.8**
GRR				eSg	**Sg**	**20 52 58.9**	**-0.2**
	496nm,0.1s						
RENF	**Rennes**	**0.45**	**246**	eP	**Pn**	**20 53 02.6**	**-1.2**
RENF				eS	**Sb**	**20 53 08.3**	**+0.3**
RENF	**Rennes**	**0.45**	**246**	Pg	**Pn**	**20 53 02.8**	**-1.0**
RENF				Sg	**Sb**	**20 53 08.6**	**+0.5**
FLN	**La Foliniere**	**0.58**	**38**	ePg	**Pn**	**20 53 05.0**	**-0.6**
	baz=219						
FLN				eSg	**Sb**	**20 53 11.2**	**-0.5**
	40nm,0.2s,baz=215						
FLN				eSn	**Sn**	**20 53 16.6**	**+2.0**
	baz=219						
LDF	**La Druitiere**	**0.66**	**64**	ePg	**Pn**	**20 53 07.0**	**+0.3**
LDF				eSg	**Sb**	**20 53 15.4**	**+1.4**
	46nm,0.2s						
LDF				eSn	**Sn**	**20 53 19.3**	**+2.7**
SGMF	**Saint Gilles**	**1.03**	**268**	ePg	**Pn**	**20 53 12.7**	**+1.0**
SGMF	**Saint Gilles**	**1.03**	**268**	ePn	**Pn**	**20 53 13.5**	**+1.8**
SGMF				eSg	**Sn**	**20 53 25.5**	**-0.1**
	47nm,0.2s						
SGMF				eSn	**Sb**	**20 53 27.5**	**+2.9**
	49nm,0.2s						
JQE	**Queens East**	**1.12**	**323**	eP	**Pn**	**20 53 14.3**	**+1.4**
JRS	**Jersey**	**1.14**	**322**	eP	**Pn**	**20 53 14.6**	**+1.4**
JRS				eS	**Sn**	**20 53 28.5**	**+0.2**
JRS				IAML		20 53 34.2	
	comp=N,34nm,0.5s						
JRS				IAML		20 53 34.5	
	comp=E,36nm,0.3s						
JSA	**Saint Aubin**	**1.17**	**320**	eP	**Pn**	**20 53 15.0**	**+1.4**
JSA				eS	**Sn**	**20 53 29.1**	**+0.1**
JSA				IAML		20 53 33.8	
	comp=N,32nm,0.3s						
JSA				IAML		20 53 34.2	
	comp=E,29nm,0.3s						
JSA	**Saint Aubin**	**1.17**	**320**	Pg	**Pn**	**20 53 15.2**	**+1.6**
JSA				Sg	**Sn**	**20 53 29.5**	**+0.5**
QUIF	**Quistinic**	**1.49**	**256**	ePn	**Pg**	**20 53 19.8**	**-1.1**
QUIF	**Quistinic**	**1.49**	**256**	ePg	**Pg**	**20 53 21.4**	**+0.5**
QUIF				eSg	**Sg**	**20 53 40.6**	**+0.3**
	comp=E,47nm,0.3s						
ROSF	**Rostrenen**	**1.50**	**272**	ePn	**Pg**	**20 53 20.0**	**-1.2**
ROSF	**Rostrenen**	**1.50**	**272**	ePg	**Pg**	**20 53 21.5**	**+0.3**
ROSF				eSg	**Sg**	**20 53 40.5**	**-0.3**
	comp=E,26nm,0.2s						
ROSF	**Rostrenen**	**1.50**	**272**	eP	**Pg**	**20 53 20.2**	**-1.0**
MFF	**Saint Martin d**	**1.80**	**160**	ePn	**Pg**	**20 53 25.2**	**-1.7**
MFF	**Saint Martin d**	**1.80**	**160**	ePg	**Pg**	**20 53 27.7**	**+0.8**
MFF				eSg	**Sg**	**20 53 50.9**	**+0.6**
	comp=E,26nm,0.2s						
MFF	**Saint Martin d**	**1.80**	**160**	Pn	**Pg**	**20 53 25.2**	**-1.7**
MFF				Pg	**Pb**	**20 53 27.9**	**+3.2**
MFF				Sn	**Sb**	**20 53 47.8**	**+0.9**
MFF				Sg	**Sg**	**20 53 52.2**	**+1.9**
CHIF	**Chize**	**2.21**	**169**	eP	**Pb**	**20 53 30.7**	**-0.9**
CHIF	**Chize**	**2.21**	**169**	Pn	**Pb**	**20 53 30.9**	**-0.7**
CHIF				Pg	**Pg**	**20 53 35.3**	**+0.7**
CHIF				Sn	**Sb**	**20 53 58.2**	**-0.4**
CHIF				Sg	**Sg**	**20 54 04.1**	**+0.8**
CLF	**Chambon-Foret**	**2.21**	**96**	Pn	**Pn**	**20 53 29.4**	**+1.5**
CLF				Pg	**Pg**	**20 53 36.3**	**+1.6**
CLF				Sn	**Sb**	**20 53 58.9**	**+0.3**
CLF				Sg	**Sg**	**20 54 04.8**	**+1.4**
HYF	**Humbligny**	**2.67**	**111**	ePn	**Pn**	**20 53 36.3**	**+1.9**
HYF	**Humbligny**	**2.67**	**111**	eP	**Pb**	**20 53 38.9**	**-0.7**
HYF	**Humbligny**	**2.67**	**111**	ePg	**Pg**	**20 53 44.0**	**+0.5**
HYF				eSg	**Sg**	**20 54 17.4**	**-0.8**
TCF	**Toulx Ste Croi**	**2.98**	**131**	ePn	**Pn**	**20 53 41.4**	**+2.8**
TCF				eSn	**Sn**	**20 54 14.4**	**+0.5**
	comp=E,1.5nm,0.2s						
TCF				eSg	**Sg**	**20 54 27.8**	**-0.2**
	comp=E,1.8nm,0.1s						
BGF	**Bois d'Agland**	**3.15**	**122**	ePn	**Pn**	**20 53 43.4**	**+2.5**
BGF	**Bois d'Agland**	**3.15**	**122**	ePg	**Pg**	**20 53 52.6**	**0.0**
BGF				eSn	**Sn**	**20 54 19.0**	**+1.0**
BGF				eSg	**Sg**	**20 54 33.1**	**-0.4**
	comp=E,26nm,0.4s						
SSF	**Saint Saulge**	**3.30**	**110**	ePn	**Pn**	**20 53 45.7**	**+2.8**
SSF	**Saint Saulge**	**3.30**	**110**	ePg	**Pg**	**20 53 55.5**	**+0.1**
SSF				eSn	**Sn**	**20 54 21.8**	**+0.1**
	comp=E,0.9nm,0.2s						
SSF				eSg	**Sg**	**20 54 38.0**	**-0.2**
	comp=E,8.7nm,0.3s						
AVF	**Avril sur Loir**	**3.33**	**115**	ePn	**Pn**	**20 53 46.0**	**+2.7**
AVF	**Avril sur Loir**	**3.33**	**115**	ePg	**Pg**	**20 53 56.2**	**+0.3**
AVF				eSn	**Sn**	**20 54 21.9**	**-0.4**
	comp=E,3.4nm,0.3s						
AVF				eSg	**Sg**	**20 54 38.3**	**-0.7**
	comp=E,3.6nm,0.3s						
LOR	**Lormes**	**3.45**	**106**	ePn	**Pn**	**20 53 47.6**	**+2.6**
	baz=286						
LOR	**Lormes**	**3.45**	**106**	ePg	**Pg**	**20 53 58.0**	**-0.3**
	baz=73						
LOR				eSn	**Sn**	**20 54 25.8**	**+0.4**
LOR				eSg	**Sg**	**20 54 41.6**	**-1.3**
	comp=E,11nm,0.4s,baz=292						
RJF	**Les Rejaudoux**	**3.47**	**149**	ePn	**Pn**	**20 53 46.9**	**+1.6**
RJF	**Les Rejaudoux**	**3.47**	**149**	ePg	**Pg**	**20 53 58.8**	**+0.1**
RJF				eSn	**Sn**	**20 54 26.4**	**+0.5**
	comp=E,2.1nm,0.3s						
RJF				eSg	**Sg**	**20 54 43.4**	**-0.2**
	comp=E,9.1nm,0.3s						
LFF	**La Frestale**	**3.58**	**160**	ePn	**Pn**	**20 53 48.8**	**+2.1**
LFF	**La Frestale**	**3.58**	**160**	ePg	**Pg**	**20 54 00.6**	**-0.1**
LFF				eSn	**Sn**	**20 54 29.0**	**+0.5**
LFF				eSg	**Sg**	**20 54 46.3**	**-0.8**
	comp=E,11nm,0.4s						
SMF	**Signal de Mont**	**3.69**	**115**	ePn	**Pn**	**20 53 50.4**	**+2.1**
SMF				eSn	**Sn**	**20 54 31.4**	**+0.1**
SMF				eSg	**Sg**	**20 54 49.6**	**-1.1**
	comp=E,3.2nm,0.2s						
BAIF	**Baives**	**3.85**	**61**	ePn	**Pn**	**20 53 52.2**	**+1.7**
BAIF	**Baives**	**3.85**	**61**	ePg	**Pg**	**20 54 04.4**	**-1.6**
BAIF				eSn	**Sn**	**20 54 34.8**	**-0.5**
	comp=E,3.8nm,0.2s						
CAF	**Calviac**	**3.99**	**147**	ePn	**Pn**	**20 53 54.7**	**+2.2**
CAF	**Calviac**	**3.99**	**147**	ePg	**Pg**	**20 54 08.0**	**-0.7**
CAF				eSn	**Sn**	**20 54 38.7**	**-0.1**
CAF				eSg	**Sg**	**20 54 59.6**	**-0.8**
	comp=E,5.5nm,0.3s						
SFTF	**Sexfontaines**	**4.05**	**89**	ePn	**Pn**	**20 53 55.3**	**+2.1**
SFTF	**Sexfontaines**	**4.05**	**89**	ePg	**Pg**	**20 54 09.2**	**-0.5**
SFTF				eSn	**Sn**	**20 54 40.4**	**+0.3**
SFTF				eSg	**Sg**	**20 55 00.7**	**-1.5**
	comp=E,7.0nm,0.3s						
DOU	**Dourbes**	**4.09**	**62**	eP	**Pn**	**20 53 56.9**	**+3.1**
GIVF	**Givet**	**4.23**	**63**	ePn	**Pn**	**20 53 56.9**	**+1.2**
GIVF	**Givet**	**4.23**	**63**	eP	Pn	20 54 00.9	+5.2
GIVF	**Givet**	**4.23**	**63**	ePg	**Pg**	**20 54 11.8**	**-1.4**
GIVF				eSn	**Sn**	**20 54 44.1**	**-0.5**
	comp=E,7.0nm,0.3s						
PAGF	**Fort de Pagny**	**4.50**	**84**	ePn	**Pn**	**20 54 00.9**	**+1.5**
	baz=266						
PAGF	**Fort de Pagny**	**4.50**	**84**	ePg	**Pg**	**20 54 16.9**	**-1.4**
	baz=262						
PAGF				eSn	**Sn**	**20 54 50.5**	**-0.7**
PAGF				eSg	**Sg**	**20 55 15.2**	**-1.3**
	comp=E,2.0nm,0.3s						
HAU	**Haudompre**	**4.94**	**91**	ePn	**Pn**	**20 54 07.3**	**+1.8**
HAU	**Haudompre**	**4.94**	**91**	ePg	**Pg**	**20 54 25.8**	**-1.0**
HAU				eSn	**Sn**	**20 55 00.1**	**-2.0**
	comp=E,2.1nm,0.2s						
HAU				eSg	**Sg**	**20 55 28.8**	**-1.9**
	comp=E,7.3nm,0.4s						
CABF	**La Chapelle**	**5.11**	**107**	ePn	**Pn**	**20 54 10.3**	**+2.4**
CABF				eSn	**Sn**	**20 55 05.8**	**-0.6**
CABF				eSg	**Sg**	**20 55 33.9**	**-2.2**
	comp=E,6.1nm,0.7s						
SJPF	**Ste Jean**	**5.19**	**182**	ePn	**Pn**	**20 54 10.6**	**+1.6**
SJPF	**Ste Jean**	**5.19**	**182**	ePg	**Pg**	**20 54 29.9**	**-1.7**
SJPF				eSg	**Sg**	**20 55 37.2**	**-1.7**
	comp=E,0.9nm,0.4s						
HINF	**Hinteralfeld**	**5.30**	**92**	ePn	**Pn**	**20 54 12.2**	**+1.7**
HINF	**Hinteralfeld**	**5.30**	**92**	ePg	**Pg**	**20 54 31.4**	**-2.3**
HINF				eSn	**Sn**	**20 55 09.4**	**-1.7**
HINF				eSg	**Sg**	**20 55 40.4**	**-1.9**
	comp=E,4.5nm,0.4s						
EPF	**Esparros**	**5.36**	**169**	ePn	**Pn**	**20 54 12.9**	**+1.6**
EPF				eSn	**Sn**	**20 55 10.8**	**-1.7**
	comp=E,0.9nm,0.2s						
EPF				eSg	**Sg**	**20 55 43.0**	**-1.2**
	comp=E,1.9nm,0.3s						
ETSF	**Etsaut**	**5.42**	**176**	ePn	**Pn**	**20 54 14.0**	**+1.9**
ETSF				eSn	**Sn**	**20 55 12.2**	**-1.8**
	comp=E,0.4nm,0.2s						
LASF	**Ste Croix**	**5.42**	**140**	ePn	**Pn**	**20 54 13.3**	**+1.3**
LASF				eSg	**Sg**	**20 55 44.5**	**-1.5**
	comp=E,1.1nm,0.2s						
MTLF	**Montolieu**	**5.45**	**154**	ePn	**Pn**	**20 54 14.1**	**+1.5**
MTLF				eSg	**Sg**	**20 55 44.9**	**-2.3**
	comp=E,1.0nm,0.3s						
CDF	**Champ du Feu**	**5.53**	**86**	ePn	**Pn**	**20 54 14.7**	**+1.0**
CDF	**Champ du Feu**	**5.53**	**86**	eP	Pn	20 54 19.3	+5.6
CDF	**Champ du Feu**	**5.53**	**86**	ePg	**Pg**	**20 54 36.1**	**-2.0**
CDF				eSn	**Sn**	**20 55 16.1**	**-0.7**
	comp=E,2.0nm,0.6s						
PGF	**Pioggiola**	**9.09**	**126**	eSn	**Sn**	**20 56 41.9**	**-2.5**
	comp=E,11nm,0.8s						

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*ECX **15** 21:04:09.1±0.6, 32°.31N×115°.42W, h5km±3km, MD2.4, ML2.6*
*MEX **15** 21:04:14.2±1.1, 32°.08N×115°.87W, h9km, MD3.5*
ISC 15 21:04:07.6±0.9**, 32°.31N**±0°.03×**115°.44W**±0°.04**, h15**km±9km**, n22, σ0ˢ.61**/31**, 3C-3D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.16**	**46**	eP	**Pg**	**21 04 11.6**	**0.0**
CPBX				eS	**Sg**	**21 04 14.4**	**+0.2**
MBIG	**Mexicali**	**0.22**	**64**	eP	**Pg**	**21 04 12.9**	**+0.3**
SGL	**Mount Signal**	**0.42**	**324**	⇑iP	**Pb**	**21 04 16.3**	**-0.4**
ERPC	**Ernies Place**	**0.47**	**336**	eP	**Pb**	**21 04 17.9**	**+0.2**
DREC	**Desert Rsrch C**	**0.49**	**359**	eP	**Pb**	**21 04 18.2**	**+0.2**
WESC	**Westside Schoo**	**0.51**	**331**	eP	**Pb**	**21 04 18.3**	**0.0**
ESJX	**Sierra Juarez**	**0.53**	**235**	eP	**Pb**	**21 04 19.2**	**+0.5**
ESJX				eS	**Sb**	**21 04 26.7**	**+0.4**
ESJX				IAML		21 04 29.1	
	comp=N,707nm,0.1s						
ESJX				⇑e		21 04 29.1	
ERMX	**Rumorosa**	**0.56**	**296**	eP	**Pb**	**21 04 18.9**	**-0.3**
ERMX				eS	**Sb**	**21 04 26.8**	**-0.3**
IKP	**In-Ko-Pah, Jac**	**0.66**	**301**	⇑eP	**Pb**	**21 04 20.8**	**-0.2**
ECBX	**El Chinero**	**0.90**	**158**	eP	**Pg**	**21 04 24.9**	**-0.1**
ECBX				eS	**Sg**	**21 04 37.0**	**+0.2**
VTX	**Valle De La Tr**	**0.96**	**198**	⇓e	**Sn**	**21 04 42.7**	**+2.5**
VTX				IAML		21 04 42.7	
	comp=E,154nm,0.3s						
MONP2	**Monument Peak**	**1.01**	**305**	eP	**Pg**	**21 04 27.1**	**-0.1**
CBX	**Cerro Bola**	**1.04**	**271**	eP	**Pn**	**21 04 27.9**	**+0.1**
CBX				eS	**Sn**	**21 04 41.7**	**-0.4**
TJIG	**Tijuana**	**1.05**	**277**	eP	**Pn**	**21 04 27.7**	**-0.3**
BAR	**Barrett**	**1.11**	**290**	eP	**Pg**	**21 04 28.7**	**-0.3**
CCX	**Cicese**	**1.13**	**247**	eP	**Pn**	**21 04 28.9**	**0.0**
CCX				eS	**Sg**	**21 04 44.1**	**-0.1**
SPIG	**San Pedro Mart**	**1.26**	**181**	iP	**Pb**	**21 04 31.2**	**-0.1**
	baz=341,slow=5.3						
SPIG				iS	**Sb**	**21 04 46.7**	**-0.8**
SPX	**San Pedro Mart**	**1.27**	**181**	⇓eP	**Pn**	**21 04 30.2**	**-0.9**
SPX				eS	**Sb**	**21 04 47.3**	**-0.4**
SPX				IAML		21 04 51.5	
	comp=N,52nm,0.5s						
SPX				⇓e		21 04 51.5	
OLP	**Otay Lakes Par**	**1.30**	**284**	eP	**Pb**	**21 04 31.9**	**+0.2**
EML	**El Monte Cty P**	**1.32**	**296**	eP	**Pb**	**21 04 32.3**	**+0.2**
SDRC	**San Diego Road**	**1.34**	**289**	eP	**Pb**	**21 04 32.6**	**+0.1**
SFX	**San Felipe**	**1.36**	**158**	eP	**Pb**	**21 04 32.7**	**-0.2**
SFX				eS	**Sg**	**21 04 51.1**	**-0.5**

ISC 15 21:35:49.8±1.6**, 50°.3N**±0°.1×**18°.84E**±0°.05**, h0**km**, n6, σ0ˢ.52**/10**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.62**	**99**	ePg	**Pg**	**21 36 01.5**	**-0.1**
OJC				eSg	**Sg**	**21 36 10.1**	**+0.4**
MORC	**Moravsky Berou**	**1.00**	**238**	ePG	**Pb**	**21 36 09.8**	**-0.2**
MORC				eSG	**Sg**	**21 36 21.2**	**-0.6**
LANS	**Liptovska Anna**	**1.23**	**161**	ePG	**Pg**	**21 36 13.6**	**+0.2**
LANS				eSG	**Sb**	**21 36 30.6**	**+0.1**
LANS				eLG	Lg	21 36 34.8	
VRAC	**Vranov**	**1.77**	**236**	ePN	**Pn**	**21 36 21.7**	**0.0**
VRAC				eSG	**Sn**	**21 36 45.2**	**+0.3**
VYHS	**Vyhne**	**1.82**	**180**	ePN	**Pn**	**21 36 21.8**	**-0.6**
KRUC	**Moravsky**	**2.03**	**233**	eSG	**Sb**	**21 36 54.1**	**+0.9**

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*IDC **15** 21:43:40.1±1.1, 55°.27S×25°.73W, h0km, mb4.1/5, mb1 4.2/5, mb1mx4.0/16, mbtmp4.1/5, Error ellipse: s-maj=33.9km s-min=31.6km az=64.0*
*NEIC **15** 21:43:41.3±1.1, 55°.4S±0°.1×25°.8W±0°.2, h10km±1km, mb4.3/8, Error ellipse: s-maj=25.6km s-min=18.9km az=222.0*
ISC 15 21:43:41.1±0.7**, 55°.4S**±0°.1×**25°.8W**±0°.1**, h10**km**, n21, σ1ˢ.06**/21**, mb4.3**/7**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.28**	**275**	Pn	**Pn**	**21 45 14.5**	**+0.9**
VNA1	**Neumayer--Stat**	**17.16**	**160**	P	**Pn**	**21 47 41.6**	**+0.9**
VNA3	**Neumayer Olymp**	**17.40**	**163**	P	**Pn**	**21 47 43.9**	**+0.2**
VNA2	**Neumayer--Watz**	**17.56**	**160**	P	**P**	**21 47 46.6**	**-0.1**
	baz=322,slow=12						
SNAA	**Sanae**	**19.07**	**158**	P	**Pn**	**21 48 04.9**	**+0.7**
SNAA	**Sanae**	**19.07**	**158**	P	**Pn**	**21 48 04.6**	**+0.5**
QSPA	**South Pole Qui**	**34.90**	**180**	P	**P**	**21 50 32.3**	**-0.2**
CPUP	**Villa Florida**	**36.97**	**309**	P	**P**	**21 50 49.5**	**-0.9**
	3.7nm,1.0s,baz=116,slow=4.7,SNR=3.2						
MAW	**Mawson**	**40.24**	**144**	P	**P**	**21 51 18.0**	**+0.6**
LVC	**Limon Verde**	**45.65**	**298**	P	**P**	**21 52 02.8**	**+0.6**
LVC				IAmb	IAmb	21 52 07.1	
	comp=Z,4.8nm,1.1s						
VNDA	**Vanda**	**47.30**	**182**	P	**P**	**21 52 15.2**	**+1.1**
	comp=Z,0.8nm,0.8s,baz=216,slow=20,SNR=2.0						
LPAZ	**La Paz**	**50.64**	**303**	P	**P**	**21 52 42.2**	**+1.2**
	comp=Z,3.2nm,0.7s,baz=127,slow=4.5,SNR=11						
LPAZ	**La Paz**	**50.64**	**303**	P	**P**	**21 52 41.1**	**0.0**
LPAZ				IAmb	IAmb	21 52 44.3	
	comp=Z,3.0nm,0.8s						
SAML	**Samuel**	**54.89**	**313**	P	**P**	**21 53 11.9**	**+0.1**
SAML				IAmb	IAmb	21 53 12.6	
	comp=Z,1.5nm,0.8s						
DBIC	**Dimbokro**	**64.21**	**23**	P	**P**	**21 54 15.5**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=187,slow=4.6,SNR=1.3						
DBIC	**Dimbokro**	**64.21**	**23**	P	**P**	**21 54 15.9**	**-0.1**
DBIC				IAmb	IAmb	21 54 20.4	
	comp=Z,3.1nm,0.9s						
TOA0	**Torodi Ar. Sit**	**72.06**	**28**	P	**P**	**21 55 06.0**	**+0.7**
TORD	**Torodi Ar. Bea**	**72.06**	**28**	P	**P**	**21 55 05.8**	**+0.6**
	comp=Z,3.2nm,0.7s,baz=198,slow=6.6,SNR=14						
PLWZ	**Palliser**	**81.80**	**196**	P	**P**	**21 55 56.5**	**-3.5**
SONM	**Songino Array**	**149.88**	**84**	PKPbc	**PKPbc**	**22 03 30.5**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=210,slow=1.4,SNR=5.7						
ILAR	**Eielson Array**	**150.24**	**312**	PKPbc	**PKPbc**	**22 03 31.1**	**+0.2**
	comp=Z,0.6nm,0.9s,baz=121,slow=2.2,SNR=4.7						

IDC 15 21:57:19.4±2.8**, 6°.33S**×**130°.06E, h125**km±40km**, mb2.9**/1**, mb1 3.1**/5**, mb1mx3.0**/38**, mbtmp3.5**/5**, Error ellipse: s-maj=74.7km s-min=21.5km az=89.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.55**	**13**	P	Pn	21 58 40.1	+0.1
	2.0nm,0.3s,baz=39,slow=10,SNR=21						
SIJI				S	Sn	21 59 37.6	-5.1
	0.8nm,0.3s,baz=174,slow=22,SNR=1.5						
FITZ	**Fitzroy Crossi**	**12.47**	**200**	P	Pn	22 00 13.1	+0.5
	0.2nm,0.3s,baz=153,slow=2.3,SNR=8.2						
FITZ				S	Sn	22 02 21.6	-8.4
	0.1nm,0.3s,baz=22,slow=0.8,SNR=2.4						
WRA	**Warramunga Arr**	**14.16**	**163**	P	Pn	22 00 32.5	-1.9
	0.3nm,0.3s,baz=345,slow=12,SNR=15						
WRA				S	Sn	22 02 59.4	-12
	0.4nm,0.3s,baz=350,slow=20,SNR=8.8						
ASAR	**Alice Springs**	**17.63**	**168**	P	Pn	22 01 17.6	+0.3
	0.2nm,0.3s,baz=346,slow=10,SNR=11						
MKAR	**Makanchi Array**	**67.70**	**327**	P	P	22 08 03.2	-0.1
	0.1nm,0.5s,baz=122,slow=8.1,SNR=1.7						

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*DDA **15** 22:12:10.7, 41°.27N×43°.93E, h7km±3km, ML2.2*
*TIF **15** 22:12:11.0, 41°.35N×43°.94E, h13km±1km*
ISC 15 22:12:11.0±0.9**, 41°.33N**±0°.03×**43°.92E**±0°.02**, h13**km±8km**, n28, σ1ˢ.45**/51**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BGD	**Bogdanovka**	**0.25**	**255**	P	**Pb**	**22 12 17.4**	**-0.1**
BGD				S	**Sg**	**22 12 21.6**	**+1.6**
TRLG	**Trialeti**	**0.25**	**34**	P	**Pb**	**22 12 16.6**	**-1.0**
TRLG				S	**Sg**	**22 12 20.0**	**-0.1**
AKH	**Akhalkalaki**	**0.33**	**284**	P	**Pb**	**22 12 18.6**	**-0.2**
AKH				S	**Sg**	**22 12 23.4**	**+1.0**
AKH	**Akhalkalaki**	**0.33**	**284**	ePg	**Pb**	**22 12 18.6**	**-0.2**
AKH				eSg	**Sg**	**22 12 23.4**	**+1.0**
KZRT	**Kazreti**	**0.37**	**81**	P	**Pb**	**22 12 18.6**	**-0.9**
KZRT				S	**Sg**	**22 12 23.5**	**0.0**
KZRT	**Kazreti**	**0.37**	**81**	ePg	**Pb**	**22 12 18.6**	**-0.9**
KZRT				eSg	**Sb**	**22 12 24.5**	**-0.7**
KZRT	**Kazreti**	**0.37**	**81**	iP	**Pb**	**22 12 18.6**	**-0.9**
KZRT				iS	**Sg**	**22 12 23.3**	**-0.2**
BKRG	**Bakuriani**	**0.52**	**326**	P	**Pb**	**22 12 22.0**	**-0.2**
BKRG				S	**Sb**	**22 12 29.8**	**0.0**
EAK	**Akyaka**	**0.68**	**200**	iP	**Pg**	**22 12 24.5**	**+0.2**
EAK				iS	**Sg**	**22 12 30.8**	**-2.6**
TBLG	**Delisi**	**0.74**	**57**	P	**Pg**	**22 12 24.9**	**-0.5**
TBLG				S	**Sb**	**22 12 35.5**	**-0.2**
BTNK	**Botanikuri**	**0.75**	**62**	P	**Pb**	**22 12 25.4**	**-0.6**
BTNK	**Botanikuri**	**0.75**	**62**	iP	**Pg**	**22 12 25.2**	**-0.4**
BTNK				IAML		22 12 43.0	
	comp=N,148nm,0.1s						
EPOS	**Posof**	**0.91**	**281**	iP	**Pg**	**22 12 28.9**	**+0.3**
EPOS				iS	**Sg**	**22 12 35.3**	**-5.2**
DGRG	**David-gareji**	**1.10**	**83**	P	**Pn**	**22 12 32.4**	**+0.1**
DGRG				S	**Sn**	**22 12 48.5**	**+1.1**
DGRG	**David-gareji**	**1.10**	**83**	ePg	**Pn**	**22 12 33.4**	**+1.1**
DGRG				eSg	**Sn**	**22 12 48.5**	**+1.1**
DGRG	**David-gareji**	**1.10**	**83**	iP	**Pn**	**22 12 32.5**	**+0.1**
TKB	**Tkibuli**	**1.23**	**326**	P	**Pb**	**22 12 34.4**	**+0.2**
TKB				S	**Sg**	**22 12 51.4**	**+0.7**
ONI	**Oni**	**1.31**	**345**	P	**Pg**	**22 12 35.8**	**-0.4**
ONI				S	**Sg**	**22 12 53.7**	**+0.5**
IGDI	**IGDIR**	**1.47**	**175**	iP	**Pn**	**22 12 37.9**	**+0.6**
DDFL	**Dedoflistskaro**	**1.66**	**85**	P	**Pg**	**22 12 43.3**	**+0.4**
DDFL				S	**Sg**	**22 13 10.2**	**+5.7**
DDFL	**Dedoflistskaro**	**1.66**	**85**	ePg	**Pg**	**22 12 43.3**	**+0.4**
DDFL				eSg	**Sg**	**22 13 06.2**	**+1.7**
DDFL	**Dedoflistskaro**	**1.66**	**85**	iP	**Pg**	**22 12 42.9**	**0.0**
LGD	**Lagodekhi**	**1.82**	**73**	P	**Pb**	**22 12 44.3**	**+0.1**
LGD				S	**Sg**	**22 13 08.8**	**-0.7**
LGD	**Lagodekhi**	**1.82**	**73**	ePg	**Pg**	**22 12 45.3**	**-0.6**
LGD				eSg	**Sg**	**22 13 09.8**	**+0.3**
BTLR	**Botlikh**	**2.18**	**51**	ePg	**Pg**	**22 12 51.1**	**-1.7**
BTLR				eSg	**Sg**	**22 13 19.4**	**-1.6**
XNZR	**Khunzakh**	**2.41**	**59**	ePn	**Pb**	**22 12 54.4**	**0.0**
XNZR				eSn	**Sb**	**22 13 24.9**	**+0.9**
GNBR	**Gunib**	**2.51**	**64**	ePn	**Pb**	**22 12 55.5**	**-0.5**
GNBR				eSn	**Sb**	**22 13 27.2**	**+0.3**
AKT	**Akhty**	**2.87**	**86**	ePn	**Pb**	**22 13 00.3**	**-2.0**
AKT				iSn	**Sb**	**22 13 35.5**	**-1.8**

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*TIF **15** 22:12:17.4, 41°.35N×43°.95E, h13km±1km*
ISC 15 22:12:17.6±1.0**, 41°.33N**±0°.04×**43°.94E**±0°.02**, h13**km±8km**, n24, σ0ˢ.61**/47**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRLG	**Trialeti**	**0.24**	**30**	P	**Pb**	**22 12 23.1**	**-1.0**
TRLG				S	**Sg**	**22 12 26.6**	**+0.1**
BGD	**Bogdanovka**	**0.26**	**256**	P	**Pg**	**22 12 23.1**	**-0.2**
BGD				S	**Sg**	**22 12 28.1**	**+1.0**
AKH	**Akhalkalaki**	**0.34**	**284**	P	**Pb**	**22 12 25.1**	**-0.7**
AKH				S	**Sg**	**22 12 30.0**	**+0.5**
AKH	**Akhalkalaki**	**0.34**	**284**	ePg	**Pb**	**22 12 25.1**	**-0.7**
AKH				eSg	**Sg**	**22 12 30.0**	**+0.5**
KZRT	**Kazreti**	**0.35**	**80**	P	**Pb**	**22 12 25.1**	**-0.7**
KZRT				S	**Sg**	**22 12 29.9**	**+0.3**
KZRT	**Kazreti**	**0.35**	**80**	ePg	**Pb**	**22 12 25.1**	**-0.7**
KZRT				eSg	**Sg**	**22 12 29.9**	**+0.3**
BKRG	**Bakuriani**	**0.53**	**324**	P	**Pb**	**22 12 28.5**	**-0.5**
BKRG				S	**Sb**	**22 12 36.3**	**-0.3**
TBLG	**Delisi**	**0.72**	**56**	P	**Pb**	**22 12 31.8**	**-0.3**
TBLG				S	**Sb**	**22 12 41.8**	**-0.2**
TBLG	**Delisi**	**0.72**	**56**	ePg	**Pb**	**22 12 31.8**	**-0.3**
TBLG				eSg	**Sb**	**22 12 41.8**	**-0.2**
BTNK	**Botanikuri**	**0.74**	**61**	P	**Pb**	**22 12 32.1**	**-0.3**
BTNK				S	**Sb**	**22 12 42.0**	**-0.3**
BTNK	**Botanikuri**	**0.74**	**61**	ePg	**Pb**	**22 12 32.1**	**-0.3**
BTNK				eSg	**Sb**	**22 12 42.0**	**-0.3**
DGRG	**David-gareji**	**1.09**	**83**	P	**Pn**	**22 12 38.9**	**+0.3**
DGRG				S	**Sn**	**22 12 54.6**	**+1.0**
DGRG	**David-gareji**	**1.09**	**83**	ePg	**Pn**	**22 12 38.9**	**+0.3**
DGRG				eSg	**Sn**	**22 12 54.6**	**+1.0**
TKB	**Tkibuli**	**1.24**	**326**	P	**Pg**	**22 12 41.2**	**-0.4**
TKB				S	**Sg**	**22 12 57.9**	**+0.2**
ONI	**Oni**	**1.31**	**344**	P	**Pb**	**22 12 41.9**	**-0.3**
ONI				S	**Sg**	**22 13 00.3**	**+0.3**
ONI	**Oni**	**1.31**	**344**	ePg	**Pg**	**22 12 42.9**	**0.0**
ONI				eSg	**Sg**	**22 13 00.3**	**+0.3**
LACR	**Lac**	**1.52**	**10**	ePg	**Pg**	**22 12 46.6**	**-0.3**
LACR				iSg	**Sg**	**22 13 06.8**	**+0.2**
DIGR	**Digorskoe uzhe**	**1.59**	**350**	ePg	**Pg**	**22 12 48.1**	**-0.1**
DIGR				iSg	**Sg**	**22 13 09.2**	**+0.3**
DDFL	**Dedoflistskaro**	**1.65**	**85**	iS	**Pg**	**22 12 49.7**	**+0.4**

KORR	**Kora**	1.76	3	*e*Pg	Pg	22 12 51.2	-0.2
KORR				*e*Sg	Sg	22 13 14.5	+0.3
LGD	**Lagodekhi**	1.80	73	P	Pb	22 12 50.9	+0.4
LGD				S	Sg	22 13 15.9	+0.3
LGD	**Lagodekhi**	1.80	73	*e*Pg	Pg	22 12 51.9	-0.3
LGD				*e*Sg	Sg	22 13 15.9	+0.3
BTLR	**Botlikh**	2.16	51	*e*Pg	Pb	22 12 56.5	-0.2
BTLR				*e*Sg	Sb	22 13 24.3	+0.8
AKT	**Akhty**	2.86	86	*e*Pn	Pb	22 13 07.0	-1.5
AKT				*i* Sn	Sb	22 13 41.5	-2.0

ZUR 15 22:17:44.4, 46°.37N×7°.47E, h1^{km}±2^{km}, MLh0.8/6, 1D, Error ellipse: s-maj=4.8km s-min=0.8km az=105.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKBD	**Leukerbad**	0.11	81	Pg	Pg	22 17 46.9	+0.4
	0.1nm,SNR=1.3						
LKBD				Sg	Sg	22 17 48.6	+0.7
SENIN	**Lac Senin/Sane**	0.12	267	⇓Pg	Pg	22 17 46.9	+0.2
	0.1nm,SNR=2.3						
SENIN				Sg	Sg	22 17 48.9	+0.6
SIOV	**Sion-Valere**	0.15	209	Pg	Pg	22 17 47.6	+0.3
SIOV				Pg	Pg	22 17 47.6	+0.3
	0.2nm,SNR=1.8						
GRYON	**Gryon**	0.28	244	Pg	Pg	22 17 50.0	+0.4
	0.1nm,SNR=1.6						
GRYON				Pg	Pg	22 17 50.0	+0.4
GRYON				Sg	Sg	22 17 53.8	+0.6
DIX	**Grande Dixence**	0.29	189	Pg	Pg	22 17 50.3	+0.3
	SNR=1.0						
DIX				Pg	Pg	22 17 50.3	+0.3
EMBD	**Embd, Matterta**	0.29	121	Pg	Pg	22 17 50.2	+0.3
	SNR=0.8						
SIMPL	**Simplonpass**	0.40	109	Pg	Pg	22 17 52.4	+0.3
SIMPL				Pg	Pg	22 17 52.4	+0.3
	SNR=0.8						
FIESA	**Fiescheralp**	0.45	81	Pg	Pg	22 17 53.2	+0.3
	SNR=1.2						

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*STR **15** 22:19:33.5±1.4, 46°N±21°×1°3E±1°2, h0^{km}, MLv3.1/7*

*VIE **15** 22:19:35.4±0.1, 46°.27N×12°.76E, h11^{km}±3^{km}, mb2.4/13, ml2.9/16, Error ellipse: s-maj=1.7km s-min=0.7km az=19.0 16 km S of Ampezzo*

*IASPEI **15** 22:19:35.7±0.8, 46°.26N±0°.02×12°.75E±0°.01, h8^{km}±5^{km}, Error ellipse: s-maj=2.8km s-min=2.1km az=179.8, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ROM **15** 22:19:35.1±0.1, 46°.251N±0°.006×12°.773E±0°.008, h8^{km}, ML2.6/1, Error ellipse: s-maj=0.7km s-min=0.5km az=180.0*

*LDG **15** 22:19:36.4±0.1, 46°.25N×12°.89E, h2^{km}, Ml2.7/27, Error ellipse: s-maj=2.8km s-min=1.5km az=11.0*

*PRU **15** 22:19:37.5±0.0, 46°.31N×12°.80E, h2^{km}*

ISC 15 22:19:35.7±0.8**, 46°.26N**±0°.02×**12°.76E**±0°.01**, h11**^{km}±4^{km}**, n128, σ1^{s}30**/188**, 9C-12D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STAL	**STALIGIAL**	0.03	278	P	Pg	22 19 37.1	-0.7
STAL				S	Sg	22 19 38.1	-1.2
MLNI	**Malnisio**	0.15	224	⇑*e*Pg	Pg	22 19 38.7	-0.4
MLNI				*e*Sg	Sg	22 19 41.6	0.0
MPRI	**Monte Prat**	0.16	95	⇑*e*Pg	Pg	22 19 39.1	-0.2
MPRI				*e*Sg	Sg	22 19 42.1	+0.2
CLUD	**Cludinico**	0.22	23	⇓*i*Pg	Pg	22 19 40.0	-0.3
CLUD				*i* Sg	Sg	22 19 43.7	+0.2
CIMO	**Cimolais**	0.23	284	⇓*i*Pg	Pg	22 19 39.7	-0.8
CIMO				*i* Sg	Sg	22 19 43.2	-0.5
FUSE	**Fusea**	0.23	47	⇓*e*Pg	Pg	22 19 40.1	-0.4
FUSE				*e*Sg	Sg	22 19 44.4	+0.6
BOO	**Bordano**	0.25	75	*e*Pg	Pg	22 19 40.6	-0.2
BOO				*e*Sg	Sg	22 19 44.9	+0.7
BUA	**Buia**	0.26	98	⇓*e*Pg	Pg	22 19 41.0	+0.1
BUA				*e*Sg	Sg	22 19 45.3	+0.8
GEPF	**Gemona**	0.27	86	⇓P	Pg	22 19 41.1	0.0
GEPF				S	Sg	22 19 45.8	+1.1
GEPF				AML	AML		
	comp=E,1250µm,0.3s						
GEPF				AML	AML		
	comp=N,1730µm,0.9s						
CSMI	**Casera Mimoias**	0.27	344	⇓*e*Pg	Pg	22 19 40.9	-0.4
CSMI				*e*Sg	Sg	22 19 45.2	+0.2
POLC	**Polcenigo**	0.29	218	⇓P	Pg	22 19 41.7	+0.1
POLC				S	Sg	22 19 46.4	+0.9
POLC				AML	AML		
	comp=N,4950µm,0.3s						
POLC				AML	AML		
	comp=E,4350µm,0.4s						
CSO	**Casso**	0.30	274	⇓*e*Pg	Pg	22 19 41.3	-0.5
CSO				*e*Sg	Sg	22 19 45.8	-0.1
CAE	**Caneva**	0.33	222	⇓*e*Pg	Pg	22 19 42.2	-0.2
CAE				*e*Sg	Sg	22 19 47.9	+1.0
BAD	**Bernadia**	0.34	93	⇑*e*Pg	Pg	22 19 42.2	-0.2
BAD				*e*Sg	Sb	22 19 47.8	-1.2
FVI	**Forni Avoltri**	0.34	3	P	Pg	22 19 42.2	-0.3
FVI				S	Sg	22 19 48.0	+0.8
FVI				AML	AML		
	comp=N,2135µm,0.4s						
FVI				AML	AML		
	comp=E,1575µm,0.5s						
VINO	**Villanova**	0.36	90	⇓*e*Pg	Pg	22 19 42.6	-0.3
VINO				*e*Sg	Sb	22 19 48.7	-1.1
FRE8	**Fregona**	0.37	229	P	Pg	22 19 42.9	-0.1
FRE8				S	Sg	22 19 49.3	+1.4
PLRO	**Paularo**	0.40	42	⇑*e*Pg	Pg	22 19 43.4	-0.2
PLRO				*e*Sg	Sg	22 19 49.5	+0.6
TLI	**Talmassons**	0.41	144	*e*Pg	Pg	22 19 43.6	-0.1
COLI	**Coloredo**	0.45	106	*e*Pg	Pg	22 19 44.3	-0.2
AFL	**Alpe Faloria**	0.48	305	*e*Pg	Pg	22 19 45.2	0.0
ABTA	**Abfaltersbach**	0.52	341	*e*Pg	Pg	22 19 45.6	-0.2
	comp=E,28nm,0.4s,SNR=40						
ABTA				*e*Sg	Sg	22 19 52.7	-0.1
	comp=E,204nm,0.3s						
ROBS	**Robic**	0.52	91	*i* Pg	Pg	22 19 45.3	-0.6
ROBS				*i* Sg	Sb	22 19 54.1	-0.3
VARN	**Col Varnada, M**	0.53	240	*e*Pg	Pg	22 19 45.0	-0.9
FAU	**Forcella Aurin**	0.54	268	⇑*e*Pg	Pg	22 19 45.1	-1.1
ED06	**Collalto TV**	0.55	224	*e*Pg	Pg	22 19 46.4	-0.1
LSR	**Lussari**	0.58	67	*e*Pg	Pg	22 19 46.4	-0.5
PRED	**Cave del Predi**	0.59	71	⇑*e*Pg	Pg	22 19 46.4	-0.8
ACOM	**Acomizza, Ital**	0.60	60	⇓P	Pg	22 19 46.9	-0.5
ACOM				S	Sg	22 19 55.5	+0.2
ACOM				AML	AML		
	comp=E,510µm,0.3s						
ACOM				AML	AML		
	comp=N,511µm,0.6s						
ACOM				AML	AML		
	comp=E,510µm,0.3s						
ACOM	**Acomizza, Ital**	0.60	60	*e*Pg	Pg	22 19 46.8	-0.5
DRE	**Drenchia**	0.62	97	*e*Pg	Pg	22 19 47.0	-0.7
MTLO	**Montello**	0.64	226	*e*Pg	Pg	22 19 47.6	-0.4
SABO	**M.te Sabotino**	0.65	115	⇑P	Pb	22 19 48.2	-0.8
SABO				S	Sb	22 19 57.8	-0.2
SABO				AML	AML		
	comp=N,434µm,0.8s						
SABO				AML	AML		
	comp=E,380µm,0.8s						
SABO	**M.te Sabotino**	0.65	115	⇑*e*Pg	Pb	22 19 48.1	-0.8
CADS	**Cadrg**	0.68	92	*i* Pg	Pg	22 19 48.0	-0.8
CADS				*i* Sg	Sb	22 19 59.7	+0.7
MYKA	**Terra Mystica**	0.72	58	Pg	Pg	22 19 49.1	-0.5
	comp=E,2.4nm,0.2s						
MYKA				Sg	Sb	22 19 59.1	-0.9
	comp=E,23nm,0.3s						
IESO	**Jesolo**	0.75	191	*e*Pg	Pg	22 19 49.9	-0.3
CTI	**Castel Tesino**	0.80	255	AML	AML		
	comp=E,1182µm,0.2s						
CTI				AML	AML		
	comp=E,1182µm,0.2s						
CTI				AML	AML		
	comp=N,1084µm,0.2s						
VOJS	**Vojsko**	0.81	106	*i* Pg	Pg	22 19 50.7	-0.7
VOJS				*i* Sg	Sb	22 20 04.0	+1.1
BRES	**Bressanone**	0.83	302	P	Pg	22 19 51.9	0.0
BRES				S	Sg	22 20 03.5	+0.7
RISI	**Rein**	0.84	326	⇓P	Pg	22 19 51.9	+0.1
RISI				S	Sg	22 20 03.3	+0.5
RISI				AML	AML		
	comp=N,1375µm,0.4s						
RISI				AML	AML		
	comp=E,996µm,0.4s						
RISI				AML	AML		
	comp=N,1370µm,0.4s						
GORS	**Gorjuse**	0.86	85	*i* Pg	Pg	22 19 51.7	-0.6
GORS				*i* Sg	Sb	22 20 04.7	+0.5
KBA	**Koelnbreinsper**	0.92	26	Pg	Pb	22 19 53.4	-0.2
	comp=N,7.6nm,0.2s						
KBA				*e*Sg	Sb	22 20 05.9	-0.1
	comp=N,86nm,0.6s						
KOSI	**Kohlern**	0.98	283	P	Pg	22 19 54.4	-0.1
KOSI				S	Sg	22 20 07.9	+0.6
KOSI				AML	AML		
	comp=E,228µm,0.5s						
KOSI				AML	AML		
	comp=N,272µm,0.7s						
KOSI				AML	AML		
	comp=N,272µm,0.7s						
JAVS	**Javornik**	0.98	111	*i* Pg	Pn	22 19 55.6	+0.2
JAVS				*i* Sg	Sn	22 20 11.8	+2.5
CRNS	**Crni Vrh**	1.06	99	*i* Pg	Pb	22 19 56.2	+0.2
APPI	**Appiano**	1.08	282	P	Pg	22 19 56.3	-0.2
APPI				AML	AML		
	comp=E,349µm,1.5s						
APPI				AML	AML		
	comp=N,313µm,0.4s						
APPI				AML	AML		
	comp=E,350µm,1.5s						
APPI				AML	AML		
	comp=N,312µm,0.4s						
ABSI	**Aberstueckl**	1.10	296	P	Pg	22 19 56.6	-0.2
ABSI				AML	AML		
	comp=E,692µm,1.5s						
ABSI				AML	AML		
	comp=N,908µm,0.3s						
ROSI	**Rosskopf**	1.15	306	AML	AML		
	comp=N,283µm,1.6s						
ROSI				AML	AML		
	comp=E,288µm,0.4s						
ROSI				AML	AML		
	comp=N,284µm,1.6s						
LJU	**Ljubljana**	1.25	99	AML	AML		
	comp=E,706µm,0.5s						
LJU				AML	AML		
	comp=N,510µm,0.3s						
OBKA	**Obir**	1.27	78	*e*Pg	Pb	22 19 59.7	+0.1
	comp=N,1.9nm,0.2s						
OBKA				*e*Sg	Sn	22 20 16.6	+0.3
	comp=N,25nm,0.3s						
WTTA	**Wattenberg**	1.27	323	AML	AML		
	comp=E,295µm,0.5s						
WTTA				AML	AML		
	comp=N,224µm,1.1s						
WTTA	**Wattenberg**	1.27	323	*e*Pg	Pg	22 19 59.8	-0.2
	comp=N,18nm,0.2s,SNR=16						
WTTA				Sg	Sg	22 20 17.0	+0.4
	comp=N,71nm,0.4s						
ROVR	**Rover Verones**	1.32	243	AML	AML		
	comp=N,1460µm,1.6s						
ROVR				AML	AML		
	comp=E,758µm,0.2s						
ROVR				AML	AML		
	comp=N,1465µm,1.6s						
ROVR				AML	AML		
	comp=E,290µm,0.7s						
ROVR				AML	AML		
	comp=N,592µm,0.4s						
ROVR				AML	AML		
	comp=E,758µm,0.2s						
WATA	**Walderalm**	1.35	324	*e*Pg	Pg	22 20 01.2	-0.4
	comp=E,7.8nm,0.2s,SNR=10						
WATA				Sg	Sg	22 20 19.4	+0.2
	comp=E,28nm,0.2s						
SQTA	**Sankt Quirin**	1.44	313	*e*Pg	Pn	22 20 02.7	+0.9
	comp=E,9.7nm,0.2s,SNR=21						
SQTA				Sg	Sg	22 20 22.4	+0.5
	comp=E,34nm,0.3s						
RIY	**Rijeka**	1.52	127	*i* Pn	Pb	22 20 03.8	-0.1
RIY				Sn	Sg	22 20 25.5	+0.8
MAGA	**Magasa**	1.56	253	AML	AML		
	comp=N,988µm,0.4s						
MAGA				AML	AML		
	comp=E,948µm,0.3s						
MAGA				AML	AML		
	comp=E,952µm,0.3s						
MAGA				AML	AML		
	comp=N,990µm,0.4s						
MOSI	**Grossmontoni**	1.57	284	AML	AML		
	comp=N,904µm,0.5s						
MOSI				AML	AML		
	comp=E,496µm,0.3s						
MABI	**Malga Bissina**	1.57	263	AML	AML		
	comp=E,224µm,1.5s						
MABI				AML	AML		
	comp=N,240µm,1.0s						
MABI				AML	AML		
	comp=E,224µm,1.5s						
MOTA	**Moosalm**	1.57	314	*e*Pg	Pn	22 20 05.3	+1.6
	comp=E,5.5nm,0.2s,SNR=9.4						
MOTA				Sg	Sg	22 20 27.4	+1.1
	comp=E,25nm,0.4s						
FETA	**Feichten**	1.59	299	*e*Pg	Pb	22 20 05.7	+0.5
	comp=E,13nm,0.3s,SNR=14						
FETA				Sg	Sn	22 20 26.6	+2.0
	comp=E,19nm,0.4s						
SOKA	**Soboth**	1.63	74	Pg	Pg	22 20 05.9	-0.9
	comp=E,0.9nm,0.1s						
SOKA				*e*Sn	Sn	22 20 26.0	+0.7
	comp=E,9.2nm,0.4s						
SALO	**Salr**	1.68	249	AML	AML		
	comp=E,294µm,0.3s						
SALO				AML	AML		
	comp=N,332µm,0.6s						
RETA	**Reutte**	1.84	313	*e*Pg	Pb	22 20 10.5	+1.2
	comp=N,26nm,0.5s,SNR=16						
RETA				*e*Sg	Sg	22 20 36.8	+2.0
	comp=N,19nm,0.3s						
BOJS	**Bojanci**	1.90	112	P	Pn	22 20 09.0	+1.0
BOJS				AML	AML		
	comp=N,148µm,0.7s						
BOJS				AML	AML		
	comp=E,101µm,0.6s						
MOA	**Molln**	1.90	32	Pg	Pb	22 20 10.4	+0.1
	comp=E,2.0nm,0.3s						
MOA				⇑Sg	Sg	22 20 36.9	+0.2
	comp=E,17nm,0.4s						
OZLJ	**Ozalj**	2.00	108	*e*Pn	Pb	22 20 11.1	-0.8
OZLJ				Sn	Sg	22 20 38.3	-1.4
ARSA	**Arzberg**	2.15	61	*e*Pn	Pn	22 20 12.9	+1.6
	comp=E,0.8nm,0.2s						
ARSA				*e*Sn	Sn	22 20 39.5	+1.5
	comp=E,5.3nm,0.5s						
NVLJ	**Novalja**	2.25	138	*e*Pn	Pn	22 20 13.5	+0.7
NVLJ				Sn	Sn	22 20 42.4	+1.9
PTJ	**Puntijarka**	2.26	98	*e*Pn	Pn	22 20 13.9	+0.9
LMD	**Lutirano**	2.30	199	AML	AML		
	comp=N,52µm,0.5s						
LMD				AML	AML		
	comp=E,99µm,0.3s						
SEI	**Scarperia**	2.41	205	AML	AML		
	comp=E,113µm,0.4s						
SEI				AML	AML		
	comp=N,90µm,0.4s						
PIEI	**Pieia**	2.72	183	AML	AML		
	comp=N,24µm,1.4s						
PIEI				AML	AML		
	comp=E,33µm,0.2s						
UDBI	**Udbina**	2.73	128	*i* Pn	Pn	22 20 20.6	+1.1
CRMI	**Carmignano**	2.77	208	AML	AML		
	comp=N,18µm,0.6s						
CRMI				AML	AML		
	comp=E,16µm,1.0s						
DUGI	**Dugi Otok**	2.79	143	*e*Pn	Pn	22 20 20.9	+0.7
MOSL	**Moslavina**	2.86	102	*e*Pn	Pn	22 20 21.6	+0.4
KHC	**Kasperske Hory**	2.93	11	*e*PN	Pn	22 20 23.7	+1.5
KHC				*e*x	x	22 20 34.0	
KHC				*e*SN	Sn	22 21 00.0	+2.7
KHC				*e*SG	Sg	22 21 08.8	-0.9
	comp=E,25nm,0.8s						
MORI	**Morici**	3.17	138	*e*Pn	Pn	22 20 26.3	+0.8
FDMO	**Fiordimonte**	3.23	176	AML	AML		
	comp=N,18µm,1.1s						
FDMO				AML	AML		
	comp=E,20µm,0.7s						
SLE	**Schleitheim**	3.29	299	Pn	Pn	22 20 28.7	+1.7
ZIRJ	**Zirje**	3.31	141	*e*Pn	Pn	22 20 28.5	+1.2
ZIRJ				Sn	Sn	22 21 07.6	+1.0
KIJV	**Kijevo**	3.42	130	*e*Pn	Pn	22 20 29.8	+0.9
SULZ	**Cheisacher**	3.43	293	Pn	Pn	22 20 30.6	+1.6
BALST	**Balsthal**	3.64	289	Pn	Pn	22 20 34.0	+2.1
BALST				Sn	Sn	22 21 15.9	+1.0
KIZ	**Kirchzarten**	3.72	299	Pg	Pn	22 20 35.0	+2.1
PRU	**Pruhonice**	3.92	17	*e*PN	Pn	22 20 37.7	+2.0
PRU				*e*SG	Sg	22 21 39.0	-2.5
NKC	**Novy Kostel**	3.99	357	*e*SG	Sg	22 21 42.9	-0.7
	comp=E,12nm,0.4s						
RICI	**Ricice**	4.16	130	*e*Pn	Pn	22 20 40.0	+1.0
LPG	**La Plagne**	4.26	262	*e*Pn	Pn	22 20 41.7	+1.0
LPG	**La Plagne**	4.26	262	*e*P	Pn	22 20 45.1	+4.4
LPG				*e*Sn	Sn	22 21 30.1	-0.5
	comp=E,1.5nm,0.3s						
LPL	**La Plagne**	4.27	262	*e*Pn	Pn	22 20 41.7	+0.9
LPL	**La Plagne**	4.27	262	*e*P	Pn	22 20 45.3	+4.5
LPL				*e*Sn	Sn	22 21 30.4	-0.3
	comp=E,4.1nm,0.5s						
ECH	**Echery**	4.29	299	Pn	Pn	22 20 43.0	+2.2
ECH				Sn	Sn	22 21 31.8	+1.0
CDF	**Champ du Feu**	4.31	302	*e*Pn	Pn	22 20 42.3	+1.2
CDF	**Champ du Feu**	4.31	302	*e*Pg	Pg	22 20 57.7	-0.4
CDF				*e*Sn	Sn	22 21 30.6	-0.7
CDF				*e*Sg	Sg	22 21 53.6	-0.3
	comp=E,3.0nm,0.4s						
CHMF	**Charmoille**	4.31	286	Pn	Pn	22 20 43.1	+1.9
HINF	**Hinteralfeld**	4.33	293	*e*Pn	Pn	22 20 42.6	+1.2
HINF				*e*Sn	Sn	22 21 31.3	-0.5
	comp=E,5.5nm,0.4s						
SBF	**Sospel**	4.47	240	*e*Pn	Pn	22 20 44.5	+1.2
SBF				*e*Sn	Sn	22 21 34.6	-0.6
	comp=E,4.3nm,0.3s						
MBDF	**Montbardon**	4.48	252	*e*Pn	Pn	22 20 44.5	+1.0
MBDF				*e*Sn	Sn	22 21 34.4	-1.3
	comp=E,1.7nm,0.3s						
PGF	**Pioggiola**	4.58	217	*e*Pn	Pn	22 20 44.8	-0.1
PGF				*e*Sn	Sn	22 21 36.7	-1.4
	comp=E,6.7nm,0.5s						
CABF	**La Chapelle**	4.63	277	*e*Pn	Pn	22 20 46.5	+1.0
CABF				*e*Sn	Sn	22 21 38.7	-0.5
	comp=E,0.5nm,0.4s						
BRG	**Berggiesshubel**	4.69	9	SN	Sn	22 21 40.2	-0.3
BRG				SG	Sg	22 22 05.1	-1.0
	comp=E,7.2nm,1.0s						
HAU	**Haudompre**	4.71	294	*e*Pn	Pn	22 20 47.7	+1.1
HAU				*e*Sn	Sn	22 21 40.6	-0.6
	comp=E,12nm,0.5s						
DPC	**Dobruska-Polom**	4.74	29	*e*SG	Sg	22 22 05.1	-2.6
	comp=E,5.3nm,0.5s						
UPC	**Upice**	4.78	26	*e*SG	Sg	22 22 06.4	-2.5
	comp=E,8.8nm,0.7s						
ORIF	**Oris-en-Rattie**	5.01	257	*e*Pn	Pn	22 20 51.8	+1.0
ORIF	**Oris-en-Rattie**	5.01	257	*e*P	Pn	22 20 55.5	+4.7
ORIF				*e*Sn	Sn	22 21 47.8	-0.9
	comp=E,1.7nm,0.3s						
CLL	**Collm**	5.06	2	*i* (Pn)	Pn	22 20 54.7	+3.4
CLL				*e*Sg	Sg	22 22 18.0	0.0
	comp=Z,10.0nm,0.8s						
FRF	**La Foret Royal**	5.11	240	*e*Pn	Pn	22 20 53.0	+0.9
FRF				*e*Sn	Sn	22 21 49.7	-1.3
	comp=Z,1.2nm,0.2s						
PAGF	**Fort de Pagny**	5.30	298	*e*Pn	Pn	22 20 55.6	+0.9
PAGF	**Fort de Pagny**	5.30	298	*e*Pg	Pg	22 21 15.9	-1.2
PAGF				*e*Sg	Sg	22 22 24.2	-1.5
	comp=Z,2.5nm,0.5s						
LMR	**La Mourre**	5.32	239	*e*Pn	Pn	22 20 55.0	0.0
LMR	**La Mourre**	5.32	239	*e*P	Pn	22 20 59.9	+4.9
LMR				*e*Sn	Sn	22 21 54.8	-1.4
	comp=Z,1.7nm,0.3s						
SMRF	**Simiane la Rot**	5.57	248	*e*Sn	Sn	22 22 01.4	-1.0
	comp=Z,9.2nm,0.4s						
SFTF	**Sexfontaines**	5.61	293	*e*Pn	Pn	22 20 59.9	+1.0
	baz=114						
SFTF				*e*Sn	Sn	22 22 01.2	-2.1
	comp=Z,0.8nm,0.2s						
MEZF	**Maizieres J'vi**	5.70	296	*e*Pn	Pn	22 21 01.0	+0.9
	baz=111						
MEZF				*e*Sn	Sn	22 22 03.9	-1.5
	comp=Z,0.7nm,0.3s						
VIVF	**Saint-Julien-l**	5.85	259	*e*Pn	Pn	22 21 03.5	+1.3
VIVF				*e*Sn	Sn	22 22 07.7	-1.5
	comp=Z,1.0nm,0.3s						
SMF	**Signal de Mont**	6.17	277	*e*Pn	Pn	22 21 07.5	+0.8
SMF				*e*Sn	Sn	22 22 15.4	-1.8
	comp=Z,0.9nm,0.3s						
LOR	**Lormes**	6.20	283	*e*Pn	Pn	22 21 07.7	+0.7
	baz=105						
LOR				*e*Sn	Sn	22 22 15.6	-2.2
	comp=Z,2.4nm,0.4s						
SSF	**Saint Saulge**	6.42	281	*e*Pn	Pn	22 21 10.5	+0.4
SSF				*e*Sn	Sn	22 22 22.0	-1.3
	comp=Z,0.5nm,0.4s						
AVF	**Avril sur Loir**	6.51	278	*e*Pn	Pn	22 21 12.4	+1.1
AVF				*e*Sn	Sn	22 22 22.8	-2.7
	comp=Z,0.2nm,0.3s						
LASF	**Ste Croix**	6.66	254	*e*P	Pn	22 21 18.0	+4.6
LASF				*e*Sn	Sn	22 22 27.1	-2.1
	comp=Z,1.8nm,0.3s						
BGF	**Bois d'Agland**	6.86	276	*e*Pn	Pn	22 21 15.9	-0.2
BGF				*e*Sn	Sn	22 22 31.8	-2.3
	comp=Z,2.4nm,0.4s						
BAIF	**Baives**	6.87	307	*e*P	Pn	22 21 21.4	+5.2
HYF	**Humbligny**	7.02	282	*e*Pn	Pn	22 21 19.4	+1.0
HYF				*e*Sn	Sn	22 22 35.7	-2.5
TCF	**Toulx Ste Croi**	7.31	274	*e*Sn	Sn	22 22 42.1	-3.2
	comp=Z,0.7nm,0.2s						

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*NIED **15** 22:23:00, 35°.80N×141°.00E, h11^{km}, Mw3.3 Best double couple: $M_0$1.02000×10^{14} NP1:ϕ_s172.00000°, δ55.00000°, λ-107.00000°. NP2:ϕ_s21.00000°, δ38.00000°, λ-67.00000°.*

JMA 15 22:23:48.4±0.2**, 35°.79N**×**140°.92E, h14**^{km}±1^{km}**, M3.6, 6C-1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	0.10	210	⇓P	Pg	22 23 51.4	-0.1
CHOJ				S	Sg	22 23 53.4	-0.2
JIHU	**Itakohorinouch**	0.36	299	⇑P	Pb	22 23 56.4	-0.3
JIHU				S	Sb	22 24 02.4	+0.2
JSMT	**Sammumatsuo**	0.41	249	⇑P	Pg	22 23 57.0	+0.4
JHYU	**Hitachinakayam**	0.61	334	⇑P	Pg	22 24 00.6	+0.2
JHYU				S	Sb	22 24 09.0	-0.4
JCN	**Nagara**	0.69	238	⇑P	Pb	22 24 02.5	+0.3
JYT	**Yasato**	0.73	307	⇑P	Pg	22 24 01.9	-0.8
JYT				S	Sg	22 24 11.3	-1.0
JHO	**Hitachi**	0.87	341	⇑P	Pg	22 24 04.2	-1.0
JHO				S	Sg	22 24 15.4	-1.2
BSO4	**Boso 4**	0.93	211	P	Pn	22 24 06.7	-0.2
BSO3	**Boso 3**	1.04	199	P	Pb	22 24 07.6	-0.4
MAT	**Matsushiro**	2.32	290	P	Pn	22 24 25.0	-1.2
MAT				S	Sn	22 24 54.3	-0.2

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*KRNET **15** 22:29:59.4±0.1, 42°.46N×80°.81E, h18^{km}, mb3.4*

*SOME **15** 22:29:59.4, 42°.38N×80°.75E, h15^{km}*

*NNC **15** 22:30:00.2±0.9, 42°.46N×80°.72E, h0^{km}, mb3.7, mpv3.5, Error ellipse: s-maj=6.4km s-min=4.5km az=144.0*

ISC 15 22:30:05.7±1.4**, 42°.65N**±0°.05×**80°.48E**±0°.05**, h10**^{km}**, n65, σ1^{s}91**/107**, 35C-22D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	0.80	353	⇓*i*P	Pg	22 30 19.5	-1.7
	baz=41						
KTMS				⇑*i*S	Sb	22 30 33.7	+1.0
	baz=41						
KTMS	**Ketmen**	0.80	353	⇓*i*P	Pg	22 30 19.5	-1.7
	18nm,0.1s						
KTMS				⇑*i*S	Sb	22 30 33.7	+1.0
	204nm,0.2s						
KTMS	**Ketmen**	0.80	353	P	Pg	22 30 19.5	-1.7
	18nm,0.1s						
KTMS				S	Sb	22 30 33.8	+1.0
	204nm,0.2s						
SHLS	**Shalkode**	0.90	304	⇑*i*P	Pg	22 30 18.6	-4.6
	baz=16						
SHLS				⇑*i*S	Sg	22 30 32.4	-2.5

	baz=16						
SHLS	Shalkode	0.90	304	⇑iP	Pg	22 30 18.6	-4.6
	123nm,0.2s						
SHLS				⇑iS	Sg	22 30 32.4	-2.5
	200nm,0.4s						
SHLS	Shalkode	0.90	304	P	Pg	22 30 18.5	-4.6
	76nm,0.1s						
SHLS				S	Sg	22 30 32.4	-2.5
	74nm,0.2s						
UZB	Uzynbulak	1.18	295	⇑iP	Pn	22 30 26.8	-1.6
	baz=98						
UZB				⇓iS	Sn	22 30 47.0	+2.3
	baz=98						
UZB	Uzynbulak	1.18	295	⇑iP	Pn	22 30 26.8	-1.6
	20nm,0.2s						
UZB				⇓iS	Sn	22 30 47.0	+2.3
	37nm,0.2s						
UZB	Uzynbulak	1.18	295	P	Pn	22 30 26.8	-1.6
	13nm,0.2s						
UZB				S	Sn	22 30 46.9	+2.3
	40nm,0.2s						
PRZ	Przheval'sk	1.54	264	⇑iP	Pn	22 30 32.7	-0.8
	baz=71						
PRZ				⇑iS	Sg	22 30 57.0	+1.6
	baz=71						
KPKS	Kokpek	1.55	302	⇑iP	Pn	22 30 33.5	0.0
	baz=3.0						
KPKS				⇓iS	Sg	22 30 58.3	+2.8
	baz=3.0						
KPKS	Kokpek	1.55	302	⇑iP	Pn	22 30 33.5	0.0
	171nm,0.3s						
KPKS				⇓iS	Sg	22 30 58.3	+2.8
	129nm,0.3s						
SATY	Saty	1.58	286	eP	Pb	22 30 34.2	-0.9
	66nm,0.2s						
SATY				eS	Sg	22 30 59.5	+3.1
	192nm,0.1s						
DJR	Jarkent	1.75	344	eP	Pb	22 30 36.9	-1.2
	2.0nm,0.2s						
DJR				eS	Sg	22 31 03.7	+1.6
	61nm,0.3s						
DJR	Jarkent	1.75	344	Pg	Pb	22 30 36.8	-1.2
	1.1nm,0.2s						
DJR				Lg	Lg	22 31 03.6	
	40nm,0.3s						
KURS	Kuram	1.89	297	eP	Pb	22 30 39.3	-1.0
	baz=99						
KURS				eS	Sg	22 31 08.3	+1.9
	baz=99						
KURS	Kuram	1.89	297	eP	Pb	22 30 39.3	-1.0
	28nm,0.3s						
KURS				eS	Sg	22 31 08.2	+1.9
	23nm,0.4s						
KURS	Kuram	1.89	297	Pg	Pb	22 30 39.3	-1.0
	28nm,0.3s						
KURS				Lg	Lg	22 31 08.2	
	23nm,0.4s						
ANVS	Anan'yevo	2.08	275	⇑iP	Pn	22 30 41.6	+0.8
	baz=79						
ANVS				⇑iS	Sg	22 31 12.2	-0.3
	baz=79						
ARXS	Arharly	2.48	310	eP	Pb	22 30 50.1	-0.3
	10nm,0.3s						
ARXS				eS	Sg	22 31 26.1	+0.6
	48nm,0.4s						
KDJ	Kajisay	2.50	259	⇑iP	Pn	22 30 46.1	-0.5
	baz=64						
KDJ				⇑iS	Sb	22 31 20.1	-1.6
	baz=64						
KOTS	Kotyrbulak	2.54	284	eP	Pb	22 30 51.1	-0.4
	29nm,0.2s						
KOTS				eS	Sg	22 31 28.3	+1.0
	238nm,0.4s						
KOTS	Kotyrbulak	2.54	284	Pg	Pb	22 30 51.1	-0.4
	29nm,0.2s						
KOTS				Lg	Lg	22 31 28.2	
	92nm,0.5s						
MDOK	Medeo	2.57	283	eP	Pb	22 30 50.2	-1.8
	11nm,0.3s						
MDOK				eS	Sg	22 31 27.8	-0.5
	60nm,0.4s						
MDOK	Medeo	2.57	283	⇑Pg	Pb	22 30 49.8	-2.2
	7.4nm,0.5s						
MDOK				⇑Lg	Lg	22 31 27.9	
	36nm,0.6s						
MDOK	Medeo	2.57	283	Pg	Pb	22 30 50.2	-1.8
	12nm,0.3s						
MDOK				Lg	Lg	22 31 27.8	
	57nm,0.5s						
TNSS	Tian-Shan	2.63	280	eP	Pb	22 30 52.0	-1.1
	13nm,0.2s						
TNSS				eS	Sg	22 31 30.8	+0.7
	60nm,0.4s						
TNSS	Tian-Shan	2.63	280	Pg	Pb	22 30 52.0	-1.1
	13nm,0.2s						
TNSS				Lg	Lg	22 31 30.8	
	60nm,0.4s						
AAA	Alma-Ata	2.68	283	eP	Pb	22 30 54.0	+0.2
	11nm,0.2s						
AAA				eS	Sg	22 31 33.0	+1.3
	64nm,0.3s						
AAA	Alma-Ata	2.68	283	Pg	Pb	22 30 54.0	+0.2
	12nm,0.2s						
AAA				Lg	Lg	22 31 33.0	
	64nm,0.3s						
KAPS	Kapalarasan	2.75	343	eP	Pb	22 30 54.0	-1.1
	4.3nm,0.2s						
KAPS				eS	Sg	22 31 33.1	-1.1
	61nm,0.5s						
KAPS	Kapalarasan	2.75	343	Pg	Pb	22 30 54.0	-1.1
	4.3nm,0.2s						
KAPS				Lg	Lg	22 31 33.1	
	61nm,0.5s						
CHKK	Chushkaly	2.82	296	eP	Pb	22 30 55.5	-0.7
	4.1nm,0.3s						
CHKK				eS	Sg	22 31 35.4	-0.9
	36nm,0.2s						
CHKK	Chushkaly	2.82	296	Pg	Pb	22 30 55.5	-0.7
	2.2nm,0.2s						
CHKK				Lg	Lg	22 31 35.6	
	36nm,0.2s						
IZV	Izvestkoviy	2.87	279	eP	Pb	22 30 56.0	-1.1
	6.1nm,0.2s						
IZV				eS	Sg	22 31 36.6	-1.3
	50nm,0.5s						
IZV	Izvestkoviy	2.87	279	Pg	Pb	22 30 56.0	-1.1
	6.1nm,0.2s						
IZV				Lg	Lg	22 31 36.6	
	50nm,0.5s						
KTBS	Karatobe	2.97	292	eP	Pb	22 30 58.2	-0.6
	4.7nm,0.3s						
KTBS				eS	Sg	22 31 40.7	-0.5
	81nm,0.4s						
KTBS	Karatobe	2.97	292	Pg	Pb	22 30 58.2	-0.6
	4.7nm,0.3s						
KTBS				Lg	Lg	22 31 40.7	
	81nm,0.4s						
MTBS	Maitube	3.01	280	eP	Pb	22 30 58.7	-0.9
	5.0nm,0.3s						
MTBS				eS	Sg	22 31 41.4	-1.1
	33nm,0.3s						
MTBS	Maitube	3.01	280	Pg	Pb	22 30 58.7	-0.9
	5.5nm,0.2s						
MTBS				Lg	Lg	22 31 41.4	
	33nm,0.3s						
ULHL	Ulahol	3.16	264	⇑iP	Pn	22 30 55.7	0.0
	baz=68						
ULHL				⇑iS	Sn	22 31 36.8	+3.2
	baz=68						
KUU	Kurty	3.27	294	eP	Pb	22 31 03.7	-0.1
	2.4nm,0.3s						
KUU				eS	Sg	22 31 49.9	-0.8
	30nm,0.4s						
KUU	Kurty	3.27	294	Pg	Pb	22 31 03.7	-0.1
	1.8nm,0.2s						
KUU				Lg	Lg	22 31 49.9	
	30nm,0.4s						
BOOM	Boomskoye usch	3.36	269	⇑iP	Pn	22 30 58.7	+0.3
	baz=72						
BOOM				⇑iS	Sn	22 31 41.9	+3.5
	baz=72						
DGS	Degeres	3.50	281	eP	Pb	22 31 07.3	-0.6
	4.5nm,0.3s						
DGS				eS	Sg	22 31 55.9	-2.3
	31nm,0.5s						
DGS	Degeres	3.50	281	Pg	Pb	22 31 07.3	-0.6
	4.5nm,0.3s						
DGS				Lg	Lg	22 31 55.9	
	31nm,0.5s						
NRN	Naryn	3.55	251	⇑eP	Pn	22 31 00.3	-0.9
	baz=56						
NRN				⇑iS	Sn	22 31 44.6	+1.2
	baz=56						
KZA	Kyzart	3.92	263	⇓eP	Pn	22 31 06.1	-0.2
	baz=67						
KZA				⇓eS	Sn	22 31 55.2	+2.7
	baz=67						
KBK	Karagaybulak	4.08	272	⇓eP	Pn	22 31 08.8	+0.5
	baz=75						
KBK				⇓iS	Sn	22 31 59.7	+3.5
	baz=75						
CHMS	Chumysh	4.23	277	⇓eP	Pn	22 31 11.2	+1.0
	baz=79						
CHMS				⇓iS	Sn	22 32 03.7	+4.1
	baz=79						
CHMS	Chumysh	4.23	277	⇑Pg	Pb	22 31 21.7	+1.5
	3.1nm,0.8s						
CHMS				⇑Lg	Lg	22 32 18.9	
MAKZ	Makanchi	4.29	14	⇓Pn	Pn	22 31 10.1	-0.9
	1.5nm,0.5s						
MAKZ				⇑Lg	Lg	22 32 18.1	
	3.0nm,0.6s						
FRU1	Bishkek	4.31	274	⇓eP	Pn	22 31 12.2	+0.8
	baz=76						
FRU1				⇓iS	Sn	22 32 05.2	+3.4
	baz=76						
MK31	Makanchi Array	4.34	17	⇑Pn	Pn	22 31 10.5	-1.2
	0.2nm,0.3s						
MK31				⇓Pg	Pb	22 31 20.1	-1.9
	0.5nm,0.3s,baz=201,slow=13,SNR=28						
MK31				⇑Lg	Lg	22 32 19.7	
	4.1nm,0.5s,baz=192,slow=29,SNR=11						
SGDS	Sogindy	4.36	283	Pg	Pb	22 31 22.1	-0.3
	4.2nm,0.7s						
SGDS				Lg	Lg	22 32 21.5	
	5.8nm,0.6s						
AAK	Ala-Archa	4.42	272	⇓iP	Pn	22 31 13.4	+0.5
	baz=74						
AAK				⇓iS	Sn	22 32 07.7	+3.2
	baz=74						
AAK	Ala-Archa	4.42	272	⇑Pg	Pb	22 31 24.0	+0.6
	5.4nm,1.2s						
AAK				⇓Lg	Lg	22 32 23.1	
	5.1nm,0.4s						
USP	Ospenovka	4.43	280	⇓iP	Pn	22 31 14.3	+1.3
	baz=82						
USP				⇓iS	Sn	22 32 08.8	+4.1
	baz=82						
UCH	Uchtor	4.43	267	⇑eP	Pn	22 31 13.6	+0.1
	baz=69						
UCH				⇑eS	Sn	22 32 07.6	+2.2
	baz=69						
ARLS	Aral	4.64	262	⇑eP	Pn	22 31 15.9	-0.1
	baz=65						
ARLS				⇑iS	Sn	22 32 11.5	+1.6
	baz=65						
MRKS	Merke	5.35	273	eP	Pb	22 31 42.1	+2.8
	1.5nm,0.2s						
MRKS				eS	Sg	22 32 55.6	-1.7
	5.3nm,0.4s						
ZSN	Zaisan	5.72	31	eP	Pb	22 31 44.2	-1.3
	2.3nm,0.3s						
ZSN				eS	Sb	22 32 58.9	+4.9
	6.4nm,0.4s						
KK31	Karatay Array	7.34	277	Pg	Pb	22 32 17.4	+4.3
	0.4nm,0.5s,baz=85,slow=15,SNR=7.0						
KK31				Lg	Lg	22 33 55.9	
	0.9nm,0.4s,baz=86,slow=29,SNR=5.3						
KURBB	Kurchatov Arra	8.09	351	⇓Lg	Lg	22 34 21.7	
	9.7nm,0.8s						
KURK	Kurchatov	8.17	352	⇑Lg	Lg	22 34 23.9	
	5.8nm,1.1s						

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*ISK **15** 22:30:49.8, 38°.54N×26°.77E, h6^{km}, ML2.8/13*
*ATH **15** 22:30:50.2, 38°.50N×26°.71E, h41^{km}±2^{km}, ML2.7/4, Error ellipse: s-maj=2.9km s-min=1.4km az=253.0*
*DDA **15** 22:30:50.3, 38°.53N×26°.77E, h8^{km}±1^{km}, ML2.6*
*THE **15** 22:30:51.4, 38°.49N×26°.73E, h23^{km}±1^{km}, ML2.6/4, Error ellipse: s-maj=1.6km s-min=0.5km az=96.0*
ISC 15 22:30:49.7±0.9**, 38°.52N**±0°.02×**26°.77E**±0°.02**, h16**^{km}±7^{km}**, n40,** σ**0^{s}.60**/64**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
FOCM	Foa	0.20	352	PG	Pg	22 30 53.9	-0.4
FOCM				SG	Sg	22 30 56.7	-0.7
URLA	Izmir	0.21	220	PG	Pb	22 30 55.2	+0.1
URLA	Izmir	0.21	220	i P	Pb	22 30 55.3	+0.1
URLA				i S	Sb	22 30 59.2	+0.5
BLCB	Balcova	0.26	121	PG	Pg	22 30 55.7	+0.4
BLCB				SG	Sb	22 30 59.9	-0.2
DGB	zmir	0.47	169	i P	Pb	22 30 59.7	+0.1
DGB				i S	Sg	22 31 06.1	+0.5
ZEDA	zmir-Bergama	0.51	29	i P	Pg	22 30 59.9	0.0
ZEDA				i S	Sg	22 31 06.0	-0.7
DKL	Dikili	0.56	11	PG	Pg	22 31 00.8	0.0
DKL				SG	Sg	22 31 08.7	+0.3
CHOS	Chios island	0.57	257	P	Pb	22 31 01.8	+0.4
CHOS				S	Sb	22 31 10.2	+0.8
	632nm,0.2s						
CHOS	Chios island	0.57	257	P	Pb	22 31 01.5	+0.1
CHOS				S	Sb	22 31 10.2	+0.8
CHOS				AML	AML	22 31 13.6	
	comp=E,1504µm,0.2s						
CHOS				AML	AML	22 31 14.0	
	comp=N,963µm,0.2s						
AYVA	Ayvalik	0.79	356	i P	Pb	22 31 05.4	+0.3
SMG	Samos	0.81	176	P	Pg	22 31 05.9	+0.5
SMG				S	Sg	22 31 16.9	+0.8
	comp=N,468nm,0.3s						
SMG	Samos	0.81	176	P	Pg	22 31 05.8	+0.3
SMG				S	Sn	22 31 18.0	-0.2
SMG				AML	AML	22 31 21.6	
	comp=N,999µm,0.2s						
SMG				AML	AML	22 31 22.0	
	comp=E,941µm,0.3s						
PRK	Paraskevi	0.82	332	P	Pn	22 31 06.7	0.0
PRK				S	Sn	22 31 18.5	0.0
	comp=E,2µm,0.5s						
PRK	Paraskevi	0.82	332	P	Pn	22 31 07.3	+0.6
PRK				S	Sn	22 31 18.0	-0.5
PRK				AML	AML	22 31 19.8	
	comp=N,3091µm,0.4s						
PRK				AML	AML	22 31 20.6	
	comp=E,4365µm,0.5s						
AKHS	Akhisar	0.90	66	i P	Pb	22 31 07.0	+0.1
AKHS				i S	Sg	22 31 19.6	+0.7
AKHS				IAML		22 31 21.0	
	comp=E,116nm,0.3s						
AKS	Akhisar	0.90	66	PG	Pb	22 31 07.1	+0.2
AKS				SG	Sg	22 31 19.5	+0.6
GCAM	G?zelcaml?	0.90	155	PG	Pn	22 31 07.6	-0.1
GCAM				SG	Sn	22 31 20.4	+0.1
GCAM	G?zelcaml?	0.90	155	i P	Pn	22 31 08.2	+0.6
GOMA	Golmarmara-Man	0.92	78	PG	Pg	22 31 07.9	+0.3
GOMA				SG	Sn	22 31 21.2	+0.2
PSRA	Psara	0.94	272	P	Pn	22 31 08.6	+0.3
PSRA				S	Sn	22 31 21.3	-0.2
SIGR	SIGRI	0.99	315	P	Pg	22 31 08.9	0.0
SIGR				S	Sg	22 31 22.0	+0.1
	comp=E,298nm,0.5s						
SIGR	SIGRI	0.99	315	P	Pg	22 31 08.8	0.0
SIGR				S	Sg	22 31 21.5	-0.4
SIGR				AML	AML	22 31 24.6	
	comp=N,655µm,0.3s						
SIGR				AML	AML	22 31 24.6	
	comp=E,498µm,0.5s						
AYDB	Zeytinkoy-Aydi	1.05	122	PG	Pg	22 31 10.4	+0.3
STEP	BALIKESIR_Sava	1.14	41	i P	Pg	22 31 11.7	+0.1
STEP				i S	Sb	22 31 25.9	+0.4
STEP				IAML		22 31 28.0	
	comp=N,330nm,0.5s						
BAYC	CANAKKALE_Bayr	1.23	352	i P	Pn	22 31 11.9	-0.5
BAYC				i S	Sb	22 31 27.4	-0.9
MANT	Manisa	1.41	91	i P	Pg	22 31 17.2	+0.4
MANT				i S	Sg	22 31 34.7	-0.5
BALB	Balikesir	1.42	37	PN	Pb	22 31 16.4	+0.6
BOZC	Bozcaada	1.43	338	PN	Pb	22 31 16.6	+0.5
KULA	Kula-Manisa	1.49	90	PN	Pb	22 31 17.8	+0.8
BODT	Bodrum	1.52	163	PN	Pg	22 31 18.5	-0.4
DEMI	Demirci	1.61	70	i P	Pg	22 31 20.3	-0.4
APE	Apeiranthos	1.75	214	P	Pn	22 31 18.9	-0.5
APE				S	Sn	22 31 40.4	-1.0
APE	Apeiranthos	1.75	214	P	Pn	22 31 18.9	-0.5
APE				S	Sn	22 31 39.6	-1.8
USAK	Uak-Merkez	1.78	83	i P	Pg	22 31 23.4	-0.4
YER	Yerkesik	1.83	138	PN	Pb	22 31 22.9	0.0
LIA	Limnos Island	1.85	319	P	Pn	22 31 21.1	+0.4
DAT	Datca	1.90	160	i P	Pn	22 31 19.2	-2.4
SMTH	Samothraki Isl	2.17	334	P	Pn	22 31 25.3	+0.1
SERI	Serifos	2.26	234	P	Pn	22 31 26.4	0.0
SERI	Serifos	2.26	234	P	Pn	22 31 26.6	+0.2

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*VIE **15** 22:49:44.1±0.8, 51°.39N×16°.07E, h0^{km}, mb2.2/4, ml2.6/5, Error ellipse: s-maj=9.4km s-min=5.6km az=63.0 74 km WNW of Wroclaw Suspected Mining induced.*
ISC 15 22:49:42.0±1.2**, 51°.54N**±0°.05×**16°.15E**±0°.03**, h0**^{km}**, n24,** σ**0^{s}.73**/51**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.70	172	i Pg	Pg	22 49 55.9	+0.6
KSP				eSg	Sg	22 50 05.4	+1.0
CHVC	Chvalec	0.95	184	ePG	Pg	22 50 00.6	+0.5
CHVC				eSG	Sg	22 50 13.3	+0.9
	comp=Z,37nm,0.5s						
OSTC	Ostas	0.98	177	ePG	Pb	22 50 01.4	-0.4
OSTC				eSG	Sg	22 50 13.9	+0.5
	comp=Z,44nm,0.6s						
UPC	Upice	1.03	185	ePG	Pg	22 50 02.0	+0.3
UPC				eSG	Sg	22 50 15.7	+0.6
	comp=Z,50nm,0.3s						
DPC	Dobruska-Polom	1.19	175	ePG	Pg	22 50 04.6	-0.2
DPC				eSG	Sg	22 50 19.9	-0.3
	comp=Z,21nm,0.5s						
PVCC	Panska Ves	1.42	225	ePG	Pb	22 50 09.0	-0.2
PVCC				eSG	Sn	22 50 28.2	-0.1
	comp=Z,56nm,0.3s						
KRLC	Kraliky	1.52	164	ePG	Pn	22 50 10.4	0.0
KRLC				eSG	Sg	22 50 30.4	-0.2
	comp=Z,33nm,0.6s						
BRG	Berggiesshubel	1.54	245	PN	Pb	22 50 10.9	-0.4
BRG				PG	Pg	22 50 11.4	0.0
BRG				SG	Sg	22 50 31.5	+0.2
	42nm,0.4s						
PRU	Pruhonice	1.85	214	ePN	Pn	22 50 14.3	-0.7
PRU				ePG	Pb	22 50 16.3	-0.4
PRU				eSG	Sb	22 50 40.3	-0.1
	comp=Z,17nm,0.3s						
MORC	Moravsky Berou	1.97	153	ePN	Pn	22 50 16.0	-0.6
MORC				eSG	Sn	22 50 40.2	-1.9
CLL	Collm	1.98	265	i Pn	Pn	22 50 16.6	-0.1
	comp=Z,6.0nm,0.4s						
CLL				i Pg	Pg	22 50 20.0	+0.1
CLL				i		22 50 23.3	
CLL				i Sg	Sg	22 50 46.8	+1.2
	comp=Z,18nm,0.5s						
OKC	Ostrava-Krasne	2.12	142	ePG	Pg	22 50 22.2	-0.4
OKC				eSG	Sg	22 50 49.9	-0.2
VRAC	Vranov	2.25	173	ePN	Pn	22 50 19.9	-0.5
VRAC				eSG	Sn	22 50 50.1	+1.3
PBCC	Pribram	2.30	217	eSG	Sg	22 50 55.1	-0.8
KRUC	Moravsky	2.48	176	ePN	Pn	22 50 23.9	+0.3
KRUC				eSG	Sb	22 50 57.6	-0.9
OJC	Ojcow	2.66	118	ePg	Pg	22 50 32.8	-0.2
OJC				eSg	Sg	22 51 08.1	+0.7
NKC	Novy Kostel	2.68	242	ePN	Pn	22 50 26.5	+0.1
NKC				ePG	Pg	22 50 32.6	-0.7
NKC				eSG	Sg	22 51 09.4	+1.4
KHC	Kasperske Hory	2.92	215	ePN	Pn	22 50 29.2	-0.4
KHC				ePG	Pb	22 50 35.5	+0.7
KHC				eSN	Sn	22 51 05.5	+0.1
KHC				eSG	Sg	22 51 14.6	-1.0
	comp=Z,6.9nm,0.5s						
LANS	Liptovska Anna	3.20	137	ePN	Pn	22 50 34.9	+1.4
LANS				ePG	Pg	22 50 43.0	-0.2
MODS	Modra-Piesok	3.25	167	eSG	Sg	22 51 27.2	+1.0
VYHS	Vyhne	3.50	149	ePG	Pg	22 50 48.7	-0.4
CONA	Conrad Observa	3.62	183	ePn	Pn	22 50 40.1	+0.8
	comp=Z,0.8nm,0.2s						
CONA				Sg	Sg	22 51 37.4	-0.6
	comp=Z,9.1nm,0.4s						
MOA	Molln	3.89	199	i Pn	Pn	22 50 43.2	+0.2
	comp=Z,1.0nm,0.2s						
MOA				Sg	Sg	22 51 47.4	+0.7
	comp=Z,4.1nm,0.3s						
ARSA	Arzberg	4.31	186	ePn	Pn	22 50 49.5	+0.8
	comp=Z,0.7nm,0.2s						
ARSA				Sg	Sg	22 52 01.8	+1.5
	comp=Z,6.4nm,0.5s						

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*IDC **15** 22:53:42.7±1.0, 49°.31S×69°.68E, h0^{km}, mb4.2/9, mb1 4.3/10, mb1mx3.9/36, mbtmp4.2/10, ML4.5/1, Error ellipse: s-maj=29.5km s-min=23.6km az=113.0*
*NEIC **15** 22:53:44.6±1.6, 49°.5S±0°.1×69°.58E±0°.09, h15^{km}±2^{km}, mb4.5/8, Error ellipse: s-maj=20.8km s-min=7.0km az=168.0*
ISC 15 22:53:44.1±0.7**, 49°.4S**±0°.1×**69°.57E**±0°.08**, h10**^{km}**, n21,** σ**0^{s}.82**/20**, mb4.2**/12**, Kerguelen Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
PAF	Port-aux-Franc	0.42	90	Pg	Pg	22 53 52.2	-0.2
I23FR	KERGUELEN INFR	0.44	90	Pg	Pb	22 53 54.2	+0.2
	baz=274,slow=54,SNR=2.5						
I23FR				i		22 56 10.0	
	baz=272,slow=332,SNR=0.9						
MAW	Mawson	18.62	188	P	Pn	22 58 03.6	+2.0
	1.4nm,0.3s,baz=18,slow=14,SNR=14						
MAW	Mawson	18.62	188	P	P	22 57 60.0	-1.4
QSPA	South Pole Qui	40.82	180	P	P	23 01 25.0	-0.6
	2.8nm,1.0s,baz=281,slow=4.9,SNR=12						
QSPA	South Pole Qui	40.82	180	IAmb	IAmb	23 01 27.9	
	comp=Z,4.0nm,1.0s						
MSEY	Mahe Island	46.10	340	P	P	23 02 08.9	+0.4
LSZ	Lusaka	47.81	301	P	P	23 02 21.1	-0.8
LSZ				IAmb	IAmb	23 02 23.7	
	comp=Z,3.9nm,1.0s						
FITZ	Fitzroy Crossi	54.49	76	P	P	23 03 11.7	-0.3
	comp=Z,1.7nm,0.8s,baz=186,slow=0.6,SNR=3.7						
STKA	Stephens Creek	55.30	100	P	P	23 03 18.1	+0.4
	comp=Z,1.8nm,0.7s,baz=252,slow=6.4,SNR=3.3						
ASAR	Alice Springs	55.83	87	P	P	23 03 20.8	-0.9
	comp=Z,1.9nm,0.8s,baz=216,slow=7.0,SNR=14						
WRA	Warramunga Arr	58.75	85	P	P	23 03 41.6	-0.7
	comp=Z,1.8nm,0.8s,baz=220,slow=6.3,SNR=5.6						
WR0	Warramunga Arr	58.87	85	P	P	23 03 43.4	+0.3
WR0				IAmb	IAmb	23 03 43.6	
	comp=Z,1.8nm,0.8s						
WB0	Warramunga Arr	58.91	84	P	P	23 03 43.1	-0.4
WB0				IAmb	IAmb	23 03 43.9	
	comp=Z,4.7nm,0.8s						
CMAR	Chiang Mai Arr	72.37	29	P	P	23 05 10.5	+0.3
	comp=Z,1.1nm,0.8s,baz=207,slow=6.6,SNR=6.7						
KBL	Kabul	83.52	360	P	P	23 06 13.0	+0.9
HRA	Herat	83.62	354	P	P	23 06 12.7	+0.2
HRA				IAmb	IAmb	23 06 13.7	
	comp=Z,2.9nm,0.9s						
TORD	Torodi Ar. Bea	86.05	295	P	P	23 06 25.6	+0.6
	comp=Z,0.6nm,0.9s,baz=125,slow=3.6,SNR=4.8						
KKAR	Karatay Array	92.08	1	P	P	23 06 53.0	+0.1
MKAR	Makanchi Array	96.40	9	P	P	23 07 11.5	-1.1
	comp=Z,0.5nm,0.8s,baz=186,slow=3.5,SNR=4.9						
KURBB	Kurchatov Arra	99.89	6	P	Pdif	23 07 28.0	-0.1
	comp=Z,0.8nm,0.8s,baz=195,slow=4.7,SNR=5.3						

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*SJA **15** 22:55:29.7±1.1, 23°.99S×70°.15W, h43^{km}±18^{km}, ML4.2, MW4.4*
*NEIC **15** 22:55:30.6±1.9, 23°.98S±0°.03×70°.14W±0°.06, h52^{km}±3^{km}, Error ellipse: s-maj=7.3km s-min=3.8km az=96.0*
*IDC **15** 22:55:30.7±0.4, 24°.08S×70°.12W, h51^{km}±3^{km}, mb4.1/12, mb1 4.2/15, mb1mx4.1/28, mbtmp4.3/15, MS3.4/5, Ms1 3.3/5, ms1mx3.0/33, Error ellipse: s-maj=13.7km s-min=6.9km az=123.0*
*GUC **15** 22:55:30.4±0.7, 24°.00S×70°.11W, h52^{km}±2^{km}, ML4.6*
*VAO **15** 22:55:42.0±0.6, 23°.41S×69°.31W, h93^{km}±6^{km}, mb4.7*
ISC 15 22:55:30.2±0.4**, 23°.98S**±0°.03×**70°.16W**±0°.04**, h49**^{km}±3^{km}**, h49**^{km}**:pP-P, n234,** σ**1^{s}.55**/254**, mb4.7**/54**, 9C-4D, Near coast of northern Chile**

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

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PB10  IPOC Station P     0.59 322⇑iP    Pn      22 55 43.2 +0.7
PB10                             eS     Sn      22 55 52.8 +1.5
PB10  IPOC Station P     0.59 322       Pn      22 55 43.4 +0.9
PB10                              Sn    Sn      22 55 53.0 +1.6
PB10  IPOC Station P     0.59 322 i P   Pn      22 55 43.2 +0.7
PB10                             i S    Sn      22 55 52.8 +1.5
PB14  IPOC Station P     0.68 199⇑iP    Pn      22 55 44.4 +0.4
PB14                             eS     Sn      22 55 54.8 +0.8
PB14  IPOC Station P     0.68 199 i P   Pn      22 55 44.5 +0.4
PB14                             i S    Sn      22 55 54.7 +0.8
PB15  IPOC Station P     0.99  40⇓eP    Pn      22 55 48.4 +0.4
PB15                             eS     Sn      22 56 01.9 +0.7
PB15  IPOC Station P     0.99  40 i P   Pn      22 55 48.5 +0.4
PB15                             i S    Sn      22 56 02.3 +1.1
PB05  IPOC Station P     1.12 358⇑iP    Pn      22 55 50.5 +0.8
PB05                             eS     Sn      22 56 06.0 +1.9
PB05  IPOC Station P     1.12 358 i P   Pn      22 55 50.6 +0.8
PB05                             i S    Sn      22 56 05.3 +1.2
GO02  Mina Guanaco       1.29 156⇓eP    Pn      22 55 53.2 +1.1
GO02                             eS     Sn      22 56 09.7 +1.2
GO02                              IAML          22 56 12.5
      comp=E,18µm,0.2s
GO02  Mina Guanaco       1.29 156  Pn   Pn      22 55 53.5 +1.3
GO02                              Sn    Sn      22 56 09.3 +0.8
PB06  IPOC Station P     1.38  23⇓eP    Pn      22 55 54.1 +0.8
PB06                             eS     Sn      22 56 11.7 +1.3
PB06                              IAML          22 56 15.1
      comp=E,15µm,0.2s
PB06  IPOC Station P     1.38  23 i P   Pn      22 55 54.4 +1.2
PB06                             i S    Sn      22 56 11.5 +1.1
PB04  IPOC Station P     1.64   0⇑iP    Pn      22 55 57.5 +0.7
PB04                             eS     Sn      22 56 18.6 +1.9
PB04                              IAML          22 56 27.4
      comp=N,9µm,0.4s
PB04  IPOC Station P     1.64   0  Pn   Pn      22 55 57.5 +0.7
PB04  IPOC Station P     1.64   0 i P   Pn      22 55 57.5 +0.7
PB04                             i S    Sn      22 56 21.2 +4.5
LVC   Limon Verde        1.78  40  P    Pn      22 56 00.9 +2.0
      comp=N,947nm,0.3s,baz=200,slow=10,SNR=4443
LVC                               S     Sn      22 56 22.9 +2.3
      comp=N,5µm,0.3s,baz=17,slow=6.1,SNR=36
LVC   Limon Verde        1.78  40⇓eP    Pn      22 55 59.8 +0.9
LVC                              eS     Sn      22 56 22.0 +1.4
LVC   Limon Verde        1.78  40       Pn      22 56 01.0 +2.0
LVC                               Sn    Sn      22 56 22.5 +1.9
LVC   Limon Verde        1.78  40 eP    Pn      22 56 01.0 +2.0
LVC   Limon Verde        1.78  40 i P   Pn      22 56 01.1 +2.1
LVC                              i S    Sn      22 56 23.0 +2.3
LVC                               IAML          22 56 26.7
      comp=Z,6µm,0.3s
PB03  IPOC Station P     1.96  11⇑iP    Pn      22 56 01.6 +0.5
PB03                             eS     Sn      22 56 26.3 +1.6
PB03                              IAML          22 56 30.0
      comp=E,9µm,0.1s
PB03  IPOC Station P     1.96  11 i P   Pn      22 56 01.7 +0.5
PB03                             i S    Sn      22 56 27.7 +3.1
PB07  IPOC Station P     2.25   7⇑iP    Pn      22 56 05.7 +0.4
PB07                             eS     Sn      22 56 34.0 +2.1
PB07  IPOC Station P     2.25   7 i P   Pn      22 56 05.8 +0.5
PB09  IPOC Station P     2.33  22⇑iP    Pn      22 56 07.8 +1.5
PB09                             eS     Sn      22 56 35.9 +2.1
PB09                              IAML          22 56 47.4
      comp=E,5µm,0.6s
PB09  IPOC Station P     2.33  22 i P   Pn      22 56 08.1 +1.8
PB02  IPOC Station P     2.66   5⇑iP    Pn      22 56 10.7  0.0
PB02                             i S    Sn      22 56 44.1 +2.3
PB02  IPOC Station P     2.66   5 i P   Pn      22 56 11.0 +0.3
PB01  IPOC Station P     2.99  12⇑iP    Pn      22 56 15.8 +0.5
PB01                             i S    Sn      22 56 51.5 +1.6
PB01  IPOC Station P     2.99  12  Pn   Pn      22 56 15.9 +0.7
PB01                              Sn    Sn      22 56 57.3 +7.5
PATCX Punta Patache      3.14   0 i P   Pn      22 56 16.6 -0.8
GO03  Copiap             3.60 181 eP    Pn      22 56 23.7  0.0
GO03                             i S    Sn      22 57 06.9 +1.9
GO03                              IAML          22 57 31.2
      comp=E,742nm,0.3s
GO03  Copiap             3.60 181  Pn   Pn      22 56 24.9 +1.3
PB11  IPOC Station P     4.22   6  Pn   Pn      22 56 31.7 -0.5
GO01  Chusmiza           4.38  12  Pn   Pn      22 56 35.2 +0.5
YJA   Yavi               4.64  68 i P   Pn      22 56 42.3 +4.1
YJA                               IAML          22 57 46.4
      comp=Z,44nm,1.4s
AZAP  Zapla              4.66  94 i P   Pn      22 56 41.5 +3.1
VCA   Vinchina           5.05 160 i P   Pn      22 56 45.5 +1.9
VCA                               IAML          22 58 00.3
      comp=Z,631nm,0.8s
CYA   Choya              5.92 140 i P   Pn      22 56 57.9 +2.5
CYA                               IAML          22 57 26.6
      comp=Z,30nm,0.6s
ACLC  CERRO LA CRUZ      6.14 153 i P   Pn      22 56 59.9 +1.4
GO04  Tololo Observa     6.20 185  Pn   Pn      22 56 58.7 -0.7
ACCO  Cerro Coronel      6.66 172 i P   Pn      22 57 06.8 +1.0
AMOG  MOGNA              7.09 168 i P   Pn      22 57 11.7 +0.2
APLL  PUNTA DE LOS L     7.16 154 i P   Pn      22 57 12.6 +0.1
CFA   Coronel Fontan     7.79 168  P    Pn      22 57 20.6 -0.4
      comp=Z,3.1nm,0.3s,baz=348,slow=14,SNR=25
CFA                               S     Sn      22 58 50.3 +2.5
      comp=Z,1.6nm,0.3s,baz=8.7,slow=19,SNR=1.5
CFA                               LR    LR      23 00 36.4
      comp=Z,214nm,19.5s,baz=350,slow=40
CFA   Coronel Fontan     7.79 168 i P   Pn      22 57 21.3 +0.3
LPAZ  La Paz             7.88  14  P    Pn      22 57 24.4 +1.5
      comp=Z,1.5nm,0.3s,baz=210,slow=6.5,SNR=31
LPAZ                              S     Sn      22 58 55.6 +4.5
      baz=143,slow=9.8,SNR=1.7
LPAZ  La Paz             7.88  14  Pn   Pn      22 57 23.5 +0.6
LPAZ  La Paz             7.88  14 eP    Pn      22 57 24.2 +1.3
ROC1  El Roble           9.00 185  Pn   Pn      22 57 38.5 +0.8
ROC1                                    Sn      22 59 39.9  +22
PEL   Peldehue           9.14 183  Pn   Pn      22 57 40.0 +0.4
PEL                                     Sn      22 59 44.3  +23
GO05  Huala             11.10 188  Pn   Pn      22 58 04.9 -1.5
SIV   San Ignacio       11.66  49  P    Pn      22 58 11.8 -2.4
      comp=Z,4.7nm,0.3s,baz=265,slow=10,SNR=52
SIV                               S     Sn      23 00 16.7 -6.2
      comp=Z,0.3nm,0.3s,baz=246,slow=16,SNR=4.2
CPUP  Villa Florida     11.86 104  P    Pn      22 58 16.6 -0.1
      comp=Z,0.3nm,0.3s,baz=286,slow=12,SNR=8.5
NNA   Nana              13.51 331  LR   LR      23 03 22.8
      comp=Z,72nm,21.0s,baz=166,slow=35
SALV  Santo Antonio     15.79  62 eP    Pn      22 59 06.9 -2.5
TRCB  Terra Rica        16.14  89 eP    Pn      22 59 13.3 -0.5
ITAB  Concordia         16.58 105 eP    P       22 59 20.3 -1.0
PLCA  Paso Flores       16.71 181  P    P       22 59 28.5 +5.8
      comp=Z,0.1nm,0.3s,baz=47,slow=18,SNR=3.2
PLCA                              LR    LR      23 06 06.7
      comp=Z,224nm,19.3s,baz=18,slow=38
PLCA  Paso Flores       16.71 181  P    P       22 59 23.8 +1.1
PLCA  Paso Flores       16.71 181 eP    pP      22 59 37.8 +3.3
C2SB  Chapadao do Su    16.94  75 eP    Pn      22 59 23.3 -0.6
PCMB  Pacaembu          17.59  86 eP    P       22 59 32.2 -0.2
FRTB  Fartura           18.88  92 eP    P       22 59 46.6 -0.1
CLDB  Colider           18.89  49 eP    P       22 59 44.7 -2.1
ARAG  Araguaiana, MT    19.11  68 eP    P       22 59 47.4 -1.8
SPB   Sao Paulo         20.80  94  P    P       23 00 07.5 -0.1
SPB   Sao Paulo         20.80  94 eP    P       23 00 08.3 +0.7
RCLB  Rio Claro- Sao    20.86  90 eP    P       23 00 08.9 +0.6
IPMB  Ipameri, GO       21.33  78 eP    P       23 00 12.1 -1.3
BDFB  Brasilia          22.40  72  P    P       23 00 22.4 -2.6
      comp=Z,14nm,0.9s,baz=241,slow=12,SNR=14
BDFB                              LR    LR      23 09 56.4
      comp=Z,64nm,20.1s,baz=244,slow=39
BDFB  Brasilia          22.40  72  P    P       23 00 23.3 -1.7
BDFB                              IAmb  IAmb    23 00 25.6
      comp=Z,13nm,0.8s
PARB  Paraibuna         22.48  93 eP    P       23 00 25.3 -0.4
PTGA  Pitinga           25.13  25  P    P       23 00 49.5 -1.4
      comp=Z,4.1nm,0.4s,baz=213,slow=12,SNR=14
PTGA                              LR    LR      23 11 44.4
      comp=Z,129nm,20.6s,baz=202,slow=39
PTGA  Pitinga           25.13  25  P    P       23 00 50.7 -0.2
PTGA  Pitinga           25.13  25 eP    P       23 00 50.9  0.0
OTAV  Otavalo           25.38 340  P    P       23 00 54.1 +0.5
JANB  Januaria          25.89  75 eP    P       23 00 56.3 -1.6
FLOC  Florencia         25.96 347 eP    P       23 00 57.4 -1.0
MACC  Macarena, Meta    26.21 352 eP    P       23 01 37.0  +36
SMTB  Santa Maria do    26.29  59 eP    P       23 01 00.3 -1.1
SOTA  Rioblanco         26.70 346 eP    P       23 01 09.3 +3.7
BBAC  Balboa, Cauca     26.75 344 eP    P       23 01 06.7 +1.0
ORTC  Ortega, Tolima    28.16 349 eP    P       23 01 19.3 +1.2
GO10  Punta Arenas      29.14 181  P    P       23 01 26.4 -0.1
EFI   East Falkland     29.18 164  P    P       23 01 25.6 -1.2
EFI                               IAmb  IAmb    23 01 27.9
      comp=Z,31nm,1.1s
GUY2C Guyana, Caldas    29.46 349 eP    P       23 01 30.8 +0.6
NORC  Norcasia          29.72 351 eP    P       23 01 33.5 +1.5
RUSC  La Rusia          29.82 354  P    P       23 01 34.0 +0.5
MDP   Montagnes des     33.57  33  P    P       23 02 06.7 +0.9
      comp=Z,12nm,1.0s,baz=217,slow=10,SNR=4.4
RCBR  Riachuelo         37.54  67  P    P       23 02 39.7 -0.4
      comp=Z,26nm,0.8s,baz=227,slow=11,SNR=13
RCBR  Riachuelo         37.54  67  P    P       23 02 40.1  0.0
RCBR  Riachuelo         37.54  67 eP    P       23 02 40.2 +0.2
HOPE  Hope Point        39.31 149  P    P       23 02 55.0 +0.7
MLPR  Magueyes Islan    41.80   4  P    P       23 03 14.7 -0.6
CRPR  Cabo Rojo, PR     41.84   4  P    P       23 03 13.8 -1.7
PDPR  Patillas Dam,     41.94   6  P    P       23 03 14.3 -2.1
PDPR                              IAmb  IAmb    23 03 14.9
      comp=Z,12nm,0.8s
SJG   San Juan          42.02   6  P    P       23 03 15.2 -1.7
SJG                               IAmb  IAmb    23 03 15.5
      comp=Z,16nm,0.8s
MTP   Monte Pirata      42.06   7  P    P       23 03 14.7 -2.7
MTP                               IAmb  IAmb    23 03 15.2
      comp=Z,8.6nm,0.9s
VNA3  Neumayer Olymp    58.12 161  P    P       23 05 18.7 +0.2
VNA2  Neumayer--Watz    58.72 160  P    P       23 05 22.8 +0.2
      baz=289,slow=8.0
Z50A  Ashland           58.86 345  P    P       23 05 23.8 -0.2
Z50A                              IAmb  IAmb    23 05 24.3
      comp=Z,6.3nm,0.8s
V62A  Hyde County Ai    59.47 355  P    P       23 05 28.2 +0.1
X48A  Hartselle         60.28 344  IAmb IAmb    23 05 48.0
      comp=Z,9.2nm,1.1s
SNAA  Sanae             60.34 160  P    P       23 05 33.7 -0.2
SNAA  Sanae             60.34 160  P    P       23 05 33.6 -0.2
      comp=Z,4.4nm,0.8s,baz=264,slow=6.9,SNR=11
SNAA  Sanae             60.34 160  IAmb IAmb    23 05 34.6
      comp=Z,5.8nm,0.9s
SWET  Sewanee           60.74 345  IAmb IAmb    23 05 51.1
      comp=Z,11nm,1.1s
OXF   Oxford            60.97 342  P    P       23 05 37.4 -1.1
PLAL  Pickwick Lake     61.05 343  IAmb IAmb    23 05 39.3
      comp=Z,4.7nm,0.9s
JCT   Junction City     61.16 331  P    P       23 05 39.2 -0.7
JCT                               IAmb  IAmb    23 05 42.2
      comp=Z,6.5nm,0.7s
WLAR  White Oak Lake    61.37 338  P    P       23 05 41.1  0.0
V48A  Smith Brothers    61.45 345  P    P       23 05 40.5 -1.2
WHTX  Lake Whitney,     61.47 334  P    P       23 05 41.9  0.0
WHTX                              IAmb  IAmb    23 05 57.1
      comp=Z,5.0nm,0.9s
CLTN  Cedars of Leba    61.67 345  P    P       23 05 42.7 -0.5
CLTN                              IAmb  IAmb    23 05 43.6
      comp=Z,4.9nm,0.9s
S57A  Dark Hollow, R    61.96 352  P    P       23 05 45.3 +0.2
S57A                              IAmb  IAmb    23 06 01.0
      comp=Z,9.1nm,1.1s
TXAR  Lajitas Array     62.03 327  P    P       23 05 47.2 +1.4
      comp=Z,0.6nm,0.7s,baz=161,slow=7.2,SNR=6.1
TXAR                              sP    sP      23 06 07.3 +2.0
      comp=Z,0.9nm,0.7s,baz=159,slow=7.9,SNR=5.2
TXAR  Lajitas Array     62.03 327  P    P       23 05 46.7 +0.8
TX31  Lajitas Ar. Si    62.03 327  P    P       23 05 46.4 +0.6
TX32  Lajitas Array     62.03 327  P    P       23 05 46.3 +0.4
WVT   Waverly           62.07 344  P    P       23 05 45.2 -0.6
WVT                               IAmb  IAmb    23 05 45.8
      comp=Z,6.9nm,0.8s
MIAR  Mount Ida         62.31 338  P    P       23 05 47.3 -0.2
MIAR                              IAmb  IAmb    23 06 02.5
      comp=Z,6.0nm,1.1s
WHAR  Wooly Hollow      62.56 340  IAmb IAmb    23 06 03.9
      comp=Z,12nm,1.1s
T47A  Sharon Grove      62.71 345  IAmb IAmb    23 06 04.4
      comp=Z,8.5nm,1.0s
ABTX  Abilene, Hawle    62.93 332  P    P       23 05 52.0 +0.4
ABTX                              IAmb  IAmb    23 06 08.0
      comp=Z,3.9nm,0.8s
LCAR  Lake Charles      62.94 341  P    P       23 05 50.7 -0.9
LCAR                              IAmb  IAmb    23 05 51.6
      comp=Z,3.9nm,1.0s
PARMO Parma             63.09 342  P    P       23 05 51.7 -0.9
PBMO  Poplar Bluff      63.38 342  P    P       23 05 52.5 -2.0
PBMO                              IAmb  IAmb    23 05 55.0
      comp=Z,5.2nm,0.6s
WCI   Wyandotte Cave    63.70 346  P    P       23 05 56.1 -0.6
WCI                               IAmb  IAmb    23 05 56.9
      comp=Z,7.7nm,1.0s
U40A  Yellville         63.72 340  IAmb IAmb    23 05 57.6
      comp=Z,4.8nm,0.8s
MGMO  Mountain Grove    64.27 341  P    P       23 06 00.2 -0.3
MGMO                              IAmb  IAmb    23 06 14.8
      comp=Z,5.8nm,1.1s
S39A  Bolivar           65.09 340  IAmb IAmb    23 06 06.7
      comp=Z,10nm,0.8s
MSTX  Muleshoe          65.44 330  P    P       23 06 08.2  0.0
MSTX                              IAmb  IAmb    23 06 10.2
      comp=Z,6.0nm,0.8s
T35A  Sooner Cattle     65.47 337  P    P       23 06 07.6 -0.6
T35A                              IAmb  IAmb    23 06 23.3
      comp=Z,5.7nm,0.9s
N51A  Ashland           65.56 350  P    P       23 06 07.8 -0.8
N51A                              IAmb  IAmb    23 06 12.2
      comp=Z,12nm,1.1s
HSIG                    65.70 321  P    P       23 06 10.4 +0.6
HSIG                              IAmb  IAmb    23 06 19.1
      comp=Z,5.8nm,1.0s
AMTX  Amarillo          65.73 332       P       23 06 09.9 -0.2
AMTX                              IAmb  IAmb    23 06 12.1
      comp=Z,4.5nm,1.0s
N49A  Columbus Grove    65.87 348  P    P       23 06 10.1 -0.6
N49A                              IAmb  IAmb    23 06 11.3
      comp=Z,8.4nm,0.8s
HRV   Adam Dziewonsk    66.16 359  P    P       23 06 13.7 +1.1
QSPA  South Pole Qui    66.22 180  P    P       23 06 13.6 +0.7
      baz=153,slow=2.4
QSPA  South Pole Qui    66.22 180  IAmb IAmb    23 06 28.8
      comp=Z,12nm,0.9s
HAL   Halifax           68.55   5  P    P       23 06 25.4 -2.2
I49A  Point Hope        68.58 350  P    P       23 06 25.6 -2.2
KSCO  Kaye Shedlock'    69.64 334  P    P       23 06 34.6 -0.1
KSCO                                    pP      23 06 47.3 -1.6
SDCO  Great Sand Dun    69.81 331       pP      23 06 51.9 +1.9
TRQ   Mont Tremblant    69.98 357  P    P       23 06 36.6 +0.1
H43A  Windswept, Lux    70.00 347  P    P       23 06 35.8 -0.8
LIC   Lamto             70.19  73 eP    P       23 06 37.4 -1.1
      comp=Z,4.7nm,0.5s
TIC   Toumodi           70.39  73 eP    P       23 06 39.5 -0.2
KIC   Kosan Boka        70.51  74 eP    P       23 06 39.5 -0.9
      comp=Z,11nm,0.7s
Y14A  Wickenburg        70.55 323  P    P       23 06 39.3 -0.9
DBIC  Dimbokro          70.55  73  P    P       23 06 39.7 -0.9
      comp=Z,6.6nm,0.8s,baz=218,slow=5.6,SNR=8.7
DBIC  Dimbokro          70.55  73  IAmb IAmb    23 06 40.7
      comp=Z,6.3nm,0.8s
Q24A  Divide            70.66 332  P    P       23 06 40.7 -0.4
Q24A                              IAmb  IAmb    23 06 58.8
      comp=Z,4.2nm,0.8s
MVCO  Mesa Verde        70.76 328  P    P       23 06 41.4 -0.4
MVCO                              IAmb  IAmb    23 06 45.4
      comp=Z,4.8nm,0.7s
D41A  Chassel           72.64 347  IAmb IAmb    23 06 53.5
      comp=Z,11nm,0.8s
KNB   Kanab             72.77 325  P    P       23 06 53.6 -0.1
O20A  White River Ci    72.99 330  P    P       23 06 55.5 +0.5
O20A                              IAmb  IAmb    23 07 11.8
      comp=Z,8.7nm,1.0s
SZCU  Shurtz Canyon     73.35 326  P    P       23 06 56.9 -0.3
CCUT  Cedar City        73.46 325  P    P       23 06 59.0 +1.2
PSUT  Pine Spring       74.46 326  P    P       23 07 04.2 +0.5
MPU   Maple Canyon      74.48 328  P    P       23 07 03.2 -0.5
RSSD  Black Hills       74.54 335  P    P       23 07 02.3 -1.7
TPNV  Topopah Spring    74.55 323  P    P       23 07 04.4 +0.3
DUG   Dugway, Tooele    75.19 328  P    P       23 07 08.4 +0.7
R11A  Troy Canyon, C    75.22 325  P    P       23 07 08.0  0.0
HWUT  Hardware Ranch    75.69 329  P    P       23 07 10.7 +0.1
PDAR  Pinedale Array    75.69 331  P    P       23 07 11.3 +0.7
      comp=Z,0.3nm,0.7s,baz=138,slow=9.6,SNR=3.6
PDAR                              pP    pP      23 07 25.9 +0.8
      comp=Z,0.4nm,0.5s,baz=137,slow=6.9,SNR=4.2
PDAR  Pinedale Array    75.69 331  P    P       23 07 10.9 +0.2
SPUT  South Promonto    75.88 328  P    P       23 07 11.9 +0.3
MDND  Maddock           76.24 340  P    P       23 07 14.0 +0.6
AHID  Auburn Hatcher    76.38 330  P    P       23 07 15.1 +0.5
AHID                              IAmb  IAmb    23 07 16.7
      comp=Z,4.2nm,0.8s
NVAR  Mina Array Bea    76.75 323  P    P       23 07 18.6 +1.8
      comp=Z,0.6nm,0.8s,baz=148,slow=5.4,SNR=5.4
NVAR                              pP    pP      23 07 33.0 +1.9
      comp=Z,0.9nm,0.8s,baz=159,slow=6.9,SNR=5.8
NVAR  Mina Array Bea    76.75 323  P    P       23 07 17.6 +0.8
ELK   Elko              76.82 326  P    P       23 07 18.3 +1.2
FLWY  Flagg Ranch       77.24 331  P    P       23 07 20.6 +1.2
FLWY                              IAmb  IAmb    23 07 36.5
      comp=Z,6.0nm,0.8s
ULM   Lac du Bonnet     77.34 343  P    P       23 07 19.0 -0.5
      comp=Z,0.5nm,0.3s,baz=157,slow=7.0,SNR=3.8
ULM                               sP    sP      23 07 39.1 -0.2
      comp=Z,1.9nm,0.4s,baz=157,slow=5.3,SNR=5.0
ULM   Lac du Bonnet     77.34 343  P    P       23 07 19.8 +0.3
RLMT  Red Lodge         77.46 333  P    P       23 07 21.3 +0.7
YNE   Yellowstone No    77.68 332  P    P       23 07 22.5 +0.6
YHH   Holmes Hill       77.87 332  P    P       23 07 24.5 +1.5
PNTR  Pine Nut          77.93 323  P    P       23 07 23.8 +0.4
PNTR                              IAmb  IAmb    23 07 42.1
      comp=Z,4.6nm,0.8s
YHB   Horse Butte       77.99 331  P    P       23 07 23.9 +0.3
YHL   Hebgen Lake       78.06 331  P    P       23 07 25.1 +1.0
PAHR  Pah Rah Range     78.25 323  P    P       23 07 25.7 +0.7
PAHR                              IAmb  IAmb    23 07 44.1
      comp=Z,6.3nm,0.9s
SCHQ  Schefferville     78.54   2  P    P       23 07 25.3 -0.7
      comp=Z,1.4nm,0.7s,baz=208,slow=7.2,SNR=4.5
SCHQ  Schefferville     78.54   2  IAmb IAmb    23 07 32.7
      comp=Z,3.1nm,1.1s
AFDM  Forest Hills D    78.60 322  P    P       23 07 27.2 +0.4
MCMT  McKenzie Canyo    78.78 331  P    P       23 07 28.4 +0.4
DLMT  Dillon            79.08 331  P    P       23 07 30.4 +0.9
MFID  Camas Ranch       79.10 328  P    P       23 07 29.9 +0.3
MCCM  Marconi Confer    79.15 320  P    P       23 07 29.3 -0.5
TOA0  Torodi Ar. Sit    79.27  70  P    P       23 07 30.2 -0.8
TORD  Torodi Ar. Bea    79.27  70  P    P       23 07 30.2 -0.8
      comp=Z,18nm,0.8s,baz=254,slow=5.1,SNR=74
TORD                              pP    pP      23 07 45.1 -0.4
      comp=Z,6.1nm,0.6s,baz=255,slow=4.9,SNR=8.1
TORD                              sP    sP      23 07 50.3 -0.9
      comp=Z,3.4nm,0.3s,baz=258,slow=5.2,SNR=4.6
TORD  Torodi Ar. Bea    79.27  70  P    P       23 07 28.4 -2.6
BOSA  Boshof            83.30 118  P    P       23 07 51.9 -0.6
      comp=Z,2.6nm,1.0s,baz=228,slow=5.7,SNR=5.5
BOSA                              sP    sP      23 08 12.8 +0.1
      comp=Z,2.0nm,0.6s,baz=260,slow=4.1,SNR=2.6
BOSA  Boshof            83.30 118  IAmb IAmb    23 07 52.8
      comp=Z,5.5nm,1.0s
YKA   Yellowknife Ar    93.14 341  P    P       23 08 38.3 -0.2
      comp=Z,0.9nm,0.7s,baz=136,slow=5.0,SNR=8.7
YKA                               pP    pP      23 08 53.0 -0.2
      comp=Z,1.0nm,0.7s,baz=138,slow=4.7,SNR=5.6
H11S2 WAKE ISLAND Hy127.00 276     T    T       01 34 13.6
      baz=107,slow=75,SNR=43
H11S1 WAKE ISLAND Hy127.01 276     T    T       01 34 11.3
      baz=107,slow=75,SNR=43
H11S3 WAKE ISLAND Hy127.02 276     T    T       01 34 03.9
      baz=107,slow=75,SNR=41
H11N3 WAKE ISLAND Hy127.16 277     T    T       01 34 25.7
      baz=106,slow=75,SNR=16
H11N2 WAKE ISLAND Hy127.17 277     T    T       01 34 20.5
      baz=106,slow=75,SNR=12
H11N1 WAKE ISLAND Hy127.17 277     T    T       01 34 25.7
      baz=106,slow=75,SNR=8.6
ASAR  Alice Springs    127.19 208  PKP    PKiKP   23 14 30.1 -0.5
      comp=Z,0.9nm,0.7s,baz=140,slow=2.2,SNR=8.0
ASAR                               pPKP   pPKPdf  23 14 44.9 -0.4
      comp=Z,1.9nm,0.8s,baz=165,slow=2.6,SNR=9.5
ASAR  Alice Springs    127.19 208         pPKPdf  23 14 45.0 -0.2
WRA   Warramunga Arr   130.24 211  PKP    PKiKP   23 14 35.8 -0.9
      comp=Z,0.9nm,0.8s,baz=162,slow=1.8,SNR=4.4
WRA                                pPKP   pPKPdf  23 14 51.3 +0.2
      comp=Z,2.4nm,0.9s,baz=146,slow=1.3,SNR=10
WRA   Warramunga Arr   130.24 211         pPKPdf  23 14 51.7 +0.6
BVAR  Borovoye Array   138.48  35  PKP    PKPdf   23 14 50.6 +0.5
      comp=Z,0.5nm,0.6s,baz=265,slow=2.6,SNR=5.3
KURK  Kurchatov        144.02  34         pPKPdf  23 15 14.2 -1.3
KURK  Kurchatov        144.02  34         PKPdf   23 14 58.9 -1.2
KURBB Kurchatov Arra   144.03  34  PKP    PKPdf   23 14 58.9 -1.3
      comp=Z,1.2nm,0.6s,baz=302,slow=3.5,SNR=18
KURBB                              pPKP   pPKPdf  23 15 13.6 -1.9
      comp=Z,3.3nm,0.8s,baz=300,slow=3.2,SNR=9.4
ZALV  Zalesovo Beam    144.68  26  PKP    PKPdf   23 15 00.7 -0.5
      comp=Z,7.5nm,0.7s,baz=309,slow=4.8,SNR=39
ZALV                               pPKP   pPKPdf  23 15 15.7 -0.8
      comp=Z,12nm,0.9s,baz=305,slow=5.2,SNR=13
ZALV  Zalesovo Beam    144.68  26         PKPbc   23 15 00.0 -0.1
ARSB  Arslanbob        144.79  52  pPKPdf pPKPdf  23 15 17.4 +0.1
AAK   Ala-Archa        145.42  49  PKPbc  PKPab   23 15 04.2 +0.8
      comp=Z,16nm,0.8s,baz=203,slow=1.6,SNR=84
AAK                                pPKPbc pPKPdf  23 15 19.4 +1.0
      comp=Z,14nm,1.0s,baz=244,slow=2.7,SNR=9.1
AAK   Ala-Archa        145.42  49         PKPab   23 15 04.4 +1.0
FRU1  Bishkek          145.45  48         pPKPab  23 15 19.1 +0.9
KBK   Karagaybulak     145.72  49  P      PKPab   23 15 05.3 +0.9
      SNR=14
KZA   Kyzart           146.14  49  P      PKPab   23 15 07.0 +0.6
      SNR=7.7
NIL   Nilore           146.67  65         PKPbc   23 15 07.1  0.0
ULHL  Ulahol           146.76  49  P      PKiKP   23 15 09.0 -1.0
      SNR=15
KSH   Kashi            147.53  53  PKPbc  PKPbc   23 15 09.8 +0.4
KSH                                pPKP   pPKPdf  23 15 20.0 -2.0
KSH                                PP     PP      23 18 42.5 +6.5
KSH                                PKS    PKSdf   23 18 44.9 +2.9
MAKZ  Makanchi         148.12  37         PKPdf   23 15 07.8 +0.5
PRZ   Przheval'sk      148.13  47         PKPab   23 15 12.8 -1.1
PRZ                                pPKPab pPKPbc  23 15 28.2 +2.1
MK31  Makanchi Array   148.30  37         PKPbc   23 15 11.2 +0.2
MK31                                      pPKPbc  23 15 26.7 +0.5
MKAR  Makanchi Array   148.30  37  PKPbc  PKiKP   23 15 11.4 -1.2
      comp=Z,5.5nm,0.8s,baz=320,slow=2.2,SNR=56
MKAR                               pPKPbc pPKPbc  23 15 26.7 +0.5
      comp=Z,9.0nm,0.8s,baz=325,slow=2.1,SNR=19
HYB   Hyderabad        150.06  97 i PKP   PKPbc   23 15 16.0 -0.3
WMQ   Urumqi           153.14  37 eP      PKPdf   23 15 15.0 -0.2
SONM  Songino Array    156.03   6  PKPbc  PKPbc   23 15 35.6
      comp=Z,0.7nm,0.9s,baz=182,slow=3.9,SNR=5.2
SONM                               PKPab  PKPab   23 15 46.6  0.0
      comp=Z,0.9nm,0.7s,baz=339,slow=3.8,SNR=4.9
SONM  Songino Array    156.03   6         PKPbc   23 15 36.1
GTA   Gaotai           162.43  27 ePKP    PKPdf   23 15 31.3 +4.4
GTA                                sPKP           23 15 45.9
GTA                                PKPab  pPKPab  23 16 24.8 -4.6
CMAR  Chiang Mai Arr   168.45 116  PKPab  PKPab   23 16 40.8 -0.9
      comp=Z,0.4nm,0.7s,baz=226,slow=2.4,SNR=1.4
```

WEL 15 22:57:05.8±0.6**, 33°S**±7°×**17°9E**±1°6**, h33km, M4.6**/10**,**
mB5.1/2**, ML4.8**/10**, MLv4.6**/10**, Mw(mB)4.4**/2**, South of**
Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.04**	**36**	S	Sn	22 58 51.7	+0.1
WMGZ	**Waiomatatini S**	**5.28**	**188**	P	Pn	22 58 23.5	+1.3
WMGZ				S	Sn	22 59 24.0	+2.1
HAZ	**Te Kaha**	**5.32**	**194**	P	Pn	22 58 23.8	+0.9
HAZ				S	Sn	22 59 23.4	+0.5
RUGZ	**Raukumara Rang**	**5.54**	**194**	P	Pn	22 58 27.1	+1.0
PUZ	**Puketiti**	**5.55**	**189**	P	Pn	22 58 27.4	+1.4
PUZ				S	Sn	22 59 29.5	+0.9
TWGZ	**Tauwhareparae**	**5.69**	**191**	P	Pn	22 58 29.0	+1.0
TWGZ				S	Sn	22 59 32.6	+0.3
MWZ	**Matawai**	**5.93**	**194**	P	Pn	22 58 31.5	+0.2
MWZ				S	Sn	22 59 36.2	-1.9
URZ	**Urewera**	**5.95**	**198**	P	Pn	22 58 31.7	+0.2
CNGZ	**Carnagh Statio**	**5.96**	**189**	P	Pn	22 58 31.5	-0.1
TKGZ	**Te Karaka**	**5.97**	**192**	P	Pn	22 58 24.6	-7.2
RIGZ	**Rimuhau**	**6.24**	**192**	P	Pn	22 58 35.5	-0.1
MUGZ	**Murupara**	**6.25**	**199**	P	Pn	22 58 35.8	+0.2
KNZ	**Kokohu**	**6.57**	**192**	P	Pn	22 58 38.4	-1.5
NMHZ	**Naumai**	**6.82**	**197**	P	Pn	22 58 42.5	-1.1
HIZ	**Hauiti**	**6.97**	**211**	P	Pn	22 58 49.1	+3.6
BHHZ	**Black Hill Sta**	**7.39**	**200**	P	Pn	22 58 48.8	-2.6
KRHZ	**Kereru**	**7.45**	**198**	P	Pn	22 58 48.8	-3.3

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*IDC **15** 23:02:59.9±1.6, 58°82S×25°26W, h0km, mb4.1/1,*
mb1 4.3/2, mb1mx3.8/19, mbtmp4.3/2, ML4.4/1, Error
ellipse: s-maj=79.3km s-min=49.5km az=86.0

ISC 15 23:03:00.7±1.5**, 58°8S**±0°2×**25°6W**±0°5**, h10km, n8, σ0**^{s}**65**/8**,**
South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	13.89	156	P	Pn	23 06 17.6	+0.3
VNA3	Neumayer Olymp	14.08	159	P	Pn	23 06 19.9	0.0
VNA2	Neumayer--Watz	14.29	155	P	Pn	23 06 22.7	-0.1
	baz=317,slow=14						
SNAA	Sanae	15.85	153	P	Pn	23 06 43.6	-0.1
SNAA	Sanae	15.85	153	Pn	Pn	23 06 43.3	-0.4
	1.3nm,0.3s,baz=14,slow=7.1,SNR=52						
TORD	Torodi Ar. Bea	75.12	28	P	P	23 14 42.8	+0.1
	1.0nm,0.5s,baz=205,slow=6.4,SNR=8.1						
YKA	Yellowknife Ar	138.78	315	PKP	PKiKP	23 22 26.6	-1.0
	0.3nm,0.5s,baz=132,slow=2.3,SNR=3.8						
ILAR	Eielson Array	152.54	307	PKPbc	PKiKP	23 22 56.8	+0.9
	1.1nm,0.7s,baz=144,slow=5.6,SNR=13						

IDC 15 23:06:27.8±482.0**, 46°.23N×64°.76E, h0^{km}, Error ellipse: s-maj=236.7km s-min=135.9km az=155.0, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I31KZ	AKTYUBINSK INF	6.13	315	*i*		23 43 00.0	
	baz=129,slow=331,SNR=1.4						
I34MN	SONGINO INFRAS	28.20	71	*i*		02 00 20.0	
	baz=276,slow=328,SNR=1.8						
I18DK	QAANAAQ INFRAS	53.34	349	*i*		04 49 25.0	
	baz=23,slow=343,SNR=3.6						
I10CA	LAC DU BONNET	82.52	348	*i*		07 45 10.0	
	baz=10,slow=346,SNR=6.0						

EAF 15 23:14:22.6±0.3**, 18°.03S×26°.87E, h10^{km}, MD3.8, Zimbabwe**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATP	Matopo	2.84	147	*i* P	Pn	23 15 07.8	-0.4
MATP	Matopo	2.84	147	*i* P	Pn	23 15 07.8	-0.4
LBTB	Lobatse	7.05	189	*i* P	Pn	23 16 04.9	-1.1
LBTB				*i* S	Sn	23 17 19.7	-6.6
LBTB	Lobatse	7.05	189	*i* P	Pn	23 16 04.9	-1.1
LBTB				*i* S	Sn	23 17 19.7	-6.6
BOSA	Boshof	10.64	188	*i* P	Pn	23 16 52.4	-2.8
BOSA				*i* S	Sn	23 18 41.6	-13
BOSA	Boshof	10.64	188	*i* P	Pn	23 16 52.4	-2.8
BOSA				*i* S	Sn	23 18 41.6	-13

*IDC **15** 23:20:41.5±1.2, 13°.13N×87°.20W, h0^{km}, mb3.6/6, mb1 3.8/7, mb1mx3.6/41, mbtmp3.6/7, ML2.8/2, Error ellipse: s-maj=36.3km s-min=12.7km az=49.0*

*SNET **15** 23:20:47.1±0.8, 12°.45N×87°.89W, h30^{km}±3^{km}, ML4.0*

*UCR **15** 23:20:47.2±0.8, 12°.44N×87°.88W, h30^{km}±2^{km}, ML4.0, mb4.2(NEIC)*

*NEIC **15** 23:20:49±2.3, 12°.74N±0°.03×87°.69W±0°.07, h73^{km}±5^{km}, mb4.2/6, Md4.0(SNET), Error ellipse: s-maj=10.8km s-min=3.9km az=72.0*

*INET **15** 23:20:56.3, 12°.49N×87°.70W, h34^{km}, ML4.1*

ISC 15 23:20:46.8±1.0**, 12°.52N**±0°.07×**87°.77W**±0°.05**, h72^{km}**±8^{km}**, n46, σ0^{s}.86**/67**, mb4.0**/8**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	Cosiguina Volc	0.50	24		Pn	23 21 00.6	+0.7
CSGN				Sn	Sn	23 21 08.6	-1.0
CNCH	Conchagua	0.76	355	*e*P	Pn	23 21 02.7	0.0
CNCH				*e*S	Sn	23 21 14.9	+0.6
CNCH	Conchagua	0.76	355	*e*P	Pn	23 21 02.7	0.0
CNCH				*e*S	Sn	23 21 14.9	+0.6
LCND	La Caada	0.80	351	*e*P	Pn	23 21 03.0	0.0
LCND				*e*S	Sn	23 21 15.9	+1.0
LCND				IAML		23 21 16.6	
	comp=Z,4μm,0.2s						
LCND	La Caada	0.80	351	*e*P	Pn	23 21 03.0	0.0
LCND				*e*S	Sn	23 21 15.9	+1.0
LCND				IAML		23 21 16.6	
	comp=Z,4μm,0.2s						
JUCU	Jucuar¡n	0.87	327	*e*P	Pn	23 21 03.5	-0.4
JUCU				*e*S	Sn	23 21 16.0	-0.6
JUCU				IAML		23 21 17.9	
	comp=Z,3μm,0.2s						
JUCU	Jucuar¡n	0.87	327	*e*P	Pn	23 21 03.5	-0.4
JUCU				*e*S	Sn	23 21 16.0	-0.6
JUCU				IAML		23 21 17.9	
	comp=Z,3μm,0.2s						
BLLM	Bellamira	1.03	334	*e*P	Pn	23 21 06.0	+0.2
BLLM				*e*S	Sn	23 21 20.8	+0.8
BLLM	Bellamira	1.03	334	*e*P	Pn	23 21 06.0	+0.2
BLLM				*e*S	Sn	23 21 20.8	+0.8
LCY	Lacayo	1.04	330	*e*P	Pn	23 21 06.1	+0.1
LCY				*e*S	Sn	23 21 20.4	+0.1
LCY	Lacayo	1.04	330	*e*P	Pn	23 21 06.1	+0.1
LCY				*e*S	Sn	23 21 20.4	+0.1
RANC	El Ranchito	1.04	331	*e*P	Pn	23 21 06.3	+0.2
RANC				*e*S	Sn	23 21 21.3	+0.9
RANC	El Ranchito	1.04	331	*e*P	Pn	23 21 06.3	+0.2
RANC				*e*S	Sn	23 21 21.3	+0.9
PACA	Pacayal	1.09	330	*e*P	Pn	23 21 07.0	+0.3
PACA				IAML		23 21 27.6	
	comp=Z,9μm,0.3s						
PACA	Pacayal	1.09	330	*e*P	Pn	23 21 07.0	+0.3
PACA				IAML		23 21 27.6	
	comp=Z,9μm,0.3s						
MOMN	Momotombo	1.20	95	*e*P	Pn	23 21 07.5	-0.6
MOMN				*e*S	Sn	23 21 24.4	+0.5
MOMN	Momotombo	1.20	95	*e*P	Pn	23 21 07.5	-0.6
MOMN				*e*S	Sn	23 21 24.4	+0.5
TECA	Tecapa	1.21	324	*e*P	Pn	23 21 08.4	+0.2
TECA				*e*S	Sn	23 21 25.0	+0.7
TECA	Tecapa	1.21	324	*e*P	Pn	23 21 08.4	+0.2
TECA				*e*S	Sn	23 21 25.0	+0.7
FAGO	Alcalda de S	1.22	344	*e*P	Pn	23 21 08.5	+0.3
FAGO				*e*S	Sn	23 21 25.6	+1.4
FAGO	Alcalda de S	1.22	344	*e*P	Pn	23 21 08.5	+0.3
FAGO				*e*S	Sn	23 21 25.6	+1.4
TGUH	Tegucigalpa,Un	1.60	17	*e*P	Pn	23 21 14.5	+1.1
TGUH	Tegucigalpa,Un	1.60	17	*e*P	Pn	23 21 14.5	+1.1
TGUH	Tegucigalpa,Un	1.60	17		Pn	23 21 14.3	+0.9
LFRS	El Faro	1.67	311	*e*P	Pn	23 21 14.7	+0.5
LFRS				*e*S	Sn	23 21 35.2	+0.2
LOMA	Loma Larga	1.77	309	*e*P	Pn	23 21 15.9	+0.4
LOMA				*e*S	Sn	23 21 37.3	0.0
LOMA				IAML		23 21 39.1	
	comp=Z,2μm,0.3s						
LOMA	Loma Larga	1.77	309	*e*P	Pn	23 21 15.9	+0.4
LOMA				*e*S	Sn	23 21 37.3	0.0
LOMA				IAML		23 21 39.1	
	comp=Z,2μm,0.3s						
SNET	Serv Nac Est T	1.84	309	Pn	Pn	23 21 18.5	+2.1
BOQS	Boqueron	1.91	310	*e*P	Pn	23 21 17.4	-0.1
BOQS				*e*S	Sn	23 21 41.3	+0.6
ACON	Acoyapa	2.59	102		Pn	23 21 28.3	+1.8
ESPN	Las Esperanzas	3.40	95	Pn	Pn	23 21 37.5	0.0
JTS	Las Juntas de	3.54	128	Pn	Pn	23 21 39.8	+0.4
	comp=Z,2.3nm,0.3s,baz=12,slow=19,SNR=8.3						
JTS				Pg		23 21 47.3	
	comp=Z,30nm,0.3s,baz=20,slow=7.7,SNR=83						
JTS				Sn	Sn	23 22 22.0	+1.9
	comp=Z,6.6nm,0.3s,baz=164,slow=23,SNR=3.6						
JTS				Lg	Lg	23 22 33.1	
	comp=Z,14nm,0.3s,baz=203,slow=20,SNR=13						
JTS	Las Juntas de	3.54	128		Pn	23 21 45.9	+6.5
APG	El Apazote	3.60	314	Pn	Pn	23 21 41.6	+1.1
	comp=Z,0.3nm,0.3s,baz=114,slow=10.0,SNR=3.0						
APG				Lg	Lg	23 22 36.9	
	comp=Z,1.3nm,0.3s,baz=345,slow=18,SNR=2.2						
TXAR	Lajitas Array	22.33	321	P	P	23 25 40.3	+1.5
	comp=Z,1.1nm,0.8s,baz=148,slow=10,SNR=5.8						
TX31	Lajitas Ar. Si	22.33	321	P	P	23 25 40.3	+1.4
PDAR	Pinedale Array	35.57	332	P	P	23 27 38.9	+1.3
	comp=Z,0.2nm,0.4s,baz=136,slow=12,SNR=4.8						
REDW	Red Top Meadow	36.63	331	P	P	23 27 47.7	+1.1
SNOW	Snow King Moun	36.66	332	P	P	23 27 47.5	+0.7
SNOW				IAmb	IAmb	23 27 49.2	
	comp=Z,4.6nm,0.6s						
TPAW	Teton Pass	36.77	331	P	P	23 27 48.1	+0.2
TPAW				IAmb	IAmb	23 27 50.3	
	comp=Z,3.7nm,0.9s						
ULM	Lac du Bonnet	38.21	352	P	P	23 27 58.2	-1.3
	comp=Z,0.9nm,0.5s,baz=168,slow=9.3,SNR=2.8						
ULM	Lac du Bonnet	38.21	352	IAmb	IAmb	23 28 02.6	
	comp=Z,1.9nm,1.1s						
SCHQ	Schefferville	45.30	17	P	P	23 28 55.9	-1.5
	comp=Z,1.7nm,0.6s,baz=221,slow=6.7,SNR=8.3						
SCHQ	Schefferville	45.30	17	IAmb	IAmb	23 28 57.1	
	comp=Z,2.0nm,0.7s						
FRB	Frobisher Bay	52.92	11	P	P	23 29 53.3	-2.0
	comp=Z,0.8nm,0.4s,baz=228,slow=9.9,SNR=7.4						
YKA	Yellowknife Ar	53.47	345	P	P	23 29 58.6	-0.8
	comp=Z,0.2nm,0.6s,baz=129,slow=8.8,SNR=3.8						

*BJI **15** 23:22:03.9±0.0, 14°.69S×65°.64E, h5^{km}, mB5.2/30, mb4.7/42, Ms4.8/12, Ms7 4.5/10*

*IDC **15** 23:22:09.3±0.5, 14°.18S×66°.11E, h0^{km}, mb4.3/20, mb1 4.4/21, mb1mx4.2/48, mbtmp4.3/21, ML4.4/1, MS4.0/9, Ms1 4.0/9, ms1mx3.7/46, Error ellipse: s-maj=18.4km s-min=13.7km az=179.0*

*NEIC **15** 23:22:10.6±1.4, 14°.19S±0°.08×66°.13E±0°.08, h10^{km}±1^{km}, mb4.9/89, Error ellipse: s-maj=17.5km s-min=7.2km az=139.0*

*GCMT **15** 23:22:11.6±0.3, 14°.29S±0°.03×66°.04E±0°.02, h12^{km}, MW4.9/72, Moment Tensor Solution. s16,c19; s72,c106; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.51±.11; $M_{\theta\theta}$-1.57±.10; $M_{\phi\phi}$3.08±.09; $M_{r\theta}$-0.57±.33; $M_{\theta\phi}$-0.65±.09; $M_{\phi r}$1.06±.30; Best double couple: $M_0$2.78000×10^{16} NP1:ϕ_s30.00000°,δ47.00000°,λ-29.00000°. NP2: ϕ_s141.00000°,δ69.00000°,λ-133.00000°. Principal axes: T 3.4300, Plg13.0000°, Azm261.0000°; N -1.2990, Plg40.0000°, Azm160.0000°; P -2.1300, Plg47.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 23:22:12.7±2.1**, 14°.18S**±0°.07×**66°.07E**±0°.06**, h23^{km}**±14^{km}**, n225, σ1^{s}.40**/220**, mb4.8**/82**, MS4.2**/16**, 7C-4D, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	Diego Carcia H	9.04	45	T	T	23 33 43.8	
	baz=224,slow=75,SNR=310						
H08S2	Diego Garcia H	9.05	45	T	T	23 33 44.0	
	baz=224,slow=75,SNR=353						
H08S3	Diego Garcia H	9.06	45	T	T	23 33 45.2	
	baz=224,slow=75,SNR=525						
DGAR	Diego Garcia	9.19	44	Pn	Pn	23 24 21.7	-2.3
RER	Riviere de l'E	12.04	233	Pn	Pn	23 25 00.9	-2.1
OPO	Ambohidratompo	18.63	254	P	Pn	23 26 30.2	+0.8
	1.1nm,0.3s,baz=84,slow=16,SNR=11						
OPO				LR	LR	23 31 28.7	
	comp=Z,381nm,19.7s,baz=212,slow=30						
ABPO	Ambohimpanom	18.68	253	P	P	23 26 29.8	+0.1
MNCI	Minicoy	23.37	18	P	P	23 27 19.0	-0.8
PALK	Pallekele	25.79	35	LR	LR	23 35 21.8	
	comp=Z,717nm,21.9s,baz=213,slow=31						
KMBO	Kilima Mbogo	31.31	292	P	P	23 28 33.7	+1.9
	1.0nm,0.4s,baz=74,slow=7.9,SNR=6.7						
KMBO				LR	LR	23 38 23.7	
	comp=Z,322nm,21.6s,baz=98,slow=31						
KMBO	Kilima Mbogo	31.31	292	P	P	23 28 31.4	-0.4
ATD	Arta Tunnel	34.39	317	LR	LR	23 42 01.0	
	comp=Z,192nm,19.0s,baz=100,slow=35						
ATD	Arta Tunnel	34.39	317	P	P	23 28 58.2	-0.3
ATD				IAmb	IAmb	23 30 04.3	
	comp=Z,15nm,1.0s						
LSZ	Lusaka	36.62	263	P	P	23 29 18.0	+0.2
LSZ				IAmb	IAmb	23 29 26.4	
	comp=Z,17nm,1.1s						
WSAR	Wadi Sarin	37.89	349	LR	LR	23 41 56.9	
	comp=Z,93nm,18.6s,baz=178,slow=31						
IPM	Ipoh	39.32	64	P	P	23 29 39.7	-0.7
IPM				IAmb	IAmb	23 31 00.4	
	comp=Z,47nm,1.7s						
KULM	Kulim	39.38	63	P	P	23 29 40.0	-1.0
KULM				IAmb	IAmb	23 30 29.6	
	comp=Z,54nm,1.7s						
LBTB	Lobatse	39.48	248	P	P	23 29 41.4	-0.5
	comp=Z,2.7nm,0.7s,baz=104,slow=7.8,SNR=5.0						
LBTB	Lobatse	39.48	248	P	P	23 29 40.7	-1.2
LBTB					P	23 29 41.4	-0.5
LBTB				IAmb	IAmb	23 29 51.0	
	comp=Z,41nm,1.9s						
UOSS	Minazif	40.06	346	P	P	23 29 43.8	-2.6
UOSS				IAmb	IAmb	23 29 47.7	
	comp=Z,66nm,1.9s						
BOSA	Boshof	40.41	242	P	P	23 29 49.5	0.0
	comp=Z,6.8nm,1.0s,baz=85,slow=5.7,SNR=5.8						
BOSA				LR	LR	23 43 58.0	
	comp=Z,252nm,19.5s,baz=60,slow=32						
BOSA	Boshof	40.41	242	P	P	23 29 49.2	-0.3
LEM	Lembang	41.45	84	LR	LR	23 43 57.0	
	comp=Z,326nm,20.2s,baz=180,slow=32						
RAYN	Ar Rayn	42.53	332	P	P	23 30 07.8	+1.0
SUR	Sutherland	44.97	238	P	P	23 30 24.8	-1.8
DMN	Daman	45.46	24	*e*P	P	23 30 32.1	+1.6
	comp=Z,25nm,1.1s						
RAMN	Ramite	45.49	26	*e*P	P	23 30 32.6	+1.9
	comp=Z,51nm,1.0s						
PKI	Pulchoki	45.55	24	*e*P	P	23 30 32.4	+1.1
PKIN	Phulchoki	45.55	24	*e*P	P	23 30 32.4	+1.2
DANN	Dangsing	45.62	22	*e*P	P	23 30 32.8	+1.0
	comp=Z,37nm,1.1s						
GKN	Gorkha	45.63	23	*e*P	P	23 30 33.1	+1.4
KKN	Kakani	45.69	24	*e*P	P	23 30 33.6	+1.3
ODAN	Odare	45.75	27	*e*P	P	23 30 34.3	+1.5
CMAR	Chiang Mai Arr	45.84	46	P	P	23 30 33.2	-0.2
	comp=Z,0.7nm,0.4s,baz=238,slow=8.4,SNR=7.2						
CMAR				LR	LR	23 47 37.1	
	comp=Z,218nm,20.4s,baz=230,slow=33						
CMAR	Chiang Mai Arr	45.84	46	P	P	23 30 33.1	-0.3
JIRN	Jiri	45.94	25	*e*P	P	23 30 35.6	+1.2
	comp=Z,32nm,1.0s						
GUN	Gumba	46.04	25	*e*P	P	23 30 36.6	+1.4
	comp=Z,25nm,1.0s						
CHTO	Chiang Mai	46.09	46	P	P	23 30 35.1	-0.2
TAPN	Taplejung	46.32	27	*e*P	P	23 30 38.9	+1.6
TSUM	Tsumeb	46.60	257	P	P	23 30 40.0	+0.4
TSUM				IAmb	IAmb	23 30 51.8	
	comp=Z,8.7nm,1.1s						
SHL	Shillong	46.83	33	P	P	23 30 42.1	+0.9
JAGI	Jajag, Banyuwa	47.42	89	P	P	23 30 43.7	-2.2
H01W3	Cape Leeuwin H	47.82	124	T	T	00 21 59.1	
	baz=284,slow=75,SNR=22						
H01W2	Cape Leeuwin H	47.82	124	T	T	00 21 53.2	
	baz=284,slow=75,SNR=29						
H01W1	Cape Leeuwin H	47.84	124	T	T	00 21 54.8	
	baz=284,slow=75,SNR=26						
NIL	Nilore	48.05	8	P	P	23 30 50.1	-0.4
NIL				IAmb	IAmb	23 31 24.7	
	comp=Z,6.5nm,0.4s						
HRA	Herat	48.43	356	P	P	23 30 53.8	+0.2
KBL	Kabul	48.53	3	P	P	23 30 54.1	-0.2
KBL				IAmb	IAmb	23 30 56.8	
	comp=Z,11nm,1.1s						
LSA	Lhasa	49.88	29	P	P	23 31 05.2	+0.1
LSA				IAmb	IAmb	23 31 08.0	
	comp=Z,10nm,1.1s						
SLVN	Son La	51.24	47	P	P	23 31 15.6	+0.6
GEYT	Alibeck	52.37	352	LR	LR	23 52 03.8	
	comp=Z,70nm,18.5s,baz=195,slow=34						
GEYT	Alibeck	52.37	352	P	P	23 31 23.1	0.0
GYA0B	ALIBECK ARRAY	52.37	352	P	P	23 31 23.4	+0.3
CHGR	Chuyangaron	52.64	3	P	P	23 31 25.2	+0.1
CHGR				IAmb	IAmb	23 32 37.0	
	comp=Z,15nm,1.0s						
KMI	Kunming	52.96	43	P	P	23 31 28.9	+1.0
KMI				pP	pP	23 31 33.5	-0.6
KMI				sP	sP	23 31 35.0	-1.6
KMI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KMI				LR	LR		
	comp=Z,120nm,30.4s						
KMI				LR	LR		
	comp=Z,190nm,24.6s						
GAR	Garm	53.05	4	IAmb	IAmb	23 31 29.2	
	comp=Z,23nm,1.3s						
KSH	Kashi	54.21	9	P	P	23 31 34.4	-2.3
KSH				pP	pP	23 31 38.4	-4.6
KSH				PcP	PcP	23 32 39.5	-1.5
KSH				PcS	PcS	23 36 35.4	-5.1
KSH				S	S	23 39 06.9	-5.9
KSH				ScS	ScS	23 41 17.4	-7.5
KSH				pmax	pmax		
	comp=Z,42nm,1.0s						
KSH				pmax	pmax		
	comp=Z,530nm,5.7s						
KSH				LR	LR		
	comp=Z,250nm,11.7s						
KSH				LR	LR		
	comp=Z,200nm,10.5s						
KSH				LR	LR		
	comp=Z,130nm,13.4s						
QIZ	Qiongzhong	54.29	54	P	P	23 31 37.3	-0.2
QIZ				S	S	23 39 16.3	+2.0
QIZ				LR	LR		
	comp=Z,170nm,6.9s						
QIZ				LR	LR		
	comp=Z,300nm,20.0s						
QIZ				LR	LR		
	comp=Z,380nm,21.1s						
ARSB	Arslanbob	55.59	6	P	P	23 31 46.6	-0.1
NRN	Naryn	56.09	9	P	P	23 31 50.5	0.0
GYA	Guiyang	56.47	44	⇑*i*P	P	23 31 53.9	+0.6
GYA				PP	PP	23 34 05.6	+6.3
GYA				S	S	23 39 49.9	+6.4
GYA				SS	SS	23 43 33.9	+2.6
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,200nm,5.6s						
GYA				LR	LR		
	comp=Z,290nm,18.0s						
GYA				LR	LR		
	comp=Z,250nm,18.3s						
GYA				LR	LR		
	comp=Z,210nm,18.8s						
KDJ	Kajisay	56.96	10	P	P	23 31 55.9	-0.6
SOEI	Soe	56.99	93	P	P	23 31 56.8	-0.4
AAK	Ala-Archa	57.06	7	P	P	23 31 57.7	+0.5
	comp=Z,2.0nm,0.8s,baz=208,slow=10,SNR=5.5						
AAK	Ala-Archa	57.06	7	IAmb	IAmb	23 31 58.8	
	comp=Z,5.1nm,1.1s						
KK31	Karatay Array	57.15	4	P	P	23 31 58.0	+0.4
KK31				PcP	PcP	23 32 52.4	+0.2
KKAR	Karatay Array	57.15	4	P	P	23 31 57.7	+0.1
KKAR				PcP	PcP	23 32 52.5	+0.4
KKAR	Karatay Array	57.15	4	P	P	23 31 57.9	+0.3
KKAR				IAmb	IAmb	23 31 58.5	
	comp=Z,9.7nm,1.6s						
KKAR				PcP	PcP	23 32 53.0	+0.9
FITZ	Fitzroy Crossi	57.15	103	P	P	23 31 59.2	+1.0
	comp=Z,4.0nm,0.8s,baz=177,slow=2.9,SNR=8.0						
FRU1	Bishkek	57.25	7	P	P	23 31 58.5	+0.1
FRU1				IAmb	IAmb	23 32 31.8	
	comp=Z,21nm,1.6s						
LUWI	Luwuk	57.54	82	P	P	23 31 59.4	-1.6
GNI	Garni	57.58	341	P	P	23 32 01.6	+0.7
GAZ	Gaziantep	57.85	333	P	P	23 32 03.0	+0.2
GAZ				IAmb	IAmb	23 32 22.3	
	comp=Z,26nm,1.7s						
AKH	Akhalkalaki	59.12	340	P	P	23 32 12.6	+1.0
AKH				IAmb	IAmb	23 32 13.9	
	comp=Z,10nm,1.0s						
WMQ	Urumqi	61.01	18	P	P	23 32 25.5	+1.1
WMQ				pP	pP	23 32 30.9	+0.1
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,220nm,4.7s						
WMQ				LR	LR		
	comp=Z,480nm,25.9s						
WMQ				LR	LR		
	comp=Z,1μm,29.0s						
WMQ				LR	LR		
	comp=Z,690nm,28.7s						
WMQ	Urumqi	61.01	18	P	P	23 32 24.5	+0.1
LZH	Lanzhou	61.43	34	*e*P	P	23 32 28.8	+1.2
LZH				pmax	pmax		
	comp=Z,12nm,1.1s						
LZH				pmax	pmax		
	comp=Z,170nm,5.4s						
LZH				LR	LR		
	comp=Z,220nm,17.3s						
LZH				LR	LR		
	comp=Z,290nm,18.0s						
LZH				LR	LR		
	comp=Z,350nm,18.5s						
BRTR	Keskin Array B	61.55	332	P	P	23 32 28.9	+0.6
	comp=Z,4.7nm,1.1s,baz=140,slow=7.9,SNR=15						
BRTR	Keskin Array B	61.55	332	P	P	23 32 28.2	0.0
BR131	Keskin Array S	61.55	332	P	P	23 32 28.5	+0.2
BR131				IAmb	IAmb	23 32 30.0	
	comp=Z,11nm,1.3s						
KIV	Kislovodsk	61.67	341	P	P	23 32 28.4	-0.6
KIV				IAmb	IAmb	23 32 42.0	
	comp=Z,13nm,1.4s						
GTA	Gaotai	61.91	29	⇓P	P	23 32 31.4	+0.7
GTA				pP	pP	23 32 35.8	-1.2
GTA				sP	sP	23 32 38.3	-1.2
GTA				pmax	pmax		
	comp=Z,12nm,1.0s						
GTA				pmax	pmax		
	comp=Z,110nm,4.6s						
GTA				LR	LR		
	comp=Z,160nm,21.3s						
GTA				LR	LR		
	comp=Z,130nm,21.9s						
GTA				LR	LR		
	comp=Z,200nm,20.0s						
MAKZ	Makanchi	62.37	12	P	P	23 32 33.2	-0.2
MAKZ				IAmb	IAmb	23 32 34.4	
	comp=Z,5.6nm,1.0s						
MK31	Makanchi Array	62.42	13	IAmb	IAmb	23 32 34.6	
	comp=Z,12nm,1.4s						
MKAR	Makanchi Array	62.42	13	P	P	23 32 33.5	-0.3
	comp=Z,3.1nm,0.8s,baz=208,slow=8.6,SNR=32						
MKAR				PcP	PcP	23 33 13.7	+0.5
	comp=Z,2.0nm,0.9s,baz=188,slow=5.3,SNR=4.7						
MKAR	Makanchi Array	62.42	13	P	P	23 32 33.2	-0.6
XAN	Xi'an	62.95	39	P	P	23 32 37.5	-0.2
XAN				pmax	pmax		
	comp=Z,11nm,1.0s						
XAN				pmax	pmax		
	comp=Z,130nm,4.9s						
XAN	Xi'an	62.95	39	IAmb	IAmb	23 32 38.7	
	comp=Z,13nm,1.1s						
MANT	Manisa	63.07	328	P	P	23 32 37.4	-1.2
MDUB	Mudurnu	63.28	331	P	P	23 32 39.5	-0.3
ABKAR	Akbulak array	63.39	356	P	P	23 32 39.9	-0.3
ASAR	Alice Springs	64.36	110	P	P	23 32 46.5	-0.8
	comp=Z,3.3nm,0.9s,baz=270,slow=6.0,SNR=26						
ASAR	Alice Springs	64.36	110	P	P	23 32 46.3	-1.0
AS31	Alice Springs	64.36	110	P	P	23 32 46.6	-0.7
WRA	Warramunga Arr	65.14	106	P	P	23 32 52.0	-0.4
	comp=Z,5.3nm,1.0s,baz=270,slow=6.1,SNR=8.4						
WRA	Warramunga Arr	65.14	106	P	P	23 32 52.4	-0.1
WB0	Warramunga Arr	65.21	105	P	P	23 32 52.1	-0.7
WB0				IAmb	IAmb	23 33 05.2	
	comp=Z,10nm,1.1s						
WR0	Warramunga Arr	65.33	106	P	P	23 32 53.0	-0.6
WR0				IAmb	IAmb	23 33 00.8	
	comp=Z,11nm,1.1s						
KURBB	Kurchatov Arra	65.44	9	P	P	23 32 53.9	+0.3
	comp=Z,3.4nm,0.8s,baz=210,slow=7.1,SNR=12						
KURK	Kurchatov	65.55	9	P	P	23 32 53.9	-0.4
KURK	Kurchatov	65.55	9	IAmb	IAmb	23 32 55.4	
	comp=Z,7.8nm,1.1s						
ITM	Ithomi	65.83	322	P	P	23 32 57.4	+0.9
AGG	Agios Georgios	66.84	324	P	P	23 33 01.8	-1.2
AGG				IAmb	IAmb	23 33 21.8	
	comp=Z,18nm,1.5s						
BRVK	Borovoye	67.06	3	P	P	23 33 03.8	-0.1
BRVK				IAmb	IAmb	23 33 04.9	
	comp=Z,7.1nm,0.9s						
NJ2	Nanjing	68.31	47	*e*P	P	23 33 13.4	+1.1
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
FNA	Florina	68.58	325	P	P	23 33 14.1	+0.2
FNA				IAmb	IAmb	23 33 21.2	
	comp=Z,9.5nm,1.2s						
VTS	Vitosha	68.85	327	⇓P	P	23 33 15.4	-0.2
VTS	Vitosha	68.85	327	IAmb	IAmb	23 33 23.7	
	comp=Z,9.3nm,1.3s						
HHC	Hu-ho-hao-te	69.08	35	*e*P	P	23 33 18.6	+1.6
HHC				pmax	pmax		
	comp=Z,64nm,1.1s						
HHC				pmax	pmax		
	comp=Z,280nm,4.9s						
HHC				LR	LR		

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      comp=Z,520nm,17.3s
HHC                               LR        LR
      comp=Z,350nm,17.3s
HHC                               LR        LR
      comp=Z,690nm,17.0s
TOA0  Torodi Ar. Sit     69.29 290  P         P          23 33 19.4 +0.7
TOA0                                IAmb      IAmb       23 33 26.2
      comp=Z,13nm,1.4s
TORD  Torodi Ar. Bea     69.29 290  P         P          23 33 19.1 +0.4
      comp=Z,2.2nm,1.1s,baz=100,slow=6.2,SNR=5.9
VRI   Vrincioaia         69.51 332 ⇑P         P          23 33 21.0 +1.5
ZAA0  Zalesovo Array     69.72  12  IAmb      IAmb       23 33 21.2
      comp=Z,9.5nm,1.1s
ZALV  Zalesovo Beam      69.72  12  P         P          23 33 20.1 -0.4
      comp=Z,4.2nm,0.8s,baz=207,slow=6.2,SNR=17
ZALV  Zalesovo Beam      69.72  12  P         P          23 33 20.1 -0.5
TAM   Tamanrasset        69.73 301  P         P          23 33 22.1 +0.5
VOIR                     69.98 331 ⇑P         P          23 33 22.9 +0.5
SNAA  Sanae              70.04 198  P         P          23 33 24.0 +1.5
SNAA                                IAmb      IAmb       23 33 29.8
      comp=Z,27nm,1.8s
TIP   Timpagrande        70.22 321  P         P          23 33 25.1 +1.0
TIP                                 IAmb      IAmb       23 33 32.4
      comp=Z,12nm,1.3s
STKA  Stephens Creek     70.48 119  P         P          23 33 27.0 +1.2
      comp=Z,2.8nm,0.8s,baz=310,slow=4.8,SNR=3.4
ARU   Arti               70.62 356  P         P          23 33 25.9 -0.1
ARU                                 IAmb      IAmb       23 33 27.6
      comp=Z,19nm,1.4s
PDG   Podgorica          70.86 325 ⇓P         P          23 33 27.9 +0.1
PDG   Podgorica          70.86 325  IAmb      IAmb       23 33 35.8
      comp=Z,9.1nm,1.0s
GZR   Gura Zlata         71.05 329 ⇑P         P          23 33 30.2 +1.2
SONM  Songino Array      71.44  27  P         P          23 33 32.2 +0.8
      comp=Z,5.5nm,0.9s,baz=215,slow=6.6,SNR=36
SONM  Songino Array      71.44  27  P         P          23 33 32.2 +0.8
BURAR Bucovina Array     71.51 332 ⇑P         P          23 33 32.9 +1.2
BURAR Bucovina Array     71.51 332  P         P          23 33 31.2 -0.6
ULN   Ulaanbaatar        71.76  28  P         P          23 33 32.6 -0.7
ULN                                 IAmb      IAmb       23 33 41.2
      comp=Z,12nm,1.6s
BZS   Buzias             71.79 329 ⇑P         P          23 33 33.8 +0.5
DRGR                     72.08 330 ⇑P         P          23 33 36.2 +1.1
AKASG Malin Array Be     72.20 336  P         P          23 33 35.1 -0.5
      comp=Z,1.4nm,0.7s,baz=134,slow=4.9,SNR=7.8
SGRT  San Giovanni R     72.43 323  P         P          23 33 37.2 -0.2
TRPA  Tarpa              73.12 331 ⇓P         P          23 33 42.6 +1.4
KIC   Kosan Boka         73.14 281  eP        P          23 33 43.2 +1.1
      comp=Z,98nm,1.9s
TLY   Talaya             73.25  23  P         P          23 33 42.7 +0.7
DBIC  Dimbokro           73.33 281  P         P          23 33 43.2 -0.1
      comp=Z,3.4nm,0.8s,baz=159,slow=7.5,SNR=4.0
DBIC  Dimbokro           73.33 281  P         P          23 33 42.5 -0.7
DBIC                                IAmb      IAmb       23 33 50.6
      comp=Z,21nm,1.4s
LIC   Lamto              73.37 281  eP        P          23 33 44.5 +1.0
      comp=Z,13nm,0.8s
OBN   Obninsk            73.39 343  P         P          23 33 42.7 +0.1
TIC   Toumodi            73.48 281  eP        P          23 33 44.4 +0.2
BLY   Banja Luka         73.52 326  P         P          23 33 43.5 -0.2
BLY                                 IAmb      IAmb       23 33 56.7
      comp=Z,16nm,1.5s
INTR  Introdacqua        73.68 322  P         P          23 33 45.0 +0.2
KOLS  Kolonicke sedl     73.82 332  eP        pP         23 33 55.4 +3.7
AQU   L'Aquila           74.18 322  P         P          23 33 47.8 +0.1
AQU                                 IAmb      IAmb       23 34 00.3
      comp=Z,12nm,1.2s
PSZ   Piszkesteto        74.24 330  P         P          23 33 47.4 -0.5
NRCA  Norcia             74.64 322  IAmb      IAmb       23 33 51.3
      comp=Z,12nm,1.3s
VYHS  Vyhne              75.15 330  eP        P          23 33 53.6 +0.5
ARSA  Arzberg            76.01 327  eP        P          23 33 59.3 +1.2
      comp=Z,4.8nm,0.8s
CTAO  Charters Tower     76.20 108  P         P          23 33 58.0 -1.8
CONA  Conrad Observa     76.27 328  eP        P          23 34 00.5 +0.9
      comp=Z,13nm,1.5s
MYKA  Terra Mystica      76.63 326  eP        P          23 34 03.7 +2.0
      comp=Z,0.7nm,0.4s
STAL  STALIGIAL          76.92 325  P         P          23 34 03.3  0.0
STAL                                IAmb      IAmb       23 34 38.1
      comp=Z,12nm,1.2s
TEOL  Teolo              76.97 324  P         P          23 34 03.3 -0.2
TEOL                                IAmb      IAmb       23 34 05.6
      comp=Z,5.6nm,0.8s
MOA   Molln              77.05 327  eP        P          23 34 04.8 +0.9
      comp=Z,11nm,1.2s
KBA   Koelnbreinsper     77.07 326  eP        P          23 34 04.6 +0.4
      comp=Z,5.8nm,1.5s
ABTA  Abfaltersbach      77.32 325  eP        P          23 34 06.6 +1.0
      comp=Z,7.2nm,1.3s
KSAR  Wonju Array Be     77.45  46  P         P          23 34 06.9 +0.5
KS19  Wonju Array Si     77.47  46  P         P          23 34 06.5  0.0
KSRS  Korea Array        77.48  46  P         P          23 34 06.5 -0.1
      comp=Z,1.9nm,0.9s,baz=260,slow=6.9,SNR=3.7
KLMR  Klimovskoe         77.73 347  eP        P          23 34 05.8 -1.6
KLMR                                AMP                  23 34 11.7
      comp=Z,50nm,2.2s
GEC2  GERESS Array S     77.97 328  P         P          23 34 08.9 -0.3
WTTA  Wattenberg         78.11 326 i P        P          23 34 10.6 +0.5
      comp=Z,5.2nm,0.7s
WATA  Walderalm          78.19 326  eP        P          23 34 11.8 +1.3
      comp=Z,2.8nm,0.7s
KHC   Kasperske Hory     78.21 328  eP        P          23 34 09.2 -1.2
PRU   Pruhonice          78.25 329  eP        P          23 34 11.6 +1.0
SQTA  Sankt Quirin       78.32 325  eP        P          23 34 11.5 +0.3
      comp=Z,1.9nm,0.6s
MOTA  Moosalm            78.45 325  eP        P          23 34 11.9 -0.1
      comp=Z,4.0nm,1.0s
FETA  Feichten           78.47 325  eP        P          23 34 13.6 +1.6
      comp=Z,5.7nm,1.2s
SBA   Scott Base         78.47 168  P         P          23 34 11.4  0.0
RETA  Reutte             78.72 325  eP        P          23 34 13.7 +0.4
      comp=Z,5.2nm,1.4s
HIA   Hailar             78.90  33  P         P          23 34 14.1 -0.2
HIA                                 IAmb      IAmb       23 36 36.1
      comp=Z,4.8nm,0.6s
CLL   Collm              79.84 329  P         P          23 34 19.3  0.0
CLL                                 IAmb      IAmb       23 34 32.7
      comp=Z,27nm,1.9s
ESBB  Sonseca Array      84.21 313  P         P          23 34 43.0 +0.4
ESDC  Sonseca Array      84.21 313  P         P          23 34 43.3 +0.7
      comp=Z,2.7nm,0.8s,baz=100,slow=4.3,SNR=7.2
ESDC  Sonseca Array      84.21 313  P         P          23 34 43.5 +0.9
PAB   San Pablo          84.43 313  P         P          23 34 43.5 -0.2
PAB                                 IAmb      IAmb       23 34 52.0
      comp=Z,9.5nm,1.1s
MJAR  Matsushiro Arr     84.53  50  P         P          23 34 44.7 +0.5
      comp=Z,1.4nm,0.7s,baz=253,slow=5.0,SNR=4.8
MJAR  Matsushiro Arr     84.53  50  P         P          23 34 44.1 -0.1
LVZ   Lovozero           84.96 349  P         P          23 34 45.8 +0.1
NC602 NORSAR Array S     86.30 336  P         P          23 34 51.9 -0.5
ARCES ARCESS Array B     88.21 347  P         P          23 35 01.4 -0.1
RES   Resolute Bay      118.58 354  PKP       PKPdf      23 40 57.6 -0.4
      comp=Z,1.1nm,0.8s,baz=317,slow=5.6,SNR=5.3
ILAR  Eielson Array     124.66  16  PKP       PKPdf      23 41 08.3 -1.7
      comp=Z,1.0nm,1.0s,baz=320,slow=3.1,SNR=7.3
ILAR  Eielson Array     124.66  16            PKPdf      23 41 08.6 -1.4
SCHQ  Schefferville     125.49 329  PKP       PKiKP      23 41 13.2 +0.9
      comp=Z,1.2nm,0.9s,baz=315,slow=5.7,SNR=3.2
BCAR  Beaver Creek A    127.39  16            PKiKP      23 41 16.4 +0.5
YKA   Yellowknife Ar    131.75   0  PKP       PKPdf      23 41 23.2 -0.4
      comp=Z,0.6nm,0.8s,baz=334,slow=12,SNR=5.2
YKA                                 PP        PP         23 43 41.9 -1.2
      comp=Z,0.4nm,0.9s,baz=5.3,slow=6.4,SNR=4.0
JFWS  Jewell Farm       144.85 329  pPKPdf    PKiKP      23 41 53.1 +1.2
DGMT  Dagmar            144.87 349  pPKPdf    PKiKP      23 41 54.7 +2.8
TZTN  Tazewell          144.90 315  pPKPdf    PKiKP      23 41 54.9 +2.6
R49A  Shelbyville       145.01 319            PKiKP      23 41 53.9 +1.6
HODGE Hodges            145.11 310            PKiKP      23 41 54.9 +2.2
BLO   Bloomington       145.33 321            PKiKP      23 41 55.3 +2.3
P46A  Rosedale          145.46 322  pPKPdf    PKiKP      23 41 55.8 +2.5
TKL   Tuckaleechee C    145.51 314  PKPbc     PKPab      23 41 51.5 +1.7
      comp=Z,7.0nm,1.2s,baz=53,slow=11,SNR=4.4
TKL   Tuckaleechee C    145.51 314            PKiKP      23 41 56.7 +3.2
WCI   Wyandotte Cave    145.76 320            PKPdf      23 41 49.9 +0.1
O44A  Mansfield         145.85 324            PKPab      23 41 51.4 +0.5
NEW   Newport           145.91   4  PKPbc     PKPab      23 41 50.9  0.0
      comp=Z,18nm,0.9s,baz=350,slow=2.9,SNR=23
NEW   Newport           145.91   4            PKPab      23 41 51.6 +0.6
EGMT  Eagleton          146.08 355            PKPab      23 41 51.4 -0.2
C09A  Chrisman Ranch    146.28   5            PKPab      23 41 52.5 +0.1
LAO   LASA Array        146.95 350            PKPbc      23 41 53.9 +0.3
E07A  Sunnyside         147.34   8            PKPab      23 41 56.1 -0.3
MSO   Missoula          147.45   0            PKPbc      23 41 55.7 +0.6
WVT   Waverly           148.00 318            PKPbc      23 41 56.5 -0.3
CCM   Cathedral Cave    148.85 324            PKPbc      23 41 59.4 +0.5
RSSD  Black Hills       148.98 346            PKiKP      23 42 00.0 -0.6
YNE   Yellowstone No    149.09 355            PKiKP      23 42 01.9 +0.9
MCMT  McKenzie Canyo    149.44 358            PKiKP      23 42 01.8 +0.2
SNOW  Snow King Moun    150.69 355  PKPab     PKPab      23 42 10.9 +0.5
MFID  Camas Ranch       150.82   3            PKiKP      23 42 04.9 +0.6
K22A  Casper            150.92 349            PKiKP      23 42 04.4 -0.3
BW06  Boulder Array     151.26 353  PKPab     PKPab      23 42 12.2 -0.6
PD31  Pinedale Array    151.26 353  PKPab     PKPab      23 42 11.5 -1.2
PDAR  Pinedale Array    151.26 353  PKPbc     PKPbc      23 42 04.7 -0.3
      comp=Z,3.9nm,0.7s,baz=350,slow=3.6,SNR=3.7
PDAR  Pinedale Array    151.26 353            PKPbc      23 42 04.9  0.0
PDAR                                PKPab     PKPab      23 42 12.0 -0.8
YBH   Yreka Blue Hor    151.51  14  PKPbc     PKiKP      23 42 06.2 +0.4
      comp=Z,0.9nm,0.5s,baz=251,slow=4.1,SNR=3.9
MOD   Modoc Plateau     151.83  10            PKiKP      23 42 07.4 +0.8
HWUT  Hardware Ranch    152.60 356  PKPab     PKPab      23 42 14.4 -3.8
MIAR  Mount Ida         152.63 321            PKiKP      23 42 08.9 +0.7
MIAR                                PKPab     PKPab      23 42 18.6 +0.1
NVAR  Mina Array Bea    155.54   8  PKPbc     PKPbc      23 42 15.0
      comp=Z,1.1nm,0.8s,baz=358,slow=2.2,SNR=5.5
NVAR                                PKPab     PKPab      23 42 31.4 +0.5
      comp=Z,2.3nm,0.9s,baz=359,slow=3.0,SNR=7.1
NVAR  Mina Array Bea    155.54   8            PKPab      23 42 31.7 +0.8
TXAR  Lajitas Array     162.18 329  PKPab     PKPab      23 42 59.0 -0.8
      comp=Z,1.1nm,0.9s,baz=76,slow=5.3,SNR=5.6
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INET ***15*** *23:26:05.7, 13°.16N×89°.72W, h9^{km}, ML4.0*

SNET ***15*** *23:26:05.2±0.9, 13°.15N×89°.82W, h27^{km}±3^{km}, ML4.3*

UCR ***15*** *23:26:05.3±1.0, 13°.16N×89°.81W, h28^{km}±4^{km}, ML4.2, mb4.4(NEIC)*

IDC ***15*** *23:26:06.0±3.7, 13°.42N×89°.10W, h50^{km}±29^{km}, mb3.8/12, mb1 4.0/13, mb1mx3.7/42, mbtmp4.1/13, ML4.1/1, MS3.5/7, Ms1 3.5/7, ms1mx3.3/47, Error ellipse: s-maj=29.3km s-min=23.0km az=65.0*

NEIC ***15*** *23:26:09.3±1.8, 13°.37N±0°.08×89°.56W±0°.07, h78^{km}±6^{km}, Error ellipse: s-maj=12.9km s-min=8.0km az=212.0*

GCG ***15*** *23:26:12.7±0.5, 13°.61N×90°.04W, h37^{km}±151^{km}, MD4.3*

ISC 15 23:26:06.5±0.9, **13°.28N**±0°.06×**89°.73W**±0°.04, **h53**^{km}±7^{km}, **n153**, σ**1^{s}.36**/160, **mb4.3**/29, **MS3.5**/5, **1C-7D, El Salvador**

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Code  Station Name         Δ°   AZ°   Phase ID                Time      Res
                                      Op        ISC          h  m  s    ISC
LALI  Alcalda de L        0.45  62  eP        Pn         23 26 17.4 +0.1
LALI                                eS        Sn         23 26 25.3 +0.1
LALI  Alcalda de L        0.45  62  eP        Pn         23 26 17.4 +0.1
LALI                                eS        Sn         23 26 25.3 +0.1
CEVE  Cerro Verde         0.56  10  eP        Pn         23 26 19.3 +0.4
CEVE                                eS        Sn         23 26 30.1 +2.3
CEVE                                 IAML                23 26 35.2
      comp=Z,25μm,0.3s
CEVE  Cerro Verde         0.56  10  eP        Pn         23 26 19.3 +0.4
CEVE                                eS        Sn         23 26 30.1 +2.3
CEVE                                 IAML                23 26 35.2
      comp=Z,25μm,0.3s
SBLS  San Blas            0.57  10  eP        Pn         23 26 19.3 +0.2
SBLS  San Blas            0.57  10  eP        Pn         23 26 19.3 +0.2
SNJE  San Jose            0.60  11⇓eP         Pn         23 26 19.8 +0.4
SNJE  San Jose            0.60  11⇓eP         Pn         23 26 19.8 +0.4
RTR   El Retiro           0.62   7  eP        Pn         23 26 20.1 +0.4
RTR   El Retiro           0.62   7  eP        Pn         23 26 20.1 +0.4
BOQS  Boqueron            0.63  44⇓eP         Pn         23 26 20.4 +0.7
BOQS                                eS        Sn         23 26 32.7 +3.4
SNET  Serv Nac Est T      0.63  50  eP        Pn         23 26 19.9 +0.3
SNET                                eS        Sn         23 26 31.4 +2.3
SNET                                 IAML                23 26 37.7
      comp=Z,6μm,0.4s
SNET  Serv Nac Est T      0.63  50  eP        Pn         23 26 19.9 +0.3
SNET                                eS        Sn         23 26 31.4 +2.3
SNET                                 IAML                23 26 37.7
      comp=Z,6μm,0.4s
SNET  Serv Nac Est T      0.63  50   Pn       Pn         23 26 20.5 +0.9
SNET                                 Sn       Sn         23 26 31.0 +1.9
UEES  Universidad Ev      0.64  47  eP        Pn         23 26 20.4 +0.6
UEES                                eS        Sn         23 26 31.2 +1.8
UEES  Universidad Ev      0.64  47  eP        Pn         23 26 20.4 +0.6
UEES                                eS        Sn         23 26 31.2 +1.8
LOMA  Loma Larga          0.65  56⇓eP         Pn         23 26 20.4 +0.5
LOMA                                eS        Sn         23 26 32.0 +2.4
LOMA  Loma Larga          0.65  56⇓eP         Pn         23 26 20.4 +0.5
LOMA                                eS        Sn         23 26 32.0 +2.4
OPAM  Oficina de Pla      0.67  50  eP        Pn         23 26 20.6 +0.5
OPAM                                 IAML                23 26 40.0
      comp=Z,5μm,0.3s
OPAM  Oficina de Pla      0.67  50  eP        Pn         23 26 20.6 +0.5
OPAM                                 IAML                23 26 40.0
      comp=Z,5μm,0.3s
UESS  Universidad de      0.67  49  eP        Pn         23 26 20.9 +0.7
UESS  Universidad de      0.67  49  eP        Pn         23 26 20.9 +0.7
UDBS  Universidad Do      0.70  52  eP        Pn         23 26 21.0 +0.5
UDBS  Universidad Do      0.70  52  eP        Pn         23 26 21.0 +0.5
UNIC  Universidad Ca      0.72  14  eP        Pn         23 26 21.5 +0.7
UNIC  Universidad Ca      0.72  14  eP        Pn         23 26 21.5 +0.7
AEIL  Aeropuerto Ilo      0.72  55  eP        Pn         23 26 21.7 +0.9
AEIL  Aeropuerto Ilo      0.72  55  eP        Pn         23 26 21.7 +0.9
LFRS  El Faro             0.73  62  eP        Pn         23 26 21.3 +0.4
LBRS  Las Brisas          0.81  55  eP        Pn         23 26 22.8 +0.9
UESV  Universidad de      0.98  69  eP        Pn         23 26 25.0 +0.9
UESV  Universidad de      0.98  69  eP        Pn         23 26 25.0 +0.9
IXG   Ixpaco              1.13 322⇑iP         Pn         23 26 26.4 +0.1
LLGN  La Laguna           1.16  41  eP        Pn         23 26 27.6 +1.0
LLGN  La Laguna           1.16  41  eP        Pn         23 26 27.6 +1.0
MTO3  Montecristo         1.17  18  eP        Pn         23 26 28.4 +1.5
MTO3  Montecristo         1.17  18  eP        Pn         23 26 28.4 +1.5
COEB  Comit de Eme        1.18  79  eP        Pn         23 26 27.5 +0.6
COEB  Comit de Eme        1.18  79  eP        Pn         23 26 27.5 +0.6
TECA  Tecapa              1.21  80  eP        Pn         23 26 27.7 +0.4
TECA  Tecapa              1.21  80  eP        Pn         23 26 27.7 +0.4
PACA  Pacayal             1.38  82  eP        Pn         23 26 30.5 +1.0
PACA                                 IAML                23 26 56.3
      comp=Z,14μm,0.4s
PACA  Pacayal             1.38  82  eP        Pn         23 26 30.5 +1.0
PACA                                 IAML                23 26 56.3
      comp=Z,14μm,0.4s
RANC  El Ranchito         1.41  83  eP        Pn         23 26 31.1 +1.2
RANC                                eS        Sn         23 26 51.3 +3.8
RANC  El Ranchito         1.41  83  eP        Pn         23 26 31.1 +1.2
RANC                                eS        Sn         23 26 51.3 +3.8
NBG   Las Nubes           1.44 335⇓eP         Pn         23 26 32.7 +2.3
JUCU  Jucuar¡n            1.44  91  eP        Pn         23 26 30.3  0.0
JUCU                                 IAML                23 26 52.3
      comp=Z,2μm,0.5s
JUCU  Jucuar¡n            1.44  91  eP        Pn         23 26 30.3  0.0
JUCU                                 IAML                23 26 52.3
      comp=Z,2μm,0.5s
FUG   Fuego 3             1.59 317⇓eP         Pn         23 26 32.9 +0.4
FAGO  Alcalda de S        1.63  75  eP        Pn         23 26 33.5 +0.7
FAGO  Alcalda de S        1.63  75  eP        Pn         23 26 33.5 +0.7
LCND  La Caada            1.79  89  eP        Pn         23 26 35.6 +0.6
LCND                                eS        Sn         23 27 00.0 +3.4
LCND  La Caada            1.79  89  eP        Pn         23 26 35.6 +0.6
LCND                                eS        Sn         23 27 00.0 +3.4
MRL   Marmol              1.79   1  eP        Pn         23 26 37.9 +2.6
CNCH  Conchagua           1.84  90  eP        Pn         23 26 36.4 +0.5
CNCH  Conchagua           1.84  90  eP        Pn         23 26 36.4 +0.5
APG   El Apazote          1.86 337  P         Pn         23 26 37.4 +1.2
      comp=Z,62nm,0.3s,baz=157,slow=8.5,SNR=283
APG                                 S         Sn         23 27 03.6 +4.9
      comp=Z,100nm,0.3s,baz=358,slow=7.0,SNR=7.5
ERG   Entre ros, C        2.13 303  eP        Pn         23 26 40.1 +0.4
CSGN  Cosiguina Volc      2.13  98            Pn         23 26 40.9 +1.1
STG3  Santiaguito 3,      2.29 309  eP        Pn         23 26 42.3 +0.3
TGUH  Tegucigalpa,Un      2.51  72            Pn         23 26 46.1 +1.1
CCIG  Comitan             3.79 322            Pn         23 27 04.8 +2.2
ACON  Acoyapa             4.63 106  Pn        Pn         23 27 15.1 +1.1
ESPN  Las Esperanzas      5.40 101            Pn         23 27 26.1 +1.6
JTS   Las Juntas de       5.54 122  P         Pn         23 27 27.7 +1.2
      comp=Z,1.9nm,0.3s,baz=22,slow=1.4,SNR=8.9
JTS                                 S         Sn         23 28 27.6 -1.2
      baz=220,slow=23,SNR=1.1
JTS                                 Lg        Lg         23 28 47.0
      comp=Z,1.7nm,0.3s,baz=171,slow=23,SNR=11
JTS   Las Juntas de       5.54 122            Pn         23 27 28.4 +1.9
CMIG  Matias Romero       6.26 308  P         Pn         23 27 37.6 +1.3
      comp=Z,2.6nm,0.3s,baz=96,slow=9.6,SNR=34
CMIG                                S         Sn         23 28 43.9 -2.6
      comp=Z,6.8nm,0.3s,baz=71,slow=18,SNR=6.2
CMIG                                LR        LR         23 30 33.0
      comp=Z,515nm,21.7s,baz=136,slow=40
TEIG  Tepich              7.05  11  P         Pn         23 27 48.8 +1.7
      comp=Z,11nm,0.3s,SNR=18
TLIG  Tlapa               9.53 298            Pn         23 28 25.8 +4.6
833A  Chaparral WMA,     17.47 330            P          23 30 07.5 +0.4
346A  Big Creek Wild     18.03   1  P         Pn         23 30 11.2 -2.1
344A  Westbrook Farm     18.11 357  P         P          23 30 14.1  0.0
344A                                IAmb      IAmb       23 30 32.1
      comp=Z,29nm,1.1s
FLOC  Florencia          18.14 129  P         P          23 30 15.8 +1.2
342A  Flagon Creek P     18.17 353  P         P          23 30 15.3 +0.6
342A                                IAmb      IAmb       23 30 24.7
      comp=Z,39nm,1.1s
SDDR  Presa de Saban     18.59  70  P         P          23 30 18.0 -1.6
SDDR                                IAmb      IAmb       23 30 19.2
      comp=Z,50nm,1.5s
456A  Hilliard           18.76  21  P         P          23 30 20.4 -0.8
456A                                IAmb      IAmb       23 30 27.6
      comp=Z,17nm,0.8s
VBMS  Vicksburg          18.87 358  P         Pn         23 30 22.8 -0.6
SDV   Santo Domingo      19.23 101  LR        LR         23 38 23.6
      comp=Z,104nm,21.7s,baz=278,slow=40
SDV   Santo Domingo      19.23 101  P         P          23 30 26.5 -0.3
143A  Socs Landing,      19.40 356  P         Pn         23 30 28.7 -1.1
143A                                IAmb      IAmb       23 30 40.5
      comp=Z,31nm,1.2s
237A  Washetta, Mont     19.45 344  P         Pn         23 30 30.0 -0.5
237A                                IAmb      IAmb       23 30 43.6
      comp=Z,14nm,1.1s
JCT   Junction City      19.48 333  P         Pn         23 30 30.0 -0.9
WHTX  Lake Whitney,      19.93 340  P         Pn         23 30 35.1 -0.9
WHTX                                IAmb      IAmb       23 30 37.5
      comp=Z,12nm,0.8s
Z41A  Richland Creek     20.09 352  P         Pn         23 30 37.0 -0.9
Z41A                                IAmb      IAmb       23 30 43.7
      comp=Z,22nm,0.8s
257A  Skidaway Islan     20.25  22  P         P          23 30 35.6 -1.9
Z51A  Franklin           20.38  11  P         P          23 30 39.1 +0.3
WLAR  White Oak Lake     20.55 352  P         Pn         23 30 42.5 -0.9
WLAR                                IAmb      IAmb       23 30 55.2
      comp=Z,23nm,1.1s
TX31  Lajitas Ar. Si     20.56 323  P         Pn         23 30 42.9 -0.7
TX32  Lajitas Array      20.56 323  P         P          23 30 41.9 +0.9
TXAR  Lajitas Array      20.56 323  P         Pn         23 30 44.0 +0.4
      comp=Z,2.0nm,0.6s,baz=148,slow=11,SNR=14
TXAR  Lajitas Array      20.56 323  P         Pn         23 30 42.9 -0.7
CCAR  Cane Creek         20.63 355  P         P          23 30 42.2 +0.6
CCAR                                IAmb      IAmb       23 31 00.5
      comp=Z,27nm,1.2s
Y49A  Blount Mountai     20.71   8  P         P          23 30 41.2 -1.2
OXF   Oxford             21.14   1  P         P          23 30 47.3 +0.3
ABTX  Abilene, Hawle     21.29 336  P         P          23 30 48.7  0.0
FPAL  Fort Paine         21.50   9  P         P          23 30 50.5 -0.4
UALR  University of      21.53 354  P         P          23 30 52.0 +0.7
UALR                                IAmb      IAmb       23 31 09.2
      comp=Z,26nm,1.2s
W35A  Tecumseh           22.72 345  P         P          23 31 05.4 +1.5
WVT   Waverly            22.82   4  P         P          23 31 05.2 +0.3
WVT                                 IAmb      IAmb       23 31 21.9
      comp=Z,7.1nm,0.9s
TKL   Tuckaleechee C     22.92  13  P         P          23 31 04.1 -2.0
      comp=Z,2.0nm,0.6s,baz=203,slow=11,SNR=2.8
TKL                                 LR        LR         23 40 28.7
      comp=Z,210nm,21.1s,baz=188,slow=38
TKL   Tuckaleechee C     22.92  13  P         P          23 31 06.7 +0.6
TKL                                 IAmb      IAmb       23 31 21.5
      comp=Z,10nm,1.0s
FNO   Franklin           22.96 344  P         P          23 31 05.9 -0.6
HICK  Hickman            23.17   1  P         P          23 31 10.1 +1.6
PARMO Parma              23.29 360  P         P          23 31 11.0 +1.3
MNTX  Cornudas Mount     23.30 324  P         P          23 31 09.7 -0.2
U49A  Red Boiling Sp     23.41   8  P         P          23 31 11.3 +0.5
U49A                                IAmb      IAmb       23 31 12.6
      comp=Z,14nm,1.2s
PBMO  Poplar Bluff       23.41 359  P         P          23 31 09.9 -0.9
W57A  Gilead             23.49  20  P         P          23 31 11.4 -0.1
W57A                                IAmb      IAmb       23 31 20.6
      comp=Z,6.8nm,0.9s
S39A  Bolivar            24.52 353  P         P          23 31 20.3 -0.8
S39A                                IAmb      IAmb       23 31 36.8
      comp=Z,8.2nm,1.1s
CCM   Cathedral Cave     24.71 357  P         P          23 31 23.4 +0.6
CCM                                 IAmb      IAmb       23 31 37.2
      comp=Z,7.8nm,0.9s
WCI   Wyandotte Cave     25.04   6  P         P          23 31 25.2 -0.5
WCI                                 IAmb      IAmb       23 31 43.1
      comp=Z,9.7nm,0.9s
Q51A  Peebles            26.26  11  P         P          23 31 36.3 -0.5
Q51A                                IAmb      IAmb       23 31 52.8
      comp=Z,22nm,1.5s
PV09  Paradox Valley     30.46 329  P         P          23 32 15.4 +0.8
WVNY  West Valley, N     30.58  16  P         P          23 32 13.6 -1.7
WVNY                                IAmb      IAmb       23 32 30.0
      comp=Z,6.9nm,0.9s
ECSD  EROS Data Cent     30.92 350            P          23 32 17.2 -1.0
ECSD                                IAmb      IAmb       23 32 36.6
      comp=Z,4.2nm,1.1s
PFO   Pinyon Flats O     31.64 314  LR        LR         23 48 06.6
      comp=Z,77nm,18.9s,baz=119,slow=41
SHPR  Sheep Range        32.48 320  P         P          23 32 33.5 +1.3
COWI  Conover            32.72   1  P         P          23 32 32.6 -1.4
COWI                                IAmb      IAmb       23 32 33.7
      comp=Z,5.4nm,1.1s
E43A  Lone Tree Farm     33.07   3  P         P          23 32 36.4 -0.7
PD31  Pinedale Array     34.02 333  P         P          23 32 46.2 +0.6
PDAR  Pinedale Array     34.02 333  PcP       PcP        23 35 22.6  0.0
      comp=Z,0.4nm,0.6s,baz=117,slow=4.8,SNR=5.9
PDAR                                LR        LR         23 49 12.0
      comp=Z,71nm,19.8s,baz=164,slow=41
PDAR  Pinedale Array     34.02 333  P         P          23 32 45.1 -0.6
AGMN  Agassiz Nation     35.29 353  IAmb      IAmb       23 33 09.2
      comp=Z,6.2nm,0.9s
ELK   Elko               35.32 326  LR        LR         23 48 59.7
      comp=Z,86nm,18.4s,baz=134,slow=39
NV11  Mina Array Sit     35.54 320  P         P          23 32 59.9 +1.1
NV11                                IAmb      IAmb       23 33 02.3
      comp=Z,4.6nm,0.8s
OMMB  Old Mammoth Mi     35.60 318  P         P          23 32 59.9 +0.4
OMMB                                IAmb      IAmb       23 33 02.7
      comp=Z,3.1nm,0.9s
NVAR  Mina Array Bea     35.63 320  P         P          23 33 02.0 +2.4
      comp=Z,4.5nm,0.7s,baz=135,slow=8.5,SNR=26
NVAR                                PcP       PcP        23 35 28.5 +1.1
      comp=Z,1.7nm,0.9s,baz=135,slow=4.1,SNR=7.0
NVAR  Mina Array Bea     35.63 320  P         P          23 33 01.3 +1.6
NVAR                                          PcP        23 35 28.1 +0.7
MDPB  Devils Postpil     35.66 318  P         P          23 33 00.6 +0.7
MDPB                                IAmb      IAmb       23 33 03.1
      comp=Z,3.8nm,0.8s
SAO   San Andreas Ge     36.77 315  P         P          23 33 09.9 +0.8
PNTR  Pine Nut           36.84 320  P         P          23 33 11.6 +1.7
PNTR                                IAmb      IAmb       23 33 13.3
      comp=Z,5.5nm,0.9s
DGMT  Dagmar             37.09 344  P         P          23 33 11.8 +0.2
DGMT                                IAmb      IAmb       23 33 13.0
      comp=Z,7.4nm,0.9s
ULM   Lac du Bonnet      37.21 353  P         P          23 33 11.2 -1.4
      comp=Z,2.3nm,0.8s,baz=163,slow=9.2,SNR=5.3
BEKR  Beckworth          37.77 320  P         P          23 33 18.3 +0.5
WVOR  Wild Horse Val     38.34 325  P         P          23 33 22.2 -0.2
MOD   Modoc Plateau      38.96 323  P         P          23 33 28.1 +0.4
YBH   Yreka Blue Hor     40.30 321  LR        LR         23 52 30.8
      comp=Z,100nm,21.9s,baz=152,slow=39
SCHQ  Schefferville      45.16  19  P         P          23 34 16.1 -1.8
      comp=Z,3.4nm,0.7s,baz=213,slow=5.8,SNR=9.8
SCHQ  Schefferville      45.16  19  IAmb      IAmb       23 34 17.1
      comp=Z,5.9nm,1.1s
FCC   Fort Churchill     45.52 357  P         P          23 34 19.9 -0.6
FCC                                 IAmb      IAmb       23 34 19.9
      comp=Z,2.9nm,0.8s
YKA   Yellowknife Ar     52.25 346  P         P          23 35 11.4 -0.7
      comp=Z,0.5nm,0.4s,baz=146,slow=8.1,SNR=16
YKA                                 pP        pP         23 35 25.5 -0.9
      comp=Z,1.1nm,0.8s,baz=145,slow=8.1,SNR=5.5
FRB   Frobisher Bay      52.54  12  P         P          23 35 11.9 -2.3
      comp=Z,2.1nm,0.3s,baz=178,slow=4.3,SNR=19
PLCA  Paso Flores        56.60 163  P         P          23 35 43.9 -0.1
      comp=Z,4.5nm,1.1s,baz=260,slow=13,SNR=3.1
RES   Resolute Bay       61.47 358  P         P          23 36 15.8 -1.4
      comp=Z,1.1nm,0.4s,baz=175,slow=8.4,SNR=15
RES   Resolute Bay       61.47 358  IAmb      IAmb       23 36 23.9
      comp=Z,2.4nm,1.1s
ILAR  Eielson Array      64.38 336  P         P          23 36 36.5 -0.2
      comp=Z,0.2nm,0.5s,baz=104,slow=5.9,SNR=3.8
ARCES ARCESS Array B     86.12  19  P         P          23 38 39.8 -1.7
      comp=Z,2.9nm,1.0s,baz=286,slow=3.7,SNR=6.0
TORD  Torodi Ar. Bea     88.39  77  P         P          23 38 49.2 -4.3
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Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,0.5nm,0.8s,baz=285,slow=5.7,SNR=4.3						
KSH	Kashi	125.81	14	PKP	PKPdf	23 45 00.3	-2.7
KSH				sPKP		23 45 37.3	
KSH				PP	PP	23 46 55.8	+1.3
KSH				PKS	PKSdf	23 48 35.9	-3.8
KSH				SKKS		23 53 38.9	
WRA	Warramunga Arr	137.35	255	PKP	PKPdf	23 45 27.1	+2.0
	comp=Z,0.5nm,0.7s,baz=89,slow=2.7,SNR=4.8						
WRA	Warramunga Arr	137.35	255		PKPdf	23 45 25.6	+0.6
ASAR	Alice Springs	137.50	249	PKP	PKPdf	23 45 27.4	+2.1
	comp=Z,0.6nm,0.9s,baz=100,slow=2.5,SNR=4.0						
CMAR	Chiang Mai Arr	147.33	345	PKPbc	PKPdf	23 45 43.9	+1.1
	comp=Z,1.7nm,0.4s,baz=335,slow=3.1,SNR=11						

ANF ***15*** *23:27:02.6±0.8, 40°.63N×124°.07W, h18^{km}, ML2.7/8, Error ellipse: s-maj=8.8km s-min=2.6km az=62.0*

NEIC ***15*** *23:27:03.8±1.9, 40°.60N±0°.02×124°.06W±0°.07, h25^{km}±9^{km}, Error ellipse: s-maj=7.5km s-min=1.8km az=101.0*

NCEDC ***15*** *23:27:03.9±1.8, 40°.58N±0°.04×124°.1W±0°.1, h18^{km}±5^{km}, ML2.8/21, Error ellipse: s-maj=12.0km s-min=4.7km az=78.0*

ISC 15 23:27:03.2±1.0**, 40°.57N**±0°.02×**124°.14W**±0°.04**, h32**^{km}±6^{km}**, n86,** σ**1**^{s}**00**/97**, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMPM	Mount Pierce	0.16	175		Pb	23 27 08.8	-0.7
KMPM					Sb	23 27 12.8	-0.9
KCTM	Capetown	0.18	237		Pb	23 27 09.6	0.0
KCTM					Sb	23 27 14.5	+0.7
JCC	Jacoby Creek,	0.26	19	Pg	Pb	23 27 09.3	-1.1
JCC				Sg	Sb	23 27 13.9	-1.3
KCRM	Chalk Rock	0.28	121		Pb	23 27 10.2	-0.6
KSMM	Slide Mountain	0.39	184		Pb	23 27 12.5	+0.4
KHMM	Horse Mountain	0.43	46		Pb	23 27 12.6	-0.3
KHMM					Sb	23 27 19.6	+0.1
KCSM	Cold Springs	0.48	94		Pb	23 27 13.5	-0.1
KMRM	Mail Ridge	0.48	137		Pb	23 27 14.0	+0.5
KMRM					Sn	23 27 21.9	+0.7
KRPM	Rodgers	0.59	8		Pb	23 27 15.0	-0.3
KPPM	Pickett Peak	0.63	111		Pb	23 27 15.9	-0.1
KHBM	Hayfork Bally	0.70	83		Pb	23 27 16.6	-0.6
KBSM	Bell Springs	0.78	147		Pb	23 27 18.2	-0.2
KOMM	Orleans Mounta	0.88	36		Pb	23 27 19.1	-1.0
KIPM	Iron Peak	0.91	146		Pb	23 27 20.3	-0.4
KRMB	Red Mountain	0.96	10		Pb	23 27 20.3	-1.3
KRMB					Sb	23 27 32.7	-1.4
KCPM	Cahto Peak	0.98	154		Pb	23 27 20.5	-1.4
KBNM	Bluenose Ridge	0.99	133		Pb	23 27 21.4	-0.5
LBPM	Beegum Peak	0.99	104		Pb	23 27 20.7	-1.3
LGPM	Granite Peak	1.05	71		Pb	23 27 21.5	-1.4
KFPM	Farley Peak	1.08	149		Pn	23 27 22.1	-0.1
O02D	Mt. Diablo Mer	1.10	111		Pn	23 27 22.4	-0.1
O02D	Mt. Diablo Mer	1.10	111	P	Pn	23 27 22.2	-0.3
	baz=293,SNR=52						
O02D				S	Sb	23 27 37.8	-0.2
	baz=293						
N02D	Trinity Center	1.16	69		Pn	23 27 23.0	-0.3
N02D	Trinity Center	1.16	69	P	Pn	23 27 23.0	-0.3
	baz=250,SNR=136						
WDC	Whiskeytown Da	1.22	89	Pn	Pn	23 27 23.6	-0.3
LBKM	Bonanza King	1.23	65		Pn	23 27 24.1	-0.1
KRKM	Rackout Spring	1.25	144		Pn	23 27 24.8	+0.3
GTC	Three Chop Rid	1.25	159		Pn	23 27 24.2	-0.3
M02C	Callahan	1.27	49		Pn	23 27 24.7	0.0
M02C	Callahan	1.27	49	P	Pn	23 27 24.7	0.0
	baz=229,SNR=210						
M02C				S	Sn	23 27 41.2	+0.4
	baz=229						
KSXB	Camp Six Broad	1.27	9		Pn	23 27 24.6	-0.2
GROM	Round Mountain	1.30	120		Pn	23 27 25.4	+0.2
GVV	Valley View	1.38	125		Pn	23 27 26.7	+0.4
GASB	Alder Springs	1.43	130		Pn	23 27 27.3	+0.4
GNAM	Navarro Ridge	1.43	164		Pn	23 27 26.7	-0.2
KTRM	Thompson Ridge	1.45	23		Pn	23 27 27.4	+0.1
LAMM	Antelope Mount	1.54	47		Pn	23 27 28.8	+0.2
YBH	Yreka Blue Hor	1.58	42		Pn	23 27 29.4	+0.3
YBH	Yreka Blue Hor	1.58	42		Pn	23 27 29.6	+0.5
GHOM	Hamilton Openi	1.59	163		Pn	23 27 28.7	-0.5
LSHM	Sage Hen Hill	1.61	81		Pn	23 27 29.9	+0.4
L02E	Cave Junction	1.63	14		Pn	23 27 30.1	+0.4
L02E	Cave Junction	1.63	14	P	Pn	23 27 30.1	+0.4
	baz=193,SNR=103						
L02E				S	Sn	23 27 50.4	+0.7
	baz=193						
GCK	Clark Valley	1.66	128		Pn	23 27 31.9	+1.8
LGBM	Gray Butte	1.66	62		Pn	23 27 31.2	+0.9
M03C	McCloud	1.68	65		Pn	23 27 31.6	+1.1
LMPM	Military Pass	1.75	58		Pn	23 27 33.1	+1.6
HOPS	Hopland Field	1.78	152	Pn	Pn	23 27 32.8	+1.1
GGUM	Gualala	1.78	164		Pn	23 27 31.1	-0.7
GSNM	Snow Mountain	1.79	156		Pn	23 27 32.9	+1.0
LHEM	Herd Peak	1.79	53		Pn	23 27 33.3	+1.2
LDBM	Digger Butte	1.80	94		Pn	23 27 32.1	+0.1
O03E	Paynes Creek	1.80	98		Pn	23 27 32.1	0.0
O03E	Paynes Creek	1.80	98	P	Pn	23 27 32.0	-0.1
	baz=280,SNR=17						
B040	Montague	1.81	45		Pn	23 27 32.9	+0.8
LBFM	Black Fox Moun	1.87	65		Pn	23 27 34.2	+1.0
LGMM	Garner Mountai	2.02	59		Pn	23 27 36.2	+1.1
LRDM	Redding Peak	2.04	92		Pn	23 27 36.5	+1.1
HATC	Hat Creek Radi	2.05	82		Pn	23 27 36.7	+1.2
LTIM	Timbered Crate	2.10	72		Pn	23 27 36.9	+0.7
M04C	Macdoel	2.11	54		Pn	23 27 37.5	+1.1
M04C	Macdoel	2.11	54	P	Pn	23 27 37.4	+1.0
	baz=235						
MGL	Magalia	2.12	110		Pn	23 27 36.5	+0.1
LMHM	Little Mount H	2.13	61		Pn	23 27 37.5	+0.8
LBCM	Butte Creek Ri	2.13	82		Pn	23 27 37.3	+0.6
L04D	Klamath Falls	2.15	39		Pn	23 27 39.0	+2.1
L04D	Klamath Falls	2.15	39	P	Pn	23 27 38.8	+2.0
	baz=220,SNR=65						
L04D				S	Sn	23 28 04.6	+2.2
	baz=220						
K02D	Willamette Mer	2.15	9	P	Pn	23 27 37.4	+0.5
	baz=189,SNR=47						
K02D				S	Sn	23 28 03.0	+0.5
	baz=189						
HUMO	Hull Mountain	2.22	23	Pn	Pn	23 27 38.6	+0.9
SUTB	Sutter Butte	2.25	126		Pn	23 27 38.1	-0.1
ORV	Oroville	2.27	116		Pn	23 27 39.3	+1.0
ORV	Oroville	2.27	116		Pn	23 27 38.9	+0.6
ORV	Oroville	2.27	116		Pn	23 27 39.5	+1.1
J01E	Myrtle Point	2.59	3	S	Sn	23 28 13.0	-0.1
	baz=183						
MCCM	Marconi Confer	2.61	158	Pn	Pn	23 27 45.2	+2.1
NOLM	Olema	2.74	157		Pb	23 27 50.0	-1.5
AFDM	Forest Hills D	2.93	123		Pn	23 27 49.7	+2.2
BEKR	Beckworth	2.98	102		Pb	23 27 53.4	-2.2
MOD	Modoc Plateau	3.18	64		Pn	23 27 52.5	+1.4
RUBR	Rubicon Trail	3.42	115	Pn	Pn	23 27 56.1	+1.6
J05D	Fort Rock, OR	3.47	38	P	Pn	23 27 57.1	+2.0
	baz=219,SNR=7.2						
VCNR	Virginia City	3.68	109	Pn	Pn	23 27 59.1	+1.1
PAHR	Pah Rah Range	3.75	102		Pn	23 28 00.1	+1.3
PNTR	Pine Nut	3.79	112		Pn	23 28 01.1	+1.4
PINE	Pine Mountain	4.00	35	Pn	Pn	23 28 03.6	+1.2
BVYM	Vineyard	4.37	150		Pn	23 28 05.5	-1.9
BVYM					Pb	23 28 13.4	-5.9

EAF ***15*** *23:44:56.3±0.9, 28°.43S×27°.30E, h0^{km}±35^{km}, MD3.9*

PRE ***15*** *23:44:59.6±1.2, 28°.09S×26°.76E, h2^{km}, ML2.9*

ISC 15 23:44:58.5±1.0**, 28°.10S**±0°.05×**26°.94E**±0°.06**, h7**^{km}**, n17,** σ**2**^{s}**33**/30**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRYS	Parys	1.23	18	eP	Pg	23 45 24.7	+2.5
PRYS				eS	Sn	23 45 41.4	+2.2
PRYS				AML	AML	23 45 43.2	
	comp=Z,480nm,0.4s						
BOSA	Boshof	1.56	251	i P	Pb	23 45 28.5	+0.7
BOSA	Boshof	1.56	251	eP	Pn	23 45 27.4	+0.6
BOSA				eS	Sn	23 45 46.2	-1.2
BOSA				AML	AML	23 45 50.7	
	comp=Z,152nm,0.6s						
BOSA	Boshof	1.56	251	i P	Pb	23 45 28.5	+0.7
SWZ	Schweizer	1.69	302	eP	Pn	23 45 29.1	+0.5
SWZ				eS	Sn	23 45 50.3	-0.3
SWZ				AML	AML	23 46 04.3	
	comp=Z,205nm,0.8s						
KLOF	Kloof	1.85	19	eP	Pb	23 45 32.5	-0.1
KLOF				eS	Sb	23 45 57.8	+1.8
KLOF				AML	AML	23 46 01.3	
	comp=Z,465nm,0.2s						
LBTB	Lobatse	3.30	338	i P	Pn	23 45 53.9	+3.2
LBTB	Lobatse	3.30	338	eP	Pn	23 45 51.7	+1.0
LBTB				eS	Sn	23 46 30.5	+0.3
LBTB				AML	AML	23 46 45.5	
	comp=Z,164nm,0.6s						
LBTB	Lobatse	3.30	338	i P	Pn	23 45 53.9	+3.2
BUFB	Buffelsbos	6.32	197	eP	Pn	23 46 34.6	+2.6
BUFB				eS	Sn	23 47 42.7	-1.7
BUFB				AML	AML	23 47 50.1	
	comp=Z,4.5nm,0.9s						
MSNA	Messina	6.38	27	i P	Pn	23 46 32.7	-0.2
MSNA				i S	Sn	23 47 43.1	-3.0
MSNA	Messina	6.38	27	eP	Pn	23 46 35.6	+2.6
MSNA				eS	Sn	23 47 45.2	-0.9
MSNA				AML	AML	23 47 51.0	
	comp=Z,7.1nm,0.2s						
MSNA	Messina	6.38	27	i P	Pn	23 46 32.7	-0.2
MSNA				i S	Sn	23 47 43.1	-3.0
MATP	Matopo	7.77	11	i P	Pn	23 46 53.4	+1.1
MATP				i S	Sn	23 48 18.4	-2.2
MATP	Matopo	7.77	11	i P	Pn	23 46 53.4	+1.1
MATP				i S	Sn	23 48 18.4	-2.2
TSUM	Tsumeb	12.32	314	i P	Pn	23 47 54.8	+0.3
TSUM				i S	Sn	23 50 06.7	-5.5
TSUM	Tsumeb	12.32	314	i P	Pn	23 47 54.8	+0.3
TSUM				i S	Sn	23 50 06.7	-5.5

BGR ***15*** *23:51:26.1±0.0, 7°.42S×81°.94W, h33^{km}, mb6.1, mB_BB6.4, Ms5.9*

IDC ***15*** *23:51:28.0±0.3, 5°.58S×80°.99W, h0^{km}, mb5.7/36, mb1 5.7/39, mb1mx5.7/48, mbtmp5.6/39, ML4.9/3, MS6.2/32, Ms1 6.2/32, ms1mx6.1/37, Error ellipse: s-maj=12.5km s-min=9.0km az=56.0*

BJI ***15*** *23:51:28.8±0.0, 5°.57S×80°.88W, h10^{km}, mB6.1/40, Ms6.4/67, Ms7 6.3/62*

MOS ***15*** *23:51:31.7±1.2, 5°.57S×81°.01W, h31^{km}, mb6.2/40, MS6.0/44, Error ellipse: s-maj=9.8km s-min=6.1km az=95.8*

VAO ***15*** *23:51:31.7±0.3, 5°.67S×80°.66W, h10^{km}, mb5.9*

NEIC ***15*** *23:51:33.0, 5°.58S×80°.97W, h30^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.80; $M_{\theta\theta}$-0.28; $M_{\phi\phi}$-1.52; $M_{r\theta}$-0.27; $M_{\theta\phi}$-1.00; $M_{\phi r}$1.22; Fault plane solution: $M_0$2.32000×10^{18} NP1:ϕ_s8.21000°, δ61.50000°, λ67.06000°. NP2:ϕ_s229.77000°, δ35.97000°, λ125.67000°. Principal axes: T 2.3330, Plg65.0000°, Azm237.0000°; N -0.0267, Plg20.0000°, Azm20.0000°; P -2.3063, Plg14.0000°, Azm115.0000°;*

NEIC ***15*** *23:51:33.0±2.5, 5°.58S±0°.05×80°.97W±0°.05, h29^{km}±1^{km}, mb6.0/667, Ms_20 6.1/621, Mwb6.2/85, Mww6.3, ML6.2(ARE), Mwc6.3(GCMT) Error ellipse: s-maj=9.3km s-min=6.7km az=225.0*

UCR ***15*** *23:51:34.4±3.2, 5°.58S×80°.35W, h26^{km}±999^{km}, mb6.3(NEIC)*

GCMT ***15*** *23:51:34.0±0.0, 5°.65S×81°.10W, h32^{km}, MW6.3/169, Moment Tensor Solution. s169,c400; s166,c653; Duration: 3^{s}4 Moment tensor: Scale 10^{18}Nm; M_{rr}3.25±.01; $M_{\theta\theta}$-0.53±.01; $M_{\phi\phi}$-2.72±.01; $M_{r\theta}$-0.77±.02; $M_{\theta\phi}$-0.53±.01; $M_{\phi r}$1.16±.02; Best double couple: $M_0$3.32100×10^{18} NP1:ϕ_s205.00000°, δ38.00000°, λ112.00000°. NP2:ϕ_s358.00000°, δ56.00000°, λ74.00000°. Principal axes: T 3.6440, Plg74.0000°, Azm224.0000°; N -0.6440, Plg13.0000°, Azm7.0000°; P -2.9980, Plg9.0000°, Azm99.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***15*** *23:51:35, 5°.70S×81°.11W, h32^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}3.13; $M_{\theta\theta}$-0.45; $M_{\phi\phi}$-2.68; $M_{r\theta}$-0.77; $M_{\theta\phi}$-0.58; $M_{\phi r}$1.06; Fault plane solution: $M_0$3.26000×10^{18} NP1:ϕ_s358.00000°, δ55.00000°, λ73.00000°. NP2:ϕ_s207.00000°, δ39.00000°, λ113.00000°. Principal axes: T 3.5036, Plg74.0000°, Azm221.0000°; N -0.5541, Plg14.0000°, Azm8.0000°; P -2.9496, Plg8.0000°, Azm101.0000°;*

NEIC ***15*** *23:51:39, 5°.57S×81°.08W, h30^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}3.01; $M_{\theta\theta}$-0.91; $M_{\phi\phi}$-2.10; $M_{r\theta}$-0.52; $M_{\theta\phi}$-0.54; $M_{\phi r}$1.27; Fault plane solution: $M_0$3.05000×10^{18} NP1:ϕ_s5.00000°, δ57.00000°, λ76.00000°. NP2:ϕ_s209.00000°, δ35.00000°, λ110.00000°. Principal axes: T 3.4019, Plg74.0000°, Azm238.0000°; N -0.8936, Plg11.0000°, Azm13.0000°; P -2.5082, Plg11.0000°, Azm105.0000°;*

ARE ***15*** *23:53:29±0.0, 5°.66S×81°.13W, h39^{km} Error ellipse: s-maj=0.0km s-min=0.0km az=90.0*

ISC 15 23:51:32.3±0.4**, 5°.67S**±0°.03×**80°.94W**±0°.03**, h27**^{km}±2^{km}**, h27**^{km}**:pP-P, n1926,** σ**2**^{s}**35**/1768**, mb6.0**/433**, MS6.1**/394**, 45C-47D, Near coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	Atahualpa	2.91	120	Pn	Pb	23 52 21.2	-2.6
	253nm,0.3s,baz=5.9,slow=8.7,SNR=677						
ATAH				Sn	Sb	23 53 01.9	+2.7
	2μm,0.3s,baz=83,slow=21,SNR=4.2						
ATAH				LR	LR	23 53 44.3	
	comp=Z,566μm,18.4s,baz=275,slow=45						
OTAV	Otavalo	6.37	23	eP	Pn	23 53 05.4	+0.4
OTAV	Otavalo	6.37	23	P	Pn	23 53 04.9	-0.1
OTAV	Otavalo	6.37	23		Pn	23 53 04.9	-0.1
OTAV	Otavalo	6.37	23	eP	Pn	23 53 05.3	+0.3
CMBC	Cumbal	7.27	25	eP	Pn	23 53 18.6	+1.4
NNA	Nana	7.46	147	Pn	Pn	23 53 21.4	+1.8
	57nm,0.3s,baz=298,slow=8.8,SNR=79						
NNA				Sn	Sn	23 54 42.0	-1.5
	113nm,0.3s,baz=197,slow=22,SNR=6.4						
NNA				LR	LR	23 56 51.9	
	comp=Z,115μm,19.0s,baz=302,slow=43						
NNA	Nana	7.46	147		Pn	23 53 20.9	+1.3
GCUF	Volcan Galeras	7.73	28	eP	Pn	23 53 22.7	-1.0
TUMC	Tumaco	7.76	17	eP	Pn	23 53 25.6	+1.9
TUMC	Tumaco	7.76	17		Pn	23 53 24.3	+0.6
CRUC	La Cruz	8.22	29	eP	Pn	23 53 30.3	+0.1
BBAC	Balboa, Cauca	8.48	26	eP	Pn	23 53 31.8	-1.9
SOTA	Rioblanco	8.88	29	eP	Pn	23 53 38.6	-0.8
FLOC	Florencia	8.93	36	eP	Pn	23 53 37.7	-2.0
FLOC	Florencia	8.93	36		Pn	23 53 38.1	-1.6
GR1C	Gorgona, Isla	9.05	18	eP	Pn	23 53 40.5	-0.8
PCON	Cinco Dias	9.15	30	eP	Pn	23 53 42.9	-0.3
POPC	Popayan, Colom	9.20	28	eP	Pn	23 53 41.1	-2.5
MALC	Bahia Malaga	10.27	21	eP	Pn	23 53 56.6	-1.5
MACC	Macarena, Meta	10.51	43	eP	Pn	23 53 57.8	-3.6
PAYG	Puerto Ayora	10.57	298	eP	Pn	23 54 02.1	-0.1
PAYG	Puerto Ayora	10.57	298		Pn	23 54 02.4	+0.2
YOTC	Yotoco, Valle	10.63	26	eP	Pn	23 54 04.2	+1.1
ORTC	Ortega, Tolima	11.08	31	eP	Pn	23 54 05.2	-4.0
PIZC	Pizarro, Choco	11.15	19	eP	Pn	23 54 14.9	+4.7
PLMC	San Jos del P	11.49	24	eP	Pn	23 54 26.5	+12
ANIL	Santa Ana	11.51	29	eP	Pn	23 54 13.7	-1.6
TOLC	Tolima	11.63	29	eP	Pn	23 54 14.8	-2.2
GUVC	San Jose del G	11.64	46	eP	Pn	23 54 13.1	-3.8
VILC	Villavicencio,	12.11	37	eP	Pn	23 54 23.3	-0.2
GUY2C	Guyana, Caldas	12.17	27	eP	Pn	23 54 21.3	-3.2
CVER	Cruz Verde, Cu	12.23	34	eP	Pn	23 54 24.6	-0.7
SOLC	Bahia Solano	12.33	17	eP	Pn	23 54 24.9	-1.4
ROSC	El Rosal	12.36	32	Pn	Pn	23 54 26.5	-0.5
	3.2nm,0.3s,baz=181,slow=13,SNR=4.8						
ROSC				LR	LR	23 59 43.0	
	comp=Z,260μm,19.0s,baz=220,slow=40						
ROSC	El Rosal	12.36	32	eP	Pn	23 54 26.3	-0.7
ROSC	El Rosal	12.36	32		Pn	23 54 26.4	-0.7
CBOC	Ciudad Bolivar	12.47	23	eP	Pn	23 54 23.0	-5.4
CHIC	Chingaza	12.51	35	eP	Pn	23 54 27.1	-1.9
NORC	Norcasia	12.70	29	eP	Pn	23 54 27.6	-3.8
ICCO	Coco Island	12.71	331	⇓eP	Pn	23 54 32.5	+1.1
HELC	Santa Helena	12.96	25	eP	Pn	23 54 29.8	-5.4
PTAC	Punta Ardita,	13.11	14	eP	Pn	23 54 37.9	+0.9
PTGC	Puerto Gaitan,	13.17	42	eP	Pn	23 54 33.3	-4.4
SPBC	San Pablo de B	13.17	31	eP	Pn	23 54 39.3	+1.5
GMAL	Guarumal, Vera	13.35	359	⇓eP	Pn	23 54 42.0	+1.8
AZU	Azuero	13.39	3	⇓iP	Pn	23 54 42.4	+1.6
AZU	Azuero	13.39	3	eP	Pn	23 54 42.2	+1.5
DBBC	Dabeiba	13.46	21	eP	Pn	23 54 41.6	-0.1
PTBC	PUERTO BERRIO,	13.75	28	eP	Pn	23 54 42.4	-3.2
RUSC	La Rusia	13.91	34	eP	Pn	23 54 45.4	-2.8
RUSC	La Rusia	13.91	34		Pn	23 54 46.9	-1.3
UREC	San Jos de Ur	14.38	22	eP	Pn	23 54 53.3	-1.0
ZARC	Zaragoza, Cauc	14.41	25	eP	Pn	23 54 53.5	-1.3
UPD2	Meteti	14.42	12	eP	Pn	23 54 54.9	+0.1
BARC	Barichara	14.43	33	eP	Pn	23 54 55.2	0.0
BRU2	Volcan	14.48	353	eP	Pn	23 54 57.1	+1.4
EDSV	San Vito	14.54	352	eP	P	23 55 00.8	-2.1
ZANG	Zanguenga, Cho	14.57	4	eP	Pn	23 54 59.0	+2.1
BRRC	Barranca, Sant	14.60	30	eP	Pn	23 54 51.0	-6.2
UPA	Univ. de Panam	14.62	5	eP	Pn	23 54 57.3	-0.3
UPA	Univ. de Panam	14.62	5	eP	Pn	23 54 57.4	-0.2
CAPC	Capurgana	14.65	14	eP	Pn	23 54 57.4	-0.6
EDPN	Palmar Norte	14.75	350	eP	P	23 55 03.3	-1.9
BCIP	Isla Barro Col	14.78	4	eP	Pn	23 54 59.1	-0.6
BCIP	Isla Barro Col	14.78	4	P	P	23 55 03.7	-1.7
BCIP	Isla Barro Col	14.78	4	eP	Pn	23 54 58.9	-0.8
BCIP	Isla Barro Col	14.78	4	P	P	23 55 03.7	-1.7
EDBA	Buenos Aires	14.92	351	eP	P	23 55 06.7	-0.4
TAMC	Tame, Arauca	15.10	37	eP	Pn	23 54 59.0	-5.0
EDDO	Dominical	15.11	349	eP	P	23 55 09.7	+0.6
LCBC	Los crdobas,	15.13	18	eP	Pn	23 55 02.0	-2.4
PAMC	Pamplona, Colo	15.32	33	eP	Pn	23 55 06.1	-1.2
LCR2	La Lucha 2	15.61	349	eP	Pn	23 55 11.8	+0.9
OCAC	Ocana	15.77	29	eP	Pn	23 55 08.5	-4.4
HDC	Heredia	15.89	348	⇓eP	Pn	23 55 16.1	+1.6
HDC	Heredia	15.89	348	P	P	23 55 19.2	+1.3
HDC				IAmb	IAmb	23 55 26.5	
	comp=Z,1μm,1.0s						
SMLC	San Martn de	15.92	26	eP	Pn	23 55 11.8	-3.0
SRA1	San Ramn	16.05	347	eP	P	23 55 19.6	-0.1
AP01	Chacalluta	16.32	142	eP	Pn	23 55 19.6	-0.1
JTS	Las Juntas de	16.35	346	Pn	P	23 55 21.6	-1.3
	comp=Z,0.4nm,0.3s,baz=226,slow=11,SNR=17						
JTS				LR	LR	00 00 27.8	
	comp=Z,110μm,20.7s,baz=234,slow=33						
JTS	Las Juntas de	16.35	346	deP	P	23 55 22.3	-0.7
JTS	Las Juntas de	16.35	346	⇓eP	Pn	23 55 20.2	-0.1
JTS	Las Juntas de	16.35	346	P	P	23 55 23.2	+0.2
JTS				IAmb	IAmb	23 55 42.5	
	comp=Z,1μm,1.2s						
LPAZ	La Paz	16.40	131	Pn	Pn	23 55 22.6	+1.2
	comp=Z,2.8nm,0.3s,baz=312,slow=9.1,SNR=123						
LPAZ				LR	LR	00 01 54.8	
	comp=Z,40μm,20.3s,baz=310,slow=38						
LPAZ	La Paz	16.40	131	eP	Pn	23 55 21.8	+0.4
LPAZ	La Paz	16.40	131	eP	Pn	23 55 19.7	-1.7
FORC	Fortuna	16.46	347	eP	P	23 55 25.2	+1.1
GUAI	GUAI	16.48	344	eP	P	23 55 24.6	+0.3
CEDE	Laguna Cedeo	16.48	347	eP	P	23 55 24.2	-0.3
SJCC	San Jacinto, C	16.50	20	eP	Pn	23 55 20.0	-2.1
PB12	IPOC Station P	16.51	142	⇓iP	Pn	23 55 22.5	+0.2
PLVR	Palo Verde	16.51	345	eP	P	23 55 24.6	-0.2
CUI	Cuipilapa	16.76	345	eP	P	23 55 27.6	+0.1
PTEN	Parque Tenorio	16.77	346	eP	P	23 55 28.0	+0.4
COLC	Colonia	16.78	345	eP	P	23 55 28.7	+1.1
ARGC	Ariguani, Magd	16.80	23	⇓eP	Pn	23 55 23.4	-2.6
PB16	IPOC Station P	16.82	139	⇓iP	P	23 55 28.2	-0.5
GUAB	Guayabo de Bag	16.82	345	eP	P	23 55 29.8	+1.6
MESS	Mesas	16.85	345	eP	P	23 55 30.0	+1.5
NY14	Universidad de	16.85	344	eP	P	23 55 29.4	+1.1
GPS2	Hotel Rincn d	16.90	345	eP	P	23 55 31.7	+2.7
GPS3	Bodega del ICE	16.90	345	eP	P	23 55 31.0	+1.9
LAPC	Finca la Perla	16.93	345	eP	P	23 55 29.4	+0.1
BUEV	Buena Vista	16.96	345	eP	P	23 55 31.2	+1.5
ELOV	Elorza	17.00	42	eP	Pn	23 55 23.2	-5.3
BUAI	Buenos Aires	17.01	345	eP	P	23 55 30.1	-0.1
SOCV	Socops	17.12	36	eP	Pn	23 55 23.6	-6.4
CODC	Agustn Codazz	17.21	26	⇓iP	Pn	23 55 28.7	-2.3
PSGC	Pisagua	17.39	144	⇓iP	Pn	23 55 33.1	-0.2
SDV	Santo Domingo	17.74	35	P	Pn	23 55 36.9	-0.9
	comp=Z,9.0nm,0.3s,baz=357,slow=3.4,SNR=26						
SDV				LR	LR	00 03 30.8	
	comp=Z,88μm,19.3s,baz=216,slow=41						
SDV	Santo Domingo	17.74	35	⇓eP	Pn	23 55 33.9	-3.9
SDV	Santo Domingo	17.74	35	P	Pn	23 55 35.3	-2.5
PB11	IPOC Station P	17.79	143	⇓iP	Pn	23 55 38.6	+0.2
PB11	IPOC Station P	17.79	143	P	P	23 55 39.6	+0.6
SAML	Samuel	17.90	102	P	Pn	23 55 35.2	-4.5
SAML				pmax	pmax		
	comp=Z,1μm,1.3s						
SAML	Samuel	17.90	102	P	Pn	23 55 35.2	-4.5
SAML				IAmb	IAmb	23 55 42.8	
	comp=Z,1μm,1.2s						
SAML	Samuel	17.90	102	eP	Pn	23 55 36.9	-2.8
GO01	Chusmiza	18.00	142	P	P	23 55 43.5	+1.9
GO01				IAmb	IAmb	23 56 11.5	
	comp=Z,2μm,1.6s						
SMRC	Santa Marta, M	18.01	22	eP	Pn	23 55 39.3	-1.6
ACON	Acoyapa	18.02	346	P	P	23 55 43.2	+1.8
TA01	Diego Aracena	18.12	146	⇓iP	Pn	23 55 42.0	-0.2
PATCX	Punta Patache	18.34	146	⇓iP	Pn	23 55 46.1	+1.1
PB08	IPOC Station P	18.39	143	⇓iP	Pn	23 55 47.2	+1.3
PB02	IPOC Station P	18.88	147	⇓iP	Pn	23 55 53.4	+1.8
PB01	IPOC Station P	18.89	145	⇓iP	Pn	23 55 53.4	+1.7
PB01	IPOC Station P	18.89	145	P	Pn	23 55 53.3	+1.7
PRVC	Isla de Provid	18.93	359	eP	P	23 55 51.6	+0.3
PB07	IPOC Station P	19.21	147	⇓iP	Pn	23 55 57.3	+1.6
BAUV	El Baul	19.39	42	eP	P	23 55 53.3	-3.1
DABV	Dabajuro	19.41	32	eP	P	23 55 56.1	-0.5
URIC	Uribia, Colomb	19.42	27	eP	P	23 55 54.4	-2.3
PB03	IPOC Station P	19.55	147	⇓iP	Pn	23 56 02.2	+2.6
PB04	IPOC Station P	19.57	149	⇑iP	Pn	23 56 01.3	+1.3
PB04	IPOC Station P	19.57	149	P	Pn	23 56 01.0	+1.0
PB09	IPOC Station P	19.62	146	⇓iP	Pn	23 56 02.2	+1.6
CSGN	Cosiguina Volc	19.66	340	P	Pn	23 56 00.9	0.0
CSGN				IAmb	IAmb	23 56 22.9	
	comp=Z,2μm,1.3s						
PB05	IPOC Station P	19.98	150	⇑iP	Pn	23 56 05.7	+1.0
PB06	IPOC Station P	20.18	148	⇑iP	Pn	23 56 08.0	+0.9
PB10	IPOC Station P	20.36	152	⇑iP	Pn	23 56 09.9	+0.7
PB10	IPOC Station P	20.36	152		Pn	23 56 10.6	+1.4
PB10				IAmb	IAmb	23 56 14.7	
	comp=Z,1μm,1.5s						
LVC	Limon Verde	20.46	147	P	Pn	23 56 10.6	0.0
	comp=Z,50nm,0.7s,baz=316,slow=8.6,SNR=32						
LVC	Limon Verde	20.46	147	P	Pn	23 56 11.8	+1.2
LVC				pmax	pmax		
	comp=Z,1μm,1.3s						
LVC				MLR	MLR		
	comp=Z,57μm,19.0s						
LVC	Limon Verde	20.46	147		Pn	23 56 11.8	+1.2
LVC				IAmb	IAmb	23 56 35.8	
	comp=Z,1μm,1.2s						
LVC	Limon Verde	20.46	147	eP	P	23 56 07.8	-0.6
TGUH	Tegucigalpa,Un	20.59	342	eP	P	23 56 10.6	+1.0
TGUH	Tegucigalpa,Un	20.59	342	IAmb	IAmb	23 56 34.0	
	comp=Z,726nm,1.0s						
TGUH				IAMs_20	IAMs_20	00 02 38.1	
	comp=Z,70μm,20.0s						
PB15	IPOC Station P	20.64	149	⇑iP	Pn	23 56 13.2	+0.6
SNET	Serv Nac Est T	20.92	337	P	Pn	23 56 14.5	-1.3
PB14	IPOC Station P	21.39	153	⇑iP	P	23 56 21.0	+2.6
PTGA	Pitinga	21.50	78	P	P	23 56 18.9	-0.4
	comp=Z,840nm,0.8s,baz=261,slow=12,SNR=433						
PTGA				LR	LR	00 05 53.6	
	comp=Z,168μm,18.2s,baz=263,slow=40						
PTGA	Pitinga	21.50	78	P	P	23 56 18.9	-0.4
PTGA				IAmb	IAmb	23 56 21.8	
	comp=Z,805nm,0.8s						
PTGA	Pitinga	21.50	78	eP	P	23 56 18.6	-0.7
PTGA				eS	S	00 00 15.1	-1.6
SIV	San Ignacio	22.02	119	P	P	23 56 25.5	+0.6
	comp=Z,180nm,0.8s,baz=306,slow=9.8,SNR=228						
SIV				LR	LR	00 06 03.3	
	comp=Z,157μm,19.1s,baz=299,slow=40						
APG	El Apazote	22.61	335	P	P	23 56 32.3	+0.9
	comp=Z,94nm,1.0s,baz=181,slow=8.0,SNR=28						
APG				LR	LR	00 04 04.8	
	comp=Z,72μm,18.7s,baz=176,slow=34						
PCRV	Puerto La Cruz	22.61	46	P	P	23 56 32.0	+0.7
	comp=Z,477nm,0.8s,baz=298,slow=3.1,SNR=58						
PCRV				LR	LR	00 06 29.7	
	comp=Z,107μm,19.4s,slow=40						
ORIV	Oritupano	22.80	50	eP	P	23 56 35.2	+2.0
PCJ	Portland Cotta	23.56	9	⇑iP	P	23 56 43.5	+2.7
MCJ	Malvern	23.66	8	⇓iP	P	23 56 46.5	+4.6
STH	Stony Hill	23.95	10	⇓iP	P	23 56 46.3	+1.8
MTDJ	Mount Denham	23.98	8	eP	P	23 56 46.9	+1.9

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SLA   San Lorenzo       24.05 144⇓iP      P         23 56 49.5 +3.8
GO03  Copiap            24.06 156  P      P         23 56 47.8 +2.2
GO03                               IAmb   IAmb      23 57 09.3
      comp=Z,557nm,1.2s
BBJ   Bamboo Saint A    24.17   9 i P     P         23 56 50.1 +3.4
CCIG  Comitan           24.47 333  IAMs_20 IAMs_20  00 04 43.4
      comp=Z,92µm,20.0s
GUIV  Guiria            24.70  49 eP      P         23 56 50.0 -1.5
FSCY  Frank Sound, G    24.83 359  P      P         23 56 53.6 +1.0
FSCY                                      P         23 56 54.9 +2.4
TPP   Pointe-a-Pierr    25.08  51 eP      P         23 56 57.9 +3.0
TRN   Trinidad (W)      25.32  50 eP      P         23 56 53.8 -3.3
CLDB  Colider           25.40 103 eP      P         23 56 56.9 -1.0
CLDB                              eS      S         00 01 22.8 -0.5
TBH   Brigand Hill      25.48  51 eP      P         23 56 59.1 +0.6
VCA   Vinchina          25.92 154⇑iP      P         23 57 05.5 +2.9
GRFF  Grenada Fort F    25.97  47 eP      P         23 57 06.2 +3.2
GTBY  Guantanamo Bay    26.07  13 eP      P         23 57 05.6 +1.7
GRGR  Grenville         26.09  47 eP      P         23 57 03.1 -1.0
GRGR  Grenville         26.09  47  P      P         23 57 03.1 -1.0
GO04  Tololo Observa    26.18 160  IAMs_20 IAMs_20  00 05 08.8
      comp=Z,45µm,21.0s
GRSS  Sisters           26.23  47 eP      P         23 57 08.8 +3.5
SDDR  Presa de Saban    26.28  21  IAmb   IAmb      23 57 52.1
      comp=Z,454nm,1.2s
TOSP  Speyside          26.39  50 eP      P         23 57 06.7 -0.1
TOSP  Speyside          26.39  50  P      P         23 57 06.7 -0.1
CMIG  Matias Romero     26.49 329  P      P         23 57 07.6 -0.1
      comp=Z,48nm,1.1s,baz=153,slow=7.0,SNR=19
CMIG                               PcP    PcP       00 00 32.0 -0.5
      comp=Z,16nm,0.7s,baz=155,slow=0.3,SNR=6.0
CMIG                               LR     LR        00 05 35.2
      comp=Z,44µm,20.9s,baz=179,slow=32
TEIG  Tepich            26.73 345  LR     LR        00 06 50.5
      comp=Z,62µm,19.6s,baz=318,slow=35
TEIG  Tepich            26.73 345 eP      P         23 57 08.1 -1.6
TEIG  Tepich            26.73 345  P      P         23 57 10.0 +0.2
TEIG                               IAmb   IAmb      23 57 14.8
      comp=Z,592nm,1.3s
TEIG  Tepich            26.73 345  IAMs_20 IAMs_20  00 06 29.6
      comp=Z,59µm,20.0s
SALV  Santo Antonio     26.76 114 eP      P         23 57 10.7 +0.5
SALV                              eS      S         00 01 44.3 -0.5
SC01  Santiago de lo    26.89  22  IAmb   IAmb      23 57 54.1
      comp=Z,570nm,1.1s
SVB   Belmont           27.14  46 eP      P         23 57 12.4 -1.1
SVB   Belmont           27.14  46  P      P         23 57 12.4 -1.1
SVB   Belmont           27.14  46  IAMs_20 IAMs_20  00 08 60.0
      comp=Z,63µm,20.0s
CRPR  Cabo Rojo, PR     27.20  30  IAmb   IAmb      23 57 35.2
      comp=Z,293nm,0.8s
SVCV  St. Vincent, C    27.21  46 eP      P         23 57 12.1 -2.2
MPR   Mayaguez          27.36  30  IAmb   IAmb      23 57 34.2
      comp=Z,582nm,0.9s
MCLT  Moule a Chique    27.65  46 eP      P         23 57 20.1 +1.9
MCLT  Moule a Chique    27.65  46  P      P         23 57 20.4 +2.3
MCLT                               IAMs_20 IAMs_20  00 09 14.4
      comp=Z,58µm,20.0s
SLB   Belfond           27.66  45 eP      P         23 57 16.2 -2.1
SJG   San Juan          27.77  31  P      P         23 57 19.2  0.0
      comp=Z,277nm,0.7s,baz=206,slow=5.8,SNR=79
SJG                                LR     LR        00 09 44.4
      comp=Z,51µm,21.1s,baz=202,slow=40
SJG   San Juan          27.77  31 eP      P         23 57 18.9 -0.2
SJG   San Juan          27.77  31  P      P         23 57 19.0 -0.2
SJG                                pmax   pmax
      comp=Z,2µm,1.2s
SJG                                MLR    MLR
      comp=Z,48µm,21.0s
SJG   San Juan          27.77  31  P      P         23 57 19.0 -0.2
SJG   San Juan          27.77  31  IAMs_20 IAMs_20  00 09 32.5
      comp=Z,48µm,21.0s
SLAC  Saint Lucia, A    27.81  45 eP      P         23 57 19.7 +0.1
SLBI  Saint Lucia, B    27.84  45 eP      P         23 57 18.9 -0.9
HUMP  Col San Antoni    27.95  32  IAmb   IAmb      23 57 43.7
      comp=Z,728nm,1.3s
MTP   Monte Pirata      28.07  32  IAmb   IAmb      23 57 42.4
      comp=Z,414nm,1.1s
FDF   Fort de France    28.21  44 eP      P         23 57 21.9 -1.3
FDF   Fort de France    28.21  44  P      P         23 57 21.9 -1.3
FDF                                pmax   pmax
      comp=Z,419nm,1.3s
FDF                                MLR    MLR
      comp=Z,34µm,19.0s
FDF   Fort de France    28.21  44  P      P         23 57 21.9 -1.3
FDF   Fort de France    28.21  44  IAmb   IAmb      23 57 43.6
      comp=Z,419nm,1.3s
BBGH  Gun Hill          28.29  49 eP      P         23 57 24.7 +0.8
CUPR  Culebra, Puert    28.39  33  IAmb   IAmb      23 57 45.4
      comp=Z,268nm,1.1s
CFA   Coronel Fontan    28.41 157  P      P         23 57 26.5 +1.7
      comp=Z,87nm,1.0s,baz=338,slow=8.4,SNR=64
CFA                                LR     LR        00 07 04.1
      comp=Z,50µm,21.8s,baz=358,slow=33
AQDB  Aquidauana        28.58 123 eP      P         23 57 27.0 +0.6
STVI  Saint Thomas      28.61  33  IAmb   IAmb      23 57 48.7
      comp=Z,225nm,0.9s
GRTK  Grand Turk        28.67  19  P      P         23 57 27.9 +0.7
DWS   Wesley            28.69  42 eP      P         23 57 26.5 -0.9
PEL   Peldehue          28.95 162  IAmb   IAmb      23 57 33.1
      comp=Z,593nm,1.6s
MLYT  Lee's Yard        28.96  39 eP      P         23 57 28.3 -1.5
SABA  Saba              29.00  37 eP      P         23 57 33.2 +3.1
SABA  Saba              29.00  37  IAMs_20 IAMs_20  00 10 02.6
      comp=Z,61µm,20.0s
SKOC  St. Kitts, UWI    29.05  38 eP      P         23 57 30.0 -0.6
SEUS  St. Eustatius     29.06  37 eP      P         23 57 26.5 -4.1
SEUS  St. Eustatius     29.06  37  P      P         23 57 29.9 -0.7
SEUS                               IAmb   IAmb      23 57 40.9
      comp=Z,335nm,0.9s
SEUS                               IAMs_20 IAMs_20  00 09 54.8
      comp=Z,59µm,21.0s
SKI   Saint Kitts       29.08  38 eP      P         23 57 28.3 -2.6
SKI   Saint Kitts       29.08  38  P      P         23 57 28.3 -2.6
SKI                                pmax   pmax
      comp=Z,1µm,1.4s
SKI                                MLR    MLR
      comp=Z,66µm,21.0s
SKI   Saint Kitts       29.08  38  P      P         23 57 28.3 -2.6
SKI   Saint Kitts       29.08  38  IAMs_20 IAMs_20  00 09 50.5
      comp=Z,67µm,21.0s
SMRT  St. Maarten       29.43  36 eP      P         23 57 33.3 -0.7
SMRT  St. Maarten       29.43  36  IAMs_20 IAMs_20  00 10 15.8
      comp=Z,39µm,20.0s
ANWB  Willy Bob         29.92  39 eP      P         23 57 36.1 -2.2
ANWB  Willy Bob         29.92  39  P      P         23 57 36.1 -2.2
MDP   Montagnes des     30.21  70  P      P         23 57 40.8 -0.2
      comp=Z,110nm,0.7s,baz=248,slow=9.5,SNR=36
ARAG  Araguaiana, MT    30.26 112 eP      P         23 57 41.4 -0.1
C2SB  Chapadao do Su    30.32 118 eP      P         23 57 42.1 +0.2
GO05  Huala             30.36 165  P      P         23 57 43.1 +1.0
GO05                               IAmb   IAmb      23 57 44.8
      comp=Z,349nm,1.2s
CPUP  Villa Florida     30.50 135  P      P         23 57 44.2 +0.9
      comp=Z,106nm,1.1s,baz=323,slow=9.2,SNR=3.8
CPUP                               LR     LR        00 12 46.9
      comp=Z,39µm,18.7s,baz=298,slow=42
CPUP  Villa Florida     30.50 135  P      P         23 57 44.2 +0.9
CPUP                               pmax   pmax
      comp=Z,237nm,1.2s
CPUP  Villa Florida     30.50 135  IAmb   IAmb      23 57 59.8
      comp=Z,237nm,1.1s
CPUP  Villa Florida     30.50 135 eP      P         23 57 43.8 +0.5
061Z  Ochoppi           31.35   0  P      P         23 57 50.7 -0.1
061Z                               IAmb   IAmb      23 58 07.7
      comp=Z,297nm,1.0s
MOIG  Morelia           32.12 322  P      P         23 57 58.9 +0.9
MOIG                               IAmb   IAmb      23 58 05.4
      comp=Z,724nm,2.0s
TRCB  Terra Rica        32.18 125 eP      P         23 57 58.5 +0.3
TRCB                              eS      S         00 03 10.3 +0.5
060A  Indiantown        32.52   1  IAmb   IAmb      23 58 17.7
      comp=Z,303nm,0.9s
PCMB  Pacaembu          32.80 122 eP      P         23 58 03.3 -0.4
PCMB                              eS      S         00 03 19.6 +0.1
ITRB  Iturama           32.84 118 eP      P         23 58 04.1  0.0
ITQB  Itaqui            33.11 139 eP      P         23 58 08.6 +2.3
SMTB  Santa Maria do    33.22  97 eP      P         23 58 07.3 -0.2
PTGB  Pitanga           33.55 127 eP      P         23 58 10.6 +0.3
DWPF  Disney Wildern    33.59 359  P      P         23 58 11.5 +1.1
DWPF  Disney Wildern    33.59 359  P      P         23 58 11.3 +0.9
      baz=179
BDFB  Brasilia          33.78 110  P      P         23 58 12.6 +0.1
      comp=Z,40nm,0.8s,baz=267,slow=11,SNR=38
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BDFB                               PcP    PcP       00 00 51.3 -0.3
      comp=Z,35nm,0.9s,baz=136,slow=18,SNR=1.8
BDFB                               LR     LR        00 13 02.3
      comp=Z,85µm,19.8s,baz=284,slow=38
BDFB  Brasilia          33.78 110  P      P         23 58 12.8 +0.3
BDFB                               pmax   pmax
      comp=Z,441nm,1.6s
BDFB                               MLR    MLR
      comp=Z,84µm,19.0s
BDFB  Brasilia          33.78 110  P      P         23 58 12.8 +0.3
BDFB                               IAmb   IAmb      23 58 28.2
      comp=Z,441nm,1.6s
IPMB  Ipameri, GO       34.21 114 eP      P         23 58 15.8 -0.3
RPN   Rapa Nui          34.44 229  LR     LR        00 08 26.9
      comp=Z,58µm,21.6s,baz=33,slow=30
ITAB  Concordia         34.80 131 eP      P         23 58 21.1  0.0
ITAB                              eS      S         00 03 49.9 -0.4
656A  Willston          34.87 358  P      P         23 58 20.0 -1.5
656A                               IAmb   IAmb      23 58 43.7
      comp=Z,158nm,0.9s
656A                               IAMs_20 IAMs_20  00 12 07.1
      comp=Z,31µm,20.0s
BB19B Bebedouro         34.94 119 eP      P         23 58 21.7 -0.6
FRTB  Fartura           34.95 123 eP      P         23 58 21.9 -0.5
ZAIG  Zacatecas         35.31 324  IAMs_20 IAMs_20  00 11 06.5
      comp=Z,50µm,18.0s
CPSB  Cacapava Do Su    35.70 137 eP      P         23 58 30.1 +1.4
553A  Crawfordville     35.81 355  IAMs_20 IAMs_20  00 12 28.1
      comp=Z,38µm,20.0s
LPA   La Plata          36.02 147 eP      P         23 58 30.1 -1.3
LPA                                pP     pP        23 58 37.6 -1.7
LPA                                S      S         00 04 22.1  +13
LPA                                SSS    SSS       00 06 38.8
LPA                                PKIKP  PKiKP     00 08 11.3 -6.3
LPA                                SKIKS            00 15 04.5
PLCA  Paso Flores       36.13 167  P      P         23 58 33.7 +1.4
      comp=Z,241nm,1.1s,baz=3.4,slow=10,SNR=108
PLCA                               PcP    PcP       00 00 58.1 +0.2
      comp=Z,45nm,1.0s,baz=334,slow=4.7,SNR=6.0
PLCA                               PKiKP  PKiKP     00 08 17.5 -0.1
      comp=Z,3.5nm,1.0s,baz=259,slow=3.5,SNR=3.8
PLCA                               LR     LR        00 10 21.3
      comp=Z,15µm,20.9s,baz=34,slow=31
PLCA  Paso Flores       36.13 167 eP      P         23 58 33.6 +1.2
PLCA                              eS      S         00 04 12.3 +1.8
456A  Hilliard          36.20 358  IAmb   IAmb      23 58 48.6
      comp=Z,171nm,1.1s
456A                               IAMs_20 IAMs_20  00 13 26.4
      comp=Z,27µm,18.0s
RCLB  Rio Claro- Sao    36.30 121 eP      P         23 58 33.7 -0.3
451A  Vernon            36.38 353  P      P         23 58 34.6 +0.2
451A                               IAmb   IAmb      23 58 53.5
      comp=Z,431nm,1.2s
PLTB  Pedras Altas      36.44 139 eP      P         23 58 35.7 +0.6
545A  Edgard            36.68 346  IAMs_20 IAMs_20  00 15 27.1
      comp=Z,40µm,20.0s
SPB   Sao Paulo         36.84 122 eP      P         23 58 38.3 -0.2
CNLB  Canela            36.88 133 eP      P         23 58 38.1 -0.8
CNLB                              eS      S         00 04 21.9 -0.4
TIGA  Tifton            36.99 356  IAMs_20 IAMs_20  00 13 34.2
      comp=Z,28µm,20.0s
TIGA  Tifton            36.99 356  P      P         23 58 40.4 +0.7
      baz=176,SNR=12
VAO   Valinhos          37.00 121 eP      P         23 58 39.5 -0.5
BRAL  Brewton           37.10 351  IAmb   IAmb      23 59 00.7
      comp=Z,270nm,1.2s
BRAL  Brewton           37.10 351  P      P         23 58 44.0 +3.5
      baz=170,SNR=5.7
352A  Blakely           37.14 354         P         23 58 41.1 +0.2
352A                               IAMs_20 IAMs_20  00 13 09.2
      comp=Z,32µm,20.0s
JANB  Januaria          37.16 107 eP      P         23 58 41.0 -0.4
255A  Hazlehurst        37.42 358  IAmb   IAmb      23 58 47.3
      comp=Z,524nm,1.8s
255A                               IAMs_20 IAMs_20  00 13 55.5
      comp=Z,30µm,19.0s
257A  Skidaway Islan    37.44 360  IAmb   IAmb      23 58 47.7
      comp=Z,202nm,0.8s
OGAUY Aigu              37.45 143 eP      P         23 58 44.2 +0.6
250A  Grady             37.78 353  IAmb   IAmb      23 59 05.7
      comp=Z,348nm,1.2s
735A  Kenedy            37.98 336  IAmb   IAmb      23 58 54.0
      comp=Z,278nm,0.9s
154A  Montrose          38.13 357  IAmb   IAmb      23 59 05.2
      comp=Z,325nm,0.9s
154A                               IAMs_20 IAMs_20  00 14 09.3
      comp=Z,24µm,20.0s
157A  Early Branch      38.14 360  P      P         23 58 51.0 +1.7
      baz=180,SNR=11
HKT   Hockley           38.20 339  P      P         23 58 50.3 +0.5
HKT                                pmax   pmax
      comp=Z,482nm,1.2s
HKT   Hockley           38.20 339  P      P         23 58 50.3 +0.5
HKT                                IAmb   IAmb      23 58 57.4
      comp=Z,482nm,1.2s
833A  Chaparral WMA,    38.20 333  P      P         23 58 50.2 +0.2
      baz=150,SNR=26
158A  Hollywood         38.20   1  P      P         23 58 52.6 +2.7
      baz=181,SNR=12
BSCB  Bom Sucesso       38.21 117 eP      P         23 58 49.2 -1.1
BSCB                              eS      S         00 04 42.6 -0.1
H06S1 SOCORRO T         38.26 310  T      T         00 38 54.0
      SNR=9.8
H06E1 SOCORRO T-PHAS38.26 310      T      T         00 39 06.8
      SNR=43
PARB  Paraibuna         38.27 121 eP      P         23 58 50.4 -0.4
152A  Waverly Hall      38.30 355  IAMs_20 IAMs_20  00 14 05.8
      comp=Z,36µm,20.0s
NHSC  New Hope          38.57   1  P      P         23 58 52.7 -0.3
      baz=181,SNR=50
Z59A  Georgetown, SC    38.73   2  P      P         23 58 56.5 +2.2
      baz=183
Z57A  Bowman            38.76   0  P      P         23 58 54.3 -0.2
      baz=180,SNR=15
VBMS  Vicksburg         38.77 347  IAmb   IAmb      23 58 59.9
      comp=Z,280nm,1.1s
VBMS  Vicksburg         38.77 347  P      P         23 58 55.2 +0.5
      baz=165
Z56A  Williston         38.78 359  IAmb   IAmb      23 59 10.8
      comp=Z,356nm,0.8s
Z56A                               IAMs_20 IAMs_20  00 15 56.7
      comp=Z,23µm,19.0s
Z56A  Williston         38.78 359  P      P         23 58 54.2 -0.5
      baz=179,SNR=13
Z58A  St. Stephen       38.81   1  P      P         23 58 54.2 -0.7
      baz=182,SNR=10
LRAL  Lakeview Retre    38.92 352  P      P         23 58 55.0 -0.9
      baz=170,SNR=43
LRAL                               S      S         00 04 48.9 -3.9
      baz=170
GOGA  Godfrey           38.94 357  IAMs_20 IAMs_20  00 14 44.9
      comp=Z,29µm,20.0s
GOGA  Godfrey           38.94 357  P      P         23 58 54.9 -1.2
      baz=176,SNR=36
GOGA                               S      S         00 04 50.0 -3.1
      baz=176
Z51A  Franklin          38.98 354  IAMs_20 IAMs_20  00 14 16.0
      comp=Z,31µm,20.0s
Z50A  Ashland           39.00 353  P      P         23 58 55.4 -1.2
      baz=172,SNR=47
Z50A                               S      S         00 04 49.6 -4.5
      baz=172
ESAR  Angra dos Reis    39.17 120 eP      P         23 58 58.2 -0.1
Y56A  Pelion            39.25 360  P      P         23 58 57.9 -0.7
      baz=179
NBPS  Pedro II - PI     39.35  90 eP      P         23 58 59.8 -0.2
Y58A  Scranton          39.38   2  P      P         23 58 59.8  0.0
      baz=182,SNR=8.2
Y55A  Saluda            39.40 359  P      P         23 58 58.5 -1.5
      baz=179,SNR=50
Y55A                               S      S         00 04 55.6 -4.4
      baz=179
Y52A  Lilburn           39.43 356  IAMs_20 IAMs_20  00 14 50.9
      comp=Z,33µm,20.0s
Y52A  Lilburn           39.43 356  P      P         23 58 59.2 -1.0
      baz=175,SNR=9.0
Y52A                               S      S         00 04 56.2 -4.3
      baz=175
143A  Socs Landing,     39.44 346  P      P         23 58 59.6 -0.6
143A                               IAmb   IAmb      23 59 25.8
      comp=Z,192nm,0.8s
NATX  Nacogdoches       39.46 341  IAmb   IAmb      23 59 06.6
      comp=Z,344nm,0.8s
NATX  Nacogdoches       39.46 341  P      P         23 59 01.0 +0.6
      baz=158,SNR=35
Y57A  Sumter            39.48   1  P      P         23 58 59.3 -1.2
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Y57A  Sumter            39.48   1  P      P         23 58 59.6 -0.9
      baz=181,SNR=13
Y59A  Loris             39.49   3  IAmb   IAmb      23 59 06.3
      comp=Z,167nm,0.7s
Y59A  Loris             39.49   3  P      P         23 59 00.4 -0.3
      baz=183,SNR=8.9
Y60A  Bolivia           39.54   4  P      P         23 59 01.0 -0.1
Y60A                               IAmb   IAmb      23 59 17.1
      comp=Z,232nm,1.0s
Y60A                               IAMs_20 IAMs_20  00 14 10.8
      comp=Z,25µm,22.0s
435B  Jarrell           39.60 337  IAmb   IAmb      23 59 07.5
      comp=Z,436nm,1.1s
435B  Jarrell           39.60 337  P      P         23 59 02.3 +0.7
      baz=154,SNR=47
435B                               S      S         00 05 00.6 -2.5
      baz=154
HODGE Hodges            39.71 358  IAMs_20 IAMs_20  00 15 34.1
      comp=Z,22µm,19.0s
X57A  Johnson Farm,     39.93   1  P      P         23 59 04.3  0.0
      baz=181
X55A  Gracelyn & Ava    39.93 359  P      P         23 59 03.4 -1.0
      baz=179,SNR=53
X55A                               S      S         00 05 03.4 -4.6
      baz=179
X56A  White Oak         39.95 360  P      P         23 59 03.3 -1.2
      baz=180,SNR=47
X56A                               S      S         00 05 03.9 -4.3
      baz=180
X53A  Estanollee        40.02 357  P      P         23 59 03.7 -1.4
      baz=176,SNR=32
X53A                               S      S         00 05 04.0 -5.3
      baz=176
X54A  Belton            40.02 358  P      P         23 59 04.3 -0.9
      baz=178,SNR=46
X54A                               S      S         00 05 04.9 -4.5
      baz=178
X58A  Rowland           40.04   2  P      P         23 59 06.1 +0.9
X58A  Rowland           40.04   2  P      P         23 59 05.2  0.0
      baz=182
237A  Washetta, Mont    40.06 340  P      P         23 59 06.3 +0.9
X59A  McDuffie Farm,    40.09   3  P      P         23 59 05.3 -0.3
      baz=184
X60A  Albert Glenn T    40.13   4  P      P         23 59 07.3 +1.3
      baz=185,SNR=6.2
X51A  Calhoun           40.19 355  IAMs_20 IAMs_20  00 15 14.0
      comp=Z,34µm,20.0s
X51A  Calhoun           40.19 355  P      P         23 59 04.9 -1.6
      baz=174,SNR=25
X51A                               S      S         00 05 07.5 -4.4
      baz=174
JCT   Junction City     40.23 334  IAmb   IAmb      23 59 12.7
      comp=Z,238nm,1.0s
JCT   Junction City     40.23 334  P      P         23 59 07.5 +0.5
      baz=150,SNR=88
JCT                                S      S         00 05 13.5 +0.8
      baz=150
FPAL  Fort Paine        40.24 354  IAMs_20 IAMs_20  00 15 05.2
      comp=Z,23µm,21.0s
PAULI Pauline           40.28 359  IAmb   IAmb      23 59 23.2
      comp=Z,193nm,0.8s
PAULI                              IAMs_20 IAMs_20  00 15 14.4
      comp=Z,25µm,20.0s
HPIG                    40.30 325  IAmb   IAmb      23 59 12.0
      comp=Z,445nm,1.9s
Z41A  Richland Creek    40.32 345  IAmb   IAmb      23 59 24.8
      comp=Z,256nm,1.0s
Z41A  Richland Creek    40.32 345  P      P         23 59 07.8 +0.2
      baz=162,SNR=25
X48A  Hartselle         40.32 352         P         23 59 07.0 -0.6
W58A  Raeford           40.51   2  P      P         23 59 08.6 -0.5
      baz=183,SNR=9.0
W58A                               S      S         00 05 12.7 -3.8
      baz=183
W54A  Cherokee Point    40.56 358  P      P         23 59 08.5 -1.0
      baz=178,SNR=48
W54A                               S      S         00 05 13.0 -4.3
      baz=178
W56A  Indian Trail      40.59   0  P      P         23 59 08.5 -1.3
      baz=181,SNR=34
W56A                               S      S         00 05 12.7 -5.1
      baz=181
KMSC  Kings Mountain    40.60 359         P         23 59 09.3 -0.5
KMSC                               IAmb   IAmb      23 59 25.8
      comp=Z,286nm,0.9s
KMSC                               IAMs_20 IAMs_20  00 17 08.7
      comp=Z,27µm,22.0s
KMSC  Kings Mountain    40.60 359  P      P         23 59 08.7 -1.2
      baz=179,SNR=92
KMSC                               S      S         00 05 13.9 -4.0
      baz=179
NBPN  Ponto Novo - B    40.61 100 eP      P         23 59 09.3 -1.1
W57A  Gilead            40.62   1  P      P         23 59 08.5 -1.5
      baz=182,SNR=35
W60A  Pink Hill         40.62   4  P      P         23 59 10.2 +0.2
      baz=185,SNR=5.0
WHTX  Lake Whitney,     40.63 338  P      P         23 59 10.2  0.0
WHTX  Lake Whitney,     40.63 338  P      P         23 59 10.3 +0.1
      baz=154,SNR=102
WHTX                               S      S         00 05 19.7 +1.2
      baz=154
W52A  Murphy            40.65 356  IAMs_20 IAMs_20  00 15 48.0
      comp=Z,36µm,20.0s
CCAR  Cane Creek        40.69 346  IAmb   IAmb      23 59 16.8
      comp=Z,574nm,1.2s
W59A  Clinton           40.69   3  P      P         23 59 10.5  0.0
      baz=184
W59A                               S      S         00 05 15.6 -3.6
      baz=184
OXF   Oxford            40.76 349  P      P         23 59 10.4 -0.8
      baz=167,SNR=26
CNNC  Cliffs of the     40.79   4  P      P         23 59 10.6 -0.8
      baz=185
W61A  Ground Anchor     40.80   5  P      P         23 59 11.1 -0.5
      baz=186,SNR=6.2
NBMO  Morrinhos-CE      40.83  89 eP      P         23 59 11.7 -0.5
SJMB  Sao Joao De Ma    40.84 112 eP      P         23 59 11.4 -0.8
W50A  Signal Mountai    40.86 355  IAMs_20 IAMs_20  00 15 44.7
      comp=Z,28µm,20.0s
BBSR  BB Station        40.87  21  P      P         23 59 15.3 +3.2
SWET  Sewanee           40.94 354  IAMs_20 IAMs_20  00 15 25.8
      comp=Z,21µm,20.0s
CPCT  Cooper Cave       41.04 356  IAMs_20 IAMs_20  00 15 50.5
      comp=Z,36µm,20.0s
X43A  Marvell           41.06 347  P      P         23 59 13.6 -0.1
X43A                               IAmb   IAmb      23 59 33.8
      comp=Z,295nm,1.0s
X43A  Marvell           41.06 347  P      P         23 59 13.9 +0.3
      baz=165
TXAR  Lajitas Array     41.10 329  P      P         23 59 13.7 -0.5
      comp=Z,29nm,1.0s,baz=148,slow=7.4,SNR=33
TXAR                               PcP    PcP       00 01 13.3 -0.3
      comp=Z,23nm,0.7s,baz=153,slow=6.4,SNR=7.7
TXAR  Lajitas Array     41.10 329  P      P         23 59 13.6 -0.7
NBPB  Pedra_Branca-C    41.15  92 eP      P         23 59 14.4 -0.4
LPIG  La Paz            41.18 317  P      P         23 59 14.9 +0.1
      comp=Z,34nm,0.3s,baz=250,slow=1.1,SNR=8.7
BSFB  Barra de Sao F    41.18 112 eP      P         23 59 14.5 -0.5
TKL   Tuckaleechee C    41.20 356  P      P         23 59 13.4 -1.4
      comp=Z,199nm,1.1s,baz=168,slow=14,SNR=30
TKL                                LR     LR        00 16 25.6
      comp=Z,33µm,19.0s,baz=175,slow=36
TKL   Tuckaleechee C    41.20 356  IAmb   IAmb      23 59 34.7
      comp=Z,267nm,1.1s
TKL                                IAMs_20 IAMs_20  00 16 14.6
      comp=Z,34µm,19.0s
V54A  Nebo              41.24 359  P      P         23 59 14.2 -1.0
      baz=178,SNR=58
V54A                               S      S         00 05 22.5 -5.0
      baz=178
V56A  Mocksville        41.26   1  P      P         23 59 14.1 -1.2
      baz=181,SNR=10.0
V56A                               S      S         00 05 23.5 -4.3
      baz=181
V58A  Windy Hill, Pi    41.28   2  P      P         23 59 14.7 -0.8
V58A  Windy Hill, Pi    41.28   2  P      P         23 59 14.0 -1.5
      baz=183,SNR=24
V59A  Middlesex         41.29   3  P      P         23 59 14.1 -1.5
      baz=184,SNR=24
V59A                               S      S         00 05 25.0 -3.3
      baz=184
V55A  Taylorsville      41.30 360         P         23 59 15.0 -0.7
V55A                               IAMs_20 IAMs_20  00 17 39.4
      comp=Z,24µm,22.0s
V55A  Taylorsville      41.30 360  P      P         23 59 14.9 -0.8
      baz=180,SNR=6.6
V55A                               S      S         00 05 24.3 -4.1
      baz=180
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W45A	**Hickory Valley**	41.35	350		P	23 59 15.8	-0.3
W45A				IAmb	IAmb	23 59 36.5	
	comp=Z,431nm,1.2s						
V57A	**Coltrane Farms**	41.35	1	P	P	23 59 14.6	-1.5
	baz=182,SNR=26						
V57A				S	S	00 05 25.1	-4.1
	baz=182						
V60A	**Jim Taylor Roa**	41.36	5	P	P	23 59 16.0	-0.1
V60A				IAmb	IAmb	23 59 20.4	
	comp=Z,161nm,0.7s						
V60A	**Jim Taylor Roa**	41.36	5	P	P	23 59 16.6	+0.4
	baz=186,SNR=10.0						
V52A	**Sevierville**	41.37	357		P	23 59 15.3	-0.9
V52A				IAmb	IAmb	23 59 31.9	
	comp=Z,252nm,0.9s						
V52A				IAMs_20	IAMs_20	00 16 20.1	
	comp=Z,32µm,19.0s						
V51A	**Loudon**	41.38	356	IAMs_20	IAMs_20	00 16 11.4	
	comp=Z,39µm,20.0s						
V61A	**Roper**	41.45	5	IAmb	IAmb	23 59 22.0	
	comp=Z,541nm,1.5s						
V61A	**Roper**	41.45	5	P	P	23 59 16.8	0.0
	baz=187,SNR=6.7						
X40A	**Basin Creek Fa**	41.49	345	P	P	23 59 17.3	+0.1
	baz=162,SNR=29						
X40A				S	S	00 05 30.2	-1.1
	baz=162						
V48A	**Smith Brothers**	41.56	353		P	23 59 16.5	-1.3
MIAR	**Mount Ida**	41.74	344	IAmb	IAmb	23 59 36.3	
	comp=Z,254nm,1.0s						
MIAR	**Mount Ida**	41.74	344	P	P	23 59 19.2	-0.1
	baz=161,SNR=109						
MIAR				S	S	00 05 33.2	-1.7
	baz=161						
Z35A	**Perchaven, San**	41.76	339	P	P	23 59 20.0	+0.5
NBIT	**Itapeh - BA**	41.79	106	*e*P	P	23 59 19.6	-0.4
U56A	**King**	41.80	1	P	P	23 59 17.6	-2.2
U56A					P	23 59 19.1	-0.7
U56A	**King**	41.80	1	P	P	23 59 19.1	-0.7
	baz=181,SNR=30						
U56A				S	S	00 05 32.0	-3.8
	baz=181						
U58A	**Oxford**	41.91	3	P	P	23 59 19.4	-1.2
	baz=184,SNR=22						
U58A				S	S	00 05 33.2	-4.1
	baz=184						
U59A	**Littleton**	41.91	4	P	P	23 59 20.3	-0.3
U59A	**Littleton**	41.91	4	P	P	23 59 19.3	-1.3
	baz=185,SNR=12						
U59A				S	S	00 05 34.1	-3.2
	baz=185						
U57A	**Blanch**	41.91	2	P	P	23 59 19.0	-1.6
	baz=182,SNR=25						
U57A				S	S	00 05 32.4	-5.0
	baz=182						
NBMA	**Muriti-CE**	41.92	95	*e*P	P	23 59 20.8	-0.3
U55A	**TA2, Sparta**	41.95	360	P	P	23 59 19.8	-1.3
	baz=180,SNR=38						
U55A				S	S	00 05 35.3	-2.8
	baz=180						
U54A	**Nelsons Funny**	41.98	359	P	P	23 59 20.3	-1.0
U54A				IAMs_20	IAMs_20	00 17 12.3	
	comp=Z,25µm,19.0s						
U54A	**Nelsons Funny**	41.98	359	P	P	23 59 19.9	-1.4
	baz=179,SNR=25						
U54A				S	S	00 05 33.5	-5.0
	baz=179						
U61A	**Possum Corner**	41.99	5	P	P	23 59 20.8	-0.5
U61A				IAmb	IAmb	23 59 26.5	
	comp=Z,579nm,1.6s						
U61A	**Possum Corner**	41.99	5	P	P	23 59 20.4	-0.9
	baz=187,SNR=6.3						
W41B	**Gary Mavity, V**	42.00	346	P	P	23 59 21.0	-0.3
W41B	**Gary Mavity, V**	42.00	346	P	P	23 59 21.1	-0.3
	baz=163,SNR=116						
W41B				S	S	00 05 38.3	-0.4
	baz=163						
ABTX	**Abilene, Hawle**	42.03	336	P	P	23 59 22.0	+0.2
ABTX	**Abilene, Hawle**	42.03	336	P	P	23 59 22.0	+0.2
	baz=152,SNR=271						
ABTX				S	S	00 05 39.1	-0.4
	baz=152						
TZTN	**Tazewell**	42.06	357	IAmb	IAmb	23 59 40.5	
	comp=Z,286nm,1.1s						
TZTN				IAMs_20	IAMs_20	00 16 59.6	
	comp=Z,27µm,19.0s						
TZTN	**Tazewell**	42.06	357	P	P	23 59 20.2	-1.7
	baz=176,SNR=36						
TZTN				S	S	00 05 34.2	-5.5
	baz=176						
U60A	**Pendleton**	42.07	5	P	P	23 59 20.8	-1.1
	baz=186,SNR=9.4						
WVT	**Waverly**	42.08	352	P	P	23 59 19.9	-2.1
WVT				pmax	pmax		
	comp=Z,91nm,0.9s						
WVT	**Waverly**	42.08	352	P	P	23 59 19.9	-2.1
WVT	**Waverly**	42.08	352	P	P	23 59 19.9	-2.1
	baz=170						
WVT				S	S	00 05 33.7	-6.2
	baz=170						
HALT	**Halls**	42.11	350	P	P	23 59 21.2	-1.1
HALT				IAmb	IAmb	23 59 25.9	
	comp=Z,440nm,1.4s						
U49A	**Red Boiling Sp**	42.21	354	P	P	23 59 22.1	-1.0
U49A				IAMs_20	IAMs_20	00 16 26.4	
	comp=Z,23µm,21.0s						
GNAR	**Gosnell**	42.29	349	IAmb	IAmb	23 59 28.1	
	comp=Z,254nm,1.0s						
LNXT	**Lenox**	42.32	350	P	P	23 59 24.1	+0.2
LNXT				IAmb	IAmb	23 59 43.2	
	comp=Z,299nm,0.9s						
PEBM	**Pemiscott Bayo**	42.40	349	IAmb	IAmb	23 59 44.5	
	comp=Z,674nm,1.3s						
W39A	**Magazine**	42.41	344		P	23 59 25.2	+0.5
W39A				IAmb	IAmb	23 59 42.4	
	comp=Z,569nm,1.1s						
W39A	**Magazine**	42.41	344	P	P	23 59 25.2	+0.5
	baz=161,SNR=234						
W39A				S	S	00 05 43.9	-0.9
	baz=161						
GLAT	**Glass**	42.45	350	IAmb	IAmb	23 59 29.0	
	comp=Z,408nm,1.1s						
T58A	**Grand View Acr**	42.45	3	P	P	23 59 23.5	-1.5
	baz=184,SNR=23						
T53A	**Wise**	42.46	358	P	P	23 59 23.6	-1.6
	baz=178,SNR=38						
T57A	**Hurt**	42.48	2	P	P	23 59 23.6	-1.6
T57A	**Hurt**	42.48	2	P	P	23 59 23.8	-1.4
	baz=182,SNR=34						
T57A				S	S	00 05 41.1	-4.6
	baz=182						
T56A	**Rocky Mt**	42.49	1	P	P	23 59 24.4	-1.0
	baz=181,SNR=26						
NBCL	**Cascavel-CE**	42.50	90	*e*P	P	23 59 25.6	-0.3
T51A	**Gray**	42.51	356	P	P	23 59 24.0	-1.5
	baz=176,SNR=43						
T51A				S	S	00 05 40.1	-6.1
	baz=176						
T54A	**Tazewell**	42.51	359	P	P	23 59 24.0	-1.6
	baz=179,SNR=33						
T54A				S	S	00 05 41.5	-4.9
	baz=179						
T59A	**Double "B" Far**	42.54	4		P	23 59 25.2	-0.5
T59A	**Double "B" Far**	42.54	4	P	P	23 59 24.4	-1.4
	baz=185,SNR=9.9						
T59A				S	S	00 05 42.6	-4.0
	baz=185						
T55A	**Pulaski**	42.57	0	P	P	23 59 24.8	-1.3
	baz=180,SNR=23						
T55A				S	S	00 05 43.2	-4.0
	baz=180						
T52A	**Hallie**	42.60	358		P	23 59 25.6	-0.7
T52A				IAmb	IAmb	23 59 41.9	
	comp=Z,340nm,1.2s						
T52A				IAMs_20	IAMs_20	00 18 06.7	
	comp=Z,24µm,19.0s						
T52A	**Hallie**	42.60	358	P	P	23 59 24.7	-1.5
	baz=177,SNR=37						
T52A				S	S	00 05 43.6	-4.0
	baz=177						
LCAR	**Lake Charles**	42.61	348	IAmb	IAmb	23 59 31.4	
	comp=Z,286nm,0.8s						
T50A	**Nancy**	42.63	355	P	P	23 59 24.4	-2.1
	baz=174,SNR=31						
T50A				S	S	00 05 41.9	-6.0
	baz=174						
NBTA	**Tacaratu-PE**	42.63	97	*e*P	P	23 59 26.7	-0.3
FCAR	**Ozark Folk Cen**	42.66	347	IAmb	IAmb	23 59 33.0	
	comp=Z,242nm,0.8s						
BLA	**Blacksburg**	42.66	1	IAMs_20	IAMs_20	00 16 42.3	
	comp=Z,19µm,20.0s						
BLA	**Blacksburg**	42.66	1	P	P	23 59 25.4	-1.4
	baz=181,SNR=9.8						
BLA				S	S	00 05 44.7	-3.9
	baz=181						
PVMO	**Portageville**	42.66	350	P	P	23 59 27.2	+0.5
PVMO				IAmb	IAmb	23 59 31.0	
	comp=Z,259nm,0.9s						
PENMO	**Penman**	42.69	350	P	P	23 59 27.4	+0.5
PENMO				IAmb	IAmb	23 59 31.9	
	comp=Z,584nm,1.2s						
T60A	**Surry**	42.77	5	P	P	23 59 27.8	+0.2
T60A					P	23 59 29.9	+2.3
T60A	**Surry**	42.77	5	P	P	23 59 26.8	-0.8
	baz=186						
T49A	**Edmonton**	42.77	355		P	23 59 26.2	-1.4
T49A				IAMs_20	IAMs_20	00 16 44.3	
	comp=Z,25µm,20.0s						
T49A	**Edmonton**	42.77	355	P	P	23 59 25.8	-1.8
	baz=173,SNR=66						
T49A				S	S	00 05 43.7	-6.4
	baz=173						
HENM	**Henderson Moun**	42.92	350	IAmb	IAmb	23 59 32.9	
	comp=Z,398nm,1.2s						
NBLA	**Lagarto - SE**	42.98	100	*e*P	P	23 59 28.6	-1.2
T45A	**Paducah**	43.08	351		P	23 59 29.8	-0.3
X34A	**Smith Ranch, M**	43.12	339	IAMs_20	IAMs_20	00 18 16.8	
	comp=Z,20µm,21.0s						
S53A	**Williamson**	43.14	359	P	P	23 59 28.6	-2.1
	baz=178,SNR=8.1						
S56A	**Natural Bridge**	43.14	2	P	P	23 59 29.0	-1.6
	baz=182,SNR=8.9						
S58A	**Poland Farm, P**	43.15	3	P	P	23 59 30.7	0.0
S58A				IAMs_20	IAMs_20	00 16 06.1	
	comp=Z,21µm,22.0s						
S58A	**Poland Farm, P**	43.15	3	P	P	23 59 29.3	-1.4
	baz=184,SNR=8.2						
S51A	**Beattyville**	43.16	357	IAMs_20	IAMs_20	00 18 26.1	
	comp=Z,28µm,19.0s						
S51A	**Beattyville**	43.16	357	P	P	23 59 28.9	-1.9
	baz=176						
S51A				S	S	00 05 49.2	-6.5
	baz=176						
S52A	**Salyersville**	43.17	358	P	P	23 59 29.0	-1.9
	baz=177,SNR=38						
S52A				S	S	00 05 49.8	-6.2
	baz=177						
S55A	**Lewisburg**	43.22	1	P	P	23 59 29.9	-1.4
	baz=181,SNR=31						
S55A				S	S	00 05 52.1	-4.7
	baz=181						
S50A	**Richmond**	43.25	356	P	P	23 59 29.7	-1.8
	baz=175,SNR=66						
S57A	**Dark Hollow, R**	43.25	2		P	23 59 30.6	-0.9
S57A				IAMs_20	IAMs_20	00 16 02.8	
	comp=Z,21µm,22.0s						
S57A	**Dark Hollow, R**	43.25	2	P	P	23 59 30.0	-1.5
	baz=183,SNR=11						
S57A				S	S	00 05 52.6	-4.5
	baz=183						
S54A	**Dingess, Beckl**	43.25	360	P	P	23 59 29.9	-1.7
	baz=180,SNR=21						
S54A				S	S	00 05 51.9	-5.2
	baz=180						
U40A	**Yellville**	43.27	346	IAmb	IAmb	23 59 37.6	
	comp=Z,648nm,1.2s						
U40A	**Yellville**	43.27	346	P	P	23 59 31.5	-0.2
	baz=163,SNR=285						
U40A				S	S	00 05 55.4	-2.1
	baz=163						
W35A	**Tecumseh**	43.29	341	P	P	23 59 30.8	-1.1
W35A					PcP	00 01 21.2	+0.6
S60A	**Water View**	43.34	5	P	P	23 59 31.6	-0.6
	baz=186,SNR=11						
S59A	**Mechanicsville**	43.34	4	P	P	23 59 31.1	-1.1
	baz=185,SNR=9.5						
S59A				S	S	00 05 54.9	-3.4
	baz=185						
S61A	**Accomac**	43.41	6	P	P	23 59 31.7	-1.1
S61A				IAmb	IAmb	23 59 52.6	
	comp=Z,549nm,1.3s						
S61A	**Accomac**	43.41	6	P	P	23 59 30.1	-2.7
	baz=188						
S49A	**Springfield**	43.42	355	P	P	23 59 30.8	-2.1
	baz=174,SNR=57						
HHAR	**Hobbs**	43.48	345	IAmb	IAmb	23 59 39.3	
	comp=Z,568nm,1.5s						
R58B	**Mineral**	43.50	4	P	P	23 59 32.4	-1.1
	baz=184,SNR=38						
R58B				S	S	00 05 58.1	-2.6
	baz=184						
T42A	**Van Buren**	43.53	348	IAmb	IAmb	23 59 37.8	
	comp=Z,155nm,0.8s						
WMOK	**Wichita Mounta**	43.58	339	IAmb	IAmb	23 59 39.1	
	comp=Z,342nm,1.1s						
WMOK	**Wichita Mounta**	43.58	339	P	P	23 59 33.8	-0.5
	baz=154,SNR=340						
WMOK				S	S	00 06 01.1	-1.0
	baz=154						
NBPA	**Parau_RN**	43.60	92	*e*P	P	23 59 34.5	-0.2
R54A	**Victor**	43.63	360	P	P	23 59 33.0	-1.5
	baz=180,SNR=23						
TUL1	**Leonard**	43.65	342	P	P	23 59 34.5	-0.3
	baz=158,SNR=253						
TUL1				S	S	00 06 01.4	-1.7
	baz=158						
NBLI	**Livramento-PB**	43.72	95	*e*P	P	23 59 35.8	0.0
R55A	**Marlinton**	43.74	1	P	P	23 59 34.5	-1.1
	baz=181,SNR=21						
R55A				S	S	00 06 01.0	-3.4
	baz=181						
U38A	**Gravette**	43.74	344	IAmb	IAmb	23 59 40.7	
	comp=Z,264nm,1.0s						
CBN	**Corbin Frederi**	43.78	4	P	P	23 59 34.6	-1.1
	baz=185,SNR=7.0						
R53A	**Hurricane**	43.79	359	IAMs_20	IAMs_20	00 18 18.1	
	comp=Z,24µm,20.0s						
R53A	**Hurricane**	43.79	359	P	P	23 59 34.1	-1.7
	baz=179,SNR=8.7						
R53A				S	S	00 06 01.0	-3.9
	baz=179						
R59A	**King George, V**	43.79	4	P	P	23 59 35.0	-0.9
	baz=186,SNR=15						
R57A	**Stanardsville**	43.80	3	P	P	23 59 34.7	-1.3
	baz=184,SNR=8.3						
R57A				S	S	00 06 01.9	-3.3
	baz=184						
R52A	**Catlettsburg**	43.81	358	P	P	23 59 33.9	-2.1
	baz=178,SNR=8.0						
R51A	**Hillsboro**	43.82	357	P	P	23 59 34.3	-1.7
	baz=176,SNR=9.0						
R58A	**Rapidan**	43.83	3	P	P	23 59 35.2	-1.0
	baz=184,SNR=28						
R58A				S	S	00 06 02.5	-3.1
	baz=184						
S44A	**Carbondale**	43.83	350	IAmb	IAmb	23 59 40.1	
	comp=Z,205nm,0.8s						
R50A	**Paris**	43.84	356	IAMs_20	IAMs_20	00 17 56.6	
	comp=Z,36µm,19.0s						
R50A	**Paris**	43.84	356	P	P	23 59 34.3	-2.0
	baz=175,SNR=29						
R50A				S	S	00 05 59.3	-6.4
	baz=175						
USIN	**University of**	43.86	352	IAmb	IAmb	23 59 39.8	
	comp=Z,220nm,0.8s						
MNTX	**Cornudas Mount**	43.87	329	IAmb	IAmb	23 59 41.7	
	comp=Z,243nm,1.1s						
MNTX				IAMs_20	IAMs_20	00 16 47.1	
	comp=Z,31µm,18.0s						
MNTX	**Cornudas Mount**	43.87	329	P	P	23 59 36.1	-0.6
	baz=144,SNR=56						
MNTX				S	S	00 06 08.3	+1.9
	baz=144						
R56A	**Bull Pasture M**	43.88	2	P	P	23 59 35.4	-1.2
	baz=182,SNR=6.2						
R56A				S	S	00 06 04.6	-1.8
	baz=182						
MGMO	**Mountain Grove**	43.90	347	IAmb	IAmb	23 59 41.7	
	comp=Z,384nm,1.1s						
R60A	**Leonardtown, M**	43.90	5	P	P	23 59 36.2	-0.5
	baz=186,SNR=9.2						
ADOK	**Arcadia Dam**	43.91	341	P	P	23 59 36.7	-0.2
R49A	**Shelbyville**	43.92	355	IAMs_20	IAMs_20	00 17 40.6	
	comp=Z,39µm,20.0s						
R49A	**Shelbyville**	43.92	355	P	P	23 59 34.7	-2.2
	baz=174,SNR=35						
WCI	**Wyandotte Cave**	43.96	354	P	P	23 59 35.1	-2.1
WCI				pmax	pmax		
	comp=Z,119nm,0.9s						
WCI				MLR	MLR		
	comp=Z,22µm,21.0s						
WCI	**Wyandotte Cave**	43.96	354	P	P	23 59 35.1	-2.1
WCI	**Wyandotte Cave**	43.96	354	IAMs_20	IAMs_20	00 17 09.8	
	comp=Z,22µm,21.0s						
WCI	**Wyandotte Cave**	43.96	354	P	P	23 59 35.1	-2.1
	baz=172						
WCI				S	S	00 06 00.2	-7.2
	baz=172						
Q53A	**Leroy**	44.31	359	P	P	23 59 38.4	-1.7
	baz=179,SNR=36						
Q53A				S	S	00 06 08.9	-3.6
	baz=179						
Q50A	**Georgetown**	44.38	357	P	P	23 59 38.5	-2.1
	baz=176						
Q50A				S	S	00 06 09.0	-4.6
	baz=176						
NBAN	**Anadia - AL**	44.41	98	*e*P	P	23 59 41.0	-0.3
Q52A	**Bidwell**	44.42	359	P	P	23 59 39.0	-2.0
	baz=178,SNR=29						
Q52A				S	S	00 06 08.8	-5.3
	baz=178						
Q54A	**Coxs Mills**	44.43	0	P	P	23 59 39.2	-1.8
	baz=180,SNR=10						
Q54A				S	S	00 06 09.0	-5.3
	baz=180						
Q55A	**Buckhannon**	44.45	1	P	P	23 59 40.1	-1.1
	baz=181,SNR=36						
Q55A				S	S	00 06 11.3	-3.4
	baz=181						
Q59A	**Harwood**	44.49	5	P	P	23 59 40.3	-1.1
	baz=186,SNR=8.6						
Q58A	**Fox Den Farm,**	44.49	4	P	P	23 59 40.3	-1.2
	baz=185,SNR=21						
Q58A				S	S	00 06 11.4	-3.8
	baz=185						
MSTX	**Muleshoe**	44.51	334	P	P	23 59 41.7	-0.2
	baz=148						
Q56A	**Snyder Ridge,**	44.52	2	IAMs_20	IAMs_20	00 16 52.4	
	comp=Z,20µm,22.0s						
Q56A	**Snyder Ridge,**	44.52	2	P	P	23 59 40.7	-1.0
	baz=182,SNR=9.1						
Q56A				S	S	00 06 13.6	-2.0
	baz=182						
Q51A	**Peebles**	44.53	357	IAMs_20	IAMs_20	00 19 26.8	
	comp=Z,30µm,21.0s						
Q51A	**Peebles**	44.53	357	P	P	23 59 39.8	-2.0
	baz=177,SNR=37						
Q51A				S	S	00 06 10.4	-5.3
	baz=177						
Q57A	**Strasburg**	44.54	3	P	P	23 59 40.9	-1.0
	baz=184,SNR=10						
CCM	**Cathedral Cave**	44.55	348	P	P	23 59 40.6	-1.4
CCM				pmax	pmax		
	comp=Z,199nm,0.8s						
CCM	**Cathedral Cave**	44.55	348	P	P	23 59 40.6	-1.4
CCM				IAmb	IAmb	23 59 46.9	
	comp=Z,199nm,0.8s						
CCM	**Cathedral Cave**	44.55	348	P	P	23 59 40.8	-1.1
	baz=165						
CCM				S	S	00 06 12.1	-3.9
	baz=165						
Q48A	**North Vernon**	44.60	355	P	P	23 59 40.1	-2.2
	baz=173,SNR=42						
Q49A	**Aurora**	44.60	356	P	P	23 59 40.1	-2.3
	baz=174,SNR=26						
S39A	**Bolivar**	44.66	346	IAmb	IAmb	23 59 47.6	
	comp=Z,216nm,0.7s						
OLIL	**Olney**	44.68	352	IAmb	IAmb	23 59 46.4	
	comp=Z,171nm,0.8s						
Q60A	**Greensboro**	44.70	6	P	P	23 59 42.7	-0.4
	baz=187,SNR=8.1						
RCBR	**Riachuelo**	44.80	93	P	P	23 59 44.2	-0.3
	comp=Z,57nm,0.9s,baz=248,slow=8.0,SNR=13						
RCBR	**Riachuelo**	44.80	93	P	P	23 59 44.6	+0.2
RCBR				pmax	pmax		
	comp=Z,120nm,1.1s						
RCBR				MLR	MLR		
	comp=Z,39µm,18.0s						
RCBR	**Riachuelo**	44.80	93	P	P	23 59 44.6	+0.2
RCBR	**Riachuelo**	44.80	93	*e*P	P	23 59 44.4	-0.1
RCBR				*e*S	S	00 06 19.5	-1.0
AMTX	**Amarillo**	44.83	336	IAmb	IAmb	23 59 49.4	
	comp=Z,292nm,0.9s						
AMTX	**Amarillo**	44.83	336	P	P	23 59 44.1	-0.3
	baz=150						
BLO	**Bloomington**	44.92	354	IAMs_20	IAMs_20	00 17 40.1	
	comp=Z,18µm,20.0s						
SLM	**Saint Louis**	44.92	350	IAmb	IAmb	23 59 48.8	
	comp=Z,146nm,0.8s						
P53A	**Whipple**	44.93	360	P	P	23 59 43.3	-1.7
	baz=179,SNR=7.1						
P55A	**Reedsville**	44.97	1	P	P	23 59 43.6	-1.6
	baz=182,SNR=7.0						
P55A				S	S	00 06 18.9	-3.2
	baz=182						
P51A	**Williamsport**	44.97	358	IAmb	IAmb	00 00 00.4	
	comp=Z,336nm,1.8s						
P51A				IAMs_20	IAMs_20	00 19 39.5	
	comp=Z,24µm,20.0s						
P51A	**Williamsport**	44.97	358	P	P	23 59 43.0	-2.3
	baz=177,SNR=9.0						
Q44A	**Meyer Farm, Va**	44.98	351	IAmb	IAmb	23 59 48.9	
	comp=Z,228nm,0.8s						
P56A	**Dayton Farm, R**	44.99	2	P	P	23 59 44.5	-1.0
	baz=183,SNR=31						
P56A				S	S	00 06 19.1	-3.3
	baz=183						
P57A	**Homestead Farm**	45.01	3	P	P	23 59 45.0	-0.6
	baz=184,SNR=8.7						
P57A				S	S	00 06 21.5	-1.2
	baz=184						
P54A	**Burton**	45.05	0	P	P	23 59 44.0	-1.9
	baz=181						
P58A	**Pank, Wackersv**	45.06	4	P	P	23 59 44.7	-1.3
	baz=185,SNR=23						
P52A	**Corning**	45.09	359	P	P	23 59 44.2	-2.1
	baz=178,SNR=38						
P52A				S	S	00 06 17.1	-6.7
	baz=178						
P48A	**Milroy**	45.10	355	IAmb	IAmb	00 00 03.9	
	comp=Z,134nm,0.9s						
P48A				IAMs_20	IAMs_20	00 18 36.9	
	comp=Z,38µm,20.0s						
P48A	**Milroy**	45.10	355	P	P	23 59 43.6	-2.7
	baz=174,SNR=37						
MCWV	**Mont Chateau**	45.11	1	P	P	23 59 44.7	-1.7
	baz=182						
P49A	**Miami Univ. Ec**	45.12	356	P	P	23 59 45.2	-1.3
	baz=175,SNR=25						
P50A	**Jamestown**	45.13	357	P	P	23 59 44.5	-2.1
	baz=176,SNR=27						
P59A	**Jarrettsville**	45.25	5	P	P	23 59 46.6	-0.9
	baz=186,SNR=10.0						
P59A				S	S	00 06 23.0	-3.1
	baz=186						
NBPV	**Pedro Velho**	45.39	93	*e*P	P	23 59 49.0	0.0
P61A	**Hammonton**	45.47	7	IAmb	IAmb	23 59 53.9	
	comp=Z,390nm,1.1s						
P60A	**Greenville**	45.52	6	IAmb	IAmb	23 59 53.9	
	comp=Z,176nm,1.1s						
P60A	**Greenville**	45.52	6	P	P	23 59 48.4	-1.2
	baz=187,SNR=15						
P60A				S	S	00 06 27.9	-2.1
	baz=187						
NBRF	**Rio Formoso -**	45.53	97	*e*P	P	23 59 50.0	-0.2
O52A	**Adamsville**	45.57	359	IAmb	IAmb	23 59 53.4	
	comp=Z,163nm,1.1s						
O52A				IAMs_20	IAMs_20	00 19 32.3	
	comp=Z,19µm,20.0s						
O52A	**Adamsville**	45.57	359	P	P	23 59 47.8	-2.2
	baz=179,SNR=32						
O51A	**Pataskala**	45.62	358	P	P	23 59 48.5	-2.0
	baz=178,SNR=41						
O51A				S	S	00 06 24.8	-6.7
	baz=178						
O54A	**Avella**	45.63	1	IAMs_20	IAMs_20	00 18 22.9	
	comp=Z,21µm,22.0s						
O54A	**Avella**	45.63	1	P	P	23 59 48.5	-2.0
	baz=181,SNR=7.6						
MVL	**Millersville**	45.64	5	IAmb	IAmb	23 59 55.1	
	comp=Z,197nm,1.1s						
PSUB	**Penn St. - Bra**	45.65	6	P	P	23 59 50.4	-0.3
PSUB					P	23 59 50.8	+0.1

PSUB	comp=Z,168nm,1.2s			IAmb	IAmb	23 59 55.1	
O50A	**Cable** baz=176,SNR=27	45.66	357	P	P	23 59 48.7	-2.1
O50A	baz=176			S	S	00 06 25.6	-6.5
O55A	**Ligonier** baz=182,SNR=22	45.68	2	P	P	23 59 49.3	-1.6
O55A	baz=182			S	S	00 06 27.4	-5.0
O53A	**New Philadelph** baz=180,SNR=27	45.69	360	P	P	23 59 49.1	-1.9
319A	**Douglas** comp=Z,383nm,1.1s	45.71	325	IAmb	IAmb	23 59 57.4	
ACSO	**Alum Creek Sta** comp=Z,168nm,0.9s	45.72	358	IAmb	IAmb	00 00 09.6	
ACSO	comp=Z,22µm,19.0s			IAMs_20	IAMs_20	00 19 31.2	
ACSO	**Alum Creek Sta** baz=177,SNR=38	45.72	358	P	P	23 59 49.3	-1.9
ACSO	baz=177			S	S	00 06 28.2	-4.7
O58A	**Lewisberry** baz=186,SNR=43	45.72	4	P	P	23 59 50.3	-0.9
O58A	baz=186			S	S	00 06 30.9	-2.0
O49A	**Covington** comp=Z,37µm,20.0s	45.74	356	IAMs_20	IAMs_20	00 18 27.8	
O49A	**Covington** baz=175,SNR=30	45.74	356	P	P	23 59 49.1	-2.3
O49A	baz=175			S	S	00 06 27.6	-5.6
O57A	**Amberson** baz=185,SNR=40	45.76	4	P	P	23 59 50.5	-1.0
O57A	baz=185			S	S	00 06 31.2	-2.2
O56A	**Blue Knob Stat** comp=Z,18µm,21.0s	45.77	3	IAMs_20	IAMs_20	00 17 38.4	
O56A	**Blue Knob Stat** baz=183,SNR=20	45.77	3	P	P	23 59 50.5	-1.1
O56A	baz=183			S	S	00 06 30.9	-2.7
121A	**Cookes Peak, D** comp=Z,189nm,1.1s	45.78	328	IAmb	IAmb	23 59 58.1	
121A	**Cookes Peak, D** baz=141,SNR=70	45.78	328	P	P	23 59 53.0	+0.9
P43A	**Skaggs, Pawnee** comp=Z,244nm,1.1s	45.78	351	IAmb	IAmb	23 59 55.5	
PAGS	**Pennsylvania G** comp=Z,203nm,1.2s	45.84	4	IAmb	IAmb	23 59 56.4	
O48A	**Farmland** baz=174,SNR=37	45.87	356	P	P	23 59 50.0	-2.4
O48A	baz=174			S	S	00 06 28.7	-6.3
O59A	**Robesonia** baz=187,SNR=34	45.96	5	P	P	23 59 52.2	-0.9
O59A	baz=187			S	S	00 06 34.6	-1.8
O60A	**Telford** baz=188,SNR=13	46.05	6	P	P	23 59 52.0	-1.7
O60A	baz=188			S	S	00 06 36.2	-1.3
O44A	**Mansfield** comp=Z,476nm,1.7s	46.12	352	IAmb	IAmb	23 59 58.3	
SSPA	**Standing Stone**	46.16	3	P	P	23 59 53.8	-0.9
SSPA	comp=Z,198nm,1.2s			IAmb	IAmb	23 59 58.8	
SSPA	**Standing Stone** baz=184	46.16	3	P	P	23 59 53.4	-1.3
SFIN	**Lafayette** baz=172,SNR=23	46.17	353	P	P	23 59 52.1	-2.6
N53A	**Lisbon** comp=Z,22µm,22.0s	46.25	0	IAMs_20	IAMs_20	00 18 42.3	
N53A	**Lisbon** baz=180,SNR=9.8	46.25	0	P	P	23 59 53.4	-2.0
N53A	baz=180			S	S	00 06 33.5	-7.0
N55A	**Marion Center** baz=183,SNR=29	46.26	2	P	P	23 59 53.9	-1.6
N55A	baz=183			S	S	00 06 36.1	-4.7
N50A	**Nevada** baz=177,SNR=23	46.26	358	P	P	23 59 53.4	-2.1
N50A	baz=177			S	S	00 06 34.8	-5.8
N52A	**McGinn’s Farm,** baz=179,SNR=8.2	46.26	359	P	P	23 59 52.9	-2.6
N51A	**Ashland** comp=Z,187nm,1.1s	46.38	358	IAmb	IAmb	23 59 59.6	
N51A	comp=Z,19µm,20.0s			IAMs_20	IAMs_20	00 19 58.8	
N51A	**Ashland** baz=178,SNR=27	46.38	358	P	P	23 59 54.1	-2.3
N51A	baz=178			S	S	00 06 35.3	-7.1
N54A	**Moraine State** baz=181,SNR=24	46.41	1	P	P	23 59 54.9	-1.8
N56A	**West Decatur** baz=184,SNR=9.4	46.42	3	P	P	23 59 55.2	-1.6
N56A	baz=184			S	S	00 06 37.7	-5.3
N58A	**Sunbury** comp=Z,150nm,1.0s	46.45	4	IAmb	IAmb	00 00 10.3	
N58A	**Sunbury** baz=186,SNR=27	46.45	4	P	P	23 59 55.4	-1.5
N58A	baz=186			S	S	00 06 40.9	-2.4
N48A	**Decatur** baz=174,SNR=9.1	46.45	356	P	P	23 59 54.5	-2.5
N49A	**Columbus Grove** baz=176,SNR=12	46.46	357	P	P	23 59 54.8	-2.2
N49A	baz=176			S	S	00 06 34.2	-9.3
BRNJ	**Basking Ridge**	46.50	7	P	P	23 59 58.4	+1.1
N47A	**Urbana** comp=Z,161nm,1.1s	46.53	355	IAmb	IAmb	00 00 15.3	
N47A	comp=Z,35µm,20.0s			IAMs_20	IAMs_20	00 19 29.8	
N47A	**Urbana** baz=174,SNR=8.1	46.53	355	P	P	23 59 54.6	-3.0
Y22D	**IRIS PASSCAL I**	46.55	330	P	P	23 59 59.0	+1.0
Y22D	comp=Z,20µm,19.0s			IAMs_20	IAMs_20	00 17 57.9	
P38A	**Dawn** comp=Z,143nm,0.8s	46.55	347	IAmb	IAmb	00 00 02.1	
N61A	**South Mountain** baz=189,SNR=12	46.60	7	P	P	23 59 56.9	-1.1
N59A	**State Game Lan** comp=Z,169nm,0.8s	46.60	5	IAmb	IAmb	00 00 02.8	
N59A	**State Game Lan** baz=187,SNR=38	46.60	5	P	P	23 59 57.3	-0.8
N59A	baz=187			S	S	00 06 42.5	-3.1
N60A	**Cedar Hill Far** baz=188,SNR=13	46.62	6	P	P	23 59 56.0	-2.3
N60A	baz=188			S	S	00 06 43.7	-2.2
HDIL	**Hopedale** baz=169,SNR=49	46.64	351	P	P	23 59 56.5	-2.0
M51A	**Elyria** baz=178,SNR=6.5	46.79	359	P	P	23 59 57.6	-2.0
KSU1	**Kansas State U** baz=158,SNR=83	46.85	343	P	P	23 59 59.6	-0.6
KSU1	baz=158			S	S	00 06 46.5	-2.7
R32A	**Long Quarter,** comp=Z,21µm,22.0s	46.87	341	IAMs_20	IAMs_20	00 19 46.2	
M53A	**WI Miller and** baz=180,SNR=27	46.88	0	P	P	23 59 58.4	-2.0
M50A	**Fremont** comp=Z,134nm,0.9s	46.89	358	IAmb	IAmb	00 00 23.1	
M50A	comp=Z,21µm,18.0s			IAMs_20	IAMs_20	00 20 16.2	
M50A	**Fremont** baz=177,SNR=9.4	46.89	358	P	P	23 59 58.5	-1.8
PAL	**Palisades**	46.90	7	P	P	23 59 59.8	-0.6
PAL	comp=Z,111nm,1.0s			pmax	pmax		
PAL	**Palisades**	46.90	7	P	P	23 59 59.8	-0.6
PAL	**Palisades** baz=190,SNR=8.2	46.90	7	P	P	23 59 59.1	-1.3
M57A	**Sunshine Farm,** comp=Z,236nm,1.1s	46.91	4	IAmb	IAmb	00 00 04.9	
M57A	**Sunshine Farm,** baz=185,SNR=33	46.91	4	P	P	23 59 59.6	-1.0
M57A	baz=185			S	S	00 06 44.9	-5.1
M55A	**Ridgway** comp=Z,492nm,1.9s	46.95	2	IAmb	IAmb	00 00 04.6	
M55A	comp=Z,19µm,22.0s			IAMs_20	IAMs_20	00 18 15.9	
M55A	**Ridgway** baz=183,SNR=24	46.95	2	P	P	23 59 59.1	-1.8
M55A	baz=183			S	S	00 06 45.0	-5.6
M54A	**Oil Creek Stat** comp=Z,128nm,1.1s	46.97	1	IAmb	IAmb	00 00 04.5	
M54A	comp=Z,21µm,22.0s			IAMs_20	IAMs_20	00 17 46.2	
M54A	**Oil Creek Stat** baz=182,SNR=12	46.97	1	P	P	23 59 59.3	-1.8
M54A	baz=182			S	S	00 06 45.3	-5.5
M52A	**Chesterland** comp=Z,153nm,1.3s	46.98	360	IAmb	IAmb	00 00 04.5	
M52A	comp=Z,18µm,22.0s			IAMs_20	IAMs_20	00 18 53.8	
M52A	**Chesterland** baz=180,SNR=8.0	46.98	360	P	P	23 59 58.9	-2.3
M56A	**Emporium** comp=Z,207nm,1.0s	46.99	3	IAmb	IAmb	00 00 04.9	
M56A	**Emporium** baz=184,SNR=39	46.99	3	P	P	23 59 59.6	-1.7
M56A	baz=184			S	S	00 06 45.3	-5.9
M58A	**Price’s Panora** baz=186,SNR=34	46.99	5	P	P	00 00 00.2	-1.1
M58A	baz=186			S	S	00 06 46.7	-4.5
M47A	**Cromwell** baz=174	47.00	355	P	P	23 59 59.0	-2.2
M49A	**Liberty Center** baz=176,SNR=28	47.00	357	P	P	23 59 59.2	-2.1
ANMO	**Albuquerque** comp=Z,152nm,0.9s,baz=149,slow=10.0,SNR=90	47.02	331	P	P	00 00 02.1	+0.4
ANMO	**Albuquerque**	47.02	331 *c*	*i*P	P	00 00 01.9	+0.2
ANMO	comp=Z,295nm,1.1s			pmax	pmax		
ANMO	**Albuquerque**	47.02	331	P	P	00 00 02.0	+0.2
ANMO	comp=Z,276nm,1.1s			IAmb	IAmb	00 00 07.4	
ANMO	**Albuquerque** comp=Z,21µm,20.0s	47.02	331	IAMs_20	IAMs_20	00 18 28.4	
ANMO	**Albuquerque** baz=144	47.02	331	P	P	00 00 02.2	+0.4
ANMO	baz=144			S	S	00 06 53.9	+1.7
N41A	**Harden Midland** comp=Z,203nm,0.8s	47.04	350	IAmb	IAmb	00 00 05.3	
M48A	**Edgerton** comp=Z,152nm,1.3s	47.05	356	IAmb	IAmb	00 00 04.7	
M48A	**Edgerton** baz=175,SNR=7.8	47.05	356	P	P	23 59 59.4	-2.3
M48A	baz=175			S	S	00 06 46.1	-5.9
ALLY	**Alegheny Colle** comp=Z,191nm,1.4s	47.10	1	IAmb	IAmb	00 00 05.4	
ALLY	comp=Z,17µm,20.0s			IAMs_20	IAMs_20	00 19 28.7	
M60A	**Port Jervis** baz=189,SNR=10.0	47.13	6	P	P	00 00 01.2	-1.0
M60A	baz=189			S	S	00 06 49.9	-3.2
M61A	**Granite Spring** baz=190	47.21	7	S	S	00 06 52.3	-2.0
M59A	**Waymart** baz=188,SNR=10	47.25	6	P	P	00 00 02.2	-1.1
M59A	baz=188			S	S	00 06 51.4	-3.5
TUC	**Tucson**	47.26	325	P	P	00 00 03.6	0.0
TUC	comp=Z,130nm,1.2s			pmax	pmax		
TUC	**Tucson**	47.26	325	P	P	00 00 03.6	0.0
TUC	**Tucson** baz=138	47.26	325	P	P	00 00 03.6	0.0
M44A	**Midewin, Midew** comp=Z,147nm,1.1s	47.28	353	IAmb	IAmb	00 00 21.3	
YLE	**Yale** comp=Z,168nm,1.0s	47.33	8	IAmb	IAmb	00 00 22.7	
L53A	**Girard** baz=181,SNR=11	47.40	1	P	P	00 00 02.0	-2.3
L53A	baz=181			S	S	00 06 50.8	-6.2
M62A	**Hamden** baz=191,SNR=6.6	47.46	8	P	P	00 00 02.3	-2.5
L48A	**N Adams** baz=175,SNR=25	47.49	356	P	P	00 00 02.8	-2.3
L48A	baz=175			S	S	00 06 50.4	-7.8
L50A	**Kingsville** baz=178,SNR=27	47.52	358	P	P	00 00 03.1	-2.1
L50A	baz=178			S	S	00 06 51.1	-7.4
M63A	**Gales Ferry** baz=192,SNR=13	47.55	9	P	P	00 00 03.5	-2.0
M63A	baz=192			S	S	00 06 57.5	-1.5
ERPA	**Erie** comp=Z,161nm,1.1s	47.57	1	IAmb	IAmb	00 00 08.9	
ERPA	comp=Z,18µm,22.0s			IAMs_20	IAMs_20	00 18 05.2	
ERPA	**Erie** baz=181,SNR=11	47.57	1	P	P	00 00 03.5	-2.2
CBKS	**Cedar Bluff** baz=154,SNR=36	47.57	340	P	P	00 00 05.8	0.0
CBKS	baz=154			S	S	00 07 00.4	+0.9
L47A	**Sherwood** baz=174,SNR=49	47.58	356	P	P	00 00 03.5	-2.3
L47A	baz=174			S	S	00 06 50.7	-8.7
L57A	**Andrews Acres** baz=186,SNR=54	47.59	4	P	P	00 00 04.4	-1.5
L57A	baz=186			S	S	00 06 53.3	-6.4
L49A	**Milan** baz=176,SNR=38	47.62	357	P	P	00 00 04.5	-1.6
L49A	baz=176			S	S	00 06 53.0	-7.0
L56A	**Greenwood** comp=Z,138nm,0.8s	47.68	3	IAmb	IAmb	00 00 10.2	
L56A	**Greenwood** baz=185,SNR=18	47.68	3	P	P	00 00 04.8	-1.8
L56A	baz=185			S	S	00 06 54.2	-6.8
L55A	**Hinsdale** baz=183,SNR=15	47.68	3	P	P	00 00 04.7	-1.9
L55A	baz=183			S	S	00 06 57.1	-3.9
L54A	**Sinclairville** baz=182,SNR=11	47.70	2	P	P	00 00 04.6	-2.1
L46A	**Eue Claire** comp=Z,153nm,0.9s	47.71	355	IAmb	IAmb	00 00 24.3	
L46A	comp=Z,30µm,20.0s			IAMs_20	IAMs_20	00 20 06.9	
L46A	**Eue Claire** baz=173,SNR=7.6	47.71	355	P	P	00 00 03.8	-2.9
L58A	**Harry Jones Me** baz=187,SNR=46	47.71	5	P	P	00 00 05.7	-1.1
L58A	baz=187			S	S	00 06 57.2	-4.2
AAM	**Ann Arbor** comp=Z,295nm,1.3s	47.81	357	IAmb	IAmb	00 00 11.2	
AAM	comp=Z,30µm,20.0s			IAMs_20	IAMs_20	00 20 00.6	
AAM	**Ann Arbor** baz=176,SNR=8.6	47.81	357	P	P	00 00 05.6	-1.9
AAM	baz=176			S	S	00 06 55.7	-7.0
L60A	**Shokan** baz=189,SNR=15	47.83	7	P	P	00 00 06.9	-0.8
L60A	baz=189			S	S	00 07 01.6	-1.4
M64A	**Tiverton** baz=193	47.83	10	P	P	00 00 06.8	-0.9
M64A	baz=193			S	S	00 07 01.4	-1.6
BINY	**Binghamton** comp=Z,267nm,1.0s	47.85	5	IAmb	IAmb	00 00 12.1	
BINY	**Binghamton** baz=187,SNR=51	47.85	5	P	P	00 00 06.7	-1.2
WVNY	**West Valley, N** comp=Z,202nm,1.1s	47.90	2	IAmb	IAmb	00 00 12.0	
WVNY	comp=Z,18µm,22.0s			IAMs_20	IAMs_20	00 19 05.8	
T25A	**Trinidad** baz=148,SNR=217	47.90	335	P	P	00 00 09.1	+0.4
T25A	baz=148			S	S	00 07 06.2	+1.5
L59A	**Walton** baz=188,SNR=36	47.94	6	P	P	00 00 07.2	-1.4
L59A	baz=188			S	S	00 07 01.0	-3.6
L44A	**Lake County Fo** comp=Z,186nm,1.0s	48.04	353	IAmb	IAmb	00 00 27.2	
L44A	comp=Z,19µm,22.0s			IAMs_20	IAMs_20	00 22 52.9	
L44A	**Lake County Fo** baz=171	48.04	353	P	P	00 00 08.4	-0.9
L63A	**North Scituate** baz=192,SNR=6.6	48.07	9	P	P	00 00 10.2	+0.7
L63A	baz=192			S	S	00 07 03.6	-2.7
L62A	**Suffield** baz=191,SNR=9.1	48.07	8	P	P	00 00 11.4	+1.9
K54A	**Basiliko Farm,** baz=183,SNR=13	48.09	2	P	P	00 00 08.0	-1.7
K54A	baz=183			S	S	00 07 01.7	-5.1
L61A	**Hillsdale 1, H** baz=190,SNR=27	48.11	7	P	P	00 00 09.2	-0.7
L61A	baz=190			S	S	00 07 04.3	-2.7
BRYW	**Bryant College** comp=Z,131nm,1.0s	48.13	9	IAmb	IAmb	00 00 14.7	
K51A	**Iona Station** baz=179,SNR=5.8	48.17	359	P	P	00 00 08.0	-2.2
K51A	baz=179			S	S	00 07 03.0	-4.8
214A	**Organ Pipe Nat** comp=Z,262nm,1.1s	48.19	323	IAmb	IAmb	00 00 16.5	
214A	**Organ Pipe Nat** baz=135,SNR=122	48.19	323	P	P	00 00 11.1	+0.4
K52A	**Tillsonburg** baz=180,SNR=12	48.22	0	P	P	00 00 08.5	-2.2
K55A	**Perry** baz=184,SNR=8.1	48.24	3	P	P	00 00 09.0	-1.9
K55A	baz=184			S	S	00 07 04.1	-4.8
K50A	**Casco** comp=Z,20µm,19.0s	48.24	358	IAMs_20	IAMs_20	00 21 15.0	
K50A	**Casco** baz=178,SNR=7.2	48.24	358	P	P	00 00 09.4	-1.4
K56A	**Middlesex** baz=185,SNR=8.2	48.25	4	P	P	00 00 09.0	-2.0
K56A	baz=185			S	S	00 07 02.6	-6.5
K47A	**Vermontville** baz=175,SNR=61	48.26	356	P	P	00 00 08.6	-2.4
K47A	baz=175			S	S	00 07 01.0	-8.0
L64A	**Middleborough** baz=194,SNR=6.0	48.27	10	P	P	00 00 10.5	-0.6
L64A	baz=194			S	S	00 07 07.2	-1.9
K49A	**Clarkson** baz=177,SNR=50	48.28	358	P	P	00 00 09.1	-2.1
K49A	baz=177			S	S	00 07 02.3	-7.1
K46A	**Dorr** baz=174,SNR=39	48.33	355	P	P	00 00 08.6	-2.9
K48A	**Perry** baz=176,SNR=49	48.33	357	P	P	00 00 09.4	-2.2
K48A	baz=176			S	S	00 07 04.6	-5.5
K57A	**Scipio Center** baz=186,SNR=27	48.34	4	P	P	00 00 09.9	-1.7
K57A	baz=186			S	S	00 07 03.6	-6.6
K58A	**Earlville** comp=Z,131nm,1.1s	48.45	5	IAmb	IAmb	00 01 43.5	
K58A	**Earlville** baz=187,SNR=11	48.45	5	P	P	00 00 10.6	-1.8
K58A	baz=187			S	S	00 07 08.8	-3.0
X18A	**Snowflake** comp=Z,147nm,1.1s	48.46	328	IAmb	IAmb	00 00 18.8	
L61B	**Northampton** baz=191,SNR=10	48.48	8	P	P	00 00 12.2	-0.5
L61B	baz=191			S	S	00 07 10.3	-1.9
K60A	**Five Rivers En** baz=189,SNR=12	48.48	7	P	P	00 00 13.5	+0.7
K59A	**Cooperstown** baz=188,SNR=22	48.53	6	P	P	00 00 11.2	-1.9
K59A	baz=188			S	S	00 07 12.3	-0.8
K43A	**Burlington** comp=Z,261nm,0.9s	48.62	353	IAmb	IAmb	00 00 32.0	
K61A	**Williamstown** baz=190,SNR=9.5	48.62	8	P	P	00 00 13.2	-0.6
K61A	baz=190			S	S	00 07 15.8	+1.7
WES	**Weston** comp=Z,244nm,1.4s	48.62	9	IAmb	IAmb	00 00 18.6	
MEDO	**Medina** comp=Z,477nm,1.8s	48.66	2	IAmb	IAmb	00 00 18.2	
SCIA	**State Center** baz=164,SNR=26	48.66	348	P	P	00 00 13.2	-0.9
SCIA	baz=164			S	S	00 07 09.8	-5.0
J52A	**Paris** baz=181,SNR=34	48.68	0	P	P	00 00 12.1	-2.2
J52A	baz=181			S	S	00 07 08.5	-6.5
HRV	**Adam Dziewonsk**	48.70	9	P	P	00 00 16.4	+2.0
HRV	comp=Z,228nm,1.4s			pmax	pmax		
HRV	**Adam Dziewonsk**	48.70	9	P	P	00 00 16.4	+2.0
HRV	comp=Z,228nm,1.4s			IAmb	IAmb	00 00 19.2	
HRV	**Adam Dziewonsk** baz=192	48.70	9	P	P	00 00 15.4	+1.0
K62A	**Royalston** comp=Z,247nm,1.2s	48.75	9	IAmb	IAmb	00 00 19.5	
K62A	**Royalston** baz=192,SNR=11	48.75	9	P	P	00 00 13.7	-1.2
K62A	baz=192			S	S	00 07 14.1	-1.9
J54A	**Appleton** comp=Z,124nm,0.9s	48.76	2	IAmb	IAmb	00 00 18.0	
J54A	comp=Z,17µm,22.0s			IAMs_20	IAMs_20	00 19 32.7	
J54A	**Appleton** baz=183	48.76	2	P	P	00 00 14.2	-0.7
KSCO	**Kaye Shedlock’** baz=151,SNR=6.0	48.79	337	P	P	00 00 15.2	-0.1
J55A	**Hilton** comp=Z,192nm,1.1s	48.79	3	IAmb	IAmb	00 00 18.3	
J55A	**Hilton** baz=184,SNR=6.2	48.79	3	P	P	00 00 13.0	-2.0
W18A	**Petrified Fore** baz=140,SNR=75	48.80	328	P	P	00 00 16.2	+0.6
W18A	baz=140			S	S	00 07 19.1	+1.7
J47A	**Sumner** baz=175,SNR=50	48.81	356	P	P	00 00 13.2	-2.1
J47A	baz=175			S	S	00 07 09.3	-7.5
J48A	**Bridge Port** comp=Z,29µm,20.0s	48.81	357	IAMs_20	IAMs_20	00 20 32.1	
J48A	**Bridge Port** baz=176,SNR=46	48.81	357	P	P	00 00 13.3	-1.9
J48A	baz=176			S	S	00 07 09.3	-7.5
J49A	**Marlette** baz=177,SNR=46	48.84	358	P	P	00 00 13.1	-2.4
J49A	baz=177			S	S	00 07 11.7	-5.6
J56A	**Wolcott** comp=Z,217nm,0.9s	48.86	4	IAmb	IAmb	00 00 19.0	
J56A	**Wolcott** baz=185,SNR=6.2	48.86	4	P	P	00 00 13.7	-1.9
J56A	baz=185			S	S	00 07 11.4	-6.0
SDCO	**Great Sand Dun** comp=Z,268nm,1.1s	48.88	334	IAmb	IAmb	00 00 21.8	
SDCO	**Great Sand Dun** baz=147,SNR=342	48.88	334	P	P	00 00 16.4	+0.2
SDCO	baz=147			S	S	00 07 20.4	+1.7
K63A	**Dunstable** baz=192,SNR=9.3	48.89	9	P	P	00 00 15.6	-0.2
K63A				S	S	00 07 16.9	-1.0

	baz=192						
J46A	Howard City	48.98	355	P	P	00 00 14.2	-2.3
	baz=174,SNR=23						
J46A				S	S	00 07 12.2	-7.0
	baz=174						
J57A	Williamstown	49.06	5	IAmb	IAmb	00 00 20.6	
	comp=Z,139nm,1.1s						
J57A	Williamstown	49.06	5	P	P	00 00 16.0	-1.1
	baz=186,SNR=7.6						
J57A				S	S	00 07 14.5	-5.7
	baz=186						
J58A	Remsen	49.07	5	P	P	00 00 15.7	-1.5
	baz=188,SNR=7.0						
JFWS	Jewell Farm	49.09	351	P	P	00 00 15.7	-1.8
	baz=168,SNR=38						
JFWS				S	S	00 07 16.1	-4.7
	baz=168						
J45A	Montague	49.13	355	IAMs_20	IAMs_20	00 21 08.5	
	comp=Z,28µm,19.0s						
J45A	Montague	49.13	355	P	P	00 00 14.8	-2.9
	baz=173						
J60A	Lant Hill Farm	49.16	7	P	P	00 00 17.2	-0.7
	baz=190,SNR=36						
J60A				S	S	00 07 21.3	-0.5
	baz=190						
I51A	Listowel	49.24	360	P	P	00 00 16.2	-2.4
	baz=180,SNR=35						
I51A				S	S	00 07 16.5	-6.5
	baz=180						
J59A	Piesco	49.25	6	P	P	00 00 17.0	-1.6
	baz=188,SNR=12						
J59A				S	S	00 07 19.2	-3.9
	baz=188						
ACCN	Adirondack Com	49.27	7	IAmb	IAmb	00 00 23.3	
	comp=Z,205nm,1.1s						
J62A	Henniker	49.37	9	P	P	00 00 22.0	+2.5
	baz=192						
J62A				S	S	00 07 23.3	-1.3
	baz=192						
J61A	Chester	49.38	8	P	P	00 00 22.1	+2.5
	baz=191						
J61A				S	S	00 07 24.5	-0.3
	baz=191						
I49A	Point Hope	49.41	358	IAmb	IAmb	00 00 22.9	
	comp=Z,249nm,0.9s						
I49A				IAMs_20	IAMs_20	00 22 00.3	
	comp=Z,15µm,18.0s						
I49A	Point Hope	49.41	358	P	P	00 00 17.5	-2.4
	baz=178						
I49A				S	S	00 07 19.2	-6.1
	baz=178						
I58A	Old Forge	49.43	6	P	P	00 00 19.7	-0.3
	baz=188,SNR=8.8						
BGNE	Belgrade	49.43	343	P	P	00 00 19.2	-0.9
	baz=157,SNR=8.6						
S22A	4UR Ranch, Cre	49.47	333	IAmb	IAmb	00 00 27.3	
	comp=Z,295nm,1.5s						
S22A				IAMs_20	IAMs_20	00 22 07.2	
	comp=Z,14µm,18.0s						
S22A	4UR Ranch, Cre	49.47	333	P	P	00 00 20.9	+0.1
	baz=145,SNR=68						
PECO	Prince Edward	49.50	4	IAmb	IAmb	00 00 23.6	
	comp=Z,140nm,0.9s						
I52A	Shelburne	49.51	1	P	P	00 00 18.1	-2.5
	baz=181,SNR=14						
J63A	Strafford	49.53	9	S	S	00 07 25.5	-1.5
	baz=193						
I46A	Reed City	49.55	356	P	P	00 00 18.2	-2.7
	baz=174,SNR=9.1						
I46A				S	S	00 07 20.9	-6.3
	baz=174						
I47A	Gladwin	49.57	357	P	P	00 00 18.8	-2.2
	baz=175,SNR=51						
I47A				S	S	00 07 20.1	-7.3
	baz=175						
I57A	Carthage	49.61	5	P	P	00 00 19.4	-1.9
	baz=187,SNR=10.0						
I57A				S	S	00 07 22.4	-5.6
	baz=187						
EFI	East Falkland	49.63	161*ce*	P	P	00 00 22.7	+1.3
EFI				pmax	pmax		
	comp=Z,460nm,1.1s						
EFI	East Falkland	49.63	161	P	P	00 00 23.1	+1.7
I59A	Olmsteadville	49.65	7	P	P	00 00 20.0	-1.6
	baz=189,SNR=30						
I59A				S	S	00 07 26.6	-2.1
	baz=189						
I48A	Sherman Twp	49.69	357	P	P	00 00 19.9	-2.0
	baz=176,SNR=38						
I48A				S	S	00 07 21.6	-7.5
	baz=176						
I45A	Fountain	49.71	355	IAmb	IAmb	00 00 25.7	
	comp=Z,194nm,1.1s						
I45A				IAMs_20	IAMs_20	00 21 35.9	
	comp=Z,29µm,20.0s						
I45A	Fountain	49.71	355	P	P	00 00 19.5	-2.5
	baz=173,SNR=7.0						
Y14A	Wickenburg	49.72	325	IAmb	IAmb	00 00 28.0	
	comp=Z,147nm,1.1s						
I55A	Frankford	49.74	3	P	P	00 00 22.9	+0.6
	baz=184,SNR=10						
I55A				S	S	00 07 22.4	-7.5
	baz=184						
Q24A	Divide	49.75	335	IAMs_20	IAMs_20	00 23 02.0	
	comp=Z,15µm,20.0s						
Q24A	Divide	49.75	335	P	P	00 00 22.9	0.0
	baz=148						
Q24A				S	S	00 07 32.6	+1.8
	baz=148						
HNH	Hanover	49.77	8	IAmb	IAmb	00 00 27.4	
	comp=Z,162nm,1.1s						
I60A	Shoreham	49.77	7	P	P	00 00 21.9	-0.6
	baz=190,SNR=42						
I60A				S	S	00 07 28.8	-1.4
	baz=190						
NCB	Newcomb	49.78	6	IAmb	IAmb	00 00 28.9	
	comp=Z,237nm,1.9s						
MVCO	Mesa Verde	49.82	331	IAmb	IAmb	00 01 48.8	
	comp=Z,168nm,1.1s						
MVCO				IAMs_20	IAMs_20	00 20 23.5	
	comp=Z,26µm,18.0s						
MVCO	Mesa Verde	49.82	331	P	P	00 00 23.4	+0.1
	baz=143,SNR=26						
MVCO				S	S	00 07 33.4	+1.7
	baz=143						
I42A	Draeger Farm,	49.86	352	IAmb	IAmb	00 00 26.9	
	comp=Z,116nm,0.8s						
WUAZ	Wupatki	49.97	327	IAmb	IAmb	00 01 49.7	
	comp=Z,206nm,1.1s						
WUAZ	Wupatki	49.97	327	P	P	00 00 25.2	+0.7
	baz=139,SNR=22						
I61A	Oroboro, Fairl	50.00	8	P	P	00 00 24.1	-0.3
	baz=191,SNR=12						
I61A				S	S	00 07 32.2	-1.3
	baz=191						
USHA	Ushuaia	50.05	171	LR	LR	00 18 31.0	
	comp=Z,22µm,19.7s,baz=311,slow=32						
DELO	Deloro Mine	50.05	3	IAmb	IAmb	00 00 27.6	
	comp=Z,142nm,0.9s						
H53A	Bobcaygeon	50.06	2	P	P	00 00 22.3	-2.4
	baz=183,SNR=11						
H53A				S	S	00 07 26.2	-8.1
	baz=183						
I62A	Tamworth	50.07	9	IAmb	IAmb	00 00 29.8	
	comp=Z,140nm,1.1s						
I62A	Tamworth	50.07	9	P	P	00 00 21.9	-3.0
	baz=192,SNR=6.8						
I62A				S	S	00 07 32.9	-1.6
	baz=192						
I40A	Norwalk	50.10	351	IAmb	IAmb	00 00 28.8	
	comp=Z,318nm,1.3s						
H55A	Tweed	50.11	3	P	P	00 00 22.8	-2.3
	baz=185,SNR=9.6						
H55A				S	S	00 07 27.4	-7.5
	baz=185						
H47A	Mio	50.13	357	P	P	00 00 22.8	-2.5
	baz=176,SNR=18						
H47A				S	S	00 07 29.8	-5.4
	baz=176						
H46A	Fife Lake	50.13	356	S	S	00 07 28.8	-6.5
	baz=174						
H57A	Richville	50.15	5	P	P	00 00 23.5	-1.9
	baz=187,SNR=13						
H57A				S	S	00 07 32.3	-3.3
	baz=187						
GLA	Glamis	50.17	322	IAmb	IAmb	00 00 32.3	
	comp=Z,468nm,1.7s						
GLA	Glamis	50.17	322	P	P	00 00 26.1	+0.3
	baz=134,SNR=28						
GLA				S	S	00 07 38.5	+2.1
	baz=134						
H48A	Harrisville	50.19	358	IAMs_20	IAMs_20	00 20 47.6	
	comp=Z,17µm,20.0s						
H48A	Harrisville	50.19	358	P	P	00 00 23.6	-2.1
	baz=177,SNR=11						
H48A				S	S	00 07 28.4	-7.7
	baz=177						
H56A	Elgin	50.21	4	P	P	00 00 24.1	-1.8
	baz=186,SNR=22						
H58A	Gabriels	50.23	6	P	P	00 00 24.3	-1.7
	baz=189,SNR=9.8						
H58A				S	S	00 07 34.1	-2.6
	baz=189						
SADO	Sadowa	50.24	2	IAmb	IAmb	00 00 28.8	
	comp=Z,179nm,1.1s						
SADO				IAMs_20	IAMs_20	00 21 34.8	
	comp=Z,16µm,20.0s						
OGNE	Ogallala	50.27	339	IAmb	IAmb	00 00 31.6	
	comp=Z,300nm,1.1s						
OGNE	Ogallala	50.27	339	P	P	00 00 26.3	-0.2
	baz=152,SNR=25						
H45A	Beulah	50.27	355	P	P	00 00 24.1	-2.3
	baz=173,SNR=8.4						
H43A	Windswept, Lux	50.29	354	IAMs_20	IAMs_20	00 21 36.4	
	comp=Z,23µm,20.0s						
LBNH	Lisbon	50.34	8	IAmb	IAmb	00 00 31.7	
	comp=Z,172nm,1.1s						
LBNH	Lisbon	50.34	8	P	P	00 00 26.4	-0.5
	baz=192,SNR=12						
LBNH				S	S	00 07 35.8	-2.5
	baz=192						
I63A	Otisfield	50.37	10	IAmb	IAmb	00 00 32.1	
	comp=Z,211nm,1.2s						
I63A	Otisfield	50.37	10	P	P	00 00 26.7	-0.4
	baz=193,SNR=7.5						
I63A				S	S	00 07 37.7	-0.8
	baz=193						
GLMI	Grayling	50.38	357	IAmb	IAmb	00 01 52.6	
	comp=Z,163nm,0.9s						
GLMI	Grayling	50.38	357	P	P	00 00 25.0	-2.2
	baz=175,SNR=7.1						
LONY	Lake Ozonia	50.39	6	IAmb	IAmb	00 00 31.0	
	comp=Z,216nm,1.4s						
LONY	Lake Ozonia	50.39	6	P	P	00 00 25.5	-1.8
	baz=188,SNR=9.1						
I64A	Boothbay	50.41	11	P	P	00 00 26.9	-0.5
	baz=195,SNR=6.6						
Y12C	Blythe	50.47	323	IAmb	IAmb	00 00 33.8	
	comp=Z,227nm,1.1s						
Y12C				IAMs_20	IAMs_20	00 20 27.2	
	comp=Z,30µm,20.0s						
Y12C	Blythe	50.47	323	P	P	00 00 28.6	+0.5
	baz=134,SNR=45						
H59A	Cadyville	50.51	7	P	P	00 00 26.6	-1.6
	baz=189,SNR=12						
H60A	Morristown	50.55	8	P	P	00 00 27.6	-0.9
	baz=191,SNR=11						
H60A				S	S	00 07 38.8	-2.4
	baz=191						
PLVO	Plevna	50.60	4	IAmb	IAmb	00 00 31.9	
	comp=Z,129nm,1.0s						
G53A	Haliburton	50.61	2	P	P	00 00 27.5	-1.4
	baz=183,SNR=9.9						
G53A				S	S	00 07 35.9	-6.0
	baz=183						
H61A	Lyndonville	50.63	8	P	P	00 00 28.2	-0.9
	baz=192,SNR=9.7						
H61A				S	S	00 07 40.8	-1.5
	baz=192						
PDMCI	Parker Dam,Lak	50.64	324	P	P	00 00 29.6	+0.3
	baz=135,SNR=16						
ISCO	Idaho Springs	50.65	335	IAmb	IAmb	00 00 35.1	
	comp=Z,330nm,1.1s						
ISCO	Idaho Springs	50.65	335	P	P	00 00 29.9	+0.1
	baz=148,SNR=310						
ISCO				S	S	00 07 48.0	+4.6
	baz=148						
G45A	Suttons Bay	50.66	356	IAmb	IAmb	00 00 32.6	
	comp=Z,278nm,1.1s						
G45A				IAMs_20	IAMs_20	00 21 28.2	
	comp=Z,29µm,20.0s						
G45A	Suttons Bay	50.66	356	P	P	00 00 27.2	-2.1
	baz=174,SNR=46						
G45A				S	S	00 07 37.8	-4.8
	baz=174						
G47A	Hillman	50.68	357	P	P	00 00 27.3	-2.2
	baz=176,SNR=27						
G47A				S	S	00 07 37.5	-5.4
	baz=176						
IKP	In-Ko-Pah, Jac	50.69	321	P	P	00 00 30.3	+0.4
	baz=132,SNR=34						
IKP				S	S	00 07 46.2	+2.6
	baz=132						
SWSC	Sam W. Stewart	50.70	322	P	P	00 00 30.1	+0.3
	baz=133,SNR=24						
FRNY	Flat Rock	50.71	7	IAmb	IAmb	00 00 34.4	
	comp=Z,227nm,1.2s						
SMCO	Snowmass	50.71	334	IAmb	IAmb	00 00 45.0	
	comp=Z,261nm,1.2s						
SMCO				IAMs_20	IAMs_20	00 23 35.7	
	comp=Z,17µm,19.0s						
PV02	Paradox Valley	50.73	332	IAMs_20	IAMs_20	00 20 37.5	
	comp=Z,26µm,21.0s						
PV13	Radium Mtn., P	50.73	332	IAMs_20	IAMs_20	00 21 02.6	
	comp=Z,26µm,18.0s						
H62A	Milan	50.78	9	IAmb	IAmb	00 00 49.5	
	comp=Z,143nm,1.1s						
H62A	Milan	50.78	9	P	P	00 00 31.3	+1.0
	baz=193,SNR=10						
H62A				S	S	00 07 44.2	-0.2
	baz=193						
PV05	Paradox Valley	50.80	331	IAmb	IAmb	00 00 36.7	
	comp=Z,387nm,1.2s						
PV03	Paradox Valley	50.82	332	IAmb	IAmb	00 00 36.3	
	comp=Z,294nm,1.1s						
PV03				IAMs_20	IAMs_20	00 20 48.9	
	comp=Z,20µm,19.0s						
G57A	Newington	50.83	5	P	P	00 00 28.8	-1.7
	baz=188,SNR=29						
G57A				S	S	00 07 40.2	-4.7
	baz=188						
PTCN	Pitcairn Islan	50.84	242	IAMs_20	IAMs_20	00 15 50.0	
	comp=Z,21µm,22.0s						
G55A	Calabogie	50.84	4	P	P	00 00 28.0	-2.6
	baz=185,SNR=11						
G55A				S	S	00 07 40.4	-4.6
	baz=185						
PV18	Skein Mesa, Pa	50.84	332	IAmb	IAmb	00 00 36.3	
	comp=Z,259nm,1.0s						
PV18				IAMs_20	IAMs_20	00 21 05.5	
	comp=Z,24µm,18.0s						
PV12	Saucer Basin,	50.85	332	IAMs_20	IAMs_20	00 20 41.7	
	comp=Z,27µm,20.0s						
PV11	David Mesa, Pa	50.86	332	IAMs_20	IAMs_20	00 20 59.2	
	comp=Z,25µm,18.0s						
G46A	Petoskey	50.88	356	P	P	00 00 28.6	-2.3
	baz=175,SNR=7.5						
PV17	East Wray Mesa	50.89	332	IAmb	IAmb	00 00 36.7	
	comp=Z,244nm,1.0s						
PV16	Nyswonger Mesa	50.89	332	IAmb	IAmb	00 00 36.9	
	comp=Z,312nm,1.2s						
PV16				IAMs_20	IAMs_20	00 20 50.4	
	comp=Z,16µm,19.0s						
G54A	Lake Saint Pet	50.90	3	P	P	00 00 28.6	-2.6
	baz=184,SNR=30						
G54A				S	S	00 07 39.7	-6.3
	baz=184						
PV19	Morning Glory	50.92	332	IAmb	IAmb	00 00 37.0	
	comp=Z,240nm,1.2s						
PV19				IAMs_20	IAMs_20	00 21 07.8	
	comp=Z,22µm,18.0s						
PV20	West Nyswonger	50.94	332	IAmb	IAmb	00 00 37.1	
	comp=Z,241nm,1.2s						
PV20				IAMs_20	IAMs_20	00 21 08.3	
	comp=Z,22µm,18.0s						
PV04	Paradox Valley	50.95	332	IAmb	IAmb	00 00 38.1	
	comp=Z,413nm,1.4s						
PV04				IAMs_20	IAMs_20	00 20 43.5	
	comp=Z,23µm,21.0s						
BC3	Big Chuckawall	50.97	323	P	P	00 00 32.3	+0.3
	baz=134,SNR=62						
G58A	Ormstown	50.97	6	P	P	00 00 30.0	-1.6
	baz=189,SNR=24						
G58A				S	S	00 07 42.8	-4.0
	baz=189						
PV14	Lion Creek, Pa	50.99	332	IAmb	IAmb	00 00 38.3	
	comp=Z,451nm,1.4s						
G59A	Clarenceville	51.00	7	P	P	00 00 30.6	-1.2
	baz=190,SNR=13						
PV10	Paradox Valley	51.01	332	IAmb	IAmb	00 00 37.7	
	comp=Z,410nm,1.3s						
PV22	Blue Mesa, Par	51.01	332	IAmb	IAmb	00 00 37.8	
	comp=Z,290nm,1.2s						
PV22				IAMs_20	IAMs_20	00 20 58.1	
	comp=Z,25µm,19.0s						
MONP2	Monument Peak	51.05	321	P	P	00 00 32.5	-0.2
	baz=132,SNR=36						
PV23	Carpenter Ridg	51.05	332	IAmb	IAmb	00 00 38.0	
	comp=Z,214nm,1.1s						
H63A	New Sharon	51.05	10	P	P	00 00 32.5	+0.2
	baz=194,SNR=14						
H63A				S	S	00 07 47.3	-0.8
	baz=194						
W13A	Hualapai Mount	51.06	325	IAMs_20	IAMs_20	00 19 55.2	
	comp=Z,17µm,22.0s						
BAR	Barrett	51.06	321	IAMs_20	IAMs_20	00 20 11.9	
	comp=Z,20µm,18.0s						
G60A	Masonville	51.12	8	P	P	00 00 31.6	-1.2
	baz=191,SNR=36						
G60A				S	S	00 07 46.6	-2.5
	baz=191						
IRM	Iron Mountain	51.13	323	P	P	00 00 33.5	+0.4
	baz=134,SNR=128						
U15A	North Rim	51.15	327	IAmb	IAmb	00 00 59.0	
	comp=Z,175nm,1.2s						
ECSD	EROS Data Cent	51.18	345	P	P	00 00 31.6	-1.7
	baz=160,SNR=94						
ECSD				S	S	00 07 45.5	-4.4
	baz=160						
H64A	Troy	51.18	11	P	P	00 00 32.0	-1.2
	baz=195						
H64A				S	S	00 07 47.7	-2.1
	baz=195						
F49A	Sandfield	51.21	359	P	P	00 00 30.5	-3.0
	baz=179,SNR=13						
F49A				S	S	00 07 43.1	-7.2
	baz=179						
NEE2	Needles Airpor	51.24	324	P	P	00 00 34.2	+0.3
	baz=135,SNR=18						
F52A	Sundridge	51.26	1	P	P	00 00 31.0	-2.7
	baz=182,SNR=10						
F45A	CMU Biological	51.29	356	P	P	00 00 32.0	-2.0
	baz=174,SNR=32						
F45A				S	S	00 07 45.0	-6.3
	baz=174						
F48A	Evansville	51.29	358	P	P	00 00 31.4	-2.6
	baz=178,SNR=12						
F48A				S	S	00 07 44.5	-6.8
	baz=178						
F51A	Arnstein	51.38	1	P	P	00 00 31.9	-2.8
	baz=181,SNR=20						
F51A				S	S	00 07 46.2	-6.3
	baz=181						
G40A	Rib Lake	51.39	352	IAMs_20	IAMs_20	00 24 01.5	
	comp=Z,15µm,21.0s						
G61A	St-Isidore-de-	51.42	8	P	P	00 00 34.7	-0.3
	baz=192,SNR=35						
G61A				S	S	00 07 51.1	-2.1
	baz=192						
H65A	Eastbrook	51.42	12	P	P	00 00 34.9	-0.1
	baz=196,SNR=6.1						
H65A				S	S	00 07 52.8	-0.3
	baz=196						
F55A	Otter Lake	51.44	4	P	P	00 00 35.9	+0.8
	baz=186,SNR=9.1						
ALGO	Algonquin Park	51.46	3	P	P	00 00 32.8	-2.5
	baz=184						
109C	Camp Elliot, M	51.47	321	IAmb	IAmb	00 00 41.0	
	comp=Z,190nm,1.1s						
109C				IAMs_20	IAMs_20	00 19 15.3	
	comp=Z,15µm,19.0s						
109C	Camp Elliot, M	51.47	321	P	P	00 00 35.9	+0.2
	baz=131,SNR=28						
G62A	West of Eustis	51.51	9	P	P	00 00 35.6	-0.1
	baz=193,SNR=44						
G62A				S	S	00 07 54.0	-0.4
	baz=193						
BELC	Belle Mtn. Jos	51.53	322	P	P	00 00 36.5	+0.2
	baz=133,SNR=26						
TPFO	Pinon Flats	51.54	322	P	P	00 00 36.6	+0.2
	baz=132,SNR=61						
XPFO	Pion Flat	51.55	322	P	P	00 00 36.2	-0.1
XPFO	Pion Flat	51.55	322	IAMs_20	IAMs_20	00 20 15.2	
	comp=Z,17µm,19.0s						
PFO	Pinyon Flats O	51.55	322	P	P	00 00 36.3	-0.1
	comp=Z,42nm,1.1s,baz=129,slow=6.5,SNR=24						
PFO				PcP	PcP	00 01 49.8	-0.4
	comp=Z,68nm,1.0s,baz=107,slow=4.8,SNR=2.3						
PFO	Pinyon Flats O	51.55	322*c i*	P	P	00 00 36.2	-0.1
PFO				pmax	pmax		
	comp=Z,62nm,1.0s						
PFO	Pinyon Flats O	51.55	322	P	P	00 00 36.4	-0.1
PFO	Pinyon Flats O	51.55	322	IAMs_20	IAMs_20	00 20 14.2	
	comp=Z,16µm,18.0s						
PFO	Pinyon Flats O	51.55	322	P	P	00 00 36.6	+0.2
	baz=132,SNR=65						
G63A	Kingsbury	51.56	10	P	P	00 00 36.6	+0.5
	baz=194,SNR=8.0						
G63A				S	S	00 07 55.6	+0.4
	baz=194						
F42A	Maple Grove Fa	51.60	354	IAmb	IAmb	00 00 40.2	
	comp=Z,236nm,1.1s						
F42A				IAMs_20	IAMs_20	00 22 16.2	
	comp=Z,22µm,21.0s						
H66A	Whiting	51.70	12	S	S	00 07 57.0	0.0
	baz=197						
N23A	Red Feather La	51.71	336	IAmb	IAmb	00 01 04.6	
	comp=Z,149nm,1.1s						
N23A	Red Feather La	51.71	336	P	P	00 00 37.4	-0.2
	baz=148,SNR=74						
E52A	Mattawa	51.77	2	P	P	00 00 34.6	-3.0
	baz=183,SNR=22						
PKME	Peaks-Kenny Pk	51.77	10	IAmb	IAmb	00 00 42.6	
	comp=Z,195nm,1.0s						
PKME	Peaks-Kenny Pk	51.77	10	P	P	00 00 37.2	-0.3
	baz=195,SNR=9.0						
SPMN	Marine on St.	51.77	349	IAmb	IAmb	00 00 41.3	
	comp=Z,283nm,0.9s						
SPMN	Marine on St.	51.77	349	P	P	00 00 36.0	-1.7
	baz=165,SNR=102						
SPMN				S	S	00 07 52.6	-5.4
	baz=165						
F59A	Saint Guilaume	51.81	7	P	P	00 00 38.0	+0.1
	baz=190,SNR=8.7						
G64A	Maxfield	51.86	11	P	P	00 00 40.9	+2.7
	baz=196,SNR=7.5						
GMRC	Granite Mounta	51.87	323	P	P	00 00 39.0	+0.2
	baz=134,SNR=69						
E46A	Sault Ste Mari	51.90	357	IAMs_20	IAMs_20	00 22 35.8	
	comp=Z,30µm,20.0s						
E53A	Dumoine, Ponti	51.90	3	P	P	00 00 35.9	-2.7
	baz=184,SNR=12						
E48A	Lockeyer	51.93	359	P	P	00 00 36.4	-2.4
	baz=178,SNR=86						
E47A	Iron Bridge	51.94	358	P	P	00 00 36.4	-2.4
	baz=177,SNR=58						
E54A	Lac Daplat, Po	51.98	3	P	P	00 00 36.6	-2.6
	baz=185,SNR=30						
E51A	G1948 Merrick	51.99	1	P	P	00 00 36.7	-2.5
	baz=182,SNR=80						
MURC	Murrieta	52.00	321	P	P	00 00 39.8	+0.2
	baz=132,SNR=24						
F60A	Warwick	52.03	8	P	P	00 00 38.1	-1.5
	baz=191,SNR=27						
G65A	Princeton	52.04	12	P	P	00 00 42.4	+2.7
	baz=197,SNR=7.6						
O20A	White River Ci	52.05	334	IAmb	IAmb	00 00 47.3	
	comp=Z,278nm,1.1s						
O20A	White River Ci	52.05	334	P	P	00 00 40.3	+0.2
	baz=145,SNR=76						
E55A	Montcerf-Lytto	52.08	4	P	P	00 00 38.2	-1.7
	baz=186,SNR=7.6						
E43A	Lone Tree Farm	52.10	355	IAmb	IAmb	00 00 43.6	
	comp=Z,152nm,0.9s						
E43A				IAMs_20	IAMs_20	00 23 45.2	
	comp=Z,23µm,19.0s						
F61A	St Evariste	52.18	9	P	P	00 00 41.7	+1.1
	baz=193,SNR=7.6						
E57A	Chemin Saint G	52.20	6	P	P	00 00 39.0	-1.9
	baz=189,SNR=68						
F63A	Nahmakanta, Br	52.23	10	P	P	00 00 40.5	-0.5
	baz=195,SNR=6.1						
E44A	Grand Marais A	52.25	356	IAmb	IAmb	00 00 45.0	
	comp=Z,332nm,1.4s						
E44A	Grand Marais A	52.25	356	P	P	00 00 39.7	-1.4

	baz=174,SNR=7.4						
E56A	**St. Veronique**	52.25	5	P	P	00 00 39.3	-1.8
	baz=187,SNR=38						
E58A	**La Victoria**	52.26	7	P	P	00 00 39.6	-1.7
	baz=190,SNR=34						
BBRC	**Big Bear Solar**	52.27	322	P	P	00 00 42.6	+0.7
	baz=132						
HEC	**Hector,Ludlow**	52.30	323	P	P	00 00 42.6	+0.7
	baz=133,SNR=145						
D46A	**Sault St. Mari**	52.41	357	P	P	00 00 40.0	-2.3
	baz=176,SNR=26						
SCI2	**San Clemente I**	52.45	320	P	P	00 00 43.1	+0.2
	baz=130						
SUSD	**Miller**	52.46	344	IAMs_20	IAMs_20	00 25 21.1	
	comp=Z,15µm,19.0s						
SUSD	**Miller**	52.46	344	P	P	00 00 41.3	-1.5
	baz=157,SNR=32						
E59A	**St. Maurice**	52.46	7	P	P	00 00 42.6	-0.1
	baz=191						
TUQ	**Turquoise Moun**	52.48	324	P	P	00 00 43.5	+0.2
	baz=134,SNR=18						
E60A	**Ste Agathe de**	52.49	8	P	P	00 00 41.7	-1.2
	baz=192,SNR=38						
F64A	**Sherman**	52.52	11	IAmb	IAmb	00 00 48.2	
	comp=Z,222nm,1.1s						
F64A	**Sherman**	52.52	11	P	P	00 00 42.9	-0.3
	baz=196,SNR=11						
D47A	**Chapleau**	52.53	358	P	P	00 00 40.6	-2.7
	baz=177,SNR=61						
D51A	**Lot 18 Range I**	52.55	1	P	P	00 00 40.5	-2.9
	baz=182,SNR=8.6						
D53A	**Lac Vacive, Po**	52.60	3	IAmb	IAmb	00 00 46.9	
	comp=Z,149nm,1.1s						
D53A	**Lac Vacive, Po**	52.60	3	P	P	00 00 41.5	-2.3
	baz=184,SNR=51						
D50A	**G1974 Best Tow**	52.62	1	P	P	00 00 41.0	-2.9
	baz=181,SNR=27						
D48A	**Paudash Townsh**	52.62	359	P	P	00 00 41.0	-2.9
	baz=179,SNR=58						
CIS	**Catalina Islan**	52.64	320	P	P	00 00 43.8	-0.6
	baz=130						
D55A	**Sainte-Anne-du**	52.68	5	P	P	00 00 42.1	-2.3
	baz=187,SNR=32						
E61A	**Lac Etchemin**	52.70	9	P	P	00 00 44.4	-0.1
	baz=193,SNR=12						
BFSC	**Mount Baldy Ra**	52.71	321	P	P	00 00 44.9	-0.1
	baz=132,SNR=70						
D54A	**Lac Fusel, La**	52.73	4	P	P	00 00 42.2	-2.5
	baz=185,SNR=31						
FMP	**Fort Macarthur**	52.76	321	P	P	00 00 45.2	0.0
	baz=131						
D56A	**ZEC Mazanza, M**	52.77	5	P	P	00 00 43.0	-2.1
	baz=188,SNR=27						
SHPR	**Sheep Range**	52.78	325	IAmb	IAmb	00 00 52.1	
	comp=Z,326nm,1.5s						
SHPR				IAMs_20	IAMs_20	00 21 23.7	
	comp=Z,14µm,21.0s						
D57A	**Chemin Vers le**	52.83	6	P	P	00 00 43.9	-1.6
	baz=189,SNR=46						
RWWY	**Rawlins**	52.89	335	IAMs_20	IAMs_20	00 23 03.6	
	comp=Z,14µm,19.0s						
E38A	**The Farm, Brul**	52.90	351	IAMs_20	IAMs_20	00 25 37.9	
	comp=Z,18µm,22.0s						
GSC	**Goldstone, Bar**	52.91	323	IAmb	IAmb	00 00 52.2	
	comp=Z,167nm,1.1s						
GSC				IAMs_20	IAMs_20	00 22 12.1	
	comp=Z,20µm,20.0s						
GSC	**Goldstone, Bar**	52.91	323	P	P	00 00 46.7	+0.4
	baz=133,SNR=110						
D41A	**Chassel**	52.94	353	IAMs_20	IAMs_20	00 23 17.8	
	comp=Z,22µm,21.0s						
MWC	**Mount Wilson**	52.95	321	IAmb	IAmb	00 00 52.3	
	comp=Z,144nm,1.1s						
MWC				IAMs_20	IAMs_20	00 21 01.3	
	comp=Z,14µm,18.0s						
PASC	**Pasadena Art C**	52.99	321	IAmb	IAmb	00 00 52.6	
	comp=Z,203nm,1.3s						
PASC	**Pasadena Art C**	52.99	321	IAMs_20	IAMs_20	00 21 02.6	
	comp=Z,14µm,19.0s						
SHOC	**Shoshone, Teco**	53.00	324	P	P	00 00 47.1	+0.2
	baz=134,SNR=29						
D58A	**Chemin du LacG**	53.02	7	P	P	00 00 45.4	-1.5
	baz=190,SNR=54						
E63A	**Oxbow**	53.05	11	IAmb	IAmb	00 00 51.9	
	comp=Z,142nm,0.9s						
E63A	**Oxbow**	53.05	11	P	P	00 00 46.6	-0.5
	baz=196,SNR=30						
D59A	**Saint-Raymond**	53.07	8	P	P	00 00 45.9	-1.3
	baz=191,SNR=9.2						
D60A	**Saint Jean D’O**	53.10	9	P	P	00 00 46.3	-1.1
	baz=192,SNR=50						
DECC	**Green Verdugo**	53.14	321	P	P	00 00 48.4	+0.4
	baz=131,SNR=15						
E64A	**Bridgewater**	53.16	11	P	P	00 00 47.3	-0.6
	baz=196,SNR=9.3						
SNCC	**San Nicolas Is**	53.25	319	P	P	00 00 49.4	+0.5
SNCC				IAmb	IAmb	00 00 54.1	
	comp=Z,288nm,1.1s						
SNCC	**San Nicolas Is**	53.25	319	P	P	00 00 49.0	+0.1
	baz=129						
LATQ	**La Tuque**	53.32	7	P	P	00 00 47.5	-1.5
	baz=190,SNR=53						
EDW2	**Edwards Air Fo**	53.34	322	P	P	00 00 49.4	-0.2
	baz=132,SNR=96						
K22A	**Casper**	53.42	337	IAmb	IAmb	00 00 55.3	
	comp=Z,280nm,1.0s						
K22A	**Casper**	53.42	337	P	P	00 00 49.9	-0.3
	baz=148,SNR=138						
D61A	**St Aubert, Com**	53.50	9	P	P	00 00 49.8	-0.6
	baz=193,SNR=77						
BLG	**Laguna Peak, P**	53.51	320	P	P	00 00 50.7	0.0
	baz=130,SNR=8.6						
LRMC	**Laurel Mtn Rad**	53.55	323	P	P	00 00 51.5	+0.4
	baz=132,SNR=71						
D62A	**Allapoint, All**	53.57	10	P	P	00 00 51.3	+0.4
D62A	**Allapoint, All**	53.57	10	P	P	00 00 50.5	-0.4
	baz=195,SNR=75						
OSI	**Osito Audit: C**	53.62	321	IAmb	IAmb	00 01 12.5	
	comp=Z,185nm,1.2s						
OSI				IAMs_20	IAMs_20	00 21 22.2	
	comp=Z,14µm,18.0s						
OSI	**Osito Audit: C**	53.62	321	P	P	00 00 51.8	+0.2
	baz=131,SNR=5.4						
VLDQ	**Val d'Or**	53.64	3	IAMs_20	IAMs_20	00 24 07.9	
	comp=Z,13µm,19.0s						
D63A	**Stockholm**	53.70	11	P	P	00 00 51.5	-0.4
	baz=196,SNR=12						
TPNV	**Topopah Spring**	53.72	325	IAmb	IAmb	00 00 58.5	
	comp=Z,190nm,1.2s						
TPNV				IAMs_20	IAMs_20	00 23 01.6	
	comp=Z,19µm,18.0s						
TPNV	**Topopah Spring**	53.72	325	P	P	00 00 53.1	+0.7
	baz=135,SNR=118						
FURC	**Furnace Creek,**	53.74	324	P	P	00 00 52.9	+0.6
	baz=134,SNR=58						
RSSD	**Black Hills**	53.76	339	P	P	00 00 52.4	-0.2
RSSD				pmax	pmax		
	comp=Z,202nm,1.1s						
RSSD				MLR	MLR		
	comp=Z,18µm,22.0s						
RSSD	**Black Hills**	53.76	339	P	P	00 00 52.4	-0.2
RSSD				IAmb	IAmb	00 00 57.9	
	comp=Z,202nm,1.1s						
RSSD	**Black Hills**	53.76	339	IAMs_20	IAMs_20	00 23 55.2	
	comp=Z,18µm,22.0s						
RSSD	**Black Hills**	53.76	339	P	P	00 00 52.5	-0.1
	baz=151						
SCZ2	**Santa Cruz Isl**	53.80	320	P	P	00 00 52.8	0.0
	baz=130						
MPMC	**Manual Prospec**	53.83	323	P	P	00 00 53.2	-0.1
	baz=133,SNR=76						
ARVC	**Arvin**	54.02	322	P	P	00 00 54.8	+0.3
	baz=131,SNR=26						
SBC	**Santa Barbara**	54.13	320	P	P	00 00 55.4	+0.1
	baz=130						
ISA	**Isabella, Lake**	54.16	322	IAMs_20	IAMs_20	00 22 20.3	
	comp=Z,16µm,20.0s						
ISA	**Isabella, Lake**	54.16	322	P	P	00 00 55.9	+0.4
	baz=132,SNR=52						
EYMN	**Ely**	54.19	351	P	P	00 00 54.1	-1.4
	baz=167,SNR=179						
DUG	**Dugway, Tooele**	54.25	330	IAmb	IAmb	00 01 02.1	
	comp=Z,297nm,1.1s						
DUG				IAMs_20	IAMs_20	00 23 07.7	
	comp=Z,21µm,19.0s						
DUG	**Dugway, Tooele**	54.25	330	P	P	00 00 56.6	+0.4
	baz=140,SNR=185						
R11A	**Troy Canyon, C**	54.34	327	IAmb	IAmb	00 01 02.9	
	comp=Z,142nm,1.1s						
R11A	**Troy Canyon, C**	54.34	327	P	P	00 00 57.5	+0.6
	baz=136,SNR=130						
CWC	**Cottonwood Cre**	54.44	323	P	P	00 00 58.0	+0.4
	baz=132						
D32A	**Dogwood Acres,**	54.47	347	IAmb	IAmb	00 01 01.9	
	comp=Z,217nm,0.9s						
PKM	**Mcpherson Peak**	54.48	321	P	P	00 00 58.0	-0.1
	baz=130,SNR=13						
LSQQ	**Lebel-sur-Quev**	54.61	3	P	P	00 00 55.8	-2.7
	baz=185						
VES	**Vestal, Richgr**	54.65	322	P	P	00 00 59.3	+0.3
	baz=131,SNR=48						
BW06	**Boulder Array**	54.77	334	IAmb	IAmb	00 01 04.6	
	comp=Z,191nm,1.1s						
BW06	**Boulder Array**	54.77	334	P	P	00 00 59.2	-0.9
	baz=144,SNR=107						
PD31	**Pinedale Array**	54.77	334	IAmb	IAmb	00 01 04.6	
	comp=Z,176nm,1.1s						
PDAR	**Pinedale Array**	54.77	334	P	P	00 00 59.0	-1.1
	comp=Z,28nm,0.8s,baz=131,slow=8.2,SNR=125						
PDAR				PcP	PcP	00 02 01.6	-0.7
	comp=Z,28nm,0.9s,baz=133,slow=5.7,SNR=3.7						
PDAR				LR	LR	00 24 23.6	
	comp=Z,26µm,18.2s,baz=158,slow=36						
PDAR				PKPPKP	P'P'df	00 31 10.1	+1.1
	comp=Z,0.5nm,0.8s,baz=270,slow=1.5,SNR=3.5						
PDAR	**Pinedale Array**	54.77	334	P	P	00 00 58.2	-1.8
SMMC	**Simmler**	54.87	321	P	P	00 01 01.2	+0.5
	baz=130,SNR=36						
TIN	**Tinemaha, Big**	54.94	324	P	P	00 01 01.8	+0.5
	baz=133,SNR=18						
VOG	**Valley Oaks Go**	55.14	322	P	P	00 01 01.9	-0.7
	baz=131						
MATQ	**Matagami**	55.28	3	P	P	00 01 00.5	-2.7
	baz=184,SNR=68						
AGMN	**Agassiz Nation**	55.32	348	P	P	00 01 02.7	-0.9
	baz=162,SNR=294						
AHID	**Auburn Hatcher**	55.45	333	IAMs_20	IAMs_20	00 24 25.1	
	comp=Z,25µm,19.0s						
HVU	**Hansel Valley**	55.45	331		PcP	00 02 02.5	-2.4
MLAC	**Mammoth, Mammo**	55.68	324	P	P	00 01 07.0	+0.2
	baz=132,SNR=21						
OMMB	**Old Mammoth Mi**	55.77	324	IAmb	IAmb	00 01 13.0	
	comp=Z,196nm,1.1s						
OMMB				IAMs_20	IAMs_20	00 23 55.9	
	comp=Z,21µm,19.0s						
MDND	**Maddock**	55.77	345	P	P	00 01 06.3	-0.6
	baz=157,SNR=70						
REDW	**Red Top Meadow**	55.81	334	IAMs_20	IAMs_20	00 25 08.8	
	comp=Z,23µm,18.0s						
MDPB	**Devils Postpil**	55.83	324	IAMs_20	IAMs_20	00 23 57.5	
	comp=Z,19µm,20.0s						
NV11	**Mina Array Sit**	55.83	325	IAmb	IAmb	00 01 23.4	
	comp=Z,122nm,1.1s						
NV11				IAMs_20	IAMs_20	00 24 18.6	
	comp=Z,14µm,18.0s						
SNOW	**Snow King Moun**	55.85	334	IAmb	IAmb	00 01 24.2	
	comp=Z,254nm,1.2s						
ELK	**Elko**	55.89	329	IAmb	IAmb	00 01 13.7	
	comp=Z,168nm,1.1s						
NVAR	**Mina Array Bea**	55.92	325	P	P	00 01 08.2	-0.2
	comp=Z,163nm,1.1s,baz=139,slow=6.0,SNR=93						
NVAR				PcP	PcP	00 02 06.1	-0.8
	comp=Z,8.7nm,0.7s,baz=28,slow=16,SNR=1.5						
NVAR				LR	LR	00 24 30.4	
	comp=Z,14µm,18.0s,baz=130,slow=36						
NVAR				PKPPKP	P'P'df	00 31 02.8	-5.1
	comp=Z,0.8nm,0.8s,baz=278,slow=3.8,SNR=3.8						
NVAR	**Mina Array Bea**	55.92	325	P	P	00 01 07.7	-0.7
PMPB	**Monarch Peak**	55.95	321	IAmb	IAmb	00 01 14.6	
	comp=Z,234nm,1.1s						
PMPB				IAMs_20	IAMs_20	00 20 39.8	
	comp=Z,15µm,21.0s						
TPAW	**Teton Pass**	55.96	334	IAMs_20	IAMs_20	00 24 21.7	
	comp=Z,18µm,20.0s						
FXWY	**Fox Creek**	56.11	334	IAmb	IAmb	00 01 29.0	
	comp=Z,135nm,1.1s						
FXWY				IAMs_20	IAMs_20	00 24 27.6	
	comp=Z,18µm,20.0s						
RYN	**Ryan**	56.18	325	IAmb	IAmb	00 01 31.1	
	comp=Z,386nm,1.9s						
RYN				IAMs_20	IAMs_20	00 24 39.7	
	comp=Z,16µm,18.0s						
FLWY	**Flagg Ranch**	56.32	335	IAmb	IAmb	00 01 18.3	
	comp=Z,362nm,1.4s						
FLWY				IAMs_20	IAMs_20	00 24 59.4	
	comp=Z,19µm,18.0s						
H17A	**Grant Village**	56.52	335	IAmb	IAmb	00 01 23.9	
	comp=Z,126nm,1.1s						
H17A	**Grant Village**	56.52	335	P	P	00 01 14.2	+1.5
	baz=144,SNR=52						
RLMT	**Red Lodge**	56.58	336	IAmb	IAmb	00 01 17.7	
	comp=Z,145nm,1.1s						
RLMT				IAMs_20	IAMs_20	00 25 00.9	
	comp=Z,22µm,20.0s						
RLMT	**Red Lodge**	56.58	336	P	P	00 01 12.3	-0.7
	baz=146,SNR=101						
LKWY	**Lake**	56.59	335	IAmb	IAmb	00 01 19.1	
	comp=Z,147nm,1.1s						
SAO	**San Andreas Ge**	56.70	321	IAMs_20	IAMs_20	00 23 28.6	
	comp=Z,15µm,19.0s						
LAO	**LASA Array**	56.76	339	IAmb	IAmb	00 01 19.2	
	comp=Z,284nm,1.2s						
LAO	**LASA Array**	56.76	339	P	P	00 01 13.2	-0.8
	baz=150,SNR=108						
YERR	**Yerington**	56.83	325	IAmb	IAmb	00 01 32.8	
	comp=Z,178nm,1.2s						
CMB	**Columbia Colle**	56.87	323	IAMs_20	IAMs_20	00 24 39.1	
	comp=Z,12µm,20.0s						
PNTR	**Pine Nut**	57.11	325	IAmb	IAmb	00 01 35.0	
	comp=Z,208nm,1.2s						
PNTR				IAMs_20	IAMs_20	00 24 45.3	
	comp=Z,12µm,19.0s						
ULM	**Lac du Bonnet**	57.18	349	P	P	00 01 15.3	-1.6
	comp=Z,321nm,1.1s,baz=162,slow=7.2,SNR=59						
ULM				PKPPKP	P'P'df	00 31 11.7	+7.4
	comp=Z,4.0nm,1.0s,baz=332,slow=4.6,SNR=4.9						
ULM	**Lac du Bonnet**	57.18	349	*ce*P	P	00 01 15.1	-1.7
ULM	**Lac du Bonnet**	57.18	349	IAMs_20	IAMs_20	00 27 29.8	
	comp=Z,15µm,22.0s						
VCNR	**Virginia City**	57.27	325	IAmb	IAmb	00 01 23.7	
	comp=Z,156nm,1.1s						
PAHR	**Pah Rah Range**	57.40	325	IAmb	IAmb	00 01 33.7	
	comp=Z,141nm,1.2s						
RUBR	**Rubicon Trail**	57.40	324	IAmb	IAmb	00 01 39.2	
	comp=Z,240nm,1.3s						
RUBR				IAMs_20	IAMs_20	00 25 21.3	
	comp=Z,20µm,19.0s						
DGMT	**Dagmar**	57.64	342	IAmb	IAmb	00 01 25.1	
	comp=Z,172nm,1.1s						
DGMT	**Dagmar**	57.64	342	IAMs_20	IAMs_20	00 27 22.0	
	comp=Z,14µm,20.0s						
DGMT	**Dagmar**	57.64	342	P	P	00 01 19.9	-0.3
	baz=152,SNR=26						
MFID	**Camas Ranch**	58.16	331	IAMs_20	IAMs_20	00 25 59.9	
	comp=Z,20µm,18.0s						
DRLN	**Deer Lake**	58.39	18	IAmb	IAmb	00 01 30.0	
	comp=Z,168nm,1.0s						
MCCM	**Marconi Confer**	58.45	322	P	P	00 01 27.2	+1.2
MCCM				IAmb	IAmb	00 01 29.7	
	comp=Z,187nm,1.3s						
LRM	**Limekiln Ridge**	58.46	335	P	P	00 01 26.7	+0.5
ORV	**Oroville**	58.52	324	IAmb	IAmb	00 01 32.3	
	comp=Z,284nm,1.1s						
TAOE	**Nuku Hiva Isla**	58.77	263	*e*P	P	00 01 32.1	+3.2
	comp=Z,897nm,1.2s						
TAOE				*e*S	S	00 09 36.0	+3.0
	comp=Z,27µm,28.1s						
TAOE				*e*LQ	LQ	00 16 14.3	
	comp=Z,14µm,31.4s						
TAOE				*e*LR	LR	00 18 42.9	
	comp=Z,29µm,23.6s,baz=89						
TAOE	**Nuku Hiva Isla**	58.77	263	P	P	00 01 28.5	-0.3
TAOE				IAMs_20	IAMs_20	00 19 45.2	
	comp=Z,18µm,20.0s						
GDXM	**Geysers**	58.81	322	IAmb	IAmb	00 01 45.7	
	comp=Z,102nm,1.1s						
HOPS	**Hopland Field**	59.10	322	P	P	00 01 30.9	+0.3
HOPS				IAmb	IAmb	00 01 51.8	
	comp=Z,160nm,1.4s						
HOPS				IAMs_20	IAMs_20	00 25 14.2	
	comp=Z,11µm,20.0s						
EGMT	**Eagleton**	59.17	338	IAMs_20	IAMs_20	00 26 44.5	
	comp=Z,17µm,22.0s						
EGMT	**Eagleton**	59.17	338	P	P	00 01 30.4	-0.5
	baz=146,SNR=165						
O03E	**Paynes Creek**	59.18	324	P	P	00 01 30.2	-1.0
	baz=131,SNR=30						
MOD	**Modoc Plateau**	59.40	327	IAMs_20	IAMs_20	00 25 43.0	
	comp=Z,18µm,21.0s						
J08A	**Circle Bar Ran**	59.44	329	IAmb	IAmb	00 01 52.4	
	comp=Z,101nm,0.9s						
O02D	**Mt. Diablo Mer**	59.68	324	P	P	00 01 33.6	-1.0
	baz=130,SNR=28						
KCPM	**Cahto Peak**	59.84	323	IAMs_20	IAMs_20	00 25 59.8	
	comp=Z,11µm,19.0s						
MSO	**Missoula**	59.89	334	IAMs_20	IAMs_20	00 26 21.8	
	comp=Z,17µm,20.0s						
MSO	**Missoula**	59.89	334	P	P	00 01 36.0	0.0
	baz=141,SNR=132						
BMO	**Blue Mountains**	59.94	331	IAmb	IAmb	00 01 53.6	
	comp=Z,103nm,1.1s						
N02D	**Trinity Center**	60.14	324	P	P	00 01 36.2	-1.5
	baz=130,SNR=28						
M04C	**Macdoel**	60.17	326	P	P	00 01 37.9	-0.2
	baz=131,SNR=118						
PMSA	**Palmer Station**	60.21	172	P	P	00 01 39.2	+1.4
PMSA	**Palmer Station**	60.21	172	*e*P	P	00 01 39.5	+1.7
HOPE	**Hope Point**	60.26	152	P	P	00 01 40.6	+2.4
HOPE				pmax	pmax		
	comp=Z,368nm,1.3s						
HOPE	**Hope Point**	60.26	152	P	P	00 01 40.6	+2.4
SACV	**Santiago Islan**	60.39	69	P	P	00 01 42.0	+2.1
SACV				IAmb	IAmb	00 01 58.1	
	comp=Z,103nm,1.0s						
M02C	**Callahan**	60.50	325	P	P	00 01 39.3	-0.9
	baz=130,SNR=46						
YBH	**Yreka Blue Hor**	60.63	325	IAmb	IAmb	00 01 58.1	
	comp=Z,112nm,1.0s						
YBH				IAMs_20	IAMs_20	00 27 07.7	
	comp=Z,15µm,18.0s						
KHMM	**Horse Mountain**	60.68	324	IAmb	IAmb	00 02 09.3	
	comp=Z,202nm,1.2s						
KHMM				IAMs_20	IAMs_20	00 24 03.9	
	comp=Z,11µm,22.0s						
K04D	**Chiloquin, OR**	60.68	326	P	P	00 01 41.6	+0.1
	baz=132,SNR=26						
L04D	**Klamath Falls**	60.72	326	P	P	00 01 41.3	-0.5
	baz=131,SNR=53						
JCC	**Jacoby Creek,**	60.82	324	IAmb	IAmb	00 01 48.0	
	comp=Z,208nm,1.1s						
J05D	**Fort Rock, OR**	60.84	327	P	P	00 01 42.8	+0.2
	baz=133,SNR=46						
KRMB	**Red Mountain**	61.19	324	IAMs_20	IAMs_20	00 27 28.5	
	comp=Z,11µm,19.0s						
J04D	**Umpqua Nationa**	61.29	327	P	P	00 01 45.7	0.0
	baz=132,SNR=32						
HUMO	**Hull Mountain**	61.34	326	IAMs_20	IAMs_20	00 26 24.4	
	comp=Z,12µm,20.0s						
L02E	**Cave Junction**	61.42	325	P	P	00 01 46.3	-0.1
	baz=130,SNR=37						
SCHQ	**Schefferville**	61.42	9	P	P	00 01 44.2	-1.9
	comp=Z,56nm,0.7s,baz=209,slow=5.3,SNR=54						
SCHQ				LR	LR	00 28 49.7	
	comp=Z,5µm,20.1s,baz=206,slow=36						
SCHQ				PKPPKP	P'P'df	00 31 04.6	+6.8
	comp=Z,4.9nm,1.0s,baz=31,slow=2.8,SNR=6.0						
SCHQ	**Schefferville**	61.42	9	IAmb	IAmb	00 01 49.6	
	comp=Z,110nm,0.9s						
E09A	**Wood Farm, Sta**	61.55	332	IAMs_20	IAMs_20	00 27 24.4	
	comp=Z,13µm,19.0s						
I05D	**Terrebonne, OR**	61.62	328	P	P	00 01 48.2	+0.5
	baz=133,SNR=70						
WALA	**Waterton Lakes**	61.63	336	IAmb	IAmb	00 02 05.2	
	comp=Z,240nm,1.1s						
WALA				IAMs_20	IAMs_20	00 27 50.7	
	comp=Z,18µm,20.0s						
K02D	**Willamette Mer**	61.80	325	P	P	00 01 49.1	+0.1
	baz=130,SNR=69						
I04A	**Tendick Farm,**	61.82	327	P	P	00 01 48.5	-0.7
	baz=132,SNR=28						
E08A	**Dider Farm, El**	61.97	331	IAmb	IAmb	00 02 07.4	
	comp=Z,93nm,1.0s						
E08A				IAMs_20	IAMs_20	00 28 40.1	
	comp=Z,19µm,18.0s						
HAWA	**Hanford**	62.13	331	IAmb	IAmb	00 02 10.2	
	comp=Z,146nm,1.1s						
HAWA				IAMs_20	IAMs_20	00 28 02.0	
	comp=Z,19µm,18.0s						
G05D	**Wamic, OR**	62.22	329	P	P	00 01 52.5	+0.8
	baz=133,SNR=22						
J01E	**Myrtle Point**	62.25	326	P	P	00 01 52.4	+0.5
	baz=130,SNR=20						
I03D	**Drain, OR**	62.27	326	P	P	00 01 51.9	-0.1
	baz=131,SNR=16						
H04A	**Detroit Lake**	62.29	328	IAmb	IAmb	00 02 11.6	
	comp=Z,188nm,1.0s						
H04A				IAMs_20	IAMs_20	00 27 51.5	
	comp=Z,14µm,20.0s						
D08A	**Wollman Farm,**	62.31	332	IAmb	IAmb	00 02 09.8	
	comp=Z,185nm,1.2s						
D08A				IAMs_20	IAMs_20	00 27 47.1	
	comp=Z,12µm,20.0s						
NEW	**Newport**	62.38	334	IAmb	IAmb	00 01 57.7	
	comp=Z,200nm,1.1s						
NEW	**Newport**	62.38	334	IAMs_20	IAMs_20	00 29 39.7	
	comp=Z,15µm,18.0s						
NEW	**Newport**	62.38	334	P	P	00 01 52.3	-0.4
	baz=138,SNR=98						
H04D	**Lebanon**	62.48	327	P	P	00 01 53.0	-0.4
	baz=132,SNR=5.5						
C09A	**Chrisman Ranch**	62.55	333	IAmb	IAmb	00 02 11.7	
	comp=Z,180nm,1.4s						
C09A				IAMs_20	IAMs_20	00 27 45.4	
	comp=Z,15µm,20.0s						
FFC	**Flin Flon**	62.69	346	P	P	00 01 53.3	-1.3
FFC				pmax	pmax		
	comp=Z,57nm,1.0s						
FFC				MLR	MLR		
	comp=Z,16µm,20.0s						
FFC	**Flin Flon**	62.69	346	P	P	00 01 53.3	-1.3
FFC	**Flin Flon**	62.69	346	IAMs_20	IAMs_20	00 31 52.2	
	comp=Z,16µm,20.0s						
F05D	**White Salmon**	62.73	329	P	P	00 01 55.6	+0.5
	baz=133,SNR=29						
I02D	**Swisshome**	62.81	327	P	P	00 01 56.3	+0.7
	baz=130						
COR	**Corvallis**	62.83	327	P	P	00 01 56.6	+0.9
COR				pmax	pmax		
	comp=Z,2µm,2.0s						
COR	**Corvallis**	62.83	327	P	P	00 01 56.6	+0.9
COR	**Corvallis**	62.83	327	IAMs_20	IAMs_20	00 28 06.6	
	comp=Z,20µm,20.0s						
G03D	**McMinnville, O**	63.22	328	P	P	00 02 00.8	+2.5
	baz=131						
LTY	**Liberty**	63.29	331	IAmb	IAmb	00 02 04.2	
	comp=Z,178nm,1.1s						
B08A	**Colville Reser**	63.45	332	IAMs_20	IAMs_20	00 30 45.0	
	comp=Z,12µm,19.0s						
LON	**Longmire**	63.50	330	IAmb	IAmb	00 02 18.1	
	comp=Z,167nm,1.0s						
F04D	**Rainier, OR**	63.66	329	P	P	00 02 01.8	+0.6
	baz=132,SNR=23						
E04D	**Cinebar**	63.75	329	P	P	00 02 01.7	-0.2
	baz=133,SNR=28						
C06D	**Leavenworth**	63.87	331	P	P	00 02 02.6	0.0
	baz=135						
D04E	**Lakebay**	64.28	330	P	P	00 02 09.1	+3.9
	baz=133						
B06A	**Marblemount**	64.57	331	IAmb	IAmb	00 02 24.4	
	comp=Z,140nm,0.9s						
D03D	**Eldon**	64.68	330	P	P	00 02 07.9	0.0
	baz=132,SNR=24						
B05A	**Bryant**	64.69	331	P	P	00 02 07.2	-0.8
	baz=134,SNR=28						
FCC	**Fort Churchill**	65.09	352	P	P	00 02 10.2	-0.1
FCC				pmax	pmax		
	comp=Z,529nm,1.5s						
FCC	**Fort Churchill**	65.09	352	P	P	00 02 10.2	-0.1
FCC				IAMs_20	IAMs_20	00 29 29.4	
	comp=Z,14µm,22.0s						
A04D	**Lummi Island**	65.29	331	P	P	00 02 11.5	-0.3
	baz=133,SNR=6.5						
PCED	**Cedros**	65.40	43	*e*P	P	00 02 13.2	+0.5
	comp=Z,110nm,1.1s						
PCAN	**Candelaria**	65.46	43	*e*P	P	00 02 12.7	-0.5
	comp=Z,117nm,1.0s						
PICO	**Pico**	65.52	43	*e*P	P	00 02 13.4	-0.2
	comp=Z,77nm,1.6s						
PGC	**Sidney**	65.61	331	P	P	00 02 14.1	+0.2
PGC					P	00 02 14.6	+0.7
PGC				IAmb	IAmb	00 02 19.6	
	comp=Z,237nm,1.1s						
ROSA	**Rosais**	65.75	43	*e*P	P	00 02 16.6	+1.5
	comp=Z,124nm,1.2s						

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ROSA  Rosais           65.75  43  P        P        00 02 15.6 +0.6
PMAN  Manadas          65.81  43 eP        P        00 02 15.3  -0.1
      comp=Z,111nm,1.5s
H10N3 ASCENSION HYDR65.95  96  P        P        00 02 21.7 +5.2
      baz=242,slow=7.0,SNR=5.4
H10N2 ASCENSION HYDR65.97  96  P        P        00 02 22.8 +6.3
      baz=242,slow=7.0,SNR=5.9
H10N1 ASCENSION HYDR65.97  96  P        P        00 02 21.5 +4.9
      baz=242,slow=7.0,SNR=3.9
SRBC  Serra Branca     66.05  43 eP        P        00 02 14.9  -2.1
      comp=Z,237nm,1.1s
VAH   Vaihoa           66.06 256 eP        P        00 02 19.9 +2.4
      comp=Z,350nm,1.2s
PGRA  Graciosa         66.08  43 eP        P        00 02 16.8  -0.4
      comp=Z,136nm,1.6s
ASCN  Ascension        66.09  96  P        P        00 02 17.8 +0.1
ASCN                              IAMs_20  IAMs_20  00 29 43.2
      comp=Z,13µm,22.0s
LLLB  Lillooet         66.22 333  IAmb     IAmb     00 02 36.6
      comp=Z,270nm,1.4s
LLLB                              IAMs_20  IAMs_20  00 32 03.3
      comp=Z,16µm,19.0s
PMOR  Pomariorio Ree   66.32 256 eP        P        00 02 21.6 +2.5
      comp=Z,590nm,1.1s
PMOR  Pomariorio Ree   66.32 256 eT        T        01 14 08.3
      comp=Z,12nm,0.3s
PSET  Sete Cidades     67.07  45 eP        P        00 02 23.2  -0.3
      comp=Z,254nm,1.7s
PSMA  Santa Maria      67.11  46 eP        P        00 02 23.6  -0.2
      comp=Z,147nm,1.1s
PSMN  Pico do Norte,   67.16  46 eP        P        00 02 24.4 +0.3
      comp=Z,180nm,1.2s
CMLA  Cha da Macela    67.18  45 eP        P        00 02 25.0 +0.8
      comp=Z,114nm,1.0s
BART  Pico Bartolome   67.44  45 eP        P        00 02 25.9   0.0
      comp=Z,154nm,1.1s
TVO   Taravao          67.66 253 eP        P        00 02 30.3 +2.6
      comp=Z,84nm,1.3s
PPT   Papeete          67.96 253  LR       LR       00 25 02.2
      comp=Z,12µm,18.2s,baz=90,slow=30
PPT2  Papeete2         67.96 253 eP        P        00 02 32.2 +2.5
      comp=Z,215nm,1.3s
PPT2                             eS        S        00 11 30.0 +2.4
      comp=Z,23µm,28.2s
PPT2                             eLQ       LQ       00 19 35.6
      comp=Z,11µm,31.8s
PPT2                             eLR       LR       00 23 09.7
      comp=Z,34µm,24.8s,baz=90
PAE   Paea             67.97 253 eP        P        00 02 32.2 +2.6
      comp=Z,50nm,1.0s
TBI   Tubuai           68.07 247 eS        S        00 11 30.6 +2.1
      comp=Z,17µm,32.5s
TBI                              eLQ       LQ       00 19 44.6
      comp=Z,5µm,37.5s
TBI                              eLR       LR       00 23 03.4
      comp=Z,20µm,25.8s,baz=83
TBI   Tubuai           68.07 247 eT        T        01 16 22.8
      comp=Z,69nm,0.3s
BBB   Bella Bella      70.18 331  IAmb     IAmb     00 02 48.6
      comp=Z,258nm,1.1s
MACI  Morro de la Ar   70.56  58  P        P        00 02 47.4 +1.7
PMOZ  Porto Moniz, M   71.47  53 eP        P        00 02 55.5 +4.5
      comp=Z,147nm,1.0s
PMOZ                             eS        S        00 12 12.0 +3.6
PMOZ  Porto Moniz, M   71.47  53 eLR       LR       00 28 18.1
      comp=Z,5µm,22.0s
PMAR  Madeira          71.66  53 eP        P        00 02 58.0 +5.7
      comp=Z,190nm,1.7s
NRS   Narsarsuaq       72.13  17 i P       P        00 02 53.7  -0.5
      comp=Z,123nm,0.9s
NRS   Narsarsuaq       72.13  17 i P       P        00 02 53.7  -0.5
NRS                               pmax     pmax
      comp=Z,120nm,0.9s
NRS                               MLR      MLR
      comp=Z,9µm,25.0s
PMPS  Porto Santo      72.23  53 eP        P        00 02 58.0 +2.6
      comp=Z,348nm,1.7s
PMPST Porto Santo, M   72.24  53 eP        P        00 03 00.6 +5.1
      comp=Z,280nm,1.9s
PMPST                            eS        S        00 12 17.3 +0.3
YKA   Yellowknife Ar   72.69 344  P        P        00 02 55.9  -1.7
      comp=Z,116nm,1.2s,baz=138,slow=6.0,SNR=100
YKA                               PKP2bc            00 30 34.9
      comp=Z,0.6nm,0.9s,baz=355,slow=2.3,SNR=4.5
DIB   Dawson Inlet,    72.91 330  IAmb     IAmb     00 03 04.9
      comp=Z,293nm,1.1s
SHEL  Horse Pasture    74.24 105  P        P        00 03 07.2  -0.5
SHEL                              pmax     pmax
      comp=Z,147nm,1.0s
SHEL                              MLR      MLR
      comp=Z,21µm,20.0s
SHEL  Horse Pasture    74.24 105  P        P        00 03 07.2  -0.5
SHEL                              IAmb     IAmb     00 03 27.8
      comp=Z,147nm,1.0s
CRAG  Craig            74.53 332  P        P        00 03 09.1 +0.7
WRAK  Wrangell Islan   74.73 333  IAMs_20  IAMs_20  00 35 58.5
      comp=Z,14µm,18.0s
DLBC  Dease Lake       74.97 336  IAmb     IAmb     00 03 16.6
      comp=Z,237nm,1.0s
SFJD  Kangerlussuaq    75.68  12 i P       P        00 03 13.0  -1.9
SFJD  Kangerlussuaq    75.68  12  P        P        00 03 13.7  -1.1
SFJD                              pmax     pmax
      comp=Z,117nm,1.0s
SFJD                              MLR      MLR
      comp=Z,5µm,20.0s
SFJD  Kangerlussuaq    75.68  12  P        P        00 03 13.7  -1.1
SFJD                              IAmb     IAmb     00 03 18.7
      comp=Z,117nm,0.9s
SIT   Sitka            76.44 333  IAMs_20  IAMs_20  00 36 44.7
      comp=Z,14µm,20.0s
LIC   Lamto            76.68  82 eP        P        00 03 21.6  -0.1
      comp=Z,444nm,2.0s
JIS   Juneau Island    76.71 334  IAmb     IAmb     00 03 26.6
      comp=Z,180nm,1.1s
TIC   Toumodi          76.75  82 eP        P        00 03 22.3 +0.2
      comp=Z,230nm,0.9s
DBIC  Dimbokro         76.91  82  P        P        00 03 23.1 +0.1
      comp=Z,75nm,0.8s,baz=245,slow=6.1,SNR=26
DBIC                              LR       LR       00 35 52.7
      comp=Z,27µm,19.6s,baz=234,slow=35
KIC   Kosan Boka       76.98  82 eP        P        00 03 23.6 +0.2
      comp=Z,709nm,1.3s
BESE  Bessie Mountai   77.09 334  IAmb     IAmb     00 03 28.9
      comp=Z,274nm,1.1s
WRMHI West Rim         77.25 291  P        P        00 03 26.4 +1.4
ILULI Ilulissat        77.50  10 i P       P        00 03 24.0  -1.1
      comp=Z,163nm,0.9s
ILULI Ilulissat        77.50  10 i P       P        00 03 24.0  -1.1
ILULI                             pmax     pmax
      comp=Z,160nm,0.9s
ILULI                             MLR      MLR
      comp=Z,8µm,22.0s
ILULI Ilulissat        77.50  10  IAmb     IAmb     00 03 29.3
      comp=Z,151nm,0.9s
KHU   Kahuku           77.51 291  IAMs_20  IAMs_20  00 30 22.5
      comp=Z,12µm,20.0s
MLOA  Mauna Loa Obse   77.53 291  IAMs_20  IAMs_20  00 30 41.0
      comp=Z,13µm,19.0s
POHA  Pohakuloa        77.53 292  IAMs_20  IAMs_20  00 30 42.0
      comp=Z,11µm,19.0s
RAR   Rarotonga        77.58 250  IAMs_20  IAMs_20  00 28 38.8
      comp=Z,15µm,21.0s
HPAH  Hawaii Prepara   77.73 292  IAMs_20  IAMs_20  00 29 51.3
      comp=Z,10µm,20.0s
SKAG  Skagway          77.79 335  IAMs_20  IAMs_20  00 37 54.1
      comp=Z,14µm,19.0s
KHLU  Kahalu`u         77.83 291  IAMs_20  IAMs_20  00 30 31.0
      comp=Z,13µm,20.0s
TTIG  Tnine Tigouga,   77.96  57  P        P        00 03 33.2 +4.5
      SNR=16
TTIG                              P        P        00 03 33.2 +4.5
      SNR=16
WHY   Whitehorse       78.29 336  IAMs_20  IAMs_20  00 40 18.1
      comp=Z,10µm,20.0s
OUK   Oukaimeden       78.60  57  P        P        00 03 38.0 +5.5
      SNR=14
OUK                               P        P        00 03 38.0 +5.5
      SNR=14
VNA3  Neumayer Olymp   78.68 162  P        P        00 03 32.0 +0.2
DHAK  Deception Hill   78.84 334  IAmb     IAmb     00 03 38.7
      comp=Z,278nm,1.1s
VNA1  Neumayer--Stat   78.97 161  P        P        00 03 33.8 +0.5
VNA2  Neumayer--Watz   79.31 161  P        P        00 03 35.3   0.0
      baz=298,slow=6.2
PFVI  Vila Bisbo       79.32  51  P        P        00 03 39.7 +3.8
      SNR=9.8
PFVI                              P        P        00 03 39.7 +3.8
      SNR=9.8
PFVI  Vila Bisbo       79.32  51  IAmb     IAmb     00 03 49.3
      comp=Z,265nm,1.3s
PFVI  Vila Bisbo       79.32  51 eP        P        00 03 38.8 +2.9
      comp=Z,382nm,1.8s
PFVI                             eS        S        00 13 35.5 +0.5
PFVI                             eSS       SS       00 18 48.5 +6.0
OUZM  OUZ              79.45  57  P        P        00 03 40.0 +3.0
      SNR=16
OUZM                              P        P        00 03 40.0 +3.0
      SNR=16
HYT   Haines Junctio   79.45 335  IAmb     IAmb     00 03 42.0
      comp=Z,151nm,1.3s
AVE   Averroes         79.47  55  P        P        00 03 40.7 +3.9
      SNR=16
PMAFR Mafra            79.47  49 eP        P        00 03 39.0 +2.3
      comp=Z,194nm,1.5s
PMAFR                            eS        S        00 13 36.0  -0.6
PMAFR                            eSS       SS       00 18 45.7 +1.0
MORF  Marmelete        79.50  51 eP        P        00 03 37.2 +0.2
MORF                             eS        S        00 13 38.8 +1.7
MORF                              AMS      AMS      00 40 47.4
      comp=E,5µm,20.0s
MORF  Marmelete        79.50  51 eP        P        00 03 37.1 +0.2
MORF                             eS        S        00 13 38.7 +1.7
MORF  Marmelete        79.50  51 eP        P        00 03 40.0 +3.0
      comp=E,317nm,1.7s
MORF                             eS        S        00 13 38.6 +1.5
MORF                             eSS       SS       00 18 53.1 +7.8
LIS   Lisbon           79.50  49 eP        P        00 03 37.1 +0.2
LIS                              eS        S        00 13 38.5 +1.6
LIS                               AMS      AMS      00 36 56.7
      comp=Z,10µm,20.2s
LIS   Lisbon           79.50  49 eP        P        00 03 37.0 +0.2
LIS                              eS        S        00 13 38.5 +1.6
LIS   Lisbon           79.50  49 eP        P        00 03 40.6 +3.7
      comp=Z,236nm,1.6s
PTEO  Sao Teotonio     79.51  50 eP        P        00 03 39.2 +2.3
      comp=Z,232nm,1.6s
YKU2  Yakutat          79.69 334  IAMs_20  IAMs_20  00 39 03.5
      comp=Z,14µm,19.0s
PNCL  Nicolau / Gran   79.81  50 eP        P        00 03 40.2 +1.7
      comp=Z,189nm,1.7s
PNCL                             eS        S        00 13 39.9  -0.2
MESJ  Messejana        79.97  50 eP        P        00 03 39.8 +0.4
MESJ                             eS        S        00 13 43.7 +1.8
MESJ                              AMS      AMS      00 37 06.4
      comp=Z,6µm,20.0s
MESJ  Messejana        79.97  50 eP        P        00 03 39.8 +0.4
MESJ                             eS        S        00 13 43.7 +1.8
MESJ  Messejana        79.97  50 eP        P        00 03 42.2 +2.8
      comp=Z,101nm,1.7s
PSBE  So Bento         79.99  48 eP        P        00 03 41.4 +1.9
      comp=Z,228nm,1.8s
PSBE  So Bento         79.99  48 eS        S        00 13 41.6  -0.5
PBDV  Barranco-do-Ve   80.04  51 eP        P        00 03 43.0 +3.1
      comp=Z,160nm,1.6s
PBDV  Barranco-do-Ve   80.04  51 eS        S        00 13 43.9 +1.2
PCVE  Castro Verde     80.06  50 eP        P        00 03 38.5  -1.4
      comp=Z,177nm,1.6s
PCVE  Castro Verde     80.06  50 eS        S        00 13 44.3 +1.5
RTC   Rabat Centre     80.08  54  P        P        00 03 44.4 +4.3
      SNR=13
ZHG   ZHG              80.13  55  P        P        00 03 45.0 +4.5
      SNR=19
OPA   Opana            80.16 293  IAMs_20  IAMs_20  00 29 07.5
      comp=Z,12µm,22.0s
ZGR   Zagora           80.24  58  P        P        00 03 46.0 +4.8
      SNR=20
ZGR                               P        P        00 03 46.0 +4.8
      SNR=20
PVAQ  Vaqueiros        80.25  51  P        P        00 03 45.2 +4.3
      SNR=11
PVAQ                              P        P        00 03 45.2 +4.3
      SNR=11
PVAQ  Vaqueiros        80.25  51  IAmb     IAmb     00 04 03.4
      comp=Z,218nm,1.9s
PVAQ  Vaqueiros        80.25  51 eP        P        00 03 41.5 +0.6
      comp=Z,102nm,1.6s
PVAQ  Vaqueiros        80.25  51 eS        S        00 13 45.2 +0.4
PVAQ  Vaqueiros        80.25  51 eLR       LR       00 31 40.5
      comp=Z,5µm,18.0s
PBEJ  Beja             80.29  50 eP        P        00 03 43.7 +2.5
      comp=Z,112nm,1.7s
PMTG  Montargil        80.29  49 eP        P        00 03 39.8  -1.3
      comp=Z,169nm,1.6s
PMTG  Montargil        80.29  49 eS        S        00 13 44.1  -1.1
PTOM  Tomar            80.30  48 eP        P        00 03 41.4 +0.2
      comp=Z,185nm,1.7s
PCAS  Casmilo, Conde   80.35  48 eP        P        00 03 39.4  -2.1
      comp=Z,219nm,1.6s
PCAS  Casmilo, Conde   80.35  48 eS        S        00 13 45.8  -0.1
PCAS                             eSS       SS       00 18 56.3  -1.6
TZRR  Tazzarine        80.42  58  P        P        00 03 47.2 +5.0
      SNR=18
TZRR                              P        P        00 03 47.2 +5.0
      SNR=18
C36M  Paulatuk         80.45 346  IAMs_20  IAMs_20  00 42 18.1
      comp=Z,12µm,19.0s
C36M  Paulatuk         80.45 346  P        P        00 03 39.4  -1.9
      baz=136,SNR=45
COI   Coimbra          80.46  48  IAmb     IAmb     00 03 47.5
      comp=Z,169nm,0.9s
COI                               IAMs_20  IAMs_20  00 36 34.0
      comp=Z,7µm,21.0s
COI   Coimbra          80.46  48 eP        P        00 03 42.5 +0.5
      comp=Z,394nm,1.5s
COI   Coimbra          80.46  48 eS        S        00 13 46.3  -0.6
COI                              eSS       SS       00 19 01.1 +1.7
RES   Resolute Bay     80.68 356  P        P        00 03 41.1  -1.3
      comp=Z,42nm,1.0s,baz=179,slow=8.9,SNR=3.5
RES   Resolute Bay     80.68 356  P        P        00 03 41.1  -1.3
RES                               pmax     pmax
      comp=Z,107nm,1.3s
RES                               MLR      MLR
      comp=Z,15µm,22.0s
RES   Resolute Bay     80.68 356  IAmb     IAmb     00 03 46.3
      comp=Z,107nm,1.2s
RES                               IAMs_20  IAMs_20  00 39 08.0
      comp=Z,15µm,22.0s
PESTR Estremoz         80.72  49  P        P        00 03 47.7 +4.2
      SNR=6.2
PESTR Estremoz         80.72  49 eS        S        00 13 47.7  -2.0
SNAA  Sanae            80.91 162  P        P        00 03 43.9   0.0
SNAA  Sanae            80.91 162ceP        P        00 03 43.7  -0.2
SNAA  Sanae            80.91 162  IAMs_20  IAMs_20  00 40 14.7
      comp=Z,8µm,21.0s
PVIS  Viseu            80.97  47 eP        P        00 03 45.2 +0.4
      comp=Z,207nm,1.6s
PMRV  Marv??o          81.01  49 eP        P        00 03 45.2 +0.2
      comp=Z,57nm,1.5s
PMRV  Marv??o          81.01  49 eS        S        00 13 50.9  -1.9
PMRV  Marv??o          81.01  49 eLR       LR       00 32 12.4
      comp=Z,7µm,18.0s
PGAV  Gavieira, Arco   81.04  46 eP        P        00 03 44.9  -0.3
      comp=Z,154nm,1.8s
PGAV  Gavieira, Arco   81.04  46 eS        S        00 13 52.3  -0.9
PGAV  Gavieira, Arco   81.04  46 eLR       LR       00 30 56.4
      comp=Z,9µm,24.0s
PCBR  Castelo Branco   81.05  48 eP        P        00 03 45.4 +0.2
      comp=Z,115nm,1.5s
CTGM  Chitina Glacie   81.13 335  IAmb     IAmb     00 03 50.8
      comp=Z,184nm,1.2s
GOLM  Goulmima         81.14  57  P        P        00 03 51.1 +5.1
      SNR=27
GOLM                              P        P        00 03 51.1 +5.1
      SNR=27
PCAB  Cabril           81.15  46 eP        P        00 03 47.3 +1.6
      comp=Z,122nm,1.9s
MTE   Manteigas        81.15  48 eP        P        00 03 47.6 +1.8
      comp=Z,122nm,1.7s
MTE   Manteigas        81.15  48 eS        S        00 13 53.5  -0.8
MTE                              eSS       SS       00 19 12.5 +2.6
MTE   Manteigas        81.15  48 eLR       LR       00 30 50.9
      comp=Z,6µm,22.0s
PVRL  Vila Real        81.25  47 eP        P        00 03 45.4  -0.9
      comp=Z,115nm,1.9s
BARN  Barnard Glacie   81.32 335  IAmb     IAmb     00 03 51.8
      comp=Z,147nm,1.1s
CZD   Col de Zad       81.34  55  P        P        00 03 53.0 +5.7
      SNR=20
KULLO Kullorsuaq       81.42   6 i P       P        00 03 45.3  -1.1
      comp=Z,139nm,1.0s
KULLO Kullorsuaq       81.42   6 i P       P        00 03 45.3  -1.1
KULLO                             pmax     pmax
      comp=Z,140nm,1.0s
KULLO                             MLR      MLR
      comp=Z,8µm,19.0s
BALM  Baldy            81.60 334  IAmb     IAmb     00 03 52.9
      comp=Z,125nm,1.0s
MDT   Midelt           81.66  56  P        P        00 03 53.5 +4.8
      SNR=22
SMIR  Smir Dam         81.66  53  P        P        00 03 54.0 +5.5
      SNR=23
SMIR                              P        P        00 03 54.0 +5.5
      SNR=23
TGL   Tana Glacier     81.68 334  IAmb     IAmb     00 03 53.3
      comp=Z,154nm,1.0s
ARF   Arif             81.69  57  P        P        00 03 54.0 +5.1
      SNR=24
ARF                               P        P        00 03 54.0 +5.1
      SNR=24
MVO   Moncorvo         81.73  47 eP        P        00 03 48.8   0.0
      comp=Z,167nm,1.7s
MVO   Moncorvo         81.73  47 eS        S        00 13 57.6  -2.7
MVO   Moncorvo         81.73  47 eLR       LR       00 31 16.9
      comp=Z,8µm,22.0s
CRQM  Cirque           81.82 334  IAmb     IAmb     00 03 53.9
      comp=Z,171nm,1.1s
PBRG  Braganca         82.10  47 eP        P        00 03 51.4 +0.6
      comp=Z,221nm,1.7s
PBRG  Braganca         82.10  47 eS        S        00 14 03.6  -0.4
VRDI  Verde Repeater   82.17 334  IAmb     IAmb     00 03 55.8
      comp=Z,188nm,1.0s
EPYK  Eagle Plains     82.20 340  IAmb     IAmb     00 04 08.8
      comp=Z,302nm,1.2s
EPYK                              IAMs_20  IAMs_20  00 42 20.4
      comp=Z,12µm,19.0s
EPYK  Eagle Plains     82.20 340  P        P        00 03 50.1  -0.6
      baz=124,SNR=84
HORN  Hornachuelos     82.25  51  P        P        00 03 55.9 +4.4
      SNR=11
RAGM  Ragged Mountai   82.33 333  IAmb     IAmb     00 03 56.8
      comp=Z,200nm,1.1s
BCAR  Beaver Creek A   82.34 336  P        P        00 03 50.2  -1.3
TULEG Thule            82.38   3  IAmb     IAmb     00 04 05.5
      comp=Z,189nm,1.3s
TULEG                             IAMs_20  IAMs_20  00 40 24.2
      comp=Z,9µm,20.0s
GLB   Gilahina Butte   82.42 334  IAmb     IAmb     00 03 56.9
      comp=Z,178nm,1.1s
SUMG  Summit           82.67  12 i P       P        00 03 52.7  -0.8
      comp=Z,405nm,1.0s
SUMG  Summit           82.67  12 i P       P        00 03 52.7  -0.8
SUMG                              pmax     pmax
      comp=Z,410nm,1.0s
SUMG                              MLR      MLR
      comp=Z,32µm,25.0s
SUMG  Summit           82.67  12  IAmb     IAmb     00 04 09.1
      comp=Z,299nm,1.3s
SUMG                              IAMs_20  IAMs_20  00 45 32.7
      comp=Z,7µm,21.0s
MID   Middleton Isla   82.68 332  IAMs_20  IAMs_20  00 40 29.7
      comp=Z,7µm,20.0s
BORG  Borgarnes        82.69  22  P        P        00 03 54.4 +1.2
      comp=Z,92nm,1.1s,baz=275,slow=4.9,SNR=4.9
BORG  Borgarnes        82.69  22  P        P        00 03 54.4 +1.2
BORG                              pmax     pmax
      comp=Z,435nm,1.4s
PALE  Palemas          82.70  54  P        P        00 03 58.0 +3.9
      SNR=28
PALE                              P        P        00 03 58.0 +3.9
      SNR=28
EYAK  Cordova Ski Ar   82.88 333  IAmb     IAmb     00 04 15.1
      comp=Z,267nm,1.6s
MENT  Mentasta         83.06 336  IAmb     IAmb     00 03 59.8
      comp=Z,109nm,1.2s
HIN   Hinchinbrook I   83.16 333  IAmb     IAmb     00 04 00.2
      comp=Z,131nm,1.1s
HIN                               IAMs_20  IAMs_20  00 43 42.1
      comp=Z,10µm,19.0s
FID   Port Fidalgo     83.29 333  IAMs_20  IAMs_20  00 41 42.4
      comp=Z,13µm,21.0s
PAB   San Pablo        83.33  49  P        P        00 03 57.7 +0.5
PAB                               pmax     pmax
      comp=Z,270nm,1.7s
PAB   San Pablo        83.33  49  P        P        00 03 57.7 +0.5
PAB                               IAmb     IAmb     00 04 02.8
      comp=Z,270nm,1.6s
PAB   San Pablo        83.33  49  IAMs_20  IAMs_20  00 38 35.0
      comp=Z,7µm,20.0s
GOG   Mont Gurugu      83.46  54  P        P        00 04 02.0 +3.9
      SNR=29
GOG                               P        P        00 04 02.0 +3.9
      SNR=29
GLI   Glacier Island   83.62 333  IAmb     IAmb     00 04 02.1
      comp=Z,93nm,1.0s
GLI                               IAMs_20  IAMs_20  00 41 40.2
      comp=Z,10µm,21.0s
JBK   JBK              83.63  55  P        P        00 04 03.0 +3.9
      SNR=29
JBK                               P        P        00 04 03.0 +3.9
      SNR=29
SCRK  Sand Creek       83.64 337  IAmb     IAmb     00 04 02.8
      comp=Z,141nm,1.1s
ESDC  Sonseca Array    83.64  49  P        P        00 03 59.4 +0.6
      comp=Z,37nm,0.7s,baz=267,slow=4.6,SNR=50
ESDC                              LR       LR       00 39 15.6
      comp=Z,5µm,19.1s,baz=250,slow=34
ESDC  Sonseca Array    83.64  49  IAmb     IAmb     00 04 04.5
      comp=Z,74nm,1.0s
ESBB  Sonseca Array    83.64  49  IAMs_20  IAMs_20  00 38 55.5
      comp=Z,6µm,20.0s
PAX   Paxson           83.79 335  IAmb     IAmb     00 04 03.3
      comp=Z,212nm,1.1s
TDRA  Tendrara         83.83  56  P        P        00 04 03.1 +3.0
      SNR=26
TDRA                              P        P        00 04 03.1 +3.0
      SNR=26
SCM   Sheep Creek Mo   84.11 334  IAmb     IAmb     00 04 05.2
      comp=Z,162nm,1.0s
SCM                               IAMs_20  IAMs_20  00 44 29.8
      comp=Z,9µm,21.0s
TORD  Torodi Ar. Bea   84.14  76  P        P        00 04 01.9 +0.1
      comp=Z,35nm,0.5s,baz=276,slow=4.1,SNR=57
TORD                              PKKPbc   PKKPbc   00 22 14.9  -0.6
      comp=Z,2.3nm,0.7s,baz=69,slow=2.7,SNR=10
TORD                              PKP2bc            00 30 10.6
      comp=Z,0.7nm,0.8s,baz=75,slow=3.6,SNR=4.2
TORD                              LR       LR       00 41 13.5
      comp=Z,32µm,19.2s,baz=285,slow=36
TORD  Torodi Ar. Bea   84.14  76  P        P        00 04 06.2 +4.4
FIGM  Figuig           84.30  57  P        P        00 04 07.0 +4.5
      SNR=32
FIGM                              P        P        00 04 07.0 +4.5
      SNR=32
SEW   Seward           84.40 332  IAmb     IAmb     00 04 06.2
      comp=Z,126nm,1.0s
SEW                               IAMs_20  IAMs_20  00 38 41.0
      comp=Z,11µm,22.0s
QSPA  South Pole Qui   84.42 180  PKKPbc   PKKPbc   00 22 14.3  -3.0
      comp=Z,3.8nm,0.7s,baz=265,slow=0.4,SNR=8.6
QSPA  South Pole Qui   84.42 180  P        P        00 04 02.8 +0.4
QSPA  South Pole Qui   84.42 180  IAMs_20  IAMs_20  00 35 31.0
      comp=Z,10µm,20.0s
KNK   Knik Glacier     84.44 333  IAmb     IAmb     00 04 07.7
      comp=Z,161nm,1.2s
KNK                               IAMs_20  IAMs_20  00 42 50.6
      comp=Z,13µm,21.0s
SML   Sawmill          84.53 334  IAMs_20  IAMs_20  00 44 33.1
      comp=Z,10µm,21.0s
DHY   Denali Highway   84.62 335  IAmb     IAmb     00 04 07.6
      comp=Z,129nm,1.4s
DHY                               IAMs_20  IAMs_20  00 40 46.4
      comp=Z,9µm,22.0s
GHO   Glory Hole Cre   84.78 334  IAmb     IAmb     00 04 08.4
      comp=Z,136nm,1.2s
GHO                               IAMs_20  IAMs_20  00 44 40.0
      comp=Z,9µm,22.0s
PMR   Palmer           84.81 334  IAmb     IAmb     00 04 08.3
      comp=Z,99nm,1.3s
RC01  Rabbit Creek A   84.89 333  IAMs_20  IAMs_20  00 44 55.6
      comp=Z,9µm,19.0s
PRP   Porcupine Dome   84.91 338  IAmb     IAmb     00 04 09.2
      comp=Z,119nm,1.1s
BRLK  Bradley Lake     84.95 331  IAmb     IAmb     00 04 09.3
      comp=Z,176nm,1.2s
BRLK                              IAMs_20  IAMs_20  00 38 52.4
      comp=Z,7µm,22.0s
HDA   Harding Lake     84.99 337  P        P        00 04 03.6  -1.4
      baz=114
CNPM  China Poot       85.04 331           pP       00 04 14.3 +0.4
CNPM                              IAMs_20  IAMs_20  00 38 43.6
      comp=Z,8µm,22.0s
ILAR  Eielson Array    85.12 337  P        P        00 04 04.2  -1.5
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	comp=Z,35nm,1.1s,baz=141,slow=2.6,SNR=66						
ILAR				PKKPbc	**PKKPbc**	**00 22 13.2**	**-2.1**
	comp=Z,1.2nm,0.9s,baz=295,slow=2.8,SNR=6.6						
ILAR				LR	LR	00 43 41.6	
	comp=Z,17µm,19.0s,baz=119,slow=37						
ILAR	**Eielson Array**	**85.12**	**337**	P	**P**	**00 04 03.6**	**-2.0**
KDAK	**Kodiak Island**	**85.13**	**329**	P	**P**	**00 04 06.8**	**+1.0**
KDAK				pmax	pmax		
	comp=Z,90nm,1.0s						
KDAK				MLR	MLR		
	comp=Z,7µm,20.0s						
KDAK	**Kodiak Island**	**85.13**	**329**	P	**P**	**00 04 06.8**	**+1.0**
KDAK				IAmb	IAmb	00 04 10.4	
	comp=Z,90nm,0.9s						
KDAK	**Kodiak Island**	**85.13**	**329**	IAMs_20	IAMs_20	00 41 11.4	
	comp=Z,7µm,20.0s						
OHAK	**Old Harbor**	**85.31**	**329**	IAMs_20	IAMs_20	00 42 06.4	
	comp=Z,6µm,20.0s						
DSB	**Dublin**	**85.37**	**36**	IAMs_20	IAMs_20	00 39 20.3	
	comp=Z,9µm,21.0s						
RND	**Reindeer**	**85.37**	**335**	IAMs_20	IAMs_20	00 43 49.5	
	comp=Z,12µm,21.0s						
BMAR	**Burnt Mountain**	**85.41**	**340**	P	**P**	**00 04 05.9**	**-1.3**
SCO	**Scoresbysund**	**85.42**	**17**	*i* P	**P**	**00 04 07.4**	**+0.4**
SCO	**Scoresbysund**	**85.42**	**17**	*i* P	**P**	**00 04 07.4**	**+0.4**
SCO				MLR	MLR		
	comp=Z,7µm,28.0s						
SCO	**Scoresbysund**	**85.42**	**17**	IAmb	IAmb	00 04 22.8	
	comp=Z,86nm,1.2s						
POKR	**Poker Plat Res**	**85.47**	**337**	P	**P**	**00 04 06.4**	**-1.0**
	baz=114,SNR=18						
SUA	**Susitna One**	**85.48**	**333**	IAmb	IAmb	00 04 12.2	
	comp=Z,113nm,1.1s						
SUA				IAMs_20	IAMs_20	00 43 35.1	
	comp=Z,9µm,21.0s						
MCK	**McKinley**	**85.53**	**336**	IAmb	IAmb	00 04 12.1	
	comp=Z,113nm,1.2s						
MCK				IAMs_20	IAMs_20	00 43 29.6	
	comp=Z,13µm,21.0s						
COLA	**College**	**85.54**	**337**	P	**P**	**00 04 07.2**	**-0.5**
COLA				pmax	pmax		
	comp=Z,47nm,0.8s						
COLA				MLR	MLR		
	comp=Z,14µm,19.0s						
COLA	**College**	**85.54**	**337**	P	**P**	**00 04 07.2**	**-0.5**
TCOL	**CIGO, UAF Yank**	**85.54**	**337**	P	**P**	**00 04 06.6**	**-1.2**
	baz=113						
SII	**Sitkinak Islan**	**85.58**	**328**	IAMs_20	IAMs_20	00 42 06.3	
	comp=Z,8µm,19.0s						
NVL	**N'lazarevskaya**	**85.60**	**161**	⇓*i*P	**P**	**00 04 08.1**	**+0.1**
NVL				*e*		00 07 31.2	
NVL				*e*S	**SKSac**	**00 14 27.9**	**-3.5**
NVL				*e*SS	**SS**	**00 20 16.5**	**+2.6**
NVL				pmax	pmax		
	comp=Z,218nm,1.3s						
NVL				MLR	MLR		
	comp=Z,8µm,19.0s						
MDM	**Murphy Dome**	**85.72**	**337**	IAmb	IAmb	00 04 13.1	
	comp=Z,163nm,1.1s						
NEA	**Nenana**	**85.91**	**336**	IAMs_20	IAMs_20	00 42 41.3	
	comp=Z,11µm,20.0s						
BWN	**Browne**	**85.91**	**336**	IAMs_20	IAMs_20	00 42 00.9	
	comp=Z,9µm,21.0s						
HTL	**Hartland**	**85.91**	**38**	*e*P	**P**	**00 04 10.8**	**+0.9**
HTL				IAmb	IAmb	00 04 14.8	
	comp=Z,112nm,1.0s						
HTL				IAMs_20	IAMs_20	00 35 52.4	
	comp=Z,8µm,22.2s						
TRF	**Thorofare Moun**	**85.99**	**335**	IAmb	IAmb	00 04 34.7	
	comp=Z,208nm,1.4s						
RSBS	**Rosebush, Pemb**	**85.99**	**37**	*e*P	**P**	**00 04 10.1**	**-0.2**
RSBS				IAmb	IAmb	00 04 14.8	
	comp=Z,163nm,1.0s						
RSBS				IAMs_20	IAMs_20	00 37 48.5	
	comp=Z,10µm,24.0s						
SKT	**Skwentna**	**86.01**	**333**	IAMs_20	IAMs_20	00 43 40.1	
	comp=Z,8µm,20.0s						
KTH	**Kantishna Hill**	**86.29**	**335**	IAmb	IAmb	00 04 15.7	
	comp=Z,179nm,1.2s						
KTH				IAMs_20	IAMs_20	00 44 07.8	
	comp=Z,11µm,20.0s						
YRC	**Rhoscolyn**	**86.42**	**36**	*e*P	**P**	**00 04 13.4**	**+1.1**
WPS	**Cemaes, Angles**	**86.50**	**36**	*e*P	**P**	**00 04 13.7**	**+1.0**
WPS				IAmb	IAmb	00 04 17.1	
	comp=Z,438nm,1.5s						
WPS				IAMs_20	IAMs_20	00 39 37.4	
	comp=Z,8µm,18.7s						
BPAW	**Bear Paw Mtn.**	**86.51**	**336**	IAMs_20	IAMs_20	00 41 52.5	
	comp=Z,12µm,22.0s						
WLF1	**Llynfaes**	**86.53**	**36**	*e*P	**P**	**00 04 14.6**	**+1.8**
WLF1				IAmb	IAmb	00 04 23.9	
	comp=Z,545nm,1.5s						
WLF1				IAMs_20	IAMs_20	00 39 58.6	
	comp=Z,15µm,19.3s						
PPLA	**Purkeypile**	**86.61**	**334**	IAMs_20	IAMs_20	00 47 40.1	
	comp=Z,8µm,20.0s						
WME	**Myndd Eilian**	**86.61**	**36**	*e*P	**P**	**00 04 13.7**	**+0.5**
YLL	**Llanberis**	**86.62**	**36**	*e*P	**P**	**00 04 14.5**	**+1.1**
IOMK	**Kirk Michael**	**86.67**	**35**	*e*P	**P**	**00 04 12.5**	**-1.1**
IOMK				IAmb	IAmb	00 04 18.3	
	comp=Z,690nm,1.1s						
IOMK				IAMs_20	IAMs_20	00 41 10.0	
	comp=Z,14µm,17.9s						
MLY	**Manley**	**86.74**	**336**	IAMs_20	IAMs_20	00 43 07.5	
	comp=Z,11µm,20.0s						
GAL1	**Galloway**	**86.74**	**34**	*e*P	**P**	**00 04 12.7**	**-1.1**
GAL1				IAmb	IAmb	00 04 18.3	
	comp=Z,195nm,1.0s						
KPL	**Plockton**	**86.87**	**32**	*e*P	**P**	**00 04 13.2**	**-1.2**
KPL				IAmb	IAmb	00 04 18.6	
	comp=Z,215nm,1.0s						
MCH1	**Michaelchurch**	**87.05**	**37**	*e*P	**P**	**00 04 15.1**	**-0.4**
MCH1				IAmb	IAmb	00 04 19.8	
	comp=Z,97nm,0.9s						
MCH1				IAMs_20	IAMs_20	00 38 30.3	
	comp=Z,10µm,21.7s						
PGBU	**Glenifferbraes**	**87.10**	**33**	*e*P	**P**	**00 04 14.5**	**-1.2**
PGBU				IAmb	IAmb	00 04 20.0	
	comp=Z,231nm,1.1s						
MONM	**Monmouth**	**87.13**	**37**	*e*P	**P**	**00 04 15.4**	**-0.4**
MONM				IAmb	IAmb	00 04 20.4	
	comp=Z,182nm,0.9s						
MONM				IAMs_20	IAMs_20	00 38 32.8	
	comp=Z,9µm,21.2s						
HLM1	**Long Mynd**	**87.24**	**37**	*e*P	**P**	**00 04 16.0**	**-0.5**
HLM1				IAmb	IAmb	00 04 20.9	
	comp=Z,192nm,1.0s						
HLM1				IAMs_20	IAMs_20	00 38 03.7	
	comp=Z,12µm,25.7s						
OLDB	**Oldbury-Upon-S**	**87.25**	**38**	*e*P	**P**	**00 04 17.0**	**+0.6**
OLDB				IAmb	IAmb	00 04 20.8	
	comp=Z,127nm,0.9s						
OLDB				IAMs_20	IAMs_20	00 36 01.8	
	comp=Z,10µm,26.2s						
EAB	**Aberfoyle**	**87.27**	**33**	*e*P	**P**	**00 04 17.4**	**+0.9**
COLD	**Coldfoot**	**87.32**	**339**	IAmb	IAmb	00 04 21.9	
	comp=Z,114nm,1.1s						
COLD				IAMs_20	IAMs_20	00 45 00.7	
	comp=Z,10µm,18.0s						
INVG	**Invergeldie, C**	**87.49**	**33**	*e*P	**P**	**00 04 17.9**	**+0.4**
INVG				IAmb	IAmb	00 04 21.6	
	comp=Z,229nm,1.3s						
STRD	**Stroud**	**87.51**	**38**	*e*P	**P**	**00 04 17.2**	**-0.5**
STRD				IAmb	IAmb	00 04 22.1	
	comp=Z,262nm,0.8s						
STRD				IAMs_20	IAMs_20	00 35 54.0	
	comp=Z,10µm,27.4s						
SVW2	**Sparrevohn**	**87.58**	**332**	IAmb	IAmb	00 04 21.7	
	comp=Z,112nm,1.0s						
SVW2				IAMs_20	IAMs_20	00 46 45.6	
	comp=Z,9µm,20.0s						
TOLK	**Toolik Lake Re**	**87.62**	**340**	IAmb	IAmb	00 04 22.7	
	comp=Z,152nm,1.2s						
TOLK				IAMs_20	IAMs_20	00 45 50.8	
	comp=Z,11µm,21.0s						
TOLK	**Toolik Lake Re**	**87.62**	**340**	P	**P**	**00 04 17.3**	**-0.7**
	baz=112,SNR=63						
SWN1	**Swindon**	**87.67**	**38**	*e*P	**P**	**00 04 18.9**	**+0.4**
SWN1				IAmb	IAmb	00 04 23.1	
	comp=Z,229nm,0.9s						
SWN1				IAMs_20	IAMs_20	00 36 13.1	
	comp=Z,11µm,29.1s						
ESK	**Eskdalemuir**	**87.69**	**34**	P	**P**	**00 04 18.1**	**-0.4**
ESK				pmax	pmax		
	comp=Z,216nm,1.0s						
ESK	**Eskdalemuir**	**87.69**	**34**	P	**P**	**00 04 18.1**	**-0.4**
EKA	**Eskdalemuir Ar**	**87.72**	**34**	P	**P**	**00 04 18.0**	**-0.6**
	comp=Z,202nm,1.0s,baz=239,slow=5.2,SNR=4.6						
EDI	**Edinburgh**	**87.84**	**33**	*e*P	**P**	**00 04 19.0**	**-0.2**
EDI				IAmb	IAmb	00 04 23.4	
	comp=Z,281nm,1.3s						
EDU	**Dundee**	**88.08**	**33**	*e*P	**P**	**00 04 20.5**	**+0.2**
ESY	**Stoneypath**	**88.15**	**33**	*e*P	**P**	**00 04 20.1**	**-0.5**
MCD	**Coleburn Disti**	**88.19**	**32**	*e*P	**P**	**00 04 21.1**	**+0.2**
CWF	**Charnwood Fore**	**88.22**	**37**	*e*P	**P**	**00 04 21.4**	**+0.3**
CWF				IAmb	IAmb	00 04 25.6	
	comp=Z,88nm,1.1s						
CWF				IAMs_20	IAMs_20	00 39 07.3	
	comp=Z,9µm,20.3s						
IMAR	**Indian Mountai**	**88.24**	**337**	P	**P**	**00 04 19.1**	**-1.8**
EDMD	**Edmundbyers**	**88.28**	**35**	*e*P	**P**	**00 04 21.8**	**+0.5**
EDMD				IAmb	IAmb	00 04 25.9	
	comp=Z,179nm,1.0s						
EDMD				IAMs_20	IAMs_20	00 36 01.5	
	comp=Z,7µm,28.5s						
DRUM	**Mains of Drumt**	**88.44**	**33**	*e*P	**P**	**00 04 22.5**	**+0.5**
DRUM				IAmb	IAmb	00 04 26.3	
	comp=Z,148nm,1.1s						
SBA	**Scott Base**	**89.09**	**191**	IAMs_20	IAMs_20	00 35 14.3	
	comp=Z,7µm,21.0s						
DAG	**Danmarks Havn**	**89.37**	**12**	*i* P	**P**	**00 04 24.6**	**-1.4**
	comp=Z,121nm,1.1s						
DAG	**Danmarks Havn**	**89.37**	**12**	*i* P	**P**	**00 04 24.6**	**-1.4**
DAG				pmax	pmax		
	comp=Z,120nm,1.1s						
DAG				MLR	MLR		
	comp=Z,11µm,24.0s						
WACR	**West Acre**	**89.38**	**37**	*e*P	**P**	**00 04 28.1**	**+1.6**
WACR				IAmb	IAmb	00 04 34.8	
	comp=Z,130nm,0.9s						
WACR				IAMs_20	IAMs_20	00 39 53.4	
	comp=Z,10µm,21.3s						
AFI	**Afiamalu**	**89.47**	**256**	P	**P**	**00 04 28.3**	**+0.5**
	comp=Z,220nm,0.9s,baz=257,slow=18,SNR=12						
AFI	**Afiamalu**	**89.47**	**256**	P	**P**	**00 04 28.4**	**+0.5**
AFI				pmax	pmax		
	comp=Z,708nm,1.3s						
AFI	**Afiamalu**	**89.47**	**256**	IAmb	IAmb	00 04 35.6	
	comp=Z,708nm,1.2s						
CLF	**Chambon-Foret**	**89.63**	**42**	IAmb	IAmb	00 04 32.7	
	comp=Z,109nm,1.0s						
VNDA	**Vanda**	**90.18**	**191**	P	**P**	**00 04 30.7**	**+0.8**
	comp=Z,30nm,1.0s,baz=121,slow=3.3,SNR=41						
VNDA				PP	**PP**	**00 08 05.7**	**+2.5**
	comp=Z,5.7nm,1.1s,baz=116,slow=5.8,SNR=4.4						
VNDA				PKKPbc	**PKKPdf**	**00 21 57.4**	**-0.6**
	comp=Z,3.2nm,1.1s,baz=165,slow=3.0,SNR=4.7						
VNDA				LR	LR	00 36 20.7	
	comp=Z,7µm,21.8s,baz=123,slow=30						
VNDA	**Vanda**	**90.18**	**191**	IAmb	IAmb	00 04 32.8	
	comp=Z,232nm,1.6s						
CASM	**Ain Smara**	**91.24**	**54**	P	**P**	**00 04 37.0**	**+1.3**
CASM	**Ain Smara**	**91.24**	**54**	P	**P**	**00 04 37.0**	**+1.3**
UCC	**Uccle**	**91.38**	**39**	IAmb	IAmb	00 04 40.6	
	comp=Z,98nm,1.3s						
CKFL	**Kef-Lekhel**	**91.44**	**54**	P	P	00 04 41.6	+4.9
CKFL	**Kef-Lekhel**	**91.44**	**54**	P	P	00 04 41.6	+4.9
CAEH	**'Ain El Ouahch**	**91.58**	**53**	P	**P**	**00 04 39.6**	**+2.4**
CAEH	**'Ain El Ouahch**	**91.58**	**53**	P	**P**	**00 04 39.6**	**+2.4**
RDOG	**Red Dog Mine**	**92.22**	**338**	IAmb	IAmb	00 04 44.4	
	comp=Z,77nm,1.0s						
RDOG				IAMs_20	IAMs_20	00 48 09.3	
	comp=Z,11µm,21.0s						
BNI	**Bardonecchia**	**92.28**	**45**	IAmb	IAmb	00 04 52.0	
	comp=Z,126nm,1.8s						
BNI				IAMs_20	IAMs_20	00 46 17.3	
	comp=Z,7µm,20.0s						
WLF	**Walferdange**	**92.39**	**41**	*e*P	**P**	**00 04 40.4**	**-0.3**
	comp=Z,141nm,1.2s,baz=259,slow=5.4						
WLF	**Walferdange**	**92.39**	**41**	IAmb	IAmb	00 04 45.8	
	comp=Z,143nm,1.3s						
WLF				IAMs_20	IAMs_20	00 41 21.7	
	comp=Z,7µm,22.0s						
ANM	**Nome**	**92.69**	**335**	IAmb	IAmb	00 04 46.6	
	comp=Z,77nm,1.3s						
ANM				IAMs_20	IAMs_20	00 48 26.9	
	comp=Z,10µm,21.0s						
SUE	**Sulen**	**92.83**	**29**	*e*P	**P**	**00 04 42.9**	**+0.6**
SUE				*e*SKSac	**SKSac**	**00 15 11.7**	**-2.5**
SUE				*e*SS	**SS**	**00 22 05.2**	**+5.6**
ECH	**Echery**	**92.91**	**42**	IAmb	IAmb	00 04 47.6	
	comp=Z,46nm,1.0s						
FOO	**Floro**	**93.03**	**29**	*e*SKSac	**SKSac**	**00 15 17.3**	**+2.0**
BER	**Bergen**	**93.04**	**30**	*e*P	**P**	**00 04 42.7**	**-0.6**
BER				*e*SKSac	**SKSac**	**00 15 17.3**	**+1.8**
BER				*e*SS	**SS**	**00 22 06.9**	**+4.3**
BER				IVMs_BB	IVMs_BB	00 38 08.3	
	comp=Z,4µm,3.9s						
STAV	**Stavanger**	**93.08**	**31**	*e*P	**P**	**00 04 43.4**	**-0.1**
STAV				*e*SKSac	**SKSac**	**00 15 13.1**	**-2.5**
STAV				*e*SS	**SS**	**00 22 07.9**	**+4.7**
KEST	**Kesra**	**93.50**	**55**	P	**P**	**00 04 47.7**	**+1.5**
	comp=Z,13nm,0.8s,baz=293,slow=1.5,SNR=12						
KEST				LR	LR	00 44 04.9	
	comp=Z,6µm,21.9s,baz=214,slow=34						
KEST	**Kesra**	**93.50**	**55**	IAmb	IAmb	00 05 03.2	
	comp=Z,111nm,1.6s						
KEST				IAMs_20	IAMs_20	00 48 48.1	
	comp=Z,9µm,20.0s						
BLS5	**Blasjo**	**93.51**	**31**	*e*P	**P**	**00 04 46.3**	**+0.7**
BLS5				*e*SKSac	**SKSac**	**00 15 18.1**	**-0.1**
BLS5				*e*SS	**SS**	**00 22 11.3**	**+1.9**
HYA	**Hoyanger**	**93.53**	**29**	*e*P	**P**	**00 04 46.5**	**+0.9**
ODD1	**Odda**	**93.64**	**30**	*e*P	**P**	**00 04 45.9**	**-0.3**
BFO	**Black Forest**	**93.70**	**42**	*e*L	L	00 43 51.4	
	comp=Z,3µm,21.3s						
BFO	**Black Forest**	**93.70**	**42**	P	**P**	**00 04 47.9**	**+1.1**
BFO				pmax	pmax		
	comp=Z,34nm,1.3s						
BFO	**Black Forest**	**93.70**	**42**	P	**P**	**00 04 47.9**	**+1.1**
TNS	**Taunus Mts**	**93.92**	**40**	*e*L	L	00 42 18.9	
	comp=Z,6µm,22.0s						
TUE	**Stuetta**	**94.26**	**44**	IAmb	IAmb	00 05 18.9	
	comp=Z,98nm,1.7s						
MOL	**Molde**	**94.29**	**28**	*e*SKSac	**SKSac**	**00 15 23.4**	**+1.2**
SPIA	**Saint Paul Isl**	**94.35**	**327**	IAMs_20	IAMs_20	00 47 35.2	
	comp=Z,7µm,20.0s						
HOMB	**Homborsund**	**94.49**	**32**	*e*P	**P**	**00 04 51.4**	**+1.3**
HOMB				*e*SKSac	**SKSac**	**00 15 22.4**	**-1.0**
HOMB				*e*SS	**SS**	**00 22 27.2**	**+3.9**
SKAR	**Skarslia**	**94.53**	**30**	*e*P	**P**	**00 04 51.2**	**+0.9**
SKAR				IVmB_BB		00 04 53.8	
	comp=Z,3µm,5.0s						
SKAR				*e*SKSac	**SKSac**	**00 15 24.9**	**+1.1**
SKAR				*e*SS	**SS**	**00 22 31.2**	**+7.2**
SKAR				IVMs_BB	IVMs_BB	00 39 02.0	
	comp=Z,4µm,5.1s						
DAVA	**Damuels**	**94.68**	**43**	*e*PcP	**P**	**00 04 51.2**	**-0.2**
	comp=Z,27nm,0.9s,SNR=10						
DAVA	**Damuels**	**94.68**	**43**	P'P'df	P'P'df	00 30 01.3	+0.2
	comp=Z,11nm,1.4s						
PRMA	**PARMA**	**94.84**	**46**	IAMs_20	IAMs_20	00 43 41.6	
	comp=Z,9µm,22.0s						
VLC	**Villacollemand**	**94.86**	**46**		pP	00 05 01.8	+1.0
GTTG	**Gottingen**	**94.96**	**39**	*e*P	**P**	**00 04 53.3**	**+0.9**
	comp=Z,59nm,1.2s,baz=259,slow=5.4						
DOMB	**Dombas**	**94.97**	**28**	*e*P	**P**	**00 04 51.4**	**-0.9**
DOMB				*e*SKSac	**SKSac**	**00 15 25.5**	**-0.5**
DOMB				*e*SS	**SS**	**00 22 34.5**	**+4.5**
DOMB				IVMs_BB	IVMs_BB	00 39 59.5	
	comp=Z,5µm,4.7s						
SALO	**Salr**	**95.03**	**45**	IAmb	IAmb	00 05 13.5	
	comp=Z,97nm,1.5s						
SALO				IAMs_20	IAMs_20	00 46 32.9	
	comp=Z,6µm,21.0s						
KONO	**Kongsberg**	**95.12**	**31**	*e*P	**P**	**00 04 53.4**	**+0.5**
KONO				*e*SKSac	**SKSac**	**00 15 26.8**	**0.0**
KONO				*e*SS	**SS**	**00 22 38.6**	**+6.3**
KONO				IVMs_BB	IVMs_BB	00 45 21.1	
	comp=Z,4µm,5.0s						
KONO	**Kongsberg**	**95.12**	**31**	⇓*e*P	**P**	**00 04 54.5**	**+1.6**
KONO				pmax	pmax		
	comp=Z,61nm,1.5s						
KONO				MLR	MLR		
	comp=Z,3µm,19.0s						
CASP	**Castiglione de**	**95.13**	**48**		pP	00 05 04.1	+2.0
SYO	**Syowa Base**	**95.20**	**162**	⇓*i*P	**P**	**00 04 51.4**	**-1.7**
SYO	**Syowa Base**	**95.20**	**162**	⇓*i*PcP	**P**	**00 04 53.0**	**-0.1**
SYO	**Syowa Base**	**95.20**	**162**	⇑*i*sP	sP	00 05 04.0	-0.8
FETA	**Feichten**	**95.24**	**43**	*e*PcP	**P**	**00 04 54.2**	**+0.2**
	comp=Z,50nm,1.0s,SNR=23						
FETA	**Feichten**	**95.24**	**43**	*e*PKKPdf	PKKPdf	00 21 47.9	-1.6
	comp=Z,8.2nm,1.2s						
FETA	**Feichten**	**95.24**	**43**	*e*P'P'df	P'P'df	00 30 00.6	+0.5
	comp=Z,4.8nm,1.2s						
BSEG	**Bad Segeberg**	**95.28**	**36**	*e*L	L	00 43 46.3	
	comp=Z,8µm,22.0s						
RETA	**Reutte**	**95.29**	**43**	*e*PcP	**P**	**00 04 54.0**	**-0.1**
	comp=Z,18nm,1.0s,SNR=5.9						
RETA	**Reutte**	**95.29**	**43**	P'P'df	P'P'df	00 29 58.2	-1.6
	comp=Z,2.2nm,1.0s						
ZCCA	**Zocca**	**95.29**	**46**	IAmb	IAmb	00 05 08.3	
	comp=Z,210nm,1.9s						
GAMB	**Gambell**	**95.39**	**333**	IAmb	IAmb	00 04 59.2	
	comp=Z,51nm,1.1s						
GAMB				IAMs_20	IAMs_20	00 52 08.3	
	comp=Z,6µm,21.0s						
OSSC	**Osservatorio P**	**95.45**	**47**	IAMs_20	IAMs_20	00 46 20.8	
	comp=Z,6µm,20.0s						
MOTA	**Moosalm**	**95.51**	**43**	*e*PcP	**P**	**00 04 55.4**	**+0.2**
	comp=Z,32nm,0.8s,SNR=10						
MOTA	**Moosalm**	**95.51**	**43**	*e*PKKPdf	PKKPdf	00 21 46.7	-2.2
	comp=Z,8.4nm,0.9s						
MOTA	**Moosalm**	**95.51**	**43**	P'P'df	P'P'df	00 29 55.8	-3.7
	comp=Z,3.8nm,1.3s						
TBLU	**Trondheim**	**95.56**	**27**	*e*PP	**PP**	**00 08 49.0**	**+3.0**
TBLU				*e*SS	SS	00 22 42.3	+3.9
SQTA	**Sankt Quirin**	**95.58**	**43**	*e*PcP	**P**	**00 04 55.9**	**+0.4**
	comp=Z,42nm,0.8s,SNR=7.6						
SQTA	**Sankt Quirin**	**95.58**	**43**	*e*PKKPdf	PKKPdf	00 21 46.7	-2.1
	comp=Z,9.5nm,0.8s						
SQTA	**Sankt Quirin**	**95.58**	**43**	P'P'df	P'P'df	00 29 58.1	-1.3
	comp=Z,11nm,1.8s						
FUR	**Furstenfeldbru**	**95.66**	**42**	*e*L	L	00 45 10.3	
	comp=Z,4µm,21.9s						
GRA1	**Grafenberg Arr**	**95.68**	**41**	IAMs_20	IAMs_20	00 43 09.6	
	comp=Z,5µm,21.0s						
GRF	**Grafenberg Arr**	**95.68**	**41**	*e*P	**P**	**00 04 57.8**	**+2.0**
	comp=Z,37nm,1.3s,baz=259,slow=5.4						
GRF				*e*L	L	00 43 20.3	
	comp=Z,5µm,21.9s						
OSL	**Oslo**	**95.70**	**30**	*e*P	**P**	**00 04 56.5**	**+1.0**
WATA	**Walderalm**	**95.83**	**43**	*e*PcP	**P**	**00 04 57.4**	**+0.7**
	comp=Z,20nm,0.9s,SNR=8.2						
WATA	**Walderalm**	**95.83**	**43**	*e*PKKPdf	PKKPdf	00 21 47.4	-1.0
	comp=Z,8.6nm,1.0s						
WATA	**Walderalm**	**95.83**	**43**	*e*P'P'df	P'P'df	00 29 57.3	-1.6
	comp=Z,9.0nm,1.5s						
WTTA	**Wattenberg**	**95.87**	**43**	*e*PcP	**P**	**00 04 57.3**	**+0.4**
	comp=Z,24nm,0.9s,SNR=9.7						
WTTA	**Wattenberg**	**95.87**	**43**	*e*PKKPdf	PKKPdf	00 21 45.4	-3.0
	comp=Z,12nm,1.0s						
WTTA	**Wattenberg**	**95.87**	**43**	*e*P'P'df	P'P'df	00 29 57.6	-1.3
	comp=Z,8.0nm,1.4s						
MOX	**Moxa**	**95.96**	**40**	*e*L	L	00 46 16.3	
	comp=Z,4µm,21.2s						
NB2	**NORSAR Subarra**	**95.97**	**29**	P	**P**	**00 04 55.7**	**-1.1**
	comp=Z,84nm,1.7s,baz=270,slow=4.8						
NB2	**NORSAR Subarra**	**95.97**	**29**	P	**P**	**00 04 55.7**	**-1.1**
	baz=270,slow=4.8						
NOA	**NORSAR Array B**	**95.97**	**29**	P	**P**	**00 04 56.0**	**-0.8**
	comp=Z,13nm,1.1s,baz=268,slow=4.6,SNR=9.7						
NOA				LR	LR	00 48 09.2	
	comp=Z,2µm,19.0s,baz=260,slow=36						
KBS	**Kingsbay**	**96.08**	**11**	*e*P	**P**	**00 04 57.4**	**+0.4**
KBS				IVmB_BB		00 05 08.9	
	comp=Z,1µm,3.0s						
KBS				*e*PP	**PP**	**00 08 52.1**	**+2.4**
KBS				*e*SKSac	**SKSac**	**00 15 29.8**	**-1.5**
KBS				*e*SKSac	**SKSac**	**00 15 31.6**	**+0.3**
KBS				*e*SS	**SS**	**00 22 46.3**	**+1.2**
KBS				*e*SS	SS	00 22 47.6	+2.4
KBS				IVMs_BB	IVMs_BB	00 44 51.3	
	comp=Z,2µm,21.6s						
KBS	**Kingsbay**	**96.08**	**11**	⇑*e*P	**P**	**00 04 57.7**	**+0.7**
KBS				pmax	pmax		
	comp=Z,40nm,1.4s						
NC602	**NORSAR Array S**	**96.12**	**30**	*e*P	**P**	**00 04 58.2**	**+0.7**
NC602				*e*SKSac	**SKSac**	**00 15 29.3**	**-2.8**
NC602				*e*SS	**SS**	**00 22 50.9**	**+4.5**
NC602				IVMs_BB	IVMs_BB	00 42 35.7	
	comp=Z,4µm,4.7s						
TSUM	**Tsumeb**	**96.16**	**110**	P	**P**	**00 04 59.6**	**+0.9**
TSUM				IAmb	IAmb	00 05 15.5	
	comp=Z,110nm,1.2s						
NSS	**Namsos**	**96.33**	**26**	*e*P	**P**	**00 04 58.5**	**+0.2**
NSS				*e*SKSac	**SKSac**	**00 15 29.9**	**-3.1**
NSS				*e*SS	**SS**	**00 22 49.5**	**+0.3**
ABTA	**Abfaltersbach**	**96.45**	**44**	*e*PcP	**P**	**00 04 59.9**	**+0.5**
	comp=Z,34nm,1.0s,SNR=8.2						
ABTA	**Abfaltersbach**	**96.45**	**44**	*e*PKKPdf	PKKPdf	00 21 45.7	-1.5
	comp=Z,6.0nm,1.2s						
ABTA	**Abfaltersbach**	**96.45**	**44**	P'P'df	P'P'df	00 29 57.0	-0.7
	comp=Z,4.8nm,1.2s						
NKC	**Novy Kostel**	**96.49**	**40**	*e*P	**P**	**00 05 01.1**	**+1.7**
NKC				*e*x	x	00 05 04.5	
NKC				*e*SKS	**SKSac**	**00 15 27.9**	**-6.6**
NKC				AMS	AMS	00 41 40.0	
	comp=Z,8µm,24.8s						
NKC	**Novy Kostel**	**96.49**	**40**	*e*P	**P**	**00 05 01.1**	**+1.7**
NKC				*e*		00 15 27.9	
NKC				MLR	MLR		
	comp=Z,8µm,24.8s						
COP	**Copenhagen**	**96.55**	**35**	*i* P	pP	00 05 09.4	+1.3
COP	**Copenhagen**	**96.55**	**35**	*e*P	**pP**	**00 05 09.4**	**+1.3**
COP				MLR	MLR		
	comp=Z,4µm,30.0s						
WET	**Wettzell**	**96.75**	**41**	*e*L	L	00 47 42.3	
	comp=Z,3µm,20.9s						
STOK	**Stokkvaagen**	**96.75**	**24**	*e*P	**P**	**00 05 01.3**	**+1.1**
KONS	**Konsvik**	**96.78**	**24**	*e*P	**P**	**00 05 01.0**	**+0.7**
NRCA	**Norcia**	**96.79**	**48**	IAMs_20	IAMs_20	00 44 32.3	
	comp=Z,7µm,22.0s						
SUR	**Sutherland**	**96.84**	**123**	P	**P**	**00 05 03.6**	**+1.9**
SUR				IAmb	IAmb	00 05 24.1	
	comp=Z,119nm,1.6s						
CLL	**Collm**	**96.85**	**39**	*i* P	**P**	**00 05 03.5**	**+2.5**
	comp=Z,108nm,1.9s						
CLL				*e*PIp		00 05 04.0	
	comp=Z,900nm,11.5s						
CLL				*i* pP	**sP**	**00 05 11.8**	**-0.9**
CLL				*e*PP	**PP**	**00 08 54.0**	**-2.4**
CLL				*e*SKSac	**SKSac**	**00 15 37.0**	**+0.7**
CLL				*e*S	**ScS**	**00 16 26.0**	**+4.2**
CLL				*e*PS	PS	00 17 46.0	+0.2
CLL				*e*SS	**SS**	**00 23 00.0**	**+2.7**
CLL				*e*SSS	SSS	00 26 30.0	
CLL				L	L	00 44 00.0	
	comp=Z,3µm,21.9s						
CLL	**Collm**	**96.85**	**39**	*e*L	L	00 44 22.6	
	comp=Z,3µm,21.9s						
CLL	**Collm**	**96.85**	**39**	*i* P	**P**	**00 05 04.6**	**+3.6**
CLL				*e*		00 15 37.0	
CLL				*e*S	**ScS**	**00 16 26.0**	**+4.2**
CLL				pmax	pmax		
	comp=Z,108nm,1.9s						
CLL				MLR	MLR		
	comp=Z,3µm,21.9s						
CLL	**Collm**	**96.85**	**39**	IAmb	IAmb	00 05 13.9	
	comp=Z,75nm,1.6s						
LOF	**Lofoten**	**96.90**	**22**	*e*P	**P**	**00 05 01.8**	**+1.0**
LOF				IVmB_BB		00 05 04.3	
	comp=Z,2µm,2.0s						
LOF				*e*SKSac	**SKSac**	**00 15 35.0**	**-0.8**
LOF				*e*SS	**SS**	**00 23 03.1**	**+6.1**
LOF				IVMs_BB	IVMs_BB	00 39 01.2	
	comp=Z,6µm,4.9s						
HSPB	**Hornsund (broa**	**96.95**	**13**	*e*P	**P**	**00 05 01.7**	**+0.8**
HSPB				IVmB_BB		00 05 02.2	
	comp=Z,558nm,2.4s						
HSPB				*e*SKSac	**SKSac**	**00 15 33.7**	**-2.1**
HSPB				*e*SS	**SS**	**00 22 58.4**	**+1.0**
HSPB				IVMs_BB	IVMs_BB	00 41 40.0	
	comp=Z,2µm,31.0s						
SPA0	**Spitsbergen Ar**	**97.02**	**12**	*e*P	**P**	**00 05 01.2**	**0.0**
SPA0				*e*SKSac	**SKSac**	**00 15 33.4**	**-2.8**
SPA0				*e*SS	**SS**	**00 23 02.0**	**+3.6**
SPITS	**Spitsbergen Ar**	**97.02**	**12**	P	**P**	**00 05 00.6**	**-0.7**
	comp=Z,12nm,0.8s,baz=204,slow=1.8,SNR=7.4						
SPITS				PKKPbc	**PKKPbc**	**00 21 41.5**	**-3.6**
	comp=Z,7.4nm,0.8s,baz=86,slow=5.9,SNR=11						
KBA	**Koelnbreinsper**	**97.03**	**43**	*e*PcP	**P**	**00 05 02.0**	**-0.2**
	comp=Z,11nm,0.8s						
KBA	**Koelnbreinsper**	**97.03**	**43**	*e*PKKPdf	PKKPdf	00 21 43.1	-3.1
	comp=Z,6.2nm,1.3s						
RGN	**Rugen**	**97.06**	**36**	IAMs_20	IAMs_20	00 47 55.5	
	comp=Z,7µm,20.0s						
HFS	**Hagfors**	**97.19**	**30**	P	**P**	**00 05 01.4**	**-1.0**

	comp=Z,11nm,0.7s,baz=198,slow=4.2,SNR=6.8						
KHC	**Kasperske Hory**	**97.21**	**41**	*e*P	**P**	**00 05 02.3**	**-0.4**
KHC				*e*x	x	00 05 06.8	
KHC				*e*x	x	00 05 14.8	
KHC				*e*SKS	**SKSac**	**00 15 37.9**	**-0.4**
KHC				AMS	AMS	00 42 00.0	
	comp=Z,5µm,23.9s						
KHC	**Kasperske Hory**	**97.21**	**41**	⇑*e*P	Pdif	00 05 03.8	+1.0
KHC				pmax	pmax		
	comp=Z,35nm,1.0s						
MYKA	**Terra Mystica**	**97.23**	**44**	*e*PcP	Pdif	00 05 03.0	0.0
	comp=Z,18nm,1.0s,SNR=6.1						
MYKA	**Terra Mystica**	**97.23**	**44**	*e*PKKPdf	PKKPdf	00 21 42.1	-3.6
	comp=Z,6.7nm,1.2s						
GEC2	**GERESS Array S**	**97.29**	**42**	*e*L	L	00 50 03.5	
	comp=Z,3µm,21.1s						
GERES	**GERESS Array B**	**97.29**	**42**	P	**P**	**00 05 02.3**	**-0.9**
	comp=Z,4.0nm,0.8s,baz=318,slow=1.8,SNR=7.0						
GERES				PKKPbc	**PKKPdf**	**00 21 45.0**	**-0.7**
	comp=Z,1.5nm,0.7s,baz=185,slow=6.3,SNR=3.7						
GERES				LR	LR	00 47 00.0	
	comp=Z,3µm,20.8s,baz=259,slow=34						
GERES	**GERESS Array B**	**97.29**	**42**	*e*P	Pdif	00 05 03.7	+0.4
GERES	**GERESS Array B**	**97.29**	**42**	P	**P**	**00 05 03.0**	**-0.2**
MOR8	**Moi Rana**	**97.33**	**24**	*e*P	Pdif	00 05 04.1	+1.2
MOR8				*e*SKSac	**SKSac**	**00 15 41.3**	**+3.1**
INTR	**Introdacqua**	**97.36**	**48**	IAmb	IAmb	00 05 17.2	
	comp=Z,90nm,1.6s						
BRG	**Berggiesshubel**	**97.44**	**40**	*e*P	Pdif	00 05 05.5	+1.7
	comp=Z,4.6nm,1.1s						
BRG				*i*		00 05 07.7	
	comp=Z,35nm,1.1s						
BRG				PP	**PP**	**00 09 01.0**	**+0.1**
BRG				SKS	**SKSac**	**00 15 39.0**	**-0.4**
BRG				S	**ScS**	**00 16 28.0**	**+1.2**
BRG				*e*PKKP	**PKKPbc**	**00 21 43.2**	**0.0**
	comp=Z,13nm,1.4s						
BRG				SS	**SS**	**00 23 08.0**	**+2.4**
BRG				*e*PKPPKP		00 29 56.4	
	comp=Z,52nm,2.2s						
BRG	**Berggiesshubel**	**97.44**	**40**	*e*P	Pdif	00 05 05.5	+1.7
BRG						00 09 01.0	
BRG						00 15 39.0	
BRG				S	**ScS**	**00 16 28.0**	**+1.2**
BRG				SS	**SS**	**00 23 08.0**	**+2.4**
BRG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BRG				pmax	pmax		
	comp=Z,35nm,1.2s						
BRG				pmax	pmax		
	comp=Z,13nm,1.4s						
BRG				pmax	pmax		
	comp=Z,52nm,2.2s						
BRG				MLR	MLR		
	comp=N,2µm,21.3s						
BRG				MLR	MLR		
	comp=E,3µm,21.8s						
BRG				MLR	MLR		
	comp=Z,3µm,22.0s						
PBCC	**Pribram**	**97.48**	**41**	*e*P	Pdif	00 05 08.6	+4.6
HIZ	**Hauiti**	**97.51**	**230**	IAMs_20	IAMs_20	00 39 51.2	
	comp=Z,10µm,20.0s						
STEI	**Steigen**	**97.55**	**22**	*e*P	**P**	**00 05 03.3**	**-0.4**
STEI				*e*SKSac	**SKSac**	**00 15 38.6**	**-0.5**
STEI				*e*SS	**SS**	**00 23 13.4**	**+7.2**
MOA	**Molln**	**97.66**	**43**	*e*PcP	Pdif	00 05 05.2	+0.4
	comp=Z,15nm,1.1s,SNR=10.0						
MOA	**Molln**	**97.66**	**43**	P'P'df	P'P'df	00 29 51.6	-3.7
	comp=Z,7.8nm,1.9s						
WDD	**Wied Dalam**	**97.71**	**55**	IAMs_20	IAMs_20	00 48 40.5	
	comp=Z,7µm,21.0s						
PRA	**Prague**	**97.76**	**40**	AMS	AMS	00 42 40.0	
	comp=Z,8µm,25.1s						
PRU	**Pruhonice**	**97.83**	**40**	*e*P	Pdif	00 05 06.4	+0.9
PRU				*e*x	x	00 05 10.2	
PRU				*e*x	x	00 05 20.3	
PRU				*e*SKS	**SKSac**	**00 15 37.9**	**-3.5**
PRU				AMS	AMS	00 43 00.0	
	comp=Z,8µm,25.3s						
PRU	**Pruhonice**	**97.83**	**40**	*e*P	Pdif	00 05 06.4	+0.9
PRU				*e*		00 05 20.3	
PRU				*e*		00 15 37.9	
PRU				MLR	MLR		
	comp=Z,8µm,25.3s						
PVCC	**Panska Ves**	**97.84**	**40**	*e*P	Pdif	00 05 10.1	+4.5
PVCC				*e*x	x	00 05 24.2	
PVCC				AMS	AMS	00 42 40.0	
	comp=Z,8µm,24.9s						
PVCC	**Panska Ves**	**97.84**	**40**	*e*P	Pdif	00 05 10.1	+4.5
PVCC				*e*		00 05 24.2	
PVCC				MLR	MLR		
	comp=Z,8µm,24.9s						
OBKA	**Obir**	**97.86**	**44**	*e*PcP	Pdif	00 05 05.1	-0.7
	comp=Z,12nm,0.9s						
BSD	**Bornholm Skovb**	**97.97**	**35**	*i* P	Pdif	00 05 17.0	+11
BSD	**Bornholm Skovb**	**97.97**	**35**	*e*P	Pdif	00 05 17.0	+11
BSD				MLR	MLR		
	comp=Z,6µm,26.0s						
ADK	**Adak**	**97.98**	**321**	IAMs_20	IAMs_20	00 44 08.8	
	comp=Z,6µm,20.0s						
BJO1	**Bjornoya**	**98.09**	**16**	*e*P	Pdif	00 05 07.1	+1.0
BJO1				*e*SKSac	**SKSac**	**00 15 38.1**	**-3.6**
BJO1				*e*SS	**SS**	**00 23 12.2**	**-1.3**
BJO1				IVMs_BB	IVMs_BB	00 43 34.7	
	comp=Z,4µm,3.7s						
SOKA	**Soboth**	**98.19**	**44**	*e*PcP	Pdif	00 05 09.1	+1.8
	comp=Z,27nm,1.6s						
SOKA	**Soboth**	**98.19**	**44**	*e*PKKPdf	PKKPdf	00 21 41.5	-2.5
	comp=Z,6.7nm,1.1s						
MIDW	**Midway**	**98.31**	**298**	IAMs_20	IAMs_20	00 38 45.0	
	comp=Z,10µm,21.0s						
OXZ	**Oxford**	**98.37**	**225**	IAMs_20	IAMs_20	00 43 52.6	
	comp=Z,10µm,20.0s						
TREC	**Trest**	**98.46**	**41**	AMS	AMS	00 44 30.0	
	comp=Z,5µm,24.5s						
ARSA	**Arzberg**	**98.52**	**43**	*e*Pdiff	**P**	**00 05 08.3**	**-0.3**
	comp=Z,17nm,0.9s						
TRO	**Tromso**	**98.72**	**20**	*e*Pdif	Pdif	00 05 09.7	+0.7
TRO				*e*SKSac	**SKSac**	**00 15 46.4**	**+1.4**
TRO				*e*SS	**SS**	**00 23 21.9**	**-0.6**
TRO				IVMs_BB	IVMs_BB	00 51 31.7	
	comp=Z,6µm,4.2s						
CONA	**Conrad Observa**	**98.73**	**43**	*e*Pdiff	Pdif	00 05 10.4	+0.7
	comp=Z,22nm,0.9s,SNR=7.0						
UPC	**Upice**	**98.77**	**40**	*e*P	Pdif	00 05 10.8	+1.1
UPC				*e*SKS	**SKSac**	**00 15 45.4**	**-0.7**
UPC				AMS	AMS	00 42 20.0	
	comp=Z,8µm,24.6s						
UPC	**Upice**	**98.77**	**40**	*e*P	Pdif	00 05 10.8	+1.1
UPC				*e*		00 15 45.4	
UPC				MLR	MLR		
	comp=Z,8µm,24.6s						
CHVC	**Chvalec**	**98.79**	**40**	*e*P	Pdif	00 05 10.4	+0.6
CHVC				*e*x	x	00 05 24.0	
CHVC				AMS	AMS	00 42 30.0	
	comp=Z,8µm,25.9s						
ODZ	**Otahua Downs**	**98.84**	**223**	IAMs_20	IAMs_20	00 41 07.8	
	comp=Z,10µm,19.0s						
OSTC	**Ostas**	**98.89**	**40**	*e*P	Pdif	00 05 11.1	+0.8
OSTC				*e*x	x	00 05 28.3	
OSTC				*e*SKS	**SKSac**	**00 15 42.9**	**-3.9**
OSTC				AMS	AMS	00 43 10.0	
	comp=Z,8µm,27.0s						
KSP	**Ksiaz**	**98.94**	**40**	*e*P	Pdif	00 05 15.7	+5.3
KSP	**Ksiaz**	**98.94**	**40**	*e*P	Pdif	00 05 15.7	+5.3
RPZ	**Rata Peaks**	**98.95**	**224**	IAMs_20	IAMs_20	00 43 13.9	
	comp=Z,9µm,20.0s						
DPC	**Dobruska-Polom**	**98.97**	**40**	*e*P	Pdif	00 05 11.8	+1.1
DPC				*e*x	x	00 05 28.7	
DPC				*e*SKS	**SKSac**	**00 15 45.4**	**-1.8**
DPC				AMS	AMS	00 44 50.0	
	comp=Z,7µm,23.1s						
DPC	**Dobruska-Polom**	**98.97**	**40**	*e*P	Pdif	00 05 11.8	+1.1
DPC				*e*		00 05 28.7	
DPC				*e*		00 15 45.4	
DPC				MLR	MLR		
	comp=Z,7µm,23.1s						
KRUC	**Moravsky**	**99.06**	**41**	*e*PDIFF	**Pdif**	**00 05 11.2**	**+0.2**
VRAC	**Vranov**	**99.18**	**41**	⇑P	**Pdif**	**00 05 12.6**	**+1.0**
VRAC	**Vranov**	**99.18**	**41**	⇑P	**Pdif**	**00 05 12.6**	**+1.0**
VRAC	**Vranov**	**99.18**	**41**	*e*PDIFF	**Pdif**	**00 05 11.8**	**+0.2**
HOPEN	**Hopen**	**99.18**	**13**	*e*Pdif	**Pdif**	**00 05 12.2**	**+1.3**
HOPEN				IVmB_BB		00 05 16.4	
	comp=Z,2µm,2.9s						
HOPEN				*e*PP	**PP**	**00 09 15.4**	**+1.9**
HOPEN				*e*SKSac	**SKSac**	**00 15 48.8**	**+1.6**
HOPEN				*e*SS	**SS**	**00 23 32.6**	**+3.9**
HOPEN				IVMs_BB	IVMs_BB	00 43 41.3	
	comp=Z,2µm,3.7s						
KRLC	**Kraliky**	**99.28**	**40**	AMS	AMS	00 43 40.0	
	comp=Z,5µm,23.8s						
GKP	**Gorka Klasztor**	**99.41**	**37**	*e*P	**Pdif**	**00 05 17.5**	**+5.1**
GKP	**Gorka Klasztor**	**99.41**	**37**	*e*P	**Pdif**	**00 05 17.5**	**+5.1**
TIP	**Timpagrande**	**99.52**	**51**	⇑P	**Pdif**	**00 05 13.1**	**-0.3**
BLY	**Banja Luka**	**99.73**	**46**	IAMs_20	IAMs_20	00 46 00.0	
	comp=Z,7µm,22.0s						
MORC	**Moravsky Berou**	**99.78**	**41**	⇑P	**Pdif**	**00 05 15.8**	**+1.5**
MORC	**Moravsky Berou**	**99.78**	**41**	⇑P	**Pdif**	**00 05 15.8**	**+1.5**
MORC	**Moravsky Berou**	**99.78**	**41**	*e*PDIFF	**Pdif**	**00 05 14.6**	**+0.3**
JAVC	**Velka Javorina**	**99.91**	**42**	*e*PDIFF	**Pdif**	**00 05 17.0**	**+2.1**
WKZ	**Wanaka**	**100.01**	**223**	IAMs_20	IAMs_20	00 41 24.7	
	comp=Z,10µm,20.0s						
HAMF	**Hammerfest**	**100.16**	**19**	*e*Pdif	**Pdif**	**00 05 16.1**	**+0.7**
HAMF				*e*SKSac	**SKSac**	**00 15 50.9**	**-1.2**
HAMF				*e*SS	**SS**	**00 23 46.4**	**+3.9**
OKC	**Ostrava-Krasne**	**100.17**	**41**	*e*P	**Pdif**	**00 05 16.9**	**+1.0**
OKC				*e*x	x	00 05 21.2	
OKC				*e*SKS		00 15 45.4	
OKC				AMS	AMS	00 45 20.0	
	comp=Z,5µm,22.6s						
OKC	**Ostrava-Krasne**	**100.17**	**41**	*e*P	**Pdif**	**00 05 16.9**	**+1.0**
OKC				*e*		00 15 45.4	
OKC				MLR	MLR		
	comp=Z,5µm,22.6s						
KTK1	**Kautokeino**	**100.33**	**21**	*e*Pdif	**Pdif**	**00 05 17.1**	**+0.9**
ARCES	**ARCESS Array B**	**101.01**	**20**	P	**Pdif**	**00 05 18.4**	**-0.8**
	comp=Z,8.0nm,1.1s,baz=289,slow=2.8,SNR=3.6						
ARCES				PKKPbc	**PKKPbc**	**00 21 30.3**	**-3.4**
	comp=Z,2.6nm,0.7s,baz=104,slow=3.9,SNR=7.4						
ARE0	**ARCESS Array S**	**101.01**	**20**	*e*Pdif	**Pdif**	**00 05 19.9**	**+0.7**
ARE0				*e*SKSac	**SKSac**	**00 15 55.0**	**-1.4**
ARE0				*e*PS	PS	00 18 31.5	+1.5
ARE0				*e*SS	**SS**	**00 23 56.0**	**+1.5**
ARE0				IVMs_BB	IVMs_BB	00 49 35.0	
	comp=Z,4µm,4.2s						
DCZ	**Deep Cove**	**101.05**	**222**	IAMs_20	IAMs_20	00 41 52.1	
	comp=Z,8µm,21.0s						
PYZ	**Puysegur Point**	**101.12**	**221**	IAMs_20	IAMs_20	00 43 12.9	
	comp=Z,8µm,19.0s						
OJC	**Ojcow**	**101.20**	**40**	*e*P	**Pdif**	**00 05 24.1**	**+3.5**
OJC	**Ojcow**	**101.20**	**40**	*e*P	**Pdif**	**00 05 24.1**	**+3.5**
PDG	**Podgorica**	**101.32**	**48**	⇓P	**Pdif**	**00 05 24.0**	**+2.8**
PDG	**Podgorica**	**101.32**	**48**	IAMs_20	IAMs_20	00 47 51.5	
	comp=Z,6µm,22.0s						
BOSA	**Boshof**	**101.37**	**121**	P	**Pdif**	**00 05 21.6**	**-0.4**
	comp=Z,7.4nm,1.0s,baz=229,slow=3.9,SNR=7.7						
BOSA				PKKPbc	**PKKPbc**	**00 21 29.9**	**-1.5**
	comp=Z,3.5nm,0.6s,baz=61,slow=1.7,SNR=11						
BOSA	**Boshof**	**101.37**	**121**	P	**Pdif**	**00 05 23.3**	**+1.3**
BOSA	**Boshof**	**101.37**	**121**		**Pdif**	**00 05 23.3**	**+1.3**
TIR	**Tirane**	**101.83**	**49**	IAMs_20	IAMs_20	00 51 11.9	
	comp=Z,5µm,21.0s						
LBTB	**Lobatse**	**102.45**	**117**	PP	**PP**	**00 09 38.2**	**-1.6**
	comp=Z,5.2nm,0.9s,baz=296,slow=7.7,SNR=3.8						
BZS	**Buzias**	**102.81**	**45**	⇑P	**Pdif**	**00 05 29.9**	**+2.1**
BZS	**Buzias**	**102.81**	**45**	⇑P	**Pdif**	**00 05 29.9**	**+2.1**
SUW	**Suwalki**	**102.86**	**36**	IAMs_20	IAMs_20	00 51 59.9	
	comp=Z,5µm,21.0s						
UZH	**Uzhgorod**	**102.97**	**42**	*e*P	**Pdif**	**00 05 31.0**	**+2.6**
UZH				*e*		00 09 50.0	
UZH				*e*S	**Sdif**	**00 17 12.0**	**-1.1**
UZH				*e*SS	**SS**	**00 24 19.6**	**-3.2**
FINES	**FINESS Array B**	**103.06**	**28**	Pdiff	**Pdif**	**00 05 27.4**	**-1.1**
	comp=Z,9.5nm,0.7s,baz=286,slow=7.7,SNR=12						
FINES				PKKPbc	**PKKPbc**	**00 21 24.7**	**-2.7**
	comp=Z,6.6nm,0.8s,baz=116,slow=4.4,SNR=7.0						
FINES	**FINESS Array B**	**103.06**	**28**	P	**Pdif**	**00 05 29.1**	**+0.6**
FINES	**FINESS Array B**	**103.06**	**28**		**Pdif**	**00 05 29.1**	**+0.6**
TRPA	**Tarpa**	**103.19**	**42**	⇑P	**Pdif**	**00 05 33.9**	**+4.5**
DRGR		**103.45**	**43**	⇑P	**Pdif**	**00 05 32.7**	**+2.0**
DRGR		**103.45**	**43**	⇑P	**Pdif**	**00 05 32.7**	**+2.0**
GZR	**Gura Zlata**	**103.64**	**45**	⇓P	**Pdif**	**00 05 33.8**	**+2.2**
GZR	**Gura Zlata**	**103.64**	**45**	⇓P	**Pdif**	**00 05 33.8**	**+2.2**
BILL	**Bilibino**	**103.65**	**339**	⇓*e*P	**Pdif**	**00 05 32.0**	**+1.0**
BILL				pmax	pmax		
	comp=Z,13nm,1.8s						
BILL	**Bilibino**	**103.65**	**339**	IAMs_20	IAMs_20	00 55 58.4	
	comp=Z,5µm,20.0s						
ITM	**Ithomi**	**103.65**	**53**	IAMs_20	IAMs_20	00 52 28.7	
	comp=Z,5µm,21.0s						
LVV	**L'vov**	**103.96**	**40**	*e*P	**Pdif**	**00 05 40.8**	**+8.0**
LVV				*e*		00 09 54.7	
LVV				*e*		00 16 06.5	
LVV				*e*S	**Sdif**	**00 17 22.6**	**+1.3**
LVV				*e*PS	**PS**	**00 18 59.2**	**-2.7**
LVV				*e*SS	**SS**	**00 24 28.3**	**-8.0**
LVV				MLR	MLR		
	comp=E,4µm,21.0s						
LVV				MLR	MLR		
	comp=Z,3µm,21.0s						
LVV				MLR	MLR		
	comp=N,2µm,20.0s						
APA	**Apatity**	**104.36**	**21**	⇓*i*P	**Pdif**	**00 05 37.5**	**+3.3**
APA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ITZ	**Itezhi-Tezhi**	**104.65**	**108**	*e*P	**Pdif**	**00 05 46.8**	**+10**
ITZ				*e*S	SS	00 24 59.0	+11
ARR	**Arges**	**104.95**	**45**	⇑P	**Pdif**	**00 05 38.1**	**+0.8**
BURAR	**Bucovina Array**	**105.05**	**42**	⇓P	**Pdif**	**00 05 38.8**	**+1.0**
BURAR	**Bucovina Array**	**105.05**	**42**	⇓P	**Pdif**	**00 05 38.8**	**+1.0**
MICGM	**Minsk**	**105.48**	**35**	*e*PKP	**PKiKP**	**00 09 55.0**	**+2.1**
MICGM				*e*PP	PP	00 10 27.0	+26
MICGM				*e*PPP	PPP	00 13 08.0	
MICGM				*e*SKS	SKSdf	00 16 30.0	-33
MICGM				*e*SS	SKKPbc	00 25 24.0	+22
MICGM				*e*SSS	SSS	00 31 24.0	
MICGM				*e*LR	LR	00 42 00.0	
MICGM				LRM	MLR	00 47 06.0	
	comp=Z,11nm,26.0s						
MICGM				LRM	MLR	00 47 16.0	
	comp=Z,16nm,24.0s						
MLR	**Muntele Rosu**	**105.84**	**44**	IAMs_20	IAMs_20	00 54 22.0	
	comp=Z,4µm,20.0s						
MATP	**Matopo**	**106.05**	**113**	PP	PP	00 09 58.1	-8.6
	comp=Z,5.8nm,0.9s,baz=63,slow=2.6,SNR=7.2						
LSZ	**Lusaka**	**106.80**	**108**	PP	**PP**	**00 10 09.7**	**-2.6**
	comp=Z,11nm,1.1s,baz=269,slow=5.6,SNR=5.0						
LSZ				PKKPbc	**PKKPbc**	**00 21 17.7**	**+2.9**
	comp=Z,2.4nm,0.8s,baz=110,slow=3.0,SNR=5.6						
AKASG	**Malin Array Be**	**107.09**	**39**	PP	**PP**	**00 10 11.3**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=275,slow=5.6,SNR=7.5						
AKASG				PKKPbc	**PKKPbc**	**00 21 12.6**	**-2.2**
	comp=Z,1.7nm,0.6s,baz=69,slow=3.2,SNR=8.9						
TIRR	**Tirgusor**	**107.74**	**45**	IAMs_20	IAMs_20	00 55 40.1	
	comp=Z,5µm,22.0s						
DZM	**Mont Dzumac**	**108.56**	**245**	*e*PP	**PP**	**00 10 23.3**	**-1.7**
	comp=Z,2µm,25.8s						
DZM				*e*SKSac	**SKSac**	**00 16 34.3**	**+1.4**
	comp=Z,3µm,27.3s						
DZM	**Mont Dzumac**	**108.56**	**245**	*e*PS	PS	00 19 50.8	+0.1
	comp=Z,3µm,25.4s						
DZM				*e*SS	SS	00 25 43.0	+2.5
	comp=Z,7µm,28.5s						
DZM	**Mont Dzumac**	**108.56**	**245**	*e*LR	LR	00 41 54.0	
	comp=Z,10µm,30.9s						
DZM	**Mont Dzumac**	**108.56**	**245**	IAMs_20	IAMs_20	00 49 13.6	
	comp=Z,5µm,20.0s						
KLMR	**Klimovskoe**	**109.42**	**27**	*e*P	**Pdif**	**00 05 58.2**	**+1.4**
KLMR						00 10 34.3	
KLMR						00 16 31.8	
KLMR				SP	SP	00 20 00.1	+6.6
KLMR				*e*		00 21 05.5	
KLMR				SS	SS	00 26 05.5	+16
KLMR				pmax	pmax		
	comp=Z,33nm,1.5s						
KLMR				MLR	MLR		
	comp=Z,4µm,18.0s						
KLMR	**Klimovskoe**	**109.42**	**27**	*e*Pdif	**Pdif**	**00 05 58.2**	**+1.4**
KLMR				AMP		00 06 01.8	
	comp=Z,33nm,1.5s						
KLMR				PP	**PP**	**00 10 34.3**	**+4.4**
KLMR				⇓SKSac	**SKSac**	**00 16 31.9**	**-2.7**
KLMR				⇓SKSac	**SKSac**	**00 16 31.9**	**-2.7**
KLMR				SP	SP	00 20 00.2	+6.7
KLMR				*e*PKKPab	**PKKPbc**	**00 21 05.5**	**-2.2**
KLMR				SS	SS	00 26 05.6	+16
KLMR				SS	SS	00 26 05.6	+16
KLMR				LR	LR	00 45 26.1	
KLMR				AMP		00 53 53.6	
	comp=Z,4µm,18.0s						
OBN	**Obninsk**	**110.14**	**33**	⇓*i*PKIKP	**PKiKP**	**00 10 01.9**	**+0.4**
OBN						00 10 40.0	
OBN				*e*		00 16 37.3	
OBN				*e*		00 18 05.5	
OBN				*e*PS	PS	00 20 00.6	-4.5
OBN				*e*PPS	PPS	00 21 41.5	
OBN				*e*SS	SS	00 25 58.5	-1.1
OBN				pmax	pmax		
	comp=Z,28nm,1.3s						
OBN	**Obninsk**	**110.14**	**33**	IAMs_20	IAMs_20	00 53 20.3	
	comp=Z,4µm,21.0s						
SEY	**Seymchan**	**111.06**	**337**	⇑*i*PKIKP	**PKiKP**	**00 10 03.5**	**+0.4**
TIXI	**Tiksi**	**111.51**	**350**	⇑*i*PKIKP	**PKiKP**	**00 10 05.4**	**+1.7**
TIXI				MLR	MLR		
	comp=Z,8µm,23.0s						
TIXI	**Tiksi**	**111.51**	**350**	IAMs_20	IAMs_20	00 56 48.9	
	comp=Z,8µm,22.0s						
LPSR	**Galich'ya Gora**	**112.34**	**35**	*i* PKIKP	**PKiKP**	**00 10 05.4**	**-0.4**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BR131	**Keskin Array S**	**112.44**	**49*c***	*i*PKIKP	**PKiKP**	**00 10 06.7**	**+0.1**
BRTR	**Keskin Array B**	**112.44**	**49**	PKiKP	**PKiKP**	**00 10 07.3**	**+0.7**
	comp=Z,2.4nm,0.9s,baz=202,slow=1.3,SNR=7.1						
BRTR				PKKPbc	**PKKPbc**	**00 20 57.5**	**+0.1**
	comp=Z,7.6nm,1.1s,baz=123,slow=4.6,SNR=7.7						
BRTR	**Keskin Array B**	**112.44**	**49**	*i* PKIKP	**PKiKP**	**00 10 07.3**	**+0.7**
H11N3	**WAKE ISLAND Hy**	**112.74**	**289**	T	T	02 12 29.2	
	baz=86,slow=74,SNR=161						
H11N2	**WAKE ISLAND Hy**	**112.75**	**289**	T	T	02 12 20.1	
	baz=86,slow=74,SNR=199						
H11N1	**WAKE ISLAND Hy**	**112.75**	**289**	T	T	02 12 30.3	
	baz=86,slow=74,SNR=213						
H11S2	**WAKE ISLAND Hy**	**112.97**	**288**	T	T	02 12 47.3	
	baz=89,slow=75,SNR=130						
VSR	**Storozhevoye**	**112.97**	**36**	*i* PKIKP	**PKiKP**	**00 10 06.7**	**-0.3**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.5s						
H11S1	**WAKE ISLAND Hy**	**112.97**	**288**	T	T	02 12 46.1	
	baz=89,slow=75,SNR=165						
H11S3	**WAKE ISLAND Hy**	**112.98**	**288**	T	T	02 12 46.9	
	baz=89,slow=75,SNR=126						
MA2	**Magadan**	**113.48**	**334**	IAMs_20	IAMs_20	01 06 13.5	
	comp=Z,5µm,21.0s						
VRH	**Novokhopyorsk**	**114.47**	**36**	*i* PKIKP	**PKiKP**	**00 10 08.4**	**-1.5**
VRH				*e*		00 20 47.3	
VRH				pmax	pmax		
	comp=Z,20nm,1.0s						
SKR	**Severo-Kuril's**	**114.84**	**324**	⇑*i*PKIKP	**PKiKP**	**00 10 08.4**	**-2.2**
SOC	**Sochi**	**115.86**	**44**	*i* PKIKP	**PKiKP**	**00 10 10.9**	**-1.9**
SOC				*e*		00 11 15.0	
SOC				*e*PPP	PPP	00 13 45.1	
SOC				*e*PS	**PKKPab**	**00 20 50.7**	**+1.4**
SOC				*e*SS	SS	00 27 02.0	-14
SOC				*e*SSS	SSS	00 31 39.9	
NRIK	**Noril'sk**	**115.97**	**5**	PKP	**PKiKP**	**00 10 11.6**	**-0.7**
	comp=Z,1.6nm,0.3s,baz=109,slow=1.5,SNR=7.6						
NRIK				PP	**PP**	**00 11 17.0**	**+0.9**
	comp=Z,7.7nm,1.0s,baz=228,slow=16,SNR=4.7						
NRIK				PKKPbc	**PKKPbc**	**00 20 44.7**	**-1.3**
	comp=Z,18nm,1.0s,baz=144,slow=2.0,SNR=8.2						
NRIK	**Noril'sk**	**115.97**	**5**	PKIKP	**PKiKP**	**00 10 11.6**	**-0.7**
ASF	**Jabal al Asfar**	**116.49**	**57**	PKKPbc	PKKPbc	00 20 48.4	+5.2
	comp=Z,6.2nm,1.1s,baz=47,slow=2.8,SNR=7.2						
HNR	**Honiara**	**117.50**	**256**	IAMs_20	IAMs_20	00 48 48.7	
	comp=Z,7µm,21.0s						
GOF	**Gofitskoye**	**117.61**	**42**	⇑*e*PKIKP	pPKPdf	00 10 25.6	+0.6
KIV	**Kislovodsk**	**117.77**	**43**	*e*P	**Pdif**	**00 06 35.4**	**+0.9**
KIV				*i*		00 10 17.6	
KIV				*e*		00 11 30.7	
KIV				*e*		00 17 10.5	
KIV				*e*PS	**PS**	**00 21 16.1**	**+0.5**
KIV				*e*SS	SS	00 27 40.7	-0.4
KIV				pmax	pmax		
	comp=Z,22nm,1.1s						
CAN	**Canberra**	**117.86**	**225**	IAMs_20	IAMs_20	00 50 55.6	
	comp=Z,8µm,20.0s						
KMBO	**Kilima Mbogo**	**117.91**	**94**	PKP	**PKiKP**	**00 10 18.4**	**+0.4**
	comp=Z,2.5nm,0.7s,baz=264,slow=0.7,SNR=9.2						
KMBO				PKKPbc	**PKKPab**	**00 20 40.6**	**-0.8**
	comp=Z,1.1nm,0.3s,baz=44,slow=5.8,SNR=6.1						
KMBO	**Kilima Mbogo**	**117.91**	**94**	PKIKP	**PKiKP**	**00 10 18.4**	**+0.4**
KBZ	**Khabaz**	**117.99**	**43**	PKP	**PKPdf**	**00 10 16.3**	**-0.6**
	comp=Z,7.6nm,0.9s,baz=177,slow=7.2,SNR=12						
KBZ				PKKPbc	**PKKPab**	**00 20 40.0**	**+0.1**
	comp=Z,8.8nm,1.0s,baz=70,slow=4.1,SNR=5.9						
KBZ	**Khabaz**	**117.99**	**43**	⇑*i*PKIKP	**PKiKP**	**00 10 16.0**	**-0.9**
NCK	**Nalchik**	**118.55**	**43**	⇑*i*PKIKP	**PKiKP**	**00 10 19.0**	**+0.9**
YAK	**Yakutsk**	**119.36**	**344**	*e*PKIKP	**PKiKP**	**00 10 13.7**	**-5.4**
YAK				*e*		00 11 34.0	
YAK				*e*PS	**PKKPdf**	**00 21 08.2**	**+3.8**
YAK				*e*SS	SS	00 27 46.9	-13
YAK				pmax	pmax		
	comp=Z,28nm,1.0s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,259nm,2.5s						
YAK				pmax	pmax		
	comp=N,131nm,2.0s						
YAK				pmax	pmax		
	comp=E,135nm,2.9s						
YAK				MLR	MLR		
	comp=Z,4µm,20.0s						
YAK	**Yakutsk**	**119.36**	**344**		**PKPdf**	**00 10 17.5**	**-1.5**
YAK				IAMs_20	IAMs_20	01 03 54.8	
	comp=Z,4µm,20.0s						
ARU	**Arti**	**120.13**	**25**	PKKPbc	PKKPbc	00 20 28.8	-1.9
	comp=Z,2.4nm,0.8s,baz=225,slow=2.0,SNR=4.7						
ARU	**Arti**	**120.13**	**25**	*i* PKIKP	**PKPdf**	**00 10 19.8**	**-0.9**
ARU						00 11 44.7	
ARU						00 17 31.7	
ARU				SP	**SP**	**00 21 34.0**	**+2.4**
ARU				PS	**PS**	**00 21 41.9**	**+5.9**
ARU	**Arti**	**120.13**	**25**		**PKPdf**	**00 10 19.3**	**-1.4**
ARU	**Arti**	**120.13**	**25**	IAMs_20	IAMs_20	01 01 26.3	
	comp=Z,4µm,21.0s						
GROC	**Groznyy**	**120.14**	**43**	*i* PKIKP	**PKPdf**	**00 10 19.8**	**-1.3**
GROC				*e*		00 11 46.1	
GROC				pmax	pmax		
	comp=Z,21nm,1.5s						
GNI	**Garni**	**120.53**	**46**	⇑*i*PKIKP	**PKPdf**	**00 10 23.1**	**+0.9**
SVE	**Sverdlovsk**	**120.70**	**23**	*i* PKIKP	**PKPdf**	**00 10 20.0**	**-1.8**
SVE				pmax	pmax		
	comp=Z,31nm,1.8s						
SVE				MLR	MLR		
	comp=Z,4µm,22.0s						
MAK	**Makhachkala**	**121.39**	**42**	*e*P	**Pdif**	**00 06 47.2**	**-3.2**
MAK				*i*		00 10 19.9	
MAK				*e*		00 11 50.7	
MAK				*e*PPP	PPP	00 14 26.5	
MAK				*e*		00 17 15.8	
MAK				*e*PS	**PS**	**00 21 51.1**	**+3.3**
MAK				*e*SS	SS	00 28 26.5	-0.9
MAK				*e*SSS	SSS	00 32 52.9	
MAK				pmax	pmax		
	comp=Z,43nm,0.7s						
MAK				MLR	MLR		
	comp=Z,2µm,19.0s						
AKT	**Akhty**	**122.14**	**44**	*i* PKIKP	**PKiKP**	**00 10 29.0**	**+3.7**
AKT				*e*		00 12 01.3	
AKT				*e*		00 14 00.0	
AKT				pmax	pmax		
	comp=Z,18nm,1.2s						
ABPO	**Ambohimpanom**	**123.36**	**117**	PKIKP	**PKiKP**	**00 10 28.8**	**+0.4**
ABPO	**Ambohimpanom**	**123.36**	**117**		**PKiKP**	**00 10 28.8**	**+0.4**
OPO	**Ambohidratompo**	**123.48**	**117**	PKP	**PKPdf**	**00 10 27.3**	**-1.2**
	comp=Z,13nm,0.8s,baz=246,slow=1.9,SNR=14						
AKTO	**Aktyubinsk**	**123.74**	**30**	PKP	**PKPdf**	**00 10 26.1**	**-1.6**
	comp=Z,8.2nm,1.0s,baz=34,slow=1.1,SNR=16						
AKTO				PP	**PP**	**00 12 13.2**	**+3.1**
	comp=Z,4.5nm,0.8s,baz=307,slow=5.5,SNR=3.7						
AKTO				PKKPbc	**PKKPab**	**00 20 14.3**	**-0.6**
	comp=Z,5.7nm,0.9s,baz=124,slow=3.8,SNR=9.5						
AKTO	**Aktyubinsk**	**123.74**	**30**	PKIKP	**PKPdf**	**00 10 26.2**	**-1.6**
YUK	**Yuzh-Kuril'sk**	**124.01**	**321**	*i* PKIKP	**pPKPdf**	**00 10 37.3**	**0.0**
YUK				*e*		00 12 07.7	
YUK				*e*PPP	PPP	00 14 47.0	
YUK				*e*SS	SS	00 29 02.5	+1.9
YUK				SSS	SSS	00 33 35.3	
YSS	**Yuzh-Sakhalins**	**124.36**	**325**	IAMs_20	IAMs_20	01 08 12.2	
	comp=Z,5µm,20.0s						
STKA	**Stephens Creek**	**124.91**	**225**	PKP	**PKPdf**	**00 10 30.1**	**-0.5**

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      comp=Z,31nm,0.8s,baz=108,slow=2.3,SNR=36
STKA  Stephens Creek    124.91 225   PKIKP    PKPdf    00 10 30.1  -0.5
GRNR  Gornyy            125.32 332⇓ iPKIKP    PKiKP    00 10 30.0  -1.2
GRNR                                eS        PP       00 12 30.5  +10
GRNR                                 pmax     pmax
      comp=Z,10.0nm,0.9s
GRNR  Gornyy            125.32 332  i PN      PKiKP    00 10 30.0  -1.2
GRNR                                 pmax     pmax
      comp=Z,10.0nm,0.9s
GRNR                                 MLR      MLR
      comp=Z,390nm,18.0s
ABKAR Akbulak array     125.45  30            PKPdf    00 10 30.5  -0.6
RAYN  Ar Rayn           125.56  65   PKIKP    PKiKP    00 10 31.7  -0.8
RAYN  Ar Rayn           125.56  65            PKiKP    00 10 31.7  -0.8
BOD   Bodaibo           126.69 350  ePKIKP    PKiKP    00 10 30.9  -2.8
BOD                                  pmax     pmax
      comp=Z,43nm,2.2s
ERM   Erimo             126.73 320   IAMs_20  IAMs_20  01 05 14.7
      comp=Z,4µm,20.0s
ZEA   Zeya              126.88 339  ePKHKP    PKPpre   00 10 02.6
ZEA                                 e                  00 10 44.2
ZEA                                 e                  00 24 22.0
ZEA                                 e                  00 29 37.0
ZEA                                 e                  01 05 18.0
ZEA                                  pmax     pmax
      comp=Z,52nm,1.0s
ZEA                                  pmax     pmax
      comp=Z,1µm,15.0s
CTA   Charters Tower    127.02 240   PKP      PKPdf    00 10 34.5  -0.5
      comp=Z,56nm,1.0s,baz=102,slow=1.7,SNR=43
CTA   Charters Tower    127.02 240   PKIKP    PKPdf    00 10 34.5  -0.5
BRVK  Borovoye          127.21  21c iPKIKP    PKPdf    00 10 33.6  -0.8
BRVK  Borovoye          127.21  21            PKPdf    00 10 33.5  -0.9
BRVK  Borovoye          127.21  21   IAMs_20  IAMs_20  01 10 57.2
      comp=Z,4µm,21.0s
BVAR  Borovoye Array    127.28  21   PKP      PKPdf    00 10 33.6  -0.9
      comp=Z,14nm,0.7s,baz=288,slow=1.5,SNR=41
BVAR                                 PP       PP       00 12 34.3  +1.0
      comp=Z,6.1nm,1.0s,baz=333,slow=15,SNR=4.1
BVAR  Borovoye Array    127.28  21   PKIKP    PKPdf    00 10 33.6  -0.9
KLR   Kul'dur           128.55 333⇓ iPKIKP    PKPdf    00 10 35.9  -1.1
TEY   Ternei            128.96 326⇑ ePKIKP    PKPdf    00 10 35.8  -2.1
TEY                                 e                  00 10 41.2
TEY                                 e                  00 10 51.3
TEY                                 e                  00 12 45.7
TEY                                  pmax     pmax
      comp=Z,10.0nm,0.9s
TEY                                  pmax     pmax
      comp=Z,100nm,4.3s
TEY   Ternei            128.96 326⇑ ePN       PKPdf    00 10 35.8  -2.1
TEY                                  pmax     pmax
      comp=Z,10.0nm,0.9s
TEY                                  pmax     pmax
      comp=Z,100nm,4.3s
PMG   Port Moresby      129.79 253   PKP      PKPdf    00 10 40.7  +0.3
      comp=Z,48nm,1.0s,baz=296,slow=5.7,SNR=5.0
PMG   Port Moresby      129.79 253⇓ iPKIKP    PKiKP    00 10 41.8  +0.7
PMG   Port Moresby      129.79 253            PKiKP    00 10 42.5  +1.4
ZAA0  Zalesovo Array    130.49  11   IAMs_20  IAMs_20  01 10 55.4
      comp=Z,5µm,22.0s
ZALV  Zalesovo Beam     130.49  11   PKhKP    PKPpre   00 10 34.3
      comp=Z,7.0nm,1.0s,baz=257,slow=2.6,SNR=6.5
ZALV                                 PKP      PKPdf    00 10 39.9  -0.7
      comp=Z,47nm,0.5s,baz=331,slow=3.0,SNR=45
ZALV  Zalesovo Beam     130.49  11   PKIKP    PKPdf    00 10 39.9  -0.7
ZALV  Zalesovo Beam     130.49  11            PKPpre   00 10 31.2
BRZS  Berezniki         130.58  22  ePKP      PKPdf    00 10 40.3  -0.7
BRZS                                ePP       PP       00 12 59.9  +4.9
BRZS  Berezniki         130.58  22  ePKIKP    PKPdf    00 10 40.2  -0.7
BRZS                                e                  00 12 59.9
GEYT  Alibeck           130.88  43   PKP      PKPdf    00 10 41.7  -0.2
      comp=Z,26nm,1.2s,baz=284,slow=6.0,SNR=12
GEYT  Alibeck           130.88  43            PKPdf    00 10 41.4  -0.5
GYA0B ALIBECK ARRAY     130.88  43   IAMs_20  IAMs_20  01 15 59.0
      comp=Z,4µm,21.0s
ASHT  Ashkhabad         131.06  43   IAMs_20  IAMs_20  01 16 15.0
      comp=Z,3µm,21.0s
KURK  Kurchatov         131.96  17c iPKIKP    PKPdf    00 10 42.6  -0.8
KURK  Kurchatov         131.96  17            PKPdf    00 10 39.5  -3.9
KURK  Kurchatov         131.96  17   IAMs_20  IAMs_20  01 20 10.5
      comp=Z,4µm,19.0s
USA0B Ussuriysk Arra    131.99 328d iPKIKP    PKPdf    00 10 43.0  -0.7
USA0B Ussuriysk Arra    131.99 328   IAMs_20  IAMs_20  01 15 34.6
      comp=Z,5µm,21.0s
USRK  Ussuriysk Ar.     131.99 328   PKP      PKPdf    00 10 43.2  -0.4
      comp=Z,25nm,1.0s,baz=346,slow=2.2,SNR=21
USRK  Ussuriysk Ar.     131.99 328   PKIKP    PKPdf    00 10 43.3  -0.4
USRK  Ussuriysk Ar.     131.99 328            PKPdf    00 10 41.9  -1.9
KURBB Kurchatov Arra    132.01  18   PKP      PKPdf    00 10 42.8  -0.7
      comp=Z,30nm,0.6s,baz=325,slow=2.3,SNR=36
KURBB Kurchatov Arra    132.01  18   PKIKP    PKPdf    00 10 41.2  -2.3
SEM   Semipalatinsk     132.70  16  ePKP      PKPdf    00 10 44.0  -1.3
SEM   Semipalatinsk     132.70  16  ePKIKP    PKPdf    00 10 43.9  -1.3
VLA   Vladivostok       132.78 327⇓ iPKIKP    PKPdf    00 10 45.8  +0.6
MJAR  Matsushiro Arr    132.82 316   PKhKP    PKPpre   00 10 36.4
      comp=Z,2.9nm,0.6s,baz=71,slow=1.0,SNR=4.6
MJAR                                 PKP      PKPdf    00 10 44.0  -1.6
      comp=Z,10nm,0.9s,baz=148,slow=0.9,SNR=9.4
MJAR                                 SKPbc    SKPbc    00 14 08.4  -3.0
      comp=Z,14nm,1.0s,baz=63,slow=1.3,SNR=8.8
MJAR  Matsushiro Arr    132.82 316   PKIKP    PKPdf    00 10 44.0  -1.6
MJAR  Matsushiro Arr    132.82 316            PKPpre   00 10 36.7
MAJO  Matsushiro        132.83 316   PKIKP    PKPdf    00 10 44.6  -1.0
MAJO  Matsushiro        132.83 316            PKPdf    00 10 44.6  -1.0
MAJO  Matsushiro        132.83 316   IAMs_20  IAMs_20  00 59 39.5
      comp=Z,5µm,21.0s
MAT   Matsushiro        132.83 316   PKP      PKPdf    00 10 44.5  -1.1
MJB9  Matsu-Tunnel      132.83 316   IAMs_20  IAMs_20  00 59 40.5
      comp=Z,6µm,21.0s
MDJ   Mudanjiang        132.92 330   PKP      PKPdf    00 10 44.3  -1.2
HIA   Hailar            133.16 342⇑ iPKIKP    PKiKP    00 10 47.4  +0.4
HIA   Hailar            133.16 342   IAMs_20  IAMs_20  01 13 15.0
      comp=Z,6µm,20.0s
IRK   Irkutsk           133.38 356  ePKIKP    PKPdf    00 10 44.4  -1.7
IRK                                 e                  00 11 41.6
IRK                                 e                  00 13 10.7
IRK                                  pmax     pmax
      comp=Z,245nm,2.8s
TLY   Talaya            133.98 356c iPKIKP    PKPdf    00 10 46.2  -1.1
TLY                                 i                  00 10 58.8
TLY                                 e                  00 13 16.9
TLY                                 ePS       PS       00 23 32.3  -4.7
TLY                                 eSS       SS       00 31 09.4  +7.3
TLY                                  pmax     pmax
      comp=Z,15nm,0.9s
TLY                                  pmax     pmax
      comp=Z,148nm,1.7s
TLY   Talaya            133.98 356   IAMs_20  IAMs_20  01 12 08.7
      comp=Z,4µm,21.0s
MOY   Mondy             134.13 358  ePKIKP    PKPdf    00 10 47.6  -0.1
MOY                                  pmax     pmax
      comp=Z,270nm,2.8s
INU   Inuyama           134.27 315   IAMs_20  IAMs_20  01 00 54.5
      comp=Z,5µm,21.0s
KK31  Karatay Array     135.00  30   PKIKP    PKPdf    00 10 48.4  -1.1
SOCY  Socotra           135.05  78   IAMs_20  IAMs_20  01 19 26.4
      comp=Z,4µm,18.0s
CHM   Chimkent          135.11  31  ePKP      PKPdf    00 10 48.8  -0.9
CHM   Chimkent          135.11  31  ePKIKP    PKPdf    00 10 48.7  -0.9
ASAR  Alice Springs     135.21 228   PKhKP    PKPpre   00 10 38.9
      comp=Z,5.4nm,0.8s,baz=135,slow=2.2,SNR=14
ASAR                                 PKP      PKPdf    00 10 50.0  -0.5
      comp=Z,26nm,0.7s,baz=117,slow=2.1,SNR=35
ASAR                                 PP       PP       00 13 25.1  -0.5
      comp=Z,10nm,1.1s,baz=129,slow=7.0,SNR=5.7
ASAR  Alice Springs     135.21 228   PKIKP    PKPdf    00 10 50.0  -0.5
ASAR  Alice Springs     135.21 228            PKPpre   00 10 35.9
MSEY  Mahe Island       135.28 102   PKIKP    PKiKP    00 10 51.3  -1.1
MSEY  Mahe Island       135.28 102            PKiKP    00 10 51.3  -1.1
ZAK   Zakamensk         135.30 356  ePKHKP    PKPpre   00 10 38.7
ZAK                                 e                  00 14 22.3
ZAK                                  pmax     pmax
      comp=Z,28nm,1.8s
IUG   Iuzhnay           135.46  31  ePKP      PKPdf    00 10 50.4  -0.1
IUG                                 ePP       PP       00 13 26.9  +0.3
IUG   Iuzhnay           135.46  31  ePKIKP    PKPdf    00 10 50.4  -0.1
IUG                                 e                  00 13 26.8
CN2   Changchun         135.50 333  ePKP      PKPdf    00 10 48.8  -1.5
CN2                                  AMB      AMB
      comp=Z,410nm,12.2s
CN2                                  LR       LR
      comp=Z,3µm,25.0s
CN2                                  LR       LR
      comp=Z,2µm,25.0s
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CN2                                  LR       LR
      comp=Z,3µm,23.0s
DZA   Taraz             135.56  29  ePKP      PKPdf    00 10 49.5  -1.0
DZA   Taraz             135.56  29  ePKIKP    PKPdf    00 10 49.5  -1.0
HRA   Herat             135.56  45   IAMs_20  IAMs_20  01 17 27.6
      comp=Z,4µm,20.0s
TAS   Tashkent          135.66  32   IAMs_20  IAMs_20  01 24 25.1
      comp=Z,3µm,20.0s
MAKZ  Makanchi          136.45  17   PKHKP    PKPpre   00 10 37.0
MAKZ  Makanchi          136.45  17            PKPpre   00 10 37.0
MAKZ                                 IAMs_20  IAMs_20  01 19 37.2
      comp=Z,4µm,19.0s
MK31  Makanchi Array    136.55  17  i PKIKP   PKiKP    00 10 53.1  -0.9
MKAR  Makanchi Array    136.55  17   PKhKP    PKPpre   00 10 41.6
      comp=Z,1.9nm,0.8s,baz=337,slow=2.8,SNR=9.5
MKAR                                 PKP      PKPdf    00 10 50.5  -1.8
      comp=Z,20nm,0.9s,baz=301,slow=2.5,SNR=35
MKAR  Makanchi Array    136.55  17   PKIKP    PKPdf    00 10 50.5  -1.8
MKAR  Makanchi Array    136.55  17            PKPpre   00 10 39.1
ZSN   Zaisan            136.63  14  ePKP      PKPdf    00 10 50.9  -1.5
ZSN   Zaisan            136.63  14  ePKIKP    PKPdf    00 10 50.8  -1.6
SGDS  Sogindy           136.64  26  ePKP      PKPdf    00 10 52.1  -0.5
USP   Ospenovka         136.74  26   P        PKPdf    00 10 52.9  +0.1
      SNR=19
EKS2  Erkin-Say         136.89  27   P        PKiKP    00 10 55.5  +0.6
      SNR=16
WRA   Warramunga Arr    136.97 233   PKhKP    PKPpre   00 10 41.6
      comp=Z,5.1nm,0.7s,baz=132,slow=2.6,SNR=18
WRA                                  PKP      PKPdf    00 10 52.1  -1.7
      comp=Z,56nm,0.7s,baz=122,slow=1.4,SNR=81
WRA                                  PP       PP       00 13 35.4  -1.5
      comp=Z,7.0nm,1.0s,baz=120,slow=6.3,SNR=9.7
WRA   Warramunga Arr    136.97 233   PKIKP    PKPdf    00 10 52.1  -1.7
KUU   Kurty             137.01  24  ePKP      PKPdf    00 10 52.0  -1.2
KUU                                 ePP       PP       00 13 41.7  +5.8
KUU   Kurty             137.01  24  ePKIKP    PKPdf    00 10 51.9  -1.2
KUU                                 e                  00 13 41.7
FRU1  Bishkek           137.16  27   IAMs_20  IAMs_20  01 24 17.7
      comp=Z,3µm,19.0s
H01W1 Cape Leeuwin H    137.22 198   T        T        02 43 45.1
      baz=155,slow=76,SNR=26
H01W2 Cape Leeuwin H    137.22 198   T        T        02 44 08.6
      baz=155,slow=76,SNR=25
AAK   Ala-Archa         137.23  27   PKhKP    PKPpre   00 10 43.6
      comp=Z,3.3nm,0.7s,baz=282,slow=2.8,SNR=9.9
AAK   Ala-Archa         137.23  27   P        PKPdf    00 10 54.6  +0.8
      SNR=11
AAK   Ala-Archa         137.23  27c iPKIKP    PKiKP    00 10 53.4  -2.3
AAK                                  MLR      MLR
      comp=Z,3µm,21.0s
AAK   Ala-Archa         137.23  27            PKPpre   00 10 47.1
AAK   Ala-Archa         137.23  27   IAMs_20  IAMs_20  01 25 13.8
      comp=Z,4µm,19.0s
H01W3 Cape Leeuwin H    137.23 198   T        T        02 43 46.2
      baz=155,slow=76,SNR=23
AML   Almayashu         137.26  28   P        PKPpre   00 10 46.9
      SNR=8.8
ULN   Ulaanbaatar       137.41 352   PKHKP    PKPpre   00 10 42.1
ULN   Ulaanbaatar       137.41 352            PKPpre   00 10 42.1
KBK   Karagaybulak      137.42  26   P        PKiKP    00 10 56.1   0.0
      SNR=11
SONM  Songino Array     137.52 353   PKhKP    PKPpre   00 10 42.3
      comp=Z,20nm,1.0s,baz=351,slow=2.7,SNR=34
SONM                                 PKP      PKiKP    00 10 54.1  -2.0
      comp=Z,28nm,0.8s,baz=330,slow=0.9,SNR=19
SONM                                 PP       PP       00 13 40.2  +1.2
      comp=Z,11nm,1.0s,baz=355,slow=4.5,SNR=5.4
SONM  Songino Array     137.52 353   PKIKP    PKiKP    00 10 54.1  -2.0
SONM  Songino Array     137.52 353            PKPpre   00 10 40.8
ARSB  Arslanbob         137.54  29   IAMs_20  IAMs_20  01 16 40.3
      comp=Z,4µm,20.0s
UCH   Uchtor            137.56  27   P        PKPdf    00 10 54.6  -0.2
      SNR=25
AAA   Alma-Ata          137.81  24  ePKP      PKPdf    00 10 54.4  -0.4
AAA   Alma-Ata          137.81  24  ePKIKP    PKPdf    00 10 54.3  -0.4
SNY   Shenyang          137.90 332   PKP      PKPpre   00 10 41.6
SNY                                  PP       PP       00 13 43.0  +1.4
SNY   Shenyang          137.90 332   SS       SS       00 31 29.4   -20
MDOK  Medeo             137.90  24  ePKP      PKPdf    00 10 54.3  -0.7
MDOK                                ePP       PP       00 13 41.8  +0.1
MDOK  Medeo             137.90  24  ePKIKP    PKPdf    00 10 54.3  -0.7
MDOK                                e                  00 13 41.8
NWAO  Narrogin (SRO)    137.91 203   PKP      PKPdf    00 10 54.3  -0.9
      comp=Z,57nm,1.0s,baz=172,slow=2.7,SNR=10
NWAO  Narrogin (SRO)    137.91 203   PKIKP    PKPdf    00 10 54.3  -0.9
KPKS  Kokpek            138.29  22  ePKP      PKPdf    00 10 54.8  -0.9
KPKS                                ePP       PP       00 13 44.4  +0.4
KPKS  Kokpek            138.29  22  ePKIKP    PKPdf    00 10 54.7  -0.9
KPKS                                e                  00 13 44.4
ULHL  Ulahol            138.32  26   P        PKPdf    00 10 50.2  -5.7
      SNR=6.3
UZB   Uzynbulak         138.69  22  ePKP      PKPdf    00 10 56.7  +0.2
UZB   Uzynbulak         138.69  22  ePKIKP    PKPdf    00 10 56.6  +0.2
SHLS  Shalkode          138.84  22  ePKP      PKPdf    00 10 57.2  +0.4
SHLS                                ePP       PP       00 13 50.2  +2.7
SHLS  Shalkode          138.84  22  ePKIKP    PKPdf    00 10 57.1  +0.4
SHLS                                e                  00 13 50.1
KSRS  Korea Array       138.86 324   PKhKP    PKPpre   00 10 47.1
      comp=Z,3.7nm,0.8s,baz=45,slow=3.5,SNR=8.7
KSRS                                 PKP      PKPdf    00 10 56.1  -0.5
      comp=Z,38nm,0.9s,baz=17,slow=1.3,SNR=28
KSRS  Korea Array       138.86 324   PKIKP    PKPdf    00 10 56.2  -0.5
KSAR  Wonju Array Be    138.89 324   PKHKP    PKPpre   00 10 45.9
KSAR  Wonju Array Be    138.89 324            PKPpre   00 10 45.9
INCN  Inchon            139.58 325   IAMs_20  IAMs_20  01 17 12.0
      comp=Z,5µm,22.0s
JNU   Nakatsue          139.74 317   PKhKP    PKPpre   00 10 49.7
      comp=Z,24nm,1.0s,baz=40,slow=5.7,SNR=5.4
KBL   Kabul             140.06  40   PKIKP    PKPdf    00 10 53.7  -5.6
KBL   Kabul             140.06  40            PKPdf    00 10 53.7  -5.6
KBL                                  IAMs_20  IAMs_20  01 22 44.8
      comp=Z,4µm,20.0s
KSH   Kashi             140.38  28   PKP      PKiKP    00 11 01.6  -0.6
KSH                                  PP       PP       00 14 02.4  +5.2
KSH                                  PKS               00 14 35.9
KSH                                  SKKS              00 20 52.8
KSH                                  AMB      AMB
      comp=Z,560nm,5.7s
KSH                                  LR       LR
      comp=Z,1µm,14.2s
KSH                                  LR       LR
      comp=Z,3µm,19.3s
KSH                                  LR       LR
      comp=Z,4µm,19.9s
WMQ   Urumqi            140.71  13  ePKP      PKPdf    00 11 01.0  +1.0
WMQ                                  PP       PP       00 14 04.1  +5.5
WMQ                                  PKS               00 14 29.6
WMQ                                  SS       SS       00 32 26.5  +4.2
WMQ                                  AMB      AMB
      comp=Z,630nm,8.9s
WMQ                                  LR       LR
      comp=Z,2µm,18.7s
WMQ                                  LR       LR
      comp=Z,2µm,18.1s
WMQ                                  LR       LR
      comp=Z,4µm,22.5s
WMQ   Urumqi            140.71  13   IAMs_20  IAMs_20  01 15 43.1
      comp=Z,4µm,21.0s
DL2   Dalian            141.12 332   PKP      PKPdf    00 10 56.6  -4.2
DL2                                  AMB      AMB
      comp=Z,830nm,8.9s
DL2                                  LR       LR
      comp=Z,2µm,20.4s
DL2                                  LR       LR
      comp=Z,2µm,18.8s
DL2                                  LR       LR
      comp=Z,4µm,22.6s
BJT   Baijiatuau        142.50 338   IAMs_20  IAMs_20  01 22 15.4
      comp=Z,4µm,20.0s
HHC   Hu-ho-hao-te      143.23 344  ePKP      PKPab    00 10 58.1  -2.2
HHC                                  PP       PP       00 14 12.6  -1.4
HHC                                  SS       SS       00 32 52.0  +0.3
HHC                                  AMB      AMB
      comp=Z,580nm,9.2s
HHC                                  LR       LR
      comp=Z,1µm,21.5s
HHC                                  LR       LR
      comp=Z,2µm,22.1s
HHC                                  LR       LR
      comp=Z,2µm,23.1s
NIL   Nilore            143.27  37   IAMs_20  IAMs_20  01 27 42.1
      comp=Z,4µm,20.0s
BTO   Baotou            143.85 346  ePKP      PKPab    00 10 59.9  -2.9
FITZ  Fitzroy Crossi    144.71 227   PKP      PKPab    00 11 06.3  -0.1
      comp=Z,467nm,0.9s,baz=164,slow=0.0,SNR=300
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JOW   Kunigami          145.11 310   PKPbc    PKPbc    00 11 07.4  -0.3
      comp=Z,28nm,1.0s,baz=148,slow=13,SNR=33
TIA   Tai'an            145.38 334   PKPbc    PKPbc    00 11 05.9  -2.3
TIA                                  PP       PP       00 14 34.6  +7.5
TIA                                  LR       LR
      comp=Z,4µm,18.0s
TIA                                  LR       LR
      comp=Z,2µm,18.8s
TIA                                  LR       LR
      comp=Z,6µm,19.0s
TIY   Taiyuan           145.86 341  ePKPbc    PKPdf    00 11 08.3  -1.0
TIY                                  PKPab    PKiKP    00 11 12.9  -0.5
TIY                                  PP       PP       00 14 34.3  +4.5
TIY   Taiyuan           145.86 341  ePKPbc    PKPdf    00 11 08.5  -0.8
DHRM  DHARAMSHALA       146.07  36  eP        PKPdf    00 11 08.8  -1.2
DHRM                                ex        x        00 11 10.3
GTA   Gaotai            146.41 359 ⇑PKPbc     PKPdf    00 11 09.1  -1.1
GTA                                  PKPab    PKPab    00 11 13.0  +0.7
GTA                                  pPKP     PKiKP    00 11 15.4  +0.9
GTA                                  PP       PP       00 14 36.4  +3.6
GTA                                  PKS               00 14 42.0
GTA                                  SKKS              00 21 20.3
GTA                                  SS       SS       00 33 26.4  -1.4
GTA                                  AMB      AMB
      comp=Z,930nm,7.9s
GTA                                  LR       LR
      comp=Z,3µm,20.0s
GTA                                  LR       LR
      comp=Z,2µm,20.0s
GTA                                  LR       LR
      comp=Z,4µm,21.3s
BHUJ  Bhuj              146.71  55  eP        PKPdf    00 11 10.6  -0.4
BHUJ                                ex        x        00 11 10.9
BHUJ                                 IAmb     IAmb     00 11 26.3
      comp=Z,705nm,1.7s
SIJI  Sorong            147.19 260   PKPbc    PKPbc    00 11 13.7  -0.7
      comp=Z,71nm,0.6s,baz=36,slow=8.4,SNR=18
SSE   Sheshan           147.28 323   PKPbc    PKPdf    00 11 12.8  +1.1
SSE                                  PP       PP       00 14 38.0  -0.7
SSE                                  LR       LR
      comp=Z,940nm,20.6s
SSE                                  LR       LR
      comp=Z,1µm,21.4s
SSE   Sheshan           147.28 323   IAMs_20  IAMs_20  01 25 39.2
      comp=Z,5µm,21.0s
SMLA  Simla             147.39  36  eP        PKPdf    00 11 10.9  -0.9
SMLA                                ex        x        00 11 12.1
SMLA                                 IAmb     IAmb     00 11 28.3
      comp=Z,9µm,3.3s
NJ2   Nanjing           147.89 327  ePKPbc    PKPdf    00 11 14.0  +1.3
NJ2                                  PP       PP       00 14 49.3  +7.2
NJ2                                  SS       SS       00 33 51.3  +5.8
NJ2                                  AMB      AMB
      comp=Z,1µm,4.8s
NJ2                                  LR       LR
      comp=Z,4µm,19.9s
NJ2                                  LR       LR
      comp=Z,2µm,16.1s
NJ2                                  LR       LR
      comp=Z,5µm,22.7s
DDI   Dehra Dun         148.50  36  ex        PKPdf    00 11 12.6  -1.3
DDI                                  IAmb     IAmb     00 11 33.3
      comp=Z,240nm,1.1s
LZH   Lanzhou           149.41 352 ⇑PKPbc     PKPdf    00 11 14.4  -0.9
LZH                                  pPKP     PKiKP    00 11 21.3  +0.4
LZH                                  PKPab    pPKPdf   00 11 23.4  -0.8
LZH                                  PP       PP       00 14 52.1  +1.6
LZH                                  SKKS              00 21 39.5
LZH                                  SS       SS       00 34 06.8  +5.0
LZH                                  AMB      AMB
      comp=Z,1µm,8.1s
LZH                                  LR       LR
      comp=Z,2µm,20.1s
LZH                                  LR       LR
      comp=Z,3µm,19.5s
LZH                                  LR       LR
      comp=Z,4µm,20.1s
XAN   Xi'an             150.33 343   PKPbc    PKPdf    00 11 15.3  -1.4
XAN                                  PKPab    pPKPbc   00 11 31.1  +0.4
XAN                                  PKS      PKSdf    00 14 45.8  -5.8
XAN                                  PP       PP       00 14 59.1  +3.3
XAN                                  SKS      SKSdf    00 18 20.6  -2.5
XAN                                  SKKS     SKKSac   00 21 44.9  -1.7
XAN                                  LR       LR
      comp=Z,3µm,21.6s
XAN                                  LR       LR
      comp=Z,2µm,20.1s
XAN                                  LR       LR
      comp=Z,4µm,24.5s
XAN   Xi'an             150.33 343   IAMs_20  IAMs_20  01 21 49.5
      comp=Z,5µm,21.0s
YOJ   Yonaguni jima     150.37 312   PKIKP    PKiKP    00 11 22.2  -0.7
YOJ   Yonaguni jima     150.37 312            PKiKP    00 11 22.2  -0.7
YOJ                                  IAMs_20  IAMs_20  01 15 27.7
      comp=Z,4µm,20.0s
DGAR  Diego Garcia      150.44 116⇓ iPKIKP    PKiKP    00 11 23.5  +0.1
TATO  Taipei            151.18 314   IAMs_20  IAMs_20  01 18 47.5
      comp=Z,4µm,20.0s
TNTI  Ternate           151.34 261   IAMs_20  IAMs_20  01 09 06.3
      comp=Z,3µm,20.0s
WHN   Wuhan             151.38 332 ⇓PKPbc     PKPbc    00 11 23.1  -1.3
WHN                                  PKPab    sPKPbc   00 11 35.5  -0.7
WHN                                  PP       PP       00 15 04.3  +2.2
WHN   Wuhan             151.38 332 ⇑PKPbc     PKPdf    00 11 15.8  -2.5
WHN                                  PKPab    sPKPbc   00 11 35.5  -0.7
WHN                                  PP       PP       00 15 04.3  +2.2
WHN                                  SS       SS       00 34 27.4  +3.2
WHN                                  LR       LR
      comp=Z,11µm,20.4s
WHN                                  LR       LR
      comp=Z,2µm,14.3s
WHN                                  LR       LR
      comp=Z,11µm,20.9s
YULB  Yu-li             152.27 312   IAMs_20  IAMs_20  01 10 27.9
      comp=Z,3µm,21.0s
POO   Poona             152.28  60  ex        PKPdf    00 11 18.7  -1.3
POO                                 eP        PKPdf    00 11 18.8  -1.3
SSLB  Suanglung         152.28 313   IAMs_20  IAMs_20  01 09 21.3
      comp=Z,5µm,21.0s
BHPL  Bhopal            152.79  48  eP        PKPdf    00 11 18.1  -2.6
BHPL                                ex        x        00 11 18.9
TPUB  Ta-pu             152.81 312   IAMs_20  IAMs_20  01 16 16.4
      comp=Z,3µm,22.0s
MATI  Mati              152.94 274  eP        PKPbc    00 11 28.3   0.0
DANN  Dangsing          153.18  31  eP        PKPdf    00 11 20.7  -0.8
      comp=Z,661nm,1.0s
QZH   Quanzhou          153.21 318   PKPbc    PKPdf    00 11 17.4  -3.8
QZH                                  PP       PP       00 15 11.9  -1.2
QZH                                  SS       SS       00 34 47.6  +2.3
QZH                                  LR       LR
      comp=Z,1µm,19.5s
QZH                                  LR       LR
      comp=Z,3µm,20.2s
QZH                                  LR       LR
      comp=Z,5µm,20.0s
GOA   Goa               153.37  67  ex        PKPdf    00 11 19.4  -2.2
GOA                                 eP        PKPdf    00 11 20.3  -1.3
DDMP  Don Marcelino,    153.49 272  eP        PKPbc    00 11 29.5  -0.1
DAV   Davao City (W)    153.61 274   IAMs_20  IAMs_20  01 06 23.2
      comp=Z,4µm,20.0s
ENH   Enshi             153.63 339   IAMs_20  IAMs_20  01 26 01.9
      comp=Z,4µm,20.0s
KNMB  Chin-men Tao      153.66 317   IAMs_20  IAMs_20  01 25 24.3
      comp=Z,3µm,21.0s
GKN   Gorkha            153.90  30  eP        PKPdf    00 11 21.2  -1.1
      comp=Z,689nm,1.3s
MNCY  Minicoy           154.04  83  eP        PKPdf    00 11 21.1  -1.5
PVCP  Virac             154.06 290  eP        PKiKP    00 11 34.4  +3.6
MSLP  Maasin            154.08 281  eP        PKPab    00 11 43.6  -0.7
KCP   Kidapawan         154.10 274⇓ eP        PKPdf    00 11 22.6  -0.2
KCP                                 i S       PKPab    00 11 41.0  -3.6
OCLP  Ormoc             154.18 284  eP        PKPab    00 11 47.2  +2.4
SGCP  Mt. Cagua         154.32 301  eP        PKPab    00 11 47.7  +2.4
KKN   Kakani            154.40  29  eP        PKPdf    00 11 21.7  -1.4
      comp=Z,204nm,0.9s
DMN   Daman             154.46  30  eP        PKPdf    00 11 21.9  -1.4
      comp=Z,437nm,1.3s
CD2   Chengdu           154.51 351   PKPbc    PKPdf    00 11 21.4  -1.6
CD2                                  sPKP              00 11 27.0
CD2                                  PP       PP       00 15 27.6  +8.2
CD2                                  SKS      SKSdf    00 18 27.4  -0.9
CD2                                  SKKS     SKKSac   00 22 03.0  -6.4
CD2                                  LR       LR
      comp=Z,4µm,20.1s
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CD2				LR	LR		
	comp=Z,5µm,21.1s						
CD2				LR	LR		
	comp=Z,6µm,25.6s						
GUN	Gumba	154.58	28	eP	PKPdf	00 11 22.4	-1.1
	comp=Z,558nm,1.1s						
PKIN	Phulchoki	154.63	29	eP	PKPdf	00 11 22.0	-1.5
PKI	Pulchoki	154.64	29	eP	PKPdf	00 11 21.9	-1.7
	comp=Z,937nm,2.0s						
SKMP	Bagumbayan, Su	154.65	273	eP	PKPdf	00 11 23.6	0.0
KLRI	Killari	154.84	59	ePKPdf	PKPdf	00 11 22.3	-1.4
KLRI				ePP	PP	00 15 24.1	+0.9
KLRI				IVMs_BB	IVMs_BB	01 21 05.2	
	comp=Z,2µm,23.2s						
CTBH	Cotabato--PC H	154.93	275	⇓iP	PKPdf	00 11 23.5	-0.5
JIRN	Jiri	154.94	28	eP	PKPdf	00 11 22.4	-1.7
	comp=Z,910nm,1.4s						
LSA	Lhasa	154.96	16	IAMs_20	IAMs_20	01 29 33.8	
	comp=Z,5µm,22.0s						
CAUP	Cauayan	155.06	299	eP	PKPab	00 11 50.7	+2.2
NGP	Nagpur	155.24	50	i x	PKPdf	00 11 16.1	-8.1
NGP				eP	PKPdf	00 11 21.2	-2.9
NGP				ex	x	00 24 19.5	
NGP				IAMs_20	IAMs_20	01 24 03.4	
	comp=Z,7µm,20.9s						
LUWI	Luwuk	155.41	255	IAMs_20	IAMs_20	01 14 53.1	
	comp=Z,3µm,22.0s						
RAMN	Ramite	155.73	28	eP	PKPdf	00 11 23.8	-1.2
	comp=Z,255nm,1.2s						
BALP	Baler	155.75	296	eP	PKPab	00 11 54.5	+3.1
PAGZ	Pagadian	155.76	276	eP	PKPdf	00 11 23.7	-1.3
TAPN	Taplejung	155.88	25	eP	PKPdf	00 11 23.8	-1.5
	comp=Z,684nm,1.7s						
SRSP	Sriramsagar	155.89	55	ePKPdf	PKPdf	00 11 23.1	-2.0
SRSP				IVMs_BB	IVMs_BB	01 21 59.0	
	comp=Z,1µm,22.4s						
SZP	Santa	155.99	301	IAMs_20	IAMs_20	01 13 31.2	
	comp=Z,4µm,20.0s						
ODAN	Odare	156.17	27	eP	PKPdf	00 11 24.2	-1.4
	comp=Z,231nm,1.0s						
GTK	Tadong	156.28	24	ex	PKPdf	00 11 24.7	-0.9
GTK				eP	PKPdf	00 11 24.8	-0.7
GTK				ex	x	00 14 18.5	
OTRP	Odiongan	156.39	288	eP	PKPab	00 11 53.4	-0.8
SMPP	San Manuel, Pa	156.39	298	eP	PKPab	00 11 53.1	-1.1
URV	Uravakonda	156.67	65	ePKPdf	PKPdf	00 11 24.9	-1.3
URV				ePP	PP	00 15 35.4	+1.8
URV				IVMs_BB	IVMs_BB	01 23 07.9	
	comp=Z,3µm,20.3s						
RPR	Rampur	156.69	54	ePKPdf	PKPdf	00 11 24.6	-1.5
RPR				IVMs_BB	IVMs_BB	01 23 16.1	
	comp=Z,1µm,22.4s						
KAPI	Kappang	156.78	243	PKP	PKPdf	00 11 26.9	+0.5
	comp=Z,12nm,0.9s,baz=36,slow=0.8,SNR=11						
KAPI				PKPbc	PKPbc	00 11 36.1	
	comp=Z,22nm,0.8s,baz=176,slow=2.3,SNR=8.9						
KAPI				PKPab	PKPab	00 11 55.1	-0.7
	comp=Z,41nm,1.0s,baz=76,slow=1.8,SNR=8.0						
KAPI	Kappang	156.78	243	PKIKP	PKPdf	00 11 26.9	+0.5
KAPI						00 11 55.1	
HYBB	Hyderabad (bro	156.79	58	ePKPdf	PKPdf	00 11 24.8	-1.6
HYBB				ePKSdf	PKSdf	00 14 58.4	-2.0
HYBB				ePP	PP	00 15 36.8	+2.9
HYBB				IVMs_BB	IVMs_BB	01 24 32.3	
	comp=Z,1µm,21.6s						
HYB	Hyderabad	156.79	58	i PKP	PKPdf	00 11 24.0	-2.3
HYB				epPKP	pPKPdf	00 11 36.0	+0.8
HYB				esPKP		00 11 40.5	
HYB				e		00 11 53.0	
HYB				e		00 12 04.0	
HYB				e		00 12 11.0	
HYB	Hyderabad	156.79	58	ex	PKPdf	00 11 22.5	-3.8
HYB				eP	PKPdf	00 11 24.0	-2.3
TGY	Tagaytay City	156.90	293	PKPab	PKPab	00 11 55.5	-0.9
	comp=Z,205nm,0.4s,baz=57,slow=11,SNR=3.7						
TGY	Tagaytay City	156.90	293	PKP2	PKPab	00 11 55.6	-0.9
SRLM	Srisailam	157.67	61	ePKPdf	PKPdf	00 11 26.0	-1.5
SRLM				ePP	PP	00 15 38.2	-0.6
SRLM				IVMs_BB	IVMs_BB	01 20 54.5	
	comp=Z,1µm,22.1s						
ZIRO	ZIRO	157.71	12	ex	PKPdf	00 11 27.8	+0.3
ZIRO				i x	x	00 15 40.3	
NJS	Nagarjunasagar	157.83	59	ePKPdf	PKPdf	00 11 26.1	-1.5
NJS				ePP	PP	00 15 41.7	+2.1
NJS				IVMs_BB	IVMs_BB	01 20 31.1	
	comp=Z,1µm,24.3s						
GZH	Guangzhou	157.88	323	PKP	PKPdf	00 11 26.0	-1.5
GZH				PP	PP	00 15 34.3	-4.6
GZH				LR	LR		
	comp=Z,2µm,20.0s						
GZH				LR	LR		
	comp=Z,2µm,17.3s						
TRD	Trivandrum	157.88	81	ex	PKPdf	00 11 26.4	-1.3
TRD				eP	PKPdf	00 11 27.3	-0.4
TRD				i x	x	00 15 43.8	
BOK	Bokaro	157.96	34	ex	PKPdf	00 11 25.7	-1.9
BOK				eP	PKPdf	00 11 25.9	-1.7
BOK				IAmb	IAmb	00 11 40.8	
	comp=Z,122nm,1.6s						
GGR	Gangavaram	157.96	55	ePKPdf	PKPdf	00 11 26.6	-1.2
GGR				IVMs_BB	IVMs_BB	01 29 37.1	
	comp=Z,1µm,19.0s						
HKPS	Hong Kong Po S	157.98	320	IAMs_20	IAMs_20	01 19 41.1	
	comp=Z,4µm,20.0s						
GYA	Guiyang	158.09	341	PKP	PKPdf	00 11 28.4	+0.5
GYA				PKPab	PKPab	00 12 02.6	+1.4
GYA				PKS	PKSdf	00 14 58.9	-2.9
GYA				PP	PP	00 15 42.8	+3.2
GYA				SKKS		00 22 23.3	
GYA				SS	SS	00 35 38.9	+2.1
GYA				LR	LR		
	comp=Z,2µm,23.5s						
GYA				LR	LR		
	comp=Z,2µm,21.6s						
GYA				LR	LR		
	comp=Z,4µm,21.6s						
ADKI	Addanki	158.71	60	ePKPdf	PKPdf	00 11 27.3	-1.4
ADKI				ePP	PP	00 15 46.2	+1.7
ADKI				IVMs_BB	IVMs_BB	01 24 55.4	
	comp=Z,881nm,21.0s						
MYLAV	Mylavaram	158.86	57	ePKPdf	PKPdf	00 11 27.8	-1.1
MYLAV				ePP	PP	00 15 47.5	+2.3
MYLAV				IVMs_BB	IVMs_BB	01 22 06.3	
	comp=Z,1µm,22.9s						
SHL	Shillong	159.06	18	ex	PKPdf	00 11 26.3	-2.8
SHL				i P	PKPdf	00 11 26.5	-2.6
SHL				i x	x	00 15 53.5	
SKHT	Srikalahasti	159.32	66	ePKPdf	PKPdf	00 11 28.3	-1.1
SKHT				ePP	PP	00 15 49.5	+1.5
SKHT				IVMs_BB	IVMs_BB	01 24 02.1	
	comp=Z,880nm,19.8s						
JAGI	Jajag, Banyuwa	159.42	227	IAMs_20	IAMs_20	01 13 28.6	
	comp=Z,5µm,22.0s						
PVM	Polavaram	159.42	55	ePKPdf	PKPdf	00 11 28.3	-1.2
PVM				ePP	PP	00 15 50.8	+2.6
PVM				IVMs_BB	IVMs_BB	01 25 14.7	
	comp=Z,1µm,21.9s						
KOHI	KOHIMA	159.51	13	eP	PKPdf	00 11 27.6	-2.0
MDRS	Chennai	160.04	67	ex	PKPdf	00 11 27.4	-2.8
MDRS				eP	PKPdf	00 11 28.8	-1.4
MDRS				IAmb	IAmb	00 11 46.3	
	comp=Z,226nm,1.7s						
MDRS				i PP	PP	00 15 50.6	-1.3
KMI	Kunming	160.34	350	PKP	PKPab	00 12 11.6	+0.5
KMI				PKS	PKSdf	00 15 03.8	-0.6
KMI				PP	PP	00 15 55.5	+3.7
KMI	Kunming	160.34	350	SKKS	SKKSac	00 22 52.0	+11
KMI	Kunming	160.34	350	PKP	PKPdf	00 11 29.1	-1.6
KMI				pPKP	pPKPdf	00 11 33.8	-5.7
KMI				sPKP		00 11 36.4	
KMI				LR	LR		
	comp=Z,610nm,24.0s						
KMI				LR	LR		
	comp=Z,3µm,22.0s						
KMI				LR	LR		
	comp=Z,4µm,25.2s						
BWNR	Bhubaneshwar	160.58	40	eP	PKPdf	00 11 28.9	-1.8
CHLP	Challavanipeta	160.58	48	ePKPdf	PKPdf	00 11 29.3	-1.4
CHLP				IVMs_BB	IVMs_BB	01 27 22.8	
	comp=Z,810nm,21.6s						
BATP	Bataraza	161.16	281	eP	PKPdf	00 11 31.6	+0.1
BRDH	Bariadhala	161.64	22	PKP	PKPdf	00 11 31.8	0.0
	comp=Z,80nm,0.3s,baz=303,slow=4.0,SNR=3.6						
BRDH				PKPab	PKPab	00 12 16.6	0.0
	comp=Z,69nm,0.3s,baz=268,slow=20,SNR=1.2						
PALK	Pallekele	161.69	84	PKP	PKPdf	00 11 30.6	-1.5
	comp=Z,8.3nm,0.8s,baz=25,slow=6.9,SNR=3.7						
PALK	Pallekele	161.69	84	PKIKP	PKPdf	00 11 30.6	-1.5
LEM	Lembang	164.93	215	PKP	PKPdf	00 11 33.9	-1.5
	comp=Z,35nm,0.8s,baz=117,slow=1.8,SNR=17						
LEM				PKPab	PKPab	00 12 30.8	-0.6
	comp=Z,107nm,1.0s,baz=163,slow=6.6,SNR=8.0						
LEM	Lembang	164.93	215	PKIKP	PKPdf	00 11 33.9	-1.5
LEM						00 12 30.8	
SBUM	Sibu	166.50	257		PKPdf	00 11 37.8	+1.3
CHTO	Chiang Mai	166.94	1	PKIKP	PKPdf	00 11 35.0	-1.7
CHTO	Chiang Mai	166.94	1		PKPdf	00 11 35.0	-1.7
CMAR	Chiang Mai Arr	167.29	1	PKP	PKPdf	00 11 35.9	-1.1
	comp=Z,10nm,0.9s,baz=297,slow=1.5,SNR=20						
CMAR				PKPab	PKPab	00 12 39.7	-1.7
	comp=Z,33nm,1.0s,baz=342,slow=4.9,SNR=9.8						
CMAR				PP	PP	00 16 32.0	+4.1
	comp=Z,6.4nm,0.9s,baz=350,slow=4.9,SNR=5.0						
CMAR	Chiang Mai Arr	167.29	1	PKIKP	PKPdf	00 11 35.3	-1.6
CMAR						00 12 39.7	
CMAR	Chiang Mai Arr	167.29	1		PKPdf	00 11 35.3	-1.6
PBKT	Sadao Pong	169.01	350		PKPdf	00 11 37.1	-1.0
DGPR	DIGLIPUR	170.40	39	ex	PKPdf	00 11 36.5	-2.5
DGPR				eP	PKPdf	00 11 37.5	-1.5
PBA	Port Blair	171.38	46	ex	PKPdf	00 11 37.2	-2.3
PBA				eP	PKPdf	00 11 37.5	-2.0
RPSI	Rantau Prapat	177.04	177		PKPdf	00 11 41.2	-0.2
PSI	Prapat	177.15	177	PKP	PKPdf	00 11 39.3	-2.3
	comp=Z,30nm,1.1s,baz=165,slow=1.1,SNR=11						
PSI				PKPab	PKPab	00 13 24.7	-0.6
	comp=Z,23nm,1.0s,baz=209,slow=8.8,SNR=5.3						
PSI				PP	PP	00 17 17.1	+0.5
	comp=Z,4.1nm,0.6s,baz=166,slow=8.4,SNR=4.1						
PSI	Prapat	177.15	177	PKIKP	PKPdf	00 11 41.2	-0.4
IPM	Ipoh	177.72	239		PKPdf	00 11 40.2	-1.4

NEIC ***16*** *00:04:27.8±2.6, 40.°78N±0.°03×125.°00W±0.°04, h21^{km}±10^{km}, Error ellipse: s-maj=5.3km s-min=3.6km az=139.0*

ANF ***16*** *00:04:28.0±1.4, 40.°94N×124.°76W, h0^{km}, ML2.6/5, Error ellipse: s-maj=13.4km s-min=7.2km az=61.0*

NCEDC ***16*** *00:04:27.4±2.7, 40.°78N±0.°05×125.°16W±0.°03, h24^{km}±7^{km}, ML3.0/12, Error ellipse: s-maj=8.2km s-min=1.7km az=199.0*

ISC 16 00:04:25.9±2.0**, 40.°79N**±0.°03×**125.°15W**±0.°07**, h17**^{km}±13^{km}**, n88, σ0.^{s}98**/101**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCTM	Capetown	0.69	117		Pb	00 04 40.4	+0.9
KCTM					Sb	00 04 50.4	+1.7
JCC	Jacoby Creek,	0.85	88		Pb	00 04 41.8	-0.3
JCC					Pg	00 04 42.0	-0.4
JCC	Jacoby Creek,	0.85	88		Sb	00 04 53.0	-0.1
JCC	Jacoby Creek,	0.85	88		Sb	00 04 53.3	+0.2
KMPM	Mount Pierce	0.86	115		Pb	00 04 42.6	+0.2
KMPM					Sb	00 04 54.1	+0.3
KRPM	Rodgers	0.93	66		Pb	00 04 43.3	-0.2
KRPM					Sb	00 04 55.6	+0.1
KSMM	Slide Mountain	0.95	129		Pb	00 04 43.5	-0.5
KCRM	Chalk Rock	1.07	109		Pb	00 04 45.6	-0.3
KHMM	Horse Mountain	1.08	85		Pb	00 04 45.6	-0.6
KHMM	Horse Mountain	1.08	85		Sb	00 04 59.5	-0.5
KRMB	Red Mountain	1.19	51		Pn	00 04 46.5	-1.3
KMRM	Mail Ridge	1.23	117		Pn	00 04 48.2	-0.1
KCSM	Cold Springs	1.27	101		Pn	00 04 48.6	-0.3
KOMM	Orleans Mounta	1.37	69		Pn	00 04 49.6	-0.7
KSXB	Camp Six Broad	1.41	42		Pn	00 04 49.9	-1.0
KPPM	Pickett Peak	1.43	107		Pn	00 04 51.0	-0.2
KHBM	Hayfork Bally	1.47	94		Pn	00 04 51.1	-0.6
KIPM	Iron Peak	1.61	127		Pn	00 04 53.4	-0.2
KCPM	Cahto Peak	1.63	132		Pn	00 04 53.3	-0.5
KBNM	Bluenose Ridge	1.74	120		Pn	00 04 55.8	+0.5
KFPM	Farley Peak	1.75	131		Pn	00 04 54.9	-0.6
LGPM	Granite Peak	1.76	85		Pn	00 04 55.1	-0.6
LBPM	Beegum Peak	1.79	105		Pn	00 04 55.7	-0.3
L02E	Cave Junction	1.79	40	P	Pn	00 04 55.7	-0.3
	baz=221,SNR=24						
L02E				S	Sn	00 05 16.4	-2.0
	baz=221						
M02C	Callahan	1.83	70	P	Pn	00 04 56.1	-0.5
	baz=252,SNR=48						
M02C				S	Sn	00 05 18.5	-1.0
	baz=252						
GTC	Three Chop Rid	1.85	138		Pn	00 04 56.0	-0.7
N02D	Trinity Center	1.86	84		Pn	00 04 56.9	-0.1
N02D	Trinity Center	1.86	84	P	Pn	00 04 56.6	-0.4
	baz=265,SNR=6.6						
N02D				S	Sn	00 05 18.6	-1.5
	baz=265						
O02D	Mt. Diablo Mer	1.90	108		Pn	00 04 57.4	-0.2
O02D	Mt. Diablo Mer	1.90	108	P	Pn	00 04 57.3	-0.2
	baz=289,SNR=6.5						
O02D				S	Sn	00 05 20.8	-0.3
	baz=289						
LBKM	Bonanza King	1.90	80		Pn	00 04 57.3	-0.3
KRKM	Rackout Spring	1.94	129		Pn	00 04 57.7	-0.4
GNAM	Navarro Ridge	1.97	143		Pn	00 04 57.7	-0.7
WDC	Whiskeytown Da	1.99	95		Pn	00 04 58.4	-0.3
WDC	Whiskeytown Da	1.99	95		Pn	00 04 58.7	0.0
YBH	Yreka Blue Hor	2.06	62	Pn	Pn	00 05 00.7	+0.9
GROM	Round Mountain	2.08	114		Pn	00 05 00.3	+0.2
GHMM	Hull Mountain	2.13	127		Pn	00 05 00.3	-0.5
GHOM	Hamilton Openi	2.14	144		Pn	00 04 59.9	-0.9
GVV	Valley View	2.14	117		Pn	00 05 01.2	+0.2
GASB	Alder Springs	2.18	121		Pn	00 05 01.4	0.0
K02D	Willamette Mer	2.20	30	P	Pn	00 05 01.6	-0.1
	baz=211,SNR=136						
K02D				S	Sn	00 05 26.0	-2.5
	baz=211						
GGUM	Gualala	2.31	146		Pn	00 05 02.2	-0.9
LSHM	Sage Hen Hill	2.36	89		Pn	00 05 03.9	+0.1
LTCM	Tuscan Springs	2.38	103		Pn	00 05 04.4	+0.4
GHLM	Highland Sprin	2.39	136		Pn	00 05 03.7	-0.6
HOPS	Hopland Field	2.40	138		Pn	00 05 03.9	-0.4
HOPS	Hopland Field	2.40	138		Pn	00 05 04.1	-0.3
HUMO	Hull Mountain	2.45	41	Pn	Pn	00 05 05.5	+0.5
J01E	Myrtle Point	2.54	20	P	Pn	00 05 06.3	+0.1
	baz=201						
L04D	Klamath Falls	2.57	55	P	Pn	00 05 08.7	+1.9
	baz=237,SNR=28						
L04D				S	Sn	00 05 38.7	+1.1
	baz=237						
LDBM	Digger Butte	2.58	97		Pn	00 05 06.7	-0.3
O03E	Paynes Creek	2.59	100		Pn	00 05 07.0	-0.1
O03E	Paynes Creek	2.59	100	P	Pn	00 05 06.8	-0.3
	baz=282,SNR=57						
O03E				S	Sn	00 05 37.4	-0.8
	baz=282						
M04C	Macdoel	2.68	67	P	Pn	00 05 09.9	+1.6
	baz=249,SNR=6.4						
M04C				S	Sn	00 05 42.5	+2.0
	baz=249						
LMEM	Manzanita Entr	2.73	94		Pn	00 05 10.2	+1.2
LTIM	Timbered Crate	2.79	81		Pn	00 05 10.5	+0.7
HATC	Hat Creek Radi	2.80	88		Pn	00 05 10.7	+0.8
LRDM	Redding Peak	2.82	95		Pn	00 05 11.4	+1.2
LCMM	Colby Mountain	2.84	102		Pn	00 05 10.9	+0.3
LBCM	Butte Creek Ri	2.88	88		Pn	00 05 11.3	+0.2
OSUM	Sutter Buttes	2.95	120		Pn	00 05 11.4	-0.4
ORV	Oroville	3.05	113	Pn	Pn	00 05 13.5	+0.2
MCCM	Marconi Confer	3.17	146	Pn	Pn	00 05 17.3	+2.4
I03D	Drain, OR	3.20	24	P	Pn	00 05 16.4	+1.2
	baz=205,SNR=76						
I03D				S	Sn	00 05 51.4	-1.5
	baz=205						
J04D	Umpqua Nationa	3.33	42	P	Pn	00 05 19.9	+2.5
	baz=224						
I02D	Swisshome	3.45	16	P	Pn	00 05 19.4	+0.7
	baz=197						
I04A	Tendick Farm,	3.62	33	P	Pn	00 05 23.3	+2.1
	baz=215,SNR=7.7						
AFDM	Forest Hills D	3.70	118	Pn	Pn	00 05 22.6	+0.4
BEKR	Beckworth	3.77	103	Pn	Pn	00 05 24.6	+1.2
MOD	Modoc Plateau	3.81	71	Pn	Pn	00 05 24.6	+0.7
H04D	Lebanon	4.13	25	P	Pn	00 05 29.7	+1.6
	baz=206,SNR=13						
PINE	Pine Mountain	4.33	45	Pn	Pn	00 05 32.5	+1.5
H04A	Detroit Lake	4.46	28	Pn	Pn	00 05 34.1	+1.4
PAHR	Pah Rah Range	4.54	102	Pn	Pn	00 05 34.1	+0.2
PNTR	Pine Nut	4.59	110	Pn	Pn	00 05 36.2	+1.6
CMB	Columbia Colle	4.60	125	Pn	Pn	00 05 36.0	+1.4
YERR	Yerington	4.89	110	Pn	Pn	00 05 40.0	+1.3
SAO	San Andreas Ge	4.95	143	Pn	Pn	00 05 39.8	+0.4
WVOR	Wild Horse Val	5.15	69	Pn	Pn	00 05 43.4	+1.2
I07A	Izee	5.32	50	Pn	Pn	00 05 46.1	+1.6
F04A	Amboy	5.51	20	Pn	Pn	00 05 47.6	+0.5
G06A	Carlson Farm,	5.54	35	Pn	Pn	00 05 49.0	+1.5
RYN	Ryan	5.54	111	Pn	Pn	00 05 49.2	+1.5
J08A	Circle Bar Ran	5.59	60	Pn	Pn	00 05 47.9	-0.4
KVN	Kaiserville	5.69	105	Pn	Pn	00 05 50.8	+1.0
OMMB	Old Mammoth Mi	5.73	122	Pn	Pn	00 05 50.7	+0.3
NVAR	Mina Array Bea	5.79	112	Pn	Pn	00 05 52.1	+1.0

NIED ***16*** *00:05:00, 35.°70N×140.°80E, h50^{km}, Mw4.4 Best double couple: M$_0$5.05000×10^{15} NP1:φ$_s$10.00000°, δ69.00000°, λ107.00000°. NP2:φ$_s$150.00000°, δ27.00000°, λ53.00000°.*

IDC ***16*** *00:05:23.7±0.5, 35.°73N×140.°73E, h0^{km}, mb4.3/27, mb1 4.3/32, mb1mx4.2/74, mbtmp4.3/32, ML4.0/5, MS4.8/2, Ms1 4.9/2, ms1mx3.7/37, Error ellipse: s-maj=15.0km s-min=12.1km az=92.0*

NEIC ***16*** *00:05:28.9±1.5, 35.°73N±0.°06×140.°85E±0.°10, h40^{km}±7^{km}, mb4.8/11, Error ellipse: s-maj=11.8km s-min=7.9km az=96.0*

JMA ***16*** *00:05:29.3±0.1, 35.°75N×140.°68E, h50^{km}±1^{km}, M3.8 Broadband fault plane solution: P waves. NP1: φ$_s$184.00000°, δ12.00000°, λ86.00000°. NP2:φ$_s$9.00000°, δ78.00000°, λ91.00000°. Principal axes: T Plg57.0000°, Azm280.0000°; N Plg1.0000°, Azm189.0000°; P Plg33.0000°, Azm98.0000°;*

JMA Felt II J1.

ISC 16 00:05:30.1±0.7**, 35.°77N**±0.°04×**140.°78E**±0.°05**, h47**^{km}±5^{km}**, n78, σ1.^{s}19**/77**, mb4.3**/30**, 1C-6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.09	135	⇑P	Pn	00 05 37.2	-0.4
CHOJ				eS	Sn	00 05 43.2	+0.4
JIHU	Itakohorinouch	0.29	314	⇓P	Pn	00 05 38.6	-0.3
JIHU				S	Sn	00 05 45.6	+0.6
JSMT	Sammumatsuo	0.30	245	⇓P	Pn	00 05 37.9	-1.1
JSMT				S	Sn	00 05 45.3	+0.1
JCN	Nagara	0.59	234	⇓P	Pn	00 05 41.4	-0.9
JYT	Yasato	0.66	314	⇓P	Pn	00 05 42.0	-1.2
JYT				S	Sn	00 05 50.9	-1.8
BSO4	Boso 4	0.86	205	P	Pn	00 05 44.7	-1.0
JHO	Hitachi	0.86	349	⇓P	Pn	00 05 45.6	-0.3
BSO3	Boso 3	0.99	193	P	Pn	00 05 46.3	-1.1
BSO1	Boso 1	1.12	172	P	Pn	00 05 48.7	-0.2
JAG	Ashikaga	1.26	302	⇓P	Pn	00 05 49.6	-1.7
MJAR	Matsushiro Arr	2.22	291	Pn	Pn	00 06 03.3	-1.2
	8.7nm,0.3s,baz=98,slow=13,SNR=217						
MJAR				Sn	Sn	00 06 30.7	0.0
	4.5nm,0.3s,baz=14,slow=19,SNR=9.9						
MJAR				LR	LR	00 07 03.8	
	comp=Z,913nm,19.4s,baz=110,slow=46						
MJAR	Matsushiro Arr	2.22	291		Pn	00 06 04.1	-0.4
MAJO	Matsushiro	2.22	291		Pn	00 06 04.7	+0.2
MAT	Matsushiro	2.22	291	P	Pn	00 06 04.5	0.0
MAT				S	Sn	00 06 30.5	-0.2
MJB9	Matsu-Tunnel	2.23	291		Pn	00 06 04.8	+0.2
JHJ2	Mitsune	2.77	197	Pn	Pn	00 06 10.7	-1.3
JHJ2					Sn	00 06 44.1	+0.1
JHJ	Hachijo jima 2	2.77	198	Pn	Pn	00 06 10.0	-1.9
	62nm,0.3s,baz=310,slow=23,SNR=9.0						
JHJ				Sn	Sn	00 06 42.1	-2.0
	79nm,0.3s,baz=205,slow=21,SNR=4.1						
INU	Inuyama	3.10	263		Pn	00 06 16.2	-0.3
ERM	Erimo	6.51	16		Pn	00 07 04.9	+1.7
ASAJ	Asahikawa	8.46	9	Pn	Pn	00 07 28.6	-1.4
	3.1nm,0.3s,baz=184,slow=17,SNR=9.7						
ASAJ				Sn	Sn	00 09 00.9	-3.1
	0.7nm,0.3s,baz=217,slow=20,SNR=2.4						
JKA	Kamikawa-asahi	8.46	9		Pn	00 07 28.6	-1.4
JKA					Sn	00 09 00.9	-3.1
JCJ	Chichijima	8.73	172	Pn	Pn	00 07 31.2	-2.6
	12nm,0.3s,baz=307,slow=20,SNR=3.3						
KSRS	Korea Array	10.47	283	Pn	Pn	00 08 00.8	+3.2
	0.3nm,0.3s,baz=97,slow=13,SNR=7.8						
USRK	Ussuriysk Ar.	10.78	324	Pn	Pn	00 08 04.1	+2.4
	baz=120,slow=12,SNR=10.0						
USRK	Ussuriysk Ar.	10.78	324		Pn	00 08 02.4	+0.6
KLR	Kul'dur	14.99	337	Pn	Pn	00 08 55.4	-3.4
	0.2nm,0.3s,baz=144,slow=16,SNR=3.8						
H11N2	WAKE ISLAND Hy	27.97	118	T	T	00 40 31.4	
	baz=309,slow=75,SNR=21						
H11N1	WAKE ISLAND Hy	27.98	118	T	T	00 40 37.8	
	baz=309,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	27.99	118	T	T	00 40 38.8	
	baz=309,slow=75,SNR=16						
H11S1	WAKE ISLAND Hy	28.64	120	T	T	00 41 20.1	
	baz=312,slow=75,SNR=36						
H11S3	WAKE ISLAND Hy	28.64	120	T	T	00 41 20.4	
	baz=312,slow=75,SNR=25						
H11S2	WAKE ISLAND Hy	28.65	120	T	T	00 41 15.8	
	baz=312,slow=75,SNR=20						
BUSP	Coron	30.10	223	eP	P	00 11 41.7	+6.5
BUKP	Musuan	31.26	211	eP	P	00 11 46.1	+0.5
ZALV	Zalesovo Beam	42.40	313	P	P	00 13 19.6	-0.1
	6.2nm,0.8s,baz=83,slow=6.6,SNR=2.9						
NRIK	Noril'sk	44.21	336	P	P	00 13 35.7	+1.6
	1.4nm,0.3s,baz=98,slow=7.5,SNR=5.1						
MKAR	Makanchi Array	44.37	303	P	P	00 13 35.2	-0.6
	3.6nm,0.6s,baz=88,slow=10,SNR=5.5						
CNBA	Chernabura Isl	44.56	45	P	P	00 13 36.6	-0.5
CNBA				IAmb	IAmb	00 13 40.5	
	comp=Z,29nm,1.2s						
MAKZ	Makanchi	44.58	303	P	P	00 13 36.6	-0.9
KAPI	Kappang	45.11	210	LR	LR	00 32 29.2	
	comp=Z,754nm,21.0s,baz=183,slow=36						
KURK	Kurchatov	46.32	309	P	P	00 13 51.0	-0.1
KURK	Kurchatov	46.32	309	IAmb	IAmb	00 13 51.8	
	comp=Z,24nm,1.1s						
KURBB	Kurchatov Arra	46.39	309	P	P	00 13 51.0	-0.6
	comp=Z,19nm,1.1s,baz=80,slow=7.3,SNR=9.5						
AAK	Ala-Archa	50.65	299	P	P	00 14 25.7	+1.0
	comp=Z,4.7nm,0.8s,baz=151,slow=9.1,SNR=3.4						
AAK	Ala-Archa	50.65	299	P	P	00 14 24.8	0.0
AAK				IAmb	IAmb	00 14 39.2	
	comp=Z,9.8nm,1.1s						
ILAR	Eielson Array	50.84	32	P	P	00 14 26.9	+1.2
	comp=Z,1.6nm,0.7s,baz=266,slow=6.0,SNR=16						
BVAR	Borovoye Array	51.05	313	P	P	00 14 27.6	+0.2
	comp=Z,5.1nm,0.9s,baz=82,slow=7.1,SNR=7.6						
LEM	Lembang	52.60	223	P	P	00 14 39.5	0.0
	comp=Z,18nm,0.6s,baz=322,slow=19,SNR=2.3						
WRA	Warramunga Arr	55.74	187	P	P	00 15 00.9	-1.2
	comp=Z,1.4nm,0.5s,baz=1.4,slow=7.2,SNR=5.3						
WRA	Warramunga Arr	55.74	187	IAmb	IAmb	00 15 02.9	
	comp=Z,0.8nm,1.1s						
INK	Inuvik	55.74	27	P	P	00 15 02.9	+1.4
	comp=Z,1.4nm,0.7s,baz=303,slow=5.7,SNR=5.7						
ARU	Arti	56.97	319	P	P	00 15 10.3	-0.2
C36M	Paulatuk	58.79	24		PcP	00 16 11.5	-0.7
AKTO	Aktyubinsk	59.14	312	P	P	00 15 26.3	+0.5
	comp=Z,4.6nm,1.1s,baz=105,slow=11,SNR=3.5						
ASAR	Alice Springs	59.47	187	P	P	00 15 28.9	+0.7
	comp=Z,1.8nm,0.8s,baz=15,slow=11,SNR=5.2						
RES	Resolute Bay	63.95	14	P	P	00 15 58.3	+0.6
	comp=Z,2.2nm,0.7s,baz=302,slow=5.6,SNR=10						
RES	Resolute Bay	63.95	14	P	P	00 15 57.8	+0.1
GEYT	Alibeck	64.00	299	P	P	00 15 59.8	+1.0
	comp=Z,1.5nm,0.8s,baz=347,slow=5.9,SNR=1.9						
GEYT	Alibeck	64.00	299	IAmb	IAmb	00 16 04.1	
	comp=Z,1.4nm,0.8s						
ARCES	ARCESS Array B	65.00	339	P	P	00 16 05.2	+0.4
	comp=Z,2.6nm,0.8s,baz=37,slow=9.1,SNR=3.0						
ARCES				LR	LR	00 50 43.9	
	comp=Z,1µm,18.3s,baz=281,slow=42						
YKA	Yellowknife Ar	65.16	30	P	P	00 16 06.6	+0.7
	comp=Z,0.5nm,0.7s,baz=301,slow=6.4,SNR=4.3						
FINES	FINESS Array B	69.69	332	P	P	00 16 34.3	-0.2
	comp=Z,3.5nm,0.8s,baz=42,slow=8.8,SNR=7.2						
KBZ	Khabaz	71.34	311	P	P	00 16 44.9	+0.1
	comp=Z,4.6nm,0.9s,baz=83,slow=1.8,SNR=5.6						
KIV	Kislovodsk	71.35	311	P	P	00 16 46.1	+1.0
KIV				IAmb	IAmb	00 16 46.8	
	comp=Z,7.8nm,0.8s						
NWAO	Narrogin (SRO)	71.81	201	P	P	00 16 47.4	-0.2
	comp=Z,7.2nm,0.8s,baz=190,slow=12,SNR=1.7						

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AKASG Malin Array Be   74.98 322  P      P       00 17 05.8 -0.4
      comp=Z,1.9nm,0.5s,baz=48,slow=6.1,SNR=9.5
HFS   Hagfors          75.03 336  P      P       00 17 06.2 -0.1
      comp=Z,2.9nm,0.8s,baz=50,slow=4.6,SNR=8.2
NB2   NORSAR Subarra   75.15 337  P      P       00 17 07.2 +0.1
      comp=Z,1.4nm,0.6s,baz=41,slow=5.9
NOA   NORSAR Array B   75.15 337  P      P       00 17 06.8 -0.3
      comp=Z,2.0nm,0.6s,baz=40,slow=5.7,SNR=6.6
NVAR  Mina Array Bea   76.16  53  P      P       00 17 14.8 +1.3
      comp=Z,0.6nm,0.7s,baz=282,slow=4.5,SNR=4.2
PDAR  Pinedale Array   78.92  45  P      P       00 17 30.2 +1.3
      comp=Z,0.6nm,0.6s,baz=255,slow=2.8,SNR=7.0
PDAR  Pinedale Array   78.92  45  P      P       00 17 28.4 -0.5
BRTR  Keskin Array B   79.31 311  P      P       00 17 30.7 -0.2
      comp=Z,2.8nm,1.1s,baz=122,slow=4.5,SNR=5.5
BRTR  Keskin Array B   79.31 311  P      P       00 17 30.1 -0.8
MMAI  Mount Meron Ar   82.28 305  P      P       00 17 46.7 -0.1
      comp=Z,0.7nm,0.6s,baz=49,slow=4.4,SNR=2.7
PDG   Podgorica        85.62 321  P      P       00 18 03.2 -0.4
PDG                               IAmb   IAmb    00 18 04.9
      comp=Z,6.9nm,1.1s
TXAR  Lajitas Array    91.30  52  P      P       00 18 30.5 -0.5
      comp=Z,0.4nm,0.7s,baz=328,slow=3.2,SNR=3.5
LPAZ  La Paz          147.77  61  PKPbc  PKPbc   00 25 11.5 +0.5
      comp=Z,1.7nm,0.8s,baz=18,slow=12,SNR=5.1
```

JMA ***16*** *00:07:54.5±0.9, 46°.27N×153°.08E, h30^{km}, M4.9*

MOS ***16*** *00:07:56.5±1.0, 46°.45N×152°.72E, h42^{km}, mb5.0/30, MS3.5/5, Error ellipse: s-maj=8.2km s-min=5.6km az=80.5*

SKHL ***16*** *00:07:56.5±0.4, 46°.24N×152°.96E, h54^{km}±4^{km}, mb5.2/8, msh5.6/3*

IDC ***16*** *00:07:59.6±2.6, 46°.51N×152°.61E, h53^{km}±23^{km}, mb4.2/33, mb1 4.4/36, mb1mx4.2/72, mbtmp4.5/36, ML3.8/3, Error ellipse: s-maj=17.0km s-min=11.0km az=163.0*

BJI ***16*** *00:08:00.0±0.0, 46°.60N×152°.60E, h50^{km}, mB4.9/4, mb4.7/11, Ms4.5/3, Ms7 4.3/3*

NEIC ***16*** *00:08:19.1±3.0, 48°.2N±0°.1×152°.5E±0°.1, h154^{km}±5^{km}, mb4.6/125, Error ellipse: s-maj=20.8km s-min=10.6km az=156.0*

ISC 16 00:07:57.9±0.6**, 46°.29N**±0°.05×**152°.75E**±0°.05**, h44**^{km}±4^{km}**, h44**^{km}**:pP-P, n335,** σ1^{s}68/323**, mb4.7**/121**, 18C-20D, Kuril Islands**

```
Code  Station Name      Δ°   AZ°    Phase ID            Time      Res
                                  Op     ISC          h  m  s    ISC
KUR   Kuril'sk          3.58 255 i P     Pn      00 08 52.0 +1.2
KUR                               AMB    AMB     00 08 56.0
      180nm,0.4s
KUR                               AMB    AMB     00 08 56.0
      370nm,0.4s
KUR                              eS      Sn      00 09 33.3 +1.5
KUR                               A      A       00 09 37.0
      3μm,3.0s
KUR                               A      A       00 09 37.0
      4μm,3.0s
KUR                               A      A       00 09 54.0
      520nm,0.5s
KUR                               A      A       00 09 54.0
      380nm,0.5s
KUR   Kuril'sk          3.58 255c iPN    Pn      00 08 52.0 +1.2
KUR                              eS      Sn      00 09 33.3 +1.5
KUR                               pmax   pmax
      comp=Z,365nm,0.4s
KUR                               pmax   pmax
      comp=E,175nm,0.5s
KUR                               pmax   pmax
      comp=N,125nm,0.2s
KUR                               smax   smax
      comp=E,4μm,3.1s
KUR                               smax   smax
      comp=N,3μm,2.6s
KUR                               smax   smax
      comp=E,1μm,0.6s
KUR                               smax   smax
      comp=N,919nm,0.5s
SKR   Severo-Kuril's    4.93  26 eP      Pn      00 09 08.7 -0.6
SKR                               AMB    AMB     00 09 10.6
      comp=N,520nm,0.6s
SKR                              eS      Sn      00 10 01.7 -3.3
SKR                               A      A       00 10 18.5
      comp=N,10μm,5.0s
SKR                               A      A       00 10 18.5
      comp=N,9μm,5.0s
SKR                               A      A       00 10 31.0
      comp=N,390nm,0.7s
SKR                               A      A       00 10 31.0
      comp=N,460nm,0.7s
SKR   Severo-Kuril's    4.93  26 ePN     Pn      00 09 08.7 -0.6
SKR                               pmax   pmax
      comp=Z,638nm,0.6s
YUK   Yuzh-Kuril'sk     5.37 248 i P     Pn      00 09 17.0 +1.6
YUK                               AMB    AMB     00 09 17.7
      comp=Z,410nm,0.5s
YUK                              i S     Sn      00 10 17.0 +1.1
YUK                               A      A       00 10 30.4
      comp=Z,3μm,3.0s
YUK                               A      A       00 10 30.4
      comp=Z,2μm,3.0s
YUK                               A      A       00 10 40.1
      comp=Z,380nm,0.7s
YUK                               A      A       00 10 40.1
      comp=Z,450nm,0.7s
YUK                               AMS    AMS     00 12 30.6
      comp=Z,1μm,15.0s
YUK   Yuzh-Kuril'sk     5.37 248c iPN    Pn      00 09 17.1 +1.6
YUK                               pmax   pmax
      comp=E,159nm,0.2s
YUK                               pmax   pmax
      comp=Z,570nm,0.2s
YUK                               pmax   pmax
      comp=N,152nm,0.1s
YUK                               MLR    MLR
      comp=Z,1μm,15.0s
GRPR  Tuman             5.45 248 i P     Pn      00 09 18.2 +1.7
GRPR                              AMB    AMB     00 09 20.0
      comp=Z,300nm,0.5s
GRPR                             i S     Sn      00 10 18.0 +0.2
GRPR                              A      A       00 10 25.0
      comp=Z,390nm,0.6s
GRPR                              A      A       00 10 25.0
      comp=Z,330nm,0.6s
GRPR  Tuman             5.45 248c iPN    Pn      00 09 18.2 +1.7
GRPR                              pmax   pmax
      comp=Z,303nm,0.4s
GRPR                              pmax   pmax
      comp=N,186nm,0.2s
GRPR                              pmax   pmax
      comp=E,243nm,0.5s
GLVR  Golovnino         5.73 246 i P     Pn      00 09 21.6 +1.3
GLVR                              AMB    AMB     00 09 23.0
      comp=E,330nm,0.4s
GLVR                             i S     Sn      00 10 25.7 +1.0
GLVR                              A      A       00 10 33.0
      comp=E,320nm,0.5s
GLVR                              A      A       00 10 33.0
      comp=E,260nm,0.5s
GLVR  Golovnino         5.73 246⇓iPN    Pn      00 09 21.6 +1.3
GLVR                              pmax   pmax
      comp=Z,334nm,0.3s
GLVR                              pmax   pmax
      comp=N,62nm,0.1s
GLVR                              pmax   pmax
      comp=E,34nm,0.1s
NEM2  Nemuro 2          5.78 242  P      Pn      00 09 20.4 -0.6
NEM2                             eS      Sn      00 10 23.4 -2.6
NMR   Nemuro--Hokkai    5.79 242 eP      Pn      00 09 20.7 -0.4
NMR   Nemuro--Hokkai    5.79 242 ePN     Pn      00 09 20.7 -0.4
PAU   Pauzhetka         5.83  26 eP      Pn      00 09 19.4 -2.3
JRA   Rausu             5.89 249  P      Pn      00 09 24.4 +1.9
JNK   Nakash            6.31 247  P      Pn      00 09 29.6 +1.3
JNK                              eS      Sn      00 10 39.3 +0.2
JAK   Akkeshi           6.62 243  P      Pn      00 09 31.8 -0.8
JAK                              eS      Sn      00 10 43.9 -2.8
JTKR  Abashiri--Toko    6.67 253  P      Pn      00 09 35.1 +1.8
YSS   Yuzh-Sakhalins    6.92 279 eP      Pn      00 09 38.7 +2.1
YSS                               AMB    AMB     00 09 39.8
      comp=E,30nm,0.6s
YSS                              eS      Sn      00 10 54.0 +0.1
YSS                               AMS    AMS     00 12 19.0
      comp=E,1μm,12.0s
YSS   Yuzh-Sakhalins    6.92 279 ePN     Pn      00 09 38.7 +2.1
YSS                               pmax   pmax
      comp=Z,20nm,0.8s
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YSS                               MLR    MLR
      comp=Z,1μm,12.0s
YSS   Yuzh-Sakhalins    6.92 279  Pn     Pn      00 09 54.8  +18
JMP   Maruseppu         7.02 254  P      Pn      00 09 40.5 +2.4
JAR   Ashorobuto        7.06 248  P      Pn      00 09 40.0 +1.4
JAR                              eS      Sn      00 10 58.8 +1.4
JOB   Onbets            7.21 245 eS      Sn      00 10 59.1 -2.1
JSE   Soyaes            7.25 263  P      Pn      00 09 45.1 +3.9
JKK2  Kamakawa 2        7.48 255  P      Pn      00 09 46.8 +2.4
JKA   Kamikawa-asahi    7.49 257 eP      Pn      00 09 47.6 +3.1
ASAJ  Asahikawa         7.50 257  P      Pn      00 09 47.4 +2.8
ASAJ  Asahikawa         7.50 257  P      Pn      00 09 47.5 +3.0
      comp=Z,5.2nm,0.3s,baz=94,slow=15,SNR=22
ASAJ                              S      Sn      00 11 16.8 +8.6
      baz=140,slow=7.9,SNR=1.2
PEA0B Petropavlovsk-    7.54  23⇓ePN     Pn      00 09 43.4 -1.7
PEA0B Petropavlovsk-    7.54  23         Pn      00 09 44.2 -0.9
PETK  Petropavlovsk-    7.54  23  P      Pn      00 09 43.9 -1.1
      comp=Z,3.5nm,0.3s,baz=177,slow=15,SNR=50
PETK                              S      Sn      00 11 16.4 +7.2
      baz=172,slow=15,SNR=1.6
PETK  Petropavlovsk-    7.54  23  PN     Pn      00 09 44.0 -1.1
PETK  Petropavlovsk-    7.54  23         Pn      00 09 44.0 -1.1
JWK2  Keihoku           7.65 267  P      Pn      00 09 51.4 +4.7
JCH   Churui            7.66 245  P      Pn      00 09 46.5 -0.3
JCH                              eS      Sn      00 11 08.5 -3.7
UGL   Uglegorsk         7.73 295 eP      Pn      00 09 49.3 +1.5
UGL                               AMB    AMB     00 09 51.3
      comp=Z,30nm,0.6s
UGL                              eS      Sn      00 11 14.3 +0.4
UGL                               A      A       00 11 17.9
      comp=Z,140nm,0.8s
UGL                               A      A       00 11 17.9
      comp=Z,220nm,0.8s
UGL   Uglegorsk         7.73 295⇑iPN     Pn      00 09 54.7 +6.9
UGL                               pmax   pmax
      comp=Z,79nm,0.7s
PET   Petropavlovsk     7.75  27 eP      Pn      00 09 47.4 -0.5
PET                               AMB    AMB     00 09 57.3
      comp=Z,60nm,0.8s
PET                              eS      Sn      00 11 11.2 -3.1
PET   Petropavlovsk     7.75  27 ePN     Pn      00 09 44.4 -3.6
PET                               pmax   pmax
      comp=Z,58nm,0.8s
PET                               MLR    MLR
      comp=Z,600nm,16.0s
PET   Petropavlovsk     7.75  27  Pn     Pn      00 09 47.5 -0.5
JAB   Ashibetsu         7.98 253  P      Pn      00 09 54.1 +2.9
TYV   Tymovskoe         8.11 308 eP      Pn      00 09 54.0 +1.1
ERM   Erimo             8.12 242cePN     Pn      00 09 54.2 +1.2
ERM                               pmax   pmax
      comp=Z,77nm,0.7s
ERM   Erimo             8.12 242         Sn      00 11 58.0  +35
JNBK  Urakawa-nobuka    8.22 244  P      Pn      00 09 53.9 -0.6
JNB   Noboribetsu       9.22 250  P      Pn      00 10 08.3 +0.2
JNB                              eS      Sn      00 11 47.7 -2.7
JKB   Kayabe            9.51 247  P      Pn      00 10 11.5 -0.7
JSH   Shimam            9.79 253  P      Pn      00 10 17.1 +1.1
JANG  Nango            10.10 238  P      Pn      00 10 17.1 -3.1
JTM   Tenmabayashi     10.11 241  P      Pn      00 10 18.8 -1.5
OFUJ  Ofunato          10.88 232  P      Pn      00 10 28.0 -2.9
TEY   Ternei           11.38 269 eP      Pn      00 10 36.8 -0.8
JIO   Ouri             11.50 231  P      Pn      00 10 36.6 -2.8
MA2   Magadan          13.36 356 eP      Pn      00 11 04.7  0.0
MA2   Magadan          13.36 356⇓ePN     Pn      00 11 04.7  0.0
MA2                               pmax   pmax
      comp=Z,36nm,1.7s
MA2   Magadan          13.36 356  Pn     Pn      00 10 52.8  -12
MJAR  Matsushiro Arr   14.61 233  P      Pn      00 11 19.6 -2.0
      comp=Z,0.1nm,0.3s,baz=30,slow=14,SNR=5.3
MAT   Matsushiro       14.61 233  P      P       00 11 28.4 +1.2
MAT                               S      S       00 14 12.7 -6.9
USA0B Ussuriysk Arra   14.77 269         S       00 14 27.9 +5.0
USRK  Ussuriysk Ar.    14.77 269  P      Pn      00 11 24.9 +1.1
      baz=70,slow=11,SNR=5.8
KSRS  Korea Array      20.42 253  P      P       00 12 32.1 +0.9
      comp=Z,6.7nm,0.9s,baz=59,slow=11,SNR=7.9
KS19  Wonju Array Si   20.43 253  P      Pn      00 12 52.2  +18
KS19                              IAmb   IAmb    00 12 54.1
      comp=Z,22nm,1.0s
YAK   Yakutsk          20.58 328 eP      P       00 12 31.8 -0.8
YAK                              e*PP    pP      00 12 43.6 +1.0
YAK                              eS      S       00 16 14.6 -5.4
YAK                               pmax   pmax
      comp=Z,11nm,0.7s
YAK                               pmax   pmax
      comp=N,10.0nm,1.1s
YAK                               pmax   pmax
      comp=E,8.0nm,1.2s
YAK                               smax   smax
      comp=E,114nm,3.1s
YAK                               smax   smax
      comp=N,144nm,4.0s
GSTR  Great Sitkin T   21.09  63  P      P       00 12 47.5 +9.2
JNU   Nakatsue         21.27 240  P      P       00 13 06.9  +27
JNU                               IAmb   IAmb    00 13 09.9
      comp=Z,21nm,1.0s
HIA   Hailar           22.28 290⇓eP      P       00 12 48.7 -2.4
HIA                               pmax   pmax
      comp=Z,7.0nm,1.2s
BILL  Bilibino         22.89  13 eP      P       00 12 57.0 -0.4
BILL  Bilibino         22.89  13⇓eP      P       00 12 56.6 -0.8
BILL                              *PP    pP      00 13 06.0 -1.4
BILL                              *SP    sP      00 13 12.0 -0.6
BILL                                             00 13 23.0
BILL                             eSS     Sn      00 17 39.1  +18
BILL                              pmax   pmax
      comp=Z,7.0nm,1.0s
BILL                              MLR    MLR
      comp=Z,467nm,20.0s
BILL  Bilibino         22.89  13  P      P       00 12 50.7 -6.7
GAMB  Gambell          26.34  36  P      P       00 13 29.7 +0.5
H11N2 WAKE ISLAND Hy   28.93 152  T      T       00 45 23.2
      baz=340,slow=76,SNR=388
H11N1 WAKE ISLAND Hy   28.95 152  T      T       00 45 27.2
      baz=340,slow=76,SNR=196
H11N3 WAKE ISLAND Hy   28.95 152  T      T       00 45 24.2
      baz=340,slow=76,SNR=206
ANM   Nome             29.21  36  P      P       00 13 54.8 -0.1
ANM                               pmax   pmax
      comp=Z,10.0nm,0.8s
ANM   Nome             29.21  36  P      P       00 13 54.8 -0.1
ANM                               IAmb   IAmb    00 13 56.5
      comp=Z,9.9nm,0.8s
NJ2   Nanjing          29.63 253 eP      P       00 14 15.8  +17
H11S1 WAKE ISLAND Hy   30.01 153  T      T       00 46 42.4
      baz=340,slow=76,SNR=335
H11S3 WAKE ISLAND Hy   30.02 153  T      T       00 46 37.8
      baz=340,slow=76,SNR=209
H11S2 WAKE ISLAND Hy   30.03 153  T      T       00 46 38.4
      baz=340,slow=76,SNR=238
CNBA  Chernabura Isl   30.92  56  P      P       00 14 15.9 +5.8
RDOG  Red Dog Mine     31.34  30  P      P       00 14 11.6 -2.0
RDOG                              IAmb   IAmb    00 14 14.7
      comp=Z,8.3nm,0.8s
SVW2  Sparrevohn       32.99  44  P      P       00 14 28.9 +0.6
SVW2                              IAmb   IAmb    00 14 29.6
      comp=Z,6.3nm,0.8s
IMAR  Indian Mountai   34.28  36  P      P       00 14 39.5 +0.1
RSO   Redoubt South    34.37  46  P      P       00 14 42.3 +1.9
KDAK  Kodiak Island    34.59  50  P      P       00 14 41.2 -0.9
      comp=Z,14nm,1.0s,baz=297,slow=3.2,SNR=8.3
KDAK  Kodiak Island    34.59  50  P      P       00 14 41.5 -0.6
KDAK                              pmax   pmax
      comp=Z,24nm,0.9s
KDAK  Kodiak Island    34.59  50  P      P       00 14 41.5 -0.6
PPLA  Purkeypile       34.67  41  P      P       00 14 43.4 +0.5
PPLA                              IAmb   IAmb    00 14 50.5
      comp=Z,15nm,1.1s
SKT   Skwentna         34.96  43  P      P       00 14 46.7 +1.5
CNPM  China Poot       35.16  47  P      P       00 14 47.6 +0.5
CNPM                              IAmb   IAmb    00 14 56.9
      comp=Z,11nm,0.9s
BPAW  Bear Paw Mtn.    35.27  39  P      P       00 14 48.8 +0.9
BPAW                              IAmb   IAmb    00 14 49.5
      comp=Z,11nm,1.0s
KTH   Kantishna Hill   35.27  40  P      P       00 14 49.1 +1.1
BRLK  Bradley Lake     35.33  47  P      P       00 14 48.1 -0.4
BRLK                              IAmb   IAmb    00 14 48.7
      comp=Z,9.1nm,0.7s
SUA   Susitna One      35.33  44  IAmb   IAmb    00 14 50.5
      comp=Z,10nm,1.0s
MLY   Manley           35.43  38  IAmb   IAmb    00 14 51.0
      comp=Z,11nm,0.9s
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TRF   Thorofare Moun   35.55  40  P      P       00 14 51.0 +0.5
TRF                               IAmb   IAmb    00 14 52.8
      comp=Z,16nm,0.9s
RC01  Rabbit Creek A   35.83  44  P      P       00 14 52.6 -0.2
RC01                              IAmb   IAmb    00 14 53.5
      comp=Z,5.8nm,0.7s
COLD  Coldfoot         35.85  34  P      P       00 14 50.3 -2.5
BWN   Browne           35.94  39  P      P       00 14 55.3 +1.7
SEW   Seward           36.03  46  P      P       00 14 54.8 +0.4
SEW                               IAmb   IAmb    00 14 55.3
      comp=Z,13nm,1.2s
NEA   Nenana           36.12  38  P      P       00 14 55.2  0.0
NEA                               IAmb   IAmb    00 14 56.5
      comp=Z,13nm,0.8s
MCK   McKinley         36.16  40  P      P       00 14 54.4 -1.2
MCK                               pmax   pmax
      comp=Z,17nm,1.0s
MCK   McKinley         36.16  40  P      P       00 14 54.4 -1.2
MCK                               IAmb   IAmb    00 14 56.6
      comp=Z,17nm,1.0s
GHO   Glory Hole Cre   36.19  43  IAmb   IAmb    00 14 56.8
      comp=Z,14nm,1.1s
RND   Reindeer         36.20  40  P      P       00 14 55.9  0.0
RND                               pmax   pmax
      comp=Z,18nm,1.0s
RND   Reindeer         36.20  40  P      P       00 14 55.9  0.0
TOLK  Toolik Lake Re   36.27  32  P      P       00 14 54.7 -1.7
MDM   Murphy Dome      36.49  38  P      P       00 14 58.2 -0.2
MDM                               IAmb   IAmb    00 14 59.9
      comp=Z,13nm,0.8s
WRH   Wood River Hil   36.54  39  P      P       00 14 59.2 +0.5
WRH                               IAmb   IAmb    00 15 01.2
      comp=Z,9.3nm,0.9s
WRH                                      S       00 20 14.6  -23
COLA  College          36.65  38  P      P       00 15 00.0 +0.3
COLA                              pmax   pmax
      comp=Z,28nm,1.0s
COLA  College          36.65  38  P      P       00 15 00.0 +0.3
CCB   Clear Creek Bu   36.67  38  P      P       00 15 00.1 +0.3
DHY   Denali Highway   36.87  41  IAmb   IAmb    00 15 02.5
      comp=Z,12nm,0.8s
SCM   Sheep Creek Mo   36.95  43  IAmb   IAmb    00 15 03.5
      comp=Z,16nm,0.9s
HDA   Harding Lake     37.04  39  P      P       00 15 02.5 -0.5
HDA                               IAmb   IAmb    00 15 03.6
      comp=Z,14nm,0.8s
IL31                   37.06  38  P      P       00 15 03.1  0.0
IL31                              IAmb   IAmb    00 15 05.4
      comp=Z,11nm,1.0s
ILAR  Eielson Array    37.06  38  P      P       00 15 02.8 -0.5
      comp=Z,9.8nm,1.1s,baz=259,slow=6.9,SNR=23
ILAR  Eielson Array    37.06  38  P      P       00 15 03.3 +0.1
ILAR  Eielson Array    37.06  38  P      P       00 15 03.2 +0.1
GLI   Glacier Island   37.13  45  P      P       00 15 03.8 -0.1
FID   Port Fidalgo     37.44  45  P      P       00 15 06.6 +0.1
HIN   Hinchinbrook I   37.47  45  P      P       00 15 07.0 +0.3
PRP   Porcupine Dome   37.64  37  IAmb   IAmb    00 15 10.1
      comp=Z,13nm,0.9s
FYU   Fort Yukon       37.76  35  P      P       00 15 09.6 +0.5
RIDG  Independent Ri   37.98  40  IAmb   IAmb    00 15 11.5
      comp=Z,17nm,1.0s
BMAR  Burnt Mountain   38.04  34  P      P       00 15 12.5 +1.0
SCRK  Sand Creek       38.35  39  IAmb   IAmb    00 15 14.2
      comp=Z,6.4nm,0.8s
RAGM  Ragged Mountai   38.37  45  P      P       00 15 15.5 +1.1
MENT  Mentasta         38.54  41  P      P       00 15 17.0 +1.2
GLB   Gilahina Butte   38.66  43  P      P       00 15 17.0 +0.2
VRDI  Verde Repeater   38.85  44  IAmb   IAmb    00 15 20.6
      comp=Z,12nm,0.8s
MCARA McCarthy VSAT    39.04  43  P      P       00 15 22.0 +2.1
MCARA                             IAmb   IAmb    00 15 33.0
      comp=Z,14nm,1.1s
TGL   Tana Glacier     39.22  44  P      P       00 15 22.3 +0.7
BCAR  Beaver Creek A   39.41  41  P      P       00 15 23.5 +0.5
BALM  Baldy            39.41  44  P      P       00 15 23.9 +0.7
BALM                              IAmb   IAmb    00 15 24.9
      comp=Z,14nm,1.0s
CTGM  Chitina Glacie   39.91  44  P      P       00 15 28.4 +1.1
DAWY  Dawson           40.35  39  P      P       00 15 31.6 +0.7
EPYK  Eagle Plains     41.19  35  P      P       00 15 38.6 +0.9
HYT   Haines Junctio   41.78  44  P      P       00 15 44.4 +1.7
HYT                               IAmb   IAmb    00 15 45.2
      comp=Z,10nm,0.9s
DHAK  Deception Hill   41.82  46  P      P       00 15 45.5 +2.5
INK   Inuvik           42.17  32  P      P       00 15 45.9 +0.3
      comp=Z,17nm,0.8s,baz=290,slow=7.4,SNR=28
INK   Inuvik           42.17  32  P      P       00 15 46.4 +0.8
INK                               pmax   pmax
      comp=Z,20nm,1.0s
INK   Inuvik           42.17  32  P      P       00 15 46.4 +0.8
INK                               IAmb   IAmb    00 15 47.2
      comp=Z,20nm,0.9s
WHY   Whitehorse       43.07  43  P      P       00 15 54.4 +1.2
WHY                               IAmb   IAmb    00 15 55.8
      comp=Z,12nm,1.0s
WMQ   Urumqi           44.86 291 eP      P       00 16 13.3 +5.6
WMQ                               pmax   pmax
      comp=Z,18nm,1.5s
WMQ                               pmax   pmax
      comp=Z,97nm,6.3s
C36M  Paulatuk         45.34  30  IAmb   IAmb    00 16 24.2
      comp=Z,20nm,0.9s
DLBC  Dease Lake       46.09  45  P      P       00 16 19.1 +1.8
      comp=Z,5.5nm,0.9s,baz=274,slow=6.1,SNR=6.7
DLBC  Dease Lake       46.09  45  IAmb   IAmb    00 16 33.0
      comp=Z,11nm,1.1s
MKAR  Makanchi Array   46.93 298  P      P       00 16 22.9 -1.0
      comp=Z,2.5nm,0.8s,baz=74,slow=7.2,SNR=5.0
MAKZ  Makanchi         47.12 298  P      P       00 16 26.7 +1.3
MAKZ                              pmax   pmax
      comp=Z,4.0nm,1.1s
MAKZ  Makanchi         47.12 298  P      P       00 16 26.7 +1.3
KURK  Kurchatov        47.41 304 eP      P       00 16 26.6 -0.9
KURK  Kurchatov        47.41 304  P      P       00 16 26.4 -1.2
KURK  Kurchatov        47.41 304  P      P       00 16 26.4 -1.2
KURK  Kurchatov        47.41 304  IAmb   IAmb    00 16 27.3
      comp=Z,8.3nm,1.1s
KURBB Kurchatov Arra   47.50 304  P      P       00 16 26.4 -1.9
      comp=Z,2.2nm,0.9s,baz=67,slow=8.1,SNR=4.2
BVAR  Borovoye Array   50.96 310  P      P       00 16 53.4 -1.3
      comp=Z,1.6nm,0.6s,baz=57,slow=7.3,SNR=4.2
BVAR                              PcP    PcP     00 18 10.5 +0.2
      comp=Z,1.5nm,0.7s,baz=68,slow=4.0,SNR=3.9
BRVK  Borovoye         51.00 310 eP      P       00 16 54.5 -0.4
BRVK  Borovoye         51.00 310⇓eP      P       00 16 54.5 -0.4
BRVK                              pmax   pmax
      comp=Z,2.0nm,0.9s
BRVK  Borovoye         51.00 310  P      P       00 16 53.5 -1.5
RES   Resolute Bay     51.35  18  P      P       00 16 56.9 -0.3
      comp=Z,2.2nm,0.8s,baz=286,slow=7.4,SNR=2.9
RES   Resolute Bay     51.35  18  P      P       00 16 56.1 -1.1
YKA   Yellowknife Ar   51.44  36  P      P       00 16 58.3 +0.3
      comp=Z,6.1nm,0.9s,baz=293,slow=6.7,SNR=20
SPITS Spitsbergen Ar   53.02 350  P      P       00 17 08.0 -1.6
      comp=Z,13nm,1.1s,baz=72,slow=11,SNR=4.1
KSH   Kashi            54.60 293  P      P       00 17 28.5 +6.7
KSH                               PcP    PcP     00 18 32.0 +7.5
KSH                               PcS    PcS     00 22 28.1 +3.9
KSH                               pmax   pmax
      comp=Z,44nm,1.4s
KSH                               LR     LR
      comp=Z,370nm,15.6s
KSH                               LR     LR
      comp=Z,300nm,13.4s
KSH                               LR     LR
      comp=Z,710nm,16.1s
ARU   Arti             55.18 318d iP     P       00 17 24.1 -1.5
ARU                                              00 19 26.7
ARU                               S      S       00 25 03.7 -1.6
ARU                               SS     SS      00 28 46.6 -2.5
ARU                               pmax   pmax
      comp=Z,6.0nm,1.1s
DAG   Danmarks Havn    57.09 358 i P     P       00 17 37.5 -1.5
      comp=Z,9.5nm,1.0s
DAG   Danmarks Havn    57.09 358 i P     P       00 17 37.5 -1.5
DAG                               pmax   pmax
      comp=Z,10.0nm,1.0s
KULLO Kullorsuaq       57.75   9 i P     P       00 17 42.3 -1.3
      comp=Z,8.2nm,0.7s
KULLO Kullorsuaq       57.75   9 i P     P       00 17 42.3 -1.3
KULLO                             pmax   pmax
      comp=Z,8.0nm,0.7s
PINE  Pine Mountain    58.05  58  P      P       00 17 48.3 +1.9
PINE                              IAmb   IAmb    00 17 50.7
      comp=Z,10nm,1.1s
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MOD	Modoc Plateau	59.53	60	IAmb	IAmb	00 17 58.9	
	comp=Z,6.9nm,1.0s						
WVOR	Wild Horse Val	60.21	59	IAmb	IAmb	00 18 03.4	
	comp=Z,4.8nm,0.9s						
SUMG	Summit	61.17	4	*i* P	P	00 18 07.0	-0.7
	comp=Z,32nm,0.9s						
SUMG				*i*		00 18 19.2	
SUMG	Summit	61.17	4	P	P	00 18 07.3	-0.5
SUMG				pmax	pmax		
	comp=Z,24nm,0.9s						
SUMG	Summit	61.17	4	P	P	00 18 07.3	-0.5
YERR	Yerington	61.95	62	IAmb	IAmb	00 18 14.8	
	comp=Z,7.9nm,1.1s						
KVN	Kaiserville	62.60	61	IAmb	IAmb	00 18 19.7	
	comp=Z,4.6nm,1.0s						
NVAR	Mina Array Bea	62.87	62	P	P	00 18 20.5	+1.1
	comp=Z,3.6nm,0.9s,baz=284,slow=7.2,SNR=13						
NVAR	Mina Array Bea	62.87	62	P	P	00 18 20.4	+0.9
TPAW	Teton Pass	63.97	54	P	P	00 18 27.3	+0.5
TPAW				IAmb	IAmb	00 18 28.4	
	comp=Z,6.2nm,0.9s						
FINES	FINESS Array B	64.35	335	P	P	00 18 27.2	-1.3
	comp=Z,2.9nm,0.6s,baz=29,slow=8.6,SNR=14						
FINES	FINESS Array B	64.35	335	P	P	00 18 26.5	-2.0
SPUT	South Promonto	64.52	56	P	P	00 18 33.3	+3.1
DUG	Dugway, Tooele	65.03	57	IAmb	IAmb	00 18 35.6	
	comp=Z,5.7nm,0.9s						
PDAR	Pinedale Array	65.22	53	P	P	00 18 35.4	+0.6
	comp=Z,2.3nm,0.8s,baz=305,slow=1.6,SNR=14						
PDAR	Pinedale Array	65.22	53	P	P	00 18 35.1	+0.3
CCUT	Cedar City	66.42	60	P	P	00 18 47.9	+5.2
MSU	Marysvale	66.50	58	P	P	00 18 47.1	+4.0
MSU	Marysvale	66.50	58	P	P	00 18 47.1	+4.0
VSU	Vasula	66.50	332	⇓*e*P	P	00 18 43.3	+0.8
VSU				pmax	pmax		
	comp=Z,62nm,1.1s						
TMUT	Trail Mountain	66.55	57	P	P	00 18 46.7	+3.2
GEYT	Alibeck	66.62	301	P	P	00 18 43.7	0.0
	comp=Z,1.8nm,0.8s,baz=273,slow=5.2,SNR=3.8						
LCMT	Little Creek M	66.85	60	P	P	00 18 52.9	+7.7
ULM	Lac du Bonnet	67.03	40	P	P	00 18 45.7	-0.3
	comp=Z,1.5nm,0.8s,baz=302,slow=4.0,SNR=4.1						
ULM	Lac du Bonnet	67.03	40	⇓*e*P	P	00 18 46.0	0.0
PFO	Pinyon Flats O	67.11	65	⇑*e*P	P	00 18 47.8	+0.9
PFO				pmax	pmax		
	comp=Z,4.0nm,1.4s						
RSSD	Black Hills	67.31	49	P	P	00 18 48.2	0.0
RSSD				pmax	pmax		
	comp=Z,5.0nm,1.0s						
RSSD	Black Hills	67.31	49	P	P	00 18 48.2	0.0
RSSD				IAmb	IAmb	00 18 48.9	
	comp=Z,5.3nm,1.0s						
WRA	Warramunga Arr	68.00	199	P	P	00 18 53.1	+0.8
	comp=Z,2.2nm,0.9s,baz=12,slow=6.5,SNR=5.3						
PV14	Lion Creek, Pa	68.44	57	P	P	00 19 00.1	+4.7
NC204	NORSAR Array S	68.47	341	P	P	00 18 50.8	-4.2
PV20	West Nyswonger	68.49	57	P	P	00 18 55.4	-0.3
PV04	Paradox Valley	68.49	57	P	P	00 18 56.4	+0.8
PV04				IAmb	IAmb	00 19 03.2	
	comp=Z,6.7nm,1.0s						
PV19	Morning Glory	68.50	57	P	P	00 18 56.4	+0.7
PV19				IAmb	IAmb	00 19 10.2	
	comp=Z,9.8nm,1.0s						
NB201	NORSAR Array S	68.55	341	IAmb	IAmb	00 19 04.2	
	comp=Z,5.0nm,0.6s						
NB2	NORSAR Subarra	68.58	341	P	P	00 18 54.3	-1.3
	comp=Z,3.6nm,0.7s,baz=28,slow=6.5						
NOA	NORSAR Array B	68.58	341	P	P	00 18 54.6	-1.0
	comp=Z,7.5nm,0.8s,baz=28,slow=6.4,SNR=17						
HFS	Hagfors	68.80	339	P	P	00 18 56.0	-0.9
	comp=Z,9.4nm,0.7s,baz=46,slow=6.4,SNR=9.6						
HFS	Hagfors	68.80	339	P	P	00 18 56.0	-0.9
AKT	Akhty	70.10	309	*e*P	P	00 19 05.4	0.0
AKT				*e**PP	pP	00 19 18.3	+0.7
AKT				*e**SP	PcP	00 19 26.0	-1.3
AKT				*e*		00 19 28.5	
AKT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KONO	Kongsberg	70.19	341	*ce*P	P	00 19 06.3	+0.8
KONO				pmax	pmax		
	comp=Z,91nm,2.5s						
NCK	Nalchik	70.82	313	⇓*e*P	P	00 19 09.6	-0.1
NCK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KIV	Kislovodsk	70.94	314	⇓P	P	00 19 11.8	+1.3
KIV	Kislovodsk	70.94	314	*e*P	P	00 19 12.5	+2.0
KIV				pmax	pmax		
	comp=Z,21nm,1.1s						
KIV	Kislovodsk	70.94	314	P	P	00 19 11.6	+1.1
KIV				IAmb	IAmb	00 19 14.3	
	comp=Z,5.8nm,0.9s						
KBZ	Khabaz	71.00	314	P	P	00 19 10.1	-0.5
	comp=Z,6.6nm,0.9s,baz=147,slow=3.3,SNR=9.6						
KBZ	Khabaz	71.00	314	*e*P	P	00 19 11.2	+0.5
KBZ	Khabaz	71.00	314	*de*P	P	00 19 11.2	+0.5
KBZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ZEI	Tsey	71.17	313	*e*P	P	00 19 11.6	-0.5
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TBLG	Delisi	71.50	311	P	P	00 19 15.1	+1.3
TBLG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TBLG	Delisi	71.50	311	P	P	00 19 15.1	+1.3
TBLG				IAmb	IAmb	00 19 15.5	
	comp=Z,8.6nm,0.8s						
ASAR	Alice Springs	71.69	198	P	P	00 19 16.7	+1.7
	comp=Z,1.7nm,0.9s,baz=13,slow=5.7,SNR=5.3						
AKASG	Malin Array Be	71.79	326	P	P	00 19 14.5	-0.8
	comp=Z,1.2nm,0.4s,baz=35,slow=6.3,SNR=4.9						
AKBB	Malin Array Si	71.79	326	⇓*e*P	P	00 19 15.1	-0.2
ANMO	Albuquerque	72.29	58	*ce*P	P	00 19 20.4	+1.5
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GNI	Garni	72.64	310	P	P	00 19 19.6	-1.3
	comp=Z,2.0nm,0.6s,baz=242,slow=15,SNR=3.2						
GNI	Garni	72.64	310	IAmb	IAmb	00 19 35.8	
	comp=Z,7.7nm,1.1s						
SCHQ	Schefferville	73.83	23	P	P	00 19 26.9	-0.5
	comp=Z,5.1nm,0.9s,baz=342,slow=5.7,SNR=7.6						
SCHQ	Schefferville	73.83	23	P	P	00 19 27.4	-0.1
KWP	Kalwaria Pacla	75.09	329	IAmb	IAmb	00 19 35.9	
	comp=Z,15nm,0.9s						
OJC	Ojcow	75.60	331	P	P	00 19 37.4	-0.3
OJC				pmax	pmax		
	comp=Z,13nm,1.0s						
OJC	Ojcow	75.60	331	P	P	00 19 37.4	-0.3
OJC				IAmb	IAmb	00 19 38.5	
	comp=Z,13nm,1.0s						
BUR08	Bucovina Ar. S	75.81	326	P	P	00 19 39.1	0.0
BUR08				IAmb	IAmb	00 19 39.7	
	comp=Z,8.0nm,0.8s						
KOLS	Kolonicke sedl	75.83	329	*e*P	P	00 19 39.0	-0.1
KOLS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KOLS	Kolonicke sedl	75.83	329	*e*P	P	00 19 39.0	-0.1
BURAR	Bucovina Array	75.83	326	⇓P	P	00 19 39.1	-0.1
BURAR	Bucovina Array	75.83	326	P	P	00 19 38.8	-0.5
CRVS	Cervenica-Dubn	76.14	329	*e*P	P	00 19 41.0	+0.1
CRVS	Cervenica-Dubn	76.14	329	*e*P	P	00 19 41.0	+0.1
TESR	Tescani	76.18	325	⇑P	P	00 19 40.7	-0.3
TRPA	Tarpa	76.41	328	⇓P	P	00 19 42.7	+0.4
OSTC	Ostas	76.47	333	*e*P	P	00 19 42.3	-0.4
CHVC	Chvalec	76.50	333	*e*P	P	00 19 42.6	-0.3
UPC	Upice	76.58	333	*e*P	P	00 19 42.8	-0.5
UPC	Upice	76.58	333	*e*P	P	00 19 42.8	-0.5
DPC	Dobruska-Polom	76.62	333	*e*P	P	00 19 43.7	+0.1
DPC	Dobruska-Polom	76.62	333	*e*P	P	00 19 43.7	+0.1
LANS	Liptovska Anna	76.62	331	*e*P	P	00 19 44.6	+1.0
LANS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LANS	Liptovska Anna	76.62	331	*e*P	P	00 19 44.6	+1.0
EKA	Eskdalemuir Ar	76.72	346	P	P	00 19 43.7	-0.3
	comp=Z,2.2nm,0.8s,baz=24,slow=5.8,SNR=3.4						
MORC	Moravsky Berou	76.73	332	P	P	00 19 44.0	-0.3
MORC				pmax	pmax		
	comp=Z,15nm,1.0s						
MORC	Moravsky Berou	76.73	332	*e*P	P	00 19 43.9	-0.3
MORC	Moravsky Berou	76.73	332	P	P	00 19 44.0	-0.3
MORC				IAmb	IAmb	00 19 45.6	
	comp=Z,15nm,1.0s						
CLL	Collm	76.78	335	*i* P	P	00 19 44.7	+0.3
	comp=Z,18nm,0.9s						
CLL				*i* PcP	pP	00 19 57.1	+0.6
	comp=Z,7.0nm,0.7s						
CLL	Collm	76.78	335	*i* P	P	00 19 44.7	+0.3
CLL				*i* *PP	pP	00 19 57.1	+0.6
CLL				pmax	pmax		
	comp=Z,18nm,0.9s						
CLL	Collm	76.78	335	P	P	00 19 43.0	-1.4
CJR	Cluj-Napoca	77.20	327	⇓P	P	00 19 47.1	+0.2
MLR	Muntele Rosu	77.30	325	P	P	00 19 47.9	+0.3
	comp=Z,8.3nm,0.7s,baz=23,slow=10,SNR=4.2						
MLR	Muntele Rosu	77.30	325	⇑P	P	00 19 48.2	+0.7
MLR	Muntele Rosu	77.30	325	IAmb	IAmb	00 19 49.7	
	comp=Z,17nm,1.1s						
VYHS	Vyhne	77.40	331	*e*P	P	00 19 48.0	0.0
VYHS				pmax	pmax		
	comp=Z,13nm,1.1s						
VYHS	Vyhne	77.40	331	*e*P	P	00 19 48.0	0.0
VRAC	Vranov	77.44	332	P	P	00 19 48.1	0.0
	comp=Z,8.3nm,0.7s,baz=36,slow=5.8,SNR=10						
VRAC	Vranov	77.44	332	⇑P	P	00 19 48.4	+0.2
VRAC	Vranov	77.44	332	P	P	00 19 48.9	+0.7
VRAC	Vranov	77.44	332	*e*P	P	00 19 48.3	+0.2
DRGR		77.47	327	⇑P	P	00 19 48.1	-0.3
JAVC	Velka Javorina	77.48	331	*e*P	P	00 19 49.4	+0.9
PRU	Pruhonice	77.49	334	*e*P	P	00 19 48.2	-0.2
PRU				*e*PCP	pP	00 20 00.6	0.0
PRU	Pruhonice	77.49	334	*e*P	P	00 19 48.2	-0.2
PRU				*e*		00 20 00.6	
PSZ	Piszkesteto	77.53	330	P	P	00 19 47.6	-1.2
PSZ				pmax	pmax		
	comp=Z,14nm,1.1s						
PSZ	Piszkesteto	77.53	330	P	P	00 19 47.6	-1.2
PSZ				IAmb	IAmb	00 19 50.0	
	comp=Z,14nm,1.1s						
ICOR	Ion Corvin	77.66	323	⇑P	P	00 19 50.4	+1.0
VOIR		77.70	325	⇑P	P	00 19 49.8	0.0
KRUC	Moravsky	77.72	332	*e*P	P	00 19 49.6	-0.1
ARR	Arges	77.92	325	⇑P	P	00 19 51.6	+0.7
TXAR	Lajitas Array	77.94	60	P	P	00 19 52.0	+0.6
	comp=Z,1.9nm,0.6s,baz=300,slow=4.6,SNR=14						
TXAR	Lajitas Array	77.94	60	P	P	00 19 52.0	+0.6
TXAR	Lajitas Array	77.94	60	P	P	00 19 51.9	+0.5
MODS	Modra-Piesok	78.03	331	*e*P	P	00 19 51.0	-0.5
MODS				pmax	pmax		
	comp=Z,15nm,1.1s						
MODS	Modra-Piesok	78.03	331	*e*P	P	00 19 51.0	-0.5
ZST	Bratislava	78.24	331	*e*P	P	00 19 52.5	-0.1
ZST				pmax	pmax		
	comp=Z,16nm,1.1s						
ZST	Bratislava	78.24	331	*e*P	P	00 19 52.5	-0.1
KHC	Kasperske Hory	78.54	334	*e*P	P	00 19 54.3	0.0
KHC				*e*x	x	00 19 57.9	
KHC				*e*PCP	pP	00 20 06.7	+0.1
KHC	Kasperske Hory	78.54	334	*de*P	P	00 19 54.7	+0.4
KHC				pmax	pmax		
	comp=Z,22nm,0.9s						
BR131	Keskin Array S	78.55	317	*c i*P	P	00 19 54.6	-0.1
BR131	Keskin Array S	78.55	317	P	P	00 19 55.1	+0.5
BRTR	Keskin Array B	78.55	317	P	P	00 19 55.1	+0.5
	comp=Z,5.0nm,0.9s,baz=67,slow=4.7,SNR=17						
BRTR	Keskin Array B	78.55	317	P	P	00 19 54.6	-0.1
GZR	Gura Zlata	78.62	327	⇓P	P	00 19 54.5	-0.3
GEC2	GERESS Array S	78.76	334	P	P	00 19 53.7	-1.9
GERES	GERESS Array B	78.76	334	P	P	00 19 55.3	-0.3
	comp=Z,2.5nm,0.6s,baz=28,slow=6.0,SNR=5.3						
GERES	GERESS Array B	78.76	334	P	P	00 19 53.8	-1.8
U40A	Yellville	78.81	49		PcP	00 20 08.2	+3.6
BZS	Buzias	78.87	327	⇓P	P	00 19 56.1	0.0
CONA	Conrad Observa	78.88	332	*e*P	P	00 19 57.0	+0.8
	comp=Z,7.1nm,0.7s						
MEM	Membach	79.29	339	P	P	00 19 57.8	-0.5
	comp=Z,10nm,1.0s						
MEM	Membach	79.29	339	PcP	PcP	00 20 08.2	+1.8
MEM	Membach	79.29	339	pP	pP	00 20 30.1	+20
MOA	Molln	79.46	333	*e*P	P	00 19 59.7	+0.3
	comp=Z,4.3nm,0.8s						
PLVB	Pleven	79.57	324	⇑P	P	00 19 59.3	-0.7
BMRD	Maredsous	79.87	340	P	P	00 20 01.6	+0.1
BMRD				pP	sP	00 20 34.7	+16
SOKA	Soboth	80.25	332	*e*P	P	00 20 04.1	+0.3
	comp=Z,6.8nm,0.9s						
PERS	Pernice	80.26	332	*e*P	P	00 20 03.9	+0.1
KBA	Koelnbreinsper	80.44	333	*e*P	P	00 20 05.5	+0.7
	comp=Z,17nm,1.2s,SNR=5.7						
DOBS	Dobrina	80.57	331	*e*P	P	00 20 04.9	-0.5
WATA	Walderalm	80.75	334	*e*P	P	00 20 06.8	+0.3
	comp=Z,15nm,1.2s,SNR=5.3						
VTS	Vitosha	80.77	325	⇓P	P	00 20 07.0	+0.3
VTS	Vitosha	80.77	325	P	P	00 20 07.9	+1.2
VTS	Vitosha	80.77	325	P	P	00 20 06.6	0.0
VTS				IAmb	IAmb	00 20 08.3	
	comp=Z,16nm,0.9s						
BFO	Black Forest	80.78	337	P	P	00 20 05.0	-1.4
BFO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BFO	Black Forest	80.78	337	P	P	00 20 05.0	-1.4
BFO				IAmb	IAmb	00 20 07.2	
	comp=Z,8.1nm,1.0s						
WTTA	Wattenberg	80.80	334	*e*P	P	00 20 07.4	+0.6
	comp=Z,14nm,1.0s,SNR=5.4						
LEGS	Legarje	80.80	331	*e*P	P	00 20 06.1	-0.5
RETA	Reutte	80.85	335	*e*P	P	00 20 07.4	+0.4
	comp=Z,4.1nm,1.0s						
MOTA	Moosalm	80.88	335	*e*P	P	00 20 07.6	+0.4
	comp=Z,14nm,1.1s,SNR=5.6						
SQTA	Sankt Quirin	80.96	335	*e*P	P	00 20 08.2	+0.7
	comp=Z,12nm,1.2s,SNR=5.8						
FETA	Feichten	81.28	335	*e*P	P	00 20 09.8	+0.4
	comp=Z,4.4nm,1.0s						
MANT	Manisa	81.91	319	P	P	00 20 12.8	0.0
PDG	Podgorica	82.47	327	⇑P	P	00 20 14.5	-0.9
PDG	Podgorica	82.47	327	IAmb	IAmb	00 20 15.6	
	comp=Z,8.2nm,0.9s						
ASF	Jabal al Asfar	82.80	310	P	P	00 20 17.5	+0.1
	comp=Z,3.5nm,0.9s,baz=346,slow=1.5,SNR=4.8						
MMAI	Mount Meron Ar	82.93	311	P	P	00 20 18.9	+0.8
	comp=Z,5.5nm,0.7s,baz=50,slow=6.6,SNR=13						
NRCA	Norcia	84.29	331	IAmb	IAmb	00 20 27.3	
	comp=Z,7.3nm,0.8s						
ESBB	Sonseca Array	91.91	342	P	P	00 20 59.2	-2.3
MTE	Manteigas	91.91	345	P	P	00 21 00.8	-0.7
MTE				IAmb	IAmb	00 21 11.8	
	comp=Z,7.2nm,1.0s						
ESDC	Sonseca Array	91.91	342	P	P	00 21 00.1	-1.4
	comp=Z,0.3nm,0.4s,baz=2.3,slow=6.4,SNR=4.2						
ESDC	Sonseca Array	91.91	342	IAmb	IAmb	00 21 01.6	
	comp=Z,1.5nm,0.9s						
BDFB	Brasilia	144.86	36	PKP	PKPbc	00 27 29.8	+0.4
	comp=Z,1.7nm,0.7s,baz=243,slow=6.8,SNR=3.3						
CFA	Coronel Fontan	145.32	80	PKPbc	PKPdf	00 27 30.7	+0.2
	baz=287,slow=4.3						
PLCA	Paso Flores	148.41	96	PKPbc	PKPbc	00 27 40.0	+0.9
	comp=Z,1.9nm,0.7s,baz=285,slow=3.0,SNR=3.6						
PLCA	Paso Flores	148.41	96	PKP2	PKPbc	00 27 40.0	+0.9
CPUP	Villa Florida	148.91	61	PKPbc	PKPbc	00 27 40.9	+0.3
	comp=Z,5.9nm,0.8s,baz=313,slow=2.5,SNR=12						

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*IDC **16** 00:08:26.6±2.4, 19.°85N×83.°22W, h0^{km}, mb3.3/1, mb1 3.9/3, mb1mx3.5/43, mbtmp3.7/3, ML3.7/2, Error ellipse: s-maj=62.5km s-min=44.4km az=112.0*

*SSNC **16** 00:08:32.1±3.5, 19.°93N×82.°85W, h23^{km}±55^{km}, MD3.8, ML3.0*

ISC 16 00:08:30.9±1.3**, 20.°0N**±0.°1×**83.°20W**±0.°07**, h35^{km}, n8, σ3.^{s}09**/11**, 1C, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOR	Soroa	2.78	4	*e*P	Pn	00 09 13.5	+0.5
SOR				IVmB_BB		00 09 14.7	
	comp=Z,1μm,0.2s						
SOR				*e*S	Sn	00 09 46.2	+0.9
SOR				IAML		00 09 48.8	
	comp=E,141nm,0.3s						
SOR				IAML		00 09 49.1	
	comp=N,117nm,0.3s						
MGV	Manicaragua	3.66	55	*e*P	Pn	00 09 22.5	-2.6
MGV				*e*S	Sn	00 10 00.7	-6.4
MGV				IAML		00 10 00.9	
	comp=N,7.1nm,0.2s						
MGV				IAML		00 10 05.3	
	comp=E,9.4nm,0.2s						
MGV				IAML		00 10 09.3	
	comp=N,9.0nm,0.2s						
TEIG	Tepich	4.78	274	Pn	Pn	00 09 39.8	-0.6
	comp=N,3.1nm,0.3s,baz=195,slow=0.0,SNR=16						
CCCC	Cccc	5.22	76	*e*P	Pn	00 09 50.3	+3.7
CCCC				⇑*e*S	Sn	00 10 48.7	+3.1
CCCC				IAML		00 10 53.4	
	comp=E,1.4nm,0.6s						
CCCC				IAML		00 10 53.6	
	comp=N,3.2nm,0.2s						
TKL	Tuckaleechee C	15.60	358	Pn	Pn	00 12 07.0	-1.2
	comp=N,0.3nm,0.3s,baz=162,slow=13,SNR=4.1						
ILAR	Eielson Array	60.93	334	P	P	00 18 41.5	+1.4
	comp=N,0.4nm,0.9s,baz=125,slow=4.7,SNR=4.5						
WRA	Warramunga Arr	144.77	264	PKP	PKPdf	00 28 04.8	-0.2
	comp=N,1.3nm,0.9s,baz=80,slow=3.2,SNR=4.9						
ASAR	Alice Springs	145.43	257	PKPbc	PKPab	00 28 06.8	+0.6
	comp=N,1.7nm,0.6s,baz=96,slow=3.3,SNR=18						

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*DJA **16** 00:14:30.5±0.7, 10°S±8°×11°4E±°, h10^{km}, M4.6/10, mb4.7/3, MLv4.6/10, MLv4.6/7*

*NEIC **16** 00:14:34.2±2.2, 9.°67S±0.°07×114.°23E±0.°05, h63^{km}±7^{km}, mb4.3/20, Error ellipse: s-maj=12.3km s-min=2.6km az=212.0*

*IDC **16** 00:14:39.1±4.4, 9.°52S×114.°44E, h102^{km}±39^{km}, mb3.8/21, mb1 3.9/23, mb1mx3.7/55, mbtmp4.2/23, Error ellipse: s-maj=28.6km s-min=13.8km az=56.0*

ISC 16 00:14:30.9±0.5**, 9.°82S**±0.°08×**114.°21E**±0.°06**, h35^{km}, n73, σ1.^{s}51**/67**, mb4.2**/26**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	1.34	358	P	Pn	00 14 53.4	+0.3
JAGI	Jajag, Banyuwa	1.34	358	Pn	Pn	00 14 54.0	+0.9
DNP	Denpasar	1.51	41	P	Pn	00 14 57.4	+2.0
SRBI	Singaraja	1.99	30	P	Pn	00 15 04.4	+2.3
KMMI	Kalianget	2.76	355	P	Pn	00 15 14.9	+2.2
PLAI	Plampang	3.66	75	P	Pn	00 15 27.0	+1.9
WOJI	Wonogiri, Jawa	3.79	301	P	Pn	00 15 28.1	+1.2
UGM	Wanagama	4.10	297	P	Pn	00 15 32.7	+1.5
UGM	Wanagama	4.10	297	Pn	Pn	00 15 33.4	+2.2
SMRI	Semarang	4.63	306		Pn	00 15 49.8	+11
CISI	Cisompet, Garu	6.70	289	P	Pn	00 16 07.8	+0.8
	0.4nm80nm,1.1s						
CISI	Cisompet, Garu	6.70	289	Pn	Pn	00 16 08.3	+1.3
KAPI	Kappang	7.28	49	P	Pn	00 16 17.3	+2.5
	2.8nm,0.3s,baz=184,slow=8.1,SNR=8.1						
KAPI				S	Sn	00 17 36.2	-0.2
	5.0nm,0.3s,baz=81,slow=23,SNR=7.0						
EDFI	Ende, Flores	7.46	82	P	Pn	00 16 20.7	+3.2
SOEI	Soe	9.92	90	Pn	Pn	00 16 55.5	+4.4
FITZ	Fitzroy Crossi	13.81	128	P	Pn	00 17 40.8	-3.5
	0.4nm,0.3s,baz=41,slow=0.4,SNR=7.3						
FITZ				S	Sn	00 20 02.2	-14
	0.5nm,0.3s,baz=298,slow=0.0,SNR=4.0						
SIJI	Sorong	19.16	63	P	Pn	00 18 50.9	-1.7
	0.5nm,0.3s,baz=180,slow=20,SNR=3.2						
WRA	Warramunga Arr	21.88	120	P	P	00 19 23.5	+2.5
	1.1nm,0.6s,baz=294,slow=13,SNR=5.4						
WRA				S	S	00 23 16.1	-4.9
	1.0nm,0.8s,baz=281,slow=22,SNR=4.1						
ASAR	Alice Springs	23.31	129	P	P	00 19 37.6	+1.6
	0.5nm,0.5s,baz=302,slow=8.7,SNR=6.1						
CMAR	Chiang Mai Arr	31.88	332	P	P	00 20 55.1	+2.1
	3.1nm,0.6s,baz=163,slow=9.7,SNR=14						
CTA	Charters Tower	32.54	112	P	P	00 21 01.0	+2.1
	1.2nm,0.5s,baz=275,slow=11,SNR=3.1						
STKA	Stephens Creek	33.54	135	P	P	00 21 09.3	+1.8
	3.0nm,0.8s,baz=313,slow=6.7,SNR=4.0						
STKA	Stephens Creek	33.54	135	IAmb	IAmb	00 21 18.6	
	comp=Z,1.6nm,1.1s						
ODAN	Odare	44.80	325	*e*P	P	00 22 41.3	-0.5
	comp=Z,22nm,0.7s						
TAPN	Taplejung	45.00	326	*e*P	P	00 22 43.5	0.0
	comp=Z,19nm,0.7s						
LSA	Lhasa	45.13	331	P	P	00 22 45.2	+0.5
LSA				IAmb	IAmb	00 22 46.1	
	comp=Z,7.6nm,0.8s						
RAMN	Ramite	45.31	324	*e*P	P	00 22 46.0	+0.1
JIRN	Jiri	46.09	325	*e*P	P	00 22 52.0	-0.2
	comp=Z,47nm,0.6s						
GUN	Gumba	46.46	325	*e*P	P	00 22 54.6	-0.5
	comp=Z,33nm,0.6s						
PKI	Pulchoki	46.47	324	*e*P	P	00 22 54.1	-1.1
	comp=Z,14nm,0.8s						
PKIN	Phulchoki	46.48	324	*e*P	P	00 22 54.2	-1.0
DMN	Daman	46.68	324	*e*P	P	00 22 56.1	-0.6
	comp=Z,16nm,0.5s						
KKN	Kakani	46.71	324	*e*P	P	00 22 56.0	-0.9
GKN	Gorkha	47.25	324	*e*P	P	00 23 00.4	-0.6
DANN	Dangsing	48.02	323	*e*P	P	00 23 06.3	-0.9
	comp=Z,42nm,0.7s						
USA0B	Ussuriysk Arra	56.13	15	P	P	00 24 05.4	-1.5
USRK	Ussuriysk Ar.	56.13	15	P	P	00 24 05.2	-1.6
	comp=Z,4.6nm,0.7s,baz=192,slow=5.9,SNR=12						
USRK	Ussuriysk Ar.	56.13	15	P	P	00 24 05.7	-1.2
DCZ	Deep Cove	57.44	138	P	P	00 24 16.7	+0.5
ULN	Ulaanbaatar	57.78	354	P	P	00 24 17.2	-1.5
ULN				IAmb	IAmb	00 24 18.7	
	comp=Z,3.9nm,0.8s						
SONM	Songino Array	57.81	354	P	P	00 24 18.6	-0.3
	comp=Z,2.5nm,0.6s,baz=176,slow=8.8,SNR=5.7						
SONM	Songino Array	57.81	354	IAmb	IAmb	00 24 18.9	
	comp=Z,2.1nm,0.7s						
KLR	Kul'dur	60.79	13	P	P	00 24 37.2	-2.0
	comp=Z,1.1nm,0.6s,baz=219,slow=13,SNR=4.2						
KDJ	Kajisay	61.83	329	P	P	00 24 46.4	-0.3
MKAR	Makanchi Array	63.15	336	P	P	00 24 54.5	-0.7
	comp=Z,1.9nm,0.6s,baz=147,slow=7.1,SNR=22						
MAKZ	Makanchi	63.29	336	P	P	00 24 55.6	-0.5
ARSB	Arslanbob	63.46	326	P	P	00 24 57.9	+0.3
ARSB				IAmb	IAmb	00 25 02.5	
	comp=Z,3.8nm,0.8s						
AAK	Ala-Archa	63.57	328	P	P	00 24 59.6	+1.3
	comp=Z,1.8nm,0.7s,baz=142,slow=10,SNR=6.3						
AAK	Ala-Archa	63.57	328	IAmb	IAmb	00 25 02.0	
	comp=Z,2.0nm,0.8s						
SOCY	Socotra	63.70	289	P	P	00 24 59.4	-0.1
BTK	Batken	63.82	324	P	P	00 24 60.0	0.0
BTK				IAmb	IAmb	00 25 11.0	
	comp=Z,1.8nm,0.8s						
KKAR	Karatay Array	66.01	326	P	P	00 25 12.7	-1.3
KURBB	Kurchatov Arra	67.70	336	P	P	00 25 23.5	-1.0
	comp=Z,0.6nm,0.7s,baz=151,slow=6.2,SNR=4.7						
KURK	Kurchatov	67.74	336	P	P	00 25 23.5	-1.3
KURK	Kurchatov	67.74	336	IAmb	IAmb	00 25 30.1	
	comp=Z,2.2nm,0.9s						
ZALV	Zalesovo Beam	68.22	342	P	P	00 25 26.2	-1.6
	comp=Z,0.9nm,0.3s,baz=164,slow=5.0,SNR=4.1						
GEYT	Alibeck	70.66	316	P	P	00 25 43.0	-0.2
	comp=Z,1.4nm,0.7s,baz=157,slow=1.1,SNR=3.7						
GEYT	Alibeck	70.66	316	P	P	00 25 43.8	+0.5
BVAR	Borovoye Array	72.87	334	P	P	00 25 55.5	-0.6
	comp=Z,1.8nm,0.6s,baz=142,slow=8.3,SNR=9.6						
BRVK	Borovoye	72.94	334	P	P	00 25 56.1	-0.4
RAYN	Ar Rayn	74.85	298	P	P	00 26 07.7	-0.7
RAYN				IAmb	IAmb	00 26 08.7	
	comp=Z,2.7nm,1.0s						
ABKAR	Akbulak array	75.57	327	P	P	00 26 11.3	-0.6
AKTO	Aktyubinsk	77.26	327	P	P	00 26 21.1	-0.5
	comp=Z,0.9nm,0.8s,baz=82,slow=12,SNR=3.9						
MBAR	Mbarara	83.46	271	P	P	00 26 57.6	+1.7
	comp=Z,1.1nm,0.2s,baz=150,slow=20,SNR=3.9						
KBZ	Khabaz	83.55	316	P	P	00 26 55.9	+0.4
	comp=Z,1.5nm,0.8s,baz=78,slow=9.3,SNR=3.2						
MMAI	Mount Meron Ar	86.05	304	P	P	00 27 10.0	+1.6
	comp=Z,1.3nm,0.7s,baz=83,slow=6.0,SNR=3.6						
BR131	Keskin Array S	89.04	310	IAmb	IAmb	00 27 23.8	
	comp=Z,2.0nm,0.8s						
BRTR	Keskin Array B	89.04	310	P	P	00 27 22.9	+0.1
	comp=Z,1.6nm,0.7s,baz=133,slow=5.8,SNR=10.0						
AKASG	Malin Array Be	94.35	321	P	P	00 27 45.3	-1.6
	comp=Z,0.2nm,0.3s,baz=93,slow=3.6,SNR=3.1						
FINES	FINESS Array B	97.65	331	P	Pdif	00 28 01.8	+0.1
	comp=Z,2.5nm,0.7s,baz=50,slow=3.0,SNR=5.0						
TORD	Torodi Ar. Bea	113.94	280	PKP	PKiKP	00 33 07.4	+0.2
	comp=Z,0.4nm,0.7s,baz=39,slow=1.3,SNR=3.2						
YKA	Yellowknife Ar	116.83	23	PKP	PKiKP	00 33 11.5	+0.1
	comp=Z,0.4nm,0.7s,baz=301,slow=1.5,SNR=5.5						
NVAR	Mina Array Bea	125.17	50	PKP	PKiKP	00 33 28.9	+0.1
	comp=Z,0.3nm,0.5s,baz=232,slow=4.4,SNR=2.5						

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*HEL **16** 00:27:17.8, 67.°91N×20.°05E, h0^{km}, ML1.7, Explosion*

*UPP **16** 00:27:19.0±0.1, 67.°83N×20.°20E, h0^{km}, ML2.8, Explosion*

ISC 16 00:27:18.9±1.0**, 67.°83N**±0.°03×**20.°36E**±0.°07**, h0^{km}, n19, σ0.^{s}84**/24**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOVU	Salmi	0.40	349	P	Pg	00 27 26.6	+0.1
KOVU				S	Sg	00 27 31.8	+0.2
KOVU	Salmi	0.40	349	*i* P	Pg	00 27 26.6	+0.1
KOVU				*i* S	Sg	00 27 31.8	+0.2
LANU	Lannavaara	0.65	70	P	Pb	00 27 32.4	-0.7
LANU				S	Sb	00 27 41.7	-1.1
LANU	Lannavaara	0.65	70	*e*P	Pb	00 27 32.1	-1.0
	baz=264						
LANU				*e*S	Sb	00 27 42.3	-0.4
DUNU	Dundret	0.72	174	P	Pg	00 27 32.7	+0.1
DUNU	Dundret	0.72	174	*i* P	Pg	00 27 32.7	+0.1
MASU	Masugnsbyn	0.73	120	P	Pb	00 27 34.0	-0.5
MASU	Masugnsbyn	0.73	120	*i* P	Pb	00 27 34.0	-0.5
KIF	Kilpisjarvi	1.19	8	*e*P	Pg	00 27 41.6	0.0
KIF	Kilpisjarvi	1.19	8	*e*P	Pg	00 27 41.6	0.0
KIF				MSG		00 27 53.3	
	comp=Z,5.8nm,0.2s						
KIF				*e*S	Sb	00 27 57.7	-0.4
PAJU	Pajala	1.34	126	P	Pb	00 27 44.4	-0.4
PAJU	Pajala	1.34	126	*e*P	Pb	00 27 44.4	-0.4
HEF	Hetta	1.36	63	*e*P	Pn	00 27 45.0	-0.2
HEF	Hetta	1.36	63	*e*P	Pn	00 27 44.9	-0.3
HEF				MSG		00 28 01.1	
	comp=Z,3.4nm,0.2s						
HEF				*e*SN	Sn	00 28 06.8	+2.8
HARU	Harads	1.69	172	P	Pn	00 27 49.9	+0.3
HARU	Harads	1.69	172	*e*P	Pn	00 27 49.9	+0.3
KALU	Kalix	2.31	148	*e*P	Pb	00 27 59.7	-1.6
KALU				*e*SB	Sb	00 28 30.2	-0.1
TOF	Tornio	2.35	137	MSG		00 28 31.4	
	comp=Z,4.2nm,0.2s						
KEV	Kevo	3.09	48	MSG		00 28 49.8	
	comp=Z,2.3nm,0.2s						

UPP 16 00:28:14.9±0.5, 67°.83N×20°.16E, h0km, ML2.1, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.14	28	P	Pg	00 28 17.8	+0.2
	baz=219						
KUA				S	Sg	00 28 20.0	+0.5
KOVU	Salmi	0.40	0	S	Sg	00 28 28.0	+0.5

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*SJA **16** 00:28:44.9±0.9, 28°.83S×67°.52W, h136km±4km, ML3.3, MW3.3*

*IDC **16** 00:28:46.1±2.1, 28°.83S×67°.64W, h126km±25km, mb3.2/1, mb1 3.0/3, mb1mx2.9/28, mbtmp3.5/3, Error ellipse: s-maj=77.7km s-min=20.1km az=92.0*

ISC 16 00:28:45.9±0.9, 28°.81S±0°.04×67°.54W±0°.04, h132km±7km, n29, $\sigma 0^{s}.94$/50, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VCA	Vinchina	0.59	277	*i* P	Pn	00 29 06.3	+0.4
VCA				*i* S	Sn	00 29 21.4	+0.4
VCA				IAML		00 29 24.0	
	comp=Z,2μm,0.2s						
ACLC	CERRO LA CRUZ	0.80	140	*i* P	Pn	00 29 07.7	+0.2
AGUA	GUANDACOL	1.07	231	*i* P	Pn	00 29 10.0	+0.3
AGUA				*i* S	Sn	00 29 28.4	+0.5
AGUA				IAML		00 29 28.8	
	comp=Z,552nm,0.2s						
CYA	Choya	1.57	77	*i* P	Pn	00 29 15.6	+0.6
CYA				IAML		00 29 15.9	
	comp=Z,138nm,0.4s						
CYA				*i* S	Sn	00 29 36.4	-0.8
APLL	PUNTA DE LOS L	1.81	151	*i* P	Pn	00 29 17.8	+0.1
APLL				IAML		00 29 18.0	
	comp=Z,202nm,0.2s						
APLL				*i* S	Sn	00 29 41.1	-1.1
ACDV	Cuesta del Vie	1.93	225	*i* P	Pn	00 29 18.0	-1.3
ACDV				IAML		00 29 20.4	
	comp=Z,205nm,0.5s						
ACDV				*i* S	Sn	00 29 45.9	+1.0
AROD	Rodeo	2.16	231	*i* P	Pn	00 29 23.2	+1.0
AROD				*i* S	Sn	00 29 51.1	+1.0
ACCO	Cerro Coronel	2.21	216	*i* P	Pn	00 29 23.2	+0.3
ACCO				*i* S	Sn	00 29 51.9	+0.6
AMOG	MOGNA	2.28	201	*i* P	Pn	00 29 23.5	+0.1
AMOG				*i* S	Sn	00 29 52.4	0.0
RTLL	Cerro Villicun	2.64	198	*i* P	Pn	00 29 28.0	0.0
RTLL				*i* S	Sn	00 29 59.3	-1.1
RTLL				IAML		00 30 01.4	
	comp=Z,98nm,0.5s						
GO03	Copiap	2.67	296	*i* P	Pn	00 29 28.4	0.0
GO03				*i* S	Sn	00 29 59.2	-1.8
CFA	Coronel Fontan	2.85	192	P	Pn	00 29 30.7	0.0
	comp=Z,4.7nm,0.3s,baz=9.0,slow=13,SNR=19						
CFA				S	Sn	00 30 04.4	-0.8
	comp=Z,33nm,0.3s,baz=156,slow=17,SNR=20						
CFA	Coronel Fontan	2.85	192	*i* P	Pn	00 29 30.7	0.0
CFA				*i* S	Sn	00 30 04.7	-0.6
ZON	Zonda	2.90	200	*i* P	Pn	00 29 31.5	+0.1
ZON				*i* S	Sn	00 30 05.6	-0.8
ZON				IAML		00 30 07.0	
	comp=Z,82nm,0.7s						
GO04	Tololo Observa	3.15	244	*i* P	Pn	00 29 34.5	-0.2
GO04				*i* S	Sn	00 30 11.8	-0.6
RTCV	Cerro Valdivia	3.16	196	*i* P	Pn	00 29 34.8	+0.1
RTCV				*i* S	Sn	00 30 11.4	-1.1
RTLS	Leoncito	3.34	207	*i* P	Pn	00 29 37.6	+0.2
RTLS				*i* S	Sn	00 30 17.3	+0.2
RTLS				IAML		00 30 20.7	
	comp=Z,35nm,0.3s						
ACAN	Cantantal	3.47	175	*i* P	Pn	00 29 39.2	+0.5
ACAN				*i* S	Sn	00 30 18.2	-1.4
MRA	San Martin	3.93	157	*i* P	Pn	00 29 44.6	-0.2
MRA				*i* S	Sn	00 30 28.8	-1.8
MRA				IAML		00 30 29.4	
	comp=Z,30nm,0.4s						
ASAL	Salagasta	3.93	196	*i* P	Pn	00 29 44.7	-0.1
ASAL				*i* S	Sn	00 30 29.8	-0.8
AAGR	Agrelo	4.40	194	*i* P	Pn	00 29 51.1	0.0
AZAP	Zapla	5.08	26	*i* P	Pn	00 30 01.0	+0.7
PEL	Peldehue	5.09	211	*i* P	Pn	00 30 00.4	+0.1
PEL				*i* S	Sn	00 30 57.5	-0.8
ROC1	El Roble	5.12	215	*i* P	Pn	00 29 59.0	-1.7
LVC	Limon Verde	6.29	348	P	Pn	00 30 16.7	0.0
	comp=Z,0.2nm,0.3s,baz=153,slow=9.0,SNR=1.6						
LVC				S	Sn	00 31 24.2	-3.4
	comp=Z,0.4nm,0.3s,baz=168,slow=20,SNR=2.1						
PB06	IPOC Station P	6.35	343	*i* P	Pn	00 30 16.5	-0.8
TORD	Torodi Ar. Bea	78.77	68	P	P	00 40 35.4	+1.1
	comp=Z,0.3nm,0.6s,baz=257,slow=5.8,SNR=2.1						
WRA	Warramunga Arr	127.13	206	PKP	PKiKP	00 47 35.4	-0.4
	comp=Z,0.3nm,0.8s,baz=154,slow=1.7,SNR=1.4						
MKAR	Makanchi Array	150.42	44	PKPbc	PKiKP	00 48 23.1	+0.7
	comp=Z,0.2nm,0.6s,baz=288,slow=2.5,SNR=2.9						

MAN 16 00:42:34.5, 5°.55N×125°.20E, h9km, mb4.6, ML3.5, MS3.4, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	General Santos	0.59	334	⇑*i*P	Pg	00 42 45.6	-0.4
GSPH				*i* S	Sg	00 42 52.3	-1.4
KCP	Kidapawan	1.45	356	⇑*e*P	Pb	00 43 01.9	+0.1

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*BJI **16** 01:00:11.5±0.0, 7°.86S×126°.24E, h437km, mB4.9/28, mb4.8/60*

*NEIC **16** 01:00:14.8±1.4, 7°.45S±0°.08×126°.03E±0°.05, h424km±4km, mb5.0/88, Error ellipse: s-maj=11.4km s-min=7.5km az=172.0*

*MOS **16** 01:00:14.3±1.0, 7°.39S×126°.04E, h428km, mb5.0/39, Error ellipse: s-maj=9.4km s-min=5.4km az=117.4*

*DJA **16** 01:00:14.9±0.2, 8°S±3°×12°6E±°, h421km±3km, M5.1/42, mb5.2/42, mB5.5/31, MLv5.7/8, Mw(mB)5.0/31, Mwp5.7/2*

*IDC **16** 01:00:15.8±0.6, 7°.44S×126°.03E, h430km±5km, mb4.5/44, mb1 4.5/51, mb1mx4.5/60, mbtmp5.3/51, Error ellipse: s-maj=8.0km s-min=5.1km az=61.0*

*KLM **16** 01:00:15.0, 7°.44S×126°.05E, h416km, mb5.2*

ISC 16 01:00:15.4±0.4, 7°.47S±0°.03×125°.99E±0°.04, h433km±3km, n692, $\sigma 1^{s}.53$/751, mb5.0/119, 33C-14D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	2.84	217	P	P	01 01 20.4	+0.4
SOEI				S	S	01 02 09.9	-2.5
SOEI	Soe	2.84	217	P	P	01 01 20.4	+0.4
SOEI				S	S	01 02 11.0	-1.4
MMRI	Maumere	3.89	252	P	P	01 01 27.8	-0.7
AAI	Ambon	4.35	30	P	P	01 01 33.4	+0.6
BNDI	Bandanaira	4.87	53	P	P	01 01 37.6	-0.1
MSAI	Masohi	5.04	36	P	P	01 01 38.6	-0.7
	0.8nm1μm130nm,0.9s						
SAUI	Saumlaki	5.29	96	P	P	01 01 40.9	-0.9
	15nm37μm4μm,0.8s						
SAUI	Saumlaki	5.29	96	P	P	01 01 41.0	-0.8
SANI	Sanana	5.39	360	P	P	01 01 43.3	+0.5
	1.3nm3μm355nm,0.7s						
BASI	Baing, Sumba	6.00	243	P	P	01 01 47.5	-1.6
	19nm77μm4μm,0.5s						
WSI	Waingapu	6.04	248	P	P	01 01 48.0	-1.5
	68nm136μm8μm,0.5s						
KAPI	Kappang	6.66	291	P	P	01 01 58.0	+1.6
	78nm,0.3s,baz=117,slow=7.2,SNR=191						
KAPI				S	S	01 03 19.9	+1.3
	baz=65,slow=19,SNR=1.2						
LUWI	Luwuk	7.15	333	P	P	01 02 03.1	+1.5
	0.7nm233nm,0.8s						
LUWI	Luwuk	7.15	333	P	P	01 02 02.0	+0.4
MTN	Manton Dam	7.36	137	P	P	01 02 03.2	-0.5
	baz=7.4,SNR=386						
FAKI	Fak Fak	7.70	54	P	P	01 02 04.7	-2.9
FAKI	Fak Fak	7.70	54	P	P	01 02 05.0	-2.6
KDU	Kakadu	8.22	130	P	P	01 02 12.3	-0.8
	baz=8.2,SNR=69						
PLAI	Plampang	8.24	260	P	P	01 02 11.1	-2.3
	44μm4μm,0.8s						
TNTI	Ternate	8.30	10	P	P	01 02 13.8	-0.3
	130nm,1.2s						
TNTI	Ternate	8.30	10	P	P	01 02 12.7	-1.3
SIJI	Sorong	8.41	39	P	P	01 02 14.4	-0.8
	43nm,0.3s,baz=197,slow=7.2,SNR=76						
SIJI				S	S	01 03 49.6	-4.0
	8.0nm,0.3s,baz=128,slow=19,SNR=5.1						
SWI	Sorong	8.41	39	P	P	01 02 15.2	0.0
	12μm1μm,1.2s						
KNRA	Kununurra	8.59	162	P	P	01 02 17.3	+0.1
	baz=8.6,SNR=83						
RKPI	Ransiki, Papua	10.08	54	P	P	01 02 34.1	+0.5
	15μm1μm,1.0s						
FITZ	Fitzroy Crossi	10.57	182	P	P	01 02 39.1	+0.3
	baz=11,SNR=186						
FITZ	Fitzroy Crossi	10.57	182	P	P	01 02 39.1	+0.3
	36nm,0.3s,baz=170,slow=0.0,SNR=278						
FITZ				S	S	01 04 34.8	-2.4
	4.9nm,0.3s,baz=186,slow=0.0,SNR=11						
KBKI	Kotabaru	10.62	292	P	P	01 02 40.6	+1.1
	275nm511nm41nm,0.6s						
SRBI	Singaraja	10.70	266	P	P	01 02 39.2	-1.1
	3μm248nm,0.7s						
DNP	Denpasar	10.74	263	P	P	01 02 40.0	-0.8
	26μm789nm,0.5s						
IGBI	Denpasar	10.82	262	P	P	01 02 39.8	-1.8
BKB	Balikpapan	10.96	304	P	P	01 02 45.2	+1.9
	199nm,0.8s						
BKB	Balikpapan	10.96	304	P	P	01 02 44.9	+1.6
JAGI	Jajag, Banyuwa	11.77	264	P	P	01 02 50.0	-2.1
JAGI	Jajag, Banyuwa	11.77	264	P	P	01 02 49.8	-2.2
KMMI	Kalianget	11.94	271	P	P	01 02 56.3	+2.4
DDMP	Don Marcelino,	13.49	359	*e*P	P	01 03 10.4	-0.4
SMPI	Sarmi	13.79	67	P	P	01 03 14.8	+0.7
	5μm508nm,1.1s						
SKMP	Bagumbayan, Su	13.97	354	*e*P	P	01 03 16.2	+0.1
MATI	Mati	14.32	1	*e*P	P	01 03 20.7	+0.8
KCP	Kidapawan	14.41	356	⇓*i*P	P	01 03 21.1	+0.2
DAV	Davao City (W)	14.45	358	P	P	01 03 21.0	-0.2
	54nm,0.3s,baz=74,slow=3.4,SNR=7.0						
DAV	Davao City (W)	14.45	358	P	P	01 03 20.6	-0.6
WB0	Warramunga Arr	14.69	147	P	P	01 03 22.8	-1.0
CTBH	Cotabato--PC H	14.70	353	⇑*i*P	P	01 03 25.2	+1.3
WB5	Warramunga Arr	14.77	147	P	P	01 03 24.2	-0.4
	baz=15						
WRAB	Tennant Creek	14.80	148	P	P	01 03 24.5	-0.5
WRAB	Tennant Creek	14.80	148	P	P	01 03 24.5	-0.5
WRA	Warramunga Arr	14.81	148	P	P	01 03 24.3	-0.7
	7.2nm,0.3s,baz=322,slow=9.5,SNR=278						
WRA				S	S	01 06 06.9	+5.3
	6.2nm,0.3s,baz=324,slow=18,SNR=12						
WRA				ScP	ScP	01 10 57.8	-0.3
	0.8nm,0.3s,baz=312,slow=2.4,SNR=6.6						
WRA	Warramunga Arr	14.81	148	P	P	01 03 23.3	-1.7
WB2	Warramunga Arr	14.81	148	P	P	01 03 23.9	-1.1
MBWA	Marble Bar	14.89	203		PcP	01 08 03.6	-2.0
GENI	Genyem	14.93	72	P	P	01 03 26.7	+0.3
	12μm917nm,1.0s						
WOJI	Wonogiri, Jawa	14.94	268	P	P	01 03 25.3	-1.1
	48nm,0.5s						
UWJI	Ujung Watu	14.97	273	P	P	01 03 34.9	+8.1
PBKI	Pangkalan Bun	15.03	288	P	P	01 03 29.2	+1.8
	8μm307nm,1.0s						
BUKP	Musuan	15.28	357	*e*P	P	01 03 31.5	+1.4
UGM	Wanagama	15.33	267	P	P	01 03 29.8	-0.9
	92nm,0.8s						
UGM	Wanagama	15.33	267	P	P	01 03 29.6	-1.1
UGM				IAmb	IAmb	01 03 40.6	
	comp=Z,58nm,0.7s						
SPMM	Sapulut	15.39	322	P	P	01 03 32.0	+0.7
SMRI	Semarang	15.43	271	P	P	01 03 32.3	+0.6
	comp=Z,121nm,0.7s						
SMRI	Semarang	15.43	271	P	P	01 03 31.6	-0.1
PAGZ	Pagadian	15.44	350	*e*P	P	01 03 32.2	+0.4
KKM	Kota Kinabalu	16.59	324	P	P	01 03 44.2	+0.1
KKM				IAmb	IAmb	01 03 52.9	
	comp=Z,61nm,0.8s						
SBUM	Sibu	16.91	305	P	P	01 03 47.9	+0.4
SBUM	Sibu	16.91	305	P	P	01 03 48.0	+0.6
MSLP	Maasin	17.53	356	*e*P	P	01 03 55.7	+1.7
WRKA	Warakurna	17.61	173	P	P	01 03 54.8	0.0
	baz=18,SNR=242						
AS31	Alice Springs	17.80	156	P	P	01 03 56.5	-0.4
AS31				IAmb	IAmb	01 03 59.0	
	comp=Z,40nm,0.7s						
ASAR	Alice Springs	17.80	156	P	P	01 03 56.5	-0.4
	comp=Z,26nm,0.3s,baz=328,slow=8.0,SNR=654						
ASAR				S	S	01 06 59.9	+0.6
	comp=Z,3.7nm,0.3s,baz=346,slow=23,SNR=14						
ASAR				PcP	PcP	01 08 10.3	+0.1
	comp=Z,1.6nm,0.3s,baz=353,slow=1.1,SNR=5.2						
ASAR				ScP	ScP	01 11 03.9	-0.1
	comp=Z,2.3nm,0.3s,baz=353,slow=1.8,SNR=12						
ASAR				PKiKP	PKiKP	01 16 00.7	-1.2
	comp=Z,0.1nm,0.3s,baz=359,slow=1.5,SNR=5.1						
ASAR	Alice Springs	17.80	156	P	P	01 03 55.9	-1.0
KSM	Kuching	17.99	299	P	P	01 03 58.8	-0.1
KSM	Kuching	17.99	299	P	P	01 03 59.0	+0.1
CISI	Cisompet, Garu	18.02	269	P	P	01 03 57.0	-2.2
CISI	Cisompet, Garu	18.02	269	P	P	01 03 58.8	-0.4
COEN	Coen	18.07	112	P	P	01 03 58.3	-1.3
	baz=18,SNR=88						
BATP	Bataraza	18.11	333	*e*P	P	01 04 00.5	+0.5
LEM	Lembang	18.24	271	P	P	01 04 02.4	+0.8
	comp=Z,43nm,0.3s,baz=61,slow=8.4,SNR=49						
LEM				S	S	01 07 05.0	-2.4
	comp=Z,3.0nm,0.3s,baz=300,slow=20,SNR=3.1						
OCLP	Ormoc	18.45	356	*e*P	P	01 04 03.8	+0.3
QIS	Mount Isa	18.52	136	P	P	01 04 03.6	-0.5
	baz=19,SNR=26						
GIRL	Giralia	18.86	216	P	P	01 04 08.4	+1.1
	baz=19,SNR=23						
MEEK	Meekatharra	20.31	199	P	P	01 04 20.7	0.0
	baz=20,SNR=248						
PMG	Port Moresby	21.03	97	P	P	01 04 27.4	0.0
	comp=Z,66nm,0.6s,baz=276,slow=3.7,SNR=25						
PMG				ScP	ScP	01 11 12.9	+1.4
	comp=Z,9.6nm,0.6s,baz=125,slow=14,SNR=5.4						
PMG	Port Moresby	21.03	97	*ce*P	P	01 04 27.7	+0.3
PMG				pmax	pmax		
	comp=Z,439nm,0.9s						
PMG	Port Moresby	21.03	97	P	P	01 04 27.1	-0.3
PMBI	Palembang	21.60	281	P	P	01 04 36.9	+4.3
PMBI	Palembang	21.60	281	P	P	01 04 34.8	+2.2
MDSI	Maura Dua	21.89	277	P	P	01 04 34.3	-1.0
	comp=Z,29nm,1.1s						
TPRI	Tanjung Pinang	22.97	290	P	P	01 04 46.6	+1.6
FORT	Forrest	23.27	175	P	P	01 04 47.6	+0.1
	baz=23,SNR=149						
CTA	Charters Tower	23.30	125	P	P	01 04 48.2	+0.3
	comp=Z,8.1nm,0.9s,baz=297,slow=12,SNR=9.3						
CTA				PcP	PcP	01 08 21.5	+0.7
	comp=Z,13nm,0.7s,baz=278,slow=3.6,SNR=8.1						
CTA				ScP	ScP	01 11 17.9	+0.5
	comp=Z,16nm,0.7s,baz=293,slow=4.1,SNR=8.8						
MORW	Morawa	23.44	202	P	P	01 04 48.9	-0.1
	baz=24,SNR=21						
MYKOM	Kota Tinggi	23.93	292	P	P	01 04 54.3	+0.7
MYKOM				IAmb	IAmb	01 04 55.6	
	comp=Z,55nm,0.7s						
KRJI	Kerinci	25.01	281	P	P	01 05 03.8	+0.4
	comp=Z,125nm,0.4s						
KLBR	Kellerberrin	25.20	197	P	P	01 05 04.8	+0.1
	baz=25,SNR=108						
SDSI	Sungai Dareh	25.33	284	P	P	01 05 05.9	-0.2
	comp=Z,3μmcomp=Z,81nm,1.2s						
QLP	Quilpie	25.73	140	P	P	01 05 10.3	+0.8
	baz=26,SNR=9.8						
MUN	Mundaring	26.03	199	P	P	01 05 12.1	0.0
	baz=26,SNR=50						
PDSI	Padang	26.27	283	P	P	01 05 13.9	-0.6
	comp=Z,19nm,0.7s						
NWAO	Narrogin (SRO)	26.60	197	P	P	01 05 17.5	+0.4
	baz=27,SNR=188						
NWAO	Narrogin (SRO)	26.60	197	P	P	01 05 17.4	+0.4
	comp=Z,153nm,0.5s,baz=27,slow=7.3,SNR=220						
NWAO				ScP	ScP	01 11 25.1	-1.4
	comp=Z,16nm,0.8s,baz=324,slow=6.5,SNR=3.6						
BBOO	Buckleboo	26.89	161	P	P	01 05 19.9	+0.2
	baz=27,SNR=80						
IPM	Ipoh	27.59	295	IAmb	IAmb	01 05 28.0	
	comp=Z,46nm,0.6s						
IPM	Ipoh	27.59	295	P	P	01 05 27.0	+0.8
RKGY	Rocky Gully	28.25	196	P	P	01 05 33.4	+1.7
	baz=28,SNR=98						
KULM	Kulim	28.28	296	P	P	01 05 32.0	-0.2
KULM				IAmb	IAmb	01 05 33.9	
	comp=Z,60nm,0.6s						
STKA	Stephens Creek	28.30	151	P	P	01 05 32.8	+0.6
	baz=28,SNR=46						
STKA	Stephens Creek	28.30	151	P	P	01 05 32.8	+0.6
	comp=Z,58nm,0.7s,baz=323,slow=9.3,SNR=124						
STKA				PcP	PcP	01 08 31.8	-0.4
	comp=Z,15nm,0.5s,baz=347,slow=4.3,SNR=4.9						
STKA				S	S	01 09 46.0	-0.9
	comp=Z,11nm,1.0s,baz=90,slow=20,SNR=4.5						
STKA				ScP	ScP	01 11 30.5	-1.2
	comp=Z,4.4nm,0.5s,baz=45,slow=12,SNR=2.9						
STKA	Stephens Creek	28.30	151	P	P	01 05 32.4	+0.3
HTT	Hallett	28.47	157	P	P	01 05 34.5	+0.8
	baz=29,SNR=42						
RPSI	Rantau Prapat	28.83	290	P	P	01 05 37.1	+0.1
RPSI	Rantau Prapat	28.83	290		ScP	01 11 33.0	-0.8
PSI	Prapat	28.87	290	P	P	01 05 37.4	-0.1
	comp=Z,149nm,0.8s,baz=116,slow=4.9,SNR=126						
PSI				ScP	ScP	01 11 33.0	-1.0
	comp=Z,5.6nm,0.8s,baz=194,slow=5.0,SNR=4.5						
CMSA	Cobar Meteorol	30.19	145	P	P	01 05 49.6	+1.0
	baz=30,SNR=134						
TPUB	Ta-pu	31.03	350	P	P	01 05 54.5	-1.6
SNSI	Sinabang, Aceh	31.18	287	P	P	01 05 58.8	+1.3
	comp=Z,216nm,1.1s						
LHMI	Lhok Sumawe	31.61	293	P	P	01 06 01.8	+0.7
	comp=Z,376nm,1.0s						
LHMI	Lhok Sumawe	31.61	293	P	P	01 06 01.2	+0.1
MLSI	Meulaboh, Aceh	31.74	291	P	P	01 06 01.3	-1.0
	comp=Z,4μmcomp=Z,499nm,1.1s						
ARMA	Armidale	33.14	137	P	P	01 06 15.9	+1.7
	baz=33,SNR=10						
HNR	Honiara	33.64	96	P	P	01 06 18.2	-0.4
	comp=Z,87nm,0.4s,baz=250,slow=8.2,SNR=7.7						
HNR	Honiara	33.64	96	IAmb	IAmb	01 06 19.8	
	comp=Z,168nm,0.9s						
YNG	Young	33.76	145	P	P	01 06 20.7	+1.4
	baz=34,SNR=24						
JOW	Kunigami	34.17	4	P	P	01 06 21.7	-1.1
TOO	Toolangi	34.80	152	P	P	01 06 30.1	+2.0
	baz=35,SNR=36						
CAN	Canberra	34.84	146	P	P	01 06 28.5	0.0
CAN				pmax	pmax		
	comp=Z,42nm,0.8s						
CAN	Canberra	34.84	146	P	P	01 06 28.5	0.0
CAN				IAmb	IAmb	01 06 31.1	
	comp=Z,42nm,0.8s						
CNB	Canberra Magne	35.04	146	P	P	01 06 31.6	+1.4
	baz=35,SNR=13						
CM31	Chiang Mai Arr	37.09	314	P	P	01 06 47.6	+0.1
CM31				IAmb	IAmb	01 06 49.6	
	comp=Z,50nm,0.7s						
CMAR	Chiang Mai Arr	37.09	314	P	P	01 06 48.5	+1.0
	comp=Z,44nm,0.7s,baz=145,slow=6.8,SNR=178						
CMAR				PcP	PcP	01 08 58.8	+1.6
	comp=Z,11nm,0.6s,baz=163,slow=3.0,SNR=16						
CMAR				ScP	ScP	01 12 03.9	+1.3
	comp=Z,4.8nm,0.8s,baz=167,slow=3.0,SNR=12						
CMAR	Chiang Mai Arr	37.09	314	P	P	01 06 47.6	+0.1
CMAR	Chiang Mai Arr	37.09	314		ScP	01 12 03.5	+0.9
CHTO	Chiang Mai	37.33	315	P	P	01 06 49.8	+0.4
CHTO				pmax	pmax		
	comp=Z,53nm,0.8s						
CHTO	Chiang Mai	37.33	315	P	P	01 06 49.8	+0.4
CHTO				IAmb	IAmb	01 06 51.4	
	comp=Z,53nm,0.8s						
GYA	Guiyang	38.59	332	⇑*i*P	P	01 07 00.5	+0.7
GYA				pP	pwP	01 08 25.3	-0.3
GYA				PP	PP	01 08 46.5	+6.3
GYA				PcP	PcP	01 09 03.3	+1.4
GYA				ScP	ScP	01 12 09.6	+1.3
GYA				S	S	01 12 28.3	+4.3
GYA				PcS	PcS	01 12 52.1	-0.1
GYA				sS	sS	01 14 53.3	+4.4
GYA				ScS	ScS	01 16 20.0	-0.5
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,120nm,5.5s						
KMI	Kunming	39.52	326	P	P	01 07 09.5	+1.9
KMI				pmax	pmax		
	comp=Z,44nm,1.3s						
KMI	Kunming	39.52	326	IAmb	IAmb	01 07 10.5	
	comp=Z,32nm,0.7s						
NJ2	Nanjing	39.89	351	*e*P	P	01 07 11.3	+1.2
NJ2				pmax	pmax		
	comp=Z,38nm,0.7s						
TAU	Tasmania Unive	39.98	155	P	P	01 07 11.0	+0.3
TAU				pmax	pmax		
	comp=Z,45nm,1.0s						
TAU	Tasmania Unive	39.98	155	P	P	01 07 11.0	+0.3
TAU				IAmb	IAmb	01 07 13.0	
	comp=Z,45nm,1.0s						
JNU	Nakatsue	40.64	6	P	P	01 07 16.3	+0.1
	comp=Z,18nm,0.8s,baz=129,slow=1.7,SNR=7.0						
JNU				ScP	ScP	01 12 15.6	-0.4
	comp=Z,7.5nm,0.8s,baz=335,slow=4.9,SNR=3.6						
JNU	Nakatsue	40.64	6	P	P	01 07 16.1	0.0
ENH	Enshi	40.74	338	P	P	01 07 17.0	-0.1
ENH				IAmb	IAmb	01 07 18.4	
	comp=Z,40nm,0.9s						
DZM	Mont Dzumac	41.57	115	P	P	01 07 23.6	-0.4
	comp=Z,13nm,0.9s,baz=280,slow=8.7,SNR=4.4						
SIMRM	Sittwe	42.58	311	P	P	01 07 32.6	+0.7
SIMRM				IAmb	IAmb	01 07 34.4	
	comp=Z,65nm,0.6s						
TJN	Taejon	43.63	2	⇑*e*P	P	01 07 37.9	-2.0
CD2	Chengdu	43.71	332	⇑P	P	01 07 41.0	+0.4
CD2				pmax	pmax		
	comp=Z,100nm,0.6s						
INU	Inuyama	43.84	13	P	P	01 07 40.5	-1.1
XAN	Xi'an	44.34	340	P	P	01 07 45.1	-0.4
XAN				pmax	pmax		
	comp=Z,61nm,0.9s						
XAN				pmax	pmax		
	comp=Z,780nm,14.2s						
XAN	Xi'an	44.34	340	P	P	01 07 44.3	-1.2
XAN				pmax	pmax		
	comp=Z,46nm,0.8s						
XAN	Xi'an	44.34	340	P	P	01 07 44.3	-1.2
XAN				IAmb	IAmb	01 07 46.2	
	comp=Z,46nm,0.8s						
KSAR	Wonju Array Be	44.71	2	P	P	01 07 48.0	-0.3
KSAR						01 09 22.3	
KSAR	Wonju Array Be	44.71	2	P	P	01 07 48.0	-0.3
KSAR					PcP	01 09 22.3	+0.5
KSRS	Korea Array	44.73	2	P	P	01 07 49.5	+1.2
	comp=Z,7.3nm,0.8s,baz=177,slow=9.1,SNR=18						
KSRS				PcP	PcP	01 09 22.9	+1.0

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      comp=Z,5.3nm,0.8s,baz=185,slow=3.8,SNR=10.0
KSRS                                 ScP     ScP     01 12 32.5 +0.2
      comp=Z,1.9nm,0.6s,baz=192,slow=4.6,SNR=5.2
MAJO  Matsushiro        45.26  14deP       P       01 07 51.9 -0.7
MAJO                                 pmax    pmax
      comp=Z,35nm,0.8s
MAJO  Matsushiro        45.26  14  P       P       01 07 51.5 -1.1
MAJO                                 IAmb    IAmb    01 07 53.2
      comp=Z,33nm,0.8s
MAT   Matsushiro        45.26  14  P       P       01 07 52.0 -0.6
MJAR  Matsushiro Arr    45.26  14  P       P       01 07 52.0 -0.5
      comp=Z,27nm,0.7s,baz=191,slow=9.0,SNR=64
MJAR                                 ScP     ScP     01 12 35.7 +1.0
      comp=Z,3.5nm,0.8s,baz=172,slow=4.7,SNR=4.9
MJAR  Matsushiro Arr    45.26  14  P       P       01 07 51.5 -1.0
MJB9  Matsu-Tunnel      45.26  14  IAmb    IAmb    01 07 53.2
      comp=Z,34nm,0.8s
PALK  Pallekele         47.48 287  P       P       01 08 09.9 -0.2
      comp=Z,22nm,0.7s,baz=95,slow=7.8,SNR=16
PALK  Pallekele         47.48 287  P       P       01 08 10.1 +0.1
PALK  Pallekele         47.48 287ceP       P       01 08 09.8 -0.2
PALK                                 pmax    pmax
      comp=Z,31nm,0.9s
PALK  Pallekele         47.48 287  P       P       01 08 09.0 -1.0
LZH   Lanzhou           48.07 336 ⇑P       P       01 08 15.5 +1.3
LZH                                  PP      PP      01 10 15.4 +3.7
LZH                                  sP      sP      01 10 28.4 +2.9
LZH                                  pmax    pmax
      comp=Z,28nm,1.0s
LZH                                  pmax    pmax
      comp=Z,100nm,5.5s
BJT   Baijiatuau        48.12 350  P       P       01 08 13.7 -0.6
BJT                                  pmax    pmax
      comp=Z,7.0nm,0.7s
BJT   Baijiatuau        48.12 350  P       P       01 08 13.7 -0.6
BJI   Beijing           48.14 350 eP       P       01 08 14.4  0.0
BJI                                  pmax    pmax
      comp=Z,9.0nm,0.6s
LSA   Lhasa             49.88 319 i P      P       01 08 29.8 +1.6
      SNR=93
LSA   Lhasa             49.88 319  P       P       01 08 29.1 +0.9
LSA                                  pmax    pmax
      comp=Z,260nm,0.7s
LSA   Lhasa             49.88 319  P       P       01 08 29.1 +0.9
HHC   Hu-ho-hao-te      49.88 346 eP       P       01 08 33.1 +5.5
HHC                                  pmax    pmax
      comp=Z,98nm,1.0s
HHC                                  pmax    pmax
      comp=Z,430nm,5.0s
ODAN  Odare             50.63 314 eP       P       01 08 34.3 +0.7
      comp=Z,557nm,0.5s
TAPN  Taplejung         50.70 315 eP       P       01 08 34.9 +0.8
      comp=Z,465nm,0.4s
RAMN  Ramite            51.26 313 eP       P       01 08 39.2 +1.1
      comp=Z,1µm,0.5s
MSVF  Nonsavu           51.67 107⇑eP       P       01 08 42.0 +0.9
MSVF                                 pmax    pmax
      comp=Z,32nm,0.9s
MSVF  Nonsavu           51.67 107  P       P       01 08 41.6 +0.4
USA0B Ussuriysk Arra    51.72   5⇑eP       P       01 08 41.6 +0.8
USRK  Ussuriysk Ar.     51.72   5  P       P       01 08 41.3 +0.5
      comp=Z,6.4nm,0.6s,baz=188,slow=7.0,SNR=29
USRK                                 ScP     ScP     01 13 02.2 +0.2
      comp=Z,4.2nm,0.8s,baz=205,slow=3.8,SNR=6.7
USRK  Ussuriysk Ar.     51.72   5  P       P       01 08 40.5 -0.4
MDJ   Mudanjiang        51.95   3  P       P       01 08 44.3 +1.8
MDJ                                  pmax    pmax
      comp=Z,16nm,0.8s
MDJ                                  pmax    pmax
      comp=Z,4µm,8.6s
MDJ   Mudanjiang        51.95   3  P       P       01 08 43.9 +1.4
JIRN  Jiri              51.97 314 eP       P       01 08 44.2 +0.7
      comp=Z,707nm,0.6s
GUN   Gumba             52.34 314 eP       P       01 08 46.9 +0.8
      comp=Z,1µm,0.7s
PKI   Pulchoki          52.48 313 eP       P       01 08 47.6 +0.5
      comp=Z,529nm,0.5s
PKIN  Phulchoki         52.49 313 eP       P       01 08 47.5 +0.4
      comp=Z,461nm,0.5s
GTA   Gaotai            52.57 335 ⇑P       P       01 08 48.3 +1.0
GTA                                  PcP     PcP     01 09 51.8 +1.0
GTA                                  pP      pP      01 10 14.6 +1.8
GTA                                  sP      sP      01 11 03.0 +3.1
GTA                                  pmax    pmax
      comp=Z,46nm,1.1s
KKN   Kakani            52.70 313 eP       P       01 08 49.2 +0.6
      comp=Z,383nm,0.5s
DMN   Daman             52.72 313 eP       P       01 08 49.5 +0.7
      comp=Z,440nm,0.7s
HYB   Hyderabad         52.99 298 i P      P       01 08 49.0 -1.6
H08S2 Diego Garcia H    53.00 266  P       P       01 08 51.9 +1.4
      baz=55,slow=8.2,SNR=8.8
H08S3 Diego Garcia H    53.01 266  P       P       01 08 51.7 +1.2
      baz=55,slow=8.2,SNR=16
H08S1 Diego Carcia H    53.02 266  P       P       01 08 52.0 +1.5
      baz=55,slow=8.2,SNR=7.8
DGAR  Diego Garcia      53.06 266ceP       P       01 08 52.4 +1.3
DGAR                                 pmax    pmax
      comp=Z,70nm,0.7s
DGAR  Diego Garcia      53.06 266  P       P       01 08 52.2 +1.0
GKN   Gorkha            53.28 313 eP       P       01 08 53.5 +0.8
      comp=Z,740nm,0.4s
RPZ   Rata Peaks        53.36 140  P       P       01 08 53.6 +0.8
      comp=Z,90nm,0.8s,baz=276,slow=2.6,SNR=31
RPZ   Rata Peaks        53.36 140  P       P       01 08 52.4 -0.5
RPZ                                  IAmb    IAmb    01 08 54.4
      comp=Z,93nm,0.8s
ASAJ  Asahikawa         53.50  15  P       P       01 08 53.5 -0.2
      comp=Z,6.8nm,0.7s,baz=220,slow=7.8,SNR=7.0
DANN  Dangsing          54.12 313 eP       P       01 08 59.4 +0.6
      comp=Z,751nm,0.6s
TUWZ  Tuamarina         54.23 137  P       P       01 08 58.8 -0.2
BHW   Baring Head       54.85 136  P       P       01 09 02.1 -1.3
MNCI  Minicoy           55.03 285  P       P       01 09 04.8 -0.4
URZ   Urewera           55.27 132  P       P       01 09 06.3 -0.1
      comp=Z,11nm,0.5s,baz=244,slow=4.0,SNR=8.4
KLR   Kul'dur           56.69   5⇑eP       P       01 09 17.0 +0.9
KLR                                  pmax    pmax
      comp=Z,1.0nm,0.9s
HIA   Hailar            56.76 355⇓eP       P       01 09 17.0 +0.4
HIA                                  pmax    pmax
      comp=Z,10.0nm,0.9s
HIA   Hailar            56.76 355  P       P       01 09 17.5 +0.9
POO   Poona             57.55 297 eP       P       01 09 18.5 -4.1
ULN   Ulaanbaatar       57.58 345  P       P       01 09 23.2 +0.7
ULN                                  pmax    pmax
      comp=Z,41nm,1.0s
ULN   Ulaanbaatar       57.58 345  P       P       01 09 23.2 +0.7
ULN                                  IAmb    IAmb    01 09 24.5
      comp=Z,41nm,1.0s
SONM  Songino Array     57.73 344  P       P       01 09 24.3 +0.9
      comp=Z,20nm,0.8s,baz=160,slow=8.1,SNR=90
SONM                                 PcP     PcP     01 10 10.9 +0.3
      comp=Z,4.5nm,0.8s,baz=134,slow=2.9,SNR=4.6
SONM                                 ScP     ScP     01 13 28.9 +0.4
      comp=Z,1.6nm,0.7s,baz=154,slow=5.1,SNR=4.3
SONM                                 PKPPKP  P'P'df  01 38 54.6 -7.6
      comp=Z,0.7nm,0.8s,baz=306,slow=2.6,SNR=4.0
SONM                                 PKP2bc          01 39 08.2
      comp=Z,1.4nm,0.9s,baz=321,slow=2.2,SNR=3.6
SONM  Songino Array     57.73 344  P       P       01 09 23.9 +0.5
SONM                                                 01 10 10.9
SONM                                 pmax    pmax
      comp=Z,18nm,0.8s
SONM  Songino Array     57.73 344  P       P       01 09 23.9 +0.5
NDI   New Delhi         59.17 310 eP       P       01 09 31.5 -2.0
CASY  Casey             59.68 187  P       P       01 09 36.0 -0.2
CASY                                 IAmb    IAmb    01 09 37.9
      comp=Z,56nm,0.9s
ZAK   Zakamensk         60.90 344 eP       P       01 09 44.7  0.0
ZAK                                 e                01 10 22.4
ZAK                                  pmax    pmax
      comp=Z,9.0nm,1.1s
ZAK                                  pmax    pmax
      comp=Z,5.0nm,1.1s
BHK   Bhakra            61.13 312 ex       P       01 09 47.8 +1.2
WMQ   Urumqi            61.69 329 eP       P       01 09 51.1 +1.0
WMQ                                  pmax    pmax
      comp=Z,71nm,0.9s
WMQ                                  pmax    pmax
      comp=Z,570nm,10.9s
WMQ   Urumqi            61.69 329  IAmb    IAmb    01 09 52.0
      comp=Z,80nm,0.8s
TLY   Talaya            61.97 344ceP       P       01 09 52.7 +1.0
TLY                                  pmax    pmax
      comp=Z,16nm,0.9s
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TLY   Talaya            61.97 344  P       P       01 09 52.2 +0.5
IRK   Irkutsk           62.32 345 eP       P       01 09 47.5 -6.4
IRK                                 e                01 10 29.8
IRK                                 e                01 11 14.6
IRK                                  pmax    pmax
      comp=Z,38nm,4.3s
MOY   Mondy             62.70 343 eP       P       01 09 57.8 +1.3
MOY                                  pmax    pmax
      comp=Z,45nm,1.4s
NIL   Nilore            64.56 313  P       P       01 10 09.1 +0.3
NIL                                  pmax    pmax
      comp=Z,143nm,0.9s
NIL   Nilore            64.56 313  P       P       01 10 09.1 +0.3
KSH   Kashi             65.73 319  P       P       01 10 17.3 +1.1
KSH                                  PcP     PcP     01 10 43.1 -0.4
KSH                                  pP      pP      01 11 52.1 +4.2
KSH                                  S       S       01 18 21.0 -6.7
KSH                                  pmax    pmax
      comp=Z,100nm,0.6s
KSH                                  pmax    pmax
      comp=Z,410nm,4.8s
BOD   Bodaibo           65.80 353 eP       P       01 10 16.4 +0.3
BOD                                  pmax    pmax
      comp=Z,19nm,1.1s
PETK  Petropavlovsk-    66.08  20  P       P       01 10 18.9 +1.0
      comp=Z,2.7nm,0.7s,baz=221,slow=3.0,SNR=8.4
MK31  Makanchi Array    66.50 329 eP       P       01 10 20.9 +0.1
MK31  Makanchi Array    66.50 329  IAmb    IAmb    01 10 22.5
      comp=Z,60nm,0.9s
MKAR  Makanchi Array    66.50 329  P       P       01 10 21.6 +0.8
      comp=Z,61nm,0.5s,baz=123,slow=7.2,SNR=1593
MKAR                                 S       S       01 18 36.5 +0.1
      comp=Z,2.5nm,1.0s,baz=134,slow=12,SNR=9.5
MKAR                                 PKPPKP  P'P'df  01 38 38.7 -9.4
      comp=Z,0.7nm,1.1s,baz=300,slow=3.0,SNR=4.0
MKAR  Makanchi Array    66.50 329  P       P       01 10 20.9 +0.1
MAKZ  Makanchi          66.67 329  P       P       01 10 21.9 +0.1
MAKZ                                 pmax    pmax
      comp=Z,44nm,0.7s
MAKZ  Makanchi          66.67 329  P       P       01 10 21.9 +0.1
MAKZ                                 IAmb    IAmb    01 10 23.3
      comp=Z,44nm,0.7s
ULHL  Ulahol            67.09 322  P       P       01 10 25.8 +1.0
      SNR=21
KZA   Kyzart            67.61 321  P       P       01 10 29.6 +1.4
      SNR=42
KBL   Kabul             68.06 312  P       P       01 10 31.3 +0.3
KBL                                  pmax    pmax
      comp=Z,73nm,0.6s
KBL   Kabul             68.06 312  P       P       01 10 31.3 +0.3
KBK   Karagaybulak      68.12 322  P       P       01 10 32.3 +1.3
      SNR=40
UCH   Uchtor            68.15 321  P       P       01 10 32.8 +1.2
      SNR=33
AAK   Ala-Archa         68.39 322  P       P       01 10 34.0 +1.3
      comp=Z,54nm,0.5s,baz=124,slow=5.4,SNR=297
AAK   Ala-Archa         68.39 322  P       P       01 10 34.0 +1.3
      SNR=57
AAK   Ala-Archa         68.39 322 i P      P       01 10 33.9 +1.3
      SNR=120
AAK   Ala-Archa         68.39 322  P       P       01 10 33.6 +0.9
AAK                                  pmax    pmax
      comp=Z,60nm,0.6s
AAK   Ala-Archa         68.39 322  P       P       01 10 33.6 +0.9
FRU1  Bishkek           68.40 322  IAmb    IAmb    01 10 34.1
      comp=Z,22nm,0.6s
CHMS  Chumysh           68.43 322  P       P       01 10 33.4 +0.7
      SNR=19
CHMS  Chumysh           68.43 322 i P      P       01 10 32.5 -0.3
CHMS                                 pmax    pmax
      comp=Z,18nm,0.6s
AML   Almayashu         68.61 321  P       P       01 10 35.5 +1.2
      SNR=93
USP   Ospenovka         68.73 322  P       P       01 10 35.6 +1.0
      SNR=63
EKS2  Erkin-Say         68.84 321  P       P       01 10 36.8 +1.4
      SNR=58
YAK   Yakutsk           69.35   2 eP       P       01 10 37.8 -0.1
YAK                                 e                01 10 53.6
YAK                                 e*PP     pP      01 12 06.7 -3.2
YAK                                 e                01 13 21.4
YAK                                 eS       S       01 19 10.9 +1.9
YAK                                  pmax    pmax
      comp=Z,25nm,0.9s
YAK                                  pmax    pmax
      comp=N,4.0nm,0.9s
YAK                                  pmax    pmax
      comp=E,2.0nm,0.8s
YAK                                  pmax    pmax
      comp=Z,332nm,5.8s
YAK                                  pmax    pmax
      comp=N,413nm,6.2s
YAK                                  pmax    pmax
      comp=E,291nm,5.1s
YAK                                  smax    smax
      comp=E,204nm,4.3s
YAK                                  smax    smax
      comp=N,192nm,4.3s
YAK   Yakutsk           69.35   2  P       P       01 10 38.3 +0.5
YAK                                  IAmb    IAmb    01 10 39.2
      comp=Z,36nm,0.7s
MA2   Magadan           69.70  13  P       P       01 10 41.2 +1.2
      comp=Z,5.6nm,0.6s,baz=119,slow=19,SNR=4.0
MA2   Magadan           69.70  13⇓eP       P       01 10 41.4 +1.4
MA2                                  pmax    pmax
      comp=Z,8.0nm,1.1s
MA2   Magadan           69.70  13  P       P       01 10 40.2 +0.1
MSEY  Mahe Island       70.11 268  P       P       01 10 44.6 +1.1
ZALV  Zalesovo Beam     70.31 336  P       P       01 10 43.7  0.0
      comp=Z,148nm,0.5s,baz=138,slow=5.0,SNR=588
ZALV                                 S       S       01 19 16.6 -3.6
      comp=Z,1.6nm,0.6s,baz=144,slow=11,SNR=7.4
ZALV                                 PKP2bc          01 38 36.6
      comp=Z,1.4nm,0.8s,baz=352,slow=2.9,SNR=5.1
ZALV  Zalesovo Beam     70.31 336  P       P       01 10 43.4 -0.4
ZALV  Zalesovo Beam     70.31 336  P       P       01 10 43.4 -0.4
KURBB Kurchatov Arra    70.89 330  P       P       01 10 48.0 +0.7
      comp=Z,115nm,0.7s,baz=136,slow=5.1,SNR=276
KURBB Kurchatov Arra    70.89 330  P       P       01 10 47.3  0.0
KURK  Kurchatov         70.90 330c iP      P       01 10 47.9 +0.5
KURK                                 pmax    pmax
      comp=Z,198nm,0.8s
KURK  Kurchatov         70.90 330  P       P       01 10 47.6 +0.2
TAS   Tashkent          71.03 318  P       P       01 10 48.9 +0.5
TAS                                  pmax    pmax
      comp=Z,89nm,0.6s
TAS   Tashkent          71.03 318  P       P       01 10 48.9 +0.5
KK31  Karatay Array     71.12 320  P       P       01 10 49.3 +0.4
KK31                                 pmax    pmax
      comp=Z,17nm,1.0s
KK31  Karatay Array     71.12 320  P       P       01 10 49.3 +0.4
KKAR  Karatay Array     71.12 320  P       P       01 10 49.1 +0.2
KKAR  Karatay Array     71.12 320  P       P       01 10 49.1 +0.2
WBK   Wadi Bani Khal    72.04 297  P       P       01 10 55.5 +0.7
VNDA  Vanda             72.49 172  P       P       01 10 56.8 +0.5
      comp=Z,18nm,0.7s,baz=316,slow=6.6,SNR=109
VNDA  Vanda             72.49 172  P       P       01 10 56.5 +0.2
VNDA                                 pmax    pmax
      comp=Z,20nm,0.8s
VNDA  Vanda             72.49 172  P       P       01 10 56.5 +0.2
VNDA                                 IAmb    IAmb    01 10 57.7
      comp=Z,20nm,0.8s
MHTO  MHTO              72.49 295  P       P       01 10 57.2 -0.2
WSAR  Wadi Sarin        72.52 297  P       P       01 10 58.1 +0.6
      comp=Z,30nm,0.9s,baz=122,slow=5.6,SNR=13
WSAR  Wadi Sarin        72.52 297  P       P       01 10 58.1 +0.6
      SNR=7.3
JMDO  Jabal Madar       72.74 296  P       P       01 10 58.9 +0.1
SMDO  Samad             72.98 297  P       P       01 11 01.0 +0.7
      SNR=15
BIDO  Bidbid            73.04 297  P       P       01 11 01.2 +0.7
SEY   Seymchan          73.05  12⇑eP       P       01 11 00.0 +0.3
MAW   Mawson            73.07 201  P       P       01 11 01.1 +1.3
      baz=73,SNR=34
MAW   Mawson            73.07 201  P       P       01 11 01.1 +1.3
      comp=Z,26nm,0.4s,baz=70,slow=5.5,SNR=81
MAW   Mawson            73.07 201  P       P       01 11 00.5 +0.7
MAW                                  pmax    pmax
      comp=Z,8.0nm,0.6s
MAW   Mawson            73.07 201  P       P       01 11 00.5 +0.7
HRA   Herat             73.13 309  IAmb    IAmb    01 11 03.4
      comp=Z,41nm,1.0s
BSY   Bisya             73.65 296  P       P       01 11 04.2 +0.1
HOQ   Hoqain            73.78 297  P       P       01 11 05.5 +0.7
      SNR=23
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SHAO  Shalim            73.90 291  P       P       01 11 05.3 -0.3
SOCY  Socotra           74.19 285  P       P       01 11 07.2 -0.2
      SNR=209
ARQ   Araqi             74.41 297  P       P       01 11 09.0 +0.6
      SNR=13
DMTO  DMTO              74.45 291  P       P       01 11 09.0 +0.3
      SNR=8.5
SOHO  SOHO              74.61 297  P       P       01 11 09.8 +0.3
      SNR=6.9
MOMR  Moma              74.81   7 eSg      PcP     01 11 22.1 +0.8
      comp=Z,6.2nm,0.5s
UOSS  Minazif           75.12 298  P       P       01 11 12.4 +0.1
UOSS  Minazif           75.12 298  P       P       01 11 12.2 -0.2
HATD  Hatta, Dubai      75.15 298  P       P       01 11 13.2 +0.7
HATD  Hatta, Dubai      75.15 298  P       P       01 11 13.3 +0.7
ASHO  Ashiyiah          75.17 298 i P      P       01 11 13.3 +0.6
      SNR=9.6
ASHO  Ashiyiah          75.17 298  P       P       01 11 13.4 +0.6
      SNR=9.7
MSFE  Esma-Masafi       75.27 299 i P      P       01 11 14.1 +0.8
      SNR=6.0
ALNE  Al Ain            75.28 297 i P      P       01 11 13.7 +0.4
      SNR=5.3
BANOM Banah             75.30 299  P       P       01 11 14.2 +0.8
BANOM Banah             75.30 299  P       P       01 11 14.3 +0.9
SHME  Shamm             75.47 299 i P      P       01 11 14.9 +0.6
      SNR=6.2
WHFO  Wadi Hawf         75.59 291  P       P       01 11 15.0 -0.2
      SNR=23
FAQ   Al Faqa, Dubai    75.60 298  P       P       01 11 15.6 +0.6
NAZ   Nazwa, Dubai      75.60 298  P       P       01 11 15.4 +0.3
ABTO  Aybut             75.91 290  P       P       01 11 17.1 +0.1
      SNR=42
BVAR  Borovoye Array    76.38 329  P       P       01 11 19.3 +0.5
      comp=Z,43nm,0.7s,baz=120,slow=6.5,SNR=281
BRVK  Borovoye          76.45 329  P       P       01 11 19.5 +0.3
BRVK                                 pmax    pmax
      comp=Z,89nm,1.1s
BRVK  Borovoye          76.45 329  P       P       01 11 19.5 +0.3
OPO   Ambohidratompo    77.08 253  P       P       01 11 24.5 +0.9
      comp=Z,31nm,0.7s,baz=89,slow=4.4,SNR=70
YBGR  Belaya Gora       77.15   7 eSg      P       01 11 21.4 -1.2
      comp=Z,5.8nm,1.3s
GEYT  Alibeck           77.51 311  P       P       01 11 26.2 +0.8
      comp=Z,19nm,0.6s,baz=149,slow=3.1,SNR=75
GEYT  Alibeck           77.51 311  P       P       01 11 25.7 +0.3
GYA0B ALIBECK ARRAY     77.51 311  IAmb    IAmb    01 11 27.5
      comp=Z,38nm,0.8s
TIXI  Tiksi             78.98   1ceP       P       01 11 32.0 -0.5
TIXI                                 pmax    pmax
      comp=Z,17nm,0.5s
TIXI  Tiksi             78.98   1  P       P       01 11 32.0 -0.5
TIXI                                 IAmb    IAmb    01 11 33.4
      comp=Z,27nm,0.5s
TIXI  Tiksi             78.98   1 eSg      P       01 11 31.5 -1.0
      comp=Z,6.7nm,0.8s
ABKAR Akbulak array     80.43 323  P       P       01 11 40.7  0.0
ABKAR Akbulak array     80.43 323  P       P       01 11 41.0 +0.2
ABKAR                                IAmb    IAmb    01 11 41.9
      comp=Z,24nm,0.7s
BILL  Bilibino          80.51  14⇓eP       P       01 11 42.3 +1.6
BILL                                e                01 14 50.5
BILL                                 pmax    pmax
      comp=Z,1.0nm,0.9s
NRIK  Noril'sk          81.09 347  P       P       01 11 44.5 +0.7
      comp=Z,9.3nm,0.6s,baz=134,slow=6.7,SNR=20
NRIK                                 S       S       01 21 15.5 -0.8
      comp=Z,1.1nm,0.3s,baz=175,slow=24,SNR=3.6
SYO   Syowa Base        81.78 201⇓iP       P       01 11 46.6 -0.7
SYO   Syowa Base        81.78 201⇓iPcP     PcP     01 11 51.0 -0.8
AKTO  Aktyubinsk        82.04 323  P       P       01 11 49.5 +0.4
      comp=Z,21nm,0.5s,baz=107,slow=7.1,SNR=146
AKTO                                 S       S       01 21 26.0 -0.7
      comp=Z,0.7nm,0.6s,baz=312,slow=22,SNR=15
QSPA  South Pole Qui    82.51 180  P       P       01 11 51.8 +0.5
      comp=Z,59nm,0.5s,baz=183,slow=0.6,SNR=692
QSPA                                 S       S       01 21 31.7 +0.6
      comp=Z,1.3nm,1.0s,baz=294,slow=22,SNR=7.4
QSPA  South Pole Qui    82.51 180  P       P       01 11 51.8 +0.5
SVE   Sverdlovsk        83.14 330deP       P       01 11 54.9 +0.4
SVE                                  pmax    pmax
      comp=Z,72nm,1.2s
DAMY  Dhamar            83.80 286  P       P       01 12 00.0 +1.0
DAMY                                 IAmb    IAmb    01 12 02.2
      comp=Z,27nm,0.8s
ARU   Arti              84.03 329  P       P       01 11 58.8 -0.1
      comp=Z,4.8nm,0.5s,baz=136,slow=2.3,SNR=34
ARU   Arti              84.03 329c iP      P       01 11 58.5 -0.4
ARU                                  *PP     pP      01 13 34.4 -1.5
ARU                                                  01 15 14.4
ARU                                  S       S       01 21 38.2 -8.0
ARU                                  SS      SS      01 27 21.2 -5.4
ARU                                  pmax    pmax
      comp=Z,58nm,1.1s
ARU   Arti              84.03 329  P       P       01 11 58.8 -0.1
ARU                                  IAmb    IAmb    01 12 00.7
      comp=Z,59nm,1.1s
RAYN  Ar Rayn           84.31 295 i P      P       01 12 01.7 +0.6
      SNR=48
RAYN  Ar Rayn           84.31 295  P       P       01 12 01.2 +0.1
RAYN                                 pmax    pmax
      comp=Z,36nm,0.9s
RAYN  Ar Rayn           84.31 295  P       P       01 12 01.2 +0.1
RAYN                                 IAmb    IAmb    01 12 02.7
      comp=Z,36nm,0.8s
AKT   Akhty             86.19 312 eP       P       01 12 10.6 +0.6
AKT                                 e*PP     pP      01 13 48.0 +1.1
AKT                                 e*SP     sP      01 14 29.7 -1.6
AKT                                 e                01 15 41.3
AKT                                  pmax    pmax
      comp=Z,36nm,1.0s
GROC  Groznyy           87.97 314 eP       P       01 12 18.2  0.0
GROC                                e*PP     pP      01 13 57.7 +2.3
GROC                                e*SP     sP      01 14 41.8 +2.2
GROC                                e                01 15 50.3
GROC                                e                01 24 22.4
GROC                                 pmax    pmax
      comp=Z,34nm,1.4s
GNI   Garni             88.13 311  P       P       01 12 20.0 +0.7
      comp=Z,2.1nm,0.6s,baz=170,slow=9.8,SNR=3.8
GNI   Garni             88.13 311  P       P       01 12 20.0 +0.7
TBLG  Delisi            88.44 312  IAmb    IAmb    01 12 22.0
      comp=Z,22nm,0.6s
KMBO  Kilima Mbogo      88.60 269  P       P       01 12 23.3 +1.1
      comp=Z,8.4nm,0.8s,baz=70,slow=7.0,SNR=28
KMBO  Kilima Mbogo      88.60 269 i P      P       01 12 23.2 +1.0
      SNR=10
KMBO  Kilima Mbogo      88.60 269  P       P       01 12 22.9 +0.7
KMBO                                 IAmb    IAmb    01 12 23.8
      comp=Z,8.9nm,0.7s
ZEI   Tsey              89.25 313 eP       P       01 12 24.0 -0.5
ZEI                                  pmax    pmax
      comp=Z,10.0nm,0.9s
AKH   Akhalkalaki       89.30 312  IAmb    IAmb    01 12 26.4
      comp=Z,13nm,0.8s
KIRV  Kirov             89.39 329  P       P       01 12 23.7 -0.7
      comp=Z,5.2nm,0.5s,baz=96,slow=16,SNR=3.4
NCK   Nalchik           89.60 314⇓eP       P       01 12 26.2 +0.3
NCK                                  pmax    pmax
      comp=Z,12nm,1.3s
KBZ   Khabaz            90.14 314  P       P       01 12 27.5 -0.8
      comp=Z,1.4nm,0.5s,baz=84,slow=11,SNR=5.0
KBZ   Khabaz            90.14 314⇓eP       P       01 12 28.4 +0.1
KBZ                                  pmax    pmax
      comp=Z,9.0nm,1.2s
KIV   Kislovodsk        90.33 314 eP       P       01 12 27.8 -1.5
KIV                                  pmax    pmax
      comp=Z,17nm,1.1s
NVL   N'lazarevskaya    90.72 198⇓iP       P       01 12 30.8 +0.3
NVL                                  pmax    pmax
      comp=Z,17nm,0.7s
PRGR  Permogore         91.96 332 eP       P       01 12 32.2 -4.1
PRGR                                 pmax    pmax
      comp=Z,10.0nm,0.9s
ASF   Jabal al Asfar    93.16 302  P       P       01 12 43.2 +0.5
      comp=Z,4.0nm,0.8s,baz=93,slow=2.1,SNR=7.2
SNAA  Sanae             94.25 194  P       P       01 12 47.8 +0.9
SNAA  Sanae             94.25 194  PKiKP   PKiKP   01 17 27.3 -0.3
SNAA  Sanae             94.25 194  P       P       01 12 47.9 +1.1
      comp=Z,13nm,0.6s,baz=182,slow=4.9,SNR=101
SNAA  Sanae             94.25 194ceP       P       01 12 47.7 +0.9
SNAA  Sanae             94.25 194  P       P       01 12 47.1 +0.3
SNAA                                 IAmb    IAmb    01 12 48.7
      comp=Z,15nm,0.6s
MATP  Matopo            94.38 249 i P      P       01 12 45.7 -2.9
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MATP	Matopo	94.38	249	P	P	01 12 45.6	-2.9
	comp=Z,10nm,0.4s,baz=122,slow=3.6,SNR=74						
MATP	Matopo	94.38	249	i P	P	01 12 45.7	-2.9
MMAI	Mount Meron Ar	94.51	303	P	P	01 12 49.7	+0.9
	comp=Z,1.2nm,0.4s,baz=81,slow=6.8,SNR=14						
KLMR	Klimovskoe	94.75	331	eP	P	01 12 46.3	-2.7
KLMR				pmax	pmax		
	comp=Z,43nm,2.3s						
KLMR	Klimovskoe	94.75	331	eP	P	01 12 46.4	-2.6
KLMR				AMP		01 12 51.2	
	comp=Z,43nm,2.3s						
TOLK	Toolik Lake Re	94.88	21	P	P	01 12 50.1	+0.6
	baz=262						
MBAR	Mbarara	95.13	269	⇑eP	P	01 12 52.1	0.0
MBAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ILAR	Eielson Array	95.47	25	P	P	01 12 50.7	-1.6
	comp=Z,0.6nm,0.6s,baz=261,slow=5.1,SNR=7.9						
ILAR				PP	PP	01 16 51.5	+1.5
	comp=Z,1.8nm,0.9s,baz=244,slow=6.0,SNR=7.5						
ILAR				PKKPbc	PKKPdf	01 29 42.4	-2.0
	comp=Z,1.3nm,0.6s,baz=63,slow=1.9,SNR=15						
LSZ	Lusaka	95.51	254	P	P	01 12 54.0	+0.3
LSZ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
LSZ	Lusaka	95.51	254	P	P	01 12 54.0	+0.3
LSZ				IAmb	IAmb	01 12 54.4	
	comp=Z,7.0nm,0.7s						
OBN	Obninsk	95.74	325	⇑eP	P	01 12 52.9	-0.7
OBN				e*SS	sS	01 25 37.3	-51
OBN				SSS	SSS	01 34 03.0	
OBN				pmax	pmax		
	comp=Z,20nm,0.9s						
BOSA	Boshof	95.79	240	i P	P	01 12 55.2	+0.5
BOSA	Boshof	95.79	240	P	P	01 12 55.2	+0.5
	comp=Z,14nm,0.5s,baz=107,slow=3.8,SNR=56						
BOSA	Boshof	95.79	240	i P	P	01 12 55.2	+0.5
BOSA	Boshof	95.79	240	P	P	01 12 55.3	+0.5
BOSA				pmax	pmax		
	comp=Z,17nm,0.6s						
BOSA	Boshof	95.79	240	P	P	01 12 55.2	+0.5
VNA2	Neumayer--Watz	95.85	194	P	P	01 12 55.1	+1.1
	baz=131,slow=4.8						
VNA2	Neumayer--Watz	95.85	194	PKiKP	PKiKP	01 17 30.8	+0.5
VNA3	Neumayer Olymp	96.15	193	P	P	01 12 56.2	+0.9
VNA3	Neumayer Olymp	96.15	193	PKiKP	PKiKP	01 17 30.9	+0.1
LBTB	Lobatse	96.20	244	i P	P	01 12 56.7	+0.1
LBTB	Lobatse	96.20	244	P	P	01 12 57.2	+0.6
	comp=Z,11nm,0.8s,baz=112,slow=3.1,SNR=19						
LBTB	Lobatse	96.20	244	i P	P	01 12 56.7	+0.1
LBTB	Lobatse	96.20	244	P	P	01 12 57.0	+0.3
LBTB				pmax	pmax		
	comp=Z,21nm,1.0s						
LBTB	Lobatse	96.20	244	P	P	01 12 57.0	+0.3
LBTB				IAmb	IAmb	01 12 58.1	
	comp=Z,21nm,1.0s						
VNA1	Neumayer--Stat	96.25	194	P	P	01 12 56.4	+0.7
BR131	Keskin Array S	96.52	309	ceP	P	01 12 56.4	-1.4
BR131	Keskin Array S	96.52	309	IAmb	IAmb	01 12 57.2	
	comp=Z,4.3nm,0.7s						
BRTR	Keskin Array B	96.52	309	P	P	01 12 56.8	-1.1
	comp=Z,3.4nm,0.7s,baz=130,slow=3.9,SNR=23						
BRTR				PP	PP	01 16 52.1	-6.8
	comp=Z,3.0nm,0.8s,baz=123,slow=9.9,SNR=4.5						
BRTR	Keskin Array B	96.52	309	P	P	01 12 56.6	-1.2
BMAR	Burnt Mountain	96.62	23	P	P	01 12 57.9	+0.4
SUR	Sutherland	98.67	236	P	P	01 13 08.8	+1.1
	comp=Z,11nm,0.9s,baz=158,slow=4.4						
SUR	Sutherland	98.67	236	IAmb	IAmb	01 13 10.7	
	comp=Z,17nm,1.1s						
AKASG	Malin Array Be	100.02	320	P	Pdif	01 13 12.3	-0.6
	comp=Z,0.7nm,0.5s,baz=79,slow=4.6,SNR=5.8						
AKASG				PP	PP	01 17 27.7	+3.0
	comp=Z,2.9nm,0.7s,baz=110,slow=8.6,SNR=8.0						
AKASG				PKiKP	PKiKP	01 17 37.8	-0.4
	comp=Z,0.8nm,0.4s,baz=72,slow=2.6,SNR=4.9						
SORM	Soroca	100.61	318	⇓P	PP	01 17 28.0	-1.2
TOPG	Topolog	100.62	314	⇑P	PP	01 17 24.7	-4.7
ARCES	ARCESS Array B	100.63	339	P	Pdif	01 13 14.3	-0.9
	comp=Z,2.4nm,0.7s,baz=77,slow=5.4,SNR=9.5						
ARCES				PKiKP	PKiKP	01 17 39.1	+0.3
	comp=Z,3.8nm,0.9s,baz=116,slow=1.1,SNR=12						
ARCES				PKKPbc	PKKPbc	01 29 27.9	-3.1
	comp=Z,2.4nm,0.7s,baz=259,slow=3.2,SNR=12						
INK	Inuvik	100.78	22	PKiKP	PKiKP	01 17 38.9	-0.1
	comp=Z,0.9nm,0.4s,baz=246,slow=1.8,SNR=7.3						
INK				PKKPbc	PKKPbc	01 29 27.5	-2.9
	comp=Z,4.7nm,0.6s,baz=44,slow=2.7,SNR=32						
FINES	FINESS Array B	101.26	331	P	Pdif	01 13 17.3	-0.9
	comp=Z,2.3nm,0.9s,baz=151,slow=4.4,SNR=5.6						
FINES				PKiKP	PKiKP	01 17 40.6	+0.5
	comp=Z,1.6nm,0.4s,baz=111,slow=3.4,SNR=17						
VRI	Vrincioaia	101.77	315	⇑P	PP	01 17 39.0	+1.0
MLR	Muntele Rosu	102.33	315	⇑P	PP	01 17 38.3	-3.9
DOPR	Dopca	102.70	315	⇑P	PP	01 17 43.8	-1.1
BURAR	Bucovina Array	102.74	317	⇑P	PP	01 17 46.8	+1.6
HUMR	Humele	103.05	314	⇑P	PP	01 17 50.1	+2.6
ARCR	ARCALIA	103.36	317	⇑P	PP	01 17 51.7	+2.0
CJR	Cluj-Napoca	103.90	316	⇑P	PP	01 17 52.2	-1.5
DRGR		104.50	316	⇑P	PP	01 17 55.3	-2.9
TSUM	Tsumeb	104.69	248	PKiKP	PKiKP	01 17 48.7	+0.8
	comp=Z,1.1nm,0.7s,baz=308,slow=17,SNR=4.0						
HERR	Herculane	104.85	314	⇑P	PP	01 17 57.1	-3.6
SIRR	Siria	105.27	316	⇑P	PP	01 18 04.5	+0.7
BZS	Buzias	105.35	315	⇓P	PP	01 18 03.9	-0.5
OKC	Ostrava-Krasne	107.17	320	ePP	PP	01 18 22.4	+5.0
MORC	Moravsky Berou	107.56	320	⇑P	PKiKP	01 17 49.4	-2.8
NB2	NORSAR Subarra	108.37	332	PKPdf	PKiKP	01 17 53.3	0.0
	comp=Z,0.9nm,0.8s,baz=68,slow=1.9						
NOA	NORSAR Array B	108.37	332	PKiKP	PKiKP	01 17 52.9	-0.4
	comp=Z,2.1nm,0.8s,baz=259,slow=3.3,SNR=5.8						
CONA	Conrad Observa	108.97	318	ePP	PP	01 18 35.4	+4.8
	comp=Z,11nm,1.3s						
ARSA	Arzberg	109.32	317	ePKiKP	PKiKP	01 17 55.7	+0.2
	comp=Z,1.3nm,0.7s						
ARSA				ePP	PP	01 18 36.4	+3.4
	comp=Z,3.4nm,1.1s						
PRU	Pruhonice	109.43	320	ePP	PP	01 18 35.2	+1.5
BRG	Berggiesshubel	109.62	321	ePKP	PP	01 18 40.2	+5.2
	comp=Z,16nm,1.7s						
BRG				epPKP		01 20 15.6	
	comp=Z,34nm,2.1s						
BRG				ePKS		01 22 36.1	
	comp=Z,9.6nm,1.1s						
SOKA	Soboth	109.75	317	ePP	PP	01 18 39.8	+3.6
	comp=Z,10nm,1.1s						
YKA	Yellowknife Ar	109.91	25	PKiKP	PKiKP	01 17 55.8	-0.3
	comp=Z,1.1nm,0.5s,baz=296,slow=1.7,SNR=36						
YKA				SKP		01 20 49.1	
	comp=Z,1.0nm,0.8s,baz=290,slow=1.6,SNR=7.0						
YKA				PKKPbc	PKKPbc	01 28 59.9	-2.7
	comp=Z,2.9nm,0.5s,baz=119,slow=3.8,SNR=56						
MOA	Molln	110.04	318	ePP	PP	01 18 41.4	+3.2
	comp=Z,3.3nm,0.7s						
B05A	Bryant	110.08	41	PKiKP	PKiKP	01 17 58.0	+1.2
	baz=282						
OBKA	Obir	110.11	317	ePP	PP	01 18 42.2	+3.5
	comp=Z,2.4nm,0.6s						
GERES	GERESS Array B	110.21	319	PKiKP	PKiKP	01 17 57.1	-0.1
	comp=Z,2.2nm,0.6s,baz=126,slow=1.3,SNR=3.2						
GERES				PP	PP	01 18 38.8	-0.5
	comp=Z,1.6nm,0.6s,baz=79,slow=10,SNR=3.6						
KHC	Kasperske Hory	110.23	320	ePP	PP	01 18 44.7	+5.3
KBA	Koelnbreinsper	110.81	318	ePKiKP	PKiKP	01 17 57.8	-0.7
	comp=Z,1.3nm,0.5s						
L04D	Klamath Falls	111.03	48	PKiKP	PKiKP	01 17 59.7	+0.6
	baz=279						
ABTA	Abfaltersbach	111.44	317	ePKiKP	PKiKP	01 17 59.3	-0.3
	comp=Z,2.1nm,0.6s						
J05D	Fort Rock, OR	111.63	46	PKiKP	PKiKP	01 18 01.3	+1.1
	baz=280						
WTTA	Wattenberg	111.91	318	ePKiKP	PKiKP	01 18 00.6	0.0
	comp=Z,11nm,0.4s,SNR=20						
WTTA				ePP	PP	01 18 54.1	+2.5
	comp=Z,2.6nm,0.6s						
WATA	Walderalm	111.93	318	ePKiKP	PKiKP	01 18 00.6	0.0
	comp=Z,5.3nm,0.5s,SNR=4.9						
SQTA	Sankt Quirin	112.20	318	ePKiKP	PKiKP	01 18 01.1	0.0
	comp=Z,3.5nm,0.5s						
SQTA				ePP	PP	01 18 55.6	+2.1
	comp=Z,2.5nm,0.5s						
MOTA	Moosalm	112.24	318	ePKiKP	PKiKP	01 18 00.9	-0.3
	comp=Z,3.7nm,0.5s						
MOTA				ePP	PP	01 18 56.6	+2.7
	comp=Z,5.9nm,0.9s						
RETA	Reutte	112.43	318	i PKiKP	PKiKP	01 18 01.3	-0.2
	comp=Z,1.2nm,0.4s						
FETA	Feichten	112.56	318	i PKiKP	PKiKP	01 18 01.9	0.0
	comp=Z,1.9nm,0.5s						
DAVA	Damuels	113.06	318	i PKiKP	PKiKP	01 18 02.9	+0.1
	comp=Z,5.8nm,0.4s,SNR=10						
DAVA				ePP	PP	01 19 01.3	+1.7
	comp=Z,6.9nm,0.7s						
PKM	Mcpherson Peak	114.06	55	P	PKiKP	01 18 06.6	+1.5
	baz=278						
MEM	Membach	114.54	323	PKiKP	PKiKP	01 18 05.5	+0.2
NVAR	Mina Array Bea	114.69	51	PKP	PKiKP	01 18 07.0	+0.7
	comp=Z,1.3nm,0.8s,baz=245,slow=1.8,SNR=6.7						
NVAR				SKP		01 21 01.1	
	comp=Z,0.7nm,0.6s,baz=246,slow=2.5,SNR=4.5						
NVAR				PKKPbc	PKKPbc	01 28 49.4	+3.0
	comp=Z,1.2nm,0.8s,baz=108,slow=4.8,SNR=3.5						
NVAR	Mina Array Bea	114.69	51		PKiKP	01 18 07.2	+0.9
CWC	Cottonwood Cre	115.22	53	P	PKiKP	01 18 08.3	+1.0
	baz=280						
EDW2	Edwards Air Fo	115.54	55	P	PKiKP	01 18 08.8	+1.0
	baz=279						
DOU	Dourbes	115.56	322	PKiKP	PKiKP	01 18 07.4	+0.1
SNF	Seneffe	115.61	323	PKiKP	PKPdf	01 18 07.2	-0.1
LRMC	Laurel Mtn Rad	115.70	54	P	PKiKP	01 18 09.5	+1.3
	baz=280						
MPMC	Manual Prospec	115.75	54	P	PKiKP	01 18 09.6	+1.2
	baz=280						
MSO	Missoula	115.79	41	P	PKiKP	01 18 08.0	0.0
	baz=288						
KEST	Kesra	115.91	306	PKP	PKiKP	01 18 09.4	+0.9
	comp=Z,2.6nm,0.4s,baz=11,slow=0.2,SNR=12						
KEST				PP	PP	01 19 16.5	-3.4
	comp=Z,21nm,1.0s,baz=68,slow=1.4,SNR=9.9						
BFSC	Mount Baldy Ra	115.91	56	P	PKiKP	01 18 09.2	+0.6
	baz=279						
GSC	Goldstone, Bar	116.43	54	P	PKiKP	01 18 11.0	+1.5
	baz=280						
TPNV	Topopah Spring	116.57	52	P	PKiKP	01 18 10.8	+0.9
	baz=281						
USHA	Ushuaia	116.76	171	PKP	PKiKP	01 18 10.6	+1.1
	comp=Z,2.4nm,0.9s,baz=152,slow=8.2,SNR=5.2						
R11A	Troy Canyon, C	116.81	51	P	PKiKP	01 18 11.5	+1.2
	baz=282						
PFO	Pinyon Flats O	117.00	56	P	PKiKP	01 18 12.0	+1.2
	baz=279						
TPFO	Pinon Flats	117.00	56	P	PKiKP	01 18 12.0	+1.3
	baz=279						
MONP2	Monument Peak	117.14	57	P	PKiKP	01 18 12.7	+1.5
	baz=279						
GMRC	Granite Mounta	117.45	55	P	PKiKP	01 18 13.0	+1.4
	baz=280						
BC3	Big Chuckawall	117.82	56	P	PKiKP	01 18 13.8	+1.5
	baz=280						
IRM	Iron Mountain	117.98	55	P	PKiKP	01 18 14.1	+1.6
	baz=280						
EGMT	Eagleton	118.06	39		PKPdf	01 18 12.2	0.0
EGMT	Eagleton	118.06	39	P	PKiKP	01 18 12.8	+0.4
	baz=292						
DUG	Dugway, Tooele	118.46	48	PKIKP	PKiKP	01 18 14.1	+0.7
DUG	Dugway, Tooele	118.46	48		PKiKP	01 18 14.1	+0.7
DUG	Dugway, Tooele	118.46	48	P	PKiKP	01 18 14.6	+1.1
	baz=285						
HWUT	Hardware Ranch	118.97	46		PKiKP	01 18 14.4	0.0
FFC	Flin Flon	119.36	30	PKIKP	PKiKP	01 18 14.7	+0.2
FFC	Flin Flon	119.36	30		PKiKP	01 18 14.7	+0.2
PDAR	Pinedale Array	120.03	45	PKP	PKiKP	01 18 16.8	+0.2
	comp=Z,1.4nm,0.5s,baz=90,slow=1.4,SNR=25						
PDAR				SKP		01 21 10.3	
	comp=Z,1.1nm,0.9s,baz=48,slow=2.2,SNR=4.8						
PDAR				PKKPbc	PKKPbc	01 28 26.9	-1.0
	comp=Z,3.5nm,0.5s,baz=119,slow=5.2,SNR=34						
PDAR	Pinedale Array	120.03	45		PKiKP	01 18 16.5	-0.1
FCC	Fort Churchill	120.38	23	PKIKP	PKPdf	01 18 15.7	-0.5
FCC	Fort Churchill	120.38	23		PKPdf	01 18 15.7	-0.5
LAO	LASA Array	120.80	39	P	PKiKP	01 18 18.7	+1.0
	baz=294						
DGMT	Dagmar	121.26	37	P	PKiKP	01 18 20.0	+1.4
	baz=297						
O20A	White River Ci	121.82	47	P	PKiKP	01 18 21.0	+0.9
	baz=289,SNR=7.0						
TUC	Tucson	121.93	57	P	PKiKP	01 18 21.4	+1.1
	baz=282						
K22A	Casper	122.17	44		PKPdf	01 18 20.0	-0.5
K22A	Casper	122.17	44	P	PKiKP	01 18 20.7	0.0
	baz=292						
MVCO	Mesa Verde	122.52	50	P	PKiKP	01 18 22.9	+1.3
	baz=287						
FRB	Frobisher Bay	122.86	8	PKKPbc	PKKPbc	01 28 14.7	-2.9
	comp=Z,1.2nm,0.4s,baz=178,slow=4.0,SNR=8.8						
N23A	Red Feather La	123.21	46	P	PKiKP	01 18 23.4	+0.4
	baz=291						
RSSD	Black Hills	123.26	41	PKIKP	PKPdf	01 18 22.6	0.0
RSSD	Black Hills	123.26	41		PKPdf	01 18 22.6	0.0
RSSD	Black Hills	123.26	41	P	PKPdf	01 18 22.6	0.0
	baz=295						
S22A	4UR Ranch, Cre	123.63	49	P	PKiKP	01 18 25.4	+1.5
	baz=288,SNR=6.0						
ISCO	Idaho Springs	123.84	47	P	PKiKP	01 18 25.1	+0.8
	baz=291						
121A	Cookes Peak, D	124.34	56	P	PKiKP	01 18 26.5	+1.2
	baz=284						
SESP	Santiago Espad	124.52	312	P	PKiKP	01 18 25.7	+0.2
	SNR=8.1						
SDCO	Great Sand Dun	124.62	49	P	PKiKP	01 18 26.8	+1.0
	baz=290						
ANMO	Albuquerque	124.76	52	PKKPbc	PKKPbc	01 28 09.0	-0.5
	comp=Z,0.3nm,0.3s,baz=231,slow=18,SNR=6.6						
ANMO	Albuquerque	124.76	52	⇓iPKIKP	PKiKP	01 18 27.0	+0.9
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ANMO	Albuquerque	124.76	52	P	PKiKP	01 18 27.0	+0.9
	baz=287						
ULM	Lac du Bonnet	124.97	32	PKP	PKPdf	01 18 25.1	-0.2
	comp=Z,3.2nm,0.5s,baz=9.2,slow=1.1,SNR=13						
TORD	Torodi Ar. Bea	124.99	281	PKP	PKPdf	01 18 26.5	+0.2
	comp=Z,19nm,0.7s,baz=25,slow=2.4,SNR=106						
TORD	Torodi Ar. Bea	124.99	281		PKPdf	01 18 26.0	-0.4
ESDC	Sonseca Array	125.00	314	PKP	PKiKP	01 18 26.2	0.0
	comp=Z,0.8nm,0.3s,baz=17,slow=3.3,SNR=7.7						
PAB	San Pablo	125.33	314	PKIKP	PKiKP	01 18 27.1	+0.2
PAB	San Pablo	125.33	314		PKiKP	01 18 27.1	+0.2
T25A	Trinidad	125.65	49	P	PKiKP	01 18 28.7	+0.9
	baz=290						
MNTX	Cornudas Mount	126.53	56	P	PKiKP	01 18 30.4	+0.9
	baz=286,SNR=12						
HORN	Hornachuelos	126.62	312	P	PKiKP	01 18 29.8	+0.4
	SNR=7.2						
PVRL	Vila Real	126.97	317	ePKPdf	PKiKP	01 18 31.1	+1.0
PCAB	Cabril	126.98	318	ePKPdf	PKiKP	01 18 30.9	+0.8
PGAV	Gavieira, Arco	127.03	318	ePKPdf	PKiKP	01 18 30.9	+0.7
MTE	Manteigas	127.23	316	ePKPdf	PKiKP	01 18 31.6	+0.9
PCBR	Castelo Branco	127.42	315	ePKPdf	PKiKP	01 18 31.8	+0.9
PMRV	Marv??o	127.53	315	ePKPdf	PKiKP	01 18 31.8	+0.6
MDT	Midelt	127.81	306	P	PKiKP	01 18 33.0	+0.9
	SNR=9.4						
COI	Coimbra	127.91	316	ePKPdf	PKPdf	01 18 29.0	-2.3
PCAS	Casmilo, Conde	128.04	316	ePKPdf	PKiKP	01 18 32.9	+0.7
ECSD	EROS Data Cent	128.18	39	P	PKPdf	01 18 31.7	0.0
	baz=301						
PMTG	Montargil	128.27	315	ePKPdf	PKPdf	01 18 31.3	-0.7
PBEJ	Beja	128.45	313	ePKPdf	PKiKP	01 18 34.1	+1.0
TXAR	Lajitas Array	128.57	58	PKP	PKiKP	01 18 34.3	+0.6
	comp=Z,2.1nm,0.6s,baz=234,slow=1.6,SNR=19						
TXAR				SKPbc	SKPbc	01 21 13.2	
	comp=Z,11nm,0.9s,baz=263,slow=1.5,SNR=46						
TXAR				PKKPbc	PKKPdf	01 27 54.8	-47
	comp=Z,0.3nm,0.4s,baz=100,slow=5.3,SNR=6.8						
TXAR	Lajitas Array	128.57	58	PKIKP	PKiKP	01 18 33.6	-0.1
TXAR	Lajitas Array	128.57	58		PKiKP	01 18 33.6	-0.1
EYMN	Ely	128.66	32	P	PKPdf	01 18 32.8	+0.3
	baz=309						
PCVE	Castro Verde	128.74	313	ePKPdf	PKPdf	01 18 32.5	-0.4
MESJ	Messejana	128.78	313	ePKPdf	PKPdf	01 18 31.9	-1.1
MESJ	Messejana	128.78	313	ePKPdf	PKPdf	01 18 32.9	-0.1
PBDV	Barranco-do-Ve	128.81	312	ePKPdf	PKiKP	01 18 35.2	+1.3
PNCL	Nicolau / Gran	128.89	314	ePKPdf	PKiKP	01 18 34.6	+0.7
TZRR	Tazzarine	129.19	304	P	PKiKP	01 18 36.0	+1.1
	SNR=6.4						
MORF	Marmelete	129.31	313	ePKPdf	PKPdf	01 18 33.1	-1.0
MORF	Marmelete	129.31	313	ePKPdf	PKiKP	01 18 36.0	+1.1
ZGR	Zagora	129.42	303	P	PKiKP	01 18 36.3	+0.9
	SNR=6.7						
PFVI	Vila Bisbo	129.51	313	ePKPdf	PKiKP	01 18 36.4	+1.2
PLCA	Paso Flores	129.67	164	PKP	PKiKP	01 18 36.1	+0.5
	comp=Z,6.0nm,0.7s,baz=292,slow=0.6,SNR=9.6						
PLCA				SKPbc	SKPbc	01 21 16.1	+0.2
	comp=Z,5.6nm,0.9s,baz=274,slow=2.0,SNR=6.5						
PLCA	Paso Flores	129.67	164	eP	PKPdf	01 18 33.8	-1.0
WMOK	Wichita Mounta	130.77	50	P	PKiKP	01 18 37.9	0.0
	baz=293						
ABTX	Abilene, Hawle	130.88	53	P	PKiKP	01 18 38.6	+0.4
	baz=290						
KIC	Kosan Boka	131.10	272	ePKIKP	PKPdf	01 18 38.0	-0.1
	comp=Z,23nm,0.7s						
DBIC	Dimbokro	131.23	272	PKP	PKiKP	01 18 39.5	+0.1
	comp=Z,10nm,0.6s,baz=61,slow=2.8,SNR=22						
DBIC				SKPbc	SKPbc	01 21 22.6	+0.3
	comp=Z,7.3nm,0.7s,baz=79,slow=3.1,SNR=12						
DBIC	Dimbokro	131.23	272		PKPdf	01 18 38.8	+0.4
LIC	Lamto	131.37	272	ePKIKP	PKPdf	01 18 38.2	-0.4
	comp=Z,37nm,0.3s						
TIC	Toumodi	131.39	272	ePKIKP	PKPdf	01 18 38.5	-0.2
	comp=Z,18nm,0.3s						
JCT	Junction City	131.46	56	P	PKiKP	01 18 40.0	+0.5
	baz=288						
SCHQ	Schefferville	131.66	10	PKP	PKiKP	01 18 39.2	+0.2
	comp=Z,4.6nm,0.3s,baz=354,slow=2.3,SNR=30						
SCHQ				SKPbc	SKPbc	01 21 22.7	+0.1
	comp=Z,23nm,0.7s,baz=3.0,slow=3.5,SNR=47						
JFWS	Jewell Farm	132.47	36	P	PKPdf	01 18 39.2	-0.6
	baz=307						
TUL1	Leonard	132.51	47	P	PKiKP	01 18 41.2	-0.2
	baz=296						
D46A	Sault St. Mari	133.07	28	P	PKiKP	01 18 42.3	+0.2
	baz=317						
F45A	CMU Biological	133.22	30	P	PKiKP	01 18 43.2	+0.7
	baz=315						
D47A	Chapleau	133.37	27	P	PKiKP	01 18 42.8	+0.1
	baz=318						
E47A	Iron Bridge	133.74	28	P	PKiKP	01 18 43.7	+0.2
	baz=318						
D48A	Paudash Townsh	133.86	26	P	PKiKP	01 18 43.3	-0.4
	baz=320						
E48A	Lockeyer	134.23	27	P	PKPdf	01 18 42.5	-0.5
	baz=319						
LSQQ	Lebel-sur-Quev	134.26	21	P	PKPdf	01 18 42.8	-0.2
	baz=327						
W39A	Magazine	134.29	47	P	PKPdf	01 18 43.6	+0.1
	baz=298						
U40A	Yellville	134.40	45	P	PKPdf	01 18 43.4	-0.3
	baz=300						
CCM	Cathedral Cave	134.63	42	PKIKP	PKPdf	01 18 44.3	+0.2
CCM	Cathedral Cave	134.63	42		PKPdf	01 18 44.3	+0.2
CCM	Cathedral Cave	134.63	42	P	PKiKP	01 18 45.5	-0.1
	baz=303						
D50A	G1974 Best Tow	134.70	25	P	PKPdf	01 18 43.7	-0.2
	baz=323						
MIAR	Mount Ida	134.74	48	P	PKPdf	01 18 43.3	-1.1
	baz=297						
D51A	Lot 18 Range I	134.96	24	P	PKPdf	01 18 43.8	-0.6
	baz=323						
T42A	Van Buren	135.28	43		PKPdf	01 18 45.3	0.0
J47A	Sunmer	135.28	32	P	PKPdf	01 18 45.7	+0.6
	baz=314						
E51A	G1948 Merrick	135.35	25	P	PKPdf	01 18 44.2	-0.9
	baz=323						
W41B	Gary Mavity, V	135.41	46	P	PKPdf	01 18 46.1	+0.5
	baz=299						
K47A	Vermontville	135.58	33	P	PKPdf	01 18 45.7	+0.1
	baz=313						
D53A	Lac Vacive, Po	135.64	23	P	PKPdf	01 18 45.4	-0.2
	baz=325						
F51A	Arnstein	135.65	26	P	PKPdf	01 18 45.1	-0.6
	baz=322						
D54A	Lac Fusel, La	135.97	22	P	PKPdf	01 18 45.4	-0.9
	baz=327						
F52A	Sundridge	136.01	26	P	PKiKP	01 18 47.8	-0.4
	baz=322						
E53A	Dumoine, Ponti	136.22	24	P	PKPdf	01 18 46.8	0.0
	baz=325						
L48A	N Adams	136.38	33	P	PKPdf	01 18 46.9	-0.3
	baz=313						
D55A	Sainte-Anne-du	136.52	21	P	PKPdf	01 18 47.2	-0.1
	baz=328						
D56A	ZEC Mazanza, M	136.75	21	P	PKPdf	01 18 47.6	-0.2
	baz=329						
I51A	Listowel	136.78	29	P	PKiKP	01 18 49.4	-0.4
	baz=319						
D57A	Chemin Vers le	137.08	20	P	PKPdf	01 18 48.7	+0.4
	baz=330						
E56A	St. Veronique	137.09	21	P	PKPdf	01 18 48.9	+0.6
	baz=328						
LATQ	La Tuque	137.12	19	P	PKiKP	01 18 50.2	-0.1
	baz=332						
P48A	Milroy	137.47	37	P	PKiKP	01 18 51.0	-0.3
	baz=310						
E57A	Chemin Saint G	137.51	21	P	PKiKP	01 18 51.6	+0.4
	baz=330						
Q48A	North Vernon	137.62	37	P	PKPdf	01 18 50.2	+0.6
	baz=309						
P49A	Miami Univ. Ec	137.84	36	P	PKiKP	01 18 51.7	-0.3
	baz=311						
E58A	La Victoria	137.85	20	P	PKiKP	01 18 51.0	-0.8
	baz=331						
WVT	Waverly	137.97	42	P	PKiKP	01 18 52.0	-0.4
	baz=305						
P50A	Jamestown	138.32	35	P	PKiKP	01 18 52.2	-0.9
	baz=312						
ACSO	Alum Creek Sta	138.35	34		PKPdf	01 18 51.0	+0.1
ACSO	Alum Creek Sta	138.35	34	P	PKPdf	01 18 51.8	+0.9
	baz=314						
R49A	Shelbyville	138.37	38	P	PKiKP	01 18 53.3	+0.1
	baz=310						
S49A	Springfield	138.62	38	P	PKPdf	01 18 52.1	+0.6
	baz=309						
O51A	Pataskala	138.62	34	P	PKPdf	01 18 51.5	+0.1
	baz=314						
N52A	McGinn’s Farm,	138.65	32	P	PKPdf	01 18 51.7	+0.3
	baz=316						
E61A	Lac Etchemin	138.68	17	P	PKPdf	01 18 51.9	+0.6
	baz=335						
CFA	Coronel Fontan	138.83	161	PKP	PKPdf	01 18 52.6	+0.5
	comp=Z,16nm,0.6s,baz=253,slow=1.3,SNR=16						
CFA				SKPbc	SKPbc	01 21 45.4	-0.3
	comp=Z,3.7nm,0.6s,baz=178,slow=3.6,SNR=6.8						
M54A	Oil Creek Stat	139.17	30	P	PKPdf	01 18 52.5	+0.1
	baz=319						
S50A	Richmond	139.23	38	P	PKiKP	01 18 54.6	-0.3
	baz=310						
P52A	Corning	139.24	34	P	PKPdf	01 18 52.7	+0.2
	baz=314						
T50A	Nancy	139.37	39	P	PKiKP	01 18 55.3	0.0
	baz=309						
J58A	Remsen	139.67	24	P	PKiKP	01 18 55.9	+0.2
	baz=326						
L56A	Greenwood	139.68	27	P	PKiKP	01 18 55.2	-0.6
	baz=322						
S51A	Beattyville	139.74	37	P	PKiKP	01 18 55.8	-0.2
	baz=311						
O54A	Avella	139.79	32	P	PKiKP	01 18 56.3	+0.2
	baz=317						
J59A	Piesco	139.90	23	P	PKiKP	01 18 56.3	+0.1
	baz=327						
I60A	Shoreham	140.03	22	P	PKiKP	01 18 56.8	+0.4
	baz=329						
P54A	Burton	140.16	33	P	PKPdf	01 18 47.4	-6.8
	baz=316						
LRAL	Lakeview Retre	140.24	46	P	PKPdf	01 18 48.6	-5.9
	baz=302						
N56A	West Decatur	140.29	29	P	PKPdf	01 18 48.0	-6.4
	baz=320						
MCWV	Mont Chateau	140.45	32	P	PKPdf	01 18 48.7	-6.0
	baz=317						
Z50A	Ashland	140.88	45	P	PKPdf	01 18 50.8	-4.9
	baz=304						
Q56A	Snyder Ridge,	141.25	32	P	PKPdf	01 18 50.8	-5.4
	baz=318						
N59A	State Game Lan	141.47	27	P	PKPdf	01 18 52.5	-4.0
	baz=324						
T55A	Pulaski	141.75	36	P	PKPdf	01 18 52.6	-4.6
	baz=314						
X53A	Estanollee	141.91	41	P	PKPdf	01 18 54.5	-3.0
	baz=308						
V54A	Nebo	141.96	38	P	PKPdf	01 18 54.0	-3.6
	baz=311						
U55A	TA2, Sparta	142.02	37	P	PKPdf	01 18 53.7	-4.1
	baz=313						
Q58A	Fox Den Farm,	142.10	31	P	PKPdf	01 18 53.8	-3.9
	baz=320						
T56A	Rocky Mt	142.24	35	P	PKPdf	01 18 54.4	-3.6
	baz=315						
W54A	Cherokee Point	142.26	39	P	PKPdf	01 18 55.2	-2.9
	baz=310						
V55A	Taylorsville	142.35	37	P	PKPdf	01 18 55.2	-3.0

	baz=312						
P60A	Greenville	142.41	28	P	PKPdf	01 18 54.5	-3.7
	baz=323						
GOGA	Godfrey	142.47	42	P	PKPdf	01 18 54.7	-3.8
	baz=307						
X54A	Belton	142.48	40	P	PKPdf	01 18 55.8	-2.7
	baz=309						
KMSC	Kings Mountain	142.75	38	P	PKPdf	01 18 56.4	-2.5
	baz=311						
X55A	Gracelyn & Ava	143.00	40	P	PKPdf	01 18 57.3	-2.1
	baz=310						
V57A	Coltrane Farms	143.19	36	P	PKPbc	01 18 57.2	-0.2
	baz=314						
S59A	Mechanicsville	143.19	32	P	PKPbc	01 18 57.3	-0.1
	baz=319						
Y55A	Saluda	143.20	40	P	PKPbc	01 18 58.0	+0.5
	baz=309						
W56A	Indian Trail	143.22	38	P	PKPbc	01 18 57.9	+0.4
	baz=312						
X56A	White Oak	143.37	39	P	PKPbc	01 18 58.4	+0.4
	baz=311						
U58A	Oxford	143.53	34	P	PKPab	01 18 58.3	0.0
	baz=316						
TIGA	Tifton	143.53	45	P	PKPdf	01 18 59.5	-0.9
	baz=305						
W57A	Gilead	143.56	37		PKPbc	01 18 58.9	+0.3
W57A	Gilead	143.56	37	P	PKPbc	01 18 58.8	+0.2
	baz=313						
V58A	Windy Hill, Pi	143.63	36		PKPbc	01 18 58.9	+0.1
V58A	Windy Hill, Pi	143.63	36	P	PKPab	01 18 58.7	0.0
	baz=315						
T59A	Double "B" Far	143.65	33		PKPbc	01 18 59.1	+0.3
T59A	Double "B" Far	143.65	33	P	PKPbc	01 18 59.0	+0.2
	baz=318						
Z56A	Williston	143.90	41	P	PKPdf	01 19 00.9	-0.1
	baz=309						
X57A	Johnson Farm,	143.96	38	P	PKPab	01 19 00.5	+0.5
	baz=312						
Y57A	Sumter	144.08	39		PKPab	01 19 00.7	+0.3
Y57A	Sumter	144.08	39	P	PKPdf	01 19 00.9	-0.3
	baz=311						
W58A	Raeford	144.10	37	P	PKPab	01 19 00.5	0.0
	baz=314						
V59A	Middlesex	144.15	35	P	PKPab	01 19 00.7	+0.1
	baz=316						
Z57A	Bowman	144.35	40	P	PKPdf	01 19 02.2	+0.4
	baz=310						
X58A	Rowland	144.36	37	P	PKPab	01 19 01.4	0.0
	baz=313						
W59A	Clinton	144.46	36	P	PKPdf	01 19 01.9	0.0
	baz=315						
157A	Early Branch	144.55	41	P	PKPab	01 19 03.2	+1.0
	baz=309						
Y58A	Scranton	144.60	38	P	PKPab	01 19 02.9	+0.5
	baz=312						
V60A	Jim Taylor Roa	144.70	34	P	PKPdf	01 19 02.4	+0.1
	baz=317						
U61A	Possum Corner	144.72	32		PKPab	01 19 02.8	+0.1
U61A	Possum Corner	144.72	32	P	PKPdf	01 19 02.5	+0.1
	baz=319						
CNNC	Cliffs of the	144.73	35	P	PKPab	01 19 02.7	-0.1
	baz=316						
X59A	McDuffie Farm,	144.79	37	P	PKPbc	01 19 02.7	+0.1
	baz=314						
NHSC	New Hope	144.81	40	P	PKPab	01 19 02.9	-0.2
	baz=311						
Z58A	St. Stephen	144.89	39	P	PKPab	01 19 03.8	+0.3
	baz=311						
W60A	Pink Hill	144.96	35	P	PKPab	01 19 03.5	-0.2
	baz=316						
Y59A	Loris	145.03	38	P	PKPab	01 19 03.9	-0.1
	baz=313						
158A	Hollywood	145.04	40	P	PKPab	01 19 03.7	-0.3
	baz=310						
V61A	Roper	145.05	33	P	PKPab	01 19 03.7	-0.2
	baz=318						
X60A	Albert Glenn T	145.15	36	P	PKPab	01 19 04.1	-0.3
	baz=315						
ITAB	Concordia	145.45	183	*e*P	PKPbc	01 19 05.1	+0.3
CPUP	Villa Florida	146.25	175	PKPbc	PKPab	01 19 08.1	-0.7
	comp=Z,36nm,0.5s,baz=188,slow=1.7,SNR=96						
CPUP	Villa Florida	146.25	175	*e*P	PKPbc	01 19 06.7	-0.4
LVC	Limon Verde	146.73	154	PKPbc	PKiKP	01 19 10.6	-0.7
	comp=Z,33nm,0.6s,baz=246,slow=2.3,SNR=29						
LVC	Limon Verde	146.73	154	PKIKP	PKPbc	01 19 07.9	-1.2
LVC						01 19 10.4	
LVC	Limon Verde	146.73	154		PKPbc	01 19 07.8	-1.2
LVC					PKiKP	01 19 10.3	-0.9
DWPF	Disney Wildern	146.94	48	P	PKPbc	01 19 09.7	+0.7
	baz=303						
PTGB	Pitanga	147.95	183	*e*P	PKPbc	01 19 10.1	-1.7
PARB	Paraibuna	148.30	195	*e*P	PKiKP	01 19 13.6	-0.5
SPB	Sao Paulo	148.46	192		PKPbc	01 19 13.5	+0.4
SPB	Sao Paulo	148.46	192	*e*P	PKiKP	01 19 14.3	-0.1
PB11	IPOC Station P	148.86	151		PKPdf	01 19 09.5	-0.4
PB11				PKPbc	PKiKP	01 19 15.0	-0.5
PB11				PKPab	PKPab	01 19 20.8	+1.0
JTS	Las Juntas de	149.31	82		PKPdf	01 19 10.1	-0.5
JTS				PKPbc	PKiKP	01 19 16.5	+0.2
TRCB	Terra Rica	149.89	183	*e*P	PKPbc	01 19 14.8	-1.8
NNA	Nana	150.18	130	PKPbc	PKiKP	01 19 18.2	+0.1
	comp=Z,30nm,0.8s,baz=241,slow=6.9,SNR=3.9						
NNA	Nana	150.18	130	PKIKP	PKPbc	01 19 17.6	+0.1
NNA	Nana	150.18	130		PKPbc	01 19 17.6	+0.1
BSCB	Bom Sucesso	150.29	198	*e*P	PKiKP	01 19 18.6	+0.3
BSFB	Barra de Sao F	150.82	206	*e*P	PKiKP	01 19 19.7	+0.4
SJMB	Sao Joao De Ma	151.08	206	*e*P	PKPbc	01 19 19.0	-0.5
ATAH	Atahualpa	151.68	120	PKP	PKPdf	01 19 16.4	+1.7
	comp=Z,9.6nm,0.8s,baz=126,slow=5.3,SNR=6.2						
ATAH				PKPbc	PKiKP	01 19 23.3	+1.6
	comp=Z,29nm,0.7s,baz=184,slow=2.8,SNR=23						
LPAZ	La Paz	152.57	149	PKP	PKPdf	01 19 17.5	+1.3
	comp=Z,4.9nm,1.0s,baz=64,slow=0.7,SNR=12						
LPAZ				PKPbc	PKiKP	01 19 24.4	+0.6
	comp=Z,10nm,0.4s,baz=49,slow=2.1,SNR=51						
LPAZ				PKPab	PKPab	01 19 36.4	+0.6
	comp=Z,18nm,0.7s,baz=183,slow=4.8,SNR=16						
LPAZ	La Paz	152.57	149		PKPdf	01 19 15.4	-0.8
LPAZ				PKPbc	PKiKP	01 19 24.4	+0.6
LPAZ				PKPab	PKPab	01 19 36.2	+0.4
LPAZ	La Paz	152.57	149	*e*P	PKPdf	01 19 12.1	-4.2
C2SB	Chapadao do Su	153.90	183	*e*P	PKPdf	01 19 18.6	+1.3
OTAV	Otavalo	154.59	105	*e*P	PKPdf	01 19 12.2	-6.8
SIV	San Ignacio	155.66	163	PKP	PKPdf	01 19 20.8	+1.0
	comp=Z,4.7nm,0.7s,baz=186,slow=1.0,SNR=29						
SIV				PKPab	PKPab	01 19 48.7	+0.4
	comp=Z,14nm,0.5s,baz=158,slow=4.6,SNR=31						
SIV				PP	PP	01 23 30.5	+5.1
	comp=Z,2.8nm,0.8s,baz=236,slow=4.3,SNR=5.0						
BDFB	Brasilia	156.28	194	PKP	PKPdf	01 19 21.2	+0.5
	comp=Z,2.9nm,0.7s,baz=218,slow=9.6,SNR=3.5						
BDFB				PKPab	PKPab	01 19 51.8	+0.8
	comp=Z,7.9nm,0.6s,baz=133,slow=5.0,SNR=7.5						
BDFB	Brasilia	156.28	194		PKPab	01 19 51.6	+0.5
SALV	Santo Antonio	156.72	176	*e*P	PKPdf	01 19 21.9	+0.8
RCBR	Riachuelo	157.62	234	PKPab	PKPab	01 19 58.4	+1.4
	comp=Z,12nm,0.6s,baz=108,slow=5.0,SNR=8.9						
ROSC	El Rosal	159.64	96	PKP	PKPdf	01 19 26.2	+0.9
	comp=Z,8.8nm,0.6s,baz=176,slow=16,SNR=4.7						
SAML	Samuel	161.30	151	PKP2	PKPab	01 20 13.4	+0.5
SAML						02 19 27.5	
SAML	Samuel	161.30	151		PKPdf	01 19 27.5	+1.0
SAML					PKPab	01 20 13.4	+0.5
SDV	Santo Domingo	163.49	84	PKP	PKPdf	01 19 28.6	-0.3
	comp=Z,7.6nm,0.8s,baz=269,slow=2.2,SNR=7.7						
SDV	Santo Domingo	163.49	84		PKPdf	01 19 28.8	0.0
SDV	Santo Domingo	163.49	84	*e*P	PKPdf	01 19 28.7	-0.3
PTGA	Pitinga	169.92	144	PKP	PKPdf	01 19 33.3	-0.2
	comp=Z,0.6nm,0.3s,baz=118,slow=4.4,SNR=4.4						
PTGA				PKPab	PKPab	01 20 50.9	0.0
	comp=Z,3.8nm,0.6s,baz=179,slow=3.3,SNR=8.1						

YARS 16 01:09:33.0±0.0**, 68°.96N×136°.80E, h15^{km}, ML2.0**/3**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YBGR	Belaya Gora	3.45	93	*e*Pg	Pb	01 10 34.6	+1.0
	2.1nm,1.0s						
MOMR	Moma	3.50	133	*e*Pg	Pb	01 10 36.4	+1.9
	4.5nm,0.7s						
TIXI	Tiksi	3.81	319	*e*Pg	Pb	01 10 42.6	+2.9
	0.6nm,0.2s						

BEO ***16*** *01:34:14.9±1.0, 41°.47N×19°.52E, h12^{km}, ML1.7/5*
TIR ***16*** *01:34:14.6, 41°.55N×19°.55E, h7^{km}, Md2.6/4*
ISC 16 01:34:14.4±1.4**, 41°.51N**±0°.05×**19°.53E**±0°.06**, h11**^{km}±11^{km}**, n11, σ0^{s}.78**/20**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.30	122	*e*Pg	Pg	01 34 20.8	+0.3
TIR				*e*Sg	Sb	01 34 26.5	-0.3
TIR	Tirane	0.30	122	*i* PG	Pg	01 34 20.8	+0.3
TIR				*i* SG	Sb	01 34 26.5	-0.3
PUK	Puka	0.60	27	*i* PG	Pg	01 34 26.3	+0.2
PUK				*i* SG	Sb	01 34 36.8	+1.2
PHP	Peshkopia	0.71	75	*i* PG	Pg	01 34 27.9	-0.2
PHP				*i* SG	Sb	01 34 38.2	-0.4
PDG	Podgorica	0.94	348	*e*Pg	Pg	01 34 31.4	-1.2
PDG				*e*Sg	Sn	01 34 46.9	-0.2
PDG				*e*Sg	Sb	01 34 47.4	+2.1
BCI	Bajram Curri	0.95	25	*i* PG	Pg	01 34 32.0	-0.7
BCI				*i* SG	Sb	01 34 46.0	+0.5
TREB	Trebinje	1.49	324	*e*Pg	Pn	01 34 41.8	+0.6
TREB				*e*Sg	Sg	01 35 02.7	+0.2
DBRK	Dubrovnik	1.55	319	*e*Pn	Pn	01 34 42.1	+0.2
SJES	Sjenica	1.78	11	*e*Pg	Pg	01 34 48.3	-0.4
SJES				*e*Sg	Sg	01 35 11.4	-0.4
STON	Ston	1.92	316	*e*Pn	Pn	01 34 47.1	0.0
MAKA	Makarska	2.57	315	*e*Pn	Pn	01 34 55.4	-0.6

MAN 16 01:55:39.9, 17°.96N×120°.32E, h35^{km}, mb3.8, ML2.5, MS2.1, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	0.14	106⇑	*e*P	Pn	01 55 47.3	+1.0
SIPP				*e*S	Sn	01 55 53.3	+2.8
APYP	Conner	0.89	96	*e*P	Pn	01 55 55.6	-0.3
APYP				*e*S	Sn	01 56 08.1	+0.5
SMPP	San Manuel, Pa	1.83	169	*e*P	Pn	01 56 10.6	+1.6
SMPP				*e*S	Sn	01 56 31.2	+0.1

ISK ***16*** *02:07:17.9, 34°.82N×25°.30E, h55^{km}±1^{km}, ML3.2/10*
ATH ***16*** *02:07:17.9, 34°.88N×25°.34E, h55^{km}±2^{km}, ML2.9/11, Error ellipse: s-maj=3.0km s-min=1.3km az=352.0*
IDC ***16*** *02:07:18.4±1.4, 34°.92N×25°.28E, h54^{km}±9^{km}, mb3.5/9, mb1 3.5/11, mb1mx3.3/43, mbtmp3.7/11, Error ellipse: s-maj=23.1km s-min=16.8km az=170.0*
THE ***16*** *02:07:18.7, 34°.73N×25°.33E, h12^{km}±2^{km}, ML2.8/6, Error ellipse: s-maj=2.6km s-min=0.5km az=342.0*
DDA ***16*** *02:07:30.7, 35°.97N×26°.08E, h5^{km}±3^{km}, ML2.3*
ISC 16 02:07:18.3±0.9**, 34°.85N**±0°.06×**25°.34E**±0°.03**, h48**^{km}±7^{km}**, n75, σ1^{s}.51**/93**, mb3.9**/9**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAST	Lasithi	0.33	20	P	Pn	02 07 27.4	-0.2
LAST				S	Sn	02 07 34.8	+0.6
	1μm,0.6s						
LAST	Lasithi	0.33	20	P	Pn	02 07 27.4	-0.2
LAST				S	Sn	02 07 35.8	+1.6
LAST				AML	AML	02 07 37.4	
	comp=N,3033μm,0.6s						
LAST				AML	AML	02 07 39.7	
	comp=E,1963μm,0.6s						
SIVA	Sivas	0.47	291	P	Pn	02 07 29.1	+0.2
SIVA				S	Sn	02 07 36.5	-0.1
	comp=E,6μm,0.6s						
SIVA	Sivas	0.47	291	P	Pn	02 07 29.0	0.0
SIVA				S	Sn	02 07 37.2	+0.6
SIVA				AML	AML	02 07 40.2	
	comp=E,13321μm,0.7s						
SIVA				AML	AML	02 07 40.8	
	comp=N,9912μm,0.5s						
NPS	Neapolis	0.47	29	P	Pn	02 07 29.4	+0.4
NPS				S	Sn	02 07 38.6	+1.9
	comp=N,1μm,0.5s						
NPS	Neapolis	0.47	29	P	Pn	02 07 29.4	+0.4
NPS				S	Sn	02 07 38.0	+1.4
NPS				AML	AML	02 07 42.0	
	comp=E,1989μm,0.3s						
NPS				AML	AML	02 07 43.1	
	comp=N,2402μm,0.5s						
HRKL	Herakleio	0.50	337	P	Pn	02 07 30.2	+0.8
HRKL				S	Sn	02 07 39.4	+2.1
	comp=N,2μm,0.5s						
HRKL	Herakleio	0.50	337	PG	Pn	02 07 30.2	+0.8
HRKL				SG	Sn	02 07 39.2	+1.9
KSTL	Kastelli Herak	0.50	334	P	Pn	02 07 27.9	-1.5
KSTL				S	Sn	02 07 35.6	-1.8
IACM	Heraklion	0.50	334	P	Pn	02 07 30.2	+0.8
TMBK	Timbaki Herakl	0.52	295	P	Pn	02 07 30.2	+0.6
TMBK				S	Sn	02 07 38.7	+1.0
	comp=N,880nm,0.5s						
IDI	Anoyia	0.57	320	P	Pn	02 07 31.6	+1.3
IDI	Anoyia	0.57	320	P	Pn	02 07 30.2	-0.1
	comp=N,22nm,0.3s,baz=150,slow=11,SNR=196						
IDI				S	Sn	02 07 40.7	+1.7
	comp=N,91nm,0.3s,baz=225,slow=23,SNR=24						
IDI	Anoyia	0.57	320	P	Pn	02 07 30.5	+0.2
IDI				S	Sn	02 07 40.5	+1.5
IDI				AML	AML	02 07 44.0	
	comp=E,1570μm,0.5s						
IDI				AML	AML	02 07 44.6	
	comp=N,1189μm,0.6s						
IDI	Anoyia	0.57	320	PG	Pn	02 07 30.8	+0.5
IDI				SG	Sn	02 07 40.5	+1.5
STIA	Sitia Lasithi	0.71	60	P	Pn	02 07 33.8	+1.8
ZKR	Zakros	0.77	70	P	Pn	02 07 34.0	+1.2
ZKR				S	Sn	02 07 46.6	+3.2
	comp=N,560nm,0.6s						
ZKR	Zakros	0.77	70	P	Pn	02 07 34.0	+1.2
ZKR				S	Sn	02 07 43.9	+0.5
ZKR				AML	AML	02 07 51.6	
	comp=N,875μm,0.7s						
ZKR				AML	AML	02 07 52.0	
	comp=E,1352μm,0.6s						
ZKR	Zakros	0.77	70	PG	Pn	02 07 34.0	+1.2
GVD	Gavdhos	1.03	270	P	Pn	02 07 36.7	+0.4
GVD				S	Sn	02 07 51.5	+1.9
GVD				AML	AML	02 08 02.6	
	comp=N,1258μm,0.6s						
GVD				AML	AML	02 08 04.9	
	comp=E,1501μm,0.4s						
VAM	Vamos	1.09	301	P	Pn	02 07 39.1	+2.0
VAM	Vamos	1.09	301	P	Pn	02 07 38.4	+1.3
VAM				S	Sn	02 07 52.7	+1.6
VAM				AML	AML	02 07 59.6	
	comp=E,1150μm,0.7s						
VAM				AML	AML	02 08 02.6	
	comp=N,804μm,0.5s						
IMMV	Iera Moni Meta	1.27	299	P	Pn	02 07 40.9	+1.3
IMMV				AML	AML	02 08 07.2	
	comp=N,773μm,0.6s						
IMMV				AML	AML	02 08 08.2	
	comp=E,861μm,0.5s						
IMMV	Iera Moni Meta	1.27	299	PN	Pn	02 07 40.1	+0.5
SAP1	Santorini-Akro	1.50	2	P	Pn	02 07 43.7	+1.0
SANT	Santorini	1.52	4	P	Pn	02 07 43.6	+0.6
SANT	Santorini	1.52	4	PN	Pn	02 07 44.2	+1.2
SANT	Santorini	1.52	4	*i* P	Pn	02 07 43.7	+0.6
ANAF	Anafi Island	1.54	13	P	Pn	02 07 43.9	+0.6
ANAF				AML	AML	02 08 17.3	
	comp=E,898μm,0.4s						
ANAF				AML	AML	02 08 18.1	
	comp=N,1180μm,0.6s						
SAP3	Santorini-Thir	1.58	0	P	Pn	02 07 44.3	+0.5
THT2	Imerovigli	1.58	2	PN	Pn	02 07 45.2	+1.3
CMBO	Columbo, Santo	1.62	2	P	Pn	02 07 45.4	+1.1
KARP	Karpathos	1.65	65	P	Pn	02 07 46.9	+2.2
KARP	Karpathos	1.65	65	P	Pn	02 07 46.6	+1.8
KARP				AML	AML	02 08 22.1	
	comp=N,551μm,0.9s						
KARP				AML	AML	02 08 25.4	
	comp=E,462μm,0.8s						
KARP	Karpathos	1.65	65	PN	Pn	02 07 46.2	+1.5
IOSP	Ios island	1.87	359	P	Pn	02 07 48.1	+0.3
IOSP				AML	AML	02 08 17.3	
	comp=E,417μm,0.5s						
IOSP				AML	AML	02 08 17.6	
	comp=N,281μm,0.4s						
ANKY	Antikythira Is	1.95	302	P	Pn	02 07 50.4	+1.5
MHLO	Agia Marina, M	1.99	338	P	Pn	02 07 50.0	+0.6
MHLA	Plaka, Milos I	2.03	339	P	Pn	02 07 50.5	+0.5
APE	Apeiranthos	2.22	4	P	Pn	02 07 52.8	+0.1
APE	Apeiranthos	2.22	4	PN	Pn	02 07 54.4	+1.8
APE	Apeiranthos	2.22	4	*i* P	Pn	02 07 53.0	+0.4
KTHA	Kythira Island	2.33	308	P	Pn	02 07 54.3	+0.3
SERI	Serifos	2.41	344	P	Pn	02 07 55.5	+0.3
SERI				S	Sn	02 08 23.7	+0.2
DAT	Datca	2.61	44	PN	Pn	02 07 59.6	+1.5
ARG	Arkhangelos	2.65	58	P	Pn	02 07 60.0	+1.5
ARG	Arkhangelos	2.65	58	PN	Pn	02 08 00.5	+2.0
VLI	Veliai	2.70	314	P	Pn	02 07 59.1	0.0
SMG	Samos	3.10	23	P	Pn	02 08 05.2	+0.6
YER	Yerkesik	3.30	45	PN	Pn	02 08 09.2	+1.8
TURN	Turunc	3.33	52	PN	Pn	02 08 05.8	-2.0
TURN	Turunc	3.33	52	*i* P	Pn	02 08 04.1	-3.7
DALY	Dalyan (Mula)	3.33	53	PN	Pn	02 08 09.6	+1.8
PTL	Penteli	3.41	340	P	Pn	02 08 09.3	+0.4
AYDN	Tasoluk	3.47	35	*i* P	Pn	02 08 11.6	+1.8
ITM	Ithomi	3.61	311	P	Pn	02 08 12.1	+0.3
AKAS	Kas	3.74	67	*i* P	Pn	02 08 13.5	-0.1
TAVA	DENIZLI_Tavas	3.89	47	*i* P	Pn	02 08 17.4	+1.8
AKUM	Antalya-Kumluc	4.33	69	*i* P	Pn	02 08 21.6	0.0
KORT	Korkueli	4.60	61	*i* P	Pn	02 08 28.2	+2.9
KORT				IAML		02 09 26.0	
	comp=N,8.9nm,1.2s						
KORT				IAML		02 09 45.0	
	comp=E,8.4nm,0.6s						
KHAL	Karahalli	4.85	42	*i* P	Pn	02 08 29.2	+0.5
USAK	Uak-Merkez	4.86	36	*i* P	Pn	02 08 30.1	+1.3
USAK				IAML		02 10 40.0	
	comp=E,6.2nm,3.3s						
BRTR	Keskin Array B	8.21	51	P	Pn	02 09 15.1	+0.3
	comp=E,0.0nm,0.3s,baz=223,slow=12,SNR=2.6						
MMAI	Mount Meron Ar	8.56	100	P	Pn	02 09 19.9	+0.3
	comp=E,0.7nm,0.3s,baz=288,slow=14,SNR=6.8						
MMAI				S	Sn	02 10 47.8	-7.1
	comp=E,0.9nm,0.3s,baz=310,slow=21,SNR=4.8						
AKASG	Malin Array Be	16.09	9	P	Pn	02 11 02.1	+1.1
	comp=E,0.9nm,0.3s,baz=201,slow=11,SNR=5.9						
KBZ	Khabaz	16.20	52	P	P	02 11 06.6	+1.6
	comp=E,0.1nm,0.3s,baz=216,slow=14,SNR=6.0						
FINES	FINESS Array B	26.61	1	P	P	02 12 49.1	-2.7
	comp=E,2.5nm,0.8s,baz=156,slow=12,SNR=6.4						
AKTO	Aktyubinsk	28.35	47	P	P	02 13 07.0	-0.5
	comp=E,0.5nm,0.5s,baz=243,slow=6.8,SNR=3.3						
TORD	Torodi Ar. Bea	30.41	231	P	P	02 13 25.5	-0.6
	comp=E,0.4nm,0.4s,baz=34,slow=8.8,SNR=16						
ARCES	ARCESS Array B	34.74	0	P	P	02 14 00.9	-2.5
	comp=E,5.4nm,1.0s,baz=185,slow=7.3,SNR=4.9						
MKAR	Makanchi Array	43.82	56	P	P	02 15 19.4	-0.1
	comp=E,0.3nm,0.4s,baz=268,slow=7.7,SNR=12						
ZALV	Zalesovo Beam	45.11	46	P	P	02 15 28.9	-0.7
	comp=E,0.9nm,0.4s,baz=273,slow=8.7,SNR=4.1						
SONM	Songino Array	59.57	51	P	P	02 17 17.3	+0.3
	comp=E,0.4nm,0.4s,baz=274,slow=9.5,SNR=3.4						
SCHQ	Schefferville	63.52	320	P	P	02 17 42.9	-0.5
	comp=E,0.5nm,0.4s,baz=93,slow=3.2,SNR=5.2						
YKA	Yellowknife Ar	77.79	342	P	P	02 19 09.6	-0.4
	comp=E,0.1nm,0.4s,baz=38,slow=5.2,SNR=3.3						

IDC ***16*** *02:08:14.2±5.5, 17°.02S×178°.75W, h473^{km}±39^{km}, mb3.4/6, mb1 3.5/6, mb1mx3.1/35, mbtmp4.3/6, Error ellipse: s-maj=86.4km s-min=24.0km az=124.0*
NEIC ***16*** *02:08:20.9±1.4, 16°.8S±0°.3×179°.3W±0°.3, h530^{km}±18^{km}, mb4.0/3, Error ellipse: s-maj=61.6km s-min=28.8km az=138.0*
ISC 16 02:08:22.2±2.9**, 16°.8S**±0°.4×**179°.4W**±0°.5**, h533**^{km}**, n11, σ1^{s}.55**/12**, mb3.9**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.65	248	P	P	02 09 33.5	-0.3
CTA	Charters Tower	32.75	259	P	P	02 14 11.8	+0.4
	1.0nm,0.4s,baz=84,slow=10,SNR=3.1						
STKA	Stephens Creek	38.40	240	P	P	02 14 56.9	-1.2
	4.9nm,0.6s,baz=93,slow=10,SNR=12						
STKA	Stephens Creek	38.40	240	IAmb	IAmb	02 16 31.2	
	comp=Z,7.1nm,1.6s						
WRA	Warramunga Arr	43.95	258	P	P	02 15 42.0	-0.3
	comp=Z,1.0nm,0.4s,baz=81,slow=6.5,SNR=17						
WRA				PcP	PcP	02 17 16.4	-0.1
	comp=Z,0.7nm,0.8s,baz=104,slow=3.3,SNR=4.0						
WRA	Warramunga Arr	43.95	258	IAmb	IAmb	02 15 44.9	
	comp=Z,0.2nm,0.6s						
AS31	Alice Springs	44.23	253	P	P	02 15 44.0	-0.4
AS31				IAmb	IAmb	02 15 45.0	
	comp=Z,3.0nm,0.5s						
ASAR	Alice Springs	44.23	253	P	P	02 15 44.5	0.0
	comp=Z,6.9nm,0.5s,baz=89,slow=8.1,SNR=107						
ASAR				PcP	PcP	02 17 16.9	-0.6
	comp=Z,0.6nm,0.4s,baz=106,slow=3.7,SNR=5.6						
ASAR				ScP	ScP	02 20 23.0	+4.2
	comp=Z,0.2nm,0.5s,baz=98,slow=3.9,SNR=4.3						
ASAR	Alice Springs	44.23	253	P	P	02 15 43.7	-0.7
FITZ	Fitzroy Crossi	52.32	260	P	P	02 16 45.4	+0.7
	comp=Z,0.9nm,0.4s,baz=181,slow=8.4,SNR=7.1						
PETK	Petropavlovsk-	72.34	346	P	P	02 18 53.1	-0.6
	comp=Z,3.8nm,0.9s,baz=114,slow=8.9,SNR=10						

WEL 16 02:20:58.7±0.8**, 37°S**±5°×**17°7E**±°**, h213**^{km}±7^{km}**, M3.1**/11**, ML3.6**/3**, MLv3.1**/11**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUGZ	Raukumara Rang	1.24	173	P	Pn	02 21 30.6	-1.0
PKGZ	Pakihiroa	1.25	158	P	Pn	02 21 31.5	-0.1
TWGZ	Tauwhareparae	1.50	165	P	Pn	02 21 34.3	+0.7
TWGZ				S	S	02 22 01.5	+0.8
URZ	Urewera	1.55	191	P	Pn	02 21 33.9	0.0
URZ				S	S	02 22 01.8	+0.4
MWZ	Matawai	1.60	179	P	Pn	02 21 34.8	+0.4
MWZ				S	S	02 22 02.5	+0.3
TOZ	Tahuroa Road	1.87	237	P	Pn	02 21 37.7	+0.9
MKAZ	Moumakai	1.90	258	P	Pn	02 21 37.3	+0.1
RIGZ	Rimuhau	1.98	174	P	Pn	02 21 38.6	+0.6
RIGZ				S	S	02 22 09.0	+0.4
ETAZ	East Tamaki Re	2.06	263	P	Pn	02 21 39.0	+0.2
KWHZ	Kaweka Forest	2.82	197	P	Pn	02 21 46.8	-0.1
KWHZ				S	S	02 22 26.2	+1.8
BHHZ	Black Hill Sta	2.97	202	P	Pn	02 21 48.1	-0.6
BHHZ				S	S	02 22 27.7	0.0
KRHZ	Kereru	3.04	196	P	Pn	02 21 48.8	-0.6
KRHZ				S	S	02 22 28.6	-0.3
KAHZ	Kahuranaki	3.10	189	P	Pn	02 21 50.0	-0.1
KAHZ				S	S	02 22 32.2	+2.0
PNHZ	Pukenui	3.33	197	P	Pn	02 21 52.0	-0.9
PNHZ				S	S	02 22 35.3	+0.1
DVHZ	Dannevirke	3.71	196	P	Pn	02 21 56.0	-1.3
DVHZ				S	S	02 22 42.2	-1.1
TIWZ	Tintock	4.23	197	P	Pn	02 22 02.1	-1.6
HOWZ	Holdsworth Sta	4.43	200	P	Pn	02 22 04.0	-2.3
OGWZ	Otaki Gorge	4.46	203	P	Pn	02 22 04.5	-2.1
TMWZ	Te Maipa	4.54	195	P	Pn	02 22 05.9	-1.7
MTW	Mount Morrison	4.68	199	P	Pn	02 22 06.9	-2.4
CAW	Cannon Point	4.76	203	P	Pn	02 22 07.8	-2.5
MSWZ	Moikau Station	4.99	200	P	Pn	02 22 10.6	-2.6
TCW	Tory Channel	5.12	208	P	Pn	02 22 12.1	-2.8
TUWZ	Tuamarina	5.44	209	P	Pn	02 22 15.8	-3.1

JMA ***16*** *02:22:30.0±0.2, 25°.03N×123°.59E, h30^{km}, M3.0*
IDC ***16*** *02:22:30.2±3.4, 24°.59N×122°.80E, h0^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.4/33, mbtmp3.5/4, Error ellipse: s-maj=253.2km s-min=24.3km az=62.0*
ISC 16 02:22:29.1±2.2**, 25°.04N**±0°.10×**123°.60E**±0°.04**, h4**^{km}±15^{km}**, n12, σ0^{s}.61**/17**, mb3.5**/4**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.71	170	P	Pg	02 22 43.2	+0.5
YOJ	Yonaguni jima	0.78	223	P	Pg	02 22 44.4	+0.3
YOJ				*e*S	Sg	02 22 53.8	-0.5
JISG	Ishigakijimahi	0.79	125	P	Pg	02 22 44.9	+0.6
JISG				*e*S	Sg	02 22 55.4	+0.9
JYNG	Yonagunijimaku	0.83	226	P	Pg	02 22 45.1	0.0
JYNG				S	Sg	02 22 55.6	-0.3
JIJ	Ishigaki jima	0.83	143	P	Pg	02 22 45.1	0.0
JKRS	Kuro-shima	0.88	155	P	Pg	02 22 46.2	+0.2
JKRS				*e*S	Sg	02 22 57.5	+0.1
HATJ	Hateruma jima	0.99	169	P	Pg	02 22 48.1	-0.1
HATJ				*e*S	Sg	02 23 00.6	-0.5

JTJ	Tarama	1.08	111	P	Pg	02 22 48.7	-1.1
MKAR	Makanchi Array	39.29	314	P	P	02 29 59.5	+0.5
	0.7nm,0.8s,baz=100,slow=10,SNR=6.9						
ZALV	Zalesovo Beam	40.76	325	P	P	02 30 11.5	+0.5
	0.4nm,0.3s,baz=116,slow=9.8,SNR=2.8						
WRA	Warramunga Arr	45.91	166	P	P	02 30 52.1	-0.9
	0.3nm,0.3s,baz=344,slow=8.8,SNR=2.7						
ASAR	Alice Springs	49.44	168	P	P	02 31 20.4	0.0
	0.2nm,0.4s,baz=351,slow=7.4,SNR=3.9						

AEIC ***16*** *02:24:49±1.2, 53°.89N±0°.08×165°.24W±0°.08, h63^{km}±5^{km}, ML4.0/58, mb4.1/9(NEIC), Error ellipse: s-maj=11.8km s-min=6.1km az=158.0*

NEIC ***16*** *02:24:51.0±1.7, 53°.99N±0°.07×165°.33W±0°.07, h69^{km}±5^{km}, Error ellipse: s-maj=11.1km s-min=5.3km az=167.0*

IDC ***16*** *02:24:51.5±3.2, 54°.40N×165°.28W, h65^{km}±25^{km}, mb3.4/7, mb1 3.7/10, mb1mx3.5/43, mbtmp3.8/10, ML3.7/3, Error ellipse: s-maj=40.0km s-min=17.9km az=176.0*

ISC 16 02:24:50.7±1.0**, 53°.9N**±0°.1×**165°.18W**±0°.05**, h67**^{km}±7^{km}**, n87, σ1**^{s}**.34**/91**, mb3.9**/7**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKSA	Akutan Strait	0.38	308		Pn	02 25 01.3	-0.8
AKSA	Akutan Strait	0.38	308		Pn	02 25 01.3	-0.8
AKSA					Sn	02 25 10.1	-0.4
AKUT	Akutan	0.42	304		Pn	02 25 01.7	-0.6
AKUT					Sn	02 25 10.9	-0.1
AKBBA	Akutan Broad B	0.48	294		Pn	02 25 02.0	-1.0
AKBBA					Sn	02 25 11.5	-0.6
ZRO	Akutan Zero	0.51	292		Pn	02 25 02.5	-0.8
AKMO	Akutan Morgan	0.52	291		Pn	02 25 02.6	-0.8
AKMO					Sn	02 25 12.2	-0.6
AKLV	Akutan Long Va	0.52	300		Pn	02 25 02.6	-0.8
AKLV					Sn	02 25 12.1	-0.7
AKGG	Akutan Green G	0.56	302		Pn	02 25 03.3	-0.5
AKRB	Akutan Reef Bi	0.57	294		Pn	02 25 03.1	-0.8
AKRB					Sn	02 25 13.5	-0.1
WESP	Westdahl Peak	0.65	25		Pn	02 25 04.6	-0.2
WEBT	Westdahl Beart	0.73	20		Pn	02 25 06.6	+0.9
WESN	West Dahl Nort	0.75	28		Pn	02 25 06.4	+0.4
UNV	Unalaska Valle	0.78	266		Pn	02 25 05.0	-1.3
UNV					Sn	02 25 16.7	-1.2
MTBL	Makushin Table	0.89	275		Pn	02 25 06.9	-0.7
MNAT	Makushin Natee	0.89	269		Pn	02 25 06.7	-0.9
MNAT					Sn	02 25 19.3	-0.8
MREP	Makushin Rep't	0.93	265		Pn	02 25 07.5	-0.7
MSW	Makushin Switc	0.95	271		Pn	02 25 07.4	-0.9
MSW					Sn	02 25 20.7	-0.7
MGOD	Makushin Gods	1.01	264		Pn	02 25 08.7	-0.4
MGOD					Sn	02 25 22.3	-0.5
SSLS	Shishaldin Sou	1.07	40		Pn	02 25 09.9	+0.1
SSBA	Shishaldin	1.07	35		Pn	02 25 10.0	+0.1
BRPK	Brown Peak	1.13	48		Pn	02 25 10.4	-0.2
FALS	False Pass	1.41	47		Pn	02 25 14.5	+0.3
FALS	False Pass	1.41	47		Sn	02 25 33.8	+1.8
OKFG	Magazine Ridge	1.70	254		Pn	02 25 18.0	-0.1
BALA	Baldy Mountain	1.90	46		Pn	02 25 21.1	+0.2
OKSP	Okmok Steeple	1.96	252		Pn	02 25 21.6	-0.1
DT1	Dutton Round H	2.08	53		Pn	02 25 23.4	+0.1
DOL	Dolgoi Island	2.30	56		Pn	02 25 26.6	+0.3
HAG	Hague Volcano	2.38	52		Pn	02 25 28.2	+0.9
NIKH	Nikolski High	2.39	248		Pn	02 25 27.6	+0.2
PN7A	Pavlof North-7	2.40	49		Pn	02 25 28.0	+0.3
PVV	Pavlof Volcano	2.46	52		Pn	02 25 29.1	+0.7
BLHA	Black Hill	2.55	44		Pn	02 25 29.1	-0.6
SDPT	Sand Point	3.10	60		Pn	02 25 37.3	+0.3
CNBA	Chernabura Isl	3.40	72		Pn	02 25 41.4	+0.2
VNWF	Veniaminof 8	3.94	53		Pn	02 25 50.5	+1.8
VNFG	Fog Glacier, M	4.02	51		Pn	02 25 51.6	+1.9
VNSS	Veniaminof 8	4.03	52		Pn	02 25 51.4	+1.4
VNNF	Veniaminof 3	4.13	52		Pn	02 25 52.7	+1.5
SPIA	Saint Paul Isl	4.36	321		Pn	02 25 54.3	0.0
CHGN	Chignik	4.57	56		Pn	02 25 57.6	+0.5
ATKA	Atka Island	5.70	256		Pn	02 26 13.0	+0.4
PLK1	Peulik 1	6.21	48		Pn	02 26 21.0	+1.4
SII	Sitkinak Islan	6.83	63		Pn	02 26 30.1	+2.0
KAHC	Katmai Hardscr	7.39	46		Pn	02 26 37.3	+1.4
OHAK	Old Harbor	7.52	59		Pn	02 26 37.5	+0.1
KDAK	Kodiak Island	8.08	56	P	Pn	02 26 43.4	-1.7
	3.2nm,0.3s,baz=228,slow=4.9,SNR=49						
KDAK				S	Sn	02 28 08.9	-6.0
	0.4nm,0.3s,baz=342,slow=24,SNR=6.0						
KDAK	Kodiak Island	8.08	56		Pn	02 26 45.8	+0.7
SVW2	Sparrevohn	8.86	32		Pn	02 26 56.5	+0.6
ILW	Iliamna West	9.01	42		Pn	02 27 00.4	+2.4
RED	Redoubt Volcan	9.37	41		Pn	02 27 05.4	+2.6
RDWB	Redoubt West	9.39	40		Pn	02 27 04.9	+1.7
RSO	Redoubt South	9.41	41		Pn	02 27 05.1	+1.7
GAMB	Gambell	10.45	344		Pn	02 27 19.0	+1.6
SEW	Seward	10.57	48		Pn	02 27 19.5	+0.4
ANM	Nome	10.70	360		Pn	02 27 22.5	+1.7
PPLA	Purkeypile	11.28	32		Pn	02 27 30.0	+1.2
PMR	Palmer	11.50	42		Pn	02 27 32.5	+0.7
BPAW	Bear Paw Mtn.	12.53	30		Pn	02 27 46.9	+1.1
MLY	Manley	13.31	27		Pn	02 27 57.7	+1.3
WRH	Wood River Hil	13.69	33		Pn	02 28 02.0	+0.6
CCB	Clear Creek Bu	13.90	32		Pn	02 28 04.6	+0.5
ILAR	Eielson Array	14.27	33	P	Pn	02 28 06.5	-2.6
	0.3nm,0.3s,baz=216,slow=14,SNR=11						
BCAR	Beaver Creek A	15.20	44		Pn	02 28 21.1	-0.1
TOLK	Toolik Lake Re	16.49	20	P	P	02 28 38.3	-0.7
DAWY	Dawson	16.61	42	P	P	02 28 40.5	+0.3
DAWY				IAmb	IAmb	02 28 42.7	
	comp=Z,7.7nm,0.8s						
WHY	Whitehorse	17.60	55	IAmb	IAmb	02 28 57.6	
	comp=Z,48nm,1.9s						
DLBC	Dease Lake	19.93	63	P	P	02 29 16.3	-0.5
	comp=Z,0.1nm,0.3s,baz=330,slow=8.1,SNR=2.8						
DLBC	Dease Lake	19.93	63	IAmb	IAmb	02 29 29.4	
	comp=Z,25nm,1.6s						
INK	Inuvik	20.67	34	P	P	02 29 20.9	-3.7
	comp=Z,3.1nm,0.5s,baz=232,slow=7.7,SNR=9.6						
INK	Inuvik	20.67	34	P	Pn	02 29 26.8	-0.8
INK				IAmb	IAmb	02 29 27.8	
	comp=Z,8.8nm,1.1s						
PETK	Petropavlovsk-	21.93	283	P	P	02 29 37.0	-1.3
	comp=Z,2.5nm,0.6s,baz=86,slow=14,SNR=12						
C36M	Paulatuk	24.23	35	P	P	02 30 00.8	+0.1
C36M				IAmb	IAmb	02 30 02.4	
	comp=Z,7.4nm,1.3s						
YKA	Yellowknife Ar	27.32	51	P	P	02 30 28.1	-0.6
	comp=Z,1.4nm,0.8s,baz=271,slow=9.7,SNR=20						
YKA				ScP	ScP	02 37 19.7	-0.8
	comp=Z,0.1nm,0.5s,baz=278,slow=3.3,SNR=4.2						
NVAR	Mina Array Bea	35.25	97	P	P	02 31 40.8	+2.0
	comp=Z,0.2nm,0.4s,baz=312,slow=7.2,SNR=2.8						
H11N2	WAKE ISLAND Hy	40.27	223	T	T	03 15 22.0	
	baz=25,slow=76,SNR=59						
H11N3	WAKE ISLAND Hy	40.27	223	T	T	03 15 22.5	
	baz=25,slow=76,SNR=55						
H11N1	WAKE ISLAND Hy	40.28	223	T	T	03 15 12.8	
	baz=25,slow=76,SNR=52						
H11S1	WAKE ISLAND Hy	41.45	223	T	T	03 16 38.2	
	baz=25,slow=76,SNR=56						
H11S2	WAKE ISLAND Hy	41.46	222	T	T	03 16 43.4	
	baz=25,slow=76,SNR=58						
H11S3	WAKE ISLAND Hy	41.46	223	T	T	03 16 43.5	
	baz=25,slow=76,SNR=57						
TXAR	Lajitas Array	50.26	94	P	P	02 33 41.4	+1.2
	comp=Z,1.0nm,0.7s,baz=293,slow=4.8,SNR=3.8						
SCHQ	Schefferville	52.57	46	P	P	02 33 56.1	-0.8
	comp=Z,1.8nm,0.8s,baz=256,slow=8.8,SNR=6.8						
SONM	Songino Array	52.65	302	PcP	PcP	02 35 05.3	-1.6
	comp=Z,0.5nm,0.4s,baz=42,slow=4.6,SNR=3.7						
LZH	Lanzhou	62.31	294	*e*P	P	02 35 06.4	+0.5
LZH				pP	pP	02 35 22.3	-1.2
LZH				sP	sP	02 35 31.8	+0.8
LZH				PP	PP	02 37 24.1	+0.8
WMQ	Urumqi	64.52	310	*e*P	P	02 35 23.8	+3.5
MKAR	Makanchi Array	64.53	315	P	P	02 35 18.8	-1.5
	comp=Z,0.2nm,0.6s,baz=50,slow=7.6,SNR=2.8						

ISK ***16*** *02:38:57.9, 38°.57N×40°.69E, h5^{km}, ML3.7/28*

IDC ***16*** *02:38:58.4±1.0, 38°.63N×40°.67E, h0^{km}, mb3.6/4, mb1 3.6/10, mb1mx3.3/58, mbtmp3.5/10, ML2.5/5, Error ellipse: s-maj=19.5km s-min=10.9km az=151.0*

DDA ***16*** *02:38:58.9, 38°.55N×40°.65E, h7^{km}±2^{km}, MW3.7*

ISC 16 02:38:58.8±1.2**, 38°.57N**±0°.02×**40°.69E**±0°.02**, h4**^{km}±9^{km}**, n54, σ0**^{s}**.87**/68**, mb3.5**/4**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HANI	Diyarbakir_Han	0.27	236	*i* P	Pg	02 39 04.3	+0.2
HANI				*i* S	Sg	02 39 08.5	+0.8
HANI				IAML		02 39 09.0	
	comp=E,11µm,0.3s						
BNGB	Bingl	0.42	359	PG	Pg	02 39 07.4	+0.4
BNGB				SG	Sb	02 39 14.3	-1.4
BNGL	BINGOL	0.53	43	*i* P	Pb	02 39 10.0	-0.8
SVAN	Silvan-Diyarba	0.58	136	PG	Pg	02 39 10.4	+0.5
SVAN				SG	Sb	02 39 19.5	-0.7
SVAN	Silvan-Diyarba	0.58	136	*i* P	Pg	02 39 10.4	+0.5
SVAN				*i* S	Sb	02 39 18.9	-1.3
SVAN				IAML		02 39 20.0	
	comp=N,2µm,0.5s						
MUSM	Mu-Merkez	0.66	76	*i* P	Pg	02 39 11.3	-0.3
DYBB	Diyarbakir	0.75	215	PG	Pb	02 39 13.7	-0.8
DYBB				SG	Sb	02 39 25.1	0.0
DIYA	Diyarbakir	0.78	215	*i* P	Pb	02 39 14.4	-0.7
DIYA				*i* S	Sb	02 39 25.8	-0.3
DIYA				IAML		02 39 27.0	
	comp=N,5µm,0.3s						
KARO	Karliova-Bingo	0.79	21	PG	Pg	02 39 13.9	-0.1
KARO				SG	Sb	02 39 26.3	-0.1
BTMN	Batman	0.82	146	*i* P	Pb	02 39 15.3	-0.4
BTMN				*i* S	Sb	02 39 26.4	-0.7
BTMN				IAML		02 39 27.0	
	comp=E,4µm,0.3s						
VRTB	Varto-Mus	0.84	45	PG	Pb	02 39 15.3	-0.9
VRTB				SG	Sb	02 39 27.9	0.0
VRTB	Varto-Mus	0.84	45	*i* P	Pb	02 39 15.2	-0.9
YEDI	Yedisu-Bingol	0.87	353	PG	Pg	02 39 15.4	-0.2
YEDI				SG	Sb	02 39 28.9	+0.1
TNCL	Tunceli-Merkez	1.05	302	*i* P	Pg	02 39 18.1	-0.7
TNCL				*i* S	Sb	02 39 32.6	-1.1
TNCL				IAML		02 39 45.0	
	comp=N,1µm,0.7s						
GURO	Guroymak-BITLI	1.05	91	PG	Pg	02 39 19.0	0.0
PTK	Pertek	1.06	288	PG	Pb	02 39 19.3	-0.6
SVRC	Sivrice-ELAZID	1.10	260	PN	Pb	02 39 19.9	-0.6
SVRC				SN	Sn	02 39 36.3	-0.7
MAZI	Mazidag	1.12	190	PN	Pg	02 39 19.8	-0.6
SRTM	Siirt_Merkez	1.13	120	*i* P	Pg	02 39 20.4	-0.1
BLIS	Bitlis-Merkez	1.13	97	*i* P	Pg	02 39 20.3	-0.2
BLIS				*i* S	Sb	02 39 35.8	-0.4
BLIS				IAML		02 39 39.0	
	comp=E,1µm,0.5s						
MARD	Mardin	1.26	177	*i* P	Pg	02 39 22.3	-0.6
MARD				*i* S	Sg	02 39 38.9	-0.3
MARD				IAML		02 39 40.0	
	comp=E,5µm,0.4s						
ERZN	Erzincan	1.26	324	PN	Pn	02 39 23.2	-0.2
EKAR	Karacoban	1.27	57	*i* P	Pn	02 39 24.6	+0.9
ELZG	Elazig	1.34	267	*i* P	Pb	02 39 23.8	-0.8
ELZG				*i* S	Sn	02 39 42.7	-0.1
ELZG				IAML		02 39 46.0	
	comp=E,2µm,0.8s						
EUZM	Uzumlu	1.37	326	*i* P	Pg	02 39 25.1	-0.1
KOPT	Kop Dagi	1.45	354	*i* P	Pg	02 39 26.6	-0.1
MLAZ	Malazgirt-MUS	1.56	68	PN	Pb	02 39 27.8	-0.6
KOPR	Koprukoy-ERZUR	1.68	32	PN	Pb	02 39 29.6	-0.9
SIRT	Sirnak	1.75	127	PN	Pb	02 39 30.6	-0.9
MALT	Malatya	1.79	262	PN	Pb	02 39 31.3	-1.0
AKDM	Akdamar-Van	1.82	97	PN	Pb	02 39 31.7	-1.0
URFA	Urfa	1.85	233	PN	Pb	02 39 32.0	-1.3
BAYT	Aydıntepe-Bayb	1.87	347	PN	Pb	02 39 32.5	-1.2
ARPR	Arapgir-MALATY	1.91	287	PN	Pb	02 39 32.9	-1.4
AGRB	Hanur-Agry	2.06	60	PN	Pn	02 39 35.0	+0.6
VANB	Van	2.12	88	PN	Pb	02 39 36.2	-1.7
SENK	Senkaya-Erzuru	2.37	32	PN	Pn	02 39 39.2	+0.5
DARE	Darende-Malaty	2.51	271	PN	Pn	02 39 41.5	+1.0
CHOM	Cayeli-Rize	2.52	1	PN	Pn	02 39 41.9	+1.2
CLDR	Caldiran	2.59	76	PN	Pn	02 39 42.5	+0.8
BCA	Borcka	2.96	14	PN	Pn	02 39 47.7	+1.1
TASB	TASBURUN-IGDIR	3.10	62	PN	Pn	02 39 49.7	+1.1
SVSK	Karacayir	3.16	296	PN	Pn	02 39 51.2	+1.8
GNI	Garni	3.52	62	Pn	Pn	02 39 55.4	+1.0
	comp=E,2.3nm,0.3s,baz=258,slow=3.7,SNR=15						
KBZ	Khabaz	5.42	17	Pn	Pn	02 40 22.2	+1.9
	comp=E,0.1nm,0.3s,baz=234,slow=17,SNR=2.1						
BRTR	Keskin Array B	5.60	284	Pn	Pn	02 40 24.1	+1.1
	comp=E,0.3nm,0.3s,baz=103,slow=13,SNR=15						
MMAI	Mount Meron Ar	7.01	219	Pn	Pn	02 40 44.4	+2.1
	comp=E,2.3nm,0.3s,baz=32,slow=14,SNR=22						
MMAI				Lg	Lg	02 42 40.9	
	comp=E,3.0nm,0.3s,baz=30,slow=32,SNR=4.5						
ASF	Jabal al Asfar	7.09	207	Pn	Pn	02 40 44.6	+1.1
	comp=E,0.1nm,0.3s,baz=0.0,slow=5.1,SNR=2.4						
ASF				Lg	Lg	02 42 44.9	
	comp=E,1.0nm,0.3s,baz=342,slow=20,SNR=3.1						
EIL	Elat	10.07	210	Lg	Lg	02 44 25.8	
	comp=E,0.4nm,0.3s,baz=91,slow=16,SNR=4.3						
AKTO	Aktyubinsk	17.08	40	P	Pn	02 42 58.6	+0.2
	comp=E,0.1nm,0.3s,baz=234,slow=15,SNR=2.3						
FINES	FINESS Array B	24.63	343	P	P	02 44 20.4	+0.3
	comp=E,3.8nm,0.9s,baz=141,slow=12,SNR=3.8						
KURBB	Kurchatov Arra	29.20	53	P	P	02 45 02.1	+0.8
	comp=E,0.3nm,0.4s,baz=263,slow=8.8,SNR=4.1						
MKAR	Makanchi Array	31.36	61	P	P	02 45 20.6	0.0
	comp=E,0.8nm,0.9s,baz=264,slow=9.5,SNR=6.6						
YKA	Yellowknife Ar	77.33	349	P	P	02 50 53.8	-0.4
	comp=E,0.2nm,0.5s,baz=14,slow=5.1,SNR=4.1						

IDC 16 03:15:16.9±2.8**, 23°.68S**×**175°.29W, h0**^{km}**, mb3.9**/5**, mb1 4.3**/5**, mb1mx3.9**/33**, mbtmp3.9**/5**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.8**/29**, Error ellipse: s-maj=166.9km s-min=26.8km az=156.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	27.57	297	LR	LR	03 31 08.6	
	comp=Z,67nm,19.3s,baz=40,slow=34						
ASAR	Alice Springs	46.32	259	P	P	03 23 44.9	+0.1
	1.2nm,0.5s,baz=88,slow=7.2,SNR=18						
WRA	Warramunga Arr	46.72	264	P	P	03 23 47.5	-0.6
	1.6nm,0.6s,baz=93,slow=8.0,SNR=7.1						
NVAR	Mina Array Bea	81.66	42	P	P	03 27 37.2	-0.1
	0.3nm,0.6s,baz=229,slow=5.5,SNR=3.3						
TXAR	Lajitas Array	86.70	56	P	P	03 28 02.9	-0.1
	0.8nm,0.8s,baz=207,slow=5.6,SNR=3.7						
ILAR	Eielson Array	90.88	12	P	P	03 28 21.6	-0.3
	0.7nm,1.0s,baz=210,slow=5.2,SNR=3.8						
AKASG	Malin Array Be	147.00	331	PKPbc	PKPbc	03 35 01.0	-0.3
	0.8nm,0.5s,baz=39,slow=4.1,SNR=11						
BRTR	Keskin Array B	150.81	310	PKPbc	PKPbc	03 35 11.4	-0.3
	0.9nm,0.8s,baz=118,slow=4.9,SNR=4.2						

IDC ***16*** *03:24:46.8±1.7, 17°.31S×124°.28E, h0^{km}, mb3.7/3, mb1 4.1/5, mb1mx3.8/27, mbtmp4.0/5, ML4.2/2, MS3.0/2, Ms1 3.0/2, ms1mx2.8/21, Error ellipse: s-maj=64.7km s-min=20.8km az=41.0*

NEIC ***16*** *03:24:50.3±1.3, 17°.2S±0°.2×124°.5E±0°.2, h16^{km}±7^{km}, Error ellipse: s-maj=35.5km s-min=13.2km az=53.0*

ISC 16 03:24:49.3±1.3**, 17°.2S**±0°.1×**124°.8E**±0°.1**, h10**^{km}**, n15, σ3**^{s}**.41**/17**, mb3.8**/3**, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	7.41	356		Pn	03 26 38.3	+0.6
SOEI					Sn	03 28 01.1	-0.8
WRA	Warramunga Arr	9.45	108	Pn	Pn	03 27 08.8	+3.1
	1.4nm,0.3s,baz=284,slow=15,SNR=20						
WRA				Sn	Sn	03 28 48.8	-3.3
	4.8nm,0.3s,baz=282,slow=25,SNR=5.9						
WRA				Lg	Lg	03 30 04.1	
	1.8nm,0.3s,baz=285,slow=28,SNR=7.8						
WRA				LR	LR	03 31 22.9	
	comp=Z,67nm,19.7s,baz=210,slow=40						
WRA	Warramunga Arr	9.45	108		Pn	03 27 09.3	+3.6
WB0	Warramunga Arr	9.46	107		Pn	03 27 09.1	+3.3
WRAB	Tennant Creek	9.46	108	Pn	Pn	03 27 08.8	+3.0
WB2	Warramunga Arr	9.46	108		Pn	03 27 09.3	+3.5
WR0	Warramunga Arr	9.64	108	Pn	Pn	03 27 11.9	+3.7
ASAR	Alice Springs	10.69	129	Pn	Pn	03 27 25.8	+3.2
	3.8nm,0.3s,baz=299,slow=13,SNR=104						
ASAR				Sn	Sn	03 29 20.7	-1.8
	4.9nm,0.3s,baz=302,slow=22,SNR=17						
ASAR	Alice Springs	10.69	129		Pn	03 27 26.2	+3.5
AS31	Alice Springs	10.69	129		Pn	03 27 26.4	+3.7
STKA	Stephens Creek	21.11	137	P	P	03 29 35.8	+1.6
	2.9nm,0.5s,baz=311,slow=13,SNR=6.7						
STKA				S	S	03 33 23.1	-6.1
	1.8nm,0.4s,baz=349,slow=5.2,SNR=4.0						
STKA	Stephens Creek	21.11	137	IAmb	IAmb	03 29 36.9	
	comp=Z,7.0nm,1.8s						
KSRS	Korea Array	54.43	3	LR	LR	03 56 57.6	
	comp=Z,22nm,21.4s,baz=22,slow=35						
SONM	Songino Array	66.79	347	P	P	03 35 40.6	-0.6
	comp=Z,0.5nm,0.7s,baz=167,slow=7.4,SNR=3.6						
MKAR	Makanchi Array	74.29	331	P	P	03 36 25.1	-1.7
	comp=Z,0.4nm,0.5s,baz=147,slow=6.0,SNR=6.3						

NEIC ***16*** *03:46:07, 40°.86N×125°.11W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.27; $M_{\theta\theta}$-1.01; $M_{\phi\phi}$1.28; $M_{r\theta}$-0.51; $M_{\theta\phi}$-0.19; $M_{\phi r}$0.16; Fault plane solution: $M_0$1.30000×10^{15} NP1:ϕ_s37.35000°, δ65.60000°, λ-14.02000°. NP2:ϕ_s133.23000°, δ77.26000°, λ-154.95000°. Principal axes: T 1.3207, Plg8.0000°, Azm264.0000°; N -0.0513, Plg62.0000°, Azm158.0000°; P -1.2694, Plg27.0000°, Azm357.0000°;*

IDC ***16*** *03:46:07.5±1.3, 40°.89N×124°.86W, h0^{km}, mb3.5/4, mb1 4.0/9, mb1mx3.7/48, mbtmp3.7/9, ML3.8/5, MS3.2/3, Ms1 3.2/3, ms1mx2.8/23 Error ellipse: s-maj=14.9km s-min=11.6km az=119.0*

NEIC ***16*** *03:46:08.2±2.0, 40°.85N±0°.04×125°.03W±0°.05, h15^{km}±6^{km}, Error ellipse: s-maj=5.9km s-min=5.2km az=105.0*

NCEDC ***16*** *03:46:09.7±2.9, 40°.86N±0°.03×125°.02W±0°.07, h24^{km}±7^{km}, Mwr4.0/10, mb4.1/14(NEIC), Error ellipse: s-maj=0.0km s-min=0.0km az=179.0*

ANF ***16*** *03:46:09.9±0.7, 41°.04N×124°.69W, h0^{km}, ML3.7/20, Error ellipse: s-maj=8.2km s-min=4.3km az=81.0*

ISC 16 03:46:07.1±1.8**, 40°.87N**±0°.04×**125°.10W**±0°.06**, h14**^{km}±11^{km}**, n168, σ1**^{s}**.52**/182**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	0.70	124		Pb	03 46 21.8	+0.7
KCTM					Sn	03 46 31.4	-1.8
JCC	Jacoby Creek,	0.81	93		Pg	03 46 22.4	-0.5
JCC				Sg	Sb	03 46 32.7	-1.1
KRPM	Rodgers	0.86	70		Pb	03 46 23.8	-0.1
KRPM					Sb	03 46 35.1	-0.3
KMPM	Mount Pierce	0.87	121		Pg	03 46 24.0	+0.1
KMPM					Sb	03 46 35.1	-0.5
KSMM	Slide Mountain	0.98	134		Pb	03 46 25.3	-0.6
KHMM	Horse Mountain	1.04	89		Pb	03 46 26.5	-0.4
KCRM	Chalk Rock	1.07	114		Pb	03 46 27.0	-0.5
KRMB	Red Mountain	1.11	54		Pb	03 46 27.1	-1.1
KMRM	Mail Ridge	1.24	121		Pn	03 46 29.5	-0.6
KCSM	Cold Springs	1.25	105		Pn	03 46 29.8	-0.6
KOMM	Orleans Mounta	1.31	71		Pn	03 46 30.4	-0.7
KSXB	Camp Six Broad	1.33	43		Pn	03 46 30.4	-1.0
KPPM	Pickett Peak	1.42	111		Pn	03 46 32.3	-0.4
KHBM	Hayfork Bally	1.44	98		Pn	03 46 32.2	-0.8
KBSM	Bell Springs	1.49	129		Pn	03 46 33.1	-0.5
KIPM	Iron Peak	1.63	130		Pn	03 46 35.0	-0.5
KCPM	Cahto Peak	1.66	135		Pn	03 46 35.1	-0.8
KTRM	Thompson Ridge	1.66	51		Pn	03 46 35.2	-0.8
L02E	Cave Junction	1.71	41		Pn	03 46 36.0	-0.5
L02E	Cave Junction	1.71	41	P	Pn	03 46 36.0	-0.5
	baz=221,SNR=217						
L02E				S	Sn	03 46 56.0	-2.2
	baz=221						
LGPM	Granite Peak	1.72	88		Pn	03 46 36.0	-0.8
KBNM	Bluenose Ridge	1.75	123		Pn	03 46 37.4	+0.2
M02C	Callahan	1.77	72		Pn	03 46 36.7	-0.8
M02C	Callahan	1.77	72	P	Pn	03 46 36.7	-0.8
	baz=253,SNR=718						
M02C				S	Sn	03 46 58.0	-1.8
	baz=253						
KFPM	Farley Peak	1.77	133		Pn	03 46 36.7	-0.7
LBPM	Beegum Peak	1.77	107		Pn	03 46 36.9	-0.6
N02D	Trinity Center	1.82	86		Pn	03 46 37.2	-0.8
N02D	Trinity Center	1.82	86	P	Pn	03 46 37.2	-0.8
	baz=267,SNR=436						
LBKM	Bonanza King	1.85	83		Pn	03 46 37.9	-0.8
GTC	Three Chop Rid	1.89	141		Pn	03 46 38.0	-0.9
O02D	Mt. Diablo Mer	1.89	111		Pn	03 46 38.5	-0.6
O02D	Mt. Diablo Mer	1.89	111	P	Pn	03 46 38.5	-0.6
	baz=292,SNR=469						
O02D				S	Sn	03 47 01.2	-1.6
	baz=292						
KRKM	Rackout Spring	1.96	131		Pn	03 46 39.5	-0.6
WDC	Whiskeytown Da	1.96	98		Pn	03 46 39.5	-0.5
YBH	Yreka Blue Hor	2.00	64	Pn	Pn	03 46 40.3	-0.2
	19nm,0.3s,baz=282,slow=12,SNR=388						
YBH				Lg	Lg	03 47 04.1	
	135nm,0.3s,baz=288,slow=20,SNR=27						
LAMM	Antelope Mount	2.01	68		Pn	03 46 40.5	-0.3
GNAM	Navarro Ridge	2.01	146		Pn	03 46 39.6	-1.0
GROM	Round Mountain	2.08	116		Pn	03 46 41.7	-0.1
LCSM	College of the	2.12	74		Pn	03 46 42.1	-0.1
K02D	Willamette Mer	2.12	30	P	Pn	03 46 42.2	0.0
	baz=211,SNR=49						
K02D				S	Sn	03 47 05.8	-2.5
	baz=211						
GVV	Valley View	2.15	120		Pn	03 46 42.8	+0.1
GHMM	Hull Mountain	2.15	129		Pn	03 46 42.1	-0.7
GHOM	Hamilton Openi	2.18	146		Pn	03 46 41.9	-1.1
GASB	Alder Springs	2.19	123		Pn	03 46 42.9	-0.3
B040	Montague	2.23	64		Pn	03 46 44.0	+0.3
LGBM	Gray Butte	2.25	77		Pn	03 46 44.5	+0.4
M03C	McCloud	2.29	79		Pn	03 46 45.0	+0.5
LHEM	Herd Peak	2.30	70		Pn	03 46 45.1	+0.3
LMPM	Military Pass	2.30	73		Pn	03 46 45.5	+0.7
LSHM	Sage Hen Hill	2.32	91		Pn	03 46 44.9	-0.1
GGUM	Gualala	2.36	148		Pn	03 46 44.1	-1.3
LTCM	Tuscan Springs	2.36	105		Pn	03 46 45.4	-0.1
HUMO	Hull Mountain	2.36	42		Pn	03 46 45.4	-0.2
GSNM	Snow Mountain	2.42	142		Pn	03 46 45.7	-0.6
GHLM	Highland Sprin	2.43	138		Pn	03 46 45.8	-0.7
GCK	Clark Valley	2.43	122		Pn	03 46 47.1	+0.7
HOPS	Hopland Field	2.44	140		Pn	03 46 46.0	-0.5
J01E	Myrtle Point	2.45	20	P	Pn	03 46 46.8	+0.1
	baz=201,SNR=8.0						
J01E				S	Sn	03 47 13.5	-2.9
	baz=201						
GTSM	Trough Springs	2.47	128		Pn	03 46 46.6	-0.4
LBFM	Black Fox Moun	2.47	78		Pn	03 46 47.8	+0.7
L04D	Klamath Falls	2.49	56		Pn	03 46 48.5	+1.1
L04D	Klamath Falls	2.49	56	P	Pn	03 46 48.5	+1.1
	baz=238,SNR=639						
L04D				S	Sb	03 47 19.8	-2.5
	baz=238						
GDCM	Dry Creek	2.54	145		Pn	03 46 47.0	-0.9
LDBM	Digger Butte	2.56	99		Pn	03 46 47.8	-0.5
LGMM	Garner Mountai	2.57	72		Pn	03 46 49.2	+0.7
O03E	Paynes Creek	2.58	102		Pn	03 46 47.8	-0.7
O03E	Paynes Creek	2.58	102	P	Pn	03 46 47.8	-0.7
	baz=284,SNR=748						
O03E				S	Sn	03 47 17.6	-2.0
	baz=284						
GMKM	Mount Konoctai	2.60	136		Pn	03 46 48.6	-0.2
M04C	Macdoel	2.62	69		Pn	03 46 49.8	+0.6
M04C	Macdoel	2.62	69	P	Pn	03 46 49.8	+0.6
	baz=250,SNR=104						
M04C				S	Sn	03 47 22.2	+1.4
	baz=250						
GACM	Adobe Creek	2.63	138		Pn	03 46 48.9	-0.4
DBO	Dodson Butte	2.64	31		Pn	03 46 50.0	+0.6
GCVM	Cloverdale	2.64	142		Pn	03 46 48.6	-0.6
GBMM	Baldy Mountain	2.64	130		Pn	03 46 49.5	+0.1
GFC	Funks Creek	2.65	125		Pn	03 46 49.7	+0.3
LMHM	Little Mount H	2.69	74		Pn	03 46 50.6	+0.4
GHCM	House Creek	2.69	146		Pn	03 46 49.2	-0.9
GSSM	Skaggs Springs	2.69	143		Pn	03 46 49.2	-0.8
LMEM	Manzanita Entr	2.70	96		Pn	03 46 50.2	-0.1
GDXM	Geysers	2.72	139		Pn	03 46 51.4	+1.0
ORV	Oroville	3.05	114		Pn	03 46 54.0	-0.9
K04D	Chiloquin, OR	3.06	54	P	Pn	03 46 56.0	+0.9
	baz=236,SNR=19						
I03D	Drain, OR	3.11	24	P	Pn	03 46 56.5	+0.8
	baz=205,SNR=460						
I03D				S	Sn	03 47 31.0	-1.7
	baz=205						
MCCM	Marconi Confer	3.22	147	Pn	Pn	03 46 56.1	-1.1
J04D	Umpqua Nationa	3.25	42	P	Pn	03 46 59.4	+1.5
	baz=224,SNR=28						
J04D				S	Sn	03 47 37.7	+1.2

	baz=224						
I02D	**Swisshome**	**3.37**	**16**	P	**Pn**	**03 46 59.8**	**+0.5**
	baz=196						
I02D				S	**Sn**	**03 47 35.9**	**-3.1**
	baz=196						
I04A	**Tendick Farm,**	**3.54**	**33**	P	**Pn**	**03 47 03.3**	**+1.6**
	baz=215,SNR=26						
I04A				S	**Sn**	**03 47 42.0**	**-1.4**
	baz=215						
AFDM	**Forest Hills D**	**3.71**	**120**		**Pn**	**03 47 03.6**	**-0.4**
MOD	**Modoc Plateau**	**3.75**	**72**		**Pn**	**03 47 04.5**	**-0.2**
J05D	**Fort Rock, OR**	**3.75**	**49**	P	**Pn**	**03 47 05.8**	**+1.0**
	baz=231,SNR=42						
J05D				S	**Sn**	**03 47 48.7**	**-0.1**
	baz=231						
COR	**Corvallis**	**3.94**	**19**		**Pn**	**03 47 08.1**	**+0.9**
H04D	**Lebanon**	**4.04**	**25**	P	**Pn**	**03 47 10.4**	**+1.8**
	baz=206,SNR=91						
H04D				S	**Sn**	**03 47 54.9**	**-0.9**
	baz=206						
PINE	**Pine Mountain**	**4.25**	**45**		**Pn**	**03 47 12.9**	**+1.4**
H04A	**Detroit Lake**	**4.37**	**28**		**Pn**	**03 47 14.7**	**+1.5**
I05D	**Terrebonne, OR**	**4.44**	**37**	P	**Pn**	**03 47 16.2**	**+2.1**
	baz=220,SNR=11						
I05D				S	**Sn**	**03 48 06.0**	**+0.4**
	baz=220						
PAHR	**Pah Rah Range**	**4.52**	**103**		**Pn**	**03 47 15.3**	**0.0**
G03D	**McMinnville, O**	**4.54**	**17**	P	**Pn**	**03 47 17.1**	**+1.6**
	baz=198,SNR=15						
G03D				S	**Sn**	**03 48 06.9**	**-1.1**
	baz=198						
PNTR	**Pine Nut**	**4.58**	**111**		**Pn**	**03 47 16.6**	**+0.4**
WVOR	**Wild Horse Val**	**5.09**	**70**		**Pn**	**03 47 22.9**	**-0.2**
G05D	**Wamic, OR**	**5.17**	**31**	P	**Pn**	**03 47 27.0**	**+2.8**
	baz=214,SNR=13						
F04A	**Amboy**	**5.42**	**20**		**Pn**	**03 47 28.9**	**+1.4**
F04D	**Rainier, OR**	**5.43**	**16**	P	**Pn**	**03 47 30.3**	**+2.8**
	baz=197						
F05D	**White Salmon**	**5.67**	**27**	P	**Pn**	**03 47 33.2**	**+2.3**
	baz=209,SNR=10						
F05D				S	**Sn**	**03 48 36.4**	**+0.5**
	baz=209						
PMPB	**Monarch Peak**	**5.74**	**143**		**Pn**	**03 47 32.2**	**+0.3**
NVAR	**Mina Array Bea**	**5.78**	**113**	Pn	**Pn**	**03 47 33.5**	**+0.9**
	2.3nm,0.3s,baz=288,slow=14,SNR=135						
NVAR				Pg	**Pb**	**03 47 43.9**	**-4.0**
	3.4nm,0.3s,baz=279,slow=17,SNR=20						
NVAR				Lg	Lg	03 48 56.2	
	baz=272,slow=30,SNR=1.8						
NVAR				LR	LR	03 49 14.5	
	comp=Z,83nm,21.9s,baz=18,slow=33						
NVAR	**Mina Array Bea**	**5.78**	**113**		**Pn**	**03 47 33.0**	**+0.3**
E04D	**Cinebar**	**5.97**	**17**	P	**Pn**	**03 47 37.0**	**+2.0**
	baz=199,SNR=16						
E04D				S	**Sn**	**03 48 42.3**	**-1.0**
	baz=199						
D03D	**Eldon**	**6.82**	**12**	P	**Pn**	**03 47 48.6**	**+2.0**
	baz=193,SNR=22						
D03D				S	**Sn**	**03 49 00.3**	**-3.8**
	baz=193						
BMO	**Blue Mountains**	**6.97**	**53**		**Pn**	**03 47 50.4**	**+1.5**
ISA	**Isabella, Lake**	**7.36**	**133**	P	**Pn**	**03 47 56.8**	**+2.6**
	baz=317						
ELK	**Elko**	**7.48**	**88**	Pn	**Pn**	**03 47 58.0**	**+2.0**
	0.3nm,0.3s,baz=278,slow=15,SNR=10.0						
ARVC	**Arvin**	**7.57**	**137**	P	**Pn**	**03 47 59.0**	**+2.0**
	baz=321						
B05A	**Bryant**	**7.70**	**15**	P	**Pn**	**03 48 01.1**	**+2.4**
	baz=197						
B05A				S	**Sn**	**03 49 22.6**	**-3.1**
	baz=197						
R11A	**Troy Canyon, C**	**7.76**	**106**	P	**Pn**	**03 48 01.0**	**+1.1**
	baz=292						
PGC	**Sidney**	**7.87**	**8**	Pn	**Pn**	**03 48 03.1**	**+2.1**
TPNV	**Topopah Spring**	**7.93**	**117**	P	**Pn**	**03 48 04.6**	**+2.5**
	baz=302						
LRMC	**Laurel Mtn Rad**	**7.94**	**130**	P	**Pn**	**03 48 04.7**	**+2.5**
	baz=315						
EDW2	**Edwards Air Fo**	**8.20**	**135**	P	**Pn**	**03 48 07.8**	**+2.0**
	baz=319						
GSC	**Goldstone, Bar**	**8.58**	**128**	P	**Pn**	**03 48 14.7**	**+3.7**
	baz=313						
BFSC	**Mount Baldy Ra**	**8.87**	**136**	P	**Pn**	**03 48 17.0**	**+2.0**
	baz=320						
PSUT	**Pine Spring**	**8.97**	**101**		**Pn**	**03 48 17.9**	**+1.4**
HEC	**Hector,Ludlow**	**9.18**	**128**	P	**Pn**	**03 48 22.6**	**+3.3**
	baz=314						
DUG	**Dugway, Tooele**	**9.38**	**90**	P	**Pn**	**03 48 25.2**	**+3.3**
	baz=278						
MCMT	**McKenzie Canyo**	**9.83**	**62**		**Pn**	**03 48 30.3**	**+2.1**
PFO	**Pinyon Flats O**	**9.99**	**134**	Pn	**Pn**	**03 48 31.7**	**+1.4**
	1.0nm,0.3s,baz=324,slow=9.5,SNR=11						
PFO	**Pinyon Flats O**	**9.99**	**134**	P	**Pn**	**03 48 31.8**	**+1.4**
	baz=319						
LLLB	**Lillooet**	**10.00**	**12**		**Pn**	**03 48 31.8**	**+1.6**
TPFO	**Pinon Flats**	**10.00**	**134**	P	**Pn**	**03 48 31.9**	**+1.4**
	baz=319						
MSU	**Marysvale**	**10.23**	**99**		**Pn**	**03 48 36.4**	**+2.6**
IRM	**Iron Mountain**	**10.36**	**127**	P	**Pn**	**03 48 37.8**	**+2.5**
	baz=313						
MTPU	**Mount Pierson**	**10.38**	**102**		**Pn**	**03 48 37.6**	**+1.7**
MONP2	**Monument Peak**	**10.56**	**136**	P	**Pn**	**03 48 40.3**	**+2.1**
	baz=321						
FXWY	**Fox Creek**	**10.79**	**71**		**Pn**	**03 48 42.4**	**+1.0**
FLWY	**Flagg Ranch**	**11.11**	**68**		**Pn**	**03 48 46.8**	**+1.0**
PDAR	**Pinedale Array**	**11.75**	**76**	Pn	**Pn**	**03 48 56.4**	**+1.9**
	0.1nm,0.3s,baz=278,slow=10.0,SNR=7.3						
PDAR	**Pinedale Array**	**11.75**	**76**		**Pn**	**03 48 55.8**	**+1.3**
PV13	**Radium Mtn., P**	**12.86**	**97**		**Pn**	**03 49 11.4**	**+1.7**
SDCO	**Great Sand Dun**	**15.49**	**95**	Pn	**Pn**	**03 49 46.4**	**+1.0**
SDCO	**Great Sand Dun**	**15.49**	**95**	P	**P**	**03 49 48.4**	**-1.4**
	baz=288						
ANMO	**Albuquerque**	**15.85**	**106**	Pn	**Pn**	**03 49 49.7**	**-0.2**
	0.1nm,0.3s,baz=295,slow=13,SNR=4.9						
ANMO	**Albuquerque**	**15.85**	**106**	Pn	**Pn**	**03 49 51.8**	**+1.8**
ANMO	**Albuquerque**	**15.85**	**106**	P	**P**	**03 49 52.7**	**-1.0**
	baz=297						
T25A	**Trinidad**	**16.50**	**96**	IAmb	IAmb	03 50 01.8	
	comp=Z,15nm,1.2s						
T25A	**Trinidad**	**16.50**	**96**	P	**P**	**03 50 00.9**	**0.0**
	baz=289						
KSCO	**Kaye Shedlock’**	**17.33**	**89**	IAmb	IAmb	03 50 12.9	
	comp=Z,24nm,0.7s						
R32A	**Long Quarter,**	**20.44**	**88**	P	Pn	03 50 45.2	-1.0
FFC	**Flin Flon**	**20.69**	**40**	P	**P**	**03 50 47.5**	**+0.9**
FFC				IAmb	IAmb	03 50 52.4	
	comp=Z,12nm,1.6s						
TX31	**Lajitas Ar. Si**	**20.91**	**117**	P	**P**	**03 50 50.4**	**+1.1**
TX31				IAmb	IAmb	03 50 53.9	
	comp=Z,6.4nm,1.1s						
TX32	**Lajitas Array**	**20.91**	**117**	IAmb	IAmb	03 50 53.9	
	comp=Z,6.6nm,1.1s						
TXAR	**Lajitas Array**	**20.91**	**117**	P	**P**	**03 50 50.4**	**+1.1**
	comp=Z,1.4nm,0.6s,baz=305,slow=9.0,SNR=9.0						
TXAR	**Lajitas Array**	**20.91**	**117**	P	**P**	**03 50 50.6**	**+1.2**
WMOK	**Wichita Mounta**	**21.63**	**98**	P	**P**	**03 50 57.2**	**+0.2**
WMOK	**Wichita Mounta**	**21.63**	**98**	P	**P**	**03 50 57.0**	**+0.1**
	baz=294						
KSU1	**Kansas State U**	**21.86**	**85**	P	**P**	**03 51 03.8**	**+4.4**
	baz=284						
ULM	**Lac du Bonnet**	**22.38**	**55**	P	**P**	**03 51 04.5**	**-0.3**
	comp=Z,1.8nm,0.5s,baz=270,slow=8.5,SNR=5.1						
ULM				LR	LR	04 00 19.2	
	comp=Z,124nm,20.6s,baz=168,slow=38						
ULM	**Lac du Bonnet**	**22.38**	**55**	IAmb	IAmb	03 51 16.4	
	comp=Z,2.8nm,0.7s						
T35A	**Sooner Cattle**	**22.55**	**91**	P	**P**	**03 51 07.6**	**+0.8**
T35A				IAmb	IAmb	03 51 12.3	
	comp=Z,10nm,0.8s						
YKA	**Yellowknife Ar**	**22.55**	**13**	P	**P**	**03 51 07.6**	**+1.1**
	comp=Z,1.6nm,0.8s,baz=198,slow=11,SNR=16						
KDAK	**Kodiak Island**	**24.38**	**323**	LR	LR	03 57 43.6	
	comp=Z,74nm,18.7s,baz=137,slow=28						
ILAR	**Eielson Array**	**27.04**	**340**	P	**P**	**03 51 52.4**	**+3.8**
	comp=Z,0.2nm,0.6s,baz=145,slow=9.6,SNR=4.4						
H11N3	**WAKE ISLAND Hy**	**60.90**	**272**	T	T	05 03 05.5	
	baz=53,slow=75,SNR=9.8						
H11N2	**WAKE ISLAND Hy**	**60.90**	**272**	T	T	05 02 57.0	
	baz=53,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	**60.92**	**272**	T	T	05 03 05.1	
	baz=53,slow=75,SNR=9.8						
H11S1	**WAKE ISLAND Hy**	**61.78**	**271**	T	T	05 04 05.2	
	baz=54,slow=74,SNR=6.8						
H11S2	**WAKE ISLAND Hy**	**61.78**	**271**	T	T	05 04 12.6	
	baz=54,slow=74,SNR=6.7						
H11S3	**WAKE ISLAND Hy**	**61.80**	**271**	T	T	05 04 09.9	
	baz=54,slow=74,SNR=5.1						
WMQ	**Urumqi**	**90.67**	**337**	*e*P	**P**	**03 59 12.0**	**+2.7**
LZH	**Lanzhou**	**91.22**	**322**	*e*P	**P**	**03 59 10.8**	**-1.3**
LZH				pP	PcP	03 59 14.9	+1.8
LZH				sP	sP	03 59 19.1	+2.1
LZH				PP	**PP**	**04 02 42.3**	**-6.0**

ROM ***16*** *03:51:30.8±0.1, 44°.412N±0°.005×7°.28E±0°.01, h16^{km}±1^{km}, ML2.4/19, Error ellipse: s-maj=0.7km s-min=0.6km az=243.0*

GEN ***16*** *03:51:31.4, 44°.41N×7°.28E, h14^{km}±1^{km}, Ml2.3*

LDG ***16*** *03:51:31.8±0.1, 44°.37N×7°.29E, h14^{km}, Md2.8/2, Ml2.5/43, Error ellipse: s-maj=1.6km s-min=1.1km az=49.0*

STR ***16*** *03:51:31.2±0.3, 44°N±1°×°±°, h12^{km}±2^{km}, MLv2.4/6*

ISC 16 03:51:30.6±0.7**, 44°.42N**±0°.01×**7°.30E**±0°.01**, h18**^{km}±1^{km}**,**
n97,σ1^{s}**58**/180**, 5C-2D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DOI	**San Damiano**	**0.09**	**334**	P	**Pb**	**03 51 34.8**	**+0.4**
DOI				S	**Sb**	**03 51 36.9**	**+0.1**
DOI				AML	AML		
	comp=N,29350µm,0.2s						
DOI				AML	AML		
	comp=E,14500µm,0.1s						
DOI				AML	AML		
	comp=N,29350µm,0.2s						
PZZ	**Stroppo**	**0.16**	**303**	⇑*i*P	**Pb**	**03 51 35.4**	**+0.6**
PZZ				S	**Sb**	**03 51 38.1**	**+0.5**
PZZ				AML	AML		
	comp=E,5990µm,0.2s						
PZZ				AML	AML		
	comp=N,6800µm,0.1s						
PZZ	**Stroppo**	**0.16**	**303**	P	**Pb**	**03 51 35.4**	**+0.6**
PZZ				S	**Sb**	**03 51 38.0**	**+0.5**
STV	**Sant Anna di V**	**0.18**	**174**	P	**Pb**	**03 51 35.7**	**+0.6**
STV				S	**Sb**	**03 51 38.4**	**+0.3**
STV				AML	AML		
	comp=N,2470µm,0.1s						
STV				AML	AML		
	comp=E,2140µm,0.1s						
STV	**Sant Anna di V**	**0.18**	**174**	P	**Pb**	**03 51 35.7**	**+0.6**
STV				S	**Sb**	**03 51 38.4**	**+0.3**
ENR	**Entracque**	**0.21**	**156**	⇑P	**Pb**	**03 51 36.2**	**+0.3**
ENR				S	**Sb**	**03 51 39.5**	**+0.1**
ENR				AML	AML		
	comp=N,1935µm,0.4s						
ENR				AML	AML		
	comp=E,3265µm,1.3s						
ENR	**Entracque**	**0.21**	**156**	P	**Pb**	**03 51 36.2**	**+0.3**
ENR				S	**Sb**	**03 51 39.4**	**+0.1**
ISO	**Isola**	**0.30**	**217**	Pg	**Pg**	**03 51 37.4**	**+0.2**
ISO				Sg	**Sg**	**03 51 41.2**	**-0.5**
SURF	**Saint Ours**	**0.35**	**280**	Pg	**Pg**	**03 51 38.4**	**+0.2**
BHB	**Bricherasio**	**0.42**	**356**	⇓P	**Pg**	**03 51 39.1**	**-0.3**
BHB				AML	AML		
	comp=N,454µm,1.1s						
BHB				AML	AML		
	comp=E,520µm,0.4s						
BHB	**Bricherasio**	**0.42**	**356**	P	**Pg**	**03 51 39.1**	**-0.3**
BHB				S	**Sg**	**03 51 44.3**	**-0.9**
GBOS	**Grotte di Boss**	**0.43**	**115**	P	**Pb**	**03 51 40.1**	**+0.4**
GBOS				S	**Sb**	**03 51 46.0**	**+0.1**
GBOS				AML	AML		
	comp=N,1765µm,0.3s						
GBOS				AML	AML		
	comp=E,1905µm,0.1s						
GBOS	**Grotte di Boss**	**0.43**	**115**	P	**Pb**	**03 51 40.1**	**+0.4**
GBOS				S	**Sb**	**03 51 45.8**	**0.0**
TURF	**col de Turini**	**0.45**	**172**	Pg	**Pg**	**03 51 39.2**	**-0.7**
TURF				Sg	**Sg**	**03 51 45.4**	**-0.7**
SAOF	**Saorge**	**0.47**	**157**	Pg	**Pg**	**03 51 40.5**	**+0.3**
SAOF				Sg	**Sg**	**03 51 46.8**	**+0.1**
SAOF	**Saorge**	**0.47**	**157**	⇑P	**Pg**	**03 51 40.5**	**+0.3**
SAOF				S	**Sg**	**03 51 46.7**	**+0.1**
SAOF				AML	AML		
	comp=N,251µm,1.3s						
SAOF				AML	AML		
	comp=E,183µm,1.3s						
MBDF	**Montbardon**	**0.49**	**309**	*e*Pg	**Pg**	**03 51 40.7**	**+0.1**
MBDF				*e*Sg	**Sg**	**03 51 47.5**	**+0.3**
	comp=E,331nm,0.3s						
OGAG	**Argentiere**	**0.55**	**274**	Pg	**Pb**	**03 51 43.8**	**+2.0**
OGAG				Sg	**Sb**	**03 51 52.4**	**+3.1**
SBF	**Sospel**	**0.57**	**170**	*e*Pg	**Pg**	**03 51 41.2**	**-0.8**
SBF				*e*Sg	**Sg**	**03 51 48.3**	**-1.3**
	comp=E,62nm,0.2s						
ESCA	**l'Escarene**	**0.59**	**175**	Pg	**Pg**	**03 51 42.7**	**+0.3**
RRL	**Rocca Remolon**	**0.62**	**324**	P	**Pg**	**03 51 42.9**	**-0.1**
RRL				S	**Sg**	**03 51 51.4**	**+0.1**
RRL				AML	AML		
	comp=E,198µm,0.5s						
RRL				AML	AML		
	comp=N,268µm,0.3s						
RRL				AML	AML		
	comp=E,198µm,0.5s						
RRL	**Rocca Remolon**	**0.62**	**324**	P	**Pg**	**03 51 42.9**	**-0.1**
RRL				S	**Sg**	**03 51 51.7**	**+0.4**
RORO	**Rocca Rossa**	**0.63**	**119**	⇓P	**Pg**	**03 51 43.5**	**+0.3**
RORO				S	**Sb**	**03 51 52.1**	**+0.5**
RORO				AML	AML		
	comp=E,910µm,0.2s						
RORO				AML	AML		
	comp=N,803µm,1.6s						
RORO	**Rocca Rossa**	**0.63**	**119**	P	**Pg**	**03 51 43.4**	**+0.3**
RORO				S	**Sb**	**03 51 52.0**	**+0.5**
NEGI	**Seborga**	**0.64**	**153**	⇑P	**Pg**	**03 51 43.6**	**+0.3**
NEGI				S	**Sg**	**03 51 52.1**	**+0.2**
NEGI				AML	AML		
	comp=E,384µm,0.1s						
NEGI				AML	AML		
	comp=N,440µm,0.2s						
NEGI	**Seborga**	**0.64**	**153**	P	**Pg**	**03 51 43.6**	**+0.3**
NEGI				S	**Sg**	**03 51 51.9**	**0.0**
IMI	**Imperia**	**0.67**	**140**	⇑P	**Pg**	**03 51 44.0**	**+0.2**
IMI				S	**Sb**	**03 51 52.8**	**+0.1**
IMI				AML	AML		
	comp=N,466µm,0.3s						
IMI				AML	AML		
	comp=E,346µm,0.8s						
IMI	**Imperia**	**0.67**	**140**	P	**Pg**	**03 51 44.0**	**+0.2**
IMI				S	**Sg**	**03 51 52.6**	**0.0**
CALF	**Calern**	**0.72**	**202**	Pg	**Pb**	**03 51 45.1**	**+0.4**
CALF				Sg	**Sb**	**03 51 54.5**	**+0.1**
RSP	**Reno Superiore**	**0.73**	**358**	P	**Pb**	**03 51 44.0**	**-0.9**
RSP				S	**Sb**	**03 51 55.1**	**+0.6**
RSP				AML	AML		
	comp=N,186µm,0.7s						
RSP				AML	AML		
	comp=N,190µm,0.8s						
RSP				AML	AML		
	comp=E,158µm,1.4s						
RSP				AML	AML		
	comp=E,163µm,1.4s						
RSP	**Reno Superiore**	**0.73**	**358**	P	**Pb**	**03 51 43.9**	**-0.9**
RSP				S	**Sb**	**03 51 52.9**	**-1.7**
QLNO	**Quiliano**	**0.76**	**97**	P	**Pg**	**03 51 46.0**	**+0.6**
QLNO				S	**Sg**	**03 51 55.9**	**+0.4**
QLNO				AML	AML		
	comp=N,245µm,1.6s						
QLNO				AML	AML		
	comp=E,330µm,1.2s						
BNI	**Bardonecchia**	**0.77**	**325**	P	**Pb**	**03 51 45.6**	**0.0**
BNI				S	**Sb**	**03 51 55.6**	**-0.2**
BNI				AML	AML		
	comp=E,84µm,1.3s						
BNI				AML	AML		
	comp=N,43µm,0.4s						
FINB	**Finale Ligure**	**0.77**	**108**	P	**Pg**	**03 51 46.2**	**+0.4**
FINB				S	**Sg**	**03 51 56.4**	**+0.4**
FINB				AML	AML		
	comp=E,368µm,0.3s						
FINB				AML	AML		
	comp=N,346µm,1.5s						
OGDI	**Digne**	**0.78**	**247**	Pn	**Pn**	**03 51 48.2**	**+1.3**
MONC	**Moncucco Torin**	**0.79**	**34**	P	**Pg**	**03 51 46.8**	**+0.7**
MONC				AML	AML		
	comp=E,334µm,1.1s						
MONC				AML	AML		
	comp=N,272µm,1.1s						
ROTM	**Rocchetta Tana**	**0.86**	**60**	AML	AML		
	comp=E,904µm,0.7s						
ROTM				AML	AML		
	comp=N,1069µm,0.5s						
ROTM	**Rocchetta Tana**	**0.86**	**60**	P	**Pn**	**03 51 48.8**	**+0.9**
ROTM				S	**Sn**	**03 52 01.1**	**+1.0**
PCP	**Piancastagn**	**0.90**	**82**	P	**Pg**	**03 51 48.4**	**+0.3**
PCP				S	**Sg**	**03 52 00.3**	**+0.3**
PCP				AML	AML		
	comp=E,214µm,0.6s						
PCP				AML	AML		
	comp=N,296µm,0.6s						
PCP	**Piancastagn**	**0.90**	**82**	P	**Pg**	**03 51 48.4**	**+0.3**
PCP				S	**Sg**	**03 52 00.3**	**+0.3**
FRF	**La Foret Royal**	**0.98**	**209**	*e*Pg	**Pb**	**03 51 48.7**	**-0.4**
FRF				*e*Sg	**Sb**	**03 52 01.7**	**0.0**
	comp=N,60nm,0.2s						
LSD	**Lago del Serru**	**1.04**	**354**	P	**Pb**	**03 51 49.6**	**-0.7**
LSD				S	**Sb**	**03 52 04.4**	**+0.6**
LSD				AML	AML		
	comp=N,108µm,1.0s						
LSD				AML	AML		
	comp=E,164µm,0.7s						
ORIF	**Oris-en-Rattie**	**1.13**	**297**	*e*Pn	**Pn**	**03 51 52.2**	**+0.5**
ORIF	**Oris-en-Rattie**	**1.13**	**297**	*e*Pg	**Pb**	**03 51 53.3**	**+1.6**
ORIF				*e*Sn	**Sb**	**03 52 06.1**	**0.0**
	comp=E,36nm,0.2s						
ORIF				*e*Sg	**Sn**	**03 52 08.5**	**+1.7**
	comp=E,48nm,0.3s						
LPG	**La Plagne**	**1.15**	**340**	*e*Pn	**Pn**	**03 51 52.4**	**+0.3**
LPG	**La Plagne**	**1.15**	**340**	*e*P	**Pg**	**03 51 54.2**	**+1.3**
LPG				*e*Sn	**Sb**	**03 52 07.5**	**+0.7**
	comp=E,13nm,0.2s						
LPG				*e*Sg	**Sg**	**03 52 09.8**	**+1.9**
	comp=E,10.0nm,0.2s						
GDM	**Grand'Maison**	**1.15**	**313**	Pg	**Pn**	**03 51 53.1**	**+1.0**
GDM				Sg	**Sb**	**03 52 07.5**	**+0.7**
LPL	**La Plagne**	**1.17**	**340**	*e*Pn	**Pn**	**03 51 52.9**	**+0.6**
LPL				*e*Sg	**Sb**	**03 52 09.1**	**+1.8**
	comp=E,25nm,0.3s						
MLYF	**Mely**	**1.19**	**249**	Pg	**Pb**	**03 51 54.1**	**+1.4**
LMR	**La Mourre**	**1.23**	**208**	*e*Pn	**Pn**	**03 51 53.3**	**+0.4**
LMR				*e*Sn	**Sb**	**03 52 07.0**	**-1.8**
LMR				*e*Sg	**Sn**	**03 52 09.2**	**+0.1**
	comp=E,88nm,0.2s						
BSTF	**la Bastide-des**	**1.31**	**246**	Pg	**Pb**	**03 51 56.2**	**+1.4**
SMRF	**Simiane la Rot**	**1.32**	**251**	*e*Pg	**Pb**	**03 51 56.4**	**+1.5**
SMRF				*e*Sg	**Sb**	**03 52 13.4**	**+1.9**
	comp=E,63nm,0.3s						
ARTF	**Artigues**	**1.36**	**233**	Pg	**Pn**	**03 51 56.3**	**+1.5**
ARTF				Sg	**Sb**	**03 52 14.6**	**+1.8**
GRN	**Grenoble**	**1.38**	**307**	Pg	**Pb**	**03 51 57.9**	**+1.9**
GRN				Sg	**Sg**	**03 52 16.2**	**+1.0**
RUSF	**Rustrel**	**1.39**	**250**	Pg	**Pb**	**03 51 57.3**	**+1.2**
RUSF				Sg	**Sg**	**03 52 17.1**	**+1.4**
OGSM	**Saint Maurice**	**1.65**	**317**	Pg	**Pb**	**03 52 01.5**	**+1.1**
VIVF	**Saint-Julien-l**	**1.93**	**284**	*e*P	**Pn**	**03 52 04.0**	**+1.4**
VIVF				*e*Sn	**Sn**	**03 52 25.1**	**-1.3**
	comp=E,4.8nm,0.2s						
VIVF				*e*Sg	**Sg**	**03 52 33.1**	**+0.4**
	comp=E,16nm,0.3s						
OG35	**Corcelles**	**2.03**	**324**	Pg	**Pn**	**03 52 06.8**	**+2.7**
PGF	**Pioggiola**	**2.24**	**146**	*e*Pn	**Pn**	**03 52 06.7**	**-0.3**
PGF				*e*Sn	**Sn**	**03 52 31.3**	**-3.0**
	comp=E,6.1nm,0.3s						
CABF	**La Chapelle**	**2.35**	**339**	*e*Pn	**Pn**	**03 52 09.7**	**+1.2**
CABF	**La Chapelle**	**2.35**	**339**	*e*Pg	**Pg**	**03 52 15.9**	**+0.1**
CABF				*e*Sn	**Sn**	**03 52 36.1**	**-0.8**
CABF				*e*Sg	**Sg**	**03 52 46.5**	**+0.2**
	comp=E,2.4nm,0.3s						
TRBF	**Trabuc cave**	**2.42**	**264**	Pn	**Pn**	**03 52 10.2**	**+0.9**
TRBF				Sn	**Sn**	**03 52 38.1**	**-0.5**
LASF	**Ste Croix**	**2.50**	**263**	*e*Pn	**Pn**	**03 52 10.4**	**0.0**
LASF	**Ste Croix**	**2.50**	**263**	*e*Pg	**Pb**	**03 52 17.2**	**+2.2**
LASF				*e*Sn	**Sn**	**03 52 38.7**	**-1.8**
	comp=E,1.9nm,0.2s						
CHMF	**Charmoille**	**2.86**	**351**	Pn	**Pn**	**03 52 17.2**	**+1.7**
CHMF				Sn	**Sn**	**03 52 49.5**	**0.0**
LBL	**Lubilhac**	**3.00**	**287**	Pn	**Pn**	**03 52 19.5**	**+2.2**
SMF	**Signal de Mont**	**3.30**	**314**	*e*Pn	**Pn**	**03 52 22.3**	**+0.9**
SMF	**Signal de Mont**	**3.30**	**314**	*e*P	**Pn**	**03 52 25.4**	**+4.0**
SMF				*e*Sn	**Sn**	**03 52 58.4**	**-1.7**
SMF				*e*Sg	**Sg**	**03 53 15.1**	**-1.4**
	comp=E,3.0nm,0.3s						
HINF	**Hinteralfeld**	**3.41**	**355**	*e*Pn	**Pn**	**03 52 24.2**	**+1.2**
HINF				*e*Sn	**Sn**	**03 53 01.8**	**-1.2**
	comp=E,1.5nm,0.2s						
SLE	**Schleitheim**	**3.44**	**13**	Pn	**Pn**	**03 52 25.7**	**+2.3**
AVF	**Avril sur Loir**	**3.65**	**312**	*e*Pn	**Pn**	**03 52 27.1**	**+0.9**
AVF				*e*Sn	**Sn**	**03 53 05.8**	**-2.9**
AVF				*e*Sg	**Sg**	**03 53 26.3**	**-1.4**
	comp=E,1.5nm,0.4s						
HAU	**Haudompre**	**3.65**	**350**	*e*Pn	**Pn**	**03 52 27.5**	**+1.3**
HAU	**Haudompre**	**3.65**	**350**	*e*P	**Pn**	**03 52 30.8**	**+4.6**
HAU				*e*Sn	**Sn**	**03 53 07.0**	**-1.8**
	comp=E,3.9nm,0.3s						
LOR	**Lormes**	**3.73**	**321**	*e*Pn	**Pn**	**03 52 29.3**	**+2.0**
	baz=143						
LOR				*e*Sn	**Sn**	**03 53 09.2**	**-1.6**
	comp=E,2.1nm,0.2s						
LOR				*e*Sg	**Sg**	**03 53 29.1**	**-1.2**
	comp=E,4.8nm,0.6s						
SSF	**Saint Saulge**	**3.75**	**316**	*e*Pn	**Pn**	**03 52 29.0**	**+1.5**
SSF				*e*Sn	**Sn**	**03 53 09.2**	**-2.0**
SSF				*e*Sg	**Sg**	**03 53 29.4**	**-1.5**
	comp=E,1.8nm,0.3s						
CAF	**Calviac**	**3.77**	**280**	*e*Pn	**Pn**	**03 52 27.5**	**-0.4**
CAF	**Calviac**	**3.77**	**280**	*e*P	**Pn**	**03 52 30.7**	**+2.8**
CAF				*e*Sn	**Sn**	**03 53 10.4**	**-1.4**
	comp=E,3.6nm,0.4s						
CAF				*e*Sg	**Sg**	**03 53 30.3**	**-1.4**
	comp=E,0.7nm,0.2s						
BGF	**Bois d'Agland**	**3.79**	**306**	*e*Pn	**Pn**	**03 52 28.1**	**-0.1**
BGF	**Bois d'Agland**	**3.79**	**306**	*e*P	**Pn**	**03 52 30.3**	**+2.1**
BGF				*e*Sn	**Sn**	**03 53 10.0**	**-2.3**
BGF				*e*Sg	**Sg**	**03 53 31.1**	**-1.3**
	comp=E,5.8nm,0.3s						
MTLF	**Montolieu**	**3.83**	**255**	*e*Pn	**Pn**	**03 52 29.4**	**+0.7**
MTLF				*e*Sn	**Sn**	**03 53 10.2**	**-3.1**
	comp=E,0.6nm,0.2s						
MTLF				*e*Sg	**Sg**	**03 53 31.0**	**-2.6**
	comp=E,0.4nm,0.2s						
CDF	**Champ du Feu**	**3.99**	**360**	*e*Pn	**Pn**	**03 52 32.3**	**+1.3**
CDF				*e*Sn	**Sn**	**03 53 15.4**	**-2.0**
	comp=E,1.0nm,0.3s						
TCF	**Toulx Ste Croi**	**4.05**	**299**	*e*Pn	**Pn**	**03 52 32.5**	**+0.8**
TCF				*e*Sn	**Sn**	**03 53 16.5**	**-2.1**
TCF				*e*Sg	**Sg**	**03 53 38.8**	**-1.7**
	comp=E,1.3nm,0.3s						
FNEB	**Nbias**	**4.06**	**250**	Pn	**Pn**	**03 52 33.7**	**+1.8**
SFTF	**Sexfontaines**	**4.10**	**338**	*e*Pn	**Pn**	**03 52 33.7**	**+1.3**
	baz=157						
SFTF				*e*Sn	**Sn**	**03 53 17.8**	**-2.0**
	comp=E,1.7nm,0.3s						
RJF	**Les Rejaudoux**	**4.21**	**284**	*e*P	**Pn**	**03 52 37.5**	**+3.6**
RJF	**Les Rejaudoux**	**4.21**	**284**	*e*Pg	Pb	03 52 49.0	+4.9
RJF				*e*Sg	**Sg**	**03 53 42.5**	**-3.2**
	comp=E,0.5nm,0.3s						
PAGF	**Fort de Pagny**	**4.28**	**346**	*e*Pn	**Pn**	**03 52 35.8**	**+1.0**
PAGF				*e*Sn	**Sn**	**03 53 21.9**	**-2.3**
	comp=E,1.0nm,0.2s						
HYF	**Humbligny**	**4.33**	**313**	*e*P	**Pn**	**03 52 38.6**	**+3.1**
HYF				*e*Sn	**Sn**	**03 53 22.2**	**-3.3**
MEZF	**Maizieres J’vi**	**4.37**	**340**	*e*Pn	**Pn**	**03 52 37.2**	**+1.1**
	baz=160						
MEZF				*e*Sn	**Sn**	**03 53 24.3**	**-2.2**
	comp=E,1.2nm,0.2s						
LFF	**La Frestale**	**4.71**	**279**	*e*P	**Pn**	**03 52 44.9**	**+4.1**
LFF				*e*Sg	**Sg**	**03 53 58.9**	**-2.8**
	comp=E,0.7nm,0.2s						
MFF	**Saint Martin d**	**5.67**	**295**	*e*Pn	**Pn**	**03 52 54.3**	**+0.3**
MFF				*e*Sn	**Sn**	**03 53 54.4**	**-4.2**
	comp=E,0.2nm,0.2s						
GIVF	**Givet**	**5.93**	**344**	*e*Pn	**Pn**	**03 52 58.4**	**+0.9**
BAIF	**Baives**	**6.02**	**341**	*e*Pn	**Pn**	**03 52 59.9**	**+1.1**
BAIF	**Baives**	**6.02**	**341**	*e*P	Pn	03 53 03.3	+4.5
BAIF				*e*Sn	**Sn**	**03 54 05.6**	**-1.6**
	comp=E,0.7nm,0.4s						
LDF	**La Druitiere**	**6.61**	**312**	*e*Pn	**Pn**	**03 53 08.1**	**+1.3**
LDF				*e*Sn	**Sn**	**03 54 17.3**	**-4.3**
	comp=E,0.1nm,0.2s						
GRR	**Gorron**	**6.90**	**308**	*e*Pn	**Pn**	**03 53 11.3**	**+0.5**
GRR				*e*Sn	**Sn**	**03 54 24.1**	**-4.6**
	comp=E,0.3nm,0.2s						
FLN	**La Foliniere**	**6.90**	**312**	*e*Pn	**Pn**	**03 53 11.3**	**+0.5**
	baz=128						
FLN				*e*Sn	**Sn**	**03 54 23.5**	**-5.3**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=E,0.6nm,0.2s						

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*IDC **16** 03:58:35.0±4.8, 21°.14S×176°.90W, h387km±51km, mb3.1/5, mb1 3.5/7, mb1mx3.3/26, mbtmp4.1/7, Error ellipse: s-maj=27.3km s-min=18.1km az=106.0*

ISC 16 03:58:26.3±1.2**, 21°.2S**±0°.1×**176°.7W**±0°.2**, h300**km**, n7, σ1ˢ00**/8**, mb3.5**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**15.72**	**264**	P	**Pn**	**04 01 54.0**	**+0.7**
	1.1nm,0.3s,baz=78,slow=22,SNR=13						
URZ	**Urewera**	**17.86**	**196**	P	**Pn**	**04 02 17.8**	**-0.2**
	1.8nm,0.3s,baz=58,slow=18,SNR=8.6						
URZ				S	**S**	**04 05 23.5**	**-0.2**
	0.3nm,0.3s,baz=75,slow=20,SNR=2.6						
STKA	**Stephens Creek**	**38.62**	**245**	P	**P**	**04 05 22.1**	**+0.7**
	1.0nm,0.3s,baz=81,slow=12,SNR=4.1						
ASAR	**Alice Springs**	**45.57**	**257**	P	**P**	**04 06 17.1**	**-0.2**
	1.5nm,0.5s,baz=94,slow=8.3,SNR=19						
WRA	**Warramunga Arr**	**45.73**	**262**	P	**P**	**04 06 17.4**	**-1.2**
	0.7nm,0.2s,baz=96,slow=7.9,SNR=10						
NVAR	**Mina Array Bea**	**80.67**	**43**	P	**P**	**04 10 07.6**	**+1.1**
	0.4nm,0.7s,baz=223,slow=7.4,SNR=4.3						
ILAR	**Eielson Array**	**88.69**	**12**	P	**P**	**04 10 44.2**	**-1.1**
	0.3nm,0.6s,baz=218,slow=5.7,SNR=13						

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*HEL **16** 04:01:00.0, 71°.58N×13°.67E, h10km, ML2.5, Confirmed Earthquake*

*BER **16** 04:01:01.1±1.8, 71°.63N×13°.09E, h28km±17km, ML1.8, ML2.5(HEL), Confirmed Earthquake*

NAO 16 04:01:01.2±6.9**, 71°.66N×13°.64E, h22**km±79km**, ML1.8, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRO	**Tromso**	**2.69**	**137**	Pn	Pn	04 01 41.8	-1.3
TRO				Sn	Sn	04 02 11.7	-3.1
TRO	**Tromso**	**2.69**	**137**	*e*P	Pn	04 01 41.7	-1.3
TRO				*e*S	Sn	04 02 11.7	-3.1
TRO				IAML		04 02 15.2	
	comp=Z,4.8nm,0.5s						
TRO	**Tromso**	**2.69**	**137**	*e*P	Pn	04 01 41.6	-1.4
TRO				*e*S	Sn	04 02 11.1	-3.7
HAMF	**Hammerfest**	**3.42**	**103**	Pn	Pn	04 01 52.3	-0.7
HAMF				Sn	Sn	04 02 30.6	-2.1
HAMF	**Hammerfest**	**3.42**	**103**	*e*P	Pn	04 01 52.5	-0.4
HAMF				*e*S	Sn	04 02 31.2	-1.5
HAMF				IAML		04 02 34.3	
	comp=Z,6.4nm,0.7s						
LOF	**Lofoten**	**3.54**	**181**	*e*P	Pn	04 01 52.3	-2.5
LOF				*e*S	Sn	04 02 29.3	-6.6
LOF				IAML		04 02 29.5	
	comp=Z,5.8nm,0.5s						
KIF	**Kilpisjarvi**	**3.60**	**134**	Pn	Pn	04 01 54.9	-0.6
KIF				Sn	Sn	04 02 34.9	-2.3
KIF	**Kilpisjarvi**	**3.60**	**134**	*e*P	Pn	04 01 55.0	-0.5
KIF				MPN		04 01 56.5	
	comp=Z,2.4nm,0.1s						
KIF				*e*S	Sn	04 02 35.2	-2.0
KIF	**Kilpisjarvi**	**3.60**	**134**	*e*P	Pn	04 01 55.0	-0.5
KIF				MPN		04 01 56.5	
	comp=Z,2.4nm,0.1s						
KIF				*e*S	Sn	04 02 35.2	-2.0
STEI	**Steigen**	**3.79**	**171**	*e*P	Pn	04 01 55.7	-2.3
STEI				IAML		04 02 35.5	
	comp=Z,3.7nm,0.7s						
STEI				*e*S	Sn	04 02 36.8	-5.1
KOVU	**Salmi**	**4.12**	**144**	*e*P	Pn	04 02 02.2	-0.4
KOVU				*e*S	Sn	04 02 48.4	-1.6
KTK1	**Kautokeino**	**4.19**	**125**	Pn	Pn	04 02 05.0	+1.4
KTK1	**Kautokeino**	**4.19**	**125**	*e*P	Pn	04 02 03.4	-0.2
KTK1				*e*S	Sn	04 02 48.6	-3.2
KTK1				IAML		04 03 08.2	
	comp=Z,1.9nm,0.7s						
KTK1	**Kautokeino**	**4.19**	**125**	*e*P	Pn	04 02 04.4	+0.8
KTK1				*e*S	Sn	04 02 50.8	-1.0
KUA	**Kurravaara**	**4.38**	**145**	*e*P	Pn	04 02 05.7	-0.6
KUA				*e*S	Sn	04 02 52.5	-4.1
ARA0	**ARCESS Array S**	**4.49**	**113**	Pn	Pn	04 02 07.9	+0.1
	baz=305,slow=12						
ARA0				Sn	Sn	04 02 58.4	-0.9
	baz=305,slow=22						
ARA0	**ARCESS Array S**	**4.49**	**113**	Pn	Pn	04 02 07.9	+0.1
	baz=305,slow=12						
ARA0				Sn	Sn	04 02 58.4	-0.9
	baz=305,slow=22						
ARE0	**ARCESS Array S**	**4.49**	**113**	*e*P	Pn	04 02 07.5	-0.2
ARE0				*e*S	Sn	04 02 56.7	-2.6
ARE0				IAML		04 03 08.1	
	comp=Z,7.2nm,1.1s						
ARE0	**ARCESS Array S**	**4.49**	**113**	*e*P	Pn	04 02 07.9	+0.1
ARE0				*e*S	Sn	04 02 57.9	-1.3
LANU	**Lannavaara**	**4.63**	**137**	*e*P	Pn	04 02 09.1	-0.6
LANU				*e*S	Sn	04 02 59.6	-3.1
LANU	**Lannavaara**	**4.63**	**137**	*e*P	Pn	04 02 09.1	-0.6
LANU				*e*S	Sn	04 02 59.6	-3.1
HEF	**Hetta**	**4.73**	**129**	*e*P	Pn	04 02 10.9	-0.2
HEF				MPN		04 02 11.9	
	comp=Z,0.7nm,0.1s						
HEF				*e*S	Sn	04 03 02.9	-2.3
HEF	**Hetta**	**4.73**	**129**	*e*P	Pn	04 02 10.9	-0.2
HEF				MPN		04 02 11.9	
	comp=Z,0.7nm,0.1s						
HEF				*e*S	Sn	04 03 02.9	-2.3
KEV	**Kevo**	**4.82**	**107**	Pn	Pn	04 02 12.3	0.0
KEV				Sn	Sn	04 03 05.0	-2.4
KEV	**Kevo**	**4.82**	**107**	*e*P	Pn	04 02 12.2	-0.1
KEV				MPN		04 02 13.6	
	comp=Z,0.3nm,0.1s						
KEV				*e*S	Sn	04 03 04.9	-2.5
KEV	**Kevo**	**4.82**	**107**	*e*P	Pn	04 02 12.2	-0.1
KEV				MPN		04 02 13.6	
	comp=Z,0.3nm,0.1s						
KEV				*e*S	Sn	04 03 04.9	-2.5
MASU	**Masugnsbyn**	**5.13**	**141**	*e*P	Pn	04 02 16.1	-0.5
DUNU	**Dundret**	**5.17**	**148**	*e*P	Pn	04 02 16.4	-0.7
KONS	**Konsvik**	**5.19**	**182**	*e*P	Pn	04 02 14.3	-3.0
KONS				*e*S	Sn	04 03 08.6	-7.7
KONS				IAML		04 03 21.8	
	comp=Z,12nm,1.2s						
STOK	**Stokkvaagen**	**5.36**	**183**	*e*P	Pn	04 02 16.3	-3.3
STOK				*e*S	Sn	04 03 13.2	-7.3
MOR8	**Moi Rana**	**5.52**	**177**	*e*P	Pn	04 02 17.6	-4.3
MOR8				*e*S	Sn	04 03 15.1	-9.5
MOR8				IAML		04 03 23.6	
	comp=Z,2.3nm,0.7s						
PAJU	**Pajala**	**5.73**	**140**	*e*P	Pn	04 02 24.3	-0.5
SPA0	**Spitsbergen Ar**	**6.60**	**5**	Pn	Pn	04 02 35.6	-1.0
	baz=180,slow=14						
SPA0				Sn	Sn	04 03 45.4	-5.5
SPA0	**Spitsbergen Ar**	**6.60**	**5**	Pn	Pn	04 02 35.6	-1.0
	baz=180,slow=14						
SPA0				Sn	Sn	04 03 45.4	-5.5
VRF	**Varrio**	**6.78**	**118**	*e*P	Pn	04 02 38.5	-0.7
VRF				MPN		04 02 41.6	
	comp=Z,0.2nm,0.1s						
VRF	**Varrio**	**6.78**	**118**	*e*P	Pn	04 02 38.5	-0.7
VRF				MPN		04 02 41.6	
	comp=Z,0.2nm,0.1s						
TOF	**Tornio**	**6.79**	**140**	*e*P	Pn	04 02 39.0	-0.3
TOF				MPN		04 02 39.6	
	comp=Z,0.3nm,0.1s						
TOF	**Tornio**	**6.79**	**140**	*e*P	Pn	04 02 39.0	-0.3
TOF				MPN		04 02 39.6	
	comp=Z,0.3nm,0.1s						

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*TAP **16** 04:09:06.0, 24°.62N×122°.49E, h74km, ML3.4, C*

*JMA **16** 04:09:06.0±0.1, 24°.54N×122°.48E, h74km±1km, M2.6*

ISC 16 04:09:06.9±1.3**, 24°.56N**±0°.04×**122°.49E**±0°.02**, h65**km±8km**, n67, σ0ˢ83**/129**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.33**	**268**	P	**Pn**	**04 09 18.0**	**+0.3**
	baz=253						
EOS1				S	**Sn**	**04 09 26.7**	**+1.1**
	baz=253						
JYNG	**Yonagunijimaku**	**0.42**	**104**	P	**Pn**	**04 09 18.7**	**+0.2**
JYNG				S	**Sn**	**04 09 27.9**	**+0.9**
YOJ	**Yonaguni jima**	**0.48**	**101**	P	**Pn**	**04 09 19.3**	**+0.2**
	baz=114						
YOJ				*e*S	**Sn**	**04 09 28.4**	**+0.5**
	baz=114						
YOJ	**Yonaguni jima**	**0.48**	**101**	P	**Pn**	**04 09 19.2**	**+0.2**
YOJ				S	**Sn**	**04 09 28.5**	**+0.6**
TWC	**Suao**	**0.59**	**275**	*i* P	**Pn**	**04 09 19.7**	**-0.5**
	baz=271						
TWC				S	**Sn**	**04 09 29.5**	**-0.4**
	baz=271						
NTC	**Toucheng**	**0.67**	**296**	P	**Pn**	**04 09 20.8**	**-0.3**
	baz=290						
NTC				*e*S	**Sn**	**04 09 31.2**	**-0.3**
	baz=290						
ENA	**Nanau**	**0.70**	**259**	*e*P	**Pn**	**04 09 21.2**	**-0.3**
	baz=251						
ENA				*e*S	**Sn**	**04 09 32.0**	**-0.1**
	baz=251						
ILA	**Ilan**	**0.71**	**287**	*e*P	**Pn**	**04 09 21.7**	**+0.1**
	baz=287						
ILA				*e*S	**Sn**	**04 09 32.3**	**0.0**
	baz=287						
TIPB	**Shuangxi**	**0.73**	**304**	*e*P	**Pn**	**04 09 21.2**	**-0.7**
	baz=299						
TIPB				*e*S	**Sn**	**04 09 31.9**	**-1.0**
	baz=299						
TWE	**Neicheng**	**0.77**	**282**	P	**Pn**	**04 09 22.1**	**-0.2**
	baz=276						
TWE				S	**Sn**	**04 09 33.3**	**-0.3**
	baz=276						
NWF	**Wu-fen Shan**	**0.82**	**308**	P	**Pn**	**04 09 22.7**	**-0.4**
	baz=297						
NWF				*e*S	**Sn**	**04 09 34.0**	**-1.0**
	baz=297						
WFSB	**Wu-fen Shan**	**0.82**	**308**	P	**Pn**	**04 09 22.7**	**-0.3**
	baz=297						
WFSB				S	**Sn**	**04 09 34.0**	**-0.8**
	baz=297						
ENTT	**Nioudou**	**0.85**	**276**	*e*P	**Pn**	**04 09 23.5**	**+0.2**
	baz=274						
ENTT				*e*S	**Sn**	**04 09 35.2**	**-0.1**
	baz=274						
NDT	**Datong Townshi**	**0.89**	**273**	*e*P	**Pn**	**04 09 24.1**	**+0.2**
	baz=268						
NDT				*e*S	**Sn**	**04 09 36.4**	**+0.1**
	baz=268						
NACB	**Ninganchiao**	**0.91**	**245**	*e*P	**Pn**	**04 09 23.4**	**-0.6**
	baz=233						
NACB				*e*S	**Sn**	**04 09 36.0**	**-0.6**
	baz=233						
NWLT	**Wulai**	**0.93**	**284**	P	**Pn**	**04 09 24.2**	**-0.1**
	baz=285						
NWLT				S	**Sn**	**04 09 36.7**	**-0.4**
	baz=285						
TWA	**Mucha**	**0.93**	**297**	P	**Pn**	**04 09 23.8**	**-0.5**
	baz=292						
TWA				S	**Sn**	**04 09 36.6**	**-0.4**
	baz=292						
TWD	**Chiawan**	**0.95**	**240**	*e*P	**Pn**	**04 09 24.2**	**-0.3**
	baz=228						
TWD				*e*S	**Sn**	**04 09 37.4**	**-0.1**
	baz=228						
NHDH	**Xindian Distri**	**0.97**	**295**	*e*P	**Pn**	**04 09 24.4**	**-0.3**
	baz=282						
NHDH				*e*S	**Sn**	**04 09 37.2**	**-0.7**
	baz=282						
ETLH	**Xiulin Townshi**	**0.99**	**249**	*e*P	**Pn**	**04 09 24.9**	**-0.1**
	baz=245						
ETLH				*e*S	**Sn**	**04 09 38.7**	**+0.2**
	baz=245						
TATO	**Taipei**	**1.00**	**295**	*e*P	**Pn**	**04 09 24.6**	**-0.6**
	baz=282						
TATO				*e*S	**Sn**	**04 09 38.3**	**-0.4**
	baz=282						
NNSB	**Datong**	**1.02**	**263**	*e*P	**Pn**	**04 09 25.8**	**+0.2**
	baz=250						
NNSB				*e*S	**Sn**	**04 09 39.5**	**+0.2**
	baz=250						
NNSH	**Datong**	**1.02**	**263**	*e*P	**Pn**	**04 09 25.6**	**0.0**
	baz=251						
NNSH				*e*S	**Sn**	**04 09 39.5**	**+0.2**
	baz=251						
YM01	**YM01**	**1.02**	**305**	P	**Pn**	**04 09 25.0**	**-0.5**
	baz=294						
YM01				*e*S	**Sn**	**04 09 38.2**	**-1.1**
	baz=294						
YHNB	**Yeheng**	**1.02**	**276**	P	**Pn**	**04 09 25.7**	**+0.2**
	baz=278						
YHNB				S	**Sn**	**04 09 39.2**	**-0.1**
	baz=278						
NNS	**Nan Shan**	**1.03**	**264**	*e*P	**Pn**	**04 09 26.0**	**+0.4**
	baz=250						
NNS				*e*S	**Sn**	**04 09 39.3**	**-0.2**
	baz=250						
YM10	**YM10**	**1.03**	**305**	P	**Pn**	**04 09 25.2**	**-0.5**
	baz=295						
YM10				*e*S	**Sn**	**04 09 39.5**	**-0.1**
	baz=295						
YM05	**YM05**	**1.04**	**306**	*e*P	**Pn**	**04 09 25.1**	**-0.6**
	baz=296						
YM05				*e*S	**Sn**	**04 09 39.0**	**-0.7**
	baz=296						
NSK	**Sanguang**	**1.04**	**277**	P	**Pn**	**04 09 26.0**	**+0.3**
	baz=279						
NSK				S	**Sn**	**04 09 39.9**	**+0.2**
	baz=279						
ENLB	**Shoufeng**	**1.04**	**232**	*e*P	**Pn**	**04 09 25.2**	**-0.5**
	baz=222						
ENLB				*e*S	**Sn**	**04 09 39.6**	**-0.1**
	baz=222						
YM04	**YM04**	**1.05**	**304**	P	**Pn**	**04 09 25.3**	**-0.6**
	baz=292						
YM04				*e*S	**Sn**	**04 09 39.5**	**-0.4**
	baz=292						
TWY	**Chenhua**	**1.08**	**312**	*e*P	**Pn**	**04 09 25.9**	**-0.3**
	baz=302						
TWS1	**Kuangyinshan**	**1.12**	**299**	*e*P	**Pn**	**04 09 26.4**	**-0.3**
	baz=295						
TWS1				*e*S	**Sn**	**04 09 41.9**	**+0.6**
	baz=295						
IRIF	**Iriomote-Funau**	**1.15**	**101**	P	**Pn**	**04 09 26.9**	**-0.2**
IRIF				S	**Sn**	**04 09 42.1**	**0.0**
WHF	**Hehuan Shan**	**1.19**	**250**	*e*P	**Pn**	**04 09 28.0**	**-0.1**
	baz=246						
WHF				*e*S	**Sn**	**04 09 43.8**	**-0.1**
	baz=246						
ESL	**Shilin**	**1.22**	**233**	*e*P	**Pn**	**04 09 27.7**	**-0.4**
	baz=223						
TWT	**Tachien**	**1.24**	**256**	*e*P	**Pn**	**04 09 29.6**	**+1.1**
	baz=247						
TWT				*e*S	**Sn**	**04 09 44.8**	**+0.3**
	baz=247						
TDCB	**Techi**	**1.25**	**256**	*e*P	**Pn**	**04 09 29.4**	**+0.8**
	baz=247						
TDCB				*e*S	**Sn**	**04 09 44.3**	**-0.5**
	baz=247						
HATJ	**Hateruma jima**	**1.30**	**112**	P	**Pn**	**04 09 29.2**	**+0.2**
HATJ				S	**Sn**	**04 09 46.4**	**+0.8**
CHGB	**Renai**	**1.30**	**248**	P	**Pn**	**04 09 29.5**	**+0.2**
	baz=237						
CHGB				*e*S	**Sn**	**04 09 45.6**	**-0.5**
	baz=237						
OWD	**Renai**	**1.34**	**244**	*e*P	**Pn**	**04 09 29.7**	**-0.2**
	baz=234						
OWD				*e*S	**Sn**	**04 09 46.7**	**-0.3**
	baz=234						
LIOB	**Emei**	**1.35**	**274**	*e*P	**Pn**	**04 09 30.1**	**+0.3**
	baz=270						
LIOB				*e*S	**Sn**	**04 09 47.0**	**+0.1**
	baz=270						
NSTT	**Nanjuang**	**1.36**	**273**	*e*P	**Pn**	**04 09 30.4**	**+0.5**
	baz=269						
NSTT				*e*S	**Sn**	**04 09 46.9**	**-0.3**
	baz=269						
JKRS	**Kuro-shima**	**1.42**	**103**	P	**Pn**	**04 09 30.8**	**+0.2**
JKRS				S	**Sn**	**04 09 49.1**	**+0.7**
WHP	**Taichung City**	**1.44**	**259**	*e*P	**Pn**	**04 09 32.0**	**+1.1**
	baz=252						
WHP				*e*S	**Sn**	**04 09 49.7**	**+0.6**
	baz=252						
HGSD	**Ruisui**	**1.44**	**223**	*e*P	**Pn**	**04 09 30.3**	**-0.7**
	baz=217						
HGSD				*e*S	**Sn**	**04 09 48.4**	**-0.7**
	baz=217						
VWDT	**VWDT**	**1.47**	**237**	*i* P	**Pn**	**04 09 31.4**	**0.0**
	baz=228						
VWDT				S	**Sn**	**04 09 49.1**	**-0.6**
	baz=228						
EHY	**Hungye**	**1.50**	**226**	*e*P	**Pn**	**04 09 30.6**	**-1.1**
	baz=224						
EHY				*e*S	**Sn**	**04 09 49.1**	**-1.3**
	baz=224						
JIJ	**Ishigaki jima**	**1.52**	**97**	P	**Pn**	**04 09 31.6**	**-0.3**
JIJ				S	**Sn**	**04 09 50.2**	**-0.6**
TWQ1	**Liyutan**	**1.58**	**263**	*e*P	**Pn**	**04 09 34.6**	**+1.8**
	baz=259						
TWQ1				*e*S	**Sn**	**04 09 53.1**	**+0.7**
	baz=259						
YULB	**Yu-li**	**1.60**	**224**	*e*P	**Pn**	**04 09 32.0**	**-1.1**
	baz=222						
YULB				*e*S	**Sn**	**04 09 51.0**	**-1.7**
	baz=222						
SSLB	**Suanglung**	**1.60**	**242**	*e*P	**Pn**	**04 09 33.5**	**+0.3**
	baz=234						
SSLB				*e*S	**Sn**	**04 09 53.6**	**+0.7**
	baz=234						
SMLT	**Sun Moon Lake**	**1.60**	**246**	*e*P	**Pn**	**04 09 34.4**	**+1.1**
	baz=237						
SMLT				*e*S	**Sn**	**04 09 53.6**	**+0.5**
	baz=237						
TWF1	**Yuli**	**1.62**	**223**	*e*P	**Pn**	**04 09 32.7**	**-0.7**
	baz=230						
TYC	**Yuchr**	**1.63**	**247**	*e*P	**Pn**	**04 09 34.9**	**+1.4**
	baz=239						
TYC				*e*S	**Sn**	**04 09 55.9**	**+2.3**
	baz=239						
JISG	**Ishigakijimahi**	**1.65**	**89**	P	**Pn**	**04 09 33.2**	**-0.6**
JISG				*e*S	**Sn**	**04 09 54.0**	**-0.1**
WHYT	**Xinyi Township**	**1.73**	**241**	*e*P	**Pn**	**04 09 35.9**	**+1.1**
	baz=235						
WHYT				*e*S	**Sn**	**04 09 57.4**	**+1.4**
	baz=235						
FULB	**Fuli**	**1.74**	**219**	*e*P	**Pn**	**04 09 34.4**	**-0.7**
	baz=211						
FULB				*e*S	**Sn**	**04 09 55.2**	**-1.1**
	baz=211						
YUS	**Yu-Shan**	**1.77**	**233**	*e*P	**Pn**	**04 09 36.1**	**+0.3**
	baz=225						
YUS				*e*S	**Sn**	**04 09 56.6**	**-1.0**
	baz=225						
CHKT	**Chengkung**	**1.78**	**216**	*e*S	**Sn**	**04 09 54.3**	**-3.0**
	baz=208						
CHN5	**Tsauling**	**1.92**	**240**	P	**Pn**	**04 09 38.5**	**+1.1**
	baz=230						
CHN5				*e*S	**Sn**	**04 10 02.2**	**+1.6**
	baz=230						
TPUB	**Ta-pu**	**2.12**	**234**	*e*P	**Pn**	**04 09 41.0**	**+0.9**
	baz=225						
TPUB				*e*S	**Sn**	**04 10 06.7**	**+1.3**
	baz=225						
TWGBT	**Beinan**	**2.16**	**217**	*e*P	**Pn**	**04 09 39.8**	**-0.9**
	baz=222						
TWGBT				*e*S	**Sn**	**04 10 04.2**	**-2.3**
	baz=222						
TWG	**Pinlang**	**2.17**	**217**	*e*P	**Pn**	**04 09 40.0**	**-0.8**
	baz=222						
TWG				*e*S	**Sn**	**04 10 04.3**	**-2.3**
	baz=222						
TWK	**Hsinying**	**2.24**	**235**	*e*P	**Pn**	**04 09 43.0**	**+1.2**
	baz=233						
TWK				*e*S	**Sn**	**04 10 10.3**	**+1.8**
	baz=233						
CHN1	**Nanshi**	**2.26**	**233**	*e*P	**Pn**	**04 09 43.9**	**+1.9**
	baz=232						
CHN1				*e*S	**Sn**	**04 10 10.1**	**+1.2**
	baz=232						
MASBT	**Mashibuluo**	**2.58**	**222**	*e*P	**Pn**	**04 09 47.5**	**+1.1**
	baz=221						

IDC 16 04:38:35.9±9.2**, 18°.58S×178°.60W, h0**km**, mb3.7**/3**, mb1 4.0**/3**, mb1mx3.6**/19**, mbtmp3.7**/3**, Error ellipse: s-maj=406.8km s-min=39.8km az=144.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.33**	**260**	P	P	04 46 48.1	0.0
	0.4nm,0.3s,baz=97,slow=7.8,SNR=7.5						
ASAR	**Alice Springs**	**44.44**	**255**	P	P	04 46 48.8	-0.2
	0.4nm,0.7s,baz=87,slow=8.3,SNR=6.9						
ILAR	**Eielson Array**	**86.58**	**13**	P	P	04 51 20.6	0.0
	0.7nm,1.1s,baz=202,slow=6.8,SNR=4.0						

IDC 16 05:01:15.5±6.0**, 7°.06S×155°.54E, h0**km**, mb3.8**/4**, mb1 3.8**/4**, mb1mx3.5**/41**, mbtmp3.8**/4**, MS3.1**/2**, Ms1 3.1**/2**, ms1mx2.5**/39**, Error ellipse: s-maj=193.7km s-min=32.5km az=113.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.96**	**119**	Sn	Sn	05 03 27.8	-1.7
	10nm,0.3s,baz=16,slow=11,SNR=3.6						
HNR				LR	LR	05 04 14.6	
	comp=Z,214nm,20.0s,baz=319,slow=36						
WRA	**Warramunga Arr**	**24.22**	**236**	P	P	05 06 34.4	+0.2
	0.8nm,0.8s,baz=59,slow=9.2,SNR=5.2						
ASAR	**Alice Springs**	**26.53**	**229**	P	P	05 06 54.9	-0.3
	0.3nm,0.8s,baz=60,slow=10,SNR=2.9						
USRK	**Ussuriysk Ar.**	**55.28**	**340**	LR	LR	05 33 01.0	
	comp=Z,20nm,20.4s,baz=42,slow=34						
MKAR	**Makanchi Array**	**83.81**	**319**	P	P	05 13 47.6	+0.7
	1.5nm,0.7s,baz=103,slow=6.3,SNR=17						
ZALV	**Zalesovo Beam**	**84.53**	**326**	P	P	05 13 49.7	-0.7
	1.2nm,0.5s,baz=102,slow=4.9,SNR=2.6						

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*IDC **16** 05:13:31.6±7.5, 18°.90N×145°.23E, h323km±78km, mb3.1/9, mb1 3.3/9, mb1mx3.1/52, mbtmp3.8/9, Error ellipse: s-maj=27.9km s-min=14.0km az=98.0*

ISC 16 05:13:34.1±0.8**, 18°.9N**±0°.1×**145°.2E**±0°.3**, h350**km**, n10, σ0ˢ76**/10**, mb3.4**/10**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	**Asahikawa**	**25.25**	**356**	P	**P**	**05 18 29.4**	**-0.2**
	1.3nm,0.3s,baz=156,slow=18,SNR=3.6						
WRA	**Warramunga Arr**	**40.02**	**196**	P	**P**	**05 20 36.2**	**-0.3**
	0.5nm,0.4s,baz=358,slow=9.2,SNR=5.2						
FITZ	**Fitzroy Crossi**	**41.46**	**209**	P	**P**	**05 20 48.6**	**+0.4**
	0.6nm,0.3s,baz=0.0,slow=15,SNR=3.0						
ASAR	**Alice Springs**	**43.70**	**195**	P	**P**	**05 21 05.6**	**-0.3**
	0.2nm,0.6s,baz=15,slow=8.2,SNR=2.8						
MKAR	**Makanchi Array**	**57.98**	**314**	P	**P**	**05 22 51.9**	**+0.7**
	0.5nm,0.6s,baz=89,slow=8.3,SNR=6.5						
KURBB	**Kurchatov Arra**	**60.85**	**318**	P	**P**	**05 23 10.2**	**-0.3**
	0.4nm,0.4s,baz=96,slow=7.0,SNR=5.9						
ILAR	**Eielson Array**	**63.70**	**26**	P	**P**	**05 23 27.8**	**-1.2**
	0.6nm,0.6s,baz=250,slow=5.4,SNR=11						
YKA	**Yellowknife Ar**	**78.06**	**28**	P	**P**	**05 24 54.9**	**+0.3**
	0.6nm,0.5s,baz=285,slow=5.2,SNR=15						
NVAR	**Mina Array Bea**	**83.42**	**52**	P	**P**	**05 25 24.7**	**+1.2**
	1.4nm,0.7s,baz=270,slow=5.6,SNR=10						
FINES	**FINESS Array B**	**86.51**	**335**	P	**P**	**05 25 37.7**	**-0.2**
	14nm,1.2s,baz=58,slow=4.7,SNR=5.7						

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*IDC **16** 05:22:59.5±2.5, 4°.88S×152°.35E, h57km±20km, mb3.9/6, mb1 4.1/7, mb1mx3.8/41, mbtmp4.2/7, ML2.2/1, MS3.2/1, Ms1 3.2/1, ms1mx2.7/28, Error ellipse: s-maj=47.1km s-min=13.3km az=119.0*

ISC 16 05:22:59.1±1.0**, 4°.91S**±0°.08×**152°.5E**±0°.1**, h55**km**, n10, σ0ˢ70**/12**, mb3.9**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.73**	**325**	P	**Pn**	**05 23 13.6**	**0.0**
	2µm,0.3s,baz=155,slow=1.0,SNR=535						
KRVT				S	**Sn**	**05 23 24.7**	**+0.7**
	964nm,0.3s,baz=351,slow=19,SNR=31						
PMG	**Port Moresby**	**6.89**	**229**	P	**Pn**	**05 24 38.8**	**+1.1**
	2.8nm,0.3s,baz=14,slow=9.0,SNR=6.4						
PMG				S	**Sn**	**05 25 54.6**	**-0.1**
	3.2nm,0.3s,baz=138,slow=16,SNR=6.5						
WRA	**Warramunga Arr**	**23.11**	**228**	P	**P**	**05 27 59.9**	**-0.8**
	6.8nm,0.5s,baz=53,slow=10,SNR=56						
ASAR	**Alice Springs**	**25.84**	**222**	P	**P**	**05 28 24.9**	**-0.7**
	2.3nm,0.5s,baz=60,slow=8.7,SNR=22						
ASAR				LR	LR	05 37 52.8	
	comp=Z,49nm,18.1s,baz=164,slow=35						
STKA	**Stephens Creek**	**28.70**	**199**	P	**P**	**05 28 51.2**	**+0.1**
	0.6nm,0.3s,baz=9.8,slow=9.7,SNR=3.0						
FITZ	**Fitzroy Crossi**	**29.30**	**241**	P	**P**	**05 28 55.6**	**-1.0**
	4.9nm,0.6s,baz=168,slow=1.2,SNR=23						

ILAR	Eielson Array	82.39	22	P	P	05 35 14.8	-0.2
	1.0nm,0.8s,baz=244,slow=5.7,SNR=11						
YKA	Yellowknife Ar	95.68	28	P	P	05 36 19.4	+0.7
	0.2nm,0.7s,baz=274,slow=4.9,SNR=5.5						
TORD	Torodi Ar. Bea	150.01	288	PKPbc	PKPbc	05 42 44.5	-0.1
	2.0nm,0.6s,baz=75,slow=3.0,SNR=13						
BDFB	Brasilia	151.23	136	PKPbc	PKPbc	05 42 47.6	-0.1
	1.2nm,0.5s,baz=190,slow=3.5,SNR=3.6						

TIR ***16*** *05:24:35.6, 41°.51N×19°.51E, h7^{km}, Md2.9/4*
BEO ***16*** *05:24:37.8±0.5, 41°.53N×19°.56E, h9^{km}±3^{km}, ML2.3/5*
ISC 16 05:24:36.2±1.2**, 41°.53N**±0°.04×**19°.51E**±0°.03**, h8**^{km}±10^{km}**,**
n38, σ1^{s}.**01**/52**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.32	124	*e*Pg	Pg	05 24 42.4	-0.1
TIR				*e*Sg	Sg	05 24 47.9	+1.1
TIR	Tirane	0.32	124	*i* PG	Pg	05 24 42.6	+0.1
TIR				*i* SG	Sb	05 24 48.2	-1.3
PUK	Puka	0.59	29	*i* PG	Pg	05 24 47.4	-0.3
PUK				*i* SG	Sg	05 24 51.9	-3.5
DRME	Dracevica, Mon	0.70	340	*e*Pg	Pg	05 24 49.8	0.0
PHP	Peshkopia	0.71	77	*i* PG	Pg	05 24 49.3	-0.7
PHP				*i* SG	Sg	05 24 59.6	+0.3
PDG	Podgorica	0.92	348	*e*Pg	Pb	05 24 55.2	+0.8
PDG				*e*Sg	Sn	05 25 08.8	-0.1
PDG	Podgorica	0.92	348	*e*Pg	Pb	05 24 55.3	+0.8
BCI	Bajram Curri	0.94	26	*i* PG	Pg	05 24 53.3	-0.9
BCI				*i* SG	Sn	05 25 09.1	-0.2
HCY	Herceg Novi	1.19	321	*e*Pn	Pb	05 24 59.0	-0.1
TREB	Trebinje	1.47	324	*e*Pg	Pg	05 25 05.0	+0.6
TREB				*e*Sg	Sg	05 25 24.3	+0.8
TREB	Trebinje	1.47	324	*e*Pn	Pn	05 25 03.8	+0.8
DBRK	Dubrovnik	1.53	319	*e*Pn	Pn	05 25 04.6	+0.8
DBRK				Sn	Sg	05 25 26.1	+0.7
BRY	Bratogost	1.55	333	*e*Pn	Pn	05 25 05.4	+1.1
SJES	Sjenica	1.77	11	*e*Pn	Pb	05 25 09.9	+1.0
SJES				*e*Sg	Sg	05 25 33.1	+0.1
STON	Ston	1.90	316	*e*Pn	Pn	05 25 08.7	-0.2
STON	Ston	1.90	316	*e*Pn	Pn	05 25 09.0	+0.1
STIP	Stip	2.01	84	*i* Pn	Pb	05 25 13.3	+0.3
SELS	Selova	2.07	35	*e*Pn	Pn	05 25 11.4	+0.2
RUDO	Rudo	2.09	357	*e*Pn	Pb	05 25 13.9	-0.5
BARS	Barje	2.14	52	*e*Pn	Pn	05 25 11.8	-0.4
BBLS	Lazići	2.34	358	*e*Pn	Pn	05 25 16.4	+1.4
BBLS	Lazići	2.34	358	*e*Pn	Pb	05 25 19.8	+1.1
BOSS	Bosilegrad	2.42	65	*e*Pn	Pn	05 25 16.5	+0.5
GRUS	Gruza	2.52	20	*e*Pn	Pn	05 25 18.6	+1.2
MAKA	Makarska	2.55	314	*e*Pn	Pn	05 25 17.4	-0.4
MAKA				Sn	Sn	05 25 47.7	-1.3
HAPS	Han Pijesak,BI	2.59	351	*e*Pn	Pn	05 25 19.0	+0.5
DIVS	Divibare	2.59	8	*e*Pn	Pn	05 25 20.5	+2.0
DIVS	Divibare	2.59	8	*e*Pn	Pn	05 25 20.5	+2.0
RICI	Ricice	2.64	319	*e*Pn	Pn	05 25 18.9	-0.2
RICI				Sn	Sn	05 25 51.6	+0.3
BOVS	Bovan	2.66	37	*e*Pn	Pn	05 25 19.3	0.0
ZAPS	Zavoj	2.90	52	*e*Pn	Pn	05 25 24.1	+1.5
ZAGS	Zajecar	3.04	40	*e*Pn	Pn	05 25 26.7	+2.1
KIJV	Kijevo	3.37	318	*i* Pn	Pn	05 25 29.3	+0.1
KIJV				Sn	Sn	05 26 08.5	-0.8
ZIRJ	Zirje	3.56	308	*e*Pn	Pn	05 25 30.7	-1.0
ZIRJ				Sn	Sn	05 26 13.1	-0.8
MORI	Morici	3.65	311	*e*Pn	Pn	05 25 32.0	-0.9
MORI				Sn	Sn	05 26 15.6	-0.5
UDBI	Udbina	4.07	319	*e*Pn	Pn	05 25 39.3	+0.5
DUGI	Dugi Otok	4.10	308	*e*Pn	Pn	05 25 38.9	-0.3
NVLJ	Novalja	4.56	313	*e*Pn	Pn	05 25 46.1	+0.7

SOME ***16*** *05:32:09.5, 42°.35N×78°.02E, h10^{km}, MS3.9*
IDC ***16*** *05:32:09.2±0.6, 42°.34N×78°.04E, h0^{km}, mb4.2/17, mb1 4.4/24, mb1mx4.1/47, mbtmp4.2/24, ML4.2/7, MS3.6/10, Ms1 3.6/10, ms1mx3.2/55, Error ellipse: s-maj=10.7km s-min=9.5km az=151.0*
BJI ***16*** *05:32:09.7±0.0, 42°.42N×78°.04E, h8^{km}, mB4.6/19, mb4.3/22, ML4.5/9, Ms4.0/15, Ms7 3.9/14*
KRNET ***16*** *05:32:10.0±0.1, 42°.39N×78°.02E, h17^{km}, mb5.2*
MOS ***16*** *05:32:10.5±1.7, 42°.43N×78°.05E, h12^{km}, mb4.5/10, Error ellipse: s-maj=6.5km s-min=4.6km az=106.6*
MOS Felt (II-III) at Saty, Kurmenty.
NNC ***16*** *05:32:10.2±0.4, 42°.43N×78°.04E, h0^{km}, mb5.2, mpv5.2, Error ellipse: s-maj=3.2km s-min=1.7km az=179.0*
NEIC ***16*** *05:32:13.8±2.0, 42°.42N±0°.07×78°.07E±0°.04, h24^{km}±5^{km}, mb4.3/9, Error ellipse: s-maj=10.8km s-min=4.2km az=176.0*
ISC 16 05:32:11.4±0.3**, 42°.41N**±0°.02×**77°.97E**±0°.01**, h10**^{km}**, n243,** σ2^{s}.**07**/319**, mb4.3**/29**, MS3.6**/10**, 58C-71D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	Przheval'sk	0.32	77	⇓*i*P	Pg	05 32 16.3	-1.6
	baz=72						
PRZ				⇓*i*S	Sg	05 32 20.6	-1.7
	baz=72						
ANVS	Anan'yevo	0.43	329	⇓*i*P	Pg	05 32 19.7	-0.3
	baz=27						
ANVS				⇓*i*S	Sb	05 32 26.9	-1.1
	baz=27						
KDJ	Kajisay	0.65	245	⇑*i*P	Pg	05 32 22.6	-1.5
	baz=47						
KDJ				⇑*i*S	Sg	05 32 31.3	-1.4
	baz=47						
TNSS	Tian-Shan	0.98	310	⇓*i*P	Pg	05 32 29.2	-1.1
	baz=10.0						
TNSS				⇑*i*S	Sb	05 32 43.7	-0.2
	baz=10.0						
TNSS	Tian-Shan	0.98	310	⇓*i*P	Pg	05 32 29.2	-1.1
	2µm,0.2s						
TNSS				⇑*i*S	Sb	05 32 43.7	-0.2
	4µm,0.4s						
TNSS	Tian-Shan	0.98	310	P	Pg	05 32 29.2	-1.1
	2µm,0.2s						
TNSS				S	Sb	05 32 43.7	-0.2
	4µm,0.4s						
TNSS	Tian-Shan	0.98	310	⇓*i*PG	Pg	05 32 29.2	-1.1
TNSS				*i* S	Sb	05 32 43.7	-0.2
MDOK	Medeo	1.01	318	⇑*e*P	Pg	05 32 29.7	-1.2
	baz=18						
MDOK				⇓*i*S	Sb	05 32 44.1	-0.5
	baz=18						
MDOK	Medeo	1.01	318	⇑*e*P	Pg	05 32 29.7	-1.2
	2µm,0.2s						
MDOK				⇓*i*S	Sb	05 32 44.2	-0.5
	5µm,0.5s						
MDOK	Medeo	1.01	318	⇑P	Pg	05 32 29.6	-1.4
	1µm,0.5s						
MDOK				⇓S	Sb	05 32 44.2	-0.4
	4µm,0.6s						
MDOK	Medeo	1.01	318	Pg	Pg	05 32 29.7	-1.2
	2µm,0.5s						
MDOK				Lg	Lg	05 32 44.2	
	5µm,1.0s						
MDOK	Medeo	1.01	318	⇑*e*PG	Pg	05 32 29.7	-1.2
MDOK				*i* S	Sb	05 32 44.2	-0.4
KOTS	Kotyrbulak	1.04	323	⇓*e*P	Pg	05 32 30.3	-1.1
	baz=22						
KOTS				⇓*e*S	Sb	05 32 45.1	-0.2
	baz=22						
KOTS	Kotyrbulak	1.04	323	⇓*e*P	Pg	05 32 30.3	-1.1
	4µm,0.1s						
KOTS				*e*S	Sb	05 32 45.1	-0.2
	8µm,0.2s						
KOTS	Kotyrbulak	1.04	323	P	Pg	05 32 30.3	-1.1
	4µm,0.1s						
KOTS				S	Sb	05 32 45.1	-0.2
	8µm,0.2s						
UZB	Uzynbulak	1.07	46	⇓*e*P	Pg	05 32 29.1	-2.8
	420nm,0.2s						
UZB				*e*S	Sg	05 32 43.1	-2.7
	2µm,0.2s						
UZB	Uzynbulak	1.07	46	P	Pg	05 32 29.1	-2.8
	551nm,0.4s						
UZB				S	Sg	05 32 43.1	-2.7
	2µm,0.3s						
UZB	Uzynbulak	1.07	46	⇓*e*PG	Pg	05 32 29.1	-2.8
UZB				*e*S	Sg	05 32 43.1	-2.7
KURS	Kuram	1.08	8	⇓*e*P	Pg	05 32 30.6	-1.7
	baz=6.0						
KURS				⇓*e*S	Sn	05 32 45.6	-2.3
	baz=6.0						
KURS	Kuram	1.08	8	⇓*e*P	Pg	05 32 30.6	-1.7
	1µm,0.5s						
KURS				*e*S	Sn	05 32 45.5	-2.3
	2µm,0.4s						
KURS	Kuram	1.08	8	P	Pg	05 32 30.6	-1.7
	1µm,0.5s						
KURS				S	Sn	05 32 45.5	-2.3
	2µm,0.5s						
KNDC	Almaty	1.09	318	⇑P	Pb	05 32 31.3	-1.2
	1µm,0.6s						
KNDC				⇑S	Sn	05 32 47.6	-0.5
	5µm,0.8s						
KNDC	Almaty	1.09	318	PG	Pb	05 32 31.3	-1.2
KNDC				S	Sn	05 32 47.6	-0.5
AAA	Alma-Ata	1.11	316	⇓*e*P	Pb	05 32 32.0	-0.8
	baz=16						
AAA				⇓*e*S	Sn	05 32 48.1	-0.5
	baz=16						
AAA	Alma-Ata	1.11	316	⇓*e*P	Pb	05 32 32.0	-0.8
	3µm,0.2s						
AAA				*e*S	Sn	05 32 48.1	-0.5
	2µm,0.3s						
AAA	Alma-Ata	1.11	316	P	Pb	05 32 32.0	-0.8
	5µm,0.3s						
AAA				S	Sn	05 32 48.1	-0.5
	3µm,0.6s						
AAA	Alma-Ata	1.11	316	*e*PG	Pb	05 32 32.0	-0.8
AAA				*e*S	Sn	05 32 48.3	-0.3
AAA				pmax	pmax		
	comp=Z,5µm,0.4s						
AAA				smax	smax		
	comp=E,3µm,0.6s						
KPKS	Kokpek	1.18	26	⇓*e*P	Pb	05 32 31.7	-2.2
	baz=24						
KPKS				⇓*e*S	Sb	05 32 47.6	-1.7
	baz=24						
KPKS	Kokpek	1.18	26	⇓*e*P	Pb	05 32 31.7	-2.2
	comp=E,3µm,0.2s						
KPKS				*e*S	Sb	05 32 47.5	-1.7
	comp=E,10µm,0.5s						
KPKS	Kokpek	1.18	26	⇓*e*PG	Pb	05 32 31.7	-2.2
KPKS				*e*S	Sb	05 32 47.5	-1.7
IZV	Izvestkoviy	1.18	302	⇓*e*P	Pb	05 32 32.8	-1.2
	baz=3.0						
IZV				⇓*e*S	Sg	05 32 49.4	-0.1
	baz=3.0						
IZV	Izvestkoviy	1.18	302	⇓*e*P	Pb	05 32 32.8	-1.2
	comp=E,540nm,0.2s						
IZV				*e*S	Sg	05 32 49.4	-0.1
	comp=E,2µm,0.4s						
IZV	Izvestkoviy	1.18	302	P	Pb	05 32 32.8	-1.2
	comp=E,540nm,0.2s						
IZV				S	Sg	05 32 49.4	-0.1
	comp=E,2µm,0.4s						
ULHL	Ulahol	1.29	263	⇑*i*P	Pn	05 32 34.5	-1.3
	baz=65						
ULHL				⇑*i*S	Sb	05 32 51.7	-1.0
	baz=65						
ULHL	Ulahol	1.29	263	P	Pn	05 32 34.5	-1.3
	SNR=795						
SHLS	Shalkode	1.32	55	*e*P	Pg	05 32 38.9	+2.1
	baz=60						
SHLS				*e*S	Sn	05 33 00.3	+6.4
	baz=60						
SHLS	Shalkode	1.32	55	*e*P	Pg	05 32 38.9	+2.1
	comp=E,4µm,0.2s						
SHLS				*e*S	Sn	05 33 00.3	+6.4
	comp=E,12µm,0.6s						
SHLS	Shalkode	1.32	55	P	Pg	05 32 38.9	+2.1
	comp=E,4µm,0.2s						
SHLS				S	Sn	05 33 00.3	+6.4
	comp=E,12µm,0.6s						
SHLS	Shalkode	1.32	55	*e*P*	Pg	05 32 38.9	+2.1
SHLS				*e*S	Sn	05 33 00.3	+6.4
MTBS	Maitube	1.34	303	⇓*e*P	Pn	05 32 35.6	-0.7
	baz=3.0						
MTBS				⇑*i*S	Sg	05 32 54.7	0.0
	baz=3.0						
MTBS	Maitube	1.34	303	⇓*e*P	Pn	05 32 35.6	-0.7
	comp=E,3µm,0.3s						
MTBS				⇑*i*S	Sg	05 32 54.7	0.0
	comp=E,4µm,0.3s						
MTBS	Maitube	1.34	303	P	Pn	05 32 35.6	-0.7
	comp=E,3µm,0.3s						
MTBS				S	Sg	05 32 54.7	0.0
	comp=E,7µm,0.3s						
MTBS	Maitube	1.34	303	⇓*e*PG	Pn	05 32 35.6	-0.7
MTBS				*i* S	Sg	05 32 54.7	0.0
BOOM	Boomskoye usch	1.51	274	⇓*i*P	Pn	05 32 38.3	-0.3
	baz=75						
BOOM				⇓*i*S	Sn	05 32 58.6	+0.2
	baz=75						
BOOM	Boomskoye usch	1.51	274	PN	Pb	05 32 38.7	-0.9
BOOM						05 32 59.7	
BOOM	Boomskoye usch	1.51	274		Pb	05 32 38.7	-0.9
BOOM				Sn	Sg	05 32 59.7	-0.2
KTBS	Karatobe	1.61	324	⇓*e*P	Pb	05 32 40.5	-0.8
	comp=E,1µm,0.4s						
KTBS				*e*S	Sg	05 33 02.5	-0.6
	comp=E,6µm,0.2s						
KTBS	Karatobe	1.61	324	P	Pb	05 32 40.4	-0.8
	comp=E,2µm,0.3s						
KTBS				S	Sg	05 33 02.6	-0.6
	comp=E,6µm,0.2s						
KST	Kastek	1.61	294	⇓*e*P	Pb	05 32 40.4	-0.9
	baz=94						
KST				⇑*i*S	Sg	05 33 02.9	-0.3
	baz=94						
KST	Kastek	1.61	294	⇓*e*P	Pb	05 32 40.4	-0.9
	comp=E,2µm,0.2s						
KST				⇑*i*S	Sg	05 33 02.9	-0.3
	comp=E,3µm,0.7s						
KST	Kastek	1.61	294	P	Pb	05 32 40.4	-0.9
	comp=E,3µm,0.7s						
KST				S	Sg	05 33 02.9	-0.3
	comp=E,6µm,0.7s						
CHKK	Chushkaly	1.61	334	⇓*e*P	Pb	05 32 40.4	-0.9
	baz=33						
CHKK				⇓*e*S	Sg	05 33 02.9	-0.4
	baz=33						
CHKK	Chushkaly	1.61	334	⇓*e*P	Pb	05 32 40.4	-0.9
	comp=E,3µm,0.3s						
CHKK				*e*S	Sg	05 33 02.8	-0.4
	comp=E,8µm,0.4s						
CHKK	Chushkaly	1.61	334	P	Pb	05 32 40.4	-0.9
	comp=E,3µm,0.4s						
CHKK				S	Sg	05 33 02.8	-0.4
	comp=E,8µm,0.4s						
CHKK	Chushkaly	1.61	334	⇓*e*PN	Pb	05 32 40.4	-0.9
CHKK				*e*S	Sg	05 33 02.8	-0.4
NRN	Naryn	1.77	237	⇑*e*P	Pb	05 32 42.9	-1.2
	baz=39						
NRN				⇑*i*S	Sb	05 33 06.9	+0.5
	baz=39						
ARXS	Arharly	1.80	357	⇓*e*P	Pb	05 32 43.6	-1.0
	comp=E,4µm,0.3s						
ARXS				*e*S	Sg	05 33 08.1	-1.3
	comp=E,5µm,0.8s						
ARXS	Arharly	1.80	357	P	Pb	05 32 43.6	-1.0
	comp=E,4µm,0.3s						
ARXS				S	Sg	05 33 08.1	-1.3
	comp=E,5µm,0.8s						
DGS	Degeres	1.82	298	⇑*e*P	Pb	05 32 44.1	-0.8
	baz=98						
DGS				⇑*e*S	Sg	05 33 08.9	-1.0
	baz=98						
DGS	Degeres	1.82	298	⇑*e*P	Pb	05 32 44.1	-0.8
	comp=E,1µm,0.4s						
DGS				*e*S	Sg	05 33 08.9	-1.0
	comp=E,9µm,0.5s						
DGS	Degeres	1.82	298	P	Pb	05 32 44.1	-0.8
	comp=E,1µm,0.4s						
DGS				S	Sg	05 33 08.9	-1.0
	comp=E,9µm,0.5s						
KUU	Kurty	1.90	322	⇓*e*P	Pb	05 32 45.6	-0.7
	comp=E,2µm,0.4s						
KUU				*e*S	Sg	05 33 11.2	-1.4
KUU	Kurty	1.90	322	Pg	Pb	05 32 45.5	-0.7
	comp=E,2µm,0.3s						
KUU				Lg	Lg	05 33 11.2	
	comp=E,4µm,0.4s						
KUU	Kurty	1.90	322	⇓*e*PN	Pb	05 32 45.6	-0.7
KUU				*e*S	Sg	05 33 11.2	-1.4
KZA	Kyzart	2.05	262	⇑*i*P	Pb	05 32 47.8	-1.1
	baz=62						
KZA				⇑*i*S	Sb	05 33 14.8	+0.1
	baz=62						
KZA	Kyzart	2.05	262	P	Pb	05 32 47.9	-1.1
	SNR=798						
KBK	Karagaybulak	2.25	277	⇓*i*P	Pn	05 32 50.0	+1.2
	baz=78						
KBK				⇓*i*S	Sn	05 33 18.5	+1.7
	baz=78						
KBK	Karagaybulak	2.25	277	P	Pb	05 32 51.1	-1.1
	SNR=628						
DJR	Jarkent	2.33	34	⇑*e*P	Pb	05 32 51.0	-2.6
	comp=E,701nm,0.4s						
DJR				*e*S	Sb	05 33 21.1	-1.4
	comp=E,4µm,0.6s						
DJR	Jarkent	2.33	34	Pg	Pb	05 32 51.5	-2.1
	comp=E,701nm,0.5s						
DJR				Lg	Lg	05 33 21.9	
	comp=E,6µm,0.4s						
CHMS	Chumysh	2.45	285	⇓*i*P	Pb	05 32 53.4	-2.1
	baz=85						
CHMS				⇓*i*S	Sb	05 33 24.1	-1.6
	baz=85						
CHMS	Chumysh	2.45	285	P	Pb	05 32 53.4	-2.1
	SNR=114						
CHMS	Chumysh	2.45	285	⇑Pn	Pb	05 32 53.4	-2.1
	comp=E,237nm,0.4s						
CHMS				⇑Lg	Lg	05 33 27.5	
	comp=E,3µm,0.6s						
CHMS	Chumysh	2.45	285	*i* PN	Pb	05 32 53.6	-1.9
CHMS				pmax	pmax		
	comp=Z,237nm,0.4s						
UCH	Uchtor	2.57	267	⇑*i*P	Pn	05 32 55.1	+1.6
	baz=68						
UCH				⇑*i*S	Sn	05 33 27.0	+1.9
	baz=68						
UCH	Uchtor	2.57	267	P	Pb	05 32 56.1	-1.8
	SNR=423						
AAK	Ala-Archa	2.58	276	Pn	Pb	05 32 55.7	-2.1
	comp=Z,99nm,0.3s,baz=95,slow=8.9,SNR=307						
AAK				Lg	Lg	05 33 32.2	
	comp=Z,318nm,0.3s,baz=360,slow=20,SNR=19						
AAK	Ala-Archa	2.58	276	⇑*e*P	Pb	05 32 55.3	-2.6
	baz=77						
AAK				⇑*i*S	Sn	05 33 27.3	+2.4
	baz=77						
AAK	Ala-Archa	2.58	276	P	Pb	05 32 55.8	-2.1
	SNR=463						
AAK	Ala-Archa	2.58	276	⇑Pn	Pn	05 32 54.6	+1.2
	comp=Z,391nm,0.6s						
AAK				⇑Lg	Lg	05 33 34.6	
	comp=Z,2µm,0.7s						
AAK	Ala-Archa	2.58	276	*de*PN	Pb	05 32 55.5	-2.4
AAK				pmax	pmax		
	comp=Z,396nm,0.7s						
AAK	Ala-Archa	2.58	276		Pb	05 32 56.6	-1.3
TDK	Taldyqorghan	2.61	7	*e*P	Pb	05 32 56.9	-1.3
	comp=Z,4µm,0.6s						
TDK				*e*S	Sg	05 33 31.1	-4.1
	comp=Z,9µm,0.5s						
TDK	Taldyqorghan	2.61	7	Pg	Pb	05 32 56.9	-1.3
	comp=Z,4µm,0.6s						
TDK				Lg	Lg	05 33 31.1	
	comp=Z,9µm,0.5s						
TDK	Taldyqorghan	2.61	7	*e*PN	Pb	05 32 56.9	-1.3
TDK				*e*S	Sg	05 33 31.1	-4.1
USP	Ospenovka	2.69	290	⇓*i*P	Pb	05 32 56.9	-2.8
	baz=90						
USP				⇓*i*S	Sb	05 33 30.3	-2.5
	baz=90						
USP	Ospenovka	2.69	290	P	Pb	05 32 56.8	-2.9
	SNR=57						
ARLS	Aral	2.77	260	⇑*e*P	Pn	05 32 57.2	+1.2
	baz=61						
ARLS				⇑*i*S	Sn	05 33 31.8	+2.2
	baz=61						
KAPS	Kapalarasan	3.04	19	*e*P	Pb	05 33 05.2	-0.4
	comp=Z,506nm,0.4s						
KAPS				*e*S	Sg	05 33 44.8	-4.3
	comp=Z,2µm,0.4s						
KAPS	Kapalarasan	3.04	19	Pg	Pb	05 33 05.2	-0.4
	comp=Z,506nm,0.4s						
KAPS				Lg	Lg	05 33 44.8	
	comp=Z,2µm,0.4s						
EKS2	Erkin-Say	3.11	276	⇓*i*P	Pn	05 33 02.8	+2.1
	baz=76						
EKS2				⇓*i*S	Sn	05 33 40.4	+2.5
	baz=76						
EKS2	Erkin-Say	3.11	276	P	Pn	05 33 02.8	+2.1
	SNR=69						
AML	Almayashu	3.19	266	⇑*i*P	Pn	05 33 04.0	+2.1
	baz=67						
AML				⇑*i*S	Sn	05 33 41.9	+1.7
	baz=67						
AML	Almayashu	3.19	266	P	Pb	05 33 05.2	-3.1
	SNR=28						
KSH	Kashi	3.27	208	Pn	Pg	05 33 12.0	-1.9
KSH				Sn	Sg	05 33 56.8	+0.6
KSH				LR	LR		
	comp=Z,4µm,6.8s						
KSH				LR	LR		
	comp=Z,3µm,7.8s						
KSH				LR	LR		
	comp=Z,3µm,15.8s						
MRKS	Merke	3.52	277	*e*P	Pb	05 33 13.9	+0.1
	comp=Z,317nm,0.6s						
MRKS				*e*S	Sb	05 34 00.4	+3.7
	comp=Z,758nm,0.3s						
MRKS	Merke	3.52	277	Pg	Pb	05 33 13.9	+0.1
	comp=Z,317nm,0.6s						
MRKS				Lg	Lg	05 34 00.4	
	comp=Z,758nm,0.3s						
BTLS	Baital	3.87	314	*e*P	Pb	05 33 20.7	+0.9
	comp=Z,177nm,0.5s						
BTLS				*e*S	Sg	05 34 11.7	-4.1
	comp=Z,87nm,0.4s						
BTLS	Baital	3.87	314	Pg	Pb	05 33 20.7	+0.9
	comp=Z,177nm,0.5s						
BTLS				Lg	Lg	05 34 11.7	
	comp=Z,87nm,0.4s						
BTLS	Baital	3.87	314	*e*PN	Pb	05 33 20.7	+0.9
BTLS				*e*S	Sg	05 34 11.7	-4.1
ARSB	Arslanbob	3.88	255	⇑*i*P	Pn	05 33 12.7	+1.4
	baz=56						
ARSB				⇑*i*S	Sn	05 33 58.1	+1.1
	baz=56						
DZA	Taraz	4.92	278	*e*P	Pb	05 33 40.4	+2.7
	comp=Z,167nm,0.2s						
DZA				*e*S	Sg	05 34 46.1	-3.3
	comp=Z,367nm,0.3s						
DZA	Taraz	4.92	278	*e*PN	Pb	05 33 40.4	+2.7
DZA				*e*S	Sg	05 34 46.1	-3.3
MAKZ	Makanchi	5.24	32	⇓Pn	Pn	05 33 30.4	+0.6
	comp=Z,54nm,0.3s						
MAKZ				⇑Lg	Lg	05 34 54.4	
	comp=Z,117nm,0.8s						
MAKZ	Makanchi	5.24	32	PN	Pn	05 33 31.1	+1.3
MAKZ	Makanchi	5.24	32		Pn	05 33 31.1	+1.3
MK31	Makanchi Array	5.36	34	Pn	Pn	05 33 32.4	+0.9
	comp=Z,37nm,0.2s,baz=216,slow=12,SNR=2621						
MK31				⇓Sn	Sn	05 34 33.9	+0.8
	comp=Z,49nm,0.5s						
MK31				⇓Lg	Lg	05 34 56.9	
	comp=Z,52nm,0.4s,baz=208,slow=28,SNR=5.1						
MK31	Makanchi Array	5.36	34	PN	Pn	05 33 32.3	+0.9
MK31						05 34 34.5	
MK31	Makanchi Array	5.36	34		Pn	05 33 33.2	+1.8
MKAR	Makanchi Array	5.36	34	Pn	Pn	05 33 32.4	+1.0
	comp=Z,39nm,0.3s,baz=214,slow=15,SNR=1554						
MKAR				Lg	Lg	05 34 58.0	
	comp=Z,39nm,0.3s,baz=218,slow=28,SNR=6.7						
MKAR	Makanchi Array	5.36	34	PN	Pn	05 33 32.5	+1.1
MKAR	Makanchi Array	5.36	34		Pn	05 33 32.5	+1.1
KK31	Karatay Array	5.54	280	⇑Pn	Pn	05 33 35.0	+1.1
	comp=Z,1.1nm,0.9s,baz=94,slow=11,SNR=32						
KK31				⇓Pg	Pg	05 33 52.5	-5.0
	comp=Z,59nm,0.6s,baz=88,slow=17,SNR=45						
KK31				⇑Lg	Lg	05 35 08.1	
	comp=Z,121nm,0.5s,baz=98,slow=30,SNR=5.9						
KK31	Karatay Array	5.54	280		Pg	05 33 53.4	-4.0
KKAR	Karatay Array	5.54	280		Pg	05 33 54.3	-3.1
KKAR	Karatay Array	5.54	280		Pg	05 33 53.4	-4.0
IUG	Iuzhnay	5.90	270	Pg	Pg	05 34 00.1	-4.3
	comp=Z,35nm,0.4s						
IUG				Lg	Lg	05 35 19.0	
	comp=Z,274nm,0.5s						
TAS	Tashkent	6.57	263	P*	Pg	05 34 15.3	-1.9
TAS	Tashkent	6.57	263	Pn	Pg	05 34 15.3	-1.9
GAR	Garm	6.74	242		Pn	05 33 53.5	+2.9

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WMQ   Urumqi            7.25  76 ePn      Pn     05 33 57.8 +0.3
WMQ                                Sn     Sn     05 35 22.8 +2.9
WMQ                                smax   smax
      comp=Z,140nm,0.9s
WMQ                                smax   smax
      comp=Z,140nm,1.1s
WMQ                                LR     LR
      comp=Z,580nm,9.5s
WMQ                                LR     LR
      comp=Z,310nm,8.5s
WMQ                                LR     LR
      comp=Z,350nm,9.5s
WMQ   Urumqi            7.25  76   PN     Pn     05 33 58.0 +0.6
WMQ   Urumqi            7.25  76          Pn     05 33 58.0 +0.6
CHGR  Chuyangaron       7.69 244          Pn     05 34 04.7 +1.2
KURBB Kurchatov Arra    8.22   2   Pn     Pn     05 34 09.7 -1.0
      comp=Z,1.1nm,0.3s,baz=190,slow=12,SNR=48
KURBB                              Lg     Lg     05 36 30.1
      comp=Z,2.3nm,0.3s,baz=199,slow=29,SNR=10
KURK  Kurchatov         8.32   3 ⇓Pn      Pn     05 34 10.7 -1.2
      comp=Z,21nm,0.6s
KURK                             ⇑Lg      Lg     05 36 33.8
      comp=Z,319nm,0.8s
KURK  Kurchatov         8.32   3deP       Pn     05 34 11.3 -0.7
KURK  Kurchatov         8.32   3          Pn     05 34 12.0  0.0
BRZS  Berezniki         8.41 336   Pg     Pg     05 34 47.1 -5.3
      comp=Z,41nm,0.4s
BRZS                               Lg     Lg     05 36 40.0
      comp=Z,171nm,0.7s
CHCP  Chirah Chowk      9.49 205   P      Pn     05 34 30.0 +1.8
NIL   Nilore            9.51 205   P      Pn     05 34 30.4 +2.1
NIL   Nilore            9.51 205          Pn     05 34 30.4 +2.1
CEP   Cherat            9.81 211   P      Pn     05 34 34.6 +1.9
CEP                                S      Sn     05 36 23.0 +0.1
KBL   Kabul            10.52 225   P      Pn     05 34 43.4 +1.0
KBL   Kabul            10.52 225          Pn     05 34 43.4 +1.0
THW   Thamme Wali      10.79 209   P      Pn     05 34 46.2 +0.2
BVAR  Borovoye Array   11.78 337   Pn     Pn     05 34 58.2 -1.1
      comp=Z,5.4nm,0.3s,baz=150,slow=15,SNR=52
BVAR                               Sn     Sn     05 37 09.5 -1.2
      comp=Z,1.6nm,0.3s,baz=134,slow=21,SNR=3.7
BVAR                               Lg     Lg     05 38 24.9
      comp=Z,3.7nm,0.3s,baz=153,slow=28,SNR=6.8
BRVK  Borovoye         11.84 337 ⇑Pn      Pn     05 34 58.6 -1.5
      comp=Z,31nm,0.9s
BRVK                             ⇑Sn      Sn     05 37 13.7 +1.6
      comp=Z,45nm,1.2s
BRVK                             ⇑Lg      Lg     05 38 26.1
      comp=Z,307nm,1.4s
BRVK  Borovoye         11.84 337ceP       Pn     05 34 59.4 -0.7
BRVK  Borovoye         11.84 337          Pn     05 34 59.5 -0.6
ZAA0  Zalesovo Array   12.41  19 ⇓Pn      Pn     05 35 07.8 -0.1
      comp=Z,2.4nm,0.6s
ZAA0                             ⇑Lg      Lg     05 38 40.2
      comp=Z,11nm,1.1s
ZAA0  Zalesovo Array   12.41  19          Pn     05 35 08.3 +0.4
ZALV  Zalesovo Beam    12.41  19   Pn     Pn     05 35 06.7 -1.2
      comp=Z,3.3nm,0.3s,baz=213,slow=14,SNR=59
ZALV                               Lg     Lg     05 38 43.2
      comp=Z,0.3nm,0.3s,baz=198,slow=23,SNR=2.6
ZALV  Zalesovo Beam    12.41  19   P      Pn     05 35 08.6 +0.7
ZALV  Zalesovo Beam    12.41  19          Pn     05 35 08.6 +0.7
AB31  Akbulak array    14.29 305 ⇓Pn      Pn     05 35 31.7 -2.0
      comp=Z,1.8nm,0.2s,baz=106,slow=13,SNR=106
AB31                             ⇑Sn      Sn     05 38 15.7 +3.5
      comp=Z,7.9nm,0.8s
AB31                             ⇑Lg      Lg     05 39 45.6
      comp=Z,23nm,0.8s
ABKAR Akbulak array    14.29 305          Pn     05 35 32.9 -0.8
DANN  Dangsing         14.80 160 eP       Pn     05 35 35.2 -5.8
      comp=Z,39nm,0.7s
GKN   Gorkha           15.36 157 eP       Pn     05 35 43.1 -5.3
KKN   Kakani           15.76 155 eP       Pn     05 35 48.9 -4.7
      comp=Z,28nm,0.7s
GEYT  Alibeck          15.82 260   Pn     Pn     05 35 54.0 -0.2
      comp=Z,0.3nm,0.3s,baz=132,slow=6.2,SNR=2.5
GEYT  Alibeck          15.82 260   P      P      05 36 00.3 +2.3
GUN   Gumba            15.83 154 eP       Pn     05 35 51.0 -3.7
      comp=Z,47nm,0.4s
DMN   Daman            15.87 156 eP       Pn     05 35 50.8 -4.3
AKTO  Aktyubinsk       15.89 307   Pn     Pn     05 35 53.2 -1.8
      comp=Z,0.6nm,0.3s,baz=114,slow=11,SNR=21
AKTO                               LR     LR     05 42 18.8
      comp=Z,161nm,20.6s,baz=115,slow=38
AKTO  Aktyubinsk       15.89 307 ⇓Pn      Pn     05 35 53.9 -1.1
      comp=Z,8.2nm,0.7s
AKTO                             ⇓Lg      Lg     05 40 38.4
      comp=Z,36nm,1.2s
PKIN  Phulchoki        15.99 155 eP       Pn     05 35 52.5 -4.2
      comp=Z,31nm,0.5s
PKI   Pulchoki         16.00 155 eP       Pn     05 35 52.6 -4.2
JIRN  Jiri             16.17 153 eP       Pn     05 35 55.8 -3.2
      comp=Z,63nm,0.5s
LSA   Lhasa            16.54 136   P      P      05 36 05.4 -1.1
LSA                                pmax   pmax
      comp=Z,12nm,0.7s
LSA   Lhasa            16.54 136          P      05 36 05.4 -1.1
GTA   Gaotai           16.77  93 eP       P      05 36 08.3 -0.4
GTA                                pP     sP     05 36 14.3 +0.7
GTA                                sP     pP     05 36 17.4 +5.4
GTA                                S      Sn     05 39 14.3 +1.5
GTA                                sS     S      05 39 20.8 -3.0
GTA                                SS     SnSn   05 39 34.5 +8.7
GTA                                pmax   pmax
      comp=Z,6.0nm,1.2s
GTA                                pmax   pmax
      comp=Z,180nm,8.1s
RAMN  Ramite           16.96 153 eP       Pn     05 36 04.6 -4.4
      comp=Z,36nm,0.7s
TAPN  Taplejung        17.00 149 eP       Pn     05 36 06.5 -3.0
      comp=Z,24nm,0.5s
ODAN  Odare            17.32 151 eP       Pn     05 36 10.2 -3.3
      comp=Z,34nm,0.7s
SVE   Sverdlovsk       18.20 328 eP       Pn     05 36 22.7 -1.3
SVE                              eS       Sn     05 39 35.3  -12
SVE                                pmax   pmax
      comp=Z,20nm,1.0s
SVE                                MLR    MLR
      comp=Z,780nm,9.0s
ARU   Arti             18.78 325   LR     LR     05 44 06.0
      comp=Z,149nm,18.7s,baz=154,slow=38
ARU   Arti             18.78 325c iP      Pn     05 36 32.0 +1.0
ARU                                S      S      05 40 05.7 +1.7
ARU                                pmax   pmax
      comp=Z,23nm,1.1s
ARU   Arti             18.78 325   P      Pn     05 36 31.4 +0.4
ARU                                IAmb   IAmb   05 36 36.8
      comp=Z,27nm,1.2s
ZAK   Zakamensk        19.12  57 eP       Pn     05 36 34.7 -0.6
ZAK                                pmax   pmax
      comp=Z,5.0nm,1.2s
ZAK                                pmax   pmax
      comp=Z,5.0nm,1.4s
SONM  Songino Array    20.71  65   P      P      05 36 51.0 -0.8
      comp=Z,2.3nm,0.7s,baz=272,slow=11,SNR=6.9
SONM  Songino Array    20.71  65   P      Pn     05 36 51.8 -2.4
SONM                               pmax   pmax
      comp=Z,3.0nm,0.9s
SONM  Songino Array    20.71  65   P      Pn     05 36 51.8 -2.4
LZH   Lanzhou          20.96  99 eP       Pn     05 36 54.3 -3.0
LZH                                pP     sP     05 37 02.0 +2.4
LZH                                sP     pP     05 37 06.6 +8.5
LZH                                PP     P      05 37 15.3  +21
LZH                                pmax   pmax
      comp=Z,14nm,1.3s
LZH                                pmax   pmax
      comp=Z,59nm,4.3s
LZH                                LR     LR
      comp=Z,220nm,13.6s
LZH                                LR     LR
      comp=Z,320nm,15.2s
ULN   Ulaanbaatar      21.15  65   P      P      05 36 56.2 -0.5
ULN                                pmax   pmax
      comp=Z,19nm,1.5s
ULN   Ulaanbaatar      21.15  65   P      P      05 36 56.2 -0.5
ULN                                IAmb   IAmb   05 37 05.5
      comp=Z,19nm,1.5s
BRDH  Bariadhala       22.75 146   LR     LR     05 47 03.1
      comp=Z,107nm,18.9s,baz=102,slow=39
TBLG  Delisi           24.60 280   P      P      05 37 32.9 +1.2
TBLG                               pmax   pmax
      comp=Z,5.0nm,0.5s
TBLG  Delisi           24.60 280   P      P      05 37 32.9 +1.2
TBLG                               IAmb   IAmb   05 37 48.5
      comp=Z,5.4nm,0.5s
GNI   Garni            24.99 276 i P      P      05 37 36.5 +1.1
GNI                                pmax   pmax
      comp=Z,9.0nm,1.4s
WSAR  Wadi Sarin       24.99 226   P      P      05 37 34.6 -0.7
      comp=Z,2.1nm,0.4s,baz=72,slow=12,SNR=2.9
HHC   Hu-ho-hao-te     25.07  82 eP       P      05 37 35.3 -0.7
HHC                                pmax   pmax
      comp=Z,38nm,0.8s
HHC                                pmax   pmax
      comp=Z,110nm,4.3s
KBZ   Khabaz           25.55 285 i P      P      05 37 41.7 +1.6
KIV   Kislovodsk       25.66 286 eP       P      05 37 39.8 -1.5
KIV                                pmax   pmax
      comp=Z,16nm,1.0s
KIV                                MLR    MLR
      comp=Z,108nm,15.0s
KMI   Kunming          26.71 122   P      P      05 37 52.8 +1.7
KMI                                pP     sP     05 37 59.5 +3.3
KMI                                pmax   pmax
      comp=Z,11nm,0.9s
PRGR  Permogore        27.23 326 eP       P      05 37 52.8 -2.4
PRGR                               pmax   pmax
      comp=Z,12nm,1.0s
BOD   Bodaibo          27.36  43 eP       P      05 37 57.1 +0.7
BOD                                pmax   pmax
      comp=Z,7.0nm,1.8s
NRIK  Noril'sk         27.45   7   LR     LR     05 50 08.0
      comp=Z,76nm,19.3s,baz=196,slow=39
KLMR  Klimovskoe       29.56 322 eP       P      05 38 18.0 +2.1
KLMR                               pmax   pmax
      comp=Z,25nm,1.3s
KLMR  Klimovskoe       29.56 322 eP       P      05 38 18.0 +2.1
KLMR                               AMP           05 38 19.9
      comp=Z,25nm,1.3s
OBN   Obninsk          29.64 310⇓eP       P      05 38 19.1 +2.4
OBN                              e               05 38 21.4
OBN                                S      S      05 43 18.0 +6.1
OBN                                pmax   pmax
      comp=Z,3.0nm,0.9s
CMAR  Chiang Mai Arr   29.79 137   P      P      05 38 17.0 -1.4
      comp=Z,0.9nm,0.3s,baz=317,slow=9.3,SNR=8.6
CMAR  Chiang Mai Arr   29.79 137   P      P      05 38 17.2 -1.2
CMAR  Chiang Mai Arr   29.79 137   P      P      05 38 17.2 -1.2
PBKT  Sadao Pong       32.41 136   P      P      05 38 41.8 +0.4
BR131 Keskin Array S   33.25 281 i P      P      05 38 46.8 -2.1
BRTR  Keskin Array B   33.25 281   P      P      05 38 50.6 +1.7
      comp=Z,1.1nm,0.6s,baz=93,slow=9.8,SNR=6.1
BRTR  Keskin Array B   33.25 281   P      P      05 38 53.1 +4.2
AKASG Malin Array Be   33.99 301   P      P      05 38 55.3 +0.3
      comp=Z,1.5nm,0.7s,baz=73,slow=8.7,SNR=4.6
AKASG                              LR     LR     05 53 39.3
      comp=Z,61nm,21.5s,baz=95,slow=38
AKASG Malin Array Be   33.99 301 i P      P      05 38 57.5 +2.5
AKASG                              pmax   pmax
      comp=Z,2.0nm,0.7s
FINES FINESS Array B   36.01 320   P      P      05 39 11.9 -0.4
      comp=Z,1.1nm,0.5s,baz=117,slow=7.1,SNR=10
FINES                              LR     LR     05 54 27.6
      comp=Z,134nm,18.8s,baz=198,slow=37
FINES FINESS Array B   36.01 320   P      P      05 39 12.2  0.0
FINES FINESS Array B   36.01 320   P      P      05 39 12.2  0.0
TESR  Tescani          36.33 294 ⇓P       P      05 39 17.9 +2.6
SOCY  Socotra          36.63 222   P      P      05 39 15.2 -2.9
SOCY                               IAmb   IAmb   05 39 15.5
      comp=Z,3.7nm,0.7s
MLR   Muntele Rosu     37.05 293 ⇑P       P      05 39 25.6 +4.1
MLR   Muntele Rosu     37.05 293 ⇑P       P      05 39 25.6 +4.1
BURAR Bucovina Array   37.05 297 ⇑P       P      05 39 25.2 +3.7
BURAR Bucovina Array   37.05 297 ⇑P       P      05 39 25.2 +3.7
BURAR Bucovina Array   37.05 297   P      P      05 39 21.8 +0.3
DOPR  Dopca            37.31 294 ⇑P       P      05 39 27.4 +3.8
KLR   Kul'dur          37.41  61 i P      P      05 39 23.5 -0.8
KLR                                pmax   pmax
      comp=Z,3.0nm,0.9s
ARCES ARCESS Array B   38.03 333   P      P      05 39 28.9 -0.5
      comp=Z,10nm,0.9s,baz=102,slow=10.0,SNR=15
ARCES ARCESS Array B   38.03 333   P      P      05 39 28.7 -0.6
TRPA  Tarpa            38.70 298 ⇑P       P      05 39 38.8 +3.5
DRGR                   38.91 296 ⇓P       P      05 39 40.5 +3.4
DRGR                   38.91 296 ⇓P       P      05 39 40.5 +3.4
VTS   Vitosha          39.74 289 ⇑P       P      05 39 48.0 +3.8
VTS   Vitosha          39.74 289 ⇑P       P      05 39 48.0 +3.8
BZS   Buzias           39.95 294 ⇓P       P      05 39 49.3 +3.6
BZS   Buzias           39.95 294 ⇓P       P      05 39 49.3 +3.6
MDVR  Moldovita        40.12 293 ⇓P       P      05 39 49.2 +2.0
VRAC  Vranov           42.25 301   LR     LR     05 59 34.4
      comp=Z,58nm,18.5s,baz=41,slow=39
NC405 NORSAR Array S   42.93 319   P      P      05 40 10.0 +0.1
SPITS Spitsbergen Ar   43.10 345   LR     LR     06 01 45.5
      comp=Z,115nm,18.1s,baz=65,slow=41
NOA   NORSAR Array B   43.18 319   P      P      05 40 11.7 -0.4
      comp=Z,5.1nm,0.9s,baz=84,slow=8.1,SNR=7.5
NOA                                LR     LR     05 59 05.7
      comp=Z,89nm,19.1s,baz=350,slow=37
JHJ   Hachijo jima 2   48.77  80   LR     LR     06 01 24.2
      comp=Z,314nm,21.3s,baz=32,slow=36
DAG   Danmarks Havn    50.64 343⇓iP       P      05 41 12.6 +2.6
      comp=Z,5.3nm,0.8s
DAG   Danmarks Havn    50.64 343⇓iP       P      05 41 12.6 +2.6
DAG                                pmax   pmax
      comp=Z,5.0nm,0.8s
SUMG  Summit           57.22 341 i P      P      05 42 00.6 +1.9
      comp=Z,16nm,1.1s
SUMG  Summit           57.22 341 eP       P      05 42 00.6 +1.9
SUMG                               pmax   pmax
      comp=Z,16nm,1.1s
INK   Inuvik           67.11  12   P      P      05 43 05.8 +1.3
      comp=Z,1.6nm,0.7s,baz=6.4,slow=9.1,SNR=5.7
ILAR  Eielson Array    67.53  19   P      P      05 43 08.6 +1.2
      comp=Z,0.8nm,0.9s,baz=316,slow=6.3,SNR=6.6
ILAR  Eielson Array    67.53  19   P      P      05 43 07.5 +0.2
FRB   Frobisher Bay    70.90 345   P      P      05 43 29.6 +1.4
      comp=Z,0.8nm,0.7s,baz=53,slow=11,SNR=4.2
TORD  Torodi Ar. Bea   71.16 271   P      P      05 43 28.8 -1.7
      comp=Z,2.7nm,0.7s,baz=44,slow=5.6,SNR=9.4
TORD  Torodi Ar. Bea   71.16 271   P      P      05 43 29.2 -1.3
KDAK  Kodiak Island    71.62  26   P      P      05 43 34.3 +1.7
      comp=Z,4.0nm,0.7s,baz=353,slow=9.8,SNR=4.6
YKA   Yellowknife Ar   74.96   6   P      P      05 43 50.9 -1.4
      comp=Z,2.4nm,0.8s,baz=348,slow=5.5,SNR=28
WRA   Warramunga Arr   80.91 128   P      P      05 44 25.1 -0.7
      comp=Z,2.1nm,0.9s,baz=328,slow=5.1,SNR=4.7
ASAR  Alice Springs    83.56 130   P      P      05 44 37.3 -2.4
      comp=Z,0.8nm,0.5s,baz=318,slow=5.2,SNR=4.8
PDAR  Pinedale Array   94.93   6   P      P      05 45 34.8 +0.7
      comp=Z,0.3nm,0.5s,baz=80,slow=1.7,SNR=4.0
PFO   Pinyon Flats O  103.19  12 i P      Pdif   05 46 14.7 +3.5
PFO                                pmax   pmax
      comp=Z,5.0nm,0.8s
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BGR ***16*** *05:34:35.0±0.0, 22°.30S×176°.75W, h300^{km}*

IDC ***16*** *05:34:36.9±1.6, 21°.91S×177°.67W, h304^{km}±13^{km}, mb4.2/21, mb1 4.4/22, mb1mx4.3/29, mbtmp4.9/22, Error ellipse: s-maj=14.2km s-min=10.1km az=126.0*

NEIC ***16*** *05:34:40.1±1.6, 21°.9S±0°.1×177°.8W±0°.1, h336^{km}±5^{km}, mb4.8/171, Error ellipse: s-maj=17.1km s-min=14.7km az=105.0*

ISC 16 05:34:35.9±0.3**, 22°.07S**±0°.04×**177°.58W**±0°.07**, h300^{km}, n587, σ1^{s}36**/643**, mb4.8**/93**, 26C-15D, South of Fiji Islands**

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Code  Station Name       Δ°   AZ°    Phase ID              Time     Res
                                   Op     ISC          h  m  s     ISC
MSVF  Nonsavu           5.96 316          Pn     05 36 06.8 +2.0
RAO   Raoul Island      7.16 182   S      S      05 37 41.3 -1.4
      290nm,0.3s,baz=81,slow=23,SNR=6.5
GLKZ  Green Lake        7.17 182   P      Pn     05 36 17.9 -1.4
GLKZ                               S      S      05 37 41.8 -1.1
AFI   Afiamalu          9.81  35   P      Pn     05 36 46.0 -5.9
      19nm,0.3s,baz=206,slow=3.6,SNR=16
AFI                                S      S      05 38 29.4  -13
      13nm,0.3s,baz=113,slow=17,SNR=5.8
DZM   Mont Dzumac      14.81 267   P      Pn     05 37 52.3  0.0
      3.7nm,0.3s,baz=88,slow=18,SNR=32
DZM   Mont Dzumac      14.81 267   P      P      05 37 50.1 -0.9
OUZ   Omahuta          15.21 209   P      Pn     05 37 59.0 +2.3
URZ   Urewera          16.77 195   P      P      05 38 11.4 -0.8
      18nm,0.3s,baz=280,slow=4.9,SNR=52
URZ                                S      S      05 41 09.2 -2.6
      9.7nm,0.3s,baz=39,slow=23,SNR=13
RRRZ  Republican Roa   16.99 196   P      Pn     05 38 17.0 -0.5
GRRZ  Galatos Road     17.11 197   P      Pn     05 38 18.4 -0.6
PRRZ  Plateau Road     17.18 196   P      P      05 38 17.5 +0.9
SNGZ  Shannon Statio   17.22 194   P      P      05 38 17.7 +0.6
SNGZ                               S      S      05 41 17.9 -2.9
PRGZ  Paritu Road      17.25 192   P      Pn     05 38 19.5 -1.0
WPRZ  Whakapapatarin   17.26 197   P      Pn     05 38 19.5 -1.1
KUTZ  Kaahu Road       17.32 198   P      Pn     05 38 20.6 -0.8
RAHZ  Arahi            17.41 194   P      P      05 38 20.4 +1.3
RAHZ                               S      S      05 41 20.6 -3.8
MRHZ  Matea Rd         17.49 196   P      P      05 38 21.1 +1.1
MRHZ                               S      S      05 41 23.0 -3.0
WHHZ  Waihua           17.53 194   P      Pn     05 38 22.5 -1.2
WHHZ                               S      S      05 41 19.2 -7.5
HIZ   Hauiti           17.63 200   P      Pn     05 38 24.5 -0.5
ARHZ  Aropaoanui       17.76 194   P      P      05 38 23.6 +0.7
ARHZ                               S      S      05 41 27.3 -4.0
BKZ   Black Stump Fm   17.78 195   P      P      05 38 23.3 +0.2
BKZ                                S      S      05 41 33.2 +1.3
KRVZ  Karewarewa       17.94 197   P      P      05 38 26.0 +1.1
WTVZ  West Tongariro   17.97 197   P      P      05 38 26.5 +1.3
MCHZ  McNeill Hill     18.00 194   P      P      05 38 26.1 +0.7
MCHZ                               S      S      05 41 36.8 +0.8
KWHZ  Kaweka Forest    18.04 195   P      P      05 38 24.7 -1.3
KWHZ                               S      S      05 41 36.0 -1.0
BHHZ  Black Hill Sta   18.20 196   P      P      05 38 26.0 -1.6
BHHZ                               S      S      05 41 35.0 -5.0
MOVZ  Moawhango        18.20 197   P      P      05 38 28.5 +0.9
MOVZ                               S      S      05 41 38.3 -1.7
VRZ   Vera Road        18.22 199   P      P      05 38 30.4 +2.5
KRHZ  Kereru           18.27 195   P      P      05 38 28.7 +0.4
KRHZ                               S      S      05 41 39.9 -1.4
KAHZ  Kahuranaki       18.29 194   P      P      05 38 30.3 +1.7
KAHZ                               S      S      05 41 39.7 -2.1
PNHZ  Pukenui          18.56 195   P      P      05 38 30.1 -1.4
NBEZ  Newall Road No   18.64 201   P      P      05 38 38.0 +5.8
WPHZ  Waipukurau       18.65 194   P      P      05 38 33.2 +0.9
WAZ   Wanganui         18.74 198   P      P      05 38 37.7 +4.3
TSZ   Takapari Road    18.76 196   P      P      05 38 33.8 +0.2
PRHZ  Porangahau       18.80 194   P      P      05 38 35.1 +1.1
DVHZ  Dannevirke       18.94 195   P      P      05 38 35.9 +0.5
ANWZ  Angora Road      19.02 194   P      P      05 38 37.7 +1.4
POWZ  Post Office Ro   19.12 196   P      S      05 41 59.5 +1.7
PRWZ  Pori Road        19.23 195   P      P      05 38 40.2 +1.6
BFZ   Birch Farm       19.28 194   P      P      05 38 39.1  0.0
MRZ   Mangatainoka R   19.42 196   P      P      05 38 39.1 -1.5
HOWZ  Holdsworth Sta   19.66 196   P      P      05 38 41.5 -1.6
OGWZ  Otaki Gorge      19.67 197   P      P      05 38 42.9 -0.4
OGWZ  Otaki Gorge      19.67 197   P      S      05 42 09.9 +1.8
TMWZ  Te Maipa         19.77 195   P      P      05 38 45.0 +0.7
KIW   Kapiti Island    19.79 197   P      P      05 38 41.9 -2.6
MTW   Mount Morrison   19.91 195   P      P      05 38 45.5 -0.3
MTW   Mount Morrison   19.91 195   P      S      05 42 12.5 +0.1
CAW   Cannon Point     19.97 196   P      P      05 38 47.0 +0.6
TRWZ  Traveller        20.09 195   P      P      05 38 47.6 -0.1
TRWZ  Traveller        20.09 195   P      S      05 42 15.2 -0.3
PAWZ  Paruwai Farm     20.14 195   P      P      05 38 48.6 +0.5
PAWZ  Paruwai Farm     20.14 195   P      S      05 42 16.6 +0.2
MSWZ  Moikau Station   20.22 196   P      S      05 42 18.0 +0.3
SNZO  South Karori     20.26 197   P      P      05 38 48.2 -1.1
BHW   Baring Head      20.31 197   P      S      05 42 20.9 +1.9
PLWZ  Palliser         20.36 196   P      P      05 38 49.6 -0.8
PLWZ  Palliser         20.36 196   P      S      05 42 21.9 +1.9
TUWZ  Tuamarina        20.59 198   P      P      05 38 52.4 -0.2
TUWZ  Tuamarina        20.59 198   P      S      05 42 25.4 +1.8
BSWZ  Blackbirch Sta   20.87 198   P      S      05 42 35.4 +7.3
KHZ   Kahutara         21.61 198   P      S      05 42 47.1 +7.1
RPZ   Rata Peaks       23.56 201   P      P      05 39 19.9  0.0
      65nm,0.5s,baz=0.1,slow=1.9,SNR=27
CAN   Canberra         31.99 238   P      P      05 40 36.2 +1.4
TAU   Tasmania Unive   35.81 226   P      P      05 41 08.1 +0.8
TAU                                IAmb   IAmb   05 41 08.6
      comp=Z,24nm,0.6s
PMG   Port Moresby     36.09 285   P      P      05 41 10.8 +0.7
PMG                                IAmb   IAmb   05 41 10.9
      comp=Z,28nm,0.8s
STKA  Stephens Creek   37.48 246   P      P      05 41 22.2 +0.6
      comp=Z,15nm,0.5s,baz=92,slow=9.1,SNR=53
STKA                               PcP    PcP    05 43 35.0 +2.1
      comp=Z,4.1nm,0.5s,baz=140,slow=3.8,SNR=4.2
STKA                               ScP    ScP    05 46 52.1 +0.8
      comp=Z,4.6nm,0.9s,baz=8.1,slow=7.1,SNR=2.9
STKA  Stephens Creek   37.48 246   P      P      05 41 22.6 +1.1
AS31  Alice Springs    44.56 258   P      P      05 42 19.2 +0.2
ASAR  Alice Springs    44.56 258   P      P      05 42 19.1 +0.1
      comp=Z,12nm,0.7s,baz=97,slow=7.6,SNR=144
ASAR                               PcP    PcP    05 43 58.6 +2.2
      comp=Z,9.1nm,0.6s,baz=105,slow=3.8,SNR=18
ASAR                               ScP    ScP    05 47 19.9 +0.3
      comp=Z,1.2nm,0.6s,baz=106,slow=4.3,SNR=4.8
ASAR                               S      S      05 48 27.1 -4.7
      comp=Z,2.2nm,0.8s,baz=92,slow=15,SNR=12
ASAR  Alice Springs    44.56 258   P      P      05 42 18.9 -0.1
WB0   Warramunga Arr   44.78 264   P      P      05 42 20.7 -0.1
WB2   Warramunga Arr   44.78 264   P      P      05 42 20.7 -0.1
WRAB  Tennant Creek    44.78 264   P      P      05 42 20.1 -0.7
WRA   Warramunga Arr   44.79 264   P      P      05 42 20.1 -0.7
      comp=Z,2.4nm,0.3s,baz=90,slow=5.8,SNR=53
WRA                                PcP    PcP    05 43 59.7 +2.5
      comp=Z,5.0nm,0.3s,baz=94,slow=5.2,SNR=5.7
WRA   Warramunga Arr   44.79 264   P      P      05 42 20.8 -0.1
KHLU  Kahalu`u         46.52  29   P      P      05 42 35.1 +0.9
HPAH  Hawaii Prepara   46.99  29   P      P      05 42 38.7 +0.9
SBA   Scott Base       56.34 184   P      P      05 43 50.9 +5.2
SBA                                IAmb   IAmb   05 44 03.5
      comp=Z,48nm,0.9s
VNDA  Vanda            56.39 185   P      P      05 43 48.6 +2.5
      comp=Z,1.6nm,0.6s,baz=353,slow=7.9,SNR=11
VNDA  Vanda            56.39 185   P      P      05 43 49.2 +3.2
CASY  Casey            62.72 206   P      P      05 44 30.6 +1.5
QSPA  South Pole Qui   68.01 180   P      P      05 45 05.8 +2.7
QSPA                               IAmb   IAmb   05 45 14.6
      comp=Z,20nm,1.1s
MJAR  Matsushiro Arr   71.70 324   P      P      05 45 25.1 -0.5
      comp=Z,9.5nm,0.6s,baz=148,slow=5.9,SNR=26
MJAR  Matsushiro Arr   71.70 324   P      P      05 45 25.0 -0.6
MAJO  Matsushiro       71.70 324   P      P      05 45 25.3 -0.3
MAJO                               IAmb   IAmb   05 45 25.9
      comp=Z,16nm,0.8s
MAT   Matsushiro       71.70 324   P      P      05 45 24.8 -0.8
JNU   Nakatsue         73.68 317   P      P      05 45 36.4 -0.9
      comp=Z,15nm,0.9s,baz=55,slow=1.7,SNR=7.4
JNU   Nakatsue         73.68 317   P      P      05 45 36.7 -0.6
JNU                                IAmb   IAmb   05 45 37.9
      comp=Z,36nm,1.2s
TPUB  Ta-pu            75.15 303   P      P      05 45 44.5 -1.4
UNV   Unalaska Valle   76.20   7   P      P      05 45 49.7 -1.4
YSS   Yuzh-Sakhalins   77.46 333   P      P      05 45 57.6 -0.7
YSS                                IAmb   IAmb   05 45 60.0
      comp=Z,24nm,1.0s
PET   Petropavlovsk    77.58 346   P      P      05 45 57.0 -1.7
PET                                IAmb   IAmb   05 46 14.6
      comp=Z,23nm,1.1s
PETK  Petropavlovsk-   77.88 345   P      P      05 45 59.5 -1.0
      comp=Z,8.1nm,0.7s,baz=143,slow=8.1,SNR=15
PETK  Petropavlovsk-   77.88 345   P      P      05 46 00.1 -0.4
KSRS  Korea Array      78.31 319   P      P      05 46 04.1 +0.9
      comp=Z,6.1nm,0.6s,baz=128,slow=6.0,SNR=20
HOPS  Hopland Field    79.30  40   P      P      05 46 10.6 +2.1
HOPS                               IAmb   IAmb   05 46 10.7
      comp=Z,19nm,0.9s
MWC   Mount Wilson     79.59  47   P      P      05 46 11.9 +1.5
MWC                                IAmb   IAmb   05 46 12.5
      comp=Z,13nm,1.0s
ARVC  Arvin            79.60  45   P      P      05 46 11.7 +1.5
      baz=234
KMRM  Mail Ridge       79.72  39   P      P      05 46 13.5 +2.7
CHIR  Chirikof Islan   79.80  12   P      P      05 46 10.8 +0.1
MURC  Murrieta         79.81  47   P      P      05 46 12.8 +1.4
      baz=235
VES   Vestal, Richgr   79.86  45   P      P      05 46 12.7 +1.2
      baz=234,SNR=5.6
BFSC  Mount Baldy Ra   79.87  47   P      P      05 46 13.0 +1.2
      baz=235,SNR=6.5
MONP2 Monument Peak    79.94  48   P      P      05 46 14.0 +1.6
      baz=236,SNR=7.1
EDW2  Edwards Air Fo   80.01  46   P      P      05 46 14.1 +1.6
      baz=235,SNR=13
IKP   In-Ko-Pah, Jac   80.03  49   P      P      05 46 14.3 +1.6
      baz=236
KHMM  Horse Mountain   80.13  38   P      P      05 46 14.8 +1.7
KHMM                               IAmb   IAmb   05 46 16.0
      comp=Z,28nm,1.3s
ISA   Isabella, Lake   80.15  45   P      P      05 46 14.1 +0.8
ISA                                IAmb   IAmb   05 46 15.8
      comp=Z,12nm,0.9s
ISA   Isabella, Lake   80.15  45   P      P      05 46 14.9 +1.7
      baz=234,SNR=8.7
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O02D	Mt. Diablo Mer	80.23	39	P	P	05 46 15.6	+2.1
	baz=231,SNR=11						
MAW	Mawson	80.23	200	P	P	05 46 14.7	+1.7
	comp=Z,4.0nm,0.7s,baz=45,slow=8.6,SNR=7.3						
PFO	Pinyon Flats O	80.33	48	P	P	05 46 15.4	+1.2
	comp=Z,4.7nm,0.9s,baz=258,slow=7.0,SNR=7.2						
PFO	Pinyon Flats O	80.33	48	IAmb	IAmb	05 46 16.2	
	comp=Z,4.0nm,0.8s						
PFO	Pinyon Flats O	80.33	48	P	P	05 46 15.7	+1.4
	baz=236						
CMB	Columbia Colle	80.35	42	P	P	05 46 15.3	+1.1
SWSC	Sam W. Stewart	80.41	49	P	P	05 46 16.6	+2.1
	baz=236						
USA0B	Ussuriysk Arra	80.47	326	P	P	05 46 14.9	+0.3
USA0B				IAmb	IAmb	05 46 16.5	
	comp=Z,16nm,0.8s						
USRK	Ussuriysk Ar.	80.47	326	P	P	05 46 15.2	+0.6
	comp=Z,12nm,0.7s,baz=125,slow=3.5,SNR=24						
USRK	Ussuriysk Ar.	80.47	326	P	P	05 46 15.0	+0.4
AFDM	Forest Hills D	80.55	41	P	P	05 46 16.4	+1.2
LRMC	Laurel Mtn Rad	80.57	46	P	P	05 46 16.9	+1.3
	baz=235,SNR=5.7						
ORV	Oroville	80.60	41	P	P	05 46 16.6	+1.1
WDC	Whiskeytown Da	80.63	39	P	P	05 46 17.2	+1.6
WDC				IAmb	IAmb	05 46 18.2	
	comp=Z,15nm,1.0s						
SII	Sitkinak Islan	80.78	13	P	P	05 46 15.6	-0.3
N02D	Trinity Center	80.79	39	P	P	05 46 18.3	+1.8
	baz=231,SNR=11						
BELC	Belle Mtn. Jos	80.86	48	P	P	05 46 18.9	+1.8
	baz=236,SNR=6.9						
CWC	Cottonwood Cre	80.87	45	P	P	05 46 18.7	+1.6
	baz=234						
O03E	Paynes Creek	80.89	40	P	P	05 46 18.2	+1.2
	baz=231,SNR=8.2						
MDPB	Devils Postpil	80.93	43	P	P	05 46 18.4	+0.8
OMMB	Old Mammoth Mi	80.97	43	P	P	05 46 19.1	+1.3
M02C	Callahan	80.97	38	P	P	05 46 19.1	+1.7
	baz=230,SNR=11						
MPMC	Manual Prospec	81.03	45	P	P	05 46 19.4	+1.3
	baz=235,SNR=8.4						
L02E	Cave Junction	81.03	38	P	P	05 46 19.2	+1.6
	baz=230						
BC3	Big Chuckawall	81.04	48	P	P	05 46 19.9	+1.9
	baz=236						
GSC	Goldstone, Bar	81.05	46	P	P	05 46 19.2	+1.2
GSC	Goldstone, Bar	81.05	46	P	P	05 46 19.6	+1.6
	baz=235,SNR=6.1						
HEC	Hector,Ludlow	81.10	47	P	P	05 46 19.8	+1.5
	baz=236						
RUBR	Rubicon Trail	81.11	42	P	P	05 46 19.0	+0.6
RUBR				IAmb	IAmb	05 46 21.6	
	comp=Z,18nm,1.2s						
GLA	Glamis	81.15	49	P	P	05 46 20.2	+1.7
GLA				IAmb	IAmb	05 46 21.6	
	comp=Z,15nm,1.0s						
GLA	Glamis	81.15	49	P	P	05 46 20.6	+2.1
	baz=237						
NJ2	Nanjing	81.17	310	*e*P	P	05 46 19.8	+1.2
YBH	Yreka Blue Hor	81.27	38	P	P	05 46 20.5	+1.5
	comp=Z,13nm,0.8s,baz=184,slow=1.6,SNR=39						
YBH	Yreka Blue Hor	81.27	38	P	P	05 46 20.1	+1.1
YBH				IAmb	IAmb	05 46 21.8	
	comp=Z,19nm,0.9s						
K02D	Willamette Mer	81.35	37	P	P	05 46 21.2	+1.8
	baz=230						
PNTR	Pine Nut	81.48	42	P	P	05 46 21.9	+1.5
BEKR	Beckworth	81.49	41	P	P	05 46 21.5	+1.2
J01E	Myrtle Point	81.51	37	P	P	05 46 21.7	+1.6
	baz=229						
GMRC	Granite Mounta	81.53	47	P	P	05 46 22.0	+1.4
	baz=236,SNR=5.0						
IRM	Iron Mountain	81.54	48	P	P	05 46 22.4	+1.9
	baz=237,SNR=8.3						
VCNR	Virginia City	81.57	42	P	P	05 46 22.2	+1.4
VCNR				IAmb	IAmb	05 46 23.2	
	comp=Z,10nm,0.9s						
YERR	Yerington	81.64	42	P	P	05 46 22.5	+1.3
YERR				IAmb	IAmb	05 46 23.3	
	comp=Z,13nm,0.7s						
GRAC	Grapevine Rang	81.66	45	P	P	05 46 22.8	+1.7
	baz=235						
FURC	Furnace Creek,	81.68	45	P	P	05 46 22.7	+1.6
	baz=235						
HUMO	Hull Mountain	81.69	37	P	P	05 46 17.3	-3.8
TUQ	Turquoise Moun	81.72	47	P	P	05 46 23.3	+1.7
	baz=236,SNR=5.7						
Y12C	Blythe	81.74	49	P	P	05 46 23.0	+1.5
Y12C				IAmb	IAmb	05 46 24.3	
	comp=Z,9.0nm,0.8s						
Y12C	Blythe	81.74	49	P	P	05 46 23.6	+2.1
	baz=237						
SHOC	Shoshone, Teco	81.75	46	P	P	05 46 23.0	+1.4
	baz=236						
M04C	Macdoel	81.80	39	P	P	05 46 23.5	+1.7
	baz=231,SNR=5.7						
L04D	Klamath Falls	81.81	38	P	P	05 46 23.6	+1.7
	baz=231,SNR=8.5						
RYN	Ryan	81.87	43	P	P	05 46 23.9	+1.6
NVAR	Mina Array Bea	81.89	43	P	P	05 46 23.8	+1.3
	comp=Z,6.4nm,0.8s,baz=224,slow=8.6,SNR=53						
NVAR				PKKPbc	PKKPbc	06 04 55.5	+2.8
	comp=Z,0.4nm,0.7s,baz=93,slow=4.7,SNR=4.7						
NVAR	Mina Array Bea	81.89	43	P	P	05 46 23.9	+1.4
PAHR	Pah Rah Range	81.98	41	P	P	05 46 23.9	+1.1
PAHR				IAmb	IAmb	05 46 25.1	
	comp=Z,12nm,0.9s						
214A	Organ Pipe Nat	81.99	51	P	P	05 46 24.8	+1.9
	baz=238						
NV11	Mina Array Sit	81.99	43	P	P	05 46 24.3	+1.4
NV11				IAmb	IAmb	05 46 25.2	
	comp=Z,15nm,1.1s						
MDJ	Mudanjiang	82.02	325	P	P	05 46 23.6	+0.9
MDJ	Mudanjiang	82.02	325	P	P	05 46 23.7	+0.9
MDJ				IAmb	IAmb	05 46 24.5	
	comp=Z,18nm,0.8s						
I03D	Drain, OR	82.18	36	P	P	05 46 25.3	+1.7
	baz=230						
KDAK	Kodiak Island	82.24	13	P	P	05 46 23.0	-0.5
	comp=Z,9.1nm,0.8s,baz=245,slow=4.2,SNR=5.3						
KDAK	Kodiak Island	82.24	13	P	P	05 46 23.5	0.0
PDMCI	Parker Dam,Lak	82.31	48	P	P	05 46 26.6	+2.1
	baz=237,SNR=5.2						
TPNV	Topopah Spring	82.36	45	P	P	05 46 26.1	+1.2
TPNV	Topopah Spring	82.36	45	P	P	05 46 26.4	+1.5
	baz=236,SNR=8.5						
K04D	Chiloquin, OR	82.39	38	P	P	05 46 26.6	+1.8
	baz=231						
KVN	Kaiserville	82.39	43	P	P	05 46 25.3	+0.3
KVN				IAmb	IAmb	05 46 27.1	
	comp=Z,9.8nm,0.8s						
J04D	Umpqua Nationa	82.57	37	P	P	05 46 27.8	+1.9
	baz=231,SNR=8.6						
I04A	Tendick Farm,	82.76	37	P	P	05 46 27.7	+1.1
	baz=230						
MOD	Modoc Plateau	82.77	39	P	P	05 46 27.1	+0.3
MOD				IAmb	IAmb	05 46 29.1	
	comp=Z,26nm,1.3s						
SHPR	Sheep Range	82.83	46	P	P	05 46 28.6	+1.3
Y14A	Wickenburg	82.91	49	P	P	05 46 29.3	+1.7
Y14A				IAmb	IAmb	05 46 30.2	
	comp=Z,8.9nm,0.8s						
W13A	Hualapai Mount	82.92	48	P	P	05 46 29.0	+1.1
H04D	Lebanon	83.05	36	P	P	05 46 29.9	+2.0
	baz=230						
J05D	Fort Rock, OR	83.10	38	P	P	05 46 30.1	+1.6
	baz=231,SNR=22						
G03D	McMinnville, O	83.21	35	P	P	05 46 30.6	+1.8
	baz=230						
H04A	Detroit Lake	83.45	36	P	P	05 46 30.6	+0.5
PINE	Pine Mountain	83.58	37	P	P	05 46 32.1	+1.1
R11A	Troy Canyon, C	83.59	44	P	P	05 46 31.7	+0.6
R11A	Troy Canyon, C	83.59	44	P	P	05 46 32.3	+1.1
	baz=236,SNR=7.3						
TUC	Tucson	83.64	52	P	P	05 46 33.6	+2.2
TUC				IAmb	IAmb	05 46 34.6	
	comp=Z,15nm,0.9s						
TUC	Tucson	83.64	52	P	P	05 46 33.6	+2.2
	baz=239						
I05D	Terrebonne, OR	83.70	37	P	P	05 46 33.0	+1.6
	baz=231						
IPM	Ipoh	83.72	277	P	P	05 46 30.8	-1.3
IPM				IAmb	IAmb	05 46 33.5	
	comp=Z,14nm,0.7s						
CN2	Changchun	83.77	322	*e*P	P	05 46 31.4	-0.3
F04D	Rainier, OR	83.91	35	P	P	05 46 34.5	+2.2
	baz=230						
E03A	Lebam	83.92	34	P	P	05 46 33.6	+1.3
WVOR	Wild Horse Val	84.08	40	P	P	05 46 34.2	+0.7
WVOR				IAmb	IAmb	05 46 35.7	
	comp=Z,13nm,1.0s						
F04A	Amboy	84.13	35	P	P	05 46 34.2	+0.9
X16A	Lo Mia Camp, P	84.26	49	P	P	05 46 35.9	+1.3
X16A				IAmb	IAmb	05 46 37.6	
	comp=Z,10nm,0.9s						
319A	Douglas	84.27	53	P	P	05 46 36.1	+1.5
G05D	Wamic, OR	84.28	36	P	P	05 46 35.8	+1.5
	baz=231						
LCMT	Little Creek M	84.39	46	P	P	05 46 35.4	+0.2
E04D	Cinebar	84.45	35	P	P	05 46 36.9	+1.9
	baz=230						
I07A	Izee	84.58	38	P	P	05 46 37.1	+1.3
I07A				IAmb	IAmb	05 46 37.7	
	comp=Z,17nm,1.2s						
CCUT	Cedar City	84.61	46	P	P	05 46 37.0	+0.6
F05D	White Salmon	84.61	36	P	P	05 46 37.2	+1.3
	baz=231						
G06A	Carlson Farm,	84.65	36	P	P	05 46 36.6	+0.5
G06A				IAmb	IAmb	05 46 38.3	
	comp=Z,23nm,1.1s						
RSO	Redoubt South	84.68	12	P	P	05 46 35.1	-0.9
KNB	Kanab	84.68	47	P	P	05 46 38.0	+1.4
U15A	North Rim	84.73	47	P	P	05 46 38.1	+1.1
J08A	Circle Bar Ran	84.73	39	P	P	05 46 37.5	+0.8
PSUT	Pine Spring	84.82	45	P	P	05 46 38.4	+1.1
WUAZ	Wupatki	84.88	49	P	P	05 46 37.8	+0.2
WUAZ	Wupatki	84.88	49	P	P	05 46 39.5	+1.9
	baz=239						
LON	Longmire	84.98	35	P	P	05 46 38.7	+1.0
RPSI	Rantau Prapat	84.98	275	P	P	05 46 37.5	-0.9
RPSI				IAmb	IAmb	05 46 38.2	
	comp=Z,8.7nm,0.9s						
D05A	Enumclaw	85.16	34	P	P	05 46 38.9	+0.4
ELK	Elko	85.16	42	P	P	05 46 38.8	-0.3
PKCU	Pink Cliffs	85.25	47	P	P	05 46 41.1	+1.5
X18A	Snowflake	85.37	50	P	P	05 46 41.8	+1.7
X18A				IAmb	IAmb	05 46 42.8	
	comp=Z,6.7nm,0.8s						
MA2	Magadan	85.39	344	P	P	05 46 37.8	-1.6
MA2				IAmb	IAmb	05 46 39.8	
	comp=Z,8.6nm,0.8s						
F07A	Phinny Hill Vi	85.45	36	P	P	05 46 40.7	+0.7
F07A				IAmb	IAmb	05 46 42.2	
	comp=Z,18nm,1.1s						
G08A	Pilot Rock	85.62	37	P	P	05 46 41.6	+0.7
G08A				IAmb	IAmb	05 46 43.2	
	comp=Z,21nm,1.1s						
MTPU	Mount Pierson	85.66	46	P	P	05 46 43.1	+1.4
GAMB	Gambell	85.68	3	P	P	05 46 39.6	-1.0
GAMB				IAmb	IAmb	05 46 41.4	
	comp=Z,9.6nm,0.8s						
A04D	Lummi Island	85.78	33	P	P	05 46 43.3	+1.8
	baz=230						
TCRU	Three Creeks R	85.79	45	P	P	05 46 42.5	+0.3
B05A	Bryant	85.80	34	P	P	05 46 43.1	+1.5
	baz=230						
RC01	Rabbit Creek A	85.86	13	P	P	05 46 40.5	-1.1
RC01				IAmb	IAmb	05 46 41.8	
	comp=Z,13nm,1.0s						
LTY	Liberty	85.90	35	P	P	05 46 42.8	+0.6
LTY				IAmb	IAmb	05 46 44.1	
	comp=Z,14nm,0.9s						
E07A	Sunnyside	85.90	36	P	P	05 46 43.1	+0.9
MSU	Marysvale	85.91	46	P	P	05 46 43.9	+1.2
121A	Cookes Peak, D	85.95	53	P	P	05 46 44.7	+1.7
121A				IAmb	IAmb	05 46 46.1	
	comp=Z,12nm,1.0s						
121A	Cookes Peak, D	85.95	53	P	P	05 46 45.5	+2.5
	baz=241						
HAWA	Hanford	85.98	36	P	P	05 46 42.6	+0.1
SUA	Susitna One	86.00	13	P	P	05 46 41.5	-1.0
GLI	Glacier Island	86.26	14	P	P	05 46 42.2	-1.3
BMO	Blue Mountains	86.30	38	P	P	05 46 44.5	+0.3
E08A	Dider Farm, El	86.30	36	P	P	05 46 44.8	+0.7
E08A				IAmb	IAmb	05 46 46.3	
	comp=Z,19nm,1.0s						
MFID	Camas Ranch	86.33	40	P	P	05 46 45.6	+1.1
TTA	Tatalina	86.42	10	P	P	05 46 43.7	-0.7
TTA				IAmb	IAmb	05 46 45.0	
	comp=Z,8.2nm,0.9s						
KNK	Knik Glacier	86.43	14	P	P	05 46 43.6	-0.8
KNK				IAmb	IAmb	05 46 44.6	
	comp=Z,12nm,0.7s						
SNAA	Sanae	86.44	178	P	P	05 46 45.2	+0.6
PMR	Palmer	86.45	13	P	P	05 46 43.4	-1.0
PMR				IAmb	IAmb	05 46 44.0	
	comp=Z,7.6nm,0.6s						
VNA3	Neumayer Olymp	86.56	176	P	P	05 46 45.8	+0.7
GHO	Glory Hole Cre	86.65	13	P	P	05 46 44.9	-0.6
D08A	Wollman Farm,	86.72	36	P	P	05 46 46.9	+0.8
Q16A	Castle Valley	86.80	46	P	P	05 46 47.9	+1.0
E09A	Wood Farm, Sta	86.81	37	P	P	05 46 47.1	+0.5
TMUT	Trail Mountain	86.97	45	P	P	05 46 49.4	+1.5
F10A	Beach Ranch, E	87.00	37	P	P	05 46 47.9	+0.3
VNA2	Neumayer--Watz	87.00	177	P	P	05 46 48.3	+1.1
	baz=196,slow=3.9						
SCM	Sheep Creek Mo	87.05	14	P	P	05 46 47.3	-0.1
ENH	Enshi	87.24	304	P	P	05 46 49.0	0.0
BJI	Beijing	87.28	315	P	P	05 46 48.4	-0.5
B08A	Colville Reser	87.29	35	P	P	05 46 49.1	+0.3
SRU	San Rafael Swe	87.33	46	P	P	05 46 50.1	+0.7
MNTX	Cornudas Mount	87.34	54	P	P	05 46 50.7	+1.3
MNTX				IAmb	IAmb	05 46 52.2	
	comp=Z,15nm,0.8s						
MNTX	Cornudas Mount	87.34	54	P	P	05 46 51.6	+2.2
	baz=242						
P17A	Butcher Ranch,	87.37	45	P	P	05 46 50.3	+0.7
LLLB	Lillooet	87.41	32	P	P	05 46 50.0	+0.7
LLLB				IAmb	IAmb	05 46 51.2	
	comp=Z,14nm,0.9s						
VRDI	Verde Repeater	87.44	16	P	P	05 46 49.2	-0.2
VRDI				IAmb	IAmb	05 46 50.2	
	comp=Z,25nm,1.5s						
C09A	Chrisman Ranch	87.52	35	P	P	05 46 50.0	+0.1
GLB	Gilahina Butte	87.54	16	P	P	05 46 49.3	-0.4
GLB				IAmb	IAmb	05 46 49.8	
	comp=Z,8.8nm,0.7s						
BALM	Baldy	87.56	16	P	P	05 46 49.7	-0.2
BALM				IAmb	IAmb	05 46 51.1	
	comp=Z,7.7nm,0.6s						
TX31	Lajitas Ar. Si	87.57	57	P	P	05 46 52.2	+1.5
TX31				IAmb	IAmb	05 46 53.6	
	comp=Z,7.7nm,0.9s						
TX32	Lajitas Array	87.57	57	P	P	05 46 52.2	+1.5
TX32				IAmb	IAmb	05 46 53.6	
	comp=Z,7.8nm,0.9s						
TXAR	Lajitas Array	87.57	57	P	P	05 46 52.4	+1.7
	comp=Z,4.3nm,0.8s,baz=217,slow=6.4,SNR=45						
TXAR				PKKPbc	PKKPbc	06 04 42.2	+3.8
	comp=Z,0.7nm,0.6s,baz=76,slow=2.3,SNR=7.6						
BARN	Barnard Glacie	87.76	17	P	P	05 46 50.9	-0.1
BARN				IAmb	IAmb	05 46 51.9	
	comp=Z,12nm,0.8s						
KTH	Kantishna Hill	87.87	12	P	P	05 46 49.1	-2.2
KTH				IAmb	IAmb	05 46 50.5	
	comp=Z,12nm,0.9s						
TRF	Thorofare Moun	87.89	12	P	P	05 46 49.9	-1.6
PV09	Paradox Valley	87.95	47	P	P	05 46 53.8	+1.2
PV19	Morning Glory	87.95	47	P	P	05 46 53.0	+0.5
PV23	Carpenter Ridg	88.01	47	P	P	05 46 52.5	-0.3
PV23				IAmb	IAmb	05 46 54.6	
	comp=Z,9.7nm,0.8s						
PV03	Paradox Valley	88.02	47	P	P	05 46 53.4	+0.6
PV04	Paradox Valley	88.05	47	P	P	05 46 53.5	+0.7
PV04				IAmb	IAmb	05 46 54.7	
	comp=Z,5.9nm,0.7s						
ANMO	Albuquerque	88.08	51	P	P	05 46 54.4	+1.3
ANMO				IAmb	IAmb	05 46 55.3	
	comp=Z,7.1nm,0.9s						
ANMO	Albuquerque	88.08	51	P	P	05 46 54.4	+1.3
	baz=242						
PV12	Saucer Basin,	88.08	47	P	P	05 46 54.0	+0.9
RND	Reindeer	88.14	12	P	P	05 46 51.3	-1.2
DHY	Denali Highway	88.14	13	P	P	05 46 51.4	-1.3
DHY				IAmb	IAmb	05 46 54.7	
	comp=Z,19nm,1.5s						
PV22	Blue Mesa, Par	88.20	47	P	P	05 46 54.1	+0.5
MCK	McKinley	88.41	12	P	P	05 46 52.6	-1.1
NEW	Newport	88.41	36	P	P	05 46 54.7	+0.6
NEW				IAmb	IAmb	05 46 55.7	
	comp=Z,9.2nm,0.9s						
NEW	Newport	88.41	36	P	P	05 46 54.8	+0.6
	baz=234						
PAX	Paxson	88.47	14	P	P	05 46 53.8	-0.4
PBKT	Sadao Pong	88.49	288	P	P	05 46 55.7	+0.6
BWN	Browne	88.70	12	P	P	05 46 53.9	-1.2
MENT	Mentasta	88.85	15	P	P	05 46 55.1	-0.7
MENT				IAmb	IAmb	05 47 00.2	
	comp=Z,10nm,1.2s						
AHID	Auburn Hatcher	88.86	42	P	P	05 46 57.6	+1.0
AHID				IAmb	IAmb	05 46 58.7	
	comp=Z,9.5nm,1.2s						
MCMT	McKenzie Canyo	88.89	40	P	P	05 46 57.7	+0.9
S22A	4UR Ranch, Cre	89.16	48	P	P	05 46 59.5	+1.3
	baz=242						
WRH	Wood River Hil	89.24	12	P	P	05 46 56.1	-1.5
MLY	Manley	89.25	11	P	P	05 46 55.8	-1.9
MLY				IAmb	IAmb	05 46 56.9	
	comp=Z,10.0nm,0.6s						
RIDG	Independent Ri	89.28	14	P	P	05 46 57.3	-0.6
REDW	Red Top Meadow	89.33	42	P	P	05 46 59.5	+0.7
REDW				IAmb	IAmb	05 47 00.9	
	comp=Z,15nm,1.1s						
DLMT	Dillon	89.33	40	P	P	05 47 00.2	+1.6
DLMT				IAmb	IAmb	05 47 00.8	
	comp=Z,22nm,1.4s						
TPAW	Teton Pass	89.33	42	P	P	05 46 59.5	+0.6
TPAW				IAmb	IAmb	05 47 00.2	
	comp=Z,13nm,1.2s						
DLBC	Dease Lake	89.33	23	P	P	05 46 59.2	+0.9
DLBC				IAmb	IAmb	05 47 00.1	
	comp=Z,16nm,1.1s						
O20A	White River Ci	89.36	46	P	P	05 47 00.0	+1.0
	baz=241						
XAN	Xi'an	89.39	307	P	P	05 46 59.4	+0.3
XAN				pP	pP	05 48 12.6	+2.5
XAN	Xi'an	89.39	307	P	P	05 46 57.8	-1.2
WHY	Whitehorse	89.39	20	P	P	05 46 58.9	+0.4
WHY				IAmb	IAmb	05 46 59.9	
	comp=Z,11nm,0.9s						
HDA	Harding Lake	89.42	13	P	P	05 46 57.6	-0.8
HDA	Harding Lake	89.42	13	P	P	05 46 57.6	-0.8
	baz=209						
BCAR	Beaver Creek A	89.42	15	P	P	05 46 58.5	0.0
CCB	Clear Creek Bu	89.45	12	P	P	05 46 57.8	-0.8
IMAR	Indian Mountai	89.63	10	P	P	05 46 58.9	-0.4
TCOL	CIGO, UAF Yank	89.64	12	P	P	05 46 58.6	-0.8
	baz=208						
COLA	College	89.65	12	P	P	05 46 58.9	-0.5
MDM	Murphy Dome	89.65	12	P	P	05 46 58.8	-0.7
MDM				IAmb	IAmb	05 46 59.1	
	comp=Z,14nm,0.8s						
SCRK	Sand Creek	89.68	14	P	P	05 46 59.8	0.0
QLMT	Earthquake Lak	89.75	41	P	P	05 47 02.9	+2.2
IL31		89.75	13	P	P	05 46 59.0	-0.9
IL31				IAmb	IAmb	05 46 59.3	
	comp=Z,5.3nm,0.6s						
ILAR	Eielson Array	89.75	13	P	P	05 46 58.7	-1.2
	comp=Z,4.8nm,0.6s,baz=216,slow=5.6,SNR=80						
ILAR				PKiKP	PKiKP	05 51 53.5	-1.3
	comp=Z,0.3nm,0.8s,baz=245,slow=3.7,SNR=4.7						
ILAR				PKKPbc	PKKPbc	06 04 36.2	+1.3
	comp=Z,0.2nm,0.5s,baz=338,slow=2.8,SNR=4.5						
ILAR	Eielson Array	89.75	13	P	P	05 46 59.1	-0.8
FLWY	Flagg Ranch	89.80	42	P	P	05 47 02.9	+1.9
FLWY				IAmb	IAmb	05 47 03.4	
	comp=Z,18nm,1.0s						
BW06	Boulder Array	89.83	43	P	P	05 47 02.4	+1.2
BW06	Boulder Array	89.83	43	P	P	05 47 01.6	+0.4
	baz=240						
PD31	Pinedale Array	89.83	43	P	P	05 47 02.1	+1.0
PDAR	Pinedale Array	89.83	43	P	P	05 47 01.5	+0.3
	comp=Z,3.4nm,0.7s,baz=211,slow=3.1,SNR=33						
PDAR	Pinedale Array	89.83	43	P	P	05 47 01.7	+0.6
YHB	Horse Butte	89.85	41	P	P	05 47 02.8	+1.6
YHL	Hebgen Lake	89.91	41	P	P	05 47 03.2	+1.7
POKR	Poker Plat Res	89.95	12	P	P	05 46 59.3	-1.5
	baz=208						
H17A	Grant Village	90.04	41	P	P	05 47 04.7	+2.6
	baz=239						
SDCO	Great Sand Dun	90.08	49	P	P	05 47 03.5	+1.0
	baz=242						
KMI	Kunming	90.40	297	P	P	05 47 04.9	+0.7
T25A	Trinidad	90.57	50	P	P	05 47 05.7	+1.0
	baz=243						
DAWY	Dawson	90.85	16	P	P	05 47 05.3	+0.2
DAWY				IAmb	IAmb	05 47 06.0	
	comp=Z,12nm,0.8s						
CMAR	Chiang Mai Arr	91.00	289	P	P	05 47 08.0	+1.2
	comp=Z,9.5nm,0.9s,baz=130,slow=3.1,SNR=43						
EGAK	Eagle	91.01	15	P	P	05 47 05.9	+0.1
EGAK				IAmb	IAmb	05 47 06.4	
	comp=Z,15nm,0.8s						
JCT	Junction City	91.09	58	P	P	05 47 08.7	+1.7
JCT	Junction City	91.09	58	P	P	05 47 07.9	+0.9
	baz=245						
RLMT	Red Lodge	91.21	41	P	P	05 47 09.3	+1.8
RLMT				IAmb	IAmb	05 47 09.7	
	comp=Z,7.3nm,0.9s						
RLMT	Red Lodge	91.21	41	P	P	05 47 08.9	+1.5
	baz=240						
K22A	Casper	91.72	44	P	P	05 47 10.7	+0.9
	baz=242						
ABTX	Abilene, Hawle	92.11	56	P	P	05 47 13.1	+1.4
	baz=246						
EGMT	Eagleton	92.40	38	P	P	05 47 13.6	+0.9
	baz=240						
BMAR	Burnt Mountain	92.54	12	P	P	05 47 13.2	+0.4
EPYK	Eagle Plains	93.39	15	P	P	05 47 16.6	-0.1
	baz=218						
LAO	LASA Array	93.83	41	P	P	05 47 20.9	+1.6
	baz=242						
RSSD	Black Hills	94.01	44	P	P	05 47 20.9	+0.5
RSSD				IAmb	IAmb	05 47 21.8	
	comp=Z,6.3nm,0.7s						
RSSD	Black Hills	94.01	44	P	P	05 47 20.5	+0.1
	baz=244						
LZH	Lanzhou	94.03	307	*e*P	P	05 47 19.0	-1.6
LZH				PP	PP	05 51 14.9	+3.3
NATX	Nacogdoches	95.64	58	P	P	05 47 24.1	-3.7
INK	Inuvik	95.68	15	P	P	05 47 25.7	-1.4
	comp=Z,3.4nm,0.9s,baz=183,slow=4.3,SNR=7.5						
INK	Inuvik	95.68	15	P	P	05 47 26.2	-0.9
INK				IAmb	IAmb	05 47 27.2	
	comp=Z,8.5nm,1.2s						
DGMT	Dagmar	95.87	40	P	P	05 47 29.8	+1.3
	baz=244						
YKA	Yellowknife Ar	97.77	25	P	P	05 47 36.2	-0.4
	comp=Z,1.3nm,0.8s,baz=237,slow=4.5,SNR=19						
YKA				PKiKP	PKiKP	05 52 08.2	-0.6
	comp=Z,0.1nm,0.5s,baz=234,slow=1.6,SNR=6.1						
YKA				PKKPbc	PKKPbc	06 04 13.9	+0.5
	comp=Z,0.2nm,0.8s,baz=56,slow=2.1,SNR=4.0						
GTA	Gaotai	98.26	309	*e*P	P	05 47 40.8	+1.2
RES	Resolute Bay	109.19	16	PKiKP	PKiKP	05 52 28.0	-1.3
	comp=Z,1.2nm,0.7s,baz=230,slow=1.7,SNR=7.7						
ZALV	Zalesovo Beam	111.95	321	PKiKP	PKiKP	05 52 34.1	-1.0
	comp=Z,2.9nm,0.7s,baz=164,slow=1.5,SNR=6.7						
MKAR	Makanchi Array	112.55	313	Pdiff	Pdif	05 48 45.0	+2.1
	comp=Z,0.3nm,0.6s,baz=96,slow=4.5,SNR=6.0						
MKAR				PKiKP	PKiKP	05 52 35.5	-1.1
	comp=Z,0.5nm,0.4s,baz=177,slow=1.1,SNR=9.0						
MKAR	Makanchi Array	112.55	313		PKiKP	05 52 34.8	-1.8
KURK	Kurchatov	115.40	317		PKPdf	05 52 40.5	-1.3
KSH	Kashi	116.09	304	PKP	PKPdf	05 52 43.3	-0.4
KSH				PP	PP	05 53 57.9	+4.2
KSH				sPKP		05 54 45.1	
KSH				PKS		05 56 19.6	
KSH				SKKS		06 00 14.1	
BOOM	Boomskoye usch	116.49	308		PKPdf	05 52 43.1	-1.3
FRB	Frobisher Bay	117.98	28	PKP	PKPdf	05 52 45.7	-0.7
	comp=Z,1.8nm,0.6s,baz=296,slow=2.5,SNR=12						
SCHQ	Schefferville	119.66	39	PKP	PKPdf	05 52 49.5	-0.4
	comp=Z,1.3nm,0.8s,baz=257,slow=12,SNR=3.7						
SCHQ	Schefferville	119.66	39		PKPdf	05 52 49.2	-0.8
GAR	Garm	120.40	303		PKPdf	05 52 51.4	-0.7
KKAR	Karatay Array	120.52	308		PKPdf	05 52 50.8	-1.2
BRVK	Borovoye	120.58	320		PKPdf	05 52 50.1	-1.7
KBL	Kabul	120.97	298		PKPdf	05 52 52.3	-1.0
SPITS	Spitsbergen Ar	123.44	357	PKP	PKPdf	05 52 56.0	-0.7
	comp=Z,10nm,0.7s,baz=93,slow=5.8,SNR=11						
DAG	Danmarks Havn	124.25	6	*i* P	PKPdf	05 52 56.7	-1.4
	comp=Z,5.7nm,0.8s						
SUMG	Summit	124.58	14	*i* P	PKPdf	05 52 59.0	-0.4
	comp=Z,47nm,1.1s						

SUMG	Summit	124.58	14		PKiKP	05 52 59.7	-0.1
BOSA	Boshof	125.01	205	PKP	PKiKP	05 53 02.2	+0.5
	comp=Z,1.9nm,0.7s,baz=339,slow=2.3,SNR=3.0						
ARU	Arti	126.70	325		PKPdf	05 53 02.6	-0.7
ABKAR	Akbulak array	127.48	316		PKPdf	05 53 04.1	-1.0
ABKAR	Akbulak array	127.48	316		PKPdf	05 53 04.4	-0.7
GEYT	Alibeck	129.94	302	PKP	PKPdf	05 53 09.6	-0.6
	comp=Z,2.2nm,0.7s,baz=147,slow=8.8,SNR=4.6						
ARCES	ARCESS Array B	130.53	350	PKP	PKPdf	05 53 09.5	-0.8
	comp=Z,10nm,0.7s,baz=13,slow=1.5,SNR=25						
KLMR	Klimovskoe	133.46	336	ePKPdf	PKPdf	05 53 13.5	-2.5
KLMR				AMP		05 53 15.9	
	comp=Z,26nm,1.6s						
KLMR				ePP	PP	05 56 05.4	+18
FINES	FINESS Array B	137.38	343	PKhKP	PKPpre	05 53 12.2	
	comp=Z,3.0nm,0.8s,baz=39,slow=2.9,SNR=8.4						
FINES				PKP	PKPdf	05 53 23.1	-0.2
	comp=Z,4.5nm,0.7s,baz=52,slow=2.3,SNR=9.5						
FINES				SKPbc	SKPbc	05 56 26.7	-1.2
	comp=Z,5.8nm,1.1s,baz=352,slow=2.8,SNR=3.6						
KMBO	Kilima Mbogo	138.93	240	PKP	PKiKP	05 53 29.2	-1.1
	comp=Z,2.8nm,0.7s,baz=27,slow=2.7,SNR=4.0						
KMBO	Kilima Mbogo	138.93	240		PKPdf	05 53 27.5	-0.5
NB2	NORSAR Subarra	140.57	353	PKP	PKPdf	05 53 20.6	-8.7
	comp=Z,18nm,1.4s,baz=10,slow=3.2						
NOA	NORSAR Array B	140.57	353	PKhKP	PKPdf	05 53 19.5	-10
	comp=Z,0.7nm,0.7s,baz=9.5,slow=2.6,SNR=9.9						
NOA				PKP	PKiKP	05 53 30.0	-1.9
	comp=Z,3.6nm,0.8s,baz=13,slow=4.0,SNR=7.1						
HFS	Hagfors	141.14	351	PKhKP	PKPdf	05 53 22.7	-7.6
	comp=Z,4.2nm,0.4s,baz=72,slow=4.8,SNR=21						
HFS				SKPbc	SKPbc	05 56 36.3	-1.9
	comp=Z,2.5nm,0.8s,baz=5.5,slow=4.5,SNR=3.9						
KAC	Achnashellach	144.16	7	eP	PKPab	05 53 33.6	-0.7
KPL	Plockton	144.28	7	eP	PKPab	05 53 34.0	-0.6
MCD	Coleburn Disti	144.28	5	eP	PKPab	05 53 33.7	-1.0
MBAR	Mbarara	144.36	234		PKPab	05 53 35.2	-1.3
SUW	Suwalki	144.44	339	ePKP	PKPab	05 53 34.9	-0.5
SUW	Suwalki	144.44	339		PKPab	05 53 34.4	-1.0
AKASG	Malin Array Be	144.56	330	PKP	PKPab	05 53 34.2	-1.8
	comp=Z,21nm,0.5s,baz=42,slow=4.5,SNR=100						
AKASG				SKPbc	SKPbc	05 56 45.2	-1.6
	comp=Z,0.1nm,0.3s,baz=39,slow=3.3,SNR=4.1						
AKASG	Malin Array Be	144.56	330		PKPab	05 53 34.0	-2.0
AKBB	Malin Array Si	144.56	330		PKPab	05 53 34.4	-1.6
EDU	Dundee	145.33	5	eP	PKPbc	05 53 38.2	0.0
INVG	Invergeldie, C	145.35	6	eP	PKPdf	05 53 37.5	-0.3
EAB	Aberfoyle	145.56	7	eP	PKPdf	05 53 38.2	+0.1
BSD	Bornholm Skovb	145.69	347	i P	PKPdf	05 53 38.2	-0.1
	comp=Z,49nm,0.8s						
GAZ	Gaziantep	146.43	304		PKPbc	05 53 41.6	-0.6
EKA	Eskdalemuir Ar	146.52	6	PKPbc	PKPbc	05 53 40.9	-0.8
	comp=Z,12nm,0.7s,baz=337,slow=2.3,SNR=18						
SORM	Soroca	146.74	328	⇑P	PKPbc	05 53 43.1	+0.6
GAL1	Galloway	146.81	8	eP	PKPdf	05 53 40.8	+0.6
GKP	Gorka Klasztor	146.85	344	ePKP	PKPbc	05 53 42.4	-0.3
BEL	Belsk	147.05	339	ePKP	PKPbc	05 53 43.3	+0.1
EDMD	Edmundbyers	147.12	5	eP	PKPbc	05 53 42.4	-1.0
IOMK	Kirk Michael	147.42	8	eP	PKPbc	05 53 43.8	-0.4
WIM	Isle of Man	147.52	8	eP	PKPbc	05 53 43.9	-0.6
ILGA	Ilgaz	147.55	313		PKPbc	05 53 45.5	+0.2
KWP	Kalwaria Pacla	148.16	335	ePKP	PKPbc	05 53 46.5	+0.1
KWP	Kalwaria Pacla	148.16	335		PKPbc	05 53 46.0	-0.3
BR131	Keskin Array S	148.16	311		PKPbc	05 53 45.9	-1.0
BRTR	Keskin Array B	148.16	311	PKPbc	PKPbc	05 53 45.6	-1.2
	comp=Z,13nm,0.6s,baz=136,slow=5.0,SNR=41						
WME	Myndd Eilian	148.30	8	eP	PKPbc	05 53 45.7	-0.8
WLF1	Llynfaes	148.40	8	eP	PKPbc	05 53 46.2	-0.6
RUE	Ruedersdorf	148.40	347	ePKPbc	PKPbc	05 53 46.4	-0.4
	baz=16,slow=2.3						
BUR08	Bucovina Ar. S	148.59	330		PKPbc	05 53 48.1	+0.5
BURAR	Bucovina Array	148.61	330	⇑P	PKPbc	05 53 47.7	+0.1
BURAR	Bucovina Array	148.61	330		PKPdf	05 53 42.5	-1.1
BURAR				PKPbc	PKPbc	05 53 48.1	+0.5
TESR	Tescani	148.69	327	⇑P	PKPbc	05 53 46.6	-1.2
ANTO	Ankara	148.69	311	⇑P	PKPbc	05 53 47.8	-0.3
ANTO	Ankara	148.69	311		PKPbc	05 53 47.5	-0.6
ANTO				PKPab	PKiKP	05 53 50.3	+0.9
BR231	Keskin MP Arra	148.72	311		PKPbc	05 53 47.6	-0.6
BR231				PKPab	PKiKP	05 53 50.2	+0.7
OJC	Ojcow	148.75	338	ePKP	PKPbc	05 53 47.7	-0.1
OJC	Ojcow	148.75	338		PKPbc	05 53 47.3	-0.5
OJC				PKPab	PKiKP	05 53 49.5	+0.5
CFR	Carcaliu	148.78	324	⇑P	PKPbc	05 53 47.6	-0.4
TOPG	Topolog	148.83	323	⇑P	PKPbc	05 53 48.0	-0.2
KOLS	Kolonicke sedl	148.89	334	ePKP	PKPbc	05 53 48.2	0.0
FOEL	Foel Wylfa	148.93	7	eP	PKPbc	05 53 47.8	-0.3
ODBI	Odobesti	148.98	326	⇓P	PKiKP	05 53 49.1	-0.5
TIRR	Tirgusor	149.07	322	⇓P	PKPbc	05 53 47.9	-0.9
VRI	Vrincioaia	149.08	326	⇓P	PKPbc	05 53 48.0	-0.8
TSCT	Constanta Port	149.11	322	⇓P	PKiKP	05 53 49.6	-0.3
PLOR	Plostina	149.13	326	⇓P	PKiKP	05 53 51.4	+1.4
CRVS	Cervenica-Dubn	149.23	335	ePKP	PKPbc	05 53 49.2	+0.1
CWF	Charnwood Fore	149.25	4	eP	PKPbc	05 53 48.0	-0.9
NIE	Niedzica	149.25	337	ePKP	PKPbc	05 53 49.0	-0.1
KSP	Ksiaz	149.29	343	ePKP	PKPbc	05 53 49.2	0.0
HLM1	Long Mynd	149.33	6	eP	PKPbc	05 53 48.8	-0.3
BMR	Baia Mare	149.35	332	⇓P	PKPbc	05 53 48.9	-0.4
MDUB	Mudurnu	149.51	314		PKPbc	05 53 49.4	-0.7
OSTC	Ostas	149.57	343	⇑ePKP	PKPbc	05 53 49.8	0.0
CHVC	Chvalec	149.59	343	⇑ePKP	PKPbc	05 53 49.9	0.0
OKC	Ostrava-Krasne	149.63	340	⇑ePKP	PKPbc	05 53 49.4	-0.5
CLZ	Clausthal	149.65	350	ePKPbc	PKPbc	05 53 49.8	-0.1
	baz=16,slow=2.3						
CLL	Collm	149.67	347	i PKPbc	PKiKP	05 53 50.7	-0.1
	comp=Z,35nm,0.7s						
CLL				i PKiKP	PKPbc	05 53 53.0	+3.0
	comp=Z,42nm,0.8s						
CLL				i PKPab	PKPab	05 53 57.7	+1.5
	comp=Z,29nm,0.9s						
CLL	Collm	149.67	347	ePKPbc	PKiKP	05 53 50.8	-0.1
	baz=16,slow=2.3						
CLL	Collm	149.67	347		PKiKP	05 53 50.7	-0.1
UPC	Upice	149.68	343	⇑ePKP	PKPbc	05 53 49.8	-0.3
DOPR	Dopca	149.70	327	⇑P	PKPbc	05 53 50.5	+0.3
DPC	Dobruska-Polom	149.73	342	⇑ePKP	PKPbc	05 53 49.9	-0.4
MLR	Muntele Rosu	149.74	326	PKPbc	PKPbc	05 53 50.2	-0.3
	baz=270,slow=1.0						
MLR	Muntele Rosu	149.74	326	⇑P	PKiKP	05 53 51.0	-0.4
MLR	Muntele Rosu	149.74	326		PKPbc	05 53 49.9	-0.6
LANS	Liptovska Anna	149.77	338	ePKP	PKiKP	05 53 51.1	-0.1
LANS				e		05 53 55.6	
MCH1	Michaelchurch	149.83	7	eP	PKPbc	05 53 49.2	-1.1
BRG	Berggiesshubel	149.87	345	ePKP	PKPdf	05 53 46.3	+1.0
	comp=Z,13nm,1.6s						
BRG	Berggiesshubel	149.87	345	i PKP	PKPbc	05 53 50.3	-0.2
	comp=Z,23nm,0.7s						
BRG	Berggiesshubel	149.87	345	ePKPbc	PKPbc	05 53 50.3	-0.2
	baz=16,slow=2.3						
MORC	Moravsky Berou	149.88	340	⇑P	PKPbc	05 53 50.6	0.0
MORC	Moravsky Berou	149.88	340	ePKP	PKPbc	05 53 50.2	-0.4
MORC	Moravsky Berou	149.88	340		PKPbc	05 53 49.8	-0.8
FBE	Freiberg	149.96	346	ePKPbc	PKPbc	05 53 50.8	+0.1
	baz=16,slow=2.3						
GTTG	Gottingen	150.00	351	ePKPbc	PKPbc	05 53 50.6	-0.2
	baz=16,slow=2.3						
CJR	Cluj-Napoca	150.02	330	⇓P	PKPbc	05 53 51.0	0.0
PVCC	Panska Ves	150.03	344	⇑ePKP	PKPbc	05 53 50.9	0.0
CSS	Mathiatis	150.08	302		PKPbc	05 53 50.7	-0.8
VOIR		150.24	327	⇓P	PKPbc	05 53 51.7	0.0
DRGR		150.37	331	⇓P	PKPbc	05 53 51.4	-0.5
SWN1	Swindon	150.43	5	eP	PKPbc	05 53 51.2	-0.5
BUG	Bochum--Univer	150.44	354	ePKPbc	PKPbc	05 53 51.4	-0.4
	baz=16,slow=2.3						
PRA	Prague	150.49	344	⇑ePKP	PKPbc	05 53 52.0	0.0
ARR	Arges	150.49	327	⇑P	PKiKP	05 53 52.9	+0.1
PRU	Pruhonice	150.54	344	⇑ePKP	PKPbc	05 53 51.8	-0.3
VYHS	Vyhne	150.55	338	ePKP	PKPbc	05 53 51.9	-0.3
VYHS				e		05 53 59.8	
MOX	Moxa	150.58	348	ePKPbc	PKPbc	05 53 52.0	-0.2
	baz=16,slow=2.3						
VRAC	Vranov	150.58	341	PKPbc	PKPbc	05 53 52.3	0.0
	comp=Z,9.1nm,0.7s,baz=67,slow=2.7,SNR=11						
VRAC	Vranov	150.58	341	⇓P	PKPbc	05 53 52.2	0.0
VRAC	Vranov	150.58	341	ePKP	PKPbc	05 53 52.0	-0.3
PLN	Plauen	150.62	347	ePKPbc	PKPbc	05 53 52.2	-0.1
	baz=16,slow=2.3						
TANN	Tannenbergstha	150.63	347	ePKPbc	PKPbc	05 53 52.2	-0.2
	baz=16,slow=2.3						
JAVC	Velka Javorina	150.63	339	ePKP	PKiKP	05 53 53.2	+0.2
PSZ	Piszkesteto	150.64	336	⇓P	PKPbc	05 53 52.2	-0.3
PSZ	Piszkesteto	150.64	336		PKPbc	05 53 52.2	-0.3
WOL	Wolverton	150.67	5	eP	PKPbc	05 53 51.9	-0.5
GUNZ	Gunzen	150.70	347	ePKPbc	PKPbc	05 53 52.6	0.0
	baz=16,slow=2.3						
WERN	Wernitzgruen	150.76	347	ePKPbc	PKPbc	05 53 52.9	+0.2
	baz=16,slow=2.3						
NKC	Novy Kostel	150.80	347	⇑ePKP	PKPbc	05 53 52.4	-0.4
NKC				ePKPAB	PKPab	05 54 01.8	+0.8
KRUC	Moravsky	150.86	341	ePKP	PKPbc	05 53 52.5	-0.4
PBCC	Pribram	150.96	344	⇑ePKP	PKPbc	05 53 52.7	-0.4
PBCC				ePKPAB	PKPab	05 54 02.2	+0.5
DEV	Deva	150.96	330	⇑P	PKPbc	05 53 52.9	-0.3
MANZ	Manzenberg	151.11	347	ePKPbc	PKPbc	05 53 53.4	-0.1
	baz=16,slow=2.3						
MODS	Modra-Piesok	151.19	339	ePKP	PKPbc	05 53 52.9	-0.8
SIRR	Siria	151.23	332	⇑P	PKPbc	05 53 53.7	-0.1
UCC	Uccle	151.28	357		PKPbc	05 53 53.5	-0.3
ROTZ	Rotzenmuhle	151.29	347	ePKPbc	PKPbc	05 53 53.6	-0.3
	baz=16,slow=2.3						
MEM	Membach	151.37	355	PKPdf	PKPdf	05 53 47.0	-0.7
MEM				PKPbc	PKPbc	05 53 52.9	-1.1
MEM				PKiKP	PKiKP	05 53 53.7	-0.7
GZR	Gura Zlata	151.38	329	⇑P	PKPbc	05 53 53.6	-0.7
ZST	Bratislava	151.40	339	ePKP	PKiKP	05 53 54.9	+0.4
ZST				e		05 54 02.0	
BSTI	Sart Tilman	151.43	356	PKiKP	PKPbc	05 53 54.2	+0.1
TNS	Taunus Mts	151.50	352	ePKPbc	PKPbc	05 53 54.4	0.0
	baz=16,slow=2.3						
GRF	Grafenberg Arr	151.56	348	ePKPbc	PKPbc	05 53 54.3	-0.2
	baz=16,slow=2.3						
KHC	Kasperske Hory	151.57	345	ePKPDF	PKPdf	05 53 48.2	+0.1
KHC				⇑ePKP	PKPbc	05 53 54.1	-0.5
KHC				ePKPAB	PKPab	05 54 03.8	-0.5
KHC	Kasperske Hory	151.57	345		PKPbc	05 53 54.4	-0.2
KHC				PKPab	PKPab	05 54 04.4	+0.1
SNF	Seneffe	151.58	357	PKPbc	PKPbc	05 53 54.0	-0.5
SNF				PKiKP	PKiKP	05 53 54.4	-0.4
BCLA	Clavier	151.61	356	PKPdf	PKPdf	05 53 49.4	+1.4
BCLA				PKPbc	PKiKP	05 53 54.8	-0.1
BCLA				PKPab	PKPab	05 54 03.1	-1.2
BGES	Gesves	151.66	356	PKPbc	PKPbc	05 53 54.2	-0.5
BGES				PKPab	PKPab	05 54 03.4	-1.2
SRE	Strehaia	151.71	328	⇓P	PKiKP	05 53 55.3	0.0
BZS	Buzias	151.75	331	⇓P	PKPbc	05 53 54.6	-0.4
BMRD	Maredsous	151.76	357	PKiKP	PKPbc	05 53 54.8	-0.1
GEC2	GERESS Array S	151.81	344	ePKPbc	PKPbc	05 53 54.8	-0.4
	baz=16,slow=2.3						
GEC2	GERESS Array S	151.81	344		PKPbc	05 53 54.6	-0.6
GEC2				PKPab	PKPab	05 54 05.8	+0.4
GERES	GERESS Array B	151.81	344	PKPbc	PKPbc	05 53 54.9	-0.3
	comp=Z,12nm,0.8s,baz=64,slow=3.1,SNR=25						
GERES	GERESS Array B	151.81	344		PKPbc	05 53 54.3	-0.9
GERES				PKPab	PKPab	05 54 06.4	+1.0
PLVB	Pleven	151.86	324	⇓P	PKPbc	05 53 54.4	-0.9
HERR	Herculane	151.93	329	⇑P	PKPbc	05 53 54.9	-0.5
DOU	Dourbes	151.97	357	PKPdf	PKPdf	05 53 48.8	+0.2
DOU				PKPbc	PKPbc	05 53 55.0	-0.4
DOU				PKPab	PKPab	05 54 04.7	-1.2
CONA	Conrad Observa	152.03	341	ePKiKP	PKPbc	05 53 55.8	0.0
	comp=Z,16nm,0.7s,SNR=8.0						
ELL	Elmali	152.06	308		PKPbc	05 53 55.5	-0.7
MANT	Manisa	152.25	312		PKPbc	05 53 55.7	-1.0
WLF	Walferdange	152.30	355	PKiKP	PKPbc	05 53 56.2	+0.1
WLF	Walferdange	152.30	355	ePKPbc	PKiKP	05 53 56.5	+0.2
	baz=16,slow=2.3						
WLF	Walferdange	152.30	355		PKiKP	05 53 56.5	+0.2
MDVR	Moldovita	152.34	330	⇑P	PKPbc	05 53 55.9	-0.6
MOA	Molln	152.57	343	ePKiKP	PKPbc	05 53 56.4	-0.4
	comp=Z,5.2nm,0.7s						
ARSA	Arzberg	152.74	340	i PKPbc	PKPbc	05 53 56.5	-0.8
	comp=Z,4.3nm,1.0s						
STU	Stuttgart	152.81	350	ePKPbc	PKPbc	05 53 57.1	-0.2
	baz=16,slow=2.3						
STU	Stuttgart	152.81	350		PKPbc	05 53 57.1	-0.2
STU				PKPab	PKPab	05 54 08.9	-0.6
FUR	Furstenfeldbru	153.01	347	ePKPbc	PKPbc	05 53 57.3	-0.5
	baz=16,slow=2.3						
VTS	Vitosha	153.13	325	⇓P	PKPbc	05 53 57.8	-0.6
VTS	Vitosha	153.13	325		PKPbc	05 53 57.3	-1.1
BFO	Black Forest	153.37	351		PKPbc	05 53 57.0	-1.6
SOKA	Soboth	153.40	340	ePKPbc	PKPbc	05 53 57.9	-0.8
	comp=Z,8.2nm,1.1s						
KBA	Koelnbreinsper	153.53	343	ePKiKP	PKPbc	05 53 58.9	-0.2
	comp=Z,11nm,0.8s						
ECH	Echery	153.63	353		PKPab	05 54 12.3	-0.7
OBKA	Obir	153.70	341	i PKPbc	PKPbc	05 53 58.3	-1.1
	comp=Z,4.9nm,0.8s						
WATA	Walderalm	153.73	346	ePKiKP	PKPbc	05 53 58.9	-0.6
	comp=Z,9.6nm,1.1s						
RETA	Reutte	153.76	347	ePKiKP	PKPbc	05 53 59.1	-0.4
	comp=Z,3.4nm,0.7s						
WTTA	Wattenberg	153.78	346	ePKiKP	PKPbc	05 53 59.3	-0.4
	comp=Z,16nm,1.0s						
MOTA	Moosalm	153.82	347	ePKiKP	PKPbc	05 53 59.2	-0.5
	comp=Z,7.0nm,0.8s						
MYKA	Terra Mystica	153.86	342	ePKPbc	PKPbc	05 53 58.6	-1.1
	comp=Z,4.0nm,0.6s						
SQTA	Sankt Quirin	153.92	346	ePKiKP	PKPbc	05 53 59.5	-0.4
	comp=Z,8.1nm,0.8s						
ABTA	Abfaltersbach	154.05	344	ePKPbc	PKPbc	05 53 59.1	-1.0
	comp=Z,12nm,0.7s,SNR=6.8						
LJU	Ljubljana	154.12	340	i PKPbc	PKPbc	05 53 59.5	-0.7
LJU				e		05 54 01.9	
CRNS	Crni Vrh	154.17	341	ePKPbc	PKPbc	05 53 59.2	-1.2
CRNS				e		05 54 01.7	
BOJS	Bojanci	154.37	339	ePKPbc	PKPbc	05 54 00.6	-0.2
STAL	STALIGIAL	154.45	343		PKPdf	05 53 51.2	-1.1
STAL				PKPbc	PKPbc	05 53 59.8	-1.1
STAL					PKPab	05 54 16.3	-0.3
CTI	Castel Tesino	154.92	345		PKiKP	05 54 01.3	-0.7
CTI				PKPab	PKPab	05 54 17.6	-1.1
LIT	Litokhoron	155.22	321		PKPab	05 54 19.3	-0.9
PDG	Podgorica	155.29	329		PKPdf	05 54 01.9	+8.4
PDG				PKPab	PKPab	05 54 18.8	-1.4
SENIN	Lac Senin/Sane	155.44	352		PKPab	05 54 20.3	-0.7
OSSC	Osservatorio P	157.38	343		PKPab	05 54 28.4	-0.9
PBRG	Braganca	158.87	19	ePKPab	PKPab	05 54 35.8	0.0
PVRL	Vila Real	159.03	22	ePKPab	PKPab	05 54 36.5	0.0
MVO	Moncorvo	159.36	21	ePKPdf	PKPdf	05 53 59.9	+1.1
MVO	Moncorvo	159.36	21	ePKPab	PKPab	05 54 38.1	+0.1
PVIS	Viseu	159.46	23	ePKPab	PKPab	05 54 38.2	-0.2
COI	Coimbra	159.71	25	ePKPab	PKPab	05 54 39.6	+0.2
PCAS	Casmilo, Conde	159.81	25	ePKPdf	PKPdf	05 53 56.4	-2.8
PCAS	Casmilo, Conde	159.81	25	ePKPab	PKPab	05 54 39.7	-0.2
MTE	Manteigas	159.86	23	ePKPdf	PKPdf	05 54 00.1	+0.8
MTE	Manteigas	159.86	23	ePKPab	PKPab	05 54 40.0	-0.2
PSBE	So Bento	160.15	26	ePKPab	PKPab	05 54 41.6	+0.2
PTOM	Tomar	160.22	25	ePKPab	PKPab	05 54 41.6	-0.1
PCBR	Castelo Branco	160.38	23	ePKPdf	PKPdf	05 54 00.5	+0.7
PCBR	Castelo Branco	160.38	23	ePKPab	PKPab	05 54 42.2	-0.2
PMTG	Montargil	160.76	26	ePKPdf	PKPdf	05 54 01.4	+1.1
PMTG	Montargil	160.76	26	ePKPab	PKPab	05 54 41.4	-2.6
PMRV	Marv??o	160.77	24	ePKPdf	PKPdf	05 54 00.8	+0.5
PMRV	Marv??o	160.77	24	ePKPab	PKPab	05 54 43.8	-0.3
PNCL	Nicolau / Gran	161.44	28	ePKPdf	PKPdf	05 54 02.0	+1.0
PNCL	Nicolau / Gran	161.44	28	ePKPab	PKPab	05 54 47.0	0.0
ESDC	Sonseca Array	161.62	16	PKP	PKPdf	05 54 00.7	-0.6
	comp=Z,0.9nm,0.9s,baz=341,slow=3.4,SNR=5.6						
ESDC				PKPab	PKPab	05 54 47.0	-0.8
	comp=Z,0.8nm,0.7s,baz=341,slow=4.6,SNR=5.3						
ESDC	Sonseca Array	161.62	16		PKPdf	05 54 00.5	-0.7
ESDC					PKPab	05 54 46.9	-1.0
PBEJ	Beja	161.79	27	ePKPdf	PKPdf	05 54 01.3	-0.1
MESJ	Messejana	161.80	28	ePKPdf	PKPdf	05 54 01.9	+0.5
MESJ	Messejana	161.80	28	ePKPdf	PKPdf	05 54 02.4	+1.0
MESJ	Messejana	161.80	28	ePKPab	PKPab	05 54 48.8	+0.2
PTEO	Sao Teotonio	161.82	29	ePKPab	PKPab	05 54 48.7	0.0
MORF	Marmelete	162.05	30	ePKPdf	PKPdf	05 54 02.1	+0.4
MORF	Marmelete	162.05	30	ePKPdf	PKPdf	05 54 03.2	+1.5
MORF	Marmelete	162.05	30	ePKPab	PKPab	05 54 49.8	0.0
PCVE	Castro Verde	162.05	28	ePKPab	PKPab	05 54 49.8	0.0
PVAQ	Vaqueiros	162.38	28	ePKPab	PKPab	05 54 51.8	+0.6
DBIC	Dimbokro	163.16	154	PKP	PKPdf	05 54 02.7	-0.7
	comp=Z,3.7nm,1.0s,baz=30,slow=21,SNR=3.2						
DBIC	Dimbokro	163.16	154		PKPdf	05 54 03.3	-0.1
TOA0	Torodi Ar. Sit	171.10	175		PKPdf	05 54 08.9	-0.2
TORD	Torodi Ar. Bea	171.10	175	PKP	PKPdf	05 54 08.4	-0.8
	comp=Z,3.3nm,0.8s,baz=329,slow=0.7,SNR=16						
TORD				PKPab	PKPab	05 55 30.5	+0.4
	comp=Z,0.7nm,0.7s,baz=194,slow=4.8,SNR=3.7						
TORD	Torodi Ar. Bea	171.10	175		PKPdf	05 54 08.7	-0.5

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*TIR **16** 05:58:06.4, 41°.46N×19°.50E, h33^{km}, Md2.8/4*

*BEO **16** 05:58:09.4±0.5, 41°.53N×19°.47E, h0^{km}, ML2.6/7*

ISC 16 05:58:09.9±1.0**, 41°.55N**±0°.04×**19°.53E**±0°.03**, h11**^{km}±9^{km}**,**
n52, σ**0ˢ83**/67**, 2C-4D, Albania**

PDG 16 05:58:09.2±0.2**, 41°.45N**×**19°.50E, h16**^{km}**, ML2.7**/12**, Error ellipse: s-maj=0.4km s-min=0.4km az=0.0, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.32	129	ePg	Pg	05 58 16.0	-0.3
TIR				eSg	Sg	05 58 21.6	+1.0
TIR	Tirane	0.32	129	i PG	Pg	05 58 15.3	-1.1
TIR				i SG	Sg	05 58 20.8	+0.2
TIR	Tirane	0.32	129	⇓P	Pg	05 58 16.1	-0.2
PUK	Puka	0.56	29	i PG	Pg	05 58 20.2	-0.7
PUK				i SG	Sb	05 58 30.4	+0.6
DRME	Dracevica, Mon	0.69	338	ePg	Pg	05 58 23.3	+0.1
PHP	Peshkopia	0.69	78	i PG	Pg	05 58 21.5	-1.8
PHP				i SG	Sb	05 58 33.6	0.0
PDG	Podgorica	0.91	347	ePg	Pg	05 58 26.8	-0.5
PDG				eSg	Sb	05 58 39.8	+0.2
PDG	Podgorica	0.91	347	⇑P	Pn	05 58 28.3	-0.2
PDG	Podgorica	0.91	347	ePg	Pn	05 58 28.2	-0.3
BCI	Bajram Curri	0.91	26	i PG	Pg	05 58 26.2	-1.2
BCI				i SG	Sb	05 58 39.5	-0.3
OHR	Ohrid	1.05	114	ePn	Pb	05 58 29.7	-0.4
HCY	Herceg Novi	1.19	320	ePn	Pg	05 58 32.5	-0.2
TREB	Trebinje	1.46	323	ePn	Pg	05 58 37.5	-0.4
TREB	Trebinje	1.46	323	ePn	Pg	05 58 37.8	-0.1
SKO	Skopje	1.49	73	ePg	Pb	05 58 37.9	+0.4
SKO				eSg	Sg	05 58 58.3	+0.5
SKO	Skopje	1.49	73	ePn	Pg	05 58 38.1	-0.3
DBRK	Dubrovnik	1.52	318	ePn	Pb	05 58 38.2	+0.1
DBRK				Sn	Sg	05 58 59.2	+0.4
BRY	Bratogost	1.54	332	ePn	Pb	05 58 38.9	+0.4
UPM	Unac-Piva	1.72	345	ePn	Pb	05 58 41.8	+0.3
SJES	Sjenica	1.74	11	eSg	Pb	05 58 41.7	-0.2
SJES	Sjenica	1.74	11	ePn	Sg	05 59 06.7	+0.8
STON	Ston	1.90	315	ePn	Pn	05 58 43.0	+0.9
STON	Ston	1.90	315	ePn	Pb	05 58 44.4	-0.1
STIP	Stip	2.00	85	i Pn	Pb	05 58 46.7	+0.6
SELS	Selova	2.04	35	ePn	Pn	05 58 44.2	0.0
RUDO	Rudo	2.07	357	ePn	Pb	05 58 46.3	-1.2
BARS	Barje	2.12	52	ePn	Pn	05 58 45.9	+0.7
VAY	Valandovo	2.30	95	ePn	Pn	05 58 47.4	-0.2
BBLS	Lazići	2.32	358	ePn	Pn	05 58 49.1	+1.1
BBLS	Lazići	2.32	358	ePn	Pb	05 58 51.4	-0.3
BOSS	Bosilegrad	2.39	66	ePn	Pn	05 58 49.4	+0.4
GRUS	Gruza	2.50	20	ePn	Pn	05 58 50.6	+0.2
MAKA	Makarska	2.55	314	i Pn	Pn	05 58 50.9	-0.1
MAKA				Sn	Sn	05 59 21.7	-0.3
DIVS	Divibare	2.57	7	ePn	Pn	05 58 52.3	+0.8
DIVS	Divibare	2.57	7	ePn	Pn	05 58 51.8	+0.3
HAPS	Han Pijesak,Bl	2.57	351	ePn	Pn	05 58 52.5	+1.0
HAPS	Han Pijesak,Bl	2.57	351	ePn	Pb	05 58 54.3	-1.8
BOVS	Bovan	2.63	37	ePn	Pn	05 58 54.3	+2.1
RICI	Ricice	2.63	318	i Pn	Pn	05 58 52.4	+0.1
RICI				Sn	Sn	05 59 25.4	+1.2
ZAPS	Zavoj	2.87	52	ePn	Pn	05 58 57.3	+1.7
VTS	Vitosha	2.96	68	ePn	Pn	05 58 58.0	+1.2
VTS	Vitosha	2.96	68	⇓P	Pn	05 58 58.1	+1.2
ZAGS	Zajecar	3.01	40	ePn	Pn	05 58 57.4	-0.1
KIJV	Kijevo	3.37	318	i Pn	Pn	05 59 02.9	+0.5
KIJV				Sn	Sn	05 59 42.0	-0.2
ZIRJ	Zirje	3.56	308	i Pn	Pn	05 59 05.0	0.0
ZIRJ				Sn	Sn	05 59 46.2	-0.8
MDVR	Moldovita	3.60	26	⇑P	Pn	05 59 06.6	+0.9
MORI	Morici	3.65	311	i Pn	Pn	05 59 06.6	+0.4
HERR	Herculane	3.94	31	⇓P	Pn	05 59 11.5	+1.2
UDBI	Udbina	4.06	318	i Pn	Pn	05 59 13.3	+1.3
UDBI				Sn	Sn	05 59 59.5	0.0
DUGI	Dugi Otok	4.10	308	ePn	Pn	05 59 12.4	0.0
DUGI				Sn	Sn	05 59 58.8	-1.6
BZS	Buzias	4.34	20	⇓P	Pn	05 59 16.3	+0.6
NVLJ	Novalja	4.55	313	ePn	Pn	05 59 19.6	+0.9
NVLJ				Sn	Sn	06 00 09.6	-1.9

LJU 16 05:58:28.8, 45°.75N×**14°.88E, h2**^{km}**, ML0.0, 1D,**
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VISS	Visnje	0.06	334	⇓iPg	Pg	05 58 30.1	0.0
VISS				i Sg	Sg	05 58 31.2	+0.2
	comp=Z,4.0nm,0.1s						

IDC 16 06:09:56.1±2.8**, 32°.34S**×**178°.91W, h0**^{km}**, mb4.2**/2**,**
mb1 4.4/3**, mb1mx3.9**/22**, mbtmp4.2**/3**, ML3.6**/1**, Error**
ellipse: s-maj=65.3km s-min=44.3km az=121.0, South
of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.74	208	Pn	Pn	06 11 36.1	-0.1
	1.2nm,0.3s,baz=260,slow=4.8,SNR=10						
URZ				Sn	Sn	06 12 49.2	-4.5
	1.7nm,0.3s,baz=19,slow=24,SNR=7.6						
ASAR	Alice Springs	42.27	269	P	P	06 17 51.7	+0.2
	0.5nm,0.4s,baz=109,slow=7.9,SNR=12						
WRA	Warramunga Arr	43.43	275	P	P	06 18 00.6	-0.4
	3.1nm,0.3s,baz=116,slow=8.6,SNR=79						
FINES	FINESS Array B	146.68	338	PKPbc	PKPdf	06 29 38.1	+0.7
	2.7nm,0.7s,baz=65,slow=3.7,SNR=12						

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*HLW **16** 06:26:03.4, 35°.12N×34°.22E, h10^{km}±10^{km}, Md3.5, Ml3.8*
*NIC **16** 06:26:04.9±0.0, 35°.40N×34°.29E, h24^{km}, Ml3.3/4*
*DDA **16** 06:26:05.5, 35°.23N×34°.24E, h51^{km}±1^{km}, ML3.2*
*ISK **16** 06:26:05.9, 35°.23N×34°.32E, h56^{km}, ML3.2/28*
*GII **16** 06:26:06.2±0.0, 35°.09N×34°.42E, h30^{km}, MD3.1/5, Mm2.9/4*
*GRAL **16** 06:26:06.3±0.5, 34°.89N×34°.38E, h11^{km}±6^{km}, MD3.4*
ISC 16 06:26:04.1±1.2**, 35°.16N**±0°.02×**34°.42E**±0°.03**, h26**^{km}±13^{km}**,**
n88, σ**1ˢ17**/125**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PARAL	Paralimni	0.35	243	P	Pn	06 26 14.7	+1.1
PARAL				AML	AML	06 26 21.5	
	34nm,0.2s						
PARAL				AML	AML	06 26 21.5	
	34nm,0.2s						
PARAL				S	Sn	06 26 21.7	+1.9
EREN	Erenkoy	0.43	331	PG	Pn	06 26 15.7	+1.1
EREN				SG	Sn	06 26 23.9	+2.4
EREN	Erenkoy	0.43	331	i P	Pn	06 26 15.7	+1.1
EREN				i S	Sn	06 26 22.6	+1.1
MVOU	Mavrovouni	0.67	258	P	Pb	06 26 18.0	+0.9
MVOU				S	Sn	06 26 27.9	+0.4
ATHAL	Athalassa	0.84	269	P	Pb	06 26 20.8	+0.7
ATHAL				S	Sn	06 26 31.5	-0.3
CSS	Mathiatis	0.92	258	Pg	Pn	06 26 21.4	+0.1
CSS				Sg	Sn	06 26 34.3	+0.6
CSS	Mathiatis	0.92	258	P	Pn	06 26 21.5	+0.2
CSS				S	Sn	06 26 34.6	+0.9
ASGA	Asgata	1.03	249	P	Pn	06 26 23.9	+1.0
ASGA				AML	AML	06 26 38.0	
	2.4nm,0.5s						
ASGA				AML	AML	06 26 38.0	
	2.4nm,0.5s						
ASGA				S	Sb	06 26 38.1	+1.6
ASGA				AML	AML	06 26 38.5	
	3.2nm,0.6s						
ASGA				AML	AML	06 26 38.5	
	3.2nm,0.6s						
TISA	Tisan-Mersin	1.17	329	PG	Pn	06 26 25.2	+0.4
TISA				SG	Sb	06 26 39.4	-1.1
KARG	Kargicak-Mersi	1.20	331	PN	Pb	06 26 26.1	0.0
KARG				SN	Sb	06 26 40.2	-0.9
AKK2	Akkuyu-Mersin	1.21	324	PN	Pn	06 26 25.8	+0.5
YESI	Yesilovacik-Me	1.22	329	PN	Pn	06 26 25.9	+0.5
YESI				SN	Sb	06 26 40.5	-1.2
AKK1	Akkuyu-Mersin	1.22	324	PN	Pb	06 26 26.1	-0.4
AKK1				SN	Sb	06 26 40.5	-1.3
AKKU	Akkuyu-Mersin	1.23	325	PN	Pb	06 26 26.3	-0.3
IKL	Isikli	1.24	331	PN	Pn	06 26 26.2	+0.5
IKL				SN	Sb	06 26 40.9	-1.4
GULN	MERSIN_Gulnar	1.25	325	i P	Pn	06 26 26.1	+0.2
GULN				i S	Sn	06 26 40.2	-1.7
LEF	Lefka	1.26	269	PN	Pb	06 26 27.3	+0.2
LEF	Lefka	1.26	269	i P	Pn	06 26 26.6	+0.6

LEF				i S	Sn	06 26 41.1	-0.9
SILI	Silifke-Mersin	1.27	342	PN	Pn	06 26 27.0	+0.8
SILI				SN	Sb	06 26 42.3	-1.1
TEPK	Tepekoy-MERSIN	1.28	326	PN	Pb	06 26 27.1	-0.5
YORU	Yoruktepe-Mers	1.29	320	PN	Pn	06 26 27.1	+0.6
OREN	Orenkoy-Mersin	1.31	323	PN	Pn	06 26 26.8	+0.1
OREN				SN	Sb	06 26 42.7	-1.7
SZAC	Souni	1.33	253	P	Pn	06 26 28.1	+1.1
SZAC				AML	AML	06 26 44.7	
	2.4nm,0.6s						
SZAC				AML	AML	06 26 44.7	
	2.4nm,0.6s						
SZAC				S	Sb	06 26 45.2	+0.2
KIZK	Mersin	1.34	350	PN	Pn	06 26 28.0	+0.9
KIZK	Mersin	1.34	350	i P	Pn	06 26 27.7	+0.5
KIZK				i S	Sn	06 26 43.9	-0.2
KEBE	Keben-Mersin	1.41	336	PN	Pn	06 26 28.7	+0.5
TEKE	Tekeli-Mersin	1.45	313	PN	Pn	06 26 29.3	+0.7
ALFC	Alefka	1.50	270	P	Pn	06 26 29.0	-0.3
ALFC				S	Sn	06 26 46.7	-1.3
ALFC				AML	AML	06 26 50.4	
	1.2nm,0.4s						
ALFC				AML	AML	06 26 50.4	
	1.2nm,0.4s						
TEVE	Tevekalti-Mers	1.50	328	PN	Pn	06 26 30.0	+0.5
HWQ	Hawqa	1.53	125	eP	Pn	06 26 31.0	+1.1
HWQ				eS	Sn	06 26 48.9	-0.1
BERE	Bereket-Mersin	1.54	321	PN	Pn	06 26 30.7	+0.7
BEYL	Beirut	1.56	145	eP	Pn	06 26 29.8	-0.2
NATA	Nata	1.57	257	P	Pn	06 26 31.9	+1.7
BHL	Bhannes	1.61	141	eP	Pn	06 26 30.9	0.0
BHL				eS	Sn	06 26 49.3	-1.6
KRTS	Karatas	1.61	28	PN	Pn	06 26 32.7	+1.9
MERS	Mersin	1.71	3	PN	Pn	06 26 33.5	+1.2
AKMS	Akamas	1.72	266	P	Pn	06 26 33.7	+1.3
DQRL	Deir Qamar	1.73	146	eP	Pn	06 26 32.7	+0.1
DQRL				eS	Sn	06 26 51.9	-1.9
DED	Mersin	1.83	9	i P	Pn	06 26 35.1	+1.3
TAHT	Tahtakopru-Hat	1.88	49	PN	Pn	06 26 36.9	+2.4
QRWL	Qaraoun	1.91	147	eP	Pn	06 26 35.2	+0.2
ERMK	Ermenek	1.92	321	i P	Pb	06 26 37.5	-1.1
YURE	YUREGIR	1.93	30	PN	Pn	06 26 37.2	+1.9
YURE	YUREGIR	1.93	30	i P	Pn	06 26 37.3	+2.0
GAZI	Gazipasa	2.02	303	PN	Pn	06 26 37.3	+0.7
GAZI	Gazipasa	2.02	303	i P	Pn	06 26 36.8	+0.3
GAZI				i S	Sn	06 26 59.7	-1.4
GAZI				IAML		06 27 02.0	
	comp=N,113nm,0.5s						
RCY	Rachaya	2.03	144	eP	Pn	06 26 37.0	+0.3
SHBL	Chebaa	2.11	148	eP	Pn	06 26 38.0	+0.1
CEYT	Ceyhan	2.14	30	PN	Pn	06 26 40.2	+2.1
GULE	Gulek	2.14	8	i P	Pn	06 26 40.0	+1.7
HNTI	Hanita	2.16	163	Pn	Pn	06 26 38.9	+0.5
HNTI				Sn	Sn	06 27 03.4	-1.0
KARA	Karaisali	2.16	13	PN	Pn	06 26 40.0	+1.6
NATI	Neve Ativ	2.18	150	Pn	Pn	06 26 40.1	+1.4
NATI				Sn	Sn	06 27 04.4	-0.4
KSDI	Kefar Szold	2.21	152	Pn	Pn	06 26 39.8	+0.7
KSDI				Sn	Sn	06 27 05.4	-0.2
KERG	Konya-Eregli	2.27	354	i P	Pn	06 26 41.6	+1.6
MMA0B	Mount Meron ar	2.29	159	Pn	Pn	06 26 40.9	+0.7
MMA0B				Sn	Sn	06 27 07.1	-0.4
HDMB	Hadim	2.39	320	PN	Pn	06 26 42.7	+0.9
AKO	Adana	2.44	19	i P	Pn	06 26 43.4	+1.1
BLGI	Bet Lehem HaGe	2.50	165	Pn	Pn	06 26 44.1	+1.0
BLGI				Sn	Sn	06 27 12.8	+0.1
OFRI	`Ofer	2.57	169	Pn	Pn	06 26 44.7	+0.6
OFRI				Sn	Sn	06 27 14.4	-0.2
YESY	Yesilyurt	2.68	348	PN	Pn	06 26 46.8	+1.2
OSC2	CSNet OBS 4	2.74	221	P	Pn	06 26 48.5	+2.1
MMLI	Mount Malkishu	2.84	163	Pn	Pn	06 26 48.7	+1.0
MMLI				Sn	Sn	06 27 21.4	+0.3
KEPZ	Antalya-Kepez	2.87	308	i P	Pn	06 26 50.0	+1.7
KEPZ				i S	Sn	06 27 21.7	-0.3
SLTI	Sal'it	2.95	170	Pn	Pn	06 26 50.6	+1.3
SLTI				Sn	Sn	06 27 23.3	-0.6
AYKD	Aykdinkavak	2.96	40	i P	Pn	06 26 51.3	+1.8
AYKD				i S	Sn	06 27 22.8	-1.4
YAHY	KAYSERI_Yahyal	3.03	14	i P	Pn	06 26 52.8	+2.3
HMDT	Nahal Hemdat	3.04	162	Pn	Pn	06 26 51.3	+0.8
HMDT				Sn	Sn	06 27 26.9	+0.9
KMRS	Kahramanmaras	3.08	40	PN	Pn	06 26 53.9	+2.8
GULA	Gulagac	3.19	357	PN	Pn	06 26 54.1	+1.5
AMAZ	Amatzia	3.64	173	Pn	Pn	06 26 59.9	+1.1
DSI	Dead Sea	3.67	167	Pn	Pn	06 26 59.9	+0.8
YTIR	Yattir	3.83	171	Pn	Pn	06 27 02.8	+1.4
YTIR				Sn	Sn	06 27 46.5	+0.9
RSH		4.23	188	P	Pn	06 27 06.7	-0.2
	baz=186						
KZIT	Kziot	4.24	180	Pn	Pn	06 27 07.7	+0.7
ZFRI	Zfri	4.63	172	Pn	Pn	06 27 13.5	+1.1
PRNI	Paran	4.82	174	Pn	Pn	06 27 16.0	+1.0
KRMI	Paran Flat	5.03	177	Pn	Pn	06 27 19.0	+1.1
MBRI	Mt Berech	5.36	175	Pn	Pn	06 27 23.6	+1.1
SUZ	Suez	5.47	195	P	Pn	06 27 23.9	0.0
	baz=193						
EIL	Elat	5.49	175	Pn	Pn	06 27 24.8	+0.6
KOT	Kottamia	5.66	204	P	Pn	06 27 26.1	-0.4
	baz=202						
KOT				AMP		06 28 00.0	
	baz=202						
KOT				S	Sn	06 28 26.4	-4.2
	baz=202						
HBST	Basata	5.93	177	P	Pn	06 27 31.3	+1.1
	baz=175						
HBST				AMP		06 28 00.0	
	baz=175						
GLL	Jalalah	6.02	203	P	Pn	06 27 31.1	-0.4
	baz=202						
HSAF	As Saff	6.03	205	P	Pn	06 27 31.2	-0.5
	baz=204						
ZAF	Zafarana	6.07	196	P	Pn	06 27 31.7	-0.4
	baz=195						
HDHB	Dhahab	6.42	178	P	Pn	06 27 37.6	+0.7
	baz=176						
GRB	Gharib	7.01	192	P	Pn	06 27 44.3	-0.7
	baz=191						

ROM 16 06:31:51.1±0.2,**43°.492N**±0°.004×**12°.381E**±0°.004,**h7^{km}**±1^{km},**ML0.6**/3,**3C,Error ellipse: s-maj=0.4km s-min=0.3km az=344.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATPI	Pietralunga -	0.04	160	P	Pg	06 31 52.9	+0.1
ATPI				S	Sg	06 31 54.0	+0.1
ATPI				AML	AML		
	comp=E,87µm,0.1s						
ATPI				AML	AML		
	comp=N,69µm,1.4s						
ATPI				AML	AML		
	comp=E,87µm,0.1s						
ATPI				AML	AML		
	comp=N,69µm,1.4s						
BADI	Badiali	0.10	280	⇑P	Pg	06 31 53.8	+0.3
BADI				S	Sg	06 31 55.7	+0.6
BADI				AML	AML		
	comp=E,97µm,0.1s						
BADI				AML	AML		
	comp=N,97µm,0.8s						
BADI				AML	AML		
	comp=E,97µm,0.1s						
BADI				AML	AML		
	comp=N,97µm,0.8s						
ATVO	AVT- Monte Val	0.11	170	P	Pg	06 31 54.1	+0.5
ATVO				S	Sg	06 31 56.3	+0.9
ATVO				AML	AML		
	comp=E,36µm,0.3s						
ATVO				AML	AML		
	comp=N,25µm,1.5s						
CDCA	Citt' di Caste	0.11	253	P	Pg	06 31 54.1	+0.5
CDCA				S	Sg	06 31 56.2	+0.9
PIEI	Pieia	0.12	68	⇑P	Pg	06 31 54.3	+0.5
PIEI				S	Sg	06 31 56.9	+1.2
PIEI				AML	AML		
	comp=E,54µm,1.0s						
PIEI				AML	AML		
	comp=N,35µm,0.9s						
PIEI				AML	AML		
	comp=E,54µm,1.0s						
ATMI	Monte Miggiano	0.18	208	S	Sg	06 31 59.0	+1.8
NARO	Abbazia di Nar	0.19	51	P	Pg	06 31 55.4	+0.4
NARO				S	Sg	06 31 58.6	+1.0
PARC	Parchiule	0.19	327	⇑P	Pg	06 31 55.5	+0.6
PARC				S	Sg	06 31 59.1	+1.5

MOS ***16*** *06:32:23.6±1.1,51°.59N×16°.14E,h12^{km},mb4.3/8,Error ellipse: s-maj=6.4km s-min=3.6km az=86.0*

IPEC ***16*** *06:32:23.8±0.4,51°.59N×16°.20E,h2^{km}±2^{km},ML3.7/4, Error ellipse: s-maj=3.4km s-min=1.6km az=49.0*

IDC ***16*** *06:32:24.6±0.4,51°.52N×16°.09E,h0^{km},mb4.0/13, mb1 4.0/21,mb1mx3.9/49,mbtmp4.0/21,ML3.6/8,MS3.0/3, Ms1 3.0/3,ms1mx2.5/50,Error ellipse: s-maj=8.3km s-min=5.6km az=103.0*

LDG ***16*** *06:32:24.0±0.2,51°.55N×16°.32E,h1^{km},Ml3.9/33,Error ellipse: s-maj=4.1km s-min=2.3km az=4.0,Suspected Mining induced.*

NEIC ***16*** *06:32:24.4±2.0,51°.63N±0°.04×16°.11E±0°.05,h5^{km}±1^{km}, mb4.1/12,ML4.5(VIE),Error ellipse: s-maj=8.5km s-min=2.9km az=214.0*

BGR ***16*** *06:32:25.4±0.3,51°.53N×16°.19E,h1^{km},ML4.1/6,Error ellipse: s-maj=4.4km s-min=2.2km az=20.0*

PRU ***16*** *06:32:25.2±0.0,51°.53N×16°.16E,h0^{km},M4.1,Felt In Harrachov*

DNK ***16*** *06:32:25.5±1.6,51°.69N×16°.02E,h0^{km}±76^{km},ML3.0, Hypocentre not reviewed by the ISC*

BNS ***16*** *06:32:27.6±0.5,51°.51N×15°.94E,h5^{km},ML3.9*

UPP ***16*** *06:32:33.0±2.3,52°.29N×15°.89E,h0^{km},ML3.1,Suspected explosion*

ISC 16 06:32:22.8±0.4,**51°.55N**±0°.02×**16°.11E**±0°.02,**h0^{km},n361,** σ**2^{s}.00**/460,**mb4.1**/21,**MS2.9**/4,**8C-10D,Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.72	171	ePg	Pb	06 32 38.5	+0.3
	SNR=347						
KSP	Ksiaz	0.72	171	ePg	Pb	06 32 38.5	+0.3
	SNR=347						
KSP	Ksiaz	0.72	171	i Pg	Pb	06 32 38.5	+0.3
KSP				eSg	Sg	06 32 47.5	+1.7
KSP	Ksiaz	0.72	171	⇓iP	Pb	06 32 38.5	+0.3
KSP				e		06 32 47.5	
CHVC	Chvalec	0.96	182	ePG	Pb	06 32 43.1	+0.7
CHVC				eSG	Sb	06 32 55.8	+0.1
	comp=Z,814nm,0.6s						
OSTC	Ostas	1.00	176	ePG	Pb	06 32 43.6	+0.6
OSTC				eSG	Sb	06 32 56.7	0.0
	comp=Z,994nm,0.6s						
UPC	Upice	1.05	183	ePG	Pb	06 32 44.4	+0.6
UPC				eSG	Sb	06 32 58.6	+0.6
	comp=Z,2µm,0.6s						
UPC	Upice	1.05	183	eP	Pb	06 32 44.4	+0.6
UPC				e		06 32 58.6	
UPC				smax	smax		
	comp=N,2µm,0.6s						
DPC	Dobruska-Polom	1.21	174	ePg	Pn	06 32 47.4	+0.4
	SNR=236						
DPC	Dobruska-Polom	1.21	174	ePG	Pn	06 32 47.4	+0.4
DPC				eSG	Sg	06 33 02.2	+0.6
	comp=N,489nm,0.6s						
DPC	Dobruska-Polom	1.21	174	ePg	Pn	06 32 47.4	+0.4
	SNR=236						
DPC	Dobruska-Polom	1.21	174	eP	Pn	06 32 47.4	+0.4
DPC				e		06 33 02.2	
DPC				smax	smax		
	comp=N,489nm,0.6s						
PVCC	Panska Ves	1.41	224	ePg	Pb	06 32 51.4	+1.3
	SNR=237						
PVCC				eSg	Sn	06 33 11.1	+2.0
	SNR=3.2						
PVCC	Panska Ves	1.41	224	ePG	Pb	06 32 51.3	+1.3
PVCC				eSG	Sn	06 33 11.0	+1.9
	comp=N,2µm,0.5s						
PVCC	Panska Ves	1.41	224	ePg	Pb	06 32 51.4	+1.3
	SNR=237						
PVCC				eSg	Sn	06 33 11.1	+2.0
	SNR=3.2						
PVCC	Panska Ves	1.41	224	eP	Pb	06 32 51.3	+1.3
PVCC				e		06 33 11.0	
PVCC				smax	smax		
	comp=N,2µm,0.5s						
BRG	Berggiesshubel	1.52	244	PN	Pb	06 32 52.2	+0.4
BRG				PG	Pg	06 32 54.1	+2.2
BRG				SG	Sn	06 33 14.4	+2.6
	comp=N,3µm,0.6s						
BRG	Berggiesshubel	1.52	244	ePn	Pb	06 32 52.3	+0.4
	SNR=7.7						
BRG				ePg	Pg	06 32 54.1	+2.2
	SNR=212						
BRG				eSg	Sn	06 33 14.6	+2.8
	SNR=3.5						
BRG	Berggiesshubel	1.52	244	ePn	Pb	06 32 52.3	+0.4
	SNR=7.7						
BRG				ePg	Pg	06 32 54.1	+2.2
	SNR=212						
BRG				eSg	Sn	06 33 14.6	+2.8
	SNR=3.5						
BRG	Berggiesshubel	1.52	244	P	Pb	06 32 52.2	+0.4
BRG						06 33 14.4	
BRG				smax	smax		
	comp=N,3µm,0.6s						
KRLC	Kraliky	1.54	164	ePG	Pb	06 32 52.5	+0.3
KRLC				eSG	Sn	06 33 12.3	+0.1
	comp=N,860nm,0.8s						
KRLC	Kraliky	1.54	164	eP	Pb	06 32 52.5	+0.3
KRLC				e		06 33 12.3	
KRLC				smax	smax		
	comp=N,860nm,0.8s						
ANAC	Anensky vrch	1.68	151	ePn	Pn	06 32 54.4	+0.9
	baz=334						
ANAC				eSg	Sb	06 33 16.7	+0.3
	comp=N,426nm,0.4s,baz=334						
RUE	Ruedersdorf	1.71	304	ePn	Pb	06 32 55.2	+0.1
	SNR=6.0						
RUE	Ruedersdorf	1.71	304	ePn	Pb	06 32 55.2	+0.1
	SNR=6.0						
LIPC	Lipinka	1.81	160	ePn	Pn	06 32 56.1	+0.9
	baz=343						
LIPC				eSg	Sg	06 33 21.3	+0.4
	baz=343						
PRA	Prague	1.82	216	ePG	Pb	06 32 57.1	+0.1
PRA				eSG	Sg	06 33 22.5	+1.1
	comp=N,594nm,0.7s						
PRA	Prague	1.82	216	eP	Pb	06 32 57.1	+0.1
PRA				e		06 33 22.5	
PRA				smax	smax		
	comp=N,594nm,0.7s						
FBE	Freiberg	1.84	251	ePn	Pb	06 32 56.9	-0.4
	SNR=4.1						
FBE	Freiberg	1.84	251	ePn	Pb	06 32 56.9	-0.4
	SNR=4.1						
PRU	Pruhonice	1.85	213	ePn	Pn	06 32 57.0	+1.2
	SNR=32						
PRU	Pruhonice	1.85	213	ePN	Pn	06 32 57.1	+1.2
PRU				ePG	Pg	06 32 59.0	+0.7
PRU				eSG	Sg	06 33 23.3	+1.0
	comp=N,776nm,0.3s						
PRU	Pruhonice	1.85	213	ePn	Pn	06 32 57.0	+1.2
	SNR=32						
PRU	Pruhonice	1.85	213	eP	Pn	06 32 57.1	+1.2
PRU				e		06 33 23.3	
PRU				smax	smax		
	comp=N,776nm,0.3s						
CLL	Collm	1.96	264	ePn	Pb	06 32 59.3	0.0
	SNR=30						
CLL	Collm	1.96	264	i Pn	Pb	06 32 59.4	0.0
	comp=Z,91nm,0.5s						
CLL				i Pg	Pg	06 33 03.2	+2.8
CLL				i		06 33 06.4	
CLL				i Sg	Sg	06 33 29.9	+4.1
	comp=Z,893nm,0.6s						
CLL				eLmax		06 33 30.0	
CLL	Collm	1.96	264	ePn	Pb	06 32 59.3	0.0
	SNR=30						
CLL	Collm	1.96	264	i P	Pb	06 32 59.4	0.0
CLL				i		06 33 29.9	
CLL				pmax	pmax		
	comp=Z,91nm,0.5s						
CLL	Collm	1.96	264		Pb	06 32 59.4	0.0
RAC	Raciborz	1.98	137	eP	Pg	06 33 01.0	+0.3
RAC				e		06 33 27.5	
MORC	Moravsky Berou	2.00	152	ePn	Pn	06 32 58.7	+0.9
	SNR=80						
MORC	Moravsky Berou	2.00	152	⇓P	Pn	06 32 58.7	+0.9
MORC				⇑S	Sg	06 33 27.1	+0.1
MORC	Moravsky Berou	2.00	152	P	Pn	06 32 58.8	+0.9
MORC	Moravsky Berou	2.00	152	ePn	Pn	06 32 58.6	+0.8
	baz=335						
MORC				eSg	Sg	06 33 27.0	+0.1
	comp=Z,528nm,0.8s,baz=335						
MORC	Moravsky Berou	2.00	152	ePN	Pn	06 32 58.6	+0.8
MORC				eSG	Sg	06 33 27.0	+0.1
MORC	Moravsky Berou	2.00	152		Pn	06 32 58.8	+0.9
OKC	Ostrava-Krasne	2.15	142	ePn	Pn	06 33 00.0	+0.2
	SNR=9.3						
OKC				eSg	Sg	06 33 31.5	-0.3
	SNR=4.5						
OKC	Ostrava-Krasne	2.15	142	ePN	Pn	06 33 00.3	+0.4
OKC				ePG	Pb	06 33 03.2	+0.6
OKC				eSG	Sg	06 33 31.7	-0.1
	comp=Z,370nm,0.6s						
OKC	Ostrava-Krasne	2.15	142	ePn	Pn	06 33 00.0	+0.2
	SNR=9.3						
OKC				eSg	Sg	06 33 31.5	-0.3
	SNR=4.5						
OKC	Ostrava-Krasne	2.15	142	eP	Pn	06 33 00.3	+0.4
OKC				e		06 33 31.7	
OKC				smax	smax		
	comp=N,370nm,0.6s						
VRAC	Vranov	2.27	172	ePn	Pn	06 33 02.8	+1.2
	SNR=150						
VRAC	Vranov	2.27	172	Pn	Pn	06 33 02.8	+1.2
	comp=N,15nm,0.3s,baz=336,slow=14,SNR=173						
VRAC				Lg	Lg	06 33 35.9	
	comp=N,84nm,0.3s,baz=257,slow=20,SNR=12						
VRAC	Vranov	2.27	172	ePn	Pn	06 33 02.8	+1.2
	SNR=150						
VRAC	Vranov	2.27	172	⇑P	Pn	06 33 03.0	+1.5
VRAC				⇑S	Sb	06 33 33.8	+0.6
VRAC	Vranov	2.27	172	ePn	Pn	06 33 02.7	+1.2
	baz=354						
VRAC				eSg	Sg	06 33 35.7	+0.2
	comp=N,261nm,0.3s,baz=354						
VRAC	Vranov	2.27	172	ePN	Pn	06 33 02.7	+1.2
VRAC				eSG	Sg	06 33 35.8	+0.2
TREC	Trest	2.29	190	ePn	Pn	06 33 03.7	+1.8
	SNR=13						
TREC				eSg	Sg	06 33 37.7	+1.2
	SNR=5.3						
TREC	Trest	2.29	190	ePN	Pb	06 33 04.5	-0.6
TREC				ePG	Pg	06 33 06.6	-0.1
TREC				eSG	Sg	06 33 37.0	+0.6
	comp=N,406nm,0.7s						
TREC	Trest	2.29	190	ePn	Pn	06 33 03.7	+1.8
	SNR=13						
TREC				eSg	Sg	06 33 37.7	+1.2
	SNR=5.3						
TREC	Trest	2.29	190	eP	Pb	06 33 04.5	-0.6
TREC				e		06 33 37.0	
TREC				smax	smax		
	comp=N,406nm,0.7s						
PBCC	Pribram	2.30	217	ePN	Pn	06 33 03.2	+1.2
PBCC				eSG	Sg	06 33 37.6	+0.9
KRUC	Moravsky	2.50	176	ePn	Pn	06 33 06.3	+1.6
	SNR=132						
KRUC	Moravsky	2.50	176	ePn	Pn	06 33 06.3	+1.6
	SNR=132						
KRUC	Moravsky	2.50	176	ePn	Pn	06 33 06.0	+1.3
	baz=357						
KRUC				eSg	Sg	06 33 43.1	+0.1
	comp=N,353nm,0.7s,baz=357						
KRUC	Moravsky	2.50	176	ePN	Pn	06 33 06.0	+1.3
KRUC				eSG	Sg	06 33 43.1	+0.1
TANN	Tannenbergstha	2.57	245	ePn	Pn	06 33 07.6	+1.9
	SNR=27						
TANN				eSg	Sg	06 33 47.3	+2.0
	SNR=4.6						
TANN	Tannenbergstha	2.57	245	ePn	Pn	06 33 07.6	+1.9
	SNR=27						
TANN				eSg	Sg	06 33 47.3	+2.0
	SNR=4.6						
GUNZ	Gunzen	2.67	245	ePn	Pn	06 33 08.8	+1.7
	SNR=14						
GUNZ	Gunzen	2.67	245	ePn	Pn	06 33 08.8	+1.7
	SNR=14						
NKC	Novy Kostel	2.67	242	ePn	Pn	06 33 09.1	+2.0
	SNR=18						
NKC	Novy Kostel	2.67	242	ePN	Pn	06 33 09.0	+2.0
NKC				ePG	Pg	06 33 13.4	-0.5
NKC				eSG	Sg	06 33 50.1	+1.6
	comp=N,1µm,0.6s						
NKC	Novy Kostel	2.67	242	ePn	Pn	06 33 09.1	+2.0
	SNR=18						
NKC	Novy Kostel	2.67	242	eP	Pn	06 33 09.0	+2.0
NKC				e		06 33 50.1	
NKC				smax	smax		
	comp=N,1µm,0.6s						
WERN	Wernitzgruen	2.68	243	ePn	Pn	06 33 09.6	+2.3
	SNR=28						
WERN	Wernitzgruen	2.68	243	ePn	Pn	06 33 09.6	+2.3
	SNR=28						
OJC	Ojcow	2.69	118	ePn	Pn	06 33 06.7	-0.6
	SNR=23						
OJC	Ojcow	2.69	118	ePn	Pn	06 33 06.7	-0.6
	SNR=23						
OJC	Ojcow	2.69	118	ePn	Pn	06 33 06.6	-0.7
OJC				ePg	Pg	06 33 14.2	-0.1
OJC				eSg	Sg	06 33 49.8	+0.6
OJC	Ojcow	2.69	118	eP	Pn	06 33 06.6	-0.7
OJC				e		06 33 49.8	
OJC	Ojcow	2.69	118		Pn	06 33 06.8	-0.5
PLN	Plauen	2.71	248	ePn	Pn	06 33 09.3	+1.7
	SNR=15						
PLN	Plauen	2.71	248	ePn	Pn	06 33 09.3	+1.7
	SNR=15						
NEUB	Neuenburg	2.74	264	eSg	Sg	06 33 53.9	+3.2
	SNR=7.3						
NEUB	Neuenburg	2.74	264	eSg	Sg	06 33 53.9	+3.2
	SNR=7.3						
JAVC	Velka Javorina	2.88	159	ePn	Pn	06 33 12.4	+2.5
	SNR=24						
JAVC	Velka Javorina	2.88	159	ePn	Pn	06 33 12.4	+2.5
	SNR=24						
JAVC	Velka Javorina	2.88	159	ePN	Pn	06 33 12.0	+2.1
KHC	Kasperske Hory	2.92	215	ePn	Pn	06 33 11.7	+1.3
	SNR=44						
KHC	Kasperske Hory	2.92	215	ePN	Pn	06 33 11.8	+1.3
KHC				ePG	Pg	06 33 17.7	-1.0
KHC				eSN	Sn	06 33 45.5	-0.7
KHC				eSG	Sg	06 33 57.2	+0.8
	comp=N,322nm,0.5s						
KHC	Kasperske Hory	2.92	215	ePn	Pn	06 33 11.7	+1.3
	SNR=44						
KHC	Kasperske Hory	2.92	215	d iP	Pn	06 33 11.2	+0.7
KHC	Kasperske Hory	2.92	215		Pn	06 33 11.7	+1.3
MOX	Moxa	2.98	254	ePn	Pn	06 33 12.8	+1.6
	SNR=10						
MOX				eSg	Sg	06 34 01.6	+3.3
	SNR=8.8						
MOX	Moxa	2.98	254	ePn	Pn	06 33 12.8	+1.6
	SNR=10						
MOX				eSg	Sg	06 34 01.6	+3.3
	SNR=8.8						
MANZ	Manzenberg	2.98	240	ePn	Pn	06 33 13.5	+2.1
	SNR=41						
MANZ	Manzenberg	2.98	240	ePn	Pn	06 33 13.5	+2.1
	SNR=41						
ROTZ	Rotzenmuhle	3.06	236	ePn	Pn	06 33 14.1	+1.7
	SNR=25						
ROTZ	Rotzenmuhle	3.06	236	ePn	Pn	06 33 14.1	+1.7
	SNR=25						
GEC2	GERESS Array S	3.12	211	ePn	Pn	06 33 14.9	+1.6
	SNR=37						
GEC2	GERESS Array S	3.12	211	ePn	Pn	06 33 14.9	+1.6
	SNR=37						
GEC2	GERESS Array S	3.12	211		Pn	06 33 15.1	+1.8
GERES	GERESS Array B	3.12	211	Pn	Pn	06 33 14.6	+1.2
	comp=N,10nm,0.3s,baz=32,slow=11,SNR=134						
GERES				Pg	Pg	06 33 22.0	-0.6
	comp=N,23nm,0.3s,baz=26,slow=16,SNR=44						
GERES				Lg	Lg	06 34 01.6	
	comp=N,22nm,0.3s,baz=0.0,slow=30,SNR=5.6						
GERES	GERESS Array B	3.12	211		Pn	06 33 14.7	+1.4
SMOL	Smolenice	3.16	164	eSG	Sg	06 34 06.3	+2.1
SMOL				eLG	Lg	06 34 11.6	
WET	Wettzell	3.18	222	ePn	Pn	06 33 15.6	+1.6
	SNR=62						

WET	Wettzell	3.18	222	ePn	Pn	06 33 15.6	+1.6
	SNR=62						
LANS	Liptovska Anna	3.22	137	eP	Pn	06 33 16.1	+1.4
LANS				pmax	pmax		
	comp=N,157nm,0.8s						
LANS	Liptovska Anna	3.22	137	ePN	Pn	06 33 16.1	+1.4
LANS				ePG	Pg	06 33 25.6	+1.0
LANS				eSG	Sg	06 34 06.2	-0.1
LANS				eLG	Lg	06 34 23.7	
MODS	Modra-Piesok	3.27	166	eP	Pn	06 33 16.5	+1.2
MODS				pmax	pmax		
	comp=N,205nm,0.5s						
MODS	Modra-Piesok	3.27	166	ePN	Pn	06 33 16.5	+1.2
MODS				ePG	Pg	06 33 25.7	+0.3
MODS				eSG	Sg	06 34 09.5	+1.7
MODS				eLG	Lg	06 34 16.6	
ZST	Bratislava	3.42	169	eP	Pn	06 33 18.5	+1.2
ZST				pmax	pmax		
	comp=N,114nm,0.9s						
ZST	Bratislava	3.42	169	ePN	Pn	06 33 18.5	+1.2
ZST				ePG	Pg	06 33 29.1	+0.8
ZST				eSG	Sg	06 34 11.3	-1.3
ZST				eLG	Lg	06 34 16.3	
NIE	Niedzica	3.42	127	ePn	Pn	06 33 18.9	+1.5
NIE				ePg	Pg	06 33 28.6	+0.3
NIE				eSg	Sg	06 34 13.6	+0.9
NIE	Niedzica	3.42	127	eP	Pn	06 33 18.9	+1.5
VYHS	Vyhne	3.53	149	eP	Pn	06 33 19.4	+0.5
VYHS	Vyhne	3.53	149	ePN	Pn	06 33 19.4	+0.5
VYHS				ePG	Pg	06 33 31.6	+1.2
VYHS				eSG	Sg	06 34 15.2	-0.9
CLZ	Clausthal	3.58	277	ePn	Pn	06 33 22.0	+2.4
	SNR=7.8						
CLZ	Clausthal	3.58	277	ePn	Pn	06 33 22.0	+2.4
	SNR=7.8						
GRA1	Grafenberg Arr	3.63	241		Pn	06 33 22.3	+2.1
GRF	Grafenberg Arr	3.63	241	ePn	Pn	06 33 22.2	+2.0
	SNR=5.4						
GRF	Grafenberg Arr	3.63	241	ePn	Pn	06 33 22.2	+2.0
	SNR=5.4						
GRF	Grafenberg Arr	3.63	241	P	Pn	06 33 22.3	+2.0
CONA	Conrad Observa	3.63	183	ePn	Pn	06 33 22.1	+1.8
	comp=N,11nm,0.3s,SNR=15						
CONA				Sg	Sg	06 34 20.0	+0.6
	comp=N,256nm,0.5s						
CONA	Conrad Observa	3.63	183		Pn	06 33 22.1	+1.8
CONA					Sg	06 34 20.0	+0.6
BSD	Bornholm Skovb	3.64	349	i P	Pn	06 33 20.9	+0.5
BSD				i S	Sn	06 34 02.3	-1.7
BSD	Bornholm Skovb	3.64	349	i P	Pn	06 33 20.9	+0.5
BSD				i S	Sn	06 34 02.3	-1.7
BSD	Bornholm Skovb	3.64	349	e		06 33 19.6	
	baz=170,slow=11						
BSD				i P		06 33 20.9	
BSD				i S		06 34 02.3	
BSD				IAML		06 34 33.2	
	comp=Z,28nm,0.4s						
MOA	Molln	3.89	199	i Pn	Pn	06 33 25.7	+1.8
	comp=Z,38nm,0.5s,SNR=47						
MOA				Sg	Sg	06 34 28.5	+0.6
	comp=Z,283nm,0.8s						
MOA	Molln	3.89	199		Pn	06 33 25.7	+1.8
MOA					Sg	06 34 28.5	+0.6
STHS	Stebnicka Huta	3.91	121	eP	Pn	06 33 24.9	+0.8
STHS	Stebnicka Huta	3.91	121	ePN	Pn	06 33 24.9	+0.8
STHS				eSG	Sg	06 34 32.3	+3.9
UBBA	Unterbreizbach	3.91	262	ePn	Pn	06 33 25.7	+1.6
	SNR=6.7						
UBBA	Unterbreizbach	3.91	262	ePn	Pn	06 33 25.7	+1.6
	SNR=6.7						
KECS	Kecovo	4.17	136	eP	Pn	06 33 28.8	+1.1
KECS	Kecovo	4.17	136	ePN	Pn	06 33 28.8	+1.1
KECS				ePG	Pg	06 33 44.2	+1.5
KECS				eSG	Sg	06 34 36.9	+0.2
ARSA	Arzberg	4.32	185	ePn	Pn	06 33 32.1	+2.3
	comp=Z,9.5nm,0.3s,SNR=13						
ARSA				Sg	Sg	06 34 42.9	+1.4
	comp=Z,228nm,0.7s						
ARSA	Arzberg	4.32	185		Pn	06 33 32.1	+2.3
ARSA					LR	06 34 42.9	
CRVS	Cervenica-Dubn	4.34	126	eP	Pn	06 33 31.6	+1.6
CRVS				pmax	pmax		
	comp=N,220nm,0.9s						
CRVS	Cervenica-Dubn	4.34	126	ePN	Pn	06 33 31.6	+1.6
CRVS				ePG	Pg	06 33 47.3	+1.4
CRVS				eSG	Sg	06 34 43.6	+1.5
CRVS				eLG	Lg	06 34 53.6	
RJOB	Jochberg	4.38	211	ePn	Pn	06 33 32.9	+2.3
	SNR=20						
RJOB	Jochberg	4.38	211	ePn	Pn	06 33 32.9	+2.3
	SNR=20						
LUNU	Lund	4.39	340	P	Pn	06 33 31.1	+0.5
LUNU				S	Sn	06 34 21.2	-1.2
PSZ	Piszkesteto	4.39	145	⇓P	Pn	06 33 31.9	+1.2
PSZ	Piszkesteto	4.39	145	P	Pn	06 33 32.3	+1.6
PSZ	Piszkesteto	4.39	145		Pn	06 33 32.3	+1.6
KWP	Kalwaria Pacla	4.62	112	P	Pn	06 33 34.8	+0.9
KWP	Kalwaria Pacla	4.62	112		Pn	06 33 34.8	+0.9
KOLS	Kolonicke sedl	4.74	121	eP	Pn	06 33 36.1	+0.6
KOLS	Kolonicke sedl	4.74	121	ePN	Pn	06 33 36.1	+0.6
KOLS				ePG	Pg	06 33 54.9	+1.2
BLEU	Blekinge	4.77	358	P	Pn	06 33 36.5	+0.7
BLEU				S	Sn	06 34 29.1	-2.6
KBA	Koelnbreinsper	4.83	203	ePn	Pn	06 33 39.0	+2.1
	comp=N,44nm,0.6s,SNR=33						
KBA				Sg	Sg	06 34 58.5	+0.7
	comp=N,76nm,0.6s						
KBA	Koelnbreinsper	4.83	203	P	Pn	06 33 39.0	+2.1
KBA	Koelnbreinsper	4.83	203		Pn	06 33 39.0	+2.1
KBA					LR	06 34 58.5	
SOKA	Soboth	4.93	189	ePn	Pn	06 33 40.2	+2.1
	comp=N,3.1nm,0.2s						
SOKA	Soboth	4.93	189		Pn	06 33 40.2	+2.1
UZH	Uzhgorod	4.94	124	eP	Pn	06 33 41.4	+3.2
UZH				eS	Sn	06 34 39.3	+3.4
SUW	Suwalki	4.95	57	P	Pn	06 33 41.0	+2.7
SUW	Suwalki	4.95	57	Pn	Pn	06 33 41.0	+2.7
TNS	Taunus Mts	5.03	258	ePn	Pn	06 33 41.2	+1.7
	SNR=16						
TNS	Taunus Mts	5.03	258	ePn	Pn	06 33 41.2	+1.7
	SNR=16						
DEL	Delary	5.10	346	P	Pn	06 33 40.8	+0.3
GROS	Grobnik	5.11	185	i Pn	Pn	06 33 42.7	+2.1
OBKA	Obir	5.15	192	ePn	Pn	06 33 43.0	+1.8
	comp=N,5.5nm,0.6s						
OBKA				Sg	Sg	06 35 10.4	+2.3
	comp=N,91nm,0.6s						
OBKA	Obir	5.15	192		Pn	06 33 43.0	+1.8
OBKA					LR	06 35 10.4	
WATA	Walderalm	5.15	217	ePn	Pn	06 33 42.8	+1.5
	comp=N,19nm,0.3s,SNR=36						
WATA	Walderalm	5.15	217	P	Pn	06 33 42.8	+1.5
WATA	Walderalm	5.15	217		Pn	06 33 42.8	+1.5
MYKA	Terra Mystica	5.18	199	ePn	Pn	06 33 43.3	+1.7
	comp=N,4.0nm,0.4s						
MYKA				Sg	Sg	06 35 11.3	+2.0
	comp=N,98nm,0.8s						
MYKA	Terra Mystica	5.18	199		Pn	06 33 43.3	+1.7
MYKA					LR	06 35 11.3	
WTTA	Wattenberg	5.19	216	ePn	Pn	06 33 43.8	+2.0
	comp=N,18nm,0.4s,SNR=17						
WTTA	Wattenberg	5.19	216	P	Pn	06 33 43.9	+2.0
WTTA	Wattenberg	5.19	216		Pn	06 33 43.9	+2.0
STU	Stuttgart	5.24	241	P	Pn	06 33 43.2	+0.8
STU	Stuttgart	5.24	241		Pn	06 33 43.1	+0.8
LVV	L'vov	5.33	106	eP	Pn	06 33 44.1	+0.6
LVV				eS	Sn	06 34 43.9	-1.6
LVV				MLR	MLR		
	comp=Z,250nm,5.0s						
MOTA	Moosalm	5.33	220	i Pn	Pn	06 33 45.1	+1.4
	comp=Z,11nm,0.3s,SNR=9.5						
MOTA				Sn	Sn	06 34 46.2	+0.3
	comp=Z,14nm,0.3s						
MOTA				Sg	Sg	06 35 15.7	+1.9
	comp=Z,58nm,0.6s						
MOTA	Moosalm	5.33	220	P	Pn	06 33 45.1	+1.4
MOTA						06 34 46.2	
MOTA	Moosalm	5.33	220		Pn	06 33 45.1	+1.4
MOTA					Sn	06 34 46.2	+0.3
MOTA					LR	06 35 15.8	
RETA	Reutte	5.35	223	ePn	Pn	06 33 45.3	+1.3
	comp=Z,2.4nm,0.2s,SNR=5.2						
RETA				Sg	Sg	06 35 15.7	+1.0
	comp=Z,65nm,0.5s						
RETA	Reutte	5.35	223		Pn	06 33 45.3	+1.3
RETA					LR	06 35 15.7	
ABTA	Abfaltersbach	5.36	208	ePn	Pn	06 33 46.3	+2.2
	comp=Z,10.0nm,0.5s,SNR=26						
ABTA	Abfaltersbach	5.36	208		Pn	06 33 46.3	+2.2
TRPA	Tarpa	5.39	127	⇑P	Pn	06 33 44.4	0.0
SQTA	Sankt Quirin	5.39	218	ePn	Pn	06 33 46.7	+2.2
	comp=Z,11nm,0.2s,SNR=16						
SQTA				Sg	Sg	06 35 17.6	+1.8
	comp=Z,96nm,0.8s						
SQTA	Sankt Quirin	5.39	218	P	Pn	06 33 46.7	+2.2
SQTA	Sankt Quirin	5.39	218		Pn	06 33 46.7	+2.2
SQTA					LR	06 35 17.6	
KOE	Koeppel	5.41	261	ePn	Pn	06 33 45.9	+1.2
KOE				eSn	Sn	06 34 45.8	-1.9
VXJU	Vaexsjoe	5.42	353	P	Pn	06 33 45.7	+0.9
VXJU	Vaexsjoe	5.42	353	P		06 33 45.7	
CEI	Carei	5.66	131	⇓P	Pn	06 33 48.9	+0.8
BGG	Burgeitz	5.71	260	ePn	Pn	06 33 50.5	+1.6
LAUG	Laupendahl	5.74	272	ePn	Pn	06 33 50.4	+1.3
FETA	Feichten	5.74	220	ePn	Pn	06 33 51.2	+1.9
	comp=Z,3.8nm,0.3s						
FETA	Feichten	5.74	220		Pn	06 33 51.2	+1.9
CRES	Cresnjev	5.75	185	i Pn	Pn	06 33 51.4	+2.0
STAL	STALIGIAL	5.75	204		Pn	06 33 51.1	+1.7
AHRW	Bad Neuenahr-A	5.79	263	ePn	Pn	06 33 52.1	+2.2
	SNR=7.8						
AHRW	Bad Neuenahr-A	5.79	263	ePn	Pn	06 33 52.1	+2.2
	SNR=7.8						
DAVA	Damuels	5.89	226	ePn	Pn	06 33 52.7	+1.2
	comp=Z,3.0nm,0.3s						
DAVA	Damuels	5.89	226		Pn	06 33 52.7	+1.2
GNOU	Gnosjoe	5.91	347	P	Pn	06 33 52.5	+0.9
GNOU	Gnosjoe	5.91	347	P		06 33 52.5	
STB	Steinbach	5.92	264	ePn	Pn	06 33 53.4	+1.7
BFO	Black Forest	5.97	240	P	Pn	06 33 53.0	+0.6
BFO	Black Forest	5.97	240		Pn	06 33 53.0	+0.6
TRI	Trieste	6.05	196	P	Pn	06 33 53.4	-0.1
TRI	Trieste	6.05	196	Pn	Pn	06 33 53.4	-0.1
BOJS	Bojanci	6.08	186	ePn	Pn	06 33 56.0	+2.2
HILG	Hillesheim	6.10	262	ePn	Pn	06 33 55.9	+1.8
KLL	Kalltalsperre	6.24	265	ePn	Pn	06 33 57.2	+1.1
CTI	Castel Tesino	6.25	210	P	Pn	06 33 58.9	+2.6
CTI	Castel Tesino	6.25	210		Pn	06 33 58.9	+2.6
DAVOX	Davos/Dischmat	6.28	223	Pn	Pn	06 33 58.1	+1.2
	comp=Z,1.5nm,0.3s,baz=36,slow=12,SNR=23						
DAVOX				Lg	Lg	06 35 43.0	
	comp=Z,4.4nm,0.3s,baz=188,slow=23,SNR=6.1						
ONAU	Onsala	6.35	339	P	Pn	06 33 59.0	+1.5
BORU	Boraas	6.40	344	P	Pn	06 33 59.2	+1.0
SIRR	Siria	6.43	143	⇑P	Pn	06 34 00.2	+1.5
DRGR		6.43	135	⇑P	Pn	06 33 59.7	+0.9
CDF	Champ du Feu	6.51	245	ePn	Pn	06 34 01.3	+1.5
CDF	Champ du Feu	6.51	245	ePg	Pg	06 34 27.7	+0.3
CDF				eSg	Sg	06 35 50.9	-0.7
	comp=Z,159nm,0.8s						
WLF	Walferdange	6.61	257	P	Pn	06 34 03.2	+2.0
WLF	Walferdange	6.61	257	Pn	Pn	06 34 03.2	+2.0
ECH	Echery	6.68	244	P	Pn	06 34 02.3	+0.2
ECH	Echery	6.68	244		Pn	06 34 02.3	+0.2
FKPU	Falk	6.76	349	P	Pn	06 34 04.2	+1.0
FKPU	Falk	6.76	349	P		06 34 04.2	
TEOL	Teolo	6.86	207		Pn	06 34 06.5	+1.9
CJR	Cluj-Napoca	6.89	132	⇓P	Pn	06 34 05.3	+0.2
BZS	Buzias	6.97	146	⇑P	Pn	06 34 07.0	+0.9
SALO	Salr	7.00	214		Pn	06 34 09.3	+2.8
HINF	Hinteralfeld	7.07	242	ePn	Pn	06 34 09.0	+1.4
HINF	Hinteralfeld	7.07	242	ePg	Pg	06 34 37.5	-0.7
HINF				eSg	Sg	06 36 08.2	-1.6
	comp=Z,102nm,0.6s						
BUR08	Bucovina Ar. S	7.08	120		Pn	06 34 09.4	+1.6
BURAR	Bucovina Array	7.11	120	⇓P	Pn	06 34 08.3	+0.2
BURAR	Bucovina Array	7.11	120		Pn	06 34 09.6	+1.5
HAU	Haudompre	7.25	245	ePn	Pn	06 34 10.6	+0.7
HAU	Haudompre	7.25	245	ePg	Pg	06 34 40.7	-0.9
HAU				eSg	Sg	06 36 13.3	-2.1
	comp=Z,83nm,0.7s						
GIVF	Givet	7.30	263	ePn	Pn	06 34 12.5	+1.9
GIVF	Givet	7.30	263	ePg	Pg	06 34 41.9	-0.6
GIVF				eSg	Sg	06 36 15.2	-1.8
	comp=Z,82nm,0.7s						
PAGF	Fort de Pagny	7.33	250	ePn	Pn	06 34 12.7	+1.7
	baz=69						
PAGF	Fort de Pagny	7.33	250	ePg	Pg	06 34 42.6	-0.5
	baz=66						
PAGF				eSg	Sg	06 36 16.3	-1.7
	comp=Z,87nm,0.8s						
GZR	Gura Zlata	7.59	142	⇓P	Pn	06 34 15.3	+0.7
MICGM	Minsk	7.69	63	eP	Pb	06 34 43.0	+6.1
MICGM				eS	Sg	06 36 35.0	+5.5
BAIF	Baives	7.69	263	ePn	Pn	06 34 17.6	+1.6
BAIF				eSg	Sg	06 36 27.5	-2.1
	comp=Z,74nm,0.9s						
MDVR	Moldovita	7.74	149	⇑P	Pn	06 34 17.5	+0.8
MEZF	Maizieres J'vi	7.75	251	ePn	Pn	06 34 17.9	+1.1
	baz=72						
MEZF	Maizieres J'vi	7.75	251	ePg	Pg	06 34 50.0	-1.2
	baz=63						
MEZF				eSg	Sg	06 36 29.2	-2.3
	comp=Z,65nm,0.8s						
SENIN	Lac Senin/Sane	7.78	232	Pn	Pn	06 34 18.4	+0.9
SFTF	Sexfontaines	7.90	249	ePn	Pn	06 34 20.2	+1.4
	baz=70						
SFTF	Sexfontaines	7.90	249	ePg	Pg	06 34 51.8	-2.2
SFTF				eSg	Sg	06 36 34.0	-2.2
	comp=Z,87nm,0.8s						
ZCCA	Zocca	7.98	208		Pn	06 34 23.5	+3.4
HOMB	Homborsund	8.03	330	eP		06 34 18.8	
HOMB				IAML		06 35 48.4	
	comp=Z,3.6nm,0.4s						
CABF	La Chapelle	8.23	237	ePn	Pn	06 34 24.0	+0.6
CABF	La Chapelle	8.23	237	ePg	Pg	06 34 58.2	-2.1
CABF				eSg	Sg	06 36 44.7	-2.1
	comp=Z,90nm,0.7s						
AKASG	Malin Array Be	8.30	91	Pn	Pn	06 34 23.4	-0.9
	comp=Z,6.9nm,0.3s,baz=280,slow=12,SNR=43						
AKASG				Sn	Sn	06 35 52.7	-5.9
	comp=Z,3.4nm,0.3s,baz=269,slow=23,SNR=5.1						
AKASG				Lg	Lg	06 36 49.9	
	baz=272,slow=26,SNR=3.8						
AKASG	Malin Array Be	8.30	91		Pn	06 34 23.0	-1.2
AKBB	Malin Array Si	8.30	91	i P	Pn	06 34 23.5	-0.8
AKBB	Malin Array Si	8.30	91		Pn	06 34 23.8	-0.4
VLC	Villacollemand	8.34	210	Pn	Pn	06 34 28.5	+3.7
MSSA	Maissana	8.48	214		Pn	06 34 29.2	+2.3
LPL	La Plagne	8.67	229	ePn	Pn	06 34 31.2	+1.6
LPL				eSn	Sn	06 36 03.5	-4.6
LPL				eSg	Sg	06 36 57.7	-3.2
	comp=Z,9.0nm,0.7s						
LPG	La Plagne	8.67	229	ePn	Pn	06 34 31.1	+1.4
LPG				eSn	Sn	06 36 03.2	-5.1
LPG				eSg	Sg	06 36 58.2	-2.9
	comp=Z,18nm,0.7s						
OSSC	Osservatorio P	8.68	204	Pn	Pn	06 34 31.0	+1.4
HFS	Hagfors	8.71	352	Pn	Pn	06 34 29.2	-0.7
	comp=Z,0.4nm,0.3s,baz=170,slow=14,SNR=13						
HFS				Sn	Sn	06 36 06.9	-1.8
	comp=Z,0.9nm,0.3s,baz=180,slow=24,SNR=3.7						
STON	Ston	8.75	172	ePg	Pg	06 35 38.2	+28
STON				Sg	Sn	06 35 43.0	-27
BNI	Bardonecchia	9.04	228	P	Pn	06 34 37.0	+2.4
BNI	Bardonecchia	9.04	228	Pn	Pn	06 34 37.0	+2.4
LOR	Lormes	9.06	247	ePn	Pn	06 34 35.7	+0.9
	baz=64						
LOR	Lormes	9.06	247	ePg	Pn	06 35 14.2	+39
	baz=66						
LOR				eSg	Sn	06 37 10.3	+53
	comp=Z,39nm,0.9s						
MBDF	Montbardon	9.25	226	ePn	Pn	06 34 38.6	+1.1
MBDF	Montbardon	9.25	226	ePg	Pn	06 35 17.8	+40
MBDF				eSn	Sn	06 36 17.5	-4.7
MBDF				eSg		06 37 15.8	
	comp=Z,7.3nm,0.5s						
SSF	Saint Saulge	9.38	246	ePn	Pn	06 34 39.3	+0.2
SSF	Saint Saulge	9.38	246	ePg	Pn	06 35 20.1	+41
SSF				eSg	Sn	06 37 20.5	+55
	comp=Z,16nm,0.6s						
SMF	Signal de Mont	9.42	243	ePn	Pn	06 34 39.9	+0.1
SMF	Signal de Mont	9.42	243	ePg	Pn	06 35 20.6	+41
SMF				eSn	Sn	06 36 21.7	-4.7
SMF				eSg		06 37 21.4	
	comp=Z,38nm,0.7s						
ORIF	Oris-en-Rattie	9.51	230	ePn	Pn	06 34 42.0	+0.9
ORIF				eSn	Sn	06 36 23.7	-5.0
ORIF				eSg		06 37 24.4	
NC602	NORSAR Array S	9.55	346	Pn	Pn	06 34 41.3	-0.2
AVF	Avril sur Loir	9.62	245	ePn	Pn	06 34 41.7	-0.7
AVF	Avril sur Loir	9.62	245	ePg	Pn	06 35 23.7	+41
AVF				eSn	Sn	06 36 24.9	-6.1
AVF				eSg		06 37 27.9	
	comp=Z,28nm,0.8s						
SBF	Sospel	9.66	221	ePn	Pn	06 34 43.9	+0.9
SBF				eSn	Sn	06 36 27.7	-4.4
	comp=Z,1.8nm,0.3s						
HYF	Humbligny	9.77	249	ePn	Pn	06 34 46.1	+1.6
HYF	Humbligny	9.77	249	ePg	Pn	06 35 25.8	+41
HYF				eSn	Sn	06 36 28.8	-6.0
HYF				eSg		06 37 32.3	
NB201	NORSAR Array S	9.89	346	Pn	Pn	06 34 47.2	+1.2
NC405	NORSAR Array S	9.89	347	Pn	Pn	06 34 45.3	-0.7
NOA	NORSAR Array B	9.89	346	Pn	Pn	06 34 45.6	-0.5
	comp=Z,0.1nm,0.3s,baz=172,slow=18,SNR=9.0						
NOA				Sn	Sn	06 36 33.2	-4.6
	comp=Z,0.1nm,0.3s,baz=184,slow=12,SNR=3.2						
NOA				Lg	Lg	06 37 44.0	
	comp=Z,0.1nm,0.3s,baz=226,slow=26,SNR=3.8						
NBO00	NORSAR Array S	9.95	345	Pn	Pn	06 34 45.9	-1.0
BGF	Bois d'Agland	10.03	245	ePn	Pn	06 34 48.3	+0.2
BGF	Bois d'Agland	10.03	245	ePg	Pn	06 35 32.7	+45
BGF				eSn	Sn	06 36 35.6	-5.7
BGF				eSg		06 37 40.5	
	comp=Z,22nm,0.5s						
VIVF	Saint-Julien-l	10.15	233	ePn	Pn	06 34 51.0	+1.3
VIVF	Saint-Julien-l	10.15	233	ePg	Pn	06 35 34.1	+44
VIVF				eSg	Sn	06 37 43.9	+60
	comp=Z,1.0nm,0.3s						
NC204	NORSAR Array S	10.19	345	Pn	Pn	06 34 49.4	-0.7
PGF	Pioggiola	10.22	211	ePn	Pn	06 34 51.7	+0.9
FRF	La Foret Royal	10.23	222	ePn	Pn	06 34 52.1	+1.3
SMRF	Simiane la Rot	10.37	227	ePn	Pn	06 34 54.0	+1.2
SMRF	Simiane la Rot	10.37	227	ePg	Pn	06 35 37.4	+45
SMRF				eSn	Sn	06 36 43.8	-5.9
SMRF				eSg		06 37 50.9	
	comp=Z,0.9nm,0.3s						
LMR	La Mourre	10.47	222	ePn	Pn	06 34 55.1	+1.0
TCF	Toulx Ste Croi	10.55	245	ePn	Pn	06 34 56.2	+1.0
TCF	Toulx Ste Croi	10.55	245	ePg	Pn	06 35 41.1	+46
TCF				eSn	Sn	06 36 47.9	-6.1
TCF				eSg		06 37 56.6	
	comp=Z,18nm,0.7s						
LDF	La Druitiere	10.85	261	ePn	Pn	06 35 00.8	+1.6
LDF	La Druitiere	10.85	261	ePg	Pn	06 35 47.4	+48
LDF				eSn	Sn	06 36 55.4	-5.8
LDF				eSg		06 38 05.6	
	comp=Z,4.2nm,0.6s						
FLN	La Foliniere	11.01	262	ePn	Pn	06 35 03.2	+1.8
	baz=79						
FLN	La Foliniere	11.01	262	ePg	Pn	06 35 49.2	+48
FLN				eSn	Sn	06 36 59.5	-5.6
FLN				eSg		06 38 11.2	
	comp=Z,1.4nm,0.2s						
FINES	FINESS Array B	11.33	25	Pn	Pn	06 35 04.2	-1.5
	comp=Z,0.6nm,0.3s,baz=211,slow=12,SNR=25						
FINES				Sn	Sn	06 37 05.3	-7.5
	comp=Z,1.2nm,0.3s,baz=218,slow=22,SNR=6.0						
FINES	FINESS Array B	11.33	25	Pn	Pn	06 35 04.3	-1.4
FIA1	FINESS Array S	11.33	25	Pn	Pn	06 35 05.1	-0.6
GRR	Gorron	11.38	260	ePn	Pn	06 35 07.6	+1.2
GRR	Gorron	11.38	260	ePg	Pn	06 35 56.7	+50
GRR				eSn	Sn	06 37 07.4	-6.8
GRR				eSg		06 38 22.8	
	comp=Z,0.5nm,0.2s						
CAF	Calviac	11.46	240	ePn	Pn	06 35 09.5	+1.8
CAF	Calviac	11.46	240	ePg	Pn	06 35 58.5	+51
CAF				eSn	Sn	06 37 09.7	-6.7
CAF				eSg		06 38 25.1	
	comp=Z,0.4nm,0.2s						
RJF	Les Rejaudoux	11.53	243	ePn	Pn	06 35 09.8	+1.3
RJF	Les Rejaudoux	11.53	243	ePg	Pn	06 35 59.3	+51
RJF				eSg		06 38 26.9	
	comp=Z,8.0nm,0.7s						
MFF	Saint Martin d	11.75	251	ePn	Pn	06 35 11.8	+0.3
MFF				eSg		06 38 34.0	
	comp=Z,0.3nm,0.2s						
EKA	Eskdalemuir Ar	12.09	296	Pn	Pn	06 35 13.6	-2.6
	baz=103,slow=13,SNR=11						
EKA				Sn	Sn	06 37 23.8	-7.8
	baz=100,slow=25,SNR=4.2						
LFF	La Frestale	12.18	243	eSg		06 38 47.5	
	comp=Z,6.6nm,0.6s						
MTLF	Montolieu	12.47	234	ePn	Pn	06 35 21.9	+0.5
MTLF	Montolieu	12.47	234	ePg	Pn	06 36 17.3	+56
OBN	Obninsk	12.73	66	⇓eP	Pn	06 35 23.4	-1.4
OBN				eS	Sn	06 37 40.5	-6.6
OBN				pmax	pmax		
	comp=Z,20nm,1.5s						
ARCES	ARCESS Array B	18.58	10	Pn	P	06 36 39.3	-1.8
	comp=Z,0.9nm,0.3s,baz=199,slow=10,SNR=27						
ARE0	ARCESS Array S	18.58	10	P	P	06 36 39.6	-1.5
PRGR	Permogore	18.96	46	eP	Pn	06 36 46.0	+0.2
PRGR				e		06 40 16.4	
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KEV	Kevo	18.97	12	P	Pn	06 36 45.9	0.0
KEV				pmax	pmax		
	comp=Z,49nm,1.3s						
KEV	Kevo	18.97	12	P	Pn	06 36 45.9	0.0
SHA1	Shidzhatmaz	19.44	103	i P	Pn	06 36 52.4	+0.4
BTLR	Botlikh	22.20	102	i P	P	06 37 22.4	+1.7
GNI	Garni	22.82	109	LR	LR	06 47 14.9	
	comp=Z,32nm,19.3s,baz=252,slow=39						
GNI	Garni	22.82	109	i P	P	06 37 28.9	+1.6
GNI				pmax	pmax		
	comp=Z,9.0nm,1.6s						
MMAI	Mount Meron Ar	23.26	135	LR	LR	06 48 37.1	
	comp=Z,29nm,18.1s,baz=285,slow=42						
ARU	Arti	25.12	62	P	P	06 37 49.2	+0.2
	comp=Z,1.0nm,0.3s,baz=290,slow=11,SNR=6.6						
ARU				LR	LR	06 47 32.4	
	comp=Z,56nm,18.6s,baz=170,slow=36						
ARU	Arti	25.12	62	d iP	P	06 37 49.8	+0.8
ARU				S	S	06 42 18.8	+4.4
ARU				SS	SnSn	06 43 07.3	+4.3
ARU				pmax	pmax		
	comp=Z,14nm,1.9s						
SCO	Scoresbysund	25.72	331	P	P	06 37 56.7	+2.3
SCO	Scoresbysund	25.72	331	P	P	06 37 56.7	+2.3
AKTO	Aktyubinsk	26.14	76	P	P	06 37 59.5	+1.1
	comp=Z,2.8nm,0.6s,baz=295,slow=9.3,SNR=12						
KBS	Kingsbay	27.53	358	i P	P	06 38 06.2	-4.4
KBS				pmax	pmax		
	comp=Z,23nm,1.1s						
ABKAR	Akbulak array	27.72	77	P	P	06 38 14.4	+1.8
ABKAR				IAmb	IAmb	06 38 22.9	
	comp=Z,1.2nm,0.8s						
ABKAR	Akbulak array	27.72	77	P	P	06 38 14.2	+1.7
SUMG	Summit	31.36	332	P	P	06 38 47.9	+2.8
SUMG	Summit	31.36	332	P	P	06 38 47.9	+2.8
BRVK	Borovoye	32.50	66	i P	P	06 38 53.5	-1.3
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRVK	Borovoye	32.50	66	P	P	06 38 57.4	+2.6
BVAR	Borovoye Array	32.57	66	P	P	06 38 57.9	+2.4
	comp=Z,1.8nm,0.6s,baz=286,slow=7.1,SNR=16						
KURBB	Kurchatov Arra	38.16	66	P	P	06 39 45.1	+1.6
	comp=Z,1.4nm,0.6s,baz=298,slow=8.7,SNR=10						
KURK	Kurchatov	38.17	66	P	P	06 39 45.1	+1.5
KURK	Kurchatov	38.17	66	P	P	06 39 45.5	+1.9
KURK				IAmb	IAmb	06 39 45.7	
	comp=Z,3.3nm,0.8s						
ARSB	Arslanbob	39.57	82	P	P	06 39 58.6	+2.9
ARSB				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARSB	Arslanbob	39.57	82	P	P	06 39 58.6	+2.9
ARSB				IAmb	IAmb	06 40 00.3	
	comp=Z,3.5nm,0.7s						
AAK	Ala-Archa	39.76	79	P	P	06 39 59.5	+2.3
	comp=Z,2.4nm,0.6s,baz=284,slow=4.1,SNR=10						
AAK	Ala-Archa	39.76	79	i P	P	06 39 56.3	-1.0
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AAK	Ala-Archa	39.76	79	P	P	06 40 00.3	+3.1
AAK				IAmb	IAmb	06 40 01.0	
	comp=Z,2.9nm,0.7s						
TORD	Torodi Ar. Bea	40.04	202	P	P	06 40 00.7	+1.2
	comp=Z,1.0nm,0.5s,baz=13,slow=9.1,SNR=7.5						

TORD	Torodi Ar. Bea	40.04	202	P	P	06 40 01.1	+1.6
MK31	Makanchi Array	42.20	69	P	P	06 40 19.5	+2.4
MK31				pmax	pmax		
	comp=Z,1.0nm,1.2s						
MK31	Makanchi Array	42.20	69	P	P	06 40 19.4	+2.4
MKAR	Makanchi Array	42.20	69	P	P	06 40 18.9	+1.8
	comp=Z,0.9nm,0.8s,baz=303,slow=6.3,SNR=10						
MKAR	Makanchi Array	42.20	69	P	P	06 40 19.6	+2.5
SCHQ	Schefferville	47.04	308	P	P	06 40 56.1	+0.5
	comp=Z,1.5nm,0.7s,baz=125,slow=4.0,SNR=5.6						
BILL	Bilibino	58.66	13	iP	P	06 42 18.7	-2.6
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
YKA	Yellowknife Ar	59.82	336	P	P	06 42 31.3	+2.0
	comp=Z,1.5nm,0.6s,baz=32,slow=6.5,SNR=49						
HIA	Hailar	60.41	47	iP	P	06 42 31.0	-2.6
HIA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ILAR	Eielson Array	63.27	352	P	P	06 42 54.9	+2.3
	comp=Z,0.2nm,0.6s,baz=0.3,slow=5.2,SNR=5.7						
ULM	Lac du Bonnet	63.33	318	P	P	06 42 54.4	+1.2
	comp=Z,1.1nm,0.7s,baz=3.8,slow=3.7,SNR=3.1						
ULM	Lac du Bonnet	63.33	318	IAmb	IAmb	06 42 57.6	
	comp=Z,1.9nm,0.9s						
KLR	Kul'dur	65.62	40	iP	P	06 43 06.8	-1.4
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CMAR	Chiang Mai Arr	71.35	84	P	P	06 43 46.0	+1.5
	comp=Z,0.8nm,0.3s,baz=307,slow=6.4,SNR=5.7						
PDAR	Pinedale Array	74.91	322	P	P	06 44 07.7	+2.1
	comp=Z,0.6nm,0.5s,baz=63,slow=5.5,SNR=9.0						
DAV	Davao City (W)	96.37	70	LR	LR	07 31 15.6	
	comp=Z,440nm,21.9s,baz=331,slow=37						
ASAR	Alice Springs	125.36	84	PKP	PKPdf	06 51 25.6	+0.1
	comp=Z,0.4nm,0.7s,baz=273,slow=0.9,SNR=4.5						

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*GUC **16** 06:41:29.7±0.7, 31°.26S×70°.39W, h131^{km}±5^{km}, ML3.4*

*SJA **16** 06:41:29.2±0.8, 31°.26S×70°.03W, h120^{km}±4^{km}, ML3.1, MW3.2*

ISC 16 06:41:29.7±1.5**, 31°.25S**±0°.03×**70°.03W**±0°.04**, h127**^{km}±10^{km}**, n35, σ0^{s}.79**/54**, 5C-3D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO03	El Pedregal	0.70	306	⇑iP	Pn	06 41 49.8	0.0
CO03				eS	Sn	06 42 04.6	-0.5
CO03				IAML		06 42 05.6	
	comp=N,1µm,0.1s						
RTLS	Leoncito	0.83	131	iP	Pn	06 41 51.1	0.0
RTLS				eS	Sn	06 42 07.1	-0.2
RTLS				IAML		06 42 07.3	
	comp=Z,468nm,0.7s						
CO02	Combarbal	0.83	273	⇓iP	Pn	06 41 51.0	+0.1
CO02				eS	Sn	06 42 06.2	-0.8
CO02				IAML		06 42 08.1	
	comp=N,1µm,0.1s						
ACCO	Cerro Coronel	1.06	52	iP	Pn	06 41 53.4	+0.1
ACCO				eS	Sn	06 42 11.4	+0.3
CO04	Los Peladeros	1.13	225	iP	Pn	06 41 53.7	-0.1
CO04				eS	Sn	06 42 11.5	-0.6
CO04				IAML		06 42 12.9	
	comp=E,632nm,0.3s						
AROD	Rodeo	1.19	24	iP	Pn	06 41 55.0	+0.5
AROD				eS	Sn	06 42 13.7	+0.4
ZON	Zonda	1.19	104	iP	Pn	06 41 54.0	-0.2
ZON				eS	Sn	06 42 11.4	-1.4
ZON				IAML		06 42 13.9	
	comp=Z,199nm,0.4s						
GO04	Tololo Observa	1.27	328	⇑iP	Pn	06 41 55.3	0.0
GO04				eS	Sn	06 42 14.5	-0.2
GO04				IAML		06 42 16.5	
	comp=E,2µm,0.3s						
GO04	Tololo Observa	1.27	328	iP	Pn	06 41 55.1	-0.1
GO04				eS	Sn	06 42 14.4	-0.2
CO01	Juntas del Tor	1.27	357	⇑iP	Pn	06 41 56.5	+1.1
CO01				eS	Sn	06 42 16.2	+1.4
RTLL	Cerro Villicun	1.33	94	iP	Pn	06 41 55.0	-0.7
ACDV	Cuesta del Vie	1.33	36	iP	Pn	06 41 56.2	+0.3
ACDV				eS	Sn	06 42 16.0	+0.2
AMOG	MOGNA	1.35	77	iP	Pn	06 41 55.6	-0.4
RTCV	Cerro Valdivia	1.41	116	iP	Pn	06 41 56.4	-0.2
RTCV				eS	Sn	06 42 16.7	-0.3
CFA	Coronel Fontan	1.57	103	iP	Pn	06 41 58.4	0.0
ARCO	CERRO ARCO	1.84	150	iP	Pn	06 42 02.2	+0.6
ARCO				IAML		06 42 29.9	
	comp=Z,127nm,0.4s						
ROCH	El Roble	1.91	206	eP	Pn	06 42 02.6	+0.1
ROCH				eS	Sn	06 42 27.5	-0.1
ROCH				IAML		06 42 28.7	
	comp=N,246nm,0.3s						
ROC1	El Roble	1.91	206	iP	Pn	06 42 02.4	-0.2
PEL	Peldehue	1.96	196	iP	Pn	06 42 03.2	+0.1
FCH	Farellones	2.08	186	⇓iP	Pn	06 42 06.0	+1.3
FCH				eS	Sn	06 42 33.3	+1.7
FCH				IAML		06 42 38.6	
	comp=E,161nm,0.2s						
AAGR	Agrelo	2.09	151	iP	Pn	06 42 05.3	+0.6
AGUA	GUANDACOL	2.21	37	iP	Pn	06 42 07.1	+1.0
AGUA				eS	Sn	06 42 33.8	-0.3
MT03	Universidad Ad	2.27	190	⇓iP	Pn	06 42 07.6	+0.7
MT03				eS	Sn	06 42 36.2	+0.7
MT03				IAML		06 42 40.5	
	comp=E,370nm,0.3s						
RCDM	Rinconada Maip	2.32	196	eP	Pn	06 42 08.0	+0.5
RCDM				eS	Sn	06 42 37.3	+0.7
RCDM				IAML		06 42 38.2	
	comp=E,429nm,0.1s						
LMEL	Las Melosas	2.59	183	⇑iP	Pn	06 42 11.8	+0.8
LMEL				eS	Sn	06 42 44.6	+1.7
LMEL				IAML		06 42 48.7	
	comp=N,136nm,0.2s						
ACAN	Cantantal	2.62	114	iP	Pn	06 42 11.7	+0.3
MT01	Popeta	2.80	201	⇑iP	Pn	06 42 13.0	-0.5
MT01				eS	Sn	06 42 45.8	-1.6
MT01				IAML		06 42 47.1	
	comp=E,154nm,0.2s						
VCA	Vinchina	2.97	33	iP	Pn	06 42 17.0	+1.1
VCA				IAML		06 42 57.6	
	comp=Z,100nm,0.3s						
APLL	PUNTA DE LOS L	3.13	75	iP	Pn	06 42 17.6	-0.3
APLL				IAML		06 42 18.2	
	comp=Z,29nm,0.1s						
ACLC	CERRO LA CRUZ	3.22	56	iP	Pn	06 42 19.6	+0.3
GO03	Copiap	3.65	357	iP	Pn	06 42 24.7	-0.1
LAMA	Las Malvinas	3.73	170	iP	Pn	06 42 26.4	+0.6
MRA	San Martin	3.85	109	iP	Pn	06 42 27.0	-0.4
GO05	Huala	4.07	203	iP	Pn	06 42 28.4	-1.8
CYA	Choya	4.62	54	iP	Pn	06 42 36.0	-1.7
CYA				IAML		06 42 36.1	
	comp=Z,9.3nm,0.1s						

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*IDC **16** 07:17:13.4±0.9, 30°.45N×138°.70E, h418^{km}±12^{km}, mb3.2/13, mb1 3.3/17, mb1mx3.0/51, mbtmp3.9/17, Error ellipse: s-maj=31.5km s-min=12.7km az=79.0*

*JMA **16** 07:17:13.4±0.6, 30°.60N×139°.08E, h434^{km}, M3.5*

ISC 16 07:17:12.9±0.8**, 30°.57N**±0°.08×**138°.9E**±0°.1**, h411**^{km}**, n31, σ2^{s}.28**/38**, mb3.5**/13**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	2.64	16	P	P	07 18 17.3	+3.3
	12nm,0.3s,baz=253,slow=19,SNR=4.6						
JHJ				S	S	07 19 07.6	+3.9
	22nm,0.3s,baz=90,slow=20,SNR=5.2						
JIE	Ise	4.24	334	P	P	07 18 31.4	+3.8
JKN2	Miekihoku	4.29	329	P	P	07 18 31.2	+3.1
BSO1	Boso 1	4.43	23	P	P	07 18 32.0	+3.2
BSO1				S	S	07 19 34.4	+3.4
BSO3	Boso 3	4.43	17	eS	S	07 19 33.7	+2.2
JCJ	Chichijima	4.50	140	S	S	07 19 32.2	-1.2
	28nm,0.3s,baz=287,slow=23,SNR=13						
BSO4	Boso 4	4.56	15	eS	S	07 19 34.9	+0.6
JEG	Eigenji	5.02	336	P	P	07 18 39.2	+3.8
JEG				S	S	07 19 45.6	+2.7
JHU	Hanno	5.28	3	P	P	07 18 39.7	+1.8
JHU				eS	S	07 19 45.4	-2.2
JRY	Ryogami san	5.43	360	P	P	07 18 41.9	+2.4
JYT	Yasato	5.74	10	eS	S	07 19 53.0	-3.4
JAG	Ashikaga	5.86	4	P	P	07 18 45.1	+1.1
JAG				S	S	07 19 54.7	-4.0
MJAR	Matsushiro Arr	5.98	355	P	P	07 18 47.0	+1.7
	0.3nm,0.3s,baz=165,slow=10,SNR=11						
MAT	Matsushiro	5.99	355	P	P	07 18 47.2	+1.8
MAT				S	S	07 19 58.5	-2.8
JHO	Hitachi	6.18	12	P	P	07 18 49.4	+2.0
JHO				S	S	07 20 03.4	-1.7
JFK	Kawauchi	6.97	13	S	S	07 20 19.1	-1.9
USRK	Ussuriysk Ar.	14.67	340	P	P	07 20 21.6	+0.4
	baz=141,slow=9.4,SNR=4.3						
KLR	Kul'dur	19.41	346	P	P	07 21 12.8	+1.8
	0.2nm,0.3s,baz=145,slow=2.7,SNR=4.4						
CMAR	Chiang Mai Arr	38.13	261	P	P	07 23 53.0	-2.0
	1.0nm,0.4s,baz=59,slow=7.1,SNR=5.4						
MKAR	Makanchi Array	46.08	307	P	P	07 24 57.3	-0.6
	0.9nm,0.7s,baz=89,slow=10,SNR=13						
KURBB	Kurchatov Arra	48.58	312	P	P	07 25 16.1	-0.7
	1.4nm,0.5s,baz=92,slow=9.8,SNR=31						
WRA	Warramunga Arr	50.42	186	P	P	07 25 29.7	-1.0
	0.3nm,0.5s,baz=2.0,slow=7.7,SNR=3.7						
BVAR	Borovoye Array	53.56	316	P	P	07 25 53.0	-0.2
	1.2nm,0.4s,baz=95,slow=7.7,SNR=7.1						
ASAR	Alice Springs	54.14	186	P	P	07 25 56.5	-1.2
	0.3nm,0.6s,baz=8.0,slow=16,SNR=3.4						
AKTO	Aktyubinsk	61.56	314	P	P	07 26 47.6	-0.6
	1.3nm,0.6s,baz=70,slow=13,SNR=4.6						
ARCES	ARCESS Array B	69.31	340	P	P	07 27 37.5	+0.6
	4.6nm,0.9s,baz=68,slow=8.0,SNR=3.8						
KBZ	Khabaz	73.56	311	P	P	07 28 02.0	-0.4
	2.6nm,0.8s,baz=209,slow=2.6,SNR=4.3						
FINES	FINESS Array B	73.56	333	P	P	07 28 02.2	+0.1
	1.1nm,0.5s,baz=64,slow=4.4,SNR=7.9						
AKASG	Malin Array Be	78.13	322	P	P	07 28 27.4	-0.4
	0.5nm,0.4s,baz=52,slow=5.2,SNR=3.5						
NOA	NORSAR Array B	79.32	337	P	P	07 28 33.3	-0.8
	0.6nm,0.8s,baz=65,slow=19,SNR=2.8						
BRTR	Keskin Array B	81.55	311	P	P	07 28 45.2	-1.2
	0.9nm,0.8s,baz=28,slow=6.8,SNR=3.5						

MAN 16 07:27:40.1, 7°.72N×124°.75E, h27^{km}, mb4.1, ML2.8, MS2.5, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	Musuan	0.34	62	eS	Sb	07 27 49.3	-4.1
CTBH	Cotabato--PC H	0.71	226	⇑iP	Pn	07 27 54.4	+0.1
CTBH				iS	Sn	07 28 04.3	0.0
PAGZ	Pagadian	1.37	275	eP	Pn	07 28 02.8	-0.6
PAGZ				eS	Sb	07 28 21.5	-0.5
MATI	Mati	1.68	117	eP	Pb	07 28 09.2	-1.1

IDC 16 07:30:40.2±2.7**, 7°.67N×94°.29E, h0**^{km}**, mb3.6**/3**, mb1 3.7**/4**, mb1mx3.4**/49**, mbtmp3.6**/4**, ML3.2**/1**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.4**/36**, Error ellipse: s-maj=192.3km s-min=25.1km az=54.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	6.69	136	Pn	Pn	07 32 23.1	+3.2
	0.5nm,0.3s,baz=326,slow=15,SNR=3.5						
PALK	Pallekele	13.47	269	LR	LR	07 38 59.5	
	comp=Z,50nm,18.1s,baz=130,slow=37						
H08S3	Diego Garcia H	26.52	236	T	T	08 03 14.9	
	baz=55,slow=74,SNR=14						
H08S2	Diego Garcia H	26.53	235	T	T	08 03 15.1	
	baz=55,slow=74,SNR=7.1						
H08S1	Diego Carcia H	26.54	236	T	T	08 03 17.7	
	baz=55						
MKAR	Makanchi Array	40.31	347	P	P	07 38 19.3	0.0
	0.4nm,0.8s,baz=166,slow=7.5,SNR=4.1						
ASAR	Alice Springs	49.68	130	P	P	07 39 33.1	-1.2
	0.2nm,0.6s,baz=302,slow=7.0,SNR=4.2						
FINES	FINESS Array B	72.96	332	P	P	07 42 11.5	+0.2
	2.4nm,1.0s,baz=116,slow=9.4,SNR=2.6						

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*IDC **16** 07:36:39.7±0.8, 0°.63N×126°.52E, h0^{km}, mb4.1/7, mb1 4.1/10, mb1mx3.8/46, mbtmp4.1/10, ML3.7/3, Error ellipse: s-maj=36.7km s-min=12.7km az=67.0*

*DJA **16** 07:36:44.3±1.1, 1°N±3°×12°7E±°, h30^{km}±9^{km}, M4.0/5, MLv4.0/5*

*NEIC **16** 07:36:47.2±1.5, 0°.59N±0°.10×126°.74E±0°.05, h61^{km}±8^{km}, mb4.1/13, Error ellipse: s-maj=14.4km s-min=7.1km az=170.0*

ISC 16 07:36:46.5±0.7**, 0°.53N**±0°.06×**126°.66E**±0°.05**, h47**^{km}**, n33, σ1^{s}.77**/41**, mb4.1**/12**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.75	71	P	Pn	07 37 00.3	-0.5
TNTI				S	Sn	07 37 12.6	+1.4
TNTI	Ternate	0.75	71	Pn	Pn	07 37 00.9	+0.1
TNTI				Sn	Sn	07 37 12.0	+0.8
LBMI	Labuha	1.44	144	P	Pn	07 37 09.8	-0.3
LBMI				S	Sn	07 37 28.8	+1.0
SANI	Sanana	2.65	195	P	Pn	07 37 24.5	-2.3
SANI				S	Sn	07 37 55.1	-2.5
NLAI	Namlea	3.77	173	P	Pn	07 37 42.4	+0.2
NLAI				S	Sn	07 38 24.9	-0.4
LUWI	Luwuk	4.18	248	Pn	Pn	07 37 50.4	+2.6
LUWI				Sn	Sn	07 38 41.0	+5.4
SIJI	Sorong	4.82	107	Pn	Pn	07 37 57.4	+0.9
	1.1nm,0.3s,baz=307,slow=20,SNR=2.0						
FAKI	Fak Fak	6.56	122	Pn	Pn	07 38 21.0	+0.5
FAKI				Sn	Sn	07 39 35.6	+1.6
KAPI	Kappang	8.82	231	Pn	Pn	07 38 49.9	-1.6
	3.1nm,0.3s,baz=26,slow=7.3,SNR=8.3						
FITZ	Fitzroy Crossi	18.54	183	P	P	07 40 59.2	-0.1
	0.1nm,0.3s,baz=181,slow=23,SNR=3.4						
WB0	Warramunga Arr	21.55	160	P	P	07 41 31.5	-0.6
WB0				IAmb	IAmb	07 41 38.6	
	comp=Z,10.0nm,1.2s						
WRAB	Tennant Creek	21.69	160	P	P	07 41 33.2	-0.4
WRAB				IAmb	IAmb	07 41 51.0	
	comp=Z,11nm,1.2s						
WRA	Warramunga Arr	21.70	160	P	P	07 41 33.1	-0.5
	comp=Z,2.3nm,0.3s,baz=338,slow=9.5,SNR=26						
WRA	Warramunga Arr	21.70	160	P	P	07 41 33.1	-0.5
WB2	Warramunga Arr	21.70	160	P	P	07 41 33.2	-0.4
WR0	Warramunga Arr	21.78	160	P	P	07 41 34.2	-0.3
WR0				IAmb	IAmb	07 41 34.8	
	comp=Z,9.1nm,1.2s						
AS31	Alice Springs	25.06	164	P	P	07 42 06.7	0.0
ASAR	Alice Springs	25.06	164	P	P	07 42 07.5	+0.8
	comp=Z,2.4nm,0.4s,baz=346,slow=13,SNR=66						
ASAR				S	S	07 46 34.5	+6.4
	comp=Z,1.3nm,1.0s,baz=346,slow=19,SNR=5.3						
ASAR	Alice Springs	25.06	164	P	P	07 42 07.8	+1.1
HNR	Honiara	34.59	107	P	P	07 43 31.4	0.0
STKA	Stephens Creek	35.20	158	P	P	07 43 36.7	+0.4
	comp=Z,2.0nm,0.7s,baz=326,slow=6.2,SNR=4.8						
STKA	Stephens Creek	35.20	158	P	P	07 43 36.4	+0.1
STKA				IAmb	IAmb	07 43 48.7	
	comp=Z,3.2nm,1.4s						
MK31	Makanchi Array	60.14	326	P	P	07 46 48.4	-1.0
MKAR	Makanchi Array	60.14	326	P	P	07 46 47.8	-1.6
	comp=Z,1.2nm,0.3s,baz=120,slow=7.2,SNR=34						
MKAR	Makanchi Array	60.14	326	P	P	07 46 48.0	-1.4
BKZ	Black Stump Fm	60.29	137	P	P	07 46 48.3	-2.3
MAKZ	Makanchi	60.33	326	P	P	07 46 50.1	-0.6
MAKZ				IAmb	IAmb	07 46 54.3	
	comp=Z,2.4nm,1.1s						
KURBB	Kurchatov Arra	64.39	328	P	P	07 47 16.3	-1.3
	comp=Z,1.0nm,0.4s,baz=132,slow=6.6,SNR=32						
KURK	Kurchatov	64.39	328	P	P	07 47 17.3	-0.4
KURK				IAmb	IAmb	07 47 32.8	
	comp=Z,3.5nm,0.9s						
CASY	Casey	67.65	187	P	P	07 47 38.5	+0.2
BVAR	Borovoye Array	69.96	328	P	P	07 47 52.1	-0.9
	comp=Z,1.1nm,0.7s,baz=120,slow=5.8,SNR=7.2						
ABKAR	Akbulak array	74.58	321	P	P	07 48 19.6	-1.0
AKTO	Aktyubinsk	76.11	322	P	P	07 48 28.4	-1.0
	comp=Z,0.8nm,0.4s,baz=98,slow=7.7,SNR=4.2						

JMA 16 07:51:46.6, 32°.57N×130°.02E, h8^{km}±1^{km}, M0.2, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHD	Hondo	0.14	137	P	Pg	07 51 49.7	0.0
JHD				S	Sg	07 51 52.0	+0.2
NGSJ	Nagasakinomoza	0.20	289	P	Pg	07 51 50.9	+0.3
NGSJ				eS	Sg	07 51 53.7	+0.4

JMA 16 07:53:57.1, 36°.74N×138°.00E, h15^{km}±1^{km}, M0.5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAT	Matsushiro	0.26	140	P	Pg	07 54 02.4	-0.3
MAT				S	Sg	07 54 06.2	-0.3
MAT	Matsushiro	0.26	140	P	Pg	07 54 02.4	-0.3
MAT				S	Sg	07 54 06.1	-0.4
JNG	Nsakai	0.34	166	P	Pg	07 54 04.0	-0.2
JNG				S	Sg	07 54 08.7	-0.3

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*IDC **16** 07:56:18.8±1.2, 19°.34S×70°.99W, h0^{km}, mb3.9/4, mb1 3.9/6, mb1mx3.7/36, mbtmp3.8/6, ML2.8/3, MS3.1/4, Ms1 3.0/4, ms1mx2.7/36, Error ellipse: s-maj=31.5km s-min=17.7km az=79.0*

*NEIC **16** 07:56:21.3±1.2, 19°.45S±0°.06×71°.09W±0°.07, h17^{km}±5^{km}, mb4.0/6, ML3.4(GUC), Error ellipse: s-maj=12.2km s-min=5.1km az=134.0*

*GUC **16** 07:56:22.7±0.7, 19°.42S×71°.03W, h30^{km}±2^{km}, ML3.5*

ISC 16 07:56:18.0±1.8**, 19°.43S**±0°.03×**71°.10W**±0°.06**, h2**^{km}±10^{km}**, n42, σ1^{s}.39**/60**, mb4.0**/6**, 6C-5D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.94	100	⇓iP	Pn	07 56 37.2	-1.1
PSGC				iS	Sg	07 56 48.7	+0.6
PSGC				IAML		07 56 52.3	
	comp=N,1µm,0.2s						
PB12	IPOC Station P	1.09	42	⇓iP	Pn	07 56 40.2	-0.4
PB12				iS	Sb	07 56 54.1	-0.5
PB12				IAML		07 56 57.8	
	comp=N,1µm,0.5s						
AP01	Chacalluta	1.28	34	eP	Pn	07 56 36.8	-6.2
AP01				iS	Sb	07 56 58.7	-1.1
AP01				IAML		07 57 03.7	
	comp=N,2µm,0.4s						
PB11	IPOC Station P	1.40	104	⇓iP	Pg	07 56 45.0	+0.1
PB11				iS	Sn	07 57 02.7	-1.3
PB11				IAML		07 57 08.1	
	comp=N,1µm,0.7s						
PB11	IPOC Station P	1.40	104		Pg	07 56 45.6	+0.7
PB11				Sn	Sg	07 57 03.2	+0.1
TA01	Diego Aracena	1.42	143	⇑iP	Pg	07 56 45.9	+0.7
TA01				iS	Sb	07 57 03.4	-0.5
TA01				IAML		07 57 11.1	
	comp=E,2µm,0.7s						
PATCX	Punta Patache	1.64	147	⇑iP	Pg	07 56 49.2	-0.4
PATCX				iS	Sn	07 57 08.5	-1.4
PATCX				IAML		07 57 21.6	
	comp=E,733nm,0.5s						
GO01	Chusmiza	1.81	98	⇑iP	Pb	07 56 52.2	-0.1
GO01				iS	Sb	07 57 15.0	-0.6
GO01				IAML		07 57 18.9	
	comp=N,975nm,0.2s						
GO01	Chusmiza	1.81	98		Pg	07 56 52.5	-0.3
GO01				Sn	Sb	07 57 15.2	-0.5
PB16	IPOC Station P	1.86	54	⇓iP	Pb	07 56 52.8	-0.3
PB16				iS	Sb	07 57 17.0	-0.2
PB16				IAML		07 57 20.9	
	comp=N,682nm,0.5s						
PB08	IPOC Station P	1.96	111	⇑iP	Pb	07 56 54.4	-0.4
PB08				iS	Sb	07 57 18.4	-1.5
PB08				IAML		07 57 29.7	
	comp=N,404nm,0.5s						
PB02	IPOC Station P	2.19	149	⇑iP	Pb	07 56 56.8	-1.7
PB02				iS	Sn	07 57 21.7	-1.7
PB02				IAML		07 57 40.5	
	comp=E,997nm,0.6s						
PB01	IPOC Station P	2.20	137	⇑iP	Pb	07 56 57.1	-1.6
PB01				iS	Sn	07 57 23.6	-0.1
PB01	IPOC Station P	2.20	137		Pb	07 56 57.7	-1.0
PB01				Sn	Sn	07 57 23.6	-0.1
PB07	IPOC Station P	2.55	154	eP	Pn	07 57 01.7	+1.0
PB07				iS	Sn	07 57 32.8	+0.4
PB07				IAML		07 57 49.1	
	comp=E,340nm,0.5s						
PB03	IPOC Station P	2.89	154	eP	Pn	07 57 06.6	+1.3
PB03				iS	Sn	07 57 41.6	+0.8
PB03				IAML		07 58 08.0	
	comp=E,173nm,0.6s						
PB09	IPOC Station P	2.92	144	eP	Pb	07 57 08.0	-3.1
PB09				iS	Sn	07 57 42.2	+0.5
PB04	IPOC Station P	3.02	163	eP	Pn	07 57 07.8	+0.6
PB04				iS	Sn	07 57 40.4	-3.6
PB04	IPOC Station P	3.02	163		Pn	07 57 08.2	+1.1
PB05	IPOC Station P	3.50	166	⇓eP	Pn	07 57 13.8	+0.1
PB05				iS	Sn	07 57 52.0	-3.9
PB05				IAML		07 58 27.0	
	comp=N,117nm,0.4s						
LVC	Limon Verde	3.76	147	Pn	Pn	07 57 19.0	+1.4
	comp=N,2.5nm,0.3s,baz=342,slow=11,SNR=20						
LVC				Sn	Sn	07 58 03.4	+0.7
	comp=N,6.2nm,0.3s,baz=103,slow=13,SNR=6.6						
LVC				Lg	Lg	07 58 19.5	
	comp=N,16nm,0.3s,baz=111,slow=10,SNR=11						
LVC	Limon Verde	3.76	147		Pn	07 57 20.1	+2.6
PB10	IPOC Station P	4.09	173	Pn	Pn	07 57 21.6	-0.1
LPAZ	La Paz	4.22	43	Pn	Pn	07 57 24.7	+0.7
	comp=N,0.1nm,0.3s,baz=214,slow=11,SNR=2.4						
LPAZ				LR	LR	07 58 46.0	
	comp=N,40nm,20.8s,baz=202,slow=36						
LPAZ	La Paz	4.22	43	Pn	Pb	07 57 31.0	-2.4
GO02	Mina Guanaco	5.87	167		Pn	07 57 47.2	+0.8
GO02				Sn	Sn	07 58 54.8	+0.2
SIV	San Ignacio	10.15	72	Pn	Pn	07 58 46.2	+1.2
	comp=N,0.3nm,0.3s,baz=263,slow=9.4,SNR=7.5						
SIV				LR	LR	08 03 12.7	
	comp=N,77nm,20.9s,baz=285,slow=41						
PTGA	Pitinga	21.55	32	P	P	08 01 08.6	-0.3
	comp=N,1.6nm,0.4s,baz=231,slow=14,SNR=6.0						
PTGA	Pitinga	21.55	32	P	P	08 01 08.2	-0.8
PTGA				IAmb	IAmb	08 01 08.4	
	comp=Z,5.5nm,1.1s						
BDFB	Brasilia	22.33	84	LR	LR	08 09 55.1	
	comp=Z,38nm,18.9s,baz=141,slow=37						
BDFB	Brasilia	22.33	84	P	P	08 01 18.5	+1.0
BDFB				IAmb	IAmb	08 01 20.4	
	comp=Z,7.4nm,1.3s						
SPB	Sao Paulo	22.40	105	P	P	08 01 19.0	+1.0
SPB				IAmb	IAmb	08 01 19.7	
	comp=Z,12nm,1.2s						
RUSC	La Rusia	25.24	355	P	P	08 01 48.3	+2.1
PAYG	Puerto Ayora	26.48	313	P	P	08 01 56.8	-0.2
SDV	Santo Domingo	28.14	1	P	P	08 02 13.4	+1.3
QSPA	South Pole Qui	70.75	180	P	P	08 07 38.1	+2.4
	comp=Z,0.2nm,0.4s,baz=151,slow=11,SNR=6.8						
TORD	Torodi Ar. Bea	78.63	72	P	P	08 08 20.9	-1.2
	comp=Z,1.6nm,0.9s,baz=248,slow=5.5,SNR=6.3						
TORD	Torodi Ar. Bea	78.63	72	P	P	08 08 21.6	-0.5
YKA	Yellowknife Ar	88.57	341	P	P	08 09 12.9	+0.8
	comp=Z,0.8nm,0.8s,baz=139,slow=5.2,SNR=18						
JMIC	Jan Mayen	99.79	17	LR	LR	08 51 31.7	
	comp=Z,67nm,21.8s,baz=96,slow=33						
MKAR	Makanchi Array	145.09	33	PKP	PKPdf	08 15 56.8	-0.5
	comp=Z,0.7nm,0.8s,baz=313,slow=2.7,SNR=5.9						
MKAR	Makanchi Array	145.09	33		PKiKP	08 15 58.0	-3.1

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*JMA **16** 07:58:47.0±0.3, 43°.48N×147°.64E, h12^{km}, M3.7*

*SKHL **16** 07:58:48.2±0.3, 43°.48N×147°.79E, h40^{km}±4^{km}, mb4.0/5*

ISC 16 07:58:49.2±3.7**, 43°.6N**±0°.1×**147°.7E**±0°.1**, h33**^{km}±13^{km}**, n13, σ0^{s}.67**/22**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	0.68	293	iP	Pn	07 59 01.8	-0.7
SHO				AMB	AMB	07 59 02.0	
	40nm,0.2s						
SHO				iS	Sb	07 59 11.8	0.0
SHO				A	A	07 59 13.0	
	580nm,0.2s						
SHO				A	A	07 59 13.0	
	230nm,0.2s						
YUK	Yuzh-Kuril'sk	1.39	289	iP	Pn	07 59 12.0	-0.3
YUK				AMB	AMB	07 59 13.0	
	50nm,0.2s						
YUK				iS	Sn	07 59 29.0	-0.6
YUK				A	A	07 59 33.0	
	200nm,0.4s						
YUK				A	A	07 59 33.0	

	640nm,0.4s						
NEM2	Nemuro 2	1.44	261	P	Pn	07 59 12.1	-0.8
NEM2				*e*S	Sn	07 59 30.6	-0.1
GRPR	Tuman	1.44	286	*i* P	Pn	07 59 12.5	-0.5
GRPR				AMB	AMB	07 59 13.0	
	50nm,0.3s						
GRPR				*i* S	Sn	07 59 30.8	0.0
GRPR				A	A	07 59 33.0	
	120nm,0.4s						
GRPR				A	A	07 59 33.0	
	490nm,0.4s						
NMR	Nemuro--Hokkai	1.45	261	*i* P	Pn	07 59 12.2	-0.9
NMR				*e*S	Sn	07 59 30.4	-0.5
GLVR	Golovnino	1.58	276	*e*P	Pn	07 59 14.5	-0.4
GLVR				AMB	AMB	07 59 16.0	
	30nm,0.3s						
GLVR				*e*S	Sn	07 59 34.0	-0.2
GLVR				A	A	07 59 35.0	
	110nm,0.3s						
GLVR				A	A	07 59 35.0	
	310nm,0.3s						
KUR	Kuril'sk	1.64	4	*i* P	Pn	07 59 16.0	+0.4
KUR				AMB	AMB	07 59 17.0	
	80nm,0.5s						
KUR				*e*S	Sn	07 59 34.9	-0.6
KUR				A	A	07 59 39.0	
	170nm,0.2s						
KUR				A	A	07 59 39.0	
	210nm,0.2s						
JRA	Rausu	1.89	281	P	Pn	07 59 19.2	+0.1
JNSB	Nemuroshibetsu	1.96	276	P	Pn	07 59 20.2	+0.1
JNK	Nakash	2.16	271	P	Pn	07 59 22.7	-0.2
JNK				*e*S	Sn	07 59 48.8	+0.3
JAK	Akkeshi	2.27	256	P	Pn	07 59 24.5	+0.2
JTKR	Abashiri--Toko	2.77	279	P	Pn	07 59 32.2	+1.0
JTKR				*e*S	Sn	08 00 04.9	+1.5
JAR	Ashorobuto	2.87	265	P	Pn	07 59 33.6	+0.9

NNC 16 08:10:50.1±3.4**, 36°.74N×70°.89E, h127^{km}**±85^{km}**, mb2.9, mpv3.5, 2C-1D, Error ellipse: s-maj=30.2km s-min=24.7km az=43.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.36	358	P	Pn	08 12 21.9	+0.4
	2.6nm,0.5s,baz=355,slow=42,SNR=26						
KK31				⇑S	Sn	08 13 33.0	+0.2
	9.2nm,0.8s,baz=190,slow=18,SNR=18						
AAK	Ala-Archa	6.51	24	⇑P	Pn	08 12 23.2	-0.4
	1.1nm,0.3s						
AAK				⇓S	Sn	08 13 37.4	+0.8
	3.4nm,0.5s						
AB31	Akbulak array	14.83	331	P	Pn	08 14 12.8	-0.5
	0.5nm,0.5s,baz=148,slow=13,SNR=7.0						
AB31				S	Sn	08 16 59.3	+2.0
	0.2nm,0.3s,baz=158,slow=22,SNR=2.8						

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*IDC **16** 08:46:19.6±0.7, 37°.32N×97°.98W, h0^{km}, mb3.8/3, mb1 4.0/10, mb1mx3.7/57, mbtmp3.8/10, ML3.1/5, MS3.3/1, Ms1 3.3/1, ms1mx2.4/49, Error ellipse: s-maj=11.6km s-min=9.7km az=140.0*

*NEIC **16** 08:46:20.2±0.8, 37°.19N±0°.04×97°.90W±0°.05, h3^{km}±5^{km}, mb3.9/10, Mwr3.7/33, Error ellipse: s-maj=6.3km s-min=4.7km az=61.0*

*NEIC **16** 08:46:20.3, 37°.21N×97°.88W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.31; $M_{\theta\theta}$1.74; $M_{\phi\phi}$-0.43; $M_{r\theta}$-0.69; $M_{\theta\phi}$3.62; $M_{\phi r}$1.59; Fault plane solution: $M_0$4.31000×10^{14} NP1:ϕ_s94.13000°, δ65.41000°, λ-20.09000°. NP2:ϕ_s192.78000°, δ71.80000°, λ-154.02000°. Principal axes: T 4.4661, Plg4.0000°, Azm322.0000°; N -0.3266, Plg59.0000°, Azm225.0000°; P -4.1395, Plg31.0000°, Azm55.0000°;*

*CERI **16** 08:46:20.0, 37°.19N×97°.90W, h3^{km}*

*ANF **16** 08:46:20.1±0.3, 37°.17N×97°.91W, h0^{km}, ML4.8/11, Error ellipse: s-maj=3.9km s-min=3.0km az=42.0*

ISC 16 08:46:20.1±0.6**, 37°.19N**±0°.04×**97°.87W**±0°.04**, h10^{km}, n222,** σ1^{s}**26**/227**, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	1.12	104		Pb	08 46 41.5	-0.1
T35A				Sg	Sg	08 46 56.4	+0.2
T35A					Sn	08 46 57.7	+0.4
U32A	Winter Ranch,	1.22	229		Pn	08 46 42.5	-0.8
R32A	Long Quarter,	1.40	332		Pn	08 46 45.9	0.0
ADOK	Arcadia Dam	1.58	165		Pb	08 46 49.5	0.0
OK005	Luther M Schoo	1.62	160		Pb	08 46 49.8	-0.5
OK009	Oakdale Elemen	1.64	167		Pb	08 46 50.4	-0.2
OKCFA	Oklahoma City	1.80	169		Pn	08 46 52.3	+1.0
OKCSW	OKLAHOMA CITY	1.81	169		Pb	08 46 52.9	-0.5
FNO	Franklin	1.96	169	Pn	Pn	08 46 54.8	+1.2
TUL1	Leonard	2.10	127		Pn	08 46 56.9	+1.5
TUL1	Leonard	2.10	127	P	Pn	08 46 56.5	+1.1
	baz=308						
KSU1	Kansas State U	2.15	27	P	Pn	08 46 57.5	+1.4
	baz=208						
KSU1				S	Sb	08 47 27.2	+1.2
	baz=208						
W35A	Tecumseh	2.19	158	Pn	Pn	08 46 57.6	+1.1
CBKS	Cedar Bluff	2.19	318		Pn	08 46 57.7	+1.0
CBKS	Cedar Bluff	2.19	318	P	Pn	08 46 57.7	+1.0
	baz=138						
CBKS				S	Sb	08 47 27.3	+0.1
	baz=138						
WMOK	Wichita Mounta	2.56	197		Pn	08 47 02.6	+0.9
WMOK	Wichita Mounta	2.56	197	P	Pn	08 47 02.8	+1.2
	baz=16						
X34A	Smith Ranch, M	2.58	179		Pn	08 47 03.2	+1.2
U38A	Gravette	2.89	104		Pn	08 47 08.4	+2.1
HHAR	Hobbs	3.28	105		Pn	08 47 13.5	+1.8
N33A	J Bar K, Exete	3.56	5		Pn	08 47 16.2	+0.8
S39A	Bolivar	3.65	81		Pn	08 47 18.0	+1.2
W39A	Magazine	3.86	120		Pn	08 47 20.3	+0.8
Z35A	Perchaven, San	3.88	172		Pn	08 47 20.6	+0.8
U40A	Yellville	4.11	100		Pn	08 47 24.8	+1.8
U40A	Yellville	4.11	100	P	Pn	08 47 24.4	+1.3
	baz=283						
KSCO	Kaye Shedlock’	4.17	297		Pn	08 47 25.3	+1.2
KSCO	Kaye Shedlock’	4.17	297	P	Pn	08 47 25.2	+1.2
	baz=115						
KSCO				S	Sn	08 48 13.9	+1.0
	baz=115						
P38A	Dawn	4.18	53		Pn	08 47 25.1	+1.1
BGNE	Belgrade	4.22	357		Pn	08 47 25.6	+1.1
BGNE	Belgrade	4.22	357	P	Pn	08 47 25.4	+0.9
	baz=177						
MIAR	Mount Ida	4.37	126		Pn	08 47 28.1	+1.6
MIAR	Mount Ida	4.37	126	P	Pn	08 47 27.7	+1.1
	baz=308						
MGMO	Mountain Grove	4.47	89		Pn	08 47 29.4	+1.4
Z38A	Mt. Pleasant	4.58	148		Pn	08 47 30.2	+0.8
ABTX	Abilene, Hawle	4.78	198		Pn	08 47 34.7	+2.4
FCAR	Ozark Folk Cen	4.80	104		Pn	08 47 33.9	+1.4
WHAR	Wooly Hollow	4.89	111		Pn	08 47 35.2	+1.5
X40A	Basin Creek Fa	4.90	122		Pn	08 47 35.2	+1.4
X40A	Basin Creek Fa	4.90	122	P	Pn	08 47 34.8	+1.0
	baz=305						
OGNE	Ogallala	4.96	320		Pn	08 47 36.6	+1.8
W41B	Gary Mavity, V	4.97	112		Pn	08 47 36.6	+1.8
W41B	Gary Mavity, V	4.97	112	P	Pn	08 47 35.8	+1.0
	baz=296						
UALR	University of	5.09	117		Pn	08 47 37.8	+1.3
MSTX	Muleshoe	5.13	233		Pn	08 47 38.5	+1.4
WHTX	Lake Whitney,	5.20	176		Pn	08 47 38.6	+0.6
WHTX	Lake Whitney,	5.20	176	S	Sn	08 48 38.4	+0.4
	baz=356						
WLAR	White Oak Lake	5.22	131		Pn	08 47 39.3	+1.0
T25A	Trinidad	5.23	271		Pn	08 47 40.6	+2.1
CCM	Cathedral Cave	5.33	79		Pn	08 47 41.8	+2.1
T42A	Van Buren	5.42	90		Pn	08 47 41.7	+0.7
237A	Washetta, Mont	5.45	161		Pn	08 47 41.4	0.0
LCAR	Lake Charles	5.51	100		Pn	08 47 43.4	+1.1
Z41A	Richland Creek	5.71	132		Pn	08 47 45.0	+0.1
Z41A	Richland Creek	5.71	132	S	Sn	08 48 49.6	-0.9
	baz=315						
SCIA	State Center	5.93	36		Pn	08 47 49.1	+1.2
CCAR	Cane Creek	5.95	121		Pn	08 47 49.4	+1.2
PBMO	Poplar Bluff	5.97	92		Pn	08 47 49.4	+0.9
Q24A	Divide	6.01	289		Pn	08 47 49.7	+0.3
Q24A	Divide	6.01	289	S	Sn	08 48 57.7	-0.8
	baz=105						
NATX	Nacogdoches	6.03	153		Pn	08 47 49.6	+0.2
NATX	Nacogdoches	6.03	153	S	Sn	08 48 57.0	-1.4
	baz=335						
HBAR	Harrisburg	6.04	103	Pn	Pn	08 47 50.2	+0.6
SDCO	Great Sand Dun	6.10	278		Pn	08 47 51.3	+0.7
SLM	Saint Louis	6.21	74		Pn	08 47 53.2	+1.4
X43A	Marvell	6.27	113		Pn	08 47 53.4	+0.7
LPAR	Lepanto	6.31	102	Pn	Pn	08 47 53.6	+0.4
435B	Jarrell	6.39	178		Pn	08 47 54.3	-0.1
435B	Jarrell	6.39	178	P	Pn	08 47 54.5	+0.1
	baz=358						
N41A	Harden Midland	6.50	55		Pn	08 47 56.5	+0.7
PEBM	Pemiscott Bayo	6.53	97	Pn	Pn	08 47 57.9	+1.7
ECSD	EROS Data Cent	6.61	8		Pn	08 47 57.2	-0.1
ECSD	EROS Data Cent	6.61	8	P	Pn	08 47 57.3	-0.1
	baz=189						
ECSD				S	Sn	08 49 11.0	-1.7
	baz=189						
ISCO	Idaho Springs	6.61	296		Pn	08 47 58.4	+0.7
PENMO	Penman	6.65	94	Pn	Pn	08 47 59.6	+1.7
HENM	Henderson Moun	6.74	91	Pn	Pn	08 48 00.7	+1.6
LNXT	Lenox	6.82	97	Pn	Pn	08 48 01.4	+1.2
S44A	Carbondale	6.87	83		Pn	08 48 01.7	+0.7
JCT	Junction City	6.88	194		Pn	08 48 01.7	+0.6
143A	Socs Landing,	6.94	128	Pn	Pn	08 48 02.8	+0.9
GLAT	Glass	6.95	95	Pn	Pn	08 48 03.5	+1.5
HICK	Hickman	6.96	93	Pn	Pn	08 48 03.8	+1.7
P43A	Skaggs, Pawnee	7.00	67		Pn	08 48 03.5	+0.9
L40A	Anamosa	7.07	44		Pn	08 48 03.8	+0.1
Q44A	Meyer Farm, Va	7.19	74		Pn	08 48 05.8	+0.5
N23A	Red Feather La	7.29	303		Pn	08 48 08.2	+1.2
SUSD	Miller	7.29	354		Pn	08 48 07.8	+1.1
ANMO	Albuquerque	7.31	255	Pn	Pn	08 48 08.5	+1.4
	0.2nm,0.3s,baz=82,slow=14,SNR=4.9						
ANMO				Lg	Lg	08 50 08.5	
	9.2nm,0.3s,baz=157,slow=23,SNR=10						
ANMO	Albuquerque	7.31	255		Pn	08 48 08.8	+1.7
W45A	Hickory Valley	7.31	104		Pn	08 48 08.0	+1.1
OXF	Oxford	7.37	109	Pn	Pn	08 48 08.2	+0.4
T45A	Paducah	7.37	89	Pn	Pn	08 48 09.2	+1.4
HKT	Hockley	7.42	166	Pn	Pn	08 48 09.5	+1.1
HDIL	Hopedale	7.49	61		Pn	08 48 09.9	+0.6
441A	DeRidder	7.50	147		Pn	08 48 10.8	+1.2
OLIL	Olney	7.87	76	Pn	Pn	08 48 15.5	+0.9
L42A	Oliver, Polo	7.95	50		Pn	08 48 16.1	+0.4
WVT	Waverly	8.14	94		Pn	08 48 18.8	+0.4
JFWS	Jewell Farm	8.17	43		Pn	08 48 18.5	-0.3
JFWS	Jewell Farm	8.17	43	P	Pn	08 48 18.4	-0.3
	baz=228						
PLAL	Pickwick Lake	8.23	103		Pn	08 48 19.6	0.0
MNTX	Cornudas Mount	8.27	231		Pn	08 48 20.8	+0.6
RSSD	Black Hills	8.36	328		Pn	08 48 22.1	+0.5
RSSD	Black Hills	8.36	328	P	Pn	08 48 23.9	+2.3
	baz=144						
RWWY	Rawlins	8.51	305		Pn	08 48 24.0	+0.3
K22A	Casper	8.60	312		Pn	08 48 25.1	+0.3
T47A	Sharon Grove	8.60	88		Pn	08 48 25.5	+0.8
I40A	Norwalk	8.67	37		Pn	08 48 25.1	-0.5
M44A	Midewin, Midew	8.69	58	Pn	Pn	08 48 26.3	+0.3
P46A	Rosedale	8.71	71		Pn	08 48 28.2	+2.0
SPMN	Marine on St.	8.89	24		Pn	08 48 28.2	-0.3
SFIN	Lafayette	8.99	66		Pn	08 48 32.0	+2.0
V48A	Smith Brothers	9.02	96	Pn	Pn	08 48 31.9	+1.5
L44A	Lake County Fo	9.15	54	Pn	Pn	08 48 33.0	+0.9
BLO	Bloomington	9.15	74		Pn	08 48 32.6	+0.4
K43A	Burlington	9.16	50	Pn	Pn	08 48 33.1	+0.7
X48A	Hartselle	9.20	104	Pn	Pn	08 48 34.8	+1.8
TX31	Lajitas Ar. Si	9.21	213		Pn	08 48 35.1	+1.9
TX32	Lajitas Array	9.21	213		Pn	08 48 35.0	+1.8
TXAR	Lajitas Array	9.21	213	Pn	Pn	08 48 33.5	+0.3
	0.8nm,0.3s,baz=36,slow=11,SNR=20						
TXAR				Lg	Lg	08 51 06.0	
	1.6nm,0.3s,baz=46,slow=25,SNR=3.8						
TXAR	Lajitas Array	9.21	213		Pn	08 48 34.9	+1.7
WCI	Wyandotte Cave	9.23	80		Pn	08 48 35.2	+1.9
CLTN	Cedars of Leba	9.34	93	Pn	Pn	08 48 36.8	+2.0
121A	Cookes Peak, D	9.38	243	Pn	Pn	08 48 35.2	-0.3
I42A	Draeger Farm,	9.55	43	Pn	Pn	08 48 37.5	-0.1
U49A	Red Boiling Sp	9.71	90		Pn	08 48 41.5	+1.6
LRAL	Lakeview Retre	9.82	112	Pn	Pn	08 48 42.2	+0.8
SWET	Sewanee	9.85	98	Pn	Pn	08 48 43.7	+1.9
T49A	Edmonton	9.85	87		Pn	08 48 42.7	+0.9
G40A	Rib Lake	9.92	33		Pn	08 48 43.5	+0.8
P48A	Milroy	10.04	73		Pn	08 48 43.2	-1.1
R49A	Shelbyville	10.12	80	Pn	Pn	08 48 46.6	+1.1
L46A	Eue Claire	10.14	58	Pn	Pn	08 48 46.7	+0.9
N47A	Urbana	10.16	65	Pn	Pn	08 48 46.0	0.0
FPAL	Fort Paine	10.29	101	Pn	Pn	08 48 49.3	+1.4
E38A	The Farm, Brul	10.52	25	Pn	Pn	08 48 51.2	+0.3
Z50A	Ashland	10.53	108	Pn	Pn	08 48 52.5	+1.4
H43A	Windswept, Lux	10.55	43	Pn	Pn	08 48 51.6	+0.2
BW06	Boulder Array	10.55	305		Pn	08 48 51.9	+0.3
PD31	Pinedale Array	10.55	305		Pn	08 48 51.9	+0.3
PDAR	Pinedale Array	10.55	305	Pn	Pn	08 48 50.0	-1.7
	1.2nm,0.3s,baz=116,slow=14,SNR=33						
PDAR	Pinedale Array	10.55	305		Pn	08 48 51.4	-0.3
R50A	Paris	10.78	80	Pn	Pn	08 48 55.1	+0.5
CPCT	Cooper Cave	10.91	95		Pn	08 48 58.0	+1.7
V51A	Loudon	10.97	93		Pn	08 48 58.2	+1.1
COWI	Conover	11.04	33		Pn	08 48 57.1	-0.9
M48A	Edgerton	11.05	63	Pn	Pn	08 48 57.8	-0.4
AGMN	Agassiz Nation	11.20	7	Pn	Pn	08 48 58.0	-2.2
F42A	Maple Grove Fa	11.24	37		Pn	08 49 01.2	+0.4
N49A	Columbus Grove	11.28	66	Pn	Pn	08 49 00.3	-1.0
LAO	LASA Array	11.34	329	Pn	Pn	08 49 03.4	+1.1
S51A	Beattyville	11.36	83		Pn	08 49 03.5	+0.9
TKL	Tuckaleechee C	11.46	93	Pn	Pn	08 49 04.1	+0.2
	1.1nm,0.3s,baz=217,slow=4.7,SNR=17						
TKL				Lg	Lg	08 52 17.2	
	2.9nm,0.3s,baz=157,slow=23,SNR=10						
TKL	Tuckaleechee C	11.46	93		Pn	08 49 04.7	+0.9
HWUT	Hardware Ranch	11.48	297		Pn	08 49 04.9	+0.6
TZTN	Tazewell	11.49	89	Pn	Pn	08 49 05.9	+1.6
V52A	Sevierville	11.56	92		Pn	08 49 06.2	+0.9
AHID	Auburn Hatcher	11.57	303		Pn	08 49 06.4	+0.8
Q51A	Peebles	11.59	76	Pn	Pn	08 49 06.4	+0.8
J47A	Sunmer	11.66	55	Pn	Pn	08 49 06.8	+0.3
SNOW	Snow King Moun	11.66	307		Pn	08 49 07.3	+0.5
REDW	Red Top Meadow	11.67	306	Pn	Pn	08 49 07.6	+0.7
RLMT	Red Lodge	11.68	316		Pn	08 49 06.6	-0.4
152A	Waverly Hall	11.69	109	Pn	Pn	08 49 09.6	+2.5
EYMN	Ely	11.73	22		Pn	08 49 05.1	-2.3
Y52A	Lilburn	11.73	102	Pn	Pn	08 49 09.0	+1.5
TPAW	Teton Pass	11.79	306		Pn	08 49 07.8	-0.9
T52A	Hallie	11.88	86	Pn	Pn	08 49 10.5	+0.9
FXWY	Fox Creek	11.91	307		Pn	08 49 10.6	+0.4
FLWY	Flagg Ranch	11.93	309		Pn	08 49 11.2	+0.8
ACSO	Alum Creek Sta	12.02	71		Pn	08 49 10.0	-1.5
YNE	Yellowstone No	12.03	314		Pn	08 49 12.1	+0.3
D41A	Chassel	12.03	32		Pn	08 49 09.3	-2.3
G45A	Suttons Bay	12.09	46		Pn	08 49 11.1	-1.3
DGMT	Dagmar	12.19	340		Pn	08 49 13.4	-0.4
I47A	Gladwin	12.22	52	Pn	Pn	08 49 13.5	-0.8
M50A	Fremont	12.23	65		Pn	08 49 13.6	-0.8
E43A	Lone Tree Farm	12.24	38		Pn	08 49 11.6	-2.9
GOGA	Godfrey	12.35	103	Pn	Pn	08 49 17.3	+1.3
J48A	Bridge Port	12.36	56		Pn	08 49 14.7	-1.4
GLMI	Grayling	12.57	49		Pn	08 49 17.7	-1.4
N51A	Ashland	12.61	68		Pn	08 49 18.6	-0.9
R53A	Hurricane	12.65	80	Pn	Pn	08 49 20.6	+0.5
U54A	Nelsons Funny	12.87	88	Pn	Pn	08 49 23.2	0.0
HODGE	Hodges	13.03	98	Pn	Pn	08 49 26.6	+1.4
ULM	Lac du Bonnet	13.13	6	Pn	Pn	08 49 21.5	-5.1
	0.5nm,0.3s,baz=186,slow=10,SNR=6.4						
ULM				Sn	Sn	08 51 41.8	-11
	1.2nm,0.3s,baz=112,slow=14,SNR=4.7						
ULM				Lg	Lg	08 53 05.3	
	1.1nm,0.3s,baz=321,slow=2.6,SNR=5.7						
ULM	Lac du Bonnet	13.13	6		Pn	08 49 23.2	-3.4
P53A	Whipple	13.14	75	Pn	Pn	08 49 25.5	-1.3
PAULI	Pauline	13.21	96	Pn	Pn	08 49 27.7	-0.1
V55A	Taylorsville	13.46	91	Pn	Pn	08 49 31.3	+0.1
M52A	Chesterland	13.49	66	Pn	Pn	08 49 30.3	-1.3
Q54A	Coxs Mills	13.54	77	Pn	Pn	08 49 31.8	-0.5
E46A	Sault Ste Mari	13.64	44		Pn	08 49 31.0	-2.6
255A	Hazlehurst	13.72	108	Pn	Pn	08 49 35.5	+0.7
EGMT	Eagleton	13.90	325		Pn	08 49 37.8	+0.6
BLA	Blacksburg	13.91	85	Pn	Pn	08 49 38.8	+1.4
O54A	Avella	13.99	72	Pn	Pn	08 49 39.2	+0.9
R55A	Marlinton	14.09	80	Pn	Pn	08 49 39.1	-0.8
BIRD	Birdtown, Kers	14.34	95	Pn	Pn	08 49 41.9	-1.2
N54A	Moraine State	14.39	69	Pn	Pn	08 49 43.2	-0.7
ALLY	Alegheny Colle	14.40	67		Pn	08 49 42.1	-1.9
M54A	Oil Creek Stat	14.73	67	Pn	Pn	08 49 46.0	-2.5
T57A	Hurt	14.86	85	Pn	Pn	08 49 50.4	+0.1
O56A	Blue Knob Stat	15.38	73	Pn	Pn	08 49 55.2	-1.9
M55A	Ridgway	15.38	68	Pn	Pn	08 49 55.1	-2.2
M56A	Emporium	15.82	68	Pn	Pn	08 49 59.8	-3.2
M56A				IAmb	IAmb	08 50 02.9	
	comp=Z,10nm,1.1s						
SSPA	Standing Stone	15.93	71	Pn	Pn	08 50 02.9	-1.4
SSPA				IAmb	IAmb	08 50 13.4	
	comp=Z,13nm,1.4s						
SADO	Sadowa	16.02	56	Pn	Pn	08 50 01.7	-3.8
	comp=Z,0.3nm,0.3s,baz=269,slow=13,SNR=3.4						
SADO				Lg	Lg	08 54 37.7	
	comp=Z,0.2nm,0.3s,baz=188,slow=2.8,SNR=3.6						
SADO				LR	LR	08 56 10.3	
	comp=Z,115nm,21.0s,baz=326,slow=37						
SADO	Sadowa	16.02	56		Pn	08 50 02.3	-3.2
SADO				IAmb	IAmb	08 50 04.5	
	comp=Z,12nm,1.4s						
L56A	Greenwood	16.39	66	Pn	Pn	08 50 09.0	-1.3
N58A	Sunbury	16.83	71	P	Pn	08 50 14.2	-1.7
N59A	State Game Lan	17.55	71	P	Pn	08 50 25.4	+0.5
FFC	Flin Flon	17.77	352	P	P	08 50 28.7	+0.5
K58A	Earlville	17.90	65	P	P	08 50 29.9	+0.1
J58A	Remsen	18.28	63	P	Pn	08 50 31.5	-2.3
J58A				IAmb	IAmb	08 50 41.8	
	comp=Z,5.7nm,0.9s						
ODNJ	Ogdensburg	18.45	71	P	Pn	08 50 38.1	+2.3
J59A	Piesco	18.86	63	P	Pn	08 50 42.2	+1.4
ACCN	Adirondack Com	19.44	64	P	Pn	08 50 48.6	+0.8
YBH	Yreka Blue Hor	19.68	291	P	P	08 50 49.1	-0.4
	comp=Z,0.0nm,0.3s,baz=114,slow=18,SNR=2.1						
YKA	Yellowknife Ar	27.36	343	P	P	08 52 05.0	-0.1
	comp=Z,0.3nm,0.8s,baz=144,slow=9.2,SNR=4.3						
ILAR	Eielson Array	39.80	330	P	P	08 53 53.9	+0.8
	comp=Z,0.6nm,0.7s,baz=108,slow=7.0,SNR=8.7						
ARCES	ARCESS Array B	65.86	19	P	P	08 57 05.7	+0.3
	comp=Z,6.1nm,1.1s,baz=317,slow=6.3,SNR=2.7						

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*NNC **16** 08:58:18.3±1.3, 39°.84N×75°.98E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=9.3km s-min=7.8km az=145.0*

*SOME **16** 08:58:19.9, 39°.98N×76°.03E, h5^{km}*

*KRNET **16** 08:58:25.2±0.1, 40°.07N×76°.04E, mb3.0*

ISC 16 08:58:20.0±2.5**, 39°.9N**±0°.1×**76°.08E**±0°.04**, h10^{km}, n37,** σ1^{s}**49**/59**, 11C-19D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	1.53	358	⇓*i*P	Pg	08 58 50.8	+1.4
	baz=58						
NRN				⇓*i*S	Sg	08 59 09.6	+0.4
	baz=58						
KZA	Kyzart	2.26	344	⇓*i*P	Pg	08 59 04.1	+0.8
	baz=44						
KZA				⇓*i*S	Sg	08 59 31.9	-0.8
	baz=44						
KZA	Kyzart	2.26	344	P	Pg	08 59 05.1	+1.7
	SNR=13						
ULHL	Ulahol	2.34	3	⇓*e*P	Pg	08 59 05.1	+0.2
	baz=4.0						
ULHL				⇓*i*S	Sg	08 59 34.1	-1.2
	baz=4.0						
ULHL	Ulahol	2.34	3	P	Pg	08 59 05.3	+0.4
	SNR=14						
ARLS	Aral	2.37	326	⇓*i*P	Pg	08 59 05.4	+0.1
	baz=25						
ARLS				⇓*i*S	Sg	08 59 34.7	-1.3
	baz=25						
KDJ	Kajisay	2.38	20	⇓*i*P	Pg	08 59 05.6	+0.1
	baz=23						
KDJ				⇓*i*S	Sg	08 59 35.2	-1.1
	baz=23						
BOOM	Boomskoye usch	2.59	358	⇑*i*P	Pg	08 59 08.3	-1.3
	baz=58						
BOOM				⇑*i*S	Sb	08 59 39.6	+1.1
	baz=58						
UCH	Uchtor	2.61	334	⇓*e*P	Pg	08 59 08.8	-1.1
	baz=32						
UCH				⇓*i*S	Sb	08 59 40.6	+1.3
	baz=32						
UCH	Uchtor	2.61	334	P	Pg	08 59 10.6	+0.6
	SNR=5.6						
ARSB	Arslanbob	2.75	302	⇑*i*P	Pg	08 59 11.2	-1.5
	baz=99						
ARSB				⇑*e*S	Sb	08 59 45.0	+1.9
	baz=99						
AML	Almayashu	2.86	322	⇓*e*P	Pb	08 59 12.2	+0.8
	baz=20						
AML				⇓*i*S	Sb	08 59 46.6	-0.1
	baz=20						
AML	Almayashu	2.86	322	P	Pg	08 59 15.0	+0.1
	SNR=8.5						
KBK	Karagaybulak	2.88	343	⇓*i*P	Pb	08 59 12.4	+0.9
	baz=43						
KBK				⇓*i*S	Sb	08 59 46.9	0.0
	baz=43						
KBK	Karagaybulak	2.88	343	P	Pg	08 59 15.7	+0.5
	SNR=7.0						
AAK	Ala-Archa	2.98	337	⇑*e*P	Pb	08 59 14.1	+0.8
	baz=36						
AAK				⇑*e*S	Sb	08 59 49.3	-0.5
	baz=36						
AAK	Ala-Archa	2.98	337	P	Pg	08 59 17.2	+0.1
	SNR=5.1						
AAK	Ala-Archa	2.98	337	⇑Pg	Pb	08 59 13.7	+0.5
	5.7nm,0.7s						
AAK				⇓Lg	Lg	08 59 52.6	
	15nm,0.7s						
ANVS	Anan'yevo	3.12	22	⇑*i*P	Pb	08 59 15.6	0.0
	baz=24						
ANVS				⇑*i*S	Sb	08 59 53.2	-0.5
	baz=24						
PRZ	Przheval'sk	3.12	33	⇑*i*P	Pb	08 59 16.5	+0.9
	baz=36						
PRZ				⇑*i*S	Sb	08 59 53.8	0.0
	baz=36						
KST	Kastek	3.14	358	*e*P	Pb	08 59 17.5	+1.6
	7.3nm,0.4s						
KST				*e*S	Sg	08 59 59.0	-1.8
	9.6nm,0.6s						
KST	Kastek	3.14	358	Pg	Pb	08 59 17.2	+1.3
	7.3nm,0.4s						
KST				Lg	Lg	09 00 01.4	
	9.6nm,0.6s						
IZV	Izvestkoviy	3.16	7	*e*P	Pb	08 59 18.1	+1.8
	2.5nm,0.4s						
IZV				*e*S	Sg	09 00 00.1	-1.3
	10.0nm,0.5s						
IZV	Izvestkoviy	3.16	7	Pg	Pb	08 59 18.1	+1.8
	2.5nm,0.4s						
IZV				Lg	Lg	09 00 02.8	
	12nm,0.6s						
TNSS	Tian-Shan	3.20	12	*e*P	Pb	08 59 17.7	+0.6
	3.0nm,0.3s						
TNSS				*e*S	Sg	08 59 59.5	-3.3
	6.1nm,0.7s						
TNSS	Tian-Shan	3.20	12	Pg	Pb	08 59 17.7	+0.6
	3.0nm,0.3s						
TNSS				Lg	Lg	09 00 02.5	
	6.4nm,0.5s						
EKS2	Erkin-Say	3.25	329	⇓*e*P	Pb	08 59 17.7	-0.2
	baz=27						
EKS2				⇓*i*S	Sb	08 59 55.8	-1.9
	baz=27						
MDOK	Medeo	3.34	12	*e*P	Pb	08 59 20.2	+0.8
	1.6nm,0.5s						
MDOK				*e*S	Sg	09 00 03.3	-3.9
	12nm,0.5s						
MDOK	Medeo	3.34	12	Pg	Pb	08 59 20.2	+0.8
	1.6nm,0.5s						
MDOK				Lg	Lg	09 00 06.5	
	12nm,0.5s						
DGS	Degeres	3.34	356	*e*P	Pb	08 59 19.9	+0.4
	3.5nm,0.7s						
DGS				*e*S	Sb	09 00 02.9	+2.7
	9.0nm,0.5s						
DGS	Degeres	3.34	356	Pg	Pb	08 59 19.8	+0.4
	3.5nm,0.7s						
DGS				Lg	Lg	09 00 06.0	
	9.0nm,0.5s						
KOTS	Kotyrbulak	3.42	13	*e*P	Pb	08 59 21.9	+1.2
	4.0nm,0.3s						
KOTS				*e*S	Sg	09 00 06.6	-3.2

	43nm,0.5s						
KOTS	Kotyrbulak	3.42	13	Pg	Pb	08 59 21.9	+1.2
	4.0nm,0.3s						
KOTS				Lg	Lg	09 00 09.6	
	43nm,0.5s						
MRKS	Merke	3.56	324	*e*P	Pb	08 59 23.5	+0.4
	2.6nm,0.6s						
MRKS				*e*S	Sb	09 00 09.3	+2.9
	3.5nm,0.8s						
MRKS	Merke	3.56	324	Pg	Pb	08 59 23.5	+0.4
	2.6nm,0.6s						
MRKS				Lg	Lg	09 00 11.9	
	3.5nm,0.8s						
CHKK	Chushkaly	4.01	9	*e*P	Pb	08 59 33.1	+2.4
	1.1nm,0.1s						
CHKK				*e*S	Sg	09 00 25.6	-3.0
	5.7nm,0.3s						
CHKK	Chushkaly	4.01	9	Pg	Pb	08 59 33.1	+2.4
	1.1nm,0.1s						
CHKK				Lg	Lg	09 00 28.5	
	5.7nm,0.3s						

*KRNET **16** 09:11:31.4±0.1, 42°.90N×77°.27E, h18^{km}, mb3.1*
*NNC **16** 09:11:31.0±0.5, 42°.89N×77°.30E, h0^{km}, mb3.7, mpv3.6, Error ellipse: s-maj=3.4km s-min=1.7km az=17.0*
*SOME **16** 09:11:31.6, 42°.92N×77°.25E, h15^{km}*
ISC 16 09:11:31.4±0.9**, 42°.90N**±0°.02×**77°.24E**±0°.01**, h13**^{km}±7^{km}**, n63,** σ1^{s}**34**/121**, 28C-31D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNSS	Tian-Shan	0.26	303	⇑*e*P	Pg	09 11 37.5	+0.4
	baz=0.0						
TNSS				⇑*e*S	Sg	09 11 41.8	+0.9
	baz=0.0						
TNSS	Tian-Shan	0.26	303	⇑*e*P	Pg	09 11 37.5	+0.4
	356nm,0.1s						
TNSS				*e*S	Sg	09 11 41.7	+0.9
	353nm,0.1s						
TNSS	Tian-Shan	0.26	303	P	Pg	09 11 37.5	+0.4
	367nm,0.1s						
TNSS				S	Sg	09 11 41.7	+0.9
	441nm,0.2s						
MDOK	Medeo	0.30	332	⇓*e*P	Pg	09 11 37.8	+0.1
	baz=28						
MDOK				⇓*e*S	Sg	09 11 42.1	+0.2
	baz=28						
MDOK	Medeo	0.30	332	⇓*e*P	Pg	09 11 37.8	+0.1
	16nm,0.2s						
MDOK				*e*S	Sg	09 11 42.2	+0.2
	309nm,0.2s						
MDOK	Medeo	0.30	332	P	Pg	09 11 37.8	+0.1
	3.7nm,0.2s						
MDOK				⇑S	Sg	09 11 41.7	-0.2
	101nm,0.3s						
MDOK	Medeo	0.30	332	Pg	Pg	09 11 37.8	+0.1
	16nm,0.2s						
MDOK				Lg	Lg	09 11 42.2	
	309nm,0.2s						
ANVS	Anan'yevo	0.34	110	⇑*i*P	Pg	09 11 37.7	-0.6
	baz=11						
ANVS				⇑*i*S	Sg	09 11 42.1	-0.9
	baz=11						
KOTS	Kotyrbulak	0.35	345	⇓*e*P	Pg	09 11 38.7	+0.1
	baz=40						
KOTS				⇓*e*S	Sg	09 11 43.7	+0.3
	baz=40						
KOTS	Kotyrbulak	0.35	345	⇓*e*P	Pg	09 11 38.7	+0.1
	102nm,0.1s						
KOTS				*e*S	Sg	09 11 43.7	+0.3
	586nm,0.2s						
KOTS	Kotyrbulak	0.35	345	P	Pg	09 11 38.7	+0.1
	102nm,0.1s						
KOTS				S	Sg	09 11 43.7	+0.3
	586nm,0.2s						
KNDC	Almaty	0.38	328	⇑S	Sg	09 11 45.2	+1.0
	135nm,0.3s						
AAA	Alma-Ata	0.39	323	*e*P	Pb	09 11 40.1	-0.2
	66nm,0.1s						
AAA				*e*S	Sb	09 11 46.2	0.0
	451nm,0.2s						
AAA	Alma-Ata	0.39	323	P	Pb	09 11 40.1	-0.2
	66nm,0.1s						
AAA				S	Sb	09 11 46.2	0.0
	451nm,0.2s						
IZV	Izvestkoviy	0.48	287	⇑*e*P	Pg	09 11 41.3	+0.4
	baz=86						
IZV				⇑*e*S	Sg	09 11 48.3	+1.0
	baz=86						
IZV	Izvestkoviy	0.48	287	⇑*e*P	Pg	09 11 41.3	+0.4
	40nm,0.1s						
IZV				*e*S	Sg	09 11 48.4	+1.0
	92nm,0.3s						
IZV	Izvestkoviy	0.48	287	P	Pg	09 11 41.4	+0.4
	40nm,0.1s						
IZV				S	Sg	09 11 48.4	+1.0
	124nm,0.4s						
MTBS	Maitube	0.64	292	⇑*e*P	Pg	09 11 44.1	+0.3
	baz=91						
MTBS				⇑*e*S	Sg	09 11 52.9	+0.6
	baz=91						
MTBS	Maitube	0.64	292	⇑*e*P	Pg	09 11 44.1	+0.3
	22nm,0.1s						
MTBS				*e*S	Sg	09 11 52.9	+0.6
	40nm,0.2s						
MTBS	Maitube	0.64	292	P	Pg	09 11 44.1	+0.3
	22nm,0.1s						
MTBS				S	Sg	09 11 52.9	+0.6
	40nm,0.2s						
KDJ	Kajisay	0.77	183	⇑*i*P	Pg	09 11 45.9	-0.4
	baz=84						
KDJ				⇑*i*S	Sg	09 11 56.4	0.0
	baz=84						
SATY	Saty	0.87	79	*e*P	Pg	09 11 47.4	-0.9
	17nm,0.1s						
SATY				*e*S	Sg	09 11 58.7	-1.1
	149nm,0.2s						
SATY	Saty	0.87	79	P	Pg	09 11 47.3	-0.9
	21nm,0.2s						
SATY				S	Sg	09 11 58.7	-1.1
	149nm,0.2s						
KURS	Kuram	0.90	49	*e*P	Pb	09 11 47.9	-1.0
	baz=48						
KURS				*e*S	Sb	09 11 59.4	-1.5
	baz=48						
KURS	Kuram	0.90	49	*e*P	Pb	09 11 47.9	-1.0
	2.8nm,0.1s						
KURS				*e*S	Sb	09 11 59.4	-1.5
	20nm,0.3s						
KURS	Kuram	0.90	49	P	Pb	09 11 47.9	-1.0
	2.8nm,0.1s						
KURS				S	Sb	09 11 59.4	-1.5
	20nm,0.3s						
KTBS	Karatobe	0.91	334	⇓*e*P	Pb	09 11 48.7	-0.4
	5.0nm,0.2s						
KTBS				*e*S	Sb	09 12 00.8	-0.3
	58nm,0.3s						
KTBS	Karatobe	0.91	334	P	Pb	09 11 48.7	-0.4
	5.0nm,0.2s						
KTBS				S	Sb	09 12 00.8	-0.3
	58nm,0.3s						
KST	Kastek	0.95	279	⇑*e*P	Pb	09 11 49.7	0.0
	baz=79						
KST				⇑*e*S	Sb	09 12 02.7	+0.5
	baz=79						
KST	Kastek	0.95	279	⇑*e*P	Pb	09 11 49.7	0.0
	42nm,0.2s						
KST				*e*S	Sb	09 12 02.7	+0.5
	19nm,0.3s						
KST	Kastek	0.95	279	P	Pb	09 11 49.7	0.0
	42nm,0.2s						
KST				S	Sb	09 12 02.7	+0.5
	19nm,0.3s						
PRZ	Przheval'sk	0.95	115	⇑*i*P	Pb	09 11 49.4	-0.4
	baz=16						
PRZ				⇑*i*S	Sn	09 12 02.5	-1.6
	baz=16						
CHKK	Chushkaly	0.97	349	⇓*e*P	Pb	09 11 49.7	-0.4
	baz=49						
CHKK				⇓*e*S	Sb	09 12 02.6	-0.3
	baz=49						
CHKK	Chushkaly	0.97	349	⇓*e*P	Pb	09 11 49.7	-0.4
	21nm,0.1s						
CHKK				*e*S	Sb	09 12 02.6	-0.3
	74nm,0.3s						
CHKK	Chushkaly	0.97	349	P	Pb	09 11 49.7	-0.4
	21nm,0.1s						
CHKK				S	Sb	09 12 02.6	-0.3
	74nm,0.3s						
ULHL	Ulahol	0.98	229	⇑*i*P	Pb	09 11 50.2	-0.2
	baz=30						
ULHL				⇑*i*S	Sb	09 12 03.2	-0.1
	baz=30						
BOOM	Boomskoye usch	1.04	247	⇑*i*P	Pb	09 11 51.3	0.0
	baz=48						
BOOM				⇑*i*S	Sb	09 12 05.6	+0.7
	baz=48						
DGS	Degeres	1.13	288	⇓*e*P	Pb	09 11 52.8	0.0
	baz=88						
DGS				⇓*e*S	Sb	09 12 08.2	+0.7
	baz=88						
DGS	Degeres	1.13	288	⇓*e*P	Pb	09 11 52.8	0.0
	7.0nm,0.1s						
DGS				*e*S	Sb	09 12 08.1	+0.7
	22nm,0.2s						
DGS	Degeres	1.13	288	P	Pb	09 11 52.9	+0.1
	7.0nm,0.1s						
DGS				S	Sb	09 12 08.1	+0.7
	22nm,0.2s						
KPKS	Kokpek	1.20	61	*e*P	Pn	09 11 53.2	-0.8
	baz=62						
KPKS				*e*S	Sb	09 12 08.6	-0.9
	baz=62						
KPKS	Kokpek	1.20	61	*e*P	Pn	09 11 53.2	-0.8
	10nm,0.1s						
KPKS				*e*S	Sb	09 12 08.6	-0.9
	96nm,0.3s						
UZB	Uzynbulak	1.33	79	⇓*e*P	Pn	09 11 55.2	-0.6
	7.5nm,0.2s						
UZB				*e*S	Sb	09 12 12.2	-1.1
	56nm,0.1s						
UZB	Uzynbulak	1.33	79	P	Pn	09 11 55.2	-0.6
	12nm,0.2s						
UZB				S	Sb	09 12 12.2	-1.1
	56nm,0.1s						
ARXS	Arharly	1.38	18	⇓*e*P	Pb	09 11 56.6	-0.6
	15nm,0.2s						
ARXS				*e*S	Sb	09 12 14.6	-0.1
	52nm,0.2s						
ARXS	Arharly	1.38	18	P	Pb	09 11 56.6	-0.6
	15nm,0.2s						
ARXS				S	Sb	09 12 14.6	-0.1
	52nm,0.2s						
SHLS	Shalkode	1.65	80	*e*P	Pg	09 12 06.6	+3.5
	baz=81						
SHLS				*e*S	Sg	09 12 31.5	+6.9
	baz=81						
SHLS	Shalkode	1.65	80	*e*P	Pg	09 12 06.5	+3.5
	19nm,0.2s						
SHLS				*e*S	Sg	09 12 31.4	+6.9
	44nm,0.2s						
SHLS	Shalkode	1.65	80	Pg	Pg	09 12 07.4	+4.3
	20nm,0.2s						
SHLS				Lg	Lg	09 12 33.1	
	52nm,0.4s						
KZA	Kyzart	1.68	242	⇑*i*P	Pb	09 12 02.8	+0.4
	baz=42						
KZA				⇑*i*S	Sb	09 12 25.1	+1.4
	baz=42						
KBK	Karagaybulak	1.70	263	⇑*i*P	Pb	09 12 03.1	+0.5
	baz=63						
KBK				⇑*e*S	Sg	09 12 26.0	-0.2
	baz=63						
NRN	Naryn	1.73	213	⇓*i*P	Pb	09 12 03.6	+0.4
	baz=14						
NRN				⇓*i*S	Sg	09 12 27.0	0.0
	baz=14						
CHMS	Chumysh	1.83	274	⇓*i*P	Pb	09 12 04.8	+0.1
	baz=74						
CHMS				⇓*i*S	Sg	09 12 30.0	-0.2
	baz=74						
AAK	Ala-Archa	2.04	264	⇓*i*P	Pb	09 12 08.4	+0.1
	baz=64						
AAK				⇓*i*S	Sb	09 12 35.2	+1.6
	baz=64						
USP	Ospenovka	2.04	281	⇓*i*P	Pb	09 12 08.5	+0.2
	baz=81						
USP				⇓*i*S	Sb	09 12 35.4	+1.8
	baz=81						
UCH	Uchtor	2.12	253	⇓*i*P	Pb	09 12 09.5	-0.4
	baz=53						
UCH				⇓*i*S	Sb	09 12 37.5	+1.2
	baz=53						
DJR	Jarkent	2.34	51	*e*P	Pb	09 12 13.7	+0.2
	1.0nm,0.2s						
DJR				*e*S	Sb	09 12 43.7	+1.4
	11nm,0.3s						
DJR	Jarkent	2.34	51	Pg	Pg	09 12 14.7	-1.7
DJR				Lg	Lg	09 12 45.1	
ARLS	Aral	2.40	245	⇓*e*P	Pb	09 12 13.0	-1.4
	baz=46						
ARLS				⇓*i*S	Sb	09 12 43.5	-0.4
	baz=46						
EKS2	Erkin-Say	2.56	266	⇓*i*P	Pb	09 12 15.6	-1.6
	baz=66						
EKS2				⇓*i*S	Sb	09 12 47.4	-1.2
	baz=66						
AML	Almayashu	2.73	255	⇓*i*P	Pb	09 12 18.3	-2.0
	baz=55						
AML				⇓*i*S	Sb	09 12 51.9	-1.9
	baz=55						
KAPS	Kapalarasan	2.83	32	*e*P	Pb	09 12 22.2	+0.4
	2.8nm,0.3s						
KAPS				*e*S	Sb	09 12 58.3	+1.8
	16nm,0.2s						
KAPS	Kapalarasan	2.83	32	Pg	Pb	09 12 22.5	+0.6
	3.1nm,0.5s						
KAPS				Lg	Lg	09 12 58.3	
	11nm,0.4s						

*IDC **16** 09:25:48.9±0.5, 13°.53N×121°.01E, h215^{km}±3^{km}, mb3.5/9, mb1 3.7/9, mb1mx3.3/39, mbtmp4.0/9, Error ellipse: s-maj=31.0km s-min=12.1km az=61.0*
*NEIC **16** 09:25:50.0±0.8, 13°.5N±0°.1×120°.9E±0°.2, h221^{km}±6^{km}, mb4.1/14, Error ellipse: s-maj=31.6km s-min=11.1km az=67.0*
*MAN **16** 09:25:51.0, 13°.59N×120°.70E, h188^{km}, mb4.4, ML3.3, MS3.1*
ISC 16 09:25:48.8±0.6**, 13°.54N**±0°.06×**120°.77E**±0°.09**, h200**^{km}**, n41,** σ**1^{s}66**/44**, mb3.9**/17**, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	Lubang	0.54	290	*e*P	Pn	09 26 17.2	+1.2
LUBP				*e*S	Sn	09 26 38.2	+1.1
TGY	Tagaytay City	0.58	16	P	Pn	09 26 20.4	+4.1
	152nm,0.3s,baz=183,slow=2.5,SNR=7.5						
TGY				S	Sn	09 26 41.7	+4.0
	149nm,0.3s,baz=247,slow=22,SNR=15						
LQP	Lukban	0.94	53	*e*P	Pn	09 26 20.4	+2.0
BOAC	Boac	1.05	94	*e*P	Pn	09 26 20.9	+2.0
BUSP	Coron	1.63	200	*e*P	Pn	09 26 26.4	+2.7
OTRP	Odiongan	1.69	134	*e*P	Pn	09 26 26.2	+1.9
BALP	Baler	2.32	20	*e*P	Pn	09 26 32.4	+1.7
SCZP	Santa Cruz	2.37	340	*e*P	Pn	09 26 32.4	+1.2
SCZP				*e*S	Sn	09 26 50.8	-14
SMPP	San Manuel, Pa	2.59	358	*e*P	Pn	09 26 35.3	+1.5
SMPP				*e*S	Sn	09 27 09.3	+0.3
BOLP	Bolinao	2.94	344	*e*P	Pn	09 26 38.9	+1.2
CAUP	Cauayan	3.53	17	*e*P	Pn	09 26 47.2	+2.4
CM31	Chiang Mai Arr	21.53	286	P	P	09 30 24.0	+1.5
CM31				IAmb	IAmb	09 30 25.4	
	comp=Z,8.5nm,0.9s						
CMAR	Chiang Mai Arr	21.53	286	P	P	09 30 23.8	+1.3
	comp=Z,2.8nm,0.7s,baz=98,slow=7.9,SNR=24						
CMAR	Chiang Mai Arr	21.53	286	P	P	09 30 24.0	+1.5
WB0	Warramunga Arr	35.72	158	P	P	09 32 26.4	-2.1
WB0				IAmb	IAmb	09 32 28.4	
	comp=Z,5.9nm,1.2s						
WRAB	Tennant Creek	35.85	158	P	P	09 32 27.8	-1.9
WRAB				IAmb	IAmb	09 32 30.0	
	comp=Z,8.4nm,1.4s						
WRA	Warramunga Arr	35.86	158	P	P	09 32 26.2	-3.5
	comp=Z,3.3nm,0.3s,baz=343,slow=13,SNR=14						
WB2	Warramunga Arr	35.86	158	P	P	09 32 27.9	-1.8
WB2				IAmb	IAmb	09 32 31.0	
	comp=Z,7.7nm,1.3s						
WR0	Warramunga Arr	35.95	158	P	P	09 32 28.6	-1.8
AS31	Alice Springs	39.15	161	P	P	09 32 56.0	-1.3
ASAR	Alice Springs	39.15	161	P	P	09 32 56.0	-1.3
	comp=Z,1.1nm,0.5s,baz=338,slow=7.3,SNR=25						
ASAR	Alice Springs	39.15	161	P	P	09 32 57.0	-0.3
MKAR	Makanchi Array	46.20	324	P	P	09 33 53.8	+0.1
	comp=Z,0.7nm,0.7s,baz=123,slow=8.8,SNR=7.0						
MKAR	Makanchi Array	46.20	324	P	P	09 33 54.1	+0.4
NIL	Nilore	47.45	303	P	P	09 34 03.9	+0.2
NIL				IAmb	IAmb	09 34 04.3	
	comp=Z,7.4nm,0.6s						
ZALV	Zalesovo Beam	49.23	333	P	P	09 34 15.3	-1.4
	comp=Z,0.9nm,0.3s,baz=113,slow=11,SNR=2.9						
KURK	Kurchatov	50.35	326	P	P	09 34 25.5	+0.2
GAR	Garm	51.07	309	P	P	09 34 31.2	+0.2
ABKAR	Akbulak array	60.89	319	P	P	09 35 40.0	-0.4
ARU	Arti	63.55	327	P	P	09 35 57.0	-0.8
PPLA	Purkeypile	76.71	28	P	P	09 37 17.9	+0.1
BPAW	Bear Paw Mtn.	77.17	27	P	P	09 37 20.5	+0.3
BPAW				IAmb	IAmb	09 37 37.6	
	comp=Z,3.8nm,1.4s						
RND	Reindeer	78.18	27	P	P	09 37 24.6	-1.2
RND				IAmb	IAmb	09 37 38.5	
	comp=Z,6.0nm,1.4s						
ARCES	ARCESS Array B	79.25	339	P	P	09 37 30.5	-1.0
	comp=Z,1.0nm,0.4s,baz=80,slow=6.8,SNR=11						
ARCES	ARCESS Array B	79.25	339	P	P	09 37 31.1	-0.4
FINES	FINESS Array B	80.45	331	P	P	09 37 37.2	-0.8
	comp=Z,2.2nm,0.9s,baz=58,slow=4.7,SNR=10.0						
FINES	FINESS Array B	80.45	331	P	P	09 37 37.3	-0.7
BURAR	Bucovina Array	83.82	317	P	P	09 37 56.1	+0.1
BUR08	Bucovina Ar. S	83.82	317	P	P	09 37 56.1	+0.1
BUR08				IAmb	IAmb	09 38 05.5	
	comp=Z,4.0nm,1.2s						
NOA	NORSAR Array B	87.43	333	P	P	09 38 12.4	-1.0
	comp=Z,0.8nm,0.9s,baz=62,slow=6.8,SNR=2.5						
YKA	Yellowknife Ar	92.89	22	P	P	09 38 37.5	-1.2
	comp=Z,0.1nm,0.6s,baz=298,slow=3.7,SNR=5.3						

IDC 16 09:29:47.9±3.2**, 6°.00S**×**126°.12E, h448**^{km}±41^{km}**, mb2.6**/1**, mb1 2.9**/3**, mb1mx2.5**/35**, mbtmp3.6**/3**, Error ellipse: s-maj=146.3km s-min=16.1km az=64.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.00	151	P	P	09 33 08.1	-1.6
	baz=328,slow=10,SNR=2.1						
WRA				S	S	09 35 38.5	-18
	9.5nm,0.3s,baz=321,slow=25,SNR=34						
ASAR	Alice Springs	19.09	158	P	P	09 33 41.9	+0.6
	0.4nm,0.3s,baz=332,slow=10,SNR=13						
ASAR				S	S	09 36 52.5	+0.8
	0.1nm,0.3s,baz=315,slow=21,SNR=3.8						
MKAR	Makanchi Array	65.32	328	P	P	09 39 44.3	-0.2
	0.2nm,0.4s,baz=123,slow=7.4,SNR=5.1						

DJA 16 09:51:50.6±0.6**, 5°S**±4°×**13°0E**±°**, h203**^{km}±8^{km}**, M3.8**/7**, mB4.7**/1**, mb3.8**/3**, MLv3.9**/7**, Mw(mB)3.9**/1**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	0.91	5	P	Pn	09 52 20.0	-0.1
MSAI	Masohi	2.25	337	P	Pn	09 52 32.2	+0.2
MSAI				S	S	09 53 04.9	+1.1
SAUI	Saumlaki	2.93	150	P	Pn	09 52 39.8	+0.2
FAKI	Fak Fak	3.48	44	P	Pn	09 52 45.8	-0.3
FAKI				S	S	09 53 30.2	+1.1
SWI	Sorong	4.76	18	P	Pn	09 53 01.5	-0.6
SANI	Sanana	5.09	311	P	Pn	09 53 05.6	-0.7
	0.1nm18nm,0.8s						
LBMI	Labuha	5.29	334	P	Pn	09 53 09.0	+0.1

*NIED **16** 09:59:00, 24°.30N×123°.60E, h8^{km}, Mw3.7 Best double couple: $M_0$3.43000×10^{14} NP1:ϕ_s191.00000°, δ67.00000°, λ-52.00000°. NP2:ϕ_s308.00000°, δ44.00000°, λ-145.00000°.*
*JMA **16** 09:59:12.2, 24°.34N×123°.59E, h16^{km}±1^{km}, M3.6*
JMA Felt I J1.
*IDC **16** 09:59:16.8±5.1, 24°.36N×123°.61E, h51^{km}±48^{km}, mb3.4/4, mb1 3.6/5, mb1mx3.2/67, mbtmp3.6/5, ML2.6/1, MS2.9/2, Ms1 3.0/2, ms1mx2.5/29, Error ellipse: s-maj=43.5km s-min=21.8km az=76.0*
ISC 16 09:59:12.0±0.9**, 24°.38N**±0°.05×**123°.60E**±0°.03**, h19**^{km}±2^{km}**, n15,** σ**2^{s}22**/23**, mb3.8**/4**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	Iriomote-Funau	0.13	110	P	Pb	09 59 15.9	+2.1
IRIF				S	Sb	09 59 18.5	+3.6
HATJ	Hateruma jima	0.37	149	P	Pg	09 59 19.1	-0.7
HATJ				*e*S	Sg	09 59 24.2	-0.9
JKRS	Kuro-shima	0.40	110	P	Pg	09 59 20.4	+0.1
JKRS				S	Sb	09 59 26.7	+0.4
JIJ	Ishigaki jima	0.50	92	P	Pb	09 59 22.0	-0.1
JIJ				S	Sb	09 59 29.3	+0.3
YOJ	Yonaguni jima	0.54	279	P	Pb	09 59 22.7	-0.1
YOJ				*e*S	Sg	09 59 30.1	-0.1
JYNG	Yonagunijimaku	0.60	277	P	Pg	09 59 23.9	0.0
JYNG				*e*S	Sg	09 59 32.2	+0.2
JISG	Ishigakijimahi	0.68	72	P	Pb	09 59 25.6	+0.4
JISG				*e*S	Sg	09 59 35.7	+1.1
JTJ	Tarama	1.04	75	P	Pn	09 59 32.1	+0.6
JTJ				S	Sg	09 59 46.7	+0.9
JOW	Kunigami	4.88	59	P	Pn	10 00 27.7	+3.4
	0.5nm,0.3s,baz=224,slow=18,SNR=17						
JOW				S	Sn	10 01 13.0	-7.3
	0.3nm,0.3s,baz=113,slow=15,SNR=2.5						
KSRS	Korea Array	13.55	15	P	P	10 02 30.1	-2.0
	0.1nm,0.3s,baz=197,slow=11,SNR=3.5						
CMAR	Chiang Mai Arr	23.68	260	LR	LR	10 14 45.6	
	comp=Z,21nm,21.2s,baz=135,slow=39						
MKAR	Makanchi Array	39.75	315	P	P	10 06 44.4	+1.0
	0.2nm,0.3s,baz=91,slow=8.6,SNR=3.5						
MKAR				LR	LR	10 24 12.9	
	comp=Z,28nm,19.0s,baz=352,slow=38						
WRA	Warramunga Arr	45.28	166	P	P	10 07 28.5	0.0
	1.3nm,0.7s,baz=346,slow=8.8,SNR=7.1						
ASAR	Alice Springs	48.80	167	P	P	10 07 57.4	+1.4
	0.5nm,0.5s,baz=350,slow=7.2,SNR=14						
YKA	Yellowknife Ar	81.93	23	P	P	10 11 30.8	+0.7
	0.5nm,0.7s,baz=299,slow=4.9,SNR=14						

*IDC **16** 10:06:17.4±1.6, 15°.77S×173°.98W, h0^{km}, mb4.4/4, mb1 4.6/5, mb1mx3.9/35, mbtmp4.5/5, ML5.2/1, Error ellipse: s-maj=53.1km s-min=27.5km az=141.0*
*NEIC **16** 10:06:23.3±1.4, 15°.72S±0°.07×173°.8W±0°.1, h53^{km}±10^{km}, mb4.6/12, Error ellipse: s-maj=17.5km s-min=9.1km az=75.0*
ISC 16 10:06:26.6±0.7**, 15°.7S**±0°.1×**173°.4W**±0°.2**, h100**^{km}**, n46,** σ**2^{s}97**/37**, mb4.5**/10**, 1C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	2.41	42	Pn	Pn	10 07 03.8	-0.9
	372nm,0.3s,baz=159,slow=0.7,SNR=220						
AFI				Sn	Sn	10 07 31.4	-2.4
	268nm,0.3s,baz=55,slow=21,SNR=10						
KNTN	Kanton	12.98	8	Pn	Pn	10 09 28.0	+0.6
OUZ	Omahuta	22.63	209	P	P	10 11 21.1	+1.9
OUZ				IAmb	IAmb	10 11 29.2	
	comp=Z,32nm,1.4s						
URZ	Urewera	23.94	199	P	P	10 11 31.4	0.0
	comp=Z,5.7nm,0.5s,baz=348,slow=1.7,SNR=7.2						
URZ	Urewera	23.94	199	P	P	10 11 31.2	-0.3
URZ				IAmb	IAmb	10 11 43.6	
	comp=Z,61nm,1.2s						
RIGZ	Rimuhau	24.17	197	P	P	10 11 39.6	+6.1
MUGZ	Murupara	24.25	199	P	P	10 11 41.4	+7.2
PRGZ	Paritu Road	24.33	197	P	P	10 11 38.4	+3.4
SNGZ	Shannon Statio	24.36	198	P	P	10 11 36.2	+1.0
PRRZ	Plateau Road	24.39	200	P	P	10 11 44.2	+8.7
ALRZ	Allen Road	24.46	200	P	P	10 11 43.6	+7.5
WPRZ	Whakapapatarin	24.48	200	P	P	10 11 46.2	+10
KNZ	Kokohu	24.48	197	P	P	10 11 35.0	-1.3
MHGZ	Mahia Peninsul	24.54	196	P	P	10 11 37.2	+0.3
RAHZ	Arahi	24.56	198	P	P	10 11 33.6	-3.4
WHHZ	Waihua	24.66	198	P	P	10 11 31.3	-6.7
MRHZ	Matea Rd	24.69	199	P	P	10 11 39.4	+1.1
NMHZ	Naumai	24.81	198	P	P	10 11 33.0	-6.4
ARHZ	Aropaoanui	24.90	198	P	P	10 11 30.2	-10
BKZ	Black Stump Fm	24.97	199	P	P	10 11 36.0	-4.8
MCHZ	McNeill Hill	25.16	198	P	P	10 11 34.2	-8.3
KWHZ	Kaweka Forest	25.23	199	P	P	10 11 37.2	-6.0
CKHZ	Cape Kidnapper	25.25	197	P	P	10 11 34.3	-9.0

BHHZ	**Black Hill Sta**	**25.40**	**199**	P	P	10 11 37.1	-7.7
KAHZ	**Kahuranaki**	**25.43**	**198**	P	P	10 11 37.1	-7.9
KRHZ	**Kereru**	**25.44**	**199**	P	**P**	**10 11 39.0**	**-6.1**
BHW	**Baring Head**	**27.52**	**199**	P	**P**	**10 12 01.7**	**-2.0**
THZ	**Tophouse**	**28.50**	**202**	P	**P**	**10 12 13.1**	**+0.6**
DSZ	**Denniston Nort**	**28.89**	**203**	P	P	10 12 40.0	+24
LTZ	**Lake Taylor**	**29.62**	**202**	P	**P**	**10 12 20.5**	**-1.9**
WHZ	**Wether Hill Ro**	**33.88**	**204**	P	**P**	**10 13 00.8**	**+1.1**
STKA	**Stephens Creek**	**43.85**	**240**	P	**P**	**10 14 21.8**	**-1.3**
	comp=Z,4.7nm,0.9s,baz=76,slow=10,SNR=6.2						
STKA	**Stephens Creek**	**43.85**	**240**	P	**P**	**10 14 21.9**	**-1.1**
WR0	**Warramunga Arr**	**49.55**	**257**	P	**P**	**10 15 07.0**	**-0.7**
WR0				IAmb	IAmb	10 15 14.5	
	comp=Z,4.2nm,1.2s						
WB0	**Warramunga Arr**	**49.70**	**257**	P	**P**	**10 15 08.3**	**-0.6**
WB0				IAmb	IAmb	10 15 18.8	
	comp=Z,15nm,1.5s						
WB2	**Warramunga Arr**	**49.73**	**257**	P	**P**	**10 15 08.4**	**-0.7**
WB2				IAmb	IAmb	10 15 18.9	
	comp=Z,12nm,1.4s						
WRAB	**Tennant Creek**	**49.73**	**257**	P	**P**	**10 15 08.1**	**-1.0**
WRAB				IAmb	IAmb	10 15 24.5	
	comp=Z,13nm,1.5s						
WRA	**Warramunga Arr**	**49.74**	**257**	P	**P**	**10 15 08.1**	**-1.1**
	comp=Z,1.1nm,0.4s,baz=96,slow=6.5,SNR=16						
WRA	**Warramunga Arr**	**49.74**	**257**	P	**P**	**10 15 07.8**	**-1.4**
AS31	**Alice Springs**	**49.98**	**252**	P	**P**	**10 15 09.4**	**-1.6**
AS31				IAmb	IAmb	10 15 11.2	
	comp=Z,1.5nm,0.7s						
ASAR	**Alice Springs**	**49.98**	**252**	P	**P**	**10 15 09.2**	**-1.8**
	comp=Z,5.9nm,0.6s,baz=87,slow=7.7,SNR=102						
ASAR	**Alice Springs**	**49.98**	**252**	P	**P**	**10 15 09.0**	**-2.0**
QSPA	**South Pole Qui**	**74.32**	**180**	P	**P**	**10 17 55.4**	**+2.4**
IMAR	**Indian Mountai**	**82.80**	**8**	P	**P**	**10 18 42.4**	**+3.2**
SYO	**Syowa Base**	**92.27**	**191**⇑	*e*P	**P**	**10 19 25.8**	**+0.8**
CLL	**Collm**	**144.13**	**353**	*i* PKPbc	**PKPdf**	**10 25 50.7**	**+0.2**

IDC 16 10:35:41.0±4.7**,8°.19S**×**128°.20E,h151**^{km}±50^{km}**,mb3.4**/1**,**
mb1 3.3/5**,mb1mx3.1**/35**,mbtmp3.7**/5**,Error ellipse:**
s-maj=55.7km s-min=20.4km az=55.0,Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KAPI	**Kappang**	**8.97**	**290**	P	Pn	10 37 45.5	-1.8
	3.7nm,0.3s,baz=135,slow=10.0,SNR=4.8						
FITZ	**Fitzroy Crossi**	**10.16**	**194**	P	Pn	10 38 03.5	+0.4
	0.2nm,0.3s,baz=169,slow=3.4,SNR=5.1						
FITZ				S	Sn	10 39 55.0	-0.6
	0.1nm,0.3s,baz=148,slow=2.5,SNR=2.7						
WRA	**Warramunga Arr**	**13.11**	**154**	P	Pn	10 38 41.4	-0.2
	0.1nm,0.3s,baz=336,slow=12,SNR=5.3						
WRA				S	Sn	10 41 04.0	-2.6
	0.3nm,0.3s,baz=334,slow=22,SNR=8.5						
ASAR	**Alice Springs**	**16.33**	**161**	P	P	10 39 22.1	+0.2
	0.1nm,0.3s,baz=338,slow=10,SNR=15						
ASAR				S	Sn	10 42 25.2	+1.2
	0.1nm,0.3s,baz=336,slow=27,SNR=4.8						
MKAR	**Makanchi Array**	**68.26**	**328**	P	P	10 46 26.0	+0.5
	0.7nm,0.7s,baz=130,slow=7.9,SNR=8.0						

MAN 16 10:37:24.3,10°.52N×**125°.44E,h28**^{km}**,mb4.4,ML3.3,**
MS3.1,Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.69**	**236**	*e*P	Pn	10 37 38.3	0.0
MSLP				*e*S	Sn	10 37 49.9	+1.8
SCPH	**Surigao**	**0.74**	**176**	*e*P	Pb	10 37 38.6	0.0
SCPH				*e*S	Sn	10 37 50.3	+1.1
OCLP	**Ormoc**	**0.97**	**303**	*e*P	Pn	10 37 42.1	-0.1
OCLP				*e*S	Sb	10 38 01.6	+6.5
BUTP	**Butuan**	**1.55**	**173**	*e*P	Pn	10 37 50.0	-0.2
BUTP				*e*S	Sb	10 38 16.5	+4.7
TBP	**Tagbilaran**	**1.76**	**242**	*e*P	Pn	10 37 52.4	-0.6
CNP	**Catarman**	**2.12**	**339**	*e*P	Pn	10 37 58.4	+0.5
CNP				*e*S	Sb	10 38 28.7	+0.8
BUKP	**Musuan**	**2.65**	**188**	*e*P	Pn	10 38 06.9	+1.6
BUKP				*e*S	Sb	10 38 44.1	+0.7

*ATH **16** 11:05:39.6, 34°.79N×24°.98E, h26^{km}±5^{km}, ML2.9/6, Error ellipse: s-maj=6.8km s-min=1.6km az=346.0*
*IDC **16** 11:05:40.2±1.6, 34°.48N×25°.16E, h0^{km}, mb3.3/2, mb1 3.2/4, mb1mx3.1/40, mbtmp3.2/4, ML3.3/2, Error ellipse: s-maj=73.1km s-min=23.8km az=136.0*
*THE **16** 11:05:40.1, 34°.76N×25°.00E, h9^{km}±1^{km}, ML2.9/6, Error ellipse: s-maj=1.8km s-min=0.6km az=16.0*
ISC 16 11:05:40.4±1.6**,34°.76N**±0°.07×**25°.00E**±0°.03**,h10**^{km}±10^{km}**,**
n23,σ**0**^{s}**.83**/33**,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.30**	**328**	P	**Pg**	**11 05 46.2**	**-0.2**
SIVA				S	**Sg**	**11 05 51.3**	**+0.9**
	9µm,0.5s						
SIVA	**Sivas**	**0.30**	**328**	P	**Pg**	**11 05 46.2**	**-0.2**
SIVA				S	**Sg**	**11 05 51.0**	**+0.5**
SIVA				AML	AML	11 05 54.0	
	comp=N,14451µm,0.4s						
SIVA				AML	AML	11 05 55.6	
	comp=E,23011µm,0.5s						
TMBK	**Timbaki Herakl**	**0.36**	**328**	P	**Pg**	**11 05 47.9**	**+0.3**
TMBK				S	**Sg**	**11 05 53.4**	**+0.9**
	comp=E,2µm,0.6s						
IDI	**Anoyia**	**0.53**	**350**	P	**Pg**	**11 05 50.1**	**-0.6**
IDI	**Anoyia**	**0.53**	**350**	P	**Pg**	**11 05 50.2**	**-0.6**
IDI				S	**Sg**	**11 05 57.4**	**-0.4**
IDI				AML	AML	11 05 59.0	
	comp=E,5225µm,0.5s						
IDI				AML	AML	11 06 00.7	
	comp=N,3028µm,0.6s						
KSTL	**Kastelli Herak**	**0.54**	**6**	P	**Pg**	**11 05 50.5**	**-0.5**
KSTL				S	**Sg**	**11 05 58.5**	**+0.4**
HRKL	**Herakleio**	**0.55**	**9**	P	**Pg**	**11 05 51.1**	**-0.1**
HRKL				S	**Sg**	**11 05 59.2**	**+0.7**
	comp=N,4µm,0.6s						
LAST	**Lasithi**	**0.56**	**44**	P	**Pg**	**11 05 51.0**	**-0.3**
LAST	**Lasithi**	**0.56**	**44**	P	**Pg**	**11 05 51.0**	**-0.3**
LAST				S	**Sb**	**11 05 59.7**	**-0.7**
LAST				AML	AML	11 06 04.8	
	comp=N,1879µm,0.4s						
LAST				AML	AML	11 06 09.1	
	comp=E,1576µm,0.5s						
NPS	**Neapolis**	**0.71**	**45**	P	**Pg**	**11 05 53.6**	**-0.5**
NPS				S	**Sb**	**11 06 04.3**	**-0.3**
	comp=E,652nm,0.3s						
NPS	**Neapolis**	**0.71**	**45**	P	**Pg**	**11 05 53.4**	**-0.6**
NPS				AML	AML	11 06 08.8	
	comp=E,1365µm,0.3s						
NPS				AML	AML	11 06 13.1	
	comp=N,1870µm,0.6s						
PRNS	**Prines Rethymn**	**0.73**	**326**	P	**Pg**	**11 05 54.1**	**-0.3**
PRNS				S	**Sb**	**11 06 05.7**	**+0.5**
GVD	**Gavdhos**	**0.76**	**276**	P	**Pg**	**11 05 54.8**	**-0.2**
VAM	**Vamos**	**0.92**	**315**	P	**Pg**	**11 05 56.9**	**-1.2**
VAM				S	**Sb**	**11 06 11.0**	**+0.3**
	comp=N,782nm,0.5s						
ZKR	**Zakros**	**1.06**	**70**	P	**Pg**	**11 06 00.2**	**-0.5**
ZKR	**Zakros**	**1.06**	**70**	P	**Pg**	**11 05 59.7**	**-1.0**
ZKR				AML	AML	11 06 27.6	
	comp=N,667µm,0.4s						
ZKR				AML	AML	11 06 29.1	
	comp=E,1464µm,0.6s						
IMMV	**Iera Moni Meta**	**1.09**	**310**	P	**Pg**	**11 05 59.8**	**-1.5**
IMMV				S	**Sb**	**11 06 15.9**	**+0.3**
	comp=E,665nm,0.6s						
IMMV	**Iera Moni Meta**	**1.09**	**310**	P	**Pg**	**11 05 59.3**	**-2.0**
IMMV				AML	AML	11 06 25.2	
	comp=N,1484µm,0.5s						
IMMV				AML	AML	11 06 25.8	
	comp=E,1540µm,0.7s						
RODP	**Rodopos**	**1.29**	**308**	P	**Pn**	**11 06 02.8**	**-1.7**
BRTR	**Keskin Array B**	**8.48**	**52**	Pn	Pn	11 07 48.7	+5.2
	comp=E,0.1nm,0.3s,baz=236,slow=14,SNR=2.3						
AKASG	**Malin Array Be**	**16.22**	**10**	Pn	**P**	**11 09 31.8**	**+0.4**
	comp=E,0.6nm,0.3s,baz=202,slow=10,SNR=6.1						
TORD	**Torodi Ar. Bea**	**30.14**	**230**	P	**P**	**11 11 51.3**	**+0.8**
	comp=E,0.3nm,0.5s,baz=28,slow=8.1,SNR=3.0						
MKAR	**Makanchi Array**	**44.10**	**56**	P	**P**	**11 13 49.9**	**+1.1**
	comp=E,0.2nm,0.5s,baz=264,slow=7.8,SNR=2.8						

*IDC **16** 11:15:23.5±0.5, 15°.95S×179°.54W, h0^{km}, mb4.4/18, mb1 4.6/18, mb1mx4.5/26, mbtmp4.4/18, MS4.3/29, Ms1 4.3/29, ms1mx4.2/34, Error ellipse: s-maj=20.9km s-min=15.8km az=114.0*
*NEIC **16** 11:15:23.8±2.9, 15°.74S±0°.07×179°.5W±0°.1, h10^{km}±1^{km}, mb4.8/83, Error ellipse: s-maj=21.8km s-min=11.0km az=103.0*
*GCMT **16** 11:15:28.8±0.2, 15°.75S±0°.01×179°.47W±0°.01, h19^{km}, MW5.1/127, Moment Tensor Solution. s62,c84; s127,c217; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.10±.15; $M_{\theta\theta}$2.97±.13; $M_{\phi\phi}$-1.88±.12; $M_{r\theta}$-0.89±.27; $M_{\theta\phi}$5.81±.12; $M_{\phi r}$-0.59±.26; Best double couple: $M_0$6.36600×10^{16} NP1:ϕ_s282.00000°,δ85.00000°, λ5.00000°. NP2:ϕ_s191.00000°,δ85.00000°,λ175.00000°. Principal axes: T 6.9810, Plg8.0000°, Azm146.0000°; N -1.2400, Plg82.0000°, Azm326.0000°; P -5.7510, Plg0.0000°, Azm236.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **16** 11:15:29.6±0.0, 18°.29S×176°.43E, h33^{km}, Ms4.8*
ISC 16 11:15:24.5±0.4**,15°.78S**±0°.07×**179°.46W**±0°.08**,h10**^{km}**,**
n194,σ**1**^{s}**.55**/158**,mb4.8**/56**,MS4.3**/28**,2C,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.08**	**230**		**Pn**	**11 16 11.4**	**-1.9**
FUNA	**Funafuti**	**7.33**	**350**	Pn	**Pn**	**11 17 06.9**	**-4.7**
AFI	**Afiamalu**	**7.66**	**77**	LR	LR	11 19 45.9	
	comp=Z,3µm,21.4s,baz=234,slow=34						
RAO	**Raoul Island**	**13.49**	**174**	LR	LR	11 23 04.7	
	comp=Z,3µm,18.2s,baz=346,slow=35						
DZM	**Mont Dzumac**	**14.73**	**243**	*e*P	**P**	**11 19 01.5**	**+2.3**
	104nm,1.4s						
DZM				*e*LQ	LQ	11 21 45.0	
	3µm,25.1s						
DZM				*e*LR	LR	11 22 26.0	
	comp=Z,3µm,25.6s						
DZM	**Mont Dzumac**	**14.73**	**243**	LR	LR	11 23 34.6	
	comp=Z,2µm,21.4s,baz=76,slow=34						
RAR	**Rarotonga**	**19.43**	**109**	LR	LR	11 25 23.5	
	comp=Z,888nm,19.2s,baz=270,slow=31						
HNR	**Honiara**	**21.05**	**285**	LR	LR	11 26 58.8	
	comp=Z,1µm,19.3s,baz=116,slow=33						
URZ	**Urewera**	**22.60**	**187**	LR	LR	11 27 40.7	
	comp=Z,936nm,20.2s,baz=6.5,slow=33						
THZ	**Tophouse**	**26.72**	**193**	P	**P**	**11 21 02.5**	**-1.6**
THZ				IAmb	IAmb	11 21 20.8	
	comp=Z,43nm,1.2s						
LTZ	**Lake Taylor**	**27.83**	**193**	P	**P**	**11 21 11.7**	**-2.4**
OXZ	**Oxford**	**28.40**	**193**	P	**P**	**11 21 16.6**	**-2.5**
PPT2	**Papeete2**	**28.67**	**98**	*e*LR	LR	11 28 33.2	
	comp=Z,494nm,24.8s						
PPT	**Papeete**	**28.67**	**98**	LR	LR	11 29 26.0	
	comp=Z,225nm,21.6s,baz=234,slow=29						
TBI	**Tubuai**	**29.21**	**110**	*e*S	**S**	**11 26 18.8**	**-0.5**
	comp=Z,161nm,26.6s						
TBI				*e*LQ	LQ	11 27 38.8	
	comp=Z,2µm,28.0s						
TBI				*e*LR	LR	11 28 52.0	
	comp=Z,1µm,30.5s						
MLZ	**Mavora Lakes**	**31.30**	**197**	P	**P**	**11 21 44.4**	**-0.4**
RMQ	**Roma**	**31.42**	**245**	P	**P**	**11 21 46.8**	**+0.8**
	baz=31,SNR=16						
DCZ	**Deep Cove**	**31.67**	**198**	P	**P**	**11 21 49.4**	**+1.5**
DCZ				IAmb	IAmb	11 21 52.5	
	comp=Z,20nm,0.9s						
WHZ	**Wether Hill Ro**	**31.83**	**197**	P	**P**	**11 21 48.4**	**-1.0**
CMSA	**Cobar Meteorol**	**35.38**	**237**	P	**P**	**11 22 20.2**	**-0.3**
	baz=35,SNR=18						
QLP	**Quilpie**	**35.41**	**246**	P	**P**	**11 22 20.5**	**-0.3**
	baz=35,SNR=7.3						
COEN	**Coen**	**36.13**	**268**	P	**P**	**11 22 27.2**	**0.0**
	baz=36,SNR=5.9						
STKA	**Stephens Creek**	**38.82**	**239**	P	**P**	**11 22 50.1**	**+0.3**
	baz=39,SNR=13						
STKA	**Stephens Creek**	**38.82**	**239**	P	**P**	**11 22 50.3**	**+0.4**
	comp=Z,17nm,1.0s,baz=35,slow=7.4,SNR=9.3						
STKA				LR	LR	11 37 03.3	
	comp=Z,789nm,21.7s,baz=62,slow=34						
STKA	**Stephens Creek**	**38.82**	**239**	P	**P**	**11 22 50.2**	**+0.4**
TAOE	**Nuku Hiva Isla**	**38.97**	**85**	*e*LR	LR	11 33 23.8	
	comp=Z,737nm,25.1s						
HTT	**Hallett**	**41.40**	**237**	P	**P**	**11 23 11.9**	**+0.6**
	baz=41,SNR=5.7						
BBOO	**Buckleboo**	**43.60**	**239**	P	**P**	**11 23 27.4**	**-1.7**
	baz=43,SNR=5.2						
WB0	**Warramunga Arr**	**44.02**	**258**	P	**P**	**11 23 30.6**	**-2.1**
WB0				IAmb	IAmb	11 23 37.0	
	comp=Z,19nm,0.8s						
WRA	**Warramunga Arr**	**44.07**	**258**	P	**P**	**11 23 32.1**	**-0.9**
	comp=Z,12nm,0.8s,baz=91,slow=8.9,SNR=18						
WRA				LR	LR	11 40 48.4	
	comp=Z,318nm,19.1s,baz=75,slow=35						
WRA	**Warramunga Arr**	**44.07**	**258**	P	**P**	**11 23 30.9**	**-2.2**
AS31	**Alice Springs**	**44.44**	**252**	P	**P**	**11 23 34.9**	**-1.1**
AS31				IAmb	IAmb	11 23 42.0	
	comp=Z,8.6nm,0.7s						
ASAR	**Alice Springs**	**44.44**	**252**	P	**P**	**11 23 35.0**	**-1.1**
	comp=Z,22nm,1.0s,baz=85,slow=8.9,SNR=60						
ASAR				LR	LR	11 40 22.4	
	comp=Z,384nm,21.8s,baz=92,slow=34						
ASAR	**Alice Springs**	**44.44**	**252**	P	**P**	**11 23 34.7**	**-1.3**
KDU	**Kakadu**	**46.62**	**267**	P	**P**	**11 23 53.1**	**-0.2**
	baz=46,SNR=4.5						
MTN	**Manton Dam**	**47.88**	**267**	P	**P**	**11 24 02.2**	**-0.9**
	baz=48,SNR=3.5						
WRKA	**Warakurna**	**49.57**	**250**	P	**P**	**11 24 15.4**	**-0.7**
	baz=49,SNR=29						
FITZ	**Fitzroy Crossi**	**52.41**	**259**	P	**P**	**11 24 37.9**	**+0.4**
	baz=52,SNR=7.8						
FITZ	**Fitzroy Crossi**	**52.41**	**259**	LR	LR	11 44 55.5	
	comp=Z,457nm,20.5s,baz=267,slow=34						
SOEI	**Soe**	**55.08**	**269**	P	**P**	**11 24 58.6**	**+1.4**
JCJ	**Chichijima**	**56.59**	**318**	LR	LR	11 46 03.5	
	comp=Z,319nm,19.9s,baz=106,slow=32						
MEEK	**Meekatharra**	**58.26**	**248**	P	**P**	**11 25 20.9**	**+1.2**
	baz=58,SNR=3.3						
KLBR	**Kellerberrin**	**58.89**	**242**	P	**P**	**11 25 22.6**	**-1.4**
	baz=59,SNR=6.1						
MORW	**Morawa**	**60.43**	**245**	P	**P**	**11 25 36.2**	**+1.6**
	baz=60,SNR=3.4						
JHJ	**Hachijo jima 2**	**62.28**	**322**	LR	LR	11 50 27.2	
	comp=Z,110nm,18.3s,baz=136,slow=34						
VNDA	**Vanda**	**62.48**	**185**	P	**P**	**11 25 47.9**	**+0.3**
	comp=Z,1.8nm,0.9s,baz=346,slow=4.6,SNR=2.9						
VNDA				LR	LR	11 48 32.4	
	comp=Z,263nm,19.7s,baz=328,slow=32						
MJAR	**Matsushiro Arr**	**65.60**	**323**	P	**P**	**11 26 08.7**	**0.0**
	comp=Z,3.4nm,0.7s,baz=157,slow=6.6,SNR=10						
MJAR				LR	LR	11 49 10.2	
	comp=Z,254nm,21.9s,baz=105,slow=31						
MJAR	**Matsushiro Arr**	**65.60**	**323**	P	**P**	**11 26 08.7**	**0.0**
JNU	**Nakatsue**	**67.91**	**316**	LR	LR	11 51 08.9	
	comp=Z,140nm,21.6s,baz=117,slow=32						
JKA	**Kamikawa-asahi**	**68.93**	**332**	P	**P**	**11 26 30.8**	**+1.2**
ASAJ	**Asahikawa**	**68.93**	**332**	P	**P**	**11 26 30.8**	**+1.2**
	comp=Z,3.6nm,0.9s,baz=112,slow=19,SNR=3.7						
PETK	**Petropavlovsk-**	**71.38**	**346**	P	**P**	**11 26 47.2**	**+2.8**
	comp=Z,11nm,1.1s,baz=148,slow=14,SNR=3.8						
PETK				LR	LR	11 51 50.6	
	comp=Z,243nm,20.3s,baz=203,slow=31						
PETK	**Petropavlovsk-**	**71.38**	**346**	P	**P**	**11 26 46.9**	**+2.4**
KSM	**Kuching**	**71.42**	**277**	P	**P**	**11 26 46.2**	**+0.7**
KSRS	**Korea Array**	**72.45**	**318**	P	**P**	**11 26 53.0**	**+1.7**
	comp=Z,1.1nm,0.8s,baz=125,slow=6.2,SNR=6.1						
KSRS				LR	LR	11 55 59.0	
	comp=Z,147nm,19.5s,baz=122,slow=34						
KSAR	**Wonju Array Be**	**72.46**	**318**	P	**P**	**11 26 53.5**	**+2.2**
QSPA	**South Pole Qui**	**74.27**	**180**	P	**P**	**11 27 01.1**	**-0.6**
	comp=Z,4.8nm,0.8s,baz=136,slow=1.8						
QSPA	**South Pole Qui**	**74.27**	**180**	P	**P**	**11 27 01.2**	**-0.6**
USRK	**Ussuriysk Ar.**	**74.29**	**326**	P	**P**	**11 27 03.4**	**+1.4**
	comp=Z,2.1nm,0.7s,baz=189,slow=8.0,SNR=4.9						
USRK				LR	LR	11 57 29.4	
	comp=Z,158nm,18.9s,baz=134,slow=34						
USRK	**Ussuriysk Ar.**	**74.29**	**326**	P	**P**	**11 27 01.9**	**-0.1**
NJ2	**Nanjing**	**75.81**	**310**	*e*P	**P**	**11 27 13.1**	**+2.1**
MDJ	**Mudanjiang**	**75.87**	**325**	P	**P**	**11 27 14.1**	**+3.0**
WDC	**Whiskeytown Da**	**76.99**	**41**	P	**P**	**11 27 19.6**	**+2.0**
WDC				IAmb	IAmb	11 27 25.6	
	comp=Z,15nm,1.4s						
CMB	**Columbia Colle**	**77.00**	**44**	P	**P**	**11 27 18.4**	**+0.7**
ISA	**Isabella, Lake**	**77.09**	**47**	P	**P**	**11 27 19.4**	**+1.1**
ISA				IAmb	IAmb	11 27 26.2	
	comp=Z,11nm,1.2s						
AFDM	**Forest Hills D**	**77.10**	**43**	IAmb	IAmb	11 27 28.7	
	comp=Z,6.7nm,1.1s						
YBH	**Yreka Blue Hor**	**77.53**	**40**	IAmb	IAmb	11 27 33.9	
	comp=Z,17nm,1.4s						
CN2	**Changchun**	**77.73**	**323**	*e*P	**P**	**11 27 22.8**	**+1.2**
BEKR	**Beckworth**	**77.99**	**42**	P	**P**	**11 27 24.2**	**+0.8**
PNTR	**Pine Nut**	**78.08**	**43**	P	**P**	**11 27 25.1**	**+1.1**
PNTR				IAmb	IAmb	11 27 31.8	
	comp=Z,15nm,1.2s						
VCNR	**Virginia City**	**78.16**	**43**	P	**P**	**11 27 26.2**	**+1.8**
VCNR				IAmb	IAmb	11 27 32.4	
	comp=Z,10nm,1.4s						
YERR	**Yerington**	**78.27**	**44**	IAmb	IAmb	11 27 32.1	
	comp=Z,14nm,1.4s						
PAHR	**Pah Rah Range**	**78.55**	**43**	P	**P**	**11 27 27.8**	**+1.4**
PAHR				IAmb	IAmb	11 27 38.1	
	comp=Z,7.1nm,1.1s						
RYN	**Ryan**	**78.56**	**44**	P	**P**	**11 27 26.2**	**-0.3**
NVAR	**Mina Array Bea**	**78.61**	**45**	P	**P**	**11 27 28.0**	**+1.1**
	comp=Z,1.3nm,0.8s,baz=227,slow=8.4,SNR=12						
NVAR				LR	LR	11 54 09.8	
	comp=Z,227nm,21.5s,baz=227,slow=30						
NVAR	**Mina Array Bea**	**78.61**	**45**	P	**P**	**11 27 27.4**	**+0.5**
NV11	**Mina Array Sit**	**78.71**	**45**	IAmb	IAmb	11 27 29.8	
	comp=Z,11nm,1.4s						
BRLK	**Bradley Lake**	**78.76**	**14**	P	**P**	**11 27 24.8**	**-2.2**
KVN	**Kaiserville**	**79.06**	**44**	P	**P**	**11 27 26.9**	**-2.5**
TPNV	**Topopah Spring**	**79.29**	**47**	P	**P**	**11 27 30.6**	**0.0**
GAMB	**Gambell**	**79.53**	**3**	IAmb	IAmb	11 27 40.5	
	comp=Z,17nm,1.1s						
H02S1	**DAWSON INLET T**	**79.67**	**27**	T	T	12 55 21.2	
	SNR=25						
PINE	**Pine Mountain**	**79.76**	**39**	IAmb	IAmb	11 27 40.5	
	comp=Z,11nm,0.9s						
TTA	**Tatalina**	**80.57**	**11**	IAmb	IAmb	11 27 46.4	
	comp=Z,22nm,1.1s						
I07A	**Izee**	**80.79**	**39**		**PcP**	**11 27 44.5**	**-0.7**
ANM	**Nome**	**80.82**	**6**	P	**P**	**11 27 41.4**	**+3.4**
J08A	**Circle Bar Ran**	**81.04**	**40**	IAmb	IAmb	11 27 49.5	
	comp=Z,6.8nm,0.9s						
PSUT	**Pine Spring**	**81.71**	**46**	P	**P**	**11 27 41.3**	**-2.3**
G08A	**Pilot Rock**	**81.76**	**38**	P	**P**	**11 27 44.1**	**+0.5**
G08A				IAmb	IAmb	11 27 51.2	
	comp=Z,9.6nm,1.2s						
KTH	**Kantishna Hill**	**82.12**	**12**	P	**P**	**11 27 43.8**	**-1.2**
KTH				IAmb	IAmb	11 27 54.8	
	comp=Z,6.1nm,1.0s						
BARN	**Barnard Glacie**	**82.30**	**18**	P	**P**	**11 27 45.6**	**-0.6**
BARN				IAmb	IAmb	11 27 55.1	
	comp=Z,12nm,1.0s						
RPSI	**Rantau Prapat**	**82.67**	**275**	P	**P**	**11 27 47.5**	**-1.4**
RPSI				IAmb	IAmb	11 27 56.5	
	comp=Z,16nm,1.1s						
MCK	**McKinley**	**82.70**	**13**	IAmb	IAmb	11 27 54.1	
	comp=Z,13nm,1.1s						
MFID	**Camas Ranch**	**82.73**	**41**	IAmb	IAmb	11 27 55.6	
	comp=Z,8.6nm,1.3s						
MLY	**Manley**	**83.47**	**12**	IAmb	IAmb	11 28 01.2	
	comp=Z,11nm,1.1s						
IMAR	**Indian Mountai**	**83.77**	**10**	P	**P**	**11 27 55.1**	**+1.6**
BCAR	**Beaver Creek A**	**83.89**	**16**	P	**P**	**11 27 52.9**	**-1.3**
MDM	**Murphy Dome**	**83.92**	**13**	P	**P**	**11 27 54.4**	**+0.1**
MDM				IAmb	IAmb	11 28 03.0	
	comp=Z,13nm,1.0s						
COLA	**College**	**83.93**	**13**	P	**P**	**11 27 54.5**	**+0.3**
ILAR	**Eielson Array**	**84.05**	**13**	P	**P**	**11 27 55.8**	**+0.9**
	comp=Z,5.4nm,1.1s,baz=235,slow=5.8,SNR=13						
ILAR	**Eielson Array**	**84.05**	**13**	P	**P**	**11 27 54.7**	**-0.2**
SCRK	**Sand Creek**	**84.07**	**15**	P	**P**	**11 27 55.0**	**-0.1**
SCRK				IAmb	IAmb	11 28 01.6	
	comp=Z,8.4nm,1.1s						
PBKT	**Sadao Pong**	**84.80**	**289**	P	**P**	**11 28 02.7**	**+2.9**
PBKT				IAmb	IAmb	11 28 09.2	
	comp=Z,6.1nm,1.1s						
DAWY	**Dawson**	**85.34**	**16**	IAmb	IAmb	11 28 10.4	
	comp=Z,6.9nm,1.1s						
AHID	**Auburn Hatcher**	**85.49**	**43**	P	**P**	**11 28 00.7**	**-2.2**
MAW	**Mawson**	**85.51**	**200**	P	**P**	**11 28 00.6**	**-1.8**
	comp=Z,43nm,1.0s,baz=29,slow=21,SNR=12						
MAW				LR	LR	12 03 32.4	
	comp=Z,248nm,18.6s,baz=83,slow=34						
MAW	**Mawson**	**85.51**	**200**	P	**P**	**11 27 58.4**	**-3.9**
COLD	**Coldfoot**	**85.52**	**11**	P	**P**	**11 27 59.9**	**-2.3**
COLD				IAmb	IAmb	11 28 16.3	
	comp=Z,8.0nm,1.2s						
ANMO	**Albuquerque**	**85.58**	**52**	P	**P**	**11 28 02.7**	**-0.8**
TX31	**Lajitas Ar. Si**	**85.72**	**58**	IAmb	IAmb	11 28 12.1	
	comp=Z,7.1nm,1.2s						
TXAR	**Lajitas Array**	**85.72**	**58**	P	**P**	**11 28 06.4**	**+2.2**
	comp=Z,2.6nm,0.8s,baz=212,slow=8.4,SNR=6.1						
TXAR				LR	LR	11 59 20.7	
	comp=Z,192nm,19.1s,baz=0.0,slow=31						
TXAR	**Lajitas Array**	**85.72**	**58**	P	**P**	**11 28 03.2**	**-1.0**
TPAW	**Teton Pass**	**85.91**	**43**	P	**P**	**11 28 05.4**	**+0.3**
TPAW				IAmb	IAmb	11 28 14.4	
	comp=Z,7.3nm,1.1s						
REDW	**Red Top Meadow**	**85.91**	**43**	IAmb	IAmb	11 28 24.5	
	comp=Z,13nm,1.2s						
FXWY	**Fox Creek**	**85.92**	**43**	IAmb	IAmb	11 28 14.4	
	comp=Z,7.8nm,1.4s						
SNOW	**Snow King Moun**	**86.02**	**43**	IAmb	IAmb	11 28 15.8	
	comp=Z,9.0nm,1.1s						
YHB	**Horse Butte**	**86.31**	**42**	P	**P**	**11 28 06.7**	**-0.3**
YMR	**Madison River**	**86.42**	**42**	P	**P**	**11 28 10.0**	**+2.5**
PD31	**Pinedale Array**	**86.51**	**44**	P	P	11 28 02.0	-6.1
PDAR	**Pinedale Array**	**86.51**	**44**	P	**P**	**11 28 10.0**	**+1.9**
	comp=Z,2.0nm,1.1s,baz=198,slow=0.9,SNR=6.7						
PDAR				LR	LR	11 59 10.0	
	comp=Z,143nm,20.9s,baz=296,slow=30						
PDAR	**Pinedale Array**	**86.51**	**44**	P	P	11 28 01.8	-6.2
H17A	**Grant Village**	**86.55**	**42**	IAmb	IAmb	11 28 18.9	
	comp=Z,5.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**87.22**	**290**	P	**P**	**11 28 13.1**	**+1.3**
	comp=Z,0.8nm,0.3s,baz=106,slow=2.8,SNR=8.2						
CMAR				LR	LR	12 04 54.6	
	comp=Z,62nm,20.1s,baz=120,slow=34						
LZH	**Lanzhou**	**88.80**	**308**	*e*P	**P**	**11 28 19.1**	**0.0**
LZH				pP	pwP	11 28 23.4	-0.5
LZH				sP	sP	11 28 26.5	+3.6
LZH				PP	**PP**	**11 31 45.4**	**-3.0**
ULN	**Ulaanbaatar**	**90.89**	**320**	P	**P**	**11 28 25.1**	**-3.4**
ULN				IAmb	IAmb	11 28 35.6	
	comp=Z,4.7nm,0.8s						
SYO	**Syowa Base**	**91.00**	**193**⇑	*e*P	**P**	**11 28 26.7**	**-1.8**
SYO	**Syowa Base**	**91.00**	**193**⇑	*e*PcP	**PcP**	**11 28 29.0**	**-0.5**
SONM	**Songino Array**	**91.28**	**320**	P	**P**	**11 28 30.4**	**0.0**
	comp=Z,1.5nm,0.9s,baz=358,slow=40,SNR=2.6						
SONM				LR	LR	12 04 24.7	
	comp=Z,108nm,21.9s,baz=66,slow=32						
SNAA	**Sanae**	**92.74**	**179**	P	**P**	**11 28 35.5**	**-1.2**
SNAA	**Sanae**	**92.74**	**179**	P	**P**	**11 28 35.6**	**-1.2**
	comp=Z,7.3nm,0.9s,baz=138,slow=21,SNR=4.1						
SNAA	**Sanae**	**92.74**	**179**	P	**P**	**11 28 35.7**	**-1.0**
YKA	**Yellowknife Ar**	**92.83**	**25**	P	**P**	**11 28 37.1**	**+0.2**
	comp=Z,0.3nm,0.9s,baz=241,slow=3.5,SNR=3.7						
YKA				PKKPbc	**PKKPbc**	**11 45 52.5**	**+1.9**
	comp=Z,0.1nm,0.4s,baz=37,slow=1.8,SNR=4.6						
YKA				LR	LR	12 07 23.1	
	comp=Z,170nm,18.3s,baz=0.0,slow=34						
VNA3	**Neumayer Olymp**	**92.92**	**177**	P	**P**	**11 28 36.2**	**-1.2**
VNA2	**Neumayer--Watz**	**93.34**	**177**	P	**P**	**11 28 38.8**	**-0.6**
	baz=173,slow=3.2						
PLCA	**Paso Flores**	**93.53**	**134**	LR	LR	12 01 25.8	
	comp=Z,72nm,21.8s,baz=251,slow=30						
VNA1	**Neumayer--Stat**	**93.58**	**177**	P	**P**	**11 28 40.1**	**-0.4**
TIXI	**Tiksi**	**93.85**	**346**	P	**P**	**11 28 40.8**	**-0.6**
TIXI				IAmb	IAmb	11 28 50.0	
	comp=Z,6.7nm,1.2s						
BRDH	**Bariadhala**	**94.96**	**292**	LR	LR	12 07 28.3	
	comp=Z,89nm,21.4s,baz=156,slow=33						
ULM	**Lac du Bonnet**	**97.94**	**40**	LR	LR	12 06 44.7	
	comp=Z,129nm,19.7s,baz=262,slow=31						
WMQ	**Urumqi**	**102.77**	**312**	*e*P	**Pdif**	**11 29 24.8**	**+2.4**
MKAR	**Makanchi Array**	**106.93**	**315**	PKiKP	**PKiKP**	**11 33 54.2**	**+3.7**
	comp=Z,0.6nm,0.6s,baz=63,slow=0.8,SNR=8.6						
KURBB	**Kurchatov Arra**	**109.63**	**319**	PKiKP	**PKiKP**	**11 33 56.0**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=92,slow=1.7,SNR=4.5						
KURBB				PKKPbc	**PKKPbc**	**11 45 03.2**	**+2.0**
	comp=Z,0.2nm,0.7s,baz=275,slow=4.2,SNR=6.3						
KSH	**Kashi**	**111.01**	**307**	PKP	**PKiKP**	**11 34 00.3**	**+1.7**
KSH				PP	PP	11 34 46.5	+9.3
KSH				SKS	**SKSdf**	**11 41 10.8**	**-0.2**
KSH				SKKS	**SKKSac**	**11 41 39.6**	**-0.6**

BVAR	**Borovoye Array**	**114.56**	**321**	PKP	**PKiKP**	**11 34 05.1**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=232,slow=20,SNR=3.0						
ARU	**Arti**	**120.53**	**327**	PKP	**PKiKP**	**11 34 17.9**	**+1.7**
	comp=Z,1.3nm,0.7s,baz=270,slow=1.0,SNR=5.8						
ABKAR	**Akbulak array**	**121.68**	**318**		**PKPdf**	**11 34 17.4**	**-1.2**
AKTO	**Aktyubinsk**	**122.60**	**320**	PKP	**PKiKP**	**11 34 21.0**	**+0.5**
	comp=Z,2.0nm,0.7s,baz=276,slow=7.2,SNR=4.1						
ARCES	**ARCESS Array B**	**124.05**	**350**	PKP	**PKiKP**	**11 34 23.1**	**+0.2**
	comp=Z,6.9nm,0.9s,baz=36,slow=20,SNR=3.5						
KLMR	**Klimovskoe**	**127.01**	**337**	*e*PKPdf	**PKiKP**	**11 34 28.6**	**-0.3**
KLMR				AMP		11 34 32.9	
	comp=Z,62nm,2.6s						
NOA	**NORSAR Array B**	**134.15**	**353**	PKP	**PKiKP**	**11 34 44.4**	**+1.0**
	comp=Z,1.3nm,0.9s,baz=40,slow=4.2,SNR=3.0						
AKASG	**Malin Array Be**	**138.21**	**333**	PKP	**PKiKP**	**11 34 52.6**	**+0.7**
	comp=Z,2.3nm,0.8s,baz=43,slow=2.6,SNR=4.0						
KMBO	**Kilima Mbogo**	**140.03**	**249**	PKP	**PKPdf**	**11 34 53.6**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=36,slow=8.7,SNR=2.8						
BRTR	**Keskin Array B**	**142.56**	**316**	PKP	**PKPdf**	**11 34 58.4**	**+0.1**
	comp=Z,2.1nm,1.1s,baz=35,slow=4.5,SNR=4.7						
CLL	**Collm**	**143.17**	**347**	*e*L	L	12 34 22.2	
	comp=Z,158nm,18.3s						
PRU	**Pruhonice**	**144.03**	**345**	*e*PKP	**PKiKP**	**11 35 03.9**	**+0.1**
VYHS	**Vyhne**	**144.08**	**339**	*e*PKP	**PKiKP**	**11 35 05.9**	**+1.9**
MOX	**Moxa**	**144.09**	**348**	*e*L	L	12 37 15.6	
	comp=Z,128nm,21.3s						
MMAI	**Mount Meron Ar**	**144.12**	**305**	PKP	**PKPdf**	**11 35 01.2**	**+0.1**
	comp=Z,11nm,0.8s,baz=69,slow=4.6,SNR=8.9						
MODS	**Modra-Piesok**	**144.70**	**341**	*e*PKP	**PKiKP**	**11 35 04.6**	**-0.7**
CSS	**Mathiatis**	**144.97**	**309**		**PKPab**	**11 35 00.2**	**-1.5**
TNS	**Taunus Mts**	**145.05**	**351**	*e*L	L	12 40 33.4	
	comp=Z,144nm,20.1s						
KHC	**Kasperske Hory**	**145.07**	**345**	*e*PKP	**PKPdf**	**11 35 03.1**	**+0.9**
KHC				*e*pPKP	**PKiKP**	**11 35 07.3**	**+1.2**
KHC	**Kasperske Hory**	**145.07**	**345**		**PKPdf**	**11 35 01.7**	**-0.5**
GRF	**Grafenberg Arr**	**145.07**	**348**	*e*PKPbc	**PKiKP**	**11 35 06.7**	**+0.7**
	baz=26,slow=3.0						
GRF				*e*L	L	12 34 49.6	
	comp=Z,103nm,20.5s						
WET	**Wettzell**	**145.23**	**346**	*e*L	L	12 31 07.4	
	comp=Z,159nm,21.3s						
BCLA	**Clavier**	**145.23**	**355**	pPKiKP	**PKiKP**	**11 35 08.7**	**+2.4**
GEC2	**GERESS Array S**	**145.30**	**345**	*e*L	L	12 34 59.5	
	comp=Z,174nm,18.6s						
GERES	**GERESS Array B**	**145.30**	**345**	PKPbc	**PKPdf**	**11 35 03.3**	**+0.6**
	comp=Z,3.7nm,0.8s,baz=24,slow=4.7,SNR=3.8						
GERES	**GERESS Array B**	**145.30**	**345**		**PKPdf**	**11 35 03.7**	**+1.0**
EIL	**Elat**	**145.52**	**300**	PKPbc	**PKiKP**	**11 35 05.0**	**-2.5**
	comp=Z,3.1nm,0.6s,baz=358,slow=5.9,SNR=3.4						
CONA	**Conrad Observa**	**145.53**	**342**	*e*sPKPab	**PKPab**	**11 35 05.4**	**+2.0**
	comp=Z,18nm,1.1s						
MOA	**Molln**	**146.07**	**343**	*e*sPKPbc	**PKiKP**	**11 35 06.6**	**-1.5**
	comp=Z,10.0nm,0.9s						
ARSA	**Arzberg**	**146.24**	**342**	*e*pPKPab	**PKiKP**	**11 35 06.9**	**-1.6**
	comp=Z,1.3nm,0.5s						
FUR	**Furstenfeldbru**	**146.51**	**347**	*e*L	L	12 26 15.5	
	comp=Z,239nm,18.2s						
SOKA	**Soboth**	**146.91**	**342**	*e*sPKPbc	**PKPab**	**11 35 08.6**	**-0.1**
	comp=Z,10nm,0.9s						
BFO	**Black Forest**	**146.91**	**350**	*e*L	L	12 28 27.1	
	comp=Z,111nm,20.2s						
BFO	**Black Forest**	**146.91**	**350**		**PKPbc**	**11 35 06.3**	**-1.0**
VTS	**Vitosha**	**146.92**	**329**		**PKPdf**	**11 35 04.7**	**-1.0**
KBA	**Koelnbreinsper**	**147.02**	**344**	*e*sPKPbc	**PKiKP**	**11 35 09.6**	**-0.7**
	comp=Z,4.6nm,0.8s						
OBKA	**Obir**	**147.20**	**342**	*e*pPKPab	**PKiKP**	**11 35 10.4**	**-0.2**
	comp=Z,7.4nm,1.1s						
WATA	**Walderalm**	**147.23**	**346**	*e*sPKPbc	**PKiKP**	**11 35 09.7**	**-1.0**
	comp=Z,9.9nm,1.0s						
RETA	**Reutte**	**147.26**	**347**	*e*pPKiKP	**PKiKP**	**11 35 12.5**	**+1.8**
	comp=Z,7.1nm,1.0s						
WTTA	**Wattenberg**	**147.28**	**346**	*e*sPKPbc	**PKiKP**	**11 35 10.0**	**-0.8**
	comp=Z,9.9nm,0.8s						
MOTA	**Moosalm**	**147.32**	**347**	*e*sPKPbc	**PKiKP**	**11 35 10.0**	**-0.9**
	comp=Z,6.5nm,0.9s						
MYKA	**Terra Mystica**	**147.35**	**343**	*e*sPKPbc	**PKiKP**	**11 35 10.1**	**-0.8**
	comp=Z,7.0nm,0.8s						
SQTA	**Sankt Quirin**	**147.42**	**346**	*e*sPKPbc	**PKiKP**	**11 35 10.4**	**-0.6**
	comp=Z,7.1nm,0.8s						
ABTA	**Abfaltersbach**	**147.55**	**345**	*e*pPKPbc	**PKPab**	**11 35 10.1**	**-1.1**
	comp=Z,9.2nm,0.8s						
DAVA	**Damuels**	**147.64**	**348**	*e*sPKPbc	**PKiKP**	**11 35 11.3**	**-0.3**
	comp=Z,13nm,1.4s						
FETA	**Feichten**	**147.71**	**347**	*e*sPKPbc	**PKPab**	**11 35 11.4**	**-0.5**
	comp=Z,5.6nm,0.9s						
STAL	**STALIGIAL**	**147.95**	**344**		**PKPbc**	**11 35 08.7**	**-1.5**
DAVOX	**Davos/Dischmat**	**148.12**	**348**	PKPbc	**PKPab**	**11 35 12.4**	**-1.2**
	comp=Z,4.1nm,0.8s,baz=39,slow=6.5,SNR=5.2						
ZCCA	**Zocca**	**150.17**	**345**		**PKPbc**	**11 35 13.6**	**-2.3**
BNI	**Bardonecchia**	**150.36**	**351**		**PKiKP**	**11 35 16.6**	**-0.6**
TORD	**Torodi Ar. Bea**	**177.16**	**203**	PKP	**PKPdf**	**11 35 39.0**	**+2.8**
	comp=Z,2.6nm,0.9s,baz=2.8,slow=1.0,SNR=10						
TORD				PKPab	PKPab	11 37 19.9	-0.1
	comp=Z,2.3nm,0.9s,baz=171,slow=3.9,SNR=6.5						
TORD				PP	**PP**	**11 41 15.7**	**+3.9**
	comp=Z,1.1nm,0.9s,baz=159,slow=3.9,SNR=5.2						

JMA 16 11:29:40.5±0.1, 28°.48N×141°.04E, h178^{km}, M3.8, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.71**	**143**	P	Pn	11 30 14.6	+0.2
CBIJ				*e*S	Sn	11 30 40.6	0.0
JHH2	**Haha-jima-NKT2**	**2.10**	**151**	P	Pn	11 30 18.7	+0.2
JHH2				*e*S	Sn	11 30 48.4	+0.4
BSO3	**Boso 3**	**6.32**	**356**	P	Pn	11 31 13.0	+1.7
JHU	**Hanno**	**7.50**	**349**	P	Pn	11 31 27.3	+0.2
JRY	**Ryogami san**	**7.73**	**347**	P	Pn	11 31 30.6	+0.4
JYT	**Yasato**	**7.76**	**355**	*e*S	Sn	11 32 52.7	-4.9
JAG	**Ashikaga**	**8.04**	**351**	P	Pn	11 31 35.0	+0.8
JAG				*e*S	Sn	11 32 56.1	-8.1
JHO	**Hitachi**	**8.12**	**357**	P	Pn	11 31 35.0	-0.3
JHO				S	Sn	11 32 59.0	-7.2
JFK	**Kawauchi**	**8.86**	**359**	*e*S	Sn	11 33 14.6	-9.5

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*IDC **16** 11:33:35.1±1.1, 55°.87S×27°.83W, h0^{km}, mb4.1/3, mb1 4.2/4, mb1mx3.8/35, mbtmp4.1/4, ML4.1/1, Error ellipse: s-maj=66.2km s-min=23.1km az=92.0*

*NEIC **16** 11:33:47.5±1.4, 56°.0S±0°.1×27°.38W±0°.09, h97^{km}±8^{km}, mb4.3/8, Error ellipse: s-maj=21.7km s-min=6.5km az=188.0*

ISC 16 11:33:48.7±0.7, 56°.1S±0°.1×27°.5W±0°.1, h112^{km}, n33, σ0^{s}68/33, mb4.2/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.46**	**285**	Pn	**Pn**	**11 35 07.2**	**-0.4**
VNA3	**Neumayer Olymp**	**17.03**	**160**	P	**Pn**	**11 37 39.0**	**-0.6**
VNA2	**Neumayer--Watz**	**17.24**	**158**	P	**P**	**11 37 41.6**	**-0.3**
	baz=316,slow=12						
SNAA	**Sanae**	**18.80**	**156**	P	**P**	**11 37 58.4**	**-0.6**
SNAA	**Sanae**	**18.80**	**156**	P	**P**	**11 37 58.3**	**-0.6**
	0.6nm,0.3s,baz=295,slow=12,SNR=27						
SNAA	**Sanae**	**18.80**	**156**	P	**P**	**11 37 58.4**	**-0.6**
SNAA				IAmb	IAmb	11 38 01.9	
	comp=Z,11nm,1.4s						
PMSA	**Palmer Station**	**19.76**	**229**		**P**	**11 38 08.7**	**-0.7**
QSPA	**South Pole Qui**	**34.18**	**180**	P	**P**	**11 40 23.5**	**+0.5**
	comp=Z,1.5nm,0.4s,baz=7.5,slow=1.3,SNR=36						
QSPA	**South Pole Qui**	**34.18**	**180**	P	**P**	**11 40 23.8**	**+0.8**
LVC	**Limon Verde**	**45.16**	**300**	P	**P**	**11 41 55.8**	**+1.3**
LVC				IAmb	IAmb	11 42 13.3	
	comp=Z,12nm,1.3s						
VNDA	**Vanda**	**46.55**	**183**	P	**P**	**11 42 05.3**	**+1.0**
	comp=Z,1.7nm,0.8s,baz=182,slow=6.7,SNR=9.6						
VNDA	**Vanda**	**46.55**	**183**	P	**P**	**11 42 05.3**	**+1.0**
VNDA				IAmb	IAmb	11 42 11.6	
	comp=Z,3.9nm,1.1s						
GO01	**Chusmiza**	**47.81**	**302**	P	**P**	**11 42 16.0**	**+0.7**
GO01				IAmb	IAmb	11 42 28.5	
	comp=Z,6.2nm,1.2s						
PB11	**IPOC Station P**	**47.95**	**302**	P	**P**	**11 42 16.6**	**+0.6**
PB11				IAmb	IAmb	11 42 16.7	
	comp=Z,7.7nm,0.9s						
TOA0	**Torodi Ar. Sit**	**73.15**	**30**	P	**P**	**11 45 07.0**	**+0.1**
TORD	**Torodi Ar. Bea**	**73.15**	**30**	P	**P**	**11 45 06.9**	**0.0**
	comp=Z,1.2nm,0.5s,baz=202,slow=6.3,SNR=13						
TORD	**Torodi Ar. Bea**	**73.15**	**30**	P	**P**	**11 45 06.9**	**0.0**
YKA	**Yellowknife Ar**	**136.07**	**318**	PKP	**PKiKP**	**11 52 57.6**	**+0.9**
	comp=Z,0.1nm,0.4s,baz=134,slow=2.8,SNR=7.5						
INK	**Inuvik**	**145.71**	**321**	PKPdf	**PKPab**	**11 53 13.3**	**-0.1**
EPYK	**Eagle Plains**	**146.32**	**317**	PKPdf	**PKPbc**	**11 53 14.8**	**0.0**
DAWY	**Dawson**	**146.68**	**312**	PKPdf	**PKPbc**	**11 53 15.4**	**-0.5**
RIDG	**Independent Ri**	**148.89**	**310**	PKPbc	**PKiKP**	**11 53 22.6**	**-0.5**
FYU	**Fort Yukon**	**149.69**	**315**	PKPbc	**PKPab**	**11 53 27.4**	**-2.0**
IL31		**150.00**	**312**	PKPbc	**PKiKP**	**11 53 25.2**	**0.0**
ILAR	**Eielson Array**	**150.00**	**312**	PKPbc	**PKPbc**	**11 53 24.1**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=130,slow=3.3,SNR=13						
ILAR	**Eielson Array**	**150.00**	**312**		**PKiKP**	**11 53 25.0**	**-0.3**
RND	**Reindeer**	**150.54**	**309**	PKPbc	**PKiKP**	**11 53 26.5**	**0.0**
MCK	**McKinley**	**150.65**	**309**	PKPbc	**PKiKP**	**11 53 26.8**	**+0.2**
KDAK	**Kodiak Island**	**150.68**	**297**	PKPbc	**PKiKP**	**11 53 26.4**	**-0.5**
TRF	**Thorofare Moun**	**151.18**	**308**	PKPbc	**PKiKP**	**11 53 27.6**	**-0.4**
TOLK	**Toolik Lake Re**	**151.58**	**319**	PKPbc	**PKiKP**	**11 53 28.1**	**-0.4**
BPAW	**Bear Paw Mtn.**	**151.62**	**310**	PKPbc	**PKiKP**	**11 53 28.2**	**-0.5**
PPLA	**Purkeypile**	**151.91**	**307**	PKPbc	**PKPbc**	**11 53 28.9**	**-0.3**

TAP 16 11:34:34.6, 24°.50N×121°.83E, h23^{km}, ML1.6, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENA	**Nanau**	**0.11**	**228**	*e*P	Pb	11 34 39.6	+0.6
	baz=224						
ENA				S	Sb	11 34 42.5	+0.6
	baz=224						
TWC	**Suao**	**0.11**	**10**	P	Pb	11 34 39.5	+0.5
	baz=14						
TWC				S	Sb	11 34 42.9	+0.8
	baz=14						
TWE	**Neicheng**	**0.26**	**326**	*e*P	Pb	11 34 41.0	0.0
	baz=328						
TWE				*e*S	Sb	11 34 46.5	+1.3
	baz=328						
EOS1	**EOS1**	**0.28**	**80**	*e*P	Pb	11 34 41.2	+0.1
	baz=79						
EOS1				*e*S	Sb	11 34 46.8	+1.3
	baz=79						
NDT	**Datong Townshi**	**0.30**	**290**	*e*P	Pb	11 34 42.5	+0.9
	baz=289						
NDT				S	Sb	11 34 47.8	+1.6
	baz=289						
SLBB	**Yuanshan**	**0.31**	**325**	*e*P	Pb	11 34 41.8	+0.2
	baz=325						
SLBB				*e*S	Sb	11 34 47.3	+0.9
	baz=325						
NACB	**Ninganchiao**	**0.39**	**213**	*e*P	Pb	11 34 43.5	+0.7
	baz=213						
NACB				*e*S	Sb	11 34 49.2	+0.7
	baz=213						
NWLT	**Wulai**	**0.41**	**313**	*e*P	Pb	11 34 43.7	+0.5
	baz=312						
NWLT				*e*S	Sb	11 34 49.8	+0.8
	baz=312						
NNSB	**Datong**	**0.41**	**260**	*e*P	Pb	11 34 43.7	+0.4
	baz=260						
NNSB				*e*S	Sb	11 34 50.3	+1.0
	baz=260						
NNSH	**Datong**	**0.41**	**260**	*e*P	Pb	11 34 43.5	+0.1
	baz=260						
NNSH				*e*S	Sb	11 34 50.1	+0.8
	baz=260						
NNS	**Nan Shan**	**0.42**	**262**	*e*S	Sb	11 34 50.8	+1.4
	baz=261						
ETLH	**Xiulin Townshi**	**0.43**	**227**	*e*P	Pb	11 34 43.7	+0.1
	baz=227						
ETLH				*e*S	Sb	11 34 50.9	+1.1
	baz=227						
YHNB	**Yeheng**	**0.45**	**292**	*e*P	Pb	11 34 44.7	+0.8
	baz=292						
YHNB				S	Sb	11 34 51.4	+1.2
	baz=292						
NSK	**Sanguang**	**0.46**	**292**	*e*P	Pb	11 34 44.9	+0.8
	baz=292						
NSK				S	Sb	11 34 52.0	+1.3
	baz=292						
TIPB	**Shuangxi**	**0.47**	**360**	*e*P	Pb	11 34 44.3	0.0
	baz=359						
TIPB				*e*S	Sb	11 34 51.8	+0.9
	baz=359						
WHF	**Hehuan Shan**	**0.62**	**236**	*e*P	Pb	11 34 46.3	-0.8
	baz=235						
CHGB	**Renai**	**0.74**	**234**	*e*P	Pb	11 34 49.0	0.0
	baz=233						
CHGB				*e*S	Sn	11 35 00.3	-0.3
	baz=233						
OWD	**Renai**	**0.81**	**228**	*e*S	Sn	11 35 02.1	+0.1
	baz=227						
VWDT	**VWDT**	**0.97**	**220**	*e*P	Pn	11 34 53.0	+0.1
	baz=220						
YOJ	**Yonaguni jima**	**1.08**	**92**	*e*P	Pb	11 34 55.1	+0.6
	baz=91						
YOJ				*e*S	Sn	11 35 09.2	+0.7
	baz=91						

JMA 16 11:34:38.3±0.2, 24°.99N×123°.59E, h22^{km}, M2.1, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.67**	**169**	P	Pb	11 34 50.9	-0.3
JISG	**Ishigakijimahi**	**0.77**	**121**	P	Pb	11 34 52.7	-0.3
JISG				S	Sb	11 35 03.4	+0.4
JYNG	**Yonagunijimaku**	**0.80**	**228**	P	Pb	11 34 53.2	-0.2
JIJ	**Ishigaki jima**	**0.80**	**141**	P	Pb	11 34 52.9	-0.6
JIJ				*e*S	Sb	11 35 02.9	-1.0
JKRS	**Kuro-shima**	**0.84**	**153**	P	Pb	11 34 53.9	-0.3
JKRS				*e*S	Sb	11 35 04.8	-0.3
HATJ	**Hateruma jima**	**0.95**	**168**	P	Pb	11 34 55.7	-0.4
HATJ				*e*S	Sn	11 35 08.8	-0.4

BJI 16 12:04:51.6±0.0, 32°.42N×117°.13E, h6^{km}, ML3.6/15, 1C, Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NJ2	**Nanjing**	**1.51**	**104**	*e*Pn	Pn	12 05 18.8	-0.3
NJ2				Pg	Pb	12 05 19.9	-0.1
NJ2				Sn	Sn	12 05 37.8	-1.3
NJ2				Sg	Sg	12 05 39.8	-0.2
NJ2				smax	smax		
	comp=N,2µm,0.3s						
NJ2				smax	smax		
	comp=E,3µm,0.3s						
WHN	**Wuhan**	**3.02**	**233**	⇑Pg	Pb	12 05 46.3	+0.5
WHN				Sn	Sn	12 06 17.1	+0.6
WHN				Sg	Sb	12 06 25.8	+2.8
WHN				smax	smax		
	comp=N,800nm,0.6s						
WHN				smax	smax		
	comp=E,780nm,0.6s						
TIA	**Tai'an**	**3.78**	**360**	Pg	Pb	12 06 00.3	+1.5
TIA				Sg	Sb	12 06 45.8	+0.9
TIA				smax	smax		
	comp=N,66nm,0.5s						
TIA				smax	smax		
	comp=E,81nm,0.5s						
XAN	**Xi'an**	**7.07**	**285**	Pg	Pb	12 07 00.8	+6.1
XAN				Sg	Sg	12 08 30.6	-7.8
XAN				smax	smax		
	comp=N,27nm,0.9s						
XAN				smax	smax		
	comp=E,25nm,1.0s						
WMQ	**Urumqi**	**25.67**	**305**	*e*P	P	12 10 24.1	+1.8

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*IDC **16** 12:11:24.0±1.7, 39°.94S×177°.08E, h0^{km}, mb3.6/2, mb1 3.9/3, mb1mx3.7/21, mbtmp3.7/3, ML3.4/1, MS3.4/1, Ms1 3.4/1, ms1mx2.9/19, Error ellipse: s-maj=40.2km s-min=27.1km az=101.0*

*WEL **16** 12:11:30.3±0.2, 40°S±2°×17°7E±°, h32^{km}±2^{km}, M3.9/22, ML4.2/22, MLv3.9/22*

ISC 16 12:11:29.6±0.9, 39°.86S±0°.03×177°.03E±0°.04, h48^{km}±6^{km}, n144, σ1^{s}13/161, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAHZ	**Kahuranaki**	**0.14**	**300**	P	**Pn**	**12 11 36.9**	**-0.5**
KAHZ				S	**Sn**	**12 11 41.9**	**-1.0**
CKHZ	**Cape Kidnapper**	**0.21**	**10**	P	**Pn**	**12 11 37.6**	**-0.2**
CKHZ				S	**Sn**	**12 11 43.0**	**-0.6**
PXZ	**Pawanui**	**0.21**	**218**	P	**Pn**	**12 11 38.5**	**+0.6**
PXZ				S	**Sn**	**12 11 44.9**	**+1.2**
MCHZ	**McNeill Hill**	**0.49**	**328**	P	**Pn**	**12 11 40.0**	**-0.7**
MCHZ				S	**Sn**	**12 11 47.3**	**-1.2**
WPHZ	**Waipukurau**	**0.50**	**246**	P	**Pn**	**12 11 41.2**	**+0.5**
PRHZ	**Porangahau**	**0.51**	**217**	P	**Pn**	**12 11 41.9**	**+1.0**
KRHZ	**Kereru**	**0.56**	**293**	P	**Pn**	**12 11 40.6**	**-0.9**
KRHZ				S	**Sn**	**12 11 48.1**	**-1.8**
ARHZ	**Aropaoanui**	**0.60**	**357**	P	**Pn**	**12 11 41.9**	**-0.1**
KWHZ	**Kaweka Forest**	**0.64**	**313**	P	**Pn**	**12 11 41.7**	**-0.9**
KWHZ				S	**Sn**	**12 11 50.3**	**-1.6**
PNHZ	**Pukenui**	**0.64**	**265**	P	**Pn**	**12 11 42.5**	**-0.1**
PNHZ				S	**Sn**	**12 11 51.5**	**-0.4**
ANWZ	**Angora Road**	**0.73**	**215**	P	**Pn**	**12 11 44.6**	**+0.9**
ANWZ				S	**Sn**	**12 11 56.0**	**+2.0**
NMHZ	**Naumai**	**0.78**	**347**	P	**Pn**	**12 11 44.4**	**-0.1**
NMHZ				S	**Sn**	**12 11 55.0**	**-0.3**
DVHZ	**Dannevirke**	**0.79**	**236**	P	**Pn**	**12 11 44.7**	**+0.2**
DVHZ				S	**Sn**	**12 11 56.5**	**+1.1**
WHHZ	**Waihua**	**0.80**	**11**	P	**Pn**	**12 11 44.7**	**0.0**
WHHZ				S	**Sn**	**12 11 56.9**	**+1.4**
BKZ	**Black Stump Fm**	**0.81**	**329**	P	**Pn**	**12 11 44.1**	**-0.7**
BKZ				S	**Sn**	**12 11 54.1**	**-1.7**
BHHZ	**Black Hill Sta**	**0.83**	**296**	P	**Pn**	**12 11 44.4**	**-0.7**
BHHZ				S	**Sn**	**12 11 54.4**	**-2.1**
TSZ	**Takapari Road**	**0.84**	**256**	S	**Sn**	**12 11 56.2**	**-0.4**
RAHZ	**Arahi**	**0.95**	**3**	P	**Pn**	**12 11 46.6**	**0.0**
RAHZ				S	**Sn**	**12 11 59.2**	**+0.1**
KNZ	**Kokohu**	**0.98**	**31**	P	**Pn**	**12 11 47.1**	**+0.2**
MHGZ	**Mahia Peninsul**	**0.98**	**44**	P	**Pn**	**12 11 47.8**	**+0.7**
BFZ	**Birch Farm**	**1.01**	**216**	P	**Pn**	**12 11 48.2**	**+0.7**
MTHZ	**Maungataniwha**	**1.02**	**352**	P	**Pn**	**12 11 47.3**	**-0.3**
PRWZ	**Pori Road**	**1.07**	**229**	P	**Pn**	**12 11 49.1**	**+0.9**
MOVZ	**Moawhango**	**1.09**	**294**	P	**Pn**	**12 11 48.5**	**-0.1**
POWZ	**Post Office Ro**	**1.10**	**241**	P	**Pn**	**12 11 49.6**	**+0.9**
SNGZ	**Shannon Statio**	**1.10**	**13**	P	**Pn**	**12 11 48.8**	**+0.1**
MRHZ	**Matea Rd**	**1.13**	**335**	P	**Pn**	**12 11 48.9**	**-0.2**
PRGZ	**Paritu Road**	**1.15**	**35**	P	**Pn**	**12 11 49.6**	**+0.3**
HATZ	**Hinemaiaia**	**1.21**	**323**	P	**Pn**	**12 11 50.3**	**+0.1**
TUVZ	**Tukino**	**1.22**	**299**	P	**Pn**	**12 11 51.1**	**+0.7**
CPWZ	**Castlepoint**	**1.22**	**211**	P	**Pn**	**12 11 51.3**	**+1.0**
RTZ	**Ruatahuna**	**1.25**	**358**	P	**Pn**	**12 11 50.5**	**-0.2**
WHVZ	**Whangaehu Hut**	**1.26**	**297**	P	**Pn**	**12 11 51.7**	**+0.7**
TIWZ	**Tintock**	**1.27**	**223**	P	**Pn**	**12 11 51.6**	**+0.7**
RITZ	**Rihia Road**	**1.27**	**314**	P	**Pn**	**12 11 51.3**	**+0.3**
TRVZ	**Turoa**	**1.28**	**296**	P	**Pn**	**12 11 51.9**	**+0.6**
RIGZ	**Rimuhau**	**1.29**	**26**	P	**Pn**	**12 11 51.3**	**+0.1**
FWVZ	**Far West T-bar**	**1.29**	**297**	P	**Pn**	**12 11 52.0**	**+0.5**
MTVZ	**Mangateitei**	**1.30**	**291**	P	**Pn**	**12 11 52.9**	**+1.5**
NGZ	**Ngauruhoe**	**1.30**	**301**	P	**Pn**	**12 11 52.1**	**+0.5**
KRVZ	**Karewarewa**	**1.32**	**305**	P	**Pn**	**12 11 52.0**	**+0.2**
WTVZ	**West Tongariro**	**1.34**	**303**	P	**Pn**	**12 11 52.3**	**+0.3**
OHWZ	**Ohakea**	**1.36**	**255**	P	**Pn**	**12 11 55.2**	**+3.0**
KATZ	**Kakaramea**	**1.36**	**310**	P	**Pn**	**12 11 52.7**	**+0.4**
MRZ	**Mangatainoka R**	**1.37**	**234**	P	**Pn**	**12 11 52.6**	**+0.3**
RATZ	**Rangitukua**	**1.39**	**315**	P	**Pn**	**12 11 52.7**	**0.0**
RAGZ	**Rawiri**	**1.40**	**12**	P	**Pn**	**12 11 52.6**	**-0.2**
MUGZ	**Murupara**	**1.40**	**352**	P	**Pn**	**12 11 52.4**	**-0.3**
ALRZ	**Allen Road**	**1.40**	**337**	P	**Pn**	**12 11 52.7**	**-0.1**
PKVZ	**Pokaka**	**1.42**	**293**	P	**Pn**	**12 11 54.2**	**+1.1**
PRRZ	**Plateau Road**	**1.45**	**340**	P	**Pn**	**12 11 53.2**	**-0.2**
WHTZ	**Whakaora**	**1.46**	**325**	P	**Pn**	**12 11 53.8**	**+0.2**
TWVZ	**Taurewa**	**1.47**	**302**	P	**Pn**	**12 11 53.5**	**-0.2**
WPRZ	**Whakapapatarin**	**1.50**	**333**	P	**Pn**	**12 11 53.7**	**-0.4**
TMWZ	**Te Maipa**	**1.52**	**215**	P	**Pn**	**12 11 54.4**	**0.0**
WATZ	**Wairara**	**1.53**	**318**	P	**Pn**	**12 11 54.2**	**-0.4**
HOWZ	**Holdsworth Sta**	**1.55**	**228**	P	**Pn**	**12 11 54.7**	**-0.1**
TKGZ	**Te Karaka**	**1.56**	**24**	P	**Pn**	**12 11 54.6**	**-0.3**
RRRZ	**Republican Roa**	**1.57**	**345**	P	**Pn**	**12 11 54.9**	**-0.2**
MWZ	**Matawai**	**1.57**	**14**	P	**Pn**	**12 11 54.6**	**-0.6**
WAZ	**Wanganui**	**1.58**	**273**	P	**Pn**	**12 11 56.8**	**+1.6**
HRRZ	**Handcock Road**	**1.58**	**338**	P	**Pn**	**12 11 55.3**	**+0.1**
URZ	**Urewera**	**1.60**	**2**	Pn	**Pn**	**12 11 54.9**	**-0.6**
	59nm,0.3s,baz=216,slow=9.3,SNR=389						
URZ				Sn	**Sn**	**12 12 13.5**	**-1.5**
	46nm,0.3s,baz=244,slow=9.3,SNR=21						
URZ	**Urewera**	**1.60**	**2**	P	**Pn**	**12 11 54.9**	**-0.6**
KUTZ	**Kaahu Road**	**1.66**	**325**	P	**Pn**	**12 11 56.1**	**-0.3**
HSRZ	**Hossack Road**	**1.67**	**338**	P	**Pn**	**12 11 56.2**	**-0.2**
GRRZ	**Galatos Road**	**1.67**	**334**	P	**Pn**	**12 11 56.4**	**-0.1**
TARZ	**Mount Tarawera**	**1.68**	**346**	P	**Pn**	**12 11 56.6**	**0.0**
HLRZ	**Highlands Stat**	**1.69**	**342**	P	**Pn**	**12 11 57.2**	**+0.4**
OGWZ	**Otaki Gorge**	**1.71**	**236**	P	**Pn**	**12 11 57.0**	**0.0**
MTW	**Mount Morrison**	**1.74**	**222**	P	**Pn**	**12 11 56.9**	**-0.6**
EDRZ	**Edgecumbe**	**1.77**	**353**	P	**Pn**	**12 11 57.5**	**-0.3**
MKRZ	**Makatiti**	**1.78**	**346**	P	**Pn**	**12 11 58.9**	**+0.9**
UTU	**Utuhina**	**1.81**	**339**	P	**Pn**	**12 11 58.2**	**-0.1**
OMRZ	**Omania**	**1.83**	**343**	P	**Pn**	**12 11 58.1**	**-0.5**
TWGZ	**Tauwhareparae**	**1.84**	**24**	P	**Pn**	**12 11 58.4**	**-0.4**
TRWZ	**Traveller**	**1.84**	**213**	P	**Pn**	**12 11 58.2**	**-0.7**
NGRZ	**Ngongotaha**	**1.88**	**339**	P	**Pn**	**12 11 59.9**	**+0.5**
MARZ	**Manawahe**	**1.90**	**351**	P	**Pn**	**12 11 59.8**	**+0.2**
KIW	**Kapiti Island**	**1.90**	**238**	P	**Pn**	**12 12 00.1**	**+0.5**
VRZ	**Vera Road**	**1.91**	**292**	P	**Pn**	**12 12 00.1**	**+0.4**
TLZ	**Tolley Road**	**1.92**	**322**	P	**Pn**	**12 11 59.4**	**-0.5**
KARZ	**Kaharoa**	**1.94**	**341**	P	**Pn**	**12 11 59.7**	**-0.5**
CAW	**Cannon Point**	**1.95**	**230**	P	**Pn**	**12 11 59.9**	**-0.3**
PAWZ	**Paruwai Farm**	**1.95**	**218**	P	**Pn**	**12 11 59.7**	**-0.6**
RUGZ	**Raukumara Rang**	**1.96**	**15**	P	**Pn**	**12 12 00.1**	**-0.4**
WHRZ	**Whale Island**	**2.00**	**359**	P	**Pn**	**12 12 00.3**	**-0.7**
PUZ	**Puketiti**	**2.03**	**29**	P	**Pn**	**12 12 00.4**	**-0.9**
OPRZ	**Ohinepanea**	**2.05**	**349**	P	**Pn**	**12 12 00.9**	**-0.7**
MSWZ	**Moikau Station**	**2.06**	**221**	P	**Pn**	**12 12 00.7**	**-1.1**
PKGZ	**Pakihiroa**	**2.13**	**23**	P	**Pn**	**12 12 02.4**	**-0.5**
HIZ	**Hauiti**	**2.16**	**308**	P	**Pn**	**12 12 02.8**	**-0.3**
PLWZ	**Palliser**	**2.17**	**218**	P	**Pn**	**12 12 02.2**	**-1.2**
HAZ	**Te Kaha**	**2.18**	**16**	P	**Pn**	**12 12 02.6**	**-0.8**
TGRZ	**Tauranga**	**2.21**	**344**	P	**Pn**	**12 12 03.2**	**-0.7**
WEL	**Wellington**	**2.23**	**230**	P	**Pn**	**12 12 03.9**	**-0.3**
BHW	**Baring Head**	**2.25**	**226**	P	**Pn**	**12 12 03.6**	**-0.8**
DREZ	**Durham Road**	**2.29**	**286**	P	**Pn**	**12 12 06.8**	**+1.8**
WMGZ	**Waiomatatini S**	**2.31**	**28**	P	**Pn**	**12 12 04.4**	**-0.7**
KHEZ	**Kahui Hut**	**2.40**	**283**	P	**Pn**	**12 12 09.1**	**+2.6**
TOZ	**Tahuroa Road**	**2.44**	**330**	P	**Pn**	**12 12 06.5**	**-0.5**
PKE	**Pukeiti**	**2.45**	**285**	P	**Pn**	**12 12 09.2**	**+2.1**
NMEZ	**Namu Road**	**2.48**	**279**	P	**Pn**	**12 12 09.8**	**+2.4**
TCW	**Tory Channel**	**2.49**	**236**	P	**Pn**	**12 12 07.0**	**-0.8**
MXZ	**Matakaoa Point**	**2.50**	**24**	P	**Pn**	**12 12 07.8**	**-0.1**
NBEZ	**Newall Road No**	**2.52**	**283**	P	**Pn**	**12 12 11.3**	**+3.3**
TUWZ	**Tuamarina**	**2.82**	**235**	P	**Pn**	**12 12 10.8**	**-1.4**
BSWZ	**Blackbirch Sta**	**3.03**	**231**	P	**Pn**	**12 12 13.9**	**-1.1**
NNZ	**Nelson**	**3.09**	**243**	P	**Pn**	**12 12 15.6**	**-0.4**
MKAZ	**Moumakai**	**3.12**	**331**	P	**Pn**	**12 12 16.4**	**+0.1**
KBAZ	**Karaka Road Bo**	**3.23**	**328**	P	**Pn**	**12 12 18.0**	**+0.2**
KUZ	**Kuaotunu**	**3.28**	**341**	P	**Pn**	**12 12 18.2**	**-0.3**
ETAZ	**East Tamaki Re**	**3.34**	**330**	P	**Pn**	**12 12 19.5**	**+0.2**
AWAZ	**Awhitu Peninsu**	**3.36**	**325**	P	**Pn**	**12 12 19.9**	**+0.2**
WIAZ	**Waiheke Island**	**3.41**	**333**	P	**Pn**	**12 12 20.5**	**+0.3**
EPAZ	**Eden Park BICE**	**3.48**	**328**	P	**Pn**	**12 12 21.7**	**+0.4**
WTAZ	**Waiatarua**	**3.50**	**326**	P	**Pn**	**12 12 22.0**	**+0.4**
HBAZ	**Herne Bay Bore**	**3.51**	**328**	P	**Pn**	**12 12 22.0**	**+0.4**
MBAZ	**Motutapu North**	**3.52**	**331**	P	**Pn**	**12 12 21.8**	**0.0**
QRZ	**Quartz Range**	**3.57**	**253**	P	**Pn**	**12 12 21.7**	**-0.8**
RVAZ	**Riverhead Bore**	**3.64**	**327**	P	**Pn**	**12 12 23.7**	**+0.2**
THZ	**Tophouse**	**3.66**	**237**	P	**Pn**	**12 12 22.4**	**-1.4**
KHZ	**Kahutara**	**3.67**	**225**	P	**Pn**	**12 12 21.9**	**-1.9**
ABAZ	**Army Bay**	**3.69**	**331**	P	**Pn**	**12 12 24.7**	**+0.6**
GVZ	**Greta Valley S**	**4.32**	**223**	P	**Pn**	**12 12 31.7**	**-1.0**
DSZ	**Denniston Nort**	**4.39**	**243**	P	**Pn**	**12 12 32.6**	**-1.2**
WCZ	**Waipu Caves**	**4.46**	**331**	P	**Pn**	**12 12 35.1**	**+0.5**
LTZ	**Lake Taylor**	**4.62**	**229**	P	**Pn**	**12 12 35.0**	**-1.9**
AMCZ	**Amberley**	**4.67**	**223**	P	**Pn**	**12 12 36.7**	**-0.8**
OKCZ	**Okains Bay**	**4.87**	**216**	P	**Pn**	**12 12 38.4**	**-1.9**
MQZ	**McQueen’s Vall**	**5.04**	**219**	P	**Pn**	**12 12 40.4**	**-2.2**
AKCZ	**Akaroa Harbour**	**5.05**	**216**	P	**Pn**	**12 12 41.0**	**-1.8**
INZ	**Inchbonnie**	**5.09**	**234**	P	**Pn**	**12 12 40.9**	**-2.4**
OXZ	**Oxford**	**5.10**	**226**	P	**Pn**	**12 12 41.4**	**-2.1**
OUZ	**Omahuta**	**5.38**	**328**	P	**Pn**	**12 12 47.9**	**+0.6**
WVZ	**Waitaha Valley**	**5.71**	**234**	P	**Pn**	**12 12 50.2**	**-1.7**
RPZ	**Rata Peaks**	**5.90**	**227**	Pn	**Pn**	**12 12 52.0**	**-2.4**
	1.1nm,0.3s,baz=220,slow=2.0,SNR=17						
RPZ				Sn	**Sn**	**12 13 54.7**	**-5.9**
	6.3nm,0.3s,baz=289,slow=23,SNR=53						
RPZ	**Rata Peaks**	**5.90**	**227**	P	**Pn**	**12 12 52.9**	**-1.5**
CTZ	**Chatham Island**	**6.12**	**131**	P	**Pn**	**12 12 59.7**	**+2.2**
LBZ	**Lake Benmore**	**6.81**	**226**	P	**Pn**	**12 13 05.4**	**-1.4**
ODZ	**Otahua Downs**	**7.01**	**220**	P	**Pn**	**12 13 07.8**	**-1.8**
ASAR	**Alice Springs**	**39.66**	**281**	P	**P**	**12 18 58.3**	**+1.3**
	0.6nm,0.8s,baz=118,slow=6.2,SNR=13						
ASAR				LR	LR	12 34 19.8	
	comp=Z,52nm,19.1s,baz=144,slow=35						
WRA	**Warramunga Arr**	**41.52**	**286**	P	**P**	**12 19 13.2**	**+0.8**
	0.4nm,0.3s,baz=125,slow=8.2,SNR=6.3						
TORD	**Torodi Ar. Bea**	**153.07**	**190**	PKPbc	**PKPbc**	**12 31 22.5**	**+0.2**
	0.4nm,0.8s,baz=212,slow=5.1,SNR=3.8						

TORD				PKPab	PKPab	12 31 35.6	+1.9
	0.7nm,0.7s,baz=146,slow=2.8,SNR=3.4						

NEIC ***16*** *12:26:07.6±0.9, 19°.92S±0°.08×178°.7W±0°.3, h559^{km}±12^{km}, mb4.1/9, Error ellipse: s-maj=34.8km s-min=11.1km az=96.0*

IDC ***16*** *12:26:11.6±23.0, 19°.58S×178°.89W, h610^{km}±224^{km}, mb3.0/3, mb1 3.3/3, mb1mx2.8/33, mbtmp4.0/3, Error ellipse: s-maj=295.4km s-min=49.5km az=132.0*

ISC 16 12:26:05.7±1.2**, 20°.0S**±0°.2×**178°.5W**±0°.2**, h550**^{km}**, n18, σ1^{s}.21**/19**, mb3.9**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.97	304	P	P	12 27 27.6	+0.1
TUWZ	Tuamarina	22.31	195	P	P	12 30 23.7	+1.4
WAKE	Wake Island	41.66	339	P	P	12 33 07.2	+0.6
WR0	Warramunga Arr	44.02	262	P	P	12 33 24.7	-0.4
WR0				IAmb	IAmb	12 33 39.9	
	comp=Z,5.8nm,1.4s						
AS31	Alice Springs	44.17	256	P	P	12 33 26.5	+0.1
ASAR	Alice Springs	44.18	256	P	P	12 33 26.1	-0.3
	comp=Z,2.1nm,0.5s,baz=96,slow=7.7,SNR=47						
ASAR				PcP	PcP	12 34 58.5	-0.7
	comp=Z,0.2nm,0.8s,baz=108,slow=3.5,SNR=4.7						
ASAR	Alice Springs	44.18	256	P	P	12 33 25.9	-0.5
WB0	Warramunga Arr	44.18	262	P	P	12 33 26.2	-0.2
WB0				IAmb	IAmb	12 33 41.6	
	comp=Z,9.5nm,1.4s						
WB2	Warramunga Arr	44.19	262	P	P	12 33 26.4	-0.2
WB2				IAmb	IAmb	12 33 35.0	
	comp=Z,5.2nm,1.2s						
WRAB	Tennant Creek	44.20	262	P	P	12 33 27.2	+0.7
WRA	Warramunga Arr	44.20	262	P	P	12 33 26.2	-0.3
	comp=Z,0.8nm,0.3s,baz=97,slow=7.6,SNR=34						
WRA	Warramunga Arr	44.20	262	P	P	12 33 26.3	-0.3
GAMB	Gambell	83.67	3	P	P	12 37 37.7	+1.5
GHO	Glory Hole Cre	84.85	14	P	P	12 37 42.3	+0.1
GHO				IAmb	IAmb	12 37 50.1	
	comp=Z,12nm,1.5s						
ILAR	Eielson Array	87.93	13	P	P	12 37 55.7	-1.0
	comp=Z,0.4nm,0.9s,baz=210,slow=5.7,SNR=5.5						
AKASG	Malin Array Be	142.35	331	PKP	PKPdf	12 44 31.9	-3.9
	comp=Z,0.5nm,0.3s,baz=42,slow=4.1,SNR=7.4						
BUR08	Bucovina Ar. S	146.38	331	PKPbc	PKPbc	12 44 45.9	+0.5
BURAR	Bucovina Array	146.40	331	PKPbc	PKPbc	12 44 46.3	+0.9

KRSC 16 12:28:39.5±2.0**, 49°.90N**×**157°.77E, h41**^{km}±26^{km}**, ML4.0, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.32	307	*e*P	Pn	12 29 02.2	+0.8
SKR				*e*S	Sn	12 29 18.3	+0.5
PAU	Pauzhetka	1.69	339	*e*P	Pn	12 29 09.1	+2.6
PAU				*e*S	Sn	12 29 30.5	+3.7
ALID	Alaid	1.72	305	*e*P	Pn	12 29 09.2	+2.1
KDTR	Khodutka, Kamc	1.93	6	*e*P	Pn	12 29 12.2	+2.4
MIPR	Malaya Ipel'ka	2.47	345	*e*P	Pn	12 29 21.1	+3.9
ASAK	Asacha	2.49	2	*e*P	Pn	12 29 20.2	+2.6
ASAK				*e*S	Sn	12 29 49.4	+2.6
RUS	Russkaya	2.58	10	*e*P	Pn	12 29 21.3	+2.5
RUS				*e*S	Sn	12 29 51.6	+2.7
MTVR	Mutnovka	2.60	6	*e*P	Pn	12 29 22.0	+2.8
GRL	Gorelyy	2.67	4	*e*P	Pn	12 29 23.1	+3.0
GRL				*e*S	Sn	12 29 54.7	+3.5
KRMR	Karymshinskiy	2.95	4	*e*P	Pn	12 29 27.2	+3.4
APC	Apacha	3.06	353	*e*P	Pn	12 29 28.3	+3.0
PET	Petropavlovsk	3.18	10	*e*P	Pn	12 29 30.0	+3.0
PET				*e*S	Sn	12 30 06.9	+3.3
DALK	Dalny	3.20	11	*e*P	Pn	12 29 30.3	+3.1
DALK				*e*S	Sn	12 30 06.9	+2.8
UGLR	Uglovaya	3.38	11	*e*P	Pn	12 29 33.6	+3.7
AVH	Avacha	3.43	10	*e*P	Pn	12 29 35.2	+4.7
AVH				*e*S	Sn	12 30 15.6	+5.7
SMAR	Somma	3.43	10	*e*P	Pn	12 29 34.9	+4.2
KOK	Koryaka	3.44	9	*e*P	Pn	12 29 34.7	+4.0
SDLR	Sedlovina	3.46	11	*e*P	Pn	12 29 33.8	+2.9
KRER	Koryakskii	3.47	10	*e*P	Pn	12 29 35.2	+4.1
SPN	Mys Shipunski	3.50	23	*e*P	Pn	12 29 37.2	+5.8
KRX	Arik	3.51	9	*e*P	Pn	12 29 35.9	+4.2
MKZ	Mys Kozlova	5.26	26	*e*P	Pn	12 29 58.6	+3.0
KZV	Kizimen	5.45	15	*e*P	Pn	12 30 03.3	+5.0
TUMD	Tumrok D	5.55	16	*e*P	Pn	12 30 03.8	+4.2
TUMR	Tumrok	5.59	14	*e*P	Pn	12 30 05.2	+5.1
ZLN	Zelenaya	6.40	15	*e*P	Pn	12 30 16.7	+5.4
KBTR	Krutoberegovo	7.02	24	*e*P	Pn	12 30 23.1	+3.5

NIED ***16*** *13:17:00, 41°.70N×144°.30E, h20^{km}, Mw4.0 Best double couple: M$_0$9.54000×10^{14} NP1:ϕ_s15.00000°, δ72.00000°, λ52.00000°. NP2:ϕ_s263.00000°, δ41.00000°, λ152.00000°.*

IDC ***16*** *13:17:12.5±1.1, 41°.67N×144°.41E, h0^{km}, mb3.9/11, mb1 4.0/16, mb1mx3.8/43, mbtmp3.8/16, ML2.9/4, MS3.0/4, Ms1 3.0/4, ms1mx2.7/36, Error ellipse: s-maj=24.8km s-min=18.5km az=125.0*

JMA ***16*** *13:17:16.9±0.2, 41°.72N×144°.28E, h26^{km}±3^{km}, M3.9*

NEIC ***16*** *13:17:17.2±1.1, 41°.66N±0°.07×144°.3E±0°.1, h31^{km}±5^{km}, mb4.3/19, Error ellipse: s-maj=12.0km s-min=10.3km az=96.0*

ISC 16 13:17:13.8±1.7**, 41°.71N**±0°.06×**144°.37E**±0°.05**, h8**^{km}±10^{km}**, n64, σ0^{s}.83**/59**, mb4.1**/20**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERM	Erimo	0.95	289		Pn	13 17 33.9	+0.4
JEM	Erimo	0.95	289	P	Pn	13 17 33.9	+0.4
JTHR	Tokachihiroo	0.99	307	P	Pn	13 17 33.9	0.0
JTHR				*e*S	Sn	13 17 47.4	-0.7
JCH	Churui	1.18	321	P	Pg	13 17 36.8	+0.4
JCH				*e*S	Sg	13 17 52.0	+0.4
JOB	Onbets	1.26	342	P	Pg	13 17 38.3	+0.3
JAK	Akkeshi	1.31	11	P	Pg	13 17 38.8	-0.2
JAK				*e*S	Sg	13 17 56.2	+0.2
JNBK	Urakawa-nobuka	1.33	296	P	Pg	13 17 39.7	+0.3
JKHN	Kushirohamanak	1.50	23	P	Pg	13 17 41.9	-0.6
JSHD	Hidakashinhida	1.58	297	P	Pg	13 17 43.5	-0.6
JAR	Ashorobuto	1.65	345	P	Pb	13 17 43.3	-1.2
JKA	Kamikawa-asahi	2.74	332		Pn	13 17 59.0	+1.0
JKA					Sb	13 18 36.1	-0.5
ASAJ	Asahikawa	2.74	332	Pn	Pn	13 17 59.0	+1.0
	3.7nm,0.3s,baz=191,slow=8.2,SNR=42						
ASAJ				Sn	Sb	13 18 36.1	-0.6
	14nm,0.3s,baz=281,slow=30,SNR=5.8						
MJAR	Matsushiro Arr	7.03	225	Pn	Pn	13 18 58.1	+1.0
	0.1nm,0.3s,baz=28,slow=15,SNR=18						
MJAR				LR	LR	13 22 18.6	
	comp=Z,98nm,19.5s,baz=60,slow=44						
MJAR	Matsushiro Arr	7.03	225		Pn	13 18 57.0	-0.1
MJB9	Matsu-Tunnel	7.03	225	Pn	Pn	13 18 57.3	+0.2
MAJO	Matsushiro	7.04	225	Pn	Pn	13 18 57.1	0.0
INU	Inuyama	8.57	225	Pn	Pn	13 19 17.8	-0.3
JHJ	Hachijo jima 2	9.31	204	Sn	Sn	13 20 57.7	-16
	3.4nm,0.3s,baz=84,slow=18,SNR=2.1						
USRK	Ussuriysk Ar.	9.41	289	Pn	Pn	13 19 31.8	+2.2
	baz=94,slow=16,SNR=4.2						
KSRS	Korea Array	13.37	257	Pn	Pn	13 20 25.0	+1.2
	0.1nm,0.3s,baz=71,slow=15,SNR=3.3						
KSRS				LR	LR	13 25 39.4	
	comp=Z,48nm,18.3s,baz=190,slow=38						
MA2	Magadan	18.33	10	P	P	13 21 27.8	-0.5
	0.3nm,0.3s,baz=160,slow=11,SNR=3.6						
MA2	Magadan	18.33	10	IAmb	IAmb	13 21 29.5	
	comp=Z,6.7nm,1.2s						
HIA	Hailar	18.79	302	P	Pn	13 21 32.7	-1.2
YAK	Yakutsk	22.18	342	P	P	13 22 10.8	+0.7
YAK				IAmb	IAmb	13 22 11.9	
	comp=Z,8.6nm,0.5s						
ULN	Ulaanbaatar	27.00	296	P	P	13 22 57.0	+0.8
SONM	Songino Array	27.44	296	P	P	13 23 01.5	+1.4
	comp=Z,0.8nm,0.4s,baz=100,slow=7.7,SNR=4.9						
SONM	Songino Array	27.44	296	P	P	13 23 00.8	+0.7
GUMO	Guam	28.02	179	LR	LR	13 31 29.6	
	comp=Z,29nm,19.6s,baz=69,slow=31						
H11N2	WAKE ISLAND Hy	29.08	132	T	T	13 54 20.3	
	baz=324,slow=75,SNR=82						
H11N1	WAKE ISLAND Hy	29.09	132	T	T	13 54 10.7	
	baz=324,slow=75,SNR=70						
H11N3	WAKE ISLAND Hy	29.09	132	T	T	13 54 20.9	
	baz=324,slow=75,SNR=53						
H11S1	WAKE ISLAND Hy	29.96	134	T	T	13 55 19.6	
	baz=325,slow=75,SNR=59						
H11S3	WAKE ISLAND Hy	29.96	134	T	T	13 55 49.1	
	baz=325,slow=75,SNR=55						
H11S2	WAKE ISLAND Hy	29.98	134	T	T	13 55 25.5	
	baz=325,slow=75,SNR=47						
HKPS	Hong Kong Po S	31.89	242	P	P	13 23 38.9	-0.7
ZALV	Zalesovo Beam	40.63	309	P	P	13 24 54.0	+0.1
	comp=Z,1.4nm,0.5s,baz=86,slow=8.0,SNR=6.1						
ZALV	Zalesovo Beam	40.63	309	P	P	13 24 53.2	-0.7
IMAR	Indian Mountai	41.48	33	P	P	13 25 02.6	+1.8
RSO	Redoubt South	41.85	41	P	P	13 25 05.8	+1.6
COLD	Coldfoot	42.97	31	P	P	13 25 14.8	+1.9
COLD				IAmb	IAmb	13 26 07.9	
	comp=Z,13nm,1.7s						
MK31	Makanchi Array	43.74	299	P	P	13 25 18.9	-0.6
MKAR	Makanchi Array	43.74	299	P	P	13 25 19.4	-0.1
	comp=Z,1.2nm,0.7s,baz=82,slow=9.9,SNR=8.5						
MKAR				LR	LR	13 45 13.0	
	comp=Z,40nm,19.8s,baz=347,slow=38						
MKAR	Makanchi Array	43.74	299	P	P	13 25 18.8	-0.7
MAKZ	Makanchi	43.94	299	P	P	13 25 20.4	-0.6
MAKZ				IAmb	IAmb	13 25 28.5	
	comp=Z,3.8nm,1.1s						
ILAR	Eielson Array	44.34	35	P	P	13 25 24.7	+0.7
	comp=Z,0.3nm,0.6s,baz=278,slow=6.3,SNR=5.0						
CMAR	Chiang Mai Arr	44.97	253	P	P	13 25 29.6	0.0
	comp=Z,0.5nm,0.4s,baz=43,slow=7.0,SNR=2.7						
KURK	Kurchatov	44.99	305	P	P	13 25 28.2	-1.2
KURK				IAmb	IAmb	13 25 33.8	
	comp=Z,3.3nm,1.1s						
BCAR	Beaver Creek A	46.77	37	P	P	13 25 42.7	-0.6
INK	Inuvik	49.19	29	P	P	13 26 02.9	+1.0
	comp=Z,0.8nm,0.5s,baz=296,slow=6.5,SNR=12						
BRVK	Borovoye	49.28	310	P	P	13 26 02.6	-0.2
BRVK				IAmb	IAmb	13 27 51.7	
	comp=Z,2.6nm,0.8s						
AAK	Ala-Archa	50.40	296	P	P	13 26 11.1	-0.6
AAK				IAmb	IAmb	13 27 17.6	
	comp=Z,7.2nm,1.8s						
KKAR	Karatay Array	52.86	298	P	P	13 26 28.8	-1.1
KKAR	Karatay Array	52.86	298	P	P	13 26 29.4	-0.5
KKAR				IAmb	IAmb	13 26 30.3	
	comp=Z,2.0nm,0.8s						
HNR	Honiara	52.86	161	P	P	13 26 29.9	-0.1
AIN	Ainahou	55.24	94	P	P	13 26 48.5	+0.7
ABKAR	Akbulak array	56.74	309	P	P	13 26 57.7	-0.2
RES	Resolute Bay	57.50	16	P	P	13 27 03.1	+0.3
RES				IAmb	IAmb	13 27 13.8	
	comp=Z,12nm,1.8s						
YKA	Yellowknife Ar	58.63	32	P	P	13 27 15.2	+4.2
	comp=Z,0.2nm,0.7s,baz=299,slow=7.2,SNR=2.7						
WRA	Warramunga Arr	62.03	191	P	P	13 27 34.0	-0.6
	comp=Z,0.7nm,0.8s,baz=7.3,slow=6.6,SNR=6.7						
FINES	FINESS Array B	65.75	332	P	P	13 27 58.4	-0.3
	comp=Z,2.7nm,0.7s,baz=79,slow=4.1,SNR=8.4						
KBZ	Khabaz	69.60	311	P	P	13 28 23.6	+0.4
	comp=Z,2.0nm,0.8s,baz=358,slow=5.4,SNR=2.8						
NOA	NORSAR Array B	70.75	338	P	P	13 28 29.8	-0.3
	comp=Z,0.6nm,0.6s,baz=51,slow=5.0,SNR=2.8						
AKASG	Malin Array Be	71.99	323	P	P	13 28 36.6	-1.1
	comp=Z,1.1nm,0.6s,baz=41,slow=6.2,SNR=6.8						
BURAR	Bucovina Array	76.04	322	P	P	13 29 02.3	+0.7

GCG ***16*** *13:20:58.8±0.3, 16°.17N×92°.20W, h142^{km}, MD4.2*

MEX ***16*** *13:21:02.1±0.4, 14°.03N×93°.15W, h5^{km}±10^{km}, MD4.0*

NEIC ***16*** *13:21:05.7±2.1, 14°.08N±0°.08×92°.89W±0°.07, h44^{km}±5^{km}, mb4.4/78, Md4.0/6(MEX), Error ellipse: s-maj=12.5km s-min=8.8km az=217.0*

IDC ***16*** *13:21:06.2±3.2, 14°.19N×92°.77W, h39^{km}±26^{km}, mb3.7/12, mb1 3.9/16, mb1mx3.8/37, mbtmp3.9/16, ML3.7/4, MS3.5/6, Ms1 3.5/6, ms1mx3.1/26, Error ellipse: s-maj=35.6km s-min=15.0km az=46.0*

ISC 16 13:21:04.0±2.3**, 14°.06N**±0°.06×**92°.96W**±0°.05**, h32**^{km}±16^{km}**, n164, σ1^{s}.78**/173**, mb4.4**/44**, MS3.7**/4**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.08	38	*i* P	Pn	13 21 21.1	-1.9
THIG				*i* S	Sn	13 21 36.6	-0.2
THIG		1.08	38		Pn	13 21 23.2	+0.3
THIG					Sn	13 21 33.4	-3.4
STG3	Santiaguito 3,	1.49	64	*e*P	Pn	13 21 29.4	+0.6
PCIG		1.66	351	*e*P	Pn	13 21 28.6	-2.3
PCIG				*i* S	Sn	13 21 48.4	-2.7
PCIG		1.66	351		Pn	13 21 29.3	-1.6
PCIG					Sn	13 21 43.1	-8.0
FUG	Fuego 3	2.09	79	*e*P	Pn	13 21 38.0	+1.0
FUG				*e*S	Sb	13 22 05.5	-1.6
IXG	Ixpaco	2.44	87	*e*P	Pn	13 21 42.1	+0.1
APG	El Apazote	2.59	68	Pn	Pn	13 21 45.2	+1.2
	8.9nm,0.3s,baz=255,slow=6.1,SNR=78						
APG				Sn	Sn	13 22 06.5	-8.1
	12nm,0.3s,baz=260,slow=21,SNR=13						
APG				LR	LR	13 22 28.6	
	comp=Z,144nm,21.1s,baz=196,slow=35						
HUIG	Huatulco	3.49	300	*e*P	Pn	13 21 52.3	-3.8
HUIG				*i* P	Pn	13 21 52.4	-3.8
HUIG				*i* S	Sn	13 22 31.1	-5.2
HUIG	Huatulco	3.49	300		Pn	13 21 52.3	-3.8
CMIG	Matias Romero	3.54	329	Pn	Pn	13 21 56.5	-0.4
	2.8nm,0.3s,baz=136,slow=8.4,SNR=27						
CMIG				Sn	Sn	13 22 32.5	-5.2
	6.9nm,0.3s,baz=133,slow=13,SNR=6.3						
CMIG	Matias Romero	3.54	329	*e*P	Pn	13 21 54.1	-2.8
CMIG				*e*S	Sn	13 22 35.0	-2.6
CSGN	Cosiguina Volc	5.36	101	Pn	Pn	13 22 22.0	0.0
TEIG	Tepich	7.59	35	Pn	Pn	13 22 53.0	+0.5
	3.3nm,0.3s,baz=126,slow=0.0,SNR=12						
TEIG				LR	LR	13 26 14.5	
	comp=Z,439nm,18.4s,baz=72,slow=42						
TEIG	Tepich	7.59	35	Pn	Pn	13 22 53.1	+0.5
UNM	Universidad Na	7.93	312	Pn	Pn	13 22 57.0	-0.5
ESPN	Las Esperanzas	8.64	101	Pn	Pn	13 23 04.6	-2.3
JTS	Las Juntas de	8.68	115	Pn	Pn	13 23 08.8	+1.3
	0.4nm,0.3s,baz=185,slow=11,SNR=3.3						
HDC	Heredia	9.54	114	Pn	Pn	13 23 19.8	+0.3
MOIG	Morelia	9.66	306	Pn	Pn	13 23 23.9	+2.8
545A	Edgard	16.07	8	Pn	Pn	13 24 48.6	+0.9
JCT	Junction City	17.52	340		P	13 25 08.0	+1.1
JCT	Junction City	17.52	340	P	P	13 25 09.9	+3.0
	baz=157						
DWPF	Disney Wildern	17.62	36		Pn	13 25 07.3	+0.1
TXAR	Lajitas Array	18.15	329	P	P	13 25 15.9	+2.0
	0.1nm,0.3s,baz=151,slow=11,SNR=2.7						
352A	Blakely	18.84	22	P	Pn	13 25 22.6	+0.6
352A				IAmb	IAmb	13 25 51.4	
	comp=Z,43nm,1.3s						
TIGA	Tifton	19.32	25	P	Pn	13 25 28.5	+0.6
TIGA				IAmb	IAmb	13 25 29.6	
	comp=Z,26nm,0.9s						
TIGA	Tifton	19.32	25	P	Pn	13 25 28.5	+0.6
	baz=208						
ABTX	Abilene, Hawle	19.46	343	P	Pn	13 25 30.2	+0.6
ABTX	Abilene, Hawle	19.46	343	P	Pn	13 25 30.7	+1.1
	baz=160						
WLAR	White Oak Lake	19.54	360		Pn	13 25 31.8	+1.3
WLAR				IAmb	IAmb	13 25 36.6	
	comp=Z,15nm,0.7s						
Z50A	Ashland	20.15	17	P	P	13 25 36.0	+0.2
Z50A	Ashland	20.15	17	P	P	13 25 36.5	+0.8
	baz=200						
MIAR	Mount Ida	20.41	359	P	P	13 25 39.4	+0.9
MIAR	Mount Ida	20.41	359	P	Pn	13 25 40.2	-0.4
	baz=178,SNR=6.3						
ROSC	El Rosal	20.52	115	P	P	13 25 40.7	+0.4
	comp=Z,2.9nm,0.3s,baz=198,slow=19,SNR=3.1						
ROSC	El Rosal	20.52	115	P	P	13 25 40.8	+0.5
ROSC				IAmb	IAmb	13 25 57.2	
	comp=Z,26nm,1.1s						
UALR	University of	20.63	1	P	P	13 25 42.0	+1.1
MNTX	Cornudas Mount	20.93	329	P	Pn	13 25 45.6	-1.2
MNTX	Cornudas Mount	20.93	329	P	Pn	13 25 46.1	-0.7
	baz=144,SNR=7.2						
W41B	Gary Mavity, V	21.03	2	P	P	13 25 46.1	+0.9
W41B				IAmb	IAmb	13 26 20.3	
	comp=Z,27nm,1.8s						
W41B	Gary Mavity, V	21.03	2	P	P	13 25 46.2	+0.9
	baz=182						
W39A	Magazine	21.06	358	P	P	13 25 46.8	+1.3
W39A	Magazine	21.06	358	P	P	13 25 50.0	+4.5
	baz=178,SNR=5.1						
GOGA	Godfrey	21.11	23	P	P	13 25 46.1	0.0
GOGA	Godfrey	21.11	23	P	P	13 25 46.5	+0.4
	baz=206						
FLOC	Florencia	21.13	124	P	P	13 25 46.0	-0.6
WHAR	Wooly Hollow	21.15	2	P	P	13 25 47.1	+0.6
RUSC	La Rusia	21.18	111	P	P	13 25 46.0	-1.5
W35A	Tecumseh	21.30	351	P	P	13 25 49.2	+1.1
Y52A	Lilburn	21.31	21	P	P	13 25 49.0	+0.8
	baz=204						
FNO	Franklin	21.48	350	P	P	13 25 49.9	-0.2
MSTX	Muleshoe	21.73	338	P	P	13 25 53.7	+0.8
MSTX				IAmb	IAmb	13 26 23.2	
	comp=Z,12nm,1.0s						
MSTX	Muleshoe	21.73	338	P	P	13 25 54.5	+1.7
	baz=153						
FCAR	Ozark Folk Cen	21.75	2	P	P	13 25 52.7	-0.2
TUL1	Leonard	21.91	354	P	P	13 25 56.1	+1.4
TUL1				IAmb	IAmb	13 25 58.1	
	comp=Z,12nm,0.8s						
TUL1	Leonard	21.91	354	P	P	13 25 56.8	+2.2
	baz=172						
X53A	Estanollee	22.15	22	P	P	13 25 57.8	+0.6
	baz=205						
Z57A	Bowman	22.16	28	P	P	13 25 59.5	+2.1
	baz=213						
AMTX	Amarillo	22.18	341	P	P	13 25 58.6	+0.9
AMTX				IAmb	IAmb	13 25 59.9	
	comp=Z,17nm,0.8s						
AMTX	Amarillo	22.18	341	P	P	13 25 59.6	+1.9
	baz=157						
U40A	Yellville	22.20	0	P	P	13 25 58.0	+0.2
U40A				IAmb	IAmb	13 26 05.2	
	comp=Z,13nm,0.8s						
U40A	Yellville	22.20	0	P	P	13 25 58.7	+0.9
	baz=180						
HODGE	Hodges	22.30	24	P	P	13 25 59.1	+0.2
HODGE				IAmb	IAmb	13 26 01.1	
	comp=Z,21nm,1.3s						
U38A	Gravette	22.32	357	P	P	13 25 59.9	+0.7
WVT	Waverly	22.45	11	P	P	13 26 00.0	-0.5
WVT				IAmb	IAmb	13 26 21.7	
	comp=Z,17nm,1.6s						
SDV	Santo Domingo	22.47	101	P	P	13 26 01.3	+0.2
	comp=Z,1.3nm,0.4s,baz=261,slow=8.8,SNR=3.9						
X54A	Belton	22.53	23	P	P	13 26 01.7	+0.4
	baz=208						
BG3	Lake Jocassee	22.72	22	P	P	13 26 03.4	0.0
BG3				IAmb	IAmb	13 26 37.1	
	comp=Z,21nm,1.8s						
CLTN	Cedars of Leba	22.73	14	P	P	13 26 03.0	-0.4
CLTN				IAmb	IAmb	13 26 31.4	
	comp=Z,24nm,1.7s						
PBMO	Poplar Bluff	22.74	5	P	P	13 26 03.3	-0.2
PBMO				IAmb	IAmb	13 26 59.3	
	comp=Z,12nm,1.2s						
JSC	Jenkinsville	22.75	26	P	P	13 26 04.0	+0.3
121A	Cookes Peak, D	22.83	326	P	P	13 26 07.8	+3.0
	baz=140						
U32A	Winter Ranch,	22.88	347	P	P	13 26 06.1	+1.1
U32A				IAmb	IAmb	13 26 07.4	
	comp=Z,24nm,1.2s						
T42A	Van Buren	22.94	4	P	P	13 26 05.0	-0.5
T35A	Sooner Cattle	22.98	353	P	P	13 26 05.6	-0.5
T35A				IAmb	IAmb	13 26 07.4	
	comp=Z,21nm,1.0s						
X56A	White Oak	23.03	26	P	P	13 26 06.8	+0.2
	baz=211						
TKL	Tuckaleechee C	23.04	19	P	P	13 26 05.9	-0.7
	comp=Z,2.3nm,0.8s,baz=175,slow=11,SNR=2.5						
TKL	Tuckaleechee C	23.04	19	IAmb	IAmb	13 26 38.0	
	comp=Z,13nm,1.4s						
W54A	Cherokee Point	23.08	23	P	P	13 26 07.7	+0.7
	baz=207						
V52A	Sevierville	23.27	20	P	P	13 26 08.8	-0.1
V52A				IAmb	IAmb	13 26 09.5	
	comp=Z,22nm,1.4s						
U49A	Red Boiling Sp	23.27	15	P	P	13 26 08.5	-0.4
U49A				IAmb	IAmb	13 26 43.4	
	comp=Z,14nm,1.4s						
BIRD	Birdtown, Kers	23.40	27	P	P	13 26 09.9	-0.3
BIRD				IAmb	IAmb	13 26 10.6	
	comp=Z,19nm,1.4s						
KMSC	Kings Mountain	23.46	25	P	P	13 26 11.2	+0.4
	baz=209						
S39A	Bolivar	23.54	359	P	P	13 26 11.2	-0.4
W56A	Indian Trail	23.77	26	P	P	13 26 13.3	-0.4
	baz=211						
S44A	Carbondale	23.77	7	P	P	13 26 14.5	+0.7
S44A				IAmb	IAmb	13 26 15.8	
	comp=Z,11nm,0.9s						
V54A	Nebo	23.78	23	P	P	13 26 14.4	+0.5
	baz=207						
TZTN	Tazewell	23.92	19	P	P	13 26 14.8	-0.4
TZTN				IAmb	IAmb	13 26 37.0	
	comp=Z,17nm,1.3s						
CCM	Cathedral Cave	23.95	3	P	P	13 26 14.9	-0.5
CCM	Cathedral Cave	23.95	3	P	P	13 26 15.4	-0.1
	baz=184						
T50A	Nancy	23.99	16	P	P	13 26 14.7	-1.2
	baz=200						
ANMO	Albuquerque	24.10	332	P	P	13 26 18.0	+0.9
	comp=Z,0.5nm,0.6s,baz=152,slow=13,SNR=3.7						
V55A	Taylorsville	24.13	24	P	P	13 26 16.5	-0.7
V55A				IAmb	IAmb	13 26 18.4	
	comp=Z,13nm,0.9s						
V55A	Taylorsville	24.13	24	P	P	13 26 16.9	-0.2
	baz=209,SNR=5.8						
V56A	Mocksville	24.38	25	P	P	13 26 19.3	-0.2
	baz=210						
TUC	Tucson	24.40	321	P	P	13 26 21.8	+2.0
V57A	Coltrane Farms	24.75	26	P	P	13 26 22.3	-0.5
	baz=212						
WCI	Wyandotte Cave	24.79	13	P	P	13 26 22.6	-0.6
WCI				IAmb	IAmb	13 27 18.3	
	comp=Z,28nm,1.7s						
WCI	Wyandotte Cave	24.79	13	P	P	13 26 22.9	-0.3
	baz=195						
R32A	Long Quarter,	24.80	349	P	P	13 26 24.1	+0.9
OLIL	Olney	24.95	9	P	P	13 26 24.2	-0.3
OLIL				IAmb	IAmb	13 26 58.3	
	comp=Z,13nm,0.9s						
V58A	Windy Hill, Pi	24.96	27	P	P	13 26 23.9	-0.9
V58A				IAmb	IAmb	13 26 24.8	
	comp=Z,13nm,0.9s						
V58A	Windy Hill, Pi	24.96	27	P	P	13 26 24.1	-0.6
	baz=213,SNR=5.1						
T54A	Tazewell	25.06	22	P	P	13 26 25.9	+0.2
	baz=207						
KSU1	Kansas State U	25.15	353	P	P	13 26 27.4	+1.0
	baz=172,SNR=10.0						
T25A	Trinidad	25.15	338	P	P	13 26 29.8	+3.1
	baz=153,SNR=9.5						
V59A	Middlesex	25.34	29	P	P	13 26 27.7	-0.4
	baz=215						
CBKS	Cedar Bluff	25.38	348	P	P	13 26 29.2	+0.7
CBKS	Cedar Bluff	25.38	348	P	P	13 26 30.4	+1.9
	baz=164						
U57A	Blanch	25.40	26	P	P	13 26 28.3	-0.4
	baz=212						
AOPR	Arecibo Observ	25.51	77	P	P	13 26 29.3	-0.7
SDCO	Great Sand Dun	26.09	337	P	P	13 26 37.9	+2.6
	baz=151,SNR=6.5						
Q51A	Peebles	26.28	17	P	P	13 26 35.5	-1.1
WUAZ	Wupatki	27.04	325	P	P	13 26 46.7	+3.0
	baz=138						
PV12	Saucer Basin,	27.95	333	P	P	13 26 53.8	+1.9
PV12				IAmb	IAmb	13 26 55.8	
	comp=Z,23nm,1.5s						
PV11	David Mesa, Pa	27.96	333	P	P	13 26 53.4	+1.4
PV11				IAmb	IAmb	13 26 56.5	
	comp=Z,21nm,1.6s						
O54A	Avella	28.27	21	P	P	13 26 53.7	-0.8
P57A	Homestead Farm	28.54	25	P	P	13 26 57.1	+0.2
	baz=211						
JFWS	Jewell Farm	28.85	4	P	P	13 26 59.0	-0.6
SDMD	Soldier's Deli	28.97	26	P	P	13 26 59.4	-1.4
SDMD				IAmb	IAmb	13 27 56.0	
	comp=Z,6.6nm,1.1s						
MSU	Marysvale	29.71	329	P	P	13 27 07.4	-0.2
ECSD	EROS Data Cent	29.74	355	P	P	13 27 06.9	-0.6
ECSD	EROS Data Cent	29.74	355	P	P	13 27 07.5	0.0
	baz=173						
P17A	Butcher Ranch,	29.76	332	P	P	13 27 07.5	-0.5
MPMC	Manual Prospec	31.04	319	P	P	13 27 21.4	+2.1
	baz=129						
R11A	Troy Canyon, C	31.41	325	P	P	13 27 25.2	+2.6

	baz=134						
PDAR	Pinedale Array	31.99	337	P	P	13 27 29.1	+1.4
	comp=Z,0.8nm,0.9s,baz=143,slow=11,SNR=5.5						
REDW	Red Top Meadow	33.00	336	P	P	13 27 37.7	+1.2
NVAR	Mina Array Bea	33.05	322	P	P	13 27 39.0	+2.0
	comp=Z,1.7nm,0.7s,baz=133,slow=8.5,SNR=16						
NVAR				PcP	PcP	13 30 21.1	+0.9
	comp=Z,0.2nm,0.4s,baz=143,slow=2.3,SNR=3.5						
NVAR	Mina Array Bea	33.05	322	P	P	13 27 38.6	+1.7
TPAW	Teton Pass	33.15	336	P	P	13 27 38.3	+0.5
TPAW				IAmb	IAmb	13 28 00.8	
	comp=Z,10nm,1.2s						
MDND	Maddock	34.14	352	P	P	13 27 46.7	+0.6
AGMN	Agassiz Nation	34.22	357	P	P	13 27 46.5	-0.3
AGMN				IAmb	IAmb	13 27 47.6	
	comp=Z,4.2nm,0.8s						
AGMN	Agassiz Nation	34.22	357	P	P	13 27 46.8	0.0
	baz=175						
LONY	Lake Ozonia	34.24	24	P	P	13 27 43.4	-3.6
	baz=213,SNR=5.2						
LAO	LASA Array	34.38	344	P	P	13 27 49.0	+0.8
LAO				IAmb	IAmb	13 27 50.2	
	comp=Z,9.7nm,1.3s						
LAO	LASA Array	34.38	344	P	P	13 27 49.7	+1.4
	baz=157						
MCMT	McKenzie Canyo	35.02	335	P	P	13 27 55.9	+1.9
E55A	Montcerf-Lytto	35.28	20	P	P	13 27 56.5	+0.6
	baz=209						
PTGA	Pitinga	35.82	112	P	P	13 28 02.0	+1.0
PTGA				IAmb	IAmb	13 28 03.8	
	comp=Z,6.5nm,0.9s						
WVOR	Wild Horse Val	35.93	327	P	P	13 28 03.2	+1.5
WVOR				IAmb	IAmb	13 28 04.8	
	comp=Z,8.2nm,1.4s						
ULM	Lac du Bonnet	36.17	357	P	P	13 28 01.9	-1.6
	comp=Z,2.9nm,0.8s,baz=175,slow=9.8,SNR=7.4						
ULM	Lac du Bonnet	36.17	357	P	P	13 28 02.3	-1.3
J08A	Circle Bar Ran	36.49	328	P	P	13 28 07.8	+1.2
J08A				IAmb	IAmb	13 28 09.1	
	comp=Z,5.3nm,1.0s						
EGMT	Eagleton	36.62	341	P	P	13 28 08.8	+1.3
EGMT				IAmb	IAmb	13 28 27.7	
	comp=Z,8.9nm,1.1s						
F10A	Beach Ranch, E	37.82	332	P	P	13 28 18.7	+1.0
F10A				IAmb	IAmb	13 28 20.9	
	comp=Z,7.6nm,1.1s						
LPAZ	La Paz	38.87	140	P	P	13 28 27.0	-0.5
	comp=Z,0.6nm,0.6s,baz=310,slow=7.9,SNR=2.4						
LPAZ				LR	LR	13 43 35.9	
	comp=Z,49nm,18.4s,baz=343,slow=35						
FFC	Flin Flon	41.18	352	P	P	13 28 45.6	+0.1
FFC				IAmb	IAmb	13 28 47.0	
	comp=Z,18nm,1.6s						
SCHQ	Schefferville	45.49	21	P	P	13 29 18.9	-1.4
	comp=Z,3.5nm,1.0s,baz=232,slow=17,SNR=4.1						
SCHQ				PcP	PcP	13 30 58.4	-0.5
	comp=Z,1.9nm,0.7s,baz=249,slow=3.3,SNR=4.1						
SCHQ				LR	LR	13 50 26.2	
	comp=Z,118nm,18.7s,baz=318,slow=39						
YKA	Yellowknife Ar	50.76	347	P	P	13 30 01.9	+1.0
	comp=Z,3.5nm,0.8s,baz=151,slow=7.8,SNR=47						
BCAR	Beaver Creek A	59.61	337	P	P	13 31 06.2	+1.4
INK	Inuvik	60.12	344	P	P	13 31 08.8	+0.7
IL31		62.42	337	P	P	13 31 24.9	+1.2
ILAR	Eielson Array	62.42	337	P	P	13 31 24.9	+1.2
	comp=Z,1.8nm,0.9s,baz=121,slow=5.6,SNR=13						
ILAR	Eielson Array	62.42	337	P	P	13 31 24.4	+0.6
BMAR	Burnt Mountain	62.92	340	P	P	13 31 28.2	+1.1
NOA	NORSAR Array B	84.54	28	P	P	13 33 34.8	+0.9
	comp=Z,1.7nm,0.9s,baz=247,slow=3.9,SNR=3.1						
NOA				LR	LR	14 09 15.5	
	comp=Z,26nm,21.8s,baz=285,slow=34						
NRIK	Noril'sk	96.82	360	LR	LR	14 20 22.5	
	comp=Z,36nm,20.5s,baz=12,slow=37						
NJ2	Nanjing	124.94	327	*e*P	PKPdf	13 40 00.6	-1.0
KSH	Kashi	125.71	11	PKP	PKPdf	13 40 02.1	-0.9
KSH				sPKP		13 40 16.3	
KSH				PP	PP	13 41 59.1	+5.4
KSH				PKS	PKSdf	13 43 37.4	-2.4
KSH				SKKS		13 48 47.0	
LZH	Lanzhou	127.66	343	*e*PKP	PKPdf	13 40 04.6	-2.3
LZH				pPKP	pPKPdf	13 40 15.3	-1.5
LZH				sPKP		13 40 20.3	
CMAR	Chiang Mai Arr	145.62	340	PKPbc	PKPab	13 40 40.9	+0.2
	comp=Z,2.2nm,0.8s,baz=346,slow=4.4,SNR=18						
CMAR	Chiang Mai Arr	145.62	340		PKPdf	13 40 39.8	-0.3

TAP 16 13:25:29.2, 24°.81N×121°.78E, h8^{km}, ML2.0, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILA	Ilan	0.06	212	P	Pg	13 25 31.5	+0.5
	baz=203						
ILA				*e*S	Sg	13 25 33.1	+0.9
	baz=203						
NTC	Toucheng	0.06	48	P	Pg	13 25 31.7	+0.6
	baz=47						
NTC				S	Sg	13 25 33.2	+0.8
	baz=47						
TWE	Neicheng	0.14	228	P	Pg	13 25 33.0	+0.8
	baz=223						
TWE				S	Sg	13 25 35.4	+1.2
	baz=223						
SLBB	Yuanshan	0.14	246	*e*P	Pg	13 25 32.4	+0.1
	baz=245						
TIPB	Shuangxi	0.16	15	*e*S	Sg	13 25 36.5	+1.5
	baz=14						
NWLT	Wulai	0.26	262	*e*P	Pb	13 25 35.6	-0.5
	baz=261						
NWLT				*e*S	Sb	13 25 39.9	-0.8
	baz=261						
ENTT	Nioudou	0.26	229	P	Pb	13 25 35.4	-0.8
	baz=227						
ENTT				*e*S	Sg	13 25 38.9	+1.0
	baz=227						
NDT	Datong Townshi	0.32	229	*e*P	Pb	13 25 36.4	-0.8
	baz=229						
NDT				*e*S	Sg	13 25 40.6	+0.8
	baz=229						

JMA 16 13:25:50.3±0.1, 24°.34N×123°.60E, h14^{km}±1^{km}, M1.3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	Iriomote-Funau	0.12	92	P	Pg	13 25 53.5	-0.2
IRIF				*e*S	Sb	13 25 56.5	-0.5
HATJ	Hateruma jima	0.34	146	*e*S	Sg	13 26 01.9	0.0
JKRS	Kuro-shima	0.39	105	P	Pg	13 25 58.0	-0.1
JKRS				S	Sb	13 26 04.4	-0.4
JIJ	Ishigaki jima	0.50	87	P	Pg	13 25 59.7	-0.4
JIJ				S	Sg	13 26 06.8	+0.1
YOJ	Yonaguni jima	0.55	283	P	Pg	13 26 01.2	+0.1
YOJ				*e*S	Sg	13 26 08.0	-0.5
JISG	Ishigakijimahi	0.69	69	P	Pg	13 26 03.7	-0.1
JISG				S	Sb	13 26 13.6	0.0
JTJ	Tarama	1.05	73	S	Sg	13 26 24.6	+0.4

TAP 16 13:26:47.6, 24°.67N×121°.71E, h16^{km}±1^{km}, ML1.6, 2C, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWE	Neicheng	0.07	324	⇑*i*P	Pg	13 26 51.5	+0.8
	baz=333						
TWE				S	Sg	13 26 53.2	+0.6
	baz=333						
SLBB	Yuanshan	0.11	322	P	Pb	13 26 51.4	-0.1
	baz=321						
ENTT	Nioudou	0.13	258	*e*P	Pb	13 26 52.7	+0.8
	baz=256						
ENTT				*e*S	Sb	13 26 54.4	-0.3
	baz=256						
TWC	Suao	0.14	115	*e*P	Pb	13 26 52.1	+0.2
	baz=113						
TWC				*e*S	Sb	13 26 54.8	0.0
	baz=113						
NDT	Datong Townshi	0.19	250	*e*P	Pb	13 26 53.5	+0.7
	baz=249						
NDT				*e*S	Sb	13 26 56.2	-0.1
	baz=249						
NTC	Toucheng	0.21	30	*e*S	Sg	13 26 56.1	+0.2
	baz=30						
NWLT	Wulai	0.22	300	P	Pb	13 26 54.2	+0.9
	baz=299						
NWLT				S	Sb	13 26 57.1	0.0
	baz=299						
ENA	Nanau	0.24	173	*e*P	Pb	13 26 54.2	+0.5
	baz=171						
ENA				*e*S	Sb	13 26 57.5	-0.2
	baz=171						
YHNB	Yeheng	0.30	270	⇑*i*P	Pb	13 26 55.7	+0.9
	baz=270						
YHNB				S	Sb	13 26 59.6	0.0
	baz=270						
NSK	Sanguang	0.32	271	P	Pb	13 26 55.9	+0.8
	baz=270						
NSK				*e*S	Sb	13 27 00.3	+0.2
	baz=270						
TIPB	Shuangxi	0.32	19	*e*P	Pb	13 26 55.4	+0.4
	baz=19						
TIPB				S	Sb	13 26 59.7	-0.3
	baz=19						
NNS	Nan Shan	0.38	234	*e*S	Sb	13 27 02.0	+0.2
	baz=232						
NNSB	Datong	0.38	231	*e*S	Sg	13 27 01.3	+0.5
	baz=231						
NNSH	Datong	0.38	231	*e*S	Sb	13 27 01.4	-0.4
	baz=231						
NACB	Ninganchiao	0.50	192	*e*S	Sb	13 27 06.6	+1.3
	baz=192						

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*NEIC **16** 13:26:46.4±1.5, 21°.60N±0°.08×143°.1E±0°.1, h291^{km}±6^{km}, mb4.5/59, Error ellipse: s-maj=16.4km s-min=12.1km az=84.0*

*IDC **16** 13:26:46.9±1.6, 21°.65N×143°.08E, h292^{km}±15^{km}, mb3.4/19, mb1 3.6/23, mb1mx3.5/43, mbtmp4.1/23, Error ellipse: s-maj=15.5km s-min=9.8km az=85.0*

ISC 16 13:26:48.4±0.5**, 21°.68N**±0°.06×**143°.04E**±0°.09**, h311^{km}, n97, σ1^{s}.01**/106**, mb4.4**/42**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	5.45	352	P	Pn	13 28 11.1	-0.4
	43nm,0.3s,baz=277,slow=20,SNR=17						
JCJ				S	S	13 29 15.7	-2.8
	22nm,0.3s,baz=307,slow=20,SNR=3.9						
JHJ2	Mitsune	11.74	347	Pn	Pn	13 29 26.8	-0.8
JHJ	Hachijo jima 2	11.76	346	P	Pn	13 29 27.4	-0.4
	11nm,0.3s,baz=76,slow=23,SNR=6.5						
JHJ				S	S	13 31 39.1	+0.3
	4.9nm,0.3s,baz=180,slow=14,SNR=2.3						
INU	Inuyama	14.61	340	P	P	13 29 59.1	-1.5
MJAR	Matsushiro Arr	15.40	345	P	P	13 30 09.3	+0.1
	0.2nm,0.3s,baz=167,slow=9.7,SNR=14						
MJAR				S	S	13 32 53.6	-2.2
	0.1nm,0.3s,baz=145,slow=13,SNR=3.8						
MJAR	Matsushiro Arr	15.40	345	P	P	13 30 06.5	-2.8
MAJO	Matsushiro	15.40	345	P	P	13 30 07.7	-1.5
MAJO				IAmb	IAmb	13 30 22.5	
	comp=Z,38nm,1.7s						
MJB9	Matsu-Tunnel	15.40	345	P	P	13 30 07.8	-1.5
MJB9				IAmb	IAmb	13 30 22.5	
	comp=Z,37nm,1.7s						
JNU	Nakatsue	15.69	319	P	P	13 30 11.0	-1.5
	comp=Z,0.1nm,0.3s,baz=36,slow=19,SNR=1.8						
JNU	Nakatsue	15.69	319	P	P	13 30 10.9	-1.6
JNU				IAmb	IAmb	13 30 54.8	
	comp=Z,34nm,1.5s						
YHNB	Yeheng	20.14	283	P	P	13 31 00.3	0.0
YHNB				IAmb	IAmb	13 31 32.6	
	comp=Z,36nm,1.4s						
KSRS	Korea Array	20.45	324	P	P	13 31 04.3	+1.2
	comp=Z,1.6nm,0.6s,baz=148,slow=8.8,SNR=12						
SONM	Songino Array	39.27	321	P	P	13 33 48.3	+0.4
	comp=Z,0.6nm,0.4s,baz=126,slow=7.3,SNR=2.8						
CMAR	Chiang Mai Arr	41.44	274	P	P	13 34 06.0	+0.2
	comp=Z,0.5nm,0.4s,baz=79,slow=5.8,SNR=4.2						
CTA	Charters Tower	41.63	175	P	P	13 34 06.7	-0.4
	comp=Z,0.9nm,0.7s,baz=234,slow=1.5,SNR=3.1						
WB0	Warramunga Arr	42.05	192	P	P	13 34 10.0	-0.5
WB0				IAmb	IAmb	13 34 37.6	
	comp=Z,37nm,2.0s						
WR0	Warramunga Arr	42.21	192	P	P	13 34 10.6	-1.2
WRAB	Tennant Creek	42.22	192	P	P	13 34 09.0	-2.9
WB2	Warramunga Arr	42.23	192	P	P	13 34 10.1	-1.9
WRA	Warramunga Arr	42.23	192	P	P	13 34 11.7	-0.3
	comp=Z,1.6nm,0.7s,baz=16,slow=8.9,SNR=14						
WRA	Warramunga Arr	42.23	192	P	P	13 34 10.8	-1.2
JOHN	Johnston Islan	44.93	88	P	P	13 34 30.9	-2.5
ASAR	Alice Springs	45.94	192	P	P	13 34 40.6	-0.6
	comp=Z,0.3nm,0.4s,baz=16,slow=6.6,SNR=10						
BILL	Bilibino	48.57	11	P	P	13 35 01.4	+0.7
XMIS	Christmas Isla	48.66	233	P	P	13 35 01.0	-1.2
UNV	Unalaska Valle	49.70	37	P	P	13 35 10.2	+0.7
AKUT	Akutan	50.21	37	P	P	13 35 14.2	+1.0
GAMB	Gambell	51.69	24	P	P	13 35 25.1	+1.1
STKA	Stephens Creek	53.27	182	P	P	13 35 35.5	-0.3
	comp=Z,1.5nm,0.5s,baz=342,slow=6.3,SNR=4.5						
ZAA0	Zalesovo Array	54.15	322	P	P	13 35 42.7	+0.7
ZALV	Zalesovo Beam	54.15	322	P	P	13 35 42.2	+0.2
	comp=Z,1.1nm,0.6s,baz=88,slow=7.6,SNR=5.3						
ZALV				PcP	PcP	13 36 42.3	+0.1
	comp=Z,1.2nm,0.4s,baz=134,slow=3.9,SNR=4.7						
ZALV	Zalesovo Beam	54.15	322	P	P	13 35 41.8	-0.2
ZALV					PcP	13 36 42.0	-0.3
MK31	Makanchi Array	54.61	313	P	P	13 35 46.1	+0.6
MKAR	Makanchi Array	54.61	313	P	P	13 35 46.6	+1.0
	comp=Z,0.9nm,0.6s,baz=91,slow=10,SNR=14						
MKAR				PcP	PcP	13 36 44.9	+0.6
	comp=Z,0.5nm,0.4s,baz=80,slow=5.1,SNR=7.6						
MKAR	Makanchi Array	54.61	313	P	P	13 35 46.2	+0.7
MKAR					PcP	13 36 44.5	+0.3
MAKZ	Makanchi	54.83	313	P	P	13 35 47.9	+0.9
RDOG	Red Dog Mine	56.94	21	P	P	13 36 01.4	-0.1
KURK	Kurchatov	57.40	317	P	P	13 36 05.3	+0.3
OHAK	Old Harbor	57.82	35	P	P	13 36 08.5	+0.8
NRIK	Noril'sk	57.97	340	P	P	13 36 08.5	-0.1
	comp=Z,1.3nm,0.3s,baz=135,slow=13,SNR=3.5						
IMAR	Indian Mountai	59.56	25	P	P	13 36 20.8	+1.2
SKT	Skwentna	59.58	30	P	P	13 36 19.8	0.0
SKT				IAmb	IAmb	13 37 55.6	
	comp=Z,31nm,1.7s						
BPAW	Bear Paw Mtn.	60.25	28	P	P	13 36 25.1	+0.9
SEW	Seward	60.26	32	P	P	13 36 23.2	-1.2
TRF	Thorofare Moun	60.42	28	P	P	13 36 25.9	+0.3
MLY	Manley	60.55	26	P	P	13 36 26.7	+0.4
MLY				IAmb	IAmb	13 37 34.5	
	comp=Z,29nm,2.0s						
PMR	Palmer	60.63	31	P	P	13 36 27.2	+0.3
PMR				IAmb	IAmb	13 36 44.2	
	comp=Z,34nm,1.9s						
GHO	Glory Hole Cre	60.76	30	P	P	13 36 28.3	+0.5
GHO				IAmb	IAmb	13 37 39.8	
	comp=Z,23nm,1.5s						
KNK	Knik Glacier	60.93	31	P	P	13 36 27.0	-1.8
KNK				IAmb	IAmb	13 36 27.5	
	comp=Z,17nm,1.3s						
MCK	McKinley	61.07	28	P	P	13 36 29.9	+0.1
MCK				IAmb	IAmb	13 37 08.1	
	comp=Z,24nm,1.7s						
NEA	Nenana	61.16	27	P	P	13 36 30.8	+0.5
NEA				IAmb	IAmb	13 38 37.8	
	comp=Z,21nm,1.8s						
ARSB	Arslanbob	61.28	306	P	P	13 36 33.0	+1.2
ARSB				IAmb	IAmb	13 36 49.0	
	comp=Z,18nm,1.8s						
SCM	Sheep Creek Mo	61.52	30	P	P	13 36 33.0	+0.1
WRH	Wood River Hil	61.56	27	P	P	13 36 33.1	+0.1
WRH				IAmb	IAmb	13 38 25.2	
	comp=Z,28nm,1.9s						
MDM	Murphy Dome	61.58	27	P	P	13 36 32.9	-0.2
MDM				IAmb	IAmb	13 38 37.9	
	comp=Z,16nm,1.5s						
CCB	Clear Creek Bu	61.71	27	P	P	13 36 34.1	+0.2
TOLK	Toolik Lake Re	61.79	23	P	P	13 36 36.0	+1.4
TOLK				IAmb	IAmb	13 36 37.4	
	comp=Z,26nm,1.8s						
HDA	Harding Lake	62.04	28	P	P	13 36 35.6	-0.5
HDA				IAmb	IAmb	13 38 33.0	
	comp=Z,21nm,1.9s						
IL31		62.12	27	P	P	13 36 35.7	-0.9
IL31				IAmb	IAmb	13 38 21.1	
	comp=Z,20nm,1.8s						
ILAR	Eielson Array	62.12	27	P	P	13 36 36.2	-0.4
	comp=Z,1.2nm,0.6s,baz=260,slow=5.4,SNR=28						
ILAR	Eielson Array	62.12	27	P	P	13 36 35.7	-1.0
PAX	Paxson	62.51	29	P	P	13 36 40.2	+0.7
PAX				IAmb	IAmb	13 37 38.4	
	comp=Z,28nm,1.9s						
BRVK	Borovoye	62.66	320	P	P	13 36 41.1	+0.7
RIDG	Independent Ri	62.87	28	P	P	13 36 42.2	+0.5
RIDG				IAmb	IAmb	13 36 48.6	
	comp=Z,26nm,1.7s						
KKAR	Karatay Array	62.96	308	P	P	13 36 42.7	0.0
FYU	Fort Yukon	63.05	25	P	P	13 36 41.8	-1.0
FYU				IAmb	IAmb	13 38 38.3	
	comp=Z,26nm,1.7s						
GLB	Gilahina Butte	63.15	31	P	P	13 36 42.2	-1.4
GLB				IAmb	IAmb	13 37 33.3	
	comp=Z,16nm,1.4s						
SCRK	Sand Creek	63.27	28	P	P	13 36 45.0	+0.6
SCRK				IAmb	IAmb	13 37 07.7	
	comp=Z,24nm,2.0s						
VRDI	Verde Repeater	63.31	31	P	P	13 36 43.8	-1.0
VRDI				IAmb	IAmb	13 38 04.9	
	comp=Z,19nm,1.5s						
BMAR	Burnt Mountain	63.42	24	P	P	13 36 46.8	+1.6
BCAR	Beaver Creek A	64.19	29	P	P	13 36 51.1	+0.7
EGAK	Eagle	64.56	27	P	P	13 36 52.7	+0.2
EGAK				IAmb	IAmb	13 38 10.4	
	comp=Z,26nm,2.0s						
DAWY	Dawson	65.30	28	P	P	13 36 58.1	+0.7
HYT	Haines Junctio	66.20	32	P	P	13 37 04.5	+1.2
EPYK	Eagle Plains	66.44	26	P	P	13 37 05.8	+1.2
EPYK				IAmb	IAmb	13 38 03.3	
	comp=Z,26nm,1.9s						
INK	Inuvik	67.64	24	P	P	13 37 12.1	+0.2
INK				IAmb	IAmb	13 37 20.5	
	comp=Z,17nm,1.9s						
JIS	Juneau Island	67.96	34	P	P	13 37 13.4	-0.7
ABKAR	Akbulak array	69.47	316	P	P	13 37 24.0	+0.4
C36M	Paulatuk	70.93	22	P	P	13 37 31.9	-0.1
BBB	Bella Bella	72.49	40	P	P	13 37 40.9	-0.6
GEYT	Alibeck	73.15	305	P	P	13 37 47.2	+1.4
	comp=Z,0.7nm,0.5s,baz=78,slow=6.6,SNR=2.6						
YKA	Yellowknife Ar	76.53	28	P	P	13 38 04.9	+0.5
	comp=Z,2.3nm,0.6s,baz=289,slow=5.6,SNR=43						
RES	Resolute Bay	77.13	13	P	P	13 38 08.0	+0.4
RES				IAmb	IAmb	13 38 50.2	
	comp=Z,16nm,1.9s						
ARCES	ARCESS Array B	78.90	341	P	P	13 38 18.4	+1.0
	comp=Z,4.1nm,0.6s,baz=75,slow=8.7,SNR=32						
ARCES	ARCESS Array B	78.90	341	P	P	13 38 18.0	+0.7
PINE	Pine Mountain	79.48	47	P	P	13 38 22.4	+1.2
KBZ	Khabaz	82.29	314	P	P	13 38 37.0	+1.3
	comp=Z,3.2nm,0.8s,baz=98,slow=5.7,SNR=4.4						
FINES	FINESS Array B	83.14	334	P	P	13 38 39.4	-0.3
	comp=Z,3.1nm,0.5s,baz=71,slow=4.8,SNR=39						
FINES	FINESS Array B	83.14	334	P	P	13 38 39.0	-0.7
NVAR	Mina Array Bea	83.26	51	P	P	13 38 42.0	+0.9
	comp=Z,1.5nm,0.7s,baz=272,slow=5.7,SNR=14						
AKASG	Malin Array Be	87.45	324	P	P	13 38 59.9	-1.1
	comp=Z,0.3nm,0.4s,baz=51,slow=4.6,SNR=4.4						
PDAR	Pinedale Array	87.50	45	P	P	13 39 01.7	-0.1
	comp=Z,0.3nm,0.7s,baz=318,slow=1.2,SNR=3.4						
PDAR	Pinedale Array	87.50	45	P	P	13 39 01.2	-0.6
TORD	Torodi Ar. Bea	128.65	309	PKP	PKiKP	13 45 20.5	+0.1
	comp=Z,0.1nm,0.6s,baz=356,slow=1.9,SNR=2.6						
PLCA	Paso Flores	145.84	132	PKPbc	PKPbc	13 45 52.2	+0.5
	comp=Z,1.9nm,0.6s,baz=242,slow=6.5,SNR=5.5						
LPAZ	La Paz	150.07	85	PKPbc	PKiKP	13 46 04.7	-0.1
	comp=Z,1.9nm,0.6s,baz=287,slow=2.8,SNR=11						
LPAZ				PKPab	PKPab	13 46 12.5	+1.4
	comp=Z,1.4nm,0.5s,baz=351,slow=3.9,SNR=7.6						
LPAZ	La Paz	150.07	85		PKPbc	13 46 04.4	+0.4
LPAZ					PKPab	13 46 12.0	+0.9

JMA 16 13:27:05.0±0.1, 24°.33N×123°.58E, h13^{km}±1^{km}, M0.7, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	Iriomote-Funau	0.14	88	P	Pg	13 27 08.3	-0.2
IRIF				S	Sg	13 27 11.1	+0.2
HATJ	Hateruma jima	0.34	143	*e*S	Sg	13 27 16.7	+0.1
JKRS	Kuro-shima	0.40	103	P	Pg	13 27 12.8	-0.2
JKRS				S	Sg	13 27 19.0	+0.5
JIJ	Ishigaki jima	0.51	86	P	Pg	13 27 15.1	0.0
JIJ				*e*S	Sg	13 27 21.8	-0.2
JYNG	Yonagunijimaku	0.59	282	S	Sb	13 27 25.1	-0.4
JISG	Ishigakijimahi	0.71	69	P	Pg	13 27 18.5	-0.4
JISG				*e*S	Sb	13 27 28.9	-0.1

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*KRNET **16** 13:32:30.6±0.1, 40°.40N×72°.65E, h16^{km}, mb2.6*

*SOME **16** 13:32:31.4, 40°.62N×72°.42E, h0^{km}*

*NNC **16** 13:32:35.1±7.1, 40°.78N×72°.45E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=56.8km s-min=23.4km az=171.0*

ISC 16 13:32:32.0±1.8**, 40°.52N**±0°.06×**72°.52E**±0°.04**, h6^{km}**±14^{km}**, n18, σ1^{s}.50**/31**, 18C-5D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARK	Arkit	1.34	342	⇑*i*P	Pg	13 32 57.8	+0.1
	baz=40						
ARK				⇑*i*S	Sg	13 33 18.2	+3.0
	baz=40						
BTK	Batken	1.38	251	⇑*i*P	Pb	13 32 57.2	-1.1
	baz=57						
BTK				⇑*i*S	Sg	13 33 17.7	+1.3
	baz=57						
AML	Almayashu	1.83	28	⇑*i*P	Pb	13 33 05.8	-0.4
	baz=24						
AML				⇑*i*S	Sg	13 33 31.7	+0.7
	baz=24						
ARLS	Aral	1.91	45	⇑*e*P	Pb	13 33 06.0	-1.3
	baz=40						
ARLS				⇑*i*S	Sb	13 33 32.3	+0.8
	baz=40						
UCH	Uchtor	2.27	41	⇑*i*P	Pb	13 33 11.9	-1.7
	baz=37						
UCH				⇑*e*S	Sb	13 33 41.1	-1.1
	baz=37						
MRKS	Merke	2.28	13	*e*P	Pb	13 33 13.0	-0.7
	1.8nm,0.2s						
MRKS				*e*S	Sg	13 33 44.2	-1.1
	4.6nm,0.3s						
MRKS	Merke	2.28	13	Pg	Pb	13 33 13.0	-0.7
	2.1nm,0.3s						
MRKS				Lg	Lg	13 33 44.0	
	4.6nm,0.4s						
EKS2	Erkin-Say	2.34	23	⇑*i*P	Pb	13 33 13.0	-1.6
	baz=20						
EKS2				⇑*i*S	Sb	13 33 44.0	+0.2
	baz=20						
IUG	Iuzhnay	2.48	312	*e*P	Pb	13 33 16.1	-0.9
	0.9nm,0.2s						
IUG				*e*S	Sg	13 33 49.2	-2.4
	7.7nm,0.2s						
IUG	Iuzhnay	2.48	312	Pg	Pn	13 33 14.0	+1.0
	0.8nm,0.3s						
IUG				Lg	Lg	13 33 45.6	
	7.3nm,0.4s						
KZA	Kyzart	2.58	52	⇑*e*P	Pn	13 33 15.7	+1.1
	baz=49						
KZA				⇑*i*S	Sn	13 33 47.5	+1.0
	baz=49						
AAK	Ala-Archa	2.58	34	⇑*i*P	Pn	13 33 16.0	+1.5
	baz=31						
AAK				⇑*i*S	Sb	13 33 48.4	-2.4
	baz=31						
AAK	Ala-Archa	2.58	34	⇑Pg	Pb	13 33 19.5	+0.7
	3.1nm,0.6s						
AAK				Lg	Lg	13 33 51.7	
	4.6nm,0.5s						
NRN	Naryn	2.79	70	⇓*e*P	Pn	13 33 17.0	-0.4
	baz=67						
NRN				⇓*e*S	Sn	13 33 51.6	0.0
	baz=67						
KBK	Karagaybulak	2.81	40	⇓*i*P	Pn	13 33 19.1	+1.6
	baz=37						
KBK				⇓*i*S	Sb	13 33 54.2	-3.1
	baz=37						
KK31	Karatay Array	2.98	330	⇑Pg	Pb	13 33 25.3	-0.3
	0.6nm,0.6s						
KK31				⇓Lg	Lg	13 34 03.5	
	1.0nm,0.5s,baz=138,slow=28						
KST	Kastek	3.60	44	*e*P	Pb	13 33 37.7	+1.6
	0.7nm,0.2s						
KST				*e*S	Sg	13 34 26.4	-1.3
	1.5nm,0.3s						
KST	Kastek	3.60	44	Pg	Pb	13 33 37.7	+1.6

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	1.0nm,0.3s						
KST				Lg	Lg	13 34 26.8	
	1.1nm,0.3s						

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*IDC **16** 13:52:28.2±4.8, 4°.42S×153°.78E, h105^{km}±31^{km}, mb3.7/5, mb1 3.8/7, mb1mx3.5/28, mbtmp4.1/7, Error ellipse: s-maj=48.2km s-min=25.9km az=83.0*

*NEIC **16** 13:52:31.1±1.7, 4°.5S±0°.1×153°.6E±0°.2, h123^{km}±13^{km}, mb4.5/7, Error ellipse: s-maj=32.0km s-min=17.0km az=113.0*

ISC 16 13:52:28.7±1.0, **4°.50S**±0°.10×**153°.7E**±0°.1, **h100**^{km}, **n19**, σ**1^{s}03**/20, **mb4.1**/9, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.69	276	P	Pn	13 52 57.4	0.0
	323nm,0.3s,baz=127,slow=1.9,SNR=156						
KRVT				S	Sn	13 53 20.8	+1.7
	502nm,0.3s,baz=216,slow=19,SNR=6.8						
PMG	Port Moresby	8.13	233	P	Pn	13 54 25.0	+1.0
	3.8nm,0.3s,baz=46,slow=10,SNR=17						
PMG	Port Moresby	8.13	233	Pn	Pn	13 54 24.8	+0.9
PATS	Pohnpei	12.16	22	Pn	Pn	13 55 20.7	+2.1
CTA	Charters Tower	17.11	204	P	Pn	13 56 22.9	+1.2
	0.2nm,0.3s,baz=14,slow=15,SNR=2.3						
WB0	Warramunga Arr	24.18	230	P	P	13 57 35.6	-0.3
WB0				IAmb	IAmb	13 57 37.2	
	comp=Z,10.0nm,0.5s						
WR0	Warramunga Arr	24.18	229	P	P	13 57 36.3	+0.4
WR0				IAmb	IAmb	13 57 37.7	
	comp=Z,6.2nm,0.8s						
WRAB	Tennant Creek	24.31	229	P	P	13 57 37.2	+0.1
WRAB				IAmb	IAmb	13 57 38.4	
	comp=Z,10nm,0.5s						
WB2	Warramunga Arr	24.32	229	P	P	13 57 37.5	+0.3
WB2				IAmb	IAmb	13 57 38.5	
	comp=Z,11nm,0.6s						
WRA	Warramunga Arr	24.32	229	P	P	13 57 37.8	+0.6
	comp=Z,6.5nm,0.4s,baz=54,slow=10,SNR=48						
WRA	Warramunga Arr	24.32	229	P	P	13 57 36.6	-0.6
ASAR	Alice Springs	26.98	223	P	P	13 58 01.0	-0.3
	comp=Z,0.7nm,0.4s,baz=56,slow=9.1,SNR=13						
ASAR	Alice Springs	26.98	223	P	P	13 58 00.5	-0.8
STKA	Stephens Creek	29.51	201	P	P	13 58 23.2	-0.5
	comp=Z,2.9nm,0.9s,baz=28,slow=13,SNR=4.4						
STKA	Stephens Creek	29.51	201	P	P	13 58 22.9	-0.7
FITZ	Fitzroy Crossi	30.60	242	P	P	13 58 32.7	-0.7
	comp=Z,1.6nm,0.6s,baz=169,slow=0.7,SNR=8.9						
JOW	Kunigami	39.69	323	P	P	13 59 49.8	-1.5
MKAR	Makanchi Array	80.70	319	P	P	14 04 29.5	-1.4
	comp=Z,0.1nm,0.5s,baz=123,slow=5.3,SNR=2.0						
TORD	Torodi Ar. Bea	151.07	289	PKPbc	PKPbc	14 12 11.1	-0.1
	comp=Z,0.2nm,0.6s,baz=96,slow=1.3,SNR=2.0						

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*NEIC **16** 14:03:25.6±2.2, 30°.6N±0°.1×140°.2E±0°.1, h5^{km}±4^{km}, mb4.7/17, Error ellipse: s-maj=15.8km s-min=13.7km az=130.0*

*IDC **16** 14:03:25.1±0.6, 30°.54N×140°.17E, h0^{km}, mb3.7/12, mb1 3.9/14, mb1mx3.8/36, mbtmp3.7/14, ML3.0/2, MS3.4/1, Ms1 3.4/1, ms1mx2.5/45, Error ellipse: s-maj=20.6km s-min=19.2km az=102.0*

ISC 16 14:03:30.3±0.5, **30°.62N**±0°.08×**140°.15E**±0°.09, **h35**^{km}, **n52**, σ**1^{s}47**/47, **mb4.0**/20, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	6.13	345	Pn	Pn	14 05 02.2	+3.8
	0.1nm,0.3s,baz=143,slow=14,SNR=5.6						
MAJO	Matsushiro	6.13	345	Pn	Pn	14 04 57.6	-0.8
MJB9	Matsu-Tunnel	6.13	345	Pn	Pn	14 04 57.5	-1.0
JNU	Nakatsue	8.27	290	Pn	Pn	14 05 26.0	-1.8
	0.2nm,0.3s,baz=31,slow=12,SNR=3.1						
JNU	Nakatsue	8.27	290		Pn	14 05 27.0	-0.9
ERM	Erimo	11.63	11	Pn	Pn	14 06 11.7	-2.1
KSRS	Korea Array	12.21	307	Pn	Pn	14 06 21.6	-0.2
	0.1nm,0.3s,baz=106,slow=13,SNR=3.1						
ASAJ	Asahikawa	13.62	8	Pn	Pn	14 06 36.9	-4.0
	0.1nm,0.3s,baz=158,slow=19,SNR=2.6						
JKA	Kamikawa-asahi	13.62	8		Pn	14 06 36.9	-4.0
NACB	Ninganchiao	17.67	253		Pn	14 07 33.0	-0.8
NACB				IAmb	IAmb	14 07 34.9	
	comp=Z,13nm,0.9s						
YULB	Yu-li	18.26	251		P	14 07 39.6	-1.3
H11N2	WAKE ISLAND Hy	26.46	108	T	T	14 36 24.1	
	baz=300,slow=75,SNR=847						
H11N1	WAKE ISLAND Hy	26.46	108	T	T	14 36 24.3	
	baz=300,slow=75,SNR=34						
H11N3	WAKE ISLAND Hy	26.47	108	T	T	14 36 27.0	
	baz=300,slow=75,SNR=639						
H11S3	WAKE ISLAND Hy	26.91	110	T	T	14 36 58.6	
	baz=302,slow=76,SNR=285						
H11S1	WAKE ISLAND Hy	26.91	110	T	T	14 36 58.9	
	baz=302,slow=76,SNR=383						
H11S2	WAKE ISLAND Hy	26.93	110	T	T	14 36 59.7	
	baz=302,slow=76,SNR=24						
LUWI	Luwuk	35.56	211	P	P	14 10 24.9	+0.5
PBKT	Sadao Pong	38.33	258	P	P	14 10 49.8	+1.8
CHTO	Chiang Mai	39.03	262	P	P	14 10 54.9	+1.1
CMAR	Chiang Mai Arr	39.19	262	P	P	14 10 56.1	+1.0
	comp=Z,0.6nm,0.2s,baz=53,slow=6.8,SNR=7.8						
PMG	Port Moresby	40.36	169	P	P	14 11 03.5	-1.3
PMG				IAmb	IAmb	14 11 55.9	
	comp=Z,46nm,1.8s						
ZALV	Zalesovo Beam	45.69	317	PcP	PcP	14 13 25.3	+0.2
	comp=Z,0.8nm,0.6s,baz=93,slow=3.0,SNR=4.5						
MKAR	Makanchi Array	46.90	307	P	P	14 11 57.6	+0.3
	comp=Z,0.3nm,0.7s,baz=99,slow=8.4,SNR=3.6						
MKAR				PcP	PcP	14 13 28.5	-1.1
	comp=Z,0.2nm,0.7s,baz=62,slow=4.3,SNR=2.8						
MKAR				LR	LR	14 31 35.4	
	comp=Z,39nm,19.4s,baz=14,slow=36						
MKAR	Makanchi Array	46.90	307	P	P	14 11 57.3	0.0
KURK	Kurchatov	49.27	312	P	P	14 12 16.3	+0.8
KURK	Kurchatov	49.27	312	IAmb	IAmb	14 14 04.7	
	comp=Z,8.7nm,1.8s						
KURBB	Kurchatov Arra	49.33	312	P	P	14 12 16.3	+0.4
	comp=Z,0.4nm,0.7s,baz=90,slow=7.5,SNR=4.1						
WB0	Warramunga Arr	50.40	187	P	P	14 12 23.7	-0.6
WB0				IAmb	IAmb	14 13 04.3	
	comp=Z,38nm,1.9s						
WRAB	Tennant Creek	50.57	187	P	P	14 12 25.1	-0.5
WRAB				IAmb	IAmb	14 13 43.3	
	comp=Z,20nm,1.8s						
WR0	Warramunga Arr	50.57	187	P	P	14 12 25.1	-0.5
WR0				IAmb	IAmb	14 13 08.1	
	comp=Z,10nm,1.4s						
WRA	Warramunga Arr	50.58	187	P	P	14 12 24.4	-1.3
	comp=Z,1.4nm,0.8s,baz=2.7,slow=7.6,SNR=11						
WRA				PcP	PcP	14 13 43.8	+0.7
	comp=Z,0.4nm,0.5s,baz=0.3,slow=4.1,SNR=6.2						
WRA	Warramunga Arr	50.58	187	P	P	14 12 24.8	-0.8
ASAR	Alice Springs	54.30	187	P	P	14 12 51.7	-1.5
	comp=Z,0.7nm,0.7s,baz=16,slow=13,SNR=11						
NEA	Nenana	54.57	30	P	P	14 12 56.2	+1.4
NEA				IAmb	IAmb	14 14 36.5	
	comp=Z,15nm,1.6s						
KNK	Knik Glacier	54.79	34	P	P	14 12 56.2	-0.1
KNK				IAmb	IAmb	14 13 10.0	
	comp=Z,22nm,1.3s						
SML	Sawmill	54.85	33	P	P	14 12 57.3	+0.4
ILAR	Eielson Array	55.52	30	P	P	14 13 00.3	-1.3
	comp=Z,1.2nm,1.0s,baz=258,slow=6.6,SNR=6.2						
KKAR	Karatay Array	55.62	304	P	P	14 13 01.9	-0.8
KKAR	Karatay Array	55.62	304	P	P	14 13 01.7	-1.0
KKAR				IAmb	IAmb	14 13 06.9	
	comp=Z,9.3nm,2.0s						
RAGM	Ragged Mountai	56.67	35	P	P	14 13 08.5	-1.5
ABKAR	Akbulak array	61.39	313	P	P	14 13 42.6	-0.1
YKA	Yellowknife Ar	69.91	28	P	P	14 14 37.5	+0.1
	comp=Z,0.2nm,0.6s,baz=283,slow=5.5,SNR=4.4						
AKASG	Malin Array Be	78.74	323	P	P	14 15 29.1	0.0
	comp=Z,0.1nm,0.2s,baz=44,slow=5.9,SNR=3.1						
NVAR	Mina Array Bea	79.74	51	P	P	14 15 36.0	+0.9
	comp=Z,0.6nm,0.8s,baz=277,slow=5.4,SNR=4.2						
BRTR	Keskin Array B	82.32	312	P	P	14 15 50.4	+1.7
	comp=Z,0.4nm,0.5s,baz=38,slow=9.5,SNR=2.6						
PDAR	Pinedale Array	82.95	44	P	P	14 15 54.2	+2.1
	comp=Z,0.1nm,0.4s,baz=334,slow=6.0,SNR=2.3						
PDAR	Pinedale Array	82.95	44	P	P	14 15 52.1	0.0
TXAR	Lajitas Array	94.89	52	P	P	14 16 50.8	+1.5
	comp=Z,0.9nm,0.8s,baz=213,slow=3.1,SNR=4.0						
PTGA	Pitinga	144.67	36	PKP	PKPdf	14 23 03.1	-0.9
	comp=Z,4.0nm,0.7s,baz=302,slow=4.6,SNR=8.9						
LPAZ	La Paz	150.50	68	PKPbc	PKiKP	14 23 20.6	+0.2
	comp=Z,0.6nm,0.5s,baz=260,slow=2.7,SNR=2.6						
PLCA	Paso Flores	153.21	121	PKPbc	PKiKP	14 23 26.0	+1.3
	comp=Z,2.6nm,0.9s,baz=236,slow=6.7,SNR=3.8						

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*IDC **16** 14:09:37.0±0.5, 30°.43N×140°.17E, h0^{km}, mb4.0/14, mb1 4.2/16, mb1mx4.0/41, mbtmp4.0/16, ML3.7/2, MS3.2/5, Ms1 3.2/5, ms1mx2.9/44, Error ellipse: s-maj=18.5km s-min=15.0km az=104.0*

*NEIC **16** 14:09:38.5±2.4, 30°.32N±0°.05×140°.4E±0°.1, h10^{km}±1^{km}, mb4.8/14, Error ellipse: s-maj=15.3km s-min=8.0km az=256.0*

ISC 16 14:09:42.0±0.4, **30°.35N**±0°.05×**140°.34E**±0°.08, **h35**^{km}, **n66**, σ**1^{s}23**/62, **mb4.2**/22, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.79	351	Pn	Pn	14 10 25.3	+1.2
JHJ	Hachijo jima 2	2.80	350	Pn	Pn	14 10 24.6	+0.4
	8.6nm,0.3s,baz=77,slow=19,SNR=5.0						
JHJ				Sn	Sn	14 10 56.4	-0.4
	14nm,0.3s,baz=210,slow=20,SNR=3.1						
JCJ	Chichijima	3.63	153	Pn	Pn	14 10 35.1	-0.6
	13nm,0.3s,baz=288,slow=20,SNR=3.4						
JCJ				Sn	Sn	14 11 15.2	-2.1
	2.8nm,0.3s,baz=299,slow=19,SNR=2.9						
MJAR	Matsushiro Arr	6.42	344	Pn	Pn	14 11 15.0	+0.9
	0.2nm,0.3s,baz=157,slow=12,SNR=16						
MJAR				Sn	Sn	14 12 27.0	+0.9
	baz=157,slow=16,SNR=1.9						
MJAR				LR	LR	14 13 44.0	
	comp=Z,145nm,20.1s,baz=160,slow=39						
MJAR	Matsushiro Arr	6.42	344		Pn	14 11 12.8	-1.2
MAJO	Matsushiro	6.42	344		Pn	14 11 15.4	+1.3
MJB9	Matsu-Tunnel	6.43	344		Pn	14 11 16.0	+1.8
JNU	Nakatsue	8.52	291	LR	LR	14 14 46.3	
	comp=Z,222nm,18.2s,baz=72,slow=37						
KSRS	Korea Array	12.51	308	Pn	Pn	14 12 41.8	+4.4
	0.2nm,0.3s,baz=116,slow=14,SNR=8.2						
KSRS				LR	LR	14 17 29.4	
	comp=Z,43nm,18.7s,baz=134,slow=38						
ASAJ	Asahikawa	13.85	7	Pn	Pn	14 12 50.1	-5.6
	0.2nm,0.3s,baz=70,slow=15,SNR=3.1						
JKA	Kamikawa-asahi	13.85	7		Pn	14 12 50.1	-5.6
USRK	Ussuriysk Ar.	15.32	337	Pn	P	14 13 18.6	-1.3
	baz=142,slow=12,SNR=4.2						
USRK	Ussuriysk Ar.	15.32	337	P	P	14 13 20.1	+0.2
YOJ	Yonaguni jima	16.46	253	Pn	Pn	14 13 30.8	+0.5
TATO	Taipei	17.53	257		P	14 13 43.9	-0.7
TATO				IAmb	IAmb	14 14 29.5	
	comp=Z,198nm,1.9s						
KLR	Kul'dur	19.95	343	P	P	14 14 10.1	-0.8
	comp=Z,0.1nm,0.3s,baz=135,slow=10.0,SNR=2.5						
PETK	Petropavlovsk-	26.03	24	P	P	14 15 14.0	+2.3
	comp=Z,1.2nm,0.6s,baz=222,slow=3.9,SNR=4.1						
PETK				LR	LR	14 27 04.0	
	comp=Z,48nm,18.8s,baz=241,slow=40						
H11N2	WAKE ISLAND Hy	26.22	108	T	T	14 42 35.9	
	baz=300,slow=75,SNR=848						
H11N1	WAKE ISLAND Hy	26.22	108	T	T	14 42 37.3	
	baz=300,slow=75,SNR=568						
H11N3	WAKE ISLAND Hy	26.24	108	T	T	14 42 37.1	
	baz=300,slow=75,SNR=458						
H11S3	WAKE ISLAND Hy	26.66	110	T	T	14 43 11.9	
	baz=302,slow=75,SNR=242						
H11S1	WAKE ISLAND Hy	26.67	110	T	T	14 43 10.9	
	baz=302,slow=75,SNR=109						
H11S2	WAKE ISLAND Hy	26.68	110	T	T	14 43 11.4	
	baz=302,slow=75,SNR=69						
PBKT	Sadao Pong	38.43	258	P	P	14 17 01.6	+1.1
PBKT				IAmb	IAmb	14 17 04.3	
	comp=Z,4.1nm,0.7s						
GSTR	Great Sitkin T	38.56	43	P	P	14 17 01.1	-0.2
CHTO	Chiang Mai	39.16	263	P	P	14 17 07.1	+0.5
CMAR	Chiang Mai Arr	39.31	262	P	P	14 17 08.3	+0.4
	comp=Z,1.7nm,0.7s,baz=58,slow=6.4,SNR=13						
CMAR				LR	LR	14 32 56.9	
	comp=Z,54nm,21.1s,baz=86,slow=36						
CMAR	Chiang Mai Arr	39.31	262	P	P	14 17 08.6	+0.7
TIXI	Tiksi	41.82	355	P	P	14 17 26.1	-1.8
ZALV	Zalesovo Beam	45.99	317	PcP	PcP	14 19 37.5	-0.4
	comp=Z,2.2nm,0.8s,baz=82,slow=3.7,SNR=7.2						
MKAR	Makanchi Array	47.19	307	P	P	14 18 09.9	-1.2
	comp=Z,0.6nm,0.8s,baz=92,slow=9.9,SNR=6.3						
MKAR				PcP	PcP	14 19 41.5	-0.8
	comp=Z,0.5nm,0.8s,baz=85,slow=4.2,SNR=3.9						
MKAR	Makanchi Array	47.19	307		PcP	14 19 40.9	-1.3
LEM	Lembang	48.49	226	P	P	14 18 22.3	+0.6
	comp=Z,11nm,0.3s,baz=25,slow=9.6,SNR=4.8						
KURK	Kurchatov	49.57	313	P	P	14 18 27.9	-1.5
KURBB	Kurchatov Arra	49.63	313	P	P	14 18 27.9	-2.0
	comp=Z,1.5nm,0.2s,baz=90,slow=6.7,SNR=10						
WRA	Warramunga Arr	50.34	187	P	P	14 18 35.4	-0.1
	comp=Z,0.8nm,0.4s,baz=3.5,slow=7.5,SNR=16						
WRA				PcP	PcP	14 19 54.5	+0.6
	comp=Z,0.4nm,0.5s,baz=359,slow=4.1,SNR=4.6						
KDAK	Kodiak Island	52.77	38	P	P	14 18 53.8	+0.5
	comp=Z,14nm,1.1s,baz=278,slow=14,SNR=3.1						
IMAR	Indian Mountai	52.90	28	P	P	14 18 55.8	+1.6
ASAR	Alice Springs	54.07	187	P	P	14 19 03.8	+0.6
	comp=Z,0.3nm,0.5s,baz=0.4,slow=5.7,SNR=12						
IL31		55.66	30	P	P	14 19 14.3	0.0
IL31				IAmb	IAmb	14 19 40.9	
	comp=Z,15nm,1.7s						
ILAR	Eielson Array	55.66	30	P	P	14 19 14.4	+0.1
	comp=Z,1.3nm,0.9s,baz=262,slow=5.8,SNR=10.0						
ILAR	Eielson Array	55.66	30	P	P	14 19 13.9	-0.4
BMAR	Burnt Mountain	56.65	27	P	P	14 19 22.1	+0.7
SCRK	Sand Creek	56.93	31	P	P	14 19 24.4	+0.9
SCRK				IAmb	IAmb	14 21 02.6	
	comp=Z,21nm,1.9s						
BCAR	Beaver Creek A	57.97	32	P	P	14 19 31.6	+0.8
HUH	Hualalai	58.15	85	P	P	14 19 31.7	-1.2
ABKAR	Akbulak array	61.69	313	P	P	14 19 55.2	-1.2
C36M	Paulatuk	63.88	23	P	P	14 20 10.5	-0.2
C36M				IAmb	IAmb	14 20 12.4	
	comp=Z,3.5nm,1.0s						
ARCES	ARCESS Array B	69.94	340	P	P	14 20 50.0	+0.7
	comp=Z,3.6nm,0.9s,baz=80,slow=12,SNR=2.9						
YKA	Yellowknife Ar	70.06	28	P	P	14 20 50.1	+0.1
	comp=Z,0.7nm,0.9s,baz=295,slow=5.2,SNR=6.2						
AKASG	Malin Array Be	79.05	323	P	P	14 21 40.2	-2.2
	comp=Z,0.1nm,0.3s,baz=50,slow=5.8,SNR=3.2						
NVAR	Mina Array Bea	79.77	51	P	P	14 21 49.1	+2.1
	comp=Z,1.0nm,0.7s,baz=283,slow=5.2,SNR=8.7						
BRTR	Keskin Array B	82.62	312	P	P	14 22 01.1	-0.8
	comp=Z,1.2nm,0.8s,baz=84,slow=5.4,SNR=4.5						
BRTR	Keskin Array B	82.62	312	P	P	14 22 00.7	-1.2
PDAR	Pinedale Array	83.03	44	P	P	14 22 04.8	+0.6
	comp=Z,0.5nm,0.8s,baz=277,slow=2.4,SNR=3.9						
PDAR	Pinedale Array	83.03	44	P	P	14 22 03.8	-0.3
WMOK	Wichita Mounta	94.59	45	P	P	14 22 59.4	0.0
TX31	Lajitas Ar. Si	94.91	52	P	P	14 23 01.6	+0.5
TX31				IAmb	IAmb	14 23 05.2	
	comp=Z,14nm,1.8s						
TX32	Lajitas Array	94.92	52	P	P	14 23 02.8	+1.8
TX32				IAmb	IAmb	14 23 05.2	
	comp=Z,14nm,1.8s						
TXAR	Lajitas Array	94.92	52	P	P	14 23 02.8	+1.8
	comp=Z,1.6nm,0.8s,baz=309,slow=3.3,SNR=6.6						
TXAR	Lajitas Array	94.92	52	P	P	14 23 02.6	+1.5
PTGA	Pitinga	144.78	37	PKP	PKPdf	14 29 15.8	-0.1
	comp=Z,6.0nm,0.7s,baz=357,slow=3.4,SNR=12						
PTGA	Pitinga	144.78	37		PKPdf	14 29 15.4	-0.5
LPAZ	La Paz	150.44	68	PKPbc	PKiKP	14 29 32.3	+0.3
	comp=Z,1.2nm,0.9s,baz=329,slow=5.9,SNR=2.7						
PLCA	Paso Flores	152.94	121	PKPbc	PKiKP	14 29 36.7	+0.9
	comp=Z,1.9nm,0.7s,baz=56,slow=3.3,SNR=4.8						
SIV	San Ignacio	155.73	59	PKPab	PKPab	14 29 59.3	0.0
	comp=Z,0.7nm,0.7s,baz=339,slow=4.1,SNR=3.5						

JMA 16 14:17:54.4±0.4, **24°.89N**×**122°.46E**, **h0**^{km}, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.62	135	P	Pg	14 18 07.0	+0.7
JYNG				*e*S	Sg	14 18 15.8	+1.4
IRIF	Iriomote-Funau	1.28	115	P	Pn	14 18 19.7	+0.1

TAP 16 14:18:09.0, **24°.39N**×**121°.31E**, **h10**^{km}, **ML1.8**, **A**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNS	Nan Shan	0.07	51	*i* P	Pg	14 18 11.3	-0.1
	baz=56						
NNS				*e*S	Sg	14 18 13.0	-0.1
	baz=56						
NNSB	Datong	0.07	62	*i* P	Pg	14 18 11.4	-0.1
	baz=62						
NNSB				S	Sg	14 18 12.8	-0.3
	baz=62						
NNSH	Datong	0.07	62	*i* P	Pg	14 18 11.3	-0.1
	baz=62						
NNSH				*e*S	Sg	14 18 12.7	-0.5
	baz=62						
TWT	Tachien	0.18	221	P	Pg	14 18 13.2	+0.2
	baz=223						
TWT				*e*S	Sg	14 18 16.4	+0.5
	baz=223						
TDCB	Techi	0.20	225	*e*P	Pg	14 18 13.2	-0.1
	baz=224						
TDCB				*e*S	Sg	14 18 16.0	-0.1
	baz=224						
ETLH	Xiulin Townshi	0.24	140	*e*P	Pg	14 18 14.3	+0.3
	baz=139						
ETLH				*e*S	Sg	14 18 17.8	+0.4
	baz=139						
WHF	Hehuan Shan	0.25	189	*e*P	Pg	14 18 14.2	-0.1
	baz=187						
WHF				*e*S	Sg	14 18 18.1	+0.2
	baz=187						
NDT	Datong Townshi	0.28	41	*e*P	Pg	14 18 14.7	0.0
	baz=41						
NDT				*e*S	Sg	14 18 18.8	+0.3
	baz=41						
YHNB	Yeheng	0.28	12	*e*P	Pg	14 18 14.5	-0.3
	baz=12						
YHNB				*e*S	Sg	14 18 18.6	-0.1
	baz=12						
NSK	Sanguang	0.28	9	P	Pg	14 18 14.9	0.0
	baz=10.0						
NSK				*e*S	Sg	14 18 18.8	+0.1
	baz=10.0						
ENTT	Nioudou	0.34	43	*e*P	Pg	14 18 15.8	0.0
	baz=44						
ENTT				*e*S	Sg	14 18 20.8	+0.4
	baz=44						
NACB	Ninganchiao	0.34	130	*e*P	Pg	14 18 14.9	-0.9
	baz=130						
NACB				*e*S	Sg	14 18 20.8	+0.5
	baz=130						
WHP	Taichung City	0.35	251	*e*P	Pg	14 18 16.1	+0.1
	baz=250						
WHP				*e*S	Sg	14 18 21.2	+0.4
	baz=250						
CHGB	Renai	0.35	201	*e*P	Pg	14 18 16.1	-0.1
	baz=200						
CHGB				*e*S	Sg	14 18 20.7	-0.1
	baz=200						
LIOB	Emei	0.37	313	*e*P	Pg	14 18 16.5	+0.2
	baz=313						
LIOB				*e*S	Sg	14 18 21.6	+0.4
	baz=313						
NSTT	Nanjuang	0.37	310	*e*P	Pg	14 18 16.3	-0.1
	baz=310						
NSTT				*e*S	Sg	14 18 21.4	+0.2
	baz=310						
NWLT	Wulai	0.42	25	*e*P	Pg	14 18 17.2	-0.1
	baz=24						
NWLT				*e*S	Sg	14 18 23.0	+0.1
	baz=24						
OWD	Renai	0.45	196	*e*P	Pg	14 18 17.5	-0.4
	baz=195						
OWD				*e*S	Sg	14 18 23.2	-0.7
	baz=195						
TWE	Neicheng	0.46	45	*e*P	Pg	14 18 18.1	+0.1
	baz=46						
TWE				*e*S	Sg	14 18 24.7	+0.5
	baz=46						
DPDB	Guoxing	0.50	224	*e*P	Pg	14 18 18.8	-0.1
	baz=224						
DPDB				*e*S	Sg	14 18 25.8	+0.3
	baz=224						
ESL	Shilin	0.59	169	*e*P	Pg	14 18 20.5	+0.1
	baz=168						
ESL				*e*S	Sg	14 18 28.4	+0.3
	baz=168						
VWDT	VWDT	0.66	194	*e*P	Pg	14 18 21.1	-0.6
	baz=193						
VWDT				*e*S	Sg	14 18 29.1	-1.2
	baz=193						
SSLB	Suanglung	0.69	208	*e*P	Pg	14 18 21.6	-0.7
	baz=208						
SSLB				*e*S	Sg	14 18 30.6	-0.6
	baz=208						

JMA 16 14:18:35.7±0.2, **37°.23N**×**144°.34E**, **h32**^{km}, **M3.7**, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.52	296	P	Pn	14 19 16.0	+1.6
JIKH				*e*S	Sn	14 19 46.0	+2.0
JIO	Ouri	2.67	298	P	Pn	14 19 18.1	+1.7
JIO				*e*S	Sn	14 19 49.5	+1.9
JKMT	Kesennumamotoy	2.76	306	P	Pn	14 19 19.1	+1.4
JKMT				S	Sn	14 19 51.3	+1.4
JFK	Kawauchi	2.77	274	P	Pn	14 19 19.1	+1.3
JFK				S	Sn	14 19 51.3	+1.1
JMST	Minamisoumatoc	2.79	281	P	Pn	14 19 19.5	+1.4
JMST				S	Sn	14 19 50.8	+0.1
OFUJ	Ofunato	2.80	312	P	Pn	14 19 19.6	+1.3
OFUJ				S	Sn	14 19 52.2	+1.3
JMK	Ichinoseki	3.00	306	P	Pn	14 19 22.9	+1.9
JMK				S	Sn	14 19 58.3	+2.4
JOU	Okura	3.12	292	P	Pn	14 19 25.1	+2.4
JOU				*e*S	Sn	14 20 02.0	+3.0
JFT	Otama	3.20	276	P	Pn	14 19 26.3	+2.5
JFT				*e*S	Sn	14 20 03.2	+2.3
JYK	Kaneyama	3.56	299	P	Pn	14 19 31.3	+2.5
JRG	Rokugo	3.63	308	P	Pn	14 19 32.5	+2.8
JRG				S	Sn	14 20 14.6	+3.2
JAH	Hinai	4.14	317	P	Pn	14 19 39.4	+2.8
JTM	Tenmabayashi	4.37	325	*e*S	Sn	14 20 30.9	+1.3
JRY	Ryogami san	4.54	256	P	Pn	14 19 43.2	+1.0
JOT	Ohata	4.87	329	P	Pn	14 19 49.7	+3.0
JKB	Kayabe	5.31	332	P	Pn	14 19 54.5	+1.8
JCH	Churui	5.43	352	P	Pn	14 19 53.7	-0.7
JCH				S	Sn	14 20 53.2	-2.5
NEM2	Nemuro 2	6.22	9	P	Pn	14 20 02.2	-3.0
NEM2				S	Sn	14 21 07.4	-7.8
JTKR	Abashiri--Toko	6.74	357	P	Pn	14 20 11.8	-0.6
JTKR				S	Sn	14 21 23.6	-4.4
JHR	Hokuryu	6.80	344	P	Pn	14 20 15.1	+1.9
JHR				*e*S	Sn	14 21 31.0	+1.4

UCR 16 14:19:13.0±0.9, **9°.94N**×**85°.65W**, **h16**^{km}±7^{km}, **MD3.6**, **MW3.4**, **Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUAI	GUAI	0.35	22	*i* P	Pg	14 19 19.9	-0.4
GUAI				*i* S	Sg	14 19 25.6	+0.4
PLVR	Palo Verde	0.49	36	*e*P	Pg	14 19 22.5	-0.5
PLVR				*e*S	Sb	14 19 30.3	-0.3
NY14	Universidad de	0.71	9	*i* P	Pg	14 19 26.5	-0.3
JTS	Las Juntas de	0.76	63	*e*P	Pg	14 19 26.8	-1.1
JTS				*e*S	Sb	14 19 38.7	+0.6
COLC	Colonia	0.84	31	*i* P	Pb	14 19 28.5	-0.8
CUI	Cuipilapa	0.85	34	*i* P	Pb	14 19 28.6	-0.9
CUI				*i* S	Sb	14 19 40.6	-0.2
GBS3	Finca Las Img	0.85	13	*i* P	Pb	14 19 28.3	-1.2
GUAB	Guayabo de Bag	0.86	28	*i* P	Pb	14 19 28.9	-0.8
MESS	Mesas	0.91	29	*i* P	Pb	14 19 29.3	-1.1
ACAL	Aguas Claras	0.91	41	*i* P	Pb	14 19 29.7	-0.8
PTEN	Parque Tenorio	1.00	40	*i* P	Pb	14 19 31.1	-1.0
CEDE	Laguna Cedeo	1.07	60	*i* P	Pb	14 19 32.7	-0.5
SRA1	San Ramn	1.16	83	*e*P	Pn	14 19 33.4	-1.3
LCR2	La Lucha 2	1.63	97	*e*P	Pn	14 19 40.4	-0.9

IDC 16 14:19:33.1±1.7, **6°.98S**×**120°.95E**, **h434**^{km}±18^{km}, **mb2.8**/3, **mb1 2.8**/5, **mb1mx2.6**/37, **mbtmp3.5**/5, **Error ellipse: s-maj=192.4km s-min=16.1km az=56.0**, **Flores Sea**

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

KAPI	Kappang	2.29	329	P	P	14 20 33.9	+0.1
	2.1nm,0.3s,baz=184,slow=7.6,SNR=7.2						
WRA	Warramunga Arr	18.30	136	P	P	14 23 18.8	-0.8
	0.1nm,0.3s,baz=309,slow=9.4,SNR=5.6						
ASAR	Alice Springs	20.74	145	P	P	14 23 42.5	+0.3
	0.2nm,0.3s,baz=320,slow=8.8,SNR=9.0						
MKAR	Makanchi Array	63.59	331	P	P	14 29 19.9	+0.1
	0.3nm,0.5s,baz=143,slow=7.3,SNR=10						
ZALV	Zalesovo Beam	67.88	338	P	P	14 29 46.4	-0.3
	1.0nm,0.6s,baz=132,slow=4.1,SNR=3.9						

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*IDC **16** 14:21:06.0±0.8, 7°.83N×38°.04W, h0^{km}, mb3.9/9, mb1 4.0/10, mb1mx3.7/46, mbtmp4.0/10, ML3.8/1, MS3.6/15, Ms1 3.6/15, ms1mx3.4/32, Error ellipse: s-maj=32.8km s-min=17.5km az=147.0*

*NEIC **16** 14:21:07.5±1.7, 7°.8N±0°.1×38°.0W±0°.1, h10^{km}±1^{km}, mb4.4/8, Error ellipse: s-maj=25.5km s-min=19.9km az=148.0*

ISC 16 14:21:07.5±0.6**, 7°.62N**±0°.09×**37°.9W**±0°.1**, h10**^{km}**, n35, σ1^{s}.49**/19**, mb4.1**/10**, MS3.6**/14**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	Riachuelo	13.51	171	Pn	Pn	14 24 21.8	+2.4
	0.5nm,0.3s,baz=0.0,slow=6.1,SNR=3.7						
RCBR				Sn	Sn	14 26 46.2	-3.7
	0.2nm,0.3s,baz=76,slow=12,SNR=2.5						
MDP	Montagnes des	14.83	261	LR	LR	14 29 17.5	
	comp=Z,260nm,21.0s,baz=120,slow=33						
PTGA	Pitinga	23.49	250	P	P	14 26 16.9	-0.7
	1.0nm,0.5s,baz=120,slow=20,SNR=4.0						
PTGA				LR	LR	14 35 09.8	
	comp=Z,120nm,21.9s,baz=58,slow=36						
PTGA	Pitinga	23.49	250	IAmb	IAmb	14 26 46.8	
	comp=Z,28nm,1.8s						
BDFB	Brasilia	25.18	203	LR	LR	14 35 28.9	
	comp=Z,111nm,19.8s,baz=129,slow=34						
H10N3	ASCENSION HYDR	27.96	123	T	T	14 56 42.6	
	baz=303,slow=75,SNR=15						
H10N2	ASCENSION HYDR	27.96	123	T	T	14 56 44.0	
	baz=303,slow=75,SNR=16						
H10N1	ASCENSION HYDR	27.98	123	T	T	14 56 45.2	
	baz=303,slow=75,SNR=17						
H10S3	ASCENSION HYDR	28.44	125	T	T	14 57 12.8	
	baz=278						
H10S2	ASCENSION HYDR	28.46	125	T	T	14 57 03.7	
	baz=302						
SJG	San Juan	29.37	294	LR	LR	14 36 20.4	
	comp=Z,150nm,21.6s,baz=96,slow=31						
DBIC	Dimbokro	32.83	90	P	P	14 27 41.8	+0.2
	comp=Z,3.2nm,0.9s,baz=282,slow=5.1,SNR=3.4						
DBIC				LR	LR	14 38 39.4	
	comp=Z,101nm,19.1s,baz=245,slow=32						
ROSC	El Rosal	36.27	268	LR	LR	14 43 17.6	
	comp=Z,112nm,19.4s,baz=88,slow=37						
LPAZ	La Paz	38.18	231	P	P	14 28 29.3	+1.1
	comp=Z,1.9nm,0.7s,baz=57,slow=6.4,SNR=10						
LPAZ				LR	LR	14 43 27.2	
	comp=Z,76nm,20.3s,baz=67,slow=35						
LPAZ	La Paz	38.18	231	P	P	14 28 29.1	+0.8
CPUP	Villa Florida	38.65	208	LR	LR	14 44 58.4	
	comp=Z,75nm,18.6s,baz=34,slow=37						
TOA0	Torodi Ar. Sit	39.33	79	P	P	14 28 37.8	+0.5
TOA0				IAmb	IAmb	14 28 40.7	
	comp=Z,6.8nm,1.1s						
TORD	Torodi Ar. Bea	39.33	79	P	P	14 28 38.1	+0.8
	comp=Z,4.8nm,1.1s,baz=270,slow=8.3,SNR=11						
TORD				LR	LR	14 42 58.3	
	comp=Z,174nm,20.4s,baz=300,slow=33						
TORD	Torodi Ar. Bea	39.33	79	P	P	14 28 37.5	+0.2
CFA	Coronel Fontan	48.58	215	P	P	14 29 52.1	+0.7
	comp=Z,2.1nm,0.7s,baz=344,slow=4.8,SNR=5.1						
KEST	Kesra	51.41	50	LR	LR	14 51 54.6	
	comp=Z,62nm,18.8s,baz=260,slow=36						
GERES	GERESS Array B	59.65	37	LR	LR	14 54 46.4	
	comp=Z,20nm,19.1s,baz=287,slow=34						
NOA	NORSAR Array B	64.49	24	LR	LR	14 58 32.4	
	comp=Z,13nm,18.1s,baz=285,slow=35						
AKASG	Malin Array Be	69.73	39	P	P	14 32 18.1	+0.4
	comp=Z,0.9nm,0.5s,baz=266,slow=6.1,SNR=4.6						
BOSA	Boshof	70.71	124	LR	LR	14 57 33.6	
	comp=Z,48nm,20.2s,baz=162,slow=31						
BRTR	Keskin Array B	71.00	51	P	P	14 32 25.2	-0.7
	comp=Z,1.9nm,1.1s,baz=269,slow=3.1,SNR=4.6						
PDAR	Pinedale Array	71.38	312	LR	LR	15 00 28.1	
	comp=Z,147nm,20.2s,baz=342,slow=33						
YMR	Madison River	72.62	314	P	P	14 32 36.2	+0.6
YHB	Horse Butte	72.79	314	P	P	14 32 36.9	+0.3
YKA	Yellowknife Ar	77.13	332	P	P	14 32 59.5	-1.5
	comp=Z,0.2nm,0.6s,baz=98,slow=5.7,SNR=5.4						
OPO	Ambohidratompo	87.81	109	LR	LR	15 09 11.2	
	comp=Z,37nm,21.8s,baz=177,slow=33						
AKTO	Aktyubinsk	87.96	40	P	P	14 33 58.3	+0.5
	comp=Z,0.6nm,0.5s,baz=281,slow=10						
ABKAR	Akbulak array	89.40	40	P	P	14 34 04.9	+0.3
MJAR	Matsushiro Arr	135.92	4	PKP	PKPdf	14 40 27.1	-2.2
	comp=Z,0.7nm,0.6s,baz=344,slow=2.2,SNR=4.1						
MJAR	Matsushiro Arr	135.92	4		PKPdf	14 40 27.3	-2.0

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*NEIC **16** 14:25:13.2±2.4, 19°.4S±0°.1×177°.6W±0°.2, h364^{km}±7^{km}, mb4.5/16, Error ellipse: s-maj=23.5km s-min=17.5km az=130.0*

*IDC **16** 14:25:13.4±2.0, 19°.61S×177°.55W, h366^{km}±21^{km}, mb3.3/9, mb1 3.6/11, mb1mx3.3/37, mbtmp4.1/11, Error ellipse: s-maj=18.9km s-min=11.1km az=127.0*

ISC 16 14:25:11.5±0.6**, 19°.5S**±0°.1×**177°.5W**±0°.1**, h350**^{km}**, n36, σ1^{s}.76**/37**, mb4.0**/16**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.81	45	P	Pn	14 27 05.4	+1.8
	6.2nm,0.3s,baz=189,slow=3.7,SNR=14						
AFI				S	S	14 28 29.9	-4.9
	3.8nm,0.3s,baz=36,slow=19,SNR=4.4						
DZM	Mont Dzumac	15.26	258	P	Pn	14 28 32.2	+0.6
	0.6nm,0.3s,baz=286,slow=19,SNR=5.3						
DZM	Mont Dzumac	15.26	258	IAmb	IAmb	14 28 33.0	
	comp=Z,51nm,1.5s						
URZ	Urewera	19.24	193	P	P	14 29 12.7	+1.2
	comp=Z,0.9nm,0.3s,baz=286,slow=4.1,SNR=6.9						
URZ				S	S	14 32 27.0	-2.9
	comp=Z,0.4nm,0.3s,baz=24,slow=20,SNR=4.6						
BKZ	Black Stump Fm	20.25	194	P	P	14 29 18.7	-3.0
BKZ				IAmb	IAmb	14 29 45.9	
	comp=Z,138nm,1.9s						
QRZ	Quartz Range	22.88	200	P	P	14 29 45.3	-0.3
THZ	Tophouse	23.62	198	P	P	14 29 52.2	-0.2
KHZ	Kahutara	24.05	197	P	P	14 29 55.4	-0.7
KHZ				IAmb	IAmb	14 31 00.3	
	comp=Z,105nm,1.4s						
CTA	Charters Tower	34.10	263	P	P	14 31 24.6	0.0
	comp=Z,7.0nm,0.6s,baz=90,slow=11,SNR=22						
STKA	Stephens Creek	38.66	243	P	P	14 32 02.9	+0.2
	comp=Z,2.0nm,0.5s,baz=83,slow=12,SNR=16						
STKA	Stephens Creek	38.66	243	P	P	14 32 03.0	+0.2
WR0	Warramunga Arr	45.05	261	P	P	14 32 52.4	-1.7
WB0	Warramunga Arr	45.22	261	P	P	14 32 53.7	-1.7
WB0				IAmb	IAmb	14 33 10.1	
	comp=Z,39nm,2.0s						
WB2	Warramunga Arr	45.23	261	P	P	14 32 54.1	-1.4
WRAB	Tennant Creek	45.23	261	P	P	14 32 52.0	-3.5
WRAB				IAmb	IAmb	14 34 03.9	
	comp=Z,18nm,1.6s						
AS31	Alice Springs	45.23	256	P	P	14 32 54.8	-0.7
AS31				IAmb	IAmb	14 32 56.0	
	comp=Z,8.0nm,0.7s						
ASAR	Alice Springs	45.24	256	P	P	14 32 55.0	-0.5
	comp=Z,21nm,0.6s,baz=91,slow=8.4,SNR=501						
ASAR	Alice Springs	45.24	256	P	P	14 32 54.1	-1.4
WRA	Warramunga Arr	45.24	261	P	P	14 32 54.4	-1.1
	comp=Z,1.5nm,0.4s,baz=97,slow=7.7,SNR=47						
WRA	Warramunga Arr	45.24	261	P	P	14 32 54.5	-1.1
SOEI	Soe	56.98	271	P	P	14 34 22.3	0.0
SOEI				IAmb	IAmb	14 34 24.1	
	comp=Z,18nm,0.8s						
MJAR	Matsushiro Arr	69.74	323	P	P	14 35 44.5	0.0
	comp=Z,1.0nm,0.5s,baz=138,slow=6.1,SNR=5.9						
QSPA	South Pole Qui	70.53	180	P	P	14 35 51.1	+2.0
QSPA				IAmb	IAmb	14 35 53.6	
	comp=Z,11nm,1.6s						
PETK	Petropavlovsk-	75.48	345	P	P	14 36 18.6	+0.9
	comp=Z,1.3nm,0.6s,baz=139,slow=8.3,SNR=5.3						
NVAR	Mina Array Bea	79.98	43	P	P	14 36 44.9	+1.9
	comp=Z,0.8nm,0.7s,baz=227,slow=9.6,SNR=6.2						
NVAR	Mina Array Bea	79.98	43	P	P	14 36 44.5	+1.5
TXAR	Lajitas Array	86.11	57	P	P	14 37 14.8	+0.6
	comp=Z,0.6nm,0.7s,baz=247,slow=4.6,SNR=3.4						
ILAR	Eielson Array	87.27	13	P	P	14 37 18.2	-0.5
	comp=Z,0.3nm,0.4s,baz=217,slow=4.9,SNR=13						
PDAR	Pinedale Array	87.92	43	P	P	14 37 23.3	+0.7
	comp=Z,0.2nm,0.5s,baz=243,slow=4.0,SNR=3.1						
MKAR	Makanchi Array	110.90	314	PKiKP	PKiKP	14 43 03.2	-0.2
	comp=Z,0.2nm,0.5s,baz=135,slow=1.1,SNR=4.3						
AAK	Ala-Archa	116.10	309		PKPdf	14 43 14.1	+0.4
BVAR	Borovoye Array	118.67	320	PKP	PKPdf	14 43 17.9	-0.1
	comp=Z,0.4nm,0.4s,baz=76,slow=3.4,SNR=4.9						
AKASG	Malin Array Be	142.41	332	PKhKP	PKPdf	14 43 59.1	-3.7
	comp=Z,0.3nm,0.4s,baz=39,slow=4.0,SNR=3.4						
BRTR	Keskin Array B	146.56	314	PKPbc	PKPdf	14 44 12.4	+1.9
	comp=Z,1.2nm,0.7s,baz=142,slow=4.7,SNR=4.4						
BRTR	Keskin Array B	146.56	314		PKPdf	14 44 12.2	+1.7
GERES	GERESS Array B	149.41	345	PKPbc	PKPbc	14 44 19.7	0.0
	comp=Z,0.6nm,0.7s,baz=35,slow=3.6,SNR=2.3						

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*TIF **16** 14:28:50.8, 41°.34N×43°.94E, h16^{km}*

*DDA **16** 14:28:51.5, 41°.37N×43°.91E, h7^{km}±1^{km}, ML2.7*

*NSSP **16** 14:28:51.0, 41°.32N×43°.93E, h10^{km}, Ms2.9*

*ISK **16** 14:28:51.4, 41°.37N×43°.93E, h9^{km}, ML3.0/5*

*NORS **16** 14:28:53.2±0.0, 41°.41N×43°.90E, h1^{km}, MPVA3.9*

ISC 16 14:28:51.7±0.9**, 41°.36N**±0°.02×**43°.93E**±0°.02**, h11**^{km}±7^{km}**, n50, σ0^{s}.66**/93**, 8C, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRLG	Trialeti	0.22	34	P	Pg	14 28 56.6	+0.1
TRLG				S	Sg	14 29 00.3	+0.5
BGD	Bogdanovka	0.27	250	P	Pg	14 28 57.2	-0.2
BGD				S	Sg	14 29 01.2	+0.1
AKH	Akhalkalaki	0.34	280	P	Pg	14 28 58.4	-0.1
AKH				S	Sg	14 29 03.2	+0.1
AKH	Akhalkalaki	0.34	280	PG	Pg	14 28 58.4	-0.1
AKH				SG	Sg	14 29 03.2	+0.1
KZRT	Kazreti	0.35	85	P	Pg	14 28 58.7	-0.1
KZRT				S	Sg	14 29 03.6	+0.1
KZRT	Kazreti	0.35	85	*i* P	Pg	14 28 58.7	-0.1
KZRT				*i* S	Sg	14 29 03.5	+0.1
STE	Stepanavan	0.48	137	⇑*e*P	Pg	14 29 01.7	+0.5
STE				⇑*e*S	Sg	14 29 08.6	+0.9
BKRG	Bakuriani	0.51	323	P	Pb	14 29 02.0	-0.8
BKRG				S	Sb	14 29 09.7	-0.5
TBLG	Delisi	0.71	58	P	Pg	14 29 05.4	-0.1
TBLG				S	Sb	14 29 15.5	-0.4
TBLG	Delisi	0.71	58	PG	Pg	14 29 05.4	-0.1
TBLG				SG	Sb	14 29 15.6	-0.4
TBLG	Delisi	0.71	58	*i* P	Pg	14 29 05.3	-0.1
TBLG				*i* S	Sb	14 29 15.5	-0.4
EAK	Akyaka	0.71	200	*i* P	Pg	14 29 04.7	-0.8
EAK				*i* S	Sg	14 29 14.9	0.0
EAK				IAML		14 29 15.0	
	comp=N,374nm,0.3s						
EAK				IAML		14 29 15.0	
	comp=E,374nm,0.3s						
BTNK	Botanikuri	0.73	63	P	Pg	14 29 05.5	-0.3
BTNK				S	Sb	14 29 15.5	-0.9
BTNK	Botanikuri	0.73	63	*i* P	Pg	14 29 05.5	-0.3
BTNK				*i* S	Sb	14 29 15.7	-0.7
BTNK				IAML		14 29 16.0	
	comp=E,707nm,0.1s						
SEAG	Tbilisi Sea	0.77	58	P	Pb	14 29 06.5	-0.6
SEAG				S	Sb	14 29 17.6	-0.1
EPOS	Posof	0.92	280	*i* P	Pg	14 29 09.1	-0.4
EPOS				*i* S	Sn	14 29 23.3	-0.6
ARUZ	Aruch	1.08	174	⇑*i*P	Pg	14 29 11.3	-1.1
ARUZ				⇑*i*S	Sg	14 29 25.6	-0.9
GUDG	Gudauri	1.18	20	P	Pg	14 29 13.0	-1.4
GUDG				S	Sb	14 29 29.6	0.0
KAPZ	Kaputan	1.18	150	⇑*i*P	Pb	14 29 13.7	-0.6
KAPZ				⇑*i*S	Sg	14 29 29.8	-0.2
METS	Metsamor	1.21	175	*i* P	Pg	14 29 15.4	+0.5
METS				*i* S	Sn	14 29 32.9	+1.9
TKB	Tkibuli	1.22	325	P	Pg	14 29 14.6	-0.5
VNNZ	Vanand	1.25	184	*i* P	Pn	14 29 14.7	-0.6
VNNZ				*i* S	Sb	14 29 31.6	+0.1
ONI	Oni	1.28	344	P	Pn	14 29 15.4	-0.2
ONI				S	Sn	14 29 33.3	+0.4
ONI	Oni	1.28	344	PN	Pg	14 29 15.8	-0.6
ONI				SN	Sn	14 29 33.6	+0.7
GNI	Garni	1.35	153	⇑*i*P	Pn	14 29 16.9	+0.3
GNI				⇑*i*S	Sg	14 29 35.5	+0.2
GNI	Garni	1.35	153	PN	Pb	14 29 17.3	+0.2
TASB	TASBURUN-IGDIR	1.39	170	PN	Pn	14 29 17.5	+0.4
TASB				SN	Sg	14 29 36.9	+0.5
ZEI	Tsey	1.43	359	*e*Pg	Pg	14 29 18.8	-0.4
ZEI				*e*Sg	Sg	14 29 39.1	+1.2
SENK	Senkaya-Erzuru	1.44	237	PN	Pn	14 29 18.2	+0.3
NRKZ	NAREK	1.46	158	*i* P	Pn	14 29 18.4	+0.3
NRKZ				*i* S	Sb	14 29 37.9	+0.4
IGDI	IGDIR	1.49	176	*i* P	Pn	14 29 18.1	-0.4
IGDI				*i* S	Sn	14 29 37.7	-0.2
IGDI				IAML		14 29 38.0	
	comp=N,136nm,0.2s						
IGDI				IAML		14 29 39.0	
	comp=E,108nm,0.3s						
LACR	Lac	1.50	10	*e*Pg	Pb	14 29 18.9	-0.6
LACR				*e*Sg	Sg	14 29 40.0	+0.1
DAGI	Agillar	1.55	260	*i* P	Pn	14 29 19.8	+0.5
DAGI				*i* S	Sg	14 29 41.0	-0.5
DAGI				IAML		14 29 43.0	
	comp=E,76nm,0.4s						
DAGI				IAML		14 29 47.0	
	comp=N,60nm,0.4s						
DIGR	Digorskoe uzhe	1.56	350	*e*Pg	Pg	14 29 21.1	-0.7
DIGR				*e*Sg	Sg	14 29 43.0	+0.8
DDFL	Dedoflistskaro	1.65	86	P	Pg	14 29 23.0	-0.3
DDFL				S	Sg	14 29 45.1	+0.4
DDFL	Dedoflistskaro	1.65	86	*i* P	Pg	14 29 23.0	-0.3
BATM	Batumi	1.70	279	P	Pb	14 29 22.4	-0.6
BATM				S	Sb	14 29 44.8	+0.4
BATM	Batumi	1.70	279	PN	Pb	14 29 22.4	-0.6
BATM	Batumi	1.70	279	*i* P	Pb	14 29 22.4	-0.6
BATM				*i* S	Sb	14 29 44.9	+0.5
DBOC	Borcka	1.71	270	*i* P	Pb	14 29 22.5	-0.6
DBOC				*i* S	Sb	14 29 45.1	+0.5
DBOC				IAML		14 29 46.0	
	comp=E,125nm,0.5s						
DDEM	Demirkent	1.71	255	*i* P	Pb	14 29 22.8	-0.4
DDEM				*i* S	Sb	14 29 45.0	+0.1
DBAD	Bademkaya	1.72	259	*i* P	Pb	14 29 22.7	-0.7
DBAD				*i* S	Sb	14 29 45.6	+0.5
DBAD				IAML		14 29 46.0	
	comp=N,149nm,0.7s						
DBAD				IAML		14 29 51.0	
	comp=E,91nm,0.5s						
BCA	Borcka	1.74	274	PN	Pb	14 29 23.2	-0.5
LGD	Lagodekhi	1.80	74	P	Pb	14 29 24.1	-0.6
LGD				S	Sg	14 29 49.1	-0.4
KMGR	Komgaron	1.84	22	*e*Pg	Pg	14 29 26.5	-0.4
KMGR				*e*Sg	Sg	14 29 51.8	+1.0
ARNR	Ardon	1.84	8	*e*Pg	Pg	14 29 27.7	+0.7
ARNR				*e*Sg	Sg	14 29 53.6	+2.7
LSNR	Lesken	1.92	358	*e*Pg	Pg	14 29 28.4	-0.3
LSNR				*e*Sg	Sg	14 29 55.0	+1.4
STDR	Stavd-Durt	2.02	3	*e*Pg	Pg	14 29 30.2	-0.2
STDR				*e*Sg	Sg	14 29 56.6	+0.2
KOPR	Koprukoy-ERZUR	2.09	230	PN	Pn	14 29 27.9	+1.1
BTLR	Botlikh	2.15	52	*e*Pg	Pb	14 29 30.9	+0.2
BTLR				*e*Sg	Sg	14 29 59.4	-1.4

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*IDC **16** 14:34:39.1±0.6, 28°.24N×57°.76E, h0^{km}, mb4.0/23, mb1 4.2/28, mb1mx4.0/58, mbtmp4.1/28, ML4.0/4, MS3.2/6, Ms1 3.2/6, ms1mx2.9/52, Error ellipse: s-maj=15.0km s-min=12.7km az=131.0*

*MOS **16** 14:34:39.5±1.2, 28°.32N×57°.72E, h11^{km}, mb4.5/19, Error ellipse: s-maj=8.5km s-min=5.5km az=110.2*

*NEIC **16** 14:34:40.5±1.5, 28°.19N±0°.04×57°.64E±0°.08, h10^{km}±1^{km}, mb4.5/40, mb_Lg4.5(TEH), ML4.2(THR), Error ellipse: s-maj=12.0km s-min=5.2km az=69.0*

*TEH **16** 14:34:41.2, 28°.16N×57°.89E, h21^{km}, ML4.6*

*OMAN **16** 14:34:43.9±9.9, 28°.23N×58°.04E, h60^{km}±276^{km}, ml4.6/10, Error ellipse: s-maj=250.1km s-min=49.7km az=87.0*

*THR **16** 14:34:43.9±0.3, 28°.36N×57°.87E, h15^{km}±5^{km}, ML4.2*

ISC 16 14:34:40.8±0.3**, 28°.18N**±0°.03×**57°.81E**±0°.04**, h10**^{km}**, n236, σ1^{s}.73**/246**, mb4.2**/47**, MS3.4**/5**, 3C-4D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHNJ	Kahnooj	0.25	201	*e*Pg	Pb	14 34 47.0	-0.4
KHNJ				*e*Sg	Sb	14 34 52.3	+0.4
NIAN	Nian	1.06	234	*e*Pg	Pn	14 35 02.5	+0.8
NIAN				*e*		14 35 28.7	
IBND	Bandar-abas	1.34	237	*e*		14 35 40.8	
IBND				*e*Pg	Pg	14 35 07.8	+1.3
GENO	Geno	1.65	242	*e*Pn	Pb	14 35 12.0	+0.7
GENO				*e*		14 35 44.0	
CHMN	Cheshme madani	1.69	352	*e*	Sg	14 35 35.1	-0.1
CHMN				*e*Pn	Pn	14 35 09.3	-1.4
NGRK	Negar Kerman	1.74	327	*e*	Sn	14 35 34.1	+0.3
KRBR	Kerman	2.01	333	*e*Pn	Pb	14 35 17.8	+0.1
KRBR				*e*Sg	Sb	14 35 43.8	+0.8
KRBR				IAML		14 35 46.3	
	comp=N,2μm,0.7s						
KRBR				IAML		14 35 49.6	
	comp=E,2μm,0.6s						
KRBR	Kerman	2.01	333	*e*Pn	Pb	14 35 17.8	+0.1
TVBK	TV Kerman	2.02	333	*e*Pn	Pn	14 35 14.5	-0.7
TVBK				*e*		14 35 50.7	
KHGB	Koh Gabri	2.48	332	*e*Pn	Pn	14 35 21.9	+0.5
SHME	Shamm	2.59	215	*e*Pb	Pn	14 35 25.2	+2.3
	SNR=40						
SHME				Sg	Sb	14 36 01.3	+2.0
SHME	Shamm	2.59	215	*e*Pn	Pn	14 35 25.3	+2.5
BANOM	Banah	2.62	211	*e*Pb	Pn	14 35 25.4	+2.2
	SNR=118						
BANOM	Banah	2.62	211	P	Pn	14 35 25.6	+2.3
	SNR=112						
BANOM	Banah	2.62	211	*e*Pn	Pn	14 35 25.5	+2.3
SZD1	Zahaedan-tmp	2.98	63	*e*Pn	Pn	14 35 29.3	+1.1
LAR1	LAR	3.08	261	*e*Pn	Pn	14 35 31.4	+1.8
MDH	Madha	3.17	206	Pn	Pn	14 35 30.9	+0.1
MDH	Madha	3.17	206	P	Pn	14 35 31.2	+0.4
MDH				S	Sn	14 36 10.8	+2.1
MDH	Madha	3.17	206	*e*Pn	Pn	14 35 30.9	+0.1
MSFE	Esma-Masafi	3.17	208	*i* Pb	Pn	14 35 32.5	+1.7
	SNR=18						
MSFE	Esma-Masafi	3.17	208	*e*Pn	Pn	14 35 32.5	+1.7
UMQ	Umm Al-Quwin	3.27	216	*e*Pn	Pn	14 35 35.0	+2.9
CHBR	Chabahar	3.51	137	*e*Pn	Pb	14 35 41.3	-1.7
CHBR	Chabahar	3.51	137	*e*Pn	Pb	14 35 41.3	-1.7
UOSS	Minazif	3.53	204	Pn	Pn	14 35 35.4	-0.3
UOSS	Minazif	3.53	204	P	Pn	14 35 36.8	+1.1
UOSS	Minazif	3.53	204	*e*Pn	Pn	14 35 35.6	-0.1
UOSS	Minazif	3.53	204		Pn	14 35 34.9	-0.8
HATD	Hatta, Dubai	3.67	205	Pn	Pn	14 35 37.8	+0.3
HATD	Hatta, Dubai	3.67	205	*e*Pn	Pn	14 35 37.7	+0.1
NAZ	Nazwa, Dubai	3.72	212	*i* Pn	Pn	14 35 39.2	+0.9
	SNR=16						
NAZ	Nazwa, Dubai	3.72	212	P	Pn	14 35 42.0	+3.8
NAZ	Nazwa, Dubai	3.72	212	*e*Pn	Pn	14 35 40.7	+2.5
JHRM	Jahrom	3.74	276	*e*Pn	Pn	14 35 40.7	+2.0
NHDN	Nehbandan	3.75	31	*e*Pn	Pn	14 35 39.6	+0.8
ASHO	Ashiyiah	3.82	205	*i* Pn	Pn	14 35 40.7	+0.9
	SNR=8.2						
ASHO	Ashiyiah	3.82	205	P	Pn	14 35 43.0	+3.3
	SNR=15						
ASHO	Ashiyiah	3.82	205	*e*Pn	Pn	14 35 40.6	+0.9
IBAF	Bafgh	3.91	331	*e*Pn	Pn	14 35 44.1	+3.0
FAQ	Al Faqa, Dubai	3.96	211	Pn	Pn	14 35 43.3	+1.8
FAQ	Al Faqa, Dubai	3.96	211	*e*Pn	Pn	14 35 42.3	+0.7
SOHO	SOHO	4.19	196	*e*Pn	Pn	14 35 44.2	-0.6
LMD1	Lamerd	4.20	260	*e*Pn	Pn	14 35 46.7	+1.8
IMEH	Mehriz	4.23	320	*e*Pn	Pn	14 35 47.4	+1.8
IKOO	Kooshah	4.35	13	*e*Pn	Pn	14 35 47.5	+0.3
AJN	Ajban	4.41	216	*i* Pn	Pn	14 35 49.2	+1.5
	SNR=23						
AJN	Ajban	4.41	216	P	Pn	14 35 50.8	+3.1
	SNR=23						
AJN				S	Sn	14 36 42.8	+3.7
AJN	Ajban	4.41	216	*e*Pn	Pn	14 35 50.2	+2.5
ALNE	Al Ain	4.51	205	*i* Pn	Pn	14 35 50.6	+1.5
	SNR=22						
ALNE	Al Ain	4.51	205	*e*Pn	Pn	14 35 50.3	+1.2
HOQ	Hoqain	4.60	186	P	Pn	14 35 51.0	+0.5
	SNR=24						
HOQ				S	Sn	14 36 46.9	+2.8
BIDO	Bidbid	4.65	176	*e*Pn	Pn	14 35 50.8	-0.3
ITEG	Tejag	4.77	10	*e*Pn	Pn	14 35 52.8	-0.1
GHB	Gharebagh	4.78	286	*e*Pn	Pn	14 35 55.3	+2.2
SHI	Shiraz	4.86	289	*e*Pn	Pn	14 35 55.6	+1.4
TPRV	Parvadeh(Tabas	4.92	349	*e*Pn	Pn	14 35 55.8	+0.9
ARQ	Araqi	4.96	194	P	Pn	14 35 58.1	+2.7
	SNR=31						
ARQ				S	Sn	14 36 56.9	+4.0
WSAR	Wadi Sarin	4.98	171	Pn	Pn	14 35 56.4	+0.7
	comp=E,11nm,0.3s,baz=356,slow=8.7,SNR=152						
WSAR				Sn	Sn	14 36 52.9	-0.4
	comp=E,26nm,0.3s,baz=84,slow=18,SNR=6.1						
WSAR				LR	LR	14 38 16.8	
	comp=E,101nm,18.9s,baz=359,slow=43						
WSAR	Wadi Sarin	4.98	171	P	Pn	14 35 56.7	+1.1
ICHK	Chekchek	5.00	325	*e*Pn	Pn	14 35 57.7	+1.5
SMDO	Samad	5.11	178	P	Pn	14 35 60.0	+2.5
	SNR=8.9						
SMDO				S	Sn	14 36 58.6	+2.1
ISAD	Sadrabad	5.16	317	*e*Pn	Pn	14 35 59.6	+1.3
IMON	Monand	5.24	17	*e*Pn	Pn	14 36 01.3	+1.9
AFRZ	Afriz	5.33	11	*e*Pn	Pn	14 36 01.3	+0.8
TKDS	Koohdasht(Taba	5.45	354	*e*Pn	Pn	14 36 03.7	+1.6
IKAZ	Kazeroun	5.46	288	*e*Pn	Pn	14 36 04.2	+1.6
TABS	Tabas	5.48	354	*e*Pn	Pn	14 36 05.2	+2.6
TABS				*e*Sg	Sb	14 37 28.2	+5.7
TABS	Tabas	5.48	354	*e*Pn	Pn	14 36 05.2	+2.6
MZWR	Madinat Zayed	5.65	220	*e*Pn	Pn	14 36 05.6	+0.8
SHRT	Shahrakht	5.85	21	*e*Pn	Pn	14 36 09.8	+2.2
SHRT	Shahrakht	5.85	21	*e*Pn	Pn	14 36 09.8	+2.2
TNSJ	Nastanj	5.85	350	*e*Pn	Pn	14 36 07.4	-0.3
IRAM	Ramesheh	5.93	309	*e*Pn	Pn	14 36 10.4	+1.5
KLNJ	Kolanjah	6.10	299	*e*Pn	Pn	14 36 12.5	+1.2
GHWR	Ruwais	6.11	228	*e*Pn	Pn	14 36 11.9	+0.8
JLN	Jalan Bani Buh	6.18	166	P	Pn	14 36 13.0	+0.9
IGAR	Gharneh	6.52	312	*e*Pn	Pn	14 36 18.5	+1.5
IZEF	Zefreh	6.66	316	*e*Pn	Pn	14 36 20.3	+1.3
SLWR	Sila	6.86	235	*e*Pn	Pn	14 36 21.6	+0.2
ROKH	ROKH	7.18	307	*e*Pn	Pn	14 36 28.0	+2.0
HRA	Herat	7.25	30		Pn	14 36 27.8	+0.7
IPIR	Pirpir	7.47	309	*e*Pn	Pn	14 36 30.8	+0.7
ISFR	Sfrayin	8.85	1	*e*Pn	Pn	14 36 50.8	+1.8
IDMV	Damavand	8.86	328	*e*Pn	Pn	14 36 52.3	+3.2
IALA	Alasht	8.94	333	*e*Pn	Pn	14 36 54.1	+3.8
BMDN	Meydan	9.46	308	*e*Pn	Pn	14 36 56.5	-0.7
BDRS	Dareh Seyedi	9.57	309	*e*Pn	Pn	14 36 58.8	-0.1
GEYT	Alibeck	9.72	1	Pn	Pn	14 37 04.7	+4.0
	comp=E,0.5nm,0.3s,baz=163,slow=11,SNR=7.8						
GEYT				LR	LR	14 41 25.7	
	comp=E,82nm,18.2s,baz=175,slow=42						
GEYT	Alibeck	9.72	1		Pn	14 37 01.7	+1.0
GYA0B	ALIBECK ARRAY	9.72	1	Pn	Pn	14 37 03.5	+2.8
HSAM	Samen	9.91	310	*e*Pn	Pn	14 37 03.5	0.0
QABG	Abgarm-Qazvin	10.25	319	*e*Pn	Pn	14 37 09.2	+1.1
WHFO	Wadi Hawf	10.87	201	P	Pn	14 37 17.5	+1.0
	SNR=13						
WHFO				S	Sn	14 39 14.7	-3.6
RBK	Rabkut	11.14	198	P	Pn	14 37 19.7	-0.5
	SNR=6.9						
ABTO	Aybut	11.55	202	P	Pn	14 37 25.5	-0.4
	SNR=5.9						
RAYN	Ar Rayn	12.01	250	P	Pn	14 37 28.9	-3.3
RAYN	Ar Rayn	12.01	250		Pn	14 37 28.9	-3.3
CHGR	Chuyangaron	14.09	39	Pn	Pn	14 38 03.0	+2.5
NIL	Nilore	14.33	64	P	Pn	14 38 05.8	+2.0
NIL	Nilore	14.33	64	Pn	Pn	14 38 05.8	+2.0
GAR	Garm	14.98	41		Pn	14 38 13.4	+0.7
GAR				IAmb	IAmb	14 38 29.1	
	comp=Z,15nm,1.1s						
AKT	Akhty	15.62	331	*i* P	Pn	14 38 17.6	-3.5
GNI	Garni	16.08	321	Pn	Pn	14 38 28.6	+1.4
	comp=Z,0.7nm,0.3s,baz=180,slow=20,SNR=1.9						
GNI	Garni	16.08	321	P	Pn	14 38 25.5	-1.7
GNI				pmax	pmax		
	comp=Z,18nm,1.0s						
GNI	Garni	16.08	321	Pn	Pn	14 38 25.5	-1.7
SOCY	Socotra	16.31	193	P	Pn	14 38 28.2	-1.9
GROC	Groznyy	17.85	330	P	Pn	14 38 49.2	0.0

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GROC                                   pmax   pmax
       comp=Z,30nm,0.8s
KK31   Karatay Array      18.08  31    P      Pn      14 38 51.5 -0.6
KK31                                   pmax   pmax
       comp=Z,5.0nm,1.0s
KK31   Karatay Array      18.08  31    P      Pn      14 38 51.5 -0.6
KKAR   Karatay Array      18.08  31    P      Pn      14 38 51.6 -0.5
KKAR   Karatay Array      18.08  31           Pn      14 38 51.6 -0.5
DAMY   Dhamar             18.40 225    P      P       14 38 53.0 -3.4
DAMY                                   IAmb   IAmb    14 38 57.3
       comp=Z,34nm,1.1s
ASF    Jabal al Asfar     18.51 288    P      Pn      14 38 57.7 +0.3
       comp=Z,0.8nm,0.3s,baz=39,slow=6.9,SNR=7.4
KSH    Kashi              18.81  48    P      P       14 38 55.8 -4.9
KSH                                    pP     Pn      14 38 59.9 -1.2
KSH                                    PP     PnPn    14 39 12.0 -1.3
KSH                                    S      Sn      14 42 18.0  -14
KSH                                    sS     S       14 42 23.9  -11
KSH                                    SS     SnSn    14 42 41.8 -3.9
NCK    Nalchik            19.09 327  i P      P       14 39 02.7 -0.9
NCK                                    pmax   pmax
       comp=Z,10.0nm,0.9s
GAZ    Gaziantep          19.49 303    P      P       14 39 05.0 -3.0
GAZ                                    IAmb   IAmb    14 39 19.7
       comp=Z,14nm,0.8s
KBZ    Khabaz             19.61 326    P      Pn      14 39 12.2 +1.7
       comp=Z,0.2nm,0.3s,baz=122,slow=13,SNR=5.1
KBZ    Khabaz             19.61 326  i P      P       14 39 08.2 -0.9
KBZ                                    pmax   pmax
       comp=Z,3.0nm,0.9s
SHA1   Shidzhatmaz        19.73 326  i P      P       14 39 09.6 -1.2
AAK    Ala-Archa          19.77  39    P      Pn      14 39 12.0 -0.6
       comp=Z,0.1nm,0.3s,baz=222,slow=13,SNR=8.4
AAK    Ala-Archa          19.77  39ceP      P       14 39 11.1  0.0
AAK                                    pmax   pmax
       comp=Z,7.0nm,1.3s
AAK    Ala-Archa          19.77  39    P      P       14 39 11.2  0.0
MMAI   Mount Meron Ar     19.87 290    P      P       14 39 11.4 -0.8
       comp=Z,0.9nm,0.3s,baz=103,slow=17,SNR=6.6
KIV    Kislovodsk         19.88 326  eP       P       14 39 09.9 -2.3
KIV                                    pmax   pmax
       comp=Z,31nm,1.0s
EIL    Elat               20.06 280    P      P       14 39 13.4 -0.8
       comp=Z,12nm,1.0s,baz=70,slow=9.3,SNR=4.3
ABKAR  Akbulak array      21.11   4    P      P       14 39 24.9 -0.5
ABKAR  Akbulak array      21.11   4    P      P       14 39 25.3 -0.1
ABKAR                                  IAmb   IAmb    14 39 30.0
       comp=Z,6.3nm,0.8s
ATD    Arta Tunnel        21.70 223    P      P       14 39 31.6 -0.5
       comp=Z,3.0nm,0.3s,baz=354,slow=9.2,SNR=3.0
ATD    Arta Tunnel        21.70 223    IAmb   IAmb    14 39 39.6
       comp=Z,21nm,1.1s
AKTO   Aktyubinsk         22.22   0    P      P       14 39 37.0 -0.3
       comp=Z,3.4nm,0.8s,baz=183,slow=12,SNR=12
DANN   Dangsing           22.85  83  eP       P       14 39 45.2 +0.6
       comp=Z,24nm,0.6s
BR131  Keskin Array S     23.05 306    P      P       14 39 46.9 +0.6
       SNR=6.8
BR131  Keskin Array S     23.05 306    P      P       14 39 45.5 -0.9
BR131                                  pmax   pmax
       comp=Z,11nm,1.0s
BR131  Keskin Array S     23.05 306    P      P       14 39 45.5 -0.9
BR131                                  IAmb   IAmb    14 40 00.3
       comp=Z,11nm,0.9s
BRTR   Keskin Array B     23.05 306    P      P       14 39 46.3 -0.1
       comp=Z,5.7nm,0.8s,baz=127,slow=9.9,SNR=24
BRTR   Keskin Array B     23.05 306    P      P       14 39 44.8 -1.6
ILGA   Ilgaz              23.53 309    P      P       14 39 50.0 -1.4
PKIN   Phulchoki          24.38  85  eP       P       14 40 01.4 +1.9
       comp=Z,8.3nm,0.7s
PKI    Pulchoki           24.39  85  eP       P       14 40 01.5 +1.8
       comp=Z,17nm,0.9s
ISP    Isparta            24.75 300    P      P       14 40 02.3 -0.3
ISP                                    pmax   pmax
       comp=Z,27nm,0.9s
ISP    Isparta            24.75 300    P      P       14 40 02.3 -0.3
ISP                                    IAmb   IAmb    14 40 09.3
       comp=Z,27nm,0.9s
GUN    Gumba              24.76  84  eP       P       14 40 06.2 +3.1
       comp=Z,22nm,0.8s
ELL    Elmali             24.97 297    P      P       14 40 04.9 +0.2
ELL                                    pmax   pmax
       comp=Z,70nm,0.7s
ELL    Elmali             24.97 297    P      P       14 40 04.9 +0.2
JIRN   Jiri               25.06  84  eP       P       14 40 09.3 +3.4
       comp=Z,17nm,0.8s
RAMN   Ramite             25.53  86  eP       P       14 40 13.5 +3.5
BVAR   Borovoye Array     26.51  17    P      P       14 40 18.2 -0.1
       comp=Z,3.0nm,0.8s,baz=198,slow=9.2,SNR=14
BRVK   Borovoye           26.51  17ceP      P       14 40 17.5 -0.8
BRVK                                   pmax   pmax
       comp=Z,6.0nm,1.3s
BRVK   Borovoye           26.51  17    P      P       14 40 18.7 +0.4
MAKZ   Makanchi           26.54  39    P      P       14 40 19.2 +0.6
MAKZ                                   pmax   pmax
       comp=Z,18nm,2.0s
MAKZ   Makanchi           26.54  39    P      P       14 40 19.1 +0.6
MAKZ                                   IAmb   IAmb    14 40 26.8
       comp=Z,18nm,2.0s
MK31   Makanchi Array     26.70  39    P      P       14 40 20.9 +0.8
MK31                                   pmax   pmax
       comp=Z,2.0nm,1.0s
MK31   Makanchi Array     26.70  39    P      P       14 40 20.9 +0.8
MKAR   Makanchi Array     26.70  39    P      P       14 40 20.0 -0.1
       comp=Z,0.8nm,0.8s,baz=226,slow=8.2,SNR=9.3
MKAR                                   LR     LR      14 52 43.8
       comp=Z,45nm,19.9s,baz=266,slow=41
MKAR   Makanchi Array     26.70  39    P      P       14 40 21.2 +1.1
KARP   Karpathos          26.97 294    P      P       14 40 21.6 -1.1
KURBB  Kurchatov Arra     27.36  29    P      P       14 40 25.8 -0.1
       comp=Z,0.8nm,0.8s,baz=224,slow=8.6,SNR=7.1
KURK   Kurchatov          27.47  29    P      P       14 40 28.0 +1.1
KURK                                   pmax   pmax
       comp=Z,7.0nm,1.5s
KURK   Kurchatov          27.47  29    P      P       14 40 28.0 +1.1
WMQ    Urumqi             28.58  49  eP       P       14 40 39.4 +2.4
PALK   Pallekele          30.02 130    LR     LR      14 52 58.2
       comp=Z,56nm,18.2s,baz=24,slow=36
TESR   Tescani            30.52 315  ⇓P       P       14 40 53.5 -0.5
OBN    Obninsk            30.99 336⇓eP      P       14 40 55.6 -2.5
OBN                                  e                14 40 57.8
OBN                                    *PP    pP      14 41 00.0 -1.3
OBN                                                   14 43 56.0
OBN                                    pmax   pmax
       comp=Z,50nm,2.5s
AKASG  Malin Array Be     31.18 324    P      P       14 40 58.0 -1.9
       comp=Z,1.1nm,0.5s,baz=129,slow=8.5,SNR=11
AKASG  Malin Array Be     31.18 324    P      P       14 40 58.5 -1.3
AKASG                                  pmax   pmax
       comp=Z,1.0nm,0.7s
AKASG  Malin Array Be     31.18 324    P      P       14 40 58.5 -1.3
AKBB   Malin Array Si     31.18 324    P      P       14 40 58.5 -1.3
AKBB                                   pmax   pmax
       comp=Z,6.0nm,1.0s
AKBB   Malin Array Si     31.18 324    P      P       14 40 58.5 -1.3
AKBB                                   IAmb   IAmb    14 40 59.7
       comp=Z,5.9nm,0.9s
AGG    Agios Georgios     31.29 299    P      P       14 41 00.2 -0.8
AGG                                    pmax   pmax
       comp=Z,32nm,1.6s
AGG    Agios Georgios     31.29 299    P      P       14 41 00.2 -0.8
ITM    Ithomi             31.35 296    P      P       14 40 59.0 -2.6
VTS    Vitosha            31.41 307    P      P       14 41 00.8 -1.4
VTS                                    pmax   pmax
       comp=Z,14nm,1.7s
VTS    Vitosha            31.41 307    P      P       14 41 00.8 -1.4
VTS                                    IAmb   IAmb    14 41 12.5
       comp=Z,14nm,1.7s
BURAR  Bucovina Array     31.88 316  ⇓P       P       14 41 05.7 -0.5
BURAR  Bucovina Array     31.88 316  ⇓P       P       14 41 05.7 -0.5
BURAR  Bucovina Array     31.88 316    P      P       14 41 04.8 -1.4
BUR08  Bucovina Ar. S     31.90 316    P      P       14 41 05.5 -0.9
BUR08                                  IAmb   IAmb    14 41 47.6
       comp=Z,21nm,1.9s
ZAA0   Zalesovo Array     32.45  30    P      P       14 41 10.1 -0.9
ZAA0                                   IAmb   IAmb    14 41 17.6
       comp=Z,3.9nm,1.1s
ZALV   Zalesovo Beam      32.45  30    P      P       14 41 10.8 -0.2
       comp=Z,0.9nm,0.4s,baz=242,slow=9.5,SNR=6.8
ZALV   Zalesovo Beam      32.45  30    P      P       14 41 10.1 -0.9
KOLS   Kolonicke sedl     34.22 317  eP       P       14 41 26.9 +0.4
KOLS                                   pmax   pmax
       comp=Z,9.0nm,0.7s
KOLS   Kolonicke sedl     34.22 317  eP       P       14 41 26.8 +0.3
KMBO   Kilima Mbogo       35.19 218    P      P       14 41 37.1 +1.6
       comp=Z,1.1nm,0.5s,baz=22,slow=18,SNR=4.9
KMBO   Kilima Mbogo       35.19 218  i P      P       14 41 37.5 +2.0
KMBO                                   pmax   pmax
       comp=Z,1.0nm,0.5s
KMBO   Kilima Mbogo       35.19 218    IAmb   IAmb    14 42 26.7
       comp=Z,14nm,1.9s
VYHS   Vyhne              36.16 315  eP       P       14 41 44.3 +1.0
VYHS   Vyhne              36.16 315  eP       P       14 41 44.3 +1.0
OJC    Ojcow              36.21 318    P      P       14 41 42.0 -1.6
OJC                                    pmax   pmax
       comp=Z,8.0nm,0.8s
OJC    Ojcow              36.21 318    P      P       14 41 42.0 -1.6
OJC                                    IAmb   IAmb    14 41 43.5
       comp=Z,7.9nm,0.8s
GTA    Gaotai             36.37  61  eP       P       14 41 49.8 +4.5
GTA                                    pP     sP      14 41 56.6 +6.7
GTA                                    sP     pP      14 41 59.6  +11
MORC   Moravsky Berou     37.40 316    P      P       14 41 52.4 -1.4
MORC                                   pmax   pmax
       comp=Z,15nm,1.7s
MORC   Moravsky Berou     37.40 316    P      P       14 41 52.4 -1.4
MORC                                   IAmb   IAmb    14 41 54.9
       comp=Z,15nm,1.7s
CMAR   Chiang Mai Arr     38.84  95    P      P       14 42 11.2 +4.9
       comp=Z,0.2nm,0.3s,baz=291,slow=7.6,SNR=2.4
FINES  FINESS Array B     39.39 337    P      P       14 42 09.8 -0.5
       comp=Z,1.8nm,0.5s,baz=128,slow=10,SNR=9.8
FINES  FINESS Array B     39.39 337  i P      P       14 42 10.1 -0.2
FINES                                  pmax   pmax
       comp=Z,2.0nm,0.5s
LZH    Lanzhou            39.47  67  eP       P       14 42 12.1 +0.5
LZH                                    pP     sP      14 42 16.3 +0.1
LZH                                    sP     pP      14 42 20.3 +5.4
LZH                                    PP     PnPn    14 43 50.4 +5.4
GEC2   GERESS Array S     39.52 314    P      P       14 42 10.2 -1.5
GERES  GERESS Array B     39.52 314    P      P       14 42 10.3 -1.5
       comp=Z,1.9nm,0.7s,baz=90,slow=9.3,SNR=6.8
GERES  GERESS Array B     39.52 314    P      P       14 42 10.0 -1.7
KHC    Kasperske Hory     39.67 314  eP       P       14 42 11.6 -1.3
KHC    Kasperske Hory     39.67 314  i P      P       14 42 10.4 -2.5
KHC                                    pmax   pmax
       comp=Z,10.0nm,0.9s
KHC    Kasperske Hory     39.67 314    P      P       14 42 11.6 -1.3
KMI    Kunming            40.10  84    P      P       14 42 22.9 +5.9
CLL    Collm              40.63 317  eP       P       14 42 21.0 +0.2
SONM   Songino Array      42.22  49    LR     LR      15 02 11.9
       comp=Z,89nm,18.8s,baz=68,slow=39
SENIN  Lac Senin/Sane     43.30 309    P      P       14 42 41.3 -1.7
SENIN                                  IAmb   IAmb    14 43 48.9
       comp=Z,24nm,1.9s
BNI    Bardonecchia       43.61 307    P      P       14 42 43.8 -1.6
BNI                                    pmax   pmax
       comp=Z,24nm,1.7s
BNI    Bardonecchia       43.61 307    P      P       14 42 43.8 -1.6
BNI                                    IAmb   IAmb    14 42 56.7
       comp=Z,24nm,1.7s
NRIK   Noril'sk           44.66  15  i P      P       14 42 53.5 +0.2
NRIK                                   pmax   pmax
       comp=Z,2.0nm,1.0s
NC405  NORSAR Array S     44.93 330    P      P       14 42 54.4 -1.2
NB2    NORSAR Subarra     45.12 330    P      P       14 42 55.5 -1.6
       comp=Z,0.6nm,0.5s,baz=117,slow=7.9
NOA    NORSAR Array B     45.12 330    P      P       14 42 56.1 -0.9
       comp=Z,0.6nm,0.6s,baz=116,slow=7.9,SNR=4.2
KONO   Kongsberg          45.29 328    P      P       14 42 58.3 -0.1
KONO                                   pmax   pmax
       comp=Z,93nm,1.8s
KONO   Kongsberg          45.29 328    P      P       14 42 58.3 -0.1
NBO00  NORSAR Array S     45.31 330    P      P       14 42 57.6 -1.0
ARCES  ARCESS Array B     45.39 345    P      P       14 42 58.1 -1.0
       comp=Z,8.3nm,1.1s,baz=139,slow=5.9,SNR=5.5
ESDC   Sonseca Array      51.61 300    P      P       14 43 48.1 +0.6
       comp=Z,0.5nm,0.4s,baz=76,slow=7.2,SNR=1.8
TOA0   Torodi Ar. Sit     54.15 266    P      P       14 44 05.3 -1.2
       SNR=6.5
TOA0   Torodi Ar. Sit     54.15 266    P      P       14 44 04.7 -1.8
TOA0                                   IAmb   IAmb    14 44 08.4
       comp=Z,6.6nm,0.8s
TORD   Torodi Ar. Bea     54.15 266    P      P       14 44 05.1 -1.4
       comp=Z,6.3nm,0.7s,baz=62,slow=7.1,SNR=42
TORD   Torodi Ar. Bea     54.15 266    P      P       14 44 04.1 -2.5
TIXI   Tiksi              57.56  21  i P      P       14 44 31.9 +1.8
TIXI                                   pmax   pmax
       comp=Z,1.0nm,1.0s
KSRS   Korea Array        58.44  61    P      P       14 44 35.4 -1.5
       comp=Z,1.2nm,0.7s,baz=267,slow=6.6,SNR=5.2
KLR    Kul'dur            59.01  47  i P      P       14 44 39.3 -1.4
KLR                                    pmax   pmax
       comp=Z,3.0nm,1.3s
BOSA   Boshof             64.51 212    P      P       14 45 17.6 -0.4
       comp=Z,2.1nm,0.6s,baz=30,slow=6.0,SNR=6.3
BOSA   Boshof             64.51 212    P      P       14 45 17.6 -0.4
BOSA                                   pmax   pmax
       comp=Z,11nm,1.4s
BOSA   Boshof             64.51 212    IAmb   IAmb    14 46 48.2
       comp=Z,11nm,1.4s
BILL   Bilibino           70.72  22⇑eP      P       14 45 55.9 -0.7
BILL                                   *PP    pP      14 45 59.0 -1.1
BILL                                   *SP    sP      14 46 03.0 +1.6
BILL                                                  14 46 18.0
BILL                                   pmax   pmax
       comp=Z,2.0nm,1.0s
BILL                                   MLR    MLR
       comp=Z,105nm,17.0s
GUMO   Guam               81.16  79    LR     LR      15 25 40.5
       comp=Z,19nm,21.5s,baz=98,slow=38
BMAR   Burnt Mountain     83.20   9    P      P       14 47 06.0 -0.9
SCHQ   Schefferville      84.67 331    P      P       14 47 13.4 -1.2
       comp=Z,1.5nm,0.9s,baz=8.6,slow=9.5,SNR=3.9
ILAR   Eielson Array      85.37  10    P      P       14 47 18.1 +0.1
       comp=Z,0.4nm,0.8s,baz=312,slow=2.8,SNR=3.8
WRA    Warramunga Arr     88.04 114    P      P       14 47 32.4 +0.6
       comp=Z,1.2nm,0.9s,baz=315,slow=4.1,SNR=6.9
YKA    Yellowknife Ar     89.44 356    P      P       14 47 36.6 -0.9
       comp=Z,0.3nm,0.6s,baz=2.4,slow=5.0,SNR=8.7
ASAR   Alice Springs      89.60 117    P      P       14 47 39.5 +0.5
       comp=Z,0.8nm,0.9s,baz=304,slow=5.0,SNR=8.0
```

IDC 16 14:36:49.1±1.4, **1°.23N**×**127°.53E**, **h0**^{km}, **mb3.6**/4, **mb1 3.8**/5, **mb1mx3.4**/38, **mbtmp3.6**/5, **ML3.2**/1, **Error ellipse: s-maj=103.4km s-min=18.6km az=68.0, Halmahera**

```
Code   Station Name          Δ°  AZ°   Phase ID       Time       Res
                                       Op     ISC     h  m  s    ISC
FITZ   Fitzroy Crossi     19.30 185    P      Pn      14 41 16.6 -0.1
       0.1nm,0.3s,baz=161,slow=0.2,SNR=1.9
WRA    Warramunga Arr     22.08 163    P      P       14 41 46.9 +1.0
       1.8nm,0.5s,baz=342,slow=11,SNR=32
ASAR   Alice Springs      25.51 166    P      P       14 42 18.6 -0.9
       0.5nm,0.3s,baz=350,slow=14,SNR=27
STKA   Stephens Creek     35.52 159    P      P       14 43 47.5 -0.4
       1.3nm,0.8s,baz=339,slow=14,SNR=3.6
MKAR   Makanchi Array     60.05 326    P      P       14 46 58.8 +0.9
       0.1nm,0.3s,baz=122,slow=8.8,SNR=5.7
KURBB  Kurchatov Arra     64.26 328    P      P       14 47 25.4 -0.7
       baz=125,slow=5.8
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*DJA **16** 14:53:55.2±0.3, 9°S±3°×11°1E±°, h49^{km}±10^{km}, M5.1/14, mb4.9/13, mB5.5/7, MLv5.2/14, Mw(mB)5.0/7*
*NEIC **16** 14:53:57.0±1.6, 8°.61S±0°.07×111°.08E±0°.06, h75^{km}±4^{km}, mb4.9/66, Error ellipse: s-maj=11.4km s-min=7.6km az=217.0*
*IDC **16** 14:53:57.7±1.7, 8°.58S×111°.11E, h78^{km}±15^{km}, mb4.3/26, mb1 4.4/28, mb1mx4.3/36, mbtmp4.6/28, MS3.4/17, Ms1 3.4/17, ms1mx3.2/52, Error ellipse: s-maj=12.3km s-min=9.6km az=34.0*
*KLM **16** 14:53:57.0, 8°.87S×110°.91E, h85^{km}, mb4.8*
ISC 16 14:53:56.2±0.8, **8°.74S**±0°.05×**111°.04E**±0°.04, **h75**^{km}±6^{km}, **n481**, σ**1°.10**/492, **mb4.8**/53, **Jawa**

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Code   Station Name          Δ°  AZ°   Phase ID       Time       Res
                                       Op     ISC     h  m  s    ISC
WOJI   Wonogiri, Jawa      0.90 353    P      Pn      14 54 13.3 -0.5
WOJI                                   S      Sn      14 54 27.0 +0.2
UGM    Wanagama            0.96 328    P      Pn      14 54 14.0 -0.6
UGM                                    S      Sn      14 54 28.1 -0.2
UGM    Wanagama            0.96 328           Pn      14 54 14.0 -0.6
UGM                                    Sn     Sn      14 54 27.4 -0.9
SMRI   Semarang            1.78 341    P      Pn      14 54 26.8 +1.8
SMRI                                   S      Sn      14 54 51.2 +4.3
SMRI   Semarang            1.78 341           Pn      14 54 26.8 +1.8
JAGI   Jajag, Banyuwa      3.09  85    P      Pn      14 54 43.5 +0.7
JAGI                                   S      Sn      14 55 17.3 -1.4
JAGI   Jajag, Banyuwa      3.09  85           Pn      14 54 42.4 -0.4
KMMI   Kalianget           3.35  60    P      Pn      14 54 47.2 +0.9
CISI   Cisompet, Garu      3.40 290    P      Pn      14 54 45.1 -1.9
CISI                                   S      Sn      14 55 22.7 -3.5
CISI   Cisompet, Garu      3.40 290           Pn      14 54 45.1 -1.9
LEM    Lembang             3.88 299    P      Pn      14 54 54.6 +0.9
       50nm,0.3s,baz=34,slow=7.5,SNR=46
LEM                                    S      Sn      14 55 41.3 +3.1
       115nm,0.3s,baz=185,slow=22,SNR=7.8
LEM                                    LR     LR      14 56 41.6
       comp=Z,701nm,19.0s,baz=104,slow=42
LEM    Lembang             3.88 299    P      Pn      14 54 54.0 +0.3
DNP    Denpasar            4.13  90    P      Pn      14 54 57.0 +0.1
SRBI   Singaraja           4.18  81    P      Pn      14 54 57.8 +0.2
SRBI                                   S      Sn      14 55 45.6 +0.3
PLAI   Plampang            6.66  91    P      Pn      14 55 32.0 +0.5
       0.9nm2µm186nm,0.6s
PLAI                                   S      Sn      14 56 45.9 -0.2
       0.9nm2µm186nm,0.6s
KASI   Kota Agung          7.23 296    P      Pn      14 55 40.5 +1.2
       0.5nm1µm66nm,0.8s
KASI                                   S      Sn      14 57 00.8 +0.8
       0.5nm1µm66nm,0.8s
KBKI   Kotabaru            7.43  44    P      Pn      14 55 44.4 +2.4
       0.1nm16nm,0.9s
LWLI   Liwa                7.85 298    P      Pn      14 55 50.5 +2.6
MDSI   Maura Dua           8.01 301    P      Pn      14 55 50.5 +0.5
       26nm,0.9s
PMBI   Palembang           8.49 312    P      Pn      14 56 01.2 +4.7
       9µm222nm,0.5s
PMBI   Palembang           8.49 312    Pn     Pn      14 55 56.7 +0.2
MNAI   Manna               9.13 298    P      Pn      14 56 04.5 -0.7
       4µm110nm,0.6s
MNAI   Manna               9.13 298    Pn     Pn      14 56 05.0 -0.3
WSI    Waingapu            9.19  97    P      Pn      14 56 03.3 -2.8
       6µm284nm,0.6s
WSI                                    S      Sn      14 57 51.6 +3.7
       6µm284nm,0.6s
KAPI   Kappang             9.41  67    P      Pn      14 56 09.7 +0.7
       0.8nm,0.3s,baz=246,slow=19,SNR=2.2
KAPI                                   LR     LR      15 00 27.4
       comp=Z,81nm,19.3s,baz=252,slow=42
BASI   Baing, Sumba        9.53 100    P      Pn      14 56 09.2 -1.5
       1µm64nm,0.9s
KSM    Kuching            10.17 356           Pn      14 56 21.4 +2.0
KSM    Kuching            10.17 356    P      Pn      14 56 22.0 +2.6
MMRI   Maumere            11.07  90    P      Pn      14 56 29.6 -2.2
       2µm50nm,0.5s
MMRI                                   S      Sn      14 58 31.6 -2.4
       2µm50nm,0.5s
SBUM   Sibu               11.18   6    Pn     Pn      14 56 36.4 +3.3
SBUM   Sibu               11.18   6    P      Pn      14 56 37.0 +3.8
MYKOM  Kota Tinggi        12.68 325    P      P       14 56 59.0 -3.0
SOEI   Soe                13.10  95    P      Pn      14 56 57.8 -1.6
       52nm,0.7s
SOEI   Soe                13.10  95           Pn      14 56 57.3 -2.1
KKM    Kota Kinabalu      15.56  20    Pn     Pn      14 57 30.8 -0.7
SANI   Sanana             16.29  67    P      P       14 57 42.0 -0.2
       30nm,0.8s
IPM    Ipoh               16.49 322    P      P       14 57 43.7 -0.8
IPM    Ipoh               16.49 322    P      P       14 57 48.0 +3.5
PSI    Prapat             16.65 313    LR     LR      15 04 46.5
       comp=Z,226nm,20.8s,baz=151,slow=39
FITZ   Fitzroy Crossi     16.97 125    P      Pn      14 57 48.0 -0.9
       baz=17,SNR=18
FITZ   Fitzroy Crossi     16.97 125    P      Pn      14 57 47.9 -1.0
       1.0nm,0.3s,baz=146,slow=0.2,SNR=24
FITZ                                   S      Sn      15 00 40.8  -16
       0.7nm,0.3s,baz=175,slow=0.3,SNR=4.0
FITZ                                   LR     LR      15 04 52.9
       comp=Z,110nm,18.0s,baz=106,slow=38
KULM   Kulim              17.36 323    Pn     Pn      14 57 51.6 -2.1
KULM   Kulim              17.36 323    P      P       14 57 58.0 +4.0
AAI    Ambon              17.77  75    P      Pn      14 57 59.8 +1.0
KNRA   Kununurra          18.64 113    P      P       14 58 07.7 -0.4
       baz=19,SNR=14
KNRA   Kununurra          18.64 113           Pn      14 58 09.2 -0.1
MEEK   Meekatharra        19.20 159    P      P       14 58 12.6 -1.6
       baz=19,SNR=12
LHMI   Lhok Sumawe        19.74 314    P      P       14 58 17.6 -2.6
LHMI                                   IAmb   IAmb    14 58 18.3
       comp=Z,71nm,0.8s
SAUI   Saumlaki           20.06  89    P      P       14 58 22.4 -1.3
MTN    Manton Dam         20.16 103    P      P       14 58 25.6 +0.9
       baz=20,SNR=47
KDU    Kakadu             21.42 102    P      P       14 58 38.4 +0.2
       baz=22,SNR=13
SIJI   Sorong             21.61  70    P      P       14 58 40.2 -0.1
       comp=Z,37nm,0.6s,baz=295,slow=6.6,SNR=19
FAKI   Fak Fak            21.87  76    P      P       14 58 40.2 -2.9
WRKA   Warakurna          23.09 137    P      P       14 58 55.1 -0.8
       baz=23,SNR=14
NWAO   Narrogin (SRO)     24.75 167    LR     LR      15 08 54.5
       comp=Z,139nm,21.1s,baz=4.0,slow=36
WB0    Warramunga Arr     25.12 118    P      P       14 59 14.7 +0.3
WRA    Warramunga Arr     25.14 119    P      P       14 59 15.2 +0.6
       comp=Z,8.5nm,0.8s,baz=292,slow=12,SNR=74
WRA                                    PcP    PcP     15 02 48.5 +1.3
       comp=Z,1.3nm,0.6s,baz=300,slow=1.7,SNR=5.3
WRA                                    S      S       15 03 55.0  +21
       comp=Z,0.7nm,0.6s,baz=262,slow=24,SNR=3.3
WRA                                    LR     LR      15 10 42.3
       comp=Z,43nm,18.5s,baz=190,slow=40
WRA    Warramunga Arr     25.14 119    P      P       14 59 14.3 -0.3
WB2    Warramunga Arr     25.15 119    P      P       14 59 15.1 +0.4
WB2                                    IAmb   IAmb    15 00 12.7
       comp=Z,31nm,1.2s
AS31   Alice Springs      26.44 127    P      P       14 59 26.5 +0.1
ASAR   Alice Springs      26.44 127    P      P       14 59 27.1 +0.7
       comp=Z,5.4nm,0.5s,baz=303,slow=8.7,SNR=73
ASAR                                   PcP    PcP     15 02 51.7 +1.6
       comp=Z,1.6nm,0.5s,baz=312,slow=1.7,SNR=8.3
ASAR                                   LR     LR      15 09 25.0
       comp=Z,103nm,21.4s,baz=289,slow=35
ASAR   Alice Springs      26.44 127    P      P       14 59 26.9 +0.5
PBKT   Sadao Pong         27.05 338    P      P       14 59 31.8 +0.1
SZP    Santa              27.73  20    P      P       14 59 38.5 +0.7
CM31   Chiang Mai Arr     29.54 336    P      P       14 59 53.8 -0.1
CM31                                          PcP     15 02 59.4 +1.8
CMAR   Chiang Mai Arr     29.54 336    P      P       14 59 54.0  0.0
       comp=Z,1.5nm,0.6s,baz=172,slow=8.7,SNR=15
CMAR                                   PcP    PcP     15 02 59.8 +2.2
       comp=Z,4.1nm,0.7s,baz=193,slow=3.2,SNR=21
CMAR                                   LR     LR      15 12 42.7
       comp=Z,129nm,19.1s,baz=172,slow=38
CMAR   Chiang Mai Arr     29.54 336    P      P       14 59 53.3 -0.6
CMAR                                          PcP     15 02 59.0 +1.4
CHTO   Chiang Mai         29.86 337           PcP     15 03 00.2 +1.7
QIS    Mount Isa          29.98 116    P      P       14 59 57.4 -0.4
       baz=30,SNR=5.2
COEN   Coen               31.91 102    P      P       15 00 14.8 -0.2
       baz=32,SNR=12
TPUB   Ta-pu              33.19  16    P      P       15 00 26.4 +0.4
TPUB                                   IAmb   IAmb    15 00 27.9
       comp=Z,10nm,0.7s
YULB   Yu-li              33.47  17    P      P       15 00 28.4  0.0
YULB                                   IAmb   IAmb    15 00 31.3
       comp=Z,8.1nm,0.5s
SSLB   Suanglung          33.75  16    P      P       15 00 31.3 +0.5
SSLB                                   IAmb   IAmb    15 00 37.6
       comp=Z,14nm,0.6s
NACB   Ninganchiao        34.30  17    P      P       15 00 34.8 -0.8
NACB                                   IAmb   IAmb    15 00 36.3
       comp=Z,16nm,0.7s
YHNB   Yeheng             34.70  17    P      P       15 00 38.6 -0.5
YHNB                                   IAmb   IAmb    15 00 43.8
       comp=Z,11nm,0.8s
YOJ    Yonaguni jima      35.00  19    P      P       15 00 42.0 +0.4
GYA    Guiyang            35.24 353  eP       P       15 00 46.9 +3.1
GYA                                    pP     pP      15 01 05.4 +3.7
GYA                                    PP     PP      15 02 29.6  +24
GYA                                    sS     sS      15 06 47.3 +4.8
GYA                                    S      SS      15 08 15.0  -34
STKA   Stephens Creek     36.53 133    P      P       15 00 53.9 -0.8
       baz=37,SNR=11
STKA   Stephens Creek     36.53 133    P      P       15 00 56.0 +1.2
       comp=Z,2.6nm,0.5s,baz=313,slow=9.2,SNR=16
STKA                                   PcP    PcP     15 03 18.6 +1.6
       comp=Z,4.7nm,0.5s,baz=326,slow=3.7,SNR=6.9
STKA                                   LR     LR      15 16 52.2
       comp=Z,85nm,19.1s,baz=220,slow=38
STKA   Stephens Creek     36.53 133    P      P       15 00 55.4 +0.7
H08S2  Diego Garcia H     38.16 269    T      T       15 41 38.8
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	baz=94,slow=76,SNR=22						
H08S3	Diego Garcia H	38.17	269	T	T	15 41 36.3	
	baz=94,slow=76,SNR=20						
H08S1	Diego Carcia H	38.17	269	T	T	15 41 41.0	
	baz=94,slow=76,SNR=20						
ENH	Enshi	38.81	358	P	P	15 01 13.8	-0.1
ENH				IAmb	IAmb	15 01 16.6	
	comp=Z,7.9nm,0.6s						
WHN	Wuhan	39.18	5	P	sP	15 01 55.1	+11
CD2	Chengdu	40.03	350	eP	P	15 01 25.0	+0.9
NJ2	Nanjing	41.24	10	eP	P	15 01 35.8	+1.9
HYB	Hyderabad	41.30	309	i P	P	15 01 34.0	-0.8
ODAN	Odare	42.17	328	eP	P	15 01 41.2	-0.8
	comp=Z,14nm,0.5s						
TAPN	Taplejung	42.40	329	eP	P	15 01 43.4	-0.5
	comp=Z,10nm,0.5s						
XAN	Xi'an	42.59	357	P	P	15 01 46.3	+1.3
XAN				pP	pP	15 02 04.3	+1.0
XAN	Xi'an	42.59	357	P	P	15 01 44.2	-0.8
XAN				IAmb	IAmb	15 01 47.4	
	comp=Z,11nm,0.6s						
RAMN	Ramite	42.66	327	eP	P	15 01 45.3	-0.7
	comp=Z,5.0nm,0.3s						
LSA	Lhasa	42.74	334	P	P	15 01 45.6	-1.2
LSA				IAmb	IAmb	15 01 49.5	
	comp=Z,9.2nm,0.5s						
JIRN	Jiri	43.45	327	eP	P	15 01 51.7	-0.7
	comp=Z,17nm,0.5s						
PKI	Pulchoki	43.80	326	eP	P	15 01 53.6	-1.6
GUN	Gumba	43.81	327	eP	P	15 01 54.7	-0.7
	comp=Z,18nm,0.5s						
PKIN	Phulchoki	43.81	326	eP	P	15 01 53.6	-1.7
	comp=Z,4.6nm,0.4s						
DMN	Daman	44.00	326	eP	P	15 01 55.3	-1.4
	comp=Z,9.8nm,0.4s						
KKN	Kakani	44.04	326	eP	P	15 01 55.8	-1.2
	comp=Z,4.8nm,0.4s						
GKN	Gorkha	44.56	326	eP	P	15 01 59.7	-1.4
	comp=Z,16nm,0.2s						
LZH	Lanzhou	45.09	352	eP	P	15 02 08.8	+3.6
LZH				pP	pP	15 02 24.8	+1.1
LZH				sP	sP	15 02 35.1	+2.9
LZH				PP	PP	15 03 59.8	+7.7
DANN	Dangsing	45.32	325	eP	P	15 02 05.8	-1.5
	comp=Z,20nm,0.4s						
JNU	Nakatsue	45.71	23	LR	LR	15 21 23.3	
	comp=Z,31nm,21.5s,baz=188,slow=36						
JNU	Nakatsue	45.71	23	P	P	15 02 09.5	-0.5
KSAR	Wonju Array Be	48.57	18	P	P	15 02 31.3	-0.8
KSRS	Korea Array	48.59	18	P	P	15 02 33.2	+1.0
	comp=Z,7.8nm,0.7s,baz=200,slow=8.1,SNR=30						
KSRS				LR	LR	15 25 29.0	
	comp=Z,22nm,18.7s,baz=258,slow=39						
KS19	Wonju Array Si	48.62	18	P	P	15 02 31.4	-1.1
BJI	Beijing	48.76	5	eP	P	15 02 33.5	0.0
GTA	Gaotai	49.02	348	eP	P	15 02 36.4	+0.7
GTA				pP	pP	15 02 52.8	-1.5
GTA				sP	sP	15 03 02.3	-0.5
GTA				S	S	15 09 34.8	0.0
HHC	Hu-ho-hao-te	49.34	1	eP	sP	15 03 06.5	+1.3
INU	Inuyama	50.24	28	P	P	15 02 44.0	-0.8
MAJO	Matsushiro	51.77	28	P	P	15 02 55.0	-1.4
MAT	Matsushiro	51.77	28	P	P	15 02 55.1	-1.3
MJAR	Matsushiro Arr	51.77	28	P	P	15 02 55.2	-1.2
	comp=Z,5.7nm,0.9s,baz=202,slow=7.0,SNR=13						
MJAR				PcP	PcP	15 04 08.3	-0.3
	comp=Z,2.2nm,0.8s,baz=184,slow=4.4,SNR=3.6						
MJAR				LR	LR	15 23 42.2	
	comp=Z,25nm,21.9s,baz=45,slow=35						
MJAR	Matsushiro Arr	51.77	28	P	P	15 02 54.7	-1.7
MJB9	Matsu-Tunnel	51.77	28	P	P	15 02 55.1	-1.3
MJB9				IAmb	IAmb	15 03 40.5	
	comp=Z,42nm,1.8s						
CN2	Changchun	53.90	13	eP	P	15 03 11.3	-0.6
MDJ	Mudanjiang	55.69	16	P	P	15 03 24.9	+0.1
MDJ	Mudanjiang	55.69	16	P	P	15 03 23.9	-0.9
MDJ				IAmb	IAmb	15 03 25.5	
	comp=Z,8.3nm,0.6s						
USA0B	Ussuriysk Arra	56.00	18	P	P	15 03 26.7	-0.3
USA0B				IAmb	IAmb	15 03 28.0	
	comp=Z,11nm,0.7s						
USRK	Ussuriysk Ar.	56.00	18	P	P	15 03 27.0	0.0
	comp=Z,5.8nm,0.5s,baz=198,slow=2.6,SNR=32						
USRK	Ussuriysk Ar.	56.00	18	P	P	15 03 26.7	-0.3
WMQ	Urumqi	56.44	340	eP	P	15 03 32.8	+2.6
ULN	Ulaanbaatar	56.46	357	P	P	15 03 29.9	-0.5
ULN				IAmb	IAmb	15 03 31.1	
	comp=Z,7.0nm,1.1s						
SONM	Songino Array	56.47	356	P	P	15 03 30.2	-0.3
	comp=Z,2.3nm,0.5s,baz=177,slow=8.6,SNR=12						
SONM				PcP	PcP	15 04 27.6	+1.1
	comp=Z,4.0nm,0.5s,baz=180,slow=4.2,SNR=9.4						
SONM	Songino Array	56.47	356	IAmb	IAmb	15 04 28.1	
	comp=Z,4.3nm,0.9s						
KSH	Kashi	57.98	328	P	P	15 03 43.8	+2.5
KSH				pP	pP	15 04 02.9	+2.6
KSH				PP	PP	15 05 53.6	+3.0
KSH				S	S	15 11 35.6	-0.5
KSH				sS	sS	15 12 08.3	-0.8
KSH				ScS	ScS	15 13 21.9	-2.3
HIA	Hailar	58.26	7	P	P	15 03 41.9	-1.0
HIA				IAmb	IAmb	15 03 42.9	
	comp=Z,3.5nm,0.7s						
KBL	Kabul	58.58	320	P	P	15 03 43.6	-2.0
SOCY	Socotra	60.39	289	P	P	15 03 58.0	-0.3
SOCY				IAmb	IAmb	15 03 59.5	
	comp=Z,7.3nm,0.8s						
TLY	Talaya	60.51	355	P	P	15 03 58.2	-0.2
GAR	Garm	60.71	324	P	P	15 03 58.4	-1.7
GAR				IAmb	IAmb	15 04 07.5	
	comp=Z,7.2nm,0.7s						
MK31	Makanchi Array	60.93	338	P	P	15 04 00.6	-0.7
MK31				IAmb	IAmb	15 04 02.3	
	comp=Z,8.0nm,0.5s						
MKAR	Makanchi Array	60.93	338	P	P	15 04 01.2	-0.2
	comp=Z,14nm,0.6s,baz=145,slow=7.1,SNR=160						
MKAR	Makanchi Array	60.93	338	P	P	15 04 00.3	-1.1
AAK	Ala-Archa	61.04	330	LR	LR	15 35 24.5	
	comp=Z,38nm,19.0s,baz=136,slow=41						
AAK	Ala-Archa	61.04	330	P	P	15 04 01.6	-0.7
MAKZ	Makanchi	61.06	338	P	P	15 04 01.6	-0.6
YSS	Yuzh-Sakhalins	62.22	24	P	P	15 04 09.1	-0.8
OPO	Ambohidratompo	62.55	254	P	P	15 04 15.0	+2.1
	comp=Z,2.2nm,0.8s,baz=180,slow=3.0,SNR=3.4						
UOSS	Minazif	63.03	304	P	P	15 04 14.8	-1.0
KKAR	Karatay Array	63.41	328	P	P	15 04 16.1	-1.9
KKAR	Karatay Array	63.41	328	P	P	15 04 16.0	-2.0
KKAR				IAmb	IAmb	15 05 52.1	
	comp=Z,9.6nm,2.0s						
BHW	Baring Head	64.70	132	P	P	15 04 25.1	-1.5
BKZ	Black Stump Fm	65.53	129	P	P	15 04 32.2	+0.1
KURK	Kurchatov	65.54	338	P	P	15 04 30.8	-0.9
KURK				IAmb	IAmb	15 04 32.3	
	comp=Z,5.7nm,0.5s						
ZAA0	Zalesovo Array	66.27	343	P	P	15 04 34.6	-1.7
ZAA0				IAmb	IAmb	15 04 36.5	
	comp=Z,9.3nm,0.9s						
ZALV	Zalesovo Beam	66.27	343	P	P	15 04 35.2	-1.0
	comp=Z,8.9nm,0.4s,baz=158,slow=6.3,SNR=50						
ZALV				LR	LR	15 34 43.9	
	comp=Z,51nm,18.8s,baz=86,slow=37						
ZALV	Zalesovo Beam	66.27	343	P	P	15 04 34.9	-1.4
MAW	Mawson	66.92	198	LR	LR	15 29 12.7	
	comp=Z,145nm,20.9s,baz=66,slow=32						
GEYT	Alibeck	67.73	317	P	P	15 04 45.7	-0.3
	comp=Z,2.9nm,0.4s,baz=134,slow=6.4,SNR=6.1						
GEYT				LR	LR	15 39 45.3	
	comp=Z,9.8nm,18.1s,baz=280,slow=41						
BRVK	Borovoye	70.63	335	P	P	15 05 02.5	-1.1
RAYN	Ar Rayn	71.58	298	P	P	15 05 08.9	-1.1
RAYN				IAmb	IAmb	15 05 10.8	
	comp=Z,12nm,1.2s						
YAK	Yakutsk	72.03	9	P	P	15 05 11.2	-0.6
ABKAR	Akbulak array	72.97	328	P	P	15 05 17.2	-0.5
PEA0B	Petropavlovsk-	73.22	27	P	P	15 05 19.3	+0.2
PETK	Petropavlovsk-	73.22	27	P	P	15 05 19.6	+0.5
	comp=Z,9.5nm,0.7s,baz=196,slow=3.0,SNR=25						
PETK	Petropavlovsk-	73.22	27	P	P	15 05 19.1	0.0
VNDA	Vanda	73.55	170	P	P	15 05 22.0	+1.3
	comp=Z,1.2nm,0.7s,baz=303,slow=8.3,SNR=5.3						
VNDA	Vanda	73.55	170	P	P	15 05 22.0	+1.3
VNDA				IAmb	IAmb	15 05 26.4	
	comp=Z,23nm,2.0s						
PET	Petropavlovsk	73.60	28	P	P	15 05 20.8	-0.5
KMBO	Kilima Mbogo	73.80	271	P	P	15 05 24.9	+1.3
	comp=Z,0.6nm,0.5s,baz=36,slow=6.2,SNR=5.2						
KMBO				LR	LR	15 32 56.2	
	comp=Z,26nm,18.8s,baz=86,slow=32						
MA2	Magadan	75.11	20	P	P	15 05 29.9	0.0
MA2				IAmb	IAmb	15 05 31.4	
	comp=Z,18nm,0.8s						
ARU	Arti	77.93	333	P	P	15 05 45.0	-0.9
ARU				IAmb	IAmb	15 05 46.5	
	comp=Z,15nm,1.1s						
AKH	Akhalkalaki	79.36	315	P	P	15 05 53.4	-0.9
AKH				IAmb	IAmb	15 05 56.3	
	comp=Z,19nm,1.4s						
NRIK	Noril'sk	79.59	352	P	P	15 05 54.2	-0.5
	comp=Z,3.2nm,0.4s,baz=130,slow=5.2,SNR=12						
MATP	Matopo	80.05	251	P	P	15 05 56.5	-2.0
	comp=Z,5.0nm,0.7s,baz=117,slow=4.2,SNR=10.0						
KBZ	Khabaz	80.62	317	P	P	15 06 01.6	+0.8
	comp=Z,13nm,0.8s,baz=117,slow=5.7,SNR=18						
KIV	Kislovodsk	80.85	317	P	P	15 06 00.3	-1.9
KIV				IAmb	IAmb	15 06 06.0	
	comp=Z,17nm,0.7s						
LSZ	Lusaka	80.89	256	P	P	15 06 04.5	+1.4
	comp=Z,5.6nm,0.5s,baz=68,slow=1.8,SNR=8.4						
LSZ	Lusaka	80.89	256	P	P	15 06 04.6	+1.5
LSZ				IAmb	IAmb	15 06 05.4	
	comp=Z,6.0nm,0.6s						
TIXI	Tiksi	81.08	6	P	P	15 06 01.7	-1.0
TIXI				IAmb	IAmb	15 06 03.1	
	comp=Z,23nm,0.8s						
BOSA	Boshof	82.19	242	P	P	15 06 10.9	+1.2
	comp=Z,2.3nm,0.7s,baz=160,slow=3.5,SNR=4.3						
BOSA	Boshof	82.19	242	IAmb	IAmb	15 07 35.1	
	comp=Z,33nm,2.0s						
LBTB	Lobatse	82.25	246	P	P	15 06 11.4	+1.3
	comp=Z,2.5nm,0.7s,baz=98,slow=4.8,SNR=3.5						
BILL	Bilibino	85.86	18	P	P	15 06 27.1	-0.2
BILL				IAmb	IAmb	15 06 32.2	
	comp=Z,25nm,2.0s						
BR131	Keskin Array S	85.97	311	P	P	15 06 27.7	-0.9
BR131				IAmb	IAmb	15 06 30.6	
	comp=Z,10nm,0.8s						
BRTR	Keskin Array B	85.97	311	P	P	15 06 29.0	+0.3
	comp=Z,8.5nm,0.8s,baz=134,slow=6.9,SNR=34						
BRTR	Keskin Array B	85.97	311	P	P	15 06 28.2	-0.4
KLMR	Klimovskoe	88.75	332	eP	P	15 06 37.7	-3.6
KLMR				AMP		15 06 42.5	
	comp=Z,30nm,1.4s						
SNAA	Sanae	89.05	197	P	P	15 06 44.5	+1.7
SNAA	Sanae	89.05	197	P	P	15 06 44.7	+2.0
	comp=Z,1.0nm,0.5s,baz=184,slow=4.8,SNR=10.0						
SNAA	Sanae	89.05	197	IAmb	IAmb	15 06 53.4	
	comp=Z,28nm,1.9s						
VNA2	Neumayer--Watz	90.70	197	P	P	15 06 52.7	+2.3
AKASG	Malin Array Be	91.54	321	P	P	15 06 53.9	-0.7
	comp=Z,1.6nm,0.4s,baz=85,slow=4.6,SNR=10						
AKASG	Malin Array Be	91.54	321	P	P	15 06 53.5	-1.1
LIT	Litokhoron	94.45	310	P	P	15 07 07.4	-0.9
FINES	FINESS Array B	95.20	331	P	P	15 07 11.4	+0.3
	comp=Z,2.1nm,0.7s,baz=72,slow=6.2,SNR=5.4						
FINES				PKiKP	PKiKP	15 11 52.9	+1.0
	comp=Z,5.9nm,1.1s,baz=119,slow=1.7,SNR=3.7						
ARCES	ARCESS Array B	96.56	339	P	P	15 07 17.3	+0.1
	comp=Z,3.6nm,0.9s,baz=108,slow=4.8,SNR=8.7						
ILAR	Eielson Array	103.00	25	Pdiff	Pdif	15 07 45.6	-0.5
	comp=Z,0.1nm,0.6s,baz=286,slow=4.3,SNR=5.2						
TORD	Torodi Ar. Bea	110.67	281	PKiKP	PKiKP	15 12 21.6	+0.3
	comp=Z,0.5nm,0.7s,baz=144,slow=1.2,SNR=3.5						
RES	Resolute Bay	112.44	7	PKiKP	PKiKP	15 12 23.5	+0.4
	comp=Z,0.2nm,0.3s,baz=318,slow=1.8,SNR=6.0						
YKA	Yellowknife Ar	117.03	22	PKP	PKiKP	15 12 32.8	+0.6
	comp=Z,0.8nm,0.5s,baz=308,slow=1.5,SNR=17						
NVAR	Mina Array Bea	126.82	48	PKP	PKiKP	15 12 53.5	+0.9
	comp=Z,1.0nm,0.7s,baz=246,slow=1.9,SNR=10						
ELK	Elko	128.12	44	PKP	PKiKP	15 12 56.3	+1.3
	comp=Z,0.9nm,0.4s,baz=109,slow=10,SNR=5.6						
GMRC	Granite Mounta	130.07	52	P	PKiKP	15 13 01.9	+2.8
	baz=290						
PDAR	Pinedale Array	130.91	39	PKP	PKiKP	15 13 01.2	+0.6
	comp=Z,0.6nm,0.7s,baz=88,slow=0.9,SNR=5.7						
ULM	Lac du Bonnet	132.97	23	PKP	PKiKP	15 13 04.3	+0.1
	comp=Z,1.0nm,0.5s,baz=337,slow=6.3,SNR=3.7						
O20A	White River Ci	133.12	42	P	PKiKP	15 13 07.2	+2.1
	baz=301						
RSSD	Black Hills	133.42	35	P	PKiKP	15 13 06.2	+0.6
	baz=309						
SCHQ	Schefferville	134.00	358	PKP	PKiKP	15 13 06.0	-0.2
	comp=Z,1.9nm,0.5s,baz=9.1,slow=1.4,SNR=13						
ANMO	Albuquerque	136.92	47	P	PKiKP	15 13 15.8	+2.8
	baz=298						
ECSD	EROS Data Cent	137.62	30	P	PKiKP	15 13 14.8	+0.9
	baz=317						
D46A	Sault St. Mari	139.86	16	P	PKiKP	15 13 19.3	+0.9
	baz=336						
D47A	Chapleau	139.96	15	P	PKiKP	15 13 17.5	-1.1
	baz=338						
F45A	CMU Biological	140.52	18	P	PKiKP	15 13 18.6	-1.1
	baz=334						
E48A	Lockeyer	140.73	14	P	PKiKP	15 13 19.0	-1.2
	baz=339						
F49A	Sandfield	141.43	15	P	PKiKP	15 13 22.4	+0.8
	baz=339						
G47A	Hillman	141.48	17	P	PKiKP	15 13 22.5	+0.8
	baz=336						
TXAR	Lajitas Array	141.55	53	PKhKP	PKPdf	15 13 14.8	-4.8
	comp=Z,0.6nm,0.5s,baz=230,slow=2.2,SNR=4.2						
E58A	La Victoria	142.32	5	P	PKPdf	15 13 17.0	-3.4
	baz=353						
SADO	Sadowa	143.03	12	PKP	PKPbc	15 13 19.5	+0.9
	comp=Z,6.4nm,1.1s,baz=251,slow=1.4,SNR=3.9						
CPUP	Villa Florida	143.36	198	PKP	PKPdf	15 13 21.8	-1.0
	comp=Z,1.2nm,0.5s,baz=168,slow=1.4,SNR=7.2						
S39A	Bolivar	143.73	34	PKPpre	PKPab	15 13 20.7	+0.6
JCT	Junction City	143.99	49	PKPpre	PKPab	15 13 22.0	+0.7
JCT	Junction City	143.99	49	P	PKPdf	15 13 23.3	-0.6
	baz=301						
H59A	Cadyville	143.99	6	P	PKPbc	15 13 21.9	+0.6
	baz=352						
H60A	Morristown	144.16	5	P	PKPdf	15 13 23.0	-0.7
	baz=354						
H58A	Gabriels	144.16	6	P	PKPbc	15 13 22.8	+0.9
	baz=351						
H63A	New Sharon	144.20	1	P	PKPdf	15 13 23.2	-0.5
	baz=358						
H61A	Lyndonville	144.24	4	P	PKPdf	15 13 23.5	-0.3
	baz=355						
I57A	Carthage	144.45	8	P	PKPdf	15 13 23.7	-0.5
	baz=349						
K52A	Tillsonburg	144.55	15	P	PKPdf	15 13 24.5	+0.1
	baz=340						
CCM	Cathedral Cave	144.56	31		PKPbc	15 13 23.8	+0.4
CCM	Cathedral Cave	144.56	31	P	PKPdf	15 13 24.2	-0.3
	baz=320						
SFIN	Lafayette	144.59	24	P	PKPdf	15 13 24.5	0.0
	baz=328						
NCB	Newcomb	144.60	7		PKPdf	15 13 24.1	-0.3
L50A	Kingsville	144.65	18	P	PKPdf	15 13 24.6	0.0
	baz=336						
MGMO	Mountain Grove	144.70	33		PKPbc	15 13 24.1	+0.3
N47A	Urbana	144.71	22	P	PKPdf	15 13 24.4	-0.3
	baz=331						
MEDO	Medina	144.71	12		PKPdf	15 13 24.2	-0.4
I58A	Old Forge	144.79	8	P	PKPdf	15 13 24.9	+0.1
	baz=350						
I59A	Olmsteadville	144.81	6	P	PKPdf	15 13 25.3	+0.4
	baz=352						
I60A	Shoreham	144.82	5	P	PKPdf	15 13 25.4	+0.6
	baz=352,SNR=7.2						
WHTX	Lake Whitney,	144.87	45	P	PKPdf	15 13 26.5	+1.3
	baz=305						
J57A	Williamstown	144.92	9		PKPdf	15 13 25.0	0.0
J57A	Williamstown	144.92	9	P	PKPdf	15 13 25.5	+0.5
	baz=348,SNR=10						
U40A	Yellville	144.95	35		PKPdf	15 13 25.1	-0.3
U40A	Yellville	144.95	35	P	PKPdf	15 13 25.5	+0.2
	baz=316,SNR=12						
N48A	Decatur	144.97	21	P	PKPdf	15 13 25.6	+0.4
	baz=332						
Q44A	Meyer Farm, Va	144.98	28		PKPdf	15 13 25.2	-0.1
J59A	Piesco	145.07	7		PKPdf	15 13 25.5	+0.2
J59A	Piesco	145.07	7	P	PKPdf	15 13 26.0	+0.7
	baz=350						
J58A	Remsen	145.07	8		PKPdf	15 13 25.5	+0.2
J58A	Remsen	145.07	8	P	PKPdf	15 13 25.9	+0.6
	baz=349,SNR=6.6						
M50A	Fremont	145.16	19		PKPdf	15 13 25.7	+0.2
M50A	Fremont	145.16	19	P	PKPdf	15 13 26.1	+0.7
	baz=335						
P46A	Rosedale	145.19	25		PKPdf	15 13 26.3	+0.7
K54A	Basiliko Farm,	145.19	13	P	PKPdf	15 13 26.2	+0.7
	baz=343,SNR=7.5						
K55A	Perry	145.21	12	P	PKPdf	15 13 26.3	+0.7
	baz=344,SNR=5.9						
N49A	Columbus Grove	145.21	20		PKPdf	15 13 25.9	+0.4
N49A	Columbus Grove	145.21	20	P	PKPdf	15 13 26.3	+0.7
	baz=333						
W39A	Magazine	145.23	37		PKPbc	15 13 25.4	-0.2
W39A	Magazine	145.23	37	P	PKPdf	15 13 26.5	+0.7
	baz=314,SNR=6.1						
ACCN	Adirondack Com	145.24	6		PKPdf	15 13 25.9	+0.3
ERPA	Erie	145.36	14	PKPbc	PKPab	15 13 26.2	+0.3
ERPA	Erie	145.36	14	P	PKPab	15 13 26.9	+1.0
	baz=341,SNR=6.2						
J61A	Chester	145.38	5	P	PKPab	15 13 27.3	+1.3
	baz=354						
K56A	Middlesex	145.38	11	P	PKPab	15 13 26.7	+0.7
	baz=345						
J60A	Lant Hill Farm	145.41	6	P	PKPab	15 13 26.7	+0.7
	baz=352						
WVNY	West Valley, N	145.41	13	PKPbc	PKPab	15 13 26.4	+0.2
L54A	Sinclairville	145.41	14	P	PKPab	15 13 27.0	+0.9
	baz=342,SNR=12						
T42A	Van Buren	145.42	32	PKPbc	PKPab	15 13 26.8	+0.5
L53A	Girard	145.44	15	P	PKPab	15 13 27.1	+0.8
	baz=340,SNR=6.1						
O48A	Farmland	145.45	22	P	PKPab	15 13 27.1	+0.7
	baz=331						
K57A	Scipio Center	145.49	10	P	PKPab	15 13 27.3	+0.8
	baz=347						
OLIL	Olney	145.53	27		PKPab	15 13 26.9	+0.2
M52A	Chesterland	145.54	17	P	PKPab	15 13 27.5	+0.9
	baz=338						
K58A	Earlville	145.60	9	P	PKPab	15 13 27.6	+0.7
	baz=348						
L55A	Hinsdale	145.66	13	P	PKPab	15 13 27.7	+0.6
	baz=343						
N50A	Nevada	145.70	19	P	PKPab	15 13 27.9	+0.7
	baz=335						
FCAR	Ozark Folk Cen	145.70	35		PKPdf	15 13 25.3	-1.3
FCAR				PKPbc	PKPab	15 13 27.4	-0.1
ALLY	Alegheny Colle	145.76	15		PKPbc	15 13 27.3	+0.2
MIAR	Mount Ida	145.79	38		PKPab	15 13 27.6	-0.2
MIAR	Mount Ida	145.79	38	P	PKPab	15 13 29.1	+1.2
	baz=313,SNR=11						
N51A	Ashland	145.81	18		PKPdf	15 13 26.9	+0.3
N51A	Ashland	145.81	18	P	PKPab	15 13 28.1	+0.4
	baz=336						
O49A	Covington	145.81	21		PKPab	15 13 27.8	+0.1
O49A	Covington	145.81	21	P	PKPab	15 13 28.3	+0.6
	baz=332						
M53A	WI Miller and	145.82	16	P	PKPab	15 13 28.2	+0.5
	baz=339,SNR=10						
S44A	Carbondale	145.83	29		PKPab	15 13 28.1	+0.3
BLO	Bloomington	145.85	25		PKPdf	15 13 17.5	-9.3
BLO				PKPbc	PKPab	15 13 28.1	+0.2
L56A	Greenwood	145.88	11		PKPab	15 13 28.2	+0.3
L56A	Greenwood	145.88	11	P	PKPab	15 13 28.3	+0.3
	baz=345,SNR=7.4						
PBMO	Poplar Bluff	145.95	32	PKPbc	PKPab	15 13 28.4	0.0
M54A	Oil Creek Stat	146.01	14	PKPbc	PKPab	15 13 28.6	+0.2
M54A	Oil Creek Stat	146.01	14	P	PKPab	15 13 28.8	+0.4
	baz=341,SNR=7.4						
WHAR	Wooly Hollow	146.03	35		PKPab	15 13 28.4	-0.3
P48A	Milroy	146.04	23		PKPab	15 13 28.5	-0.1
P48A	Milroy	146.04	23	P	PKPab	15 13 28.7	+0.1
	baz=330						
O50A	Cable	146.10	20	P	PKPab	15 13 29.5	+0.7
	baz=333						
BINY	Binghamton	146.10	9	P	PKPab	15 13 29.1	+0.3
	baz=348						
LCAR	Lake Charles	146.10	33		PKPab	15 13 28.9	-0.1
N52A	McGinn’s Farm,	146.11	17	P	PKPab	15 13 29.0	+0.2
	baz=337						
W41B	Gary Mavity, V	146.14	36		PKPbc	15 13 28.6	+0.3
W41B	Gary Mavity, V	146.14	36	P	PKPab	15 13 28.9	-0.2
	baz=316						
L57A	Andrews Acres	146.15	11	P	PKPab	15 13 28.9	0.0
	baz=346						
ACSO	Alum Creek Sta	146.24	19		PKPbc	15 13 28.7	+0.2
ACSO	Alum Creek Sta	146.24	19	P	PKPab	15 13 29.5	+0.2
	baz=335,SNR=10						
P49A	Miami Univ. Ec	146.25	22	P	PKPab	15 13 29.6	+0.2
	baz=331,SNR=7.4						
L59A	Walton	146.25	8	P	PKPab	15 13 29.6	+0.3
	baz=349						
L61B	Northampton	146.26	5	P	PKPab	15 13 29.3	0.0
	baz=353						
M55A	Ridgway	146.26	13		PKPbc	15 13 28.8	+0.2
M55A	Ridgway	146.26	13	P	PKPab	15 13 29.6	+0.1
	baz=342,SNR=6.6						
L58A	Harry Jones Me	146.27	9	P	PKPab	15 13 29.8	+0.4
	baz=348						
X40A	Basin Creek Fa	146.28	37	P	PKiKP	15 13 30.9	-1.0
	baz=314						
HRV	Adam Dziewonsk	146.29	3	P	PKPab	15 13 29.8	+0.4
	baz=355						
N53A	Lisbon	146.36	16		PKPbc	15 13 28.9	0.0
N53A	Lisbon	146.36	16	P	PKPab	15 13 29.9	+0.1
	baz=338,SNR=6.6						
UALR	University of	146.37	36		PKPab	15 13 29.7	-0.3
Q48A	North Vernon	146.38	24	P	PKPab	15 13 30.1	+0.3
	baz=329,SNR=9.0						
M56A	Emporium	146.38	13		PKPab	15 13 29.7	-0.2
M56A	Emporium	146.38	13	P	PKPab	15 13 29.8	0.0
	baz=343,SNR=6.6						
O51A	Pataskala	146.44	19	P	PKPab	15 13 30.2	+0.1
	baz=335,SNR=9.4						
N54A	Moraine State	146.45	15	PKPbc	PKPab	15 13 29.7	-0.4
N54A	Moraine State	146.45	15	P	PKPab	15 13 30.0	-0.2
	baz=340,SNR=8.2						
P50A	Jamestown	146.51	21	P	PKPab	15 13 30.2	-0.3
	baz=333						
Q49A	Aurora	146.64	23	P	PKPab	15 13 30.7	-0.2
	baz=330						
O52A	Adamsville	146.71	18	PKPbc	PKPbc	15 13 30.2	+0.2
O52A	Adamsville	146.71	18	P	PKPab	15 13 30.7	-0.4
	baz=336,SNR=5.8						
M57A	Sunshine Farm,	146.74	11	PKPbc	PKPab	15 13 30.9	-0.3
M57A	Sunshine Farm,	146.74	11	P	PKPab	15 13 31.2	0.0
	baz=345,SNR=11						
WCI	Wyandotte Cave	146.74	25	PKPbc	PKPab	15 13 30.8	-0.5
WCI	Wyandotte Cave	146.74	25	P	PKPab	15 13 31.1	-0.2
	baz=328						
O53A	New Philadelph	146.77	17	P	PKPab	15 13 31.1	-0.3
	baz=338						
M58A	Price’s Panora	146.82	10	P	PKPab	15 13 31.3	-0.3
	baz=346,SNR=5.6						
M59A	Waymart	146.83	9	P	PKPab	15 13 31.3	-0.2
	baz=348						
N55A	Marion Center	146.87	14	P	PKPab	15 13 31.4	-0.4
	baz=342,SNR=6.3						
P51A	Williamsport	146.88	20		PKPbc	15 13 30.6	+0.2
P51A	Williamsport	146.88	20	P	PKPbc	15 13 31.0	+0.6
	baz=334,SNR=7.4						
N56A	West Decatur	146.90	13	P	PKPab	15 13 31.5	-0.4
	baz=343,SNR=6.7						
P52A	Corning	147.05	19	P	PKPbc	15 13 31.7	+0.8
	baz=336,SNR=10						
O54A	Avella	147.07	16		PKPbc	15 13 31.7	+0.8
O54A	Avella	147.07	16	P	PKPab	15 13 32.2	-0.4
	baz=339,SNR=6.4						
Z41A	Richland Creek	147.14	39		PKPab	15 13 32.8	-0.2
Z41A	Richland Creek	147.14	39	P	PKPab	15 13 33.3	+0.3
	baz=313						
R49A	Shelbyville	147.15	24		PKPbc	15 13 32.0	+0.8
R49A	Shelbyville	147.15	24	P	PKPab	15 13 32.4	-0.5
	baz=330,SNR=6.1						
M60A	Port Jervis	147.16	8	P	PKPab	15 13 32.2	-0.7
	baz=350						
Q51A	Peebles	147.19	21		PKPbc	15 13 31.7	+0.3
Q51A	Peebles	147.19	21	P	PKPbc	15 13 32.2	+0.9
	baz=333						
SSPA	Standing Stone	147.25	13	PKPbc	PKPab	15 13 32.4	-0.8
SSPA	Standing Stone	147.25	13	P	PKPab	15 13 32.6	-0.6
	baz=344						
N58A	Sunbury	147.29	11		PKPbc	15 13 32.2	+0.7
N58A	Sunbury	147.29	11	P	PKPab	15 13 32.5	-0.9
	baz=346,SNR=6.4						
O55A	Ligonier	147.33	15	P	PKPbc	15 13 32.5	+0.8
	baz=341						
N59A	State Game Lan	147.39	10		PKPbc	15 13 32.7	+0.8
N59A	State Game Lan	147.39	10	P	PKPab	15 13 33.1	-0.7
	baz=347						
X43A	Marvell	147.39	35	P	PKPab	15 13 33.5	-0.5

	baz=317						
ODNJ	Ogdensburg	147.40	8		PKPbc	15 13 32.8	+1.0
T47A	Sharon Grove	147.41	28		PKPbc	15 13 32.8	+0.8
P53A	Whipple	147.42	18		PKPab	15 13 33.0	-1.0
P53A	Whipple	147.42	18	P	PKPab	15 13 33.2	-0.8
	baz=337,SNR=7.0						
O56A	Blue Knob Stat	147.45	14		PKPbc	15 13 32.6	+0.6
O56A	Blue Knob Stat	147.45	14	P	PKPab	15 13 33.3	-0.8
	baz=342						
R50A	Paris	147.49	23		PKPbc	15 13 32.5	+0.3
R50A	Paris	147.49	23	P	PKPbc	15 13 32.9	+0.8
	baz=331						
S49A	Springfield	147.53	25	P	PKPbc	15 13 32.9	+0.7
	baz=329,SNR=5.6						
N60A	Cedar Hill Far	147.54	9	P	PKPbc	15 13 33.2	+1.0
	baz=349						
P54A	Burton	147.58	17	P	PKiKP	15 13 33.6	-0.8
	baz=338						
Q52A	Bidwell	147.62	20	P	PKPbc	15 13 33.2	+0.7
	baz=335						
MCWV	Mont Chateau	147.71	16		PKPbc	15 13 33.5	+0.8
MCWV	Mont Chateau	147.71	16	P	PKiKP	15 13 34.1	-0.6
	baz=340						
O57A	Amberson	147.72	12	P	PKPbc	15 13 33.6	+0.9
	baz=344						
N61A	South Mountain	147.77	8	P	PKiKP	15 13 34.3	-0.4
	baz=350						
WVT	Waverly	147.77	29	PKPbc	PKiKP	15 13 34.1	-0.9
WVT	Waverly	147.77	29	P	PKiKP	15 13 34.2	-0.7
	baz=323						
W45A	Hickory Valley	147.84	32		PKPbc	15 13 34.0	+0.9
P55A	Reedsville	147.85	16	P	PKiKP	15 13 34.2	-0.9
	baz=340,SNR=5.3						
O59A	Robesonia	147.90	10	P	PKPbc	15 13 34.2	+0.9
	baz=346						
O58A	Lewisberry	147.95	12	P	PKPbc	15 13 34.1	+0.8
	baz=345						
Q53A	Leroy	147.95	19	P	PKiKP	15 13 34.4	-0.8
	baz=336						
S50A	Richmond	147.98	23	P	PKPbc	15 13 34.1	+0.6
	baz=330,SNR=6.6						
T49A	Edmonton	148.01	25		PKPbc	15 13 34.2	+0.6
T49A	Edmonton	148.01	25	P	PKiKP	15 13 34.6	-0.8
	baz=328,SNR=6.1						
Q54A	Coxs Mills	148.05	18		PKPbc	15 13 34.3	+0.7
Q54A					PKiKP	15 13 35.7	+0.3
Q54A	Coxs Mills	148.05	18	P	PKiKP	15 13 34.7	-0.7
	baz=338,SNR=8.7						
R52A	Catlettsburg	148.05	21	P	PKPbc	15 13 34.4	+0.8
	baz=334						
BDFB	Brasilia	148.10	221	PKPbc	PKiKP	15 13 36.2	-0.1
	comp=Z,3.1nm,0.7s,baz=105,slow=3.8,SNR=6.9						
P56A	Dayton Farm, R	148.11	15	P	PKiKP	15 13 34.9	-0.6
	baz=341,SNR=7.4						
OXF	Oxford	148.21	33		PKPbc	15 13 34.6	+0.5
OXF	Oxford	148.21	33	P	PKiKP	15 13 35.3	-0.5
	baz=319						
Q55A	Buckhannon	148.26	17	P	PKiKP	15 13 35.3	-0.6
	baz=339						
R53A	Hurricane	148.29	20		PKPbc	15 13 34.0	-0.3
R53A	Hurricane	148.29	20	P	PKiKP	15 13 35.4	-0.5
	baz=335,SNR=6.6						
P57A	Homestead Farm	148.33	13		PKPbc	15 13 34.9	+0.5
P57A	Homestead Farm	148.33	13	P	PKiKP	15 13 35.4	-0.6
	baz=343						
S51A	Beattyville	148.33	22	PKPbc	PKPbc	15 13 34.9	+0.5
S51A	Beattyville	148.33	22	P	PKPbc	15 13 35.2	+0.8
	baz=332,SNR=13						
T50A	Nancy	148.37	25	P	PKiKP	15 13 35.4	-0.8
	baz=329,SNR=9.6						
U49A	Red Boiling Sp	148.40	26		PKPbc	15 13 35.3	+0.7
PSUB	Penn St. - Bra	148.40	10		PKPbc	15 13 34.5	0.0
Q56A	Snyder Ridge,	148.46	15		PKPbc	15 13 35.3	+0.5
Q56A	Snyder Ridge,	148.46	15	P	PKiKP	15 13 35.9	-0.4
	baz=340						
P58A	Pank, Wackersv	148.48	12	P	PKiKP	15 13 35.7	-0.6
	baz=344						
S52A	Salyersville	148.49	22	P	PKiKP	15 13 35.8	-0.6
	baz=333,SNR=7.3						
CLTN	Cedars of Leba	148.50	28		PKPbc	15 13 35.5	+0.6
PLAL	Pickwick Lake	148.55	31		PKPbc	15 13 35.1	+0.1
V48A	Smith Brothers	148.56	29		PKPbc	15 13 35.2	+0.1
Q57A	Strasburg	148.66	14	P	PKiKP	15 13 36.3	-0.4
	baz=342						
R54A	Victor	148.74	18	P	PKiKP	15 13 36.3	-0.6
	baz=337						
T51A	Gray	148.78	24	P	PKiKP	15 13 36.6	-0.4
	baz=331,SNR=14						
S53A	Williamson	148.82	20	P	PKiKP	15 13 36.7	-0.4
	baz=334						
Q58A	Fox Den Farm,	148.92	13	P	PKiKP	15 13 37.0	-0.2
	baz=343						
S54A	Dingess, Beckl	148.99	19		PKPbc	15 13 36.7	+0.6
S54A	Dingess, Beckl	148.99	19	P	PKiKP	15 13 37.0	-0.4
	baz=336						
R56A	Bull Pasture M	149.00	16	P	PKPbc	15 13 36.0	-0.2
	baz=340						
T52A	Hallie	149.03	22		PKiKP	15 13 37.0	-0.5
T52A	Hallie	149.03	22	P	PKiKP	15 13 37.2	-0.3
	baz=332						
T53A	Wise	149.30	22	P	PKiKP	15 13 38.2	0.0
	baz=333						
TZTN	Tazewell	149.30	23		PKiKP	15 13 37.8	-0.3
TZTN	Tazewell	149.30	23	P	PKiKP	15 13 38.1	0.0
	baz=331						
R57A	Stanardsville	149.33	15	P	PKiKP	15 13 38.4	+0.4
	baz=341						
R58A	Rapidan	149.46	14	P	PKiKP	15 13 38.4	+0.1
	baz=342						
X48A	Hartselle	149.49	30		PKPbc	15 13 37.5	0.0
T54A	Tazewell	149.57	20	P	PKiKP	15 13 38.6	-0.1
	baz=335						
V51A	Loudon	149.62	25		PKiKP	15 13 38.4	-0.4
W50A	Signal Mountai	149.71	27		PKPbc	15 13 38.5	+0.5
T55A	Pulaski	149.78	19	P	PKiKP	15 13 39.2	+0.1
	baz=336						
R58B	Mineral	149.81	14	P	PKiKP	15 13 39.3	+0.3
	baz=342						
CPCT	Cooper Cave	149.84	26		PKiKP	15 13 39.1	-0.1
V52A	Sevierville	149.90	24		PKiKP	15 13 39.5	+0.2
TKL	Tuckaleechee C	149.98	25	PKPbc	PKiKP	15 13 39.6	+0.1
	comp=Z,12nm,0.5s,baz=144,slow=5.4,SNR=32						
T56A	Rocky Mt	150.10	18	P	PKiKP	15 13 39.9	+0.2
	baz=338						
S58A	Poland Farm, P	150.10	15		PKiKP	15 13 39.6	-0.1
S58A	Poland Farm, P	150.10	15	P	PKiKP	15 13 40.0	+0.3
	baz=342						
S59A	Mechanicsville	150.14	13	P	PKiKP	15 13 40.4	+0.7
	baz=343						
U55A	TA2, Sparta	150.25	20	P	PKiKP	15 13 40.3	+0.2
	baz=335						
Y49A	Blount Mountai	150.28	30		PKiKP	15 13 39.9	-0.3
T57A	Hurt	150.35	17	P	PKiKP	15 13 40.3	+0.1
	baz=339						
W52A	Murphy	150.40	25		PKiKP	15 13 40.7	+0.2
X51A	Calhoun	150.44	27		PKiKP	15 13 40.2	-0.3
X51A	Calhoun	150.44	27	P	PKiKP	15 13 41.0	+0.6
	baz=327						
V54A	Nebo	150.59	22	P	PKiKP	15 13 41.0	+0.2
	baz=333						
T58A	Grand View Acr	150.60	16	P	PKiKP	15 13 41.0	+0.2
	baz=340						
U56A	King	150.61	19		PKPbc	15 13 39.7	-0.4
U56A	King	150.61	19	P	PKiKP	15 13 41.1	+0.3
	baz=337						
LRAL	Lakeview Retre	150.63	32		PKiKP	15 13 40.9	0.0
LRAL	Lakeview Retre	150.63	32	P	PKiKP	15 13 41.2	+0.2
	baz=322						
V55A	Taylorsville	150.78	21		PKiKP	15 13 41.5	+0.4
V55A	Taylorsville	150.78	21	P	PKiKP	15 13 41.5	+0.4
	baz=335						
T59A	Double "B" Far	150.83	14		PKiKP	15 13 41.7	+0.5
T59A	Double "B" Far	150.83	14	P	PKiKP	15 13 42.1	+0.9
	baz=342						
U57A	Blanch	150.86	17	P	PKiKP	15 13 41.5	+0.3
	baz=339						
BG3	Lake Jocassee	150.90	24		PKiKP	15 13 42.2	+0.8
Z50A	Ashland	151.01	30		PKiKP	15 13 41.6	-0.1
Z50A				PKPab	PKPab	15 13 49.6	+0.8
Z50A	Ashland	151.01	30	P	PKiKP	15 13 42.1	+0.4
	baz=324						
V56A	Mocksville	151.07	20	P	PKiKP	15 13 42.2	+0.5
	baz=336						
W54A	Cherokee Point	151.11	23	P	PKiKP	15 13 42.2	+0.4
	baz=332						
U58A	Oxford	151.12	16	P	PKiKP	15 13 42.5	+0.7
	baz=340						
X53A	Estanollee	151.17	25	P	PKiKP	15 13 42.9	+0.9
	baz=330						
V57A	Coltrane Farms	151.23	18	P	PKiKP	15 13 42.5	+0.4
	baz=337						
KMSC	Kings Mountain	151.38	22		PKiKP	15 13 42.7	+0.3
KMSC				PKPab	PKPab	15 13 50.5	+0.3
KMSC	Kings Mountain	151.38	22	P	PKiKP	15 13 42.9	+0.5
	baz=334						
Y52A	Lilburn	151.38	27		PKiKP	15 13 43.2	+0.7
Y52A	Lilburn	151.38	27	P	PKiKP	15 13 43.5	+1.0
	baz=328						
U60A	Pendleton	151.40	14	P	PKiKP	15 13 43.2	+0.8
	baz=343						
PAULI	Pauline	151.49	23		PKiKP	15 13 42.8	+0.2
X54A	Belton	151.51	24	P	PKiKP	15 13 43.7	+1.0
	baz=331						
V58A	Windy Hill, Pi	151.52	17	P	PKiKP	15 13 43.2	+0.6
	baz=339						
W56A	Indian Trail	151.65	20	P	PKiKP	15 13 43.5	+0.6
	baz=335						
PB11	IPOC Station P	151.68	179		PKiKP	15 13 44.7	+1.1
V59A	Middlesex	151.79	16	P	PKiKP	15 13 44.0	+0.8
	baz=340						
W57A	Gilead	151.83	19		PKiKP	15 13 43.5	+0.2
W57A					PKPab	15 13 52.1	+0.1
W57A	Gilead	151.83	19	P	PKiKP	15 13 43.8	+0.5
	baz=336						
X55A	Gracelyn & Ava	151.87	23	P	PKiKP	15 13 44.3	+0.9
	baz=333						
GOGA	Godfrey	152.03	27	P	PKiKP	15 13 44.8	+1.0
	baz=328						
152A	Waverly Hall	152.07	29		PKiKP	15 13 44.4	+0.5
X56A	White Oak	152.07	22	P	PKiKP	15 13 44.6	+0.8
	baz=334						
BIRD	Birdtown, Kers	152.14	21		PKiKP	15 13 44.4	+0.5
JSC	Jenkinsville	152.17	22		PKiKP	15 13 44.6	+0.6
W58A	Raeford	152.20	18	P	PKiKP	15 13 44.8	+0.8
	baz=338						
Y55A	Saluda	152.25	23	P	PKiKP	15 13 45.1	+0.9
	baz=332						
Y56A	Pelion	152.59	23	P	PKiKP	15 13 46.0	+1.1
	baz=333						
W60A	Pink Hill	152.61	16	P	PKiKP	15 13 45.9	+1.0
	baz=341						
Y57A	Sumter	152.73	21	P	PKiKP	15 13 46.3	+1.1
	baz=335						
X60A	Albert Glenn T	152.98	17	P	PKiKP	15 13 46.8	+1.1
	baz=340						
Z57A	Bowman	153.26	22	P	PKiKP	15 13 48.0	+1.6
	baz=334						
SIV	San Ignacio	154.22	198	PKP	PKPdf	15 13 42.3	+1.8
	comp=Z,0.9nm,0.7s,baz=233,slow=4.8,SNR=5.8						
SIV				PKPbc	PKiKP	15 13 49.9	+1.0
	comp=Z,0.9nm,0.6s,baz=223,slow=3.2,SNR=4.2						
LPAZ	La Paz	155.12	182	PKP	PKPdf	15 13 44.6	+2.1
	comp=Z,0.4nm,0.3s,baz=146,slow=3.6,SNR=3.2						
LPAZ				PKPab	PKPab	15 14 09.2	+2.1
	comp=Z,0.7nm,0.4s,baz=101,slow=5.2,SNR=2.6						

*IDC **16** 15:09:46.6±0.8, 12°.09N×43°.75W, h0^{km}, mb3.8/15, mb1 4.0/15, mb1mx3.8/54, mbtmp3.9/15, ML4.4/1, MS3.6/19, Ms1 3.7/19, ms1mx3.4/46, Error ellipse: s-maj=20.7km s-min=16.9km az=143.0*

*NEIC **16** 15:09:47.8±1.6, 12°.03N±0°.08×43°.7W±0°.1, h10^{km}±1^{km}, mb4.7/13, Error ellipse: s-maj=19.9km s-min=12.8km az=106.0*

ISC 16 15:09:48.0±0.7**, 12°.0N**±0°.1×**43°.8W**±0°.1**, h10^{km}, n44, σ0^{s}.69**/22**, mb4.2**/16**, MS3.6**/18**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDP	Montagnes des	11.16	233	Pn	Pn	15 12 27.1	-0.7
	2.7nm,0.3s,baz=37,slow=12,SNR=35						
MDP				Sn	Sn	15 14 20.1	-13
	0.6nm,0.3s,baz=214,slow=18,SNR=3.9						
MDP				LR	LR	15 16 04.5	
	comp=Z,460nm,21.0s,baz=17,slow=34						
H05N1	Guadeloupe/Mar	17.31	286	T	T	15 31 19.8	
PTGA	Pitinga	20.50	233	P	P	15 14 26.5	+0.1
	3.9nm,0.6s,baz=40,slow=14,SNR=9.0						
PTGA				LR	LR	15 21 29.7	
	comp=Z,244nm,20.8s,baz=64,slow=34						
PTGA	Pitinga	20.50	233	IAmb	IAmb	15 14 34.5	
	comp=Z,13nm,0.8s						
SJG	San Juan	22.45	288	P	P	15 14 46.8	-0.6
	comp=Z,3.0nm,0.4s,baz=243,slow=9.0,SNR=2.7						
SJG				LR	LR	15 22 12.0	
	comp=Z,142nm,21.6s,baz=86,slow=33						
SJG	San Juan	22.45	288	IAmb	IAmb	15 14 55.5	
	comp=Z,74nm,1.6s						
SDV	Santo Domingo	26.62	266	P	P	15 15 27.3	+0.2
	comp=Z,1.6nm,0.6s,baz=66,slow=10.0,SNR=2.8						
SDV				LR	LR	15 27 58.2	
	comp=Z,79nm,18.4s,baz=80,slow=41						
SAML	Samuel	28.42	224	P	P	15 15 42.5	-0.6
SAML				IAmb	IAmb	15 15 49.6	
	comp=Z,11nm,1.4s						
RUSC	La Rusia	29.60	261	P	P	15 15 53.8	-0.3
ROSC	El Rosal	31.05	259	LR	LR	15 29 38.7	
	comp=Z,210nm,18.1s,baz=125,slow=38						
SIV	San Ignacio	32.70	212	P	P	15 16 21.3	+0.5
	comp=Z,1.2nm,0.7s,baz=56,slow=11,SNR=3.8						
SIV				LR	LR	15 29 21.1	
	comp=Z,114nm,20.5s,baz=256,slow=36						
H10N3	ASCENSION HYDR	35.15	123	T	T	15 54 00.5	
	baz=303,slow=75,SNR=69						
H10N2	ASCENSION HYDR	35.15	123	T	T	15 54 00.9	
	baz=303,slow=75,SNR=59						
H10N1	ASCENSION HYDR	35.17	123	T	T	15 54 02.1	
	baz=303,slow=75,SNR=65						
H10S3	ASCENSION HYDR	35.64	124	T	T	15 54 36.2	
	baz=301,slow=74,SNR=39						
H10S2	ASCENSION HYDR	35.66	124	T	T	15 54 39.8	
	baz=279,slow=74,SNR=9.0						
LPAZ	La Paz	37.06	221	P	P	15 17 00.2	+1.0
	comp=Z,2.0nm,0.9s,baz=25,slow=8.2,SNR=6.2						
LPAZ				LR	LR	15 32 20.4	
	comp=Z,138nm,20.5s,baz=32,slow=36						
LPAZ	La Paz	37.06	221	P	P	15 16 59.3	+0.1
DBIC	Dimbokro	38.71	94	P	P	15 17 12.1	-0.6
	comp=Z,3.4nm,1.0s,baz=257,slow=18,SNR=2.9						
DBIC				LR	LR	15 31 22.9	
	comp=Z,102nm,18.5s,baz=260,slow=34						
DBIC	Dimbokro	38.71	94	IAmb	IAmb	15 18 07.5	
	comp=Z,37nm,1.9s						
LVC	Limon Verde	42.35	216	LR	LR	15 34 27.6	
	comp=Z,97nm,20.8s,baz=340,slow=35						
TOA0	Torodi Ar. Sit	44.32	83	P	P	15 17 58.2	-0.5
TOA0				IAmb	IAmb	15 18 02.0	
	comp=Z,15nm,1.6s						
TORD	Torodi Ar. Bea	44.32	83	P	P	15 17 58.5	-0.1
	comp=Z,2.8nm,1.0s,baz=279,slow=7.2,SNR=8.9						
TORD				LR	LR	15 34 52.9	
	comp=Z,168nm,19.2s,baz=305,slow=34						
TORD	Torodi Ar. Bea	44.32	83	P	P	15 17 57.9	-0.7
ESDC	Sonseca Array	44.61	45	LR	LR	15 34 21.2	
	comp=Z,48nm,18.7s,baz=300,slow=33						
SCHQ	Schefferville	46.40	342	P	P	15 18 15.1	+0.4
	comp=Z,2.3nm,0.9s,baz=122,slow=5.7,SNR=5.2						
SCHQ				LR	LR	15 34 50.5	
	comp=Z,54nm,19.1s,baz=356,slow=32						
SCHQ	Schefferville	46.40	342	IAmb	IAmb	15 18 47.8	
	comp=Z,26nm,1.9s						
KEST	Kesra	53.24	54	LR	LR	15 42 06.7	
	comp=Z,68nm,18.1s,baz=244,slow=36						
ULM	Lac du Bonnet	57.02	323	P	P	15 19 33.5	-0.5
	comp=Z,1.5nm,0.8s,baz=58,slow=4.9,SNR=3.6						
ULM	Lac du Bonnet	57.02	323	IAmb	IAmb	15 19 40.8	
	comp=Z,5.0nm,0.9s						
H09W1	TRISTAN DA CUN	57.10	150	T	T	16 21 25.6	
	SNR=18						
PLCA	Paso Flores	58.06	204	P	P	15 19 42.2	+0.7
	comp=Z,7.0nm,1.1s,baz=52,slow=12,SNR=3.1						
PLCA				LR	LR	15 45 01.9	
	comp=Z,60nm,18.9s,baz=246,slow=36						
PLCA	Paso Flores	58.06	204	IAmb	IAmb	15 19 48.1	
	comp=Z,48nm,1.8s						
GERES	GERESS Array B	59.79	40	LR	LR	15 43 01.2	
	comp=Z,35nm,19.4s,baz=300,slow=33						
FCC	Fort Churchill	59.86	332	P	P	15 19 55.1	+1.5
NOA	NORSAR Array B	62.98	27	LR	LR	15 42 28.3	
	comp=Z,26nm,20.9s,baz=330,slow=31						
PDAR	Pinedale Array	64.20	312	P	P	15 20 22.7	-0.8
	comp=Z,0.1nm,0.3s,baz=82,slow=7.8,SNR=2.3						
AKASG	Malin Array Be	70.00	40	P	P	15 21 00.2	+0.3
	comp=Z,0.2nm,0.4s,baz=274,slow=4.0,SNR=3.2						
NVAR	Mina Array Bea	70.56	307	P	P	15 21 03.8	-0.1
	comp=Z,0.1nm,0.4s,baz=61,slow=7.3,SNR=2.5						
YKA	Yellowknife Ar	70.59	332	P	P	15 21 02.4	-0.8
	comp=Z,0.4nm,0.8s,baz=103,slow=6.3,SNR=3.7						
BRTR	Keskin Array B	72.75	52	LR	LR	15 52 49.0	
	comp=Z,19nm,19.0s,baz=336,slow=36						
BOSA	Boshof	77.90	123	LR	LR	15 51 04.0	
	comp=Z,78nm,18.0s,baz=185,slow=32						
KMBO	Kilima Mbogo	81.43	93	LR	LR	15 58 33.7	
	comp=Z,32nm,19.4s,baz=274,slow=36						
ILAR	Eielson Array	84.73	335	P	P	15 22 22.9	+0.8
	comp=Z,1.8nm,1.1s,baz=59,slow=4.2,SNR=5.7						

*SJA **16** 15:13:52.4±1.1, 30°.65S×71°.62W, h40^{km}±56^{km}, ML3.1, MW3.3*

*GUC **16** 15:13:53.0±0.5, 30°.74S×71°.30W, h46^{km}±4^{km}, ML3.7*

ISC 16 15:13:51.3±2.3**, 30°.74S**±0°.05×**71°.62W**±0°.10**, h4^{km}**±11^{km}**, n17, σ0^{s}.93**/26**, 1C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO02	Combarbal	0.70	131	⇓*i*P	Pg	15 14 05.8	+0.9
CO02				*i* S	Sg	15 14 14.8	+0.8
CO03	El Pedregal	0.81	97	⇓*i*P	Pg	15 14 06.6	-0.2
CO03				*i* S	Sg	15 14 15.2	-2.0
GO04	Tololo Observa	0.90	52	⇓*i*P	Pg	15 14 08.5	-0.2
GO04				*i* S	Sg	15 14 20.0	-0.4
AROD	Rodeo	1.94	73	*i* P	Pn	15 14 25.1	-0.2
AROD				*i* S	Sn	15 14 48.7	-1.5
ACCO	Cerro Coronel	2.20	87	*i* P	Pn	15 14 29.3	+0.3
ACCO				IAML		15 15 12.1	
	comp=Z,133nm,0.4s						
ACDV	Cuesta del Vie	2.23	76	*i* P	Pn	15 14 29.6	+0.5
ACDV				*i* S	Sn	15 14 58.2	+1.0
ACDV				IAML		15 14 58.5	
	comp=Z,110nm,0.7s						
RTLS	Leoncito	2.25	119	*i* P	Pn	15 14 30.0	+0.4
RTLS				*i* S	Sn	15 14 58.8	+0.8
RTLS				IAML		15 15 01.4	
	comp=Z,83nm,0.6s						
ROCH	El Roble	2.29	167	IAML		15 15 09.6	
	comp=N,536nm,0.4s						
PEL	Peldehue	2.53	162	⇑*i*P	Pn	15 14 32.6	-0.5
PEL				*i* S	Sn	15 15 03.7	-0.7
PEL				IAML		15 15 16.2	
	comp=N,401nm,0.3s						
AMOG	MOGNA	2.69	95	*i* P	Pn	15 14 35.8	+0.3
RTLL	Cerro Villicun	2.76	103	*i* P	Pn	15 14 36.1	-0.3
RTLL				*i* S	Sn	15 15 09.8	-0.3
FCH	Farellones	2.82	157	*e*P	Pn	15 14 37.6	+0.2
FCH				*e*S	Sn	15 15 11.1	-0.8
FCH				IAML		15 15 25.0	
	comp=E,208nm,0.2s						
MT03	Universidad Ad	2.90	161	*e*P	Pn	15 14 38.3	-0.1
MT03				*e*S	Sn	15 15 13.5	-0.3
AGUA	GUANDACOL	2.98	66	*i* P	Pn	15 14 41.5	+2.0
LMEL	Las Melosas	3.32	159	⇓*i*P	Pn	15 14 44.6	+0.4
LMEL				*i* S	Sn	15 15 23.3	-1.0
LMEL				IAML		15 15 33.0	
	comp=N,229nm,0.4s						
AAGR	Agrelo	3.33	135	*i* P	Pn	15 14 45.7	+1.4
APLL	PUNTA DE LOS L	4.40	87	*i* P	Pn	15 14 57.8	-1.1

*IDC **16** 15:25:09.2±1.1, 5°.68S×80°.99W, h0^{km}, mb3.7/9, mb1 4.0/9, mb1mx3.8/33, mbtmp3.8/9, MS3.7/1, Ms1 3.7/1, ms1mx2.8/38, Error ellipse: s-maj=45.8km s-min=19.6km az=43.0*

*ARE **16** 15:25:14±1.6, 5°.69S±0°.08×81°.00W±0°.09, h28^{km}±2^{km}, ML4.2, mb4.5/18(NEIC), Error ellipse: s-maj=13.6km s-min=9.6km az=58.0*

*NEIC **16** 15:25:15.3±1.6, 5°.65S±0°.08×81°.00W±0°.10, h42^{km}±6^{km}, Error ellipse: s-maj=14.8km s-min=10.0km az=65.0*

ISC 16 15:25:14.6±0.5**, 5°.68S**±0°.07×**80°.99W**±0°.09**, h35^{km}, n56, σ1^{s}.49**/50**, mb4.3**/14**, Near coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	Atahualpa	2.96	119	Pn	Pn	15 26 03.4	+3.9
	12nm,0.3s,baz=292,slow=5.6,SNR=34						
ATAH				Lg	Lg	15 26 41.7	
	31nm,0.3s,baz=28,slow=7.5,SNR=4.5						
OTAV	Otavalo	6.40	23	Pn	Pn	15 26 47.7	+0.8
NNA	Nana	7.49	147	Pn	Pn	15 27 03.1	+1.6
	2.5nm,0.3s,baz=275,slow=10,SNR=8.2						
NNA				Sn	Sn	15 28 22.8	-2.4
	1.5nm,0.3s,baz=223,slow=19,SNR=2.3						
NNA	Nana	7.49	147		Pn	15 27 03.5	+2.0
FLOC	Florencia	8.97	37	Pn	Pn	15 27 21.2	-0.6
PAYG	Puerto Ayora	10.53	298	Pn	Pn	15 27 43.5	+0.3
LPAZ	La Paz	16.43	131	Pn	P	15 29 05.9	+0.1
	0.2nm,0.3s,baz=336,slow=8.1,SNR=6.7						
LPAZ	La Paz	16.43	131	Pn	Pn	15 29 03.2	-0.1
SDV	Santo Domingo	17.78	36	P	P	15 29 21.2	+1.0
	0.2nm,0.3s,baz=198,slow=20,SNR=2.4						
SAML	Samuel	17.96	101	P	Pn	15 29 19.7	-2.0
URIC	Uribia, Colomb	19.45	27	P	P	15 29 38.1	-0.3
LVC	Limon Verde	20.48	146	P	P	15 29 49.0	-0.9
	1.5nm,0.5s,baz=24,slow=12,SNR=1.8						
LVC	Limon Verde	20.48	146	IAmb	IAmb	15 30 20.9	
	comp=Z,20nm,1.6s						
PTGA	Pitinga	21.55	78	P	P	15 29 59.7	-1.6
	comp=Z,1.5nm,0.5s,baz=315,slow=19,SNR=2.3						
PTGA	Pitinga	21.55	78	P	P	15 30 00.1	-1.1
SIV	San Ignacio	22.06	119	P	P	15 30 07.4	+0.7
	comp=Z,1.0nm,0.5s,baz=306,slow=12,SNR=5.7						
SIV				LR	LR	15 39 43.2	
	comp=Z,173nm,18.2s,baz=284,slow=40						
GO04	Tololo Observa	26.19	160	P	P	15 30 45.5	-0.8
GO04				IAmb	IAmb	15 31 16.9	
	comp=Z,38nm,1.6s						
Y58A	Scranton	39.39	2	P	P	15 32 41.5	+0.5
T42A	Van Buren	43.52	348	P	P	15 33 14.1	-0.8
T42A				IAmb	IAmb	15 33 14.6	
	comp=Z,23nm,1.8s						
FNO	Franklin	43.55	340	P	P	15 33 15.4	+0.3
CCM	Cathedral Cave	44.55	348	P	P	15 33 22.8	-0.3
S39A	Bolivar	44.65	346	P	P	15 33 23.8	-0.1
S39A				IAmb	IAmb	15 33 24.8	
	comp=Z,3.8nm,0.7s						
ANMO	Albuquerque	47.00	331	P	P	15 33 41.9	-0.9
ANMO				IAmb	IAmb	15 34 23.5	
	comp=Z,8.0nm,1.8s						
SDCO	Great Sand Dun	48.86	334	P	P	15 33 56.8	-0.5
HWUT	Hardware Ranch	54.73	332	P	P	15 34 40.5	-0.4
HWUT				IAmb	IAmb	15 34 52.5	
	comp=Z,4.5nm,0.8s						
PDAR	Pinedale Array	54.75	334	P	P	15 34 41.2	+0.1
	comp=Z,0.8nm,0.7s,baz=126,slow=9.1,SNR=6.7						
PDAR	Pinedale Array	54.75	334	P	P	15 34 40.7	-0.4
AGMN	Agassiz Nation	55.31	348	P	P	15 34 44.4	-0.3
AGMN				IAmb	IAmb	15 34 45.4	
	comp=Z,3.4nm,0.7s						
NVAR	Mina Array Bea	55.89	325	P	P	15 34 50.6	+1.3
	comp=Z,0.6nm,0.7s,baz=134,slow=6.9,SNR=7.3						
NVAR				PcP	PcP	15 35 47.6	-0.2
	comp=Z,0.5nm,0.7s,baz=124,slow=4.9,SNR=2.9						
YHL	Hebgen Lake	57.13	335	P	P	15 34 59.2	+1.0
ULM	Lac du Bonnet	57.18	349	P	P	15 34 57.6	-0.4
	comp=Z,1.6nm,0.6s,baz=168,slow=6.9,SNR=4.3						
ULM	Lac du Bonnet	57.18	349	IAmb	IAmb	15 35 07.7	
	comp=Z,11nm,1.6s						
YKA	Yellowknife Ar	72.68	344	P	P	15 36 37.9	-0.7
	comp=Z,0.6nm,0.9s,baz=136,slow=5.7,SNR=8.7						
VNA3	Neumayer Olymp	78.69	162	P	P	15 37 13.9	+1.0
VNA2	Neumayer--Watz	79.32	161	P	P	15 37 17.2	+0.8
	baz=294,slow=6.4						
SNAA	Sanae	80.91	162	P	P	15 37 25.7	+0.7
TORD	Torodi Ar. Bea	84.19	76	P	P	15 37 43.5	+0.4
	comp=Z,1.1nm,0.7s,baz=279,slow=4.5,SNR=8.4						
TORD	Torodi Ar. Bea	84.19	76	IAmb	IAmb	15 37 49.0	
	comp=Z,0.9nm,0.8s						
QSPA	South Pole Qui	84.41	180	P	P	15 37 44.5	+1.1
ILAR	Eielson Array	85.10	337	P	P	15 37 46.9	+0.2
	comp=Z,0.2nm,0.5s,baz=141,slow=3.7,SNR=2.9						
H11N3	WAKE ISLAND Hy	112.69	289	T	T	17 46 08.4	
	baz=81,slow=71,SNR=7.3						
H11N2	WAKE ISLAND Hy	112.70	289	T	T	17 46 14.8	
	baz=81,slow=71,SNR=6.1						
H11N1	WAKE ISLAND Hy	112.70	289	T	T	17 46 01.9	

	baz=81,slow=71,SNR=5.2						
H11S2	**WAKE ISLAND Hy**	**12.92**	**288**	T	T	17 46 14.9	
	baz=89,slow=75,SNR=9.7						
H11S1	**WAKE ISLAND Hy**	**12.92**	**288**	T	T	17 46 26.9	
	baz=89,slow=75,SNR=9.5						
H11S3	**WAKE ISLAND Hy**	**12.94**	**288**	T	T	17 46 21.8	
	baz=89,slow=75,SNR=6.5						
ZALV	**Zalesovo Beam**	**130.51**	**11**	PKP	**PKPdf**	**15 44 20.9**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=234,slow=1.2,SNR=5.5						
ASAR	**Alice Springs**	**135.16**	**228**	PKP	**PKPdf**	**15 44 29.4**	**-2.0**
	comp=Z,0.4nm,0.5s,baz=114,slow=2.3,SNR=9.7						
MKAR	**Makanchi Array**	**136.58**	**17**	PKP	**PKPdf**	**15 44 32.4**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=7.6,slow=2.2,SNR=4.7						
WRA	**Warramunga Arr**	**136.92**	**233**	PKP	**PKPdf**	**15 44 34.9**	**+0.1**
	comp=Z,1.7nm,1.0s,baz=115,slow=2.2,SNR=11						
KSH	**Kashi**	**140.42**	**28**	PKP	**PKiKP**	**15 44 42.8**	**-0.5**
KSH				sPKP		15 44 56.8	
KSH				PP	**PP**	**15 47 44.6**	**+6.1**
KSH				PKS	**PKSdf**	**15 48 16.1**	**-0.7**
KSH				SKKS		15 54 30.8	
WMQ	**Urumqi**	**140.73**	**13**	*e*P	**PKPdf**	**15 44 40.0**	**-1.1**
HHC	**Hu-ho-hao-te**	**143.22**	**344**	*e*P	PKPab	15 44 35.9	-5.4
GTA	**Gaotai**	**146.41**	**359**	*e*PKPbc	**PKPbc**	**15 44 51.9**	**-0.6**
GTA				pPKP	pPKPab	15 45 04.3	-0.4
GTA				sPKP		15 45 09.4	
LZH	**Lanzhou**	**149.41**	**352**	*e*PKPbc	**PKPdf**	**15 44 53.1**	**-3.3**
LZH				pPKP	PKiKP	15 45 02.8	+0.9
LZH				sPKP		15 45 10.5	
XAN	**Xi'an**	**150.32**	**343**	PKPbc	**PKPbc**	**15 45 02.6**	**-0.3**
XAN				pPKP	sPKPbc	15 45 17.3	-0.9

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*IDC **16** 15:32:40.4±3.8, 10°.83S×164°.55E, h90^{km}±34^{km}, mb3.4/3, mb1 3.7/5, mb1mx3.4/25, mbtmp4.0/5, MS3.3/2, Ms1 3.3/2, ms1mx2.8/21, Error ellipse: s-maj=43.0km s-min=19.5km az=48.0*

ISC 16 15:32:41.4±1.3**, 10°.9S**±0°.1×**164°.5E**±0°.1**, h100^{km}, n6, σ1^s.04**/8**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.71**	**287**	P	**Pn**	**15 33 50.0**	**-0.3**
	41nm,0.3s,baz=171,slow=3.4,SNR=22						
HNR				S	**Sn**	**15 34 43.3**	**-0.6**
	baz=50,slow=16,SNR=1.1						
HNR				LR	LR	15 36 01.2	
	comp=Z,218nm,18.8s,baz=300,slow=42						
HNR	**Honiara**	**4.71**	**287**	*e*P	**Pn**	**15 33 50.0**	**-0.3**
DZM	**Mont Dzumac**	**11.27**	**171**	P	**Pn**	**15 35 20.4**	**+0.9**
	0.4nm,0.3s,baz=325,slow=14,SNR=13						
DZM				S	**Sn**	**15 37 21.9**	**-1.6**
	0.3nm,0.3s,baz=259,slow=16,SNR=4.3						
DZM				LR	LR	15 39 28.9	
	comp=Z,172nm,19.1s,baz=46,slow=36						
WRA	**Warramunga Arr**	**30.40**	**249**	P	**P**	**15 38 45.5**	**+1.1**
	0.2nm,0.9s,baz=68,slow=7.9,SNR=1.6						
ILAR	**Eielson Array**	**83.76**	**19**	P	**P**	**15 44 58.5**	**-0.5**
	0.3nm,0.7s,baz=218,slow=5.7,SNR=1.9						
MKAR	**Makanchi Array**	**92.58**	**317**	P	**P**	**15 45 41.8**	**+0.1**
	0.8nm,0.7s,baz=101,slow=6.1,SNR=9.9						

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*NEIC **16** 15:33:58.8±2.2, 23°.10S±0°.08×66°.4W±0°.1, h214^{km}±9^{km}, mb4.6/5, ML4.3(GUC), Error ellipse: s-maj=17.2km s-min=10.9km az=84.0*

*SJA **16** 15:33:59.3±0.7, 23°.04S×66°.47W, h235^{km}±6^{km}, ML2.9, MW3.0*

*IDC **16** 15:33:59.1±1.3, 23°.15S×66°.37W, h212^{km}±15^{km}, mb3.5/2, mb1 3.5/7, mb1mx3.3/24, mbtmp3.9/7, Error ellipse: s-maj=24.4km s-min=20.7km az=142.0*

*GUC **16** 15:34:01.8±0.3, 22°.96S×66°.83W, h256^{km}±8^{km}, ML4.1*

ISC 16 15:33:59.8±0.7**, 23°.13S**±0°.05×**66°.57W**±0°.04**, h225**^{km}±6^{km}**, n53, σ1^s.75**/73**, 5C-4D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	**Yavi**	**1.35**	**46**	*i* P	**Pn**	**15 34 35.8**	**+0.7**
YJA				IAML		15 34 36.9	
	comp=Z,50nm,0.2s						
YJA				*e*S	**S**	**15 35 02.2**	**-0.3**
AZAP	**Zapla**	**1.76**	**129**	*i* P	**Pn**	**15 34 39.0**	**+0.8**
AZAP				IAML		15 34 39.9	
	comp=Z,89nm,0.3s						
AZAP				*e*S	**S**	**15 35 08.3**	**+0.2**
SLA	**San Lorenzo**	**1.86**	**149**	*i* P	**Pn**	**15 34 40.7**	**+1.6**
SLA				IAML		15 34 43.7	
	comp=Z,22nm,0.6s						
SLA				*e*S	**S**	**15 35 10.6**	**+1.0**
LVC	**Limon Verde**	**2.22**	**283**	P	**Pn**	**15 34 44.4**	**+1.7**
	comp=Z,12nm,0.3s,baz=105,slow=2.6,SNR=94						
LVC				S	**S**	**15 35 17.3**	**+1.2**
	comp=Z,11nm,0.3s,baz=259,slow=22,SNR=38						
LVC	**Limon Verde**	**2.22**	**283**	⇓*e*P	**Pn**	**15 34 44.4**	**+1.7**
LVC				*e*S	**S**	**15 35 17.2**	**+1.1**
LVC	**Limon Verde**	**2.22**	**283**		**Pn**	**15 34 44.1**	**+1.3**
LVC	**Limon Verde**	**2.22**	**283**	*i* P	**Pn**	**15 34 44.2**	**+1.5**
LVC				IAML		15 35 18.5	
	comp=Z,36nm,0.3s						
PB15	**IPOC Station P**	**2.67**	**268**	⇑*i*P	**Pn**	**15 34 49.3**	**+1.9**
PB15				*e*S	**S**	**15 35 25.6**	**+1.1**
PB15	**IPOC Station P**	**2.67**	**268**	*i* P	**Pn**	**15 34 49.2**	**+1.9**
PB15				*e*S	**S**	**15 35 26.1**	**+1.7**
PB06	**IPOC Station P**	**2.80**	**278**	⇓*e*P	**Pn**	**15 34 50.3**	**+1.5**
PB06				*e*S	**S**	**15 35 27.3**	**+0.4**
PB06				IAML		15 35 30.2	
	comp=N,393nm,0.1s						
PB06	**IPOC Station P**	**2.80**	**278**	*i* P	**Pn**	**15 34 50.2**	**+1.5**
PB09	**IPOC Station P**	**2.81**	**298**	⇑*i*P	**Pn**	**15 34 50.6**	**+1.8**
PB09				*e*S	**S**	**15 35 26.7**	**-0.3**
PB09				IAML		15 35 32.4	
	comp=E,219nm,0.1s						
PB09	**IPOC Station P**	**2.81**	**298**	*i* P	**Pn**	**15 34 50.3**	**+1.6**
PB05	**IPOC Station P**	**3.36**	**274**	⇓*e*P	**Pn**	**15 34 56.3**	**+1.3**
PB05	**IPOC Station P**	**3.36**	**274**	*i* P	**Pn**	**15 34 56.3**	**+1.3**
PB07	**IPOC Station P**	**3.37**	**294**	*i* P	**Pn**	**15 34 56.1**	**+0.9**
PB07				*e*S	**S**	**15 35 37.2**	**-1.4**
PB04	**IPOC Station P**	**3.40**	**283**	*e*S	**S**	**15 35 38.4**	**-0.8**
PB04	**IPOC Station P**	**3.40**	**283**		**Pn**	**15 34 56.3**	**+0.8**
PB04	**IPOC Station P**	**3.40**	**283**	*i* P	**Pn**	**15 34 56.8**	**+1.3**
PB01	**IPOC Station P**	**3.41**	**307**	⇑*i*P	**Pn**	**15 34 54.7**	**-0.9**
PB01				*e*S	**S**	**15 35 37.9**	**-1.4**
PB01	**IPOC Station P**	**3.41**	**307**		**Pn**	**15 34 54.6**	**-0.9**
GO02	**Mina Guanaco**	**3.43**	**233**		**Pn**	**15 34 57.6**	**+1.6**
PB02	**IPOC Station P**	**3.57**	**300**	⇑*i*P	**Pn**	**15 34 58.1**	**+0.6**
PB02				*i* S	**S**	**15 35 41.1**	**-1.6**
PB10	**IPOC Station P**	**3.69**	**263**	⇓*e*P	**Pn**	**15 34 60.0**	**+1.3**
PB10				*i* S	**S**	**15 35 44.6**	**-0.4**
PB10	**IPOC Station P**	**3.69**	**263**		**Pn**	**15 34 59.8**	**+1.1**
PB10	**IPOC Station P**	**3.69**	**263**	*i* P	**Pn**	**15 34 60.0**	**+1.3**
PB14	**IPOC Station P**	**3.82**	**246**	*e*P	**Pn**	**15 35 01.9**	**+1.3**
PB14				*i* S	**S**	**15 35 47.5**	**-0.8**
PB14	**IPOC Station P**	**3.82**	**246**	*i* P	**Pn**	**15 35 02.1**	**+1.5**
PB08	**IPOC Station P**	**3.82**	**320**	⇑*i*P	**Pn**	**15 35 01.6**	**+0.8**
PB08				*e*S	**S**	**15 35 48.2**	**-0.5**
GO01	**Chusmiza**	**4.22**	**324**		**Pn**	**15 35 06.3**	**+0.5**
PB11	**IPOC Station P**	**4.42**	**319**		**Pn**	**15 35 07.3**	**-0.5**
CYA	**Choya**	**5.34**	**173**	*i* P	**Pn**	**15 35 20.6**	**+1.5**
GO03	**Copiap**	**5.55**	**216**		**Pn**	**15 35 21.4**	**-0.3**
ACLC	**CERRO LA CRUZ**	**6.28**	**183**	*i* P	**Pn**	**15 35 32.8**	**+1.6**
LPAZ	**La Paz**	**6.96**	**347**	P	**Pn**	**15 35 41.3**	**+1.0**
	comp=E,0.7nm,0.3s,baz=154,slow=7.5,SNR=15						
LPAZ				S	**S**	**15 36 57.2**	**-3.2**
	comp=E,0.1nm,0.3s,baz=252,slow=20,SNR=4.9						
LPAZ	**La Paz**	**6.96**	**347**	Pn	**Pn**	**15 35 40.8**	**+0.4**
APLL	**PUNTA DE LOS L**	**7.24**	**180**	*i* P	**Pn**	**15 35 42.8**	**-0.5**
GO04	**Tololo Observa**	**7.97**	**207**	Pn	**Pn**	**15 35 51.1**	**-1.7**
CFA	**Coronel Fontan**	**8.58**	**190**	P	**Pn**	**15 36 00.0**	**-0.4**
	comp=E,1.6nm,0.3s,baz=8.6,slow=13,SNR=37						
CFA				S	**S**	**15 37 31.5**	**-5.8**
	comp=E,2.1nm,0.3s,baz=252,slow=18,SNR=12						
SIV	**San Ignacio**	**8.78**	**37**	P	**Pn**	**15 36 00.8**	**-2.4**
	comp=E,2.6nm,0.3s,baz=234,slow=12,SNR=30						
ROC1	**El Roble**	**10.57**	**201**	Pn	**Pn**	**15 36 26.7**	**+0.6**
GO05	**Huala**	**12.73**	**200**	Pn	**Pn**	**15 36 51.0**	**-2.1**
SAML	**Samuel**	**14.46**	**13**	Pn	**Pn**	**15 37 10.9**	**-3.6**
BDFB	**Brasilia**	**19.01**	**70**	P	**P**	**15 38 04.6**	**-0.5**
	comp=E,0.4nm,0.3s,baz=233,slow=10,SNR=3.3						
SNAA	**Sanae**	**60.04**	**161**	P	**P**	**15 43 43.5**	**+0.8**
SNAA				IAmb	IAmb	15 44 56.7	
	comp=Z,27nm,2.0s						
V55A	**Taylorsville**	**60.27**	**346**	P	**P**	**15 43 44.9**	**+0.3**
TOA0	**Torodi Ar. Sit**	**75.88**	**69**	P	**P**	**15 45 20.7**	**-1.3**
TOA0				IAmb	IAmb	15 46 34.4	
	comp=Z,23nm,2.0s						
TORD	**Torodi Ar. Bea**	**75.88**	**69**	P	**P**	**15 45 20.6**	**-1.4**
	comp=Z,0.6nm,0.4s,baz=261,slow=5.8,SNR=8.1						
TORD	**Torodi Ar. Bea**	**75.88**	**69**	P	**P**	**15 45 20.3**	**-1.7**
YKA	**Yellowknife Ar**	**93.44**	**340**	P	**P**	**15 46 49.5**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=134,slow=4.7,SNR=4.6						
KSH	**Kashi**	**144.36**	**54**	PKP	**PKiKP**	**15 53 11.9**	**-1.2**
KSH				sPKP		15 54 33.0	
KSH				PP	**PP**	**15 56 34.8**	**+7.3**
KSH				SKS	**SKSdf**	**15 59 58.1**	**+0.7**
KSH				SKKS	**SKKSac**	**16 02 59.3**	**+1.9**
MKAR	**Makanchi Array**	**145.60**	**39**	PKPbc	**PKPab**	**15 53 12.5**	**0.0**
	comp=Z,1.2nm,0.5s,baz=348,slow=2.5,SNR=22						
MKAR	**Makanchi Array**	**145.60**	**39**		**PKPbc**	**15 53 11.9**	**+0.1**

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*IDC **16** 15:52:01.7±2.9, 15°.56N×92°.40W, h0^{km}, mb3.7/5, mb1 4.0/5, mb1mx3.6/44, mbtmp3.7/5, ML2.6/1, MS2.9/2, Ms1 2.9/2, ms1mx2.6/45, Error ellipse: s-maj=76.8km s-min=23.9km az=25.0*

ISC 16 15:52:02.6±2.5**, 15°.5N**±0°.4×**92°.4W**±0°.2**, h10^{km}, n8, σ0^s.81**/8**, mb3.8**/5**, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APG	**El Apazote**	**1.96**	**104**	Pn	**Pn**	**15 52 36.1**	**-0.1**
	3.3nm,0.3s,baz=251,slow=5.8,SNR=19						
CMIG	**Matias Romero**	**2.84**	**304**	Pn	**Pn**	**15 52 48.5**	**+0.5**
	0.9nm,0.3s,baz=133,slow=11,SNR=7.3						
CMIG				Sn	**Sb**	**15 53 27.5**	**-0.8**
	1.7nm,0.3s,baz=164,slow=7.5,SNR=4.0						
CMIG				LR	LR	15 54 06.4	
	comp=Z,72nm,20.8s,baz=186,slow=44						
TKL	**Tuckaleechee C**	**21.52**	**20**	LR	LR	16 06 17.1	
	comp=Z,80nm,19.1s,baz=302,slow=40						
NVAR	**Mina Array Bea**	**32.26**	**320**	P	**P**	**15 58 30.7**	**-1.0**
	0.4nm,0.6s,baz=119,slow=7.4,SNR=4.2						
SCHQ	**Schefferville**	**43.97**	**21**	P	**P**	**16 00 09.7**	**-0.2**
	1.9nm,1.0s,baz=220,slow=15,SNR=3.3						
YKA	**Yellowknife Ar**	**49.48**	**347**	P	**P**	**16 00 53.0**	**+0.2**
	0.8nm,0.8s,baz=152,slow=7.6,SNR=11						
INK	**Inuvik**	**58.89**	**343**	P	**P**	**16 02 02.3**	**+0.9**
	0.9nm,0.7s,baz=86,slow=6.6,SNR=3.6						
ILAR	**Eielson Array**	**61.30**	**337**	P	**P**	**16 02 18.8**	**+0.8**
	0.7nm,1.2s,baz=101,slow=6.8,SNR=5.1						

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*MAN **16** 15:52:39.9, 21°.14N×121°.19E, h48^{km}, mb4.9, ML3.8, MS3.8*

*JMA **16** 15:52:40.6±0.5, 21°.34N×121°.43E, h24^{km}, M4.7*

*IDC **16** 15:52:41.1±9.6, 20°.94N×121°.55E, h73^{km}±58^{km}, mb3.5/10, mb1 3.6/13, mb1mx3.4/59, mbtmp3.8/13, ML3.1/3, MS2.6/1, Ms1 2.6/1, ms1mx2.3/41, Error ellipse: s-maj=97.4km s-min=28.1km az=2.0*

*NEIC **16** 15:52:42.0±1.9, 21°.26N±0°.07×121°.32E±0°.09, h57^{km}±6^{km}, mb4.2/8, Error ellipse: s-maj=12.1km s-min=10.3km az=114.0*

*TAP **16** 15:52:41.8, 21°.34N×121°.34E, h75^{km}, ML4.2, D*

ISC 16 15:52:42.3±0.8**, 21°.22N**±0°.03×**121°.32E**±0°.03**, h67**^{km}±8^{km}**, n157, σ1^s.69**/245**, mb3.9**/14**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.79**	**330**	P	**Pn**	**15 52 57.7**	**-0.3**
	baz=314						
TSEB				S	**Sn**	**15 53 10.3**	**+0.7**
	baz=314						
LAY	**Lan-yu**	**0.85**	**15**	*e*P	**Pn**	**15 52 58.1**	**-0.7**
	baz=16						
LAY				*e*S	**Sn**	**15 53 11.2**	**+0.2**
	baz=16						
TWKBT	**Hengchun**	**0.86**	**327**	P	**Pn**	**15 52 58.3**	**-0.6**
	baz=315						
TWKBT				S	**Sn**	**15 53 10.2**	**-1.1**
	baz=315						
TWK1	**Hengchun**	**0.87**	**327**	P	**Pn**	**15 52 58.4**	**-0.6**
	baz=315						
TWK1				S	**Sn**	**15 53 10.4**	**-1.0**
	baz=315						
HEN	**Hengchun**	**0.95**	**325**	P	**Pn**	**15 52 59.8**	**-0.2**
	baz=318						
HEN				S	**Sn**	**15 53 14.0**	**+0.7**
	baz=318						
TAW	**Tawu**	**1.20**	**341**	P	**Pn**	**15 53 01.9**	**-1.4**
	baz=346						
TAW				S	**Sn**	**15 53 16.9**	**-2.0**
	baz=346						
EAST	**Anshuo**	**1.24**	**339**	*i* P	**Pn**	**15 53 02.6**	**-1.2**
	baz=346						
EAST				S	**Sn**	**15 53 18.3**	**-1.6**
	baz=346						
SCZT	**Fangliau**	**1.32**	**331**	*i* P	**Pn**	**15 53 04.2**	**-0.7**
	baz=320						
SCZT				S	**Sn**	**15 53 19.8**	**-2.0**
	baz=320						
ECL	**Taimali**	**1.42**	**346**	P	**Pn**	**15 53 04.2**	**-1.8**
	baz=351						
ECL				S	**Sn**	**15 53 20.5**	**-3.4**
	baz=351						
WLCH	**Liuqiu**	**1.43**	**322**	P	**Pn**	**15 53 06.7**	**+0.5**
	baz=319						
WLCH				S	**Sn**	**15 53 25.8**	**+1.6**
	baz=319						
TWP	**Hsiaoliuchiu**	**1.44**	**322**	P	**Pn**	**15 53 06.4**	**+0.1**
	baz=318						
TWP				S	**Sn**	**15 53 25.3**	**+0.9**
	baz=318						
SSPT	**Xinbi**	**1.44**	**331**	*e*P	**Pn**	**15 53 06.1**	**-0.3**
	baz=328						
TWH	**Lutao**	**1.49**	**6**	P	**Pn**	**15 53 05.1**	**-2.0**
	baz=6.0						
TWH				S	**Sn**	**15 53 22.8**	**-3.0**
	baz=6.0						
TWGBT	**Beinan**	**1.61**	**352**	P	**Pn**	**15 53 06.8**	**-1.9**
	baz=351						
TWGBT				S	**Sn**	**15 53 25.1**	**-3.5**
	baz=351						
TWG	**Pinlang**	**1.61**	**352**	Pn	**Pn**	**15 53 06.6**	**-2.1**
SGLT	**Jiouru**	**1.69**	**333**	*e*P	**Pn**	**15 53 09.8**	**+0.1**
	baz=339						
SGLT				*e*S	**Sn**	**15 53 32.0**	**+1.6**
	baz=339						
SNJT	**Kaohsiung City**	**1.78**	**329**	*e*P	**Pn**	**15 53 10.6**	**-0.4**
	baz=314						
TWM1	**Shoushan**	**1.80**	**333**	P	**Pn**	**15 53 11.4**	**+0.1**
	baz=330						
TWM1				S	**Sn**	**15 53 34.5**	**+1.3**
	baz=330						
CHKT	**Chengkung**	**1.88**	**1**	*e*P	**Pn**	**15 53 11.6**	**-0.6**
	baz=352						
CHKT				*e*S	**Sn**	**15 53 33.2**	**-1.7**
	baz=352						
SLGT	**Liugui**	**1.88**	**341**	*e*S	**Sn**	**15 53 33.7**	**-1.3**
	baz=339						
FULB	**Fuli**	**1.97**	**359**	*e*P	**Pn**	**15 53 12.9**	**-0.6**
	baz=350						
FULB				*e*S	**Sn**	**15 53 35.5**	**-1.9**
	baz=350						
SGST	**Jiashian**	**1.98**	**340**	*e*P	**Pn**	**15 53 12.0**	**-1.6**
	baz=338						
SGST				*e*S	**Sn**	**15 53 35.2**	**-2.3**
	baz=338						
STYT	**Tauyuan**	**2.01**	**345**	*e*S	**Sn**	**15 53 37.2**	**-1.0**
	baz=344						
CHN3	**Shinhua**	**2.05**	**335**	*e*P	**Pn**	**15 53 14.6**	**0.0**
	baz=321						
CHN3				*e*S	**Sn**	**15 53 39.1**	**-0.1**
	baz=321						
TAI1	**Yung-k'ang**	**2.08**	**331**	*e*P	**Pn**	**15 53 14.2**	**-0.7**
	baz=329						
TAI1				*e*S	**Sn**	**15 53 38.3**	**-1.5**
	baz=329						
CHN1	**Nanshi**	**2.09**	**340**	P	**Pn**	**15 53 14.7**	**-0.4**
	baz=349						
CHN1				S	**Sn**	**15 53 38.8**	**-1.4**
	baz=349						
WTP	**Ta-pu**	**2.12**	**342**	*e*P	**Pn**	**15 53 15.3**	**-0.3**
	baz=341						
WTP				*e*S	**Sn**	**15 53 39.6**	**-1.4**
	baz=341						
TWF1	**Yuli**	**2.13**	**359**	*e*P	**Pn**	**15 53 13.5**	**-2.1**
	baz=352						
SNST	**Tainan City**	**2.14**	**339**	*e*P	**Pn**	**15 53 15.3**	**-0.4**
	baz=338						
YULB	**Yu-li**	**2.17**	**359**	*e*P	**Pn**	**15 53 14.4**	**-1.8**
	baz=352						
YULB				*e*S	**Sn**	**15 53 39.9**	**-2.1**
	baz=352						
YULB	**Yu-li**	**2.17**	**359**		**Pn**	**15 53 13.6**	**-2.5**
TPUB	**Ta-pu**	**2.17**	**343**	*e*P	**Pn**	**15 53 15.4**	**-0.9**
	baz=342						
TPUB				*e*S	**Sn**	**15 53 40.1**	**-2.0**
	baz=342						
TPUB	**Ta-pu**	**2.17**	**343**		**Pn**	**15 53 15.2**	**-1.0**
TWK	**Hsinying**	**2.18**	**339**	P	**Pn**	**15 53 15.6**	**-0.8**
	baz=349						
TWK				S	**Sn**	**15 53 40.3**	**-2.2**
	baz=349						
SCLT	**Jiali**	**2.21**	**332**	*e*P	**Pn**	**15 53 15.9**	**-0.8**
	baz=320						
SCLT				*e*S	**Sn**	**15 53 41.6**	**-1.5**
	baz=320						
CHN4	**Tsaushan**	**2.23**	**343**	*e*P	**Pn**	**15 53 16.7**	**-0.3**
	baz=341						
CHN4				*e*S	**Sn**	**15 53 42.0**	**-1.5**
	baz=341						
HGSD	**Ruisui**	**2.27**	**2**	*e*P	**Pn**	**15 53 18.1**	**+0.6**
	baz=9.0						
HGSD				*e*S	**Sn**	**15 53 45.6**	**+1.2**
	baz=9.0						
EHY	**Hungye**	**2.28**	**0**	*e*P	**Pn**	**15 53 17.7**	**0.0**
	baz=352						
EHY				*e*S	**Sn**	**15 53 41.6**	**-3.2**
	baz=352						
YUS	**Yu-Shan**	**2.29**	**351**	*e*P	**Pn**	**15 53 18.1**	**-0.1**
	baz=340						
YUS				*e*S	**Sn**	**15 53 44.9**	**-0.7**
	baz=340						
ALS	**Alishan**	**2.33**	**348**	P	**Pn**	**15 53 18.2**	**-0.5**
	baz=347						
ALS				S	**Sn**	**15 53 45.0**	**-1.5**
	baz=347						
CHN8	**Yiju**	**2.36**	**334**	*e*P	**Pn**	**15 53 17.7**	**-1.0**
	baz=322						
CHN8				*e*S	**Sn**	**15 53 45.2**	**-1.4**
	baz=322						
CHY	**Chiayi**	**2.42**	**340**	*e*P	**Pn**	**15 53 18.7**	**-0.8**
	baz=339						
CHY				*e*S	**Sn**	**15 53 45.8**	**-2.2**
	baz=339						
CHN2	**Minshiung**	**2.44**	**341**	*e*P	**Pn**	**15 53 19.2**	**-0.6**
	baz=340						
CHN2				*e*S	**Sn**	**15 53 47.3**	**-1.2**
	baz=340						
WLGB	**Puzi**	**2.44**	**337**	*e*P	**Pn**	**15 53 18.6**	**-1.3**
	baz=346						
WLGB				*e*S	**Sn**	**15 53 46.3**	**-2.3**
	baz=346						
CHN5	**Tsauling**	**2.44**	**346**	*e*P	**Pn**	**15 53 19.4**	**-0.6**
	baz=345						
CHN5				S	**Sn**	**15 53 47.8**	**-1.1**
	baz=345						
WHYT	**Xinyi Township**	**2.51**	**350**	*e*P	**Pn**	**15 53 21.0**	**+0.2**
	baz=340						
WHYT				*e*S	**Sn**	**15 53 48.5**	**-1.8**
	baz=340						
VWDT	**VWDT**	**2.53**	**356**	*e*P	**Pn**	**15 53 21.8**	**+0.8**
	baz=356						
WDGT	**Dungji**	**2.55**	**323**	P	**Pn**	**15 53 19.6**	**-1.7**
	baz=330						
WDGT				S	**Sn**	**15 53 46.8**	**-4.5**
	baz=330						
WGK	**Gukeng**	**2.56**	**344**	*e*P	**Pn**	**15 53 20.8**	**-0.6**
	baz=343						
WGK				*e*S	**Sn**	**15 53 49.8**	**-1.7**
	baz=343						
WDLH	**Douliu**	**2.57**	**344**	*e*P	**Pn**	**15 53 21.0**	**-0.5**
	baz=342						
WDLH				*e*S	**Sn**	**15 53 48.6**	**-3.1**
	baz=342						
SSLB	**Suanglung**	**2.58**	**352**	*e*P	**Pn**	**15 53 21.5**	**-0.3**
	baz=352						
SSLB				*e*S	**Sn**	**15 53 50.9**	**-1.2**
	baz=352						
SSLB	**Suanglung**	**2.58**	**352**		**Pn**	**15 53 21.5**	**-0.3**
ESL	**Shilin**	**2.59**	**2**	*e*P	**Pn**	**15 53 22.0**	**+0.2**
	baz=355						
ESL				*e*S	**Sn**	**15 53 49.7**	**-2.5**
	baz=355						
WSF	**Szhu**	**2.62**	**337**	*i* P	**Pn**	**15 53 21.0**	**-1.3**
	baz=345						
WSF				S	**Sn**	**15 53 50.2**	**-2.7**
	baz=345						
VCHM	**Qimei**	**2.65**	**319**	*e*P	**Pn**	**15 53 20.9**	**-1.8**
	baz=317						
VCHM				*e*S	**Sn**	**15 53 49.5**	**-4.1**
	baz=317						
WJS	**Zhushan**	**2.65**	**348**	*e*P	**Pn**	**15 53 22.4**	**-0.3**
	baz=347						
WJS				*e*S	**Sn**	**15 53 52.2**	**-1.5**
	baz=347						
SMLT	**Sun Moon Lake**	**2.68**	**352**	P	**Pn**	**15 53 22.9**	**-0.3**
	baz=351						
SMLT				S	**Sn**	**15 53 53.2**	**-1.5**
	baz=351						
ENLB	**Shoufeng**	**2.69**	**5**	*e*P	**Pn**	**15 53 22.2**	**-1.0**
	baz=13						
TYC	**Yuchr**	**2.71**	**351**	*e*P	**Pn**	**15 53 22.9**	**-0.7**
	baz=350						
TYC				*e*S	**Sn**	**15 53 54.1**	**-1.1**
	baz=350						
WNT	**Mingjian**	**2.71**	**348**	*e*P	**Pn**	**15 53 22.6**	**-0.9**
	baz=347						
WNT				*e*S	**Sn**	**15 53 53.0**	**-2.3**
	baz=347						
OWD	**Renai**	**2.73**	**357**	*e*P	**Pn**	**15 53 24.4**	**+0.5**
	baz=346						
OWD				*e*S	**Sn**	**15 53 54.4**	**-1.5**
	baz=346						
PHUB	**P'eng-hu**	**2.80**	**325**	*e*P	**Pn**	**15 53 22.6**	**-2.2**
	baz=323						
PHUB				*e*S	**Sn**	**15 53 52.9**	**-4.6**
	baz=323						
DPDB	**Guoxing**	**2.83**	**353**	*e*P	**Pn**	**15 53 25.0**	**-0.2**
	baz=352						
DPDB				*e*S	**Sn**	**15 53 56.3**	**-1.8**
	baz=352						
CHGB	**Renai**	**2.83**	**357**	*e*P	**Pn**	**15 53 26.0**	**+0.5**
	baz=346						
PNG	**Penghu**	**2.85**	**325**	P	**Pn**	**15 53 23.6**	**-1.9**
	baz=331						
PNG				*e*S	**Sn**	**15 53 55.3**	**-3.4**
	baz=331						
TWD	**Chiawan**	**2.86**	**5**	*e*P	**Pn**	**15 53 25.6**	**+0.1**
	baz=352						
TWD				*e*S	**Sn**	**15 53 58.0**	**-0.9**
	baz=352						
WHF	**Hehuan Shan**	**2.92**	**359**	*e*P	**Pn**	**15 53 27.9**	**+1.2**
	baz=6.0						
WHF				*e*S	**Sn**	**15 53 59.9**	**-1.0**
	baz=6.0						
WCHH	**Zhanghua**	**2.94**	**346**	*e*P	**Pn**	**15 53 26.1**	**-0.5**
	baz=345						
WCHH				*e*S	**Sn**	**15 53 58.5**	**-2.2**
	baz=345						
NACB	**Ninganchiao**	**2.96**	**5**	*e*P	**Pn**	**15 53 25.7**	**-1.1**
	baz=353						
NACB				*e*S	**Sn**	**15 53 58.5**	**-2.7**
	baz=353						
NACB	**Ninganchiao**	**2.96**	**5**		**Pn**	**15 53 26.1**	**-0.7**
TCU	**Taichung**	**2.98**	**349**	*e*P	**Pn**	**15 53 26.8**	**-0.4**
	baz=340						
TCU				*e*S	**Sn**	**15 54 00.3**	**-1.4**
	baz=340						
ETLH	**Xiulin Townshi**	**2.98**	**3**	*e*P	**Pn**	**15 53 27.2**	**-0.1**
	baz=3.0						
ETLH				*e*S	**Sn**	**15 54 00.6**	**-1.3**
	baz=3.0						
TWT	**Tachien**	**3.03**	**357**	*e*P	**Pn**	**15 53 28.4**	**+0.4**
	baz=346						
TDCB	**Techi**	**3.03**	**357**	*e*P	**Pn**	**15 53 27.8**	**-0.2**
	baz=348						
TDCB				*e*S	**Sn**	**15 54 00.8**	**-2.3**
	baz=348						
SGCP	**Mt. Cagua**	**3.04**	**167**	*e*P	**Pn**	**15 53 25.8**	**-2.2**
SGCP				*e*S	**Sn**	**15 54 01.3**	**-1.8**
WHP	**Taichung City**	**3.07**	**354**	*e*P	**Pn**	**15 53 28.1**	**-0.4**
	baz=345						
WHP				*e*S	**Sn**	**15 54 02.7**	**-1.3**
	baz=345						
TWQ1	**Liyutan**	**3.16**	**351**	P	**Pn**	**15 53 29.1**	**-0.5**
	baz=350						
NNSB	**Datong**	**3.20**	**1**	*e*P	**Pn**	**15 53 32.1**	**+1.8**

	baz=7.0						
NNSB				eS	Sn	15 54 05.7	-1.6
	baz=7.0						
NNSH	**Datong**	**3.20**	**1**	eP	**Pn**	**15 53 31.2**	**+0.9**
	baz=6.0						
NNSH				eS	**Sn**	**15 54 05.9**	**-1.4**
	baz=6.0						
NNS	**Nan Shan**	**3.21**	**1**	eP	**Pn**	**15 53 32.0**	**+1.6**
	baz=6.0						
NNS				eS	**Sn**	**15 54 07.7**	**+0.1**
	baz=6.0						
ENA	**Nanau**	**3.22**	**7**	eP	**Pn**	**15 53 29.4**	**-1.1**
	baz=7.0						
APYP	**Conner**	**3.34**	**181**	eP	**Pn**	**15 53 30.1**	**-2.0**
APYP				eS	**Sn**	**15 54 08.6**	**-1.9**
NDT	**Datong Townshi**	**3.38**	**3**	eP	**Pn**	**15 53 33.4**	**+0.8**
	baz=8.0						
NSTT	**Nanjuang**	**3.41**	**355**	eP	**Pn**	**15 53 34.7**	**+1.6**
	baz=355						
NSTT				eS	**Sn**	**15 54 09.5**	**-2.9**
	baz=355						
TWC	**Suao**	**3.41**	**8**	eP	**Pn**	**15 53 33.0**	**-0.1**
	baz=8.0						
ENTT	**Nioudou**	**3.42**	**4**	eP	**Pn**	**15 53 33.6**	**+0.5**
	baz=4.0						
ENTT				eS	**Sn**	**15 54 12.0**	**-0.5**
	baz=4.0						
LIOB	**Emei**	**3.42**	**355**	eP	**Pn**	**15 53 33.6**	**+0.4**
	baz=355						
LIOB				eS	**Sn**	**15 54 10.2**	**-2.6**
	baz=355						
YHNB	**Yeheng**	**3.44**	**1**	eP	**Pn**	**15 53 34.3**	**+0.8**
	baz=350						
YHNB				eS	**Sn**	**15 54 10.7**	**-2.4**
	baz=350						
YHNB	**Yeheng**	**3.44**	**1**		**Pn**	**15 53 34.2**	**+0.6**
NSK	**Sanguang**	**3.44**	**1**	eP	**Pn**	**15 53 33.7**	**+0.1**
	baz=351						
NSK				eS	**Sn**	**15 54 12.2**	**-1.1**
	baz=351						
TWE	**Neicheng**	**3.50**	**5**	eP	**Pn**	**15 53 35.5**	**+1.2**
	baz=5.0						
NWLT	**Wulai**	**3.55**	**3**	eP	**Pn**	**15 53 36.6**	**+1.6**
	baz=3.0						
JYNG	**Yonagunijimaku**	**3.55**	**25**	P	**Pn**	**15 53 34.4**	**-0.6**
JYNG				S	**Sn**	**15 54 13.1**	**-2.6**
YOJ	**Yonaguni jima**	**3.59**	**25**	eP	**Pn**	**15 53 35.1**	**-0.3**
	baz=33						
YOJ				eS	**Sn**	**15 54 13.5**	**-3.1**
	baz=33						
YOJ	**Yonaguni jima**	**3.59**	**25**	P	**Pn**	**15 53 35.5**	**0.0**
YOJ				eS	**Sn**	**15 54 15.3**	**-1.3**
YOJ	**Yonaguni jima**	**3.59**	**25**	Pn	**Pn**	**15 53 35.5**	**0.0**
HATJ	**Hateruma jima**	**3.64**	**39**	P	**Pn**	**15 53 35.6**	**-0.6**
HATJ				eS	**Sn**	**15 54 16.2**	**-1.7**
SZP	**Santa**	**3.74**	**193**	Pn	**Pn**	**15 53 37.7**	**+0.2**
TATO	**Taipei**	**3.75**	**2**	Pn	**Pn**	**15 53 36.6**	**-1.0**
TIPB	**Shuangxi**	**3.77**	**7**	eP	**Pn**	**15 53 39.0**	**+1.0**
	baz=355						
TIPB				eS	**Sn**	**15 54 19.6**	**-1.5**
	baz=355						
IRIF	**Iriomote-Funau**	**3.82**	**35**	P	**Pn**	**15 53 38.2**	**-0.4**
IRIF				S	**Sn**	**15 54 20.0**	**-2.3**
JKRS	**Kuro-shima**	**3.90**	**39**	P	**Pn**	**15 53 39.3**	**-0.4**
JKRS				eS	**Sn**	**15 54 21.4**	**-2.9**
YM01	**YM01**	**3.92**	**3**	eP	**Pn**	**15 53 40.4**	**+0.3**
	baz=3.0						
YM04	**YM04**	**3.92**	**3**	eP	**Pn**	**15 53 40.2**	**0.0**
	baz=3.0						
YM05	**YM05**	**3.94**	**3**	eP	**Pn**	**15 53 39.4**	**-1.0**
	baz=3.0						
JIJ	**Ishigaki jima**	**4.07**	**39**	P	**Pn**	**15 53 41.1**	**-1.0**
JIJ				eS	**Sn**	**15 54 25.9**	**-2.6**
VWUC	**VWUC**	**4.13**	**336**	eP	**Pn**	**15 53 40.9**	**-2.0**
	baz=335						
VWUC				eS	**Sn**	**15 54 24.6**	**-5.5**
	baz=335						
KNM	**Kinmen**	**4.15**	**321**	eP	**Pn**	**15 53 42.7**	**-0.5**
	baz=318						
KNM				eS	**Sn**	**15 54 28.3**	**-2.2**
	baz=318						
KNMB	**Chin-men Tao**	**4.22**	**321**	eP	**Pn**	**15 53 42.5**	**-1.5**
	baz=319						
KNMB	**Chin-men Tao**	**4.22**	**321**	Pn	**Pn**	**15 53 42.6**	**-1.5**
ZPLA	**Ao Xicun**	**4.26**	**310**	eP	**Pn**	**15 53 43.5**	**-1.2**
	baz=308						
CAUP	**Cauayan**	**4.28**	**174**	eP	**Pn**	**15 53 45.0**	**+0.1**
PTMZ	**Houxiangcun**	**4.31**	**332**	eP	**Pn**	**15 53 43.6**	**-1.8**
	baz=331						
PTMZ				eS	**Sn**	**15 54 28.5**	**-5.9**
	baz=331						
VDOS	**Pratas Island**	**4.32**	**264**	eP	**Pn**	**15 53 46.2**	**+0.7**
	baz=261						
JISG	**Ishigakijimahi**	**4.34**	**39**	P	**Pn**	**15 53 44.6**	**-1.2**
JISG				eS	**Sn**	**15 54 33.0**	**-2.1**
QZH	**Quanzhou**	**4.48**	**326**	Pn	**Pn**	**15 53 46.3**	**-1.4**
QZH				Sn	**Sn**	**15 54 33.0**	**-5.5**
PTTC	**Pingtan**	**4.50**	**342**	eP	**Pn**	**15 53 45.8**	**-2.1**
	baz=349						
PTTC				eS	**Sn**	**15 54 33.5**	**-5.4**
	baz=349						
JTJ	**Tarama**	**4.62**	**42**	P	**Pn**	**15 53 48.7**	**-0.9**
JTJ				eS	**Sn**	**15 54 40.5**	**-1.4**
ZZJH	**Jiuhuzhen**	**4.70**	**314**	eP	**Pn**	**15 53 49.3**	**-1.4**
	baz=313						
AXDP	**Jialang**	**4.79**	**321**	eP	**Pn**	**15 53 49.7**	**-2.2**
	baz=319						
JIRB	**Irabujima**	**5.05**	**44**	P	**Pn**	**15 53 54.4**	**-1.1**
JIRB				eS	**Sn**	**15 54 50.4**	**-2.1**
SMPP	**San Manuel, Pa**	**5.08**	**187**	eP	**Pn**	**15 53 53.9**	**-2.0**
SMPP				eS	**Sn**	**15 54 51.0**	**-2.2**
JMJ2	**Miyako jima3**	**5.09**	**46**	P	**Pn**	**15 53 55.4**	**-0.6**
JMJ2				eS	**Sn**	**15 54 50.8**	**-2.7**
JOGS	**Gusukube**	**5.16**	**46**	P	**Pn**	**15 53 55.6**	**-1.3**
JOGS				eS	**Sn**	**15 54 53.8**	**-1.3**
JIKM	**Ikemajima**	**5.17**	**44**	P	**Pn**	**15 53 55.9**	**-1.1**
JIKM				eS	**Sn**	**15 54 52.7**	**-2.6**
MHZQ	**Yeshan**	**5.30**	**337**	eP	**Pn**	**15 53 57.0**	**-1.9**
	baz=336						
HKPS	**Hong Kong Po S**	**6.76**	**280**	Pn	**Pn**	**15 54 18.6**	**-0.3**
JOW	**Kunigami**	**8.46**	**47**	P	**Pn**	**15 54 40.4**	**-1.8**
	0.2nm,0.3s,baz=96,slow=19,SNR=6.0						
JNU	**Nakatsue**	**14.58**	**34**	P	**Pn**	**15 56 05.2**	**+0.2**
	0.1nm,0.3s,baz=235,slow=12,SNR=2.5						
JNU				LR	LR	16 00 57.9	
	comp=Z,28nm,21.7s,baz=207,slow=34						
KSRS	**Korea Array**	**17.16**	**18**	P	**P**	**15 56 38.3**	**0.0**
	0.2nm,0.3s,baz=196,slow=11,SNR=6.4						
KS19	**Wonju Array Si**	**17.19**	**18**	P	**P**	**15 56 38.4**	**-0.2**
KS19				IAmb	IAmb	15 57 22.9	
	comp=Z,113nm,1.9s						
MJAR	**Matsushiro Arr**	**21.21**	**40**	P	**P**	**15 57 23.6**	**+1.2**
	comp=Z,1.1nm,0.6s,baz=224,slow=7.3,SNR=6.5						
USRK	**Ussuriysk Ar.**	**24.57**	**19**	P	**P**	**15 57 56.0**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=206,slow=13,SNR=3.6						
ASAJ	**Asahikawa**	**28.86**	**33**	P	**P**	**15 58 36.6**	**+2.3**
	comp=Z,3.5nm,0.4s,baz=231,slow=9.0,SNR=18						
JKA	**Kamikawa-asahi**	**28.86**	**33**	P	**P**	**15 58 36.6**	**+2.3**
ULN	**Ulaanbaatar**	**28.97**	**340**	P	**P**	**15 58 36.1**	**+0.6**
SONM	**Songino Array**	**29.16**	**339**	P	**P**	**15 58 37.7**	**+0.6**
	comp=Z,1.4nm,0.5s,baz=161,slow=11,SNR=4.8						
SONM	**Songino Array**	**29.16**	**339**	IAmb	IAmb	15 58 39.8	
	comp=Z,1.4nm,0.8s						
WMQ	**Urumqi**	**35.85**	**317**	eP	**P**	**15 59 38.9**	**+3.3**
MK31	**Makanchi Array**	**40.59**	**318**	P	**P**	**16 00 16.5**	**+1.1**
MK31				IAmb	IAmb	16 01 31.4	
	comp=Z,5.4nm,1.9s						
MKAR	**Makanchi Array**	**40.59**	**318**	P	**P**	**16 00 16.9**	**+1.5**
	comp=Z,0.6nm,0.5s,baz=109,slow=8.5,SNR=9.3						
MKAR	**Makanchi Array**	**40.59**	**318**	P	**P**	**16 00 16.5**	**+1.2**
ZAA0	**Zalesovo Array**	**42.82**	**329**	P	**P**	**16 00 33.8**	**+0.4**
ZAA0				IAmb	IAmb	16 00 35.3	
	comp=Z,9.4nm,1.9s						
ZALV	**Zalesovo Beam**	**42.82**	**329**	P	**P**	**16 00 33.7**	**+0.3**
	comp=Z,1.0nm,0.4s,baz=112,slow=8.7,SNR=4.8						
ZALV	**Zalesovo Beam**	**42.82**	**329**	P	**P**	**16 00 33.0**	**-0.3**
KURK	**Kurchatov**	**44.47**	**322**	P	**P**	**16 00 48.1**	**+1.5**
KURK	**Kurchatov**	**44.47**	**322**	IAmb	IAmb	16 02 29.9	
	comp=Z,6.2nm,1.6s						
KURBB	**Kurchatov Arra**	**44.48**	**322**	P	**P**	**16 00 48.1**	**+1.4**
	comp=Z,0.4nm,0.4s,baz=125,slow=7.2,SNR=6.1						
NRIK	**Noril'sk**	**52.29**	**346**	P	**P**	**16 01 46.1**	**-0.4**
	comp=Z,1.7nm,0.5s,baz=120,slow=5.7,SNR=6.7						
ABKAR	**Akbulak array**	**55.62**	**316**	P	**P**	**16 02 12.7**	**+1.5**
TTA	**Tatalina**	**68.01**	**29**	P	**P**	**16 03 34.2**	**0.0**
SVW2	**Sparrevohn**	**68.35**	**31**	P	**P**	**16 03 36.2**	**-0.1**
IMAR	**Indian Mountai**	**68.78**	**26**	P	**P**	**16 03 39.4**	**+0.5**
ILAR	**Eielson Array**	**71.79**	**27**	P	**P**	**16 03 55.8**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=286,slow=4.7,SNR=4.7						
BMAR	**Burnt Mountain**	**72.17**	**24**	P	**P**	**16 04 00.4**	**+0.8**
FINES	**FINESS Array B**	**74.07**	**330**	P	**P**	**16 04 11.4**	**+0.6**
	comp=Z,3.6nm,1.1s,baz=46,slow=6.0,SNR=3.2						
YKA	**Yellowknife Ar**	**85.64**	**23**	P	**P**	**16 05 12.1**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=312,slow=4.2,SNR=7.0						

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*NEIC **16** 15:56:30.4±2.5, 8°.52S±0°.06×128°.82E±0°.03, h29^{km}±6^{km}, mb4.3/4, Error ellipse: s-maj=9.3km s-min=4.2km az=187.0*

*IDC **16** 15:56:34.7±4.1, 8°.34S×128°.69E, h52^{km}±39^{km}, mb3.6/9, mb1 3.7/10, mb1mx3.4/49, mbtmp3.9/10, ML3.6/1, MS3.2/3, Ms1 3.2/3, ms1mx2.8/36, Error ellipse: s-maj=36.4km s-min=16.1km az=74.0*

ISC 16 15:56:32.0±0.6**, 8°.59S**±0°.06×**128°.85E**±0°.10**, h35^{km}, n28, σ1^{s}.72**/29**, mb3.9**/9**, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.50**	**76**	Pn	**Pn**	**15 57 11.2**	**+1.1**
SOEI	**Soe**	**4.67**	**255**		**Pn**	**15 57 41.1**	**+0.9**
MMRI	**Maumere**	**6.54**	**269**	Pn	**Pn**	**15 58 05.7**	**0.0**
FAKI	**Fak Fak**	**6.57**	**31**	Pn	**Pn**	**15 58 04.6**	**-1.5**
SIJI	**Sorong**	**8.04**	**18**	P	**Pn**	**15 58 28.1**	**+1.8**
	0.9nm,0.3s,baz=180,slow=20,SNR=4.1						
SIJI				S	**Sn**	**15 59 55.1**	**-0.9**
	0.5nm,0.3s,baz=253,slow=19,SNR=3.7						
FITZ	**Fitzroy Crossi**	**9.96**	**198**	P	**Pn**	**15 58 53.2**	**+0.6**
	1.0nm,0.3s,baz=134,slow=0.1,SNR=22						
FITZ				S	**Sn**	**16 00 41.0**	**-2.2**
	4.1nm,0.3s,baz=38,slow=0.0,SNR=5.9						
FITZ				LR	LR	16 04 03.8	
	comp=Z,91nm,21.2s,baz=264,slow=44						
WB0	**Warramunga Arr**	**12.34**	**155**		**Pn**	**15 59 24.9**	**-0.4**
WRA	**Warramunga Arr**	**12.48**	**155**	P	**Pn**	**15 59 26.8**	**-0.3**
	0.8nm,0.3s,baz=324,slow=13,SNR=43						
WRA				S	Sn	16 01 40.4	-4.7
	2.6nm,0.3s,baz=330,slow=22,SNR=7.7						
WRA				LR	LR	16 04 57.6	
	comp=Z,76nm,19.7s,baz=350,slow=39						
WRA	**Warramunga Arr**	**12.48**	**155**		**Pn**	**15 59 26.6**	**-0.6**
WB2	**Warramunga Arr**	**12.48**	**155**		**Pn**	**15 59 26.8**	**-0.5**
WR0	**Warramunga Arr**	**12.58**	**155**	Pn	**Pn**	**15 59 27.4**	**-1.1**
AS31	**Alice Springs**	**15.76**	**163**	Pn	**Pn**	**16 00 10.6**	**-0.9**
ASAR	**Alice Springs**	**15.76**	**163**	P	**Pn**	**16 00 10.2**	**-1.3**
	0.3nm,0.3s,baz=331,slow=9.9,SNR=20						
ASAR				S	**Sn**	**16 03 00.9**	**-4.1**
	1.0nm,0.3s,baz=323,slow=17,SNR=9.5						
CTA	**Charters Tower**	**20.35**	**126**	P	**P**	**16 01 08.2**	**+2.6**
	2.6nm,0.8s,baz=323,slow=10,SNR=2.3						
STKA	**Stephens Creek**	**26.03**	**155**	P	**P**	**16 02 05.3**	**+3.3**
	2.5nm,0.8s,baz=324,slow=9.1,SNR=3.8						
STKA	**Stephens Creek**	**26.03**	**155**	P	**P**	**16 02 03.2**	**+1.3**
STKA				IAmb	IAmb	16 02 35.0	
	comp=Z,5.8nm,1.7s						
NWAO	**Narrogin (SRO)**	**26.50**	**202**	P	**P**	**16 02 08.8**	**+2.6**
	comp=Z,12nm,0.9s,baz=10,slow=2.8,SNR=3.7						
CMAR	**Chiang Mai Arr**	**39.91**	**312**	P	**P**	**16 04 01.7**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=143,slow=6.0,SNR=4.9						
MKAR	**Makanchi Array**	**68.94**	**328**	P	**P**	**16 07 32.1**	**-1.5**
	comp=Z,0.2nm,0.5s,baz=128,slow=7.1,SNR=5.0						
ZALV	**Zalesovo Beam**	**72.50**	**334**	P	**P**	**16 07 53.5**	**-1.5**
	comp=Z,0.5nm,0.5s,baz=131,slow=7.9,SNR=2.7						
KURBB	**Kurchatov Arra**	**73.27**	**329**	P	**P**	**16 07 58.4**	**-1.2**
	comp=Z,0.9nm,0.7s,baz=132,slow=4.9,SNR=11						
KURK	**Kurchatov**	**73.28**	**329**	P	**P**	**16 07 58.4**	**-1.3**
KURK	**Kurchatov**	**73.28**	**329**	IAmb	IAmb	16 08 42.5	
	comp=Z,12nm,1.9s						
BVAR	**Borovoye Array**	**78.80**	**328**	P	**P**	**16 08 31.0**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=100,slow=6.0,SNR=4.3						
TIXI	**Tiksi**	**80.06**	**0**	P	**P**	**16 08 36.3**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=146,slow=3.6,SNR=1.8						
KBZ	**Khabaz**	**92.96**	**314**	LR	LR	17 02 26.9	
	comp=Z,30nm,18.5s,baz=108,slow=43						
CPUP	**Villa Florida**	**144.78**	**170**	PKPbc	**PKPdf**	**16 16 07.5**	**+1.5**
	comp=Z,1.6nm,0.5s,baz=170,slow=2.1,SNR=5.1						
LPAZ	**La Paz**	**150.11**	**146**	PKPbc	**PKiKP**	**16 16 23.1**	**+1.3**
	comp=Z,0.5nm,0.5s,baz=351,slow=1.2,SNR=3.2						

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*DDA **16** 16:22:24.3, 42°.59N×43°.47E, h9^{km}±1^{km}, ML2.7*

*TIF **16** 16:22:25.2, 42°.56N×43°.48E, h10^{km}*

*IASPEI **16** 16:22:25.6±0.8, 42°.55N±0°.01×43°.50E±0°.02, h8^{km}±5^{km}, Error ellipse: s-maj=2.9km s-min=2.1km az=94.3, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*NORS **16** 16:22:25.3±0.0, 42°.58N×43°.42E, h2^{km}, MPVA4.1*

*ISK **16** 16:22:25.3, 42°.56N×43°.53E, h6^{km}, ML3.4/6*

*MOS **16** 16:22:26.2±1.5, 42°.57N×43°.48E, h11^{km}, mb3.8/1, Error ellipse: s-maj=5.6km s-min=3.9km az=93.0*

ISC 16 16:22:25.6±0.8**, 42°.55N**±0°.01×**43°.48E**±0°.01**, h7^{km}**±5^{km}**, n95, σ1^{s}.22**/181**, 5C-5D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONI	**Oni**	**0.05**	**333**	P	**Pg**	**16 22 27.4**	**0.0**
ONI				S	**Sg**	**16 22 28.9**	**+0.3**
ONI	**Oni**	**0.05**	**333**	PG	**Pg**	**16 22 27.3**	**-0.1**
ONI				SG	**Sg**	**16 22 28.9**	**+0.3**
ONI	**Oni**	**0.05**	**333**	PG	**Pg**	**16 22 27.4**	**0.0**
DIGR	**Digorskoe uzhe**	**0.36**	**12**	i Pg	**Pg**	**16 22 32.2**	**-0.6**
DIGR				eSg	**Sg**	**16 22 37.1**	**-0.5**
DIGR	**Digorskoe uzhe**	**0.36**	**12**	⇑iPG	**Pg**	**16 22 32.2**	**-0.6**
DIGR				eS	**Sg**	**16 22 37.1**	**-0.5**
ZEI	**Tsey**	**0.39**	**52**	i Pg	**Pg**	**16 22 32.8**	**-0.6**
ZEI				eSg	**Sg**	**16 22 38.1**	**-0.4**
ZEI	**Tsey**	**0.39**	**52**	⇑iPG	**Pg**	**16 22 32.8**	**-0.6**
ZEI				eS	**Sg**	**16 22 38.2**	**-0.4**
TKB	**Tkibuli**	**0.41**	**242**	P	**Pb**	**16 22 34.4**	**-0.9**
TKB				S	**Sb**	**16 22 40.7**	**-1.0**
TKB	**Tkibuli**	**0.41**	**242**	PG	**Pb**	**16 22 34.3**	**-0.9**
TKB				S	**Sb**	**16 22 40.7**	**-1.0**
LACR	**Lac**	**0.66**	**65**	i Pg	**Pg**	**16 22 36.6**	**-1.8**
LACR				eSg	**Sg**	**16 22 45.2**	**-1.9**
LACR	**Lac**	**0.66**	**65**	i PG	**Pg**	**16 22 36.6**	**-1.8**
LACR				pmax	pmax		
	comp=Z,251nm,0.3s						
KORR	**Kora**	**0.69**	**38**	i Pg	**Pg**	**16 22 38.8**	**-0.2**
KORR				eSg	**Sb**	**16 22 49.1**	**-0.7**
KORR	**Kora**	**0.69**	**38**	⇑iPG	**Pg**	**16 22 38.8**	**-0.2**
KORR				eS	**Sb**	**16 22 49.1**	**-0.7**
GUDG	**Gudauri**	**0.74**	**96**	P	**Pg**	**16 22 38.0**	**-1.9**
GUDG				S	**Sg**	**16 22 47.8**	**-1.8**
GUDG	**Gudauri**	**0.74**	**96**	PG	**Pg**	**16 22 38.0**	**-1.9**
GUDG				S	**Sg**	**16 22 47.7**	**-1.8**
LSNR	**Lesken**	**0.77**	**19**	i Pg	**Pb**	**16 22 40.4**	**-1.1**
LSNR				eSg	**Sb**	**16 22 51.8**	**-0.3**
LSNR	**Lesken**	**0.77**	**19**	⇓ePG	**Pb**	**16 22 40.3**	**-1.1**
LSNR				eS	**Sb**	**16 22 51.4**	**-0.8**
BKRG	**Bakuriani**	**0.79**	**178**	P	**Pg**	**16 22 41.2**	**+0.4**
BKRG				S	**Sb**	**16 22 52.9**	**+0.2**
BKRG	**Bakuriani**	**0.79**	**178**	PG	**Pg**	**16 22 41.2**	**+0.4**
BKRG				S	**Sb**	**16 22 52.8**	**+0.2**
ARNR	**Ardon**	**0.86**	**43**	ePg	**Pb**	**16 22 42.7**	**-0.3**
ARNR				eSg	**Sn**	**16 22 55.4**	**-1.7**
ARNR	**Ardon**	**0.86**	**43**	ePG	**Pb**	**16 22 42.7**	**-0.3**
ARNR				eS	**Sn**	**16 22 55.4**	**-1.7**
NEY	**Neytrino**	**0.90**	**322**	ePg	**Pg**	**16 22 42.4**	**-0.5**
NEY				eSg	**Sg**	**16 22 53.5**	**-1.1**
NEY	**Neytrino**	**0.90**	**322**	ePG	**Pg**	**16 22 42.4**	**-0.5**
NEY				eS	**Sg**	**16 22 53.5**	**-1.1**
STDR	**Stavd-Durt**	**0.93**	**27**	i Pg	**Pn**	**16 22 44.4**	**-0.7**
STDR				eSg	**Sn**	**16 22 58.4**	**-0.2**
STDR	**Stavd-Durt**	**0.93**	**27**	⇓ePG	**Pn**	**16 22 44.3**	**-0.7**
STDR				eS	**Sn**	**16 22 58.7**	**+0.1**
NCK	**Nalchik**	**0.95**	**5**	ePg	**Pb**	**16 22 44.1**	**-0.4**
NCK				eSg	**Sn**	**16 22 57.9**	**-1.4**
NCK	**Nalchik**	**0.95**	**5**	ePG	**Pb**	**16 22 44.0**	**-0.5**
NCK				pmax	pmax		
	comp=Z,221nm,0.2s						
VLKR	**Vladikavkaz**	**1.01**	**60**	ePg	**Pn**	**16 22 45.9**	**-0.4**
VLKR				ePg	**Pn**	**16 22 45.9**	**-0.4**
VLKR				eSg	**Sn**	**16 23 00.6**	**-0.2**
VLKR				eSg	**Sn**	**16 23 00.6**	**-0.2**
VLKR	**Vladikavkaz**	**1.01**	**60**	ePG	**Pn**	**16 22 45.8**	**-0.4**
VLKR				eS	**Sn**	**16 23 00.6**	**-0.2**
TRLG	**Trialeti**	**1.11**	**155**	P	**Pg**	**16 22 46.7**	**-0.3**
TRLG				S	**Sn**	**16 23 02.9**	**-0.4**
TRLG	**Trialeti**	**1.11**	**155**	PG	**Pg**	**16 22 46.6**	**-0.3**
TRLG				S	**Sn**	**16 23 02.8**	**-0.4**
BTKR	**Batakoyurt**	**1.13**	**43**	ePg	**Pn**	**16 22 48.6**	**+0.6**
BTKR				eSg	**Sn**	**16 23 06.3**	**+2.6**
BTKR	**Batakoyurt**	**1.13**	**43**	ePG	**Pn**	**16 22 48.5**	**+0.6**
BTKR				eS	**Sn**	**16 23 05.7**	**+1.9**
AKH	**Akhalkalaki**	**1.14**	**180**	P	**Pg**	**16 22 47.4**	**-0.1**
AKH				S	**Sn**	**16 23 04.0**	**-0.1**
AKH	**Akhalkalaki**	**1.14**	**180**	PN	**Pb**	**16 22 47.6**	**-0.1**
AKH				SN	**Sn**	**16 23 03.9**	**-0.1**
AKH	**Akhalkalaki**	**1.14**	**180**	PG	**Pg**	**16 22 47.3**	**-0.1**
AKH				S	**Sn**	**16 23 03.9**	**-0.1**
KMGR	**Komgaron**	**1.14**	**63**	ePg	**Pn**	**16 22 49.1**	**+1.1**
KMGR				eSg	**Sn**	**16 23 07.4**	**+3.5**
KMGR	**Komgaron**	**1.14**	**63**	ePG	**Pn**	**16 22 49.1**	**+1.1**
KMGR				eS	**Sn**	**16 23 07.4**	**+3.5**
EPOS	**Posof**	**1.18**	**209**	i P	**Pb**	**16 22 47.7**	**-0.8**
EPOS				i S	**Sn**	**16 23 05.4**	**+0.2**
EPOS				IAML		16 23 11.0	
	comp=E,125nm,0.5s						
EPOS				IAML		16 23 11.0	
	comp=N,214nm,0.6s						
TBLG	**Delisi**	**1.24**	**131**	P	**Pn**	**16 22 48.9**	**-0.5**
TBLG				S	**Sn**	**16 23 06.8**	**+0.5**
TBLG	**Delisi**	**1.24**	**131**	PN	**Pb**	**16 22 49.3**	**-0.1**
TBLG				SN	**Sn**	**16 23 06.6**	**+0.3**
TBLG	**Delisi**	**1.24**	**131**	i P	**Pn**	**16 22 48.9**	**-0.5**
TBLG				i S	**Sn**	**16 23 06.9**	**+0.5**
TBLG				IAML		16 23 10.0	
	comp=N,84nm,0.3s						
TBLG				IAML		16 23 13.0	
	comp=E,87nm,0.4s						
TBLG	**Delisi**	**1.24**	**131**	PG	**Pn**	**16 22 48.8**	**-0.5**
TBLG				S	**Sn**	**16 23 06.8**	**+0.5**
KBZ	**Khabaz**	**1.26**	**340c**	iPG	**Pg**	**16 22 49.0**	**-0.7**
SEAG	**Tbilisi Sea**	**1.26**	**128**	P	**Pb**	**16 22 49.5**	**-0.1**
SEAG				S	**Sn**	**16 23 07.8**	**+1.1**
SEAG	**Tbilisi Sea**	**1.26**	**128**	PG	**Pb**	**16 22 49.5**	**-0.1**
SEAG				S	**Sn**	**16 23 07.8**	**+1.1**
KBTC	**Kuba-Taba**	**1.27**	**358**	ePg	**Pg**	**16 22 49.8**	**-0.2**
KBTC				eSg	**Sn**	**16 23 07.0**	**-0.1**
KBTC	**Kuba-Taba**	**1.27**	**358**	⇓ePG	**Pg**	**16 22 49.6**	**-0.4**
KBTC				eS	**Sn**	**16 23 06.8**	**-0.3**
BGD	**Bogdanovka**	**1.28**	**176**	P	**Pn**	**16 22 50.0**	**-0.1**
BGD				S	**Sn**	**16 23 08.1**	**+0.4**
BGD	**Bogdanovka**	**1.28**	**176**	PG	**Pn**	**16 22 50.0**	**-0.1**
BGD				S	**Sn**	**16 23 08.1**	**+0.4**
BTNK	**Botanikuri**	**1.31**	**131**	P	**Pn**	**16 22 50.0**	**-0.4**
BTNK				S	**Sg**	**16 23 08.9**	**+1.3**
BTNK	**Botanikuri**	**1.31**	**131**	i P	**Pn**	**16 22 49.9**	**-0.4**
BTNK				i S	**Sg**	**16 23 09.0**	**+1.3**
BTNK				IAML		16 23 10.0	
	comp=E,92nm,0.2s						
BTNK				IAML		16 23 10.0	
	comp=N,112nm,0.2s						
BTNK	**Botanikuri**	**1.31**	**131**	PG	**Pn**	**16 22 49.9**	**-0.4**
BTNK				S	**Sg**	**16 23 08.9**	**+1.3**
SHA1	**Shidzhatmaz**	**1.33**	**333**	ePg	**Pg**	**16 22 51.4**	**+0.1**
SHA1				eSg	**Sn**	**16 23 08.3**	**-0.7**
SHA1	**Shidzhatmaz**	**1.33**	**333**	ePG	**Pg**	**16 22 51.4**	**+0.1**
SHA1				eS	**Sn**	**16 23 08.3**	**-0.7**
PRTR	**Priterechnaya**	**1.34**	**26**	ePg	**Pg**	**16 22 51.9**	**+0.6**
PRTR				eSg	**Sg**	**16 23 11.8**	**+3.1**
PRTR	**Priterechnaya**	**1.34**	**26**	ePG	**Pg**	**16 22 51.9**	**+0.6**
PRTR				eS	**Sg**	**16 23 11.8**	**+3.1**
KZRT	**Kazreti**	**1.35**	**149**	P	**Pn**	**16 22 50.2**	**-0.7**
KZRT				S	**Sn**	**16 23 08.8**	**-0.2**
KZRT	**Kazreti**	**1.35**	**149**	i P	**Pn**	**16 22 50.1**	**-0.7**
KZRT				i S	**Sb**	**16 23 08.7**	**0.0**
KZRT	**Kazreti**	**1.35**	**149**	PG	**Pn**	**16 22 50.2**	**-0.7**
KZRT				S	**Sn**	**16 23 08.8**	**-0.2**
TRKR	**Terskaya**	**1.49**	**37**	ePg	**Pg**	**16 22 53.8**	**-0.4**
TRKR				eSg	**Sg**	**16 23 16.2**	**+2.7**
TRKR	**Terskaya**	**1.49**	**37**	ePG	**Pg**	**16 22 53.8**	**-0.4**
TRKR				eS	**Sg**	**16 23 16.2**	**+2.7**
KIV	**Kislovodsk**	**1.52**	**338**	PN	**Pb**	**16 22 53.7**	**-0.5**
KIV				SN	**Sg**	**16 23 14.4**	**-0.2**
KIV	**Kislovodsk**	**1.52**	**338**	i PG	**Pb**	**16 22 53.8**	**-0.5**
BEYR	**Belyy Ugol+**	**1.54**	**342**	ePG	**Pb**	**16 22 53.8**	**-0.8**
BEYR				eS	**Sg**	**16 23 14.6**	**-0.6**
BATM	**Batumi**	**1.63**	**235**	P	**Pb**	**16 22 55.4**	**-0.6**
BATM				S	**Sg**	**16 23 18.9**	**+0.8**
BATM	**Batumi**	**1.63**	**235**	PN	**Pb**	**16 22 55.5**	**-0.6**
BATM				SN	**Sg**	**16 23 18.1**	**+0.1**
BATM	**Batumi**	**1.63**	**235**	i P	**Pb**	**16 22 55.4**	**-0.6**
BATM				i S	**Sg**	**16 23 19.1**	**+1.0**
BATM	**Batumi**	**1.63**	**235**	⇓iPN	**Pb**	**16 22 55.3**	**-0.7**
BATM				i S	**Sg**	**16 23 18.8**	**+0.8**
BCA	**Borcka**	**1.77**	**232**	PN	**Pb**	**16 22 57.7**	**-0.7**
BCA				SN	**Sb**	**16 23 21.3**	**+0.5**
GROC	**Groznyy**	**1.82**	**68**	ePg	**Pg**	**16 22 59.6**	**-1.0**
GROC				eSg	**Sg**	**16 23 25.7**	**+1.5**
GROC	**Groznyy**	**1.82**	**68**	ePN	**Pb**	**16 22 59.2**	**-0.1**
GROC				eS	**Sg**	**16 23 24.0**	**-0.2**
EAK	**Akyaka**	**1.86**	**177**	i P	**Pb**	**16 22 59.5**	**-0.5**
EAK				i S	**Sg**	**16 23 25.1**	**-0.4**
EAK				IAML		16 23 29.0	
	comp=N,127nm,0.7s						
EAK				IAML		16 23 39.0	
	comp=E,161nm,1.1s						
DAGI	**Agillar**	**1.88**	**219**	i P	**Pb**	**16 23 00.0**	**-0.3**
DAGI				i S	**Sg**	**16 23 25.5**	**-0.5**
DAGI				IAML		16 23 28.0	
	comp=N,186nm,1.1s						
DAGI				IAML		16 23 28.0	
	comp=E,186nm,0.4s						
ARXR	**Arkhyz**	**1.91**	**303**	⇓iPN	**Pg**	**16 23 01.7**	**-0.6**
ARXR				eS	**Sg**	**16 23 27.4**	**+0.4**
BTLR	**Botlikh**	**2.03**	**86**	ePg	**Pb**	**16 23 03.0**	**+0.2**
BTLR				eSg	**Sg**	**16 23 31.9**	**+1.1**
BTLR	**Botlikh**	**2.03**	**86**	ePN	**Pb**	**16 23 03.0**	**+0.2**
BTLR				eS	**Sg**	**16 23 31.9**	**+1.1**
DBAD	**Bademkaya**	**2.03**	**222**	i P	**Pb**	**16 23 02.0**	**-0.9**
DBAD				i S	**Sg**	**16 23 30.3**	**-0.6**
DDEM	**Demirkent**	**2.10**	**219**	i P	**Pb**	**16 23 04.1**	**0.0**
DDEM				i S	**Sg**	**16 23 32.6**	**-0.6**
SENK	**Senkaya-Erzuru**	**2.16**	**204**	PN	**Pb**	**16 23 03.5**	**-1.6**
LGD	**Lagodekhi**	**2.17**	**108**	P	**Pb**	**16 23 04.8**	**-0.4**
LGD				S	**Sg**	**16 23 33.9**	**-1.5**
LGD	**Lagodekhi**	**2.17**	**108**	PN	**Pb**	**16 23 04.8**	**-0.4**
LGD				S	**Sg**	**16 23 33.9**	**-1.5**
DDFL	**Dedoflistskaro**	**2.25**	**118**	P	**Pg**	**16 23 08.1**	**-0.7**
DDFL				S	**Sb**	**16 23 35.1**	**+0.4**
DDFL	**Dedoflistskaro**	**2.25**	**118**	i P	**Pg**	**16 23 08.4**	**-0.3**
DDFL				i S	**Sg**	**16 23 42.5**	**+4.6**
DDFL	**Dedoflistskaro**	**2.25**	**118**	PN	**Pg**	**16 23 08.1**	**-0.7**
DDFL				S	**Sb**	**16 23 35.1**	**+0.4**
CHOM	**Cayeli-Rize**	**2.50**	**235**	PN	**Pn**	**16 23 08.3**	**+1.7**
GOF	**Gofitskoye**	**2.53**	**353**	⇑ePN	**Pb**	**16 23 09.2**	**-2.2**
GOF				eS	**Sg**	**16 23 46.0**	**-0.9**
GOF				eS	**Sb**	**16 23 48.7**	**+6.0**
GOF				pmax	pmax		
	comp=Z,30nm,0.6s						
GOF				smax	smax		
	comp=N,155nm,0.8s						
GOF				smax	smax		
	comp=E,34nm,0.4s						
GNI	**Garni**	**2.58**	**158**	PN	**Pn**	**16 23 08.8**	**+0.9**
GNI	**Garni**	**2.58**	**158**	i PN	**Pb**	**16 23 12.6**	**+0.4**
GNBR	**Gunib**	**2.58**	**92**	ePN	**Pb**	**16 23 12.2**	**-0.1**
GNBR				eS	**Sb**	**16 23 45.6**	**+1.4**
RPOR	**Krasnaya Polya**	**2.62**	**297**	ePN	**Pb**	**16 23 10.6**	**-2.3**
RPOR				eS	**Sb**	**16 23 43.8**	**-1.5**
MAK	**Makhachkala**	**2.99**	**81**	i PN	**Pb**	**16 23 16.2**	**-3.0**
LZRR	**Lazarevskoye**	**3.30**	**296**	i PN	**Pn**	**16 23 19.2**	**+1.5**
LZRR				eS	**Sn**	**16 23 59.5**	**+2.3**
AKT	**Akhty**	**3.34**	**107**	ePN	**Pb**	**16 23 21.5**	**-3.7**
AKT				e		16 23 25.8	
AKT				e		16 24 05.6	
AKT				e		16 24 07.5	
AKT				e		16 24 14.4	
AKT				pmax	pmax		
	comp=Z,8.0nm,0.5s						
AKT				smax	smax		
	comp=N,19nm,0.5s						
AKT				smax	smax		
	comp=E,36nm,0.5s						
AKT				smax	smax		

	comp=E,34nm,0.6s						
BRVK	**Borovoye**	**20.73**	**50**	*i* P	**P**	**16 27 06.8**	**+0.4**

IDC ***16*** *16:30:39.2±0.7, 53.°75N×35.°30W, h0^{km}, mb3.6/13, mb1 3.8/15, mb1mx3.6/51, mbtmp3.6/15, ML2.6/2, MS3.0/2, Ms1 3.0/2, ms1mx2.7/33, Error ellipse: s-maj=27.2km s-min=13.6km az=19.0*

NEIC ***16*** *16:30:40.6±1.6, 53.°7N±0.°2×35.°3W±0.°2, h12^{km}±4^{km}, mb4.6/10, Error ellipse: s-maj=22.8km s-min=15.1km az=196.0*

ISC 16 16:30:41.4±0.6, 53.°7N±0.°1×35.°38W±0.°09, h16^{km}, n29, σ0^{s}.74/26, mb3.9/16, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCHQ	**Schefferville**	**18.34**	**286**	P	**Pn**	**16 34 55.2**	**+0.4**
	0.1nm,0.3s,baz=92,slow=5.6,SNR=4.5						
SCHQ	**Schefferville**	**18.34**	**286**	P	**Pn**	**16 34 54.8**	**+0.1**
FRB	**Frobisher Bay**	**19.70**	**314**	P	**Pn**	**16 35 10.7**	**-0.4**
	0.1nm,0.3s,baz=83,slow=5.3,SNR=3.2						
PKME	**Peaks-Kenny Pk**	**23.41**	**263**	P	**P**	**16 35 48.9**	**-0.4**
PESTR	**Estremoz**	**24.05**	**117**	P	**P**	**16 35 55.3**	**-0.4**
PESTR				IAmb	IAmb	16 36 09.6	
	comp=Z,21nm,0.9s						
ESDC	**Sonseca Array**	**25.45**	**111**	P	**P**	**16 36 09.2**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=319,slow=9.2,SNR=1.7						
NOA	**NORSAR Array B**	**25.68**	**55**	LR	LR	16 44 12.7	
	comp=Z,26nm,19.7s,baz=345,slow=32						
TRQ	**Mont Tremblant**	**26.02**	**269**	P	**P**	**16 36 12.4**	**-1.1**
PECO	**Prince Edward**	**28.71**	**267**	P	**P**	**16 36 35.7**	**-1.9**
PECO				IAmb	IAmb	16 36 36.7	
	comp=Z,14nm,0.8s						
RES	**Resolute Bay**	**31.22**	**334**	P	**P**	**16 36 59.5**	**+0.1**
ULM	**Lac du Bonnet**	**36.45**	**290**	P	**P**	**16 37 45.7**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=59,slow=12,SNR=3.4						
ULM	**Lac du Bonnet**	**36.45**	**290**	IAmb	IAmb	16 38 21.6	
	comp=Z,14nm,1.8s						
AKASG	**Malin Array Be**	**38.49**	**67**	P	**P**	**16 38 02.7**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=307,slow=7.7,SNR=3.0						
YKA	**Yellowknife Ar**	**40.21**	**315**	P	**P**	**16 38 16.3**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=64,slow=8.3,SNR=2.5						
YKA				PcP	**PcP**	**16 40 20.2**	**0.0**
	comp=Z,0.3nm,0.6s,baz=70,slow=3.7,SNR=5.3						
BRTR	**Keskin Array B**	**47.47**	**78**	P	**P**	**16 39 16.1**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=270,slow=7.4,SNR=3.9						
BRTR				LR	LR	16 59 36.8	
	comp=Z,17nm,18.3s,baz=328,slow=37						
PDAR	**Pinedale Array**	**48.45**	**289**	P	**P**	**16 39 23.7**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=58,slow=7.0,SNR=4.6						
TORD	**Torodi Ar. Bea**	**49.92**	**130**	P	**P**	**16 39 33.9**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=330,slow=7.9,SNR=9.2						
ILAR	**Eielson Array**	**50.73**	**329**	P	**P**	**16 39 40.3**	**+0.5**
	comp=Z,0.2nm,0.7s,baz=46,slow=5.2,SNR=3.4						
IMAR	**Indian Mountai**	**51.84**	**333**	P	**P**	**16 39 48.5**	**+0.4**
DBIC	**Dimbokro**	**53.01**	**141**	P	**P**	**16 39 57.5**	**+0.1**
	comp=Z,2.0nm,0.7s,baz=280,slow=7.0,SNR=4.0						
DBIC	**Dimbokro**	**53.01**	**141**	IAmb	IAmb	16 40 04.9	
	comp=Z,23nm,1.4s						
TXAR	**Lajitas Array**	**54.27**	**272**	P	**P**	**16 40 07.1**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=46,slow=9.1,SNR=3.1						
NVAR	**Mina Array Bea**	**56.28**	**290**	P	**P**	**16 40 22.0**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=56,slow=10.0,SNR=3.1						
NVAR	**Mina Array Bea**	**56.28**	**290**	P	**P**	**16 40 22.0**	**+0.8**
MK31	**Makanchi Array**	**66.77**	**41**	P	**P**	**16 41 30.7**	**-0.9**
MK31				IAmb	IAmb	16 42 04.9	
	comp=Z,5.4nm,1.9s						
MKAR	**Makanchi Array**	**66.77**	**41**	P	**P**	**16 41 31.1**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=321,slow=4.5,SNR=5.1						
SONM	**Songino Array**	**73.78**	**26**	P	**P**	**16 42 14.0**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=316,slow=6.0,SNR=3.5						
SONM	**Songino Array**	**73.78**	**26**	IAmb	IAmb	16 42 16.5	
	comp=Z,0.7nm,0.8s						
ASAR	**Alice Springs**	**148.94**	**19**	PKPbc	**PKPbc**	**16 50 27.2**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=349,slow=2.2,SNR=4.7						

IDC ***16*** *16:42:39.9±1.2, 2.°81S×129.°54E, h0^{km}, mb3.9/4, mb1 4.1/8, mb1mx3.7/45, mbtmp4.0/8, ML3.8/4, MS3.4/2, Ms1 3.4/2, ms1mx2.7/39, Error ellipse: s-maj=26.9km s-min=19.5km az=90.0*

DJA ***16*** *16:42:43.5±0.6, 3°S±2°×12°9E±°, h14^{km}±5^{km}, M4.0/11, mb4.2/1, MLv3.9/11*

NEIC ***16*** *16:42:44.9±1.6, 2.°89S±0.°09×129.°56E±0.°07, h45^{km}±10^{km}, mb4.2/11, Error ellipse: s-maj=13.0km s-min=9.3km az=193.0*

ISC 16 16:42:40.8±1.4, 2.°76S±0.°04×129.°74E±0.°05, h18^{km}±10^{km}, n36, σ1^{s}.72/40, mb4.1/5, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.00**	**234**	P	**Pb**	**16 42 59.0**	**-0.6**
MSAI				S	**Sn**	**16 43 13.8**	**+0.2**
BNDI	**Bandanaira**	**1.76**	**175**	P	Pg	16 43 17.6	+2.9
BNDI				S	**Sg**	**16 43 41.6**	**+4.0**
AAI	**Ambon**	**1.80**	**239**	P	**Pn**	**16 43 11.5**	**+0.6**
SIJI	**Sorong**	**2.42**	**39**	Pn	**Pb**	**16 43 24.3**	**+0.6**
	42nm,0.3s,baz=88,slow=23,SNR=345						
SIJI				Sn	**Sb**	**16 43 55.9**	**+2.7**
	32nm,0.3s,baz=189,slow=24,SNR=13						
SWI	**Sorong**	**2.42**	**39**	P	**Pg**	**16 43 25.5**	**-1.7**
SWI				S	**Sb**	**16 43 55.2**	**+2.0**
FAKI	**Fak Fak**	**2.51**	**94**	P	**Pg**	**16 43 26.3**	**-2.6**
FAKI				S	**Sg**	**16 44 00.7**	**-0.8**
FAKI	**Fak Fak**	**2.51**	**94**	Pn	**Pg**	**16 43 26.8**	**-2.2**
NLAI	**Namlea**	**2.68**	**260**	P	**Pn**	**16 43 22.8**	**-0.2**
NLAI				S	**Sn**	**16 43 53.2**	**-1.9**
LBMI	**Labuha**	**3.08**	**313**	P	**Pn**	**16 43 28.1**	**-0.4**
SANI	**Sanana**	**3.82**	**281**	P	**Pn**	**16 43 37.4**	**-1.3**
RKPI	**Ransiki, Papua**	**4.60**	**74**	P	Pb	16 43 55.4	-5.6
LUWI	**Luwuk**	**7.17**	**284**	Pn	**Pn**	**16 44 24.8**	**0.0**
SOEI	**Soe**	**8.83**	**218**	P	**Pn**	**16 44 50.1**	**+2.4**
KAPI	**Kappang**	**10.22**	**257**	Pn	**Pn**	**16 45 07.0**	**+0.4**
	0.7nm,0.3s,baz=114,slow=10.0,SNR=3.8						
BKB	**Balikpapan**	**12.93**	**276**	Pn	**Pn**	**16 45 44.9**	**+1.2**
FITZ	**Fitzroy Crossi**	**15.77**	**195**	Pn	**Pn**	**16 46 21.8**	**-0.2**
	0.1nm,0.3s,baz=173,slow=0.4,SNR=2.9						
JAGI	**Jajag, Banyuwa**	**16.52**	**249**	Pn	**Pn**	**16 46 31.3**	**-0.4**
JAGI				IAmb	IAmb	16 46 36.7	
	comp=Z,21nm,1.1s						
WB0	**Warramunga Arr**	**17.51**	**165**	Pn	**Pn**	**16 46 44.0**	**-0.1**
WRA	**Warramunga Arr**	**17.66**	**166**	P	**Pn**	**16 46 45.9**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=350,slow=12,SNR=27						
WRA				Sn	**Sn**	**16 49 57.9**	**-4.5**
	comp=Z,0.2nm,0.3s,baz=356,slow=19,SNR=5.2						
WRA	**Warramunga Arr**	**17.66**	**166**	P	**Pn**	**16 46 45.0**	**-1.0**
WB2	**Warramunga Arr**	**17.66**	**166**	Pn	**Pn**	**16 46 45.6**	**-0.4**
WB2				IAmb	IAmb	16 47 40.3	
	comp=Z,23nm,1.6s						
WR0	**Warramunga Arr**	**17.73**	**165**		**Pn**	**16 46 46.9**	**+0.1**
WR0				IAmb	IAmb	16 47 01.6	
	comp=Z,30nm,1.9s						
UGM	**Wanagama**	**19.80**	**254**	P	**P**	**16 47 09.5**	**-1.0**
KSM	**Kuching**	**19.88**	**282**	P	**P**	**16 47 10.9**	**-0.4**
KSM				IAmb	IAmb	16 47 20.9	
	comp=Z,18nm,1.2s						
AS31	**Alice Springs**	**21.17**	**169**	P	**P**	**16 47 25.7**	**+0.5**
ASAR	**Alice Springs**	**21.17**	**169**	P	**P**	**16 47 26.9**	**+1.6**
	comp=Z,6.0nm,0.7s,baz=351,slow=12,SNR=47						
ASAR				S	**S**	**16 51 17.2**	**-2.9**
	comp=Z,2.7nm,0.9s,baz=349,slow=20,SNR=11						
ASAR	**Alice Springs**	**21.17**	**169**	P	**P**	**16 47 25.6**	**+0.3**
LEM	**Lembang**	**22.41**	**259**	LR	LR	16 58 36.0	
	comp=Z,70nm,19.9s,baz=12,slow=43						
CTA	**Charters Tower**	**23.59**	**138**	P	**P**	**16 47 53.9**	**+3.2**
	comp=Z,3.8nm,0.9s,baz=305,slow=12,SNR=5.3						
CTAO	**Charters Tower**	**23.59**	**138**	P	**P**	**16 47 50.8**	**+0.1**
STKA	**Stephens Creek**	**31.04**	**160**	P	**P**	**16 48 59.9**	**+2.2**
	comp=Z,2.0nm,0.8s,baz=337,slow=7.3,SNR=3.8						
STKA	**Stephens Creek**	**31.04**	**160**	P	**P**	**16 48 57.6**	**-0.1**
STKA				IAmb	IAmb	16 49 02.8	
	comp=Z,10.0nm,1.9s						
MA2	**Magadan**	**64.32**	**12**	LR	LR	17 22 00.6	
	comp=Z,29nm,18.4s,baz=324,slow=37						
MKAR	**Makanchi Array**	**64.57**	**326**	P	**P**	**16 53 17.8**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=120,slow=7.4,SNR=6.2						
MAKZ	**Makanchi**	**64.76**	**326**	P	**P**	**16 53 18.6**	**+0.4**
KURK	**Kurchatov**	**68.80**	**328**	P	**P**	**16 53 44.1**	**+0.3**
KURK				IAmb	IAmb	16 55 45.9	
	comp=Z,5.9nm,1.4s						

NEIC ***16*** *16:53:18.9±1.7, 61.°3S±0.°1×156.°8E±0.°6, h15^{km}±3^{km}, mb4.6/9, Error ellipse: s-maj=39.5km s-min=18.9km az=79.0*

IDC ***16*** *16:53:18.6±2.4, 61.°32S×155.°80E, h0^{km}, mb3.9/4, mb1 4.1/5, mb1mx3.9/21, mbtmp4.0/5, ML4.1/1, MS4.2/14, Ms1 4.3/14, ms1mx4.2/16, Error ellipse: s-maj=154.7km s-min=30.0km az=73.0*

GCMT ***16*** *16:53:24.9±0.2, 61.°39S±0.°01×154.°12E±0.°03, h12^{km}, MW5.0/98, Moment Tensor Solution. s45,c59; s98,c160; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.14±.11; $M_{\theta\theta}$3.21±.08; $M_{\phi\phi}$-3.07±.11; $M_{r\theta}$-1.01±.25; $M_{\theta\phi}$-2.92±.09; $M_{\phi r}$1.55±.30; Best double couple: $M_0$4.66300×10^{16} NP1:ϕ_s246.00000°, δ67.00000°, λ178.00000°. NP2: ϕ_s337.00000°, δ88.00000°, λ23.00000°. Principal axes: T 4.8280, Plg17.0000°, Azm204.0000°; N -0.3240, Plg67.0000°, Azm341.0000°; P -4.4980, Plg15.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 16:53:18.2±0.9, 61.°3S±0.°1×156.°9E±0.°3, h10^{km}, n38, σ0^{s}.78/17, mb4.2/7, MS4.2/15, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**16.38**	**176**	Pn	**Pn**	**16 57 07.6**	**-0.1**
	0.7nm,0.3s,baz=344,slow=12,SNR=24						
VNDA				LR	LR	17 02 55.1	
	comp=Z,2μm,18.4s,baz=356,slow=35						
VNDA	**Vanda**	**16.38**	**176**		**Pn**	**16 57 07.0**	**-0.7**
SBA	**Scott Base**	**16.93**	**173**	P	**P**	**16 57 16.7**	**0.0**
SBA				IAmb	IAmb	16 57 44.5	
	comp=Z,66nm,1.9s						
RPZ	**Rata Peaks**	**19.53**	**32**	LR	LR	17 04 13.6	
	comp=Z,2μm,21.5s,baz=184,slow=33						
URZ	**Urewera**	**26.28**	**38**	LR	LR	17 08 14.9	
	comp=Z,501nm,21.2s,baz=206,slow=34						
OUZ	**Omahuta**	**28.20**	**30**	P	**P**	**16 59 10.4**	**-0.3**
STKA	**Stephens Creek**	**31.09**	**334**	P	**P**	**16 59 36.0**	**-0.4**
	comp=Z,2.4nm,0.9s,baz=135,slow=13,SNR=2.4						
STKA				LR	LR	17 10 42.8	
	comp=Z,425nm,18.1s,baz=160,slow=34						
MAW	**Mawson**	**37.25**	**219**	LR	LR	17 15 22.6	
	comp=Z,1μm,19.4s,baz=102,slow=36						
H01W1	**Cape Leeuwin H**	**37.80**	**294**	T	T	17 39 32.8	
	baz=147,slow=75,SNR=140						
H01W2	**Cape Leeuwin H**	**37.81**	**294**	T	T	17 39 34.8	
	baz=147,slow=75,SNR=124						
H01W3	**Cape Leeuwin H**	**37.82**	**294**	T	T	17 39 34.0	
	baz=147,slow=75,SNR=137						
DZM	**Mont Dzumac**	**39.76**	**14**	*e*LR	LR	17 11 14.0	
	comp=Z,1μm,25.4s						
ASAR	**Alice Springs**	**40.80**	**327**	P	**P**	**17 00 59.1**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=158,slow=8.2,SNR=10						
ASAR				LR	LR	17 15 20.8	
	comp=Z,308nm,18.9s,baz=158,slow=33						
ASAR	**Alice Springs**	**40.80**	**327**	P	**P**	**17 01 00.1**	**+0.5**
WR0	**Warramunga Arr**	**44.19**	**329**	P	**P**	**17 01 27.9**	**+0.8**
WR0				IAmb	IAmb	17 02 22.1	
	comp=Z,12nm,1.4s						
WB2	**Warramunga Arr**	**44.25**	**329**	P	**P**	**17 01 27.4**	**-0.2**
WRA	**Warramunga Arr**	**44.25**	**329**	P	**P**	**17 01 27.6**	**0.0**
	comp=Z,1.2nm,0.7s,baz=166,slow=7.3,SNR=8.6						
WRA				LR	LR	17 17 24.6	
	comp=Z,343nm,21.5s,baz=120,slow=33						
WRA	**Warramunga Arr**	**44.25**	**329**	P	**P**	**17 01 26.5**	**-1.2**
WRAB	**Tennant Creek**	**44.26**	**329**	P	**P**	**17 01 27.1**	**-0.6**
WRAB				IAmb	IAmb	17 02 31.4	
	comp=Z,21nm,1.6s						
WB0	**Warramunga Arr**	**44.41**	**329**	P	**P**	**17 01 28.8**	**0.0**
WB0				IAmb	IAmb	17 01 30.1	
	comp=Z,21nm,1.6s						
FITZ	**Fitzroy Crossi**	**48.48**	**319**	P	**P**	**17 01 59.4**	**-1.5**
	comp=Z,1.8nm,0.8s,baz=177,slow=0.3,SNR=5.9						
TBI	**Tubuai**	**52.55**	**69**	*e*LR	LR	17 17 52.6	
	comp=Z,190nm,25.5s						
TBI	**Tubuai**	**52.55**	**69**	*e*T	T	18 00 13.9	
	comp=Z,52nm,0.3s						
PPT2	**Papeete2**	**57.54**	**65**	*e*LR	LR	17 20 14.6	
	comp=Z,176nm,23.0s						
PPT	**Papeete**	**57.56**	**65**	LR	LR	17 24 58.3	
	comp=Z,126nm,18.7s,baz=224,slow=33						
VAH	**Vaihoa**	**60.48**	**66**	*e*T	T	18 10 01.4	
	comp=Z,56nm,0.2s						
PLCA	**Paso Flores**	**71.26**	**144**	LR	LR	17 30 29.6	
	comp=Z,163nm,18.5s,baz=222,slow=31						
H08S2	**Diego Garcia H**	**80.65**	**271**	T	T	18 33 09.7	
	baz=151,slow=76,SNR=40						
H08S1	**Diego Carcia H**	**80.66**	**271**	T	T	18 33 02.3	
	baz=151,slow=76,SNR=20						
H08S3	**Diego Garcia H**	**80.67**	**271**	T	T	18 33 06.5	
	baz=151,slow=76,SNR=54						
BOSA	**Boshof**	**82.22**	**222**	LR	LR	17 40 10.3	
	comp=Z,148nm,19.0s,baz=158,slow=34						
CPUP	**Villa Florida**	**88.38**	**150**	LR	LR	17 42 39.2	
	comp=Z,144nm,18.9s,baz=215,slow=33						
CMAR	**Chiang Mai Arr**	**91.86**	**306**	LR	LR	17 46 15.3	
	comp=Z,61nm,19.0s,baz=165,slow=35						
LPAZ	**La Paz**	**94.79**	**137**	LR	LR	17 40 50.2	
	comp=Z,86nm,21.7s,baz=160,slow=30						
MJAR	**Matsushiro Arr**	**98.68**	**345**	LR	LR	17 49 53.5	
	comp=Z,35nm,20.4s,baz=100,slow=34						
MKAR	**Makanchi Array**	**123.25**	**308**	PKP	**PKiKP**	**17 12 15.8**	**+1.5**
	comp=Z,0.2nm,0.7s,baz=126,slow=2.5,SNR=2.9						
YKA	**Yellowknife Ar**	**140.34**	**47**	PKP	**PKPdf**	**17 12 46.1**	**+0.5**
	comp=Z,0.1nm,0.5s,baz=247,slow=3.7,SNR=3.6						
AKASG	**Malin Array Be**	**149.71**	**274**	PKPbc	**PKiKP**	**17 13 07.9**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=94,slow=2.4,SNR=2.7						

INET ***16*** *16:57:47.3, 12.°73N×88.°13W, h71^{km}, ML3.3*

SNET ***16*** *16:57:48.2±1.1, 12.°73N×88.°26W, h15^{km}±999^{km}, ML3.5*

UCR 16 16:57:48.1±1.0, 12.°71N×88.°26W, h13^{km}±999^{km}, ML3.6, 2C-8D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**0.70**	**36**	⇓*i*P	Pg	16 58 00.8	-1.0
CNCH				IAML		16 58 01.6	
	comp=Z,2μm,0.2s						
CNCH				*e*S	Sb	16 58 11.8	-0.1
CNCH	**Conchagua**	**0.70**	**36**	⇓*i*P	Pg	16 58 00.8	-1.0
CNCH				IAML		16 58 01.6	
	comp=Z,2μm,0.2s						
CNCH				*e*S	Sb	16 58 11.8	-0.1
LCY	**Lacayo**	**0.71**	**357**	⇓*e*P	Pg	16 58 01.8	-0.3
LCY				*e*S	Sg	16 58 11.1	-0.4
LCY	**Lacayo**	**0.71**	**357**	⇓*e*P	Pg	16 58 01.8	-0.3
LCY				*e*S	Sg	16 58 11.1	-0.4
BLLM	**Bellamira**	**0.73**	**2**	⇑*i*P	Pg	16 58 01.8	-0.6
BLLM	**Bellamira**	**0.73**	**2**	⇑*i*P	Pg	16 58 01.8	-0.6
PACA	**Pacayal**	**0.76**	**355**	⇓*i*P	Pg	16 58 02.3	-0.6
PACA				*e*S	Sb	16 58 13.9	+0.3
PACA	**Pacayal**	**0.76**	**355**	⇓*i*P	Pg	16 58 02.3	-0.6
PACA				*e*S	Sb	16 58 13.9	+0.3
TECA	**Tecapa**	**0.82**	**343**	⇓*e*P	Pg	16 58 03.3	-0.7
TECA				*e*S	Sg	16 58 14.8	0.0
TECA	**Tecapa**	**0.82**	**343**	⇓*e*P	Pg	16 58 03.3	-0.7
TECA				*e*S	Sg	16 58 14.8	0.0

IDC ***16*** *17:13:03.4±1.8, 11.°33N×86.°70W, h0^{km}, mb3.5/4, mb1 3.9/6, mb1mx3.6/47, mbtmp3.7/6, ML3.7/2, MS3.7/4, Ms1 3.8/4, ms1mx3.0/37, Error ellipse: s-maj=60.7km s-min=13.3km az=37.0*

UCR ***16*** *17:13:07.5±1.4, 11.°22N×86.°91W, h32^{km}±35^{km}, MD4.2, MW4.1*

INET ***16*** *17:13:09.8, 11.°42N×86.°87W, h10^{km}, ML3.8*

ISC 16 17:13:08.4±0.9, 11.°28N±0.°08×86.°82W±0.°09, h35^{km}, n30, σ1^{s}.23/27, mb3.5/4, MS4.0/3, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASN	**Masaya**	**0.96**	**43**	*e*P	**Pn**	**17 13 26.4**	**+0.9**
NY14	**Universidad de**	**1.41**	**116**	*i* P	**Pn**	**17 13 31.8**	**+0.3**
CRIN	**San Cristobal**	**1.43**	**351**	*e*P	**Pn**	**17 13 32.1**	**+0.1**
BUEV	**Buena Vista**	**1.46**	**109**	*i* P	**Pn**	**17 13 32.4**	**-0.1**
GPS3	**Bodega del ICE**	**1.52**	**110**	*i* P	**Pn**	**17 13 33.3**	**+0.2**
GUAI	**GUAI**	**1.63**	**128**	*i* P	**Pn**	**17 13 33.9**	**-0.7**
GUAB	**Guayabo de Bag**	**1.66**	**110**	*i* P	**Pn**	**17 13 34.9**	**-0.2**
COLC	**Colonia**	**1.70**	**111**	*i* P	**Pn**	**17 13 35.8**	**+0.2**
PLVR	**Palo Verde**	**1.71**	**123**	*e*P	**Pn**	**17 13 35.6**	**-0.3**
CUI	**Cuipilapa**	**1.74**	**111**	*e*P	**Pn**	**17 13 36.6**	**+0.4**
CUI				*i* S	**Sn**	**17 13 56.3**	**-0.8**
MATN	**Matagalpa**	**1.86**	**28**	*e*P	**Pn**	**17 13 38.4**	**+0.5**
ACAL	**Aguas Claras**	**1.86**	**110**	*i* P	**Pn**	**17 13 37.9**	**-0.1**
PTEN	**Parque Tenorio**	**1.88**	**107**	*i* P	**Pn**	**17 13 38.3**	**+0.1**
JTS	**Las Juntas de**	**2.08**	**118**	Pn	**Pn**	**17 13 40.6**	**-0.2**
	9.6nm,0.3s,baz=23,slow=21,SNR=45						
JTS				Lg	Lg	17 14 05.6	
	27nm,0.3s,baz=0.0,slow=21,SNR=6.9						
CEDE	**Laguna Cedeo**	**2.22**	**111**	*e*P	**Pn**	**17 13 43.5**	**+0.7**
HDC	**Heredia**	**2.94**	**115**	*e*P	**Pn**	**17 13 56.5**	**+3.7**
SJS	**Escuela Geolog**	**3.02**	**116**	*e*P	**Pn**	**17 13 57.5**	**+3.5**
LCR2	**La Lucha 2**	**3.16**	**119**	*e*P	**Pn**	**17 13 57.8**	**+1.9**
APG	**El Apazote**	**5.13**	**317**	Pn	**Pn**	**17 14 24.1**	**+1.0**
	1.0nm,0.3s,baz=123,slow=10.0,SNR=7.9						
CMIG	**Matias Romero**	**9.72**	**307**	Pn	**Pn**	**17 15 26.7**	**+0.9**
	2.0nm,0.3s,baz=118,slow=7.8,SNR=13						
ROSC	**El Rosal**	**13.92**	**116**	LR	LR	17 22 22.4	
	comp=Z,50nm,18.5s,baz=46,slow=40						
TXAR	**Lajitas Array**	**23.87**	**321**	P	**P**	**17 18 19.2**	**+0.3**
	0.9nm,0.4s,baz=142,slow=11,SNR=7.1						
PDAR	**Pinedale Array**	**37.09**	**332**	P	**P**	**17 20 14.8**	**-1.0**
	0.3nm,0.6s,baz=114,slow=10,SNR=4.0						
SCHQ	**Schefferville**	**46.22**	**16**	P	**P**	**17 21 30.4**	**+0.4**
	1.0nm,0.8s,baz=226,slow=14,SNR=2.5						
RCBR	**Riachuelo**	**53.44**	**106**	LR	LR	17 45 21.5	
	comp=Z,124nm,19.4s,baz=141,slow=36						
YKA	**Yellowknife Ar**	**54.90**	**345**	P	**P**	**17 22 34.5**	**-0.8**
	0.3nm,0.7s,baz=143,slow=7.7,SNR=4.3						
DBIC	**Dimbokro**	**80.87**	**85**	LR	LR	17 58 45.5	
	comp=Z,163nm,21.9s,baz=138,slow=34						
TORD	**Torodi Ar. Bea**	**86.06**	**77**	LR	LR	18 02 31.0	
	comp=Z,54nm,19.8s,baz=190,slow=34						
ASAR	**Alice Springs**	**139.40**	**247**	PKP	**PKPdf**	**17 32 32.5**	**-0.5**
	0.4nm,1.1s,baz=146,slow=0.9,SNR=4.3						
WRA	**Warramunga Arr**	**139.53**	**253**	PKP	**PKPdf**	**17 32 33.2**	**0.0**
	0.4nm,0.9s,baz=91,slow=2.8,SNR=3.9						

TAP ***16*** *17:30:10.3, 24.°43N×122.°00E, h20^{km}, ML2.6, B*

JMA ***16*** *17:30:10.3, 24.°39N×122.°02E, h26^{km}, M1.9*

ISC 16 17:30:10.0±0.9, 24.°42N±0.°02×122.°03E±0.°02, h17^{km}±7^{km}, n69, σ0^{s}.52/124, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.16**	**37**	P	**Pb**	**17 30 15.3**	**+0.8**
	baz=45						
EOS1				S	**Sb**	**17 30 19.2**	**+1.6**
	baz=45						
TWC	**Suao**	**0.24**	**319**	*i* P	**Pb**	**17 30 15.8**	**-0.3**
	baz=323						
TWC				*i* S	**Sg**	**17 30 19.4**	**+0.1**
	baz=323						
ENA	**Nanau**	**0.26**	**271**	*i* P	**Pb**	**17 30 16.0**	**-0.3**
	baz=274						
ENA				*i* S	**Sb**	**17 30 20.7**	**+0.2**
	baz=274						
ILA	**Ilan**	**0.42**	**323**	*i* P	**Pb**	**17 30 19.4**	**+0.3**
	baz=323						
ILA				*i* S	**Sb**	**17 30 25.3**	**0.0**
	baz=323						
TWE	**Neicheng**	**0.44**	**312**	P	**Pb**	**17 30 19.3**	**-0.1**
	baz=315						
TWE				S	**Sg**	**17 30 25.2**	**+0.2**
	baz=315						
NTC	**Toucheng**	**0.46**	**337**	*e*P	**Pb**	**17 30 19.8**	**0.0**
	baz=346						
NACB	**Ninganchiao**	**0.47**	**238**	*e*P	**Pg**	**17 30 19.5**	**+0.1**
	baz=238						
NACB				*e*S	**Sb**	**17 30 26.8**	**+0.3**
	baz=238						
ENTT	**Nioudou**	**0.47**	**297**	P	**Pb**	**17 30 19.9**	**-0.1**
	baz=299						
ENTT				S	**Sb**	**17 30 26.4**	**-0.3**
	baz=299						
SLBB	**Yuanshan**	**0.48**	**313**	P	**Pg**	**17 30 19.3**	**-0.5**
	baz=315						
SLBB				*e*S	**Sg**	**17 30 26.0**	**-0.3**
	baz=315						
NDT	**Datong Townshi**	**0.50**	**291**	P	**Pb**	**17 30 20.3**	**-0.1**
	baz=292						
NDT				S	**Sb**	**17 30 27.4**	**-0.1**
	baz=292						
TWD	**Chiawan**	**0.52**	**229**	*i* P	**Pb**	**17 30 20.8**	**+0.1**
	baz=228						
TWD				S	**Sb**	**17 30 28.4**	**+0.3**
	baz=228						
ETLH	**Xiulin Townshi**	**0.54**	**247**	P	**Pg**	**17 30 20.8**	**0.0**
	baz=250						
ETLH				S	**Sb**	**17 30 28.9**	**+0.2**
	baz=250						
TIPB	**Shuangxi**	**0.57**	**342**	*e*P	**Pb**	**17 30 21.9**	**+0.2**
	baz=344						
TIPB				S	**Sg**	**17 30 29.0**	**-0.2**
	baz=344						
TWB1	**Santiao Chiao**	**0.58**	**357**	*i* P	**Pb**	**17 30 22.4**	**+0.6**
	baz=353						
TWB1				*e*S	**Sb**	**17 30 30.2**	**+0.3**
	baz=353						
NNSB	**Datong**	**0.59**	**271**	P	**Pg**	**17 30 21.6**	**-0.1**
	baz=275						
NNSB				S	**Sb**	**17 30 29.8**	**-0.3**
	baz=275						
NNSH	**Datong**	**0.59**	**271**	P	**Pg**	**17 30 21.4**	**-0.3**
	baz=275						
NNSH				S	**Sb**	**17 30 29.6**	**-0.4**
	baz=275						
NWLT	**Wulai**	**0.59**	**307**	P	**Pb**	**17 30 22.1**	**0.0**
	baz=302						
NWLT				S	**Sg**	**17 30 29.6**	**-0.1**
	baz=302						
NNS	**Nan Shan**	**0.59**	**272**	*i* P	**Pg**	**17 30 21.8**	**-0.1**
	baz=276						
NNS				*i* S	**Sg**	**17 30 29.7**	**-0.1**
	baz=276						
YHNB	**Yeheng**	**0.64**	**293**	*e*P	**Pb**	**17 30 22.8**	**0.0**
	baz=293						
YHNB				*e*S	**Sb**	**17 30 31.6**	**0.0**
	baz=293						
ENLB	**Shoufeng**	**0.65**	**217**	*e*P	**Pn**	**17 30 24.6**	**+0.1**
	baz=214						
NSK	**Sanguang**	**0.66**	**293**	*i* P	**Pb**	**17 30 23.2**	**+0.1**
	baz=293						
NSK				*i* S	**Sg**	**17 30 31.5**	**-0.3**
	baz=293						
WFSB	**Wu-fen Shan**	**0.68**	**341**	*e*P	**Pn**	**17 30 24.3**	**-0.7**
	baz=335						
WFSB				*e*S	**Sb**	**17 30 33.0**	**+0.3**
	baz=335						
TWA	**Mucha**	**0.68**	**324**	P	**Pn**	**17 30 24.3**	**-0.8**
	baz=333						
TWA				S	**Sb**	**17 30 32.9**	**0.0**
	baz=333						
NHDH	**Xindian Distri**	**0.70**	**320**	*e*P	**Pn**	**17 30 25.0**	**-0.3**
	baz=311						
NHDH				*e*S	**Sb**	**17 30 33.8**	**+0.5**
	baz=311						
TATO	**Taipei**	**0.73**	**318**	*e*P	**Pn**	**17 30 25.1**	**-0.6**
	baz=312						
TATO				*e*S	**Sg**	**17 30 34.5**	**+0.3**
	baz=312						
WHF	**Hehuan Shan**	**0.75**	**248**	*i* P	**Pg**	**17 30 24.5**	**-0.3**
	baz=253						
WHF				*i* S	**Sb**	**17 30 35.6**	**+0.6**
	baz=253						
TAP	**Taipei**	**0.77**	**322**	S	**Sn**	**17 30 37.2**	**-0.3**
	baz=317						
TDCB	**Techi**	**0.81**	**258**	P	**Pg**	**17 30 25.8**	**0.0**
	baz=257						
TDCB				S	**Sg**	**17 30 37.2**	**+0.6**
	baz=257						
ESL	**Shilin**	**0.81**	**222**	*e*P	**Pg**	**17 30 25.8**	**-0.1**
	baz=236						
ESL				*e*S	**Sn**	**17 30 39.1**	**+0.6**
	baz=236						
WLTB	**Daxi**	**0.82**	**301**	*e*P	**Pg**	**17 30 26.1**	**0.0**
	baz=303						
WLTB				*e*S	**Sg**	**17 30 37.0**	**+0.1**
	baz=303						
YM01	**YM01**	**0.83**	**330**	*e*P	**Pn**	**17 30 26.9**	**-0.2**
	baz=332						
YM01				*e*S	**Sg**	**17 30 37.5**	**+0.3**
	baz=332						
JYNG	**Yonagunijimaku**	**0.84**	**88**	P	**Pb**	**17 30 25.9**	**-0.3**
JYNG				S	**Sg**	**17 30 37.6**	**+0.1**
YM10	**YM10**	**0.84**	**330**	P	**Pn**	**17 30 27.1**	**-0.2**
	baz=333						
YM10				*e*S	**Sn**	**17 30 38.5**	**-0.9**
	baz=333						

YM11	YM11 baz=334	0.84	331	P	Pn	17 30 27.4	0.0
YM11	baz=334			eS	Sn	17 30 38.6	-0.8
YM05	YM05 baz=333	0.85	331	eP	Pn	17 30 27.3	0.0
YM05	baz=333			eS	Sg	17 30 38.4	+0.6
YM04	YM04 baz=331	0.85	329	eP	Pn	17 30 27.5	+0.1
YM04	baz=331			eS	Sn	17 30 39.1	-0.4
CHGB	Renai baz=249	0.86	245	P	Pn	17 30 27.1	-0.5
CHGB	baz=249			S	Sn	17 30 39.7	-0.2
YM08	YM08 baz=335	0.86	333	eP	Pn	17 30 27.1	-0.3
YM08	baz=335			eS	Sg	17 30 38.7	+0.6
TWS1	Kuangyinshan baz=316	0.87	321	eP	Pn	17 30 28.2	+0.6
TWS1	baz=316			eS	Sn	17 30 39.4	-0.5
ANP	Anpu baz=330	0.89	329	eP	Pn	17 30 27.7	-0.2
ANP	baz=330			eS	Sn	17 30 39.9	-0.6
YOJ	Yonaguni jima baz=80	0.90	87	eP	Pb	17 30 27.2	0.0
YOJ	Yonaguni jima	0.90	87	P	Pb	17 30 26.9	-0.3
YOJ				eS	Sg	17 30 39.6	+0.2
OWD	Renai baz=241	0.91	239	P	Pg	17 30 27.6	-0.1
OWD	baz=241			eS	Sn	17 30 40.8	-0.2
EGFH	Guangfu baz=229	0.93	216	P	Pn	17 30 28.5	+0.1
EGFH	baz=229			eS	Sn	17 30 42.1	+0.7
NCUH	Zhongli baz=314	0.94	305	eP	Pn	17 30 29.4	+0.9
NCUH	baz=314			eS	Sn	17 30 43.2	+1.7
LIOB	Emei baz=288	0.95	284	eP	Pn	17 30 28.6	0.0
LIOB	baz=288			eS	Sn	17 30 41.8	0.0
NSTT	Nanjuang baz=288	0.95	283	eP	Pn	17 30 28.9	+0.1
NSTT	baz=288			eS	Sg	17 30 41.3	+0.1
WHP	Taichung City baz=268	0.99	262	eP	Pg	17 30 29.7	+0.3
WHP	baz=268			S	Sg	17 30 42.3	-0.1
HSN	Hsinchu baz=296	1.03	292	eS	Sn	17 30 45.1	+1.3
VWDT	VWDT baz=228	1.05	231	eP	Pg	17 30 30.2	-0.2
VWDT	baz=228			eS	Sn	17 30 44.6	+0.4
DPDB	Guoxing baz=251	1.08	249	eP	Pg	17 30 30.8	-0.1
DPDB	baz=251			eS	Sg	17 30 45.9	+0.9
HGSD	Ruisui baz=207	1.08	211	eP	Pg	17 30 31.2	+0.3
HGSD	baz=207			eS	Sg	17 30 46.8	+1.8
EHY	Hungye baz=212	1.12	215	eP	Pb	17 30 30.6	-0.4
SMLT	Sun Moon Lake baz=232	1.16	243	eP	Pg	17 30 32.3	-0.2
SMLT	baz=232			eS	Sg	17 30 48.5	+0.8
SSLB	Suanglung baz=224	1.17	237	eP	Pg	17 30 32.6	0.0
SSLB	baz=224			eS	Sg	17 30 49.0	+1.2
YULB	Yu-li baz=210	1.22	213	eP	Pn	17 30 32.0	-0.5
TWF1	Yuli baz=225	1.26	212	eS	Sn	17 30 49.5	0.0
WHYT	Xinyi Township baz=239	1.29	236	eP	Pg	17 30 34.8	-0.2
WHYT	baz=239			eS	Sg	17 30 52.1	+0.2
YUS	Yu-Shan baz=207	1.35	227	eS	Sg	17 30 53.0	-0.9
ALS	Alishan baz=213	1.44	231	eP	Pg	17 30 37.7	-0.2
ALS	baz=213			eS	Sg	17 30 56.5	-0.1
CHN5	Tsauling baz=234	1.48	237	eP	Pg	17 30 37.8	-0.8
CHN5	baz=234			eS	Sg	17 30 58.4	+0.5
ELDTW	Lidau baz=201	1.54	217	eP	Pb	17 30 38.2	0.0
IRIF	Iriomote-Funau	1.56	93	P	Pn	17 30 35.9	-1.1
CHN4	Tsaushan baz=228	1.69	231	eP	Pb	17 30 41.3	+0.5
CHN4	baz=228			eS	Sg	17 31 04.0	-0.6
TPUB	Ta-pu baz=226	1.70	229	eP	Pb	17 30 40.9	0.0
TPUB	baz=226			eS	Sg	17 31 03.7	-1.1
WTP	Ta-pu baz=225	1.75	228	eP	Pb	17 30 41.7	0.0
WTP	baz=225			eS	Sg	17 31 05.5	-0.8
JKRS	Kuro-shima	1.82	95	P	Pn	17 30 40.6	0.0
JIJ	Ishigaki jima	1.93	91	P	Pn	17 30 41.7	-0.5
JISG	Ishigakijimahi	2.09	85	P	Pn	17 30 43.2	-1.1

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*NIED **16** 17:45:00, 27°.40N×127°.40E, h107^{km}, Mw4.0 Best double couple: M$_0$1.01000×10^{15} NP1:φ$_s$17.00000°, δ86.00000°, λ-48.00000°. NP2:φ$_s$112.00000°, δ42.00000°, λ-174.00000°.*

*IDC **16** 17:45:41.5±0.7, 27°.33N×127°.39E, h108^{km}±9^{km}, mb3.5/13, mb1 3.6/16, mb1mx3.4/47, mbtmp3.8/16, Error ellipse: s-maj=20.6km s-min=12.1km az=83.0*

*JMA **16** 17:45:43.2±0.2, 27°.39N×127°.43E, h109^{km}±3^{km}, M3.6*

ISC 16 17:45:42.6±0.7, **27°.34N**±0°.06×**127°.44E**±0°.07, **h118**^{km}±7^{km}, **n39**, σ**0^{s}89**/56, **mb3.7**/13, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIH	Iheya	0.55	123	P	Pn	17 46 01.2	+0.5
JIH				S	Sn	17 46 14.4	+0.1
JAGN	Aguni-jima	0.77	194	P	Pn	17 46 02.6	+0.3
JAGN				S	Sn	17 46 16.9	-0.3
JOW	Kunigami	0.90	124	P	Pn	17 46 03.9	+0.5
JOW				eS	Sn	17 46 18.8	-0.4
JOW	Kunigami 87nm,0.3s,baz=114,slow=15,SNR=2714	0.90	124	P	Pn	17 46 03.7	+0.2
JOW	115nm,0.3s,baz=94,slow=18,SNR=37			S	Sn	17 46 17.4	-1.8
JYRO	Yoronjima	0.95	109	P	Pn	17 46 04.4	+0.5
JYRO				S	Sn	17 46 19.4	-0.7
JNTH	Nagotoyohara	0.96	148	P	Pn	17 46 04.8	+0.7
JNTH				S	Sn	17 46 20.2	-0.2
JOKE	Okinoerabujima	1.00	88	P	Pn	17 46 04.8	+0.3
JOKE				S	Sn	17 46 20.6	-0.4
JKE	Kume jima 2	1.17	210	P	Pn	17 46 06.5	+0.3
JKE				S	Sn	17 46 23.4	-0.6
JJT3	Tamagusuku3	1.23	166	P	Pn	17 46 08.2	+1.4
JJT3				S	Sn	17 46 26.5	+1.3
JTK	Tokunoshima	1.41	71	P	Pn	17 46 09.0	+0.2
JTK				S	Sn	17 46 28.1	-0.7
JAMN	Amaminishikomi	1.78	59	P	Pn	17 46 13.2	0.0
JAMN				S	Sn	17 46 35.3	-1.3
JAM	Amami Oshima	2.19	60	P	Pn	17 46 18.4	+0.1
JAM				S	Sn	17 46 44.7	-1.0
JTAJ	Takarajima	2.38	40	P	Pn	17 46 21.3	+0.5
JTAJ				S	Sn	17 46 51.3	+1.2
JZK	Kikaishima	2.44	66	P	Pn	17 46 22.1	+0.6
JZK				S	Sn	17 46 52.3	+0.9
JNU	Nakatsue 4.3nm,0.3s,baz=342,slow=16,SNR=53	6.49	26	P	Pn	17 47 16.4	+0.9
JNU	0.3nm,0.3s,baz=344,slow=20,SNR=2.1			S	Sn	17 48 30.2	+2.0
KSRS	Korea Array 0.1nm,0.3s,baz=177,slow=13,SNR=5.3	10.10	2	P	Pn	17 48 05.0	+0.8
MJAR	Matsushiro Arr 0.1nm,0.3s,baz=246,slow=14,SNR=9.0	12.94	42	P	Pn	17 48 43.6	+1.5
SONM	Songino Array 1.7nm,0.4s,baz=144,slow=11,SNR=19	26.25	327	P	P	17 51 07.5	+0.8
TAPN	Taplejung 1.3nm,0.3s	35.19	279	eP	P	17 52 27.3	+1.6
ODAN	Odare 7.7nm,0.5s	35.55	279	eP	P	17 52 29.1	+0.3
GUN	Gumba	36.70	281	eP	P	17 52 39.6	+0.9
PKI	Pulchoki	37.17	280	eP	P	17 52 42.6	0.0
PKIN	Phulchoki 2.5nm,0.4s	37.18	280	eP	P	17 52 42.6	0.0
KKN	Kakani	37.25	281	eP	P	17 52 43.3	+0.2
GKN	Gorkha	37.77	281	eP	P	17 52 47.6	+0.1
DANN	Dangsing 8.9nm,0.6s	38.48	282	eP	P	17 52 53.8	+0.2
MKAR	Makanchi Array 0.8nm,0.5s,baz=93,slow=10,SNR=16	40.28	311	P	P	17 53 07.0	-0.9
MKAR	0.2nm,0.4s,baz=100,slow=2.6,SNR=4.8			PcP	PcP	17 55 09.7	+0.4
ZALV	Zalesovo Beam 0.8nm,0.5s,baz=118,slow=8.9,SNR=4.8	40.94	322	P	P	17 53 11.5	-1.8
ZALV	0.5nm,0.4s,baz=134,slow=3.8,SNR=3.4			PcP	PcP	17 55 10.9	-0.4
AAK	Ala-Archa 0.4nm,0.5s,baz=169,slow=10	45.27	304	P	P	17 53 48.7	+0.3
WRA	Warramunga Arr 0.2nm,0.5s,baz=353,slow=8.5,SNR=4.1	47.47	171	P	P	17 54 05.8	+0.2
ASAR	Alice Springs 0.2nm,0.6s,baz=357,slow=8.8,SNR=6.8	51.09	172	P	P	17 54 34.7	+1.6
ILAR	Eielson Array 0.3nm,0.4s,baz=239,slow=4.4,SNR=9.0	63.80	28	P	P	17 56 00.9	-0.8
KBZ	Khabaz 2.3nm,0.8s,baz=121,slow=5.4,SNR=4.1	67.92	309	P	P	17 56 29.1	+0.7
FINES	FINESS Array B 0.8nm,0.4s,baz=55,slow=4.6,SNR=9.5	71.56	330	P	P	17 56 50.5	+0.1
AKASG	Malin Array Be 0.3nm,0.3s,baz=61,slow=7.6,SNR=3.8	74.24	319	P	P	17 57 04.5	-2.0
BRTR	Keskin Array B 0.9nm,0.6s,baz=122,slow=3.1,SNR=5.6	75.80	307	P	P	17 57 15.6	-0.3
YKA	Yellowknife Ar 0.9nm,0.7s,baz=297,slow=5.7,SNR=11	77.82	25	P	P	17 57 26.6	0.0
NB2	NORSAR Subarra comp=Z,0.6nm,0.6s,baz=54,slow=5.6	78.01	333	P	P	17 57 27.1	-0.6
NOA	NORSAR Array B comp=Z,0.7nm,0.6s,baz=52,slow=5.7,SNR=3.4	78.01	333	P	P	17 57 26.9	-0.8

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*IDC **16** 18:14:01.7±4.2, 10°.79N×126°.57E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.2/48, mbtmp3.4/3, Error ellipse: s-maj=323.6km s-min=28.3km az=66.0*

*MAN **16** 18:14:05.0, 10°.36N×125°.11E, h1^{km}, mb4.7, ML3.6, MS3.5*

ISC 16 18:14:06.1±1.2, **10°.36N**±0°.03×**125°.07E**±0°.04, **h15**^{km}±9^{km}, **n16**, σ**2^{s}26**/25, **mb3.4**/3, **1C-3D**, **Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	Maasin	0.30	223	eP	Pg	18 14 12.3	-0.2
MSLP				eS	Sb	18 14 18.3	+0.3
SCPH	Surigao	0.70	144	eP	Pg	18 14 18.1	-1.7
SCPH				eS	Sb	18 14 29.5	0.0
OCLP	Ormoc	0.83	327	eP	Pg	18 14 21.0	-1.2
OCLP				eS	Sn	18 14 37.6	+2.4
LLP	Lapu-Lapu	1.09	268⇓	eP	Pb	18 14 25.9	-0.8
LLP				eS	Sn	18 14 42.2	+0.6
TBP	Tagbilaran	1.36	241	eP	Pn	18 14 30.5	-0.1
TBP				i S	Sg	18 15 01.1	+11
BUTP	Butuan	1.48	158	eP	Pb	18 14 32.3	-1.1
BUTP				eS	Sg	18 15 00.9	+7.0
CNP	Catarman	2.18	349	eP	Pn	18 14 42.9	+1.1
CNP				eS	Sb	18 15 12.5	+0.4
GUIM	Jordan	2.46	277	eP	Pb	18 14 48.1	-1.9
GUIM				eS	Sb	18 15 19.5	-0.5
BUKP	Musuan	2.46	180	eP	Pn	18 14 47.0	+1.2
BUKP				eS	Sb	18 15 18.1	-2.1
RCP	Roxas	2.58	298⇑	eP	Pn	18 14 49.0	+1.6
CTBH	Cotabato--PC H	3.22	195⇓	iP	Pg	18 15 07.4	-0.5
KCP	Kidapawan	3.33	180⇓	eP	Pb	18 15 00.9	-4.0
PVCP	Virac	3.34	345	eP	Pn	18 14 59.5	+1.7
PVCP				eS	Sg	18 15 51.9	-1.7
WRA	Warramunga Arr 0.4nm,0.9s,baz=349,slow=8.9,SNR=2.8	31.46	163	P	P	18 20 25.3	-2.0
ASAR	Alice Springs 0.3nm,0.6s,baz=345,slow=7.1,SNR=9.8	34.90	166	P	P	18 20 55.9	-1.4
MKAR	Makanchi Array 0.4nm,0.8s,baz=124,slow=7.2,SNR=3.9	51.25	323	P	P	18 23 11.3	+2.0

IDC 16 18:14:45.3±2.0, **6°.44S**×**129°.05E**, **h0**^{km}, **mb3.3**/1, **mb1 3.2**/3, **mb1mx3.0**/41, **mbtmp3.1**/3, **ML3.1**/2, **Error ellipse: s-maj=122.9km s-min=31.0km az=68.0**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.1nm,0.3s,baz=338,slow=13,SNR=9.5	14.37	160	Pn	Pn	18 18 09.3	-0.9
WRA	0.1nm,0.3s,baz=2.2,slow=23,SNR=5.7			Sn	Sn	18 20 40.2	-10
ASAR	Alice Springs 0.1nm,0.3s,baz=339,slow=9.9,SNR=7.9	17.75	165	P	P	18 18 54.7	-0.3
MKAR	Makanchi Array 0.1nm,0.5s,baz=130,slow=6.2,SNR=2.5	67.25	327	P	P	18 25 41.7	0.0

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*SJA **16** 18:21:09.9±0.7, 29°.97S×69°.58W, h116^{km}±2^{km}, ML3.0, MW3.0*

*GUC **16** 18:21:10.0±0.6, 29°.98S×69°.67W, h120^{km}±6^{km}, ML3.5*

ISC 16 18:21:10.7±1.5, **30°.00S**±0°.04×**69°.62W**±0°.04, **h120**^{km}±9^{km}, **n22**, σ**0^{s}50**/34, **6C**, **Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AROD	Rodeo	0.21	144	i P	Pn	18 21 27.8	-0.1
AROD				eS	Sn	18 21 40.3	-0.4
ACDV	Cuesta del Vie	0.46	112	i P	Pn	18 21 28.4	-0.2
ACDV				eS	Sn	18 21 41.5	-0.7
ACCO	Cerro Coronel	0.76	141	i P	Pn	18 21 30.9	0.0
ACCO				eS	Sn	18 21 46.3	+0.1
GO04	Tololo Observa	1.04	260⇑	iP	Pn	18 21 33.4	0.0
GO04				eS	Sn	18 21 51.0	+0.4
GO04	Tololo Observa	1.04	260	i P	Pn	18 21 33.6	+0.2
GO04				eS	Sn	18 21 50.8	+0.1
CO03	El Pedregal	1.25	228⇑	iP	Pn	18 21 35.5	+0.1
CO03				eS	Sn	18 21 54.7	+0.5
CO03	comp=N,1μm,0.1s			IAML		18 21 56.9	
AMOG	MOGNA	1.35	134	i P	Pn	18 21 36.2	-0.3
RTLL	Cerro Villicun	1.65	144	i P	Pn	18 21 40.0	0.0
RTLL				eS	Sn	18 22 01.9	-0.4
CO02	Combarbal	1.69	224⇑	iP	Pn	18 21 40.4	-0.1
CO02				eS	Sn	18 22 03.4	0.0
CO02	comp=N,870nm,0.1s			IAML		18 22 05.8	
ZON	Zonda	1.74	153	i P	Pn	18 21 41.1	0.0
ZON	comp=Z,55nm,0.5s			IAML		18 22 04.2	
VCA	Vinchina	1.76	45⇑	iP	Pn	18 21 41.9	+0.5
VCA				eS	Sn	18 22 06.1	+1.3
VCA	comp=E,522nm,0.4s			IAML		18 22 08.0	
RTLS	Leoncito	1.82	171	i P	Pn	18 21 43.1	+0.9
RTLS				eS	Sn	18 22 07.1	+0.9
RTLS	comp=Z,128nm,0.3s			IAML		18 22 10.0	
CFA	Coronel Fontan	1.99	144	i P	Pn	18 21 44.3	+0.2
RTCV	Cerro Valdivia	2.08	154	i P	Pn	18 21 45.7	+0.5
ACLC	CERRO LA CRUZ	2.39	77	i P	Pn	18 21 49.1	-0.1
GO03	Copiap	2.46	347⇑	iP	Pn	18 21 50.1	+0.1
GO03				eS	Sn	18 22 19.8	-0.4
GO03	comp=N,150nm,0.3s			IAML		18 22 22.5	
APLL	PUNTA DE LOS L comp=Z,51nm,0.3s	2.70	99	IAML		18 21 52.9	
APLL				i P	Pn	18 21 52.9	-0.2
ACAN	Cantantal	3.08	138	i P	Pn	18 21 58.3	+0.3
ROCH	El Roble	3.19	202⇑	iP	Pn	18 21 58.9	-0.9
ROCH				i S	Sn	18 22 36.9	-0.7
ROCH	comp=N,72nm,0.6s			IAML		18 22 40.2	
PEL	Peldehue	3.27	196	i P	Pn	18 22 00.6	+0.1
CYA	Choya	3.68	66	i P	Pn	18 22 05.2	-0.8
CYA	comp=Z,23nm,0.5s			IAML		18 22 06.9	
MRA	San Martin	4.12	127	i P	Pn	18 22 12.0	0.0
MRA	comp=Z,34nm,0.5s			IAML		18 22 59.4	

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*NEIC **16** 18:29:42.8±1.9, 59°.9S±0°.1×26°.0W±0°.3, h10^{km}±1^{km}, mb4.3/8, Error ellipse: s-maj=35.1km s-min=9.4km az=55.0*

*IDC **16** 18:29:42.9±0.9, 59°.58S×26°.08W, h0^{km}, mb3.9/4, mb1 4.1/5, mb1mx3.8/22, mbtmp4.0/5, ML4.3/1, Error ellipse: s-maj=45.3km s-min=27.1km az=73.0*

ISC 16 18:29:48.2±0.7, **59°.9S**±0°.1×**26°.3W**±0°.1, **h35**^{km}, **n22**, σ**1^{s}90**/23, **mb4.0**/7, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.14	153	P	Pn	18 32 52.9	+1.0
VNA3	Neumayer Olymp	13.28	156	P	Pn	18 32 54.3	+0.4
VNA2	Neumayer--Watz baz=307,slow=15	13.54	153	P	Pn	18 32 57.1	-0.3
SNAA	Sanae	15.12	151	P	Pn	18 33 19.0	+0.1
SNAA	Sanae 1.2nm,0.3s,baz=334,slow=8.4,SNR=43	15.12	151	Pn	Pn	18 33 19.1	+0.1
SNAA	0.2nm,0.3s,baz=310,slow=14,SNR=3.4			Sn	Sn	18 35 54.4	-11
SNAA	Sanae	15.12	151	P	Pn	18 33 19.3	+0.4
SNAA					Sn	18 36 00.2	-4.7
EFI	East Falkland	19.48	281		Pn	18 34 14.8	+1.6
EFI	comp=Z,70nm,1.5s			IAmb	IAmb	18 34 30.9	
GO09	Cerro Castillo	26.89	268	P	P	18 35 25.1	-0.4
QSPA	South Pole Qui	30.39	180	P	P	18 35 53.6	-3.1
QSPA	comp=Z,0.9nm,0.8s			IAmb	IAmb	18 36 07.8	
MAW	Mawson	36.87	140	P	P	18 36 56.5	+3.9
GO05	Huala	38.47	289	P	P	18 37 05.4	-1.1
GO05	comp=Z,19nm,1.4s			IAmb	IAmb	18 37 11.3	
ROC1	El Roble	39.71	292	P	P	18 37 16.1	-1.1
VNDA	Vanda comp=Z,1.0nm,0.7s,baz=193,slow=1.9,SNR=4.4	42.79	183	P	P	18 37 44.9	+3.2
LPAZ	La Paz comp=Z,0.6nm,0.4s,baz=186,slow=5.5,SNR=6.0	52.99	307	P	P	18 39 01.6	-0.3
LPAZ	La Paz	52.99	307	P	P	18 39 01.6	-0.3
LPAZ	comp=Z,2.0nm,1.1s			IAmb	IAmb	18 39 19.9	
TOA0	Torodi Ar. Sit	76.17	28	P	P	18 41 32.3	-0.1
TOA0	comp=Z,4.2nm,1.2s			IAmb	IAmb	18 41 39.6	
TORD	Torodi Ar. Bea comp=Z,0.4nm,0.4s,baz=197,slow=6.7,SNR=7.3	76.17	28	P	P	18 41 31.6	-0.8
TORD	Torodi Ar. Bea	76.17	28	P	P	18 41 30.3	-2.1
ASAR	Alice Springs comp=Z,0.5nm,0.8s,baz=183,slow=4.1,SNR=6.7	95.22	162	P	P	18 43 08.3	+0.3
YKA	Yellowknife Ar comp=Z,0.2nm,0.6s,baz=140,slow=2.9,SNR=3.7	139.25	315	PKP	PKPdf	18 49 10.6	+0.9
SONM	Songino Array comp=Z,0.6nm,0.5s,baz=210,slow=5.1,SNR=3.7	150.30	92	PKPbc	PKPbc	18 49 34.2	-0.4
ILAR	Eielson Array comp=Z,0.2nm,0.3s,baz=144,slow=2.0,SNR=6.8	152.87	306	PKPbc	PKPbc	18 49 38.8	-1.1

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*CNRM **16** 18:32:33.4, 31°.82N×5°.20W, h2^{km}*

*INMG **16** 18:32:35.2±1.2, 31°.88N×5°.24W, h10^{km}, ML2.4, Error ellipse: s-maj=10.9km s-min=9.1km az=19.0*

*MDD **16** 18:32:38.8±4.4, 32°.18N×4°.92W, h0^{km}, mb4.5/1, Error ellipse: s-maj=61.2km s-min=38.3km az=74.0, PRXIMO SIN SOLUCIN*

ISC 16 18:32:33.1±1.0, **31°.84N**±0°.03×**5°.26W**±0°.03, **h14**^{km}±9^{km}, **n26**, σ**1^{s}82**/44, **Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOLM	Goulmima	0.29	117	P	Pg	18 32 39.1	-0.2
GOLM				S	Sg	18 32 42.9	-0.6
ARF	Arif	0.97	114	P	Pg	18 32 51.0	-1.0
ARF				S	Sg	18 33 03.1	-1.6
TZRR	Tazzarine	1.08	194	P	Pn	18 32 54.6	+0.6
TZRR				S	Sn	18 33 09.1	+0.3
MD31	MD31	1.11	22	P	Pg	18 32 54.6	+0.1
MD31				S	Sg	18 33 09.0	0.0
MDT	Midelt SNR=220	1.12	29	P	Pb	18 32 54.5	+0.2
MDT				S	Sb	18 33 10.4	+1.6
CZD	Col de Zad	1.21	9	P	Pn	18 32 57.0	+1.2
CZD				S	Sn	18 33 13.7	+1.6
OUZM	OUZ	1.58	235	P	Pg	18 33 03.4	-0.1
OUZM				S	Sg	18 33 25.6	+1.5
ZGR	Zagora	1.74	190	P	Pb	18 33 04.8	-0.1
ZGR				S	Sg	18 33 29.4	+0.2
LCRM	LCR	1.87	10	P	Pb	18 33 07.6	+0.4
LCRM				S	Sg	18 33 33.0	-0.4
ZHG	ZHG	1.98	324	P	Pg	18 33 10.5	-0.7
ZHG				S	Sb	18 33 33.6	0.0
SICH	Sidi Chahed	2.26	359	P	Pb	18 33 13.4	-0.3
SICH				S	Sb	18 33 43.5	+1.9
OUK	Oukaimeden	2.31	255	P	Pg	18 33 15.8	-1.7
PBDV	Barranco-do-Ve	5.83	338	ePn	Pn	18 34 00.5	+1.4
PBDV				eSn	Sn	18 35 04.5	-1.2
PBDV	1.5nm,0.2s			A	A	18 35 06.3	
PVAQ	Vaqueiros	5.91	341	ePn	Pn	18 34 01.6	+1.4
PVAQ				eSn	Sn	18 35 05.7	-2.0
PVAQ	3.8nm,0.4s			A	A	18 35 07.7	
EGRO	El Granado 0.8nm,0.1s,SNR=5.7	5.97	343	P	Pn	18 34 02.5	+1.4
EGRO	0.5nm,0.1s,SNR=7.9			S	Sn	18 35 06.2	-3.0
EMIN	Mina Concepcio 0.2nm,0.1s,SNR=7.9	6.03	349	P	Pn	18 34 02.7	+0.8
EMIN	0.2nm,0.1s,SNR=7.9			S	Sn	18 35 07.6	-3.0
PFVI	Vila Bisbo 1.7nm,0.1s,SNR=7.9	6.05	332	P	Pn	18 34 08.2	+6.1
PFVI	3.6nm,0.2s,SNR=7.9			S	Sn	18 35 10.6	-0.5
PFVI	Vila Bisbo	6.05	332	eSn	Sn	18 35 10.9	-0.2
MORF	Marmelete	6.13	334	eSn	Sn	18 35 12.4	-0.8
MORF	2.5nm,0.2s			A	A	18 35 15.2	
PCVE	Castro Verde	6.22	339	eSn	Sn	18 35 13.7	-1.6
PCVE	2.0nm,0.3s			A	A	18 35 17.5	
ECAB	El Cabril 0.1nm,0.1s,SNR=7.9	6.22	359	P	Pn	18 34 08.2	+3.6
ECAB	0.4nm,0.2s,SNR=7.9			S	Sn	18 35 11.5	-4.1
MESJ	Messejana	6.46	339	eSn	Sn	18 35 20.6	-0.8
MESJ	2.9nm,0.4s			A	A	18 35 23.8	
PNCL	Nicolau / Gran	6.81	338	ePn	Pn	18 34 14.0	+1.4
PNCL				eSn	Sn	18 35 28.1	-1.8
PNCL	1.5nm,0.6s			A	A	18 35 30.3	
EBAD	Badajoz 0.8nm,0.1s,SNR=7.8	7.05	349	P	Pn	18 34 17.5	+1.6
EBAD	0.3nm,0.1s,SNR=7.9			S	Sn	18 35 30.9	-4.9
PESTR	Estremoz	7.27	345	eSn	Sn	18 35 38.5	-2.7
PMRV	Marv??o	7.77	348	eSn	Sn	18 35 50.8	-2.8
PMRV	1.4nm,0.6s			A	A	18 35 53.9	

IDC 16 18:47:29.6±6.2, **5°.59S**×**147°.60E**, **h167**^{km}±65^{km}, **mb2.7**/1, **mb1 3.1**/3, **mb1mx2.8**/24, **mbtmp3.5**/3, **Error ellipse: s-maj=120.4km s-min=48.3km az=120.0**, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby 3.8nm,0.3s,baz=344,slow=6.0,SNR=18	3.82	187	P	Pn	18 48 29.5	+1.5
PMG	3.7nm,0.3s,baz=70,slow=23,SNR=12			S	Sn	18 49 13.4	-0.2
WRA	Warramunga Arr 0.3nm,0.3s,baz=47,slow=11,SNR=9.6	19.24	221	P	P	18 51 41.4	+0.1
ASAR	Alice Springs 0.4nm,0.6s,baz=38,slow=10.0,SNR=12	22.30	215	P	P	18 52 14.0	+0.5
TORD	Torodi Ar. Bea 0.6nm,0.9s,baz=57,slow=3.2,SNR=3.0	145.57	285	PKPbc	PKPdf	19 06 48.1	-0.9

RSNC 16 18:58:04.0±1.2, 7°.44N×73°.20W, h130km±4km, ML3.6, Mw3.9, 9C-5D, Fault plane solution: NP1:φs9.00000°, δ90.00000°, λ38.00000°., Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	0.50	101	⇑*i*P	Pn	18 58 23.8	+0.1
PAMC				*e*S	Sn	18 58 38.5	0.0
PAMC				*i*		18 58 40.9	
	comp=Z,987nm,0.6s						
BRRC	Barranca, Sant	0.61	237	⇓*i*P	Pn	18 58 23.3	-0.4
BRRC				*e*S	Sn	18 58 38.3	-0.4
BRRC				*i*		18 58 42.4	
	comp=Z,584nm,0.5s						
OCAC	Ocana	0.80	351	⇓*i*P	Pn	18 58 25.1	-0.3
OCAC				*e*S	Sn	18 58 41.6	-0.1
OCAC				*i*		18 58 44.0	
	comp=Z,1µm,0.2s						
BARC	Barichara	0.84	179	⇑*i*P	Pn	18 58 25.6	-0.3
BARC				*e*S	Sn	18 58 41.8	-0.5
BARC				*i*		18 58 45.7	
	comp=Z,581nm,0.3s						
PTBC	PUERTO BERRIO,	1.54	235	*e*P	Pn	18 58 31.7	-0.9
PTBC				*e*S	Sn	18 58 54.0	-0.3
PTBC				*i*		18 58 55.6	
	comp=Z,487nm,0.2s						
RUSC	La Rusia	1.54	176	⇓*e*P	Pn	18 58 31.9	-1.2
RUSC				*e*S	Sn	18 58 54.9	-0.3
RUSC				*i*		18 58 57.5	
	comp=Z,118nm,0.3s						
SMLC	San Martn de	1.61	327	⇓*e*P	Pn	18 58 32.2	-1.1
SMLC				*e*S	Sn	18 58 54.5	-1.3
SMLC				*i*		18 58 56.9	
	comp=Z,833nm,0.1s						
ZARC	Zaragoza, Cauc	1.65	272	*e*P	Pn	18 58 33.6	-0.2
ZARC				*e*S	Sn	18 58 56.5	0.0
ZARC				*i*		18 58 59.8	
	comp=Z,750nm,0.2s						
TAMC	Tame, Arauca	1.71	125	*e*P	Pn	18 58 34.2	-0.4
TAMC				*e*S	Sn	18 58 57.5	-0.5
TAMC				*i*		18 59 00.1	
	comp=Z,416nm,0.3s						
SPBC	San Pablo de B	1.98	206	*e*P	Pn	18 58 37.5	-0.4
SPBC				*e*S	Sn	18 59 03.6	-0.1
SPBC				*i*		18 59 10.9	
	comp=Z,547nm,0.3s						
UREC	San Jos de Ur	2.34	278	*e*P	Pn	18 58 40.8	-1.4
UREC				*e*S	Sn	18 59 09.1	-2.4
UREC				*i*		18 59 12.5	
	comp=Z,425nm,0.4s						
SOCV	Socops	2.47	70	⇑*i*P	Pn	18 58 43.0	-0.9
SOCV				*e*S	Sn	18 59 12.2	-2.2
CODC	Agustn Codazz	2.49	354	⇓*i*P	Pn	18 58 43.3	-0.9
CODC				*e*S	Sn	18 59 13.7	-1.3
CODC				*i*		18 59 22.6	
	comp=Z,121nm,0.7s						
NORC	Norcasia	2.50	222	*e*P	Pn	18 58 43.3	-0.9
NORC				*e*S	Sn	18 59 14.6	-0.6
NORC				*i*		18 59 20.8	
	comp=Z,272nm,0.2s						
CTAB	Cerro Tablazo,	2.61	203	*e*P	Pn	18 58 47.6	+1.5
CTAB				*e*S	Sn	18 59 20.8	+2.4
ARGC	Ariguani, Magd	2.62	337	*e*P	Pn	18 58 46.1	+0.3
ARGC				*e*S	Sn	18 59 19.4	+1.6
ARGC				*i*		18 59 26.1	
	comp=Z,108nm,0.2s						
HELC	Santa Helena	2.63	242	*e*P	Pn	18 58 45.8	-0.4
HELC				*e*S	Sn	18 59 16.6	-2.0
HELC				*i*		18 59 26.3	
	comp=Z,246nm,0.3s						
ROSC	El Rosal	2.81	203	⇑*e*P	Pn	18 58 49.7	+1.1
ROSC				*e*S	Sn	18 59 22.9	0.0
ROSC				*i*		18 59 34.7	
	comp=Z,228nm,0.5s						
CHIC	Chingaza	2.84	191	⇑*e*P	Pn	18 58 48.8	-0.2
CHIC				*e*S	Sn	18 59 24.2	+0.6
CHIC				*i*		18 59 32.4	
	comp=Z,173nm,0.8s						
SDV	Santo Domingo	2.92	60	⇑*i*P	Pn	18 58 49.2	-0.5
SDV				*e*S	Sn	18 59 21.0	-4.0
SDV				*i*		18 59 25.1	
	comp=Z,68nm,0.7s						
DBBC	Dabeiba	3.02	262	⇑*e*P	Pn	18 58 50.4	-0.5
DBBC				*e*S	Sn	18 59 23.4	-3.7
CVER	Cruz Verde, Cu	3.03	197	*e*P	Pn	18 58 53.1	+1.6
CVER				*e*S	Sn	18 59 29.8	+1.8
GUY2C	Guyana, Caldas	3.08	225	*e*P	Pn	18 58 51.6	-0.6
GUY2C				*e*S	Sn	18 59 28.7	-0.5
GUY2C				*i*		18 59 42.7	
	comp=Z,247nm,0.5s						
CBOC	Ciudad Bolivar	3.20	241	⇑*e*P	Pn	18 58 53.6	+0.1
CBOC				*e*S	Sn	18 59 30.5	-1.2
CBOC				*i*		18 59 47.8	
	comp=Z,104nm,0.5s						
RREF	El Recreo	3.31	220	*e*P	Pn	18 58 54.8	-0.4
RREF				*e*S	Sn	18 59 34.4	-0.3
RREF				*i*		18 59 43.1	
	comp=Z,169nm,0.4s						
VILC	Villavicencio,	3.34	189	*e*P	Pn	18 58 54.9	-0.4
VILC				*e*S	Sn	18 59 34.4	-0.5
VILC				*i*		18 59 47.6	
	comp=Z,255nm,0.3s						
LCBC	Los crdobas,	3.44	294	*e*P	Pn	18 58 54.9	-1.5
LCBC				*e*S	Sn	18 59 36.6	-0.3
LCBC				*i*		18 59 43.8	
	comp=Z,103nm,0.6s						
TOLC	Tolima	3.54	217	*e*P	Pn	18 58 58.0	+0.1
TOLC				*i*		18 59 47.0	
	comp=Z,108nm,0.5s						
ANIL	Santa Ana	3.66	217	*e*P	Pn	18 59 00.1	+0.5
ANIL				*e*S	Sn	18 59 44.1	+1.5
ANIL				*i*		18 59 52.4	
	comp=Z,506nm,0.3s						
ELOV	Elorza	3.71	97	⇑*i*P	Pn	18 58 58.7	-1.2
PLMC	San Jos del P	3.97	231	*e*P	Pn	18 59 03.1	-0.4
PLMC				*i*		18 59 57.6	
	comp=Z,72nm,0.3s						
ORTC	Ortega, Tolima	4.06	210	*e*P	Pn	18 59 03.9	-0.7
ORTC				*e*S	Sn	18 59 50.8	-0.8
ORTC				*i*		19 00 02.4	
	comp=Z,120nm,0.7s						
MACC	Macarena, Meta	5.30	187	*e*P	Pn	18 59 19.3	-1.9
MACC				*e*S	Sn	19 00 15.2	-6.2
MACC				*i*		19 00 46.6	
	comp=Z,42nm,0.6s						
PCON	Cinco Dias	6.00	212	*e*P	Pn	18 59 31.1	+0.1
PCON				*e*S	Sn	19 00 38.9	0.0
PCON				*i*		19 01 08.8	
	comp=Z,18nm,1.2s						
FLOC	Florencia	6.31	203	*e*P	Pn	18 59 33.3	-1.5
FLOC				*e*S	Sn	19 00 45.8	0.0
FLOC				*i*		19 01 27.3	
	comp=Z,24nm,1.4s						

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*IDC **16** 19:02:19.7±2.0, 43°.69N×105°.36W, h0km, mb1 3.6/3, mb1mx3.3/36, mbtmp3.4/3, ML3.5/3, Error ellipse: s-maj=46.5km s-min=9.0km az=150.0*

*NEIC **16** 19:02:21.6±1.5, 43°.80N±0°.05×105°.22W±0°.02, h0km±2km, ML3.3/52, Error ellipse: s-maj=8.9km s-min=3.2km az=355.0*

ISC 16 19:02:20.4±1.0, 43°.79N±0°.06×105°.19W±0°.07, h0km, n61, σ1s.21/60, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.90	68		Pb	19 02 39.8	+0.7
K22A	Casper	1.49	221		Pn	19 02 47.3	-1.4
K22A				IAML		19 03 11.1	
	comp=N,394nm,0.3s						
K22A				IAML		19 03 11.2	
	comp=E,414nm,0.3s						
RWWY	Rawlins	2.57	216		Pn	19 03 03.8	+0.3
RWWY				IAML		19 03 40.1	
	comp=E,161nm,0.6s						
RWWY				IAML		19 03 43.2	
	comp=E,160nm,0.9s						
N23A	Red Feather La	2.94	191		Pn	19 03 10.1	+1.4
N23A				IAML		19 03 53.9	
	comp=N,128nm,0.7s						
N23A				IAML		19 03 56.7	
	comp=E,85nm,0.6s						
LAO	LASA Array	2.99	346		Pn	19 03 10.4	+1.2
RLMT	Red Lodge	3.21	296		Pn	19 03 12.8	+0.4
RLMT				IAML		19 04 10.7	
	comp=E,87nm,0.7s						
RLMT				IAML		19 04 11.8	
	comp=E,75nm,0.7s						
PD31	Pinedale Array	3.35	254		Pn	19 03 14.4	+0.2
PDAR	Pinedale Array	3.35	254	Pn	Pn	19 03 14.2	0.0
	comp=E,4.4nm,0.3s,baz=79,slow=16,SNR=92						
PDAR				Lg	Lg	19 04 00.6	
	comp=E,17nm,0.3s,baz=73,slow=32,SNR=14						
PDAR	Pinedale Array	3.35	254		Pn	19 03 14.5	+0.3
BW06	Boulder Array	3.35	254		Pn	19 03 14.7	+0.5
BW06				IAML		19 04 09.0	
	comp=E,44nm,0.5s						
YNE	Yellowstone No	3.66	291		Pn	19 03 19.1	+0.5
OGNE	Ogallala	3.68	139		Pn	19 03 21.5	+2.8
YMP	Mirror Lake Pl	3.69	287		Pn	19 03 19.9	+0.8
GCMT	Greycliff	3.76	304	Pn	Pn	19 03 20.8	+1.0
LKWY	Lake	3.83	284		Pn	19 03 22.0	+1.1
LKWY				IAML		19 04 39.3	
	comp=E,39nm,1.0s						
H17A	Grant Village	3.93	281		Pn	19 03 24.1	+1.8
FLWY	Flagg Ranch	3.99	276		Pn	19 03 23.4	+0.4
FLWY				IAML		19 04 32.4	
	comp=E,40nm,1.9s						
FLWY				IAML		19 04 43.5	
	comp=E,34nm,0.8s						
ISCO	Idaho Springs	4.00	185		Pn	19 03 24.9	+1.7
SNOW	Snow King Moun	4.05	267		Pn	19 03 25.2	+1.3
SNOW				IAML		19 04 38.7	
	comp=E,47nm,0.8s						
SNOW				IAML		19 04 47.6	
	comp=E,43nm,0.9s						
YHH	Holmes Hill	4.18	286		Pn	19 03 27.8	+2.0
TPAW	Teton Pass	4.19	268		Pn	19 03 26.1	+0.3
TPAW				IAML		19 04 42.2	
	comp=E,29nm,1.0s						
TPAW				IAML		19 04 49.4	
	comp=E,43nm,0.8s						
FXWY	Fox Creek	4.23	270		Pn	19 03 27.2	+0.8
O20A	White River Ci	4.30	213		Pn	19 03 28.2	+1.0
O20A				IAML		19 04 42.2	
	comp=E,40nm,0.8s						
O20A				IAML		19 04 45.2	
	comp=N,38nm,0.8s						
YHB	Horse Butte	4.42	285		Pn	19 03 29.2	+0.3
YHL	Hebgen Lake	4.43	286		Pn	19 03 29.3	+0.1
AHID	Auburn Hatcher	4.43	259		Pn	19 03 30.8	+1.7
AHID				IAML		19 05 04.5	
	comp=E,29nm,0.9s						
RDMU	Red Mountain	4.57	227		Pn	19 03 33.2	+2.1
DGMT	Dagmar	4.74	8		Pn	19 03 35.4	+2.2
KSCO	Kaye Shedlock’	5.14	157		Pn	19 03 39.9	+1.1
HWUT	Hardware Ranch	5.18	247	IAML		19 05 16.3	
	comp=E,23nm,0.9s						
CTU	Camp Tracy	5.76	240	Pn	Pn	19 03 48.1	+0.7
PV22	Blue Mesa, Par	5.90	209		Pn	19 03 50.4	+1.1
PV07	Paradox Valley	5.94	207		Pn	19 03 52.0	+2.1
PV15	Paradox Valley	5.98	206		Pn	19 03 52.3	+1.9
P17A	Butcher Ranch,	5.99	226		Pn	19 03 50.2	-0.3
SDCO	Great Sand Dun	6.04	182		Pn	19 03 51.0	-0.2
PV12	Saucer Basin,	6.11	208		Pn	19 03 54.5	+2.3
PV14	Lion Creek, Pa	6.13	209		Pn	19 03 53.8	+1.3
PV20	West Nyswonger	6.14	209		Pn	19 03 53.9	+1.3
PV11	David Mesa, Pa	6.15	208		Pn	19 03 54.0	+1.4
PV16	Nyswonger Mesa	6.15	208		Pn	19 03 53.9	+1.1
SRU	San Rafael Swe	6.15	222		Pn	19 03 52.6	-0.1
PV03	Paradox Valley	6.18	208		Pn	19 03 54.1	+1.0
PV02	Paradox Valley	6.18	207		Pn	19 03 55.4	+2.2
T25A	Trinidad	6.67	175	Pn	Pn	19 04 01.1	+1.3
DUG	Dugway, Tooele	6.71	240		Pn	19 04 00.2	-0.2
MSU	Marysvale	7.45	227		Pn	19 04 11.8	+1.2
JTMT	Jette	7.49	305	Pn	Pn	19 04 11.6	+0.6
MTPU	Mount Pierson	7.80	225		Pn	19 04 15.6	0.0
WALA	Waterton Lakes	8.00	314	Pn	Pn	19 04 17.3	-0.8
ELK	Elko	8.05	251	Pn	Pn	19 04 20.0	+1.2
PKCU	Pink Cliffs	8.33	223	Pn	Pn	19 04 23.1	+0.4
PSUT	Pine Spring	8.38	234		Pn	19 04 24.3	+1.0
CCUT	Cedar City	8.79	228	Pn	Pn	19 04 30.1	+1.1
ULM	Lac du Bonnet	9.07	41	Pn	Pn	19 04 31.9	-0.7
	comp=E,1.2nm,0.3s,baz=228,slow=12,SNR=12						
ULM				Pg		19 05 07.4	
	comp=E,1.7nm,0.3s,baz=218,slow=12,SNR=6.6						
ULM				Lg	Lg	19 07 05.2	
	comp=E,0.7nm,0.3s,baz=312,slow=21,SNR=5.3						
ULM	Lac du Bonnet	9.07	41		Pn	19 04 32.1	-0.4
U15A	North Rim	9.14	219	Pn	Pn	19 04 33.6	-0.2
WUAZ	Wupatki	9.53	212	Pn	Pn	19 04 40.0	+0.9
MSTX	Muleshoe	9.98	168		Pn	19 04 45.0	-0.1
FFC	Flin Flon	11.15	10		Pn	19 05 00.2	-0.8
YKA	Yellowknife Ar	19.53	347	P	P	19 06 48.4	-0.8
	comp=E,0.1nm,0.3s,baz=157,slow=11,SNR=5.6						

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*IDC **16** 19:10:02.5±1.2, 6°.08S×127°.83E, h398km±15km, mb3.5/9, mb1 3.6/14, mb1mx3.4/31, mbtmp4.3/14, Error ellipse: s-maj=15.2km s-min=8.5km az=80.0*

*DJA **16** 19:10:02.6±0.4, 6°S±3°×12°8E±°, h388km±4km, M4.2/12, mB4.8/4, mb4.2/7, MLv4.2/12, Mw(mB)4.1/4*

ISC 16 19:10:02.2±0.5, 6°.10S±0°.05×127°.65E±0°.05, h400km, n38, σ2s.09/55, mb3.7/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	2.46	13	P	Pn	19 11 02.1	+0.8
AAI				S	S	19 11 47.8	-1.1
BNDI	Bandanaira	2.74	55	P	Pn	19 11 04.5	+1.2
BNDI				S	S	19 11 51.0	-1.7
NLAI	Namlea	2.89	349	P	Pn	19 11 06.4	+1.8
NLAI				S	S	19 11 55.0	0.0
MSAI	Masohi	3.02	25	P	Pn	19 11 04.6	-1.0
MSAI				S	S	19 11 54.8	-2.0
SAUI	Saumlaki	4.08	118	P	Pn	19 11 15.9	+0.9
SAUI				S	S	19 12 13.2	-0.9
SANI	Sanana	4.35	338	P	Pn	19 11 17.5	-0.2
SANI				S	S	19 12 16.2	-2.7
SOEI	Soe	4.94	222	P	Pn	19 11 24.5	+0.8
SOEI				S	S	19 12 28.9	-1.1
LBMI	Labuha	5.42	358	P	Pn	19 11 29.5	+0.8
	0.1nm27nm,0.8s						
LBMI				S	S	19 12 37.7	-1.4
	0.1nm27nm,0.8s						
FAKI	Fak Fak	5.57	56	P	Pn	19 11 29.7	-0.5
	0.9nm2µm195nm,0.9s						
FAKI				S	S	19 12 36.3	-5.5
	0.9nm2µm195nm,0.9s						
MMRI	Maumere	5.93	245	P	Pn	19 11 34.7	+0.6
	0.2nm55nm,0.7s						
MMRI				S	S	19 12 47.7	-1.2
	0.2nm55nm,0.7s						
SIJI	Sorong	6.33	35	P	Pn	19 11 38.4	-0.1
	14nm,0.3s,baz=216,slow=13,SNR=41						
SIJI				S	S	19 12 52.7	-4.2
	11nm,0.3s,baz=300,slow=23,SNR=14						
SWI	Sorong	6.33	35	P	Pn	19 11 38.2	-0.2
	0.3nm36nm,0.5s						
SWI				S	S	19 12 52.1	-4.8
	0.3nm36nm,0.5s						
KAPI	Kappang	7.93	277	P	P	19 11 59.0	+2.1
	0.4nm,0.3s,baz=114,slow=13,SNR=3.7						
RKPI	Ransiki, Papua	7.95	55	P	P	19 11 58.4	+1.3
	1.2nm9µm134nm,0.7s						
RKPI				S	S	19 13 29.4	-1.0
	1.2nm9µm134nm,0.7s						
BASI	Baing, Sumba	8.11	239	P	Pn	19 11 57.8	-0.6
	687nm26nm,0.7s						
BASI				S	S	19 13 27.6	-6.1
	687nm26nm,0.7s						
PLAI	Plampang	10.16	254	P	P	19 12 20.8	-0.8
PLAI				S	S	19 14 08.9	-7.6
FITZ	Fitzroy Crossi	12.09	189	P	P	19 12 43.6	+0.7
	0.7nm,0.3s,baz=128,slow=0.2,SNR=24						
WRA	Warramunga Arr	15.22	155	P	P	19 13 17.4	+0.3
	2.5nm,0.3s,baz=330,slow=11,SNR=58						
WRA				S	S	19 15 55.4	-3.1
	0.3nm,0.3s,baz=329,slow=20,SNR=9.6						
ASAR	Alice Springs	18.48	162	P	P	19 13 52.2	+0.4
	2.0nm,0.3s,baz=347,slow=12,SNR=165						
ASAR				S	S	19 17 00.1	-1.0
	0.3nm,0.3s,baz=334,slow=17,SNR=22						
LEM	Lembang	19.92	267	P	P	19 14 08.1	+1.9
	11nm,0.6s,baz=84,slow=18,SNR=5.4						
NWAO	Narrogin (SRO)	28.40	199	P	P	19 15 23.4	+1.5
	9.0nm,0.9s,baz=16,slow=9.2,SNR=3.1						
STKA	Stephens Creek	28.77	155	P	P	19 15 25.9	+0.7
	1.7nm,0.5s,baz=324,slow=5.5,SNR=7.4						
CMAR	Chiang Mai Arr	37.38	311	P	P	19 16 40.0	+1.1
	2.0nm,0.6s,baz=142,slow=7.0,SNR=26						
KSRS	Korea Array	43.33	0	P	P	19 17 27.2	+0.5
	1.4nm,0.7s,baz=175,slow=10,SNR=6.0						
MJAR	Matsushiro Arr	43.55	12	P	P	19 17 28.2	-0.4
	3.3nm,0.7s,baz=186,slow=9.8,SNR=12						
ODAN	Odare	50.91	312	*e*P	P	19 18 25.5	+0.5
TAPN	Taplejung	50.95	313	*e*P	P	19 18 25.9	+0.5
	5.9nm,0.4s						
RAMN	Ramite	51.55	312	*e*P	P	19 18 30.6	+0.9
	16nm,0.5s						
JIRN	Jiri	52.24	312	*e*P	P	19 18 35.4	+0.5
	5.1nm,0.3s						
GUN	Gumba	52.61	312	*e*P	P	19 18 38.0	+0.5
	11nm,0.4s						
PKI	Pulchoki	52.77	311	*e*P	P	19 18 39.0	+0.3
	5.2nm,0.4s						
PKIN	Phulchoki	52.79	311	*e*P	P	19 18 39.0	+0.3
	4.6nm,0.5s						
KKN	Kakani	52.99	312	*e*P	P	19 18 40.5	+0.4
DMN	Daman	53.02	311	*e*P	P	19 18 40.7	+0.3
	3.4nm,0.3s						
GKN	Gorkha	53.58	311	*e*P	P	19 18 44.7	+0.4
	27nm,0.2s						
PETK	Petropavlovsk-	64.23	20	P	P	19 19 56.9	+1.1
	4.7nm,0.8s,baz=167,slow=3.8,SNR=8.4						
MKAR	Makanchi Array	66.21	328	P	P	19 20 09.5	+0.9
	1.0nm,0.4s,baz=117,slow=8.3,SNR=46						
ZALV	Zalesovo Beam	69.76	335	P	P	19 20 30.0	-0.2
	0.7nm,0.5s,baz=130,slow=4.9,SNR=4.7						

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*DJA **16** 19:16:57.6±0.7, 2°N±5°×12°7E±°, h114km±6km, M4.2/7, mB5.4/3, mb4.2/4, MLv4.1/7, MLv4.2/3, Mw(mB)4.9/3*

*IDC **16** 19:17:01.6±3.0, 1°.61N×127°.29E, h137km±31km, mb3.3/4, mb1 3.4/7, mb1mx3.1/35, mbtmp3.8/7, Error ellipse: s-maj=33.8km s-min=17.8km az=70.0*

ISC 16 19:16:59.2±1.2, 1°.72N±0°.09×127°.06E±0°.08, h103km, n14, σ2s.28/20, mb3.6/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.99	162	P	Pn	19 17 21.6	+1.8
TNTI				S	Sn	19 17 40.6	+5.3
LBMI	Labuha	2.39	169	P	Pn	19 17 38.5	+1.5
LBMI				S	Sn	19 18 08.1	+2.2
SANI	Sanana	3.90	196	P	Pn	19 17 57.2	+0.1
SANI				S	Sn	19 18 38.4	-3.5
NLAI	Namlea	4.93	180	P	Pn	19 18 11.4	+0.4
NLAI				S	Sn	19 19 04.7	-2.2
SIJI	Sorong	4.93	121	P	Pn	19 18 11.1	0.0
	1.3nm,0.3s,baz=320,slow=19,SNR=5.2						
LUWI	Luwuk	5.09	237	P	Pn	19 18 13.0	-0.2
	0.9nm978nm32nm,1.2s						
LUWI				S	Sn	19 19 11.0	+0.2
	0.9nm978nm32nm,1.2s						
AAI	Ambon	5.49	168	P	Pn	19 18 19.2	+0.5
	0.1nm25nm,1.0s						
KAPI	Kappang	9.90	227	P	Pn	19 19 22.7	+4.1
	3.3nm,0.3s,baz=95,slow=7.9,SNR=5.2						
KAPI				S	Sn	19 21 08.5	+0.6
	2.3nm,0.3s,baz=145,slow=21,SNR=6.9						
WSI	Waingapu	13.17	211	P	Pn	19 20 02.0	-0.3
FITZ	Fitzroy Crossi	19.75	184	P	P	19 21 19.9	-1.2
	0.2nm,0.3s,baz=172,slow=0.6,SNR=6.6						
WRA	Warramunga Arr	22.68	162	P	P	19 21 49.5	-2.9
	1.7nm,0.4s,baz=339,slow=11,SNR=19						
ASAR	Alice Springs	26.10	166	P	P	19 22 21.4	-2.2
	0.6nm,0.3s,baz=348,slow=14,SNR=9.7						
MKAR	Makanchi Array	59.38	326	P	P	19 26 50.4	-0.4
	1.2nm,0.5s,baz=121,slow=8.1,SNR=29						
ZALV	Zalesovo Beam	62.52	333	P	P	19 27 12.5	+0.7
	0.2nm,0.3s,baz=129,slow=3.9,SNR=2.4						

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*ISK **16** 19:17:31.6, 35°.88N×27°.22E, h8km, ML2.9/11*

*ATH **16** 19:17:31.4, 35°.84N×27°.27E, h26km±2km, ML2.6/1, Error ellipse: s-maj=4.1km s-min=1.2km az=133.0*

*THE **16** 19:17:32.5, 35°.85N×27°.22E, h2km±1km, ML2.6/4, Error ellipse: s-maj=1.5km s-min=0.4km az=101.0*

*DDA **16** 19:17:32.4, 35°.85N×27°.39E, h8km±1km, ML2.2*

ISC 16 19:17:32.3±0.9, 35°.86N±0°.03×27°.26E±0°.03, h14km±8km, n40, σ1s.37/62, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.32	195	P	Pg	19 17 38.5	-0.5
KARP				S	Sg	19 17 44.0	+0.5
	1µm,0.1s						
KARP	Karpathos	0.32	195	P	Pg	19 17 38.4	-0.5
KARP				S	Sg	19 17 43.9	+0.4
KARP				AML	AML	19 17 44.1	
	comp=E,2510µm,0.2s						
KARP				AML	AML	19 17 44.8	
	comp=N,3047µm,0.1s						
KARP	Karpathos	0.32	195	PG	Pg	19 17 38.5	-0.5
KARP				SG	Sg	19 17 43.8	+0.4
NISR	Nisiros	0.76	352	P	Pg	19 17 47.2	+0.1
NISR				S	Sb	19 17 59.0	+1.5
NISR	Nisiros	0.76	352	P	Pg	19 17 47.1	+0.1
ARG	Arkhangelos	0.79	63	P	Pb	19 17 48.3	+0.6
ARG				S	Sn	19 18 00.7	+0.2
	comp=N,545nm,0.3s						
ARG	Arkhangelos	0.79	63	P	Pg	19 17 46.6	-1.0
ARG				S	Sb	19 17 58.5	+0.2
ARG	Arkhangelos	0.79	63	PG	Pg	19 17 47.5	-0.1
ARG				SG	Sb	19 17 59.3	+1.1
DAT	Datca	0.91	16	PG	Pg	19 17 49.3	-0.6
DAT				SG	Sb	19 18 02.4	+0.5
DAT	Datca	0.91	16	*i* P	Pg	19 17 49.2	-0.7
DAT				*i* S	Sb	19 18 02.3	+0.5
ZKR	Zakros	1.13	229	P	Pg	19 17 53.4	-0.7
ZKR				S	Sg	19 18 08.8	0.0
	comp=N,148nm,0.4s						
ZKR	Zakros	1.13	229	P	Pg	19 17 53.3	-0.7
ZKR				S	Sg	19 18 08.1	-0.8
BODT	Bodrum	1.20	2	PN	Pb	19 17 54.8	-0.1
BODT				SN	Sb	19 18 11.5	+1.2
NPS	Neapolis	1.47	247	P	Pn	19 17 58.4	0.0
NPS				S	Sn	19 18 17.8	+0.4
	comp=N,182nm,0.5s						
NPS	Neapolis	1.47	247	P	Pn	19 17 58.2	-0.1
DALY	Dalyan (Mula)	1.48	49	PN	Pn	19 17 59.2	+0.8
DALY	Dalyan (Mula)	1.48	49	*i* P	Pn	19 17 59.0	+0.6
DALY				*i* S	Sg	19 18 20.3	+0.4
DALY				IAML		19 18 27.0	
	comp=N,59nm,0.6s						
TURN	Turunc	1.48	47	PN	Pn	19 17 55.4	-3.1
TURN	Turunc	1.48	47	*i* P	Pn	19 17 54.5	-4.0
TURN				*i* S	Sn	19 18 10.0	-7.6
TURN				IAML		19 18 14.0	
	comp=N,86nm,0.5s						
TURN				IAML		19 18 14.0	
	comp=E,76nm,0.4s						
YER	Yerkesik	1.52	33	PN	Pn	19 17 59.6	+0.5
LAST	Lasithi	1.61	245	P	Pn	19 18 00.5	+0.1
LAST				S	Sn	19 18 21.6	+0.6
LAST	Lasithi	1.61	245	P	Pn	19 18 00.5	+0.1
FETY	Fethiye	1.67	62	PN	Pn	19 18 02.5	+1.5
FETY	Fethiye	1.67	62	*i* P	Pn	19 18 01.2	+0.2
FETY				*i* S	Sb	19 18 24.8	+1.2
FETY				IAML		19 18 32.0	
	comp=E,29nm,0.4s						
FETY				IAML		19 18 32.0	
	comp=N,27nm,0.9s						
IOSP	Ios island	1.81	299	P	Pn	19 18 02.5	-0.6
IOSP	Ios island	1.81	299	P	Pn	19 18 02.5	-0.6
APE	Apeiranthos	1.85	311	P	Pn	19 18 03.1	-0.5
APE	Apeiranthos	1.85	311	P	Pn	19 18 02.9	-0.7
APE	Apeiranthos	1.85	311	PN	Pn	19 18 03.8	+0.2
AYDN	Tasoluk	1.87	15	*i* P	Pb	19 18 06.8	+0.6
AYDN				*i* S	Sb	19 18 30.2	+0.7
AYDN				IAML		19 18 37.0	
	comp=E,24nm,0.5s						
AYDN				IAML		19 18 37.0	
	comp=N,19nm,0.6s						
SMG	Samos	1.88	350	P	Pn	19 18 03.5	-0.5
AKAS	Kas	1.94	78	PN	Pn	19 18 06.5	+1.6
AKAS	Kas	1.94	78	*i* P	Pb	19 18 06.9	-0.6
AKAS				*i* S	Sb	19 18 32.8	+1.3
AKAS				IAML		19 18 40.0	

	comp=N,35nm,1.4s						
AKAS				IAML		19 18 44.0	
	comp=E,14nm,0.5s						
IDI	Anoyia	2.02	254	P	Pn	19 18 05.7	-0.2
IDI				S	Sn	19 18 31.3	+0.4
IDI	Anoyia	2.02	254	P	Pn	19 18 06.0	+0.1
TAVA	DENIZLI_Tavas	2.08	39	*i* P	Pb	19 18 09.8	-0.1
TAVA				*i* S	Sn	19 18 35.2	+2.6
TAVA				IAML		19 18 39.0	
	comp=N,24nm,0.5s						
TAVA				IAML		19 18 41.0	
	comp=E,20nm,0.5s						
AYDB	Zeytinkoy-Aydi	2.15	13	PN	Pn	19 18 08.8	+1.0
SIVA	Sivas	2.17	248	P	Pn	19 18 08.3	+0.3
GOLH	Golhisar	2.31	53	*i* P	Pn	19 18 12.6	+2.6
GOLH				*i* S	Sb	19 18 42.1	0.0
GOLH				IAML		19 18 52.0	
	comp=N,37nm,0.4s						
KORT	Korkueli	2.74	64	*i* P	Pb	19 18 20.2	-1.0
KORT				*i* S	Sb	19 18 53.5	-1.1
KORT				IAML		19 19 01.0	
	comp=E,12nm,0.6s						
KORT				IAML		19 19 02.0	
	comp=N,12nm,1.1s						

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*ATH **16** 19:19:02.6, 38°.13N×20°.38E, h10^{km}±1^{km}, ML2.4/9, Error ellipse: s-maj=2.0km s-min=1.0km az=53.0*

*THE **16** 19:19:03.0, 38°.13N×20°.37E, h7^{km}±1^{km}, ML2.5/3, Error ellipse: s-maj=1.0km s-min=0.4km az=351.0*

ISC 16 19:19:02.6±1.1**, 38°.14N**±0°.03×**20°.38E**±0°.04**, h10**^{km}±5^{km}**, n48, σ0^s.43**/69**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.05	360	P	Pg	19 19 04.7	+0.1
CHV1				S	Sg	19 19 05.8	-0.1
KEF3	Kipouria, Keph	0.07	339	P	Pg	19 19 05.2	+0.3
KEF3				S	Sg	19 19 06.7	+0.2
LXR1	Lixouri, Cepha	0.08	34	P	Pg	19 19 05.1	+0.2
LXR1				S	Sg	19 19 06.5	0.0
LXRA	Lixouri, Kepha	0.08	34	P	Pg	19 19 05.0	+0.1
LXRA				S	Sg	19 19 06.5	0.0
ARGA	Argostoli. Kep	0.09	61	P	Pg	19 19 05.2	+0.2
ARGA				S	Sg	19 19 06.7	0.0
KEF2	Argostoli. Kep	0.09	70	P	Pg	19 19 05.4	+0.3
KEF2				S	Sg	19 19 06.7	0.0
AGT1	Agia Thekli	0.12	1	P	Pg	19 19 05.8	+0.4
AGT1				S	Sg	19 19 07.8	+0.4
KEF4	Livadi, Kephal	0.13	15	P	Pg	19 19 05.9	+0.3
KEF4				S	Sg	19 19 08.1	+0.4
KEF1	Kardakata, Kep	0.16	26	P	Pg	19 19 06.3	+0.2
KEF1				S	Sg	19 19 08.6	+0.1
VLS	Valsamata	0.17	75	P	Pg	19 19 06.5	+0.2
VLS				S	Sg	19 19 09.2	+0.4
VLS	Valsamata	0.17	75	P	Pg	19 19 06.5	+0.2
VLS				S	Sg	19 19 09.1	+0.3
VLS				AML	AML	19 19 09.3	
	comp=E,17223µm,0.1s						
VLS				AML	AML	19 19 09.4	
	comp=N,16020µm,0.1s						
VSK1	VASILIKIADES	0.31	28	P	Pg	19 19 09.1	+0.3
VSK1				S	Sg	19 19 14.2	+1.2
KFL	Anninata	0.32	94	P	Pg	19 19 09.5	+0.4
KFL				S	Sb	19 19 14.8	-1.0
	comp=N,2µm,0.4s						
KFL	Anninata	0.32	94	P	Pg	19 19 09.4	+0.4
KFL				S	Sg	19 19 14.4	+1.1
KFL				AML	AML	19 19 15.3	
	comp=N,4809µm,0.5s						
KFL				AML	AML	19 19 16.3	
	comp=E,4815µm,0.3s						
KONA	Konidatara, Ke	0.33	27	P	Pg	19 19 09.3	+0.2
KONA				S	Sg	19 19 13.9	+0.4
KONA				AML	AML	19 19 14.6	
	comp=N,1218µm,0.2s						
KONA				AML	AML	19 19 17.1	
	comp=E,1024µm,0.2s						
FSK	Fiskardo	0.35	24	P	Pg	19 19 09.8	+0.1
FSK				S	Sg	19 19 15.7	+1.3
	comp=E,555nm,0.2s						
FSK	Fiskardo	0.35	24	P	Pg	19 19 09.8	+0.1
FSK				S	Sg	19 19 15.3	+1.0
EVGI	Lefkada island	0.53	24	P	Pg	19 19 13.1	+0.1
EVGI				S	Sb	19 19 21.3	-0.6
EVGI	Lefkada island	0.53	24	P	Pg	19 19 13.0	+0.1
EVGI				S	Sb	19 19 21.3	-0.6
KRI1	kERI	0.58	144	P	Pg	19 19 14.5	+0.6
MGNA	Meganis	0.61	32	P	Pg	19 19 14.2	-0.2
VTN	Vitineika	0.67	109	P	Pb	19 19 16.4	0.0
LKD2	Lefkada island	0.69	18	P	Pg	19 19 15.8	-0.1
LKD2	Lefkada island	0.69	18	P	Pg	19 19 15.7	-0.3
TSLK	Tsoukalades, L	0.72	17	P	Pg	19 19 16.4	-0.2
TSLK				S	Sb	19 19 27.6	+0.3
TSLK	Tsoukalades, L	0.72	17	P	Pg	19 19 16.2	-0.3
PDO	Prodromos	0.78	53	P	Pg	19 19 17.7	0.0
PDO				AML	AML	19 19 36.0	
	comp=N,800µm,0.3s						
PDO				AML	AML	19 19 40.9	
	comp=E,398µm,0.3s						
RLS	Riolos of Patr	0.86	95	P	Pg	19 19 19.4	+0.2
RLS	Riolos of Patr	0.86	95	P	Pg	19 19 19.1	-0.1
PVO	Paravola	1.02	61	P	Pg	19 19 22.4	+0.1
PVO	Paravola	1.02	61	P	Pg	19 19 22.4	+0.1
PVO				AML	AML	19 19 40.0	
	comp=N,474µm,0.3s						
PVO				AML	AML	19 19 43.9	
	comp=E,469µm,0.3s						
DRO	Drossia	1.06	99	P	Pg	19 19 23.3	+0.2
DRO				S	Sn	19 19 38.5	-0.1
	comp=E,185nm,0.4s						
DRO	Drossia	1.06	99	P	Pg	19 19 23.1	0.0
DRO				AML	AML	19 19 47.8	
	comp=E,364µm,0.4s						
DRO				AML	AML	19 19 49.3	
	comp=N,368µm,0.5s						
AMT	Artemida-Makis	1.21	119	P	Pb	19 19 25.6	-0.1
EFP	Efpalio	1.23	76	P	Pn	19 19 25.7	-0.3
EFP				AML	AML	19 19 51.6	
	comp=E,179µm,0.5s						
EFP				AML	AML	19 19 54.0	
	comp=N,158µm,0.4s						
LAKA	Lakka	1.26	85	P	Pn	19 19 25.3	-1.1
ANX	Ano Chora	1.29	69	P	Pn	19 19 26.8	-0.1
ANX				AML	AML	19 19 53.2	
	comp=E,301µm,0.6s						
ANX				AML	AML	19 19 53.4	
	comp=N,339µm,0.5s						
SERG	Sergoula	1.35	78	P	Pn	19 19 27.3	-0.3
SERG				AML	AML	19 19 55.2	
	comp=N,190µm,0.4s						
SERG				AML	AML	19 19 57.2	
	comp=E,159µm,0.4s						
TRIZ	Trizonia	1.35	80	P	Pn	19 19 27.5	-0.1
EVR	Evrytania	1.36	55	P	Pg	19 19 29.4	+0.6
IGT	Igoumenitsa	1.40	358	P	Pb	19 19 29.2	+0.3
KLV	Kalavryta, Ach	1.40	93	P	Pb	19 19 29.0	+0.1
KALE	Kalithea	1.41	79	P	Pn	19 19 28.4	0.0
ITM	Ithomi	1.55	127	P	Pb	19 19 31.3	-0.2
MAKR	Makrakomi, Fth	1.63	57	P	Pb	19 19 32.8	0.0
KEK	Kerkira	1.64	344	P	Pb	19 19 33.1	+0.1
PYL	PYLOS	1.64	138	P	Pb	19 19 33.3	+0.3
AGG	Agios Georgios	1.77	59	P	Pb	19 19 35.1	0.0

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*IDC **16** 19:27:24.6±2.5, 43°.39N×105°.27W, h0^{km}, mb1 3.3/3, mb1mx3.1/31, mbtmp3.0/3, ML2.7/2, Error ellipse: s-maj=51.4km s-min=9.8km az=153.0*

*NEIC **16** 19:27:27.1±1.2, 43°.59N±0°.06×105°.21W±0°.04, h0^{km}±2^{km}, ML3.2/30, Error ellipse: s-maj=10.8km s-min=3.7km az=19.0*

ISC 16 19:27:25.9±0.9**, 43°.59N**±0°.06×**105°.23W**±0°.06**, h0**^{km}**, n21, σ1^s.53**/21**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.01	58	Pg	Pb	19 27 46.3	-0.1
K22A	Casper	1.34	226		Pg	19 27 50.3	-1.2
K22A				IAML		19 28 14.8	
	comp=N,304nm,0.5s						
K22A				IAML		19 28 15.9	
	comp=E,246nm,0.5s						
RWWY	Rawlins	2.40	218		Pn	19 28 07.5	+0.8
RWWY				IAML		19 28 41.5	
	comp=E,130nm,0.8s						
RWWY				IAML		19 28 42.6	
	comp=E,142nm,0.6s						
N23A	Red Feather La	2.75	191		Pn	19 28 13.0	+1.5
N23A				IAML		19 28 53.1	
	comp=N,97nm,0.5s						
N23A				IAML		19 28 54.4	
	comp=E,105nm,0.5s						
BW06	Boulder Array	3.27	257		Pn	19 28 19.7	+1.0
PD31	Pinedale Array	3.27	257		Pn	19 28 19.2	+0.6
PDAR	Pinedale Array	3.27	257	Pn	Pn	19 28 19.5	+0.8
	comp=E,3.2nm,0.3s,baz=80,slow=16,SNR=23						
PDAR				Lg	Lg	19 29 04.8	
	comp=E,9.0nm,0.3s,baz=77,slow=33,SNR=15						
PDAR	Pinedale Array	3.27	257		Pn	19 28 20.5	+1.8
RLMT	Red Lodge	3.28	299		Pn	19 28 20.0	+1.3
RLMT				IAML		19 29 14.7	
	comp=E,38nm,0.6s						
OGNE	Ogallala	3.55	137		Pn	19 28 23.7	+1.4
FLWY	Flagg Ranch	3.99	279		Pn	19 28 30.2	+1.7
FLWY				IAML		19 29 44.1	
	comp=E,38nm,2.0s						
REDW	Red Top Meadow	4.10	269		Pn	19 28 31.4	+1.4
REDW				IAML		19 29 38.9	
	comp=E,37nm,0.8s						
REDW				IAML		19 29 47.9	
	comp=E,36nm,1.8s						
O20A	White River Ci	4.12	214		Pn	19 28 32.4	+2.1
O20A				IAML		19 30 21.3	
	comp=E,36nm,3.1s						
O20A				IAML		19 30 21.9	
	comp=N,29nm,1.9s						
FXWY	Fox Creek	4.21	273		Pn	19 28 33.3	+1.7
YMR	Madison River	4.27	287		Pn	19 28 33.5	+1.2
DGMT	Dagmar	4.93	8		Pn	19 28 44.2	+2.9
KSCO	Kaye Shedlock’	4.98	156	Pn	Pn	19 28 43.5	+1.5
HWUT	Hardware Ranch	5.08	249		Pn	19 28 44.7	+1.2
HWUT				IAML		19 30 13.6	
	comp=N,18nm,1.8s						
HWUT				IAML		19 30 35.7	
	comp=N,14nm,2.8s						
Q16A	Castle Valley	6.47	226		Pn	19 29 03.8	+1.2
ULM	Lac du Bonnet	9.23	41	Pn	Pn	19 29 38.9	-1.3
	comp=N,0.4nm,0.3s,baz=226,slow=15,SNR=4.9						
ULM				Lg	Lg	19 32 14.9	
	comp=N,0.4nm,0.3s,baz=0.0,slow=20,SNR=2.3						
YKA	Yellowknife Ar	19.72	347	P	Pn	19 31 57.4	-0.6
	comp=N,0.1nm,0.3s,baz=162,slow=14,SNR=3.1						

DJA 16 19:55:33.9±0.7**, 12°S**±5°×**11°6E**±°**, h10**^{km}**, M3.8**/9**, mb3.7**/4**, MLv3.9**/9**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DNP	Denpasar	2.83	352	P	Pn	19 56 18.5	-0.8
DNP				S	Sn	19 56 54.1	+0.6
JAGI	Jajag, Banyuwa	3.34	334	P	Pn	19 56 25.6	-0.7
JAGI				S	Sn	19 57 04.3	-1.8
PLAI	Plampang	3.39	39	P	Pn	19 56 26.5	-0.5
PLAI				S	Sn	19 57 08.8	+1.5
SRBI	Singaraja	3.42	353	P	Pn	19 56 28.2	+0.9
SRBI				S	Sn	19 57 09.5	+1.6
WOJI	Wonogiri, Jawa	5.90	308	P	Pn	19 57 01.6	+0.2
	0.1nm8.3nm,1.4s						
UGM	Wanagama	6.17	305	P	Pn	19 57 05.6	+0.4

IDC 16 20:09:28.5±2.0**, 0°.58N**×**125°.25E, h0**^{km}**, mb3.2**/3**, mb1 3.5**/3**, mb1mx3.2**/39**, mbtmp3.3**/3**, Error ellipse: s-maj=216.4km s-min=24.7km az=64.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.25	157	P	P	20 14 25.8	-1.4
	0.6nm,0.9s,baz=335,slow=11,SNR=3.4						
ASAR	Alice Springs	25.52	161	P	P	20 15 00.1	+1.1
	0.5nm,0.8s,baz=328,slow=8.1,SNR=4.3						
MKAR	Makanchi Array	59.33	327	P	P	20 19 32.3	-0.1
	0.1nm,0.3s,baz=123,slow=7.8,SNR=8.4						

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*UCR **16** 20:15:51.7±1.6, 12°.40N×87°.85W, h8^{km}±16^{km}, ML4.5, mb4.2(NEIC)*

*SNET **16** 20:15:51.6±0.9, 12°.37N×87°.83W, h15^{km}±8^{km}, ML4.6*

*IDC **16** 20:15:53.1±0.7, 12°.61N×87°.52W, h71^{km}±5^{km}, mb3.6/12, mb1 3.8/16, mb1mx3.6/48, mbtmp3.9/16, MS2.7/2, Ms1 2.7/2, ms1mx2.5/27, Error ellipse: s-maj=23.9km s-min=8.8km az=49.0*

*NEIC **16** 20:15:53.5±2.6, 12°.43N±0°.04×87°.77W±0°.06, h74^{km}±3^{km}, mb4.2/22, Md4.6(SNET), Error ellipse: s-maj=8.6km s-min=5.5km az=67.0*

*INET **16** 20:15:53.6, 12°.54N×87°.74W, h70^{km}, ML5.2*

*GCG **16** 20:15:59.0±0.4, 11°.90N×88°.64W, h36^{km}±999^{km}, MD4.4*

ISC 16 20:15:53.1±0.6**, 12°.52N**±0°.05×**87°.73W**±0°.04**, h71**^{km}±4^{km}**, n109, σ1^s.22**/124**, mb4.1**/17**, 10C-4D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	0.48	21		Pn	20 16 06.5	+0.6
CSGN				Sn	Sn	20 16 17.2	+1.8
CNCH	Conchagua	0.75	352	⇑*i*P	Pn	20 16 08.8	-0.1
CNCH				*e*S	Sn	20 16 21.1	+0.7
CNCH				IAML		20 16 23.1	
	comp=Z,35µm,0.4s						
CNCH	Conchagua	0.75	352	⇑*i*P	Pn	20 16 08.8	-0.1
CNCH				*e*S	Sn	20 16 21.1	+0.7
CNCH				IAML		20 16 23.1	
	comp=Z,35µm,0.4s						
LCND	La Caada	0.80	349	⇑*e*P	Pn	20 16 09.2	0.0
LCND				IAML		20 16 25.7	
	comp=Z,16µm,0.3s						
LCND	La Caada	0.80	349	⇑*e*P	Pn	20 16 09.2	0.0
LCND				IAML		20 16 25.7	
	comp=Z,16µm,0.3s						
JUCU	Jucuar¡n	0.88	325	⇑*e*P	Pn	20 16 09.6	-0.8
JUCU				*e*S	Sn	20 16 22.4	-0.7
JUCU				IAML		20 16 26.6	
	comp=Z,18µm,0.3s						
JUCU	Jucuar¡n	0.88	325	⇑*e*P	Pn	20 16 09.6	-0.8
JUCU				*e*S	Sn	20 16 22.4	-0.7
JUCU				IAML		20 16 26.6	
	comp=Z,18µm,0.3s						
BLLM	Bellamira	1.04	332	⇓*i*P	Pn	20 16 12.3	+0.1
BLLM	Bellamira	1.04	332	⇓*i*P	Pn	20 16 12.3	+0.1
RANC	El Ranchito	1.05	329	*e*P	Pn	20 16 12.5	0.0
RANC	El Ranchito	1.05	329	*e*P	Pn	20 16 12.5	0.0
PACA	Pacayal	1.10	329	⇑*e*P	Pn	20 16 13.1	0.0
PACA	Pacayal	1.10	329	⇑*e*P	Pn	20 16 13.1	0.0
COPN	Copaltepe	1.17	107	*e*P	Pn	20 16 13.1	-0.6
COPN	Copaltepe	1.17	107	*e*P	Pn	20 16 13.1	-0.6
MOMN	Momotombo	1.17	96	*e*P	Pn	20 16 13.5	-0.4
MOMN	Momotombo	1.17	96	*e*P	Pn	20 16 13.5	-0.4
FAGO	Alcalda de S	1.22	343	⇓*e*P	Pn	20 16 14.8	+0.3
FAGO	Alcalda de S	1.22	343	⇓*e*P	Pn	20 16 14.8	+0.3
TECA	Tecapa	1.22	322	⇑*e*P	Pn	20 16 14.5	-0.1
TECA	Tecapa	1.22	322	⇑*e*P	Pn	20 16 14.5	-0.1
COEB	Comit de Eme	1.24	321	*e*P	Pn	20 16 14.9	0.0
COEB				IAML		20 16 34.5	
	comp=Z,6µm,0.3s						
COEB	Comit de Eme	1.24	321	*e*P	Pn	20 16 14.9	0.0
COEB				IAML		20 16 34.5	
	comp=Z,6µm,0.3s						
UESV	Universidad de	1.51	317	*e*P	Pn	20 16 18.4	+0.1
UESV	Universidad de	1.51	317	*e*P	Pn	20 16 18.4	+0.1
TGUH	Tegucigalpa,Un	1.59	16		Pn	20 16 20.6	+1.2
TGUH				Sn	Sn	20 16 40.6	+1.3
LFRS	El Faro	1.69	310	*e*P	Pn	20 16 20.9	+0.1
LBRS	Las Brisas	1.76	314	*e*P	Pn	20 16 22.2	+0.6
LOMA	Loma Larga	1.79	309	*e*P	Pn	20 16 22.3	+0.2
LOMA				IAML		20 16 45.1	
	comp=Z,6µm,0.2s						
LOMA	Loma Larga	1.79	309	*e*P	Pn	20 16 22.3	+0.2
LOMA				IAML		20 16 45.1	
	comp=Z,6µm,0.2s						
LALI	Alcalda de L	1.82	302	*e*P	Pn	20 16 22.1	-0.2
LALI	Alcalda de L	1.82	302	*e*P	Pn	20 16 22.1	-0.2
SNET	Serv Nac Est T	1.86	309	*e*P	Pn	20 16 23.4	+0.4
SNET				IAML		20 16 46.7	
	comp=Z,3µm,0.2s						
SNET	Serv Nac Est T	1.86	309	*e*P	Pn	20 16 23.4	+0.4
SNET				IAML		20 16 46.7	
	comp=Z,3µm,0.2s						
SNET	Serv Nac Est T	1.86	309		Pn	20 16 23.2	+0.2
SNET				Sn	Sn	20 16 45.5	-0.3
UEES	Universidad Ev	1.89	309	*e*P	Pn	20 16 23.9	+0.6
UEES	Universidad Ev	1.89	309	*e*P	Pn	20 16 23.9	+0.6
BOQS	Boqueron	1.93	309	*e*P	Pn	20 16 24.7	+0.7
CEVE	Cerro Verde	2.25	305	*e*P	Pn	20 16 29.4	+1.0
CEVE	Cerro Verde	2.25	305	*e*P	Pn	20 16 29.4	+1.0
SBLS	San Blas	2.26	306	*e*P	Pn	20 16 29.2	+0.7
SBLS	San Blas	2.26	306	*e*P	Pn	20 16 29.2	+0.7
ACON	Acoyapa	2.56	102		Pn	20 16 32.4	+0.1
GB1A	Borinquen Arri	2.85	126	*e*P	Pn	20 16 37.0	+0.7
NY14	Universidad de	2.85	131	*e*P	Pn	20 16 38.2	+2.0
LAPC	Finca la Perla	2.85	128	*e*P	Pn	20 16 37.5	+1.1
BUEV	Buena Vista	2.85	127	*e*P	Pn	20 16 37.4	+1.0
BUAI	Buenos Aires	2.87	125	*e*P	Pn	20 16 37.4	+0.8
GPS1	Guardaparques	2.91	126	*e*P	Pn	20 16 38.8	+1.6
GPS3	Bodega del ICE	2.91	127	*e*P	Pn	20 16 39.3	+2.1
GPS2	Hotel Rincn d	2.92	127	*e*P	Pn	20 16 39.5	+2.1
LIM1	Limonal	3.03	126	*e*P	Pn	20 16 39.6	+0.8
GUAB	Guayabo de Bag	3.05	126	*e*P	Pn	20 16 41.2	+2.2
MESS	Mesas	3.05	125	*e*P	Pn	20 16 39.8	+0.7
COLC	Colonia	3.09	126	*e*P	Pn	20 16 40.8	+1.1
IXG	Ixpaco	3.10	302	*e*P	Pn	20 16 41.4	+1.5
GUAI	GUAI	3.12	136	*e*P	Pn	20 16 41.4	+1.4
CUI	Cuipilapa	3.13	126	*e*P	Pn	20 16 41.5	+1.3
MRL	Marmol	3.17	324	*e*S	Sn	20 17 29.1	+11
PTEN	Parque Tenorio	3.24	123	*e*P	Pn	20 16 43.0	+1.4
ESPN	Las Esperanzas	3.37	95		Pn	20 16 44.4	+1.0
JTS	Las Juntas de	3.52	129	P	Pn	20 16 45.4	0.0
	comp=Z,7.2nm,0.3s,baz=10,slow=23,SNR=23						
JTS				S	Sn	20 17 24.0	-1.8
	comp=Z,12nm,0.3s,baz=29,slow=17,SNR=4.6						
JTS				LR	LR	20 17 53.8	
	comp=Z,49nm,19.4s,baz=348,slow=35						
FUG	Fuego 3	3.58	303	*e*P	Pn	20 16 49.3	+2.9
FUG				*e*S	Sn	20 17 28.6	+1.0
CEDE	Laguna Cedeo	3.59	124	*e*P	Pn	20 16 49.0	+2.5
APG	El Apazote	3.62	313	P	Pn	20 16 48.4	+1.4
	comp=Z,1.3nm,0.3s,baz=102,slow=9.6,SNR=9.2						
STG3	Santiaguito 3,	4.32	301	*e*P	Pn	20 16 58.9	+2.4
STG3				*e*S	Sn	20 17 45.6	-0.1
CMIG	Matias Romero	8.27	304	P	Pn	20 17 52.6	+2.2
	comp=Z,0.7nm,0.3s,baz=128,slow=6.9,SNR=4.6						
CMIG				S	Sn	20 19 24.5	+2.2
	comp=Z,1.5nm,0.3s,baz=289,slow=20,SNR=4.1						
MTDJ	Mount Denham	11.35	59	Pn	Pn	20 18 36.3	+3.8
GTBY	Guantanamo Bay	14.17	57	P	P	20 19 15.5	-0.3
ROSC	El Rosal	15.29	119	LR	LR	20 24 57.5	
	comp=Z,68nm,20.4s,baz=243,slow=36						
SDV	Santo Domingo	17.18	100	P	Pn	20 19 48.0	-0.9
	comp=Z,0.3nm,0.3s,baz=271,slow=8.2,SNR=6.1						
GOGA	Godfrey	21.15	10	P	P	20 20 35.0	+2.6
GOGA				IAmb	IAmb	20 20 36.6	
	comp=Z,9.4nm,0.7s						
HODGE	Hodges	22.18	12	P	P	20 20 45.4	+2.0
HODGE				IAmb	IAmb	20 21 04.9	
	comp=Z,9.2nm,1.1s						
TX32	Lajitas Array	22.34	321	P	P	20 20 46.2	+0.9
TXAR	Lajitas Array	22.34	321	P	P	20 20 45.5	+0.2
	comp=Z,4.2nm,0.7s,baz=139,slow=8.9,SNR=23						
TXAR	Lajitas Array	22.34	321	P	P	20 20 46.3	+0.9
TX31	Lajitas Ar. Si	22.34	321	P	P	20 20 46.3	+0.9
BG3	Lake Jocassee	22.79	10	P	P	20 20 51.3	+1.4
BG3				IAmb	IAmb	20 20 53.6	
	comp=Z,9.6nm,1.3s						
TKL	Tuckaleechee C	23.31	8	P	P	20 20 55.2	+0.3
	comp=Z,4.9nm,0.8s,baz=158,slow=5.0,SNR=8.1						
TKL	Tuckaleechee C	23.31	8	IAmb	IAmb	20 20 59.4	
	comp=Z,12nm,1.2s						
T42A	Van Buren	24.59	354	P	P	20 21 06.7	+0.2
SRU	San Rafael Swe	33.30	327	P	P	20 22 24.6	+0.3
MTPU	Mount Pierson	33.48	324	P	P	20 22 26.7	+0.6
P17A	Butcher Ranch,	33.68	327	P	P	20 22 28.8	+1.2
LONY	Lake Ozonia	33.91	17	P	P	20 22 29.9	+0.6
PD31	Pinedale Array	35.58	332	P	P	20 22 44.5	+0.6
PD31				IAmb	IAmb	20 22 44.7	
	comp=Z,2.4nm,1.2s						
PDAR	Pinedale Array	35.58	332	P	P	20 22 44.8	+0.9
	comp=Z,0.6nm,0.4s,baz=131,slow=11,SNR=11						
PDAR				pP	pP	20 23 02.8	+1.7
	comp=Z,0.5nm,0.5s,baz=121,slow=9.9,SNR=3.8						
HWUT	Hardware Ranch	35.67	329	P	P	20 22 45.0	+0.4
HWUT				IAmb	IAmb	20 22 46.4	
	comp=Z,5.4nm,0.8s						
AHID	Auburn Hatcher	36.30	330	P	P	20 22 50.9	+0.8
AHID				IAmb	IAmb	20 22 52.5	
	comp=Z,4.6nm,0.6s						
REDW	Red Top Meadow	36.64	331	P	P	20 22 54.3	+1.3
SNOW	Snow King Moun	36.67	332	P	P	20 22 54.9	+1.6
ELK	Elko	37.05	324	P	P	20 22 58.4	+1.9
	comp=Z,0.8nm,0.7s,baz=125,slow=4.6,SNR=4.6						
ELK	Elko	37.05	324	IAmb	IAmb	20 22 58.5	
	comp=Z,2.4nm,1.0s						
NVAR	Mina Array Bea	37.47	319	P	P	20 23 02.2	+2.2
	comp=Z,0.9nm,0.8s,baz=130,slow=8.0,SNR=7.0						
NVAR				PcP	PcP	20 25 18.4	+1.1
	comp=Z,0.4nm,0.6s,baz=113,slow=2.5,SNR=3.9						
NVAR				pPcP		20 25 37.4	
	comp=Z,0.3nm,0.6s,baz=137,slow=3.8,SNR=4.3						
NVAR				ScP	ScP	20 28 59.4	+0.9
	comp=Z,0.4nm,0.6s,baz=127,slow=4.6,SNR=3.8						
NVAR				pScP		20 29 21.4	
	comp=Z,0.3nm,0.6s,baz=23,slow=8.0,SNR=3.5						
ULM	Lac du Bonnet	38.21	352	P	P	20 23 03.6	-2.2
	comp=Z,1.3nm,0.5s,baz=174,slow=14,SNR=3.8						
ULM				pP	pP	20 23 23.1	-0.1
	comp=Z,1.6nm,0.5s,baz=171,slow=11,SNR=3.2						
ULM	Lac du Bonnet	38.21	352	IAmb	IAmb	20 23 08.0	
	comp=Z,3.8nm,1.4s						
YBH	Yreka Blue Hor	42.12	320	P	P	20 23 38.2	-0.3
	comp=Z,0.9nm,0.7s,baz=173,slow=8.1,SNR=2.6						
SCHQ	Schefferville	45.29	17	P	P	20 24 01.5	-2.1
	comp=Z,2.6nm,0.5s,baz=225,slow=6.6,SNR=13						
SCHQ				pP	pP	20 24 21.7	+0.4
	comp=Z,5.6nm,0.8s,baz=214,slow=5.6,SNR=6.5						
SCHQ	Schefferville	45.29	17	P	P	20 24 02.6	-1.0
SCHQ				IAmb	IAmb	20 24 03.1	
	comp=Z,3.1nm,0.6s						
CPUP	Villa Florida	48.64	143	P	P	20 24 28.3	-1.8
	comp=Z,1.0nm,0.5s,baz=314,slow=8.0,SNR=3.9						
CPUP	Villa Florida	48.64	143	IAmb	IAmb	20 24 37.8	
	comp=Z,4.0nm,1.2s						
YKA	Yellowknife Ar	53.47	345	P	P	20 25 04.6	-1.1
	comp=Z,0.3nm,0.5s,baz=143,slow=7.0,SNR=8.9						
YKA				pP	pP	20 25 22.0	-1.9
	comp=Z,0.6nm,0.6s,baz=140,slow=8.2,SNR=6.2						
YKA				PcP	PcP	20 26 10.8	-1.1
	comp=Z,0.1nm,0.5s,baz=149,slow=4.1,SNR=4.8						
YKA				ScP	ScP	20 30 03.8	+0.3
	comp=Z,0.2nm,0.5s,baz=150,slow=4.9,SNR=4.8						
PLCA	Paso Flores	55.33	164	P	P	20 25 20.0	+0.4
	comp=Z,4.9nm,1.0s,baz=25,slow=4.7,SNR=4.4						
PLCA	Paso Flores	55.33	164	IAmb	IAmb	20 25 27.7	
	comp=Z,15nm,1.3s						
ILAR	Eielson Array	65.84	336	P	P	20 26 29.5	-1.3
	comp=Z,0.2nm,0.4s,baz=153,slow=5.8,SNR=4.5						
LZH	Lanzhou	130.43	348	*e*PKP	PKPdf	20 34 52.8	-3.5
LZH				pPKP	PKiKP	20 35 02.8	+5.7
LZH				sPKP		20 35 07.8	
WRA	Warramunga Arr	139.03	254	PKP	PKPdf	20 35 13.4	+0.9
	comp=Z,0.7nm,0.6s,baz=90,slow=2.5,SNR=9.1						
WRA				pPKP	pPKPdf	20 35 32.5	-0.4
	comp=Z,0.7nm,0.8s,baz=89,slow=1.5,SNR=3.5						
ASAR	Alice Springs	139.04	248	PKP	PKPdf	20 35 13.4	+0.9
	comp=Z,0.5nm,0.6s,baz=92,slow=1.9,SNR=7.8						
ASAR				pPKP	pPKPdf	20 35 32.5	-0.4
	comp=Z,0.7nm,0.9s,baz=104,slow=2.1,SNR=3.7						
CMAR	Chiang Mai Arr	148.52	348	PKPbc	PKPbc	20 35 31.8	-1.0
	comp=Z,0.4nm,0.5s,baz=336,slow=3.3,SNR=5.3						
CMAR				pPKPbc	pPKPbc	20 35 51.6	-1.4
	comp=Z,0.6nm,0.7s,baz=339,slow=3.3,SNR=4.3						

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*NCEDC **16** 20:44:36.3±1.4, 36°.18N±0°.03×120°.28W±0°.04, h11^{km}±7^{km}, Md2.8/148, Error ellipse: s-maj=5.4km s-min=2.9km az=51.0*

NEIC 16 20:44:36.9±1.4**, 36°.18N**±0°.04×**120°.29W**±0°.04**, h18**^{km}±4^{km}**, Error ellipse: s-maj=5.6km s-min=4.1km az=213.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PARM	Anticline Ridg	0.09	328		Pg	20 44 39.8	-0.8
PKEM	Kettleman Hill	0.18	128		Pb	20 44 41.3	0.0
CTM	Castle Mountai	0.25	190		Pg	20 44 42.4	-0.3
PWMM	Westland Maint	0.26	13		Pb	20 44 43.3	+0.2
PHFM	Heflinger Ranc	0.31	198		Pg	20 44 43.6	0.0
PKD	Bear Valley Ra	0.31	222		Pg	20 44 43.5	-0.1
PSRM	Scobie Ranch	0.32	179		Pg	20 44 43.8	0.0
PVCM	Vineyard Canyo	0.32	219		Pg	20 44 43.9	0.0
GHC	Gold Hill	0.35	189		Pg	20 44 44.0	-0.3
PCMM	Cholame Hills	0.38	195		Pg	20 44 45.0	+0.1
PSNM	Stone Corral	0.39	181		Pg	20 44 44.7	-0.3
PMRM	Maxey Ranch	0.39	174		Pg	20 44 45.0	-0.1
PKLM	Kerr Lake	0.40	186		Pg	20 44 45.2	-0.1
PWKM	Work Ranch	0.40	207		Pg	20 44 45.4	+0.1
PPO	Portuguese Can	0.41	221		Pb	20 44 45.6	0.0
PMPB	Monarch Peak	0.42	276		Pb	20 44 46.0	0.0
PAGB	Antelope Grade	0.44	176		Pg	20 44 45.8	-0.2
THIS	South End of C	0.45	174		Pg	20 44 46.1	-0.1
PMCM	McMillan Canyo	0.46	189		Pg	20 44 46.1	0.0
TCHL	Shandon	0.49	191		Pg	20 44 47.0	+0.1
TRAM	Private Proper	0.50	179		Pg	20 44 46.8	-0.2
PSAM	San Ardo	0.51	253		Pg	20 44 47.0	-0.3
PTRM	Twissleman Ran	0.52	173		Pg	20 44 47.3	-0.1
PBWM	Bitterwater Cr	0.54	285		Pg	20 44 47.6	-0.1
LRC	Lone Oak Road	0.62	277		Pb	20 44 48.6	-0.5
PBPM	Bitterwater Pu	0.62	164		Pb	20 44 49.0	-0.2
TSCN	Private Proper	0.63	185		Pb	20 44 49.3	-0.1
BMSM	Mercy Hot Spri	0.63	320		Pb	20 44 49.4	-0.1
PANM	San Antonio Re	0.64	232		Pb	20 44 49.2	-0.3
LRV	Little Rabbit	0.64	293		Pg	20 44 49.8	+0.1
PHSB	Hesperia Broad	0.71	241		Pb	20 44 50.6	-0.2
PCCM	Crazy Canyon	0.72	263		Pb	20 44 50.7	-0.1
RAMR	Ramage Ranch	0.72	222		Pb	20 44 50.7	-0.2
BBNM	San Benito	0.72	298		Pb	20 44 50.9	-0.1
BBGB	Big Mountain B	0.73	304		Pb	20 44 51.0	-0.2
BAVM	Antelope Valle	0.76	308		Pb	20 44 51.4	-0.3
BPIM	Pinnacles	0.78	294		Pb	20 44 51.6	-0.4
BRMM	Rolling Bench	0.79	327		Pg	20 44 52.3	-0.1
BEMM	Emmet	0.81	307		Pb	20 44 52.4	-0.2
BLDC	Black Mountain	0.81	218		Pb	20 44 52.4	-0.1
BLDC	Black Mountain	0.81	218		Pb	20 44 52.4	-0.2
BSGM	Shirttail Gulc	0.82	287		Pb	20 44 52.3	-0.3
BVL	Bear Valley	0.83	299		Pb	20 44 52.8	-0.1
RCTC	Rector, Farmer	0.85	81		Pb	20 44 51.5	-1.6
PTAM	Tassajara Cree	0.85	204		Pb	20 44 52.9	-0.3
PHCM	Hearst Castle	0.86	235		Pb	20 44 53.3	-0.1
BEHM	Elkhorn Ranch	0.87	305		Pb	20 44 53.5	0.0
SMMC	Simmler	0.89	165		Pb	20 44 53.0	-0.8
ARDC	Alexander Ranc	0.91	219		Pb	20 44 54.1	0.0
PCBM	Cambria	0.91	224		Pb	20 44 53.9	-0.2
PAPM	Alder Peak	0.91	254		Pb	20 44 53.9	-0.4
EFD	Emergency Oper	0.93	203		Pb	20 44 54.2	-0.2
BLRM	Lewis Ranch	0.94	302		Pg	20 44 55.1	-0.1
CARC	Carrizo Plain	0.94	157		Pb	20 44 54.0	-0.7
FRI	Friant	0.94	29		Pb	20 44 53.1	-1.6
BJOM	Mount Johnson	0.94	299		Pb	20 44 53.3	-1.4
BSMM	Soledad Missio	0.95	283		Pb	20 44 54.5	-0.4
BHRM	Hodges Ranch	0.96	305		Pb	20 44 54.9	-0.2
BJCM	Johnson Can.	0.97	293		Pb	20 44 54.8	-0.4
MRHM	Rocky Hill	0.97	83		Pb	20 44 53.4	-1.9
LSDC	Los Osos Digit	0.99	208		Pb	20 44 54.4	-1.1
MHDM	Hidden Dam	0.99	18		Pb	20 44 53.9	-1.7
SCZ	Santa Cruz	1.00	295		Pb	20 44 55.1	-0.6
BCH	Branch Mountai	1.00	171		Pb	20 44 55.1	-0.7
BCGM	Cienega Road	1.01	302		Pb	20 44 55.9	+0.1
DPD	Davis Peak	1.02	203		Pn	20 44 56.5	0.0
VES	Vestal, Richgr	1.03	109		Pb	20 44 54.6	-1.6
HJSM	John Smith Roa	1.04	308		Pb	20 44 56.2	-0.2
BCWM	Chews Ridge	1.04	278		Pb	20 44 56.1	-0.5
HAST	Hastings Reser	1.05	282		Pb	20 44 55.7	-0.8
BSLM	Silva Ranch	1.05	305		Pb	20 44 54.9	-1.6
DCD	Diablo Creek	1.06	205		Pb	20 44 56.1	-0.6
BVYM	Vineyard	1.07	303		Pb	20 44 56.6	-0.4
HLTM	Lone Tree Road	1.09	311		Pb	20 44 57.0	-0.2
BAPM	Anderson Peak	1.10	270		Pb	20 44 56.2	-1.3
SAO	San Andreas Ge	1.11	302		Pn	20 44 56.7	-0.8
BSRM	Salinas Radio	1.11	297		Pn	20 44 56.7	-0.9
SFJWR	San Luis Fatjo	1.13	321		Pn	20 44 56.6	-1.2
FRP	Fremont Peak	1.13	301		Pn	20 44 57.3	-0.6
HELL	Mitchell Peak,	1.14	63		Pn	20 44 56.0	-2.0
BPCNC	Pine Canyon	1.15	291		Pn	20 44 57.5	-0.7
PACP	Pacheco Peak	1.16	316		Pn	20 44 57.9	-0.4
SLD	San Luis Dam	1.17	320		Pn	20 44 57.4	-1.0
HPCM	Pacheco Lake	1.19	318		Pn	20 44 57.9	-0.8
BPOM	Post Ranch	1.20	273		Pn	20 44 57.8	-1.0
HFEM	San Felipe	1.21	312		Pn	20 44 58.2	-0.7
HJGM	San Juan Grade	1.21	301		Pn	20 44 58.1	-0.9
MYLM	Yosemite Lake	1.21	355		Pn	20 44 57.8	-1.1
SPG2	Springville 2	1.23	88		Pn	20 44 57.4	-1.8
OCR	O'Connell Ranc	1.23	307		Pn	20 44 58.8	-0.5
ANZ	Anzar Road	1.27	304		Pb	20 45 00.0	-0.3
HTUM	Tustin Road	1.27	301		Pn	20 44 59.3	-0.5
HERM	Elkhorn Road	1.31	299		Pn	20 44 58.8	-1.5
MMIM	Miami Mountain	1.32	19		Pn	20 44 59.7	-0.9
PKM	Mcpherson Peak	1.34	163		Pn	20 45 00.7	-0.2
HCOM	Corn Cob Canyo	1.35	302		Pn	20 45 00.9	0.0
HSPM	Sheep	1.36	314		Pn	20 45 00.6	-0.6
KCC	Kaiser Creek	1.38	34		Pn	20 45 00.7	-0.7
HMOM	Monterey	1.39	288		Pn	20 45 00.4	-0.9
BCW	Bitter Crk WRg	1.42	150		Pn	20 45 00.1	-1.8
WOFM	Oak Flat	1.43	116		Pn	20 45 00.9	-1.2
FIGC	Figueroa Mtn.	1.46	170		Pn	20 45 02.8	+0.3
JLAB	Laurel Hill	1.52	310		Pn	20 45 02.3	-1.0
ARN	Arnold Ranch	1.54	320		Pn	20 45 03.0	-0.6
CCOB	Coe Ranch Numb	1.55	315		Pn	20 45 03.2	-0.5
ISA	Isabella, Lake	1.56	109		Pn	20 45 03.0	-0.8
ARVC	Arvin	1.58	131		Pn	20 45 03.1	-0.9
JSTM	Santa Teresa H	1.59	311		Pn	20 45 03.1	-1.1
MHC	Mount Hamilton	1.59	317		Pn	20 45 03.5	-0.9
CMMM	Mount Mocho	1.60	323		Pn	20 45 04.2	-0.3
TEJ	El Tejon	1.60	126		Pn	20 45 03.0	-1.5
JUMM	Mount Umunhum	1.63	308		Pn	20 45 03.8	-1.0
WORM	Onyx Ranch	1.73	105		Pn	20 45 06.2	+0.1
MRDM	Red Cones	1.73	34		Pn	20 45 07.0	+0.6
SCHCA	Scheelite	1.74	47		Pn	20 45 07.0	+0.5
MDPB	Devils Postpil	1.75	33		Pn	20 45 07.0	+0.4
OMMB	Old Mammoth Mi	1.77	35		Pn	20 45 07.4	+0.5
MINS	Minaret Summit	1.77	33		Pn	20 45 07.5	+0.6
MDYM	Dry Creek	1.80	34		Pb	20 45 08.6	-0.9
CWC	Cottonwood Cre	1.80	81		Pn	20 45 07.7	+0.5
MLCM	Laurel Creek C	1.81	37		Pn	20 45 08.1	+0.7
RCCR	Rock Creek Can	1.81	43		Pn	20 45 08.2	+0.6
MTUM	Tungsten Hills	1.81	49		Pn	20 45 08.3	+0.8
WCHM	Chimney Peak	1.81	99		Pn	20 45 07.9	+0.4
MCUB	Copperopolis B	1.82	352		Pn	20 45 06.9	-0.5
MGPM	Gravel Pit	1.82	37		Pn	20 45 08.5	+0.8
MCMM	Convict Lake	1.82	38		Pn	20 45 08.3	+0.7
MDCM	Deadman Creek	1.83	33		Pn	20 45 08.3	+0.6
MCVM	Convict Lake	1.83	39		Pn	20 45 08.5	+0.7
MEMM	East Mammoth H	1.84	36		Pn	20 45 08.8	+0.9
MCBM	Casa Benchmark	1.84	37		Pb	20 45 09.1	-1.1
CMB	Columbia Colle	1.86	358		Pn	20 45 08.1	+0.2
MLAC	Mammoth, Mammo	1.86	38		Pb	20 45 09.4	-1.1
MDRNC	Doe Ridge	1.87	38		Pn	20 45 09.3	+1.1
MLHM	Little Hot Cre	1.91	38		Pb	20 45 10.5	-0.9
MFBM	Five Bridges	1.95	49		Pb	20 45 10.7	-1.2
ORC	Owens River	1.96	41		Pn	20 45 10.8	+1.3
POCCA	Poleta Canyon	2.00	53		Pn	20 45 11.3	+1.3
MNHB	New Hogan Dam	2.01	348		Pn	20 45 09.6	-0.4
VPEM	Volcano Peak E	2.01	96		Pn	20 45 11.4	+1.3
MCDM	Chidago Canyon	2.02	47		Pb	20 45 11.7	-1.4
BENR	Benton	2.06	41		Pn	20 45 12.4	+1.5
HCK	Huntoon Valley	2.33	35		Pn	20 45 16.1	+1.8
AASM	Arroyo Seco	2.34	344		Pn	20 45 14.4	-0.2
BONR	Boundary Peak	2.38	41		Pn	20 45 17.3	+1.9
LHV	Little Huntoon	2.51	34		Pn	20 45 19.1	+2.2
NVAR	Mina Array Bea	2.75	34		Pn	20 45 22.9	+2.5
NV11	Mina Array Sit	2.82	36		Pn	20 45 22.8	+1.5
AFDM	Forest Hills D	2.82	349		Pn	20 45 21.1	0.0
RYN	Ryan	2.82	29		Pn	20 45 22.7	+1.4
YERR	Yerington	2.92	16		Pb	20 45 27.1	-1.6
PNTR	Pine Nut	2.96	10		Pn	20 45 22.9	-0.3
TPNV	Topopah Spring	3.34	75		Pn	20 45 29.8	+1.4
KVN	Kaiserville	3.35	30		Pn	20 45 30.0	+1.4
SHPR	Sheep Range	4.15	84		Pn	20 45 40.9	+1.4

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*IDC **16** 21:13:10.6±1.0, 11°.19S×165°.21E, h0^{km}, mb3.9/8, mb1 4.1/9, mb1mx3.9/38, mbtmp3.9/9, ML4.0/1, MS3.0/2, Ms1 3.0/2, ms1mx2.9/45, Error ellipse: s-maj=39.4km s-min=23.9km az=138.0*

ISC 16 21:13:15.3±0.8**, 11°.3S**±0°.1×**165°.3E**±0°.2**, h31**^{km}**, n13, σ1^{s}.11**/12**, mb3.8**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.60	288	LR	LR	21 16 40.3	
	comp=Z,117nm,20.9s,baz=78,slow=38						
DZM	Mont Dzumac	10.81	174	Pn	Pn	21 15 47.8	-0.3
	1.1nm,0.3s,baz=3.1,slow=6.1,SNR=12						
PMG	Port Moresby	17.97	274	LR	LR	21 23 19.5	
	comp=Z,78nm,20.8s,baz=358,slow=34						
CTA	Charters Tower	20.34	242	P	P	21 17 51.4	+2.2
	2.7nm,0.7s,baz=66,slow=15,SNR=3.0						
WRA	Warramunga Arr	31.03	250	P	P	21 19 29.8	-0.8
	1.7nm,1.0s,baz=82,slow=8.3,SNR=5.8						
ASAR	Alice Springs	32.33	243	P	P	21 19 40.9	-1.1
	0.8nm,0.8s,baz=79,slow=8.4,SNR=6.2						
ASAR				PcP	PcP	21 22 29.9	+0.2
	0.1nm,0.3s,baz=70,slow=3.0,SNR=4.6						
CMAR	Chiang Mai Arr	71.82	294	P	P	21 24 36.0	+0.4
	0.3nm,0.4s,baz=121,slow=6.4,SNR=4.1						
ILAR	Eielson Array	83.84	19	P	P	21 25 42.0	+0.5
	0.8nm,0.7s,baz=234,slow=6.3,SNR=5.2						
NVAR	Mina Array Bea	86.47	50	P	P	21 25 56.7	+1.2
	0.3nm,0.7s,baz=224,slow=6.3,SNR=3.5						
MKAR	Makanchi Array	93.39	317	P	P	21 26 26.5	-1.1
	0.9nm,0.8s,baz=100,slow=6.5,SNR=9.2						
ZALV	Zalesovo Beam	93.49	324	P	P	21 26 27.2	-0.6
	0.4nm,0.6s,baz=145,slow=5.3,SNR=2.7						
YKA	Yellowknife Ar	95.35	27	P	P	21 26 35.3	-0.9
	0.2nm,0.6s,baz=264,slow=4.3,SNR=3.9						
ARCES	ARCESS Array B	116.43	345	PKP	PKPdf	21 31 55.0	-0.4
	2.1nm,0.8s,baz=32,slow=5.3,SNR=2.7						

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*IDC **16** 21:15:16.7±1.1, 27°.80S×71°.53W, h0^{km}, mb4.2/3, mb1 4.1/5, mb1mx3.7/45, mbtmp4.2/5, ML3.7/2, Error ellipse: s-maj=42.5km s-min=25.4km az=86.0*

*NEIC **16** 21:15:20.7±2.0, 27°.83S±0°.04×71°.25W±0°.08, h23^{km}±4^{km}, mb4.6/3, Error ellipse: s-maj=10.7km s-min=5.1km az=110.0*

ISC 16 21:15:21.2±0.7**, 27°.77S**±0°.05×**71°.39W**±0°.10**, h28**^{km}**, n29, σ1^{s}.55**/35**, mb4.2**/5**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO03	Copiap	1.03	81		Pn	21 15 39.0	-0.9
GO03				Sn	Sn	21 15 50.6	-2.9
LCO	Las Campanas	1.38	154	Pn	Pn	21 15 42.5	-2.3
LCO				Sn	Sn	21 15 59.1	-3.2
GO04	Tololo Observa	2.45	168		Pn	21 15 58.5	-1.1
GO02	Mina Guanaco	3.05	32		Pn	21 16 08.2	+0.3
PB10	IPOC Station P	4.30	10	Pn	Pn	21 16 23.6	-1.2
CFA	Coronel Fontan	4.71	145	Pn	Pn	21 16 31.6	+1.3
	7.3nm,0.3s,baz=318,slow=12,SNR=47						
CFA				Sn	Sn	21 17 27.9	+3.9
	14nm,0.3s,baz=303,slow=22,SNR=2.1						
CFA	Coronel Fontan	4.71	145		Pn	21 16 31.6	+1.3
CFA					Sn	21 17 27.9	+3.9
ROC1	El Roble	5.20	177		Pn	21 16 36.4	-1.0
PEL	Peldehue	5.39	174		Pn	21 16 39.8	0.0
LVC	Limon Verde	5.60	24	Pn	Pn	21 16 43.4	+0.4
	1.0nm,0.3s,baz=197,slow=11,SNR=18						
LVC	Limon Verde	5.60	24		Pn	21 16 43.2	+0.2
GO05	Huala	7.24	184	Pn	Pn	21 17 02.4	-2.7
JTS	Las Juntas de	40.05	339	P	P	21 22 54.4	+0.3
JTS				IAmb	IAmb	21 22 55.6	
	comp=Z,3.7nm,1.1s						
CRPR	Cabo Rojo, PR	45.69	6	P	P	21 23 39.5	-0.2
SNAA	Sanae	57.17	159	P	P	21 25 04.4	-0.8
	comp=Z,1.9nm,0.8s,baz=251,slow=9.4,SNR=6.0						
SNAA	Sanae	57.17	159	P	P	21 25 04.5	-0.7
DBIC	Dimbokro	72.72	73	P	P	21 26 47.1	+0.1
	comp=Z,3.6nm,0.8s,baz=202,slow=4.6,SNR=5.2						
DBIC	Dimbokro	72.72	73	P	P	21 26 46.6	-0.5
DBIC				IAmb	IAmb	21 26 48.8	
	comp=Z,6.9nm,1.0s						
TORD	Torodi Ar. Bea	81.58	70	P	P	21 27 37.2	+0.4
	comp=Z,1.6nm,0.9s,baz=258,slow=5.0,SNR=11						
I07A	Izee	83.97	327	P	P	21 27 50.5	+1.8
I07A				IAmb	IAmb	21 27 53.4	
	comp=Z,10nm,1.0s						
ASAR	Alice Springs	123.34	208	PKP	PKPdf	21 34 15.8	-0.4
	comp=Z,0.4nm,0.7s,baz=137,slow=1.8,SNR=2.6						
WRA	Warramunga Arr	126.44	211	PKP	PKPdf	21 34 21.9	-0.3
	comp=Z,0.6nm,0.8s,baz=151,slow=1.7,SNR=5.7						
KKAR	Karatay Array	145.71	53		PKPab	21 34 57.9	+0.1
ZAA0	Zalesovo Array	148.55	27		PKiKP	21 35 06.2	-0.3
ZALV	Zalesovo Beam	148.55	27	PKPbc	PKiKP	21 35 05.7	-0.8
	comp=Z,3.0nm,0.8s,baz=306,slow=4.0,SNR=12						
ZALV	Zalesovo Beam	148.55	27	PKPbc	PKiKP	21 35 06.0	-0.4
MK31	Makanchi Array	151.94	40		PKiKP	21 35 13.8	0.0
MK31					PKPab	21 35 22.9	+0.2
MKAR	Makanchi Array	151.94	40	PKPbc	PKiKP	21 35 13.9	+0.1
	comp=Z,0.9nm,0.7s,baz=306,slow=2.4,SNR=10						
MKAR	Makanchi Array	151.94	40		PKiKP	21 35 13.8	+0.1
MKAR					PKPab	21 35 23.0	+0.3

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*IDC **16** 21:15:36.0±1.1, 27°.76S×71°.45W, h0^{km}, mb4.4/3, mb1 4.4/4, mb1mx3.9/44, mbtmp4.4/4, ML4.2/1, Error ellipse: s-maj=46.4km s-min=33.0km az=78.0*

ISC 16 21:15:38.6±1.3**, 27°.7S**±0°.2×**71°.5W**±0°.3**, h18**^{km}**, n8, σ0^{s}.87**/8**, mb4.4**/3**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CFA	Coronel Fontan	4.81	144	Pn	Pn	21 16 50.9	+0.7
	11nm,0.3s,baz=319,slow=14,SNR=5.8						
SNAA	Sanae	57.26	159	P	P	21 25 23.6	-1.0
	3.6nm,0.9s,baz=279,slow=8.1,SNR=5.5						
DBIC	Dimbokro	72.83	73	P	P	21 27 06.5	-0.2
	3.4nm,0.6s,baz=198,slow=6.2,SNR=6.6						
TORD	Torodi Ar. Bea	81.69	70	P	P	21 27 55.8	-0.5
	0.6nm,0.5s,baz=258,slow=4.1,SNR=8.8						
WRA	Warramunga Arr	126.40	211	PKP	PKPdf	21 34 41.3	+0.2
	0.6nm,0.7s,baz=150,slow=1.7,SNR=5.9						
ZALV	Zalesovo Beam	148.57	27	PKPbc	PKPbc	21 35 25.4	+1.4
	3.6nm,0.8s,baz=294,slow=2.8,SNR=10.0						
MKAR	Makanchi Array	151.99	40	PKPbc	PKPbc	21 35 32.8	+0.3
	1.1nm,0.8s,baz=341,slow=3.3,SNR=7.2						
KLR	Kul'dur	152.04	326	PKPbc	PKPbc	21 35 32.6	+0.2
	1.0nm,0.7s,baz=65,slow=2.1,SNR=4.5						

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*SJA **16** 21:16:25.0±0.4, 19°.98S×71°.39W, h33^{km}, ML6.7, MW6.4*

*DNK **16** 21:16:27.1±2.7, 19°.92S×71°.61W, h1^{km}±20^{km}, mb6.3, Ms6.7, Hypocentre not reviewed by the ISC*

*IDC **16** 21:16:28.2±0.3, 19°.81S×70°.58W, h0^{km}, mb5.9/39, mb1 5.9/44, mb1mx5.9/47, mbtmp5.9/44, ML5.0/5, MS6.6/38, Ms1 6.6/38, ms1mx6.5/43, Error ellipse: s-maj=11.7km s-min=8.5km az=68.0*

*NEIC **16** 21:16:29.6, 19°.98S×70°.70W, h15^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}4.69; $M_{\theta\theta}$-4.71; $M_{\phi\phi}$0.02; $M_{r\theta}$4.38; $M_{\theta\phi}$0.40; $M_{\phi r}$-4.96; Fault plane solution: $M_0$8.12000×10^{18} NP1:ϕ_s258.24000°, δ24.00000°, λ43.85000°. NP2:ϕ_s126.97000°, δ73.63000°, λ107.80000°. Principal axes: T 8.7782, Plg58.0000°, Azm61.0000°; N -1.5215, Plg17.0000°, Azm302.0000°; P -7.2567, Plg27.0000°, Azm203.0000°;*

*GUC **16** 21:16:29.1±0.4, 19°.97S×70°.81W, h21^{km}±3^{km}, MW6.7, MW6.5*

*NEIC **16** 21:16:29.6±1.7, 19°.98S±0°.03×70°.70W±0°.05, h20^{km}±1^{km}, mb6.3/624, Ms_20 6.7/765, Mwb6.5/87, Mww6.7, Mwc6.7(GCMT), Mwr6.7(GUC), Error ellipse: s-maj=7.9km s-min=6.0km az=268.0*

*BJI **16** 21:16:31.0±0.0, 19°.89S×70°.58W, h20^{km}, mB6.7/50, Ms6.9/89, Ms7 6.9/85*

*MOS **16** 21:16:31.8±1.5, 19°.81S×70°.59W, h31^{km}, mb6.4/35, MS6.7/69, Error ellipse: s-maj=8.3km s-min=5.6km az=91.3*

*VAO **16** 21:16:32.9±0.5, 19°.87S×70°.49W, h34^{km}±3^{km}, mb6.1*

*NEIC **16** 21:16:36, 19°.84S×70°.36W, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}0.90; $M_{\theta\theta}$-0.74; $M_{\phi\phi}$-0.16; $M_{r\theta}$1.03; $M_{\theta\phi}$0.20; $M_{\phi r}$-0.86; Fault plane solution: $M_0$1.59000×10^{19} NP1:ϕ_s126.00000°, δ74.00000°, λ98.00000°. NP2:ϕ_s277.00000°, δ18.00000°, λ63.00000°. Principal axes: T 1.6694, Plg60.0000°, Azm48.0000°; N -0.1697, Plg8.0000°, Azm304.0000°; P -1.4998, Plg29.0000°, Azm209.0000°;*

*NEIC **16** 21:16:37, 19°.95S×70°.96W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}0.93; $M_{\theta\theta}$-0.67; $M_{\phi\phi}$-0.26; $M_{r\theta}$0.47; $M_{\theta\phi}$0.30; $M_{\phi r}$-0.86; Fault plane solution: $M_0$1.32000×10^{19} NP1:ϕ_s141.00000°, δ70.00000°, λ104.00000°. NP2:ϕ_s286.00000°, δ24.00000°, λ57.00000°. Principal axes: T 1.4209, Plg63.0000°, Azm72.0000°; N -0.2342, Plg13.0000°, Azm316.0000°; P -1.1867, Plg23.0000°, Azm220.0000°;*

*GCMT **16** 21:16:37.6±0.0, 19°.94S×70°.92W, h12^{km}, MW6.7/172, Moment Tensor Solution. s172,c433; s169,c779; Duration: 5^{s}.3 Moment tensor: Scale 10^{19}Nm; M_{rr}0.93±.00; $M_{\theta\theta}$-0.68±.00; $M_{\phi\phi}$-0.25±.00; $M_{r\theta}$0.35±.01; $M_{\theta\phi}$0.29±.00; $M_{\phi r}$-0.88±.01; Best double couple: $M_0$1.27000×10^{19} NP1:ϕ_s284.00000°, δ26.00000°, λ54.00000°. NP2:ϕ_s144.00000°, δ69.00000°, λ106.00000°. Principal axes: T 1.4100, Plg63.0000°, Azm79.0000°; N -0.2810, Plg15.0000°, Azm318.0000°; P -1.1290, Plg22.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=125s. Triangular moment-rate function*

*BGR **16** 21:16:42.0±0.0, 17°.38S×70°.23W, h33^{km}, mb6.2, mB_BB6.7, Ms6.9*

ISC 16 21:16:29.0±0.4**, 19°.91S**±0°.02×**70°.62W**±0°.03**, h9**^{km}±2^{km}**, h9**^{km}**:pP-P, n2128, σ2^{s}.07**/2307**, mb6.3**/386**, MS6.7**/504**, 123C-44D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.56	57	⇑ *i*P	Pn	21 16 42.3	-0.8
PSGC				*i* S	Sn	21 16 52.8	+0.3
TA01	Diego Aracena	0.77	148	⇓ *i*P	Pg	21 16 44.2	+0.3
TA01				*i* S	Sb	21 16 55.4	+0.2
PB11	IPOC Station P	0.92	81	⇑ *i*P	Pn	21 16 48.7	+0.5
PB11				*i* S	Sn	21 17 03.8	+2.2
PB11	IPOC Station P	0.92	81	Pn	Pn	21 16 48.3	+0.1
PB11				Sg	Sn	21 17 04.4	+2.9
PATCX	Punta Patache	1.01	155	⇓ *i*P	Pg	21 16 47.5	-0.9
PATCX				*i* S	Sn	21 17 03.5	-0.3
PB12	IPOC Station P	1.31	12	⇓ *i*P	Pn	21 16 53.3	-0.3
PB12				*i* S	Sg	21 17 12.6	+1.3
GO01	Chusmiza	1.36	80	⇑ *i*P	Pg	21 16 56.3	+1.1
GO01				*i* S	Sn	21 17 17.6	+4.7
GO01	Chusmiza	1.36	80	Pn	Pg	21 16 56.5	+1.4
PB08	IPOC Station P	1.40	100	⇑ *i*P	Pg	21 16 56.4	+0.6
PB08				*i* S	Sg	21 17 17.9	+4.0
AP01	Chacalluta	1.55	10	⇓ *i*P	Pn	21 16 57.1	+0.4
AP01				*i* S	Sg	21 17 19.4	+0.6
PB01	IPOC Station P	1.55	137	⇓ *i*P	Pn	21 16 57.0	+0.2
PB01	IPOC Station P	1.55	137	Pn	Pn	21 16 57.3	+0.4
PB01	IPOC Station P	1.55	137	Pn	Pb	21 16 57.5	-0.4
PB02	IPOC Station P	1.56	155	⇓ *i*P	Pn	21 16 56.4	-0.6
PB02				*i* S	Sb	21 17 18.2	+0.2
PB16	IPOC Station P	1.88	34	*e*P	Pg	21 17 05.3	+0.2
PB16				*e*S	Sg	21 17 31.6	+2.0
PB07	IPOC Station P	1.94	159	⇓ *i*P	Pn	21 17 01.6	-0.6
PB07	IPOC Station P	1.94	159	*e*P	Pb	21 17 05.0	+0.4
PB07				*e*S	Sg	21 17 31.0	-0.3
PB07				IAML		21 17 45.4	
	comp=Z,51μm,1.2s						
PB09	IPOC Station P	2.28	146	⇓ *i*P	Pn	21 17 08.5	+1.5
PB09	IPOC Station P	2.28	146	*i* P	Pb	21 17 09.8	-0.6
PB09				*e*S	Sb	21 17 38.0	-0.7
PB03	IPOC Station P	2.28	159	⇓ *i*P	Pn	21 17 06.2	-0.8
PB03	IPOC Station P	2.28	159	*i* P	Pn	21 17 06.7	-0.2
PB04	IPOC Station P	2.46	170	⇓ *i*P	Pn	21 17 07.6	-1.7
PB04	IPOC Station P	2.46	170	Pn	Pn	21 17 07.6	-1.7
PB04	IPOC Station P	2.46	170	*e*P	Pn	21 17 07.8	-1.6
PB04				*e*S	Sg	21 17 50.6	+2.6
PB06	IPOC Station P	2.95	161	⇓ *i*P	Pn	21 17 15.1	-1.1
PB06	IPOC Station P	2.95	161	*i* P	Pn	21 17 16.1	-0.1
PB06				*e*P	Pb	21 17 18.8	-3.0
PB06				*e*S	Sg	21 18 01.1	-2.7
PB05	IPOC Station P	2.96	173	⇓ *i*P	Pn	21 17 13.7	-2.6
PB05	IPOC Station P	2.96	173	*e*P	Pn	21 17 14.0	-2.2
PB05				*e*S	Sg	21 18 01.2	-2.9
PB05				IAML		21 18 24.3	
	comp=Z,16μm,0.9s						
LVC	Limon Verde	3.13	150	Pn	Pn	21 17 20.2	+1.5
	comp=Z,347nm,0.3s,baz=318,slow=9.6,SNR=378						
LVC				Sn	Sb	21 18 02.8	-0.6
	comp=Z,3μm,0.3s,baz=336,slow=22,SNR=9.6						
LVC	Limon Verde	3.13	150	Pn	Pn	21 17 18.3	-0.5
LVC				Sn	Sn	21 17 52.5	-3.9
LVC	Limon Verde	3.13	150	*e*P	Pn	21 17 21.6	+2.8
LVC	Limon Verde	3.13	150	*e*P	Pn	21 17 20.6	+1.8
LVC				*e*S	Sb	21 18 04.9	+1.6
LVC				IAML		21 18 13.9	
	comp=Z,50μm,1.4s						
PB15	IPOC Station P	3.46	162	*e*P	Pn	21 17 21.8	-1.3
PB15				*e*S	Sb	21 18 15.6	+2.9
PB15				IAML		21 18 31.0	
	comp=Z,108μm,0.7s						
PB10	IPOC Station P	3.59	179		Pn	21 17 21.9	-3.0
PB10	IPOC Station P	3.59	179	*e*P	Pn	21 17 21.7	-3.2
PB10				*e*S	Sg	21 18 26.9	+2.5
I08BO	LAS PENAS INFR	4.21	30	Pn	Pb	21 17 42.1	-1.4
	baz=217,slow=28,SNR=3.3						
I08BO				*i*		21 35 10.0	
	baz=212,slow=316,SNR=1.5						
LPAZ	La Paz	4.30	34	Pn	Pb	21 17 41.2	-4.0
	comp=Z,39nm,0.3s,baz=210,slow=10,SNR=616						
LPAZ	La Paz	4.30	34	P	Pn	21 17 38.3	+3.1
LPAZ	La Paz	4.30	34	Pn	Pn	21 17 38.2	+3.1
LPAZ	La Paz	4.30	34	*e*P	Pb	21 17 41.9	-3.3
PB14	IPOC Station P	4.70	178	*e*P	Pn	21 17 37.3	-3.1
PB14				*e*S	Sn	21 18 33.4	-1.9
YJA	Yavi	5.27	116	*i* P	Pb	21 17 55.7	-5.9
YJA				*e*S	Sb	21 19 08.6	+3.3
YJA				IAML		21 19 18.1	
	comp=Z,8μm,3.5s						
AZAP	Zapla	6.71	131	*e*P	Pn	21 18 12.8	+4.9
AZAP				IAML		21 21 05.3	
	comp=Z,3μm,2.7s						
SLA	San Lorenzo	6.73	136	*e*P	Pn	21 18 11.9	+3.7
SLA				*e*S	Sn	21 19 30.8	+5.7
SLA				IAML		21 20 53.3	
	comp=Z,4μm,4.3s						
ASTB	Santa Barbara	6.99	126	*e*P	Pn	21 18 16.3	+4.5
ASTB				*e*S	Sb	21 19 55.5	+1.1
ASTB				IAML		21 20 07.9	
	comp=Z,2μm,1.8s						
GO03	Copiap	7.66	177	*e*P	Pn	21 18 17.2	-3.6
VCA	Vinchina	9.06	166	*e*P	Pn	21 18 39.9	-0.3
VCA				IAML		21 21 30.3	
	comp=Z,8μm,3.8s						
CYA	Choya	9.56	154	*e*P	Pn	21 18 50.2	+3.3
CYA				IAML		21 21 44.5	
	comp=Z,2μm,3.5s						
AGUA	GUANDACOL	9.73	169	*e*P	Pn	21 18 50.6	+1.4
AGUA				*e*S	Sn	21 20 59.5	+21
AGUA				IAML		21 21 19.5	
	comp=Z,3μm,1.7s						
SIV	San Ignacio	9.88	68	Pn	Pn	21 18 51.7	+0.4
	comp=Z,23nm,0.3s,baz=261,slow=12,SNR=308						
SIV				Sn	Sn	21 20 38.9	-3.5
	comp=Z,18nm,0.3s,baz=226,slow=12,SNR=1.1						
SIV				Lg	Lg	21 21 45.9	
	comp=Z,9.5nm,0.3s,baz=162,slow=15,SNR=2.1						
SIV				LR	LR	21 23 28.8	
	comp=Z,782μm,19.6s,baz=270,slow=43						
NNA	Nana	9.89	322	Pn	Pn	21 18 50.8	-0.6
	comp=Z,36nm,0.3s,baz=138,slow=18,SNR=17						
NNA				Sn	Sn	21 20 38.5	-4.1
	comp=Z,31nm,0.3s,baz=227,slow=21,SNR=2.5						
NNA	Nana	9.89	322	*i* P	Pn	21 18 51.1	-0.3
NNA	Nana	9.89	322		Pn	21 18 51.0	-0.4
NNA					Sn	21 20 37.2	-5.4
GO04	Tololo Observa	10.22	181	*e*P	Pn	21 19 00.0	+3.9
GO04				*e*S	Sn	21 21 25.4	+34
AROD	Rodeo	10.27	174	*e*P	Pn	21 19 04.6	+7.7
AROD				*e*S	Sn	21 21 18.3	+26
AROD				IAML		21 21 32.6	
	comp=Z,2μm,2.8s						
ACDV	Cuesta del Vie	10.31	173	*i* P	Pn	21 19 11.1	+14
ACDV				*e*S	Sn	21 21 16.0	+23

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ACDV                                  IAML              21 22 28.4
      comp=Z,3µm,1.5s
ACCO  Cerro Coronel     10.73 173 eP       Pn       21 19 02.1  -1.0
ACCO                              eS       Sn       21 21 09.3  +5.7
ACCO                               IAML             21 22 01.3
      comp=Z,3µm,2.6s
APLL  PUNTA DE LOS L    11.08 161 eP       Pn       21 19 06.4  -1.3
APLL                              eS                21 22 21.7
AMOG  MOGNA             11.15 171 eP       Pn       21 19 11.5  +2.8
AMOG                               IAML             21 22 40.6
      comp=Z,3µm,1.9s
RTLL  Cerro Villicun    11.54 171 eP       Pn       21 19 12.4  -1.6
RTLL                               IAML             21 22 49.7
      comp=Z,2µm,2.7s
CFA   Coronel Fontan    11.85 170  Pn      Pn       21 19 16.0  -2.1
      comp=Z,6.4nm,0.3s,baz=342,slow=14,SNR=2.2
CFA                                Sn      Sn       21 21 38.5  +7.9
      comp=Z,4.2nm,0.3s,baz=103,slow=10.0,SNR=2.1
CFA                                LR      LR       21 24 14.1
      comp=Z,484µm,19.0s,baz=337,slow=39
CFA   Coronel Fontan    11.85 170 eP       Pn       21 19 28.3   +10
RTLS  Leoncito          11.90 175 eP       Pn       21 19 19.1  -0.1
RTLS                               IAML             21 23 07.9
      comp=Z,3µm,2.1s
RTCV  Cerro Valdivia    12.05 172 eP       Pn       21 19 18.0  -3.0
RTCV                               IAML             21 23 20.4
      comp=Z,4µm,2.9s
ACAN  Cantantal         12.70 167 i P      Pn       21 19 28.2  -1.6
ACAN                               IAML             21 24 01.0
      comp=Z,557nm,2.1s
ROC1  El Roble          13.02 181 eP       Pn       21 19 34.2  -0.2
SAML  Samuel            13.05  34 eP       Pn       21 19 33.0  -1.7
SAML  Samuel            13.05  34  P       Pn       21 19 34.1  -0.6
SAML  Samuel            13.05  34          Pn       21 19 34.1  -0.6
SAML  Samuel            13.05  34 eP       Pn       21 19 33.4  -1.2
PEL   Peldehue          13.19 180 eP       Pn       21 19 36.2  -0.3
CPUP  Villa Florida     13.79 120  Pn      Pn       21 19 45.4  +0.7
      comp=Z,1.1nm,0.3s,baz=295,slow=12,SNR=17
CPUP                               Sn      Sn       21 22 26.1  +8.1
      comp=Z,0.7nm,0.3s,baz=3.3,slow=18,SNR=1.0
CPUP                               Lg      Lg       21 23 37.1
      comp=Z,0.8nm,0.3s,baz=253,slow=20,SNR=2.9
CPUP                               LR      LR       21 25 53.2
      comp=Z,154µm,20.5s,baz=299,slow=41
CPUP  Villa Florida     13.79 120  P       Pn       21 19 44.6  -0.1
CPUP                                                21 22 13.4
CPUP  Villa Florida     13.79 120          Pn       21 19 44.6  -0.1
CPUP                                       Sn       21 22 13.4  -4.7
CPUP  Villa Florida     13.79 120 eP       Pn       21 19 45.2  +0.5
AQDB  Aquidauana        14.02  95 eP       Pn       21 19 47.4  -0.5
SALV  Santo Antonio     14.75  77 eP       Pn       21 19 56.0  -1.9
ATAH  Atahualpa         14.77 328  Pn      Pn       21 19 57.2  -1.4
      comp=Z,1.2nm,0.3s,baz=143,slow=12,SNR=42
ATAH                               Sn      Sn       21 22 41.9  -0.7
      baz=325,slow=15,SNR=1.6
YCA   YACYRETA          14.81 123 eP       P        21 20 02.2  -2.3
YCA                                IAML             21 24 49.1
      comp=Z,144nm,2.4s
GO05  Huala             15.09 184  P       Pn       21 19 56.7  -5.7
GO05  Huala             15.09 184 eP       Pn       21 20 00.8  -1.6
GO05                              eS       S        21 23 11.0  +3.8
ITQB  Itaqui            15.98 130 eP       Pn       21 20 14.2  +0.1
CCHI  Chillan           16.69 184 eP       Pn       21 20 21.2  -1.8
C2SB  Chapadao do Su    16.82  89 eP       Pn       21 20 25.6  +0.8
CLDB  Colider           16.86  60 eP       Pn       21 20 22.7  -2.8
TRCB  Terra Rica        17.00 103 eP       Pn       21 20 26.5  -0.6
TRCB                              eS       Sn       21 23 34.5  -1.7
PTGB  Pitanga           17.82 109 eP       P        21 20 37.9  -0.2
PCMB  Pacaembu          18.18  99 eP       Pn       21 20 41.1  -0.7
PCMB                              eS       Sn       21 24 01.4  -3.5
ARAG  Araguaiana, MT    18.38  80 eP       Pn       21 20 43.7  -0.5
ARAG                              eS       Sn       21 24 09.3  -0.5
ITAB  Concordia         18.44 117 eP       P        21 20 44.2  -0.6
ITAB                              eS       Sn       21 24 07.6  -3.4
LPA   La Plata          18.68 146 i P      P        21 20 43.3  -4.1
LPA                                pPP              21 21 02.1
LPA                                S       S        21 24 25.6  +5.2
LPA                                KIKP             21 33 15.0
LPA                                SKIKS            21 36 33.2
CPSB  Cacapava Do Su    18.71 127 eP       P        21 20 47.6  -0.2
ITRB  Iturama           19.06  93 eP       Pn       21 20 53.0  +0.5
PLTB  Pedras Altas      19.31 131 eP       P        21 20 53.3  -1.1
PLTB                              eS       Sn       21 24 32.2  +0.2
GO06  Curarrehue        19.63 182  P       P        21 20 56.8  -1.1
GO06  Curarrehue        19.63 182 eP       Pn       21 20 58.9  -0.3
GO06                              eS       Sn       21 24 39.7   0.0
FRTB  Fartura           19.87 104 eP       P        21 21 00.2  -0.3
OGAUY Aigu              20.13 139 eP       P        21 21 03.7  +0.4
CNLB  Canela            20.24 121 eP       P        21 21 03.7  -0.9
BB19B Bebedouro         20.72  97 eP       P        21 21 09.7  -0.2
PLCA  Paso Flores       20.76 180  P       P        21 21 10.7  +0.5
      comp=Z,425nm,1.0s,baz=23,slow=12,SNR=134
PLCA                               S       S        21 25 01.8  -0.2
      comp=Z,21nm,0.9s,baz=79,slow=13,SNR=1.1
PLCA                               PcP     PcP      21 25 21.2  +1.8
      comp=Z,88nm,1.2s,baz=0.0,slow=2.0,SNR=3.2
PLCA                               LR      LR       21 28 43.9
      comp=Z,84µm,21.3s,baz=34,slow=35
PLCA  Paso Flores       20.76 180  P       P        21 21 06.8  -3.4
PLCA                               IAmb    IAmb     21 21 16.9
      comp=Z,1µm,1.1s
PLCA                                       S        21 24 57.1  -4.9
PLCA                                       PcP      21 25 18.2  -1.2
PLCA  Paso Flores       20.76 180 eP       P        21 21 10.7  +0.5
PLCA                              eS       S        21 25 01.9  -0.2
PLCA  Paso Flores       20.76 180 eP       P        21 21 07.0  -3.1
IPMB  Ipameri, GO       21.28  89 eP       P        21 21 14.8  -1.1
OTAV  Otavalo           21.44 338 eP       P        21 21 20.0  +1.9
OTAV  Otavalo           21.44 338  P       P        21 21 17.7  -0.4
OTAV                               pmax    pmax
      comp=Z,273nm,0.9s
OTAV  Otavalo           21.44 338  P       P        21 21 17.7  -0.4
OTAV  Otavalo           21.44 338 eP       P        21 21 19.7  +1.6
RCLB  Rio Claro- Sao    21.67 101 eP       P        21 21 18.9  -1.2
PTGA  Pitinga           21.72  30  P       P        21 21 19.6  -1.0
      comp=Z,503nm,0.9s,baz=208,slow=11,SNR=290
PTGA                               S       S        21 25 19.1  -2.1
      comp=Z,91nm,0.8s,baz=215,slow=19,SNR=1.8
PTGA                               LR      LR       21 30 37.1
      comp=Z,389µm,18.0s,baz=210,slow=39
PTGA  Pitinga           21.72  30  P       P        21 21 19.6  -1.0
PTGA                               IAmb    IAmb     21 21 32.0
      comp=Z,1µm,1.0s
PTGA  Pitinga           21.72  30 eP       P        21 21 19.6  -1.0
SPB   Sao Paulo         21.84 104  P       P        21 21 20.6  -1.3
SPB   Sao Paulo         21.84 104 eP       P        21 21 20.4  -1.5
CMBC  Cumbal            21.89 340 eP       P        21 21 26.3  +3.4
FLOC  Florencia         21.92 346 eP       P        21 21 23.2  +0.5
FLOC  Florencia         21.92 346  P       P        21 21 23.3  +0.5
BDFB  Brasilia          21.93  82  P       P        21 21 23.4  +0.4
      comp=Z,75nm,0.6s,baz=268,slow=12,SNR=34
BDFB                               S       S        21 25 21.2  -4.3
      comp=Z,38nm,0.8s,baz=16,slow=27,SNR=1.7
BDFB                               LR      LR       21 31 45.2
      comp=Z,299µm,19.0s,baz=264,slow=42
BDFB  Brasilia          21.93  82  P       P        21 21 21.7  -1.3
BDFB                               pmax    pmax
      comp=Z,945nm,1.2s
BDFB                               MLR     MLR
      comp=Z,293µm,20.0s
BDFB  Brasilia          21.93  82  P       P        21 21 21.7  -1.3
BDFB                               IAmb    IAmb     21 21 38.3
      comp=Z,945nm,1.2s
BDFB                               IAMs_20 IAMs_20  21 31 01.4
      comp=Z,293µm,20.0s
CPAS1 Pasto             21.97 342 eP       P        21 21 26.3  +2.5
CPAS2 Pasto             21.98 342 eP       P        21 21 26.3  +2.5
GCUF  Volcan Galeras    22.01 342 eP       P        21 21 26.3  +2.0
CCUFI Cufio, Nario      22.01 342 eP       P        21 21 30.7  +6.4
MACC  Macarena, Meta    22.14 351 eP       P        21 21 22.7  -2.5
VAO   Valinhos          22.22 102 eP       P        21 21 24.7  -1.4
CRUC  La Cruz           22.23 343 eP       P        21 21 28.0  +1.6
GUVC  San Jose del G    22.40 355 eP       P        21 21 24.8  -3.1
GARC  Garzon, Huila     22.47 347 eP       P        21 21 27.1  -1.8
SOTA  Rioblanco         22.68 344 eP       P        21 21 32.8  +1.4
BBAC  Balboa, Cauca     22.74 343 eP       P        21 21 32.5  +0.7
PCON  Cinco Dias        22.81 345 eP       P        21 21 35.2  +2.3
TUMC  Tumaco            23.01 339 eP       P        21 21 35.2  +0.8
TUMC  Tumaco            23.01 339  P       P        21 21 33.3  -1.1
POPC  Popayan, Colom    23.09 344 eP       P        21 21 36.1  +0.7
PARB  Paraibuna         23.48 103 eP       P        21 21 37.6  -1.5
GR1C  Gorgona, Isla     23.94 341 eP       P        21 21 45.0  +1.4
PTGC  Puerto Gaitan,    24.00 356 eP       P        21 21 42.5  -1.7
VILC  Villavicencio,    24.06 352 eP       P        21 21 43.2  -1.6
ORTC  Ortega, Tolima    24.10 349 eP       P        21 21 44.9  -0.2
BSCB  Bom Sucesso       24.23  97 eP       P        21 21 46.0  -0.5
YOTC  Yotoco, Valle     24.40 346 eP       P        21 21 48.5  +0.6
CVER  Cruz Verde, Cu    24.51 352 eP       P        21 21 50.3  +1.0
ESAR  Angra dos Reis    24.55 102 eP       P        21 21 48.1  -1.0
CHIC  Chingaza          24.57 353 eP       P        21 21 47.7  -2.2
MALC  Bahia Malaga      24.67 344 eP       P        21 21 51.2  +0.9
ANIL  Santa Ana         24.70 349 eP       P        21 21 50.3  -0.5
SMTB  Santa Maria do    24.82  67 eP       P        21 21 51.5  -0.3
ROSC  El Rosal          24.86 351  P       P        21 21 53.5  +1.1
      comp=Z,167nm,0.6s,baz=177,slow=5.7,SNR=67
ROSC                               S       S        21 26 16.5  +0.7
      comp=Z,22nm,0.8s,baz=263,slow=23,SNR=0.8
ROSC                               LR      LR       21 33 11.4
      comp=Z,297µm,18.2s,baz=204,slow=40
ROSC  El Rosal          24.86 351 eP       P        21 21 53.3  +0.9
ROSC  El Rosal          24.86 351  P       P        21 21 52.5  +0.1
ROSC                                       S        21 26 12.1  -3.7
ROSC                               IAMs_20 IAMs_20  21 32 43.6
      comp=Z,284µm,22.0s
CTAB  Cerro Tablazo,    25.01 352 eP       P        21 21 53.9   0.0
RREF  El Recreo         25.09 349 eP       P        21 21 56.2  +1.4
PLMC  San Jos del P     25.28 347 eP       P        21 21 55.7  -0.2
GUY2C Guyana, Caldas    25.41 349 eP       P        21 21 58.5  +1.0
GUY2C                             eP       P        21 21 59.2  +1.8
JANB  Januaria          25.53  83 eP       P        21 21 57.5  -0.7
PIZC  Pizarro, Choco    25.59 344 eP       P        21 22 00.4  +1.8
SPBC  San Pablo de B    25.62 352 eP       P        21 21 58.4  -0.6
NORC  Norcasia          25.65 350 eP       P        21 21 59.2   0.0
RUSC  La Rusia          25.75 354 eP       P        21 22 01.0  +0.4
CBOC  Ciudad Bolivar    26.15 348 eP       P        21 22 04.1  +0.2
TAMC  Tame, Arauca      26.20 357 eP       P        21 22 04.6  +0.4
HELC  Santa Helena      26.38 349 eP       P        21 22 06.0  -0.2
BARC  Barichara         26.45 354 eP       P        21 22 04.6  -2.1
PTBC  PUERTO BERRIO,    26.55 351 eP       P        21 22 05.5  -1.8
ELOV  Elorza            26.76   2 eP       P        21 22 09.1  -0.1
SOLC  Bahia Solano      26.81 345 eP       P        21 22 11.6  +1.9
BRRC  Barranca, Sant    27.02 353 eP       P        21 22 09.9  -1.5
PAYG  Puerto Ayora      27.13 312 eP       P        21 22 14.4  +1.8
PAYG                              eP       P        21 22 17.1  +4.5
PAYG  Puerto Ayora      27.13 312  P       P        21 22 11.4  -1.2
PAMC  Pamplona, Colo    27.15 355 eP       P        21 22 12.6  -0.6
DBBC  Dabeiba           27.31 348 eP       P        21 22 14.4  +0.1
ZARC  Zaragoza, Cauc    27.54 351⇓eP       P        21 22 12.6  -3.6
ZARC                              eP       P        21 22 15.9  -0.4
SJMB  Sao Joao De Ma    27.79  93 eP       P        21 22 17.6  -0.9
PTAC  Punta Ardita,     27.80 345 eP       P        21 22 20.1  +1.5
UREC  San Jos de Ur     27.91 350 eP       P        21 22 18.0  -1.5
BSFB  Barra de Sao F    28.09  93 eP       P        21 22 20.4  -0.8
OCAC  Ocana             28.09 354 eP       P        21 22 18.9  -2.5
SDV   Santo Domingo     28.61 360  P       P        21 22 25.3  -0.7
      comp=Z,292nm,1.1s,baz=187,slow=7.6,SNR=93
SDV                                S       S        21 27 08.4  -6.4
      comp=Z,60nm,1.1s,baz=265,slow=22,SNR=1.7
SDV                                LR      LR       21 33 06.4
      comp=Z,185µm,20.3s,baz=196,slow=35
SDV   Santo Domingo     28.61 360 eP       P        21 22 25.0  -1.0
SDV   Santo Domingo     28.61 360  P       P        21 22 24.6  -1.4
SDV                                IAmb    IAmb     21 22 35.8
      comp=Z,406nm,1.1s
SDV   Santo Domingo     28.61 360 eP       P        21 22 25.3  -0.7
SMLC  San Martn de      28.73 353 eP       P        21 22 24.2  -2.6
BAUV  El Baul           28.78   5 eP       P        21 22 26.2  -1.0
AZU   Azuero            29.12 340 eP       P        21 22 32.0  +1.7
LCBC  Los crdobas,      29.14 348 eP       P        21 22 32.2  +1.8
UPD2  Meteti            29.20 345 eP       P        21 22 36.7  +5.7
CODC  Agustn Codazz     29.78 354 eP       P        21 22 33.1  -3.0
ARGC  Ariguani, Magd    29.79 353 eP       P        21 22 35.8  -0.4
SJCC  San Jacinto, C    29.95 351 eP       P        21 22 37.6  -0.2
UPA   Univ. de Panam    30.02 342 eP       P        21 22 39.9  +1.7
NBIT  Itapeh - BA       30.13  86 eP       P        21 22 39.5  +0.2
BCIP  Isla Barro Col    30.28 342 eP       P        21 22 41.2  +0.6
BCIP  Isla Barro Col    30.28 342  P       P        21 22 40.6   0.0
BCIP                               pmax    pmax
      comp=Z,205nm,0.9s
BCIP  Isla Barro Col    30.28 342  P       P        21 22 40.6   0.0
PCRV  Puerto La Cruz    30.47  12  P       P        21 22 42.6  +0.4
      comp=Z,246nm,1.0s,baz=193,slow=4.2,SNR=26
PCRV                               LR      LR       21 36 22.3
      comp=Z,603µm,19.0s,slow=39
MDP   Montagnes des     30.50  37  P       P        21 22 42.7  +0.2
      comp=Z,175nm,0.8s,baz=215,slow=8.7,SNR=80
MDP                                S       S        21 27 43.8  -0.4
      comp=Z,43nm,1.1s,baz=84,slow=21,SNR=1.5
MDP                                LR      LR       21 35 48.9
      comp=Z,372µm,19.2s,baz=214,slow=38
NBPN  Ponto Novo - B    30.63  77 eP       P        21 22 44.3  +0.4
SMRC  Santa Marta, M    31.08 353 eP       P        21 22 45.6  -2.0
GO09  Cerro Castillo    31.33 182  P       P        21 22 48.7  -0.8
GO09                               IAMs_20 IAMs_20  21 37 25.2
      comp=Z,126µm,20.0s
TPP   Pointe-a-Pierr    31.36  18 eP       P        21 22 53.1  +3.0
URIC  Uribia, Colomb    31.44 357 eP       P        21 22 47.4  -3.4
GUIV  Guiria            31.46  16 eP       P        21 22 50.6  -0.4
TBH   Brigand Hill      31.63  18 eP       P        21 22 55.3  +2.8
TRN   Trinidad (W)      31.69  17 eP       P        21 22 48.3  -4.6
NBPS  Pedro II - PI     32.33  65 eP       P        21 22 59.1  +0.3
HDC   Heredia           32.55 335  IAmb    IAmb     21 23 18.2
      comp=Z,661nm,1.1s
HDC                                IAMs_20 IAMs_20  21 36 44.5
      comp=Z,131µm,19.0s
TOSP  Speyside          32.56  19 eP       P        21 23 01.3  +0.7
TOSP  Speyside          32.56  19  P       P        21 23 01.3  +0.7
NBLA  Lagarto - SE      32.80  79 eP       P        21 23 02.2  -0.7
GRFF  Grenada Fort F    32.93  16 eP       P        21 23 03.5  -0.5
GRGR  Grenville         33.04  16 eP       P        21 23 04.4  -0.5
GRGR  Grenville         33.04  16  P       P        21 23 05.1  +0.2
GRHS  Sauteurs          33.13  16 eP       P        21 23 05.4  -0.2
JTS   Las Juntas de     33.16 334  P       P        21 23 07.3  +1.3
      comp=Z,101nm,1.0s,baz=223,slow=6.1,SNR=59
JTS                                PcP     PcP      21 25 49.5  +0.5
      comp=Z,26nm,1.0s,baz=141,slow=13,SNR=2.8
JTS                                S       S        21 28 31.6  +5.9
      comp=Z,8.4nm,1.1s,baz=202,slow=10,SNR=1.0
JTS                                LR      LR       21 35 35.4
      comp=Z,60µm,21.9s,baz=210,slow=35
JTS   Las Juntas de     33.16 334c iP      P        21 23 08.1  +2.1
JTS                                pmax    pmax
      comp=Z,297nm,1.5s
JTS                                MLR     MLR
      comp=Z,180µm,15.0s
JTS   Las Juntas de     33.16 334  P       P        21 23 04.4  -1.6
GO10  Punta Arenas      33.19 180  IAmb    IAmb     21 23 12.1
      comp=Z,635nm,1.1s
EFI   East Falkland     33.20 166 i P      P        21 23 06.8  +0.9
EFI                                pmax    pmax
      comp=Z,477nm,1.5s
EFI                                MLR     MLR
      comp=Z,196µm,16.0s
EFI   East Falkland     33.20 166  P       P        21 23 03.9  -2.0
EFI                                IAmb    IAmb     21 23 13.0
      comp=Z,240nm,0.9s
GRSS  Sisters           33.21  16 eP       P        21 23 06.1  -0.2
NBTA  Tacaratu-PE       33.22  76 eP       P        21 23 05.4  -1.2
NBMA  Muriti-CE         33.29  72 eP       P        21 23 07.3   0.0
NBPB  Pedra_Branca-C    33.38  69 eP       P        21 23 08.2  +0.3
NBMO  Morrinhos-CE      34.08  65 eP       P        21 23 14.2  +0.2
SVB   Belmont           34.23  16 eP       P        21 23 13.1  -2.2
SVB   Belmont           34.23  16  P       P        21 23 14.8  -0.5
SVB                                IAMs_20 IAMs_20  21 38 14.9
      comp=Z,173µm,19.0s
SVCV  St. Vincent, C    34.26  17 eP       P        21 23 14.5  -1.0
BCHC  Barbados, Cave    34.57  19 eP       P        21 23 19.9  +1.8
BBSP  Saint Philip      34.59  19 eP       P        21 23 19.3  +0.9
BBGH  Gun Hill          34.60  19 eP       P        21 23 16.7  -1.7
BBGH  Gun Hill          34.60  19  P       P        21 23 16.7  -1.7
BBGH  Gun Hill          34.60  19  IAmb    IAmb     21 23 34.9
      comp=Z,574nm,0.9s
ESPN  Las Esperanzas    34.63 336  IAMs_20 IAMs_20  21 39 23.3
      comp=Z,162µm,18.0s
NBAN  Anadia - AL       34.66  78 eP       P        21 23 18.3  -0.8
PRVC  Isla de Provid    34.72 341 eP       P        21 23 21.6  +2.1
MCLT  Moule a Chique    34.73  17 eP       P        21 23 18.5  -1.1
MCLT  Moule a Chique    34.73  17  P       P        21 23 18.5  -1.1
MCLT  Moule a Chique    34.73  17  IAMs_20 IAMs_20  21 37 57.2
      comp=Z,175µm,21.0s
ACON  Acoyapa           34.77 334  IAMs_20 IAMs_20  21 38 02.1
      comp=Z,96µm,18.0s
SLB   Belfond           34.82  16 eP       P        21 23 20.4   0.0
USHA  Ushuaia           34.91 178  P       P        21 23 21.2  +0.6
      comp=Z,131nm,1.1s,baz=355,slow=5.8,SNR=23
USHA                               S       S        21 28 50.6  -1.4
      comp=Z,5.1nm,0.7s,baz=159,slow=4.3,SNR=1.1
USHA                               LR      LR       21 39 04.6
      comp=Z,102µm,18.7s,baz=12,slow=39
SLAC  Saint Lucia, A    34.92  17 eP       P        21 23 20.1  -1.1
SLBI  Saint Lucia, B    35.02  16 eP       P        21 23 21.1  -1.0
NBCL  Cascavel-CE       35.13  68 eP       P        21 23 24.3  +1.1
NBPA  Parau_RN          35.47  71 eP       P        21 23 25.5  -0.5
FDF   Fort de France    35.66  16 eP       P        21 23 24.6  -3.0
FDF   Fort de France    35.66  16  P       P        21 23 24.6  -3.0
FDF                                pmax    pmax
      comp=Z,551nm,0.7s
FDF                                MLR     MLR
      comp=Z,229µm,18.0s
FDF   Fort de France    35.66  16  P       P        21 23 24.6  -3.0
NBRF  Rio Formoso -     36.07  77 eP       P        21 23 30.6  -0.6
RPN   Rapa Nui          36.12 251  P       P        21 23 32.7  +1.2
      comp=Z,284nm,1.1s,baz=355,slow=4.7,SNR=9.1
RPN                                S       S        21 29 15.6  +4.4
      comp=Z,29nm,0.5s,baz=132,slow=10,SNR=1.5
RPN                                LR      LR       21 34 49.6
      comp=Z,214µm,18.6s,baz=97,slow=30
MDN   Morne-Daniel      36.16  15 eP       P        21 23 25.5  -6.4
DLPL  La Plaine         36.21  15 eP       P        21 23 22.6   -10
DLPL  La Plaine         36.21  15 e        SS       21 31 51.6  +0.7
DLPL  La Plaine         36.21  15  IAmb    IAmb     21 23 47.9
      comp=Z,526nm,0.9s
DLPL                               IAMs_20 IAMs_20  21 39 33.2
      comp=Z,125µm,20.0s
MDPO  Dominica; Chan    36.39  15 eP       P        21 23 27.7  -6.1
DWS   Wesley            36.42  15 eP       P        21 23 31.7  -2.3
RCBR  Riachuelo         36.52  72  P       P        21 23 35.9  +0.8
      comp=Z,371nm,0.9s,baz=238,slow=9.7,SNR=84
RCBR                               S       S        21 29 16.4  -1.3
      comp=Z,22nm,1.0s,baz=1.4,slow=17,SNR=1.3
RCBR                               LR      LR       21 39 50.0
      comp=Z,200µm,19.5s,baz=240,slow=38
RCBR  Riachuelo         36.52  72  P       P        21 23 35.0  -0.1
RCBR                               S       S        21 29 16.4  -1.3
RCBR                               pmax    pmax
      comp=Z,705nm,1.2s
RCBR                               MLR     MLR
      comp=Z,180µm,18.0s
RCBR  Riachuelo         36.52  72  P       P        21 23 35.0  -0.1
RCBR                               IAmb    IAmb     21 23 47.5
      comp=Z,705nm,1.1s
RCBR  Riachuelo         36.52  72 eP       P        21 23 35.4  +0.3
RCBR                              epP      sP       21 23 44.3  +5.6
CSGN  Cosiguina Volc    36.69 332  IAmb    IAmb     21 23 44.1
      comp=Z,403nm,0.9s
NBPV  Pedro Velho       36.81  74 eP       P        21 23 37.8  +0.3
LCND  La Caada          37.13 331⇑iP       P        21 23 40.2  +0.1
H05N1 Guadeloupe/Mar    37.20  15  P       P        21 23 36.5  -4.2
JUCU  Jucuar¡n          37.24 331⇑iP       P        21 23 41.8  +0.6
MLYT  Lee's Yard        37.33  13 eP       P        21 23 37.9  -4.0
TGUH  Tegucigalpa,Un    37.52 333 eP       P        21 23 44.7  +1.1
TGUH  Tegucigalpa,Un    37.52 333  P       P        21 23 43.1  -0.5
TGUH                               IAmb    IAmb     21 24 01.3
      comp=Z,803nm,1.1s
FAGO  Alcalda de S      37.56 331⇓iP       P        21 23 51.7  +7.9
COEB  Comit de Eme      37.59 331⇑iP       P        21 23 45.5  +1.4
NVDO  Nevis, Disaste    37.62  13 eP       P        21 23 38.5  -5.7
MLPR  Magueyes Islan    37.80   6  P       P        21 23 45.0  -0.7
SKI   Saint Kitts       37.81  12 eP       P        21 23 43.6  -2.3
SKI   Saint Kitts       37.81  12  P       P        21 23 43.6  -2.3
SKI                                pmax    pmax
      comp=Z,638nm,1.0s
SKI                                MLR     MLR
      comp=Z,484µm,18.0s
SKI   Saint Kitts       37.81  12  P       P        21 23 43.6  -2.3
SKI   Saint Kitts       37.81  12  IAmb    IAmb     21 23 52.0
      comp=Z,638nm,1.0s
SKI                                IAMs_20 IAMs_20  21 40 48.8
      comp=Z,484µm,18.0s
CDVI  St. Croix         37.86   9  IAmb    IAmb     21 23 54.1
      comp=Z,843nm,1.0s
SEUS  St. Eustatius     37.91  12 eP       P        21 23 43.7  -3.0
SEUS  St. Eustatius     37.91  12  P       P        21 23 43.7  -3.0
SEUS  St. Eustatius     37.91  12  IAmb    IAmb     21 23 50.7
      comp=Z,802nm,1.1s
SEUS                               IAMs_20 IAMs_20  21 41 21.3
      comp=Z,279µm,18.0s
OBIP  Obispado Ponce    37.92   6  IAmb    IAmb     21 23 48.3
      comp=Z,1µm,1.1s
LALI  Alcalda de L      37.95 330 eP       P        21 23 48.1  +1.1
PDPR  Patillas Dam,     37.96   7  P       P        21 23 45.6  -1.4
PDPR                               IAmb    IAmb     21 23 47.2
      comp=Z,822nm,1.1s
PCJ   Portland Cotta    37.96 350 i P      P        21 23 47.3  +0.2
SABA  Saba              37.99  11 eP       P        21 23 45.7  -1.7
SABA  Saba              37.99  11  P       P        21 23 45.9  -1.4
SABA                               IAmb    IAmb     21 23 53.6
      comp=Z,368nm,0.9s
LOMA  Loma Larga        38.01 330⇑iP       P        21 23 49.3  +1.6
SJG   San Juan          38.03   7  P       P        21 23 46.1  -1.6
      comp=Z,539nm,1.0s,baz=184,slow=3.8,SNR=89
SJG                                S       S        21 29 34.8  -5.5
      comp=Z,45nm,1.0s,baz=53,slow=22,SNR=8.2
SJG   San Juan          38.03   7 eP       P        21 23 45.4  -2.4
SJG   San Juan          38.03   7  P       P        21 23 46.3  -1.4
SJG                                S       S        21 29 37.4  -2.9
SJG                                pmax    pmax
      comp=Z,767nm,1.1s
SJG                                MLR     MLR
      comp=Z,112µm,18.0s
SJG   San Juan          38.03   7  P       P        21 23 46.3  -1.4
SJG                                IAmb    IAmb     21 23 47.8
      comp=Z,768nm,1.1s
SJG                                        S        21 29 37.4  -2.9
SJG   San Juan          38.03   7  IAMs_20 IAMs_20  21 41 45.2
      comp=Z,112µm,18.0s
SNET  Serv Nac Est T    38.08 330  IAmb    IAmb     21 23 54.0
      comp=Z,1µm,1.1s
OPAM  Oficina de Pla    38.08 330⇑iP       P        21 23 50.2  +1.9
UEES  Universidad Ev    38.11 330⇑iP       P        21 23 50.0  +1.5
LGNH  Logne             38.23 357  IAmb    IAmb     21 24 00.6
      comp=Z,352nm,0.9s
MCJ   Malvern           38.23 349 i P      P        21 23 51.7  +2.2
STH   Stony Hill        38.23 350⇑iP       P        21 23 49.9  +0.4
GCPR  Guaynabo City     38.24   7  IAmb    IAmb     21 23 58.5
      comp=Z,569nm,0.8s
AGPR  Aguadilla, PR     38.29   5  IAmb    IAmb     21 23 52.0
      comp=Z,714nm,1.1s
ANWB  Willy Bob         38.33  14  P       P        21 23 47.5  -2.8
ANWB                               IAmb    IAmb     21 24 01.1
      comp=Z,982nm,1.1s
CUPR  Culebra, Puert    38.33   8  IAmb    IAmb     21 23 58.5
      comp=Z,514nm,0.8s
EMPR  Esperanza - Ma    38.35   6  IAmb    IAmb     21 23 59.9
      comp=Z,512nm,0.8s
CEVE  Cerro Verde       38.39 329⇑iP       P        21 23 52.7  +1.6
SMRT  St. Maarten       38.44  12 eP       P        21 23 46.5  -4.6
SMRT  St. Maarten       38.44  12  P       P        21 23 46.5  -4.6
SMRT  St. Maarten       38.44  12  IAmb    IAmb     21 23 56.5
      comp=Z,971nm,1.0s
BNJ   Bonny Gate        38.49 350 i P      P        21 23 52.0  +0.4
MTDJ  Mount Denham      38.50 349 eP       P        21 23 52.5  +0.7
MTDJ  Mount Denham      38.50 349  IAmb    IAmb     21 23 54.1
      comp=Z,416nm,1.1s
BBJ   Bamboo Saint A    38.61 350 i P      P        21 23 52.4  -0.2
SDDR  Presa de Saban    38.65 359  IAMs_20 IAMs_20  21 41 21.3
      comp=Z,124µm,19.0s
SC01  Santiago de lo    39.09 360  IAmb    IAmb     21 24 14.7
      comp=Z,1µm,1.1s
APG   El Apazote        39.81 329  P       P        21 24 03.2  +0.3
      comp=Z,416nm,1.1s,baz=154,slow=7.4,SNR=125
APG                                S       S        21 30 05.5  -2.1
      comp=Z,3.2nm,0.6s,baz=205,slow=22,SNR=1.0
APG                                LR      LR       21 40 15.0
      comp=Z,26µm,18.3s,baz=140,slow=36
GTBY  Guantanamo Bay    39.83 353 eP       P        21 24 02.4  -0.4
GTBY  Guantanamo Bay    39.83 353  IAMs_20 IAMs_20  21 43 07.3
      comp=Z,123µm,18.0s
GRTK  Grand Turk        41.17 359  IAmb    IAmb     21 24 21.9
      comp=Z,692nm,1.1s
GRTK                               IAMs_20 IAMs_20  21 43 09.9
      comp=Z,103µm,18.0s
HOPE  Hope Point        43.04 151  P       P        21 24 27.8  -1.0
HOPE                               pmax    pmax
      comp=Z,327nm,1.0s
HOPE                               MLR     MLR
      comp=Z,76µm,20.0s
HOPE  Hope Point        43.04 151  P       P        21 24 27.8  -1.0
HOPE  Hope Point        43.04 151  IAMs_20 IAMs_20  21 42 13.9
      comp=Z,76µm,20.0s
TEIG  Tepich            43.47 336  P       P        21 24 32.9  +0.3
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	comp=Z,250nm,0.7s,SNR=62						
TEIG				S	S	21 30 59.9	-1.5
	comp=Z,24nm,1.0s,baz=114,slow=0.0,SNR=1.6						
TEIG	Tepich	43.47	336	*e*P	P	21 24 32.8	+0.2
TEIG	Tepich	43.47	336	P	P	21 24 32.6	-0.1
TEIG				IAmb	IAmb	21 24 36.3	
	comp=Z,437nm,0.9s						
CMIG	Matias Romero	43.82	325	P	P	21 24 36.4	+0.9
	comp=Z,303nm,1.1s,baz=136,slow=5.6,SNR=78						
CMIG				S	S	21 31 06.8	+0.2
	comp=Z,2.2nm,0.5s,baz=32,slow=10,SNR=2.1						
CMIG				LR	LR	21 42 34.4	
	comp=Z,34µm,20.3s,baz=144,slow=36						
PMSA	Palmer Station	45.06	176	P	P	21 24 45.9	+1.1
	comp=Z,135nm,0.9s,baz=7.0,slow=7.3,SNR=14						
PMSA				S	S	21 31 26.0	+2.5
	comp=Z,29nm,1.1s,baz=76,slow=2.3,SNR=1.7						
PMSA				LR	LR	21 44 32.5	
	comp=Z,41µm,18.1s,baz=12,slow=37						
PMSA	Palmer Station	45.06	176	P	P	21 24 44.1	-0.8
PMSA				IAmb	IAmb	21 25 01.7	
	comp=Z,294nm,1.1s						
PMSA	Palmer Station	45.06	176	*e*P	P	21 24 45.3	+0.5
060A	Indiantown	47.61	348	IAMs_20	IAMs_20	21 46 02.1	
	comp=Z,54µm,19.0s						
DWPF	Disney Wildern	48.87	347	P	P	21 25 14.3	-0.7
DWPF				IAmb	IAmb	21 25 17.1	
	comp=Z,487nm,1.1s						
DWPF	Disney Wildern	48.87	347	IAMs_20	IAMs_20	21 49 19.4	
	comp=Z,53µm,19.0s						
DWPF	Disney Wildern	48.87	347	P	P	21 25 15.5	+0.5
	baz=166						
DWPF				S	S	21 32 21.2	+2.5
	baz=166						
MOIG	Morelia	49.45	321	IAmb	IAmb	21 25 37.1	
	comp=Z,593nm,1.1s						
553A	Crawfordville	51.55	345	IAMs_20	IAMs_20	21 46 28.3	
	comp=Z,50µm,19.0s						
BBSR	BB Station	52.29	6	P	P	21 25 40.5	-0.3
BBSR				IAmb	IAmb	21 25 51.1	
	comp=Z,367nm,1.1s						
BBSR	BB Station	52.29	6	IAMs_20	IAMs_20	21 50 43.9	
	comp=Z,54µm,18.0s						
257A	Skidaway Islan	52.54	349	IAmb	IAmb	21 25 49.7	
	comp=Z,702nm,1.1s						
257A				IAMs_20	IAMs_20	21 47 49.7	
	comp=Z,68µm,21.0s						
TIGA	Tifton	52.55	346	P	P	21 25 41.8	-0.9
TIGA				IAMs_20	IAMs_20	21 48 07.8	
	comp=Z,50µm,20.0s						
TIGA	Tifton	52.55	346	P	P	21 25 43.0	+0.2
	baz=165,SNR=28						
255A	Hazlehurst	52.77	347	IAmb	IAmb	21 25 55.5	
	comp=Z,673nm,1.1s						
255A				IAMs_20	IAMs_20	21 51 28.9	
	comp=Z,68µm,19.0s						
158A	Hollywood	53.14	350	P	P	21 25 48.2	+1.1
	baz=169,SNR=6.7						
BRAL	Brewton	53.18	342	P	P	21 25 47.8	+0.4
	baz=161,SNR=29						
H09W1	TRISTAN DA CUN	53.21	122	P	P	21 25 47.6	-0.2
157A	Early Branch	53.22	349	P	P	21 25 48.6	+0.9
	baz=168,SNR=19						
H09N1	TRISTAN DA CUN	53.23	122	P	P	21 25 50.0	+2.2
Z59A	Georgetown, SC	53.49	351	P	P	21 25 50.5	+0.9
	baz=170,SNR=7.9						
NHSC	New Hope	53.50	350	IAMs_20	IAMs_20	21 51 42.2	
	comp=Z,61µm,19.0s						
NHSC	New Hope	53.50	350	P	P	21 25 50.8	+1.1
	baz=169,SNR=39						
154A	Montrose	53.57	347	IAMs_20	IAMs_20	21 52 56.9	
	comp=Z,71µm,18.0s						
Z58A	St. Stephen	53.66	350	P	P	21 25 51.8	+0.9
	baz=169,SNR=38						
250A	Grady	53.73	343	IAmb	IAmb	21 26 03.9	
	comp=Z,365nm,1.0s						
Z57A	Bowman	53.77	350	P	P	21 25 52.4	+0.6
	baz=168,SNR=62						
Z56A	Williston	53.92	349	P	P	21 25 53.3	+0.5
	baz=168,SNR=24						
152A	Waverly Hall	53.99	345	IAmb	IAmb	21 25 55.0	
	comp=Z,432nm,1.1s						
KVTX	Kingsville	54.06	330	IAMs_20	IAMs_20	21 49 28.1	
	comp=Z,58µm,20.0s						
Y60A	Bolivia	54.10	352	IAMs_20	IAMs_20	21 50 58.1	
	comp=Z,46µm,20.0s						
Y60A	Bolivia	54.10	352	P	P	21 25 54.8	+0.7
	baz=171,SNR=54						
346A	Big Creek Wild	54.11	340	IAmb	IAmb	21 25 57.1	
	comp=Z,637nm,1.1s						
Y59A	Loris	54.17	352	IAmb	IAmb	21 26 05.1	
	comp=Z,494nm,1.1s						
Y59A				IAMs_20	IAMs_20	21 50 59.0	
	comp=Z,54µm,18.0s						
Y59A	Loris	54.17	352	P	P	21 25 55.3	+0.7
	baz=170,SNR=9.3						
Y58A	Scranton	54.20	351	IAMs_20	IAMs_20	21 51 40.8	
	comp=Z,53µm,19.0s						
Y58A	Scranton	54.20	351	P	P	21 25 55.7	+0.8
	baz=170,SNR=24						
Y56A	Pelion	54.36	349	P	P	21 25 56.4	+0.4
	baz=168,SNR=22						
GOGA	Godfrey	54.42	347	IAmb	IAmb	21 25 58.2	
	comp=Z,240nm,1.1s						
GOGA	Godfrey	54.42	347	IAMs_20	IAMs_20	21 53 23.4	
	comp=Z,58µm,18.0s						
GOGA	Godfrey	54.42	347	P	P	21 25 56.2	-0.2
	baz=165,SNR=53						
Y57A	Sumter	54.42	350	IAMs_20	IAMs_20	21 50 48.7	
	comp=Z,49µm,19.0s						
Y57A	Sumter	54.42	350	P	P	21 25 57.1	+0.6
	baz=169,SNR=61						
344A	Westbrook Farm	54.59	339	IAmb	IAmb	21 26 14.4	
	comp=Z,306nm,1.1s						
Y55A	Saluda	54.60	349	P	P	21 25 58.2	+0.4
	baz=167,SNR=87						
X60A	Albert Glenn T	54.63	353	P	P	21 25 58.6	+0.6
	baz=172,SNR=45						
X59A	McDuffie Farm,	54.70	352	P	P	21 25 59.2	+0.7
	baz=171,SNR=48						
Z51A	Franklin	54.72	345	IAmb	IAmb	21 25 59.9	
	comp=Z,271nm,1.1s						
Z51A				IAMs_20	IAMs_20	21 50 33.2	
	comp=Z,56µm,20.0s						
X58A	Rowland	54.79	351	IAmb	IAmb	21 26 01.7	
	comp=Z,488nm,1.0s						
X58A				IAMs_20	IAMs_20	21 51 27.4	
	comp=Z,65µm,20.0s						
X58A	Rowland	54.79	351	P	P	21 25 59.8	+0.7
	baz=170,SNR=50						
X57A	Johnson Farm,	54.81	350	P	P	21 25 59.9	+0.6
	baz=169,SNR=14						
PTCN	Pitcairn Islan	54.83	253	P	P	21 25 59.0	-0.8
441A	DeRidder	54.84	336	IAmb	IAmb	21 26 01.9	
	comp=Z,529nm,1.1s						
Z50A	Ashland	54.84	344	IAmb	IAmb	21 26 01.2	
	comp=Z,446nm,1.1s						
Z50A				IAMs_20	IAMs_20	21 52 00.5	
	comp=Z,44µm,19.0s						
Z50A	Ashland	54.84	344	P	P	21 25 59.3	-0.3
	baz=162,SNR=107						
LRAL	Lakeview Retre	54.92	343	IAMs_20	IAMs_20	21 54 05.5	
	comp=Z,44µm,18.0s						
LRAL	Lakeview Retre	54.92	343	P	P	21 25 59.5	-0.6
	baz=161,SNR=88						
HODGE	Hodges	54.97	348	IAmb	IAmb	21 26 02.0	
	comp=Z,294nm,1.2s						
HODGE				IAMs_20	IAMs_20	21 49 15.9	
	comp=Z,57µm,21.0s						
Y52A	Lilburn	54.98	346	IAMs_20	IAMs_20	21 50 12.3	
	comp=Z,48µm,20.0s						
Y52A	Lilburn	54.98	346	P	P	21 26 00.2	-0.4
	baz=165,SNR=43						
X56A	White Oak	55.00	349	P	P	21 26 01.2	+0.5
	baz=168,SNR=92						
H10S3	ASCENSION HYDR	55.05	87	P	P	21 26 01.6	+0.4
	baz=20,slow=74,SNR=17						
H10S2	ASCENSION HYDR	55.07	87	P	P	21 26 02.8	+1.4
	baz=200,slow=74,SNR=14						
W60A	Pink Hill	55.07	353	P	P	21 26 01.9	+0.8
	baz=172,SNR=29						
342A	Flagon Creek P	55.08	337	P	P	21 26 01.1	-0.2
X55A	Gracelyn & Ava	55.08	349	P	P	21 26 01.7	+0.4
	baz=167,SNR=98						
W61A	Ground Anchor	55.11	354	P	P	21 26 02.3	+0.8
	baz=173,SNR=42						
H06S1	SOCORRO T	55.14	312	P	P	21 26 02.3	+0.4
H06E1	SOCORRO T-PHAS	55.14	312	P	P	21 26 01.3	-0.7
HKT	Hockley	55.20	333	P	P	21 26 01.9	-0.2
HKT				pmax	pmax		
	comp=Z,246nm,1.1s						
HKT	Hockley	55.20	333	P	P	21 26 01.9	-0.2
HKT				IAmb	IAmb	21 26 16.7	
	comp=Z,246nm,1.1s						
VBMS	Vicksburg	55.22	339	IAmb	IAmb	21 26 05.1	
	comp=Z,414nm,1.1s						
VBMS	Vicksburg	55.22	339	P	P	21 26 02.3	0.0
	baz=157,SNR=17						
W58A	Raeford	55.23	351	P	P	21 26 03.2	+0.9
	baz=170,SNR=89						
H06N1	SOCORRO T-PHAS	55.24	312	P	P	21 26 03.8	+1.1
W59A	Clinton	55.27	352	P	P	21 26 03.4	+0.8
	baz=171,SNR=21						
W59A				S	S	21 33 48.0	+1.6
	baz=171						
CNNC	Cliffs of the	55.27	353	IAMs_20	IAMs_20	21 51 02.3	
	comp=Z,51µm,20.0s						
CNNC	Cliffs of the	55.27	353	P	P	21 26 03.3	+0.7
	baz=172,SNR=48						
CNNC				S	S	21 33 48.0	+1.6
	baz=172						
X54A	Belton	55.29	348	P	P	21 26 03.1	+0.3
	baz=167,SNR=74						
X54A				S	S	21 33 46.6	-0.2
	baz=167						
V62A	Hyde County Ai	55.39	355	IAMs_20	IAMs_20	21 50 47.6	
	comp=Z,41µm,18.0s						
V62A	Hyde County Ai	55.39	355	P	P	21 26 04.0	+0.5
	baz=174,SNR=6.1						
833A	Chaparral WMA,	55.43	329	IAmb	IAmb	21 26 07.5	
	comp=Z,287nm,0.8s						
833A	Chaparral WMA,	55.43	329	P	P	21 26 04.5	+0.6
	baz=147,SNR=64						
833A				S	S	21 33 48.4	-0.5
	baz=147						
X53A	Estanollee	55.44	347	P	P	21 26 03.8	0.0
	baz=166,SNR=56						
X53A				S	S	21 33 48.1	-0.6
	baz=166						
PAULI	Pauline	55.45	349	IAmb	IAmb	21 26 06.3	
	comp=Z,485nm,1.1s						
PAULI				IAMs_20	IAMs_20	21 50 20.9	
	comp=Z,61µm,20.0s						
W57A	Gilead	55.47	351	IAmb	IAmb	21 26 15.3	
	comp=Z,532nm,1.1s						
W57A				IAMs_20	IAMs_20	21 51 50.5	
	comp=Z,70µm,20.0s						
W57A	Gilead	55.47	351	P	P	21 26 04.5	+0.5
	baz=169,SNR=55						
W57A				S	S	21 33 48.4	-0.8
	baz=169						
Y49A	Blount Mountai	55.54	344	IAMs_20	IAMs_20	21 52 23.0	
	comp=Z,43µm,19.0s						
W56A	Indian Trail	55.55	350	P	P	21 26 04.9	+0.3
	baz=169,SNR=52						
W56A				S	S	21 33 49.3	-0.9
	baz=169						
H10N3	ASCENSION HYDR	55.55	86	P	P	21 26 06.9	+2.1
	baz=237,slow=6.3,SNR=15						
H10N2	ASCENSION HYDR	55.57	86	P	P	21 26 07.1	+2.2
	baz=237,slow=6.3,SNR=16						
H10N1	ASCENSION HYDR	55.57	86	P	P	21 26 07.8	+2.9
	baz=237,slow=6.3,SNR=22						
ASCN	Ascension	55.66	86	P	P	21 26 05.2	-0.7
ASCN				IAMs_20	IAMs_20	21 48 09.0	
	comp=Z,79µm,22.0s						
V61A	Roper	55.68	354	P	P	21 26 06.2	+0.7
	baz=173,SNR=19						
V61A				S	S	21 33 52.1	+0.2
	baz=173						
KMSC	Kings Mountain	55.68	349	IAmb	IAmb	21 26 14.1	
	comp=Z,346nm,1.1s						
KMSC				IAMs_20	IAMs_20	21 50 35.9	
	comp=Z,60µm,19.0s						
KMSC	Kings Mountain	55.68	349	P	P	21 26 06.0	+0.4
	baz=168,SNR=108						
V60A	Jim Taylor Roa	55.72	353	IAmb	IAmb	21 26 08.4	
	comp=Z,472nm,1.1s						
V60A				IAMs_20	IAMs_20	21 51 07.2	
	comp=Z,53µm,21.0s						
V60A	Jim Taylor Roa	55.72	353	P	P	21 26 06.5	+0.7
	baz=172,SNR=18						
V60A				S	S	21 33 51.4	-1.1
	baz=172						
W54A	Cherokee Point	55.78	349	P	P	21 26 06.8	+0.5
	baz=167,SNR=82						
W54A				S	S	21 33 53.2	-0.2
	baz=167						
BG3	Lake Jocassee	55.84	348	IAmb	IAmb	21 26 08.4	
	comp=Z,241nm,1.2s						
V59A	Middlesex	55.84	353	P	P	21 26 07.5	+0.8
	baz=171,SNR=153						
V59A				S	S	21 33 52.9	-1.0
	baz=171						
X51A	Calhoun	55.84	346	IAmb	IAmb	21 26 09.0	
	comp=Z,448nm,1.1s						
X51A				IAMs_20	IAMs_20	21 53 29.9	
	comp=Z,52µm,19.0s						
X51A	Calhoun	55.84	346	P	P	21 26 06.5	-0.2
	baz=164,SNR=61						
X51A				S	S	21 33 53.9	-0.2
	baz=164						
V58A	Windy Hill, Pi	55.98	352	IAMs_20	IAMs_20	21 53 35.9	
	comp=Z,42µm,18.0s						
V58A	Windy Hill, Pi	55.98	352	P	P	21 26 08.2	+0.5
	baz=170,SNR=102						
V58A				S	S	21 33 55.0	-0.9
	baz=170						
FPAL	Fort Paine	55.99	345	IAmb	IAmb	21 26 09.8	
	comp=Z,370nm,1.2s						
W52A	Murphy	56.14	347	IAmb	IAmb	21 26 10.9	
	comp=Z,469nm,1.1s						
V57A	Coltrane Farms	56.16	351	P	P	21 26 09.4	+0.4
	baz=170,SNR=63						
V57A				S	S	21 33 57.7	-0.6
	baz=170						
V56A	Mocksville	56.20	350	P	P	21 26 10.0	+0.8
	baz=169,SNR=134						
V56A				S	S	21 33 58.7	-0.1
	baz=169						
U61A	Possum Corner	56.20	354	P	P	21 26 10.0	+0.8
	baz=173,SNR=33						
U61A				S	S	21 34 01.9	+3.1
	baz=173						
NATX	Nacogdoches	56.31	335	P	P	21 26 11.4	+1.3
	baz=153,SNR=35						
NATX				S	S	21 34 01.4	+1.0
	baz=153						
V55A	Taylorsville	56.35	350	IAmb	IAmb	21 26 13.0	
	comp=Z,562nm,1.1s						
V55A	Taylorsville	56.35	350	P	P	21 26 11.1	+0.7
	baz=168,SNR=86						
V55A				S	S	21 34 01.5	+0.6
	baz=168						
U59A	Littleton	56.36	353	IAMs_20	IAMs_20	21 54 37.9	
	comp=Z,45µm,18.0s						
U59A	Littleton	56.36	353	P	P	21 26 11.2	+0.8
	baz=172,SNR=65						
U59A				S	S	21 34 01.3	+0.4
	baz=172						
V54A	Nebo	56.41	349	P	P	21 26 11.1	+0.3
	baz=167,SNR=98						
V54A				S	S	21 34 01.2	-0.5
	baz=167						
U60A	Pendleton	56.41	354	P	P	21 26 11.4	+0.7
	baz=173,SNR=44						
U60A				S	S	21 34 01.9	+0.4
	baz=173						
U58A	Oxford	56.49	352	P	P	21 26 12.1	+0.8
	baz=171,SNR=82						
U58A				S	S	21 34 03.0	+0.3
	baz=171						
W50A	Signal Mountai	56.55	346	IAmb	IAmb	21 26 13.6	
	comp=Z,460nm,1.1s						
W50A				IAMs_20	IAMs_20	21 54 02.8	
	comp=Z,55µm,19.0s						
CPCT	Cooper Cave	56.61	346	IAmb	IAmb	21 26 13.5	
	comp=Z,514nm,1.2s						
CPCT				IAMs_20	IAMs_20	21 54 41.9	
	comp=Z,56µm,18.0s						
U57A	Blanch	56.63	352	P	P	21 26 12.9	+0.5
	baz=170,SNR=79						
U57A				S	S	21 34 04.5	-0.1
	baz=170						
TKL	Tuckaleechee C	56.65	347	P	P	21 26 12.1	-0.4
	comp=Z,515nm,1.1s,baz=162,slow=8.1,SNR=102						
TKL				S	S	21 33 59.7	-5.2
	comp=Z,5.2nm,1.0s,baz=216,slow=18,SNR=1.1						
TKL	Tuckaleechee C	56.65	347	IAmb	IAmb	21 26 14.1	
	comp=Z,551nm,1.1s						
435B	Jarrell	56.67	332	IAmb	IAmb	21 26 16.2	
	comp=Z,146nm,0.8s						
435B	Jarrell	56.67	332	P	P	21 26 13.1	+0.4
	baz=149,SNR=35						
435B				S	S	21 34 03.8	-1.6
	baz=149						
U56A	King	56.70	351	IAMs_20	IAMs_20	21 54 08.1	
	comp=Z,62µm,20.0s						
U56A	King	56.70	351	P	P	21 26 13.8	+0.9
	baz=169,SNR=61						
U56A				S	S	21 34 06.6	+1.0
	baz=169						
SWET	Sewanee	56.71	345	IAmb	IAmb	21 26 20.6	
	comp=Z,289nm,1.1s						
V52A	Sevierville	56.79	347	IAMs_20	IAMs_20	21 53 43.2	
	comp=Z,40µm,18.0s						
V51A	Loudon	56.91	347	IAmb	IAmb	21 26 16.0	
	comp=Z,414nm,1.1s						
V51A				IAMs_20	IAMs_20	21 54 49.4	
	comp=Z,69µm,18.0s						
T59A	Double "B" Far	56.95	353	IAMs_20	IAMs_20	21 51 52.6	
	comp=Z,47µm,20.0s						
T59A	Double "B" Far	56.95	353	P	P	21 26 15.3	+0.7
	baz=172,SNR=165						
T59A				S	S	21 34 09.3	+0.7
	baz=172						
Z41A	Richland Creek	56.95	338	P	P	21 26 15.4	+0.8
	baz=155,SNR=69						
Z41A				S	S	21 34 10.1	+1.2
	baz=155						
U55A	TA2, Sparta	56.96	350	P	P	21 26 15.2	+0.4
	baz=168,SNR=54						
U55A				S	S	21 34 09.7	+0.6
	baz=168						
OXF	Oxford	56.99	342	IAMs_20	IAMs_20	21 55 23.3	
	comp=Z,43µm,18.0s						
OXF	Oxford	56.99	342	P	P	21 26 13.8	-1.1
	baz=159,SNR=84						
OXF				S	S	21 34 07.1	-2.3
	baz=159						
T60A	Surry	57.03	354	P	P	21 26 14.7	-0.4
T60A	Surry	57.03	354	P	P	21 26 15.9	+0.8
	baz=173,SNR=18						
T60A				S	S	21 34 10.7	+0.9
	baz=173						
T58A	Grand View Acr	57.03	352	P	P	21 26 16.0	+0.8
	baz=171,SNR=176						
T58A				S	S	21 34 11.0	+1.1
	baz=171						
PLAL	Pickwick Lake	57.05	343	IAmb	IAmb	21 26 16.3	
	comp=Z,416nm,1.1s						
U54A	Nelsons Funny	57.11	349	IAmb	IAmb	21 26 18.0	
	comp=Z,613nm,1.1s						
U54A				IAMs_20	IAMs_20	21 51 20.2	
	comp=Z,47µm,20.0s						
U54A	Nelsons Funny	57.11	349	P	P	21 26 16.1	+0.2
	baz=168,SNR=62						
U54A				S	S	21 34 10.2	-0.9
	baz=168						
T57A	Hurt	57.18	352	IAmb	IAmb	21 26 27.1	
	comp=Z,522nm,1.1s						
T57A				IAMs_20	IAMs_20	21 54 37.7	
	comp=Z,49µm,18.0s						
T57A	Hurt	57.18	352	P	P	21 26 16.9	+0.7
	baz=170,SNR=101						
T57A				S	S	21 34 12.0	+0.2
	baz=170						
T56A	Rocky Mt	57.32	351	P	P	21 26 18.2	+1.0
	baz=170,SNR=74						
T56A				S	S	21 34 14.8	+1.1
	baz=170						
JCT	Junction City	57.43	330	P	P	21 26 18.1	0.0
	baz=147,SNR=49						
JCT				S	S	21 34 14.8	-0.6
	baz=147						
V48A	Smith Brothers	57.43	344	IAmb	IAmb	21 26 23.7	
	comp=Z,337nm,1.1s						
V48A				IAMs_20	IAMs_20	21 54 28.1	
	comp=Z,42µm,20.0s						
X43A	Marvell	57.45	340	P	P	21 26 18.4	+0.2
	baz=157,SNR=24						
X43A				S	S	21 34 15.1	-0.3
	baz=157						
TZTN	Tazewell	57.46	348	IAMs_20	IAMs_20	21 53 46.9	
	comp=Z,42µm,18.0s						
TZTN	Tazewell	57.46	348	P	P	21 26 17.9	-0.3
	baz=166,SNR=51						
TZTN				S	S	21 34 15.1	-0.5
	baz=166						
S61A	Accomac	57.47	355	IAMs_20	IAMs_20	21 48 29.7	
	comp=Z,47µm,22.0s						
S61A	Accomac	57.47	355	P	P	21 26 19.5	+1.2
	baz=174,SNR=5.2						
S61A				S	S	21 34 18.3	+2.7
	baz=174						
T55A	Pulaski	57.52	350	P	P	21 26 19.6	+0.9
	baz=169,SNR=124						
T55A				S	S	21 34 17.3	+0.9
	baz=169						
BLA	Blacksburg	57.56	351	IAmb	IAmb	21 26 23.3	
	comp=Z,452nm,1.1s						
BLA				IAMs_20	IAMs_20	21 53 21.6	
	comp=Z,55µm,20.0s						
BLA	Blacksburg	57.56	351	P	P	21 26 19.7	+0.8
	baz=169,SNR=69						
BLA				S	S	21 34 17.8	+1.0
	baz=169						
S60A	Water View	57.58	354	P	P	21 26 19.9	+0.8
	baz=173,SNR=11						
S60A				S	S	21 34 18.7	+1.7
	baz=173						
T54A	Tazewell	57.59	350	P	P	21 26 19.3	+0.1
	baz=168,SNR=52						
T54A				S	S	21 34 16.7	-0.7
	baz=168						
S58A	Poland Farm, P	57.64	353	IAmb	IAmb	21 26 22.1	
	comp=Z,340nm,1.1s						
S58A	Poland Farm, P	57.64	353	P	P	21 26 20.1	+0.7
	baz=172,SNR=57						
S58A				S	S	21 34 18.5	+0.8
	baz=172						
HPIG		57.64	323	IAmb	IAmb	21 26 23.8	
	comp=Z,259nm,1.1s						
CLTN	Cedars of Leba	57.64	345	IAmb	IAmb	21 26 21.1	
	comp=Z,575nm,1.2s						
CLTN				IAMs_20	IAMs_20	21 54 49.7	
	comp=Z,41µm,20.0s						
WHTX	Lake Whitney,	57.66	333	IAmb	IAmb	21 26 22.8	
	comp=Z,448nm,1.1s						
WHTX	Lake Whitney,	57.66	333	P	P	21 26 20.1	+0.4
	baz=150,SNR=38						
WHTX				S	S	21 34 16.9	-1.3
	baz=150						
T53A	Wise	57.69	349	P	P	21 26 19.7	-0.2
	baz=167,SNR=80						
T53A				S	S	21 34 16.7	-1.9
	baz=167						
S59A	Mechanicsville	57.70	354	P	P	21 26 20.7	+0.8
	baz=173,SNR=30						
S59A				S	S	21 34 20.0	+1.5
	baz=173						
SACV	Santiago Islan	57.77	57	P	P	21 26 20.3	-0.6
SACV				IAmb	IAmb	21 26 34.8	
	comp=Z,312nm,0.9s						
SACV	Santiago Islan	57.77	57	IAMs_20	IAMs_20	21 48 46.3	
	comp=Z,62µm,22.0s						
S56A	Natural Bridge	57.89	352	P	P	21 26 22.0	+0.7
	baz=170,SNR=68						
S56A				S	S	21 34 22.2	+1.1
	baz=170						
S57A	Dark Hollow, R	57.89	352	IAmb	IAmb	21 26 24.1	
	comp=Z,611nm,1.1s						
S57A				IAMs_20	IAMs_20	21 52 40.6	
	comp=Z,68µm,20.0s						
S57A	Dark Hollow, R	57.89	352	P	P	21 26 22.1	+0.8
	baz=171,SNR=119						
S57A				S	S	21 34 22.3	+1.1
	baz=171						
T52A	Hallie	57.89	348	IAmb	IAmb	21 26 37.2	
	comp=Z,370nm,1.1s						
T52A				IAMs_20	IAMs_20	21 50 54.5	
	comp=Z,61µm,20.0s						
T52A	Hallie	57.89	348	P	P	21 26 21.1	-0.2
	baz=166,SNR=55						

T52A				S	S	21 34 18.5	-2.7
	baz=166						
U49A	Red Boiling Sp	57.91	346	IAMs_20	IAMs_20	21 54 51.9	
	comp=Z,56µm,19.0s						
T51A	Gray	57.95	347	P	P	21 26 21.4	-0.2
	baz=165,SNR=89						
T51A				S	S	21 34 19.5	-2.4
	baz=165						
R58B	Mineral	57.96	353	IAMs_20	IAMs_20	21 55 18.5	
	comp=Z,39µm,18.0s						
R58B	Mineral	57.96	353	P	P	21 26 22.7	+1.0
	baz=172,SNR=115						
R58B				S	S	21 34 23.5	+1.5
	baz=172						
WVT	Waverly	58.06	344	P	P	21 26 21.4	-1.1
WVT				pmax	pmax		
	comp=Z,503nm,1.2s						
WVT				MLR	MLR		
	comp=Z,33µm,21.0s						
WVT	Waverly	58.06	344	P	P	21 26 21.4	-1.1
WVT				IAmb	IAmb	21 26 22.8	
	comp=Z,503nm,1.1s						
WVT	Waverly	58.06	344	P	P	21 26 21.3	-1.1
	baz=161						
WVT				S	S	21 34 19.1	-4.3
	baz=161						
X40A	Basin Creek Fa	58.08	338	P	P	21 26 22.2	-0.3
	baz=155,SNR=18						
X40A				S	S	21 34 21.4	-2.2
	baz=155						
R61A	Willards	58.09	356	P	P	21 26 23.8	+1.1
	baz=175,SNR=10.0						
R61A				S	S	21 34 24.9	+1.1
	baz=175						
R59A	King George, V	58.12	354	P	P	21 26 23.6	+0.9
	baz=173,SNR=40						
R59A				S	S	21 34 27.2	+3.2
	baz=173						
S55A	Lewisburg	58.12	351	P	P	21 26 23.7	+0.9
	baz=169,SNR=119						
S55A				S	S	21 34 24.3	+0.1
	baz=169						
R60A	Leonardtown, M	58.13	354	P	P	21 26 23.9	+1.0
	baz=173,SNR=16						
R60A				S	S	21 34 25.9	+1.7
	baz=173						
CBN	Corbin Frederi	58.15	354	IAmb	IAmb	21 26 25.2	
	comp=Z,469nm,1.1s						
CBN	Corbin Frederi	58.15	354	P	P	21 26 23.8	+0.8
	baz=173,SNR=23						
CBN				S	S	21 34 25.7	+1.3
	baz=173						
UALR	University of	58.17	339	IAmb	IAmb	21 26 25.8	
	comp=Z,489nm,1.1s						
T50A	Nancy	58.19	347	P	P	21 26 22.8	-0.5
	baz=164,SNR=101						
T50A				S	S	21 34 22.1	-3.0
	baz=164						
S54A	Dingess, Beckl	58.27	350	IAmb	IAmb	21 26 26.1	
	comp=Z,533nm,1.1s						
S54A				IAMs_20	IAMs_20	21 53 37.5	
	comp=Z,55µm,20.0s						
S54A	Dingess, Beckl	58.27	350	P	P	21 26 24.1	+0.2
	baz=168,SNR=112						
S54A				S	S	21 34 25.4	-0.8
	baz=168						
S53A	Williamson	58.30	349	P	P	21 26 23.9	-0.2
	baz=167,SNR=77						
S53A				S	S	21 34 24.9	-1.6
	baz=167						
R58A	Rapidan	58.31	353	P	P	21 26 25.0	+0.9
	baz=172,SNR=61						
R58A				S	S	21 34 28.5	+2.0
	baz=172						
HBAR	Harrisburg	58.34	341	IAmb	IAmb	21 26 30.9	
	comp=Z,518nm,1.1s						
R57A	Stanardsville	58.37	353	P	P	21 26 25.6	+1.1
	baz=171,SNR=161						
R57A				S	S	21 34 29.0	+1.7
	baz=171						
LPIG	La Paz	58.38	317	P	P	21 26 25.1	+0.1
	comp=Z,95nm,0.5s,baz=115,slow=2.2,SNR=6.2						
MIAR	Mount Ida	58.39	338	P	P	21 26 25.0	+0.2
	baz=155,SNR=267						
MIAR				S	S	21 34 26.0	-1.7
	baz=155						
TXAR	Lajitas Array	58.42	326	P	P	21 26 24.8	-0.4
	comp=Z,43nm,0.6s,baz=143,slow=8.6,SNR=230						
TXAR				S	S	21 34 27.4	-1.1
	comp=Z,4.5nm,1.1s,baz=153,slow=8.0,SNR=2.8						
TXAR				LR	LR	21 51 17.7	
	comp=Z,18µm,18.9s,baz=0.0,slow=36						
TXAR				PKPPKP	P'P'df	21 56 07.8	+7.6
	comp=Z,1.4nm,1.0s,baz=321,slow=3.4,SNR=3.8						
TXAR	Lajitas Array	58.42	326	P	P	21 26 24.7	-0.5
T49A	Edmonton	58.42	346	P	P	21 26 24.6	-0.4
	baz=164,SNR=300						
T49A				S	S	21 34 25.0	-3.1
	baz=164						
S52A	Salyersville	58.47	348	P	P	21 26 24.9	-0.4
	baz=166,SNR=39						
S52A				S	S	21 34 26.7	-1.9
	baz=166						
W41B	Gary Mavity, V	58.50	339	IAmb	IAmb	21 26 39.1	
	comp=Z,180nm,1.0s						
W41B	Gary Mavity, V	58.50	339	P	P	21 26 25.3	-0.2
	baz=156,SNR=116						
W41B				S	S	21 34 27.8	-1.3
	baz=156						
S51A	Beattyville	58.53	348	IAMs_20	IAMs_20	21 50 19.2	
	comp=Z,62µm,22.0s						
S51A	Beattyville	58.53	348	P	P	21 26 25.3	-0.4
	baz=166,SNR=47						
S51A				S	S	21 34 27.7	-1.8
	baz=166						
R55A	Marlinton	58.56	351	IAmb	IAmb	21 26 28.7	
	comp=Z,347nm,1.0s						
R55A	Marlinton	58.56	351	P	P	21 26 27.1	+1.1
	baz=170,SNR=67						
R55A				S	S	21 34 31.3	+1.3
	baz=170						
R56A	Bull Pasture M	58.59	352	P	P	21 26 27.3	+1.1
	baz=170,SNR=28						
R56A				S	S	21 34 33.0	+2.6
	baz=170						
R54A	Victor	58.59	350	P	P	21 26 26.5	+0.3
	baz=169,SNR=90						
R54A				S	S	21 34 30.3	-0.1
	baz=169						
WHAR	Wooly Hollow	58.62	339	IAmb	IAmb	21 26 39.8	
	comp=Z,214nm,1.1s						
Q61A	Milford	58.64	356	P	P	21 26 27.4	+1.0
	baz=175,SNR=5.2						
Q61A				S	S	21 34 32.8	+2.0
	baz=175						
T47A	Sharon Grove	58.69	345	IAmb	IAmb	21 26 43.1	
	comp=Z,395nm,1.0s						
T47A				IAMs_20	IAMs_20	21 55 23.3	
	comp=Z,43µm,20.0s						
S50A	Richmond	58.73	347	P	P	21 26 26.7	-0.4
	baz=165,SNR=153						
S50A				S	S	21 34 30.5	-1.6
	baz=165						
Q59A	Harwood	58.73	354	P	P	21 26 27.9	+0.8
	baz=173,SNR=12						
Q59A				S	S	21 34 34.3	+2.3
	baz=173						
Q60A	Greensboro	58.80	355	P	P	21 26 27.2	-0.3
Q60A	Greensboro	58.80	355	P	P	21 26 28.6	+1.1
	baz=174,SNR=26						
Q60A				S	S	21 34 35.3	+2.4
	baz=174						
R53A	Hurricane	58.90	350	IAmb	IAmb	21 26 29.6	
	comp=Z,355nm,1.1s						
R53A				IAMs_20	IAMs_20	21 55 40.1	
	comp=Z,62µm,19.0s						
R53A	Hurricane	58.90	350	P	P	21 26 28.2	-0.1
	baz=168,SNR=43						
R53A				S	S	21 34 35.9	+1.7
	baz=168						
Q58A	Fox Den Farm,	58.91	354	P	P	21 26 29.1	+0.9
	baz=172,SNR=101						
Q58A				S	S	21 34 36.7	+2.3
	baz=172						
LCAR	Lake Charles	58.97	341	IAmb	IAmb	21 26 30.3	
	comp=Z,280nm,1.2s						
S49A	Springfield	59.02	346	P	P	21 26 28.4	-0.8
	baz=164,SNR=78						
S49A				S	S	21 34 34.8	-1.0
	baz=164						
R52A	Catlettsburg	59.02	349	P	P	21 26 28.8	-0.4
	baz=167,SNR=36						
R52A				S	S	21 34 37.4	+1.5
	baz=167						
W39A	Magazine	59.05	338	IAmb	IAmb	21 26 33.3	
	comp=Z,401nm,1.0s						
W39A	Magazine	59.05	338	P	P	21 26 30.0	+0.6
	baz=155,SNR=238						
W39A				S	S	21 34 36.2	-0.1
	baz=155						
HENM	Henderson Moun	59.06	342	IAmb	IAmb	21 26 34.7	
	comp=Z,437nm,1.1s						
Q57A	Strasburg	59.08	353	P	P	21 26 30.7	+1.2
	baz=172,SNR=145						
Q57A				S	S	21 34 40.0	+3.4
	baz=172						
FCAR	Ozark Folk Cen	59.11	340	IAmb	IAmb	21 26 31.3	
	comp=Z,246nm,1.2s						
ABTX	Abilene, Hawle	59.15	332	P	P	21 26 30.4	+0.2
	baz=148,SNR=110						
ABTX				S	S	21 34 35.8	-2.1
	baz=148						
R51A	Hillsboro	59.16	348	P	P	21 26 29.8	-0.3
	baz=166,SNR=100						
R51A				S	S	21 34 35.6	-2.1
	baz=166						
Q56A	Snyder Ridge,	59.18	352	IAMs_20	IAMs_20	21 53 28.7	
	comp=Z,54µm,20.0s						
Q56A	Snyder Ridge,	59.18	352	P	P	21 26 31.5	+1.3
	baz=171,SNR=167						
Q56A				S	S	21 34 39.3	+1.4
	baz=171						
Q55A	Buckhannon	59.26	351	P	P	21 26 32.0	+1.2
	baz=170,SNR=82						
Q55A				S	S	21 34 40.5	+1.5
	baz=170						
SDMD	Soldier's Deli	59.29	354	IAmb	IAmb	21 26 33.0	
	comp=Z,185nm,1.1s						
R50A	Paris	59.29	347	IAmb	IAmb	21 26 38.7	
	comp=Z,358nm,1.1s						
R50A				IAMs_20	IAMs_20	21 56 07.5	
	comp=Z,57µm,18.0s						
R50A	Paris	59.29	347	P	P	21 26 30.6	-0.4
	baz=165,SNR=85						
R50A				S	S	21 34 36.1	-3.3
	baz=165						
Q53A	Leroy	59.34	350	P	P	21 26 31.5	+0.2
	baz=168,SNR=79						
Q53A				S	S	21 34 39.1	-0.9
	baz=168						
Q54A	Coxs Mills	59.36	351	IAmb	IAmb	21 26 33.0	
	comp=Z,233nm,0.8s						
Q54A				IAMs_20	IAMs_20	21 53 48.3	
	comp=Z,47µm,21.0s						
Q54A	Coxs Mills	59.36	351	P	P	21 26 31.5	+0.1
	baz=169,SNR=84						
Q54A				S	S	21 34 40.0	-0.2
	baz=169						
P61A	Hammonton	59.40	356	IAmb	IAmb	21 26 40.3	
	comp=Z,239nm,0.8s						
P61A	Hammonton	59.40	356	P	P	21 26 32.4	+0.8
	baz=176,SNR=14						
P58A	Pank, Wackersv	59.41	354	P	P	21 26 32.7	+1.0
	baz=173,SNR=71						
P58A				S	S	21 34 42.6	+1.8
	baz=173						
P59A	Jarrettsville	59.45	355	P	P	21 26 33.0	+1.0
	baz=174,SNR=108						
P59A				S	S	21 34 42.5	+1.1
	baz=174						
P57A	Homestead Farm	59.48	353	IAmb	IAmb	21 26 41.9	
	comp=Z,427nm,1.1s						
P57A				IAMs_20	IAMs_20	21 55 41.7	
	comp=Z,39µm,18.0s						
P57A	Homestead Farm	59.48	353	P	P	21 26 33.7	+1.4
	baz=172,SNR=126						
P57A				S	S	21 34 45.5	+3.8
	baz=172						
R49A	Shelbyville	59.48	347	IAmb	IAmb	21 26 33.6	
	comp=Z,195nm,1.1s						
R49A				IAMs_20	IAMs_20	21 52 34.4	
	comp=Z,66µm,20.0s						
R49A	Shelbyville	59.48	347	P	P	21 26 31.4	-0.8
	baz=164,SNR=66						
R49A				S	S	21 34 42.3	+0.5
	baz=164						
Q52A	Bidwell	59.57	349	P	P	21 26 32.6	-0.2
	baz=167,SNR=36						
Q52A				S	S	21 34 41.8	-1.1
	baz=167						
P60A	Greenville	59.59	356	IAmb	IAmb	21 26 34.9	
	comp=Z,341nm,1.1s						
P60A				IAMs_20	IAMs_20	21 56 23.7	
	comp=Z,37µm,18.0s						
P60A	Greenville	59.59	356	P	P	21 26 33.5	+0.5
	baz=175,SNR=48						
P60A				S	S	21 34 44.2	+1.1
	baz=175						
P56A	Dayton Farm, R	59.60	353	P	P	21 26 34.5	+1.4
	baz=171,SNR=80						
P56A				S	S	21 34 44.6	+1.4
	baz=171						
WCI	Wyandotte Cave	59.67	346	P	P	21 26 32.6	-1.0
WCI				pmax	pmax		
	comp=Z,425nm,1.2s						
WCI				MLR	MLR		
	comp=Z,67µm,18.0s						
WCI	Wyandotte Cave	59.67	346	P	P	21 26 32.6	-1.0
WCI				IAmb	IAmb	21 26 40.9	
	comp=Z,424nm,1.1s						
WCI	Wyandotte Cave	59.67	346	P	P	21 26 32.8	-0.8
	baz=163						
WCI				S	S	21 34 42.1	-2.2
	baz=163						
PSUB	Penn St. - Bra	59.69	356	IAmb	IAmb	21 26 35.7	
	comp=Z,254nm,1.0s						
P55A	Reedsville	59.73	352	P	P	21 26 34.9	+0.9
	baz=170,SNR=86						
P55A				S	S	21 34 46.1	+1.1
	baz=170						
USIN	University of	59.75	344	IAmb	IAmb	21 26 39.7	
	comp=Z,323nm,1.1s						
USIN				IAMs_20	IAMs_20	21 56 05.5	
	comp=Z,43µm,19.0s						
Q50A	Georgetown	59.77	348	P	P	21 26 33.6	-0.6
	baz=166,SNR=24						
Q50A				S	S	21 34 41.9	-3.6
	baz=166						
U40A	Yellville	59.78	339	IAmb	IAmb	21 26 37.4	
	comp=Z,293nm,0.9s						
U40A	Yellville	59.78	339	P	P	21 26 34.1	-0.3
	baz=156,SNR=207						
U40A				S	S	21 34 43.5	-2.3
	baz=156						
O61A	Allentown	59.80	357	P	P	21 26 35.2	+0.8
	baz=176,SNR=34						
O61A				S	S	21 34 47.2	+1.4
	baz=176						
Q51A	Peebles	59.82	349	IAmb	IAmb	21 26 35.6	
	comp=Z,326nm,1.1s						
Q51A				IAMs_20	IAMs_20	21 53 05.5	
	comp=Z,48µm,20.0s						
Q51A	Peebles	59.82	349	P	P	21 26 34.2	-0.5
	baz=166,SNR=63						
Q51A				S	S	21 34 43.7	-2.5
	baz=166						
MVL	Millersville	59.83	355	P	P	21 26 35.0	+0.4
MVL				IAmb	IAmb	21 26 37.5	
	comp=Z,249nm,0.9s						
T42A	Van Buren	59.84	341	IAmb	IAmb	21 26 35.3	
	comp=Z,223nm,1.1s						
MCWV	Mont Chateau	59.88	352	IAmb	IAmb	21 26 37.7	
	comp=Z,238nm,1.0s						
MCWV	Mont Chateau	59.88	352	P	P	21 26 35.9	+0.9
	baz=170,SNR=82						
MCWV				S	S	21 34 47.9	+1.1
	baz=170						
P54A	Burton	59.91	351	P	P	21 26 35.9	+0.6
	baz=169						
P54A				S	S	21 34 46.7	-0.6
	baz=169						
P53A	Whipple	59.93	350	IAmb	IAmb	21 26 37.6	
	comp=Z,446nm,1.1s						
P53A				IAMs_20	IAMs_20	21 54 08.5	
	comp=Z,43µm,20.0s						
P53A	Whipple	59.93	350	P	P	21 26 35.7	+0.3
	baz=168,SNR=100						
P53A				S	S	21 34 46.5	-1.1
	baz=168						
O58A	Lewisberry	60.01	354	P	P	21 26 36.9	+1.1
	baz=173,SNR=66						
O58A				S	S	21 34 49.2	+0.7
	baz=173						
O60A	Telford	60.08	356	P	P	21 26 37.1	+0.8
	baz=175,SNR=48						
O60A				S	S	21 34 50.5	+1.1
	baz=175						
HHAR	Hobbs	60.08	338	IAmb	IAmb	21 26 39.1	
	comp=Z,418nm,1.1s						
PAGS	Pennsylvania G	60.09	355	IAmb	IAmb	21 26 38.6	
	comp=Z,222nm,1.0s						
PAGS				IAMs_20	IAMs_20	21 51 12.9	
	comp=Z,49µm,22.0s						
Q49A	Aurora	60.11	347	P	P	21 26 35.9	-0.6
	baz=165,SNR=71						
Q49A				S	S	21 34 46.0	-3.8
	baz=165						
O59A	Robesonia	60.13	355	P	P	21 26 37.7	+1.0
	baz=174,SNR=60						
O59A				S	S	21 34 50.7	+0.6
	baz=174						
O57A	Amberson	60.16	354	P	P	21 26 38.1	+1.2
	baz=172,SNR=175						
O57A				S	S	21 34 51.9	+1.4
	baz=172						
P52A	Corning	60.20	350	P	P	21 26 36.9	-0.3
	baz=168,SNR=64						
P52A				S	S	21 34 49.1	-1.9
	baz=168						
P51A	Williamsport	60.21	349	IAmb	IAmb	21 26 44.8	
	comp=Z,252nm,1.0s						
P51A				IAMs_20	IAMs_20	21 53 15.8	
	comp=Z,42µm,20.0s						
P51A	Williamsport	60.21	349	P	P	21 26 36.8	-0.5
	baz=167,SNR=64						
P51A				S	S	21 34 50.8	-0.3
	baz=167						
Q48A	North Vernon	60.22	346	P	P	21 26 36.6	-0.7
	baz=164,SNR=83						
Q48A				S	S	21 34 47.4	-3.8
	baz=164						
MGMO	Mountain Grove	60.31	340	IAMs_20	IAMs_20	21 55 03.2	
	comp=Z,39µm,19.0s						
O56A	Blue Knob Stat	60.32	353	P	P	21 26 39.3	+1.2
	baz=171,SNR=227						
O56A				S	S	21 34 54.0	+1.4
	baz=171						
O55A	Ligonier	60.35	352	P	P	21 26 39.2	+0.9
	baz=171,SNR=206						
O55A				S	S	21 34 54.6	+1.7
	baz=171						
U38A	Gravette	60.38	338	IAmb	IAmb	21 26 41.0	
	comp=Z,200nm,1.1s						
BRNJ	Basking Ridge	60.39	357	IAmb	IAmb	21 26 41.2	
	comp=Z,388nm,1.0s						
BRNJ				IAMs_20	IAMs_20	21 56 30.8	
	comp=Z,51µm,19.0s						
TUL1	Leonard	60.42	337	P	P	21 26 38.8	0.0
	baz=153,SNR=172						
TUL1				S	S	21 34 53.0	-0.9
	baz=153						
N61A	South Mountain	60.44	357	P	P	21 26 39.6	+0.8
	baz=176,SNR=55						
N61A				S	S	21 34 54.7	+0.6
	baz=176						
CPNY	Central Park	60.46	357	IAmb	IAmb	21 26 51.5	
	comp=Z,265nm,1.1s						
O54A	Avella	60.47	351	IAmb	IAmb	21 26 46.7	
	comp=Z,215nm,0.9s						
O54A				IAMs_20	IAMs_20	21 53 39.6	
	comp=Z,52µm,20.0s						
O54A	Avella	60.47	351	P	P	21 26 39.2	+0.2
	baz=170,SNR=25						
O54A				S	S	21 34 54.5	+0.1
	baz=170						
P50A	Jamestown	60.47	348	P	P	21 26 38.6	-0.5
	baz=166,SNR=41						
P50A				S	S	21 34 51.7	-2.8
	baz=166						
WMOK	Wichita Mounta	60.58	333	P	P	21 26 39.3	-0.7
	baz=150,SNR=31						
WMOK				S	S	21 34 54.2	-1.9
	baz=150						
N62A	Caumsett State	60.58	358	P	P	21 26 40.4	+0.6
	baz=177						
N62A				S	S	21 34 56.2	+0.5
	baz=177						
P49A	Miami Univ. Ec	60.58	348	P	P	21 26 38.8	-1.0
	baz=165,SNR=89						
P49A				S	S	21 34 53.1	-2.8
	baz=165						
OLIL	Olney	60.59	344	IAmb	IAmb	21 26 40.4	
	comp=Z,289nm,1.1s						
OLIL				IAMs_20	IAMs_20	21 57 25.6	
	comp=Z,48µm,18.0s						
N60A	Cedar Hill Far	60.61	356	P	P	21 26 40.6	+0.6
	baz=175,SNR=59						
N60A				S	S	21 34 57.9	+1.8
	baz=175						
N63A	Mattituck	60.61	358	P	P	21 26 41.0	+1.1
	baz=178						
SSPA	Standing Stone	60.61	354	P	P	21 26 39.8	-0.2
SSPA	Standing Stone	60.61	354	IAMs_20	IAMs_20	21 53 30.5	
	comp=Z,48µm,21.0s						
SSPA	Standing Stone	60.61	354	P	P	21 26 41.0	+1.0
	baz=172						
SSPA				S	S	21 34 58.7	+2.5
	baz=172						
O52A	Adamsville	60.62	350	IAmb	IAmb	21 26 41.4	
	comp=Z,262nm,0.9s						
O52A				IAMs_20	IAMs_20	21 54 49.7	
	comp=Z,60µm,19.0s						
O52A	Adamsville	60.62	350	P	P	21 26 39.9	-0.2
	baz=168,SNR=48						
O52A				S	S	21 34 56.5	+0.1
	baz=168						
OKCFA	Oklahoma City	60.62	335	IAmb	IAmb	21 26 42.9	
	comp=Z,198nm,0.9s						
BLO	Bloomington	60.62	346	IAmb	IAmb	21 26 40.8	
	comp=Z,393nm,1.1s						
BLO				IAMs_20	IAMs_20	21 56 26.6	
	comp=Z,52µm,18.0s						
O53A	New Philadelph	60.65	351	P	P	21 26 40.4	+0.1
	baz=169,SNR=49						
O53A				S	S	21 34 55.3	-1.5
	baz=169						
P48A	Milroy	60.66	347	IAmb	IAmb	21 26 40.6	
	comp=Z,269nm,1.1s						
P48A				IAMs_20	IAMs_20	21 56 53.5	
	comp=Z,64µm,18.0s						
P48A	Milroy	60.66	347	P	P	21 26 39.1	-1.3
	baz=164,SNR=52						
P48A				S	S	21 34 53.9	-3.0
	baz=164						
PAL	Palisades	60.67	357	IAMs_20	IAMs_20	21 56 24.5	
	comp=Z,64µm,18.0s						
PAL	Palisades	60.67	357	P	P	21 26 40.8	+0.5
	baz=176,SNR=60						
PAL				S	S	21 34 57.4	+0.4
	baz=176						
N58A	Sunbury	60.70	355	IAMs_20	IAMs_20	21 51 31.0	
	comp=Z,45µm,22.0s						
N58A	Sunbury	60.70	355	P	P	21 26 41.5	+0.9
	baz=174,SNR=99						
N58A				S	S	21 34 58.8	+1.5
	baz=174						
N59A	State Game Lan	60.70	356	IAmb	IAmb	21 26 43.1	
	comp=Z,188nm,1.0s						
N59A	State Game Lan	60.70	356	P	P	21 26 41.5	+0.9
	baz=174,SNR=57						
N59A				S	S	21 34 58.2	+0.8
	baz=174						
O51A	Pataskala	60.78	349	P	P	21 26 40.8	-0.4
	baz=167,SNR=60						
O51A				S	S	21 34 56.6	-1.8
	baz=167						
ODNJ	Ogdensburg	60.79	357	IAmb	IAmb	21 26 43.2	
	comp=Z,177nm,1.0s						
ODNJ				IAMs_20	IAMs_20	21 56 33.4	
	comp=Z,58µm,18.0s						
CCM	Cathedral Cave	60.83	341	P	P	21 26 40.4	-1.1
CCM				pmax	pmax		
	comp=Z,521nm,1.2s						
CCM				MLR	MLR		

	comp=Z,21µm,20.0s						
CCM	**Cathedral Cave**	**60.83**	**341**	P	**P**	**21 26 40.4**	**-1.1**
CCM	**Cathedral Cave** baz=158	**60.83**	**341**	P	**P**	**21 26 41.0**	**-0.5**
CCM	baz=158			S	**S**	**21 34 54.9**	**-4.2**
N55A	**Marion Center** baz=171,SNR=300	**60.87**	**353**	P	**P**	**21 26 42.9**	**+1.1**
N55A	baz=171			S	**S**	**21 35 00.8**	**+1.1**
ACSO	**Alum Creek Sta** comp=Z,57µm,18.0s	**60.93**	**349**	IAMs_20	IAMs_20	21 56 42.8	
ACSO	**Alum Creek Sta** baz=167,SNR=109	**60.93**	**349**	P	**P**	**21 26 41.9**	**-0.3**
ACSO	baz=167			S	**S**	**21 34 57.9**	**-2.4**
N56A	**West Decatur** baz=172,SNR=196	**60.93**	**353**	P	**P**	**21 26 43.0**	**+0.8**
N56A	baz=172			S	**S**	**21 35 00.9**	**+0.5**
O50A	**Cable** baz=166,SNR=38	**60.96**	**349**	P	**P**	**21 26 41.8**	**-0.7**
O50A	baz=166			S	**S**	**21 34 57.7**	**-3.0**
M61A	**Granite Spring** baz=177,SNR=31	**60.97**	**357**	P	**P**	**21 26 42.9**	**+0.4**
M61A	baz=177			S	**S**	**21 35 01.2**	**+0.4**
M63A	**Gales Ferry** baz=178,SNR=20	**61.01**	**359**	P	**P**	**21 26 43.5**	**+0.8**
M63A	baz=178			S	**S**	**21 35 02.1**	**+0.9**
M60A	**Port Jervis** baz=176,SNR=53	**61.03**	**357**	P	**P**	**21 26 43.5**	**+0.7**
M60A	baz=176			S	**S**	**21 35 02.9**	**+1.3**
M62A	**Hamden** baz=178,SNR=42	**61.07**	**358**	P	**P**	**21 26 44.1**	**+1.0**
M62A	baz=178			S	**S**	**21 35 02.5**	**+0.5**
SLM	**Saint Louis** comp=Z,299nm,1.1s	**61.07**	**343**	IAmb	IAmb	21 26 44.7	
O49A	**Covington** comp=Z,387nm,1.1s	**61.13**	**348**	IAmb	IAmb	21 26 44.4	
O49A	comp=Z,51µm,19.0s			IAMs_20	IAMs_20	21 56 19.2	
O49A	**Covington** baz=165,SNR=42	**61.13**	**348**	P	**P**	**21 26 42.9**	**-0.7**
O49A	baz=165			S	**S**	**21 34 59.0**	**-3.9**
N53A	**Lisbon** comp=Z,421nm,1.1s	**61.14**	**351**	IAmb	IAmb	21 26 45.4	
N53A	**Lisbon** baz=169,SNR=70	**61.14**	**351**	P	**P**	**21 26 43.8**	**+0.2**
N53A	baz=169			S	**S**	**21 35 01.6**	**-1.5**
M64A	**Tiverton** baz=179,SNR=15	**61.15**	**359**	P	**P**	**21 26 44.3**	**+0.7**
M64A	baz=179			S	**S**	**21 35 03.7**	**+0.7**
S39A	**Bolivar** comp=Z,40µm,20.0s	**61.15**	**340**	IAMs_20	IAMs_20	21 55 45.2	
M65A	**Busby, Falmout** comp=Z,43µm,22.0s	**61.15**	**360**	IAMs_20	IAMs_20	21 50 44.2	
M65A	**Busby, Falmout** baz=180	**61.15**	**360**	P	**P**	**21 26 44.1**	**+0.5**
M65A	baz=180			S	**S**	**21 35 04.8**	**+1.7**
N54A	**Moraine State** comp=Z,50µm,20.0s	**61.18**	**352**	IAMs_20	IAMs_20	21 54 50.5	
N54A	**Moraine State** baz=170,SNR=235	**61.18**	**352**	P	**P**	**21 26 44.7**	**+0.8**
N54A	baz=170			S	**S**	**21 35 03.6**	**+0.1**
MNTX	**Cornudas Mount** comp=Z,208nm,0.8s	**61.19**	**326**	IAmb	IAmb	21 26 47.0	
MNTX	**Cornudas Mount** baz=142,SNR=371	**61.19**	**326**	P	**P**	**21 26 43.8**	**-0.3**
MNTX	baz=142			S	**S**	**21 35 02.6**	**-1.4**
M58A	**Price's Panora** baz=174,SNR=158	**61.20**	**355**	P	**P**	**21 26 44.9**	**+0.9**
M58A	baz=174			S	**S**	**21 35 04.4**	**+0.6**
P46A	**Rosedale** comp=Z,326nm,1.0s	**61.21**	**345**	IAmb	IAmb	21 26 51.1	
P46A	comp=Z,50µm,20.0s			IAMs_20	IAMs_20	21 55 03.1	
M57A	**Sunshine Farm,** comp=Z,46µm,22.0s	**61.23**	**354**	IAMs_20	IAMs_20	21 51 46.0	
M57A	**Sunshine Farm,** baz=173,SNR=120	**61.23**	**354**	P	**P**	**21 26 45.3**	**+1.1**
M57A	baz=173			S	**S**	**21 35 05.4**	**+1.3**
N52A	**McGinn's Farm,** baz=168,SNR=69	**61.28**	**350**	P	**P**	**21 26 44.3**	**-0.3**
N52A	baz=168			S	**S**	**21 35 02.5**	**-2.3**
M59A	**Waymart** baz=175,SNR=142	**61.30**	**356**	P	**P**	**21 26 45.4**	**+0.8**
M59A	baz=175			S	**S**	**21 35 04.8**	**-0.2**
O48A	**Farmland** baz=164,SNR=104	**61.37**	**347**	P	**P**	**21 26 44.2**	**-0.9**
O48A	baz=164			S	**S**	**21 35 01.9**	**-4.0**
KSCT	**Kent School, K** comp=Z,262nm,1.1s	**61.38**	**358**	IAmb	IAmb	21 26 48.0	
KSCT	comp=Z,53µm,19.0s			IAMs_20	IAMs_20	21 55 06.0	
L63A	**North Scituate** baz=179,SNR=102	**61.46**	**359**	P	**P**	**21 26 46.6**	**+0.9**
L63A	baz=179			S	**S**	**21 35 07.6**	**+0.6**
M56A	**Emporium** baz=172,SNR=203	**61.48**	**354**	P	**P**	**21 26 46.6**	**+0.7**
M56A	baz=172			S	**S**	**21 35 07.9**	**+0.6**
N50A	**Nevada** baz=167,SNR=97	**61.48**	**349**	P	**P**	**21 26 45.4**	**-0.5**
N50A	baz=167			S	**S**	**21 35 04.8**	**-2.5**
N51A	**Ashland** comp=Z,280nm,0.9s	**61.49**	**350**	IAmb	IAmb	21 26 53.6	
N51A	comp=Z,67µm,20.0s			IAMs_20	IAMs_20	21 55 07.7	
N51A	**Ashland** baz=168,SNR=38	**61.49**	**350**	P	**P**	**21 26 45.6**	**-0.4**
N51A	baz=168			S	**S**	**21 35 04.1**	**-3.3**
SHEL	**Horse Pasture**	**61.52**	**98**	P	**P**	**21 26 45.8**	**-1.0**
SHEL	comp=Z,311nm,1.0s			pmax	pmax		
SHEL	comp=Z,72µm,19.0s			MLR	MLR		
SHEL	**Horse Pasture**	**61.52**	**98**	P	**P**	**21 26 45.8**	**-1.0**
SHEL	comp=Z,311nm,1.0s			IAmb	IAmb	21 27 05.0	
M55A	**Ridgway** comp=Z,33µm,18.0s	**61.53**	**353**	IAMs_20	IAMs_20	21 57 19.8	
M55A	**Ridgway** baz=171,SNR=309	**61.53**	**353**	P	**P**	**21 26 46.5**	**+0.2**
M55A	baz=171			S	**S**	**21 35 07.4**	**-0.6**
L64A	**Middleborough** baz=180,SNR=40	**61.53**	**360**	P	**P**	**21 26 46.6**	**+0.5**
L64A	baz=180			S	**S**	**21 35 07.7**	**-0.1**
L65A	**Cape Cod Natio** baz=181	**61.62**	**0**	P	**P**	**21 26 47.9**	**+1.1**
L62A	**Suffield** baz=178,SNR=8.6	**61.65**	**358**	P	**P**	**21 26 47.7**	**+0.7**
L62A	baz=178			S	**S**	**21 35 10.3**	**+0.9**
L60A	**Shokan** baz=176,SNR=58	**61.67**	**357**	P	**P**	**21 26 48.1**	**+0.9**
L60A	baz=176			S	**S**	**21 35 10.8**	**+1.1**
M54A	**Oil Creek Stat** baz=170,SNR=202	**61.67**	**352**	P	**P**	**21 26 47.2**	**0.0**
M54A	baz=170			S	**S**	**21 35 08.7**	**-1.1**
MSTX	**Muleshoe**	**61.72**	**330**	P	**P**	**21 26 47.4**	**-0.4**
MSTX	**Muleshoe** baz=146,SNR=242	**61.72**	**330**	P	**P**	**21 26 47.6**	**-0.2**
MSTX	baz=146			S	**S**	**21 35 09.6**	**-1.2**
M53A	**WI Miller and** baz=169,SNR=95	**61.74**	**351**	P	**P**	**21 26 47.7**	**+0.1**
M53A	baz=169			S	**S**	**21 35 09.4**	**-1.2**
P43A	**Skaggs, Pawnee** comp=Z,41µm,19.0s	**61.81**	**344**	IAMs_20	IAMs_20	21 57 34.0	
N49A	**Columbus Grove** comp=Z,49µm,20.0s	**61.81**	**348**	IAMs_20	IAMs_20	21 54 06.3	
N49A	**Columbus Grove** baz=166,SNR=177	**61.81**	**348**	P	**P**	**21 26 47.5**	**-0.7**
N49A	baz=166			S	**S**	**21 35 07.3**	**-4.2**
L58A	**Harry Jones Me** baz=174,SNR=180	**61.83**	**356**	P	**P**	**21 26 49.4**	**+1.2**
L58A	baz=174			S	**S**	**21 35 14.0**	**+2.3**
L61A	**Hillsdale 1, H** baz=177,SNR=31	**61.84**	**358**	P	**P**	**21 26 49.1**	**+0.8**
L61A	baz=177			S	**S**	**21 35 12.7**	**+0.9**
L57A	**Andrews Acres** baz=173,SNR=74	**61.86**	**355**	P	**P**	**21 26 49.3**	**+0.8**
L57A	baz=173			S	**S**	**21 35 12.3**	**+0.2**
M51A	**Elyria** baz=168,SNR=36	**61.86**	**350**	P	**P**	**21 26 48.1**	**-0.4**
M51A	baz=168			S	**S**	**21 35 08.6**	**-3.6**
ALLY	**Alegheny Colle** comp=Z,52µm,20.0s	**61.88**	**352**	IAMs_20	IAMs_20	21 54 33.0	
QUA2	**Belchertown** comp=Z,250nm,1.1s	**61.89**	**359**	IAmb	IAmb	21 26 50.7	
QUA2	comp=Z,40µm,20.0s			IAMs_20	IAMs_20	21 54 54.7	
SFIN	**Lafayette** comp=Z,300nm,0.9s	**61.91**	**346**	IAmb	IAmb	21 26 49.4	
SFIN	**Lafayette** baz=162,SNR=74	**61.91**	**346**	P	**P**	**21 26 47.3**	**-1.4**
SFIN	baz=162			S	**S**	**21 35 07.4**	**-5.3**
L59A	**Walton** comp=Z,57µm,18.0s	**61.92**	**356**	IAMs_20	IAMs_20	21 57 18.3	
L59A	**Walton** baz=175,SNR=153	**61.92**	**356**	P	**P**	**21 26 49.8**	**+1.0**
L59A	baz=175			S	**S**	**21 35 14.5**	**+1.6**
N48A	**Decatur** baz=165,SNR=105	**61.92**	**348**	P	**P**	**21 26 48.0**	**-0.9**
N48A	baz=165			S	**S**	**21 35 10.2**	**-2.7**
BCX	**Boston College** comp=Z,276nm,1.1s	**61.93**	**360**	IAmb	IAmb	21 26 51.0	
M52A	**Chesterland** comp=Z,337nm,0.9s	**61.94**	**351**	IAmb	IAmb	21 26 57.1	
M52A	**Chesterland** baz=169,SNR=61	**61.94**	**351**	P	**P**	**21 26 48.7**	**-0.3**
M52A	baz=169			S	**S**	**21 35 11.8**	**-1.3**
AMTX	**Amarillo** baz=147	**61.97**	**331**	P	**P**	**21 26 49.0**	**-0.4**
AMTX	baz=147			S	**S**	**21 35 11.6**	**-2.3**
WES	**Weston** comp=Z,392nm,1.1s	**61.98**	**359**	IAmb	IAmb	21 26 51.4	
BINY	**Binghamton** baz=174,SNR=122	**61.99**	**355**	P	**P**	**21 26 50.2**	**+0.8**
BINY	baz=174			S	**S**	**21 35 15.4**	**+1.6**
O44A	**Mansfield** comp=Z,420nm,1.1s	**62.02**	**345**	IAmb	IAmb	21 26 49.7	
O44A	comp=Z,55µm,18.0s			IAMs_20	IAMs_20	21 58 16.6	
L56A	**Greenwood** comp=Z,48µm,22.0s	**62.06**	**354**	IAMs_20	IAMs_20	21 52 02.0	
L56A	**Greenwood** baz=173,SNR=121	**62.06**	**354**	P	**P**	**21 26 50.1**	**+0.3**
L56A	baz=173			S	**S**	**21 35 15.2**	**+0.5**
L61B	**Northampton** baz=178,SNR=66	**62.07**	**358**	P	**P**	**21 26 50.2**	**+0.4**
L61B	baz=178			S	**S**	**21 35 15.3**	**+0.6**
M50A	**Fremont** comp=Z,50µm,19.0s	**62.08**	**349**	IAMs_20	IAMs_20	21 55 28.2	
M50A	**Fremont** baz=167,SNR=40	**62.08**	**349**	P	**P**	**21 26 49.4**	**-0.5**
M50A	baz=167			S	**S**	**21 35 12.7**	**-2.1**
N47A	**Urbana** comp=Z,59µm,20.0s	**62.08**	**347**	IAMs_20	IAMs_20	21 54 23.1	
N47A	**Urbana** baz=164,SNR=59	**62.08**	**347**	P	**P**	**21 26 48.6**	**-1.3**
N47A	baz=164			S	**S**	**21 35 10.5**	**-4.4**
U32A	**Winter Ranch,** comp=Z,372nm,1.1s	**62.08**	**334**	IAmb	IAmb	21 26 50.9	
VNA3	**Neumayer Olymp**	**62.09**	**161**	P	**P**	**21 26 51.3**	**+1.6**
HRV	**Adam Dziewonsk**	**62.10**	**359**	P	**P**	**21 26 49.6**	**-0.5**
HRV	comp=Z,576nm,1.0s			pmax	pmax		
HRV	comp=Z,42µm,21.0s			MLR	MLR		
HRV	**Adam Dziewonsk**	**62.10**	**359**	P	**P**	**21 26 49.5**	**-0.5**
HRV	**Adam Dziewonsk** comp=Z,42µm,21.0s	**62.10**	**359**	IAMs_20	IAMs_20	21 52 48.3	
HRV	**Adam Dziewonsk** baz=179	**62.10**	**359**	P	**P**	**21 26 51.0**	**+1.0**
HRV	baz=179			S	**S**	**21 35 13.3**	**-1.8**
L53A	**Girard** baz=170,SNR=174	**62.19**	**352**	P	**P**	**21 26 50.7**	**+0.1**
L53A	baz=170			S	**S**	**21 35 14.5**	**-1.8**
L55A	**Hinsdale** baz=172,SNR=230	**62.20**	**353**	P	**P**	**21 26 51.5**	**+0.8**
L55A	baz=172			S	**S**	**21 35 16.1**	**-0.3**
K62A	**Royalston** comp=Z,207nm,1.1s	**62.27**	**359**	IAmb	IAmb	21 26 53.7	
K62A	**Royalston** baz=178,SNR=21	**62.27**	**359**	P	**P**	**21 26 52.2**	**+1.0**
K62A	baz=178			S	**S**	**21 35 18.7**	**+1.4**
K60A	**Five Rivers En** baz=177,SNR=20	**62.28**	**357**	P	**P**	**21 26 52.3**	**+1.1**
K60A	baz=177			S	**S**	**21 35 19.4**	**+2.0**
K63A	**Dunstable** baz=179,SNR=34	**62.28**	**359**	P	**P**	**21 26 52.1**	**+0.9**
K63A	baz=179			S	**S**	**21 35 19.5**	**+2.2**
HSIG	comp=Z,200nm,1.1s	**62.30**	**320**	IAmb	IAmb	21 26 55.4	
K61A	**Williamstown** baz=177,SNR=52	**62.31**	**358**	P	**P**	**21 26 52.5**	**+1.0**
K61A	baz=177			S	**S**	**21 35 20.1**	**+2.3**
M49A	**Liberty Center** baz=166,SNR=92	**62.31**	**349**	P	**P**	**21 26 50.7**	**-0.8**
M49A	baz=166			S	**S**	**21 35 13.9**	**-3.9**
VNA1	**Neumayer--Stat**	**62.31**	**161**	P	**P**	**21 26 53.4**	**+2.2**
ERPA	**Erie** comp=Z,47µm,20.0s	**62.31**	**352**	IAMs_20	IAMs_20	21 54 45.6	
ERPA	**Erie** baz=170,SNR=51	**62.31**	**352**	P	**P**	**21 26 51.9**	**+0.4**
ERPA	baz=170			S	**S**	**21 35 19.6**	**+1.7**
L54A	**Sinclairville** baz=171,SNR=371	**62.35**	**353**	P	**P**	**21 26 52.3**	**+0.6**
L54A	baz=171			S	**S**	**21 35 16.7**	**-1.6**
TRY	**Troy** comp=Z,53µm,19.0s	**62.38**	**357**	IAMs_20	IAMs_20	21 55 45.7	
WVNY	**West Valley, N** comp=Z,42µm,21.0s	**62.44**	**353**	IAMs_20	IAMs_20	21 54 36.9	
M48A	**Edgerton** comp=Z,387nm,1.1s	**62.46**	**348**	IAmb	IAmb	21 26 59.9	
M48A	comp=Z,49µm,19.0s			IAMs_20	IAMs_20	21 56 49.3	
M48A	**Edgerton** baz=165,SNR=48	**62.46**	**348**	P	**P**	**21 26 51.5**	**-0.9**
M48A	baz=165			S	**S**	**21 35 16.0**	**-3.7**
K59A	**Cooperstown** baz=176,SNR=229	**62.49**	**356**	P	**P**	**21 26 53.6**	**+0.9**
K59A	baz=176			S	**S**	**21 35 21.3**	**+1.2**
M47A	**Cromwell** baz=164,SNR=6.1	**62.52**	**347**	P	**P**	**21 26 52.1**	**-0.8**
M47A	baz=164			S	**S**	**21 35 15.4**	**-5.1**
K58A	**Earlville** baz=175,SNR=154	**62.53**	**356**	P	**P**	**21 26 53.6**	**+0.7**
K58A	baz=175			S	**S**	**21 35 21.0**	**+0.5**
K57A	**Scipio Center** baz=174,SNR=72	**62.56**	**355**	P	**P**	**21 26 53.6**	**+0.5**
K57A	baz=174			S	**S**	**21 35 21.2**	**+0.3**
K56A	**Middlesex** baz=173,SNR=90	**62.60**	**354**	P	**P**	**21 26 53.9**	**+0.5**
K56A	baz=173			S	**S**	**21 35 21.6**	**+0.2**
HDIL	**Hopedale** comp=Z,51µm,18.0s	**62.61**	**344**	IAMs_20	IAMs_20	21 58 47.2	
HDIL	**Hopedale** baz=160,SNR=47	**62.61**	**344**	P	**P**	**21 26 52.4**	**-1.1**
HDIL	baz=160			S	**S**	**21 35 19.5**	**-2.1**
K54A	**Basiliko Farm,** baz=172,SNR=191	**62.65**	**353**	P	**P**	**21 26 54.2**	**+0.4**
K54A	baz=172			S	**S**	**21 35 21.5**	**-0.5**
L50A	**Kingsville** baz=167,SNR=27	**62.66**	**350**	P	**P**	**21 26 52.9**	**-0.9**
L50A	baz=167			S	**S**	**21 35 18.4**	**-3.8**
VNA2	**Neumayer--Watz** baz=282,slow=6.7	**62.68**	**161**	P	**P**	**21 26 55.3**	**+1.7**
K55A	**Perry** baz=172,SNR=113	**62.70**	**354**	P	**P**	**21 26 54.2**	**+0.1**
K55A	baz=172			S	**S**	**21 35 22.6**	**0.0**
J62A	**Henniker** baz=179,SNR=36	**62.83**	**359**	P	**P**	**21 26 56.0**	**+1.1**
J62A	baz=179			S	**S**	**21 35 25.6**	**+1.4**
L48A	**N Adams** baz=165,SNR=76	**62.85**	**348**	P	**P**	**21 26 54.2**	**-0.9**
L48A	baz=165			S	**S**	**21 35 20.3**	**-4.3**
J63A	**Strafford** baz=180,SNR=12	**62.87**	**360**	P	**P**	**21 26 56.0**	**+0.9**
J63A	baz=180			S	**S**	**21 35 26.0**	**+1.3**
J60A	**Lant Hill Farm** baz=177,SNR=53	**62.89**	**358**	P	**P**	**21 26 56.4**	**+1.2**
J60A	baz=177			S	**S**	**21 35 28.0**	**+3.1**
L49A	**Milan** baz=166,SNR=54	**62.89**	**349**	P	**P**	**21 26 54.8**	**-0.5**
L49A	baz=166			S	**S**	**21 35 20.7**	**-4.4**
J61A	**Chester** baz=178,SNR=66	**62.96**	**358**	P	**P**	**21 26 57.2**	**+1.5**
J61A	baz=178			S	**S**	**21 35 28.5**	**+2.6**
P38A	**Dawn** comp=Z,296nm,1.1s	**62.97**	**340**	IAmb	IAmb	21 27 03.0	
L47A	**Sherwood** baz=165,SNR=117	**63.03**	**348**	P	**P**	**21 26 55.5**	**-0.8**
L47A	baz=165			S	**S**	**21 35 22.0**	**-4.8**
ACCN	**Adirondack Com** comp=Z,408nm,1.1s	**63.04**	**358**	IAmb	IAmb	21 26 59.0	
ACCN	comp=Z,51µm,19.0s			IAMs_20	IAMs_20	21 55 45.0	
AAM	**Ann Arbor** comp=Z,135nm,0.9s	**63.05**	**349**	IAmb	IAmb	21 27 09.9	
AAM	comp=Z,55µm,20.0s			IAMs_20	IAMs_20	21 53 55.1	
AAM	**Ann Arbor** baz=166,SNR=12	**63.05**	**349**	P	**P**	**21 26 55.8**	**-0.6**
AAM	baz=166			S	**S**	**21 35 22.0**	**-5.1**
K52A	**Tillsonburg** baz=169,SNR=46	**63.06**	**352**	P	**P**	**21 26 56.4**	**0.0**
K52A	baz=169			S	**S**	**21 35 25.1**	**-2.1**
FFD	**Franklin Falls** comp=Z,338nm,1.0s	**63.07**	**359**	IAmb	IAmb	21 26 59.2	
FFD	comp=Z,34µm,19.0s			IAMs_20	IAMs_20	21 56 47.9	
M44A	**Midewin, Midew** comp=Z,293nm,1.1s	**63.09**	**345**	IAmb	IAmb	21 27 03.4	
J58A	**Remsen** comp=Z,205nm,0.9s	**63.10**	**356**	IAmb	IAmb	21 27 09.1	
J58A	comp=Z,59µm,18.0s			IAMs_20	IAMs_20	21 57 53.5	
J58A	**Remsen** baz=175,SNR=70	**63.10**	**356**	P	**P**	**21 26 57.3**	**+0.6**
J58A	baz=175			S	**S**	**21 35 28.8**	**+1.1**
121A	**Cookes Peak, D** comp=Z,202nm,0.9s	**63.11**	**325**	IAmb	IAmb	21 27 01.7	
121A	comp=Z,57µm,18.0s			IAMs_20	IAMs_20	21 54 07.5	
121A	**Cookes Peak, D** baz=141,SNR=125	**63.11**	**325**	P	**P**	**21 26 58.4**	**+1.2**
121A	baz=141			S	**S**	**21 35 30.5**	**+1.9**
K51A	**Iona Station** baz=169,SNR=30	**63.12**	**351**	P	**P**	**21 26 56.6**	**-0.3**
K51A	baz=169			S	**S**	**21 35 24.4**	**-3.5**
J56A	**Wolcott** baz=173,SNR=59	**63.13**	**355**	P	**P**	**21 26 57.1**	**+0.3**
J56A	baz=173			S	**S**	**21 35 28.2**	**+0.3**
J59A	**Piesco** comp=Z,60µm,21.0s	**63.16**	**357**	IAMs_20	IAMs_20	21 54 36.1	
J59A	**Piesco** baz=176,SNR=215	**63.16**	**357**	P	**P**	**21 26 58.1**	**+1.0**
J59A	baz=176			S	**S**	**21 35 31.2**	**+2.8**
MEDO	**Medina** comp=Z,39µm,20.0s	**63.17**	**354**	IAMs_20	IAMs_20	21 55 17.3	
N41A	**Harden Midland** comp=Z,46µm,19.0s	**63.17**	**343**	IAMs_20	IAMs_20	21 58 28.9	
J57A	**Williamstown** comp=Z,55µm,18.0s	**63.19**	**356**	IAMs_20	IAMs_20	21 58 01.1	
J57A	**Williamstown** baz=174,SNR=135	**63.19**	**356**	P	**P**	**21 26 57.9**	**+0.5**
J57A	baz=174			S	**S**	**21 35 29.4**	**+0.6**
J55A	**Hilton** comp=Z,55µm,22.0s	**63.20**	**354**	IAMs_20	IAMs_20	21 52 36.3	
J55A	**Hilton** baz=172,SNR=52	**63.20**	**354**	P	**P**	**21 26 57.7**	**+0.4**
J55A	baz=172			S	**S**	**21 35 30.2**	**+1.3**
L46A	**Eue Claire** comp=Z,386nm,1.0s	**63.29**	**347**	IAmb	IAmb	21 26 58.2	
L46A	comp=Z,62µm,20.0s			IAMs_20	IAMs_20	21 55 09.2	
L46A	**Eue Claire** baz=164,SNR=26	**63.29**	**347**	P	**P**	**21 26 56.7**	**-1.2**
L46A	baz=164			S	**S**	**21 35 24.3**	**-5.7**
J54A	**Appleton** comp=Z,44µm,21.0s	**63.30**	**353**	IAMs_20	IAMs_20	21 55 11.6	
J54A	**Appleton** baz=172,SNR=63	**63.30**	**353**	P	**P**	**21 26 58.3**	**+0.3**
J54A	baz=172			S	**S**	**21 35 28.7**	**-1.4**
HNH	**Hanover** comp=Z,39µm,21.0s	**63.31**	**359**	IAMs_20	IAMs_20	21 55 46.4	
K50A	**Casco** comp=Z,53µm,19.0s	**63.34**	**350**	IAMs_20	IAMs_20	21 56 32.7	
K50A	**Casco** baz=167,SNR=14	**63.34**	**350**	P	**P**	**21 26 57.6**	**-0.7**
K50A	baz=167			S	**S**	**21 35 26.9**	**-3.8**
I58A	**Old Forge** baz=175,SNR=118	**63.41**	**356**	P	**P**	**21 26 59.5**	**+0.7**
I58A	baz=175			S	**S**	**21 35 33.3**	**+1.7**
I59A	**Olmsteadville** baz=177,SNR=164	**63.46**	**357**	P	**P**	**21 26 59.9**	**+0.8**
I59A	baz=177			S	**S**	**21 35 34.4**	**+2.2**
I62A	**Tamworth** comp=Z,313nm,1.1s	**63.47**	**359**	IAmb	IAmb	21 27 02.4	
I62A	comp=Z,44µm,19.0s			IAMs_20	IAMs_20	21 56 39.5	
I62A	**Tamworth** baz=179,SNR=37	**63.47**	**359**	P	**P**	**21 27 00.2**	**+1.1**

I62A	baz=179			S	S	21 35 34.2	+2.0
I60A	**Shoreham** baz=177,SNR=87	63.48	358	P	P	21 27 00.4	+1.2
I60A	baz=177			S	S	21 35 34.1	+1.8
J52A	**Paris** baz=170,SNR=283	63.48	352	P	P	21 26 59.2	-0.1
J52A	baz=170			S	S	21 35 30.0	-2.4
K49A	**Clarkson** baz=167,SNR=33	63.49	349	P	P	21 26 58.4	-0.9
K49A	baz=167			S	S	21 35 28.1	-4.4
I64A	**Boothbay** baz=181,SNR=23	63.52	1	P	P	21 27 00.8	+1.4
I64A	baz=181			S	S	21 35 35.0	+2.3
I61A	**Oroboro, Fairl** baz=178,SNR=177	63.54	359	P	P	21 27 01.0	+1.4
I61A	baz=178			S	S	21 35 36.1	+3.0
KSU1	**Kansas State U** comp=Z,33µm,18.0s	63.54	338	IAMs_20	IAMs_20	21 59 50.0	
KSU1	**Kansas State U** baz=153,SNR=65	63.54	338	P	P	21 26 59.2	-0.6
KSU1	baz=153			S	S	21 35 31.1	-2.3
K48A	**Perry** baz=166,SNR=74	63.62	349	P	P	21 26 59.5	-0.7
K48A	baz=166			S	S	21 35 30.1	-4.1
I63A	**Otisfield** comp=Z,362nm,1.1s	63.64	0	IAmb	IAmb	21 27 02.5	
I63A	comp=Z,36µm,19.0s			IAMs_20	IAMs_20	21 57 28.1	
I63A	**Otisfield** baz=180,SNR=34	63.64	0	P	P	21 27 01.7	+1.5
I63A	baz=180			S	S	21 35 37.4	+3.0
NCB	**Newcomb** comp=Z,226nm,0.8s	63.65	357	IAmb	IAmb	21 27 02.7	
NCB	comp=Z,38µm,19.0s			IAMs_20	IAMs_20	21 56 07.2	
K47A	**Vermontville** baz=165,SNR=29	63.66	348	P	P	21 26 59.5	-1.0
K47A	baz=165			S	S	21 35 30.2	-4.4
I57A	**Carthage** baz=175,SNR=88	63.70	356	P	P	21 27 01.3	+0.6
I57A	baz=175			S	S	21 35 35.5	+0.5
L44A	**Lake County Fo** baz=162,SNR=16	63.81	346	P	P	21 27 00.3	-1.1
L44A	baz=162			S	S	21 35 31.2	-5.3
K46A	**Dorr** baz=164,SNR=48	63.83	348	P	P	21 27 00.1	-1.5
K46A	baz=164			S	S	21 35 31.4	-5.4
LBNH	**Lisbon** baz=179,SNR=80	63.84	359	P	P	21 27 03.0	+1.4
LBNH	baz=179			S	S	21 35 39.3	+2.5
Y22D	**IRIS PASSCAL I** comp=Z,272nm,1.1s	63.85	327	IAmb	IAmb	21 27 18.8	
Y22D	**IRIS PASSCAL I** baz=142	63.85	327	P	P	21 27 03.3	+1.2
Y22D	baz=142			S	S	21 35 42.8	+5.1
I53A	**Kortright Cn E** baz=171,SNR=40	63.95	353	P	P	21 27 02.3	+0.1
I53A	baz=171			S	S	21 35 36.9	-1.2
J49A	**Marlette** baz=167,SNR=69	64.00	350	P	P	21 27 01.6	-1.0
J49A	baz=167			S	S	21 35 35.0	-3.8
J48A	**Bridge Port** comp=Z,53µm,19.0s	64.05	349	IAMs_20	IAMs_20	21 56 46.3	
J48A	**Bridge Port** baz=166,SNR=84	64.05	349	P	P	21 27 02.0	-0.9
J48A	baz=166			S	S	21 35 36.8	-2.7
L42A	**Oliver, Polo** comp=Z,188nm,1.0s	64.07	344	IAmb	IAmb	21 27 03.8	
L42A	comp=Z,46µm,18.0s			IAMs_20	IAMs_20	21 59 05.7	
H58A	**Gabriels** baz=176,SNR=130	64.09	357	P	P	21 27 04.0	+0.7
H58A	baz=176			S	S	21 35 40.6	+0.6
I51A	**Listowel** baz=169,SNR=159	64.11	352	P	P	21 27 03.1	-0.3
I51A	baz=169			S	S	21 35 35.5	-4.7
I55A	**Frankford** baz=173,SNR=140	64.13	354	P	P	21 27 03.8	+0.3
I55A	baz=173			S	S	21 35 39.8	-0.6
H61A	**Lyndonville** baz=179,SNR=101	64.14	359	P	P	21 27 04.8	+1.3
H61A	baz=179			S	S	21 35 43.2	+2.6
WVL	**Waterville** comp=Z,45µm,22.0s	64.16	1	IAMs_20	IAMs_20	21 52 21.9	
H62A	**Milan** comp=Z,247nm,0.9s	64.17	360	IAmb	IAmb	21 27 14.0	
H62A	comp=Z,47µm,19.0s			IAMs_20	IAMs_20	21 56 60.0	
H62A	**Milan** baz=179,SNR=24	64.17	360	P	P	21 27 05.0	+1.3
H62A	baz=179			S	S	21 35 44.7	+3.8
J47A	**Sunmer** comp=Z,38µm,20.0s	64.17	349	IAMs_20	IAMs_20	21 56 45.7	
J47A	**Sunmer** baz=165,SNR=74	64.17	349	P	P	21 27 03.0	-0.8
J47A	baz=165			S	S	21 35 37.3	-3.7
H60A	**Morristown** baz=178,SNR=34	64.18	358	P	P	21 27 04.8	+1.0
H60A	baz=178			S	S	21 35 44.0	+2.9
H57A	**Richville** baz=175,SNR=176	64.20	356	P	P	21 27 04.6	+0.7
H57A	baz=175			S	S	21 35 42.8	+1.6
H64A	**Troy** baz=182,SNR=35	64.24	1	P	P	21 27 05.4	+1.2
H64A	baz=182			S	S	21 35 45.3	+3.5
H63A	**New Sharon** baz=181,SNR=89	64.25	0	P	P	21 27 05.8	+1.5
H63A	baz=181			S	S	21 35 45.6	+3.7
I52A	**Shelburne** baz=170,SNR=181	64.26	352	P	P	21 27 04.3	-0.1
I52A	baz=170			S	S	21 35 40.0	-2.1
H59A	**Cadyville** baz=177,SNR=187	64.30	358	P	P	21 27 05.6	+1.0
H59A	baz=177			S	S	21 35 44.9	+2.4
SNAA	**Sanae**	64.30	161	P	P	21 27 05.5	+1.0
SNAA	**Sanae** comp=Z,136nm,0.9s,baz=282,slow=5.7,SNR=124	64.30	161	P	P	21 27 05.7	+1.2
SNAA	**Sanae**	64.30	161*c*	*i*P	P	21 27 06.5	+2.0
SNAA	**Sanae** comp=Z,251nm,1.0s	64.30	161	IAmb	IAmb	21 27 19.2	
ANMO	**Albuquerque** comp=Z,44nm,0.8s,baz=143,slow=7.9,SNR=127	64.30	328	P	P	21 27 05.4	+0.3
ANMO	**Albuquerque**	64.30	328*c*	*i*P	P	21 27 05.7	+0.6
ANMO	comp=Z,242nm,1.6s			pmax	pmax		
ANMO	comp=Z,15µm,17.0s			MLR	MLR		
ANMO	**Albuquerque**	64.30	328	P	P	21 27 04.3	-0.8
ANMO	**Albuquerque** baz=142	64.30	328	P	P	21 27 05.7	+0.6
ANMO	baz=142			S	S	21 35 43.4	0.0
LONY	**Lake Ozonia** comp=Z,49µm,20.0s	64.31	357	IAMs_20	IAMs_20	21 55 19.7	
LONY	**Lake Ozonia** baz=176,SNR=43	64.31	357	P	P	21 27 05.5	+0.8
LONY	baz=176			S	S	21 35 47.4	+4.7
H65A	**Eastbrook** baz=182,SNR=32	64.32	2	P	P	21 27 05.9	+1.2
H65A	baz=182			S	S	21 35 44.7	+1.9
EMMW	**East Machias**	64.36	2	P	P	21 27 05.0	0.0
EMMW	comp=Z,419nm,1.1s			IAmb	IAmb	21 27 07.4	
EMMW	comp=Z,43µm,22.0s			IAMs_20	IAMs_20	21 53 21.3	
H56A	**Elgin** baz=174,SNR=112	64.39	356	P	P	21 27 05.9	+0.7
H56A	baz=174			S	S	21 35 44.8	+1.2
H55A	**Tweed** baz=173,SNR=81	64.42	355	P	P	21 27 05.9	+0.5
H55A	baz=173			S	S	21 35 44.1	+0.1
DELO	**Deloro Mine** comp=Z,420nm,1.1s	64.43	354	IAmb	IAmb	21 27 07.3	
J46A	**Howard City** baz=164,SNR=13	64.44	348	P	P	21 27 04.4	-1.2
J46A	baz=164			S	S	21 35 41.0	-3.3
H66A	**Whiting** baz=183,SNR=27	64.45	3	P	P	21 27 06.6	+1.1
H66A	baz=183			S	S	21 35 46.1	+1.8
CBKS	**Cedar Bluff** baz=150,SNR=165	64.47	335	P	P	21 27 06.3	+0.3
CBKS	baz=150			S	S	21 35 45.1	0.0
FRNY	**Flat Rock** comp=Z,42µm,19.0s	64.48	358	IAMs_20	IAMs_20	21 56 27.2	
I49A	**Point Hope** comp=Z,34µm,20.0s	64.51	350	IAMs_20	IAMs_20	21 57 24.6	
I49A	**Point Hope** baz=167,SNR=90	64.51	350	P	P	21 27 05.3	-0.7
I49A	baz=167			S	S	21 35 40.1	-5.1
L40A	**Anamosa** comp=Z,59µm,19.0s	64.53	343	IAMs_20	IAMs_20	21 58 29.0	
HAL	**Halifax** comp=Z,41µm,19.0s	64.55	6	IAMs_20	IAMs_20	21 57 31.4	
H53A	**Bobcaygeon** baz=172,SNR=171	64.58	354	P	P	21 27 06.6	+0.2
H53A	baz=172			S	S	21 35 44.1	-1.8
TUC	**Tucson**	64.61	323	P	P	21 27 06.8	-0.2
TUC	comp=Z,82nm,1.1s			pmax	pmax		
TUC	comp=Z,29µm,19.0s			MLR	MLR		
TUC	**Tucson**	64.61	323	P	P	21 27 06.8	-0.2
TUC	**Tucson** baz=138	64.61	323	P	P	21 27 07.7	+0.7
TUC	baz=138			S	S	21 35 49.1	+2.1
J45A	**Montague** comp=Z,190nm,0.8s	64.67	347	IAmb	IAmb	21 27 07.8	
J45A	comp=Z,42µm,19.0s			IAMs_20	IAMs_20	21 55 58.8	
J45A	**Montague** baz=164,SNR=5.8	64.67	347	P	P	21 27 05.8	-1.2
J45A	baz=164			S	S	21 35 42.0	-5.2
G60A	**Masonville** baz=178,SNR=58	64.71	359	P	P	21 27 08.5	+1.2
G60A	baz=178			S	S	21 35 50.4	+2.8
G63A	**Kingsbury** baz=181,SNR=45	64.71	1	P	P	21 27 08.4	+1.1
G63A	baz=181			S	S	21 35 50.0	+2.4
G59A	**Clarenceville** baz=177,SNR=38	64.71	358	P	P	21 27 08.1	+0.9
H52A	**Wyevale** baz=170,SNR=115	64.79	353	P	P	21 27 07.8	0.0
H52A	baz=170			S	S	21 35 46.5	-2.0
GGN	**Saint George** comp=Z,343nm,1.1s	64.80	3	IAmb	IAmb	21 27 10.9	
GGN	comp=Z,44µm,18.0s			IAMs_20	IAMs_20	21 59 26.9	
G62A	**West of Eustis** comp=Z,40µm,21.0s	64.81	0	IAMs_20	IAMs_20	21 54 28.0	
G62A	**West of Eustis** baz=180,SNR=143	64.81	0	P	P	21 27 09.4	+1.5
G62A	baz=180			S	S	21 35 51.4	+2.6
G58A	**Ormstown** baz=176,SNR=52	64.81	357	P	P	21 27 08.8	+0.9
G58A	baz=176			S	S	21 35 51.8	+3.0
G57A	**Newington** baz=176,SNR=118	64.82	357	P	P	21 27 08.7	+0.7
G57A	baz=176			S	S	21 35 50.4	+1.6
SADO	**Sadowa** comp=Z,315nm,0.8s,baz=217,slow=2.3,SNR=200	64.83	353	P	P	21 27 07.4	-0.7
SADO	comp=Z,8.1nm,1.1s,baz=276,slow=21,SNR=2.0			S	S	21 35 44.6	-4.4
SADO	**Sadowa** comp=Z,39µm,19.0s	64.83	353	IAMs_20	IAMs_20	21 56 55.2	
G65A	**Princeton** comp=Z,42µm,20.0s	64.85	2	IAMs_20	IAMs_20	21 54 21.2	
G65A	**Princeton** baz=183,SNR=30	64.85	2	P	P	21 27 09.4	+1.2
G65A	baz=183			S	S	21 35 51.3	+2.1
G64A	**Maxfield** baz=182,SNR=38	64.86	1	P	P	21 27 09.3	+1.0
G64A	baz=182			S	S	21 35 51.4	+1.9
PKME	**Peaks-Kenny Pk**	64.86	1	P	P	21 27 08.5	+0.3
PKME	comp=Z,55µm,22.0s			IAMs_20	IAMs_20	21 53 27.5	
PKME	**Peaks-Kenny Pk** baz=181,SNR=37	64.86	1	P	P	21 27 09.4	+1.2
PKME	baz=181			S	S	21 35 52.7	+3.2
I47A	**Gladwin** comp=Z,274nm,0.9s	64.87	349	IAmb	IAmb	21 27 15.7	
I47A	**Gladwin** baz=166,SNR=52	64.87	349	P	P	21 27 07.5	-0.8
I47A	baz=166			S	S	21 35 45.6	-4.0
G61A	**St-Isidore-de-** baz=179,SNR=99	64.88	359	P	P	21 27 10.0	+1.6
G61A	baz=179			S	S	21 35 53.5	+3.9
I48A	**Sherman Twp** baz=166,SNR=249	64.89	350	P	P	21 27 07.9	-0.5
I48A	baz=166			S	S	21 35 46.1	-3.7
PLVO	**Plevna** comp=Z,261nm,1.0s	64.90	355	IAmb	IAmb	21 27 10.5	
PLVO	comp=Z,45µm,18.0s			IAMs_20	IAMs_20	21 58 32.1	
SCIA	**State Center** baz=157,SNR=102	64.96	342	P	P	21 27 08.7	-0.3
SCIA	baz=157			S	S	21 35 48.0	-2.8
I46A	**Reed City** baz=165,SNR=39	64.97	348	P	P	21 27 07.9	-1.1
I46A	baz=165			S	S	21 35 48.4	-2.5
JFWS	**Jewell Farm** comp=Z,301nm,0.9s	65.07	344	IAmb	IAmb	21 27 10.8	
JFWS	**Jewell Farm** baz=160,SNR=59	65.07	344	P	P	21 27 09.2	-0.4
JFWS	baz=160			S	S	21 35 48.8	-3.4
T25A	**Trinidad** comp=Z,274nm,1.1s	65.08	331	IAmb	IAmb	21 27 14.3	
T25A	**Trinidad** baz=145,SNR=94	65.08	331	P	P	21 27 11.0	+0.9
T25A	baz=145			S	S	21 35 56.6	+3.7
G55A	**Calabogie** baz=174,SNR=144	65.08	355	P	P	21 27 10.1	+0.4
G55A	baz=174			S	S	21 35 52.1	0.0
G53A	**Haliburton** baz=172,SNR=253	65.12	354	P	P	21 27 10.2	+0.3
G53A	baz=172			S	S	21 35 51.0	-1.7
I45A	**Fountain** comp=Z,44µm,18.0s	65.22	348	IAMs_20	IAMs_20	21 59 40.3	
I45A	**Fountain** baz=164,SNR=5.9	65.22	348	P	P	21 27 09.4	-1.2
I45A	baz=164			S	S	21 35 50.1	-3.7
N33A	**J Bar K, Exete** comp=Z,36µm,20.0s	65.29	338	IAMs_20	IAMs_20	21 58 20.8	
F63A	**Nahmakanta, Br** comp=Z,248nm,1.1s	65.31	1	IAmb	IAmb	21 27 13.8	
F63A	comp=Z,43µm,20.0s			IAMs_20	IAMs_20	21 55 29.2	
F63A	**Nahmakanta, Br** baz=182,SNR=26	65.31	1	P	P	21 27 12.3	+1.1
F63A	baz=182			S	S	21 35 56.7	+1.8
H48A	**Harrisville** comp=Z,371nm,0.9s	65.33	350	IAmb	IAmb	21 27 18.8	
H48A	comp=Z,32µm,19.0s			IAMs_20	IAMs_20	21 56 26.4	
H48A	**Harrisville** baz=167,SNR=87	65.33	350	P	P	21 27 10.7	-0.6
H48A	baz=167			S	S	21 35 52.8	-2.4
G54A	**Lake Saint Pet** baz=172,SNR=156	65.34	354	P	P	21 27 11.7	+0.3
G54A	baz=172			S	S	21 35 54.3	-1.1
H47A	**Mio** baz=166,SNR=38	65.38	349	P	P	21 27 10.9	-0.8
H47A	baz=166			S	S	21 35 52.5	-3.4
F59A	**Saint Guilaume** baz=178,SNR=16	65.47	358	P	P	21 27 12.9	+0.7
F59A	baz=178			S	S	21 35 58.8	+1.9
F64A	**Sherman** comp=Z,441nm,1.1s	65.49	2	IAmb	IAmb	21 27 14.8	
F64A	comp=Z,34µm,20.0s			IAMs_20	IAMs_20	21 55 03.0	
F64A	**Sherman** baz=182,SNR=55	65.49	2	P	P	21 27 13.4	+1.1
F64A	baz=182			S	S	21 35 59.9	+2.8
H46A	**Fife Lake** baz=165,SNR=14	65.50	349	P	P	21 27 11.3	-1.1
H46A	baz=165			S	S	21 35 53.9	-3.5
F58A	**St-Lin Laurent** baz=177	65.52	358	P	P	21 27 12.9	+0.4
F58A	baz=177			S	S	21 36 01.0	+3.6
214A	**Organ Pipe Nat** comp=Z,454nm,1.1s	65.52	321	IAmb	IAmb	21 27 17.1	
214A	**Organ Pipe Nat** baz=136,SNR=204	65.52	321	P	P	21 27 14.4	+1.5
214A	baz=136			S	S	21 36 01.6	+3.4
GBN	**Guysborough** comp=Z,382nm,1.1s	65.52	7	IAmb	IAmb	21 27 14.9	
GBN	comp=Z,40µm,20.0s			IAMs_20	IAMs_20	21 57 31.3	
F61A	**St Evariste** baz=180,SNR=44	65.56	360	P	P	21 27 13.6	+0.8
F61A	baz=180			S	S	21 36 00.9	+2.9
F60A	**Warwick** baz=179,SNR=105	65.57	359	P	P	21 27 13.4	+0.6
F60A	baz=179			S	S	21 36 00.6	+2.5
F55A	**Otter Lake** baz=174,SNR=18	65.63	356	P	P	21 27 13.5	+0.3
F55A	baz=174			S	S	21 36 02.0	+3.1
LMN	**Caledonia Moun** comp=Z,64µm,21.0s	65.66	4	IAMs_20	IAMs_20	21 54 39.5	
I42A	**Draeger Farm,** comp=Z,333nm,1.1s	65.66	346	IAmb	IAmb	21 27 14.7	
I42A	comp=Z,44µm,20.0s			IAMs_20	IAMs_20	21 57 09.0	
GLMI	**Grayling** comp=Z,59µm,20.0s	65.67	349	IAMs_20	IAMs_20	21 57 57.3	
GLMI	**Grayling** baz=166,SNR=34	65.67	349	P	P	21 27 12.8	-0.7
GLMI	baz=166			S	S	21 35 56.4	-3.0
H45A	**Beulah** baz=164,SNR=25	65.74	348	P	P	21 27 13.1	-0.9
H45A	baz=164			S	S	21 35 56.4	-3.9
X18A	**Snowflake** comp=Z,190nm,1.1s	65.80	325	IAmb	IAmb	21 27 18.9	
X18A	comp=Z,53µm,18.0s			IAMs_20	IAMs_20	21 56 14.7	
KSCO	**Kaye Shedlock’** baz=147,SNR=162	65.83	333	P	P	21 27 15.6	+0.7
KSCO	baz=147			S	S	21 36 04.3	+2.4
F52A	**Sundridge** baz=171,SNR=177	65.86	353	P	P	21 27 14.9	+0.2
F52A	baz=171			S	S	21 36 00.2	-1.5
G47A	**Hillman** baz=166,SNR=88	65.88	350	P	P	21 27 14.3	-0.6
G47A	baz=166			S	S	21 35 58.3	-3.6
ALGO	**Algonquin Park** baz=172,SNR=59	65.89	354	P	P	21 27 15.1	+0.2
ALGO	baz=172			S	S	21 36 04.0	+2.0
H43A	**Windswept, Lux** comp=Z,264nm,0.8s	65.95	347	IAmb	IAmb	21 27 16.8	
H43A	comp=Z,55µm,20.0s			IAMs_20	IAMs_20	21 56 39.7	
E60A	**Ste Agathe de** baz=179,SNR=39	65.96	359	P	P	21 27 16.0	+0.7
E60A	baz=179			S	S	21 36 06.7	+3.8
E58A	**La Victoria** baz=177,SNR=80	66.01	358	P	P	21 27 16.4	+0.8
E58A	baz=177			S	S	21 36 06.6	+3.2
E61A	**Lac Etchemin** baz=180,SNR=66	66.02	0	P	P	21 27 17.1	+1.3
E61A	baz=180			S	S	21 36 06.7	+3.0
E63A	**Oxbow** comp=Z,350nm,1.1s	66.04	2	IAmb	IAmb	21 27 18.9	
E63A	comp=Z,38µm,20.0s			IAMs_20	IAMs_20	21 55 09.7	
E63A	**Oxbow** baz=182,SNR=47	66.04	2	P	P	21 27 17.0	+1.1
E63A	baz=182			S	S	21 36 06.4	+2.6
E64A	**Bridgewater** baz=183,SNR=45	66.06	2	P	P	21 27 16.9	+1.0
E64A	baz=183			S	S	21 36 06.5	+2.5
F51A	**Arnstein** baz=170,SNR=100	66.06	353	P	P	21 27 15.8	-0.2
F51A	baz=170			S	S	21 36 01.9	-2.2
G45A	**Suttons Bay** comp=Z,260nm,0.9s	66.07	348	IAmb	IAmb	21 27 30.8	
G45A	comp=Z,50µm,19.0s			IAMs_20	IAMs_20	21 58 02.9	
G45A	**Suttons Bay** baz=165,SNR=42	66.07	348	P	P	21 27 15.3	-0.8
G45A	baz=165			S	S	21 36 02.2	-2.1
SDCO	**Great Sand Dun** comp=Z,337nm,1.1s	66.07	330	IAmb	IAmb	21 27 19.8	
SDCO	**Great Sand Dun** baz=144,SNR=499	66.07	330	P	P	21 27 17.6	+0.9
SDCO	baz=144			S	S	21 36 10.0	+4.8
E57A	**Chemin Saint G** baz=176,SNR=71	66.08	357	P	P	21 27 16.8	+0.6
E57A	baz=176			S	S	21 36 05.6	+1.2
I40A	**Norwalk** comp=Z,191nm,1.1s	66.08	344	IAmb	IAmb	21 27 17.3	
E59A	**St. Maurice** baz=178,SNR=11	66.09	359	P	P	21 27 17.2	+1.0
E59A	baz=178			S	S	21 36 06.7	+2.3
BGNE	**Belgrade** baz=152,SNR=93	66.13	338	P	P	21 27 16.7	+0.1
BGNE	baz=152			S	S	21 36 03.3	-2.0

W18A	**Petrified Fore**	**66.13**	**326**	IAmb	IAmb	21 27 21.0	
	comp=Z,141nm,1.0s						
W18A				IAMs_20	IAMs_20	21 56 37.5	
	comp=Z,32µm,18.0s						
W18A	**Petrified Fore**	**66.13**	**326**	P	**P**	**21 27 18.2**	**+1.2**
	baz=140,SNR=46						
W18A				S	**S**	**21 36 09.0**	**+3.2**
	baz=140						
F49A	**Sandfield**	**66.17**	**351**	P	**P**	**21 27 16.0**	**-0.7**
	baz=168,SNR=83						
F49A				S	**S**	**21 36 01.6**	**-3.9**
	baz=168						
G46A	**Petoskey**	**66.19**	**349**	P	**P**	**21 27 16.2**	**-0.7**
	baz=165,SNR=41						
G46A				S	**S**	**21 36 01.7**	**-4.0**
	baz=165						
E55A	**Montcerf-Lytto**	**66.23**	**356**	P	**P**	**21 27 17.4**	**+0.4**
	baz=174,SNR=32						
E55A				S	**S**	**21 36 07.8**	**+1.8**
	baz=174						
E56A	**St. Veronique**	**66.25**	**357**	P	**P**	**21 27 17.7**	**+0.4**
	baz=176,SNR=105						
E56A				S	**S**	**21 36 09.2**	**+2.7**
	baz=176						
E52A	**Mattawa**	**66.28**	**354**	P	**P**	**21 27 17.3**	**-0.1**
	baz=172,SNR=94						
E52A				S	**S**	**21 36 08.5**	**+1.8**
	baz=172						
E53A	**Dumoine, Ponti**	**66.28**	**355**	P	**P**	**21 27 17.7**	**+0.3**
	baz=173,SNR=64						
E53A				S	**S**	**21 36 08.9**	**+2.2**
	baz=173						
E54A	**Lac Daplat, Po**	**66.29**	**355**	P	**P**	**21 27 17.6**	**+0.2**
	baz=173,SNR=106						
E54A				S	**S**	**21 36 09.1**	**+2.3**
	baz=173						
PQI	**Presque Isle**	**66.30**	**2**	IAmb	IAmb	21 27 20.0	
	comp=Z,364nm,1.1s						
PQI				IAMs_20	IAMs_20	21 54 54.6	
	comp=Z,41µm,22.0s						
F48A	**Evansville**	**66.32**	**351**	P	**P**	**21 27 17.1**	**-0.6**
	baz=168,SNR=100						
F48A				S	**S**	**21 36 03.9**	**-3.3**
	baz=168						
D60A	**Saint Jean D'O**	**66.50**	**360**	P	**P**	**21 27 19.8**	**+1.0**
	baz=180,SNR=41						
D60A				S	**S**	**21 36 14.4**	**+5.0**
	baz=180						
X16A	**Lo Mia Camp, P**	**66.53**	**324**	IAmb	IAmb	21 27 25.1	
	comp=Z,324nm,1.1s						
D59A	**Saint-Raymond**	**66.61**	**359**	P	**P**	**21 27 20.3**	**+0.8**
	baz=179,SNR=22						
D59A				S	**S**	**21 36 12.6**	**+1.9**
	baz=179						
E51A	**G1948 Merrick**	**66.61**	**353**	P	**P**	**21 27 19.6**	**+0.1**
	baz=171,SNR=91						
E51A				S	**S**	**21 36 09.2**	**-1.5**
	baz=171						
F45A	**CMU Biological**	**66.67**	**349**	P	**P**	**21 27 19.1**	**-0.8**
	baz=165,SNR=98						
F45A				S	**S**	**21 36 07.1**	**-4.3**
	baz=165						
D63A	**Stockholm**	**66.67**	**2**	P	**P**	**21 27 20.9**	**+1.1**
	baz=183,SNR=52						
D63A				S	**S**	**21 36 14.0**	**+2.6**
	baz=183						
D57A	**Chemin Vers le**	**66.67**	**358**	P	**P**	**21 27 20.8**	**+0.9**
	baz=177,SNR=112						
D57A				S	**S**	**21 36 12.6**	**+1.1**
	baz=177						
D62A	**Allapoint, All**	**66.69**	**1**	IAMs_20	IAMs_20	21 55 29.9	
	comp=Z,37µm,20.0s						
D62A	**Allapoint, All**	**66.69**	**1**	P	**P**	**21 27 21.0**	**+1.1**
	baz=182,SNR=80						
D62A				S	**S**	**21 36 12.3**	**+0.7**
	baz=182						
S22A	**4UR Ranch, Cre**	**66.70**	**329**	P	**P**	**21 27 21.6**	**+0.9**
	baz=143,SNR=80						
S22A				S	**S**	**21 36 14.0**	**+1.2**
	baz=143						
D58A	**Chemin du LacG**	**66.72**	**358**	P	**P**	**21 27 21.2**	**+1.0**
	baz=178,SNR=158						
D58A				S	**S**	**21 36 12.8**	**+0.7**
	baz=178						
D56A	**ZEC Mazanza, M**	**66.74**	**357**	P	**P**	**21 27 20.8**	**+0.5**
	baz=176,SNR=62						
D56A				S	**S**	**21 36 12.9**	**+0.5**
	baz=176						
D55A	**Sainte-Anne-du**	**66.75**	**356**	P	**P**	**21 27 20.8**	**+0.4**
	baz=175,SNR=118						
D55A				S	**S**	**21 36 13.0**	**+0.5**
	baz=175						
D61A	**St Aubert, Com**	**66.79**	**0**	P	**P**	**21 27 21.9**	**+1.2**
	baz=180,SNR=20						
D61A				S	**S**	**21 36 15.2**	**+2.3**
	baz=180						
E48A	**Lockeyer**	**66.89**	**351**	P	**P**	**21 27 21.1**	**-0.2**
	baz=168,SNR=69						
E48A				S	**S**	**21 36 11.0**	**-3.2**
	baz=168						
D54A	**Lac Fusel, La**	**66.97**	**356**	P	**P**	**21 27 21.7**	**-0.1**
	baz=174,SNR=86						
D54A				S	**S**	**21 36 14.6**	**-0.5**
	baz=174						
D53A	**Lac Vacive, Po**	**66.98**	**355**	IAmb	IAmb	21 27 30.4	
	comp=Z,260nm,1.1s						
D53A	**Lac Vacive, Po**	**66.98**	**355**	P	**P**	**21 27 22.2**	**+0.3**
	baz=173						
D53A				S	**S**	**21 36 14.4**	**-0.8**
	baz=173						
BATG	**Bathurst New B**	**66.99**	**3**	IAmb	IAmb	21 27 24.3	
	comp=Z,406nm,1.1s						
LATQ	**La Tuque**	**67.00**	**358**	P	**P**	**21 27 22.9**	**+0.9**
	baz=178,SNR=47						
LATQ				S	**S**	**21 36 16.2**	**+0.8**
	baz=178						
E47A	**Iron Bridge**	**67.03**	**351**	P	**P**	**21 27 21.7**	**-0.5**
	baz=167,SNR=91						
E47A				S	**S**	**21 36 13.3**	**-2.5**
	baz=167						
MVCO	**Mesa Verde**	**67.10**	**328**	IAmb	IAmb	21 27 26.9	
	comp=Z,157nm,1.0s						
MVCO	**Mesa Verde**	**67.10**	**328**	P	**P**	**21 27 24.0**	**+0.9**
	baz=141,SNR=52						
MVCO				S	**S**	**21 36 19.6**	**+2.0**
	baz=141						
E46A	**Sault Ste Mari**	**67.11**	**350**	IAmb	IAmb	21 27 30.2	
	comp=Z,218nm,1.1s						
E46A				IAMs_20	IAMs_20	21 57 20.5	
	comp=Z,58µm,20.0s						
D51A	**Lot 18 Range I**	**67.15**	**354**	P	**P**	**21 27 22.9**	**0.0**
	baz=171,SNR=99						
D51A				S	**S**	**21 36 17.6**	**+0.4**
	baz=171						
OGNE	**Ogallala**	**67.21**	**335**	IAmb	IAmb	21 27 26.2	
	comp=Z,456nm,1.1s						
OGNE	**Ogallala**	**67.21**	**335**	P	**P**	**21 27 24.0**	**+0.4**
	baz=148,SNR=65						
OGNE				S	**S**	**21 36 20.2**	**+1.7**
	baz=148						
F42A	**Maple Grove Fa**	**67.26**	**347**	IAMs_20	IAMs_20	21 55 18.3	
	comp=Z,40µm,21.0s						
G40A	**Rib Lake**	**67.27**	**345**	IAMs_20	IAMs_20	21 58 08.4	
	comp=Z,46µm,20.0s						
D50A	**G1974 Best Tow**	**67.27**	**353**	P	**P**	**21 27 23.8**	**+0.1**
	baz=171,SNR=202						
D50A				S	**S**	**21 36 16.1**	**-2.6**
	baz=171						
WUAZ	**Wupatki**	**67.31**	**325**	IAmb	IAmb	21 27 28.8	
	comp=Z,353nm,1.1s						
WUAZ				IAMs_20	IAMs_20	21 57 00.6	
	comp=Z,31µm,18.0s						
WUAZ	**Wupatki**	**67.31**	**325**	P	**P**	**21 27 26.1**	**+1.6**
	baz=138,SNR=222						
WUAZ				S	**S**	**21 36 25.1**	**+5.0**
	baz=138						
GLA	**Glamis**	**67.50**	**321**	IAmb	IAmb	21 27 29.3	
	comp=Z,220nm,1.1s						
GLA	**Glamis**	**67.50**	**321**	P	**P**	**21 27 27.0**	**+1.4**
	baz=135,SNR=69						
GLA				S	**S**	**21 36 26.5**	**+4.4**
	baz=135						
D48A	**Paudash Townsh**	**67.52**	**352**	P	**P**	**21 27 24.7**	**-0.6**
	baz=169,SNR=70						
D48A				S	**S**	**21 36 18.7**	**-3.1**
	baz=169						
D46A	**Sault St. Mari**	**67.58**	**350**	P	**P**	**21 27 24.6**	**-1.0**
	baz=166,SNR=40						
D46A				S	**S**	**21 36 18.0**	**-4.4**
	baz=166						
D47A	**Chapleau**	**67.59**	**351**	P	**P**	**21 27 25.0**	**-0.8**
	baz=167,SNR=70						
D47A				S	**S**	**21 36 17.9**	**-4.8**
	baz=167						
E43A	**Lone Tree Farm**	**67.61**	**348**	IAmb	IAmb	21 27 33.4	
	comp=Z,206nm,1.1s						
E43A				IAMs_20	IAMs_20	21 58 54.7	
	comp=Z,44µm,21.0s						
E44A	**Grand Marais A**	**67.64**	**349**	IAmb	IAmb	21 27 40.1	
	comp=Z,136nm,0.8s						
E44A	**Grand Marais A**	**67.64**	**349**	P	**P**	**21 27 25.8**	**-0.3**
	baz=164,SNR=33						
E44A				S	**S**	**21 36 20.0**	**-3.2**
	baz=164						
ECSD	**EROS Data Cent**	**67.67**	**340**	IAmb	IAmb	21 27 32.6	
	comp=Z,238nm,1.1s						
ECSD	**EROS Data Cent**	**67.67**	**340**	P	**P**	**21 27 26.1**	**-0.2**
	baz=154,SNR=342						
ECSD				S	**S**	**21 36 21.8**	**-1.9**
	baz=154						
ISCO	**Idaho Springs**	**67.79**	**331**	IAmb	IAmb	21 27 30.5	
	comp=Z,156nm,1.1s						
ISCO	**Idaho Springs**	**67.79**	**331**	P	**P**	**21 27 28.4**	**+0.9**
	baz=144,SNR=185						
ISCO				S	**S**	**21 36 26.8**	**+0.9**
	baz=144						
COWI	**Conover**	**67.81**	**346**	IAmb	IAmb	21 27 28.4	
	comp=Z,189nm,1.1s						
COWI				IAMs_20	IAMs_20	22 00 26.7	
	comp=Z,43µm,20.0s						
Y12C	**Blythe**	**67.81**	**321**	IAmb	IAmb	21 27 32.4	
	comp=Z,182nm,1.0s						
Y12C	**Blythe**	**67.81**	**321**	P	**P**	**21 27 29.0**	**+1.6**
	baz=135,SNR=93						
Y12C				S	**S**	**21 36 29.5**	**+3.8**
	baz=135						
TAOE	**Nuku Hiva Isla**	**67.86**	**268**	*e*S	**S**	**21 36 25.2**	**-2.1**
	comp=Z,82µm,25.8s						
TAOE				*e*LQ	LQ	21 45 08.8	
	comp=Z,35µm,29.9s						
TAOE				*e*LR	LR	21 47 54.2	
	comp=Z,30µm,25.5s,baz=108						
TAOE	**Nuku Hiva Isla**	**67.86**	**268**	*e*T	T	22 41 09.3	
	comp=Z,113nm,0.2s						
TAOE	**Nuku Hiva Isla**	**67.86**	**268**	IAMs_20	IAMs_20	21 49 25.1	
	comp=Z,32µm,20.0s						
SPMN	**Marine on St.**	**67.89**	**343**	IAmb	IAmb	21 27 28.6	
	comp=Z,286nm,1.1s						
SPMN	**Marine on St.**	**67.89**	**343**	P	**P**	**21 27 27.1**	**-0.6**
	baz=158,SNR=83						
SPMN				S	**S**	**21 36 22.9**	**-3.4**
	baz=158						
SMCO	**Snowmass**	**67.91**	**330**	IAmb	IAmb	21 27 32.4	
	comp=Z,221nm,1.1s						
PDMCI	**Parker Dam,Lak**	**67.98**	**322**	P	**P**	**21 27 29.8**	**+1.3**
	baz=136,SNR=38						
PDMCI				S	**S**	**21 36 32.4**	**+4.7**
	baz=136						
VLDQ	**Val d'Or**	**67.98**	**355**	IAmb	IAmb	21 27 30.2	
	comp=Z,324nm,1.1s						
VLDQ				IAMs_20	IAMs_20	22 02 23.4	
	comp=Z,48µm,18.0s						
IKP	**In-Ko-Pah, Jac**	**67.99**	**320**	P	**P**	**21 27 30.4**	**+1.7**
	baz=134,SNR=156						
IKP				S	**S**	**21 36 33.4**	**+5.3**
	baz=134						
PV02	**Paradox Valley**	**67.99**	**328**	IAmb	IAmb	21 27 33.5	
	comp=Z,235nm,1.2s						
PV02				IAMs_20	IAMs_20	21 57 49.9	
	comp=Z,33µm,19.0s						
PV13	**Radium Mtn., P**	**68.00**	**328**	IAmb	IAmb	21 27 32.6	
	comp=Z,236nm,1.1s						
PV13				IAMs_20	IAMs_20	21 57 40.0	
	comp=Z,32µm,18.0s						
SWSC	**Sam W. Stewart**	**68.01**	**320**	P	**P**	**21 27 30.4**	**+1.7**
	baz=134,SNR=77						
SWSC				S	**S**	**21 36 34.3**	**+6.2**
	baz=134						
PV05	**Paradox Valley**	**68.07**	**328**	IAmb	IAmb	21 27 35.9	
	comp=Z,193nm,1.2s						
PV05				IAMs_20	IAMs_20	21 57 39.7	
	comp=Z,34µm,18.0s						
PV03	**Paradox Valley**	**68.08**	**328**	IAMs_20	IAMs_20	21 57 42.3	
	comp=Z,31µm,18.0s						
PV18	**Skein Mesa, Pa**	**68.11**	**328**	IAmb	IAmb	21 27 32.0	
	comp=Z,183nm,1.2s						
PV18				IAMs_20	IAMs_20	21 57 42.9	
	comp=Z,32µm,18.0s						
PV12	**Saucer Basin,**	**68.11**	**328**	IAmb	IAmb	21 27 34.3	
	comp=Z,235nm,1.2s						
PV12				IAMs_20	IAMs_20	21 57 54.0	
	comp=Z,38µm,18.0s						
PV11	**David Mesa, Pa**	**68.13**	**328**	IAmb	IAmb	21 27 34.2	
	comp=Z,190nm,1.1s						
PV11				IAMs_20	IAMs_20	21 57 52.5	
	comp=Z,35µm,18.0s						
PV17	**East Wray Mesa**	**68.16**	**328**	IAmb	IAmb	21 27 32.4	
	comp=Z,179nm,1.2s						
PV17				IAMs_20	IAMs_20	21 57 43.3	
	comp=Z,37µm,18.0s						
PV16	**Nyswonger Mesa**	**68.16**	**328**	IAMs_20	IAMs_20	21 57 44.4	
	comp=Z,30µm,18.0s						
PV19	**Morning Glory**	**68.19**	**328**	IAMs_20	IAMs_20	21 57 45.1	
	comp=Z,31µm,18.0s						
PV20	**West Nyswonger**	**68.21**	**328**	IAMs_20	IAMs_20	21 57 54.7	
	comp=Z,30µm,18.0s						
PV04	**Paradox Valley**	**68.22**	**328**	IAMs_20	IAMs_20	21 57 56.6	
	comp=Z,38µm,18.0s						
PV14	**Lion Creek, Pa**	**68.26**	**328**	IAmb	IAmb	21 27 37.2	
	comp=Z,212nm,1.2s						
PV14				IAMs_20	IAMs_20	21 57 47.0	
	comp=Z,40µm,18.0s						
PV22	**Blue Mesa, Par**	**68.27**	**329**	IAmb	IAmb	21 27 48.9	
	comp=Z,250nm,1.1s						
PV10	**Paradox Valley**	**68.27**	**328**	IAmb	IAmb	21 27 33.8	
	comp=Z,210nm,1.1s						
PV10				IAMs_20	IAMs_20	21 57 35.5	
	comp=Z,37µm,18.0s						
BC3	**Big Chuckawall**	**68.29**	**321**	P	**P**	**21 27 32.2**	**+1.6**
	baz=135,SNR=169						
BC3				S	**S**	**21 36 36.8**	**+5.0**
	baz=135						
PV23	**Carpenter Ridg**	**68.32**	**328**	IAMs_20	IAMs_20	22 02 10.5	
	comp=Z,32µm,18.0s						
MONP2	**Monument Peak**	**68.35**	**320**	P	**P**	**21 27 32.7**	**+1.6**
	baz=134,SNR=136						
MONP2				S	**S**	**21 36 37.5**	**+4.8**
	baz=134						
BAR	**Barrett**	**68.36**	**319**	IAmb	IAmb	21 27 35.8	
	comp=Z,405nm,1.1s						
IRM	**Iron Mountain**	**68.46**	**321**	P	**P**	**21 27 33.3**	**+1.7**
	baz=135,SNR=319						
IRM				S	**S**	**21 36 38.0**	**+4.3**
	baz=135						
U15A	**North Rim**	**68.48**	**325**	IAmb	IAmb	21 27 37.1	
	comp=Z,249nm,0.9s						
U15A				IAMs_20	IAMs_20	21 57 22.8	
	comp=Z,34µm,18.0s						
NEE2	**Needles Airpor**	**68.59**	**322**	P	**P**	**21 27 33.7**	**+1.4**
	baz=136,SNR=5.9						
NEE2				S	**S**	**21 36 39.4**	**+4.4**
	baz=136						
D41A	**Chassel**	**68.59**	**347**	IAmb	IAmb	21 27 40.2	
	comp=Z,469nm,1.1s						
D41A				IAMs_20	IAMs_20	21 59 17.5	
	comp=Z,37µm,21.0s						
109C	**Camp Elliot, M**	**68.77**	**319**	P	**P**	**21 27 34.9**	**+1.5**
	baz=133,SNR=20						
109C				S	**S**	**21 36 42.2**	**+5.1**
	baz=133						
N23A	**Red Feather La**	**68.82**	**332**	IAmb	IAmb	21 27 38.1	
	comp=Z,451nm,1.1s						
N23A	**Red Feather La**	**68.82**	**332**	P	**P**	**21 27 34.9**	**+1.0**
	baz=144,SNR=183						
N23A				S	**S**	**21 36 40.5**	**+2.4**
	baz=144						
E38A	**The Farm, Brul**	**68.85**	**345**	IAmb	IAmb	21 27 34.7	
	comp=Z,166nm,1.1s						
E38A				IAMs_20	IAMs_20	21 59 08.3	
	comp=Z,46µm,20.0s						
BELC	**Belle Mtn. Jos**	**68.86**	**321**	P	**P**	**21 27 35.7**	**+1.5**
	baz=134,SNR=121						
BELC				S	**S**	**21 36 43.2**	**+4.7**
	baz=134						
TPFO	**Pinon Flats**	**68.86**	**320**	S	**S**	**21 36 44.6**	**+6.1**
	baz=134						
XPFO	**Pion Flat**	**68.86**	**320**	P	**P**	**21 27 33.6**	**-0.6**
XPFO				IAmb	IAmb	21 27 39.2	
	comp=Z,166nm,0.9s						
PFO	**Pinyon Flats O**	**68.87**	**320**	P	**P**	**21 27 35.6**	**+1.4**
	comp=Z,167nm,1.0s,baz=117,slow=4.6,SNR=112						
PFO				LR	LR	21 55 43.5	
	comp=Z,13µm,19.4s,baz=127,slow=34						
PFO	**Pinyon Flats O**	**68.87**	**320**	*c* *i*P	**P**	**21 27 36.2**	**+2.0**
PFO				pmax	pmax		
	comp=Z,442nm,1.3s						
PFO	**Pinyon Flats O**	**68.87**	**320**	P	**P**	**21 27 33.6**	**-0.6**
PFO				IAmb	IAmb	21 27 39.2	
	comp=Z,166nm,0.9s						
PFO	**Pinyon Flats O**	**68.87**	**320**	P	**P**	**21 27 35.8**	**+1.6**
	baz=134,SNR=136						
PFO				S	**S**	**21 36 44.3**	**+5.7**
	baz=134						
NVL	**N'lazarevskaya**	**68.88**	**159**	⇑ *i*P	**P**	**21 27 33.5**	**-0.1**
NVL				*e*PPP	PPP	21 31 49.0	
NVL				pmax	pmax		
	comp=Z,276nm,1.1s						
LSQQ	**Lebel-sur-Quev**	**68.88**	**356**	P	**P**	**21 27 34.0**	**+0.2**
	baz=174						
LSQQ				S	**S**	**21 36 36.6**	**-1.3**
	baz=174						
SUSD	**Miller**	**69.08**	**339**	IAMs_20	IAMs_20	22 03 30.1	
	comp=Z,37µm,18.0s						
SUSD	**Miller**	**69.08**	**339**	P	**P**	**21 27 35.0**	**-0.2**
	baz=152,SNR=28						
SUSD				S	**S**	**21 36 39.0**	**-1.5**
	baz=152						
GMRC	**Granite Mounta**	**69.20**	**321**	P	**P**	**21 27 38.1**	**+1.8**
	baz=135,SNR=370						
GMRC				S	**S**	**21 36 47.2**	**+4.6**
	baz=135						
O20A	**White River Ci**	**69.26**	**330**	IAmb	IAmb	21 27 40.5	
	comp=Z,226nm,1.1s						
O20A				IAMs_20	IAMs_20	21 58 54.6	
	comp=Z,43µm,20.0s						
O20A	**White River Ci**	**69.26**	**330**	P	**P**	**21 27 37.8**	**+1.1**
	baz=142,SNR=133						
O20A				S	**S**	**21 36 44.8**	**+1.6**
	baz=142						
MURC	**Murrieta**	**69.31**	**320**	P	**P**	**21 27 38.5**	**+1.7**
	baz=133,SNR=36						
MURC				S	**S**	**21 36 49.5**	**+5.9**
	baz=133						
LIC	**Lamto**	**69.50**	**75**	*e*P	**P**	**21 27 36.7**	**-1.7**
	comp=Z,443nm,1.2s						
H07S1	**FLORES T-PHASE**	**69.53**	**32**	*e*P	**P**	**21 27 38.6**	**+0.5**
H07S1				*e*S	S	21 37 02.1	+16
H07S1	**FLORES T-PHASE**	**69.53**	**32**	P	**P**	**21 27 36.9**	**-1.2**
	baz=209						
BBRC	**Big Bear Solar**	**69.59**	**320**	P	**P**	**21 27 40.9**	**+2.1**
	baz=134,SNR=18						
BBRC				S	**S**	**21 36 52.8**	**+5.4**
	baz=134						
MATQ	**Matagami**	**69.63**	**355**	P	**P**	**21 27 38.3**	**-0.2**
	baz=173,SNR=90						
MATQ				S	**S**	**21 36 44.5**	**-2.2**
	baz=173						
HEC	**Hector,Ludlow**	**69.63**	**321**	P	**P**	**21 27 40.9**	**+2.0**
	baz=134,SNR=459						
HEC				S	**S**	**21 36 53.0**	**+5.5**
	baz=134						
TIC	**Toumodi**	**69.68**	**75**	*e*P	**P**	**21 27 37.8**	**-1.7**
	comp=Z,442nm,1.1s						
SCI2	**San Clemente I**	**69.72**	**318**	P	**P**	**21 27 41.0**	**+1.6**
	baz=132,SNR=28						
SCI2				S	**S**	**21 36 54.3**	**+5.8**
	baz=132						
TUQ	**Turquoise Moun**	**69.81**	**322**	P	**P**	**21 27 41.6**	**+1.6**
	baz=135,SNR=164						
TUQ				S	**S**	**21 36 54.0**	**+4.2**
	baz=135						
KIC	**Kosan Boka**	**69.82**	**75**	*e*P	**P**	**21 27 39.4**	**-1.0**
	comp=Z,2µm,1.5s						
H07N1	**FLORES T-PHASE**	**69.82**	**32**	*e*P	**P**	**21 27 41.3**	**+1.5**
H07N1	**FLORES T-PHASE**	**69.82**	**32**	P	**P**	**21 27 39.8**	**-0.1**
DRLN	**Deer Lake**	**69.83**	**9**	IAMs_20	IAMs_20	22 04 19.4	
	comp=Z,32µm,18.0s						
DBIC	**Dimbokro**	**69.84**	**75**	P	**P**	**21 27 40.6**	**+0.2**
	comp=Z,288nm,1.0s,baz=219,slow=6.2,SNR=94						
DBIC				S	**S**	**21 36 44.5**	**-6.1**
	comp=Z,6.3nm,0.9s,baz=178,slow=19,SNR=2.6						
DBIC				LR	LR	21 56 46.5	
	comp=Z,86µm,20.9s,baz=224,slow=35						
DBIC	**Dimbokro**	**69.84**	**75**	P	**P**	**21 27 39.3**	**-1.2**
DBIC				IAmb	IAmb	21 27 42.3	
	comp=Z,330nm,0.9s						
CIS	**Catalina Islan**	**69.92**	**319**	P	**P**	**21 27 42.1**	**+1.5**
	baz=132,SNR=35						
CIS				S	**S**	**21 36 55.7**	**+4.8**
	baz=132						
BFSC	**Mount Baldy Ra**	**70.02**	**320**	P	**P**	**21 27 42.8**	**+1.5**
	baz=133,SNR=123						
BFSC				S	**S**	**21 36 57.9**	**+5.7**
	baz=133						
RWWY	**Rawlins**	**70.03**	**332**	IAmb	IAmb	21 27 44.1	
	comp=Z,260nm,1.1s						
FMP	**Fort Macarthur**	**70.05**	**319**	P	**P**	**21 27 43.2**	**+1.9**
	baz=132,SNR=8.1						
FMP				S	**S**	**21 36 57.7**	**+5.4**
	baz=132						
RRX	**Edison Barstow**	**70.06**	**321**	P	**P**	**21 27 43.6**	**+2.1**
	baz=134,SNR=5.4						
RRX				S	**S**	**21 36 56.6**	**+4.2**
	baz=134						
EYMN	**Ely**	**70.09**	**345**	IAMs_20	IAMs_20	21 59 33.1	
	comp=Z,35µm,20.0s						
EYMN	**Ely**	**70.09**	**345**	P	**P**	**21 27 40.5**	**-0.8**
	baz=159,SNR=108						
EYMN				S	**S**	**21 36 48.8**	**-3.5**
	baz=159						
SHPR	**Sheep Range**	**70.13**	**323**	IAmb	IAmb	21 27 47.1	
	comp=Z,178nm,0.9s						
PCAN	**Candelaria**	**70.23**	**34**	*e*P	**P**	**21 27 42.7**	**+0.3**
	comp=Z,385nm,1.2s						
GSC	**Goldstone, Bar**	**70.24**	**321**	IAmb	IAmb	21 27 45.3	
	comp=Z,218nm,1.1s						
GSC	**Goldstone, Bar**	**70.24**	**321**	P	**P**	**21 27 44.3**	**+1.7**
	baz=134,SNR=187						
GSC				S	**S**	**21 36 59.5**	**+4.8**
	baz=134						
PCED	**Cedros**	**70.24**	**34**	*e*P	**P**	**21 27 43.2**	**+0.8**
	comp=Z,333nm,1.4s						
MWC	**Mount Wilson**	**70.25**	**320**	IAmb	IAmb	21 27 47.8	
	comp=Z,335nm,1.1s						
QSPA	**South Pole Qui**	**70.28**	**180**	P	**P**	**21 27 42.4**	**-0.2**
QSPA				IAmb	IAmb	21 28 00.0	
	comp=Z,242nm,1.1s						
PICO	**Pico**	**70.29**	**34**	*e*P	**P**	**21 27 43.3**	**+0.5**
	comp=Z,482nm,1.2s						
PASC	**Pasadena Art C**	**70.30**	**319**	IAmb	IAmb	21 27 51.3	
	comp=Z,305nm,1.1s						
SHOC	**Shoshone, Teco**	**70.34**	**322**	P	**P**	**21 27 44.7**	**+1.5**
	baz=134,SNR=33						
SHOC				S	**S**	**21 37 00.9**	**+5.2**
	baz=134						
DECC	**Green Verdugo**	**70.44**	**319**	P	**P**	**21 27 45.6**	**+1.8**
	baz=132,SNR=62						
DECC				S	**S**	**21 37 01.6**	**+4.7**
	baz=132						
K22A	**Casper**	**70.50**	**333**	IAmb	IAmb	21 27 45.8	
	comp=Z,244nm,1.1s						
K22A	**Casper**	**70.50**	**333**	P	**P**	**21 27 45.0**	**+0.9**
	baz=144,SNR=81						
K22A				S	**S**	**21 36 59.4**	**+1.8**
	baz=144						
SNCC	**San Nicolas Is**	**70.51**	**318**	IAmb	IAmb	21 27 57.6	
	comp=Z,286nm,1.1s						
SNCC	**San Nicolas Is**	**70.51**	**318**	P	**P**	**21 27 45.7**	**+1.5**
	baz=131,SNR=7.5						
SNCC				S	**S**	**21 37 02.6**	**+4.9**
	baz=131						
ROSA	**Rosais**	**70.55**	**34**	*e*P	**P**	**21 27 45.7**	**+1.4**
	comp=Z,532nm,1.4s						
ROSA				*e*S	**S**	**21 36 59.5**	**+1.5**
ROSA	**Rosais**	**70.55**	**34**	*e*LR	LR	21 50 12.1	
	comp=Z,6µm,21.6s						
ROSA	**Rosais**	**70.55**	**34**	IAmb	IAmb	21 27 47.9	
	comp=Z,236nm,1.1s						
PMAN	**Manadas**	**70.57**	**34**	*e*P	**P**	**21 27 45.4**	**+1.0**
	comp=Z,522nm,1.2s						
EDW2	**Edwards Air Fo**	**70.66**	**320**	P	**P**	**21 27 46.4**	**+1.2**
	baz=133,SNR=181						
EDW2				S	**S**	**21 37 02.8**	**+3.3**
	baz=133						

RSSD	**Black Hills**	70.68	335	P	P	21 27 44.5	-0.8
RSSD				pmax	pmax		
	comp=Z,205nm,1.1s						
RSSD				MLR	MLR		
	comp=Z,35µm,20.0s						
RSSD	**Black Hills**	70.68	335	P	P	21 27 44.5	-0.8
RSSD				IAmb	IAmb	21 27 46.9	
	comp=Z,204nm,1.1s						
RSSD	**Black Hills**	70.68	335	IAMs_20	IAMs_20	22 01 50.3	
	comp=Z,35µm,20.0s						
RSSD	**Black Hills**	70.68	335	P	P	21 27 45.9	+0.6
	baz=147						
RSSD				S	S	21 37 00.2	+0.4
	baz=147						
BLG	**Laguna Peak, P**	70.80	319	P	P	21 27 47.4	+1.5
	baz=132,SNR=37						
BLG				S	S	21 37 05.7	+4.7
	baz=132						
D32A	**Dogwood Acres,**	70.84	341	IAmb	IAmb	21 27 47.1	
	comp=Z,473nm,1.1s						
D32A				IAMs_20	IAMs_20	22 03 31.5	
	comp=Z,29µm,19.0s						
LRMC	**Laurel Mtn Rad**	70.88	321	P	P	21 27 48.1	+1.5
	baz=133,SNR=166						
LRMC				S	S	21 37 08.0	+5.8
	baz=133						
SRBC	**Serra Branca**	70.89	34	*e*P	P	21 27 47.1	+0.7
	comp=Z,961nm,1.5s						
MACI	**Morro de la Ar**	70.89	49	P	P	21 27 46.1	-0.8
PGRA	**Graciosa**	70.92	34	*e*P	P	21 27 51.2	+4.7
	comp=Z,670nm,1.4s						
PGRA				*e*S	S	21 37 02.1	-0.1
PGRA	**Graciosa**	70.92	34	*e*LR	LR	21 50 27.3	
	comp=Z,6µm,19.1s						
OSI	**Osito Audit: C**	70.92	319	IAmb	IAmb	21 27 51.4	
	comp=Z,224nm,1.0s						
OSI	**Osito Audit: C**	70.92	319	P	P	21 27 48.2	+1.4
	baz=132,SNR=41						
OSI				S	S	21 37 06.7	+4.1
	baz=132						
PSMA	**Santa Maria**	71.01	37	*e*P	P	21 27 46.6	-0.6
	comp=Z,261nm,1.7s						
ADH	**Angra Heroismo**	71.04	35	*e*P	P	21 27 48.3	+1.0
	comp=Z,475nm,1.3s						
PSMN	**Pico do Norte,**	71.05	37	*e*P	P	21 27 46.9	-0.5
	comp=Z,219nm,1.5s						
PSMN				*e*S	S	21 37 00.1	-3.8
PSMN	**Pico do Norte,**	71.05	37	*e*LR	LR	21 50 05.1	
	comp=Z,3µm,20.3s						
TPNV	**Topopah Spring**	71.06	323	IAmb	IAmb	21 28 08.0	
	comp=Z,289nm,1.1s						
TPNV	**Topopah Spring**	71.06	323	P	P	21 27 49.7	+2.0
	baz=135,SNR=202						
TPNV				S	S	21 37 11.9	+7.6
	baz=135						
SCZ2	**Santa Cruz Isl**	71.08	318	P	P	21 27 49.1	+1.4
	baz=132,SNR=26						
SCZ2				S	S	21 37 08.6	+4.3
	baz=132						
FURC	**Furnace Creek,**	71.08	322	P	P	21 27 49.5	+1.9
	baz=134,SNR=162						
FURC				S	S	21 37 09.3	+5.2
	baz=134						
MPMC	**Manual Prospec**	71.16	321	P	P	21 27 49.7	+1.3
	baz=134,SNR=223						
MPMC				S	S	21 37 10.7	+5.1
	baz=134						
PDA	**Ponta Delgada**	71.24	36	*e*P	P	21 27 48.9	+0.4
	comp=Z,673nm,1.2s						
PSET	**Sete Cidades**	71.26	36	*e*P	P	21 27 49.3	+0.6
	comp=Z,711nm,1.5s						
PSET				*e*S	S	21 37 02.1	-4.3
PSET	**Sete Cidades**	71.26	36	*e*LR	LR	21 50 17.9	
	comp=Z,4µm,21.7s						
ARVC	**Arvin**	71.33	320	P	P	21 27 50.8	+1.6
	baz=132,SNR=51						
ARVC				S	S	21 37 11.9	+4.7
	baz=132						
CMLA	**Cha da Macela**	71.33	36	*e*P	P	21 27 49.1	0.0
	comp=Z,555nm,1.1s						
CMLA				*e*S	S	21 37 07.2	+0.1
CMLA	**Cha da Macela**	71.33	36	*e*LR	LR	21 50 23.8	
	comp=Z,5µm,20.7s						
CMLA	**Cha da Macela**	71.33	36	P	P	21 27 48.8	-0.3
CMLA				pmax	pmax		
	comp=Z,331nm,1.0s						
CMLA				MLR	MLR		
	comp=Z,31µm,20.0s						
CMLA	**Cha da Macela**	71.33	36	P	P	21 27 48.8	-0.3
CMLA				IAmb	IAmb	21 27 52.0	
	comp=Z,331nm,1.0s						
CMLA	**Cha da Macela**	71.33	36	IAMs_20	IAMs_20	22 01 44.2	
	comp=Z,31µm,20.0s						
SBC	**Santa Barbara**	71.42	319	P	P	21 27 51.1	+1.5
	baz=132,SNR=5.7						
SBC				S	S	21 37 13.8	+5.6
	baz=132						
ISA	**Isabella, Lake**	71.48	320	IAmb	IAmb	21 28 00.2	
	comp=Z,365nm,1.1s						
ISA	**Isabella, Lake**	71.48	320	P	P	21 27 51.8	+1.7
	baz=133,SNR=290						
ISA				S	S	21 37 15.0	+5.9
	baz=133						
BART	**Pico Bartolome**	71.54	37	*e*P	P	21 27 51.1	+0.6
	comp=Z,1µm,1.4s						
BART				*e*S	S	21 36 57.5	-12
AGMN	**Agassiz Nation**	71.56	343	IAmb	IAmb	21 27 51.9	
	comp=Z,216nm,1.1s						
AGMN	**Agassiz Nation**	71.56	343	P	P	21 27 49.7	-0.5
	baz=155,SNR=74						
AGMN				S	S	21 37 06.0	-3.3
	baz=155						
DUG	**Dugway, Tooele**	71.56	327	IAmb	IAmb	21 27 54.9	
	comp=Z,425nm,1.1s						
DUG	**Dugway, Tooele**	71.56	327	P	P	21 27 52.1	+1.5
	baz=138,SNR=393						
DUG				S	S	21 37 14.8	+4.9
	baz=138						
R11A	**Troy Canyon, C**	71.68	324	P	P	21 27 53.3	+1.9
	baz=136,SNR=278						
R11A				S	S	21 37 16.1	+4.6
	baz=136						
GRAC	**Grapevine Rang**	71.74	322	P	P	21 27 53.4	+1.8
	baz=134,SNR=40						
GRAC				S	S	21 37 17.7	+5.8
	baz=134						
CWC	**Cottonwood Cre**	71.77	321	P	P	21 27 53.7	+1.7
	baz=133						
CWC				S	S	21 37 18.9	+6.3
	baz=133						
PKM	**Mcpherson Peak**	71.77	319	P	P	21 27 53.8	+1.8
	baz=132,SNR=166						
PKM				S	S	21 37 16.7	+4.0
	baz=132						
PDAR	**Pinedale Array**	71.94	331	P	P	21 27 53.2	+0.2
	comp=Z,40nm,0.9s,baz=141,slow=5.7,SNR=154						
PDAR				S	S	21 37 13.4	-1.0
	comp=Z,0.8nm,0.8s,baz=123,slow=6.7,SNR=1.5						
PDAR				PKPPKP		21 55 46.8	
	comp=Z,2.0nm,1.1s,baz=318,slow=1.2,SNR=4.7						
PDAR				LR	LR	22 00 44.4	
	comp=Z,19µm,19.0s,baz=132,slow=37						
PDAR	**Pinedale Array**	71.94	331	P	P	21 27 51.8	-1.2
BW06	**Boulder Array**	71.94	331	P	P	21 27 53.4	+0.4
	baz=142,SNR=176						
BW06				S	S	21 37 15.1	+0.6
	baz=142						
VES	**Vestal, Richgr**	71.96	320	P	P	21 27 54.6	+1.7
	baz=132,SNR=141						
VES				S	S	21 37 19.4	+5.0
	baz=132						
HWUT	**Hardware Ranch**	72.00	329	IAmb	IAmb	21 27 59.1	
	comp=Z,194nm,0.9s						
HWUT				IAMs_20	IAMs_20	21 59 57.8	
	comp=Z,40µm,19.0s						
SMMC	**Simmler**	72.17	319	P	P	21 27 56.2	+1.9
	baz=132,SNR=123						
SMMC				S	S	21 37 22.4	+5.5
	baz=132						
TIN	**Tinemaha, Big**	72.28	322	P	P	21 27 57.0	+2.0
	baz=133,SNR=10						
TIN				S	S	21 37 22.9	+4.6
	baz=133						
MDND	**Maddock**	72.29	340	IAMs_20	IAMs_20	22 03 33.1	
	comp=Z,30µm,19.0s						
MDND	**Maddock**	72.29	340	P	P	21 27 55.3	+0.7
	baz=152,SNR=58						
MDND				S	S	21 37 17.3	-0.4
	baz=152						
VOG	**Valley Oaks Go**	72.46	320	P	P	21 27 56.7	+0.8
	baz=132						
VOG				S	S	21 37 24.2	+4.0
	baz=132						
TBI	**Tubuai**	72.50	251	*e*S	S	21 37 19.0	-2.3
	comp=Z,72µm,27.0s						
TBI				*e*LQ	LQ	21 47 00.2	
	comp=Z,37µm,33.5s						
TBI				*e*LR	LR	21 50 05.7	
	comp=Z,111µm,28.2s,baz=102						
PAGB	**Antelope Grade**	72.60	319	IAmb	IAmb	21 28 03.6	
	comp=Z,231nm,1.2s						
AHID	**Auburn Hatcher**	72.66	330	IAmb	IAmb	21 28 01.2	
	comp=Z,217nm,0.9s						
MEH	**Mehetia**	72.67	257	*e*T	T	22 47 06.4	
	comp=Z,34nm,0.3s						
VAH	**Vaihoa**	72.99	260	*e*P	P	21 28 02.4	+2.9
	comp=Z,246nm,1.1s						
REDW	**Red Top Meadow**	73.00	330	IAmb	IAmb	21 28 19.0	
	comp=Z,268nm,1.1s						
MLAC	**Mammoth, Mammo**	73.02	322	P	P	21 28 01.5	+2.0
	baz=133						
MLAC				S	SKiKP	21 37 31.0	-1.8
	baz=133						
SNOW	**Snow King Moun**	73.03	331	IAMs_20	IAMs_20	22 00 34.4	
	comp=Z,26µm,19.0s						
OMMB	**Old Mammoth Mi**	73.11	322	IAmb	IAmb	21 28 14.4	
	comp=Z,348nm,1.2s						
TPAW	**Teton Pass**	73.15	331	IAmb	IAmb	21 28 02.4	
	comp=Z,292nm,1.1s						
MDPB	**Devils Postpil**	73.17	322	IAmb	IAmb	21 28 03.4	
	comp=Z,238nm,1.2s						
PMOZ	**Porto Moniz, M**	73.17	45	P	P	21 28 03.4	+3.1
	SNR=7.7						
PMOZ	**Porto Moniz, M**	73.17	45	*e*P	P	21 28 00.7	+0.4
	comp=Z,562nm,1.4s						
PMOZ				*e*S	SKiKP	21 37 31.5	-1.5
PMOZ	**Porto Moniz, M**	73.17	45	*e*LQ	LQ	21 47 44.0	
PMOZ				*e*LR	LR	21 51 03.9	
	comp=Z,30µm,18.0s						
ELK	**Elko**	73.21	326	P	P	21 28 01.6	+1.0
	comp=Z,110nm,1.1s,baz=152,slow=4.6,SNR=123						
ELK	**Elko**	73.21	326	IAMs_20	IAMs_20	22 00 13.0	
	comp=Z,27µm,19.0s						
PMPB	**Monarch Peak**	73.25	320	IAmb	IAmb	21 28 08.4	
	comp=Z,449nm,1.1s						
NVAR	**Mina Array Bea**	73.26	323	P	P	21 28 02.2	+1.3
	comp=Z,148nm,1.1s,baz=143,slow=5.9,SNR=311						
NVAR				S	SKiKP	21 37 33.1	0.0
	comp=Z,0.5nm,0.9s,baz=130,slow=12,SNR=2.3						
NVAR				LR	LR	21 59 12.9	
	comp=Z,10µm,19.6s,baz=112,slow=35						
NVAR	**Mina Array Bea**	73.26	323	P	P	21 27 59.5	-1.4
FUL	**Funchal**	73.26	45	*e*P	P	21 28 00.7	0.0
	comp=Z,404nm,1.7s						
PMAR	**Madeira**	73.29	45	*e*P	P	21 28 01.4	+0.2
PMOR	**Pomariorio Ree**	73.30	260	*e*P	P	21 28 04.2	+2.8
	comp=Z,226nm,1.1s						
ULM	**Lac du Bonnet**	73.33	343	P	P	21 28 00.1	-0.6
	comp=Z,168nm,1.1s,baz=153,slow=5.7,SNR=118						
ULM				S	S	21 37 23.1	-6.4
	comp=Z,4.9nm,1.1s,baz=357,slow=10,SNR=1.0						
ULM				LR	LR	22 05 06.0	
	comp=Z,26µm,18.2s,baz=141,slow=40						
ULM	**Lac du Bonnet**	73.33	343*c*	*i*P	P	21 28 00.3	-0.4
ULM	**Lac du Bonnet**	73.33	343	IAMs_20	IAMs_20	22 00 56.8	
	comp=Z,36µm,21.0s						
KVN	**Kaiserville**	73.57	323	IAmb	IAmb	21 28 07.2	
	comp=Z,286nm,1.1s						
RLMT	**Red Lodge**	73.67	333	IAmb	IAmb	21 28 05.1	
	comp=Z,304nm,1.1s						
RLMT				IAMs_20	IAMs_20	22 04 19.2	
	comp=Z,30µm,19.0s						
RLMT	**Red Lodge**	73.67	333	P	P	21 28 04.2	+1.1
	baz=142,SNR=249						
RLMT				S	SKiKP	21 37 33.7	+0.2
	baz=142						
LAO	**LASA Array**	73.67	335	IAmb	IAmb	21 28 10.4	
	comp=Z,277nm,1.1s						
LAO	**LASA Array**	73.67	335	P	P	21 28 03.8	+0.9
	baz=145,SNR=44						
LAO				S	S	21 37 33.8	+0.1
	baz=145						
H17A	**Grant Village**	73.67	331	IAMs_20	IAMs_20	22 05 34.9	
	comp=Z,48µm,19.0s						
H17A	**Grant Village**	73.67	331	P	P	21 28 05.0	+1.8
	baz=141,SNR=73						
H17A				S	S	21 37 37.2	+3.0
	baz=141						
LKWY	**Lake**	73.73	332	IAmb	IAmb	21 28 12.1	
	comp=Z,277nm,1.0s						
LKWY				IAMs_20	IAMs_20	22 02 45.0	
	comp=Z,43µm,20.0s						
TVO	**Taravao**	73.78	257	*e*P	P	21 28 07.4	+3.2
	comp=Z,85nm,1.3s						
PMPS	**Porto Santo**	73.88	45	*e*P	P	21 28 05.0	+0.6
	comp=Z,773nm,1.8s						
PMPS	**Porto Santo**	73.88	45	*e*PP	PP	21 30 54.1	+4.6
PMPST	**Porto Santo, M**	73.90	45	*e*P	P	21 28 04.4	-0.1
	comp=Z,760nm,2.4s						
PMPST	**Porto Santo, M**	73.90	45	*e*PP	PP	21 30 54.1	+4.4
TIAR	**Tiarei**	73.92	257	*e*P	P	21 28 07.7	+2.6
	comp=Z,32nm,1.0s						
TIAR	**Tiarei**	73.92	257	*e*T	T	22 48 41.0	
	comp=Z,6.2nm,0.3s						
SAO	**San Andreas Ge**	74.00	320	P	P	21 28 04.5	-0.6
SAO				pmax	pmax		
	comp=Z,109nm,1.1s						
SAO				MLR	MLR		
	comp=Z,10µm,21.0s						
SAO	**San Andreas Ge**	74.00	320	P	P	21 28 04.5	-0.6
PAE	**Paea**	74.11	257	*e*P	P	21 28 08.9	+2.8
	comp=Z,55nm,1.4s						
PPT2	**Papeete2**	74.13	257	*e*P	P	21 28 09.5	+3.2
	comp=Z,175nm,1.3s						
PPT2				*e*S	S	21 37 38.5	-1.5
	comp=Z,31µm,23.2s						
PPT2	**Papeete2**	74.13	257	*e*LQ	LQ	21 47 41.3	
	comp=Z,38µm,29.0s						
PPT2				*e*LR	LR	21 50 50.6	
	comp=Z,95µm,25.2s,baz=111						
PPT	**Papeete**	74.13	257	LR	LR	21 52 29.4	
	comp=Z,28µm,20.7s,baz=106,slow=29						
YERR	**Yerington**	74.18	323	IAmb	IAmb	21 28 10.8	
	comp=Z,259nm,1.1s						
DGMT	**Dagmar**	74.39	338	IAmb	IAmb	21 28 10.2	
	comp=Z,629nm,1.1s						
DGMT	**Dagmar**	74.39	338	IAMs_20	IAMs_20	22 05 48.5	
	comp=Z,28µm,19.0s						
DGMT	**Dagmar**	74.39	338	P	P	21 28 08.3	+1.2
	baz=147,SNR=102						
DGMT				S	S	21 37 46.0	+4.4
	baz=147						
PNTR	**Pine Nut**	74.45	322	IAmb	IAmb	21 28 19.2	
	comp=Z,333nm,1.2s						
SCHQ	**Schefferville**	74.50	2	P	P	21 28 07.3	-0.2
	comp=Z,73nm,0.9s,baz=195,slow=4.8,SNR=101						
SCHQ				S	S	21 37 38.9	-3.6
	comp=Z,5.5nm,1.1s,baz=223,slow=16,SNR=1.8						
SCHQ				LR	LR	22 03 02.1	
	comp=Z,30µm,19.0s,baz=199,slow=38						
SCHQ	**Schefferville**	74.50	2	IAMs_20	IAMs_20	22 00 30.5	
	comp=Z,37µm,22.0s						
RUBR	**Rubicon Trail**	74.75	322	IAmb	IAmb	21 28 21.4	
	comp=Z,233nm,1.1s						
PAHR	**Pah Rah Range**	74.75	323	IAmb	IAmb	21 28 14.7	
	comp=Z,419nm,1.2s						
DLMT	**Dillon**	75.34	331	IAmb	IAmb	21 28 16.9	
	comp=Z,362nm,1.1s						
DLMT				IAMs_20	IAMs_20	22 06 05.1	
	comp=Z,25µm,18.0s						
MFID	**Camas Ranch**	75.45	328	IAmb	IAmb	21 28 17.3	
	comp=Z,379nm,1.1s						
MFID				IAMs_20	IAMs_20	22 02 05.1	
	comp=Z,29µm,19.0s						
MCCM	**Marconi Confer**	75.77	320	IAmb	IAmb	21 28 17.4	
	comp=Z,261nm,1.1s						
ORV	**Oroville**	75.86	322	IAmb	IAmb	21 28 20.2	
	comp=Z,451nm,1.1s						
EGMT	**Eagleton**	76.17	334	IAmb	IAmb	21 28 20.1	
	comp=Z,509nm,1.1s						
EGMT				IAMs_20	IAMs_20	22 05 12.4	
	comp=Z,28µm,21.0s						
EGMT	**Eagleton**	76.17	334	P	P	21 28 18.1	+0.7
	baz=142,SNR=23						
O03E	**Paynes Creek**	76.52	322	P	P	21 28 19.8	+0.3
	baz=131,SNR=66						
O02D	**Mt. Diablo Mer**	77.02	322	P	P	21 28 23.1	+0.7
	baz=130,SNR=36						
MSO	**Missoula**	77.06	331	IAmb	IAmb	21 28 26.3	
	comp=Z,220nm,1.1s						
MSO				IAMs_20	IAMs_20	22 06 43.9	
	comp=Z,31µm,19.0s						
MSO	**Missoula**	77.06	331	P	P	21 28 24.1	+1.6
	baz=139,SNR=116						
SBA	**Scott Base**	77.10	191	P	P	21 28 21.8	-0.4
SBA				pmax	pmax		
	comp=Z,203nm,1.2s						
SBA				MLR	MLR		
	comp=Z,16µm,18.0s						
SBA	**Scott Base**	77.10	191	P	P	21 28 21.8	-0.4
BMO	**Blue Mountains**	77.22	328	IAmb	IAmb	21 28 27.3	
	comp=Z,217nm,1.1s						
BMO				IAMs_20	IAMs_20	22 03 32.1	
	comp=Z,29µm,20.0s						
N02D	**Trinity Center**	77.48	322	P	P	21 28 25.2	+0.2
	baz=131,SNR=45						
M04C	**Macdoel**	77.52	323	P	P	21 28 26.4	+1.1
	baz=131,SNR=41						
EAH	**EAH**	77.76	50	P	P	21 28 29.0	+2.4
	SNR=7.6						
EAH				P	P	21 28 29.0	+2.4
	SNR=7.6						
I07A	**Izee**	77.80	326	IAMs_20	IAMs_20	22 03 53.5	
	comp=Z,28µm,19.0s						
M02C	**Callahan**	77.84	323	P	P	21 28 27.5	+0.5
	baz=131,SNR=35						
JTMT	**Jette**	77.90	332	IAmb	IAmb	21 28 44.2	
	comp=Z,245nm,1.2s						
JTMT				IAMs_20	IAMs_20	22 06 34.2	
	comp=Z,32µm,20.0s						
YBH	**Yreka Blue Hor**	77.98	323	P	P	21 28 26.8	-0.9
	comp=Z,46nm,1.1s,baz=105,slow=3.4,SNR=32						
YBH				S	S	21 38 20.2	-1.3
	comp=Z,1.6nm,0.8s,baz=195,slow=8.3,SNR=2.3						
TTIG	**Tnine Tigouga,**	78.01	51	P	P	21 28 30.1	+1.9
	SNR=64						
TTIG				P	P	21 28 30.1	+1.9
	SNR=64						
K04D	**Chiloquin, OR**	78.03	324	P	P	21 28 29.2	+1.2
	baz=132,SNR=10						
L04D	**Klamath Falls**	78.07	323	P	P	21 28 28.9	+0.6
	baz=131,SNR=32						
VNDA	**Vanda**	78.13	190	P	P	21 28 30.3	+2.3
	comp=Z,61nm,0.9s,baz=131,slow=5.4,SNR=111						
VNDA				S	S	21 38 26.4	+4.4
	comp=Z,1.5nm,1.0s,baz=100,slow=18,SNR=2.5						
JCC	**Jacoby Creek,**	78.15	321	IAmb	IAmb	21 28 46.8	
	comp=Z,278nm,1.1s						
J05D	**Fort Rock, OR**	78.19	325	P	P	21 28 30.3	+1.4
	baz=132,SNR=35						
TORD	**Torodi Ar. Bea**	78.34	71	P	P	21 28 29.4	-0.8
	comp=Z,577nm,1.0s,baz=256,slow=3.9,SNR=447						
TORD				LR	LR	22 01 21.4	
	comp=Z,80µm,22.0s,baz=270,slow=34						
TORD	**Torodi Ar. Bea**	78.34	71	P	P	21 28 28.7	-1.5
G08A	**Pilot Rock**	78.36	327	IAMs_20	IAMs_20	22 03 57.2	
	comp=Z,40µm,19.0s						
PINE	**Pine Mountain**	78.37	325	IAMs_20	IAMs_20	22 07 53.3	
	comp=Z,25µm,18.0s						
SYO	**Syowa Base**	78.55	160⇑	*e*P	P	21 28 28.0	-2.4
SYO	**Syowa Base**	78.55	160⇓	*i*X	P	21 28 30.8	+0.4
SYO	**Syowa Base**	78.55	160⇓	*i*sP	sP	21 28 36.0	+2.0
SYO	**Syowa Base**	78.55	160	*e*SH	S	21 38 21.0	-5.7
J04D	**Umpqua Nationa**	78.63	324	P	P	21 28 32.5	+1.0
	baz=131						
WALA	**Waterton Lakes**	78.72	333	IAmb	IAmb	21 28 34.8	
	comp=Z,291nm,1.1s						
L02E	**Cave Junction**	78.76	323	P	P	21 28 33.3	+1.4
	baz=130,SNR=14						
OUK	**Oukaimeden**	78.77	51	P	P	21 28 35.0	+2.3
	SNR=48						
OUK				P	P	21 28 35.0	+2.3
	SNR=48						
I05D	**Terrebonne, OR**	78.95	326	P	P	21 28 34.6	+1.6
	baz=132,SNR=37						
FFC	**Flin Flon**	79.02	342	P	P	21 28 32.8	-0.2
FFC				pmax	pmax		
	comp=Z,109nm,1.2s						
FFC				MLR	MLR		
	comp=Z,32µm,19.0s						
FFC	**Flin Flon**	79.02	342	P	P	21 28 32.8	-0.2
FFC	**Flin Flon**	79.02	342	IAMs_20	IAMs_20	22 05 46.2	
	comp=Z,32µm,19.0s						
K02D	**Willamette Mer**	79.14	323	P	P	21 28 35.4	+1.3
	baz=130,SNR=24						
I04A	**Tendick Farm,**	79.16	325	P	P	21 28 34.7	+0.5
	baz=131,SNR=26						
G06A	**Carlson Farm,**	79.18	327	IAMs_20	IAMs_20	22 04 12.9	
	comp=Z,24µm,18.0s						
E08A	**Dider Farm, El**	79.25	328	IAMs_20	IAMs_20	22 04 01.7	
	comp=Z,25µm,20.0s						
F07A	**Phinny Hill Vi**	79.27	327	IAMs_20	IAMs_20	22 04 24.3	
	comp=Z,40µm,18.0s						
SRHM	**Skhour des Reh**	79.41	50	P	P	21 28 38.0	+2.2
	SNR=24						
SRHM				P	P	21 28 38.0	+2.2
	SNR=24						
HAWA	**Hanford**	79.41	328	IAMs_20	IAMs_20	22 04 08.1	
	comp=Z,28µm,19.0s						
OUZM	**OUZ**	79.43	52	P	P	21 28 37.3	+1.2
	SNR=48						
OUZM				P	P	21 28 37.3	+1.2
	SNR=48						
G05D	**Wamic, OR**	79.54	326	P	P	21 28 38.1	+1.9
	baz=132,SNR=40						
NEW	**Newport**	79.58	330	P	P	21 28 36.4	+0.1
	comp=Z,63nm,1.1s,baz=130,slow=5.9,SNR=45						
NEW				S	S	21 38 37.6	-0.6
	comp=Z,2.7nm,0.9s,baz=33,slow=3.0,SNR=2.6						
NEW	**Newport**	79.58	330	P	P	21 28 36.8	+0.5
	baz=136,SNR=42						
J01E	**Myrtle Point**	79.59	323	P	P	21 28 38.0	+1.6
	baz=130,SNR=16						
I03D	**Drain, OR**	79.61	324	P	P	21 28 37.6	+1.1
	baz=130,SNR=15						
E07A	**Sunnyside**	79.69	328	IAMs_20	IAMs_20	22 04 15.4	
	comp=Z,30µm,20.0s						
C09A	**Chrisman Ranch**	79.78	330	IAmb	IAmb	21 28 41.6	
	comp=Z,255nm,1.1s						
H04D	**Lebanon**	79.82	325	P	P	21 28 38.3	+0.7
	baz=131						
ZGR	**Zagora**	79.88	53	P	P	21 28 40.0	+1.5
	SNR=68						
ZGR				P	P	21 28 40.0	+1.5
	SNR=68						
F05D	**White Salmon**	80.05	327	P	P	21 28 40.2	+1.3
	baz=132,SNR=8.1						
I02D	**Swisshome**	80.15	324	P	P	21 28 42.6	+3.1
	baz=130						
COR	**Corvallis**	80.17	325	P	P	21 28 39.0	-0.5
COR				pmax	pmax		
	comp=Z,233nm,1.1s						
COR				MLR	MLR		
	comp=Z,15µm,20.0s						
COR	**Corvallis**	80.17	325	P	P	21 28 39.0	-0.5
COR				IAmb	IAmb	21 28 45.8	
	comp=Z,233nm,1.1s						
AVE	**Averroes**	80.19	49⇑	*i*P	P	21 28 39.9	-0.1
AVE				*i* S	SKSac	21 38 53.4	-4.5
TZRR	**Tazzarine**	80.25	52	P	P	21 28 42.0	+1.6
	SNR=84						
TZRR				P	P	21 28 42.0	+1.6
	SNR=84						
G03D	**McMinnville, O**	80.55	325	P	P	21 28 42.7	+1.2
	baz=131						
LTY	**Liberty**	80.58	328	IAMs_20	IAMs_20	22 04 52.8	
	comp=Z,33µm,19.0s						
F04A	**Amboy**	80.58	326	IAmb	IAmb	21 28 54.7	
	comp=Z,292nm,0.9s						
B08A	**Colville Reser**	80.68	329	IAMs_20	IAMs_20	22 10 45.7	
	comp=Z,21µm,18.0s						
FCC	**Fort Churchill**	80.74	348	IAMs_20	IAMs_20	22 05 48.8	
	comp=Z,37µm,19.0s						
SUR	**Sutherland**	80.76	121	P	P	21 28 42.4	-1.0
SUR	**Sutherland**	80.76	121	IAMs_20	IAMs_20	22 01 31.0	
	comp=Z,30µm,20.0s						
LON	**Longmire**	80.81	327	IAMs_20	IAMs_20	22 05 23.0	
	comp=Z,36µm,19.0s						
ZHG	**ZHG**	80.82	50	P	P	21 28 44.1	+0.7
	SNR=62						
ZHG				P	P	21 28 44.1	+0.7
	SNR=62						
RTC	**Rabat Centre**	80.94	49	P	P	21 28 45.4	+1.5
	SNR=43						

RTC				P	P	21 28 45.4	+1.5
	SNR=43						
F04D	**Rainier, OR**	80.99	326	P	P	21 28 45.5	+1.7
	baz=131,SNR=6.4						
E04D	**Cinebar**	81.07	327	P	P	21 28 45.2	+0.9
	baz=132,SNR=18						
C06D	**Leavenworth**	81.14	328	P	P	21 28 45.2	+0.5
	baz=133						
F03A	**Seaside**	81.18	326	IAmb	IAmb	21 28 58.4	
	comp=Z,378nm,1.1s						
D05A	**Enumclaw**	81.19	327	IAmb	IAmb	21 28 58.4	
	comp=Z,411nm,1.0s						
D05A				IAMs_20	IAMs_20	22 05 45.1	
	comp=Z,30µm,19.0s						
PFVI	**Vila Bisbo**	81.25	45	IAmb	IAmb	21 29 00.4	
	comp=Z,219nm,1.1s						
PFVI				IAMs_20	IAMs_20	22 00 38.1	
	comp=Z,33µm,21.0s						
PFVI	**Vila Bisbo**	81.25	45	*e*P	P	21 28 46.3	+0.8
	comp=Z,400nm,1.6s						
PFVI	**Vila Bisbo**	81.25	45	*e*PP	PP	21 31 56.3	+5.0
PFVI				*e*SKS	SKSac	21 39 03.0	-2.0
MORF	**Marmelete**	81.47	45	*e*P	P	21 28 47.4	+0.6
MORF				*e*SKSac	SKSac	21 39 04.1	-2.4
MORF				AMS	AMS	22 01 30.4	
	comp=Z,28µm,23.4s						
MORF	**Marmelete**	81.47	45	*e*P	P	21 28 47.3	+0.6
MORF				*e*		21 39 04.1	
MORF	**Marmelete**	81.47	45	*e*P	P	21 28 47.3	+0.6
	comp=Z,319nm,1.9s						
MORF	**Marmelete**	81.47	45	*e*SKS	SKSac	21 39 04.3	-2.3
PTEO	**Sao Teotonio**	81.55	45	*e*P	P	21 28 48.2	+1.2
	comp=Z,569nm,1.6s						
PTEO	**Sao Teotonio**	81.55	45	*e*PP	PP	21 32 00.1	+6.4
E03A	**Lebam**	81.58	326	IAmb	IAmb	21 28 51.0	
	comp=Z,286nm,1.1s						
E03A				IAMs_20	IAMs_20	22 05 29.4	
	comp=Z,25µm,21.0s						
D04E	**Lakebay**	81.58	327	P	P	21 28 48.4	+1.5
	baz=131,SNR=13						
CZD	**Col de Zad**	81.76	51	P	P	21 28 50.6	+1.9
	SNR=92						
LIS	**Lisbon**	81.91	44	*e*P	P	21 28 49.6	+0.6
LIS				*e*SKSac	SKSac	21 39 07.6	-1.7
LIS				AMS	AMS	22 06 45.6	
	comp=Z,54µm,21.0s						
LIS	**Lisbon**	81.91	44	*e*P	P	21 28 49.5	+0.6
LIS				*e*		21 39 07.5	
LIS	**Lisbon**	81.91	44	*e*P	P	21 28 49.7	+0.8
	comp=Z,450nm,1.7s						
LIS	**Lisbon**	81.91	44	*e*PP	PP	21 32 02.4	+5.7
PBDV	**Barranco-do-Ve**	81.92	46	*e*P	P	21 28 49.9	+0.8
	comp=Z,334nm,1.4s						
PBDV	**Barranco-do-Ve**	81.92	46	*e*SKS	SKSac	21 39 08.8	-0.8
IFR	**Ifrane**	81.94	50	⇑*i*P	P	21 28 49.9	+0.4
IFR				*i* S	S	21 39 08.2	+4.3
PMAFR	**Mafra**	81.95	44	*e*P	P	21 28 49.7	+0.5
	comp=Z,322nm,1.6s						
PMAFR	**Mafra**	81.95	44	*e*PP	PP	21 32 02.3	+5.2
PMAFR				*e*SKS	SKSac	21 39 08.5	-1.2
B05A	**Bryant**	81.97	328	P	P	21 28 49.4	+0.4
	baz=132,SNR=46						
D03D	**Eldon**	81.98	327	P	P	21 28 50.1	+1.0
	baz=131,SNR=32						
PNCL	**Nicolau / Gran**	81.98	45	*e*P	P	21 28 49.7	+0.4
	comp=Z,319nm,1.7s						
PNCL	**Nicolau / Gran**	81.98	45	*e*PP	PP	21 32 04.3	+7.0
PNCL				*e*SKS	SKSac	21 39 09.8	-0.1
TSUM	**Tsumeb**	82.03	107	*i* P	P	21 28 52.1	+1.8
TSUM	**Tsumeb**	82.03	107	*i* P	P	21 28 52.1	+1.8
TSUM	**Tsumeb**	82.03	107	P	P	21 28 48.3	-2.0
TSUM				IAmb	IAmb	21 29 00.4	
	comp=Z,201nm,0.9s						
TSUM	**Tsumeb**	82.03	107	IAMs_20	IAMs_20	22 03 15.3	
	comp=Z,31µm,20.0s						
MESJ	**Messejana**	82.04	45	*e*P	P	21 28 50.4	+0.7
MESJ				*e*SKSac	SKSac	21 39 08.3	-2.0
MESJ				AMS	AMS	22 07 24.9	
	comp=Z,32µm,14.6s						
MESJ	**Messejana**	82.04	45	*e*P	P	21 28 50.3	+0.7
MESJ				*e*		21 39 08.2	
MESJ	**Messejana**	82.04	45	*e*P	P	21 28 50.8	+1.1
	comp=Z,232nm,1.9s						
PCVE	**Castro Verde**	82.05	45	*e*P	P	21 28 50.2	+0.5
	comp=Z,245nm,1.5s						
PCVE	**Castro Verde**	82.05	45	*e*SKS	SKSac	21 39 10.2	-0.2
SICH	**Sidi Chahed**	82.10	50	P	P	21 28 52.0	+2.0
	SNR=27						
SICH				P	P	21 28 52.0	+2.0
	SNR=27						
PVAQ	**Vaqueiros**	82.14	46	IAMs_20	IAMs_20	22 01 26.7	
	comp=Z,38µm,21.0s						
PVAQ	**Vaqueiros**	82.14	46	*e*P	P	21 28 50.6	+0.4
	comp=Z,281nm,1.8s						
PVAQ	**Vaqueiros**	82.14	46	*e*SKS	SKSac	21 39 11.4	+0.4
PVAQ	**Vaqueiros**	82.14	46	*e*LQ	LQ	21 51 00.2	
PVAQ				*e*LR	LR	21 55 58.3	
	comp=Z,35µm,20.0s						
RAR	**Rarotonga**	82.26	250	P	P	21 28 52.7	+1.4
	comp=Z,69nm,1.0s,baz=142,slow=12,SNR=3.4						
NLWA	**Neilton Lookou**	82.29	327	IAMs_20	IAMs_20	22 06 13.2	
	comp=Z,38µm,19.0s						
PBEJ	**Beja**	82.38	45	*e*P	P	21 28 52.4	+1.0
	comp=Z,296nm,1.8s						
PBEJ	**Beja**	82.38	45	*e*PP	PP	21 32 07.0	+6.4
A04D	**Lummi Island**	82.57	328	P	P	21 28 53.0	+0.9
	baz=132,SNR=8.6						
PSBE	**So Bento**	82.57	43	*e*P	P	21 28 53.4	+0.9
	comp=Z,633nm,1.9s						
PSBE	**So Bento**	82.57	43	*e*SKS	SKSac	21 39 16.1	+2.2
SFS	**San Fernando**	82.68	47	⇑*i*P	P	21 28 53.8	+0.8
SFS				*i* S	SKSac	21 39 20.1	+5.5
PMTG	**Montargil**	82.70	44	*e*P	P	21 28 52.2	-0.9
	comp=Z,669nm,1.9s						
PMTG	**Montargil**	82.70	44	*e*SKS	SKSac	21 39 13.6	-1.1
CNIL	**Conil**	82.74	47	*e*P	P	21 28 55.0	+1.7
PTOM	**Tomar**	82.88	44	*e*P	P	21 28 54.4	+0.4
	comp=Z,630nm,1.8s						
PTOM	**Tomar**	82.88	44	*e*PP	PP	21 32 13.1	+8.4
PGC	**Sidney**	82.90	328	IAmb	IAmb	21 29 07.0	
	comp=Z,239nm,1.1s						
CEU	**Ceuta**	82.97	48	⇑*i*P	P	21 28 54.9	+0.4
CEU				*i* S	SKSac	21 39 23.4	+6.8
PESTR	**Estremoz**	83.01	45	*e*SKS	SKSac	21 39 20.8	+4.0
PCAS	**Casmilo, Conde**	83.06	43	*e*P	P	21 28 55.5	+0.6
	comp=Z,371nm,2.0s						
PCAS	**Casmilo, Conde**	83.06	43	*e*SKS	SKSac	21 39 19.7	+2.7
COI	**Coimbra**	83.20	43	*e*P	P	21 28 56.7	+1.1
	comp=Z,690nm,1.7s						
COI	**Coimbra**	83.20	43	*e*SKS	SKSac	21 39 18.5	+0.6
NRS	**Narsarsuaq**	83.29	12	*i* P		21 28 56.5	
NRS				IAmb		21 29 04.2	
	comp=Z,175nm,1.0s						
NRS				IAMs_20		22 04 59.3	
	comp=Z,40µm,19.9s						
NRS	**Narsarsuaq**	83.29	12	*i* P	P	21 28 56.5	+0.9
	comp=Z,175nm,1.0s						
NRS	**Narsarsuaq**	83.29	12	*i* P	P	21 28 56.5	+0.9
NRS				pmax	pmax		
	comp=Z,180nm,1.0s						
NRS				MLR	MLR		
	comp=Z,40µm,20.0s						
NRS	**Narsarsuaq**	83.29	12	IAmb	IAmb	21 29 04.5	
	comp=Z,156nm,1.0s						
NRS				IAMs_20	IAMs_20	22 05 05.3	
	comp=Z,40µm,20.0s						
PVLZ	**Peæn de**	83.36	49	⇑*i*P	P	21 28 56.1	-0.5
PVLZ				*i* S	SKSac	21 39 21.1	+1.9
REAL	**Reales**	83.38	48	*e*P	P	21 28 59.0	+2.1
PMRV	**Marv??o**	83.44	44	*e*P	P	21 28 56.6	-0.3
	comp=Z,226nm,1.7s						
PMRV	**Marv??o**	83.44	44	*e*PP	PP	21 32 16.4	+7.1
PMRV				*e*S	SKSac	21 39 23.2	+3.6
PMRV	**Marv??o**	83.44	44	*e*LQ	LQ	21 50 59.5	
PMRV				*e*LR	LR	21 56 03.1	
	comp=Z,52µm,18.0s						
LIJA	**Lijar**	83.46	47	*e*P	P	21 28 58.0	+0.8
PCBR	**Castelo Branco**	83.60	44	*e*P	P	21 28 57.7	0.0
	comp=Z,340nm,1.7s						
PCBR	**Castelo Branco**	83.60	44	*e*PP	PP	21 32 18.7	+8.1
PVIS	**Viseu**	83.81	43	*e*P	P	21 28 58.7	-0.1
	comp=Z,509nm,1.8s						
PVIS	**Viseu**	83.81	43	*e*PP	PP	21 32 17.9	+5.6
MTE	**Manteigas**	83.86	43	IAmb	IAmb	21 29 02.0	
	comp=Z,252nm,1.1s						
MTE	**Manteigas**	83.86	43	*e*P	P	21 28 58.9	-0.2
	comp=Z,513nm,1.4s						
MTE	**Manteigas**	83.86	43	*e*S	SKSac	21 39 24.5	+2.1
MTE	**Manteigas**	83.86	43	*e*LQ	LQ	21 50 34.0	
MTE				*e*LR	LR	21 56 17.2	
	comp=Z,76µm,18.0s						
EMAL	**Malaga-Limoner**	84.06	48	⇑*i*P	P	21 28 60.0	-0.2
EMAL				*i* S	S	21 39 29.1	+4.2
PVRL	**Vila Real**	84.22	42	*e*P	P	21 29 01.1	+0.2
	comp=Z,590nm,1.8s						
PVRL	**Vila Real**	84.22	42	*e*PP	PP	21 32 13.7	-2.0
PGAV	**Gavieira, Arco**	84.25	42	*e*P	P	21 29 00.9	-0.2
	comp=Z,522nm,1.8s						
PGAV	**Gavieira, Arco**	84.25	42	*e*PP	PP	21 32 15.3	-0.7
PGAV				*e*S	S	21 39 28.1	+1.4
PGAV	**Gavieira, Arco**	84.25	42	*e*LQ	LQ	21 51 24.9	
PGAV				*e*LR	LR	21 56 15.8	
	comp=Z,93µm,20.0s						
PCAB	**Cabril**	84.26	42	*e*P	P	21 29 01.4	+0.3
	comp=Z,550nm,1.8s						
PCAB	**Cabril**	84.26	42	*e*PP	PP	21 32 15.3	-0.7
MVO	**Moncorvo**	84.60	43	*e*P	P	21 29 02.8	-0.1
	comp=Z,551nm,1.8s						
MVO	**Moncorvo**	84.60	43	*e*PP	PP	21 32 16.8	-2.0
MVO				*e*S	S	21 39 30.3	+0.1
MVO	**Moncorvo**	84.60	43	*e*LQ	LQ	21 50 52.8	
MVO				*e*LR	LR	21 56 22.1	
	comp=Z,72µm,20.0s						
NUUK	**Nuuk**	85.09	8	⇑*i*P		21 29 05.8	
NUUK				IAMs_20		22 11 19.2	
	comp=Z,21µm,17.2s						
PBRG	**Braganca**	85.12	42	*e*P	P	21 29 05.9	+0.4
	comp=Z,545nm,1.7s						
PBRG	**Braganca**	85.12	42	*e*PP	PP	21 32 27.8	+4.7
PBRG				*e*S	S	21 39 35.4	0.0
PAB	**San Pablo**	85.52	45	P	P	21 29 07.0	-0.5
PAB				pmax	pmax		
	comp=Z,220nm,1.2s						
PAB				MLR	MLR		
	comp=Z,35µm,21.0s						
PAB	**San Pablo**	85.52	45	P	P	21 29 07.0	-0.5
PAB				IAmb	IAmb	21 29 09.9	
	comp=Z,220nm,1.1s						
PAB	**San Pablo**	85.52	45	IAMs_20	IAMs_20	22 03 16.9	
	comp=Z,35µm,21.0s						
TAM	**Tamanrasset**	85.55	64	P	P	21 29 06.6	-1.5
TAM				pmax	pmax		
	comp=Z,314nm,1.0s						
TAM				MLR	MLR		
	comp=Z,98µm,21.0s						
TAM	**Tamanrasset**	85.55	64	P	P	21 29 06.6	-1.5
TAM				IAmb	IAmb	21 29 11.7	
	comp=Z,314nm,1.0s						
BOSA	**Boshof**	85.61	119	*i* P	P	21 29 10.6	+2.2
BOSA	**Boshof**	85.61	119	P	P	21 29 09.1	+0.7
	comp=Z,77nm,1.1s,baz=248,slow=5.4,SNR=41						
BOSA				S	SKSac	21 39 36.4	+1.9
	comp=Z,2.9nm,0.9s,baz=25,slow=22,SNR=1.3						
BOSA				PKKPbc	PKKPbc	21 47 11.2	0.0
	comp=Z,2.0nm,0.6s,baz=38,slow=2.7,SNR=8.1						
BOSA				LR	LR	22 04 38.4	
	comp=Z,22µm,19.7s,baz=248,slow=34						
BOSA	**Boshof**	85.61	119	*i* P	P	21 29 10.6	+2.2
BOSA	**Boshof**	85.61	119	P	P	21 29 06.4	-2.1
BOSA				pmax	pmax		
	comp=Z,73nm,1.0s						
BOSA	**Boshof**	85.61	119	P	P	21 29 06.4	-2.1
ESDC	**Sonseca Array**	85.84	45	P	P	21 29 10.0	+0.9
	comp=Z,110nm,1.1s,baz=244,slow=4.9,SNR=97						
ESDC				S	SKSac	21 39 38.5	+3.4
	comp=Z,0.6nm,0.6s,baz=266,slow=2.0,SNR=2.6						
ESDC				PKKPbc	PKKPbc	21 47 10.9	-0.9
	comp=Z,0.6nm,0.3s,baz=44,slow=2.3,SNR=5.1						
ESDC				LR	LR	22 03 58.5	
	comp=Z,29µm,21.2s,baz=230,slow=33						
ESDC	**Sonseca Array**	85.84	45	P	P	21 29 08.6	-0.5
ESBB	**Sonseca Array**	85.84	45	IAmb	IAmb	21 29 12.2	
	comp=Z,141nm,1.1s						
ESBB				IAMs_20	IAMs_20	22 03 26.5	
	comp=Z,36µm,21.0s						
MAW	**Mawson**	86.30	164	P	P	21 29 12.4	+1.5
	comp=Z,119nm,0.9s,baz=212,slow=6.4,SNR=25						
MAW				S	SKSac	21 39 38.7	+1.6
	comp=Z,2.2nm,0.8s,baz=264,slow=2.0,SNR=1.4						
MAW				PKKPbc	PKKPbc	21 47 08.4	-2.0
	comp=Z,12nm,1.1s,baz=74,slow=9.3,SNR=5.7						
MAW				LR	LR	22 08 10.9	
	comp=Z,29µm,19.4s,baz=233,slow=36						
MAW	**Mawson**	86.30	164	P	P	21 29 09.8	-1.1
MAW				pmax	pmax		
	comp=Z,42nm,1.2s						
MAW				MLR	MLR		
	comp=Z,6µm,19.0s						
MAW	**Mawson**	86.30	164	P	P	21 29 09.8	-1.1
UCM	**Universidad Co**	86.63	45	⇑*i*P	P	21 29 13.1	+0.1
UCM				*i* S	SKSac	21 39 43.0	+3.1
CART	**Cartagena**	86.86	48	⇑*i*P	P	21 29 12.3	-1.8
CART				*i* S	SKSac	21 39 40.9	-0.4
CART	**Cartagena**	86.86	48	IAMs_20	IAMs_20	22 07 36.5	
	comp=Z,28µm,21.0s						
LBTB	**Lobatse**	87.14	115	*i* P	P	21 29 18.7	+2.7
LBTB	**Lobatse**	87.14	115	*i* P	P	21 29 18.7	+2.7
LBTB	**Lobatse**	87.14	115	P	P	21 29 15.0	-1.0
LBTB				pmax	pmax		
	comp=Z,68nm,1.1s						
LBTB	**Lobatse**	87.14	115	P	P	21 29 15.0	-1.0
BBB	**Bella Bella**	87.44	329	IAMs_20	IAMs_20	22 15 52.5	
	comp=Z,28µm,19.0s						
SFJD	**Kangerlussuaq**	87.92	8	⇑*i*P		21 29 18.3	
SFJD				IAMs_20		22 12 05.9	
	comp=Z,1µm,17.8s						
SFJD	**Kangerlussuaq**	87.92	8	⇑*i*P	P	21 29 18.2	-0.2
SFJD	**Kangerlussuaq**	87.92	8	P	P	21 29 18.3	-0.2
SFJD				pmax	pmax		
	comp=Z,67nm,1.2s						
SFJD				MLR	MLR		
	comp=Z,22µm,18.0s						
SFJD	**Kangerlussuaq**	87.92	8	P	P	21 29 18.3	-0.2
SFJD	**Kangerlussuaq**	87.92	8	IAMs_20	IAMs_20	22 12 07.4	
	comp=Z,22µm,18.0s						
ISOG	**Isortoq, Green**	88.53	13	*i* P		21 29 22.0	
ISOG				IAmb		21 29 24.6	
	comp=Z,411nm,1.4s						
ANGG	**Ammassalik, Gr**	88.86	13	*i* P		21 29 22.0	
ANGG				IAmb		21 29 26.1	
	comp=Z,524nm,1.4s						
ANGG				IAMs_20		22 08 00.8	
	comp=Z,37µm,20.2s						
ANGG	**Ammassalik, Gr**	88.86	13	IAmb	IAmb	21 29 25.8	
	comp=Z,261nm,1.1s						
ANGG				IAMs_20	IAMs_20	22 08 06.7	
	comp=Z,37µm,20.0s						
YKA	**Yellowknife Ar**	89.17	341	P	P	21 29 24.4	0.0
	comp=Z,568nm,1.3s,baz=140,slow=5.1,SNR=482						
YKA				PP	PP	21 32 56.8	+1.8
	comp=Z,42nm,1.1s,baz=140,slow=8.3,SNR=4.1						
YKA				S	SKSac	21 39 53.7	-0.4
	comp=Z,0.9nm,0.6s,baz=135,slow=4.6,SNR=4.7						
YKA				PKKPbc	PKKPbc	21 47 02.5	-2.0
	comp=Z,2.1nm,0.9s,baz=307,slow=2.9,SNR=5.6						
YKA				PKPPKP	P'P'df	21 55 11.2	+5.2
	comp=Z,0.4nm,0.8s,baz=319,slow=1.6,SNR=4.9						
YKA				LR	LR	22 12 53.5	
	comp=Z,37µm,19.9s,baz=0.0,slow=38						
MOBC	**Moresby Island**	89.91	328	IAMs_20	IAMs_20	22 14 22.8	
	comp=Z,21µm,20.0s						
ILULI	**Ilulissat**	89.97	7	*i* P		21 29 28.6	
ILULI				IAmb		21 29 30.8	
	comp=Z,144nm,1.2s						
ILULI				IAMs_20		22 13 07.8	
	comp=Z,29µm,19.2s						
ILULI	**Ilulissat**	89.97	7	*i* P	P	21 29 28.5	+0.4
	comp=Z,144nm,1.2s						
ILULI	**Ilulissat**	89.97	7	*i* P	P	21 29 28.5	+0.4
ILULI				pmax	pmax		
	comp=Z,140nm,1.2s						
ILULI				MLR	MLR		
	comp=Z,29µm,19.0s						
ILULI	**Ilulissat**	89.97	7	IAMs_20	IAMs_20	22 13 13.7	
	comp=Z,29µm,19.0s						
DIB	**Dawson Inlet,**	90.19	328	IAMs_20	IAMs_20	22 15 11.3	
	comp=Z,23µm,18.0s						
H02S1	**DAWSON INLET T**	90.19	328	P	P	21 29 29.8	+0.3
	baz=20						
H02N1	**VAN INLET T-PH**	90.25	328	P	P	21 29 30.2	+0.3
CCA1	**Carnmenellis**	90.42	36	*e*P	P	21 29 30.0	-0.7
CCA1				IAmb	IAmb	21 29 32.5	
	comp=Z,246nm,1.3s						
CCA1				IAMs_20	IAMs_20	22 06 57.8	
	comp=Z,27µm,18.4s						
ITZ	**Itezhi-Tezhi**	90.77	107	*i* P	P	21 29 34.0	+0.7
ITZ				*e*		21 33 05.3	
ITZ				*e*S	SKKSac	21 40 16.2	-4.2
SET	**Setif**	90.86	52	P	P	21 29 35.0	+1.8
SET	**Setif**	90.86	52	P	P	21 29 35.0	+1.8
CKHR	**Kef el Ahmar**	90.87	52	P	P	21 29 42.0	+8.7
CKHR	**Kef el Ahmar**	90.87	52	P	P	21 29 42.0	+8.7
DFRA	**Djebel Bou Aff**	91.36	52	P	P	21 29 42.0	+6.5
DFRA	**Djebel Bou Aff**	91.36	52	P	P	21 29 42.0	+6.5
DSB	**Dublin**	91.42	33	IAmb	IAmb	21 29 37.6	
	comp=Z,181nm,1.1s						
DSB				IAMs_20	IAMs_20	22 07 27.5	
	comp=Z,31µm,21.0s						
MAHO	**Mahon**	91.57	48	⇑*i*P	P	21 29 34.3	-1.9
MAHO				*i* S	SKSac	21 40 11.8	+2.8
CASM	**Ain Smara**	91.69	52	P	P	21 29 45.2	+8.2
CASM	**Ain Smara**	91.69	52	P	P	21 29 45.2	+8.2
MSNA	**Messina**	91.89	114	*i* P	P	21 29 45.1	+6.8
MSNA	**Messina**	91.89	114	*i* P	P	21 29 45.1	+6.8
CKFL	**Kef-Lekhel**	91.92	52	P	P	21 29 46.2	+8.1
CKFL	**Kef-Lekhel**	91.92	52	P	P	21 29 46.2	+8.1
WRAK	**Wrangell Islan**	91.93	331	IAmb	IAmb	21 29 39.8	
	comp=Z,96nm,1.1s						
NUUG	**Nuugaatsiaq**	91.99	5	⇑*i*P		21 29 38.5	
NUUG				IAmb		21 29 40.8	
	comp=Z,198nm,1.3s						
NUUG				IAMs_20		22 14 07.6	
	comp=Z,31µm,18.9s						
DLBC	**Dease Lake**	92.06	333	LR	LR	22 13 46.6	
	comp=Z,32µm,19.9s,baz=105,slow=37						
DLBC	**Dease Lake**	92.06	333	IAmb	IAmb	21 29 40.9	
	comp=Z,107nm,1.1s						
DLBC				IAMs_20	IAMs_20	22 13 25.8	
	comp=Z,36µm,21.0s						
GMM	**Mts of Mourne**	92.16	32	⇑*e*P	P	21 29 38.6	0.0
YRC	**Rhoscolyn**	92.34	33	⇑*e*P	P	21 29 39.4	-0.1
BORG	**Borgarnes**	92.43	19	P	P	21 29 40.6	+0.9
	comp=Z,144nm,1.2s,baz=192,slow=1.8,SNR=4.0						
BORG				LR	LR	22 09 19.9	
	comp=Z,19µm,19.4s,baz=232,slow=34						
BORG	**Borgarnes**	92.43	19	P	P	21 29 39.5	-0.1
BORG				pmax	pmax		
	comp=Z,119nm,1.1s						
BORG				MLR	MLR		
	comp=Z,28µm,22.0s						
BORG	**Borgarnes**	92.43	19	P	P	21 29 39.5	-0.1
BORG				IAmb	IAmb	21 29 43.6	
	comp=Z,119nm,1.1s						
BORG	**Borgarnes**	92.43	19	IAMs_20	IAMs_20	22 08 29.5	
	comp=Z,27µm,22.0s						
WLF1	**Llynfaes**	92.46	33	⇑*e*P	P	21 29 39.7	-0.2
WLF1				IAmb	IAmb	21 29 42.1	
	comp=Z,226nm,1.1s						
WLF1				IAMs_20	IAMs_20	22 06 38.7	
	comp=Z,75µm,20.5s						
CLGH	**Cloghs, Cushen**	92.52	31	*e*P	P	21 29 39.7	-0.6
CLGH				IAmb	IAmb	21 29 42.7	
	comp=Z,296nm,1.4s						
CLGH				IAMs_20	IAMs_20	22 01 31.3	
	comp=Z,54µm,41.5s						
CMAH	**Djebel Manchou**	92.53	52	P	P	21 29 48.0	+7.1
CMAH	**Djebel Manchou**	92.53	52	P	P	21 29 48.0	+7.1
MCH1	**Michaelchurch**	92.55	35	⇑*e*P	P	21 29 39.8	-0.6
MCH1				IAmb	IAmb	21 29 42.6	
	comp=Z,105nm,1.2s						
MCH1				IAMs_20	IAMs_20	22 02 10.7	
	comp=Z,30µm,32.8s						
WME	**Myndd Eilian**	92.56	33	⇑*e*P	P	21 29 39.9	-0.6
MONM	**Monmouth**	92.58	35	⇑*e*P	P	21 29 40.1	-0.5
MONM				IAMs_20	IAMs_20	22 01 47.1	
	comp=Z,43µm,47.8s						
WIM	**Isle of Man**	92.75	33	⇑*e*P	P	21 29 41.2	-0.2
IOMK	**Kirk Michael**	92.86	32	⇑*e*P	P	21 29 42.1	+0.2
IOMK				IAmb	IAmb	21 29 43.7	
	comp=Z,416nm,1.1s						
IOMK				IAMs_20	IAMs_20	22 08 03.0	
	comp=Z,74µm,18.7s						
HLM1	**Long Mynd**	92.87	34	⇑*e*P	P	21 29 41.6	-0.4
HLM1				IAMs_20	IAMs_20	22 04 41.5	
	comp=Z,33µm,26.4s						
FOEL	**Foel Wylfa**	92.88	34	⇑*e*P	P	21 29 41.4	-0.6
FOEL				IAmb	IAmb	21 29 42.9	
	comp=Z,116nm,1.1s						
FOEL				IAMs_20	IAMs_20	22 04 54.4	
	comp=Z,46µm,24.0s						
LSZ	**Lusaka**	92.89	107	IAMs_20	IAMs_20	22 08 04.9	
	comp=Z,25µm,22.0s						
STRD	**Stroud**	92.89	35	*e*P	P	21 29 41.8	-0.3
STRD				IAMs_20	IAMs_20	22 05 36.0	
	comp=Z,30µm,23.5s						
SWN1	**Swindon**	92.97	36	*e*P	P	21 29 42.4	0.0
SWN1				IAmb	IAmb	21 29 50.0	
	comp=Z,673nm,1.8s						
SWN1				IAMs_20	IAMs_20	22 05 38.9	
	comp=Z,30µm,23.7s						
UPNV	**Upernavik**	92.97	4	⇑*i*P		21 29 42.5	
UPNV				IAmb		21 29 44.9	
	comp=Z,200nm,1.4s						
UPNV				IAMs_20		22 07 22.0	
	comp=Z,25µm,22.1s						
GAL1	**Galloway**	93.10	32	⇑*e*P	P	21 29 42.9	0.0
GAL1				IAmb	IAmb	21 29 44.0	
	comp=Z,204nm,1.4s						
GAL1				IAMs_20	IAMs_20	22 01 44.9	
	comp=Z,56µm,45.1s						
KHLH	**Kahului Airpor**	93.20	291	IAMs_20	IAMs_20	22 03 51.7	
	comp=Z,19µm,20.0s						
STNC	**Stoke**	93.50	34	⇑*e*P	P	21 29 45.0	+0.1
STNC				IAmb	IAmb	21 29 46.8	
	comp=Z,206nm,1.1s						
STNC				IAMs_20	IAMs_20	22 05 12.6	
	comp=Z,43µm,24.7s						
KEST	**Kesra**	93.63	53	P	P	21 29 46.7	+0.7
	comp=Z,45nm,1.1s,baz=232,slow=3.2,SNR=14						
KEST				PP	PP	21 33 30.9	-0.2
	comp=Z,21nm,0.9s,baz=251,slow=8.8,SNR=5.2						
KEST				S	SKSac	21 40 21.3	+0.3
	comp=Z,2.9nm,0.9s,baz=62,slow=16,SNR=1.5						
KEST				PKKP	PKKPbc	21 46 52.1	+0.1
	comp=Z,5.3nm,0.9s,baz=22,slow=4.6,SNR=4.9						
KEST				LR	LR	22 12 48.7	
	comp=Z,54µm,20.2s,baz=218,slow=36						
MXZ	**Matakaoa Point**	93.64	228	IAMs_20	IAMs_20	22 03 58.8	
	comp=Z,32µm,19.0s						
SIT	**Sitka**	93.66	330	IAMs_20	IAMs_20	22 18 36.0	
	comp=Z,24µm,19.0s						
CLF	**Chambon-Foret**	93.72	40	IAmb	IAmb	21 29 47.6	
	comp=Z,158nm,1.1s						
CWF	**Charnwood Fore**	93.81	35	⇑*e*P	P	21 29 46.0	-0.3
CWF				IAmb	IAmb	21 29 49.2	
	comp=Z,160nm,1.4s						
CWF				IAMs_20	IAMs_20	22 04 09.2	
	comp=Z,35µm,29.2s						
JIS	**Juneau Island**	93.88	332	IAMs_20	IAMs_20	22 14 32.7	
	comp=Z,36µm,21.0s						
KPL	**Plockton**	93.92	30	⇑*e*P	P	21 29 46.1	-0.5
KPL				IAmb	IAmb	21 29 48.1	
	comp=Z,100nm,1.0s						
KPL				IAMs_20	IAMs_20	22 07 33.4	
	comp=Z,50µm,20.7s						
CASY	**Casey**	94.08	180	P	P	21 29 46.8	-0.6
CASY				IAmb	IAmb	21 29 53.9	
	comp=Z,136nm,1.1s						
CASY	**Casey**	94.08	180	IAMs_20	IAMs_20	22 12 01.7	
	comp=Z,22µm,20.0s						
ESK	**Eskdalemuir**	94.08	32	P	P	21 29 47.1	-0.4
ESK				pmax	pmax		
	comp=Z,85nm,1.1s						
ESK				MLR	MLR		
	comp=Z,27µm,20.0s						
ESK	**Eskdalemuir**	94.08	32	P	P	21 29 47.0	-0.4
ESK				IAmb	IAmb	21 29 48.7	
	comp=Z,85nm,1.1s						
ESK	**Eskdalemuir**	94.08	32	IAMs_20	IAMs_20	22 09 31.7	
	comp=Z,27µm,20.0s						
URZ	**Urewera**	94.13	227	LR	LR	22 04 04.2	
	comp=Z,55µm,18.6s,baz=168,slow=30						
INVG	**Invergeldie, C**	94.22	31	⇑*e*P	P	21 29 47.6	-0.5
INVG				IAMs_20	IAMs_20	22 07 24.3	
	comp=Z,53µm,19.6s						
KHZ	**Kahutara**	94.38	222	IAMs_20	IAMs_20	22 02 31.8	
	comp=Z,27µm,21.0s						

EDMD	Edmundbyers	94.47	33	⇑eP	P	21 29 49.0	-0.3
EDMD				IAMs_20	IAMs_20	22 08 59.6	
	comp=Z,37µm,18.8s						
MDO	Dochfour	94.58	30	⇑eP	P	21 29 49.5	-0.2
RAO	Raoul Island	94.59	237	LR	LR	22 03 30.8	
	comp=Z,12µm,20.7s,baz=99,slow=30						
KULLO	Kullorsuaq	94.66	4	⇑iP	P	21 29 49.9	+0.2
	comp=Z,125nm,1.4s						
KULLO	Kullorsuaq	94.66	4	⇑iP	P	21 29 49.9	+0.2
KULLO				pmax	pmax		
	comp=Z,130nm,1.4s						
KULLO				MLR	MLR		
	comp=Z,19µm,19.0s						
KULLO	Kullorsuaq	94.66	4	⇑iP		21 29 50.0	
KULLO				IAmb		21 29 53.0	
	comp=Z,125nm,1.4s						
KULLO				IAMs_20		22 11 21.2	
	comp=Z,19µm,19.2s						
ESY	Stoneypath	94.66	32	⇑eP	P	21 29 50.0	-0.1
SUMG	Summit	94.75	9	⇑iP		21 29 51.5	
SUMG				IAmb		21 29 54.6	
	comp=Z,408nm,1.2s						
SUMG				IAMs_20		22 11 15.3	
	comp=Z,103µm,20.9s						
SUMG	Summit	94.75	9	⇑iP	P	21 29 51.5	+0.8
	comp=Z,407nm,1.2s						
SUMG	Summit	94.75	9	⇑iP	P	21 29 51.5	+0.8
SUMG				pmax	pmax		
	comp=Z,410nm,1.2s						
SUMG				MLR	MLR		
	comp=Z,100µm,21.0s						
SUMG	Summit	94.75	9	IAmb	IAmb	21 30 04.3	
	comp=Z,115nm,1.0s						
EDU	Dundee	94.77	31	⇑eP	P	21 29 50.7	+0.1
SKAG	Skagway	94.92	332	IAMs_20	IAMs_20	22 15 12.3	
	comp=Z,28µm,20.0s						
NNZ	Nelson	95.11	223	IAMs_20	IAMs_20	22 01 54.0	
	comp=Z,28µm,22.0s						
THZ	Tophouse	95.12	222	IAMs_20	IAMs_20	22 02 16.6	
	comp=Z,28µm,22.0s						
WHY	Whitehorse	95.36	334	IAMs_20	IAMs_20	22 19 52.8	
	comp=Z,22µm,18.0s						
AFI	Afiamalu	95.51	253	LR	LR	22 04 45.4	
	comp=Z,27µm,18.1s,baz=117,slow=30						
RES	Resolute Bay	95.64	354	PKKP	PKKPbc	21 46 46.1	-1.8
	comp=Z,5.9nm,1.0s,baz=289,slow=2.7,SNR=8.7						
WHZ	Wether Hill Ro	95.77	217	IAMs_20	IAMs_20	22 05 53.2	
	comp=Z,19µm,18.0s						
WKZ	Wanaka	95.78	218	IAMs_20	IAMs_20	22 03 05.6	
	comp=Z,37µm,22.0s						
QRZ	Quartz Range	95.86	223	IAMs_20	IAMs_20	22 06 32.2	
	comp=Z,21µm,18.0s						
CRZF	Crozet Islands	96.03	144	IAMs_20	IAMs_20	22 10 12.9	
	comp=Z,21µm,19.0s						
TULEG	Thule	96.24	0	IAMs_20	IAMs_20	22 12 49.9	
	comp=Z,30µm,20.0s						
TULEG	Thule	96.24	0	⇑iP		21 29 57.1	
TULEG				IAmb		21 29 59.6	
	comp=Z,63nm,1.4s						
TULEG				IAMs_20		22 12 43.5	
	comp=Z,31µm,20.9s						
SCO	Scoresbysund	96.31	15	i P		21 29 58.4	
SCO				i S		21 40 36.6	
SCO				IAMs_20		22 09 02.0	
	comp=Z,35µm,25.8s						
SCO	Scoresbysund	96.31	15	i P	P	21 29 58.4	+1.1
SCO	Scoresbysund	96.31	15	i S	SKSac	21 40 36.6	+3.1
SCO	Scoresbysund	96.31	15	i P	P	21 29 58.4	+1.1
SCO				i S	SKSac	21 40 36.6	+3.1
SCO				MLR	MLR		
	comp=Z,35µm,26.0s						
SCO	Scoresbysund	96.31	15	IAMs_20	IAMs_20	22 09 43.5	
	comp=Z,22µm,21.0s						
PYZ	Puysegur Point	96.31	216	IAMs_20	IAMs_20	22 05 10.6	
	comp=Z,29µm,19.0s						
KEKH	Kekaha	96.44	291	IAMs_20	IAMs_20	22 05 43.7	
	comp=Z,19µm,18.0s						
WLF	Walferdange	96.74	40	eP	P	21 30 00.1	+0.3
	comp=Z,280nm,1.4s,baz=247,slow=5.3						
WLF	Walferdange	96.74	40	IAmb	IAmb	21 30 09.0	
	comp=Z,106nm,1.1s						
C36M	Paulatuk	96.76	343	IAMs_20	IAMs_20	22 18 34.1	
	comp=Z,30µm,19.0s						
C36M	Paulatuk	96.76	343	P	P	21 29 58.2	-1.2
	baz=130						
ECH	Echery	96.80	41	IAmb	IAmb	21 30 01.9	
	comp=Z,93nm,1.1s						
ECH				IAMs_20	IAMs_20	22 10 49.0	
	comp=Z,30µm,20.0s						
YKU2	Yakutat	96.87	331	IAMs_20	IAMs_20	22 21 06.9	
	comp=Z,23µm,18.0s						
MSSA	Maissana	96.89	45	IAMs_20	IAMs_20	22 11 59.8	
	comp=Z,27µm,20.0s						
CASP	Castiglione de	97.27	47	IAMs_20	IAMs_20	22 12 42.0	
	comp=Z,21µm,21.0s						
PCA	Pinnacle	97.40	332	IAMs_20	IAMs_20	22 21 08.9	
	comp=Z,29µm,18.0s						
VLC	Villacollemand	97.41	46	IAMs_20	IAMs_20	22 14 35.8	
	comp=Z,28µm,18.0s						
BFO	Black Forest	97.56	41	eP	P	21 30 03.1	-0.5
	comp=Z,45nm,1.3s,baz=247,slow=5.3						
BFO				eL	L	22 11 33.7	
	comp=Z,37µm,20.9s						
BFO	Black Forest	97.56	41	P	P	21 30 02.2	-1.4
BFO				pmax	pmax		
	comp=Z,23nm,1.0s						
BFO				MLR	MLR		
	comp=Z,37µm,20.0s						
BFO	Black Forest	97.56	41	P	P	21 30 02.2	-1.4
AHRW	Bad Neuenahr-A	97.62	39	eP	Pdif	21 30 04.2	+0.4
	comp=Z,301nm,1.8s,baz=247,slow=5.3						
OSSC	Osservatorio P	97.78	47	IAMs_20	IAMs_20	22 11 29.5	
	comp=Z,24µm,21.0s						
ZCCA	Zocca	97.88	46	IAmb	IAmb	21 30 08.3	
	comp=Z,69nm,0.9s						
DAVOX	Davos/Dischmat	97.99	43	LR	LR	22 10 12.4	
	comp=Z,21µm,21.3s,baz=246,slow=33						
VAE	Valguarnera	98.06	53	LR	LR	22 16 12.9	
	comp=Z,13µm,19.1s,baz=270,slow=37						
BUG	Bochum--Univer	98.07	38	eP	Pdif	21 30 06.0	+0.2
	comp=Z,232nm,1.5s,baz=247,slow=5.3						
DAVA	Damuels	98.17	43	ePdiff	Pdif	21 30 06.7	+0.1
	comp=Z,59nm,1.2s,SNR=23						
STU	Stuttgart	98.26	41	eP	Pdif	21 30 06.8	+0.1
	comp=Z,111nm,1.1s,baz=247,slow=5.3						
STU	Stuttgart	98.26	41	IAmb	IAmb	21 30 08.5	
	comp=Z,84nm,0.9s						
CTGM	Chitina Glacie	98.27	332	IAMs_20	IAMs_20	22 18 38.0	
	comp=Z,23µm,20.0s						
TNS	Taunus Mts	98.32	40	eP	Pdif	21 30 07.3	+0.4
	comp=Z,108nm,1.2s,baz=247,slow=5.3						
TNS				eL	L	22 10 37.8	
	comp=Z,47µm,21.7s						
UBR	Ueberruh	98.45	42	eP	Pdif	21 30 08.0	+0.3
	comp=Z,102nm,1.4s,baz=247,slow=5.3						
FETA	Feichten	98.62	43	ePdiff	Pdif	21 30 08.6	+0.1
	comp=Z,48nm,1.2s,SNR=20						
FETA				ePKKPdf	PKKPbc	21 46 38.0	-0.9
	comp=Z,3.2nm,0.9s						
IBBN	Ibbenburen	98.67	37	eP	Pdif	21 30 08.8	+0.5
	comp=Z,131nm,1.1s,baz=247,slow=5.3						
TEOL	Teolo	98.68	45	IAmb	IAmb	21 30 10.5	
	comp=Z,79nm,1.0s						
BALM	Baldy	98.75	332	IAMs_20	IAMs_20	22 15 33.0	
	comp=Z,19µm,22.0s						
RETA	Reutte	98.80	43	ePdiff	Pdif	21 30 09.3	0.0
	comp=Z,49nm,1.2s,SNR=27						
TGL	Tana Glacier	98.84	332	IAMs_20	IAMs_20	22 22 18.0	
	comp=Z,27µm,18.0s						
DAWY	Dawson	98.87	335	IAMs_20	IAMs_20	22 23 26.8	
	comp=Z,26µm,18.0s						
INK	Inuvik	98.91	340	PKKPbc	PKKPbc	21 46 37.5	-1.2
	comp=Z,6.1nm,1.0s,baz=255,slow=3.7,SNR=7.5						
MOTA	Moosalm	98.97	43	ePdiff	Pdif	21 30 10.1	0.0
	comp=Z,113nm,1.5s,SNR=51						
MOTA				ePP	PP	21 34 11.5	-0.8
	comp=Z,44nm,1.3s						
MOTA				PKKPdf	PKKPbc	21 46 35.9	-2.1
	comp=Z,4.4nm,0.9s						
CRQM	Cirque	98.98	332	IAMs_20	IAMs_20	22 22 22.0	
	comp=Z,20µm,18.0s						
EPYK	Eagle Plains	98.98	338	IAMs_20	IAMs_20	22 18 23.7	
	comp=Z,27µm,20.0s						
EPYK	Eagle Plains	98.98	338	Pdiff	Pdif	21 30 09.6	+0.1
	baz=120						
SQTA	Sankt Quirin	99.00	43	ePdiff	Pdif	21 30 10.4	+0.2
	comp=Z,102nm,1.3s,SNR=65						
SQTA				ePP	PP	21 34 11.4	-1.1
	comp=Z,44nm,1.3s						
SQTA				PKKPdf	PKKPbc	21 46 36.0	-1.9
	comp=Z,9.4nm,1.3s						
WATA	Walderalm	99.27	43	ePdiff	Pdif	21 30 11.5	+0.1
	comp=Z,86nm,1.4s,SNR=36						
WATA				ePP	PP	21 34 11.9	-2.7
	comp=Z,42nm,1.5s						
WTTA	Wattenberg	99.29	43	ePdiff	Pdif	21 30 11.8	+0.2
	comp=Z,95nm,1.3s,SNR=36						
WTTA				PKKPdf	PKKPbc	21 46 35.0	-2.1
	comp=Z,3.2nm,0.7s						
PAOL	Paolisi	99.30	50	IAMs_20	IAMs_20	22 18 37.7	
	comp=Z,22µm,20.0s						
DBG	Daneborg	99.35	12	eP		21 30 11.0	
DBG				IAMs_20		22 13 57.9	
	comp=Z,52µm,20.6s						
FUR	Furstenfeldbru	99.36	42	eP	Pdif	21 30 12.1	+0.5
	comp=Z,71nm,1.1s,baz=247,slow=5.3						
FUR				eL	L	22 12 29.4	
	comp=Z,33µm,20.7s						
BCAR	Beaver Creek A	99.38	334	P	Pdif	21 30 10.8	-0.6
CEL	Celeste	99.42	53	IAMs_20	IAMs_20	22 17 04.0	
	comp=Z,29µm,20.0s						
UBBA	Unterbreizbach	99.46	39	eP	Pdif	21 30 12.3	+0.5
	comp=Z,126nm,1.5s,baz=247,slow=5.3						
KNTN	Kanton	99.48	264	IAMs_20	IAMs_20	22 04 09.6	
	comp=Z,19µm,21.0s						
RAGM	Ragged Mountai	99.52	331	IAMs_20	IAMs_20	22 18 33.0	
	comp=Z,25µm,19.0s						
GLB	Gilahina Butte	99.56	332	IAMs_20	IAMs_20	22 16 07.9	
	comp=Z,23µm,21.0s						
GTTG	Gottingen	99.68	39	eP	Pdif	21 30 13.5	+0.6
	comp=Z,90nm,1.2s,baz=247,slow=5.3						
ABTA	Abfaltersbach	99.69	44	ePdiff	Pdif	21 30 13.3	+0.1
	comp=Z,37nm,1.3s,SNR=25						
ABTA				ePP	PP	21 34 14.6	-3.2
	comp=Z,41nm,1.5s						
ABTA				PKKPdf	PKKPbc	21 46 36.3	+0.4
	comp=Z,2.5nm,1.0s						
GRA1	Grafenberg Arr	99.82	41	IAMs_20	IAMs_20	22 13 42.1	
	comp=Z,27µm,20.0s						
GRF	Grafenberg Arr	99.82	41	eP	Pdif	21 30 14.3	+0.6
	comp=Z,64nm,1.1s,baz=247,slow=5.3						
GRF				eL	L	22 13 11.3	
	comp=Z,27µm,21.5s						
KMY	Karmoy	99.91	30	eSKSac	SKSac	21 40 55.2	+2.9
STAV	Stavanger	100.02	31	ePdif	Pdif	21 30 13.9	-0.3
STAV				eSKSac	SKSac	21 40 56.4	+3.6
STAV				eSS	SS	21 48 45.9	+3.5
STAV				IVMs_BB	IVMs_BB	22 11 25.1	
	comp=Z,14µm,23.1s						
CLZ	Clausthal	100.02	38	eP	Pdif	21 30 15.2	+0.7
	comp=Z,152nm,1.5s,baz=247,slow=5.3						
NRDL	Niedersach Rie	100.08	38	eP	Pdif	21 30 15.6	+1.0
	comp=Z,85nm,1.4s,baz=247,slow=5.3						
JMIC	Jan Mayen	100.11	17	ePdif	Pdif	21 30 16.6	+2.2
JMIC				ePP	PP	21 34 19.9	-0.2
JMIC				eSKSac	SKSac	21 40 56.3	+3.5
JMIC				ePS	PS	21 43 20.6	+1.4
JMIC				eSS	SS	21 48 45.6	+2.5
JMIC				IVMs_BB	IVMs_BB	22 10 45.0	
	comp=Z,6µm,5.3s						
MENT	Mentasta	100.13	334	IAMs_20	IAMs_20	22 22 09.1	
	comp=Z,22µm,19.0s						
RJOB	Jochberg	100.19	43	eP	Pdif	21 30 15.4	+0.1
	comp=Z,48nm,1.5s,baz=247,slow=5.3						
ROBS	Robic	100.19	45	ePdiff	Pdif	21 30 15.3	0.0
ROBS				ePP	PP	21 34 15.5	-5.9
ROBS				eSKSac	SKSac	21 40 52.7	-1.6
ROBS				ePS	PS	21 43 20.2	-0.7
ASSE	Asse, Remlinge	100.29	38	eP	Pdif	21 30 16.5	+1.0
	comp=Z,186nm,1.7s,baz=247,slow=5.3						
KBA	Koelnbreinsper	100.33	44	ePdiff	Pdif	21 30 15.9	-0.3
	comp=Z,27nm,1.4s,SNR=10						
TIP	Timpagrande	100.34	52	⇓P	Pdif	21 30 16.0	-0.3
MOX	Moxa	100.37	40	eP	Pdif	21 30 16.6	+0.6
	comp=Z,47nm,1.5s,baz=247,slow=5.3						
MOX				eL	L	22 11 60.0	
	comp=Z,51µm,22.0s						
SUE	Sulen	100.38	29	ePdif	Pdif	21 30 16.5	+0.7
SUE				ePP	PP	21 34 21.6	-0.7
SUE				eSKSac	SKSac	21 40 57.7	+3.2
SUE				eSS	SS	21 48 51.9	+4.6
SUE				IVMs_BB	IVMs_BB	22 12 14.5	
	comp=Z,12µm,5.1s						
BER	Bergen	100.39	29	ePdif	Pdif	21 30 17.2	+1.4
BER				IVmB_BB		21 30 24.1	
	comp=Z,4µm,2.5s						
BER				ePP	PP	21 34 24.7	+2.2
BER				eSKSac	SKSac	21 40 57.8	+3.2
BER				eSS	SS	21 48 50.7	+3.3
BER				IVMs_BB	IVMs_BB	22 11 39.2	
	comp=Z,10µm,5.3s						
MYKA	Terra Mystica	100.39	44	ePdiff	Pdif	21 30 16.6	+0.3
	comp=Z,28nm,1.2s,SNR=18						
MYKA				ePP	PP	21 34 20.1	-2.9
	comp=Z,47nm,1.3s						
JAVS	Javornik	100.44	45	ePdiff	Pdif	21 30 16.8	+0.2
JAVS				ePP	PP	21 34 17.5	-5.9
JAVS				eSKSac	SKSac	21 40 58.4	+2.6
JAVS				ePS	PS	21 43 25.9	+2.0
ROTZ	Rotzenmuhle	100.45	41	eP	Pdif	21 30 17.1	+0.7
	comp=Z,64nm,1.5s,baz=247,slow=5.3						
MANZ	Manzenberg	100.46	41	eP	Pdif	21 30 17.3	+0.8
	comp=Z,57nm,1.1s,baz=247,slow=5.3						
MBAR	Mbarara	100.47	94	i P	Pdif	21 30 19.8	+2.2
MBAR				pmax	pmax		
	comp=Z,21nm,2.0s						
BLS5	Blasjo	100.56	30	ePdif	Pdif	21 30 16.1	-0.6
BLS5				ePP	PP	21 34 17.9	-6.0
BLS5				eSKSac	SKSac	21 40 57.4	+1.8
BLS5				eSS	SS	21 48 47.9	-2.2
BLS5				IVMs_BB	IVMs_BB	22 10 55.9	
	comp=Z,15µm,27.0s						
NEUB	Neuenburg	100.64	39	eP	Pdif	21 30 17.9	+0.7
	comp=Z,116nm,1.4s,baz=247,slow=5.3						
PLN	Plauen	100.65	40	eP	Pdif	21 30 18.0	+0.8
	comp=Z,46nm,1.4s,baz=247,slow=5.3						
SCRK	Sand Creek	100.66	335	IAMs_20	IAMs_20	22 25 04.1	
	comp=Z,26µm,18.0s						
WET	Wettzell	100.67	42	eP	Pdif	21 30 17.9	+0.5
	comp=Z,66nm,1.6s,baz=247,slow=5.3						
WET				eL	L	22 13 16.0	
	comp=Z,34µm,21.4s						
BSEG	Bad Segeberg	100.68	36	eP	Pdif	21 30 17.9	+0.7
	comp=Z,57nm,1.2s,baz=247,slow=5.3						
BSEG				eL	L	22 12 26.8	
	comp=Z,41µm,21.8s						
FOO	Floro	100.71	28	ePdif	Pdif	21 30 18.8	+1.6
FOO				ePP	PP	21 34 24.5	-0.4
FOO				eSKSac	SKSac	21 40 59.5	+3.4
FOO				IVMs_BB	IVMs_BB	22 08 39.9	
	comp=Z,12µm,4.7s						
GUNZ	Gunzen	100.72	40	eP	Pdif	21 30 18.4	+0.7
	comp=Z,53nm,1.5s,baz=247,slow=5.3						
WERN	Wernitzgruen	100.72	40	eP	Pdif	21 30 18.5	+0.9
	comp=Z,115nm,1.6s,baz=247,slow=5.3						
MATE	Matera	100.73	51	⇑P	Pdif	21 30 18.0	+0.1
NKC	Novy Kostel	100.75	40	ePDIFF	Pdif	21 30 18.5	+0.8
NKC				ex	x	21 30 31.3	
NKC				ePP	PP	21 34 24.0	-1.5
NKC				eSKS		21 40 58.2	
NKC				AMS	AMS	22 13 50.0	
	comp=Z,40µm,19.8s						
NKC	Novy Kostel	100.75	40	eP	Pdif	21 30 18.5	+0.8
NKC				e		21 34 24.0	
NKC				e		21 40 58.2	
NKC				MLR	MLR		
	comp=Z,40µm,19.8s						
LJU	Ljubljana	100.80	45	i Pdiff	Pdif	21 30 18.0	-0.1
LJU				ePP	PP	21 34 23.0	-3.1
LJU				eSKSac	SKSac	21 41 00.3	+3.0
LJU				ePS	PS	21 43 29.2	+1.6
TANN	Tannenbergstha	100.81	40	eP	Pdif	21 30 18.8	+0.8
	comp=Z,138nm,1.3s,baz=247,slow=5.3						
ODD1	Odda	100.82	30	ePdif	Pdif	21 30 17.7	-0.1
ODD1				eSKSac	SKSac	21 41 01.7	+4.9
ODD1				eSS	SS	21 48 56.9	+3.2
RIDG	Independent Ri	100.92	334	IAMs_20	IAMs_20	22 25 18.8	
	comp=Z,23µm,18.0s						
OBKA	Obir	100.95	45	ePdiff	Pdif	21 30 19.0	+0.2
	comp=Z,33nm,1.4s,SNR=22						
OBKA				ePP	PP	21 34 21.8	-5.5
	comp=Z,36nm,1.5s						
GEC2	GERESS Array S	101.10	42	eP	Pdif	21 30 19.5	+0.1
	comp=Z,37nm,1.4s,baz=247,slow=5.3						
GEC2				eL	L	22 13 31.1	
	comp=Z,33µm,20.8s						
GERES	GERESS Array B	101.10	42	P	Pdif	21 30 19.4	0.0
	comp=Z,10nm,1.0s,baz=242,slow=2.9,SNR=33						
GERES				PP	PP	21 34 27.9	-0.4
	comp=Z,2.0nm,0.9s,baz=230,slow=8.2,SNR=4.3						
GERES				S	SKSac	21 41 00.2	+1.3
	comp=Z,0.4nm,0.6s,baz=251,slow=9.1,SNR=2.5						
GERES				PKKPbc	PKKPbc	21 46 31.9	0.0
	comp=Z,1.4nm,0.7s,baz=48,slow=2.0,SNR=6.2						
GERES	GERESS Array B	101.10	42		Pdif	21 30 19.1	-0.4
KHC	Kasperske Hory	101.11	42	ePDIFF	Pdif	21 30 19.2	-0.2
KHC				ex	x	21 30 32.0	
KHC				ePP	PP	21 34 24.0	-4.3
KHC				ex	x	21 34 48.5	
KHC				eSKS		21 40 55.5	
KHC				AMS	AMS	22 13 20.0	
	comp=Z,30µm,21.2s						
KHC	Kasperske Hory	101.11	42	i P	Pdif	21 30 19.3	-0.2
KHC				pmax	pmax		
	comp=Z,82nm,1.8s						
KHC				MLR	MLR		
	comp=Z,58µm,20.0s						
HOMB	Homborsund	101.16	32	ePdif	Pdif	21 30 19.8	+0.6
HOMB				eSKSac	SKSac	21 40 58.7	+0.3
HOMB				eSS	SS	21 48 59.0	+0.7
HOMB				IVMs_BB	IVMs_BB	22 13 12.8	
	comp=Z,15µm,17.3s						
MOA	Molln	101.16	43	ePdiff	Pdif	21 30 19.7	+0.1
	comp=Z,40nm,1.2s,SNR=15						
DAG	Danmarks Havn	101.29	11	i P	Pdif	21 30 19.0	-0.5
	comp=Z,42nm,1.7s						
DAG	Danmarks Havn	101.29	11	i P	Pdif	21 30 19.0	-0.5
DAG				pmax	pmax		
	comp=Z,42nm,1.7s						
DAG				MLR	MLR		
	comp=Z,51µm,20.0s						
DAG	Danmarks Havn	101.29	11	i P		21 30 19.0	
DAG				IAmb		21 30 21.1	
	comp=Z,42nm,1.7s						
DAG				IAMs_20		22 15 09.2	
	comp=Z,51µm,20.3s						
SOKA	Soboth	101.32	44	ePdiff	Pdif	21 30 20.5	0.0
	comp=Z,17nm,1.2s,SNR=7.0						
CLL	Collm	101.41	40	⇑iPdif	Pdif	21 30 22.2	+1.6
	comp=Z,48nm,1.3s						
CLL				ePlp		21 30 24.0	
	comp=Z,3µm,19.3s						
CLL				ePmax		21 30 27.0	
	comp=Z,2µm,8.3s						
CLL				i sPdif	sPdif	21 30 28.6	+4.3
	comp=Z,104nm,1.5s						
CLL				ePP	PP	21 34 26.0	-4.5
	comp=Z,138nm,1.9s						
CLL				ePPlp		21 34 33.0	
	comp=Z,6µm,18.8s						
CLL				eSKSac	SKSac	21 41 06.0	+6.0
CLL				ePS	PS	21 43 38.0	+4.2
CLL				eSS	SS	21 49 12.0	+10
CLL				e		21 52 18.0	
CLL				i PKPPKPdf		21 54 55.1	
	comp=Z,135nm,2.5s						
CLL				Lm	MLR	22 12 00.0	
	comp=N,18µm,21.7s						
CLL				Lm	MLR	22 12 00.0	
	comp=E,37µm,21.9s						
CLL				Lm	MLR	22 12 00.0	
	comp=Z,52µm,21.6s						
CLL				L	L	22 12 00.0	
	comp=Z,53µm,21.7s						
CLL				eLmax		22 12 12.0	
CLL	Collm	101.41	40	eP	Pdif	21 30 22.3	+1.7
	comp=Z,48nm,1.3s,baz=247,slow=5.3						
CLL				eL	L	22 12 41.6	
	comp=Z,53µm,21.7s						
CLL	Collm	101.41	40	⇑iP	Pdif	21 30 22.2	+1.6
CLL				pmax	pmax		
	comp=Z,48nm,1.3s						
FBE	Freiberg	101.50	40	eP	Pdif	21 30 22.2	+1.1
	comp=Z,56nm,1.2s,baz=247,slow=5.3						
PBCC	Pribram	101.53	41	ePDIFF	Pdif	21 30 21.9	+0.7
PBCC				ePP	PP	21 34 27.5	-4.0
PBCC				eSKS		21 41 05.3	
SEW	Seward	101.63	330	IAMs_20	IAMs_20	22 19 18.8	
	comp=Z,28µm,22.0s						
SML	Sawmill	101.70	332	IAMs_20	IAMs_20	22 23 53.5	
	comp=Z,23µm,18.0s						
DHY	Denali Highway	101.73	333	IAMs_20	IAMs_20	22 20 36.3	
	comp=Z,23µm,19.0s						
ARSA	Arzberg	101.81	44	ePdiff	Pdif	21 30 22.5	0.0
	comp=Z,29nm,1.7s,SNR=13						
BRG	Berggiesshubel	101.85	40	i P	Pdif	21 30 23.1	+0.5
	comp=Z,42nm,1.3s						
BRG				ePP	PP	21 34 18.3	-15
	comp=Z,92nm,1.7s						
BRG				SKS		21 41 07.0	
BRG				S	Sdif	21 42 02.0	-2.5
BRG				ePKKP	PKKPdf	21 46 54.5	+18
	comp=Z,136nm,2.5s						
BRG				SS	SS	21 48 26.0	-42
BRG				ePKPPKP		21 54 55.8	
	comp=Z,81nm,2.3s						
BRG	Berggiesshubel	101.85	40	eP	Pdif	21 30 23.4	+0.8
	comp=Z,57nm,1.5s,baz=247,slow=5.3						
BRG	Berggiesshubel	101.85	40	i P	Pdif	21 30 23.1	+0.5
BRG				S	Sdif	21 42 02.0	-2.5
BRG				pmax	pmax		
	comp=Z,42nm,1.3s						
BRG				MLR	MLR		
	comp=N,8µm,23.5s						
BRG				MLR	MLR		
	comp=E,33µm,19.9s						
BRG				MLR	MLR		
	comp=Z,47µm,19.7s						
BRG				smax	smax		
	comp=N,7.0nm,0.9s						
PRP	Porcupine Dome	101.86	336	IAMs_20	IAMs_20	22 19 09.9	
	comp=Z,20µm,19.0s						
SKAR	Skarslia	101.86	30	ePdif	Pdif	21 30 25.4	+2.9
SKAR				ePP	PP	21 34 33.8	+0.1
SKAR				eSKSac	SKSac	21 41 05.0	+3.1
SKAR				eSP	SP	21 43 37.0	+0.4
SKAR				eSS	SS	21 49 13.2	+5.0
SKAR				IVMs_BB	IVMs_BB	22 13 25.9	
	comp=Z,14µm,18.8s						
PRA	Prague	101.92	41	ePDIFF	Pdif	21 30 23.9	+1.0
PRA				ePP	PP	21 34 29.2	-5.1
PRA				eSKS		21 41 05.3	
PRA				AMS	AMS	22 15 50.0	
	comp=Z,22µm,18.8s						
PRA	Prague	101.92	41	eP	Pdif	21 30 23.9	+1.0
PRA				e		21 41 05.3	
PRA				MLR	MLR		
	comp=Z,22µm,18.8s						
PRU	Pruhonice	101.96	41	ePDIFF	Pdif	21 30 23.5	+0.4
PRU				ex	x	21 30 34.6	
PRU				ePP	PP	21 34 28.6	-6.1
PRU				ex	x	21 41 12.6	
PRU				AMS	AMS	22 13 20.0	
	comp=Z,20µm,20.1s						
PRU	Pruhonice	101.96	41	eP	Pdif	21 30 23.5	+0.4
PRU				MLR	MLR		
	comp=Z,20µm,20.1s						
HDA	Harding Lake	102.02	334	IAMs_20	IAMs_20	22 20 03.1	
	comp=Z,23µm,20.0s						
HDA	Harding Lake	102.02	334	Pdiff	Pdif	21 30 23.7	+0.7
	baz=111						
RC01	Rabbit Creek A	102.09	331	IAMs_20	IAMs_20	22 25 40.5	
	comp=Z,24µm,18.0s						
ILAR	Eielson Array	102.13	335	P	Pdif	21 30 22.2	-1.3
	comp=Z,2.9nm,1.1s,baz=147,slow=3.6,SNR=16						
ILAR				PP	PP	21 34 35.0	-0.5
	comp=Z,16nm,1.1s,baz=110,slow=7.0,SNR=6.0						
ILAR				PKKPbc	PKKPbc	21 46 28.4	-0.9
	comp=Z,1.6nm,0.9s,baz=295,slow=3.8,SNR=4.5						
ILAR	Eielson Array	102.13	335	P	Pdif	21 30 22.4	-1.1
ILAR	Eielson Array	102.13	335		Pdif	21 30 22.4	-1.1
PVCC	Panska Ves	102.13	41	ePDIFF	Pdif	21 30 14.1	-10
PVCC				ex	x	21 41 10.3	
PVCC				AMS	AMS	22 15 10.0	
	comp=Z,29µm,19.4s						
KONO	Kongsberg	102.14	31	ePdif	Pdif	21 30 21.9	-1.8
KONO				ePP	PP	21 34 35.2	-0.5
KONO				eSKSac	SKSac	21 41 03.0	-0.1

KONO				*e*SP	SP	21 43 39.6	+0.1
KONO				*e*SS	**SS**	**21 49 12.2**	**+0.3**
KONO				IVMs_BB	IVMs_BB	22 12 28.9	
	comp=Z,16µm,20.2s						
FYU	**Fort Yukon**	**102.14**	**337**	IAMs_20	IAMs_20	22 24 25.4	
	comp=Z,22µm,18.0s						
BRLK	**Bradley Lake**	**102.21**	**329**	IAMs_20	IAMs_20	22 20 20.1	
	comp=Z,19µm,20.0s						
CONA	**Conrad Observa**	**102.22**	**43**	*e*Pdiff	**Pdif**	**21 30 24.6**	**+0.2**
	comp=Z,19nm,1.4s						
CONA				*e*PP	**PP**	**21 34 33.2**	**-3.6**
	comp=Z,30nm,1.8s						
BLY	**Banja Luka**	**102.22**	**47**	⇓P	**Pdif**	**21 30 25.5**	**+1.1**
BMAR	**Burnt Mountain**	**102.23**	**338**		**Pdif**	**21 30 24.1**	**+0.1**
CNPM	**China Poot**	**102.30**	**329**	IAMs_20	IAMs_20	22 20 35.4	
	comp=Z,17µm,21.0s						
TREC	**Trest**	**102.36**	**42**	*e*PDIFF	**Pdif**	**21 30 23.9**	**-1.0**
TREC				AMS	AMS	22 14 00.0	
	comp=Z,28µm,21.3s						
TREC	**Trest**	**102.36**	**42**	*e*P	**Pdif**	**21 30 23.9**	**-1.0**
TREC				MLR	MLR		
	comp=Z,28µm,21.3s						
COP	**Copenhagen**	**102.38**	**35**	*e*P		21 30 28.5	
COP				*i* S		21 41 07.2	
COP				IAMs_20		22 14 27.5	
	comp=Z,17µm,20.1s						
COP	**Copenhagen**	**102.38**	**35**	*i* P	**Pdif**	**21 30 28.4**	**+3.6**
COP	**Copenhagen**	**102.38**	**35**	*e*P	**Pdif**	**21 30 28.4**	**+3.6**
COP				*i* S	**SKSac**	**21 41 07.2**	**+2.9**
COP				MLR	MLR		
	comp=Z,17µm,20.0s						
KDAK	**Kodiak Island**	**102.44**	**327**	IAMs_20	IAMs_20	22 23 37.0	
	comp=Z,16µm,19.0s						
CCB	**Clear Creek Bu**	**102.45**	**335**	IAMs_20	IAMs_20	22 21 44.5	
	comp=Z,25µm,19.0s						
POKR	**Poker Plat Res**	**102.47**	**335**	Pdiff	**Pdif**	**21 30 25.1**	**0.0**
	baz=110						
WRH	**Wood River Hil**	**102.51**	**334**	IAMs_20	IAMs_20	22 21 39.0	
	comp=Z,22µm,20.0s						
COLA	**College**	**102.55**	**335**	IAMs_20	IAMs_20	22 21 53.9	
	comp=Z,24µm,19.0s						
TCOL	**CIGO, UAF Yank**	**102.55**	**335**	Pdiff	**Pdif**	**21 30 25.3**	**-0.1**
	baz=110						
OHAK	**Old Harbor**	**102.63**	**326**	IAMs_20	IAMs_20	22 22 11.2	
	comp=Z,16µm,18.0s						
DOMB	**Dombas**	**102.65**	**28**	*e*Pdif	**Pdif**	**21 30 25.7**	**-0.3**
DOMB				*e*PP	**PP**	**21 34 41.3**	**+1.7**
DOMB				*e*SKSac	**SKSac**	**21 41 09.0**	**+3.5**
DOMB				*e*SS	**SS**	**21 49 20.7**	**+1.7**
DOMB				IVMs_BB	IVMs_BB	22 09 50.2	
	comp=Z,10µm,31.9s						
MDM	**Murphy Dome**	**102.73**	**335**	IAMs_20	IAMs_20	22 22 00.8	
	comp=Z,22µm,19.0s						
PAF	**Port-aux-Franc**	**102.77**	**155**	IAMs_20	IAMs_20	22 15 25.7	
	comp=Z,23µm,20.0s						
OSL	**Oslo**	**102.77**	**31**	*e*Pdif	**Pdif**	**21 30 26.1**	**-0.3**
OSL				*e*PP	**PP**	**21 34 40.4**	**0.0**
OSL				*e*SKSac	**SKSac**	**21 41 10.6**	**+4.6**
KRUC	**Moravsky**	**102.86**	**42**	*e*PDIFF	**Pdif**	**21 30 27.2**	**0.0**
KRUC				*e*PP	**PP**	**21 34 38.9**	**-2.6**
KRUC				*e*SKS		21 41 10.0	
KRUC				*e*SP	SP	21 43 48.2	+0.5
SII	**Sitkinak Islan**	**102.91**	**326**	IAMs_20	IAMs_20	22 23 43.6	
	comp=Z,16µm,20.0s						
NEA	**Nenana**	**102.95**	**334**	IAMs_20	IAMs_20	22 20 18.6	
	comp=Z,22µm,20.0s						
BWN	**Browne**	**102.97**	**334**	IAMs_20	IAMs_20	22 20 36.5	
	comp=Z,17µm,19.0s						
UPC	**Upice**	**103.01**	**41**	*e*PDIFF	**Pdif**	**21 30 28.7**	**+0.9**
UPC				*e*PP	PP	21 34 25.9	-17
UPC				*e*SKS		21 41 08.4	
UPC				AMS	AMS	22 15 30.0	
	comp=Z,25µm,19.8s						
UPC	**Upice**	**103.01**	**41**	*e*P	**Pdif**	**21 30 28.7**	**+0.9**
UPC				*e*		21 41 08.4	
UPC				MLR	MLR		
	comp=Z,25µm,19.8s						
VRAC	**Vranov**	**103.06**	**42**	⇓P	**Pdif**	**21 30 29.5**	**+1.5**
VRAC	**Vranov**	**103.06**	**42**	⇓P	**Pdif**	**21 30 29.5**	**+1.5**
VRAC	**Vranov**	**103.06**	**42**	*e*PDIFF	**Pdif**	**21 30 28.4**	**+0.4**
VRAC				*e*PP	**PP**	**21 34 41.0**	**-1.9**
VRAC				*e*SKS		21 41 11.8	
VRAC				*e*SP	SP	21 43 52.8	+3.1
CHVC	**Chvalec**	**103.06**	**41**	*e*PDIFF	**Pdif**	**21 30 28.2**	**+0.2**
CHVC				*e*x	x	21 30 33.7	
CHVC				*e*PP	**PP**	**21 34 36.2**	**-6.7**
CHVC				*e*SKS		21 41 08.9	
CHVC				AMS	AMS	22 15 30.0	
	comp=Z,25µm,19.4s						
PDG	**Podgorica**	**103.06**	**49**	⇓P	**Pdif**	**21 30 29.6**	**+1.5**
PDG	**Podgorica**	**103.06**	**49**	⇑P	PP	21 34 33.3	-10
PDG	**Podgorica**	**103.06**	**49**	IAMs_20	IAMs_20	22 20 40.3	
	comp=Z,24µm,19.0s						
ZST	**Bratislava**	**103.09**	**43**	*e*P	**Pdif**	**21 30 28.3**	**+0.1**
ZST				*e*		21 34 39.4	
ZST	**Bratislava**	**103.09**	**43**	*e*PDIFF	**Pdif**	**21 30 28.3**	**+0.1**
ZST				*e*PP	**PP**	**21 34 39.4**	**-3.8**
OSTC	**Ostas**	**103.15**	**41**	*e*PDIFF	**Pdif**	**21 30 28.9**	**+0.5**
OSTC				*e*x	x	21 30 34.4	
OSTC				*e*PP	**PP**	**21 34 37.6**	**-6.0**
OSTC				*e*SKS		21 41 08.0	
OSTC				AMS	AMS	22 15 30.0	
	comp=Z,24µm,19.9s						
DPC	**Dobruska-Polom**	**103.16**	**41**	*e*PDIFF	**Pdif**	**21 30 29.7**	**+1.2**
DPC				*e*x	x	21 30 55.7	
DPC				*e*PP	PP	21 34 34.0	-10
DPC				*e*SKS		21 41 05.2	
DPC				AMS	AMS	22 15 30.0	
	comp=Z,19µm,21.0s						
DPC	**Dobruska-Polom**	**103.16**	**41**	*e*P	**Pdif**	**21 30 29.7**	**+1.2**
DPC				*e*		21 41 05.2	
DPC				MLR	MLR		
	comp=Z,19µm,21.0s						
TIR	**Tirane**	**103.22**	**51**	IAMs_20	IAMs_20	22 20 16.5	
	comp=Z,24µm,21.0s						
MODS	**Modra-Piesok**	**103.25**	**43**	*e*P	**Pdif**	**21 30 29.3**	**+0.4**
MODS				*e*		21 34 40.8	
MODS	**Modra-Piesok**	**103.25**	**43**	*e*PDIFF	**Pdif**	**21 30 29.3**	**+0.4**
MODS				*e*PP	**PP**	**21 34 40.8**	**-3.6**
KSP	**Ksiaz**	**103.27**	**41**	*e*Pdif	**Pdif**	**21 30 30.4**	**+1.5**
KSP				*e*SP	SP	21 43 56.1	+4.2
KSP				*e*L	L	22 15 54.6	
	comp=Z,38µm,19.6s						
KSP	**Ksiaz**	**103.27**	**41**	*e*P	**Pdif**	**21 30 30.4**	**+1.5**
KSP				*e*SP	SP	21 43 56.1	+4.2
KSP				MLR	MLR		
	comp=Z,38µm,19.6s						
NB2	**NORSAR Subarra**	**103.33**	**30**	P	**Pdif**	**21 30 29.6**	**+0.6**
	comp=Z,264nm,2.5s,baz=253,slow=4.4						
NB2	**NORSAR Subarra**	**103.33**	**30**	P	**Pdif**	**21 30 29.6**	**+0.6**
	baz=253,slow=4.4						
NOA	**NORSAR Array B**	**103.33**	**30**	Pdiff	**Pdif**	**21 30 29.4**	**+0.4**
	comp=Z,14nm,1.1s,baz=252,slow=4.3,SNR=8.1						
NOA				PP	**PP**	**21 34 42.2**	**-2.5**
	comp=Z,7.8nm,1.1s,baz=290,slow=6.5,SNR=3.9						
NOA				PKKPbc	**PKKPbc**	**21 46 24.5**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=58,slow=1.3,SNR=3.2						
KRLC	**Kraliky**	**103.37**	**41**	*e*PDIFF	**Pdif**	**21 30 27.7**	**-1.8**
KRLC				*e*PP	PP	21 34 37.0	-8.3
KRLC				*e*SKS		21 41 09.9	
KRLC				AMS	AMS	22 16 30.0	
	comp=Z,17µm,18.8s						
KRLC	**Kraliky**	**103.37**	**41**	*e*P	**Pdif**	**21 30 27.7**	**-1.8**
KRLC				*e*		21 41 09.9	
KRLC				MLR	MLR		
	comp=Z,17µm,18.8s						
NC602	**NORSAR Array S**	**103.40**	**30**	*e*Pdif	**Pdif**	**21 30 29.0**	**-0.2**
NC602				*e*PP	**PP**	**21 34 44.2**	**-1.0**
NC602				*e*SKSac	**SKSac**	**21 41 08.5**	**-0.4**
NC602				*e*PS	PS	21 43 54.6	+0.1
NC602				*e*SS	**SS**	**21 49 29.4**	**+0.3**
NC602				IVMs_BB	IVMs_BB	22 13 46.2	
	comp=Z,14µm,20.6s						
CHIR	**Chirikof Islan**	**103.48**	**325**	IAMs_20	IAMs_20	22 24 06.7	
	comp=Z,20µm,18.0s						
TBLU	**Trondheim**	**103.55**	**27**	*e*Pdif	**Pdif**	**21 30 32.8**	**+3.0**
TBLU				*e*PP	**PKiKP**	**21 34 49.1**	**+0.8**
TBLU				*e*SKSac	**SKSac**	**21 41 09.0**	**-0.5**
TBLU				*e*SP	SP	21 43 56.1	+1.9
TBLU				*e*SS	**SS**	**21 49 33.2**	**+2.1**
TBLU				IVMs_BB	IVMs_BB	22 06 55.0	
	comp=Z,5µm,17.8s						
BSD	**Bornholm Skovb**	**103.58**	**36**	*e*P		21 30 31.7	
BSD				IAMs_20		22 15 35.1	
	comp=Z,29µm,18.5s						
BSD	**Bornholm Skovb**	**103.58**	**36**	*i* P	**Pdif**	**21 30 31.6**	**+1.4**
BSD	**Bornholm Skovb**	**103.58**	**36**	*e*P	**Pdif**	**21 30 31.6**	**+1.4**
BSD				MLR	MLR		
	comp=Z,29µm,18.0s						
BPAW	**Bear Paw Mtn.**	**103.59**	**334**	IAMs_20	IAMs_20	22 22 40.5	
	comp=Z,16µm,20.0s						
JAVC	**Velka Javorina**	**103.62**	**43**	*e*PDIFF	**Pdif**	**21 30 31.9**	**+1.3**
JAVC				*e*PP	**PP**	**21 34 45.8**	**-1.5**
JAVC				*e*SKS		21 41 15.5	
PPLA	**Purkeypile**	**103.75**	**332**	IAMs_20	IAMs_20	22 18 53.8	
	comp=Z,24µm,21.0s						
MLY	**Manley**	**103.77**	**334**	IAMs_20	IAMs_20	22 22 43.2	
	comp=Z,24µm,20.0s						
MORC	**Moravsky Berou**	**103.77**	**42**	⇓P	**Pdif**	**21 30 32.5**	**+1.3**
MORC	**Moravsky Berou**	**103.77**	**42**	⇑P	**PP**	**21 34 41.2**	**-7.1**
MORC	**Moravsky Berou**	**103.77**	**42**	⇓P	**Pdif**	**21 30 32.5**	**+1.3**
MORC	**Moravsky Berou**	**103.77**	**42**	*e*PDIFF	**Pdif**	**21 30 31.7**	**+0.5**
MORC				*e*PP	**PP**	**21 34 46.0**	**-2.3**
MORC				*e*SKS		21 41 15.9	
MORC				*e*SP	SP	21 43 58.8	+1.5
MORC	**Moravsky Berou**	**103.77**	**42**	IAMs_20	IAMs_20	22 14 51.7	
	comp=Z,26µm,20.0s						
OHR	**Ohrid**	**103.84**	**51**	*i* P	**PKiKP**	**21 34 50.8**	**+1.2**
OKC	**Ostrava-Krasne**	**104.17**	**42**	*e*PDIFF	**Pdif**	**21 30 34.8**	**+1.9**
OKC				*e*x	x	21 34 40.0	
OKC				*e*SKS		21 41 16.8	
OKC				AMS	AMS	22 15 00.0	
	comp=Z,20µm,20.9s						
OKC	**Ostrava-Krasne**	**104.17**	**42**	*e*P	**Pdif**	**21 30 34.8**	**+1.9**
OKC				*e*		21 41 16.8	
OKC				MLR	MLR		
	comp=Z,20µm,20.9s						
FNA	**Florina**	**104.19**	**52**	IAMs_20	IAMs_20	22 21 02.7	
	comp=Z,22µm,19.0s						
COLD	**Coldfoot**	**104.21**	**337**	IAMs_20	IAMs_20	22 17 01.1	
	comp=Z,23µm,21.0s						
VYHS	**Vyhne**	**104.28**	**43**	*e*P	**Pdif**	**21 30 34.1**	**+0.6**
VYHS				*e*		21 34 49.6	
VYHS	**Vyhne**	**104.28**	**43**	*e*PDIFF	**Pdif**	**21 30 34.1**	**+0.6**
VYHS				*e*PP	**PKiKP**	**21 34 49.6**	**-0.6**
GKP	**Gorka Klasztor**	**104.44**	**38**	*e*Pdif	**Pdif**	**21 30 36.9**	**+2.9**
GKP				*e*SP	SP	21 44 10.6	+6.5
GKP				*e*L	L	22 15 18.2	
	comp=Z,31µm,21.5s						
GKP	**Gorka Klasztor**	**104.44**	**38**	*e*P	**Pdif**	**21 30 36.9**	**+2.9**
GKP				*e*SP	SP	21 44 10.6	+6.6
GKP				MLR	MLR		
	comp=Z,31µm,21.5s						
SKO	**Skopje**	**104.52**	**50**	*i* P	**PKiKP**	**21 34 52.2**	**+1.5**
NSS	**Namsos**	**104.63**	**26**	*e*Pdif	**Pdif**	**21 30 34.2**	**-0.4**
NSS				*e*PP	**PP**	**21 34 55.1**	**+0.9**
NSS				*e*SKSac	**SKSac**	**21 41 15.1**	**+0.6**
NSS				*e*PS	PS	21 44 07.2	-0.1
NSS				IVMs_BB	IVMs_BB	22 12 27.8	
	comp=Z,7µm,30.4s						
LIT	**Litokhoron**	**104.85**	**52**	IAMs_20	IAMs_20	22 23 39.1	
	comp=Z,25µm,19.0s						
STIP	**Stip**	**104.99**	**51**	*i* P	**PKiKP**	**21 34 55.6**	**+3.9**
CHGN	**Chignik**	**105.12**	**325**	IAMs_20	IAMs_20	22 25 19.9	
	comp=Z,16µm,20.0s						
VAY	**Valandovo**	**105.19**	**51**	*i* P	**PKiKP**	**21 34 52.8**	**+0.8**
IMAR	**Indian Mountai**	**105.23**	**335**		**Pdif**	**21 30 36.9**	**-0.4**
OJC	**Ojcow**	**105.29**	**42**	*e*Pdif	**Pdif**	**21 30 39.4**	**+1.5**
OJC				*e*SP	SP	21 44 14.1	+1.0
OJC				*e*L	L	22 12 49.0	
	comp=Z,19µm,25.9s						
OJC	**Ojcow**	**105.29**	**42**	*e*P	**Pdif**	**21 30 39.4**	**+1.5**
OJC				*e*SP	SP	21 44 14.1	+1.0
OJC				MLR	MLR		
	comp=Z,19µm,25.9s						
MDVR	**Moldovita**	**105.36**	**48**	⇓P	**PKiKP**	**21 34 55.4**	**+3.1**
NIE	**Niedzica**	**105.43**	**43**	*e*Pdif	**Pdif**	**21 30 40.4**	**+1.8**
NIE				*e*SP	SP	21 44 21.8	+7.1
NIE				*e*L	L	22 16 11.3	
	comp=Z,17µm,21.3s						
NIE	**Niedzica**	**105.43**	**43**	*e*P	**Pdif**	**21 30 40.4**	**+1.8**
NIE				*e*SP	SP	21 44 21.8	+7.1
NIE				MLR	MLR		
	comp=Z,17µm,21.3s						
CNBA	**Chernabura Isl**	**105.44**	**323**	IAMs_20	IAMs_20	22 28 04.5	
	comp=Z,15µm,18.0s						
BZS	**Buzias**	**105.47**	**47**	⇑P	**Pdif**	**21 30 40.5**	**+1.6**
BZS	**Buzias**	**105.47**	**47**	⇓P	**PKiKP**	**21 34 52.1**	**-0.3**
BZS	**Buzias**	**105.47**	**47**	⇑P	**Pdif**	**21 30 40.5**	**+1.6**
STOK	**Stokkvaagen**	**105.52**	**25**	*e*Pdif	**Pdif**	**21 30 38.4**	**0.0**
STOK				*e*PP	**PP**	**21 35 00.2**	**-0.5**
STOK				*e*SKSac	**SKSac**	**21 41 22.8**	**+4.5**
KONS	**Konsvik**	**105.60**	**24**	*e*SKSac	**SKSac**	**21 41 17.2**	**-1.5**
KONS				*e*SS	**SS**	**21 50 00.0**	**+1.0**
KKB	**Krupnik**	**105.69**	**51**	*e*P	**PP**	**21 35 02.0**	**-0.7**
VTS	**Vitosha**	**105.96**	**50**	⇓P	**PKiKP**	**21 34 54.5**	**+0.9**
VTS	**Vitosha**	**105.96**	**50**	*e*P	**PP**	**21 35 01.4**	**-3.5**
VTS	**Vitosha**	**105.96**	**50**	IAMs_20	IAMs_20	22 22 02.0	
	comp=Z,24µm,20.0s						
MOR8	**Moi Rana**	**106.04**	**25**	*e*Pdif	**Pdif**	**21 30 41.4**	**+0.5**
MOR8				IVmB_BB		21 30 41.7	
	comp=Z,2µm,3.3s						
MOR8				*e*PP	**PP**	**21 35 03.9**	**-0.8**
MOR8				*e*SKSac	**SKSac**	**21 41 25.1**	**+4.3**
MOR8				*e*PS	PS	21 44 25.4	+3.3
MOR8				*e*SS	**SS**	**21 50 09.4**	**+4.3**
MOR8				IVMs_BB	IVMs_BB	22 11 53.4	
	comp=Z,5µm,23.7s						
CRVS	**Cervenica-Dubn**	**106.07**	**43**	*e*P	**Pdif**	**21 30 43.6**	**+2.1**
CRVS	**Cervenica-Dubn**	**106.07**	**43**	*e*PDIFF	**Pdif**	**21 30 43.5**	**+2.1**
MMB	**Musomiste**	**106.10**	**51**	*e*P	**PP**	**21 35 05.2**	**-0.6**
LOF	**Lofoten**	**106.14**	**23**	*e*Pdif	**Pdif**	**21 30 41.4**	**+0.2**
LOF				IVmB_BB		21 30 43.4	
	comp=Z,2µm,3.1s						
LOF				*e*PP	**PP**	**21 35 06.8**	**+1.6**
LOF				*e*SKSac	**SKSac**	**21 41 21.4**	**+0.4**
LOF				*e*PS	PS	21 44 22.9	+0.1
LOF				*e*SS	**SKKPbc**	**21 50 01.6**	**-0.9**
LOF				IVMs_BB	IVMs_BB	22 14 32.8	
	comp=Z,7µm,22.5s						
GZR	**Gura Zlata**	**106.22**	**47**	⇓P	**Pdif**	**21 30 43.0**	**+0.7**
GZR	**Gura Zlata**	**106.22**	**47**	⇓P	**PKiKP**	**21 34 48.4**	**-5.6**
GZR	**Gura Zlata**	**106.22**	**47**	⇓P	**Pdif**	**21 30 43.0**	**+0.7**
BEL	**Belsk**	**106.24**	**40**	*e*Pdif	**Pdif**	**21 30 50.5**	**+8.4**
BEL				*e*L	L	22 15 23.1	
	comp=Z,33µm,21.7s						
BEL	**Belsk**	**106.24**	**40**	*e*P	**Pdif**	**21 30 50.5**	**+8.4**
BEL				MLR	MLR		
	comp=Z,33µm,21.7s						
SANT	**Santorini**	**106.27**	**57**	IAMs_20	IAMs_20	22 18 59.6	
	comp=Z,22µm,22.0s						
KMBO	**Kilima Mbogo**	**106.38**	**97**	Pdiff	**Pdif**	**21 30 44.2**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=246,slow=7.4,SNR=2.4						
KMBO				PP	**PP**	**21 35 05.8**	**-2.8**
	comp=Z,2.2nm,0.8s,baz=248,slow=7.8,SNR=4.8						
KMBO				Sdiff		21 41 31.1	
	comp=Z,0.4nm,0.3s,baz=196,slow=20,SNR=1.3						
DRGR		**106.47**	**46**	⇓P	**PKiKP**	**21 34 50.7**	**-3.6**
UZH	**Uzhgorod**	**106.55**	**44**	*e*P	**Pdif**	**21 30 48.8**	**+5.3**
UZH				*e*		21 35 15.4	
UZH				*i*		21 41 17.7	
UZH				*e*SS	SS	21 50 10.0	-3.0
UZH				MLR	MLR		
	comp=Z,2µm,18.0s						
TRPA	**Tarpa**	**106.62**	**44**	⇑P	**PKiKP**	**21 34 55.3**	**+0.9**
STEI	**Steigen**	**106.72**	**23**	*e*Pdif	**Pdif**	**21 30 43.8**	**0.0**
STEI				*e*PP	**PP**	**21 35 09.8**	**+0.2**
STEI				*e*SKSac	**SKSac**	**21 41 24.2**	**+0.6**
STEI				*e*PS	PS	21 44 29.2	+0.4
STEI				IVMs_BB	IVMs_BB	22 15 50.4	
	comp=Z,9µm,16.0s						
RZN	**Rozhen**	**106.84**	**51**	*e*P	**PP**	**21 35 10.1**	**-1.4**
PLD	**Plovdiv**	**106.92**	**51**	*e*P	**PP**	**21 35 11.7**	**-0.1**
KWP	**Kalwaria Pacla**	**107.01**	**43**	*e*Pdif	**Pdif**	**21 30 48.5**	**+2.9**
KWP				*e*PP	**PKiKP**	**21 34 56.6**	**+1.5**
KWP				*e*SP	SP	21 44 50.8	+20
KWP				*e*L	L	22 11 54.7	
	comp=Z,23µm,29.2s						
KWP	**Kalwaria Pacla**	**107.01**	**43**	*e*P	**Pdif**	**21 30 48.5**	**+2.9**
KWP	**Kalwaria Pacla**	**107.01**	**43**	IAMs_20	IAMs_20	22 17 19.4	
	comp=Z,22µm,22.0s						
KDZ	**Kurdzhali**	**107.35**	**51**	*e*P	**PP**	**21 35 13.5**	**-1.5**
KARP	**Karpathos**	**107.44**	**58**	IAMs_20	IAMs_20	22 25 23.6	
	comp=Z,23µm,18.0s						
ARR	**Arges**	**107.50**	**47**	⇓P	**PKiKP**	**21 34 58.4**	**+2.1**
HUMR	**Humele**	**107.59**	**48**	⇑P	**PKiKP**	**21 34 57.5**	**+1.2**
FALS	**False Pass**	**107.62**	**323**	IAMs_20	IAMs_20	22 27 33.1	
	comp=Z,13µm,18.0s						
ABPO	**Ambohimpanom**	**107.83**	**119**	IAMs_20	IAMs_20	22 17 09.3	
	comp=Z,23µm,20.0s						
LVV	**L'vov**	**107.89**	**43**	*e*P	**Pdif**	**21 30 49.5**	**0.0**
LVV				*e*SS	SS	21 50 29.0	-2.1
LVV				*e*SSS	SSS	21 54 25.3	
LVV				MLR	MLR		
	comp=Z,15µm,21.0s						
LVV				MLR	MLR		
	comp=E,15µm,22.0s						
LVV				MLR	MLR		
	comp=N,11µm,20.0s						
KBS	**Kingsbay**	**107.97**	**12**	IAMs_20		22 19 27.4	
	comp=Z,67µm,21.3s						
KBS	**Kingsbay**	**107.97**	**12**	*e*Pdif	**Pdif**	**21 30 49.0**	**-0.2**
KBS				IVmB_BB		21 30 50.7	
	comp=Z,964nm,3.0s						
KBS				*e*PP	**PP**	**21 35 19.6**	**+1.1**
KBS				*e*SKSac	**SKSac**	**21 41 29.2**	**+0.4**
KBS				*e*PS	PS	21 44 41.9	+0.5
KBS				*e*SS	**SS**	**21 50 29.7**	**-1.0**
KBS				IVMs_BB	IVMs_BB	22 19 22.2	
	comp=Z,9µm,21.8s						
KBS	**Kingsbay**	**107.97**	**12**	IAMs_20	IAMs_20	22 19 34.4	
	comp=Z,29µm,21.0s						
SZH	**Strazhica**	**108.03**	**50**	*e*P	**PP**	**21 35 19.1**	**-0.8**
SUW	**Suwalki**	**108.06**	**38**	*e*PP	**PKiKP**	**21 34 58.2**	**+1.3**
SUW				*e*SP	SP	21 44 39.4	-2.0
SUW				*e*L	L	22 12 10.1	
	comp=Z,30µm,28.0s						
BURAR	**Bucovina Array**	**108.30**	**45**	⇑P	**Pdif**	**21 30 53.6**	**+2.1**
BURAR	**Bucovina Array**	**108.30**	**45**	⇑P	**Pdif**	**21 30 53.6**	**+2.1**
BURAR	**Bucovina Array**	**108.30**	**45**		**Pdif**	**21 30 50.6**	**-0.9**
TRO	**Tromso**	**108.33**	**22**	*e*Pdif	**Pdif**	**21 30 50.7**	**-0.3**
TRO				IVmBBB		21 30 53.0	
	comp=Z,1µm,5.2s						
TRO				*e*PP	**PP**	**21 35 19.5**	**-1.7**
TRO				*e*SKSac	**SKSac**	**21 41 35.2**	**+4.7**
TRO				*e*PS	**PS**	**21 44 45.5**	**+0.2**
TRO				*e*SS	**SS**	**21 50 33.2**	**-2.6**
TRO				IVMs_BB	IVMs_BB	22 09 33.4	
	comp=Z,5µm,35.4s						
HSPB	**Hornsund (broa**	**108.38**	**14**	*e*Pdif	**Pdif**	**21 30 51.2**	**+0.1**
HSPB				*e*PP	**PP**	**21 35 20.4**	**-1.1**
HSPB				*e*SKSac	**SKSac**	**21 41 31.0**	**+0.4**
HSPB				*e*PS	**PS**	**21 44 46.3**	**+0.6**
HSPB				*e*SS	**SS**	**21 50 38.0**	**+1.6**
HSPB				IVMs_BB	IVMs_BB	22 19 44.3	
	comp=Z,6µm,15.7s						
TAU	**Tasmania Unive**	**108.40**	**208**	IAMs_20	IAMs_20	22 09 47.8	
	comp=Z,23µm,21.0s						
MLR	**Muntele Rosu**	**108.43**	**47**	⇓P	**PKiKP**	**21 34 50.6**	**-7.5**
SPA0	**Spitsbergen Ar**	**108.72**	**13**	*e*Pdif	**Pdif**	**21 30 52.5**	**-0.1**
SPA0				*e*PP	**PP**	**21 35 23.6**	**-0.4**
SPA0				*e*SKSac	**SKSac**	**21 41 27.5**	**-4.6**
SPA0				*e*PS	**PS**	**21 44 49.6**	**+0.4**
SPA0				*e*SS	**SS**	**21 50 37.7**	**-3.3**
SPA0				IVMs_BB	IVMs_BB	22 10 53.7	
	comp=Z,7µm,36.3s						
BIZ	**Bicaz**	**108.78**	**46**	⇑P	**Pdif**	**21 30 55.4**	**+1.9**
BIZ	**Bicaz**	**108.78**	**46**	⇑P	**PKiKP**	**21 34 56.5**	**-2.0**
BJO1	**Bjornoya**	**108.92**	**17**	*e*		21 29 33.1	
BJO1				*e*Pdif	**Pdif**	**21 30 54.8**	**+1.3**
BJO1				*e*PP	**PP**	**21 35 23.4**	**-2.0**
BJO1				*e*SKSac	**SKSac**	**21 41 33.3**	**+0.4**
BJO1				*e*PS	PS	21 44 51.6	+0.4
BJO1				IVMs_BB	IVMs_BB	22 09 13.1	
	comp=Z,4µm,24.4s						
PLOR	**Plostina**	**108.98**	**47**	⇓P	**PKiKP**	**21 34 59.5**	**+0.5**
VRI	**Vrincioaia**	**109.04**	**47**	⇑P	**PKiKP**	**21 34 53.9**	**-5.1**
TESR	**Tescani**	**109.08**	**46**	⇓P	**PKiKP**	**21 34 59.3**	**+0.2**
RDOG	**Red Dog Mine**	**109.13**	**337**	IAMs_20	IAMs_20	22 25 59.1	
	comp=Z,25µm,20.0s						
UNV	**Unalaska Valle**	**109.26**	**321**	IAMs_20	IAMs_20	22 30 47.3	
	comp=Z,13µm,18.0s						
HARR	**Harsova**	**109.69**	**49**	⇑P	**PKiKP**	**21 35 01.5**	**+1.2**
KTK1	**Kautokeino**	**109.78**	**22**	*e*Pdif	**Pdif**	**21 30 57.3**	**-0.2**
KTK1				*e*PP	**PP**	**21 35 33.3**	**+1.4**
KTK1				*e*PS	PS	21 45 00.5	+0.3
ANM	**Nome**	**109.81**	**333**	IAMs_20	IAMs_20	22 30 17.1	
	comp=Z,15µm,18.0s						
CFR	**Carcaliu**	**109.91**	**48**	⇑P	**PKiKP**	**21 35 01.1**	**+0.4**
TIRR	**Tirgusor**	**110.00**	**49**	⇓P	**PKiKP**	**21 35 01.4**	**+0.6**
HAMF	**Hammerfest**	**110.03**	**21**	*e*PKSdf	PKSdf	21 38 36.8	+0.5
HAMF				*e*SKSac	**SKSac**	**21 41 41.4**	**+3.7**
HAMF				*e*PS	**PS**	**21 45 03.0**	**+0.4**
HAMF				*e*SS	**SS**	**21 51 00.5**	**+1.7**
HAMF				IVMs_BB	IVMs_BB	22 14 29.4	
	comp=Z,4µm,4.7s						
NACGM	**Naroch**	**110.26**	**38**	*e*PKP	**PKiKP**	**21 34 54.0**	**-7.0**
NACGM				*e*PP	PP	21 35 08.0	-28
NACGM				*e*PPP	PPP	21 37 13.0	
NACGM				*e*SKS		21 41 07.0	
NACGM				*e*SKKS	**SKSac**	**21 41 46.0**	**+6.7**
NACGM				*e*SS	SKKPbc	21 50 14.0	+24
NACGM				*e*SSS	SSS	21 53 18.0	
NACGM				*e*LQ	LQ	22 05 26.0	
NACGM				*e*LR	LR	22 09 50.0	
NACGM				LRM	MLR	22 19 38.0	
	comp=Z,57nm,19.0s						
DZM	**Mont Dzumac**	**110.38**	**236**	*e*PP	**PP**	**21 35 33.0**	**-3.9**
	comp=Z,4µm,25.4s						
DZM				*e*SKSac	**SKSac**	**21 41 38.7**	**-3.0**
	comp=Z,11µm,26.8s						
DZM	**Mont Dzumac**	**110.38**	**236**	*e*PS	PS	21 45 07.9	+0.7
	comp=Z,14µm,24.9s						
DZM				*e*SS	SS	21 50 56.8	-8.1
	comp=Z,14µm,25.1s						
DZM	**Mont Dzumac**	**110.38**	**236**	*e*LR	LR	22 07 41.6	
	comp=Z,54µm,24.4s,baz=140						
FINES	**FINESS Array B**	**110.46**	**31**	PKiKP	**PKiKP**	**21 35 01.9**	**+0.7**
	comp=Z,5.5nm,1.0s,baz=293,slow=1.1,SNR=5.3						
FINES				Sdiff		21 41 39.7	
	comp=Z,3.5nm,1.0s,baz=270,slow=5.6,SNR=2.4						
FINES				PKKPbc	**PKKPbc**	**21 46 02.6**	**-0.6**
	comp=Z,3.5nm,0.7s,baz=74,slow=4.1,SNR=9.8						
ISP	**Isparta**	**110.53**	**56**	IAMs_20	IAMs_20	22 25 34.0	
	comp=Z,18µm,20.0s						
HOPEN	**Hopen**	**110.53**	**14**	*e*Pdif	**Pdif**	**21 31 02.9**	**+2.3**
HOPEN				*e*PP	**PP**	**21 35 36.9**	**-0.2**
HOPEN				*e*SKSac	**SKSac**	**21 41 42.9**	**+3.3**
HOPEN				*e*PS	**PS**	**21 45 07.1**	**+0.1**
HOPEN				*e*SS	**SS**	**21 51 04.4**	**-0.7**
HOPEN				IVMs_BB	IVMs_BB	22 20 24.6	
	comp=Z,6µm,21.7s						
VSU	**Vasula**	**110.56**	**34**	*i* PKIKP	**PKiKP**	**21 35 00.0**	**-1.5**
VSU				MLR	MLR		
	comp=Z,41µm,18.0s						
ARCES	**ARCESS Array B**	**110.62**	**22**	PP	**PP**	**21 35 37.5**	**-0.4**
	comp=Z,8.1nm,0.9s,baz=344,slow=6.8,SNR=4.5						
ARCES				PKKPbc	**PKKPbc**	**21 46 02.1**	**-0.8**
	comp=Z,4.4nm,0.6s,baz=91,slow=4.0,SNR=17						
ARE0	**ARCESS Array S**	**110.62**	**22**	*e*Pdif	**Pdif**	**21 31 04.3**	**+3.1**
ARE0				*e*PP	**PP**	**21 35 36.4**	**-1.5**
ARE0				*e*SKSac	**SKSac**	**21 41 40.9**	**+0.6**
ARE0				*e*PS	**PS**	**21 45 07.9**	**-0.2**
ARE0				*e*SS	**SS**	**21 51 07.2**	**+0.5**
ARE0				IVMs_BB	IVMs_BB	22 18 44.0	
	comp=Z,6µm,14.1s						
KIS	**Kishinev**	**110.63**	**46**	*e*P	**Pdif**	**21 31 04.0**	**+2.3**
	comp=Z,2µm,20.0s						
KIS	**Kishinev**	**110.63**	**46**	*e*PKP	**PKiKP**	**21 35 03.0**	**+1.0**
KIS	**Kishinev**	**110.63**	**46**	*e*PP	PP	21 35 50.0	+11
	comp=Z,4µm,19.0s						
KIS	**Kishinev**	**110.63**	**46**	*e*PS	PS	21 44 54.0	-15
KIS	**Kishinev**	**110.63**	**46**	*e*PPS	PPS	21 46 07.0	
KIS				*e*SS	SS	21 51 16.0	+7.9
KIS				*e*SSS	SSS	21 55 28.0	
KIS				*e*L	L	22 08 40.0	
KIS				LRM	MLR	22 18 10.0	
	comp=Z,18µm,23.0s						
MICGM	**Minsk**	**110.86**	**38**	*e*PKP	**PKiKP**	**21 35 02.0**	**-0.2**
MICGM				*e*PP	**PP**	**21 35 40.0**	**0.0**
MICGM				*e*PPP	PPP	21 37 48.0	
MICGM				*e*SKS	SKSdf	21 41 46.0	-28
MICGM				*e*SKKS	**SKKSac**	**21 42 45.0**	**+2.3**
MICGM				*e*SKKKS		21 43 28.0	
MICGM				*e*SS	**SS**	**21 51 12.0**	**+1.3**
MICGM				*e*SSS	SSS	21 55 20.0	
MICGM				*e*LR	LR	22 12 12.0	
MICGM				LRM	MLR	22 20 12.0	
	comp=Z,117nm,20.0s						
MICGM				LRM	MLR	22 20 12.0	
	comp=Z,122nm,19.0s						

MICGM				LRM	MLR	22 20 15.0	
	comp=E,64nm,21.0s						
MICGM				LRM	MLR	22 20 20.0	
	comp=N,29nm,20.0s						
MNK	**Minsk**	110.86	38	*e*PKIKP	PKiKP	21 35 02.0	-0.2
MNK				*e*		21 35 40.0	
MNK				*e*SSS	SSS	21 55 20.0	
AKASG	**Malin Array Be**	111.31	42	Pdiff	Pdif	21 31 03.5	-1.2
	comp=N,0.1nm,0.3s,baz=269,slow=3.4,SNR=3.3						
AKASG				PKiKP	PKiKP	21 35 02.8	-0.4
	comp=N,3.5nm,0.5s,baz=275,slow=2.4,SNR=18						
AKASG				PP	PP	21 35 40.6	-2.8
	comp=N,6.6nm,0.9s,baz=260,slow=8.3,SNR=7.9						
AKASG				Sdiff		21 41 42.3	
	comp=N,0.1nm,0.3s,baz=258,slow=2.7,SNR=2.8						
AKASG				PKKPbc	PKKPbc	21 45 59.8	-0.3
	comp=N,1.8nm,0.7s,baz=71,slow=4.1,SNR=6.2						
AKASG	**Malin Array Be**	111.31	42	*i* PKIKP	PKiKP	21 35 01.6	-1.6
AKASG	**Malin Array Be**	111.31	42		PKiKP	21 35 01.6	-1.6
AKBB	**Malin Array Si**	111.31	42	IAMs_20	IAMs_20	22 21 04.1	
	comp=Z,19µm,21.0s						
CSS	**Mathiatis**	112.29	59	IAMs_20	IAMs_20	22 27 04.1	
	comp=Z,21µm,20.0s						
ANTO	**Ankara**	112.58	54	⇑P	PKiKP	21 35 07.7	+1.6
ANTO	**Ankara**	112.58	54	⇑PKIKP	PKiKP	21 35 07.7	+1.6
ANTO	**Ankara**	112.58	54	IAMs_20	IAMs_20	22 25 43.6	
	comp=Z,17µm,19.0s						
BR131	**Keskin Array S**	113.21	54	*i* PKIKP	PKiKP	21 35 08.0	+0.7
BRTR	**Keskin Array B**	113.21	54	Pdiff	Pdif	21 31 16.5	+2.9
	comp=Z,0.4nm,0.8s,baz=251,slow=4.4,SNR=3.1						
BRTR				PKiKP	PKiKP	21 35 08.0	+0.6
	comp=Z,17nm,1.1s,baz=191,slow=2.5,SNR=27						
BRTR				PP	PP	21 35 57.8	+0.2
	comp=Z,11nm,1.0s,baz=264,slow=4.8,SNR=4.9						
BRTR				Sdiff		21 41 53.0	
	comp=Z,0.4nm,0.8s,baz=258,slow=5.7,SNR=2.3						
BRTR				PKKPab	PKKPab	21 46 00.3	+0.8
	comp=Z,2.5nm,0.9s,baz=96,slow=2.5,SNR=6.7						
ILGA	**Ilgaz**	113.43	53	IAMs_20	IAMs_20	22 24 14.8	
	comp=Z,23µm,22.0s						
CAN	**Canberra**	113.45	215	IAMs_20	IAMs_20	22 11 18.0	
	comp=Z,19µm,20.0s						
APA	**Apatity**	113.58	24	⇓*i*PKIKP	PKiKP	21 35 09.8	+2.8
APA				*i*		21 35 57.0	
APA				*i*		21 41 54.0	
APA				*i* PS	PS	21 45 38.0	+2.6
APA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LVZ	**Lovozero**	114.02	24	IAMs_20	IAMs_20	22 19 44.2	
	comp=Z,20µm,20.0s						
SIM	**Simferopol'**	114.09	49	*e*P	Pdif	21 31 21.0	+3.8
SIM				*i*		21 35 10.0	
SIM				*e*SS	SS	21 52 02.0	+7.8
SIM				pmax	pmax		
	comp=Z,34nm,1.1s						
SIM				pmax	pmax		
	comp=E,600nm,9.4s						
TARA	**Tarawa**	115.29	262	IAMs_20	IAMs_20	22 13 20.6	
	comp=Z,23µm,20.0s						
GAZ	**Gaziantep**	115.70	58	IAMs_20	IAMs_20	22 28 01.3	
	comp=Z,16µm,21.0s						
ATD	**Arta Tunnel**	115.75	87	IAMs_20	IAMs_20	22 23 35.6	
	comp=Z,22µm,22.0s						
TMCR	**Tamitsa**	115.85	27	*e*PKIKP	PKPdf	21 35 12.2	+0.8
TMCR				pmax	pmax		
	comp=Z,36nm,1.0s						
OBN	**Obninsk**	115.90	38	*de*P	Pdif	21 31 25.1	+0.2
OBN				*i*		21 35 12.0	
OBN				*i*		21 36 19.5	
OBN				*e*		21 38 45.7	
OBN				*e*SS	SS	21 52 16.0	-1.2
OBN				pmax	pmax		
	comp=Z,594µm,18.3s						
OBN				pmax	pmax		
	comp=Z,137nm,1.4s						
OBN				MLR	MLR		
	comp=Z,33µm,19.0s						
OBN	**Obninsk**	115.90	38	PKPdf	PKPdf	21 35 10.8	-0.9
MOS	**Moscow**	116.47	37	*i* PKIKP	PKPdf	21 35 12.8	-0.1
MOS				*e*		21 36 20.7	
MOS				*e*PPP	PPP	21 38 49.1	
MOS				*e*		21 42 02.0	
MOS				*e*PS	PS	21 46 03.5	+1.3
MOS				*e*SS	SS	21 52 40.9	+16
MOS				pmax	pmax		
	comp=Z,84nm,1.2s						
KLMR	**Klimovskoe**	116.98	31	P	Pdif	21 31 36.2	+6.6
KLMR				*e*		21 35 12.4	
KLMR				SP	SP	21 46 06.7	+2.2
KLMR				SS	SS	21 52 33.2	+2.3
KLMR				pmax	pmax		
	comp=Z,146nm,1.2s						
KLMR				MLR	MLR		
	comp=Z,22µm,19.0s						
KLMR	**Klimovskoe**	116.98	31	Pdif	Pdif	21 31 36.3	+6.6
KLMR				*e*PKPdf	PKPdf	21 35 12.4	-1.3
KLMR				AMP		21 35 16.7	
	comp=Z,146nm,1.2s						
KLMR				*e*PP	PP	21 36 13.2	-10
KLMR				SKSac	SKSac	21 42 12.6	+7.2
KLMR				SKSac	SKSac	21 42 12.6	+7.2
KLMR				SKKSac	SKKSac	21 43 26.6	+2.7
KLMR				SKKSac	SKKSac	21 43 26.6	+2.7
KLMR				SP	SP	21 46 06.7	+2.2
KLMR				PS	PKKPdf	21 46 14.9	+6.5
KLMR				PS	PKKPdf	21 46 14.9	+6.5
KLMR				SS	SS	21 52 33.3	+2.3
KLMR				SS	SS	21 52 33.3	+2.3
KLMR				LR	LR	22 12 04.9	
KLMR				AMP		22 22 40.1	
	comp=Z,22µm,18.7s						
LPSR	**Galich'ya Gora**	117.40	40	*i* PKIKP	PKiKP	21 35 15.2	+0.4
LPSR				*e*		21 42 07.8	
LPSR				*e*SP	SP	21 46 09.5	+0.7
LPSR				*e*SS	SS	21 52 32.9	-4.1
LPSR				pmax	pmax		
	comp=Z,130nm,1.4s						
LPSR				MLR	MLR		
	comp=Z,38µm,22.0s						
VSR	**Storozhevoye**	117.61	42	*i* PKIKP	PKiKP	21 35 15.4	+0.2
VSR				*e*		21 42 09.7	
VSR				*e*SP	SP	21 46 12.3	+1.5
VSR				*e*PS	PS	21 46 13.3	+0.5
VSR				*e*SS	SS	21 52 34.8	-5.0
VSR				pmax	pmax		
	comp=Z,90nm,1.3s						
VSR				MLR	MLR		
	comp=Z,25µm,22.0s						
VORR	**Voronezh**	117.61	41	*e*PKIKP	PKPdf	21 35 14.0	-1.2
VORR				pmax	pmax		
	comp=Z,250nm,1.2s						
KTUT	**Trabzon**	117.98	53	⇓P	PKiKP	21 35 16.4	+0.2
SOC	**Sochi**	118.04	51	*e*P	Pdif	21 31 32.3	-2.5
SOC				*i*		21 35 16.7	
SOC				*i*		21 36 27.9	
SOC				*e*PPP	PPP	21 39 04.8	
SOC				*e*		21 42 09.1	
SOC				*i* PS	PS	21 46 13.8	-3.2
SOC				pmax	pmax		
	comp=Z,69nm,0.7s						
VRH	**Novokhopyorsk**	119.21	42	*i* PKIKP	PKiKP	21 35 18.4	+0.1
VRH				*e*		21 42 08.8	
VRH				*e*PS	PS	21 46 23.7	-3.5
VRH				*e*SS	SS	21 52 58.5	-2.1
VRH				pmax	pmax		
	comp=Z,120nm,1.4s						
VRH				MLR	MLR		
	comp=Z,42µm,19.0s						
PRGR	**Permogore**	119.74	30	*e*PKIKP	PKiKP	21 35 19.2	+0.2
PRGR				pmax	pmax		
	comp=Z,56nm,0.7s						
STKA	**Stephens Creek**	119.97	212	PKP	PKiKP	21 35 20.8	+0.2
	comp=Z,8.6nm,0.5s,baz=96,slow=4.0,SNR=20						
STKA				PP	PP	21 36 42.6	-0.9
	comp=Z,8.2nm,1.1s,baz=146,slow=11,SNR=4.0						
STKA				PKKPbc	PKKPbc	21 45 29.5	-0.2
	comp=Z,6.0nm,0.7s,baz=336,slow=6.6,SNR=8.8						
KIV	**Kislovodsk**	120.19	50	*i* PKiKP	PKiKP	21 35 21.1	+0.5
	SNR=23						
KIV	**Kislovodsk**	120.19	50	*e*P	Pdif	21 31 45.3	+0.8
KIV				*i*		21 35 21.2	
KIV				*e*		21 36 46.2	
KIV				*e*		21 42 17.0	
KIV				*e*PS	PS	21 46 36.9	+0.3
KIV				*e*SS	SS	21 53 15.1	+1.2
KIV				pmax	pmax		
	comp=Z,267nm,1.1s						
KIV				MLR	MLR		
	comp=Z,37µm,22.0s						
KIV	**Kislovodsk**	120.19	50		PKPdf	21 35 19.9	-0.7
KIV				IAMs_20	IAMs_20	22 27 13.7	
	comp=Z,13µm,22.0s						
KBZ	**Khabaz**	120.35	50	PKP	PKiKP	21 35 21.6	+0.8
	comp=Z,76nm,1.0s,baz=257,slow=1.9,SNR=44						
KBZ				PKKPbc	PKKPbc	21 45 29.3	+1.1
	comp=Z,5.2nm,0.9s,baz=129,slow=4.3,SNR=5.0						
KBZ	**Khabaz**	120.35	50	*c i*PKIKP	PKiKP	21 35 21.7	+0.9
GOF	**Gofitskoye**	120.42	49	⇑*e*PKIKP	PKiKP	21 35 21.9	+1.0
GOF				pmax	pmax		
	comp=Z,178nm,1.3s						
BILL	**Bilibino**	120.46	339	*de*P	Pdif	21 31 42.0	-3.0
BILL				*i*		21 35 20.4	
BILL				*i*		21 36 45.4	
BILL				*e*PPP	PPP	21 39 30.1	
BILL				*e*		21 42 24.9	
BILL				*i* PS	PS	21 46 37.7	-0.1
BILL				*e*PPS	PPS	21 48 04.3	
BILL				pmax	pmax		
	comp=Z,449µm,19.2s						
BILL				pmax	pmax		
	comp=Z,47nm,1.4s						
BILL				MLR	MLR		
	comp=Z,14µm,21.0s						
BILL	**Bilibino**	120.46	339		PKiKP	21 35 20.3	0.0
BILL				IAMs_20	IAMs_20	22 31 47.5	
	comp=Z,16µm,19.0s						
AKH	**Akhalkalaki**	120.81	53	⇓P	PKiKP	21 35 23.5	+1.4
AKH	**Akhalkalaki**	120.81	53	IAMs_20	IAMs_20	22 33 54.1	
	comp=Z,17µm,19.0s						
NCK	**Nalchik**	120.86	51	*i* PKIKP	PKPdf	21 35 21.6	-0.2
NCK				pmax	pmax		
	comp=Z,73nm,1.1s						
RAYN	**Ar Rayn**	120.97	74	*i* PKiKP	PKiKP	21 35 23.5	+0.8
	SNR=43						
RAYN	**Ar Rayn**	120.97	74	PKIKP	PKPdf	21 35 20.9	-1.7
RAYN				MLR	MLR		
	comp=Z,50µm,19.0s						
RAYN	**Ar Rayn**	120.97	74		PKPdf	21 35 20.9	-1.7
ZEI	**Tsey**	121.10	51	*i* PKIKP	PKPdf	21 35 20.9	-1.6
ZEI				pmax	pmax		
	comp=Z,65nm,0.9s						
MSEY	**Mahe Island**	121.68	109	PKiKP	PKPdf	21 35 24.0	-0.3
MSEY	**Mahe Island**	121.68	109	IAMs_20	IAMs_20	22 24 43.4	
	comp=Z,24µm,21.0s						
GNI	**Garni**	121.75	55	*i* PKiKP	PKiKP	21 35 24.6	+0.7
	SNR=13						
GNI	**Garni**	121.75	55	*c i*PKIKP	PKiKP	21 35 25.0	+1.1
GNI				pmax	pmax		
	comp=Z,441nm,1.7s						
GNI	**Garni**	121.75	55		PKPdf	21 35 21.9	-1.9
GNI	**Garni**	121.75	55	IAMs_20	IAMs_20	22 32 25.3	
	comp=Z,16µm,20.0s						
HNR	**Honiara**	122.32	244	IAMs_20	IAMs_20	22 18 44.2	
	comp=Z,18µm,19.0s						
GROC	**Groznyy**	122.47	51	*i* PKIKP	PKPdf	21 35 23.8	-1.0
GROC				*e*		21 37 02.7	
GROC				*e*		21 42 36.7	
GROC				pmax	pmax		
	comp=Z,92nm,1.1s						
MAK	**Makhachkala**	123.74	51	*e*P	Pdif	21 31 58.4	-1.7
MAK				*i*		21 35 24.6	
MAK				*e*		21 37 11.5	
MAK				*e*		21 42 27.5	
MAK				*e*PS	PS	21 47 05.9	-2.0
MAK				*e*SS	SS	21 53 57.0	-1.9
MAK				pmax	pmax		
	comp=Z,205nm,1.2s						
MAK				pmax	pmax		
	comp=Z,1µm,3.6s						
H11S2	**WAKE ISLAND Hy**	126.08	279	T	T	23 54 56.9	
	baz=98,slow=75						
H11S1	**WAKE ISLAND Hy**	126.08	279	T	T	23 55 00.7	
	baz=98						
H11S3	**WAKE ISLAND Hy**	126.09	279	T	T	23 54 38.0	
	baz=98,slow=75						
H11N3	**WAKE ISLAND Hy**	126.12	280	T	T	23 54 08.8	
	baz=102						
H11N2	**WAKE ISLAND Hy**	126.14	280	T	T	23 54 56.0	
	baz=102,slow=74						
H11N1	**WAKE ISLAND Hy**	126.14	280	T	T	23 55 05.7	
	baz=102,slow=74						
WAKE	**Wake Island**	126.28	280	IAMs_20	IAMs_20	22 18 50.1	
	comp=Z,17µm,21.0s						
CTAO	**Charters Tower**	126.30	224	IAMs_20	IAMs_20	22 21 24.3	
	comp=Z,16µm,20.0s						
SOCY	**Socotra**	126.40	89	PKiKP	PKiKP	21 35 34.7	+1.0
	SNR=15						
ABTO	**Aybut**	126.99	83	PKiKP	PKiKP	21 35 35.0	+0.2
	SNR=18						
TIXI	**Tiksi**	127.01	352	PKP	PKiKP	21 35 33.1	-0.1
	comp=Z,67nm,1.2s,baz=45,slow=3.7,SNR=5.9						
TIXI	**Tiksi**	127.01	352	*c i*PKIKP	PKPdf	21 35 32.7	0.0
TIXI				pmax	pmax		
	comp=Z,68nm,1.3s						
TIXI				MLR	MLR		
	comp=Z,22µm,22.0s						
TIXI	**Tiksi**	127.01	352	PKPdf	PKPdf	21 35 31.9	-0.8
TIXI				IAMs_20	IAMs_20	22 32 22.1	
	comp=Z,18µm,22.0s						
WHFO	**Wadi Hawf**	127.55	82	PKiKP	PKPdf	21 35 35.6	+0.2
	SNR=14						
ARU	**Arti**	127.71	33	PKKP		21 45 46.6	
	comp=Z,1.4nm,0.5s,baz=130,slow=17,SNR=6.6						
ARU	**Arti**	127.71	33	*i* PKIKP	PKiKP	21 35 35.5	+0.5
ARU						21 37 35.2	
ARU				PPP	PPP	21 40 17.1	
ARU						21 42 45.4	
ARU				SP	SP	21 47 31.9	-7.9
ARU				PS	PS	21 47 46.7	+4.5
ARU				MLR	MLR		
	comp=Z,31µm,20.0s						
ARU	**Arti**	127.71	33		PKPdf	21 35 34.3	-0.1
RBK	**Rabkut**	127.87	83	PKiKP	PKiKP	21 35 36.3	-0.2
	SNR=14						
SEY	**Seymchan**	128.01	337	PKP	PKiKP	21 35 35.8	+0.3
	comp=Z,101nm,0.9s,baz=104,slow=2.0,SNR=154						
SEY				PP	PP	21 37 37.6	0.0
	comp=Z,52nm,1.1s,baz=49,slow=9.4,SNR=4.3						
SEY				PKKP	PKKPdf	21 45 46.9	-0.2
	comp=Z,2.9nm,0.6s,baz=180,slow=6.1,SNR=6.4						
SVE	**Sverdlovsk**	128.59	32	*i* PKIKP	PKiKP	21 35 37.5	+0.7
SVE				pmax	pmax		
	comp=Z,103nm,1.4s						
SVE				MLR	MLR		
	comp=Z,28µm,22.0s						
SVE				MLR	MLR		
	comp=E,22µm,22.0s						
DMTO	**DMTO**	128.61	83	PKiKP	PKPdf	21 35 37.6	+0.3
	SNR=10						
NRIK	**Noril'sk**	128.79	10	PKP	PKPdf	21 35 36.5	+0.3
	comp=E,42nm,1.1s,baz=60,slow=1.0,SNR=30						
SHAO	**Shalim**	129.30	83	*i* PKPdf	PKPdf	21 35 37.1	-1.5
	SNR=7.4						
PET	**Petropavlovsk**	129.84	323	*i* PKIKP	PKiKP	21 35 39.4	+0.1
PET				*i*		21 37 53.8	
PET				*e*PPP	PPP	21 40 38.1	
PET				*e*PS	PS	21 47 59.9	-0.9
PET				*e*SS	SS	21 55 12.1	-2.0
PET				*e*SSS	SSS	22 00 00.1	
PET				pmax	pmax		
	comp=Z,84nm,1.2s						
PET				pmax	pmax		
	comp=Z,5µm,16.7s						
PET	**Petropavlovsk**	129.84	323		PKPdf	21 35 37.5	-1.1
PET				IAMs_20	IAMs_20	22 43 11.7	
	comp=Z,13µm,19.0s						
FAQ	**Al Faqa, Dubai**	130.26	74	PKiKP	PKiKP	21 35 40.8	-0.4
FAQ	**Al Faqa, Dubai**	130.26	74	PKiKP	PKiKP	21 35 42.6	+1.5
	SNR=6.6						
ALNE	**Al Ain**	130.34	75	*i* PKiKP	PKPdf	21 35 40.9	+0.4
	SNR=9.0						
PEA0B	**Petropavlovsk-**	130.34	324	⇓*i*PKIKP	PKiKP	21 35 40.6	+0.2
PEA0B	**Petropavlovsk-**	130.34	324	IAMs_20	IAMs_20	22 38 56.9	
	comp=Z,14µm,22.0s						
PETK	**Petropavlovsk-**	130.34	324	PKP	PKiKP	21 35 40.6	+0.2
	comp=Z,70nm,1.1s,baz=94,slow=5.9,SNR=26						
PETK	**Petropavlovsk-**	130.34	324		PKPdf	21 35 39.1	-0.5
NAZ	**Nazwa, Dubai**	130.35	74	*i* PKiKP	PKiKP	21 35 41.2	-0.1
	SNR=8.0						
NAZ	**Nazwa, Dubai**	130.35	74	PKiKP	PKiKP	21 35 41.8	+0.6
	SNR=7.3						
ASAR	**Alice Springs**	130.53	210	PKhKP	PKPpre	21 35 22.0	
	comp=Z,0.8nm,0.6s,baz=134,slow=2.3,SNR=8.2						
ASAR				PKP	PKPdf	21 35 41.2	+0.2
	comp=Z,45nm,0.9s,baz=143,slow=2.2,SNR=56						
ASAR				SKPbc	SKPbc	21 39 07.2	+2.4
	comp=Z,7.8nm,0.9s,baz=147,slow=4.1,SNR=5.3						
ASAR				SKKPbc	SKKPbc	21 48 40.5	-0.1
	comp=Z,3.9nm,0.8s,baz=329,slow=4.8,SNR=4.1						
ASAR	**Alice Springs**	130.53	210		PKPdf	21 35 38.8	-2.2
MA2	**Magadan**	130.59	334	PKP	PKPdf	21 35 40.1	+0.3
	comp=Z,52nm,1.1s,baz=100,slow=2.4,SNR=24						
MA2				PP	PP	21 37 53.2	-1.4
	comp=Z,16nm,0.9s,baz=24,slow=7.9,SNR=3.5						
MA2				SKPbc	SKPab	21 39 05.5	+1.8
	comp=Z,21nm,1.0s,baz=45,slow=5.9,SNR=4.5						
MA2	**Magadan**	130.59	334	*c i*PKIKP	PKiKP	21 35 40.4	-0.3
MA2				pmax	pmax		
	comp=Z,97nm,1.3s						
MA2	**Magadan**	130.59	334		PKPdf	21 35 39.3	-0.5
ASHO	**Ashiyiah**	130.68	74	*i* PKPdf	PKPdf	21 35 40.6	-0.5
	SNR=8.5						
ASHO	**Ashiyiah**	130.68	74	PKiKP	PKPdf	21 35 41.3	+0.2
	SNR=8.4						
HATD	**Hatta, Dubai**	130.76	74	*i* PKPdf	PKPdf	21 35 40.8	-0.5
	SNR=11						
HATD	**Hatta, Dubai**	130.76	74	PKiKP	PKiKP	21 35 41.8	-0.4
	SNR=8.6						
MSFE	**Esma-Masafi**	130.83	73	*i* PKPdf	PKPdf	21 35 41.1	-0.3
	SNR=8.5						
UOSS	**Minazif**	130.84	74	*i* PKPdf	PKPdf	21 35 40.8	-0.6
	SNR=7.6						
PATS	**Pohnpei**	130.84	262	IAMs_20	IAMs_20	22 20 35.8	
	comp=Z,18µm,22.0s						
SHME	**Shamm**	130.87	72	*i* PKPdf	PKPdf	21 35 41.2	-0.3
	SNR=8.1						
MDH	**Madha**	130.95	73	PKPdf	PKPdf	21 35 41.2	-0.4
ARQ	**Araqi**	130.96	76	PKiKP	PKiKP	21 35 42.9	+0.3
	SNR=11						
BANOM	**Banah**	131.00	73	PKiKP	PKPdf	21 35 41.7	0.0
ABKAR	**Akbulak array**	131.04	41	PKPdf	PKPdf	21 35 40.7	-0.3
ABKAR	**Akbulak array**	131.04	41	PKPdf	PKPdf	21 35 40.6	-0.3
SOHO	**SOHO**	131.05	75	PKiKP	PKiKP	21 35 42.4	-0.3
	SNR=27						
DQM	**DQM**	131.42	81	PKiKP	PKPdf	21 35 42.9	+0.3
	SNR=5.7						
BSY	**Bisya**	131.51	77	PKiKP	PKiKP	21 35 45.1	+1.4
	SNR=14						
MHTO	**MHTO**	131.98	79	PKiKP	PKiKP	21 35 44.3	-0.3
	SNR=7.6						
SKR	**Severo-Kuril's**	132.18	321	*e*PKIKP	PKiKP	21 35 43.9	-0.2
SKR				*e*PPS	PPS	21 48 16.0	
SKR				pmax	pmax		
	comp=Z,2µm,16.3s						
SKR				MLR	MLR		
	comp=Z,4µm,17.0s						
SKR				MLR	MLR		
	comp=Z,4µm,16.0s						
GEYT	**Alibeck**	132.28	56	PKP	PKPdf	21 35 44.0	+0.2
	comp=Z,32nm,1.1s,baz=269,slow=7.0,SNR=38						
GEYT				SKPbc	SKPab	21 39 12.0	+0.3
	comp=Z,11nm,1.1s,baz=248,slow=2.3,SNR=3.9						
GEYT	**Alibeck**	132.28	56		PKPdf	21 35 42.1	-1.7
GYA0B	**ALIBECK ARRAY**	132.28	56	IAMs_20	IAMs_20	22 36 56.1	
	comp=Z,16µm,21.0s						
JMDO	**Jabal Madar**	132.29	77	PKiKP	PKiKP	21 35 45.3	0.0
	SNR=6.3						
SMDO	**Samad**	132.32	77	PKiKP	PKPdf	21 35 44.4	0.0
	SNR=22						
BIDO	**Bidbid**	132.44	76	PKiKP	PKiKP	21 35 46.4	+0.8
	SNR=11						
PMG	**Port Moresby**	132.76	235	PKIKP	PKPdf	21 35 42.9	-2.4
PMG				MLR	MLR		
	comp=Z,22µm,21.0s						
PMG	**Port Moresby**	132.76	235		PKPdf	21 35 42.9	-2.4
WSAR	**Wadi Sarin**	132.87	76	PKiKP	PKiKP	21 35 46.0	-0.4
	SNR=8.4						
WBK	**Wadi Bani Khal**	133.12	77	PKiKP	PKiKP	21 35 46.7	-0.3
	SNR=11						
WRA	**Warramunga Arr**	133.46	213	PKhKP	PKPpre	21 35 32.6	
	comp=Z,2.3nm,0.6s,baz=147,slow=2.1,SNR=7.1						
WRA				PKP	PKiKP	21 35 47.3	-0.5
	comp=Z,24nm,0.6s,baz=154,slow=1.8,SNR=63						
WRA				SKPbc	SKPab	21 39 16.4	-0.9
	comp=Z,19nm,1.1s,baz=159,slow=3.0,SNR=6.5						
WRA				SKKPbc	SKKPbc	21 48 26.2	-3.7
	comp=Z,10nm,1.1s,baz=334,slow=5.6,SNR=6.2						
WRA	**Warramunga Arr**	133.46	213	PKPdf	PKPdf	21 35 44.6	-1.9
WRAB	**Tennant Creek**	133.46	213	PKIKP	PKPdf	21 35 45.2	-1.4
WRAB				MLR	MLR		
	comp=Z,26µm,19.0s						
WRAB	**Tennant Creek**	133.46	213	PKPdf	PKPdf	21 35 45.2	-1.4
WB0	**Warramunga Arr**	133.58	213	PKPdf	PKPdf	21 35 45.2	-1.6
DGAR	**Diego Garcia**	134.64	123	IAMs_20	IAMs_20	22 42 48.9	
	comp=Z,12µm,18.0s						
BRVK	**Borovoye**	135.28	33	*i* PKIKP	PKiKP	21 35 50.2	-0.2
BRVK	**Borovoye**	135.28	33		PKPdf	21 35 47.9	-1.0
BVAR	**Borovoye Array**	135.35	33	SKKPbc	SKKPbc	21 48 21.7	-4.6
	comp=Z,7.3nm,1.1s,baz=182,slow=5.2,SNR=3.6						
YAK	**Yakutsk**	135.61	346	PKhKP	PKPpre	21 35 36.5	
	comp=Z,5.9nm,0.4s,baz=206,slow=1.3,SNR=4.5						
YAK				PKP	PKPdf	21 35 49.2	0.0
	comp=Z,28nm,0.8s,baz=175,slow=0.3,SNR=18						
YAK	**Yakutsk**	135.61	346	*e*PKHKP	PKPpre	21 35 37.2	
YAK				pmax	pmax		
	comp=Z,111nm,1.4s						
YAK				pmax	pmax		
	comp=N,16nm,1.4s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,1µm,4.7s						
YAK				pmax	pmax		
	comp=N,473nm,4.0s						
YAK				pmax	pmax		
	comp=E,302nm,4.0s						
YAK	**Yakutsk**	135.61	346		PKPdf	21 35 47.7	-1.5
YAK				IAMs_20	IAMs_20	22 40 06.7	
	comp=Z,11µm,20.0s						
MANU	**Manus Island**	136.82	244	IAMs_20	IAMs_20	22 25 56.6	
	comp=Z,13µm,21.0s						
MBWA	**Marble Bar**	137.95	194	IAMs_20	IAMs_20	22 31 56.6	
	comp=Z,14µm,19.0s						
BRZS	**Berezniki**	138.20	35	⇑*i*PKP	PKPdf	21 35 54.8	+0.3
BRZS				*e*PP	PP	21 38 40.8	-2.3
BRZS				*e*LR	LR	22 35 39.8	
BRZS	**Berezniki**	138.20	35	*c i*PKIKP	PKPdf	21 35 54.7	+0.3
BRZS				*e*		21 38 40.8	
NKL	**Nikolayevsk**	138.98	332	*i* PKHKP	PKPpre	21 35 46.1	
NKL				*e*		21 38 45.8	
NKL				*e*SS	SS	21 57 06.4	+2.8
NKL				MLR	MLR		
	comp=Z,11µm,24.0s						
KUR	**Kuril'sk**	139.46	317	*e*PKHKP	PKPpre	21 35 50.0	
KUR				*e*		21 42 55.1	
KUR				*e*SS	SS	21 57 14.2	+4.0
KUR				pmax	pmax		
	comp=Z,249nm,1.3s						
KAAM	**Kaadhehdhoo**	139.50	114	IAMs_20	IAMs_20	22 31 43.2	
	comp=Z,14µm,22.0s						
CHM	**Chimkent**	139.76	47	*e*PKP	PKPdf	21 35 56.8	-0.8
CHM				*e*PP	PP	21 38 49.6	-3.6
CHM				*e*LR	LR	22 37 55.3	
CHM	**Chimkent**	139.76	47	*e*PKIKP	PKPdf	21 35 56.7	-0.8
CHM				*e*		21 38 49.6	
KKAR	**Karatay Array**	140.09	46	PKIKP	PKPdf	21 35 57.3	-0.8
KKAR	**Karatay Array**	140.09	46	PKPdf	PKPdf	21 35 57.2	-0.8
IUG	**Iuzhnay**	140.12	47	*e*PKP	PKPdf	21 35 55.1	-3.2
IUG				*e*PP	PP	21 38 55.0	-0.6
IUG				*e*LR	LR	22 43 59.7	
IUG	**Iuzhnay**	140.12	47	*e*PKIKP	PKPdf	21 35 55.1	-3.2
IUG				*e*		21 38 54.9	
DZA	**Taraz**	140.72	46	*e*PKP	PKPdf	21 35 59.8	+0.4
DZA	**Taraz**	140.72	46	*e*PKIKP	PKPdf	21 35 59.7	+0.4
KURK	**Kurchatov**	140.83	31	PKIKP	PKPdf	21 35 57.9	-1.2
KURK				MLR	MLR		
	comp=Z,21µm,21.0s						
KURK	**Kurchatov**	140.83	31	PKPdf	PKPdf	21 35 57.9	-1.2
KURBB	**Kurchatov Arra**	140.85	31	PKhKP	PKPpre	21 35 52.4	
	comp=Z,10nm,0.6s,baz=304,slow=2.9,SNR=1.9						
KURBB				PP	PP	21 39 03.1	+3.9
	comp=Z,36nm,1.3s,baz=317,slow=6.9,SNR=5.0						
KURBB				SKKPbc	SKKPbc	21 47 47.4	-17
	comp=Z,2.9nm,1.0s,baz=134,slow=5.1,SNR=4.3						
ZAA0	**Zalesovo Array**	141.16	23	IAMs_20	IAMs_20	22 41 56.5	
	comp=Z,14µm,20.0s						

ZALV	**Zalesovo Beam**	**141.16**	**23**	PKhKP	PKPpre	21 35 53.4	
	comp=Z,11nm,0.6s,baz=305,slow=5.2,SNR=28						
ZALV				PKP	**PKPdf**	**21 35 59.9**	**+0.3**
	comp=Z,116nm,0.9s,baz=305,slow=2.2,SNR=30						
ZALV				SKPbc	**SKiKP**	**21 39 38.9**	**+0.1**
	comp=Z,50nm,1.1s,baz=294,slow=1.4,SNR=4.8						
ZALV	**Zalesovo Beam**	**141.16**	**23**		PKPpre	21 35 53.6	
YUK	**Yuzh-Kuril'sk**	**141.28**	**317**	*d* *i*PKHKP	**PKPdf**	**21 35 55.0**	**-5.1**
YUK				*e*		21 39 01.5	
YUK				*e*SS	SS	21 57 32.5	+1.0
YUK				pmax	pmax		
	comp=Z,254nm,1.1s						
YUK				MLR	MLR		
	comp=Z,9µm,20.0s						
YUK				MLR	MLR		
	comp=N,4µm,16.0s						
YUK				MLR	MLR		
	comp=E,7µm,19.0s						
BTLS	**Baital**	**141.53**	**41**	*e*PKP	**PKPdf**	**21 35 55.5**	**-5.1**
BTLS				*e*PP	**PP**	**21 39 01.2**	**-2.6**
BTLS				*e*LR	LR	22 45 10.6	
BTLS	**Baital**	**141.53**	**41**	*e*PKHKP	**PKPdf**	**21 35 55.5**	**-5.1**
BTLS				*e*		21 39 01.1	
YSS	**Yuzh-Sakhalins**	**141.71**	**323**	*c* *e*PKHKP	**PKPdf**	**21 35 55.3**	**-5.5**
YSS				*e*		21 39 05.6	
YSS				*e*PPP	PPP	21 42 16.1	
YSS				pmax	pmax		
	comp=Z,100nm,1.1s						
YSS	**Yuzh-Sakhalins**	**141.71**	**323**	PKPdf	**PKPdf**	**21 35 59.2**	**-1.6**
SEM	**Semipalatinsk**	**141.81**	**30**	*i* PKP	**PKPdf**	**21 35 56.2**	**-5.1**
SEM				*e*PP	**PP**	**21 39 03.7**	**-1.7**
SEM				*e*LR	LR	22 33 32.4	
SEM	**Semipalatinsk**	**141.81**	**30**	*i* PKHKP	**PKPdf**	**21 35 56.1**	**-5.1**
SEM				*e*		21 39 03.7	
BOD	**Bodaibo**	**141.99**	**356**	*e*PKHKP	**PKPdf**	**21 35 54.7**	**-6.3**
BOD				pmax	pmax		
	comp=Z,159nm,2.0s						
EKS2	**Erkin-Say**	**142.45**	**45**	P	**PKPdf**	**21 35 58.8**	**-3.7**
	SNR=32						
GRNR	**Gornyy**	**142.53**	**332**	⇑*i*PKIKP	**PKPdf**	**21 35 58.5**	**-3.7**
GRNR				pmax	pmax		
	comp=Z,20nm,0.8s						
AML	**Almayashu**	**142.63**	**46**	P	**PKPdf**	**21 36 00.4**	**-2.8**
	SNR=31						
SGDS	**Sogindy**	**142.65**	**43**	*e*PKP	**PKPdf**	**21 35 59.9**	**-2.8**
SGDS				*e*PP	**PP**	**21 39 09.0**	**-1.8**
SGDS				*e*LR	LR	22 36 36.8	
USP	**Ospenovka**	**142.65**	**44**	P	**PKPdf**	**21 35 59.6**	**-3.1**
	SNR=42						
AAK	**Ala-Archa**	**142.94**	**44**	P	**PKPdf**	**21 36 02.7**	**-0.7**
	SNR=34						
AAK	**Ala-Archa**	**142.94**	**44**	*i* PKPdf	**PKPdf**	**21 36 00.4**	**-3.0**
	SNR=55						
AAK	**Ala-Archa**	**142.94**	**44**	*i* PKIKP	**PKPdf**	**21 36 02.0**	**-1.4**
AAK	**Ala-Archa**	**142.94**	**44**		**PKPdf**	**21 36 02.2**	**-1.2**
CHMS	**Chumysh**	**142.94**	**44**	P	**PKPdf**	**21 36 00.5**	**-2.7**
	SNR=34						
BHUJ	**Bhuj**	**142.98**	**78**	⇑*i*x	**PKPdf**	**21 35 59.7**	**-4.1**
MNCY	**Minicoy**	**142.98**	**103**	*e*P	**PKPdf**	**21 35 58.6**	**-5.5**
UCH	**Uchtor**	**143.13**	**45**	P	**PKPdf**	**21 36 04.3**	**+0.2**
	SNR=95						
KBK	**Karagaybulak**	**143.23**	**44**	P	**PKPdf**	**21 36 03.6**	**-0.4**
	SNR=24						
ASAJ	**Asahikawa**	**143.30**	**319**	PKhKP	PKPbc	21 36 01.4	+0.6
	comp=Z,121nm,1.1s,baz=268,slow=5.3,SNR=13						
KUU	**Kurty**	**143.52**	**42**	⇑*i*PKP	PKPbc	21 36 01.8	+0.3
KUU				*e*PP	**PP**	**21 39 17.5**	**+1.6**
KUU				*e*LR	LR	22 39 04.3	
KUU	**Kurty**	**143.52**	**42**	*c* *i*PKIKP	PKPbc	21 36 01.7	+0.2
KUU				*e*		21 39 17.5	
ZEA	**Zeya**	**143.54**	**342**	*i* PKIKP	PKPab	21 36 00.5	+0.2
ZEA				*e*		21 39 14.0	
ZEA				*e*		21 43 02.0	
ZEA				pmax	pmax		
	comp=Z,360nm,1.6s						
ZEA				pmax	pmax		
	comp=N,2µm,12.0s						
ZEA				pmax	pmax		
	comp=E,900nm,12.0s						
ZEA				pmax	pmax		
	comp=Z,6µm,12.0s						
ZEA				pmax	pmax		
	comp=Z,3µm,12.0s						
ZEA				pmax	pmax		
	comp=E,600nm,11.0s						
KZA	**Kyzart**	**143.69**	**45**	P	**PKPdf**	**21 36 04.8**	**-0.3**
	SNR=27						
CHKK	**Chushkaly**	**143.94**	**41**	*e*PKP	PKPbc	21 36 03.4	+0.6
CHKK	**Chushkaly**	**143.94**	**41**	*e*PKIKP	PKPbc	21 36 03.3	+0.5
ERM	**Erimo**	**143.96**	**315**	PKIKP	**PKPdf**	**21 36 04.9**	**-0.1**
ERM				MLR	MLR		
	comp=Z,16µm,18.0s						
ERM	**Erimo**	**143.96**	**315**		**PKPdf**	**21 36 04.9**	**-0.1**
MTBS	**Maitube**	**143.96**	**43**	⇑*i*PKP	PKPbc	21 36 03.8	+0.9
MTBS	**Maitube**	**143.96**	**43**	⇑*i*PKIKP	PKPbc	21 36 03.7	+0.8
TDK	**Taldyqorghan**	**144.18**	**39**	*e*PKP	PKPbc	21 36 03.5	+0.1
TDK				*e*PP	PP	21 39 28.2	+8.5
TDK				*e*LR	LR	22 38 59.1	
	comp=Z,15µm,19.9s						
TDK	**Taldyqorghan**	**144.18**	**39**	*e*PKIKP	PKPbc	21 36 03.5	+0.1
TDK				*e*		21 39 28.2	
TDK				MLR	MLR		
	comp=Z,15µm,20.0s						
AAA	**Alma-Ata**	**144.23**	**42**	⇑*i*PKP	PKPbc	21 36 04.2	+0.5
AAA				*e*PP	**PP**	**21 39 24.6**	**+4.3**
AAA				*e*LR	LR	22 37 32.1	
	comp=Z,8µm,20.4s						
AAA	**Alma-Ata**	**144.23**	**42**	*c* *i*PKIKP	PKPbc	21 36 04.2	+0.5
AAA				*e*		21 39 24.5	
AAA				MLR	MLR		
	comp=Z,8µm,20.0s						
ULHL	**Ulahol**	**144.26**	**44**	P	**PKPdf**	**21 36 05.6**	**-0.2**
	SNR=423						
TNSS	**Tian-Shan**	**144.33**	**42**	⇑*e*PKP	**PKPdf**	**21 36 05.8**	**-0.4**
TNSS	**Tian-Shan**	**144.33**	**42**	⇑*e*PKIKP	**PKPdf**	**21 36 05.8**	**-0.4**
MDOK	**Medeo**	**144.34**	**42**	*e*PKP	**PKPab**	**21 36 03.8**	**-0.1**
MDOK				*e*PP	**PP**	**21 39 22.6**	**+1.6**
MDOK				*e*LR	LR	22 37 26.9	
	comp=Z,8µm,21.2s						
MDOK	**Medeo**	**144.34**	**42**	*e*PKIKP	**PKPab**	**21 36 03.7**	**-0.1**
MDOK				*e*		21 39 22.6	
MDOK				MLR	MLR		
	comp=Z,8µm,21.0s						
NIL	**Nilore**	**145.15**	**59**	PKIKP	**PKPbc**	**21 36 06.3**	**-0.6**
NIL				MLR	MLR		
	comp=Z,37µm,20.0s						
NIL	**Nilore**	**145.15**	**59**		**PKPbc**	**21 36 06.3**	**-0.6**
KPKS	**Kokpek**	**145.19**	**41**	⇑*e*PKP	**PKPdf**	**21 36 07.8**	**+0.6**
KPKS	**Kokpek**	**145.19**	**41**	*c* *e*PKIKP	**PKPdf**	**21 36 07.8**	**+0.6**
MKAR	**Makanchi Array**	**145.23**	**33**	PKPbc	**PKPab**	**21 36 06.9**	**0.0**
	comp=Z,283nm,0.7s,baz=321,slow=3.9,SNR=580						
MKAR	**Makanchi Array**	**145.23**	**33**		**PKPbc**	**21 36 06.1**	**-0.6**
SATY	**Saty**	**145.24**	**41**	⇑*i*PKP	**PKPdf**	**21 36 08.3**	**+0.9**
SATY				*e*LR	LR	22 37 53.2	
SATY	**Saty**	**145.24**	**41**	*c* *i*PKIKP	**PKPdf**	**21 36 08.3**	**+0.9**
KSH	**Kashi**	**145.29**	**48**	PKPbc	**PKPdf**	**21 36 07.9**	**+0.3**
KSH				pPKP	PKiKP	21 36 17.1	+5.6
KSH				PKS	**PKSbc**	**21 39 41.8**	**-6.7**
KSH				SKKS		21 46 13.0	
KSH				AMB	AMB		
	comp=Z,5µm,5.7s						
KSH				LR	LR		
	comp=Z,15µm,18.8s						
KSH				LR	LR		
	comp=Z,11µm,17.7s						
KSH				LR	LR		
	comp=Z,6µm,17.1s						
GUMO	**Guam**	**145.49**	**265**	PKPbc	**PKPab**	**21 36 08.8**	**+0.1**
	comp=Z,524nm,1.1s,baz=188,slow=5.4,SNR=4.0						
GUMO	**Guam**	**145.49**	**265**		**PKPdf**	**21 36 06.6**	**-1.8**
GUMO	**Guam**	**145.49**	**265**	IAMs_20	IAMs_20	22 34 25.5	
	comp=Z,11µm,19.0s						
BOM	**Bombay**	**145.53**	**85**	IAMs_20	IAMs_20	22 38 44.2	
	comp=Z,29µm,22.1s						
UZB	**Uzynbulak**	**145.57**	**41**	⇑*i*PKP	**PKPab**	**21 36 08.9**	**+0.5**
UZB				*e*LR	LR	22 39 51.8	
UZB	**Uzynbulak**	**145.57**	**41**	*c* *i*PKIKP	**PKPab**	**21 36 08.9**	**+0.5**
KLR	**Kul'dur**	**145.69**	**334**	PKPbc	**PKPdf**	**21 36 07.8**	**0.0**
	comp=Z,474nm,1.2s,baz=46,slow=3.2,SNR=328						
KLR				PP	**PP**	**21 39 28.6**	**+0.3**
	comp=Z,31nm,1.1s,baz=31,slow=5.1,SNR=3.2						
KLR	**Kul'dur**	**145.69**	**334**	*i* PKP2	**PKPab**	**21 36 08.6**	**+0.2**
COCO	**West Island**	**145.80**	**158**	IAMs_20	IAMs_20	22 39 57.7	
	comp=Z,13µm,20.0s						
SHLS	**Shalkode**	**145.84**	**41**	⇑*i*PKP	**PKPab**	**21 36 10.5**	**+1.1**
SHLS				*e*PP	**PP**	**21 39 36.5**	**+6.7**
SHLS				*e*LR	LR	22 39 57.0	
SHLS	**Shalkode**	**145.84**	**41**	*c* *i*PKP2	**PKPab**	**21 36 10.4**	**+1.1**
SHLS				*e*		21 39 36.5	
GOA	**Goa**	**145.88**	**92**	⇑*i*P	**PKPab**	**21 36 09.9**	**-0.2**
ZSN	**Zaisan**	**146.06**	**30**	⇑*i*PKP	**PKPbc**	**21 36 09.2**	**-0.1**
ZSN				*e*PP	**PP**	**21 39 28.6**	**-2.0**
ZSN				*e*LR	LR	22 38 11.6	
ZSN	**Zaisan**	**146.06**	**30**	*c* *i*PKP2	**PKPbc**	**21 36 09.2**	**-0.1**
ZSN				*e*		21 39 28.6	
TEY	**Ternei**	**146.30**	**324**	⇓*i*PKP2	**PKPab**	**21 36 10.5**	**-0.3**
TEY				pmax	pmax		
	comp=N,110nm,1.0s						
TEY				pmax	pmax		
	comp=Z,360nm,1.1s						
TEY				pmax	pmax		
	comp=Z,2µm,7.0s						
POO	**Poona**	**146.45**	**86**	⇓*i*P	**PKPdf**	**21 36 07.0**	**-3.0**
	comp=Z,500nm,1.2s						
POO				⇑*i*P	**PKPab**	**21 36 12.4**	**+0.2**
POO				*i* x	x	21 46 31.0	
TRD	**Trivandrum**	**146.66**	**105**	⇑*i*P	**PKPdf**	**21 36 09.3**	**-1.1**
JMU	**Jammu**	**146.71**	**60**	*e*P	**PKPbc**	**21 36 11.0**	**-0.7**
IRK	**Irkutsk**	**147.48**	**6**	*e*PKIKP	**PKPdf**	**21 36 11.6**	**+0.9**
IRK				*e*		21 39 44.6	
IRK				pmax	pmax		
	comp=Z,2µm,2.2s						
MOY	**Mondy**	**147.62**	**10**	*e*PKP2	**PKPbc**	**21 36 12.9**	**-0.9**
MOY				pmax	pmax		
	comp=Z,2µm,2.3s						
CIT	**Chita**	**147.78**	**355**	*e*PKP2	**PKPbc**	**21 36 13.3**	**-0.8**
CIT				*e*		21 39 40.2	
CIT				pmax	pmax		
	comp=Z,2µm,2.3s						
TLY	**Talaya**	**147.97**	**7**	PKPbc	**PKPdf**	**21 36 13.0**	**+1.5**
	comp=Z,232nm,1.3s,baz=243,slow=0.9,SNR=49						
TLY	**Talaya**	**147.97**	**7**	*c* *i*PKIKP	**PKPdf**	**21 36 12.6**	**+1.0**
TLY				*e*		21 39 42.3	
TLY				*e*SS	SS	21 58 45.0	-1.5
TLY				pmax	pmax		
	comp=Z,3µm,2.3s						
TLY	**Talaya**	**147.97**	**7**		**PKPdf**	**21 36 10.9**	**-0.6**
TLY				IAMs_20	IAMs_20	22 45 18.3	
	comp=Z,15µm,20.0s						
DHRM	**DHARAMSHALA**	**147.97**	**61**	*e*P	**PKPdf**	**21 36 12.7**	**+0.3**
FAKI	**Fak Fak**	**148.08**	**227**	IAMs_20	IAMs_20	22 35 33.9	
	comp=Z,15µm,21.0s						
BHK	**Bhakra**	**148.27**	**62**	*e*P	**PKPdf**	**21 36 14.0**	**+1.3**
BHK				*e*x	x	21 37 07.0	
MMRI	**Maumere**	**148.94**	**205**	IAMs_20	IAMs_20	22 43 16.4	
	comp=Z,13µm,20.0s						
SMLA	**Simla**	**148.96**	**62**	⇑*i*P	**PKPdf**	**21 36 14.8**	**+1.0**
KLRI	**Killari**	**148.97**	**88**	*e*PKPbc	**PKPdf**	**21 36 14.8**	**+0.6**
KLRI				IVMs_BB	IVMs_BB	22 44 59.4	
	comp=Z,6µm,18.1s						
URV	**Uravakonda**	**148.99**	**94**	*e*PKPbc	**PKPdf**	**21 36 15.1**	**+0.8**
URV				*e*PP	**PP**	**21 39 46.4**	**-3.0**
URV				IVMs_BB	IVMs_BB	22 40 46.6	
	comp=Z,6µm,20.5s						
JCJ	**Chichijima**	**149.14**	**290**	PKPbc	**PKPbc**	**21 36 18.0**	**-0.4**
	comp=Z,216nm,0.5s,baz=331,slow=4.1,SNR=24						
ZAK	**Zakamensk**	**149.21**	**8**	*e*PKIKP	**PKPdf**	**21 36 15.1**	**+1.4**
ZAK				pmax	pmax		
	comp=Z,302nm,1.5s						
USRK	**Ussuriysk Ar.**	**149.31**	**327**	PKPbc	**PKPbc**	**21 36 18.6**	**+0.4**
	comp=Z,387nm,1.1s,baz=18,slow=0.9,SNR=118						
USRK				PP	**PP**	**21 39 50.2**	**+0.5**
	comp=Z,26nm,1.1s,baz=32,slow=4.7,SNR=4.2						
USRK	**Ussuriysk Ar.**	**149.31**	**327**	PKIKP	**PKPdf**	**21 36 12.9**	**-1.0**
USRK	**Ussuriysk Ar.**	**149.31**	**327**		**PKPdf**	**21 36 12.9**	**-1.0**
NDI	**New Delhi**	**149.48**	**67**	*e*P	**PKPdf**	**21 36 13.0**	**-1.7**
PALK	**Pallekele**	**149.49**	**110**	*i* PKPbc	**PKPdf**	**21 36 16.2**	**+1.0**
	SNR=24						
XMIS	**Christmas Isla**	**149.58**	**173**	IAMs_20	IAMs_20	22 36 33.3	
	comp=Z,11µm,22.0s						
MJAR	**Matsushiro Arr**	**149.83**	**309**	PKPbc	**PKPbc**	**21 36 20.2**	**+0.4**
	comp=Z,187nm,0.9s,baz=96,slow=0.7,SNR=37						
MJAR	**Matsushiro Arr**	**149.83**	**309**	PKIKP	**PKPdf**	**21 36 13.8**	**-1.2**
MJAR	**Matsushiro Arr**	**149.83**	**309**		**PKPdf**	**21 36 13.8**	**-1.2**
MAJO	**Matsushiro**	**149.83**	**309**	PKIKP	**PKPdf**	**21 36 13.8**	**-1.3**
MAJO				MLR	MLR		
	comp=Z,17µm,21.0s						
MAJO	**Matsushiro**	**149.83**	**309**		**PKPdf**	**21 36 13.8**	**-1.3**
MAT	**Matsushiro**	**149.83**	**309**	PKP	**PKPdf**	**21 36 15.0**	**-0.1**
JHJ2	**Mitsune**	**149.88**	**302**	IAMs_20	IAMs_20	22 49 38.0	
	comp=Z,14µm,19.0s						
DDI	**Dehra Dun**	**149.89**	**64**	*e*P	**PKPdf**	**21 36 17.2**	**+1.8**
JHJ	**Hachijo jima 2**	**149.90**	**302**	PKPbc	**PKiKP**	**21 36 20.6**	**-0.4**
	comp=Z,664nm,0.9s,baz=227,slow=5.7,SNR=7.8						
WMQ	**Urumqi**	**150.04**	**32**	PKPbc	**PKPdf**	**21 36 16.4**	**+1.2**
WMQ				pPKP	PKPab	21 36 25.6	-0.3
WMQ				PP	**PP**	**21 39 58.6**	**+4.5**
WMQ				SKKS		21 46 44.1	
WMQ				SS	**SS**	**21 59 11.8**	**+0.9**
WMQ				AMB	AMB		
	comp=Z,3µm,5.5s						
WMQ				LR	LR		
	comp=Z,10µm,21.3s						
WMQ				LR	LR		
	comp=Z,18µm,20.1s						
WMQ				LR	LR		
	comp=Z,29µm,19.7s						
BHPL	**Bhopal**	**150.13**	**78**	⇑*i*P	**PKPdf**	**21 36 14.6**	**-1.4**
MDJ	**Mudanjiang**	**150.18**	**330**	PKPbc	**PKPdf**	**21 36 15.5**	**+0.2**
MDJ				pPKP	PKiKP	21 36 21.3	+0.1
MDJ				PP	**PP**	**21 39 54.6**	**0.0**
MDJ				SS	SS	21 59 09.4	-2.7
MDJ				LR	LR		
	comp=Z,10µm,22.8s						
MDJ				LR	LR		
	comp=Z,17µm,19.7s						
MDJ				LR	LR		
	comp=Z,21µm,27.1s						
HYB	**Hyderabad**	**150.70**	**90**	*i* PKP	**PKPdf**	**21 36 17.0**	**0.0**
HYB				*e*		21 36 22.0	
HYB				*e*PP	**PP**	**21 40 00.0**	**+0.6**
HYB	**Hyderabad**	**150.70**	**90**	*e*P	**PKPdf**	**21 36 17.0**	**0.0**
HYB				*i* PP	**PP**	**21 39 56.1**	**-3.4**
HYBB	**Hyderabad (bro**	**150.70**	**90**	*e*PKPbc	**PKPdf**	**21 36 17.6**	**+0.6**
HYBB				*e*PP	**PP**	**21 39 58.0**	**-1.4**
HYBB				IVMs_BB	IVMs_BB	22 39 09.1	
	comp=Z,4µm,22.7s						
SRSP	**Sriramsagar**	**150.73**	**87**	*e*PKPbc	**PKPdf**	**21 36 17.3**	**+0.3**
SRSP				*e*PP	**PP**	**21 39 58.1**	**-1.4**
SRSP				IVMs_BB	IVMs_BB	22 40 04.3	
	comp=Z,3µm,22.4s						
SRLM	**Srisailam**	**150.78**	**92**	*e*PKPbc	**PKPdf**	**21 36 17.8**	**+0.8**
SRLM				*e*PP	**PP**	**21 39 56.7**	**-3.2**
SRLM				IVMs_BB	IVMs_BB	22 42 42.8	
	comp=Z,4µm,20.8s						
SKHT	**Srikalahasti**	**150.97**	**98**	*e*PKPbc	**PKPdf**	**21 36 18.5**	**+1.2**
SKHT				*e*PP	**PP**	**21 39 59.2**	**-1.6**
SKHT				IVMs_BB	IVMs_BB	22 40 48.7	
	comp=Z,2µm,20.6s						
INU	**Inuyama**	**151.21**	**308**	IAMs_20	IAMs_20	22 53 30.8	
	comp=Z,12µm,20.0s						
NJS	**Nagarjunasagar**	**151.26**	**92**	*e*PKPbc	**PKPdf**	**21 36 18.5**	**+0.8**
NJS				*e*PP	**PP**	**21 40 01.8**	**-0.7**
NJS				IVMs_BB	IVMs_BB	22 44 14.3	
	comp=Z,3µm,19.0s						
MDRS	**Chennai**	**151.27**	**99**	⇑*i*P	**PKPdf**	**21 36 17.9**	**+0.1**
MDRS				*i* PP	**PP**	**21 39 57.3**	**-5.3**
JAGI	**Jajag, Banyuwa**	**151.41**	**190**	IAMs_20	IAMs_20	22 42 37.5	
	comp=Z,11µm,21.0s						
RPR	**Rampur**	**151.61**	**87**	*e*PKPbc	**PKPdf**	**21 36 18.4**	**+0.1**
RPR				*e*PP	**PP**	**21 40 03.2**	**-1.4**
RPR				IVMs_BB	IVMs_BB	22 43 13.3	
	comp=Z,3µm,20.3s						
ADKI	**Addanki**	**151.73**	**93**	*e*PKPbc	**PKPdf**	**21 36 19.5**	**+1.1**
ADKI				*e*PP	**PP**	**21 40 03.8**	**-1.4**
ADKI				IVMs_BB	IVMs_BB	22 53 37.8	
	comp=Z,3µm,17.8s						
PTH	**Pithoragarh**	**151.89**	**64**	*e*P	**PKPdf**	**21 36 15.1**	**-3.6**
PTH				*e*x	x	21 39 53.1	
SONM	**Songino Array**	**152.03**	**4**	PKP	**PKPdf**	**21 36 19.3**	**+1.1**
	comp=Z,58nm,1.2s,baz=243,slow=0.5,SNR=112						
SONM				PKPbc	**PKiKP**	**21 36 25.1**	**0.0**
	comp=Z,130nm,1.0s,baz=325,slow=1.8,SNR=58						
SONM	**Songino Array**	**152.03**	**4**		**PKPdf**	**21 36 16.8**	**-1.4**
SONM					**PKPbc**	**21 36 23.7**	**-1.1**
ULN	**Ulaanbaatar**	**152.04**	**3**	PKIKP	**PKPdf**	**21 36 17.0**	**-1.3**
ULN				MLR	MLR		
	comp=Z,19µm,20.0s						
ULN	**Ulaanbaatar**	**152.04**	**3**		**PKPdf**	**21 36 17.0**	**-1.3**
GGR	**Gangavaram**	**152.32**	**89**	*e*PKPbc	**PKPdf**	**21 36 20.0**	**+0.6**
GGR				*e*PP	**PP**	**21 40 06.7**	**-2.0**
GGR				IVMs_BB	IVMs_BB	22 47 44.0	
	comp=Z,3µm,17.6s						
UGM	**Wanagama**	**152.34**	**182**	IAMs_20	IAMs_20	22 42 35.7	
	comp=Z,11µm,20.0s						
MYLAV	**Mylavaram**	**152.54**	**92**	*e*PKPbc	**PKPdf**	**21 36 21.0**	**+1.3**
MYLAV				*e*PP	**PP**	**21 40 05.7**	**-4.2**
MYLAV				IVMs_BB	IVMs_BB	22 44 05.9	
	comp=Z,4µm,19.7s						
CN2	**Changchun**	**152.64**	**334**	*e*PKPbc	**PKPdf**	**21 36 18.1**	**-1.0**
CN2				*e*PP	**PP**	**21 40 11.6**	**+3.0**
CN2				AMB	AMB		
	comp=Z,2µm,6.8s						
CN2				LR	LR		
	comp=Z,16µm,22.0s						
CN2				LR	LR		
	comp=Z,10µm,22.0s						
CN2				LR	LR		
	comp=Z,16µm,22.0s						
CISI	**Cisompet, Garu**	**152.67**	**177**	IAMs_20	IAMs_20	22 38 58.8	
	comp=Z,13µm,22.0s						
SMRI	**Semarang**	**153.19**	**182**	IAMs_20	IAMs_20	22 41 15.5	
	comp=Z,14µm,21.0s						
PVM	**Polavaram**	**153.56**	**91**	*e*PKPbc	**PKPdf**	**21 36 22.2**	**+1.1**
PVM				*e*PP	**PP**	**21 40 11.2**	**-4.5**
PVM				IVMs_BB	IVMs_BB	22 42 10.3	
	comp=Z,3µm,21.3s						
SNY	**Shenyang**	**155.05**	**334**	⇑PKPbc	**PKPdf**	**21 36 23.0**	**+0.5**
SNY				PP	**PP**	**21 40 23.3**	**+1.2**
SNY				SS	SS	22 00 06.9	+1.6
SNY				LR	LR		
	comp=Z,4µm,17.3s						
SNY				LR	LR		
	comp=Z,1µm,21.3s						
SNY				LR	LR		
	comp=Z,18µm,22.4s						
DANN	**Dangsing**	**155.19**	**65**	*e*P	**PKPdf**	**21 36 23.7**	**+0.1**
	comp=Z,751nm,1.0s						
LUWI	**Luwuk**	**155.39**	**214**	IAMs_20	IAMs_20	22 39 10.0	
	comp=Z,11µm,22.0s						
GKN	**Gorkha**	**156.02**	**66**	*e*P	**PKPdf**	**21 36 23.8**	**-0.7**
CHLP	**Challavanipeta**	**156.05**	**89**	*e*PKPbc	**PKPdf**	**21 36 25.2**	**+0.6**
CHLP				*e*PP	**PP**	**21 40 27.5**	**-2.1**
CHLP				IVMs_BB	IVMs_BB	22 44 06.6	
	comp=Z,4µm,20.5s						
KSRS	**Korea Array**	**156.20**	**321**	PKP	**PKPdf**	**21 36 24.9**	**+0.7**
	comp=Z,57nm,1.1s,baz=49,slow=0.8,SNR=78						
KSRS				PKPab	**PKPab**	**21 36 51.9**	**0.0**
	comp=Z,24nm,0.9s,baz=56,slow=0.8,SNR=4.7						
KSRS				PP	**PP**	**21 40 30.4**	**+1.4**
	comp=Z,7.6nm,1.0s,baz=37,slow=4.7,SNR=4.2						
KSAR	**Wonju Array Be**	**156.23**	**321**	PKIKP	**PKPdf**	**21 36 23.0**	**-1.3**
KSAR	**Wonju Array Be**	**156.23**	**321**		**PKPdf**	**21 36 23.0**	**-1.3**
DMN	**Daman**	**156.52**	**66**	*e*P	**PKPdf**	**21 36 24.8**	**-0.5**
	comp=Z,438nm,1.6s						
KKN	**Kakani**	**156.63**	**66**	*e*P	**PKPdf**	**21 36 25.0**	**-0.4**
	comp=Z,237nm,1.4s						
JNU	**Nakatsue**	**156.75**	**309**	PKP	**PKPdf**	**21 36 25.7**	**+0.5**
	comp=Z,18nm,1.1s,baz=87,slow=5.0,SNR=5.0						
JNU				PKPab	**PKPab**	**21 36 55.2**	**+0.7**
	comp=Z,21nm,0.9s,baz=4.9,slow=3.8,SNR=5.0						
PKIN	**Phulchoki**	**156.78**	**66**	*e*P	**PKPdf**	**21 36 24.5**	**-1.2**
PKI	**Pulchoki**	**156.79**	**66**	*e*P	**PKPdf**	**21 36 24.5**	**-1.3**
PMBI	**Palembang**	**156.86**	**168**	IAMs_20	IAMs_20	22 49 45.9	
	comp=Z,9µm,20.0s						
INCN	**Inchon**	**156.92**	**323**	PKP2	**PKPab**	**21 36 53.1**	**-2.0**
INCN						22 36 22.8	
INCN				MLR	MLR		
	comp=Z,13µm,18.0s						
INCN	**Inchon**	**156.92**	**323**		**PKPdf**	**21 36 22.8**	**-2.4**
INCN					**PKPab**	**21 36 53.1**	**-2.0**
INCN	**Inchon**	**156.92**	**323**	IAMs_20	IAMs_20	22 58 42.6	
	comp=Z,13µm,18.0s						
GUN	**Gumba**	**157.11**	**65**	*e*P	**PKPdf**	**21 36 25.8**	**-0.4**
	comp=Z,961nm,1.6s						
JIRN	**Jiri**	**157.44**	**66**	*e*P	**PKPdf**	**21 36 25.6**	**-1.0**
	comp=Z,1µm,2.3s						
BWNR	**Bhubaneshwar**	**157.85**	**85**	⇑*i*P	**PKPdf**	**21 36 26.7**	**-0.1**
BWNR				*i* x	x	21 40 45.2	
BOK	**Bokaro**	**157.86**	**76**	⇑*i*P	**PKPdf**	**21 36 27.1**	**+0.4**
BOK				*i* PP	**PP**	**21 40 36.2**	**-3.3**
RAMN	**Ramite**	**157.97**	**67**	*e*P	**PKPdf**	**21 36 26.4**	**-0.7**
	comp=Z,847nm,1.7s						
DL2	**Dalian**	**158.31**	**333**	PKP	**PKPdf**	**21 36 26.9**	**+0.1**
DL2				PP	**PP**	**21 40 46.8**	**+6.6**
DL2				AMB	AMB		
	comp=Z,3µm,7.7s						
DL2				LR	LR		
	comp=Z,8µm,21.6s						
DL2				LR	LR		
	comp=Z,7µm,20.6s						
DL2				LR	LR		
	comp=Z,12µm,21.4s						
ODAN	**Odare**	**158.68**	**67**	*e*P	**PKPdf**	**21 36 27.4**	**-0.6**
	comp=Z,570nm,1.6s						
TAPN	**Taplejung**	**158.82**	**65**	*e*P	**PKPdf**	**21 36 27.6**	**-0.6**
	comp=Z,1µm,2.3s						
GTA	**Gaotai**	**158.88**	**21**	⇑PKP	**PKPdf**	**21 36 28.8**	**+1.1**
GTA				pPKP	sPKPdf	21 36 39.3	+7.9
GTA				PKPab	**pPKPab**	**21 37 05.9**	**-0.4**
GTA				PP	**PP**	**21 40 45.8**	**+2.4**
GTA				SKKS		21 47 33.1	
GTA				SS	**SS**	**22 00 48.3**	**+1.8**
GTA				AMB	AMB		
	comp=Z,6µm,10.5s						
GTA				LR	LR		
	comp=Z,10µm,19.7s						
GTA				LR	LR		
	comp=Z,10µm,21.3s						
GTA				LR	LR		
	comp=Z,14µm,21.9s						
HHC	**Hu-ho-hao-te**	**159.04**	**355**	*e*PKP	**PKPdf**	**21 36 28.9**	**+1.1**
HHC				SS	SS	22 00 47.5	-0.1
HHC				AMB	AMB		
	comp=Z,15µm,9.4s						
HHC				LR	LR		
	comp=Z,41µm,19.0s						
HHC				LR	LR		
	comp=Z,40µm,19.9s						
BJI	**Beijing**	**159.10**	**345**	PKP	**PKPdf**	**21 36 28.8**	**+1.1**
BJI				pPKP	**sPKPdf**	**21 36 33.9**	**+2.4**
BJI				LR	LR		
	comp=Z,7µm,19.1s						
BJI				LR	LR		
	comp=Z,9µm,22.1s						
BJI				LR	LR		
	comp=Z,11µm,24.5s						
BJT	**Baijiatuau**	**159.12**	**345**	IAMs_20	IAMs_20	22 53 52.3	
	comp=Z,13µm,20.0s						
BTO	**Baotou**	**159.36**	**359**	*e*PKP	**PKPdf**	**21 36 28.6**	**+0.4**
GTK	**Tadong**	**159.59**	**65**	*i* P	**PKPdf**	**21 36 26.6**	**-2.4**
GTK				*i* PP	**PP**	**21 40 45.7**	**-3.1**
DAV	**Davao City (W)**	**159.76**	**233**	PP	PP	21 40 51.0	+1.9
	comp=Z,98nm,0.3s,baz=156,slow=6.7,SNR=3.6						
DAV	**Davao City (W)**	**159.76**	**233**	IAMs_20	IAMs_20	22 41 40.1	
	comp=Z,13µm,20.0s						
KCP	**Kidapawan**	**160.09**	**232**	⇑*e*P	**PKPdf**	**21 36 29.8**	**0.0**
PSI	**Prapat**	**160.17**	**148**	PP	PP	21 40 51.8	+1.2
	comp=Z,4.7nm,0.7s,baz=176,slow=4.4,SNR=2.8						
CMBY	**CAMPBELL BAY**	**160.27**	**128**	*e*P	**PKPdf**	**21 36 28.7**	**-1.1**
CMBY				*i* PP	**PP**	**21 40 52.5**	**+0.6**
LSA	**Lhasa**	**160.81**	**56**	PKP	**PKPdf**	**21 36 31.6**	**+1.0**
LSA				LR	LR		
	comp=Z,38µm,19.9s						
LSA				LR	LR		
	comp=Z,41µm,15.7s						
LSA				LR	LR		
	comp=Z,69µm,22.8s						
LSA	**Lhasa**	**160.81**	**56**	PKPdf	**PKPdf**	**21 36 31.8**	**+1.2**
KSM	**Kuching**	**161.66**	**183**		**PKPdf**	**21 36 29.3**	**-2.1**
PAGZ	**Pagadian**	**161.90**	**230**	*e*P	**PKPdf**	**21 36 31.3**	**-0.3**
PBA	**Port Blair**	**162.02**	**115**	*i* P	PKPdf	21 36 27.5	-4.1
PBA				*i* PP	PP	21 40 59.1	-2.6
TIY	**Taiyuan**	**162.06**	**352**	*e*PKP	**PKPdf**	**21 36 32.1**	**+0.9**
TIY				PP	**PP**	**21 41 03.1**	**+2.9**
TIY				SS	SS	22 01 20.3	+1.0
TIY				LR	LR		
	comp=Z,7µm,16.8s						
TIY				LR	LR		
	comp=Z,13µm,17.9s						
TIY				LR	LR		
	comp=Z,20µm,20.8s						
TIA	**Tai'an**	**162.39**	**339**	PKP	**PKPdf**	**21 36 32.3**	**+0.8**

TIA				SS	SS	22 01 20.1	-2.9
TIA				AMB	AMB		
	comp=Z,3µm,6.8s						
TIA				LR	LR		
	comp=Z,12µm,22.6s						
TIA				LR	LR		
	comp=Z,6µm,20.1s						
TIA				LR	LR		
	comp=Z,11µm,21.4s						
IPM	**Ipoh**	**162.64**	**151**		**PKPdf**	**21 36 30.3**	**-2.1**
TBP	**Tagbilaran**	**162.72**	**236**	*e*P	PKPdf	21 36 21.9	-11
DGPR	**DIGLIPUR**	**162.87**	**110**	⇑*i*P	**PKPdf**	**21 36 31.4**	**-1.1**
DGPR				*i* PP	**PP**	**21 41 03.7**	**-2.6**
SHL	**Shillong**	**162.91**	**68**	⇑*i*P	**PKPdf**	**21 36 29.6**	**-2.9**
SHL				*i* PP	**PP**	**21 41 05.7**	**-1.0**
LZH	**Lanzhou**	**163.16**	**16**	⇑PKP	**PKPdf**	**21 36 33.8**	**+1.3**
LZH				PKPab	**PKPab**	**21 37 22.8**	**+0.5**
LZH				PP	**PP**	**21 41 04.6**	**-1.6**
LZH				SKKS		21 47 49.6	
LZH				AMB	AMB		
	comp=Z,6µm,8.1s						
LZH				LR	LR		
	comp=Z,13µm,19.0s						
LZH				LR	LR		
	comp=Z,16µm,18.4s						
LZH				LR	LR		
	comp=Z,24µm,20.6s						
BRDH	**Bariadhala**	**163.24**	**77**	PKP	**PKPdf**	**21 36 34.0**	**+1.4**
	comp=Z,111nm,0.3s,baz=300,slow=20						
BRDH				PKPab	**PKPab**	**21 37 23.1**	**-0.1**
	comp=Z,81nm,0.3s,baz=73,slow=19,SNR=2.1						
GUIM	**Jordan**	**164.28**	**236**	*e*P	**PKPdf**	**21 36 33.5**	**-0.4**
SSE	**Sheshan**	**164.60**	**319**	PKP	**PKPdf**	**21 36 31.9**	**-1.8**
SSE				PP	**PP**	**21 41 18.3**	**+3.9**
SSE				SS	SS	22 01 42.5	-4.6
SSE				LR	LR		
	comp=Z,6µm,22.7s						
SSE				LR	LR		
	comp=Z,4µm,21.2s						
KKM	**Kota Kinabalu**	**164.71**	**207**		**PKPdf**	**21 36 32.2**	**-2.2**
NJ2	**Nanjing**	**165.22**	**327**	*e*PKP	**PKPdf**	**21 36 34.8**	**+0.6**
NJ2				pPKP	**sPKPdf**	**21 36 39.3**	**+1.4**
NJ2				sPKP		21 36 41.3	
NJ2				PKPab	**PKPab**	**21 37 30.5**	**-0.8**
NJ2				PP	**PP**	**21 41 17.1**	**-0.2**
NJ2				SS	SS	22 01 52.1	-0.8
NJ2				AMB	AMB		
	comp=Z,5µm,7.1s						
NJ2				LR	LR		
	comp=Z,9µm,18.0s						
NJ2				LR	LR		
	comp=Z,12µm,17.1s						
NJ2				LR	LR		
	comp=Z,16µm,21.3s						
OTRP	**Odiongan**	**165.74**	**240**	*e*P	**PKPdf**	**21 36 35.8**	**+0.7**
OTRP				*e*S	**PKPab**	**21 37 36.6**	**+2.4**
XAN	**Xi'an**	**165.91**	**2**	PKP	**PKPdf**	**21 36 35.6**	**+0.8**
XAN				PKPab	**PKPab**	**21 37 32.1**	**-2.2**
XAN				SS	SS	22 01 58.8	0.0
XAN				LR	LR		
	comp=Z,15µm,23.0s						
XAN				LR	LR		
	comp=Z,5µm,26.5s						
XAN				LR	LR		
	comp=Z,15µm,24.9s						
BATP	**Bataraza**	**166.28**	**218**	*e*P	**PKPdf**	**21 36 36.9**	**+1.3**
BOAC	**Boac**	**166.46**	**244**	*e*P	**PKPdf**	**21 36 36.0**	**+0.4**
BUSP	**Coron**	**166.97**	**235**	*e*P	**PKPdf**	**21 36 34.1**	**-2.0**
ENPP	**El Nido**	**167.03**	**230**	*e*P	**PKPdf**	**21 36 36.8**	**+0.7**
ENPP				*e*S	**PP**	**21 41 28.9**	**+1.5**
PGP	**Puerto Galera**	**167.22**	**242**	⇑*e*P	**PKPdf**	**21 36 35.5**	**-0.8**
CD2	**Chengdu**	**167.92**	**24**	PKP	**PKPdf**	**21 36 36.0**	**-0.4**
CD2				pPKP	sPKPdf	21 36 47.4	+7.3
CD2				PP	**PP**	**21 41 30.8**	**-0.3**
CD2				SKS	**SKSdf**	**21 43 37.9**	**-2.7**
CD2				SKKS	**SKKSac**	**21 48 19.3**	**-0.4**
CD2				SS	**SS**	**22 02 20.3**	**+0.5**
CD2				AMB	AMB		
	comp=Z,11µm,10.3s						
CD2				LR	LR		
	comp=Z,26µm,29.9s						
CD2				LR	LR		
	comp=Z,20µm,27.5s						
CD2				LR	LR		
	comp=Z,23µm,27.5s						
LUBP	**Lubang**	**167.93**	**241**	*e*P	**PKPdf**	**21 36 36.5**	**-0.2**
WHN	**Wuhan**	**168.50**	**338**	⇑PKP	**PKPdf**	**21 36 37.5**	**+0.8**
WHN				PKPab	**PKPab**	**21 37 44.8**	**-1.0**
WHN				PP	**PP**	**21 41 32.0**	**-1.8**
WHN				SS	SS	22 02 22.4	-2.9
WHN				LR	LR		
	comp=Z,34µm,18.4s						
WHN				LR	LR		
	comp=Z,5µm,17.2s						
WHN				LR	LR		
	comp=Z,52µm,26.0s						
SCZP	**Santa Cruz**	**169.17**	**249**	*e*P	**PKPdf**	**21 36 38.6**	**+1.1**
CMAR	**Chiang Mai Arr**	**170.03**	**97**	PKP	**PKPdf**	**21 36 38.3**	**+0.3**
	comp=Z,9.3nm,1.0s,baz=266,slow=1.7,SNR=54						
CMAR				PKPab	**PKPab**	**21 37 54.4**	**+1.2**
	comp=Z,13nm,1.0s,baz=257,slow=5.9,SNR=7.1						
CMAR				PP	**PP**	**21 41 44.4**	**+0.7**
	comp=Z,14nm,1.1s,baz=279,slow=5.2,SNR=5.4						
CMAR	**Chiang Mai Arr**	**170.03**	**97**		**PKPdf**	**21 36 36.1**	**-1.9**
CMAR					**PKPab**	**21 37 51.2**	**-2.0**
CHTO	**Chiang Mai**	**170.09**	**95**	PKIKP	**PKPdf**	**21 36 36.1**	**-1.9**
CHTO	**Chiang Mai**	**170.09**	**95**		**PKPdf**	**21 36 36.1**	**-1.9**
QZH	**Quanzhou**	**170.12**	**302**	*i* PKP	**PKPdf**	**21 36 39.0**	**+1.2**
QZH				PKPab	**PKPab**	**21 37 53.9**	**+0.6**
QZH				PP	**PP**	**21 41 42.3**	**-1.1**
QZH				AMB	AMB		
	comp=Z,5µm,7.9s						
QZH				LR	LR		
	comp=Z,9µm,19.9s						
QZH				LR	LR		
	comp=Z,8µm,18.9s						
QZH				LR	LR		
	comp=Z,12µm,20.8s						
KMI	**Kunming**	**171.96**	**49**	PKP	**PKPdf**	**21 36 39.8**	**+0.7**
KMI				pPKP	sPKPdf	21 36 44.9	+2.1
GYA	**Guiyang**	**173.01**	**20**	*i* PKP	**PKPdf**	**21 36 39.8**	**+0.4**
GYA				PKPab	**PKPab**	**21 38 07.0**	**+0.9**
GYA				PKS		21 40 07.8	
GYA				PP	PP	21 42 04.9	+8.4
GYA				SKKS		21 48 45.4	
GYA				SS	**SS**	**22 03 14.5**	**+4.4**
GYA				LR	LR		
	comp=Z,10µm,19.9s						
GYA				LR	LR		
	comp=Z,7µm,18.5s						
GYA				LR	LR		
	comp=Z,9µm,20.2s						
HKC	**Hong Kong Obse**	**174.93**	**299**	⇑P	**PKPdf**	**21 36 42.0**	**+2.0**
GZH	**Guangzhou**	**175.14**	**311**	PKP	**PKPdf**	**21 36 40.8**	**+0.8**
GZH				PP	**PP**	**21 42 05.3**	**-2.5**
GZH				SS	SS	22 03 25.9	-6.4
GZH				LR	LR		
	comp=Z,5µm,22.2s						
GZH				LR	LR		
	comp=Z,7µm,21.6s						
QIZ	**Qiongzhong**	**179.03**	**206**	PKP	**PKPdf**	**21 36 38.6**	**-2.2**
QIZ				PP	**PP**	**21 42 24.3**	**-1.0**
QIZ				SS	SS	22 04 08.5	+1.0
QIZ				AMB	AMB		
	comp=Z,8µm,9.2s						
QIZ				LR	LR		
	comp=Z,10µm,21.4s						
QIZ				LR	LR		
	comp=Z,4µm,20.0s						
QIZ				LR	LR		
	comp=Z,16µm,27.1s						

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*KRNET **16** 21:22:43.9±0.1, 41°.19N×69°.28E, mb3.0*

*SOME **16** 21:22:43.0, 41°.22N×69°.48E, h5^{km}*

*NNC **16** 21:22:45.6±2.1, 41°.31N×69°.49E, h0^{km}, mb3.6, mpv3.1, Error ellipse: s-maj=15.3km s-min=11.1km az=82.0*

*ISU **16** 21:22:45.5, 41°.26N×69°.38E, h5^{km}*

ISC 16 21:22:42.4±0.9**, 41°.29N**±0°.03×**69°.50E**±0°.03**, h15**^{km}±6^{km}**, n31, σ2^s.02**/53**, 23C-7D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGS	**TashGRES**	**0.14**	**5**	*i* P	**Pg**	**21 22 46.8**	**+0.7**
TGS				*i* S	**Sg**	**21 22 48.2**	**-0.4**
TAS	**Tashkent**	**0.16**	**283**	⇑*i*P	**Pg**	**21 22 46.8**	**+0.3**
	baz=7.0						
TAS				⇑*i*S	**Sg**	**21 22 48.9**	**-0.3**
	baz=7.0						
TAS	**Tashkent**	**0.16**	**283**	*e*P	**Pg**	**21 22 47.0**	**+0.5**
TAS				S	**Sb**	**21 22 48.3**	**-2.1**
IUG	**Iuzhnay**	**0.94**	**25**	*e*P	**Pg**	**21 23 02.6**	**+1.9**
	1.9nm,0.2s						
IUG				*e*S	**Sn**	**21 23 16.1**	**+1.4**
	91nm,0.3s						
IUG	**Iuzhnay**	**0.94**	**25**	P	**Pg**	**21 23 02.6**	**+1.9**
	1.9nm,0.2s						
IUG				S	**Sn**	**21 23 16.1**	**+1.4**
	91nm,0.3s						
CHM	**Chimkent**	**1.03**	**4**	*e*P	**Pg**	**21 23 04.9**	**+2.5**
	66nm,0.2s						
CHM				*e*S	**Sg**	**21 23 20.4**	**+4.5**
	752nm,0.5s						
BTK	**Batken**	**1.58**	**140**	⇑*i*P	**Pg**	**21 23 14.1**	**+1.3**
	baz=34						
BTK				⇑*i*S	**Sg**	**21 23 36.2**	**+2.8**
	baz=34						
DZI	**Dzhizak**	**1.73**	**228**	*e*	**Pg**	**21 23 16.3**	**+0.6**
DZI				*e*P	Pb	21 23 18.7	+4.8
DZI				*e*S	**Sg**	**21 23 41.0**	**+2.9**
FRG	**Fergana**	**1.81**	**107**	*i* P	Pg	21 23 23.4	+6.2
FRG				S	Sg	21 23 51.6	+11
ARK	**Arkit**	**1.92**	**74**	⇑*i*P	**Pg**	**21 23 21.9**	**+2.7**
	baz=73						
ARK				⇑*i*S	**Sg**	**21 23 49.7**	**+5.7**
	baz=73						
ARK	**Arkit**	**1.92**	**74**	*i* P	**Pg**	**21 23 20.1**	**+0.9**
ARK				*i* S	Sn	21 23 27.2	-11
KK31	**Karatay Array**	**1.96**	**22**	⇑P	**Pg**	**21 23 20.5**	**+0.4**
	3.7nm,0.4s,baz=19,slow=13,SNR=34						
KK31				S	**Sg**	**21 23 46.4**	**+0.8**
	11nm,0.3s,baz=210,slow=34,SNR=21						
DZA	**Taraz**	**2.10**	**40**	*e*P	**Pg**	**21 23 23.8**	**+1.1**
	12nm,0.2s						
DZA				*e*S	**Sg**	**21 23 53.1**	**+3.1**
	76nm,0.3s						
ARSB	**Arslanbob**	**2.62**	**88**	⇓*i*P	**Pg**	**21 23 31.4**	**-1.3**
	baz=86						
ARSB				⇓*i*S	**Sg**	**21 24 06.1**	**-0.5**
	baz=86						
ARSB	**Arslanbob**	**2.62**	**88**	*e*P	**Pg**	**21 23 33.3**	**+0.6**
ARSB				*e*S	**Sg**	**21 24 09.3**	**+2.7**
MRKS	**Merke**	**3.13**	**61**	*e*P	**Pg**	**21 23 41.9**	**-0.6**
	3.6nm,0.3s						
MRKS				*e*S	**Sg**	**21 24 24.4**	**+1.4**
	18nm,0.4s						
MRKS	**Merke**	**3.13**	**61**	Pg	**Pg**	**21 23 41.9**	**-0.6**
	4.2nm,0.5s						
MRKS				Lg	Lg	21 24 24.4	
	19nm,0.5s						
AML	**Almayashu**	**3.25**	**74**	⇑*i*P	**Pb**	**21 23 40.6**	**+0.6**
	baz=73						
AML				⇑*i*S	**Sb**	**21 24 21.9**	**+2.3**
	baz=73						
EKS2	**Erkin-Say**	**3.47**	**65**	⇑*i*P	**Pb**	**21 23 43.5**	**-0.1**
	baz=65						
EKS2				⇑*i*S	**Sb**	**21 24 26.7**	**+1.0**
	baz=65						
ARLS	**Aral**	**3.66**	**79**	⇑*i*P	**Pb**	**21 23 46.2**	**-0.7**
	baz=78						
ARLS				⇑*i*S	**Sb**	**21 24 31.5**	**+0.3**
	baz=78						
UCH	**Uchtor**	**3.86**	**74**	⇑*i*P	**Pb**	**21 23 49.1**	**-1.5**
	baz=74						
UCH				⇑*i*S	**Sb**	**21 24 36.7**	**-0.6**
	baz=74						
AAK	**Ala-Archa**	**3.96**	**68**	⇓*i*P	**Pb**	**21 23 50.3**	**-1.7**
	baz=68						
AAK				⇓*i*S	**Sb**	**21 24 38.7**	**-1.1**
	baz=68						
AAK	**Ala-Archa**	**3.96**	**68**	⇑Pg	**Pg**	**21 23 56.6**	**-1.6**
	2.0nm,0.4s						
AAK				⇑Lg	Lg	21 24 52.8	
	3.9nm,0.5s						
CHMS	**Chumysh**	**4.26**	**65**	⇑*e*P	**Pb**	**21 23 54.3**	**-2.8**
	baz=64						
CHMS				⇑*i*S	**Sb**	**21 24 45.8**	**-2.5**
	baz=64						
CHMS	**Chumysh**	**4.26**	**65**	⇑Pg	**Pg**	**21 24 04.4**	**+0.4**
	2.1nm,0.6s						
CHMS				⇓Lg	Lg	21 25 02.2	
	4.0nm,0.4s						
KBK	**Karagaybulak**	**4.28**	**70**	⇓*i*P	**Pb**	**21 23 54.8**	**-2.7**
	baz=69						
KBK				⇓*e*S	**Sb**	**21 24 46.6**	**-2.5**
	baz=69						
KZA	**Kyzart**	**4.38**	**78**	⇑*e*P	**Pb**	**21 23 56.2**	**-3.0**
	baz=77						
KZA				⇑*e*S	**Sb**	**21 24 48.9**	**-3.1**
	baz=77						
BTLS	**Baital**	**5.01**	**40**	*e*P	**Pg**	**21 24 16.4**	**-2.0**
	0.7nm,0.2s						
BTLS				*e*S	**Sg**	**21 25 22.9**	**-0.3**
	2.9nm,0.5s						
BTLS	**Baital**	**5.01**	**40**	Pg	**Pg**	**21 24 16.4**	**-2.0**
	0.9nm,0.3s						
KST	**Kastek**	**5.11**	**68**	*e*P	**Pg**	**21 24 18.0**	**-2.3**
	1.4nm,0.3s						
KST				*e*S	**Sg**	**21 25 25.8**	**-0.6**
	11nm,0.7s						
MDOK	**Medeo**	**5.91**	**69**	⇑Lg	Lg	21 25 55.6	
	10nm,1.1s						

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*NEIC **16** 21:24:19.2±1.3, 19°.86S±0°.06×70°.74W±0°.04, h10^{km}±1^{km}, mb4.5/2, Error ellipse: s-maj=10.8km s-min=6.2km az=0.0*

*IDC **16** 21:24:19.3±2.2, 19°.92S×70°.69W, h0^{km}, mb4.1/2, mb1 4.4/2, mb1mx4.0/35, mbtmp4.1/2, Error ellipse: s-maj=101.6km s-min=52.3km az=25.0*

ISC 16 21:24:19.8±0.8**, 19°.9S**±0°.1×**70°.70W**±0°.07**, h10**^{km}**, n13, σ1^s.14**/15**, mb4.4**/3**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB11	**IPOC Station P**	**0.98**	**84**	Pg	**Pg**	**21 24 38.5**	**-0.3**
PB11				Sg	**Sb**	**21 24 52.7**	**+0.5**
GO01	**Chusmiza**	**1.43**	**82**	Pn	**Pn**	**21 24 46.0**	**-0.2**
GO01				Sn	**Sb**	**21 25 05.8**	**+0.5**
PB01	**IPOC Station P**	**1.63**	**136**	Pn	**Pn**	**21 24 48.1**	**-0.6**
PB10	**IPOC Station P**	**3.63**	**178**	Pn	**Pn**	**21 25 16.2**	**0.0**
JTS	**Las Juntas de**	**33.09**	**334**	P	**P**	**21 30 56.6**	**+0.5**
PDPR	**Patillas Dam,**	**37.92**	**7**	P	**P**	**21 31 36.2**	**-1.4**
PDPR				IAmb	IAmb	21 31 44.9	
	comp=Z,7.2nm,0.8s						
TXAR	**Lajitas Array**	**58.34**	**326**	P	**P**	**21 34 16.8**	**+1.4**
	comp=Z,1.0nm,0.7s,baz=156,slow=6.9,SNR=1.8						
TXAR	**Lajitas Array**	**58.34**	**326**	P	**P**	**21 34 14.5**	**-0.9**
TORD	**Torodi Ar. Bea**	**78.40**	**71**	P	**P**	**21 36 22.9**	**+1.6**
	comp=Z,3.2nm,0.8s,baz=251,slow=5.1,SNR=2.7						
TORD	**Torodi Ar. Bea**	**78.40**	**71**	P	**P**	**21 36 21.5**	**+0.2**
WRA	**Warramunga Arr**	**133.45**	**213**	PKP	**PKiKP**	**21 43 37.7**	**-0.8**
	comp=Z,1.1nm,1.0s,baz=144,slow=1.9,SNR=1.3						
MKAR	**Makanchi Array**	**145.24**	**33**	PKPbc	**PKPbc**	**21 43 56.0**	**-1.6**
	comp=Z,1.4nm,0.7s,baz=330,slow=3.0,SNR=2.2						
SONM	**Songino Array**	**152.00**	**4**	PKPbc	**PKiKP**	**21 44 17.7**	**+1.9**
	comp=Z,1.9nm,0.8s,baz=60,slow=2.3,SNR=2.1						

IDC 16 21:24:58.2±2.5**, 19°.72S**×**71°.08W, h0**^{km}**, mb4.1**/1**, mb1 4.4**/2**, mb1mx3.9**/38**, mbtmp4.4**/2**, ML4.6**/1**, Error ellipse: s-maj=88.7km s-min=48.7km az=69.0, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**3.51**	**145**	Pn	Pn	21 25 54.6	+0.2
	54nm,0.3s,baz=331,slow=13,SNR=3.7						
LVC				Sn	Sn	21 26 34.7	-2.2
	9.3nm,0.3s,baz=84,slow=22,SNR=1.0						
TORD	**Torodi Ar. Bea**	**78.70**	**72**	P	P	21 37 02.7	-0.2
	1.5nm,0.8s,baz=274,slow=4.2,SNR=1.4						
WRA	**Warramunga Arr**	**133.37**	**214**	PKP	PKPdf	21 44 16.5	-0.8
	0.9nm,0.9s,baz=150,slow=1.8,SNR=1.5						
MKAR	**Makanchi Array**	**145.32**	**33**	PKPbc	PKPbc	21 44 37.5	-0.3
	2.3nm,1.0s,baz=284,slow=1.8,SNR=2.3						

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*IDC **16** 21:26:22.6±0.6, 19°.73S×70°.55W, h0^{km}, mb4.7/16, mb1 4.8/18, mb1mx4.6/38, mbtmp4.7/18, ML4.2/2, Error ellipse: s-maj=25.4km s-min=14.3km az=62.0*

*NEIC **16** 21:26:24.2±1.7, 19°.93S±0°.04×70°.77W±0°.06, h19^{km}±1^{km}, mb5.0/52, ML4.8(GUC), Error ellipse: s-maj=7.7km s-min=6.2km az=99.0*

*GUC **16** 21:26:24.8±0.6, 19°.84S×70°.77W, h42^{km}±1^{km}, ML4.8*

ISC 16 21:26:24.5±1.5**, 19°.95S**±0°.03×**70°.71W**±0°.05**, h18**^{km}±9^{km}**, n286, σ1^s.24**/280**, mb4.9**/32**, 1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.66**	**58**	*e*P	**Pb**	**21 26 37.6**	**+0.1**
PSGC				*e*S	**Sb**	**21 26 47.6**	**+1.3**
PSGC				IAML		21 26 49.9	
	comp=N,48µm,0.7s						
TA01	**Diego Aracena**	**0.79**	**141**	*e*S	**Sn**	**21 26 54.5**	**+2.2**
TA01				IAML		21 26 56.5	
	comp=E,55µm,0.6s						
PB11	**IPOC Station P**	**1.01**	**80**	*e*P	**Pg**	**21 26 44.4**	**+0.2**
PB11				IAML		21 27 03.5	
	comp=N,38µm,0.3s						
PB11	**IPOC Station P**	**1.01**	**80**		**Pg**	**21 26 44.4**	**+0.2**
PATCX	**Punta Patache**	**1.02**	**149**	⇓*e*P	**Pg**	**21 26 44.9**	**+0.6**
PATCX				*i* S	**Sn**	**21 27 00.8**	**+2.9**
PATCX				IAML		21 27 08.0	
	comp=E,33µm,0.6s						
PB12	**IPOC Station P**	**1.37**	**15**	*e*P	**Pn**	**21 26 48.4**	**-0.6**
PB12				*e*S	**Sn**	**21 27 05.9**	**-0.8**
GO01	**Chusmiza**	**1.46**	**79**	*e*P	**Pb**	**21 26 51.5**	**+0.1**
GO01				*e*S	**Sg**	**21 27 11.6**	**-0.1**
GO01				IAML		21 27 16.2	
	comp=N,37µm,0.3s						
GO01	**Chusmiza**	**1.46**	**79**	Pn	**Pb**	**21 26 51.5**	**+0.1**
GO01				Sn	**Sn**	**21 27 08.2**	**-1.0**
PB08	**IPOC Station P**	**1.48**	**98**	*e*P	**Pb**	**21 26 52.1**	**+0.4**
PB08				*e*S	**Sg**	**21 27 12.4**	**0.0**
PB01	**IPOC Station P**	**1.58**	**134**	Pn	**Pb**	**21 26 53.1**	**-0.3**
PB01				Sn	**Sn**	**21 27 11.5**	**-0.4**
PB04	**IPOC Station P**	**2.43**	**168**	Pn	**Pn**	**21 27 03.6**	**0.0**
LVC	**Limon Verde**	**3.14**	**148**	Pn	**Pn**	**21 27 16.0**	**+2.6**
	comp=N,65nm,0.3s,baz=320,slow=11,SNR=6.2						
LVC				Sn	**Sb**	**21 27 56.0**	**-2.1**
	comp=N,104nm,0.3s,baz=60,slow=20,SNR=1.6						
LVC				Lg	Lg	21 28 01.3	
	comp=N,213nm,0.3s,baz=217,slow=19,SNR=10						
LVC	**Limon Verde**	**3.14**	**148**	Pn	**Pn**	**21 27 14.1**	**+0.7**
PB10	**IPOC Station P**	**3.55**	**178**	Pn	**Pn**	**21 27 18.3**	**-0.5**
LPAZ	**La Paz**	**4.39**	**34**	Pn	**Pn**	**21 27 33.8**	**+2.9**
	comp=N,0.2nm,0.3s,baz=199,slow=18,SNR=2.1						
LPAZ	**La Paz**	**4.39**	**34**	Pn	**Pn**	**21 27 30.9**	**0.0**
LPAZ	**La Paz**	**4.39**	**34**	Pn	**Pg**	**21 27 48.1**	**-0.6**
GO02	**Mina Guanaco**	**5.29**	**169**	Pn	**Pn**	**21 27 42.5**	**-0.5**
GO03	**Copiap**	**7.62**	**177**	Pn	**Pn**	**21 28 14.9**	**+0.1**
NNA	**Nana**	**9.87**	**322**	Pn	**Pn**	**21 28 44.8**	**-0.8**
	comp=N,1.4nm,0.3s,baz=162,slow=9.6,SNR=2.1						
NNA				Sn	**Sn**	**21 30 41.3**	**+5.3**
	comp=N,1.8nm,0.3s,baz=198,slow=8.5,SNR=2.1						
SIV	**San Ignacio**	**9.98**	**68**	Pn	**Pn**	**21 28 47.8**	**+0.7**
	comp=N,1.2nm,0.3s,baz=230,slow=19,SNR=2.9						
CFA	**Coronel Fontan**	**11.82**	**170**	Pn	**Pn**	**21 29 10.5**	**-1.8**
	comp=N,0.1nm,0.3s,baz=0.0,slow=20,SNR=3.1						
ROC1	**El Roble**	**12.98**	**181**	Pn	**Pn**	**21 29 27.8**	**-0.6**
GO05	**Huala**	**15.04**	**184**	Pn	**Pn**	**21 29 55.1**	**-1.2**
GO06	**Curarrehue**	**19.58**	**182**	P	**P**	**21 30 52.3**	**+0.6**
PLCA	**Paso Flores**	**20.72**	**180**	P	Pn	21 31 05.8	-0.7
	comp=N,22nm,0.8s,baz=26,slow=13,SNR=9.2						
PLCA	**Paso Flores**	**20.72**	**180**	P	**P**	**21 31 02.7**	**-1.3**
OTAV	**Otavalo**	**21.45**	**338**	P	**P**	**21 31 10.9**	**-1.5**
PTGA	**Pitinga**	**21.80**	**30**	P	**P**	**21 31 14.8**	**-1.0**
FLOC	**Florencia**	**21.94**	**347**	P	**P**	**21 31 17.6**	**+0.3**
GARC	**Garzon, Huila**	**22.49**	**347**	*e*P	**P**	**21 31 22.4**	**-1.0**
SOTA	**Rioblanco**	**22.69**	**345**	*e*P	**P**	**21 31 31.3**	**+5.5**
BBAC	**Balboa, Cauca**	**22.75**	**343**	*e*P	**P**	**21 31 26.9**	**+0.7**
PCON	**Cinco Dias**	**22.83**	**345**	*e*P	**P**	**21 31 30.4**	**+3.1**
GR1C	**Gorgona, Isla**	**23.95**	**341**	*e*P	**P**	**21 31 37.5**	**-0.4**
PLMC	**San Jos del P**	**25.30**	**347**	*e*P	**P**	**21 31 50.9**	**+0.7**
GUY2C	**Guyana, Caldas**	**25.43**	**349**	*e*P	**P**	**21 31 55.4**	**+3.5**
SMLC	**San Martn de**	**28.76**	**353**	*e*P	P	21 32 14.9	-6.3
SJCC	**San Jacinto, C**	**29.98**	**351**	*e*P	**P**	**21 32 32.8**	**+0.6**
EFI	**East Falkland**	**33.18**	**166**	P	**P**	**21 33 00.9**	**+0.9**
EFI				IAmb	IAmb	21 33 08.0	
	comp=Z,20nm,1.0s						
USHA	**Ushuaia**	**34.87**	**178**	P	**P**	**21 33 16.4**	**+1.8**
	comp=Z,8.8nm,0.9s,baz=355,slow=12,SNR=3.2						
RCBR	**Riachuelo**	**36.62**	**72**	P	**P**	**21 33 29.4**	**-0.7**
	comp=Z,29nm,1.2s,baz=234,slow=11,SNR=2.7						
SJG	**San Juan**	**38.09**	**7**	P	**P**	**21 33 40.5**	**-1.9**
	comp=Z,15nm,0.8s,baz=15,slow=2.0,SNR=4.5						
SJG	**San Juan**	**38.09**	**7**	P	**P**	**21 33 41.1**	**-1.3**
SJG				IAmb	IAmb	21 33 41.1	
	comp=Z,25nm,0.9s						
GCPR	**Guaynabo City**	**38.29**	**7**	P	**P**	**21 33 42.7**	**-1.3**
GCPR				IAmb	IAmb	21 33 43.7	
	comp=Z,25nm,0.8s						
APG	**El Apazote**	**39.80**	**329**	P	**P**	**21 33 56.5**	**-0.5**
	comp=Z,7.4nm,0.9s,baz=100,slow=6.1,SNR=3.3						
TEIG	**Tepich**	**43.47**	**336**	P	**P**	**21 34 26.9**	**+0.1**
	comp=Z,13nm,0.7s,baz=203,slow=0.0,SNR=3.6						
TEIG	**Tepich**	**43.47**	**336**	P	**P**	**21 34 26.8**	**-0.1**
TEIG				IAmb	IAmb	21 34 36.4	
	comp=Z,24nm,0.8s						
CMIG	**Matias Romero**	**43.80**	**326**	P	**P**	**21 34 30.2**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=213,slow=0.2,SNR=3.8						
Y57A	**Sumter**	**54.45**	**350**	P	**P**	**21 35 51.7**	**+0.9**
	baz=169						
Y55A	**Saluda**	**54.63**	**349**	P	**P**	**21 35 52.4**	**+0.3**
	baz=167						
X58A	**Rowland**	**54.82**	**351**	P	**P**	**21 35 53.6**	**+0.1**
	baz=170						
X56A	**White Oak**	**55.02**	**350**	P	**P**	**21 35 55.1**	**+0.2**
	baz=168						
X55A	**Gracelyn & Ava**	**55.10**	**349**	P	**P**	**21 35 55.6**	**0.0**
	baz=168						
W58A	**Raeford**	**55.26**	**351**	P	**P**	**21 35 57.2**	**+0.5**
	baz=170						
833A	**Chaparral WMA,**	**55.42**	**329**	P	**P**	**21 35 56.9**	**-1.1**
833A				IAmb	IAmb	21 36 05.5	
	comp=Z,9.9nm,0.8s						
W56A	**Indian Trail**	**55.57**	**350**	P	**P**	**21 35 58.9**	**-0.1**
	baz=169						
V59A	**Middlesex**	**55.86**	**353**	P	**P**	**21 36 01.4**	**+0.4**
	baz=171						
V56A	**Mocksville**	**56.22**	**350**	P	**P**	**21 36 03.8**	**+0.2**
	baz=169						
V55A	**Taylorsville**	**56.38**	**350**	P	**P**	**21 36 05.2**	**+0.5**
	baz=168						
V54A	**Nebo**	**56.43**	**349**	P	**P**	**21 36 05.0**	**-0.1**
	baz=167						
U58A	**Oxford**	**56.52**	**352**	P	**P**	**21 36 06.3**	**+0.6**
	baz=171						
U57A	**Blanch**	**56.66**	**352**	P	**P**	**21 36 06.8**	**+0.1**
	baz=170						
TKL	**Tuckaleechee C**	**56.67**	**347**	P	**P**	**21 36 05.8**	**-1.0**
	comp=Z,13nm,0.8s,baz=179,slow=11,SNR=4.6						
TKL	**Tuckaleechee C**	**56.67**	**347**	IAmb	IAmb	21 36 07.0	
	comp=Z,21nm,1.0s						
T59A	**Double "B" Far**	**56.98**	**353**	P	**P**	**21 36 09.3**	**+0.4**
	baz=172						
T58A	**Grand View Acr**	**57.06**	**353**	P	**P**	**21 36 10.1**	**+0.6**
	baz=171						
U54A	**Nelsons Funny**	**57.13**	**349**	P	**P**	**21 36 10.0**	**-0.1**
	baz=168						
T57A	**Hurt**	**57.21**	**352**	P	**P**	**21 36 11.0**	**+0.4**
	baz=170						
WLAR	**White Oak Lake**	**57.45**	**338**	P	**P**	**21 36 10.7**	**-1.7**
T55A	**Pulaski**	**57.55**	**350**	P	**P**	**21 36 13.6**	**+0.6**
	baz=169						
T54A	**Tazewell**	**57.62**	**350**	P	**P**	**21 36 13.4**	**-0.2**
	baz=168						
S58A	**Poland Farm, P**	**57.67**	**353**	P	**P**	**21 36 14.4**	**+0.7**
	baz=172						
T53A	**Wise**	**57.71**	**349**	P	**P**	**21 36 13.8**	**-0.4**
	baz=167						
S56A	**Natural Bridge**	**57.92**	**352**	P	**P**	**21 36 16.3**	**+0.7**
	baz=170						
S57A	**Dark Hollow, R**	**57.92**	**352**	P	**P**	**21 36 16.0**	**+0.4**
	baz=171						
T51A	**Gray**	**57.97**	**348**	P	**P**	**21 36 14.9**	**-1.0**
	baz=165						
WVT	**Waverly**	**58.08**	**344**	P	**P**	**21 36 15.4**	**-1.3**
	baz=161						
S55A	**Lewisburg**	**58.15**	**351**	P	**P**	**21 36 17.7**	**+0.5**
	baz=169						
T50A	**Nancy**	**58.21**	**347**	P	**P**	**21 36 16.9**	**-0.7**
	baz=164						

S54A	Dingess, Beckl	58.30	350	P	P	21 36 18.2	-0.1
	baz=168						
R58A	Rapidan	58.34	353	P	P	21 36 18.5	0.0
	baz=172						
MIAR	Mount Ida	58.39	338	P	P	21 36 19.0	0.0
	baz=155						
R57A	Stanardsville	58.40	353	P	P	21 36 19.6	+0.7
	baz=171						
TXAR	Lajitas Array	58.40	326	P	P	21 36 19.3	0.0
	comp=Z,3.6nm,0.8s,baz=146,slow=8.7,SNR=8.1						
TXAR	Lajitas Array	58.40	326	P	P	21 36 18.2	-1.0
T49A	Edmonton	58.44	346	P	P	21 36 18.6	-0.7
	baz=164						
S52A	Salyersville	58.49	349	P	P	21 36 18.9	-0.6
	baz=166						
W41B	Gary Mavity, V	58.51	339	P	P	21 36 19.8	+0.1
	baz=156						
R55A	Marlinton	58.59	351	P	P	21 36 21.1	+0.7
	baz=170						
R54A	Victor	58.62	351	P	P	21 36 20.6	+0.1
	baz=169						
S50A	Richmond	58.75	347	P	P	21 36 20.9	-0.5
	baz=165						
W39A	Magazine	59.05	338	P	P	21 36 23.7	+0.2
	baz=155						
Q57A	Strasburg	59.11	353	P	P	21 36 24.9	+1.0
	baz=172						
ABTX	Abilene, Hawle	59.15	332	P	P	21 36 24.6	+0.3
	baz=148						
Q56A	Snyder Ridge,	59.21	352	P	P	21 36 25.5	+1.0
	baz=171						
Q53A	Leroy	59.37	350	P	P	21 36 25.4	-0.2
	baz=168						
Q54A	Coxs Mills	59.38	351	P	P	21 36 25.5	-0.2
	baz=169						
P58A	Pank, Wackersv	59.44	354	P	P	21 36 26.7	+0.5
	baz=173						
U40A	Yellville	59.78	339	P	P	21 36 28.2	-0.4
	baz=156						
P54A	Burton	59.94	351	P	P	21 36 29.9	+0.3
	baz=169						
P53A	Whipple	59.96	350	P	P	21 36 29.2	-0.6
	baz=168						
O57A	Amberson	60.19	354	P	P	21 36 31.7	+0.4
	baz=172						
Q48A	North Vernon	60.23	347	P	P	21 36 30.3	-1.3
	baz=164						
O56A	Blue Knob Stat	60.35	353	P	P	21 36 33.0	+0.5
	baz=172						
O55A	Ligonier	60.38	352	P	P	21 36 32.8	+0.2
	baz=171						
TUL1	Leonard	60.42	337	P	P	21 36 33.3	+0.3
	baz=153						
O54A	Avella	60.49	352	P	P	21 36 33.1	-0.3
	baz=170						
N59A	State Game Lan	60.73	356	P	P	21 36 35.8	+0.8
	baz=174						
N55A	Marion Center	60.90	353	P	P	21 36 37.0	+0.8
	baz=171,SNR=6.8						
ACSO	Alum Creek Sta	60.95	349	P	P	21 36 36.2	-0.3
	baz=167						
N56A	West Decatur	60.96	353	P	P	21 36 37.0	+0.4
	baz=172						
MNTX	Cornudas Mount	61.17	326	P	P	21 36 37.8	-0.4
	baz=142						
N54A	Moraine State	61.21	352	P	P	21 36 38.6	+0.4
	baz=170						
M58A	Price's Panora	61.24	355	P	P	21 36 39.4	+0.9
	baz=174						
M59A	Waymart	61.33	356	P	P	21 36 39.8	+0.7
	baz=175						
O48A	Farmland	61.39	347	P	P	21 36 38.3	-1.1
	baz=164						
L63A	North Scituate	61.50	359	P	P	21 36 40.4	+0.3
	baz=179						
M56A	Emporium	61.51	354	P	P	21 36 40.7	+0.4
	baz=172						
M55A	Ridgway	61.56	353	P	P	21 36 41.1	+0.6
	baz=171,SNR=6.5						
L64A	Middleborough	61.57	360	P	P	21 36 40.9	+0.4
	baz=180						
M54A	Oil Creek Stat	61.70	352	P	P	21 36 41.8	+0.2
	baz=170						
MSTX	Muleshoe	61.71	330	P	P	21 36 42.1	+0.2
	baz=146						
M53A	WI Miller and	61.77	352	P	P	21 36 42.0	0.0
	baz=169						
N49A	Columbus Grove	61.84	348	P	P	21 36 41.8	-0.7
	baz=166						
L58A	Harry Jones Me	61.86	356	P	P	21 36 43.1	+0.5
	baz=174						
L57A	Andrews Acres	61.89	355	P	P	21 36 43.7	+0.9
	baz=173						
L59A	Walton	61.95	356	P	P	21 36 44.0	+0.8
	baz=175						
BINY	Binghamton	62.02	356	P	P	21 36 43.9	+0.2
	baz=174						
L56A	Greenwood	62.09	354	P	P	21 36 44.8	+0.6
	baz=173						
HRV	Adam Dziewonsk	62.14	359	P	P	21 36 45.2	+0.7
	baz=179						
L53A	Girard	62.22	352	P	P	21 36 45.0	0.0
	baz=170						
L55A	Hinsdale	62.23	354	P	P	21 36 45.5	+0.4
	baz=172						
ERPA	Erie	62.34	352	P	P	21 36 46.0	+0.2
	baz=170						
L54A	Sinclairville	62.38	353	P	P	21 36 46.5	+0.4
	baz=171,SNR=7.4						
K59A	Cooperstown	62.52	357	P	P	21 36 47.8	+0.8
	baz=176						
K58A	Earlville	62.56	356	P	P	21 36 47.8	+0.5
	baz=175						
K57A	Scipio Center	62.59	355	P	P	21 36 48.0	+0.5
	baz=174						
K54A	Basiliko Farm,	62.68	353	P	P	21 36 48.6	+0.6
	baz=172,SNR=5.2						
K55A	Perry	62.73	354	P	P	21 36 48.8	+0.3
	baz=172						
L49A	Milan	62.91	349	P	P	21 36 49.3	-0.4
	baz=166						
L47A	Sherwood	63.05	348	P	P	21 36 49.8	-0.7
	baz=165						
121A	Cookes Peak, D	63.09	325	P	P	21 36 52.6	+1.3
	baz=141						
J58A	Remsen	63.13	356	P	P	21 36 51.5	+0.4
	baz=175						
J56A	Wolcott	63.16	355	P	P	21 36 51.4	+0.1
	baz=174						
J59A	Piesco	63.19	357	P	P	21 36 52.3	+0.8
	baz=176						
J57A	Williamstown	63.23	356	P	P	21 36 51.7	0.0
	baz=174						
J54A	Appleton	63.33	354	P	P	21 36 52.2	-0.1
	baz=172						
I58A	Old Forge	63.44	357	P	P	21 36 53.6	+0.4
	baz=176						
I59A	Olmsteadville	63.49	357	P	P	21 36 53.8	+0.4
	baz=177						
J52A	Paris	63.51	352	P	P	21 36 53.5	-0.1
	baz=170,SNR=5.9						
I61A	Oroboro, Fairl	63.58	359	P	P	21 36 55.3	+1.3
	baz=178						
K48A	Perry	63.65	349	P	P	21 36 53.8	-0.7
	baz=166						
I57A	Carthage	63.73	356	P	P	21 36 55.5	+0.5
	baz=175						
J48A	Bridge Port	64.07	349	P	P	21 36 56.3	-1.0
	baz=166						
H58A	Gabriels	64.13	357	P	P	21 36 58.2	+0.6
	baz=176						
I51A	Listowel	64.14	352	P	P	21 36 57.4	-0.3
	baz=169						
I55A	Frankford	64.17	354	P	P	21 36 57.9	0.0
	baz=173						
H61A	Lyndonville	64.17	359	P	P	21 36 59.0	+1.1
	baz=179						
H57A	Richville	64.24	356	P	P	21 36 58.7	+0.4
	baz=175						
I52A	Shelburne	64.29	352	P	P	21 36 58.6	-0.1
	baz=170						
H63A	New Sharon	64.30	1	P	P	21 37 00.0	+1.3
	baz=181						
H59A	Cadyville	64.33	358	P	P	21 36 59.7	+0.7
	baz=177						
H65A	Eastbrook	64.37	2	P	P	21 36 59.8	+0.7
	baz=182						
H56A	Elgin	64.42	356	P	P	21 36 59.7	+0.2
	baz=174						
I49A	Point Hope	64.53	350	P	P	21 36 59.3	-1.0
	baz=167						
TUC	Tucson	64.58	323	P	P	21 37 02.0	+1.0
	baz=138						
H53A	Bobcaygeon	64.61	354	P	P	21 37 00.5	-0.2
	baz=172						
G62A	West of Eustis	64.85	0	P	P	21 37 01.3	-1.1
G62A	West of Eustis	64.85	0	P	P	21 37 03.6	+1.3
	baz=180						
G57A	Newington	64.85	357	P	P	21 37 02.9	+0.6
	baz=176						
PKME	Peaks-Kenny Pk	64.91	1	P	P	21 37 03.3	+0.7
	baz=181						
G61A	St-Isidore-de-	64.92	359	P	P	21 37 03.8	+1.0
	baz=179						
I48A	Sherman Twp	64.92	350	P	P	21 37 02.0	-0.8
	baz=166						
G53A	Haliburton	65.15	354	P	P	21 37 04.4	+0.1
	baz=172,SNR=5.2						
214A	Organ Pipe Nat	65.50	321	IAmb	IAmb	21 37 16.2	
	comp=Z,9.9nm,0.9s						
214A	Organ Pipe Nat	65.50	321	P	P	21 37 08.4	+1.5
	baz=136						
F52A	Sundridge	65.89	353	P	P	21 37 08.6	-0.5
	baz=171						
E58A	La Victoria	66.04	358	P	P	21 37 10.5	+0.5
	baz=177						
SDCO	Great Sand Dun	66.06	330	P	P	21 37 11.4	+0.7
SDCO				IAmb	IAmb	21 37 12.6	
	comp=Z,18nm,1.1s						
SDCO	Great Sand Dun	66.06	330	P	P	21 37 11.6	+0.8
	baz=144						
F51A	Arnstein	66.09	353	P	P	21 37 09.7	-0.6
	baz=170						
F49A	Sandfield	66.20	351	P	P	21 37 09.8	-1.2
	baz=168						
E56A	St. Veronique	66.29	357	P	P	21 37 11.9	+0.3
	baz=176						
E54A	Lac Daplat, Po	66.33	355	P	P	21 37 11.5	-0.3
	baz=173						
F48A	Evansville	66.35	351	P	P	21 37 11.5	-0.5
	baz=168						
X16A	Lo Mia Camp, P	66.51	324	P	P	21 37 12.1	-1.4
E51A	G1948 Merrick	66.64	353	P	P	21 37 14.2	+0.3
	baz=171						
D63A	Stockholm	66.71	2	P	P	21 37 15.2	+0.9
	baz=183						
D62A	Allapoint, All	66.73	1	P	P	21 37 15.1	+0.7
	baz=182						
D58A	Chemin du LacG	66.76	358	P	P	21 37 15.3	+0.7
	baz=178						
E48A	Lockeyer	66.92	351	P	P	21 37 15.2	-0.4
	baz=168						
WUAZ	Wupatki	67.29	325	P	P	21 37 20.2	+1.7
	baz=138						
IKP	In-Ko-Pah, Jac	67.96	320	P	P	21 37 24.7	+2.0
	baz=134						
SWSC	Sam W. Stewart	67.98	320	P	P	21 37 24.6	+2.0
	baz=134						
BC3	Big Chuckawall	68.27	321	P	P	21 37 26.4	+1.8
	baz=135,SNR=5.3						
MONP2	Monument Peak	68.32	320	P	P	21 37 27.0	+1.9
	baz=134						
BAR	Barrett	68.33	319	P	P	21 37 25.5	+0.6
IRM	Iron Mountain	68.44	321	P	P	21 37 27.7	+2.1
	baz=135,SNR=6.0						
BELC	Belle Mtn. Jos	68.83	321	P	P	21 37 29.9	+1.8
	baz=134						
XPFO	Pion Flat	68.84	320	P	P	21 37 28.1	-0.1
XPFO				IAmb	IAmb	21 37 37.3	
	comp=Z,11nm,0.9s						
PFO	Pinyon Flats O	68.84	320	P	P	21 37 28.3	+0.1
PFO				IAmb	IAmb	21 37 37.3	
	comp=Z,10nm,0.9s						
PFO	Pinyon Flats O	68.84	320	P	P	21 37 30.2	+2.0
	baz=134						
GMRC	Granite Mounta	69.18	322	P	P	21 37 31.8	+1.6
	baz=135,SNR=8.8						
HEC	Hector,Ludlow	69.61	321	P	P	21 37 34.8	+1.9
	baz=134,SNR=9.0						
MTPU	Mount Pierson	69.61	326	P	P	21 37 32.3	-0.8
TUQ	Turquoise Moun	69.79	322	P	P	21 37 35.9	+1.9
	baz=135						
DBIC	Dimbokro	69.93	75	P	P	21 37 35.0	-0.2
	comp=Z,9.3nm,0.8s,baz=266,slow=13,SNR=2.1						
DBIC	Dimbokro	69.93	75	P	P	21 37 34.1	-1.1
DBIC				IAmb	IAmb	21 37 41.5	
	comp=Z,13nm,1.1s						
BFSC	Mount Baldy Ra	69.99	320	P	P	21 37 36.9	+1.6
	baz=133						
SHPR	Sheep Range	70.11	323	IAmb	IAmb	21 37 45.6	
	comp=Z,9.5nm,0.8s						
GSC	Goldstone, Bar	70.21	321	P	P	21 37 38.2	+1.6
	baz=134						
QSPA	South Pole Qui	70.24	180	P	P	21 37 36.5	+0.1
EDW2	Edwards Air Fo	70.63	320	P	P	21 37 40.6	+1.5
	baz=133,SNR=5.5						
RSSD	Black Hills	70.68	335	P	P	21 37 40.2	+0.8
	baz=147						
LRMC	Laurel Mtn Rad	70.85	321	P	P	21 37 42.3	+1.8
	baz=133						
TPNV	Topopah Spring	71.04	323	P	P	21 37 41.3	-0.4
TPNV				IAmb	IAmb	21 37 44.7	
	comp=Z,14nm,1.0s						
TPNV	Topopah Spring	71.04	323	P	P	21 37 43.8	+2.1
	baz=135,SNR=6.7						
FURC	Furnace Creek,	71.06	322	P	P	21 37 43.7	+2.2
	baz=134,SNR=6.1						
MPMC	Manual Prospec	71.14	321	P	P	21 37 43.9	+1.6
	baz=134						
ISA	Isabella, Lake	71.45	321	P	P	21 37 46.2	+2.1
	baz=133,SNR=7.1						
DUG	Dugway, Tooele	71.54	327	P	P	21 37 46.2	+1.6
	baz=138						
R11A	Troy Canyon, C	71.66	324	P	P	21 37 47.4	+1.9
	baz=136,SNR=5.1						
CWC	Cottonwood Cre	71.75	321	P	P	21 37 47.8	+1.9
	baz=133						
PKM	Mcpherson Peak	71.75	319	P	P	21 37 47.9	+1.8
	baz=132,SNR=6.0						
PDAR	Pinedale Array	71.93	331	P	P	21 37 46.7	-0.4
	comp=Z,1.4nm,0.6s,baz=130,slow=4.9,SNR=3.4						
PDAR	Pinedale Array	71.93	331	P	P	21 37 46.9	-0.2
VES	Vestal, Richgr	71.94	320	P	P	21 37 48.9	+2.0
	baz=132						
SMMC	Simmler	72.14	319	P	P	21 37 50.4	+2.2
	baz=132,SNR=5.1						
SPUT	South Promonto	72.19	328	P	P	21 37 47.8	-0.7
AHID	Auburn Hatcher	72.65	330	IAmb	IAmb	21 37 59.7	
	comp=Z,22nm,0.9s						
OMMB	Old Mammoth Mi	73.08	322	P	P	21 37 52.9	-1.3
OMMB				IAmb	IAmb	21 37 56.6	
	comp=Z,14nm,1.0s						
MDPB	Devils Postpil	73.14	322	IAmb	IAmb	21 38 04.3	
	comp=Z,11nm,0.9s						
NVAR	Mina Array Bea	73.24	323	P	P	21 37 56.0	+1.1
	comp=Z,4.5nm,0.8s,baz=145,slow=5.3,SNR=13						
NVAR	Mina Array Bea	73.24	323	P	P	21 37 54.0	-0.9
ULM	Lac du Bonnet	73.34	343	P	P	21 37 54.0	-0.9
	comp=Z,6.4nm,0.9s,baz=165,slow=12,SNR=3.0						
RYN	Ryan	73.50	323	P	P	21 37 55.0	-1.4
RYN				IAmb	IAmb	21 37 58.8	
	comp=Z,13nm,1.2s						
KVN	Kaiserville	73.55	323	IAmb	IAmb	21 38 05.8	
	comp=Z,14nm,0.9s						
YHH	Holmes Hill	74.10	331	P	P	21 37 59.0	-0.9
SCHQ	Schefferville	74.55	2	P	P	21 38 01.1	-0.8
	comp=Z,6.1nm,0.9s,baz=200,slow=6.9,SNR=3.7						
SCHQ	Schefferville	74.55	2	P	P	21 38 02.0	+0.1
VCNR	Virginia City	74.60	323	IAmb	IAmb	21 38 02.6	
	comp=Z,11nm,0.6s						
BEKR	Beckworth	75.39	323	IAmb	IAmb	21 38 16.3	
	comp=Z,11nm,1.0s						
ORV	Oroville	75.84	322	P	P	21 38 08.6	-1.1
TOA0	Torodi Ar. Sit	78.44	71	P	P	21 38 23.7	-1.2
TOA0				IAmb	IAmb	21 38 29.5	
	comp=Z,21nm,1.0s						
TORD	Torodi Ar. Bea	78.44	71	P	P	21 38 24.1	-0.7
	comp=Z,10nm,0.8s,baz=251,slow=5.1,SNR=9.0						
TORD	Torodi Ar. Bea	78.44	71	P	P	21 38 24.3	-0.6
YKA	Yellowknife Ar	89.17	341	P	P	21 39 18.7	+0.1
	comp=Z,3.1nm,0.7s,baz=137,slow=4.9,SNR=12						
KBZ	Khabaz	120.45	50	PKP	PKiKP	21 45 15.8	+0.8
	comp=Z,3.2nm,1.0s,baz=17,slow=3.9,SNR=4.1						
H11S2	WAKE ISLAND Hy	125.99	279	T	T	00 04 23.1	
	baz=105,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	126.00	279	T	T	00 04 11.3	
	baz=105,SNR=7.7						
H11S3	WAKE ISLAND Hy	126.01	279	T	T	00 04 47.5	
	baz=105,slow=75,SNR=8.0						
H11N3	WAKE ISLAND Hy	126.04	280	T	T	00 05 05.5	
	baz=106						
H11N2	WAKE ISLAND Hy	126.05	280	T	T	00 04 12.9	
	baz=106						
H11N1	WAKE ISLAND Hy	126.06	280	T	T	00 04 53.8	
	baz=106						
SEY	Seymchan	128.01	337	PKP	PKiKP	21 45 29.4	0.0
	comp=Z,3.2nm,0.5s,baz=141,slow=1.6,SNR=6.9						
ASAR	Alice Springs	130.45	210	PKP	PKiKP	21 45 36.4	+0.7
	comp=Z,2.5nm,1.1s,baz=119,slow=1.2,SNR=3.0						
ASAR	Alice Springs	130.45	210		PKiKP	21 45 35.7	0.0
WRA	Warramunga Arr	133.38	213	PKP	PKiKP	21 45 41.2	-0.5
	comp=Z,1.2nm,1.0s,baz=150,slow=1.8,SNR=4.3						
WRA	Warramunga Arr	133.38	213		PKPdf	21 45 39.4	-1.0
KURBB	Kurchatov Arra	140.93	31	PKhKP	PKPdf	21 45 49.9	-3.5
	comp=Z,1.3nm,0.9s,baz=304,slow=2.9,SNR=4.1						
ZALV	Zalesovo Beam	141.23	23	PKP	PKPdf	21 45 54.4	+0.6
	comp=Z,3.3nm,0.7s,baz=292,slow=4.5,SNR=5.5						
ZALV	Zalesovo Beam	141.23	23		PKPdf	21 45 53.6	-0.2
MAKZ	Makanchi	145.15	33		PKPab	21 46 00.7	+0.1
MK31	Makanchi Array	145.32	33		PKPdf	21 46 01.4	+0.1
MKAR	Makanchi Array	145.32	33	PKPbc	PKPdf	21 46 01.7	+0.4
	comp=Z,8.7nm,0.7s,baz=315,slow=3.2,SNR=29						
MKAR	Makanchi Array	145.32	33		PKPbc	21 46 00.7	-0.5
KSH	Kashi	145.39	48	PKPbc	PKPab	21 46 02.4	+0.5
KSH				pPKP	sPKPdf	21 46 12.4	+3.0
KSH				PP	PP	21 49 22.9	+1.3
KSH				PKS	PKSdf	21 49 36.9	-0.5
KLR	Kul'dur	145.69	334	PKPbc	PKPab	21 46 02.9	+0.4
	comp=Z,6.5nm,0.8s,baz=21,slow=2.6,SNR=8.5						
USA0B	Ussuriysk Arra	149.30	327		PKPbc	21 46 11.3	-1.0
USRK	Ussuriysk Ar.	149.30	327	PKPbc	PKiKP	21 46 13.5	0.0
	comp=Z,7.2nm,0.8s,baz=5.8,slow=1.3,SNR=11						
USRK	Ussuriysk Ar.	149.30	327		PKiKP	21 46 12.9	-0.6
MJAR	Matsushiro Arr	149.79	309	PKPbc	PKiKP	21 46 14.7	0.0
	comp=Z,7.5nm,0.8s,baz=149,slow=0.7,SNR=13						
MJAR	Matsushiro Arr	149.79	309		PKPbc	21 46 12.6	-1.2
MAJO	Matsushiro	149.79	309		PKPbc	21 46 13.6	-0.2
MAT	Matsushiro	149.79	309	PKP	PKPbc	21 46 14.1	+0.3
MJB9	Matsu-Tunnel	149.79	309		PKPbc	21 46 13.6	-0.2
WMQ	Urumqi	150.13	32	*e*P	PKPdf	21 46 08.6	-0.8
SONM	Songino Array	152.08	4	PKPbc	PKiKP	21 46 19.6	+0.3
	comp=Z,4.2nm,0.8s,baz=359,slow=1.3,SNR=6.0						
SONM	Songino Array	152.08	4		PKiKP	21 46 19.4	+0.1
SONM	Songino Array	152.08	4		PKPab	21 46 34.1	+5.7
CN2	Changchun	152.64	334	*e*PKPbc	PKPdf	21 46 10.8	-2.3
HHC	Hu-ho-hao-te	159.07	355	*e*P	PKPdf	21 46 15.3	-6.6
LZH	Lanzhou	163.22	15	*e*PKP	PKPdf	21 46 30.3	+3.7
LZH				pPKP	sPKPdf	21 46 41.9	+7.7
LZH				sPKP		21 46 46.3	
NJ2	Nanjing	165.20	326	*e*P	PKPdf	21 46 27.5	-0.7
XAN	Xi'an	165.96	1	PKP	PKPdf	21 46 21.1	-7.8
XAN				pPKP	pPKPdf	21 46 30.3	-4.3

IDC ***16*** *21:26:38.7±0.8, 19°.83S×70°.57W, h0^{km}, mb4.6/10, mb1 4.8/11, mb1mx4.5/37, mbtmp4.6/11, ML4.8/1, Error ellipse: s-maj=31.6km s-min=17.7km az=42.0*

NEIC ***16*** *21:26:42.8±1.4, 19°.95S±0°.06×70°.74W±0°.07, h35^{km}±1^{km}, Error ellipse: s-maj=12.7km s-min=9.4km az=127.0*

ISC 16 21:26:44.1±0.5**, 19°.86S**±0°.06×**70°.61W**±0°.08**, h44^{km}, n66, σ1^s.22**/67**, mb4.8**/19**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	IPOC Station P	0.90	84	Pn	Pn	21 26 59.1	-1.5
PB11				Sn	Sn	21 27 14.8	+2.2
PB11	IPOC Station P	0.90	84	*i* S	Pn	21 26 58.8	-1.9
PB11	IPOC Station P	0.90	84		Pn	21 26 58.7	-1.9
LVC	Limon Verde	3.16	150	Pn	Pn	21 27 30.3	-1.4
	113nm,0.3s,baz=349,slow=10,SNR=4.2						
LVC				Sn	Sn	21 28 10.5	+2.1
	296nm,0.3s,baz=218,slow=12,SNR=7.4						
LVC	Limon Verde	3.16	150		Pn	21 27 32.5	+0.8
LVC					Sn	21 28 06.8	-1.6
CFA	Coronel Fontan	11.88	170	Pn	Pn	21 29 25.6	-5.5
	2.6nm,0.3s,baz=357,slow=11,SNR=8.9						
CFA	Coronel Fontan	11.88	170		Pn	21 29 25.6	-5.5
PTGA	Pitinga	21.68	30	P	P	21 31 31.8	+0.5
SDV	Santo Domingo	28.57	360	P	P	21 32 35.9	-0.4
GO09	Cerro Castillo	31.37	182	P	P	21 33 00.3	-0.3
JTS	Las Juntas de	33.13	334	P	P	21 33 15.2	-1.2
RCBR	Riachuelo	36.50	72	P	P	21 33 46.2	+0.6
	11nm,0.8s,baz=268,slow=16,SNR=3.5						
RCBR	Riachuelo	36.50	72	P	P	21 33 45.6	+0.1
RCBR				IAmb	IAmb	21 33 50.0	
	comp=Z,11nm,0.8s						
SDD	Santo Domingo	38.09	1	P	P	21 33 59.2	+0.4
AGPR	Aguadilla, PR	38.25	5	P	P	21 34 01.0	+0.8
STVI	Saint Thomas	38.38	9	P	P	21 34 01.1	-0.1
STVI				IAmb	IAmb	21 34 02.0	
	comp=Z,12nm,0.7s						
TEIG	Tepich	43.44	336	P	P	21 34 43.4	+0.5
	comp=Z,10nm,0.5s,baz=271,slow=0.0,SNR=6.7						
TEIG	Tepich	43.44	336	P	P	21 34 42.7	-0.2
TEIG				IAmb	IAmb	21 34 44.5	
	comp=Z,16nm,0.8s						
656A	Willston	50.28	346	P	P	21 35 36.5	+0.3
BBSR	BB Station	52.25	6	P	P	21 35 50.9	0.0
BBSR				IAmb	IAmb	21 35 52.2	
	comp=Z,11nm,0.8s						
Y60A	Bolivia	54.06	352	P	P	21 36 04.3	+0.1
JSC	Jenkinsville	54.79	349	P	P	21 36 09.7	+0.1
Z50A	Ashland	54.81	344	P	P	21 36 09.9	+0.2
HODGE	Hodges	54.93	348	P	P	21 36 10.7	+0.1
833A	Chaparral WMA,	55.40	329	P	P	21 36 14.3	+0.2
V58A	Windy Hill, Pi	55.94	352	P	P	21 36 18.2	+0.5
CPCT	Cooper Cave	56.57	346	P	P	21 36 22.0	-0.3
TKL	Tuckaleechee C	56.61	347	P	P	21 36 21.9	-0.7
	comp=Z,7.2nm,0.9s,baz=101,slow=3.7,SNR=3.5						
SWET	Sewanee	56.68	345	P	P	21 36 23.3	+0.2
SWET				IAmb	IAmb	21 36 25.1	
	comp=Z,2.9nm,0.4s						
V52A	Sevierville	56.75	347	P	P	21 36 23.6	0.0
T59A	Double "B" Far	56.91	353	P	P	21 36 24.3	-0.3
T59A				IAmb	IAmb	21 36 26.9	
	comp=Z,14nm,0.8s						
U49A	Red Boiling Sp	57.88	346	P	P	21 36 31.7	+0.2
U49A				IAmb	IAmb	21 36 32.1	
	comp=Z,4.4nm,0.6s						
R58B	Mineral	57.92	353	P	P	21 36 32.6	+0.9
R58B				IAmb	IAmb	21 36 35.6	
	comp=Z,10nm,0.9s						
S54A	Dingess, Beckl	58.23	350	P	P	21 36 34.5	+0.5
S54A				IAmb	IAmb	21 36 37.6	
	comp=Z,9.5nm,0.7s						
MIAR	Mount Ida	58.35	338	P	P	21 36 35.2	+0.3
MIAR				IAmb	IAmb	21 36 36.3	
	comp=Z,10nm,0.7s						
TXAR	Lajitas Array	58.39	326	P	P	21 36 36.5	+1.1
	comp=Z,2.0nm,0.5s,baz=153,slow=10,SNR=12						
TXAR	Lajitas Array	58.39	326	P	P	21 36 34.5	-0.9
TX32	Lajitas Array	58.39	326	P	P	21 36 34.9	-0.5
TX32				IAmb	IAmb	21 36 35.0	
	comp=Z,8.5nm,1.1s						
DBIC	Dimbokro	69.82	75	P	P	21 37 51.4	+0.8
	comp=Z,8.7nm,1.0s,baz=263,slow=8.1,SNR=3.1						
DBIC	Dimbokro	69.82	75	P	P	21 37 50.5	-0.1
DBIC				IAmb	IAmb	21 37 53.0	
	comp=Z,13nm,1.1s						
PDAR	Pinedale Array	71.91	331	P	P	21 38 04.3	+1.2
	comp=Z,1.9nm,0.9s,baz=132,slow=6.7,SNR=3.9						
PDAR	Pinedale Array	71.91	331	P	P	21 38 02.7	-0.3
NVAR	Mina Array Bea	73.23	323	P	P	21 38 12.1	+1.2
	comp=Z,2.6nm,0.8s,baz=130,slow=6.7,SNR=4.6						
NVAR	Mina Array Bea	73.23	323	P	P	21 38 09.9	-1.1
SCHQ	Schefferville	74.46	2	P	P	21 38 18.1	+0.5
	comp=Z,5.9nm,0.9s,baz=234,slow=2.0,SNR=3.8						
SCHQ	Schefferville	74.46	2	P	P	21 38 17.0	-0.5
TORD	Torodi Ar. Bea	78.33	71	P	P	21 38 40.6	+0.3
	comp=Z,13nm,0.7s,baz=259,slow=4.8,SNR=12						
TORD	Torodi Ar. Bea	78.33	71	P	P	21 38 39.8	-0.5
YKA	Yellowknife Ar	89.13	341	P	P	21 39 35.5	+1.2
	comp=Z,3.3nm,0.6s,baz=139,slow=4.8,SNR=14						
YKA	Yellowknife Ar	89.13	341	P	P	21 39 35.5	+1.2
ASAR	Alice Springs	130.57	210	PKP	PKiKP	21 45 51.4	-0.4
	comp=Z,1.4nm,0.8s,baz=118,slow=1.1,SNR=4.5						
ASAR	Alice Springs	130.57	210		PKPdf	21 45 50.1	-0.9
WRA	Warramunga Arr	133.50	213	PKP	PKPdf	21 45 57.0	+0.4
	comp=Z,2.3nm,0.7s,baz=143,slow=1.6,SNR=18						

WRA	Warramunga Arr	133.50	213		PKPdf	21 45 53.6	-3.0
KURBB	Kurchatov Arra	140.81	31	PKhKP	PKPdf	21 46 02.6	-6.4
	comp=Z,0.8nm,0.7s,baz=306,slow=3.1,SNR=5.4						
ZALV	Zalesovo Beam	141.12	23	PKP	PKPdf	21 46 09.0	-0.5
	comp=Z,3.9nm,0.5s,baz=312,slow=4.0,SNR=10						
ZALV	Zalesovo Beam	141.12	23		PKPdf	21 46 09.0	-0.5
AAK	Ala-Archa	142.90	44	PKP	PKPdf	21 46 13.8	+0.6
	comp=Z,1.7nm,0.7s,baz=190,slow=3.5,SNR=4.2						
AAK	Ala-Archa	142.90	44		PKPdf	21 46 12.8	-0.4
MKAR	Makanchi Array	145.20	33	PKPbc	PKPdf	21 46 17.8	+0.8
	comp=Z,15nm,0.7s,baz=316,slow=3.7,SNR=40						
MKAR	Makanchi Array	145.20	33		PKPdf	21 46 17.3	+0.3
KLR	Kul'dur	145.66	334	PKPbc	PKPab	21 46 19.1	+0.8
	comp=Z,7.8nm,0.6s,baz=62,slow=2.4,SNR=18						
KLR	Kul'dur	145.66	334		PKPab	21 46 19.1	+0.8
USRK	Ussuriysk Ar.	149.28	327	PKPbc	PKiKP	21 46 29.6	+0.3
	comp=Z,5.8nm,0.6s,baz=300,slow=0.5,SNR=21						
MJAR	Matsushiro Arr	149.81	309	PKPbc	PKiKP	21 46 30.3	-0.4
	comp=Z,5.5nm,0.6s,baz=144,slow=1.3,SNR=8.6						
SONM	Songino Array	151.99	4	PKPbc	PKiKP	21 46 35.7	+0.8
	comp=Z,4.3nm,0.5s,baz=298,slow=1.1,SNR=17						

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*NEIC **16** 21:27:13.5±1.6, 20°.1S±0°.1×70°.74W±0°.08, h10km±1km, mb4.5, Error ellipse: s-maj=20.4km s-min=11.7km az=169.0*

*IDC **16** 21:27:13.0±1.0, 19°.88S×70°.62W, h0km, mb4.4/7, mb1 4.7/8, mb1mx4.4/37, mbtmp4.5/8, ML4.2/1, Error ellipse: s-maj=35.5km s-min=25.6km az=59.0*

*GUC **16** 21:27:14.6±0.6, 19°.78S×70°.88W, h34km±11km, ML4.8*

ISC 16 21:27:13.5±2.1**, 19°.95S**±0°.05×**70°.86W**±0°.07**, h5**km±12km**, n40, σ1ˢ.01**/46**, mb4.5**/6**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.77	63	*e*P	Pg	21 27 28.3	0.0
PSGC				*e*S	Sg	21 27 38.6	+0.2
TA01	Diego Aracena	0.88	134	*e*P	Pn	21 27 32.7	+0.1
TA01				*e*S	Sn	21 27 46.4	+0.6
TA01				IAML		21 27 48.4	
	comp=E,28μm,0.5s						
PATCX	Punta Patache	1.09	143	*e*P	Pn	21 27 36.0	+0.5
PATCX				*e*S	Sn	21 27 52.8	+1.8
PATCX				IAML		21 27 55.3	
	comp=E,27μm,0.5s						
PB11	IPOC Station P	1.14	81	*e*P	Pg	21 27 35.6	+0.2
PB11				*e*S	Sb	21 27 50.8	-0.3
PB11				IAML		21 27 52.4	
	comp=E,38μm,0.6s						
PB11	IPOC Station P	1.14	81	Pn	Pg	21 27 33.9	-1.5
PB11				Sn	Sg	21 27 50.5	+0.1
GO01	Chusmiza	1.59	80	*e*P	Pn	21 27 42.8	+0.1
GO01				*e*S	Sb	21 28 04.1	-0.1
GO01				IAML		21 28 07.5	
	comp=N,35μm,0.3s						
PB01	IPOC Station P	1.68	131	Pg	Pn	21 27 43.8	+0.2
PB01					Sg	21 28 08.4	+0.7
LVC	Limon Verde	3.21	146	Lg	Lg	21 28 56.3	
	comp=N,77nm,0.3s,baz=172,slow=8.3,SNR=4.0						
SIV	San Ignacio	10.11	69	Pn	Pn	21 29 41.6	+2.2
	comp=N,7.4nm,0.3s,baz=292,slow=12,SNR=1.8						
SIV	San Ignacio	10.11	69		Pn	21 29 41.6	+2.2
CFA	Coronel Fontan	11.85	169	Pn	Pn	21 30 02.6	-0.5
	comp=N,1.7nm,0.3s,baz=346,slow=12,SNR=1.7						
CFA	Coronel Fontan	11.85	169		Pn	21 30 02.6	-0.5
PLCA	Paso Flores	20.72	179	P	P	21 31 56.2	+1.3
	comp=N,22nm,0.9s,baz=14,slow=8.2,SNR=3.0						
RCBR	Riachuelo	36.74	72	P	P	21 34 21.1	-1.1
	comp=N,16nm,0.9s,baz=266,slow=13,SNR=1.9						
RCBR	Riachuelo	36.74	72	P	P	21 34 20.3	-1.9
TEIG	Tepich	43.42	336	P	P	21 35 17.5	+0.2
GOGA	Godfrey	54.41	347	P	P	21 36 42.4	+0.8
Y49A	Blount Mountai	55.52	344	P	P	21 36 50.2	+0.5
TXAR	Lajitas Array	58.33	326	P	P	21 37 09.8	0.0
	comp=N,1.6nm,0.7s,baz=138,slow=9.6,SNR=1.7						
TXAR	Lajitas Array	58.33	326	P	P	21 37 09.3	-0.4
X37A	Clayton	59.03	336	P	P	21 37 14.2	-0.3
MNTX	Cornudas Mount	61.10	327	P	P	21 37 28.5	-0.2
SADO	Sadowa	64.84	353	P	P	21 37 52.5	-0.8
X16A	Lo Mia Camp, P	66.43	324	P	P	21 38 04.8	+0.7
DBIC	Dimbokro	70.06	75	P	P	21 38 25.1	-2.0
	comp=N,6.0nm,0.8s,baz=200,slow=7.6,SNR=1.5						
GSC	Goldstone, Bar	70.13	321	P	P	21 38 28.5	+1.3
QSPA	South Pole Qui	70.23	180	P	P	21 38 26.1	-1.4
PDAR	Pinedale Array	71.87	331	P	P	21 38 37.8	+0.1
	comp=N,1.6nm,0.9s,baz=142,slow=4.6,SNR=1.7						
PDAR	Pinedale Array	71.87	331	P	P	21 38 37.4	-0.3
NVAR	Mina Array Bea	73.16	323	P	P	21 38 46.5	+1.1
	comp=N,2.4nm,0.9s,baz=140,slow=7.1,SNR=2.5						
NVAR	Mina Array Bea	73.16	323	P	P	21 38 45.9	+0.4
FXWY	Fox Creek	73.22	331	P	P	21 38 44.6	-1.1
ULM	Lac du Bonnet	73.31	344	P	P	21 38 45.9	+0.1
FLWY	Flagg Ranch	73.42	331	P	P	21 38 46.2	-0.7
KVN	Kaiserville	73.47	323	P	P	21 38 47.4	+0.1
RLMT	Red Lodge	73.60	333	P	P	21 38 48.4	+0.4
MAW	Mawson	86.33	164	P	P	21 39 56.1	-0.2
YKA	Yellowknife Ar	89.13	341	P	P	21 40 11.2	+1.7
	comp=N,3.5nm,0.8s,baz=137,slow=4.8,SNR=2.1						
YKA	Yellowknife Ar	89.13	341	P	P	21 40 11.2	+1.7
MJAR	Matsushiro Arr	149.68	309	PKPbc	PKiKP	21 47 05.6	-0.1
	comp=N,2.6nm,0.6s,baz=120,slow=1.4,SNR=1.6						

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*NEIC **16** 21:32:47.7±1.1, 19°.82S±0°.06×70°.85W±0°.08, h10km±1km, mb4.1/3, Error ellipse: s-maj=14.3km s-min=7.8km az=305.0*

*IDC **16** 21:32:48.6±0.8, 19°.70S×70°.72W, h0km, mb4.1/9, mb1 4.3/11, mb1mx4.1/38, mbtmp4.2/11, ML4.3/2, Error ellipse: s-maj=24.4km s-min=21.2km az=18.0*

ISC 16 21:32:47.6±0.6**, 19°.81S**±0°.05×**70°.90W**±0°.07**, h10**km**, n39, σ1ˢ.80**/44**, mb4.3**/8**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	IPOC Station P	1.17	88	Pn	Pn	21 33 10.9	+0.7
PB11				Sn	Sn	21 33 25.0	-1.4
GO01	Chusmiza	1.61	85	Pn	Pb	21 33 17.3	-0.5
GO01				Sn	Sn	21 33 36.6	-1.1
PB01	IPOC Station P	1.81	133		Pb	21 33 20.3	-0.5
PB01				Sn	Sn	21 33 40.9	-1.0
PB04	IPOC Station P	2.61	164		Pn	21 33 29.7	-0.3
PB04				Sn	Sn	21 33 59.2	-2.6
LVC	Limon Verde	3.35	147	Pn	Pn	21 33 42.6	+2.3
	15nm,0.3s,baz=330,slow=9.7,SNR=6.2						
LVC				Sn	Sn	21 34 21.0	+0.6
	56nm,0.3s,baz=90,slow=20,SNR=2.7						
LVC	Limon Verde	3.35	147		Pn	21 33 41.1	+0.8
LVC					Sn	21 34 19.6	-0.8
PB10	IPOC Station P	3.70	175	Pn	Pn	21 33 43.7	-1.2
LPAZ	La Paz	4.38	37	Pn	Pb	21 34 03.0	-2.1
	2.6nm,0.3s,baz=229,slow=9.9,SNR=8.3						
SIV	San Ignacio	10.10	69	Pn	Pn	21 35 13.9	+1.2
	5.4nm,0.3s,baz=275,slow=13,SNR=17						
PLCA	Paso Flores	20.86	179	P	Pn	21 37 33.5	+1.3
	2.5nm,0.7s,baz=26,slow=15,SNR=2.6						
PLCA	Paso Flores	20.86	179	P	P	21 37 30.2	+0.5
PLCA				IAmb	IAmb	21 37 35.1	
	comp=Z,1.0nm,0.7s						
PTGA	Pitinga	21.77	31	P	P	21 37 41.3	+1.6
	comp=Z,7.6nm,0.5s,baz=179,slow=23,SNR=7.2						
PTGA	Pitinga	21.77	31	P	P	21 37 39.8	+0.1
BDFB	Brasilia	22.19	83	P	P	21 37 43.8	-0.5
	comp=Z,4.5nm,0.5s,baz=280,slow=10,SNR=3.4						
BDFB	Brasilia	22.19	83	P	P	21 37 43.5	-0.8
RUSC	La Rusia	25.63	355	P	P	21 38 18.4	+0.4
RCBR	Riachuelo	36.74	73	P	P	21 39 56.5	+0.9
	comp=Z,10nm,0.8s,baz=190,slow=6.1,SNR=3.8						
RCBR	Riachuelo	36.74	73	P	P	21 39 55.0	-0.6
DBIC	Dimbokro	70.07	75	P	P	21 44 01.2	+0.8
	comp=Z,3.8nm,0.8s,baz=204,slow=10.0,SNR=4.0						
DBIC	Dimbokro	70.07	75	P	P	21 44 00.4	-0.1
DBIC				IAmb	IAmb	21 44 16.9	
	comp=Z,9.8nm,1.1s						
PDAR	Pinedale Array	71.73	331	P	P	21 44 12.3	+2.1
	comp=Z,0.5nm,0.9s,baz=152,slow=9.9,SNR=2.2						
NVAR	Mina Array Bea	73.02	323	P	P	21 44 19.5	+1.5
	comp=Z,0.3nm,0.7s,baz=153,slow=8.1,SNR=2.6						
TORD	Torodi Ar. Bea	78.57	72	P	P	21 44 50.9	+0.9
	comp=Z,7.4nm,0.8s,baz=248,slow=5.2,SNR=16						
TORD	Torodi Ar. Bea	78.57	72	P	P	21 44 49.2	-0.7
YKA	Yellowknife Ar	88.99	341	P	P	21 45 43.4	+1.3
	comp=Z,0.8nm,0.6s,baz=135,slow=5.3,SNR=6.1						
DAG	Danmarks Havn	101.25	11	*i* P	Pdif	21 46 30.0	-7.8
	comp=Z,14nm,1.1s						
ASAR	Alice Springs	130.48	210	PKP	PKiKP	21 52 01.8	+1.6
	comp=Z,0.3nm,0.7s,baz=95,slow=1.8,SNR=2.8						
WRA	Warramunga Arr	133.39	214	PKP	PKiKP	21 52 07.4	+1.3
	comp=Z,0.4nm,0.7s,baz=148,slow=1.7,SNR=2.5						
KURBB	Kurchatov Arra	140.90	31	PKhKP	PKPdf	21 52 14.8	-2.9
	comp=Z,0.2nm,0.3s,baz=302,slow=2.3,SNR=4.8						
ZALV	Zalesovo Beam	141.17	23	PKP	PKiKP	21 52 19.9	-1.0
	comp=Z,1.7nm,0.6s,baz=282,slow=2.9,SNR=6.8						
ZALV	Zalesovo Beam	141.17	23		PKiKP	21 52 20.3	-0.5
MK31	Makanchi Array	145.30	33		PKPbc	21 52 25.2	-0.3
MKAR	Makanchi Array	145.30	33	PKPbc	PKiKP	21 52 27.9	-1.8
	comp=Z,3.8nm,0.8s,baz=323,slow=3.6,SNR=22						
MKAR	Makanchi Array	145.30	33		PKPbc	21 52 25.6	+0.1
KLR	Kul'dur	145.49	334	PKPbc	PKiKP	21 52 28.7	-1.2
	comp=Z,0.6nm,0.5s,baz=19,slow=5.1,SNR=4.8						
USRK	Ussuriysk Ar.	149.08	327	PKPbc	PKiKP	21 52 38.9	+1.4
	comp=Z,2.2nm,0.8s,baz=39,slow=0.9,SNR=5.8						
MJAR	Matsushiro Arr	149.56	309	PKPbc	PKPab	21 52 41.1	-1.5
	comp=Z,1.2nm,0.7s,baz=116,slow=5.5,SNR=4.1						
SONM	Songino Array	151.96	4	PKPbc	PKiKP	21 52 45.8	+2.3
	comp=Z,2.0nm,0.7s,baz=319,slow=1.0,SNR=7.7						
SONM	Songino Array	151.96	4		PKPbc	21 52 41.8	-1.4

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*IDC **16** 21:35:30.3±0.6, 19°.94S×70°.62W, h0km, mb4.4/12, mb1 4.5/16, mb1mx4.3/39, mbtmp4.4/16, ML4.0/4, Error ellipse: s-maj=20.3km s-min=15.4km az=53.0*

*NEIC **16** 21:35:30.4±1.5, 19°.86S±0°.05×70°.69W±0°.04, h10km±1km, mb4.7/20, Error ellipse: s-maj=9.6km s-min=6.1km az=153.0*

ISC 16 21:35:31.0±0.4**, 19°.87S**±0°.05×**70°.66W**±0°.05**, h10**km**, n88, σ1ˢ.58**/90**, mb4.5**/15**, 1C, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	IPOC Station P	0.95	83	Pg	Pn	21 35 51.5	+0.9
PB11				Sg	Sg	21 36 02.2	+0.4
GO01	Chusmiza	1.40	82	Pn	Pn	21 35 56.5	-0.5
GO01				Sn	Sb	21 36 14.7	-0.9
PB01	IPOC Station P	1.60	137	Pn	Pn	21 35 59.1	-0.4
PB01				Sn	Sn	21 36 20.2	-0.1
PB04	IPOC Station P	2.49	169		Pn	21 36 13.5	+1.7
PB04				Sn	Sn	21 36 43.2	+0.8
LVC	Limon Verde	3.17	149	Pn	Pn	21 36 22.9	+1.5
	47nm,0.3s,baz=8.3,slow=7.5,SNR=8.6						
LVC				Sn	Sn	21 36 59.8	+0.3
	95nm,0.3s,baz=354,slow=23,SNR=2.2						
LVC				Lg	Lg	21 37 06.6	
	138nm,0.3s,baz=43,slow=20,SNR=10						
LVC	Limon Verde	3.17	149		Pn	21 36 21.9	+0.6
LVC					Sn	21 36 58.2	-1.3
LPAZ	La Paz	4.30	34	Pn	Pb	21 36 46.0	-1.1
	5.3nm,0.3s,baz=215,slow=5.2,SNR=9.9						
LPAZ				Lg	Lg	21 37 56.6	
	4.1nm,0.3s,baz=108,slow=24,SNR=0.8						
NNA	Nana	9.84	322	Pn	Pn	21 37 57.0	+4.4
	0.9nm,0.3s,baz=308,slow=19,SNR=1.9						
NNA				Sn	Sn	21 39 40.9	-2.4
	1.5nm,0.3s,baz=23,slow=0.9,SNR=1.9						
SIV	San Ignacio	9.91	69	Pn	Pn	21 37 54.9	+1.3
	1.5nm,0.3s,baz=270,slow=9.2,SNR=13						
CFA	Coronel Fontan	11.88	170	Pn	Pn	21 38 20.3	-0.3
	0.8nm,0.3s,baz=348,slow=19,SNR=3.4						
CPUP	Villa Florida	13.84	120	Pn	Pn	21 38 46.7	-0.7
	0.1nm,0.3s,baz=316,slow=13,SNR=1.9						
CPUP	Villa Florida	13.84	120		Pn	21 38 48.8	+1.4
PLCA	Paso Flores	20.79	180	P	P	21 40 11.9	-0.5
	12nm,0.9s,baz=7.4,slow=14,SNR=6.8						
PLCA	Paso Flores	20.79	180	P	P	21 40 12.3	-0.1
PTGA	Pitinga	21.71	30	P	P	21 40 24.0	+1.6
	5.7nm,0.4s,baz=22,slow=23,SNR=8.0						
PTGA	Pitinga	21.71	30	P	P	21 40 22.3	-0.2
PTGA				IAmb	IAmb	21 40 38.1	
	comp=Z,17nm,0.8s						
FLOC	Florencia	21.88	346	*e*P	P	21 40 25.7	+1.4
FLOC				*e*P	P	21 40 25.7	+1.4
BDFB	Brasilia	21.97	83	P	P	21 40 26.7	+1.3
	comp=Z,24nm,1.0s,baz=238,slow=9.5,SNR=3.3						
BDFB	Brasilia	21.97	83	P	P	21 40 24.6	-0.7
BDFB				IAmb	IAmb	21 40 40.4	
	comp=Z,17nm,0.9s						
SOTA	Rioblanco	22.64	344	*e*P	P	21 40 38.1	+5.2
BBAC	Balboa, Cauca	22.70	343	*e*P	P	21 40 36.3	+3.0
POPC	Popayan, Colom	23.04	344	*e*P	P	21 40 39.8	+3.0
ORTC	Ortega, Tolima	24.06	349	*e*P	P	21 40 48.7	+2.0
GUY2C	Guyana, Caldas	25.37	349	*e*P	P	21 41 02.0	+3.0
NORC	Norcasia	25.61	350	*e*P	P	21 41 00.2	-0.6
RUSC	La Rusia	25.71	354	*e*P	P	21 41 04.6	+2.4
CBOC	Ciudad Bolivar	26.11	348	*e*P	P	21 41 08.2	+2.7
BARC	Barichara	26.42	354	*e*P	P	21 41 09.2	+0.9
BARC	Barichara	26.42	354	*e*P	P	21 41 09.2	+0.9
PAMC	Pamplona, Colo	27.12	356	⇑*e*P	P	21 41 17.1	+2.2
SDV	Santo Domingo	28.58	0	P	P	21 41 29.5	+1.9
	comp=Z,3.6nm,0.9s,baz=143,slow=5.1,SNR=1.9						
SMLC	San Martn de	28.69	353	*e*P	P	21 41 25.9	-2.5
RCBR	Riachuelo	36.55	72	P	P	21 42 37.8	+0.5
	comp=Z,9.4nm,0.8s,baz=228,slow=7.7,SNR=6.1						
RCBR	Riachuelo	36.55	72	P	P	21 42 37.1	-0.2
TXAR	Lajitas Array	58.37	326	P	P	21 45 28.2	+1.4
	comp=Z,1.2nm,0.8s,baz=153,slow=9.1,SNR=5.6						
TXAR	Lajitas Array	58.37	326	P	P	21 45 26.4	-0.4
T49A	Edmonton	58.38	346	P	P	21 45 26.5	-0.1
N49A	Columbus Grove	61.78	348	P	P	21 45 50.2	+0.3
N49A				IAmb	IAmb	21 45 51.5	
	comp=Z,11nm,0.8s						
WVNY	West Valley, N	62.40	353	P	P	21 45 54.9	+0.9
J48A	Bridge Port	64.01	349	P	P	21 46 03.5	-1.2
J48A				IAmb	IAmb	21 46 07.9	
	comp=Z,12nm,0.9s						
SDCO	Great Sand Dun	66.03	330	P	P	21 46 17.3	-0.9
SDCO				IAmb	IAmb	21 46 26.3	
	comp=Z,3.4nm,1.0s						
X16A	Lo Mia Camp, P	66.48	324	P	P	21 46 18.9	-2.3
DBIC	Dimbokro	69.87	75	P	P	21 46 42.6	0.0
	comp=Z,7.0nm,0.9s,baz=219,slow=9.1,SNR=5.9						
DBIC	Dimbokro	69.87	75	P	P	21 46 41.2	-1.4
DBIC				IAmb	IAmb	21 46 47.2	
	comp=Z,14nm,1.1s						
TMUT	Trail Mountain	70.02	328	P	P	21 46 40.3	-3.0
PSUT	Pine Spring	70.82	325	P	P	21 46 48.5	+0.3
PDAR	Pinedale Array	71.89	331	P	P	21 46 55.5	+0.9
	comp=Z,0.5nm,0.8s,baz=132,slow=5.4,SNR=3.7						
PDAR	Pinedale Array	71.89	331	P	P	21 46 54.2	-0.4
NVAR	Mina Array Bea	73.21	323	P	P	21 47 04.9	+2.3
	comp=Z,0.6nm,0.7s,baz=138,slow=8.7,SNR=5.2						
NVAR	Mina Array Bea	73.21	323	P	P	21 47 01.4	-1.1
YNE	Yellowstone No	73.85	332	P	P	21 47 04.9	-1.3
SCHQ	Schefferville	74.47	2	P	P	21 47 09.9	+0.6
	comp=Z,3.5nm,0.8s,baz=186,slow=3.4,SNR=4.9						
SCHQ	Schefferville	74.47	2	P	P	21 47 09.4	+0.1
SCHQ				IAmb	IAmb	21 47 23.0	
	comp=Z,8.6nm,1.1s						
PAHR	Pah Rah Range	74.70	323	IAmb	IAmb	21 47 17.8	
	comp=Z,5.7nm,1.1s						
TOA0	Torodi Ar. Sit	78.37	71	P	P	21 47 31.4	-0.9
TORD	Torodi Ar. Bea	78.37	71	P	P	21 47 32.4	+0.1
	comp=Z,15nm,0.8s,baz=253,slow=4.9,SNR=27						
TORD	Torodi Ar. Bea	78.37	71	P	P	21 47 31.1	-1.2
YKA	Yellowknife Ar	89.12	341	P	P	21 48 27.3	+1.1
	comp=Z,1.9nm,0.7s,baz=138,slow=4.8,SNR=12						
H11S2	WAKE ISLAND Hy	126.03	279	T	T	00 13 06.5	
	baz=102,slow=74,SNR=51						
H11S1	WAKE ISLAND Hy	126.04	279	T	T	00 13 07.1	
	baz=102,slow=74,SNR=36						
H11S3	WAKE ISLAND Hy	126.05	279	T	T	00 13 19.6	
	baz=102,slow=74,SNR=38						
H11N3	WAKE ISLAND Hy	126.07	280	T	T	00 13 06.6	
	baz=101,slow=74,SNR=28						
H11N2	WAKE ISLAND Hy	126.09	280	T	T	00 13 12.1	
	baz=101,slow=74,SNR=37						
H11N1	WAKE ISLAND Hy	126.09	280	T	T	00 13 21.2	
	baz=101,slow=74,SNR=22						
SEY	Seymchan	127.96	337	PKP	PKiKP	21 54 37.9	+0.7
	comp=Z,2.6nm,0.7s,baz=151,slow=2.4,SNR=9.1						
ASAR	Alice Springs	130.54	210	PKP	PKiKP	21 54 43.1	-0.7
	comp=Z,0.5nm,0.6s,baz=58,slow=2.5,SNR=4.3						
ASAR	Alice Springs	130.54	210		PKPdf	21 54 42.6	-0.3
ABKAR	Akbulak array	131.04	41		PKiKP	21 54 43.0	-0.8
WRA	Warramunga Arr	133.46	213	PKP	PKiKP	21 54 48.5	-1.2
	comp=Z,0.4nm,0.6s,baz=147,slow=1.8,SNR=5.0						
WRA	Warramunga Arr	133.46	213		PKPdf	21 54 47.6	-0.9
ZAA0	Zalesovo Array	141.14	23		PKPdf	21 55 00.7	-0.9
ZALV	Zalesovo Beam	141.14	23	PKP	PKPdf	21 55 00.7	-0.8
	comp=Z,1.7nm,0.6s,baz=299,slow=2.8,SNR=8.5						
ZALV	Zalesovo Beam	141.14	23		PKPdf	21 55 00.5	-1.0
AAK	Ala-Archa	142.94	44	PKP	PKPdf	21 55 05.0	-0.3
	comp=Z,2.0nm,0.8s,baz=235,slow=2.0,SNR=8.1						
AAK	Ala-Archa	142.94	44		PKPdf	21 55 04.7	-0.7
MAKZ	Makanchi	145.06	33		PKPdf	21 55 07.9	-0.8
MK31	Makanchi Array	145.23	33		PKPbc	21 55 07.9	-0.8
MKAR	Makanchi Array	145.23	33	PKPbc	PKPdf	21 55 09.9	+0.9
	comp=Z,11nm,0.7s,baz=322,slow=4.0,SNR=58						
MKAR	Makanchi Array	145.23	33		PKPbc	21 55 08.0	-0.7
KSH	Kashi	145.30	48	PKPbc	PKiKP	21 55 10.9	-2.5
KSH				PP	PP	21 58 35.5	+6.6
KSH				SKS	SKSdf	22 02 19.3	+0.2
USA0B	Ussuriysk Arra	149.26	327		PKPbc	21 55 18.8	-1.2
USRK	Ussuriysk Ar.	149.26	327	PKPbc	PKiKP	21 55 21.2	0.0
	comp=Z,5.5nm,0.9s,baz=56,slow=1.1,SNR=13						
USRK	Ussuriysk Ar.	149.26	327		PKiKP	21 55 20.2	-1.1
MJAR	Matsushiro Arr	149.78	309	PKPbc	PKiKP	21 55 22.3	-0.3
	comp=Z,4.3nm,0.9s,baz=118,slow=1.1,SNR=9.7						
MJAR	Matsushiro Arr	149.78	309		PKPbc	21 55 21.4	-0.2
SONM	Songino Array	152.00	4	PKPbc	PKiKP	21 55 27.7	+0.7
	comp=Z,3.7nm,0.8s,baz=321,slow=1.6,SNR=13						
SONM	Songino Array	152.00	4		PKPbc	21 55 25.3	-1.4
ULN	Ulaanbaatar	152.01	3		PKiKP	21 55 26.9	-0.2

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*IDC **16** 21:37:17.5±1.9, 19°.86S×70°.53W, h0km, mb4.1/1, mb1 4.2/2, mb1mx3.7/37, mbtmp4.2/2, Error ellipse: s-maj=82.8km s-min=32.8km az=69.0*

ISC 16 21:37:18.4±1.5**, 19°.82S**±0°.09×**70°.6W**±0°.2**, h10**km**, n6, σ0ˢ.48**/7**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	3.19	151	Pn	Pn	21 38 08.6	-0.4
	baz=315,slow=11,SNR=0.6						
LVC				Sn	Sn	21 38 47.8	+0.5
	11nm,0.3s,baz=134,slow=21,SNR=0.7						
LPAZ	La Paz	4.22	34	Pn	Pb	21 38 33.1	0.0
	baz=215,slow=18,SNR=0.6						
TORD	Torodi Ar. Bea	78.30	71	P	P	21 49 19.2	-0.1
	1.4nm,0.7s,baz=248,slow=5.8,SNR=1.8						
WRA	Warramunga Arr	133.54	213	PKP	PKPdf	21 56 35.6	-0.4
	0.4nm,0.7s,baz=139,slow=1.7,SNR=1.8						
MKAR	Makanchi Array	145.15	33	PKPbc	PKPdf	21 56 56.8	+0.5
	1.8nm,0.7s,baz=328,slow=4.0,SNR=8.4						
SONM	Songino Array	151.94	4	PKPbc	PKiKP	21 57 14.5	+0.3
	0.6nm,0.7s,baz=349,slow=3.1,SNR=1.8						

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*IDC **16** 21:41:36.0±0.7, 19°.94S×70°.68W, h0km, mb3.8/7, mb1 4.1/9, mb1mx3.9/39, mbtmp3.9/9, ML3.6/2, Error ellipse: s-maj=27.6km s-min=18.9km az=63.0*

ISC 16 21:41:37.3±0.7**, 19°.89S**±0°.09×**70°.7W**±0°.1**, h10**km**, n16, σ1ˢ.01**/16**, mb3.8**/6**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	3.19	148	Pn	Pn	21 42 28.2	+0.3
	9.4nm,0.3s,baz=327,slow=12,SNR=4.2						
LVC				Sn	Sn	21 43 06.5	+0.3
	20nm,0.3s,baz=65,slow=10,SNR=3.0						
LVC				Lg	Lg	21 43 12.5	
	66nm,0.3s,baz=56,slow=20,SNR=10						
LPAZ	La Paz	4.34	35	Pn	Pb	21 42 53.2	-0.9
	0.9nm,0.3s,baz=197,slow=5.2,SNR=4.1						
SIV	San Ignacio	9.96	69	Pn	Pn	21 44 01.7	+1.1
	0.4nm,0.3s,baz=241,slow=19,SNR=4.2						
PLCA	Paso Flores	20.78	180	P	Pn	21 46 18.1	-2.8
	3.2nm,0.9s,baz=76,slow=20,SNR=6.0						
PTGA	Pitinga	21.75	30	P	P	21 46 29.5	+0.3
	2.3nm,0.4s,baz=194,slow=18,SNR=4.4						
TXAR	Lajitas Array	58.35	326	P	P	21 51 34.0	+1.1
	0.3nm,0.6s,baz=131,slow=11,SNR=2.1						
PDAR	Pinedale Array	71.88	331	P	P	21 53 01.2	+0.4
	0.2nm,0.5s,baz=131,slow=11,SNR=2.3						
NVAR	Mina Array Bea	73.19	323	P	P	21 53 09.8	+1.2
	0.4nm,0.7s,baz=170,slow=5.5,SNR=3.3						
TORD	Torodi Ar. Bea	78.43	71	P	P	21 53 38.5	-0.4
	3.6nm,0.8s,baz=249,slow=5.3,SNR=14						
YKA	Yellowknife Ar	89.12	341	P	P	21 54 33.1	+0.7
	0.8nm,0.8s,baz=136,slow=5.3,SNR=11						
ASAR	Alice Springs	130.50	210	PKP	PKiKP	22 00 48.8	-1.1
	0.3nm,0.6s,baz=157,slow=1.5,SNR=4.1						
WRA	Warramunga Arr	133.42	213	PKP	PKPdf	22 00 53.7	-1.0
	0.3nm,0.6s,baz=162,slow=2.0,SNR=3.3						
ZALV	Zalesovo Beam	141.18	23	PKP	PKiKP	22 01 08.5	-2.0
	0.6nm,0.6s,baz=291,slow=5.2,SNR=3.0						
MKAR	Makanchi Array	145.27	33	PKPbc	PKPdf	22 01 15.7	+0.3
	3.2nm,0.7s,baz=329,slow=4.0,SNR=32						
USRK	Ussuriysk Ar.	149.25	327	PKPbc	PKiKP	22 01 27.0	-0.5
	1.8nm,0.9s,baz=72,slow=4.7,SNR=3.2						
SONM	Songino Array	152.02	4	PKPbc	PKiKP	22 01 32.3	-1.0
	1.1nm,0.8s,baz=322,slow=2.0,SNR=5.8						

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*IDC **16** 21:42:30.8±0.8, 19°.94S×70°.53W, h0km, mb4.0/11, mb1 4.2/12, mb1mx4.0/38, mbtmp4.1/12, ML3.8/1, Error ellipse: s-maj=24.6km s-min=18.5km az=18.0*

*NEIC **16** 21:42:31.0±1.8, 20°.08S±0°.04×70°.64W±0°.07, h10km±1km, mb4.8/8, Error ellipse: s-maj=11.8km s-min=6.6km az=286.0*

ISC 16 21:42:31.2±0.5**, 20°.04S**±0°.05×**70°.64W**±0°.06**, h10**km**, n63, σ1ˢ.68**/51**, 1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	IPOC Station P	0.97	74	Pn	Pn	21 42 52.3	+1.3
PB11				Sn	Sn	21 43 05.0	+0.1
GO01	Chusmiza	1.41	75	Pn	Pg	21 43 00.0	+1.7
GO01				Sn	Sb	21 43 16.4	+0.2
PB01	IPOC Station P	1.47	133	Pn	Pb	21 42 58.4	-0.4
PB01				Sn	Sn	21 43 16.4	-1.0
LVC	Limon Verde	3.03	148	Lg	Lg	21 44 09.0	
	49nm,0.3s,baz=72,slow=18,SNR=1.4						
PB10	IPOC Station P	3.46	179		Pn	21 43 26.0	+0.8
LPAZ	La Paz	4.43	33	Pn	Pb	21 43 45.8	-3.7
	2.2nm,0.3s,baz=201,slow=6.5,SNR=3.1						
LPAZ	La Paz	4.43	33		Pn	21 43 41.1	+2.0
GO02	Mina Guanaco	5.19	169		Pn	21 43 48.1	-1.2
GO03	Copiap	7.53	177	Pn	Pn	21 44 21.0	-0.2
SIV	San Ignacio	9.95	68	Pn	Pn	21 44 55.2	+0.8
	0.9nm,0.3s,baz=262,slow=12,SNR=5.6						
GO06	Curarrehue	19.50	182		P	21 46 58.4	-0.2
PLCA	Paso Flores	20.63	180	P	Pn	21 47 12.8	-0.4
	9.4nm,0.9s,baz=19,slow=12,SNR=9.6						
PLCA	Paso Flores	20.63	180	P	Pn	21 47 13.0	-0.2
OTAV	Otavalo	21.55	338	P	P	21 47 20.1	-1.3
OTAV				IAmb	IAmb	21 47 35.1	
	comp=Z,48nm,0.7s						
PTGA	Pitinga	21.85	30	P	P	21 47 23.8	-0.3
	comp=Z,5.9nm,0.4s,baz=209,slow=16,SNR=6.9						
PTGA	Pitinga	21.85	30	P	P	21 47 23.4	-0.7
PTGA				IAmb	IAmb	21 47 35.3	
	comp=Z,11nm,0.9s						
BDFB	Brasilia	21.97	82	P	P	21 47 24.0	-1.6
	comp=Z,2.0nm,0.4s,baz=245,slow=9.3,SNR=2.6						
FLOC	Florencia	22.04	347	*e*P	P	21 47 30.9	+4.7
GCUF	Volcan Galeras	22.13	342	*e*P	P	21 47 40.7	+13
SOTA	Rioblanco	22.80	344	*e*P	P	21 47 45.1	+10
BBAC	Balboa, Cauca	22.86	343	*e*P	P	21 47 44.2	+9.1
PCON	Cinco Dias	22.93	345	*e*P	P	21 47 47.7	+11
POPC	Popayan, Colom	23.20	345	*e*P	P	21 47 48.0	+9.3
ORTC	Ortega, Tolima	24.22	349	*e*P	P	21 47 54.8	+6.4
YOTC	Yotoco, Valle	24.52	346	*e*P	P	21 48 01.9	+11
GUY2C	Guyana, Caldas	25.53	349	*e*P	P	21 48 01.9	+1.2
NORC	Norcasia	25.78	350	⇓*e*P	P	21 48 06.0	+3.5
RUSC	La Rusia	25.88	354	*e*P	P	21 48 05.5	+1.6
RUSC	La Rusia	25.88	354	P	P	21 48 04.7	+0.8
CBOC	Ciudad Bolivar	26.27	348	*e*P	P	21 48 09.9	+2.7
SMLC	San Martn de	28.85	353	*e*P	P	21 48 30.3	+0.2
RCBR	Riachuelo	36.58	72	P	P	21 49 37.8	+0.1
	comp=Z,3.5nm,0.5s,baz=227,slow=6.5,SNR=5.1						
RCBR	Riachuelo	36.58	72	P	P	21 49 37.7	-0.1
TEIG	Tepich	43.58	336	P	P	21 50 36.3	+0.6
	comp=Z,9.0nm,0.9s,baz=223,slow=0.0,SNR=2.2						
TEIG	Tepich	43.58	336	P	P	21 50 36.5	+0.9
TEIG				IAmb	IAmb	21 50 50.5	
	comp=Z,26nm,1.1s						
TXAR	Lajitas Array	58.51	326	P	P	21 52 27.8	-0.2
	comp=Z,0.3nm,0.6s,baz=155,slow=9.0,SNR=2.7						
TXAR	Lajitas Array	58.51	326	P	P	21 52 27.7	-0.3
DBIC	Dimbokro	69.89	75	P	P	21 53 43.2	+0.2
	comp=Z,3.0nm,0.8s,baz=217,slow=11,SNR=3.3						
DBIC	Dimbokro	69.89	75	P	P	21 53 42.4	-0.6

DBIC				IAmb	IAmb	21 53 56.9	
	comp=Z,5.6nm,1.0s						
PDAR	Pinedale Array	72.05	331	P	P	21 53 56.8	+1.1
	comp=Z,0.2nm,0.5s,baz=128,slow=7.0,SNR=2.3						
PDAR	Pinedale Array	72.05	331	P	P	21 53 55.7	0.0
NVAR	Mina Array Bea	73.35	323	P	P	21 54 04.7	+1.1
	comp=Z,0.3nm,0.7s,baz=156,slow=6.7,SNR=2.0						
NVAR	Mina Array Bea	73.35	323	P	P	21 54 03.6	0.0
EGMT	Eagleton	76.27	334	P	P	21 54 20.6	+0.5
TORD	Torodi Ar. Bea	78.41	71	P	P	21 54 33.2	+0.5
	comp=Z,5.6nm,0.7s,baz=254,slow=5.1,SNR=15						
TORD	Torodi Ar. Bea	78.41	71	P	P	21 54 32.1	-0.6
LBTB	Lobatse	87.10	115	P	P	21 55 15.7	-2.3
YKA	Yellowknife Ar	89.28	341	P	P	21 55 28.0	+0.9
	comp=Z,0.2nm,0.6s,baz=135,slow=5.2,SNR=3.6						
H11S2	WAKE ISLAND Hy	126.07	279	T	T	00 20 32.8	
	baz=101,slow=74,SNR=11						
H11S1	WAKE ISLAND Hy	126.08	279	T	T	00 20 02.1	
	baz=101,slow=74,SNR=10						
H11S3	WAKE ISLAND Hy	126.09	279	T	T	00 20 10.3	
	baz=101,slow=74,SNR=9.3						
H11N3	WAKE ISLAND Hy	126.12	280	T	T	00 20 09.3	
	baz=101,slow=74,SNR=11						
H11N2	WAKE ISLAND Hy	126.14	280	T	T	00 20 05.6	
	baz=101,slow=74,SNR=12						
H11N1	WAKE ISLAND Hy	126.14	280	T	T	00 20 08.3	
	baz=101,slow=74,SNR=6.9						
ASAR	Alice Springs	130.41	210	PKP	PKiKP	22 01 44.0	+0.2
	comp=Z,0.2nm,0.5s,baz=118,slow=1.7,SNR=3.0						
WRA	Warramunga Arr	133.34	213	PKP	PKiKP	22 01 49.5	-0.2
	comp=Z,0.4nm,0.8s,baz=158,slow=1.9,SNR=3.0						
ZALV	Zalesovo Beam	141.29	23	PKP	PKPdf	22 02 01.5	-0.5
	comp=Z,0.7nm,0.6s,baz=251,slow=4.4,SNR=3.9						
MAKZ	Makanchi	145.18	34		PKPdf	22 02 09.2	+0.1
MKAR	Makanchi Array	145.35	33	PKPbc	PKPab	22 02 10.1	+0.7
	comp=Z,3.4nm,0.6s,baz=329,slow=3.4,SNR=16						
MKAR	Makanchi Array	145.35	33		PKPbc	22 02 09.0	-0.2
MJAR	Matsushiro Arr	149.90	309	PKPbc	PKiKP	22 02 24.3	+1.2
	comp=Z,0.9nm,0.6s,baz=70,slow=3.5,SNR=3.7						
SONM	Songino Array	152.16	4	PKPbc	PKiKP	22 02 28.4	+0.8
	comp=Z,0.5nm,0.6s,baz=16,slow=2.0,SNR=3.2						
SONM	Songino Array	152.16	4		PKPbc	22 02 25.8	-1.4

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*IDC **16** 21:44:07.3±0.6, 19°.88S×70°.70W, h0^{km}, mb4.4/16, mb1 4.5/20, mb1mx4.3/41, mbtmp4.4/20, ML3.9/3, Error ellipse: s-maj=20.2km s-min=14.1km az=54.0*

*NEIC **16** 21:44:09.1±1.5, 20°.04S±0°.08×70°.70W±0°.07, h10^{km}±1^{km}, mb4.6/8, Error ellipse: s-maj=13.6km s-min=10.5km az=327.0*

ISC 16 21:44:08.5±0.5**, 19°.95S**±0°.05×**70°.72W**±0°.06**, h10^{km}, n50, σ1^{s}05**/48**, mb4.5**/16**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	IPOC Station P	1.02	80	Pn	Pn	21 44 29.7	+0.7
PB11				Sn	Sn	21 44 44.2	+0.8
GO01	Chusmiza	1.46	79	Pn	Pg	21 44 37.1	+0.5
GO01				Sn	Sn	21 44 54.5	-0.3
PB01	IPOC Station P	1.59	134	Pn	Pb	21 44 37.5	-0.6
PB01				Sn	Sn	21 44 55.1	-2.4
LVC	Limon Verde	3.14	148	Pn	Pn	21 44 59.3	+0.8
	baz=351,slow=10,SNR=3.1						
LVC				Sn	Sn	21 45 37.4	+1.2
	22nm,0.3s,baz=3.4,slow=23,SNR=1.3						
LVC				Lg	Lg	21 45 44.0	
	103nm,0.3s,baz=37,slow=14,SNR=5.1						
LVC	Limon Verde	3.14	148	Pn	Pn	21 44 58.9	+0.5
LVC				Sn	Sn	21 45 33.2	-3.0
LPAZ	La Paz	4.39	34	Pn	Pb	21 45 24.1	-2.0
	6.2nm,0.3s,baz=340,slow=2.8,SNR=6.6						
LPAZ				Lg	Lg	21 46 32.4	
	3.1nm,0.3s,baz=206,slow=16,SNR=0.9						
NNA	Nana	9.86	322	Pn	Pn	21 46 29.7	-0.8
	0.8nm,0.3s,baz=187,slow=17,SNR=2.0						
SIV	San Ignacio	9.98	68	Pn	Pn	21 46 32.1	0.0
	4.7nm,0.3s,baz=271,slow=10,SNR=12						
SAML	Samuel	13.14	35	Pn	Pn	21 47 16.9	+1.6
CPUP	Villa Florida	13.85	120	Pn	Pn	21 47 25.1	+0.1
	0.1nm,0.3s,baz=322,slow=12,SNR=2.4						
PLCA	Paso Flores	20.72	180	P	Pn	21 48 51.2	-0.3
	9.9nm,1.0s,baz=30,slow=16,SNR=4.0						
PTGA	Pitinga	21.80	30	P	P	21 49 01.8	+0.8
	7.6nm,0.7s,baz=211,slow=11,SNR=4.3						
PTGA	Pitinga	21.80	30	P	P	21 49 02.1	+1.1
BDFB	Brasilia	22.03	82	P	P	21 49 03.9	+0.4
	10nm,0.7s,baz=255,slow=11,SNR=2.1						
BDFB	Brasilia	22.03	82	P	P	21 49 02.4	-1.1
BDFB				IAmb	IAmb	21 49 08.9	
	comp=Z,14nm,0.9s						
ROSC	El Rosal	24.88	351	P	P	21 49 32.6	+0.5
	comp=Z,5.4nm,0.3s,baz=72,slow=19,SNR=2.8						
RUSC	La Rusia	25.78	355	P	P	21 49 41.7	+1.4
RCBR	Riachuelo	36.62	72	P	P	21 51 15.3	-0.1
	comp=Z,11nm,0.7s,baz=229,slow=8.3,SNR=5.6						
SJG	San Juan	38.09	7	P	P	21 51 26.5	-1.1
	comp=Z,15nm,0.9s,baz=117,slow=1.4,SNR=4.2						
GCPR	Guaynabo City	38.29	7	P	P	21 51 28.1	-1.2
TEIG	Tepich	43.47	336	P	P	21 52 11.7	-0.3
	comp=Z,7.0nm,0.7s,baz=160,slow=0.0						
TEIG	Tepich	43.47	336	P	P	21 52 12.8	+0.8
TEIG				IAmb	IAmb	21 52 21.9	
	comp=Z,18nm,1.1s						
PMSA	Palmer Station	45.02	176	P	P	21 52 24.7	+0.7
	comp=Z,17nm,0.9s,baz=348,slow=9.3,SNR=4.3						
TXAR	Lajitas Array	58.40	326	P	P	21 54 04.5	0.0
	comp=Z,1.9nm,0.9s,baz=142,slow=10,SNR=6.6						
PFO	Pinyon Flats O	68.83	320	P	P	21 55 14.6	+1.1
	comp=Z,2.4nm,0.6s,baz=130,slow=7.9,SNR=3.9						
DBIC	Dimbokro	69.94	75	P	P	21 55 21.2	+0.7
	comp=Z,1.7nm,0.8s,baz=238,slow=10,SNR=2.0						
PDAR	Pinedale Array	71.93	331	P	P	21 55 32.2	-0.1
	comp=Z,1.3nm,1.0s,baz=106,slow=5.4,SNR=4.3						
PDAR	Pinedale Array	71.93	331	P	P	21 55 32.9	+0.6
NVAR	Mina Array Bea	73.23	323	P	P	21 55 40.7	+0.5
	comp=Z,3.3nm,1.1s,baz=120,slow=5.3,SNR=9.4						
ULM	Lac du Bonnet	73.34	343	P	P	21 55 39.5	-0.8
	comp=Z,3.0nm,0.9s,baz=191,slow=3.0,SNR=4.0						
FLWY	Flagg Ranch	73.48	331	P	P	21 55 42.8	+1.3
FLWY				IAmb	IAmb	21 55 43.8	
	comp=Z,8.1nm,1.0s						
YNE	Yellowstone No	73.89	332	P	P	21 55 43.6	-0.3
YHH	Holmes Hill	74.09	331	P	P	21 55 46.5	+1.3
TORD	Torodi Ar. Bea	78.45	71	P	P	21 56 09.2	-1.0
	comp=Z,2.7nm,0.8s,baz=250,slow=5.2,SNR=5.2						
YKA	Yellowknife Ar	89.17	341	P	P	21 57 04.0	0.0
	comp=Z,2.6nm,0.8s,baz=139,slow=5.1,SNR=10						
H11S2	WAKE ISLAND Hy	125.99	279	T	T	00 21 42.4	
	baz=102,slow=75,SNR=5.1						
H11S1	WAKE ISLAND Hy	126.00	279	T	T	00 21 43.7	
	baz=102,slow=75,SNR=5.2						
H11S3	WAKE ISLAND Hy	126.00	279	T	T	00 21 42.7	
	baz=102,slow=75,SNR=6.9						
H11N3	WAKE ISLAND Hy	126.03	280	T	T	00 21 46.3	
	baz=101						
H11N2	WAKE ISLAND Hy	126.05	280	T	T	00 21 45.3	
	baz=101,SNR=5.9						
H11N1	WAKE ISLAND Hy	126.05	280	T	T	00 21 48.3	
	baz=101						
TIXI	Tiksi	127.04	352	PKP	PKPdf	22 03 11.4	-0.7
	comp=Z,0.4nm,0.3s,baz=62,slow=7.3,SNR=3.5						
SEY	Seymchan	128.01	337	PKP	PKPdf	22 03 14.6	+0.4
	comp=Z,1.0nm,0.4s,baz=52,slow=4.3,SNR=4.9						
ASAR	Alice Springs	130.45	210	PKP	PKPdf	22 03 19.6	-0.7
	comp=Z,0.5nm,0.8s,baz=159,slow=2.9,SNR=4.2						
WRA	Warramunga Arr	133.37	213	PKP	PKPdf	22 03 25.4	-0.4
	comp=Z,0.4nm,0.6s,baz=161,slow=1.8,SNR=4.9						
ZALV	Zalesovo Beam	141.23	23	PKP	PKPdf	22 03 37.3	-1.9
	comp=Z,1.4nm,0.7s,baz=310,slow=2.2,SNR=3.2						
MKAR	Makanchi Array	145.32	33	PKPbc	PKPbc	22 03 46.8	+0.4
	comp=Z,4.4nm,0.7s,baz=327,slow=4.0,SNR=18						
USRK	Ussuriysk Ar.	149.29	327	PKPbc	PKPbc	22 03 58.4	+0.8
	comp=Z,4.3nm,0.8s,baz=37,slow=2.1,SNR=8.8						
MJAR	Matsushiro Arr	149.78	309	PKPbc	PKPbc	22 03 59.2	+0.1
	comp=Z,3.2nm,0.8s,baz=110,slow=1.8,SNR=7.2						
SONM	Songino Array	152.08	4	PKPbc	PKPbc	22 04 04.8	+0.5
	comp=Z,2.1nm,0.8s,baz=318,slow=0.9,SNR=8.2						

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*NEIC **16** 21:46:41.8±1.6, 20°.00S±0°.05×70°.67W±0°.07, h10^{km}±1^{km}, mb4.5/5, Error ellipse: s-maj=12.9km s-min=6.2km az=297.0*

*IDC **16** 21:46:42.3±1.9, 19°.81S×70°.39W, h0^{km}, mb3.7/2, mb1 3.9/3, mb1mx3.6/33, mbtmp3.8/3, ML4.1/1, Error ellipse: s-maj=89.2km s-min=30.1km az=67.0*

ISC 16 21:46:41.9±0.8**, 19°.98S**±0°.04×**70°.65W**±0°.07**, h10^{km}, n20, σ1^{s}21**/26**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	IPOC Station P	0.96	77	Pn	Pn	21 47 03.0	+1.4
PB11					Sn	21 47 15.8	+0.4
GO01	Chusmiza	1.41	77		Pg	21 47 09.1	+0.2
GO01					Sb	21 47 27.0	+0.3
PB01	IPOC Station P	1.52	134	Pn	Pb	21 47 10.1	-0.1
PB01				Sn	Sn	21 47 27.1	-2.0
PB04	IPOC Station P	2.39	169	Pn	Pn	21 47 21.1	-0.2
PB04				Sn	Sn	21 47 50.7	0.0
LVC	Limon Verde	3.08	148	Pn	Pn	21 47 32.7	+1.8
	21nm,0.3s,baz=329,slow=12,SNR=1.1						
LVC				Sn	Sb	21 48 12.6	-2.1
	18nm,0.3s,baz=222,slow=20,SNR=1.5						
LVC	Limon Verde	3.08	148		Pn	21 47 31.7	+0.8
LVC					Sn	21 48 06.9	-1.0
LPAZ	La Paz	4.39	34	Pn	Pb	21 47 56.4	-3.0
	0.4nm,0.3s,baz=212,slow=13,SNR=0.6						
LPAZ	La Paz	4.39	34		Pn	21 47 49.7	+0.6
PTGA	Pitinga	21.80	30	P	P	21 51 35.0	+0.7
SPB	Sao Paulo	21.85	104	P	P	21 51 34.9	+0.1
RUSC	La Rusia	25.82	354	P	P	21 52 14.1	+0.1
URIC	Uribia, Colomb	31.51	357	P	P	21 53 02.9	-1.3
EFI	East Falkland	33.13	166	P	P	21 53 17.7	-0.4
PDPR	Patillas Dam,	38.04	7	P	P	21 54 00.3	-0.2
PDPR				IAmb	IAmb	21 54 04.1	
	comp=Z,10nm,1.1s						
TORD	Torodi Ar. Bea	78.40	71	P	P	21 58 43.9	+0.6
	comp=Z,0.7nm,0.8s,baz=245,slow=4.9,SNR=2.5						
TORD	Torodi Ar. Bea	78.40	71	P	P	21 58 42.8	-0.5
YKA	Yellowknife Ar	89.23	341	P	P	21 59 39.2	+1.7
	comp=Z,0.2nm,0.5s,baz=132,slow=5.5,SNR=1.8						
MKAR	Makanchi Array	145.32	33	PKPbc	PKPdf	22 06 20.1	0.0
	comp=Z,0.8nm,0.6s,baz=322,slow=3.7,SNR=7.2						
MKAR	Makanchi Array	145.32	33		PKPbc	22 06 19.6	-0.2
SONM	Songino Array	152.11	4	PKPbc	PKiKP	22 06 39.6	+1.5
	comp=Z,0.3nm,0.6s,baz=336,slow=3.2,SNR=2.5						

IDC 16 21:52:07.9±2.2**, 19°.80S**×**70°.34W, h0^{km}, mb3.6**/1**, mb1 3.3**/2**, mb1mx3.2**/38**, mbtmp3.3**/2**, ML2.7**/1**, Error ellipse: s-maj=84.0km s-min=46.2km az=82.0, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	3.10	155	Pn	Pn	21 52 58.1	-0.4
	0.9nm,0.3s,baz=328,slow=13,SNR=1.6						
TORD	Torodi Ar. Bea	78.06	71	P	P	22 04 08.4	-0.7
	0.6nm,1.1s,baz=229,slow=6.0,SNR=2.0						
ASAR	Alice Springs	130.76	210	PKP	PKPdf	22 11 22.1	+0.1
	0.3nm,0.5s,baz=140,slow=3.9,SNR=1.8						
MKAR	Makanchi Array	145.00	33	PKPbc	PKPbc	22 11 46.6	0.0
	0.2nm,0.7s,baz=339,slow=3.6,SNR=2.5						

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*IDC **16** 21:52:36.3±0.8, 19°.81S×70°.59W, h0^{km}, mb3.8/7, mb1 4.0/11, mb1mx3.9/40, mbtmp3.8/11, ML3.4/4, Error ellipse: s-maj=29.7km s-min=13.2km az=65.0*

*NEIC **16** 21:52:38.7±1.6, 19°.83S±0°.05×70°.74W±0°.03, h28^{km}±3^{km}, mb4.1/3, Error ellipse: s-maj=7.5km s-min=4.2km az=167.0*

ISC 16 21:52:36.7±0.6**, 19°.87S**±0°.05×**70°.79W**±0°.06**, h10^{km}, n40, σ1^{s}10**/40**, mb3.7**/6**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	IPOC Station P	1.07	85	Pn	Pg	21 52 58.2	+0.9
PB11				Sn	Sg	21 53 10.3	-0.9
GO01	Chusmiza	1.51	83	Pn	Pn	21 53 04.8	+0.5
GO01				Sg	Sn	21 53 23.6	-0.7
PB01	IPOC Station P	1.69	134	Pn	Pn	21 53 07.5	+1.1
PB01				Sn	Sn	21 53 26.7	-1.5
PB04	IPOC Station P	2.53	167		Pn	21 53 16.8	-1.2
PB04				Sn	Sn	21 53 48.2	-0.8
LVC	Limon Verde	3.24	148	Pn	Pn	21 53 29.8	+1.7
	11nm,0.3s,baz=309,slow=9.1,SNR=16						
LVC				Pg	Pb	21 53 35.1	+0.5
	38nm,0.3s,baz=322,slow=9.7,SNR=20						
LVC				Sn	Sn	21 54 08.7	+1.8
	29nm,0.3s,baz=76,slow=17,SNR=6.5						
LVC				Lg	Lg	21 54 16.6	
	51nm,0.3s,baz=214,slow=19,SNR=5.0						
LVC	Limon Verde	3.24	148		Pn	21 53 27.8	-0.3
LVC					Sn	21 54 04.9	-2.1
PB10	IPOC Station P	3.64	177		Pn	21 53 31.4	-1.7
LPAZ	La Paz	4.36	36	Pn	Pn	21 53 49.7	+6.0
	1.0nm,0.3s,baz=221,slow=1.8,SNR=10						
LPAZ	La Paz	4.36	36	Pn	Pn	21 53 42.7	-1.0
GO02	Mina Guanaco	5.39	168		Pn	21 53 56.5	-1.0
SIV	San Ignacio	10.01	69	Pn	Pn	21 54 59.8	-1.0
	0.1nm,0.3s,baz=261,slow=13,SNR=2.3						
CFA	Coronel Fontan	11.91	169	Pn	Pn	21 55 27.7	+0.9
	0.3nm,0.3s,baz=360,slow=14,SNR=2.2						
CPUP	Villa Florida	13.95	120	Pn	Pn	21 55 53.7	-0.8
	0.1nm,0.3s,baz=333,slow=2.3,SNR=2.5						
CPUP	Villa Florida	13.95	120		Pn	21 55 54.1	-0.4
PLCA	Paso Flores	20.80	179	P	P	21 57 19.2	+0.9
	6.2nm,1.1s,baz=24,slow=12,SNR=3.8						
PLCA	Paso Flores	20.80	179	P	P	21 57 18.7	+0.4
PLCA				IAmb	IAmb	21 57 22.0	
	comp=Z,10.0nm,1.1s						
PTGA	Pitinga	21.77	30	P	P	21 57 27.8	-0.9
	comp=Z,2.8nm,0.3s,baz=237,slow=22,SNR=5.8						
PTGA	Pitinga	21.77	30	P	P	21 57 28.4	-0.3
RUSC	La Rusia	25.70	355	P	P	21 58 07.4	-0.4
TXAR	Lajitas Array	58.30	326	P	P	22 02 33.4	+1.4
	comp=Z,0.4nm,0.6s,baz=148,slow=10,SNR=2.8						
TXAR	Lajitas Array	58.30	326	P	P	22 02 31.2	-0.8
PDAR	Pinedale Array	71.83	331	P	P	22 04 01.8	+1.8
	comp=Z,0.1nm,0.3s,baz=134,slow=6.4,SNR=3.1						
PDAR	Pinedale Array	71.83	331	P	P	22 03 59.8	-0.1
NVAR	Mina Array Bea	73.13	323	P	P	22 04 09.7	+1.9
	comp=Z,0.5nm,0.8s,baz=127,slow=7.1,SNR=3.4						
NVAR	Mina Array Bea	73.13	323	P	P	22 04 07.4	-0.4
TORD	Torodi Ar. Bea	78.48	71	P	P	22 04 38.2	-0.5
	comp=Z,1.1nm,0.7s,baz=251,slow=5.2,SNR=7.0						
TORD	Torodi Ar. Bea	78.48	71	P	P	22 04 37.0	-1.7
YKA	Yellowknife Ar	89.08	341	P	P	22 05 32.5	+0.8
	comp=Z,0.3nm,0.5s,baz=134,slow=4.9,SNR=2.1						
H11S2	WAKE ISLAND Hy	125.91	279	T	T	00 30 48.5	
	baz=101,slow=74,SNR=6.9						
H11S1	WAKE ISLAND Hy	125.92	279	T	T	00 31 01.5	
	baz=101,slow=74,SNR=4.7						
H11S3	WAKE ISLAND Hy	125.93	279	T	T	00 31 02.5	
	baz=101,slow=74,SNR=4.7						
H11N3	WAKE ISLAND Hy	125.96	280	T	T	00 31 05.2	
	baz=101						
H11N2	WAKE ISLAND Hy	125.97	280	T	T	00 31 06.9	
	baz=101						
H11N1	WAKE ISLAND Hy	125.97	280	T	T	00 31 07.4	
	baz=101						
KURK	Kurchatov	140.88	31		PKPdf	22 12 06.0	-0.8
KURBB	Kurchatov Arra	140.89	31	PKP	PKPdf	22 12 07.7	+0.8
	comp=Z,1.3nm,1.1s,baz=311,slow=4.8,SNR=6.1						
MKAR	Makanchi Array	145.29	33	PKPbc	PKPbc	22 12 15.3	+0.7
	comp=Z,1.2nm,0.6s,baz=320,slow=3.3,SNR=21						
MKAR	Makanchi Array	145.29	33		PKPbc	22 12 14.0	-0.6
KLR	Kul'dur	145.59	334	PKPbc	PKPdf	22 12 15.1	-0.2
	comp=Z,0.5nm,0.3s,baz=344,slow=4.2,SNR=2.9						
SONM	Songino Array	152.00	4	PKPbc	PKPbc	22 12 33.4	+1.0
	comp=Z,0.5nm,0.5s,baz=321,slow=1.8,SNR=4.0						

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*IASPEI **16** 21:55:32.4±0.8, 32°.89N±0°.02×116°.22W±0°.02, h13^{km}±5^{km}, Error ellipse: s-maj=2.6km s-min=2.1km az=49.0, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ANF **16** 21:55:32.4±0.2, 32°.88N×116°.24W, h15^{km}±1^{km}, ML3.4/31, Error ellipse: s-maj=2.1km s-min=1.2km az=4.0*

*NEIC **16** 21:55:33.0±1.1, 32°.870N±0°.010×116°.243W±0°.010, h18^{km}±1^{km}, Error ellipse: s-maj=1.6km s-min=0.9km az=218.0*

*PAS **16** 21:55:33.4±1.1, 32°.875N±0°.009×116°.235W±0°.005, h4^{km}±6^{km}, ML3.5/214, Error ellipse: s-maj=1.5km s-min=0.3km az=203.0*

*SCEDC **16** 21:55:33.4, 32°.88N×116°.24W, h4^{km}*

*ECX **16** 21:55:33.6±0.8, 32°.86N×116°.24W, h0^{km}±3^{km}, MD3.2, ML3.5*

ISC 16 21:55:32.5±0.8**, 32°.89N**±0°.01×**116°.22W**±0°.01**, h12^{km}**±5^{km}**, n116, σ0^{s}73**/157**, 14C-7D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBKC	Canebrake	0.03	294	⇑*i*P	Pg	21 55 34.5	-0.3
CBKC	Canebrake	0.03	294		Pg	21 55 34.5	-0.3
MONP2	Monument Peak	0.17	272	⇑*i*P	Pg	21 55 36.8	+0.1
MONP2	Monument Peak	0.17	272		Pb	21 55 39.3	+1.5
MONP2	Monument Peak	0.17	272	P	Pg	21 55 36.5	-0.2
	baz=96,SNR=1000						
MONP2				S	Sg	21 55 39.4	-0.2
	baz=96						
CRR	Carrizo Plain	0.21	90	⇑*i*P	Pb	21 55 37.8	-0.4
CRR	Carrizo Plain	0.21	90		Pb	21 55 37.8	-0.4
IKP	In-Ko-Pah, Jac	0.25	159	⇓*i*P	Pg	21 55 38.2	+0.4
IKP				*e*S	Sg	21 55 41.9	+0.4
IKP				⇓*e*		21 55 42.4	
IKP				IAML		21 55 42.4	
	comp=E,11µm,0.2s						
IKP	In-Ko-Pah, Jac	0.25	159		Pg	21 55 38.2	+0.4
IKP	In-Ko-Pah, Jac	0.25	159	P	Pg	21 55 37.9	0.0
	baz=335,SNR=1000						
IKP				S	Sg	21 55 41.9	+0.4
	baz=335						
RMX	La Rumorosa	0.30	158		Pb	21 55 40.3	+0.3
RMX					Sb	21 55 45.4	+0.4
SUP	Superstition M	0.34	78		Sb	21 55 45.0	-0.8
YUH	Yuha Desert	0.34	134	⇓*i*P	Pg	21 55 39.9	+0.4
YUH	Yuha Desert	0.34	134		Pg	21 55 39.9	+0.4
SWSC	Sam W. Stewart	0.35	80	⇑*i*P	Pb	21 55 40.5	-0.3
SWSC	Sam W. Stewart	0.35	80	P	Pb	21 55 40.5	-0.3
	baz=259,SNR=843						
SWSC				S	Sb	21 55 45.9	-0.4
	baz=259						
ERMX	Rumorosa	0.37	155	⇓*i*P	Pg	21 55 40.3	+0.4
ERMX				*e*S	Sg	21 55 45.4	+0.5
ERMX				IAML		21 55 46.1	
	comp=N,7µm,0.1s						
ERMX				⇑*e*		21 55 46.1	
ERRC	Elmore Ranch	0.40	55		Pb	21 55 41.9	+0.3
ERRC					Sb	21 55 48.8	+1.1
COK2	Cook Ranch 2	0.41	95	⇑*i*P	Pb	21 55 41.9	+0.2
COK2	Cook Ranch 2	0.41	95		Pb	21 55 41.9	+0.2
BORC	Borrego Spring	0.42	336		Sg	21 55 46.8	+0.3
WESC	Westside Schoo	0.43	107	⇑*e*P	Pb	21 55 42.2	+0.3
WESC	Westside Schoo	0.43	107		Pb	21 55 42.2	+0.3
WESC					Sb	21 55 49.1	+0.8
BAR	Barrett	0.44	242	⇑*i*P	Pg	21 55 41.4	+0.2
BAR				*e*S	Sg	21 55 47.1	+0.1
BAR				IAML		21 55 47.4	
	comp=N,4µm,0.4s						
BAR	Barrett	0.44	242	Pg	Pg	21 55 41.3	+0.2
BAR				Sg	Sg	21 55 46.8	-0.2
SALN	Salton City	0.44	26		Pb	21 55 42.1	0.0
SALN					Sb	21 55 48.2	-0.5
TKX	Tecate	0.46	226	⇑*e*P	Pg	21 55 41.8	+0.2
TKX				*e*S	Sg	21 55 47.9	+0.2
TKX	Tecate	0.46	226		Pg	21 55 41.8	+0.2
TKX					Sg	21 55 47.9	+0.2
SGL	Mount Signal	0.48	120	⇑*i*P	Pb	21 55 42.7	-0.1
SGL	Mount Signal	0.48	120		Pb	21 55 42.7	-0.1
ERPC	Ernies Place	0.49	107		Pb	21 55 43.6	+0.6
EML	El Monte Cty P	0.53	271	⇑*e*P	Pg	21 55 42.9	0.0
EML	El Monte Cty P	0.53	271		Pg	21 55 43.0	0.0
DPP	Dos Picos Cty	0.62	281		Pg	21 55 44.6	0.0
DPP					Sg	21 55 52.7	-0.1
SDRC	San Diego Road	0.63	256	⇑*e*P	Pg	21 55 44.8	-0.1
SDRC	San Diego Road	0.63	256		Pg	21 55 44.8	-0.1
HWB	Hans Werner Br	0.64	283		Pg	21 55 45.0	-0.1
HWB					Sg	21 55 53.3	-0.2
BATC	Bat Cave Butte	0.65	29		Pb	21 55 46.3	+0.4
DREC	Desert Rsrch C	0.65	97	⇑*e*P	Pn	21 55 46.7	-0.8
OLP	Otay Lakes Par	0.66	246	⇑*e*P	Pg	21 55 45.4	-0.1
OLP	Otay Lakes Par	0.66	246		Pg	21 55 45.4	-0.1
CBX	Cerro Bola	0.69	214	⇓*e*P	Pb	21 55 46.0	-0.4
CBX				*e*S	Sb	21 55 55.2	-0.7
CBX	Cerro Bola	0.69	214		Pb	21 55 46.0	-0.4
CBX					Sg	21 55 54.9	-0.1
FRD	Ford Ranch, An	0.69	332		Sg	21 55 55.4	+0.4
FRD	Ford Ranch, An	0.69	332		Pb	21 55 46.4	-0.2
BZNA	Buzz No.'s Pla	0.71	328		Sg	21 55 56.2	+0.3
PLM	Palomar	0.72	311		Pb	21 55 46.9	-0.2
PLM					Sb	21 55 56.4	-0.5
SNDA	J Saunders Pla	0.74	333		Pb	21 55 47.5	0.0
SNDA					Sb	21 55 57.4	-0.3
109C	Camp Elliot, M	0.75	271	P	Pg	21 55 46.8	-0.3
	baz=91,SNR=189						
109C				S	Sg	21 55 56.6	-0.3
	baz=91						
PFO	Pinyon Flats O	0.75	344	P	Pb	21 55 47.4	-0.3
	baz=166,SNR=91						
DNR	Dunn Ranch,Anz	0.76	333		Pb	21 55 47.8	0.0
DNR					Sb	21 55 58.5	+0.3
CTCC	Cactus City	0.79	14		Sn	21 56 00.3	-0.9
CRY	Cary Ranch	0.81	327		Pb	21 55 48.6	+0.1
GVDA	Garner Valley	0.87	334		Pb	21 55 49.7	0.0
GORC	Green Oak Ranc	0.89	288		Pg	21 55 49.2	-0.6
CPBX	Cerro Prieto	0.90	121	*e*P	Pg	21 55 50.0	+0.2
ESJX	Sierra Juarez	0.91	165	⇓*e*P	Pb	21 55 50.0	-0.2
ESJX				*e*S	Sg	21 56 01.8	-0.1
ESJX	Sierra Juarez	0.91	165		Pb	21 55 50.1	-0.2
ESJX					Sb	21 56 02.0	-0.3
COA	Coachella	0.92	91		Pb	21 55 50.1	-0.2
HAY	Hayfield	0.93	28		Pb	21 55 50.6	0.0
BC3	Big Chuckawall	1.00	40		Pb	21 55 51.4	-0.4
BC3	Big Chuckawall	1.00	40	P	Pb	21 55 51.4	-0.4
	baz=220,SNR=141						
BC3				S	Sb	21 56 04.6	-0.4
	baz=220						
BACC	Bachelor Mtn.	1.00	317		Pg	21 55 51.7	-0.1
BACC					Sb	21 56 04.7	-0.3
SALX	Saltillo	1.02	116	⇓*e*P	Pb	21 55 42.1	-10
CCX	Cicese	1.08	201		Pb	21 55 51.6	-1.5
CCX					Sb	21 56 06.2	-1.1
MURC	Murrieta	1.09	311		Pn	21 55 53.2	-0.4
MURC					Sg	21 56 07.7	-0.1
MURC	Murrieta	1.09	311	P	Pn	21 55 53.2	-0.4
	baz=132,SNR=132						
MURC				S	Sg	21 56 07.6	-0.1
	baz=132						
DEVC	Devers	1.09	344		Pg	21 55 53.7	+0.1
BELC	Belle Mtn. Jos	1.13	9	P	Pb	21 55 53.5	-0.5
	baz=190,SNR=266						
BELC				S	Sg	21 56 09.2	+0.3
	baz=190						
GLA	Glamis	1.18	82		Pn	21 55 54.0	-0.9
GLA	Glamis	1.18	82	P	Pn	21 55 53.9	-0.9
	baz=262,SNR=118						
BLAC	Blackrock camp	1.19	353		Pn	21 55 54.8	-0.3
BLAC					Sn	21 56 11.0	-0.2
TPC	Twentynine Pal	1.23	6		Pn	21 55 55.0	-0.5
PEC	Perris	1.28	322		Pb	21 55 56.5	-0.1
PEC					Sn	21 56 13.2	-0.1
SME	Santa Rosa Min	1.33	315		Pb	21 55 57.4	-0.1
RMR	Rimrock	1.36	347		Pb	21 55 57.8	-0.2
CFT	Crafton Hills	1.37	327		Pg	21 55 59.0	+0.1
BBRC	Big Bear Solar	1.49	337		Pg	21 56 01.3	0.0
BBRC	Big Bear Solar	1.49	337	Pb	Pb	21 55 60.0	-0.4
	baz=157,SNR=16						
BBRC				Sb	Sb	21 56 19.6	+0.2
	baz=157						
IRM	Iron Mountain	1.55	35	Pb	Pb	21 56 01.8	+0.6
	baz=216,SNR=12						
Y12C	Blythe	1.66	58	Pg	Pg	21 56 04.5	+0.1
	baz=239,SNR=6.7						
SS2	San Sevaine	1.70	321		Pg	21 56 04.4	-0.8
ECBX	El Chinero	1.72	145	*e*P	Pb	21 56 03.6	-0.4
ECBX				*e*S	Sg	21 56 26.9	-0.9
SSK	Sunset Peak	1.81	317		Pb	21 56 05.6	-0.1
BFSC	Mount Baldy Ra	1.81	319	Pb	Pb	21 56 05.7	+0.1
	baz=139,SNR=31						
BFSC				Sb	Sb	21 56 29.0	+0.7
	baz=139						
CIS	Catalina Islan	1.92	286	Pb	Pb	21 56 06.9	-0.5
	baz=106,SNR=20						
FMP	Fort Macarthur	1.93	296	Pb	Pb	21 56 07.4	-0.1
	baz=115,SNR=7.2						

FMP				Sb	Sb	21 56 32.7	+1.2
	baz=115						
HEC	Hector,Ludlow	1.94	357	Pg	Pg	21 56 09.3	-0.5
	baz=178,SNR=16						
GMRC	Granite Mounta	1.95	14	Pg	Pg	21 56 10.0	0.0
	baz=194,SNR=11						
SPX	San Pedro Mart	1.95	161	*e*P	Pb	21 56 07.4	-0.7
SPX	San Pedro Mart	1.95	161		Pb	21 56 07.9	-0.3
MWC	Mount Wilson	2.04	311		Pb	21 56 08.0	-1.5
MWC				Sn	Sb	21 56 33.9	-1.0
PASC	Pasadena Art C	2.09	308		Pb	21 56 08.6	-1.7
PASC				Sn	Sb	21 56 35.2	-1.0
RRX	Edison Barstow	2.09	342	Pg	Pg	21 56 12.7	+0.1
	baz=162,SNR=10.0						
RRX				Sg	Sg	21 56 40.3	+0.6
	baz=162						
ALV	Alvord Mountai	2.20	351		Pg	21 56 13.8	-0.9
DECC	Green Verdugo	2.23	308	Pb	Pb	21 56 12.9	0.0
	baz=128,SNR=6.1						
DECC				Sb	Sg	21 56 42.4	-2.0
	baz=128						
NEE2	Needles Airpor	2.30	35	Pg	Pg	21 56 17.4	+0.7
	baz=216,SNR=8.2						
SQX	San Quintin	2.32	173	*e*P	Pb	21 56 12.2	-2.0
IR2C	Iron Canyon	2.36	310		Pb	21 56 15.4	+0.5
GSC	Goldstone, Bar	2.46	349	Pg	Pg	21 56 18.8	-0.9
	baz=169,SNR=22						
EDW2	Edwards Air Fo	2.48	324	Pg	Pg	21 56 20.3	+0.2
	baz=143,SNR=11						
EDW2				Sb	Sb	21 56 49.2	+1.6
	baz=143						
TUQ	Turquoise Moun	2.56	5	Pg	Pg	21 56 20.7	-0.9
	baz=186,SNR=10.0						
OSI	Osito Audit: C	2.71	310		Pn	21 56 17.0	+1.1
OSI				Sn	Sn	21 56 50.5	+1.8
OSI	Osito Audit: C	2.71	310	Pb	Pb	21 56 21.6	+0.6
	baz=129,SNR=5.7						
OSI				Sb	Sg	21 56 58.4	-1.2
	baz=129						
LRMC	Laurel Mtn Rad	2.86	335	Sb	Sg	21 57 02.3	-2.1
	baz=155						
SHOC	Shoshone, Teco	3.01	359	Pg	Pg	21 56 28.9	-1.3
	baz=179,SNR=19						
214A	Organ Pipe Nat	3.02	107		Pn	21 56 21.3	+1.1
214A	Organ Pipe Nat	3.02	107	P	Pn	21 56 21.1	+0.9
	baz=289						
SCZ2	Santa Cruz Isl	3.07	292	P	Pn	21 56 21.6	+0.8
	baz=111						
ARVC	Arvin	3.12	317	Pb	Pb	21 56 28.5	+0.6
	baz=136,SNR=10.0						
MPMC	Manual Prospec	3.33	342	Pg	Pg	21 56 34.8	-1.6
	baz=162,SNR=14						
ISA	Isabella, Lake	3.34	327	Pn	Pn	21 56 26.4	+1.8
PKM	Mcpherson Peak	3.60	305	P	Pn	21 56 30.6	+2.3
	baz=123						
SHPR	Sheep Range	3.71	13		Pn	21 56 30.3	+0.5
TPNV	Topopah Spring	4.05	360		Pn	21 56 36.0	+1.5
TPNV	Topopah Spring	4.05	360	P	Pn	21 56 36.7	+2.2
	baz=180						

*IDC **16** 21:56:26.1±0.6, 19°.85S×70°.64W, h0^{km}, mb4.0/10, mb1 4.3/12, mb1mx4.0/44, mbtmp4.1/12, ML4.1/2, Error ellipse: s-maj=24.3km s-min=13.8km az=58.0*

*NEIC **16** 21:56:26±1.5, 19°.92S±0°.03×70°.74W±0°.05, h10^{km}±1^{km}, mb4.4/20, Error ellipse: s-maj=8.5km s-min=5.6km az=110.0*

ISC 16 21:56:26.3±0.4**, 19°.93S**±0°.04×**70°.70W**±0°.06**, h10^{km}, n69, σ1^{s}.19**/66**, mb4.3**/14**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	IPOC Station P	1.00	80		Pn	21 56 47.1	+0.6
PB11				Sg	Sb	21 56 59.5	+0.5
GO01	Chusmiza	1.44	80		Pb	21 56 53.7	+0.2
GO01				Sn	Sn	21 57 10.4	-1.7
PB01	IPOC Station P	1.59	134		Pb	21 56 55.6	-0.2
PB01				Sn	Sn	21 57 13.7	-1.5
PB04	IPOC Station P	2.45	168		Pn	21 57 06.4	0.0
LVC	Limon Verde	3.15	148	Pn	Pn	21 57 19.0	+2.8
	28nm,0.3s,baz=328,slow=10,SNR=15						
LVC				Sn	Sb	21 57 58.1	-3.0
	84nm,0.3s,baz=305,slow=23,SNR=14						
LVC				Lg	Lg	21 58 08.2	
	81nm,0.3s,baz=229,slow=23,SNR=7.4						
LVC	Limon Verde	3.15	148		Pn	21 57 17.1	+0.9
LVC					Sn	21 57 52.0	-2.0
PB10	IPOC Station P	3.57	178		Pn	21 57 20.9	-0.8
LPAZ	La Paz	4.37	34	Pn	Pb	21 57 40.9	-2.7
	2.0nm,0.3s,baz=287,slow=4.7,SNR=15						
LPAZ				Lg	Lg	21 58 48.1	
	baz=259,slow=22,SNR=1.1						
LPAZ	La Paz	4.37	34		Pn	21 57 34.0	+0.7
GO02	Mina Guanaco	5.31	169		Pn	21 57 45.9	0.0
GO02				Sn	Sn	21 58 47.3	0.0
GO03	Copiap	7.64	177	Pn	Pn	21 58 16.3	-1.4
SIV	San Ignacio	9.96	68	Pn	Pn	21 58 50.4	+0.8
	1.1nm,0.3s,baz=272,slow=12,SNR=11						
CFA	Coronel Fontan	11.84	170	Pn	Pn	21 59 19.5	+4.3
	0.3nm,0.3s,baz=337,slow=15,SNR=2.8						
PLCA	Paso Flores	20.74	180	P	P	22 01 07.5	+0.4
	3.2nm,0.9s,baz=346,slow=8.9,SNR=4.1						
PLCA	Paso Flores	20.74	180	P	P	22 01 07.4	+0.3
PTGA	Pitinga	21.78	30	P	P	22 01 18.8	+0.3
	1.8nm,0.3s,baz=233,slow=20,SNR=4.8						
PTGA	Pitinga	21.78	30	P	P	22 01 18.3	-0.2
FLOC	Florencia	21.92	347	P	P	22 01 19.5	-0.5
BDFB	Brasilia	22.01	82	P	P	22 01 21.5	+0.4
	2.9nm,0.5s,baz=236,slow=7.1,SNR=4.5						
BDFB	Brasilia	22.01	82	P	P	22 01 21.6	+0.5
RUSC	La Rusia	25.77	355	P	P	22 01 58.1	+0.1
FDF	Fort de France	35.70	16	P	P	22 03 25.0	-0.1
RCBR	Riachuelo	36.60	72	P	P	22 03 33.3	+0.3
RCBR				IAmb	IAmb	22 03 43.5	
	comp=Z,5.4nm,1.0s						
MPR	Mayaguez	38.07	5	P	P	22 03 43.4	-1.7
TEIG	Tepich	43.46	336	P	P	22 04 30.9	+1.2
	comp=Z,10nm,0.8s,baz=292,slow=0.0,SNR=2.8						
TEIG	Tepich	43.46	336	P	P	22 04 28.7	-1.0
TEIG				IAmb	IAmb	22 04 46.6	
	comp=Z,15nm,0.9s						
TXAR	Lajitas Array	58.39	326	P	P	22 06 23.3	+1.1
	comp=Z,0.7nm,0.6s,baz=151,slow=9.0,SNR=6.3						
TXAR	Lajitas Array	58.39	326	P	P	22 06 22.0	-0.3
SDCO	Great Sand Dun	66.06	330	IAmb	IAmb	22 07 16.8	
	comp=Z,3.5nm,1.1s						
ISA	Isabella, Lake	71.44	321	IAmb	IAmb	22 07 50.6	
	comp=Z,3.6nm,0.8s						
PDAR	Pinedale Array	71.92	331	P	P	22 07 51.3	+1.2
	comp=Z,0.5nm,0.7s,baz=133,slow=6.3,SNR=3.7						
PDAR	Pinedale Array	71.92	331	P	P	22 07 49.5	-0.5
NVAR	Mina Array Bea	73.23	323	P	P	22 07 59.9	+2.0
	comp=Z,1.2nm,0.9s,baz=134,slow=7.7,SNR=4.7						
NVAR	Mina Array Bea	73.23	323	P	P	22 07 57.9	0.0
ULM	Lac du Bonnet	73.33	343	P	P	22 07 57.8	-0.1
	comp=Z,1.4nm,0.5s,baz=157,slow=6.0,SNR=3.6						
KVN	Kaiserville	73.55	323	IAmb	IAmb	22 08 03.2	
	comp=Z,3.4nm,1.2s						
PAHR	Pah Rah Range	74.72	323	IAmb	IAmb	22 08 09.6	
	comp=Z,2.7nm,0.9s						
TORD	Torodi Ar. Bea	78.43	71	P	P	22 08 27.8	0.0
	comp=Z,3.6nm,0.8s,baz=246,slow=5.2,SNR=22						
TORD	Torodi Ar. Bea	78.43	71	P	P	22 08 27.2	-0.6
YKA	Yellowknife Ar	89.16	341	P	P	22 09 22.4	+0.8
	comp=Z,1.2nm,0.7s,baz=136,slow=5.0,SNR=18						
H11S1	WAKE ISLAND Hy	126.01	279	T	T	00 34 00.6	
	baz=345,slow=74,SNR=38						
H11S3	WAKE ISLAND Hy	126.02	279	T	T	00 34 01.5	
	baz=100,slow=74,SNR=42						
H11N3	WAKE ISLAND Hy	126.05	280	T	T	00 34 04.1	
	baz=53,slow=74						
H11N2	WAKE ISLAND Hy	126.06	280	T	T	00 34 07.8	
H11N1	WAKE ISLAND Hy	126.06	280	T	T	00 34 05.1	
	baz=100,slow=74						
ARU	Arti	127.77	33	PKP	PKiKP	22 15 33.2	+0.9
	comp=Z,0.5nm,0.5s,baz=14,slow=12,SNR=3.0						
ARU	Arti	127.77	33		PKPdf	22 15 31.2	-0.5
SEY	Seymchan	128.00	337	PKP	PKiKP	22 15 33.5	+1.0
	comp=Z,1.2nm,0.4s,baz=136,slow=3.9,SNR=9.9						
ASAR	Alice Springs	130.47	210	PKP	PKiKP	22 15 38.8	-0.1
	comp=Z,0.7nm,0.5s,baz=124,slow=1.9,SNR=7.4						
ASAR	Alice Springs	130.47	210		PKPdf	22 15 37.0	-1.1
WRA	Warramunga Arr	133.40	213	PKP	PKiKP	22 15 44.3	-0.6
	comp=Z,1.0nm,0.7s,baz=156,slow=1.8,SNR=12						
WRA	Warramunga Arr	133.40	213		PKPdf	22 15 41.6	-2.0
BVAR	Borovoye Array	135.42	33	PKP	PKiKP	22 15 48.0	+0.1
	comp=Z,0.7nm,0.7s,baz=343,slow=4.6,SNR=4.3						
BVAR	Borovoye Array	135.42	33		PKiKP	22 15 48.0	+0.1
KURK	Kurchatov	140.89	31		PKPdf	22 15 54.6	-1.8
KURBB	Kurchatov Arra	140.91	31	PKP	PKiKP	22 15 57.6	-1.5
	comp=Z,0.8nm,0.9s,baz=293,slow=2.4,SNR=5.1						
ZALV	Zalesovo Beam	141.21	23	PKP	PKPdf	22 15 58.0	+1.1
	comp=Z,1.4nm,0.5s,baz=318,slow=1.9,SNR=6.5						
ZALV	Zalesovo Beam	141.21	23		PKPdf	22 15 57.8	+0.9
AAK	Ala-Archa	143.01	44	PKP	PKPdf	22 16 00.8	+0.1
	comp=Z,0.3nm,0.3s,baz=12,slow=4.8,SNR=3.7						
AAK	Ala-Archa	143.01	44		PKPdf	22 15 59.8	-0.9
MKAR	Makanchi Array	145.30	33	PKPbc	PKPdf	22 16 05.2	+0.8
	comp=Z,3.6nm,0.5s,baz=323,slow=3.1,SNR=77						
MKAR	Makanchi Array	145.30	33		PKPdf	22 16 04.5	+0.2
KLR	Kul'dur	145.68	334	PKPbc	PKPab	22 16 06.5	+0.9
	comp=Z,2.9nm,0.8s,baz=80,slow=2.7,SNR=11						
USRK	Ussuriysk Ar.	149.29	327	PKPbc	PKiKP	22 16 16.6	+0.1
	comp=Z,4.1nm,0.8s,baz=40,slow=3.4,SNR=8.0						
USRK	Ussuriysk Ar.	149.29	327		PKPbc	22 16 15.2	-0.2
MJAR	Matsushiro Arr	149.79	309	PKPbc	PKiKP	22 16 18.2	+0.3
	comp=Z,2.7nm,0.6s,baz=111,slow=2.7,SNR=11						
MJAR	Matsushiro Arr	149.79	309		PKPbc	22 16 16.8	-0.1
SONM	Songino Array	152.06	4	PKPbc	PKiKP	22 16 23.2	+0.8
	comp=Z,2.6nm,0.8s,baz=329,slow=1.3,SNR=13						
SONM	Songino Array	152.06	4		PKPbc	22 16 21.6	-0.4

*NEIC **16** 21:59:02.5±1.8, 19°.92S±0°.04×70°.72W±0°.04, h10^{km}±1^{km}, mb4.6/12, ML4.3(GUC), Error ellipse: s-maj=7.6km s-min=6.0km az=168.0*

*IDC **16** 21:59:02.7±0.5, 19°.87S×70°.51W, h0^{km}, mb4.2/15, mb1 4.3/18, mb1mx4.2/40, mbtmp4.2/18, ML4.1/3, Error ellipse: s-maj=19.6km s-min=10.8km az=67.0*

*GUC **16** 21:59:06.4±0.6, 19°.91S×70°.68W, h37^{km}±3^{km}, ML4.3*

ISC 16 21:59:03.5±1.3**, 19°.88S**±0°.03×**70°.67W**±0°.05**, h10^{km}**±8^{km}**, n88, σ1^{s}.79**/97**, mb4.1**/15**, 6C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.59	61	⇓*e*P	Pn	21 59 17.5	-0.5
PSGC				*e*S	Sn	21 59 27.0	-0.8
PSGC				IAML		21 59 28.1	
	comp=N,21μm,0.2s						
PB11	IPOC Station P	0.97	83	⇓*e*P	Pn	21 59 23.9	+0.6
PB11				*e*S	Sn	21 59 37.3	+0.2
PB11				IAML		21 59 38.5	
	comp=N,33μm,0.1s						
PB11	IPOC Station P	0.97	83	Pn	Pn	21 59 23.7	+0.4
PB11				Sn	Sb	21 59 35.8	+0.5
PB12	IPOC Station P	1.30	15	⇑*i*P	Pg	21 59 29.0	+0.4
PB12				*e*S	Sg	21 59 47.2	+1.7
PB12				IAML		21 59 51.7	
	comp=N,6μm,0.8s						
GO01	Chusmiza	1.41	81	Pn	Pg	21 59 31.1	+0.5
GO01				Sn	Sb	21 59 46.7	-1.7
PB08	IPOC Station P	1.45	100	⇑*i*P	Pg	21 59 31.8	+0.4
PB08				*e*S	Sg	21 59 51.5	+1.2
PB08				IAML		21 59 52.4	
	comp=N,5μm,0.2s						
PB01	IPOC Station P	1.60	136	Pn	Pn	21 59 32.2	+0.3
PB01				Sn	Sn	21 59 50.5	-2.2
PB16	IPOC Station P	1.90	36	⇑*i*P	Pg	21 59 39.4	-0.5
PB16				*e*S	Sg	22 00 04.9	+0.4
PB16				IAML		22 00 06.8	
	comp=N,3μm,0.3s						
PB07	IPOC Station P	1.98	158	⇑*i*P	Pb	21 59 39.2	-0.5
PB07				*e*S	Sb	22 00 04.1	-0.4
PB07				IAML		22 00 09.2	
	comp=E,6μm,0.5s						
PB03	IPOC Station P	2.32	158	⇑*i*P	Pn	21 59 43.2	+1.3
PB03				*e*S	Sb	22 00 12.4	-1.8
LVC	Limon Verde	3.17	149	Pn	Pn	21 59 55.3	+1.5
	comp=E,71nm,0.3s,baz=336,slow=12,SNR=19						
LVC				Pg	Pb	22 00 00.7	+0.5
	comp=E,168nm,0.3s,baz=317,slow=8.3,SNR=9.6						
LVC				Sn	Sn	22 00 33.2	+1.3
	comp=E,133nm,0.3s,baz=77,slow=20,SNR=8.6						
LVC				Lg	Lg	22 00 41.2	
	comp=E,113nm,0.3s,baz=72,slow=23,SNR=7.7						
LVC	Limon Verde	3.17	149		Pn	21 59 54.5	+0.7
LVC					Sn	22 00 30.8	-1.1
PB10	IPOC Station P	3.61	178		Pn	21 59 57.7	-1.9
PB10				Sn	Sn	22 00 39.2	-3.1
LPAZ	La Paz	4.32	34	Pn	Pb	22 00 16.6	-3.3
	comp=E,4.0nm,0.3s,baz=328,slow=1.7,SNR=11						
NNA	Nana	9.84	322	Pn	Pn	22 01 24.9	-0.2
	comp=E,2.2nm,0.3s,baz=159,slow=8.6,SNR=3.1						
SIV	San Ignacio	9.92	69	Pn	Pn	22 01 27.0	+0.8
	comp=E,0.9nm,0.3s,baz=261,slow=12,SNR=7.5						
CFA	Coronel Fontan	11.88	170	Pn	Pn	22 01 49.3	-3.7
	comp=E,0.6nm,0.3s,baz=267,slow=7.1,SNR=2.4						
CPUP	Villa Florida	13.85	120	Pn	Pn	22 02 18.2	-1.7
	comp=E,0.1nm,0.3s,baz=297,slow=11,SNR=1.8						
CPUP	Villa Florida	13.85	120		Pn	22 02 20.4	+0.5
PLCA	Paso Flores	20.78	180	P	P	22 03 45.6	+0.8
	comp=E,13nm,0.7s,baz=24,slow=13,SNR=14						
PLCA	Paso Flores	20.78	180	P	P	22 03 43.4	-1.4
PLCA				IAmb	IAmb	22 03 49.8	
	comp=Z,17nm,0.8s						
PTGA	Pitinga	21.73	30	P	P	22 03 54.6	-0.5
	comp=Z,9.5nm,0.3s,baz=238,slow=20,SNR=10						
PTGA	Pitinga	21.73	30	P	P	22 03 54.1	-1.0
PTGA				IAmb	IAmb	22 04 08.5	
	comp=Z,15nm,1.1s						
FLOC	Florencia	21.89	347	*e*P	P	22 04 00.4	+3.6
BDFB	Brasilia	21.98	83	P	P	22 03 56.7	-1.3
	comp=Z,4.1nm,0.6s,baz=226,slow=10,SNR=6.3						
BDFB	Brasilia	21.98	83	P	P	22 03 58.1	+0.1
BBAC	Balboa, Cauca	22.71	343	*e*P	P	22 04 05.7	-0.1
PCON	Cinco Dias	22.78	345	*e*P	P	22 04 11.0	+4.1
ORTC	Ortega, Tolima	24.07	349	*e*P	P	22 04 23.4	+4.2
YOTC	Yotoco, Valle	24.36	346	*e*P	P	22 04 27.0	+5.0
CHIC	Chingaza	24.55	353	⇑*e*P	P	22 04 31.4	+7.4
ROSC	El Rosal	24.83	351	P	P	22 04 28.1	+1.6
	comp=Z,3.1nm,0.4s,baz=80,slow=17,SNR=1.6						
ROSC	El Rosal	24.83	351	P	P	22 04 25.6	-1.0
ROSC				IAmb	IAmb	22 04 35.8	
	comp=Z,7.1nm,0.5s						
RREF	El Recreo	25.05	349	*e*P	P	22 04 34.1	+5.3
GUY2C	Guyana, Caldas	25.37	349	*e*P	P	22 04 36.8	+5.2
NORC	Norcasia	25.62	350	*e*P	P	22 04 35.0	+1.6
RUSC	La Rusia	25.73	354	*e*P	P	22 04 35.9	+1.1
CBOC	Ciudad Bolivar	26.12	348	*e*P	P	22 04 40.3	+2.3
PTBC	PUERTO BERRIO,	26.52	352	*e*P	P	22 04 41.2	-0.2
PAMC	Pamplona, Colo	27.13	356	*e*P	P	22 04 43.9	-3.6
SDV	Santo Domingo	28.59	0	P	P	22 05 01.7	+1.5
	comp=Z,0.6nm,0.3s,baz=157,slow=13,SNR=2.2						
SMLC	San Martn de	28.70	353	*e*P	P	22 04 59.0	-2.0
USHA	Ushuaia	34.93	178	P	P	22 05 55.5	+0.2
	comp=Z,8.9nm,0.9s,baz=309,slow=2.0,SNR=3.4						
RCBR	Riachuelo	36.56	72	P	P	22 06 10.1	+0.3
	comp=Z,4.8nm,0.9s,baz=236,slow=11,SNR=4.7						
RCBR	Riachuelo	36.56	72	P	P	22 06 09.9	0.0
RCBR				IAmb	IAmb	22 06 18.4	
	comp=Z,15nm,1.1s						
TXAR	Lajitas Array	58.37	326	P	P	22 09 01.1	+1.9
	comp=Z,1.5nm,0.9s,baz=155,slow=9.2,SNR=6.0						
TXAR	Lajitas Array	58.37	326	P	P	22 08 58.8	-0.5
VNA3	Neumayer Olymp	62.13	161	P	P	22 09 25.4	+1.1
VNA2	Neumayer--Watz	62.71	161	P	P	22 09 29.4	+1.1
SNAA	Sanae	64.34	161	P	P	22 09 40.2	+1.1
SNAA	Sanae	64.34	161	P	P	22 09 38.2	-0.8
SDCO	Great Sand Dun	66.03	330	P	P	22 09 49.3	-1.4
SDCO				IAmb	IAmb	22 09 57.4	
	comp=Z,4.1nm,1.1s						
DBIC	Dimbokro	69.88	75	P	P	22 10 14.4	-0.7
	comp=Z,1.6nm,0.6s,baz=231,slow=4.4,SNR=5.2						
DBIC	Dimbokro	69.88	75	P	P	22 10 14.3	-0.8
DBIC				IAmb	IAmb	22 10 30.0	
	comp=Z,7.2nm,1.1s						
QSPA	South Pole Qui	70.30	180	P	P	22 10 15.9	-1.1
PDAR	Pinedale Array	71.90	331	P	P	22 10 28.4	+1.3
	comp=Z,0.4nm,0.6s,baz=134,slow=6.2,SNR=4.2						
PDAR	Pinedale Array	71.90	331	P	P	22 10 25.6	-1.5
NVAR	Mina Array Bea	73.21	323	P	P	22 10 36.7	+1.7
	comp=Z,1.5nm,0.9s,baz=155,slow=7.0,SNR=3.3						
NVAR	Mina Array Bea	73.21	323	P	P	22 10 33.7	-1.3
SCHQ	Schefferville	74.48	2	P	P	22 10 41.5	-0.2
	comp=Z,1.2nm,0.7s,baz=228,slow=12,SNR=3.8						
SCHQ	Schefferville	74.48	2	P	P	22 10 41.6	-0.2
VNDA	Vanda	78.14	190	P	P	22 11 04.2	+1.7
	comp=Z,0.9nm,0.7s,baz=166,slow=0.8,SNR=3.6						
TORD	Torodi Ar. Bea	78.39	71	P	P	22 11 04.2	-0.6
	comp=Z,4.6nm,0.6s,baz=253,slow=5.0,SNR=19						
YKA	Yellowknife Ar	89.13	341	P	P	22 11 58.8	+0.2
	comp=Z,0.6nm,0.6s,baz=140,slow=4.6,SNR=11						
H11S2	WAKE ISLAND Hy	126.02	279	T	T	00 36 42.5	
	baz=102,slow=74,SNR=52						
H11S1	WAKE ISLAND Hy	126.03	279	T	T	00 36 41.1	
	baz=228,slow=74,SNR=48						
H11S3	WAKE ISLAND Hy	126.04	279	T	T	00 37 27.8	
	SNR=50						
H11N3	WAKE ISLAND Hy	126.06	280	T	T	00 36 40.9	
	baz=101,slow=74,SNR=29						
H11N2	WAKE ISLAND Hy	126.08	280	T	T	00 36 44.3	
	baz=101,slow=74,SNR=39						
H11N1	WAKE ISLAND Hy	126.08	280	T	T	00 36 44.5	
	baz=101,slow=74,SNR=25						
ARU	Arti	127.72	33	PKP	PKiKP	22 18 09.7	+0.3
	comp=Z,0.6nm,0.4s,baz=22,slow=8.3,SNR=3.6						
SEY	Seymchan	127.97	337	PKP	PKiKP	22 18 10.1	+0.4
	comp=Z,1.4nm,0.4s,baz=7.2,slow=19,SNR=6.6						
ASAR	Alice Springs	130.52	210	PKP	PKPdf	22 18 14.8	-0.5
	comp=Z,0.9nm,0.6s,baz=129,slow=1.7,SNR=9.3						
ASAR	Alice Springs	130.52	210		PKPdf	22 18 12.8	-2.5
WRA	Warramunga Arr	133.45	213	PKP	PKPdf	22 18 20.9	0.0
	comp=Z,1.4nm,0.7s,baz=144,slow=1.6,SNR=17						
BVAR	Borovoye Array	135.37	33	PKP	PKPdf	22 18 23.6	+0.2
	comp=Z,0.7nm,0.7s,baz=328,slow=5.3,SNR=4.5						
KURK	Kurchatov	140.84	31	PKPdf	PKPdf	22 18 32.5	-1.0
KURBB	Kurchatov Arra	140.86	31	PKhKP	PKPpre	22 18 29.7	
	comp=Z,0.3nm,0.5s,baz=300,slow=3.2,SNR=4.3						
KURBB				PKP	PKPdf	22 18 34.5	+0.9
	comp=Z,0.5nm,0.6s,baz=290,slow=2.3,SNR=4.9						
ZALV	Zalesovo Beam	141.16	23	PKP	PKPdf	22 18 34.6	+0.6
	comp=Z,1.8nm,0.5s,baz=294,slow=2.2,SNR=8.6						
MKAR	Makanchi Array	145.25	33	PKPbc	PKPdf	22 18 41.8	+0.3
	comp=Z,4.0nm,0.4s,baz=331,slow=2.9,SNR=79						
KSH	Kashi	145.32	48	PKPbc	PKPdf	22 18 43.3	+1.3
KSH				PP	PP	22 22 06.6	+5.2
KSH				PKS	PKSdf	22 22 17.8	+0.2
KSH	Kashi	145.32	48	SKKS	SKKSac	22 28 55.3	+1.1
KLR	Kul'dur	145.65	334	PKPbc	PKPab	22 18 43.0	+0.3
	comp=Z,2.3nm,0.7s,baz=81,slow=2.2,SNR=7.3						
USRK	Ussuriysk Ar.	149.26	327	PKPbc	PKiKP	22 18 53.4	-0.3
	comp=Z,2.8nm,0.7s,baz=36,slow=2.3,SNR=6.0						
USRK	Ussuriysk Ar.	149.26	327		PKPbc	22 18 51.5	-1.0
MJAR	Matsushiro Arr	149.78	309	PKPbc	PKiKP	22 18 54.6	-0.5
	comp=Z,3.2nm,0.8s,baz=111,slow=1.6,SNR=11						
SONM	Songino Array	152.02	4	PKPbc	PKiKP	22 18 59.8	+0.4
	comp=Z,2.5nm,0.8s,baz=325,slow=1.2,SNR=13						
SONM	Songino Array	152.02	4		PKPbc	22 18 58.2	-0.9

IDC 16 21:59:51.1±6.5**, 19°.76S**×**70°.50W, h0^{km}, mb4.1**/4**, mb1 4.3**/4**, mb1mx3.8**/38**, mbtmp4.1**/4**, Error ellipse: s-maj=248.7km s-min=34.1km az=16.0, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	Riachuelo	36.37	72	P	P	22 06 57.5	+0.1
	7.9nm,0.8s,baz=232,slow=8.6,SNR=2.7						
TXAR	Lajitas Array	58.36	326	P	P	22 09 47.6	-0.8
	0.6nm,0.7s,baz=152,slow=5.9,SNR=2.7						
NVAR	Mina Array Bea	73.21	323	P	P	22 11 24.8	+0.6
	0.2nm,0.5s,baz=148,slow=5.3,SNR=1.3						
TORD	Torodi Ar. Bea	78.19	71	P	P	22 11 52.4	-0.6
	4.4nm,0.8s,baz=247,slow=5.1,SNR=4.6						
MKAR	Makanchi Array	145.05	33	PKPbc	PKPab	22 19 30.1	+0.2
	2.9nm,0.9s,baz=328,slow=4.3,SNR=3.4						

IDC 16 22:00:12.5±1.8**, 5°.13N**×**122°.06E, h0^{km}, mb3.4**/4**, mb1 3.5**/4**, mb1mx3.3**/55**, mbtmp3.4**/4**, Error ellipse: s-maj=328.8km s-min=22.0km az=63.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.69	154	P	P	22 06 02.0	-0.6
	0.2nm,0.6s,baz=328,slow=11,SNR=3.5						
ASAR	Alice Springs	30.87	158	P	P	22 06 31.6	+0.8
	0.3nm,0.4s,baz=338,slow=7.0,SNR=4.8						
MKAR	Makanchi Array	53.80	327	P	P	22 09 37.8	+0.7
	0.2nm,0.4s,baz=118,slow=8.4,SNR=7.9						
KURBB	Kurchatov Arra	58.10	329	P	P	22 10 06.8	-0.9
	0.2nm,0.5s,baz=130,slow=6.0,SNR=5.0						

*IDC **16** 22:01:58.5±1.8, 16°.07S×175°.61W, h302^{km}±33^{km}, mb3.4/3, mb1 3.7/4, mb1mx3.2/42, mbtmp4.2/4, Error ellipse: s-maj=145.0km s-min=25.6km az=146.0*

*NEIC **16** 22:01:59.3±0.5, 16°.2S±0°.2×175°.4W±0°.2, h330^{km}±12^{km}, mb4.1/11, Error ellipse: s-maj=41.0km s-min=15.3km az=127.0*

ISC 16 22:01:57.7±0.7**, 16°.1S**±0°.2×**175°.6W**±0°.1**, h300^{km}, n17, σ0^{s}.95**/20**, mb4.2**/10**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.33	60	P	Pn	22 03 08.9	+1.2
	21nm,0.3s,baz=176,slow=1.9,SNR=8.4						
AFI				S	S	22 04 03.6	-0.1
	8.5nm,0.3s,baz=237,slow=11,SNR=3.3						
AFI	Afiamalu	4.33	60		Pn	22 03 08.6	+1.0
AFI					S	22 04 03.8	+0.1
URZ	Urewera	22.97	195	P	P	22 06 34.8	-1.6
URZ				IAmb	IAmb	22 06 46.8	
	comp=Z,12nm,0.9s						
QRZ	Quartz Range	26.68	200	P	P	22 07 09.1	-0.6
QRZ				IAmb	IAmb	22 07 24.2	
	comp=Z,56nm,1.2s						
THZ	Tophouse	27.41	199	P	P	22 07 15.2	-1.0
THZ				IAmb	IAmb	22 07 23.5	
	comp=Z,16nm,1.2s						
WHZ	Wether Hill Ro	32.72	201	P	P	22 08 03.1	+0.4
WHZ				IAmb	IAmb	22 08 10.9	
	comp=Z,8.4nm,1.2s						
MWH	Moku‘aweowe	40.49	30	P	P	22 09 07.3	-1.5
WR0	Warramunga Arr	47.39	258	P	P	22 10 03.6	+0.8
WB0	Warramunga Arr	47.54	258	P	P	22 10 04.8	+0.8
WB0				IAmb	IAmb	22 10 16.6	
	comp=Z,4.8nm,1.1s						
WB2	Warramunga Arr	47.57	258	P	P	22 10 05.1	+0.9
WB2				IAmb	IAmb	22 10 21.8	
	comp=Z,6.0nm,1.1s						
WRA	Warramunga Arr	47.58	258	P	P	22 10 04.7	+0.4
	comp=Z,0.6nm,0.2s,baz=94,slow=7.7,SNR=53						
WRA				PcP	PcP	22 11 29.4	+0.4
	comp=Z,1.2nm,1.1s,baz=91,slow=3.3,SNR=2.8						
AS31	Alice Springs	47.84	253	P	P	22 10 07.0	+0.8
ASAR	Alice Springs	47.84	253	P	P	22 10 07.5	+1.3
	comp=Z,4.3nm,0.3s,baz=88,slow=8.1,SNR=94						
ASAR	Alice Springs	47.84	253	P	P	22 10 07.1	+0.9
SOEI	Soe	58.74	268	P	P	22 11 24.9	-0.4
SOEI				IAmb	IAmb	22 11 30.4	
	comp=Z,6.1nm,0.6s						
AKUT	Akutan	70.47	6	P	P	22 12 39.0	-0.7
ILAR	Eielson Array	83.57	12	P	P	22 13 52.5	+0.5
	comp=Z,0.1nm,0.4s,baz=213,slow=5.2,SNR=4.5						

*IDC **16** 22:03:41.8±2.1, 19°.90S×70°.40W, h0^{km}, mb3.7/2, mb1 3.9/4, mb1mx3.6/39, mbtmp3.8/4, ML3.6/2, Error ellipse: s-maj=50.1km s-min=20.8km az=81.0*

*NEIC **16** 22:03:42.1±1.2, 20°.02S±0°.05×70°.59W±0°.08, h10^{km}±2^{km}, mb4.1/1, Error ellipse: s-maj=13.6km s-min=4.5km az=299.0*

ISC 16 22:03:40.9±1.1**, 19°.98S**±0°.06×**70°.67W**±0°.10**, h10^{km}, n22, σ1^{s}.60**/19**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	IPOC Station P	0.98	77	Pn	Pn	22 04 03.5	+2.6
PB11				Sn	Sn	22 04 13.9	-1.0
GO01	Chusmiza	1.43	78		Pb	22 04 07.9	0.0
PB01	IPOC Station P	1.53	134		Pn	22 04 09.0	+0.6
PB01				Sn	Sn	22 04 27.6	-0.9
PB04	IPOC Station P	2.39	168	Pn	Pn	22 04 21.3	+1.0
PB04					Sn	22 04 50.4	+0.7
LVC	Limon Verde	3.09	148	Pn	Pn	22 04 31.5	+1.5
	12nm,0.3s,baz=0.2,slow=7.6,SNR=8.9						
LVC				Lg	Lg	22 05 17.8	
	22nm,0.3s,baz=136,slow=9.6,SNR=8.3						
LVC	Limon Verde	3.09	148		Pn	22 04 31.7	+1.6
LVC				Sn	Sn	22 05 03.2	-4.1
LPAZ	La Paz	4.40	34	Pn	Pb	22 04 57.5	-1.1

	0.7nm,0.3s,baz=162,slow=2.8,SNR=8.0						
LPAZ	La Paz	4.40	34		Pn	22 04 49.1	+0.8
GO02	Mina Guanaco	5.25	169	Pn	Pn	22 05 00.5	+0.7
SIV	San Ignacio	9.96	68	Pn	Pn	22 06 04.6	+0.4
	0.4nm,0.3s,baz=242,slow=17,SNR=3.2						
PLCA	Paso Flores	20.68	180	P	Pn	22 08 25.1	+1.6
	1.8nm,0.8s,baz=25,slow=12,SNR=1.9						
PLCA	Paso Flores	20.68	180	P	P	22 08 19.0	-2.1
TORD	Torodi Ar. Bea	78.42	71	P	P	22 15 42.7	+0.3
	1.0nm,0.7s,baz=248,slow=4.8,SNR=6.7						
TORD	Torodi Ar. Bea	78.42	71	P	P	22 15 42.0	-0.4
TORD				IAmb	IAmb	22 15 44.9	
	comp=Z,2.2nm,1.1s						
H11S2	WAKE ISLAND Hy	126.03	279	T	T	00 41 12.4	
H11S1	WAKE ISLAND Hy	126.04	279	T	T	00 41 14.1	
H11S3	WAKE ISLAND Hy	126.05	279	T	T	00 41 13.1	
H11N3	WAKE ISLAND Hy	126.08	280	T	T	00 41 18.8	
H11N2	WAKE ISLAND Hy	126.10	280	T	T	00 41 18.5	
H11N1	WAKE ISLAND Hy	126.10	280	T	T	00 41 19.8	
MKAR	Makanchi Array	145.33	33	PKPbc	PKPdf	22 23 20.3	+1.2
	comp=Z,0.3nm,0.6s,baz=309,slow=4.3,SNR=4.3						
MKAR	Makanchi Array	145.33	33		PKPbc	22 23 19.9	+1.0

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*IDC **16** 22:07:13.6±2.6, 20°.02S×70°.96W, h0km, mb3.9/3, mb1 3.9/5, mb1mx3.7/31, mbtmp3.9/5, ML3.6/2, Error ellipse: s-maj=54.0km s-min=29.0km az=75.0*

ISC 16 22:07:12.7±2.2, 19°.94S±0°.10×71°.2W±0°.2, h10km, n13, σ1s.61/8, mb4.0/3, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	3.39	142	Pn	Pn	22 08 05.2	-0.8
	5.0nm,0.3s,baz=325,slow=12,SNR=8.8						
LVC				Sn	Sn	22 08 45.9	-0.6
	9.7nm,0.3s,baz=221,slow=22,SNR=5.8						
LPAZ	La Paz	4.64	39	Pn	Pb	22 08 32.2	-2.4
	0.2nm,0.3s,baz=219,slow=6.5,SNR=4.2						
SIV	San Ignacio	10.38	69	Pn	Pn	22 09 43.5	+1.7
	0.7nm,0.3s,baz=258,slow=14,SNR=8.9						
PTGA	Pitinga	22.02	31	P	P	22 12 08.6	+1.2
	2.0nm,0.3s,baz=204,slow=20,SNR=6.7						
BDFB	Brasilia	22.45	83	P	P	22 12 13.3	+1.1
	1.1nm,0.3s,baz=315,slow=2.9,SNR=2.7						
TORD	Torodi Ar. Bea	78.85	72	P	P	22 19 17.2	+0.6
	0.6nm,0.4s,baz=246,slow=4.8,SNR=11						
H11S2	WAKE ISLAND Hy	125.57	279	T	T	00 44 49.3	
H11S1	WAKE ISLAND Hy	125.58	279	T	T	00 44 49.1	
H11S3	WAKE ISLAND Hy	125.59	279	T	T	00 44 45.3	
H11N3	WAKE ISLAND Hy	125.62	280	T	T	00 44 51.0	
H11N2	WAKE ISLAND Hy	125.63	280	T	T	00 44 50.0	
H11N1	WAKE ISLAND Hy	125.63	280	T	T	00 44 52.5	
MKAR	Makanchi Array	145.55	33	PKPbc	PKiKP	22 26 54.7	-0.6
	0.5nm,0.6s,baz=305,slow=3.9,SNR=5.8						

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*ROM **16** 22:08:18.4±0.2, 44°.061N±0°.010×13°.161E±0°.009, h6km, ML2.0/12, Error ellipse: s-maj=1.1km s-min=0.5km az=17.0*

*VIE **16** 22:08:23.6±0.9, 44°.18N×13°.39E, h8km, mb2.0/2, ml1.8/4, Error ellipse: s-maj=11.0km s-min=7.5km az=98.0 79 km ENE of San Marino*

ISC 16 22:08:20.6±1.0, 44°.01N±0°.04×13°.17E±0°.03, h10km±10km, n30, σ1s.18/56, 2D, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PESA	Pesaro	0.25	255	P	Pg	22 08 25.1	-0.5
PESA				S	Sg	22 08 28.6	-0.4
PESA				AML	AML		
	comp=E,1930µm,0.4s						
PESA				AML	AML		
	comp=N,2010µm,0.4s						
SENI	Senigallia	0.31	172	P	Pg	22 08 26.8	+0.1
SENI				S	Sg	22 08 32.2	+1.4
COR1	Corinaldo	0.40	198	P	Pg	22 08 29.0	+0.7
COR1				S	Sg	22 08 35.4	+1.8
FSSB	Fossombrone	0.43	222	⇓P	Pg	22 08 27.9	-1.1
FSSB				S	Sg	22 08 35.2	+0.7
FSSB				AML	AML		
	comp=N,664µm,0.5s						
FSSB				AML	AML		
	comp=N,663µm,0.5s						
FSSB				AML	AML		
	comp=E,782µm,0.5s						
MPAG	Monte Paganucc	0.48	218	P	Pg	22 08 28.8	-1.2
MPAG				S	Sg	22 08 37.0	+0.6
MPAG				AML	AML		
	comp=E,103µm,0.4s						
MPAG				AML	AML		
	comp=N,144µm,0.9s						
MPAG				AML	AML		
	comp=N,143µm,0.9s						
MPAG				AML	AML		
	comp=E,103µm,0.4s						
ARVD	Arcevia	0.54	198	P	Pg	22 08 30.1	-0.9
ARVD				S	Sg	22 08 39.3	+1.2
ARVD				AML	AML		
	comp=E,69µm,1.2s						
ARVD				AML	AML		
	comp=N,75µm,0.2s						
ARVD				AML	AML		
	comp=E,69µm,1.2s						
ARVD				AML	AML		
	comp=N,75µm,0.2s						
AOI	Ancona	0.55	146	P	Pg	22 08 31.8	+0.4
AOI				S	Sg	22 08 40.0	+1.4
PE3	Peglio	0.58	238	P	Pg	22 08 30.9	-0.9
PE3				S	Sg	22 08 40.3	+0.8
PE3				AML	AML		
	comp=N,184µm,0.4s						
PE3				AML	AML		
	comp=E,230µm,0.4s						
PE3				AML	AML		
	comp=N,184µm,0.6s						
NARO	Abbazia di Nar	0.58	227	P	Pg	22 08 30.6	-1.3
NARO				S	Sg	22 08 40.2	+0.7
NARO				AML	AML		
	comp=N,104µm,1.3s						
NARO				AML	AML		
	comp=E,86µm,1.0s						
FRON	Frontone	0.59	214	P	Pg	22 08 30.8	-1.1
FRON				S	Sg	22 08 40.7	+1.1
SSFR	Montelago di S	0.64	206	P	Pg	22 08 31.7	-1.2
SSFR				S	Sg	22 08 42.5	+1.3
PIEI	Pieia	0.66	225	⇓P	Pg	22 08 31.9	-1.5
PIEI				S	Sg	22 08 42.5	+0.5
PIEI				AML	AML		
	comp=E,268µm,0.1s						
PIEI				AML	AML		
	comp=N,130µm,0.4s						
PIEI				AML	AML		
	comp=E,268µm,0.1s						
PIEI				AML	AML		
	comp=N,130µm,0.4s						
EL6	Elcito	0.68	184	P	Pg	22 08 33.0	-0.7
EL6				S	Sg	22 08 43.8	+1.2
EL6				AML	AML		
	comp=E,120µm,0.3s						
EL6				AML	AML		
	comp=N,125µm,1.2s						
PARC	Parchiule	0.77	242	P	Pg	22 08 34.0	-1.4
PARC				S	Sg	22 08 45.6	+0.3
FOSV	Fossato di Vic	0.77	203	P	Pg	22 08 34.3	-1.1
FOSV				S	Sg	22 08 46.4	+0.8
ATFO	Monte Foce - G	0.78	214	P	Pg	22 08 34.6	-1.0
ATFO				S	Sg	22 08 46.1	+0.5
ATFO				AML	AML		
	comp=N,159µm,0.8s						
ATFO				AML	AML		
	comp=E,130µm,1.0s						
ATPI	Pietralunga -	0.79	225	P	Pg	22 08 34.5	-1.3
ATPI				S	Sg	22 08 46.5	+0.5
ATPI				AML	AML		
	comp=N,87µm,0.6s						
ATPI				AML	AML		
	comp=E,78µm,0.3s						
ATVO	AVT- Monte Val	0.84	222	P	Pg	22 08 35.4	-1.3
ATVO				S	Sg	22 08 48.1	+0.5
ATVO				AML	AML		
	comp=N,64µm,0.5s						
ATVO				AML	AML		
	comp=E,75µm,0.5s						
BADI	Badiali	0.84	234	P	Pg	22 08 35.3	-1.4
BADI				S	Sg	22 08 47.8	+0.2
BADI				AML	AML		
	comp=N,115µm,0.3s						
BADI				AML	AML		
	comp=E,97µm,1.6s						
MURB	Monte Urbino	0.88	213	P	Pg	22 08 36.5	-1.0
MURB				S	Sg	22 08 49.6	+0.6
MURB				AML	AML		
	comp=E,206µm,0.3s						
MURB				AML	AML		
	comp=N,216µm,1.5s						
NVLJ	Novalja	1.34	65	i Pn	Pn	22 08 45.6	+0.3
NVLJ				Sn	Sn	22 09 04.6	+1.4
DUGI	Dugi Otok	1.36	90	i Pn	Pg	22 08 46.0	-0.7
DUGI				Sn	Sn	22 09 04.7	+1.0
ZIRJ	Zirje	1.82	100	i Pn	Pn	22 08 50.9	-1.0
ZIRJ				Sn	Sb	22 09 15.8	-1.0
MORI	Morici	1.84	94	ePn	Pb	22 08 54.0	-0.2
MORI				Sn	Sg	22 09 18.2	-1.4
KIJV	Kijevo	2.33	89	ePn	Pb	22 09 00.8	-1.8
KIJV				Sn	Sb	22 09 29.3	-2.2
OBKA	Obir	2.68	21	Pg	Pg	22 09 11.9	-0.1
	comp=N,0.7nm,0.2s						
ABTA	Abfaltersbach	2.78	351	Pn	Pn	22 09 06.1	+0.9
	comp=N,0.1nm,0.1s						
RICI	Ricice	2.92	99	ePg	Pn	22 09 07.8	+0.8
RICI				Sg	Pn	22 09 08.7	+1.7
SQTA	Sankt Quirin	3.50	337	i Pn	Pn	22 09 17.6	+2.5
	comp=N,0.5nm,0.1s						
MOTA	Moosalm	3.64	337	i Pn	Pn	22 09 19.5	+2.5
	comp=N,0.2nm,0.1s						

LJU 16 22:08:28.8, 45°.75N×14°.88E, h3km, ML0.3, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VISS	Visnje	0.06	332	⇓iPg	Pg	22 08 30.1	0.0
VISS				i Sg	Sg	22 08 31.1	+0.1
	comp=Z,5.0nm,0.0s						

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*SJA **16** 22:13:04.3±0.7, 32°.28S×70°.96W, h78km±4km, ML3.4, MW3.4*

*GUC **16** 22:13:05.2±0.6, 32°.35S×70°.99W, h75km±6km, ML3.9*

ISC 16 22:13:05.5±2.1, 32°.31S±0°.07×71°.00W±0°.10, h82km±20km, n15, σ0s.31/25, 1C-3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROCH	El Roble	0.67	181	⇓eP	Pn	22 13 21.0	-0.3
ROCH				eS	Sn	22 13 33.2	+0.2
ROCH				IAML		22 13 34.0	
	comp=E,6µm,0.5s						
ROC1	El Roble	0.67	181	i P	Pn	22 13 21.0	-0.4
ROC1				i S	Sn	22 13 33.3	+0.2
PEL	Peldehue	0.88	163	i P	Pn	22 13 23.2	-0.2
PEL				i S	Sn	22 13 36.9	+0.3
FCH	Farellones	1.18	150	⇓eP	Pn	22 13 27.3	+0.1
FCH				eS	Sn	22 13 44.0	+0.6
FCH				IAML		22 13 45.9	
	comp=E,4µm,0.2s						
MT03	Universidad Ad	1.25	161	⇑iP	Pn	22 13 27.8	-0.1
MT03				eS	Sn	22 13 45.0	+0.3
MT03				IAML		22 13 47.9	
	comp=N,9µm,0.1s						
RTLS	Leoncito	1.53	71	i P	Pn	22 13 31.6	0.0
RTLS				i S	Sn	22 13 51.2	-0.1
RTLS				IAML		22 13 56.5	
	comp=Z,142nm,0.7s						
MT01	Popeta	1.57	188	⇓eP	Pn	22 13 31.7	-0.1
MT01				eS	Sn	22 13 51.8	0.0
MT01				IAML		22 13 53.7	
	comp=E,1µm,0.1s						
ZON	Zonda	2.11	70	i P	Pn	22 13 39.2	+0.2
ZON				i S	Sn	22 14 04.8	+0.2
ZON				IAML		22 14 11.0	
	comp=Z,310nm,0.4s						
RTCV	Cerro Valdivia	2.13	79	i P	Pn	22 13 39.4	+0.1
RTCV				i S	Sn	22 14 05.0	0.0
RTCV				IAML		22 14 06.5	
	comp=Z,364nm,0.3s						
RTLL	Cerro Villicun	2.36	66	i P	Pn	22 13 41.8	-0.5
RTLL				i S	Sn	22 14 09.8	-0.6
RTLL				IAML		22 14 10.4	
	comp=Z,663nm,0.4s						
ACCO	Cerro Coronel	2.38	44	i P	Pn	22 13 42.9	+0.1
ACCO				IAML		22 14 15.1	
	comp=Z,196nm,0.6s						
AROD	Rodeo	2.50	32	i P	Pn	22 13 45.0	+0.5
AMOG	MOGNA	2.53	58	i P	Pn	22 13 44.3	-0.4
AMOG				IAML		22 14 18.8	
	comp=Z,257nm,0.4s						
ACAN	Cantantal	3.23	90	i P	Pn	22 13 53.9	-0.1
ACAN				IAML		22 14 35.0	
	comp=Z,42nm,0.4s						
AGUA	GUANDACOL	3.54	38	i P	Pn	22 13 58.3	0.0

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*IDC **16** 22:16:13.8±6.5, 36°.54N×71°.11E, h74km±34km, mb3.7/3, mb1 3.5/9, mb1mx3.1/62, mbtmp3.8/9, ML3.4/6, Error ellipse: s-maj=73.6km s-min=20.0km az=152.0*

*NNC **16** 22:16:16.5±2.8, 36°.68N×71°.19E, h115km±51km, mb3.2, mpv3.9, Error ellipse: s-maj=24.9km s-min=22.0km az=115.0*

ISC 16 22:16:11.8±1.0, 36°.39N±0°.08×71°.21E±0°.07, h100km, n27, σ2s.45/33, mb4.1/3, 3C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.05	18	P	Pn	22 17 40.5	+1.4
	SNR=42						
UCH	Uchtor	6.37	23	P	Pn	22 17 44.8	+1.3
	SNR=6.1						
KZA	Kyzart	6.49	28	P	Pn	22 17 46.5	+1.5
	SNR=6.1						
EKS2	Erkin-Say	6.57	17	P	Pn	22 17 47.7	+1.8
	SNR=12						
KK31	Karatay Array	6.73	356	P	Pn	22 17 49.0	+1.0
	4.9nm,0.3s,baz=185,slow=14,SNR=84						
KK31				S	Sn	22 19 01.5	-1.6
	1.4nm,0.3s,baz=155,slow=18,SNR=7.3						
AAK	Ala-Archa	6.74	21	P	Pn	22 17 50.0	+1.8
	1.7nm,0.3s,baz=180,slow=6.3,SNR=40						
AAK				S	Sn	22 19 02.6	-0.9
	0.6nm,0.3s,baz=316,slow=22,SNR=13						
AAK	Ala-Archa	6.74	21	P	Pn	22 17 50.1	+1.8
	SNR=8.2						
AAK	Ala-Archa	6.74	21	⇑P	Pn	22 17 49.4	+1.2
	5.1nm,0.6s						
AAK				⇑S	Sn	22 19 03.0	-0.5
	3.7nm,0.5s						
CHMS	Chumysh	7.14	21	P	Pn	22 17 54.9	+1.3
	SNR=6.1						
CHMS	Chumysh	7.14	21	⇓P	Pn	22 17 54.5	+0.9
	2.4nm,0.4s						
CHMS				⇑S	Sn	22 19 11.6	-1.6
	1.9nm,0.5s						
GEYT	Alibeck	10.57	282	P	Pn	22 18 40.4	+0.2
	0.2nm,0.3s,baz=113,slow=19,SNR=3.1						
GEYT				S	Sn	22 20 34.6	-1.9
	0.8nm,0.3s,baz=300,slow=24,SNR=7.1						
DANN	Dangsing	13.28	124	eP	Pn	22 19 13.9	-2.8
GKN	Gorkha	14.10	123	eP	Pn	22 19 24.5	-2.6
PKIN	Phulchoki	14.89	122	eP	Pn	22 19 35.4	-1.9
	2.6nm,0.4s						
PKI	Pulchoki	14.90	122	eP	Pn	22 19 35.3	-2.3
GUN	Gumba	15.01	120	eP	Pn	22 19 36.2	-2.8
	6.0nm,0.4s						
KURBB	Kurchatov Arra	15.18	18	P	P	22 19 43.7	+0.4
	0.0nm,0.3s,baz=206,slow=11,SNR=5.6						
AB31	Akbulak array	15.27	331	P	Pn	22 19 41.0	-0.7
	0.3nm,0.2s,baz=329,slow=9.2,SNR=27						
AB31				S	Sn	22 22 22.0	-8.2
	1.3nm,0.7s,baz=153,slow=23,SNR=3.2						
JIRN	Jiri	15.38	120	eP	Pn	22 19 41.1	-2.6
	6.8nm,0.4s						
TAPN	Taplejung	16.64	118	eP	Pn	22 19 58.1	-1.2
BVAR	Borovoye Array	16.65	358	P	P	22 20 01.0	+1.4
	0.1nm,0.3s,baz=160,slow=8.8,SNR=4.6						
AKTO	Aktyubinsk	16.96	330	P	P	22 20 05.7	+2.5
	0.4nm,0.3s,baz=137,slow=11,SNR=4.9						
AKTO	Aktyubinsk	16.96	330	⇓P	P	22 20 04.6	+1.5
	1.3nm,0.9s						
ZALV	Zalesovo Beam	19.95	24	P	P	22 20 36.4	+0.8
	0.6nm,0.3s,baz=211,slow=10,SNR=13						
FINES	FINESS Array B	37.67	326	P	P	22 23 20.1	+3.2
	2.5nm,1.0s,baz=120,slow=11,SNR=6.0						
HFS	Hagfors	43.26	322	P	P	22 24 06.5	+3.5
	4.7nm,1.1s,baz=113,slow=11,SNR=4.2						
NOA	NORSAR Array B	44.57	323	P	P	22 24 16.6	+3.0
	1.3nm,1.0s,baz=97,slow=7.7,SNR=2.5						

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*VIE **16** 22:18:24.5±0.9, 49°.77N×18°.65E, h0km, mb2.0/3, ml2.7/4, Error ellipse: s-maj=11.8km s-min=5.4km az=23.0 30 km ESE of Ostrava Suspected Mining induced.*

*IPEC **16** 22:18:25.6±0.2, 49°.83N×18°.58E, h0km, ML2.4/3, Error ellipse: s-maj=2.1km s-min=1.1km az=161.0*

ISC 16 22:18:25.7±0.8, 49°.82N±0°.03×18°.51E±0°.02, h0km, n40, σ0s.82/70, 8C-3D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.24	275	ePG	Pg	22 18 31.1	+0.9
OKC				eSG	Sg	22 18 33.8	+0.6
	comp=Z,112nm,0.4s						
MORC	Moravsky Berou	0.63	267	⇑P	Pg	22 18 38.3	+0.5
MORC				⇓S	Sg	22 18 47.3	+1.4
MORC	Moravsky Berou	0.63	267	ePg	Pg	22 18 38.4	+0.7
	baz=85						
MORC				eSg	Sg	22 18 46.6	+0.7
	88nm,0.4s,baz=85						
MORC	Moravsky Berou	0.63	267	ePG	Pg	22 18 38.4	+0.7
MORC				eSG	Sg	22 18 46.7	+0.8
LANS	Liptovska Anna	0.92	137	ePG	Pb	22 18 44.0	-0.4
LANS				eSG	Sb	22 18 57.5	+0.3
LANS				eLG	Lg	22 19 01.3	
OJC	Ojcow	0.92	64	ePg	Pg	22 18 42.5	-0.8
OJC				eSg	Sg	22 18 54.8	-0.6
JAVC	Velka Javorina	1.11	210	ePG	Pn	22 18 49.2	+0.7
KRLC	Kraliky	1.15	284	ePG	Pg	22 18 46.9	-0.7
KRLC				eSG	Sg	22 19 02.6	+0.1
	comp=Z,73nm,0.3s						
NIE	Niedzica	1.23	108	ePg	Pb	22 18 49.7	-0.1
NIE				eSg	Sn	22 19 07.6	+0.1
VYHS	Vyhne	1.34	171	ePG	Pb	22 18 51.5	-0.2
VYHS				eSG	Sn	22 19 09.7	-0.5
VRAC	Vranov	1.35	248	⇑P	Pn	22 18 51.8	0.0
VRAC				⇑S	Sn	22 19 10.4	0.0
VRAC	Vranov	1.35	248	ePg	Pg	22 18 51.4	-0.1
	baz=67						
VRAC				eSg	Sg	22 19 09.1	+0.1
	32nm,0.2s,baz=67						
VRAC	Vranov	1.35	248	ePG	Pg	22 18 51.5	-0.1
VRAC				eSG	Sg	22 19 09.1	+0.1
SMOL	Smolenice	1.49	209	ePG	Pg	22 18 54.0	-0.1
SMOL				eSG	Sg	22 19 13.2	-0.2
SMOL				eLG	Lg	22 19 17.1	
DPC	Dobruska-Polom	1.51	292	ePG	Pn	22 18 53.5	-0.5
DPC				eSG	Sg	22 19 13.6	-0.5
	comp=Z,42nm,0.7s						
KRUC	Moravsky	1.57	242	ePg	Pn	22 18 54.9	+0.1
	baz=61						
KRUC				eSg	Sg	22 19 16.3	+0.1
	39nm,0.2s,baz=61						
KRUC	Moravsky	1.57	242	ePG	Pn	22 18 55.0	+0.1
KRUC				eSG	Sg	22 19 16.4	+0.2
OSTC	Ostas	1.65	297	ePG	Pn	22 18 56.0	+0.1
OSTC				eSG	Sb	22 19 18.6	+0.3
	comp=Z,25nm,0.6s						
MODS	Modra-Piesok	1.66	210	ePG	Pn	22 18 55.8	-0.2
MODS				eSG	Sn	22 19 17.0	-1.0
UPC	Upice	1.75	294	ePG	Pn	22 18 57.9	+0.6
UPC				eSG	Sg	22 19 22.0	+0.2
	comp=Z,25nm,0.6s						
KSP	Ksiaz	1.75	307	ePb	Pn	22 18 56.6	-0.8
KSP				ePg	Pb	22 18 58.2	-0.5
KSP				eSg	Sb	22 19 21.6	+0.3
CHVC	Chvalec	1.76	297	ePG	Pn	22 18 57.5	+0.1
CHVC				eSG	Sb	22 19 21.7	+0.3
	comp=Z,21nm,0.5s						
STHS	Stebnicka Huta	1.82	102	ePN	Pb	22 19 00.1	+0.2
KECS	Kecovo	1.86	135	ePN	Pn	22 18 59.1	+0.3
KECS				eSN	Sn	22 19 22.9	-0.1
KECS				eLG	Lg	22 19 27.8	
ZST	Bratislava	1.87	210	ePN	Pn	22 18 58.0	-0.9
ZST				eSN	Sn	22 19 21.4	-1.8
PSZ	Piszkesteto	2.11	154	⇑P	Pb	22 19 03.6	-1.3
PRU	Pruhonice	2.57	275	ePG	Pb	22 19 11.9	-0.8
PRU				eSG	Sg	22 19 46.8	-1.5
	comp=Z,18nm,0.8s						
CONA	Conrad Observa	2.58	224	Pn	Pn	22 19 08.2	-0.5
	0.5nm,0.2s						
PVCC	Panska Ves	2.63	287	ePG	Pb	22 19 14.0	+0.3
PVCC				eSG	Sg	22 19 49.5	-0.7
	comp=Z,21nm,0.4s						
PRA	Prague	2.65	277	eSG	Sg	22 19 49.2	-1.4
	comp=Z,12nm,0.5s						
BRG	Berggiesshubel	3.11	292	PG	Pb	22 19 22.4	+0.6
BRG				SG	Sb	22 20 02.6	+2.3
	9.9nm,0.5s						
TRPA	Tarpa	3.15	121	⇑P	Pn	22 19 18.0	+1.5
KHC	Kasperske Hory	3.29	260	ePN	Pn	22 19 18.6	+0.1
KHC				ePG	Pb	22 19 25.8	+0.9
KHC				eSG	Sg	22 20 10.1	-1.2
	comp=Z,23nm,1.1s						
MOA	Molln	3.43	237	ePn	Pn	22 19 19.8	-0.6
	0.3nm,0.1s						
CLL	Collm	3.81	295	eSg	Sg	22 20 27.0	-1.2
NKC	Novy Kostel	3.93	278	eSG	Sg	22 20 29.7	-2.2
	comp=Z,13nm,0.9s						
BMR	Baia Mare	3.94	121	⇑P	Pn	22 19 28.7	+1.4
DRGR		4.13	136	⇑P	Pn	22 19 30.8	+0.8
DRGR				⇓S	Sn	22 20 18.6	-0.4
SIRR	Siria	4.13	148	⇓P	Pn	22 19 31.0	+0.9
BURAR	Bucovina Array	4.96	114	⇑P	Pn	22 19 42.7	+1.3

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*DSN **16** 22:24:56.2±1.1, 27°.88N×57°.32E, h10km, ML3.7/7, Error ellipse: s-maj=44.9km s-min=9.4km az=117.0*

*TEH **16** 22:25:00.0, 27°.89N×56°.55E, h8km, ML3.3*

*OMAN **16** 22:25:02.5±26.0, 27°.89N×55°.60E, h56km±203km, ml3.3/7, Mwp6.1/5, Error ellipse: s-maj=281.6km s-min=55.0km az=306.0*

ISC 16 22:25:00.7±0.9, 27°.81N±0°.04×56°.52E±0°.04, h10km, n31, σ1s.50/39, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBND	Bandar-abas	0.36	177	e		22 25 24.2	
IBND				ePg	Pg	22 25 09.1	+1.2
NIAN	Nian	0.38	132	eSg	Sg	22 25 14.7	+1.6
NIAN				ePg	Pg	22 25 07.9	-0.2
NIAN				e		22 25 17.3	
GENO	Geno	0.52	217	ePg	Pg	22 25 11.9	+1.1
GENO				eSg	Sb	22 25 20.4	+0.8
GENO				e		22 25 26.4	
KHNJ	Kahnooj	1.06	82	ePg	Pb	22 25 19.8	-1.3
SHME	Shamm	1.79	191	eP	Pn	22 25 31.4	-0.3
	SNR=15						
NGRK	Negar Kerman	1.83	6	ePn	Pb	22 25 32.6	-2.0
NGRK				e		22 26 01.3	
BANOM	Banah	1.89	186	eP	Pn	22 25 33.0	-0.1
	SNR=25						
BANOM				S	Sb	22 26 00.0	+0.9
BANOM	Banah	1.89	186	P	Pn	22 25 33.3	+0.2
	SNR=24						
BANOM				P	Pn	22 25 33.3	+0.2
	SNR=24						
BANOM				S	Sn	22 25 59.0	+1.9
BANOM				S	Sn	22 25 59.0	+1.9
TVBK	TV Kerman	2.17	5	ePn	Pb	22 25 37.8	-2.6
TVBK				e		22 26 10.7	
CHMN	Cheshme madani	2.23	23	ePn	Pn	22 25 37.3	-0.7
CHMN				e		22 26 16.4	
MSFE	Esma-Masafi	2.47	188	eP	Pn	22 25 40.0	-1.0
	SNR=8.4						
MDH	Madha	2.51	185	P	Pn	22 25 39.5	-2.1
MDH	Madha	2.51	185	P	Pn	22 25 40.4	-1.2
MDH				P	Pn	22 25 40.4	-1.2
KHGB	Koh Gabri	2.55	359	ePn	Pn	22 25 42.5	+0.1
JHRM	Jahrom	2.69	286	ePn	Pb	22 25 46.2	-2.8
JHRM				e		22 26 40.7	
UOSS	Minazif	2.87	186	i P	Pn	22 25 44.9	-1.7

	SNR=9.8						
NAZ	Nazwa, Dubai	2.92	196	P	Pn	22 25 47.2	0.0
HATD	Hatta, Dubai	3.00	187	*i* P	Pn	22 25 48.0	-0.2
	SNR=6.3						
HATD	Hatta, Dubai	3.00	187	P	Pn	22 25 49.0	+0.7
	SNR=6.3						
ASHO	Ashiyiah	3.15	188	*i* P	Pn	22 25 49.7	-0.6
	SNR=56						
ASHO	Ashiyiah	3.15	188	S	Sn	22 26 28.4	+0.4
ISRV	Sarvestan	3.38	298	*e*Pn	Pn	22 25 55.6	+1.8
ISRV				*e*		22 26 52.5	
SOHO	SOHO	3.67	180	P	Pn	22 25 54.8	-2.6
	SNR=6.8						
SOHO				P	Pn	22 25 54.8	-2.6
	SNR=6.8						
IMEH	Mehriz	3.93	335	*e*Pn	Pn	22 26 02.5	+1.1
SZD1	Zahaedan-tmp	4.17	65	*e*Pn	Pn	22 26 04.9	+0.4
ARQ	Araqi	4.46	180	P	Pn	22 26 08.0	-0.4
	SNR=19						
NHDN	Nehbandan	4.71	40	*e*Pn	Pn	22 26 14.0	+2.1
ISAD	Sadrabad	4.77	330	*e*Pn	Pn	22 26 13.5	+0.6
IKOO	Kooshah	5.07	24	*e*Pn	Pn	22 26 18.5	+1.4
IRAM	Ramesheh	5.37	319	*e*Pn	Pn	22 26 21.7	+0.7
ABTO	Aybut	10.83	197	P	Pn	22 27 33.0	-2.9

IDC ***16*** *22:29:34.9±0.5, 19.°76S×70.°67W, h0^{km}, mb4.4/18, mb1 4.6/24, mb1mx4.5/31, mbtmp4.5/24, ML4.4/6, Error ellipse: s-maj=17.4km s-min=10.7km az=64.0*
SJA ***16*** *22:29:34.2±1.0, 19.°86S×70.°86W, h3^{km}±6^{km}, ML4.1, MW3.8*
NEIC ***16*** *22:29:34.5±1.1, 19.°89S±0.°04×70.°88W±0.°04, h7^{km}±3^{km}, mb4.9/109, ML4.6(GUC), Error ellipse: s-maj=6.0km s-min=5.4km az=119.0*
GUC ***16*** *22:29:36.5±0.9, 19.°88S×70.°89W, h11^{km}±7^{km}, ML4.6*
VAO ***16*** *22:29:41.4±0.8, 19.°82S×70.°67W, h50^{km}±7^{km}, mb4.7*
ISC 16 22:29:35.1±1.3**, 19.°89S**±0.°02×**70.°87W**±0.°04**, h7**^{km}±8^{km}**, n354, **σ1.^{s}**29**/351**, mb4.8**/56**, 5C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.77	68	⇓*e*P	Pb	22 29 50.9	0.0
PSGC				*e*S	Sb	22 30 01.6	0.0
PSGC				IAML		22 30 03.7	
	comp=N,60μm,0.6s						
PSGCX	Pisagua	0.77	68	*i* P	Pb	22 29 50.9	+0.1
PSGCX				*i* S	Sb	22 30 01.6	+0.1
TA01	Diego Aracena	0.93	136	*e*P	Pb	22 29 53.8	+0.1
TA01				*e*S	Sb	22 30 06.9	+0.5
TA01				IAML		22 30 11.2	
	comp=N,36μm,0.5s						
PATCX	Punta Patache	1.15	144	⇓*e*P	Pg	22 29 57.2	+0.1
PATCX				⇑*i*P	Pn	22 29 57.7	-0.1
PATCX				*e*S	Sn	22 30 13.3	-0.5
PATCX				IAML		22 30 17.3	
	comp=E,22μm,0.4s						
PATCX	Punta Patache	1.15	144	*i* P	Pb	22 29 57.4	+0.1
PATCX				*e*S	Sn	22 30 14.8	+1.0
PB11	IPOC Station P	1.15	84	*e*P	Pg	22 29 57.6	+0.4
PB11				*e*S	Sb	22 30 13.5	+0.7
PB11	IPOC Station P	1.15	84		Pg	22 29 57.5	+0.2
PB11				Sg	Sg	22 30 12.2	-0.1
PB11	IPOC Station P	1.15	84	*i* P	Pg	22 29 57.7	+0.4
PB11				*i* S	Sb	22 30 13.2	+0.3
PB12	IPOC Station P	1.37	22	⇑*i*P	Pn	22 30 00.8	0.0
PB12				*e*S	Sg	22 30 19.9	+0.6
PB12				IAML		22 30 23.2	
	comp=N,14μm,0.2s						
PB12	IPOC Station P	1.37	22	*i* P	Pn	22 30 00.8	0.0
PB12				*i* S	Sg	22 30 19.6	+0.3
AP01	Chacalluta	1.59	18	⇑*i*P	Pn	22 30 04.2	+0.3
AP01				*e*S	Sb	22 30 25.7	+0.4
GO01	Chusmiza	1.60	82	⇓*e*P	Pb	22 30 05.2	-0.1
GO01				*e*S	Sg	22 30 26.8	+0.2
GO01	Chusmiza	1.60	82		Pn	22 30 04.0	-0.3
GO01				Sn	Sn	22 30 24.6	-0.8
PB08	IPOC Station P	1.64	99	⇓*e*P	Pb	22 30 05.5	-0.4
PB08				*e*S	Sg	22 30 28.9	+1.0
PB08	IPOC Station P	1.64	99	*i* P	Pb	22 30 05.6	-0.3
PB08				*i* S	Sg	22 30 27.7	-0.1
PB02	IPOC Station P	1.69	147	⇑*i*P	Pn	22 30 05.7	+0.5
PB02				*e*S	Sg	22 30 29.1	-0.5
PB02	IPOC Station P	1.69	147	*i* P	Pn	22 30 05.7	+0.5
PB02				*i* S	Sg	22 30 29.9	+0.3
PB01	IPOC Station P	1.73	132	*e*P	Pn	22 30 06.5	+0.7
PB01				*e*S	Sb	22 30 30.1	+0.7
PB01	IPOC Station P	1.73	132		Pn	22 30 05.0	-0.8
PB01				Sn	Sn	22 30 27.9	-0.3
PB16	IPOC Station P	2.02	40	*i* P	Pb	22 30 11.7	-0.8
PB16				*e*S	Sg	22 30 39.7	-0.3
PB16				*e*		22 30 39.7	
PB16				IAML		22 30 43.4	
	comp=N,11μm,0.4s						
PB16	IPOC Station P	2.02	40	*i* P	Pb	22 30 12.0	-0.5
PB07	IPOC Station P	2.05	153	*i* P	Pn	22 30 10.4	+0.2
PB07				*i* S	Sg	22 30 41.1	+0.2
PB03	IPOC Station P	2.39	154	*i* P	Pn	22 30 14.9	+0.1
PB03				*i* S	Sg	22 30 50.4	-1.5
PB09	IPOC Station P	2.43	141	*i* P	Pn	22 30 17.2	+1.7
PB09				*i* S	Sg	22 30 52.6	-0.8
PB04	IPOC Station P	2.52	165		Pn	22 30 16.2	-0.6
PB04				Sn	Sn	22 30 47.5	-0.3
PB04	IPOC Station P	2.52	165	*i* P	Pn	22 30 16.1	-0.6
PB04				*i* S	Sb	22 30 52.2	0.0
PB05	IPOC Station P	3.01	168	*i* P	Pn	22 30 22.4	-1.1
PB06	IPOC Station P	3.05	157	*i* P	Pn	22 30 23.7	-0.3
LVC	Limon Verde	3.27	146	Pn	Pn	22 30 28.9	+1.7
	comp=N,91nm,0.3s,baz=312,slow=8.8,SNR=122						
LVC				Lg	Lg	22 31 18.1	
	comp=N,199nm,0.3s,baz=58,slow=18,SNR=10						
LVC	Limon Verde	3.27	146		Pn	22 30 25.9	-1.3
LVC				Sn	Sn	22 31 05.4	-1.2
LVC	Limon Verde	3.27	146	*e*P	Pn	22 30 28.9	+1.7
LVC	Limon Verde	3.27	146	*i* P	Pn	22 30 29.0	+1.8
PB15	IPOC Station P	3.55	159	*i* P	Pn	22 30 30.5	-0.4
PB10	IPOC Station P	3.62	175		Pn	22 30 30.1	-1.6
PB10				Sn	Sn	22 31 13.7	-1.0
PB10	IPOC Station P	3.62	175	*i* P	Pn	22 30 30.1	-1.6
LPAZ	La Paz	4.43	36	Pn	Pb	22 30 50.2	-3.6
	comp=N,14nm,0.3s,baz=226,slow=9.5,SNR=96						
LPAZ	La Paz	4.43	36		Pn	22 30 43.3	-0.1
PB14	IPOC Station P	4.73	175	*i* P	Pn	22 30 45.2	-2.0
GO02	Mina Guanaco	5.38	167		Pn	22 30 55.2	-1.0
YJA	Yavi	5.50	115	*i* P	Pn	22 31 01.7	+3.8
YJA				IAML		22 32 57.7	
	comp=Z,67nm,1.7s						
AZAP	Zapla	6.90	130	*i* P	Pn	22 31 19.8	+2.8
AZAP				IAML		22 32 51.8	
	comp=Z,37nm,1.7s						
GO03	Copiap	7.69	176		Pn	22 31 24.6	-3.1
NNA	Nana	9.73	323	Pn	Pn	22 31 56.2	+0.5
	comp=Z,2.1nm,0.3s,baz=162,slow=9.6,SNR=8.4						
NNA				Sn	Sn	22 33 47.8	+2.4
	comp=Z,2.0nm,0.3s,baz=222,slow=18,SNR=2.3						
NNA	Nana	9.73	323		Pn	22 31 56.2	+0.5
NNA					Sn	22 33 44.1	-1.3
SIV	San Ignacio	10.10	69	Pn	Pn	22 31 60.0	-0.8
	comp=Z,16nm,0.3s,baz=271,slow=9.6,SNR=102						
SIV				Sn	Sn	22 33 55.6	+1.1
	baz=301,slow=11,SNR=2.0						
CFA	Coronel Fontan	11.90	169	Pn	Pn	22 32 29.1	+3.7
	comp=Z,2.3nm,0.3s,baz=358,slow=12,SNR=3.9						
CFA				Sn	Sn	22 34 57.5	+19
	comp=Z,0.6nm,0.3s,baz=298,slow=18,SNR=1.6						
SAML	Samuel	13.18	35		Pn	22 32 43.1	+0.3
SAML	Samuel	13.18	35	*e*P	Pn	22 32 43.9	+1.1
PEL	Peldehue	13.20	179	Pn	Pn	22 32 41.8	-1.4
CPUP	Villa Florida	14.01	120	Pn	Pn	22 32 55.2	+1.1
	comp=Z,0.5nm,0.3s,baz=297,slow=12,SNR=20						
CPUP	Villa Florida	14.01	120		Pn	22 32 54.9	+0.8
CPUP	Villa Florida	14.01	120	*e*P	Pn	22 32 57.1	+2.9
AQDB	Aquidauana	14.26	95	*e*P	Pn	22 32 58.6	+1.0
ATAH	Atahualpa	14.63	329	Pn	Pn	22 33 04.5	+1.4
	comp=Z,0.4nm,0.3s,baz=134,slow=15,SNR=3.1						
SALV	Santo Antonio	14.98	77	*e*P	Pn	22 33 06.1	-1.4
GO05	Huala	15.09	183		Pn	22 33 07.3	-1.6
GO05				IAmb	IAmb	22 33 10.2	
	comp=Z,34nm,1.1s						
C2SB	Chapadao do Su	17.06	89	*e*P	Pn	22 33 34.9	+0.5
CLDB	Colider	17.07	61	*e*P	Pn	22 33 34.1	-0.4
TRCB	Terra Rica	17.23	103	*e*P	Pn	22 33 35.8	-0.8
PTGB	Pitanga	18.05	109	*e*P	Pn	22 33 46.8	0.0
PCMB	Pacaembu	18.42	99	*e*P	P	22 33 50.0	-1.2
ARAG	Araguaiana, MT	18.62	80	*e*P	P	22 33 52.0	-1.4
CPSB	Cacapava Do Su	18.91	127	*e*P	P	22 33 56.8	+0.2
ITRB	Iturama	19.31	93	*e*P	P	22 34 01.4	+0.5
PLTB	Pedras Altas	19.50	131	*e*P	P	22 34 03.5	+0.5
GO06	Curarrehue	19.63	181	P	P	22 34 03.9	-0.6
FRTB	Fartura	20.11	104	*e*P	P	22 34 09.6	-0.1
PLCA	Paso Flores	20.77	179	P	Pn	22 34 18.2	-1.1
	comp=Z,24nm,0.9s,baz=24,slow=12,SNR=28						
PLCA	Paso Flores	20.77	179	P	P	22 34 15.3	-1.6
PLCA				IAmb	IAmb	22 34 19.3	
	comp=Z,51nm,1.1s						
PLCA	Paso Flores	20.77	179	*e*P	Pn	22 34 18.3	-1.0
BB19B	Bebedouro	20.97	97	*e*P	P	22 34 18.3	-0.8
OTAV	Otavalo	21.34	339	*e*P	P	22 34 26.1	+2.6
OTAV	Otavalo	21.34	339	P	P	22 34 23.6	+0.1
OTAV	Otavalo	21.34	339	*e*P	P	22 34 25.1	+1.6
IPMB	Ipameri, GO	21.52	89	*e*P	P	22 34 24.7	-0.3
PTGA	Pitinga	21.83	31	P	P	22 34 26.9	-1.4
	comp=Z,10nm,0.3s,baz=204,slow=11,SNR=19						
PTGA	Pitinga	21.83	31	P	P	22 34 26.8	-1.6
PTGA	Pitinga	21.83	31	*e*P	P	22 34 26.8	-1.6
FLOC	Florencia	21.85	347	*e*P	P	22 34 29.9	+1.4
FLOC	Florencia	21.85	347	P	P	22 34 28.2	-0.4
RCLB	Rio Claro- Sao	21.91	101	*e*P	P	22 34 28.5	-0.7
GCUF	Volcan Galeras	21.93	342	*e*P	P	22 34 35.0	+5.1
SPB	Sao Paulo	22.08	104	*e*P	P	22 34 32.3	+1.4
CRUC	La Cruz	22.14	344	*e*P	P	22 34 33.2	+1.1
BDFB	Brasilia	22.17	83	P	P	22 34 29.8	-2.3
	comp=Z,6.3nm,0.4s,baz=259,slow=9.8,SNR=14						
BDFB	Brasilia	22.17	83	P	P	22 34 29.9	-2.2
GARC	Garzon, Huila	22.41	348	*e*P	P	22 34 34.1	-0.7
SOTA	Rioblanco	22.60	345	*e*P	P	22 34 40.3	+3.1
BBAC	Balboa, Cauca	22.66	343	*e*P	P	22 34 38.5	+1.1
PCON	Cinco Dias	22.74	346	*e*P	P	22 34 42.0	+3.4
POPC	Popayan, Colom	23.01	345	*e*P	P	22 34 43.8	+2.7
ORTC	Ortega, Tolima	24.04	349	*e*P	P	22 34 50.0	-1.1
YOTC	Yotoco, Valle	24.33	347	*e*P	P	22 34 55.3	+1.4
BSCB	Bom Sucesso	24.47	97	*e*P	P	22 34 54.5	-0.7
CHIC	Chingaza	24.53	353	*e*P	P	22 34 56.1	+0.1
ROSC	El Rosal	24.81	352	P	P	22 34 57.5	-1.1
	comp=Z,7.5nm,0.6s,baz=149,slow=18,SNR=4.1						
ROSC	El Rosal	24.81	352	*e*P	P	22 35 05.0	+6.4
RREF	El Recreo	25.03	349	*e*P	P	22 35 05.0	+4.2
SMTB	Santa Maria do	25.04	67	*e*P	P	22 34 58.6	-1.7
GUY2C	Guyana, Caldas	25.35	350	*e*P	P	22 35 02.3	-1.2
SPBC	San Pablo de B	25.58	353	*e*P	P	22 35 03.2	-1.9
NORC	Norcasia	25.60	351	*e*P	P	22 35 05.8	+0.5
RUSC	La Rusia	25.71	355	P	P	22 35 06.5	-0.3
JANB	Januaria	25.77	83	*e*P	P	22 35 05.7	-1.3
CBOC	Ciudad Bolivar	26.09	348	*e*P	P	22 35 11.2	+1.3
HELC	Santa Helena	26.32	350	*e*P	P	22 35 11.2	-1.1
BARC	Barichara	26.41	355	*e*P	P	22 35 10.3	-2.6
PTBC	PUERTO BERRIO,	26.50	352	*e*P	P	22 35 11.2	-2.3
BRRC	Barranca, Sant	26.97	354	*e*P	P	22 35 15.6	-2.1
PAMC	Pamplona, Colo	27.12	356	*e*P	P	22 35 20.0	+0.4
ZARC	Zaragoza, Cauc	27.49	351	*e*P	P	22 35 22.6	+0.3
SDV	Santo Domingo	28.60	0	P	P	22 35 31.5	-0.9
	comp=Z,6.0nm,0.8s,baz=265,slow=2.9,SNR=6.5						
SDV	Santo Domingo	28.60	0	*e*P	P	22 35 34.1	+1.7
SDV	Santo Domingo	28.60	0	P	P	22 35 32.0	-0.4
SDV				IAmb	IAmb	22 35 39.7	
	comp=Z,15nm,1.1s						
SDV	Santo Domingo	28.60	0	*e*P	P	22 35 32.7	+0.3
SMLC	San Martn de	28.68	353	*e*P	P	22 35 29.7	-3.3
SJCC	San Jacinto, C	29.90	351	*e*P	P	22 35 44.7	+0.8
TOSP	Speyside	32.62	19	P	P	22 36 07.2	-0.6
EFI	East Falkland	33.27	165	P	P	22 36 13.1	0.0
EFI				IAmb	IAmb	22 36 17.8	
	comp=Z,26nm,1.1s						
EFI				PcP	PcP	22 38 54.8	-0.5
USHA	Ushuaia	34.93	178	P	P	22 36 29.0	+1.5
	comp=Z,10nm,0.9s,baz=306,slow=14,SNR=3.7						
RCBR	Riachuelo	36.74	72	P	P	22 36 43.7	+0.1
	comp=Z,5.5nm,0.6s,baz=234,slow=10,SNR=4.9						
RCBR	Riachuelo	36.74	72	P	P	22 36 43.1	-0.5
RCBR				IAmb	IAmb	22 37 02.6	
	comp=Z,15nm,1.1s						
CRPR	Cabo Rojo, PR	37.84	6	P	P	22 36 52.2	-0.5
CRPR				IAmb	IAmb	22 36 53.2	
	comp=Z,34nm,1.0s						
OBIP	Obispado Ponce	37.93	7	P	P	22 36 52.5	-1.0
OBIP				IAmb	IAmb	22 37 06.3	
	comp=Z,19nm,0.9s						
PDPR	Patillas Dam,	37.97	8	P	P	22 36 52.7	-1.0
PDPR				IAmb	IAmb	22 36 59.6	
	comp=Z,19nm,0.8s						
GCPR	Guaynabo City	38.25	7	P	P	22 36 54.1	-2.0
GCPR				IAmb	IAmb	22 37 01.9	
	comp=Z,24nm,0.7s						
Y55A	Saluda	54.54	349	P	P	22 39 04.2	+0.2
	baz=167						
X59A	McDuffie Farm,	54.66	352	P	P	22 39 05.3	+0.6
	baz=171						
Z50A	Ashland	54.77	345	P	P	22 39 05.7	+0.1
	baz=163						
X56A	White Oak	54.94	350	P	P	22 39 07.5	+0.7
	baz=168						
W58A	Raeford	55.18	352	P	P	22 39 09.4	+0.8
	baz=170						
X54A	Belton	55.23	348	P	P	22 39 09.2	+0.3
	baz=167						
W56A	Indian Trail	55.49	350	P	P	22 39 11.1	+0.3
	baz=169						
W54A	Cherokee Point	55.72	349	P	P	22 39 13.2	+0.7
	baz=167						
V57A	Coltrane Farms	56.11	351	P	P	22 39 14.3	-1.0
	baz=170						
V56A	Mocksville	56.14	351	P	P	22 39 15.7	+0.3
	baz=169						
X48A	Hartselle	56.19	344	P	P	22 39 14.7	-1.2
X48A				IAmb	IAmb	22 39 23.2	
	comp=Z,11nm,0.7s						
V55A	Taylorsville	56.30	350	P	P	22 39 17.4	+0.9
	baz=168						
V54A	Nebo	56.35	349	P	P	22 39 17.5	+0.5
	baz=168						
U57A	Blanch	56.59	352	P	P	22 39 19.0	+0.4
	baz=170						
T59A	Double "B" Far	56.91	354	P	P	22 39 21.3	+0.5
	baz=173						
U54A	Nelsons Funny	57.05	349	P	P	22 39 22.2	+0.2
	baz=168						
T57A	Hurt	57.13	352	P	P	22 39 23.3	+0.8
	baz=171						
V48A	Smith Brothers	57.35	345	IAmb	IAmb	22 39 31.9	
	comp=Z,14nm,0.7s						
T55A	Pulaski	57.47	351	P	P	22 39 25.7	+0.8
	baz=169						
T54A	Tazewell	57.54	350	P	P	22 39 25.7	+0.3
	baz=168						
T52A	Hallie	57.83	349	P	P	22 39 27.1	-0.4
	baz=167						
T51A	Gray	57.88	348	P	P	22 39 27.9	+0.2
	baz=166						
WVT	Waverly	57.98	344	P	P	22 39 27.5	-1.0
WVT	Waverly	57.98	344	P	P	22 39 27.7	-0.7
	baz=161						
S55A	Lewisburg	58.07	351	P	P	22 39 29.8	+0.7
	baz=169						
T50A	Nancy	58.12	347	P	P	22 39 28.9	-0.5
	baz=165						
S54A	Dingess, Beckl	58.22	350	P	P	22 39 30.5	+0.3
	baz=168						
TXAR	Lajitas Array	58.27	326	P	P	22 39 31.1	+0.3
	comp=Z,2.2nm,0.7s,baz=154,slow=8.5,SNR=15						
TXAR	Lajitas Array	58.27	326	P	P	22 39 30.3	-0.5
MIAR	Mount Ida	58.28	338	IAmb	IAmb	22 39 39.0	
	comp=Z,12nm,0.7s						
MIAR	Mount Ida	58.28	338	P	P	22 39 31.1	+0.4
	baz=155,SNR=5.6						
T49A	Edmonton	58.35	346	P	P	22 39 30.7	-0.4
	baz=164						
R54A	Victor	58.54	351	P	P	22 39 33.0	+0.6
	baz=169						
S50A	Richmond	58.66	347	P	P	22 39 33.0	-0.2
	baz=165						
ABTX	Abilene, Hawle	59.03	332	P	P	22 39 36.6	+0.7
	baz=148						
Q57A	Strasburg	59.04	353	P	P	22 39 37.1	+1.3
	baz=172						
Q56A	Snyder Ridge,	59.14	352	P	P	22 39 37.8	+1.3
	baz=171						
Q55A	Buckhannon	59.21	352	P	P	22 39 38.0	+1.0
	baz=170						
Q53A	Leroy	59.29	350	P	P	22 39 37.9	+0.4
	baz=168						
P56A	Dayton Farm, R	59.55	353	P	P	22 39 40.6	+1.3
	baz=171						
U40A	Yellville	59.68	340	IAmb	IAmb	22 39 48.2	
	comp=Z,8.7nm,0.7s						
U40A	Yellville	59.68	340	P	P	22 39 40.5	+0.2
	baz=156						
P54A	Burton	59.86	351	P	P	22 39 42.1	+0.6
	baz=170						
P53A	Whipple	59.88	351	P	P	22 39 42.1	+0.5
	baz=169						
P52A	Corning	60.14	350	P	P	22 39 43.0	-0.4
	baz=168						
O56A	Blue Knob Stat	60.28	353	P	P	22 39 45.8	+1.4
	baz=172						
O55A	Ligonier	60.30	353	P	P	22 39 45.6	+1.1
	baz=171						
TUL1	Leonard	60.31	337	P	P	22 39 45.0	+0.3
	baz=153						
N58A	Sunbury	60.66	355	P	P	22 39 47.9	+1.0
	baz=174						
N55A	Marion Center	60.83	353	P	P	22 39 49.1	+1.0
	baz=171						
N56A	West Decatur	60.89	354	P	P	22 39 49.6	+1.1
	baz=172						
MNTX	Cornudas Mount	61.04	327	P	P	22 39 49.6	-0.2
MNTX				IAmb	IAmb	22 39 50.4	
	comp=Z,5.5nm,0.7s						
MNTX	Cornudas Mount	61.04	327	P	P	22 39 49.8	+0.1
	baz=143						
M58A	Price’s Panora	61.17	355	P	P	22 39 51.3	+0.9
	baz=174						
M59A	Waymart	61.27	356	P	P	22 39 52.0	+0.9
	baz=175						
M56A	Emporium	61.44	354	P	P	22 39 52.9	+0.7
	baz=172						
L63A	North Scituate	61.45	359	P	P	22 39 53.0	+0.8
	baz=179						
M55A	Ridgway	61.48	353	P	P	22 39 53.1	+0.6
	baz=172						
MSTX	Muleshoe	61.58	330	IAmb	IAmb	22 40 02.5	
	comp=Z,13nm,1.1s						
M54A	Oil Creek Stat	61.63	353	P	P	22 39 53.9	+0.4
	baz=171						
L60A	Shokan	61.65	357	P	P	22 39 54.5	+0.9
	baz=176						
N49A	Columbus Grove	61.75	349	P	P	22 39 53.8	-0.5
	baz=166						
L59A	Walton	61.89	356	P	P	22 39 56.4	+1.2
	baz=176						
BINY	Binghamton	61.96	356	P	P	22 39 56.9	+1.2
	baz=175						
L56A	Greenwood	62.02	354	P	P	22 39 57.0	+0.8
	baz=173						
HRV	Adam Dziewonsk	62.09	359	P	P	22 39 57.3	+0.7
	baz=179						
L53A	Girard	62.14	352	P	P	22 39 57.2	+0.3
	baz=170						
L55A	Hinsdale	62.16	354	P	P	22 39 58.0	+1.0
	baz=172						
L54A	Sinclairville	62.30	353	P	P	22 39 58.8	+0.8
	baz=171						
K59A	Cooperstown	62.46	357	P	P	22 39 60.0	+0.9
	baz=176						
K58A	Earlville	62.50	356	P	P	22 40 00.0	+0.7
	baz=175						
K57A	Scipio Center	62.53	355	P	P	22 40 00.1	+0.6
	baz=174						
K54A	Basiliko Farm,	62.60	354	P	P	22 40 00.8	+0.7
	baz=172						
K55A	Perry	62.66	354	P	P	22 40 00.9	+0.5
	baz=172						
VNA2	Neumayer--Watz	62.77	161	P	P	22 40 02.2	+1.4
	baz=284,slow=7.6						
P38A	Dawn	62.88	340	IAmb	IAmb	22 40 10.7	
	comp=Z,9.3nm,0.7s						
121A	Cookes Peak, D	62.96	325	P	P	22 40 04.5	+1.7
	baz=141						
J58A	Remsen	63.07	356	P	P	22 40 04.4	+1.3
	baz=175						
J59A	Piesco	63.13	357	P	P	22 40 04.4	+0.8
	baz=176						
J57A	Williamstown	63.16	356	P	P	22 40 04.4	+0.7
	baz=175						
J54A	Appleton	63.26	354	P	P	22 40 04.8	+0.5
	baz=172						
I58A	Old Forge	63.38	357	P	P	22 40 05.8	+0.7
	baz=176						
J52A	Paris	63.44	352	P	P	22 40 05.6	0.0
	baz=170						
I60A	Shoreham	63.46	358	P	P	22 40 06.6	+1.0
	baz=178						
K48A	Perry	63.57	349	P	P	22 40 05.6	-0.8
	baz=166						
J48A	Bridge Port	63.99	350	P	P	22 40 08.5	-0.7
	baz=167						
I51A	Listowel	64.06	352	P	P	22 40 09.4	-0.2
	baz=170						
H58A	Gabriels	64.07	357	P	P	22 40 10.3	+0.6
	baz=177						
H61A	Lyndonville	64.12	359	P	P	22 40 11.5	+1.5
	baz=179						
ANMO	Albuquerque	64.16	328	P	P	22 40 10.2	-0.5
ANMO	Albuquerque	64.16	328	P	P	22 40 11.9	+1.1
	baz=143						
H57A	Richville	64.17	356	P	P	22 40 10.9	+0.6
	baz=175						
H59A	Cadyville	64.27	358	P	P	22 40 12.1	+1.1
	baz=177						
H56A	Elgin	64.36	356	P	P	22 40 12.2	+0.6
	baz=174						
SNAA	Sanae	64.39	161	P	P	22 40 12.5	+0.8
SNAA	Sanae	64.39	161	P	P	22 40 10.6	-1.0
SNAA				IAmb	IAmb	22 40 13.1	
	comp=Z,6.0nm,0.7s						
I49A	Point Hope	64.46	350	P	P	22 40 11.5	-0.7
	baz=168						
H53A	Bobcaygeon	64.54	354	P	P	22 40 12.9	+0.2
	baz=172						
G57A	Newington	64.79	357	P	P	22 40 15.0	+0.7
	baz=176						
G62A	West of Eustis	64.80	0	P	P	22 40 15.8	+1.3
	baz=180						
I48A	Sherman Twp	64.84	350	P	P	22 40 14.2	-0.5
	baz=167						
G61A	St-Isidore-de-	64.86	359	P	P	22 40 16.4	+1.5
	baz=179						
JFWS	Jewell Farm	64.99	344	P	P	22 40 15.7	-0.1
	baz=160						
G53A	Haliburton	65.08	354	P	P	22 40 17.0	+0.7
	baz=172						
F60A	Warwick	65.55	359	P	P	22 40 20.1	+0.8
	baz=179						
F52A	Sundridge	65.82	354	P	P	22 40 21.5	+0.4
	baz=171						
ALGO	Algonquin Park	65.86	355	P	P	22 40 21.3	+0.1
	baz=173						
SDCO	Great Sand Dun	65.94	330	IAmb	IAmb	22 40 42.6	
	comp=Z,5.6nm,0.9s						
SDCO	Great Sand Dun	65.94	330	P	P	22 40 23.5	+1.1
	baz=144,SNR=8.4						
E58A	La Victoria	65.98	358	P	P	22 40 22.9	+0.8
	baz=178						
F51A	Arnstein	66.02	353	P	P	22 40 22.3	0.0
	baz=171						
BGNE	Belgrade	66.03	338	P	P	22 40 23.0	+0.4
	baz=152						
E57A	Chemin Saint G	66.06	358	P	P	22 40 22.9	+0.3
	baz=177						
F49A	Sandfield	66.12	351	P	P	22 40 22.3	-0.7
	baz=169						
E56A	St. Veronique	66.23	357	P	P	22 40 24.3	+0.6
	baz=176						
E54A	Lac Daplat, Po	66.26	355	P	P	22 40 24.0	+0.2
	baz=174						
F48A	Evansville	66.27	351	P	P	22 40 23.6	-0.3
	baz=168						
X16A	Lo Mia Camp, P	66.38	324	IAmb	IAmb	22 40 28.5	
	comp=Z,5.0nm,0.8s						
E51A	G1948 Merrick	66.57	354	P	P	22 40 25.9	+0.1
	baz=171						
F45A	CMU Biological	66.61	349	P	P	22 40 25.5	-0.6
	baz=165						
D62A	Allapoint, All	66.68	1	P	P	22 40 27.3	+0.8
	baz=182						

D58A	Chemin du LacG	66.70	359	P	P	22 40 27.5	+0.8
	baz=178						
D56A	ZEC Mazanza, M	66.72	357	P	P	22 40 27.1	+0.4
	baz=176						
D55A	Sainte-Anne-du	66.72	357	P	P	22 40 27.1	+0.3
	baz=175						
D54A	Lac Fusel, La	66.93	356	P	P	22 40 28.1	-0.1
	baz=174						
D53A	Lac Vacive, Po	66.94	355	P	P	22 40 28.4	+0.2
	baz=173						
E46A	Sault Ste Mari	67.06	350	IAmb	IAmb	22 40 36.2	
	comp=Z,9.8nm,1.1s						
WUAZ	Wupatki	67.16	325	IAmb	IAmb	22 40 33.3	
	comp=Z,6.6nm,0.8s						
D50A	G1974 Best Tow	67.23	353	P	P	22 40 30.0	0.0
	baz=171						
D47A	Chapleau	67.54	351	P	P	22 40 31.5	-0.5
	baz=168						
E43A	Lone Tree Farm	67.55	348	IAmb	IAmb	22 40 39.6	
	comp=Z,8.0nm,1.1s						
ECSD	EROS Data Cent	67.58	340	IAmb	IAmb	22 40 42.0	
	comp=Z,4.3nm,0.8s						
ECSD	EROS Data Cent	67.58	340	P	P	22 40 32.3	0.0
	baz=154						
ISCO	Idaho Springs	67.66	332	P	P	22 40 34.4	+1.0
	baz=145						
SMCO	Snowmass	67.78	330	IAmb	IAmb	22 40 45.9	
	comp=Z,4.5nm,0.9s						
PV15	Paradox Valley	67.83	329	IAmb	IAmb	22 40 37.0	
	comp=Z,8.8nm,0.9s						
PV13	Radium Mtn., P	67.86	328	IAmb	IAmb	22 40 36.6	
	comp=Z,3.9nm,0.7s						
VLDQ	Val d'Or	67.95	355	IAmb	IAmb	22 40 43.0	
	comp=Z,8.1nm,0.7s						
BC3	Big Chuckawall	68.13	321	P	P	22 40 38.2	+2.1
	baz=135						
MONP2	Monument Peak	68.18	320	P	P	22 40 38.7	+2.1
	baz=134						
BAR	Barrett	68.19	319	P	P	22 40 35.6	-0.8
BAR				IAmb	IAmb	22 40 39.6	
	comp=Z,7.2nm,0.9s						
IRM	Iron Mountain	68.30	321	P	P	22 40 39.2	+2.1
	baz=135,SNR=6.4						
U15A	North Rim	68.33	325	IAmb	IAmb	22 40 40.6	
	comp=Z,6.1nm,0.8s						
BELC	Belle Mtn. Jos	68.69	321	P	P	22 40 41.7	+2.0
	baz=134						
N23A	Red Feather La	68.70	332	P	P	22 40 41.2	+1.4
	baz=145						
PFO	Pinyon Flats O	68.70	320	P	P	22 40 41.8	+2.0
	baz=134						
LSQQ	Lebel-sur-Quev	68.85	356	P	P	22 40 40.2	0.0
	baz=174						
GMRC	Granite Mounta	69.04	322	P	P	22 40 44.0	+2.2
	baz=135,SNR=8.0						
HEC	Hector,Ludlow	69.47	321	P	P	22 40 47.0	+2.5
	baz=134,SNR=5.9						
MATQ	Matagami	69.60	355	P	P	22 40 44.4	-0.4
	baz=173						
TUQ	Turquoise Moun	69.65	322	P	P	22 40 47.9	+2.2
	baz=135,SNR=5.1						
SHPR	Sheep Range	69.97	323	IAmb	IAmb	22 40 50.6	
	comp=Z,5.1nm,0.8s						
DBIC	Dimbokro	70.07	75	P	P	22 40 47.5	-1.0
	comp=Z,2.1nm,0.4s,baz=222,slow=7.9,SNR=4.6						
DBIC	Dimbokro	70.07	75	P	P	22 40 47.2	-1.2
DBIC				IAmb	IAmb	22 40 57.4	
	comp=Z,5.6nm,0.8s						
GSC	Goldstone, Bar	70.08	321	P	P	22 40 50.5	+2.3
	baz=134						
QSPA	South Pole Qui	70.29	180	P	P	22 40 48.8	-0.3
EDW2	Edwards Air Fo	70.49	320	P	P	22 40 52.5	+1.8
	baz=133						
RSSD	Black Hills	70.57	335	P	P	22 40 50.0	-1.2
RSSD				IAmb	IAmb	22 40 52.9	
	comp=Z,5.8nm,0.8s						
RSSD	Black Hills	70.57	335	P	P	22 40 52.6	+1.4
	baz=147						
TPNV	Topopah Spring	70.91	323	IAmb	IAmb	22 40 56.5	
	comp=Z,6.5nm,0.8s						
TPNV	Topopah Spring	70.91	323	P	P	22 40 55.8	+2.4
	baz=135,SNR=8.2						
FURC	Furnace Creek,	70.92	322	P	P	22 40 55.7	+2.5
	baz=134,SNR=5.8						
MPMC	Manual Prospec	71.00	321	P	P	22 40 55.8	+1.8
	baz=134,SNR=5.4						
ISA	Isabella, Lake	71.31	321	P	P	22 40 58.2	+2.4
	baz=133,SNR=6.6						
DUG	Dugway, Tooele	71.41	327	IAmb	IAmb	22 40 59.0	
	comp=Z,7.1nm,0.9s						
DUG	Dugway, Tooele	71.41	327	P	P	22 40 58.1	+1.8
	baz=139,SNR=6.5						
R11A	Troy Canyon, C	71.53	324	P	P	22 40 59.5	+2.4
	baz=136,SNR=8.9						
CWC	Cottonwood Cre	71.61	321	P	P	22 40 59.7	+2.1
	baz=134						
VES	Vestal, Richgr	71.80	320	P	P	22 41 00.8	+2.2
	baz=133						
PDAR	Pinedale Array	71.81	331	P	P	22 40 59.1	+0.3
	comp=Z,0.9nm,0.6s,baz=141,slow=7.5,SNR=9.2						
PDAR	Pinedale Array	71.81	331	P	P	22 40 58.5	-0.3
HWUT	Hardware Ranch	71.86	329	IAmb	IAmb	22 41 07.9	
	comp=Z,5.7nm,0.8s						
SMMC	Simmler	72.00	319	P	P	22 41 02.1	+2.2
	baz=132						
AHID	Auburn Hatcher	72.53	330	IAmb	IAmb	22 41 04.8	
	comp=Z,7.4nm,0.8s						
OMMB	Old Mammoth Mi	72.95	322	IAmb	IAmb	22 41 08.5	
	comp=Z,7.2nm,0.9s						
TPAW	Teton Pass	73.02	331	IAmb	IAmb	22 41 14.6	
	comp=Z,4.8nm,0.8s						
NVAR	Mina Array Bea	73.10	323	P	P	22 41 08.1	+1.6
	comp=Z,3.1nm,0.8s,baz=158,slow=6.7,SNR=23						
NVAR	Mina Array Bea	73.10	323	P	P	22 41 06.8	+0.2
ULM	Lac du Bonnet	73.25	344	P	P	22 41 06.0	-0.8
	comp=Z,1.0nm,0.4s,baz=158,slow=8.3,SNR=4.9						
RLMT	Red Lodge	73.54	333	IAmb	IAmb	22 41 11.1	
	comp=Z,6.2nm,0.7s						
RLMT	Red Lodge	73.54	333	P	P	22 41 10.4	+1.4
	baz=143						
DGMT	Dagmar	74.28	338	P	P	22 41 14.6	+1.6
	baz=148						
SCHQ	Schefferville	74.50	2	P	P	22 41 13.9	-0.2
	comp=Z,2.2nm,0.8s,baz=213,slow=4.3,SNR=4.3						
SCHQ	Schefferville	74.50	2	P	P	22 41 13.9	-0.2
PAHR	Pah Rah Range	74.59	323	IAmb	IAmb	22 41 25.8	
	comp=Z,13nm,0.9s						
AFDM	Forest Hills D	74.99	322	IAmb	IAmb	22 41 26.8	
	comp=Z,9.2nm,1.2s						
BEKR	Beckworth	75.25	323	IAmb	IAmb	22 41 30.4	
	comp=Z,11nm,0.6s						
ORV	Oroville	75.70	322	IAmb	IAmb	22 41 32.0	
	comp=Z,18nm,1.1s						
VNDA	Vanda	78.10	190	P	P	22 41 36.0	+1.6
	comp=Z,2.4nm,1.0s,baz=129,slow=5.8,SNR=6.7						
TORD	Torodi Ar. Bea	78.57	71	P	P	22 41 37.0	-1.0
	comp=Z,5.4nm,0.7s,baz=248,slow=5.4,SNR=47						
WALA	Waterton Lakes	78.60	333	IAmb	IAmb	22 41 47.1	
	comp=Z,6.3nm,0.8s						
BOSA	Boshof	85.83	119	P	P	22 42 16.2	+0.1
	comp=Z,1.6nm,0.7s,baz=226,slow=5.4,SNR=3.9						
BOSA	Boshof	85.83	119	P	P	22 42 14.9	-1.2
BOSA				IAmb	IAmb	22 42 31.8	
	comp=Z,6.3nm,1.1s						
MAW	Mawson	86.38	164	P	P	22 42 18.3	+0.4
	comp=Z,4.6nm,0.9s,baz=219,slow=5.8,SNR=6.6						
MAW	Mawson	86.38	164	P	P	22 42 17.2	-0.7
YKA	Yellowknife Ar	89.07	341	P	P	22 42 30.9	+0.2
	comp=Z,2.3nm,0.8s,baz=138,slow=4.8,SNR=20						
KBZ	Khabaz	120.53	50	PKP	PKiKP	22 48 28.6	+0.8
	comp=Z,2.6nm,0.9s,baz=45,slow=4.3,SNR=3.4						
H11S2	WAKE ISLAND Hy	125.83	279	T	T	02 07 14.3	
	baz=102,slow=74,SNR=70						
H11S1	WAKE ISLAND Hy	125.84	279	T	T	02 07 12.9	
	baz=228,slow=74,SNR=75						
H11S3	WAKE ISLAND Hy	125.85	279	T	T	02 07 19.4	
H11N3	WAKE ISLAND Hy	125.88	280	T	T	02 07 16.2	
	SNR=34						
H11N2	WAKE ISLAND Hy	125.89	280	T	T	02 07 18.4	
	baz=293,slow=74,SNR=39						
H11N1	WAKE ISLAND Hy	125.90	280	T	T	02 07 17.7	
	baz=101,slow=74						
SEY	Seymchan	127.90	337	PKP	PKiKP	22 48 42.6	+0.8
	comp=Z,1.3nm,0.3s,baz=56,slow=23,SNR=6.7						
PETK	Petropavlovsk-	130.19	324	PKP	PKiKP	22 48 48.5	+1.8
	comp=Z,3.2nm,1.0s,baz=41,slow=16,SNR=2.3						
ASAR	Alice Springs	130.42	210	PKP	PKPdf	22 48 47.5	+0.1
	comp=Z,1.2nm,0.8s,baz=119,slow=1.6,SNR=9.3						
ASAR	Alice Springs	130.42	210		PKPdf	22 48 45.4	-2.0
ABKAR	Akbulak array	131.19	41		PKPdf	22 48 47.5	-0.4
WRA	Warramunga Arr	133.34	213	PKP	PKPdf	22 48 52.9	-0.1
	comp=Z,0.9nm,0.6s,baz=160,slow=1.8,SNR=9.5						
ZALV	Zalesovo Beam	141.24	23	PKP	PKPdf	22 49 06.7	+0.3
	comp=Z,4.8nm,0.8s,baz=280,slow=3.7,SNR=12						
ZALV	Zalesovo Beam	141.24	23		PKPdf	22 49 06.5	+0.1
MAKZ	Makanchi	145.18	33		PKPbc	22 49 12.4	-0.8
NIL	Nilore	145.35	59		PKPbc	22 49 13.4	-0.8
MKAR	Makanchi Array	145.35	33	PKPbc	PKPdf	22 49 14.2	+0.2
	comp=Z,2.0nm,0.6s,baz=325,slow=5.0,SNR=28						
MKAR	Makanchi Array	145.35	33		PKPbc	22 49 13.0	-0.7
KSH	Kashi	145.47	48	PKPbc	PKPab	22 49 15.0	+0.3
TLY	Talaya	147.99	6	PKPbc	PKPbc	22 49 21.7	+0.5
	comp=Z,0.7nm,0.4s,baz=169,slow=5.2,SNR=2.3						
USRK	Ussuriysk Ar.	149.17	327	PKPbc	PKiKP	22 49 25.1	-0.6
	comp=Z,3.3nm,0.8s,baz=43,slow=2.0,SNR=6.4						
USRK	Ussuriysk Ar.	149.17	327		PKPbc	22 49 24.6	+0.1
MJAR	Matsushiro Arr	149.64	309	PKPbc	PKPbc	22 49 26.3	+0.3
	comp=Z,3.1nm,0.7s,baz=139,slow=2.0,SNR=9.1						
MJAR				PKPab	PKPab	22 49 34.2	+3.2
	comp=Z,16nm,0.8s,baz=123,slow=1.2,SNR=31						
HYB	Hyderabad	150.95	90	i PKP	PKPbc	22 49 29.5	-0.2
SONM	Songino Array	152.04	4	PKP	PKPdf	22 49 26.2	+1.3
	comp=Z,2.3nm,0.7s,baz=127,slow=2.2,SNR=3.6						
SONM				PKPbc	PKPbc	22 49 32.7	+1.3
	comp=Z,2.4nm,0.7s,baz=320,slow=1.4,SNR=18						
SONM				PKPab	PKPab	22 49 39.4	-1.3
	comp=Z,6.5nm,0.8s,baz=317,slow=1.3,SNR=20						
SONM	Songino Array	152.04	4		PKPdf	22 49 24.3	-0.6
SONM					PKPab	22 49 39.6	-1.1
ULN	Ulaanbaatar	152.04	3		PKPab	22 49 39.9	-0.8
KSRS	Korea Array	156.03	321	PKPbc	PKPbc	22 49 39.2	
	comp=Z,1.3nm,0.8s,baz=3.2,slow=2.5,SNR=6.9						
GTA	Gaotai	158.96	20	⇑PKP	PKPdf	22 49 43.3	+8.9
LZH	Lanzhou	163.21	15	ePKP	PKPdf	22 49 34.3	-4.8
LZH				pPKP	sPKPdf	22 49 44.3	+3.2
LZH				sPKP		22 49 49.3	
CMAR	Chiang Mai Arr	170.27	97	PKP	PKPdf	22 49 45.9	+1.1
	comp=Z,0.3nm,0.3s,baz=274,slow=2.4,SNR=2.9						

TAP 16 22:31:08.1, 24°.84N×122°.17E, h4^{km}±1^{km}, ML1.7, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.23	315	P	Pg	22 31 13.6	+0.9
	baz=316						
TWB1				S	Sg	22 31 17.0	+1.2
	baz=316						
EOS1	EOS1	0.29	188	P	Pg	22 31 14.9	+1.0
	baz=197						
EOS1				S	Sb	22 31 19.7	-1.4
	baz=197						
TIPB	Shuangxi	0.34	292	P	Pg	22 31 15.7	+1.0
	baz=293						
TIPB				eS	Sg	22 31 20.7	+1.5
	baz=293						
TWC	Suao	0.38	232	eP	Pg	22 31 15.6	+0.2
	baz=232						
TWC				S	Sg	22 31 21.1	+0.8
	baz=232						
ILA	Ilan	0.39	259	eP	Pb	22 31 17.3	-0.3
	baz=260						
ILA				eS	Sb	22 31 23.4	-0.6
	baz=260						
TWE	Neicheng	0.47	255	P	Pg	22 31 18.0	+0.7
	baz=243						
TWE				eS	Sb	22 31 25.1	-1.2
	baz=243						
ENTT	Nioudou	0.59	250	eP	Pg	22 31 20.2	+0.8
	baz=250						
NWLT	Wulai	0.61	264	eP	Pb	22 31 21.1	-0.3
	baz=265						
NWLT				eS	Sb	22 31 29.4	-1.0
	baz=265						
NDT	Datong Townshi	0.65	248	P	Pb	22 31 21.7	-0.2
	baz=249						
NDT				S	Sb	22 31 30.8	-0.5
	baz=249						
YHNB	Yeheng	0.74	257	eP	Pg	22 31 22.4	0.0
	baz=249						
YHNB				S	Sb	22 31 33.4	-0.9
	baz=249						
NSK	Sanguang	0.76	258	eP	Pb	22 31 23.5	-0.5
	baz=249						
NSK				eS	Sb	22 31 34.6	0.0
	baz=249						
NNSB	Datong	0.83	240	eP	Pg	22 31 24.4	+0.3
	baz=241						
NNSB				S	Sb	22 31 36.5	-0.2
	baz=241						
NNSH	Datong	0.83	240	eP	Pb	22 31 24.7	-0.5
	baz=231						
NNSH				eS	Sb	22 31 36.1	-0.6
	baz=231						
NNS	Nan Shan	0.83	241	eS	Sb	22 31 36.8	0.0
	baz=241						
NACB	Ninganchiao	0.85	218	eS	Sg	22 31 35.3	-0.1
	baz=219						
ETLH	Xiulin Townshi	0.89	225	eP	Pb	22 31 25.9	-0.3
	baz=225						
ETLH				eS	Sg	22 31 37.1	+0.2
	baz=225						
WHF	Hehuan Shan	1.08	230	eP	Pg	22 31 29.0	+0.2
	baz=230						
WHF				eS	Sb	22 31 43.9	-0.3
	baz=230						

JMA 16 22:31:24.8, 24°.34N×123°.54E, h15^{km}±2^{km}, M0.6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.17	92	P	Pg	22 31 28.9	-0.1
IRIF				S	Sg	22 31 31.8	-0.1
HATJ	Hateruma jima	0.37	139	eS	Sg	22 31 37.4	-0.1
JKRS	Kuro-shima	0.44	103	P	Pg	22 31 33.5	-0.1
JKRS				eS	Sg	22 31 39.8	+0.2
YOJ	Yonaguni jima	0.50	284	P	Pg	22 31 34.8	+0.1
JIJ	Ishigaki jima	0.55	87	P	Pg	22 31 35.4	-0.3
JIJ				eS	Sg	22 31 42.7	-0.3
JYNG	Yonagunijimaku	0.55	282	P	Pg	22 31 35.3	-0.4

NEIC ***16*** *22:36:59.3±1.9, 20°.07S±0°.04×70°.64W±0°.04, h10^{km}±1^{km}, mb4.7/67, ML4.7(GUC), Error ellipse: s-maj=7.8km s-min=3.5km az=315.0*

IDC ***16*** *22:36:59.2±0.5, 19°.84S×70°.57W, h0^{km}, mb4.4/18, mb1 4.5/23, mb1mx4.4/29, mbtmp4.4/23, ML3.9/5, Error ellipse: s-maj=16.6km s-min=12.7km az=62.0*

GUC ***16*** *22:37:01.6±0.6, 19°.91S×70°.76W, h37^{km}±10^{km}, ML4.7*

VAO ***16*** *22:37:06.4±0.8, 19°.90S×70°.53W, h50^{km}±7^{km}, mb4.5*

ISC 16 22:36:59.7±1.4, 19°.94S±0°.03×70°.68W±0°.04, h9^{km}±8^{km}, n167, σ1^{s}79/161, mb4.6/40, 5C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.62	57	⇑eP	Pn	22 37 14.1	-0.8
PSGC				eS	Sn	22 37 23.7	-1.3
PSGC				IAML		22 37 24.3	
	comp=N,35µm,0.3s						
TA01	Diego Aracena	0.78	143	eP	Pn	22 37 16.4	-0.4
TA01				eS	Sn	22 37 28.4	-0.3
TA01				IAML		22 37 32.3	
	comp=N,44µm,0.3s						
PB11	IPOC Station P	0.98	80	⇑iP	Pn	22 37 20.5	+0.7
PB11				i S	Sn	22 37 34.7	+0.8
PB11				IAML		22 37 36.2	
	comp=E,92µm,0.8s						
PB11	IPOC Station P	0.98	80		Pn	22 37 20.4	+0.7
PB11				Sn	Sn	22 37 33.0	-0.9
PATCX	Punta Patache	1.00	151	⇓eP	Pn	22 37 20.1	+0.1
PATCX				eS	Sn	22 37 36.4	+2.0
PATCX				IAML		22 37 38.6	
	comp=E,29µm,0.6s						
GO01	Chusmiza	1.42	79	⇑iP	Pn	22 37 28.0	+1.8
GO01				i S	Sn	22 37 48.0	+2.7
GO01				IAML		22 37 52.8	
	comp=N,21µm,0.3s						
GO01	Chusmiza	1.42	79		Pn	22 37 26.9	+0.7
GO01				Sn	Sn	22 37 44.4	-0.9
PB08	IPOC Station P	1.45	98	⇓iP	Pb	22 37 28.3	+1.3
PB08				i S	Sn	22 37 48.5	+2.7
PB01	IPOC Station P	1.56	135	eP	Pg	22 37 29.6	-0.1
PB01				i S	Sg	22 37 52.5	+2.4
PB01	IPOC Station P	1.56	135		Pn	22 37 26.4	-1.3
PB01				Sn	Sn	22 37 44.9	-3.3
AP01	Chacalluta	1.59	12	eP	Pg	22 37 28.3	-2.0
AP01				eS	Sg	22 37 50.3	-0.7
PB04	IPOC Station P	2.43	168		Pn	22 37 38.5	-1.3
PB04				Sn	Sn	22 38 05.6	-4.2
LVC	Limon Verde	3.12	148	Pn	Pn	22 37 52.5	+3.0
	comp=N,14nm,0.3s,baz=319,slow=8.3,SNR=16						
LVC				Sn	Sb	22 38 31.8	-2.3
	comp=N,114nm,0.3s,baz=84,slow=19,SNR=8.5						
LVC	Limon Verde	3.12	148		Pn	22 37 48.4	-1.1
LVC				Sn	Sn	22 38 22.6	-4.6
LVC	Limon Verde	3.12	148	eP	Pn	22 37 52.4	+2.9
PB10	IPOC Station P	3.56	178		Pn	22 37 54.2	-0.9
PB10				Sn	Sn	22 38 35.2	-2.2
LPAZ	La Paz	4.37	34	Pn	Pb	22 38 12.9	-4.1
	comp=N,2.9nm,0.3s,baz=178,slow=2.8,SNR=54						
LPAZ	La Paz	4.37	34		Pn	22 38 08.8	+2.0
GO02	Mina Guanaco	5.29	169		Pn	22 38 18.3	-1.0
NNA	Nana	9.88	322	Pn	Pn	22 39 23.2	+1.1
	comp=N,1.6nm,0.3s,baz=150,slow=16,SNR=3.1						
NNA				Sn	Sn	22 41 18.6	+5.4
	comp=N,1.5nm,0.3s,baz=236,slow=17,SNR=2.3						
NNA	Nana	9.88	322		Pn	22 39 23.7	+1.6
NNA					Sn	22 41 16.1	+2.8
SIV	San Ignacio	9.95	68	Pn	Pn	22 39 23.4	+0.5
	comp=N,3.7nm,0.3s,baz=269,slow=9.8,SNR=25						
SIV				Sn	Sn	22 41 15.7	+0.8
	comp=N,0.3nm,0.3s,baz=331,slow=14,SNR=1.8						
CFA	Coronel Fontan	11.82	170	Pn	Pn	22 39 48.1	-0.5
	comp=N,0.5nm,0.3s,baz=343,slow=13,SNR=3.6						
CFA				Sn	Sn	22 41 55.4	-5.3
	comp=N,0.4nm,0.3s,baz=131,slow=21,SNR=3.0						
SAML	Samuel	13.11	35	eP	Pn	22 40 07.0	+0.7
CPUP	Villa Florida	13.82	120	Pn	Pn	22 40 16.0	+0.1
	comp=N,0.1nm,0.3s,baz=306,slow=14,SNR=4.4						
CPUP	Villa Florida	13.82	120		Pn	22 40 14.5	-1.4
CPUP	Villa Florida	13.82	120	eP	Pn	22 40 19.8	+3.9
AQDB	Aquidauana	14.07	95	eP	Pn	22 40 22.1	+2.8
SALV	Santo Antonio	14.81	77	eP	P	22 40 32.0	-3.5
CLDB	Colider	16.93	60	eP	P	22 40 58.2	-0.8
TRCB	Terra Rica	17.04	103	eP	P	22 40 59.4	-0.9
PTGB	Pitanga	17.86	109	eP	P	22 41 11.1	+1.7
PCMB	Pacaembu	18.23	99	eP	P	22 41 12.8	-0.5
ITAB	Concordia	18.47	117	eP	P	22 41 17.1	+1.1
CPSB	Cacapava Do Su	18.74	127	eP	Pn	22 41 19.9	+0.6
PLTB	Pedras Altas	19.33	131	eP	Pn	22 41 26.5	+0.1
PLCA	Paso Flores	20.72	180	P	P	22 41 42.2	+1.7
	comp=N,10.0nm,0.8s,baz=20,slow=12,SNR=9.7						
PLCA	Paso Flores	20.72	180	P	P	22 41 39.9	-0.7
PLCA	Paso Flores	20.72	180	eP	P	22 41 42.3	+1.7
BB19B	Bebedouro	20.78	97	eP	P	22 41 41.8	+0.5
IPMB	Ipameri, GO	21.34	89	eP	P	22 41 47.5	+0.1
OTAV	Otavalo	21.45	338	eP	P	22 41 51.2	+2.2
OTAV	Otavalo	21.45	338	P	P	22 41 49.9	+0.9
OTAV	Otavalo	21.45	338	eP	P	22 41 51.9	+2.9
PTGA	Pitinga	21.78	30	P	P	22 41 51.2	-0.9
	comp=N,8.0nm,0.4s,baz=220,slow=21,SNR=17						
PTGA	Pitinga	21.78	30	P	P	22 41 50.6	-1.4
PTGA	Pitinga	21.78	30	eP	P	22 41 51.1	-0.9
FLOC	Florencia	21.94	347	eP	P	22 41 55.0	+1.3
FLOC	Florencia	21.94	347	P	P	22 41 55.5	+1.7
BDFB	Brasilia	21.99	82	P	P	22 41 53.1	-1.4
	comp=N,4.4nm,0.5s,baz=253,slow=10,SNR=12						
BDFB	Brasilia	21.99	82	P	P	22 41 53.3	-1.2
CRUC	La Cruz	22.24	343	eP	P	22 42 03.6	+6.2
VAO	Valinhos	22.27	102	eP	P	22 41 57.4	0.0
GARC	Garzon, Huila	22.49	347	eP	P	22 42 00.2	+0.3
SOTA	Rioblanco	22.70	344	eP	P	22 42 04.6	+2.2
BBAC	Balboa, Cauca	22.76	343	eP	P	22 42 04.6	+1.8
PCON	Cinco Dias	22.83	345	eP	P	22 42 07.2	+3.4
POPC	Popayan, Colom	23.11	345	eP	P	22 42 08.1	+1.8
ORTC	Ortega, Tolima	24.12	349	eP	P	22 42 15.3	-0.8
BSCB	Bom Sucesso	24.29	97	eP	P	22 42 17.5	-0.2
YOTC	Yotoco, Valle	24.42	346	eP	P	22 42 19.7	+0.8
CHIC	Chingaza	24.60	353	eP	P	22 42 19.7	-1.2
ROSC	El Rosal	24.89	351	P	P	22 42 25.3	+1.9
	comp=N,7.4nm,0.5s,baz=326,slow=21,SNR=4.7						
ROSC	El Rosal	24.89	351	IAmb	IAmb	22 42 35.0	
	comp=Z,9.9nm,0.6s						
SMTB	Santa Maria do	24.89	67	eP	P	22 42 24.7	+1.5
RREF	El Recreo	25.11	349	eP	P	22 42 25.1	-0.6
PLMC	San Jos del P	25.30	347	eP	P	22 42 25.1	-1.7
GUY2C	Guyana, Caldas	25.43	349	eP	P	22 42 29.8	+1.4
JANB	Januaria	25.60	83	eP	P	22 42 28.9	-0.7
SPBC	San Pablo de B	25.65	352	eP	P	22 42 27.8	-2.3
NORC	Norcasia	25.68	350	⇑eP	P	22 42 25.1	-5.2
RUSC	La Rusia	25.78	354	⇑eP	P	22 42 30.4	-1.2
RUSC	La Rusia	25.78	354	P	P	22 42 32.4	+0.7
CBOC	Ciudad Bolivar	26.18	348	eP	P	22 42 35.8	+0.9
HELC	Santa Helena	26.40	349	eP	P	22 42 36.9	-0.3
PTBC	PUERTO BERRIO,	26.58	352	eP	P	22 42 37.6	-0.8
SJMB	Sao Joao De Ma	27.84	92	eP	P	22 42 52.0	+2.2
BSFB	Barra de Sao F	28.15	93	eP	P	22 42 53.4	+0.9
SDV	Santo Domingo	28.65	0	P	P	22 42 57.2	+0.1
	comp=Z,3.8nm,0.7s,baz=249,slow=4.1,SNR=5.2						
SDV	Santo Domingo	28.65	0	eP	P	22 42 59.4	+2.3
SMLC	San Martn de	28.76	353	eP	P	22 42 54.5	-3.3
SJCC	San Jacinto, C	29.98	351	eP	P	22 43 07.9	-0.8
NBIT	Itapeh - BA	30.19	86	eP	P	22 43 10.6	-0.1
MDP	Montagnes des	30.56	37	P	P	22 43 13.8	-0.1
	comp=Z,10nm,0.9s,baz=213,slow=8.1,SNR=4.6						
RCBR	Riachuelo	36.58	72	P	P	22 44 06.8	+0.4
	comp=Z,8.7nm,0.6s,baz=221,slow=11,SNR=8.2						
RCBR	Riachuelo	36.58	72	P	P	22 44 04.9	-1.6
RCBR				IAmb	IAmb	22 44 07.3	
	comp=Z,9.1nm,0.7s						
MIAR	Mount Ida	58.40	338	P	P	22 46 55.6	-0.1
MIAR				IAmb	IAmb	22 46 56.2	
	comp=Z,6.0nm,0.7s						
TX31	Lajitas Ar. Si	58.41	326	P	P	22 46 55.6	-0.4
TX32	Lajitas Array	58.41	326	P	P	22 46 55.1	-0.8
TXAR	Lajitas Array	58.41	326	P	P	22 46 56.4	+0.4
	comp=Z,1.7nm,0.6s,baz=147,slow=9.1,SNR=13						
TXAR	Lajitas Array	58.41	326	P	P	22 46 55.6	-0.4
T49A	Edmonton	58.45	346	P	P	22 46 55.4	-0.6
X37A	Clayton	59.10	336	P	P	22 47 00.9	+0.4
MNTX	Cornudas Mount	61.19	326	P	P	22 47 14.8	-0.1
MNTX				IAmb	IAmb	22 47 15.5	
	comp=Z,4.3nm,0.7s						
M55A	Ridgway	61.55	353	P	P	22 47 17.0	-0.2
MSTX	Muleshoe	61.72	330	IAmb	IAmb	22 47 19.9	
	comp=Z,8.1nm,0.9s						
VNA3	Neumayer Olymp	62.08	161	P	P	22 47 22.5	+2.1
VNA2	Neumayer--Watz	62.66	161	P	P	22 47 26.0	+1.7
	baz=280,slow=5.7						
SNAA	Sanae	64.28	161	P	P	22 47 36.5	+1.3
ANMO	Albuquerque	64.30	328	P	P	22 47 36.2	+0.3
G62A	West of Eustis	64.84	0	P	P	22 47 40.0	+1.0
SDCO	Great Sand Dun	66.08	330	IAmb	IAmb	22 47 49.4	
	comp=Z,5.5nm,1.0s						
X16A	Lo Mia Camp, P	66.53	324	IAmb	IAmb	22 47 55.6	
	comp=Z,3.2nm,0.8s						
E43A	Lone Tree Farm	67.64	348	IAmb	IAmb	22 47 56.8	
	comp=Z,5.7nm,0.8s						
ECSD	EROS Data Cent	67.69	340	IAmb	IAmb	22 47 59.6	
	comp=Z,3.4nm,1.0s						
W13A	Hualapai Mount	68.40	323	IAmb	IAmb	22 48 04.9	
	comp=Z,3.0nm,0.8s						
D41A	Chassel	68.61	347	IAmb	IAmb	22 48 03.6	
	comp=Z,7.6nm,0.8s						
DBIC	Dimbokro	69.90	75	P	P	22 48 11.4	-0.2
	comp=Z,7.6nm,0.8s,baz=229,slow=6.8,SNR=8.6						
DBIC	Dimbokro	69.90	75	P	P	22 48 09.7	-2.0
SHPR	Sheep Range	70.12	323	IAmb	IAmb	22 48 15.2	
	comp=Z,3.2nm,0.8s						
TCRU	Three Creeks R	70.18	326	P	P	22 48 14.9	+1.7
QSPA	South Pole Qui	70.24	180	P	P	22 48 12.4	-0.7
QSPA				IAmb	IAmb	22 48 15.5	
	comp=Z,6.4nm,0.6s						
RSSD	Black Hills	70.69	335	P	P	22 48 16.3	+0.2
RSSD				IAmb	IAmb	22 48 17.8	
	comp=Z,5.3nm,0.7s						
TPNV	Topopah Spring	71.06	323	IAmb	IAmb	22 48 25.5	
	comp=Z,5.9nm,0.8s						
ISA	Isabella, Lake	71.47	320	IAmb	IAmb	22 48 23.8	
	comp=Z,6.4nm,0.8s						
DUG	Dugway, Tooele	71.55	327	IAmb	IAmb	22 48 24.0	
	comp=Z,8.6nm,1.1s						

PDAR	Pinedale Array	71.95	331	P	P	22 48 24.3	+0.6
	comp=Z,0.9nm,0.7s,baz=131,slow=6.8,SNR=9.4						
PDAR	Pinedale Array	71.95	331	P	P	22 48 24.0	+0.3
HWUT	Hardware Ranch	72.00	329	IAmb	IAmb	22 48 27.2	
	comp=Z,3.7nm,0.8s						
AHID	Auburn Hatcher	72.66	330	IAmb	IAmb	22 48 29.8	
	comp=Z,5.4nm,0.8s						
OMMB	Old Mammoth Mi	73.10	322	IAmb	IAmb	22 48 33.5	
	comp=Z,4.9nm,0.7s						
NVAR	Mina Array Bea	73.25	323	P	P	22 48 33.2	+1.6
	comp=Z,1.6nm,0.8s,baz=159,slow=6.7,SNR=13						
NVAR	Mina Array Bea	73.25	323	P	P	22 48 31.3	-0.4
ULM	Lac du Bonnet	73.35	343	P	P	22 48 31.1	-0.5
	comp=Z,2.2nm,0.5s,baz=157,slow=7.2,SNR=7.4						
FLWY	Flagg Ranch	73.49	331	IAmb	IAmb	22 48 35.5	
	comp=Z,8.9nm,0.8s						
KVN	Kaiserville	73.57	323	IAmb	IAmb	22 48 42.0	
	comp=Z,5.9nm,1.2s						
RLMT	Red Lodge	73.67	333	IAmb	IAmb	22 48 35.9	
	comp=Z,4.7nm,0.8s						
SCHQ	Schefferville	74.54	2	P	P	22 48 38.4	-0.1
	comp=Z,3.2nm,0.7s,baz=209,slow=6.1,SNR=9.9						
SCHQ	Schefferville	74.54	2	P	P	22 48 38.7	+0.1
SCHQ				IAmb	IAmb	22 48 38.8	
	comp=Z,5.2nm,1.1s						
MFID	Camas Ranch	75.45	328	IAmb	IAmb	22 48 54.0	
	comp=Z,4.5nm,1.0s						
ORV	Oroville	75.85	322	IAmb	IAmb	22 48 48.7	
	comp=Z,5.8nm,1.1s						
VNDA	Vanda	78.09	190	P	P	22 49 01.1	+2.6
	comp=Z,1.4nm,0.8s,baz=132,slow=6.5,SNR=5.2						
TOA0	Torodi Ar. Sit	78.41	71	P	P	22 49 00.2	-1.2
TORD	Torodi Ar. Bea	78.41	71	P	P	22 49 01.0	-0.4
	comp=Z,10nm,0.6s,baz=249,slow=5.1,SNR=78						
TORD	Torodi Ar. Bea	78.41	71	P	P	22 48 57.3	-4.1
BOSA	Boshof	85.64	119	P	P	22 49 39.6	+0.2
	comp=Z,1.8nm,0.8s,baz=284,slow=4.2,SNR=3.1						
BOSA	Boshof	85.64	119	P	P	22 49 37.8	-1.7
MAW	Mawson	86.28	164	P	P	22 49 43.3	+1.7
	comp=Z,3.2nm,0.9s,baz=277,slow=8.1,SNR=4.5						
MAW	Mawson	86.28	164	P	P	22 49 40.0	-1.6
YKA	Yellowknife Ar	89.18	341	P	P	22 49 55.4	+0.1
	comp=Z,2.2nm,0.6s,baz=138,slow=4.8,SNR=58						
KBZ	Khabaz	120.42	50	PKP	PKPdf	22 55 51.4	-0.2
	comp=Z,3.7nm,0.8s,baz=251,slow=2.6,SNR=5.1						
H11S2	WAKE ISLAND Hy	126.02	279	T	T	02 14 37.1	
	baz=101,slow=74						
H11S1	WAKE ISLAND Hy	126.03	279	T	T	02 14 35.2	
	baz=101,slow=74						
H11S3	WAKE ISLAND Hy	126.04	279	T	T	02 14 38.4	
	baz=101,slow=74						
H11N3	WAKE ISLAND Hy	126.07	280	T	T	02 14 39.8	
	baz=100,slow=74						
H11N2	WAKE ISLAND Hy	126.08	280	T	T	02 14 39.7	
H11N1	WAKE ISLAND Hy	126.09	280	T	T	02 14 41.2	
	baz=53,slow=74						
PETK	Petropavlovsk-	130.33	324	PKP	PKiKP	22 56 11.6	+0.4
	comp=Z,5.1nm,0.9s,baz=140,slow=3.5,SNR=5.4						
PETK	Petropavlovsk-	130.33	324		PKPdf	22 56 10.6	+0.2
ASAR	Alice Springs	130.47	210	PKP	PKPdf	22 56 11.8	+0.2
	comp=Z,1.7nm,0.6s,baz=124,slow=1.9,SNR=16						
ASAR	Alice Springs	130.47	210		PKPdf	22 56 10.5	-1.1
ABKAR	Akbulak array	131.10	41		PKPdf	22 56 11.6	-0.4
WRA	Warramunga Arr	133.40	213	PKP	PKPdf	22 56 17.9	+0.7
	comp=Z,2.2nm,0.7s,baz=156,slow=1.8,SNR=23						
MTN	Manton Dam	140.98	215	PKPdf	PKPdf	22 56 28.6	-2.8
ZALV	Zalesovo Beam	141.21	23	PKP	PKPdf	22 56 28.9	-1.6
	comp=Z,4.4nm,0.5s,baz=285,slow=2.2,SNR=20						
AAK	Ala-Archa	143.00	44		PKPdf	22 56 32.2	-2.1
MAKZ	Makanchi	145.12	33		PKPdf	22 56 37.8	+0.1
MKAR	Makanchi Array	145.30	33	PKPbc	PKPdf	22 56 38.2	+0.2
	comp=Z,15nm,0.6s,baz=330,slow=3.0,SNR=236						
MKAR	Makanchi Array	145.30	33		PKPbc	22 56 37.5	-0.3
KSH	Kashi	145.36	48	PKPbc	PKPdf	22 56 39.8	+1.3
USRK	Ussuriysk Ar.	149.31	327	PKPbc	PKPbc	22 56 49.5	+0.5
	comp=Z,6.9nm,0.7s,baz=307,slow=1.5,SNR=15						
USRK	Ussuriysk Ar.	149.31	327		PKPbc	22 56 48.8	-0.2
MJAR	Matsushiro Arr	149.81	309	PKPbc	PKiKP	22 56 51.7	+0.1
	comp=Z,8.6nm,0.7s,baz=110,slow=1.4,SNR=27						
MJAR	Matsushiro Arr	149.81	309		PKPbc	22 56 49.5	-1.1
MAT	Matsushiro	149.81	309	PKP	PKPbc	22 56 51.3	+0.7
SONM	Songino Array	152.07	4	PKP	PKPdf	22 56 49.0	-0.1
	comp=Z,0.7nm,0.7s,baz=47,slow=1.0,SNR=5.5						
SONM				PKPbc	PKiKP	22 56 56.6	+0.5
	comp=Z,4.7nm,0.6s,baz=308,slow=1.3,SNR=34						
SONM	Songino Array	152.07	4		PKPdf	22 56 48.5	-0.6

IDC 16 22:41:32.6±2.7**, 20°.26S**×**70°.39W, h0^{km}, mb3.9**/1**, mb1 3.8**/4**, mb1mx3.6**/22**, mbtmp3.8**/4**, ML3.3**/3**, Error ellipse: s-maj=60.3km s-min=19.2km az=75.0, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	2.71	150	Pn	Pn	22 42 19.1	+1.2
	2.8nm,0.3s,baz=319,slow=20,SNR=1.8						
LVC				Lg	Lg	22 42 59.0	
	4.9nm,0.3s,baz=72,slow=23,SNR=3.3						
LPAZ	La Paz	4.49	29	Pn	Pn	22 42 44.5	+1.9
	0.8nm,0.3s,baz=122,slow=1.0,SNR=4.9						
SIV	San Ignacio	9.82	66	Pn	Pn	22 43 54.8	-0.4
	0.7nm,0.3s,baz=238,slow=13,SNR=4.5						
TORD	Torodi Ar. Bea	78.25	71	P	P	22 53 34.2	-0.7
	0.7nm,0.7s,baz=239,slow=5.5,SNR=5.1						
MKAR	Makanchi Array	145.41	34	PKPbc	PKPbc	23 01 11.9	-0.7
	0.8nm,0.7s,baz=326,slow=3.9,SNR=5.6						

IDC ***16*** *22:52:38.5±0.8, 19°.74S×70°.61W, h0^{km}, mb3.9/6, mb1 4.1/9, mb1mx3.9/31, mbtmp4.0/9, ML3.7/3, Error ellipse: s-maj=25.9km s-min=19.2km az=69.0*

GUC ***16*** *22:52:40.1±0.7, 20°.00S×70°.74W, h37^{km}±3^{km}, ML3.9*

ISC 16 22:52:39.5±2.6**, 19°.96S**±0°.03×**70°.72W**±0°.07**, h11^{km}**±15^{km}**, n35, σ1^{s}22**/41**, mb4.0**/5**, 3C-10D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.67	57	⇓iP	Pb	22 52 52.9	-0.4
PSGC				iS	Sb	22 53 02.9	+0.3
PSGC				IAML		22 53 03.5	
	comp=N,18µm,0.2s						
TA01	Diego Aracena	0.79	140	⇓iP	Pb	22 52 54.1	-1.1
TA01				iS	Sb	22 53 05.0	-0.8
TA01				IAML		22 53 10.0	
	comp=N,5µm,0.3s						
PATCX	Punta Patache	1.00	148	⇓iP	Pb	22 52 57.5	-1.4
PATCX				iS	Sb	22 53 13.4	+1.2
PATCX				IAML		22 53 16.0	
	comp=E,2µm,0.5s						
PB11	IPOC Station P	1.02	79	⇓iP	Pb	22 52 58.8	-0.4
PB11				iS	Sg	22 53 12.9	+0.4
PB11				IAML		22 53 14.3	
	comp=N,16µm,0.3s						
PB12	IPOC Station P	1.39	16	⇑iP	Pn	22 53 04.1	-0.8
PB12				iS	Sb	22 53 23.5	+0.1
PB12				IAML		22 53 33.5	
	comp=N,2µm,0.5s						
GO01	Chusmiza	1.47	79	⇓iP	Pn	22 53 06.5	+0.2
GO01				iS	Sg	22 53 27.1	+0.3
GO01				IAML		22 53 31.0	
	comp=N,6µm,0.3s						
PB08	IPOC Station P	1.48	97	⇓iP	Pn	22 53 06.3	-0.1
PB08				iS	Sb	22 53 26.2	-0.1
PB08				IAML		22 53 31.2	
	comp=N,1µm,0.2s						
PB02	IPOC Station P	1.56	150	⇓iP	Pn	22 53 06.2	-0.9
PB02				iS	Sn	22 53 27.4	0.0
PB02				IAML		22 53 31.3	
	comp=E,2µm,0.4s						
PB01	IPOC Station P	1.58	133	⇓iP	Pn	22 53 06.9	-0.6
PB01				iS	Sn	22 53 27.8	-0.2
PB01				IAML		22 53 36.1	
	comp=E,1µm,0.7s						
AP01	Chacalluta	1.62	13	⇑iP	Pn	22 53 08.4	+0.4
AP01				iS	Sb	22 53 30.0	+0.1
AP01				IAML		22 53 39.4	
	comp=E,4µm,0.5s						
PB07	IPOC Station P	1.92	156	⇓iP	Pn	22 53 11.6	-0.7
PB07				iS	Sn	22 53 38.3	+1.8
PB16	IPOC Station P	1.98	35	⇑iP	Pb	22 53 14.8	-1.2
PB16				iS	Sb	22 53 41.4	+0.5
PB16				IAML		22 53 43.3	
	comp=N,1µm,0.2s						
PB09	IPOC Station P	2.29	143	⇓iP	Pn	22 53 18.6	+1.3
PB09				iS	Sn	22 53 47.0	+1.4
LVC	Limon Verde	3.13	148	Pn	Pn	22 53 30.3	+1.3
	comp=N,12nm,0.3s,baz=316,slow=9.0,SNR=19						
LVC				Sn	Sb	22 54 10.8	-2.9
	comp=N,24nm,0.3s,baz=103,slow=21,SNR=8.2						
LPAZ	La Paz	4.41	34	Pn	Pn	22 53 51.6	+4.7
	comp=N,0.8nm,0.3s,baz=229,slow=5.2,SNR=15						
SIV	San Ignacio	9.99	68	Pn	Pn	22 55 02.6	-0.5
	comp=N,0.8nm,0.3s,baz=261,slow=12,SNR=13						
CFA	Coronel Fontan	11.81	170	Pn	Pn	22 55 32.5	+4.7
	comp=N,0.3nm,0.3s,baz=49,slow=11,SNR=2.0						
PLCA	Paso Flores	20.70	180	P	Pn	22 57 23.5	+1.4
	comp=N,3.8nm,0.7s,baz=22,slow=12,SNR=4.0						
PTGA	Pitinga	21.82	30	P	P	22 57 30.1	-1.8
	comp=N,2.2nm,0.3s,baz=184,slow=12,SNR=4.1						
BDFB	Brasilia	22.04	82	P	P	22 57 34.5	+0.2
	comp=N,1.4nm,0.5s,baz=219,slow=9.8,SNR=3.6						
TXAR	Lajitas Array	58.41	326	P	P	23 02 35.5	+0.1
	comp=N,1.0nm,0.8s,baz=150,slow=8.7,SNR=5.6						
TORD	Torodi Ar. Bea	78.46	71	P	P	23 04 39.8	-1.2
	comp=N,1.0nm,0.7s,baz=250,slow=5.3,SNR=13						
YKA	Yellowknife Ar	89.19	341	P	P	23 05 34.0	-0.8
	comp=N,0.8nm,0.7s,baz=136,slow=4.8,SNR=18						
H11S2	WAKE ISLAND Hy	125.99	279	T	T	01 30 09.1	
H11S1	WAKE ISLAND Hy	126.00	279	T	T	01 30 10.1	
H11S3	WAKE ISLAND Hy	126.00	279	T	T	01 30 10.4	
H11N3	WAKE ISLAND Hy	126.03	280	T	T	01 30 14.3	
	baz=101,slow=75,SNR=19						
H11N2	WAKE ISLAND Hy	126.05	280	T	T	01 30 12.9	
	baz=101,slow=75,SNR=24						
H11N1	WAKE ISLAND Hy	126.05	280	T	T	01 30 15.0	
	baz=101,slow=75						
WRA	Warramunga Arr	133.36	213	PKP	PKPdf	23 11 56.9	+0.4
	comp=N,0.3nm,0.5s,baz=156,slow=1.4,SNR=3.3						
ZALV	Zalesovo Beam	141.25	23	PKP	PKPdf	23 12 10.6	+0.7
	comp=N,0.7nm,0.5s,baz=314,slow=28,SNR=3.9						
MKAR	Makanchi Array	145.34	33	PKPbc	PKPdf	23 12 17.4	0.0
	comp=N,2.1nm,0.5s,baz=320,slow=4.3,SNR=30						
USRK	Ussuriysk Ar.	149.31	327	PKPbc	PKPbc	23 12 28.7	+0.3
	comp=N,2.3nm,0.7s,baz=35,slow=1.1,SNR=6.2						
MJAR	Matsushiro Arr	149.79	309	PKPbc	PKiKP	23 12 30.7	-0.2
	comp=N,2.0nm,0.8s,baz=79,slow=13,SNR=4.8						
SONM	Songino Array	152.10	4	PKPbc	PKiKP	23 12 35.5	+0.1
	comp=N,1.6nm,0.8s,baz=316,slow=1.3,SNR=7.6						

IDC ***16*** *22:54:04.1±0.5, 19°.70S×70°.64W, h0^{km}, mb4.4/18, mb1 4.5/23, mb1mx4.5/33, mbtmp4.4/23, ML3.9/5, Error ellipse: s-maj=21.0km s-min=12.3km az=60.0*

NEIC ***16*** *22:54:04.8±1.4, 19°.84S±0°.05×70°.82W±0°.05, h10^{km}±1^{km}, mb4.8/36, ML4.3(GUC), Error ellipse: s-maj=7.2km s-min=6.5km az=126.0*

GUC ***16*** *22:54:05.5±0.9, 19°.87S×70°.82W, h2^{km}±27^{km}, ML4.3*

VAO ***16*** *22:54:07.3±1.7, 19°.73S×70°.63W, h20^{km}±11^{km}, mb4.5*

ISC 16 22:54:07.0±0.7**, 19°.84S**±0°.04×**70°.77W**±0°.06**, h22^{km}**±6^{km}**, n334, σ1^{s}20**/339**, mb4.6**/27**, 5C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.65	69	eP	Pb	22 54 19.3	-0.5
PSGC				eS	Sn	22 54 29.6	-1.1
PB11	IPOC Station P	1.05	86	⇓eP	Pb	22 54 26.2	-0.4
PB11				eS	Sn	22 54 41.7	+1.1
PB11				IAML		22 54 45.2	
	comp=N,13µm,0.4s						
PB11	IPOC Station P	1.05	86		Pb	22 54 26.1	-0.4
PB11				Sg	Sn	22 54 40.2	-0.4
PATCX	Punta Patache	1.13	150	⇑eP	Pn	22 54 26.8	-0.9
PATCX				eS	Sn	22 54 43.0	+0.3
PATCX				IAML		22 54 49.1	
	comp=N,13µm,0.5s						
GO01	Chusmiza	1.49	84	⇑eP	Pb	22 54 34.0	-0.4
GO01				eS	Sb	22 54 56.9	+3.9
GO01				IAML		22 54 58.7	
	comp=N,12µm,0.1s						
GO01	Chusmiza	1.49	84	Pn	Pn	22 54 33.0	0.0
GO01				Sn	Sb	22 54 52.5	-0.5
PB08	IPOC Station P	1.55	102	eP	Pb	22 54 34.5	-0.7
PB08				eS	Sb	22 54 57.7	+3.2
PB08				IAML		22 55 01.8	
	comp=N,4µm,0.5s						
PB01	IPOC Station P	1.69	135	⇑eP	Pn	22 54 35.8	+0.4
PB01				iS	Sb	22 54 58.9	+0.4
PB01				IAML		22 55 03.9	
	comp=N,5µm,0.3s						
PB01	IPOC Station P	1.69	135	Pn	Pn	22 54 35.9	+0.4
PB01				Sn	Sn	22 54 57.1	+0.5
PB04	IPOC Station P	2.55	167	Pn	Pn	22 54 45.2	-2.1
LVC	Limon Verde	3.26	148	Pn	Pn	22 54 57.9	+0.8
	comp=N,61nm,0.3s,baz=9.0,slow=6.3,SNR=8.2						
LVC				Sn	Sn	22 55 38.0	+2.6
	comp=N,59nm,0.3s,baz=122,slow=4.4,SNR=5.0						
LVC	Limon Verde	3.26	148	Pn	Pn	22 54 56.9	-0.3
LVC	Limon Verde	3.26	148	eP	Pn	22 54 58.0	+0.8
LVC				eS	Sn	22 55 37.9	+2.5
PB10	IPOC Station P	3.66	177	Pn	Pn	22 54 59.5	-2.9
LPAZ	La Paz	4.33	36	Pn	Pn	22 55 15.6	+3.5
	comp=N,1.7nm,0.3s,baz=203,slow=7.7,SNR=2.5						
LPAZ	La Paz	4.33	36	eP	Pn	22 55 10.0	-2.1
GO02	Mina Guanaco	5.41	169	Pn	Pn	22 55 25.0	-1.7
GO03	Copiap	7.74	176	Pn	Pn	22 55 56.3	-2.1
NNA	Nana	9.75	322	Pn	Pn	22 56 27.2	+1.1
	comp=N,0.9nm,0.3s,baz=78,slow=8.3,SNR=7.0						
NNA	Nana	9.75	322	Pn	Pn	22 56 24.3	-1.8
SIV	San Ignacio	9.99	69	Pn	Pn	22 56 29.9	+0.6
	comp=N,1.6nm,0.3s,baz=261,slow=16,SNR=9.9						
GO04	Tololo Observa	10.29	180	Pn	Pn	22 56 33.2	-0.4
GO04					Sn	22 58 25.9	-2.6
CFA	Coronel Fontan	11.94	170	Pn	Pn	22 56 57.4	+1.4
	comp=N,0.4nm,0.3s,baz=351,slow=14,SNR=4.1						
SAML	Samuel	13.07	35	Pn	Pn	22 57 12.4	+0.8
SAML	Samuel	13.07	35	eP	Pn	22 57 09.6	-2.0
CPUP	Villa Florida	13.95	120	Pn	Pn	22 57 23.9	+0.4
	comp=N,0.2nm,0.3s,baz=304,slow=13,SNR=7.7						
CPUP	Villa Florida	13.95	120		Pn	22 57 22.4	-1.0
CPUP	Villa Florida	13.95	120	eP	Pn	22 57 24.6	+1.2
AQDB	Aquidauana	14.16	95	eP	Pn	22 57 25.6	-0.9
ATAH	Atahualpa	14.64	329	Pn	Pn	22 57 34.1	+0.8
	comp=N,0.3nm,0.3s,baz=192,slow=13,SNR=3.7						
SALV	Santo Antonio	14.87	77	eP	Pn	22 57 34.6	-1.5
GO05	Huala	15.15	184	Pn	Pn	22 57 38.8	-0.9
ITQB	Itaqui	16.14	130	eP	Pn	22 57 53.0	+0.5
CLDB	Colider	16.95	60	eP	Pn	22 58 01.0	-2.0
C2SB	Chapadao do Su	16.96	89	eP	Pn	22 58 02.0	-1.1
TRCB	Terra Rica	17.15	103	eP	Pn	22 58 04.6	-0.8
PTGB	Pitanga	17.97	109	eP	Pn	22 58 15.3	-0.4
PCMB	Pacaembu	18.33	99	eP	Pn	22 58 17.7	-2.4
ARAG	Araguaiana, MT	18.51	80	eP	P	22 58 20.9	-1.1
ITAB	Concordia	18.59	117	eP	P	22 58 22.5	-0.3
CPSB	Cacapava Do Su	18.86	127	eP	P	22 58 25.3	-0.5
ITRB	Iturama	19.21	93	eP	P	22 58 28.6	-1.1
GO06	Curarrehue	19.69	182	P	P	22 58 34.8	-0.1
FRTB	Fartura	20.02	104	eP	P	22 58 38.2	-0.4
PLCA	Paso Flores	20.83	180	P	P	22 58 47.5	+0.3
	comp=N,20nm,1.1s,baz=26,slow=13,SNR=12						
PLCA	Paso Flores	20.83	180	P	P	22 58 47.4	+0.1
PLCA				IAmb	IAmb	22 58 48.4	
	comp=Z,25nm,1.1s						
PLCA	Paso Flores	20.83	180	eP	P	22 58 47.3	+0.1
BB19B	Bebedouro	20.87	97	eP	P	22 58 47.0	-0.8
OTAV	Otavalo	21.33	338	P	P	22 58 51.8	-1.3
OTAV	Otavalo	21.33	338	eP	P	22 58 54.5	+1.3
IPMB	Ipameri, GO	21.41	89	eP	P	22 58 52.5	-1.2
PTGA	Pitinga	21.73	30	P	P	22 58 55.1	-1.9
	comp=Z,4.4nm,0.3s,baz=216,slow=18,SNR=6.6						
PTGA	Pitinga	21.73	30	P	P	22 58 55.7	-1.4
PTGA	Pitinga	21.73	30	eP	P	22 58 55.4	-1.7
FLOC	Florencia	21.82	347	eP	P	22 58 58.2	+0.2
FLOC	Florencia	21.82	347	P	P	22 58 58.2	+0.2
RCLB	Rio Claro- Sao	21.82	101	eP	P	22 58 57.4	-0.7
GCUF	Volcan Galeras	21.91	342	eP	P	22 59 02.5	+3.1
SPB	Sao Paulo	21.99	104	P	P	22 58 59.3	-0.5
SPB	Sao Paulo	21.99	104	eP	P	22 58 59.2	-0.5
BDFB	Brasilia	22.06	83	P	P	22 59 00.6	-0.1
	comp=Z,6.7nm,0.8s,baz=242,slow=14,SNR=4.2						
BDFB	Brasilia	22.06	83	P	P	22 58 58.9	-1.8
CRUC	La Cruz	22.12	343	eP	P	22 59 02.5	+0.9
VAO	Valinhos	22.37	102	eP	P	22 59 03.5	-0.6
SOTA	Rioblanco	22.58	345	eP	P	22 59 09.9	+3.2
BBAC	Balboa, Cauca	22.64	343	eP	P	22 59 07.4	+0.5
PCON	Cinco Dias	22.71	345	eP	P	22 59 13.6	+5.5
POPC	Popayan, Colom	22.98	345	⇓eP	P	22 59 12.6	+2.0
PARB	Paraibuna	23.63	103	eP	P	22 59 16.9	+0.1
ORTC	Ortega, Tolima	24.01	349	eP	P	22 59 19.6	-0.8
YOTC	Yotoco, Valle	24.30	346	eP	P	22 59 23.9	+0.7
BSCB	Bom Sucesso	24.38	97	eP	P	22 59 23.4	-0.6
CHIC	Chingaza	24.49	353	eP	P	22 59 24.8	-0.5
ANIL	Santa Ana	24.60	349	eP	P	22 59 26.2	0.0
ESAR	Angra dos Reis	24.70	102	eP	P	22 59 26.5	-0.2
ROSC	El Rosal	24.77	352	P	P	22 59 28.8	+0.9
	comp=Z,12nm,0.8s,baz=85,slow=21,SNR=5.6						
ROSC	El Rosal	24.77	352	P	P	22 59 27.5	-0.3
ROSC				IAmb	IAmb	22 59 29.5	
	comp=Z,11nm,0.8s						
SMTB	Santa Maria do	24.93	67	eP	P	22 59 27.9	-1.0
RREF	El Recreo	24.99	349	eP	P	22 59 31.0	+0.9
GUY2C	Guyana, Caldas	25.31	349	eP	P	22 59 33.5	+0.7
SPBC	San Pablo de B	25.54	352	eP	P	22 59 33.6	-0.8
NORC	Norcasia	25.56	350	eP	P	22 59 34.7	+0.1
JANB	Januaria	25.67	84	eP	P	22 59 34.0	-1.7
RUSC	La Rusia	25.67	355	eP	P	22 59 34.5	-1.6
RUSC	La Rusia	25.67	355	P	P	22 59 36.2	+0.1
CBOC	Ciudad Bolivar	26.06	348	eP	P	22 59 41.5	+2.3
HELC	Santa Helena	26.29	349	eP	P	22 59 41.8	+0.3
BARC	Barichara	26.37	355	eP	P	22 59 40.6	-1.5
PTBC	PUERTO BERRIO,	26.46	352	eP	P	22 59 39.8	-3.0
PAMC	Pamplona, Colo	27.07	356	eP	P	22 59 48.2	-0.6
DBBC	Dabeiba	27.22	348	eP	P	22 59 52.1	+2.5
SJMB	Sao Joao De Ma	27.93	93	eP	P	22 59 55.9	0.0
BSFB	Barra de Sao F	28.23	93	eP	P	22 59 57.2	-1.4
SDV	Santo Domingo	28.54	0	P	P	23 00 00.8	-0.8
	comp=Z,8.6nm,1.0s,baz=146,slow=3.6,SNR=3.6						
SDV	Santo Domingo	28.54	0	P	P	23 00 00.6	-1.0
SDV				IAmb	IAmb	23 00 05.5	
	comp=Z,10nm,1.0s						
SDV	Santo Domingo	28.54	0	eP	P	23 00 00.2	-1.4
SMLC	San Martn de	28.64	353	eP	P	22 59 59.1	-3.2
SJCC	San Jacinto, C	29.86	351	eP	P	23 00 09.6	-3.5
EFI	East Falkland	33.30	166	P	P	23 00 43.1	+0.1
EFI				IAmb	IAmb	23 00 50.4	
	comp=Z,19nm,1.1s						
NBTA	Tacaratu-PE	33.34	76	eP	P	23 00 42.4	-1.4
NBMA	Muriti-CE	33.41	73	eP	P	23 00 43.9	-0.5
NBPB	Pedra_Branca-C	33.48	69	eP	P	23 00 44.4	-0.7
USHA	Ushuaia	34.98	178	P	P	23 01 00.1	+2.6
	comp=Z,4.4nm,0.8s,baz=350,slow=11,SNR=2.3						
RCBR	Riachuelo	36.63	72	P	P	23 01 11.6	-0.6
	comp=Z,12nm,1.1s,baz=233,slow=10,SNR=3.3						
RCBR	Riachuelo	36.63	72	P	P	23 01 11.9	-0.3
RCBR				IAmb	IAmb	23 01 19.0	
	comp=Z,9.9nm,1.0s						
APG	El Apazote	39.68	329	P	P	23 01 39.2	+1.2
	comp=Z,6.5nm,0.9s,baz=0.2,slow=5.9,SNR=4.2						
TEIG	Tepich	43.35	336	P	P	23 02 07.7	-0.1
	comp=Z,11nm,0.7s,baz=238,slow=0.0,SNR=6.1						
CMIG	Matias Romero	43.68	326	P	P	23 02 09.4	-1.1
	comp=Z,3.4nm,0.8s,baz=124,slow=5.5,SNR=4.1						
Z57A	Bowman	53.68	350	P	P	23 03 27.4	+0.2
	baz=167						
Z50A	Ashland	54.74	344	P	P	23 03 34.0	-1.0
	baz=161						
X55A	Gracelyn & Ava	54.99	349	P	P	23 03 36.4	-0.3
	baz=166						
W58A	Raeford	55.15	352	P	P	23 03 37.9	+0.2
	baz=169						
X54A	Belton	55.20	348	P	P	23 03 37.8	-0.4
	baz=165						
W56A	Indian Trail	55.46	350	P	P	23 03 40.0	0.0
	baz=168						
W54A	Cherokee Point	55.69	349	P	P	23 03 41.5	-0.2
	baz=166						
V59A	Middlesex	55.75	353	P	P	23 03 40.5	-1.6
	baz=170						
V56A	Mocksville	56.11	350	P	P	23 03 44.8	+0.1
	baz=168						
V55A	Taylorsville	56.26	350	P	P	23 03 45.6	-0.2
	baz=167						
V54A	Nebo	56.32	349	P	P	23 03 46.0	-0.2
	baz=166						
U56A	King	56.62	351	P	P	23 03 48.9	+0.6
	baz=168						
T59A	Double "B" Far	56.86	354	P	P	23 03 50.1	0.0
	baz=171						
T58A	Grand View Acr	56.95	353	P	P	23 03 50.9	+0.2
	baz=170						
U54A	Nelsons Funny	57.02	349	P	P	23 03 50.8	-0.5
	baz=166						
T57A	Hurt	57.09	352	P	P	23 03 51.6	0.0
	baz=169						
T55A	Pulaski	57.43	351	P	P	23 03 54.3	+0.1
	baz=168						
S60A	Water View	57.50	354	P	P	23 03 54.6	+0.1
	baz=172						
T54A	Tazewell	57.50	350	P	P	23 03 54.2	-0.5
	baz=167						
T53A	Wise	57.59	349	P	P	23 03 54.8	-0.5
	baz=166						
S56A	Natural Bridge	57.80	352	P	P	23 03 57.1	+0.3
	baz=169						
S57A	Dark Hollow, R	57.81	352	P	P	23 03 57.2	+0.5
	baz=170						
T51A	Gray	57.85	348	P	P	23 03 56.1	-0.9
	baz=164						
R58B	Mineral	57.88	353	P	P	23 03 57.8	+0.6
	baz=171						
WVT	Waverly	57.96	344	P	P	23 03 55.7	-2.1
	baz=160						
S55A	Lewisburg	58.03	351	P	P	23 03 58.4	+0.1
	baz=168						
T50A	Nancy	58.09	347	P	P	23 03 57.0	-1.7
	baz=163						
S54A	Dingess, Beckl	58.18	350	P	P	23 03 58.9	-0.5
	baz=167						
MIAR	Mount Ida	58.27	338	P	P	23 03 59.7	-0.4
	baz=153						
TXAR	Lajitas Array	58.28	326	P	P	23 03 59.6	-0.7
	comp=Z,3.4nm,0.8s,baz=140,slow=8.1,SNR=16						
T49A	Edmonton	58.33	346	P	P	23 03 59.1	-1.3
	baz=162						
W41B	Gary Mavity, V	58.39	339	P	P	23 04 00.5	-0.4
	baz=155						
S50A	Richmond	58.63	347	P	P	23 04 01.8	-0.7
	baz=164						
S49A	Springfield	58.92	347	P	P	23 04 03.2	-1.3
	baz=163						
W39A	Magazine	58.93	338	P	P	23 04 04.8	+0.2
	baz=153						
Q57A	Strasburg	59.00	353	P	P	23 04 05.3	+0.2
	baz=170						
ABTX	Abilene, Hawle	59.03	332	P	P	23 04 05.1	-0.3
	baz=147						
R51A	Hillsboro	59.07	348	P	P	23 04 04.8	-0.8
	baz=165						
Q56A	Snyder Ridge,	59.10	352	P	P	23 04 06.3	+0.6
	baz=170						
R50A	Paris	59.20	348	P	P	23 04 05.6	-0.8
	baz=164						
Q53A	Leroy	59.25	350	P	P	23 04 06.3	-0.5
	baz=167						
Q54A	Coxs Mills	59.27	351	P	P	23 04 06.3	-0.6
	baz=168						
R49A	Shelbyville	59.38	347	P	P	23 04 06.8	-0.9
	baz=163						
P57A	Homestead Farm	59.40	353	P	P	23 04 07.7	0.0
	baz=171						
P56A	Dayton Farm, R	59.51	353	P	P	23 04 09.1	+0.5
	baz=170						
WCI	Wyandotte Cave	59.57	346	P	P	23 04 07.6	-1.4
	baz=162						
U40A	Yellville	59.67	339	P	P	23 04 09.0	-0.8
	baz=154						
P54A	Burton	59.82	351	P	P	23 04 10.7	0.0
	baz=168						
O56A	Blue Knob Stat	60.23	353	P	P	23 04 13.8	+0.2
	baz=170						
O55A	Ligonier	60.26	352	P	P	23 04 14.1	+0.4
	baz=170						
TUL1	Leonard	60.30	337	P	P	23 04 13.6	-0.4
	baz=151						
P49A	Miami Univ. Ec	60.48	348	P	P	23 04 13.6	-1.6
	baz=164						
CCM	Cathedral Cave	60.72	342	P	P	23 04 16.1	-0.7
	baz=156						
N55A	Marion Center	60.79	353	P	P	23 04 17.8	+0.4
	baz=170,SNR=7.9						
ACSO	Alum Creek Sta	60.83	349	P	P	23 04 16.3	-1.3
	baz=166						

N56A	West Decatur	60.85	353	P	P	23 04 17.7	0.0
	baz=171						
MNTX	Cornudas Mount	61.05	326	P	P	23 04 18.6	-0.7
	baz=141						
N54A	Moraine State	61.09	352	P	P	23 04 19.5	+0.1
	baz=169						
M58A	Price's Panora	61.12	355	P	P	23 04 20.1	+0.5
	baz=173						
N52A	McGinn's Farm,	61.19	351	P	P	23 04 19.4	-0.5
	baz=167						
M59A	Waymart	61.22	356	P	P	23 04 20.8	+0.6
	baz=174						
O48A	Farmland	61.27	347	P	P	23 04 19.5	-1.0
	baz=163						
M56A	Emporium	61.40	354	P	P	23 04 21.9	+0.5
M56A	Emporium	61.40	354	P	P	23 04 21.5	+0.1
	baz=171						
M55A	Ridgway	61.44	353	P	P	23 04 21.4	-0.3
M55A	Ridgway	61.44	353	P	P	23 04 21.9	+0.2
	baz=170,SNR=6.3						
M54A	Oil Creek Stat	61.59	352	P	P	23 04 22.7	0.0
	baz=169,SNR=5.4						
MSTX	Muleshoe	61.59	330	P	P	23 04 22.8	-0.2
	baz=144						
M53A	WI Miller and	61.65	352	P	P	23 04 22.7	-0.4
	baz=168						
N49A	Columbus Grove	61.72	348	P	P	23 04 22.6	-1.0
	baz=164						
L58A	Harry Jones Me	61.75	356	P	P	23 04 24.3	+0.5
	baz=173						
L57A	Andrews Acres	61.78	355	P	P	23 04 24.2	+0.2
	baz=172						
N48A	Decatur	61.82	348	P	P	23 04 22.7	-1.6
	baz=164						
L59A	Walton	61.84	356	P	P	23 04 24.8	+0.4
	baz=174						
M52A	Chesterland	61.85	351	P	P	23 04 24.1	-0.4
	baz=168						
BINY	Binghamton	61.91	356	P	P	23 04 25.3	+0.5
	baz=173						
L53A	Girard	62.10	352	P	P	23 04 25.8	-0.4
	baz=169						
L55A	Hinsdale	62.11	354	P	P	23 04 26.6	+0.4
	baz=171,SNR=5.4						
M49A	Liberty Center	62.22	349	P	P	23 04 25.8	-1.1
	baz=165						
ERPA	Erie	62.23	352	P	P	23 04 27.2	+0.2
	baz=169						
L54A	Sinclairville	62.26	353	P	P	23 04 27.4	+0.2
	baz=170,SNR=11						
K59A	Cooperstown	62.41	357	P	P	23 04 28.7	+0.5
	baz=175						
K58A	Earlville	62.45	356	P	P	23 04 28.8	+0.3
	baz=174						
K57A	Scipio Center	62.48	355	P	P	23 04 28.5	-0.1
	baz=173						
K54A	Basiliko Farm,	62.56	353	P	P	23 04 29.5	+0.3
	baz=170,SNR=5.9						
K55A	Perry	62.62	354	P	P	23 04 29.8	+0.2
	baz=171						
VNA2	Neumayer--Watz	62.79	161	P	P	23 04 31.1	+0.7
	baz=282,slow=7.6						
L47A	Sherwood	62.94	348	P	P	23 04 30.7	-1.0
	baz=164						
121A	Cookes Peak, D	62.98	325	P	P	23 04 33.4	+1.0
	baz=139						
J56A	Wolcott	63.05	355	P	P	23 04 32.1	-0.3
	baz=172						
J59A	Piesco	63.08	357	IAmb	IAmb	23 04 33.3	
	comp=Z,13nm,1.1s						
J59A	Piesco	63.08	357	P	P	23 04 33.1	+0.4
	baz=175						
J57A	Williamstown	63.12	356	P	P	23 04 33.1	+0.3
	baz=173						
I58A	Old Forge	63.33	357	P	P	23 04 34.5	+0.2
	baz=174						
I59A	Olmsteadville	63.38	357	P	P	23 04 34.8	+0.1
	baz=176						
J52A	Paris	63.40	352	P	P	23 04 34.3	-0.5
	baz=169,SNR=7.5						
I61A	Oroboro, Fairl	63.47	359	P	P	23 04 36.0	+0.8
	baz=177						
K48A	Perry	63.53	349	P	P	23 04 34.1	-1.6
	baz=165						
J48A	Bridge Port	63.95	349	P	P	23 04 37.6	-0.8
	baz=165						
H58A	Gabriels	64.02	357	P	P	23 04 38.9	+0.1
	baz=175						
I51A	Listowel	64.02	352	P	P	23 04 38.2	-0.7
	baz=168						
I55A	Frankford	64.05	354	P	P	23 04 38.9	-0.1
	baz=172						
H57A	Richville	64.12	356	P	P	23 04 39.2	-0.2
	baz=174						
ANMO	Albuquerque	64.17	328	P	P	23 04 40.0	-0.3
	baz=141						
I52A	Shelburne	64.17	352	P	P	23 04 39.3	-0.5
	baz=169						
H59A	Cadyville	64.22	358	P	P	23 04 40.5	+0.4
	baz=176						
H56A	Elgin	64.31	356	P	P	23 04 40.8	+0.1
	baz=173						
H55A	Tweed	64.34	355	P	P	23 04 40.3	-0.6
	baz=172						
CBKS	Cedar Bluff	64.35	335	P	P	23 04 41.1	-0.1
	baz=148						
SNAA	Sanae	64.41	161	P	P	23 04 41.5	+0.3
I49A	Point Hope	64.42	350	P	P	23 04 40.2	-1.3
	baz=166						
TUC	Tucson	64.47	323	P	P	23 04 42.4	+0.2
	baz=136						
H53A	Bobcaygeon	64.49	354	P	P	23 04 41.6	-0.4
	baz=171						
G57A	Newington	64.74	357	P	P	23 04 42.8	-0.7
	baz=174						
G62A	West of Eustis	64.74	0	P	P	23 04 44.4	+0.9
G62A	West of Eustis	64.74	0	P	P	23 04 44.6	+1.0
	baz=179						
SADO	Sadowa	64.75	353	P	P	23 04 43.2	-0.3
I48A	Sherman Twp	64.80	350	P	P	23 04 43.2	-0.8
	baz=165,SNR=5.3						
G61A	St-Isidore-de-	64.81	359	P	P	23 04 45.0	+1.0
	baz=178						
T25A	Trinidad	64.95	331	P	P	23 04 45.9	+0.6
	baz=144						
G55A	Calabogie	65.00	355	P	P	23 04 44.5	-0.7
	baz=173						
G53A	Haliburton	65.04	354	P	P	23 04 45.3	-0.2
	baz=171,SNR=9.2						
H48A	Harrisville	65.24	350	P	P	23 04 45.7	-1.1
	baz=166						
G54A	Lake Saint Pet	65.26	354	P	P	23 04 46.5	-0.4
	baz=171						
214A	Organ Pipe Nat	65.38	321	P	P	23 04 49.1	+1.1
	baz=135						
KSCO	Kaye Shedlock'	65.71	333	P	P	23 04 50.5	+0.4
	baz=146						
F52A	Sundridge	65.78	353	P	P	23 04 50.0	-0.3
	baz=170						
ALGO	Algonquin Park	65.81	354	P	P	23 04 50.0	-0.5
	baz=171						
SDCO	Great Sand Dun	65.94	330	P	P	23 04 52.4	+0.5
	baz=143						
F51A	Arnstein	65.98	353	P	P	23 04 50.8	-0.7
	baz=170						
W18A	Petrified Fore	66.00	326	P	P	23 04 52.7	+0.6
	baz=138						
BGNE	Belgrade	66.02	338	P	P	23 04 51.6	-0.3
BGNE	Belgrade	66.02	338	P	P	23 04 51.6	-0.3
	baz=150						
E56A	St. Veronique	66.18	357	P	P	23 04 52.7	-0.1
	baz=175						
E52A	Mattawa	66.20	354	P	P	23 04 52.0	-0.9
	baz=171						
E54A	Lac Daplat, Po	66.21	355	P	P	23 04 52.9	-0.1
	baz=172						
F48A	Evansville	66.23	351	P	P	23 04 52.0	-1.1
	baz=167						
E51A	G1948 Merrick	66.53	353	P	P	23 04 54.3	-0.8
	baz=170						
S22A	4UR Ranch, Cre	66.57	329	P	P	23 04 56.4	+0.5
	baz=142						
D57A	Chemin Vers le	66.60	358	P	P	23 04 55.7	+0.2
	baz=176						
D58A	Chemin du LacG	66.65	358	P	P	23 04 56.0	+0.2
	baz=177						
D56A	ZEC Mazanza, M	66.67	357	P	P	23 04 56.0	0.0
	baz=175						
D55A	Sainte-Anne-du	66.68	356	P	P	23 04 56.1	+0.1
	baz=174						
D53A	Lac Vacive, Po	66.90	355	P	P	23 04 57.0	-0.3
	baz=172						
WUAZ	Wupatki	67.17	325	P	P	23 05 00.9	+1.3
	baz=137						
D50A	G1974 Best Tow	67.19	353	P	P	23 04 58.6	-0.6
	baz=170						
ECSD	EROS Data Cent	67.56	340	P	P	23 05 01.1	-0.6
	baz=152						
ISCO	Idaho Springs	67.66	332	P	P	23 05 03.2	+0.4
	baz=143						
Y12C	Blythe	67.67	321	P	P	23 05 03.7	+1.1
	baz=134						
PV15	Paradox Valley	67.84	329	P	P	23 05 03.2	-0.7
PV15				IAmb	IAmb	23 05 05.8	
	comp=Z,12nm,0.9s						
IKP	In-Ko-Pah, Jac	67.85	320	P	P	23 05 05.2	+1.3
	baz=132						
SWSC	Sam W. Stewart	67.86	320	P	P	23 05 05.1	+1.3
	baz=133						
BC3	Big Chuckawall	68.15	321	P	P	23 05 06.9	+1.1
	baz=133,SNR=6.9						
MONP2	Monument Peak	68.21	320	P	P	23 05 07.4	+1.2
	baz=132						
BAR	Barrett	68.21	319	P	P	23 05 05.1	-1.0
BAR				IAmb	IAmb	23 05 08.1	
	comp=Z,15nm,1.0s						
IRM	Iron Mountain	68.32	321	P	P	23 05 08.1	+1.4
	baz=134,SNR=10						
N23A	Red Feather La	68.70	332	P	P	23 05 07.9	-1.4
N23A				IAmb	IAmb	23 05 10.5	
	comp=Z,7.6nm,0.9s						
N23A	Red Feather La	68.70	332	P	P	23 05 09.8	+0.5
	baz=143						
BELC	Belle Mtn. Jos	68.72	321	P	P	23 05 10.2	+0.8
	baz=133						
TPFO	Pinon Flats	68.72	320	P	P	23 05 10.7	+1.3
	baz=132						
PFO	Pinyon Flats O	68.72	320	P	P	23 05 10.6	+1.2
	baz=132						
LSQQ	Lebel-sur-Quev	68.81	356	P	P	23 05 08.9	-0.4
	baz=173						
GMRC	Granite Mounta	69.06	322	P	P	23 05 12.7	+1.2
	baz=133,SNR=12						
O20A	White River Ci	69.14	330	P	P	23 05 12.6	+0.7
	baz=141						
HEC	Hector,Ludlow	69.49	321	P	P	23 05 15.6	+1.5
	baz=133,SNR=6.5						
MATQ	Matagami	69.55	355	P	P	23 05 12.6	-1.4
	baz=172						
TUQ	Turquoise Moun	69.67	322	P	P	23 05 16.4	+1.2
	baz=133,SNR=5.7						
BFSC	Mount Baldy Ra	69.88	320	P	P	23 05 17.7	+1.2
	baz=132						
GSC	Goldstone, Bar	70.10	321	P	P	23 05 19.1	+1.3
	baz=133,SNR=6.2						
SHOC	Shoshone, Teco	70.20	322	P	P	23 05 20.7	+2.3
	baz=133						
K22A	Casper	70.38	333	P	P	23 05 20.0	+0.6
	baz=143						
EDW2	Edwards Air Fo	70.52	320	P	P	23 05 21.0	+0.7
	baz=132,SNR=6.2						
RSSD	Black Hills	70.56	335	P	P	23 05 19.5	-1.1
RSSD				IAmb	IAmb	23 05 21.7	
	comp=Z,8.4nm,0.8s						
RSSD	Black Hills	70.56	335	P	P	23 05 21.0	+0.4
	baz=146						
TPNV	Topopah Spring	70.92	323	P	P	23 05 24.6	+1.7
	baz=134,SNR=13						
FURC	Furnace Creek,	70.94	322	P	P	23 05 24.5	+1.7
	baz=133,SNR=8.9						
MPMC	Manual Prospec	71.02	321	P	P	23 05 24.5	+1.0
	baz=132,SNR=8.0						
JLU	Jordanelle	71.04	328	P	P	23 05 22.5	-1.1
ISA	Isabella, Lake	71.34	321	P	P	23 05 26.9	+1.6
	baz=131,SNR=7.9						
DUG	Dugway, Tooele	71.42	327	P	P	23 05 27.1	+1.3
	baz=137,SNR=8.8						
R11A	Troy Canyon, C	71.54	324	P	P	23 05 28.1	+1.4
	baz=134,SNR=8.5						
CWC	Cottonwood Cre	71.63	321	P	P	23 05 28.3	+1.1
	baz=132						
PKM	Mcpherson Peak	71.63	319	P	P	23 05 28.4	+1.1
	baz=130						
BW06	Boulder Array	71.81	331	P	P	23 05 28.9	+0.7
	baz=140						
PDAR	Pinedale Array	71.81	331	P	P	23 05 28.1	-0.1
	comp=Z,1.0nm,0.7s,baz=139,slow=6.9,SNR=12						
VES	Vestal, Richgr	71.82	320	P	P	23 05 29.4	+1.3
	baz=131,SNR=5.8						
SMMC	Simmler	72.02	319	P	P	23 05 30.9	+1.5
	baz=130						
NVAR	Mina Array Bea	73.12	323	P	P	23 05 37.4	+1.2
	comp=Z,4.9nm,0.8s,baz=152,slow=6.6,SNR=28						
ULM	Lac du Bonnet	73.23	343	P	P	23 05 35.2	-1.0
	comp=Z,2.9nm,0.8s,baz=175,slow=6.5,SNR=5.2						
IMW	Indian Meadow	73.33	331	P	P	23 05 37.1	-0.2
IMW				IAmb	IAmb	23 05 46.4	
	comp=Z,5.4nm,0.8s						
RLMT	Red Lodge	73.54	333	P	P	23 05 39.0	+0.5
	baz=141,SNR=8.4						
YMR	Madison River	73.94	331	P	P	23 05 40.8	0.0
DGMT	Dagmar	74.27	338	P	P	23 05 42.1	-0.3
DGMT				IAmb	IAmb	23 05 43.8	
	comp=Z,20nm,0.9s						
DGMT	Dagmar	74.27	338	P	P	23 05 43.1	+0.7
	baz=146						
SCHQ	Schefferville	74.44	2	P	P	23 05 42.0	-1.2
	comp=Z,2.0nm,0.8s,baz=202,slow=8.4,SNR=3.7						
MSO	Missoula	76.93	331	P	P	23 05 59.8	+2.0
	baz=137						
TOA0	Torodi Ar. Sit	78.46	71	P	P	23 06 06.3	-0.5
TOA0				IAmb	IAmb	23 06 14.0	
	comp=Z,8.6nm,0.9s						
TORD	Torodi Ar. Bea	78.46	71	P	P	23 06 05.5	-1.3
	comp=Z,5.8nm,1.0s,baz=258,slow=4.6,SNR=13						
SYO	Syowa Base	78.66	160	⇑eP	P	23 06 06.4	-0.6
SYO	Syowa Base	78.66	160	⇑epP	pP	23 06 12.0	-1.7
TAM	Tamanrasset	85.64	64	P	P	23 06 44.4	-0.2
TAM				IAmb	IAmb	23 06 53.7	
	comp=Z,4.3nm,1.0s						
BOSA	Boshof	85.76	119	P	P	23 06 46.9	+1.7
	comp=Z,2.4nm,1.0s,baz=169,slow=7.5,SNR=3.6						
YKA	Yellowknife Ar	89.06	341	P	P	23 06 59.5	-0.4
	comp=Z,6.7nm,1.1s,baz=139,slow=5.3,SNR=24						
H11S2	WAKE ISLAND Hy	125.93	279	T	T	01 31 03.2	
H11S1	WAKE ISLAND Hy	125.94	279	T	T	01 31 04.2	
H11S3	WAKE ISLAND Hy	125.94	279	T	T	01 31 06.3	
H11N3	WAKE ISLAND Hy	125.97	280	T	T	01 31 07.0	
H11N2	WAKE ISLAND Hy	125.98	280	T	T	01 31 02.1	
H11N1	WAKE ISLAND Hy	125.99	280	T	T	01 31 10.0	
ASAR	Alice Springs	130.52	210	PKP	PKPdf	23 13 16.6	-0.3
	comp=Z,0.5nm,0.8s,baz=158,slow=2.4,SNR=4.1						
WRA	Warramunga Arr	133.44	213	PKP	PKPdf	23 13 22.7	+0.3
	comp=Z,0.7nm,0.9s,baz=157,slow=2.0,SNR=2.9						
ZALV	Zalesovo Beam	141.15	23	PKP	PKPdf	23 13 35.6	0.0
	comp=Z,1.7nm,0.7s,baz=316,slow=4.1,SNR=5.9						
NIL	Nilore	145.23	59	PKPbc	PKPdf	23 13 44.0	+0.5
MKAR	Makanchi Array	145.25	33	PKPbc	PKPab	23 13 43.0	0.0
	comp=Z,2.5nm,0.7s,baz=331,slow=4.2,SNR=17						
KSH	Kashi	145.35	48	PKPbc	PKPab	23 13 44.3	+0.6
USRK	Ussuriysk Ar.	149.18	327	PKPbc	PKPbc	23 13 54.4	+0.5
	comp=Z,4.4nm,0.8s,baz=17,slow=1.7,SNR=7.6						
MJAR	Matsushiro Arr	149.68	309	PKPbc	PKPbc	23 13 55.4	0.0
	comp=Z,5.2nm,0.8s,baz=90,slow=1.2,SNR=14						
MJAR				PKPab	PKPab	23 14 02.3	+1.7
	comp=Z,12nm,0.9s,baz=120,slow=1.1,SNR=18						
MAT	Matsushiro	149.68	309	PKP	PKPbc	23 13 55.3	-0.1
WMQ	Urumqi	150.06	32	eP	PKPdf	23 13 53.4	+2.2
SONM	Songino Array	151.98	4	PKPbc	PKiKP	23 14 01.0	0.0
	comp=Z,2.3nm,0.8s,baz=341,slow=1.6,SNR=11						
SONM				PKPab	PKPab	23 14 08.4	-1.4
	comp=Z,5.0nm,0.9s,baz=295,slow=1.2,SNR=14						
SONM	Songino Array	151.98	4		PKPbc	23 14 00.6	-0.1
ULN	Ulaanbaatar	151.99	3		PKPdf	23 13 54.8	+0.7
KSRS	Korea Array	156.06	321	PKPbc	PKPbc	23 14 08.0	
	comp=Z,0.4nm,0.3s,baz=71,slow=31,SNR=5.9						
GTA	Gaotai	158.87	21	ePKP	PKPdf	23 14 11.3	+7.7
GTA				pPKP	sPKPdf	23 14 21.0	+8.3
GTA				sPKP		23 14 24.8	
LZH	Lanzhou	163.13	15	ePKP	PKPdf	23 14 06.8	-1.6
LZH				pPKP	sPKPdf	23 14 17.3	-0.1
LZH				sPKP		23 14 20.8	
XAN	Xi'an	165.85	1	PKP	PKPdf	23 14 09.8	-0.9
XAN				pPKP	pPKPdf	23 14 14.8	-2.7

IDC 16 22:58:15.8±2.8, 20°.15S×70°.24W, h0^{km}, mb3.7/1, mb1 3.6/3, mb1mx3.5/22, mbtmp3.6/3, ML3.3/2, Error ellipse: s-maj=62.8km s-min=19.7km az=78.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.75	153	Pn	Pn	22 59 01.9	+0.4
	baz=345,slow=12,SNR=1.7						
LVC				Lg	Lg	22 59 43.5	
	9.5nm,0.3s,baz=124,slow=21,SNR=4.1						
LPAZ	La Paz	4.33	28	Pn	Pn	22 59 25.1	+1.6
	0.6nm,0.3s,baz=215,slow=12,SNR=4.4						
SIV	San Ignacio	9.65	66	Pn	Pn	23 00 35.5	-0.6
	0.8nm,0.3s,baz=253,slow=17,SNR=5.0						
TORD	Torodi Ar. Bea	78.09	71	P	P	23 10 16.7	-0.5
	0.4nm,0.5s,baz=249,slow=5.3,SNR=4.3						
MKAR	Makanchi Array	145.24	34	PKPbc	PKPbc	23 17 54.4	-0.8
	0.7nm,0.7s,baz=328,slow=3.9,SNR=5.4						

NEIC ***16*** *23:08:12.5, 20°.07S×70°.76W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}4.66; $M_{\theta\theta}$-6.03; $M_{\phi\phi}$1.37; $M_{r\theta}$0.80; $M_{\theta\phi}$0.32; $M_{\phi r}$-4.08; Fault plane solution: $M_0$6.88000×10^{15} NP1:ϕ_s122.77000°, δ59.46000°, λ129.37000°. NP2:ϕ_s244.54000°, δ48.26000°, λ42.93000°. Principal axes: T 7.4294, Plg56.0000°, Azm86.0000°; N -1.2775, Plg33.0000°, Azm280.0000°; P -6.1519, Plg6.0000°, Azm186.0000°;*

NEIC ***16*** *23:08:12.1±1.7, 20°.13S±0°.04×70°.73W±0°.05, h10^{km}±1^{km}, mb4.7/127, Mwr4.5/19 Error ellipse: s-maj=8.1km s-min=5.5km az=241.0*

IDC ***16*** *23:08:12.1±0.6, 19°.94S×70°.66W, h0^{km}, mb4.4/17, mb1 4.4/22, mb1mx4.4/34, mbtmp4.4/22, ML3.9/5, Error ellipse: s-maj=17.7km s-min=13.4km az=60.0*

GUC ***16*** *23:08:14.3±0.6, 20°.00S×70°.80W, h22^{km}±3^{km}, ML4.6*

VAO ***16*** *23:08:18.7±0.9, 19°.96S×70°.52W, h42^{km}±8^{km}, mb4.5*

ISC 16 23:08:12.8±1.4, **20°.07S**±0°.03×**70°.76W**±0°.05, **h13**^{km}±8^{km}, **n239, σ1^{s}14**/244, **mb4.6**/67, **11C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA01	Diego Aracena	0.73	132	⇑iP	Pn	23 08 28.7	-0.2
TA01				eS	Sn	23 08 39.8	-0.2
TA01				IAML		23 08 44.9	
	comp=E,60μm,0.3s						
PSGC	Pisagua	0.76	52	⇑iP	Pb	23 08 27.7	-0.3
PSGC				eS	Sb	23 08 38.2	-0.1
PATCX	Punta Patache	0.94	143	⇑iP	Pn	23 08 32.2	+0.3
PATCX				eS	Sn	23 08 45.9	+0.7
PB11	IPOC Station P	1.08	74	⇑iP	Pn	23 08 33.9	0.0
PB11				eS	Sn	23 08 48.9	+0.1
PB11				IAML		23 08 54.6	
	comp=N,15μm,0.3s						
PB11	IPOC Station P	1.08	74	Pn	Pn	23 08 33.9	0.0
PB11				Sn	Sn	23 08 49.0	+0.2
PB02	IPOC Station P	1.48	147	⇓eP	Pg	23 08 41.0	-0.4
PB02				eS	Sg	23 09 02.4	+1.7
PB02				IAML		23 09 05.6	
	comp=E,26μm,0.4s						
PB12	IPOC Station P	1.50	16	⇓eP	Pn	23 08 39.0	-0.7
PB12				eS	Sn	23 08 58.2	-0.9
PB12				IAML		23 09 08.1	
	comp=N,10μm,0.5s						
PB08	IPOC Station P	1.51	93	⇑iP	Pg	23 08 41.2	-0.7
PB08				eS	Sg	23 09 02.2	+0.6
GO01	Chusmiza	1.52	75	⇑iP	Pg	23 08 41.3	-0.9
GO01				eS	Sg	23 09 02.5	+0.4
GO01				IAML		23 09 03.2	
	comp=N,15μm,0.2s						
GO01	Chusmiza	1.52	75	Pn	Pg	23 08 41.5	-0.7
PB01	IPOC Station P	1.54	129	⇑iP	Pg	23 08 41.5	-0.8
PB01				eS	Sg	23 09 03.0	+0.6
PB01				IAML		23 09 06.2	
	comp=E,7μm,0.5s						
PB01	IPOC Station P	1.54	129	Pn	Pb	23 08 41.1	-0.1
AP01	Chacalluta	1.73	13	⇑iP	Pn	23 08 42.8	+0.1
AP01				eS	Sn	23 09 05.0	+0.4
AP01				IAML		23 09 12.3	
	comp=N,21μm,0.3s						
PB07	IPOC Station P	1.84	154	⇑iP	Pb	23 08 46.4	-0.1
PB07				eS	Sg	23 09 12.0	-0.1
PB16	IPOC Station P	2.09	35	eP	Pb	23 08 49.9	-1.1
PB16				eS	Sb	23 09 17.1	0.0
PB16				IAML		23 09 26.0	
	comp=N,3μm,0.4s						
PB09	IPOC Station P	2.23	141	⇑iP	Pb	23 08 53.6	+0.5
PB09				eS	Sg	23 09 22.8	-1.7
PB09				IAML		23 09 31.5	
	comp=N,3μm,0.5s						
PB04	IPOC Station P	2.32	166		Pn	23 08 51.7	+0.7
LVC	Limon Verde	3.06	146	Pn	Pn	23 09 04.2	+2.9
	comp=N,44nm,0.3s,baz=327,slow=11,SNR=22						
LVC				Sn	Sb	23 09 42.4	-2.4
	comp=N,94nm,0.3s,baz=157,slow=10.0,SNR=6.9						
LVC	Limon Verde	3.06	146	eP	Pn	23 09 03.4	+2.1
PB10	IPOC Station P	3.43	177		Pn	23 09 05.4	-0.6
LPAZ	La Paz	4.51	34	Pn	Pn	23 09 26.2	+4.7
	comp=N,3.6nm,0.3s,baz=214,slow=3.8,SNR=32						
LPAZ	La Paz	4.51	34		Pn	23 09 25.9	+4.3
LPAZ	La Paz	4.51	34	Pn	Pn	23 09 23.9	+2.4
GO02	Mina Guanaco	5.18	168		Pn	23 09 31.2	+0.8
GO03	Copiap	7.51	176	Pn	Pn	23 10 00.9	-1.2
NNA	Nana	9.94	323	Pn	Pn	23 10 37.1	+1.6
	comp=N,0.6nm,0.3s,baz=167,slow=14,SNR=2.0						
NNA				Sn	Sn	23 12 24.0	-3.0
	comp=N,1.6nm,0.3s,baz=236,slow=12,SNR=2.4						
NNA	Nana	9.94	323	Pn	Pn	23 10 36.2	+0.7
GO04	Tololo Observa	10.06	180	Pn	Pn	23 10 36.6	-0.7
SIV	San Ignacio	10.07	68	Pn	Pn	23 10 37.7	+0.5
	comp=N,3.8nm,0.3s,baz=273,slow=8.9,SNR=38						
CFA	Coronel Fontan	11.71	169	Pn	Pn	23 11 03.2	+3.5
	comp=N,0.3nm,0.3s,baz=0.0,slow=13,SNR=3.6						
SAML	Samuel	13.26	35		Pn	23 11 21.3	+0.4
CPUP	Villa Florida	13.83	119	Pn	Pn	23 11 31.2	+2.6
	comp=N,0.1nm,0.3s,baz=299,slow=12,SNR=3.9						
CPUP	Villa Florida	13.83	119		Pn	23 11 27.5	-1.1
SALV	Santo Antonio	14.92	76	eP	Pn	23 11 43.2	-0.4
C2SB	Chapadao do Su	16.95	89	eP	Pn	23 12 10.8	+0.9
CLDB	Colider	17.06	60	eP	Pn	23 12 10.2	-1.1
TRCB	Terra Rica	17.09	102	eP	Pn	23 12 11.5	-0.2
PCMB	Pacaembu	18.29	98	eP	P	23 12 26.9	+0.3
ARAG	Araguaiana, MT	18.54	80	eP	P	23 12 29.0	-0.4
CPSB	Cacapava Do Su	18.72	127	eP	Pn	23 12 32.2	+0.5
ITRB	Iturama	19.19	92	eP	P	23 12 36.6	0.0
FRTB	Fartura	19.96	103	eP	P	23 12 45.2	+0.3
PLCA	Paso Flores	20.60	180	P	Pn	23 12 54.2	+0.2
	comp=N,6.3nm,0.8s,baz=22,slow=11,SNR=11						
PLCA	Paso Flores	20.60	180	P	P	23 12 50.5	-1.3
PLCA	Paso Flores	20.60	180	eP	Pn	23 12 56.1	+2.1
BB19B	Bebedouro	20.84	97	eP	P	23 12 54.7	+0.2
IPMB	Ipameri, GO	21.41	88	eP	P	23 13 00.6	-0.1
OTAV	Otavalo	21.54	339	P	P	23 13 04.8	+2.3
OTAV	Otavalo	21.54	339	eP	P	23 13 04.3	+1.8
RCLB	Rio Claro- Sao	21.77	100	eP	P	23 13 04.0	-0.5
PTGA	Pitinga	21.93	30	P	P	23 13 05.1	-1.1
	comp=N,11nm,0.3s,baz=210,slow=20,SNR=29						
PTGA	Pitinga	21.93	30	P	P	23 13 05.0	-1.1
PTGA	Pitinga	21.93	30	eP	P	23 13 06.0	-0.2
SPB	Sao Paulo	21.93	103	P	P	23 13 05.4	-0.8
SPB	Sao Paulo	21.93	103	eP	P	23 13 06.3	+0.2
FLOC	Florencia	22.05	347	eP	P	23 13 10.1	+2.7
FLOC	Florencia	22.05	347	P	P	23 13 07.6	+0.1
BDFB	Brasilia	22.09	82	P	P	23 13 08.0	-0.1
	comp=N,1.8nm,0.5s,baz=254,slow=13,SNR=11						
BDFB	Brasilia	22.09	82	P	P	23 13 07.7	-0.3
VAO	Valinhos	22.32	102	eP	P	23 13 10.4	0.0
PCON	Cinco Dias	22.94	345	eP	P	23 13 24.3	+6.8
TUMC	Tumaco	23.12	339	P	P	23 13 19.1	+0.3
POPC	Popayan, Colom	23.21	345	⇓eP	P	23 13 21.6	+1.7
ORTC	Ortega, Tolima	24.23	349	eP	P	23 13 27.8	-1.9
BSCB	Bom Sucesso	24.34	97	eP	P	23 13 31.3	+0.6
ROSC	El Rosal	25.00	352	P	P	23 13 37.9	+0.9
	comp=N,4.1nm,0.3s,baz=126,slow=19,SNR=2.2						
ROSC	El Rosal	25.00	352	IAmb	IAmb	23 13 52.9	
	comp=Z,9.6nm,0.8s						
SMTB	Santa Maria do	25.01	67	eP	P	23 13 36.4	-0.3
RREF	El Recreo	25.22	349	eP	P	23 13 40.2	+0.9
GUY2C	Guyana, Caldas	25.54	349	eP	P	23 13 43.7	+1.7

JANB	Januaria	25.69	83	eP	P	23 13 42.6	-0.3
RUSC	La Rusia	25.90	355	eP	P	23 13 46.4	+1.1
RUSC	La Rusia	25.90	355	P	P	23 13 46.0	+0.7
HELC	Santa Helena	26.51	349	eP	P	23 13 49.9	-0.8
SDV	Santo Domingo	28.77	0	P	P	23 14 12.6	+1.8
	comp=Z,3.6nm,0.5s,baz=328,slow=11,SNR=4.4						
SDV	Santo Domingo	28.77	0	P	P	23 14 12.0	+1.2
SDV	Santo Domingo	28.77	0	eP	P	23 14 11.8	+1.0
SMLC	San Martn de	28.87	353	⇑eP	P	23 14 07.6	-3.8
NBIT	Itapeh - BA	30.28	85	eP	P	23 14 23.8	-0.2
MDP	Montagnes des	30.71	37	P	P	23 14 27.9	+0.2
	comp=Z,19nm,1.1s,baz=221,slow=9.7,SNR=5.6						
NBPS	Pedro II - PI	32.52	65	eP	P	23 14 43.2	-0.5
EFI	East Falkland	33.08	165	P	P	23 14 46.0	-2.1
NBMA	Muriti-CE	33.47	72	eP	P	23 14 52.0	-0.1
NBPB	Pedra_Branca-C	33.56	69	eP	P	23 14 53.0	+0.1
RCBR	Riachuelo	36.70	72	P	P	23 15 20.4	+0.5
	comp=Z,16nm,0.8s,baz=233,slow=4.4,SNR=11						
RCBR	Riachuelo	36.70	72	P	P	23 15 20.1	+0.2
RCBR				IAmb	IAmb	23 15 20.9	
	comp=Z,12nm,0.7s						
NBPV	Pedro Velho	36.99	73	eP	P	23 15 22.6	+0.2
ICMP	Isla Caja de M	37.95	7	P	P	23 15 29.8	-0.5
MLPR	Magueyes Islan	37.98	6	P	P	23 15 30.1	-0.4
OBIP	Obispado Ponce	38.09	6	P	P	23 15 30.9	-0.6
OBIP				IAmb	IAmb	23 15 31.6	
	comp=Z,20nm,0.9s						
PDPR	Patillas Dam,	38.13	7	P	P	23 15 30.9	-1.0
PDPR				IAmb	IAmb	23 15 31.3	
	comp=Z,9.7nm,0.8s						
GCPR	Guaynabo City	38.41	7	P	P	23 15 32.9	-1.3
GCPR				IAmb	IAmb	23 15 33.3	
	comp=Z,15nm,0.9s						
PCDR	Punta Cana, DR	38.41	4	P	P	23 15 33.4	-0.9
CBCY	The Bluff, Cay	40.53	347	P	P	23 15 52.3	+0.4
T59A	Double "B" Far	57.09	354	P	P	23 17 59.2	+0.4
T59A				IAmb	IAmb	23 18 05.9	
	comp=Z,12nm,0.9s						
T60A	Surry	57.18	354	P	P	23 17 59.2	-0.2
CCAR	Cane Creek	57.30	339	P	P	23 18 00.2	-0.2
WLAR	White Oak Lake	57.55	338	P	P	23 18 02.8	+0.6
S54A	Dingess, Beckl	58.41	350	P	P	23 18 08.3	+0.1
TXAR	Lajitas Array	58.48	326	P	P	23 18 09.9	+1.0
	comp=Z,0.8nm,0.7s,baz=151,slow=5.7,SNR=7.0						
TXAR	Lajitas Array	58.48	326	P	P	23 18 09.5	+0.6
MIAR	Mount Ida	58.49	338	P	P	23 18 08.8	+0.1
MIAR				IAmb	IAmb	23 18 09.7	
	comp=Z,6.9nm,0.8s						
WHAR	Wooly Hollow	58.73	339	P	P	23 18 10.7	+0.4
WHAR				IAmb	IAmb	23 18 11.3	
	comp=Z,5.0nm,1.0s						
Q56A	Snyder Ridge,	59.33	352	P	P	23 18 15.7	+1.2
S44A	Carbondale	60.03	343	P	P	23 18 18.7	-0.7
S44A				IAmb	IAmb	23 18 27.2	
	comp=Z,11nm,0.9s						
TUL1	Leonard	60.51	337	P	P	23 18 22.1	-0.6
TUL1				IAmb	IAmb	23 18 24.1	
	comp=Z,11nm,1.0s						
CCM	Cathedral Cave	60.94	342	P	P	23 18 25.7	+0.1
CCM				IAmb	IAmb	23 18 25.9	
	comp=Z,5.1nm,1.0s						
S39A	Bolivar	61.25	340	IAmb	IAmb	23 18 33.8	
	comp=Z,8.7nm,1.0s						
N54A	Moraine State	61.32	352	P	P	23 18 27.6	-0.5
N54A				IAmb	IAmb	23 18 31.7	
	comp=Z,4.0nm,0.8s						
M56A	Emporium	61.62	354	P	P	23 18 30.2	0.0
M56A				IAmb	IAmb	23 18 36.6	
	comp=Z,5.6nm,0.7s						
SHEL	Horse Pasture	61.63	98	P	P	23 18 28.2	-2.6
T35A	Sooner Cattle	61.67	337	P	P	23 18 30.8	+0.2
T35A				IAmb	IAmb	23 18 32.7	
	comp=Z,10nm,0.9s						
M55A	Ridgway	61.67	353	P	P	23 18 30.2	-0.3
MSTX	Muleshoe	61.79	330	P	P	23 18 30.9	-0.7
MSTX				IAmb	IAmb	23 18 39.1	
	comp=Z,5.6nm,0.9s						
M54A	Oil Creek Stat	61.82	352	P	P	23 18 31.2	-0.3
P43A	Skaggs, Pawnee	61.93	344	P	P	23 18 30.2	-2.0
N49A	Columbus Grove	61.95	349	P	P	23 18 31.9	-0.4
K58A	Earlville	62.68	356	P	P	23 18 37.6	+0.4
P38A	Dawn	63.08	340	P	P	23 18 39.1	-0.9
P38A				IAmb	IAmb	23 18 46.9	
	comp=Z,4.8nm,1.0s						
319A	Douglas	63.11	323	P	P	23 18 40.8	+0.4
319A				IAmb	IAmb	23 18 43.2	
	comp=Z,8.2nm,1.0s						
121A	Cookes Peak, D	63.17	325	P	P	23 18 41.3	+0.4
121A				IAmb	IAmb	23 18 48.5	
	comp=Z,4.9nm,1.1s						
N41A	Harden Midland	63.29	343	P	P	23 18 41.0	-0.3
J59A	Piesco	63.31	357	P	P	23 18 41.4	0.0
J59A				IAmb	IAmb	23 18 43.0	
	comp=Z,5.9nm,0.8s						
MEDO	Medina	63.32	354	P	P	23 18 41.8	+0.4
J55A	Hilton	63.35	354	P	P	23 18 40.3	-1.3
R32A	Long Quarter,	63.83	336	P	P	23 18 43.4	-1.5
R32A				IAmb	IAmb	23 18 51.1	
	comp=Z,7.1nm,0.8s						
I49A	Point Hope	64.65	350	P	P	23 18 49.7	-0.5
G62A	West of Eustis	64.97	0	P	P	23 18 53.0	+0.8
SADO	Sadowa	64.98	353	P	P	23 18 52.1	-0.2
PLVO	Plevna	65.05	355	P	P	23 18 52.5	-0.3
PLVO				IAmb	IAmb	23 18 57.7	
	comp=Z,8.5nm,1.2s						
SCIA	State Center	65.07	342	P	P	23 18 52.3	-0.6
JFWS	Jewell Farm	65.19	344	P	P	23 18 52.6	-1.2
JFWS				IAmb	IAmb	23 18 54.0	
	comp=Z,10nm,1.1s						
H43A	Windswept, Lux	66.08	347	P	P	23 18 58.6	-0.9
H43A				IAmb	IAmb	23 19 00.0	
	comp=Z,7.5nm,0.8s						
SDCO	Great Sand Dun	66.15	330	P	P	23 19 00.1	-0.3
SDCO				IAmb	IAmb	23 19 03.0	
	comp=Z,5.3nm,1.1s						
W18A	Petrified Fore	66.19	326	P	P	23 19 00.4	-0.2
W18A				IAmb	IAmb	23 19 10.4	
	comp=Z,2.7nm,0.7s						
G45A	Suttons Bay	66.20	349	P	P	23 18 59.8	-0.4
G45A				IAmb	IAmb	23 19 05.5	
	comp=Z,5.0nm,0.8s						
X16A	Lo Mia Camp, P	66.59	324	P	P	23 19 03.9	+0.8
X16A				IAmb	IAmb	23 19 06.9	
	comp=Z,3.8nm,1.0s						
WUAZ	Wupatki	67.37	325	P	P	23 19 08.9	+0.8
WUAZ				IAmb	IAmb	23 19 11.3	
	comp=Z,5.8nm,1.0s						
GLA	Glamis	67.54	321	P	P	23 19 09.4	+0.3
GLA				IAmb	IAmb	23 19 13.6	
	comp=Z,3.5nm,0.7s						
E43A	Lone Tree Farm	67.75	348	P	P	23 19 09.9	-0.1
E43A					P	23 19 10.1	+0.1
E43A				IAmb	IAmb	23 19 15.5	
	comp=Z,4.6nm,0.8s						
ECSD	EROS Data Cent	67.78	340	IAmb	IAmb	23 19 11.2	
	comp=Z,3.3nm,0.9s						
Y12C	Blythe	67.85	322	P	P	23 19 10.7	-0.3
ISCO	Idaho Springs	67.87	332	P	P	23 19 10.8	-0.5
COWI	Conover	67.93	346	P	P	23 19 10.6	-0.6
COWI				IAmb	IAmb	23 19 16.7	
	comp=Z,4.3nm,1.1s						
SPMN	Marine on St.	68.01	343	P	P	23 19 10.7	-1.0
SPMN				IAmb	IAmb	23 19 12.5	
	comp=Z,8.3nm,1.1s						
PV15	Paradox Valley	68.04	329	P	P	23 19 12.5	+0.1
PV15				IAmb	IAmb	23 19 15.4	
	comp=Z,11nm,1.2s						
PV02	Paradox Valley	68.06	328	P	P	23 19 11.5	-1.0
PV02				IAmb	IAmb	23 19 13.7	
	comp=Z,3.8nm,1.0s						
PV13	Radium Mtn., P	68.06	328	P	P	23 19 12.8	+0.2
VLDQ	Val d'Or	68.13	355	P	P	23 19 11.8	-0.5
PV05	Paradox Valley	68.14	328	P	P	23 19 13.3	+0.3
PV18	Skein Mesa, Pa	68.18	328	P	P	23 19 12.8	-0.4
U15A	North Rim	68.54	325	P	P	23 19 15.6	0.0
U15A				IAmb	IAmb	23 19 19.2	
	comp=Z,4.0nm,0.9s						
D41A	Chassel	68.72	347	P	P	23 19 15.9	-0.1
D41A				IAmb	IAmb	23 19 17.5	
	comp=Z,6.0nm,0.9s						
XPFO	Pion Flat	68.90	320	P	P	23 19 17.2	-0.5
XPFO				IAmb	IAmb	23 19 20.7	
	comp=Z,3.6nm,0.9s						
PFO	Pinyon Flats O	68.91	320	P	P	23 19 17.1	-0.6
PFO				IAmb	IAmb	23 19 20.7	
	comp=Z,3.8nm,1.0s						
KNB	Kanab	69.26	325	P	P	23 19 20.8	+0.8
O20A	White River Ci	69.34	330	P	P	23 19 19.9	-0.5
O20A				IAmb	IAmb	23 19 37.7	
	comp=Z,4.4nm,1.0s						
LCMT	Little Creek M	69.49	325	P	P	23 19 21.0	-0.3
Q16A	Castle Valley	69.82	327	P	P	23 19 23.2	-0.1
CCUT	Cedar City	69.95	325	P	P	23 19 25.2	+1.0
DBIC	Dimbokro	70.01	75	P	P	23 19 24.7	-0.1
	comp=Z,12nm,1.0s,baz=215,slow=6.9,SNR=5.7						
DBIC	Dimbokro	70.01	75	P	P	23 19 22.9	-1.9
P17A	Butcher Ranch,	70.03	328	P	P	23 19 25.5	+0.9
MSU	Marysvale	70.03	326	P	P	23 19 24.7	-0.1
SHPR	Sheep Range	70.18	323	P	P	23 19 25.9	+0.4
EYMN	Ely	70.21	345	P	P	23 19 24.9	-0.4
RSSD	Black Hills	70.77	335	P	P	23 19 29.6	+0.5
RSSD				IAmb	IAmb	23 19 31.3	
	comp=Z,4.6nm,0.9s						
PSUT	Pine Spring	70.93	325	P	P	23 19 31.5	+1.3
NLU	North Lily Min	71.06	328	P	P	23 19 31.9	+0.9
TPNV	Topopah Spring	71.11	323	P	P	23 19 32.0	+0.8
TPNV				IAmb	IAmb	23 19 34.9	
	comp=Z,6.8nm,1.1s						
JLU	Jordanelle	71.24	328	P	P	23 19 32.6	+0.5
DUG	Dugway, Tooele	71.62	327	P	P	23 19 33.2	-1.0
DUG				IAmb	IAmb	23 19 37.5	
	comp=Z,5.5nm,1.0s						
R11A	Troy Canyon, C	71.73	324	P	P	23 19 36.1	+1.1
BW06	Boulder Array	72.02	331	P	P	23 19 36.9	+0.2
PD31	Pinedale Array	72.02	331	P	P	23 19 36.9	+0.2
PDAR	Pinedale Array	72.02	331	P	P	23 19 37.0	+0.3
	comp=Z,0.4nm,0.6s,baz=123,slow=5.5,SNR=4.7						
PDAR	Pinedale Array	72.02	331	P	P	23 19 37.4	+0.7
HWUT	Hardware Ranch	72.07	329	P	P	23 19 36.9	-0.1
BGU	Big Grassy Mou	72.27	328	P	P	23 19 38.4	+0.2
OMMB	Old Mammoth Mi	73.15	322	P	P	23 19 42.2	-1.5
OMMB				IAmb	IAmb	23 19 46.9	
	comp=Z,5.6nm,1.0s						
ELK	Elko	73.27	326	P	P	23 19 44.7	+0.5
NVAR	Mina Array Bea	73.31	323	P	P	23 19 45.8	+1.3
	comp=Z,2.1nm,0.9s,baz=156,slow=7.0,SNR=13						
NVAR	Mina Array Bea	73.31	323	P	P	23 19 44.6	+0.2
FXWY	Fox Creek	73.37	331	P	P	23 19 44.9	+0.2
ULM	Lac du Bonnet	73.45	343	P	P	23 19 44.9	+0.2
	comp=Z,2.5nm,0.9s,baz=172,slow=7.7,SNR=5.0						
ULM	Lac du Bonnet	73.45	343	P	P	23 19 44.3	-0.4
ULM				IAmb	IAmb	23 19 45.6	
	comp=Z,5.2nm,1.1s						
FLWY	Flagg Ranch	73.57	331	P	P	23 19 46.9	+1.0
FLWY				IAmb	IAmb	23 19 51.2	
	comp=Z,11nm,1.1s						
KVN	Kaiserville	73.62	323	P	P	23 19 46.8	+0.5
KVN				IAmb	IAmb	23 19 49.2	
	comp=Z,5.3nm,1.0s						
YNE	Yellowstone No	73.98	332	P	P	23 19 49.2	+0.9
SAO	San Andreas Ge	74.04	320	P	P	23 19 47.9	-0.6
SAO				IAmb	IAmb	23 20 00.0	
	comp=Z,9.2nm,1.1s						
YHH	Holmes Hill	74.18	332	P	P	23 19 50.6	+1.1
YHB	Horse Butte	74.31	331	P	P	23 19 50.0	-0.2
YHL	Hebgen Lake	74.38	331	P	P	23 19 51.5	+0.8
GCMT	Greycliff	74.45	333	P	P	23 19 50.5	-0.3
DGMT	Dagmar	74.49	338	P	P	23 19 50.9	0.0
DGMT				IAmb	IAmb	23 19 53.5	
	comp=Z,6.6nm,0.9s						
SCHQ	Schefferville	74.67	2	P	P	23 19 51.6	-0.2
	comp=Z,1.7nm,0.6s,baz=214,slow=5.4,SNR=4.6						
PAHR	Pah Rah Range	74.80	323	P	P	23 19 52.9	-0.1
PAHR				IAmb	IAmb	23 19 56.5	
	comp=Z,5.8nm,0.9s						
MCMT	McKenzie Canyo	75.12	330	P	P	23 19 55.4	+0.4
MFID	Camas Ranch	75.51	328	P	P	23 19 57.0	0.0
MFID				IAmb	IAmb	23 20 00.4	
	comp=Z,5.9nm,1.1s						
ORV	Oroville	75.91	322	P	P	23 19 59.7	+0.4
BMO	Blue Mountains	77.29	328	P	P	23 20 07.4	+0.3
VNDA	Vanda	77.95	190	P	P	23 20 11.9	+1.7
	comp=Z,1.6nm,0.9s,baz=120,slow=7.7,SNR=4.6						
TORD	Torodi Ar. Bea	78.52	71	P	P	23 20 14.4	0.0
	comp=Z,20nm,0.9s,baz=248,slow=5.3,SNR=88						
TORD	Torodi Ar. Bea	78.52	71	P	P	23 20 13.5	-1.0
WALA	Waterton Lakes	78.81	333	P	P	23 20 15.8	+0.4
BOSA	Boshof	85.65	119	P	P	23 20 52.6	+0.7
	comp=Z,3.2nm,1.0s,baz=269,slow=9.1,SNR=3.7						
BOSA	Boshof	85.65	119	IAmb	IAmb	23 20 59.6	
	comp=Z,5.2nm,1.1s						
PAB	San Pablo	85.72	45	P	P	23 20 52.4	+0.6
PAB				IAmb	IAmb	23 20 53.2	
	comp=Z,5.2nm,1.1s						
TAM	Tamanrasset	85.74	64	P	P	23 20 52.6	+0.2
TAM				IAmb	IAmb	23 20 54.5	
	comp=Z,5.5nm,1.0s						
ESDC	Sonseca Array	86.05	45	P	P	23 20 52.9	-0.5
ESBB	Sonseca Array	86.05	45	P	P	23 20 53.2	-0.2
YKA	Yellowknife Ar	89.28	341	P	P	23 21 08.6	+0.3
	comp=Z,2.5nm,0.8s,baz=137,slow=4.9,SNR=34						
H11S2	WAKE ISLAND Hy	125.97	279	T	T	01 46 22.8	
	baz=101,slow=74,SNR=112						
H11S1	WAKE ISLAND Hy	125.98	279	T	T	01 46 34.8	
	baz=101,slow=74,SNR=71						
H11S3	WAKE ISLAND Hy	125.98	279	T	T	01 46 42.7	
	baz=101,slow=74,SNR=70						
H11N3	WAKE ISLAND Hy	126.02	280	T	T	01 45 45.7	
	baz=101,slow=75,SNR=48						
H11N2	WAKE ISLAND Hy	126.03	280	T	T	01 45 50.7	
	baz=101,slow=75,SNR=43						
H11N1	WAKE ISLAND Hy	126.03	280	T	T	01 45 51.0	
	baz=101,slow=75,SNR=39						
ASAR	Alice Springs	130.32	210	PKP	PKiKP	23 27 24.9	+0.3
	comp=Z,1.1nm,0.8s,baz=154,slow=2.9,SNR=8.7						
ABKAR	Akbulak array	131.25	41		PKiKP	23 27 26.8	+1.2
WRA	Warramunga Arr	133.25	213	PKP	PKiKP	23 27 30.9	+0.3
	comp=Z,0.7nm,0.7s,baz=156,slow=2.0,SNR=6.4						
ZALV	Zalesovo Beam	141.36	23	PKP	PKPdf	23 27 42.5	-0.7
	comp=Z,3.7nm,0.8s,baz=232,slow=1.7,SNR=9.2						
ZALV	Zalesovo Beam	141.36	23		PKPdf	23 27 43.0	-0.3
AAK	Ala-Archa	143.15	45		PKPdf	23 27 47.6	+0.6
MAKZ	Makanchi	145.27	34		PKPdf	23 27 51.5	+1.1
NIL	Nilore	145.34	60		PKPdf	23 27 52.0	+1.0
MK31	Makanchi Array	145.44	33		PKPab	23 27 51.9	+1.0
MKAR	Makanchi Array	145.44	33	PKPbc	PKPab	23 27 51.9	+1.0
	comp=Z,12nm,0.8s,baz=323,slow=3.9,SNR=104						
MKAR	Makanchi Array	145.44	33		PKPab	23 27 51.8	+0.9
KSH	Kashi	145.50	49	PKPbc	PKPab	23 27 53.0	+1.5
USRK	Ussuriysk Ar.	149.38	327	PKPbc	PKiKP	23 28 03.3	+0.5
	comp=Z,5.7nm,0.8s,baz=7.8,slow=0.5,SNR=10						
MJAR	Matsushiro Arr	149.83	309	PKPbc	PKiKP	23 28 04.6	+0.6
	comp=Z,5.9nm,1.0s,baz=121,slow=1.6,SNR=11						
MJAR	Matsushiro Arr	149.83	309		PKiKP	23 28 04.9	+0.9
SONM	Songino Array	152.21	4	PKPbc	PKiKP	23 28 10.1	+1.4
	comp=Z,5.0nm,0.8s,baz=330,slow=1.4,SNR=32						
SONM				PKPab	PKPab	23 28 18.9	+0.9
	comp=Z,1.8nm,0.6s,baz=309,slow=1.7,SNR=8.9						
SONM	Songino Array	152.21	4		PKiKP	23 28 09.7	+0.9
ULN	Ulaanbaatar	152.22	3		PKiKP	23 28 10.3	+1.5
GTA	Gaotai	159.08	21	ePKP	PKPdf	23 28 13.0	+1.8
LZH	Lanzhou	163.35	15	ePKP	PKPdf	23 28 11.3	-4.6
LZH				pPKP	sPKPdf	23 28 20.3	-0.7
LZH				sPKP		23 28 23.0	
NJ2	Nanjing	165.28	326	eP	PKPdf	23 28 15.6	-1.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						

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*KRNET **16** 23:11:45.5±0.1, 43°.37N×76°.47E, h24^{km}, mb3.1*
*NNC **16** 23:11:45.1±0.4, 43°.37N×76°.47E, h7^{km}±2^{km}, mb3.5, mpv3.4, Error ellipse: s-maj=2.4km s-min=1.8km az=17.0*
*SOME **16** 23:11:45.6, 43°.37N×76°.47E, h20^{km}*
*KNET **16** 23:11:46.6±0.9, 43°.27N×76°.33E, h8^{km}±5^{km}, ml2.0, Error ellipse: s-maj=6.9km s-min=2.9km az=59.0*
ISC 16 23:11:46.0±1.0, **43°.36N**±0°.02×**76°.46E**±0°.01, **h20**^{km}±2^{km}, **n71**, σ**0^{s}66**/134, **36C-42D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTBS	Maitube	0.23	186	⇓eP	Pb	23 11 51.4	-0.5
	baz=87						
MTBS				⇓eS	Sb	23 11 55.7	-0.3
	baz=87						
MTBS	Maitube	0.23	186	⇓eP	Pb	23 11 51.4	-0.5
	67nm,0.1s						
MTBS				eS	Sb	23 11 55.6	-0.3
	418nm,0.2s						
MTBS	Maitube	0.23	186	P	Pb	23 11 51.4	-0.5
	67nm,0.1s						
MTBS				S	Sb	23 11 55.6	-0.3
	418nm,0.2s						
IZV	Izvestkoviy	0.34	161	⇓eP	Pb	23 11 53.2	-0.3
	baz=62						
IZV				⇓eS	Sb	23 11 58.5	-0.1
	baz=62						
IZV	Izvestkoviy	0.34	161	⇓eP	Pb	23 11 53.1	-0.3
	33nm,0.1s						
IZV				eS	Sb	23 11 58.5	-0.1
	297nm,0.1s						
IZV	Izvestkoviy	0.34	161	P	Pb	23 11 53.2	-0.3
	33nm,0.1s						
IZV				S	Sb	23 11 58.5	-0.1
	319nm,0.2s						
AAA	Alma-Ata	0.36	115	⇑eP	Pb	23 11 53.5	-0.2
	baz=15						
AAA				⇑eS	Sb	23 11 59.3	+0.4
	baz=15						
AAA	Alma-Ata	0.36	115	⇑eP	Pb	23 11 53.5	-0.2
	145nm,0.1s						
AAA				eS	Sb	23 11 59.3	+0.4
	116nm,0.2s						
AAA	Alma-Ata	0.36	115	P	Pb	23 11 53.5	-0.2
	145nm,0.1s						
AAA				S	Sb	23 11 59.3	+0.4
	116nm,0.2s						
KTBS	Karatobe	0.38	24	⇓eP	Pb	23 11 53.8	-0.3
	baz=3.0						
KTBS				⇓eS	Sb	23 11 59.7	+0.2
	baz=3.0						
KTBS	Karatobe	0.38	24	⇓eP	Pb	23 11 53.8	-0.3
	73nm,0.1s						
KTBS				eS	Sb	23 11 59.7	+0.2
	182nm,0.4s						
KTBS	Karatobe	0.38	24	P	Pb	23 11 53.8	-0.3
	73nm,0.1s						
KTBS				S	Sb	23 11 59.8	+0.2
	208nm,0.5s						
KNDC	Almaty	0.39	111	⇓P	Pb	23 11 53.9	-0.3
	23nm,0.3s						
KNDC				⇑S	Sb	23 12 00.1	+0.3
	51nm,0.4s						
MDOK	Medeo	0.47	115	⇓eP	Pb	23 11 54.9	-0.7
	baz=15						
MDOK				⇓eS	Sb	23 12 01.7	-0.5
	baz=15						
MDOK	Medeo	0.47	115	⇓eP	Pb	23 11 54.9	-0.7
	29nm,0.2s						
MDOK				eS	Sb	23 12 01.8	-0.5
	25nm,0.2s						
MDOK	Medeo	0.47	115	⇓P	Pb	23 11 54.8	-0.7
	18nm,0.4s						
MDOK				⇑S	Sb	23 12 01.7	-0.5
	50nm,0.8s						
MDOK	Medeo	0.47	115	Pg	Pb	23 11 54.9	-0.7
	38nm,0.2s						
MDOK				Lg	Lg	23 12 01.8	
	22nm,0.2s						
TNSS	Tian-Shan	0.48	132	⇑eP	Pb	23 11 55.2	-0.7
	27nm,0.2s						
TNSS				eS	Sb	23 12 02.3	-0.4
	72nm,0.1s						
TNSS	Tian-Shan	0.48	132	P	Pb	23 11 55.2	-0.7
	27nm,0.2s						
TNSS				S	Sb	23 12 02.3	-0.4
	96nm,0.2s						
KST	Kastek	0.49	229	⇓eP	Pb	23 11 55.4	-0.5
	baz=29						
KST				⇓eS	Sb	23 12 02.4	-0.2
	baz=29						
KST	Kastek	0.49	229	⇓eP	Pb	23 11 55.4	-0.5
	27nm,0.1s						
KST				eS	Sb	23 12 02.4	-0.2
	73nm,0.1s						
KST	Kastek	0.49	229	P	Pb	23 11 55.5	-0.5
	27nm,0.1s						
KST				S	Sb	23 12 02.4	-0.2
	73nm,0.1s						
KOTS	Kotyrbulak	0.49	105	⇑eP	Pb	23 11 55.5	-0.5
	baz=6.0						
KOTS				⇑eS	Sb	23 12 02.6	-0.2
	baz=6.0						
KOTS	Kotyrbulak	0.49	105	⇑eP	Pb	23 11 55.5	-0.5
	117nm,0.1s						
KOTS				eS	Sb	23 12 02.5	-0.2
	95nm,0.3s						
KOTS	Kotyrbulak	0.49	105	P	Pb	23 11 55.4	-0.5
	134nm,0.1s						
KOTS				S	Sb	23 12 02.6	-0.2
	95nm,0.3s						
DGS	Degeres	0.52	257	⇓eP	Pb	23 11 55.9	-0.6
	baz=57						
DGS				⇓eS	Sb	23 12 03.4	-0.2
	baz=57						
DGS	Degeres	0.52	257	⇓eP	Pb	23 11 55.9	-0.6
	36nm,0.2s						
DGS				eS	Sb	23 12 03.5	-0.2
	87nm,0.1s						
DGS	Degeres	0.52	257	P	Pb	23 11 55.9	-0.6
	36nm,0.2s						
DGS				S	Sb	23 12 03.5	-0.2
	134nm,0.2s						
KUU	Kurty	0.54	350	⇓eP	Pb	23 11 56.4	-0.5
	baz=50						
KUU				⇓eS	Sb	23 12 04.0	-0.2
	baz=50						
KUU	Kurty	0.54	350	⇓eP	Pb	23 11 56.4	-0.5
	18nm,0.1s						
KUU				eS	Sb	23 12 03.9	-0.2
	129nm,0.1s						
KUU	Kurty	0.54	350	P	Pb	23 11 56.3	-0.5
	18nm,0.1s						
KUU				S	Sb	23 12 03.9	-0.2
	129nm,0.1s						
CHKK	Chushkaly	0.62	38	⇓eP	Pb	23 11 57.5	-0.7
	baz=38						
CHKK				⇓eS	Sb	23 12 06.2	-0.4
	baz=38						
CHKK	Chushkaly	0.62	38	⇓eP	Pb	23 11 57.5	-0.7
	8.6nm,0.1s						
CHKK				eS	Sb	23 12 06.2	-0.4
	78nm,0.1s						
CHKK	Chushkaly	0.62	38	P	Pb	23 11 57.5	-0.7
	10nm,0.2s						
CHKK				S	Sb	23 12 06.2	-0.4
	78nm,0.1s						
ANVS	Anan'yevo	1.05	123	⇑iP	Pb	23 12 04.8	-0.8
	baz=23						
ANVS				⇑iS	Sb	23 12 18.9	-0.2
	baz=23						
ULHL	Ulahol	1.13	188	⇓P	Pn	23 12 06.5	-0.3
	13nm,0.1s,SNR=111						
ULHL				⇑S	Sn	23 12 21.5	-0.3
	6.5nm,0.1s						
KURS	Kuram	1.25	84	eP	Pn	23 12 08.1	-0.2
	baz=84						
KURS				eS	Sb	23 12 24.3	-0.2
	baz=84						
KURS	Kuram	1.25	84	eP	Pn	23 12 08.1	-0.2
	3.7nm,0.1s						
KURS				eS	Sb	23 12 24.3	-0.2
	16nm,0.3s						
KURS	Kuram	1.25	84	P	Pn	23 12 08.1	-0.2
	6.4nm,0.2s						
KURS				S	Sb	23 12 24.3	-0.2
	11nm,0.3s						
CHMS	Chumysh	1.30	254	⇑iP	Pn	23 12 09.0	-0.1
	baz=54						
CHMS				⇑iS	Sb	23 12 26.0	-0.1
	baz=54						
CHMS	Chumysh	1.30	254	⇑P	Pn	23 12 09.2	+0.1
	8.9nm,0.1s,SNR=12						
CHMS				⇑S	Sb	23 12 26.7	+0.6
	32nm,0.2s						
KBK	Karagaybulak	1.32	238	⇑iP	Pn	23 12 09.3	-0.1
	baz=38						
KBK				⇑iS	Sb	23 12 27.2	+0.6
	baz=38						
KBK	Karagaybulak	1.32	238	⇓P	Pb	23 12 10.0	-0.2
	10nm,0.1s,SNR=38						
KBK				⇑S	Sb	23 12 28.3	+1.6
	68nm,0.2s						
KDJ	Kajisay	1.34	157	⇓iP	Pn	23 12 09.9	+0.2
	baz=56						
KDJ				⇓iS	Sb	23 12 27.8	+0.5
	baz=56						

USP	Ospenovka	1.44	267	⇑eP	Pn	23 12 11.1	+0.2
	baz=67						
USP				⇑iS	Sb	23 12 30.2	+0.3
	baz=67						
USP	Ospenovka	1.44	267	⇑P	Pb	23 12 11.5	-0.6
	11nm,0.2s,SNR=47						
USP				⇑S	Sb	23 12 30.8	+0.9
	14nm,0.2s						
SATY	Saty	1.45	101	eP	Pb	23 12 12.3	-0.1
	20nm,0.2s						
SATY				eS	Sb	23 12 31.4	+0.9
	52nm,0.1s						
SATY	Saty	1.45	101	P	Pb	23 12 12.3	-0.1
	31nm,0.3s						
SATY				S	Sb	23 12 31.4	+0.9
	52nm,0.1s						
FRU1	Bishkek	1.45	248	⇓iP	Pb	23 12 11.7	-0.7
	baz=48						
FRU1				⇓iS	Sb	23 12 31.0	+0.6
	baz=48						
KZA	Kyzart	1.56	215	⇑iP	Pb	23 12 14.2	-0.3
	baz=15						
KZA				⇑iS	Sb	23 12 34.9	+0.9
	baz=15						
KZA	Kyzart	1.56	215	⇑P	Pb	23 12 14.7	+0.2
	2.7nm,0.1s,SNR=10.0						
KZA				⇑S	Sb	23 12 36.1	+2.1
	20nm,0.4s						
AAK	Ala-Archa	1.62	244	⇓iP	Pb	23 12 14.5	-0.7
	baz=44						
AAK				⇓iS	Sb	23 12 36.0	+0.8
	baz=44						
AAK	Ala-Archa	1.62	244	⇓P	Pb	23 12 14.7	-0.5
	5.4nm,0.2s,SNR=7.0						
AAK				⇓S	Sb	23 12 36.2	+1.0
	15nm,0.3s						
KPKS	Kokpek	1.62	86	⇓eP	Pb	23 12 14.3	-0.9
	25nm,0.3s						
KPKS				eS	Sb	23 12 34.8	-0.5
	33nm,0.2s						
PRZ	Przheval'sk	1.67	121	⇓iP	Pb	23 12 15.7	-0.5
	baz=21						
PRZ				⇓iS	Sb	23 12 38.4	+1.6
	baz=21						
UCH	Uchtor	1.83	232	⇑iP	Pb	23 12 18.7	-0.3
	baz=32						
UCH				⇑iS	Sb	23 12 42.7	+1.1
	baz=32						
UCH	Uchtor	1.83	232	⇓P	Pb	23 12 18.9	-0.1
	2.2nm,0.2s,SNR=11						
UCH				⇑S	Sb	23 12 43.0	+1.4
	19nm,0.2s						
UZB	Uzynbulak	1.88	96	eP	Pb	23 12 19.7	0.0
	2.8nm,0.2s						
UZB				eS	Sb	23 12 44.0	+1.2
	16nm,0.2s						
UZB	Uzynbulak	1.88	96	P	Pb	23 12 19.4	-0.3
	2.5nm,0.2s						
UZB				S	Sb	23 12 44.0	+1.2
	16nm,0.2s						
NRN	Naryn	1.96	190	⇑iP	Pb	23 12 20.4	-0.7
	baz=91						
NRN				⇑iS	Sb	23 12 46.1	+0.9
	baz=91						
EKS2	Erkin-Say	2.09	251	⇑iP	Pb	23 12 21.9	-1.4
	baz=51						
EKS2				⇑iS	Sb	23 12 48.8	-0.1
	baz=51						
TDK	Taldyqorghan	2.15	40	eP	Pb	23 12 24.1	-0.1
	11nm,0.1s						
TDK				eS	Sb	23 12 51.6	+1.1
	22nm,0.4s						
TDK	Taldyqorghan	2.15	40	Pg	Pb	23 12 24.1	-0.1
TDK				Lg	Lg	23 12 51.6	
ARLS	Aral	2.18	227	⇓iP	Pb	23 12 22.9	-1.9
	baz=27						
ARLS				⇓iS	Sb	23 12 50.7	-0.7
	baz=27						
SHLS	Shalkode	2.20	94	eP	Pb	23 12 30.5	+5.4
	2.2nm,0.3s						
SHLS				eS	Sb	23 13 02.6	+11
	9.4nm,0.3s						
SHLS	Shalkode	2.20	94	Pg	Pb	23 12 30.5	+5.4
	2.2nm,0.3s						
SHLS				Lg	Lg	23 13 02.6	
	9.4nm,0.3s						
AML	Almayashu	2.38	240	⇑iP	Pn	23 12 26.1	+1.9
	baz=40						
AML				⇑iS	Sb	23 12 56.3	-1.2
	baz=40						
DJR	Jarkent	2.59	67	eP	Pb	23 12 31.7	-0.2
	0.5nm,0.2s						
DJR				eS	Sb	23 13 04.5	+1.2
	4.9nm,0.3s						
DJR	Jarkent	2.59	67	Pg	Pb	23 12 32.1	+0.3
	0.7nm,0.2s						
DJR				Lg	Lg	23 13 05.3	
	6.3nm,0.3s						
KAPS	Kapalarasan	2.83	46	eP	Pb	23 12 35.9	+0.1
	1.3nm,0.3s						
KAPS				eS	Sb	23 13 11.6	+1.6
	9.6nm,0.3s						
KAPS	Kapalarasan	2.83	46	Pg	Pb	23 12 35.9	+0.1
	1.3nm,0.3s						
KAPS				Lg	Lg	23 13 11.6	
	11nm,0.4s						

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*LDG **16** 23:11:47.8±0.2, 45°.23N×14°.69E, h2^{km}, Ml2.7/17, Error ellipse: s-maj=4.3km s-min=2.1km az=143.0*

*VIE **16** 23:11:50.8±0.4, 45°.39N×14°.60E, h3^{km}, mb2.2/8, ml2.8/11, Error ellipse: s-maj=3.6km s-min=2.0km az=172.0 15 km ENE of Rijeka*

*LJU **16** 23:11:50.3, 45°.38N×14°.61E, h19^{km}, ML2.4*

*RHSSO **16** 23:11:51.4±0.3, 45°.35N×14°.62E, h7^{km}±3^{km}, ML2.3/7*

*PRU **16** 23:11:53.4±0.0, 45°.48N×14°.53E, h0^{km}*

ISC 16 23:11:50.4±0.9**, 45°.35N**±0°.02×**14°.53E**±0°.02**, h18**^{km}±2^{km}**,**
n95, σ1^{s}.98/153**, 6C-3D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIY	Rijeka	0.04	236	i Pg	Pg	23 11 54.1	+0.3
RIY				Sg	Sg	23 11 56.2	+0.4
RIY	Rijeka	0.04	236	ePg	Pg	23 11 54.0	+0.3
RIY				eSg	Sg	23 11 56.3	+0.4
KNDS	Knezji Dol	0.21	331	⇓iPg	Pg	23 11 55.9	+0.2
KNDS				i Sg	Sb	23 11 59.7	+1.1
	comp=Z,471nm,0.2s						
GBRS	Gornja Briga	0.27	47	⇑iPg	Pg	23 11 55.9	-0.7
GBRS				i Sg	Sg	23 11 59.3	-1.5
	comp=Z,433nm,0.1s						
CEY	Cerknica	0.40	350	⇓iPg	Pg	23 11 58.5	-0.3
CEY				eSg	Sg	23 12 04.7	+0.3
	comp=Z,91nm,0.1s						
CEY	Cerknica	0.40	350	ePg	Pg	23 11 58.3	-0.5
CEY				eSg	Sb	23 12 04.9	0.0
SKDS	Skadanscina	0.41	299	⇑iPg	Pg	23 11 59.4	+0.4
SKDS				eSg	Sb	23 12 06.6	+1.3
	comp=Z,94nm,0.1s						
VISS	Visnje	0.51	26	⇓iPg	Pg	23 11 59.7	-1.1
VISS				i Sg	Sg	23 12 06.2	-1.4
	comp=Z,189nm,0.1s						
BOJS	Bojanci	0.54	72	⇑iPg	Pg	23 12 00.1	-1.0
BOJS				i Sg	Sg	23 12 06.9	-1.5
	comp=Z,65nm,0.1s						
GBAS	Gorenja Brezov	0.59	354	i Pg	Pg	23 12 01.8	-0.4
JAVS	Javornik	0.64	330	i Pg	Pg	23 12 02.5	-0.6
JAVS				i Sg	Sb	23 12 13.0	+1.5
	comp=Z,66nm,0.1s						
TRI	Trieste	0.65	304	⇑ePg	Pb	23 12 03.6	+0.5
TRI				eSg	Sn	23 12 14.0	-0.4
LJU	Ljubljana	0.70	0	i Pg	Pg	23 12 03.8	-0.4
LJU				i Sg	Sb	23 12 14.7	+1.3
LJU	Ljubljana	0.70	0	ePg	Pg	23 12 04.4	+0.2
LJU				eSg	Sb	23 12 14.5	+1.2
OZLJ	Ozalj	0.72	67	i Pg	Pg	23 12 03.6	-0.9
OZLJ				Sg	Sg	23 12 12.0	-2.1
CRNS	Crni Vrh	0.76	346	i Pg	Pg	23 12 05.0	-0.4
PDKS	Podkum	0.79	25	i Pg	Pb	23 12 05.1	-0.5
CRES	Cresnjev	0.81	53	⇑iPg	Pb	23 12 05.4	-0.6
CRES				i Sg	Sb	23 12 15.3	-1.3
	comp=Z,70nm,0.2s						
CRES	Cresnjev	0.81	53	ePg	Pb	23 12 05.3	-0.6
CRES				eSg	Sb	23 12 15.3	-1.3
NVLJ	Novalja	0.82	162	ePg	Pb	23 12 06.4	+0.4
NVLJ				Sg	Sn	23 12 19.7	+1.1
LEGS	Legarje	0.82	42	Pg	Pb	23 12 05.6	-0.5
LEGS				eSg	Sb	23 12 16.0	-0.9
VOJS	Vojsko	0.82	327	i Pg	Pb	23 12 05.8	-0.4
VOJS				i Sg	Sn	23 12 19.5	+0.6
SABO	M.te Sabotino	0.91	315	⇑ePg	Pb	23 12 07.6	0.0
SABO				eSg	Sn	23 12 21.8	+0.8
GCIS	Gornji Cirnik	0.93	56	i Pg	Pb	23 12 07.5	-0.5
DRE	Drenchia	1.03	324	ePg	Pb	23 12 09.9	+0.1
DRE				eSg	Sn	23 12 25.6	+1.6
COLI	Coloredo	1.13	315	ePg	Pb	23 12 11.8	+0.4
ZAG	Zagreb	1.13	64	ePg	Pg	23 12 12.7	+0.3
ZAG	Zagreb	1.13	64	ePg	Pb	23 12 11.1	-0.4
ZAG				eSg	Sb	23 12 26.2	+0.4
PTJ	Puntijarka	1.16	60	ePg	Pn	23 12 11.7	-0.1
PTJ				Sg	Sb	23 12 26.2	-0.4
OBKA	Obir	1.17	1	ePg	Pg	23 12 12.9	-0.1
	comp=Z,5.6nm,0.1s,SNR=48						
OBKA				Sg	Sg	23 12 28.2	-0.1
	comp=Z,36nm,0.2s						
UDBI	Udbina	1.20	132	ePg	Pg	23 12 14.3	+0.6
UDBI				Sg	Sg	23 12 29.9	+0.5
SOKA	Soboth	1.38	15	Pg	Pb	23 12 16.4	+0.7
	comp=Z,6.9nm,0.3s,SNR=5.8						
SOKA				Sg	Sn	23 12 33.0	+0.3
	comp=Z,9.3nm,0.3s						
DUGI	Dugi Otok	1.41	164	ePn	Pb	23 12 17.1	+1.1
DUGI				Sn	Sg	23 12 37.5	+1.6
MYKA	Terra Mystica	1.43	335	Pg	Pg	23 12 17.7	-0.3
	comp=Z,7.1nm,0.3s,SNR=10						
MYKA				eSg	Sg	23 12 37.8	+1.2
	comp=Z,33nm,0.3s						
KALN	Kalnik	1.56	59	ePg	Pb	23 12 19.2	+0.4
MOSL	Moslavina	1.59	79	i Pg	Pb	23 12 19.2	0.0
MORI	Morici	1.70	150	i Pn	Pb	23 12 21.9	+0.8
MORI				Sn	Sg	23 12 45.4	+0.1
ZIRJ	Zirje	1.87	154	ePn	Pb	23 12 24.1	+0.1
ZIRJ				Sn	Sb	23 12 48.9	+1.9
KIJV	Kijevo	1.90	134	i Pn	Pb	23 12 25.3	+0.9
KBA	Koelnbreinsper	1.92	335	ePn	Pn	23 12 23.9	+1.6
	comp=Z,1.7nm,0.2s						
KBA				Sn	Sb	23 12 50.3	+1.7
	comp=Z,16nm,0.6s						
BEHE	Becsehely	1.93	54	ePn	Pn	23 12 24.0	+1.7
BEHE				eSn	Sn	23 12 47.9	+1.8
BLY	Banja Luka	1.98	107	ePn	Pn	23 12 24.6	+1.7
BLY				eSn	Sn	23 12 48.8	+1.6
ABTA	Abfaltersbach	1.98	316	ePn	Pb	23 12 26.1	+0.1
	comp=Z,0.3nm,0.1s,SNR=13						
ABTA				Sg	Sg	23 12 55.1	+0.7
	comp=Z,12nm,0.2s						
ARSA	Arzberg	2.03	20	Pn	Pn	23 12 24.7	+1.0
	comp=Z,2.0nm,0.3s						
MGRS	Mrkonjic Grad	2.04	116	ePn	Pn	23 12 24.5	+0.6
MGRS				eSn	Sn	23 12 50.0	+1.1
MOA	Molln	2.51	356	Pn	Pn	23 12 32.8	+2.5
	comp=Z,0.5nm,0.1s						
MOA				Sn	Sn	23 13 03.3	+2.8
	comp=Z,3.2nm,0.3s						
RICI	Ricice	2.63	134	ePn	Pb	23 12 35.4	-1.6
MAKA	Makarska	2.73	138	ePn	Pb	23 12 36.5	-2.1
CONA	Conrad Observa	2.74	19	ePn	Pn	23 12 35.2	+1.6
	comp=Z,0.6nm,0.1s,SNR=5.1						
WTTA	Wattenberg	2.77	315	Pn	Pb	23 12 38.4	-1.1
	comp=Z,0.8nm,0.1s						
WATA	Walderalm	2.85	315	Pn	Pb	23 12 39.6	-1.2
	comp=Z,2.0nm,0.3s						
SQTA	Sankt Quirin	2.97	310	Pn	Pb	23 12 41.2	-1.6
	comp=Z,0.4nm,0.1s						
MOTA	Moosalm	3.10	311	i Pn	Pb	23 12 42.7	-2.4
	comp=Z,0.4nm,0.2s						
MOTA				eSn	Sb	23 13 22.0	-0.6
	comp=Z,1.1nm,0.2s						
FETA	Feichten	3.12	304	ePn	Pn	23 12 42.5	+3.6
	comp=Z,0.4nm,0.2s						
FETA				eSn	Sb	23 13 23.7	+0.4
	comp=Z,0.8nm,0.3s						
STON	Ston	3.37	136	ePn	Pn	23 12 45.0	+3.0
RETA	Reutte	3.37	311	ePn	Pn	23 12 45.9	+3.7
	comp=Z,0.1nm,0.1s						
DBRK	Dubrovnik	3.74	134	i Pn	Pn	23 12 49.5	+2.4
DBRK				Sn	Sn	23 13 35.4	+4.7
KHC	Kasperske Hory	3.84	351	ePN	Pn	23 12 51.1	+2.5
KHC				eSN	Sn	23 13 34.4	+1.1
KHC				eSG	Sg	23 13 51.5	-2.3
PRU	Pruhonice	4.65	0	eSN	Sn	23 13 53.8	+0.8
PGF	Pioggiola	4.87	237	ePn	Pn	23 13 00.6	-2.2
PGF	Pioggiola	4.87	237	eP	Pn	23 13 04.8	+2.0
PGF				eSn	Sn	23 13 54.9	-3.9
	comp=Z,26nm,1.1s						
SBF	Sospel	5.28	256	ePn	Pn	23 13 07.1	-1.2
SBF	Sospel	5.28	256	eP	Pn	23 13 09.6	+1.3
SBF				eSn	Sn	23 14 05.3	-3.4
	comp=Z,58nm,1.2s						
LPG	La Plagne	5.47	274	ePn	Pn	23 13 10.7	-0.6
LPG	La Plagne	5.47	274	eP	Pn	23 13 14.7	+3.4
LPG				eSn	Sn	23 14 12.4	-1.5
	comp=Z,0.3nm,0.3s						
LPL	La Plagne	5.49	275	ePn	Pn	23 13 10.6	-0.8
LPL	La Plagne	5.49	275	eP	Pn	23 13 15.0	+3.6
LPL				eSn	Sn	23 14 12.1	-2.0
	comp=Z,0.7nm,0.3s						
MBDF	Montbardon	5.53	266	ePn	Pn	23 13 10.7	-1.2
MBDF	Montbardon	5.53	266	eP	Pn	23 13 14.5	+2.6
MBDF				eSn	Sn	23 14 12.2	-2.9
	comp=Z,0.9nm,0.3s						
HINF	Hinteralfeld	5.84	298	ePn	Pn	23 13 15.2	-0.8
HINF	Hinteralfeld	5.84	298	eP	Pn	23 13 19.2	+3.2
HINF				eSn	Sn	23 14 21.0	-1.5
	comp=Z,0.9nm,0.2s						
FRF	La Foret Royal	5.92	255	ePn	Pn	23 13 14.6	-2.5
FRF	La Foret Royal	5.92	255	eP	Pn	23 13 19.2	+2.1
FRF				eSn	Sn	23 14 23.5	-0.8
	comp=Z,1.2nm,0.2s						
CABF	La Chapelle	6.02	285	ePn	Pn	23 13 18.0	-0.5
CABF	La Chapelle	6.02	285	eP	Pn	23 13 21.7	+3.2
CABF				eSn	Sn	23 14 25.6	-1.3
LMR	La Mourre	6.09	254	ePn	Pn	23 13 17.0	-2.5
LMR	La Mourre	6.09	254	eP	Pn	23 13 22.1	+2.6
LMR				eSn	Sn	23 14 23.1	-5.5
	comp=Z,1.1nm,0.2s						
ORIF	Oris-en-Rattie	6.13	269	ePn	Pn	23 13 18.8	-1.3
ORIF	Oris-en-Rattie	6.13	269	eP	Pn	23 13 23.7	+3.6
ORIF				eSn	Sn	23 14 26.5	-3.3
	comp=Z,1.6nm,0.5s						
HAU	Haudompre	6.22	298	ePn	Pn	23 13 20.2	-1.1
HAU	Haudompre	6.22	298	eP	Pn	23 13 25.5	+4.2
HAU				eSn	Sn	23 14 30.4	-1.5
	comp=Z,1.5nm,0.4s						
VIVF	Saint-Julien-l	6.99	269	ePn	Pn	23 13 30.6	-1.3
VIVF	Saint-Julien-l	6.99	269	eP	Pn	23 13 35.6	+3.7
VIVF				eSn	Sn	23 14 47.0	-3.9
	comp=Z,0.1nm,0.2s						
SMF	Signal de Mont	7.55	284	ePn	Pn	23 13 38.1	-1.5
SMF	Signal de Mont	7.55	284	eP	Pn	23 13 42.1	+2.5
SMF				eSn	Sn	23 15 01.8	-2.9
	comp=Z,0.5nm,0.3s						
SSF	Saint Saulge	7.84	287	ePn	Pn	23 13 42.6	-0.8
SSF	Saint Saulge	7.84	287	eP	Pn	23 13 47.8	+4.4
SSF				eSn	Sn	23 15 08.7	-2.9
	comp=Z,0.2nm,0.3s						
AVF	Avril sur Loir	7.91	285	ePn	Pn	23 13 42.6	-1.7
AVF	Avril sur Loir	7.91	285	eP	Pn	23 13 48.5	+4.2
AVF				eSn	Sn	23 15 09.9	-3.3
	comp=Z,0.6nm,0.4s						
BGF	Bois d'Agland	8.23	283	ePn	Pn	23 13 47.9	-0.9
BGF	Bois d'Agland	8.23	283	eP	Pn	23 13 53.3	+4.5
BGF				eSn	Sn	23 15 17.3	-4.0
	comp=Z,1.4nm,0.3s						
BAIF	Baives	8.40	308	ePn	Pn	23 13 50.7	-0.5
BAIF	Baives	8.40	308	eP	Pn	23 13 56.2	+5.0
BAIF				eSn	Sn	23 15 22.3	-3.2
	comp=Z,1.5nm,0.6s						
MTLF	Montolieu	9.05	262	ePn	Pn	23 13 58.4	-1.6
MTLF	Montolieu	9.05	262	eP	Pn	23 14 03.3	+3.3
MTLF				eSn	Sn	23 15 36.2	-5.1
	comp=Z,0.2nm,0.2s						

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*NNC **16** 23:17:07.6±1.2, 42°.55N×69°.20E, h0^{km}, mb3.8, mpv3.7, Error ellipse: s-maj=7.3km s-min=4.0km az=85.0*

*KRNET **16** 23:17:08.7±0.1, 42°.33N×68°.87E, mb3.4*

*SOME **16** 23:17:08.0, 42°.48N×69°.18E, h5^{km}*

ISC 16 23:17:04.7±1.7**, 42°.50N**±0°.04×**69°.15E**±0°.07**, h6**^{km}±11^{km}**,**
n41, σ2^{s}.17/67**, 20C-13D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHM	Chimkent	0.38	118	⇓eP	Pb	23 17 14.5	+0.8
	837nm,0.2s						
CHM				eS	Sb	23 17 19.4	-0.5
	3µm,0.2s						
BRLS	Borolday	0.73	43	eP	Pg	23 17 16.4	-2.3
BRLS				eS	Sg	23 17 22.6	-5.7
IUG	Iuzhnay	0.74	118	eP	Pn	23 17 21.8	+0.1
	40nm,0.1s						
IUG				eS	Sn	23 17 31.8	-1.6
	763nm,0.2s						
IUG	Iuzhnay	0.74	118	P	Pn	23 17 21.8	+0.1
	45nm,0.2s						
IUG				S	Sn	23 17 31.8	-1.6
	763nm,0.2s						
KK31	Karatay Array	1.17	58	⇓P	Pg	23 17 28.9	+1.8
	4.9nm,0.2s,baz=245,slow=17,SNR=1212						
KK31				⇑S	Sn	23 17 44.3	+0.4
	109nm,0.3s,baz=241,slow=25,SNR=42						
TAS	Tashkent	1.18	175	⇓iP	Pg	23 17 28.8	+1.6
	baz=62						
TAS				⇓iS	Sn	23 17 42.8	-1.2
	baz=62						
DZA	Taraz	1.65	75	eP	Pg	23 17 38.2	+1.9
	21nm,0.1s						
DZA				eS	Sg	23 17 59.3	+1.5
	357nm,0.2s						
ARK	Arkit	2.20	108	⇑iP	Pg	23 17 50.4	+3.5
	baz=2.0						
ARK				⇑iS	Sg	23 18 21.0	+5.6
	baz=2.0						
BTK	Batken	2.74	152	⇑eP	Pg	23 17 55.2	-2.0
	baz=46						
BTK				⇑iS	Sb	23 18 28.4	+0.4
	baz=46						
MRKS	Merke	3.02	84	eP	Pg	23 18 03.1	+0.7
	8.2nm,0.2s						
MRKS				eS	Sg	23 18 42.2	+0.7
	32nm,0.3s						
MRKS	Merke	3.02	84	Pg	Pg	23 18 01.7	-0.7
	9.2nm,0.4s						
MRKS				Lg	Lg	23 18 39.9	
	32nm,0.4s						
ARSB	Arslanbob	3.09	111	⇑iP	Pg	23 18 02.2	-1.6
	baz=7.0						
ARSB				⇑iS	Sg	23 18 41.1	-2.8
	baz=7.0						
AML	Almayashu	3.39	95	⇓eP	Pb	23 18 07.5	+2.2
	baz=91						
AML				⇓iS	Sb	23 18 50.2	+3.3
	baz=91						
AML	Almayashu	3.39	95	P	Pg	23 18 10.1	+0.6
	SNR=43						
EKS2	Erkin-Say	3.42	86	⇑iP	Pb	23 18 07.9	+2.2
	baz=83						
EKS2				⇑iS	Sb	23 18 51.2	+3.6
	baz=83						
EKS2	Erkin-Say	3.42	86	P	Pb	23 18 06.2	+0.5
	SNR=7.7						
ARLS	Aral	3.90	98	⇑eP	Pb	23 18 14.0	+0.2
	baz=95						
ARLS				⇑iS	Sb	23 19 01.7	+0.4
	baz=95						
AAK	Ala-Archa	3.95	86	⇑iP	Pb	23 18 15.3	+0.6
	baz=84						
AAK				⇑iS	Sb	23 19 04.0	+1.2
	baz=84						
AAK	Ala-Archa	3.95	86	P	Pg	23 18 19.0	-1.3
	SNR=10						
UCH	Uchtor	3.98	92	⇓eP	Pb	23 18 15.6	+0.1
	baz=89						
UCH				⇓iS	Sb	23 19 04.7	+0.6
	baz=89						
UCH	Uchtor	3.98	92	P	Pg	23 18 19.9	-1.0
	SNR=9.4						
USP	Ospenovka	4.00	77	⇓iP	Pb	23 18 16.1	+0.5
	baz=75						
USP				⇓iS	Sb	23 19 05.7	+1.4
	baz=75						
FRU1	Bishkek	4.05	84	⇑iP	Pb	23 18 16.8	+0.3
	baz=82						
FRU1				⇑iS	Sb	23 19 06.5	+0.8
	baz=82						
CHMS	Chumysh	4.15	81	⇑iP	Pb	23 18 18.3	+0.1
	baz=79						
CHMS				⇑iS	Sb	23 19 09.0	+0.4
	baz=79						
KBK	Karagaybulak	4.28	86	P	Pg	23 18 25.9	-0.8
	SNR=5.5						
BTLS	Baital	4.36	53	eP	Pg	23 18 28.5	+0.3
	2.6nm,0.2s						
BTLS				eS	Sg	23 19 25.8	+1.1
	14nm,0.7s						
BTLS	Baital	4.36	53	Pg	Pb	23 18 25.9	+4.2
	3.3nm,0.2s						
BTLS				Lg	Lg	23 19 22.2	
	14nm,0.7s						
KZA	Kyzart	4.54	93	⇓iP	Pb	23 18 23.5	-1.5
	baz=91						
KZA				⇓iS	Sb	23 19 18.0	-2.1
	baz=91						
KZA	Kyzart	4.54	93	P	Pg	23 18 32.0	+0.3
	SNR=9.7						
DGS	Degeres	4.92	79	eP	Pg	23 18 38.9	-0.1
	2.6nm,0.3s						
DGS				eS	Sg	23 19 43.4	+0.7
	17nm,0.4s						
KST	Kastek	5.04	81	eP	Pg	23 18 40.6	-0.7
	5.0nm,0.6s						
KST				eS	Sg	23 19 46.5	-0.1
	23nm,0.7s						
KST	Kastek	5.04	81	Pg	Pg	23 18 38.6	-2.6
	5.0nm,0.6s						
KST				Lg	Lg	23 19 42.8	
	23nm,0.7s						
ULHL	Ulahol	5.26	90	⇑eP	Pb	23 18 33.0	-4.1
	baz=88						
ULHL				⇑iS	Sb	23 19 35.0	-5.5
	baz=88						
KUU	Kurty	5.44	73	Pg	Pb	23 18 44.6	+4.6
	1.4nm,0.1s						
KUU				Lg	Lg	23 19 53.2	
	30nm,0.6s						
TNSS	Tian-Shan	5.76	82	eP	Pg	23 18 54.0	-1.1
	3.2nm,0.3s						
TNSS				eS	Sg	23 20 09.3	-0.4
	8.9nm,0.5s						
TNSS	Tian-Shan	5.76	82	Pg	Pg	23 18 52.5	-2.6
	3.6nm,0.5s						
TNSS				Lg	Lg	23 20 06.6	
	12nm,0.7s						
KNDC	Almaty	5.79	80	⇓Pg	Pg	23 18 53.6	-1.9
	5.6nm,0.5s						
KNDC				⇑Lg	Lg	23 20 11.7	
	21nm,0.5s						
MDOK	Medeo	5.84	81	Pg	Pg	23 18 54.9	-1.7
	2.8nm,0.6s						
MDOK				Lg	Lg	23 20 13.6	
	15nm,0.6s						
MDOK	Medeo	5.84	81	Pg	Pg	23 18 53.0	-3.6
	2.1nm,0.9s						
MDOK				Lg	Lg	23 20 07.4	
	15nm,0.7s						
CHKK	Chushkaly	5.89	74	eP	Pg	23 18 56.1	-1.3
	0.7nm,0.1s						
CHKK				eS	Sg	23 20 12.9	-0.8
	14nm,0.4s						
CHKK	Chushkaly	5.89	74	Pg	Pg	23 18 55.1	-2.3
	0.6nm,0.1s						
CHKK				Lg	Lg	23 20 11.1	
	14nm,0.5s						

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*TAP **16** 23:24:51.4, 24°.16N×121°.74E, h65^{km}, ML3.5, C*

*JMA **16** 23:24:51.2±0.1, 24°.11N×121°.72E, h64^{km}±1^{km}, M3.0*

ISC 16 23:24:51.6±1.2**, 24°.17N**±0°.02×**121°.75E**±0°.02**, h67**^{km}±4^{km}**,**
n120, σ1^{s}.13/232**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NACB	Ninganchiao	0.14	271	P	Pn	23 25 01.0	-0.5
	baz=265						
NACB				S	Sn	23 25 07.8	-0.9
	baz=265						
TWD	Chiawan	0.16	237	i P	Pn	23 25 01.3	-0.3

	baz=252						
TWD	baz=252			iS	Sn	23 25 08.2	-0.7
HWA	Hwalien baz=205	0.23	214	P	Pn	23 25 01.5	-0.4
HWA	baz=205			S	Sn	23 25 10.3	+0.8
ETLH	Xiulin Townshi baz=276	0.24	279	P	Pn	23 25 01.8	-0.3
ETLH	baz=276			S	Sn	23 25 09.0	-0.8
ENA	Nanau baz=357	0.26	359	iP	Pn	23 25 02.2	+0.1
ENA	baz=357			iS	Sn	23 25 10.5	+0.8
ENLB	Shoufeng baz=201	0.30	206	iP	Pn	23 25 01.8	-0.6
ENLB	baz=201			S	Sn	23 25 11.0	+0.9
NNSB	Datong baz=310	0.42	308	P	Pn	23 25 03.4	-0.1
NNSB	baz=310			S	Sn	23 25 11.8	-0.3
NNSH	Datong baz=309	0.42	308	iP	Pn	23 25 03.5	+0.1
NNSH	baz=309			iS	Sn	23 25 11.9	-0.2
NNS	Nan Shan baz=311	0.43	308	iP	Pn	23 25 03.6	0.0
NNS	baz=311			iS	Sn	23 25 12.3	-0.1
WHF	Hehuan Shan baz=268	0.44	267	iP	Pn	23 25 03.8	-0.1
WHF	baz=268			S	Sn	23 25 12.4	-0.6
TWC	Suao baz=20	0.45	12	iP	Pn	23 25 04.1	+0.5
TWC	baz=20			iS	Sn	23 25 13.6	+1.3
ESL	Shilin baz=224	0.46	219	iP	Pn	23 25 02.4	-1.2
ESL	baz=224			S	Sn	23 25 11.0	-1.5
NDT	Datong Townshi baz=328	0.48	334	iP	Pn	23 25 04.0	+0.1
NDT	baz=328			S	Sn	23 25 13.1	+0.2
ENTT	Nioudou baz=341	0.49	341	iP	Pn	23 25 04.0	0.0
ENTT	baz=341			iS	Sn	23 25 13.2	0.0
EOS1	EOS1 baz=53	0.51	43	P	Pn	23 25 05.1	+1.0
EOS1	baz=53			S	Sn	23 25 15.2	+1.8
TWT	Tachien baz=277	0.53	279	iP	Pn	23 25 05.5	+1.0
TWT	baz=277			iS	Sn	23 25 14.4	+0.4
CHGB	Renai baz=256	0.53	258	P	Pn	23 25 04.9	+0.3
CHGB	baz=256			S	Sn	23 25 13.9	-0.3
TDCB	Techi baz=277	0.54	279	P	Pn	23 25 05.0	+0.4
TDCB	baz=277			S	Sn	23 25 14.4	+0.2
TWE	Neicheng baz=351	0.55	353	iP	Pn	23 25 05.1	+0.5
TWE	baz=351			S	Sn	23 25 15.1	+0.9
OWD	Renai baz=245	0.56	248	iP	Pn	23 25 04.8	-0.1
OWD	baz=245			S	Sn	23 25 13.7	-0.9
EGFH	Guangfu baz=216	0.58	210	P	Pn	23 25 03.9	-1.0
EGFH	baz=216			iS	Sn	23 25 13.7	-1.0
SLBB	Yuanshan baz=347	0.59	350	iP	Pn	23 25 04.5	-0.6
SLBB	baz=347			S	Sn	23 25 14.7	-0.3
YHNB	Yeheng baz=328	0.60	326	P	Pn	23 25 05.4	+0.1
YHNB	baz=328			S	Sn	23 25 15.0	-0.2
NSK	Sanguang baz=327	0.61	325	iP	Pn	23 25 05.5	+0.2
NSK	baz=327			S	Sn	23 25 15.0	-0.5
NWLT	Wulai baz=335	0.64	340	iP	Pn	23 25 05.9	+0.3
NWLT	baz=335			iS	Sn	23 25 15.7	-0.2
NTC	Toucheng baz=1.0	0.69	6	iP	Pn	23 25 07.0	+1.0
NTC	baz=1.0			S	Sn	23 25 18.6	+1.9
VWDT	VWDT baz=231	0.69	233	P	Pn	23 25 06.3	+0.2
VWDT	baz=231			S	Sn	23 25 16.8	0.0
HGSD	Ruisui baz=211	0.74	204	P	Pn	23 25 07.0	+0.4
HGSD	baz=211			eS	Sn	23 25 17.8	0.0
WHP	Taichung City baz=279	0.74	278	iP	Pn	23 25 07.8	+1.0
WHP	baz=279			S	Sn	23 25 18.8	+0.9
DPDB	Guoxing baz=260	0.76	260	iP	Pn	23 25 07.6	+0.6
DPDB	baz=260			S	Sn	23 25 19.0	+0.6
EHY	Hungye baz=209	0.77	210	iP	Pn	23 25 06.7	-0.4
EHY	baz=209			S	Sn	23 25 17.3	-1.1
TIPB	Shuangxi baz=357	0.80	5	iP	Pn	23 25 08.5	+1.0
TIPB	baz=357			S	Sn	23 25 20.6	+1.4
NHDH	Xindian Distri baz=347	0.81	346	P	Pn	23 25 08.1	+0.5
NHDH	baz=347			S	Sn	23 25 19.8	+0.4
WLTB	Daxi baz=335	0.81	327	eP	Pn	23 25 08.4	+0.8
WLTB	baz=335			S	Sn	23 25 20.7	+1.3
LIOB	Emei baz=306	0.82	306	iP	Pn	23 25 08.0	+0.3
LIOB	baz=306			S	Sn	23 25 21.3	+1.8
SSLB	Suanglung baz=241	0.82	242	P	Pn	23 25 08.0	+0.3
SSLB	baz=241			S	Sn	23 25 19.7	+0.1
NSTT	Nanjuang baz=305	0.82	304	eP	Pn	23 25 08.2	+0.5
NSTT	baz=305			S	Sn	23 25 20.6	+1.1
TWA	Mucha baz=341	0.82	350	iP	Pn	23 25 07.8	+0.1
TWA	baz=341			S	Sn	23 25 20.1	+0.6
SMLT	Sun Moon Lake baz=245	0.82	250	iP	Pn	23 25 08.8	+1.0
SMLT	baz=245			S	Sn	23 25 20.8	+1.0
TATO	Taipei baz=346	0.83	344	P	Pn	23 25 07.3	-0.6
TATO	baz=346			S	Sn	23 25 20.2	+0.4
TYC	Yuchr baz=248	0.85	252	iP	Pn	23 25 08.8	+0.8
TYC	baz=248			iS	Sn	23 25 21.7	+1.4
TWB1	Santiao Chiao baz=29	0.86	15	P	Pn	23 25 08.7	+0.5
TWB1	baz=29			eS	Sn	23 25 22.2	+1.8
YULB	Yu-li baz=207	0.88	208	P	Pn	23 25 07.2	-1.2
YULB	baz=207			eS	Sn	23 25 18.6	-2.2
TAP1	Taipei baz=348	0.89	347	eS	Sn	23 25 21.2	+0.2
NWF	Wu-fen Shan baz=353	0.90	2	iP	Pn	23 25 09.4	+0.7
NWF	baz=353			S	Sn	23 25 22.9	+1.5
WFSB	Wu-fen Shan baz=353	0.90	2	P	Pn	23 25 09.4	+0.8
WFSB	baz=353			S	Sn	23 25 23.0	+1.8
TWQ1	Liyutan baz=290	0.91	281	iP	Pn	23 25 09.1	+0.4
TWQ1	baz=290			S	Sn	23 25 22.6	+1.2
TWF1	Yuli baz=211	0.91	207	iP	Pn	23 25 07.5	-1.3
TWF1	baz=211			eS	Sn	23 25 20.2	-1.3
SBCB	Hsinchu baz=323	0.93	312	eP	Pn	23 25 09.2	+0.2
SBCB	baz=323			eS	Sn	23 25 23.6	+1.7
NSY	Sanyi baz=285	0.93	285	eP	Pn	23 25 09.3	+0.3
NSY	baz=285			eS	Sn	23 25 23.8	+1.8
WHYT	Xinyi Township baz=240	0.94	240	P	Pn	23 25 10.4	+1.2
WHYT	baz=240			iS	Sn	23 25 24.3	+2.0
NCUH	Zhongli baz=328	0.94	327	eP	Pn	23 25 09.1	-0.1
NCUH	baz=328			S	Sn	23 25 22.5	+0.3
NMLH	Miaoli baz=292	0.94	293	eP	Pn	23 25 09.7	+0.5
NMLH	baz=292			eS	Sn	23 25 23.7	+1.4
NCU	National Centr baz=329	0.94	328	eP	Pn	23 25 09.6	+0.4
NCU	baz=329			S	Sn	23 25 22.8	+0.5
HSN	Hsinchu baz=315	0.95	312	S	Sn	23 25 23.3	+1.0
TWS1	Kuangyinshan baz=345	0.97	342	eP	Pn	23 25 09.9	+0.4
TWS1	baz=345			S	Sn	23 25 23.7	+0.9
TCU	Taichung baz=268	0.98	269	P	Pn	23 25 10.3	+0.8
TCU	baz=268			S	Sn	23 25 24.2	+1.3
YM01	YM01 baz=343	0.98	351	iP	Pn	23 25 09.6	-0.1
YM01	baz=343			iS	Sn	23 25 23.3	+0.1
PTSB	Yuanli baz=286	0.99	286	eP	Pn	23 25 10.2	+0.5
PTSB	baz=286			eS	Sn	23 25 24.3	+1.1
WJS	Zhushan baz=249	0.99	250	P	Pn	23 25 11.2	+1.5
WJS	baz=249			S	Sn	23 25 25.1	+1.7
YUS	Yu-Shan baz=219	0.99	227	P	Pn	23 25 11.0	+0.7
YM10	YM10 baz=344	0.99	350	P	Pn	23 25 09.7	-0.2
YM10	baz=344			eS	Sn	23 25 23.7	+0.2
YM11	YM11 baz=343	1.00	351	P	Pn	23 25 09.7	-0.3
YM11	baz=343			eS	Sn	23 25 23.7	0.0
WNT	Mingjian baz=264	1.01	254	iP	Pn	23 25 11.4	+1.3
WNT	baz=264			S	Sn	23 25 26.1	+2.3
WDJ	Dajia District baz=280	1.02	280	eP	Pn	23 25 10.8	+0.6
WDJ	baz=280			eS	Sn	23 25 25.3	+1.3
ANP	Anpu baz=351	1.03	349	P	Pn	23 25 10.0	-0.4
ANP	baz=351			S	Sn	23 25 24.4	0.0
FULB	Fuli baz=209	1.05	203	iP	Pn	23 25 10.3	-0.3
FULB	baz=209			S	Sn	23 25 24.8	0.0
ALS	Alishan baz=226	1.08	233	P	Pn	23 25 12.2	+1.0
ALS	baz=226			S	Sn	23 25 26.9	+1.1
WCHH	Zhanghua baz=264	1.09	265	eP	Pn	23 25 11.1	+0.1
WCHH	baz=264			eS	Sn	23 25 27.3	+1.8
TWY	Chenhua baz=346	1.11	353	eP	Pn	23 25 11.6	+0.3
TWY	baz=346			eS	Sn	23 25 26.2	+0.3
CHKT	Chengkung baz=197	1.12	198	P	Pn	23 25 10.6	-0.8
CHKT	baz=197			S	Sn	23 25 26.0	-0.3
JYNG	Yonagunijimaku	1.13	75	P	Pn	23 25 11.9	+0.4
JYNG				eS	Sn	23 25 26.9	+0.5
CHN5	Tsauling baz=231	1.13	240	iP	Pn	23 25 12.6	+1.0
CHN5	baz=231			iS	Sn	23 25 28.1	+1.5
ELDTW	Lidau baz=208	1.18	215	P	Pn	23 25 11.8	-0.6
ELDTW	baz=208			S	Sn	23 25 27.5	-0.4
WGK	Gukeng baz=245	1.19	246	P	Pn	23 25 13.9	+1.7
WGK	baz=245			S	Sn	23 25 30.3	+2.6
YOJ	Yonaguni jima baz=75	1.19	76	P	Pn	23 25 12.6	+0.3
YOJ	baz=75			S	Sn	23 25 28.4	+0.6
YOJ	Yonaguni jima	1.19	76	P	Pn	23 25 12.7	+0.4
YOJ				eS	Sn	23 25 28.2	+0.4
WDLH	Douliu baz=257	1.21	247	P	Pn	23 25 14.5	+2.0
WDLH	baz=257			S	Sn	23 25 31.1	+2.9
RLNB	Erlin baz=256	1.30	258	eP	Pn	23 25 14.2	+0.5
RLNB	baz=256			S	Sn	23 25 31.7	+1.4
CHN4	Tsaushan baz=231	1.33	233	iP	Pn	23 25 15.8	+1.5
CHN4	baz=231			iS	Sn	23 25 34.2	+3.0
TPUB	Ta-pu baz=229	1.34	230	P	Pn	23 25 15.6	+1.3
TPUB	baz=229			S	Sn	23 25 33.9	+2.4
STYT	Tauyuan baz=221	1.35	222	P	Pn	23 25 15.8	+1.3
STYT	baz=221			S	Sn	23 25 33.9	+2.1
CHY	Chiayi baz=230	1.38	241	P	Pn	23 25 16.4	+1.5
CHY	baz=230			S	Sn	23 25 35.2	+2.9
WTP	Ta-pu baz=227	1.39	229	iP	Pn	23 25 15.8	+0.8
WTP	baz=227			iS	Sn	23 25 34.8	+2.3
TWK	Hsinying baz=230	1.46	232	iP	Pn	23 25 16.8	+0.9
TWK	baz=230			iS	Sn	23 25 36.5	+2.2
TWH	Lutao baz=182	1.47	190	P	Pn	23 25 15.3	-0.7
TWH	baz=182			S	Sn	23 25 33.4	-1.1
TWGBT	Beinan baz=195	1.48	205	P	Pn	23 25 15.4	-0.7
TWGBT	baz=195			S	Sn	23 25 34.2	-0.4
PCYT	Pengchaiyu baz=16	1.48	11	P	Pn	23 25 15.9	-0.3
PCYT	baz=16			eS	Sn	23 25 36.4	+1.7
SNST	Tainan City baz=229	1.48	231	P	Pn	23 25 17.7	+1.4
SNST	baz=229			S	Sn	23 25 36.3	+1.5
CHN1	Nanshi baz=228	1.49	229	iP	Pn	23 25 17.1	+0.8
CHN1	baz=228			iS	Sn	23 25 36.9	+2.0
WSF	Szhu baz=258	1.49	249	eS	Sn	23 25 37.3	+2.4
SGST	Jiashian baz=223	1.52	225	P	Pn	23 25 17.6	+0.9
SGST	baz=223			S	Sn	23 25 37.5	+1.8
SLGT	Liugui baz=213	1.55	221	P	Pn	23 25 18.4	+1.4
SLGT	baz=213			S	Sn	23 25 38.5	+2.2
CHN8	Yiju baz=239	1.63	240	S	Sn	23 25 39.5	+1.3
ECL	Taimali baz=197	1.73	205	P	Pn	23 25 19.2	-0.3
ECL	baz=197			S	Sn	23 25 40.0	-0.6
IRIF	Iriomote-Funau	1.82	84	P	Pn	23 25 20.9	+0.2
IRIF				S	Sn	23 25 42.5	-0.3
HATJ	Hateruma jima	1.89	93	P	Pn	23 25 22.4	+0.8
HATJ				eS	Sn	23 25 45.4	+1.0
EAST	Anshuo baz=196	1.96	205	eP	Pn	23 25 23.6	+0.9
EAST	baz=196			eS	Sn	23 25 46.2	-0.1
JKRS	Kuro-shima	2.07	88	P	Pn	23 25 24.8	+0.8
JKRS				S	Sn	23 25 49.8	+1.0
SCZT	Fangliau baz=221	2.07	210	P	Pn	23 25 25.4	+1.3
SCZT	baz=221			S	Sn	23 25 50.5	+1.6
PNG	Penghu baz=252	2.09	254	eP	Pn	23 25 23.3	-1.1
PNG	baz=252			S	Sn	23 25 48.1	-1.3
PHUB	P'eng-hu baz=250	2.10	252	eS	Sn	23 25 47.7	-1.8
WDGT	Dungji baz=243	2.12	245	iP	Pn	23 25 24.6	0.0
WDGT	baz=243			eS	Sn	23 25 50.0	+0.1
LAY	Lan-yu baz=179	2.13	185	P	Pn	23 25 24.4	-0.5
LAY	baz=179			eS	Sn	23 25 48.7	-1.7
JIJ	Ishigaki jima	2.20	84	P	Pn	23 25 25.9	+0.1
JIJ				S	Sn	23 25 50.8	-1.1
WLCH	Liuqiu baz=226	2.21	215	eP	Pn	23 25 28.6	+2.7
PTTC	Pingtan baz=304	2.23	307	P	Pn	23 25 25.3	-0.9
PTTC	baz=304			S	Sn	23 25 50.1	-2.6
VWUC	VWUC baz=289	2.25	292	P	Pn	23 25 25.3	-1.1
VWUC	baz=289			S	Sn	23 25 51.2	-1.9
VCHM	Qimei baz=245	2.33	246	S	Sn	23 25 54.8	-0.4
JISG	Ishigakijimahi	2.38	79	P	Pn	23 25 28.3	+0.1
JISG				S	Sn	23 25 55.2	-1.1
TWK1	Hengchun baz=192	2.38	202	eP	Pn	23 25 28.9	+0.6
TWK1	baz=192			eS	Sn	23 25 57.1	+0.7
TWKBT	Hengchun baz=192	2.38	201	eP	Pn	23 25 29.0	+0.7
TWKBT	baz=192			eS	Sn	23 25 56.4	0.0
PTMZ	Houxiangcun baz=287	2.54	290	P	Pn	23 25 29.6	-0.9
PTMZ	baz=287			S	Sn	23 25 57.9	-2.4
JTJ	Tarama	2.73	80	P	Pn	23 25 33.7	+0.6
JTJ				S	Sn	23 26 05.1	0.0
LYJJ	Jianjiangzhen baz=331	2.97	323	eP	Pn	23 25 36.3	-0.1
LYJJ	baz=331			eS	Sn	23 26 09.3	-1.5
KNMB	Chin-men Tao baz=264	3.08	276	P	Pn	23 25 36.6	-1.2
KNMB	baz=264			eS	Sn	23 26 12.7	-0.7
XPSS	Dashiqiu baz=332	3.09	333	P	Pn	23 25 37.2	-0.7
XPSS	baz=332			S	Sn	23 26 11.0	-2.6
MHZQ	Yeshan baz=304	3.12	309	P	Pn	23 25 37.0	-1.4
MHZQ	baz=304			S	Sn	23 26 11.8	-2.7
AXDP	Jialang baz=269	3.51	283	eP	Pn	23 25 43.1	-0.7
AXDP	baz=269			eS	Sn	23 26 24.2	+0.1
ZPLA	Ao Xicun baz=263	3.66	267	P	Pn	23 25 45.0	-0.8
ZPLA	baz=263			eS	Sn	23 26 26.5	-1.2

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*IDC **16** 23:32:56.6±2.3, 18°.37S×168°.15E, h0^{km}, mb3.8/5, mb1 4.1/5, mb1mx3.9/22, mbtmp3.8/5, MS4.4/2, Ms1 4.4/2, ms1mx3.9/34, Error ellipse: s-maj=109.4km s-min=27.7km az=153.0*

*NEIC **16** 23:33:05.5±1.0, 18°.7S±0°.1×168°.2E±0°.1, h84^{km}±10^{km}, mb4.3/13, Error ellipse: s-maj=24.0km s-min=13.5km az=142.0*

ISC 16 23:33:00.4±0.7**, 18°.8S**±0°.1×**168°.09E**±0°.10**, h29^{km}, n25, σ1^{s}.75**/22**, mb4.3**/11**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.64	205		Pb	23 34 01.9	-2.3
MSVF	Nonsavu	9.52	85	Pn	Pn	23 35 18.5	+2.8
ARMA	Armidale	18.92	229	P	Pn	23 37 22.4	+2.5
NIUE	Niue	20.80	94	P	P	23 37 38.7	-0.8
QRZ	Quartz Range	22.32	171	P	P	23 37 57.3	+1.6
THZ	Tophouse	23.30	171	P	P	23 38 04.3	-1.6
OXZ	Oxford	24.72	173	P	P	23 38 20.0	+0.9
OXZ	comp=Z,15nm,1.1s			IAmb	IAmb	23 38 22.9	
WR0	Warramunga Arr	31.65	262	P	P	23 39 21.9	+0.5
WR0	comp=Z,5.1nm,1.1s			IAmb	IAmb	23 39 41.9	
WB0	Warramunga Arr	31.80	263	P	P	23 39 23.5	+0.8
WRA	Warramunga Arr comp=Z,0.5nm,0.8s,baz=86,slow=9.0,SNR=4.8	31.84	262	P	P	23 39 23.4	+0.3
AS31	Alice Springs	32.20	255	P	P	23 39 27.2	+1.0
ASAR	Alice Springs comp=Z,1.9nm,0.6s,baz=83,slow=8.6,SNR=32	32.20	255	P	P	23 39 27.9	+1.8
ASAR	Alice Springs	32.20	255	P	P	23 39 27.7	+1.5
FITZ	Fitzroy Crossi	40.21	264	P	P	23 40 35.3	+0.6
FITZ	comp=Z,5.5nm,0.9s			IAmb	IAmb	23 40 47.4	
NWAO	Narrogin (SRO)	47.47	242	P	P	23 41 33.5	+0.6
NWAO	comp=Z,5.0nm,0.9s			IAmb	IAmb	23 41 44.5	
LEM	Lembang comp=Z,300nm,18.1s,baz=300,slow=39	59.91	273	LR	LR	00 11 58.7	
KLR	Kul'dur comp=Z,256nm,21.7s,baz=6.0,slow=31	74.99	336	LR	LR	00 11 17.3	
RSO	Redoubt South	85.04	18	P	P	23 45 30.9	-2.2
SONM	Songino Array comp=Z,0.2nm,0.4s,baz=126,slow=4.2,SNR=4.2	86.19	324	P	P	23 45 40.1	+1.0
SKT	Skwentna	86.61	18	P	P	23 45 38.2	-2.5
SKT	comp=Z,3.4nm,1.2s			IAmb	IAmb	23 45 52.4	
MLY	Manley	89.23	16	P	P	23 45 52.0	-1.2
MLY	comp=Z,1.7nm,1.1s			IAmb	IAmb	23 45 55.7	
NVAR	Mina Array Bea comp=Z,0.3nm,0.7s,baz=224,slow=7.6,SNR=3.3	89.30	49	P	P	23 45 53.0	-1.3
NVAR	Mina Array Bea	89.30	49	P	P	23 45 51.5	-2.8
CCB	Clear Creek Bu	89.74	17		pP	23 46 14.5	+11
ILAR	Eielson Array comp=Z,0.4nm,0.8s,baz=224,slow=5.2,SNR=3.5	90.10	18	P	P	23 45 56.4	-0.8

IDC ***16*** *23:34:36.8±1.2, 20°.39S×70°.41W, h0^{km}, mb3.8/5, mb1 3.9/7, mb1mx3.7/44, mbtmp3.8/7, ML3.5/2, Error ellipse: s-maj=33.1km s-min=25.2km az=87.0*
NEIC ***16*** *23:34:39.8±2.7, 20°.29S±0°.06×70°.64W±0°.09, h21^{km}±2^{km}, mb4.0/5, Error ellipse: s-maj=12.4km s-min=6.7km az=115.0*
ISC 16 23:34:37.9±0.8**, 20°.30S**±0°.08×**70°.68W**±0°.08**, h10^{km}, n33,** σ**1^{s}48**/26**, mb4.0**/5**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB11	IPOC Station P	1.10	61	Pn	Pg	23 34 59.7	+0.6
PB11					Sb	23 35 14.8	+1.3
PB01	IPOC Station P	1.33	124	Pn	Pn	23 35 03.9	+1.2
GO01	Chusmiza	1.53	66	Pn	Pn	23 35 07.0	+1.4
GO01				Sn	Sb	23 35 27.5	+1.3
PB04	IPOC Station P	2.08	166		Pn	23 35 08.7	-4.3
LVC	Limon Verde	2.82	145	Pn	Pn	23 35 19.3	-4.1
	3.3nm,0.3s,baz=358,slow=7.7,SNR=9.8						
LVC				Lg	Lg	23 36 05.7	
	12nm,0.3s,baz=9.9,slow=6.0,SNR=5.3						
LVC	Limon Verde	2.82	145		Pn	23 35 22.1	-1.3
PB10	IPOC Station P	3.20	178	Pn	Pn	23 35 29.1	+0.9
LPAZ	La Paz	4.67	32	Pn	Pn	23 35 52.6	+3.6
	1.2nm,0.3s,baz=242,slow=9.6,SNR=12						
LPAZ	La Paz	4.67	32		Pn	23 35 47.6	-1.4
LPAZ	La Paz	4.67	32		Pn	23 35 47.8	-1.2
GO02	Mina Guanaco	4.94	169	Pn	Pn	23 35 53.1	+0.7
GO03	Copiap	7.27	177	Pn	Pn	23 36 25.0	+0.7
SIV	San Ignacio	10.09	66	Pn	Pn	23 37 01.5	-1.4
	1.1nm,0.3s,baz=276,slow=8.8,SNR=13						
PLCA	Paso Flores	20.36	180	P	P	23 39 14.0	-0.7
	2.2nm,1.1s,baz=41,slow=11,SNR=1.3						
PLCA	Paso Flores	20.36	180	IAmb	IAmb	23 39 14.2	
	comp=Z,2.1nm,1.0s						
BDFB	Brasilia	22.04	82	P	P	23 39 29.6	-3.4
	comp=Z,0.9nm,0.5s,baz=233,slow=20,SNR=1.8						
PTGA	Pitinga	22.09	30	P	P	23 39 32.1	-1.3
	comp=Z,2.5nm,0.5s,baz=227,slow=15,SNR=6.9						
PTGA	Pitinga	22.09	30	P	P	23 39 31.8	-1.6
PTGA				IAmb	IAmb	23 39 38.1	
	comp=Z,6.1nm,1.1s						
Y14A	Wickenburg	67.34	323	P	P	23 45 34.2	+0.9
D53A	Lac Vacive, Po	67.37	355	P	P	23 45 32.2	-0.9
BATG	Bathurst New B	67.39	3	P	P	23 45 33.4	+0.1
BATG				IAmb	IAmb	23 45 46.5	
	comp=Z,1.1nm,0.7s						
TORD	Torodi Ar. Bea	78.52	71	P	P	23 46 40.0	0.0
	comp=Z,1.7nm,0.5s,baz=249,slow=5.2,SNR=24						
TORD	Torodi Ar. Bea	78.52	71	P	P	23 46 39.6	-0.4
YKA	Yellowknife Ar	89.52	341	P	P	23 47 34.9	0.0
	comp=Z,0.6nm,0.7s,baz=137,slow=5.2,SNR=13						
H11S2	WAKE ISLAND Hy	126.08	278	T	T	02 13 05.6	
	baz=101,slow=74,SNR=36						
H11S1	WAKE ISLAND Hy	126.09	279	T	T	02 13 06.4	
	baz=101,slow=74,SNR=19						
H11S3	WAKE ISLAND Hy	126.10	278	T	T	02 13 07.0	
	baz=101,slow=74,SNR=16						
H11N3	WAKE ISLAND Hy	126.14	280	T	T	02 12 13.6	
	baz=102,slow=74,SNR=11						
H11N2	WAKE ISLAND Hy	126.15	280	T	T	02 12 21.5	
	baz=102,slow=74,SNR=12						
H11N1	WAKE ISLAND Hy	126.15	280	T	T	02 12 16.0	
	baz=102,slow=74,SNR=7.2						
MKAR	Makanchi Array	145.59	34	PKPbc	PKPdf	23 54 17.6	+1.1
	comp=Z,2.5nm,0.7s,baz=327,slow=3.9,SNR=33						
SONM	Songino Array	152.43	4	PKPbc	PKPbc	23 54 36.0	+1.5
	comp=Z,1.0nm,0.7s,baz=316,slow=2.2,SNR=6.5						
SONM	Songino Array	152.43	4	PKPbc	PKPbc	23 54 35.3	+0.9

BEO ***16*** *23:44:36.9±1.0, 40°.96N×24°.50E, h21^{km}±3^{km}, ML2.7/4*
SOF ***16*** *23:44:36.9, 41°.15N×24°.47E, h12^{km}, MD3.0*
ATH ***16*** *23:44:37.5, 41°.14N×24°.43E, h28^{km}±1^{km}, ML2.7/16, Error ellipse: s-maj=1.6km s-min=0.9km az=189.0*
THE ***16*** *23:44:38.6, 41°.15N×24°.44E, h14^{km}, ML2.7/9, Error ellipse: s-maj=0.7km s-min=0.4km az=13.0*
ISK ***16*** *23:44:40.8, 41°.25N×24°.70E, h5^{km}, ML2.8/10*
DDA ***16*** *23:44:40.2, 40°.98N×24°.61E, h4^{km}±3^{km}, ML2.3*
ISC 16 23:44:38.3±0.8**, 41°.16N**±0°.02×**24°.46E**±0°.01**, h16^{km}**±5^{km}**, n103,** σ**0^{s}90**/142**, 6C-6D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAVA	Kavala	0.17	167	P	Pg	23 44 42.8	+0.2
KAVA				S	Sg	23 44 45.6	+0.1
KAVA	Kavala	0.17	167	P	Pg	23 44 42.9	+0.2
KAVA				S	Sg	23 44 45.8	+0.2
KAVA				AML	AML	23 44 45.8	
	comp=E,30212µm,0.2s						
KAVA				AML	AML	23 44 46.3	
	comp=N,25254µm,0.3s						
KVLA	Kavala	0.23	195	P	Pg	23 44 43.8	+0.2
KVLA				S	Sg	23 44 47.4	+0.3
KVLA				AML	AML	23 44 47.4	
	comp=E,8866µm,0.1s						
KVLA				AML	AML	23 44 47.5	
	comp=N,7426µm,0.2s						
NVR	Nevrokopi	0.49	293	P	Pg	23 44 48.2	+0.1
NVR				S	Sg	23 44 54.8	0.0
	comp=N,952nm,0.2s						
NVR	Nevrokopi	0.49	293	P	Pg	23 44 47.2	-0.9
NVR				S	Sg	23 44 54.5	-0.3
NVR				AML	AML	23 44 56.7	
	comp=N,1539µm,0.1s						
NVR				AML	AML	23 44 57.2	
	comp=E,1674µm,0.2s						
RZN	Rozhen	0.56	20	*i* P	Pg	23 44 48.9	-0.6
THAS	Thassos island	0.59	161	P	Pg	23 44 49.9	0.0
THAS	Thassos island	0.59	161	P	Pg	23 44 49.9	0.0
THAS				S	Sb	23 44 58.1	-0.1
THAS				AML	AML	23 45 00.7	
	comp=E,6026µm,0.3s						
THAS				AML	AML	23 45 01.0	
	comp=N,7772µm,0.3s						
SRS	Serrai	0.66	266	P	Pg	23 44 50.7	-0.6
SRS	Serrai	0.66	266	P	Pg	23 44 50.7	-0.6
SRS				AML	AML	23 45 03.8	
	comp=E,2962µm,0.2s						
SRS				AML	AML	23 45 04.3	
	comp=N,1822µm,0.1s						
MMB	Musomiste	0.70	308	*i* P	Pg	23 44 50.6	-1.4
RDO	Rodhopi	0.81	91	P	Pg	23 44 54.4	+0.3
RDO				S	Sg	23 45 05.7	+0.9
	comp=N,500nm,0.2s						
RDO	Rodhopi	0.81	91	P	Pb	23 44 53.2	-0.8
RDO				S	Sg	23 45 05.5	+0.7
RDO				AML	AML	23 45 07.3	
	comp=N,930µm,0.2s						
RDO				AML	AML	23 45 08.8	
	comp=E,1049µm,0.2s						
RDO	Rodhopi	0.81	91	PG	Pb	23 44 53.9	-0.1
RDO				SG	Sb	23 45 04.6	-0.1
KDZ	Kurdzhali	0.87	55	*i* P	Pb	23 44 53.2	-1.7
KDZ	Kurdzhali	0.87	55	PG	Pb	23 44 53.3	-1.7
KDZ				SG	Sb	23 45 03.5	-2.8
OUR	Ouranopolis	0.90	204	P	Pb	23 44 55.5	-0.1
OUR				S	Sg	23 45 08.0	+0.3
	comp=E,1µm,0.3s						
OUR	Ouranopolis	0.90	204	P	Pb	23 44 55.4	-0.2
OUR				S	Sb	23 45 07.5	+0.2
OUR				AML	AML	23 45 09.8	
	comp=E,2378µm,0.5s						
OUR				AML	AML	23 45 10.1	
	comp=N,2267µm,0.2s						
SOH	Sokhos	0.91	248	P	Pb	23 44 55.3	-0.3
SOH				S	Sg	23 45 08.1	+0.3
	comp=N,465nm,0.5s						
SOH	Sokhos	0.91	248	P	Pb	23 44 55.0	-0.6
SOH				S	Sb	23 45 07.1	-0.4
SOH				AML	AML	23 45 09.1	
	comp=E,742µm,0.2s						
SOH				AML	AML	23 45 10.3	
	comp=N,902µm,0.3s						
PLD	Plovdiv	0.96	11	*i* P	Pb	23 44 56.8	+0.3
SMTH	Samothraki Isl	1.06	130	P	Pn	23 44 58.7	+0.1
SMTH				S	Sn	23 45 13.8	+0.8
	comp=N,205nm,0.4s						
SMTH	Samothraki Isl	1.06	130	P	Pn	23 44 58.6	+0.1
SMTH				S	Sn	23 45 13.4	+0.4
SMTH				AML	AML	23 45 14.7	
	comp=N,386µm,0.2s						
SMTH				AML	AML	23 45 15.1	
	comp=E,338µm,0.2s						
HORT	Hortiatis	1.18	242	P	Pn	23 44 59.8	-0.3
HORT				S	Sb	23 45 15.8	+0.5
	comp=E,210nm,0.2s						
HORT	Hortiatis	1.18	242	P	Pn	23 44 59.7	-0.5
HORT				S	Sb	23 45 15.3	-0.1
HORT				AML	AML	23 45 18.0	
	comp=N,405µm,0.2s						
HORT				AML	AML	23 45 18.6	
	comp=E,473µm,0.2s						
KNT	Kendrikon	1.18	271	P	Pn	23 45 00.0	-0.1
KNT				S	Sn	23 45 16.0	+0.1
	comp=E,580nm,0.3s						
KNT	Kendrikon	1.18	271	P	Pn	23 45 00.2	0.0
KNT				S	Sb	23 45 15.9	+0.5
KNT				AML	AML	23 45 17.1	
	comp=N,1339µm,0.3s						
KNT				AML	AML	23 45 18.0	
	comp=E,949µm,0.4s						
DIM	Dimitrovgrad	1.20	42	*i* P	Pb	23 45 00.7	+0.1
ALN	Alexandroupoli	1.23	102	P	Pn	23 45 00.9	+0.2
ALN				S	Sg	23 45 18.1	+0.1
	comp=E,92nm,0.6s						
ALN	Alexandroupoli	1.23	102	P	Pn	23 45 00.9	+0.2
ALN				S	Sg	23 45 18.3	+0.4
ALN				AML	AML	23 45 22.1	
	comp=N,151µm,0.3s						
ALN				AML	AML	23 45 28.2	
	comp=E,183µm,0.4s						
ALN	Alexandroupoli	1.23	102	PN	Pb	23 45 01.2	+0.2
ALN				SN	Sg	23 45 18.6	+0.6
KKB	Krupnik	1.25	305	*i* P	Pn	23 45 00.6	-0.5
THE	Thessaloniki	1.25	245	P	Pn	23 45 00.8	-0.3
THE				S	Sn	23 45 17.9	+0.3
THE				AML	AML	23 45 20.8	
	comp=E,350µm,0.3s						
THE				AML	AML	23 45 21.0	
	comp=N,253µm,0.4s						
ENEZ	Enez	1.35	108	PN	Pg	23 45 04.9	+0.6
ENEZ				SN	Sg	23 45 23.0	+1.1
PAIG	Paliouri	1.37	206	P	Pn	23 45 02.0	-0.7
PAIG	Paliouri	1.37	206	P	Pn	23 45 02.0	-0.7
PAIG				AML	AML	23 45 24.3	
	comp=N,264µm,0.4s						
PAIG				AML	AML	23 45 24.7	
	comp=E,292µm,0.4s						
LIA	Limnos Island	1.38	156	P	Pn	23 45 02.6	-0.2
LIA				S	Sb	23 45 21.5	+0.6
	comp=E,522nm,0.4s						
LIA	Limnos Island	1.38	156	P	Pn	23 45 02.5	-0.3
LIA				AML	AML	23 45 24.4	
	comp=N,983µm,0.4s						
LIA				AML	AML	23 45 25.6	
	comp=E,1110µm,0.4s						
PGB	Panagyurishte	1.40	351	*i* P	Pn	23 45 03.2	-0.1
VAY	Valandovo	1.44	277	*e*Pg	Pn	23 45 03.9	+0.3
VAY				*e*Sg	Sg	23 45 24.4	-0.3
VAY	Valandovo	1.44	277	*e*Pn	Pb	23 45 04.6	0.0
GRG	Griva	1.57	263	P	Pn	23 45 05.3	-0.2
GRG	Griva	1.57	263	P	Pn	23 45 05.1	-0.4
GRG				AML	AML	23 45 33.2	
	comp=N,220µm,0.3s						
GRG				AML	AML	23 45 33.2	
	comp=E,202µm,0.4s						
ERIK	Erikli-Kesan	1.63	107	PN	Pg	23 45 09.2	-0.4
UKOP	Uzunkopru-Edir	1.64	90	PN	Pg	23 45 09.2	-0.6
GELI	Tayfur-Gelibol	1.71	116	PN	Pg	23 45 10.9	-0.2
KESN	Edirne-Kesan	1.71	101	*i* P	Pn	23 45 07.2	-0.5
KESN				*i* S	Sg	23 45 32.5	-1.0
KESN				IAML		23 45 36.0	
	comp=N,134nm,0.5s						
KESN				IAML		23 45 37.0	
	comp=E,120nm,0.4s						
VTS	Vitosha	1.72	328	*e*Sn	Sb	23 45 30.7	-0.3
VTS	Vitosha	1.72	328	⇑P	Pn	23 45 08.2	+0.5
VTS				⇑S	Sn	23 45 28.7	-0.7
VTS	Vitosha	1.72	328	*i* P	Pn	23 45 08.1	+0.5
BOZC	Bozcaada	1.79	137	*i* P	Pn	23 45 08.8	+0.4
BOZC				*i* S	Sn	23 45 30.4	-0.4
BOZC				IAML		23 45 31.0	
	comp=E,26nm,0.2s						
BOZC				IAML		23 45 31.0	
	comp=N,22nm,0.5s						
STIP	Stip	1.79	288	*i* Pn	Pn	23 45 06.8	-1.7
LIT	Litokhoron	1.84	235	P	Pn	23 45 07.7	-1.5
EDRB	Edirne	1.84	67	PN	Pb	23 45 11.8	+0.2
BOSS	Bosilegrad	1.99	313	*e*Pn	Pn	23 45 12.0	+0.7
BOSS				*e*Sn	Sb	23 45 38.4	-0.3
AOS	Alonnisos	2.04	193	P	Pn	23 45 11.0	-0.9
XOR	Xorichti	2.04	209	P	Pn	23 45 11.2	-0.8
ELND	Elena	2.06	30	⇓S	Sb	23 45 40.0	-0.5
KIRK	Kırklareli	2.07	72	*i* P	Pb	23 45 14.2	-1.4
KIRK				*i* S	Sb	23 45 42.2	+1.1
KIRK				IAML		23 45 46.0	
	comp=N,27nm,0.9s						
NEO	Neokhori	2.08	208	P	Pn	23 45 11.8	-0.8
RKY	Sarkoy-Tekirda	2.11	102	PN	Pb	23 45 16.2	0.0
BAYC	CANAKKALE_Bayr	2.13	131	*i* P	Pn	23 45 14.0	+0.8
BAYC				*i* S	Sn	23 45 38.3	-1.0
BAYC				IAML		23 45 40.0	
	comp=E,27nm,0.4s						
SKIA	Skiathos	2.13	201	P	Pn	23 45 12.3	-1.0
KZN	Kozani	2.22	248	P	Pn	23 45 14.7	+0.2
SIGR	SIGRI	2.22	151	P	Pn	23 45 14.9	+0.5
PLVB	Pleven	2.23	3	⇑P	Pn	23 45 15.2	+0.8
PLVB				⇑S	Sn	23 45 41.3	-0.3
KRBG	Karabiga-Canak	2.29	109	PN	Pb	23 45 18.6	-0.5
PRK	Paraskevi	2.36	144	P	Pn	23 45 17.7	+1.4
FNA	Florina	2.37	262	P	Pn	23 45 16.7	+0.2
MRMT	Marmara Adasi	2.44	102	PN	Pb	23 45 21.2	-0.6
THL	Klokotos Trika	2.46	230	P	Pn	23 45 17.0	-0.6
ZAPS	Zavoj	2.51	328	*e*Pn	Pn	23 45 19.1	+0.7
ZAPS				*e*Sn	Sb	23 45 51.6	-2.0
AYVA	Ayvalik	2.52	137	*i* P	Pn	23 45 19.4	+0.9
AYVA				*i* S	Sn	23 45 47.3	-1.5
AYVA				IAML		23 45 51.0	
	comp=N,24nm,0.4s						
MRKA	Markates	2.54	196	P	Pn	23 45 18.2	-0.6
BARS	Barje	2.58	311	*e*Pn	Pn	23 45 20.2	+0.9
BARS	Barje	2.58	311	*e*Pn	Pg	23 45 31.5	+3.8
BARS				*e*Sn	Sn	23 45 50.6	+0.4
AGG	Agios Georgios	2.69	218	P	Pn	23 45 20.5	-0.4
NEST	Nestorio	2.70	255	P	Pn	23 45 20.7	-0.4
MAKR	Makrakomi, Fth	2.79	221	P	Pn	23 45 22.6	+0.3
SLVT	Silivri	2.83	87	PN	Pb	23 45 25.9	-2.5
ZEDA	zmir-Bergama	2.97	137	*i* P	Pn	23 45 25.9	+1.1
ZEDA				IAML		23 45 59.0	
	comp=E,7.4nm,1.0s						
EVR	Evrytania	3.03	223	P	Pn	23 45 25.1	-0.6
CHOS	Chios island	3.03	156	P	Pn	23 45 25.7	+0.1
CTKS	Kestanelik-??a	3.05	87	PN	Pb	23 45 29.5	-2.7
STEP	BALIKESIR_Sava	3.06	125	*i* P	Pb	23 45 33.4	+1.0
STEP				IAML		23 46 14.0	
	comp=E,13nm,0.8s						
STEP				IAML		23 46 18.0	
	comp=N,21nm,0.9s						
VIL2	Platees	3.09	198	P	Pn	23 45 26.3	-0.1
ZAGS	Zajecar	3.12	329	*e*Pn	Pn	23 45 27.6	+0.8
PTL	Penteli	3.14	189	P	Pn	23 45 28.4	+1.3
SELS	Selova	3.23	311	*e*Pn	Pn	23 45 28.1	-0.1
SELS				*e*Sn	Sn	23 46 08.1	+1.8
ANX	Ano Chora	3.23	218	P	Pn	23 45 28.5	+0.1
URLA	Izmir	3.25	149	*i* P	Pn	23 45 28.1	-0.4
DEMI	Demirci	3.89	122	*i* P	Pn	23 45 38.4	+0.9
ARR	Arges	4.21	2	⇓P	Pn	23 45 42.8	+1.1
VOIR		4.29	6	⇓P	Pn	23 45 44.2	+1.2
GDZ	Gediz	4.37	117	*i* P	Pn	23 45 45.5	+1.4
AYDN	Tasoluk	4.38	142	*i* P	Pn	23 45 45.1	+0.9
GZR	Gura Zlata	4.41	344	⇓P	Pn	23 45 44.5	0.0
DIVS	Divibare	4.42	313	*e*Pn	Pn	23 45 44.7	+0.1
BORA	Eskisehir	4.74	104	*i* P	Pn	23 45 50.0	+0.9
BORA				*i* S	Sn	23 46 41.8	-2.0
BZS	Buzias	4.91	336	⇓P	Pn	23 45 51.5	+0.1
PLOR	Plostina	4.95	18	⇓P	Pn	23 45 54.0	+2.1
VRI	Vrincioaia	4.98	19	⇑P	Pn	23 45 53.6	+1.2
TESR	Tescani	5.58	16	⇑P	Pn	23 46 01.7	+1.2

IDC ***16*** *23:45:42.1±50.0, 16°.46S×176°.99W, h0^{km}, mb4.0/3, mb1 4.2/3, mb1mx3.7/32, mbtmp4.0/3, Error ellipse: s-maj=925.3km s-min=172.9km az=78.0*
NEIC ***16*** *23:46:13.7±1.1, 19°.4S±0°.1×176°.25W±0°.03, h310^{km}±10^{km}, mb4.4/12, Error ellipse: s-maj=18.6km s-min=4.8km az=178.0*
ISC 16 23:46:13.0±0.8**, 19°.3S**±0°.1×**176°.3W**±0°.1**, h300^{km}, n21,** σ**1^{s}49**/20**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	10.00	188	Pn	Pn	23 48 30.3	-0.8
DZM	Mont Dzumac	16.42	257	P	P	23 49 45.6	-0.2
DZM				IAmb	IAmb	23 49 59.5	
	comp=Z,18nm,1.1s						
MSWZ	Moikau Station	23.18	196	P	P	23 50 53.2	-0.6
BHW	Baring Head	23.28	197	P	P	23 50 53.2	-1.4
NNZ	Nelson	23.55	200	P	P	23 50 56.2	-0.8
PPT	Papeete	25.36	90	P	P	23 51 13.4	-0.3
FOZ	Fox Glacier	26.83	203	P	P	23 51 25.8	-0.5
FOZ				IAmb	IAmb	23 51 29.6	
	comp=Z,25nm,1.0s						
STKA	Stephens Creek	39.78	243	P	P	23 53 22.9	+5.2
	comp=Z,1.0nm,0.4s,baz=54,slow=8.7,SNR=3.8						
WR0	Warramunga Arr	46.21	261	P	P	23 54 08.7	-0.4
WB0	Warramunga Arr	46.38	261	P	P	23 54 09.1	-1.2
WRAB	Tennant Creek	46.39	261	P	P	23 54 10.9	+0.5
WRAB				IAmb	IAmb	23 54 21.0	
	comp=Z,24nm,0.7s						
AS31	Alice Springs	46.39	255	P	P	23 54 10.6	+0.2
ASAR	Alice Springs	46.40	255	P	P	23 54 11.4	+1.0
	comp=Z,4.3nm,0.5s,baz=89,slow=8.3,SNR=52						
ASAR	Alice Springs	46.40	255	P	P	23 54 10.4	-0.1
WRA	Warramunga Arr	46.40	261	P	P	23 54 09.5	-1.0
	comp=Z,0.7nm,0.8s,baz=91,slow=7.6,SNR=7.6						
FORT	Forrest	51.27	246	P	P	23 54 43.3	-3.8
FORT				IAmb	IAmb	23 54 46.3	
	comp=Z,17nm,1.0s						
CASY	Casey	65.72	205	P	P	23 56 29.4	+3.7
RSO	Redoubt South	81.75	12	P	P	23 57 58.6	+0.2
HIN	Hinchinbrook I	83.02	14	P	P	23 58 03.9	-0.8
HAWA	Hanford	83.03	36	P	P	23 58 04.6	-0.5
HAWA				IAmb	IAmb	23 58 07.5	
	comp=Z,0.8nm,0.7s						
KNK	Knik Glacier	83.49	13	P	P	23 58 07.8	+0.7
KNK				IAmb	IAmb	23 58 12.2	
	comp=Z,11nm,1.2s						

IDC ***16*** *23:49:22.9±2.7, 31°.68N×49°.43E, h0^{km}, mb3.9/3, mb1 3.9/5, mb1mx3.3/56, mbtmp3.8/5, ML3.2/2, Error ellipse: s-maj=64.6km s-min=31.9km az=143.0*
TEH ***16*** *23:49:24.1, 31°.70N×49°.46E, h8^{km}, ML3.5*
THR ***16*** *23:49:27.6±0.3, 31°.93N×49°.63E, h17^{km}±5^{km}, ML3.2*
ISC 16 23:49:24.5±0.8**, 31°.74N**±0°.05×**49°.45E**±0°.03**, h10^{km}, n35,** σ**1^{s}63**/37**, mb4.1**/3**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGR	Shooshtar-Gavs	0.66	304	*e*Pg	Pn	23 49 41.5	+1.5
SHGR				*e*Sg	Sn	23 49 51.6	+1.2
SHGR	Shooshtar-Gavs	0.66	304	*e*Pg	Pn	23 49 41.5	+1.5
AHWZ	Ahwaz	0.80	240	*e*Pg	Pg	23 49 39.5	-0.4
JHBN	Jahan bin	1.15	64	*e*Pg	Pg	23 49 45.8	-0.8
JHBN				*e*Sg	Sn	23 50 03.3	+0.4
JHBN				*e*		23 50 06.0	
ROKH	ROKH	1.48	65	*e*Pn	Pg	23 49 52.9	-0.1
ROKH				*e*		23 50 17.9	
IPIR	Pirpir	1.55	52	*e*Pn	Pb	23 49 53.5	0.0
IPIR				*e*		23 50 18.7	
IBRJ	Brojen	1.55	83	*e*Pn	Pg	23 49 54.9	+0.5
KLNJ	Kolanjah	1.97	111	*e*Pn	Pb	23 50 00.3	-0.5
KLNJ				*e*		23 50 33.4	
IKMR	Kamar-syah	1.99	333	*e*Pn	Pb	23 50 01.1	+0.3
IKMR				*e*		23 50 31.1	
KHMZ	Khomeyn	2.04	12	IAML		23 50 34.4	
	comp=E,184nm,0.6s						
IKFM	Kafar-mosalman	2.23	323	*e*Pn	Pb	23 50 04.2	-0.8
IKFM				*e*		23 50 52.7	
BDRS	Dareh Seyedi	2.26	348	*e*Pn	Pb	23 50 05.1	-0.6
IGAR	Gharneh	2.30	73	*e*		23 50 39.6	
IGAR				*e*Pn	Pb	23 50 04.9	-1.4
IDOB	Doab	2.31	333	*e*Pn	Pb	23 50 05.1	-1.3
IKLH	Kolahrood	2.39	48	*e*		23 50 49.9	
IKLH				*e*Pn	Pb	23 50 06.0	-1.9
IRAM	Ramesheh	2.50	88	*e*Pn	Pb	23 50 07.4	-2.3
HSAM	Samen	2.57	344	*e*Pn	Pb	23 50 09.9	-1.0
QAM	Ghamsar	2.62	39	*e*Pn	Pb	23 50 10.4	-1.4
IZEF	Zefreh	2.70	64	*e*Pn	Pb	23 50 10.7	-2.4
ASAO	Ashtian	2.84	10	*e*Pn	Pn	23 50 11.6	+1.3
ASAO				*e*Sg	Sb	23 50 50.1	-0.4
ASAO	Ashtian	2.84	10	*e*Pn	Pn	23 50 11.6	+1.3
IKOM	Komasi	2.92	327	*e*Pn	Pb	23 50 14.3	-2.6
HAGD	Aghdareh	3.09	355	*e*Pn	Pb	23 50 17.0	-2.7
HAGD				*e*		23 51 16.8	
IQOM	Qom	3.38	23	*e*Pn	Pn	23 50 20.5	+2.8
IQOM				*e*		23 50 29.6	
IRAZ	Razeghan	3.68	6	*e*Pn	Pn	23 50 24.6	+2.9
IDHR	Dehrash	3.91	320	*e*Pn	Pn	23 50 27.7	+2.8
QABG	Abgarm-Qazvin	3.96	2	*e*Pn	Pn	23 50 27.4	+1.8
YZKH	Yazd	4.42	80	*e*Pn	Pn	23 50 33.7	+2.0
YZKH	Yazd	4.42	80	*e*Pn	Pn	23 50 33.7	+2.0
IMEH	Mehriz	4.42	93	*e*Pn	Pn	23 50 33.8	+1.8
GEYT	Alibeck	9.43	47	Pn	Pn	23 51 42.2	+1.8
	comp=E,0.7nm,0.3s,baz=251,slow=13,SNR=10						
BRTR	Keskin Array B	15.10	306	Pn	P	23 53 02.3	-1.0
	comp=E,0.0nm,0.3s,baz=127,slow=14,SNR=5.7						
FINES	FINESS Array B	33.39	340	P	P	23 56 02.6	-0.2
	comp=E,2.0nm,0.8s,baz=144,slow=10,SNR=5.4						
TORD	Torodi Ar. Bea	47.44	258	P	P	23 57 59.5	-0.1
	comp=E,1.2nm,0.7s,baz=53,slow=8.5,SNR=8.6						
YKA	Yellowknife Ar	85.22	353	P	P	00 02 00.6	-0.3
	comp=E,0.2nm,0.9s,baz=24,slow=3.3,SNR=4.4						

IDC 16 23:58:22.8±1.1**, 2°.82N**×**125°.46E, h0^{km}, mb3.6**/6**, mb1 3.7**/6**, mb1mx3.5**/36**, mbtmp3.6**/6**, Error ellipse: s-maj=147.1km s-min=18.0km az=67.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	24.24	159	P	P	00 03 41.2	-0.5
	1.0nm,0.6s,baz=339,slow=10,SNR=5.2						
ASAR	Alice Springs	27.58	163	P	P	00 04 12.0	+0.1
	0.5nm,0.6s,baz=348,slow=6.9,SNR=6.2						
STKA	Stephens Creek	37.76	157	P	P	00 05 41.1	+0.4
	2.5nm,0.9s,baz=339,slow=14,SNR=3.4						
SONM	Songino Array	47.77	343	P	P	00 07 02.5	+0.6
	0.4nm,0.6s,baz=158,slow=8.6,SNR=2.2						
MKAR	Makanchi Array	57.59	326	P	P	00 08 14.1	-0.4
	0.2nm,0.4s,baz=118,slow=8.3,SNR=8.0						
KURBB	Kurchatov Arra	61.83	328	P	P	00 08 43.2	-0.4
	0.3nm,0.5s,baz=130,slow=6.5,SNR=3.7						

JMA ***17*** *00:11:01.6±0.2, 42°.05N×142°.57E, h61^{km}±2^{km}, M3.8*
JMA Felt I J1.
IDC ***17*** *00:11:05.1±2.3, 42°.21N×142°.49E, h89^{km}±15^{km}, mb3.4/10, mb1 3.5/12, mb1mx3.3/44, mbtmp3.7/12, Error ellipse: s-maj=26.7km s-min=14.7km az=128.0*
ISC 17 00:11:01.3±0.8**, 42°.02N**±0°.06×**142°.56E**±0°.04**, h61^{km}**±7^{km}**, n41,** σ**0^{s}69**/42**, mb3.8**/10**, 6C-8D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNBK	Urakawa-nobuka	0.30	28	⇑P	Pn	00 11 11.5	0.0
JNBK				*e*S	Sn	00 11 19.1	+0.2
JSHD	Hidakashinhida	0.40	350	P	Pn	00 11 12.6	+0.3
JEM	Erimo	0.44	90	⇑P	Pn	00 11 13.2	+0.5
JTHR	Tokachihiroo	0.61	63	⇑P	Pn	00 11 14.8	+0.3
JTHR				*e*S	Sn	00 11 24.7	+0.5
JIAM	Iburiatsuma	0.77	322	⇓P	Pn	00 11 17.3	+0.9
JBT2	Biratori 2	0.78	349	⇓P	Pn	00 11 16.4	-0.1
JBT2				*e*S	Sn	00 11 27.7	0.0
JCH	Churui	0.84	44	⇑P	Pn	00 11 17.3	0.0
JCH				*e*S	Sn	00 11 29.2	+0.1
JFR	Furan	1.15	1	P	Pn	00 11 21.2	-0.1
JKB	Kayabe	1.15	264	⇓P	Pn	00 11 21.4	+0.1
JKB				*e*S	Sn	00 11 36.1	0.0
JEW	Eniwo	1.17	315	⇓P	Pn	00 11 21.8	+0.3
JNB	Noboribetsu	1.22	292	⇓P	Pn	00 11 21.6	-0.6
JNB				*e*S	Sn	00 11 37.2	-0.6
JOB	Onbets	1.29	46	⇑P	Pn	00 11 24.2	+1.0
JOT	Ohata	1.30	241	⇓P	Pn	00 11 23.6	+0.3
JOT				*e*S	Sn	00 11 39.8	+0.1

JAB	Ashibetsu	1.51	351	⇓P	Pn	00 11 26.5	+0.4
JISS	Ishikarishitsu	1.52	326	P	Pn	00 11 26.5	+0.3
JAR	Ashorobuto	1.56	34	⇑P	Pn	00 11 26.8	0.0
JAR				*e*S	Sn	00 11 46.2	+0.2
JYM2	Yakumo 2	1.64	274	⇓P	Pn	00 11 27.8	0.0
ASAJ	Asahikawa	2.10	1	P	Pn	00 11 34.9	+0.8
	39nm,0.3s,baz=196,slow=12,SNR=74						
ASAJ				S	Sn	00 12 00.2	+1.1
	18nm,0.3s,baz=75,slow=31,SNR=16						
MJAR	Matsushiro Arr	6.42	213	P	Pn	00 12 39.2	+5.9
	0.1nm,0.3s,baz=27,slow=11,SNR=3.8						
USRK	Ussuriysk Ar.	8.04	289	P	Pn	00 12 57.9	+2.6
	baz=86,slow=16,SNR=5.9						
KSRS	Korea Array	12.15	253	P	P	00 13 58.3	-3.7
	0.3nm,0.3s,baz=65,slow=14,SNR=6.4						
SEY	Seymchan	21.74	12	P	P	00 15 45.6	-1.6
	1.4nm,0.3s,baz=56,slow=5.9,SNR=4.0						
SONM	Songino Array	26.09	295	P	P	00 16 28.9	-0.3
	0.6nm,0.6s,baz=73,slow=8.5,SNR=7.3						
H11N2	WAKE ISLAND Hy	30.30	130	T	T	00 48 41.9	
	baz=324,slow=75,SNR=22						
H11N1	WAKE ISLAND Hy	30.31	130	T	T	00 48 47.3	
	baz=324,slow=75,SNR=20						
H11N3	WAKE ISLAND Hy	30.32	130	T	T	00 48 47.9	
	baz=324,slow=75,SNR=22						
H11S1	WAKE ISLAND Hy	31.16	131	T	T	00 49 53.8	
	baz=325,slow=76,SNR=21						
H11S3	WAKE ISLAND Hy	31.16	131	T	T	00 49 54.5	
	baz=325,slow=76,SNR=22						
H11S2	WAKE ISLAND Hy	31.18	131	T	T	00 49 53.9	
	baz=325,slow=76,SNR=20						
ZALV	Zalesovo Beam	39.38	308	P	P	00 18 24.2	-0.4
	1.6nm,0.6s,baz=90,slow=7.4,SNR=9.1						
MKAR	Makanchi Array	42.40	298	P	P	00 18 49.3	-0.3
	1.4nm,0.9s,baz=84,slow=9.4,SNR=11						
ILAR	Eielson Array	44.86	35	P	P	00 19 09.2	+0.2
	0.2nm,0.4s,baz=259,slow=5.4,SNR=5.6						
RAMN	Ramite	47.71	270	*e*P	P	00 19 32.6	+0.4
	6.2nm,0.6s						
GUN	Gumba	47.72	272	*e*P	P	00 19 33.0	+0.6
	13nm,0.4s						
PKI	Pulchoki	48.26	272	*e*P	P	00 19 36.7	+0.2
DANN	Dangsing	49.06	274	*e*P	P	00 19 43.4	+0.7
RES	Resolute Bay	57.56	15	P	P	00 20 43.1	-0.9
	1.0nm,0.5s,baz=284,slow=3.7,SNR=7.0						
YKA	Yellowknife Ar	59.08	32	P	P	00 20 55.2	+0.5
	0.2nm,0.8s,baz=282,slow=3.5,SNR=3.7						
FINES	FINESS Array B	64.84	332	P	P	00 21 32.8	-0.5
	2.3nm,0.7s,baz=55,slow=7.2,SNR=9.5						
NOA	NORSAR Array B	69.94	337	P	P	00 22 05.4	-0.3
	1.9nm,0.9s,baz=35,slow=6.1,SNR=3.4						
BRTR	Keskin Array B	76.22	311	P	P	00 22 43.7	+0.5
	0.5nm,0.7s,baz=15,slow=5.1,SNR=3.6						

IDC ***17*** *00:12:09.2±0.5, 19°.85S×70°.55W, h0^{km}, mb4.6/18, mb1 4.7/21, mb1mx4.5/35, mbtmp4.6/21, ML4.3/3, Error ellipse: s-maj=18.0km s-min=12.7km az=72.0*
NEIC ***17*** *00:12:09.6±1.6, 20°.03S±0°.05×70°.68W±0°.04, h10^{km}±1^{km}, mb5.1/325, ML4.5(GUC), Error ellipse: s-maj=9.2km s-min=6.7km az=164.0*
GUC ***17*** *00:12:11.2±0.8, 19°.99S×70°.75W, h23^{km}±4^{km}, ML4.5*
BJI ***17*** *00:12:11.0±0.0, 20°.00S×70°.70W, h10^{km}, mB5.5/4, Ms5.5/5, Ms7 5.2/7*
VAO ***17*** *00:12:16.5±0.7, 19°.98S×70°.54W, h64^{km}±5^{km}, mb4.5*
ISC 17 00:12:11.4±1.1,**19°.98S**±0°.03×**70°.72W**±0°.04,**h19**^{km}±4^{km}, **n785,**σ**1**^{s}**.01**/743,**mb5.0**/165,**6C-6D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.68	56	⇓*i*P	Pb	00 12 24.1	-0.5
PSGC				*i* S	Sg	00 12 34.1	+0.2
PSGC				IAML		00 12 34.6	
	comp=N,39µm,0.2s						
TA01	Diego Aracena	0.77	139	⇑*i*P	Pb	00 12 25.1	-1.1
TA01				*e*S	Sn	00 12 38.7	+0.5
TA01				IAML		00 12 40.7	
	comp=E,27µm,0.6s						
PB11	IPOC Station P	1.02	78	⇑*i*P	Pb	00 12 29.9	-0.6
PB11				*i* S	Sn	00 12 44.3	-0.4
PB11				IAML		00 12 46.0	
	comp=N,34µm,0.5s						
PB11	IPOC Station P	1.02	78		Pb	00 12 30.0	-0.6
PB11				Sn	Sn	00 12 44.3	-0.4
PB12	IPOC Station P	1.41	15	⇑*i*P	Pn	00 12 35.4	-0.7
PB12				*e*S	Sn	00 12 54.3	+0.2
PB12				IAML		00 13 04.7	
	comp=N,17µm,0.5s						
GO01	Chusmiza	1.47	78	⇑*i*P	Pn	00 12 37.5	+0.3
GO01				*i* S	Sb	00 12 57.4	+0.7
GO01				IAML		00 12 59.0	
	comp=N,26µm,0.3s						
GO01	Chusmiza	1.47	78		Pn	00 12 37.5	+0.3
PB08	IPOC Station P	1.48	96	⇑*i*P	Pn	00 12 37.4	+0.1
PB08				*i* S	Sb	00 12 57.3	+0.3
PB08				IAML		00 13 07.4	
	comp=N,5µm,0.6s						
PB02	IPOC Station P	1.54	150	*e*P	Pn	00 12 37.3	-0.6
PB02				*e*S	Sb	00 12 58.5	0.0
PB02				IAML		00 13 02.3	
	comp=E,14µm,0.3s						
PB01	IPOC Station P	1.56	133	⇓*i*P	Pn	00 12 38.0	-0.3
PB01				*e*S	Sb	00 12 59.2	0.0
PB01				IAML		00 13 08.0	
	comp=E,7µm,0.7s						
PB01	IPOC Station P	1.56	133		Pn	00 12 37.9	-0.3
AP01	Chacalluta	1.64	12	⇓*i*P	Pn	00 12 39.5	+0.3
AP01				*e*S	Sb	00 13 01.0	-0.3
AP01				IAML		00 13 09.6	
	comp=N,21µm,0.3s						
PB07	IPOC Station P	1.90	156	⇓*i*P	Pn	00 12 42.6	-0.3
PB07				*e*S	Sb	00 13 09.3	+0.3
PB07				IAML		00 13 13.6	
	comp=E,4µm,0.5s						
PB09	IPOC Station P	2.27	143	⇓*i*P	Pn	00 12 49.7	+1.7
PB09				*e*S	Sb	00 13 19.4	-0.2
PB04	IPOC Station P	2.40	167		Pn	00 12 48.7	-1.1
LVC	Limon Verde	3.11	148	Pn	Pn	00 13 01.3	+1.5
	comp=E,36nm,0.3s,baz=357,slow=6.9,SNR=36						
LVC				Sn	Sn	00 13 40.3	+3.7
	comp=E,38nm,0.3s,baz=350,slow=15,SNR=5.9						
LVC	Limon Verde	3.11	148	Pn	Pn	00 13 00.3	+0.6
LVC	Limon Verde	3.11	148	*e*P	Pn	00 13 01.2	+1.5
PB10	IPOC Station P	3.52	178		Pn	00 13 02.7	-2.3
LPAZ	La Paz	4.42	34	Pn	Pn	00 13 22.3	+4.3
	comp=E,8.4nm,0.3s,baz=231,slow=3.3,SNR=31						
LPAZ	La Paz	4.42	34		Pn	00 13 19.3	+1.3
LPAZ	La Paz	4.42	34	Pg	Pg	00 13 36.4	+0.2
LPAZ	La Paz	4.42	34	*e*P	Pn	00 13 22.2	+4.3
GO02	Mina Guanaco	5.26	169		Pn	00 13 27.6	-1.7
GO03	Copiap	7.59	177		Pn	00 13 58.3	-2.8
NNA	Nana	9.89	323	Pn	Pn	00 14 32.1	-0.5
	comp=E,1.9nm,0.3s,baz=138,slow=15,SNR=3.8						
NNA	Nana	9.89	323	Pn	Pn	00 14 33.1	+0.5
SIV	San Ignacio	10.00	68	Pn	Pn	00 14 33.5	-0.6
	comp=E,4.1nm,0.3s,baz=276,slow=9.2,SNR=52						
GO04	Tololo Observa	10.15	180	Pn	Pn	00 14 33.9	-2.4
CFA	Coronel Fontan	11.79	170	Pn	Pn	00 14 55.6	-3.0
	comp=E,0.4nm,0.3s,baz=319,slow=17,SNR=3.2						
ROC1	El Roble	12.95	181		Pn	00 15 13.1	-1.5
PEL	Peldehue	13.11	180		Pn	00 15 15.2	-1.4
SAML	Samuel	13.17	35	Pn	Pn	00 15 17.5	0.0
SAML	Samuel	13.17	35	*e*P	Pn	00 15 16.7	-0.8
CPUP	Villa Florida	13.83	120	*e*P	Pn	00 15 28.3	+1.8
AQDB	Aquidauana	14.11	95	*e*P	Pn	00 15 32.2	+2.0
SALV	Santo Antonio	14.86	77	*e*P	Pn	00 15 40.9	+0.3
GO05	Huala	15.01	184	Pn	Pn	00 15 40.2	-2.3
C2SB	Chapadao do Su	16.91	89	*e*P	Pn	00 16 06.8	-0.3
CLDB	Colider	16.98	60	*e*P	Pn	00 16 06.9	-1.1
TRCB	Terra Rica	17.07	103	*e*P	Pn	00 16 08.7	-0.4
PTGB	Pitanga	17.88	109	*e*P	P	00 16 19.5	-0.2
PCMB	Pacaembu	18.26	98	*e*P	Pn	00 16 22.6	-1.3
ITAB	Concordia	18.49	116	*e*P	P	00 16 25.9	-0.4
ARAG	Araguaiana, MT	18.49	80	*e*P	P	00 16 25.3	-1.2
ITRB	Iturama	19.15	93	*e*P	P	00 16 33.0	-0.8
GO06	Curarrehue	19.55	182	P	P	00 16 36.4	-1.6
FRTB	Fartura	19.94	103	*e*P	P	00 16 42.0	-0.3
CNLB	Canela	20.28	121	*e*P	P	00 16 45.8	-0.2
PLCA	Paso Flores	20.68	180	P	P	00 16 51.5	+1.2
	comp=E,23nm,0.9s,baz=18,slow=12,SNR=14						
PLCA	Paso Flores	20.68	180	P	P	00 16 50.0	-0.3
PLCA	Paso Flores	20.68	180	*e*P	P	00 16 51.2	+0.8
BB19B	Bebedouro	20.81	97	*e*P	P	00 16 50.5	-1.3
IPMB	Ipameri, GO	21.37	88	*e*P	P	00 16 57.2	-0.7
OTAV	Otavalo	21.48	338	*e*P	P	00 17 00.9	+1.4
OTAV	Otavalo	21.48	338	P	P	00 17 01.4	+1.9
OTAV	Otavalo	21.48	338	*e*P	P	00 17 01.3	+1.9
RCLB	Rio Claro- Sao	21.75	101	*e*P	P	00 17 00.5	-1.5
PTGA	Pitinga	21.84	30	P	P	00 17 00.8	-2.0
	comp=E,23nm,0.5s,baz=212,slow=12,SNR=25						
PTGA	Pitinga	21.84	30	P	P	00 17 01.1	-1.7
PTGA				IAmb	IAmb	00 17 05.1	
	comp=Z,28nm,0.6s						
PTGA	Pitinga	21.84	30	*e*P	P	00 17 01.9	-0.9
FLOC	Florencia	21.97	347	*e*P	P	00 17 04.9	+0.6
BDFB	Brasilia	22.03	82	P	P	00 17 03.1	-2.0
	comp=Z,2.1nm,0.5s,baz=259,slow=13,SNR=5.4						
BDFB	Brasilia	22.03	82	P	P	00 17 04.8	-0.3
CRUC	La Cruz	22.27	343	*e*P	P	00 17 13.8	+5.9
VAO	Valinhos	22.30	102	*e*P	P	00 17 06.6	-1.3
GARC	Garzon, Huila	22.52	347	*e*P	P	00 17 09.7	-0.8
SOTA	Rioblanco	22.73	345	*e*P	P	00 17 15.0	+2.1
BBAC	Balboa, Cauca	22.79	343	*e*P	P	00 17 14.3	+1.1
ORTC	Ortega, Tolima	24.16	349	*e*P	P	00 17 26.7	+0.2
BSCB	Bom Sucesso	24.32	97	*e*P	P	00 17 26.8	-1.3
YOTC	Yotoco, Valle	24.45	346	*e*P	P	00 17 30.6	+1.3
CHIC	Chingaza	24.64	353	*e*P	P	00 17 31.3	0.0
ROSC	El Rosal	24.92	351	P	P	00 17 35.5	+1.6
	comp=Z,12nm,0.5s,baz=174,slow=9.0,SNR=8.8						
ROSC	El Rosal	24.92	351	P	P	00 17 35.2	+1.3
SMTB	Santa Maria do	24.94	67	*e*P	P	00 17 32.2	-1.4
RREF	El Recreo	25.14	349	*e*P	P	00 17 38.0	+1.9
GUY2C	Guyana, Caldas	25.46	349	*e*P	P	00 17 39.8	+0.9
JANB	Januaria	25.64	83	*e*P	P	00 17 38.4	-1.7
SPBC	San Pablo de B	25.69	352	*e*P	P	00 17 40.8	+0.4
RUSC	La Rusia	25.82	355	*e*P	P	00 17 42.6	+0.5
CBOC	Ciudad Bolivar	26.21	348	*e*P	P	00 17 46.0	+0.7
PTBC	PUERTO BERRIO,	26.61	352	*e*P	P	00 17 46.9	-1.8
BSFB	Barra de Sao F	28.18	93	*e*P	P	00 18 01.5	-1.4
SDV	Santo Domingo	28.69	0	P	P	00 18 06.2	-1.3
	comp=Z,9.8nm,1.0s,baz=284,slow=6.1,SNR=5.4						
SDV	Santo Domingo	28.69	0	P	P	00 18 06.4	-1.1
SDV	Santo Domingo	28.69	0	*e*P	P	00 18 06.6	-0.9
SMLC	San Martn de	28.79	353	*e*P	P	00 18 05.9	-2.4
BCIP	Isla Barro Col	30.32	342	P	P	00 18 22.3	+0.4
BCIP				IAmb	IAmb	00 18 38.4	
	comp=Z,19nm,1.0s						
MDP	Montagnes des	30.61	37	P	P	00 18 24.3	-0.1
	comp=Z,8.3nm,0.5s,baz=216,slow=9.4,SNR=9.3						
NBPN	Ponto Novo - B	30.74	77	*e*P	P	00 18 24.4	-1.2
TOSP	Speyside	32.66	19	P	P	00 18 41.2	-1.2
NBLA	Lagarto - SE	32.91	79	*e*P	P	00 18 43.3	-1.4
GRGR	Grenville	33.13	16	P	P	00 18 46.8	+0.3
JTS	Las Juntas de	33.19	334	P	P	00 18 48.3	+1.2
NBMA	Muriti-CE	33.41	72	*e*P	P	00 18 47.8	-1.3
NBPB	Pedra_Branca-C	33.49	69	*e*P	P	00 18 48.8	-1.1
NBMO	Morrinhos-CE	34.20	65	*e*P	P	00 18 54.6	-1.3
NBAN	Anadia - AL	34.77	78	*e*P	P	00 18 59.7	-1.2
USHA	Ushuaia	34.84	178	P	P	00 19 02.3	+1.4
	comp=Z,8.1nm,0.9s,baz=28,slow=12,SNR=2.8						
NBLI	Livramento-PB	35.04	74	*e*P	P	00 19 02.2	-1.1
NBCL	Cascavel-CE	35.25	68	*e*P	P	00 19 03.9	-1.1
NBPA	Parau_RN	35.58	71	*e*P	P	00 19 06.7	-1.2
RCBR	Riachuelo	36.63	72	P	P	00 19 16.4	-0.5
RCBR				IAmb	IAmb	00 19 20.3	
	comp=Z,19nm,0.8s						
RCBR	Riachuelo	36.63	72	*e*P	P	00 19 16.9	0.0
NBPV	Pedro Velho	36.93	73	*e*P	P	00 19 18.8	-0.6
ICMP	Isla Caja de M	37.86	7	P	P	00 19 26.3	-0.8
MLPR	Magueyes Islan	37.89	6	IAmb	IAmb	00 19 28.9	
	comp=Z,40nm,0.9s						
SKI	Saint Kitts	37.90	12	P	P	00 19 26.9	-0.6
CRPR	Cabo Rojo, PR	37.92	6	P	P	00 19 26.4	-1.1
CRPR				IAmb	IAmb	00 19 27.4	
	comp=Z,51nm,0.9s						
OBIP	Obispado Ponce	38.00	6	P	P	00 19 26.7	-1.6
OBIP				IAmb	IAmb	00 19 28.2	
	comp=Z,28nm,0.9s						
PDPR	Patillas Dam,	38.04	7	IAmb	IAmb	00 19 28.6	
	comp=Z,36nm,1.0s						
SJG	San Juan	38.12	7	P	P	00 19 28.2	-1.1
SJG				IAmb	IAmb	00 19 28.4	
	comp=Z,34nm,0.9s						
BANI	BANI	38.14	1	P	P	00 19 27.5	-2.1
GCPR	Guaynabo City	38.32	7	IAmb	IAmb	00 19 29.8	
	comp=Z,28nm,0.8s						
CUPR	Culebra, Puert	38.42	8	P	P	00 19 29.8	-2.1
CUPR				IAmb	IAmb	00 19 30.0	
	comp=Z,24nm,0.8s						
STVI	Saint Thomas	38.51	9	P	P	00 19 31.5	-1.1
STVI				IAmb	IAmb	00 19 46.7	
	comp=Z,29nm,1.1s						
DR12	Loma Pena Alta	38.55	2	P	P	00 19 31.9	-1.1
MTDJ	Mount Denham	38.55	350	P	P	00 19 32.9	-0.2
MTDJ				IAmb	IAmb	00 19 34.3	
	comp=Z,31nm,0.9s						
TEIG	Tepich	43.50	336	P	P	00 20 14.4	+0.7
TEIG				IAmb	IAmb	00 20 15.1	
	comp=Z,29nm,0.7s						
656A	Willston	50.37	347	P	P	00 21 07.4	+0.2
BBSR	BB Station	52.37	6	P	P	00 21 21.8	-0.5
BBSR				IAmb	IAmb	00 21 33.6	
	comp=Z,31nm,1.1s						
255A	Hazlehurst	52.83	347	P	P	00 21 25.8	+0.2
NHSC	New Hope	53.56	350	P	P	00 21 31.0	0.0
Z58A	St. Stephen	53.72	351	P	P	00 21 32.6	+0.4
	baz=169						
Z57A	Bowman	53.83	350	P	P	00 21 33.9	+1.0
	baz=168						
Z56A	Williston	53.98	349	P	P	00 21 34.3	+0.3
	baz=168						
152A	Waverly Hall	54.04	345	IAmb	IAmb	00 21 35.0	
	comp=Z,14nm,0.9s						
346A	Big Creek Wild	54.15	340	P	P	00 21 34.7	-0.7
346A				IAmb	IAmb	00 21 54.1	
	comp=Z,22nm,0.8s						
Y60A	Bolivia	54.16	352	P	P	00 21 35.5	+0.1
Y60A	Bolivia	54.16	352	P	P	00 21 35.4	+0.1
	baz=171						
Y59A	Loris	54.23	352	P	P	00 21 35.2	-0.6
	baz=170						
Y58A	Scranton	54.26	351	P	P	00 21 36.6	+0.5
Y58A	Scranton	54.26	351	P	P	00 21 36.0	-0.1
	baz=170						
GOGA	Godfrey	54.47	347	P	P	00 21 37.4	-0.3
GOGA	Godfrey	54.47	347	P	P	00 21 37.9	+0.2
	baz=165						
Y57A	Sumter	54.48	350	P	P	00 21 37.8	+0.1
	baz=169						
Y55A	Saluda	54.66	349	P	P	00 21 39.3	+0.2
	baz=167						
X60A	Albert Glenn T	54.69	353	P	P	00 21 39.6	+0.4
	baz=172						
X59A	McDuffie Farm,	54.77	352	P	P	00 21 39.8	+0.1
	baz=171						
X58A	Rowland	54.85	351	P	P	00 21 40.5	+0.2
	baz=170						
JSC	Jenkinsville	54.89	349	P	P	00 21 40.8	+0.1
Z50A	Ashland	54.89	344	P	P	00 21 39.8	-1.0
Z50A				IAmb	IAmb	00 21 41.2	
	comp=Z,23nm,1.0s						
Z50A	Ashland	54.89	344	P	P	00 21 40.2	-0.6
	baz=162,SNR=5.4						
LRAL	Lakeview Retre	54.97	343	P	P	00 21 40.5	-0.8
LRAL	Lakeview Retre	54.97	343	P	P	00 21 40.6	-0.6
	baz=161						
HODGE	Hodges	55.02	348	P	P	00 21 41.2	-0.4
HODGE				IAmb	IAmb	00 21 42.0	
	comp=Z,18nm,1.1s						
Y52A	Lilburn	55.04	346	P	P	00 21 40.8	-0.9
	baz=165						
X56A	White Oak	55.05	350	P	P	00 21 42.0	+0.2
	baz=168						
BIRD	Birdtown, Kers	55.11	350	P	P	00 21 42.4	+0.2
BIRD				IAmb	IAmb	00 21 43.2	
	comp=Z,26nm,0.8s						
W60A	Pink Hill	55.13	353	P	P	00 21 42.7	+0.3
	baz=172						
X55A	Gracelyn & Ava	55.14	349	P	P	00 21 42.6	+0.1
	baz=168						
W61A	Ground Anchor	55.18	354	P	P	00 21 43.0	+0.3
	baz=173						
HKT	Hockley	55.22	333	P	P	00 21 43.6	+0.5
W58A	Raeford	55.29	351	P	P	00 21 44.1	+0.5
	baz=170,SNR=5.7						
W59A	Clinton	55.33	352	P	P	00 21 44.1	+0.3
	baz=171						
CNNC	Cliffs of the	55.34	353	P	P	00 21 44.3	+0.4
	baz=172						
X54A	Belton	55.35	348	P	P	00 21 44.0	0.0
	baz=167						
833A	Chaparral WMA,	55.45	329	P	P	00 21 45.0	+0.2
833A				IAmb	IAmb	00 21 46.3	
	comp=Z,16nm,0.8s						
833A	Chaparral WMA,	55.45	329	P	P	00 21 45.3	+0.5
	baz=147						
X53A	Estanollee	55.49	347	P	P	00 21 44.9	-0.1
	baz=166						
PAULI	Pauline	55.51	349	P	P	00 21 44.4	-0.7
PAULI				IAmb	IAmb	00 21 46.3	
	comp=Z,20nm,0.9s						
W57A	Gilead	55.53	351	P	P	00 21 45.0	-0.3
W57A				IAmb	IAmb	00 21 46.5	
	comp=Z,24nm,1.0s						
W57A	Gilead	55.53	351	P	P	00 21 45.1	-0.2
	baz=169						
W56A	Indian Trail	55.61	350	P	P	00 21 45.8	-0.1
	baz=169						
KMSC	Kings Mountain	55.74	349	P	P	00 21 46.7	-0.1
	baz=168						
ASCN	Ascension	55.75	86	P	P	00 21 46.0	-1.4
V60A	Jim Taylor Roa	55.79	354	P	P	00 21 47.2	+0.1
	baz=172						
W54A	Cherokee Point	55.84	349	P	P	00 21 47.8	+0.3
	baz=167						
X51A	Calhoun	55.89	346	P	P	00 21 47.4	-0.5
	baz=164						
V59A	Middlesex	55.90	353	P	P	00 21 48.4	+0.5
	baz=171						
V58A	Windy Hill, Pi	56.04	352	P	P	00 21 49.1	+0.2
	baz=170						
V57A	Coltrane Farms	56.22	351	P	P	00 21 50.4	+0.1
	baz=170						
V56A	Mocksville	56.26	350	P	P	00 21 50.8	+0.4
	baz=169						
U61A	Possum Corner	56.27	354	P	P	00 21 50.8	+0.3
	baz=174						
X48A	Hartselle	56.32	344	IAmb	IAmb	00 21 51.3	
	comp=Z,20nm,1.1s						
NATX	Nacogdoches	56.34	335	P	P	00 21 51.4	+0.2
	baz=153						
V55A	Taylorsville	56.41	350	P	P	00 21 50.3	-1.3
V55A				IAmb	IAmb	00 21 53.0	
	comp=Z,17nm,0.8s						
V55A	Taylorsville	56.41	350	P	P	00 21 51.8	+0.2
	baz=168						
U59A	Littleton	56.43	353	P	P	00 21 51.5	-0.2
U59A				IAmb	IAmb	00 21 52.6	
	comp=Z,17nm,0.8s						
U59A	Littleton	56.43	353	P	P	00 21 51.9	+0.3
	baz=172						
V54A	Nebo	56.47	349	P	P	00 21 51.9	-0.1
	baz=167,SNR=6.1						
U60A	Pendleton	56.48	354	P	P	00 21 52.3	+0.3
	baz=173						
U58A	Oxford	56.56	352	P	P	00 21 52.5	-0.1
	baz=171						
W50A	Signal Mountai	56.60	346	IAmb	IAmb	00 21 53.5	
	comp=Z,21nm,1.1s						
U57A	Blanch	56.70	352	P	P	00 21 53.9	+0.3
	baz=170						
435B	Jarrell	56.70	332	P	P	00 21 53.5	-0.2
435B				IAmb	IAmb	00 21 55.0	
	comp=Z,9.9nm,0.8s						
435B	Jarrell	56.70	332	P	P	00 21 53.9	+0.2
	baz=150						
TKL	Tuckaleechee C	56.70	347	P	P	00 21 52.8	-0.9
TKL				IAmb	IAmb	00 21 54.6	
	comp=Z,18nm,0.9s						
SWET	Sewanee	56.76	345	IAmb	IAmb	00 21 54.5	
	comp=Z,18nm,1.1s						
U56A	King	56.76	351	P	P	00 21 54.2	+0.1
U56A				IAmb	IAmb	00 21 55.8	
	comp=Z,23nm,0.7s						
U56A	King	56.76	351	P	P	00 21 54.6	+0.5
	baz=169						
V52A	Sevierville	56.84	348	P	P	00 21 53.8	-0.9
V52A				IAmb	IAmb	00 21 55.2	
	comp=Z,25nm,0.8s						
V51A	Loudon	56.97	347	P	P	00 21 53.9	-1.6
V51A				IAmb	IAmb	00 21 56.1	
	comp=Z,15nm,0.8s						
Z41A	Richland Creek	56.99	338	IAmb	IAmb	00 21 58.0	
	comp=Z,18nm,0.8s						
Z41A	Richland Creek	56.99	338	P	P	00 21 56.0	+0.3
	baz=155						
237A	Washetta, Mont	57.01	335	P	P	00 21 55.0	-0.9
T59A	Double "B" Far	57.01	353	P	P	00 21 56.1	+0.3
	baz=172,SNR=7.3						
U55A	TA2, Sparta	57.02	350	P	P	00 21 55.6	-0.4
	baz=168						
OXF	Oxford	57.04	342	P	P	00 21 55.5	-0.5
	baz=159						
T58A	Grand View Acr	57.10	353	P	P	00 21 56.9	+0.5
	baz=171,SNR=5.1						
U54A	Nelsons Funny	57.17	349	IAmb	IAmb	00 21 58.4	
	comp=Z,16nm,0.8s						
U54A	Nelsons Funny	57.17	349	P	P	00 21 57.0	-0.1
	baz=168						
T57A	Hurt	57.24	352	IAmb	IAmb	00 21 59.3	
	comp=Z,34nm,1.1s						
T57A	Hurt	57.24	352	P	P	00 21 57.8	+0.4
	baz=170						
T56A	Rocky Mt	57.38	351	P	P	00 21 59.0	+0.6
	baz=170						
JCT	Junction City	57.45	330	P	P	00 21 58.3	-0.7
JCT	Junction City	57.45	330	P	P	00 21 58.7	-0.4
	baz=147						
V48A	Smith Brothers	57.48	344	IAmb	IAmb	00 21 59.1	
	comp=Z,16nm,0.9s						
WLAR	White Oak Lake	57.48	338	P	P	00 22 00.2	+1.0
X43A	Marvell	57.49	340	P	P	00 21 59.6	+0.4
	baz=158						
TZTN	Tazewell	57.51	348	P	P	00 21 59.6	+0.2
	baz=166						
W45A	Hickory Valley	57.57	342	P	P	00 21 58.1	-1.8
W45A				IAmb	IAmb	00 22 00.3	
	comp=Z,31nm,0.9s						
T55A	Pulaski	57.58	350	P	P	00 22 00.5	+0.6
	baz=169,SNR=7.1						
BLA	Blacksburg	57.62	351	P	P	00 22 00.5	+0.3
	baz=169						
HPIG		57.64	323	P	P	00 22 00.3	-0.4
T54A	Tazewell	57.65	350	P	P	00 22 00.5	0.0
	baz=168						
WHTX	Lake Whitney,	57.68	333	P	P	00 22 01.0	+0.3
WHTX				IAmb	IAmb	00 22 15.9	
	comp=Z,20nm,0.9s						
WHTX	Lake Whitney,	57.68	333	P	P	00 22 00.9	+0.3
	baz=150						
CLTN	Cedars of Leba	57.69	345	P	P	00 22 00.0	-0.6
CLTN				IAmb	IAmb	00 22 01.5	
	comp=Z,14nm,0.9s						
S58A	Poland Farm, P	57.70	353	P	P	00 22 00.6	0.0
	baz=172						
T53A	Wise	57.74	349	P	P	00 22 00.9	-0.2
	baz=167						
S59A	Mechanicsville	57.77	354	P	P	00 22 00.8	-0.3
	baz=173						
Z38A	Mt. Pleasant	57.79	336	P	P	00 22 01.5	+0.1
T52A	Hallie	57.95	348	P	P	00 22 02.3	-0.1
	baz=166						
S56A	Natural Bridge	57.95	352	P	P	00 22 02.7	+0.2
	baz=170						
S57A	Dark Hollow, R	57.95	352	P	P	00 22 03.2	+0.8
S57A				IAmb	IAmb	00 22 04.0	
	comp=Z,26nm,1.0s						
S57A	Dark Hollow, R	57.95	352	P	P	00 22 03.0	+0.5
	baz=171,SNR=5.4						
U49A	Red Boiling Sp	57.97	346	IAmb	IAmb	00 22 02.4	
	comp=Z,11nm,0.8s						
T51A	Gray	58.00	348	P	P	00 22 02.5	-0.4
	baz=165						
R58B	Mineral	58.03	353	P	P	00 22 03.4	+0.5
R58B				IAmb	IAmb	00 22 04.1	
	comp=Z,13nm,0.8s						
R58B	Mineral	58.03	353	P	P	00 22 03.5	+0.5
	baz=172						
WVT	Waverly	58.11	344	P	P	00 22 02.8	-0.8
WVT				IAmb	IAmb	00 22 03.3	
	comp=Z,18nm,0.9s						
WVT	Waverly	58.11	344	P	P	00 22 02.5	-1.1
	baz=161						

X40A	Basin Creek Fa	58.11	339	P	P	00 22 03.6	0.0
	baz=155						
S55A	Lewisburg	58.18	351	P	P	00 22 04.4	+0.3
	baz=169						
R59A	King George, V	58.18	354	P	P	00 22 04.2	+0.2
	baz=173						
UALR	University of	58.21	339	P	P	00 22 03.7	-0.6
UALR				IAmb	IAmb	00 22 09.5	
	comp=Z,14nm,1.1s						
CBN	Corbin Frederi	58.21	354	P	P	00 22 04.0	-0.2
CBN				IAmb	IAmb	00 22 05.2	
	comp=Z,19nm,0.7s						
CBN	Corbin Frederi	58.21	354	P	P	00 22 03.9	-0.4
	baz=173						
T50A	Nancy	58.24	347	P	P	00 22 03.7	-0.8
	baz=164						
S54A	Dingess, Beckl	58.33	350	P	P	00 22 04.8	-0.3
S54A	Dingess, Beckl	58.33	350	P	P	00 22 04.7	-0.5
	baz=168						
S53A	Williamson	58.35	349	P	P	00 22 04.9	-0.4
	baz=167						
R58A	Rapidan	58.37	353	P	P	00 22 05.5	+0.2
	baz=172						
MIAR	Mount Ida	58.42	338	IAmb	IAmb	00 22 06.9	
	comp=Z,20nm,0.8s						
MIAR	Mount Ida	58.42	338	P	P	00 22 05.9	+0.1
	baz=155,SNR=12						
TXAR	Lajitas Array	58.43	326	P	P	00 22 06.4	+0.3
	comp=Z,3.9nm,0.7s,baz=149,slow=8.7,SNR=38						
R57A	Stanardsville	58.43	353	P	P	00 22 06.2	+0.4
	baz=171						
T49A	Edmonton	58.48	346	P	P	00 22 05.5	-0.6
	baz=164,SNR=9.5						
S52A	Salyersville	58.52	349	P	P	00 22 06.1	-0.3
	baz=166						
W41B	Gary Mavity, V	58.54	339	P	P	00 22 06.5	-0.1
W41B				IAmb	IAmb	00 22 07.4	
	comp=Z,13nm,1.1s						
W41B	Gary Mavity, V	58.54	339	P	P	00 22 06.5	-0.1
	baz=156						
S51A	Beattyville	58.58	348	P	P	00 22 06.5	-0.3
	baz=166						
R55A	Marlinton	58.62	351	P	P	00 22 08.1	+0.9
	baz=170						
R56A	Bull Pasture M	58.65	352	P	P	00 22 07.8	+0.4
	baz=170						
R54A	Victor	58.65	351	P	P	00 22 07.7	+0.3
	baz=169						
WHAR	Wooly Hollow	58.66	339	IAmb	IAmb	00 22 08.2	
	comp=Z,16nm,1.0s						
T47A	Sharon Grove	58.74	345	IAmb	IAmb	00 22 08.3	
	comp=Z,22nm,0.9s						
Z35A	Perchaven, San	58.76	334	P	P	00 22 08.1	0.0
Z35A				IAmb	IAmb	00 22 10.3	
	comp=Z,18nm,0.8s						
S50A	Richmond	58.78	347	P	P	00 22 07.8	-0.4
	baz=165,SNR=7.2						
Q60A	Greensboro	58.87	355	P	P	00 22 09.2	+0.4
	baz=174						
R53A	Hurricane	58.95	350	P	P	00 22 07.6	-1.9
R53A				IAmb	IAmb	00 22 15.6	
	comp=Z,16nm,0.9s						
R53A	Hurricane	58.95	350	P	P	00 22 09.6	+0.1
	baz=168						
Q58A	Fox Den Farm,	58.97	354	P	P	00 22 09.5	-0.1
	baz=172						
LCAR	Lake Charles	59.01	341	IAmb	IAmb	00 22 10.2	
	comp=Z,9.6nm,0.9s						
S49A	Springfield	59.07	347	P	P	00 22 09.1	-1.1
	baz=164						
R52A	Catlettsburg	59.08	349	P	P	00 22 09.6	-0.7
	baz=167						
W39A	Magazine	59.08	338	IAmb	IAmb	00 22 12.0	
	comp=Z,17nm,0.8s						
W39A	Magazine	59.08	338	P	P	00 22 11.0	+0.6
	baz=155,SNR=6.8						
Q57A	Strasburg	59.15	353	P	P	00 22 11.6	+0.8
	baz=172,SNR=7.4						
FCAR	Ozark Folk Cen	59.15	340	P	P	00 22 09.9	-1.0
FCAR				IAmb	IAmb	00 22 11.2	
	comp=Z,9.9nm,1.0s						
T45A	Paducah	59.16	343	P	P	00 22 10.2	-0.7
ABTX	Abilene, Hawle	59.18	332	IAmb	IAmb	00 22 12.4	
	comp=Z,21nm,0.8s						
ABTX	Abilene, Hawle	59.18	332	P	P	00 22 11.2	+0.1
	baz=148,SNR=5.3						
R51A	Hillsboro	59.22	348	P	P	00 22 10.8	-0.4
	baz=166						
Q56A	Snyder Ridge,	59.25	352	P	P	00 22 12.5	+1.1
	baz=171,SNR=9.9						
Q55A	Buckhannon	59.32	352	P	P	00 22 12.9	+0.9
	baz=170						
R50A	Paris	59.35	348	P	P	00 22 11.4	-0.8
	baz=165						
SDMD	Soldier’s Deli	59.36	354	P	P	00 22 12.3	+0.2
SDMD				IAmb	IAmb	00 22 14.0	
	comp=Z,9.7nm,1.0s						
Q53A	Leroy	59.40	350	P	P	00 22 12.8	+0.2
	baz=168						
Q54A	Coxs Mills	59.42	351	IAmb	IAmb	00 22 13.2	
	comp=Z,16nm,0.6s						
Q54A	Coxs Mills	59.42	351	P	P	00 22 12.5	-0.1
	baz=169						
P58A	Pank, Wackersv	59.48	354	P	P	00 22 13.4	+0.4
	baz=173						
P59A	Jarrettsville	59.52	355	P	P	00 22 13.9	+0.6
	baz=174						
R49A	Shelbyville	59.53	347	P	P	00 22 13.0	-0.5
	baz=164						
P57A	Homestead Farm	59.55	353	P	P	00 22 14.2	+0.7
P57A				IAmb	IAmb	00 22 15.6	
	comp=Z,11nm,0.7s						
P57A	Homestead Farm	59.55	353	P	P	00 22 14.2	+0.7
	baz=172						
Q52A	Bidwell	59.62	350	P	P	00 22 14.0	-0.1
	baz=167						
P60A	Greenville	59.66	356	P	P	00 22 14.1	-0.1
P60A				IAmb	IAmb	00 22 15.3	
	comp=Z,11nm,0.7s						
P60A	Greenville	59.66	356	P	P	00 22 14.3	+0.1
	baz=175						
P56A	Dayton Farm, R	59.66	353	P	P	00 22 14.9	+0.6
	baz=171						
WCI	Wyandotte Cave	59.72	346	P	P	00 22 13.8	-0.9
WCI				IAmb	IAmb	00 22 14.7	
	comp=Z,21nm,1.1s						
WCI	Wyandotte Cave	59.72	346	P	P	00 22 13.9	-0.8
	baz=163						
PSUB	Penn St. - Bra	59.76	356	P	P	00 22 14.7	-0.2
P55A	Reedsville	59.79	352	P	P	00 22 15.7	+0.4
	baz=170						
U40A	Yellville	59.82	339	IAmb	IAmb	00 22 16.1	
	comp=Z,12nm,0.8s						
U40A	Yellville	59.82	339	P	P	00 22 15.1	-0.4
	baz=156,SNR=6.8						
Q50A	Georgetown	59.82	348	P	P	00 22 15.2	-0.2
	baz=166						
O61A	Allentown	59.87	357	P	P	00 22 16.2	+0.5
	baz=176						
T42A	Van Buren	59.88	341	P	P	00 22 14.9	-0.9
T42A				IAmb	IAmb	00 22 15.8	
	comp=Z,8.5nm,0.9s						
Q51A	Peebles	59.88	349	IAmb	IAmb	00 22 16.6	
	comp=Z,11nm,0.8s						
Q51A	Peebles	59.88	349	P	P	00 22 15.9	+0.1
	baz=166						
MVL	Millersville	59.90	355	IAmb	IAmb	00 22 17.4	
	comp=Z,17nm,0.8s						
MCWV	Mont Chateau	59.94	352	P	P	00 22 16.5	+0.3
	baz=170						
S44A	Carbondale	59.96	343	IAmb	IAmb	00 22 16.8	
	comp=Z,18nm,0.8s						
P54A	Burton	59.97	351	P	P	00 22 16.6	+0.1
	baz=169						
P53A	Whipple	59.99	350	P	P	00 22 17.1	+0.6
P53A	Whipple	59.99	350	P	P	00 22 16.7	+0.1
	baz=168						
HHAR	Hobbs	60.12	338	IAmb	IAmb	00 22 17.8	
	comp=Z,10nm,0.9s						
O60A	Telford	60.15	356	P	P	00 22 17.5	0.0
	baz=175						
Q49A	Aurora	60.16	347	P	P	00 22 16.7	-1.0
	baz=165						
O59A	Robesonia	60.20	355	P	P	00 22 18.2	+0.3
	baz=174						
O57A	Amberson	60.23	354	P	P	00 22 18.3	+0.1
	baz=172						
P52A	Corning	60.26	350	P	P	00 22 17.6	-0.8
	baz=168						
Q48A	North Vernon	60.27	347	P	P	00 22 17.3	-1.1
	baz=164						
P51A	Williamsport	60.27	349	P	P	00 22 17.6	-0.9
	baz=167						
MGMO	Mountain Grove	60.35	340	IAmb	IAmb	00 22 19.8	
	comp=Z,12nm,1.0s						
O56A	Blue Knob Stat	60.38	353	P	P	00 22 20.1	+0.8
	baz=172,SNR=6.1						
O55A	Ligonier	60.41	352	P	P	00 22 20.0	+0.6
	baz=171,SNR=8.2						
LUPA	Lehigh Univers	60.42	356	P	P	00 22 19.4	-0.1
TUL1	Leonard	60.45	337	P	P	00 22 19.8	0.0
	baz=153,SNR=7.2						
BRNJ	Basking Ridge	60.46	357	P	P	00 22 19.3	-0.4
BRNJ				IAmb	IAmb	00 22 21.3	
	comp=Z,14nm,0.7s						
N61A	South Mountain	60.51	357	P	P	00 22 20.4	+0.3
	baz=176						
O54A	Avella	60.53	352	IAmb	IAmb	00 22 20.7	
	comp=Z,8.9nm,0.7s						
O54A	Avella	60.53	352	P	P	00 22 19.6	-0.7
	baz=170						
P50A	Jamestown	60.53	348	P	P	00 22 19.2	-1.0
	baz=166						
WMOK	Wichita Mounta	60.61	334	P	P	00 22 20.0	-0.9
	baz=150,SNR=5.3						
P49A	Miami Univ. Ec	60.63	348	P	P	00 22 20.1	-0.9
	baz=165						
SSPA	Standing Stone	60.67	354	P	P	00 22 21.5	+0.3
	baz=172						
N60A	Cedar Hill Far	60.68	356	P	P	00 22 21.4	+0.2
	baz=175						
O52A	Adamsville	60.68	350	P	P	00 22 20.9	-0.3
	baz=168						
P48A	Milroy	60.71	347	P	P	00 22 20.0	-1.5
	baz=164						
O53A	New Philadelph	60.71	351	P	P	00 22 21.3	-0.2
	baz=169						
N58A	Sunbury	60.77	355	P	P	00 22 22.3	+0.5
	baz=174						
N59A	State Game Lan	60.77	356	P	P	00 22 21.7	-0.2
	baz=174						
O51A	Pataskala	60.84	350	P	P	00 22 22.0	-0.3
	baz=167						
CCM	Cathedral Cave	60.87	342	P	P	00 22 22.2	-0.4
CCM				IAmb	IAmb	00 22 23.1	
	comp=Z,19nm,1.1s						
CCM	Cathedral Cave	60.87	342	P	P	00 22 22.4	-0.2
	baz=158						
N55A	Marion Center	60.94	353	P	P	00 22 23.9	+0.8
	baz=171,SNR=15						
ACSO	Alum Creek Sta	60.98	349	P	P	00 22 22.7	-0.7
	baz=167						
N56A	West Decatur	60.99	353	P	P	00 22 24.1	+0.6
	baz=172,SNR=5.8						
O50A	Cable	61.02	349	P	P	00 22 22.9	-0.7
	baz=166						
Q44A	Meyer Farm, Va	61.03	344	P	P	00 22 22.2	-1.5
Q44A				IAmb	IAmb	00 22 23.5	
	comp=Z,16nm,0.8s						
M60A	Port Jervis	61.10	357	P	P	00 22 24.5	+0.4
	baz=176						
M62A	Hamden	61.14	358	P	P	00 22 24.4	+0.1
	baz=178						
S39A	Bolivar	61.19	340	IAmb	IAmb	00 22 25.5	
	comp=Z,17nm,0.8s						
O49A	Covington	61.19	348	P	P	00 22 23.1	-1.7
O49A				IAmb	IAmb	00 22 24.3	
	comp=Z,11nm,0.8s						
O49A	Covington	61.19	348	P	P	00 22 23.5	-1.2
	baz=165						
MNTX	Cornudas Mount	61.20	326	IAmb	IAmb	00 22 25.8	
	comp=Z,8.2nm,0.7s						
MNTX	Cornudas Mount	61.20	326	P	P	00 22 24.7	-0.3
	baz=142,SNR=15						
N53A	Lisbon	61.20	351	P	P	00 22 24.6	-0.2
N53A				IAmb	IAmb	00 22 25.7	
	comp=Z,12nm,0.8s						
N53A	Lisbon	61.20	351	P	P	00 22 24.7	-0.1
	baz=169						
N54A	Moraine State	61.24	352	P	P	00 22 25.6	+0.5
	baz=170,SNR=5.9						
P46A	Rosedale	61.26	346	P	P	00 22 23.5	-1.7
P46A				IAmb	IAmb	00 22 24.4	
	comp=Z,13nm,0.9s						
M58A	Price’s Panora	61.27	355	P	P	00 22 26.0	+0.7
	baz=174,SNR=5.3						
M57A	Sunshine Farm,	61.30	354	IAmb	IAmb	00 22 26.9	
	comp=Z,11nm,0.6s						
M57A	Sunshine Farm,	61.30	354	P	P	00 22 25.9	+0.5
	baz=173						
N52A	McGinn’s Farm,	61.34	351	P	P	00 22 25.3	-0.4
	baz=168						
M59A	Waymart	61.37	356	P	P	00 22 26.2	+0.2
	baz=175						
O48A	Farmland	61.42	347	P	P	00 22 25.4	-0.9
	baz=164						
L63A	North Scituate	61.54	359	P	P	00 22 27.6	+0.6
	baz=179,SNR=5.5						
N50A	Nevada	61.54	349	P	P	00 22 26.5	-0.6
	baz=167						
M56A	Emporium	61.54	354	P	P	00 22 27.7	+0.6
	baz=172,SNR=6.8						
N51A	Ashland	61.55	350	P	P	00 22 26.2	-0.9
N51A				IAmb	IAmb	00 22 27.3	
	comp=Z,14nm,0.7s						
N51A	Ashland	61.55	350	P	P	00 22 26.6	-0.6
	baz=168						
M55A	Ridgway	61.59	353	P	P	00 22 28.0	+0.6
	baz=171,SNR=9.7						
L64A	Middleborough	61.60	360	P	P	00 22 27.5	+0.1
	baz=180						
T35A	Sooner Cattle	61.61	337	P	P	00 22 27.2	-0.5
T35A				IAmb	IAmb	00 22 29.4	
	comp=Z,18nm,0.9s						
M54A	Oil Creek Stat	61.74	352	P	P	00 22 28.7	+0.3
	baz=170,SNR=8.3						
MSTX	Muleshoe	61.74	330	IAmb	IAmb	00 22 30.2	
	comp=Z,19nm,1.0s						
MSTX	Muleshoe	61.74	330	P	P	00 22 29.0	+0.3
	baz=146						
L60A	Shokan	61.74	357	P	P	00 22 28.7	+0.3
	baz=176						
M53A	WI Miller and	61.80	352	P	P	00 22 28.8	-0.1
	baz=169,SNR=5.3						
N49A	Columbus Grove	61.87	348	P	P	00 22 28.8	-0.5
	baz=166,SNR=13						
L58A	Harry Jones Me	61.89	356	P	P	00 22 30.3	+0.8
	baz=174,SNR=6.4						
L61A	Hillsdale 1, H	61.92	358	P	P	00 22 29.4	-0.2
	baz=177						
M51A	Elyria	61.92	350	P	P	00 22 29.3	-0.3
	baz=168						
L57A	Andrews Acres	61.93	355	P	P	00 22 30.1	+0.3
	baz=173						
SFIN	Lafayette	61.96	346	P	P	00 22 28.4	-1.5
	baz=163,SNR=6.2						
N48A	Decatur	61.97	348	P	P	00 22 29.2	-0.8
	baz=165						
L59A	Walton	61.99	356	P	P	00 22 29.7	-0.4
L59A	Walton	61.99	356	P	P	00 22 30.9	+0.8
	baz=175,SNR=6.9						
AMTX	Amarillo	61.99	331	P	P	00 22 29.5	-0.9
AMTX	Amarillo	61.99	331	P	P	00 22 29.8	-0.6
	baz=147						
M52A	Chesterland	62.00	351	P	P	00 22 29.9	-0.3
	baz=169,SNR=5.5						
VNA3	Neumayer Olymp	62.05	161	P	P	00 22 32.9	+2.7
BINY	Binghamton	62.06	356	P	P	00 22 31.3	+0.7
	baz=174,SNR=8.1						
L56A	Greenwood	62.13	354	P	P	00 22 30.8	-0.3
L56A	Greenwood	62.13	354	P	P	00 22 31.4	+0.3
	baz=173,SNR=6.0						
N47A	Urbana	62.13	347	IAmb	IAmb	00 22 30.8	
	comp=Z,16nm,0.8s						
N47A	Urbana	62.13	347	P	P	00 22 30.0	-1.0
	baz=164						
M50A	Fremont	62.13	350	P	P	00 22 30.1	-0.9
M50A	Fremont	62.13	350	P	P	00 22 30.8	-0.3
	baz=167						
L61B	Northampton	62.14	358	P	P	00 22 31.3	+0.2
	baz=178						
HRV	Adam Dziewonsk	62.18	359	P	P	00 22 32.3	+1.0
HRV	Adam Dziewonsk	62.18	359	P	P	00 22 31.8	+0.5
	baz=179						
L53A	Girard	62.25	352	P	P	00 22 31.9	0.0
	baz=170,SNR=5.8						
L55A	Hinsdale	62.26	354	P	P	00 22 32.4	+0.4
	baz=172,SNR=9.3						
HSIG		62.30	320	P	P	00 22 32.7	+0.2
M49A	Liberty Center	62.37	349	P	P	00 22 32.0	-0.6
	baz=166,SNR=11						
ERPA	Erie	62.38	352	P	P	00 22 32.7	0.0
	baz=170						
L54A	Sinclairville	62.41	353	P	P	00 22 33.5	+0.6
	baz=171,SNR=20						
M48A	Edgerton	62.52	348	IAmb	IAmb	00 22 33.6	
	comp=Z,16nm,0.8s						
M48A	Edgerton	62.52	348	P	P	00 22 32.5	-1.1
	baz=165						
K59A	Cooperstown	62.56	357	P	P	00 22 34.6	+0.7
	baz=176,SNR=8.7						
M47A	Cromwell	62.58	347	P	P	00 22 33.2	-0.8
	baz=164						
K58A	Earlville	62.59	356	P	P	00 22 34.7	+0.6
	baz=175,SNR=7.2						
K57A	Scipio Center	62.63	355	P	P	00 22 34.6	+0.2
	baz=174						
VNA2	Neumayer--Watz	62.64	161	P	P	00 22 35.6	+1.4
	baz=296,slow=5.5						
HDIL	Hopedale	62.66	344	P	P	00 22 33.9	-0.7
	baz=160						
K56A	Middlesex	62.66	355	P	P	00 22 34.5	-0.1
	baz=173						
K54A	Basiliko Farm,	62.71	353	P	P	00 22 35.4	+0.5
	baz=172,SNR=9.9						
K55A	Perry	62.76	354	P	P	00 22 35.5	+0.2
	baz=172,SNR=6.7						
J62A	Henniker	62.90	359	P	P	00 22 36.5	+0.4
	baz=179						
L48A	N Adams	62.91	349	P	P	00 22 35.4	-0.9
	baz=166,SNR=6.2						
L49A	Milan	62.95	349	P	P	00 22 36.2	-0.3
	baz=166						
J60A	Lant Hill Farm	62.96	358	P	P	00 22 37.2	+0.6
	baz=177						
P38A	Dawn	63.01	340	IAmb	IAmb	00 22 37.5	
	comp=Z,13nm,0.8s						
J61A	Chester	63.03	358	P	P	00 22 38.1	+1.1
	baz=178						
319A	Douglas	63.06	323	P	P	00 22 37.7	0.0
L47A	Sherwood	63.09	348	P	P	00 22 36.4	-1.0
	baz=165,SNR=6.3						
ACCN	Adirondack Com	63.11	358	P	P	00 22 37.8	+0.2
AAM	Ann Arbor	63.11	349	P	P	00 22 36.5	-1.1
AAM				IAmb	IAmb	00 22 37.0	
	comp=Z,13nm,1.1s						
121A	Cookes Peak, D	63.12	325	IAmb	IAmb	00 22 40.5	
	comp=Z,8.7nm,0.8s						
121A	Cookes Peak, D	63.12	325	P	P	00 22 38.7	+0.6
	baz=141						
K52A	Tillsonburg	63.12	352	P	P	00 22 37.5	-0.2
	baz=170						
J58A	Remsen	63.17	356	IAmb	IAmb	00 22 41.0	
	comp=Z,9.0nm,0.9s						
J58A	Remsen	63.17	356	P	P	00 22 38.1	+0.1
	baz=175						
K51A	Iona Station	63.18	351	P	P	00 22 37.4	-0.6
	baz=169						
J56A	Wolcott	63.20	355	P	P	00 22 38.0	0.0
	baz=174						
N41A	Harden Midland	63.22	343	IAmb	IAmb	00 22 38.3	
	comp=Z,16nm,0.8s						
J59A	Piesco	63.23	357	IAmb	IAmb	00 22 40.1	
	comp=Z,21nm,0.9s						
J59A	Piesco	63.23	357	P	P	00 22 38.7	+0.3
	baz=176,SNR=6.3						
MEDO	Medina	63.23	354	P	P	00 22 37.6	-0.7
MEDO				IAmb	IAmb	00 22 39.4	
	comp=Z,20nm,0.9s						
J57A	Williamstown	63.26	356	IAmb	IAmb	00 22 39.8	
	comp=Z,19nm,0.8s						
J57A	Williamstown	63.26	356	P	P	00 22 38.5	-0.1
	baz=174,SNR=6.5						
J55A	Hilton	63.27	354	P	P	00 22 38.7	+0.1
	baz=172						
J54A	Appleton	63.36	354	P	P	00 22 38.5	-0.7
J54A	Appleton	63.36	354	P	P	00 22 39.1	0.0
	baz=172						
K50A	Casco	63.40	350	P	P	00 22 38.3	-1.2
K50A	Casco	63.40	350	P	P	00 22 38.6	-0.9
	baz=168						
I58A	Old Forge	63.48	357	P	P	00 22 40.5	+0.4
	baz=176,SNR=9.6						
I59A	Olmsteadville	63.53	357	P	P	00 22 40.9	+0.6
	baz=177,SNR=5.3						
J52A	Paris	63.55	352	P	P	00 22 40.3	-0.2
	baz=170,SNR=14						
I60A	Shoreham	63.55	358	P	P	00 22 41.2	+0.8
	baz=177,SNR=5.6						
KSU1	Kansas State U	63.58	338	P	P	00 22 40.4	-0.3
	baz=153						
I61A	Oroboro, Fairl	63.61	359	P	P	00 22 41.7	+0.8
	baz=178						
K48A	Perry	63.68	349	P	P	00 22 40.4	-0.9
	baz=166,SNR=8.9						
K47A	Vermontville	63.72	348	P	P	00 22 40.4	-1.1
	baz=165						
NCB	Newcomb	63.72	357	P	P	00 22 42.0	+0.4
NCB				IAmb	IAmb	00 22 52.3	
	comp=Z,13nm,1.1s						
R32A	Long Quarter,	63.76	336	P	P	00 22 41.6	-0.5
I57A	Carthage	63.77	356	P	P	00 22 42.1	+0.3
	baz=175						
PECO	Prince Edward	63.86	355	P	P	00 22 42.9	+0.4
PECO				IAmb	IAmb	00 22 43.8	
	comp=Z,20nm,0.9s						
K46A	Dorr	63.88	348	P	P	00 22 41.1	-1.6
	baz=164						
LBNH	Lisbon	63.92	359	P	P	00 22 43.2	+0.4
	baz=179						
I53A	Kortright Cn E	64.01	353	P	P	00 22 43.1	-0.4
	baz=171						
J49A	Marlette	64.05	350	P	P	00 22 42.7	-1.1
	baz=167						
J48A	Bridge Port	64.10	349	P	P	00 22 43.3	-0.8
	baz=166,SNR=8.3						
H58A	Gabriels	64.16	357	P	P	00 22 44.9	+0.4
	baz=176,SNR=5.7						
I51A	Listowel	64.17	352	P	P	00 22 44.2	-0.4
	baz=169,SNR=9.8						
I55A	Frankford	64.20	354	P	P	00 22 44.8	+0.1
	baz=173,SNR=5.4						
H61A	Lyndonville	64.21	359	P	P	00 22 45.5	+0.7
	baz=179						
J47A	Sunmer	64.23	349	P	P	00 22 44.1	-0.9
	baz=165,SNR=5.4						
H60A	Morristown	64.25	358	P	P	00 22 44.9	-0.2
	baz=178						
H57A	Richville	64.27	356	P	P	00 22 45.5	+0.4
	baz=175,SNR=8.8						
ANMO	Albuquerque	64.31	328	P	P	00 22 45.8	-0.2
ANMO	Albuquerque	64.31	328	P	P	00 22 46.3	+0.4
	baz=143						
I52A	Shelburne	64.32	352	P	P	00 22 45.5	-0.1
	baz=170,SNR=10						
H63A	New Sharon	64.33	1	P	P	00 22 46.7	+1.2
	baz=181						
H59A	Cadyville	64.37	358	P	P	00 22 46.5	+0.6
	baz=177,SNR=6.1						
LONY	Lake Ozonia	64.38	357	P	P	00 22 46.5	+0.6
	baz=176						
K43A	Burlington	64.45	346	P	P	00 22 45.2	-1.2
H56A	Elgin	64.46	356	P	P	00 22 46.7	+0.3
	baz=174						
H55A	Tweed	64.49	355	P	P	00 22 46.9	+0.3
	baz=173						
DELO	Deloro Mine	64.49	355	P	P	00 22 46.9	+0.3
DELO				IAmb	IAmb	00 22 47.3	
	comp=Z,9.1nm,0.7s						
CBKS	Cedar Bluff	64.50	335	IAmb	IAmb	00 22 48.9	
	comp=Z,20nm,0.8s						
CBKS	Cedar Bluff	64.50	335	P	P	00 22 47.3	+0.4
	baz=150,SNR=5.1						
FRNY	Flat Rock	64.55	358	IAmb	IAmb	00 22 48.3	
	comp=Z,13nm,0.7s						
I49A	Point Hope	64.57	350	P	P	00 22 46.3	-0.8
	baz=167,SNR=7.4						
L40A	Anamosa	64.58	343	IAmb	IAmb	00 22 47.5	
	comp=Z,19nm,1.1s						
TUC	Tucson	64.61	323	P	P	00 22 48.1	+0.3
TUC	Tucson	64.61	323	P	P	00 22 48.9	+1.1
	baz=138						
HAL	Halifax	64.63	6	P	P	00 22 46.5	-1.0
H53A	Bobcaygeon	64.64	354	P	P	00 22 47.6	0.0

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      baz=172,SNR=7.1
G60A  Masonville       64.78 359  P      P      00 22 49.7 +1.1
      baz=178
G59A  Clarenceville    64.79 358  P      P      00 22 49.0 +0.5
      baz=177
H52A  Wyevale          64.85 353  P      P      00 22 49.0  0.0
      baz=170
G62A  West of Eustis   64.89   0  P      P      00 22 49.7 +0.5
G62A  West of Eustis   64.89   0  P      P      00 22 50.4 +1.2
      baz=180,SNR=8.1
G57A  Newington        64.89 357  P      P      00 22 49.6 +0.5
      baz=176,SNR=7.6
G58A  Ormstown         64.89 357  P      P      00 22 49.7 +0.5
      baz=176
G65A  Princeton        64.93   2  P      P      00 22 49.8 +0.4
      baz=183
I47A  Gladwin          64.93 349  P      P      00 22 48.7 -0.8
      baz=166
PKME  Peaks-Kenny Pk   64.94   1  P      P      00 22 50.0 +0.5
      baz=181
G61A  St-Isidore-de-   64.95 359  P      P      00 22 50.8 +1.1
      baz=179
I48A  Sherman Twp      64.95 350  P      P      00 22 48.9 -0.7
      baz=166,SNR=14
SCIA  State Center     65.00 342  P      P      00 22 50.0  0.0
      baz=157
I46A  Reed City        65.03 348  P      P      00 22 49.0 -1.1
      baz=165,SNR=5.1
T25A  Trinidad         65.09 331  P      P      00 22 51.0  0.0
T25A                              IAmb   IAmb   00 22 53.1
      comp=Z,11nm,1.1s
T25A  Trinidad         65.09 331  P      P      00 22 51.9 +0.9
      baz=145,SNR=5.9
JFWS  Jewell Farm      65.12 344  P      P      00 22 50.2 -0.5
      baz=160,SNR=5.7
G55A  Calabogie        65.15 355  P      P      00 22 51.3 +0.4
      baz=174
G53A  Haliburton       65.19 354  P      P      00 22 51.1  0.0
      baz=172,SNR=11
H48A  Harrisville      65.39 350  P      P      00 22 51.7 -0.8
      baz=167,SNR=6.6
G54A  Lake Saint Pet   65.41 354  P      P      00 22 52.6  0.0
      baz=172
H47A  Mio              65.44 349  P      P      00 22 51.9 -0.9
      baz=166
214A  Organ Pipe Nat   65.52 321  P      P      00 22 53.8 +0.1
214A                              IAmb   IAmb   00 22 56.5
      comp=Z,11nm,1.0s
214A  Organ Pipe Nat   65.52 321  P      P      00 22 55.2 +1.5
      baz=136
F64A  Sherman          65.56   2  P      P      00 22 54.5 +0.9
      baz=182
GBN   Guysborough      65.61   7  P      P      00 22 52.5 -1.3
F61A  St Evariste      65.64 360  P      P      00 22 54.5 +0.5
      baz=180
F60A  Warwick          65.64 359  P      P      00 22 54.3 +0.2
      baz=179
I42A  Draeger Farm,    65.71 346  P      P      00 22 53.6 -1.0
I42A                              IAmb   IAmb   00 22 58.8
      comp=Z,5.2nm,0.7s
GLMI  Grayling         65.73 349  P      P      00 22 54.8 +0.1
      baz=166
H45A  Beulah           65.80 348  P      P      00 22 54.6 -0.5
      baz=164
X18A  Snowflake        65.81 325  P      P      00 22 55.5 -0.2
KSCO  Kaye Shedlock’   65.86 333  P      P      00 22 55.8  0.0
F52A  Sundridge        65.93 353  P      P      00 22 55.7 -0.2
      baz=171,SNR=8.4
G47A  Hillman          65.94 350  P      P      00 22 55.4 -0.6
      baz=166
ALGO  Algonquin Park   65.96 354  P      P      00 22 55.8 -0.3
      baz=172,SNR=6.1
TRQ   Mont Tremblant   65.98 357  P      P      00 22 56.4  0.0
E58A  La Victoria      66.08 358  P      P      00 22 57.6 +0.7
      baz=177
SDCO  Great Sand Dun   66.09 330  IAmb   IAmb   00 22 59.7
      comp=Z,15nm,1.1s
SDCO  Great Sand Dun   66.09 330  P      P      00 22 58.7 +1.1
      baz=144
E63A  Oxbow            66.12   2  P      P      00 22 56.6 -0.6
E63A  Oxbow            66.12   2  P      P      00 22 58.0 +0.9
      baz=182
F51A  Arnstein         66.12 353  P      P      00 22 56.6 -0.5
      baz=170,SNR=6.5
G45A  Suttons Bay      66.13 348  P      P      00 22 56.2 -1.0
G45A                              IAmb   IAmb   00 22 57.5
      comp=Z,14nm,0.7s
G45A  Suttons Bay      66.13 348  P      P      00 22 56.5 -0.7
      baz=165
I40A  Norwalk          66.13 344  P      P      00 22 56.4 -0.9
I40A                              IAmb   IAmb   00 22 57.6
      comp=Z,10nm,0.8s
W18A  Petrified Fore   66.14 326  P      P      00 22 58.2 +0.4
W18A                              IAmb   IAmb   00 23 00.3
      comp=Z,9.0nm,0.9s
W18A  Petrified Fore   66.14 326  P      P      00 22 59.0 +1.2
      baz=140
E57A  Chemin Saint G   66.15 357  P      P      00 22 57.7 +0.3
      baz=176
BGNE  Belgrade         66.17 338  P      P      00 22 58.1 +0.5
      baz=152
F49A  Sandfield        66.23 351  P      P      00 22 57.0 -0.8
      baz=168,SNR=6.7
G46A  Petoskey         66.25 349  P      P      00 22 57.3 -0.7
      baz=166
E56A  St. Veronique    66.33 357  P      P      00 22 58.6 +0.1
      baz=176
E53A  Dumoine, Ponti   66.34 355  P      P      00 22 58.4 -0.2
      baz=173
E54A  Lac Daplat, Po   66.36 355  P      P      00 22 58.5 -0.2
      baz=173
F48A  Evansville       66.38 351  P      P      00 22 58.1 -0.7
      baz=168,SNR=6.5
X16A  Lo Mia Camp, P   66.54 324  P      P      00 23 00.3  0.0
X16A                              IAmb   IAmb   00 23 06.3
      comp=Z,10nm,1.1s
E51A  G1948 Merrick    66.67 353  P      P      00 23 00.6 -0.1
      baz=171,SNR=6.3
S22A  4UR Ranch, Cre   66.72 329  P      P      00 23 00.4 -1.1
S22A  4UR Ranch, Cre   66.72 329  P      P      00 23 02.2 +0.6
      baz=143
F45A  CMU Biological   66.72 349  P      P      00 23 00.2 -0.8
      baz=165,SNR=7.2
D57A  Chemin Vers le   66.75 358  P      P      00 23 01.7 +0.6
      baz=177
D63A  Stockholm        66.75   2  P      P      00 23 01.8 +0.7
      baz=183
D62A  Allapoint, All   66.77   1  P      P      00 23 02.0 +0.8
      baz=182
D58A  Chemin du LacG   66.79 358  P      P      00 23 02.0 +0.6
      baz=178,SNR=7.0
D56A  ZEC Mazanza, M   66.81 357  P      P      00 23 01.9 +0.3
      baz=176
D55A  Sainte-Anne-du   66.82 356  P      P      00 23 01.8 +0.2
      baz=175,SNR=5.8
D61A  St Aubert, Com   66.87   0  P      P      00 23 05.0 +3.1
      baz=180
E48A  Lockeyer         66.95 351  P      P      00 23 02.0 -0.5
      baz=168
D54A  Lac Fusel, La    67.03 356  P      P      00 23 02.4 -0.6
      baz=174
D53A  Lac Vacive, Po   67.04 355  IAmb   IAmb   00 23 04.0
      comp=Z,17nm,1.1s
D53A  Lac Vacive, Po   67.04 355  P      P      00 23 03.1 +0.1
      baz=173,SNR=5.7
Y14A  Wickenburg       67.07 323  P      P      00 23 04.2 +0.7
LATQ  La Tuque         67.08 358  P      P      00 23 03.1 -0.2
LATQ  La Tuque         67.08 358  P      P      00 23 03.7 +0.5
      baz=178
E47A  Iron Bridge      67.09 351  P      P      00 23 02.9 -0.5
      baz=167
MVCO  Mesa Verde       67.11 328  P      P      00 23 04.1 +0.1
MVCO  Mesa Verde       67.11 328  P      P      00 23 05.0 +1.0
      baz=141
E46A  Sault Ste Mari   67.17 350  IAmb   IAmb   00 23 03.8
      comp=Z,9.5nm,0.8s
D51A  Lot 18 Range I   67.21 354  P      P      00 23 03.5 -0.6
      baz=171
OGNE  Ogallala         67.24 335  P      P      00 23 04.5 -0.1
OGNE                              IAmb   IAmb   00 23 06.1
      comp=Z,20nm,0.9s
WUAZ  Wupatki          67.32 325  P      P      00 23 05.6 +0.3
WUAZ                              IAmb   IAmb   00 23 08.1
      comp=Z,13nm,0.9s
WUAZ  Wupatki          67.32 325  P      P      00 23 07.2 +2.0
      baz=138
D50A  G1974 Best Tow   67.34 353  P      P      00 23 04.7 -0.2
      baz=171,SNR=8.9
GLA   Glamis           67.50 321  P      P      00 23 06.5 +0.2
GLA                               IAmb   IAmb   00 23 09.1
      comp=Z,7.7nm,0.8s
GLA   Glamis           67.50 321  P      P      00 23 07.9 +1.6
      baz=135
D48A  Paudash Townsh   67.59 352  P      P      00 23 05.9 -0.6
      baz=169
D46A  Sault St. Mari   67.64 350  P      P      00 23 06.0 -0.8
      baz=166
D47A  Chapleau         67.65 351  P      P      00 23 06.0 -1.0
      baz=167
E43A  Lone Tree Farm   67.67 348  IAmb   IAmb   00 23 07.1
      comp=Z,8.4nm,0.7s
E44A  Grand Marais A   67.70 349  P      P      00 23 07.0 -0.1
      baz=165
ECSD  EROS Data Cent   67.71 340  P      P      00 23 07.2 -0.1
      baz=154,SNR=7.4
ISCO  Idaho Springs    67.81 332  P      P      00 23 09.4 +1.0
      baz=145,SNR=6.8
Y12C  Blythe           67.81 321  IAmb   IAmb   00 23 11.0
      comp=Z,7.2nm,0.8s
Y12C  Blythe           67.81 321  P      P      00 23 10.1 +1.9
      baz=135
SPMN  Marine on St.    67.94 343  IAmb   IAmb   00 23 09.1
      comp=Z,14nm,1.1s
SPMN  Marine on St.    67.94 343  P      P      00 23 08.3 -0.5
      baz=158
PDMCI Parker Dam,Lak   67.98 322  P      P      00 23 10.7 +1.4
      baz=136
PV15  Paradox Valley   67.99 329  P      P      00 23 09.9 +0.3
PV15                              IAmb   IAmb   00 23 12.2
      comp=Z,14nm,1.0s
IKP   In-Ko-Pah, Jac   67.99 320  P      P      00 23 11.6 +2.1
      baz=134,SNR=6.0
SWSC  Sam W. Stewart   68.00 320  P      P      00 23 11.1 +1.6
      baz=134
PV02  Paradox Valley   68.01 328  P      P      00 23 08.5 -1.1
PV13  Radium Mtn., P   68.01 328  P      P      00 23 09.7 +0.1
PV05  Paradox Valley   68.09 328  P      P      00 23 10.0 -0.1
PV03  Paradox Valley   68.10 328  P      P      00 23 10.7 +0.5
PV18  Skein Mesa, Pa   68.12 328  P      P      00 23 08.5 -1.8
PV12  Saucer Basin,    68.13 328  P      P      00 23 10.0 -0.4
PV07  Paradox Valley   68.14 329  P      P      00 23 09.7 -0.8
PV11  David Mesa, Pa   68.15 328  P      P      00 23 08.1 -2.4
PV17  East Wray Mesa   68.17 328  P      P      00 23 10.5 -0.2
BC3   Big Chuckawall   68.29 321  P      P      00 23 13.3 +1.9
      baz=135,SNR=8.3
MONP2 Monument Peak    68.35 320  P      P      00 23 13.3 +1.5
      baz=134
BAR   Barrett          68.35 319  P      P      00 23 11.4 -0.3
BAR                               IAmb   IAmb   00 23 14.6
      comp=Z,14nm,0.9s
W13A  Hualapai Mount   68.41 323  P      P      00 23 12.5 +0.3
PV09  Paradox Valley   68.43 328  P      P      00 23 12.2 -0.2
IRM   Iron Mountain    68.46 321  P      P      00 23 14.3 +2.0
      baz=135,SNR=16
U15A  North Rim        68.49 325  P      P      00 23 13.2 +0.4
U15A                              IAmb   IAmb   00 23 15.9
      comp=Z,10nm,0.8s
N23A  Red Feather La   68.84 332  P      P      00 23 14.8 -0.1
N23A                              IAmb   IAmb   00 23 16.9
      comp=Z,7.9nm,0.9s
N23A  Red Feather La   68.84 332  P      P      00 23 15.8 +0.9
      baz=144
BELC  Belle Mtn. Jos   68.86 321  P      P      00 23 16.7 +1.8
      baz=134,SNR=6.0
XPFO  Pion Flat        68.86 320  P      P      00 23 15.9 +1.0
XPFO                              IAmb   IAmb   00 23 17.9
      comp=Z,7.1nm,0.8s
PFO   Pinyon Flats O   68.86 320  P      P      00 23 15.9 +0.9
PFO                               IAmb   IAmb   00 23 17.9
      comp=Z,6.8nm,0.8s
PFO   Pinyon Flats O   68.86 320  P      P      00 23 16.9 +2.0
      baz=134,SNR=5.8
LSQQ  Lebel-sur-Quev   68.95 356  P      P      00 23 15.1 +0.1
      baz=174
GMRC  Granite Mounta   69.20 322  P      P      00 23 19.1 +2.0
      baz=135,SNR=15
KNB   Kanab            69.22 325  P      P      00 23 18.1 +1.0
PKCU  Pink Cliffs      69.26 326  P      P      00 23 18.1 +0.5
O20A  White River Ci   69.28 330  P      P      00 23 17.1 -0.5
O20A                              IAmb   IAmb   00 23 19.8
      comp=Z,9.9nm,1.1s
O20A  White River Ci   69.28 330  P      P      00 23 18.7 +1.2
      baz=142
LCMT  Little Creek M   69.44 325  P      P      00 23 19.4 +0.9
SRU   San Rafael Swe   69.59 328  P      P      00 23 19.4  0.0
LIC   Lamto            69.61  75  eP     P      00 23 18.6 -1.3
      comp=Z,3.5nm,0.4s
HEC   Hector,Ludlow    69.63 321  P      P      00 23 21.8 +2.1
      baz=134,SNR=9.3
MTPU  Mount Pierson    69.64 326  P      P      00 23 20.9 +0.9
MATQ  Matagami         69.70 355  P      P      00 23 19.3 -0.3
      baz=173
Q16A  Castle Valley    69.77 327  P      P      00 23 20.8 +0.2
TIC   Toumodi          69.79  75  eP     P      00 23 19.6 -1.4
TUQ   Turquoise Moun   69.82 322  P      P      00 23 22.7 +1.8
      baz=135,SNR=8.6
CCUT  Cedar City       69.90 325  P      P      00 23 22.3 +0.9
KIC   Kosan Boka       69.93  75  eP     P      00 23 20.6 -1.2
      comp=Z,17nm,0.9s
DBIC  Dimbokro         69.95  75  P      P      00 23 21.1 -0.8
      comp=Z,9.2nm,0.8s,baz=182,slow=4.8,SNR=7.7
DBIC  Dimbokro         69.95  75  IAmb   IAmb   00 23 21.9
      comp=Z,10nm,0.9s
P17A  Butcher Ranch,   69.98 328  P      P      00 23 22.1 +0.3
MSU   Marysvale        69.98 326  P      P      00 23 22.9 +0.9
BFSC  Mount Baldy Ra   70.02 320  P      P      00 23 23.5 +1.4
      baz=133
TMUT  Trail Mountain   70.08 328  P      P      00 23 23.6 +1.0
SHPR  Sheep Range      70.14 323  P      P      00 23 24.1 +1.2
SHPR                              IAmb   IAmb   00 23 25.8
      comp=Z,7.7nm,0.8s
EYMN  Ely              70.14 345  P      P      00 23 21.9 -0.5
      baz=159
QSPA  South Pole Qui   70.20 180  P      P      00 23 23.3 +0.5
QSPA                              IAmb   IAmb   00 23 30.5
      comp=Z,6.9nm,0.7s
GSC   Goldstone, Bar   70.24 321  P      P      00 23 23.7 +0.3
GSC   Goldstone, Bar   70.24 321  P      P      00 23 25.2 +1.9
      baz=134,SNR=6.0
RDMU  Red Mountain     70.25 329  P      P      00 23 23.5  0.0
PASC  Pasadena Art C   70.29 320  P      P      00 23 24.8 +1.1
PASC                              IAmb   IAmb   00 23 26.6
      comp=Z,19nm,1.1s
SHOC  Shoshone, Teco   70.34 322  P      P      00 23 26.3 +2.3
      baz=135
DECC  Green Verdugo    70.44 320  P      P      00 23 26.8 +2.2
      baz=133
SNCC  San Nicolas Is   70.51 318  P      P      00 23 23.9 -1.1
K22A  Casper           70.52 333  P      P      00 23 25.4 +0.4
K22A                              IAmb   IAmb   00 23 27.0
      comp=Z,10nm,0.8s
K22A  Casper           70.52 333  P      P      00 23 25.9 +0.8
      baz=144
EDW2  Edwards Air Fo   70.66 320  P      P      00 23 27.3 +1.4
      baz=133,SNR=5.8
ROSA  Rosais           70.67  34  P      P      00 23 26.1 +0.3
RSSD  Black Hills      70.71 335  P      P      00 23 27.4 +1.2
RSSD                              IAmb   IAmb   00 23 28.5
      comp=Z,9.4nm,0.8s
RSSD  Black Hills      70.71 335  P      P      00 23 27.2 +0.9
      baz=147
BLG   Laguna Peak, P   70.79 319  P      P      00 23 28.4 +1.7
      baz=132
TPNV  Topopah Spring   71.07 323  P      P      00 23 28.9 +0.4
TPNV                              IAmb   IAmb   00 23 31.8
      comp=Z,11nm,0.9s
TPNV  Topopah Spring   71.07 323  P      P      00 23 30.7 +2.2
      baz=135,SNR=10.0
FURC  Furnace Creek,   71.08 322  P      P      00 23 30.2 +1.8
      baz=134,SNR=8.9
MPMC  Manual Prospec   71.16 321  P      P      00 23 30.5 +1.4
      baz=134,SNR=7.9
JLU   Jordanelle       71.19 328  P      P      00 23 29.9 +0.6
CTU   Camp Tracy       71.41 328  P      P      00 23 30.9 +0.5
ISA   Isabella, Lake   71.48 321  P      P      00 23 31.6 +0.8
ISA                               IAmb   IAmb   00 23 33.9
      comp=Z,13nm,0.8s
ISA   Isabella, Lake   71.48 321  P      P      00 23 33.0 +2.1
      baz=133,SNR=8.9
DUG   Dugway, Tooele   71.57 327  P      P      00 23 31.8 +0.3
DUG                               IAmb   IAmb   00 23 34.3
      comp=Z,11nm,1.0s
DUG   Dugway, Tooele   71.57 327  P      P      00 23 33.2 +1.7
      baz=138,SNR=11
AGMN  Agassiz Nation   71.60 343  IAmb   IAmb   00 23 31.8
      comp=Z,8.1nm,0.8s
AGMN  Agassiz Nation   71.60 343  P      P      00 23 31.1 -0.1
      baz=155
R11A  Troy Canyon, C   71.69 324  P      P      00 23 32.8 +0.5
R11A  Troy Canyon, C   71.69 324  P      P      00 23 34.1 +1.9
      baz=136,SNR=8.4
PKM   Mcpherson Peak   71.77 319  P      P      00 23 34.7 +1.9
      baz=132,SNR=6.3
CWC   Cottonwood Cre   71.77 321  P      P      00 23 34.3 +1.5
      baz=133
VES   Vestal, Richgr   71.96 320  P      P      00 23 35.6 +1.9
      baz=132
BW06  Boulder Array    71.96 331  P      P      00 23 35.0 +1.1
      baz=142
PDAR  Pinedale Array   71.96 331  P      P      00 23 34.0 +0.2
      comp=Z,1.3nm,0.7s,baz=138,slow=6.7,SNR=15
PDAR  Pinedale Array   71.96 331  P      P      00 23 34.1 +0.3
HWUT  Hardware Ranch   72.01 329  IAmb   IAmb   00 23 36.0
      comp=Z,11nm,1.1s
SPUT  South Promonto   72.22 328  P      P      00 23 35.7 +0.3
TIN   Tinemaha, Big    72.28 322  P      P      00 23 37.8 +2.1
      baz=133
MDND  Maddock          72.33 340  P      P      00 23 35.7 +0.1
PAGB  Antelope Grade   72.59 320  P      P      00 23 37.3 -0.2
AHID  Auburn Hatcher   72.68 330  P      P      00 23 38.5 +0.5
AHID                              IAmb   IAmb   00 23 40.0
      comp=Z,11nm,0.9s
HVU   Hansel Valley    72.73 328  P      P      00 23 38.3 -0.1
REDW  Red Top Meadow   73.02 331  P      P      00 23 40.4 +0.3
SNOW  Snow King Moun   73.05 331  P      P      00 23 40.3  0.0
SNOW                              IAmb   IAmb   00 23 42.6
      comp=Z,10nm,1.1s
OMMB  Old Mammoth Mi   73.11 322  P      P      00 23 42.4 +1.5
OMMB                              IAmb   IAmb   00 23 43.7
      comp=Z,12nm,0.9s
TPAW  Teton Pass       73.17 331  IAmb   IAmb   00 23 49.5
      comp=Z,11nm,1.1s
MDPB  Devils Postpil   73.17 322  P      P      00 23 40.9 -0.3
NV11  Mina Array Sit   73.18 323  P      P      00 23 41.4 +0.3
ELK   Elko             73.22 326  P      P      00 23 42.7 +1.3
      comp=Z,2.9nm,0.9s,baz=88,slow=3.6,SNR=9.8
ELK   Elko             73.22 326  P      P      00 23 41.5  0.0
NVAR  Mina Array Bea   73.27 323  P      P      00 23 43.3 +1.6
      comp=Z,4.3nm,0.9s,baz=150,slow=6.3,SNR=22
ULM   Lac du Bonnet    73.38 343  P      P      00 23 41.2 -0.6
      comp=Z,5.2nm,0.9s,baz=151,slow=5.7,SNR=13
FLWY  Flagg Ranch      73.51 331  P      P      00 23 43.1 +0.1
FLWY                              IAmb   IAmb   00 23 45.7
      comp=Z,20nm,1.0s
KVN   Kaiserville      73.58 323  P      P      00 23 44.4 +0.9
H17A  Grant Village    73.70 331  P      P      00 23 44.3 +0.2
H17A  Grant Village    73.70 331  P      P      00 23 45.9 +1.7
      baz=141
LAO   LASA Array       73.70 335  P      P      00 23 43.9  0.0
LAO                               IAmb   IAmb   00 23 45.8
      comp=Z,14nm,1.0s
LAO   LASA Array       73.70 335  P      P      00 23 45.3 +1.4
      baz=145
YPP   Pitchstone Pla   73.70 331  P      P      00 23 44.2  0.0
LKWY  Lake             73.75 332  P      P      00 23 45.1 +0.6
LKWY                              IAmb   IAmb   00 23 47.9
      comp=Z,11nm,0.8s
YNR   Norris Junctio   73.99 332  P      P      00 23 46.8 +0.9
PPT   Papeete          74.02 257  P      P      00 23 46.5 +0.1
YMR   Madison River    74.08 331  P      P      00 23 47.3 +1.0
YHH   Holmes Hill      74.13 331  P      P      00 23 47.0 +0.3
CMB   Columbia Colle   74.20 321  P      P      00 23 46.1 -0.9
YHB   Horse Butte      74.25 331  P      P      00 23 48.0 +0.7
YHL   Hebgen Lake      74.32 331  P      P      00 23 49.5 +1.6
QLMT  Earthquake Lak   74.42 331  P      P      00 23 48.9 +0.6
DGMT  Dagmar           74.42 338  P      P      00 23 48.3 +0.3
DGMT                              IAmb   IAmb   00 23 50.2
      comp=Z,17nm,1.0s
DGMT  Dagmar           74.42 338  P      P      00 23 49.3 +1.3
      baz=148
PNTR  Pine Nut         74.45 323  P      P      00 23 48.9 +0.2
PNTR                              IAmb   IAmb   00 23 51.8
      comp=Z,10.0nm,0.9s
SCHQ  Schefferville    74.58   2  P      P      00 23 48.7 -0.1
      comp=Z,5.1nm,0.7s,baz=197,slow=3.9,SNR=10
SCHQ  Schefferville    74.58   2  P      P      00 23 49.1 +0.3
PAHR  Pah Rah Range    74.75 323  P      P      00 23 51.4 +1.1
PAHR                              IAmb   IAmb   00 23 53.4
      comp=Z,17nm,0.9s
MCMT  McKenzie Canyo   75.07 330  P      P      00 23 53.0 +0.9
AFDM  Forest Hills D   75.15 322  P      P      00 23 53.2 +0.8
DLMT  Dillon           75.36 331  P      P      00 23 53.7  0.0
ORV   Oroville         75.86 322  P      P      00 23 57.2 +0.7
EGMT  Eagleton         76.19 334  P      P      00 23 58.4 +0.1
EGMT                              IAmb   IAmb   00 24 00.7
      comp=Z,12nm,0.9s
EGMT  Eagleton         76.19 334  P      P      00 23 59.6 +1.3
      baz=142
O03E  Paynes Creek     76.52 322  P      P      00 24 01.2 +0.9
      baz=131
MSO   Missoula         77.08 331  P      P      00 24 04.2 +0.9
MSO   Missoula         77.08 331  P      P      00 24 04.6 +1.3
      baz=139
WDC   Whiskeytown Da   77.14 322  P      P      00 24 03.1 -0.6
BMO   Blue Mountains   77.23 328  P      P      00 24 04.5 +0.3
N02D  Trinity Center   77.49 322  P      P      00 24 06.6 +0.9
      baz=131
M04C  Macdoel          77.53 323  P      P      00 24 07.3 +1.3
      baz=132
VNDA  Vanda            78.04 190  P      P      00 24 10.8 +2.6
      comp=Z,1.2nm,0.9s,baz=130,slow=7.1,SNR=3.4
L04D  Klamath Falls    78.07 323  P      P      00 24 09.8 +0.7
      baz=131
TOA0  Torodi Ar. Sit   78.46  71  P      P      00 24 10.8 -0.8
TOA0                              IAmb   IAmb   00 24 11.8
      comp=Z,24nm,0.9s
TORD  Torodi Ar. Bea   78.46  71  P      P      00 24 10.8 -0.8
      comp=Z,18nm,0.8s,baz=248,slow=5.2,SNR=130
TORD  Torodi Ar. Bea   78.46  71  P      P      00 24 10.2 -1.3
SYO   Syowa Base       78.51 160⇑eP     P      00 24 09.0 -1.9
SYO   Syowa Base       78.51 160⇓ePcP   PcP    00 24 19.4 -0.6
WALA  Waterton Lakes   78.75 333  IAmb   IAmb   00 24 14.7
      comp=Z,13nm,1.1s
L02E  Cave Junction    78.77 323  P      P      00 24 14.1 +1.4
      baz=130
E09A  Wood Farm, Sta   78.83 329  P      P      00 24 13.4 +0.5
I05D  Terrebonne, OR   78.96 326  P      P      00 24 15.3 +1.6
      baz=132
HAWA  Hanford          79.43 328  P      P      00 24 16.7 +0.5
C09A  Chrisman Ranch   79.80 330  P      P      00 24 17.8 -0.5
FCC   Fort Churchill   80.79 348  P      P      00 24 23.4 +0.2
COI   Coimbra          83.32  43  P      P      00 24 36.9 -0.1
COI                               IAmb   IAmb   00 24 54.3
      comp=Z,7.3nm,0.7s
NRS   Narsarsuaq       83.39  12  P      P      00 24 37.4 +0.6
NRS                               IAmb   IAmb   00 24 46.7
      comp=Z,9.0nm,0.9s
FRB   Frobisher Bay    83.47   1  P      P      00 24 37.0 -0.1
      comp=Z,1.4nm,0.8s,baz=174,slow=5.3,SNR=4.7
PAB   San Pablo        85.64  45  P      P      00 24 48.3 -0.6
TAM   Tamanrasset      85.66  64  P      P      00 24 50.4 +0.9
TAM                               IAmb   IAmb   00 24 51.3
      comp=Z,10nm,1.0s
ESDC  Sonseca Array    85.96  45  P      P      00 24 50.4  0.0
YKA   Yellowknife Ar   89.21 341  P      P      00 25 05.3 -0.1
      comp=Z,6.0nm,0.7s,baz=137,slow=5.1,SNR=77
BESE  Bessie Mountai   94.27 332  P      P      00 25 25.8 -3.3
BESE                              IAmb   IAmb   00 25 36.0
      comp=Z,8.4nm,0.8s
WHY   Whitehorse       95.38 334  IAmb   IAmb   00 25 36.0
      comp=Z,10nm,0.8s
KBZ   Khabaz          120.47  50  PKP    PKiKP  00 31 02.8 +1.1
      comp=Z,1.8nm,0.9s,baz=308,slow=7.7,SNR=3.8
BILL  Bilibino        120.50 339         PKiKP  00 31 09.1 +8.0
H11S2 WAKE ISLAND Hy125.99 279    T      T      02 50 23.2
      baz=101,slow=74,SNR=121
H11S1 WAKE ISLAND Hy126.00 279    T      T      02 50 35.2
      baz=101,slow=74,SNR=134
H11S3 WAKE ISLAND Hy126.01 279    T      T      02 50 24.5
      baz=101,slow=74,SNR=138
H11N3 WAKE ISLAND Hy126.04 280    T      T      02 49 46.3
      baz=106,slow=74,SNR=109
H11N2 WAKE ISLAND Hy126.06 280    T      T      02 49 46.9
      baz=106
H11N1 WAKE ISLAND Hy126.06 280    T      T      02 49 45.6
      baz=106,slow=74,SNR=92
SEY   Seymchan        128.04 337  PKP    PKiKP  00 31 16.9 +0.8
      comp=Z,5.4nm,0.6s,baz=100,slow=3.6,SNR=17
```

ASAR	**Alice Springs**	**130.42**	**210**	PKP	**PKPdf**	**00 31 21.4**	**0.0**
	comp=Z,1.2nm,0.6s,baz=148,slow=2.7,SNR=13						
ASAR	**Alice Springs**	**130.42**	**210**		**PKPdf**	**00 31 20.4**	**-1.0**
ABKAR	**Akbulak array**	**131.16**	**41**		**PKiKP**	**00 31 23.3**	**+0.4**
ABKAR	**Akbulak array**	**131.16**	**41**		**PKiKP**	**00 31 23.9**	**+1.0**
WRA	**Warramunga Arr**	**133.34**	**213**	PKP	**PKPdf**	**00 31 27.4**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=157,slow=1.7,SNR=17						
KURK	**Kurchatov**	**140.94**	**31**		**PKiKP**	**00 31 41.5**	**-1.2**
ZAA0	**Zalesovo Array**	**141.26**	**23**		**PKPdf**	**00 31 41.0**	**+0.5**
ZALV	**Zalesovo Beam**	**141.26**	**23**	PKhKP	PKPpre	00 31 33.2	
	comp=Z,1.8nm,0.7s,baz=289,slow=4.5,SNR=5.5						
ZALV				PKP	**PKPdf**	**00 31 41.3**	**+0.8**
	comp=Z,6.9nm,0.7s,baz=297,slow=2.7,SNR=17						
AAK	**Ala-Archa**	**143.06**	**44**		**PKPdf**	**00 31 43.8**	**-0.5**
MAKZ	**Makanchi**	**145.18**	**33**		**PKPdf**	**00 31 48.0**	**+0.3**
NIL	**Nilore**	**145.27**	**59**		**PKPdf**	**00 31 48.2**	**-0.1**
MKAR	**Makanchi Array**	**145.35**	**33**	PKPbc	**PKPdf**	**00 31 48.5**	**+0.5**
	comp=Z,22nm,0.7s,baz=324,slow=4.1,SNR=260						
MKAR	**Makanchi Array**	**145.35**	**33**		**PKPbc**	**00 31 47.7**	**-0.1**
KSH	**Kashi**	**145.41**	**48**	PKPbc	**PKPab**	**00 31 49.8**	**+1.2**
KSH				PP	**PP**	**00 35 12.3**	**+3.9**
KSH				PKS	**PKSdf**	**00 35 25.4**	**+1.4**
KSH				SKKS		00 41 59.3	
KSH				LR	LR		
	comp=Z,94nm,12.6s						
SOEI	**Soe**	**146.97**	**208**		**PKiKP**	**00 32 00.6**	**+4.2**
USA0B	**Ussuriysk Arra**	**149.32**	**327**		**PKiKP**	**00 32 00.1**	**0.0**
USRK	**Ussuriysk Ar.**	**149.32**	**327**	PKPbc	**PKiKP**	**00 32 00.1**	**-0.1**
	comp=Z,12nm,0.7s,baz=42,slow=2.1,SNR=24						
MJAR	**Matsushiro Arr**	**149.81**	**309**	PKPbc	**PKiKP**	**00 32 01.6**	**+0.1**
	comp=Z,9.2nm,0.8s,baz=121,slow=1.0,SNR=19						
MAJO	**Matsushiro**	**149.81**	**309**		**PKiKP**	**00 32 01.7**	**+0.3**
MAT	**Matsushiro**	**149.81**	**309**	PKP	**PKiKP**	**00 32 01.4**	**0.0**
MJB9	**Matsu-Tunnel**	**149.81**	**309**		**PKiKP**	**00 32 01.8**	**+0.4**
WMQ	**Urumqi**	**150.16**	**32**	*e*PKPbc	**PKPdf**	**00 31 56.1**	**0.0**
WMQ				LR	LR		
	comp=Z,570nm,26.1s						
WMQ				LR	LR		
	comp=Z,230nm,24.1s						
HYB	**Hyderabad**	**150.80**	**90**	*i* PKP	**PKiKP**	**00 32 04.0**	**0.0**
SONM	**Songino Array**	**152.12**	**4**	PKP	**PKPdf**	**00 32 00.1**	**+1.1**
	comp=Z,1.1nm,0.9s,baz=341,slow=3.1,SNR=6.6						
SONM				PKPbc	**PKiKP**	**00 32 06.5**	**+0.5**
	comp=Z,11nm,0.9s,baz=325,slow=1.3,SNR=56						
SONM	**Songino Array**	**152.12**	**4**		**PKPdf**	**00 31 60.0**	**+0.9**
ULN	**Ulaanbaatar**	**152.13**	**3**		**PKiKP**	**00 32 06.0**	**-0.1**
GTA	**Gaotai**	**158.99**	**21**	*e*PKP	**PKPdf**	**00 32 10.5**	**+2.0**
HHC	**Hu-ho-hao-te**	**159.11**	**355**	*e*PKP	**PKPdf**	**00 32 07.5**	**-1.1**
LZH	**Lanzhou**	**163.26**	**15**	*e*PKP	**PKPdf**	**00 32 07.6**	**-5.6**
LZH				pPKP	pPKPdf	00 32 18.1	-1.3
LZH				sPKP		00 32 21.5	
LZH				LR	LR		
	comp=Z,210nm,18.0s						
LZH				LR	LR		
	comp=Z,200nm,18.1s						
LZH				LR	LR		
	comp=Z,260nm,20.3s						
NJ2	**Nanjing**	**165.23**	**326**	*e*PKP	**PKPdf**	**00 32 14.3**	**-0.6**
XAN	**Xi'an**	**165.99**	**1**	PKP	PKPdf	00 32 03.3	-12
XAN				pPKP	pPKPdf	00 32 10.1	-12
CD2	**Chengdu**	**168.03**	**24**	PKP	**PKPdf**	**00 32 16.0**	**-1.1**
GYA	**Guiyang**	**173.12**	**20**	*e*PKP	**PKPdf**	**00 32 18.6**	**-1.5**
GYA				PKPab	**PKPab**	**00 33 47.0**	**-0.2**
GYA				PKS	**PKSdf**	**00 35 49.3**	**-3.3**
GYA				PP	**PP**	**00 37 40.5**	**+2.7**
GYA				AMB	AMB		
	comp=Z,120nm,9.0s						

TAP 17 00:32:56.6, 24°.46N×121°.95E, h12^{km}, ML2.5, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	**Suao**	**0.18**	**328**	*i* P	Pg	00 33 00.7	+0.1
	baz=337						
TWC				S	Sg	00 33 03.2	-0.1
	baz=337						
EOS1	**EOS1**	**0.18**	**60**	P	Pg	00 33 01.1	+0.5
	baz=53						
EOS1				S	Sg	00 33 04.7	+1.3
	baz=53						
ENA	**Nanau**	**0.20**	**261**	*i* P	Pg	00 33 01.0	+0.1
	baz=267						
ENA				*i* S	Sg	00 33 04.0	+0.1
	baz=267						
TWE	**Neicheng**	**0.37**	**315**	*i* P	Pg	00 33 04.5	+0.5
	baz=320						
TWE				*i* S	Sg	00 33 09.3	+0.4
	baz=320						
ENTT	**Nioudou**	**0.40**	**297**	*i* P	Pg	00 33 04.9	+0.4
	baz=297						
ENTT				*i* S	Sg	00 33 10.4	+0.6
	baz=297						
NTC	**Toucheng**	**0.41**	**344**	P	Pg	00 33 05.2	+0.5
	baz=343						
NTC				S	Sb	00 33 11.4	-0.6
	baz=343						
SLBB	**Yuanshan**	**0.41**	**316**	*i* P	Pg	00 33 04.5	-0.2
	baz=318						
SLBB				*e*S	Sb	00 33 11.7	-0.5
	baz=318						
NDT	**Datong Townshi**	**0.43**	**290**	*i* P	Pb	00 33 05.7	-0.4
	baz=290						
NDT				S	Sg	00 33 11.2	+0.4
	baz=290						
NACB	**Ninganchiao**	**0.43**	**229**	P	Pg	00 33 04.9	-0.2
	baz=230						
NACB				S	Sg	00 33 11.2	+0.3
	baz=230						
ETLH	**Xiulin Townshi**	**0.50**	**240**	P	Pg	00 33 06.4	0.0
	baz=241						
ETLH				S	Sb	00 33 14.1	-0.5
	baz=241						
TWD	**Chiawan**	**0.50**	**221**	P	Pg	00 33 06.3	0.0
	baz=221						
TWD				S	Sg	00 33 13.5	+0.5
	baz=221						
NWLT	**Wulai**	**0.52**	**308**	P	Pb	00 33 07.6	0.0
	baz=300						
NWLT				S	Sg	00 33 14.3	+0.6
	baz=300						
NNSB	**Datong**	**0.52**	**267**	P	Pg	00 33 07.0	+0.2
	baz=267						
NNSB				S	Sg	00 33 14.0	+0.2
	baz=267						
NNSH	**Datong**	**0.52**	**267**	*i* P	Pg	00 33 06.9	+0.1
	baz=268						
NNSH				*i* S	Sg	00 33 13.7	-0.1
	baz=268						
TIPB	**Shuangxi**	**0.53**	**347**	P	Pb	00 33 07.6	-0.2
	baz=353						
TIPB				S	Sb	00 33 15.0	-0.4
	baz=353						
NNS	**Nan Shan**	**0.53**	**268**	*i* P	Pg	00 33 07.1	+0.1
	baz=268						
NNS				*i* S	Sg	00 33 14.2	+0.2
	baz=268						
TWB1	**Santiao Chiao**	**0.55**	**3**	*e*P	Pg	00 33 07.5	+0.1
	baz=353						
YHNB	**Yeheng**	**0.57**	**292**	P	Pb	00 33 08.2	-0.3
	baz=292						
YHNB				S	Sg	00 33 15.2	0.0
	baz=292						
NSK	**Sanguang**	**0.58**	**292**	*e*P	Pb	00 33 08.5	-0.3
	baz=297						
NSK				S	Sg	00 33 15.9	+0.2
	baz=297						
TWA	**Mucha**	**0.62**	**327**	P	Pb	00 33 10.2	+0.9
	baz=327						
TWA				*e*S	Sb	00 33 18.3	+0.2
	baz=327						
NWF	**Wu-fen Shan**	**0.63**	**346**	P	Pb	00 33 10.0	+0.4
	baz=333						
NWF				S	Sb	00 33 18.9	+0.5
	baz=333						
WFSB	**Wu-fen Shan**	**0.63**	**346**	P	Pb	00 33 10.1	+0.5
	baz=333						
WFSB				S	Sb	00 33 18.9	+0.5
	baz=333						
TATO	**Taipei**	**0.67**	**321**	*e*P	Pb	00 33 09.9	-0.3
	baz=309						
TATO				S	Sb	00 33 19.5	+0.1
	baz=309						
WHF	**Hehuan Shan**	**0.70**	**244**	*i* P	Pg	00 33 10.2	0.0
	baz=244						
WHF				S	Sb	00 33 20.4	-0.4
	baz=244						
TWT	**Tachien**	**0.74**	**254**	*e*P	Pn	00 33 12.3	-0.7
	baz=255						
TWT				S	Sb	00 33 21.4	-0.2
	baz=255						
TDCB	**Techi**	**0.75**	**254**	P	Pb	00 33 11.7	0.0
	baz=255						
TDCB				S	Sg	00 33 21.5	+0.4
	baz=255						
YM01	**YM01**	**0.77**	**333**	P	Pn	00 33 12.7	-0.6
	baz=332						
YM01				*e*S	Sb	00 33 22.9	+0.6
	baz=332						
YM10	**YM10**	**0.78**	**333**	*e*P	Pn	00 33 13.1	-0.4
	baz=331						
YM10				*e*S	Sb	00 33 22.9	+0.2
	baz=331						
YM08	**YM08**	**0.80**	**336**	P	Pb	00 33 12.9	+0.5
	baz=334						
YM08				*e*S	Sb	00 33 23.8	+0.6
	baz=334						
CHGB	**Renai**	**0.81**	**241**	P	Pg	00 33 12.6	+0.2
	baz=252						
CHGB				S	Sb	00 33 23.8	0.0
	baz=252						
OWD	**Renai**	**0.87**	**235**	P	Pg	00 33 13.3	-0.1
	baz=236						
OWD				S	Sg	00 33 24.9	+0.1
	baz=236						
LIOB	**Emei**	**0.88**	**283**	*e*P	Pn	00 33 14.2	-0.5
	baz=283						
LIOB				*e*S	Sb	00 33 25.3	0.0
	baz=283						
TWY	**Chenhua**	**0.88**	**338**	P	Pn	00 33 14.9	+0.2
	baz=337						
TWY				*e*S	Sb	00 33 26.1	+0.8
	baz=337						
WHP	**Taichung City**	**0.94**	**259**	P	Pn	00 33 15.6	-0.1
	baz=260						
WHP				S	Sb	00 33 27.2	0.0
	baz=260						
VWDT	**VWDT**	**1.02**	**227**	P	Pb	00 33 16.1	-0.1
	baz=234						
VWDT				*e*S	Sb	00 33 29.5	0.0
	baz=234						
HGSD	**Ruisui**	**1.08**	**207**	*e*P	Pn	00 33 17.5	0.0
	baz=208						
SMLT	**Sun Moon Lake**	**1.12**	**239**	*e*P	Pn	00 33 18.6	+0.4
	baz=240						
SSLB	**Suanglung**	**1.13**	**234**	P	Pn	00 33 18.2	-0.1
	baz=243						
SSLB				S	Sb	00 33 32.6	-0.2
	baz=243						
TYC	**Yuchr**	**1.14**	**241**	*e*P	Pg	00 33 18.9	+0.3
	baz=242						
YULB	**Yu-li**	**1.22**	**210**	*e*P	Pn	00 33 18.7	-0.8
	baz=212						
YULB				*e*S	Sg	00 33 36.4	+0.5
	baz=212						

JMA 17 00:33:19.1±0.5, 24°.36N×123°.53E, h17^{km}±3^{km}, M1.3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.18**	**98**	P	Pg	00 33 23.6	-0.1
IRIF				S	Sg	00 33 26.5	-0.3
HATJ	**Hateruma jima**	**0.39**	**140**	P	Pg	00 33 26.8	-0.4
HATJ				*e*S	Sg	00 33 32.2	-0.4
JKRS	**Kuro-shima**	**0.45**	**105**	P	Pg	00 33 28.4	+0.1
JKRS				S	Sg	00 33 34.5	0.0
JIJ	**Ishigaki jima**	**0.56**	**90**	P	Pg	00 33 30.0	-0.2
JIJ				S	Sg	00 33 37.0	-0.7
JISG	**Ishigakijimahi**	**0.75**	**72**	*e*S	Sg	00 33 43.7	+0.1

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*IDC **17** 00:35:25.2±0.5, 4°.05S×100°.44E, h0^{km}, mb4.6/28, mb1 4.6/31, mb1mx4.5/59, mbtmp4.6/31, ML4.2/3, MS3.9/4, Ms1 3.9/4, ms1mx3.6/41, Error ellipse: s-maj=19.0km s-min=10.9km az=49.0*

*KLM **17** 00:35:26.0, 4°.12S×100°.30E, h10^{km}, mb5.0*

*NEIC **17** 00:35:26.5±1.9, 4°.10S±0°.06×100°.40E±0°.07, h11^{km}±3^{km}, mb4.9/65, Error ellipse: s-maj=10.0km s-min=9.0km az=49.0*

*MOS **17** 00:35:29.1±0.9, 3°.94S×100°.54E, h36^{km}, mb5.0/35, Error ellipse: s-maj=10.4km s-min=6.7km az=106.3*

*DJA **17** 00:35:30.0±0.7, 4°S±2°×10°0E±°, h23^{km}±6^{km}, M4.9/36, mb5.1/36, mB5.4/17, MLv5.0/18, Mw(mB)4.8/17*

ISC 17 00:35:29.2±0.3, **4°.08S**±0°.04×**100°.40E**±0°.04, **h27^{km}, n277,** σ**1^{s}76**/282, **mb4.8**/88, **MS4.5**/5, **19C-5D, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**1.37**	**343**	P	**Pn**	**00 35 51.2**	**-1.4**
PPSI				S	**Sn**	**00 36 09.6**	**-0.2**
KRJI	**Kerinci**	**2.24**	**28**	P	**Pn**	**00 36 03.8**	**-0.9**
MNAI	**Manna**	**2.56**	**96**	P	**Pn**	**00 36 08.8**	**-0.2**
MNAI	**Manna**	**2.56**	**96**	Pn	**Pn**	**00 36 08.6**	**-0.4**
SISI	**Saibi**	**3.04**	**334**	P	**Pn**	**00 36 13.9**	**-1.6**
SISI				S	**Sn**	**00 36 49.2**	**-1.8**
PDSI	**Padang**	**3.15**	**1**	P	**Pn**	**00 36 15.3**	**-1.8**
PDSI				S	**Sn**	**00 36 52.0**	**-1.9**
SDSI	**Sungai Dareh**	**3.29**	**18**	P	**Pn**	**00 36 18.2**	**-0.9**
SDSI				S	**Sn**	**00 36 57.8**	**+0.4**
LWLI	**Liwa**	**3.76**	**104**	P	**Pn**	**00 36 25.4**	**-0.2**
MDSI	**Maura Dua**	**3.79**	**96**	P	**Pn**	**00 36 25.5**	**-0.3**
MDSI				S	**Sn**	**00 37 08.8**	**-0.7**
RGRI	**Rengat**	**4.18**	**28**	P	**Pn**	**00 36 31.8**	**+0.5**
PMBI	**Palembang**	**4.51**	**75**	Pn	**Pn**	**00 36 35.6**	**-0.2**
PBSI	**Pulau Batu**	**4.53**	**332**	P	**Pn**	**00 36 38.0**	**+1.9**
BLSI	**Bandar Lampung**	**4.99**	**105**	P	**Pn**	**00 36 42.7**	**+0.2**
TPRI	**Tanjung Pinang**	**6.46**	**40**	P	**Pn**	**00 37 03.9**	**+1.3**
	16nm242µm236nm,0.6s						
MYKOM	**Kota Tinggi**	**6.78**	**31**	Pn	**Pn**	**00 37 06.6**	**-0.4**
RPSI	**Rantau Prapat**	**6.89**	**348**		**Pn**	**00 37 07.6**	**-1.0**
RPSI	**Rantau Prapat**	**6.89**	**348**		**Pn**	**00 37 07.7**	**-0.8**
PSI	**Prapat**	**7.00**	**348**	Pn	**Pn**	**00 37 07.7**	**-2.4**
	1.2nm,0.3s,baz=138,slow=10,SNR=7.1						
PSI	**Prapat**	**7.00**	**348**	P	**Pn**	**00 37 07.6**	**-2.5**
LEM	**Lembang**	**7.68**	**111**	Pn	**Pn**	**00 37 19.6**	**0.0**
	7.5nm,0.3s,baz=195,slow=13,SNR=24						
LEM				LR	LR	00 40 08.7	
	comp=Z,445nm,21.8s,baz=287,slow=37						
LEM	**Lembang**	**7.68**	**111**	P	**Pn**	**00 37 19.5**	**-0.1**
	1.1nm3µm388nm,0.8s						
CISI	**Cisompet, Garu**	**8.14**	**115**	P	**Pn**	**00 37 23.2**	**-2.6**
	4.1nm9µm1µm,0.8s						
CISI	**Cisompet, Garu**	**8.14**	**115**		**Pn**	**00 37 22.9**	**-2.9**
IPM	**Ipoh**	**8.53**	**4**		**Pn**	**00 37 30.5**	**-0.6**
IPM	**Ipoh**	**8.53**	**4**	P	**Pn**	**00 37 33.0**	**+1.9**
COCO	**West Island**	**8.79**	**203**	P	**Pn**	**00 37 32.2**	**-2.5**
COCO	**West Island**	**8.79**	**203**		**Pn**	**00 37 32.2**	**-2.5**
MLSI	**Meulaboh, Aceh**	**9.21**	**334**	P	**Pn**	**00 37 41.6**	**+1.3**
	196nm,1.0s						
KULM	**Kulim**	**9.31**	**2**		**Pn**	**00 37 40.3**	**-1.5**
KULM	**Kulim**	**9.31**	**2**	P	**Pn**	**00 37 43.0**	**+1.2**
LHMI	**Lhok Sumawe**	**9.87**	**340**	Pn	**Pn**	**00 37 49.2**	**-0.3**
SMRI	**Semarang**	**10.41**	**107**	P	**Pn**	**00 37 58.6**	**+1.7**
	294nm,1.0s						
SMRI	**Semarang**	**10.41**	**107**		**Pn**	**00 37 56.6**	**-0.3**
UGM	**Wanagama**	**10.76**	**111**	P	**Pn**	**00 38 02.3**	**+0.6**
	196nm,0.8s						
UGM	**Wanagama**	**10.76**	**111**		**Pn**	**00 38 00.1**	**-1.6**
WOJI	**Wonogiri, Jawa**	**11.11**	**110**	P	**Pn**	**00 38 06.0**	**-0.4**
	77nm,0.8s						
KSM	**Kuching**	**11.33**	**61**	Pn	**Pn**	**00 38 09.0**	**-0.5**
SBUM	**Sibu**	**13.48**	**61**		**Pn**	**00 38 38.5**	**-0.3**
KMMI	**Kalianget**	**13.82**	**103**	P	**Pn**	**00 38 43.1**	**-0.4**
	78nm,1.0s						
JAGI	**Jajag, Banyuwa**	**14.34**	**108**	P	**P**	**00 38 54.6**	**-2.8**
	81nm,0.9s						
JAGI	**Jajag, Banyuwa**	**14.34**	**108**		Pn	00 38 45.8	-4.9
SRBI	**Singaraja**	**15.25**	**106**	P	**Pn**	**00 39 00.7**	**-2.2**
	50nm,0.8s						
KBKI	**Kotabaru**	**15.75**	**88**	P	**Pn**	**00 39 11.0**	**+1.6**
	31nm,0.9s						
DLV	**T Lat**	**17.84**	**27**	P	**Pn**	**00 39 35.6**	**-0.2**
PLAI	**Plampang**	**17.89**	**106**	P	**P**	**00 39 37.3**	**+0.5**
	636nm91nm,0.9s						
KKM	**Kota Kinabalu**	**18.72**	**58**	P	**P**	**00 39 44.6**	**-1.5**
KAPI	**Kappang**	**19.31**	**93**	P	**P**	**00 39 51.7**	**-0.8**
	1.4nm,0.3s,baz=265,slow=9.9,SNR=15						
KAPI				LR	LR	00 47 32.0	
	comp=Z,340nm,18.3s,baz=280,slow=38						
PBKT	**Sadao Pong**	**20.53**	**2**	P	**P**	**00 40 04.8**	**-0.8**
BASI	**Baing, Sumba**	**20.92**	**108**	P	Pn	00 40 14.0	+1.5
	2µm156nm,0.9s						
MMRI	**Maumere**	**22.16**	**103**	P	**P**	**00 40 24.5**	**+1.2**
CM31	**Chiang Mai Arr**	**22.45**	**356**	P	**P**	**00 40 23.2**	**-3.1**
CM31				IAmb	IAmb	00 40 29.7	
	comp=Z,81nm,1.1s						
CMAR	**Chiang Mai Arr**	**22.45**	**356**	P	**P**	**00 40 25.4**	**-0.9**
	comp=Z,40nm,1.0s,baz=186,slow=9.7,SNR=53						
CMAR	**Chiang Mai Arr**	**22.45**	**356**	P	**P**	**00 40 25.0**	**-1.2**
LUWI	**Luwuk**	**22.55**	**83**	P	P	00 40 39.6	+12
LUWI	**Luwuk**	**22.55**	**83**	P	**P**	**00 40 25.5**	**-1.9**
LUWI				IAmb	IAmb	00 40 43.7	
	comp=Z,53nm,0.8s						
CHTO	**Chiang Mai**	**22.80**	**356**	P	**P**	**00 40 28.7**	**-1.3**
CHTO				pmax	pmax		
	comp=Z,33nm,0.9s						
CHTO	**Chiang Mai**	**22.80**	**356**	P	**P**	**00 40 28.7**	**-1.3**
CHTO				IAmb	IAmb	00 40 39.6	
	comp=Z,33nm,0.9s						
SOEI	**Soe**	**24.34**	**105**	P	**P**	**00 40 42.9**	**-2.4**
	comp=Z,1µmcomp=Z,124nm,1.1s						
QIZ	**Qiongzhong**	**24.78**	**22**	P	**P**	**00 40 49.6**	**+0.6**
QIZ				S	**S**	**00 45 13.8**	**+3.9**
QIZ	**Qiongzhong**	**24.78**	**22**	IAmb	IAmb	00 40 58.3	
	comp=Z,28nm,1.1s						
SANI	**Sanana**	**25.63**	**86**	P	**P**	**00 40 57.6**	**+0.8**
	comp=Z,24nm,1.0s						
PSA00	**Pilbara Seismi**	**25.66**	**134**	P	**P**	**00 40 59.2**	**+2.2**
TGY	**Tagaytay City**	**27.23**	**48**	LR	LR	00 53 07.3	
	comp=Z,349nm,18.5s,baz=136,slow=39						
LBMI	**Labuha**	**27.29**	**83**	P	**P**	**00 41 18.4**	**+6.6**
TNTI	**Ternate**	**27.37**	**80**	P	**P**	**00 41 09.8**	**-2.8**
BRDH	**Bariadhala**	**27.94**	**343**	LR	LR	00 54 33.7	
	comp=Z,438nm,20.3s,baz=180,slow=41						
H08S2	**Diego Garcia H**	**27.98**	**261**	T	T	01 10 33.6	
	baz=84,slow=75,SNR=463						
H08S3	**Diego Garcia H**	**27.99**	**261**	T	T	01 10 33.7	
	baz=84,slow=75,SNR=1522						
H08S1	**Diego Carcia H**	**28.00**	**261**	T	T	01 10 35.1	
	baz=84,slow=75,SNR=376						
FITZ	**Fitzroy Crossi**	**28.35**	**121**	P	**P**	**00 41 21.4**	**+0.1**
	baz=28,SNR=14						
FITZ	**Fitzroy Crossi**	**28.35**	**121**	P	**P**	**00 41 20.9**	**-0.4**
	comp=Z,13nm,0.9s,baz=326,slow=0.1,SNR=20						
KMI	**Kunming**	**29.12**	**4**	P	**P**	**00 41 30.0**	**+1.8**
KMI				pP	pP	00 41 34.3	-1.1
KNRA	**Kununurra**	**30.17**	**114**	P	**P**	**00 41 37.2**	**-0.2**
KNRA				IAmb	IAmb	00 41 52.2	
	comp=Z,25nm,0.8s						
HYB	**Hyderabad**	**30.36**	**315**	*i* P	**P**	**00 41 41.0**	**+1.9**
GYA	**Guiyang**	**30.96**	**11**	⇑*i*P	**P**	**00 41 44.8**	**+0.4**
GYA				pP	pP	00 41 52.8	+1.1
GYA				PP	**PnPn**	**00 42 47.3**	**+1.5**
GYA				PcP	**PcP**	**00 44 42.8**	**+2.3**
GYA				S	**S**	**00 46 50.4**	**+2.9**
GYA				SS	ScP	00 48 35.5	+14
SWI	**Sorong**	**30.99**	**85**	P	P	00 41 56.4	+12
MTN	**Manton Dam**	**31.58**	**108**	P	**P**	**00 41 48.6**	**-1.3**
	baz=31,SNR=8.0						
FAKI	**Fak Fak**	**31.81**	**89**	P	**P**	**00 41 50.4**	**-1.5**
FAKI				IAmb	IAmb	00 42 02.6	
	comp=Z,21nm,1.0s						
KDU	**Kakadu**	**32.82**	**107**	P	**P**	**00 41 58.8**	**-2.0**
	baz=33,SNR=7.6						
H01W3	**Cape Leeuwin H**	**33.19**	**159**	T	T	01 17 13.4	
	baz=337,slow=76,SNR=80						
H01W2	**Cape Leeuwin H**	**33.20**	**159**	T	T	01 17 11.6	
	baz=337,slow=76,SNR=86						
H01W1	**Cape Leeuwin H**	**33.20**	**159**	T	T	01 17 15.0	
	baz=337,slow=76,SNR=62						
ODAN	**Odare**	**33.24**	**338**	*e*P	**P**	**00 42 05.6**	**+1.1**
	comp=Z,40nm,0.6s						
TAPN	**Taplejung**	**33.57**	**339**	*e*P	**P**	**00 42 09.0**	**+1.5**
	comp=Z,179nm,1.1s						
RAMN	**Ramite**	**33.61**	**337**	*e*P	**P**	**00 42 09.3**	**+1.5**
	comp=Z,36nm,0.7s						
TPUB	**Ta-pu**	**33.62**	**35**	P	**P**	**00 42 06.6**	**-1.1**
TPUB				IAmb	IAmb	00 42 21.9	
	comp=Z,19nm,1.0s						
WRKA	**Warakurna**	**33.95**	**131**	P	**P**	**00 42 11.5**	**+0.8**
	baz=34,SNR=5.9						
YULB	**Yu-li**	**34.08**	**36**	P	**P**	**00 42 11.1**	**-0.5**
YULB				IAmb	IAmb	00 42 20.6	
	comp=Z,12nm,1.1s						
SSLB	**Suanglung**	**34.19**	**35**	P	**P**	**00 42 12.1**	**-0.5**
JIRN	**Jiri**	**34.41**	**337**	*e*P	**P**	**00 42 16.1**	**+1.2**
PKI	**Pulchoki**	**34.64**	**336**	*e*P	**P**	**00 42 17.4**	**+0.6**
PKIN	**Phulchoki**	**34.65**	**336**	*e*P	**P**	**00 42 17.6**	**+0.8**
	comp=Z,24nm,0.7s						
LSA	**Lhasa**	**34.74**	**346**	IAmb	IAmb	00 42 20.4	
	comp=Z,26nm,1.0s						
GUN	**Gumba**	**34.75**	**337**	*e*P	**P**	**00 42 18.9**	**+1.1**
	comp=Z,93nm,0.7s						
DMN	**Daman**	**34.79**	**336**	*e*P	**P**	**00 42 18.9**	**+0.8**
	comp=Z,47nm,0.9s						
NACB	**Ninganchiao**	**34.85**	**35**	P	**P**	**00 42 18.2**	**-0.1**
KKN	**Kakani**	**34.88**	**336**	*e*P	**P**	**00 42 19.8**	**+1.0**
CD2	**Chengdu**	**34.94**	**5**	P	**P**	**00 42 19.0**	**-0.1**
CD2				S	**S**	**00 47 49.3**	**+0.1**
GKN	**Gorkha**	**35.33**	**335**	*e*P	**P**	**00 42 23.7**	**+1.1**
DANN	**Dangsing**	**36.01**	**335**	*e*P	**P**	**00 42 29.4**	**+0.8**
WB0	**Warramunga Arr**	**36.61**	**118**	IAmb	IAmb	00 42 46.0	
	comp=Z,17nm,0.9s						
WRA	**Warramunga Arr**	**36.63**	**118**	P	**P**	**00 42 33.0**	**-0.7**
	comp=Z,5.8nm,0.9s,baz=301,slow=9.2,SNR=18						
WRA	**Warramunga Arr**	**36.63**	**118**	*i* P	**P**	**00 42 35.4**	**+1.7**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WRA	**Warramunga Arr**	**36.63**	**118**	P	**P**	**00 42 32.7**	**-1.0**
WRAB	**Tennant Creek**	**36.63**	**118**	*ce*P	**P**	**00 42 32.9**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,19nm,1.7s						
WRAB	**Tennant Creek**	**36.63**	**118**	P	**P**	**00 42 30.1**	**-3.6**
WRAB				IAmb	IAmb	00 42 30.7	
	comp=Z,27nm,0.8s						
WB2	**Warramunga Arr**	**36.64**	**118**	IAmb	IAmb	00 42 42.2	
	comp=Z,12nm,0.8s						
WHN	**Wuhan**	**36.92**	**20**	P	**P**	**00 42 36.3**	**+0.3**
WHN				S	**S**	**00 48 23.8**	**+4.4**
FORT	**Forrest**	**37.21**	**139**	P	**P**	**00 42 38.6**	**+0.2**
FORT				IAmb	IAmb	00 42 48.3	
	comp=Z,20nm,1.0s						
AS31	**Alice Springs**	**37.73**	**124**	P	**P**	**00 42 42.6**	**-0.4**
ASAR	**Alice Springs**	**37.73**	**124**	P	**P**	**00 42 42.9**	**-0.1**
	comp=Z,5.6nm,0.8s,baz=301,slow=8.0,SNR=34						
ASAR				S	**S**	**00 48 39.2**	**+7.1**
	comp=Z,1.7nm,0.8s,baz=292,slow=15,SNR=9.5						
ASAR	**Alice Springs**	**37.73**	**124**	P	**P**	**00 42 42.8**	**-0.3**
ASAR	**Alice Springs**	**37.73**	**124**	P	**P**	**00 42 42.8**	**-0.3**
XAN	**Xi'an**	**38.76**	**11**	P	**P**	**00 42 51.1**	**-0.4**
XAN				pP	pP	00 42 57.0	-1.9
XAN				S	**S**	**00 48 54.8**	**+7.5**
XAN				SS	SnSn	00 51 18.3	-19
LZH	**Lanzhou**	**40.09**	**4**	⇑P	**P**	**00 43 03.3**	**+0.6**
LZH				pP	pP	00 43 08.8	-1.2
LZH				sP	sP	00 43 12.0	-0.8
LZH				PP	**PnPn**	**00 44 40.1**	**+1.2**
JOW	**Kunigami**	**40.87**	**40**	P	**P**	**00 43 08.8**	**-0.4**
QIS	**Mount Isa**	**41.49**	**117**	P	**P**	**00 43 14.5**	**+0.1**
	baz=41,SNR=7.4						
TIY	**Taiyuan**	**43.06**	**14**	*e*P	**P**	**00 43 27.4**	**+0.4**
GTA	**Gaotai**	**43.28**	**359**	⇑P	**P**	**00 43 29.4**	**+0.6**
GTA				pP	pP	00 43 33.9	-2.2
GTA				sP	sP	00 43 36.6	-2.3
GTA				PcP	**PcP**	**00 45 18.4**	**+0.8**
GTA				S	**S**	**00 49 59.3**	**+4.7**
GTA				SS	**SS**	**00 53 07.9**	**-0.8**
BBOO	**Buckleboo**	**43.89**	**135**	P	**P**	**00 43 34.1**	**+0.4**
	baz=44,SNR=6.3						
MTSU	**Mount Surprise**	**45.15**	**112**	P	**P**	**00 43 42.3**	**-1.8**
	baz=45,SNR=14						
BTO	**Baotou**	**45.34**	**10**	*e*P	P	00 43 39.8	-5.4
HHC	**Hu-ho-hao-te**	**45.87**	**12**	*e*P	**P**	**00 43 51.4**	**+2.0**
BJT	**Baijiatuau**	**46.22**	**17**	IAmb	IAmb	00 43 53.6	
	comp=Z,18nm,1.0s						
BJI	**Beijing**	**46.24**	**17**	⇑*i*P	**P**	**00 43 52.6**	**+0.4**
HTT	**Hallett**	**46.26**	**134**	P	**P**	**00 43 53.4**	**+0.8**
	baz=46,SNR=5.5						
PMG	**Port Moresby**	**46.70**	**99**	P	**P**	**00 43 55.3**	**-0.9**
PMG				pmax	pmax		
	comp=Z,21nm,0.7s						
PMG	**Port Moresby**	**46.70**	**99**	P	**P**	**00 43 55.3**	**-0.9**
QLP	**Quilpie**	**47.48**	**123**	P	**P**	**00 44 02.7**	**+0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=48,SNR=4.6						
STKA	Stephens Creek	47.49	131	P	P	00 44 03.1	+1.0
	baz=48,SNR=6.2						
STKA	Stephens Creek	47.49	131	P	P	00 44 02.7	+0.5
	comp=Z,9.4nm,0.9s,baz=291,slow=12,SNR=7.4						
STKA	Stephens Creek	47.49	131	P	P	00 44 02.9	+0.7
STKA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
STKA	Stephens Creek	47.49	131	P	P	00 44 02.9	+0.7
KSAR	Wonju Array Be	48.58	29	P	P	00 44 10.2	-0.3
KSAR	Wonju Array Be	48.58	29	P	P	00 44 10.2	-0.3
KSRS	Korea Array	48.61	29	P	P	00 44 10.2	-0.5
	comp=Z,19nm,1.0s,baz=220,slow=8.2,SNR=33						
KS19	Wonju Array Si	48.62	29	P	P	00 44 10.1	-0.7
KS19				IAmb	IAmb	00 44 12.2	
	comp=Z,16nm,0.9s						
KSH	Kashi	48.88	335	P	P	00 44 14.3	+1.4
KSH				pP	pP	00 44 19.1	-1.2
KSH				PcP	PcP	00 45 37.6	+0.5
KSH				PcS	PcS	00 49 33.3	-0.2
KSH				S	S	00 51 16.5	+1.5
KSH				ScS	ScS	00 54 03.1	-0.6
WMQ	Urumqi	49.04	348	P	P	00 44 16.0	+2.0
WMQ				pP	pP	00 44 19.3	-2.1
WMQ				sP	sP	00 44 23.8	-0.4
CMSA	Cobar Meteorol	50.50	128	P	P	00 44 25.9	+0.6
	baz=50,SNR=6.3						
SONM	Songino Array	51.97	5	P	P	00 44 37.1	+1.0
	comp=Z,20nm,0.7s,baz=188,slow=7.4,SNR=141						
SONM	Songino Array	51.97	5	P	P	00 44 36.6	+0.5
SONM				pmax	pmax		
	comp=Z,28nm,1.0s						
SONM	Songino Array	51.97	5	P	P	00 44 36.6	+0.5
ULN	Ulaanbaatar	52.06	6	P	P	00 44 37.0	+0.2
ULN				pmax	pmax		
	comp=Z,24nm,1.0s						
ULN	Ulaanbaatar	52.06	6	P	P	00 44 37.0	+0.2
ULN				IAmb	IAmb	00 44 38.9	
	comp=Z,24nm,1.0s						
AAK	Ala-Archa	52.09	336	P	P	00 44 38.5	+1.3
	comp=Z,3.0nm,0.3s,baz=186,slow=7.0,SNR=4.6						
AAK	Ala-Archa	52.09	336	i P	P	00 44 38.0	+0.8
AAK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
CN2	Changchun	52.73	23	eP	P	00 44 41.1	-0.6
CN2				eS	S	00 52 12.0	+4.0
EIDS	Eidsvold	52.99	119	P	P	00 44 44.7	+0.7
EIDS				IAmb	IAmb	00 44 45.6	
	comp=Z,17nm,1.1s						
MK31	Makanchi Array	53.13	345	IAmb	IAmb	00 44 46.0	
	comp=Z,16nm,1.0s						
MKAR	Makanchi Array	53.13	345	P	P	00 44 45.0	+0.4
	comp=Z,13nm,0.8s,baz=150,slow=8.8,SNR=128						
MKAR	Makanchi Array	53.13	345	c eP	P	00 44 45.0	+0.4
MKAR				pmax	pmax		
	comp=Z,13nm,0.8s						
MKAR	Makanchi Array	53.13	345	P	P	00 44 44.0	-0.6
MAKZ	Makanchi	53.23	344	P	P	00 44 45.8	+0.5
MAKZ				pmax	pmax		
	comp=Z,11nm,1.1s						
MAKZ	Makanchi	53.23	344	P	P	00 44 45.8	+0.5
MAJO	Matsushiro	53.65	38	⇓eP	P	00 44 46.7	-1.9
MAJO	Matsushiro	53.65	38	P	P	00 44 47.4	-1.1
MAJO				IAmb	IAmb	00 45 05.2	
	comp=Z,13nm,1.1s						
MAT	Matsushiro	53.65	38	P	P	00 44 47.1	-1.5
MAT				S	S	00 52 21.6	+0.8
MJAR	Matsushiro Arr	53.65	38	P	P	00 44 47.3	-1.3
	comp=Z,9.9nm,0.9s,baz=219,slow=7.1,SNR=20						
MJAR	Matsushiro Arr	53.65	38	P	P	00 44 47.4	-1.2
MJAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MJAR	Matsushiro Arr	53.65	38	P	P	00 44 47.4	-1.2
MJB9	Matsu-Tunnel	53.65	38	P	P	00 44 46.9	-1.7
MJB9				IAmb	IAmb	00 45 05.2	
	comp=Z,13nm,1.1s						
ZAK	Zakamensk	54.31	2	eP	P	00 44 53.7	+0.5
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MDJ	Mudanjiang	55.08	25	P	P	00 44 59.3	+0.5
MDJ	Mudanjiang	55.08	25	IAmb	IAmb	00 45 01.7	
	comp=Z,12nm,0.8s						
MOY	Mondy	55.54	0	eP	P	00 45 02.8	+0.7
TLY	Talaya	55.62	2	c iP	P	00 45 03.7	+1.1
TLY				pmax	pmax		
	comp=Z,13nm,0.9s						
TLY	Talaya	55.62	2	P	P	00 45 03.9	+1.3
TLY				IAmb	IAmb	00 45 12.7	
	comp=Z,11nm,0.9s						
USA0B	Ussuriysk Arra	55.80	27	c iP	P	00 45 03.9	-0.1
USRK	Ussuriysk Ar.	55.80	27	P	P	00 45 04.0	0.0
	comp=Z,47nm,0.8s,baz=223,slow=6.5,SNR=70						
USRK	Ussuriysk Ar.	55.80	27	P	P	00 45 03.9	-0.1
USRK	Ussuriysk Ar.	55.80	27	P	P	00 45 03.9	-0.1
GEYT	Alibeck	57.30	321	P	P	00 45 14.8	-0.1
	comp=Z,3.2nm,0.8s,baz=123,slow=4.4,SNR=7.9						
KURBB	Kurchatov Arra	57.65	344	P	P	00 45 16.9	-0.1
	comp=Z,6.7nm,0.9s,baz=164,slow=6.9,SNR=42						
ZALV	Zalesovo Beam	59.28	349	P	P	00 45 28.4	+0.1
	comp=Z,23nm,0.8s,baz=172,slow=4.5,SNR=92						
ZALV	Zalesovo Beam	59.28	349	P	P	00 45 27.7	-0.6
ZALV	Zalesovo Beam	59.28	349	P	P	00 45 27.7	-0.6
KLR	Kul'dur	59.67	23	⇑iP	P	00 45 31.3	+0.2
KLR				pmax	pmax		
	comp=Z,23nm,1.0s						
RAYN	Ar Rayn	60.11	300	P	P	00 45 35.2	+0.5
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RAYN	Ar Rayn	60.11	300	P	P	00 45 35.2	+0.5
ZEA	Zeya	61.85	18	eP	P	00 45 46.0	+0.1
ZEA				pmax	pmax		
	comp=Z,21nm,1.2s						
ZEA				MLR	MLR		
	comp=Z,600nm,16.0s						
ZEA				MLR	MLR		
	comp=N,400nm,15.0s						
BVAR	Borovoye Array	62.27	340	P	P	00 45 48.3	-0.4
	comp=N,3.4nm,0.8s,baz=145,slow=8.1,SNR=11						
BRVK	Borovoye	62.33	340	c eP	P	00 45 48.1	-1.0
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BOD	Bodaibo	62.67	8	eP	P	00 45 51.6	+0.3
BOD				pmax	pmax		
	comp=Z,24nm,1.4s						
YSS	Yuzh-Sakhalins	63.03	31	eP	P	00 45 53.7	-0.2
YSS				e		00 46 01.7	
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
KMBO	Kilima Mbogo	63.14	271	P	P	00 45 53.9	-1.7
KMBO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KMBO	Kilima Mbogo	63.14	271	P	P	00 45 53.9	-1.7
ABKAR	Akbulak array	63.65	332	P	P	00 45 57.4	-0.6
ABKAR	Akbulak array	63.65	332	P	P	00 45 57.7	-0.3
ABKAR				IAmb	IAmb	00 46 09.7	
	comp=Z,13nm,0.9s						
AKTO	Aktyubinsk	65.37	332	P	P	00 46 09.0	-0.2
	comp=Z,4.5nm,1.0s,baz=104,slow=3.9,SNR=4.4						
DZM	Mont Dzumac	66.29	112	P	P	00 46 14.2	-1.7
TBLG	Delisi	68.02	318		P	00 46 29.5	+3.1
SVE	Sverdlovsk	68.75	338	⇑eP	P	00 46 31.3	+0.8
SVE				pmax	pmax		
	comp=Z,22nm,1.0s						
ZEI	Tsey	69.06	319	eP	P	00 46 35.0	+2.0
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ARU	Arti	69.27	337	P	P	00 46 33.3	-0.4
	comp=Z,1.3nm,0.7s,baz=172,slow=8.3,SNR=5.0						
ARU	Arti	69.27	337	c iP	P	00 46 33.1	-0.6
ARU				S	S	00 55 38.5	+0.2
ARU				SS	SS	00 59 58.5	-6.9
ARU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ARU	Arti	69.27	337	P	P	00 46 28.8	-5.0
ARU				IAmb	IAmb	00 46 34.6	
	comp=Z,10nm,1.1s						
NCK	Nalchik	69.58	319	i P	P	00 46 36.8	+0.8
NCK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
YAK	Yakutsk	69.65	14	eP	P	00 46 33.7	-2.2
YAK				e*PP	pP	00 46 42.3	-1.4
YAK				e		00 46 52.8	
YAK				eS	S	00 55 40.7	-1.8
YAK				e*SS	sS	00 56 05.0	+10
YAK				e		00 56 31.4	
YAK				eSS	SS	01 00 02.2	-8.8
YAK				pmax	pmax		
	comp=Z,31nm,0.9s						
YAK				pmax	pmax		
	comp=E,11nm,1.3s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,227nm,4.4s						
YAK				pmax	pmax		
	comp=N,103nm,4.9s						
YAK				smax	smax		
	comp=N,109nm,5.3s						
YAK				smax	smax		
	comp=E,101nm,5.2s						
YAK				MLR	MLR		
	comp=Z,399nm,16.0s						
YAK				MLR	MLR		
	comp=N,253nm,17.0s						
YAK				MLR	MLR		
	comp=E,154nm,17.0s						
KBZ	Khabaz	70.14	319	P	P	00 46 39.8	+0.4
	comp=E,5.1nm,1.0s,baz=99,slow=1.4,SNR=5.0						
KIV	Kislovodsk	70.38	320	eP	P	00 46 38.3	-2.7
KIV				pmax	pmax		
	comp=Z,16nm,1.1s						
GAZ	Gaziantep	71.53	311	P	P	00 46 48.2	0.0
GAZ				IAmb	IAmb	00 47 06.4	
	comp=Z,12nm,1.0s						
MMAI	Mount Meron Ar	71.59	307	P	P	00 46 50.4	+1.9
	comp=Z,1.0nm,0.6s,baz=80,slow=9.4,SNR=4.8						
NRIK	Noril'sk	73.80	355	P	P	00 47 00.4	-0.4
	comp=Z,14nm,1.0s,baz=167,slow=5.7,SNR=19						
VRH	Novokhopyorsk	74.26	326	eP	P	00 47 03.0	-0.9
VRH				pmax	pmax		
	comp=Z,20nm,1.2s						
PETK	Petropavlovsk-	74.43	32	P	P	00 47 04.2	-0.6
	comp=Z,4.1nm,0.8s,baz=212,slow=5.3,SNR=4.6						
MA2	Magadan	74.75	24	c eP	P	00 47 07.1	+0.5
MA2				pmax	pmax		
	comp=Z,29nm,1.7s						
MA2	Magadan	74.75	24	P	P	00 47 07.3	+0.7
MA2				IAmb	IAmb	00 47 07.9	
	comp=Z,17nm,1.1s						
BOSA	Boshof	75.02	242	P	P	00 47 09.3	+0.3
	comp=Z,3.7nm,1.0s,baz=99,slow=8.9,SNR=4.7						
BOSA	Boshof	75.02	242	P	P	00 47 09.3	+0.3
BOSA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BOSA	Boshof	75.02	242	IAmb	IAmb	00 47 16.7	
	comp=Z,6.2nm,1.1s						
BR131	Keskin Array S	75.02	313	i P	P	00 47 09.5	+0.7
BRTR	Keskin Array B	75.02	313	P	P	00 47 08.5	-0.3
	comp=Z,2.2nm,0.9s,baz=133,slow=7.3,SNR=12						
BRTR	Keskin Array B	75.02	313	P	P	00 47 08.8	+0.1
BRTR	Keskin Array B	75.02	313	P	P	00 47 08.8	+0.1
VSR	Storozhevoye	75.71	325	eP	P	00 47 12.9	+0.7
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SYO	Syowa Base	76.04	199	⇓eP	P	00 47 14.4	+0.6
SYO	Syowa Base	76.04	199	⇑epP	pP	00 47 18.0	-3.5
LPSR	Galich'ya Gora	76.44	327	eP	P	00 47 16.8	+0.4
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SEY	Seymchan	77.40	22	⇑iP	P	00 47 21.9	+0.3
PRGR	Permogore	77.72	336	eP	P	00 47 21.3	-2.1
PRGR				pmax	pmax		
	comp=Z,18nm,0.9s						
TIXI	Tiksi	77.84	9	c iP	P	00 47 22.6	-1.2
TIXI				pmax	pmax		
	comp=Z,13nm,1.3s						
TIXI	Tiksi	77.84	9	P	P	00 47 22.7	-1.2
TIXI				IAmb	IAmb	00 47 32.4	
	comp=Z,11nm,1.0s						
OBN	Obninsk	78.77	328	P	P	00 47 29.5	+0.3
	comp=Z,1.2nm,0.4s,baz=90,slow=6.7,SNR=3.8						
OBN	Obninsk	78.77	328	⇑eP	P	00 47 29.2	-0.1
OBN				e		00 47 37.0	
OBN				eS	S	00 57 18.7	-6.4
OBN				pmax	pmax		
	comp=Z,53nm,2.5s						
OBN				MLR	MLR		
	comp=Z,198nm,18.0s						
OBN	Obninsk	78.77	328	IAmb	IAmb	00 47 41.2	
	comp=Z,20nm,1.1s						
KLMR	Klimovskoe	79.87	334	eP	P	00 47 33.6	-1.6
KLMR				pmax	pmax		
	comp=Z,32nm,1.5s						
KLMR	Klimovskoe	79.87	334	eP	P	00 47 33.7	-1.5
KLMR				AMP		00 47 37.3	
	comp=Z,32nm,1.5s						
VNDA	Vanda	80.05	169	P	P	00 47 36.8	+0.8
	comp=Z,2.9nm,0.9s,baz=293,slow=4.0,SNR=5.2						
VNDA	Vanda	80.05	169	P	P	00 47 37.1	+1.1
VNDA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VNDA	Vanda	80.05	169	P	P	00 47 37.1	+1.1
AKASG	Malin Array Be	81.37	322	P	P	00 47 43.1	-0.4
	comp=Z,0.3nm,0.4s,baz=86,slow=5.0,SNR=4.2						
AKASG	Malin Array Be	81.37	322	P	P	00 47 43.1	-0.4
AKASG				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ELND	Elena	81.52	314	⇑P	P	00 48 00.4	+16
BURAR	Bucovina Array	83.08	319	⇑P	P	00 47 54.4	+1.7
BURAR	Bucovina Array	83.08	319	P	P	00 47 54.2	+1.5
BUR08	Bucovina Ar. S	83.10	319	P	P	00 47 53.9	+1.1
LIT	Litokhoron	83.41	311	IAmb	IAmb	00 48 13.3	
	comp=Z,6.0nm,0.8s						
DRGR		84.56	318	⇓P	P	00 48 02.9	+2.7
BILL	Bilibino	84.96	20	⇓eP	P	00 48 01.6	-0.1
BILL				e		00 51 21.4	
BILL				pmax	pmax		
	comp=Z,20nm,2.5s						
BILL	Bilibino	84.96	20	P	P	00 48 01.9	+0.2
BILL				IAmb	IAmb	00 48 14.8	
	comp=Z,7.0nm,1.0s						
BZS	Buzias	85.08	316	⇓P	P	00 48 03.2	+0.5
FINES	FINESS Array B	86.13	332	P	P	00 48 07.1	-0.5
	comp=Z,3.3nm,1.0s,baz=120,slow=11,SNR=4.0						
FINES	FINESS Array B	86.13	332	i P	P	00 48 09.8	+2.2
FINES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BLY	Banja Luka	88.03	315	P	P	00 48 17.1	-0.1
BLY				IAmb	IAmb	00 48 35.4	
	comp=Z,5.7nm,0.9s						
ARSA	Arzberg	89.49	317	i pP	P	00 48 27.5	+3.4
	comp=Z,3.4nm,0.8s						
SOKA	Soboth	89.76	317	i PcP	P	00 48 26.6	+1.2
	comp=Z,5.7nm,1.0s						
OBKA	Obir	90.08	316	i PcP	P	00 48 26.8	-0.1
	comp=Z,3.2nm,0.9s						
MOA	Molln	90.40	318	i pP	P	00 48 30.2	+1.8
	comp=Z,4.5nm,1.2s						
NRCA	Norcia	90.76	313	P	P	00 48 29.1	-1.1
GEC2	GERESS Array S	90.87	319	P	P	00 48 30.3	-0.3
GERES	GERESS Array B	90.87	319	P	P	00 48 31.6	+1.0
	comp=Z,1.1nm,0.8s,baz=93,slow=5.9,SNR=3.2						
GERES	GERESS Array B	90.87	319	P	P	00 48 30.6	0.0
GERES	GERESS Array B	90.87	319	P	P	00 48 30.6	0.0
ABTA	Abfaltersbach	91.50	317	i PcP	P	00 48 33.9	+0.4
	comp=Z,4.8nm,1.4s						
WTTA	Wattenberg	92.13	317	i PcP	P	00 48 36.8	+0.2
	comp=Z,1.5nm,0.6s						
WATA	Walderalm	92.17	317	i pP	P	00 48 41.3	+4.6
	comp=Z,7.3nm,1.4s						
SQTA	Sankt Quirin	92.42	317	i pP	P	00 48 41.8	+4.0
	comp=Z,2.5nm,0.8s						
MOTA	Moosalm	92.50	317	i pP	P	00 48 43.1	+4.9
	comp=Z,4.0nm,1.2s						
FETA	Feichten	92.73	317	i pP	P	00 48 43.9	+4.6
	comp=Z,2.7nm,1.1s						
RETA	Reutte	92.74	317	i P	P	00 48 37.8	-1.4
	comp=Z,2.5nm,1.1s						
DAVA	Damuels	93.33	317	i PcP	P	00 48 41.5	-0.6
	comp=Z,5.7nm,1.4s						
YKA	Yellowknife Ar	116.23	17	PKP	PKiKP	00 54 09.4	-0.4
	comp=Z,0.4nm,0.9s,baz=322,slow=1.4,SNR=3.7						
YKA				PKKPbc	PKKPab	01 04 45.7	+1.3
	comp=Z,0.3nm,0.9s,baz=226,slow=4.1,SNR=4.2						
NRS	Narsarsuaq	117.52	342	PKIKP	PKPdf	00 54 11.4	-0.9
NRS	Narsarsuaq	117.52	342		PKPdf	00 54 11.4	-0.9
NVAR	Mina Array Bea	130.93	41	PKP	PKiKP	00 54 39.8	-0.2
	comp=Z,0.4nm,0.7s,baz=232,slow=4.4,SNR=3.3						
NVAR				SKPbc	SKPab	00 58 03.6	+1.7
	comp=Z,0.9nm,0.8s,baz=273,slow=4.1,SNR=4.1						
R11A	Troy Canyon, C	132.71	39		PKiKP	00 54 45.0	+1.5
WCI	Wyandotte Cave	145.47	9	PKIKP	PKPbc	00 55 05.3	0.0
WCI	Wyandotte Cave	145.47	9		PKPbc	00 55 05.3	0.0
TXAR	Lajitas Array	146.07	40	PKPbc	PKPab	00 55 08.3	+0.1
	comp=Z,6.7nm,0.7s,baz=289,slow=1.5,SNR=65						
S51A	Beattyville	146.40	6		PKPdf	00 55 07.0	+0.1
LCAR	Lake Charles	146.43	17		PKPbc	00 55 07.9	-0.4
WHAR	Wooly Hollow	146.80	19		PKPbc	00 55 09.3	-0.1
WVT	Waverly	147.22	12	PKP2	PKPbc	00 55 10.7	+0.1
WVT	Waverly	147.22	12		PKPbc	00 55 10.7	+0.1
SIV	San Ignacio	152.91	222	PKPbc	PKiKP	00 55 25.4	+0.1
	comp=Z,1.3nm,0.9s,baz=342,slow=7.3,SNR=4.2						
CCIG	Comitan	162.72	45		PKPdf	00 55 29.2	-0.9
CCIG					sPKPdf	00 55 47.2	+6.3

IDC ***17*** *00:41:34.3±1.0, 5°.45N×78°.53W, h0^{km}, mb3.7/7, mb1 4.0/9, mb1mx3.8/35, mbtmp3.8/9, ML3.4/2, MS4.3/1, Ms1 4.3/1, ms1mx3.4/29, Error ellipse: s-maj=45.6km s-min=16.6km az=48.0*

UPA ***17*** *00:41:36.3±1.9, 5°.60N×78°.57W, h46^{km}±811^{km}, MW4.1*

NEIC ***17*** *00:41:37.4±2.8, 5°.71N±0°.04×78°.49W±0°.07, h27^{km}±6^{km}, mb4.2/10, Error ellipse: s-maj=10.3km s-min=5.9km az=79.0*

RSNC ***17*** *00:41:37.9±2.2, 5°.73N×78°.49W, h32^{km}±27^{km}, ML4.1, Mw4.0*

ISC 17 00:41:34.2±1.1, **5°.68N**±0°.03×**78°.49W**±0°.03, **h12**^{km}±7^{km}, **n87**, σ**2.^{s}17**/106, **mb3.7**/8, **12C-5D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOLC	Bahia Solano	1.21	63	⇓iP	Pn	00 41 56.5	-0.3
SOLC				eS	Sb	00 42 09.7	-2.8
SOLC				i		00 42 12.5	
	comp=Z,3µm,0.5s						
PIZC	Pizarro, Choco	1.33	122	⇑eP	Pg	00 41 58.7	-1.1
PIZC				⇑eS	Sn	00 42 15.6	-0.6
PIZC				i		00 42 22.3	
	comp=Z,5µm,0.3s						
PTAC	Punta Ardita,	1.61	25	eP	Pn	00 42 02.0	-0.5
PTAC				eS	Sn	00 42 19.1	-4.0
PTAC				i		00 42 20.9	
	comp=Z,6µm,0.2s						
MALC	Bahia Malaga	2.02	145	⇑eP	Pb	00 42 09.0	-1.8
MALC				eS	Sg	00 42 33.1	-6.1
MALC				i		00 42 54.5	
	comp=Z,413nm,0.7s						
PLMC	San Jos del P	2.33	109	⇑eP	Pn	00 42 12.5	+0.1
PLMC				eS	Sn	00 42 39.3	-1.7
PLMC				i		00 42 41.6	
	comp=Z,4µm,0.2s						
CBOC	Ciudad Bolivar	2.47	86	eS	Sn	00 42 42.1	-2.6
CBOC				i		00 42 43.6	
	comp=Z,948nm,0.3s						
DBBC	Dabeiba	2.63	59	⇓iP	Pn	00 42 18.3	+1.8
DBBC				i		00 42 58.9	
	comp=Z,3µm,0.7s						
YOTC	Yotoco, Valle	2.72	128	⇑eP	Pn	00 42 18.4	+0.5
YOTC				eS	Sn	00 42 48.6	-2.1
YOTC				i		00 42 54.9	
	comp=Z,370nm,1.0s						
AZU	Azuero	2.75	320	⇑eP	Pn	00 42 17.2	-0.8
AZU				i		00 42 55.2	
	comp=Z,132nm,0.3s						
AZU	Azuero	2.75	320	eP	Pn	00 42 16.6	-1.4
AZU				eS	Sn	00 42 48.2	-3.0
CACAO	El Cacao, Vera	2.88	305	eP	Pn	00 42 18.8	-1.1
CACAO				eS	Sn	00 42 50.8	-3.7
UPD2	Meteti	2.89	9	eP	Pn	00 42 21.6	+1.5
UPD2				eS	Sn	00 42 54.4	-0.3
HELC	Santa Helena	2.99	80	⇓iP	Pn	00 42 23.3	+1.5
HELC				eS	Sn	00 42 57.2	-0.5
HELC				i		00 42 59.9	
	comp=Z,408nm,0.9s						
GUY2C	Guyana, Caldas	3.14	98	eP	Pn	00 42 25.9	+2.0
GUY2C				i		00 43 06.3	
	comp=Z,374nm,0.4s						
CAPC	Capurgana	3.15	21	eP	Pn	00 42 25.4	+1.8
CAPC				i		00 43 11.9	
	comp=Z,115nm,0.7s						
RREF	El Recreo	3.22	104	eP	Pn	00 42 27.4	+2.2
RREF				eS	Sn	00 43 04.7	+0.9
RREF				i		00 43 10.4	
	comp=Z,668nm,0.7s						
ANIL	Santa Ana	3.29	111	eP	Pn	00 42 27.6	+1.7
ANIL				eS	Sn	00 43 06.1	+0.9
ANIL				i		00 43 09.5	
	comp=Z,2µm,0.4s						
TOLC	Tolima	3.34	109	eP	Pn	00 42 28.7	+2.2
TOLC				i		00 43 20.3	
	comp=Z,276nm,0.5s						
GMAL	Guarumal, Vera	3.42	307	eP	Pn	00 42 27.4	0.0
GMAL				eS	Sn	00 43 07.0	-0.9
CHOR3	La Chorrera	3.44	339	eP	Pn	00 42 27.9	+0.3
CHOR3				eS	Sn	00 43 08.2	-0.1
UPA	Univ. de Panam	3.44	343	eP	Pn	00 42 28.0	+0.4
UPA				eS	Sn	00 43 07.6	-0.7
CHPO	Chepo, Panama	3.52	350	eP	Pn	00 42 29.5	+0.8
CHPO				eS	Sn	00 43 09.5	-0.9
UREC	San Jos de Ur	3.59	55	⇓iP	Pn	00 42 32.4	+2.8
UREC				eS	Sn	00 43 13.3	+1.3
UREC				i		00 43 18.9	
	comp=Z,160nm,0.7s						
NORC	Norcasia	3.61	92	eP	Pn	00 42 32.9	+2.9
NORC				eS	Sn	00 43 13.3	+0.8
NORC				i		00 43 20.6	
	comp=Z,321nm,0.7s						
POPC	Popayan, Colom	3.61	150	⇑eP	Pn	00 42 31.0	+0.9
POPC				i		00 43 14.6	
	comp=Z,89nm,0.6s						
ORTC	Ortega, Tolima	3.68	118	⇑iP	Pn	00 42 33.8	+2.8
ORTC				i		00 43 23.6	
	comp=Z,783nm,1.0s						
BCIP	Isla Barro Col	3.71	339	eP	Pn	00 42 31.5	+0.2
BCIP				eS	Sn	00 43 14.1	-1.0
BCIP				i		00 43 36.3	
	comp=Z,95nm,1.6s						
BCIP	Isla Barro Col	3.71	339	eP	Pn	00 42 31.6	+0.2
BCIP	Isla Barro Col	3.71	339		Pn	00 42 31.8	+0.4
TUMC	Tumaco	3.84	184	Pn	Pb	00 42 34.5	-7.4
BBAC	Balboa, Cauca	3.84	161	eP	Pn	00 42 34.7	+1.4
BBAC				eS	Sn	00 43 16.0	-2.5
BBAC				i		00 43 27.3	
	comp=Z,83nm,0.5s						
PCON	Cinco Dias	3.93	148	eP	Pb	00 42 37.1	-6.7
PCON				i		00 43 47.5	
	comp=Z,192nm,0.6s						
SOTA	Rioblanco	3.99	152	⇑eP	Pn	00 42 37.1	+1.5
SOTA				i		00 43 30.6	
	comp=Z,121nm,0.7s						
ZARC	Zaragoza, Cauc	4.03	63	eP	Pn	00 42 38.7	+2.9
ZARC				eS	Sn	00 43 23.4	+0.4
ZARC				i		00 43 24.4	
	comp=Z,20µm,0.7s						
PTBC	PUERTO BERRIO,	4.10	78	⇓eP	Pn	00 42 39.8	+3.0
PTBC				i		00 43 31.4	
	comp=Z,235nm,0.6s						
ROSC	El Rosal	4.24	101	Pn	Pb	00 42 45.1	-3.8
	comp=Z,4.1nm,0.3s,baz=118,slow=9.6,SNR=7.8						
ROSC	El Rosal	4.24	101	eP	Pb	00 42 46.1	-2.8
ROSC				i		00 43 47.9	
	comp=Z,178nm,0.8s						
ROSC	El Rosal	4.24	101		Pn	00 42 43.8	+4.9
CRUC	La Cruz	4.36	159	eP	Pn	00 42 42.8	+2.1
CRUC				i		00 43 42.9	
	comp=Z,75nm,0.6s						
SPBC	San Pablo de B	4.40	90	eP	Pn	00 42 45.8	+5.0
SPBC				eS	Sn	00 43 33.0	+0.9
SPBC				i		00 43 40.9	
	comp=Z,148nm,1.6s						
GARC	Garzon, Huila	4.58	139	⇑eP	Pn	00 42 46.8	+3.2
GARC				eS	Sn	00 43 38.3	+1.5
GARC				i		00 43 47.5	
	comp=Z,202nm,0.3s						
CHIC	Chingaza	4.85	102	eP	Pn	00 42 52.1	+4.7
CHIC				eS	Sn	00 43 46.0	+2.3
CHIC				i		00 43 55.3	
	comp=Z,143nm,0.8s						
FLOC	Florencia	4.96	145	⇑eP	Pn	00 42 51.7	+3.2
FLOC				eS	Sn	00 43 44.6	-1.2
FLOC				i		00 44 06.8	
	comp=Z,54nm,1.6s						

FLOC	Florencia	4.96	145		Pn	00 42 51.2	+2.6
VILC	Villavicencio,	5.03	108	eP	Pn	00 42 55.6	+6.0
VILC				eS	Sn	00 43 52.6	+4.9
VILC				i		00 43 56.8	
	comp=Z,319nm,0.5s						
SJCC	San Jacinto, C	5.32	38	eP	Pn	00 42 56.5	+3.0
SJCC				eS	Sn	00 43 52.3	-2.6
SJCC				i		00 44 00.4	
	comp=Z,37nm,1.5s						
SJCC	San Jacinto, C	5.32	38	eP	Pn	00 42 56.6	+3.0
SJCC				eS	Sn	00 43 50.8	-4.1
BARC	Barichara	5.36	80	eP	Pn	00 42 58.1	+3.9
BARC				i		00 44 03.2	
	comp=Z,398nm,0.6s						
SMLC	San Martn de	5.37	54	eP	Pn	00 42 57.1	+2.9
SMLC				eS	Sn	00 43 54.9	-1.1
SMLC				i		00 44 14.4	
	comp=Z,49nm,0.6s						
RUSC	La Rusia	5.38	87	eP	Pn	00 42 58.9	+4.1
RUSC				eS	Sn	00 43 57.2	+0.2
RUSC				i		00 44 10.5	
	comp=Z,133nm,0.9s						
RUSC	La Rusia	5.38	87		Pn	00 42 57.6	+2.7
OTAV	Otavalo	5.41	180		Pn	00 42 57.1	+2.0
MACC	Macarena, Meta	5.81	127	⇑eP	Pn	00 43 02.9	+2.6
MACC				eS	Sn	00 44 04.9	-2.0
MACC				i		00 44 21.6	
	comp=Z,209nm,0.6s						
PAMC	Pamplona, Colo	5.99	74	eP	Pn	00 43 06.9	+3.8
PAMC				eS	Sn	00 44 14.4	+2.5
PAMC				i		00 44 20.5	
	comp=Z,124nm,0.9s						
CODC	Agustn Codazz	6.55	49	eP	Pn	00 43 13.3	+2.9
CODC				eS	Sn	00 44 22.1	-2.9
CODC				i		00 44 31.9	
	comp=Z,12nm,0.6s						
GUVC	San Jose del G	6.62	118	eP	Pn	00 43 13.9	+2.5
GUVC				eS	Sn	00 44 25.8	-1.2
GUVC				i		00 44 28.9	
	comp=Z,301nm,0.7s						
TAMC	Tame, Arauca	6.70	83	eP	Pn	00 43 15.6	+3.0
TAMC				eS	Sn	00 44 31.9	+2.9
TAMC				i		00 44 52.9	
	comp=Z,71nm,2.8s						
JTS	Las Juntas de	7.87	306	Pn	Pn	00 43 32.6	+4.0
	comp=Z,0.8nm,0.3s,baz=185,slow=11,SNR=5.9						
JTS				Sn	Sn	00 45 00.4	+2.8
	comp=Z,0.5nm,0.3s,baz=33,slow=20,SNR=2.6						
JTS	Las Juntas de	7.87	306		Pn	00 43 31.9	+3.3
SDV	Santo Domingo	8.42	67	Pn	Pn	00 43 40.0	+3.8
	comp=Z,3.0nm,0.3s,baz=232,slow=13,SNR=28						
SDV				Sn	Sn	00 45 11.1	-0.3
	comp=Z,2.1nm,0.3s,baz=46,slow=20,SNR=5.6						
SDV	Santo Domingo	8.42	67	eP	Pn	00 43 39.5	+3.3
SDV				i		00 45 18.5	
	comp=Z,21nm,0.8s						
SDV	Santo Domingo	8.42	67		Pn	00 43 38.7	+2.4
URIC	Uribia, Colomb	8.78	47		Pn	00 43 43.1	+2.1
ACON	Acoyapa	9.09	314	Pn	Pn	00 43 46.7	+1.4
SDDR	Presa de Saban	14.97	27	Pn	Pn	00 45 09.6	+3.8
APG	El Apazote	14.98	309	LR	LR	00 50 33.8	
	comp=Z,1µm,20.8s,baz=124,slow=36						
DR12	Loma Pena Alta	15.77	33	Pn	Pn	00 45 18.0	+1.7
CRPR	Cabo Rojo, PR	16.54	41	Pn	Pn	00 45 24.5	-1.7
MLPR	Magueyes Islan	16.56	42	Pn	Pn	00 45 25.4	-1.0
MLPR				IAmb	IAmb	00 45 42.7	
	comp=Z,16nm,0.8s						
MPR	Mayaguez	16.67	41	Pn	Pn	00 45 26.6	-1.2
MPR				IAmb	IAmb	00 45 41.0	
	comp=Z,28nm,1.0s						
OBIP	Obispado Ponce	16.90	42	Pn	Pn	00 45 30.1	-0.7
SJG	San Juan	17.26	43	Pn	Pn	00 45 35.9	+0.6
SJG				IAmb	IAmb	00 45 43.0	
	comp=Z,17nm,1.1s						
GCPR	Guaynabo City	17.44	43	Pn	Pn	00 45 38.1	+0.6
GCPR				IAmb	IAmb	00 45 46.3	
	comp=Z,18nm,1.1s						
STVI	Saint Thomas	18.25	45		P	00 45 48.0	+0.3
STVI				IAmb	IAmb	00 46 04.6	
	comp=Z,21nm,1.0s						
SAML	Samuel	21.07	133	P	P	00 46 19.0	+0.6
SAML				IAmb	IAmb	00 46 22.8	
	comp=Z,9.9nm,0.9s						
LPAZ	La Paz	24.11	155		P	00 46 39.8	-11
LPAZ	La Paz	24.11	155		P	00 46 39.3	-11
LPAZ				IAmb	IAmb	00 46 57.7	
	comp=Z,4.3nm,0.7s						
SIV	San Ignacio	27.59	142	P	P	00 47 22.6	+1.1
	comp=Z,1.6nm,0.6s,baz=330,slow=10,SNR=8.2						
TXAR	Lajitas Array	33.45	318	P	P	00 48 17.2	+3.8
	comp=Z,0.5nm,0.8s,baz=152,slow=9.5,SNR=3.9						
BDFB	Brasilia	36.87	125	P	P	00 48 44.4	+1.4
	comp=Z,4.1nm,0.9s,baz=316,slow=5.8,SNR=5.4						
BDFB	Brasilia	36.87	125	IAmb	IAmb	00 48 45.8	
	comp=Z,7.6nm,1.0s						
CPUP	Villa Florida	37.86	148	P	P	00 48 50.7	-0.4
	comp=Z,1.4nm,0.7s,baz=0.0,slow=10,SNR=3.5						
NVAR	Mina Array Bea	48.61	318	P	P	00 50 21.1	+3.0
	comp=Z,0.4nm,0.6s,baz=129,slow=6.9,SNR=4.8						
NVAR	Mina Array Bea	48.61	318	P	P	00 50 19.8	+1.6
YKA	Yellowknife Ar	62.59	342	P	P	00 52 00.8	+2.8
	comp=Z,0.2nm,0.7s,baz=128,slow=7.7,SNR=5.4						
ILAR	Eielson Array	75.77	336	P	P	00 53 22.9	+3.3
	comp=Z,0.2nm,0.7s,baz=119,slow=5.6,SNR=4.3						
ILAR	Eielson Array	75.77	336	P	P	00 53 19.2	-0.5

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*IDC **17** 00:41:47.8±4.2, 36°.09N×70°.81E, h162^{km}±40^{km}, mb3.5/3, mb1 3.5/7, mb1mx3.1/57, mbtmp4.0/7, MS4.1/1, Ms1 4.1/1, ms1mx3.2/30, Error ellipse: s-maj=37.8km s-min=21.7km az=167.0*

*NEIC **17** 00:41:51.8±1.2, 36°.50N±0°.06×70°.7E±0°.1, h200^{km}±4^{km}, mb4.2/6, Error ellipse: s-maj=14.9km s-min=8.3km az=99.0*

ISC 17 00:41:51.1±0.6**, 36°.49N**±0°.05×**70°.76E**±0°.05**, h200**^{km}**, n50,** σ**1^{s}.55**/59**, mb4.0**/5**, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.40	216		Pn	00 42 34.7	+0.6
KBL				Sn	Sn	00 43 06.1	-1.4
CHGR	Chuyangaron	2.51	330		Pn	00 42 35.8	+0.7
CHGR				Sn	Sn	00 43 07.9	-1.7
CEP	Cherat	2.82	160	P	Pn	00 42 40.1	+1.3
CEP				S	Sn	00 43 15.0	-1.1
CHCP	Chirah Chowk	3.49	143	P	Pn	00 42 48.2	+1.5
NIL	Nilore	3.50	144	Pn	Pn	00 42 48.2	+1.5
THW	Thamme Wali	3.78	167	P	Pn	00 42 51.0	+0.8
SARP	Sargodha	4.83	160	P	Pn	00 43 03.5	+0.2
TAS	Tashkent	4.96	347	Pn	Pn	00 43 06.3	+1.4
TAS				Sn	Sn	00 44 01.7	-1.5
ARSB	Arslanbob	5.13	19		Pn	00 43 08.2	+1.1
ARSB				Sn	Sn	00 44 06.5	-0.8
THN	Thein Dam	5.76	133	eS	Sn	00 44 19.5	-2.1
AML	Almayashu	6.07	21	P	Pn	00 43 20.3	+0.8
	SNR=44						
DHRM	DHARAMSHALA	6.24	131	i x	Pn	00 43 22.1	+0.5
DHRM				eP	Pn	00 43 22.1	+0.5
DHRM				eS	Sn	00 44 31.0	-2.2
DHRM				IAML		00 44 33.5	
	comp=E,218nm,0.5s						
DHRM				IAML		00 44 34.9	
	comp=N,177nm,0.1s						
UCH	Uchtor	6.42	26	P	Pn	00 43 25.4	+1.3
	SNR=15						
KZA	Kyzart	6.57	31	P	Pn	00 43 29.5	+3.4
	SNR=5.2						
EKS2	Erkin-Say	6.59	20	P	Pn	00 43 27.3	+1.4
	SNR=13						
KK31	Karatay Array	6.61	358		Pn	00 43 27.1	+1.0
KK31				Sn	Sn	00 44 38.3	-3.2
KKAR	Karatay Array	6.61	358		Pn	00 43 26.9	+0.8
KKAR				Sn	Sn	00 44 38.9	-2.6
KKAR	Karatay Array	6.61	358		Pn	00 43 27.1	+1.0
KKAR				Sn	Sn	00 44 38.3	-3.2
AAK	Ala-Archa	6.78	24	P	Pn	00 43 30.0	+1.5
	comp=N,2.4nm,0.3s,baz=163,slow=6.8,SNR=6.7						
AAK				S	Sn	00 44 44.4	-1.4
	comp=N,2.6nm,0.3s,baz=324,slow=21,SNR=30						
AAK	Ala-Archa	6.78	24	P	Pn	00 43 29.8	+1.3
	SNR=8.6						
AAK	Ala-Archa	6.78	24	Pn	Pn	00 43 30.2	+1.7
AAK					Sn	00 44 45.9	+0.1
FRU1	Bishkek	6.98	24	Pn	Pn	00 43 32.3	+1.3
HRA	Herat	7.26	256	Pn	Pn	00 43 34.7	-0.2
SMLA	Simla	7.55	133	eS	Sn	00 44 59.6	-4.3
SMLA				IAML		00 45 02.2	
	comp=N,48nm,0.2s						
SMLA				IAML		00 45 02.2	
	comp=E,45nm,0.3s						
AYAN	Aya Nagar	9.62	144	eS	Sn	00 45 43.1	-10
GEYT	Alibeck	10.19	282	P	Pn	00 44 13.3	+0.6
	comp=E,0.2nm,0.3s,baz=107,slow=15,SNR=4.5						
GEYT	Alibeck	10.19	282		Pn	00 44 12.7	0.0
GYA0B	ALIBECK ARRAY	10.19	282	Pn	Pn	00 44 13.0	+0.3
DANN	Dangsing	13.64	123	eP	P	00 44 57.9	-1.4
	comp=E,11nm,0.3s						
BHPL	Bhopal	14.41	155	eP	P	00 45 10.3	+2.8
GKN	Gorkha	14.46	122	eP	P	00 45 07.9	-0.3
	comp=E,24nm,0.3s						
PKIN	Phulchoki	15.25	122	eP	P	00 45 17.4	+0.4
PKI	Pulchoki	15.26	121	eP	P	00 45 17.5	+0.3
KURK	Kurchatov	15.30	19	P	P	00 45 17.5	+0.5
JIRN	Jiri	15.75	120	eP	Pn	00 45 23.8	+1.0
RAMN	Ramite	16.48	121	eP	Pn	00 45 31.7	+0.3
	comp=E,10nm,0.4s						
BVAR	Borovoye Array	16.53	359	P	Pn	00 45 33.6	+2.0
	comp=E,0.9nm,0.3s,baz=161,slow=9.8,SNR=15						
BRVK	Borovoye	16.57	359	P	Pn	00 45 31.7	-0.3
AKTO	Aktyubinsk	16.69	331	P	Pn	00 45 35.2	+1.8
	comp=E,1.2nm,0.3s,baz=137,slow=9.7,SNR=20						
UOSS	Minazif	16.98	231	P	Pn	00 45 36.1	-1.0
UOSS				IAmb	IAmb	00 45 40.4	
	comp=Z,17nm,1.1s						
TAPN	Taplejung	17.01	118	eP	Pn	00 45 39.9	+2.1
ODAN	Odare	17.08	120	eP	Pn	00 45 39.6	+1.0
	comp=Z,9.3nm,0.5s						
ZALV	Zalesovo Beam	20.00	25	P	Pn	00 46 10.4	-2.1
	comp=Z,4.1nm,0.5s,baz=218,slow=10,SNR=4.1						
ISP	Isparta	31.93	285	P	P	00 47 55.6	-2.4
ISP				IAmb	IAmb	00 47 58.1	
	comp=Z,8.1nm,1.0s						
NBO00	NORSAR Array S	44.48	323	P	P	00 49 42.7	+0.6
NBO00				IAmb	IAmb	00 49 43.4	
	comp=Z,5.7nm,0.8s						
NC204	NORSAR Array S	44.51	323	P	P	00 49 42.6	+0.2
TEOL	Teolo	44.62	301	P	P	00 49 43.5	0.0
TEOL				IAmb	IAmb	00 49 45.6	
	comp=Z,2.9nm,0.5s						
MA2	Magadan	54.49	38	LR	LR	01 13 49.7	
	comp=Z,148nm,18.9s,baz=82,slow=35						
TORD	Torodi Ar. Bea	65.53	268	P	P	00 52 14.0	+0.7
	comp=Z,0.8nm,0.6s,baz=46,slow=6.1,SNR=12						
WRA	Warramunga Arr	82.15	122	P	P	00 53 49.8	+0.1
	comp=Z,0.3nm,0.3s,baz=325,slow=4.9,SNR=3.0						

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*SJA **17** 00:55:03.4±0.7, 19°.94S×70°.92W, h22^{km}±4^{km}, ML4.1, MW4.4*

*IDC **17** 00:55:03.6±0.9, 19°.74S×70°.72W, h0^{km}, mb4.1/7, mb1 4.3/9, mb1mx4.1/31, mbtmp4.1/9, ML4.1/2, Error ellipse: s-maj=32.9km s-min=20.9km az=43.0*

*NEIC **17** 00:55:04.0±2.5, 20°.02S±0°.04×70°.78W±0°.04, h9^{km}±1^{km}, mb4.4/32, Mwr4.2/13, Error ellipse: s-maj=9.1km s-min=3.6km az=225.0*

*NEIC **17** 00:55:04, 20°.07S×70°.76W, h9^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.41; $M_{\theta\theta}$-2.04; $M_{\phi\phi}$-0.37; $M_{r\theta}$1.15; $M_{\theta\phi}$0.93; $M_{\phi r}$-0.53; Fault plane solution: $M_0$2.74000×10^{15} NP1:ϕ_s293.77000°, δ31.26000°, λ89.50000°. NP2:ϕ_s114.35000°, δ58.74000°, λ90.30000°. Principal axes: T 2.7202, Plg76.0000°, Azm25.0000°; N 0.0473, Plg0.0000°, Azm294.0000°; P -2.7676, Plg14.0000°, Azm204.0000°;*

*GUC **17** 00:55:04.7±0.7, 19°.89S×70°.96W, h27^{km}±5^{km}, ML4.2*

*VAO **17** 00:55:12.7±0.7, 20°.04S×70°.60W, h78^{km}±6^{km}, mb4.2*

ISC 17 00:55:02.9±1.0**, 19°.96S**±0°.02×**70°.83W**±0°.04**, h4**^{km}±6^{km}**, n124,** σ**1^{s}.47**/131**, mb4.3**/15**, 4C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.76	61	⇓iP	Pn	00 55 19.6	-0.9
PSGC				i S	Sn	00 55 30.8	-1.7
PSGC				IAML		00 55 32.4	
	comp=N,14µm,0.6s						
TA01	Diego Aracena	0.86	134	eP	Pn	00 55 21.6	-0.1
TA01				i S	Sn	00 55 35.7	+1.0
TA01				IAML		00 55 38.7	
	comp=E,12µm,0.4s						
PATCX	Punta Patache	1.06	143	⇓iP	Pn	00 55 25.4	+0.7
PATCX				i S	Sn	00 55 41.3	+1.3
PATCX				IAML		00 55 49.4	
	comp=E,5µm,0.5s						
PATCX	Punta Patache	1.06	143	i P	Pn	00 55 25.4	+0.7
PATCX				i S	Sn	00 55 41.4	+1.4
PATCX				IAML		00 55 43.8	
	comp=Z,4µm,0.5s						
PB11	IPOC Station P	1.13	80	⇑iP	Pn	00 55 26.3	+0.7
PB11				i S	Sn	00 55 42.4	+0.8
PB11				IAML		00 55 44.8	
	comp=N,16µm,0.5s						
PB11	IPOC Station P	1.13	80		Pn	00 55 26.3	+0.7
PB11	IPOC Station P	1.13	80	i P	Pn	00 55 26.3	+0.7
PB11				IAML		00 55 45.0	
	comp=Z,6µm,0.4s						
PB12	IPOC Station P	1.43	20	⇓eP	Pn	00 55 29.5	-0.1
PB12				i S	Sg	00 55 49.4	+0.7
PB12				IAML		00 55 53.9	
	comp=N,8µm,0.5s						
PB12	IPOC Station P	1.43	20	i P	Pg	00 55 30.2	-0.1
PB12				IAML		00 55 54.4	
	comp=Z,2µm,0.3s						
GO01	Chusmiza	1.57	79	eP	Pg	00 55 33.9	+0.8
GO01				i S	Sg	00 55 56.3	+2.9
GO01	Chusmiza	1.57	79		Pg	00 55 33.9	+0.8
PB08	IPOC Station P	1.59	97	⇑iP	Pg	00 55 34.6	+1.2
PB08				i S	Sg	00 55 56.1	+2.1
PB08				IAML		00 56 02.2	
	comp=N,3µm,0.3s						
PB08	IPOC Station P	1.59	97	i P	Pg	00 55 34.4	+1.0
PB08				IAML		00 55 59.9	
	comp=Z,2µm,1.1s						
PB02	IPOC Station P	1.61	147	eP	Pg	00 55 34.0	+0.2
PB02				i S	Sg	00 55 56.0	+1.4
PB02				IAML		00 56 00.8	
	comp=E,5µm,0.5s						
PB02	IPOC Station P	1.61	147	i P	Pg	00 55 34.1	+0.4
PB02				i S	Sg	00 55 56.0	+1.4
PB02				IAML		00 56 02.7	
	comp=Z,4µm,0.4s						
PB01	IPOC Station P	1.66	131	⇑iP	Pg	00 55 35.0	+0.3
PB01				i S	Sg	00 55 58.2	+2.0
PB01				IAML		00 55 59.5	
	comp=E,2µm,0.5s						
PB01	IPOC Station P	1.66	131		Pg	00 55 34.6	-0.1
PB01	IPOC Station P	1.66	131	i P	Pg	00 55 35.1	+0.5
PB01				i S	Sg	00 55 58.5	+2.3
PB01				IAML		00 56 02.4	
	comp=Z,2µm,0.3s						
PB07	IPOC Station P	1.96	153	IAML		00 56 16.4	
	comp=E,2µm,0.3s						
PB07	IPOC Station P	1.96	153	i P	Pb	00 55 38.6	-0.7
PB07				IAML		00 56 15.1	
	comp=Z,1µm,0.4s						
PB16	IPOC Station P	2.05	38	eP	Pb	00 55 40.5	-0.5
PB16				i S	Sg	00 56 08.4	-0.4
PB16				IAML		00 56 13.0	
	comp=N,4µm,0.7s						
PB03	IPOC Station P	2.31	154	i P	Pb	00 55 43.4	-1.8
PB03				IAML		00 56 28.8	
	comp=Z,936nm,0.8s						
PB09	IPOC Station P	2.35	141	⇑eP	Pb	00 55 45.3	-0.7
PB09				IAML		00 56 29.9	
	comp=N,2µm,0.8s						
PB09	IPOC Station P	2.35	141	i P	Pb	00 55 46.0	0.0
PB09				IAML		00 56 28.2	
	comp=Z,2µm,1.3s						
PB04	IPOC Station P	2.44	165		Pn	00 55 43.8	0.0
PB04	IPOC Station P	2.44	165	i P	Pn	00 55 44.1	+0.4
PB04				i S	Sg	00 56 24.1	+2.6
PB05	IPOC Station P	2.93	169	i P	Pn	00 55 50.2	-0.2
PB05				IAML		00 56 45.1	
	comp=Z,386nm,0.9s						
PB06	IPOC Station P	2.97	157	i P	Pn	00 55 51.6	+0.7
PB06				i S	Sg	00 56 39.1	+0.7
PB06				IAML		00 56 43.2	
	comp=Z,1µm,0.8s						
LVC	Limon Verde	3.19	146	Pn	Pb	00 55 57.1	-3.2
	comp=Z,8.8nm,0.3s,baz=319,slow=9.2,SNR=20						
LVC				Sn	Sb	00 56 37.9	-1.7
	comp=Z,24nm,0.3s,baz=283,slow=17,SNR=5.7						
LVC	Limon Verde	3.19	146		Pn	00 55 53.7	-0.4
LVC	Limon Verde	3.19	146	eP	Pb	00 55 56.8	-3.5
LVC				eS	Sn	00 56 34.5	+1.8
LVC	Limon Verde	3.19	146	i P	Pb	00 55 57.3	-3.0
LVC				IAML		00 56 50.2	
	comp=Z,364nm,1.2s						
PB15	IPOC Station P	3.47	159	i P	Pn	00 55 59.0	+1.1
PB15				IAML		00 57 09.8	
	comp=Z,834nm,0.8s						
PB10	IPOC Station P	3.54	176		Pn	00 55 59.6	+0.9
PB10	IPOC Station P	3.54	176	i P	Pn	00 55 57.8	-0.8
PB10				IAML		00 57 10.8	
	comp=Z,161nm,0.7s						
LPAZ	La Paz	4.47	36	Pn	Pb	00 56 16.7	-5.6
	comp=Z,2.9nm,0.3s,baz=197,slow=1.6,SNR=38						
LPAZ	La Paz	4.47	36		Pn	00 56 16.0	+4.0
LPAZ	La Paz	4.47	36	Pn	Pn	00 56 13.7	+1.7
LPAZ	La Paz	4.47	36	eP	Pb	00 56 16.7	-5.6
LPAZ	La Paz	4.47	36	i P	Pb	00 56 16.7	-5.6
PB14	IPOC Station P	4.66	175	i P	Pn	00 56 13.2	-1.1
PB14				IAML		00 57 47.9	
	comp=Z,111nm,1.4s						
GO02	Mina Guanaco	5.30	168		Pn	00 56 23.4	+0.3
YJA	Yavi	5.43	115	i P	Pb	00 56 32.9	-5.7
GO03	Copiap	7.62	176	Pn	Pn	00 56 54.5	-0.3
NNA	Nana	9.81	323	Pn	Pn	00 57 27.9	+3.0
SIV	San Ignacio	10.09	69	Pn	Pn	00 57 29.0	+0.3
	comp=Z,4.2nm,0.3s,baz=267,slow=9.8,SNR=35						
ROC1	El Roble	12.96	181	Pn	Pn	00 58 06.7	-1.4
SAML	Samuel	13.21	35		Pn	00 58 12.1	+0.6
SAML	Samuel	13.21	35	eP	P	00 58 18.7	-2.9
AQDB	Aquidauana	14.22	95	eP	Pn	00 58 27.6	+2.5
SALV	Santo Antonio	14.96	77	eP	P	00 58 37.4	-3.6
C2SB	Chapadao do Su	17.02	89	eP	P	00 59 02.9	-1.0
TRCB	Terra Rica	17.18	103	eP	P	00 59 04.4	-1.3
PCMB	Pacaembu	18.37	99	eP	P	00 59 20.2	+1.4
ITAB	Concordia	18.59	116	eP	Pn	00 59 21.6	+0.2
ARAG	Araguaiana, MT	18.59	80	eP	P	00 59 20.5	-0.7
CNLB	Canela	20.38	121	eP	P	00 59 40.3	-0.5
PLCA	Paso Flores	20.70	179	eP	Pn	00 59 46.5	0.0
BB19B	Bebedouro	20.92	97	eP	P	00 59 46.5	-0.2
OTAV	Otavalo	21.42	339	P	P	00 59 55.0	+2.5
OTAV	Otavalo	21.42	339	eP	P	00 59 55.9	+3.4
IPMB	Ipameri, GO	21.48	89	eP	P	00 59 52.8	0.0
RCLB	Rio Claro- Sao	21.86	101	eP	P	00 59 56.8	0.0
PTGA	Pitinga	21.88	30	P	P	00 59 55.8	-1.2
	comp=Z,5.3nm,0.3s,baz=224,slow=23,SNR=19						
PTGA	Pitinga	21.88	30	P	P	00 59 56.2	-0.7
PTGA				IAmb	IAmb	01 00 03.4	
	comp=Z,8.0nm,0.8s						
FLOC	Florencia	21.93	347	P	P	00 59 59.1	+1.6
SPB	Sao Paulo	22.02	104	P	P	00 59 57.0	-1.5
BDFB	Brasilia	22.14	82	P	P	01 00 00.8	+0.9
ROSC	El Rosal	24.89	352	P	P	01 00 28.4	+1.1
ROSC				IAmb	IAmb	01 00 39.6	
	comp=Z,6.2nm,0.7s						
JANB	Januaria	25.74	83	eP	P	01 00 34.3	-0.6
RUSC	La Rusia	25.79	355	P	P	01 00 36.8	+1.1
NBPB	Pedra_Branca-C	33.59	69	eP	P	01 01 44.7	+0.2
ESPN	Las Esperanzas	34.60	336	P	P	01 01 54.4	+1.3
NBAN	Anadia - AL	34.87	78	eP	P	01 01 55.0	-0.6
NBLI	Livramento-PB	35.14	74	eP	P	01 01 57.5	-0.5
TXAR	Lajitas Array	58.35	326	P	P	01 05 00.1	+0.6
	comp=Z,1.1nm,0.9s,baz=136,slow=7.8,SNR=6.1						
TXAR	Lajitas Array	58.35	326	P	P	01 04 59.7	+0.2
MIAR	Mount Ida	58.37	338	P	P	01 04 59.1	-0.3
MIAR				IAmb	IAmb	01 05 00.1	
	comp=Z,5.8nm,1.0s						
W39A	Magazine	59.03	338	P	P	01 05 04.5	+0.6
W39A				IAmb	IAmb	01 05 14.5	
	comp=Z,2.0nm,0.8s						
ABTX	Abilene, Hawle	59.11	332	P	P	01 05 05.8	+1.2
ABTX				IAmb	IAmb	01 05 06.9	
	comp=Z,4.1nm,1.0s						
P43A	Skaggs, Pawnee	61.81	344	P	P	01 05 22.4	-0.5
PV15	Paradox Valley	67.92	329	P	P	01 06 02.4	-0.7
PV13	Radium Mtn., P	67.94	328	P	P	01 06 02.2	-0.9
PV13				IAmb	IAmb	01 06 06.0	
	comp=Z,1.8nm,0.9s						
KNB	Kanab	69.14	325	P	P	01 06 12.1	+1.4
Q16A	Castle Valley	69.70	327	P	P	01 06 15.5	+1.4
SZCU	Shurtz Canyon	69.71	325	P	P	01 06 15.0	+0.8
CCUT	Cedar City	69.82	325	P	P	01 06 15.9	+0.9
MSU	Marysvale	69.91	327	P	P	01 06 16.4	+1.0
RWWY	Rawlins	69.98	332	P	P	01 06 15.7	-0.1
K22A	Casper	70.46	333	P	P	01 06 18.0	-0.7
K22A				IAmb	IAmb	01 06 21.6	
	comp=Z,4.9nm,1.1s						
RSSD	Black Hills	70.65	335	P	P	01 06 19.5	-0.3
MPU	Maple Canyon	70.76	328	P	P	01 06 21.4	+0.7
PSUT	Pine Spring	70.81	325	P	P	01 06 22.6	+1.6
DUG	Dugway, Tooele	71.49	327	P	P	01 06 25.6	+0.7
DUG				IAmb	IAmb	01 06 27.8	
	comp=Z,3.2nm,1.1s						
PDAR	Pinedale Array	71.89	331	P	P	01 06 28.1	+0.7
	comp=Z,0.3nm,0.6s,baz=123,slow=6.6,SNR=3.4						
PDAR	Pinedale Array	71.89	331	P	P	01 06 27.2	-0.2
SPUT	South Promonto	72.15	328	P	P	01 06 29.0	+0.1
NVAR	Mina Array Bea	73.18	323	P	P	01 06 35.8	+0.6
	comp=Z,1.5nm,0.9s,baz=160,slow=6.6,SNR=8.3						
NVAR	Mina Array Bea	73.18	323	P	P	01 06 34.8	-0.4
ULM	Lac du Bonnet	73.33	344	P	P	01 06 34.7	-0.8
	comp=Z,1.0nm,0.4s,baz=151,slow=8.0,SNR=3.3						
ULM	Lac du Bonnet	73.33	344	IAmb	IAmb	01 06 35.9	
	comp=Z,3.1nm,1.1s						
PMOZ	Porto Moniz, M	73.35	45	P	P	01 06 34.1	-2.1
KVN	Kaiserville	73.50	323	P	P	01 06 37.9	+0.9
MCMT	McKenzie Canyo	75.00	330	P	P	01 06 46.8	+1.1
ORV	Oroville	75.78	322	P	P	01 06 52.4	+2.4
TOA0	Torodi Ar. Sit	78.56	71	P	P	01 07 05.3	-0.8
TORD	Torodi Ar. Bea	78.56	71	P	P	01 07 05.7	-0.4
	comp=Z,7.0nm,0.9s,baz=252,slow=5.3,SNR=28						
TORD	Torodi Ar. Bea	78.56	71	P	P	01 07 04.8	-1.3
TORD					pP	01 07 04.9	-2.1
SUR	Sutherland	80.91	121	P	P	01 07 18.0	-1.0
SUR				IAmb	IAmb	01 07 26.0	
	comp=Z,6.2nm,1.1s						
YKA	Yellowknife Ar	89.15	341	P	P	01 07 59.7	+0.5
	comp=Z,0.6nm,0.6s,baz=140,slow=5.0,SNR=13						
H11S2	WAKE ISLAND Hy	125.88	279	T	T	03 33 31.2	
	baz=101,slow=74,SNR=28						
H11S1	WAKE ISLAND Hy	125.89	279	T	T	03 33 35.0	
	baz=101,slow=74,SNR=14						
H11S3	WAKE ISLAND Hy	125.90	279	T	T	03 33 38.8	
	baz=101,slow=74,SNR=13						
H11N3	WAKE ISLAND Hy	125.93	280	T	T	03 33 14.4	
	baz=97						
H11N2	WAKE ISLAND Hy	125.94	280	T	T	03 33 26.7	
	baz=97						
H11N1	WAKE ISLAND Hy	125.95	280	T	T	03 33 43.2	
	baz=97						
SEY	Seymchan	127.98	337	PKP	PKiKP	01 14 10.9	+0.8
	comp=Z,0.6nm,0.2s,baz=90,slow=5.8,SNR=3.5						
ZALV	Zalesovo Beam	141.29	23	PKP	PKiKP	01 14 36.0	-1.4
	comp=Z,1.8nm,0.6s,baz=286,slow=3.3,SNR=7.4						
MKAR	Makanchi Array	145.40	33	PKPbc	PKPab	01 14 42.7	+0.5
	comp=Z,2.5nm,0.8s,baz=328,slow=4.9,SNR=19						
KSH	Kashi	145.49	48	PKPbc	PKPab	01 14 43.9	+0.9
KSH				PP	PP	01 18 06.6	+3.8
KSH				PKS	PKSdf	01 18 17.3	-1.0
USRK	Ussuriysk Ar.	149.25	327	PKPbc	PKiKP	01 14 54.0	-0.1
	comp=Z,1.8nm,0.7s,baz=68,slow=1.4,SNR=6.0						
SONM	Songino Array	152.11	4	PKPbc	PKiKP	01 15 00.9	+0.8
	comp=Z,2.2nm,0.7s,baz=320,slow=1.9,SNR=14						
GTA	Gaotai	159.01	21	ePKP	PKPdf	01 15 01.0	-1.7
LZH	Lanzhou	163.27	15	ePKP	PKPdf	01 15 02.3	-5.1
LZH				pPKP	sPKPdf	01 15 12.8	+4.1
LZH				sPKP		01 15 16.0	

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*IDC **17** 00:55:57.7±2.9, 18°.85S×169°.18E, h234^{km}±37^{km}, mb3.6/8, mb1 3.8/9, mb1mx3.5/31, mbtmp4.1/9, Error ellipse: s-maj=64.1km s-min=20.9km az=158.0*

ISC 17 00:55:58.4±1.0**, 19°.0S**±0°.2×**169°.3E**±0°.2**, h250**^{km}**, n26,** σ**1^{s}.09**/27**, mb3.8**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.04**	**220**	P	**Pn**	**00 57 03.3**	**+0.5**
	2.6nm,0.3s,baz=290,slow=13,SNR=17						
DZM				S	**S**	**00 57 53.0**	**-1.0**
	3.9nm,0.3s,baz=30,slow=10,SNR=7.3						
CTA	**Charters Tower**	**21.70**	**263**	P	**P**	**01 00 30.9**	**+1.2**
	2.7nm,0.9s,baz=60,slow=12,SNR=4.5						
WRA	**Warramunga Arr**	**32.90**	**262**	P	**P**	**01 02 08.6**	**-0.9**
	2.4nm,0.9s,baz=93,slow=8.1,SNR=16						
ASAR	**Alice Springs**	**33.20**	**256**	P	**P**	**01 02 12.5**	**+0.4**
	3.4nm,0.3s,baz=83,slow=8.9,SNR=40						
PETK	**Petropavlovsk-**	**72.49**	**353**	P	**P**	**01 06 57.6**	**+0.1**
	1.9nm,0.7s,baz=123,slow=7.1,SNR=4.4						
CMAR	**Chiang Mai Arr**	**78.41**	**294**	P	**P**	**01 07 33.5**	**+1.6**
	0.8nm,0.3s,baz=117,slow=5.4,SNR=3.6						
SONM	**Songino Array**	**87.02**	**323**	P	**P**	**01 08 15.8**	**+0.1**
	1.1nm,0.8s,baz=148,slow=6.5,SNR=7.3						
NVAR	**Mina Array Bea**	**88.63**	**49**	P	**P**	**01 08 25.5**	**+1.9**
	0.6nm,0.8s,baz=248,slow=6.1,SNR=4.3						
ILAR	**Eielson Array**	**89.99**	**17**	P	**P**	**01 08 27.7**	**-1.3**
	0.7nm,0.8s,baz=239,slow=4.7,SNR=8.2						
YKA	**Yellowknife Ar**	**100.44**	**27**	P	**Pdif**	**01 09 18.0**	**+1.4**
	0.5nm,0.7s,baz=254,slow=4.9,SNR=6.8						
ARCES	**ARCESS Array B**	**124.83**	**345**	PKP	**PKiKP**	**01 14 28.4**	**+0.2**
	6.3nm,1.2s,baz=56,slow=2.2,SNR=7.1						
CONA	**Conrad Observa**	**143.93**	**329**	*i* PKPdf	**PKPdf**	**01 15 04.2**	**+0.2**
	3.0nm,1.0s						
ARSA	**Arzberg**	**144.56**	**329**	*i* PKPdf	**PKPdf**	**01 15 04.9**	**-0.2**
	2.7nm,0.8s						
MOA	**Molln**	**144.75**	**330**	*i* PKPdf	**PKPdf**	**01 15 05.9**	**+0.5**
	6.1nm,1.1s						
SOKA	**Soboth**	**145.20**	**328**	*i* PKPab	**PKPab**	**01 15 06.9**	**+0.1**
	6.2nm,1.0s						
OBKA	**Obir**	**145.56**	**329**	*i* PKiKP	**PKiKP**	**01 15 08.8**	**-2.3**
	4.6nm,1.0s						
KBA	**Koelnbreinsper**	**145.74**	**330**	*i* PKPab	**PKPab**	**01 15 08.9**	**-0.1**
	3.9nm,1.1s						
MYKA	**Terra Mystica**	**145.92**	**329**	*i* PKPdf	**PKPdf**	**01 15 06.0**	**-1.5**
	2.7nm,0.9s						
WATA	**Walderalm**	**146.35**	**332**	*i* PKPab	**PKPab**	**01 15 10.8**	**-0.5**
	1.7nm,0.7s						
ABTA	**Abfaltersbach**	**146.37**	**331**	*i* PKPab	**PKPab**	**01 15 10.0**	**-1.3**
	3.6nm,1.0s						
WTTA	**Wattenberg**	**146.38**	**332**	*i* PKPab	**PKPab**	**01 15 09.9**	**-1.6**
	3.9nm,1.2s						
MOTA	**Moosalm**	**146.55**	**333**	*i* PKPab	**PKPab**	**01 15 11.2**	**-0.9**
	6.2nm,1.0s						
RETA	**Reutte**	**146.59**	**333**	*i* PKPdf	**PKPdf**	**01 15 07.8**	**-0.8**
	4.5nm,1.7s						
SQTA	**Sankt Quirin**	**146.60**	**332**	*i* PKPab	**PKPab**	**01 15 11.3**	**-0.9**
	5.7nm,1.1s						
FETA	**Feichten**	**146.96**	**333**	*i* PKPbc	**PKPbc**	**01 15 11.2**	**-0.5**
	2.5nm,0.9s						
DAVA	**Damuels**	**147.12**	**334**	*i* PKiKP	**PKiKP**	**01 15 13.7**	**-0.6**
	6.1nm,1.1s						

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*INET **17** 01:08:28.6, 11°.13N×85°.85W, h67^{km}, ML2.5*

UCR 17 01:08:28.2±1.1**, 11°.12N×85°.86W, h71^{km}**±6^{km}**, MD3.6, MW3.4, 1C, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GB1A	**Borinquen Arri**	**0.54**	**123**	*i* P	Pn	01 08 41.5	-0.2
GB1A				*i* S	Sn	01 08 51.7	+0.2
BUEV	**Buena Vista**	**0.54**	**126**	*i* P	Pn	01 08 41.7	0.0
BUEV				*i* S	Sn	01 08 51.8	+0.3
NY14	**Universidad de**	**0.56**	**146**	*i* P	Pn	01 08 42.1	+0.4
NY14				*i* S	Sn	01 08 53.1	+1.4
BUAI	**Buenos Aires**	**0.56**	**115**	⇑*i*P	Pn	01 08 41.8	0.0
BUAI				*i* S	Sn	01 08 52.4	+0.6
GPS3	**Bodega del ICE**	**0.60**	**127**	*i* P	Pn	01 08 42.2	0.0
GPS3				*i* S	Sn	01 08 52.8	+0.3
COLC	**Colonia**	**0.78**	**125**	*i* P	Pn	01 08 44.8	+0.6
CUI	**Cuipilapa**	**0.82**	**124**	*e*P	Pn	01 08 44.6	0.0
CUI				*e*S	Sn	01 08 58.1	+1.4
GUAI	**GUAI**	**0.91**	**158**	*i* P	Pn	01 08 45.5	-0.1
PLVR	**Palo Verde**	**0.91**	**147**	*e*P	Pn	01 08 45.9	0.0
PLVR				*e*S	Sn	01 08 59.4	+0.5
ACAL	**Aguas Claras**	**0.94**	**121**	*i* P	Pn	01 08 46.4	+0.3
PTEN	**Parque Tenorio**	**0.94**	**115**	*i* P	Pn	01 08 45.9	-0.2
PTEN				*i* S	Sn	01 08 59.5	+0.1
JTS	**Las Juntas de**	**1.21**	**133**	*e*P	Pn	01 08 49.2	-0.2
CEDE	**Laguna Cedeo**	**1.29**	**119**	*e*P	Pn	01 08 50.8	+0.2

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*SJA **17** 01:14:21.5±1.0, 19°.90S×71°.13W, h8^{km}±8^{km}, ML3.7, MW3.5*

*IDC **17** 01:14:27.6±1.1, 19°.79S×70°.49W, h0^{km}, mb3.6/5, mb1 4.0/6, mb1mx3.7/34, mbtmp3.6/6, ML3.6/1, Error ellipse: s-maj=58.0km s-min=22.6km az=52.0*

*GUC **17** 01:14:28.2±0.8, 20°.03S×70°.88W, h28^{km}±5^{km}, ML3.7*

ISC 17 01:14:27.1±1.6**, 19°.98S**±0°.03×**70°.82W**±0°.06**, h2^{km}**±10^{km}**, n36, σ1^s.22**/45**, mb3.7**/5**, 3C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.76**	**60**	⇑*i*P	**Pb**	**01 14 43.1**	**+0.1**
PSGC				*e*S	**Sn**	**01 14 55.5**	**-1.4**
PSGC				IAML		01 14 59.0	
	comp=N,5µm,0.3s						
PSGCX	**Pisagua**	**0.76**	**60**	*e*P	**Pg**	**01 14 41.3**	**-0.3**
PSGCX				*e*S	**Sn**	**01 14 55.0**	**-1.9**
PSGCX				IAML		01 14 58.1	
	comp=Z,2µm,0.3s						
TA01	**Diego Aracena**	**0.83**	**134**	⇓*i*P	**Pg**	**01 14 43.5**	**+0.4**
TA01				*e*S	**Sn**	**01 14 57.2**	**-1.4**
TA01				IAML		01 14 58.5	
	comp=E,5µm,0.2s						
PATCX	**Punta Patache**	**1.04**	**143**	⇓*i*P	**Pg**	**01 14 46.6**	**-0.4**
PATCX				*e*S	**Sg**	**01 15 01.2**	**+0.7**
PATCX				IAML		01 15 05.4	
	comp=N,2µm,0.2s						
PATCX	**Punta Patache**	**1.04**	**143**	*e*P	**Pg**	**01 14 46.4**	**-0.6**
PATCX				*e*S	**Sn**	**01 15 04.4**	**+0.5**
PATCX				IAML		01 15 06.8	
	comp=Z,2µm,0.4s						
PB11	**IPOC Station P**	**1.11**	**79**	⇑*i*P	**Pb**	**01 14 48.8**	**-0.3**
PB11				*e*S	**Sn**	**01 15 05.2**	**-0.6**
PB11				IAML		01 15 09.9	
	comp=E,5µm,0.7s						
PB11	**IPOC Station P**	**1.11**	**79**	*e*P	**Pb**	**01 14 48.4**	**-0.8**
PB11				*e*S	**Sn**	**01 15 07.3**	**+1.4**
PB11				IAML		01 15 08.2	
	comp=Z,3µm,0.3s						
PB12	**IPOC Station P**	**1.44**	**19**	*e*P	**Pg**	**01 14 54.1**	**-0.6**
PB12				*e*S	**Sg**	**01 15 14.1**	**+0.8**
PB12				IAML		01 15 24.5	
	comp=E,2µm,0.7s						
GO01	**Chusmiza**	**1.56**	**79**	*e*P	**Pb**	**01 14 56.5**	**-0.5**
GO01				*e*S	**Sg**	**01 15 18.1**	**+0.9**
PB08	**IPOC Station P**	**1.57**	**96**	*e*P	**Pb**	**01 14 56.4**	**-0.7**
PB08				*e*S	**Sg**	**01 15 18.4**	**+0.8**
PB08				IAML		01 15 21.0	
	comp=N,1µm,0.4s						
PB02	**IPOC Station P**	**1.58**	**147**	⇑*i*P	**Pn**	**01 14 55.4**	**-0.9**
PB02				*e*S	**Sn**	**01 15 16.4**	**-1.0**
PB02				IAML		01 15 20.6	
	comp=E,4µm,0.1s						
PB07	**IPOC Station P**	**1.94**	**154**	*e*P	**Pn**	**01 15 00.8**	**-0.4**
PB07				*e*S	**Sn**	**01 15 25.7**	**-0.5**
PB07				IAML		01 15 34.3	
	comp=E,1µm,0.7s						
PB07	**IPOC Station P**	**1.94**	**154**	*e*P	**Pn**	**01 14 59.9**	**-1.3**
PB07				*e*S	**Sb**	**01 15 29.1**	**+1.1**
PB07				IAML		01 15 32.4	
	comp=Z,706nm,0.4s						
PB04	**IPOC Station P**	**2.42**	**165**	*i* P	**Pn**	**01 15 05.8**	**-2.0**
PB05	**IPOC Station P**	**2.91**	**169**	⇓*i*P	**Pn**	**01 15 12.6**	**-2.0**
PB05				IAML		01 16 14.9	
	comp=Z,106nm,0.7s						
PB06	**IPOC Station P**	**2.95**	**157**	*i* P	**Pn**	**01 15 13.5**	**-1.5**
PB06				*e*S	**Sn**	**01 15 53.5**	**+2.5**
PB06				IAML		01 16 11.7	
	comp=Z,204nm,0.9s						
LVC	**Limon Verde**	**3.16**	**146**	Pn	**Pn**	**01 15 19.1**	**+1.0**
	comp=Z,7.7nm,0.3s,baz=307,slow=8.1,SNR=31						
LVC				Sn	**Sn**	**01 15 58.3**	**+1.6**
	comp=Z,17nm,0.3s,baz=257,slow=9.9,SNR=3.7						
LVC	**Limon Verde**	**3.16**	**146**	*i* P	**Pn**	**01 15 18.8**	**+0.7**
LVC				*e*S	**Sb**	**01 16 00.2**	**-3.1**
LVC				IAML		01 16 07.9	
	comp=Z,74nm,0.8s						
PB15	**IPOC Station P**	**3.44**	**159**	*i* P	**Pn**	**01 15 21.4**	**-0.5**
PB15				IAML		01 16 28.3	
	comp=Z,412nm,0.3s						
LPAZ	**La Paz**	**4.48**	**35**	Pn	Pb	01 15 41.2	-5.6
	comp=Z,1.3nm,0.3s,baz=215,slow=4.1,SNR=32						
PB14	**IPOC Station P**	**4.64**	**175**	*i* P	**Pn**	**01 15 37.8**	**-0.7**
PB14				IAML		01 17 19.0	
	comp=Z,40nm,0.6s						
YJA	**Yavi**	**5.41**	**115**	*e*P	**Pn**	**01 15 51.2**	**+2.0**
SIV	**San Ignacio**	**10.09**	**68**	Pn	**Pn**	**01 16 53.8**	**+0.7**
	comp=Z,1.5nm,0.3s,baz=272,slow=8.7,SNR=29						
TXAR	**Lajitas Array**	**58.38**	**326**	P	**P**	**01 24 24.6**	**+0.4**
	comp=Z,0.7nm,1.0s,baz=148,slow=10,SNR=4.0						
PDAR	**Pinedale Array**	**71.92**	**331**	P	**P**	**01 25 53.3**	**+1.3**
	comp=Z,0.1nm,0.5s,baz=128,slow=5.8,SNR=2.8						
NVAR	**Mina Array Bea**	**73.21**	**323**	P	**P**	**01 26 01.3**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=145,slow=3.3,SNR=3.7						
TORD	**Torodi Ar. Bea**	**78.55**	**71**	P	**P**	**01 26 29.4**	**-1.2**
	comp=Z,0.4nm,0.4s,baz=254,slow=5.3,SNR=10						
YKA	**Yellowknife Ar**	**89.18**	**341**	P	**P**	**01 27 23.6**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=138,slow=5.0,SNR=11						
H11S2	**WAKE ISLAND Hy**	**125.90**	**279**	T	T	03 52 53.5	
	baz=101,slow=74,SNR=23						
H11S1	**WAKE ISLAND Hy**	**125.91**	**279**	T	T	03 52 54.2	
	baz=101,slow=74,SNR=10						
H11S3	**WAKE ISLAND Hy**	**125.92**	**279**	T	T	03 52 59.0	
	baz=101,slow=74,SNR=10						
H11N3	**WAKE ISLAND Hy**	**125.95**	**280**	T	T	03 52 58.3	
	baz=101,slow=74,SNR=5.0						
H11N2	**WAKE ISLAND Hy**	**125.96**	**280**	T	T	03 52 59.4	
	baz=101,slow=74,SNR=5.4						
H11N1	**WAKE ISLAND Hy**	**125.97**	**280**	T	T	03 52 50.4	
	baz=101						
MKAR	**Makanchi Array**	**145.40**	**33**	PKPbc	**PKPab**	**01 34 06.5**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=340,slow=4.2,SNR=11						
SONM	**Songino Array**	**152.12**	**4**	PKPbc	**PKiKP**	**01 34 24.8**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=297,slow=0.9,SNR=4.2						

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*DDA **17** 01:19:32.9, 34°.69N×33°.04E, h3^{km}±3^{km}, ML2.0*

*ISK **17** 01:19:33.5, 34°.61N×33°.24E, h8^{km}, ML2.4/14*

*NIC **17** 01:19:33.5±0.0, 34°.62N×33°.31E, h14^{km}±5^{km}, Ml2.7/2*

*GII **17** 01:19:33.1±0.0, 34°.59N×33°.24E, h18^{km}±1^{km}, Mm2.3/3*

ISC 17 01:19:32.5±1.1**, 34°.57N**±0°.03×**33°.27E**±0°.03**, h12^{km}**±8^{km}**, n44, σ0^s.93**/67**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASGA	**Asgata**	**0.22**	**354**	P	**Pb**	**01 19 38.3**	**-0.1**
ASGA				S	**Sg**	**01 19 41.0**	**+0.5**
ASGA				AML	AML	01 19 42.1	
	6.1nm,0.3s						
ASGA				AML	AML	01 19 42.1	
	6.1nm,0.3s						
SZAC	**Souni**	**0.37**	**300**	P	**Pb**	**01 19 40.5**	**-0.6**
SZAC				AML	AML	01 19 46.5	
	4.0nm,0.6s						
SZAC				AML	AML	01 19 46.5	
	4.0nm,0.6s						
SZAC				S	**Sb**	**01 19 46.9**	**+0.1**
CSS	**Mathiatis**	**0.39**	**7**	PG	**Pg**	**01 19 40.6**	**+0.2**
CSS	**Mathiatis**	**0.39**	**7**	Pg	**Pg**	**01 19 40.7**	**+0.3**
CSS	**Mathiatis**	**0.39**	**7**	P	**Pg**	**01 19 40.8**	**+0.3**
MVOU	**Mavrovouni**	**0.53**	**33**	P	**Pg**	**01 19 43.1**	**+0.1**
NATA	**Nata**	**0.62**	**290**	P	**Pb**	**01 19 45.4**	**+0.1**
NATA				S	**Sn**	**01 19 55.6**	**-1.4**
LEF	**Lefka**	**0.63**	**330**	PG	**Pb**	**01 19 45.5**	**0.0**
LEF				SG	**Sb**	**01 19 54.5**	**+0.2**
LEF	**Lefka**	**0.63**	**330**	*i* P	**Pg**	**01 19 45.0**	**+0.1**
LEF				*i* S	**Sn**	**01 19 56.0**	**-1.3**
LEF				IAML		01 19 59.0	
	comp=N,60nm,0.4s						
LEF				IAML		01 20 00.0	
	comp=E,79nm,0.3s						
AKDN	**Akdeniz- Kıbrı**	**0.77**	**341**	PG	**Pb**	**01 19 48.1**	**+0.3**
ALFC	**Alefka**	**0.81**	**317**	P	**Pb**	**01 19 48.7**	**+0.2**
EREN	**Erenkoy**	**1.21**	**37**	PN	**Pg**	**01 19 56.9**	**+1.1**
EREN	**Erenkoy**	**1.21**	**37**	*i* P	**Pg**	**01 19 57.1**	**+1.3**
EREN				IAML		01 20 19.0	
	comp=N,25nm,1.2s						
EREN				IAML		01 20 21.0	
	comp=E,36nm,0.4s						
TEKE	**Tekeli-Mersin**	**1.57**	**355**	PN	**Pb**	**01 20 01.8**	**+0.2**
TEKE				SN	**Sb**	**01 20 21.8**	**+0.3**
AKKU	**Akkuyu-Mersin**	**1.60**	**8**	PN	**Pb**	**01 20 02.1**	**+0.1**
AKKU				SN	**Sg**	**01 20 23.1**	**-1.0**
GULN	**MERSIN_Gulnar**	**1.62**	**8**	*i* P	**Pb**	**01 20 02.0**	**-0.5**
GULN				*i* S	**Sg**	**01 20 23.8**	**-1.1**
GULN				IAML		01 20 26.0	
	comp=N,12nm,0.4s						
GULN				IAML		01 20 28.0	
	comp=E,14nm,0.4s						
IKL	**Isikli**	**1.70**	**11**	PN	**Pb**	**01 20 03.6**	**-0.1**
IKL				SN	**Sg**	**01 20 26.1**	**-1.1**
OSC2	**CSNet OBS 4**	**1.71**	**210**	P	**Pb**	**01 20 03.6**	**-0.3**
BERE	**Bereket-Mersin**	**1.77**	**359**	PN	**Pb**	**01 20 04.5**	**-0.6**
GAZI	**Gazipasa**	**1.84**	**335**	PN	**Pb**	**01 20 04.8**	**-1.3**
GAZI				SN	**Sb**	**01 20 28.7**	**-0.3**
GAZI	**Gazipasa**	**1.84**	**335**	*i* P	**Pn**	**01 20 04.5**	**+0.6**
GAZI				*i* S	**Sn**	**01 20 27.4**	**+0.3**
GAZI				IAML		01 20 29.0	
	comp=N,27nm,0.5s						
GAZI				IAML		01 20 31.0	
	comp=E,15nm,0.4s						
TEVE	**Tevekalti-Mers**	**1.87**	**4**	PN	**Pb**	**01 20 06.2**	**-0.4**
KEBE	**Keben-Mersin**	**1.91**	**11**	PN	**Pb**	**01 20 06.9**	**-0.4**
KIZK	**Mersin**	**2.03**	**20**	PN	**Pb**	**01 20 08.5**	**-0.9**
KIZK	**Mersin**	**2.03**	**20**	*i* P	**Pb**	**01 20 08.8**	**-0.6**
KIZK				*i* S	**Sb**	**01 20 34.2**	**-0.5**
KIZK				IAML		01 20 39.0	
	comp=E,11nm,1.0s						
KIZK				IAML		01 20 42.0	
	comp=N,13nm,1.0s						
ERMK	**Ermenek**	**2.09**	**352**	*i* P	**Pb**	**01 20 09.8**	**-0.7**
ERMK				*i* S	**Sg**	**01 20 38.0**	**-1.7**
ERMK				IAML		01 20 40.0	
	comp=E,16nm,0.9s						
ERMK				IAML		01 20 43.0	
	comp=N,18nm,0.8s						
MMA0B	**Mount Meron ar**	**2.35**	**131**	Pn	**Pn**	**01 20 11.1**	**0.0**
MMA0B				Sn	**Sn**	**01 20 40.1**	**+0.1**
KSDI	**Kefar Szold**	**2.41**	**124**	Pn	**Pn**	**01 20 12.4**	**+0.6**
KSDI				Sn	**Sn**	**01 20 41.4**	**+0.1**
NATI	**Neve Ativ**	**2.43**	**122**	Pn	**Pn**	**01 20 12.4**	**+0.4**
NATI				Sn	**Sn**	**01 20 41.8**	**+0.2**
MERS	**Mersin**	**2.51**	**24**	PN	**Pb**	**01 20 15.9**	**-1.6**
KEPZ	**Antalya-Kepez**	**2.69**	**330**	*i* P	**Pn**	**01 20 17.3**	**+1.6**
KEPZ				IAML		01 20 55.0	
	comp=N,9.3nm,0.3s						
KEPZ				IAML		01 21 00.0	
	comp=E,7.3nm,1.2s						
MMLI	**Mount Malkishu**	**2.78**	**139**	Pn	**Pn**	**01 20 16.7**	**-0.2**
KERG	**Konya-Eregli**	**2.92**	**13**	*i* P	**Pb**	**01 20 22.3**	**-2.3**
KERG				*i* S	**Sb**	**01 20 59.7**	**-0.6**
KERG				IAML		01 21 03.0	
	comp=N,7.5nm,0.3s						
KERG				IAML		01 21 04.0	
	comp=E,7.4nm,0.4s						
GULE	**Gulek**	**2.97**	**24**	*i* P	**Pb**	**01 20 22.9**	**-2.6**
GULE				IAML		01 21 06.0	
	comp=E,8.9nm,0.9s						
GULE				IAML		01 21 09.0	
	comp=N,6.8nm,0.6s						
HMDT	**Nahal Hemdat**	**2.98**	**140**	Pn	**Pn**	**01 20 20.3**	**+0.7**
HMDT				Sn	**Sn**	**01 20 56.1**	**+0.8**
KARA	**Karaisali**	**3.05**	**28**	PN	**Pn**	**01 20 22.7**	**+2.1**
AMAZ	**Amatzia**	**3.33**	**155**	Pn	**Pn**	**01 20 24.8**	**+0.4**
AMAZ				Sn	**Sn**	**01 21 04.5**	**+0.6**
CMRD	**Camardi-Nigde**	**3.38**	**24**	PN	**Pn**	**01 20 28.3**	**+3.0**
DSI	**Dead Sea**	**3.48**	**149**	Pn	**Pn**	**01 20 26.9**	**+0.5**
DSI				Sn	**Sn**	**01 21 07.8**	**+0.3**
KZIT	**Kziot**	**3.77**	**165**	Pn	**Pn**	**01 20 31.0**	**+0.5**
PRNI	**Paran**	**4.45**	**160**	Pn	**Pn**	**01 20 40.2**	**+0.3**
PRNI				Sn	**Sn**	**01 21 31.5**	**-0.1**
KRMI	**Paran Flat**	**4.61**	**164**	Pn	**Pn**	**01 20 42.2**	**+0.2**
HRFI	**Mount Harif**	**4.76**	**161**	Pn	**Pn**	**01 20 44.5**	**+0.4**
HRFI				Sn	**Sn**	**01 21 39.7**	**+0.5**
EIL	**Elat**	**5.09**	**163**	Pn	**Pn**	**01 20 49.5**	**+0.9**
EIL				Sn	**Sn**	**01 21 46.9**	**-0.4**

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*IDC **17** 01:27:44.4±1.2, 13°.52N×144°.96E, h0^{km}, mb3.7/6, mb1 3.9/6, mb1mx3.6/55, mbtmp3.7/6, MS4.1/3, Ms1 4.1/3, ms1mx3.1/62, Error ellipse: s-maj=46.3km s-min=28.1km az=104.0*

*NEIC **17** 01:27:44.3±2.6, 12°.34N±0°.06×144°.7E±0°.2, h35^{km}±2^{km}, mb4.0/2, Error ellipse: s-maj=31.2km s-min=10.1km az=96.0*

ISC 17 01:27:44.1±0.8**, 12°.41N**±0°.10×**144°.6E**±0°.1**, h30^{km}, n19, σ1^s.56**/15**, mb3.7**/7**, MS4.2**/3**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.20**	**12**		**Pn**	**01 28 06.5**	**+1.6**
GUMO				Sn	**Sn**	**01 28 17.8**	**-2.4**
PATS	**Pohnpei**	**14.60**	**111**	Pn	**Pn**	**01 31 09.7**	**+1.0**
MTN	**Manton Dam**	**28.43**	**209**	P	**P**	**01 33 34.6**	**-1.8**
WRA	**Warramunga Arr**	**33.70**	**198**	P	P	01 34 37.5	+15
	0.8nm,0.9s,baz=18,slow=9.7,SNR=4.4						
FITZ	**Fitzroy Crossi**	**35.63**	**212**	LR	LR	01 50 14.1	
	comp=Z,118nm,20.7s,baz=19,slow=37						
MKAR	**Makanchi Array**	**62.16**	**317**	P	**P**	**01 38 04.5**	**+1.8**
	0.2nm,0.4s,baz=91,slow=8.4,SNR=3.6						
MKAR	**Makanchi Array**	**62.16**	**317**	P	**P**	**01 38 03.5**	**+0.8**
KURK	**Kurchatov**	**65.32**	**320**	P	**P**	**01 38 23.3**	**0.0**
KURK				IAmb	IAmb	01 38 24.2	
	comp=Z,1.2nm,0.8s						
KURBB	**Kurchatov Arra**	**65.36**	**320**	P	**P**	**01 38 24.7**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=105,slow=6.8,SNR=5.8						
BRLK	**Bradley Lake**	**66.61**	**30**		pP	01 38 37.8	-1.1
IMAR	**Indian Mountai**	**67.37**	**23**	P	**P**	**01 38 35.5**	**-0.7**
ILAR	**Eielson Array**	**69.74**	**25**	P	**P**	**01 38 48.8**	**-2.3**
	comp=Z,0.4nm,0.6s,baz=250,slow=5.9,SNR=9.1						
ILAR	**Eielson Array**	**69.74**	**25**	P	**P**	**01 38 49.0**	**-2.1**
TOLK	**Toolik Lake Re**	**69.80**	**21**	P	**P**	**01 38 51.0**	**-0.5**
ABKAR	**Akbulak array**	**77.24**	**318**	P	**P**	**01 39 36.9**	**+1.4**
BBB	**Bella Bella**	**78.65**	**39**	LR	LR	02 08 31.5	
	comp=Z,264nm,20.2s,baz=277,slow=32						
YKA	**Yellowknife Ar**	**84.02**	**27**	P	**P**	**01 40 11.3**	**-0.2**
	comp=Z,0.1nm,0.4s,baz=285,slow=5.1,SNR=5.2						
FINES	**FINESS Array B**	**92.12**	**335**	P	**P**	**01 40 50.3**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=93,slow=2.9,SNR=5.9						
HFS	**Hagfors**	**97.78**	**338**	LR	LR	02 25 47.6	
	comp=Z,80nm,18.7s,baz=217,slow=36						

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*IDC **17** 01:28:15.3±1.2, 19°.81S×70°.72W, h0^{km}, mb3.8/4, mb1 3.9/6, mb1mx3.6/31, mbtmp3.8/6, ML3.8/2, Error ellipse: s-maj=36.9km s-min=22.9km az=90.0*

ISC 17 01:28:21.6±1.2**, 19°.82S**±0°.10×**70°.6W**±0°.2**, h44^{km}, n14, σ0^s.35**/8**, mb3.8**/4**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**3.19**	**151**	Pn	**Pn**	**01 29 09.3**	**-0.3**
	10nm,0.3s,baz=326,slow=11,SNR=11						
LVC				Sn	**Sn**	**01 29 46.7**	**+0.1**
	14nm,0.3s,baz=162,slow=22,SNR=5.8						
LPAZ	**La Paz**	**4.23**	**34**	Pn	Pn	01 29 28.8	+4.7
	2.1nm,0.3s,baz=243,slow=6.9,SNR=19						
SIV	**San Ignacio**	**9.84**	**69**	Pn	**Pn**	**01 30 40.9**	**+0.4**
	0.8nm,0.3s,baz=269,slow=9.6,SNR=18						
PTGA	**Pitinga**	**21.64**	**30**	P	**P**	**01 33 07.9**	**-0.5**
	1.4nm,0.3s,baz=180,slow=20,SNR=5.0						
QSPA	**South Pole Qui**	**70.36**	**180**	P	**P**	**01 39 31.0**	**+0.2**
	1.3nm,1.1s,baz=90,slow=5.1,SNR=2.4						
TORD	**Torodi Ar. Bea**	**78.30**	**71**	P	**P**	**01 40 17.3**	**-0.3**
	1.4nm,0.8s,baz=248,slow=4.9,SNR=8.1						
YKA	**Yellowknife Ar**	**89.09**	**341**	P	**P**	**01 41 11.8**	**+0.1**
	0.1nm,0.6s,baz=124,slow=5.5,SNR=2.9						
H11S2	**WAKE ISLAND Hy**	**126.08**	**279**	T	T	04 06 48.9	
	baz=101,slow=74,SNR=32						
H11S1	**WAKE ISLAND Hy**	**126.08**	**279**	T	T	04 06 39.6	
	baz=101,slow=74,SNR=14						
H11S3	**WAKE ISLAND Hy**	**126.09**	**279**	T	T	04 06 42.8	
	baz=101,slow=74,SNR=12						
H11N3	**WAKE ISLAND Hy**	**126.12**	**280**	T	T	04 06 42.7	
	baz=101,slow=74,SNR=4.3						
H11N2	**WAKE ISLAND Hy**	**126.13**	**280**	T	T	04 06 52.8	
	baz=101,slow=74,SNR=8.8						
H11N1	**WAKE ISLAND Hy**	**126.14**	**280**	T	T	04 06 44.2	
	baz=101,slow=74,SNR=2.9						
MKAR	**Makanchi Array**	**145.16**	**33**	PKPbc	**PKPdf**	**01 47 54.6**	**+0.2**
	0.4nm,0.6s,baz=330,slow=4.6,SNR=4.9						

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*IDC **17** 01:30:42.9±9.9, 8°.78S×118°.85E, h134^{km}±112^{km}, mb3.1/3, mb1 3.1/5, mb1mx2.9/52, mbtmp3.5/5, ML3.4/2, Error ellipse: s-maj=132.0km s-min=41.2km az=51.0*

*DJA **17** 01:30:42.0±0.4, 8°S±6°×11°9E±°, h148^{km}±6^{km}, M3.8/8, mb3.8/3, MLv3.8/8*

ISC 17 01:30:43.7±0.9**, 8°.6S**±0°.1×**119°.23E**±0°.05**, h156^{km}, n12, σ1^s.89**/18**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	**Plampang**	**1.46**	**260**	P	**Pn**	**01 31 12.5**	**-0.8**
PLAI				S	**Sn**	**01 31 34.1**	**-1.8**
WSI	**Waingapu**	**1.51**	**136**	P	**Pn**	**01 31 12.3**	**-1.5**
WSI				S	**Sn**	**01 31 35.3**	**-1.7**
BASI	**Baing, Sumba**	**2.10**	**141**	P	**Pn**	**01 31 20.6**	**+0.2**
BASI				S	**Sn**	**01 31 48.4**	**-0.3**
MMRI	**Maumere**	**2.98**	**91**	P	**Pn**	**01 31 28.4**	**-2.6**
MMRI				S	**Sn**	**01 32 06.3**	**-1.4**
SRBI	**Singaraja**	**4.00**	**277**	P	**Pn**	**01 31 43.5**	**-0.7**
JAGI	**Jajag, Banyuwa**	**5.02**	**271**	P	**Pn**	**01 31 55.3**	**-2.3**
	0.2nm11nm,1.1s						
JAGI				S	**Sn**	**01 32 52.2**	**-3.0**
	0.2nm11nm,1.1s						
SOEI	**Soe**	**5.11**	**104**	P	**Pn**	**01 31 56.8**	**-2.0**
	0.2nm17nm,0.6s						
SOEI				S	**Sn**	**01 32 55.5**	**-2.0**
	0.2nm17nm,0.6s						
FITZ	**Fitzroy Crossi**	**11.33**	**147**	P	**Pn**	**01 33 21.4**	**+0.2**
	0.2nm,0.3s,baz=279,slow=1.9,SNR=7.7						
WRA	**Warramunga Arr**	**18.48**	**129**	P	**Pn**	**01 34 49.9**	**0.0**
	0.1nm,0.3s,baz=300,slow=12,SNR=8.6						
ASAR	**Alice Springs**	**20.55**	**139**	P	**P**	**01 35 12.5**	**+2.2**
	0.9nm,0.5s,baz=315,slow=9.0,SNR=15						
SONM	**Songino Array**	**57.31**	**350**	P	**P**	**01 40 17.6**	**+2.3**
	0.4nm,0.6s,baz=156,slow=7.4,SNR=3.1						
MKAR	**Makanchi Array**	**64.19**	**333**	P	**P**	**01 41 03.1**	**+1.3**
	0.5nm,0.7s,baz=124,slow=8.4,SNR=5.7						

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*SJA **17** 01:32:00.8±0.9, 20°.05S×70°.86W, h20^{km}±6^{km}, ML3.6, MW3.8*

*GUC **17** 01:32:02.1±0.6, 20°.02S×70°.85W, h10^{km}±5^{km}, ML3.8*

*IDC **17** 01:32:04.1±1.0, 19°.94S×70°.69W, h18^{km}±5^{km}, mb3.7/2, mb1 3.8/4, mb1mx3.4/38, mbtmp3.8/4, ML3.6/2, Error ellipse: s-maj=40.0km s-min=24.0km az=90.0*

ISC 17 01:32:01.2±1.2**, 20°.01S**±0°.03×**70°.88W**±0°.06**, h9^{km}**±6^{km}**, n37, σ1^s.25**/49**, 4C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.82**	**60**	⇑*i*P	**Pg**	**01 32 17.0**	**-0.1**
PSGC				*e*S	**Sg**	**01 32 28.1**	**+0.3**
TA01	**Diego Aracena**	**0.85**	**130**	⇑*i*P	**Pg**	**01 32 17.6**	**-0.2**
TA01				*e*S	**Sg**	**01 32 28.7**	**-0.1**
TA01				IAML		01 32 32.7	
	comp=E,6µm,0.4s						
PATCX	**Punta Patache**	**1.05**	**140**	*i* P	**Pg**	**01 32 20.8**	**-0.7**
PATCX				*i* S	**Sn**	**01 32 36.8**	**-0.4**
PATCX				IAML		01 32 37.5	
	comp=Z,1µm,0.7s						
PB11	**IPOC Station P**	**1.18**	**78**	⇑*i*P	**Pg**	**01 32 22.8**	**-1.0**
PB11				*e*S	**Sn**	**01 32 40.9**	**+0.6**
PB11				IAML		01 32 42.8	
	comp=N,3µm,0.2s						
PB11	**IPOC Station P**	**1.18**	**78**	*i* P	**Pg**	**01 32 22.8**	**-1.0**
PB11				IAML		01 32 46.2	
	comp=Z,2µm,0.5s						
PB12	**IPOC Station P**	**1.48**	**21**	*i* P	**Pn**	**01 32 28.5**	**+0.3**
PB12				IAML		01 32 51.5	
	comp=Z,1µm,0.4s						
PB02	**IPOC Station P**	**1.59**	**145**	⇓*i*P	**Pn**	**01 32 29.7**	**-0.1**
PB02				*e*S	**Sb**	**01 32 50.9**	**-0.3**
PB02				IAML		01 32 53.7	
	comp=E,2µm,0.2s						
PB02	**IPOC Station P**	**1.59**	**145**	*i* P	**Pn**	**01 32 29.7**	**-0.1**
PB02				*i* S	**Sb**	**01 32 50.9**	**-0.3**
PB02				IAML		01 32 56.4	
	comp=Z,2µm,0.4s						
GO01	**Chusmiza**	**1.62**	**78**	⇓*i*P	**Pn**	**01 32 30.6**	**+0.1**
GO01				*e*S	**Sg**	**01 32 53.0**	**-0.4**

PB08	IPOC Station P	1.62	95	*e*P	Pn	01 32 30.7	+0.3
PB08				*i* S	Sb	01 32 52.8	+0.4
PB08	IPOC Station P	1.62	95	*i* P	Pn	01 32 30.3	-0.1
PB08				IAML		01 32 56.4	
	comp=Z,496nm,0.3s						
PB01	IPOC Station P	1.66	129	⇑*i*P	Pn	01 32 30.3	-0.3
PB01				*e*S	Sb	01 32 52.8	-0.3
PB01				IAML		01 32 56.4	
	comp=N,1μm,0.5s						
AP01	Chacalluta	1.71	17	*e*P	Pn	01 32 32.0	+0.8
AP01				*e*S	Sb	01 32 54.6	+0.2
AP01				IAML		01 33 02.0	
	comp=E,3μm,0.5s						
PB07	IPOC Station P	1.94	152	*e*P	Pn	01 32 35.1	+0.5
PB07				*e*S	Sb	01 33 00.9	-0.5
PB07	IPOC Station P	1.94	152	*i* P	Pn	01 32 34.6	0.0
PB07				IAML		01 33 09.8	
	comp=Z,437nm,0.7s						
PB16	IPOC Station P	2.11	38	*i* P	Pb	01 32 39.0	-1.1
PB16				IAML		01 33 12.7	
	comp=Z,685nm,0.4s						
PB03	IPOC Station P	2.28	153	*i* P	Pn	01 32 39.5	+0.2
PB03				IAML		01 33 21.2	
	comp=Z,257nm,0.9s						
PB09	IPOC Station P	2.34	140	*i* P	Pb	01 32 41.9	-1.9
PB09				IAML		01 33 22.6	
	comp=Z,601nm,0.7s						
PB04	IPOC Station P	2.41	164	*i* P	Pn	01 32 40.2	-0.8
PB05	IPOC Station P	2.90	168	*i* P	Pn	01 32 46.4	-1.3
PB05				IAML		01 33 47.0	
	comp=Z,81nm,0.6s						
PB06	IPOC Station P	2.94	156	*e*P	Pn	01 32 47.9	-0.5
PB06				*e*S	Sb	01 33 32.5	+2.3
PB06				IAML		01 33 38.2	
	comp=E,317nm,0.8s						
PB06	IPOC Station P	2.94	156	*i* P	Pn	01 32 48.4	0.0
PB06				IAML		01 33 41.0	
	comp=Z,257nm,0.5s						
LVC	Limon Verde	3.17	145	Pn	Pn	01 32 53.5	+1.8
	comp=Z,6.8nm,0.3s,baz=326,slow=9.7,SNR=14						
LVC				Sn	Sn	01 33 31.3	+1.4
	comp=Z,14nm,0.3s,baz=24,slow=20,SNR=3.3						
LVC	Limon Verde	3.17	145	*i* P	Pn	01 32 53.4	+1.8
LVC				IAML		01 33 42.8	
	comp=Z,81nm,0.8s						
PB15	IPOC Station P	3.44	158	*i* P	Pn	01 32 56.4	+1.1
PB15				IAML		01 33 58.7	
	comp=Z,285nm,0.4s						
PB10	IPOC Station P	3.50	175	*i* P	Pn	01 32 54.2	-1.7
LPAZ	La Paz	4.53	36	Pn	Pb	01 33 17.6	-3.7
	comp=Z,1.4nm,0.3s,baz=208,slow=5.1,SNR=8.5						
PB14	IPOC Station P	4.61	175	*i* P	Pn	01 33 09.9	-1.6
PB14				IAML		01 34 48.7	
	comp=Z,21nm,0.6s						
SIV	San Ignacio	10.15	68	Pn	Pn	01 34 27.8	+0.5
	comp=Z,0.6nm,0.3s,baz=254,slow=15,SNR=5.6						
QSPA	South Pole Qui	70.17	180	P	P	01 43 16.1	+1.9
	comp=Z,1.1nm,1.0s,baz=225,slow=4.3,SNR=5.9						
QSPA				pP	pwP	01 43 21.8	+2.2
	comp=Z,0.6nm,0.6s,baz=291,slow=0.7,SNR=1.8						
TORD	Torodi Ar. Bea	78.61	71	P	P	01 44 03.3	-0.7
	comp=Z,0.6nm,0.8s,baz=243,slow=6.4,SNR=5.1						
H11S1	WAKE ISLAND Hy	125.86	279	T	T	04 09 33.3	
	baz=345,slow=74,SNR=11						
H11S3	WAKE ISLAND Hy	125.87	279	T	T	04 09 38.2	
	baz=101,slow=74,SNR=12						
H11N3	WAKE ISLAND Hy	125.90	280	T	T	04 09 38.2	
	baz=52,slow=74,SNR=5.0						
H11N1	WAKE ISLAND Hy	125.92	280	T	T	04 09 38.0	
	baz=100,slow=74,SNR=8.1						
MKAR	Makanchi Array	145.46	33	PKPbc	PKPab	01 51 40.8	+0.7
	comp=Z,0.7nm,0.5s,baz=319,slow=3.9,SNR=7.6						
MKAR				pPKPbc	PKiKP	01 51 46.2	+2.4
	comp=Z,1.0nm,0.7s,baz=324,slow=4.4,SNR=5.8						
SONM	Songino Array	152.16	4	PKPbc	PKiKP	01 51 58.6	+0.9
	comp=Z,0.2nm,0.4s,baz=90,slow=1.4,SNR=3.0						
SONM				pPKPbc	PKPab	01 52 04.2	-2.7
	comp=Z,0.6nm,0.7s,baz=310,slow=1.0,SNR=4.5						

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*SJA **17** 01:34:54.0±1.1, 19°.98S×70°.88W, h13^{km}±6^{km}, ML4.9, MW5.1*

*IDC **17** 01:34:55.0±0.4, 19°.80S×70°.63W, h0^{km}, mb4.8/24, mb1 4.9/29, mb1mx4.8/43, mbtmp4.8/29, ML3.9/5, MS4.2/19, Ms1 4.2/19, ms1mx4.0/37, Error ellipse: s-maj=15.3km s-min=10.3km az=65.0*

*NEIC **17** 01:34:55.3±2.3, 19°.96S±0°.05×70°.86W±0°.05, h10^{km}±1^{km}, mb5.2/279, Mwr4.9/17, Mww5.2, ML4.8(GUC), Error ellipse: s-maj=9.2km s-min=8.6km az=169.0*

*GUC **17** 01:34:56.3±0.5, 19°.98S×70°.86W, h39^{km}±5^{km}, ML4.8*

*NEIC **17** 01:34:56, 19°.96S×70°.76W, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}2.93; $M_{\theta\theta}$-0.28; $M_{\phi\phi}$-2.64; $M_{r\theta}$-0.13; $M_{\theta\phi}$-0.85; $M_{\phi r}$-1.41; Fault plane solution: $M_0$3.25000×10^{16} NP1:ϕ_s23.25000°, δ32.56000°, λ99.03000°. NP2:ϕ_s192.56000°, δ57.89000°, λ84.27000°. Principal axes: T 3.2663, Plg76.0000°, Azm85.0000°; N -0.0340, Plg5.0000°, Azm196.0000°; P -3.2323, Plg13.0000°, Azm287.0000°;*

*BJI **17** 01:34:57.0±0.0, 19°.90S×70°.80W, h10^{km}, mB5.3/3, Ms5.2/5, Ms7 4.9/6*

*MOS **17** 01:34:57.2±1.3, 19°.89S×70°.81W, h29^{km}, mb5.3/23, Error ellipse: s-maj=12.2km s-min=7.0km az=99.6*

*GCMT **17** 01:35:00.3±0.4, 19°.84S±0°.03×71°.01W±0°.02, h22^{km}±1^{km}, MW5.2/75, Moment Tensor Solution. s23,c27; s75,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}6.09±.47; $M_{\theta\theta}$-0.39±.24; $M_{\phi\phi}$-5.70±.30; $M_{r\theta}$-3.57±.44; $M_{\theta\phi}$-1.27±.16; $M_{\phi r}$0.12±.38; Best double couple: $M_0$6.86700×10^{16} NP1:ϕ_s352.00000°, δ46.00000°, λ56.00000°. NP2: ϕ_s216.00000°, δ53.00000°, λ120.00000°. Principal axes: T 7.7010, Plg66.0000°, Azm187.0000°; N -1.6630, Plg24.0000°, Azm17.0000°; P -6.0330, Plg4.0000°, Azm285.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **17** 01:35:01, 20°.06S×70°.96W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}4.65; $M_{\theta\theta}$0.31; $M_{\phi\phi}$-4.95; $M_{r\theta}$0.63; $M_{\theta\phi}$-0.46; $M_{\phi r}$-4.59; Fault plane solution: $M_0$6.70000×10^{16} NP1:ϕ_s176.00000°, δ67.00000°, λ82.00000°. NP2:ϕ_s15.00000°, δ24.00000°, λ107.00000°. Principal axes: T 6.5824, Plg67.0000°, Azm72.0000°; N 0.2197, Plg7.0000°, Azm179.0000°; P -6.8022, Plg22.0000°, Azm272.0000°;*

*VAO **17** 01:35:01.8±0.7, 19°.93S×70°.58W, h54^{km}±6^{km}, mb4.9*

ISC 17 01:34:54.7±0.8**, 19°.96S**±0°.02×**70°.90W**±0°.04**, h7**^{km}±4^{km}**, n823, σ1^{s}.28**/749**, mb5.2**/161**, MS4.3**/21**, 3C-10D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.82	64	⇓*i*P	Pg	01 35 10.1	-0.3
PSGC				*i* S	Sg	01 35 21.0	-0.1
PSGC				IAML		01 35 23.2	
	comp=N,108μm,0.8s						
PSGCX	Pisagua	0.82	64	*i* P	Pg	01 35 10.4	0.0
PSGCX				IAML		01 35 24.1	
	comp=Z,41μm,0.9s						
TA01	Diego Aracena	0.91	132	*e*P	Pb	01 35 13.0	+0.3
TA01				*e*S	Sb	01 35 25.6	+0.6
TA01				IAML		01 35 30.2	
PATCX	Punta Patache	1.11	141	⇓*i*P	Pg	01 35 15.8	-0.1
PATCX				*i* S	Sn	01 35 33.6	+1.3
PATCX	Punta Patache	1.11	141	*i* S	Sb	01 35 31.1	+0.1
PATCX				IAML		01 35 34.8	
	comp=Z,23μm,1.6s						
PB11	IPOC Station P	1.19	81	⇓*i*P	Pb	01 35 16.6	-1.1
PB11				*i* S	Sg	01 35 32.2	-0.9
PB11				IAML		01 35 35.3	
	comp=N,40μm,0.3s						
PB11	IPOC Station P	1.19	81	Pn	Pb	01 35 16.9	-0.9
PB11				Sg	Sg	01 35 32.0	-1.1
PB11	IPOC Station P	1.19	81	*i* P	Pb	01 35 16.8	-0.9
PB11				*i* S	Sg	01 35 32.2	-0.9
PB11				IAML		01 35 38.4	
	comp=Z,36μm,0.8s						
PB12	IPOC Station P	1.45	22	⇓*i*P	Pn	01 35 20.9	-0.6
PB12				*i* S	Sn	01 35 40.1	-0.7
PB12				IAML		01 35 45.1	
	comp=E,29μm,0.6s						
PB12	IPOC Station P	1.45	22	*i* P	Pn	01 35 21.1	-0.3
PB12				*i* S	Sg	01 35 41.2	-0.1
PB12				IAML		01 35 47.4	
	comp=Z,15μm,0.7s						
GO01	Chusmiza	1.64	80	*e*P	Pn	01 35 24.3	-0.1
GO01				*i* S	Sb	01 35 46.0	-0.5
GO01				IAML		01 35 49.9	
	comp=N,35μm,0.5s						
GO01	Chusmiza	1.64	80	Pn	Pn	01 35 24.4	0.0
GO01				Sg	Sb	01 35 46.2	-0.4
PB02	IPOC Station P	1.65	145	*i* P	Pn	01 35 24.8	+0.5
PB02				*i* S	Sb	01 35 46.7	+0.1
PB02				IAML		01 35 50.4	
	comp=E,15μm,0.4s						
PB02	IPOC Station P	1.65	145	*i* P	Pn	01 35 24.7	+0.5
PB02				IAML		01 35 56.7	
	comp=Z,19μm,0.4s						
PB08	IPOC Station P	1.65	96	⇓*i*P	Pn	01 35 24.6	0.0
PB08				*i* S	Sn	01 35 45.6	-0.7
PB08				IAML		01 35 52.6	
	comp=N,9μm,0.5s						
PB08	IPOC Station P	1.65	96	*i* P	Pn	01 35 24.7	+0.2
PB08				IAML		01 35 49.8	
	comp=Z,29μm,1.1s						
AP01	Chacalluta	1.67	19	⇓*i*P	Pn	01 35 24.6	+0.2
AP01				*i* S	Sn	01 35 45.8	-0.3
PB01	IPOC Station P	1.71	129	⇓*i*P	Pn	01 35 25.4	+0.3
PB01				*i* S	Sb	01 35 48.5	+0.2
PB01				IAML		01 35 52.5	
	comp=E,8μm,0.5s						
PB01	IPOC Station P	1.71	129	Pn	Pb	01 35 26.0	-0.6
PB07	IPOC Station P	2.00	152	⇑*i*P	Pn	01 35 29.4	+0.3
PB07				*i* S	Sg	01 35 59.3	+0.4
PB07	IPOC Station P	2.00	152	*i* P	Pn	01 35 29.2	+0.2
PB07				IAML		01 36 04.2	
	comp=Z,5μm,0.9s						
PB16	IPOC Station P	2.09	39	*i* P	Pn	01 35 31.7	+1.0
PB16				*i* S	Sb	01 35 59.1	-0.6
PB16				IAML		01 36 03.7	
	comp=N,15μm,0.4s						
PB16	IPOC Station P	2.09	39	*i* P	Pb	01 35 32.4	-0.9
PB16				*i* S	Sb	01 35 59.7	0.0
PB16				IAML		01 36 01.7	
	comp=Z,31μm,1.1s						
PB03	IPOC Station P	2.34	153	*i* P	Pn	01 35 34.0	+0.3
PB03				IAML		01 36 14.7	
	comp=Z,5μm,1.0s						
PB09	IPOC Station P	2.40	140	⇑*i*P	Pn	01 35 36.3	+1.7
PB09				*i* S	Sb	01 36 07.8	-0.4
PB09				IAML		01 36 20.9	
	comp=E,6μm,0.7s						
PB09	IPOC Station P	2.40	140	*i* P	Pn	01 35 36.3	+1.7
PB09				*i* S	Sg	01 36 11.5	-0.2
PB09				IAML		01 36 29.7	
	comp=Z,8μm,1.0s						
PB04	IPOC Station P	2.46	164		Pn	01 35 35.5	0.0
PB04	IPOC Station P	2.46	164	*i* P	Pn	01 35 35.2	-0.2
PB04				*i* P	Pb	01 35 35.9	-3.5
PB05	IPOC Station P	2.95	167	*i* P	Pn	01 35 41.2	-0.9
PB05				IAML		01 36 40.2	
	comp=Z,2μm,0.8s						
PB06	IPOC Station P	3.00	156	*i* P	Pn	01 35 42.5	-0.3
PB06				IAML		01 36 33.4	
	comp=Z,5μm,1.2s						
LVC	Limon Verde	3.22	145	Pn	Pn	01 35 48.0	+1.9
	comp=Z,33nm,0.3s,baz=314,slow=10,SNR=39						
LVC				Sn	Sb	01 36 29.3	-2.9
	comp=Z,100nm,0.3s,baz=120,slow=23,SNR=5.0						
LVC	Limon Verde	3.22	145	*e*P	Pn	01 35 47.7	+1.6
PB15	IPOC Station P	3.49	158	*i* P	Pn	01 35 49.5	-0.2
PB10	IPOC Station P	3.55	175		Pn	01 35 49.1	-1.2
PB10	IPOC Station P	3.55	175	*i* P	Pn	01 35 49.0	-1.2
PB10				IAML		01 37 11.3	
	comp=Z,1μm,1.1s						
I08BO	LAS PENAS INFR	4.39	32	*i*		01 54 30.0	
	baz=214,slow=318,SNR=2.0						
LPAZ	La Paz	4.51	36	Pn	Pn	01 36 07.7	+3.7
	comp=Z,7.1nm,0.3s,baz=135,slow=3.1,SNR=41						
LPAZ	La Paz	4.51	36	P	Pn	01 36 06.7	+2.7
LPAZ	La Paz	4.51	36	Pn	Pn	01 36 06.7	+2.7
LPAZ	La Paz	4.51	36	*e*P	Pn	01 36 07.7	+3.7
PB14	IPOC Station P	4.66	174	*i* P	Pn	01 36 04.7	-1.3
PB14				IAML		01 37 49.1	
	comp=Z,760nm,1.1s						
GO02	Mina Guanaco	5.32	167	Pn	Pn	01 36 14.5	-0.3
AZAP	Zapla	6.88	129	*i* P	Pn	01 36 40.3	+4.1
AZAP				IAML		01 38 36.4	
	comp=Z,123nm,1.9s						
GO03	Copiap	7.62	176		Pn	01 36 45.4	-1.0
NNA	Nana	9.77	323	Pn	Pn	01 37 15.4	-0.5
	comp=Z,0.9nm,0.3s,baz=232,slow=22,SNR=6.4						
NNA				Sn	Sn	01 39 03.3	-2.6
	comp=Z,3.0nm,0.3s,baz=235,slow=20,SNR=3.3						
NNA				LR	LR	01 40 58.1	
	comp=Z,2μm,18.7s,baz=158,slow=37						
NNA	Nana	9.77	323	*e*P	Pn	01 37 17.1	+1.3
NNA	Nana	9.77	323		Pn	01 37 15.8	0.0
SIV	San Ignacio	10.15	69	Pn	Pn	01 37 19.8	-1.2
	comp=Z,5.8nm,0.3s,baz=258,slow=14,SNR=47						
SIV				Sn	Sn	01 39 18.8	+3.5
	comp=Z,0.9nm,0.3s,baz=356,slow=15,SNR=2.1						
SIV				LR	LR	01 41 41.7	
	comp=Z,3μm,19.1s,baz=266,slow=41						
GO04	Tololo Observa	10.17	179	Pn	Pn	01 37 20.1	-1.3
CFA	Coronel Fontan	11.84	169	Pn	Pn	01 37 47.2	+3.1
	comp=Z,0.5nm,0.3s,baz=346,slow=14,SNR=5.3						
ROC1	El Roble	12.96	180	Pn	Pn	01 38 00.7	+1.0
PEL	Peldehue	13.13	179	P	Pn	01 38 04.3	+2.5
PEL	Peldehue	13.13	179	Pn	Pn	01 38 04.3	+2.5
SAML	Samuel	13.25	35	P	Pn	01 38 02.0	-1.5
SAML	Samuel	13.25	35		Pn	01 38 01.9	-1.5
CPUP	Villa Florida	14.00	119	Pn	Pn	01 38 15.9	+2.4
	comp=Z,0.1nm,0.3s,baz=300,slow=12,SNR=14						
CPUP				LR	LR	01 44 22.5	
	comp=Z,1μm,18.5s,baz=295,slow=41						
CPUP	Villa Florida	14.00	119	P	Pn	01 38 10.6	-3.0
CPUP	Villa Florida	14.00	119		Pn	01 38 10.6	-3.0
AQDB	Aquidauana	14.28	95	*e*P	Pn	01 38 16.2	-1.3
ATAH	Atahualpa	14.68	329	Pn	Pn	01 38 25.4	+2.1
	comp=Z,0.1nm,0.3s,baz=120,slow=14,SNR=9.1						
SALV	Santo Antonio	15.03	77	*e*P	Pn	01 38 26.9	-0.8
CLDB	Colider	17.13	60	*e*P	Pn	01 38 52.9	-1.9
TRCB	Terra Rica	17.25	103	*e*P	Pn	01 38 55.2	-1.1
PCMB	Pacaembu	18.44	99	*e*P	P	01 39 08.9	-2.1
ITAB	Concordia	18.65	116	*e*P	P	01 39 12.4	-0.9
ARAG	Araguaiana, MT	18.66	80	*e*P	P	01 39 11.5	-2.0
PLTB	Pedras Altas	19.47	131	*e*P	P	01 39 22.4	+0.1
GO06	Curarrehue	19.56	181	P	P	01 39 23.1	-0.2
PLCA	Paso Flores	20.70	179	P	Pn	01 39 37.9	-0.2
	comp=Z,34nm,1.1s,baz=22,slow=12,SNR=20						
PLCA	Paso Flores	20.70	179	*e*P	Pn	01 39 37.5	-0.5
PLCA	Paso Flores	20.70	179	P	P	01 39 36.6	+0.9
PLCA	Paso Flores	20.70	179	*e*P	Pn	01 39 37.6	-0.4
BB19B	Bebedouro	20.98	97	*e*P	P	01 39 37.2	-1.7
OTAV	Otavalo	21.39	339	*e*P	P	01 39 45.3	+1.6
OTAV	Otavalo	21.39	339	P	P	01 39 45.4	+1.7
OTAV	Otavalo	21.39	339	P	P	01 39 45.4	+1.7
OTAV	Otavalo	21.39	339	*e*P	P	01 39 46.0	+2.4
IPMB	Ipameri, GO	21.55	89	*e*P	P	01 39 43.7	-1.2
PTGA	Pitinga	21.91	31	P	P	01 39 46.9	-1.8
	comp=Z,13nm,0.3s,baz=215,slow=17,SNR=43						
PTGA	Pitinga	21.91	31	P	P	01 39 47.1	-1.6
PTGA				IAmb	IAmb	01 39 53.8	
	comp=Z,86nm,1.1s						
PTGA	Pitinga	21.91	31	*e*P	P	01 39 47.3	-1.4
FLOC	Florencia	21.91	347	*e*P	P	01 39 51.0	+2.2
FLOC	Florencia	21.91	347	P	P	01 39 50.1	+1.3
RCLB	Rio Claro- Sao	21.93	101	*e*P	P	01 39 47.6	-1.3
SPB	Sao Paulo	22.09	104	P	P	01 39 48.9	-1.7
SPB	Sao Paulo	22.09	104	*e*P	P	01 39 49.9	-0.7
CRUC	La Cruz	22.20	344	*e*P	P	01 39 55.7	+3.4
BDFB	Brasilia	22.21	83	P	P	01 39 49.3	-2.8
	comp=Z,14nm,0.9s,baz=248,slow=12,SNR=16						
BDFB				LR	LR	01 49 59.4	
	comp=Z,1μm,18.1s,baz=267,slow=41						
BDFB	Brasilia	22.21	83	P	P	01 39 49.7	-2.4
BDFB	Brasilia	22.21	83	P	P	01 39 49.7	-2.4
GARC	Garzon, Huila	22.47	348	*e*P	P	01 39 56.5	+1.6
VAO	Valinhos	22.47	102	*e*P	P	01 39 52.8	-2.0
SOTA	Rioblanco	22.66	345	*e*P	P	01 39 57.7	+0.4
BBAC	Balboa, Cauca	22.72	343	*e*P	P	01 39 59.5	+1.8
PCON	Cinco Dias	22.80	346	*e*P	P	01 40 02.1	+3.3
PARB	Paraibuna	23.73	103	*e*P	P	01 40 06.9	-0.8
VILC	Villavicencio,	24.08	353	*e*P	P	01 40 11.0	-0.2
ORTC	Ortega, Tolima	24.10	349	*e*P	P	01 40 11.0	-0.3
YOTC	Yotoco, Valle	24.39	347	*e*P	P	01 40 15.4	+1.4
BSCB	Bom Sucesso	24.49	97	*e*P	P	01 40 14.3	-0.6
ANIL	Santa Ana	24.70	349	*e*P	P	01 40 18.0	+0.9
ROSC	El Rosal	24.88	352	P	P	01 40 20.4	+1.7
	comp=Z,26nm,0.7s,baz=344,slow=23,SNR=16						
ROSC	El Rosal	24.88	352	*e*P	P	01 40 18.1	-0.6
ROSC	El Rosal	24.88	352	P	P	01 40 20.8	+2.1
RREF	El Recreo	25.09	350	*e*P	P	01 40 23.4	+2.5
PLMC	San Jos del P	25.27	347	*e*P	P	01 40 22.6	+0.6
GUY2C	Guyana, Caldas	25.41	350	*i* Pg	P	01 40 24.3	+0.7
SPBC	San Pablo de B	25.64	353	*e*P	P	01 40 24.3	-1.0
RUSC	La Rusia	25.78	355	*e*P	P	01 40 27.9	+0.9
RUSC	La Rusia	25.78	355	P	P	01 40 27.4	+0.3
JANB	Januaria	25.81	83	*e*P	P	01 40 25.2	-1.7
CBOC	Ciudad Bolivar	26.15	348	*e*P	P	01 40 32.9	+2.9
TAMC	Tame, Arauca	26.25	358	*e*P	P	01 40 28.8	-2.0
TAMC				*e*P	P	01 40 33.0	+2.2
HELC	Santa Helena	26.39	350	*i* Pg	P	01 40 33.2	+0.9
PAYG	Puerto Ayora	26.97	313	P	P	01 40 36.0	-1.3
PAYG				IAmb	IAmb	01 40 44.4	
	comp=Z,107nm,1.6s						
PAMC	Pamplona, Colo	27.19	356	*e*P	P	01 40 38.5	-1.2
SJMB	Sao Joao De Ma	28.05	92	*e*P	P	01 40 46.7	-0.3
BSFB	Barra de Sao F	28.36	93	*e*P	P	01 40 48.9	-0.8
SDV	Santo Domingo	28.67	1	P	P	01 40 51.6	-1.0
	comp=Z,13nm,0.8s,baz=226,slow=5.2,SNR=9.1						
SDV	Santo Domingo	28.67	1	P	P	01 40 51.6	-1.0
SDV	Santo Domingo	28.67	1	*e*P	P	01 40 51.8	-0.9
NBIT	Itapeh - BA	30.41	86	*e*P	P	01 41 06.8	-1.1
NBPN	Ponto Novo - B	30.91	78	*e*P	P	01 41 11.1	-1.4
NBPS	Pedro II - PI	32.59	66	*e*P	P	01 41 25.8	-1.5
TOSP	Speyside	32.70	19	P	P	01 41 28.8	+0.8
NBLA	Lagarto - SE	33.08	79	*e*P	P	01 41 29.1	-2.4
JTS	Las Juntas de	33.09	334	LR	LR	01 54 18.9	
	comp=Z,576nm,21.6s,baz=208,slow=35						
JTS	Las Juntas de	33.09	334	*i* P	P	01 41 33.1	+1.6
JTS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
EFI	East Falkland	33.21	165	*i* P	P	01 41 31.7	-0.5
EFI				pmax	pmax		
	comp=Z,19nm,0.9s						
EFI	East Falkland	33.21	165	P	P	01 41 32.8	+0.6
EFI				IAmb	IAmb	01 41 33.7	
	comp=Z,40nm,1.1s						
NBTA	Tacaratu-PE	33.50	76	*e*P	P	01 41 34.1	-1.1
NBMA	Muriti-CE	33.57	73	*e*P	P	01 41 34.4	-1.4
NBPB	Pedra_Branca-C	33.65	69	*e*P	P	01 41 35.5	-1.0
NBMO	Morrinhos-CE	34.35	65	*e*P	P	01 41 41.2	-1.3
NBAN	Anadia - AL	34.94	78	*e*P	P	01 41 45.6	-2.0
NBLI	Livramento-PB	35.20	74	*e*P	P	01 41 48.9	-1.1
NBCL	Cascavel-CE	35.41	68	*e*P	P	01 41 50.4	-1.2
NBPA	Parau_RN	35.74	71	*e*P	P	01 41 53.0	-1.5
RCBR	Riachuelo	36.79	72	P	P	01 42 03.0	-0.6
	comp=Z,36nm,0.8s,baz=231,slow=11,SNR=18						
RCBR	Riachuelo	36.79	72	P	P	01 42 02.7	-0.9
RCBR				pmax	pmax		
	comp=Z,46nm,1.0s						
RCBR	Riachuelo	36.79	72	P	P	01 42 02.7	-0.9
RCBR				IAmb	IAmb	01 42 03.9	
	comp=Z,46nm,0.9s						
RCBR	Riachuelo	36.79	72	*e*P	P	01 42 03.0	-0.6
NBPV	Pedro Velho	37.09	74	*e*P	P	01 42 05.3	-0.7
MLPR	Magueyes Islan	37.89	6	P	P	01 42 11.8	-0.8
MLPR				IAmb	IAmb	01 42 20.1	
	comp=Z,82nm,1.4s						
PDPR	Patillas Dam,	38.05	8	P	P	01 42 13.2	-0.8
MPR	Mayaguez	38.12	6	P	P	01 42 13.6	-0.9
MPR				IAmb	IAmb	01 42 16.6	
	comp=Z,59nm,1.1s						
SJG	San Juan	38.12	7	P	P	01 42 13.6	-1.0
SJG				pmax	pmax		
	comp=Z,40nm,1.0s						
SJG	San Juan	38.12	7	P	P	01 42 13.6	-1.0
SJG				IAmb	IAmb	01 42 16.7	
	comp=Z,40nm,1.0s						
AOPR	Arecibo Observ	38.29	6	P	P	01 42 16.2	+0.1
GCPR	Guaynabo City	38.33	7	IAmb	IAmb	01 42 16.3	
	comp=Z,31nm,0.8s						
TEIG	Tepich	43.41	336	P	P	01 42 59.4	+1.1
TEIG	Tepich	43.41	336	P	P	01 42 58.3	0.0
TEIG				IAmb	IAmb	01 42 59.9	
	comp=Z,34nm,0.8s						
NHSC	New Hope	53.51	350	P	P	01 44 17.0	+1.0
	baz=169						
Z58A	St. Stephen	53.68	351	P	P	01 44 18.4	+1.2
	baz=170						
Z57A	Bowman	53.78	350	P	P	01 44 19.5	+1.6
	baz=168						
Z56A	Williston	53.92	349	P	P	01 44 20.0	+1.0
	baz=168						
152A	Waverly Hall	53.98	346	IAmb	IAmb	01 44 23.3	
	comp=Z,36nm,1.3s						
Y60A	Bolivia	54.12	352	P	P	01 44 21.6	+1.2
	baz=171						
Y58A	Scranton	54.22	351	P	P	01 44 21.8	+0.7
	baz=170						
Y56A	Pelion	54.37	349	P	P	01 44 22.8	+0.6
	baz=168						
GOGA	Godfrey	54.41	347	P	P	01 44 22.8	+0.2
	baz=165						
Y57A	Sumter	54.44	350	P	P	01 44 23.9	+1.2
	baz=169						
Y55A	Saluda	54.61	349	P	P	01 44 24.7	+0.8
	baz=167						
X60A	Albert Glenn T	54.65	353	P	P	01 44 24.9	+0.7
	baz=172						
X59A	McDuffie Farm,	54.72	352	P	P	01 44 25.5	+0.7
	baz=171						
X58A	Rowland	54.81	351	P	P	01 44 25.9	+0.6
	baz=170						
X57A	Johnson Farm,	54.83	351	P	P	01 44 26.3	+0.8
	baz=169						
Z50A	Ashland	54.83	345	P	P	01 44 24.5	-1.2
Z50A	Ashland	54.83	345	P	P	01 44 25.4	-0.2
	baz=163,SNR=5.8						
X56A	White Oak	55.00	350	P	P	01 44 27.2	+0.3
	baz=168,SNR=5.3						
X55A	Gracelyn & Ava	55.09	349	P	P	01 44 28.0	+0.6
	baz=168						
W60A	Pink Hill	55.09	353	P	P	01 44 28.0	+0.6
	baz=172						
HKT	Hockley	55.13	334	P	P	01 44 28.3	+0.6
HKT				pmax	pmax		
	comp=Z,15nm,1.1s						
HKT	Hockley	55.13	334	P	P	01 44 28.3	+0.6
W61A	Ground Anchor	55.14	354	P	P	01 44 28.8	+1.0
	baz=173						
W58A	Raeford	55.25	352	P	P	01 44 29.3	+0.7
	baz=170,SNR=5.3						
W59A	Clinton	55.29	352	P	P	01 44 29.8	+0.9
	baz=171						
X54A	Belton	55.30	348	P	P	01 44 29.4	+0.4
	baz=167						
CNNC	Cliffs of the	55.30	353	P	P	01 44 30.1	+1.1
	baz=172						
833A	Chaparral WMA,	55.34	329	P	P	01 44 30.6	+1.2
	baz=147						
X53A	Estanollee	55.43	348	P	P	01 44 30.7	+0.8
	baz=166						
W57A	Gilead	55.49	351	P	P	01 44 31.1	+0.8
	baz=170						
W56A	Indian Trail	55.56	350	P	P	01 44 31.2	+0.3
	baz=169						
KMSC	Kings Mountain	55.69	350	IAmb	IAmb	01 44 36.3	
	comp=Z,29nm,1.2s						
KMSC	Kings Mountain	55.69	350	P	P	01 44 31.8	0.0
	baz=168						
V60A	Jim Taylor Roa	55.75	354	P	P	01 44 33.1	+0.9
	baz=173						
W54A	Cherokee Point	55.78	349	P	P	01 44 33.2	+0.8
	baz=167						
X51A	Calhoun	55.83	346	P	P	01 44 32.9	+0.1
	baz=164						
V59A	Middlesex	55.86	353	P	P	01 44 33.4	+0.5
	baz=172						
V58A	Windy Hill, Pi	55.99	352	P	P	01 44 34.3	+0.3
	baz=171						
W52A	Murphy	56.13	347	IAmb	IAmb	01 44 36.2	
	comp=Z,25nm,1.1s						
V57A	Coltrane Farms	56.18	351	P	P	01 44 35.7	+0.4
	baz=170						
V56A	Mocksville	56.21	351	P	P	01 44 36.0	+0.6
	baz=169						
U61A	Possum Corner	56.23	355	P	P	01 44 36.3	+0.7

	baz=174						
NATX	Nacogdoches	56.25	336	P	P	01 44 36.7	+0.9
	baz=153						
V55A	Taylorsville	56.36	350	P	P	01 44 37.4	+0.8
	baz=168						
U59A	Littleton	56.39	353	P	P	01 44 37.4	+0.7
	baz=172						
V54A	Nebo	56.41	349	P	P	01 44 37.4	+0.4
	baz=167,SNR=5.2						
U58A	Oxford	56.52	353	P	P	01 44 38.9	+1.2
	baz=171						
W50A	Signal Mountai	56.54	346	IAmb	IAmb	01 44 45.1	
	comp=Z,17nm,0.9s						
435B	Jarrell	56.60	332	P	P	01 44 39.1	+0.7
	baz=150						
TKL	Tuckaleechee C	56.65	347	P	P	01 44 38.4	-0.2
	comp=Z,18nm,0.9s,baz=140,slow=9.0,SNR=11						
TKL	Tuckaleechee C	56.65	347	IAmb	IAmb	01 44 39.4	
	comp=Z,25nm,1.0s						
U57A	Blanch	56.65	352	P	P	01 44 39.4	+0.8
	baz=170						
SWET	Sewanee	56.70	345	IAmb	IAmb	01 44 45.9	
	comp=Z,16nm,0.8s						
U56A	King	56.72	351	P	P	01 44 40.2	+1.1
	baz=169						
V52A	Sevierville	56.79	348	IAmb	IAmb	01 44 43.4	
	comp=Z,38nm,1.1s						
Z41A	Richland Creek	56.90	338	IAmb	IAmb	01 44 49.5	
	comp=Z,36nm,1.0s						
Z41A	Richland Creek	56.90	338	P	P	01 44 41.4	+1.0
	baz=155						
OXF	Oxford	56.96	342	P	P	01 44 41.1	+0.2
	baz=159						
T59A	Double "B" Far	56.97	354	P	P	01 44 41.3	+0.5
	baz=172,SNR=7.0						
T58A	Grand View Acr	57.06	353	P	P	01 44 42.2	+0.7
	baz=171,SNR=7.6						
U54A	Nelsons Funny	57.12	350	IAmb	IAmb	01 44 46.2	
	comp=Z,43nm,1.1s						
U54A	Nelsons Funny	57.12	350	P	P	01 44 42.4	+0.4
	baz=168,SNR=5.4						
T57A	Hurt	57.20	352	IAmb	IAmb	01 44 44.3	
	comp=Z,26nm,0.9s						
T57A	Hurt	57.20	352	P	P	01 44 43.2	+0.7
	baz=170						
JCT	Junction City	57.34	330	P	P	01 44 44.1	+0.4
	baz=147						
V48A	Smith Brothers	57.42	345	IAmb	IAmb	01 44 47.8	
	comp=Z,43nm,1.3s						
X43A	Marvell	57.42	340	P	P	01 44 44.3	+0.2
	baz=158						
TZTN	Tazewell	57.46	348	P	P	01 44 44.7	+0.3
	baz=166						
W45A	Hickory Valley	57.50	342	IAmb	IAmb	01 44 51.8	
	comp=Z,39nm,1.1s						
T55A	Pulaski	57.53	351	P	P	01 44 45.4	+0.5
	baz=169,SNR=5.1						
BLA	Blacksburg	57.57	351	P	P	01 44 45.7	+0.5
	baz=169						
WHTX	Lake Whitney,	57.59	333	P	P	01 44 46.2	+0.9
	baz=150						
T54A	Tazewell	57.60	350	P	P	01 44 45.8	+0.4
	baz=168						
S60A	Water View	57.61	355	P	P	01 44 46.4	+1.0
	baz=174						
CLTN	Cedars of Leba	57.63	345	IAmb	IAmb	01 44 46.5	
	comp=Z,21nm,1.0s						
S58A	Poland Farm, P	57.66	353	P	P	01 44 46.5	+0.8
	baz=172						
T53A	Wise	57.69	349	P	P	01 44 46.3	+0.3
	baz=167						
S59A	Mechanicsville	57.73	354	P	P	01 44 47.0	+0.8
	baz=173						
T52A	Hallie	57.90	349	P	P	01 44 47.4	0.0
	baz=166						
S56A	Natural Bridge	57.91	352	P	P	01 44 48.0	+0.4
	baz=170						
S57A	Dark Hollow, R	57.91	352	IAmb	IAmb	01 44 49.5	
	comp=Z,26nm,0.9s						
S57A	Dark Hollow, R	57.91	352	P	P	01 44 48.3	+0.8
	baz=171						
T51A	Gray	57.94	348	P	P	01 44 48.2	+0.4
	baz=165						
R58B	Mineral	57.99	354	IAmb	IAmb	01 44 50.0	
	comp=Z,29nm,1.1s						
R58B	Mineral	57.99	354	P	P	01 44 48.7	+0.7
	baz=172						
WVT	Waverly	58.04	344	P	P	01 44 48.0	-0.4
WVT				pmax	pmax		
	comp=Z,22nm,1.0s						
WVT	Waverly	58.04	344	P	P	01 44 48.0	-0.4
WVT				IAmb	IAmb	01 44 48.7	
	comp=Z,22nm,0.9s						
WVT	Waverly	58.04	344	P	P	01 44 48.2	-0.2
	baz=161						
UALR	University of	58.13	339	IAmb	IAmb	01 44 54.0	
	comp=Z,61nm,1.6s						
S55A	Lewisburg	58.13	351	P	P	01 44 49.9	+0.7
	baz=169,SNR=5.7						
R59A	King George, V	58.15	354	P	P	01 44 49.9	+0.8
	baz=173						
T50A	Nancy	58.18	347	P	P	01 44 49.1	-0.3
	baz=164						
S54A	Dingess, Beckl	58.28	350	IAmb	IAmb	01 44 57.3	
	comp=Z,20nm,0.8s						
S54A	Dingess, Beckl	58.28	350	P	P	01 44 50.1	-0.1
	baz=168						
S53A	Williamson	58.30	350	P	P	01 44 50.0	-0.3
	baz=168						
TXAR	Lajitas Array	58.31	326	P	P	01 44 51.5	+0.8
	comp=Z,5.2nm,0.7s,baz=147,slow=8.2,SNR=48						
TXAR				LR	LR	02 09 34.8	
	comp=Z,85nm,18.1s,baz=0.0,slow=36						
TXAR	Lajitas Array	58.31	326	P	P	01 44 51.2	+0.5
TXAR	Lajitas Array	58.31	326	P	P	01 44 51.2	+0.5
R58A	Rapidan	58.33	353	P	P	01 44 50.9	+0.5
	baz=172						
MIAR	Mount Ida	58.34	338	IAmb	IAmb	01 44 58.5	
	comp=Z,29nm,0.9s						
MIAR	Mount Ida	58.34	338	P	P	01 44 51.1	+0.5
	baz=155,SNR=11						
R57A	Stanardsville	58.39	353	P	P	01 44 51.9	+1.0
	baz=172,SNR=5.8						
T49A	Edmonton	58.41	346	P	P	01 44 50.8	-0.2
	baz=164,SNR=12						
W41B	Gary Mavity, V	58.46	340	IAmb	IAmb	01 44 55.5	
	comp=Z,32nm,1.2s						
W41B	Gary Mavity, V	58.46	340	P	P	01 44 51.4	0.0
	baz=156						
S52A	Salyersville	58.47	349	P	P	01 44 51.3	-0.1
	baz=166						
WHAR	Wooly Hollow	58.58	340	IAmb	IAmb	01 44 59.8	
	comp=Z,24nm,1.1s						
R55A	Marlinton	58.58	352	P	P	01 44 53.1	+0.8
	baz=170						
R54A	Victor	58.61	351	P	P	01 44 52.9	+0.5
	baz=169						
R56A	Bull Pasture M	58.61	352	P	P	01 44 52.8	+0.4
	baz=170						
Q61A	Milford	58.68	356	P	P	01 44 53.2	+0.4
	baz=175						
S50A	Richmond	58.73	347	P	P	01 44 53.2	0.0
	baz=165						
LCAR	Lake Charles	58.93	341	IAmb	IAmb	01 44 58.3	
	comp=Z,19nm,1.2s						
Q58A	Fox Den Farm,	58.94	354	P	P	01 44 55.1	+0.5
	baz=172						
W39A	Magazine	59.00	338	IAmb	IAmb	01 44 56.8	
	comp=Z,20nm,0.9s						
W39A	Magazine	59.00	338	P	P	01 44 56.0	+0.9
	baz=155,SNR=7.0						
S49A	Springfield	59.01	347	P	P	01 44 54.8	-0.4
	baz=164						
R52A	Catlettsburg	59.03	349	P	P	01 44 55.2	-0.1
	baz=167						
FCAR	Ozark Folk Cen	59.07	340	IAmb	IAmb	01 44 56.5	
	comp=Z,55nm,1.9s						
ABTX	Abilene, Hawle	59.08	332	IAmb	IAmb	01 44 57.6	
	comp=Z,21nm,0.8s						
ABTX	Abilene, Hawle	59.08	332	P	P	01 44 56.5	+0.7
	baz=148,SNR=6.1						
Q57A	Strasburg	59.11	353	P	P	01 44 56.9	+1.0
	baz=172,SNR=7.1						
R51A	Hillsboro	59.16	348	P	P	01 44 56.0	-0.2
	baz=166						
Q56A	Snyder Ridge,	59.20	352	P	P	01 44 57.5	+1.0
	baz=171,SNR=9.8						
Q55A	Buckhannon	59.27	352	P	P	01 44 58.3	+1.2
	baz=170						
R50A	Paris	59.29	348	P	P	01 44 56.7	-0.4
	baz=165						
Q53A	Leroy	59.35	350	P	P	01 44 57.3	-0.2
	baz=168						
Q54A	Coxs Mills	59.37	351	P	P	01 44 57.6	-0.1
	baz=169						
P58A	Pank, Wackersv	59.44	354	P	P	01 44 58.8	+0.7
	baz=173						
R49A	Shelbyville	59.48	347	P	P	01 44 58.2	-0.2
	baz=164						
P59A	Jarrettsville	59.49	355	P	P	01 44 59.2	+0.8
	baz=174						
P57A	Homestead Farm	59.51	354	P	P	01 44 59.5	+0.9
	baz=172						
Q52A	Bidwell	59.57	350	P	P	01 44 59.2	+0.1
	baz=168						
P56A	Dayton Farm, R	59.62	353	P	P	01 45 00.5	+1.2
	baz=171,SNR=5.4						
P60A	Greenville	59.63	356	P	P	01 44 59.7	+0.4
	baz=175						
WCI	Wyandotte Cave	59.66	346	P	P	01 44 59.5	-0.2
WCI				pmax	pmax		
	comp=Z,37nm,1.3s						
WCI	Wyandotte Cave	59.66	346	P	P	01 44 59.5	-0.2
WCI				IAmb	IAmb	01 45 03.8	
	comp=Z,37nm,1.2s						
WCI	Wyandotte Cave	59.66	346	P	P	01 44 59.4	-0.3
	baz=163						
U40A	Yellville	59.74	340	IAmb	IAmb	01 45 04.3	
	comp=Z,22nm,1.1s						
U40A	Yellville	59.74	340	P	P	01 45 00.3	0.0
	baz=156,SNR=9.4						
P55A	Reedsville	59.74	352	P	P	01 45 00.7	+0.4
	baz=170						
Q50A	Georgetown	59.77	348	P	P	01 45 00.2	-0.2
	baz=166						
Q51A	Peebles	59.83	349	IAmb	IAmb	01 45 07.8	
	comp=Z,15nm,0.8s						
Q51A	Peebles	59.83	349	P	P	01 45 01.0	+0.2
	baz=166						
MVL	Millersville	59.87	355	IAmb	IAmb	01 45 08.7	
	comp=Z,24nm,1.0s						
S44A	Carbondale	59.89	343	IAmb	IAmb	01 45 02.2	
	comp=Z,29nm,0.9s						
MCWV	Mont Chateau	59.90	352	IAmb	IAmb	01 45 03.1	
	comp=Z,18nm,0.9s						
MCWV	Mont Chateau	59.90	352	P	P	01 45 01.9	+0.6
	baz=170,SNR=5.4						
P54A	Burton	59.92	351	P	P	01 45 02.1	+0.6
	baz=170						
P53A	Whipple	59.95	351	IAmb	IAmb	01 45 03.0	
	comp=Z,22nm,0.9s						
P53A	Whipple	59.95	351	P	P	01 45 02.1	+0.5
	baz=168						
HHAR	Hobbs	60.03	339	IAmb	IAmb	01 45 06.6	
	comp=Z,28nm,1.2s						
O58A	Lewisberry	60.04	355	P	P	01 45 02.7	+0.4
	baz=173						
Q49A	Aurora	60.10	347	P	P	01 45 02.6	-0.1
	baz=165						
O60A	Telford	60.11	356	P	P	01 45 03.4	+0.7
	baz=175						
O59A	Robesonia	60.16	355	P	P	01 45 03.8	+0.7
	baz=174						
O57A	Amberson	60.19	354	P	P	01 45 03.7	+0.4
	baz=173						
P52A	Corning	60.21	350	P	P	01 45 02.9	-0.5
	baz=168						
Q48A	North Vernon	60.21	347	P	P	01 45 03.0	-0.4
	baz=164						
P51A	Williamsport	60.22	349	IAmb	IAmb	01 45 04.0	
	comp=Z,16nm,0.9s						
P51A	Williamsport	60.22	349	P	P	01 45 02.9	-0.5
	baz=167						
U38A	Gravette	60.33	338	IAmb	IAmb	01 45 08.5	
	comp=Z,17nm,1.1s						
O56A	Blue Knob Stat	60.34	353	P	P	01 45 05.6	+1.2
	baz=172,SNR=5.7						
TUL1	Leonard	60.36	337	P	P	01 45 04.9	+0.4
	baz=153,SNR=9.1						
O55A	Ligonier	60.37	353	P	P	01 45 05.2	+0.7
	baz=171,SNR=7.0						
P50A	Jamestown	60.47	349	P	P	01 45 05.1	-0.1
	baz=166						
O54A	Avella	60.48	352	P	P	01 45 05.0	-0.3
	baz=170						
N61A	South Mountain	60.48	357	P	P	01 45 05.0	-0.2
	baz=176						
WMOK	Wichita Mounta	60.51	334	P	P	01 45 06.0	+0.4
	baz=150,SNR=5.3						
P49A	Miami Univ. Ec	60.58	348	P	P	01 45 05.6	-0.3
	baz=165						
O52A	Adamsville	60.63	350	P	P	01 45 06.1	-0.2
	baz=168						
SSPA	Standing Stone	60.63	354	P	P	01 45 06.5	+0.2
SSPA				IAmb	IAmb	01 45 14.1	
	comp=Z,30nm,1.1s						
SSPA	Standing Stone	60.63	354	P	P	01 45 06.4	+0.2
	baz=172						
P48A	Milroy	60.65	347	P	P	01 45 06.0	-0.4
	baz=164						
O53A	New Philadelph	60.67	351	P	P	01 45 06.7	+0.1
	baz=169						
PAL	Palisades	60.72	357	P	P	01 45 07.2	+0.4
	baz=177						
N58A	Sunbury	60.73	355	IAmb	IAmb	01 45 11.8	
	comp=Z,35nm,1.1s						
N58A	Sunbury	60.73	355	P	P	01 45 07.3	+0.4
	baz=174						
N59A	State Game Lan	60.73	356	P	P	01 45 07.6	+0.5
	baz=175						
O51A	Pataskala	60.79	350	P	P	01 45 06.8	-0.6
	baz=167						
CCM	Cathedral Cave	60.80	342	P	P	01 45 06.7	-0.8
CCM				pmax	pmax		
	comp=Z,35nm,1.3s						
CCM	Cathedral Cave	60.80	342	P	P	01 45 06.7	-0.8
CCM				IAmb	IAmb	01 45 11.9	
	comp=Z,35nm,1.3s						
CCM	Cathedral Cave	60.80	342	P	P	01 45 07.3	-0.1
	baz=158						
N55A	Marion Center	60.90	353	P	P	01 45 09.1	+1.0
	baz=171,SNR=14						
ACSO	Alum Creek Sta	60.93	349	IAmb	IAmb	01 45 09.0	
	comp=Z,26nm,0.9s						
ACSO	Alum Creek Sta	60.93	349	P	P	01 45 07.9	-0.4
	baz=167						
N56A	West Decatur	60.95	354	P	P	01 45 09.5	+1.0
	baz=172,SNR=8.1						
O50A	Cable	60.96	349	P	P	01 45 08.2	-0.3
	baz=166						
Q44A	Meyer Farm, Va	60.97	344	IAmb	IAmb	01 45 08.9	
	comp=Z,26nm,1.1s						
M60A	Port Jervis	61.07	357	P	P	01 45 09.5	+0.2
	baz=176						
MNTX	Cornudas Mount	61.09	327	IAmb	IAmb	01 45 11.0	
	comp=Z,10.0nm,0.7s						
MNTX	Cornudas Mount	61.09	327	P	P	01 45 09.7	+0.1
	baz=143,SNR=14						
S39A	Bolivar	61.11	340	IAmb	IAmb	01 45 13.7	
	comp=Z,34nm,1.2s						
M62A	Hamden	61.12	358	P	P	01 45 10.2	+0.7
	baz=178						
O49A	Covington	61.14	348	IAmb	IAmb	01 45 13.8	
	comp=Z,36nm,1.4s						
O49A	Covington	61.14	348	P	P	01 45 09.2	-0.5
	baz=166						
N53A	Lisbon	61.16	351	P	P	01 45 10.1	+0.2
	baz=169						
N54A	Moraine State	61.20	352	P	P	01 45 10.7	+0.6
	baz=170,SNR=6.1						
P46A	Rosedale	61.20	346	IAmb	IAmb	01 45 13.1	
	comp=Z,19nm,0.9s						
M58A	Price's Panora	61.24	355	P	P	01 45 11.4	+1.0
	baz=174,SNR=7.1						
M57A	Sunshine Farm,	61.26	355	P	P	01 45 11.1	+0.6
	baz=173						
N52A	McGinn's Farm,	61.29	351	P	P	01 45 10.6	-0.2
	baz=168						
M59A	Waymart	61.33	356	P	P	01 45 11.8	+0.8
	baz=175,SNR=6.6						
O48A	Farmland	61.36	348	P	P	01 45 10.5	-0.8
	baz=165						
N50A	Nevada	61.49	349	P	P	01 45 11.4	-0.6
	baz=167						
N51A	Ashland	61.50	350	P	P	01 45 11.4	-0.8
	baz=168						
M56A	Emporium	61.50	354	P	P	01 45 12.7	+0.4
	baz=172,SNR=7.0						
L63A	North Scituate	61.52	359	P	P	01 45 12.5	+0.2
	baz=179						
T35A	Sooner Cattle	61.52	337	IAmb	IAmb	01 45 14.8	
	comp=Z,23nm,1.0s						
M55A	Ridgway	61.55	353	P	P	01 45 13.0	+0.4
	baz=172,SNR=11						
MSTX	Muleshoe	61.63	330	IAmb	IAmb	01 45 17.7	
	comp=Z,19nm,0.9s						
MSTX	Muleshoe	61.63	330	P	P	01 45 13.7	+0.3
	baz=146,SNR=11						
M54A	Oil Creek Stat	61.69	353	P	P	01 45 13.7	+0.2
	baz=170,SNR=8.2						
L60A	Shokan	61.71	357	P	P	01 45 13.5	-0.1
	baz=176						
M53A	WI Miller and	61.76	352	P	P	01 45 14.1	+0.1
	baz=170,SNR=5.2						
N49A	Columbus Grove	61.82	349	P	P	01 45 13.8	-0.5
	baz=166,SNR=11						
L58A	Harry Jones Me	61.86	356	P	P	01 45 15.2	+0.6
	baz=175,SNR=8.5						
L57A	Andrews Acres	61.89	355	P	P	01 45 15.5	+0.7
	baz=174						
SFIN	Lafayette	61.90	346	P	P	01 45 13.8	-1.1
	baz=163						
N48A	Decatur	61.92	348	P	P	01 45 13.9	-1.1
	baz=165						
M52A	Chesterland	61.95	351	P	P	01 45 14.9	-0.3
	baz=169						
L59A	Walton	61.96	357	P	P	01 45 16.1	+0.8
	baz=176,SNR=6.2						
U32A	Winter Ranch,	62.02	335	IAmb	IAmb	01 45 17.3	
	comp=Z,20nm,0.8s						
BINY	Binghamton	62.03	356	P	P	01 45 16.5	+0.8
	baz=174,SNR=8.3						
N47A	Urbana	62.07	347	P	P	01 45 15.5	-0.5
	baz=164						
M50A	Fremont	62.08	350	P	P	01 45 15.7	-0.4
	baz=167						
L56A	Greenwood	62.09	354	P	P	01 45 16.8	+0.6
	baz=173,SNR=5.5						
L61B	Northampton	62.12	359	P	P	01 45 16.6	+0.3
	baz=178						
VNA3	Neumayer Olymp	62.12	161	P	P	01 45 17.4	+1.3
HRV	Adam Dziewonsk	62.16	359	P	P	01 45 17.1	+0.5
HRV				pmax	pmax		
	comp=Z,41nm,1.1s						
HRV	Adam Dziewonsk	62.16	359	P	P	01 45 17.1	+0.5
HRV	Adam Dziewonsk	62.16	359	P	P	01 45 16.9	+0.3
	baz=179						
L53A	Girard	62.21	352	P	P	01 45 16.9	-0.1
	baz=170,SNR=6.3						
L55A	Hinsdale	62.22	354	P	P	01 45 17.6	+0.5
	baz=172,SNR=12						
M49A	Liberty Center	62.31	349	P	P	01 45 17.4	-0.3
	baz=166,SNR=7.5						
K60A	Five Rivers En	62.33	358	P	P	01 45 18.0	+0.4
	baz=177						
ERPA	Erie	62.34	352	P	P	01 45 18.6	+0.8
	baz=170						
K63A	Dunstable	62.34	359	P	P	01 45 18.4	+0.7
	baz=179						
VNA1	Neumayer--Stat	62.35	160	P	P	01 45 19.3	+1.7
K61A	Williamstown	62.35	358	P	P	01 45 18.8	+0.9
	baz=177						
L54A	Sinclairville	62.37	353	P	P	01 45 18.8	+0.8
	baz=171,SNR=16						
K59A	Cooperstown	62.53	357	P	P	01 45 20.0	+0.9
	baz=176,SNR=10						
K58A	Earlville	62.56	356	P	P	01 45 19.9	+0.5
	baz=175,SNR=10						
HDIL	Hopedale	62.59	344	P	P	01 45 19.1	-0.4
	baz=160						
K57A	Scipio Center	62.59	355	P	P	01 45 19.9	+0.3
	baz=174						
K56A	Middlesex	62.63	355	P	P	01 45 20.3	+0.5
	baz=173						
K54A	Basiliko Farm,	62.67	354	P	P	01 45 20.6	+0.6
	baz=172,SNR=11						
VNA2	Neumayer--Watz	62.71	161	P	P	01 45 21.2	+1.2
	baz=288,slow=7.4						
K55A	Perry	62.73	354	P	P	01 45 20.9	+0.5
	baz=172,SNR=8.7						
L48A	N Adams	62.85	349	P	P	01 45 20.7	-0.5
	baz=166						
P38A	Dawn	62.94	341	IAmb	IAmb	01 45 29.2	
	comp=Z,16nm,0.9s						
121A	Cookes Peak, D	63.00	325	IAmb	IAmb	01 45 25.4	
	comp=Z,11nm,0.8s						
121A	Cookes Peak, D	63.00	325	P	P	01 45 24.5	+1.8
	baz=141,SNR=7.5						
L47A	Sherwood	63.03	348	P	P	01 45 21.3	-1.1
	baz=165,SNR=6.8						
K52A	Tillsonburg	63.08	352	P	P	01 45 22.9	+0.2
	baz=170						
ACCN	Adirondack Com	63.08	358	IAmb	IAmb	01 45 27.9	
	comp=Z,26nm,1.2s						
J58A	Remsen	63.14	356	IAmb	IAmb	01 45 29.1	
	comp=Z,19nm,1.3s						
J58A	Remsen	63.14	356	P	P	01 45 23.6	+0.4
	baz=175						
J56A	Wolcott	63.16	355	P	P	01 45 23.4	+0.2
	baz=174						
J59A	Piesco	63.20	357	P	P	01 45 24.4	+0.9
	baz=176,SNR=8.2						
J57A	Williamstown	63.23	356	IAmb	IAmb	01 45 25.2	
	comp=Z,24nm,0.9s						
J57A	Williamstown	63.23	356	P	P	01 45 23.9	+0.1
	baz=174,SNR=5.5						
J55A	Hilton	63.23	354	P	P	01 45 23.8	+0.1
	baz=173						
J54A	Appleton	63.32	354	P	P	01 45 24.5	+0.2
	baz=172						
K50A	Casco	63.35	350	P	P	01 45 24.0	-0.5
	baz=168						
I58A	Old Forge	63.45	357	P	P	01 45 26.0	+0.8
	baz=176,SNR=7.3						
KSU1	Kansas State U	63.49	338	P	P	01 45 25.4	-0.2
	baz=153						
K49A	Clarkson	63.50	350	P	P	01 45 24.7	-0.8
	baz=167						
J52A	Paris	63.50	352	P	P	01 45 25.5	-0.1
	baz=170,SNR=17						
I60A	Shoreham	63.53	358	P	P	01 45 26.6	+0.9
	baz=177						
I61A	Oroboro, Fairl	63.59	359	P	P	01 45 26.9	+0.8
	baz=178,SNR=5.8						
K48A	Perry	63.63	349	P	P	01 45 25.6	-0.8
	baz=166,SNR=5.7						
K47A	Vermontville	63.66	348	P	P	01 45 25.8	-0.8
	baz=165						
R32A	Long Quarter,	63.67	336	IAmb	IAmb	01 45 28.4	
	comp=Z,20nm,0.8s						
NCB	Newcomb	63.69	357	IAmb	IAmb	01 45 32.7	
	comp=Z,15nm,1.1s						
I57A	Carthage	63.73	356	P	P	01 45 27.4	+0.4
	baz=175						
PECO	Prince Edward	63.83	355	IAmb	IAmb	01 45 32.1	
	comp=Z,32nm,1.2s						
LBNH	Lisbon	63.89	359	P	P	01 45 29.3	+1.2
	baz=179						
I53A	Kortright Cn E	63.97	353	P	P	01 45 28.8	+0.2
	baz=171						
J49A	Marlette	64.00	350	P	P	01 45 28.0	-0.9
	baz=167						
J48A	Bridge Port	64.05	350	P	P	01 45 28.5	-0.6
	baz=166,SNR=7.9						
I51A	Listowel	64.13	352	P	P	01 45 29.5	-0.2
	baz=169,SNR=8.6						
H58A	Gabriels	64.14	357	P	P	01 45 30.1	+0.4
	baz=176,SNR=5.2						
I55A	Frankford	64.17	355	P	P	01 45 29.7	-0.2
	baz=173,SNR=8.3						
J47A	Sunmer	64.18	349	P	P	01 45 29.2	-0.7
	baz=165						
H61A	Lyndonville	64.19	359	P	P	01 45 30.8	+0.8
	baz=179						
ANMO	Albuquerque	64.20	328	P	P	01 45 31.6	+1.0
	comp=Z,3.2nm,0.7s,baz=141,slow=6.5,SNR=16						
ANMO				LR	LR	02 12 57.2	
	comp=Z,138nm,18.8s,baz=118,slow=36						
ANMO	Albuquerque	64.20	328	*i* P	P	01 45 31.6	+1.0
ANMO				pmax	pmax		
	comp=Z,19nm,1.9s						
ANMO	Albuquerque	64.20	328	P	P	01 45 32.1	+1.4
ANMO	Albuquerque	64.20	328	P	P	01 45 32.0	+1.4
	baz=143						

H62A	Milan	64.22	360	P	P	01 45 31.6	+1.3
	baz=180						
H60A	Morristown	64.23	359	P	P	01 45 30.8	+0.5
	baz=178						
H57A	Richville	64.24	356	P	P	01 45 30.3	-0.1
	baz=175,SNR=8.5						
I52A	Shelburne	64.28	353	P	P	01 45 30.6	-0.1
	baz=170,SNR=7.2						
H64A	Troy	64.31	1	P	P	01 45 31.4	+0.7
	baz=182						
H63A	New Sharon	64.31	1	P	P	01 45 31.1	+0.3
	baz=181,SNR=5.4						
SNAA	Sanae	64.33	161	P	P	01 45 32.2	+1.4
SNAA	Sanae	64.33	161	P	P	01 45 32.0	+1.2
SNAA				pmax	pmax		
	comp=Z,33nm,1.1s						
SNAA	Sanae	64.33	161	P	P	01 45 32.0	+1.2
H59A	Cadyville	64.34	358	P	P	01 45 31.6	+0.6
	baz=177,SNR=6.7						
LONY	Lake Ozonia	64.36	357	IAmb	IAmb	01 45 32.3	
	comp=Z,20nm,1.1s						
LONY	Lake Ozonia	64.36	357	P	P	01 45 32.0	+0.9
	baz=176						
CBKS	Cedar Bluff	64.41	335	IAmb	IAmb	01 45 37.1	
	comp=Z,26nm,0.9s						
CBKS	Cedar Bluff	64.41	335	P	P	01 45 32.0	+0.3
	baz=150,SNR=6.9						
H56A	Elgin	64.43	356	P	P	01 45 32.1	+0.5
	baz=174,SNR=5.8						
H55A	Tweed	64.45	355	P	P	01 45 31.9	+0.2
	baz=173						
DELO	Deloro Mine	64.46	355	IAmb	IAmb	01 45 32.5	
	comp=Z,15nm,1.0s						
TUC	Tucson	64.49	323	P	P	01 45 33.1	+0.7
TUC				pmax	pmax		
	comp=Z,7.0nm,1.3s						
TUC	Tucson	64.49	323	P	P	01 45 33.1	+0.7
TUC	Tucson	64.49	323	P	P	01 45 33.9	+1.5
	baz=138						
I49A	Point Hope	64.52	350	P	P	01 45 31.6	-0.6
	baz=168,SNR=9.4						
FRNY	Flat Rock	64.53	358	IAmb	IAmb	01 45 34.1	
	comp=Z,26nm,0.9s						
H53A	Bobcaygeon	64.60	354	P	P	01 45 32.8	0.0
	baz=172,SNR=11						
G60A	Masonville	64.76	359	P	P	01 45 35.4	+1.7
	baz=178						
G59A	Clarenceville	64.76	358	P	P	01 45 34.5	+0.8
	baz=178						
G63A	Kingsbury	64.77	1	P	P	01 45 34.7	+0.9
	baz=181						
H52A	Wyevale	64.81	353	P	P	01 45 33.9	-0.2
	baz=171,SNR=5.5						
SADO	Sadowa	64.86	354	P	P	01 45 34.4	0.0
	comp=Z,23nm,0.8s,baz=210,slow=2.6,SNR=17						
SADO				LR	LR	02 16 47.3	
	comp=Z,114nm,18.0s,baz=178,slow=39						
SADO	Sadowa	64.86	354	P	P	01 45 34.4	0.0
G57A	Newington	64.86	357	P	P	01 45 34.5	+0.2
	baz=176,SNR=7.9						
G58A	Ormstown	64.86	358	P	P	01 45 35.1	+0.7
	baz=177						
G62A	West of Eustis	64.87	0	P	P	01 45 33.9	-0.6
G62A	West of Eustis	64.87	0	P	P	01 45 35.0	+0.5
	baz=180,SNR=10						
I47A	Gladwin	64.88	349	P	P	01 45 34.1	-0.4
	baz=166						
I48A	Sherman Twp	64.90	350	P	P	01 45 34.1	-0.6
	baz=167,SNR=12						
PKME	Peaks-Kenny Pk	64.93	1	P	P	01 45 35.8	+1.0
	baz=182						
SCIA	State Center	64.93	342	P	P	01 45 35.3	+0.3
	baz=157						
PLVO	Plevna	64.93	355	IAmb	IAmb	01 45 39.3	
	comp=Z,30nm,1.3s						
G61A	St-Isidore-de-	64.93	360	P	P	01 45 35.6	+0.8
	baz=179,SNR=6.4						
I46A	Reed City	64.97	348	P	P	01 45 34.6	-0.5
	baz=165						
T25A	Trinidad	64.99	331	IAmb	IAmb	01 45 41.3	
	comp=Z,15nm,1.1s						
T25A	Trinidad	64.99	331	P	P	01 45 36.5	+0.8
	baz=145,SNR=7.5						
JFWS	Jewell Farm	65.05	344	IAmb	IAmb	01 45 41.0	
	comp=Z,32nm,1.2s						
JFWS	Jewell Farm	65.05	344	P	P	01 45 35.9	+0.1
	baz=160						
G55A	Calabogie	65.12	355	P	P	01 45 36.7	+0.6
	baz=174,SNR=6.5						
G53A	Haliburton	65.15	354	P	P	01 45 35.9	-0.4
	baz=172,SNR=14						
H48A	Harrisville	65.34	350	P	P	01 45 37.0	-0.5
	baz=167,SNR=7.0						
G54A	Lake Saint Pet	65.37	354	P	P	01 45 37.9	+0.1
	baz=172						
H47A	Mio	65.39	350	P	P	01 45 37.0	-0.9
	baz=166						
214A	Organ Pipe Nat	65.40	321	IAmb	IAmb	01 45 45.3	
	comp=Z,36nm,1.4s						
214A	Organ Pipe Nat	65.40	321	P	P	01 45 40.1	+1.9
	baz=136						
H46A	Fife Lake	65.51	349	P	P	01 45 37.7	-0.9
	baz=165						
F59A	Saint Guilaume	65.52	359	P	P	01 45 39.8	+1.2
	baz=178						
F64A	Sherman	65.55	2	P	P	01 45 39.7	+0.9
	baz=182						
F61A	St Evariste	65.62	360	P	P	01 45 40.1	+0.8
	baz=180						
F60A	Warwick	65.62	359	P	P	01 45 39.9	+0.6
	baz=179						
I42A	Draeger Farm,	65.65	346	IAmb	IAmb	01 45 43.5	
	comp=Z,15nm,1.0s						
GLMI	Grayling	65.68	349	P	P	01 45 39.6	-0.1
	baz=166						
H45A	Beulah	65.74	348	P	P	01 45 39.6	-0.5
	baz=164						
KSCO	Kaye Shedlock’	65.76	333	IAmb	IAmb	01 45 42.8	
	comp=Z,25nm,0.8s						
KSCO	Kaye Shedlock’	65.76	333	P	P	01 45 41.4	+0.8
	baz=147						
G47A	Hillman	65.89	350	P	P	01 45 40.5	-0.5
	baz=167						
F52A	Sundridge	65.89	354	P	P	01 45 40.9	-0.2
	baz=171,SNR=8.6						
ALGO	Algonquin Park	65.92	355	P	P	01 45 41.1	-0.2
	baz=172,SNR=5.4						
H43A	Windswept, Lux	65.95	347	IAmb	IAmb	01 45 45.0	
	comp=Z,25nm,1.1s						
SDCO	Great Sand Dun	65.99	330	IAmb	IAmb	01 45 51.3	
	comp=Z,17nm,1.1s						
SDCO	Great Sand Dun	65.99	330	P	P	01 45 43.0	+0.8
	baz=144,SNR=18						
E60A	Ste Agathe de	66.02	360	P	P	01 45 41.7	-0.1
	baz=179						
E58A	La Victoria	66.05	358	P	P	01 45 42.4	+0.3
	baz=177						
G45A	Suttons Bay	66.07	349	IAmb	IAmb	01 45 56.2	
	comp=Z,12nm,0.8s						
G45A	Suttons Bay	66.07	349	P	P	01 45 41.7	-0.5
	baz=165						
E61A	Lac Etchemin	66.08	0	P	P	01 45 42.5	+0.2
	baz=180						
BGNE	Belgrade	66.08	338	P	P	01 45 42.6	+0.1
	baz=152,SNR=5.2						
F51A	Arnstein	66.08	353	P	P	01 45 41.9	-0.4
	baz=171,SNR=7.4						
E57A	Chemin Saint G	66.12	358	P	P	01 45 42.7	+0.1
	baz=176						
E64A	Bridgewater	66.12	2	P	P	01 45 43.1	+0.5
	baz=183						
F49A	Sandfield	66.19	351	P	P	01 45 42.1	-0.9
	baz=168,SNR=6.2						
G46A	Petoskey	66.20	349	P	P	01 45 42.4	-0.6
	baz=166						
E56A	St. Veronique	66.30	357	P	P	01 45 43.9	+0.2
	baz=176,SNR=7.4						
E52A	Mattawa	66.31	354	P	P	01 45 43.8	0.0
	baz=172						
E53A	Dumoine, Ponti	66.31	355	P	P	01 45 44.0	+0.2
	baz=173						
E54A	Lac Daplat, Po	66.33	355	P	P	01 45 43.6	-0.2
	baz=173,SNR=5.3						
F48A	Evansville	66.33	351	P	P	01 45 43.4	-0.5
	baz=168,SNR=6.3						
X16A	Lo Mia Camp, P	66.42	324	IAmb	IAmb	01 45 51.4	
	comp=Z,12nm,1.0s						
D60A	Saint Jean D’O	66.56	360	P	P	01 45 46.1	+0.8
	baz=180						
S22A	4UR Ranch, Cre	66.61	330	P	P	01 45 46.6	+0.3
	baz=143						
E51A	G1948 Merrick	66.64	354	P	P	01 45 45.9	0.0
	baz=171,SNR=6.5						
F45A	CMU Biological	66.67	349	P	P	01 45 45.5	-0.5
	baz=165,SNR=6.8						
D57A	Chemin Vers le	66.72	358	P	P	01 45 46.9	+0.6
	baz=177,SNR=6.5						
D63A	Stockholm	66.73	2	P	P	01 45 46.9	+0.5
	baz=183						
D62A	Allapoint, All	66.75	1	P	P	01 45 47.2	+0.7
D62A				IAmb	IAmb	01 45 54.3	
	comp=Z,25nm,1.1s						
D62A	Allapoint, All	66.75	1	P	P	01 45 47.1	+0.5
	baz=182						
D58A	Chemin du LacG	66.77	359	P	P	01 45 47.3	+0.7
	baz=178,SNR=8.2						
D56A	ZEC Mazanza, M	66.79	357	P	P	01 45 46.8	0.0
	baz=176						
D55A	Sainte-Anne-du	66.79	357	P	P	01 45 46.8	0.0
	baz=175						
E48A	Lockeyer	66.91	352	P	P	01 45 47.6	0.0
	baz=168,SNR=5.5						
D54A	Lac Fusel, La	67.00	356	P	P	01 45 48.1	-0.1
	baz=174						
MVCO	Mesa Verde	67.00	328	P	P	01 45 49.8	+1.1
	baz=141,SNR=5.3						
D53A	Lac Vacive, Po	67.01	355	IAmb	IAmb	01 45 55.4	
	comp=Z,21nm,1.1s						
D53A	Lac Vacive, Po	67.01	355	P	P	01 45 48.2	0.0
	baz=173						
E47A	Iron Bridge	67.05	351	P	P	01 45 48.4	-0.1
	baz=167,SNR=5.7						
LATQ	La Tuque	67.05	359	P	P	01 45 48.9	+0.5
	baz=178						
E46A	Sault Ste Mari	67.12	350	IAmb	IAmb	01 45 52.2	
	comp=Z,15nm,1.1s						
OGNE	Ogallala	67.15	335	P	P	01 45 49.8	+0.4
	baz=148						
D51A	Lot 18 Range I	67.17	354	P	P	01 45 49.4	+0.1
	baz=171						
WUAZ	Wupatki	67.20	325	IAmb	IAmb	01 45 53.4	
	comp=Z,18nm,0.9s						
WUAZ	Wupatki	67.20	325	P	P	01 45 51.7	+1.8
	baz=139,SNR=14						
D50A	G1974 Best Tow	67.30	353	P	P	01 45 50.0	-0.1
	baz=171,SNR=9.4						
GLA	Glamis	67.37	321	P	P	01 45 52.7	+1.8
	baz=135						
D48A	Paudash Townsh	67.54	352	P	P	01 45 51.3	-0.3
	baz=169						
D46A	Sault St. Mari	67.59	350	P	P	01 45 50.9	-1.0
	baz=166						
D47A	Chapleau	67.61	351	P	P	01 45 51.5	-0.6
	baz=168						
E43A	Lone Tree Farm	67.61	348	IAmb	IAmb	01 45 52.5	
	comp=Z,9.4nm,0.8s						
ECSD	EROS Data Cent	67.63	340	IAmb	IAmb	01 45 56.5	
	comp=Z,27nm,1.2s						
ECSD	EROS Data Cent	67.63	340	P	P	01 45 52.5	+0.3
	baz=154,SNR=13						
E44A	Grand Marais A	67.65	349	P	P	01 45 51.8	-0.4
	baz=165						
Y12C	Blythe	67.69	322	P	P	01 45 54.7	+1.9
	baz=136						
ISCO	Idaho Springs	67.71	332	P	P	01 45 54.3	+1.1
	baz=145,SNR=8.8						
SMCO	Snowmass	67.83	330	IAmb	IAmb	01 46 00.9	
	comp=Z,50nm,1.9s						
PDMCI	Parker Dam,Lak	67.86	322	P	P	01 45 55.7	+1.9
	baz=136						
IKP	In-Ko-Pah, Jac	67.86	320	P	P	01 45 56.6	+2.6
	baz=134,SNR=5.4						
SPMN	Marine on St.	67.87	343	IAmb	IAmb	01 45 54.5	
	comp=Z,14nm,0.9s						
SPMN	Marine on St.	67.87	343	P	P	01 45 53.7	0.0
	baz=158						
SWSC	Sam W. Stewart	67.88	320	P	P	01 45 56.3	+2.2
	baz=134						
PV15	Paradox Valley	67.88	329	IAmb	IAmb	01 45 57.5	
	comp=Z,20nm,1.0s						
VLDQ	Val d'Or	68.02	355	IAmb	IAmb	01 45 59.1	
	comp=Z,27nm,1.4s						
PV16	Nyswonger Mesa	68.07	329	IAmb	IAmb	01 46 04.5	
	comp=Z,19nm,1.5s						
BC3	Big Chuckawall	68.17	321	P	P	01 45 58.1	+2.1
	baz=135,SNR=9.1						
MONP2	Monument Peak	68.22	320	P	P	01 45 59.1	+2.6
	baz=134,SNR=6.1						
BAR	Barrett	68.22	319	P	P	01 45 56.6	+0.4
BAR				IAmb	IAmb	01 45 59.4	
	comp=Z,16nm,0.9s						
IRM	Iron Mountain	68.34	321	P	P	01 45 59.6	+2.7
	baz=135,SNR=15						
U15A	North Rim	68.38	325	IAmb	IAmb	01 46 01.2	
	comp=Z,14nm,0.8s						
D41A	Chassel	68.59	347	IAmb	IAmb	01 46 05.7	
	comp=Z,22nm,0.9s						
109C	Camp Elliot, M	68.63	319	P	P	01 46 00.6	+1.9
	baz=133						
BELC	Belle Mtn. Jos	68.73	321	P	P	01 46 01.3	+1.7
	baz=134						
XPFO	Pion Flat	68.73	320	P	P	01 46 00.2	+0.7
PFO	Pinyon Flats O	68.74	320	P	P	01 46 02.1	+2.5
	comp=Z,6.7nm,0.7s,baz=135,slow=4.9,SNR=14						
PFO				LR	LR	02 11 45.6	
	comp=Z,122nm,21.8s,baz=141,slow=32						
PFO	Pinyon Flats O	68.74	320	*i* P	P	01 46 01.5	+1.9
PFO				pmax	pmax		
	comp=Z,13nm,0.9s						
PFO	Pinyon Flats O	68.74	320	P	P	01 46 02.0	+2.4
	baz=134,SNR=6.6						
N23A	Red Feather La	68.75	332	IAmb	IAmb	01 46 05.1	
	comp=Z,18nm,1.2s						
N23A	Red Feather La	68.75	332	P	P	01 46 01.0	+1.4
	baz=145,SNR=7.5						
E38A	The Farm, Brul	68.84	345	IAmb	IAmb	01 46 07.0	
	comp=Z,19nm,1.5s						
LSQQ	Lebel-sur-Quev	68.92	356	P	P	01 46 00.3	+0.1
	baz=174						
NVL	N'lazarevskaya	68.92	159	*e*P	P	01 46 00.4	+0.4
NVL				*e*S	S	01 55 09.0	+4.5
NVL				pmax	pmax		
	comp=Z,33nm,1.1s						
GMRC	Granite Mounta	69.08	322	P	P	01 46 04.1	+2.4
	baz=135,SNR=14						
MURC	Murrieta	69.17	320	P	P	01 46 04.0	+1.8
	baz=133						
O20A	White River Ci	69.18	330	P	P	01 46 04.2	+1.9
	baz=142,SNR=5.3						
HEC	Hector,Ludlow	69.51	321	P	P	01 46 06.9	+2.6
	baz=134,SNR=13						
MATQ	Matagami	69.67	355	P	P	01 46 04.6	-0.2
	baz=173						
TUQ	Turquoise Moun	69.69	322	P	P	01 46 07.8	+2.3
	baz=135,SNR=10.0						
LIC	Lamto	69.78	75	*e*P	P	01 46 04.6	-1.7
	comp=Z,16nm,0.9s						
BFSC	Mount Baldy Ra	69.89	320	P	P	01 46 08.9	+2.1
	baz=133						
DRLN	Deer Lake	69.93	9	P	P	01 46 06.3	-0.2
TIC	Toumodi	69.95	75	*e*P	P	01 46 05.8	-1.6
	comp=Z,4.3nm,0.3s						
EYMN	Ely	70.08	345	P	P	01 46 07.5	+0.1
	baz=159						
KIC	Kosan Boka	70.09	75	*e*P	P	01 46 06.6	-1.6
	comp=Z,58nm,1.1s						
DBIC	Dimbokro	70.11	75	P	P	01 46 07.2	-1.2
	comp=Z,18nm,0.8s,baz=227,slow=4.9,SNR=14						
DBIC				LR	LR	02 14 05.6	
	comp=Z,175nm,21.6s,baz=238,slow=34						
DBIC	Dimbokro	70.11	75	P	P	01 46 07.5	-0.8
DBIC				pmax	pmax		
	comp=Z,24nm,0.9s						
DBIC	Dimbokro	70.11	75	P	P	01 46 07.5	-0.8
DBIC				IAmb	IAmb	01 46 08.1	
	comp=Z,24nm,0.9s						
GSC	Goldstone, Bar	70.11	321	P	P	01 46 10.0	+2.0
	baz=134,SNR=7.7						
MWC	Mount Wilson	70.12	320	P	P	01 46 09.6	+1.4
MWC				pmax	pmax		
	comp=Z,24nm,1.2s						
MWC	Mount Wilson	70.12	320	P	P	01 46 09.6	+1.4
MWC				IAmb	IAmb	01 46 14.7	
	comp=Z,24nm,1.1s						
QSPA	South Pole Qui	70.22	180	P	P	01 46 10.4	+2.1
	comp=Z,22nm,1.1s,baz=147,slow=1.9,SNR=25						
QSPA	South Pole Qui	70.22	180	P	P	01 46 09.3	+1.0
QSPA				IAmb	IAmb	01 46 11.6	
	comp=Z,36nm,1.2s						
SHOC	Shoshone, Teco	70.22	322	P	P	01 46 11.4	+2.8
	baz=135						
DECC	Green Verdugo	70.31	320	P	P	01 46 11.3	+2.1
	baz=133						
K22A	Casper	70.43	333	IAmb	IAmb	01 46 12.3	
	comp=Z,11nm,0.8s						
K22A	Casper	70.43	333	P	P	01 46 11.2	+1.3
	baz=144,SNR=6.6						
EDW2	Edwards Air Fo	70.53	320	P	P	01 46 12.7	+2.1
	baz=133,SNR=7.4						
RSSD	Black Hills	70.62	335	P	P	01 46 11.5	+0.4
RSSD				pmax	pmax		
	comp=Z,14nm,0.8s						
RSSD	Black Hills	70.62	335	P	P	01 46 11.4	+0.4
RSSD				IAmb	IAmb	01 46 13.3	
	comp=Z,14nm,0.8s						
RSSD	Black Hills	70.62	335	P	P	01 46 12.5	+1.4
	baz=147						
SCZ2	Santa Cruz Isl	70.94	319	P	P	01 46 13.5	+0.5
	baz=132						
TPNV	Topopah Spring	70.94	323	IAmb	IAmb	01 46 24.2	
	comp=Z,16nm,0.8s						
TPNV	Topopah Spring	70.94	323	P	P	01 46 15.8	+2.6
	baz=135,SNR=15						
FURC	Furnace Creek,	70.96	322	P	P	01 46 15.5	+2.5
	baz=134,SNR=8.6						
MPMC	Manual Prospec	71.04	322	P	P	01 46 15.9	+2.1
	baz=134,SNR=10						
ISA	Isabella, Lake	71.35	321	IAmb	IAmb	01 46 19.2	
	comp=Z,15nm,0.8s						
ISA	Isabella, Lake	71.35	321	P	P	01 46 17.9	+2.3
	baz=133,SNR=13						
DUG	Dugway, Tooele	71.46	327	IAmb	IAmb	01 46 25.9	
	comp=Z,18nm,0.9s						
DUG	Dugway, Tooele	71.46	327	P	P	01 46 18.6	+2.4
	baz=138,SNR=13						
AGMN	Agassiz Nation	71.53	343	P	P	01 46 16.4	+0.2
	baz=155						
R11A	Troy Canyon, C	71.57	324	P	P	01 46 19.8	+2.9
	baz=136,SNR=14						
GRAC	Grapevine Rang	71.61	322	P	P	01 46 19.4	+2.3
	baz=134						
PKM	Mcpherson Peak	71.64	319	P	P	01 46 19.5	+2.0
	baz=132,SNR=6.2						
CWC	Cottonwood Cre	71.65	321	P	P	01 46 19.2	+1.8
	baz=133						
VES	Vestal, Richgr	71.83	320	P	P	01 46 20.2	+1.9
	baz=132,SNR=7.4						
BW06	Boulder Array	71.86	331	P	P	01 46 19.9	+1.3
	baz=142						
PDAR	Pinedale Array	71.86	331	P	P	01 46 19.6	+1.0
	comp=Z,2.2nm,0.8s,baz=140,slow=6.8,SNR=16						
PDAR				LR	LR	02 19 44.2	
	comp=Z,148nm,18.1s,baz=132,slow=37						
PDAR	Pinedale Array	71.86	331	P	P	01 46 19.4	+0.8
PDAR				PP	PP	01 48 52.2	-6.3
SMMC	Simmler	72.03	319	P	P	01 46 21.9	+2.3
	baz=132						
TIN	Tinemaha, Big	72.16	322	P	P	01 46 22.8	+2.4
	baz=133						
TBI	Tubuai	72.23	251	*e*S	S	01 55 45.5	+0.9
	comp=Z,175nm,29.8s						
TBI	Tubuai	72.23	251	*e*LR	LR	02 08 34.6	
	comp=Z,432nm,28.8s						
MDND	Maddock	72.25	340	P	P	01 46 21.9	+1.4
	baz=152						
AHID	Auburn Hatcher	72.57	330	IAmb	IAmb	01 46 25.3	
	comp=Z,14nm,0.8s						
REDW	Red Top Meadow	72.92	331	IAmb	IAmb	01 46 32.3	
	comp=Z,24nm,1.4s						
OMMB	Old Mammoth Mi	72.98	322	IAmb	IAmb	01 46 29.0	
	comp=Z,15nm,0.9s						
TPAW	Teton Pass	73.06	331	IAmb	IAmb	01 46 31.3	
	comp=Z,22nm,1.4s						
ELK	Elko	73.11	326	P	P	01 46 28.0	+1.8
	comp=Z,3.9nm,0.9s,baz=130,slow=2.5,SNR=17						
ELK				LR	LR	02 17 49.3	
	comp=Z,230nm,18.1s,baz=141,slow=35						
NVAR	Mina Array Bea	73.14	323	P	P	01 46 28.6	+2.2
	comp=Z,5.9nm,0.8s,baz=156,slow=6.6,SNR=38						
NVAR				LR	LR	02 15 51.5	
	comp=Z,110nm,18.2s,baz=184,slow=34						
NVAR	Mina Array Bea	73.14	323	P	P	01 46 28.2	+1.8
ULM	Lac du Bonnet	73.31	344	P	P	01 46 26.7	0.0
	comp=Z,8.2nm,0.9s,baz=152,slow=5.5,SNR=17						
ULM	Lac du Bonnet	73.31	344	*i* P	P	01 46 26.6	-0.2
ULM	Lac du Bonnet	73.31	344	IAmb	IAmb	01 46 30.6	
	comp=Z,20nm,1.2s						
IMW	Indian Meadow	73.37	331	IAmb	IAmb	01 46 34.2	
	comp=Z,25nm,1.4s						
FLWY	Flagg Ranch	73.41	331	IAmb	IAmb	01 46 37.4	
	comp=Z,28nm,0.9s						
BBNM	San Benito	73.48	320		S	01 55 59.8	+1.5
BBGB	Big Mountain B	73.50	320		S	01 55 59.5	+0.8
BAVM	Antelope Valle	73.54	320		S	01 55 58.7	-0.3
RLMT	Red Lodge	73.59	333	P	P	01 46 30.6	+1.8
	baz=142						
H17A	Grant Village	73.60	332	P	P	01 46 30.7	+1.7
H17A				PKiKP	PKiKP	01 52 20.8	-5.0
LAO	LASA Array	73.61	335	IAmb	IAmb	01 46 34.1	
	comp=Z,35nm,1.2s						
LAO	LASA Array	73.61	335	P	P	01 46 30.2	+1.4
	baz=145,SNR=8.8						
BEHM	Elkhorn Ranch	73.64	320		S	01 55 56.9	-3.2
LKWY	Lake	73.65	332	P	P	01 46 29.2	-0.1
LKWY				pmax	pmax		
	comp=Z,16nm,0.9s						
LKWY	Lake	73.65	332	P	P	01 46 29.2	-0.1
LKWY				IAmb	IAmb	01 46 33.2	
	comp=Z,16nm,0.9s						
BHRM	Hodges Ranch	73.74	320		S	01 55 55.2	-5.9
PPT2	Papeete2	73.85	257	*e*LR	LR	02 09 14.2	
	comp=Z,321nm,25.5s						
YNR	Norris Junctio	73.89	332	P	P	01 46 30.8	+0.1
HSPM	Sheep	74.14	320		S	01 55 59.5	-6.4
JLAB	Laurel Hill	74.30	320		S	01 56 01.5	-6.0
DGMT	Dagmar	74.34	338	IAmb	IAmb	01 46 38.5	
	comp=Z,34nm,1.1s						
DGMT	Dagmar	74.34	338	P	P	01 46 34.2	+1.3
	baz=148,SNR=8.6						
SCHQ	Schefferville	74.57	2	P	P	01 46 34.4	+0.3
	comp=Z,5.5nm,0.8s,baz=204,slow=3.5,SNR=8.6						
SCHQ				LR	LR	02 22 12.4	
	comp=Z,46nm,18.1s,baz=346,slow=38						
PAHR	Pah Rah Range	74.63	323	IAmb	IAmb	01 46 38.7	
	comp=Z,17nm,0.8s						
MFID	Camas Ranch	75.35	328	IAmb	IAmb	01 46 46.1	
	comp=Z,39nm,1.4s						
ORV	Oroville	75.74	322	IAmb	IAmb	01 46 48.4	
	comp=Z,51nm,1.4s						
EGMT	Eagleton	76.10	334	IAmb	IAmb	01 46 48.4	
	comp=Z,30nm,1.1s						
EGMT	Eagleton	76.10	334	P	P	01 46 44.3	+1.1
	baz=142,SNR=12						
O03E	Paynes Creek	76.40	322	P	P	01 46 46.2	+1.2
	baz=131						
O02D	Mt. Diablo Mer	76.89	322	P	P	01 46 49.0	+1.1
	baz=131						
MSO	Missoula	76.98	331	IAmb	IAmb	01 46 55.2	
	comp=Z,20nm,1.2s						
MSO	Missoula	76.98	331	P	P	01 46 50.5	+2.3
	baz=139						
N02D	Trinity Center	77.36	322	P	P	01 46 51.6	+1.2
	baz=131						
M04C	Macdoel	77.41	323	P	P	01 46 51.6	+0.9
	baz=132						
M02C	Callahan	77.72	323	P	P	01 46 53.8	+1.4
	baz=131						
VNDA	Vanda	78.03	190	P	P	01 46 56.1	+2.5
	comp=Z,3.6nm,1.0s,baz=145,slow=6.3,SNR=7.6						
VNDA	Vanda	78.03	190	P	P	01 46 55.0	+1.4
VNDA				pmax	pmax		
	comp=Z,37nm,2.0s						
VNDA	Vanda	78.03	190	P	P	01 46 55.0	+1.4
VNDA				IAmb	IAmb	01 47 05.8	
	comp=Z,37nm,2.0s						
SYO	Syowa Base	78.58	160	⇊ *i*P	P	01 46 54.0	-2.7
SYO	Syowa Base	78.58	160	⇈ *i*pP	P	01 46 56.6	-0.1
TORD	Torodi Ar. Bea	78.62	71	P	P	01 46 56.8	-1.1
	comp=Z,36nm,0.8s,baz=254,slow=5.1,SNR=138						
TORD				LR	LR	02 22 33.5	
	comp=Z,229nm,18.0s,baz=260,slow=36						
L02E	Cave Junction	78.64	323	P	P	01 46 59.5	+2.0
	baz=130						

WALA	Waterton Lakes	78.65	333	IAmb	IAmb	01 47 06.5	
	comp=Z,18nm,0.9s						
FFC	Flin Flon	79.00	342	eP	P	01 46 59.6	+0.5
K02D	Willamette Mer	79.03	323	P	P	01 47 01.7	+2.1
	baz=130						
HAWA	Hanford	79.32	328	P	P	01 47 03.1	+2.1
NEW	Newport	79.49	331	LR	LR	02 24 06.6	
	comp=Z,138nm,18.7s,baz=122,slow=37						
C09A	Chrisman Ranch	79.70	330	IAmb	IAmb	01 47 10.5	
	comp=Z,45nm,1.6s						
B08A	Colville Reser	80.59	330	IAmb	IAmb	01 47 16.8	
	comp=Z,52nm,1.9s						
MORF	Marmelete	81.70	45	eP	P	01 47 14.4	+0.2
MORF				AMb	AMB	01 47 17.0	
	comp=Z,35nm,1.1s						
MORF	Marmelete	81.70	45	eP	P	01 47 14.3	+0.2
B05A	Bryant	81.87	328	P	P	01 47 15.5	+0.9
	baz=132						
PNCL	Nicolau / Gran	82.21	45	eP	P	01 47 17.4	+0.7
	comp=Z,20nm,1.6s						
MESJ	Messejana	82.27	45	eP	P	01 47 17.4	+0.3
MESJ	Messejana	82.27	45	eP	P	01 47 17.3	+0.3
MESJ	Messejana	82.27	45	eP	P	01 47 17.8	+0.8
TSUM	Tsumeb	82.27	108	P	P	01 47 17.4	-0.3
TSUM				IAmb	IAmb	01 47 19.5	
	comp=Z,16nm,0.9s						
PCVE	Castro Verde	82.28	45	eP	P	01 47 18.1	+1.0
PBEJ	Beja	82.61	45	eP	P	01 47 19.6	+0.8
	comp=Z,18nm,1.5s						
PMTG	Montargil	82.93	44	eP	P	01 47 19.5	-0.9
	comp=Z,30nm,1.6s						
PTOM	Tomar	83.11	44	eP	P	01 47 22.2	+0.9
	comp=Z,33nm,1.8s						
PCAS	Casmilo, Conde	83.28	43	eP	P	01 47 22.6	+0.3
	comp=Z,22nm,1.3s						
PCBR	Castelo Branco	83.83	44	eP	P	01 47 25.7	+0.6
	comp=Z,16nm,1.4s						
PVIS	Viseu	84.03	43	eP	P	01 47 27.1	+0.9
	comp=Z,30nm,1.6s						
MTE	Manteigas	84.09	43	P	P	01 47 25.9	-0.5
MTE				IAmb	IAmb	01 47 27.6	
	comp=Z,18nm,1.1s						
MTE	Manteigas	84.09	43	eP	P	01 47 26.9	+0.4
	comp=Z,25nm,1.3s						
PCAB	Cabril	84.48	42	eP	P	01 47 29.0	+0.6
	comp=Z,33nm,1.8s						
MVO	Moncorvo	84.83	43	eP	P	01 47 30.3	+0.1
	comp=Z,42nm,1.6s						
PBRG	Braganca	85.35	42	eP	P	01 47 33.0	+0.2
	comp=Z,29nm,1.5s						
PAB	San Pablo	85.75	45	P	P	01 47 34.5	-0.3
PAB				pmax	pmax		
	comp=Z,18nm,1.1s						
PAB	San Pablo	85.75	45	P	P	01 47 34.5	-0.3
PAB				IAmb	IAmb	01 47 36.1	
	comp=Z,18nm,1.1s						
TAM	Tamanrasset	85.81	64	IAmb	IAmb	01 47 37.4	
	comp=Z,33nm,1.2s						
BOSA	Boshof	85.82	119	P	P	01 47 36.6	+1.0
	comp=Z,7.6nm,1.0s,baz=271,slow=4.5,SNR=7.4						
BOSA				LR	LR	02 22 14.6	
	comp=Z,191nm,21.0s,baz=231,slow=33						
BOSA	Boshof	85.82	119	P	P	01 47 35.1	-0.5
BOSA				pmax	pmax		
	comp=Z,13nm,1.2s						
BOSA	Boshof	85.82	119	P	P	01 47 35.1	-0.5
ESDC	Sonseca Array	86.07	45	P	P	01 47 36.7	+0.3
	comp=Z,4.9nm,1.0s,baz=245,slow=5.3,SNR=14						
MAW	Mawson	86.32	164	P	P	01 47 38.6	+1.4
	comp=Z,14nm,1.0s,baz=220,slow=6.6,SNR=5.7						
LBTB	Lobatse	87.36	116	P	P	01 47 42.9	-0.4
LBTB				pmax	pmax		
	comp=Z,12nm,1.3s						
LBTB	Lobatse	87.36	116	P	P	01 47 42.9	-0.4
YKA	Yellowknife Ar	89.13	341	P	P	01 47 50.7	+0.2
	comp=Z,11nm,1.1s,baz=139,slow=4.8,SNR=52						
YKA				LR	LR	02 30 34.2	
	comp=Z,111nm,20.6s,baz=0.0,slow=38						
URZ	Urewera	93.90	227	LR	LR	02 21 57.4	
	comp=Z,115nm,18.7s,baz=156,slow=30						
SUMG	Summit	94.85	9	i P	P	01 48 18.0	+0.7
	comp=Z,14nm,0.9s						
SUMG				i		01 48 38.2	
SUMG	Summit	94.85	9	i P	P	01 48 18.0	+0.7
SUMG				pmax	pmax		
	comp=Z,14nm,0.9s						
ILAR	Eielson Array	102.06	335	PP	PP	01 52 59.1	-2.1
	comp=Z,0.5nm,0.8s,baz=125,slow=7.0,SNR=4.5						
VYHS	Vyhne	104.51	43	eP	Pdif	01 49 01.2	+0.5
VYHS	Vyhne	104.51	43	ePDIFF	Pdif	01 49 01.2	+0.5
VSU	Vasula	110.76	34	i PKIKP	PKiKP	01 53 29.0	+1.0
BR131	Keskin Array S	113.47	54	i PKIKP	PKiKP	01 53 32.5	-1.5
OBN	Obninsk	116.11	38	⇓iPKIKP	PKiKP	01 53 38.9	+0.6
OBN				e		01 54 47.3	
OBN				ePPP	PPP	01 57 12.2	
OBN				pmax	pmax		
	comp=Z,15nm,0.9s						
KLMR	Klimovskoe	117.17	31	ePKIKP	PKPdf	01 53 37.9	-2.3
KLMR				pmax	pmax		
	comp=Z,46nm,2.4s						
KLMR	Klimovskoe	117.17	31	ePKPdf	PKPdf	01 53 38.0	-2.3
KLMR				AMP		01 53 54.4	
	comp=Z,46nm,2.4s						
PRGR	Permogore	119.92	30	ePKIKP	PKPdf	01 53 44.9	-0.6
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KIV	Kislovodsk	120.44	50	ePKIKP	PKiKP	01 53 47.7	+0.4
KIV				pmax	pmax		
	comp=Z,18nm,1.1s						
KBZ	Khabaz	120.59	50	PKP	PKiKP	01 53 48.4	+0.9
	comp=Z,7.9nm,1.0s,baz=311,slow=2.3,SNR=7.2						
H11S2	WAKE ISLAND Hy	125.82	279	T	T	04 13 21.2	
	baz=101,slow=74,SNR=132						
H11S1	WAKE ISLAND Hy	125.83	279	T	T	04 13 21.8	
	baz=101,slow=74,SNR=127						
H11S3	WAKE ISLAND Hy	125.83	279	T	T	04 13 23.2	
	baz=101,slow=74,SNR=106						
H11N3	WAKE ISLAND Hy	125.86	280	T	T	04 12 34.7	
	SNR=48						
H11N2	WAKE ISLAND Hy	125.88	280	T	T	04 13 23.0	
	baz=101,slow=74,SNR=61						
H11N1	WAKE ISLAND Hy	125.88	280	T	T	04 12 58.8	
	baz=293,slow=74,SNR=43						
TIXI	Tiksi	127.03	352	PKP	PKiKP	01 53 59.3	-0.1
	comp=Z,1.7nm,0.5s,baz=6.9,slow=3.4,SNR=8.5						
TIXI	Tiksi	127.03	352	PKIKP	PKPdf	01 53 59.1	+0.2
TIXI	Tiksi	127.03	352		PKPdf	01 53 59.1	+0.2
ARU	Arti	127.90	33	PKP	PKiKP	01 54 02.0	+0.5
	comp=Z,1.4nm,0.6s,baz=346,slow=5.9,SNR=6.8						
ARU	Arti	127.90	33	i PKIKP	PKPdf	01 53 58.5	-2.5
ARU						02 01 08.5	
ARU	Arti	127.90	33		PKiKP	01 54 01.7	+0.1
SEY	Seymchan	127.95	337	PKP	PKiKP	01 54 02.4	+0.9
	comp=Z,7.8nm,0.8s,baz=87,slow=1.6,SNR=26						
PETK	Petropavlovsk-	130.22	324	PKP	PKiKP	01 54 07.2	+0.8
	comp=Z,4.2nm,0.9s,baz=138,slow=9.1,SNR=3.8						
ASAR	Alice Springs	130.35	210	PKP	PKPdf	01 54 06.9	+0.1
	comp=Z,3.2nm,0.9s,baz=161,slow=2.6,SNR=19						
ASAR	Alice Springs	130.35	210	PKIKP	PKPdf	01 54 06.8	0.0
ASAR	Alice Springs	130.35	210		PKPdf	01 54 06.8	0.0
ABKAR	Akbulak array	131.26	41		PKiKP	01 54 09.0	+0.4
ABKAR	Akbulak array	131.26	41		PKiKP	01 54 08.6	+0.1
GEYT	Alibeck	132.54	56	PKP	PKiKP	01 54 11.4	-0.1
	comp=Z,1.6nm,0.8s,baz=237,slow=8.1,SNR=4.8						
GEYT	Alibeck	132.54	56		PKPdf	01 54 10.6	+0.2
WRA	Warramunga Arr	133.26	213	PKP	PKPdf	01 54 13.0	+0.7
	comp=Z,2.4nm,0.9s,baz=145,slow=1.6,SNR=5.8						
WRA	Warramunga Arr	133.26	213	PKIKP	PKPdf	01 54 12.9	+0.5
WRA	Warramunga Arr	133.26	213		PKPdf	01 54 12.9	+0.5
KKAR	Karatay Array	140.32	46	PKIKP	PKPdf	01 54 23.0	-1.7
KKAR	Karatay Array	140.32	46	PKPdf	PKPdf	01 54 23.0	-1.7
KURK	Kurchatov	141.02	31	PKIKP	PKPdf	01 54 26.9	+1.2
KURK	Kurchatov	141.02	31		PKPdf	01 54 26.9	+1.2
KURBB	Kurchatov Arra	141.03	31	PKhKP	PKPpre	01 54 19.9	
	comp=Z,0.8nm,0.7s,baz=300,slow=2.9,SNR=8.1						
KURBB				PKP	PKPdf	01 54 26.7	+1.0
	comp=Z,4.2nm,1.1s,baz=303,slow=2.2,SNR=14						
ZALV	Zalesovo Beam	141.31	23	PKhKP	PKPpre	01 54 24.8	
	comp=Z,6.6nm,0.7s,baz=306,slow=5.1,SNR=22						
ZALV				PKP	PKPdf	01 54 27.4	+1.3
	comp=Z,12nm,0.9s,baz=302,slow=2.8,SNR=22						
AAK	Ala-Archa	143.17	44	PKIKP	PKPdf	01 54 29.5	-0.5
AAK	Ala-Archa	143.17	44		PKPdf	01 54 29.5	-0.5
MAKZ	Makanchi	145.26	33	PKIKP	PKPdf	01 54 33.7	+0.4
MAKZ	Makanchi	145.26	33		PKPdf	01 54 33.7	+0.4
NIL	Nilore	145.41	59	PKIKP	PKPdf	01 54 34.1	+0.1
NIL	Nilore	145.41	59		PKPdf	01 54 34.1	+0.1
MKAR	Makanchi Array	145.43	33	PKPbc	PKPab	01 54 34.0	+0.3
	comp=Z,19nm,0.8s,baz=319,slow=3.5,SNR=127						
MKAR	Makanchi Array	145.43	33	PKIKP	PKPab	01 54 34.3	+0.5
MKAR	Makanchi Array	145.43	33		PKPab	01 54 34.3	+0.5
KSH	Kashi	145.53	48	PKPbc	PKPab	01 54 35.3	+0.8
KSH				PP	PP	01 57 58.4	+3.9
KSH				PKS	PKSdf	01 58 09.5	-0.2
KSH				SKKS		02 04 47.0	
KSH				LR	LR		
	comp=Z,100nm,12.7s						
KSH				LR	LR		
	comp=Z,76nm,13.9s						
KLR	Kul'dur	145.62	333	PKPbc	PKPab	01 54 34.9	+0.5
	comp=Z,19nm,1.1s,baz=53,slow=2.8,SNR=36						
TEY	Ternei	146.19	324	⇓iPKP2	PKPab	01 54 37.4	+0.8
TEY				pmax	pmax		
	comp=N,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=Z,30nm,1.0s						
POO	Poona	146.73	86	eP	PKPdf	01 54 35.0	-1.7
SOEI	Soe	146.91	208		PKPbc	01 54 39.6	+0.6
MOY	Mondy	147.73	9	ePKP2	PKiKP	01 54 41.4	-0.9
MOY				pmax	pmax		
	comp=Z,53nm,2.2s						
TLY	Talaya	148.06	6	PKPbc	PKiKP	01 54 42.8	-0.1
	comp=Z,1.7nm,0.5s,baz=202,slow=1.8,SNR=8.5						
TLY	Talaya	148.06	6	ePKP2	PKPbc	01 54 40.5	-0.5
TLY				pmax	pmax		
	comp=Z,37nm,1.3s						
TLY	Talaya	148.06	6		PKPbc	01 54 40.5	-0.5
USA0B	Ussuriysk Arra	149.21	327	PKP2	PKiKP	01 54 45.6	+0.2
USA0B	Ussuriysk Arra	149.21	327		PKiKP	01 54 45.5	+0.2
USRK	Ussuriysk Ar.	149.21	327	PKPbc	PKiKP	01 54 45.4	0.0
	comp=Z,16nm,0.9s,baz=34,slow=1.3,SNR=35						
ZAK	Zakamensk	149.30	7	ePKP2	PKPbc	01 54 44.9	+0.5
ZAK				pmax	pmax		
	comp=Z,13nm,1.4s						
HIA	Hailar	149.54	346	PKIKP	PKPdf	01 54 37.7	-2.7
HIA						01 54 44.7	
HIA	Hailar	149.54	346	PKPdf	PKPdf	01 54 37.7	-2.7
HIA					PKPbc	01 54 44.7	-0.2
MJAR	Matsushiro Arr	149.66	309	PKPbc	PKiKP	01 54 46.7	+0.1
	comp=Z,14nm,0.9s,baz=88,slow=1.2,SNR=18						
MJAR	Matsushiro Arr	149.66	309	PKP2	PKiKP	01 54 46.6	0.0
MJAR	Matsushiro Arr	149.66	309	PKPdf	PKPdf	01 54 38.7	-2.3
MJAR					PKiKP	01 54 46.6	0.0
MAJO	Matsushiro	149.66	309	PKP2	PKPbc	01 54 46.0	+0.4
MAJO	Matsushiro	149.66	309	PKPdf	PKPdf	01 54 40.3	-0.7
MAJO					PKPbc	01 54 46.0	+0.4
MAT	Matsushiro	149.66	309	PKP	PKiKP	01 54 46.5	-0.1
NDI	New Delhi	149.75	67	eP	PKPdf	01 54 43.0	+1.7
SIJI	Sorong	149.99	229	PKPbc	PKiKP	01 54 48.8	+0.8
	comp=Z,7.6nm,0.6s,baz=88,slow=4.3,SNR=3.6						
WMQ	Urumqi	150.24	32	ePKPbc	PKPdf	01 54 42.1	+0.4
WMQ				pPKP	PKiKP	01 54 48.1	+0.4
WMQ				LR	LR		
	comp=Z,130nm,28.5s						
HYB	Hyderabad	150.97	90	i PKP	PKPdf	01 54 44.0	+0.4
SONM	Songino Array	152.11	4	PKP	PKPdf	01 54 46.0	+1.5
	comp=Z,2.3nm,1.0s,baz=264,slow=0.6,SNR=13						
SONM				PKPbc	PKiKP	01 54 51.9	+0.5
	comp=Z,11nm,0.8s,baz=324,slow=1.3,SNR=46						
SONM	Songino Array	152.11	4	PKIKP	PKiKP	01 54 52.2	+0.7
SONM	Songino Array	152.11	4		PKPdf	01 54 45.5	+1.0
SONM					PKiKP	01 54 52.2	+0.7
ULN	Ulaanbaatar	152.12	3	PKIKP	PKPdf	01 54 43.2	-1.4
ULN						01 54 52.0	
ULN	Ulaanbaatar	152.12	3	PKPdf	PKPdf	01 54 43.2	-1.4
ULN					PKiKP	01 54 52.0	+0.5
KAPI	Kappang	153.06	204	PKPbc	PKiKP	01 54 55.8	+1.5
	comp=Z,3.3nm,0.4s,baz=282,slow=8.0,SNR=3.5						
KAPI				PKPab	pPKPab	01 55 07.9	+1.1
	comp=Z,18nm,1.0s,baz=166,slow=3.5,SNR=9.8						
KSRS	Korea Array	156.07	321	PKP	PKPdf	01 54 51.7	+1.5
	comp=Z,1.3nm,0.4s,baz=350,slow=1.6,SNR=8.2						
KSAR	Wonju Array Be	156.10	321	PKP2	PKPab	01 55 17.5	-0.2
KSAR						02 54 48.7	
KSAR	Wonju Array Be	156.10	321		PKPdf	01 54 48.7	-1.6
KSAR				PKPab	PKPab	01 55 17.4	-0.2
GTA	Gaotai	159.03	20	ePKP	PKPdf	01 54 55.1	+1.0
GTA				PKPab	sPKPab	01 55 33.3	+0.8
GTA				LR	LR		
	comp=Z,130nm,18.7s						
GTA				LR	LR		
	comp=Z,160nm,18.4s						
GTA				LR	LR		
	comp=Z,210nm,16.8s						
HHC	Hu-ho-hao-te	159.07	355	ePKP	PKPdf	01 54 54.8	+0.7
BJI	Beijing	159.09	345	ePKP	PKPdf	01 54 54.9	+1.0
TIA	Tai'an	162.34	338	PKP	PKPdf	01 54 59.3	+1.7
LZH	Lanzhou	163.29	15	ePKP	PKPdf	01 54 52.1	-6.7
LZH				pPKP	sPKPdf	01 55 03.4	+2.5
LZH				sPKP		01 55 07.1	
XAN	Xi'an	165.98	1	PKP	PKPdf	01 55 02.4	+1.4
XAN				pPKP	sPKPdf	01 55 06.3	+3.1
XAN				LR	LR		
	comp=Z,140nm,17.4s						
XAN				LR	LR		
	comp=Z,91nm,16.3s						
CD2	Chengdu	168.08	23	PKP	PKPdf	01 55 01.5	-1.2
WHN	Wuhan	168.44	337	PKP	PKPdf	01 55 04.8	+2.0
CMAR	Chiang Mai Arr	170.29	97	PKP	PKPdf	01 55 05.3	+0.9
	comp=Z,0.7nm,0.3s,baz=283,slow=1.8,SNR=5.9						
CMAR				PKPab	PKPab	01 56 20.9	+0.3
	comp=Z,0.8nm,0.3s,baz=250,slow=6.6,SNR=5.6						
CMAR	Chiang Mai Arr	170.29	97	PKP2	PKPab	01 56 20.3	-0.3
CMAR						02 55 03.4	
CMAR	Chiang Mai Arr	170.29	97		PKPdf	01 55 03.4	-1.0
CMAR					PKPab	01 56 20.3	-0.3
GYA	Guiyang	173.16	19	ePKP	PKPdf	01 55 04.8	-0.8
GYA				PKPab	PKPab	01 56 34.0	+1.1
GYA				PKS	PKSdf	01 58 35.3	-2.8
GYA				PP	PP	02 00 26.6	+3.2
GYA				AMB	AMB		
	comp=Z,120nm,9.2s						

INET ***17*** *01:45:51.1, 12°.52N×87°.77W, h59^{km}, ML3.8*

SNET ***17*** *01:45:51.9±0.9, 12°.57N×87°.91W, h33^{km}±31^{km}, ML3.7*

UCR ***17*** *01:45:52.0±1.2, 12°.57N×87°.90W, h34^{km}±43^{km}, ML3.7*

ISC 17 01:45:51.0±4.4**, 12°.5N**±0°.2×**87°.89W**±0°.08**, h29**^{km}±17^{km}**,**
n22, σ0^{s}.58/37**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	Conchagua	0.75	4	eP	Pn	01 46 05.7	-0.1
CNCH				eS	Sn	01 46 17.4	+1.2
CNCH				IAML		01 46 20.0	
	comp=Z,6μm,0.3s						
CNCH	Conchagua	0.75	4	eP	Pn	01 46 05.7	-0.1
CNCH				eS	Sn	01 46 17.4	+1.2
CNCH				IAML		01 46 20.0	
	comp=Z,6μm,0.3s						
LCND	La Caada	0.78	360	eP	Pn	01 46 06.0	0.0
LCND				eS	Sb	01 46 16.9	+0.5
LCND				IAML		01 46 19.8	
	comp=Z,2μm,0.5s						
LCND	La Caada	0.78	360	eP	Pn	01 46 06.0	0.0
LCND				eS	Sb	01 46 16.9	+0.5
LCND				IAML		01 46 19.8	
	comp=Z,2μm,0.5s						
JUCU	Jucuar¡n	0.81	334	eP	Pn	01 46 06.3	-0.2
JUCU				eS	Sb	01 46 17.4	+0.2
JUCU	Jucuar¡n	0.81	334	eP	Pn	01 46 06.3	-0.2
JUCU				eS	Sb	01 46 17.4	+0.2
BLLM	Bellamira	0.98	339	eP	Pn	01 46 08.7	-0.1
BLLM	Bellamira	0.98	339	eP	Pn	01 46 08.7	-0.1
PACA	Pacayal	1.03	336	eP	Pn	01 46 09.8	+0.1
PACA				eS	Sb	01 46 23.9	+0.3
PACA	Pacayal	1.03	336	eP	Pn	01 46 09.8	+0.1
PACA				eS	Sb	01 46 23.9	+0.3
TECA	Tecapa	1.14	328	eP	Pn	01 46 11.4	+0.2
TECA	Tecapa	1.14	328	eP	Pn	01 46 11.4	+0.2
COEB	Comit de Eme	1.16	327	eP	Pn	01 46 11.2	-0.1
COEB				eS	Sb	01 46 26.6	-0.5
COEB	Comit de Eme	1.16	327	eP	Pn	01 46 11.2	-0.1
COEB				eS	Sb	01 46 26.6	-0.5
FAGO	Alcalda de S	1.18	350	eP	Pn	01 46 11.2	-0.4
FAGO				eS	Sn	01 46 25.9	-0.9
FAGO	Alcalda de S	1.18	350	eP	Pn	01 46 11.2	-0.4
FAGO				eS	Sn	01 46 25.9	-0.9
LFRS	El Faro	1.58	314	eP	Pn	01 46 17.4	+0.2
LFRS				eS	Sb	01 46 37.6	-1.8
TGUH	Tegucigalpa,Un	1.64	21	eP	Pn	01 46 17.4	-0.5
TGUH	Tegucigalpa,Un	1.64	21	eP	Pn	01 46 17.4	-0.5
LOMA	Loma Larga	1.68	312	eP	Pn	01 46 18.8	+0.3
LOMA				eS	Sn	01 46 39.4	+0.2
LOMA				IAML		01 46 44.0	
	comp=Z,713nm,0.3s						
LOMA	Loma Larga	1.68	312	eP	Pn	01 46 18.8	+0.3
LOMA				eS	Sn	01 46 39.4	+0.2
LOMA				IAML		01 46 44.0	
	comp=Z,713nm,0.3s						
BOQS	Boqueron	1.81	312	eP	Pn	01 46 21.4	+0.9

SJA ***17*** *01:55:22.0±0.8, 20°.06S×70°.82W, h25^{km}±4^{km}, ML3.9, MW4.1*

GUC ***17*** *01:55:22.1±0.7, 20°.06S×70°.97W, h17^{km}±3^{km}, ML4.1*

NEIC ***17*** *01:55:23.5±2.5, 20°.09S±0°.05×70°.77W±0°.06, h17^{km}±2^{km}, mb4.5/12, ML4.1(GUC), Error ellipse: s-maj=8.3km s-min=6.8km az=110.0*

IDC ***17*** *01:55:24.6±1.0, 20°.03S×70°.74W, h20^{km}±4^{km}, mb3.7/6, mb1 4.1/8, mb1mx3.9/31, mbtmp3.9/8, ML4.0/2, MS3.0/2, Ms1 3.0/2, ms1mx2.8/32, Error ellipse: s-maj=33.0km s-min=20.8km az=41.0*

ISC 17 01:55:22.9±0.7**, 20°.16S**±0°.02×**70°.80W**±0°.04**, h18**^{km}±2^{km}**,**
n73, σ1^{s}.29/90**, mb4.2**/10**, 5C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA01	Diego Aracena	0.71	125	⇑iP	Pn	01 55 37.9	-0.2
TA01				eS	Sn	01 55 50.3	+1.8
TA01				IAML		01 55 52.8	
	comp=E,11μm,0.3s						
PSGC	Pisagua	0.85	49	eP	Pb	01 55 37.8	-1.3
PSGC				eS	Sg	01 55 51.0	+0.3
PSGC				IAML		01 55 53.5	
	comp=N,5μm,0.3s						
PATCX	Punta Patache	0.90	137	⇑iP	Pn	01 55 41.0	+0.3
PATCX				eS	Sn	01 55 55.4	+2.1
PATCX	Punta Patache	0.90	137	i P	Pn	01 55 41.1	+0.3
PATCX				IAML		01 55 58.6	
	comp=Z,2μm,0.8s						
PB11	IPOC Station P	1.15	70	eP	Pn	01 55 43.4	-0.7
PB11				eS	Sg	01 56 01.5	+1.3
PB11				IAML		01 56 03.4	
	comp=N,5μm,0.3s						
PB11	IPOC Station P	1.15	70		Pn	01 55 43.5	-0.7
PB11					Sb	01 55 55.9	-3.0
PB11	IPOC Station P	1.15	70	i P	Pn	01 55 43.6	-0.7
PB11				IAML		01 56 03.0	
	comp=Z,3μm,0.8s						
PB02	IPOC Station P	1.44	144	⇑iP	Pg	01 55 49.9	-0.8
PB02				eS	Sg	01 56 10.6	+1.3
PB02				IAML		01 56 15.9	
	comp=E,6μm,0.3s						
PB02	IPOC Station P	1.44	144	i P	Pg	01 55 49.8	-0.8
PB02				IAML		01 56 14.2	
	comp=Z,3μm,0.5s						
PB01	IPOC Station P	1.52	126	⇓iP	Pg	01 55 51.4	-0.7
PB01				eS	Sg	01 56 11.8	-0.1
PB01				IAML		01 56 14.6	
	comp=E,2μm,0.6s						
PB01	IPOC Station P	1.52	126		Pg	01 55 50.8	-1.3
PB08	IPOC Station P	1.55	90	⇑iP	Pb	01 55 50.8	-0.4
PB08				eS	Sg	01 56 14.1	+1.1
PB08	IPOC Station P	1.55	90	i P	Pb	01 55 51.0	-0.3
PB08				i S	Sg	01 56 12.0	-1.0
PB08				IAML		01 56 16.2	
	comp=Z,2μm,0.5s						
GO01	Chusmiza	1.59	72		Pb	01 55 51.1	-0.9
PB12	IPOC Station P	1.60	16	⇑iP	Pn	01 55 49.2	-1.1
PB12				eS	Sn	01 56 09.6	-0.9
PB12				IAML		01 56 20.0	
	comp=N,3μm,0.3s						
PB12	IPOC Station P	1.60	16	i P	Pn	01 55 49.7	-0.7
PB12				i S	Sn	01 56 09.7	-0.9
PB12				IAML		01 56 14.8	
	comp=Z,1μm,0.7s						
PB07	IPOC Station P	1.78	151	eP	Pb	01 55 54.9	-0.2
PB07				eS	Sg	01 56 20.9	+0.5
PB07	IPOC Station P	1.78	151	i P	Pb	01 55 54.7	-0.4
PB07				IAML		01 56 28.8	
	comp=Z,1μm,1.0s						
AP01	Chacalluta	1.83	14	eP	Pn	01 55 52.7	-0.7
AP01				eS	Sn	01 56 15.7	-0.4
AP01				IAML		01 56 23.4	
	comp=E,7μm,0.7s						
PB03	IPOC Station P	2.12	153	i P	Pb	01 55 59.2	-1.7
PB03				IAML		01 56 44.1	
	comp=Z,673nm,0.7s						
PB16	IPOC Station P	2.19	34	i P	Pn	01 55 59.5	+0.7
PB16				i S	Sb	01 56 29.7	+0.5
PB16				IAML		01 56 31.5	
	comp=Z,2μm,0.5s						
PB09	IPOC Station P	2.19	138	eP	Pb	01 56 01.8	-0.2
PB09				eS	Sg	01 56 33.0	-0.3
PB09				IAML		01 56 42.0	
	comp=E,2μm,0.7s						
PB09	IPOC Station P	2.19	138	i P	Pb	01 56 01.9	-0.2
PB09				IAML		01 56 44.3	
	comp=Z,1μm,0.9s						
PB04	IPOC Station P	2.25	164		Pn	01 56 00.1	+0.7
PB04	IPOC Station P	2.25	164	i P	Pn	01 56 00.2	+0.9
PB05	IPOC Station P	2.74	168	i P	Pn	01 56 06.3	+0.3
PB05				IAML		01 57 06.8	
	comp=Z,256nm,0.6s						
PB06	IPOC Station P	2.78	156	i P	Pn	01 56 07.8	+1.1
PB06				IAML		01 57 05.5	
	comp=Z,324nm,0.4s						
LVC	Limon Verde	3.01	145	Pn	Pn	01 56 12.5	+2.5
	comp=Z,13nm,0.3s,baz=327,slow=9.7,SNR=67						
LVC				Sn	Sb	01 56 51.6	-1.1
	comp=Z,32nm,0.3s,baz=286,slow=21,SNR=6.4						
LVC	Limon Verde	3.01	145		Pb	01 56 13.5	-2.7
LVC				Pg	Pg	01 56 18.6	-2.1
LVC	Limon Verde	3.01	145	i P	Pb	01 56 13.5	-2.7
LVC				i S	Sg	01 56 58.9	-0.9
LVC				IAML		01 57 11.1	
	comp=Z,169nm,0.9s						
PB15	IPOC Station P	3.28	158	i P	Pn	01 56 14.8	+1.2
PB15				IAML		01 57 23.0	
	comp=Z,302nm,0.5s						
PB10	IPOC Station P	3.35	176		Pn	01 56 14.2	-0.1
PB10	IPOC Station P	3.35	176	i P	Pn	01 56 14.2	-0.1
PB10				IAML		01 57 18.2	
	comp=Z,60nm,0.6s						
PB14	IPOC Station P	4.46	175	i P	Pn	01 56 29.6	-0.3
PB14				IAML		01 58 00.5	
	comp=Z,68nm,1.0s						
LPAZ	La Paz	4.61	34	Pn	Pn	01 56 35.9	+3.6
	comp=Z,1.5nm,0.3s,baz=236,slow=5.8,SNR=24						
LPAZ				LR	LR	01 57 46.1	
	comp=Z,73nm,20.9s,baz=242,slow=32						
LPAZ	La Paz	4.61	34	Pn	Pn	01 56 32.6	+0.3
GO02	Mina Guanaco	5.11	168		Pn	01 56 40.4	+1.6
GO02				Sn	Sn	01 57 34.6	-2.8
YJA	Yavi	5.33	113	i P	Pn	01 56 48.3	+6.4
GO03	Copiap	7.42	176	Pn	Pn	01 57 11.9	+1.6
GO03				Sn	Sn	01 58 34.4	+0.3
GO04	Tololo Observa	9.97	180	Pn	Pn	01 57 48.0	+2.5
SIV	San Ignacio	10.14	67	Pn	Pn	01 57 48.6	+1.0
	comp=Z,2.3nm,0.3s,baz=270,slow=9.5,SNR=44						
SIV				LR	LR	02 02 19.9	
	comp=Z,253nm,21.7s,baz=286,slow=41						
ROC1	El Roble	12.77	181	Pn	Pn	01 58 23.8	0.0
SAML	Samuel	13.36	35		Pn	01 58 29.1	-2.5
GO05	Huala	14.83	184	Pn	P	01 58 54.9	-2.6
PLCA	Paso Flores	20.51	179	P	P	02 00 00.2	+0.1
PTGA	Pitinga	22.03	30	P	P	02 00 17.6	+1.1
	comp=Z,2.7nm,0.3s,baz=204,slow=15,SNR=10.0						
PTGA	Pitinga	22.03	30	P	P	02 00 16.1	-0.4
PTGA				IAmb	IAmb	02 00 21.5	
	comp=Z,4.1nm,0.4s						
FLOC	Florencia	22.12	347	P	P	02 00 17.9	+0.3
RUSC	La Rusia	25.98	355	P	P	02 00 55.6	+0.3
TXAR	Lajitas Array	58.53	326	P	P	02 05 18.8	+0.3
	comp=Z,0.6nm,0.8s,baz=152,slow=8.2,SNR=5.7						
MIAR	Mount Ida	58.55	338	P	P	02 05 18.2	-0.2
MIAR				IAmb	IAmb	02 05 18.8	

	comp=Z,3.5nm,0.7s						
CPNY	Central Park	60.70	357	P	P	02 05 31.8	-1.3
MNTX	Cornudas Mount	61.30	327	P	P	02 05 37.5	+0.1
M56A	Emporium	61.71	354	P	P	02 05 40.2	+0.3
WVNY	West Valley, N	62.66	354	P	P	02 05 46.7	+0.4
WVNY				IAmb	IAmb	02 05 53.8	
	comp=Z,6.4nm,0.9s						
DELO	Deloro Mine	64.66	355	P	P	02 06 00.2	+0.8
SADO	Sadowa	65.06	353	P	P	02 06 02.2	+0.2
SADO				IAmb	IAmb	02 06 08.9	
	comp=Z,6.8nm,1.1s						
SDCO	Great Sand Dun	66.20	330	P	P	02 06 08.9	-1.0
KNB	Kanab	69.31	325	P	P	02 06 32.0	+2.5
PDAR	Pinedale Array	72.08	331	P	P	02 06 47.6	+1.4
	comp=Z,0.2nm,0.6s,baz=168,slow=4.6,SNR=3.1						
NVAR	Mina Array Bea	73.35	323	P	P	02 06 55.8	+1.9
	comp=Z,0.8nm,0.8s,baz=139,slow=7.0,SNR=4.6						
ORV	Oroville	75.95	322	P	P	02 07 10.7	+2.1
ORV				IAmb	IAmb	02 07 11.5	
	comp=Z,3.9nm,1.1s						
TORD	Torodi Ar. Bea	78.59	71	P	P	02 07 23.7	-0.2
	comp=Z,0.8nm,0.6s,baz=248,slow=5.0,SNR=11						
YKA	Yellowknife Ar	89.34	341	P	P	02 08 18.2	+0.5
	comp=Z,1.2nm,0.8s,baz=138,slow=5.1,SNR=22						
YKA				pP	sP	02 08 24.4	-0.4
	comp=Z,0.5nm,0.7s,baz=136,slow=5.0,SNR=6.4						
H11S2	WAKE ISLAND Hy	125.94	279	T	T	04 33 50.6	
	baz=101,slow=75,SNR=23						
H11S1	WAKE ISLAND Hy	125.95	279	T	T	04 33 53.2	
	baz=101,slow=75,SNR=2.5						
H11S3	WAKE ISLAND Hy	125.96	279	T	T	04 33 51.7	
	baz=101,slow=75,SNR=15						
H11N3	WAKE ISLAND Hy	125.99	280	T	T	04 33 51.2	
	baz=171,slow=74,SNR=6.3						
H11N2	WAKE ISLAND Hy	126.01	280	T	T	04 33 52.3	
	baz=103,slow=74,SNR=7.4						
MKAR	Makanchi Array	145.54	33	PKPbc	PKPab	02 15 01.1	+0.8
	comp=Z,2.2nm,0.6s,baz=323,slow=3.7,SNR=10						
MKAR				pPKPbc	sPKPdf	02 15 07.4	0.0
	comp=Z,2.1nm,0.6s,baz=358,slow=2.9,SNR=8.8						
MKAR	Makanchi Array	145.54	33		PKPab	02 15 01.5	+1.1
MJAR	Matsushiro Arr	149.85	309	PKPbc	PKiKP	02 15 13.8	+0.6
	comp=Z,0.6nm,0.3s,baz=68,slow=0.7,SNR=4.3						
SONM	Songino Array	152.30	4	PKPbc	PKiKP	02 15 19.0	+0.9
	comp=Z,1.3nm,0.9s,baz=300,slow=1.7,SNR=5.4						
SONM				pPKPbc	sPKPbc	02 15 25.6	+0.4
	comp=Z,1.0nm,0.8s,baz=175,slow=3.7,SNR=4.8						

DJA 17 01:57:23.1±1.0**,4°S**±5°×**10°0E**±°**,h19**^{km}±11^{km}**,M3.9**/10**,mB5.6**/1**,mb4.1**/2**,MLv3.8**/10**,Mw(mB)5.1**/1**,Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	1.36	344	P	Pn	01 57 46.8	-0.3
PPSI				S	Sn	01 58 04.6	-0.1
KRJI	Kerinci	2.25	28	P	Pn	01 57 59.1	-0.3
KRJI				S	Sn	01 58 27.9	+1.2
MNAI	Manna	2.57	96	P	Pn	01 58 04.0	+0.2
SISI	Saibi	3.03	335	P	Pn	01 58 10.1	+0.1
SISI				S	Sn	01 58 47.2	+1.4
PDSI	Padang	3.15	1	P	Pn	01 58 11.2	-0.5
PDSI				S	Sn	01 58 47.3	-1.5
SDSI	Sungai Dareh	3.29	18	P	Pn	01 58 14.1	+0.4
SDSI				S	Sn	01 58 52.8	+0.4
LWLI	Liwa	3.77	104	P	Pn	01 58 21.3	+0.9
MDSI	Maura Dua	3.80	96	P	Pn	01 58 20.9	+0.2
MDSI				S	Sn	01 59 04.6	-0.3
KASI	Kota Agung	4.34	109	P	Pn	01 58 28.1	+0.1
KASI				S	Sn	01 59 15.1	-3.0
CISI	Cisompet, Garu	8.15	115	P	Pn	01 59 20.2	-0.4

IDC 17 02:01:23.7±1.8**,19°.71S**×**70°.35W,h0**^{km}**,mb3.5**/2**,mb1 3.7**/3**,mb1mx3.4**/48**,mbtmp3.5**/3**,ML3.5**/1**,Error ellipse: s-maj=76.9km s-min=29.0km az=67.0,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	3.18	155	Pn	Pn	02 02 15.4	+0.1
	5.0nm,0.3s,baz=335,slow=14,SNR=9.2						
LVC				Sn	Sn	02 02 54.9	+0.7
	3.6nm,0.3s,baz=209,slow=19,SNR=3.3						
TORD	Torodi Ar. Bea	78.04	71	P	P	02 13 24.8	0.0
	0.3nm,0.4s,baz=246,slow=5.2,SNR=6.7						
YKA	Yellowknife Ar	89.07	341	P	P	02 14 20.3	0.0
	0.2nm,0.8s,baz=144,slow=5.4,SNR=2.0						
H11S2	WAKE ISLAND Hy	126.30	279	T	T	04 38 55.0	
	baz=102,slow=75,SNR=5.0						
H11S1	WAKE ISLAND Hy	126.31	279	T	T	04 38 59.2	
	baz=102,slow=75,SNR=5.4						
H11S3	WAKE ISLAND Hy	126.32	279	T	T	04 38 57.8	
	baz=102,slow=75,SNR=5.5						
BVAR	Borovoye Array	135.06	33	PKP	PKPdf	02 20 44.2	-0.7
	0.2nm,0.4s,baz=279,slow=2.8,SNR=2.4						
MKAR	Makanchi Array	144.94	33	PKP	PKPdf	02 21 02.6	-0.4
	0.6nm,0.7s,baz=335,slow=3.7,SNR=4.3						

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*SJA **17** 02:05:54.9±1.0, 19°.91S×71°.20W, h73^{km}±14^{km}, ML4.3, MW4.3*
*IDC **17** 02:05:55.4±1.2, 19°.77S×70°.84W, h0^{km}, mb4.2/7, mb1 4.3/9, mb1mx3.9/49, mbtmp4.3/9, ML4.2/2, MS3.3/2, Ms1 3.3/2, ms1mx3.0/24, Error ellipse: s-maj=32.4km s-min=20.4km az=38.0*
*NEIC **17** 02:05:56.7±2.7, 19°.97S±0°.03×71°.00W±0°.07, h15^{km}±1^{km}, mb4.5/9, Mwr4.2/22, ML4.4(GUC), Error ellipse: s-maj=11.8km s-min=5.4km az=280.0*
*GUC **17** 02:05:56.9±0.8, 19°.97S×71°.08W, h39^{km}±5^{km}, ML4.4*
*NEIC **17** 02:05:58, 20°.03S×71°.01W, h15^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.68; $M_{\theta\theta}$-0.27; $M_{\phi\phi}$-1.41; $M_{r\theta}$0.77; $M_{\theta\phi}$1.02; $M_{\phi r}$-1.53; Fault plane solution: $M_0$2.54000×10^{15} NP1:ϕ_s152.50000°, δ66.46000°, λ92.80000°. NP2:ϕ_s325.51000°, δ23.70000°, λ83.60000°. Principal axes: T 2.3587, Plg68.0000°, Azm68.0000°; N 0.3241, Plg3.0000°, Azm331.0000°; P -2.6828, Plg21.0000°, Azm240.0000°;*
*VAO **17** 02:06:01.1±0.7, 20°.00S×70°.94W, h74^{km}±6^{km}, mb4.2*
ISC 17 02:05:58.2±0.9**,19°.92S**±0°.04×**71°.01W**±0°.05**,h31**^{km}±6^{km}**,n110,**σ**1^s.54**/116**,mb4.5**/7**,4C-1D,Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.90	69	*i* P	Pn	02 06 13.9	-0.8
PSGC				*i* S	Sb	02 06 27.4	+0.4
PATCX	Punta Patache	1.21	138	*i* P	Pn	02 06 19.0	0.0
PATCX				IAML		02 06 46.4	
	comp=Z,3μm,0.5s						
PB11	IPOC Station P	1.29	83⇑	*i*P	Pn	02 06 20.5	+0.3
PB11				*i* S	Sb	02 06 38.5	+0.3
PB11				IAML		02 06 40.6	
	comp=N,18μm,0.3s						
PB11	IPOC Station P	1.29	83		Pn	02 06 20.5	+0.3
PB11					Sb	02 06 38.4	+0.3
PB11	IPOC Station P	1.29	83	*i* P	Pn	02 06 20.5	+0.3
PB11				IAML		02 06 39.8	
	comp=Z,7μm,1.1s						
PB12	IPOC Station P	1.45	27	*i* P	Pn	02 06 21.9	-0.4
PB12				*i* S	Sb	02 06 43.5	+0.8
PB12				IAML		02 06 49.0	
	comp=N,4μm,0.6s						
PB12	IPOC Station P	1.45	27	*i* P	Pn	02 06 21.9	-0.4
PB12				IAML		02 06 51.0	
	comp=Z,3μm,0.6s						
GO01	Chusmiza	1.73	82		Pn	02 06 27.4	+0.8
PB02	IPOC Station P	1.74	143⇑	*i*P	Pn	02 06 26.5	+0.1
PB02				*i* S	Sn	02 06 48.4	+0.7
PB02				IAML		02 06 58.5	
	comp=E,10μm,0.4s						
PB02	IPOC Station P	1.74	143	*i* P	Pn	02 06 26.6	+0.1
PB02				*i* S	Sn	02 06 48.6	+0.9
PB02				IAML		02 07 00.6	
	comp=Z,8μm,0.4s						
PB08	IPOC Station P	1.76	98	*i* P	Pn	02 06 27.5	+0.7
PB08				*i* S	Sb	02 06 52.3	+0.3
PB08				IAML		02 06 53.7	
	comp=N,4μm,0.1s						
PB08	IPOC Station P	1.76	98	*i* P	Pn	02 06 27.6	+0.7
PB08				IAML		02 06 56.9	
	comp=Z,2μm,0.5s						
PB01	IPOC Station P	1.82	128⇑	*i*P	Pn	02 06 28.0	+0.7
PB01				*i* S	Sn	02 06 50.7	+1.3
PB01				IAML		02 07 01.5	
	comp=N,7μm,0.2s						
PB01	IPOC Station P	1.82	128		Pn	02 06 28.1	+0.7
PB01					Sn	02 06 50.6	+1.3
PB07	IPOC Station P	2.08	150	*i* P	Pn	02 06 31.1	-0.1
PB07				IAML		02 07 12.1	
	comp=Z,2μm,0.5s						
PB16	IPOC Station P	2.12	42⇑	*i*P	Pn	02 06 32.6	+0.6
PB16				*i* S	Sb	02 07 02.2	-0.3
PB16				IAML		02 07 09.3	
	comp=E,4μm,0.4s						
PB16	IPOC Station P	2.12	42	*i* P	Pn	02 06 32.7	+0.6
PB16				IAML		02 07 06.5	
	comp=Z,3μm,0.4s						
PB03	IPOC Station P	2.42	151	*i* P	Pn	02 06 35.9	0.0
PB03				IAML		02 07 23.6	
	comp=Z,1μm,1.3s						
PB09	IPOC Station P	2.50	139	*i* P	Pn	02 06 38.3	+1.4
PB09				IAML		02 07 25.8	
	comp=Z,3μm,0.6s						
PB04	IPOC Station P	2.54	162		Pn	02 06 36.7	-0.6
PB04	IPOC Station P	2.54	162	*i* P	Pn	02 06 36.8	-0.6
PB05	IPOC Station P	3.02	166	*i* P	Pn	02 06 43.0	-1.0
PB05				IAML		02 07 46.3	
	comp=Z,444nm,0.6s						
PB06	IPOC Station P	3.08	154	*i* P	Pn	02 06 44.5	-0.4
PB06				IAML		02 07 43.1	
	comp=Z,1μm,0.8s						
LVC	Limon Verde	3.32	144	Pn	Pn	02 06 49.9	+1.6
	comp=Z,16nm,0.3s,baz=15,slow=7.5,SNR=49						
LVC				Sn	Sn	02 07 29.2	+2.3
	comp=Z,41nm,0.3s,baz=142,slow=20,SNR=8.6						
LVC	Limon Verde	3.32	144		Pn	02 06 50.0	+1.6
LVC	Limon Verde	3.32	144	*e*P	Pn	02 06 48.5	+0.2
LVC	Limon Verde	3.32	144	*i* P	Pn	02 06 49.9	+1.6
LVC				*i* S	Sb	02 07 40.7	+4.0
LVC				IAML		02 07 51.0	
	comp=Z,330nm,1.1s						
PB15	IPOC Station P	3.57	157	*i* P	Pn	02 06 51.6	-0.1
PB15				IAML		02 08 00.0	
	comp=Z,837nm,0.7s						
PB10	IPOC Station P	3.60	173	Pn	Pn	02 06 50.5	-1.4
PB10	IPOC Station P	3.60	173	*i* P	Pn	02 06 50.4	-1.4
PB10				IAML		02 08 08.8	
	comp=Z,152nm,1.1s						
LPAZ	La Paz	4.53	38	Pn	Pn	02 07 08.4	+3.1
	comp=Z,5.7nm,0.3s,baz=215,slow=6.6,SNR=28						
LPAZ				LR	LR	02 09 01.2	
	comp=Z,322nm,19.4s,baz=236,slow=43						
LPAZ	La Paz	4.53	38	Pn	Pn	02 07 08.7	+3.4
LPAZ	La Paz	4.53	38	*e*P	Pn	02 07 08.6	+3.4
PB14	IPOC Station P	4.72	173⇓	*i*P	Pn	02 07 06.2	-1.4
PB14				IAML		02 08 44.1	
	comp=Z,144nm,0.8s						
GO02	Mina Guanaco	5.38	166		Pn	02 07 16.4	-0.2
YJA	Yavi	5.61	115	*i* P	Pn	02 07 26.2	+6.4
YJA				IAML		02 09 08.9	
	comp=Z,21nm,1.7s						
AZAP	Zapla	6.98	129	*i* P	Pn	02 07 47.8	+9.2
AZAP				IAML		02 09 26.2	
	comp=Z,16nm,1.3s						
GO03	Copiap	7.67	175	Pn	Pn	02 07 46.5	-1.3
LCO	Las Campanas	9.06	178	Pn	Pn	02 08 10.6	+3.6
GO04	Tololo Observa	10.21	179	Pn	Pn	02 08 22.2	-0.6
SIV	San Ignacio	10.23	69	Pn	Pn	02 08 21.9	-1.1
	comp=Z,3.0nm,0.3s,baz=256,slow=12,SNR=47						
SAML	Samuel	13.28	36		Pn	02 09 02.9	-1.7
SAML	Samuel	13.28	36	*e*P	Pn	02 09 07.2	+2.6
CPUP	Villa Florida	14.11	119	Pn	Pn	02 09 13.7	-2.2
CPUP	Villa Florida	14.11	119	*e*P	Pn	02 09 16.2	+0.3
AQDB	Aquidauana	14.39	95	*e*P	Pn	02 09 20.5	+0.7
SALV	Santo Antonio	15.12	77	*e*P	Pn	02 09 30.1	+0.5
C2SB	Chapadao do Su	17.19	89	*e*P	Pn	02 09 55.5	-0.7
CLDB	Colider	17.19	61	*e*P	Pn	02 09 54.9	-1.4
TRCB	Terra Rica	17.36	103	*e*P	Pn	02 09 57.0	-1.2
PTGB	Pitanga	18.16	109	*e*P	Pn	02 10 07.6	-0.6
PCMB	Pacaembu	18.55	99	*e*P	P	02 10 11.2	-1.2
ARAG	Araguaiana, MT	18.75	80	*e*P	P	02 10 13.9	-0.9
ITAB	Concordia	18.76	116	*e*P	P	02 10 13.3	-1.5
CPSB	Cacapava Do Su	19.00	127	*e*P	P	02 10 15.9	-1.4
ITRB	Iturama	19.43	93	*e*P	P	02 10 21.2	-1.0
PLTB	Pedras Altas	19.58	130	*e*P	P	02 10 22.6	-1.2
TRQA	Tornquist	19.70	158	*e*P	P	02 10 23.4	-1.6
FRTB	Fartura	20.23	104	*e*P	P	02 10 29.4	-1.4
OGAUY	Aigu	20.37	138	*e*P	P	02 10 30.7	-1.6
CNLB	Canela	20.55	121	*e*P	P	02 10 32.6	-1.7
PLCA	Paso Flores	20.75	179	P	P	02 10 34.2	-2.2
PLCA	Paso Flores	20.75	179	*e*P	P	02 10 34.9	-1.5
BB19B	Bebedouro	21.09	97	*e*P	P	02 10 39.0	-1.2
OTAV	Otavalo	21.32	339	*e*P	P	02 10 43.6	+0.5
IPMB	Ipameri, GO	21.65	89	*e*P	P	02 10 44.9	-1.4
FLOC	Florencia	21.85	347	*e*P	P	02 10 51.9	+3.6
FLOC	Florencia	21.85	347	P	P	02 10 49.5	+1.1
PTGA	Pitinga	21.92	31	P	P	02 10 47.7	-1.4
	comp=Z,9.8nm,0.5s,baz=206,slow=14,SNR=20						
PTGA	Pitinga	21.92	31	P	P	02 10 47.4	-1.8
PTGA				IAmb	IAmb	02 10 51.5	
	comp=Z,11nm,0.6s						
PTGA	Pitinga	21.92	31	*e*P	P	02 10 47.5	-1.6
RCLB	Rio Claro- Sao	22.03	101	*e*P	P	02 10 48.7	-1.6
BDFB	Brasilia	22.30	83	P	P	02 10 53.1	-0.3
	comp=Z,1.8nm,0.5s,baz=277,slow=9.3,SNR=6.4						
BDFB	Brasilia	22.30	83	P	P	02 10 53.4	+0.1
BDFB				IAmb	IAmb	02 11 07.3	
	comp=Z,12nm,1.1s						
VAO	Valinhos	22.58	102	*e*P	P	02 10 54.8	-1.5
SOTA	Rioblanco	22.59	345	*e*P	P	02 11 01.2	+4.4
ORTC	Ortega, Tolima	24.04	350	*e*P	P	02 11 11.0	+0.3
BSCB	Bom Sucesso	24.60	97	*e*P	P	02 11 14.0	-1.9
SMTB	Santa Maria do	25.17	67	*e*P	P	02 11 19.2	-1.8
GUY2C	Guyana, Caldas	25.35	350	*e*P	P	02 11 25.9	+2.8
RUSC	La Rusia	25.73	355	*e*P	P	02 11 27.3	+0.8
RUSC	La Rusia	25.73	355	P	P	02 11 27.9	+1.3
JANB	Januaria	25.91	84	*e*P	P	02 11 26.2	-1.6
BSFB	Barra de Sao F	28.46	93	*e*P	P	02 11 49.1	-1.5
SDV	Santo Domingo	28.62	1	*e*P	P	02 11 51.4	-0.8
RPN	Rapa Nui	35.76	251	LR	LR	02 23 39.1	
	comp=Z,45nm,20.9s,baz=112,slow=30						
RCBR	Riachuelo	36.88	72	P	P	02 13 04.5	+0.3
	comp=Z,6.0nm,0.6s,baz=237,slow=12,SNR=5.4						
RCBR	Riachuelo	36.88	72	IAmb	IAmb	02 13 14.1	
	comp=Z,14nm,0.9s						
TXAR	Lajitas Array	58.22	326	P	P	02 15 51.6	+1.8
	comp=Z,0.3nm,0.8s,baz=153,slow=8.1,SNR=3.1						
FCAR	Ozark Folk Cen	59.00	340	P	P	02 15 56.1	+1.2
SADO	Sadowa	64.80	354	P	P	02 16 34.8	+1.0
	comp=Z,3.2nm,0.6s,baz=124,slow=5.2,SNR=4.0						
SRU	San Rafael Swe	69.39	328	P	P	02 17 04.3	+1.0
TORD	Torodi Ar. Bea	78.70	72	P	P	02 17 58.1	+0.1
	comp=Z,5.0nm,0.6s,baz=251,slow=5.3,SNR=61						
YKA	Yellowknife Ar	89.06	341	P	P	02 18 51.0	+1.3
	comp=Z,0.6nm,0.7s,baz=137,slow=5.2,SNR=11						
H11S2	WAKE ISLAND Hy	125.71	279	T	T	04 44 21.4	
	baz=101,slow=74,SNR=57						
H11S1	WAKE ISLAND Hy	125.72	279	T	T	04 44 33.8	
	baz=101,slow=74,SNR=26						
H11S3	WAKE ISLAND Hy	125.73	279	T	T	04 44 34.0	
	baz=101,slow=74,SNR=30						
H11N3	WAKE ISLAND Hy	125.76	280	T	T	04 44 37.7	
	baz=102,slow=74,SNR=13						
H11N2	WAKE ISLAND Hy	125.77	280	T	T	04 44 28.3	
	baz=102,slow=74,SNR=3.8						
H11N1	WAKE ISLAND Hy	125.77	280	T	T	04 44 39.6	
	baz=102,slow=74,SNR=3.1						
ZALV	Zalesovo Beam	141.31	23	PKP	PKiKP	02 25 27.5	-0.8
	comp=Z,1.2nm,0.6s,baz=245,slow=0.9,SNR=5.7						
ZALV	Zalesovo Beam	141.31	23		PKPdf	02 25 25.3	-0.3
MK31	Makanchi Array	145.45	33		PKiKP	02 25 34.9	-2.2
MKAR	Makanchi Array	145.45	33	PKPbc	PKiKP	02 25 34.9	-2.2
	comp=Z,1.3nm,0.9s,baz=316,slow=5.1,SNR=9.4						
MKAR	Makanchi Array	145.45	33		PKPdf	02 25 32.1	-1.0
KSH	Kashi	145.58	48	PKPbc	PKPdf	02 25 32.9	-0.8
KSH				sPKP		02 25 46.9	
KSH				PP	PP	02 28 54.8	+0.4
KSH				PKS	PKSdf	02 29 06.9	-2.4
SONM	Songino Array	152.07	4	PKPbc	PKiKP	02 25 52.6	+1.8
	comp=Z,1.3nm,0.6s,baz=308,slow=1.4,SNR=7.7						
SONM	Songino Array	152.07	4	PKPdf	PKPdf	02 25 42.1	-1.8
SONM				PKPbc	pPKPdf	02 25 52.8	-0.1
SONM				PKPab	sPKPbc	02 26 02.1	-0.4
GTA	Gaotai	159.03	20	*e*PKP	PKPdf	02 25 57.4	+3.9
LZH	Lanzhou	163.27	15	*e*PKP	PKPdf	02 25 57.3	-0.9
LZH				pPKP	pPKPdf	02 26 06.6	-0.6
LZH				sPKP		02 26 10.3	

IDC 17 02:06:38.4±26.0**,20°.79S**×**172°.13W,h0**^{km}**,mb4.3**/4**,mb1 4.5**/4**,mb1mx3.9**/47**,mbtmp4.3**/4**,Error ellipse: s-maj=482.2km s-min=161.9km az=74.0,Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	38.92	263	P	P	02 14 06.7	+0.4
	7.3nm,0.3s,baz=93,slow=11,SNR=20						
STKA	Stephens Creek	42.63	245	P	P	02 14 35.5	-1.3
	1.0nm,0.5s,baz=82,slow=7.1,SNR=4.1						
ASAR	Alice Springs	49.79	256	P	P	02 15 33.0	-0.3
	1.6nm,0.5s,baz=100,slow=6.6,SNR=18						
WRA	Warramunga Arr	49.99	261	P	P	02 15 35.2	+0.4
	1.0nm,0.3s,baz=93,slow=8.4,SNR=12						

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*IDC **17** 02:06:38.0±0.8, 28°.13N×67°.08E, h0^{km}, mb4.0/15, mb1 4.2/17, mb1mx3.8/64, mbtmp4.0/17, ML3.6/2, MS3.5/6, Ms1 3.5/6, ms1mx3.0/50, Error ellipse: s-maj=20.0km s-min=17.6km az=27.0*
ISC 17 02:06:38.8±0.6**,28°.04N**±0°.09×**67°.22E**±0°.06**,h10**^{km}**,n48,**σ**2^s.28**/46**,mb4.2**/23**,MS3.4**/6**,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THW	Thamme Wali	6.14	38	P	Pn	02 08 09.5	-0.1
KUDL	Kundal	8.19	87	*e*P	Pn	02 08 23.4	-14
KUDL				*e*S	Sn	02 09 50.7	-20
AYAN	Aya Nagar	8.75	85	*e*P	Pn	02 08 45.3	-0.1
AYAN				*e*S	Sn	02 10 14.2	-10
NDI	New Delhi	8.84	83	*e*P	Pn	02 08 47.0	+0.4
NDI				*e*x	x	02 10 22.0	
DHRM	DHARAMSHALA	8.91	60	*e*P	Pn	02 08 47.6	-0.3
DHRM				*e*S	Sn	02 10 27.0	-1.4
DHRM				IAML		02 10 35.4	
	comp=E,103nm,0.7s						
DHRM				IAML		02 10 35.5	
	comp=N,137nm,0.5s						
WSAR	Wadi Sarin	9.10	240	Pn	Pn	02 08 50.2	0.0
	comp=N,0.8nm,0.3s,baz=86,slow=8.8,SNR=5.7						
WSAR				Sn	Sn	02 10 27.0	-5.8
	comp=N,1.0nm,0.3s,baz=312,slow=17,SNR=3.9						
SMLA	Simla	9.19	68	*e*P	Pn	02 08 51.7	+0.2
SMLA				*e*S	Sn	02 10 31.4	-3.6
SMLA				IAML		02 10 33.5	
	comp=N,77nm,0.4s						
SMLA				IAML		02 10 33.8	
	comp=E,72nm,0.6s						
AGRA	Agra	9.55	92	*e*P	Pn	02 08 44.9	-11
AGRA				*e*S	Sn	02 10 17.9	-26
BHPL	Bhopal	10.38	115	*e*P	Pn	02 09 08.1	+0.3
BHPL				IAmb	IAmb	02 09 12.6	
	comp=Z,22nm,0.5s						
JOSI	Joshimath	11.06	74	*e*P	Pn	02 09 18.0	+0.7
JOSI				*e*S	Sn	02 11 15.4	-5.8
JOSI				IAML		02 11 22.0	
	comp=E,113nm,0.6s						
JOSI				IAML		02 11 22.4	
	comp=N,91nm,0.7s						
NGP	Nagpur	12.76	120	*e*P	Pn	02 09 39.6	-0.7
NGP				IAmb	IAmb	02 09 45.3	
	comp=Z,26nm,0.3s						
DANN	Dangsing	14.60	85	*e*P	Pn	02 10 02.7	-3.0
	comp=Z,59nm,0.8s						
AAK	Ala-Archa	15.72	20	Pn	Pn	02 10 19.0	-1.4
	comp=Z,0.2nm,0.3s,baz=196,slow=12,SNR=5.1						
DMN	Daman	15.84	87	*e*P	Pn	02 10 18.1	-4.0
	comp=Z,36nm,0.7s						
PKIN	Phulchoki	16.10	87	*e*P	Pn	02 10 21.7	-3.8
	comp=Z,16nm,0.5s						
PKI	Pulchoki	16.11	87	*e*P	Pn	02 10 20.9	-4.8
	comp=Z,25nm,0.6s						
GUN	Gumba	16.49	86	*e*P	Pn	02 10 27.0	-3.6
	comp=Z,78nm,0.9s						
RAMN	Ramite	17.24	89	*e*P	Pn	02 10 37.0	-2.9
	comp=Z,38nm,0.6s						
BOK	Bokaro	17.32	100	*e*x	Pn	02 10 37.2	-3.6
BOK				IAmb	IAmb	02 10 43.0	
	comp=Z,9.1nm,0.5s						
ODAN	Odare	17.95	89	*e*P	Pn	02 10 47.2	-1.6
	comp=Z,56nm,0.8s						
GNI	Garni	22.12	309	LR	LR	02 21 46.1	
	comp=Z,39nm,21.6s,baz=137,slow=41						
MKAR	Makanchi Array	22.15	28	P	P	02 11 34.1	-0.6
	comp=Z,1.7nm,0.7s,baz=209,slow=12,SNR=11						
KURBB	Kurchatov Arra	24.14	18	P	P	02 11 54.1	-0.7
	comp=Z,1.1nm,0.8s,baz=209,slow=9.6,SNR=4.9						
BVAR	Borovoye Array	25.07	5	P	P	02 12 03.5	+0.2
	comp=Z,4.4nm,0.9s,baz=178,slow=8.9,SNR=12						
MMAI	Mount Meron Ar	27.79	288	LR	LR	02 25 21.1	
	comp=Z,71nm,18.9s,baz=210,slow=41						
EIL	Elat	28.26	281	LR	LR	02 25 02.1	
	comp=Z,78nm,20.5s,baz=79,slow=39						
CMAR	Chiang Mai Arr	30.59	101	P	P	02 12 56.4	+3.3
	comp=Z,1.3nm,0.3s,baz=300,slow=7.2,SNR=4.6						
SONM	Songino Array	36.18	46	P	P	02 13 43.3	+1.7
	comp=Z,1.4nm,1.0s,baz=258,slow=7.9,SNR=6.5						
FINES	FINESS Array B	43.11	332	P	P	02 14 39.2	+0.2
	comp=Z,3.0nm,1.1s,baz=238,slow=34,SNR=3.3						
FINES				LR	LR	02 36 02.2	
	comp=Z,139nm,19.3s,baz=202,slow=41						
MOA	Molln	45.22	311	*i* P	P	02 14 56.1	0.0
	comp=Z,5.3nm,1.4s						
ABTA	Abfaltersbach	46.31	309	*i* P	P	02 15 04.7	-0.1
	comp=Z,2.9nm,1.4s						
WATA	Walderalm	46.99	310	*i* P	P	02 15 11.1	+0.9
	comp=Z,5.7nm,1.5s						
MOTA	Moosalm	47.31	310	*i* P	P	02 15 11.3	-1.4
	comp=Z,4.6nm,1.1s						
FETA	Feichten	47.55	309	*i* P	P	02 15 14.3	-0.2
	comp=Z,3.7nm,0.9s						
RETA	Reutte	47.55	310	*i* P	P	02 15 13.9	-0.6
	comp=Z,7.3nm,1.8s						
ARCES	ARCESS Array B	47.95	342	P	P	02 15 17.8	+0.7
	comp=Z,2.7nm,1.0s,baz=127,slow=7.0,SNR=4.2						
HFS	Hagfors	48.10	327	P	P	02 15 18.5	+0.1
	comp=Z,3.1nm,0.7s,baz=140,slow=9.1,SNR=5.6						
DAVA	Damuels	48.14	310	*i* P	P	02 15 18.3	-0.8
	comp=Z,1.3nm,0.6s						
NB2	NORSAR Subarra	49.53	328	P	P	02 15 28.7	-0.7
	comp=Z,1.3nm,0.8s,baz=107,slow=7.9						
NOA	NORSAR Array B	49.53	328	P	P	02 15 28.7	-0.7
	comp=Z,2.2nm,0.8s,baz=107,slow=7.5,SNR=5.2						
NOA				LR	LR	02 39 41.8	
	comp=Z,52nm,18.1s,baz=260,slow=40						
KSRS	Korea Array	51.15	63	P	P	02 15 43.5	+1.5
	comp=Z,1.0nm,0.4s,baz=281,slow=7.9,SNR=4.4						
TORD	Torodi Ar. Bea	62.45	271	P	P	02 17 02.3	-0.3
	comp=Z,0.5nm,0.6s,baz=70,slow=5.8,SNR=8.2						
SEY	Seymchan	63.26	31	P	P	02 17 08.0	+0.7
	comp=Z,2.5nm,0.8s,baz=250,slow=9.0,SNR=5.4						
JCJ	Chichijima	65.40	71	LR	LR	02 49 32.3	
	comp=Z,72nm,19.2s,baz=290,slow=39						
WRA	Warramunga Arr	80.52	119	P	P	02 18 52.0	+0.5
	comp=Z,3.0nm,0.5s,baz=316,slow=4.7,SNR=9.1						
ASAR	Alice Springs	82.30	122	P	P	02 19 02.8	+1.9
	comp=Z,1.4nm,0.7s,baz=313,slow=5.7,SNR=14						
ILAR	Eielson Array	83.75	14	P	P	02 19 10.8	+3.0
	comp=Z,0.6nm,1.0s,baz=310,slow=4.8,SNR=4.8						
YKA	Yellowknife Ar	89.77	1	P	P	02 19 37.8	+0.6
	comp=Z,0.5nm,0.8s,baz=351,slow=4.3,SNR=6.5						

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*IDC **17** 02:10:30.2±1.6, 58°.98N×152°.64W, h41^{km}±19^{km}, mb3.4/6, mb1 3.7/8, mb1mx3.3/67, mbtmp3.6/8, ML3.2/2, Error ellipse: s-maj=21.9km s-min=10.5km az=96.0*
*NEIC **17** 02:10:31.4±1.2, 58°.87N±0°.04×152°.31W±0°.05, h57^{km}±9^{km}, Error ellipse: s-maj=5.2km s-min=3.7km az=160.0*
*AEIC **17** 02:10:32±1.0, 58°.87N±0°.03×152°.31W±0°.07, h55^{km}±6^{km}, ML3.4/88, Error ellipse: s-maj=4.9km s-min=3.7km az=79.0*
ISC 17 02:10:31.7±0.9**,58°.90N**±0°.04×**152°.28W**±0°.04**,h59**^{km}±9^{km}**,n104,**σ**0^s.83**/113**,mb3.5**/6**,Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AU22	Augustine Moun	0.73	311		Pn	02 10 45.7	-0.5
AU22					Sn	02 10 56.5	-0.4
FOSS	Fourpeaked Sta	0.74	263		Pn	02 10 45.5	-0.9

AUQ	Augustine Qik’	0.74	309		Pn	02 10 46.0	-0.5
AUQ					Sn	02 10 56.9	-0.3
AUP	Augustine Pinn	0.75	309		Pn	02 10 46.1	-0.5
AUH	Augustine H	0.76	308		Pn	02 10 46.3	-0.4
AUW	Augustine West	0.78	308		Pn	02 10 46.3	-0.5
CNPM	China Poot	0.83	40		Pn	02 10 47.6	0.0
CNPM	China Poot	0.83	40		Sn	02 10 59.3	+0.2
HOM	Homer	0.83	23		Pn	02 10 47.5	0.0
HOM					Sn	02 11 00.1	+1.0
BRLK	Bradley Lake	1.12	39		Pn	02 10 51.1	-0.3
KDAK	Kodiak Island	1.13	188	P	Pn	02 10 50.6	-0.8
	29nm,0.3s,baz=48,slow=7.7,SNR=628						
KDAK				LR	LR	02 11 02.3	
	comp=Z,97nm,21.2s,baz=44,slow=27						
KDAK				S	Sn	02 11 05.4	-0.6
	88nm,0.3s,baz=290,slow=23,SNR=21						
ILS	Iliamna Low So	1.14	340		Pn	02 10 51.0	-0.6
BRSE	Bradley Lake S	1.16	42		Pn	02 10 51.7	-0.1
IVE	Iliamna Volcan	1.19	342		Pn	02 10 51.6	-0.7
ILW	Iliamna West	1.25	340		Pn	02 10 52.5	-0.7
KAHG	Katmai Hook Gl	1.25	252		Pn	02 10 52.6	-0.5
KAWH	Katmai	1.42	250		Pn	02 10 54.7	-0.6
KAHC	Katmai Hardscr	1.44	261		Pn	02 10 54.9	-0.8
RED	Redoubt Volcan	1.55	351		Pn	02 10 56.7	-0.4
RED					Sn	02 11 16.7	+0.5
RSO	Redoubt South	1.59	351		Pn	02 10 57.5	-0.2
RDWB	Redoubt West	1.62	350		Pn	02 10 57.7	-0.4
DFR	Drift River	1.71	353		Pn	02 10 59.3	-0.1
DFR					Sn	02 11 20.7	+0.5
RDJH	Redoubt Jeurge	1.72	351		Pn	02 10 59.4	0.0
OHAK	Old Harbor	1.76	198		Pn	02 10 58.9	-1.0
KELA	Mount Kelaz	1.87	257		Pn	02 11 00.6	-0.8
SEW	Seward	1.88	49		Pn	02 11 00.7	-0.8
SLKM	Skilak Lake	1.92	32		Pn	02 11 01.7	-0.4
CAPN	Captain Cook N	1.96	16		Pn	02 11 04.5	+1.9
CKL	Chakachamna La	2.31	359		Pn	02 11 08.0	+0.6
SPCR	Spurr Chakacha	2.31	1		Pn	02 11 08.1	+0.6
SPBG	Spurr Blockage	2.37	359		Pn	02 11 09.0	+0.7
PLK3	Peulik 3	2.43	242		Pn	02 11 09.0	0.0
PLK1	Peulik 1	2.53	246		Pn	02 11 10.3	-0.1
RC01	Rabbit Creek A	2.54	29		Pn	02 11 10.6	0.0
RC01					Sn	02 11 39.2	-1.1
SII	Sitkinak Islan	2.56	204	Pn	Pn	02 11 09.6	-1.2
STLK	Strandline Lak	2.62	5		Pn	02 11 12.4	+0.7
SUA	Susitna One	2.69	16		Pn	02 11 12.9	+0.3
SVW2	Sparrevohn	2.76	324		Pn	02 11 12.8	-0.8
PWL	Port Wells	2.80	44		Pn	02 11 13.5	-0.6
PMR	Palmer	3.13	29		Pn	02 11 17.8	-0.7
KNK	Knik Glacier	3.17	35		Pn	02 11 18.6	-0.5
GLI	Glacier Island	3.28	51		Pn	02 11 19.3	-1.3
HIN	Hinchinbrook I	3.29	60		Pn	02 11 20.3	-0.5
GHO	Glory Hole Cre	3.33	29		Pn	02 11 21.1	-0.3
FID	Port Fidalgo	3.47	55		Pn	02 11 21.6	-1.6
SML	Sawmill	3.52	32		Pn	02 11 24.1	+0.3
JPK	Jack Peak	3.58	50		Pn	02 11 24.2	-0.6
EYAK	Cordova Ski Ar	3.70	61	Pn	Pn	02 11 25.5	-0.8
SCM	Sheep Creek Mo	3.84	38		Pn	02 11 28.2	-0.1
PPLA	Purkeypile	4.01	1		Pn	02 11 31.3	+0.6
RAGM	Ragged Mountai	4.14	66	Pn	Pn	02 11 32.2	-0.2
GOAT	Goat Mountain	4.18	63		Pn	02 11 32.6	-0.4
HUR	Hurricane	4.29	16		Pn	02 11 34.9	+0.5
WAT6	Susitna Watana	4.32	29		Pn	02 11 34.8	-0.1
WAT1	Susitna Watana	4.35	23		Pn	02 11 35.0	-0.2
TT01	Tatalina	4.42	337		Pn	02 11 36.1	0.0
WAT2	Susitna Watana	4.46	22		Pn	02 11 36.8	-0.1
TRF	Thorofare Moun	4.67	11		Pn	02 11 40.8	+1.1
KTH	Kantishna Hill	4.72	7		Pn	02 11 40.9	+0.6
RND	Reindeer	4.82	19		Pn	02 11 42.0	+0.3
DHY	Denali Highway	4.82	28		Pn	02 11 42.1	+0.3
GLB	Gilahina Butte	4.94	55		Pn	02 11 42.5	-0.8
CRQM	Cirque	4.97	64		Pn	02 11 43.2	-0.7
VRDI	Verde Repeater	5.00	58		Pn	02 11 43.4	-0.9
MCK	McKinley	5.11	17		Pn	02 11 46.4	+0.7
MCARA	McCarthy VSAT	5.25	58		Pn	02 11 46.9	-0.7
BPAW	Bear Paw Mtn.	5.26	6		Pn	02 11 47.6	0.0
PAX	Paxson	5.26	36		Pn	02 11 48.6	+0.8
KIAG	Kiagna River	5.39	64		Pn	02 11 48.9	-0.7
PTPK	Patty Peak	5.43	61		Pn	02 11 49.7	-0.4
BALM	Baldy	5.43	63		Pn	02 11 49.4	-0.7
GRNC	Granite Creek	5.62	66		Pn	02 11 53.0	+0.2
BARN	Barnard Glacie	5.75	63	Pn	Pn	02 11 54.5	-0.1
CTGM	Chitina Glacie	5.88	65		Pn	02 11 56.4	+0.1
NEA	Nenana	5.90	14	Pn	Pn	02 11 57.9	+1.5
WRH	Wood River Hil	5.94	18		Pn	02 11 56.6	-0.3
RIDG	Independent Ri	6.03	33		Pn	02 11 58.9	+0.6
CCB	Clear Creek Bu	6.15	18		Pn	02 11 59.4	-0.4
MLY	Manley	6.20	6		Pn	02 12 00.5	0.0
PCA	Pinnacle	6.24	74		Pn	02 12 01.1	-0.1
COLA	College	6.35	17		Pn	02 12 03.0	+0.5
IL31		6.42	21		Pn	02 12 03.4	-0.1
ILAR	Eielson Array	6.42	21	P	Pn	02 12 03.6	+0.1
	0.5nm,0.3s,baz=211,slow=14,SNR=25						
ILAR				S	Sn	02 13 13.7	-1.6
	1.3nm,0.3s,baz=209,slow=20,SNR=6.2						
ILAR	Eielson Array	6.42	21		Pn	02 12 04.5	+1.0
ILAR					Sn	02 13 11.6	-3.8
SCRK	Sand Creek	6.46	34	Pn	Pn	02 12 04.2	0.0
YUK3	Moose Creek	6.54	59		Pn	02 12 05.7	+0.3
BCAR	Beaver Creek A	6.59	46		Pn	02 12 06.3	+0.3
PNL	Peninsula	6.65	78		Pn	02 12 06.2	-0.5
IM03		7.15	355		Pn	02 12 13.8	+0.3
IMAR	Indian Mountai	7.15	355		Pn	02 12 14.0	+0.6
HYT	Haines Junctio	7.68	69	Pn	Pn	02 12 22.0	+1.1
EGAK	Eagle	7.89	37	Pn	Pn	02 12 23.7	0.0
DAWY	Dawson	8.05	44	Pn	Pn	02 12 26.0	+0.2
ANM	Nome	8.41	318		Pn	02 12 31.6	+0.9
WHY	Whitehorse	8.95	71	Pn	Pn	02 12 37.7	-0.6
YKA	Yellowknife Ar	18.60	63	P	P	02 14 44.4	+0.5
	0.1nm,0.3s,baz=277,slow=10,SNR=7.3						
NVAR	Mina Array Bea	29.87	118	P	P	02 16 36.3	+2.7
	0.3nm,0.7s,baz=317,slow=9.0,SNR=2.7						
NVAR	Mina Array Bea	29.87	118	P	P	02 16 34.0	+0.4
PDAR	Pinedale Array	30.78	103	P	P	02 16 43.6	+1.9
	0.4nm,0.5s,baz=302,slow=6.5,SNR=4.8						
PDAR	Pinedale Array	30.78	103	P	P	02 16 41.5	-0.2
TXAR	Lajitas Array	44.25	110	P	P	02 18 36.9	+1.6
	0.3nm,0.8s,baz=326,slow=4.4,SNR=2.8						
ARCES	ARCESS Array B	51.85	1	P	P	02 19 32.1	-1.2
	6.5nm,1.1s,baz=21,slow=7.0,SNR=4.8						
SONM	Songino Array	55.74	307	P	P	02 20 02.0	-0.2
	0.4nm,0.5s,baz=76,slow=7.8,SNR=3.7						
BVAR	Borovoye Array	63.22	333	P	P	02 20 51.9	-1.5
	0.4nm,0.6s,baz=9.9,slow=3.5,SNR=4.0						

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*IDC **17** 02:32:49.8±6.2, 55.°99S×27.°59W, h142km±56km, mb3.9/7, mb1 4.0/8, mb1mx3.6/35, mbtmp4.3/8, Error ellipse: s-maj=29.9km s-min=15.8km az=62.0*

*NEIC **17** 02:32:49.4±1.1, 56.°0S±0.°2×27.°9W±0.°2, h141km±13km, mb4.1/4, Error ellipse: s-maj=28.7km s-min=14.5km az=211.0*

ISC 17 02:32:50.4±0.7**, 56.°0S**±0.°1×**28.°0W**±0.°1**, h150**km**, n22,** σ1s**11**/23**, mb4.0**/6**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.17	286	Pn	Pn	02 34 05.7	-0.2
HOPE				Sn	Sn	02 35 02.8	-2.1
VNA1	Neumayer--Stat	16.98	157	P	P	02 36 37.1	-0.8
VNA3	Neumayer Olymp	17.15	160	P	P	02 36 38.6	-1.3
VNA2	Neumayer--Watz	17.37	157	P	P	02 36 41.4	-0.9
	baz=311,slow=13						
SNAA	Sanae	18.94	156	P	P	02 36 58.1	-1.4
SNAA	Sanae	18.94	156	P	P	02 36 58.1	-1.4
	2.3nm,0.3s,baz=309,slow=11,SNR=86						
SNAA	Sanae	18.94	156	P	P	02 36 58.1	-1.4
SNAA				IAmb	IAmb	02 37 02.0	
	comp=Z,12nm,1.1s						
QSPA	South Pole Qui	34.21	180	P	P	02 39 22.0	+0.9
	comp=Z,3.0nm,0.6s,baz=191,slow=2.9,SNR=36						
QSPA	South Pole Qui	34.21	180	P	P	02 39 22.1	+0.9
QSPA				IAmb	IAmb	02 39 24.9	
	comp=Z,2.5nm,0.7s						
CPUP	Villa Florida	36.46	312	P	P	02 39 41.4	+0.7
	comp=Z,1.0nm,0.5s,baz=164,slow=7.8,SNR=4.1						
CPUP	Villa Florida	36.46	312	P	P	02 39 40.7	0.0
LVC	Limon Verde	44.90	301	P	P	02 40 52.0	+1.7
	comp=Z,1.4nm,0.3s,baz=193,slow=3.8,SNR=3.9						
VNDA	Vanda	46.56	183	P	P	02 41 03.4	+1.2
	comp=Z,2.1nm,0.7s,baz=184,slow=5.4,SNR=11						
LPAZ	La Paz	50.00	306	P	P	02 41 31.4	+1.4
	comp=Z,2.6nm,0.7s,baz=179,slow=7.6,SNR=6.9						
TOA0	Torodi Ar. Sit	73.28	30	P	P	02 44 04.7	-0.3
TORD	Torodi Ar. Bea	73.28	30	P	P	02 44 04.9	-0.1
	comp=Z,3.1nm,0.6s,baz=201,slow=6.7,SNR=42						
ASAR	Alice Springs	99.13	163	P	Pdif	02 46 13.8	-0.6
	comp=Z,0.3nm,0.7s,baz=188,slow=4.8,SNR=4.2						
YKA	Yellowknife Ar	135.86	318	PKP	PKPdf	02 51 51.4	-0.3
	comp=Z,0.6nm,0.6s,baz=136,slow=2.7,SNR=9.6						
MKAR	Makanchi Array	137.32	72	PKP	PKiKP	02 51 55.7	-1.1
	comp=Z,0.3nm,0.7s,baz=251,slow=3.1,SNR=3.6						
MKAR	Makanchi Array	137.32	72		PKiKP	02 51 56.3	-0.5
ILAR	Eielson Array	149.77	312	PKPbc	PKPbc	02 52 20.9	+0.1
	comp=Z,5.8nm,0.8s,baz=136,slow=2.8,SNR=64						
SONM	Songino Array	151.19	87	PKPbc	PKPbc	02 52 24.1	-0.9
	comp=Z,3.4nm,0.5s,baz=220,slow=3.6,SNR=25						

KRNET 17 02:39:28.7±0.1**, 42.°42N×78.°89E, h13**km**, mb2.0, 10C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	0.37	280	⇓iP	Pg	02 39 35.9	-0.3
	baz=80						
PRZ				⇓iS	Sg	02 39 41.0	-0.3
	baz=80						
ANVS	Anan'yevo	0.97	292	⇑iP	Pg	02 39 47.5	0.0
	baz=92						
ANVS				⇑iS	Sb	02 40 00.8	+0.4
	baz=92						
KDJ	Kajisay	1.30	258	⇑iP	Pb	02 39 53.0	-0.2
	baz=57						
KDJ				⇑iS	Sg	02 40 11.3	+0.5
	baz=57						
ULHL	Ulahol	1.97	266	⇓iP	Pb	02 40 05.3	+0.7
	baz=66						
ULHL				⇓iS	Sg	02 40 32.0	-0.2
	baz=66						
KZA	Kyzart	2.73	264	⇑iP	Pb	02 40 15.9	-1.7
	baz=64						
KZA				⇑iS	Sb	02 40 50.4	-0.6
	baz=64						
UCH	Uchtor	3.25	268	⇑iP	Pn	02 40 22.9	+3.1
	baz=68						
UCH				⇑iS	Sb	02 41 02.9	-3.3
	baz=68						
AML	Almayashu	3.87	267	⇑eP	Pn	02 40 31.8	+3.5
	baz=67						
AML				⇑iS	Sn	02 41 17.8	+4.1
	baz=67						

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*SOME **17** 02:40:03.3, 42.°20N×77.°80E, h10km*

*NNC **17** 02:40:04.1±1.0, 42.°20N×77.°71E, h0km, mb2.2, mpv2.6, Error ellipse: s-maj=10.3km s-min=6.1km az=56.0*

ISC 17 02:40:02.3±5.2**, 42.°1N**±0.°3×**77.°8E**±0.°2**, h7**km±25km**, n10,** σ**0s26**/20**, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNSS	Tian-Shan	1.09	326	eP	Pg	02 40 23.3	+0.2
	0.8nm,0.1s						
TNSS				eS	Sb	02 40 37.9	-0.3
	4.3nm,0.3s						
TNSS	Tian-Shan	1.09	326	P	Pg	02 40 23.3	+0.2
	0.8nm,0.1s						
TNSS				S	Sb	02 40 37.9	-0.3
	4.3nm,0.3s						
KOTS	Kotyrbulak	1.20	336	eP	Pg	02 40 25.1	-0.2
	2.1nm,0.3s						
KOTS				eS	Sb	02 40 40.8	-0.4
	20nm,0.5s						
KOTS	Kotyrbulak	1.20	336	P	Pg	02 40 25.1	-0.2
	2.1nm,0.3s						
KOTS				S	Sb	02 40 40.8	-0.4
	20nm,0.5s						
IZV	Izvestkoviy	1.24	317	eP	Pg	02 40 26.1	0.0
	0.6nm,0.1s						
IZV				eS	Sb	02 40 42.5	0.0
	3.8nm,0.2s						
IZV	Izvestkoviy	1.24	317	P	Pg	02 40 26.1	0.0
	0.6nm,0.1s						
IZV				S	Sb	02 40 42.5	0.0
	3.8nm,0.2s						
KTBS	Karatobe	1.77	333	eP	Pb	02 40 35.0	-0.1
	0.5nm,0.3s						
KTBS				eS	Sb	02 40 57.8	+0.3
	5.0nm,0.3s						
KTBS	Karatobe	1.77	333	P	Pb	02 40 35.0	-0.1
	0.5nm,0.3s						
KTBS				S	Sb	02 40 57.8	+0.3
	5.0nm,0.3s						
CHKK	Chushkaly	1.81	342	eP	Pb	02 40 35.8	0.0
	1.3nm,0.0s						
CHKK				eS	Sb	02 40 59.0	+0.3
	10nm,0.3s						
CHKK	Chushkaly	1.81	342	P	Pb	02 40 35.8	0.0
	1.3nm,0.0s						
CHKK				S	Sb	02 40 59.0	+0.3
	10nm,0.3s						

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*SJA **17** 02:41:49.8±1.1, 19.°40S×71.°13W, h17km±4km, ML4.5, MW4.5*

*IDC **17** 02:41:50.1±1.0, 19.°27S×70.°87W, h0km, mb4.4/5, mb1 4.4/7, mb1mx4.0/29, mbtmp4.4/7, ML3.8/2, MS4.1/16, Ms1 4.0/16, ms1mx3.8/35, Error ellipse: s-maj=29.5km s-min=20.8km az=70.0*

*NEIC **17** 02:41:50.8, 19.°46S×71.°10W, h8km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.24; $M_{\theta\theta}$-0.24; $M_{\phi\phi}$-0.01; $M_{r\theta}$0.49; $M_{\theta\phi}$0.36; $M_{\phi r}$-1.25; Fault plane solution: $M_0$1.41000×10^{16} NP1:ϕ_s157.86000°, δ84.42000°, λ103.83000°. NP2:ϕ_s269.43000°, δ14.90000°, λ22.24000°. Principal axes: T 1.3834, Plg49.0000°, Azm83.0000°; N 0.0500, Plg14.0000°, Azm336.0000°; P -1.4335, Plg38.0000°, Azm235.0000°;*

*NEIC **17** 02:41:50.4±2.8, 19.°46S±0.°06×71.°03W±0.°09, h10km±1km, mb4.5/10, Mwr4.7/20, ML4.5(GUC) Error ellipse: s-maj=13.8km s-min=10.1km az=266.0*

*GUC **17** 02:41:52.6±0.8, 19.°41S×71.°05W, h16km±5km, ML4.5*

*VAO **17** 02:41:58.2±0.7, 19.°44S×70.°88W, h84km±5km, mb4.2*

ISC 17 02:41:50.7±1.4**, 19.°43S**±0.°02×**71.°03W**±0.°05**, h12**km±8km**, n115,** σ**1s56**/110**, mb4.5**/8**, MS4.1**/12**, 6C-2D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.87	101	⇑iP	Pn	02 42 08.9	+0.1
PSGC				eS	Sn	02 42 20.7	-0.7
PSGCX	Pisagua	0.87	101	eP	Pn	02 42 09.0	+0.1
PSGCX				eS	Sn	02 42 22.0	+0.6
PSGCX				IAML		02 42 22.9	
	comp=Z,8μm,0.5s						
PB12	IPOC Station P	1.04	39	⇓iP	Pg	02 42 11.0	+0.1
PB12				eS	Sn	02 42 25.3	-0.5
PB12	IPOC Station P	1.04	39	eP	Pg	02 42 11.0	+0.1
PB12				eS	Sn	02 42 25.6	-0.1
PB12				IAML		02 42 28.2	
	comp=Z,8μm,1.0s						
AP01	Chacalluta	1.23	32	⇑iP	Pg	02 42 14.3	-0.1
AP01				eS	Sg	02 42 30.9	+0.4
AP01				IAML		02 42 41.9	
	comp=E,19μm,0.8s						
PB11	IPOC Station P	1.33	105	⇑iP	Pg	02 42 16.8	+0.4
PB11				i S	Sg	02 42 34.8	+1.1
PB11				IAML		02 42 40.1	
	comp=N,19μm,0.3s						
PB11	IPOC Station P	1.33	105		Pg	02 42 16.2	-0.2
PB11	IPOC Station P	1.33	105	eP	Pg	02 42 16.7	+0.3
PB11				eS	Sg	02 42 37.5	+3.7
PB11				IAML		02 42 38.7	
	comp=Z,12μm,0.4s						
TA01	Diego Aracena	1.38	145	⇑iP	Pg	02 42 16.9	-0.5
TA01				i S	Sg	02 42 35.9	+0.6
PATCX	Punta Patache	1.61	150	⇑iP	Pb	02 42 20.3	-0.2
PATCX				IAML		02 42 56.3	
	comp=E,5μm,0.6s						
PATCX	Punta Patache	1.61	150	eP	Pb	02 42 20.1	-0.3
PATCX				eS	Sg	02 42 44.2	+1.5
PATCX				IAML		02 42 51.6	
	comp=Z,3μm,0.8s						
GO01	Chusmiza	1.74	98	⇑iP	Pg	02 42 23.7	-0.5
GO01				eS	Sg	02 42 48.0	+1.1
GO01				IAML		02 42 50.7	
	comp=N,7μm,0.3s						
GO01	Chusmiza	1.74	98		Pb	02 42 23.0	+0.1
PB16	IPOC Station P	1.80	53	eP	Pg	02 42 24.3	-1.0
PB16				eS	Sg	02 42 49.4	+0.6
PB16				IAML		02 42 52.8	
	comp=N,6μm,0.6s						
PB16	IPOC Station P	1.80	53	eP	Pb	02 42 23.9	-0.1
PB16				eS	Sg	02 42 49.3	+0.6
PB16				IAML		02 42 53.6	
	comp=Z,8μm,0.4s						
PB08	IPOC Station P	1.90	112	⇓iP	Pb	02 42 25.8	+0.2
PB08				i S	Sg	02 42 51.7	-0.3
PB08	IPOC Station P	1.90	112	eP	Pb	02 42 25.2	-0.3
PB08				eS	Sg	02 42 51.5	-0.5
PB08				IAML		02 42 54.6	
	comp=Z,3μm,0.4s						
PB01	IPOC Station P	2.16	138	eP	Pb	02 42 28.3	-1.6
PB01				eS	Sb	02 42 55.2	-1.4
PB01				IAML		02 43 04.8	
	comp=E,4μm,0.3s						
PB01	IPOC Station P	2.16	138		Pb	02 42 28.0	-1.9
PB02	IPOC Station P	2.16	151	eP	Pb	02 42 28.1	-1.8
PB02				eS	Sg	02 42 58.7	-1.6
PB02				IAML		02 43 08.4	
	comp=N,5μm,0.7s						
PB04	IPOC Station P	3.01	164		Pn	02 42 38.4	0.0
LVC	Limon Verde	3.73	148	Pn	Pn	02 42 51.3	+2.8
	comp=N,8.5nm,0.3s,baz=356,slow=8.8,SNR=61						
LVC				Sn	Sn	02 43 36.5	+3.9
	comp=N,45nm,0.3s,baz=83,slow=9.9,SNR=3.9						
LVC	Limon Verde	3.73	148		Pn	02 42 51.0	+2.5
LVC					Sn	02 43 31.5	-1.1
LVC	Limon Verde	3.73	148	eP	Pb	02 42 53.1	-3.8
PB10	IPOC Station P	4.09	174		Pn	02 42 52.6	-0.5
LPAZ	La Paz	4.16	42	Pn	Pb	02 43 00.7	-3.7
	comp=N,0.9nm,0.3s,baz=245,slow=13,SNR=43						
LPAZ	La Paz	4.16	42		Pn	02 42 56.4	+1.8
LPAZ	La Paz	4.16	42	eP	Pb	02 42 59.5	-4.9
GO02	Mina Guanaco	5.86	167		Pn	02 43 18.1	+0.4
GO03	Copiap	8.16	175	Pn	Pn	02 43 47.8	-1.3
SIV	San Ignacio	10.08	72	Pn	Pn	02 44 15.5	+0.1
	comp=N,0.5nm,0.3s,baz=268,slow=14,SNR=18						
SIV				LR	LR	02 48 46.3	
	comp=N,1μm,21.0s,baz=276,slow=42						
GO04	Tololo Observa	10.70	179	Pn	Pn	02 44 25.3	+1.2
CFA	Coronel Fontan	12.38	169	LR	LR	02 49 21.4	
	comp=N,313nm,19.7s,baz=336,slow=36						
SAML	Samuel	12.89	37		Pn	02 44 54.5	+0.6
SAML	Samuel	12.89	37	eP	Pn	02 44 56.8	+2.9
ATAH	Atahualpa	14.16	329	LR	LR	02 50 38.9	
	comp=N,266nm,20.5s,baz=134,slow=38						
CPUP	Villa Florida	14.37	121	LR	LR	02 51 23.6	
	comp=N,529nm,20.5s,baz=304,slow=40						
CPUP	Villa Florida	14.37	121	P	P	02 45 18.4	-2.6
CPUP	Villa Florida	14.37	121	eP	Pn	02 45 16.6	+2.7
AQDB	Aquidauana	14.45	97	eP	P	02 45 18.9	-3.0
SALV	Santo Antonio	15.03	79	eP	Pn	02 45 23.1	+0.1
ITQB	Itaqui	16.59	131	eP	P	02 45 43.9	-1.8
CLDB	Colider	16.97	62	eP	P	02 45 48.3	-1.7
C2SB	Chapadao do Su	17.20	91	eP	P	02 45 51.2	-1.4
TRCB	Terra Rica	17.48	104	eP	P	02 45 54.5	-1.2
PTGB	Pitanga	18.34	110	eP	P	02 46 07.2	+2.1
ARAG	Araguaiana, MT	18.69	82	eP	P	02 46 07.4	-1.6
ITAB	Concordia	19.00	118	eP	Pn	02 46 12.0	-1.0
CPSB	Cacapava Do Su	19.31	128	eP	P	02 46 15.4	-0.3
ITRB	Iturama	19.48	94	eP	P	02 46 17.0	-0.7
TRQA	Tornquist	20.16	159	eP	P	02 46 22.7	-2.3
FRTB	Fartura	20.36	105	eP	P	02 46 25.6	-1.6
OGAUY	Aigu	20.74	139	eP	P	02 46 31.4	+0.1
CNLB	Canela	20.82	122	eP	P	02 46 32.2	0.0
OTAV	Otavalo	20.86	339	eP	Pn	02 46 33.9	-1.7
BB19B	Bebedouro	21.17	98	eP	P	02 46 35.3	-0.8
PLCA	Paso Flores	21.24	179	P	P	02 46 39.3	+2.6
	comp=N,4.0nm,0.8s,baz=19,slow=11,SNR=7.5						
PLCA	Paso Flores	21.24	179	P	P	02 46 35.2	-1.4
PLCA				IAmb	IAmb	02 46 48.4	
	comp=Z,27nm,1.4s						
PLCA	Paso Flores	21.24	179	eP	P	02 46 37.2	+0.5
FLOC	Florencia	21.37	347	P	P	02 46 38.0	-0.2
PTGA	Pitinga	21.51	32	P	P	02 46 38.7	-0.9
	comp=Z,11nm,0.3s,baz=321,slow=23,SNR=51						
PTGA				LR	LR	02 54 59.1	
	comp=Z,227nm,20.7s,baz=214,slow=37						
PTGA	Pitinga	21.51	32	P	P	02 46 38.6	-1.0
PTGA				IAmb	IAmb	02 46 48.5	
	comp=Z,18nm,0.8s						
PTGA	Pitinga	21.51	32	eP	P	02 46 38.5	-1.2
IPMB	Ipameri, GO	21.66	90	eP	P	02 46 39.8	-1.5
CRUC	La Cruz	21.66	344	eP	P	02 46 50.0	+8.4
GARC	Garzon, Huila	21.92	348	eP	P	02 46 44.5	+0.2
SOTA	Rioblanco	22.12	345	eP	P	02 46 51.4	+4.7
BDFB	Brasilia	22.26	84	LR	LR	02 57 10.5	
	comp=Z,539nm,19.4s,baz=266,slow=42						
BDFB	Brasilia	22.26	84	P	P	02 46 46.8	-1.1
VAO	Valinhos	22.70	103	eP	P	02 46 51.8	-0.8
ORTC	Ortega, Tolima	23.56	349	eP	P	02 47 01.6	+0.4
YOTC	Yotoco, Valle	23.84	347	eP	P	02 47 10.2	+6.1
PARB	Paraibuna	23.96	104	eP	P	02 47 04.1	-1.1
RREF	El Recreo	24.55	350	eP	P	02 47 14.1	+3.0
BSCB	Bom Sucesso	24.68	98	eP	P	02 47 09.4	-2.4
GUY2C	Guyana, Caldas	24.87	350	eP	P	02 47 16.5	+2.6
SMTB	Santa Maria do	25.00	68	eP	P	02 47 12.6	-2.1
ESAR	Angra dos Reis	25.02	103	eP	P	02 47 13.5	-1.2
RUSC	La Rusia	25.24	355	P	P	02 47 17.4	+0.2
JANB	Januaria	25.87	85	eP	P	02 47 21.4	-1.2
SDV	Santo Domingo	28.14	1	eP	P	02 47 43.5	+0.5
SJMB	Sao Joao De Ma	28.20	94	eP	P	02 47 42.0	-1.5
PCRV	Puerto La Cruz	30.08	13	LR	LR	03 01 27.8	
	comp=Z,1μm,18.9s,slow=39						
MDP	Montagnes des	30.36	38	LR	LR	03 00 37.8	
	comp=Z,278nm,21.6s,baz=220,slow=37						
NBIT	Itapeh - BA	30.48	87	eP	P	02 48 02.4	-1.4
NBLA	Lagarto - SE	33.10	80	eP	P	02 48 25.5	-1.3
NBTA	Tacaratu-PE	33.48	77	eP	P	02 48 28.7	-1.5
NBMA	Muriti-CE	33.52	73	eP	P	02 48 29.3	-1.2
NBPB	Pedra_Branca-C	33.57	70	eP	P	02 48 29.3	-1.6
NBMO	Morrinhos-CE	34.23	66	eP	P	02 48 35.8	-0.8
TKL	Tuckaleechee C	56.10	347	LR	LR	03 16 20.4	
	comp=Z,68nm,18.9s,baz=158,slow=37						
TXAR	Lajitas Array	57.81	326	P	P	02 51 43.0	+0.7
	comp=Z,0.2nm,0.7s,baz=132,slow=7.7,SNR=2.6						
TXAR	Lajitas Array	57.81	326	P	P	02 51 42.5	+0.2
ANMO	Albuquerque	63.69	328	LR	LR	03 22 10.7	
	comp=Z,98nm,18.1s,baz=154,slow=38						
DBIC	Dimbokro	70.08	75	P	P	02 53 03.0	-0.3
	comp=Z,3.3nm,0.8s,baz=217,slow=9.6,SNR=4.0						
DBIC	Dimbokro	70.08	75	P	P	02 53 02.8	-0.5
QSPA	South Pole Qui	70.75	180	P	P	02 53 09.4	+2.7
QSPA				IAmb	IAmb	02 53 17.9	
	comp=Z,3.1nm,0.8s						
ULM	Lac du Bonnet	72.77	344	LR	LR	03 28 03.1	
	comp=Z,60nm,18.8s,baz=288,slow=38						
TOA0	Torodi Ar. Sit	78.56	72	P	P	02 53 51.8	-0.8
TOA0				IAmb	IAmb	02 53 54.2	
	comp=Z,6.1nm,0.7s						
TORD	Torodi Ar. Bea	78.56	72	P	P	02 53 52.3	-0.3
	comp=Z,5.4nm,0.6s,baz=247,slow=5.7,SNR=55						
TORD				LR	LR	03 28 07.7	
	comp=Z,146nm,18.0s,baz=265,slow=35						
TORD	Torodi Ar. Bea	78.56	72	P	P	02 53 51.9	-0.8
BOSA	Boshof	86.17	119	LR	LR	03 30 07.8	
	comp=Z,152nm,18.9s,baz=204,slow=34						
YKA	Yellowknife Ar	88.59	341	P	P	02 54 44.1	+1.1
	comp=Z,0.8nm,0.7s,baz=137,slow=5.3,SNR=15						
KEST	Kesra	93.66	53	LR	LR	03 37 39.2	
	comp=Z,85nm,20.3s,baz=227,slow=36						
URZ	Urewera	94.17	227	LR	LR	03 28 32.8	
	comp=Z,204nm,20.4s,baz=37,slow=30						
RPZ	Rata Peaks	95.32	220	LR	LR	03 30 24.0	
	comp=Z,232nm,20.2s,baz=50,slow=30						
H11S2	WAKE ISLAND Hy	125.62	279	T	T	05 20 11.1	
	baz=101,slow=74,SNR=73						
H11S1	WAKE ISLAND Hy	125.63	279	T	T	05 20 11.7	
	baz=101,slow=74,SNR=46						
H11S3	WAKE ISLAND Hy	125.64	279	T	T	05 20 12.4	
	baz=101,slow=74,SNR=49						
H11N3	WAKE ISLAND Hy	125.66	281	T	T	05 20 08.7	
	baz=100,slow=74,SNR=16						
H11N2	WAKE ISLAND Hy	125.67	281	T	T	05 20 09.0	
	baz=100,slow=74,SNR=8.0						
H11N1	WAKE ISLAND Hy	125.67	281	T	T	05 20 08.1	
	baz=100,slow=74,SNR=6.3						
BOOM	Boomskoye usch	143.87	43		PKPdf	03 01 24.8	-1.5
MKAR	Makanchi Array	145.04	33	PKP	PKPdf	03 01 28.2	+0.2

	comp=Z,2.3nm,1.0s,baz=42,slow=4.6,SNR=3.6						
SONM	**Songino Array**	**151.59**	**4**	PKPbc	**PKiKP**	**03 01 46.8**	**+1.4**
	comp=Z,0.9nm,0.6s,baz=315,slow=2.1,SNR=5.0						

*NIED **17** 02:52:00, 38°.00N×143°.90E, h8^{km}, Mw4.3 Best double couple: $M_0$2.91000×10^{15} NP1:ϕ_s218.00000°, δ63.00000°, λ-88.00000°. NP2:ϕ_s33.00000°, δ27.00000°, λ-94.00000°.*
*JMA **17** 02:52:20.9±0.2, 37°.98N×143°.94E, h45^{km}, M4.6*
*MOS **17** 02:52:20.7±1.7, 38°.09N×144°.11E, h35^{km}, mb4.5/18, Error ellipse: s-maj=8.8km s-min=4.9km az=98.6*
*NEIC **17** 02:52:21.8±2.1, 37°.83N±0°.06×144°.1E±0°.1, h35^{km}±7^{km}, mb4.6/29, Error ellipse: s-maj=13.5km s-min=8.1km az=106.0*
*IDC **17** 02:52:22.8±0.8, 37°.78N×144°.15E, h35^{km}±5^{km}, mb4.0/14, mb1 4.2/19, mb1mx4.0/36, mbtmp4.3/19, ML4.1/4, MS3.4/9, Ms1 3.4/9, ms1mx3.1/54, Error ellipse: s-maj=17.4km s-min=13.2km az=118.0*
ISC 17 02:52:21.2±0.8**, 37°.92N**±0°.05×**144°.17E**±0°.05**, h29**^{km}±5^{km}**, n159, σ2^s.75**/186**, mb4.5**/46**, MS3.5**/6**, 11C-3D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.16**	**281**	P	**Pn**	**02 52 52.9**	**-2.3**
JIKH				S	**Sn**	**02 53 16.0**	**-5.1**
OFUJ	**Ofunato**	**2.27**	**301**	P	**Pn**	**02 52 54.5**	**-2.3**
OFUJ				S	**Sn**	**02 53 19.9**	**-3.9**
JIO	**Ouri**	**2.28**	**284**	P	**Pn**	**02 52 54.7**	**-2.2**
JIO				S	**Sn**	**02 53 19.1**	**-4.9**
JKMT	**Kesennumamotoy**	**2.29**	**294**	P	**Pn**	**02 52 54.8**	**-2.2**
JKMT				S	**Sn**	**02 53 19.9**	**-4.4**
JMK	**Ichinoseki**	**2.53**	**295**	P	**Pn**	**02 52 58.3**	**-2.0**
JMK				S	**Sn**	**02 53 26.4**	**-3.7**
JOM	**Ohasama**	**2.73**	**305**	P	**Pn**	**02 53 01.3**	**-1.7**
JOM				S	**Sn**	**02 53 32.2**	**-2.9**
JFT	**Otama**	**3.06**	**264**	P	**Pn**	**02 53 06.2**	**-1.4**
JFT				S	**Sn**	**02 53 39.7**	**-3.6**
JYK	**Kaneyama**	**3.15**	**290**	P	**Pn**	**02 53 07.4**	**-1.4**
JYK				S	**Sn**	**02 53 42.7**	**-2.7**
JANG	**Nango**	**3.20**	**321**	P	**Pn**	**02 53 07.2**	**-2.3**
JANG				*e*S	**Sn**	**02 53 41.5**	**-5.2**
JNS	**Sasagawa**	**3.84**	**270**	P	**Pn**	**02 53 17.3**	**-1.0**
BSO1	**Boso 1**	**4.16**	**219**	P	**Pn**	**02 53 20.2**	**-1.9**
BSO1				S	**Sn**	**02 54 06.8**	**-2.6**
ERM	**Erimo**	**4.16**	**350**	P	**Pn**	**02 53 21.9**	**-0.8**
ERM						02 54 06.0	
ERM	**Erimo**	**4.16**	**350**		**Pn**	**02 53 21.9**	**-0.8**
ERM				Sn	**Sn**	**02 54 06.0**	**-4.3**
JOT	**Ohata**	**4.21**	**326**	P	**Pn**	**02 53 22.0**	**-1.4**
JOT				*e*S	**Sn**	**02 54 06.2**	**-5.3**
JRY	**Ryogami san**	**4.62**	**247**	P	**Pn**	**02 53 27.3**	**-1.8**
JRY				S	**Sn**	**02 54 15.5**	**-6.3**
JKB	**Kayabe**	**4.64**	**330**	P	**Pn**	**02 53 28.6**	**-0.6**
JKB				*e*S	**Sn**	**02 54 16.1**	**-5.9**
JCH	**Churui**	**4.73**	**353**	P	**Pn**	**02 53 28.6**	**-1.9**
JCH				S	**Sn**	**02 54 19.2**	**-5.1**
JOD2	**Odawara 2**	**4.87**	**239**	P	**Pn**	**02 53 30.6**	**-1.9**
JOD2				*e*S	**Sn**	**02 54 21.9**	**-6.0**
MJAR	**Matsushiro Arr**	**4.95**	**256**	Pn	**Pn**	**02 53 32.8**	**-0.7**
	2.0nm,0.3s,baz=80,slow=15,SNR=53						
MJAR				LR	LR	02 55 53.5	
	comp=Z,187nm,19.8s,baz=95,slow=43						
MAJO	**Matsushiro**	**4.95**	**256**	*c i*P	**Pn**	**02 53 33.4**	**-0.2**
MAJO	**Matsushiro**	**4.95**	**256**		**Pn**	**02 53 33.5**	**-0.1**
MAT	**Matsushiro**	**4.95**	**256**	P	**Pn**	**02 53 33.5**	**-0.1**
MAT				S	**Sn**	**02 54 28.6**	**-1.3**
MJB9	**Matsu-Tunnel**	**4.95**	**256**		**Pn**	**02 53 33.5**	**0.0**
JOSM	**Okushiri--Mats**	**5.50**	**321**	P	**Pn**	**02 53 40.1**	**-1.0**
JOSM				*e*S	**Sn**	**02 54 37.5**	**-5.8**
NEM2	**Nemuro 2**	**5.57**	**12**	P	**Pn**	**02 53 38.9**	**-3.1**
NEM2				*e*S	**Sn**	**02 54 38.6**	**-6.4**
NMR	**Nemuro--Hokkai**	**5.57**	**12**	⇓*i*P	**Pn**	**02 53 38.8**	**-3.2**
NMR				*i* S	**Sn**	**02 54 38.6**	**-6.4**
GLVR	**Golovnino**	**5.90**	**10**	⇑*i*P	**Pn**	**02 53 43.5**	**-3.1**
GLVR				*e*S	**Sn**	**02 54 47.6**	**-5.6**
GLVR				pmax	pmax		
	comp=Z,157nm,0.7s						
GLVR				pmax	pmax		
	comp=N,78nm,0.4s						
GLVR				pmax	pmax		
	comp=E,104nm,0.5s						
GLVR				smax	smax		
	comp=N,359nm,0.3s						
GLVR				smax	smax		
	comp=E,514nm,0.5s						
JHJ2	**Mitsune**	**5.97**	**218**	Pn	**Pn**	**02 53 46.2**	**-1.3**
JHJ	**Hachijo jima 2**	**5.98**	**218**	Pn	**Pn**	**02 53 45.8**	**-1.9**
	comp=E,21nm,0.3s,baz=313,slow=22,SNR=11						
JHJ				Sn	**Sn**	**02 54 47.6**	**-7.5**
	comp=E,54nm,0.3s,baz=242,slow=24,SNR=6.8						
JTKR	**Abashiri--Toko**	**6.05**	**358**	P	**Pn**	**02 53 46.1**	**-2.5**
JTKR				*e*S	**Sn**	**02 54 51.3**	**-5.5**
GRPR	**Tuman**	**6.19**	**11**	*e*P	**Pn**	**02 53 47.1**	**-3.4**
GRPR				*e*S	**Sn**	**02 54 54.5**	**-5.7**
GRPR				pmax	pmax		
	comp=Z,166nm,0.5s						
GRPR				smax	smax		
	comp=E,266nm,0.3s						
GRPR				smax	smax		
	comp=N,615nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**6.24**	**11**	⇑*i*P	**Pn**	**02 53 48.6**	**-2.6**
YUK				*i* S	**Sn**	**02 54 56.1**	**-5.4**
YUK				pmax	pmax		
	comp=Z,211nm,0.4s						
YUK				pmax	pmax		
	comp=E,40nm,0.3s						
YUK				pmax	pmax		
	comp=N,56nm,0.2s						
YUK				smax	smax		
	comp=N,396nm,0.4s						
YUK				smax	smax		
	comp=E,267nm,0.4s						
SHO	**Shikotan**	**6.28**	**18**	⇑*i*P	**Pn**	**02 53 48.3**	**-3.4**
SHO				*i* S	**Sn**	**02 54 54.8**	**-7.6**
SHO				pmax	pmax		
	comp=Z,72nm,0.4s						
SHO				pmax	pmax		
	comp=E,39nm,0.5s						
SHO				pmax	pmax		
	comp=N,31nm,0.4s						
SHO				smax	smax		
	comp=N,166nm,0.5s						
SHO				smax	smax		
	comp=E,161nm,0.3s						
INU	**Inuyama**	**6.29**	**248**		**Pn**	**02 53 50.9**	**-1.2**
JKA	**Kamikawa-asahi**	**6.30**	**350**		**Pn**	**02 53 51.7**	**-0.4**
JKA					**Sn**	**02 54 59.6**	**-3.4**
ASAJ	**Asahikawa**	**6.30**	**350**	Pn	**Pn**	**02 53 51.7**	**-0.4**
	comp=E,12nm,0.3s,baz=194,slow=11,SNR=34						
ASAJ				Sn	**Sn**	**02 54 59.6**	**-3.4**
	comp=E,4.8nm,0.3s,baz=60,slow=27,SNR=8.4						
KUR	**Kuril'sk**	**7.81**	**20**	*e*P	**Pn**	**02 54 09.1**	**-3.7**
KUR				*e*S	**Sn**	**02 55 32.4**	**-7.8**
KUR				pmax	pmax		
	comp=E,21nm,0.5s						
KUR				pmax	pmax		
	comp=Z,42nm,0.5s						
KUR				smax	smax		
	comp=E,81nm,0.6s						
KUR				smax	smax		
	comp=N,63nm,0.5s						
YSS	**Yuzh-Sakhalins**	**9.09**	**354**	*e*P	**Pn**	**02 54 28.7**	**-1.6**
YSS				*e*S	**Sn**	**02 56 06.5**	**-5.0**
YSS				MLR	MLR		
	comp=N,100nm,20.0s						
YSS				MLR	MLR		
	comp=Z,200nm,20.0s						
TEY	**Ternei**	**9.09**	**324**	⇓*e*P	**Pn**	**02 54 30.0**	**-0.3**
TEY				pmax	pmax		
	comp=N,30nm,0.6s						
TEY				pmax	pmax		
	comp=E,20nm,0.6s						
TEY				pmax	pmax		
	comp=Z,30nm,0.6s						
JCJ	**Chichijima**	**10.92**	**189**	Pn	**Pn**	**02 54 52.9**	**-2.6**
	comp=Z,6.3nm,0.3s,baz=74,slow=22,SNR=6.3						
JCJ				Sn	Sn	02 56 43.6	-13
	comp=Z,9.1nm,0.3s,baz=289,slow=22,SNR=4.6						
USA0B	**Ussuriysk Arra**	**11.12**	**308**	P	**Pn**	**02 54 58.3**	**+0.1**
USA0B	**Ussuriysk Arra**	**11.12**	**308**	Pn	**Pn**	**02 54 58.3**	**+0.1**
USRK	**Ussuriysk Ar.**	**11.12**	**308**	Pn	**Pn**	**02 54 58.6**	**+0.4**
	baz=113,slow=13,SNR=12						
USRK				LR	LR	02 58 59.7	
	comp=Z,114nm,18.4s,baz=90,slow=35						
MDJ	**Mudanjiang**	**12.83**	**306**	P	**Pn**	**02 55 21.8**	**+0.3**
MDJ	**Mudanjiang**	**12.83**	**306**		**Pn**	**02 55 20.8**	**-0.7**
KSRS	**Korea Array**	**12.88**	**273**	Pn	**Pn**	**02 55 22.9**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=85,slow=13,SNR=10						
KSRS				LR	LR	03 00 27.6	
	comp=Z,58nm,20.3s,baz=65,slow=38						
KLR	**Kul'dur**	**14.43**	**326**	Pn	**Pn**	**02 55 42.1**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=130,slow=12,SNR=10						
KLR				LR	LR	03 01 56.5	
	comp=Z,294nm,18.1s,baz=68,slow=40						
KLR	**Kul'dur**	**14.43**	**326**	⇑*i*P	**Pn**	**02 55 41.5**	**-1.7**
PETK	**Petropavlovsk-**	**17.86**	**27**	P	**Pn**	**02 56 27.0**	**-0.2**
PETK	**Petropavlovsk-**	**17.86**	**27**	Pn	**Pn**	**02 56 27.0**	**-0.2**
ZEA	**Zeya**	**19.64**	**329**	*e*P	**P**	**02 56 46.3**	**-1.1**
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
HIA	**Hailar**	**20.91**	**311**	P	**P**	**02 56 58.9**	**-2.3**
HIA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HIA	**Hailar**	**20.91**	**311**	P	**P**	**02 56 58.9**	**-2.3**
NJ2	**Nanjing**	**21.52**	**262**	*e*P	**P**	**02 57 07.3**	**-0.5**
BJI	**Beijing**	**21.83**	**284**	*e*P	**P**	**02 57 12.3**	**+1.2**
BJT	**Baijiatuau**	**21.84**	**284**	P	**P**	**02 57 12.2**	**+1.0**
BJT				pmax	pmax		
	comp=Z,16nm,0.9s						
BJT	**Baijiatuau**	**21.84**	**284**	P	**P**	**02 57 12.2**	**+1.0**
BJT				IAmb	IAmb	02 57 25.6	
	comp=Z,16nm,0.9s						
MA2	**Magadan**	**22.08**	**9**	P	**P**	**02 57 14.1**	**+0.5**
MA2				pmax	pmax		
	comp=Z,13nm,1.5s						
MA2	**Magadan**	**22.08**	**9**	P	**P**	**02 57 14.1**	**+0.5**
HHC	**Hu-ho-hao-te**	**25.29**	**287**	*e*P	**P**	**02 57 46.0**	**+0.9**
SEY	**Seymchan**	**25.54**	**9**	P	**P**	**02 57 49.1**	**+2.1**
	comp=Z,4.0nm,0.6s,baz=190,slow=7.2,SNR=12						
SEY	**Seymchan**	**25.54**	**9**	*i* P	**P**	**02 57 48.8**	**+1.8**
YAK	**Yakutsk**	**25.75**	**344**	*i* P	**P**	**02 57 50.8**	**+1.9**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**26.81**	**126**	T	T	03 26 12.8	
	baz=318,slow=75,SNR=19						
H11N1	**WAKE ISLAND Hy**	**26.82**	**126**	T	T	03 26 08.9	
	baz=318,slow=75,SNR=11						
H11N3	**WAKE ISLAND Hy**	**26.83**	**126**	T	T	03 25 56.7	
	baz=318,slow=75,SNR=12						
BOD	**Bodaibo**	**28.00**	**325**	*e*P	**P**	**02 58 07.9**	**-1.4**
BOD				pmax	pmax		
	comp=Z,9.0nm,2.2s						
XAN	**Xi'an**	**28.68**	**273**	P	P	02 58 26.9	+11
XAN				pP	pwP	02 58 33.4	+2.2
ULN	**Ulaanbaatar**	**28.70**	**302**	P	**P**	**02 58 13.7**	**-2.1**
ULN				pmax	pmax		
	comp=Z,13nm,1.4s						
ULN	**Ulaanbaatar**	**28.70**	**302**	P	**P**	**02 58 13.7**	**-2.1**
ULN				IAmb	IAmb	02 58 22.3	
	comp=Z,13nm,1.4s						
SZP	**Santa**	**29.05**	**232**	P	**P**	**02 58 15.8**	**-3.1**
SONM	**Songino Array**	**29.14**	**302**	P	**P**	**02 58 22.7**	**+3.0**
	comp=Z,1.0nm,0.5s,baz=98,slow=9.2,SNR=11						
SONM				LR	LR	03 10 11.5	
	comp=Z,94nm,21.7s,baz=26,slow=37						
SONM	**Songino Array**	**29.14**	**302**	P	**P**	**02 58 18.4**	**-1.2**
SONM				pmax	pmax		
	comp=Z,5.0nm,1.2s						
SONM	**Songino Array**	**29.14**	**302**	P	**P**	**02 58 18.4**	**-1.2**
TLY	**Talaya**	**31.44**	**309**	*i* P	**P**	**02 58 42.8**	**+3.0**
TLY				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZAK	**Zakamensk**	**31.47**	**307**	*e*P	**P**	**02 58 42.9**	**+2.7**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LZH	**Lanzhou**	**32.08**	**279**	*e*P	**P**	**02 58 47.8**	**+2.0**
LZH				pP	pwP	02 58 58.8	-2.6
LZH				sP	sP	02 59 03.0	+8.2
LZH				PP	**PnPn**	**02 59 42.4**	**-9.2**
BILL	**Bilibino**	**32.58**	**15**	⇓*e*P	**P**	**02 58 49.5**	**-0.1**
BILL				*e*		02 59 56.5	
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BILL				MLR	MLR		
	comp=Z,63nm,17.0s						
GTA	**Gaotai**	**34.40**	**287**	*e*P	**P**	**02 59 09.0**	**+3.0**
GTA				pP	pwP	02 59 18.8	-2.8
GTA				sP	sP	02 59 22.8	+7.8
TIXI	**Tiksi**	**34.70**	**352**	*i* P	**P**	**02 59 09.2**	**+1.2**
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.1s						
WMQ	**Urumqi**	**42.40**	**297**	*e*P	**P**	**03 00 13.8**	**+0.8**
ZAA0	**Zalesovo Array**	**42.95**	**312**	P	**P**	**03 00 17.5**	**+0.3**
ZALV	**Zalesovo Beam**	**42.95**	**312**	PcP	**PcP**	**03 02 08.1**	**+0.7**
	comp=Z,1.6nm,0.4s,baz=110,slow=3.0,SNR=3.5						
ZALV	**Zalesovo Beam**	**42.95**	**312**	P	**P**	**03 00 17.6**	**+0.4**
ZALV	**Zalesovo Beam**	**42.95**	**312**	P	**P**	**03 00 17.6**	**+0.4**
NRIK	**Noril'sk**	**43.40**	**334**	LR	LR	03 18 59.9	
	comp=Z,75nm,20.0s,baz=56,slow=37						
MKAR	**Makanchi Array**	**45.51**	**302**	P	**P**	**03 00 40.4**	**+2.5**
	comp=Z,3.8nm,0.7s,baz=86,slow=9.2,SNR=11						
MKAR	**Makanchi Array**	**45.51**	**302**	*i* P	**P**	**03 00 40.7**	**+2.8**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MKAR	**Makanchi Array**	**45.51**	**302**	P	**P**	**03 00 38.1**	**+0.2**
MAKZ	**Makanchi**	**45.71**	**302**	P	**P**	**03 00 38.8**	**-0.7**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MAKZ	**Makanchi**	**45.71**	**302**	P	**P**	**03 00 38.8**	**-0.7**
MAKZ				IAmb	IAmb	03 00 47.6	
	comp=Z,6.7nm,0.9s						
KURK	**Kurchatov**	**47.11**	**308**	*ce*P	**P**	**03 00 50.5**	**+0.1**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KURK	**Kurchatov**	**47.11**	**308**	P	**P**	**03 00 51.0**	**+0.6**
KURK				IAmb	IAmb	03 01 10.2	
	comp=Z,9.9nm,0.8s						
IL31		**47.57**	**33**	P	**P**	**03 00 54.3**	**+0.6**
IL31				IAmb	IAmb	03 00 55.8	
	comp=Z,6.5nm,0.8s						
ILAR	**Eielson Array**	**47.57**	**33**	P	**P**	**03 00 55.0**	**+1.3**
	comp=Z,4.8nm,0.7s,baz=261,slow=6.4,SNR=64						
ILAR	**Eielson Array**	**47.57**	**33**	P	**P**	**03 00 54.5**	**+0.8**
BMAR	**Burnt Mountain**	**48.49**	**29**	P	**P**	**03 01 01.8**	**+0.8**
SCRK	**Sand Creek**	**48.86**	**34**	IAmb	IAmb	03 01 05.5	
	comp=Z,9.6nm,1.2s						
MCARA	**McCarthy VSAT**	**49.54**	**37**	P	**P**	**03 01 08.7**	**-0.2**
BCAR	**Beaver Creek A**	**49.92**	**35**	P	**P**	**03 01 13.9**	**+2.0**
BRVK	**Borovoye**	**51.65**	**312**	*ce*P	**P**	**03 01 26.4**	**+1.4**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AAK	**Ala-Archa**	**51.99**	**299**	*ce*P	**P**	**03 01 28.7**	**+0.8**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.7s						
KSH	**Kashi**	**52.04**	**294**	P	**P**	**03 01 32.0**	**+3.7**
KSH				pP	pwP	03 01 41.9	-2.2
KSH				PcP	**PcP**	**03 02 41.9**	**+1.7**
KSH				PcS	**PcS**	**03 06 40.6**	**+2.1**
KSH				S	**S**	**03 08 52.8**	**+2.6**
KSH	**Kashi**	**52.04**	**294**	SS	**SS**	**03 12 28.3**	**+1.2**
INK	**Inuvik**	**52.59**	**28**	P	**P**	**03 01 33.5**	**+1.8**
	comp=Z,2.3nm,0.7s,baz=302,slow=7.1,SNR=7.9						
KK31	**Karatay Array**	**54.57**	**300**	P	**P**	**03 01 45.8**	**-0.9**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KK31	**Karatay Array**	**54.57**	**300**	P	**P**	**03 01 45.8**	**-0.9**
KKAR	**Karatay Array**	**54.57**	**300**	P	**P**	**03 01 46.3**	**-0.4**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KKAR	**Karatay Array**	**54.57**	**300**	P	**P**	**03 01 46.8**	**+0.1**
KKAR	**Karatay Array**	**54.57**	**300**	P	**P**	**03 01 46.3**	**-0.4**
KKAR				IAmb	IAmb	03 01 58.3	
	comp=Z,2.6nm,0.9s						
C36M	**Paulatuk**	**55.70**	**25**	IAmb	IAmb	03 01 56.3	
	comp=Z,4.0nm,0.7s						
ARU	**Arti**	**57.14**	**319**	LR	LR	03 29 26.4	
	comp=Z,64nm,19.1s,baz=146,slow=39						
ARU	**Arti**	**57.14**	**319**	*c i*P	**P**	**03 02 05.8**	**+0.9**
ARU						03 04 07.0	
ARU				S	**S**	**03 10 02.8**	**+4.8**
ARU				SS	**SS**	**03 13 51.8**	**+5.3**
ARU				pmax	pmax		
	comp=Z,13nm,1.0s						
WB0	**Warramunga Arr**	**58.11**	**191**	P	**P**	**03 02 10.9**	**-1.1**
WRAB	**Tennant Creek**	**58.28**	**191**	*ce*P	**P**	**03 02 13.2**	**0.0**
WRAB				pmax	pmax		
	comp=Z,31nm,1.0s						
WB2	**Warramunga Arr**	**58.29**	**191**		**PcP**	**03 02 59.6**	**-4.6**
WRA	**Warramunga Arr**	**58.29**	**191**	P	**P**	**03 02 13.0**	**-0.3**
	comp=Z,22nm,0.7s,baz=11,slow=7.1,SNR=80						
WRA	**Warramunga Arr**	**58.29**	**191**	P	**P**	**03 02 11.9**	**-1.4**
ABKAR	**Akbulak array**	**59.03**	**311**	P	**P**	**03 02 18.6**	**+0.3**
ABKAR	**Akbulak array**	**59.03**	**311**	IAmb	IAmb	03 02 31.2	
	comp=Z,4.9nm,0.8s						
RES	**Resolute Bay**	**61.19**	**15**	P	**P**	**03 02 33.7**	**+1.1**
RES				pmax	pmax		
	comp=Z,7.0nm,1.3s						
RES	**Resolute Bay**	**61.19**	**15**	P	**P**	**03 02 33.6**	**+1.1**
RES				IAmb	IAmb	03 02 35.0	
	comp=Z,7.1nm,1.3s						
YKA	**Yellowknife Ar**	**61.93**	**31**	P	**P**	**03 02 38.8**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=299,slow=6.2,SNR=30						
AS31	**Alice Springs**	**62.01**	**191**	P	**P**	**03 02 37.3**	**-1.5**
AS31				IAmb	IAmb	03 02 40.7	
	comp=Z,2.0nm,0.6s						
ASAR	**Alice Springs**	**62.02**	**191**	P	**P**	**03 02 38.8**	**0.0**
	comp=Z,4.6nm,0.7s,baz=9.9,slow=7.8,SNR=46						
ASAR	**Alice Springs**	**62.02**	**191**	P	**P**	**03 02 38.3**	**-0.4**
FINES	**FINESS Array B**	**69.03**	**333**	P	**P**	**03 03 24.5**	**+0.8**
	comp=Z,3.1nm,0.8s,baz=40,slow=7.3,SNR=5.3						
FINES				pP	**sP**	**03 03 36.2**	**+3.0**
	comp=Z,2.1nm,0.6s,baz=36,slow=10,SNR=2.9						
FINES				LR	LR	03 35 28.9	
	comp=Z,56nm,19.4s,baz=38,slow=37						
KIV	**Kislovodsk**	**71.96**	**312**	*e*P	**P**	**03 03 40.3**	**-1.7**
KIV				pmax	pmax		
	comp=Z,26nm,1.1s						
FCC	**Fort Churchill**	**72.21**	**28**	P	**P**	**03 03 44.1**	**+1.0**
FCC				pmax	pmax		
	comp=Z,17nm,1.4s						
FCC	**Fort Churchill**	**72.21**	**28**	P	**P**	**03 03 44.1**	**+1.0**
KVN	**Kaiserville**	**72.47**	**54**	IAmb	IAmb	03 03 48.5	
	comp=Z,8.4nm,1.3s						
NVAR	**Mina Array Bea**	**72.70**	**55**	P	**P**	**03 03 48.8**	**+2.1**
	comp=Z,2.2nm,0.8s,baz=281,slow=6.5,SNR=14						
NVAR	**Mina Array Bea**	**72.70**	**55**	P	**P**	**03 03 48.6**	**+1.9**
NOA	**NORSAR Array B**	**74.19**	**338**	P	**P**	**03 03 55.6**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=40,slow=5.8,SNR=2.7						
NOA				pP	**PcP**	**03 04 07.4**	**-2.3**
	comp=Z,1.1nm,0.9s,baz=42,slow=4.5,SNR=1.5						
NOA				LR	LR	03 40 59.7	
	comp=Z,18nm,19.1s,baz=285,slow=39						
AKASG	**Malin Array Be**	**74.91**	**323**	P	**P**	**03 03 59.3**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=44,slow=6.1,SNR=7.9						
AKASG				pP	**PcP**	**03 04 11.4**	**-1.5**
	comp=Z,1.5nm,0.5s,baz=46,slow=6.1,SNR=6.6						
AKASG	**Malin Array Be**	**74.91**	**323**	*i* P	**P**	**03 03 59.0**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PD31	**Pinedale Array**	**75.47**	**47**	P	**P**	**03 04 02.1**	**-0.8**
PDAR	**Pinedale Array**	**75.47**	**47**	P	**P**	**03 04 04.0**	**+1.2**
	comp=Z,1.6nm,0.7s,baz=270,slow=2.4,SNR=18						
PDAR	**Pinedale Array**	**75.47**	**47**	P	**P**	**03 04 03.8**	**+1.0**
ULM	**Lac du Bonnet**	**77.54**	**35**	P	**P**	**03 04 15.0**	**+1.0**
	comp=Z,1.4nm,0.5s,baz=300,slow=5.7,SNR=5.3						
BURAR	**Bucovina Array**	**78.95**	**323**	⇑P	**P**	**03 04 23.4**	**+1.4**
VYHS	**Vyhne**	**81.21**	**327**	*e*P	**P**	**03 04 35.6**	**+1.5**
VYHS	**Vyhne**	**81.21**	**327**	*e*P	**P**	**03 04 35.6**	**+1.5**
CLL	**Collm**	**81.39**	**331**	*e*P	**P**	**03 04 36.0**	**+1.0**
OBKA	**Obir**	**84.59**	**328**	*i* P	**P**	**03 04 47.6**	**-4.1**
	comp=Z,4.3nm,1.4s						
WATA	**Walderalm**	**85.14**	**330**	*i* PcP	**P**	**03 04 55.1**	**+0.4**
	comp=Z,2.6nm,0.8s						
WTTA	**Wattenberg**	**85.18**	**330**	*i* PcP	**P**	**03 04 57.7**	**+2.9**
	comp=Z,6.5nm,1.6s						
MOTA	**Moosalm**	**85.33**	**330**	*i* PcP	**P**	**03 04 56.4**	**+0.8**
	comp=Z,4.0nm,1.2s						
RETA	**Reutte**	**85.34**	**330**	*e*P	**P**	**03 04 53.0**	**-2.5**
	comp=Z,2.9nm,0.9s						
TXAR	**Lajitas Array**	**87.84**	**54**	P	**P**	**03 05 09.4**	**+1.3**
	comp=Z,0.5nm,0.6s,baz=310,slow=3.8,SNR=7.9						
TXAR	**Lajitas Array**	**87.84**	**54**	P	**P**	**03 05 08.8**	**+0.7**
TXAR	**Lajitas Array**	**87.84**	**54**	P	**P**	**03 05 08.8**	**+0.7**
TORD	**Torodi Ar. Bea**	**118.20**	**318**	PKP	**PKiKP**	**03 11 06.4**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=24,slow=3.8,SNR=4.1						
TORD				pPKP	**sPKPdf**	**03 11 18.3**	**+2.5**
	comp=Z,0.3nm,0.6s,baz=13,slow=3.5,SNR=1.3						
NVL	**N'lazarevskaya**	**138.93**	**202**	*e*PKIKP	**PKPdf**	**03 11 43.3**	**-0.2**
NVL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
VNA2	**Neumayer--Watz**	**143.77**	**195**	PKPdf	PKPbc	03 11 50.2	+0.3
VNA3	**Neumayer Olymp**	**143.97**	**194**	PKPdf	PKPbc	03 11 50.4	-0.2
VNA1	**Neumayer--Stat**	**144.16**	**195**	PKPdf	PKPbc	03 11 51.3	+0.2
SIV	**San Ignacio**	**148.82**	**52**	PKPbc	**PKiKP**	**03 12 07.3**	**-0.5**
	comp=Z,3.1nm,0.8s,baz=275,slow=1.5,SNR=10						
CFA	**Coronel Fontan**	**152.74**	**86**	PKPbc	**PKiKP**	**03 12 16.1**	**+0.6**
	comp=Z,1.8nm,0.5s,baz=291,slow=2.5,SNR=6.6						

*GUC **17** 03:04:41.5±0.5, 19°.95S×70°.75W, h38^{km}±3^{km}, ML3.5*
*IDC **17** 03:04:44.6±7.8, 19°.76S×70°.56W, h31^{km}±58^{km}, mb3.5/4, mb1 3.8/6, mb1mx3.5/39, mbtmp3.7/6, ML3.4/2, MS3.3/1, Ms1 3.3/1, ms1mx2.6/20, Error ellipse: s-maj=36.1km s-min=27.4km az=71.0*
ISC 17 03:04:42.1±1.8**, 19°.84S**±0°.05×**70°.68W**±0°.08**, h19**^{km}±6^{km}**, n21, σ0^s.76**/19**, mb3.8**/3**, 1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	**IPOC Station P**	**0.96**	**85**	*i* P	**Pb**	**03 05 00.2**	**-0.2**
PB11				*i* S	**Sn**	**03 05 14.6**	**+0.4**
PB11				IAML		03 05 15.8	
	comp=N,6µm,0.3s						
PB12	**IPOC Station P**	**1.26**	**15**	⇓*i*P	**Pn**	**03 05 05.1**	**+0.2**
PB12				*i* S	**Sg**	**03 05 23.9**	**+0.6**
PB12				IAML		03 05 29.5	
	comp=E,1µm,0.3s						
PB08	**IPOC Station P**	**1.46**	**102**	*i* P	**Pn**	**03 05 07.7**	**-0.2**
PB08				*i* S	**Sb**	**03 05 28.2**	**+0.8**
PB08				IAML		03 05 30.7	
	comp=N,711nm,0.4s						
PB01	**IPOC Station P**	**1.63**	**137**	*e*P	**Pn**	**03 05 09.0**	**-1.0**
PB01				*i* S	**Sn**	**03 05 29.8**	**-0.8**
PB01				IAML		03 05 33.7	
	comp=N,1µm,0.3s						
PB16	**IPOC Station P**	**1.86**	**37**	*e*P	**Pb**	**03 05 15.5**	**-0.5**
PB16				*i* S	**Sg**	**03 05 42.0**	**-0.4**
PB16				IAML		03 05 44.4	
	comp=N,496nm,0.4s						
LVC	**Limon Verde**	**3.21**	**149**	Pn	**Pn**	**03 05 32.3**	**+0.4**
	comp=N,7.2nm,0.3s,baz=313,slow=10.0,SNR=13						
LVC				Sn	**Sn**	**03 06 10.7**	**+0.8**
	comp=N,9.7nm,0.3s,baz=107,slow=19,SNR=7.2						
LPAZ	**La Paz**	**4.28**	**35**	Pn	**Pb**	**03 05 55.6**	**-1.7**
	comp=N,0.6nm,0.3s,baz=231,slow=5.9,SNR=9.3						
SIV	**San Ignacio**	**9.91**	**69**	Pn	**Pn**	**03 07 04.6**	**+0.9**
	comp=N,0.2nm,0.3s,baz=279,slow=10.0,SNR=6.8						
PLCA	**Paso Flores**	**20.82**	**180**	P	Pn	03 09 25.4	+0.2
	comp=N,2.9nm,1.1s,baz=20,slow=9.6,SNR=2.9						
ROSC	**El Rosal**	**24.79**	**351**	LR	LR	03 21 10.6	
	comp=N,63nm,18.6s,baz=95,slow=40						
TXAR	**Lajitas Array**	**58.33**	**326**	P	**P**	**03 14 36.3**	**0.0**
	comp=N,0.3nm,0.6s,baz=139,slow=8.4,SNR=2.9						
TORD	**Torodi Ar. Bea**	**78.38**	**71**	P	**P**	**03 16 41.2**	**-0.8**
	comp=N,1.4nm,0.8s,baz=246,slow=4.7,SNR=10.0						
YKA	**Yellowknife Ar**	**89.09**	**341**	P	**P**	**03 17 36.1**	**+0.4**
	comp=N,0.3nm,0.6s,baz=137,slow=4.7,SNR=7.6						
H11S2	**WAKE ISLAND Hy**	**126.01**	**279**	T	T	05 42 10.1	
	baz=102,slow=74,SNR=25						
H11S1	**WAKE ISLAND Hy**	**126.02**	**279**	T	T	05 42 10.8	
	baz=102,slow=74,SNR=22						
H11S3	**WAKE ISLAND Hy**	**126.03**	**279**	T	T	05 42 10.2	
	baz=102,slow=74,SNR=28						
H11N3	**WAKE ISLAND Hy**	**126.05**	**280**	T	T	05 42 10.7	
	baz=102,slow=74,SNR=12						
H11N2	**WAKE ISLAND Hy**	**126.07**	**280**	T	T	05 42 16.4	
	baz=102,slow=74,SNR=12						
H11N1	**WAKE ISLAND Hy**	**126.07**	**280**	T	T	05 42 14.6	
	baz=102,slow=74,SNR=13						
MKAR	**Makanchi Array**	**145.21**	**33**	PKPbc	**PKPdf**	**03 24 18.6**	**0.0**
	comp=N,1.4nm,0.6s,baz=327,slow=4.3,SNR=10						
SONM	**Songino Array**	**151.97**	**4**	PKPbc	**PKiKP**	**03 24 36.7**	**+0.1**
	comp=N,0.7nm,0.6s,baz=292,slow=0.9,SNR=3.8						

*IDC **17** 03:09:21.8±4.7, 15°.66N×98°.28W, h0^{km}, mb3.6/6, mb1 3.9/8, mb1mx3.7/43, mbtmp3.6/8, ML3.1/2, MS4.1/1, Ms1 4.0/1, ms1mx2.8/43, Error ellipse: s-maj=83.8km s-min=19.8km az=177.0*
*NEIC **17** 03:09:23.6±3.7, 15°.89N±0°.09×98°.43W±0°.06, h14^{km}±7^{km},*

Error ellipse: s-maj=14.1km s-min=5.7km az=205.0

MEX ***17*** *03:09:25.3±0.3, 15°.90N×98°.42W, h8^{km}±5^{km}, MD4.1*

ISC 17 03:09:23.2±2.1**, 15°.94N**±0°.06×**98°.39W**±0°.04**, h2**^{km}±12^{km}**, n40, σ2^{s}04**/57**, mb3.6**/6**, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOIG	Yosondua	1.22	42	*e*P	Pg	03 09 45.6	-0.9
YOIG				*e*S	Sg	03 10 01.8	-0.5
TLIG	Tlapa	1.62	354	*e*P	Pn	03 09 51.4	-1.5
TLIG				*i* S	Sn	03 10 11.9	-2.5
TLIG	Tlapa	1.62	354		Pn	03 09 51.4	-1.5
TLIG				Sn	Sn	03 10 13.9	-0.5
TLIG	Tlapa	1.62	354		Pn	03 09 51.4	-1.5
TLIG					Sn	03 10 11.9	-2.5
VHO	Vista Hermosa	1.94	55	*e*P	Pn	03 09 56.2	-1.3
VHO				*e*S	Sn	03 10 20.1	-2.5
HLIG	Huajuapan de L	1.96	17	*e*P	Pn	03 09 56.4	-1.3
HLIG				*e*S	Sn	03 10 20.4	-2.6
FTIG	Fresnillo de T	1.97	7	*e*P	Pn	03 09 56.7	-1.0
FTIG				*i* S	Sn	03 10 20.4	-2.6
CAIG	El Cayaco	2.11	302	*e*P	Pn	03 09 57.7	-1.9
CAIG				*i* S	Sn	03 10 22.5	-3.9
CAIG	El Cayaco	2.11	302		Pn	03 09 57.7	-1.9
CAIG					Sn	03 10 22.5	-3.9
HUIG	Huatulco	2.20	94	*e*P	Pn	03 09 59.6	-1.2
HUIG				*i* S	Sn	03 10 25.7	-2.9
HUIG	Huatulco	2.20	94		Pn	03 09 59.6	-1.2
HUIG					Sn	03 10 25.7	-2.9
MEIG	Mezcala	2.30	329	*i* P	Pn	03 10 01.6	-0.6
MEIG				*i* S	Sn	03 10 28.4	-2.8
MEIG	Mezcala	2.30	329		Pn	03 10 01.6	-0.6
MEIG					Sn	03 10 28.4	-2.8
TOIG	Toxpalan	2.49	30	*e*P	Pn	03 10 04.4	-0.5
TOIG				*i* S	Sn	03 10 33.8	-2.0
PLIG	Platanillo	2.66	337	*i* P	Pn	03 10 06.3	-0.9
PLIG				*i* S	Sn	03 10 37.5	-2.6
PLIG	Platanillo	2.66	337		Pn	03 10 06.3	-0.9
PLIG					Sn	03 10 37.5	-2.6
ARIG	Puente Sto Nin	2.98	321	*i* P	Pn	03 10 10.8	-0.8
ARIG				*i* S	Sn	03 10 45.2	-2.9
ARIG	Puente Sto Nin	2.98	321		Pn	03 10 10.8	-0.8
ARIG					Sn	03 10 45.2	-2.9
UNM	Universidad Na	3.45	348	Pn	Pn	03 10 18.1	-0.1
CMIG	Matias Romero	3.55	71	Pn	Pn	03 10 18.5	-0.9
	1.7nm,0.3s,baz=264,slow=11,SNR=34						
CMIG				Sn	Sn	03 11 00.5	-1.4
	5.4nm,0.3s,baz=31,slow=23,SNR=3.6						
CMIG				Lg	Lg	03 11 16.2	
	22nm,0.3s,baz=320,slow=5.6,SNR=26						
CMIG	Matias Romero	3.55	71	*e*P	Pn	03 10 18.2	-1.2
CMIG				*i* S	Sn	03 11 00.3	-1.6
CMIG	Matias Romero	3.55	71		Pn	03 10 18.2	-1.2
CMIG					Sn	03 11 00.3	-1.6
MOIG	Morelia	4.57	325		Pn	03 10 36.8	+3.1
CCIG	Comitan	6.02	86		Pn	03 10 55.8	+2.3
TEIG	Tepich	10.52	65		Pn	03 11 54.8	-0.2
H06E1	SOCORRO T-PHAS	12.30	285	T	T	03 24 35.7	
	SNR=12						
TXAR	Lajitas Array	14.19	341	Pn	Pn	03 12 48.6	+3.2
	0.0nm,0.3s,baz=170,slow=12,SNR=3.5						
TXAR	Lajitas Array	14.19	341		Pn	03 12 45.9	+0.6
ABTX	Abilene, Hawle	16.65	356	Pn	P	03 13 20.1	-0.2
ABTX				IAmb	IAmb	03 13 22.5	
	comp=Z,13nm,1.0s						
ANMO	Albuquerque	20.26	341	P	Pn	03 14 02.7	+0.6
	comp=Z,2.2nm,0.8s,baz=151,slow=12,SNR=8.7						
ANMO	Albuquerque	20.26	341	P	Pn	03 14 02.5	+0.4
X16A	Lo Mia Camp, P	21.82	330	P	P	03 14 20.5	+3.4
X16A				IAmb	IAmb	03 14 22.6	
	comp=Z,2.9nm,0.9s						
PDAR	Pinedale Array	28.39	343	P	P	03 15 21.5	+2.2
	comp=Z,0.9nm,1.0s,baz=133,slow=6.3,SNR=4.6						
PDAR	Pinedale Array	28.39	343	P	P	03 15 20.0	+0.7
NVAR	Mina Array Bea	28.43	326	P	P	03 15 22.6	+2.9
	comp=Z,0.3nm,0.6s,baz=158,slow=9.6,SNR=4.7						
NVAR	Mina Array Bea	28.43	326	P	P	03 15 21.1	+1.4
SCHQ	Schefferville	45.82	25	P	P	03 17 46.8	+0.3
	comp=Z,4.9nm,1.0s,baz=219,slow=5.2,SNR=4.3						
YKA	Yellowknife Ar	47.88	350	P	P	03 18 02.4	-0.1
	comp=Z,0.3nm,0.6s,baz=155,slow=7.3,SNR=5.9						
ILAR	Eielson Array	58.68	338	P	P	03 19 22.7	+0.8
	comp=Z,0.3nm,0.8s,baz=170,slow=4.9,SNR=4.3						
BDFB	Brasilia	58.80	120	LR	LR	03 42 56.0	
	comp=Z,142nm,18.1s,baz=299,slow=34						

NEIC ***17*** *03:20:32.5±2.9, 33°.55S±0°.10×178°.5W±0°.2, h25^{km}±6^{km}, mb4.5/8, Error ellipse: s-maj=22.4km s-min=11.1km az=115.0*

WEL ***17*** *03:20:36.5±0.3, 33°S±2°×17°9W±°, h33^{km}, M4.9/19, mB5.4/11, ML5.3/19, MLv5.1/19, Mw(mB)4.8/11*

IDC ***17*** *03:20:37.0±7.5, 33°.23S×179°.01W, h36^{km}±56^{km}, mb4.5/6, mb1 4.7/7, mb1mx4.1/46, mbtmp4.7/7, ML4.7/1, MS3.7/9, Ms1 3.7/9, ms1mx3.4/36, Error ellipse: s-maj=34.1km s-min=27.9km az=44.0*

ISC 17 03:20:36.7±0.5**, 33°.39S**±0°.05×**178°.76W**±0°.08**, h41**^{km}**, n147, σ2^{s}37**/138**, mb4.7**/7**, MS3.6**/8**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.17	10	P	Pn	03 21 35.4	-2.4
GLKZ				S	Sn	03 22 23.8	-1.5
RAO	Raoul Island	4.18	10	Pn	Pn	03 21 37.5	-0.5
RIZ	Raoul Island	4.19	10	P	Pn	03 21 37.6	-0.4
RIZ				S	Sn	03 22 24.2	-1.5
MXZ	Matakaoa Point	4.81	209		Pn	03 21 47.4	+0.8
MXZ	Matakaoa Point	4.81	209	P	Pn	03 21 47.7	+1.2
MXZ				S	Sn	03 22 43.1	+2.2
WMGZ	Waiomatatini S	4.99	207	P	Pn	03 21 49.9	+0.9
WMGZ				S	Sn	03 22 49.3	+3.9
GRZ	Great Barrier	5.55	237	P	Pn	03 21 59.6	+2.9
KUZ	Kuaotunu	5.63	232	P	Pn	03 22 01.0	+3.1
TKGZ	Te Karaka	5.75	208	P	Pn	03 22 00.4	+1.0
TKGZ				S	Sn	03 23 05.5	+1.5
MWZ	Matawai	5.79	210	P	Pn	03 22 01.8	+1.8
MWZ				S	Sn	03 23 07.8	+2.6
URZ	Urewera	5.91	213	Pn	Pn	03 22 00.6	-1.1
	20nm,0.3s,baz=347,slow=1.3,SNR=70						
URZ				Sn	Sn	03 23 08.3	+0.3
	25nm,0.3s,baz=242,slow=21,SNR=8.2						
URZ	Urewera	5.91	213		Pn	03 22 00.5	-1.2
RIGZ	Rimuhau	6.01	207	P	Pn	03 22 03.1	0.0
RIGZ				S	Sn	03 23 12.6	+1.9
OMRZ	Omania	6.16	219	P	Pn	03 22 07.8	+2.8
PRGZ	Paritu Road	6.16	205	P	Pn	03 22 04.1	-1.0
PRGZ				S	Sn	03 23 15.4	+1.1
TARZ	Mount Tarawera	6.18	217	P	Pn	03 22 07.9	+2.3
WCZ	Waipu Caves	6.23	244	P	Pn	03 22 08.8	+2.8
MUGZ	Murupara	6.24	214	P	Pn	03 22 06.7	+0.4
SNGZ	Shannon Statio	6.24	209	P	Pn	03 22 06.7	+0.5
SNGZ				S	Sn	03 23 20.2	+3.8
RRRZ	Republican Roa	6.26	216	P	Pn	03 22 08.5	+2.0
RTZ	Ruatahuna	6.26	212	P	Pn	03 22 06.3	-0.2
RTZ				S	Sn	03 23 18.0	+1.2
KNZ	Kokohu	6.32	206	P	Pn	03 22 06.1	-1.2
MHGZ	Mahia Peninsul	6.36	204	P	Pn	03 22 06.8	-1.0
TOZ	Tahuroa Road	6.38	226	P	Pn	03 22 11.0	+2.9
RAHZ	Arahi	6.46	210	P	Pn	03 22 10.3	+1.0
MTHZ	Maungataniwha	6.52	212	P	Pn	03 22 10.6	+0.5
AWAZ	Awhitu Peninsu	6.53	234	P	Pn	03 22 14.4	+4.2
WHHZ	Waihua	6.54	209	P	Pn	03 22 12.2	+1.9
OUZ	Omahuta	6.59	252		Pn	03 22 12.3	+1.3
OUZ				Sn	Sn	03 23 21.8	-3.0
OUZ	Omahuta	6.59	252	P	Pn	03 22 13.1	+2.1
OUZ				S	Sn	03 23 22.2	-2.6
MRHZ	Matea Rd	6.70	214	P	Pn	03 22 12.2	-0.3
MRHZ				S	Sn	03 23 27.8	+0.3
KUTZ	Kaahu Road	6.73	219	P	Pn	03 22 14.7	+1.8
NMHZ	Naumai	6.73	211	P	Pn	03 22 14.0	+1.0
TLZ	Tolley Road	6.77	222	P	Pn	03 22 15.3	+1.9
ARHZ	Aropaoanui	6.79	209	P	Pn	03 22 13.7	-0.1
BKZ	Black Stump Fm	6.93	212		Pn	03 22 13.9	-1.8
BKZ	Black Stump Fm	6.93	212	P	Pn	03 22 14.8	-0.9
WATZ	Wairara	6.94	218	P	Pn	03 22 16.4	+0.6
RATZ	Rangitukua	7.04	217	P	Pn	03 22 17.8	+0.6
MCHZ	McNeill Hill	7.07	210	P	Pn	03 22 17.7	+0.1
RITZ	Rihia Road	7.08	216	P	Pn	03 22 17.8	+0.1
CKHZ	Cape Kidnapper	7.10	207	P	Pn	03 22 16.7	-1.3
KRVZ	Karewarewa	7.28	217	P	Pn	03 22 20.5	0.0
HIZ	Hauiti	7.28	224	P	Pn	03 22 21.0	+0.6
KAHZ	Kahuranaki	7.30	208	P	Pn	03 22 18.9	-1.8
WTVZ	West Tongariro	7.32	217	P	Pn	03 22 21.0	-0.1
NGZ	Ngauruhoe	7.36	217	P	Pn	03 22 22.2	+0.6
TWVZ	Taurewa	7.36	218	P	Pn	03 22 22.1	+0.4
KRHZ	Kereru	7.38	211	P	Pn	03 22 20.6	-1.2
BHHZ	Black Hill Sta	7.38	213	P	Pn	03 22 22.5	+0.5
TUVZ	Tukino	7.40	216	P	Pn	03 22 22.2	-0.1
MOVZ	Moawhango	7.46	215	P	Pn	03 22 22.1	-1.0
TRVZ	Turoa	7.48	216	P	Pn	03 22 23.3	-0.1
PKVZ	Pokaka	7.57	217	P	Pn	03 22 24.8	+0.2
MTVZ	Mangateitei	7.58	216	P	Pn	03 22 24.3	-0.4
PNHZ	Pukenui	7.67	210	P	Pn	03 22 23.5	-2.4
VRZ	Vera Road	7.76	221	P	Pn	03 22 27.9	+0.9
TSZ	Takapari Road	7.89	211	P	Pn	03 22 28.7	-0.2
WAZ	Wanganui	8.11	217	P	Pn	03 22 31.2	-0.6
PKE	Pukeiti	8.24	223	P	Pn	03 22 35.8	+2.2
KHEZ	Kahui Hut	8.29	223	P	Pn	03 22 36.4	+1.9
BFZ	Birch Farm	8.31	207	Pn	Pn	03 22 28.7	-5.8
BFZ	Birch Farm	8.31	207	P	Pn	03 22 28.4	-6.1
PRWZ	Pori Road	8.31	209	P	Pn	03 22 33.3	-1.2
MRZ	Mangatainoka R	8.56	210	P	Pn	03 22 35.0	-3.0
TMWZ	Te Maipa	8.81	207	P	Pn	03 22 38.5	-2.9
OGWZ	Otaki Gorge	8.86	211	P	Pn	03 22 39.2	-3.0
MTW	Mount Morrison	9.01	209	P	Pn	03 22 40.9	-3.2
KIW	Kapiti Island	9.01	212	P	Pn	03 22 40.4	-3.8
TRWZ	Traveller	9.14	207	P	Pn	03 22 43.4	-2.5
CAW	Cannon Point	9.14	211	P	Pn	03 22 42.4	-3.6
MSWZ	Moikau Station	9.32	209	Pn	Pn	03 22 45.5	-3.0
MSWZ	Moikau Station	9.32	209	P	Pn	03 22 45.9	-2.6
PLWZ	Palliser	9.45	208	Pn	Pn	03 22 46.5	-3.7
PLWZ				Sn	Sn	03 24 25.6	-10
PLWZ	Palliser	9.45	208	P	Pn	03 22 47.2	-3.1
SNZO	South Karori	9.47	211	Pn	Pn	03 22 46.1	-4.3
BHW	Baring Head	9.48	210	Pn	Pn	03 22 46.3	-4.2
BHW	Baring Head	9.48	210	P	Pn	03 22 46.9	-3.6
TCW	Tory Channel	9.58	213	P	Pn	03 22 47.2	-4.8
TUWZ	Tuamarina	9.91	214	Pn	Pn	03 22 51.0	-5.4
TUWZ					Sn	03 24 38.2	-8.1
TUWZ	Tuamarina	9.91	214	P	Pn	03 22 52.3	-4.1
NNZ	Nelson	10.01	216	Pn	Pn	03 22 54.4	-3.5
BSWZ	Blackbirch Sta	10.16	213	Pn	Pn	03 22 55.9	-4.1
QRZ	Quartz Range	10.17	221	Pn	Pn	03 22 57.2	-2.9
THZ	Tophouse	10.66	216	Pn	Pn	03 23 02.4	-4.4
THZ					Sn	03 24 57.7	-7.1
KHZ	Kahutara	10.87	212	Pn	Pn	03 23 04.0	-5.6
KHZ					Sn	03 25 03.7	-6.2
LTZ	Lake Taylor	11.74	214	Pn	Pn	03 23 16.1	-5.5
OXZ	Oxford	12.27	213	Pn	Pn	03 23 23.3	-5.4
OXZ					Sn	03 25 31.5	-13
MQZ	McQueen's Vall	12.30	211	Pn	Pn	03 23 22.2	-6.9
RPZ	Rata Peaks	13.03	215	Pn	Pn	03 23 32.7	-6.4
	2.5nm,0.3s,baz=48,slow=1.8,SNR=9.5						
RPZ				Sn	Sn	03 25 49.8	-13
	2.1nm,0.3s,baz=64,slow=18,SNR=6.8						
FOZ	Fox Glacier	13.51	218	Pn	Pn	03 23 40.5	-5.2
LBZ	Lake Benmore	13.94	215	Pn	Pn	03 23 45.0	-6.6
ODZ	Otahua Downs	14.23	212	Pn	Pn	03 23 48.8	-6.7
WKZ	Wanaka	14.83	216	Pn	Pn	03 23 56.8	-6.8
MLZ	Mavora Lakes	15.66	216	Pn	Pn	03 24 09.0	-5.4
MLZ				IAmb	IAmb	03 24 12.8	
	comp=Z,16nm,1.1s						
WHZ	Wether Hill Ro	16.12	215	Pn	Pn	03 24 15.4	-4.9
DZM	Mont Dzumac	17.26	307	LR	LR	03 29 58.0	
	comp=Z,513nm,18.1s,baz=206,slow=33						
RAR	Rarotonga	20.73	59	LR	LR	03 30 59.6	
	comp=Z,267nm,20.5s,baz=196,slow=30						
EIDS	Eidsvold	27.40	279	P	P	03 26 19.4	+1.0
EIDS				IAmb	IAmb	03 26 19.9	
	comp=Z,8.1nm,0.7s						
TBI	Tubuai	27.57	76	*e*T	T	03 55 04.8	
	comp=Z,27nm,0.3s						
PAE	Paea	30.49	66	*e*T	T	03 58 31.9	
	comp=Z,11nm,0.3s						
PPT2	Papeete2	30.54	66	*e*T	T	03 58 36.0	
	comp=Z,14nm,0.3s						
PPT	Papeete	30.55	66	LR	LR	03 36 17.6	
	comp=Z,62nm,21.6s,baz=212,slow=31						
STKA	Stephens Creek	33.29	262	LR	LR	03 39 34.4	
	comp=Z,238nm,19.8s,baz=53,slow=34						
CTA	Charters Tower	33.77	284	P	P	03 27 15.3	+0.6
	comp=Z,11nm,0.5s,baz=112,slow=9.8,SNR=11						
BBOO	Buckleboo	37.63	258	P	P	03 27 46.9	-0.8
ASAR	Alice Springs	42.40	271	P	P	03 28 26.2	-1.2
	comp=Z,6.9nm,0.5s,baz=111,slow=7.6,SNR=9.7						
WB2	Warramunga Arr	43.65	276	P	P	03 28 36.4	-1.1
WRA	Warramunga Arr	43.66	276	P	P	03 28 36.5	-1.1
	comp=Z,8.8nm,0.4s,baz=117,slow=7.6,SNR=7.2						
WRA				LR	LR	03 45 10.4	
	comp=Z,101nm,21.7s,baz=160,slow=34						
WRA	Warramunga Arr	43.66	276	IAmb	IAmb	03 28 37.5	
	comp=Z,1.0nm,0.8s						
WB0	Warramunga Arr	43.70	276	P	P	03 28 36.6	-1.2
FITZ	Fitzroy Crossi	51.78	273	P	P	03 29 39.7	-0.9
	comp=Z,6.5nm,0.6s,baz=179,slow=23,SNR=4.6						
FITZ	Fitzroy Crossi	51.78	273	IAmb	IAmb	03 29 40.1	
	comp=Z,7.7nm,0.8s						
KAPI	Kappang	63.55	282	LR	LR	03 58 52.5	
	comp=Z,38nm,20.4s,baz=120,slow=36						
MAW	Mawson	69.30	201	P	P	03 31 41.8	+2.6
	comp=Z,5.1nm,0.8s,baz=143,slow=3.2,SNR=4.9						
SNAA	Sanae	75.20	179	P	P	03 32 17.3	+2.8
VNA3	Neumayer Olymp	75.38	176	P	P	03 32 17.9	+2.4
VNA2	Neumayer--Watz	75.80	177	P	P	03 32 20.4	+2.5
	baz=178,slow=5.2						
VNA1	Neumayer--Stat	76.04	177	P	P	03 32 22.5	+3.3
ASAJ	Asahikawa	84.80	333	LR	LR	04 03 03.6	
	comp=Z,56nm,21.8s,baz=169,slow=30						
NVAR	Mina Array Bea	90.86	43	P	P	03 33 38.8	+2.8
	comp=Z,0.7nm,0.7s,baz=214,slow=6.3,SNR=5.9						
NVAR	Mina Array Bea	90.86	43	P	P	03 33 35.1	-0.8
KLR	Kul'dur	93.29	330	LR	LR	04 12 13.9	
	comp=Z,38nm,18.5s,baz=28,slow=33						
CMAR	Chiang Mai Arr	93.78	289	LR	LR	04 18 10.2	
	comp=Z,15nm,20.4s,baz=300,slow=37						
ILAR	Eielson Array	100.97	13	P	Pdif	03 34 22.3	+1.3
	comp=Z,0.3nm,0.6s,baz=226,slow=6.8,SNR=6.5						
YKA	Yellowknife Ar	108.40	26	PKKPbc	PKKPbc	03 50 10.1	-1.8
	comp=Z,0.4nm,0.6s,baz=44,slow=2.9,SNR=9.2						
MKAR	Makanchi Array	119.17	309	PKP	PKPdf	03 39 19.8	-1.1
	comp=Z,0.3nm,0.3s,baz=206,slow=0.3,SNR=10.0						
NRIK	Noril'sk	122.08	335	PKP	PKiKP	03 39 25.8	-0.1
	comp=Z,2.8nm,0.5s,baz=50,slow=4.8,SNR=5.3						
KURK	Kurchatov	122.62	313		PKPdf	03 39 25.3	-2.0
KURBB	Kurchatov Arra	122.65	312	PKP	PKPdf	03 39 26.6	-0.8
	comp=Z,1.4nm,0.6s,baz=117,slow=2.0,SNR=16						
KKAR	Karatay Array	126.15	302		PKPdf	03 39 33.5	-0.9
BVAR	Borovoye Array	128.06	314	PKP	PKPdf	03 39 37.7	0.0
	comp=Z,1.2nm,0.4s,baz=153,slow=2.4,SNR=9.9						
ARCES	ARCESS Array B	141.35	347	PKhKP	PKPpre	03 39 55.7	
	comp=Z,1.8nm,0.7s,baz=33,slow=2.6,SNR=8.9						
ARCES				PKP	PKiKP	03 40 03.4	-1.4
	comp=Z,5.2nm,0.7s,baz=111,slow=1.2,SNR=9.5						
KBZ	Khabaz	146.15	300	PKPbc	PKPbc	03 40 11.6	-0.6
	comp=Z,1.7nm,0.7s,baz=140,slow=3.9,SNR=4.8						
FINES	FINESS Array B	147.69	338	PKPbc	PKPbc	03 40 15.7	-0.3
	comp=Z,18nm,0.5s,baz=42,slow=4.0,SNR=153						
EIL	Elat	151.10	272	PKPbc	PKPbc	03 40 25.4	-0.1
	comp=Z,4.3nm,0.7s,baz=102,slow=2.2,SNR=7.0						
MMAI	Mount Meron Ar	151.49	279	PKPbc	PKPbc	03 40 26.4	0.0
	comp=Z,4.3nm,0.5s,baz=78,slow=5.3,SNR=19						
NB2	NORSAR Subarra	151.58	350	PKP	PKiKP	03 40 25.8	-0.3
	comp=Z,5.4nm,0.5s,baz=15,slow=2.6						
NOA	NORSAR Array B	151.58	350	PKPbc	PKiKP	03 40 25.9	-0.3
	comp=Z,5.3nm,0.5s,baz=13,slow=4.1,SNR=29						
NC602	NORSAR Array S	151.82	349		PKiKP	03 40 26.5	-0.1
LIC	Lamto	152.35	166	*e*PKP2	PKiKP	03 40 31.8	+2.7
	comp=Z,34nm,0.8s						
KIC	Kosan Boka	152.54	167	*e*PKP2	PKiKP	03 40 31.2	+1.7
	comp=Z,82nm,1.6s						
TIC	Toumodi	152.76	166	*e*PKP2	PKiKP	03 40 32.7	+2.7
	comp=Z,3.5nm,0.4s						
AKASG	Malin Array Be	153.20	319	PKPbc	PKPbc	03 40 29.1	-0.5
	comp=Z,0.7nm,0.3s,baz=45,slow=3.1,SNR=12						
AKASG	Malin Array Be	153.20	319		PKPbc	03 40 29.4	-0.2
BRTR	Keskin Array B	153.32	293	PKPbc	PKPbc	03 40 29.2	-1.2
	comp=Z,2.0nm,0.5s,baz=132,slow=3.2,SNR=22						
TORD	Torodi Ar. Bea	159.85	181	PKPab	PKPab	03 41 12.9	+2.1
	comp=Z,1.3nm,0.5s,baz=164,slow=4.7,SNR=9.0						

IDC ***17*** *03:22:06.5±0.8, 2°.90S×137°.46E, h0^{km}, mb4.1/13, mb1 4.3/16, mb1mx4.1/52, mbtmp4.2/16, ML4.5/3, MS3.4/6, Ms1 3.4/6, ms1mx3.1/28, Error ellipse: s-maj=30.8km s-min=14.9km az=85.0*

DJA ***17*** *03:22:13.5±0.2, 3°S±4°×13°7E±°, h69^{km}±7^{km}, M4.5/13, mb4.7/13, mB5.2/5, MLv4.4/7, Mw(mB)4.6/5*

NEIC ***17*** *03:22:14.2±2.7, 3°.02S±0°.08×137°.24E±0°.08, h63^{km}±9^{km}, mb4.4/16, Error ellipse: s-maj=12.8km s-min=10.0km az=216.0*

ISC 17 03:22:13.3±0.5**, 3°.02S**±0°.05×**137°.33E**±0°.04**, h54**^{km}**, n59, σ1^{s}88**/60**, mb4.0**/14**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	Sarmi	1.72	53	P	Pn	03 22 38.9	-2.0
SMPI				S	Sn	03 22 59.8	-1.9
BAKI	Biak	2.19	326	P	Pn	03 22 43.9	-3.4
GENI	Genyem	2.87	82	P	Pn	03 22 57.2	+0.6
GENI				S	Sn	03 23 30.0	+0.1
RKPI	Ransiki, Papua	3.49	295	P	Pn	03 23 04.8	-0.3
RKPI				S	Sn	03 23 43.7	-1.5
FAKI	Fak Fak	5.08	271	P	Pn	03 23 26.9	0.0
	0.4nm1µm74nm,0.7s						
FAKI				S	Sn	03 24 21.6	-2.7
	0.4nm1µm74nm,0.7s						
FAKI	Fak Fak	5.08	271		Pn	03 23 26.9	0.0
FAKI				Sn	Sn	03 24 20.8	-3.4
SIJI	Sorong	6.43	289	Pn	Pn	03 23 44.9	-0.5
	3.7nm,0.3s,baz=76,slow=12,SNR=11						
SIJI				LR	LR	03 26 51.3	
	comp=Z,317nm,18.4s,baz=138,slow=44						
SWI	Sorong	6.43	289	P	Pn	03 23 44.8	-0.7
	0.2nm51nm,0.6s						
MSAI	Masohi	8.39	268	P	Pn	03 24 14.5	+2.1
NLAI	Namlea	10.22	269	P	Pn	03 24 38.0	+0.6
	27nm,0.6s						
SANI	Sanana	11.37	275	P	Pn	03 24 53.8	+0.6
	25nm,0.7s						
MTN	Manton Dam	11.53	212		Pn	03 24 56.2	+1.0
MTN					Sn	03 27 02.2	-0.4
COEN	Coen	12.30	152		Pn	03 25 07.3	+1.4
COEN				Sn	Sn	03 27 20.4	-1.2
SOEI	Soe	14.60	242	P	Pn	03 25 37.6	+0.6
	60nm,0.9s						
SOEI	Soe	14.60	242		Pn	03 25 37.6	+0.6
KRVT	Keravat (AS076	14.72	95	LR	LR	03 31 13.5	
	comp=Z,133nm,19.2s,baz=275,slow=38						
KNRA	Kununurra	15.14	213		Pn	03 25 44.5	+0.5
KNRA				Sn	Sn	03 28 28.4	-2.4
WB0	Warramunga Arr	16.89	190	P	Pn	03 26 04.5	-1.6
WR0	Warramunga Arr	17.05	189	P	Pn	03 26 07.0	-1.2
WR0				IAmb	IAmb	03 26 15.7	
	comp=Z,28nm,1.0s						
WRAB	Tennant Creek	17.06	190	P	Pn	03 26 07.1	-1.2
WB2	Warramunga Arr	17.07	190	P	Pn	03 26 07.2	-1.2
WB2				IAmb	IAmb	03 26 15.4	
	comp=Z,37nm,0.7s						
WRA	Warramunga Arr	17.07	190	Pn	Pn	03 26 06.4	-2.0
	comp=Z,1.6nm,0.3s,baz=13,slow=13,SNR=11						
WRA				S	Sn	03 29 07.9	-10
	comp=Z,1.0nm,0.3s,baz=8.9,slow=22,SNR=6.4						
WRA				LR	LR	03 33 18.3	
	comp=Z,288nm,18.1s,baz=10.0,slow=39						
WRA	Warramunga Arr	17.07	190		Pn	03 26 07.8	-0.6
FITZ	Fitzroy Crossi	18.86	217	P	Pn	03 26 30.7	+0.5
	comp=Z,3.3nm,0.3s,baz=177,slow=0.4,SNR=13						
CTA	Charters Tower	19.07	153	P	Pn	03 26 34.4	+1.6
	comp=Z,1.2nm,0.3s,baz=322,slow=12,SNR=10						
AS31	Alice Springs	20.79	189	P	P	03 26 52.0	+1.8
AS31				IAmb	IAmb	03 26 56.7	
	comp=Z,9.6nm,0.7s						
ASAR	Alice Springs	20.79	189	P	Pn	03 26 52.3	-0.8
	comp=Z,27nm,0.6s,baz=15,slow=10,SNR=156						
ASAR				S	S	03 30 39.6	+0.2
	comp=Z,1.9nm,0.6s,baz=5.5,slow=30,SNR=4.5						
ASAR				LR	LR	03 35 34.4	
	comp=Z,192nm,19.0s,baz=41,slow=39						
ASAR	Alice Springs	20.79	189	P	Pn	03 26 52.2	-0.9
PSAD1	Pilbara Seismi	25.01	221	P	P	03 27 34.1	+1.7
PSAA2	Pilbara Seismi	25.07	221	P	P	03 27 34.4	+1.5
PSA00	Pilbara Seismi	25.08	221	P	P	03 27 35.9	+2.9
EIDS	Eidsvold	25.86	150	P	P	03 27 39.6	-0.5
EIDS				IAmb	IAmb	03 27 46.4	
	comp=Z,12nm,0.8s						
FORT	Forrest	28.97	197	P	P	03 28 08.7	+0.9
FORT				IAmb	IAmb	03 28 14.2	
	comp=Z,23nm,1.1s						
STKA	Stephens Creek	28.98	172	P	P	03 28 08.8	+0.9
	comp=Z,2.8nm,0.7s,baz=345,slow=12,SNR=4.2						
STKA	Stephens Creek	28.98	172	IAmb	IAmb	03 28 12.9	
	comp=Z,1.6nm,1.1s						
DZM	Mont Dzumac	34.02	126	*e*LR	LR	03 28 11.4	
	comp=Z,673nm,25.1s						
KSRS	Korea Array	41.21	349	LR	LR	03 45 16.5	
	comp=Z,17nm,21.7s,baz=190,slow=34						
CMAR	Chiang Mai Arr	43.41	301	P	P	03 30 11.1	0.0
	comp=Z,0.9nm,0.2s,baz=126,slow=6.6,SNR=6.3						
CMAR	Chiang Mai Arr	43.41	301	P	P	03 30 10.1	-1.0
USRK	Ussuriysk Ar.	47.25	355	P	P	03 30 41.4	+0.3
	comp=Z,1.7nm,0.5s,baz=168,slow=6.9,SNR=5.5						
SONM	Songino Array	57.42	336	P	P	03 31 56.6	0.0
	comp=Z,0.6nm,0.7s,baz=142,slow=9.5,SNR=4.4						
SONM	Songino Array	57.42	336	P	P	03 31 55.9	-0.7
SEY	Seymchan	66.76	7	P	P	03 32 59.6	+0.9
	comp=Z,1.4nm,0.6s,baz=209,slow=5.3,SNR=5.1						
MK31	Makanchi Array	69.20	323	P	P	03 33 13.4	-1.0
MKAR	Makanchi Array	69.20	323	P	P	03 33 14.8	+0.4
	comp=Z,1.2nm,0.6s,baz=112,slow=7.8,SNR=20						
MKAR	Makanchi Array	69.20	323	P	P	03 33 13.3	-1.2
KSH	Kashi	70.30	314	P	P	03 33 26.3	+4.8
KSH				sP	PcP	03 33 45.3	+2.4
KSH				PP	PP	03 36 05.4	+7.6
KSH				S	S	03 42 32.8	+2.9
KSH				SKS	SKSac	03 43 18.3	-0.5
KSH	Kashi	70.30	314	SS	SS	03 47 05.9	+4.5
AAK	Ala-Archa	72.48	316	LR	LR	04 08 09.9	
	comp=Z,31nm,20.0s,baz=346,slow=38						
PPT2	Papeete2	72.98	107	*e*LR	LR	03 34 42.0	
	comp=Z,261nm,26.5s						
KURBB	Kurchatov Arra	73.19	325	P	P	03 33 38.2	-0.3
	comp=Z,0.4nm,0.7s,baz=112,slow=5.3,SNR=5.5						
TBI	Tubuai	73.39	113	*e*LR	LR	03 33 16.6	
	comp=Z,291nm,31.2s						
TIXI	Tiksi	74.74	357	P	P	03 33 47.1	+0.1
	comp=Z,0.4nm,0.2s,baz=214,slow=0.2,SNR=4.3						
TIXI	Tiksi	74.74	357	P	P	03 33 46.6	-0.4
TIXI				IAmb	IAmb	03 33 48.3	
	comp=Z,1.5nm,0.7s						
KKAR	Karatay Array	75.39	316	P	P	03 33 51.4	-0.1
VNDA	Vanda	75.60	175	P	P	03 33 53.5	+1.5
	comp=Z,1.0nm,0.7s,baz=332,slow=5.7,SNR=5.1						
BVAR	Borovoye Array	78.78	325	P	P	03 34 10.6	+0.4
	comp=Z,0.7nm,0.7s,baz=96,slow=6.0,SNR=4.4						
ILAR	Eielson Array	86.69	25	P	P	03 34 50.1	-0.9
	comp=Z,0.4nm,0.6s,baz=263,slow=4.4,SNR=6.7						
QSPA	South Pole Qui	86.93	180	P	P	03 34 53.6	+1.3
	comp=Z,3.4nm,0.9s,baz=296,slow=1.4,SNR=6.1						

NEIC ***17*** *03:28:21.8±2.4, 20°.05S±0°.04×70°.64W±0°.04, h11^{km}±1^{km}, mb4.6/39, Mwr4.2/21, ML4.5(GUC), Error ellipse: s-maj=7.6km s-min=5.8km az=182.0*

IDC ***17*** *03:28:21.3±0.7, 19°.86S×70°.60W, h0^{km}, mb4.3/13, mb1 4.5/15, mb1mx4.3/32, mbtmp4.4/15, ML4.3/2, MS3.3/9, Ms1 3.3/9, ms1mx3.2/31, Error ellipse: s-maj=20.0km s-min=16.4km az=39.0*

NEIC ***17*** *03:28:21.7, 20°.06S×70°.76W, h11^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.15; $M_{\theta\theta}$-2.33; $M_{\phi\phi}$0.18; $M_{r\theta}$-0.21; $M_{\theta\phi}$1.03; $M_{\phi r}$-1.14; Fault plane solution: $M_0$2.73000×10^{15} NP1:ϕ_s134.33000°, δ53.27000°, λ124.88000°. NP2:ϕ_s264.96000°, δ48.89000°, λ52.54000°. Principal axes: T 2.7502, Plg63.0000°, Azm106.0000°; N -0.0437, Plg27.0000°, Azm292.0000°; P -2.7065, Plg2.0000°, Azm200.0000°;*

GUC ***17*** *03:28:23.3±0.7, 20°.00S×70°.75W, h35^{km}±3^{km}, ML4.5*

VAO ***17*** *03:28:30.1±0.4, 20°.03S×70°.43W, h71^{km}±3^{km}, mb4.4*

ISC 17 03:28:24.8±0.8**, 20°.01S**±0°.02×**70°.69W**±0°.05**, h31**^{km}±5^{km}**, n164, σ1^{s}74**/164**, mb4.5**/28**, MS3.2**/5**, 10C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	0.67	52	⇓*i*P	Pb	03 28 36.1	-2.1
PSGC				*i* S	Sb	03 28 46.2	-1.1
PSGC				IAML		03 28 46.8	

	comp=N,26µm,0.5s						
TA01	Diego Aracena	0.73	139	⇑iP	Pb	03 28 37.3	-1.8
TA01				eS	Sn	03 28 50.8	+1.9
TA01				IAML		03 28 53.2	
	comp=E,25µm,0.3s						
PATCX	Punta Patache	0.95	148	⇑iP	Pn	03 28 40.7	-1.4
PATCX				eS	Sn	03 28 54.9	+0.3
PB11	IPOC Station P	1.00	76	⇑iP	Pn	03 28 42.1	-0.7
PB11				eS	Sn	03 28 56.6	+0.6
PB11				IAML		03 28 58.1	
	comp=N,36µm,0.5s						
PB11	IPOC Station P	1.00	76	Pn	Pn	03 28 42.2	-0.6
PB11					Sb	03 28 52.4	-4.3
PB12	IPOC Station P	1.43	14	⇓iP	Pn	03 28 47.5	-1.2
PB12				eS	Sn	03 29 06.6	0.0
PB12				IAML		03 29 15.5	
	comp=N,8µm,0.5s						
GO01	Chusmiza	1.45	77	⇑iP	Pn	03 28 49.7	+0.4
GO01				eS	Sb	03 29 10.0	+0.3
GO01				IAML		03 29 10.8	
	comp=N,22µm,0.1s						
GO01	Chusmiza	1.45	77	Pn	Pn	03 28 49.7	+0.4
PB08	IPOC Station P	1.45	95	⇑iP	Pn	03 28 49.5	+0.4
PB08				eS	Sb	03 29 09.3	-0.3
PB02	IPOC Station P	1.50	150	⇑iP	Pn	03 28 49.4	-0.2
PB02				eS	Sb	03 29 09.8	-0.9
PB02				IAML		03 29 15.8	
	comp=E,13µm,0.5s						
PB01	IPOC Station P	1.52	133	⇑iP	Pn	03 28 50.0	+0.1
PB01				eS	Sb	03 29 10.8	-0.6
PB01				IAML		03 29 15.6	
	comp=N,6µm,0.4s						
PB01	IPOC Station P	1.52	133	Pn	Pn	03 28 50.1	+0.2
AP01	Chacalluta	1.67	11	⇑iP	Pn	03 28 51.5	-0.4
AP01				eS	Sn	03 29 13.0	+0.8
AP01				IAML		03 29 22.8	
	comp=E,14µm,0.5s						
PB07	IPOC Station P	1.86	156	⇓iP	Pn	03 28 55.0	+0.3
PB07				eS	Sb	03 29 20.1	-1.2
PB07				IAML		03 29 32.5	
	comp=E,4µm,0.5s						
PB16	IPOC Station P	2.01	34	eP	Pn	03 28 58.5	+1.4
PB16				eS	Sb	03 29 24.6	-1.2
PB16				IAML		03 29 26.3	
	comp=N,5µm,0.3s						
PB03	IPOC Station P	2.20	157	⇓iP	Pn	03 28 59.8	+0.4
PB03				eS	Sb	03 29 32.1	+1.0
PB04	IPOC Station P	2.36	168	⇓iP	Pn	03 29 00.9	-0.7
PB04				IAML		03 29 44.2	
	comp=N,3µm,0.5s						
PB04	IPOC Station P	2.36	168		Pn	03 29 00.6	-1.0
LVC	Limon Verde	3.07	148	Pn	Pn	03 29 13.5	+1.9
	comp=N,40nm,0.3s,baz=354,slow=8.5,SNR=183						
LVC				Sn	Sb	03 29 53.4	-2.8
	comp=N,77nm,0.3s,baz=64,slow=20,SNR=4.6						
LVC	Limon Verde	3.07	148		Pn	03 29 13.4	+1.9
LVC					Sn	03 29 46.4	-1.0
LVC	Limon Verde	3.07	148	eP	Pn	03 29 13.5	+1.9
PB10	IPOC Station P	3.48	178		Pn	03 29 15.0	-1.9
LPAZ	La Paz	4.43	34	Pn	Pn	03 29 34.4	+4.0
	comp=N,2.0nm,0.3s,baz=295,slow=4.9,SNR=58						
LPAZ				LR	LR	03 30 59.4	
	comp=N,237nm,19.0s,baz=65,slow=37						
LPAZ	La Paz	4.43	34	Pn	Pn	03 29 34.6	+4.2
LPAZ	La Paz	4.43	34	eP	Pn	03 29 33.5	+3.0
GO02	Mina Guanaco	5.22	169		Pn	03 29 40.1	-1.0
GO02				Sn	Sn	03 30 43.8	+3.4
GO03	Copiap	7.56	177	Pn	Pn	03 30 10.6	-2.3
NNA	Nana	9.93	323	Pn	Pn	03 30 44.9	-0.7
SIV	San Ignacio	9.98	68	Pn	Pn	03 30 45.8	-0.4
	comp=N,2.9nm,0.3s,baz=271,slow=11,SNR=63						
SIV				LR	LR	03 34 41.2	
	comp=N,70nm,20.3s,baz=277,slow=39						
GO04	Tololo Observa	10.12	181	Pn	Pn	03 30 44.8	-3.4
CFA	Coronel Fontan	11.75	170	LR	LR	03 35 40.9	
	comp=N,175nm,18.4s,baz=294,slow=37						
SAML	Samuel	13.18	34		Pn	03 31 28.5	-1.4
SAML	Samuel	13.18	34	eP	Pn	03 31 32.8	+2.9
SAML				eS	Sn	03 33 56.6	+1.2
CPUP	Villa Florida	13.79	120	Pn	P	03 31 42.5	-3.8
	comp=N,0.2nm,0.3s,baz=317,slow=12,SNR=5.8						
CPUP				LR	LR	03 37 49.5	
	comp=N,110nm,20.7s,baz=292,slow=41						
CPUP	Villa Florida	13.79	120	Pn	Pn	03 31 38.4	+0.2
CPUP	Villa Florida	13.79	120	eP	Pn	03 31 40.1	+1.8
AQDB	Aquidauana	14.07	94	eP	Pn	03 31 41.8	-0.4
SALV	Santo Antonio	14.84	76	eP	Pn	03 31 53.6	+1.1
C2SB	Chapadao do Su	16.89	89	eP	Pn	03 32 18.7	-0.2
CLDB	Colider	16.98	60	eP	Pn	03 32 19.6	-0.5
PTGB	Pitanga	17.84	109	eP	Pn	03 32 30.8	-0.1
PCMB	Pacaembu	18.23	98	eP	Pn	03 32 34.4	-1.2
ITAB	Concordia	18.45	116	eP	Pn	03 32 38.0	-0.2
ARAG	Araguaiana, MT	18.47	80	eP	P	03 32 37.5	-0.8
CPSB	Cacapava Do Su	18.70	127	eP	Pn	03 32 41.4	+0.2
PLTB	Pedras Altas	19.29	131	eP	P	03 32 46.0	-1.1
GO06	Curarrehue	19.52	182	P	P	03 32 46.4	-3.3
FRTB	Fartura	19.91	103	eP	P	03 32 54.5	+0.5
CNLB	Canela	20.24	121	eP	P	03 32 58.1	+0.5
PLCA	Paso Flores	20.65	180	P	Pn	03 33 03.9	-0.5
	comp=N,8.1nm,0.8s,baz=21,slow=12,SNR=9.1						
PLCA				LR	LR	03 41 38.0	
	comp=N,104nm,18.2s,baz=38,slow=38						
PLCA	Paso Flores	20.65	180	P	P	03 33 01.3	-0.7
PLCA	Paso Flores	20.65	180	eP	Pn	03 33 03.8	-0.6
BB19B	Bebedouro	20.78	97	eP	P	03 33 03.1	-0.3
IPMB	Ipameri, GO	21.35	88	eP	P	03 33 08.8	-0.9
OTAV	Otavalo	21.52	338	eP	P	03 33 15.5	+3.6
RCLB	Rio Claro- Sao	21.72	100	eP	P	03 33 12.6	-1.0
PTGA	Pitinga	21.85	30	P	P	03 33 13.1	-1.9
	comp=N,5.7nm,0.3s,baz=212,slow=12,SNR=14						
PTGA				LR	LR	03 42 09.0	
	comp=N,99nm,18.4s,baz=200,slow=38						
PTGA	Pitinga	21.85	30	P	P	03 33 13.9	-1.1
PTGA				IAmb	IAmb	03 33 23.0	
	comp=Z,9.7nm,0.6s						
PTGA	Pitinga	21.85	30	eP	P	03 33 14.2	-0.8
SPB	Sao Paulo	21.88	104	eP	P	03 33 14.7	-0.5
FLOC	Florencia	22.01	347	eP	P	03 33 16.8	+0.1
FLOC	Florencia	22.01	347	P	P	03 33 16.4	-0.3
BDFB	Brasilia	22.01	82	P	P	03 33 17.1	+0.2
	comp=Z,11nm,0.8s,baz=248,slow=10,SNR=9.9						
BDFB	Brasilia	22.01	82	P	P	03 33 15.5	-1.4
VAO	Valinhos	22.26	102	eP	P	03 33 17.8	-1.7
GARC	Garzon, Huila	22.56	347	eP	P	03 33 23.9	+1.0
SOTA	Rioblanco	22.77	345	eP	P	03 33 28.4	+3.1
BBAC	Balboa, Cauca	22.82	343	eP	P	03 33 26.6	+1.0
PCON	Cinco Dias	22.90	345	eP	P	03 33 31.9	+5.2
ORTC	Ortega, Tolima	24.19	349	eP	P	03 33 35.5	-3.2
BSCB	Bom Sucesso	24.29	97	eP	P	03 33 37.6	-2.1
YOTC	Yotoco, Valle	24.49	346	eP	P	03 33 43.6	+2.1
SMTB	Santa Maria do	24.93	67	eP	P	03 33 44.3	-1.2
ROSC	El Rosal	24.95	351	LR	LR	03 43 56.8	
	comp=Z,132nm,19.9s,baz=211,slow=38						
ROSC	El Rosal	24.95	351	⇑eP	P	03 33 45.4	-0.7
ROSC	El Rosal	24.95	351	P	P	03 33 46.1	+0.1
ROSC				IAmb	IAmb	03 34 05.5	
	comp=Z,7.3nm,0.7s						
GUY2C	Guyana, Caldas	25.50	349	eP	P	03 33 49.8	-1.2
JANB	Januaria	25.61	83	eP	P	03 33 50.7	-1.0
NORC	Norcasia	25.75	350	⇑eP	P	03 33 46.2	-6.6
RUSC	La Rusia	25.85	355	eP	P	03 33 51.6	-2.7
HELC	Santa Helena	26.47	349	eP	P	03 33 58.8	-1.0
PTBC	PUERTO BERRIO,	26.65	352	eP	P	03 33 59.1	-1.8
SDV	Santo Domingo	28.72	0	LR	LR	03 45 57.6	
	comp=Z,66nm,19.9s,baz=264,slow=37						
SDV	Santo Domingo	28.72	0	eP	P	03 34 21.2	+1.5
SMLC	San Martn de	28.83	353	eP	P	03 34 16.6	-3.8
NBIT	Itapeh - BA	30.21	85	eP	P	03 34 32.3	-0.5
MDP	Montagnes des	30.62	37	P	P	03 34 36.4	0.0
	comp=Z,3.6nm,0.4s,baz=214,slow=9.8,SNR=5.3						
NBPN	Ponto Novo - B	30.72	77	eP	P	03 34 36.5	-0.9
NBPS	Pedro II - PI	32.43	65	eP	P	03 34 51.9	-0.6
NBLA	Lagarto - SE	32.89	79	eP	P	03 34 55.2	-1.1
NBTA	Tacaratu-PE	33.31	76	eP	P	03 34 59.9	-0.2
NBMA	Muriti-CE	33.39	72	eP	P	03 35 00.2	-0.6
NBPB	Pedra_Branca-C	33.48	69	eP	P	03 35 01.0	-0.6
NBAN	Anadia - AL	34.75	78	eP	P	03 35 11.8	-0.8
NBLI	Livramento-PB	35.02	74	eP	P	03 35 14.6	-0.3
NBCL	Cascavel-CE	35.24	68	eP	P	03 35 16.9	+0.1
NBPA	Parau_RN	35.57	71	eP	P	03 35 19.1	-0.5
RCBR	Riachuelo	36.61	72	P	P	03 35 29.0	+0.4
	comp=Z,14nm,0.7s,baz=237,slow=7.4,SNR=11						
RCBR	Riachuelo	36.61	72	IAmb	IAmb	03 35 29.6	
	comp=Z,14nm,0.8s						
RCBR	Riachuelo	36.61	72	eP	P	03 35 29.1	+0.4
RCBR				epP	sP	03 35 45.5	+4.5
PMSA	Palmer Station	44.95	176	eP	P	03 36 37.8	+1.1
PMSA				epP	sP	03 36 54.6	+5.6
MIAR	Mount Ida	58.46	338	IAmb	IAmb	03 38 19.0	
	comp=Z,6.3nm,0.8s						
TXAR	Lajitas Array	58.47	326	P	P	03 38 18.6	+0.5
	comp=Z,1.8nm,0.8s,baz=150,slow=9.0,SNR=14						
TX32	Lajitas Array	58.47	326	P	P	03 38 18.9	+0.8
T49A	Edmonton	58.51	346	P	P	03 38 17.9	-0.3
Q56A	Snyder Ridge,	59.28	352	P	P	03 38 25.2	+1.7
MNTX	Cornudas Mount	61.24	326	IAmb	IAmb	03 38 37.8	
	comp=Z,2.8nm,0.7s						
VNA3	Neumayer Olymp	62.01	161	P	P	03 38 43.4	+1.7
VNA2	Neumayer--Watz	62.60	161	P	P	03 38 47.8	+2.2
	baz=311,slow=6.4						
319A	Douglas	63.10	323	P	P	03 38 49.4	-0.3
SNAA	Sanae	64.22	161	P	P	03 38 58.1	+1.7
SDCO	Great Sand Dun	66.13	330	P	P	03 39 08.8	-0.7
SDCO				IAmb	IAmb	03 39 11.8	
	comp=Z,7.0nm,1.2s						
X16A	Lo Mia Camp, P	66.58	324	P	P	03 39 10.9	-1.4
X16A				IAmb	IAmb	03 39 16.0	
	comp=Z,3.0nm,0.8s						
WUAZ	Wupatki	67.36	325	P	P	03 39 16.6	-0.7
WUAZ				IAmb	IAmb	03 39 26.2	
	comp=Z,5.6nm,0.9s						
BAR	Barrett	68.39	319	P	P	03 39 22.3	-1.3
W13A	Hualapai Mount	68.45	323	P	P	03 39 23.6	-0.5
U15A	North Rim	68.53	325	P	P	03 39 24.6	-0.2
U15A				IAmb	IAmb	03 39 28.0	
	comp=Z,3.9nm,0.8s						
KNB	Kanab	69.26	325	P	P	03 39 28.3	-0.8
LIC	Lamto	69.59	75	eP	P	03 39 30.7	-0.8
	comp=Z,76nm,1.6s						
TIC	Toumodi	69.77	75	eP	P	03 39 31.7	-0.9
	comp=Z,3.8nm,0.3s						
TIC	Toumodi	69.77	75	P	P	03 39 31.7	-0.9
KIC	Kosan Boka	69.91	75	eP	P	03 39 32.6	-0.8
	comp=Z,15nm,0.8s						
KIC	Kosan Boka	69.91	75	P	P	03 39 32.6	-0.8
DBIC	Dimbokro	69.93	75	P	P	03 39 33.3	-0.2
	comp=Z,3.2nm,0.6s,baz=217,slow=6.8,SNR=6.1						
DBIC	Dimbokro	69.93	75	P	P	03 39 33.0	-0.5
DBIC				IAmb	IAmb	03 39 34.2	
	comp=Z,10nm,1.2s						
QSPA	South Pole Qui	70.17	180	P	P	03 39 36.5	+2.2
SHPR	Sheep Range	70.18	323	IAmb	IAmb	03 39 38.0	
	comp=Z,2.8nm,0.8s						
TPNV	Topopah Spring	71.11	323	IAmb	IAmb	03 39 44.0	
	comp=Z,5.3nm,1.1s						
ISA	Isabella, Lake	71.52	321	IAmb	IAmb	03 39 49.6	
	comp=Z,4.4nm,0.9s						
PDAR	Pinedale Array	72.00	331	P	P	03 39 46.9	+1.1
	comp=Z,0.4nm,0.7s,baz=165,slow=6.2,SNR=5.0						
PDAR	Pinedale Array	72.00	331	P	P	03 39 46.7	+0.9
HWUT	Hardware Ranch	72.05	329	IAmb	IAmb	03 39 50.1	
	comp=Z,4.3nm,1.1s						
OMMB	Old Mammoth Mi	73.15	322	IAmb	IAmb	03 39 55.9	
	comp=Z,3.1nm,0.9s						
NVAR	Mina Array Bea	73.31	323	P	P	03 39 55.7	+2.0
	comp=Z,1.5nm,0.9s,baz=156,slow=7.1,SNR=7.7						
NVAR	Mina Array Bea	73.31	323	P	P	03 39 53.4	-0.2
ULM	Lac du Bonnet	73.42	343	P	P	03 39 53.6	-0.1
	comp=Z,1.6nm,0.5s,baz=155,slow=6.9,SNR=4.9						
ULM	Lac du Bonnet	73.42	343	IAmb	IAmb	03 39 54.2	
	comp=Z,6.9nm,1.2s						
FLWY	Flagg Ranch	73.55	331	IAmb	IAmb	03 40 03.3	
	comp=Z,5.5nm,0.8s						
SCHQ	Schefferville	74.61	2	P	P	03 40 01.2	+0.5
	comp=Z,1.6nm,0.6s,baz=190,slow=9.4,SNR=4.5						
TORD	Torodi Ar. Bea	78.44	71	P	P	03 40 23.0	-0.2
	comp=Z,7.3nm,0.5s,baz=249,slow=5.3,SNR=135						
YKA	Yellowknife Ar	89.25	341	P	P	03 41 17.6	+0.3
	comp=Z,2.1nm,0.7s,baz=137,slow=4.8,SNR=49						
RES	Resolute Bay	95.74	354	LR	LR	04 27 56.9	
	comp=Z,22nm,18.0s,baz=302,slow=37						
H11S2	WAKE ISLAND Hy	126.03	279	T	T	06 05 56.5	
	baz=101,slow=74,SNR=251						
H11S1	WAKE ISLAND Hy	126.03	279	T	T	06 05 55.2	
	baz=101,slow=74,SNR=143						
H11S3	WAKE ISLAND Hy	126.04	279	T	T	06 05 54.6	
	baz=101,slow=74,SNR=144						
H11N3	WAKE ISLAND Hy	126.07	280	T	T	06 06 35.9	
	baz=102,slow=74,SNR=110						
H11N2	WAKE ISLAND Hy	126.09	280	T	T	06 06 37.0	
	baz=102,slow=74,SNR=113						
H11N1	WAKE ISLAND Hy	126.09	280	T	T	06 06 00.3	
	baz=102,SNR=97						
ASAR	Alice Springs	130.41	210	PKP	PKiKP	03 47 33.9	0.0
	comp=Z,1.4nm,0.8s,baz=163,slow=2.6,SNR=9.8						
ASAR	Alice Springs	130.41	210		PKiKP	03 47 33.6	-0.2
ABKAR	Akbulak array	131.16	41		PKiKP	03 47 35.6	+1.1
WRA	Warramunga Arr	133.33	213	PKP	PKiKP	03 47 39.7	-0.1
	comp=Z,0.9nm,0.6s,baz=161,slow=1.8,SNR=2.9						
ZALV	Zalesovo Beam	141.28	23	PKP	PKiKP	03 47 53.6	-1.3
	comp=Z,4.0nm,0.7s,baz=296,slow=3.2,SNR=8.8						
MAKZ	Makanchi	145.19	34		PKPdf	03 48 00.2	+0.9
MKAR	Makanchi Array	145.36	33	PKPbc	PKPab	03 48 00.7	+1.0
	comp=Z,12nm,0.7s,baz=324,slow=4.1,SNR=102						
MKAR	Makanchi Array	145.36	33		PKPab	03 48 00.8	+1.1
KSH	Kashi	145.42	49	PKPbc	PKPab	03 48 01.8	+1.6
KSH				PP	PP	03 51 25.8	+5.7
KSH				PKS	PKSdf	03 51 35.8	+0.2
USRK	Ussuriysk Ar.	149.37	327	PKPbc	PKiKP	03 48 12.2	+0.4
	comp=Z,6.0nm,0.7s,baz=30,slow=3.1,SNR=10						
USRK	Ussuriysk Ar.	149.37	327		PKiKP	03 48 12.4	+0.6
MJAR	Matsushiro Arr	149.85	309	PKPbc	PKiKP	03 48 13.4	+0.3
	comp=Z,6.1nm,0.8s,baz=120,slow=1.3,SNR=12						
MAT	Matsushiro	149.85	309	PKP	PKiKP	03 48 13.7	+0.6
SONM	Songino Array	152.15	4	PKP	PKPdf	03 48 12.5	+1.9
	comp=Z,0.6nm,0.9s,baz=11,slow=3.0,SNR=3.9						
SONM				PKPbc	pPKPdf	03 48 18.7	-1.9
	comp=Z,5.2nm,0.7s,baz=310,slow=1.4,SNR=31						
GTA	Gaotai	159.01	21	ePKP	PKPdf	03 48 19.6	-0.5
LZH	Lanzhou	163.28	16	ePKP	PKPdf	03 48 19.5	-5.3
LZH				pPKP	pPKPdf	03 48 28.6	-6.2
LZH				sPKP		03 48 34.4	

GUC ***17*** *03:37:36.7±0.8, 19°.92S×71°.09W, h40^{km}±3^{km}, ML3.5*
IDC ***17*** *03:37:38.9±8.5, 19°.79S×70°.99W, h33^{km}±60^{km}, mb3.6/3, mb1 3.8/5, mb1mx3.5/32, mbtmp3.8/5, ML3.6/2, MS3.4/2, Ms1 3.4/2, ms1mx2.7/30, Error ellipse: s-maj=53.5km s-min=30.3km az=84.0*
ISC 17 03:37:34.3±2.2**, 19°.93S**±0°.04×**71°.15W**±0°.09**, h7**^{km}±11^{km}**, n20,** σ1^{s}**24**/28**, mb3.9**/3**, 6C-3D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	1.02	71	⇓iP	Pg	03 37 53.7	-0.2
PSGC				eS	Sg	03 38 07.1	-0.1
TA01	Diego Aracena	1.10	125	⇑iP	Pb	03 37 56.1	+0.5
TA01				eS	Sg	03 38 09.8	0.0
TA01				IAML		03 38 10.8	
	comp=E,2µm,0.4s						
PATCX	Punta Patache	1.28	134	⇑iP	Pg	03 37 58.9	0.0
PATCX				eS	Sg	03 38 14.9	-0.7
PB11	IPOC Station P	1.41	83	⇑iP	Pn	03 38 00.3	-0.2
PB11				eS	Sg	03 38 18.2	-1.6
PB11				IAML		03 38 20.8	
	comp=N,2µm,0.7s						
PB12	IPOC Station P	1.52	31	⇑iP	Pn	03 38 01.7	-0.3
PB12				eS	Sn	03 38 21.7	-0.3
PB12				IAML		03 38 29.1	
	comp=N,648nm,0.7s						
PB02	IPOC Station P	1.81	140	⇑iP	Pn	03 38 06.4	+0.5
PB02				IAML		03 38 40.9	
	comp=E,1µm,0.6s						
GO01	Chusmiza	1.86	82	⇓iP	Pn	03 38 08.1	+1.2
GO01				eS	Sn	03 38 31.2	+0.3
GO01				IAML		03 38 33.7	
	comp=N,1µm,0.4s						
PB08	IPOC Station P	1.89	97	⇑iP	Pn	03 38 08.2	+1.0
PB08				eS	Sn	03 38 32.1	+0.7
PB08				IAML		03 38 34.9	
	comp=N,444nm,0.4s						
PB01	IPOC Station P	1.91	126	eP	Pn	03 38 08.2	+1.0
PB07	IPOC Station P	2.14	147	eP	Pn	03 38 11.2	+0.6
PB07				eS	Sb	03 38 40.3	+0.1
PB07				IAML		03 38 48.8	
	comp=E,394nm,0.6s						
PB03	IPOC Station P	2.47	148	⇓iP	Pn	03 38 15.6	+0.5
PB03				eS	Sn	03 38 43.4	-2.3
PB03				IAML		03 39 05.3	
	comp=E,188nm,0.6s						
LVC	Limon Verde	3.38	142	Pn	Pn	03 38 29.7	+1.9
	comp=E,5.7nm,0.3s,baz=322,slow=12,SNR=12						
LVC				Sn	Sn	03 39 08.8	+0.4
	comp=E,14nm,0.3s,baz=137,slow=20,SNR=6.7						
LPAZ	La Paz	4.62	39	Pn	Pn	03 38 48.6	+3.5
	comp=E,1.3nm,0.3s,baz=198,slow=2.1,SNR=15						
SIV	San Ignacio	10.36	69	Pn	Pn	03 40 04.5	+1.2
	comp=E,0.6nm,0.3s,baz=275,slow=10,SNR=9.4						
CFA	Coronel Fontan	11.91	168	LR	LR	03 44 06.2	
	comp=E,120nm,21.2s,baz=206,slow=32						
PTGA	Pitinga	22.00	31	P	P	03 42 27.9	-1.3
	comp=E,1.7nm,0.3s,baz=202,slow=16,SNR=7.9						
TORD	Torodi Ar. Bea	78.83	72	P	P	03 49 37.7	-0.8
	comp=E,1.0nm,0.6s,baz=250,slow=5.4,SNR=19						
FRB	Frobisher Bay	83.43	1	LR	LR	04 28 33.9	
	comp=E,33nm,19.5s,baz=280,slow=37						
YKA	Yellowknife Ar	89.03	341	P	P	03 50 28.2	-1.2
	comp=E,0.1nm,0.6s,baz=119,slow=6.4,SNR=3.7						
SONM	Songino Array	152.10	4	PKPbc	PKiKP	03 57 32.3	+1.4
	comp=E,0.3nm,0.5s,baz=343,slow=1.5,SNR=3.1						

ISU ***17*** *03:44:43.0, 41°.50N×72°.70E, h5^{km}*
KRNET ***17*** *03:44:44.8±0.1, 41°.42N×72°.84E, h18^{km}, mb3.1*
SOME ***17*** *03:44:45.5, 41°.52N×72°.73E, h5^{km}*
KNET ***17*** *03:44:45.8±0.7, 41°.46N×72°.87E, h8^{km}±3^{km}, ml2.8, Error ellipse: s-maj=5.5km s-min=3.8km az=126.0*
NNC ***17*** *03:44:46.3±1.1, 41°.44N×72°.83E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=10.3km s-min=4.5km az=175.0*
ISC 17 03:44:45.6±0.7**, 41°.43N**±0°.02×**72°.84E**±0°.02**, h10**^{km}**, n64,** σ1^{s}**82**/106**, 30C-17D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.15	135	⇓iP	Pg	03 44 47.4	-1.7
	baz=34						
ARSB				⇓iS	Sg	03 44 49.9	-1.7
	baz=34						
ARK	Arkit	0.75	299	eP	Pg	03 44 58.0	-2.1
ARK				i S	Sg	03 45 09.2	-0.8
ANR	Andizhan	0.77	208	eP	Pg	03 44 59.6	-0.8
ANR				eS	Sg	03 45 09.0	-1.4
AML	Almayashu	0.95	42	⇑iP	Pg	03 45 03.5	-0.4
	baz=42						
AML				⇑iS	Sg	03 45 15.9	-0.4
	baz=42						
AML	Almayashu	0.95	42	⇑P	Pg	03 45 03.5	-0.4
	49nm,0.2s,SNR=77						
AML				⇓S	Sn	03 45 17.8	-1.4
	88nm,0.2s						
FRG	Fergana	1.06	229	eP	Pn	03 45 08.6	+2.0
FRG				S	Sn	03 45 28.8	+7.4
ARLS	Aral	1.19	68	⇑iP	Pb	03 45 07.4	-1.0
	baz=68						
ARLS				⇑iS	Sn	03 45 24.7	-0.2
	baz=68						
MRKS	Merke	1.34	12	eP	Pg	03 45 10.8	-0.6
	12nm,0.1s						
MRKS				eS	Sg	03 45 29.4	+0.5
	126nm,0.3s						
MRKS	Merke	1.34	12	P	Pg	03 45 10.8	-0.6
	12nm,0.1s						
MRKS				S	Sg	03 45 29.8	+0.9
	126nm,0.3s						
EKS2	Erkin-Say	1.41	29	⇑iP	Pb	03 45 11.7	-0.5
	baz=29						
EKS2				⇑iS	Sg	03 45 31.0	-0.1
	baz=29						
EKS2	Erkin-Say	1.41	29	P	Pb	03 45 11.9	-0.3
	10nm,0.1s,SNR=34						
EKS2				⇑S	Sg	03 45 31.7	+0.6
	22nm,0.2s						
UCH	Uchtor	1.48	57	⇑iP	Pn	03 45 12.9	+0.1
	baz=57						
UCH				⇑iS	Sg	03 45 33.2	-0.2
	baz=57						
UCH	Uchtor	1.48	57	⇑P	Pb	03 45 13.0	-0.5
	35nm,0.2s,SNR=123						
UCH				⇓S	Sg	03 45 35.7	+2.3
	99nm,0.4s						
AAK	Ala-Archa	1.72	45	⇓iP	Pb	03 45 17.4	-0.1
	baz=45						
AAK				⇓iS	Sg	03 45 40.2	-0.9
	baz=45						
AAK	Ala-Archa	1.72	45	⇓P	Pb	03 45 17.6	+0.1
	27nm,0.3s,SNR=30						
AAK				⇓S	Sg	03 45 42.2	+1.1
	46nm,0.3s						
AAK	Ala-Archa	1.72	45	⇓Pn	Pg	03 45 17.8	-0.9
	16nm,0.5s						
AAK				⇓Sn	Sg	03 45 42.2	+1.1
	19nm,0.3s						
KZA	Kyzart	1.92	70	⇑iP	Pb	03 45 20.5	-0.4
	baz=69						
KZA				⇑iS	Sb	03 45 45.8	+0.8
	baz=69						
KZA	Kyzart	1.92	70	⇑P	Pb	03 45 20.3	-0.6
	51nm,0.3s,SNR=36						
KZA				⇑S	Sg	03 45 47.8	+0.5
	103nm,0.5s						
KBK	Karagaybulak	1.99	51	⇑iP	Pb	03 45 21.9	-0.1
	baz=51						
KBK				⇑iS	Sg	03 45 48.4	-1.2
	baz=51						
KBK	Karagaybulak	1.99	51	⇑P	Pb	03 45 22.6	+0.5
	21nm,0.2s,SNR=24						
BTK	Batken	2.06	229	⇑iP	Pb	03 45 22.3	-0.9
	baz=29						
BTK				⇑iS	Sb	03 45 50.0	+1.2
	baz=29						
BTK	Batken	2.06	229	i P	Pn	03 45 20.5	+0.1
BTK				i S	Sb	03 45 47.7	-1.1
CHMS	Chumysh	2.11	42	⇓iP	Pb	03 45 23.8	-0.3
	baz=41						
CHMS				⇓iS	Sg	03 45 51.5	-2.0
	baz=41						
CHMS	Chumysh	2.11	42	⇓P	Pb	03 45 24.3	+0.2
	42nm,0.3s,SNR=31						
CHMS	Chumysh	2.11	42	⇑Pn	Pb	03 45 24.3	+0.2
	26nm,0.4s						
CHMS				⇓Sn	Sg	03 45 54.0	+0.5
	22nm,0.4s						
CHRV	Charvak	2.18	276	eP	Pn	03 45 22.4	+0.4
CHRV				eS	Sg	03 45 54.5	-1.1
USP	Ospenovka	2.21	33	⇑iP	Pb	03 45 25.1	-0.5
	baz=33						
USP				⇑iS	Sb	03 45 53.5	+0.4
	baz=33						
USP	Ospenovka	2.21	33	⇓P	Pb	03 45 25.2	-0.5
	27nm,0.3s,SNR=25						
IUG	Iuzhnay	2.22	290	eP	Pb	03 45 25.6	-0.3
	7.6nm,0.4s						
IUG				eS	Sg	03 45 54.3	-2.6
	180nm,0.5s						
IUG	Iuzhnay	2.22	290	Pg	Pb	03 45 25.6	-0.3
IUG				Lg	Lg	03 45 54.3	
KK31	Karatay Array	2.40	315	⇓Pn	Pb	03 45 27.9	-1.0
	9.6nm,0.3s,baz=138,slow=15,SNR=147						
KK31				⇑Sn	Sg	03 46 00.2	-2.6
	19nm,0.3s,baz=140,slow=24,SNR=20						
SGDS	Sogindy	2.42	33	Pg	Pb	03 45 29.0	-0.2
	9.0nm,0.2s						
SGDS				Lg	Lg	03 45 60.0	
	79nm,0.9s						
BOOM	Boomskoye usch	2.54	64	⇑iP	Pb	03 45 29.7	-1.8
	baz=64						
BOOM				⇑iS	Sb	03 46 02.3	-0.6
	baz=64						
ULHL	Ulahol	2.67	71	⇑iP	Pb	03 45 31.3	-2.3
	baz=71						
ULHL				⇑iS	Sb	03 46 04.6	-1.9
	baz=71						
ULHL	Ulahol	2.67	71	⇓P	Pb	03 45 32.3	-1.3
	12nm,0.4s,SNR=24						
BRLS	Borolday	2.74	307	eP	Pb	03 45 34.1	-0.7
	0.8nm,0.5s						
BRLS				eS	Sb	03 46 09.1	+0.7
	52nm,0.4s						
BRLS	Borolday	2.74	307	Pg	Pb	03 45 34.1	-0.7
	0.8nm,0.5s						
BRLS				Lg	Lg	03 46 09.1	
	52nm,0.4s						
KST	Kastek	2.82	54	eP	Pb	03 45 37.4	+1.2

	41nm,0.5s						
KST				*e*S	Sg	03 46 14.9	-1.4
	59nm,0.6s						
KST	Kastek	2.82	54	Pg	Pb	03 45 37.4	+1.2
	41nm,0.5s						
KST				Lg	Lg	03 46 14.9	
	59nm,0.6s						
MTBS	Maitube	3.16	56	*e*P	Pb	03 45 43.6	+1.7
	1.6nm,0.1s						
MTBS				*e*S	Sg	03 46 25.3	-1.7
	28nm,0.5s						
MTBS	Maitube	3.16	56	Pg	Pb	03 45 43.6	+1.7
MTBS				Lg	Lg	03 46 25.9	
	28nm,0.5s						
IZV	Izvestkoviy	3.23	59	*e*P	Pg	03 45 45.5	-2.0
	8.0nm,0.6s						
IZV				*e*S	Sg	03 46 28.7	-0.6
	22nm,0.5s						
IZV	Izvestkoviy	3.23	59	Pg	Pg	03 45 45.5	-2.0
	8.0nm,0.6s						
IZV				Lg	Lg	03 46 28.7	
	22nm,0.5s						
KDJ	Kajisay	3.32	76	⇑*i*P	Pn	03 45 40.6	+2.8
	baz=76						
KDJ				⇑*i*S	Sn	03 46 20.5	+3.1
	baz=76						
TNSS	Tian-Shan	3.45	61	*e*P	Pb	03 45 49.2	+2.2
	5.2nm,0.4s						
TNSS				*e*S	Sg	03 46 34.8	-1.6
	17nm,0.6s						
TNSS	Tian-Shan	3.45	61	Pg	Pb	03 45 49.2	+2.2
	5.2nm,0.4s						
TNSS				Lg	Lg	03 46 34.8	
	17nm,0.6s						
KUU	Kurty	3.56	45	*e*P	Pb	03 45 50.6	+1.8
	5.2nm,0.3s						
KUU				*e*S	Sg	03 46 37.3	-2.8
	20nm,0.4s						
KUU	Kurty	3.56	45	Pg	Pb	03 45 50.6	+1.8
	5.2nm,0.3s						
KUU				Lg	Lg	03 46 37.3	
	20nm,0.4s						
MDOK	Medeo	3.57	60	*e*P	Pg	03 45 51.4	-2.6
	4.7nm,0.5s						
MDOK				*e*S	Sg	03 46 38.4	-1.9
	15nm,0.5s						
MDOK	Medeo	3.57	60	Pg	Pg	03 45 51.4	-2.6
	4.7nm,0.5s						
MDOK				Lg	Lg	03 46 38.4	
	15nm,0.5s						
KTBS	Karatobe	3.64	50	*e*P	Pb	03 45 52.0	+1.9
	3.5nm,0.5s						
KTBS				*e*S	Sg	03 46 39.5	-3.0
	59nm,0.6s						
KTBS	Karatobe	3.64	50	Pg	Pb	03 45 51.9	+1.9
	3.5nm,0.5s						
KTBS				Lg	Lg	03 46 39.5	
	59nm,0.6s						
KOTS	Kotyrbulak	3.64	59	*e*P	Pg	03 45 52.8	-2.6
	10nm,0.4s						
KOTS				*e*S	Sg	03 46 40.8	-1.8
	40nm,0.7s						
KOTS	Kotyrbulak	3.64	59	Pg	Pg	03 45 52.8	-2.6
	10nm,0.4s						
KOTS				Lg	Lg	03 46 40.8	
	40nm,0.7s						
BTLS	Baital	3.71	13	*e*P	Pb	03 45 53.2	+2.0
	1.3nm,0.4s						
BTLS				*e*S	Sg	03 46 41.5	-3.4
	28nm,0.5s						
BTLS	Baital	3.71	13	Pg	Pb	03 45 53.2	+2.0
	1.3nm,0.4s						
BTLS				Lg	Lg	03 46 41.5	
	28nm,0.5s						
CHKK	Chushkaly	3.90	50	*e*P	Pg	03 45 58.2	-2.1
	1.6nm,0.1s						
CHKK				*e*S	Sg	03 46 50.2	-0.7
	21nm,0.6s						
CHKK	Chushkaly	3.90	50	Pg	Pg	03 45 58.2	-2.1
	1.6nm,0.1s						
CHKK				Lg	Lg	03 46 50.2	
	21nm,0.6s						
KURS	Kuram	4.45	61	*e*P	Pg	03 46 07.3	-3.5
	2.6nm,0.5s						
KURS				*e*S	Sg	03 47 06.2	-2.2
	5.8nm,0.9s						
KURS	Kuram	4.45	61	Pg	Pg	03 46 07.3	-3.5
	2.6nm,0.5s						
KURS				Lg	Lg	03 47 06.2	
	5.8nm,0.9s						
UZB	Uzynbulak	4.90	67	*e*P	Pg	03 46 16.2	-3.2
	1.0nm,0.1s						
UZB				*e*S	Sg	03 47 21.0	-1.8
	7.6nm,0.5s						
UZB	Uzynbulak	4.90	67	Pg	Pg	03 46 16.2	-3.2
	1.0nm,0.1s						
UZB				Lg	Lg	03 47 21.0	
	7.6nm,0.5s						
SHLS	Shalkode	5.21	68	Pg	Pg	03 46 28.7	+3.4
	2.4nm,0.2s						
SHLS				Lg	Lg	03 47 42.4	
	11nm,0.9s						
KAPS	Kapalarasan	6.12	49	Pg	Pg	03 46 37.5	-5.2
	0.5nm,0.5s						
KAPS				Lg	Lg	03 47 57.9	
	3.1nm,0.6s						

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*SJA **17** 03:51:30.7±1.2, 19°.31S×71°.57W, h58^{km}±15^{km}, ML3.6, MW3.6*

*GUC **17** 03:51:43.9±0.7, 20°.12S×70°.95W, h40^{km}±4^{km}, ML3.0*

ISC 17 03:51:43.4±2.7**, 20°.02S**±0°.04×**70°.81W**±0°.10**, h6**^{km}±20^{km}**, n15, σ1^{s}.42**/18**, 4C, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PATCX	Punta Patache	1.01	142	*e*P	Pb	03 52 02.3	-1.0
PATCX				*i* S	Sb	03 52 16.6	-0.2
PATCX				IAML		03 52 21.9	
	comp=E,282nm,0.6s						
PB11	IPOC Station P	1.12	77	⇑*i*P	Pn	03 52 04.6	-1.2
PB11				*i* S	Sb	03 52 21.3	+1.2
PB11				IAML		03 52 24.6	
	comp=N,1µm,0.3s						
PB12	IPOC Station P	1.47	18	*e*P	Pn	03 52 10.0	-0.6
PB12				*i* S	Sn	03 52 30.9	+0.7
PB12				IAML		03 52 33.3	
	comp=E,435nm,0.3s						
GO01	Chusmiza	1.56	77	⇑*i*P	Pn	03 52 12.3	+0.1
GO01				*i* S	Sn	03 52 33.0	+0.1
PB08	IPOC Station P	1.56	95	⇑*i*P	Pn	03 52 12.0	-0.1
PB08				*i* S	Sn	03 52 32.6	-0.2
PB08				IAML		03 52 38.5	
	comp=N,199nm,0.2s						
PB01	IPOC Station P	1.60	130	⇑*e*P	Pn	03 52 12.3	-0.1
PB01				*i* S	Sn	03 52 33.2	-0.3
PB01				IAML		03 52 38.0	
	comp=N,284nm,0.8s						
PB07	IPOC Station P	1.90	153	*e*P	Pn	03 52 16.2	-0.4
PB07				*i* S	Sb	03 52 43.8	+1.0
PB07				IAML		03 52 57.4	
	comp=E,94nm,0.5s						
PB16	IPOC Station P	2.08	36	*e*P	Pn	03 52 20.8	+1.5
PB16				*i* S	Sb	03 52 49.7	+1.4
PB16				IAML		03 52 56.4	
	comp=E,189nm,0.6s						
PB09	IPOC Station P	2.29	141	*e*P	Pn	03 52 23.4	+1.4
PB09				*i* S	Sb	03 52 54.6	+0.6
PB09				IAML		03 53 03.7	
	comp=N,136nm,0.6s						
PB09	IPOC Station P	2.29	141	*e*P	Pn	03 52 22.7	+0.7
PB09				IAML		03 53 04.3	
	comp=Z,142nm,0.6s						
PB04	IPOC Station P	2.38	165	*i* P	Pn	03 52 22.0	-1.2
PB04				*e*S	Sg	03 53 00.9	+0.9
PB05	IPOC Station P	2.87	169	*i* P	Pn	03 52 28.8	-1.1
PB06	IPOC Station P	2.91	157	*i* P	Pn	03 52 29.8	-0.6
PB06				*e*S	Sb	03 53 15.2	+3.4
PB06				IAML		03 53 22.4	
	comp=Z,76nm,0.8s						
LVC	Limon Verde	3.13	146	*i* P	Pn	03 52 35.1	+1.5
LVC				*e*S	Sb	03 53 20.3	+2.1
PB15	IPOC Station P	3.41	159	*i* P	Pn	03 52 37.2	-0.1
PB15				IAML		03 53 40.5	
	comp=Z,55nm,0.3s						

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*SJA **17** 03:52:09.6±0.8, 31°.23S×67°.86W, h10^{km}±4^{km}, ML3.7, MW3.7*

*NEIC **17** 03:52:10.1±3.2, 31°.25S±0°.01×67°.75W±0°.05, h10^{km}±1^{km}, Error ellipse: s-maj=7.9km s-min=2.8km az=260.0*

*IDC **17** 03:52:11.2±0.6, 31°.28S×67°.89W, h19^{km}±3^{km}, mb3.9/8, mb1 4.1/9, mb1mx3.9/24, mbtmp4.0/9, ML4.6/1, MS3.1/2, Ms1 3.1/2, ms1mx2.8/27, Error ellipse: s-maj=23.2km s-min=8.3km az=134.0*

ISC 17 03:52:10.0±0.7**, 31°.24S**±0°.03×**67°.84W**±0°.04**, h12**^{km}±4^{km}**, n48, σ1^{s}.48**/58**, mb4.0**/10**, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CFA	Coronel Fontan	0.50	223	Pg	Pb	03 52 20.1	-0.6
	174nm,0.3s,baz=3.5,slow=9.6,SNR=3959						
CFA				Lg	Lg	03 52 26.7	
CFA	Coronel Fontan	0.50	223	*i* P	Pg	03 52 19.9	+0.2
CFA				*e*S	Sb	03 52 27.1	-0.9
RTLL	Cerro Villicun	0.55	260	*i* P	Pg	03 52 20.4	-0.3
RTLL				*e*S	Sb	03 52 28.6	-0.8
RTLL				IAML		03 52 29.2	
	comp=Z,16µm,0.3s						
AMOG	MOGNA	0.63	298	*i* P	Pg	03 52 22.3	0.0
AMOG				IAML		03 52 46.1	
	comp=Z,2µm,0.6s						
ZON	Zonda	0.78	247	*i* P	Pg	03 52 24.8	-0.2
ZON				*e*S	Sb	03 52 35.7	-0.4
ZON				IAML		03 52 37.0	
	comp=Z,5µm,0.6s						
RTCV	Cerro Valdivia	0.86	224	*i* P	Pg	03 52 26.5	-0.1
RTCV				IAML		03 52 40.7	
	comp=Z,644nm,0.9s						
ACCO	Cerro Coronel	1.23	301	*i* P	Pb	03 52 33.2	-0.3
ACCO				IAML		03 52 53.0	
	comp=Z,982nm,3.2s						
APLL	PUNTA DE LOS L	1.41	54	*i* P	Pn	03 52 36.1	+0.5
APLL				*e*S	Sg	03 52 55.6	+0.3
APLL				IAML		03 53 01.1	
	comp=Z,1µm,0.5s						
ACDV	Cuesta del Vie	1.53	314	*i* P	Pb	03 52 38.2	-0.2
ACDV				IAML		03 53 01.9	
	comp=Z,532nm,0.3s						
ARCO	CERRO ARCO	1.85	210	*e*P	Pb	03 52 44.1	+0.3
ARCO				*e*S	Sg	03 53 08.5	-0.9
ARCO				IAML		03 53 12.8	
	comp=Z,2µm,0.8s						
ACLC	CERRO LA CRUZ	1.96	23	*i* P	Pb	03 52 45.6	-0.2
GO04	Tololo Observa	2.76	292		Pb	03 52 58.2	-1.2
GO04				Sg	Sb	03 53 35.3	+2.0
PEL	Peldehue	3.07	231		Pb	03 53 02.0	-2.5
PEL				Sg	Sb	03 53 41.0	-1.0
ROC1	El Roble	3.20	236		Pn	03 53 03.3	+2.9
ROC1	El Roble	3.20	236	*i* P	Pn	03 53 03.3	+2.9
LCO	Las Campanas	3.33	311	Pn	Pn	03 53 04.7	+2.6
GO03	Copiap	4.19	330		Pn	03 53 16.3	+2.5
GO05	Huala	5.09	221		Pn	03 53 28.1	+1.9
GO02	Mina Guanaco	6.25	345		Pn	03 53 44.5	+2.2
GO02				Sn	Sn	03 54 49.3	-4.5
PB10	IPOC Station P	8.06	342	Pn	Pn	03 54 10.4	+3.4
LVC	Limon Verde	8.65	353	LR	LR	03 58 10.3	
	comp=Z,111nm,21.9s,baz=192,slow=41						
GO06	Curarrehue	8.84	199	Pn	Pn	03 54 20.3	+2.6
PLCA	Paso Flores	9.72	192	Pn	Pn	03 54 33.1	+3.4
	comp=Z,0.1nm,0.3s,baz=30,slow=14,SNR=5.9						
CPUP	Villa Florida	10.44	65	Pn	Pn	03 54 39.0	-0.5
	comp=Z,1.3nm,0.3s,baz=245,slow=11,SNR=23						
CPUP				LR	LR	03 59 24.2	
	comp=Z,104nm,18.5s,baz=222,slow=41						
CPUP	Villa Florida	10.44	65		Pn	03 54 39.9	+0.3
LPAZ	La Paz	14.89	359	Pn	P	03 55 45.9	-0.9
	comp=Z,0.7nm,0.3s,baz=169,slow=6.3,SNR=10						
LPAZ	La Paz	14.89	359	Pn	Pn	03 55 40.7	-0.3
SAML	Samuel	22.60	12	P	P	03 57 08.8	-1.8
SAML				IAmb	IAmb	03 57 12.5	
	comp=Z,5.1nm,0.9s						
BDFB	Brasilia	23.86	54	P	P	03 57 22.4	-1.1
	comp=Z,1.8nm,0.6s,baz=196,slow=9.5,SNR=4.8						
BDFB	Brasilia	23.86	54	IAmb	IAmb	03 57 29.0	
	comp=Z,1.7nm,0.6s						
RUSC	La Rusia	37.26	351	P	P	03 59 22.1	-0.2
RUSC				PcP	PcP	04 01 40.7	-1.3
SNAA	Sanae	52.84	159	P	P	04 01 25.5	+0.4
	comp=Z,0.9nm,0.8s,baz=302,slow=10.0,SNR=6.0						
SNAA	Sanae	52.84	159	P	P	04 01 24.8	-0.3
SNAA				IAmb	IAmb	04 01 26.5	
	comp=Z,2.2nm,0.9s						
TXAR	Lajitas Array	69.21	327	P	P	04 03 17.7	+0.9
	comp=Z,0.5nm,0.6s,baz=150,slow=7.5,SNR=8.8						
DBIC	Dimbokro	70.92	69	P	P	04 03 28.1	+0.5
	comp=Z,6.4nm,1.2s,baz=203,slow=7.7,SNR=2.9						
DBIC	Dimbokro	70.92	69	IAmb	IAmb	04 03 36.3	
	comp=Z,6.4nm,1.1s						
X16A	Lo Mia Camp, P	77.15	324	P	P	04 04 02.6	-1.1
X16A				IAmb	IAmb	04 04 12.1	
	comp=Z,4.0nm,1.1s						
BOSA	Boshof	78.16	116	P	P	04 04 09.7	0.0
	comp=Z,2.0nm,0.8s,baz=234,slow=9.0,SNR=3.9						
BOSA	Boshof	78.16	116	IAmb	IAmb	04 04 17.9	
	comp=Z,0.9nm,0.8s						
TORD	Torodi Ar. Bea	79.92	68	P	P	04 04 19.5	+0.3
	comp=Z,3.3nm,0.7s,baz=257,slow=6.2,SNR=26						
TORD				pP	PcP	04 04 27.1	+0.4
	comp=Z,5.7nm,0.8s,baz=266,slow=5.1,SNR=17						
TORD	Torodi Ar. Bea	79.92	68	P	P	04 04 19.2	0.0
PDAR	Pinedale Array	83.01	330	P	P	04 04 35.6	+0.3
	comp=Z,0.7nm,0.8s,baz=125,slow=4.4,SNR=4.5						
NVAR	Mina Array Bea	83.75	322	P	P	04 04 38.3	-0.9
	comp=Z,0.4nm,0.8s,baz=162,slow=6.2,SNR=3.2						
WRA	Warramunga Arr	124.83	206	PKP	PKPdf	04 11 09.9	-0.6
	comp=Z,0.6nm,0.5s,baz=161,slow=1.9,SNR=4.9						
WRA				pPKP	pPKPdf	04 11 15.6	+0.3
	comp=Z,0.6nm,0.5s,baz=165,slow=1.7,SNR=3.2						
KURBB	Kurchatov Arra	148.44	42	PKPbc	PKPbc	04 11 56.7	+0.5
	comp=Z,2.2nm,0.7s,baz=295,slow=3.0,SNR=17						
ZALV	Zalesovo Beam	150.00	33	PKPbc	PKPbc	04 12 00.2	+0.3
	comp=Z,3.6nm,0.6s,baz=292,slow=3.5,SNR=12						
ZALV				pPKPbc	sPKPbc	04 12 05.8	-0.6
	comp=Z,2.9nm,0.7s,baz=294,slow=3.2,SNR=3.7						
ZALV	Zalesovo Beam	150.00	33		PKPbc	04 12 00.1	+0.1
ZALV				PKPab	PKPab	04 12 06.1	+0.4
MKAR	Makanchi Array	152.29	47	PKPbc	PKPbc	04 12 05.5	-0.1
	comp=Z,2.1nm,0.7s,baz=288,slow=2.0,SNR=20						
MKAR				pPKPbc	sPKPbc	04 12 11.6	-0.5
	comp=Z,1.5nm,0.7s,baz=299,slow=2.5,SNR=7.2						

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*DJA **17** 03:56:41.0±0.4, 9°S±8°×11°9E±°, h122^{km}±6^{km}, M4.2/6, mb4.4/1, MLv4.1/6*

*IDC **17** 03:56:41.6±4.1, 8°.64S×119°.08E, h133^{km}±32^{km}, mb3.3/4, mb1 3.4/5, mb1mx3.1/41, mbtmp3.7/5, Error ellipse: s-maj=97.9km s-min=18.1km az=58.0*

ISC 17 03:56:41.9±0.8**, 8°.9S**±0°.1×**119°.10E**±0°.07**, h150**^{km}**, n17, σ2^{s}.05**/18**, mb3.6**/3**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.82	160	S	Sn	03 57 20.8	-2.5
PLAI	Plampang	1.31	271	P	Pn	03 57 08.2	-1.3
PLAI				S	Sn	03 57 27.8	-2.7
WSI	Waingapu	1.43	124	P	Pn	03 57 09.8	-0.9
BASI	Baing, Sumba	1.98	133	P	Pn	03 57 17.1	+0.3
MMRI	Maumere	3.11	86	P	Pn	03 57 36.2	+5.6
DNP	Denpasar	3.85	272	P	Pn	03 57 29.6	-11
SRBI	Singaraja	3.92	281	P	Pn	03 57 39.7	-1.4
JAGI	Jajag, Banyuwa	4.91	274	P	Pn	03 57 52.6	-1.5
SOEI	Soe	5.18	100	P	Pn	03 57 56.6	-1.2
	0.2nm34nm,0.7s						
SOEI				S	Sn	03 58 53.9	-3.1
	0.2nm34nm,0.7s						
PWJI	Pagerwojo	7.27	276	P	Pn	03 58 24.9	-0.6
PCJI	Pacitan	7.86	274	P	Pn	03 58 33.1	-0.4
WRA	Warramunga Arr	18.40	128	P	Pn	04 00 47.5	0.0
	0.5nm,0.3s,baz=303,slow=12,SNR=7.8						
WRA				S	S	04 04 05.3	-2.8
	0.3nm,0.3s,baz=303,slow=24,SNR=4.4						
ASAR	Alice Springs	20.43	138	P	Pn	04 01 10.4	-1.0
	1.6nm,0.5s,baz=318,slow=9.7,SNR=17						
ASAR				ScP	ScP	04 08 39.6	+3.1
	0.6nm,0.7s,baz=348,slow=1.4,SNR=5.6						
STKA	Stephens Creek	31.00	141	P	P	04 02 48.7	+3.5
	1.5nm,0.5s,baz=339,slow=8.4,SNR=4.4						
SONM	Songino Array	57.56	350	P	P	04 06 16.1	+0.3
	0.2nm,0.5s,baz=180,slow=5.8,SNR=2.8						
MKAR	Makanchi Array	64.38	333	P	P	04 07 01.7	-0.1
	0.5nm,0.7s,baz=162,slow=7.4,SNR=6.2						
TORD	Torodi Ar. Bea	118.53	280	PKP	PKiKP	04 15 14.4	+1.5
	0.2nm,0.5s,baz=36,slow=2.0,SNR=5.6						

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*DDA **17** 04:13:04.6, 42°.47N×43°.55E, h8^{km}±2^{km}, ML2.4*

*NORS **17** 04:13:04.8±0.0, 42°.45N×43°.59E, h11^{km}, MPVA3.8*

*TIF **17** 04:13:04.7, 42°.49N×43°.58E, h12^{km}*

*ISK **17** 04:13:04.9, 42°.46N×43°.60E, h15^{km}, ML2.9/6*

ISC 17 04:13:05.0±0.9**, 42°.47N**±0°.02×**43°.56E**±0°.02**, h11**^{km}±7^{km}**, n44, σ0^{s}.81**/82**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONI	Oni	0.15	327	P	Pg	04 13 08.4	0.0
ONI				S	Sg	04 13 11.0	0.0
ONI	Oni	0.15	327	PG	Pg	04 13 08.5	0.0
ZEI	Tsey	0.41	38	*i* Pg	Pg	04 13 12.8	-0.4
ZEI				*e*Sg	Sg	04 13 18.8	+0.1
DIGR	Digorskoe uzhe	0.43	2	*i* Pg	Pg	04 13 13.4	-0.3
DIGR				*e*Sg	Sg	04 13 19.6	+0.2
TKB	Tkibuli	0.43	255	P	Pb	04 13 14.3	-0.4
TKB				S	Sb	04 13 21.3	-0.1
LACR	Lac	0.65	56	*i* Pg	Pg	04 13 16.8	-0.9
LACR				*e*Sg	Sg	04 13 25.7	-0.6
GUDG	Gudauri	0.68	90	P	Pg	04 13 16.6	-1.6
GUDG				S	Sg	04 13 26.7	-0.4
BKRG	Bakuriani	0.71	182	P	Pb	04 13 19.3	-0.2
BKRG				S	Sb	04 13 30.0	+0.7
KORR	Kora	0.72	31	*e*Pg	Pb	04 13 19.2	-0.5
KORR				*e*Sg	Sb	04 13 29.4	-0.3
LSNR	Lesken	0.83	13	*e*Pg	Pb	04 13 21.4	-0.2
LSNR				*e*Sg	Sb	04 13 33.3	+0.4
ARNR	Ardon	0.89	37	*e*Pg	Pb	04 13 22.4	-0.1
ARNR				*e*Sg	Sn	04 13 35.2	-1.3
STDR	Stavd-Durt	0.97	22	*e*Pg	Pn	04 13 25.1	+0.4
STDR				*e*Sg	Sn	04 13 38.9	+0.3
NEY	Neytrino	0.99	322	*e*Pg	Pb	04 13 24.5	0.0
NEY				*e*Sg	Sn	04 13 38.6	-0.7
VLKR	Vladikavkaz	1.01	54	*e*Pg	Pn	04 13 25.2	0.0
VLKR				*e*Sg	Sn	04 13 39.3	-0.1
TRLG	Trialeti	1.01	156	P	Pn	04 13 25.3	0.0
TRLG				S	Sn	04 13 40.1	+0.5
AKH	Akhalkalaki	1.06	183	P	Pn	04 13 25.5	-0.4
AKH				S	Sn	04 13 40.9	+0.1
AKH	Akhalkalaki	1.06	183	PG	Pn	04 13 25.6	-0.4
AKH				SG	Sn	04 13 39.8	-1.0
TBLG	Delisi	1.14	130	P	Pg	04 13 26.6	-0.4
TBLG				S	Sn	04 13 43.4	+0.7
TBLG	Delisi	1.14	130	PN	Pg	04 13 26.6	-0.4
TBLG				SN	Sn	04 13 42.5	-0.2
TBLG	Delisi	1.14	130	*i* P	Pg	04 13 26.7	-0.3
TBLG				*i* S	Sn	04 13 42.9	+0.1
EPOS	Posof	1.15	213	*i* P	Pg	04 13 27.2	+0.2
EPOS				*i* S	Sn	04 13 43.6	+0.7
EPOS				IAML		04 13 44.0	
	comp=E,48nm,0.3s						
EPOS				IAML		04 13 48.0	
	comp=N,55nm,0.6s						
SEAG	Tbilisi Sea	1.16	127	P	Pg	04 13 27.4	0.0
BGD	Bogdanovka	1.20	179	P	Pg	04 13 28.1	-0.1
BGD				S	Sn	04 13 44.9	+0.5
BTNK	Botanikuri	1.21	130	P	Pg	04 13 28.2	-0.1
BTNK				S	Sn	04 13 45.2	+0.9
BTNK	Botanikuri	1.21	130	*i* P	Pg	04 13 28.2	-0.1
BTNK				*i* S	Sn	04 13 44.3	-0.1
BTNK				IAML		04 13 47.0	
	comp=E,36nm,0.2s						
BTNK				IAML		04 13 47.0	
	comp=N,46nm,0.2s						
KZRT	Kazreti	1.25	150	P	Pb	04 13 28.2	-0.5
KZRT				S	Sg	04 13 45.7	+0.5
KZRT	Kazreti	1.25	150	*i* P	Pn	04 13 27.8	-0.7
KZRT				*i* S	Sg	04 13 45.6	+0.5
KBTC	Kuba-Taba	1.35	355	*e*Pg	Pg	04 13 31.4	+0.4
KBTC				*e*Sg	Sg	04 13 50.5	+1.9
SHA1	Shidzhatmaz	1.43	333	*e*Pg	Pb	04 13 32.1	+0.2
SHA1				*e*Sg	Sg	04 13 51.5	+0.3
BATM	Batumi	1.64	239	P	Pb	04 13 35.2	0.0
BATM				S	Sg	04 13 58.1	+0.5
BATM	Batumi	1.64	239	PN	Pb	04 13 34.4	-0.8
BATM				SN	Sb	04 13 55.9	0.0
BATM	Batumi	1.64	239	*i* P	Pb	04 13 35.0	-0.2
BATM				*i* S	Sg	04 13 57.6	-0.1
BCA	Borcka	1.77	235	PN	Pn	04 13 36.2	+0.6
BCA				SN	Sb	04 13 59.1	-0.6
DBOC	Borcka	1.80	232	*i* P	Pb	04 13 38.2	+0.1
DBOC				*i* S	Sg	04 14 02.2	-0.8
DBOC				IAML		04 14 07.0	
	comp=E,44nm,0.3s						
DAGI	Agillar	1.85	222	*i* P	Pb	04 13 39.6	+0.6
DAGI				*i* S	Sg	04 14 04.7	0.0
DAGI				IAML		04 14 07.0	
	comp=N,25nm,1.2s						
DAGI				IAML		04 14 07.0	
	comp=E,30nm,0.3s						
DBAD	Bademkaya	2.01	225	*i* P	Pb	04 13 41.8	+0.1
DBAD				*i* S	Sg	04 14 09.2	-0.5
DBAD				IAML		04 14 10.0	
	comp=E,47nm,0.3s						
DBAD				IAML		04 14 14.0	
	comp=N,86nm,0.7s						
DDEM	Demirkent	2.08	221	*i* P	Pb	04 13 43.1	+0.4
DDEM				*i* S	Sg	04 14 11.8	+0.1
DDEM				IAML		04 14 12.0	
	comp=N,94nm,0.5s						
DDEM				IAML		04 14 13.0	
	comp=E,51nm,0.3s						
LGD	Lagodekhi	2.09	107	P	Pb	04 13 43.3	+0.3
LGD				S	Sg	04 14 10.7	-1.6
SENK	Senkaya-Erzuru	2.11	206	PN	Pn	04 13 40.9	+0.4
DDFL	Dedoflistskaro	2.16	117	P	Pg	04 13 45.7	-0.8
DDFL				S	Sg	04 14 19.5	+4.9
DDFL	Dedoflistskaro	2.16	117	*i* P	Pb	04 13 44.5	+0.2
GNI	Garni	2.48	159	PN	Pn	04 13 45.9	+0.4
TASB	TASBURUN-IGDIR	2.53	168	PN	Pn	04 13 46.7	+0.5
KRIK	Erzurum-spir	2.91	224	*i* P	Pg	04 13 59.0	-1.8
KRIK				*i* S	Sg	04 14 38.8	+0.4

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*NEIC **17** 04:14:50.9±2.6, 17°.96S±0°.05×70°.49W±0°.10, h84^{km}±8^{km}, mb4.6/48, ML4.5(ARE), Error ellipse: s-maj=13.6km s-min=7.8km az=91.0*

*ARE **17** 04:14:51±4.1, 18°.02S±0°.06×70°.63W±0°.09, h65^{km}±6^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=171.0*

*IDC **17** 04:14:51.8±0.7, 17°.78S×70°.26W, h81^{km}±4^{km}, mb4.0/16, mb1 4.2/20, mb1mx4.0/45, mbtmp4.4/20, MS3.0/1, Ms1 3.1/1, ms1mx2.5/31, Error ellipse: s-maj=19.2km s-min=12.3km az=37.0*

*VAO **17** 04:14:55.0±0.8, 17°.92S×70°.10W, h84^{km}±8^{km}, mb4.1*

ISC 17 04:14:51.1±0.5**, 17°.93S**±0°.05×**70°.46W**±0°.06**, h83**^{km}±4^{km}**, n128, σ1^{s}.59**/125**, mb4.6**/34**, 3C-4D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	Chacalluta	0.45	165	⇓*i*P	Pn	04 15 05.9	+1.2
AP01				*i* S	Sn	04 15 16.9	+2.1
AP01				IAML		04 15 18.1	
	comp=N,100µm,0.3s						
PB12	IPOC Station P	0.69	169	⇓*i*P	Pn	04 15 08.2	+1.3
PB12				*i* S	Sn	04 15 20.8	+2.0
PB12				IAML		04 15 22.1	
	comp=N,34µm,0.6s						
PB16	IPOC Station P	0.99	114	⇓*i*P	Pn	04 15 12.3	+1.5
PB16				*i* S	Sn	04 15 27.1	+1.6
PB16				IAML		04 15 30.4	
	comp=E,5µm,0.6s						
PSGC	Pisagua	1.69	169	⇑*i*P	Pn	04 15 20.7	+1.6
PSGC				*i* S	Sn	04 15 42.5	+2.3
PB11	IPOC Station P	1.97	157	⇑*i*P	Pn	04 15 24.4	+1.5
PB11				*i* S	Sn	04 15 50.4	+3.4
PB11				IAML		04 15 57.4	
	comp=E,3µm,0.3s						
PB11	IPOC Station P	1.97	157		Pn	04 15 24.4	+1.5
PB11				Sn	Sn	04 15 44.0	-3.1
GO01	Chusmiza	2.10	145		Pn	04 15 28.1	+3.2
GO01				Sn	Sn	04 15 47.3	-3.3
PB08	IPOC Station P	2.52	151	⇑*i*P	Pn	04 15 33.1	+2.7
PB08				*i* S	Sn	04 16 03.7	+3.3
PB08				IAML		04 16 11.4	

	comp=N,2μm,0.5s						
LPAZ	**La Paz**	**2.77**	**54**	P	**Pn**	**04 15 36.8**	**+2.9**
	comp=N,16nm,0.3s,baz=238,slow=8.5,SNR=749						
LPAZ				LR	LR	04 16 46.3	
	comp=N,270nm,19.0s,baz=232,slow=45						
PB01	**IPOC Station P**	**3.23**	**164**		**Pn**	**04 15 40.7**	**+1.1**
PB01				Sn	**Sn**	**04 16 15.9**	**-1.2**
PB04	**IPOC Station P**	**4.39**	**176**		**Pn**	**04 15 55.9**	**+0.4**
LVC	**Limon Verde**	**4.88**	**163**	P	**Pn**	**04 16 04.2**	**+2.0**
	comp=N,4.9nm,0.3s,baz=357,slow=7.3,SNR=110						
LVC				S	**Sn**	**04 16 57.2**	**-0.5**
	comp=N,34nm,0.3s,baz=221,slow=23,SNR=14						
LVC	**Limon Verde**	**4.88**	**163**	*e*P	**Pn**	**04 16 04.3**	**+2.0**
PB10	**IPOC Station P**	**5.55**	**181**		**Pn**	**04 16 10.7**	**-0.4**
GO02	**Mina Guanaco**	**7.24**	**174**		**Pn**	**04 16 34.1**	**-0.3**
GO02				Sn	**Sn**	**04 17 54.4**	**-0.9**
NNA	**Nana**	**8.54**	**313**	P	**Pn**	**04 16 52.4**	**+0.3**
	comp=N,1.8nm,0.3s,baz=153,slow=11,SNR=3.9						
NNA	**Nana**	**8.54**	**313**		**Pn**	**04 16 50.7**	**-1.4**
SIV	**San Ignacio**	**9.19**	**79**	P	**Pn**	**04 17 00.6**	**-0.3**
	comp=N,14nm,0.3s,baz=270,slow=12,SNR=212						
GO03	**Copiap**	**9.62**	**179**	Pn	**Pn**	**04 17 05.3**	**-1.3**
GO03					**Sn**	**04 18 48.4**	**-4.6**
SAML	**Samuel**	**11.39**	**39**		**Pn**	**04 17 28.2**	**-2.7**
GO04	**Tololo Observa**	**12.19**	**181**	Pn	**Pn**	**04 17 40.1**	**-1.7**
AQDB	**Aquidauana**	**14.17**	**103**	*e*P	**Pn**	**04 18 08.8**	**+0.8**
SALV	**Santo Antonio**	**14.28**	**84**	*e*P	**Pn**	**04 18 08.3**	**-1.0**
CPUP	**Villa Florida**	**14.75**	**127**	Pn	**Pn**	**04 18 13.5**	**-1.9**
CPUP	**Villa Florida**	**14.75**	**127**	*e*P	**Pn**	**04 18 16.5**	**+1.1**
ROC1	**El Roble**	**14.99**	**182**	Pn	**Pn**	**04 18 16.4**	**-2.3**
CLDB	**Colider**	**15.84**	**66**	*e*P	**Pn**	**04 18 27.6**	**-1.7**
C2SB	**Chapadao do Su**	**16.75**	**96**	*e*P	**P**	**04 18 41.0**	**-0.5**
ITQB	**Itaqui**	**17.21**	**135**	*e*P	**P**	**04 18 47.6**	**+1.1**
ARAG	**Araguaiana, MT**	**17.99**	**86**	*e*P	**P**	**04 18 54.6**	**-0.7**
PTGB	**Pitanga**	**18.41**	**115**	*e*P	**Pn**	**04 19 01.1**	**+0.2**
PCMB	**Pacaembu**	**18.44**	**105**	*e*P	**P**	**04 18 59.8**	**-0.3**
ITRB	**Iturama**	**19.11**	**98**	*e*P	**P**	**04 19 07.7**	**+0.1**
ITAB	**Concordia**	**19.27**	**122**	*e*P	**P**	**04 19 09.8**	**+0.7**
OTAV	**Otavalo**	**19.69**	**336**	*e*P	**P**	**04 19 14.2**	**-0.1**
OTAV	**Otavalo**	**19.69**	**336**	P	**P**	**04 19 13.8**	**-0.5**
OTAV	**Otavalo**	**19.69**	**336**	*e*P	**Pn**	**04 19 20.5**	**+4.0**
CPSB	**Cacapava Do Su**	**19.85**	**132**	*e*P	**Pn**	**04 19 16.6**	**-1.2**
PTGA	**Pitinga**	**19.97**	**32**	P	**P**	**04 19 15.5**	**-1.3**
	comp=N,2.5nm,0.3s,baz=223,slow=16,SNR=21						
PTGA	**Pitinga**	**19.97**	**32**	P	**P**	**04 19 15.3**	**-1.5**
FLOC	**Florencia**	**20.06**	**345**	*e*P	**P**	**04 19 18.0**	**+0.3**
FLOC	**Florencia**	**20.06**	**345**	P	**P**	**04 19 18.1**	**+0.3**
FRTB	**Fartura**	**20.28**	**109**	*e*P	**P**	**04 19 21.1**	**+0.9**
PLTB	**Pedras Altas**	**20.54**	**135**	*e*P	**P**	**04 19 23.6**	**+0.7**
GARC	**Garzon, Huila**	**20.60**	**346**	*e*P	**P**	**04 19 24.0**	**+0.2**
BB19B	**Bebedouro**	**20.91**	**102**	*e*P	**P**	**04 19 27.8**	**+0.8**
BBAC	**Balboa, Cauca**	**20.93**	**341**	*e*P	**P**	**04 19 28.5**	**+1.1**
PCON	**Cinco Dias**	**20.97**	**343**	*e*P	Pn	04 19 30.3	-1.2
IPMB	**Ipameri, GO**	**21.17**	**94**	*e*P	**P**	**04 19 29.6**	**-0.2**
CNLB	**Canela**	**21.21**	**126**	*e*P	**P**	**04 19 31.8**	**+1.7**
TRQA	**Tornquist**	**21.38**	**161**	*e*P	**P**	**04 19 34.8**	**+3.0**
GO06	**Curarrehue**	**21.59**	**182**	P	**P**	**04 19 35.0**	**+0.9**
BDFB	**Brasilia**	**21.61**	**87**	P	**P**	**04 19 33.7**	**-0.9**
	comp=N,6.0nm,0.5s,baz=259,slow=10,SNR=14						
BDFB	**Brasilia**	**21.61**	**87**	P	**P**	**04 19 35.6**	**+1.0**
ORTC	**Ortega, Tolima**	**22.21**	**347**	*e*P	**P**	**04 19 39.1**	**-1.8**
YOTC	**Yotoco, Valle**	**22.54**	**345**	*e*P	**P**	**04 19 42.7**	**-1.8**
VAO	**Valinhos**	**22.57**	**107**	*e*P	**P**	**04 19 45.5**	**+0.7**
PLCA	**Paso Flores**	**22.72**	**180**	P	**P**	**04 19 48.1**	**+1.9**
	comp=N,8.8nm,0.9s,baz=27,slow=11,SNR=12						
PLCA	**Paso Flores**	**22.72**	**180**	P	**P**	**04 19 47.5**	**+1.3**
PLCA				IAmb	IAmb	04 19 49.9	
	comp=Z,14nm,1.0s						
PLCA	**Paso Flores**	**22.72**	**180**	*e*P	**P**	**04 19 48.2**	**+2.1**
GUY2C	**Guyana, Caldas**	**23.51**	**348**	*e*P	**P**	**04 19 53.4**	**-1.0**
GUY2C				*e*P	**P**	**04 19 54.3**	**-0.1**
RUSC	**La Rusia**	**23.82**	**354**	P	**P**	**04 19 56.0**	**-1.1**
PARB	**Paraibuna**	**23.85**	**107**	*e*P	**P**	**04 19 57.3**	**+0.4**
CBOC	**Ciudad Bolivar**	**24.27**	**346**	*e*P	**P**	**04 19 59.6**	**-1.2**
BSCB	**Bom Sucesso**	**24.40**	**101**	*e*P	**P**	**04 20 02.6**	**+0.6**
JANB	**Januaria**	**25.23**	**87**	*e*P	**P**	**04 20 09.4**	**-0.1**
ZARC	**Zaragoza, Cauc**	**25.64**	**350**	*e*P	**P**	**04 20 10.9**	**-2.2**
SDV	**Santo Domingo**	**26.65**	**360**	P	**P**	**04 20 22.4**	**0.0**
SDV	**Santo Domingo**	**26.65**	**360**	*e*P	**P**	**04 20 26.1**	**+3.7**
RCBR	**Riachuelo**	**35.82**	**75**	*e*P	**P**	**04 21 44.0**	**+1.1**
MLPR	**Magueyes Islan**	**35.84**	**6**	P	**P**	**04 21 41.9**	**-0.9**
APG	**El Apazote**	**38.21**	**328**	P	**P**	**04 22 05.0**	**+1.8**
	comp=Z,7.4nm,0.8s,baz=143,slow=2.9,SNR=6.7						
TEIG	**Tepich**	**41.76**	**334**	P	**P**	**04 22 32.3**	**0.0**
TEIG				IAmb	IAmb	04 22 35.5	
	comp=Z,28nm,1.1s						
CMIG	**Matias Romero**	**42.30**	**324**	P	**P**	**04 22 38.0**	**+1.3**
	comp=Z,3.2nm,0.6s,baz=105,slow=7.1,SNR=7.2						
352A	**Blakely**	**51.06**	**344**	P	**P**	**04 23 45.4**	**+0.4**
250A	**Grady**	**51.89**	**343**	P	**P**	**04 23 51.0**	**-0.2**
HODGE	**Hodges**	**53.08**	**348**	P	**P**	**04 23 59.7**	**-0.2**
HODGE				IAmb	IAmb	04 24 00.7	
	comp=Z,14nm,1.1s						
TKL	**Tuckaleechee C**	**54.77**	**347**	P	**P**	**04 24 11.6**	**-0.7**
	comp=Z,8.0nm,0.9s,baz=165,slow=6.9,SNR=6.3						
TKL	**Tuckaleechee C**	**54.77**	**347**	P	**P**	**04 24 11.8**	**-0.5**
V52A	**Sevierville**	**54.91**	**347**	P	**P**	**04 24 12.7**	**-0.5**
U54A	**Nelsons Funny**	**55.21**	**349**	P	**P**	**04 24 15.4**	**-0.1**
U54A				IAmb	IAmb	04 24 21.1	
	comp=Z,14nm,1.1s						
MIAR	**Mount Ida**	**56.63**	**337**	IAmb	IAmb	04 24 26.2	
	comp=Z,6.2nm,0.7s						
TXAR	**Lajitas Array**	**56.88**	**325**	P	**P**	**04 24 27.8**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=149,slow=8.7,SNR=11						
WMOK	**Wichita Mounta**	**58.90**	**333**	P	**P**	**04 24 41.5**	**0.0**
WMOK				IAmb	IAmb	04 24 42.3	
	comp=Z,2.1nm,0.6s						
S39A	**Bolivar**	**59.36**	**339**	IAmb	IAmb	04 24 44.7	
	comp=Z,4.0nm,0.8s						
MSTX	**Muleshoe**	**60.10**	**329**	IAmb	IAmb	04 24 51.2	
	comp=Z,9.5nm,0.9s						
319A	**Douglas**	**61.58**	**322**	IAmb	IAmb	04 25 02.1	
	comp=Z,7.7nm,0.9s						
ANMO	**Albuquerque**	**62.73**	**327**	P	**P**	**04 25 08.6**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=149,slow=7.9,SNR=5.4						
ANMO	**Albuquerque**	**62.73**	**327**	IAmb	IAmb	04 25 10.9	
	comp=Z,2.4nm,1.2s						
SDCO	**Great Sand Dun**	**64.45**	**330**	IAmb	IAmb	04 25 20.9	
	comp=Z,6.2nm,0.9s						
E46A	**Sault Ste Mari**	**65.21**	**349**	IAmb	IAmb	04 25 23.3	
	comp=Z,11nm,0.8s						
ECSD	**EROS Data Cent**	**65.88**	**340**	IAmb	IAmb	04 25 29.2	
	comp=Z,5.9nm,0.9s						
SPMN	**Marine on St.**	**66.06**	**343**	IAmb	IAmb	04 25 30.1	
	comp=Z,7.6nm,0.6s						
U15A	**North Rim**	**66.97**	**324**	IAmb	IAmb	04 25 38.1	
	comp=Z,5.7nm,0.9s						
DBIC	**Dimbokro**	**69.19**	**75**	P	**P**	**04 25 48.7**	**-0.6**
	comp=Z,2.7nm,0.5s,baz=239,slow=8.3,SNR=9.0						
DBIC				pP	**pP**	**04 26 10.5**	**-0.9**
	comp=Z,13nm,0.9s,baz=235,slow=5.0,SNR=6.1						
DBIC	**Dimbokro**	**69.19**	**75**	P	**P**	**04 25 49.0**	**-0.4**
DBIC				IAmb	IAmb	04 25 58.4	
	comp=Z,14nm,1.4s						
TPNV	**Topopah Spring**	**69.59**	**322**	IAmb	IAmb	04 25 54.7	
	comp=Z,6.7nm,1.1s						
PDAR	**Pinedale Array**	**70.30**	**330**	P	**P**	**04 25 56.0**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=141,slow=7.4,SNR=10						
PDAR	**Pinedale Array**	**70.30**	**330**	P	**P**	**04 25 56.5**	**+0.6**
ULM	**Lac du Bonnet**	**71.50**	**343**	P	**P**	**04 26 02.1**	**-0.5**
	comp=Z,6.0nm,0.6s,baz=154,slow=5.6,SNR=17						
ULM				pP	**pP**	**04 26 23.3**	**-1.3**
	comp=Z,2.5nm,0.6s,baz=145,slow=5.7,SNR=3.2						
ULM	**Lac du Bonnet**	**71.50**	**343**	IAmb	IAmb	04 26 02.7	
	comp=Z,5.6nm,0.6s						
ELK	**Elko**	**71.67**	**326**	P	**P**	**04 26 05.3**	**+1.1**
	comp=Z,1.0nm,0.6s,baz=113,slow=4.7,SNR=5.3						
NVAR	**Mina Array Bea**	**71.80**	**322**	P	**P**	**04 26 06.5**	**+1.5**
	comp=Z,1.6nm,0.8s,baz=154,slow=6.2,SNR=10						
NVAR				pP	**pP**	**04 26 27.2**	**+0.3**
	comp=Z,1.3nm,0.9s,baz=157,slow=6.9,SNR=4.7						
FLWY	**Flagg Ranch**	**71.85**	**331**	IAmb	IAmb	04 26 07.5	
	comp=Z,10nm,1.0s						
SCHQ	**Schefferville**	**72.54**	**2**	P	**P**	**04 26 08.2**	**-0.6**
	comp=Z,1.3nm,0.5s,baz=222,slow=8.0,SNR=4.2						
MFID	**Camas Ranch**	**73.87**	**327**	IAmb	IAmb	04 26 19.8	
	comp=Z,5.8nm,0.9s						
ORV	**Oroville**	**74.41**	**321**	IAmb	IAmb	04 26 23.2	
	comp=Z,8.3nm,1.1s						
BMO	**Blue Mountains**	**75.64**	**328**	P	**P**	**04 26 28.7**	**+1.5**
BMO				IAmb	IAmb	04 26 29.6	
	comp=Z,4.4nm,1.1s						
TORD	**Torodi Ar. Bea**	**77.59**	**72**	P	**P**	**04 26 38.0**	**-0.7**
	comp=Z,3.5nm,0.8s,baz=255,slow=5.3,SNR=23						
TORD				pP	**pP**	**04 26 59.4**	**-1.6**
	comp=Z,8.4nm,0.9s,baz=250,slow=5.3,SNR=10						
TORD	**Torodi Ar. Bea**	**77.59**	**72**	P	**P**	**04 26 38.1**	**-0.6**
SYO	**Syowa Base**	**80.34**	**160**	⇓*i*X	P	04 26 46.0	-6.7
YKA	**Yellowknife Ar**	**87.36**	**341**	P	**P**	**04 27 28.7**	**+0.3**
	comp=Z,6.1nm,0.7s,baz=136,slow=5.1,SNR=142						
YKA				pP	**pP**	**04 27 50.5**	**-0.5**
	comp=Z,3.8nm,0.8s,baz=138,slow=5.2,SNR=8.0						
DLBC	**Dease Lake**	**90.38**	**333**	P	**P**	**04 27 44.6**	**+1.7**
	comp=Z,2.7nm,0.8s,baz=142,slow=5.6,SNR=4.2						
DLBC				pP	**pP**	**04 28 06.3**	**+0.7**
	comp=Z,4.1nm,0.8s,baz=58,slow=0.6,SNR=4.8						
H11N3	**WAKE ISLAND Hy**	**125.89**	**282**	T	T	06 51 51.6	
	baz=98,slow=75,SNR=31						
H11S2	**WAKE ISLAND Hy**	**125.89**	**280**	T	T	06 53 01.4	
	baz=100,slow=75,SNR=3.3						
H11N2	**WAKE ISLAND Hy**	**125.90**	**282**	T	T	06 51 52.4	
	baz=98,slow=75,SNR=28						
H11S1	**WAKE ISLAND Hy**	**125.90**	**280**	T	T	06 53 01.7	
	baz=100,slow=75,SNR=2.8						
H11N1	**WAKE ISLAND Hy**	**125.91**	**282**	T	T	06 51 48.3	
	baz=98,slow=75,SNR=20						
H11S3	**WAKE ISLAND Hy**	**125.91**	**280**	T	T	06 53 01.7	
	baz=100,slow=75,SNR=2.8						
ASAR	**Alice Springs**	**132.30**	**211**	PKP	**PKiKP**	**04 33 57.5**	**0.0**
	comp=Z,0.4nm,0.5s,baz=133,slow=2.5,SNR=6.2						
WRA	**Warramunga Arr**	**135.17**	**214**	PKP	**PKPdf**	**04 34 02.5**	**+0.6**
	comp=Z,1.6nm,0.3s,baz=146,slow=1.7,SNR=5.2						
ZALV	**Zalesovo Beam**	**139.29**	**22**	PKP	**PKiKP**	**04 34 09.8**	**-0.8**
	comp=Z,2.8nm,0.7s,baz=272,slow=2.4,SNR=9.1						
MKAR	**Makanchi Array**	**143.50**	**32**	PKP	**PKPdf**	**04 34 15.1**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=300,slow=2.7,SNR=6.1						
KSH	**Kashi**	**143.86**	**46**	PKP	PKPab	04 34 13.9	-0.5
KSH				pPKP	pPKPdf	04 34 40.0	-0.8
KSH				PP	**PP**	**04 37 32.3**	**+1.2**
KSH				PKS	**PKSdf**	**04 37 49.0**	**-3.9**
USRK	**Ussuriysk Ar.**	**147.72**	**329**	PKPbc	**PKiKP**	**04 34 27.5**	**-0.7**
	comp=Z,3.6nm,0.8s,baz=337,slow=2.4,SNR=6.0						
MJAR	**Matsushiro Arr**	**148.66**	**312**	PKPbc	**PKiKP**	**04 34 30.4**	**-0.1**
	comp=Z,3.0nm,0.6s,baz=206,slow=0.2,SNR=11						
SONM	**Songino Array**	**150.07**	**4**	PKPbc	**PKiKP**	**04 34 33.4**	**+0.2**
	comp=Z,3.1nm,0.8s,baz=321,slow=1.8,SNR=14						
LZH	**Lanzhou**	**161.23**	**14**	*e*PKP	**PKPdf**	**04 34 47.1**	**+4.6**
LZH				pPKP	pPKPdf	04 34 58.8	-7.3
LZH				sPKP		04 35 04.0	

TRN 17 04:15:37.6, 14°.62N×59°.13W, h64^{km}, MD3.8, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBGH	**Gun Hill**	**1.53**	**196**	*e*P	Pn	04 16 03.8	+1.0
BBGH				*e*S	Sn	04 16 24.2	+2.4
BBSP	**Saint Philip**	**1.54**	**192**	*e*P	Pn	04 16 04.7	+1.7
BBSP				*e*S	Sn	04 16 24.4	+2.3
BCHC	**Barbados, Cave**	**1.56**	**198**	*e*P	Pn	04 16 04.2	+1.0
BCHC				*e*S	Sn	04 16 25.2	+2.7
MPOM	**Morne Pois Mar**	**1.68**	**264**	*e*P	Pn	04 16 05.7	+0.9
ILAM	**Ilet Lapin Mar**	**1.69**	**275**	*e*P	Pn	04 16 05.8	+0.8
LPMF	**Morne Lapointe**	**1.78**	**269**	*e*P	Pn	04 16 06.9	+0.7
ZAM	**Aeronautique**	**1.84**	**269**	*e*P	Pn	04 16 07.7	+0.8
SLAC	**Saint Lucia, A**	**1.86**	**247**	*e*P	Pn	04 16 08.0	+0.8
SLAC				*e*S	Sn	04 16 31.2	+1.5
TRMF	**Trois Ilets**	**1.86**	**268**	*e*P	Pn	04 16 08.2	+1.0
BIM	**Bigot**	**1.88**	**267**	*e*P	Pn	04 16 08.9	+1.3
SLBI	**Saint Lucia, B**	**1.88**	**252**	*e*P	Pn	04 16 07.9	+0.4
SLBI				*e*S	Sn	04 16 31.3	+1.0
FDF	**Fort de France**	**1.96**	**273**	*e*P	Pn	04 16 09.9	+1.3
FDF				*e*S	Sn	04 16 33.5	+1.3
BAMF	**Morne Balai**	**1.96**	**276**	*e*P	Pn	04 16 09.8	+1.2
GBMF	**Grand Be**	**1.98**	**275**	*e*P	Pn	04 16 10.2	+1.3
MCLT	**Moule a Chique**	**1.98**	**243**	*e*P	Pn	04 16 09.0	+0.2
MCLT				*e*S	Sn	04 16 34.4	+1.7
CXM	**Morne La Croix**	**1.98**	**276**	*e*P	Pn	04 16 10.7	+1.7
SVN	**Savane Anatole**	**1.98**	**277**	*e*P	Pn	04 16 10.7	+1.8
PML	**Morne Lenard**	**1.99**	**275**	*e*P	Pn	04 16 10.5	+1.4
SLB	**Belfond**	**2.02**	**247**	*e*P	Pn	04 16 11.0	+1.6
SLB				*e*S	Sn	04 16 34.6	+1.0
PCM	**Pelee Case Pet**	**2.02**	**276**	*e*P	Pn	04 16 10.9	+1.4
MDN	**Morne-Daniel**	**2.29**	**288**	*e*P	Pn	04 16 12.8	-0.3
MDN				*e*S	Sn	04 16 55.0	+15
DWS	**Wesley**	**2.31**	**294**	*e*P	Pn	04 16 14.4	+1.1
DWS				*e*S	Sn	04 16 41.8	+1.2
SFAN	**Fancy Village**	**2.33**	**238**	*e*P	Pn	04 16 14.9	+1.2
SFAN				*e*S	Sn	04 16 41.0	-0.3
SVCV	**St. Vincent, C**	**2.37**	**236**	*e*P	Pn	04 16 14.9	+0.7
SVCV				*e*S	Sn	04 16 42.9	+0.7
SSV	**Crater Summit**	**2.38**	**237**	*e*P	Pn	04 16 16.0	+1.6
SSV				*e*S	Sn	04 16 44.0	+1.4
SVV	**Soufriere Volc**	**2.41**	**238**	*e*P	Pn	04 16 16.4	+1.8
SVV				*e*S	Sn	04 16 44.2	+1.2
MDPV	**Dominica, Penn**	**2.43**	**295**	*e*P	Pn	04 16 16.4	+1.5
MDPV				*e*S	Sn	04 16 44.3	+0.7
MDPO	**Dominica; Chan**	**2.43**	**293**	*e*P	Pn	04 16 16.8	+1.8
MDPO				*e*S	Sn	04 16 45.6	+1.9
SVB	**Belmont**	**2.46**	**237**	*e*P	Pn	04 16 15.9	+0.6
SVB				*e*S	Sn	04 16 45.8	+1.4
TDBA	**Terre de Bas,**	**2.71**	**297**	*e*P	Pn	04 16 20.7	+1.9
CBE	**Ff, Capester**	**2.79**	**301**	*e*P	Pn	04 16 21.7	+1.8
GRHS	**Sauteurs**	**3.41**	**226**	*e*P	Pn	04 16 30.4	+2.0
GRHS				*e*S	Sn	04 17 08.8	+1.1
GRGR	**Grenville**	**3.49**	**225**	*e*P	Pn	04 16 31.5	+2.1
GRGR				*e*S	Sn	04 17 10.4	+0.9
TOSP	**Speyside**	**3.58**	**203**	*e*P	Pn	04 16 31.8	+1.1
TOSP				*e*S	Sn	04 17 12.0	+0.3
GRFF	**Grenada Fort F**	**3.60**	**225**	*e*P	Pn	04 16 32.0	+1.0
GRFF				*e*S	Sn	04 17 12.3	-0.1
MLYT	**Lee's Yard**	**3.61**	**306**	*e*P	Pn	04 16 32.4	+1.3
MLYT				*e*S	Sn	04 17 13.8	+1.2
ANWB	**Willy Bob**	**3.96**	**320**	*e*P	Pn	04 16 36.3	+0.4
ANWB				*e*S	Sn	04 17 20.4	-0.6
SKI	**Saint Kitts**	**4.39**	**308**	*e*P	Pn	04 16 44.1	+2.3
SKI	**Saint Kitts**	**4.39**	**308**	*e*S	Sn	04 17 31.8	0.0
GUIV	**Guiria**	**4.97**	**218**	*e*P	Pn	04 16 51.6	+1.8
GUIV	**Guiria**	**4.97**	**218**	*e*S	Sn	04 17 46.0	+0.1

IDC ***17*** *04:16:54.8±2.5, 19°.38S×70°.51W, h0^{km}, mb4.0/3, mb1 4.1/3, mb1mx3.6/40, mbtmp4.0/3, MS3.1/1, Ms1 3.1/1, ms1mx2.5/33, Error ellipse: s-maj=72.3km s-min=61.3km az=175.0*

NEIC ***17*** *04:16:58.1±0.7, 19°.3S±0°.1×70°.93W±0°.10, h16^{km}±9^{km}, mb4.1/1, Error ellipse: s-maj=15.2km s-min=12.9km az=154.0*

ISC 17 04:16:59.9±1.4**, 19°.2S**±0°.1×**70°.9W**±0°.2**, h35^{km}, n9, σ1.^{s}22**/9**, mb4.0**/3**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	**IPOC Station P**	**1.27**	**114**	Pn	**Pn**	**04 17 20.8**	**-0.6**
PB11					**Sn**	**04 17 38.6**	**+1.3**
GO01	**Chusmiza**	**1.66**	**105**	Pn	**Pn**	**04 17 27.1**	**+0.2**
PB01	**IPOC Station P**	**2.22**	**144**	Pn	**Pn**	**04 17 33.7**	**-0.6**
CPUP	**Villa Florida**	**14.35**	**122**	LR	LR	04 26 51.8	
	comp=Z,77nm,19.0s,baz=266,slow=43						
PTGA	**Pitinga**	**21.29**	**31**	P	**P**	**04 21 42.4**	**-1.2**
	3.9nm,0.5s,baz=215,slow=16,SNR=4.3						
PTGA	**Pitinga**	**21.29**	**31**	P	**P**	**04 21 42.9**	**-0.7**
PTGA				IAmb	IAmb	04 21 50.8	
	comp=Z,6.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.38**	**72**	P	**P**	**04 28 56.2**	**-1.2**
	comp=Z,1.6nm,0.8s,baz=249,slow=5.5,SNR=4.9						
YKA	**Yellowknife Ar**	**88.46**	**341**	P	**P**	**04 29 49.6**	**+1.6**
	comp=Z,0.4nm,0.8s,baz=136,slow=5.1,SNR=4.4						
MKAR	**Makanchi Array**	**144.82**	**33**	PKP	**PKPab**	**04 36 32.9**	**+0.7**
	comp=Z,0.4nm,0.9s,baz=318,slow=2.9,SNR=4.2						

SJA ***17*** *04:19:27.5±0.8, 20°.00S×71°.07W, h2^{km}±18^{km}, ML3.3, MW3.4*

IDC ***17*** *04:19:32.6±1.6, 19°.71S×70°.39W, h0^{km}, mb3.8/2, mb1 4.0/3, mb1mx3.5/40, mbtmp3.8/3, ML3.3/1, Error ellipse: s-maj=71.2km s-min=28.7km az=65.0*

GUC ***17*** *04:19:34.2±0.5, 19°.98S×70°.77W, h41^{km}±1^{km}, ML3.6*

ISC 17 04:19:31.1±1.8**, 19°.98S**±0°.03×**70°.84W**±0°.06**, h1^{km}**±10^{km}**, n27, σ0.^{s}81**/37**, 4C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.78**	**60**	⇑*i*P	**Pb**	**04 19 47.3**	**-0.2**
PSGC				*e*S	**Sb**	**04 19 57.7**	**-0.9**
PSGCX	**Pisagua**	**0.78**	**60**	*e*P	**Pb**	**04 19 47.2**	**-0.3**
PSGCX				IAML		04 20 08.4	
	comp=Z,514nm,0.3s						
TA01	**Diego Aracena**	**0.85**	**133**	⇓*i*P	**Pb**	**04 19 48.4**	**-0.2**
TA01				*e*S	**Sb**	**04 19 59.6**	**-0.9**
TA01				IAML		04 20 04.2	
	comp=E,7μm,0.3s						
PATCX	**Punta Patache**	**1.05**	**142**	*e*P	**Pb**	**04 19 52.0**	**-0.2**
PATCX				*e*S	**Sn**	**04 20 07.8**	**-0.7**
PATCX	**Punta Patache**	**1.05**	**142**	*e*P	**Pg**	**04 19 51.0**	**-0.3**
PATCX				*e*S	**Sn**	**04 20 08.4**	**-0.1**
PATCX				IAML		04 20 13.4	
	comp=Z,1μm,0.4s						
PB11	**IPOC Station P**	**1.14**	**79**	⇑*i*P	**Pg**	**04 19 53.3**	**+0.4**
PB11				*e*S	**Sg**	**04 20 08.2**	**+0.5**
PB11				IAML		04 20 09.3	
	comp=N,3μm,0.6s						
PB12	**IPOC Station P**	**1.44**	**20**	*e*P	**Pn**	**04 19 58.4**	**0.0**
PB12				*e*S	**Sg**	**04 20 17.7**	**+0.2**
PB12				IAML		04 20 21.1	
	comp=E,1μm,0.3s						
GO01	**Chusmiza**	**1.58**	**79**	⇑*i*P	**Pn**	**04 20 00.9**	**+0.2**
GO01				*e*S	**Sg**	**04 20 21.4**	**-0.6**
GO01				IAML		04 20 23.0	
	comp=N,2μm,0.1s						
PB08	**IPOC Station P**	**1.59**	**96**	⇓*i*P	**Pn**	**04 20 01.0**	**+0.2**
PB08				*e*S	**Sn**	**04 20 21.2**	**-1.0**
PB08				IAML		04 20 23.1	
	comp=N,481nm,0.2s						
PB02	**IPOC Station P**	**1.60**	**147**	⇑*i*P	**Pn**	**04 20 00.9**	**+0.3**
PB02				*e*S	**Sn**	**04 20 22.1**	**+0.1**
PB02				IAML		04 20 25.0	
	comp=E,2μm,0.2s						
PB01	**IPOC Station P**	**1.65**	**130**	⇓*i*P	**Pn**	**04 20 01.6**	**+0.3**
PB01				*e*S	**Sn**	**04 20 22.2**	**-1.0**
PB01				IAML		04 20 27.8	
	comp=E,809nm,0.5s						
AP01	**Chacalluta**	**1.67**	**16**	*e*P	**Pn**	**04 20 01.8**	**+0.3**
AP01				*e*S	**Sn**	**04 20 23.2**	**-0.4**
AP01				IAML		04 20 26.8	
	comp=E,2μm,0.3s						
PB03	**IPOC Station P**	**2.29**	**154**	*e*P	**Pn**	**04 20 10.7**	**+0.5**
PB03				*i* S	**Sn**	**04 20 38.8**	**-0.4**
PB03				IAML		04 20 50.4	
	comp=E,218nm,0.6s						
PB09	**IPOC Station P**	**2.34**	**141**	*i* P	**Pn**	**04 20 12.3**	**+1.4**
PB09				IAML		04 20 53.4	
	comp=Z,337nm,0.6s						
PB04	**IPOC Station P**	**2.43**	**165**	*i* P	**Pn**	**04 20 11.8**	**-0.3**
PB05	**IPOC Station P**	**2.92**	**168**	*i* P	**Pn**	**04 20 18.1**	**-0.6**
PB05				IAML		04 21 19.5	
	comp=Z,74nm,0.4s						
PB06	**IPOC Station P**	**2.96**	**157**	*i* P	**Pn**	**04 20 19.3**	**0.0**
PB06				IAML		04 21 12.2	
	comp=Z,162nm,1.6s						
LVC	**Limon Verde**	**3.17**	**146**	Pn	**Pn**	**04 20 24.8**	**+2.3**
	comp=Z,3.3nm,0.3s,baz=340,slow=12,SNR=9.7						
LVC				Sn	**Sn**	**04 21 03.0**	**+1.8**
	comp=Z,12nm,0.3s,baz=88,slow=14,SNR=3.6						
LVC	**Limon Verde**	**3.17**	**146**	*e*P	**Pn**	**04 20 24.0**	**+1.4**
LVC				IAML		04 21 18.5	
	comp=Z,63nm,1.1s						
PB10	**IPOC Station P**	**3.52**	**176**	*i* P	**Pn**	**04 20 26.4**	**-0.6**
PB10				IAML		04 21 31.6	
	comp=Z,32nm,0.9s						
TORD	**Torodi Ar. Bea**	**78.57**	**71**	P	**P**	**04 31 34.0**	**-1.0**
	comp=Z,1.5nm,0.7s,baz=248,slow=5.3,SNR=10						
YKA	**Yellowknife Ar**	**89.17**	**341**	P	**P**	**04 32 28.7**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=137,slow=4.9,SNR=4.7						
H11S2	**WAKE ISLAND Hy**	**125.88**	**279**	T	T	06 57 58.8	
	baz=107						
H11S1	**WAKE ISLAND Hy**	**125.89**	**279**	T	T	06 57 59.1	
	baz=107						
H11S3	**WAKE ISLAND Hy**	**125.90**	**279**	T	T	06 57 59.2	
	baz=107						
MKAR	**Makanchi Array**	**145.41**	**33**	PKP	**PKPab**	**04 39 11.8**	**+0.7**
	comp=Z,1.4nm,0.7s,baz=322,slow=4.0,SNR=13						
SONM	**Songino Array**	**152.13**	**4**	PKPbc	**PKiKP**	**04 39 29.5**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=96,slow=1.4,SNR=2.9						

RSNC ***17*** *04:30:31.1±2.1, 3°.88N×71°.55W, h4^{km}±13^{km}, ML3.7, Mw3.7*

IDC ***17*** *04:30:32.9±4.9, 4°.16N×71°.37W, h34^{km}±35^{km}, mb3.1/3, mb1 3.5/5, mb1mx3.3/32, mbtmp3.4/5, ML2.3/2, Error ellipse: s-maj=39.3km s-min=21.7km az=154.0*

ISC 17 04:30:27.0±1.9**, 3°.93N**±0°.04×**71°.40W**±0°.06**, h2^{km}**±11^{km}**, n24, σ1.^{s}44**/40**, mb3.2**/3**, 1D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTGC	**Puerto Gaitan,**	**0.78**	**290**	⇓*i*Pg	**Pg**	**04 30 41.4**	**-0.6**
PTGC				*e*Sg	**Sg**	**04 30 50.6**	**-1.5**
PTGC				*i*		04 31 03.8	
	comp=Z,2μm,0.3s						
GUVC	**San Jose del G**	**1.85**	**222**	*e*P	**Pn**	**04 30 59.7**	**+0.1**
GUVC				*e*S	**Sn**	**04 31 22.2**	**-1.4**
GUVC				*i*		04 31 28.8	
	comp=Z,1μm,0.2s						
VILC	**Villavicencio,**	**2.30**	**275**	*e*P	**Pn**	**04 31 06.8**	**+0.8**
VILC				*e*S	**Sb**	**04 31 36.4**	**-1.8**
VILC				*i*		04 31 38.2	
	comp=Z,1μm,0.3s						
CHIC	**Chingaza**	**2.43**	**287**	*e*P	**Pn**	**04 31 08.5**	**+0.4**
CHIC				*e*S	**Sn**	**04 31 38.8**	**+0.3**
CHIC				*i*		04 31 41.8	
	comp=Z,348nm,0.4s						
TAMC	**Tame, Arauca**	**2.52**	**351**	*e*P	**Pb**	**04 31 12.2**	**-0.8**
TAMC				*e*S	**Sg**	**04 31 47.2**	**-0.8**
TAMC				*i*		04 31 58.2	
	comp=Z,181nm,0.4s						
RUSC	**La Rusia**	**2.57**	**319**	*e*P	**Pn**	**04 31 11.6**	**+1.5**
RUSC				*e*S	**Sb**	**04 31 46.2**	**-0.1**
RUSC				*i*		04 32 00.6	
	comp=Z,198nm,0.5s						
MACC	**Macarena, Meta**	**3.02**	**234**	*e*P	**Pn**	**04 31 17.4**	**+1.6**
MACC				*e*S	**Sn**	**04 31 55.4**	**+2.7**
MACC				*i*		04 32 07.0	
	comp=Z,348nm,0.7s						
ROSC	**El Rosal**	**3.05**	**287**	Pn	**Pn**	**04 31 18.7**	**+2.1**
	comp=Z,6.4nm,0.3s,baz=95,slow=12,SNR=14						
ROSC				Pg	**Pg**	**04 31 28.0**	**+2.5**
	comp=Z,21nm,0.3s,baz=122,slow=15,SNR=43						
ROSC				Lg	Lg	04 32 10.2	
	comp=Z,29nm,0.3s,baz=34,slow=23,SNR=5.9						
ROSC	**El Rosal**	**3.05**	**287**	*e*P	**Pn**	**04 31 18.2**	**+1.6**
ROSC				*i*		04 32 07.8	
	comp=Z,81nm,0.6s						
SPBC	**San Pablo de B**	**3.16**	**303**	*e*S	**Sb**	**04 32 04.3**	**+1.2**
BARC	**Barichara**	**3.18**	**326**	*e*P	**Pg**	**04 31 26.7**	**-1.4**
BARC				*e*S	**Sg**	**04 32 10.6**	**+1.2**
BARC				*i*		04 32 25.8	
	comp=Z,497nm,0.8s						
PAMC	**Pamplona, Colo**	**3.62**	**339**	*e*P	**Pn**	**04 31 26.6**	**+2.1**
PAMC				*e*S	**Sb**	**04 32 17.3**	**+0.6**
PAMC				*i*		04 32 38.7	
	comp=Z,98nm,0.7s						
NORC	**Norcasia**	**3.82**	**295**	*e*P	**Pn**	**04 31 26.8**	**-0.1**
NORC				*e*S	**Sn**	**04 32 10.4**	**-2.0**
NORC				*i*		04 32 35.2	
	comp=Z,59nm,0.6s						
ORTC	**Ortega, Tolima**	**3.84**	**270**	*e*P	**Pn**	**04 31 27.7**	**+0.5**
ORTC				*e*S	**Sn**	**04 32 11.1**	**-1.8**
ORTC				*i*		04 32 32.6	
	comp=Z,124nm,0.6s						
PTBC	**PUERTO BERRIO,**	**4.00**	**311**	*e*P	**Pn**	**04 31 29.3**	**0.0**
PTBC				*i*		04 32 32.9	
	comp=Z,55nm,0.5s						
GUY2C	**Guyana, Caldas**	**4.16**	**288**	*e*P	**Pn**	**04 31 32.7**	**+0.8**
GUY2C				*e*S	**Sb**	**04 32 33.7**	**+1.7**
GUY2C				*i*		04 32 45.8	
	comp=Z,46nm,0.5s						
GARC	**Garzon, Huila**	**4.44**	**247**	*e*P	**Pn**	**04 31 35.8**	**+0.2**
GARC				*e*S	**Sn**	**04 32 25.8**	**-2.2**
GARC				*i*		04 32 46.2	
	comp=Z,429nm,0.2s						
FLOC	**Florencia**	**4.85**	**241**	*e*P	**Pn**	**04 31 41.5**	**+0.5**
FLOC				*e*S	**Sb**	**04 32 49.5**	**-2.0**
FLOC				*i*		04 33 03.5	
	comp=Z,186nm,0.5s						
SDV	**Santo Domingo**	**4.98**	**9**	Pn	**Pn**	**04 31 43.7**	**+0.8**
	comp=Z,2.2nm,0.3s,baz=181,slow=6.6,SNR=12						
SDV				Sn	**Sn**	**04 32 40.6**	**-0.7**
	comp=Z,6.0nm,0.3s,baz=310,slow=14,SNR=5.5						

SDV				Lg	Lg	04 33 03.1	
	comp=Z,7.3nm,0.3s,baz=220,slow=22,SNR=4.3						
PCON	Cinco Dias	5.24	252	eP	Pn	04 31 48.0	+1.2
PCON				eS	Sb	04 33 05.7	+2.3
PCON				i		04 33 15.0	
	comp=Z,92nm,0.6s						
PTGA	Pitinga	12.33	112	Lg	Lg	04 36 59.3	
	comp=Z,0.6nm,0.3s,baz=16,slow=22,SNR=8.0						
TXAR	Lajitas Array	39.66	313	P	P	04 38 01.0	+0.3
	comp=Z,0.3nm,0.6s,baz=131,slow=6.9,SNR=4.6						
YKA	Yellowknife Ar	66.55	340	P	P	04 41 17.4	-0.9
	comp=Z,0.1nm,0.6s,baz=133,slow=6.0,SNR=4.2						
TORD	Torodi Ar. Bea	72.66	78	P	P	04 41 57.5	+0.6
	comp=Z,0.3nm,0.7s,baz=273,slow=6.0,SNR=2.5						

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*NEIC **17** 04:32:41.1±2.9, 15°.8N±0°.1×98°.48W±0°.07, h20^{km}±15^{km}, Error ellipse: s-maj=20.7km s-min=5.6km az=202.0*
*MEX **17** 04:32:43.1±0.4, 15°.92N×98°.41W, h4^{km}±6^{km}, MD4.0*
ISC 17 04:32:39.9±1.8, **15°.93N**±0°.07×**98°.40W**±0°.04, **h8**^{km}±12^{km}, **n18, σ0^{s}.85**/34, **Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PEIG	Puerto Escondi	1.21	86	eP	Pg	04 33 03.2	0.0
PEIG				i S	Sg	04 33 18.7	-0.2
YOIG	Yosondua	1.24	42	eP	Pg	04 33 03.3	-0.4
YOIG				i S	Sg	04 33 19.8	0.0
TLIG	Tlapa	1.64	354	eP	Pn	04 33 09.2	0.0
TLIG				i S	Sn	04 33 29.9	-0.6
TLIG	Tlapa	1.64	354		Pn	04 33 09.4	+0.2
TLIG	Tlapa	1.64	354		Pn	04 33 09.2	0.0
TLIG					Sn	04 33 29.9	-0.6
VHO	Vista Hermosa	1.96	54	eP	Pn	04 33 13.9	+0.1
VHO				i S	Sn	04 33 38.9	+0.1
HLIG	Huajuapan de L	1.98	17	eP	Pn	04 33 14.2	+0.2
HLIG				eS	Sn	04 33 38.3	-0.8
CAIG	El Cayaco	2.11	302	eP	Pn	04 33 15.7	+0.1
CAIG				i S	Sn	04 33 41.3	-0.7
CAIG	El Cayaco	2.11	302		Pn	04 33 15.7	+0.1
CAIG					Sn	04 33 41.3	-0.7
HUIG	Huatulco	2.21	94	eP	Pn	04 33 17.9	+0.8
HUIG				i S	Sn	04 33 43.3	-1.3
HUIG	Huatulco	2.21	94		Pn	04 33 17.9	+0.8
HUIG					Sn	04 33 43.3	-1.3
MEIG	Mezcala	2.31	330	eP	Pn	04 33 18.4	0.0
MEIG				i S	Sn	04 33 46.2	-0.8
MEIG	Mezcala	2.31	330		Pn	04 33 18.4	0.0
MEIG					Sn	04 33 46.2	-0.8
ARIG	Puente Sto Nin	2.99	322	eP	Pn	04 33 28.6	+0.9
ARIG				eS	Sn	04 34 04.2	+0.3
ARIG	Puente Sto Nin	2.99	322		Pn	04 33 28.6	+0.9
ARIG					Sn	04 34 04.2	+0.3
UNM	Universidad Na	3.46	348	Pn	Pn	04 33 37.0	+2.5
UNM					Sn	04 34 16.5	+0.6
MOIG	Morelia	4.58	325	Pn	Pn	04 33 51.0	+1.1
MOIG					Sn	04 34 41.8	-1.6
CCIG	Comitan	6.03	86		Pn	04 34 15.3	+5.5
CCIG				Sn	Sn	04 35 19.9	+0.8

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*NEIC **17** 04:51:00.1±2.2, 19°.95S±0°.06×176°.08W±0°.08, h205^{km}±5^{km}, mb4.8/40, Error ellipse: s-maj=12.0km s-min=8.0km az=114.0*
*IDC **17** 04:51:00.2±1.8, 19°.78S×176°.16W, h200^{km}±16^{km}, mb4.1/14, mb1 4.3/15, mb1mx4.1/30, mbtmp4.6/15, Error ellipse: s-maj=15.2km s-min=10.4km az=145.0*
ISC 17 04:50:59.5±0.3, **20°.01S**±0°.05×**176°.04W**±0°.05, **h200**^{km}, **n122, σ2^{s}.04**/133, **mb4.7**/34, **5C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	5.84	82		Pn	04 52 25.8	+1.1
NIUE					Sn	04 53 28.3	-3.8
MSVF	Nonsavu	6.03	291		Pn	04 52 32.0	+4.7
AFI	Afiamalu	7.31	35	P	Pn	04 52 41.4	-2.5
	11nm,0.3s,baz=187,slow=3.5,SNR=10						
AFI				S	Sn	04 53 55.8	-11
	46nm,0.3s,baz=44,slow=21,SNR=11						
RIZ	Raoul Island	9.36	190	S	Sn	04 54 53.5	-1.5
RAO	Raoul Island	9.36	190	Pn	Pn	04 53 15.7	+5.3
GLKZ	Green Lake	9.37	190	P	Pn	04 53 10.2	-0.3
GLKZ				S	Sn	04 54 52.7	-2.7
RAR	Rarotonga	15.28	97		P	04 54 27.8	+2.3
DZM	Mont Dzumac	16.48	260	P	Pn	04 54 43.2	+3.4
	15nm,0.3s,baz=76,slow=18,SNR=118						
DZM	Mont Dzumac	16.48	260	P	Pn	04 54 42.8	+3.1
OUZ	Omahuta	17.70	209	P	P	04 54 53.5	+1.5
OUZ				IAmb	IAmb	04 55 00.7	
	comp=Z,28nm,1.3s						
MXZ	Matakaoa Point	18.17	195	P	P	04 55 00.2	+3.2
MXZ	Matakaoa Point	18.17	195	P	P	04 55 00.4	+3.4
WMGZ	Waiomatatini S	18.39	194	P	P	04 55 01.6	+2.1
HAZ	Te Kaha	18.48	196	P	P	04 55 02.7	+2.2
PKGZ	Pakihiroa	18.54	195	P	P	04 55 02.6	+1.5
PUZ	Puketiti	18.67	194	P	P	04 55 03.5	+0.9
PUZ				S	S	04 58 15.1	-9.4
RUGZ	Raukumara Rang	18.71	196	P	P	04 55 04.7	+1.7
RUGZ				S	S	04 58 16.4	-9.0
OPRZ	Ohinepanea	18.90	198	P	P	04 55 08.6	+3.6
MWZ	Matawai	19.09	196	P	P	04 55 08.8	+1.7
MWZ				S	S	04 58 23.8	-9.1
TKGZ	Te Karaka	19.11	195	P	P	04 55 10.7	+3.4
TKGZ				S	S	04 58 24.0	-9.2
URZ	Urewera	19.13	197	P	P	04 55 07.3	-0.2
	comp=Z,7.8nm,0.3s,baz=277,slow=4.6,SNR=27						
URZ				S	S	04 58 27.7	-5.9
	comp=Z,2.3nm,0.3s,baz=126,slow=20,SNR=11						
URZ	Urewera	19.13	197	P	P	04 55 07.5	+0.1
URZ				IAmb	IAmb	04 55 17.0	
	comp=Z,44nm,0.9s						
URZ					S	04 58 29.7	-3.9
SNGZ	Shannon Statio	19.57	196	P	P	04 55 14.4	+2.3
BKZ	Black Stump Fm	20.15	197	P	P	04 55 17.6	-0.9
BKZ					S	04 58 48.0	-5.6
BHW	Baring Head	22.69	198	P	P	04 55 44.4	+0.5
PLWZ	Palliser	22.73	197	P	P	04 55 44.0	-0.4
QRZ	Quartz Range	22.93	203	P	P	04 55 47.3	+1.2
QRZ				IAmb	IAmb	04 55 52.6	
	comp=Z,28nm,0.6s						
NNZ	Nelson	22.98	201	P	P	04 55 45.9	-0.7
TUWZ	Tuamarina	22.99	200	P	P	04 55 46.0	-0.6
CMWZ	Cape Campbell	23.20	199	P	P	04 55 49.9	+1.4
BSWZ	Blackbirch Sta	23.27	199	P	P	04 55 51.3	+2.1
THZ	Tophouse	23.63	201	P	P	04 55 53.6	+1.1
THZ				IAmb	IAmb	04 56 07.5	
	comp=Z,12nm,0.7s						
KHZ	Kahutara	24.01	199	P	P	04 55 57.3	+1.5
KHZ				IAmb	IAmb	04 56 12.6	
	comp=Z,49nm,1.4s						
LTZ	Lake Taylor	24.75	201	P	P	04 56 00.6	-2.1
LTZ				IAmb	IAmb	04 56 07.2	
	comp=Z,25nm,0.6s						
OXZ	Oxford	25.31	201	P	P	04 56 07.6	-0.1
OXZ				IAmb	IAmb	04 56 13.1	
	comp=Z,25nm,0.8s						
MQZ	McQueen's Vall	25.45	199	P	P	04 56 08.3	-0.6
MQZ				IAmb	IAmb	04 56 15.1	
	comp=Z,48nm,1.3s						
RPZ	Rata Peaks	25.99	202	P	P	04 56 17.3	+3.5
	comp=Z,10nm,0.5s,baz=342,slow=1.4,SNR=11						
RPZ	Rata Peaks	25.99	202	P	P	04 56 13.9	+0.1
RPZ				IAmb	IAmb	04 56 29.6	
	comp=Z,13nm,0.8s						
FOZ	Fox Glacier	26.28	204	P	P	04 56 15.7	-0.6
LBZ	Lake Benmore	26.88	202	P	P	04 56 21.5	-0.2
LBZ				IAmb	IAmb	04 56 37.2	
	comp=Z,38nm,1.4s						
WKZ	Wanaka	27.68	203	P	P	04 56 28.8	-0.1
WKZ				IAmb	IAmb	04 56 35.2	
	comp=Z,43nm,1.3s						
MLZ	Mavora Lakes	28.48	204	P	P	04 56 36.5	+0.5
WHZ	Wether Hill Ro	28.99	203	P	P	04 56 40.3	-0.1
WHZ				IAmb	IAmb	04 56 57.1	
	comp=Z,13nm,1.0s						
EIDS	Eidsvold	30.75	254	P	P	04 56 55.0	-1.2
EIDS				IAmb	IAmb	04 56 57.5	
	comp=Z,19nm,0.8s						
CTA	Charters Tower	35.37	263	P	P	04 57 36.8	+0.5
	comp=Z,34nm,0.6s,baz=101,slow=11,SNR=18						
PMG	Port Moresby	37.04	281	P	P	04 57 50.8	+0.3
	comp=Z,39nm,0.8s,baz=69,slow=4.3,SNR=9.7						
PMG	Port Moresby	37.04	281	IAmb	IAmb	04 57 51.6	
	comp=Z,61nm,1.0s						
COEN	Coen	39.39	272	P	P	04 58 10.3	+0.2
STKA	Stephens Creek	39.66	244	P	P	04 58 12.5	+0.4
	comp=Z,2.5nm,0.5s,baz=90,slow=10.0,SNR=10						
GENI	Genyem	46.10	286	P	P	04 59 01.7	-2.3
	comp=Z,3µmcomp=Z,198nm,0.8s						
ASAR	Alice Springs	46.42	256	P	P	04 59 05.9	-0.6
	comp=Z,20nm,0.7s,baz=88,slow=8.3,SNR=155						
ASAR				pP	pwP	04 59 54.8	+2.3
	comp=Z,6.2nm,0.7s,baz=93,slow=7.4,SNR=3.2						
ASAR				ScP	ScP	05 04 11.2	-1.1
	comp=Z,1.1nm,0.7s,baz=106,slow=4.1,SNR=5.9						
ASAR				S	S	05 05 32.5	-6.7
	comp=Z,1.1nm,0.7s,baz=94,slow=16,SNR=8.6						
ASAR	Alice Springs	46.42	256	P	P	04 59 06.2	-0.3
ASAR				PcP	PcP	05 00 38.0	0.0
WB0	Warramunga Arr	46.47	261	IAmb	IAmb	04 59 07.1	
	comp=Z,16nm,0.5s						
WB2	Warramunga Arr	46.48	261	IAmb	IAmb	04 59 09.2	
	comp=Z,10nm,0.6s						
WRA	Warramunga Arr	46.49	261	P	P	04 59 05.8	-1.2
	comp=Z,6.8nm,0.4s,baz=98,slow=5.0,SNR=85						
WRA				pP	pwP	04 59 54.5	+1.3
	comp=Z,5.9nm,0.7s,baz=96,slow=6.5,SNR=4.5						
WRA				S	S	05 05 40.4	+0.2
	comp=Z,2.5nm,0.9s,baz=95,slow=14,SNR=6.6						
WRA	Warramunga Arr	46.49	261	P	P	04 59 05.8	-1.2
KNRA	Kununurra	52.53	265	IAmb	IAmb	04 59 53.9	
	comp=Z,36nm,0.8s						
SWI	Sorong	54.91	284	P	P	05 00 08.1	-1.8
	comp=Z,2µmcomp=Z,172nm,0.9s						
SOEI	Soe	58.33	271	P	P	05 00 32.9	-1.3
	comp=Z,935nmcomp=Z,114nm,0.9s						
SBA	Scott Base	58.49	184	P	P	05 00 36.0	+1.9
SBA				IAmb	IAmb	05 00 38.4	
	comp=Z,14nm,0.8s						
VNDA	Vanda	58.57	186	P	P	05 00 37.0	+2.4
	comp=Z,4.6nm,0.8s,baz=352,slow=8.6,SNR=18						
SANI	Sanana	59.30	280	P	P	05 00 39.9	-0.9
PSA00	Pilbara Seismi	59.57	256	P	P	05 00 42.3	-0.2
PSA00				IAmb	IAmb	05 00 47.2	
	comp=Z,11nm,0.9s						
QSPA	South Pole Qui	70.06	180	P	P	05 01 51.1	+1.5
QSPA				IAmb	IAmb	05 01 52.0	
	comp=Z,21nm,0.9s						
PETK	Petropavlovsk-	76.29	344	P	P	05 02 25.8	-0.1
	comp=Z,8.5nm,0.8s,baz=126,slow=7.5,SNR=12						
PETK	Petropavlovsk-	76.29	344	P	P	05 02 25.5	-0.4
NVAR	Mina Array Bea	79.42	43	P	P	05 02 44.7	+0.9
	comp=Z,1.2nm,0.7s,baz=223,slow=8.4,SNR=11						
NVAR	Mina Array Bea	79.42	43	P	P	05 02 43.8	0.0
NJ2	Nanjing	80.99	309	eP	P	05 02 51.6	-0.4
CN2	Changchun	83.05	322	eP	P	05 03 02.4	-0.1
WHN	Wuhan	83.64	306	P	P	05 03 05.9	+0.1
MNTX	Cornudas Mount	84.97	54	P	P	05 03 13.9	+1.4
TXAR	Lajitas Array	85.25	57	P	P	05 03 15.0	+1.0
	comp=Z,2.5nm,0.9s,baz=214,slow=7.8,SNR=18						
CCB	Clear Creek Bu	87.15	12	P	P	05 03 21.9	-0.4
IL31		87.44	12	P	P	05 03 23.9	+0.3
ILAR	Eielson Array	87.44	12	P	P	05 03 23.0	-0.7
	comp=Z,1.0nm,0.5s,baz=220,slow=5.8,SNR=24						
ILAR				pP	pwP	05 04 20.0	+4.5
	comp=Z,1.8nm,1.1s,baz=224,slow=6.4,SNR=3.4						
SYO	Syowa Base	87.60	192	⇑eP	P	05 03 23.0	-1.6
SYO	Syowa Base	87.60	192	⇑iPcP	P	05 03 24.0	-0.6
SYO	Syowa Base	87.60	192	⇓epP	pP	05 04 13.4	+0.4
PLCA	Paso Flores	88.27	133	P	P	05 03 29.5	+1.0
	comp=Z,2.0nm,0.6s,baz=247,slow=6.7,SNR=10						
PLCA	Paso Flores	88.27	133	IAmb	IAmb	05 03 30.5	
	comp=Z,9.2nm,1.3s						
SNAA	Sanae	88.44	178	P	P	05 03 28.6	0.0
SNAA	Sanae	88.44	178	P	P	05 03 28.7	0.0
SNAA				IAmb	IAmb	05 03 29.5	
	comp=Z,7.6nm,0.8s						
VNA3	Neumayer Olymp	88.50	176	P	P	05 03 29.0	+0.1
VNA2	Neumayer--Watz	88.96	176	P	P	05 03 31.5	+0.5
	baz=190,slow=4.3						
VNA1	Neumayer--Stat	89.18	176	P	P	05 03 32.6	+0.6
HHC	Hu-ho-hao-te	90.33	314	eP	P	05 03 39.5	+1.5
CMAR	Chiang Mai Arr	91.69	289	P	P	05 03 45.3	+0.7
	comp=Z,1.2nm,0.3s,baz=130,slow=3.4,SNR=9.8						
LZH	Lanzhou	93.94	307	eP	P	05 03 56.6	+1.7
LZH				pP	pwP	05 04 49.4	+2.9
LZH				sP	sP	05 05 12.8	+8.6
LZH				PP	PP	05 07 39.3	-4.6
YKA	Yellowknife Ar	95.31	24	P	P	05 04 00.3	+0.1
	comp=Z,0.3nm,0.8s,baz=233,slow=5.2,SNR=5.8						
MKAR	Makanchi Array	112.20	313	PKiKP	PKiKP	05 09 10.1	-1.1
	comp=Z,0.6nm,0.5s,baz=217,slow=0.8,SNR=15						
KSH	Kashi	116.11	305	PKP	PKPdf	05 09 19.3	+0.2
KSH				PP	PP	05 10 34.0	+6.7
KSH				sPKP		05 10 40.3	
KSH				SKS	SKSdf	05 16 08.1	-4.3
KSH				SKKS	SKKSac	05 17 02.5	-5.4
ARCES	ARCESS Array B	128.76	350	PKP	PKPdf	05 09 41.4	-0.9
	comp=Z,3.9nm,0.9s,baz=298,slow=1.3,SNR=14						
FINES	FINESS Array B	135.80	345	PKP	PKiKP	05 09 57.6	+0.2
	comp=Z,1.6nm,0.8s,baz=95,slow=2.3,SNR=3.7						
AKASG	Malin Array Be	143.44	333	PKhKP	PKPpre	05 10 06.2	
	comp=Z,3.8nm,0.4s,baz=41,slow=4.1,SNR=25						
BRTR	Keskin Array B	147.84	314	PKPbc	PKPbc	05 10 20.4	-0.8
	comp=Z,4.8nm,0.7s,baz=125,slow=3.8,SNR=26						
BRTR	Keskin Array B	147.84	314		PKPbc	05 10 20.3	-0.9
CRVS	Cervenica-Dubn	147.93	338	ePKP	PKPab	05 10 24.4	+0.3
CLL	Collm	147.96	349	i PKPdf	PKPdf	05 10 18.7	+1.1
CLL				i PKPbc	PKPbc	05 10 21.0	0.0
	comp=Z,6.0nm,1.3s						
CLL				i PKPab	PKPab	05 10 24.6	+0.5
	comp=Z,5.0nm,0.8s						
CHVC	Chvalec	148.01	345	ePKPDF	PKPdf	05 10 15.5	-2.3
CHVC				ePKPAB	PKPab	05 10 28.1	+3.7
DPC	Dobruska-Polom	148.17	345	⇑ePKP	PKPbc	05 10 21.9	+0.3
LANS	Liptovska Anna	148.38	340	ePKP	PKPab	05 10 27.0	+1.1
PRU	Pruhonice	148.92	347	⇑ePKP	PKPbc	05 10 24.0	+0.5
MMAI	Mount Meron Ar	149.15	301	PKPbc	PKPbc	05 10 24.6	-0.1
	comp=Z,2.1nm,0.4s,baz=90,slow=1.8,SNR=6.4						
VYHS	Vyhne	149.15	341	ePKP	PKPbc	05 10 24.3	+0.2
VYHS				e		05 10 29.9	
KHC	Kasperske Hory	149.94	347	⇑ePKP	PKPbc	05 10 26.1	+0.1
KHC				ePKPAB	PKPab	05 10 31.8	-0.5
KHC				ex	x	05 10 39.9	
GERES	GERESS Array B	150.18	347	PKPbc	PKPbc	05 10 26.6	-0.1
	comp=Z,2.1nm,0.7s,baz=72,slow=4.3,SNR=8.0						
CONA	Conrad Observa	150.52	344	i PKPdf	PKPdf	05 10 17.7	-4.3
	comp=Z,6.9nm,1.0s						
MOA	Molln	151.00	346	i PKPbc	PKPbc	05 10 27.7	-0.8
	comp=Z,3.0nm,1.0s						
ARSA	Arzberg	151.24	344	i PKPdf	PKPdf	05 10 20.3	-2.8
	comp=Z,1.8nm,0.6s						
SOKA	Soboth	151.90	344	i PKiKP	PKPbc	05 10 30.8	0.0
	comp=Z,2.3nm,0.7s						
KBA	Koelnbreinsper	151.93	346	i PKiKP	PKPbc	05 10 30.8	-0.1
	comp=Z,3.3nm,0.6s						
WATA	Walderalm	152.04	349	i PKPbc	PKPbc	05 10 30.4	-0.7
	comp=Z,4.7nm,0.5s						
WTTA	Wattenberg	152.10	349	i PKPbc	PKPbc	05 10 30.1	-1.2
	comp=Z,5.6nm,0.5s						
MOTA	Moosalm	152.12	350	i PKPdf	PKPdf	05 10 21.4	-3.1
	comp=Z,3.6nm,0.9s						
OBKA	Obir	152.18	344	i PKPdf	PKPdf	05 10 23.3	-1.2
	comp=Z,1.8nm,0.5s						
SQTA	Sankt Quirin	152.22	349	i PKPbc	PKPbc	05 10 30.8	-0.7
	comp=Z,6.1nm,1.1s						
MYKA	Terra Mystica	152.29	346	i PKPbc	PKPbc	05 10 30.4	-1.2
	comp=Z,3.1nm,0.7s						
ABTA	Abfaltersbach	152.43	347	i PKPbc	PKPbc	05 10 30.9	-1.0
	comp=Z,5.3nm,0.6s						
FETA	Feichten	152.49	350	i PKPbc	PKPbc	05 10 31.5	-0.7
	comp=Z,2.1nm,0.7s						
DAVOX	Davos/Dischmat	152.86	351	PKPbc	PKPbc	05 10 33.1	+0.1
	comp=Z,5.1nm,0.5s,baz=224,slow=7.4,SNR=17						
TORD	Torodi Ar. Bea	172.84	162	PKPab	PKPab	05 12 13.2	+0.6
	comp=Z,2.3nm,0.8s,baz=184,slow=4.5,SNR=6.7						

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*IDC **17** 04:59:18.7±0.8, 19°.86S×70°.61W, h0^{km}, mb3.9/8, mb1 4.2/10, mb1mx4.0/27, mbtmp4.0/10, ML3.9/2, MS3.3/1, Ms1 3.3/1, ms1mx2.6/38, Error ellipse: s-maj=25.2km s-min=18.7km az=53.0*
*NEIC **17** 04:59:19.7±1.9, 20°.01S±0°.05×70°.80W±0°.07, h11^{km}±2^{km}, mb4.3/6, Error ellipse: s-maj=9.9km s-min=6.1km az=127.0*
*GUC **17** 04:59:21.9±0.7, 19°.97S×70°.81W, h21^{km}±4^{km}, ML4.1*
*VAO **17** 04:59:22.8±1.3, 19°.99S×70°.85W, h52^{km}±8^{km}, mb4.2*
ISC 17 04:59:21.3±1.4, **19°.94S**±0°.03×**70°.81W**±0°.06, **h23**^{km}±10^{km}, **n69, σ1^{s}.34**/76, **mb4.1**/8, **3C-6D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.73	62	⇓iP	Pb	04 59 35.1	-0.3
PSGC				eS	Sn	04 59 45.9	-1.0
TA01	Diego Aracena	0.86	137	⇓iP	Pb	04 59 36.9	-0.6
TA01				i S	Sn	04 59 49.9	+0.2
TA01				IAML		04 59 51.3	
	comp=N,11µm,0.5s						
PATCX	Punta Patache	1.07	145	⇓iP	Pn	04 59 40.2	-0.7
PATCX				eS	Sb	04 59 54.5	-0.2
PB11	IPOC Station P	1.10	81	⇓iP	Pb	04 59 41.5	-0.3
PB11				eS	Sn	04 59 56.7	+0.6
PB11				IAML		05 00 01.2	
	comp=E,8µm,0.5s						
PB11	IPOC Station P	1.10	81		Pn	04 59 40.8	-0.6
PB11					Sn	04 59 56.6	+0.6
PB12	IPOC Station P	1.40	19	⇑iP	Pb	04 59 46.0	-0.8
PB12				eS	Sb	05 00 05.1	+0.9
PB12				IAML		05 00 09.1	
	comp=E,5µm,0.2s						
GO01	Chusmiza	1.54	80		Pb	04 59 48.7	-0.8
PB08	IPOC Station P	1.57	98	⇓iP	Pb	04 59 49.0	-0.8
PB08				eS	Sb	05 00 10.3	+0.8
PB08				IAML		05 00 16.5	
	comp=N,2µm,0.3s						
AP01	Chacalluta	1.62	16	⇓iP	Pb	04 59 50.1	-0.5
AP01				eS	Sb	05 00 12.0	+1.4
AP01				IAML		05 00 18.8	
	comp=N,10µm,0.4s						
PB01	IPOC Station P	1.65	132	⇑iP	Pn	04 59 49.9	+0.9
PB01				eS	Sb	05 00 11.6	+0.1
PB01				IAML		05 00 17.0	
	comp=E,2µm,0.5s						
PB01	IPOC Station P	1.65	132		Pn	04 59 49.2	+0.2
PB07	IPOC Station P	1.97	154	eP	Pn	04 59 53.0	-0.5
PB07				eS	Sb	05 00 20.6	-0.3
PB07				IAML		05 00 39.9	
	comp=E,5µm,0.9s						
PB03	IPOC Station P	2.32	155	eP	Pn	04 59 57.7	-0.5
PB03				eS	Sb	05 00 35.7	+5.0
PB04	IPOC Station P	2.46	166		Pn	04 59 59.0	-1.1
PB04					Sn	05 00 26.9	-2.7
PB06	IPOC Station P	2.98	157	⇑iP	Pn	05 00 06.5	-0.9
PB06				eS	Sb	05 00 52.9	+3.0
PB06				IAML		05 01 00.2	
	comp=E,608nm,0.8s						
LVC	Limon Verde	3.19	147	Pn	Pn	05 00 11.6	+1.2
	comp=E,9.4nm,0.3s,baz=358,slow=9.5,SNR=44						
LVC				Sn	Sn	05 00 50.1	+2.1
	comp=E,18nm,0.3s,baz=121,slow=12,SNR=7.1						
LVC	Limon Verde	3.19	147		Pn	05 00 11.5	+1.2
LVC					Sn	05 00 49.2	+1.2
LVC	Limon Verde	3.19	147	eP	Pn	05 00 10.1	-0.3
PB10	IPOC Station P	3.56	176		Pn	05 00 13.1	-2.1
LPAZ	La Paz	4.44	35	Pn	Pn	05 00 32.1	+4.3
	comp=E,3.8nm,0.3s,baz=202,slow=4.2,SNR=63						
LPAZ	La Paz	4.44	35	Pn	Pn	05 00 31.5	+3.7
LPAZ	La Paz	4.44	35	eP	Pn	05 00 28.5	+0.7
GO02	Mina Guanaco	5.32	168		Pn	05 00 38.4	-1.2
GO03	Copiap	7.63	176	Pn	Pn	05 01 10.7	-0.5
SIV	San Ignacio	10.06	69	Pn	Pn	05 01 43.9	-0.6
	comp=E,1.8nm,0.3s,baz=269,slow=9.8,SNR=35						
SIV				LR	LR	05 06 04.7	
	comp=E,146nm,18.0s,baz=288,slow=41						
SAML	Samuel	13.18	35		Pn	05 02 26.0	-1.2
CPUP	Villa Florida	13.93	120	Pn	Pn	05 02 36.9	-0.4
SALV	Santo Antonio	14.93	77	eP	Pn	05 02 52.4	+1.3
CLDB	Colider	17.04	60	eP	Pn	05 03 17.5	-0.8
PTGB	Pitanga	17.98	109	eP	Pn	05 03 29.7	-0.2
PCMB	Pacaembu	18.36	99	eP	P	05 03 33.6	-0.8
ARAG	Araguaiana, MT	18.57	80	eP	P	05 03 36.1	-0.7
ITAB	Concordia	18.58	117	eP	P	05 03 36.0	-0.9
CPSB	Cacapava Do Su	18.84	127	eP	P	05 03 38.4	-1.2
ITRB	Iturama	19.24	93	eP	P	05 03 43.6	-0.6
FRTB	Fartura	20.03	104	eP	P	05 03 52.8	0.0
PLCA	Paso Flores	20.72	179	P	P	05 04 01.2	+0.9
	comp=E,3.1nm,0.9s,baz=348,slow=11,SNR=3.8						
BB19B	Bebedouro	20.90	97	eP	P	05 04 01.3	-0.9
IPMB	Ipameri, GO	21.46	89	eP	P	05 04 07.0	-1.3
PTGA	Pitinga	21.84	30	P	P	05 04 11.0	-1.4
	comp=E,7.9nm,0.3s,baz=219,slow=18,SNR=20						
PTGA	Pitinga	21.84	30	P	P	05 04 11.1	-1.3
PTGA	Pitinga	21.84	30	eP	P	05 04 11.0	-1.4
BDFB	Brasilia	22.12	83	P	P	05 04 13.3	-2.1
	comp=E,3.5nm,0.7s,baz=271,slow=7.7,SNR=4.9						
BDFB	Brasilia	22.12	83	IAmb	IAmb	05 04 21.0	
	comp=Z,9.6nm,1.2s						
VAO	Valinhos	22.39	102	eP	P	05 04 16.9	-1.4
BSCB	Bom Sucesso	24.41	97	eP	P	05 04 36.8	-1.5
JANB	Januaria	25.72	83	eP	P	05 04 47.9	-2.3
NBLI	Livramento-PB	35.11	74	eP	P	05 06 12.0	-1.3
RCBR	Riachuelo	36.70	72	P	P	05 06 26.8	-0.1
RCBR				IAmb	IAmb	05 06 37.7	
	comp=Z,9.2nm,1.0s						
TXAR	Lajitas Array	58.35	326	P	P	05 09 16.1	+1.2
	comp=Z,0.8nm,0.9s,baz=146,slow=9.1,SNR=6.2						
PDAR	Pinedale Array	71.89	331	P	P	05 10 44.0	+1.2
	comp=Z,0.2nm,0.5s,baz=158,slow=10,SNR=2.8						
NVAR	Mina Array Bea	73.18	323	P	P	05 10 53.2	+2.6
	comp=Z,0.7nm,0.8s,baz=163,slow=7.7,SNR=4.1						
YNE	Yellowstone No	73.85	332	P	P	05 10 54.8	+0.4
TOA0	Torodi Ar. Sit	78.53	71	P	P	05 11 21.0	-0.3
TORD	Torodi Ar. Bea	78.53	71	P	P	05 11 20.7	-0.7
	comp=Z,4.7nm,0.7s,baz=252,slow=5.0,SNR=28						
TORD	Torodi Ar. Bea	78.53	71	P	P	05 11 20.4	-0.9
YKA	Yellowknife Ar	89.14	341	P	P	05 12 14.8	+0.3
	comp=Z,0.8nm,0.7s,baz=139,slow=4.9,SNR=17						
H11S2	WAKE ISLAND Hy	125.90	279	T	T	07 37 45.5	
	baz=101,slow=74,SNR=90						
H11S1	WAKE ISLAND Hy	125.91	279	T	T	07 37 46.0	
	baz=101,slow=74,SNR=40						
H11S3	WAKE ISLAND Hy	125.92	279	T	T	07 37 45.7	
	baz=101,slow=74,SNR=41						
H11N3	WAKE ISLAND Hy	125.95	280	T	T	07 37 48.9	
	baz=100,slow=74,SNR=21						
H11N2	WAKE ISLAND Hy	125.96	280	T	T	07 37 46.7	
	baz=100,slow=74,SNR=16						
H11N1	WAKE ISLAND Hy	125.97	280	T	T	07 37 50.0	
	baz=100,slow=74,SNR=10						
ASAR	Alice Springs	130.41	210	PKP	PKPdf	05 18 31.2	+0.4
	comp=Z,0.4nm,0.6s,baz=172,slow=1.9,SNR=4.9						
ZALV	Zalesovo Beam	141.26	23	PKP	PKPdf	05 18 49.9	0.0
	comp=Z,0.8nm,0.4s,baz=296,slow=3.0,SNR=4.1						
MKAR	Makanchi Array	145.36	33	PKPbc	PKPab	05 18 58.0	+0.6
	comp=Z,3.2nm,0.7s,baz=325,slow=4.4,SNR=42						
USRK	Ussuriysk Ar.	149.24	327	PKPbc	PKiKP	05 19 09.3	0.0
	comp=Z,2.2nm,0.8s,baz=114,slow=3.3,SNR=5.2						
SONM	Songino Array	152.08	4	PKPbc	PKiKP	05 19 16.1	+0.9
	comp=Z,1.7nm,0.7s,baz=307,slow=0.7,SNR=12						
SONM	Songino Array	152.08	4		PKiKP	05 19 15.9	+0.6

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*IGQ **17** 05:00:23.8±0.2, 1°S±1°×7°8W±°, h8^{km}, M4.0*
ISC 17 05:00:23.7±0.9, **1°.00S**±0°.03×**77°.82W**±0°.03, **h5**^{km}±6^{km}, **n58, σ0^{s}.73**/60, **Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATEN	Tena	0.02	136	P	Pg	05 00 24.3	-0.4
ATEN	Tena	0.02	136	S	Sg	05 00 26.3	+0.9
APUY	Puyo	0.49	201	P	Pb	05 00 34.5	-0.5
APUY	Puyo	0.49	201	S	Sb	05 00 42.3	-0.2
PISA	Pisayambo	0.57	264	P	Pg	05 00 34.8	+0.1
PIS1	Pisayambo	0.57	264	P	Pg	05 00 34.8	+0.1
VCES	Cotopaxi	0.60	289	P	Pg	05 00 35.6	+0.2
ANTS	Antisana-Sarah	0.60	325	S	Sg	05 00 43.0	-0.4
ANTS	Antisana-Sarah	0.60	325	P	Pg	05 00 35.4	-0.1
ANTM	Antisana-La Mi	0.61	319	P	Pg	05 00 35.3	-0.2
TAMB	Tambo	0.62	299	P	Pg	05 00 35.8	+0.1
ANTG	Antisana-Guama	0.65	319	P	Pg	05 00 36.1	-0.2
ANTG	Antisana-Guama	0.65	319	S	Sg	05 00 43.7	-1.2
BTAM	Cotopaxi Volca	0.66	299	P	Pg	05 00 36.4	0.0
VC1	Cotopaxi 1	0.68	301	P	Pg	05 00 36.9	+0.1
APS4	Papallacta	0.68	335	P	Pg	05 00 36.5	-0.3
BREF	Cotopaxi Volca	0.70	298	P	Pg	05 00 37.4	+0.2
BRUN	Tungurahua Vol	0.72	234	S	Sg	05 00 47.3	+0.1
BRUN				P	Pg	05 00 37.7	0.0
RUN5	Runtun	0.73	235	P	Pg	05 00 37.6	-0.2
BNAS	Cotopaxi Volca	0.73	296	P	Pg	05 00 37.9	0.0

BULB	Ulba Tungurahu	0.73	233	P	Pg	05 00 37.7	-0.2
RETU	Refugio	0.77	234	P	Pg	05 00 38.4	-0.1
BPAT	Tungurahua Vol	0.79	230	P	Pg	05 00 39.0	0.0
ALAT	Latacunga	0.80	275	P	Pg	05 00 39.3	+0.3
BBIL	Ulba Tungurahu	0.80	236	S	Sg	05 00 49.2	-0.4
BBIL	Ulba Tungurahu	0.80	236	P	Pg	05 00 38.7	-0.5
BMAS	Trigal station	0.83	232	P	Pg	05 00 39.3	-0.4
AAM2	Ambato 2 (Merc	0.83	251	P	Pg	05 00 39.7	-0.1
SAGO	Sagoatoa	0.86	259	P	Pg	05 00 40.4	+0.2
APUJ	Pujili	0.88	272	P	Pg	05 00 40.5	-0.1
CONE	Cono NE Rev Vo	0.94	11	P	Pg	05 00 41.5	-0.2
ILLI	Illinizas Sur	0.95	287	P	Pg	05 00 41.7	-0.2
CAYA	Cayambe	1.07	351	P	Pg	05 00 43.9	-0.5
TERV	Terraza Guagua	1.13	316	P	Pg	05 00 45.4	-0.1
PINO	Pino	1.14	317	P	Pg	05 00 45.4	-0.3
YANA	Yana	1.15	319	P	Pg	05 00 45.4	-0.4
PULU	Pululahua	1.22	326	P	Pg	05 00 46.4	-0.7
IMBA	Imbabura, San	1.32	343	P	Pn	05 00 49.1	-0.1
AIB2	Ibarra (Univer	1.36	348	S	Sg	05 01 08.3	+0.8
AIB2	Ibarra (Univer	1.36	348	P	Pn	05 00 49.5	-0.1
YAHU	Yahuarcocha	1.38	350	P	Pn	05 00 49.4	-0.6
CUIC	Cuicocha-Domo	1.40	337	P	Pn	05 00 50.0	-0.3
CUSE	Cuicocha Este	1.42	336	P	Pn	05 00 50.2	-0.4
COTA	Cotacachi	1.42	339	P	Pb	05 00 50.8	-0.2
URCU	Urcuqui	1.49	343	P	Pb	05 00 51.9	-0.2
PAC1	Pacto, Paraso	1.58	322	P	Pn	05 00 52.5	-0.1
ATUL	Tulcn	1.76	3	S	Sb	05 01 19.7	+0.5
ATUL	Tulcn	1.76	3	P	Pb	05 00 56.0	-0.6
COHC	Cochancay	2.04	224	P	Pb	05 01 00.9	-0.4
GCUF	Volcan Galeras	2.26	12	*e*P	Pb	05 01 04.4	-0.9
CPAS2	Pasto	2.27	15	*e*P	Pb	05 01 04.5	-1.0
CRUC	La Cruz	2.69	19	*e*P	Pn	05 01 09.6	+1.6
BBAC	Balboa, Cauca	3.05	11	*e*P	Pn	05 01 15.8	+3.0
SOTA	Rioblanco	3.34	21	*e*P	Pn	05 01 19.1	+2.0
FLOC	Florencia	3.36	40	*e*P	Pn	05 01 16.4	-0.5
PCON	Cinco Dias	3.60	23	*e*P	Pn	05 01 22.4	+1.7
GARC	Garzon, Huila	3.93	36	*e*P	Pn	05 01 25.2	+0.2
MACC	Macarena, Meta	5.05	52	*e*P	Pg	05 01 59.4	-1.2
MACC				*e*S	Sb	05 02 55.0	+1.2

GUC **17** *05:08:34.0, 19°.75S×70°.69W, h44km, ML4.3*
NEIC **17** *05:09:30.3±2.7, 19°.92S±0°.05×70°.88W±0°.09, h12km±5km, mb4.4/12, Error ellipse: s-maj=14.0km s-min=3.5km az=119.0*
IDC **17** *05:09:30.2±1.1, 19°.64S×70°.56W, h0km, mb3.7/7, mb1 4.0/9, mb1mx3.8/33, mbtmp3.8/9, ML3.7/2, Error ellipse: s-maj=38.2km s-min=21.9km az=36.0*
ISC 17 05:09:33.7±0.6**, 19°.94S**±0°.04×**70°.81W**±0°.07**, h35km, n36, σ1^{s}50**/39**, mb3.9**/10**, 2C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA01	Diego Aracena	0.86	137	*e*P	Pn	05 09 48.6	-0.7
TA01				*i* S	Sn	05 10 02.5	+1.9
TA01				IAML		05 10 04.1	
	comp=N,13µm,0.4s						
PB11	IPOC Station P	1.10	81	⇑*i*P	Pn	05 09 52.0	-0.8
PB11				*i* S	Sn	05 10 06.9	+0.1
PB11				IAML		05 10 08.4	
	comp=E,4µm,0.4s						
PB12	IPOC Station P	1.40	19	⇓*i*P	Pn	05 09 55.8	-1.0
PB12				*i* S	Sn	05 10 14.4	+0.3
PB12				IAML		05 10 18.2	
	comp=N,2µm,0.4s						
PB16	IPOC Station P	2.02	38	*e*P	Pn	05 10 06.5	+0.7
PB16				*i* S	Sn	05 10 32.9	+2.8
PB16				IAML		05 10 36.9	
	comp=N,1µm,0.5s						
PB04	IPOC Station P	2.46	166		Pn	05 10 11.1	-0.4
LVC	Limon Verde	3.19	147	Pn	Pn	05 10 24.2	+2.4
	comp=N,9.8nm,0.3s,baz=343,slow=9.0,SNR=8.9						
LVC				Sn	Sn	05 11 02.0	+3.2
	comp=N,20nm,0.3s,baz=35,slow=9.5,SNR=11						
PB10	IPOC Station P	3.56	176		Pn	05 10 25.1	-1.4
LPAZ	La Paz	4.44	35	Pn	Pn	05 10 42.8	+3.7
	comp=N,1.0nm,0.3s,baz=230,slow=5.5,SNR=20						
LPAZ	La Paz	4.44	35		Pn	05 10 46.4	+7.3
GO02	Mina Guanaco	5.32	168		Pn	05 10 50.3	-0.6
SIV	San Ignacio	10.06	69	Pn	Pn	05 11 55.6	-0.3
	comp=N,1.0nm,0.3s,baz=265,slow=11,SNR=17						
CPUP	Villa Florida	13.93	120	Pn	Pn	05 12 47.6	-1.0
	comp=N,0.1nm,0.3s,baz=360,slow=6.1,SNR=2.8						
PTGA	Pitinga	21.84	30	P	P	05 14 21.0	-2.3
	comp=N,2.2nm,0.3s,baz=162,slow=20,SNR=4.9						
PTGA	Pitinga	21.84	30	P	P	05 14 21.9	-1.4
FLOC	Florencia	21.91	347	P	P	05 14 21.5	-2.6
BDFB	Brasilia	22.11	83	P	P	05 14 24.4	-2.0
	comp=N,1.5nm,0.6s,baz=180,slow=5.1,SNR=3.4						
BDFB	Brasilia	22.11	83	P	P	05 14 24.4	-2.0
BDFB				IAmb	IAmb	05 14 42.8	
	comp=Z,13nm,1.5s						
RUSC	La Rusia	25.77	355	P	P	05 15 01.5	-0.5
SDV	Santo Domingo	28.65	0	P	P	05 15 26.6	-0.9
SDV				IAmb	IAmb	05 15 35.5	
	comp=Z,3.1nm,1.0s						
URIC	Uribia, Colomb	31.46	358	P	P	05 15 53.1	+0.9
MTDJ	Mount Denham	38.50	350	⇑*e*P	P	05 16 59.5	+6.6
TXAR	Lajitas Array	58.34	326	P	P	05 19 26.5	+0.9
	comp=Z,0.3nm,0.5s,baz=147,slow=11,SNR=5.0						
TXAR	Lajitas Array	58.34	326	P	P	05 19 24.6	-1.0
MIAR	Mount Ida	58.35	338	P	P	05 19 25.4	0.0
MNTX	Cornudas Mount	61.12	326	P	P	05 19 45.2	+0.6
QSPA	South Pole Qui	70.24	180	P	P	05 20 42.3	-0.8
QSPA				IAmb	IAmb	05 20 49.4	
	comp=Z,12nm,1.5s						
PDAR	Pinedale Array	71.89	331	P	P	05 20 54.1	+0.6
	comp=Z,0.1nm,0.4s,baz=138,slow=7.2,SNR=2.4						
NVAR	Mina Array Bea	73.18	323	P	P	05 21 02.4	+1.2
	comp=Z,0.5nm,0.8s,baz=164,slow=7.0,SNR=4.0						
PINE	Pine Mountain	78.29	325	P	P	05 21 30.2	-0.1
TOA0	Torodi Ar. Sit	78.53	71	P	P	05 21 32.0	0.0
TOA0				IAmb	IAmb	05 21 41.3	
	comp=Z,5.2nm,1.2s						
TORD	Torodi Ar. Bea	78.53	71	P	P	05 21 32.0	0.0
	comp=Z,2.3nm,0.8s,baz=245,slow=5.3,SNR=15						
YKA	Yellowknife Ar	89.14	341	P	P	05 22 26.2	+1.1
	comp=Z,0.4nm,0.7s,baz=137,slow=4.8,SNR=14						
ZALV	Zalesovo Beam	141.26	23	PKP	PKPdf	05 28 59.7	-0.7
	comp=Z,0.6nm,0.5s,baz=305,slow=5.1,SNR=2.4						
MKAR	Makanchi Array	145.36	33	PKP	PKPab	05 29 09.3	+1.3
	comp=Z,1.8nm,0.6s,baz=319,slow=4.2,SNR=21						
USRK	Ussuriysk Ar.	149.24	327	PKPbc	PKiKP	05 29 20.6	+0.7
	comp=Z,1.2nm,0.6s,baz=48,slow=2.1,SNR=4.7						
SONM	Songino Array	152.08	4	PKPbc	PKiKP	05 29 27.0	+1.2
	comp=Z,0.8nm,0.6s,baz=349,slow=2.3,SNR=7.1						

SJA **17** *05:11:20.5±0.7, 19°.12S×71°.51W, h55km±7km, ML6.5, MW6.2*
IDC **17** *05:11:33.2±0.3, 19°.86S×70°.58W, h0km, mb5.1/29, mb1 5.1/34, mb1mx5.1/35, mbtmp5.0/34, ML4.5/5, MS6.2/29, Ms1 6.2/29, ms1mx6.1/32, Error ellipse: s-maj=13.1km s-min=9.0km az=71.0*
NEIC **17** *05:11:34.9, 20°.02S×70°.87W, h17km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.10; $M_{\theta\theta}$0.12; $M_{\phi\phi}$-1.22; $M_{r\theta}$0.74; $M_{\theta\phi}$0.27; $M_{\phi r}$-2.01; Fault plane solution: $M_0$2.45000×10^{18} NP1:ϕ_s359.64000°, δ15.11000°, λ108.37000°. NP2:ϕ_s160.65000°, δ75.68000°, λ85.14000°. Principal axes: T 2.3805, Plg59.0000°, Azm64.0000°; N 0.1404, Plg5.0000°, Azm162.0000°; P -2.5209, Plg31.0000°, Azm255.0000°;*
VAO **17** *05:11:34.8±0.3, 19°.96S×70°.69W, h10km, mb5.7*
GUC **17** *05:11:34.6±0.7, 19°.93S×70°.94W, h28km±5km, ML5.9, MW6.3*
NEIC **17** *05:11:34.9±2.2, 20°.02S±0°.04×70°.88W±0°.05, h21km±1km, mb5.9/453, Ms_20 6.2/805, Mwb6.2/74, Mwc6.5/42, Mww6.4, ML5.9(GUC), Mwc6.5(GCMT), Error ellipse: s-maj=8.7km s-min=6.6km az=300.0*
BJI **17** *05:11:37.7±0.0, 20°.01S×70°.84W, h10km, mB6.2/53, Ms6.5/83, Ms7 6.5/75*
MOS **17** *05:11:37.6±1.5, 19°.65S×70°.76W, h35km, mb6.0/46, MS6.3/53, Error ellipse: s-maj=9.3km s-min=5.5km az=98.4*
GCMT **17** *05:11:44.9±0.1, 20°.01S×71°.05W, h18km, MW6.4/167, Moment Tensor Solution. s160,c363; s167,c649; Duration: 3^{s}8 Moment tensor: Scale 10^{18}Nm; M_{rr}2.51±.02; $M_{\theta\theta}$0.10±.01; $M_{\phi\phi}$-2.61±.02; $M_{r\theta}$0.84±.03; $M_{\theta\phi}$0.52±.01; $M_{\phi r}$-3.78±.07; Best double couple: $M_0$4.66800×10^{18} NP1:ϕ_s352.00000°, δ17.00000°, λ94.00000°. NP2:ϕ_s168.00000°, δ73.00000°, λ89.00000°. Principal axes: T 4.5720, Plg62.0000°, Azm76.0000°; N 0.1950, Plg1.0000°, Azm168.0000°; P -4.7640, Plg28.0000°, Azm259.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
NEIC **17** *05:11:46, 20°.05S×71°.06W, h16km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}2.32; $M_{\theta\theta}$0.13; $M_{\phi\phi}$-2.45; $M_{r\theta}$1.37; $M_{\theta\phi}$0.57; $M_{\phi r}$-4.72; Fault plane solution: $M_0$5.49000×10^{18} NP1:ϕ_s164.00000°, δ77.00000°, λ88.00000°. NP2:ϕ_s353.00000°, δ13.00000°, λ98.00000°. Principal axes: T 5.3696, Plg58.0000°, Azm72.0000°; N 0.2415, Plg2.0000°, Azm165.0000°; P -5.6110, Plg32.0000°, Azm256.0000°;*
NEIC **17** *05:11:47, 20°.12S×71°.20W, h14km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}2.53; $M_{\theta\theta}$-0.04; $M_{\phi\phi}$-2.49; $M_{r\theta}$1.86; $M_{\theta\phi}$0.70; $M_{\phi r}$-3.08; Fault plane solution: $M_0$4.44000×10^{18} NP1:ϕ_s152.00000°, δ72.00000°, λ81.00000°. NP2:ϕ_s358.00000°, δ19.00000°, λ115.00000°. Principal axes: T 4.4382, Plg62.0000°, Azm49.0000°; N 0.0029, Plg8.0000°, Azm155.0000°; P -4.4412, Plg27.0000°, Azm249.0000°;*
BGR **17** *05:11:50.6±0.0, 17°.31S×69°.32W, h33km, mb5.9, Ms6.5*
NEIC **17** *05:11:58.9, 20°.10S×71°.43W, h33km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}2.72; $M_{\theta\theta}$-0.34; $M_{\phi\phi}$-2.38; $M_{r\theta}$0.94; $M_{\theta\phi}$0.26; $M_{\phi r}$-6.14; Fault plane solution: $M_0$6.72000×10^{18} NP1:ϕ_s353.88000°, δ11.24000°, λ92.42000°. NP2:ϕ_s171.41000°, δ78.77000°, λ89.52000°. Principal axes: T 6.8777, Plg56.0000°, Azm81.0000°; N -0.3068, Plg0.0000°, Azm172.0000°; P -6.5709, Plg34.0000°, Azm262.0000°;*
ISC 17 05:11:33.4±0.4**, 20°.06S**±0°.02×**70°.83W**±0°.03**, h5km**±2km**, h5km:pP-P, n1777, σ2^{s}44**/1862**, mb5.9**/284**, MS6.2**/481**, 30C-8D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA01	Diego Aracena	0.79	130	⇓*i*P	Pn	05 11 51.1	0.0
TA01				*e*S	Sn	05 12 04.8	+1.4
TA01				IAML		05 12 07.7	
	comp=E,579µm,0.5s						
PSGC	Pisagua	0.81	55	*e*P	Pb	05 11 49.7	-0.3
PSGC				*e*S	Sn	05 12 07.0	+3.1
PATCX	Punta Patache	0.99	140	⇑*i*P	Pn	05 11 54.8	+0.8
PATCX				*e*S	Sn	05 12 10.6	+2.3
PATCX				IAML		05 12 21.0	
	comp=E,242µm,0.5s						
PB11	IPOC Station P	1.14	75	⇓*i*P	Pb	05 11 55.9	+0.2
PB11				IAML		05 12 22.6	
	comp=N,362µm,0.1s						
PB11	IPOC Station P	1.14	75	Pn	Pb	05 11 56.0	+0.2
PB11					Sb	05 12 11.5	+0.6
PB12	IPOC Station P	1.51	18	⇑*i*P	Pn	05 12 00.4	-0.8
PB12				*e*S	Sg	05 12 28.4	+6.3
PB12				IAML		05 12 36.7	
	comp=N,197µm,0.6s						
PB02	IPOC Station P	1.53	145	⇑*i*P	Pg	05 12 03.2	+0.5
PB02				*e*S	Sg	05 12 25.2	+2.6
PB08	IPOC Station P	1.58	93	⇓*i*P	Pb	05 12 03.5	+0.3
PB08				*e*S	Sg	05 12 26.8	+2.6
PB08				IAML		05 12 37.0	
	comp=E,114µm,0.4s						
GO01	Chusmiza	1.59	76	⇓*i*P	Pb	05 12 03.6	0.0
GO01				*e*S	Sg	05 12 26.0	+1.5
GO01				IAML		05 12 36.2	
	comp=N,330µm,0.4s						
GO01	Chusmiza	1.59	76	Pn	Pb	05 12 03.5	0.0
PB01	IPOC Station P	1.59	128	⇑*i*P	Pg	05 12 04.1	+0.1
PB01				*e*S	Sg	05 12 26.9	+2.3
PB01				IAML		05 12 31.4	
	comp=N,201µm,0.4s						
PB01	IPOC Station P	1.59	128	Pn	Pb	05 12 03.7	+0.3
PB01				Sn	Sn	05 12 22.0	-1.3
AP01	Chacalluta	1.74	15	⇑*i*P	Pn	05 12 04.9	+0.6
AP01				*e*S	Sg	05 12 30.4	+1.0
AP01				IAML		05 12 43.9	
	comp=N,506µm,0.8s						
PB07	IPOC Station P	1.88	152	*e*P	Pb	05 12 08.8	+0.6
PB07				*e*S	Sg	05 12 35.4	+1.6
PB07				IAML		05 12 46.8	
	comp=E,164µm,0.6s						
PB07	IPOC Station P	1.88	152	*e*P	Pb	05 12 08.7	+0.4
PB07				*e*S	Sg	05 12 43.4	+10
PB07				IAML		05 12 47.0	
	comp=Z,198µm,0.9s						
PB03	IPOC Station P	2.22	153	*e*P	Pb	05 12 13.9	-0.2
PB03				*e*S	Sg	05 12 44.7	-0.1
PB03				IAML		05 12 59.4	
	comp=E,68µm,0.4s						
PB09	IPOC Station P	2.28	140	*e*P	Pb	05 12 13.9	-1.2
PB09				*e*S	Sg	05 12 53.1	+6.4
PB09				IAML		05 12 53.5	
	comp=Z,172µm,0.7s						
PB04	IPOC Station P	2.35	164	IAML		05 12 59.4	
	comp=E,134µm,0.5s						
PB04	IPOC Station P	2.35	164	Pn	Pn	05 12 13.1	+0.3
PB04				Sn	Sn	05 12 40.3	-1.8
PB04	IPOC Station P	2.35	164	*e*P	Pn	05 12 13.3	+0.5
PB04				*e*S	Sg	05 12 54.0	+5.1
PB05	IPOC Station P	2.84	168	*e*P	Pn	05 12 19.6	+0.1
PB05				*e*S	Sg	05 13 05.9	+1.2
PB05				IAML		05 13 16.1	
	comp=Z,56µm,0.7s						
PB06	IPOC Station P	2.88	156	*e*P	Pn	05 12 22.0	+1.8
PB06				*e*S	Sg	05 13 08.0	+1.9
PB06				IAML		05 13 19.5	
	comp=Z,81µm,0.8s						
LVC	Limon Verde	3.10	145	Pn	Pn	05 12 26.1	+2.7
	comp=Z,97nm,0.3s,baz=359,slow=7.7,SNR=26						
LVC				LR	LR	05 13 03.8	
	comp=Z,56µm,21.9s,baz=312,slow=29						
LVC				Sn	Sn	05 13 04.0	+2.9
	comp=Z,2µm,0.3s,baz=287,slow=10,SNR=6.5						
LVC				Lg	Lg	05 13 11.5	
	comp=Z,3µm,0.3s,baz=270,slow=20,SNR=8.5						
LVC	Limon Verde	3.10	145	P	Pn	05 12 25.6	+2.3
LVC	Limon Verde	3.10	145	Pn	Pn	05 12 25.6	+2.3
LVC	Limon Verde	3.10	145	*e*P	Pn	05 12 25.7	+2.3
LVC	Limon Verde	3.10	145	*e*P	Pn	05 12 25.7	+2.3
LVC				*e*S	Sg	05 13 13.7	+0.5
LVC				IAML		05 13 24.5	
	comp=Z,37µm,1.2s						
PB15	IPOC Station P	3.38	158	*e*P	Pn	05 12 27.7	+0.7
PB15				IAML		05 13 29.4	
	comp=Z,79µm,0.6s						
PB10	IPOC Station P	3.45	176	Pn	Pn	05 12 27.0	-0.7
PB10	IPOC Station P	3.45	176	*e*P	Pn	05 12 27.2	-0.5
PB10				IAML		05 13 37.1	
	comp=Z,19µm,2.5s						
LPAZ	La Paz	4.54	35	Pn	Pn	05 12 45.2	+1.8
	comp=Z,12nm,0.3s,baz=198,slow=1.3,SNR=36						
LPAZ				LR	LR	05 14 46.4	
	comp=Z,343µm,19.9s,baz=236,slow=46						
LPAZ	La Paz	4.54	35	P	Pn	05 12 42.9	-0.5
LPAZ	La Paz	4.54	35	Pn	Pn	05 12 42.9	-0.5
PB14	IPOC Station P	4.56	175	*e*P	Pn	05 12 42.9	-0.5
PB14				IAML		05 14 14.9	
	comp=Z,18µm,0.9s						
GO02	Mina Guanaco	5.21	168	Pn	Pn	05 12 52.4	+0.1
GO03	Copiap	7.52	176		Pn	05 13 23.3	-0.5
GO03				Sn	Sn	05 14 47.3	-2.2
GO03	Copiap	7.52	176	*e*P	Pn	05 13 23.3	-0.5
LCO	Las Campanas	8.91	179	Pn	Pn	05 13 41.1	-2.0
NNA	Nana	9.89	323	Pn	Pn	05 13 55.8	-0.6
	comp=Z,7.3nm,0.3s,baz=160,slow=12,SNR=11						
NNA				Sn	Sn	05 15 45.6	-2.2
	comp=Z,12nm,0.3s,baz=146,slow=7.3,SNR=2.6						
NNA				LR	LR	05 17 38.9	
	comp=Z,73µm,19.8s,baz=156,slow=37						
NNA	Nana	9.89	323	*i* P	Pn	05 13 56.6	+0.3
NNA	Nana	9.89	323		Pn	05 13 55.0	-1.4
GO04	Tololo Observa	10.07	180		Pn	05 13 58.1	-0.9
SIV	San Ignacio	10.12	68	Pn	Pn	05 13 58.1	-1.5
	comp=Z,5.3nm,0.3s,baz=258,slow=13,SNR=62						
SIV				Sn	Sn	05 15 50.7	-2.9
	comp=Z,5.5nm,0.3s,baz=307,slow=20,SNR=1.9						
SIV				LR	LR	05 18 36.6	
	comp=Z,437µm,18.7s,baz=266,slow=43						
CFA	Coronel Fontan	11.73	169	Pn	Pn	05 14 20.8	-0.7
	comp=Z,1.7nm,0.3s,baz=349,slow=13,SNR=15						
CFA				LR	LR	05 19 07.5	
	comp=Z,84µm,20.8s,baz=338,slow=38						
ROC1	El Roble	12.87	181		Pn	05 14 36.7	-0.5
PEL	Peldehue	13.03	179		Pn	05 14 40.0	+0.7
SAML	Samuel	13.29	35	P	Pn	05 14 40.3	-2.5
SAML	Samuel	13.29	35		Pn	05 14 40.3	-2.5
CPUP	Villa Florida	13.89	119	Pn	Pn	05 14 51.3	+0.3
	comp=Z,0.7nm,0.3s,baz=307,slow=12,SNR=18						
CPUP				LR	LR	05 21 30.8	
	comp=Z,105µm,19.1s,baz=298,slow=43						
CPUP	Villa Florida	13.89	119	P	Pn	05 14 51.6	+0.7
CPUP	Villa Florida	13.89	119		Pn	05 14 51.6	+0.7
ATAH	Atahualpa	14.80	329	Pn	Pn	05 15 03.5	-0.3
	comp=Z,0.4nm,0.3s,baz=126,slow=8.7,SNR=2.7						
GO05	Huala	14.93	184		Pn	05 15 00.7	-4.4
SALV	Santo Antonio	14.98	76	*e*P	Pn	05 15 04.5	-1.4
C2SB	Chapadao do Su	17.02	89	*e*P	Pn	05 15 31.2	-1.1
CLDB	Colider	17.11	60	*e*P	Pn	05 15 31.5	-2.0
TRCB	Terra Rica	17.16	102	*e*P	Pn	05 15 33.7	-0.3
PTGB	Pitanga	17.96	108	*e*P	P	05 15 44.9	+0.2
PCMB	Pacaembu	18.36	98	*e*P	Pn	05 15 47.9	-0.9
ITAB	Concordia	18.55	116	*e*P	P	05 15 50.9	-0.1
ARAG	Araguaiana, MT	18.61	80	*e*P	P	05 15 49.9	-1.9
LPA	La Plata	18.67	145	*i* P	P	05 15 47.1	-5.2
LPA				S	Sn	05 19 22.4	+0.7
LPA				PCP	PcP	05 20 03.8	-17
LPA				SKIKS		05 31 35.0	
PLTB	Pedras Altas	19.36	130	*e*P	P	05 15 59.2	-0.7
PLTB				*e*S	S	05 19 39.7	+0.3
GO06	Curarrehue	19.47	181	P	P	05 16 00.9	-0.3
FRTB	Fartura	20.02	103	*e*P	P	05 16 06.5	-0.8
FRTB				*e*S	S	05 19 51.8	-1.1
PLCA	Paso Flores	20.61	179	P	Pn	05 16 15.7	-0.1
	comp=Z,340nm,1.3s,baz=21,slow=12,SNR=55						
PLCA				LR	LR	05 24 39.2	
	comp=Z,37µm,18.9s,baz=24,slow=38						
PLCA	Paso Flores	20.61	179	P	Pn	05 16 15.3	-0.4
PLCA				IAmb	IAmb	05 16 33.2	
	comp=Z,768nm,1.3s						
PLCA	Paso Flores	20.61	179	*e*P	Pn	05 16 15.4	-0.3
PLCA				*e*S	S	05 20 05.6	+1.3
BB19B	Bebedouro	20.90	97	*e*P	P	05 16 15.4	-1.4
BB19B				*e*S	S	05 20 11.4	+1.0
IPMB	Ipameri, GO	21.48	88	*e*P	P	05 16 21.8	-1.3
IPMB				*e*S	S	05 20 20.5	-1.4
RCLB	Rio Claro- Sao	21.84	100	*e*P	P	05 16 25.7	-1.2
RCLB				*e*S	S	05 20 27.4	-1.5
PTGA	Pitinga	21.95	30	P	P	05 16 25.4	-2.8
	comp=Z,69nm,0.7s,baz=209,slow=12,SNR=53						
PTGA				LR	LR	05 24 59.2	
	comp=Z,50µm,20.0s,baz=208,slow=37						
PTGA	Pitinga	21.95	30	P	P	05 16 26.1	-2.0
PTGA				IAmb	IAmb	05 16 48.1	
	comp=Z,453nm,1.1s						
PTGA	Pitinga	21.95	30	*e*P	P	05 16 25.9	-2.2
PTGA				*e*S	S	05 20 29.1	-2.0
CMBC	Cumbal	21.97	341	*e*P	P	05 16 42.2	+13
SPB	Sao Paulo	22.00	103	P	P	05 16 28.1	-0.4
SPB				IAMs_20	IAMs_20	05 26 17.1	
	comp=Z,109µm,19.0s						
SPB	Sao Paulo	22.00	103	*e*P	P	05 16 27.9	-0.7
SPB				*e*S	S	05 20 30.3	-1.6
FLOC	Florencia	22.02	347	*e*P	P	05 16 31.5	+2.7
FLOC	Florencia	22.02	347	P	P	05 16 28.0	-0.9
CPAS2	Pasto	22.07	343	*e*P	P	05 16 36.4	+6.7
GCUF	Volcan Galeras	22.10	342	*e*P	P	05 16 40.9	+11
CCUFI	Cufio, Nario	22.10	342	*e*P	P	05 16 40.4	+10
BDFB	Brasilia	22.15	82	P	P	05 16 27.1	-3.2
	comp=Z,20nm,0.7s,baz=256,slow=8.8,SNR=22						
BDFB				LR	LR	05 26 19.9	
	comp=Z,167µm,20.2s,baz=256,slow=40						
BDFB	Brasilia	22.15	82	P	P	05 16 28.6	-1.8
BDFB				pmax	pmax		
	comp=Z,354nm,1.0s						
BDFB				MLR	MLR		
	comp=Z,171µm,20.0s						
BDFB	Brasilia	22.15	82	P	P	05 16 28.6	-1.8
VAO	Valinhos	22.38	102	*e*P	P	05 16 30.9	-1.9
VAO				*e*S	S	05 20 38.4	-1.1
GARC	Garzon, Huila	22.58	348	*e*P	P	05 16 40.4	+5.4
SOTA	Rioblanco	22.77	345	*e*P	P	05 16 47.6	+10
BBAC	Balboa, Cauca	22.83	343	*e*P	P	05 16 44.4	+6.7
PCON	Cinco Dias	22.91	346	*e*P	P	05 16 51.0	+12
TUMC	Tumaco	23.09	339	*e*P	P	05 16 51.0	+11
TUMC	Tumaco	23.09	339	P	P	05 16 38.5	-1.7
PARB	Paraibuna	23.64	102	*e*P	P	05 16 44.4	-1.4
PARB				*e*S	S	05 20 59.8	-1.3
PTGC	Puerto Gaitan,	24.14	357	*e*P	P	05 16 54.4	+3.9
ORTC	Ortega, Tolima	24.21	349	*e*P	P	05 16 47.6	-3.6
BSCB	Bom Sucesso	24.41	97	*e*P	P	05 16 52.4	-0.8
BSCB				*e*S	S	05 21 14.5	+1.0
YOTC	Yotoco, Valle	24.50	347	*e*P	P	05 16 57.8	+3.8
CHIC	Chingaza	24.70	353	*e*P	P	05 16 55.2	-0.8
TOLC	Tolima	24.89	349	*e*P	P	05 17 09.6	+12
ROSC	El Rosal	24.98	352	P	P	05 16 58.1	-0.4
	comp=Z,25nm,0.7s,baz=176,slow=14,SNR=13						
ROSC				LR	LR	05 28 22.5	
	comp=Z,120µm,18.6s,baz=202,slow=41						
ROSC	El Rosal	24.98	352	*e*P	P	05 17 07.9	+9.4
ROSC	El Rosal	24.98	352	P	P	05 16 56.4	-2.2
ROSC				IAmb	IAmb	05 17 45.5	
	comp=Z,373nm,1.1s						
RREF	El Recreo	25.20	349	*e*P	P	05 17 09.6	+8.8
PLMC	San Jos del P	25.38	347	*e*P	P	05 17 03.3	+1.5
GUY2C	Guyana, Caldas	25.52	349	*e*P	P	05 17 03.5	0.0
JANB	Januaria	25.75	83	*e*P	P	05 17 03.1	-2.1
JANB				*e*S	S	05 21 34.1	-0.9
RUSC	La Rusia	25.89	355	*e*P	P	05 17 09.6	+2.8
RUSC	La Rusia	25.89	355	P	P	05 17 06.6	-0.3
TAMC	Tame, Arauca	26.35	358	*e*P	P	05 17 10.2	-0.4
SOLC	Bahia Solano	26.91	345	⇑*e*P	P	05 17 21.5	+5.9
PAYG	Puerto Ayora	27.09	313	P	P	05 17 15.9	-1.3
PAYG	Puerto Ayora	27.09	313	IAMs_20	IAMs_20	05 27 57.9	
	comp=Z,49µm,18.0s						
SJMB	Sao Joao De Ma	27.98	92	*e*P	P	05 17 25.0	-0.3
SJMB				*e*S	S	05 22 09.1	-1.0
BSFB	Barra de Sao F	28.28	93	*e*P	P	05 17 27.4	-0.6
BSFB				*e*S	S	05 22 15.0	+0.2
SDV	Santo Domingo	28.77	0	P	P	05 17 30.5	-1.9
	comp=Z,26nm,0.8s,baz=220,slow=2.6,SNR=14						
SDV	Santo Domingo	28.77	0	⇑*e*P	P	05 17 41.9	+10
SDV	Santo Domingo	28.77	0	P	P	05 17 29.8	-2.6
SDV				IAmb	IAmb	05 18 34.5	
	comp=Z,133nm,0.9s						
SDV	Santo Domingo	28.77	0	IAMs_20	IAMs_20	05 28 05.7	
	comp=Z,71µm,20.0s						
SDV	Santo Domingo	28.77	0	*e*P	P	05 17 31.9	-0.5
SDV				*e*S	S	05 22 22.8	+0.2
BAUV	El Baul	28.95	6	*e*P	P	05 17 35.3	+1.4
BAUV	El Baul	28.95	6	*e*	ScP	05 24 28.1	+2.9
CAPC	Capurgana	29.23	347	*e*P	P	05 17 43.7	+7.4
LCBC	Los crdobas,	29.25	349	*e*P	P	05 17 43.1	+6.6
ORIV	Oritupano	29.85	15	*e*P	P	05 17 40.7	-1.1
SJCC	San Jacinto, C	30.07	351	⇑*e*P	P	05 17 41.9	-2.0
BCIP	Isla Barro Col	30.37	342	IAMs_20	IAMs_20	05 30 17.8	
	comp=Z,45µm,20.0s						
PLCV	Puerto La Cruz	30.66	12	P	P	05 17 47.9	-1.0
PCRV	Puerto La Cruz	30.66	12	P	P	05 17 47.9	-1.1
	comp=Z,28nm,1.1s,baz=207,slow=4.5,SNR=3.7						
PCRV				LR	LR	05 31 15.3	
	comp=Z,226µm,18.1s,slow=39						
MDP	Montagnes des	30.74	37	P	P	05 17 48.5	-1.2
	comp=Z,35nm,0.7s,baz=214,slow=13,SNR=8.8						
MDP				LR	LR	05 30 58.0	
	comp=Z,189µm,18.0s,baz=212,slow=38						
GO09	Cerro Castillo	31.17	182	P	P	05 17 50.7	-2.5
TPP	Pointe-a-Pierr	31.57	18	*e*P	P	05 17 58.5	+1.6
URIC	Uribia, Colomb	31.58	358	P	P	05 17 54.9	-2.2
GUIV	Guiria	31.67	16	*e*P	P	05 18 00.1	+2.2
TRN	Trinidad (W)	31.89	18	*e*P	P	05 17 58.5	-1.3
TOSP	Speyside	32.77	19	*e*P	P	05 17 59.8	-7.7
TOSP	Speyside	32.77	19	P	P	05 18 06.9	-0.6
GO10	Punta Arenas	33.03	180	P	P	05 18 10.0	+0.4
GO10				IAmb	IAmb	05 18 36.4	
	comp=Z,148nm,0.9s						
EFI	East Falkland	33.10	165	*i* P	P	05 18 12.0	+1.9
EFI				pmax	pmax		
	comp=Z,134nm,1.2s						
EFI	East Falkland	33.10	165	P	P	05 18 10.4	+0.3
EFI				IAmb	IAmb	05 18 26.7	
	comp=Z,228nm,1.4s						

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EFI   East Falkland    33.10 165  IAMs_20 IAMs_20 05 33 00.6
      comp=Z,36µm,20.0s
GRFF  Grenada Fort F   33.14  16 eP       P       05 18 09.9 -0.9
JTS   Las Juntas de    33.21 334  P       P       05 18 12.3 +0.9
      comp=Z,3.3nm,0.7s,baz=214,slow=12,SNR=1.9
JTS   Las Juntas de    33.21 334  P       P       05 18 10.9 -0.5
GRGR  Grenville        33.24  17 eP       P       05 18 11.7  0.0
GRGR  Grenville        33.24  17  P       P       05 18 10.8 -0.8
NBMO  Morrinhos-CE     34.33  65 eP       P       05 18 19.2 -2.0
SVB   Belmont          34.44  17 eP       P       05 18 18.1 -4.0
SVB   Belmont          34.44  17 e        S       05 23 46.2 -4.6
SVB   Belmont          34.44  17  P       P       05 18 20.4 -1.7
SVB                               IAMs_20 IAMs_20 05 33 25.6
      comp=Z,46µm,20.0s
SVCV  St. Vincent, C   34.47  17 eP       P       05 18 20.9 -1.4
SVCV  St. Vincent, C   34.47  17 e        S       05 23 49.7 -1.6
ESPN  Las Esperanzas   34.69 336  IAMs_20 IAMs_20 05 34 00.3
      comp=Z,36µm,20.0s
USHA  Ushuaia          34.76 178  P       P       05 18 27.0 +2.5
      comp=Z,90nm,1.1s,baz=339,slow=5.3,SNR=12
USHA                              LR      LR      05 32 42.7
      comp=Z,22µm,19.0s,baz=3.0,slow=36
PRVC  Isla de Provid   34.81 342 eP       P       05 18 29.0 +3.8
BBGH  Gun Hill         34.81  19 e        S       05 24 06.2  +10
ACON  Acoyapa          34.82 335  P       P       05 18 22.0 -3.4
ACON                              IAMs_20 IAMs_20 05 33 16.9
      comp=Z,38µm,20.0s
MCLT  Moule a Chique   34.94  17 eP       P       05 18 26.7 +0.3
MCLT  Moule a Chique   34.94  17 e        S       05 23 54.8 -3.9
MCLT  Moule a Chique   34.94  17  P       P       05 18 25.2 -1.2
MCLT                              IAMs_20 IAMs_20 05 33 41.0
      comp=Z,40µm,20.0s
SLAC  Saint Lucia, A   35.13  17 eP       P       05 18 29.2 +1.1
SLAC  Saint Lucia, A   35.13  17 e        S       05 23 54.2 -7.3
NBLI  Livramento-PB    35.16  74 eP       P       05 18 27.1 -1.4
SLBI  Saint Lucia, B   35.23  17 eP       P       05 18 26.6 -2.3
SLBI  Saint Lucia, B   35.23  17 e        S       05 23 54.2 -8.8
FDF   Fort de France   35.86  16 eP       P       05 18 31.6 -2.8
FDF   Fort de France   35.86  16 e        S       05 24 02.2  -11
FDF   Fort de France   35.86  16  P       P       05 18 31.1 -3.3
FDF                               pmax    pmax
      comp=Z,356nm,1.2s
FDF                               MLR     MLR
      comp=Z,48µm,19.0s
FDF   Fort de France   35.86  16  P       P       05 18 31.1 -3.3
FDF                               IAMs_20 IAMs_20 05 34 11.3
      comp=Z,48µm,19.0s
RPN   Rapa Nui         35.88 251  P       P       05 18 37.1 +2.6
      comp=Z,68nm,0.8s,baz=108,slow=20,SNR=2.6
RPN                               LR      LR      05 29 27.3
      comp=Z,79µm,20.6s,baz=92,slow=30
MDPO  Dominica; Chan   36.59  15 eP       P       05 18 29.7  -11
DWS   Wesley           36.62  15 eP       P       05 18 37.4 -3.4
MDPV  Dominica, Penn   36.65  15 eP       P       05 18 30.4  -11
RCBR  Riachuelo        36.75  72  P       P       05 18 41.1 -1.0
      comp=Z,114nm,0.8s,baz=237,slow=9.6,SNR=45
RCBR  Riachuelo        36.75  72  P       P       05 18 41.3 -0.9
RCBR                              pmax    pmax
      comp=Z,172nm,1.0s
RCBR                              MLR     MLR
      comp=Z,114µm,20.0s
RCBR  Riachuelo        36.75  72  P       P       05 18 41.3 -0.9
RCBR                              IAmb    IAmb    05 19 00.6
      comp=Z,172nm,0.9s
RCBR  Riachuelo        36.75  72 eP       P       05 18 41.2 -1.0
RCBR                             eS       S       05 24 25.5 -1.3
MLYT  Lee's Yard       37.52  14 eP       P       05 19 00.5  +12
TGUH  Tegucigalpa,Un   37.56 333  P       P       05 18 49.7 +0.7
TGUH                              IAmb    IAmb    05 19 04.5
      comp=Z,182nm,1.0s
TGUH                              IAMs_20 IAMs_20 05 37 04.6
      comp=Z,41µm,18.0s
ICMP  Isla Caja de M   37.95   7  P       P       05 18 49.7 -2.3
MLPR  Magueyes Islan   37.98   6  P       P       05 18 50.7 -1.6
SKI   Saint Kitts      38.00  13 eP       P       05 18 49.7 -2.8
SKI   Saint Kitts      38.00  13  P       P       05 18 49.5 -3.0
SKI                               pmax    pmax
      comp=Z,198nm,0.9s
SKI                               MLR     MLR
      comp=Z,156µm,18.0s
SKI   Saint Kitts      38.00  13  P       P       05 18 49.5 -3.0
SKI                               IAmb    IAmb    05 18 56.9
      comp=Z,198nm,0.9s
CRPR  Cabo Rojo, PR    38.01   6  P       P       05 18 50.4 -2.2
CDVI  St. Croix        38.05   9  P       P       05 18 52.0 -0.9
CDVI                              IAmb    IAmb    05 19 40.4
      comp=Z,138nm,0.8s
IGPR  InterUniversit   38.07   7  P       P       05 18 52.6 -0.5
OBIP  Obispado Ponce   38.09   7  P       P       05 18 51.1 -2.2
OBIP                              IAmb    IAmb    05 19 17.9
      comp=Z,204nm,0.9s
OBIP                              IAMs_20 IAMs_20 05 36 11.4
      comp=Z,34µm,19.0s
SEUS  St. Eustatius    38.11  12 eP       P       05 18 51.4 -2.0
SEUS  St. Eustatius    38.11  12 e        S       05 24 41.3 -5.6
SNET  Serv Nac Est T   38.11 330  P       P       05 18 51.2 -2.4
SNET                              IAmb    IAmb    05 19 05.5
      comp=Z,211nm,1.0s
PDPR  Patillas Dam,    38.13   7  P       P       05 18 51.2 -2.4
PDPR                              IAmb    IAmb    05 18 58.2
      comp=Z,220nm,0.8s
SABA  Saba             38.18  12 eP       P       05 18 51.4 -2.6
SABA  Saba             38.18  12 e        S       05 24 41.3 -6.8
SABA  Saba             38.18  12  P       P       05 18 52.1 -1.9
MPR   Mayaguez         38.21   6  P       P       05 18 50.6 -3.7
MPR                               IAmb    IAmb    05 19 12.5
      comp=Z,245nm,0.9s
SJG   San Juan         38.21   7  P       P       05 18 51.4 -2.8
      comp=Z,19nm,0.7s,baz=338,slow=20,SNR=9.9
SJG   San Juan         38.21   7  P       P       05 18 50.7 -3.5
SJG                               IAmb    IAmb    05 18 58.8
      comp=Z,192nm,0.9s
SJG   San Juan         38.21   7  IAMs_20 IAMs_20 05 36 28.5
      comp=Z,40µm,18.0s
BANI  BANI             38.22   1  P       P       05 18 52.6 -1.9
SDD   Santo Domingo    38.29   1  P       P       05 18 51.2 -3.7
LGNH  Logne            38.37 357  P       P       05 18 53.5 -2.2
LGNH                              IAmb    IAmb    05 19 56.6
      comp=Z,183nm,1.0s
AOPR  Arecibo Observ   38.38   6  P       P       05 18 53.2 -2.5
AOPR                              IAmb    IAmb    05 19 04.0
      comp=Z,214nm,0.9s
PCDR  Punta Cana, DR   38.41   4  P       P       05 18 54.0 -1.9
GCPR  Guaynabo City    38.41   7  P       P       05 18 53.5 -2.5
GCPR                              IAmb    IAmb    05 19 13.3
      comp=Z,207nm,0.8s
AGPR  Aguadilla, PR    38.46   6  P       P       05 18 53.1 -3.3
CUPR  Culebra, Puert   38.52   8  P       P       05 18 53.5 -3.3
CUPR                              IAmb    IAmb    05 19 00.8
      comp=Z,137nm,0.8s
EMPR  Esperanza - Ma   38.53   7  P       P       05 18 53.5 -3.4
ANWB  Willy Bob        38.53  14 eP       P       05 18 56.2 -0.8
ANWB  Willy Bob        38.53  14 e        S       05 24 40.5  -13
ANWB  Willy Bob        38.53  14  P       P       05 18 53.6 -3.4
ANWB                              IAmb    IAmb    05 19 22.2
      comp=Z,282nm,1.3s
STVI  Saint Thomas     38.61   9  P       P       05 18 54.1 -3.5
MTDJ  Mount Denham     38.61 350  P       P       05 18 56.0 -1.8
MTDJ                              IAmb    IAmb    05 19 32.8
      comp=Z,181nm,0.9s
SMRT  St. Maarten      38.63  12 eP       P       05 18 56.0 -1.8
SMRT  St. Maarten      38.63  12  P       P       05 18 54.8 -3.0
SMRT                              IAmb    IAmb    05 19 00.9
      comp=Z,218nm,0.8s
DR12  Loma Pena Alta   38.63   2  P       P       05 18 55.6 -2.3
SDDR  Presa de Saban   38.80 359  P       P       05 18 57.6 -1.7
SDDR                              IAMs_20 IAMs_20 05 36 34.7
      comp=Z,46µm,20.0s
SC01  Santiago de lo   39.24   0  P       P       05 19 01.5 -1.5
APG   El Apazote       39.84 330  P       P       05 19 10.2 +2.0
      comp=Z,29nm,1.2s,baz=180,slow=6.7,SNR=10
APG                               LR      LR      05 32 59.9
      comp=Z,5µm,19.6s,baz=150,slow=32
GTBY  Guantanamo Bay   39.96 354  P       P       05 19 09.3 +0.4
GTBY                              IAMs_20 IAMs_20 05 36 52.1
      comp=Z,28µm,20.0s
FSCY  Frank Sound, G   40.42 345  P       P       05 19 10.8 -1.9
CBCY  The Bluff, Cay   40.51 347  P       P       05 19 11.9 -1.5
GRTK  Grand Turk       41.32 360  IAMs_20 IAMs_20 05 38 21.6
      comp=Z,33µm,19.0s
CCIG  Comitan          41.74 328  P       P       05 19 21.2 -2.7
TEIG  Tepich           43.53 336  P       P       05 19 37.5 -0.7
TEIG  Tepich           43.53 336  IAMs_20 IAMs_20 05 38 43.7
      comp=Z,23µm,18.0s
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CMIG  Matias Romero    43.83 326  P       P       05 19 42.4 +1.8
      comp=Z,14nm,1.1s,baz=151,slow=8.0,SNR=8.7
PMSA  Palmer Station   44.92 176  P       P       05 19 50.9 +2.2
      comp=Z,24nm,0.9s,baz=10,slow=11,SNR=3.5
PMSA  Palmer Station   44.92 176 eP       P       05 19 50.6 +1.9
TLIG  Tlapa            46.25 322  P       P       05 20 00.8 +0.7
TLIG                              IAmb    IAmb    05 20 17.5
      comp=Z,183nm,1.5s
TLIG                              IAMs_20 IAMs_20 05 38 31.9
      comp=Z,22µm,20.0s
060A  Indiantown       47.72 348  IAMs_20 IAMs_20 05 43 46.9
      comp=Z,18µm,18.0s
DWPF  Disney Wildern   48.97 348  IAMs_20 IAMs_20 05 41 55.2
      comp=Z,24µm,21.0s
DWPF  Disney Wildern   48.97 348  S       S       05 27 27.6 +1.9
      baz=167
MOIG  Morelia          49.44 321  P       P       05 20 20.3 -4.6
656A  Willston         50.42 347  P       P       05 20 29.5 -2.4
456A  Hilliard         51.63 348  P       P       05 20 40.3 -0.6
456A                              IAMs_20 IAMs_20 05 40 55.0
      comp=Z,17µm,20.0s
553A  Crawfordville    51.65 345  P       P       05 20 38.1 -3.0
BBSR  BB Station       52.46   7  P       P       05 20 44.6 -2.5
TIGA  Tifton           52.65 346  IAMs_20 IAMs_20 05 44 33.4
      comp=Z,25µm,21.0s
TIGA  Tifton           52.65 346  P       P       05 20 48.2 -0.4
      baz=165
257A  Skidaway Islan   52.65 349  P       P       05 20 47.3 -1.3
257A                              IAMs_20 IAMs_20 05 42 54.2
      comp=Z,21µm,21.0s
352A  Blakely          53.00 345  P       P       05 20 49.1 -2.0
352A                              IAMs_20 IAMs_20 05 43 47.5
      comp=Z,20µm,21.0s
158A  Hollywood        53.26 350  P       P       05 20 52.4 -0.6
      baz=169
BRAL  Brewton          53.27 343  IAMs_20 IAMs_20 05 45 54.6
      comp=Z,17µm,19.0s
BRAL  Brewton          53.27 343  P       P       05 20 52.1 -1.0
      baz=161
157A  Early Branch     53.33 349  P       P       05 20 52.9 -0.7
      baz=168
CSU   Charleston Sou   53.48 350  P       P       05 20 53.6 -1.0
Z59A  Georgetown, SC   53.61 351  P       P       05 20 55.2 -0.4
      baz=170
NHSC  New Hope         53.62 350  P       P       05 20 54.8 -0.8
      baz=169
154A  Montrose         53.68 347  P       P       05 20 54.9 -1.2
Z58A  St. Stephen      53.78 351  P       P       05 20 56.0 -0.9
      baz=170
250A  Grady            53.82 344  P       P       05 20 55.8 -1.3
Z57A  Bowman           53.89 350  P       P       05 20 56.8 -0.8
      baz=169
Z56A  Williston        54.03 349  P       P       05 20 59.0 +0.4
Z56A                              IAmb    IAmb    05 21 42.1
      comp=Z,126nm,0.8s
Z56A                              IAMs_20 IAMs_20 05 43 35.0
      comp=Z,31µm,22.0s
Z56A  Williston        54.03 349  P       P       05 20 58.8 +0.2
      baz=168
152A  Waverly Hall     54.09 346  P       P       05 20 57.5 -1.6
346A  Big Creek Wild   54.19 340  P       P       05 20 58.5 -1.4
346A                              IAmb    IAmb    05 21 27.5
      comp=Z,130nm,1.0s
Y60A  Bolivia          54.22 352  P       P       05 20 59.5 -0.6
Y60A                              IAMs_20 IAMs_20 05 45 18.1
      comp=Z,20µm,21.0s
Y60A  Bolivia          54.22 352  P       P       05 21 00.0  0.0
      baz=172,SNR=5.5
Y59A  Loris            54.29 352  P       P       05 21 01.1 +0.5
Y59A                              IAmb    IAmb    05 21 19.8
      comp=Z,129nm,0.8s
Y59A                              IAMs_20 IAMs_20 05 44 57.9
      comp=Z,26µm,21.0s
Y59A  Loris            54.29 352  P       P       05 21 00.9 +0.3
      baz=171
Y58A  Scranton         54.32 351  P       P       05 21 00.6 -0.2
Y58A                              IAMs_20 IAMs_20 05 45 49.5
      comp=Z,20µm,20.0s
Y58A  Scranton         54.32 351  P       P       05 21 00.2 -0.6
      baz=170,SNR=6.2
Y56A  Pelion           54.48 349  P       P       05 21 01.5 -0.4
      baz=168
GOGA  Godfrey          54.52 347  P       P       05 21 03.2 +0.9
GOGA                              pmax    pmax
      comp=Z,55nm,1.0s
GOGA                              MLR     MLR
      comp=Z,17µm,19.0s
GOGA  Godfrey          54.52 347  P       P       05 21 03.2 +0.9
GOGA  Godfrey          54.52 347  IAMs_20 IAMs_20 05 47 16.0
      comp=Z,17µm,19.0s
GOGA  Godfrey          54.52 347  P       P       05 21 01.9 -0.3
      baz=166
Y57A  Sumter           54.54 350  P       P       05 21 02.9 +0.5
Y57A                              IAmb    IAmb    05 21 12.4
      comp=Z,147nm,0.9s
Y57A  Sumter           54.54 350  P       P       05 21 02.0 -0.4
      baz=169
344A  Westbrook Farm   54.66 339  P       P       05 21 04.0 +0.7
344A                              IAmb    IAmb    05 21 19.0
      comp=Z,282nm,1.6s
Y55A  Saluda           54.72 349  P       P       05 21 03.4 -0.3
      baz=167
X60A  Albert Glenn T   54.76 353  P       P       05 21 03.6 -0.4
      baz=172
Z51A  Franklin         54.82 345  P       P       05 21 05.5 +1.1
Z51A                              IAMs_20 IAMs_20 05 45 52.7
      comp=Z,28µm,21.0s
X59A  McDuffie Farm,   54.83 352  P       P       05 21 04.1 -0.4
      baz=171,SNR=6.1
X58A  Rowland          54.91 351  P       P       05 21 03.5 -1.5
X58A                              IAmb    IAmb    05 21 15.2
      comp=Z,191nm,1.1s
X58A                              IAMs_20 IAMs_20 05 45 17.3
      comp=Z,23µm,21.0s
X58A  Rowland          54.91 351  P       P       05 21 04.6 -0.5
      baz=170,SNR=7.8
X57A  Johnson Farm,    54.93 351  P       P       05 21 03.9 -1.4
      baz=169
Z50A  Ashland          54.94 345  P       P       05 21 04.1 -1.2
Z50A                              IAmb    IAmb    05 21 37.7
      comp=Z,71nm,0.8s
Z50A                              IAMs_20 IAMs_20 05 46 44.0
      comp=Z,16µm,20.0s
Z50A  Ashland          54.94 345  P       P       05 21 04.0 -1.3
      baz=163
JSC   Jenkinsville     54.95 349  P       P       05 21 04.5 -0.8
JSC                               pmax    pmax
      comp=Z,42nm,0.9s
JSC                               MLR     MLR
      comp=Z,15µm,22.0s
JSC   Jenkinsville     54.95 349  P       P       05 21 04.5 -0.8
LRAL  Lakeview Retre   55.01 343  P       P       05 21 05.0 -0.8
LRAL  Lakeview Retre   55.01 343  P       P       05 21 05.3 -0.5
      baz=162
HODGE Hodges           55.08 348  IAMs_20 IAMs_20 05 44 07.6
      comp=Z,24µm,22.0s
Y52A  Lilburn          55.09 347  P       P       05 21 05.6 -0.8
Y52A                              IAMs_20 IAMs_20 05 46 22.9
      comp=Z,22µm,19.0s
Y52A  Lilburn          55.09 347  P       P       05 21 06.3 -0.1
      baz=165
X56A  White Oak        55.11 350  P       P       05 21 05.8 -0.7
      baz=168
342A  Flagon Creek P   55.15 338  P       P       05 21 05.9 -1.0
735A  Kenedy           55.17 331  P       P       05 21 04.8 -2.3
735A                              IAmb    IAmb    05 21 22.6
      comp=Z,171nm,1.3s
BIRD  Birdtown, Kers   55.17 350  P       P       05 21 06.1 -0.9
BIRD                              IAmb    IAmb    05 21 50.3
      comp=Z,153nm,1.0s
BIRD                              IAMs_20 IAMs_20 05 45 43.1
      comp=Z,26µm,20.0s
X55A  Gracelyn & Ava   55.19 349  P       P       05 21 06.6 -0.6
      baz=168
W60A  Pink Hill        55.20 353  P       P       05 21 06.2 -0.9
      baz=172
W61A  Ground Anchor    55.24 354  P       P       05 21 06.7 -0.7
      baz=173
HKT   Hockley          55.25 333  P       P       05 21 07.2 -0.3
HKT                               pmax    pmax
      comp=Z,201nm,1.4s
HKT                               MLR     MLR
      comp=Z,7µm,20.0s
HKT   Hockley          55.25 333  P       P       05 21 07.2 -0.3
HKT                               IAmb    IAmb    05 21 23.9
      comp=Z,201nm,1.4s
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VBMS  Vicksburg        55.30 340  P       P       05 21 07.2 -0.7
VBMS  Vicksburg        55.30 340  P       P       05 21 07.5 -0.4
      baz=158
W58A  Raeford          55.36 352  P       P       05 21 07.7 -0.5
      baz=170,SNR=7.7
W59A  Clinton          55.40 352  P       P       05 21 08.3 -0.3
      baz=171
CNNC  Cliffs of the    55.40 353  P       P       05 21 07.6 -1.0
CNNC                              IAMs_20 IAMs_20 05 46 22.3
      comp=Z,18µm,19.0s
CNNC  Cliffs of the    55.40 353  P       P       05 21 08.2 -0.4
      baz=172
X54A  Belton           55.40 348  P       P       05 21 08.3 -0.4
      baz=167
833A  Chaparral WMA,   55.46 329  P       P       05 21 08.8 -0.4
833A                              IAmb    IAmb    05 21 18.5
      comp=Z,109nm,1.0s
833A  Chaparral WMA,   55.46 329  P       P       05 21 09.0 -0.2
      baz=147,SNR=18
V62A  Hyde County Ai   55.53 355  IAMs_20 IAMs_20 05 45 49.7
      comp=Z,20µm,20.0s
V62A  Hyde County Ai   55.53 355  P       P       05 21 09.0 -0.5
      baz=174
X53A  Estanollee       55.54 348  P       P       05 21 08.8 -0.9
      baz=166
PAULI Pauline          55.57 349  P       P       05 21 09.4 -0.5
PAULI                             IAMs_20 IAMs_20 05 44 31.7
      comp=Z,24µm,22.0s
W57A  Gilead           55.59 351  P       P       05 21 09.3 -0.7
W57A                              IAmb    IAmb    05 22 09.8
      comp=Z,101nm,1.0s
W57A                              IAMs_20 IAMs_20 05 46 16.9
      comp=Z,21µm,19.0s
W57A  Gilead           55.59 351  P       P       05 21 09.8 -0.1
      baz=170
Y49A  Blount Mountai   55.64 344  P       P       05 21 09.2 -1.2
W56A  Indian Trail     55.67 350  P       P       05 21 12.0 +1.5
      baz=169,SNR=6.7
KMSC  Kings Mountain   55.80 350  P       P       05 21 10.8 -0.7
KMSC                              IAMs_20 IAMs_20 05 46 14.7
      comp=Z,27µm,20.0s
KMSC  Kings Mountain   55.80 350  P       P       05 21 11.1 -0.4
      baz=168
V61A  Roper            55.81 354  P       P       05 21 11.6 +0.1
      baz=174
V60A  Jim Taylor Roa   55.85 354  P       P       05 21 09.5 -2.3
V60A                              IAmb    IAmb    05 21 21.9
      comp=Z,190nm,1.3s
V60A                              IAMs_20 IAMs_20 05 46 16.3
      comp=Z,18µm,21.0s
V60A  Jim Taylor Roa   55.85 354  P       P       05 21 10.6 -1.3
      baz=173
ASCN  Ascension        55.87  86  P       P       05 21 11.3 -1.2
W54A  Cherokee Point   55.89 349  P       P       05 21 11.0 -1.1
      baz=167
X51A  Calhoun          55.94 346  P       P       05 21 11.2 -1.3
X51A                              IAmb    IAmb    05 21 26.3
      comp=Z,336nm,1.8s
X51A                              IAMs_20 IAMs_20 05 45 51.5
      comp=Z,20µm,20.0s
X51A  Calhoun          55.94 346  P       P       05 21 11.8 -0.7
      baz=164
BG3   Lake Jocassee    55.94 348  P       P       05 21 12.1 -0.5
V59A  Middlesex        55.96 353  P       P       05 21 12.3 -0.3
      baz=172
143A  Socs Landing,    56.03 339  P       P       05 21 11.2 -2.0
143A                              IAmb    IAmb    05 21 27.8
      comp=Z,172nm,1.4s
FPAL  Fort Paine       56.09 345  P       P       05 21 12.8 -0.8
FPAL                              IAMs_20 IAMs_20 05 46 30.4
      comp=Z,22µm,21.0s
V58A  Windy Hill, Pi   56.10 352  P       P       05 21 12.7 -1.0
V58A                              IAmb    IAmb    05 21 36.7
      comp=Z,146nm,1.1s
V58A                              IAMs_20 IAMs_20 05 46 01.8
      comp=Z,22µm,21.0s
V58A  Windy Hill, Pi   56.10 352  P       P       05 21 13.6  0.0
      baz=171
W52A  Murphy           56.24 347  P       P       05 21 13.4 -1.3
W52A                              IAmb    IAmb    05 21 44.2
      comp=Z,140nm,1.2s
W52A                              IAMs_20 IAMs_20 05 46 50.5
      comp=Z,16µm,20.0s
V57A  Coltrane Farms   56.28 351  P       P       05 21 14.8 -0.1
      baz=170
V56A  Mocksville       56.31 351  P       P       05 21 15.1 -0.1
      baz=169,SNR=16
U61A  Possum Corner    56.34 355  P       P       05 21 15.3  0.0
      baz=174
X48A  Hartselle        56.36 344  P       P       05 21 14.2 -1.3
X48A                              IAmb    IAmb    05 21 48.4
      comp=Z,124nm,1.1s
NATX  Nacogdoches      56.37 336  P       P       05 21 14.5 -1.1
NATX                              IAmb    IAmb    05 21 25.3
      comp=Z,140nm,0.9s
NATX  Nacogdoches      56.37 336  P       P       05 21 15.7 +0.1
      baz=153
V55A  Taylorsville     56.47 350  P       P       05 21 14.1 -2.2
V55A                              IAmb    IAmb    05 22 05.7
      comp=Z,127nm,1.0s
V55A                              IAMs_20 IAMs_20 05 46 44.6
      comp=Z,22µm,20.0s
V55A  Taylorsville     56.47 350  P       P       05 21 15.6 -0.7
      baz=168,SNR=6.5
U59A  Littleton        56.49 353  P       P       05 21 13.7 -2.7
U59A                              IAmb    IAmb    05 21 26.5
      comp=Z,147nm,1.1s
U59A  Littleton        56.49 353  P       P       05 21 16.1 -0.3
      baz=172
V54A  Nebo             56.52 349  P       P       05 21 16.2 -0.5
      baz=168
U60A  Pendleton        56.54 354  P       P       05 21 15.9 -0.8
      baz=173
U58A  Oxford           56.62 353  P       P       05 21 17.3  0.0
      baz=171
W50A  Signal Mountai   56.65 346  P       P       05 21 16.2 -1.5
W50A                              IAMs_20 IAMs_20 05 46 13.3
      comp=Z,23µm,21.0s
CPCT  Cooper Cave      56.71 347  P       P       05 21 16.4 -1.6
CPCT                              IAmb    IAmb    05 21 47.4
      comp=Z,129nm,1.4s
CPCT                              IAMs_20 IAMs_20 05 47 19.2
      comp=Z,21µm,20.0s
435B  Jarrell          56.72 332  P       P       05 21 15.6 -2.5
435B  Jarrell          56.72 332  P       P       05 21 17.5 -0.7
      baz=150
TKL   Tuckaleechee C   56.76 347  P       P       05 21 17.0 -1.3
TKL                               pmax    pmax
      comp=Z,96nm,1.0s
TKL                               MLR     MLR
      comp=Z,19µm,18.0s
TKL   Tuckaleechee C   56.76 347  P       P       05 21 17.0 -1.3
TKL                               IAmb    IAmb    05 21 27.5
      comp=Z,96nm,0.9s
TKL                               IAMs_20 IAMs_20 05 50 07.1
      comp=Z,19µm,18.0s
U57A  Blanch           56.76 352  P       P       05 21 17.8 -0.5
      baz=170
SWET  Sewanee          56.81 345  P       P       05 21 15.7 -3.1
SWET                              IAmb    IAmb    05 21 51.3
      comp=Z,262nm,1.6s
SWET                              IAMs_20 IAMs_20 05 45 42.6
      comp=Z,21µm,22.0s
U56A  King             56.82 351  P       P       05 21 17.9 -0.9
U56A                              IAmb    IAmb    05 21 49.8
      comp=Z,177nm,1.1s
U56A                              IAMs_20 IAMs_20 05 46 46.1
      comp=Z,22µm,20.0s
U56A  King             56.82 351  P       P       05 21 18.7 -0.1
      baz=169
V52A  Sevierville      56.90 348  P       P       05 21 17.0 -2.3
V52A                              IAmb    IAmb    05 21 28.6
      comp=Z,159nm,0.9s
V52A                              IAMs_20 IAMs_20 05 46 47.8
      comp=Z,16µm,19.0s
V51A  Loudon           57.02 347  P       P       05 21 18.0 -2.2
V51A                              IAmb    IAmb    05 21 53.0
      comp=Z,93nm,0.9s
V51A                              IAMs_20 IAMs_20 05 46 55.0
      comp=Z,15µm,20.0s
Z41A  Richland Creek   57.02 338  P       P       05 21 19.8 -0.4
Z41A                              IAmb    IAmb    05 21 45.3
      comp=Z,216nm,1.1s
Z41A  Richland Creek   57.02 338  P       P       05 21 19.4 -0.8
      baz=155,SNR=11
237A  Washetta, Mont   57.03 335  P       P       05 21 19.2 -1.1
OXF   Oxford           57.08 342  P       P       05 21 18.5 -2.1
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OXF                                pmax     pmax
       comp=Z,302nm,1.2s
OXF                                MLR      MLR
       comp=Z,15µm,19.0s
OXF    Oxford             57.08 342 P        P        05 21 18.5  -2.1
OXF                                IAMs_20  IAMs_20  05 48 16.6
       comp=Z,15µm,19.0s
OXF    Oxford             57.08 342 P        P        05 21 19.2  -1.4
       baz=159
T59A   Double "B" Far     57.08 354 P        P        05 21 18.7  -1.8
T59A                               IAmb     IAmb     05 21 30.6
       comp=Z,208nm,1.1s
T59A                               IAMs_20  IAMs_20  05 47 12.7
       comp=Z,20µm,21.0s
T59A   Double "B" Far     57.08 354 P        P        05 21 19.6  -0.9
       baz=172,SNR=16
U55A   TA2, Sparta        57.08 350 P        P        05 21 20.1  -0.6
       baz=169,SNR=5.9
PLAL   Pickwick Lake      57.14 343 P        P        05 21 18.4  -2.6
PLAL                               IAMs_20  IAMs_20  05 45 36.0
       comp=Z,16µm,21.0s
T58A   Grand View Acr     57.16 353 P        P        05 21 20.8  -0.4
       baz=171,SNR=15
T60A   Surry              57.16 354 P        P        05 21 20.3  -0.8
       baz=174
U54A   Nelsons Funny      57.23 349 P        P        05 21 20.0  -1.7
U54A                               IAmb     IAmb     05 21 48.2
       comp=Z,116nm,0.8s
U54A                               IAMs_20  IAMs_20  05 46 59.6
       comp=Z,22µm,20.0s
U54A   Nelsons Funny      57.23 349 P        P        05 21 21.0  -0.7
       baz=168
T57A   Hurt               57.30 352 P        P        05 21 18.6  -3.5
T57A                               IAmb     IAmb     05 21 37.7
       comp=Z,207nm,1.3s
T57A                               IAMs_20  IAMs_20  05 47 21.7
       comp=Z,22µm,21.0s
T57A   Hurt               57.30 352 P        P        05 21 22.4  +0.3
       baz=171,SNR=7.6
T56A   Rocky Mt           57.44 351 P        P        05 21 22.6  -0.5
       baz=170
JCT    Junction City      57.46 330 P        P        05 21 20.9  -2.6
JCT                                pmax     pmax
       comp=Z,45nm,0.8s
JCT    Junction City      57.46 330 P        P        05 21 20.9  -2.6
JCT    Junction City      57.46 330 P        P        05 21 22.7  -0.7
       baz=147,SNR=14
WLAR   White Oak Lake     57.52 338 P        P        05 21 22.5  -1.2
V48A   Smith Brothers     57.53 345 P        P        05 21 21.7  -2.0
V48A                               IAmb     IAmb     05 21 56.6
       comp=Z,222nm,1.2s
V48A                               IAMs_20  IAMs_20  05 45 52.5
       comp=Z,19µm,22.0s
X43A   Marvell            57.53 340 P        P        05 21 22.1  -1.7
X43A                               IAmb     IAmb     05 21 33.6
       comp=Z,155nm,0.9s
X43A   Marvell            57.53 340 P        P        05 21 23.4  -0.4
       baz=158
TZTN   Tazewell           57.57 348 P        P        05 21 23.0  -1.1
TZTN                               IAMs_20  IAMs_20  05 45 47.6
       comp=Z,19µm,22.0s
TZTN   Tazewell           57.57 348 P        P        05 21 23.1  -0.9
       baz=166
S61A   Accomac            57.61 355 IAMs_20  IAMs_20  05 47 21.9
       comp=Z,22µm,20.0s
S61A   Accomac            57.61 355 P        P        05 21 24.0  -0.3
       baz=175
W45A   Hickory Valley     57.61 342 P        P        05 21 21.2  -3.1
W45A                               IAmb     IAmb     05 22 23.9
       comp=Z,169nm,1.0s
T55A   Pulaski            57.64 351 P        P        05 21 24.0  -0.6
       baz=169,SNR=10
HPIG                      57.64 323 P        P        05 21 23.9  -1.1
BLA    Blacksburg         57.68 351 P        P        05 21 24.2  -0.6
BLA                                pmax     pmax
       comp=Z,275nm,1.5s
BLA                                MLR      MLR
       comp=Z,21µm,21.0s
BLA    Blacksburg         57.68 351 P        P        05 21 24.2  -0.6
BLA                                IAmb     IAmb     05 21 39.8
       comp=Z,275nm,1.5s
BLA                                IAMs_20  IAMs_20  05 47 11.5
       comp=Z,21µm,21.0s
BLA    Blacksburg         57.68 351 P        P        05 21 24.7  -0.1
       baz=169
WHTX   Lake Whitney,      57.70 333 P        P        05 21 23.6  -1.5
WHTX                               IAmb     IAmb     05 21 40.8
       comp=Z,256nm,1.4s
WHTX   Lake Whitney,      57.70 333 P        P        05 21 24.5  -0.6
       baz=150
T54A   Tazewell           57.71 350 P        P        05 21 24.6  -0.5
       baz=168,SNR=9.6
S60A   Water View         57.72 355 P        P        05 21 25.0   0.0
       baz=174
CLTN   Cedars of Leba     57.74 345 P        P        05 21 24.2  -1.1
CLTN                               IAmb     IAmb     05 21 58.1
       comp=Z,120nm,1.1s
CLTN                               IAMs_20  IAMs_20  05 47 08.2
       comp=Z,19µm,22.0s
S58A   Poland Farm, P     57.77 353 P        P        05 21 24.9  -0.4
S58A   Poland Farm, P     57.77 353 P        P        05 21 24.7  -0.7
       baz=172
MET    Memphis--Engin     57.80 342 IAMs_20  IAMs_20  05 48 39.7
       comp=Z,15µm,19.0s
T53A   Wise               57.80 349 P        P        05 21 25.3  -0.4
       baz=167
Z38A   Mt. Pleasant       57.82 336 P        P        05 21 24.4  -1.5
Z38A                               IAmb     IAmb     05 21 35.3
       comp=Z,166nm,0.9s
S59A   Mechanicsville     57.83 354 P        P        05 21 25.5  -0.3
       baz=173
T52A   Hallie             58.01 349 P        P        05 21 25.7  -1.4
T52A                               IAMs_20  IAMs_20  05 45 58.2
       comp=Z,28µm,22.0s
T52A   Hallie             58.01 349 P        P        05 21 26.5  -0.7
       baz=167
S56A   Natural Bridge     58.01 352 P        P        05 21 26.7  -0.5
       baz=170
U49A   Red Boiling Sp     58.01 346 P        P        05 21 24.2  -3.0
U49A                               IAMs_20  IAMs_20  05 48 02.4
       comp=Z,22µm,21.0s
S57A   Dark Hollow, R     58.02 352 P        P        05 21 24.8  -2.4
S57A                               IAmb     IAmb     05 21 42.8
       comp=Z,160nm,1.1s
S57A                               IAMs_20  IAMs_20  05 47 50.3
       comp=Z,26µm,20.0s
S57A   Dark Hollow, R     58.02 352 P        P        05 21 26.2  -0.9
       baz=171
SACV   Santiago Islan     58.02  57 P        P        05 21 25.7  -2.0
SACV   Santiago Islan     58.02  57 IAMs_20  IAMs_20  05 44 16.8
       comp=Z,24µm,21.0s
T51A   Gray               58.05 348 P        P        05 21 26.6  -0.8
       baz=166,SNR=9.6
R58B   Mineral            58.09 353 P        P        05 21 27.5  -0.2
R58B                               IAmb     IAmb     05 21 38.1
       comp=Z,144nm,1.1s
R58B   Mineral            58.09 353 P        P        05 21 27.3  -0.3
       baz=172
X40A   Basin Creek Fa     58.15 339 P        P        05 21 26.3  -1.9
X40A   Basin Creek Fa     58.15 339 P        P        05 21 27.3  -0.9
       baz=156
WVT    Waverly            58.16 344 P        P        05 21 25.9  -2.3
WVT                                pmax     pmax
       comp=Z,131nm,1.1s
WVT                                MLR      MLR
       comp=Z,13µm,20.0s
WVT    Waverly            58.16 344 P        P        05 21 25.9  -2.3
WVT                                IAmb     IAmb     05 22 01.0
       comp=Z,131nm,1.1s
WVT    Waverly            58.16 344 P        P        05 21 27.0  -1.2
       baz=161
R61A   Willards           58.23 356 P        P        05 21 28.3  -0.4
       baz=175
S55A   Lewisburg          58.24 351 P        P        05 21 27.8  -1.0
       baz=169
UALR   University of      58.24 339 P        P        05 21 28.1  -0.7
UALR                               IAmb     IAmb     05 21 52.9
       comp=Z,168nm,1.4s
R59A   King George, V     58.25 354 P        P        05 21 29.3  +0.5
       baz=173
CBN    Corbin Frederi     58.28 354 P        P        05 21 27.3  -1.7
CBN                                IAmb     IAmb     05 21 53.1
       comp=Z,116nm,1.0s
CBN                                IAMs_20  IAMs_20  05 47 36.5
       comp=Z,15µm,20.0s
CBN    Corbin Frederi     58.28 354 P        P        05 21 28.3  -0.7
       baz=173
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T50A   Nancy              58.29 347 P        P        05 21 28.5  -0.7
       baz=165
LPAR   Lepanto            58.35 341 IAMs_20  IAMs_20  05 48 56.4
       comp=Z,16µm,19.0s
S54A   Dingess, Beckl     58.39 350 P        P        05 21 28.9  -0.9
S54A                               IAmb     IAmb     05 22 00.8
       comp=Z,158nm,1.0s
S54A                               IAMs_20  IAMs_20  05 48 13.4
       comp=Z,21µm,20.0s
S54A   Dingess, Beckl     58.39 350 P        P        05 21 29.0  -0.8
       baz=168
S53A   Williamson         58.41 349 P        P        05 21 29.3  -0.7
       baz=168
HBAR   Harrisburg         58.42 341 P        P        05 21 28.3  -1.7
HBAR                               IAMs_20  IAMs_20  05 49 01.1
       comp=Z,15µm,20.0s
TXAR   Lajitas Array      58.43 326 P        P        05 21 30.1  -0.3
       comp=Z,5.2nm,0.8s,baz=150,slow=8.1,SNR=24
TXAR                               LR       LR       05 45 40.0
       comp=Z,7µm,20.4s,baz=0.0,slow=35
TXAR                               PKP2bc            05 51 24.0
       comp=Z,1.3nm,1.0s,baz=222,slow=1.7,SNR=4.3
TXAR   Lajitas Array      58.43 326 P        P        05 21 29.1  -1.2
TX31   Lajitas Ar. Si     58.43 326 P        P        05 21 28.3  -2.1
TX32   Lajitas Array      58.43 326 P        P        05 21 28.9  -1.5
R58A   Rapidan            58.44 353 P        P        05 21 29.5  -0.6
       baz=172
MIAR   Mount Ida          58.46 338 P        P        05 21 29.3  -1.0
MIAR                               pmax     pmax
       comp=Z,170nm,1.1s
MIAR                               MLR      MLR
       comp=Z,8µm,21.0s
MIAR   Mount Ida          58.46 338 P        P        05 21 29.3  -1.0
MIAR                               IAmb     IAmb     05 21 55.4
       comp=Z,170nm,1.1s
MIAR   Mount Ida          58.46 338 P        P        05 21 29.4  -1.0
       baz=155,SNR=56
R57A   Stanardsville      58.49 353 P        P        05 21 29.8  -0.7
       baz=172,SNR=12
T49A   Edmonton           58.52 346 P        P        05 21 29.3  -1.5
T49A                               IAMs_20  IAMs_20  05 48 15.9
       comp=Z,22µm,20.0s
T49A   Edmonton           58.52 346 P        P        05 21 29.1  -1.7
       baz=164,SNR=33
W41B   Gary Mavity, V     58.57 339 P        P        05 21 28.8  -2.3
W41B                               IAmb     IAmb     05 21 54.5
       comp=Z,190nm,1.4s
W41B   Gary Mavity, V     58.57 339 P        P        05 21 30.1  -1.0
       baz=156,SNR=18
S52A   Salyersville       58.58 349 P        P        05 21 30.9  -0.3
       baz=167,SNR=6.5
LNXT   Lenox              58.58 342 IAMs_20  IAMs_20  05 48 20.4
       comp=Z,15µm,21.0s
GNAR   Gosnell            58.61 342 P        P        05 21 29.6  -1.7
GNAR                               IAMs_20  IAMs_20  05 49 09.1
       comp=Z,14µm,20.0s
UTMT   University of      58.63 343 P        P        05 21 30.5  -1.0
S51A   Beattyville        58.64 348 P        P        05 21 27.8  -3.7
S51A                               IAMs_20  IAMs_20  05 45 31.6
       comp=Z,26µm,22.0s
S51A   Beattyville        58.64 348 P        P        05 21 29.9  -1.6
       baz=166
GLAT   Glass              58.68 343 IAMs_20  IAMs_20  05 48 21.1
       comp=Z,15µm,20.0s
R55A   Marlinton          58.69 351 P        P        05 21 31.6  -0.3
R55A                               IAmb     IAmb     05 22 06.6
       comp=Z,107nm,0.9s
R55A                               IAMs_20  IAMs_20  05 47 54.2
       comp=Z,22µm,21.0s
R55A   Marlinton          58.69 351 P        P        05 21 30.9  -1.1
       baz=170,SNR=7.7
WHAR   Wooly Hollow       58.69 339 P        P        05 21 30.7  -1.2
R56A   Bull Pasture M     58.71 352 P        P        05 21 30.6  -1.5
       baz=171
R54A   Victor             58.71 351 P        P        05 21 31.2  -0.9
       baz=169,SNR=6.9
Z35A   Perchaven, San     58.78 334 P        P        05 21 32.5  -0.1
T47A   Sharon Grove       58.78 345 P        P        05 21 31.1  -1.4
T47A                               IAMs_20  IAMs_20  05 46 28.8
       comp=Z,17µm,22.0s
S50A   Richmond           58.84 347 P        P        05 21 31.7  -1.2
       baz=165,SNR=10.0
Q59A   Harwood            58.87 355 P        P        05 21 31.9  -1.1
       baz=174
PVMO   Portageville       58.93 342 IAMs_20  IAMs_20  05 48 30.7
       comp=Z,18µm,21.0s
Q60A   Greensboro         58.94 355 IAMs_20  IAMs_20  05 48 10.2
       comp=Z,15µm,21.0s
Q60A   Greensboro         58.94 355 P        P        05 21 32.4  -1.1
       baz=175
PENMO  Penman             58.95 342 IAMs_20  IAMs_20  05 48 30.1
       comp=Z,18µm,20.0s
R53A   Hurricane          59.01 350 IAMs_20  IAMs_20  05 48 35.1
       comp=Z,18µm,20.0s
R53A   Hurricane          59.01 350 P        P        05 21 32.8  -1.3
       baz=168
Q58A   Fox Den Farm,      59.04 354 P        P        05 21 33.5  -0.8
       baz=173,SNR=14
LCAR   Lake Charles       59.05 341 P        P        05 21 33.3  -1.1
LCAR                               IAmb     IAmb     05 22 07.3
       comp=Z,196nm,1.6s
W39A   Magazine           59.12 338 P        P        05 21 34.8  -0.1
W39A                               IAmb     IAmb     05 21 49.2
       comp=Z,135nm,1.1s
W39A   Magazine           59.12 338 P        P        05 21 33.7  -1.2
       baz=155,SNR=34
S49A   Springfield        59.12 347 P        P        05 21 33.7  -1.2
       baz=164
R52A   Catlettsburg       59.14 349 P        P        05 21 34.0  -1.0
       baz=167
HENM   Henderson Moun     59.15 343 IAMs_20  IAMs_20  05 48 33.5
       comp=Z,14µm,21.0s
FCAR   Ozark Folk Cen     59.19 340 P        P        05 21 32.4  -2.9
ABTX   Abilene, Hawle     59.20 332 P        P        05 21 34.4  -1.2
ABTX                               IAmb     IAmb     05 22 03.0
       comp=Z,138nm,1.1s
ABTX   Abilene, Hawle     59.20 332 P        P        05 21 34.1  -1.4
       baz=148,SNR=25
T45A   Paducah            59.21 343 P        P        05 21 33.0  -2.5
Q57A   Strasburg          59.21 353 P        P        05 21 34.4  -1.1
       baz=172,SNR=15
R51A   Hillsboro          59.27 348 P        P        05 21 34.3  -1.6
       baz=166,SNR=8.8
Q56A   Snyder Ridge,      59.31 352 P        P        05 21 35.0  -1.1
Q56A                               IAMs_20  IAMs_20  05 48 48.7
       comp=Z,17µm,20.0s
Q56A   Snyder Ridge,      59.31 352 P        P        05 21 35.1  -1.1
       baz=171,SNR=16
Q55A   Buckhannon         59.38 352 P        P        05 21 35.3  -1.4
       baz=170
R50A   Paris              59.40 348 P        P        05 21 33.8  -3.0
R50A                               IAmb     IAmb     05 21 50.7
       comp=Z,141nm,1.4s
R50A                               IAMs_20  IAMs_20  05 46 55.9
       comp=Z,23µm,22.0s
R50A   Paris              59.40 348 P        P        05 21 35.1  -1.7
       baz=165
SDMD   Soldier's Deli     59.42 355 P        P        05 21 34.1  -2.8
Q53A   Leroy              59.46 350 P        P        05 21 36.8  -0.4
       baz=168,SNR=8.1
Q54A   Coxs Mills         59.48 351 P        P        05 21 35.6  -1.7
Q54A                               IAmb     IAmb     05 22 03.6
       comp=Z,81nm,0.9s
Q54A                               IAMs_20  IAMs_20  05 47 56.2
       comp=Z,19µm,21.0s
Q54A   Coxs Mills         59.48 351 P        P        05 21 36.4  -0.9
       baz=169,SNR=8.2
PBMO   Poplar Bluff       59.49 342 P        P        05 21 35.1  -2.3
PBMO                               IAmb     IAmb     05 22 11.0
       comp=Z,125nm,0.9s
P61A   Hammonton          59.54 356 IAMs_20  IAMs_20  05 50 23.1
       comp=Z,17µm,18.0s
P61A   Hammonton          59.54 356 P        P        05 21 37.6  -0.1
       baz=176
P58A   Pank, Wackersv     59.55 354 P        P        05 21 37.1  -0.7
       baz=173
R49A   Shelbyville        59.59 347 P        P        05 21 37.2  -0.9
R49A                               IAmb     IAmb     05 22 39.1
       comp=Z,110nm,1.4s
R49A                               IAMs_20  IAMs_20  05 47 36.0
       comp=Z,19µm,20.0s
R49A   Shelbyville        59.59 347 P        P        05 21 37.4  -0.6
       baz=164
P59A   Jarrettsville      59.59 355 P        P        05 21 37.6  -0.5
       baz=174
P57A   Homestead Farm     59.61 354 P        P        05 21 36.7  -1.5
P57A                               IAMs_20  IAMs_20  05 51 01.8
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       comp=Z,15µm,18.0s
P57A   Homestead Farm     59.61 354 P        P        05 21 38.1  -0.1
       baz=172
Q52A   Bidwell            59.68 350 P        P        05 21 38.1  -0.7
       baz=168
Q52A                               S        S        05 29 49.3  -0.5
       baz=168
P56A   Dayton Farm, R     59.72 353 P        P        05 21 38.4  -0.6
       baz=171,SNR=14
P56A                               S        S        05 29 54.1  +3.7
       baz=171
P60A   Greenville         59.73 356 P        P        05 21 36.7  -2.3
P60A                               IAmb     IAmb     05 22 04.1
       comp=Z,122nm,1.4s
P60A   Greenville         59.73 356 P        P        05 21 38.0  -1.0
       baz=175
P60A                               S        S        05 29 52.1  +1.8
       baz=175
WCI    Wyandotte Cave     59.77 346 P        P        05 21 37.1  -2.3
WCI                                pmax     pmax
       comp=Z,117nm,0.9s
WCI                                MLR      MLR
       comp=Z,23µm,21.0s
WCI    Wyandotte Cave     59.77 346 P        P        05 21 37.1  -2.3
WCI                                IAmb     IAmb     05 22 11.8
       comp=Z,117nm,0.9s
WCI    Wyandotte Cave     59.77 346 IAMs_20  IAMs_20  05 48 55.0
       comp=Z,23µm,21.0s
WCI    Wyandotte Cave     59.77 346 P        P        05 21 38.1  -1.3
       baz=163
WCI                                S        S        05 29 49.9  -1.2
       baz=163
USIN   University of      59.85 345 P        P        05 21 38.0  -1.8
P55A   Reedsville         59.85 352 P        P        05 21 38.9  -1.0
       baz=170
P55A                               S        S        05 29 55.7  +3.7
       baz=170
U40A   Yellville          59.85 340 P        P        05 21 38.2  -1.8
U40A                               IAmb     IAmb     05 21 48.2
       comp=Z,77nm,0.9s
U40A   Yellville          59.85 340 P        P        05 21 39.1  -0.9
       baz=156,SNR=22
U40A                               S        S        05 29 52.0  -0.2
       baz=156
Q50A   Georgetown         59.88 348 P        P        05 21 39.7  -0.3
       baz=166,SNR=9.4
Q50A                               S        S        05 29 50.2  -2.1
       baz=166
T42A   Van Buren          59.92 341 P        P        05 21 38.6  -1.7
T42A                               IAmb     IAmb     05 22 12.9
       comp=Z,111nm,1.3s
T42A                               IAMs_20  IAMs_20  05 49 49.7
       comp=Z,14µm,20.0s
Q51A   Peebles            59.93 349 P        P        05 21 38.0  -2.5
Q51A                               IAMs_20  IAMs_20  05 50 00.2
       comp=Z,16µm,19.0s
Q51A   Peebles            59.93 349 P        P        05 21 39.2  -1.3
       baz=166
Q51A                               S        S        05 29 51.7  -1.5
       baz=166
O61A   Allentown          59.94 357 P        P        05 21 39.6  -0.9
       baz=176,SNR=6.4
MVL    Millersville       59.97 355 P        P        05 21 41.1  +0.5
MVL                                IAmb     IAmb     05 22 06.2
       comp=Z,224nm,1.5s
MCWV   Mont Chateau       60.00 352 P        P        05 21 40.7  -0.2
MCWV   Mont Chateau       60.00 352 P        P        05 21 40.5  -0.5
       baz=170
MCWV                               S        S        05 29 57.0  +3.1
       baz=170
S44A   Carbondale         60.01 343 P        P        05 21 39.3  -1.6
S44A                               IAMs_20  IAMs_20  05 49 52.2
       comp=Z,14µm,20.0s
P54A   Burton             60.03 351 P        P        05 21 40.7  -0.4
       baz=170,SNR=17
P54A                               S        S        05 29 55.6  +1.2
       baz=170
P53A   Whipple            60.05 351 P        P        05 21 38.9  -2.4
P53A                               IAmb     IAmb     05 22 15.3
       comp=Z,127nm,0.9s
P53A                               IAMs_20  IAMs_20  05 50 44.1
       comp=Z,15µm,20.0s
P53A   Whipple            60.05 351 P        P        05 21 40.9  -0.4
       baz=169,SNR=8.8
P53A                               S        S        05 29 54.9  +0.3
       baz=169
O58A   Lewisberry         60.14 355 P        P        05 21 41.5  -0.3
       baz=174
O58A                               S        S        05 29 58.4  +2.7
       baz=174
HHAR   Hobbs              60.15 339 P        P        05 21 40.5  -1.6
HHAR                               IAmb     IAmb     05 21 56.2
       comp=Z,168nm,1.3s
Q49A   Aurora             60.21 347 P        P        05 21 43.2  +0.8
       baz=165,SNR=16
Q49A                               S        S        05 29 55.1  -1.6
       baz=165
O60A   Telford            60.22 356 P        P        05 21 42.2  -0.2
       baz=175
O60A                               S        S        05 29 58.5  +1.9
       baz=175
W35A   Tecumseh           60.22 336 P        P        05 21 40.9  -1.6
PAGS   Pennsylvania G     60.23 355 P        P        05 21 41.7  -0.7
PAGS                               IAmb     IAmb     05 22 06.5
       comp=Z,93nm,1.1s
PAGS                               IAMs_20  IAMs_20  05 48 41.1
       comp=Z,19µm,21.0s
O59A   Robesonia          60.27 355 P        P        05 21 42.4  -0.3
       baz=174
O59A                               S        S        05 30 00.4  +3.1
       baz=174
O57A   Amberson           60.29 354 P        P        05 21 42.2  -0.7
       baz=173,SNR=21
O57A                               S        S        05 30 00.8  +3.2
       baz=173
P52A   Corning            60.31 350 P        P        05 21 42.1  -0.9
       baz=168,SNR=8.7
P52A                               S        S        05 29 57.5  -0.5
       baz=168
Q48A   North Vernon       60.32 347 P        P        05 21 42.1  -1.0
       baz=164
Q48A                               S        S        05 29 55.8  -2.2
       baz=164
P51A   Williamsport       60.33 349 P        P        05 21 41.4  -1.7
P51A                               IAmb     IAmb     05 21 56.7
       comp=Z,110nm,1.3s
P51A                               IAMs_20  IAMs_20  05 48 35.4
       comp=Z,16µm,20.0s
P51A   Williamsport       60.33 349 P        P        05 21 42.0  -1.1
       baz=167
P51A                               S        S        05 29 56.5  -1.6
       baz=167
MGMO   Mountain Grove     60.39 340 P        P        05 21 42.0  -1.7
MGMO                               IAMs_20  IAMs_20  05 50 14.4
       comp=Z,15µm,20.0s
O56A   Blue Knob Stat     60.45 353 P        P        05 21 43.7  -0.3
O56A   Blue Knob Stat     60.45 353 P        P        05 21 43.3  -0.7
       baz=172,SNR=14
O56A                               S        S        05 30 02.7  +2.9
       baz=172
U38A   Gravette           60.45 338 P        P        05 21 42.9  -1.2
U38A                               IAmb     IAmb     05 21 57.6
       comp=Z,91nm,1.2s
O55A   Ligonier           60.47 353 P        P        05 21 43.9  -0.3
       baz=171
O55A                               S        S        05 30 02.5  +2.4
       baz=171
TUL1   Leonard            60.48 337 P        P        05 21 42.7  -1.6
TUL1   Leonard            60.48 337 P        P        05 21 43.8  -0.5
       baz=153,SNR=25
TUL1                               S        S        05 30 00.8  +0.6
       baz=153
LUPA   Lehigh Univers     60.49 356 P        P        05 21 42.6  -1.7
BRNJ   Basking Ridge      60.53 357 P        P        05 21 43.2  -1.3
BRNJ                               IAmb     IAmb     05 21 54.1
       comp=Z,87nm,1.0s
P50A   Jamestown          60.58 349 P        P        05 21 43.8  -1.1
       baz=166
P50A                               S        S        05 29 59.9  -1.5
       baz=166
N61A   South Mountain     60.58 357 P        P        05 21 44.0  -0.8
       baz=176
N61A                               S        S        05 30 02.9  +1.5
       baz=176
O54A   Avella             60.59 352 P        P        05 21 43.9  -1.1
O54A   Avella             60.59 352 P        P        05 21 43.8  -1.1
       baz=170,SNR=6.9
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O54A			S	**S**	**05 30 03.3**	**+1.9**
	baz=170					
CPNY	**Central Park**	**60.61 357**	P	**P**	**05 21 43.9**	**-1.1**
CPNY			IAMs_20	IAMs_20	05 48 04.4	
	comp=Z,22µm,22.0s					
WMOK	**Wichita Mounta**	**60.63 334**	P	**P**	**05 21 44.1**	**-1.2**
WMOK			pmax	pmax		
	comp=Z,43nm,1.0s					
WMOK			MLR	MLR		
	comp=Z,8µm,21.0s					
WMOK	**Wichita Mounta**	**60.63 334**	P	**P**	**05 21 44.1**	**-1.2**
WMOK	**Wichita Mounta**	**60.63 334**	P	**P**	**05 21 43.8**	**-1.6**
	baz=150,SNR=14					
WMOK			S	**S**	**05 30 02.4**	**+0.1**
	baz=150					
OLIL	**Olney**	**60.69 345**	P	**P**	**05 21 44.5**	**-1.1**
OLIL			IAmb	IAmb	05 21 58.8	
	comp=Z,138nm,1.2s					
P49A	**Miami Univ. Ec**	**60.69 348**	P	**P**	**05 21 44.5**	**-1.2**
	baz=165					
P49A			S	**S**	**05 30 00.7**	**-2.1**
	baz=165					
BLO	**Bloomington**	**60.73 346**	P	**P**	**05 21 44.1**	**-1.8**
BLO			pmax	pmax		
	comp=Z,95nm,1.0s					
BLO			MLR	MLR		
	comp=Z,22µm,22.0s					
BLO	**Bloomington**	**60.73 346**	P	**P**	**05 21 44.1**	**-1.8**
BLO			IAmb	IAmb	05 22 18.9	
	comp=Z,95nm,0.9s					
BLO			IAMs_20	IAMs_20	05 49 13.2	
	comp=Z,22µm,22.0s					
N62A	**Caumsett State**	**60.73 358**	P	**P**	**05 21 45.6**	**-0.2**
	baz=177					
O52A	**Adamsville**	**60.74 350**	P	**P**	**05 21 44.1**	**-1.9**
O52A			IAmb	IAmb	05 22 40.7	
	comp=Z,161nm,1.4s					
O52A			IAMs_20	IAMs_20	05 51 13.5	
	comp=Z,18µm,20.0s					
O52A	**Adamsville**	**60.74 350**	P	**P**	**05 21 45.7**	**-0.3**
	baz=168,SNR=6.8					
O52A			S	**S**	**05 30 02.8**	**-0.6**
	baz=168					
SSPA	**Standing Stone**	**60.74 354**	P	**P**	**05 21 44.5**	**-1.4**
SSPA	**Standing Stone**	**60.74 354**	IAMs_20	IAMs_20	05 49 01.6	
	comp=Z,23µm,21.0s					
SSPA	**Standing Stone**	**60.74 354**	P	**P**	**05 21 45.4**	**-0.5**
	baz=172					
SSPA			S	**S**	**05 30 06.5**	**+3.1**
	baz=172					
N60A	**Cedar Hill Far**	**60.75 356**	P	**P**	**05 21 45.8**	**-0.2**
	baz=176					
N60A			S	**S**	**05 30 05.4**	**+1.9**
	baz=176					
P48A	**Milroy**	**60.76 347**	P	**P**	**05 21 46.1**	**0.0**
P48A			IAmb	IAmb	05 22 44.4	
	comp=Z,164nm,1.6s					
P48A			IAMs_20	IAMs_20	05 48 43.2	
	comp=Z,16µm,20.0s					
P48A	**Milroy**	**60.76 347**	P	**P**	**05 21 45.6**	**-0.5**
	baz=164					
P48A			S	**S**	**05 30 00.8**	**-3.0**
	baz=164					
O53A	**New Philadelph**	**60.77 351**	P	**P**	**05 21 46.3**	**+0.1**
	baz=169					
O53A			S	**S**	**05 30 03.7**	**-0.1**
	baz=169					
PAL	**Palisades**	**60.82 357**	P	**P**	**05 21 44.5**	**-1.9**
PAL			pmax	pmax		
	comp=Z,283nm,1.8s					
PAL			MLR	MLR		
	comp=Z,22µm,21.0s					
PAL	**Palisades**	**60.82 357**	P	**P**	**05 21 44.5**	**-1.9**
PAL			IAMs_20	IAMs_20	05 48 10.0	
	comp=Z,22µm,21.0s					
PAL	**Palisades**	**60.82 357**	P	**P**	**05 21 45.2**	**-1.3**
	baz=177					
PAL			S	**S**	**05 30 05.9**	**+1.6**
	baz=177					
N58A	**Sunbury**	**60.83 355**	P	**P**	**05 21 45.0**	**-1.5**
N58A			IAmb	IAmb	05 22 10.9	
	comp=Z,103nm,1.0s					
N58A			IAMs_20	IAMs_20	05 45 43.1	
	comp=Z,17µm,22.0s					
N58A	**Sunbury**	**60.83 355**	P	**P**	**05 21 45.5**	**-1.0**
	baz=174					
N58A			S	**S**	**05 30 06.7**	**+2.2**
	baz=174					
N59A	**State Game Lan**	**60.84 356**	P	**P**	**05 21 45.3**	**-1.3**
N59A			IAMs_20	IAMs_20	05 50 23.5	
	comp=Z,14µm,19.0s					
N59A	**State Game Lan**	**60.84 356**	P	**P**	**05 21 45.9**	**-0.7**
	baz=175					
N59A			S	**S**	**05 30 06.8**	**+2.1**
	baz=175					
O51A	**Pataskala**	**60.89 350**	P	**P**	**05 21 45.7**	**-1.3**
	baz=167,SNR=8.9					
O51A			S	**S**	**05 30 03.5**	**-1.9**
	baz=167					
CCM	**Cathedral Cave**	**60.91 342**	P	**P**	**05 21 45.5**	**-1.7**
CCM			pmax	pmax		
	comp=Z,146nm,1.3s					
CCM			MLR	MLR		
	comp=Z,14µm,20.0s					
CCM	**Cathedral Cave**	**60.91 342**	P	**P**	**05 21 45.5**	**-1.7**
CCM			IAmb	IAmb	05 22 20.2	
	comp=Z,146nm,1.2s					
CCM	**Cathedral Cave**	**60.91 342**	IAMs_20	IAMs_20	05 49 52.8	
	comp=Z,15µm,20.0s					
CCM	**Cathedral Cave**	**60.91 342**	P	**P**	**05 21 45.8**	**-1.4**
	baz=158					
CCM			S	**S**	**05 30 03.8**	**-1.8**
	baz=158					
ODNJ	**Ogdensburg**	**60.93 357**	P	**P**	**05 21 45.1**	**-2.1**
ODNJ			IAmb	IAmb	05 22 17.2	
	comp=Z,157nm,1.6s					
ODNJ			IAMs_20	IAMs_20	05 51 21.9	
	comp=Z,17µm,18.0s					
N55A	**Marion Center**	**61.00 353**	P	**P**	**05 21 46.7**	**-1.1**
	baz=171,SNR=21					
N55A			S	**S**	**05 30 09.4**	**+2.6**
	baz=171					
ACSO	**Alum Creek Sta**	**61.04 349**	P	**P**	**05 21 46.1**	**-1.9**
ACSO			IAmb	IAmb	05 22 02.5	
	comp=Z,163nm,1.2s					
ACSO			IAMs_20	IAMs_20	05 52 09.5	
	comp=Z,15µm,19.0s					
ACSO	**Alum Creek Sta**	**61.04 349**	P	**P**	**05 21 47.1**	**-0.9**
	baz=167,SNR=17					
ACSO			S	**S**	**05 30 06.4**	**-0.8**
	baz=167					
N56A	**West Decatur**	**61.06 354**	P	**P**	**05 21 47.7**	**-0.5**
	baz=172,SNR=36					
N56A			S	**S**	**05 30 10.3**	**+2.8**
	baz=172					
O50A	**Cable**	**61.07 349**	P	**P**	**05 21 47.1**	**-1.2**
	baz=166,SNR=7.0					
O50A			S	**S**	**05 30 06.1**	**-1.6**
	baz=166					
Q44A	**Meyer Farm, Va**	**61.08 344**	P	**P**	**05 21 46.4**	**-1.9**
Q44A			IAmb	IAmb	05 22 21.9	
	comp=Z,130nm,0.9s					
Q44A			IAMs_20	IAMs_20	05 49 36.6	
	comp=Z,13µm,20.0s					
YLE	**Yale**	**61.09 358**	P	**P**	**05 21 47.1**	**-1.2**
YLE			IAMs_20	IAMs_20	05 49 33.3	
	comp=Z,21µm,20.0s					
M61A	**Granite Spring**	**61.12 357**	P	**P**	**05 21 48.7**	**+0.2**
	baz=177					
M61A			S	**S**	**05 30 09.8**	**+1.7**
	baz=177					
SLM	**Saint Louis**	**61.16 343**	IAMs_20	IAMs_20	05 47 56.4	
	comp=Z,17µm,22.0s					
M63A	**Gales Ferry**	**61.16 359**	P	**P**	**05 21 48.7**	**-0.1**
	baz=179					
M63A			S	**S**	**05 30 09.6**	**+1.0**
	baz=179					
M60A	**Port Jervis**	**61.17 357**	P	**P**	**05 21 48.3**	**-0.6**
	baz=176					
M60A			S	**S**	**05 30 11.1**	**+2.2**
	baz=176					
MNTX	**Cornudas Mount**	**61.21 327**	P	**P**	**05 21 47.0**	**-2.4**
MNTX	**Cornudas Mount**	**61.21 327**	P	**P**	**05 21 48.4**	**-0.9**
	baz=143,SNR=28					
MNTX			S	**S**	**05 30 11.9**	**+2.2**
	baz=143					
M62A	**Hamden**	**61.22 358**	P	**P**	**05 21 48.4**	**-0.7**
	baz=178,SNR=7.1					
M62A			S	**S**	**05 30 10.0**	**+0.6**
	baz=178					
S39A	**Bolivar**	**61.22 340**	P	**P**	**05 21 47.6**	**-1.7**
S39A			IAmb	IAmb	05 22 14.0	
	comp=Z,156nm,1.1s					
S39A			IAMs_20	IAMs_20	05 50 56.3	
	comp=Z,16µm,20.0s					
O49A	**Covington**	**61.24 348**	P	**P**	**05 21 47.5**	**-1.9**
O49A			IAmb	IAmb	05 22 40.2	
	comp=Z,85nm,1.0s					
O49A			IAMs_20	IAMs_20	05 49 38.9	
	comp=Z,22µm,21.0s					
O49A	**Covington**	**61.24 348**	P	**P**	**05 21 48.2**	**-1.2**
	baz=166					
O49A			S	**S**	**05 30 07.4**	**-2.5**
	baz=166					
N53A	**Lisbon**	**61.27 351**	P	**P**	**05 21 48.2**	**-1.3**
N53A			IAmb	IAmb	05 22 46.8	
	comp=Z,107nm,1.0s					
N53A	**Lisbon**	**61.27 351**	P	**P**	**05 21 48.7**	**-0.8**
	baz=169					
N53A			S	**S**	**05 30 10.6**	**+0.5**
	baz=169					
M64A	**Tiverton**	**61.30 360**	P	**P**	**05 21 49.3**	**-0.4**
	baz=180					
M64A			S	**S**	**05 30 11.4**	**+1.1**
	baz=180					
N54A	**Moraine State**	**61.30 352**	P	**P**	**05 21 47.9**	**-1.9**
N54A			IAMs_20	IAMs_20	05 49 03.5	
	comp=Z,23µm,21.0s					
N54A	**Moraine State**	**61.30 352**	P	**P**	**05 21 49.1**	**-0.7**
	baz=170,SNR=15					
N54A			S	**S**	**05 30 12.4**	**+1.9**
	baz=170					
P46A	**Rosedale**	**61.31 346**	P	**P**	**05 21 47.2**	**-2.6**
P46A			IAmb	IAmb	05 21 58.4	
	comp=Z,89nm,1.0s					
P46A			IAMs_20	IAMs_20	05 49 43.4	
	comp=Z,19µm,22.0s					
M58A	**Price’s Panora**	**61.34 355**	P	**P**	**05 21 49.4**	**-0.6**
	baz=174,SNR=16					
M58A			S	**S**	**05 30 13.1**	**+2.0**
	baz=174					
M57A	**Sunshine Farm,**	**61.36 355**	P	**P**	**05 21 47.1**	**-3.1**
M57A			IAmb	IAmb	05 22 14.9	
	comp=Z,126nm,1.1s					
M57A			IAMs_20	IAMs_20	05 49 38.1	
	comp=Z,16µm,20.0s					
M57A	**Sunshine Farm,**	**61.36 355**	P	**P**	**05 21 49.2**	**-1.0**
	baz=173					
M57A			S	**S**	**05 30 14.1**	**+2.8**
	baz=173					
N52A	**McGinn’s Farm,**	**61.40 351**	P	**P**	**05 21 49.3**	**-1.1**
	baz=168,SNR=8.5					
N52A			S	**S**	**05 30 10.5**	**-1.3**
	baz=168					
M59A	**Waymart**	**61.44 356**	P	**P**	**05 21 50.1**	**-0.6**
	baz=175					
M59A			S	**S**	**05 30 14.8**	**+2.5**
	baz=175					
O48A	**Farmland**	**61.47 348**	P	**P**	**05 21 49.7**	**-1.2**
	baz=165,SNR=16					
O48A			S	**S**	**05 30 11.0**	**-1.8**
	baz=165					
KSCT	**Kent School, K**	**61.52 358**	P	**P**	**05 21 49.3**	**-1.9**
KSCT			IAmb	IAmb	05 22 15.4	
	comp=Z,120nm,1.4s					
KSCT			IAMs_20	IAMs_20	05 49 58.6	
	comp=Z,17µm,20.0s					
N50A	**Nevada**	**61.59 349**	P	**P**	**05 21 50.5**	**-1.2**
	baz=167					
N50A			S	**S**	**05 30 13.2**	**-1.0**
	baz=167					
N51A	**Ashland**	**61.61 350**	IAMs_20	IAMs_20	05 51 50.4	
	comp=Z,19µm,20.0s					
N51A	**Ashland**	**61.61 350**	P	**P**	**05 21 50.5**	**-1.4**
	baz=168,SNR=8.8					
N51A			S	**S**	**05 30 12.9**	**-1.5**
	baz=168					
M56A	**Emporium**	**61.61 354**	P	**P**	**05 21 51.4**	**-0.5**
M56A			IAMs_20	IAMs_20	05 49 27.6	
	comp=Z,20µm,21.0s					
M56A	**Emporium**	**61.61 354**	P	**P**	**05 21 51.1**	**-0.7**
	baz=172,SNR=23					
M56A			S	**S**	**05 30 16.6**	**+2.1**
	baz=172					
L63A	**North Scituate**	**61.61 359**	P	**P**	**05 21 51.4**	**-0.4**
	baz=179,SNR=6.7					
L63A			S	**S**	**05 30 16.4**	**+2.0**
	baz=179					
T35A	**Sooner Cattle**	**61.64 337**	P	**P**	**05 21 51.1**	**-1.0**
T35A			IAmb	IAmb	05 22 02.1	
	comp=Z,160nm,1.1s					
M55A	**Ridgway**	**61.66 353**	P	**P**	**05 21 51.6**	**-0.5**
M55A	**Ridgway**	**61.66 353**	P	**P**	**05 21 51.3**	**-0.8**
	baz=172,SNR=30					
M55A			S	**S**	**05 30 16.5**	**+1.4**
	baz=172					
BRYW	**Bryant College**	**61.67 359**	P	**P**	**05 21 51.9**	**-0.3**
L64A	**Middleborough**	**61.68 360**	P	**P**	**05 21 51.3**	**-0.9**
	baz=180					
L64A			S	**S**	**05 30 15.4**	**+0.2**
	baz=180					
MSTX	**Muleshoe**	**61.75 330**	P	**P**	**05 21 52.1**	**-1.0**
MSTX	**Muleshoe**	**61.75 330**	P	**P**	**05 21 51.8**	**-1.3**
	baz=146,SNR=13					
MSTX			S	**S**	**05 30 17.7**	**+1.0**
	baz=146					
M54A	**Oil Creek Stat**	**61.80 352**	P	**P**	**05 21 52.1**	**-1.0**
M54A	**Oil Creek Stat**	**61.80 352**	P	**P**	**05 21 52.4**	**-0.7**
	baz=171,SNR=19					
M54A			S	**S**	**05 30 18.2**	**+1.3**
	baz=171					
L62A	**Suffield**	**61.80 358**	S	**S**	**05 30 18.5**	**+1.8**
	baz=178					
L60A	**Shokan**	**61.81 357**	P	**P**	**05 21 52.6**	**-0.7**
	baz=176					
L60A			S	**S**	**05 30 19.5**	**+2.5**
	baz=176					
M53A	**WI Miller and**	**61.86 352**	P	**P**	**05 21 52.3**	**-1.3**
	baz=170					
M53A			S	**S**	**05 30 18.0**	**+0.3**
	baz=170					
P43A	**Skaggs, Pawnee**	**61.91 344**	P	**P**	**05 21 52.9**	**-0.9**
P43A			IAMs_20	IAMs_20	05 51 59.4	
	comp=Z,12µm,19.0s					
N49A	**Columbus Grove**	**61.93 349**	P	**P**	**05 21 52.7**	**-1.3**
N49A			IAMs_20	IAMs_20	05 50 42.2	
	comp=Z,15µm,21.0s					
N49A	**Columbus Grove**	**61.93 349**	P	**P**	**05 21 52.6**	**-1.3**
	baz=166,SNR=17					
N49A			S	**S**	**05 30 16.2**	**-2.2**
	baz=166					
L58A	**Harry Jones Me**	**61.96 356**	P	**P**	**05 21 53.4**	**-0.8**
	baz=175,SNR=15					
L58A			S	**S**	**05 30 21.4**	**+2.5**
	baz=175					
M51A	**Elyria**	**61.98 350**	P	**P**	**05 21 52.3**	**-2.0**
	baz=168					
M51A			S	**S**	**05 30 17.6**	**-1.5**
	baz=168					
L61A	**Hillsdale 1, H**	**61.99 358**	P	**P**	**05 21 53.2**	**-1.2**
	baz=177					
L61A			S	**S**	**05 30 21.2**	**+2.0**
	baz=177					
L57A	**Andrews Acres**	**62.00 355**	P	**P**	**05 21 53.1**	**-1.3**
	baz=174					
L57A			S	**S**	**05 30 21.8**	**+2.4**
	baz=174					
ALLY	**Alegheny Colle**	**62.00 352**	IAMs_20	IAMs_20	05 49 35.0	
	comp=Z,23µm,21.0s					
AMTX	**Amarillo**	**62.01 331**	P	**P**	**05 21 54.2**	**-0.5**
AMTX	**Amarillo**	**62.01 331**	P	**P**	**05 21 53.1**	**-1.6**
	baz=147					
AMTX			S	**S**	**05 30 20.4**	**+0.4**
	baz=147					
SFIN	**Lafayette**	**62.01 346**	P	**P**	**05 21 52.3**	**-2.2**
SFIN			IAmb	IAmb	05 22 27.1	
	comp=Z,142nm,1.2s					
SFIN			IAMs_20	IAMs_20	05 49 21.1	
	comp=Z,21µm,21.0s					
SFIN	**Lafayette**	**62.01 346**	P	**P**	**05 21 53.3**	**-1.3**
	baz=163,SNR=7.8					
SFIN			S	**S**	**05 30 16.1**	**-3.4**
	baz=163					
VNA3	**Neumayer Olymp**	**62.01 161**	P	**P**	**05 21 55.8**	**+1.5**
N48A	**Decatur**	**62.03 348**	P	**P**	**05 21 53.1**	**-1.6**
	baz=165,SNR=15					
N48A			S	**S**	**05 30 17.1**	**-2.6**
	baz=165					
QUA2	**Belchertown**	**62.04 359**	P	**P**	**05 21 54.2**	**-0.4**
QUA2			IAmb	IAmb	05 22 18.6	
	comp=Z,114nm,1.3s					
L59A	**Walton**	**62.06 356**	P	**P**	**05 21 54.8**	**-0.1**
L59A			IAMs_20	IAMs_20	05 48 52.8	
	comp=Z,15µm,21.0s					
L59A	**Walton**	**62.06 356**	P	**P**	**05 21 53.6**	**-1.3**
	baz=176,SNR=21					
L59A			S	**S**	**05 30 22.1**	**+1.9**
	baz=176					
M52A	**Chesterland**	**62.06 351**	P	**P**	**05 21 53.7**	**-1.2**
M52A			IAmb	IAmb	05 22 09.6	
	comp=Z,88nm,0.9s					
M52A	**Chesterland**	**62.06 351**	P	**P**	**05 21 53.6**	**-1.3**
	baz=169,SNR=9.0					
M52A			S	**S**	**05 30 19.6**	**-0.6**
	baz=169					
O44A	**Mansfield**	**62.12 345**	P	**P**	**05 21 54.6**	**-0.7**
O44A			IAmb	IAmb	05 22 27.9	
	comp=Z,91nm,0.9s					
O44A			IAMs_20	IAMs_20	05 50 42.0	
	comp=Z,20µm,20.0s					
BINY	**Binghamton**	**62.13 356**	P	**P**	**05 21 55.0**	**-0.4**
BINY			IAmb	IAmb	05 22 19.8	
	comp=Z,131nm,0.9s					
BINY			IAMs_20	IAMs_20	05 52 05.6	
	comp=Z,13µm,19.0s					
BINY	**Binghamton**	**62.13 356**	P	**P**	**05 21 54.0**	**-1.4**
	baz=175,SNR=6.7					
BINY			S	**S**	**05 30 23.5**	**+2.5**
	baz=175					
U32A	**Winter Ranch,**	**62.13 334**	P	**P**	**05 21 54.1**	**-1.4**
U32A			IAmb	IAmb	05 22 09.1	
	comp=Z,90nm,0.9s					
N47A	**Urbana**	**62.18 347**	P	**P**	**05 21 53.7**	**-2.0**
N47A			IAMs_20	IAMs_20	05 51 26.6	
	comp=Z,17µm,19.0s					
N47A	**Urbana**	**62.18 347**	P	**P**	**05 21 53.4**	**-2.3**
	baz=164					
N47A			S	**S**	**05 30 18.9**	**-2.8**
	baz=164					
M50A	**Fremont**	**62.19 350**	P	**P**	**05 21 54.1**	**-1.6**
M50A			IAmb	IAmb	05 22 10.2	
	comp=Z,87nm,1.0s					
M50A			IAMs_20	IAMs_20	05 50 30.0	
	comp=Z,18µm,19.0s					
M50A	**Fremont**	**62.19 350**	P	**P**	**05 21 53.6**	**-2.1**
	baz=167					
M50A			S	**S**	**05 30 20.4**	**-1.3**
	baz=167					
L56A	**Greenwood**	**62.19 354**	P	**P**	**05 21 54.9**	**-0.9**
L56A			IAmb	IAmb	05 22 06.0	
	comp=Z,133nm,1.0s					
L56A			IAMs_20	IAMs_20	05 50 04.1	
	comp=Z,20µm,21.0s					
L56A	**Greenwood**	**62.19 354**	P	**P**	**05 21 54.4**	**-1.5**
	baz=173					
L56A			S	**S**	**05 30 24.7**	**+2.8**
	baz=173					
L61B	**Northampton**	**62.22 358**	P	**P**	**05 21 54.4**	**-1.5**
	baz=178					
L61B			S	**S**	**05 30 25.1**	**+3.0**
	baz=178					
VNA1	**Neumayer--Stat**	**62.23 160**	P	**P**	**05 22 00.3**	**+4.6**
HRV	**Adam Dziewonsk**	**62.26 359**	P	**P**	**05 21 55.8**	**-0.3**
HRV			pmax	pmax		
	comp=Z,241nm,1.3s					
HRV	**Adam Dziewonsk**	**62.26 359**	P	**P**	**05 21 55.8**	**-0.3**
HRV	**Adam Dziewonsk**	**62.26 359**	P	**P**	**05 21 54.7**	**-1.4**
	baz=179					
HRV			S	**S**	**05 30 23.4**	**+0.9**
	baz=179					
L53A	**Girard**	**62.31 352**	P	**P**	**05 21 55.3**	**-1.3**
	baz=170					
L53A			S	**S**	**05 30 23.9**	**+0.5**
	baz=170					
L55A	**Hinsdale**	**62.33 354**	P	**P**	**05 21 55.2**	**-1.5**
	baz=172,SNR=28					
L55A			S	**S**	**05 30 25.0**	**+1.4**
	baz=172					
K62A	**Royalston**	**62.42 359**	P	**P**	**05 21 56.3**	**-1.0**
K62A			IAmb	IAmb	05 22 27.7	
	comp=Z,218nm,1.6s					
K62A	**Royalston**	**62.42 359**	P	**P**	**05 21 55.7**	**-1.6**
	baz=179					
K62A			S	**S**	**05 30 28.6**	**+3.9**
	baz=179					
M49A	**Liberty Center**	**62.42 349**	P	**P**	**05 21 55.5**	**-1.8**
	baz=166,SNR=19					
M49A			S	**S**	**05 30 22.8**	**-1.9**
	baz=166					
K60A	**Five Rivers En**	**62.42 357**	P	**P**	**05 21 55.9**	**-1.3**
	baz=177					
K60A			S	**S**	**05 30 27.5**	**+2.8**
	baz=177					
K63A	**Dunstable**	**62.44 359**	P	**P**	**05 21 56.3**	**-1.0**
	baz=179					
K63A			S	**S**	**05 30 27.2**	**+2.4**
	baz=179					
ERPA	**Erie**	**62.44 352**	P	**P**	**05 21 56.4**	**-1.0**
ERPA			IAMs_20	IAMs_20	05 49 56.6	
	comp=Z,15µm,21.0s					
ERPA	**Erie**	**62.44 352**	P	**P**	**05 21 55.8**	**-1.6**
	baz=170,SNR=20					
ERPA			S	**S**	**05 30 25.3**	**+0.4**
	baz=170					
K61A	**Williamstown**	**62.45 358**	P	**P**	**05 21 55.8**	**-1.7**
	baz=178					
K61A			S	**S**	**05 30 27.9**	**+2.8**
	baz=178					
L54A	**Sinclairville**	**62.48 353**	P	**P**	**05 21 56.4**	**-1.3**
	baz=171,SNR=27					
L54A			S	**S**	**05 30 26.6**	**+1.2**
	baz=171					
TRY	**Troy**	**62.53 358**	P	**P**	**05 21 56.6**	**-1.3**
TRY			IAMs_20	IAMs_20	05 49 39.3	
	comp=Z,16µm,19.0s					
WVNY	**West Valley, N**	**62.56 354**	P	**P**	**05 21 58.0**	**-0.2**
WVNY			IAMs_20	IAMs_20	05 49 57.9	
	comp=Z,18µm,22.0s					
M48A	**Edgerton**	**62.57 348**	IAMs_20	IAMs_20	05 50 18.2	
	comp=Z,14µm,20.0s					
M48A	**Edgerton**	**62.57 348**	P	**P**	**05 21 57.1**	**-1.2**
	baz=165					
M48A			S	**S**	**05 30 23.7**	**-2.8**
	baz=165					
VNA2	**Neumayer--Watz**	**62.60 161**	P	**P**	**05 22 00.1**	**+1.9**
	baz=293,slow=8.0					
M47A	**Cromwell**	**62.63 348**	S	**S**	**05 30 24.1**	**-3.2**
	baz=164					
K59A	**Cooperstown**	**62.63 357**	P	**P**	**05 21 57.8**	**-0.9**
	baz=176,SNR=43					
K59A			S	**S**	**05 30 29.5**	**+2.1**
	baz=176					
K58A	**Earlville**	**62.67 356**	P	**P**	**05 21 58.5**	**-0.5**
K58A			IAMs_20	IAMs_20	05 52 53.9	
	comp=Z,12µm,18.0s					
K58A	**Earlville**	**62.67 356**	P	**P**	**05 21 57.7**	**-1.2**
	baz=175					
K58A			S	**S**	**05 30 29.8**	**+2.1**
	baz=175					
K57A	**Scipio Center**	**62.70 355**	P	**P**	**05 21 58.2**	**-0.9**
	baz=174,SNR=22					
K57A			S	**S**	**05 30 28.9**	**+0.7**
	baz=174					
HDIL	**Hopedale**	**62.71 344**	IAMs_20	IAMs_20	05 51 12.6	
	comp=Z,12µm,20.0s					
HDIL	**Hopedale**	**62.71 344**	P	**P**	**05 21 57.6**	**-1.7**
	baz=160					
HDIL			S	**S**	**05 30 25.6**	**-2.7**
	baz=160					
K56A	**Middlesex**	**62.73 355**	P	**P**	**05 21 58.2**	**-1.2**
	baz=173					
K56A			S	**S**	**05 30 30.2**	**+1.6**
	baz=173					
L50A	**Kingsville**	**62.77 350**	P	**P**	**05 21 57.9**	**-1.7**
	baz=167					
L50A			S	**S**	**05 30 26.9**	**-2.2**
	baz=167					
K54A	**Basiliko Farm,**	**62.78 353**	P	**P**	**05 21 59.3**	**-0.4**
	baz=172,SNR=24					
K54A			S	**S**	**05 30 29.4**	**+0.2**
	baz=172					

K55A	Perry	62.83	354	P	P	05 21 59.3	-0.7
	baz=172						
K55A				S	S	05 30 29.4	-0.5
	baz=172						
L48A	N Adams	62.96	349	P	P	05 21 59.4	-1.5
	baz=166,SNR=8.1						
L48A				S	S	05 30 29.0	-2.5
	baz=166						
J62A	Henniker	62.98	359	P	P	05 22 00.7	-0.2
	baz=179						
J62A				S	S	05 30 35.2	+3.7
	baz=179						
L49A	Milan	63.00	349	P	P	05 22 00.3	-0.8
	baz=166,SNR=6.5						
L49A				S	S	05 30 30.2	-1.8
	baz=166						
J63A	Strafford	63.02	360	S	S	05 30 35.1	+2.9
	baz=180						
J60A	Lant Hill Farm	63.03	358	P	P	05 22 01.0	-0.3
	baz=177						
J60A				S	S	05 30 36.4	+4.1
	baz=177						
P38A	Dawn	63.05	340	P	P	05 22 00.1	-1.5
P38A				IAmb	IAmb	05 22 24.7	
	comp=Z,211nm,1.4s						
319A	Douglas	63.06	323	IAMs_20	IAMs_20	05 47 45.2	
	comp=Z,17µm,20.0s						
J61A	Chester	63.11	359	P	P	05 22 01.7	-0.2
	baz=178						
J61A				S	S	05 30 37.7	+4.4
	baz=178						
121A	Cookes Peak, D	63.12	325	IAMs_20	IAMs_20	05 48 04.8	
	comp=Z,18µm,18.0s						
121A	Cookes Peak, D	63.12	325	P	P	05 22 01.3	-1.1
	baz=141,SNR=22						
121A				S	S	05 30 38.3	+4.0
	baz=141						
L47A	Sherwood	63.14	348	P	P	05 22 01.2	-0.9
	baz=165,SNR=12						
L47A				S	S	05 30 31.7	-2.0
	baz=165						
AAM	Ann Arbor	63.17	349	IAMs_20	IAMs_20	05 51 09.9	
	comp=Z,13µm,19.0s						
AAM	Ann Arbor	63.17	349	P	P	05 22 00.3	-1.9
	baz=167						
AAM				S	S	05 30 32.6	-1.4
	baz=167						
ACCN	Adirondack Com	63.18	358	P	P	05 22 02.0	-0.3
ACCN				IAmb	IAmb	05 22 28.1	
	comp=Z,124nm,1.2s						
ACCN				IAMs_20	IAMs_20	05 50 57.6	
	comp=Z,14µm,20.0s						
K52A	Tillsonburg	63.19	352	P	P	05 22 00.9	-1.4
	baz=170						
K52A				S	S	05 30 33.5	-0.7
	baz=170						
M44A	Midewin, Midew	63.19	346	P	P	05 21 60.0	-2.4
M44A				IAMs_20	IAMs_20	05 52 37.3	
	comp=Z,16µm,20.0s						
FFD	Franklin Falls	63.22	359	IAMs_20	IAMs_20	05 50 53.6	
	comp=Z,13µm,20.0s						
J58A	Remsen	63.24	356	P	P	05 22 02.1	-0.6
J58A				IAMs_20	IAMs_20	05 49 37.0	
	comp=Z,17µm,21.0s						
J58A	Remsen	63.24	356	P	P	05 22 02.3	-0.4
	baz=175,SNR=8.3						
J58A				S	S	05 30 37.1	+2.2
	baz=175						
K51A	Iona Station	63.24	351	P	P	05 22 01.5	-1.2
	baz=169						
K51A				S	S	05 30 33.8	-1.0
	baz=169						
J56A	Wolcott	63.26	355	P	P	05 21 59.5	-3.3
J56A				IAMs_20	IAMs_20	05 53 11.7	
	comp=Z,15µm,18.0s						
J56A	Wolcott	63.26	355	P	P	05 22 01.7	-1.2
	baz=174						
J56A				S	S	05 30 36.2	+1.1
	baz=174						
J59A	Piesco	63.30	357	P	P	05 22 02.6	-0.6
J59A				IAMs_20	IAMs_20	05 50 57.7	
	comp=Z,17µm,20.0s						
J59A	Piesco	63.30	357	P	P	05 22 01.8	-1.3
	baz=176,SNR=22						
J59A				S	S	05 30 38.3	+2.6
	baz=176						
MEDO	Medina	63.30	354	P	P	05 22 01.6	-1.5
MEDO				IAmb	IAmb	05 22 12.9	
	comp=Z,144nm,1.1s						
J57A	Williamstown	63.33	356	P	P	05 22 02.3	-1.0
J57A				IAmb	IAmb	05 22 26.4	
	comp=Z,97nm,0.9s						
J57A				IAMs_20	IAMs_20	05 49 33.5	
	comp=Z,14µm,22.0s						
J57A	Williamstown	63.33	356	P	P	05 22 02.1	-1.2
	baz=175						
J57A				S	S	05 30 38.0	+1.9
	baz=175						
J55A	Hilton	63.34	354	P	P	05 22 02.5	-0.8
J55A				IAmb	IAmb	05 22 13.2	
	comp=Z,126nm,1.1s						
J55A				IAMs_20	IAMs_20	05 51 57.6	
	comp=Z,19µm,20.0s						
J55A	Hilton	63.34	354	P	P	05 22 02.5	-0.8
	baz=173,SNR=11						
J55A				S	S	05 30 37.1	+1.0
	baz=173						
L46A	Eue Claire	63.40	347	P	P	05 22 02.1	-1.7
L46A				IAMs_20	IAMs_20	05 52 22.9	
	comp=Z,16µm,19.0s						
L46A	Eue Claire	63.40	347	P	P	05 22 02.6	-1.1
	baz=164						
L46A				S	S	05 30 33.3	-3.6
	baz=164						
J54A	Appleton	63.43	354	P	P	05 22 02.8	-1.2
J54A				IAmb	IAmb	05 22 14.3	
	comp=Z,107nm,0.9s						
J54A				IAMs_20	IAMs_20	05 50 32.7	
	comp=Z,18µm,22.0s						
J54A	Appleton	63.43	354	P	P	05 22 02.7	-1.2
	baz=172						
J54A				S	S	05 30 38.7	+1.5
	baz=172						
K50A	Casco	63.46	350	P	P	05 22 02.6	-1.6
K50A				IAMs_20	IAMs_20	05 50 43.6	
	comp=Z,21µm,20.0s						
K50A	Casco	63.46	350	P	P	05 22 02.5	-1.6
	baz=168,SNR=6.2						
K50A				S	S	05 30 36.1	-1.6
	baz=168						
HNH	Hanover	63.46	359	P	P	05 22 03.2	-1.0
I58A	Old Forge	63.55	357	P	P	05 22 03.9	-0.9
	baz=176,SNR=24						
I58A				S	S	05 30 40.6	+1.7
	baz=176						
I59A	Olmsteadville	63.60	358	S	S	05 30 41.9	+2.5
	baz=177						
K49A	Clarkson	63.60	350	P	P	05 22 04.0	-1.1
	baz=167						
K49A				S	S	05 30 37.0	-2.5
	baz=167						
J52A	Paris	63.61	352	P	P	05 22 03.9	-1.2
	baz=170,SNR=40						
J52A				S	S	05 30 38.0	-1.5
	baz=170						
KSU1	Kansas State U	63.61	338	P	P	05 22 03.6	-1.7
	baz=153						
KSU1				S	S	05 30 39.3	-0.4
	baz=153						
I62A	Tamworth	63.62	360	P	P	05 22 06.4	+1.2
I62A				IAMs_20	IAMs_20	05 47 49.2	
	comp=Z,15µm,22.0s						
I62A	Tamworth	63.62	360	P	P	05 22 04.4	-0.8
	baz=180						
I62A				S	S	05 30 43.2	+3.6
	baz=180						
I60A	Shoreham	63.63	358	P	P	05 22 04.6	-0.7
	baz=178						
I60A				S	S	05 30 43.9	+4.2
	baz=178						
I64A	Boothbay	63.67	1	P	P	05 22 05.0	-0.6
	baz=181						
I64A				S	S	05 30 43.7	+3.5
	baz=181						
I61A	Oroboro, Fairl	63.69	359	P	P	05 22 05.0	-0.7
	baz=179						
I61A				S	S	05 30 43.9	+3.5
	baz=179						
K48A	Perry	63.74	349	P	P	05 22 05.2	-0.8
	baz=166,SNR=8.5						
K48A				S	S	05 30 38.6	-2.5
	baz=166						
K47A	Vermontville	63.77	348	P	P	05 22 06.8	+0.5
	baz=165						
K47A				S	S	05 30 39.0	-2.6
	baz=165						
NCB	Newcomb	63.79	357	P	P	05 22 05.5	-0.9
R32A	Long Quarter,	63.79	336	P	P	05 22 05.0	-1.5
R32A				IAmb	IAmb	05 22 16.9	
	comp=Z,119nm,0.9s						
I63A	Otisfield	63.80	0	P	P	05 22 06.5	+0.1
I63A	Otisfield	63.80	0	P	P	05 22 06.4	+0.1
	baz=180						
I63A				S	S	05 30 45.5	+3.8
	baz=180						
I57A	Carthage	63.84	356	P	P	05 22 06.1	-0.5
	baz=175						
I57A				S	S	05 30 44.0	+1.7
	baz=175						
Y22D	IRIS PASSCAL I	63.87	327	P	P	05 22 07.6	+0.3
Y22D				IAmb	IAmb	05 23 02.7	
	comp=Z,111nm,1.1s						
L44A	Lake County Fo	63.91	346	IAMs_20	IAMs_20	05 50 28.4	
	comp=Z,23µm,22.0s						
L44A	Lake County Fo	63.91	346	P	P	05 22 06.3	-0.9
	baz=162						
L44A				S	S	05 30 40.2	-3.0
	baz=162						
PECO	Prince Edward	63.93	355	P	P	05 22 06.3	-1.0
PECO				IAMs_20	IAMs_20	05 53 22.3	
	comp=Z,13µm,18.0s						
K46A	Dorr	63.94	348	P	P	05 22 06.5	-0.8
	baz=164						
K46A				S	S	05 30 39.7	-3.9
	baz=164						
LBNH	Lisbon	63.99	359	P	P	05 22 07.5	-0.2
LBNH	Lisbon	63.99	359	P	P	05 22 07.5	-0.2
LBNH				IAMs_20	IAMs_20	05 48 02.0	
	comp=Z,13µm,22.0s						
LBNH	Lisbon	63.99	359	P	P	05 22 07.0	-0.7
	baz=179						
LBNH				S	S	05 30 48.0	+3.7
	baz=179						
I53A	Kortright Cn E	64.08	353	P	P	05 22 07.2	-1.0
	baz=171						
I53A				S	S	05 30 45.3	0.0
	baz=171						
J49A	Marlette	64.11	350	P	P	05 22 06.6	-1.9
	baz=167						
J49A				S	S	05 30 43.0	-2.7
	baz=167						
J48A	Bridge Port	64.16	350	P	P	05 22 06.8	-2.0
J48A				IAmb	IAmb	05 22 18.1	
	comp=Z,95nm,0.8s						
J48A				IAMs_20	IAMs_20	05 49 28.3	
	comp=Z,18µm,21.0s						
J48A	Bridge Port	64.16	350	P	P	05 22 06.9	-1.8
	baz=166,SNR=18						
J48A				S	S	05 30 44.0	-2.3
	baz=166						
L42A	Oliver, Polo	64.16	344	P	P	05 22 06.5	-2.3
L42A				IAMs_20	IAMs_20	05 54 17.2	
	comp=Z,13µm,19.0s						
SNAA	Sanae	64.22	161	P	P	05 22 10.6	+1.6
SNAA	Sanae	64.22	161	PKP2bc	P'P'df	05 51 06.8	+2.2
	comp=Z,5.4nm,1.2s,baz=101,slow=10,SNR=3.7						
SNAA	Sanae	64.22	161	*i* P	P	05 22 10.2	+1.2
SNAA	Sanae	64.22	161	P	P	05 22 09.1	+0.1
I51A	Listowel	64.23	352	P	P	05 22 08.1	-1.2
	baz=169,SNR=29						
I51A				S	S	05 30 45.5	-1.7
	baz=169						
H58A	Gabriels	64.23	357	P	P	05 22 08.1	-1.2
	baz=177,SNR=13						
H58A				S	S	05 30 48.8	+1.5
	baz=177						
I55A	Frankford	64.27	355	P	P	05 22 08.1	-1.3
	baz=173,SNR=15						
I55A				S	S	05 30 48.6	+1.0
	baz=173						
H61A	Lyndonville	64.29	359	P	P	05 22 08.7	-0.9
	baz=179						
H61A				S	S	05 30 51.9	+4.0
	baz=179						
J47A	Sunmer	64.29	349	P	P	05 22 07.8	-1.8
J47A				IAmb	IAmb	05 22 19.0	
	comp=Z,120nm,0.8s						
J47A				IAMs_20	IAMs_20	05 52 00.6	
	comp=Z,17µm,21.0s						
J47A	Sunmer	64.29	349	P	P	05 22 08.0	-1.6
	baz=166						
J47A				S	S	05 30 45.4	-2.5
	baz=166						
WVL	Waterville	64.32	1	P	P	05 22 08.0	-1.7
WVL				IAmb	IAmb	05 22 38.4	
	comp=Z,98nm,1.1s						
WVL				IAMs_20	IAMs_20	05 50 58.7	
	comp=Z,13µm,20.0s						
H62A	Milan	64.32	360	P	P	05 22 09.8	0.0
H62A				IAmb	IAmb	05 22 37.1	
	comp=Z,91nm,1.1s						
H62A				IAMs_20	IAMs_20	05 54 09.7	
	comp=Z,11µm,19.0s						
H62A	Milan	64.32	360	P	P	05 22 08.4	-1.4
	baz=180						
H62A				S	S	05 30 52.5	+4.3
	baz=180						
ANMO	Albuquerque	64.33	328	P	P	05 22 10.2	-0.1
ANMO				pmax	pmax		
	comp=Z,32nm,1.0s						
ANMO	Albuquerque	64.33	328	P	P	05 22 10.2	-0.1
ANMO	Albuquerque	64.33	328	P	P	05 22 07.8	-2.5
	baz=143						
ANMO				S	S	05 30 51.0	+1.9
	baz=143						
H60A	Morristown	64.33	359	P	P	05 22 09.0	-0.9
	baz=178						
H60A				S	S	05 30 52.0	+3.5
	baz=178						
H57A	Richville	64.34	356	P	P	05 22 08.9	-1.1
	baz=175,SNR=32						
H57A				S	S	05 30 50.9	+2.4
	baz=175						
I52A	Shelburne	64.39	353	P	P	05 22 08.4	-1.9
	baz=170						
H64A	Troy	64.40	1	P	P	05 22 09.6	-0.8
	baz=182						
H64A				S	S	05 30 52.7	+3.5
	baz=182						
H63A	New Sharon	64.41	1	P	P	05 22 09.2	-1.2
	baz=181						
H63A				S	S	05 30 52.1	+2.8
	baz=181						
H59A	Cadyville	64.44	358	P	P	05 22 09.7	-1.0
	baz=177,SNR=6.4						
H59A				S	S	05 30 52.6	+2.8
	baz=177						
LONY	Lake Ozonia	64.45	357	P	P	05 22 09.6	-1.1
LONY				IAmb	IAmb	05 22 33.5	
	comp=Z,98nm,1.1s						
LONY				IAMs_20	IAMs_20	05 50 40.2	
	comp=Z,16µm,20.0s						
LONY	Lake Ozonia	64.45	357	P	P	05 22 09.8	-0.9
	baz=176						
LONY				S	S	05 30 52.8	+2.8
	baz=176						
H65A	Eastbrook	64.48	2	S	S	05 30 53.4	+3.1
	baz=183						
K43A	Burlington	64.50	346	P	P	05 22 09.0	-2.0
EMMW	East Machias	64.53	3	IAMs_20	IAMs_20	05 54 44.2	
	comp=Z,13µm,19.0s						
H56A	Elgin	64.53	356	P	P	05 22 10.7	-0.4
	baz=174						
H56A				S	S	05 30 53.1	+2.3
	baz=174						
CBKS	Cedar Bluff	64.53	335	P	P	05 22 09.2	-2.2
CBKS				pmax	pmax		
	comp=Z,165nm,1.2s						
CBKS	Cedar Bluff	64.53	335	P	P	05 22 09.2	-2.2
CBKS				IAmb	IAmb	05 22 22.1	
	comp=Z,164nm,1.1s						
CBKS	Cedar Bluff	64.53	335	P	P	05 22 10.2	-1.2
	baz=150,SNR=24						
CBKS				S	S	05 30 52.8	+1.6
	baz=150						
J46A	Howard City	64.55	348	P	P	05 22 10.0	-1.3
	baz=165						
J46A				S	S	05 30 46.9	-4.3
	baz=165						
H55A	Tweed	64.56	355	P	P	05 22 10.4	-0.9
	baz=173						
H55A				S	S	05 30 52.4	+1.2
	baz=173						
DELO	Deloro Mine	64.56	355	P	P	05 22 10.0	-1.4
DELO				IAmb	IAmb	05 23 01.3	
	comp=Z,95nm,1.0s						
DELO				IAMs_20	IAMs_20	05 51 37.0	
	comp=Z,22µm,20.0s						
TUC	Tucson	64.61	323	P	P	05 22 10.6	-1.5
TUC				pmax	pmax		
	comp=Z,61nm,1.4s						
TUC				MLR	MLR		
	comp=Z,13µm,20.0s						
TUC	Tucson	64.61	323	P	P	05 22 10.6	-1.5
TUC	Tucson	64.61	323	IAMs_20	IAMs_20	05 51 04.1	
	comp=Z,13µm,20.0s						
TUC	Tucson	64.61	323	P	P	05 22 10.4	-1.7
	baz=138						
TUC				S	S	05 30 55.9	+3.4
	baz=138						
H66A	Whiting	64.61	3	P	P	05 22 11.0	-0.6
	baz=184						
H66A				S	S	05 30 53.4	+1.6
	baz=184						
L40A	Anamosa	64.62	343	P	P	05 22 10.2	-1.6
L40A				IAmb	IAmb	05 22 35.4	
	comp=Z,182nm,1.2s						
L40A				IAMs_20	IAMs_20	05 53 39.4	
	comp=Z,14µm,19.0s						
FRNY	Flat Rock	64.63	358	P	P	05 22 09.2	-2.6
FRNY				IAmb	IAmb	05 22 35.3	
	comp=Z,110nm,1.0s						
I49A	Point Hope	64.63	350	P	P	05 22 08.9	-3.0
I49A				IAmb	IAmb	05 22 43.2	
	comp=Z,160nm,1.1s						
I49A				IAMs_20	IAMs_20	05 51 18.7	
	comp=Z,21µm,20.0s						
I49A	Point Hope	64.63	350	P	P	05 22 10.3	-1.5
	baz=168,SNR=30						
I49A				S	S	05 30 49.6	-2.5
	baz=168						
H53A	Bobcaygeon	64.71	354	P	P	05 22 11.1	-1.2
	baz=172,SNR=20						
H53A				S	S	05 30 53.4	+0.3
	baz=172						
J45A	Montague	64.78	348	IAMs_20	IAMs_20	05 53 21.7	
	comp=Z,14µm,19.0s						
J45A	Montague	64.78	348	P	P	05 22 12.1	-0.7
	baz=164						
J45A				S	S	05 30 50.4	-3.5
	baz=164						
G60A	Masonville	64.86	359	P	P	05 22 12.8	-0.5
	baz=178						
G60A				S	S	05 30 58.6	+3.7
	baz=178						
G59A	Clarenceville	64.86	358	P	P	05 22 12.9	-0.4
	baz=178						
G59A				S	S	05 30 59.0	+4.2
	baz=178						
G63A	Kingsbury	64.87	1	P	P	05 22 13.0	-0.4
	baz=181						
G63A				S	S	05 30 59.0	+3.9
	baz=181						
H52A	Wyevale	64.92	353	P	P	05 22 12.5	-1.2
	baz=171,SNR=8.2						
H52A				S	S	05 30 55.0	-0.6
	baz=171						
G57A	Newington	64.96	357	P	P	05 22 13.3	-0.6
	baz=176,SNR=19						
G57A				S	S	05 30 57.7	+1.6
	baz=176						
SADO	Sadowa	64.96	353	IAmb	IAmb	05 22 23.4	
	comp=Z,188nm,1.3s						
SADO				IAMs_20	IAMs_20	05 54 07.3	
	comp=Z,12µm,19.0s						
G58A	Ormstown	64.96	357	P	P	05 22 12.5	-1.4
	baz=177						
G58A				S	S	05 30 58.9	+2.8
	baz=177						
G62A	West of Eustis	64.96	0	IAMs_20	IAMs_20	05 49 36.8	
	comp=Z,13µm,20.0s						
G62A	West of Eustis	64.96	0	P	P	05 22 13.5	-0.5
	baz=180,SNR=22						
G62A				S	S	05 31 00.1	+3.9
	baz=180						
GGN	Saint George	64.96	3	IAMs_20	IAMs_20	05 49 16.9	
	comp=Z,18µm,22.0s						
I47A	Gladwin	64.99	349	IAmb	IAmb	05 22 45.1	
	comp=Z,86nm,0.9s						
I47A				IAMs_20	IAMs_20	05 51 11.2	
	comp=Z,14µm,20.0s						
I47A	Gladwin	64.99	349	P	P	05 22 12.3	-1.9
	baz=166						
I47A				S	S	05 30 53.3	-3.2
	baz=166						
I48A	Sherman Twp	65.01	350	P	P	05 22 12.6	-1.7
	baz=167,SNR=15						
I48A				S	S	05 30 54.1	-2.6
	baz=167						
G65A	Princeton	65.01	3	IAMs_20	IAMs_20	05 49 21.1	
	comp=Z,19µm,22.0s						
G65A	Princeton	65.01	3	P	P	05 22 13.5	-0.7
	baz=183						
G65A				S	S	05 30 59.6	+2.9
	baz=183						
PKME	Peaks-Kenny Pk	65.02	1	P	P	05 22 12.3	-2.0
PKME				IAmb	IAmb	05 22 38.8	
	comp=Z,93nm,1.0s						
PKME				IAMs_20	IAMs_20	05 49 45.4	
	comp=Z,13µm,20.0s						
PKME	Peaks-Kenny Pk	65.02	1	P	P	05 22 13.6	-0.7
	baz=182						
PKME				S	S	05 30 59.3	+2.4
	baz=182						
G64A	Maxfield	65.02	2	P	P	05 22 13.8	-0.6
	baz=182						
G64A				S	S	05 30 59.3	+2.4
	baz=182						
G61A	St-Isidore-de-	65.03	359	P	P	05 22 13.6	-0.8
	baz=179						
G61A				S	S	05 31 01.8	+4.8
	baz=179						
PLVO	Plevna	65.03	355	IAmb	IAmb	05 23 03.9	
	comp=Z,85nm,1.0s						
SCIA	State Center	65.04	342	IAMs_20	IAMs_20	05 52 50.4	
	comp=Z,14µm,20.0s						
SCIA	State Center	65.04	342	P	P	05 22 13.5	-1.1
	baz=157						
SCIA				S	S	05 30 54.6	-2.7
	baz=157						
I46A	Reed City	65.08	348	P	P	05 22 12.9	-1.9
	baz=165						
I46A				S	S	05 30 54.7	-3.0
	baz=165						
T25A	Trinidad	65.11	331	P	P	05 22 12.8	-2.7
	baz=145,SNR=27						
T25A				S	S	05 31 02.6	+3.8
	baz=145						
JFWS	Jewell Farm	65.17	344	IAMs_20	IAMs_20	05 54 56.7	
	comp=Z,15µm,18.0s						
JFWS	Jewell Farm	65.17	344	P	P	05 22 13.6	-1.7
	baz=160,SNR=8.9						
JFWS				S	S	05 30 57.2	-1.5
	baz=160						
G55A	Calabogie	65.22	355	P	P	05 22 14.1	-1.5
	baz=174,SNR=15						
G55A				S	S	05 31 01.2	+1.9
	baz=174						
G53A	Haliburton	65.25	354	P	P	05 22 14.3	-1.6
	baz=172,SNR=18						
G53A				S	S	05 31 00.0	+0.2
	baz=172						
I45A	Fountain	65.33	348	IAMs_20	IAMs_20	05 52 24.0	
	comp=Z,20µm,21.0s						
I45A	Fountain	65.33	348	P	P	05 22 14.7	-1.6
	baz=164						
I45A				S	S	05 30 57.2	-3.5
	baz=164						
N33A	J Bar K, Exete	65.36	338	IAMs_20	IAMs_20	05 53 31.7	
	comp=Z,14µm,20.0s						
H48A	Harrisville	65.45	350	IAmb	IAmb	05 22 26.5	
	comp=Z,85nm,0.8s						
H48A				IAMs_20	IAMs_20	05 51 43.4	

	comp=Z,18µm,19.0s						
H48A	Harrisville	65.45	350	P	P	05 22 15.7	-1.4
	baz=167						
H48A				S	S	05 30 59.4	-2.7
	baz=167						
F63A	Nahmakanta, Br	65.47	1	IAMs_20	IAMs_20	05 49 48.1	
	comp=Z,13µm,20.0s						
F63A	Nahmakanta, Br	65.47	1	P	P	05 22 16.7	-0.5
	baz=182						
F63A				S	S	05 31 04.2	+1.9
	baz=182						
G54A	Lake Saint Pet	65.48	354	P	P	05 22 15.7	-1.7
	baz=173,SNR=15						
G54A				S	S	05 31 03.6	+1.1
	baz=173						
H47A	Mio	65.50	350	P	P	05 22 16.1	-1.4
	baz=166						
H47A				S	S	05 31 01.5	-1.3
	baz=166						
214A	Organ Pipe Nat	65.52	321	IAmb	IAmb	05 22 34.3	
	comp=Z,123nm,1.3s						
214A	Organ Pipe Nat	65.52	321	P	P	05 22 15.8	-2.1
	baz=136,SNR=17						
214A				S	S	05 31 08.6	+5.0
	baz=136						
H46A	Fife Lake	65.61	349	S	S	05 31 01.5	-2.7
	baz=165						
F59A	Saint Guilaume	65.62	358	P	P	05 22 17.2	-1.0
	baz=178						
F59A				S	S	05 31 07.6	+3.5
	baz=178						
F64A	Sherman	65.65	2	IAmb	IAmb	05 22 42.8	
	comp=Z,88nm,0.9s						
F64A				IAMs_20	IAMs_20	05 49 52.9	
	comp=Z,17µm,22.0s						
F64A	Sherman	65.65	2	P	P	05 22 17.4	-1.0
	baz=183						
F64A				S	S	05 31 07.3	+2.8
	baz=183						
F58A	St-Lin Laurent	65.67	358	S	S	05 31 06.9	+2.2
	baz=177						
GBN	Guysborough	65.70	7	P	P	05 22 19.1	+0.3
GBN				IAmb	IAmb	05 22 37.2	
	comp=Z,114nm,1.1s						
GBN				IAMs_20	IAMs_20	05 52 06.5	
	comp=Z,14µm,20.0s						
F61A	St Evariste	65.72	360	P	P	05 22 18.4	-0.5
	baz=180						
F61A				S	S	05 31 08.4	+3.0
	baz=180						
F60A	Warwick	65.72	359	P	P	05 22 18.0	-0.9
	baz=179						
F60A				S	S	05 31 08.4	+3.0
	baz=179						
I42A	Draeger Farm,	65.76	346	P	P	05 22 16.3	-2.9
F55A	Otter Lake	65.77	356	P	P	05 22 18.0	-1.2
	baz=174						
F55A				S	S	05 31 08.1	+2.0
	baz=174						
GLMI	Grayling	65.79	349	P	P	05 22 17.8	-1.6
GLMI				IAMs_20	IAMs_20	05 50 28.3	
	comp=Z,19µm,22.0s						
GLMI	Grayling	65.79	349	P	P	05 22 18.1	-1.3
	baz=166						
GLMI				S	S	05 31 04.5	-1.8
	baz=166						
X18A	Snowflake	65.81	325	IAmb	IAmb	05 22 36.2	
	comp=Z,133nm,1.6s						
X18A				IAMs_20	IAMs_20	05 49 44.0	
	comp=Z,18µm,20.0s						
LMN	Caledonia Moun	65.82	5	P	P	05 22 17.6	-1.9
LMN				IAmb	IAmb	05 22 29.3	
	comp=Z,101nm,0.9s						
LMN				IAMs_20	IAMs_20	05 50 21.7	
	comp=Z,17µm,20.0s						
H45A	Beulah	65.85	348	P	P	05 22 18.0	-1.7
	baz=164						
H45A				S	S	05 31 03.5	-3.6
	baz=164						
KSCO	Kaye Shedlock’	65.88	333	P	P	05 22 18.5	-1.8
	baz=147						
KSCO				S	S	05 31 09.8	+1.9
	baz=147						
F52A	Sundridge	65.99	354	P	P	05 22 19.1	-1.6
	baz=171,SNR=26						
F52A				S	S	05 31 08.6	-0.2
	baz=171						
G47A	Hillman	66.00	350	P	P	05 22 19.3	-1.3
	baz=167						
G47A				S	S	05 31 06.5	-2.3
	baz=167						
ALGO	Algonquin Park	66.03	354	P	P	05 22 19.2	-1.7
	baz=173,SNR=8.5						
ALGO				S	S	05 31 10.7	+1.6
	baz=173						
H43A	Windswept, Lux	66.06	347	IAmb	IAmb	05 22 30.6	
	comp=Z,72nm,0.8s						
H43A				IAMs_20	IAMs_20	05 51 53.3	
	comp=Z,20µm,20.0s						
SDCO	Great Sand Dun	66.11	330	P	P	05 22 20.9	-1.1
SDCO				IAmb	IAmb	05 22 38.6	
	comp=Z,226nm,1.6s						
SDCO	Great Sand Dun	66.11	330	P	P	05 22 20.2	-1.7
	baz=144,SNR=28						
SDCO				S	S	05 31 15.1	+3.9
	baz=144						
E60A	Ste Agathe de	66.11	360	P	P	05 22 20.9	-0.5
	baz=179						
E60A				S	S	05 31 13.4	+3.2
	baz=179						
W18A	Petrified Fore	66.14	326	IAMs_20	IAMs_20	05 50 06.8	
	comp=Z,14µm,18.0s						
W18A	Petrified Fore	66.14	326	P	P	05 22 20.3	-1.8
	baz=140,SNR=22						
W18A				S	S	05 31 16.0	+4.5
	baz=140						
E58A	La Victoria	66.15	358	P	P	05 22 20.8	-0.8
	baz=178,SNR=16						
E58A				S	S	05 31 13.0	+2.3
	baz=178						
I40A	Norwalk	66.17	344	P	P	05 22 19.9	-2.0
I40A				IAMs_20	IAMs_20	05 55 44.4	
	comp=Z,19µm,19.0s						
E61A	Lac Etchemin	66.18	0	P	P	05 22 21.2	-0.6
	baz=180						
E61A				S	S	05 31 14.4	+3.4
	baz=180						
G45A	Suttons Bay	66.18	349	IAmb	IAmb	05 23 08.6	
	comp=Z,80nm,0.8s						
G45A				IAMs_20	IAMs_20	05 53 07.8	
	comp=Z,17µm,19.0s						
G45A	Suttons Bay	66.18	349	P	P	05 22 20.2	-1.6
	baz=165						
G45A				S	S	05 31 08.7	-2.4
	baz=165						
F51A	Arnstein	66.19	353	P	P	05 22 19.8	-2.1
	baz=171,SNR=6.4						
F51A				S	S	05 31 11.0	-0.1
	baz=171						
BGNE	Belgrade	66.20	338	IAMs_20	IAMs_20	05 53 58.0	
	comp=Z,14µm,21.0s						
BGNE	Belgrade	66.20	338	P	P	05 22 21.2	-0.9
	baz=152,SNR=9.4						
BGNE				S	S	05 31 12.0	+0.4
	baz=152						
E63A	Oxbow	66.20	2	P	P	05 22 21.6	-0.4
E63A				IAmb	IAmb	05 22 50.4	
	comp=Z,73nm,1.0s						
E63A				IAMs_20	IAMs_20	05 50 20.6	
	comp=Z,18µm,21.0s						
E63A	Oxbow	66.20	2	P	P	05 22 20.8	-1.1
	baz=182						
E63A				S	S	05 31 13.6	+2.3
	baz=182						
E64A	Bridgewater	66.22	2	P	P	05 22 21.3	-0.7
	baz=183						
E64A				S	S	05 31 13.7	+2.2
	baz=183						
E57A	Chemin Saint G	66.22	357	P	P	05 22 20.7	-1.5
	baz=177						
E57A				S	S	05 31 14.1	+2.4
	baz=177						
E59A	St. Maurice	66.24	359	S	S	05 31 14.3	+2.6
	baz=178						
F49A	Sandfield	66.30	351	P	P	05 22 20.9	-1.7
	baz=169						
F49A				S	S	05 31 10.3	-2.2
	baz=169						
G46A	Petoskey	66.31	349	P	P	05 22 21.0	-1.7
	baz=166						
G46A				S	S	05 31 10.9	-1.7
	baz=166						
E55A	Montcerf-Lytto	66.37	356	P	P	05 22 21.5	-1.5
	baz=175,SNR=7.9						
E55A				S	S	05 31 15.1	+1.8
	baz=175						
E56A	St. Veronique	66.40	357	P	P	05 22 21.9	-1.3
	baz=176						
E56A				S	S	05 31 15.6	+1.9
	baz=176						
E52A	Mattawa	66.41	354	P	P	05 22 21.9	-1.4
	baz=172						
E52A				S	S	05 31 14.5	+0.7
	baz=172						
E53A	Dumoine, Ponti	66.41	355	P	P	05 22 21.9	-1.5
	baz=173						
E53A				S	S	05 31 15.0	+1.1
	baz=173						
E54A	Lac Daplat, Po	66.43	355	P	P	05 22 21.8	-1.6
	baz=174						
E54A				S	S	05 31 15.5	+1.4
	baz=174						
F48A	Evansville	66.44	351	P	P	05 22 21.4	-2.1
	baz=168						
F48A				S	S	05 31 12.0	-2.3
	baz=168						
PQI	Presque Isle	66.46	2	P	P	05 22 23.1	-0.5
PQI				IAMs_20	IAMs_20	05 50 15.5	
	comp=Z,19µm,22.0s						
X16A	Lo Mia Camp, P	66.54	324	P	P	05 22 22.6	-2.1
X16A				IAMs_20	IAMs_20	05 50 16.3	
	comp=Z,15µm,20.0s						
D60A	Saint Jean D’O	66.66	360	P	P	05 22 23.0	-1.8
	baz=180						
D60A				S	S	05 31 20.3	+3.6
	baz=180						
S22A	4UR Ranch, Cre	66.73	330	P	P	05 22 25.4	-0.5
S22A	4UR Ranch, Cre	66.73	330	P	P	05 22 24.0	-1.9
	baz=143,SNR=13						
S22A				S	S	05 31 22.2	+3.5
	baz=143						
E51A	G1948 Merrick	66.74	354	P	P	05 22 24.3	-1.1
	baz=171						
E51A				S	S	05 31 18.0	+0.1
	baz=171						
D59A	Saint-Raymond	66.76	359	P	P	05 22 24.5	-1.0
	baz=179						
D59A				S	S	05 31 21.0	+3.0
	baz=179						
F45A	CMU Biological	66.78	349	P	P	05 22 23.9	-1.7
	baz=165						
F45A				S	S	05 31 15.7	-2.6
	baz=165						
D57A	Chemin Vers le	66.82	358	P	P	05 22 25.6	-0.4
	baz=177,SNR=12						
D57A				S	S	05 31 20.8	+2.0
	baz=177						
D63A	Stockholm	66.83	2	P	P	05 22 24.5	-1.5
	baz=183						
D63A				S	S	05 31 21.1	+2.3
	baz=183						
D62A	Allapoint, All	66.85	1	P	P	05 22 23.9	-2.1
D62A				IAmb	IAmb	05 22 46.6	
	comp=Z,87nm,0.8s						
D62A				IAMs_20	IAMs_20	05 50 40.6	
	comp=Z,15µm,21.0s						
D62A	Allapoint, All	66.85	1	P	P	05 22 25.1	-0.9
	baz=182						
D62A				S	S	05 31 21.0	+2.0
	baz=182						
D58A	Chemin du LacG	66.87	358	P	P	05 22 25.2	-1.0
	baz=178						
D58A				S	S	05 31 21.6	+2.3
	baz=178						
D56A	ZEC Mazanza, M	66.89	357	P	P	05 22 25.2	-1.2
	baz=176						
D56A				S	S	05 31 20.9	+1.2
	baz=176						
D55A	Sainte-Anne-du	66.89	357	P	P	05 22 25.3	-1.1
	baz=175						
D55A				S	S	05 31 20.8	+1.1
	baz=175						
D61A	St Aubert, Com	66.95	0	P	P	05 22 25.6	-1.1
	baz=181						
D61A				S	S	05 31 23.1	+2.8
	baz=181						
E48A	Lockeyer	67.02	352	P	P	05 22 25.8	-1.4
	baz=168						
E48A				S	S	05 31 19.8	-1.3
	baz=168						
Y14A	Wickenburg	67.06	323	P	P	05 22 26.3	-1.5
D54A	Lac Fusel, La	67.10	356	P	P	05 22 26.5	-1.2
	baz=174,SNR=12						
D54A				S	S	05 31 23.9	+1.7
	baz=174						
D53A	Lac Vacive, Po	67.11	355	P	P	05 22 25.8	-2.0
D53A				IAmb	IAmb	05 23 18.4	
	comp=Z,72nm,0.9s						
D53A				IAMs_20	IAMs_20	05 51 50.5	
	comp=Z,12µm,21.0s						
D53A	Lac Vacive, Po	67.11	355	P	P	05 22 26.6	-1.2
	baz=173						
D53A				S	S	05 31 22.9	+0.6
	baz=173						
MVCO	Mesa Verde	67.12	328	P	P	05 22 25.4	-3.0
MVCO				IAmb	IAmb	05 22 45.2	
	comp=Z,249nm,1.6s						
MVCO	Mesa Verde	67.12	328	P	P	05 22 26.7	-1.6
	baz=142,SNR=26						
MVCO				S	S	05 31 27.4	+4.0
	baz=142						
LATQ	La Tuque	67.15	359	P	P	05 22 26.2	-1.8
LATQ				IAmb	IAmb	05 22 59.1	
	comp=Z,188nm,1.9s						
LATQ	La Tuque	67.15	359	P	P	05 22 26.9	-1.1
	baz=178						
LATQ				S	S	05 31 24.2	+1.5
	baz=178						
E47A	Iron Bridge	67.15	351	P	P	05 22 26.9	-1.1
	baz=167,SNR=14						
E47A				S	S	05 31 20.7	-2.1
	baz=167						
BATG	Bathurst New B	67.16	4	P	P	05 22 25.4	-2.7
BATG				IAmb	IAmb	05 23 01.7	
	comp=Z,128nm,1.2s						
E46A	Sault Ste Mari	67.23	350	P	P	05 22 26.8	-1.8
E46A				IAMs_20	IAMs_20	05 52 39.5	
	comp=Z,18µm,20.0s						
OGNE	Ogallala	67.26	335	P	P	05 22 27.3	-1.7
OGNE				IAmb	IAmb	05 22 39.9	
	comp=Z,83nm,0.8s						
OGNE	Ogallala	67.26	335	P	P	05 22 28.0	-1.0
	baz=148						
OGNE				S	S	05 31 27.2	+2.5
	baz=148						
D51A	Lot 18 Range I	67.28	354	P	P	05 22 27.7	-1.1
	baz=171						
D51A				S	S	05 31 24.2	-0.1
	baz=171						
WUAZ	Wupatki	67.32	325	P	P	05 22 30.7	+1.1
WUAZ				IAmb	IAmb	05 22 46.9	
	comp=Z,210nm,1.5s						
WUAZ				IAMs_20	IAMs_20	05 51 15.0	
	comp=Z,14µm,19.0s						
WUAZ	Wupatki	67.32	325	P	P	05 22 28.7	-0.9
	baz=139,SNR=30						
WUAZ				S	S	05 31 32.5	+6.8
	baz=139						
F42A	Maple Grove Fa	67.36	347	IAMs_20	IAMs_20	05 52 23.1	
	comp=Z,20µm,20.0s						
G40A	Rib Lake	67.37	345	P	P	05 22 28.6	-0.9
G40A				IAmb	IAmb	05 23 11.8	
	comp=Z,186nm,1.9s						
D50A	G1974 Best Tow	67.40	353	P	P	05 22 28.3	-1.3
	baz=171,SNR=27						
D50A				S	S	05 31 25.1	-0.7
	baz=171						
GLA	Glamis	67.49	321	P	P	05 22 28.1	-2.4
	baz=135						
GLA				S	S	05 31 35.5	+8.0
	baz=135						
D48A	Paudash Townsh	67.65	352	P	P	05 22 29.4	-1.8
	baz=169,SNR=10						
D48A				S	S	05 31 26.9	-1.9
	baz=169						
TAOE	Nuku Hiva Isla	67.65	268	*e*LR	LR	05 43 05.1	
	comp=Z,15µm,23.4s						
TAOE	Nuku Hiva Isla	67.65	268	*e*T	T	06 35 51.4	
	comp=Z,82nm,0.2s						
TAOE	Nuku Hiva Isla	67.65	268	IAMs_20	IAMs_20	05 45 17.4	
	comp=Z,13µm,18.0s						
D46A	Sault St. Mari	67.69	350	P	P	05 22 29.7	-1.8
	baz=167						
D46A				S	S	05 31 26.6	-2.8
	baz=167						
D47A	Chapleau	67.71	351	P	P	05 22 30.4	-1.2
	baz=168,SNR=6.9						
D47A				S	S	05 31 27.1	-2.5
	baz=168						
ECSD	EROS Data Cent	67.75	340	P	P	05 22 30.3	-1.6
ECSD	EROS Data Cent	67.75	340	IAMs_20	IAMs_20	05 53 58.0	
	comp=Z,14µm,20.0s						
ECSD	EROS Data Cent	67.75	340	P	P	05 22 30.8	-1.1
	baz=154,SNR=43						
ECSD				S	S	05 31 30.3	+0.2
	baz=154						
E44A	Grand Marais A	67.75	349	IAMs_20	IAMs_20	05 52 35.4	
	comp=Z,13µm,21.0s						
E44A	Grand Marais A	67.75	349	P	P	05 22 31.0	-0.8
	baz=165						
Y12C	Blythe	67.81	322	P	P	05 22 32.4	-0.1
Y12C	Blythe	67.81	322	S	S	05 31 37.3	+6.1
	baz=136						
ISCO	Idaho Springs	67.83	332	P	P	05 22 32.3	-0.6
ISCO	Idaho Springs	67.83	332	P	P	05 22 32.3	-0.6
ISCO				IAmb	IAmb	05 22 48.4	
	comp=Z,109nm,1.4s						
ISCO	Idaho Springs	67.83	332	P	P	05 22 32.2	-0.7
	baz=145,SNR=30						
ISCO				S	S	05 31 36.5	+4.7
	baz=145						
COWI	Conover	67.91	346	P	P	05 22 31.4	-1.4
COWI				IAmb	IAmb	05 23 05.1	
	comp=Z,94nm,1.1s						
SMCO	Snowmass	67.94	330	IAmb	IAmb	05 22 49.6	
	comp=Z,145nm,1.4s						
IKP	In-Ko-Pah, Jac	67.98	320	P	P	05 22 32.3	-1.4
	baz=134,SNR=20						
IKP				S	S	05 31 41.8	+8.3
	baz=134						
PDMCI	Parker Dam,Lak	67.98	322	P	P	05 22 32.6	-0.9
	baz=136						
PDMCI				S	S	05 31 40.1	+6.8
	baz=136						
SPMN	Marine on St.	67.98	343	P	P	05 22 31.4	-2.0
SPMN				IAmb	IAmb	05 23 30.0	
	comp=Z,119nm,1.1s						
SPMN				IAMs_20	IAMs_20	05 56 57.3	
	comp=Z,11µm,19.0s						
SPMN	Marine on St.	67.98	343	P	P	05 22 32.6	-0.8
	baz=158,SNR=13						
SPMN				S	S	05 31 32.1	-0.8
	baz=158						
SWSC	Sam W. Stewart	68.00	320	P	P	05 22 33.1	-0.5
	baz=134,SNR=22						
SWSC				S	S	05 31 43.1	+10
	baz=134						
PV15	Paradox Valley	68.00	329	P	P	05 22 34.3	+0.4
PV15				IAmb	IAmb	05 22 51.0	
	comp=Z,139nm,1.2s						
PV15				IAMs_20	IAMs_20	05 51 52.8	
	comp=Z,14µm,19.0s						
PV02	Paradox Valley	68.02	329	P	P	05 22 32.7	-1.4
PV02				IAmb	IAmb	05 22 50.0	
	comp=Z,148nm,1.6s						
PV02				IAMs_20	IAMs_20	05 57 05.2	
	comp=Z,13µm,19.0s						
PV13	Radium Mtn., P	68.02	328	IAMs_20	IAMs_20	05 51 37.4	
	comp=Z,11µm,18.0s						
PV05	Paradox Valley	68.10	328	IAMs_20	IAMs_20	05 51 37.1	
	comp=Z,11µm,18.0s						
PV03	Paradox Valley	68.11	328	IAMs_20	IAMs_20	05 51 39.7	
	comp=Z,12µm,19.0s						
VLDQ	Val d'Or	68.12	355	P	P	05 22 31.1	-2.9
VLDQ				IAmb	IAmb	05 22 58.1	
	comp=Z,98nm,1.1s						
VLDQ				IAMs_20	IAMs_20	05 52 33.8	
	comp=Z,14µm,20.0s						
PV18	Skein Mesa, Pa	68.13	328	IAMs_20	IAMs_20	05 51 39.4	
	comp=Z,12µm,19.0s						
PV12	Saucer Basin,	68.14	329	IAMs_20	IAMs_20	05 51 41.5	
	comp=Z,14µm,20.0s						
PV07	Paradox Valley	68.16	329	IAMs_20	IAMs_20	05 51 56.0	
	comp=Z,13µm,20.0s						
PV11	David Mesa, Pa	68.16	329	IAMs_20	IAMs_20	05 51 41.0	
	comp=Z,14µm,19.0s						
PV17	East Wray Mesa	68.19	328	IAMs_20	IAMs_20	05 51 31.7	
	comp=Z,14µm,21.0s						
PV16	Nyswonger Mesa	68.19	328	IAMs_20	IAMs_20	05 51 41.8	
	comp=Z,11µm,20.0s						
PV19	Morning Glory	68.22	328	IAMs_20	IAMs_20	05 51 41.6	
	comp=Z,11µm,19.0s						
PV20	West Nyswonger	68.24	328	P	P	05 22 32.4	-2.9
PV20				IAMs_20	IAMs_20	05 51 43.1	
	comp=Z,11µm,19.0s						
PV04	Paradox Valley	68.25	329	IAMs_20	IAMs_20	05 51 44.3	
	comp=Z,15µm,21.0s						
BC3	Big Chuckawall	68.29	321	P	P	05 22 35.3	-0.3
	baz=135,SNR=29						
BC3				S	S	05 31 44.8	+7.6
	baz=135						
PV14	Lion Creek, Pa	68.29	328	P	P	05 22 34.2	-1.5
PV14				IAmb	IAmb	05 22 52.4	
	comp=Z,180nm,1.7s						
PV14				IAMs_20	IAMs_20	05 51 43.5	
	comp=Z,13µm,19.0s						
PV10	Paradox Valley	68.30	328	IAMs_20	IAMs_20	05 51 40.7	
	comp=Z,14µm,19.0s						
PV22	Blue Mesa, Par	68.30	329	P	P	05 22 36.2	+0.5
PV22				IAmb	IAmb	05 22 52.6	
	comp=Z,146nm,1.5s						
PV22				IAMs_20	IAMs_20	05 51 58.8	
	comp=Z,13µm,20.0s						
MONP2	Monument Peak	68.34	320	P	P	05 22 35.9	-0.2
	baz=134,SNR=13						
MONP2				S	S	05 31 46.2	+8.2
	baz=134						
BAR	Barrett	68.34	319	P	P	05 22 36.2	+0.3
BAR				IAmb	IAmb	05 22 52.3	
	comp=Z,216nm,1.6s						
PV23	Carpenter Ridg	68.34	329	IAMs_20	IAMs_20	05 51 46.9	
	comp=Z,14µm,21.0s						
W13A	Hualapai Mount	68.41	323	P	P	05 22 37.0	+0.5
IRM	Iron Mountain	68.46	321	P	P	05 22 36.1	-0.6
	baz=135,SNR=38						
IRM				S	S	05 31 47.1	+8.1
	baz=135						
U15A	North Rim	68.50	325	P	P	05 22 37.8	+0.7
U15A				IAmb	IAmb	05 22 53.8	
	comp=Z,168nm,1.6s						
U15A				IAMs_20	IAMs_20	05 51 44.0	
	comp=Z,15µm,19.0s						
D41A	Chassel	68.70	347	IAMs_20	IAMs_20	05 53 03.1	
	comp=Z,18µm,22.0s						
109C	Camp Elliot, M	68.75	319	P	P	05 22 37.1	-1.3
109C				IAmb	IAmb	05 22 46.1	
	comp=Z,195nm,1.9s						
109C	Camp Elliot, M	68.75	319	P	P	05 22 38.0	-0.4
	baz=133						
109C				S	S	05 31 50.3	+7.8
	baz=133						
NVL	N'lazarevskaya	68.81	159	⇓*i*P	P	05 22 41.8	+3.6
NVL				*e*		05 25 22.9	
NVL				*e*PPP	PPP	05 26 50.2	
NVL				pmax	pmax		
	comp=Z,236nm,1.4s						
BELC	Belle Mtn. Jos	68.85	321	P	P	05 22 39.0	-0.2
	baz=134,SNR=19						
BELC				S	S	05 31 52.0	+8.0
	baz=134						
XPFO	Pion Flat	68.85	320	P	P	05 22 39.2	0.0
XPFO				IAmb	IAmb	05 23 13.6	
	comp=Z,114nm,1.5s						
PFO	Pinyon Flats O	68.86	320	*i* P	P	05 22 40.0	+0.8
PFO				pmax	pmax		
	comp=Z,75nm,1.1s						
PFO	Pinyon Flats O	68.86	320	P	P	05 22 38.9	-0.3
PFO				IAmb	IAmb	05 23 13.6	
	comp=Z,113nm,1.5s						
PFO	Pinyon Flats O	68.86	320	P	P	05 22 38.9	-0.3
	baz=134,SNR=19						
PFO				S	S	05 31 53.3	+9.3
	baz=134						

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N23A  Red Feather La    68.86 332 P        P        05 22 36.7 -2.6
N23A  Red Feather La    68.86 332 P        P        05 22 38.9 -0.4
      baz=145,SNR=12
N23A                              S        S        05 31 48.1 +4.0
      baz=145
E38A  The Farm, Brul    68.95 345 P        P        05 22 37.6 -1.8
PHWY  Pilot Hill        68.98 333 P        P        05 22 38.2 -1.9
PHWY                              IAmb     IAmb     05 22 55.4
      comp=Z,140nm,1.4s
LSQQ  Lebel-sur-Quev    69.02 356 P        P        05 22 38.9 -0.8
      baz=174
LSQQ                              S        S        05 31 44.7 -0.3
      baz=174
SUSD  Miller            69.15 339 P        P        05 22 39.5 -1.2
SUSD                              IAMs_20  IAMs_20  05 58 49.1
      comp=Z,12µm,19.0s
SUSD  Miller            69.15 339 P        P        05 22 40.2 -0.5
      baz=152
SUSD                              S        S        05 31 48.1 +1.3
      baz=152
GMRC  Granite Mounta    69.20 322 P        P        05 22 42.0 +0.6
      baz=135,SNR=52
GMRC                              S        S        05 31 56.0 +7.9
      baz=135
KNB   Kanab             69.22 325 P        P        05 22 42.8 +1.3
KNB                               pmax     pmax
      comp=Z,283nm,1.4s
KNB   Kanab             69.22 325 P        P        05 22 42.8 +1.3
PKCU  Pink Cliffs       69.26 326 P        P        05 22 41.4 -0.6
MURC  Murrieta          69.29 320 P        P        05 22 40.1 -1.7
      baz=134,SNR=14
MURC                              S        S        05 31 57.2 +8.2
      baz=134
O20A  White River Ci    69.30 330 IAMs_20  IAMs_20  05 53 57.1
      comp=Z,14µm,20.0s
O20A  White River Ci    69.30 330 P        P        05 22 41.2 -0.7
      baz=142,SNR=15
O20A                              S        S        05 31 53.5 +4.3
      baz=142
LCMT  Little Creek M    69.44 325 P        P        05 22 41.0 -1.8
BBRC  Big Bear Solar    69.58 320 P        P        05 22 43.3 -0.6
      baz=134,SNR=6.4
BBRC                              S        S        05 32 02.2 +9.4
      baz=134
SRU   San Rafael Swe    69.60 328 P        P        05 22 43.4 -0.4
SRU                               pmax     pmax
      comp=Z,57nm,0.9s
SRU   San Rafael Swe    69.60 328 P        P        05 22 43.4 -0.4
HEC   Hector,Ludlow     69.63 321 P        P        05 22 43.3 -0.6
      baz=134,SNR=12
HEC                               S        S        05 32 00.9 +7.9
      baz=134
MTPU  Mount Pierson     69.64 326 P        P        05 22 42.5 -1.8
LIC   Lamto             69.73  75 eP       P        05 22 42.8 -2.1
      comp=Z,166nm,1.7s
MATQ  Matagami          69.77 355 P        P        05 22 43.3 -1.0
      baz=173,SNR=10
MATQ                              S        S        05 31 53.6 -0.3
      baz=173
H07S1 FLORES T-PHASE    69.77  32 eS       S        05 32 01.9 +7.5
Q16A  Castle Valley     69.78 327 P        P        05 22 45.0 +0.1
SZCU  Shurtz Canyon     69.79 325 P        P        05 22 45.3 +0.3
TUQ   Turquoise Moun    69.81 322 P        P        05 22 44.8 -0.3
      baz=135,SNR=17
TUQ                               S        S        05 32 02.8 +7.6
      baz=135
CCUT  Cedar City        69.90 325 P        P        05 22 44.7 -1.1
CIS   Catalina Islan    69.91 319 S        S        05 32 04.5 +8.3
      baz=132
TIC   Toumodi           69.91  75 eP       P        05 22 42.8 -3.3
      comp=Z,116nm,1.2s
P17A  Butcher Ranch,    69.99 328 P        P        05 22 45.6 -0.5
MSU   Marysvale         69.99 327 P        P        05 22 46.3  0.0
MSU   Marysvale         69.99 327 P        P        05 22 46.3  0.0
BFSC  Mount Baldy Ra    70.01 320 P        P        05 22 45.8 -0.5
      baz=133,SNR=18
BFSC                              S        S        05 32 05.8 +8.2
      baz=133
DRLN  Deer Lake         70.02   9 P        P        05 22 45.0 -0.8
DRLN                              IAMs_20  IAMs_20  05 59 20.4
      comp=Z,14µm,18.0s
KIC   Kosan Boka        70.05  75 eP       P        05 22 45.0 -1.9
      comp=Z,164nm,1.3s
H07N1 FLORES T-PHASE    70.06  32 eP       P        05 22 53.6 +7.2
RWWY  Rawlins           70.07 332 IAMs_20  IAMs_20  05 53 31.4
      comp=Z,13µm,21.0s
DBIC  Dimbokro          70.07  75 P        P        05 22 45.1 -1.8
      comp=Z,37nm,0.8s,baz=240,slow=6.3,SNR=24
DBIC                              LR       LR       05 52 14.4
      comp=Z,44µm,19.7s,baz=226,slow=35
DBIC  Dimbokro          70.07  75 P        P        05 22 45.4 -1.6
DBIC                              pmax     pmax
      comp=Z,122nm,0.9s
DBIC  Dimbokro          70.07  75 P        P        05 22 45.4 -1.6
DBIC                              IAmb     IAmb     05 22 56.3
      comp=Z,122nm,0.9s
TMUT  Trail Mountain    70.09 328 P        P        05 22 47.3 +0.4
QSPA  South Pole Qui    70.12 180 P        P        05 22 47.6 +0.9
SHPR  Sheep Range       70.13 323 P        P        05 22 45.7 -1.5
EYMN  Ely               70.19 345 P        P        05 22 45.9 -1.1
EYMN  Ely               70.19 345 IAMs_20  IAMs_20  05 54 53.8
      comp=Z,16µm,20.0s
EYMN  Ely               70.19 345 P        P        05 22 46.9 -0.1
      baz=159,SNR=7.4
EYMN                              S        S        05 31 57.4 -1.5
      baz=159
GSC   Goldstone, Bar    70.23 321 P        P        05 22 46.5 -1.2
GSC                               pmax     pmax
      comp=Z,288nm,1.8s
GSC   Goldstone, Bar    70.23 321 P        P        05 22 46.5 -1.2
GSC   Goldstone, Bar    70.23 321 P        P        05 22 47.0 -0.6
      baz=134,SNR=25
GSC                               S        S        05 32 06.6 +6.5
      baz=134
MWC   Mount Wilson      70.24 320 P        P        05 22 44.3 -3.5
MWC                               pmax     pmax
      comp=Z,166nm,1.4s
MWC   Mount Wilson      70.24 320 P        P        05 22 44.3 -3.5
MWC                               IAmb     IAmb     05 23 04.4
      comp=Z,166nm,1.4s
RDMU  Red Mountain      70.27 330 P        P        05 22 46.3 -1.6
SHOC  Shoshone, Teco    70.34 322 P        P        05 22 48.5 +0.2
      baz=135,SNR=10
SHOC                              S        S        05 32 10.1 +8.9
      baz=135
DECC  Green Verdugo     70.43 320 P        P        05 22 48.8  0.0
      baz=133
PCAN  Candelaria        70.47  34 eP       P        05 22 52.6 +3.6
      comp=Z,141nm,1.3s
PCED  Cedros            70.48  34 eP       P        05 22 49.0  0.0
      comp=Z,82nm,0.9s
SNCC  San Nicolas Is    70.49 318 P        P        05 22 48.7 -0.5
      baz=132
K22A  Casper            70.55 333 P        P        05 22 49.1 -0.4
      baz=144,SNR=14
K22A                              S        S        05 32 08.2 +4.6
      baz=144
EDW2  Edwards Air Fo    70.65 320 P        P        05 22 50.4 +0.2
      baz=133,SNR=20
EDW2                              S        S        05 32 10.7 +5.8
      baz=133
RSSD  Black Hills       70.74 335 P        P        05 22 50.5 -0.2
RSSD                              pmax     pmax
      comp=Z,41nm,0.8s
RSSD                              MLR      MLR
      comp=Z,11µm,20.0s
RSSD  Black Hills       70.74 335 P        P        05 22 50.5 -0.2
RSSD  Black Hills       70.74 335 IAMs_20  IAMs_20  05 57 10.1
      comp=Z,11µm,20.0s
RSSD  Black Hills       70.74 335 P        P        05 22 50.4 -0.2
      baz=147
RSSD                              S        S        05 32 09.2 +3.3
      baz=147
BLG   Laguna Peak, P    70.78 319 P        P        05 22 50.6 -0.3
      baz=132
BLG                               S        S        05 32 12.5 +6.1
      baz=132
ROSA  Rosais            70.79  34 eP       P        05 22 48.9 -2.0
      comp=Z,92nm,1.5s
ROSA                              eS       S        05 32 09.8 +3.5
ROSA  Rosais            70.79  34 eLQ      LQ       05 45 24.9
PMAN  Manadas           70.81  34 eP       P        05 22 52.2 +1.2
      comp=Z,131nm,1.6s
MPU   Maple Canyon      70.85 328 P        P        05 22 50.1 -1.4
LRMC  Laurel Mtn Rad    70.87 321 P        P        05 22 51.7  0.0
      baz=134,SNR=6.6
PSUT  Pine Spring       70.89 326 P        P        05 22 51.6 -0.1
OSI   Osito Audit: C    70.91 320 S        S        05 32 13.8 +5.9
      baz=133
NLU   North Lily Min    71.02 328 P        P        05 22 52.2 -0.3
TPNV  Topopah Spring    71.06 323 P        P        05 22 50.9 -1.9
TPNV                              pmax     pmax
      comp=Z,493nm,1.9s
TPNV  Topopah Spring    71.06 323 P        P        05 22 50.9 -1.9
TPNV  Topopah Spring    71.06 323 P        P        05 22 52.7 -0.1
      baz=135,SNR=30
TPNV                              S        S        05 32 17.6 +7.7
      baz=135
FURC  Furnace Creek,    71.08 322 P        P        05 22 53.8 +1.1
      baz=134,SNR=30
SRBC  Serra Branca      71.13  34 eP       P        05 22 52.3 -0.6
MACI  Morro de la Ar    71.15  49 P        P        05 22 52.6 -0.9
PGRA  Graciosa          71.16  34 eP       P        05 22 53.5 +0.4
      comp=Z,227nm,1.6s
PGRA                              eS       S        05 31 56.9  -14
PGRA  Graciosa          71.16  34 eLQ      LQ       05 45 29.5
MPMC  Manual Prospec    71.16 321 P        P        05 22 53.6 +0.2
      baz=134,SNR=17
MPMC                              S        S        05 32 18.5 +7.4
      baz=134
JLU   Jordanelle        71.20 328 P        P        05 22 50.0 -3.7
PSMA  Santa Maria       71.25  37 eP       P        05 22 54.7 +1.0
      comp=Z,114nm,1.6s
ADH   Angra Heroismo    71.28  35 eP       P        05 22 55.5 +1.7
      comp=Z,107nm,1.5s
PSMN  Pico do Norte,    71.30  37 eP       P        05 22 55.0 +1.0
      comp=Z,134nm,1.6s
PSMN                              eS       S        05 32 12.8 +0.6
PSMN  Pico do Norte,    71.30  37 eLQ      LQ       05 45 01.5
ARVC  Arvin             71.32 320 P        P        05 22 54.0 -0.2
      baz=133
ARVC                              S        S        05 32 19.4 +6.8
      baz=133
ISA   Isabella, Lake    71.47 321 P        P        05 22 54.5 -0.7
ISA                               pmax     pmax
      comp=Z,120nm,1.2s
ISA                               MLR      MLR
      comp=Z,5µm,20.0s
ISA   Isabella, Lake    71.47 321 P        P        05 22 54.5 -0.7
ISA                               IAmb     IAmb     05 23 11.9
      comp=Z,120nm,1.2s
ISA   Isabella, Lake    71.47 321 P        P        05 22 55.8 +0.6
      baz=133,SNR=26
ISA                               S        S        05 32 22.8 +8.3
      baz=133
PDA   Ponta Delgada     71.48  36 eP       P        05 22 56.1 +1.0
      comp=Z,140nm,1.5s
PSET  Sete Cidades      71.51  36 eP       P        05 22 55.9 +0.6
      comp=Z,208nm,1.8s
PSET                              eS       S        05 32 09.8 -4.9
PSET  Sete Cidades      71.51  36 eLQ      LQ       05 45 23.3
CMLA  Cha da Macela     71.57  36 eP       P        05 22 57.2 +1.5
      comp=Z,99nm,1.7s
CMLA                              eS       S        05 32 19.7 +4.3
CMLA  Cha da Macela     71.57  36 eLQ      LQ       05 45 07.7
CMLA  Cha da Macela     71.57  36 P        P        05 22 54.3 -1.3
CMLA                              pmax     pmax
      comp=Z,93nm,0.9s
CMLA  Cha da Macela     71.57  36 P        P        05 22 54.3 -1.3
CMLA                              IAmb     IAmb     05 23 25.5
      comp=Z,93nm,0.9s
DUG   Dugway, Tooele    71.58 327 P        P        05 22 55.2 -0.6
DUG                               pmax     pmax
      comp=Z,349nm,1.7s
DUG                               MLR      MLR
      comp=Z,7µm,20.0s
DUG   Dugway, Tooele    71.58 327 P        P        05 22 55.2 -0.6
DUG   Dugway, Tooele    71.58 327 P        P        05 22 56.6 +0.8
      baz=139,SNR=66
DUG                               S        S        05 32 23.7 +8.0
      baz=139
PCALD Caldeiras da R    71.62  36 eP       P        05 22 58.4 +2.5
AGMN  Agassiz Nation    71.64 343 P        P        05 22 54.3 -1.5
AGMN  Agassiz Nation    71.64 343 P        P        05 22 55.4 -0.4
      baz=155,SNR=11
AGMN                              S        S        05 32 14.4 -1.4
      baz=155
R11A  Troy Canyon, C    71.69 324 P        P        05 22 53.5 -3.1
R11A                              IAmb     IAmb     05 23 13.5
      comp=Z,132nm,1.4s
R11A  Troy Canyon, C    71.69 324 P        P        05 22 57.0 +0.5
      baz=136,SNR=30
R11A                              S        S        05 32 25.3 +8.2
      baz=136
GRAC  Grapevine Rang    71.73 322 P        P        05 22 56.4 -0.3
      baz=134,SNR=7.3
GRAC                              S        S        05 32 25.8 +8.4
      baz=134
PKM   Mcpherson Peak    71.76 319 P        P        05 22 57.2 +0.1
      baz=132,SNR=18
PKM                               S        S        05 32 25.4 +7.3
      baz=132
CWC   Cottonwood Cre    71.77 321 P        P        05 22 56.8 -0.3
      baz=134
CWC                               S        S        05 32 26.0 +7.9
      baz=134
BART  Pico Bartolome    71.78  37 eP       P        05 22 59.2 +2.2
      comp=Z,211nm,1.2s
BART                              eS       S        05 32 14.8 -3.2
VES   Vestal, Richgr    71.95 320 P        P        05 22 57.8 -0.2
      baz=133,SNR=23
VES                               S        S        05 32 27.2 +7.4
      baz=133
BW06  Boulder Array     71.98 331 IAMs_20  IAMs_20  05 54 48.1
      comp=Z,11µm,22.0s
BW06  Boulder Array     71.98 331 P        P        05 22 57.9 -0.4
      baz=142,SNR=26
BW06                              S        S        05 32 22.6 +2.2
      baz=142
PDAR  Pinedale Array    71.98 331 P        P        05 22 57.6 -0.7
      comp=Z,1.1nm,0.6s,baz=149,slow=6.4,SNR=15
PDAR                              LR       LR       05 55 56.5
      comp=Z,6µm,19.7s,baz=128,slow=37
PDAR  Pinedale Array    71.98 331 P        P        05 22 56.4 -1.9
SMMC  Simmler           72.15 319 P        P        05 22 58.8 -0.5
      baz=132
SMMC                              S        SKiKP    05 32 29.7 -7.2
      baz=132
TBI   Tubuai            72.26 251 eS       S        05 32 27.7 +3.7
      comp=Z,24µm,28.2s
TBI   Tubuai            72.26 251 eLR      LR       05 45 14.5
      comp=Z,47µm,27.8s,baz=103
TIN   Tinemaha, Big     72.28 322 P        P        05 22 59.4 -0.6
      baz=134,SNR=13
TIN                               S        SKiKP    05 32 31.8 -5.3
      baz=134
MDND  Maddock           72.36 340 P        P        05 22 59.1 -1.0
MDND                              IAMs_20  IAMs_20  05 59 00.3
      comp=Z,10µm,19.0s
MDND  Maddock           72.36 340 P        P        05 23 00.3 +0.1
      baz=152,SNR=14
MDND                              S        S        05 32 25.1 +1.0
      baz=152
AHID  Auburn Hatcher    72.69 330 P        P        05 23 00.5 -2.0
AHID                              IAmb     IAmb     05 23 18.8
      comp=Z,201nm,1.6s
AHID                              IAMs_20  IAMs_20  05 54 32.9
      comp=Z,11µm,21.0s
MLAC  Mammoth, Mammo73.02 322 P        P        05 23 03.5 -1.1
      baz=133,SNR=20
MLAC                              S        SKiKP    05 32 40.4 +2.0
      baz=133
REDW  Red Top Meadow    73.04 331 IAmb     IAmb     05 23 32.3
      comp=Z,193nm,1.5s
SNOW  Snow King Moun    73.07 331 P        P        05 23 04.0 -0.8
SNOW                              IAMs_20  IAMs_20  05 55 38.9
      comp=Z,9µm,18.0s
TPAW  Teton Pass        73.18 331 IAmb     IAmb     05 23 32.2
      comp=Z,153nm,1.6s
ELK   Elko              73.23 326 P        P        05 23 04.3 -1.5
ELK                               pmax     pmax
      comp=Z,98nm,1.5s
ELK   Elko              73.23 326 P        P        05 23 04.3 -1.5
ELK                               IAMs_20  IAMs_20  05 54 35.3
      comp=Z,12µm,20.0s
PMPB  Monarch Peak      73.24 320 P        P        05 23 05.9 +0.1
NVAR  Mina Array Bea    73.26 323 P        P        05 23 07.1 +1.1
      comp=Z,7.9nm,0.8s,baz=150,slow=6.6,SNR=21
NVAR                              LR       LR       05 52 48.6
      comp=Z,8µm,20.9s,baz=118,slow=34
NVAR  Mina Array Bea    73.26 323 P        P        05 23 03.5 -2.5
PMOZ  Porto Moniz, M    73.42  45 eP       P        05 23 12.2 +5.3
      comp=Z,186nm,1.5s
PMOZ                              eS       S        05 32 37.2 +0.3
PMOZ  Porto Moniz, M    73.42  45 eLR      LR       05 45 40.5
      comp=Z,9µm,20.0s
ULM   Lac du Bonnet     73.42 344 P        P        05 23 05.8 -0.6
      comp=Z,24nm,0.9s,baz=156,slow=5.5,SNR=8.4
ULM                               LR       LR       05 57 32.7
      comp=Z,15µm,21.2s,baz=140,slow=38
ULM   Lac du Bonnet     73.42 344 IAMs_20  IAMs_20  05 57 21.3
      comp=Z,18µm,21.0s
IMW   Indian Meadow     73.49 331 IAmb     IAmb     05 23 24.2
      comp=Z,248nm,1.8s
FLWY  Flagg Ranch       73.53 331 IAMs_20  IAMs_20  05 55 34.0
      comp=Z,11µm,21.0s
PMAR  Madeira           73.54  45 eP       P        05 23 13.3 +5.6
KVN   Kaiserville       73.58 323 IAmb     IAmb     05 23 23.9
      comp=Z,131nm,1.4s
TIAR  Tiarei            73.69 257 eT       T        06 43 24.5
      comp=Z,3.5nm,0.2s
RLMT  Red Lodge         73.71 333 IAMs_20  IAMs_20  05 56 10.8
      comp=Z,10µm,20.0s
RLMT  Red Lodge         73.71 333 P        P        05 23 08.1 -0.4
      baz=143,SNR=6.9
RLMT                              S        S        05 32 42.1 +2.1
      baz=143
H17A  Grant Village     73.72 331 P        P        05 23 07.0 -1.6
H17A  Grant Village     73.72 331 P        P        05 23 07.8 -0.7
      baz=141,SNR=16
YPP   Pitchstone Pla    73.72 331 P        P        05 23 05.4 -3.3
LAO   LASA Array        73.73 335 IAMs_20  IAMs_20  05 58 54.3
      comp=Z,11µm,21.0s
LAO   LASA Array        73.73 335 P        P        05 23 08.5 +0.2
      baz=146,SNR=15
YMP   Mirror Lake Pl    73.80 332 P        P        05 23 05.2 -3.9
PPT2  Papeete2          73.90 257 eS       S        05 32 45.5 +2.5
      comp=Z,14µm,25.0s
PPT2  Papeete2          73.90 257 eLR      LR       05 46 01.4
      comp=Z,38µm,24.8s,baz=107
PPT   Papeete           73.90 257 LR       LR       05 47 35.9
      comp=Z,11µm,20.3s,baz=113,slow=29
YNR   Norris Junctio    74.01 332 P        P        05 23 09.5 -0.8
PMPS  Porto Santo       74.13  45 eP       P        05 23 16.2 +5.3
YHH   Holmes Hill       74.14 332 P        P        05 23 12.0 +0.8
PMPST Porto Santo, M    74.15  45 eP       P        05 23 11.7 +0.7
      comp=Z,305nm,1.4s
PMPST                             eS       S        05 32 55.5  +11
CMB   Columbia Colle    74.20 321 P        P        05 23 11.5 +0.2
CMB                               pmax     pmax
      comp=Z,161nm,1.7s
CMB                               MLR      MLR
      comp=Z,5µm,21.0s
CMB   Columbia Colle    74.20 321 P        P        05 23 11.5 +0.2
CMB                               IAmb     IAmb     05 23 28.4
      comp=Z,161nm,1.6s
GCMT  Greycliff         74.41 333 P        P        05 23 12.8 +0.3
QLMT  Earthquake Lak    74.44 331 P        P        05 23 09.4 -3.4
PNTR  Pine Nut          74.45 323 P        P        05 23 10.5 -2.5
DGMT  Dagmar            74.45 338 P        P        05 23 11.8 -0.8
DGMT                              IAmb     IAmb     05 23 31.0
      comp=Z,108nm,0.9s
DGMT  Dagmar            74.45 338 P        P        05 23 13.0 +0.5
      baz=148,SNR=14
DGMT                              S        S        05 32 50.5 +2.7
      baz=148
VCNR  Virginia City     74.62 323 P        P        05 23 12.0 -1.9
VCNR                              IAmb     IAmb     05 23 30.6
      comp=Z,155nm,1.5s
SCHQ  Schefferville     74.67   2 P        P        05 23 12.6 -1.0
      comp=Z,12nm,0.8s,baz=212,slow=2.1,SNR=13
SCHQ                              LR       LR       05 58 21.5
      comp=Z,7µm,18.9s,baz=194,slow=38
SCHQ  Schefferville     74.67   2 P        P        05 23 13.0 -0.6
SCHQ                              IAMs_20  IAMs_20  05 55 40.5
      comp=Z,14µm,22.0s
PAHR  Pah Rah Range     74.75 323 IAmb     IAmb     05 23 31.3
      comp=Z,273nm,1.5s
DLMT  Dillon            75.38 331 IAMs_20  IAMs_20  06 01 23.7
      comp=Z,11µm,20.0s
MFID  Camas Ranch       75.47 328 IAMs_20  IAMs_20  05 56 19.6
      comp=Z,11µm,19.0s
LRM   Limekiln Ridge    75.66 331 P        P        05 23 20.4 +0.6
EGMT  Eagleton          76.22 334 P        P        05 23 21.5 -1.3
EGMT                              IAMs_20  IAMs_20  05 58 57.1
      comp=Z,10µm,21.0s
EGMT  Eagleton          76.22 334 P        P        05 23 22.7  0.0
      baz=143,SNR=38
WVOR  Wild Horse Val    76.22 326 IAMs_20  IAMs_20  05 55 54.5
      comp=Z,9µm,20.0s
HOPS  Hopland Field     76.42 321 P        P        05 23 24.0 +0.1
HOPS                              IAmb     IAmb     05 23 41.5
      comp=Z,348nm,2.0s
O03E  Paynes Creek      76.52 322 P        P        05 23 24.4 -0.2
      baz=131,SNR=11
MOD   Modoc Plateau     76.75 324 P        P        05 23 26.7 +0.7
J08A  Circle Bar Ran    76.78 326 IAMs_20  IAMs_20  05 57 23.3
      comp=Z,11µm,20.0s
O02D  Mt. Diablo Mer    77.01 322 P        P        05 23 26.8 -0.6
      baz=131
MSO   Missoula          77.10 331 P        P        05 23 27.0 -0.7
MSO                               IAmb     IAmb     05 23 45.0
      comp=Z,148nm,1.6s
MSO                               IAMs_20  IAMs_20  06 01 47.5
      comp=Z,13µm,18.0s
MSO   Missoula          77.10 331 P        P        05 23 27.5 -0.3
      baz=139,SNR=14
BMO   Blue Mountains    77.24 328 P        P        05 23 26.2 -2.5
BMO                               pmax     pmax
      comp=Z,232nm,1.8s
BMO                               MLR      MLR
      comp=Z,8µm,18.0s
BMO   Blue Mountains    77.24 328 P        P        05 23 26.2 -2.5
BMO                               IAmb     IAmb     05 23 44.6
      comp=Z,232nm,1.8s
BMO                               IAMs_20  IAMs_20  05 57 44.5
      comp=Z,8µm,18.0s
N02D  Trinity Center    77.48 322 P        P        05 23 28.8 -1.2
      baz=131
M04C  Macdoel           77.53 323 P        P        05 23 30.1 -0.2
      baz=132,SNR=5.6
KMRM  Mail Ridge        77.58 321 P        P        05 23 27.9 -2.7
KMRM                              IAmb     IAmb     05 23 47.3
      comp=Z,184nm,1.5s
I07A  Izee              77.82 326 P        P        05 23 32.7 +0.8
I07A                              IAMs_20  IAMs_20  05 56 48.8
      comp=Z,11µm,21.0s
M02C  Callahan          77.84 323 P        P        05 23 31.3 -0.8
      baz=131
JTMT  Jette             77.94 332 P        P        05 23 31.8 -0.7
JTMT                              IAmb     IAmb     05 23 48.7
      comp=Z,143nm,1.6s
JTMT                              IAMs_20  IAMs_20  06 02 04.8
      comp=Z,13µm,20.0s
VNDA  Vanda             77.95 190 P        P        05 23 32.9 +0.8
      comp=Z,4.0nm,0.9s,baz=147,slow=5.6,SNR=14
VNDA  Vanda             77.95 190 P        P        05 23 33.8 +1.7
VNDA                              pmax     pmax
      comp=Z,92nm,1.4s
VNDA  Vanda             77.95 190 P        P        05 23 33.8 +1.7
YBH   Yreka Blue Hor    77.98 323 P        P        05 23 32.3 -0.5
YBH                               pmax     pmax
      comp=Z,107nm,1.8s
YBH                               MLR      MLR
      comp=Z,7µm,21.0s
YBH   Yreka Blue Hor    77.98 323 P        P        05 23 32.3 -0.5
J05D  Fort Rock, OR     78.19 325 P        P        05 23 33.1 -1.0
      baz=132
PINE  Pine Mountain     78.38 325 P        P        05 23 35.5 +0.4
PINE                              IAMs_20  IAMs_20  05 57 52.6
      comp=Z,9µm,20.0s
G08A  Pilot Rock        78.38 328 IAMs_20  IAMs_20  05 58 01.6
      comp=Z,15µm,19.0s
SYO   Syowa Base        78.47 160⇑eP       P        05 23 29.8 -5.2
SYO   Syowa Base        78.47 160⇑ePcP     PcP      05 23 40.6 -3.6
TORD  Torodi Ar. Bea    78.58  71 P        P        05 23 35.0 -1.6
      comp=Z,81nm,0.9s,baz=254,slow=5.0,SNR=78
TORD                              LR       LR       05 57 00.4
      comp=Z,46µm,20.1s,baz=260,slow=35
TORD  Torodi Ar. Bea    78.58  71 P        P        05 23 34.1 -2.5
WALA  Waterton Lakes    78.77 333 P        P        05 23 36.3 -0.8
WALA                              IAmb     IAmb     05 24 04.6
      comp=Z,160nm,1.4s
WALA                              IAMs_20  IAMs_20  06 02 13.7
      comp=Z,11µm,21.0s
E09A  Wood Farm, Sta    78.84 329 P        P        05 23 35.6 -1.7
I05D  Terrebonne, OR    78.96 326 P        P        05 23 39.0 +0.8
      baz=132,SNR=9.5
FFC   Flin Flon         79.11 342 P        P        05 23 36.7 -1.9
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FFC				pmax	pmax		
	comp=Z,28nm,1.0s						
FFC				MLR	MLR		
	comp=Z,16µm,21.0s						
FFC	Flin Flon	79.11	342	P	P	05 23 36.7	-1.9
I04A	Tendick Farm,	79.17	325	P	P	05 23 37.9	-1.4
	baz=132						
G06A	Carlson Farm,	79.20	327	IAMs_20	IAMs_20	05 59 58.3	
	comp=Z,10µm,21.0s						
HAWA	Hanford	79.44	328	P	P	05 23 39.1	-1.5
HAWA				IAMs_20	IAMs_20	05 59 02.5	
	comp=Z,9µm,19.0s						
G05D	Wamic, OR	79.56	326	P	P	05 23 42.2	+0.9
	baz=133,SNR=5.7						
J01E	Myrtle Point	79.60	323	P	P	05 23 43.2	+1.6
	baz=130						
D08A	Wollman Farm,	79.60	329	P	P	05 23 43.4	+1.9
D08A				IAmb	IAmb	05 24 16.6	
	comp=Z,245nm,1.9s						
NEW	Newport	79.61	331	P	P	05 23 40.2	-1.4
NEW				pmax	pmax		
	comp=Z,132nm,1.8s						
NEW				MLR	MLR		
	comp=Z,9µm,20.0s						
NEW	Newport	79.61	331	P	P	05 23 40.2	-1.4
NEW	Newport	79.61	331	IAMs_20	IAMs_20	06 03 06.0	
	comp=Z,9µm,20.0s						
NEW	Newport	79.61	331	P	P	05 23 41.5	0.0
	baz=136						
I03D	Drain, OR	79.62	324	P	P	05 23 43.8	+2.1
	baz=131						
E07A	Sunnyside	79.71	328	IAMs_20	IAMs_20	05 59 12.8	
	comp=Z,10µm,18.0s						
C09A	Chrisman Ranch	79.82	330	P	P	05 23 42.7	0.0
H04D	Lebanon	79.83	325	P	P	05 23 41.5	-1.3
	baz=131						
F05D	White Salmon	80.07	327	P	P	05 23 43.3	-0.8
	baz=133						
COR	Corvallis	80.18	325	IAMs_20	IAMs_20	06 00 37.2	
	comp=Z,8µm,18.0s						
AVE	Averroes	80.44	49⇑	*i*P	P	05 23 50.0	+3.6
AVE				*i* S	S	05 33 57.1	+3.8
F04A	Amboy	80.59	326	P	P	05 23 44.0	-2.8
F04A				IAmb	IAmb	05 24 04.5	
	comp=Z,338nm,1.7s						
F04A				IAMs_20	IAMs_20	05 58 37.2	
	comp=Z,11µm,22.0s						
LTY	Liberty	80.60	328	IAMs_20	IAMs_20	05 59 15.2	
	comp=Z,9µm,19.0s						
B08A	Colville Reser	80.71	330	IAmb	IAmb	05 24 03.9	
	comp=Z,277nm,1.9s						
B08A				IAMs_20	IAMs_20	06 04 40.2	
	comp=Z,9µm,19.0s						
LON	Longmire	80.83	327	IAMs_20	IAMs_20	05 59 27.3	
	comp=Z,10µm,20.0s						
FCC	Fort Churchill	80.85	348	P	P	05 23 46.4	-1.4
FCC				pmax	pmax		
	comp=Z,53nm,1.1s						
FCC				MLR	MLR		
	comp=Z,20µm,21.0s						
FCC	Fort Churchill	80.85	348	P	P	05 23 46.4	-1.4
SUR	Sutherland	80.85	121	P	P	05 23 49.3	+0.3
SUR				IAmb	IAmb	05 24 01.2	
	comp=Z,124nm,1.3s						
SUR	Sutherland	80.85	121	IAMs_20	IAMs_20	05 56 37.9	
	comp=Z,14µm,19.0s						
F04D	Rainier, OR	81.00	326	P	P	05 23 48.5	-0.6
	baz=131						
E04D	Cinebar	81.09	327	P	P	05 23 48.5	-1.0
	baz=132						
D05A	Enumclaw	81.21	327	P	P	05 23 48.8	-1.3
D05A				IAmb	IAmb	05 24 26.1	
	comp=Z,129nm,1.0s						
D05A				IAMs_20	IAMs_20	05 59 58.5	
	comp=Z,12µm,19.0s						
PFVI	Vila Bisbo	81.50	46	P	P	05 23 50.2	-1.8
PFVI	Vila Bisbo	81.50	46	*e*P	P	05 23 50.9	-1.0
	comp=Z,119nm,1.8s						
PFVI	Vila Bisbo	81.50	46	*e*SKS	S	05 34 09.5	+5.2
E03A	Lebam	81.60	326	IAMs_20	IAMs_20	06 06 09.7	
	comp=Z,10µm,19.0s						
D04E	Lakebay	81.61	327	P	P	05 23 50.5	-1.7
	baz=132						
MORF	Marmelete	81.72	45	*e*P	P	05 23 53.2	+0.1
MORF				*e*SKSac	SKSac	05 34 10.9	-2.9
MORF				AMS	AMS	05 56 15.5	
	comp=Z,14µm,21.3s						
MORF	Marmelete	81.72	45	*e*P	P	05 23 53.2	+0.1
MORF				*e*		05 34 10.9	
MORF	Marmelete	81.72	45	*e*P	P	05 23 55.2	+2.1
	comp=Z,134nm,1.2s						
MORF	Marmelete	81.72	45	*e*SKS	S	05 34 11.4	+4.8
PTEO	Sao Teotonio	81.80	45	*e*P	P	05 23 53.8	+0.3
	comp=Z,226nm,1.5s						
B06A	Marblemount	81.86	329	IAMs_20	IAMs_20	06 00 24.6	
	comp=Z,9µm,19.0s						
B05A	Bryant	81.99	328	P	P	05 23 54.2	0.0
	baz=132,SNR=7.2						
D03D	Eldon	82.00	327	P	P	05 23 53.1	-1.2
	baz=131						
LIS	Lisbon	82.16	44	*e*P	P	05 23 55.1	-0.3
LIS				*e*S	S	05 34 10.4	-0.5
LIS				AMS	AMS	06 01 54.6	
	comp=Z,18µm,16.8s						
LIS	Lisbon	82.16	44	*e*P	P	05 23 55.0	-0.3
LIS				*e*S	S	05 34 10.4	-0.5
LIS	Lisbon	82.16	44	*e*P	P	05 24 01.3	+6.0
	comp=Z,169nm,1.6s						
PBDV	Barranco-do-Ve	82.17	46	*e*P	P	05 23 56.4	+0.9
	comp=Z,84nm,1.2s						
PBDV	Barranco-do-Ve	82.17	46	*e*SKS	S	05 34 12.6	+1.4
TSUM	Tsumeb	82.18	108	*i* P	P	05 23 59.0	+2.8
TSUM	Tsumeb	82.18	108	*i* P	P	05 23 59.0	+2.8
TSUM	Tsumeb	82.18	108	P	P	05 23 55.2	-1.0
TSUM				IAmb	IAmb	05 24 07.5	
	comp=Z,94nm,1.1s						
IFR	Ifrane	82.20	50⇑	*i*P	P	05 23 58.1	+2.2
IFR				*i* S	S	05 34 20.4	+8.4
PMAFR	Mafra	82.20	44	*e*P	P	05 23 57.6	+2.0
	comp=Z,104nm,2.0s						
PMAFR	Mafra	82.20	44	*e*SKS	S	05 34 15.5	+4.1
PNCL	Nicolau / Gran	82.23	45	*e*P	P	05 23 56.0	+0.3
	comp=Z,74nm,1.8s						
PNCL	Nicolau / Gran	82.23	45	*e*SKS	S	05 34 14.6	+2.9
MESJ	Messejana	82.29	45	*e*P	P	05 23 56.0	-0.1
MESJ				*e*SKSac	S	05 34 14.9	+2.5
MESJ				AMS	AMS	05 57 28.3	
	comp=Z,12µm,17.0s						
MESJ	Messejana	82.29	45	*e*P	P	05 23 55.9	-0.1
MESJ				*e*		05 34 14.8	
MESJ	Messejana	82.29	45	*e*P	P	05 23 57.6	+1.5
	comp=Z,58nm,2.4s						
PCVE	Castro Verde	82.30	45	*e*P	P	05 23 56.3	+0.2
	comp=Z,91nm,1.6s						
PCVE	Castro Verde	82.30	45	*e*SKS	S	05 34 14.5	+2.0
NLWA	Neilton Lookou	82.31	327	IAMs_20	IAMs_20	06 00 35.5	
	comp=Z,11µm,19.0s						
PVAQ	Vaqueiros	82.40	46	P	P	05 23 57.7	+1.1
PVAQ	Vaqueiros	82.40	46	*e*P	P	05 23 57.4	+0.8
	comp=Z,76nm,1.7s						
PVAQ	Vaqueiros	82.40	46	*e*SKS	S	05 34 16.5	+3.0
PVAQ	Vaqueiros	82.40	46	*e*LQ	LQ	05 45 50.2	
PVAQ				*e*LR	LR	05 49 50.9	
	comp=Z,16µm,22.0s						
A04D	Lummi Island	82.60	328	P	P	05 23 58.2	+0.9
	baz=132						
PBEJ	Beja	82.63	45	*e*P	P	05 24 00.3	+2.5
	comp=Z,86nm,2.0s						
PSBE	So Bento	82.82	44	*e*P	P	05 24 00.8	+2.0
	comp=Z,158nm,1.8s						
PSBE	So Bento	82.82	44	*e*SKS	S	05 34 18.6	+0.8
PGC	Sidney	82.92	328	IAMs_20	IAMs_20	06 00 44.7	
	comp=Z,9µm,19.0s						
SFS	San Fernando	82.94	47⇑	*i*P	P	05 24 03.7	+4.3
SFS				*i* S	S	05 34 28.1	+9.1
PMTG	Montargil	82.95	44	*e*P	P	05 23 58.6	-0.9
	comp=Z,171nm,1.7s						
PMTG	Montargil	82.95	44	*e*SKS	S	05 34 19.7	+0.6
PMTG				*e*SS	SS	05 39 45.8	+2.9
PTOM	Tomar	83.13	44	*e*P	P	05 24 01.3	+0.9
	comp=Z,163nm,1.8s						
CEU	Ceuta	83.22	48⇑	*i*P	P	05 24 02.7	+1.8
CEU				*i* S	S	05 34 30.1	+8.2
PESTR	Estremoz	83.26	45	IAmb	IAmb	05 24 12.5	
	comp=Z,127nm,1.8s						
PESTR	Estremoz	83.26	45	*e*SKS	S	05 34 26.1	+3.8
PESTR				*e*SS	SS	05 39 52.0	+4.5
PCAS	Casmilo, Conde	83.31	43	*e*P	P	05 24 02.3	+1.0
	comp=Z,107nm,1.7s						
PCAS	Casmilo, Conde	83.31	43	*e*S	S	05 34 26.6	+3.9
PCAS				*e*SS	SS	05 39 47.5	-0.7
COI	Coimbra	83.45	43	*e*P	P	05 24 02.2	+0.2
	comp=Z,184nm,1.9s						
COI	Coimbra	83.45	43	*e*SKS	S	05 34 26.8	+2.8
COI				*e*SS	SS	05 39 51.7	+1.5
LLLB	Lillooet	83.47	330	IAMs_20	IAMs_20	06 05 25.1	
	comp=Z,9µm,21.0s						
NRS	Narsarsuaq	83.48	12	*i* P	P	05 24 08.0	+6.4
NRS	Narsarsuaq	83.48	12	*e*P	P	05 24 08.0	+6.4
NRS				MLR	MLR		
	comp=Z,12µm,20.0s						
NRS	Narsarsuaq	83.48	12	IAMs_20	IAMs_20	06 00 15.7	
	comp=Z,12µm,20.0s						
PVLZ	Peæn de	83.61	49⇑	*i*P	P	05 24 05.2	+2.3
PVLZ				*i* S	S	05 34 30.8	+4.9
PMRV	Marv??o	83.69	44	*e*P	P	05 24 03.6	+0.3
PMRV	Marv??o	83.69	44	*e*SKS	S	05 34 30.6	+4.0
PMRV	Marv??o	83.69	44	*e*LQ	LQ	05 46 04.8	
PMRV				*e*LR	LR	05 51 59.6	
	comp=Z,19µm,16.0s						
PCBR	Castelo Branco	83.85	44	*e*P	P	05 24 04.1	0.0
	comp=Z,92nm,1.7s						
PVIS	Viseu	84.06	43	*e*P	P	05 24 04.9	-0.3
	comp=Z,176nm,1.6s						
MTE	Manteigas	84.11	43	P	P	05 24 02.6	-2.9
MTE				IAmb	IAmb	05 24 15.2	
	comp=Z,194nm,1.6s						
MTE	Manteigas	84.11	43	*e*P	P	05 24 05.0	-0.5
	comp=Z,138nm,1.5s						
MTE	Manteigas	84.11	43	*e*SKS	S	05 34 32.1	+1.2
MTE	Manteigas	84.11	43	*e*LQ	LQ	05 46 04.8	
MTE				*e*LR	LR	05 51 15.9	
	comp=Z,30µm,18.0s						
EMAL	Malaga-Limoner	84.31	48⇑	*i*P	P	05 24 10.1	+3.6
EMAL				*i* S	S	05 34 33.1	+0.2
PVRL	Vila Real	84.47	42	*e*P	P	05 24 07.8	+0.5
	comp=Z,168nm,1.7s						
PGAV	Gavieira, Arco	84.50	42	*e*P	P	05 24 08.3	+0.8
	comp=Z,211nm,1.9s						
PGAV	Gavieira, Arco	84.50	42	*e*SKS	S	05 34 36.1	+1.4
PGAV	Gavieira, Arco	84.50	42	*e*LQ	LQ	05 46 23.5	
PGAV				*e*LR	LR	05 51 59.6	
	comp=Z,35µm,20.0s						
PCAB	Cabril	84.51	42	*e*P	P	05 24 07.1	-0.4
	comp=Z,168nm,2.0s						
MVO	Moncorvo	84.85	43	*e*P	P	05 24 09.0	-0.2
	comp=Z,219nm,1.7s						
MVO	Moncorvo	84.85	43	*e*SKS	S	05 34 37.2	-1.0
MVO				*e*SS	SS	05 40 12.5	+1.4
MVO				*e*LQ	LQ	05 46 38.9	
MVO				*e*LR	LR	05 51 35.3	
	comp=Z,28µm,20.0s						
PBRG	Braganca	85.37	42	*e*P	P	05 24 11.8	0.0
	comp=Z,179nm,1.7s						
PBRG	Braganca	85.37	42	*e*SKS	S	05 34 38.9	-4.4
BOSA	Boshof	85.71	119	*i* P	P	05 24 15.8	+1.8
BOSA	Boshof	85.71	119	P	P	05 24 14.6	+0.6
	comp=Z,36nm,1.2s,baz=256,slow=4.3,SNR=13						
BOSA				LR	LR	05 59 33.7	
	comp=Z,15µm,19.6s,baz=251,slow=34						
BOSA	Boshof	85.71	119	*i* P	P	05 24 15.8	+1.8
BOSA	Boshof	85.71	119	P	P	05 24 12.7	-1.4
BOSA				IAmb	IAmb	05 24 25.0	
	comp=Z,108nm,1.4s						
PAB	San Pablo	85.77	45	P	P	05 24 13.1	-0.8
PAB				pmax	pmax		
	comp=Z,86nm,1.1s						
PAB	San Pablo	85.77	45	P	P	05 24 13.1	-0.8
PAB				IAmb	IAmb	05 24 24.4	
	comp=Z,86nm,1.1s						
TAM	Tamanrasset	85.79	64	P	P	05 24 13.6	-0.9
TAM				pmax	pmax		
	comp=Z,262nm,1.3s						
TAM				MLR	MLR		
	comp=Z,49µm,20.0s						
TAM	Tamanrasset	85.79	64	P	P	05 24 13.6	-0.9
ESDC	Sonseca Array	86.09	45	P	P	05 24 15.2	-0.3
	comp=Z,14nm,1.0s,baz=237,slow=4.9,SNR=9.9						
ESDC				LR	LR	05 58 45.6	
	comp=Z,13µm,21.7s,baz=240,slow=33						
ESDC	Sonseca Array	86.09	45	P	P	05 24 14.6	-0.8
ESBB	Sonseca Array	86.09	45	P	P	05 24 13.4	-2.1
ESBB				IAmb	IAmb	05 24 25.5	
	comp=Z,141nm,1.4s						
MAW	Mawson	86.21	164	P	P	05 24 16.8	+1.3
	comp=Z,40nm,1.2s,baz=247,slow=7.1,SNR=10						
MAW				LR	LR	06 05 35.6	
	comp=Z,5µm,18.0s,baz=241,slow=38						
UCM	Universidad Co	86.88	45⇑	*i*P	P	05 24 20.0	+0.7
UCM				*i* S	S	05 34 51.4	-6.8
CART	Cartagena	87.11	48⇑	*i*P	P	05 24 19.8	-0.6
CART				*i* S	SKSac	05 34 49.6	+1.2
CART	Cartagena	87.11	48	IAMs_20	IAMs_20	06 03 05.8	
	comp=Z,7µm,20.0s						
LBTB	Lobatse	87.25	115⇑	*i*P	P	05 24 24.3	+2.7
LBTB	Lobatse	87.25	115⇑	*i*P	P	05 24 24.3	+2.7
LBTB	Lobatse	87.25	115	P	P	05 24 17.8	-3.9
LBTB				pmax	pmax		
	comp=Z,76nm,1.3s						
LBTB	Lobatse	87.25	115	P	P	05 24 17.8	-3.9
LBTB				IAmb	IAmb	05 24 45.4	
	comp=Z,76nm,1.3s						
BBB	Bella Bella	87.47	329	IAMs_20	IAMs_20	06 08 08.0	
	comp=Z,11µm,21.0s						
SFJD	Kangerlussuaq	88.10	8	P	P	05 24 21.7	-2.7
SFJD				pmax	pmax		
	comp=Z,33nm,1.2s						
SFJD	Kangerlussuaq	88.10	8	P	P	05 24 21.7	-2.7
SFJD	Kangerlussuaq	88.10	8	IAMs_20	IAMs_20	06 01 42.5	
	comp=Z,9µm,22.0s						
ANGG	Ammassalik, Gr	89.06	13	IAMs_20	IAMs_20	06 02 57.1	
	comp=Z,12µm,20.0s						
YKA	Yellowknife Ar	89.25	341	P	P	05 24 29.1	-0.8
	comp=Z,17nm,0.9s,baz=137,slow=4.8,SNR=33						
YKA				PKKPbc	PKKPbc	05 42 15.9	+6.5
	comp=Z,0.6nm,0.9s,baz=311,slow=2.0,SNR=5.9						
YKA				LR	LR	06 08 04.3	
	comp=Z,15µm,20.3s,baz=0.0,slow=38						
MOBC	Moresby Island	89.93	328	IAMs_20	IAMs_20	06 09 33.2	
	comp=Z,9µm,20.0s						
ILULI	Ilulissat	90.15	7	*i* P	P	05 24 39.9	+5.9
ILULI	Ilulissat	90.15	7	*e*P	P	05 24 39.9	+5.9
ILULI				MLR	MLR		
	comp=Z,8µm,18.0s						
ILULI	Ilulissat	90.15	7	IAMs_20	IAMs_20	06 09 02.7	
	comp=Z,8µm,19.0s						
DIB	Dawson Inlet,	90.22	328	IAMs_20	IAMs_20	06 10 21.8	
	comp=Z,8µm,20.0s						
ITZ	Itezhi-Tezhi	90.91	107	*i* P	P	05 24 42.1	+3.0
ITZ				*e*		05 28 02.4	
ITZ				*i*		05 35 16.9	
MATP	Matopo	91.41	112	*i* P	P	05 24 51.5	+10
MATP	Matopo	91.41	112	*i* P	P	05 24 51.5	+10
DSB	Dublin	91.66	33	IAMs_20	IAMs_20	06 02 37.0	
	comp=Z,10µm,20.0s						
KHU	Kahuku	91.78	290	IAMs_20	IAMs_20	05 57 03.1	
	comp=Z,8µm,21.0s						
MAHO	Mahon	91.82	48⇑	*i*P	P	05 24 44.9	+2.4
MAHO				*i* S	SKSac	05 35 20.6	+4.5
WRAK	Wrangell Islan	91.97	331	IAMs_20	IAMs_20	06 13 51.0	
	comp=Z,10µm,18.0s						
DLBC	Dease Lake	92.11	333	P	P	05 24 43.2	-0.3
KHLU	Kahalu`u	92.14	290	IAMs_20	IAMs_20	05 58 25.3	
	comp=Z,8µm,18.0s						
BORG	Borgarnes	92.64	19	IAMs_20	IAMs_20	06 02 03.4	
	comp=Z,9µm,22.0s						
BFZ	Birch Farm	93.27	225	IAMs_20	IAMs_20	05 58 20.4	
	comp=Z,11µm,20.0s						
KEST	Kesra	93.88	53	P	P	05 24 53.3	+1.0
	comp=Z,6.0nm,0.8s,baz=247,slow=11,SNR=7.5						
KEST				LR	LR	06 07 57.5	
	comp=Z,33µm,19.9s,baz=216,slow=36						
JIS	Juneau Island	93.92	332	IAMs_20	IAMs_20	06 09 44.4	
	comp=Z,10µm,21.0s						
SNZO	South Karori	93.96	223	IAMs_20	IAMs_20	05 56 21.5	
	comp=Z,12µm,22.0s						
CLF	Chambon-Foret	93.97	40	IAmb	IAmb	05 25 01.5	
	comp=Z,80nm,1.2s						
KHZ	Kahutara	94.13	222	IAMs_20	IAMs_20	05 56 32.9	
	comp=Z,12µm,22.0s						
EKA	Eskdalemuir Ar	94.34	32	P	P	05 24 52.1	-1.6
	comp=Z,1.2nm,0.4s,baz=233,slow=2.6,SNR=11						
ODZ	Otahua Downs	94.46	219	IAMs_20	IAMs_20	05 57 04.4	
	comp=Z,10µm,22.0s						
THZ	Tophouse	94.88	222	IAMs_20	IAMs_20	05 57 10.6	
	comp=Z,12µm,22.0s						
SUMG	Summit	94.93	9	IAmb	IAmb	05 25 54.5	
	comp=Z,51nm,1.1s						
SKAG	Skagway	94.96	332	IAMs_20	IAMs_20	06 10 26.0	
	comp=Z,8µm,20.0s						
LBZ	Lake Benmore	95.10	219	IAMs_20	IAMs_20	06 00 34.4	
	comp=Z,7µm,20.0s						
WHZ	Wether Hill Ro	95.53	217	IAMs_20	IAMs_20	05 57 53.8	
	comp=Z,9µm,22.0s						
QRZ	Quartz Range	95.61	223	IAMs_20	IAMs_20	05 58 05.2	
	comp=Z,9µm,22.0s						
MLZ	Mavora Lakes	95.74	217	IAMs_20	IAMs_20	05 57 34.5	
	comp=Z,10µm,21.0s						
FOZ	Fox Glacier	95.81	220	IAMs_20	IAMs_20	05 58 28.1	
	comp=Z,9µm,21.0s						
PYZ	Puysegur Point	96.07	216	IAMs_20	IAMs_20	05 59 16.2	
	comp=Z,9µm,20.0s						
TULEG	Thule	96.39	0	IAMs_20	IAMs_20	06 08 01.7	
	comp=Z,10µm,21.0s						
SCO	Scoresbysund	96.51	15	IAMs_20	IAMs_20	06 05 05.1	
	comp=Z,7µm,20.0s						
HYT	Haines Junctio	96.60	333	IAMs_20	IAMs_20	06 11 34.2	
	comp=Z,10µm,21.0s						
C36M	Paulatuk	96.85	343	P	P	05 25 06.6	+1.7
	baz=131						
ECH	Echery	97.04	41	IAmb	IAmb	05 25 15.9	
	comp=Z,35nm,1.1s						
MSSA	Maissana	97.14	45	IAMs_20	IAMs_20	06 07 08.0	
	comp=Z,9µm,20.0s						
PCA	Pinnacle	97.44	332	IAMs_20	IAMs_20	06 12 09.7	
	comp=Z,7µm,21.0s						
BFO	Black Forest	97.81	41	*e*L	L	06 06 12.2	
	comp=Z,19µm,20.9s						
OUZ	Omahuta	97.85	228	IAMs_20	IAMs_20	05 58 56.6	
	comp=Z,8µm,22.0s						
OSSC	Osservatorio P	98.03	47	P	P	05 25 08.7	-2.2
OSSC				IAMs_20	IAMs_20	06 11 19.7	
	comp=Z,10µm,20.0s						
ZCCA	Zocca	98.13	46	P	P	05 25 08.8	-2.5
DAVOX	Davos/Dischmat	98.24	43	LR	LR	06 09 04.6	
	comp=Z,7µm,18.1s,baz=241,slow=35						
CTGM	Chitina Glacie	98.31	332	IAMs_20	IAMs_20	06 13 48.8	
	comp=Z,8µm,21.0s						
DAVA	Damuels	98.42	43	*i* Pdiff	Pdif	05 25 13.1	+0.4
	comp=Z,26nm,1.3s						
DAVA				*i* PP	PP	05 29 14.7	+1.6
	comp=Z,21nm,1.6s						
TNS	Taunus Mts	98.57	40	*e*L	L	06 06 28.6	
	comp=Z,22µm,20.7s						
FETA	Feichten	98.87	43	*i* Pdiff	Pdif	05 25 14.8	0.0
	comp=Z,10nm,1.4s						
FETA				*i* PP	PP	05 29 18.4	+1.7
	comp=Z,16nm,1.4s						
TGL	Tana Glacier	98.88	332	IAMs_20	IAMs_20	06 14 14.7	
	comp=Z,8µm,22.0s						
DAWY	Dawson	98.93	336	IAMs_20	IAMs_20	06 18 19.7	
	comp=Z,8µm,18.0s						
TEOL	Teolo	98.93	45	P	P	05 25 13.0	-1.9
TEOL				IAmb	IAmb	05 25 28.7	
	comp=Z,50nm,0.9s						
INK	Inuvik	98.99	340	P	P	05 25 13.4	-1.1
INK				pmax	pmax		
	comp=Z,21nm,1.2s						
INK				MLR	MLR		
	comp=Z,16µm,20.0s						
INK	Inuvik	98.99	340	P	P	05 25 13.4	-1.1
CRQM	Cirque	99.02	332	IAMs_20	IAMs_20	06 14 18.8	
	comp=Z,8µm,22.0s						
EPYK	Eagle Plains	99.05	338	IAMs_20	IAMs_20	06 13 44.9	
	comp=Z,8µm,20.0s						
EPYK	Eagle Plains	99.05	338	P	Pdif	05 25 15.6	+0.7
	baz=120						
RETA	Reutte	99.05	43	*i* Pdiff	Pdif	05 25 15.6	+0.2
	comp=Z,7.1nm,1.1s						
RETA				*i* PP	PP	05 29 19.6	+1.8
	comp=Z,9.8nm,1.1s						
CTI	Castel Tesino	99.15	44	P	Pdif	05 25 14.2	-1.7
CTI				pmax	pmax		
	comp=Z,96nm,1.9s						
CTI				MLR	MLR		
	comp=Z,11µm,20.0s						
CTI	Castel Tesino	99.15	44	P	Pdif	05 25 14.2	-1.7
CTI				IAmb	IAmb	05 25 32.5	
	comp=Z,96nm,1.9s						
MOTA	Moosalm	99.22	43	*i* Pdiff	Pdif	05 25 16.5	+0.2
	comp=Z,39nm,1.4s						
MOTA				*i* PP	PP	05 29 19.8	+0.5
	comp=Z,16nm,1.4s						
MCARA	McCarthy VSAT	99.23	332	IAMs_20	IAMs_20	06 17 51.0	
	comp=Z,6µm,18.0s						
SQTA	Sankt Quirin	99.25	43	*i* Pdiff	Pdif	05 25 16.1	-0.3
	comp=Z,32nm,1.2s						
SQTA				*i* PP	PP	05 29 20.4	+1.0
	comp=Z,21nm,1.4s						
VRDI	Verde Repeater	99.36	332	IAMs_20	IAMs_20	06 09 06.3	
	comp=Z,7µm,20.0s						
BCAR	Beaver Creek A	99.43	334	P	Pdif	05 25 16.1	-0.6
WATA	Walderalm	99.52	43	*i* Pdiff	Pdif	05 25 18.3	+0.7
	comp=Z,28nm,1.4s						
WATA				*i* PP	PP	05 29 18.1	-3.4
	comp=Z,24nm,1.7s						
WTTA	Wattenberg	99.54	43	*i* Pdiff	Pdif	05 25 19.3	+1.6
	comp=Z,43nm,1.2s						
WTTA				*i* PP	PP	05 29 19.9	-1.8
	comp=Z,19nm,1.3s						
PAOL	Paolisi	99.55	50	IAMs_20	IAMs_20	06 13 20.2	
	comp=Z,8µm,19.0s						
FUR	Furstenfeldbru	99.60	42	*e*L	L	06 07 29.1	
	comp=Z,11µm,20.3s						
EGAK	Eagle	99.93	336	IAMs_20	IAMs_20	06 13 46.4	
	comp=Z,8µm,21.0s						
ABTA	Abfaltersbach	99.94	44	*i* Pdiff	Pdif	05 25 19.1	-0.3
	comp=Z,25nm,1.4s						
ABTA				*i* PP	PP	05 29 23.8	-0.9
	comp=Z,17nm,1.3s						
GRA1	Grafenberg Arr	100.07	41	IAMs_20	IAMs_20	06 06 50.2	
	comp=Z,11µm,21.0s						
GRF	Grafenberg Arr	100.07	41	*e*P	Pdif	05 25 20.1	+0.3
	comp=Z,57nm,1.7s,baz=247,slow=5.2						
GRF				*e*L	L	06 06 50.2	
	comp=Z,11µm,21.3s						
HIN	Hinchinbrook I	100.40	331	IAMs_20	IAMs_20	06 15 00.8	
	comp=Z,8µm,20.0s						
FID	Port Fidalgo	100.52	331	IAMs_20	IAMs_20	06 14 28.3	
	comp=Z,10µm,21.0s						
KBA	Koelnbreinsper	100.58	44	*i* Pdiff	Pdif	05 25 22.5	+0.1
	comp=Z,14nm,1.1s						
MOX	Moxa	100.62	40	*e*L	L	06 07 30.0	
	comp=Z,22µm,20.8s						
MYKA	Terra Mystica	100.64	44	*i* Pdiff	Pdif	05 25 23.0	+0.5
	comp=Z,16nm,1.1s						
MYKA				*i* PP	PP	05 29 29.0	-0.9
	comp=Z,28nm,1.4s						
SCRK	Sand Creek	100.71	335	IAMs_20	IAMs_20	06 12 39.0	
	comp=Z,8µm,20.0s						
GLI	Glacier Island	100.85	331	IAMs_20	IAMs_20	06 14 36.8	
	comp=Z,8µm,21.0s						
BSEG	Bad Segeberg	100.92	37	*e*L	L	06 07 46.3	
	comp=Z,20µm,21.1s						
WET	Wettzell	100.92	42	*e*L	L	06 08 15.1	
	comp=Z,15µm,21.2s						
PAX	Paxson	100.93	333	IAMs_20	IAMs_20	06 18 01.7	
	comp=Z,8µm,18.0s						
RIDG	Independent Ri	100.97	334	IAMs_20	IAMs_20	06 13 58.7	
	comp=Z,7µm,20.0s						
NKC	Novy Kostel	100.99	41	*e*PDIFF	Pdif	05 25 25.3	+1.4
NKC				*e*PP	PP	05 29 14.4	-18
NKC				*e*SKS		05 36 07.5	
NKC				AMS	AMS	06 09 10.0	
	comp=Z,14µm,19.8s						
NKC	Novy Kostel	100.99	41	*e*P	Pdif	05 25 25.3	+1.4
NKC				MLR	MLR		
	comp=Z,14µm,19.8s						
LJU	Ljubljana	101.05	45	*e*Pdiff	Pdif	05 25 24.8	+0.5
LJU				*e*PP	PP	05 29 32.1	-0.9
LJU				*e*SKSac	SKSac	05 36 03.3	-0.8
LJU				*e*Sdiff	Sdif	05 37 12.0	+8.4
LJU				*e*PS	PS	05 38 40.0	+4.8
LJU				*e*SS	SS	05 44 12.0	+9.0
OBKA	Obir	101.20	45	*i* Pdiff	Pdif	05 25 25.1	+0.1
	comp=Z,16nm,1.0s						
OBKA				*i* PP	PP	05 29 32.6	-1.7
	comp=Z,13nm,1.1s						

SCM	**Sheep Creek Mo**	**101.30**	**332**	IAMs_20	IAMs_20	06 18 58.7	
	comp=Z,8µm,18.0s						
GEC2	**GERESS Array S**	**101.35**	**42**	*e*L	L	06 08 29.7	
	comp=Z,14µm,21.1s						
GERES	**GERESS Array B**	**101.35**	**42**	P	**Pdif**	**05 25 24.3**	**-1.3**
	comp=Z,1.5nm,0.8s,baz=283,slow=4.9,SNR=4.9						
KHC	**Kasperske Hory**	**101.36**	**42**	*e*PDIFF	**Pdif**	**05 25 26.9**	**+1.3**
KHC				*e*pP	pwP	05 25 34.5	+5.4
KHC				*e*PP	**PP**	**05 29 30.8**	**-4.5**
KHC				*e*SKS		05 36 01.6	
KHC				AMS	AMS	06 08 10.0	
	comp=Z,13µm,20.4s						
KHC	**Kasperske Hory**	**101.36**	**42**	*e*P	**Pdif**	**05 25 26.9**	**+1.3**
KHC				*e*		05 29 30.8	
KHC				*e*		05 36 01.6	
KHC				MLR	MLR		
	comp=Z,13µm,20.4s						
MOA	**Molln**	**101.41**	**43**	*i* Pdiff	**Pdif**	**05 25 26.4**	**+0.5**
	comp=Z,16nm,1.4s						
MOA				*i* PKiKP	**PKiKP**	**05 29 49.8**	**-0.2**
	comp=Z,15nm,1.4s						
DAG	**Danmarks Havn**	**101.48**	**11**	*i* P	**Pdif**	**05 25 30.2**	**+4.7**
DAG	**Danmarks Havn**	**101.48**	**11**	*e*P	**Pdif**	**05 25 30.2**	**+4.7**
DAG				MLR	MLR		
	comp=Z,16µm,22.0s						
SOKA	**Soboth**	**101.57**	**45**	*i* Pdiff	**Pdif**	**05 25 27.4**	**+0.8**
	comp=Z,6.8nm,1.4s						
SOKA				*i* PKiKP	**PKiKP**	**05 29 47.3**	**-3.1**
	comp=Z,18nm,1.5s						
PERS	**Pernice**	**101.61**	**45**	*e*Pdiff	**Pdif**	**05 25 28.6**	**+1.8**
PERS				*e*PP	**PP**	**05 29 35.7**	**-1.6**
PERS				*e*SKSac	**SKSac**	**05 36 10.5**	**+3.6**
PERS				*e*Sdiff	**Sdif**	**05 37 17.5**	**+9.1**
CLL	**Collm**	**101.66**	**40**	*i* pPdif	**pPdif**	**05 25 32.8**	**+4.7**
	comp=Z,22nm,1.4s						
CLL				*e*Plp		05 25 39.0	
	comp=Z,1µm,17.6s						
CLL				*e*PP	**PP**	**05 29 35.0**	**-2.4**
	comp=Z,320nm,3.2s						
CLL				*e*PPlp		05 29 39.0	
	comp=Z,2µm,19.7s						
CLL				*e*SKSac	**SKSac**	**05 36 14.0**	**+7.3**
CLL				*e*Sdif	**Sdif**	**05 37 09.0**	**+0.6**
CLL				*e*SP	SP	05 38 36.0	-4.3
CLL				*e*PS	PS	05 38 47.0	+5.6
CLL				*e*SS	**SS**	**05 44 13.0**	**+1.9**
CLL				Lm	MLR	06 07 00.0	
	comp=N,6µm,20.5s						
CLL				Lm	MLR	06 07 00.0	
	comp=E,15µm,21.9s						
CLL				Lm	MLR	06 07 00.0	
	comp=Z,20µm,21.8s						
CLL				Lmax		06 07 00.0	
CLL				L	L	06 08 00.0	
	comp=Z,23µm,20.7s						
CLL	**Collm**	**101.66**	**40**	*i* P	**pPdif**	**05 25 32.8**	**+4.7**
CLL				pmax	pmax		
	comp=Z,22nm,1.4s						
CLL				MLR	MLR		
	comp=Z,23µm,20.7s						
KNK	**Knik Glacier**	**101.66**	**331**	IAMs_20	IAMs_20	06 10 00.1	
	comp=Z,9µm,22.0s						
SEW	**Seward**	**101.67**	**330**	IAMs_20	IAMs_20	06 21 00.4	
	comp=Z,9µm,18.0s						
SML	**Sawmill**	**101.74**	**332**	IAMs_20	IAMs_20	06 19 13.3	
	comp=Z,7µm,18.0s						
DHY	**Denali Highway**	**101.77**	**333**	IAMs_20	IAMs_20	06 15 46.1	
	comp=Z,6µm,19.0s						
PBCC	**Pribram**	**101.78**	**41**	*e*SKS	**SKSac**	**05 36 13.1**	**+5.6**
PRP	**Porcupine Dome**	**101.92**	**336**	IAMs_20	IAMs_20	06 16 43.9	
	comp=Z,7µm,19.0s						
GHO	**Glory Hole Cre**	**101.99**	**332**	IAMs_20	IAMs_20	06 19 47.9	
	comp=Z,9µm,18.0s						
ARSA	**Arzberg**	**102.06**	**44**	*i* Pdiff	**Pdif**	**05 25 29.4**	**+0.7**
	comp=Z,11nm,1.7s						
ARSA				*i* PP	**PP**	**05 29 40.3**	**-0.2**
	comp=Z,6.1nm,1.4s						
HDA	**Harding Lake**	**102.08**	**334**	P	**Pdif**	**05 25 29.0**	**+0.6**
	baz=111						
BRG	**Berggiesshubel**	**102.09**	**40**	*e*PDIFF	**Pdif**	**05 25 31.4**	**+2.6**
	comp=Z,29nm,1.8s						
BRG				PP	**PP**	**05 29 34.0**	**-6.7**
BRG				SKS		05 36 13.0	
BRG				SDIFF		05 38 48.0	
BRG				*e*PKKP	PKKPdf	05 41 55.1	+14
	comp=Z,13nm,1.7s						
BRG				SS	**SS**	**05 44 17.0**	**-0.2**
BRG	**Berggiesshubel**	**102.09**	**40**	*e*L	L	06 07 41.9	
	comp=Z,19µm,21.8s						
BRG	**Berggiesshubel**	**102.09**	**40**	*e*P	**Pdif**	**05 25 31.4**	**+2.6**
BRG				S	**PS**	**05 38 48.0**	**+1.9**
BRG				SS	SS	05 44 17.0	-0.2
BRG				pmax	pmax		
	comp=Z,29nm,1.8s						
BRG				pmax	pmax		
	comp=Z,13nm,1.7s						
BRG				MLR	MLR		
	comp=N,6µm,19.9s						
BRG				MLR	MLR		
	comp=E,12µm,21.4s						
BRG				MLR	MLR		
	comp=Z,19µm,21.1s						
RC01	**Rabbit Creek A**	**102.13**	**331**	IAMs_20	IAMs_20	06 15 17.6	
	comp=Z,11µm,21.0s						
PRA	**Prague**	**102.16**	**41**	*e*PDIFF	**Pdif**	**05 25 26.8**	**-2.3**
PRA				*e*PP	**PP**	**05 29 39.2**	**-2.1**
PRA				*e*SKS		05 36 11.4	
PRA				AMS	AMS	06 08 40.0	
	comp=Z,9µm,21.4s						
PRA	**Prague**	**102.16**	**41**	*e*P	**Pdif**	**05 25 26.8**	**-2.3**
PRA				*e*		05 29 39.2	
PRA				MLR	MLR		
	comp=Z,9µm,21.4s						
ILAR	**Eielson Array**	**102.18**	**335**	P	**Pdif**	**05 25 30.7**	**+1.9**
	comp=Z,0.7nm,0.8s,baz=138,slow=2.6,SNR=6.6						
ILAR				PP	**PP**	**05 29 34.8**	**-6.2**
	comp=Z,2.8nm,1.1s,baz=98,slow=5.7,SNR=5.2						
ILAR				PKKPbc	**PKKPdf**	**05 41 39.7**	**-2.0**
	comp=Z,1.0nm,0.9s,baz=279,slow=2.2,SNR=4.3						
FYU	**Fort Yukon**	**102.21**	**337**	IAMs_20	IAMs_20	06 14 19.4	
	comp=Z,7µm,21.0s						
PRU	**Pruhonice**	**102.21**	**41**	*e*PDIFF	**Pdif**	**05 25 22.3**	**-7.0**
PRU				*e*x	x	05 29 23.4	
PRU				*e*SKS		05 36 09.8	
PRU				AMS	AMS	06 08 40.0	
	comp=Z,10µm,21.5s						
PRU	**Pruhonice**	**102.21**	**41**	*e*P	**Pdif**	**05 25 22.3**	**-7.0**
PRU				*e*		05 36 09.8	
PRU				MLR	MLR		
	comp=Z,10µm,21.5s						
BRLK	**Bradley Lake**	**102.24**	**329**	IAMs_20	IAMs_20	06 15 31.6	
	comp=Z,7µm,20.0s						
CNPM	**China Poot**	**102.33**	**329**	IAMs_20	IAMs_20	06 15 45.0	
	comp=Z,6µm,20.0s						
PVCC	**Panska Ves**	**102.38**	**41**	*e*PDIFF	**Pdif**	**05 25 29.8**	**-0.2**
PVCC				*e*PP	**PP**	**05 29 36.8**	**-6.1**
PVCC				AMS	AMS	06 09 30.0	
	comp=Z,11µm,19.7s						
PVCC	**Panska Ves**	**102.38**	**41**	*e*P	**Pdif**	**05 25 29.8**	**-0.2**
PVCC				*e*		05 29 36.8	
PVCC				MLR	MLR		
	comp=Z,11µm,19.7s						
KDAK	**Kodiak Island**	**102.46**	**327**	IAMs_20	IAMs_20	06 13 47.4	
	comp=Z,8µm,21.0s						
CONA	**Conrad Observa**	**102.47**	**43**	*i* Pdiff	**Pdif**	**05 25 31.8**	**+1.1**
	comp=Z,12nm,1.5s						
CONA				*i* PP	**PP**	**05 29 39.9**	**-3.9**
	comp=Z,11nm,1.7s						
CCB	**Clear Creek Bu**	**102.51**	**335**	IAMs_20	IAMs_20	06 13 04.4	
	comp=Z,10µm,21.0s						
RND	**Reindeer**	**102.52**	**333**	IAMs_20	IAMs_20	06 13 08.8	
	comp=Z,8µm,22.0s						
POKR	**Poker Plat Res**	**102.52**	**335**	P	**Pdif**	**05 25 31.4**	**+1.0**
	baz=110						
WRH	**Wood River Hil**	**102.56**	**334**	IAMs_20	IAMs_20	06 15 25.9	
	comp=Z,10µm,20.0s						
COLA	**College**	**102.60**	**335**	IAMs_20	IAMs_20	06 17 04.1	
	comp=Z,8µm,20.0s						
TREC	**Trest**	**102.60**	**42**	*e*PDIFF	**Pdif**	**05 25 32.8**	**+1.7**
TREC				*e*PP	**PP**	**05 29 38.3**	**-6.3**
TREC				*e*SKS		05 36 03.1	
TREC				AMS	AMS	06 08 50.0	
	comp=Z,13µm,20.6s						
TREC	**Trest**	**102.60**	**42**	*e*P	**Pdif**	**05 25 32.8**	**+1.7**
TREC				*e*		05 29 38.3	
TREC				*e*		05 36 03.1	
TREC				MLR	MLR		
	comp=Z,13µm,20.6s						
COP	**Copenhagen**	**102.62**	**35**	*i* P	**Pdif**	**05 25 42.6**	**+12**
OHAK	**Old Harbor**	**102.65**	**326**	IAMs_20	IAMs_20	06 18 45.6	
	comp=Z,6µm,19.0s						
MCK	**McKinley**	**102.66**	**333**	IAMs_20	IAMs_20	06 20 40.5	
	comp=Z,7µm,18.0s						
MSVF	**Nonsavu**	**102.69**	**246**	IAMs_20	IAMs_20	06 04 00.2	
	comp=Z,9µm,20.0s						
SII	**Sitkinak Islan**	**102.93**	**326**	IAMs_20	IAMs_20	06 17 35.9	
	comp=Z,8µm,20.0s						
NEA	**Nenana**	**103.00**	**334**	IAMs_20	IAMs_20	06 15 38.5	
	comp=Z,9µm,21.0s						
BWN	**Browne**	**103.03**	**334**	IAMs_20	IAMs_20	06 13 48.3	
	comp=Z,7µm,21.0s						
KRUC	**Moravsky**	**103.11**	**42**	*e*P	**Pdif**	**05 25 33.5**	**+0.1**
KRUC				*e*PP	**PP**	**05 29 47.4**	**-1.0**
TRF	**Thorofare Moun**	**103.14**	**333**	IAMs_20	IAMs_20	06 21 00.2	
	comp=Z,9µm,18.0s						
UPC	**Upice**	**103.26**	**41**	*e*PDIFF	**Pdif**	**05 25 29.8**	**-4.2**
UPC				*e*PP	PP	05 29 29.7	-20
UPC				*e*SKS		05 36 17.2	
UPC				AMS	AMS	06 10 40.0	
	comp=Z,9µm,19.5s						
UPC	**Upice**	**103.26**	**41**	*e*P	**Pdif**	**05 25 29.8**	**-4.2**
UPC				MLR	MLR		
	comp=Z,9µm,19.5s						
CHVC	**Chvalec**	**103.31**	**41**	*e*PDIFF	**Pdif**	**05 25 37.3**	**+3.1**
CHVC				*e*PP	**PP**	**05 29 45.8**	**-4.1**
CHVC				*e*SKS		05 36 28.9	
CHVC				AMS	AMS	06 10 10.0	
	comp=Z,9µm,19.5s						
OSTC	**Ostas**	**103.40**	**41**	*e*PDIFF	**Pdif**	**05 25 32.8**	**-1.8**
OSTC				*e*PP	PP	05 29 29.3	-21
OSTC				*e*SKS		05 36 20.2	
OSTC				AMS	AMS	06 10 00.0	
	comp=Z,9µm,20.3s						
DPC	**Dobruska-Polom**	**103.41**	**41**	*e*PDIFF	**Pdif**	**05 25 37.3**	**+2.6**
DPC				*e*x	x	05 29 32.3	
DPC				*e*SKS		05 36 21.1	
DPC				AMS	AMS	06 07 10.0	
	comp=Z,7µm,21.4s						
DPC	**Dobruska-Polom**	**103.41**	**41**	*e*P	**Pdif**	**05 25 37.3**	**+2.6**
DPC				MLR	MLR		
	comp=Z,7µm,21.4s						
KTH	**Kantishna Hill**	**103.44**	**333**	IAMs_20	IAMs_20	06 14 11.2	
	comp=Z,8µm,22.0s						
KRLC	**Kraliky**	**103.62**	**41**	*e*PDIFF	**Pdif**	**05 25 34.3**	**-1.4**
KRLC				*e*PP	**PP**	**05 29 47.3**	**-5.0**
KRLC				*e*x	x	05 36 31.2	
KRLC				AMS	AMS	06 09 40.0	
	comp=Z,8µm,21.5s						
KRLC	**Kraliky**	**103.62**	**41**	*e*P	**Pdif**	**05 25 34.3**	**-1.4**
KRLC				*e*		05 29 47.3	
KRLC				MLR	MLR		
	comp=Z,8µm,21.5s						
BPAW	**Bear Paw Mtn.**	**103.64**	**334**	IAMs_20	IAMs_20	06 14 11.3	
	comp=Z,6µm,20.0s						
PPLA	**Purkeypile**	**103.79**	**332**	IAMs_20	IAMs_20	06 13 46.5	
	comp=Z,7µm,21.0s						
MLY	**Manley**	**103.82**	**335**	IAMs_20	IAMs_20	06 16 02.1	
	comp=Z,8µm,21.0s						
BSD	**Bornholm Skovb**	**103.83**	**36**	*i* P	**Pdif**	**05 25 47.4**	**+11**
MORC	**Moravsky Berou**	**104.02**	**42**	⇑P	**PKiKP**	**05 29 57.0**	**+2.2**
COLD	**Coldfoot**	**104.28**	**337**	IAMs_20	IAMs_20	06 18 04.1	
	comp=Z,7µm,20.0s						
OKC	**Ostrava-Krasne**	**104.42**	**42**	*e*PDIFF	**Pdif**	**05 25 35.8**	**-3.3**
OKC				*e*PP	PKiKP	05 29 35.3	-20
OKC				*e*SKS		05 36 17.6	
OKC				AMS	AMS	06 10 10.0	
	comp=Z,10µm,20.4s						
OKC	**Ostrava-Krasne**	**104.42**	**42**	*e*P	**Pdif**	**05 25 35.8**	**-3.3**
OKC				*e*		05 36 17.6	
OKC				MLR	MLR		
	comp=Z,10µm,20.4s						
FNA	**Florina**	**104.44**	**52**	IAMs_20	IAMs_20	06 13 53.9	
	comp=Z,10µm,21.0s						
TOLK	**Toolik Lake Re**	**104.48**	**338**	IAMs_20	IAMs_20	06 18 30.5	
	comp=Z,9µm,19.0s						
SVW2	**Sparrevohn**	**104.85**	**330**	IAMs_20	IAMs_20	06 17 19.1	
	comp=Z,6µm,20.0s						
CHGN	**Chignik**	**105.13**	**325**	IAMs_20	IAMs_20	06 19 00.3	
	comp=Z,6µm,19.0s						
CNBA	**Chernabura Isl**	**105.44**	**323**	IAMs_20	IAMs_20	06 18 27.6	
	comp=Z,6µm,20.0s						
VTS	**Vitosha**	**106.21**	**50**	⇑P	PKiKP	05 30 21.2	+22
KWP	**Kalwaria Pacla**	**107.26**	**43**	IAMs_20	IAMs_20	06 14 41.6	
	comp=Z,10µm,21.0s						
FALS	**False Pass**	**107.62**	**323**	IAMs_20	IAMs_20	06 20 09.5	
	comp=Z,5µm,19.0s						
ALN	**Alexandroupoli**	**107.92**	**52**	IAMs_20	IAMs_20	06 15 56.0	
	comp=Z,8µm,20.0s						
LVV	**L'vov**	**108.14**	**43**	*e*P	**Pdif**	**05 26 03.9**	**+8.2**
LVV				*e*SS	SS	05 45 43.6	+3.6
LVV				MLR	MLR		
	comp=E,8µm,22.0s						
LVV				MLR	MLR		
	comp=Z,8µm,22.0s						
LVV				MLR	MLR		
	comp=N,4µm,21.0s						
KBS	**Kingsbay**	**108.16**	**12**	IAMs_20	IAMs_20	06 13 37.7	
	comp=Z,10µm,22.0s						
RDOG	**Red Dog Mine**	**109.20**	**337**	IAMs_20	IAMs_20	06 21 17.1	
	comp=Z,9µm,20.0s						
UNV	**Unalaska Valle**	**109.25**	**321**	IAMs_20	IAMs_20	06 17 38.6	
	comp=Z,7µm,21.0s						
ANM	**Nome**	**109.86**	**333**	IAMs_20	IAMs_20	06 14 06.8	
	comp=Z,6µm,22.0s						
DZM	**Mont Dzumac**	**110.12**	**236**	*e*PP	**PP**	**05 30 37.7**	**-2.5**
	comp=Z,1µm,25.6s						
DZM				*e*SKSac	**SKSac**	**05 36 49.3**	**+3.0**
	comp=Z,4µm,27.1s						
DZM	**Mont Dzumac**	**110.12**	**236**	*e*PS	PS	05 40 12.9	+3.1
	comp=Z,4µm,25.2s						
DZM				*e*SS	SS	05 46 15.4	+8.4
	comp=Z,12µm,28.6s						
DZM	**Mont Dzumac**	**110.12**	**236**	*e*LR	LR	06 02 35.6	
	comp=Z,20µm,22.9s,baz=134						
NACGM	**Naroch**	**110.50**	**38**	*e*PKP	PKiKP	05 29 42.0	-25
NACGM				*e*PP	PP	05 30 20.0	-23
NACGM				*e*PPP	PPP	05 33 24.0	
NACGM				*e*SKS		05 36 15.0	
NACGM				*e*SKKS	SKSdf	05 37 08.0	-11
NACGM				*e*SKKKS		05 38 18.0	
NACGM				*e*PS	**PS**	**05 40 18.0**	**+5.4**
NACGM				*e*SS	SS	05 45 26.0	-45
NACGM				*e*SSS	SSS	05 50 38.0	
NACGM				*e*LQ	LQ	06 03 26.0	
NACGM				*e*LR	LR	06 09 34.0	
NACGM				LRM	MLR	06 14 48.0	
	comp=Z,38nm,20.0s						
FINES	**FINESS Array B**	**110.69**	**31**	PKKPbc	PKKPbc	05 41 07.6	+0.1
	comp=Z,1.0nm,0.6s,baz=323,slow=1.0,SNR=4.8						
ISP	**Isparta**	**110.78**	**56**	IAMs_20	IAMs_20	06 20 43.8	
	comp=Z,8µm,20.0s						
ARCES	**ARCESS Array B**	**110.83**	**22**	PKKPbc	PKKPbc	05 41 08.5	+1.2
	comp=Z,2.1nm,0.6s,baz=92,slow=3.6,SNR=8.5						
KIS	**Kishinev**	**110.88**	**46**	*e*PP	PP	05 31 10.0	+24
KIS				*e*SKP		05 34 08.0	
KIS				*e*SKKS		05 38 07.0	
KIS	**Kishinev**	**110.88**	**46**	*e*PS	PS	05 40 20.0	+3.6
MICGM	**Minsk**	**111.10**	**38**	*e*PKP	**PKiKP**	**05 30 02.0**	**-5.7**
MICGM				*e*PP	**PP**	**05 30 43.0**	**-3.8**
MICGM				*e*PPP	PPP	05 33 10.0	
MICGM				*e*SKS	**SKSac**	**05 36 46.0**	**-2.4**
MICGM				*e*SKKS	**SKKSac**	**05 37 56.0**	**+6.0**
MICGM				*e*PS	**PS**	**05 40 20.0**	**+1.9**
MICGM				*e*SS	**SS**	**05 46 20.0**	**+0.6**
MICGM				*e*SSS	SSS	05 50 20.0	
MICGM				*e*LR	LR	06 08 32.0	
MICGM				LRM	MLR	06 15 16.0	
	comp=Z,42nm,20.0s						
MICGM				LRM	MLR	06 15 20.0	
	comp=E,24nm,20.0s						
MICGM				LRM	MLR	06 15 20.0	
	comp=E,19nm,18.0s						
MICGM				LRM	MLR	06 15 30.0	
	comp=Z,41nm,18.0s						
MNK	**Minsk**	**111.10**	**38**	*e*PKIKP	**PKiKP**	**05 30 02.0**	**-5.7**
MNK				*e*		05 30 43.0	
MNK				*e*		05 36 46.0	
MNK				*e*SS	SS	05 46 20.0	+0.6
MNK				MLR	MLR		
	comp=Z,40µm,18.0s						
KEV	**Kevo**	**111.36**	**22**	IAMs_20	IAMs_20	06 12 35.1	
	comp=Z,7µm,21.0s						
AKASG	**Malin Array Be**	**111.56**	**42**	PKiKP	**PKiKP**	**05 30 08.5**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=261,slow=3.2,SNR=3.7						
AKASG				PP	**PP**	**05 30 51.1**	**+0.8**
	comp=Z,4.1nm,0.8s,baz=264,slow=5.9,SNR=5.3						
AKASG				PKKPbc	**PKKPab**	**05 41 10.3**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=76,slow=4.0,SNR=4.5						
CSS	**Mathiatis**	**112.54**	**60**	IAMs_20	IAMs_20	06 22 53.0	
	comp=Z,7µm,20.0s						
CAN	**Canberra**	**113.21**	**215**	IAMs_20	IAMs_20	06 05 49.9	
	comp=Z,7µm,22.0s						
TOO	**Toolangi**	**113.25**	**211**	IAMs_20	IAMs_20	06 07 09.7	
	comp=Z,7µm,20.0s						
MIDW	**Midway**	**113.36**	**293**	IAMs_20	IAMs_20	06 08 44.3	
	comp=Z,6µm,19.0s						
BRTR	**Keskin Array B**	**113.46**	**54**	PKiKP	**PKiKP**	**05 30 12.5**	**-0.4**
	comp=Z,1.6nm,0.8s,baz=208,slow=4.9,SNR=6.2						
BR131	**Keskin Array S**	**113.47**	**54**	*i* PKIKP	**PKiKP**	**05 30 13.0**	**+0.1**
APA	**Apatity**	**113.80**	**24**	⇓*i*PKIKP	PKiKP	05 30 02.9	-10
APA				*i*		05 31 14.0	
APA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ARMA	**Armidale**	**115.30**	**220**	IAMs_20	IAMs_20	06 10 01.7	
	comp=Z,6µm,19.0s						
OBN	**Obninsk**	**116.14**	**38**	⇑*e*PKIKP	**PKPdf**	**05 30 17.1**	**-0.2**
OBN				*e*		05 31 20.2	
OBN				*i* SS	SS	05 47 18.7	-7.2
OBN				pmax	pmax		
	comp=Z,43nm,1.8s						
OBN				MLR	MLR		
	comp=Z,13µm,19.0s						
MOS	**Moscow**	**116.71**	**37**	*i* PKIKP	**PKPdf**	**05 30 14.0**	**-4.4**
MOS				*e*		05 37 01.1	
MOS				*e*PS	**PS**	**05 41 07.5**	**-1.9**
MOS				*e*SS	SS	05 47 23.9	-9.4
MOS				pmax	pmax		
	comp=Z,33nm,0.6s						
MOS				MLR	MLR		
	comp=Z,9µm,18.0s						
KLMR	**Klimovskoe**	**117.22**	**31**	PKIKP	**PKiKP**	**05 30 20.6**	**+1.3**
KLMR				pmax	pmax		
	comp=Z,49nm,1.4s						
KLMR	**Klimovskoe**	**117.22**	**31**	Pdif	**Pdif**	**05 26 49.0**	**+13**
KLMR				*e*PKPdf	**sPKPdf**	**05 30 20.7**	**-0.3**
KLMR				AMP		05 30 35.8	
	comp=Z,50nm,1.4s						
KLMR				PP	**PP**	**05 31 30.9**	**+1.0**
KLMR				SKiKP	SKiKP	05 34 09.4	+14
KLMR				SKSac	**SKSac**	**05 37 19.7**	**+7.9**
KLMR				SKSac	**SKSac**	**05 37 19.7**	**+7.9**
KLMR				SKKSac	**SKKSac**	**05 38 39.0**	**+8.0**
KLMR				SKKSac	**SKKSac**	**05 38 39.0**	**+8.0**
KLMR				SP	SP	05 41 02.4	-10
KLMR				PS	PKKPdf	05 41 24.9	+12
KLMR				PS	PKKPdf	05 41 24.9	+12
KLMR				SS	**SS**	**05 47 35.0**	**-4.6**
KLMR				SS	**SS**	**05 47 35.0**	**-4.6**
KLMR				LR	LR	06 11 58.8	
KLMR				AMP		06 18 08.2	
	comp=Z,10µm,17.9s						
LPSR	**Galich'ya Gora**	**117.65**	**40**	*i* PKIKP	**PKPdf**	**05 30 19.1**	**-1.2**
LPSR				*e*SP	SP	05 41 11.0	-5.6
LPSR				*e*SS	**SS**	**05 47 41.1**	**-4.6**
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
LPSR				MLR	MLR		
	comp=Z,15µm,20.0s						
VSR	**Storozhevoye**	**117.86**	**42**	*i* PKIKP	**PKPdf**	**05 30 20.1**	**-0.7**
VSR				*e*SP	SP	05 41 19.6	+1.0
VSR				*e*SS	**SS**	**05 47 45.9**	**-2.6**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR				MLR	MLR		
	comp=Z,10µm,21.0s						
SOC	**Sochi**	**118.29**	**51**	*i* PKIKP	**PKiKP**	**05 30 24.0**	**+2.1**
SOC				*e*		05 31 38.1	
SOC				*e*PPP	PPP	05 34 04.1	
SOC				*e*PS	PKKPdf	05 41 22.0	+11
EIDS	**Eidsvold**	**119.18**	**224**	IAMs_20	IAMs_20	06 14 57.9	
	comp=Z,6µm,19.0s						
VRH	**Novokhopyorsk**	**119.46**	**42**	*i* PKIKP	**PKPdf**	**05 30 21.4**	**-2.5**
VRH				*e*SP	SP	05 41 22.5	-11
VRH				*e*SS	**SS**	**05 48 03.9**	**-5.4**
VRH				pmax	pmax		
	comp=Z,30nm,1.5s						
VRH				MLR	MLR		
	comp=Z,17µm,20.0s						
STKA	**Stephens Creek**	**119.73**	**212**	PKP	**PKiKP**	**05 30 26.3**	**+1.0**
	comp=Z,2.3nm,0.6s,baz=90,slow=2.0,SNR=3.5						
PRGR	**Permogore**	**119.97**	**30**	*e*PKIKP	**PKiKP**	**05 30 27.1**	**+2.5**
PRGR				pmax	pmax		
	comp=Z,22nm,0.8s						
SHA1	**Shidzhatmaz**	**120.43**	**50**	*i* PKIKP	**PKPdf**	**05 30 24.8**	**-1.5**
KIV	**Kislovodsk**	**120.45**	**50**	⇑P	**PKiKP**	**05 30 31.3**	**+5.0**
KIV	**Kislovodsk**	**120.45**	**50**	*e*P	**Pdif**	**05 26 49.1**	**-1.6**
KIV				*i*		05 30 25.5	
KIV				*e*		05 31 50.5	
KIV				*e*		05 37 22.1	
KIV				*e*PS	**SP**	**05 41 41.0**	**-1.5**
KIV				*e*SS	**SKKSdf**	**05 48 19.3**	**-0.7**
KIV				pmax	pmax		
	comp=Z,51nm,1.0s						
KIV				MLR	MLR		
	comp=Z,10µm,22.0s						
KIV	**Kislovodsk**	**120.45**	**50**	IAMs_20	IAMs_20	06 22 21.2	
	comp=Z,6µm,22.0s						
BILL	**Bilibino**	**120.53**	**338**	*i* PKIKP	**PKiKP**	**05 30 26.2**	**+0.6**
BILL	**Bilibino**	**120.53**	**338**	IAMs_20	IAMs_20	06 28 47.6	
	comp=Z,7µm,20.0s						
KBZ	**Khabaz**	**120.60**	**50**	PKP	**PKPdf**	**05 30 26.0**	**-0.3**
	comp=Z,18nm,1.0s,baz=332,slow=1.4,SNR=11						
GOF	**Gofitskoye**	**120.68**	**49**	⇑*e*PKIKP	**PKiKP**	**05 30 32.5**	**+6.0**
RAYN	**Ar Rayn**	**121.20**	**74**	PKIKP	**PKPdf**	**05 30 26.5**	**-1.7**
RAYN				MLR	MLR		
	comp=Z,18µm,19.0s						
RAYN	**Ar Rayn**	**121.20**	**74**		**PKPdf**	**05 30 26.5**	**-1.7**
ZEI	**Tsey**	**121.35**	**52**	*i* PKIKP	**PKiKP**	**05 30 30.9**	**+2.7**
ZEI				pmax	pmax		
	comp=Z,21nm,0.9s						
BBOO	**Buckleboo**	**121.48**	**207**	IAMs_20	IAMs_20	06 12 01.9	
	comp=Z,7µm,21.0s						
GNI	**Garni**	**122.00**	**55**	*i* PKIKP	**PKPdf**	**05 30 28.8**	**-0.6**
HNR	**Honiara**	**122.08**	**244**	IAMs_20	IAMs_20	06 13 49.6	
	comp=Z,6µm,19.0s						
H11S2	**WAKE ISLAND Hy**	**125.90**	**279**	T	T	07 50 06.2	
	baz=101,slow=74,SNR=1502						
H11S1	**WAKE ISLAND Hy**	**125.91**	**279**	T	T	07 50 09.6	
	baz=101,slow=74,SNR=502						
H11S3	**WAKE ISLAND Hy**	**125.92**	**279**	T	T	07 50 05.6	
	baz=101,slow=74,SNR=1411						
H11N3	**WAKE ISLAND Hy**	**125.95**	**280**	T	T	07 50 13.2	
	baz=101,slow=74,SNR=256						
H11N2	**WAKE ISLAND Hy**	**125.97**	**280**	T	T	07 50 14.3	
	baz=101,slow=74,SNR=335						
H11N1	**WAKE ISLAND Hy**	**125.97**	**280**	T	T	07 50 14.5	
	baz=101,slow=74,SNR=360						
CTA	**Charters Tower**	**126.05**	**225**	PKP	**PKiKP**	**05 30 38.4**	**+0.4**
	comp=Z,2.8nm,0.3s,baz=100,slow=13,SNR=4.0						
CTAO	**Charters Tower**	**126.05**	**225**	IAMs_20	IAMs_20	06 14 26.2	
	comp=Z,6µm,22.0s						
TIXI	**Tiksi**	**127.14**	**352**	*i* PKIKP	**PKPdf**	**05 30 37.5**	**-0.5**
TIXI	**Tiksi**	**127.14**	**352**		**PKPdf**	**05 30 36.6**	**-1.4**
TIXI				IAMs_20	IAMs_20	06 31 19.1	
	comp=Z,6µm,20.0s						
ARU	**Arti**	**127.95**	**33**	*i* PKIKP	**PKiKP**	**05 30 40.8**	**+0.2**
ARU						05 32 42.7	
ARU						05 37 51.8	
ARU				SS	SS	05 49 55.0	-1.1
ARU	**Arti**	**127.95**	**33**		**PKPdf**	**05 30 37.4**	**-2.6**
SEY	**Seymchan**	**128.07**	**337**	*i* PKIKP	**PKiKP**	**05 30 40.5**	**-0.1**
SVE	**Sverdlovsk**	**128.83**	**32**	*i* PKIKP	**PKiKP**	**05 30 45.7**	**+3.3**
SVE				pmax	pmax		
	comp=Z,34nm,1.5s						
SVE				MLR	MLR		
	comp=E,9µm,21.0s						
SVE				MLR	MLR		
	comp=Z,11µm,20.0s						
NRIK	**Noril'sk**	**128.97**	**10**	PKP	**PKPdf**	**05 30 40.8**	**-0.8**
	comp=Z,2.0nm,0.4s,baz=266,slow=3.3,SNR=2.5						
PET	**Petropavlovsk**	**129.84**	**323**	IAMs_20	IAMs_20	06 35 22.9	
	comp=Z,6µm,21.0s						
AS31	**Alice Springs**	**130.30**	**210**		**PKPdf**	**05 30 41.7**	**-4.0**
ASAR	**Alice Springs**	**130.30**	**210**	PKhKP	PKPpre	05 30 35.6	
	comp=Z,0.7nm,0.6s,baz=124,slow=1.7,SNR=7.2						
ASAR				PKP	**PKPdf**	**05 30 45.3**	**-0.4**

	comp=Z,7.2nm,0.9s,baz=140,slow=1.5,SNR=10						
ASAR	Alice Springs	130.30	210	PKPdf	PKPdf	05 30 38.8	-6.8
PEA0B	Petropavlovsk-	130.34	324	IAMs_20	IAMs_20	06 32 58.1	
	comp=Z,7µm,22.0s						
PETK	Petropavlovsk-	130.34	324	PKP	PKiKP	05 30 46.9	+1.3
	comp=Z,4.1nm,0.6s,baz=107,slow=9.7,SNR=8.5						
PETK	Petropavlovsk-	130.34	324		PKPdf	05 30 45.0	+0.3
MA2	Magadan	130.64	334	*i* PKIKP	PKPdf	05 30 44.4	-0.7
MA2	Magadan	130.64	334	IAMs_20	IAMs_20	06 38 51.0	
	comp=Z,5µm,19.0s						
MORW	Morawa	130.71	188	IAMs_20	IAMs_20	06 25 54.7	
	comp=Z,4µm,20.0s						
AB31	Akbulak array	131.29	41	PKIKP	PKPdf	05 30 46.1	-0.5
ABKAR	Akbulak array	131.29	41	PKPdf	PKPdf	05 30 45.7	-0.9
RABL	Rabaul	131.38	245	IAMs_20	IAMs_20	06 15 58.1	
	comp=Z,6µm,22.0s						
GEYT	Alibeck	132.53	57	PKP	PKiKP	05 30 51.0	+0.5
	comp=Z,3.9nm,0.6s,baz=270,slow=5.9,SNR=8.1						
GEYT	Alibeck	132.53	57		PKPdf	05 30 47.9	-1.5
WB2	Warramunga Arr	133.22	213		PKPdf	05 30 48.0	-3.2
WRA	Warramunga Arr	133.22	213	PKhKP	PKPpre	05 30 43.9	
	comp=Z,3.6nm,1.1s,baz=225,slow=1.3,SNR=5.3						
WRA				PKP	pPKPdf	05 30 51.9	-0.7
	comp=Z,11nm,0.7s,baz=152,slow=1.9,SNR=10						
WRAB	Tennant Creek	133.22	213	*i* PKIKP	PKiKP	05 30 54.2	+1.8
WRAB	Tennant Creek	133.22	213		PKPdf	05 30 48.1	-3.1
WB7	Warramunga Arr	133.28	213	IAMs_20	IAMs_20	06 26 14.2	
	comp=Z,6µm,19.0s						
WB0	Warramunga Arr	133.34	213		PKPdf	05 30 51.5	0.0
WB0				IAMs_20	IAMs_20	06 22 24.5	
	comp=Z,6µm,18.0s						
DGAR	Diego Garcia	134.72	123	IAMs_20	IAMs_20	06 24 27.7	
	comp=Z,7µm,22.0s						
BRVK	Borovoye	135.52	33	*i* PKIKP	PKPdf	05 30 54.3	-0.1
BRVK	Borovoye	135.52	33		PKPdf	05 30 53.6	-0.8
YAK	Yakutsk	135.71	346	*e*PKIKP	PKiKP	05 31 03.0	+6.9
YAK				*e*		05 33 40.3	
YAK				*e*SS	SS	05 51 20.5	-9.2
YAK				pmax	pmax		
	comp=Z,14nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,814nm,6.1s						
YAK				pmax	pmax		
	comp=N,219nm,5.3s						
YAK				pmax	pmax		
	comp=E,227nm,5.4s						
YAK	Yakutsk	135.71	346	IAMs_20	IAMs_20	06 34 04.1	
	comp=Z,6µm,21.0s						
MANU	Manus Island	136.57	244	IAMs_20	IAMs_20	06 21 03.9	
	comp=Z,6µm,21.0s						
PSAD2	Pilbara Seismi	137.25	195	IAMs_20	IAMs_20	06 26 59.2	
	comp=Z,6µm,22.0s						
GIRL	Giralia	137.27	187	IAMs_20	IAMs_20	06 31 05.0	
	comp=Z,4µm,20.0s						
PSAD3	Pilbara Seismi	137.27	195	IAMs_20	IAMs_20	06 26 37.7	
	comp=Z,6µm,22.0s						
PSAB3	Pilbara Seismi	137.30	195	IAMs_20	IAMs_20	06 26 37.5	
	comp=Z,4µm,20.0s						
PSAC2	Pilbara Seismi	137.32	195	IAMs_20	IAMs_20	06 31 23.7	
	comp=Z,4µm,21.0s						
PSA00	Pilbara Seismi	137.33	195		PKPdf	05 30 57.1	-1.8
PSA00	Pilbara Seismi	137.33	195	IAMs_20	IAMs_20	06 31 21.8	
	comp=Z,4µm,21.0s						
PSAB1	Pilbara Seismi	137.34	195	IAMs_20	IAMs_20	06 26 28.3	
	comp=Z,4µm,19.0s						
PSAC1	Pilbara Seismi	137.37	195	IAMs_20	IAMs_20	06 31 23.0	
	comp=Z,5µm,22.0s						
MBWA	Marble Bar	137.75	195	IAMs_20	IAMs_20	06 34 32.1	
	comp=Z,4µm,18.0s						
FITZ	Fitzroy Crossi	138.78	204	PKhKP	PKPpre	05 30 52.8	
	comp=Z,2.0nm,0.8s,baz=172,slow=1.6,SNR=7.1						
NKL	Nikolayevsk	139.02	331	*i* PKIKP	PKiKP	05 31 06.9	+3.8
NKL				MLR	MLR		
	comp=Z,2µm,21.0s						
NKL				MLR	MLR		
	comp=E,26nm,16.0s						
NKL				MLR	MLR		
	comp=N,163nm,18.0s						
KUR	Kuril'sk	139.44	317	*e*PKIKP	PKPdf	05 31 02.1	+0.2
KUR				pmax	pmax		
	comp=Z,75nm,1.1s						
KUR				MLR	MLR		
	comp=Z,3µm,21.0s						
KUR				MLR	MLR		
	comp=N,2µm,24.0s						
KUR				MLR	MLR		
	comp=E,2µm,14.0s						
KNRA	Kununurra	139.60	210		PKPdf	05 31 00.7	-2.4
CHM	Chimkent	140.01	47	PKIKP	PKiKP	05 31 07.4	+1.9
IUG	Iuzhnay	140.37	47	*e*PKP	PKiKP	05 31 06.8	+0.4
IUG				*e*PP	PP	05 34 01.7	-0.4
IUG	Iuzhnay	140.37	47	*e*PKIKP	PKiKP	05 31 06.8	+0.4
IUG				*e*		05 34 01.7	
MTN	Manton Dam	140.81	215		PKPdf	05 31 02.7	-2.6
KURK	Kurchatov	141.06	31	PKIKP	PKPdf	05 31 03.5	-1.2
KURK				MLR	MLR		
	comp=Z,8µm,20.0s						
KURK	Kurchatov	141.06	31		PKPdf	05 31 03.5	-1.2
YUK	Yuzh-Kuril'sk	141.25	316	*e*PKIKP	PKPdf	05 31 03.1	-2.1
YUK				*e*		05 34 06.8	
YUK				*e*SS	SS	05 52 37.6	+0.9
ZAA0	Zalesovo Array	141.38	23		PKPdf	05 31 01.2	-4.0
ZALV	Zalesovo Beam	141.38	23	PKhKP	PKPpre	05 31 00.2	
	comp=Z,3.7nm,0.5s,baz=322,slow=5.9,SNR=12						
YSS	Yuzh-Sakhalins	141.71	322	*e*PKHKP	PKPpre	05 30 57.1	
YSS				*e*PPP	PPP	05 37 23.5	
YSS				*e*		05 38 14.5	
YSS				pmax	pmax		
	comp=Z,30nm,1.3s						
YSS	Yuzh-Sakhalins	141.71	322	IAMs_20	IAMs_20	06 42 09.8	
	comp=Z,6µm,21.0s						
BTLS	Baital	141.78	41	*e*PKP	PKPdf	05 31 06.8	+0.6
BTLS				*e*PP	PP	05 34 17.8	+7.4
BTLS	Baital	141.78	41	*e*PKIKP	PKPdf	05 31 06.8	+0.6
BTLS				*e*		05 34 17.7	
SEM	Semipalatinsk	142.05	30	*e*PKP	PKPdf	05 31 05.0	-1.8
SEM				*e*PP	PP	05 34 12.4	+0.5
SEM	Semipalatinsk	142.05	30	*e*PKIKP	PKPdf	05 31 05.0	-1.8
SEM				*e*		05 34 12.4	
BOD	Bodaibo	142.12	356	*e*PKIKP	PKPdf	05 31 02.5	-3.9
BOD				pmax	pmax		
	comp=Z,48nm,1.6s						
GENI	Genyem	142.16	237	PKP	PKPdf	05 30 54.0	-14
GRNR	Gornyy	142.57	331	⇑*i*PKIKP	PKPdf	05 31 07.6	+0.2
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
EKS2	Erkin-Say	142.70	45	P	PKPdf	05 31 08.4	+0.3
	SNR=16						
SGDS	Sogindy	142.90	43	*e*PKP	PKPdf	05 31 08.0	-0.3
USP	Ospenovka	142.90	44	P	PKiKP	05 31 12.6	+1.1
	SNR=6.9						
AAK	Ala-Archa	143.19	44	PKP	PKPdf	05 31 07.5	-1.4
	comp=Z,6.4nm,0.8s,baz=14,slow=4.2,SNR=14						
AAK	Ala-Archa	143.19	44		PKPbc	05 31 06.4	+0.5
UCH	Uchtor	143.38	45	P	PKPdf	05 31 09.0	-0.8
	SNR=15						
ZEA	Zeya	143.63	342	*i* PKIKP	PKiKP	05 31 10.9	-1.6
ZEA				*e*		05 46 56.0	
ZEA				*e*		05 53 04.0	
ZEA				*e*		05 58 22.0	
ZEA				pmax	pmax		
	comp=Z,180nm,2.0s						
ZEA				pmax	pmax		
	comp=E,600nm,11.0s						
ZEA				pmax	pmax		
	comp=Z,2µm,11.0s						
ZEA				pmax	pmax		
	comp=N,800nm,12.0s						
ZEA				pmax	pmax		
	comp=Z,1µm,15.0s						
ZEA				pmax	pmax		
	comp=N,600nm,16.0s						
SMPI	Sarmi	143.67	236	PKP	PKPab	05 30 55.3	-12
KUU	Kurty	143.77	42	*e*PKP	PKPbc	05 31 07.6	+0.3
KUU				*e*PP	PP	05 34 26.1	+3.6
KUU	Kurty	143.77	42	*e*PKIKP	PKPbc	05 31 07.5	+0.2
KUU				*e*		05 34 26.1	
KZA	Kyzart	143.94	45	P	PKPbc	05 31 09.3	+0.9
	SNR=12						
BOOM	Boomskoye usch	144.20	44	PKIKP	PKPdf	05 31 09.8	-1.0
BOOM				MLR	MLR		
	comp=Z,9µm,21.0s						
BOOM	Boomskoye usch	144.20	44		PKPbc	05 31 09.8	+0.9
TDK	Taldyqorghan	144.43	39	*e*PKP	PKPdf	05 31 11.6	+0.7
TDK	Taldyqorghan	144.43	39	*e*PKIKP	PKPdf	05 31 11.5	+0.7
AAA	Alma-Ata	144.48	42	*e*PKP	PKPab	05 31 07.0	-2.4
AAA				*e*PP	PP	05 34 31.4	+4.6
AAA	Alma-Ata	144.48	42	*e*PKHKP	PKPpre	05 31 06.9	
AAA				*e*		05 34 31.3	
ULHL	Ulahol	144.51	44	P	PKPdf	05 31 11.2	-0.2
	SNR=23						
MDOK	Medeo	144.58	42	*e*PKP	PKPbc	05 31 10.4	+0.3
MDOK	Medeo	144.58	42	*e*PKIKP	PKPbc	05 31 10.4	+0.3
TNSS	Tian-Shan	144.58	42	*e*PKP	PKPbc	05 31 10.7	+0.3
TNSS	Tian-Shan	144.58	42	*e*PKIKP	PKPbc	05 31 10.7	+0.3
GUMO	Guam	145.28	265	PKPbc	PKPdf	05 31 13.7	+0.5
	comp=Z,62nm,0.6s,baz=105,slow=18,SNR=2.0						
MAKZ	Makanchi	145.30	33	PKIKP	PKPbc	05 31 10.8	-1.3
MAKZ				MLR	MLR		
	comp=Z,14µm,21.0s						
MAKZ	Makanchi	145.30	33	PKPbc	PKPbc	05 31 10.8	-1.3
NIL	Nilore	145.40	60	PKIKP	PKPbc	05 31 11.7	-1.1
NIL	Nilore	145.40	60		PKPbc	05 31 11.7	-1.1
KPKS	Kokpek	145.44	41	*e*PKP	PKPab	05 31 13.2	+0.2
KPKS	Kokpek	145.44	41	*e*PKIKP	PKPab	05 31 13.1	+0.2
MK31	Makanchi Array	145.47	33	*i* PKIKP	PKPdf	05 31 12.0	-0.6
MK31	Makanchi Array	145.47	33		PKPdf	05 31 12.4	-0.3
MKAR	Makanchi Array	145.47	33	PKPbc	PKPdf	05 31 12.3	-0.3
	comp=Z,55nm,0.9s,baz=329,slow=3.7,SNR=91						
MKAR	Makanchi Array	145.47	33		PKPdf	05 31 12.5	-0.1
SATY	Saty	145.49	41	*e*PKP	PKPab	05 31 13.1	-0.1
SATY	Saty	145.49	41	*e*PKIKP	PKPab	05 31 13.1	-0.1
KSH	Kashi	145.55	48	PKPbc	PKPdf	05 31 13.1	0.0
KSH				PP	PP	05 34 36.8	+3.3
KSH				PKS	PKSdf	05 34 47.3	-1.4
KSH				SKKS		05 41 25.1	
KSH				AMB	AMB		
	comp=Z,2µm,5.5s						
KSH				LR	LR		
	comp=Z,2µm,15.7s						
KSH				LR	LR		
	comp=Z,2µm,13.6s						
KSH				LR	LR		
	comp=Z,8µm,21.3s						
KLR	Kul'dur	145.74	333	*i* PKIKP	PKPdf	05 31 11.9	-1.1
UZB	Uzynbulak	145.82	41	*e*PKP	PKPdf	05 31 12.8	-0.8
UZB	Uzynbulak	145.82	41	*e*PKIKP	PKPdf	05 31 12.7	-0.8
SHLS	Shalkode	146.09	41	*e*PKP	PKPdf	05 31 14.0	0.0
SHLS	Shalkode	146.09	41	*e*PKP2	PKPdf	05 31 13.9	0.0
ZSN	Zaisan	146.29	30	*e*PKP	PKPab	05 31 16.4	+0.4
ZSN	Zaisan	146.29	30	*e*PKP2	PKPab	05 31 16.3	+0.4
TEY	Ternei	146.31	324	⇓*e*PKP2	PKPab	05 31 15.6	-0.4
TEY				pmax	pmax		
	comp=Z,10.0nm,1.6s						
TEY				pmax	pmax		
	comp=Z,1µm,5.8s						
POO	Poona	146.66	87	⇓*i*P	PKPdf	05 31 15.5	0.0
	comp=Z,110nm,1.0s						
SOEI	Soe	146.85	208	PKP	PKPdf	05 31 04.8	-11
IRK	Irkutsk	147.65	6	*e*PKP2	PKPdf	05 31 17.1	+1.0
IRK				pmax	pmax		
	comp=Z,337nm,2.1s						
MOY	Mondy	147.81	10	*e*PKP2	PKPbc	05 31 19.9	+0.5
MOY				pmax	pmax		
	comp=Z,342nm,2.2s						
FAKI	Fak Fak	147.83	227	PKP	PKPdf	05 31 06.4	-11
FAKI	Fak Fak	147.83	227	PKPbc	PKPdf	05 31 18.3	+0.7
FAKI				IAMs_20	IAMs_20	06 30 17.8	
	comp=Z,4µm,20.0s						
BASI	Baing, Sumba	147.88	201	PKP	PKPdf	05 31 07.4	-10
CIT	Chita	147.92	355	*e*PKP2	PKPbc	05 31 19.7	+0.1
CIT				pmax	pmax		
	comp=Z,289nm,1.6s						
TLY	Talaya	148.15	7	*e*PKP2	PKPbc	05 31 19.5	-0.7
TLY				*e*		05 34 50.3	
TLY				*e*SS	SS	05 53 51.2	-2.8
TLY				pmax	pmax		
	comp=Z,339nm,1.4s						
TLY	Talaya	148.15	7	PKPbc	PKPbc	05 31 18.9	-1.3
TLY				IAMs_20	IAMs_20	06 52 08.5	
	comp=Z,5µm,19.0s						
WSI	Waingapu	148.49	201	PKP	PKPdf	05 31 11.3	-7.3
BHK	Bhakra	148.52	62	*e*P	PKPab	05 31 27.6	+2.4
MMRI	Maumere	148.72	206	IAMs_20	IAMs_20	06 28 14.4	
	comp=Z,4µm,21.0s						
WBSI	Waikabubak, Su	148.82	200	PKP	PKPdf	05 31 10.2	-9.0
EDFI	Ende, Flores	148.83	204	PKP	PKPdf	05 31 09.5	-10
JCJ	Chichijima	149.01	289	PKPbc	PKiKP	05 31 25.6	+1.2
	comp=Z,87nm,0.6s,baz=353,slow=10,SNR=7.3						
KLRI	Killari	149.17	88	*e*PKPbc	PKPdf	05 31 21.0	+1.4
KLRI				*e*PP	PKSdf	05 34 53.0	-1.9
KLRI				IVMs_BB	IVMs_BB	06 39 56.9	
	comp=Z,2µm,18.0s						
URV	Uravakonda	149.17	94	*e*Pdiff		05 27 49.6	
URV				*e*PKPbc	PKPdf	05 31 19.3	-0.4
URV				IVMs_BB	IVMs_BB	06 37 02.8	
	comp=Z,2µm,21.6s						
USA0B	Ussuriysk Arra	149.33	327	PKP2	PKPbc	05 31 22.8	-0.6
USA0B	Ussuriysk Arra	149.33	327		PKPbc	05 31 22.8	-0.6
USRK	Ussuriysk Ar.	149.33	327	PKPbc	PKPbc	05 31 23.2	-0.2
	comp=Z,25nm,0.7s,baz=35,slow=1.9,SNR=16						
USRK	Ussuriysk Ar.	149.33	327		PKPbc	05 31 22.7	-0.7
ZAK	Zakamensk	149.38	7	*e*PKP2	PKiKP	05 31 24.1	-0.6
ZAK				pmax	pmax		
	comp=Z,68nm,1.6s						
ZAK				pmax	pmax		
	comp=Z,17nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
XMIS	Christmas Isla	149.45	173	IAMs_20	IAMs_20	06 48 31.1	
	comp=Z,3µm,19.0s						
PALK	Pallekele	149.62	111	PKPbc	PKPbc	05 31 23.4	-1.7
	comp=Z,9.5nm,0.9s,baz=285,slow=1.7,SNR=1.5						
PALK	Pallekele	149.62	111	PKHKP	PKPpre	05 31 22.8	
PALK	Pallekele	149.62	111		PKPbc	05 31 22.8	-2.3
HIA	Hailar	149.65	346	PKP2	PKPbc	05 31 23.6	-0.5
HIA	Hailar	149.65	346		PKPbc	05 31 23.6	-0.5
HIA	Hailar	149.65	346	IAMs_20	IAMs_20	06 46 09.4	
	comp=Z,5µm,21.0s						
MSAI	Masohi	149.71	222	PKP	PKPdf	05 31 10.8	-10
MJAR	Matsushiro Arr	149.77	309	PKPbc	PKPbc	05 31 25.1	+0.3
	comp=Z,19nm,0.5s,baz=137,slow=0.5,SNR=25						
MJAR	Matsushiro Arr	149.77	309		PKPbc	05 31 23.1	-1.7
MAJO	Matsushiro	149.78	309	PKP2	PKPbc	05 31 24.3	-0.5
MAJO	Matsushiro	149.78	309		PKPbc	05 31 24.3	-0.5
MAT	Matsushiro	149.78	309	PKP	PKPbc	05 31 24.8	0.0
MJB9	Matsu-Tunnel	149.78	309		PKPbc	05 31 23.4	-1.5
JHJ	Hachijo jima 2	149.81	302	PKPbc	PKPbc	05 31 24.6	-0.3
	comp=Z,63nm,0.7s,baz=73,slow=19,SNR=2.0						
AAI	Ambon	149.90	220	PKP	PKPdf	05 31 09.5	-11
SIJI	Sorong	149.97	229	PKPbc	PKiKP	05 31 26.7	-0.2
	comp=Z,28nm,0.7s,baz=47,slow=2.0,SNR=15						
SWI	Sorong	149.98	229	PKP	PKPdf	05 31 08.7	-12
PLAI	Plampang	150.07	197	PKP	PKPdf	05 31 10.0	-11
MDJ	Mudanjiang	150.21	330	PKPbc	PKiKP	05 31 26.0	-0.4
MDJ				pPKP	PKPab	05 31 31.5	-0.1
MDJ				LR	LR		
	comp=Z,2µm,21.3s						
MDJ				LR	LR		
	comp=Z,3µm,26.8s						
MDJ				LR	LR		
	comp=Z,850nm,26.5s						
MDJ	Mudanjiang	150.21	330		PKiKP	05 31 25.9	-0.4
WMQ	Urumqi	150.28	32	*e*PKPbc	PKPdf	05 31 20.1	-0.6
WMQ				pPKP	sPKPbc	05 31 29.3	+1.7
WMQ				PKPab	sPKPab	05 31 36.3	+2.6
WMQ				PP	PP	05 35 04.3	+3.8
WMQ				SKKS		05 41 50.1	
WMQ				SS	SS	05 54 18.8	-0.3
WMQ				LR	LR		
	comp=Z,5µm,21.5s						
WMQ				LR	LR		
	comp=Z,12µm,18.7s						
WMQ	Urumqi	150.28	32	PKHKP	PKPpre	05 31 23.6	
WMQ				MLR	MLR		
	comp=Z,14µm,22.0s						
WMQ	Urumqi	150.28	32		PKPbc	05 31 23.6	-2.3
IGBI	Denpasar	150.71	192	PKP	PKPdf	05 31 13.4	-8.8
DNP	Denpasar	150.83	192	PKP	PKPdf	05 31 13.6	-8.8
HYBB	Hyderabad (bro	150.90	90	*e*PKPbc	PKPdf	05 31 24.8	+2.4
HYBB				*e*PP	PP	05 35 04.8	-0.9
HYBB				IVMs_BB	IVMs_BB	06 35 41.6	
	comp=Z,2µm,20.3s						
HYB	Hyderabad	150.91	90	*i* PKP	PKPdf	05 31 25.0	+2.6
HYB				*e*PP	PP	05 35 08.0	+2.3
NLAI	Namlea	150.91	219	PKP	PKPdf	05 31 11.5	-11
SRSP	Sriramsagar	150.94	87	*e*PKPbc	PKPbc	05 31 25.2	-2.8
SRSP				*e*PP	PP	05 35 04.0	-1.8
SRSP				IVMs_BB	IVMs_BB	06 41 10.6	
	comp=Z,1µm,19.4s						
SRLM	Srisailam	150.97	93	*e*Pdiff		05 29 10.4	
SRLM				*e*PKPbc	sPKPdf	05 31 25.3	+1.0
SRLM				*e*PP	PP	05 35 05.5	-0.5
SRLM				IVMs_BB	IVMs_BB	06 37 51.7	
	comp=Z,2µm,19.6s						
SKHT	Srikalahasti	151.15	98	*e*PKPbc	PKPdf	05 31 25.2	+2.5
SKHT				*e*PP	PP	05 35 05.2	-1.7
SKHT				IVMs_BB	IVMs_BB	06 36 54.6	
	comp=Z,922nm,20.2s						
INU	Inuyama	151.15	308		PKPbc	05 31 26.2	-1.9
INU				PKPab	PKPab	05 31 33.7	-2.1
INU				IAMs_20	IAMs_20	06 47 11.4	
	comp=Z,4µm,20.0s						
JAGI	Jajag, Banyuwa	151.23	190	PKP	PKPdf	05 31 13.1	-10
JAGI	Jajag, Banyuwa	151.23	190		PKPbc	05 31 28.1	-0.8
BBSI	Bau Bau	151.40	209	PKP	PKPdf	05 31 13.9	-9.4
SRBI	Singaraja	151.41	193	PKP	PKPdf	05 31 13.6	-10
NJS	Nagarjunasagar	151.45	92	*e*PKPbc	PKPbc	05 31 26.1	-3.2
NJS				*e*PP	PP	05 35 08.6	-0.2
NJS				IVMs_BB	IVMs_BB	06 40 31.8	
	comp=Z,2µm,17.9s						
RPR	Rampur	151.82	87	*e*PKPbc	PKPdf	05 31 26.8	+3.1
ADKI	Addanki	151.92	94	*e*PKPbc	PKPbc	05 31 27.2	-3.2
ADKI				*e*PP	PP	05 35 11.7	+0.3
ADKI				IVMs_BB	IVMs_BB	06 32 52.9	
	comp=Z,1µm,23.8s						
PWJI	Pagerwojo	151.97	186	PKP	PKPdf	05 31 14.9	-9.2
UGM	Wanagama	152.17	183	PKP	PKPdf	05 31 16.0	-8.4
UGM	Wanagama	152.17	183	IAMs_20	IAMs_20	06 37 25.8	
	comp=Z,4µm,20.0s						
SONM	Songino Array	152.20	4	PKPbc	PKPbc	05 31 29.0	-1.3
	comp=Z,8.7nm,0.7s,baz=330,slow=0.8,SNR=17						
SONM	Songino Array	152.20	4	PKIKP	PKPdf	05 31 22.7	-0.9
SONM						05 31 29.4	
SONM	Songino Array	152.20	4		PKPdf	05 31 22.7	-0.9
SONM					PKPbc	05 31 29.4	-0.9
ULN	Ulaanbaatar	152.21	3	PKIKP	PKPbc	05 31 29.3	-1.0
ULN	Ulaanbaatar	152.21	3	PKPbc	PKPbc	05 31 29.3	-1.0
WOJI	Wonogiri, Jawa	152.22	184	PKP	PKPdf	05 31 14.9	-10
GGR	Gangavaram	152.52	90	*e*PKPbc	PKPbc	05 31 28.1	-3.7
GGR				*e*PP	PP	05 35 14.5	-0.4
GGR				IVMs_BB	IVMs_BB	06 36 49.7	
	comp=Z,2µm,20.2s						
SANI	Sanana	152.52	219	PKP	PKPdf	05 31 13.9	-11
CISI	Cisompet, Garu	152.53	177	PKP	PKPdf	05 31 16.2	-8.8
CISI	Cisompet, Garu	152.53	177		PKPdf	05 31 27.4	+2.4
CISI				PKPab	sPKPbc	05 31 37.0	+3.3
BKSI	Bulukumba	152.57	204	PKP	PKPdf	05 31 15.7	-9.3
KMMI	Kalianget	152.65	190	PKP	PKPdf	05 31 17.2	-7.9
CN2	Changchun	152.69	334	*e*PKPbc	PKPdf	05 31 21.5	-2.8
CN2				AMB	AMB		
	comp=Z,400nm,11.2s						
CN2				LR	LR		
	comp=Z,4µm,22.0s						
CN2				LR	LR		
	comp=Z,2µm,22.0s						
CN2				LR	LR		
	comp=Z,6µm,21.5s						
CNJI	Cibinong	152.73	176	PKP	PKPdf	05 31 18.0	-7.2
MYLAV	Mylavaram	152.74	92	*e*PKPbc	PKPbc	05 31 28.9	-3.2
MYLAV				*e*PP	PP	05 35 14.5	-1.5
MYLAV				IVMs_BB	IVMs_BB	06 38 34.7	
	comp=Z,2µm,18.6s						
KPJI	Karang Pucung	152.78	179	PKP	PKPdf	05 31 17.5	-7.8
KAPI	Kappang	153.00	204	PKPbc	PKiKP	05 31 35.7	+2.6
	comp=Z,41nm,1.1s,baz=158,slow=1.0,SNR=14						
SMRI	Semarang	153.03	183	PKP	PKPdf	05 31 17.5	-8.2
LEM	Lembang	153.24	177	PKPbc	PKiKP	05 31 35.8	+2.0
	comp=Z,25nm,0.6s,baz=189,slow=9.6,SNR=3.5						
LEM	Lembang	153.24	177	PKP	PKPdf	05 31 19.1	-7.1
UWJI	Ujung Watu	153.63	184	PKP	PKPdf	05 31 18.8	-7.7
PVM	Polavaram	153.76	92	*e*PKPbc	PKPdf	05 31 29.8	+3.3
PVM				*e*PP	PP	05 35 20.4	-1.4
TNTI	Ternate	153.84	225	PKP	PKPdf	05 31 16.5	-10
SPSI	Sidrap Palu	153.95	205	PKP	PKPdf	05 31 23.7	-3.3
KASI	Kota Agung	154.16	169	PKP	PKPdf	05 31 18.8	-8.5
LWLI	Liwa	154.58	168	PKP	PKPdf	05 31 21.7	-6.3
SNY	Shenyang	155.10	334	⇑PKP	PKPdf	05 31 29.4	+1.7
SNY				SKKS		05 42 21.0	
SNY				SS	SS	05 55 11.3	-0.1
SNY				AMB	AMB		
	comp=Z,2µm,10.9s						
SNY				LR	LR		
	comp=Z,4µm,22.5s						
SNY				LR	LR		
	comp=Z,7µm,20.6s						
MDSI	Maura Dua	155.12	168	PKP	PKPdf	05 31 20.4	-8.2
LUWI	Luwuk	155.15	214	PKP	PKPdf	05 31 21.4	-7.3
LUWI	Luwuk	155.15	214	IAMs_20	IAMs_20	06 34 15.5	
	comp=Z,4µm,21.0s						
DANN	Dangsing	155.43	65	*e*P	PKPdf	05 31 29.3	+0.3
	comp=Z,419nm,0.8s						
KBKI	Kotabaru	155.79	197	PKP	PKPdf	05 31 21.1	-8.4
KMSI	Cibinong	155.81	219	PKP	PKPdf	05 31 22.2	-7.4
KSRS	Korea Array	156.19	321	PKP	PKPdf	05 31 30.0	+0.7
	comp=Z,2.9nm,0.9s,baz=34,slow=1.2,SNR=8.1						
CHLP	Challavanipeta	156.25	89	*e*PKPdf	PKPdf	05 31 30.8	+0.9
CHLP				*e*PP	PP	05 35 37.5	+1.8
CHLP				IVMs_BB	IVMs_BB	06 37 59.0	
	comp=Z,2µm,23.5s						
PMBI	Palembang	156.75	169	IAMs_20	IAMs_20	06 48 29.8	
	comp=Z,4µm,19.0s						
DMN	Daman	156.77	67	*e*P	PKPdf	05 31 32.8	+2.1
MRSI	Marisa	156.87	214	PKP	PKPdf	05 31 22.4	-8.5
KKN	Kakani	156.87	66	*e*P	PKPdf	05 31 33.0	+2.2
PKIN	Phulchoki	157.02	66	*e*P	PKPdf	05 31 33.2	+2.1
PKI	Pulchoki	157.04	66	*e*P	PKPdf	05 31 33.3	+2.1
GUN	Gumba	157.35	65	*e*P	PKPdf	05 31 33.9	+2.3
JIRN	Jiri	157.69	66	*e*P	PKPdf	05 31 34.0	+1.9
SDSI	Sungai Dareh	157.80	159	PKP	PKPdf	05 31 24.2	-7.9
RAMN	Ramite	158.21	67	*e*P	PKPdf	05 31 33.9	+1.3
DL2	Dalian	158.35	333	PKP	PKPdf	05 31 39.0	+7.0
DL2				PP	PP	05 35 48.3	+2.7
DL2				SS	SS	05 55 49.4	+3.0
DL2				AMB	AMB		
	comp=Z,1µm,11.7s						
DL2				LR	LR		
	comp=Z,3µm,22.2s						
DL2				LR	LR		
	comp=Z,2µm,24.1s						
DL2				LR	LR		
	comp=Z,5µm,21.6s						
BKNI	Bangkinang	158.83	157	IAMs_20	IAMs_20	06 46 26.6	
	comp=Z,4µm,20.0s						
ODAN	Odare	158.92	67	*e*P	PKPdf	05 31 35.2	+1.8
TAPN	Taplejung	159.07	66	*e*P	PKPdf	05 31 35.4	+1.8
GTA	Gaotai	159.10	21	⇑PKP	PKPdf	05 31 33.4	+0.3
GTA				PP	PP	05 35 52.1	+2.5
GTA				SKS	SKSdf	05 38 34.5	-5.0
GTA				SKKS	SKKSac	05 42 37.8	-2.5
GTA				SS	SS	05 55 54.4	+0.1
GTA				AMB	AMB		
	comp=Z,1µm,9.2s						
GTA				LR	LR		
	comp=Z,4µm,19.4s						
GTA				LR	LR		
	comp=Z,5µm,20.9s						
GTA				LR	LR		
	comp=Z,9µm,20.6s						
HHC	Hu-ho-hao-te	159.18	355	*e*PKP	PKPdf	05 31 33.8	+0.7
HHC				PP	PP	05 35 54.3	+4.5
HHC				SS	SS	05 55 57.1	+2.5
HHC				AMB	AMB		
	comp=Z,3µm,9.0s						
HHC				LR	LR		
	comp=Z,4µm,19.2s						
HHC				LR	LR		
	comp=Z,8µm,20.0s						
BJI	Beijing	159.20	345	PKP	PKPdf	05 31 34.1	+1.1
BJI				PP	PP	05 35 52.1	+2.3
BJI				AMB	AMB		
	comp=Z,1µm,7.8s						
BJI				LR	LR		
	comp=Z,4µm,20.2s						
BJI				LR	LR		
	comp=Z,3µm,21.6s						
BJI				LR	LR		
	comp=Z,5µm,20.6s						
DAV	Davao City (W)	159.51	233	IAMs_20	IAMs_20	06 36 56.4	
	comp=Z,4µm,19.0s						

BTO	Baotou	159.51	358	ePKP	PKPdf	05 31 38.5	+5.0
RPSI	Rantau Prapat	160.05	149		PKPdf	05 31 36.7	+1.9
PSI	Prapat	160.14	148	PKP	PKPdf	05 31 36.7	+1.6
	comp=Z,2.7nm,0.4s,baz=223,slow=7.1,SNR=8.9						
KCSI	Kotacane, Aceh	160.16	144	PKP	PKPdf	05 31 27.6	-7.3
LSA	Lhasa	161.06	56	PKP	PKPdf	05 31 36.9	+0.9
LSA				LR	LR		
	comp=Z,6µm,24.2s						
LSA				LR	LR		
	comp=Z,16µm,30.3s						
TIY	Taiyuan	162.18	352	ePKP	PKPdf	05 31 42.8	+6.4
TIY				PKPab	sPKPab	05 32 25.4	+0.7
TIY				PP	PP	05 36 08.9	+3.0
TIY				SS	SS	05 56 31.3	+5.2
TIY				AMB	AMB		
	comp=Z,610nm,9.0s						
TIY				LR	LR		
	comp=Z,3µm,17.2s						
TIY				LR	LR		
	comp=Z,8µm,21.1s						
TIA	Tai'an	162.46	338	PKP	PKPdf	05 31 44.3	+7.6
TIA				PP	PP	05 36 12.3	+4.7
TIA				SS	SS	05 56 32.9	+3.6
TIA				LR	LR		
	comp=Z,3µm,19.6s						
TIA				LR	LR		
	comp=Z,8µm,21.9s						
LZH	Lanzhou	163.36	15	⇑PKP	PKPdf	05 31 31.8	-6.0
LZH				pPKP	sPKPdf	05 31 44.4	+4.9
LZH				PP	PP	05 36 13.4	+1.0
SSE	Sheshan	164.58	318	PKP	PKPdf	05 31 33.1	-5.7
SSE				PP	PP	05 36 18.5	-0.9
NJ2	Nanjing	165.24	326	ePKP	PKPdf	05 31 40.0	+0.7
NJ2				SKKS		05 43 13.3	
NJ2				SS	SS	05 56 59.9	+1.3
NJ2				AMB	AMB		
	comp=Z,1µm,11.4s						
NJ2				LR	LR		
	comp=Z,4µm,19.9s						
NJ2				LR	LR		
	comp=Z,6µm,19.9s						
XAN	Xi'an	166.07	1	PKP	PKPdf	05 31 45.9	+5.9
XAN				PKPab	sPKPab	05 32 49.8	+7.9
XAN				PP	PP	05 36 30.3	+4.0
XAN				AMB	AMB		
	comp=Z,2µm,7.7s						
XAN				LR	LR		
	comp=Z,5µm,25.9s						
XAN				LR	LR		
	comp=Z,5µm,23.7s						
XAN				LR	LR		
	comp=Z,7µm,26.5s						
CD2	Chengdu	168.15	23	PKP	PKPdf	05 31 45.0	+3.3
CD2				sPKP		05 31 49.5	
CD2				PP	PP	05 36 40.0	+2.7
CD2				SKKS		05 43 30.0	
CD2				SS	SS	05 57 29.3	+1.7
CD2				AMB	AMB		
	comp=Z,4µm,8.4s						
CD2				LR	LR		
	comp=Z,11µm,22.1s						
CD2				LR	LR		
	comp=Z,9µm,22.1s						
CD2				LR	LR		
	comp=Z,11µm,21.1s						
SMPP	San Manuel, Pa	168.39	252	eP	PKPdf	05 31 47.3	+5.1
WHN	Wuhan	168.56	337	PKP	PKPdf	05 31 47.6	+5.8
WHN				AMB	AMB		
	comp=Z,3µm,10.7s						
WHN				LR	LR		
	comp=Z,6µm,16.1s						
WHN				LR	LR		
	comp=Z,9µm,19.0s						
WHN				LR	LR		
	comp=Z,15µm,23.9s						
QZH	Quanzhou	170.03	301	i PKP	PKPdf	05 31 46.6	+3.7
QZH				PKPab	sPKPab	05 33 00.9	+1.6
QZH				PP	PP	05 36 55.8	+7.7
QZH				SS	SS	05 57 48.3	-0.4
QZH				AMB	AMB		
	comp=Z,2µm,6.6s						
QZH				LR	LR		
	comp=Z,890nm,21.8s						
QZH				LR	LR		
	comp=Z,4µm,22.2s						
QZH				LR	LR		
	comp=Z,6µm,18.9s						
CMAR	Chiang Mai Arr	170.21	98	PKP	PKPdf	05 31 45.2	+2.0
	comp=Z,1.7nm,0.3s,baz=274,slow=1.9,SNR=18						
CMAR				PKPab	PKPab	05 32 59.4	+0.2
	comp=Z,3.4nm,0.6s,baz=266,slow=4.3,SNR=5.6						
KMI	Kunming	172.21	49	PKP	PKPdf	05 31 42.8	-1.5
KMI				pPKP	sPKPdf	05 31 49.5	+3.4
GYA	Guiyang	173.23	19	i PKP	PKPdf	05 31 42.5	-2.1
GYA				PKPab	PKPab	05 33 12.0	-0.1
GYA				PKS		05 35 13.3	
GYA				PP	PP	05 37 13.3	+11
GYA				SS	SS	05 58 15.5	-2.2
GYA				AMB	AMB		
	comp=Z,2µm,12.1s						
GYA				LR	LR		
	comp=Z,6µm,20.9s						
GYA				LR	LR		
	comp=Z,7µm,19.5s						
GYA				LR	LR		
	comp=Z,6µm,20.0s						
GZH	Guangzhou	175.09	309	PKP	PKPdf	05 31 47.5	+2.4
GZH				PP	PP	05 37 18.1	+5.4
GZH				SS	SS	05 58 36.3	-1.2
GZH				LR	LR		
	comp=Z,2µm,21.1s						
GZH				LR	LR		
	comp=Z,6µm,21.1s						

IDC ***17*** *05:17:58.5±0.9, 20°.03S×70°.73W, h0km, mb4.5/8, mb1 4.9/9, mb1mx4.4/38, mbtmp4.6/9, Error ellipse: s-maj=29.6km s-min=28.0km az=97.0*

ISC 17 05:17:58.8±1.4**, 20°.3S**±0°.3×**70°.7W**±0°.1**, h10km, n13, σ0^{s}.66**/12**, mb4.7**/7**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIV	San Ignacio	10.08	67	Pn	Pn	05 20 23.5	-0.3
	baz=253,slow=19,SNR=1.6						
PLCA	Paso Flores	20.41	180	P	Pn	05 22 40.7	+2.5
	23nm,0.9s,baz=300,slow=8.1,SNR=2.8						
PTGA	Pitinga	22.07	30	P	P	05 22 54.8	+0.8
	47nm,0.9s,baz=277,slow=17,SNR=2.9						
TXAR	Lajitas Array	58.67	326	P	P	05 27 56.0	-0.7
	2.7nm,0.9s,baz=140,slow=7.9,SNR=4.3						
PDAR	Pinedale Array	72.22	331	P	P	05 29 24.1	-0.3
	1.2nm,0.8s,baz=147,slow=8.4,SNR=3.2						
NVAR	Mina Array Bea	73.50	323	P	P	05 29 32.4	+0.4
	3.1nm,0.9s,baz=150,slow=7.2,SNR=5.0						
TORD	Torodi Ar. Bea	78.53	71	P	P	05 30 01.1	+0.2
	6.6nm,0.8s,baz=255,slow=5.0,SNR=4.5						
YKA	Yellowknife Ar	89.48	341	P	P	05 30 55.1	-0.6
	5.4nm,0.9s,baz=139,slow=4.8,SNR=4.9						
DLBC	Dease Lake	92.35	333	P	P	05 31 10.6	+1.3
	4.9nm,0.9s,baz=148,slow=13,SNR=3.9						
ZALV	Zalesovo Beam	141.51	23	PKP	PKPdf	05 37 29.9	-0.1
	1.8nm,0.5s,baz=287,slow=3.2,SNR=2.4						
MKAR	Makanchi Array	145.57	34	PKPbc	PKPab	05 37 37.9	+0.1
	10nm,0.9s,baz=320,slow=3.2,SNR=5.9						
SIJI	Sorong	149.94	228	PKPbc	PKiKP	05 37 51.7	+0.3
	5.7nm,0.4s,baz=143,slow=20,SNR=4.3						
MJAR	Matsushiro Arr	150.00	309	PKPbc	PKiKP	05 37 50.3	-0.6
	7.8nm,0.9s,baz=109,slow=1.8,SNR=4.4						

IDC ***17*** *05:19:32.9±0.6, 19°.84S×70°.54W, h0km, mb4.5/18, mb1 4.7/22, mb1mx4.5/44, mbtmp4.6/22, ML4.0/4, Error ellipse: s-maj=21.8km s-min=11.8km az=53.0*

NEIC ***17*** *05:19:34.3±2.1, 19°.96S±0°.04×70°.85W±0°.05, h10km±1km, mb5.0/128, ML5.1(GUC), Error ellipse: s-maj=8.0km s-min=7.1km az=324.0*

SJA ***17*** *05:19:34.4±1.2, 20°.00S×70°.81W, h6km±5km, ML4.7, MW4.4*

GUC ***17*** *05:19:35.2±0.7, 19°.99S×70°.89W, h36km±2km, ML5.1*

ISC 17 05:19:33.6±1.2**, 19°.97S**±0°.02×**70°.88W**±0°.04**, h8km**±7km**, n412, σ1^{s}.45**/431**, mb5.0**/62**, 2C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.81	63	eP	Pb	05 19 50.3	+0.3
PSGC				eS	Sb	05 20 01.6	+0.5
PSGCX	Pisagua	0.81	63	i P	Pb	05 19 50.4	+0.4
PSGCX				eS	Sn	05 20 01.7	-1.9
TA01	Diego Aracena	0.88	132	eP	Pb	05 19 51.0	-0.2
TA01				i S	Sn	05 20 04.4	-0.9
TA01				IAML		05 20 05.7	
	comp=N,96µm,0.3s						
PATCX	Punta Patache	1.09	141	eP	Pg	05 19 54.4	-0.1
PATCX				i S	Sb	05 20 08.9	-0.2
PATCX				IAML		05 20 14.7	
	comp=E,63µm,0.4s						
PATCX	Punta Patache	1.09	141	i P	Pg	05 19 54.6	+0.1
PB11	IPOC Station P	1.17	80	⇓i P	Pn	05 19 56.2	-0.2
PB11				eS	Sn	05 20 12.3	-0.4
PB11				IAML		05 20 14.9	
	comp=E,87µm,0.8s						
PB11	IPOC Station P	1.17	80		Pn	05 19 56.3	-0.2
PB11					Sn	05 20 12.9	+0.2
PB11	IPOC Station P	1.17	80	i P	Pn	05 19 56.4	-0.1
PB11				eS	Sn	05 20 12.4	-0.4
PB11				IAML		05 20 15.1	
	comp=Z,27µm,1.2s						
PB12	IPOC Station P	1.45	21	eP	Pb	05 20 01.0	+0.1
PB12				i S	Sg	05 20 19.9	-0.4
PB12				IAML		05 20 28.3	
	comp=N,32µm,0.5s						
PB12	IPOC Station P	1.45	21	i P	Pg	05 20 01.8	+0.4
PB12				eS	Sg	05 20 20.4	+0.1
PB12				IAML		05 20 30.4	
	comp=Z,19µm,1.8s						
GO01	Chusmiza	1.62	80	eP	Pg	05 20 04.2	-0.5
GO01				i S	Sg	05 20 25.8	0.0
GO01				IAML		05 20 30.1	
	comp=N,37µm,0.6s						
GO01	Chusmiza	1.62	80		Pb	05 20 03.7	-0.3
PB02	IPOC Station P	1.63	146	eP	Pn	05 20 03.2	+0.5
PB02				eS	Sb	05 20 24.2	-0.5
PB02	IPOC Station P	1.63	146	i P	Pg	05 20 05.0	+0.1
PB02				eS	Sg	05 20 25.7	-0.3
PB02				IAML		05 20 30.2	
	comp=Z,22µm,0.3s						
PB08	IPOC Station P	1.63	96	⇓eP	Pb	05 20 03.9	-0.3
PB08				eS	Sg	05 20 26.2	0.0
PB08				IAML		05 20 29.2	
	comp=N,35µm,0.4s						
PB08	IPOC Station P	1.63	96	i P	Pb	05 20 04.4	+0.2
PB08				eS	Sg	05 20 26.0	-0.3
PB08				IAML		05 20 31.1	
	comp=Z,8µm,0.9s						
AP01	Chacalluta	1.67	18	eP	Pg	05 20 05.9	+0.1
AP01				i S	Sg	05 20 27.2	-0.3
PB01	IPOC Station P	1.69	129	eP	Pn	05 20 03.9	+0.4
PB01				i S	Sn	05 20 25.4	+0.1
PB01				IAML		05 20 32.8	
	comp=N,47µm,0.4s						
PB01	IPOC Station P	1.69	129		Pg	05 20 06.1	+0.1
PB01				Sn	Sb	05 20 26.8	+0.4
PB07	IPOC Station P	1.98	152	eP	Pb	05 20 09.8	-0.1
PB07				i S	Sg	05 20 36.2	-1.1
PB07	IPOC Station P	1.98	152	i P	Pb	05 20 10.3	+0.3
PB07				eS	Sg	05 20 36.4	-0.9
PB07				IAML		05 20 47.5	
	comp=Z,5µm,0.5s						
PB16	IPOC Station P	2.08	39	i P	Pg	05 20 13.2	-0.5
PB16				eS	Sg	05 20 40.6	-0.1
PB03	IPOC Station P	2.32	153	i P	Pb	05 20 14.9	-0.9
PB03				eS	Sg	05 20 48.4	+0.2
PB03				IAML		05 20 53.7	
	comp=Z,5µm,0.4s						
PB09	IPOC Station P	2.38	140	i P	Pb	05 20 17.4	+0.6
PB09				eS	Sg	05 20 48.8	-1.2
PB04	IPOC Station P	2.45	164		Pn	05 20 14.8	+0.8
PB04	IPOC Station P	2.45	164	i P	Pn	05 20 12.5	-1.5
PB05	IPOC Station P	2.94	168	i P	Pn	05 20 20.2	-0.5
PB05				IAML		05 21 26.3	
	comp=Z,1µm,0.6s						
PB06	IPOC Station P	2.98	156	i P	Pn	05 20 22.0	+0.7
LVC	Limon Verde	3.21	145	Pn	Pn	05 20 25.6	+1.0
	comp=Z,87nm,0.3s,baz=340,slow=13,SNR=2.8						
LVC				Sn	Sn	05 21 04.2	+1.0
	comp=Z,546nm,0.3s,baz=59,slow=12,SNR=3.6						
LVC				Lg	Lg	05 21 11.9	
	comp=Z,271nm,0.3s,baz=333,slow=17,SNR=3.8						
LVC	Limon Verde	3.21	145		Pn	05 20 27.0	+2.4
LVC				Sn	Sn	05 21 04.5	+1.4
LVC	Limon Verde	3.21	145	i P	Pn	05 20 27.2	+2.6
LVC				IAML		05 21 17.1	
	comp=Z,4µm,1.4s						
PB10	IPOC Station P	3.54	175		Pn	05 20 28.2	-0.6
PB10	IPOC Station P	3.54	175	i P	Pn	05 20 27.0	-1.8
LPAZ	La Paz	4.50	36	Pn	Pb	05 20 50.0	-3.3
	comp=Z,6.4nm,0.3s,baz=222,slow=5.7,SNR=6.5						
LPAZ	La Paz	4.50	36	Pn	Pn	05 20 43.3	+0.6
LPAZ	La Paz	4.50	36	i P	Pb	05 20 50.9	-2.4
GO02	Mina Guanaco	5.30	167		Pn	05 20 53.9	+0.5
GO02				Sn	Sn	05 21 55.0	+0.2
HJA	Humahuaca	6.03	123	i P	Pb	05 21 11.8	-7.3
HJA				IAML		05 23 25.4	
	comp=Z,138nm,0.6s						
SLA	San Lorenzo	6.86	134	i P	Pn	05 21 23.9	+9.2
GO03	Copiap	7.61	176	Pn	Pn	05 21 24.3	-0.6
GO03					Sn	05 22 46.7	-4.6
NNA	Nana	9.79	323	Pn	Pn	05 21 56.3	+1.5
	comp=Z,1.6nm,0.3s,baz=138,slow=12,SNR=3.5						
NNA				Sn	Sn	05 23 38.0	-7.0
	comp=Z,3.2nm,0.3s,baz=214,slow=16,SNR=3.5						
NNA	Nana	9.79	323	Pn	Pn	05 21 56.6	+1.8
SIV	San Ignacio	10.14	69	Pn	Pn	05 22 00.1	+0.5
	comp=Z,17nm,0.3s,baz=274,slow=8.2,SNR=13						
GO04	Tololo Observa	10.16	180	Pn	Pn	05 22 00.7	+0.8
CFA	Coronel Fontan	11.82	169	Pn	Pn	05 22 21.8	-0.9
	comp=Z,0.7nm,0.3s,baz=11,slow=16,SNR=3.0						
SAML	Samuel	13.25	35	Pn	Pn	05 22 44.4	+2.2
CPUP	Villa Florida	13.97	119	Pn	Pn	05 22 50.7	-1.3
	comp=Z,0.1nm,0.3s,baz=293,slow=18,SNR=1.7						
CPUP	Villa Florida	13.97	119		Pn	05 22 53.5	+1.5
GO05	Huala	15.01	183		Pn	05 23 05.8	-0.3
GO05				IAmb	IAmb	05 23 06.2	
	comp=Z,141nm,1.4s						
GO06	Curarrehue	19.55	181	P	P	05 24 02.1	+0.2
GO06				IAmb	IAmb	05 24 04.3	
	comp=Z,56nm,0.9s						
PLCA	Paso Flores	20.70	179	P	Pn	05 24 16.2	-0.3
	comp=Z,23nm,0.9s,baz=5.1,slow=13,SNR=3.8						
PLCA	Paso Flores	20.70	179	P	P	05 24 15.2	+1.0
PTGA	Pitinga	21.91	30	P	P	05 24 24.8	-2.6
	comp=Z,42nm,0.9s,baz=204,slow=22,SNR=5.5						
PTGA	Pitinga	21.91	30	P	P	05 24 26.2	-1.2
PTGA				IAmb	IAmb	05 24 32.8	
	comp=Z,73nm,1.0s						
FLOC	Florencia	21.93	347		P	05 24 27.6	0.0
BDFB	Brasilia	22.19	82	P	P	05 24 26.8	-3.8
	comp=Z,35nm,0.9s,baz=251,slow=7.6,SNR=2.6						
BDFB	Brasilia	22.19	82	P	P	05 24 29.1	-1.4
BDFB				IAmb	IAmb	05 24 31.0	
	comp=Z,57nm,1.1s						
ROSC	El Rosal	24.89	352	P	P	05 24 55.7	-1.7
RUSC	La Rusia	25.79	355	P	P	05 25 06.8	+1.0
SVB	Belmont	34.37	17	P	P	05 26 20.4	-0.8
RCBR	Riachuelo	36.78	72	P	P	05 26 39.6	-2.5
	comp=Z,11nm,0.8s,baz=306,slow=0.6,SNR=4.9						
RCBR	Riachuelo	36.78	72	P	P	05 26 41.5	-0.5
OBIP	Obispado Ponce	38.01	7	P	P	05 26 52.1	-0.2
PDPR	Patillas Dam,	38.05	8	P	P	05 26 52.8	+0.1
MPR	Mayaguez	38.12	6	P	P	05 26 53.2	-0.1
GCPR	Guaynabo City	38.34	7	P	P	05 26 54.4	-0.7
GCPR				IAmb	IAmb	05 26 58.3	
	comp=Z,21nm,1.2s						
APG	El Apazote	39.74	330	P	P	05 27 08.2	+1.1
	comp=Z,5.7nm,0.9s,baz=144,slow=19,SNR=2.7						
TEIG	Tepich	43.43	336	P	P	05 27 38.8	+1.7
CMIG	Matias Romero	43.73	326	P	P	05 27 39.7	+0.1
	comp=Z,4.0nm,0.9s,baz=146,slow=3.6,SNR=2.8						
TLIG	Tlapa	46.15	322	P	P	05 27 58.8	-0.2
656A	Willston	50.33	347	P	P	05 28 31.2	+0.3
X59A	McDuffie Farm,	54.74	352	P	P	05 29 04.1	+0.6
	baz=171						
Y52A	Lilburn	54.99	347	P	P	05 29 06.1	+0.7
	baz=165						
X56A	White Oak	55.02	350	P	P	05 29 07.8	+2.2
	baz=168						
342A	Flagon Creek P	55.05	338	P	P	05 29 06.3	+0.4
BIRD	Birdtown, Kers	55.07	350	P	P	05 29 08.1	+2.1
W58A	Raeford	55.26	352	P	P	05 29 09.1	+1.8
	baz=170						
833A	Chaparral WMA,	55.36	329	P	P	05 29 09.7	+1.5
833A				IAmb	IAmb	05 29 10.6	
	comp=Z,22nm,0.9s						
833A	Chaparral WMA,	55.36	329	P	P	05 29 09.6	+1.4
	baz=147						
W56A	Indian Trail	55.57	350	P	P	05 29 11.1	+1.5
	baz=169						
KMSC	Kings Mountain	55.70	350	P	P	05 29 11.8	+1.3
	baz=168						
X51A	Calhoun	55.84	346	P	P	05 29 13.2	+1.7
	baz=164						
V59A	Middlesex	55.87	353	P	P	05 29 13.5	+1.8
	baz=172						
V58A	Windy Hill, Pi	56.01	352	P	P	05 29 13.7	+1.1
	baz=171						
V56A	Mocksville	56.22	351	P	P	05 29 15.5	+1.3
	baz=169						
Z41A	Richland Creek	56.92	338	P	P	05 29 20.5	+1.3
	baz=155						
T59A	Double "B" Far	56.99	354	P	P	05 29 19.7	+0.1
T59A	Double "B" Far	56.99	354	P	P	05 29 21.2	+1.6
	baz=173						
T57A	Hurt	57.21	352	P	P	05 29 21.5	+0.2
T57A	Hurt	57.21	352	P	P	05 29 23.2	+2.0
	baz=171						
JCT	Junction City	57.36	330	P	P	05 29 23.6	+1.1
	baz=147						
WLAR	White Oak Lake	57.42	338	P	P	05 29 21.7	-1.1
TZTN	Tazewell	57.47	348	P	P	05 29 21.4	-1.7
TZTN				IAmb	IAmb	05 29 24.2	
	comp=Z,19nm,1.2s						
T55A	Pulaski	57.55	351	P	P	05 29 25.3	+1.7
	baz=169						
T52A	Hallie	57.91	349	P	P	05 29 26.4	+0.3
T52A				IAmb	IAmb	05 29 28.9	
	comp=Z,23nm,1.2s						
T52A	Hallie	57.91	349	P	P	05 29 28.1	+1.9
	baz=167						
U49A	Red Boiling Sp	57.92	346	P	P	05 29 25.9	-0.3
U49A				IAmb	IAmb	05 29 34.8	
	comp=Z,34nm,1.5s						
S57A	Dark Hollow, R	57.92	352	P	P	05 29 27.4	+1.1
S57A				IAmb	IAmb	05 29 36.4	
	comp=Z,14nm,0.8s						
S57A	Dark Hollow, R	57.92	352	P	P	05 29 28.0	+1.8
	baz=171						
R58B	Mineral	58.00	353	P	P	05 29 27.4	+0.7
R58B				IAmb	IAmb	05 29 31.8	
	comp=Z,20nm,1.2s						
WVT	Waverly	58.06	344	P	P	05 29 26.8	-0.4
WVT				IAmb	IAmb	05 29 28.2	
	comp=Z,26nm,1.4s						
S55A	Lewisburg	58.15	351	P	P	05 29 29.1	+1.2
	baz=169						
T50A	Nancy	58.20	347	P	P	05 29 29.4	+1.2
	baz=165						
S54A	Dingess, Beckl	58.30	350	P	P	05 29 30.8	+1.9
	baz=168						
S53A	Williamson	58.31	350	P	P	05 29 30.3	+1.2
	baz=168						
TXAR	Lajitas Array	58.33	326	P	P	05 29 29.4	-0.1
	comp=Z,6.3nm,1.1s,baz=149,slow=8.1,SNR=6.8						
TX31	Lajitas Ar. Si	58.33	326	P	P	05 29 29.4	0.0
R58A	Rapidan	58.35	353	P	P	05 29 29.8	+0.7
	baz=172						
MIAR	Mount Ida	58.36	338	P	P	05 29 29.5	+0.1
MIAR				IAmb	IAmb	05 29 31.3	
	comp=Z,11nm,0.8s						
MIAR	Mount Ida	58.36	338	P	P	05 29 30.6	+1.3
	baz=155						
T49A	Edmonton	58.43	346	P	P	05 29 29.7	-0.1
T49A	Edmonton	58.43	346	P	P	05 29 30.3	+0.5
	baz=164						
T47A	Sharon Grove	58.69	345	P	P	05 29 31.8	+0.2
T47A				IAmb	IAmb	05 29 41.0	
	comp=Z,15nm,0.9s						
S50A	Richmond	58.74	347	P	P	05 29 32.7	+0.8
	baz=165						
W39A	Magazine	59.02	338	P	P	05 29 35.6	+1.7
	baz=155						
S49A	Springfield	59.03	347	P	P	05 29 35.0	+1.0
	baz=164						
ABTX	Abilene, Hawle	59.09	332	P	P	05 29 35.8	+1.2
	baz=148						
Q57A	Strasburg	59.12	353	P	P	05 29 35.7	+1.1
	baz=172						
R51A	Hillsboro	59.18	348	P	P	05 29 36.5	+1.5
	baz=166						
Q52A	Bidwell	59.59	350	P	P	05 29 39.6	+1.8
	baz=168						
P60A	Greenville	59.64	356	P	P	05 29 39.7	+1.6
	baz=175						
WCI	Wyandotte Cave	59.68	346	P	P	05 29 38.0	-0.4
	baz=163						
U40A	Yellville	59.75	340	P	P	05 29 40.3	+1.3
	baz=156						
P55A	Reedsville	59.76	352	P	P	05 29 40.1	+1.1
	baz=170						
P54A	Burton	59.94	351	P	P	05 29 42.0	+1.8
	baz=170						
O58A	Lewisberry	60.05	355	P	P	05 29 42.8	+1.8
	baz=174						
Q48A	North Vernon	60.22	347	P	P	05 29 43.4	+1.3
	baz=164						
MGMO	Mountain Grove	60.29	340	P	P	05 29 43.9	+1.1
O56A	Blue Knob Stat	60.35	353	P	P	05 29 41.7	-1.4
O56A	Blue Knob Stat	60.35	353	P	P	05 29 45.5	+2.4
	baz=172						
TUL1	Leonard	60.38	337	P	P	05 29 43.1	-0.2
TUL1				IAmb	IAmb	05 29 45.2	
	comp=Z,13nm,0.9s						
O55A	Ligonier	60.38	353	P	P	05 29 45.0	+1.8
	baz=171						
P50A	Jamestown	60.49	349	P	P	05 29 45.2	+1.3
	baz=166						
N61A	South Mountain	60.49	357	P	P	05 29 47.0	+3.0
	baz=176						
CCM	Cathedral Cave	60.81	342	P	P	05 29 45.6	-0.6
CCM				IAmb	IAmb	05 29 48.9	
	comp=Z,12nm,1.2s						
N55A	Marion Center	60.91	353	P	P	05 29 48.4	+1.5
	baz=171						
ACSO	Alum Creek Sta	60.95	349	P	P	05 29 47.2	+0.2
ACSO	Alum Creek Sta	60.95	349	P	P	05 29 48.6	+1.5
	baz=167						
O50A	Cable	60.98	349	P	P	05 29 48.8	+1.5
	baz=166						
MNTX	Cornudas Mount	61.10	327	P	P	05 29 48.7	+0.4
MNTX				IAmb	IAmb	05 29 50.1	
	comp=Z,11nm,1.1s						
MNTX	Cornudas Mount	61.10	327	P	P	05 29 49.0	+0.6
	baz=143,SNR=6.4						
S39A	Bolivar	61.12	340	P	P	05 29 49.4	+1.1
S39A				IAmb	IAmb	05 29 49.9	
	comp=Z,13nm,0.8s						
N53A	Lisbon	61.17	351	P	P	05 29 50.2	+1.6
	baz=169						
N54A	Moraine State	61.21	352	P	P	05 29 49.2	+0.3
M58A	Price’s Panora	61.25	355	P	P	05 29 52.1	+3.0
	baz=174						
M57A	Sunshine Farm,	61.27	355	P	P	05 29 50.0	+0.8
M57A				IAmb	IAmb	05 29 59.0	
	comp=Z,22nm,1.1s						
N52A	McGinn’s Farm,	61.30	351	P	P	05 29 52.0	+2.5
	baz=168						
M59A	Waymart	61.34	356	P	P	05 29 52.3	+2.5
	baz=175						
O48A	Farmland	61.38	348	P	P	05 29 51.7	+1.7
	baz=165						
N50A	Nevada	61.50	349	P	P	05 29 52.6	+1.8
	baz=167						
M56A	Emporium	61.52	354	P	P	05 29 51.3	+0.4
M56A				IAmb	IAmb	05 30 00.8	
	comp=Z,15nm,0.8s						
M56A	Emporium	61.52	354	P	P	05 29 52.3	+1.3
	baz=172						
L63A	North Scituate	61.52	359	P	P	05 29 52.1	+1.2
	baz=179						
M55A	Ridgway	61.56	353	P	P	05 29 51.6	+0.4
M55A	Ridgway	61.56	353	P	P	05 29 52.1	+0.9
	baz=172						
BRYW	Bryant College	61.58	359	P	P	05 29 52.1	+0.8

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MSTX  Muleshoe          61.65 330  P      P       05 29 52.9 +0.8
MSTX                               IAmb   IAmb    05 29 54.5
      comp=Z,21nm,1.1s
MSTX  Muleshoe          61.65 330  P      P       05 29 53.0 +0.8
      baz=146
M54A  Oil Creek Stat    61.71 353  P      P       05 29 54.1 +1.8
M54A  Oil Creek Stat    61.71 353  P      P       05 29 53.6 +1.3
      baz=171
N49A  Columbus Grove    61.83 349  P      P       05 29 53.9 +0.9
N49A  Columbus Grove    61.83 349  P      P       05 29 53.0  -0.1
      baz=166
M51A  Elyria            61.89 350  P      P       05 29 53.4  -0.1
      baz=168
AMTX  Amarillo          61.91 332  P      P       05 29 53.4  -0.4
      baz=147
N48A  Decatur           61.93 348  P      P       05 29 55.7 +2.0
      baz=165
M52A  Chesterland       61.97 351  P      P       05 29 55.5 +1.6
      baz=169
L59A  Walton            61.97 356  P      P       05 29 54.3 +0.3
L59A                               IAmb   IAmb    05 29 58.0
      comp=Z,17nm,1.0s
L59A  Walton            61.97 356  P      P       05 29 55.8 +1.8
      baz=176
BINY  Binghamton        62.04 356  P      P       05 29 55.1 +0.7
BINY                               IAmb   IAmb    05 29 58.9
      comp=Z,20nm,1.1s
L56A  Greenwood         62.10 354  P      P       05 29 56.4 +1.5
L56A  Greenwood         62.10 354  P      P       05 29 56.2 +1.3
      baz=173
L53A  Girard            62.22 352  P      P       05 29 57.0 +1.3
      baz=170
L55A  Hinsdale          62.23 354  P      P       05 29 57.1 +1.3
      baz=172
M49A  Liberty Center    62.33 349  P      P       05 29 58.2 +1.8
      baz=166
K62A  Royalston         62.34 359  P      P       05 29 58.3 +1.9
      baz=179
L54A  Sinclairville     62.38 353  P      P       05 29 58.6 +1.8
      baz=171
WVNY  West Valley, N    62.47 354  P      P       05 29 57.7 +0.4
K59A  Cooperstown       62.54 357  P      P       05 29 59.6 +1.8
      baz=176
K58A  Earlville         62.58 356  P      P       05 29 56.8  -1.3
K58A  Earlville         62.58 356  P      P       05 29 59.9 +1.8
      baz=175
K57A  Scipio Center     62.60 355  P      P       05 30 00.3 +2.1
      baz=174
HDIL  Hopedale          62.61 344  P      P       05 29 60.0 +1.7
      baz=160
K54A  Basiliko Farm,    62.68 354  P      P       05 30 00.8 +2.0
      baz=172
K55A  Perry             62.74 354  P      P       05 30 00.5 +1.4
      baz=172
J62A  Henniker          62.89 359  P      P       05 30 00.8 +0.7
      baz=179
J61A  Chester           63.02 359  P      P       05 30 03.3 +2.3
      baz=178
121A  Cookes Peak, D    63.02 325  P      P       05 30 03.0 +1.5
      baz=141
L47A  Sherwood          63.04 348  P      P       05 30 02.7 +1.5
      baz=165
J58A  Remsen            63.15 356  P      P       05 30 02.8 +0.9
J58A  Remsen            63.15 356  P      P       05 30 04.4 +2.5
      baz=175
J56A  Wolcott           63.17 355  P      P       05 30 04.3 +2.4
      baz=174
J59A  Piesco            63.21 357  P      P       05 30 03.5 +1.2
J59A  Piesco            63.21 357  P      P       05 30 03.4 +1.1
      baz=176
J55A  Hilton            63.25 354  P      P       05 30 05.0 +2.6
      baz=173
L46A  Eue Claire        63.30 347  P      P       05 30 05.1 +2.2
      baz=164
I58A  Old Forge         63.46 357  P      P       05 30 06.2 +2.3
      baz=176
KSU1  Kansas State U    63.51 338  P      P       05 30 05.1 +0.8
      baz=153
J52A  Paris             63.52 352  P      P       05 30 05.4 +1.1
      baz=170
K48A  Perry             63.64 349  P      P       05 30 05.7 +0.6
      baz=166
NCB   Newcomb           63.70 357  P      P       05 30 07.0 +1.5
J48A  Bridge Port       64.07 350  P      P       05 30 09.2 +1.3
      baz=167
I51A  Listowel          64.14 352  P      P       05 30 09.7 +1.4
      baz=169
I55A  Frankford         64.18 355  P      P       05 30 09.7 +1.2
      baz=173
ANMO  Albuquerque       64.22 328  P      P       05 30 09.6 +0.2
      comp=Z,2.2nm,1.0s,baz=130,slow=8.5,SNR=2.7
ANMO  Albuquerque       64.22 328  P      P       05 30 08.9  -0.5
ANMO  Albuquerque       64.22 328  P      P       05 30 09.6 +0.2
      baz=143
H57A  Richville         64.25 356  P      P       05 30 11.2 +2.1
      baz=175
H63A  New Sharon        64.32   1  P      P       05 30 12.6 +3.1
      baz=181
H59A  Cadyville         64.35 358  P      P       05 30 12.1 +2.3
      baz=177
LONY  Lake Ozonia       64.37 357  P      P       05 30 11.5 +1.6
      baz=176
CBKS  Cedar Bluff       64.43 335  P      P       05 30 11.8 +1.4
      baz=150
H56A  Elgin             64.44 356  P      P       05 30 11.9 +1.7
      baz=174
TUC   Tucson            64.51 323  P      P       05 30 12.2 +1.1
      baz=138
H66A  Whiting           64.53   3  P      P       05 30 13.2 +2.4
      baz=184
I49A  Point Hope        64.53 350  P      P       05 30 10.2  -0.7
I49A                               IAmb   IAmb    05 30 14.2
      comp=Z,12nm,0.9s
I49A  Point Hope        64.53 350  P      P       05 30 12.3 +1.4
      baz=168
H53A  Bobcaygeon        64.62 354  P      P       05 30 13.5 +2.1
      baz=172
SADO  Sadowa            64.87 354  P      P       05 30 13.1   0.0
      comp=Z,8.0nm,0.8s,baz=173,slow=1.3,SNR=5.4
SADO  Sadowa            64.87 354  P      P       05 30 14.0 +0.9
SADO                               IAmb   IAmb    05 30 22.3
      comp=Z,19nm,0.9s
G57A  Newington         64.87 357  P      P       05 30 14.5 +1.4
      baz=176
G58A  Ormstown          64.87 358  P      P       05 30 14.5 +1.5
      baz=177
G62A  West of Eustis    64.88   0  P      P       05 30 15.7 +2.6
      baz=180
I47A  Gladwin           64.89 349  P      P       05 30 15.1 +1.8
      baz=166
I48A  Sherman Twp       64.92 350  P      P       05 30 14.3 +0.9
      baz=167
PKME  Peaks-Kenny Pk    64.94   1  P      P       05 30 15.4 +1.9
      baz=182
G61A  St-Isidore-de-    64.94 359  P      P       05 30 15.9 +2.3
      baz=179
SCIA  State Center      64.94 342  P      P       05 30 15.5 +1.9
      baz=157
I46A  Reed City         64.99 348  P      P       05 30 14.7 +0.8
      baz=165
JFWS  Jewell Farm       65.07 344  P      P       05 30 15.0 +0.5
      baz=160
G53A  Haliburton        65.16 354  P      P       05 30 15.9 +0.9
      baz=172
214A  Organ Pipe Nat    65.42 321  P      P       05 30 18.6 +1.6
      baz=136
F64A  Sherman           65.56   2  P      P       05 30 18.6 +1.1
H45A  Beulah            65.76 348  P      P       05 30 21.1 +2.2
      baz=164
F52A  Sundridge         65.90 354  P      P       05 30 20.9 +1.1
      baz=171
ALGO  Algonquin Park    65.93 355  P      P       05 30 21.6 +1.6
      baz=173
H43A  Windswept, Lux    65.96 347  P      P       05 30 20.6 +0.4
H43A                               IAmb   IAmb    05 30 29.4
      comp=Z,11nm,0.7s
SDCO  Great Sand Dun    66.01 330  P      P       05 30 20.0  -1.0
SDCO                               IAmb   IAmb    05 30 24.6
      comp=Z,9.8nm,1.1s
SDCO  Great Sand Dun    66.01 330  P      P       05 30 22.4 +1.4
      baz=144
W18A  Petrified Fore    66.05 326  P      P       05 30 22.5 +1.3
      baz=140
E58A  La Victoria       66.06 358  P      P       05 30 23.1 +2.4
      baz=178
E61A  Lac Etchemin      66.09   0  P      P       05 30 22.6 +1.6
      baz=180
F51A  Arnstein          66.10 353  P      P       05 30 22.4 +1.4
      baz=171
E56A  St. Veronique     66.31 357  P      P       05 30 24.0 +1.6
      baz=176
S22A  4UR Ranch, Cre    66.63 330  P      P       05 30 26.4 +1.3
      baz=143
E51A  G1948 Merrick     66.65 354  P      P       05 30 25.2 +0.7
      baz=171
D62A  Allapoint, All    66.76   1  P      P       05 30 26.4 +1.2
D62A  Allapoint, All    66.76   1  P      P       05 30 26.7 +1.4
      baz=182
D58A  Chemin du LacG    66.78 359  P      P       05 30 27.0 +1.6
      baz=178
D53A  Lac Vacive, Po    67.02 355  P      P       05 30 27.6 +0.7
D53A  Lac Vacive, Po    67.02 355  P      P       05 30 27.6 +0.7
      baz=173
MVCO  Mesa Verde        67.02 328  P      P       05 30 28.4 +0.9
E47A  Iron Bridge       67.06 351  P      P       05 30 28.3 +1.1
      baz=167
BATG  Bathurst New B    67.08   4  P      P       05 30 28.2 +1.0
BATG                               IAmb   IAmb    05 30 28.7
      comp=Z,17nm,1.5s
D51A  Lot 18 Range I    67.19 354  P      P       05 30 29.3 +1.4
      baz=171
WUAZ  Wupatki           67.22 325  P      P       05 30 31.0 +2.3
      baz=139,SNR=5.9
D50A  G1974 Best Tow    67.31 353  P      P       05 30 30.8 +2.1
      baz=171
GLA   Glamis            67.39 321  P      P       05 30 31.4 +1.8
      baz=135
D46A  Sault St. Mari    67.60 350  P      P       05 30 33.8 +3.2
      baz=167
D47A  Chapleau          67.62 351  P      P       05 30 31.4 +0.6
      baz=168
E43A  Lone Tree Farm    67.63 348  P      P       05 30 31.2 +0.4
ECSD  EROS Data Cent    67.65 340  P      P       05 30 32.2 +1.2
ECSD                               IAmb   IAmb    05 30 38.6
      comp=Z,19nm,1.5s
ECSD  EROS Data Cent    67.65 340  P      P       05 30 31.9 +0.9
      baz=154
E44A  Grand Marais A    67.66 349  P      P       05 30 31.8 +0.9
      baz=165
Y12C  Blythe            67.71 322  P      P       05 30 33.6 +2.1
      baz=136
ISCO  Idaho Springs     67.73 332  P      P       05 30 33.1 +1.2
      baz=145
PDMCI Parker Dam,Lak    67.88 322  P      P       05 30 34.7 +2.1
      baz=136
IKP   In-Ko-Pah, Jac    67.88 320  P      P       05 30 34.4 +1.7
      baz=134
SWSC  Sam W. Stewart    67.90 320  P      P       05 30 34.6 +1.8
      baz=134
PV04  Paradox Valley    68.15 329  P      P       05 30 35.7 +1.2
BC3   Big Chuckawall    68.19 321  P      P       05 30 36.4 +1.7
      baz=135
MONP2 Monument Peak     68.24 320  P      P       05 30 36.9 +1.7
      baz=134
BAR   Barrett           68.24 319  P      P       05 30 36.0 +0.9
BAR                                IAmb   IAmb    05 30 38.8
      comp=Z,18nm,1.1s
W13A  Hualapai Mount    68.31 323  P      P       05 30 37.0 +1.4
IRM   Iron Mountain     68.36 321  P      P       05 30 37.3 +1.6
      baz=135,SNR=6.9
U15A  North Rim         68.40 325  P      P       05 30 37.5 +1.3
U15A                               IAmb   IAmb    05 30 40.2
      comp=Z,12nm,1.0s
109C  Camp Elliot, M    68.65 319  P      P       05 30 39.3 +1.8
      baz=133
BELC  Belle Mtn. Jos    68.75 321  P      P       05 30 40.2 +1.9
      baz=134
XPFO  Pion Flat         68.75 320  P      P       05 30 37.4  -0.9
PFO   Pinyon Flats O    68.76 320  P      P       05 30 40.1 +1.8
      comp=Z,4.0nm,0.9s,baz=116,slow=6.2
PFO   Pinyon Flats O    68.76 320  P      P       05 30 37.2  -1.2
PFO   Pinyon Flats O    68.76 320  P      P       05 30 40.6 +2.3
      baz=134
N23A  Red Feather La    68.76 332  P      P       05 30 39.8 +1.4
      baz=145
PHWY  Pilot Hill        68.89 333  P      P       05 30 38.2  -0.9
LSQQ  Lebel-sur-Quev    68.93 356  P      P       05 30 40.7 +1.9
      baz=174
GMRC  Granite Mounta    69.10 322  P      P       05 30 41.4 +0.9
      baz=135,SNR=8.1
KNB   Kanab             69.12 325  P      P       05 30 41.3 +0.8
MURC  Murrieta          69.19 320  P      P       05 30 42.6 +1.7
      baz=134
O20A  White River Ci    69.20 330  P      P       05 30 42.9 +1.9
      baz=142
LCMT  Little Creek M    69.34 325  P      P       05 30 42.9 +0.9
SRU   San Rafael Swe    69.50 328  P      P       05 30 41.4  -1.5
HEC   Hector,Ludlow     69.53 321  P      P       05 30 44.1 +1.1
      baz=134,SNR=8.5
MTPU  Mount Pierson     69.54 326  P      P       05 30 45.0 +1.7
Q16A  Castle Valley     69.68 327  P      P       05 30 44.9 +0.9
SZCU  Shurtz Canyon     69.69 325  P      P       05 30 45.4 +1.3
TUQ   Turquoise Moun    69.71 322  P      P       05 30 46.0 +1.8
      baz=135,SNR=5.1
CCUT  Cedar City        69.80 325  P      P       05 30 46.2 +1.4
P17A  Butcher Ranch,    69.89 328  P      P       05 30 46.5 +1.2
MSU   Marysvale         69.89 327  P      P       05 30 47.2 +1.8
BFSC  Mount Baldy Ra    69.91 320  P      P       05 30 47.1 +1.6
      baz=133
SHPR  Sheep Range       70.03 323  P      P       05 30 45.9  -0.3
DBIC  Dimbokro          70.10  75  P      P       05 30 45.5  -1.3
      comp=Z,12nm,1.1s,baz=228,slow=9.9,SNR=4.1
DBIC  Dimbokro          70.10  75  P      P       05 30 45.8  -1.1
DBIC                               IAmb   IAmb    05 30 47.8
      comp=Z,24nm,1.3s
TCRU  Three Creeks R    70.10 326  P      P       05 30 47.1 +0.4
GSC   Goldstone, Bar    70.13 321  P      P       05 30 46.4  -0.4
GSC   Goldstone, Bar    70.13 321  P      P       05 30 48.7 +1.9
      baz=134
RDMU  Red Mountain      70.17 330  P      P       05 30 48.5 +1.5
QSPA  South Pole Qui    70.21 180  P      P       05 30 48.6 +1.7
QSPA                               IAmb   IAmb    05 30 50.0
      comp=Z,20nm,1.1s
SHOC  Shoshone, Teco    70.24 322  P      P       05 30 49.8 +2.5
      baz=135
EDW2  Edwards Air Fo    70.55 320  P      P       05 30 51.0 +1.7
      baz=133
RSSD  Black Hills       70.64 335  P      P       05 30 49.4  -0.4
RSSD  Black Hills       70.64 335  P      P       05 30 50.9 +1.1
      baz=147
MPU   Maple Canyon      70.75 328  P      P       05 30 50.5   0.0
PSUT  Pine Spring       70.79 326  P      P       05 30 49.4  -1.4
NLU   North Lily Min    70.92 328  P      P       05 30 52.4 +0.8
TPNV  Topopah Spring    70.96 323  P      P       05 30 53.2 +1.3
TPNV                               IAmb   IAmb    05 30 57.5
      comp=Z,11nm,0.9s
TPNV  Topopah Spring    70.96 323  P      P       05 30 53.8 +1.9
      baz=135,SNR=6.0
FURC  Furnace Creek,    70.98 322  P      P       05 30 53.6 +1.9
      baz=134,SNR=5.2
MPMC  Manual Prospec    71.06 322  P      P       05 30 54.6 +2.0
      baz=134
JLU   Jordanelle        71.10 328  P      P       05 30 53.8 +1.0
CTU   Camp Tracy        71.32 328  P      P       05 30 55.1 +1.1
ISA   Isabella, Lake    71.37 321  P      P       05 30 54.7 +0.4
ISA                                IAmb   IAmb    05 30 58.2
      comp=Z,12nm,1.0s
ISA   Isabella, Lake    71.37 321  P      P       05 30 55.6 +1.3
      baz=133,SNR=7.4
DUG   Dugway, Tooele    71.47 327  P      P       05 30 55.5 +0.6
DUG                                IAmb   IAmb    05 30 58.5
      comp=Z,10nm,0.9s
DUG   Dugway, Tooele    71.47 327  P      P       05 30 57.0 +2.1
      baz=139
R11A  Troy Canyon, C    71.59 324  P      P       05 30 55.8 +0.1
R11A  Troy Canyon, C    71.59 324  P      P       05 30 57.4 +1.7
      baz=136
PKM   Mcpherson Peak    71.66 319  P      P       05 30 58.1 +2.0
      baz=132
CWC   Cottonwood Cre    71.67 321  P      P       05 30 58.0 +1.8
      baz=134
VES   Vestal, Richgr    71.86 320  P      P       05 30 58.6 +1.6
      baz=133
PDAR  Pinedale Array    71.88 331  P      P       05 30 58.7 +1.3
      comp=Z,0.6nm,0.7s,baz=120,slow=5.5,SNR=2.9
PDAR  Pinedale Array    71.88 331  P      P       05 30 57.6 +0.3
HWUT  Hardware Ranch    71.92 329  P      P       05 30 57.4  -0.2
SMMC  Simmler           72.06 319  P      P       05 31 00.7 +2.4
      baz=132
BGU   Big Grassy Mou    72.13 328  P      P       05 31 01.1 +2.2
TIN   Tinemaha, Big     72.17 322  P      P       05 31 01.3 +2.2
      baz=134
MLAC  Mammoth, Mammo72.92 322      P      P       05 31 06.2 +2.5
      baz=133
OMMB  Old Mammoth Mi    73.00 322  P      P       05 31 04.6 +0.3
OMMB                               IAmb   IAmb    05 31 07.9
      comp=Z,15nm,1.0s
MDPB  Devils Postpil    73.06 322  P      P       05 31 04.4  -0.2
MDPB                               IAmb   IAmb    05 31 08.2
      comp=Z,16nm,0.8s
NV11  Mina Array Sit    73.08 323  P      P       05 31 05.8 +1.2
TPAW  Teton Pass        73.08 331  P      P       05 31 04.1  -0.5
TPAW                               IAmb   IAmb    05 31 07.3
      comp=Z,16nm,1.4s
ELK   Elko              73.13 326  P      P       05 31 06.4 +1.5
      comp=Z,3.8nm,1.0s,baz=133,slow=3.7,SNR=4.7
ELK   Elko              73.13 326  P      P       05 31 04.6  -0.3
NVAR  Mina Array Bea    73.16 323  P      P       05 31 07.9 +2.8
      comp=Z,5.3nm,0.9s,baz=148,slow=5.7,SNR=8.2
NVAR  Mina Array Bea    73.16 323  P      P       05 31 05.4 +0.3
ULM   Lac du Bonnet     73.32 344  P      P       05 31 05.2  -0.2
      comp=Z,4.5nm,1.0s,baz=170,slow=6.1,SNR=2.5
ULM   Lac du Bonnet     73.32 344  P      P       05 31 05.3  -0.2
IMW   Indian Meadow     73.39 331  P      P       05 31 05.2  -1.3
RYN   Ryan              73.42 323  P      P       05 31 07.8 +1.2
FLWY  Flagg Ranch       73.43 331  P      P       05 31 07.5 +1.0
FLWY                               IAmb   IAmb    05 31 12.0
      comp=Z,20nm,1.2s
KVN   Kaiserville       73.48 323  P      P       05 31 07.0 +0.1
KVN                                IAmb   IAmb    05 31 10.7
      comp=Z,12nm,1.1s
RLMT  Red Lodge         73.61 333  P      P       05 31 09.6 +2.0
      baz=143
H17A  Grant Village     73.61 331  P      P       05 31 10.2 +2.6
      baz=141
LAO   LASA Array        73.63 335  P      P       05 31 08.8 +1.3
      baz=146
LKWY  Lake              73.67 332  P      P       05 31 09.0 +1.0
LKWY                               IAmb   IAmb    05 31 17.8
      comp=Z,23nm,1.4s
YNE   Yellowstone No    73.84 332  P      P       05 31 08.9  -0.1
YHH   Holmes Hill       74.04 332  P      P       05 31 09.9  -0.3
YHB   Horse Butte       74.17 331  P      P       05 31 12.4 +1.5
YHL   Hebgen Lake       74.24 331  P      P       05 31 09.7  -1.7
GCMT  Greycliff         74.31 333  P      P       05 31 12.2 +0.6
DGMT  Dagmar            74.36 338  P      P       05 31 13.8 +2.2
DGMT                               IAmb   IAmb    05 31 14.6
      comp=Z,15nm,1.0s
DGMT  Dagmar            74.36 338  P      P       05 31 13.3 +1.7
      baz=148
VCNR  Virginia City     74.52 323  P      P       05 31 14.3 +1.3
VCNR                               IAmb   IAmb    05 31 17.0
      comp=Z,19nm,1.4s
PAHR  Pah Rah Range     74.65 323  P      P       05 31 16.1 +2.4
PAHR                               IAmb   IAmb    05 31 17.7
      comp=Z,18nm,1.0s
MCMT  McKenzie Canyo    74.98 330  P      P       05 31 16.9 +1.2
AFDM  Forest Hills D    75.05 322  P      P       05 31 17.1 +1.2
ORV   Oroville          75.76 322  P      P       05 31 21.8 +1.8
ORV                                IAmb   IAmb    05 31 29.5
      comp=Z,28nm,1.3s
EGMT  Eagleton          76.12 334  P      P       05 31 23.1 +1.2
      baz=143
O03E  Paynes Creek      76.42 322  P      P       05 31 25.0 +1.3
      baz=131
BMO   Blue Mountains    77.14 328  P      P       05 31 27.6  -0.1
BMO                                IAmb   IAmb    05 31 36.6
      comp=Z,20nm,1.4s
N02D  Trinity Center    77.38 322  P      P       05 31 30.7 +1.5
      baz=131
M04C  Macdoel           77.42 323  P      P       05 31 31.6 +2.2
      baz=132
L04D  Klamath Falls     77.97 324  P      P       05 31 33.0 +0.5
      baz=131
SYO   Syowa Base        78.57 160⇓eP      P       05 31 33.0  -2.3
SYO   Syowa Base        78.57 160⇑esP     sP      05 31 39.6 +1.5
SYO   Syowa Base        78.57 160⇑ePcP    PcP     05 31 43.4  -0.9
TOA0  Torodi Ar. Sit    78.60  71  P      P       05 31 34.7  -1.7
TOA0                               IAmb   IAmb    05 31 37.7
      comp=Z,26nm,1.1s
TORD  Torodi Ar. Bea    78.60  71  P      P       05 31 35.0  -1.4
      comp=Z,19nm,1.0s,baz=264,slow=4.8,SNR=12
TORD  Torodi Ar. Bea    78.60  71  P      P       05 31 35.9  -0.5
TSUM  Tsumeb            82.25 108  P      P       05 31 55.8  -0.4
TSUM                               IAmb   IAmb    05 31 58.5
      comp=Z,27nm,1.5s
PAB   San Pablo         85.74  45  P      P       05 32 12.7  -0.7
PAB                                IAmb   IAmb    05 32 16.0
      comp=Z,9.2nm,1.2s
TAM   Tamanrasset       85.80  64  P      P       05 32 14.0  -0.2
TAM                                IAmb   IAmb    05 32 17.3
      comp=Z,14nm,1.2s
YKA   Yellowknife Ar    89.15 341  P      P       05 32 29.3 +0.1
      comp=Z,3.6nm,0.9s,baz=141,slow=5.2,SNR=4.6
DLBC  Dease Lake        92.01 333  P      P       05 32 43.7 +0.9
      comp=Z,3.5nm,0.9s,baz=187,slow=3.2,SNR=3.3
DOU   Dourbes           96.19  39  P      P       05 33 01.9  -0.1
      comp=Z,17nm,0.0s
BMRD  Maredsous         96.38  39  P      P       05 33 02.5  -0.4
H11S2 WAKE ISLAND Hy125.84 279     T      T       07 58 00.0
      baz=101,slow=74,SNR=5.9
H11S1 WAKE ISLAND Hy125.85 279     T      T       07 57 59.5
      baz=101,slow=74,SNR=5.0
H11S3 WAKE ISLAND Hy125.86 279     T      T       07 57 59.5
      baz=101,slow=74,SNR=4.6
H11N3 WAKE ISLAND Hy125.89 280     T      T       07 58 00.2
      baz=101,slow=74,SNR=5.3
H11N2 WAKE ISLAND Hy125.90 280     T      T       07 58 00.2
      baz=101,slow=74,SNR=5.5
H11N1 WAKE ISLAND Hy125.90 280     T      T       07 58 00.2
      baz=101,slow=74,SNR=5.4
SEY   Seymchan         127.97 337  PKP    PKiKP   05 38 40.7 +0.6
      comp=Z,4.0nm,0.7s,baz=56,slow=2.5,SNR=6.0
ABKAR Akbulak array    131.25  41         PKiKP   05 38 46.7  -0.5
ZALV  Zalesovo Beam    141.32  23  PKP    PKPdf   05 39 04.0  -0.7
      comp=Z,1.5nm,0.6s,baz=298,slow=3.1,SNR=3.0
NIL   Nilore           145.40  59         PKPab   05 39 13.5 +0.8
MKAR  Makanchi Array   145.43  33  PKPbc  PKPbc   05 39 11.4  -0.8
      comp=Z,7.2nm,0.8s,baz=323,slow=4.7,SNR=12
KSH   Kashi            145.53  48  PKPbc  PKiKP   05 39 15.0  -1.8
KSH                                PP     PP      05 42 38.5 +5.4
KSH                                SKS    SKSdf   05 46 23.1 +0.7
USRK  Ussuriysk Ar.    149.23 327  PKPbc  PKiKP   05 39 23.6  -0.5
      comp=Z,5.7nm,0.8s,baz=17,slow=2.3,SNR=4.1
USRK  Ussuriysk Ar.    149.23 327  PKPbc  PKiKP   05 39 24.3 +0.3
MJAR  Matsushiro Arr   149.68 309  PKPbc  PKPbc   05 39 23.5  -0.8
      comp=Z,7.4nm,0.8s,baz=88,slow=1.2,SNR=7.5
MJAR  Matsushiro Arr   149.68 309         PKPbc   05 39 24.6 +0.4
MAJO  Matsushiro       149.68 309         PKPbc   05 39 23.3  -1.0
MAT   Matsushiro       149.68 309  PKP    PKPbc   05 39 24.5 +0.2
MJB9  Matsu-Tunnel     149.68 309         PKPbc   05 39 23.4  -0.9
SIJI  Sorong           149.99 229  PKPbc  PKiKP   05 39 26.8 +0.2
      comp=Z,8.1nm,0.6s,baz=160,slow=0.6,SNR=3.9
WMQ   Urumqi           150.24  32  eP     PKPdf   05 39 20.9 +0.6
SONM  Songino Array    152.12   4  PKPbc  PKiKP   05 39 31.4 +1.3
      comp=Z,4.2nm,0.7s,baz=323,slow=1.9,SNR=5.1
SONM  Songino Array    152.12   4         PKiKP   05 39 31.3 +1.2
HHC   Hu-ho-hao-te     159.09 355  eP     PKPdf   05 39 33.8 +1.1
LZH   Lanzhou          163.29  15  ePKP   PKPdf   05 39 33.9  -3.5
LZH                                pPKP   sPKPdf  05 39 43.1 +2.8
LZH                                sPKP           05 39 48.5
NJ2   Nanjing          165.14 326  eP     PKPdf   05 39 38.8  -0.1
CD2   Chengdu          168.09  23  PKP    PKPdf   05 39 40.0  -1.3
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*IDC **17** 05:21:35.1±0.8, 20°.02S×70°.77W, h0^{km}, mb4.5/11, mb1 4.8/12, mb1mx4.4/43, mbtmp4.6/12, ML4.9/1, Error ellipse: s-maj=28.9km s-min=20.2km az=22.0*

*NEIC **17** 05:21:36.9±2.1, 19°.98S±0°.05×70°.79W±0°.07, h10^{km}±1^{km}, mb5.1/67, Error ellipse: s-maj=12.2km s-min=7.3km az=297.0*

ISC 17 05:21:36.5±0.5**, 20°.01S**±0°.06×**70°.79W**±0°.06**, h10^{km}, n102, σ0^{s}.89**/100**, mb5.0**/32**, 1D, Near coast of northern Chile**

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Code  Station Name        Δ°  AZ°     Phase ID              Time     Res
                                   Op     ISC           h  m  s     ISC
PB11  IPOC Station P     1.10  77  Pn     Pn        05 21 59.3 +1.2
PB11                               Sn     Sn        05 22 13.8 +0.4
GO01  Chusmiza           1.54  77  Pn     Pg        05 22 06.3 +0.1
GO01                               Sn     Sn        05 22 24.6  -0.2
PB01  IPOC Station P     1.59 130  Pn     Pn        05 22 04.7  -0.2
PB01                               Sn     Sn        05 22 26.7 +1.1
PB04  IPOC Station P     2.39 166  Pn     Pn        05 22 18.0 +2.1
SIV   San Ignacio       10.07  68  Pn     Pn        05 24 02.5 +1.1
      11nm,0.3s,baz=237,slow=17,SNR=5.2
GO06  Curarrehue        19.52 182         P         05 26 04.8 +0.6
PLCA  Paso Flores       20.66 179  P      P         05 26 15.9  -0.6
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	15nm,1.0s,baz=347,slow=18,SNR=2.9						
FLOC	Florencia	21.98	347	P	P	05 26 32.1	+1.2
BDFB	Brasilia	22.11	82	P	P	05 26 32.1	-0.3
	17nm,1.0s,baz=221,slow=11,SNR=3.7						
BDFB	Brasilia	22.11	82	P	P	05 26 33.1	+0.7
BDFB				IAmb	IAmb	05 26 43.8	
	comp=Z,81nm,1.1s						
TUMC	Tumaco	23.05	339	P	P	05 26 44.4	+2.1
RUSC	La Rusia	25.84	355	P	P	05 27 08.6	-0.3
SDV	Santo Domingo	28.72	0	P	P	05 27 34.3	0.0
RCBR	Riachuelo	36.70	72	P	P	05 28 44.1	-0.1
	comp=Z,13nm,0.8s,baz=232,slow=11,SNR=4.1						
RCBR	Riachuelo	36.70	72	P	P	05 28 44.2	+0.1
MLPR	Magueyes Islan	37.92	6	P	P	05 28 53.6	-0.6
MLPR				IAmb	IAmb	05 28 58.4	
	comp=Z,26nm,0.9s						
CRPR	Cabo Rojo, PR	37.95	6	P	P	05 28 54.0	-0.5
CRPR				IAmb	IAmb	05 28 54.3	
	comp=Z,59nm,1.4s						
PDPR	Patillas Dam,	38.08	7	P	P	05 28 54.5	-1.1
GCPR	Guaynabo City	38.36	7	P	P	05 28 55.7	-2.2
TEIG	Tepich	43.50	336	P	P	05 29 40.8	+0.4
TEIG				IAmb	IAmb	05 29 40.8	
	comp=Z,31nm,1.0s						
PMSA	Palmer Station	44.96	176	P	P	05 29 49.0	-2.5
656A	Willston	50.38	347	P	P	05 30 34.4	+0.4
342A	Flagon Creek P	55.12	337	P	P	05 31 10.1	+1.1
WLAR	White Oak Lake	57.49	338	P	P	05 31 26.8	+0.9
Z38A	Mt. Pleasant	57.79	336	P	P	05 31 28.8	+0.8
TXAR	Lajitas Array	58.41	326	P	P	05 31 32.6	-0.1
	comp=Z,2.7nm,0.8s,baz=146,slow=8.0,SNR=5.9						
TX31	Lajitas Ar. Si	58.41	326	P	P	05 31 32.7	0.0
TX32	Lajitas Array	58.41	326	P	P	05 31 32.8	+0.2
MIAR	Mount Ida	58.42	338	P	P	05 31 32.3	-0.2
MIAR				IAmb	IAmb	05 31 33.0	
	comp=Z,13nm,0.7s						
S44A	Carbondale	59.97	343	P	P	05 31 42.2	-0.9
HHAR	Hobbs	60.12	339	P	P	05 31 43.3	-0.9
HHAR				IAmb	IAmb	05 31 44.5	
	comp=Z,23nm,1.4s						
P51A	Williamsport	60.28	349	P	P	05 31 46.0	+0.7
P51A				IAmb	IAmb	05 31 46.9	
	comp=Z,19nm,1.1s						
MGMO	Mountain Grove	60.36	340	P	P	05 31 45.2	-0.6
MGMO				IAmb	IAmb	05 31 46.0	
	comp=Z,30nm,1.4s						
U38A	Gravette	60.41	338	P	P	05 31 45.5	-0.7
TUL1	Leonard	60.45	337	P	P	05 31 45.9	-0.6
TUL1				IAmb	IAmb	05 31 46.9	
	comp=Z,16nm,0.9s						
MNTX	Cornudas Mount	61.19	326	P	P	05 31 50.9	-0.7
S39A	Bolivar	61.19	340	P	P	05 31 50.8	-0.7
S39A				IAmb	IAmb	05 31 51.6	
	comp=Z,13nm,0.7s						
N49A	Columbus Grove	61.89	349	P	P	05 31 55.2	-0.9
WVNY	West Valley, N	62.52	353	P	P	05 32 00.4	0.0
P38A	Dawn	63.02	340	P	P	05 32 02.2	-1.5
P38A				IAmb	IAmb	05 32 03.7	
	comp=Z,11nm,0.8s						
319A	Douglas	63.05	323	P	P	05 32 05.1	+0.9
121A	Cookes Peak, D	63.10	325	P	P	05 32 05.8	+1.1
121A				IAmb	IAmb	05 32 07.1	
	comp=Z,16nm,1.2s						
ANMO	Albuquerque	64.30	328	P	P	05 32 12.9	+0.4
	comp=Z,2.9nm,0.9s,baz=139,slow=9.5,SNR=3.8						
ANMO	Albuquerque	64.30	328	P	P	05 32 13.6	+1.1
I49A	Point Hope	64.59	350	P	P	05 32 13.3	-0.7
I49A				IAmb	IAmb	05 32 21.3	
	comp=Z,15nm,0.8s						
G62A	West of Eustis	64.92	0	P	P	05 32 17.0	+1.0
SADO	Sadowa	64.92	353	P	P	05 32 15.4	-0.6
	comp=Z,4.5nm,0.8s,baz=265,slow=21,SNR=20						
SADO	Sadowa	64.92	353	P	P	05 32 15.6	-0.5
SADO				IAmb	IAmb	05 32 24.2	
	comp=Z,14nm,0.8s						
BGNE	Belgrade	66.17	338	P	P	05 32 24.4	+0.1
X16A	Lo Mia Camp, P	66.52	324	P	P	05 32 27.4	+0.5
X16A				IAmb	IAmb	05 32 29.2	
	comp=Z,16nm,1.4s						
WUAZ	Wupatki	67.30	325	P	P	05 32 33.1	+1.3
WUAZ				IAmb	IAmb	05 32 34.1	
	comp=Z,12nm,1.0s						
PV12	Saucer Basin,	68.11	329	P	P	05 32 37.7	+0.7
PFO	Pinyon Flats O	68.84	320	P	P	05 32 41.8	+0.3
	comp=Z,3.3nm,0.8s,baz=129,slow=6.6,SNR=4.3						
PFO	Pinyon Flats O	68.84	320	P	P	05 32 41.2	-0.3
LCMT	Little Creek M	69.42	325	P	P	05 32 46.2	+1.2
SRU	San Rafael Swe	69.58	328	P	P	05 32 46.2	+0.2
CCUT	Cedar City	69.88	325	P	P	05 32 47.4	-0.6
P17A	Butcher Ranch,	69.97	328	P	P	05 32 47.8	-0.6
MSU	Marysvale	69.97	326	P	P	05 32 49.4	+0.9
TMUT	Trail Mountain	70.06	328	P	P	05 32 49.9	+0.7
SHPR	Sheep Range	70.12	323	P	P	05 32 50.5	+1.1
TCRU	Three Creeks R	70.18	326	P	P	05 32 51.2	+1.3
MPU	Maple Canyon	70.83	328	P	P	05 32 54.3	+0.6
PSUT	Pine Spring	70.87	325	P	P	05 32 53.7	-0.3
TPNV	Topopah Spring	71.05	323	P	P	05 32 56.4	+1.4
TPNV				IAmb	IAmb	05 32 57.8	
	comp=Z,14nm,1.1s						
JLU	Jordanelle	71.18	328	P	P	05 32 55.9	0.0
CTU	Camp Tracy	71.40	328	P	P	05 32 55.7	-1.4
ISA	Isabella, Lake	71.45	321	P	P	05 32 58.6	+1.2
ISA				IAmb	IAmb	05 32 59.9	
	comp=Z,12nm,0.9s						
DUG	Dugway, Tooele	71.56	327	P	P	05 32 59.1	+1.1
DUG				IAmb	IAmb	05 33 00.3	
	comp=Z,15nm,1.1s						
R11A	Troy Canyon, C	71.67	324	P	P	05 32 59.6	+0.8
PDAR	Pinedale Array	71.95	331	P	P	05 33 01.0	+0.5
	comp=Z,1.0nm,0.6s,baz=150,slow=6.2,SNR=3.6						
PDAR	Pinedale Array	71.95	331	P	P	05 33 00.4	-0.1
HWUT	Hardware Ranch	72.00	329	P	P	05 33 00.9	+0.2
HWUT				IAmb	IAmb	05 33 12.1	
	comp=Z,12nm,1.0s						
BGU	Big Grassy Mou	72.21	328	P	P	05 33 02.9	+0.9
AHID	Auburn Hatcher	72.67	330	P	P	05 33 05.1	+0.3
AHID				IAmb	IAmb	05 33 06.0	
	comp=Z,9.4nm,0.9s						
NVAR	Mina Array Bea	73.25	323	P	P	05 33 09.5	+1.2
	comp=Z,3.7nm,0.9s,baz=157,slow=6.1,SNR=6.3						
NVAR	Mina Array Bea	73.25	323	P	P	05 33 09.3	+1.0
PAHR	Pah Rah Range	74.73	323	P	P	05 33 18.6	+1.8
PAHR				IAmb	IAmb	05 33 19.4	
	comp=Z,16nm,1.0s						
ORV	Oroville	75.84	322	P	P	05 33 24.7	+1.7
ORV				IAmb	IAmb	05 33 25.5	
	comp=Z,12nm,1.1s						
WDC	Whiskeytown Da	77.12	322	P	P	05 33 30.1	-0.1
SYO	Syowa Base	78.50	160	⇓eP	P	05 33 37.0	-0.6
TORD	Torodi Ar. Bea	78.53	71	P	P	05 33 38.2	-0.5
	comp=Z,13nm,1.0s,baz=264,slow=4.7,SNR=4.2						
TORD	Torodi Ar. Bea	78.53	71	P	P	05 33 39.1	+0.4
WALA	Waterton Lakes	78.74	333	P	P	05 33 39.0	-0.2
WALA				IAmb	IAmb	05 33 40.9	
	comp=Z,17nm,1.4s						
YKA	Yellowknife Ar	89.21	341	P	P	05 34 31.4	-0.7
	comp=Z,8.4nm,1.1s,baz=139,slow=4.8,SNR=2.9						
H11S2	WAKE ISLAND Hy	125.93	279	T	T	07 59 26.2	
	baz=97						
H11S1	WAKE ISLAND Hy	125.94	279	T	T	07 59 25.6	
	baz=97						
H11S3	WAKE ISLAND Hy	125.95	279	T	T	07 59 26.7	
	baz=97						
H11N3	WAKE ISLAND Hy	125.98	280	T	T	07 59 28.3	
	baz=104						
H11N2	WAKE ISLAND Hy	125.99	280	T	T	07 59 29.3	
	baz=104						
H11N1	WAKE ISLAND Hy	125.99	280	T	T	07 59 32.3	
	baz=104						
ZALV	Zalesovo Beam	141.32	23	PKP	PKPdf	05 41 05.9	-1.5
	comp=Z,2.7nm,0.6s,baz=298,slow=2.8,SNR=2.0						
MAKZ	Makanchi	145.24	33	PKPbc	PKPdf	05 41 14.8	+0.2
MKAR	Makanchi Array	145.41	33	PKPbc	PKPdf	05 41 15.2	+0.3
	comp=Z,8.6nm,0.7s,baz=325,slow=3.4,SNR=4.6						
MKAR	Makanchi Array	145.41	33	PKPbc	PKPbc	05 41 14.9	+0.1
KLR	Kul'dur	145.72	334	PKPbc	PKPdf	05 41 15.7	+0.4
	comp=Z,6.8nm,0.8s,baz=62,slow=5.7,SNR=3.9						
USRK	Ussuriysk Ar.	149.31	327	PKPbc	PKPbc	05 41 26.3	+0.6
	comp=Z,7.5nm,0.9s,baz=26,slow=2.1,SNR=4.3						
USRK	Ussuriysk Ar.	149.31	327		PKPbc	05 41 26.1	+0.4
MJAR	Matsushiro Arr	149.77	309	PKPbc	PKPbc	05 41 26.6	-0.5
	comp=Z,8.1nm,0.8s,baz=142,slow=1.3,SNR=5.1						
SIJI	Sorong	150.03	229	PKPbc	PKPbc	05 41 28.5	+0.1
	comp=Z,13nm,0.7s,baz=213,slow=19,SNR=4.7						
SONM	Songino Array	152.15	4	PKPbc	PKPbc	05 41 32.2	-0.3
	comp=Z,3.0nm,0.7s,baz=286,slow=1.1,SNR=3.6						
SONM	Songino Array	152.15	4		PKPbc	05 41 32.1	-0.4
SONM				PKPab	PKPab	05 41 41.2	-0.8

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*ATH **17** 05:22:42.6, 38.°18N×20.°38E, h15^{km}, ML2.4/3, Error ellipse: s-maj=2.1km s-min=1.2km az=239.0*

*THE **17** 05:22:42.4, 38.°19N×20.°37E, h16^{km}, ML2.6/4, Error ellipse: s-maj=0.9km s-min=0.5km az=246.0*

ISC 17 05:22:42.5±1.7, **38.°18N**±0.°05×**20.°38E**±0.°07, **h17**^{km}±6^{km}, **n24**, σ**0.^{s}20**/41, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.00	58	P	Pg	05 22 45.2	-0.1
CHV1				S	Sg	05 22 47.4	+0.1
KEF3	Kipouria, Keph	0.03	312	P	Pg	05 22 45.2	-0.2
KEF3				S	Sg	05 22 47.2	-0.2
LXRA	Lixouri, Kepha	0.05	68	P	Pg	05 22 45.6	+0.1
LXRA				S	Sg	05 22 47.8	+0.3
LXR1	Lixouri, Cepha	0.05	68	P	Pg	05 22 45.6	+0.1
LXR1				S	Sg	05 22 47.9	+0.4
AGT1	Agia Thekli	0.07	4	P	Pg	05 22 45.5	-0.2
AGT1				S	Sg	05 22 47.8	0.0
	8μm,0.3s						
ARGA	Argostoli. Kep	0.08	93	P	Pg	05 22 45.7	-0.1
ARGA				S	Sg	05 22 47.7	-0.2
KEF4	Livadi, Kephal	0.08	25	P	Pg	05 22 45.7	-0.1
KEF4				S	Sg	05 22 48.1	+0.1
ARG2	Argostoli	0.09	92	P	Pg	05 22 45.8	0.0
ARG2				S	Sg	05 22 48.1	+0.1
	15μm,0.1s						
KEF2	Argostoli. Kep	0.09	101	P	Pg	05 22 45.8	0.0
KEF2				S	Sg	05 22 47.7	-0.3
KEF1	Kardakata, Kep	0.12	37	P	Pg	05 22 46.0	-0.1
KEF1				S	Sg	05 22 48.4	-0.2
VLS	Valsamata	0.17	92	P	Pg	05 22 46.6	-0.2
VLS	Valsamata	0.17	92	P	Pg	05 22 46.6	-0.2
VLS				S	Sg	05 22 49.7	+0.1
VLS				AML	AML	05 22 49.9	
	comp=E,8785μm,0.1s						
VLS				AML	AML	05 22 50.0	
	comp=N,9620μm,0.1s						
VSK1	VASILIKIADES	0.27	33	P	Pg	05 22 48.3	-0.1
KONA	Konidatara, Ke	0.29	32	P	Pg	05 22 48.4	-0.2
KONA				S	Sg	05 22 53.1	+0.1
FSK	Fiskardo	0.31	27	P	Pg	05 22 48.8	-0.3
FSK				S	Sg	05 22 53.9	+0.3
	comp=N,362nm,0.4s						
FSK	Fiskardo	0.31	27	P	Pg	05 22 48.8	-0.3
FSK				S	Sg	05 22 53.7	0.0
FSK				AML	AML	05 22 54.3	
	comp=N,582μm,0.3s						
FSK				AML	AML	05 22 57.9	
	comp=E,862μm,0.4s						
KFL	Anninata	0.33	102	P	Pg	05 22 49.3	-0.1
KFL				S	Sb	05 22 54.9	-0.1
	comp=E,995nm,0.4s						
KFL	Anninata	0.33	102	P	Pg	05 22 49.3	-0.1
KFL				S	Sg	05 22 54.6	+0.4
KFL				AML	AML	05 22 55.2	
	comp=E,2146μm,0.3s						
KFL				AML	AML	05 22 57.5	
	comp=N,1791μm,0.4s						
EVGI	Lefkada island	0.49	26	P	Pg	05 22 52.0	-0.3
EVGI				S	Sb	05 22 59.8	+0.2
EVGI	Lefkada island	0.49	26	P	Pg	05 22 52.1	-0.2
LKD2	Lefkada island	0.65	20	P	Pg	05 22 55.3	+0.1
TSLK	Tsoukalades, L	0.68	19	P	Pb	05 22 56.1	+0.2
PVO	Paravola	1.00	64	P	Pb	05 23 01.2	-0.2
DRO	Drossia	1.08	102	P	Pb	05 23 02.7	0.0

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*IDC **17** 05:24:07.0±0.8, 19.°93S×70.°57W, h0^{km}, mb4.0/9, mb1 4.3/11, mb1mx4.1/42, mbtmp4.1/11, ML3.4/1, MS5.5/1, Ms1 5.5/1, ms1mx4.6/26, Error ellipse: s-maj=34.5km s-min=19.0km az=55.0*

*NEIC **17** 05:24:08.3±1.8, 20.°04S±0.°05×70.°82W±0.°06, h10^{km}±1^{km}, mb4.6/11, Error ellipse: s-maj=11.4km s-min=6.7km az=303.0*

ISC 17 05:24:08.0±0.5, **20.°10S**±0.°05×**70.°77W**±0.°06, **h10**^{km}, **n38**, σ**1.^{s}95**/42, **mb4.4**/11, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	IPOC Station P	1.10	72		Pb	05 24 29.8	+0.6
PB11				Sg	Sg	05 24 41.3	-2.1
PB01	IPOC Station P	1.52	128	Pn	Pb	05 24 37.8	+1.4
PB01				Sn	Sn	05 24 57.4	+2.0
GO01	Chusmiza	1.54	74		Pb	05 24 37.6	+0.7
GO01				Sn	Sg	05 24 59.0	+1.3
PB04	IPOC Station P	2.30	166	Pn	Pn	05 24 49.0	+2.9
PB04				Sn	Sn	05 25 14.4	-0.2
LVC	Limon Verde	3.04	146	Pn	Pn	05 24 58.7	+2.2
	baz=308,slow=19,SNR=1.9						
LVC				Sn	Sn	05 25 36.3	+3.1
	79nm,0.3s,baz=297,slow=18,SNR=4.8						
LVC	Limon Verde	3.04	146		Pn	05 25 00.6	+4.1
PB10	IPOC Station P	3.41	177	Pn	Pn	05 25 02.4	+1.2
LPAZ	La Paz	4.54	34	Pn	Pn	05 25 22.2	+4.8
	baz=180,slow=17,SNR=3.3						
SIV	San Ignacio	10.09	68	Pn	Pn	05 26 29.7	-3.3
	0.4nm,0.3s,baz=254,slow=19,SNR=1.8						
PLCA	Paso Flores	20.57	180	P	P	05 28 48.2	+1.2
	8.1nm,1.1s,baz=24,slow=12,SNR=2.2						
PLCA	Paso Flores	20.57	180	P	P	05 28 48.5	+1.5
PLCA				IAmb	IAmb	05 28 53.6	
	comp=Z,40nm,1.5s						
PTGA	Pitinga	21.96	30	P	P	05 28 55.9	-6.2
	comp=Z,5.0nm,0.6s,baz=156,slow=20,SNR=2.2						
PTGA	Pitinga	21.96	30	P	P	05 29 01.9	-0.2
PTGA				IAmb	IAmb	05 29 13.0	
	comp=Z,29nm,1.1s						
RUSC	La Rusia	25.93	355	P	P	05 29 41.3	+0.1
APG	El Apazote	39.90	329	LR	LR	05 46 02.5	
	comp=Z,6μm,19.6s,baz=108,slow=33						
WLAR	White Oak Lake	57.57	338	P	P	05 33 58.5	+0.5
TXAR	Lajitas Array	58.50	326	P	P	05 34 04.5	-0.2
	comp=Z,0.4nm,0.6s,baz=153,slow=8.0,SNR=5.4						
TX31	Lajitas Ar. Si	58.50	326	P	P	05 34 04.3	-0.3
TX31				IAmb	IAmb	05 34 17.9	
	comp=Z,5.9nm,1.4s						
MIAR	Mount Ida	58.51	338	P	P	05 34 03.0	-1.6
MIAR				IAmb	IAmb	05 34 11.8	
	comp=Z,14nm,1.1s						
SSPA	Standing Stone	60.78	354	P	P	05 34 20.3	+0.2
MNTX	Cornudas Mount	61.27	326	P	P	05 34 21.4	-2.2
ANMO	Albuquerque	64.39	328	P	P	05 34 44.8	+0.3
	comp=Z,0.6nm,0.5s,baz=124,slow=7.3,SNR=2.9						
ANMO	Albuquerque	64.39	328	P	P	05 34 44.7	+0.2
SADO	Sadowa	65.00	353	P	P	05 34 47.9	-0.2
	comp=Z,2.2nm,0.6s,baz=229,slow=3.2,SNR=3.8						
PFO	Pinyon Flats O	68.92	320	P	P	05 35 14.7	+1.2
	comp=Z,2.4nm,0.8s,baz=158,slow=5.0,SNR=3.5						
QSPA	South Pole Qui	70.08	180	P	P	05 35 22.4	+2.2
PDAR	Pinedale Array	72.04	331	P	P	05 35 33.1	+0.6
	comp=Z,0.5nm,0.6s,baz=159,slow=7.7,SNR=3.1						
NVAR	Mina Array Bea	73.33	323	P	P	05 35 40.6	+0.4
	comp=Z,1.0nm,0.9s,baz=141,slow=5.8,SNR=3.7						
NVAR	Mina Array Bea	73.33	323	P	P	05 35 40.2	0.0
TORD	Torodi Ar. Bea	78.54	71	P	P	05 36 09.0	-1.2
	comp=Z,5.3nm,1.0s,baz=244,slow=6.1,SNR=7.3						
TORD	Torodi Ar. Bea	78.54	71	P	P	05 36 09.1	-1.1
YKA	Yellowknife Ar	89.30	341	P	P	05 37 03.8	-0.2
	comp=Z,1.7nm,0.9s,baz=140,slow=4.6,SNR=4.8						
ZALV	Zalesovo Beam	141.39	23	PKP	PKPdf	05 43 39.7	+0.8
	comp=Z,1.3nm,0.7s,baz=354,slow=2.9,SNR=2.8						
ZALV	Zalesovo Beam	141.39	23		PKPdf	05 43 39.2	+0.3
MKAR	Makanchi Array	145.47	33	PKPbc	PKPbc	05 43 46.6	+0.2
	comp=Z,2.2nm,0.7s,baz=320,slow=3.2,SNR=4.7						
KLR	Kul'dur	145.80	333	PKPbc	PKPdf	05 43 46.8	-0.1
	comp=Z,3.0nm,0.8s,baz=125,slow=5.1,SNR=4.4						
SONM	Songino Array	152.24	4	PKPbc	PKiKP	05 44 04.5	0.0
	comp=Z,1.5nm,0.7s,baz=321,slow=1.8,SNR=3.5						
SONM	Songino Array	152.24	4		PKPbc	05 44 03.7	-0.4

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*IDC **17** 05:27:01.6±1.7, 20.°06S×70.°96W, h0^{km}, mb3.6/3, mb1 4.0/5, mb1mx3.7/36, mbtmp3.8/5, ML4.0/2, Error ellipse: s-maj=55.1km s-min=26.5km az=47.0*

ISC 17 05:27:03.3±1.2, **19.°92S**±0.°09×**70.°8W**±0.°1, **h10**^{km}, **n7**, σ**1.^{s}48**/8, **mb3.7**/3, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	3.22	146	Pn	Pn	05 27 53.6	-0.7
	13nm,0.3s,baz=292,slow=8.2,SNR=1.9						
LVC				Sn	Sn	05 28 32.6	-0.4
	5.6nm,0.3s,baz=60,slow=20,SNR=1.7						
LPAZ	La Paz	4.44	36	Pn	Pb	05 28 19.8	-2.0
	0.3nm,0.3s,baz=225,slow=10.0,SNR=2.2						
SIV	San Ignacio	10.08	69	Pn	Pn	05 29 30.6	+2.3
	1.5nm,0.3s,baz=263,slow=15,SNR=4.0						
TXAR	Lajitas Array	58.31	326	P	P	05 36 58.7	-0.1
	0.4nm,1.0s,baz=144,slow=7.0,SNR=2.1						
TORD	Torodi Ar. Bea	78.55	71	P	P	05 39 05.6	+0.1
	0.7nm,0.9s,baz=252,slow=6.3,SNR=2.5						
YKA	Yellowknife Ar	89.11	341	P	P	05 39 59.3	+0.9
	0.6nm,0.9s,baz=144,slow=4.6,SNR=3.1						
MKAR	Makanchi Array	145.36	33	PKPbc	PKPab	05 46 41.2	-0.4
	0.5nm,0.6s,baz=315,slow=2.3,SNR=2.9						

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*IDC **17** 05:30:04.2±0.4, 9.°58N×125.°39E, h0^{km}, mb4.6/45, mb1 4.7/48, mb1mx4.6/64, mbtmp4.6/48, ML5.0/3, MS4.4/3, Ms1 4.4/3, ms1mx4.1/41, Error ellipse: s-maj=14.0km s-min=8.5km az=78.0*

*MAN **17** 05:30:07.6, 9.°46N×125.°28E, h10^{km}, mb5.9, ML4.9, MS5.4*

MAN Intensity V - Placer and San Francisco Surigao del Norte; Intensity IV - Surigao City; Malimono Gigaquit and Mainit Surigao del Norte; San Ricardo Southern Leyte;Intensity III - Butuan City; Claver Surigao del Norte; San Francisco Southern Leyte; Intensity II- Hinunangan Southern Leyte; Manay Davao Oriental; Intensity I - Kidapawan City.

*MOS **17** 05:30:08.6±1.3, 9.°63N×125.°37E, h49^{km}, mb5.2/49, Error ellipse: s-maj=10.3km s-min=5.8km az=108.9*

*NEIC **17** 05:30:10.4±2.0, 9.°60N±0.°06×125.°35E±0.°07, h50^{km}±6^{km}, mb5.1/113, Error ellipse: s-maj=10.9km s-min=8.1km az=73.0*

*BJI **17** 05:30:14.8±0.0, 9.°83N×125.°44E, h76^{km}, mB5.4/31, mb4.8/46, Ms5.1/29, Ms7 4.8/29*

*DJA **17** 05:30:14.5±0.5, 10.°N±4.°×12.°6E±.°, h57^{km}±5^{km}, M5.3/39, mb5.1/39, mB5.6/12, MLv5.7/2, Mw(mB)5.1/12*

ISC 17 05:30:09.4±0.4, **9.°56N**±0.°03×**125.°33E**±0.°04, **h37**^{km}±1^{km}, **n346**, σ**1.^{s}91**/362, **mb5.0**/125, **20C-12D**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.27	36	⇑iP	Pn	05 30 16.2	-1.4
SCPH				i S	Sn	05 30 21.6	-3.4
BUTP	Butuan	0.65	154	eP	Pn	05 30 18.4	-3.8
BUTP				eS	Sn	05 30 31.9	+0.6
MSLP	Maasin	0.73	321	eP	Pn	05 30 22.8	-0.4
MSLP				eS	Sn	05 30 34.7	+1.5
CGP	Cagayan de Oro	1.26	210	⇓iP	Pn	05 30 29.1	-1.4
TBP	Tagbilaran	1.45	275	⇑iP	Pn	05 30 32.8	-0.3
TBP				i S	Sn	05 30 52.5	+1.7
LLP	Lapu-Lapu	1.54	299	⇑eP	Pn	05 30 34.6	+0.3
LLP				eS	Sn	05 30 56.4	+3.4
OCLP	Ormoc	1.64	335	eP	Pn	05 30 37.5	+1.8
OCLP				eS	Sn	05 31 00.4	+4.8
BUKP	Musuan	1.69	189	eP	Pn	05 30 35.6	-0.7
BUKP				eS	Sn	05 31 03.1	+6.3
SNPH	Sibulan	2.08	264	⇓iP	Pn	05 30 42.8	+1.1
SNPH				i S	Sn	05 31 13.3	+7.0
DCPH	Dipolog City	2.18	244	⇑eP	Pn	05 30 42.4	-0.6
DMPH	Davao City--Mi	2.47	176	⇑eP	Pn	05 30 48.5	+1.4
DAV	Davao City (W)	2.48	174	Pn	Pn	05 30 48.2	+0.9
	163nm,0.3s,baz=87,slow=7.7,SNR=36						
DAV				Sn	Sn	05 31 18.2	+1.8
	364nm,0.3s,baz=270,slow=20,SNR=8.5						
DAV	Davao City (W)	2.48	174	P	Pn	05 30 54.4	+7.1
DAV	Davao City (W)	2.48	174		Pn	05 30 50.3	+3.0
DAV					Sn	05 31 19.4	+3.1
KCP	Kidapawan	2.54	185	⇑eP	Pn	05 30 48.8	+0.6
KCP				i S	Sn	05 31 18.2	+0.3
CTBH	Cotabato--PC H	2.56	205	⇑iP	Pn	05 30 48.7	+0.4
PAGZ	Pagadian	2.57	229	eP	Pn	05 30 47.6	-0.8
MATI	Mati	2.75	160	eP	Pn	05 30 51.4	+0.4
MATI				eS	Sn	05 31 30.8	+7.8
GUIM	Jordan	2.90	292	eP	Pn	05 30 53.0	0.0
GUIM				eS	Sn	05 31 25.9	-0.7
CNP	Catarman	3.00	348	eP	Pn	05 30 56.8	+2.4
CNP				eS	Sn	05 31 40.2	+11
SKMP	Bagumbayan, Su	3.12	194	eP	Pn	05 30 59.7	+3.7
RCP	Roxas	3.23	308	⇑eP	Pn	05 30 59.0	+1.5
DDMP	Don Marcelino,	3.45	174	eP	Pn	05 31 01.4	+0.8
DDMP				eS	Sn	05 31 55.6	+15
GSPH	General Santos	3.47	186	⇑iP	Pn	05 31 12.3	+11
PVCP	Virac	4.17	344	eP	Pn	05 31 14.6	+4.1
PVCP				eS	Sn	05 32 13.2	+15
OTRP	Odiongan	4.28	311	eP	Pn	05 31 13.6	+1.7
PGP	Puerto Galera	5.81	313	⇑eP	Pn	05 31 38.2	+5.2
LQP	Lukban	5.85	321	eP	Pn	05 31 35.3	+1.5
TGY	Tagaytay City	6.23	317	Pn	Pn	05 31 39.8	+0.9
	80nm,0.3s,baz=151,slow=19,SNR=2.9						
TGY				LR	LR	05 34 35.9	
	comp=Z,3μm,18.0s,baz=93,slow=43						
TNTI	Ternate	8.96	167	P	Pn	05 32 20.9	+4.6
	2μm198nm,1.5s						
TNTI	Ternate	8.96	167		Pn	05 32 20.2	+3.9
I39PW	PALAU INFRASON	9.34	102	i		06 25 30.0	
	baz=283,slow=309,SNR=1.4						
KKM	Kota Kinabalu	9.68	250	Pn	Pn	05 32 27.4	+1.2
LUWI	Luwuk	10.83	194	P	Pn	05 32 48.6	+6.6
	288nm,0.9s						
SANI	Sanana	11.55	177	P	Pn	05 32 46.8	-5.0
SWI	Sorong	11.92	150	P	Pn	05 33 01.5	+4.7
	4μm141nm,1.1s						
SIJI	Sorong	11.93	150	Pn	Pn	05 32 57.6	+0.7
	8.5nm,0.3s,baz=333,slow=14,SNR=7.9						
SIJI				Sn	Sn	05 35 07.7	-1.2
	2.9nm,0.3s,baz=247,slow=8.0,SNR=5.8						
TWG	Pinlang	13.80	343	Pn	P	05 33 26.7	-3.7
FAKI	Fak Fak	14.19	151	Pn	Pn	05 33 29.8	+1.9
YULB	Yu-li	14.29	345		P	05 33 35.0	-0.8
TPUB	Ta-pu	14.38	342		P	05 33 34.5	-2.5
SSLB	Suanglung	14.75	344		P	05 33 39.8	-1.2
SBUM	Sibu	14.82	242	Pn	P	05 33 39.3	-2.4
NACB	Ninganchiao	14.96	347	Pn	Pn	05 33 39.6	+1.4
YHNB	Yeheng	15.49	346	Pn	Pn	05 33 44.7	-0.6
KAPI	Kappang	15.51	201	LR	LR	05 41 08.5	
	comp=Z,1μm,18.0s,baz=31,slow=43						
KBKI	Kotabaru	15.70	216	P	P	05 33 57.7	+6.2
	1μm36nm,0.9s						
DLV	T Lat	16.71	280	P	P	05 34 03.0	0.0
JOW	Kunigami	17.41	9	P	Pn	05 34 07.9	-1.5
SMPI	Sarmi	17.59	130	P	P	05 34 13.4	+0.9
	246nm,1.2s						
QIZ	Qiongzhong	17.70	304	P	P	05 34 15.0	+1.3
QIZ				S	S	05 37 33.6	-2.0
QIZ				pmax	pmax		
	comp=Z,30nm,2.7s						
GENI	Genyem	19.09	129	P	Pn	05 34 29.9	-0.1
	201nm,1.0s						
GUMO	Guam	19.55	76	LR	LR	05 40 29.0	
	comp=Z,936nm,21.8s,baz=244,slow=32						
GUMO	Guam	19.55	76	P	P	05 34 33.6	-0.5
GUMO				pmax	pmax		
	comp=Z,555nm,1.5s						
GUMO	Guam	19.55	76	P	P	05 34 33.6	-0.5
JAGI	Jajag, Banyuwa	21.09	212	P	P	05 34 50.0	-0.7
JAGI				IAmb	IAmb	05 35 06.1	
	comp=Z,106nm,1.2s						
WOJI	Wonogiri, Jawa	22.46	220	P	P	05 35 03.8	-1.7
UGM	Wanagama	22.77	221	P	P	05 35 05.5	-3.4
MTN	Manton Dam	22.99	165	P	P	05 35 13.2	+2.2
	baz=23,SNR=16						
MTN	Manton Dam	22.99	165	P	P	05 35 11.3	+0.3
MTN				IAmb	IAmb	05 35 26.4	
	comp=Z,66nm,0.9s						
NJ2	Nanjing	23.17	346	eP	P	05 35 14.8	+2.1
NJ2				pmax	pmax		
	comp=Z,32nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,590nm,8.1s						
NJ2				LR	LR		
	comp=Z,810nm,18.0s						
NJ2				LR	LR		
	comp=Z,1μm,24.6s						
NJ2				LR	LR		
	comp=Z,2μm,18.5s						
WHN	Wuhan	23.25	335	P	P	05 35 14.3	+0.8

WHN				LR	LR		
	comp=Z,5µm,18.2s						
WHN				LR	LR		
	comp=Z,2µm,13.8s						
WHN				LR	LR		
	comp=Z,7µm,16.7s						
JCJ	**Chichijima**	23.62	40	P	P	05 35 16.9	-0.2
	comp=Z,150nm,0.9s,baz=311,slow=2.8,SNR=5.6						
SLVN	**Son La**	23.70	302	P	P	05 35 18.2	+0.1
JNU	**Nakatsue**	24.00	12	P	P	05 35 20.4	-0.3
	comp=Z,6.6nm,0.7s,baz=275,slow=11,SNR=3.7						
JNU	**Nakatsue**	24.00	12	P	P	05 35 21.4	+0.7
CISI	**Cisompet, Garu**	24.36	226	P	P	05 35 20.9	-3.3
CISI				IAmb	IAmb	05 35 34.9	
	comp=Z,157nm,1.5s						
GYA	**Guiyang**	24.39	316	⇑iP	P	05 35 27.1	+2.7
GYA				pP	sP	05 35 44.3	+5.0
GYA				sP	pP	05 35 54.8	+20
GYA				PP	PnPn	05 36 06.3	+11
GYA				PcP	PcP	05 39 03.8	+0.5
GYA				S	S	05 39 39.0	-2.9
GYA				sS	sS	05 40 09.3	+11
GYA				ScP	ScP	05 42 33.0	-6.3
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,140nm,4.9s						
GYA				LR	LR		
	comp=Z,1µm,16.5s						
GYA				LR	LR		
	comp=Z,530nm,16.7s						
GYA				LR	LR		
	comp=Z,480nm,16.8s						
IPM	**Ipoh**	24.63	260	P	P	05 35 28.0	+1.3
IPM				IAmb	IAmb	05 35 38.6	
	comp=Z,46nm,0.8s						
PBKT	**Sadao Pong**	24.71	289	P	P	05 35 28.2	+0.9
PBKT				IAmb	IAmb	05 35 31.0	
	comp=Z,61nm,1.5s						
KULM	**Kulim**	24.83	262	P	P	05 35 27.9	-0.6
MDSI	**Maura Dua**	25.28	237	P	P	05 35 31.8	-0.7
KNRA	**Kununurra**	25.30	172	P	P	05 35 33.7	+1.1
	baz=25,SNR=12						
KNRA	**Kununurra**	25.30	172	P	P	05 35 32.4	-0.3
KNRA				IAmb	IAmb	05 35 41.2	
	comp=Z,64nm,0.8s						
ENH	**Enshi**	25.36	327	P	P	05 35 33.4	+0.2
ENH				IAmb	IAmb	05 35 50.7	
	comp=Z,38nm,1.0s						
BKNI	**Bangkinang**	25.85	251	P	P	05 35 37.8	+0.1
BKNI				IAmb	IAmb	05 35 54.9	
	comp=Z,78nm,0.9s						
KMI	**Kunming**	26.47	309	P	P	05 35 45.9	+2.4
KMI				pmax	pmax		
	comp=Z,33nm,1.1s						
KMI	**Kunming**	26.47	309	P	P	05 35 45.9	+2.4
CMAR	**Chiang Mai Arr**	27.05	292	P	P	05 35 50.2	+1.6
	comp=Z,12nm,1.1s,baz=108,slow=7.0,SNR=17						
CMAR	**Chiang Mai Arr**	27.05	292	P	P	05 35 47.3	-1.2
PSI	**Prapat**	27.08	257	P	P	05 35 48.1	-0.8
	comp=Z,2.7nm,0.4s,baz=49,slow=8.9,SNR=3.9						
RPSI	**Rantau Prapat**	27.11	257	P	P	05 35 48.5	-0.6
RPSI				IAmb	IAmb	05 36 04.0	
	comp=Z,44nm,1.3s						
RPSI	**Rantau Prapat**	27.11	257	P	P	05 35 48.1	-0.9
CHTO	**Chiang Mai**	27.15	293	P	P	05 35 48.6	-0.8
CHTO				pmax	pmax		
	comp=Z,17nm,1.0s						
CHTO	**Chiang Mai**	27.15	293	P	P	05 35 48.6	-0.8
FITZ	**Fitzroy Crossi**	27.48	179	P	P	05 35 52.4	+0.2
	baz=27,SNR=12						
FITZ	**Fitzroy Crossi**	27.48	179	P	P	05 35 51.9	-0.4
	comp=Z,18nm,0.8s,baz=4.0,slow=0.0,SNR=15						
FITZ	**Fitzroy Crossi**	27.48	179	P	P	05 35 51.5	-0.8
FITZ				IAmb	IAmb	05 36 06.0	
	comp=Z,35nm,1.1s						
INU	**Inuyama**	27.80	21	P	P	05 35 54.5	-0.5
INU				IAmb	IAmb	05 36 01.8	
	comp=Z,43nm,0.9s						
KSRS	**Korea Array**	27.87	4	P	P	05 35 55.4	-0.2
	comp=Z,4.8nm,0.8s,baz=184,slow=9.5,SNR=9.3						
KS19	**Wonju Array Si**	27.91	4	P	P	05 35 55.5	-0.5
KCSI	**Kotacane, Aceh**	28.01	259	P	P	05 36 05.9	+8.7
	comp=Z,2µmcomp=Z,42nm,1.2s						
XAN	**Xi'an**	28.65	331	P	P	05 36 09.3	+6.6
XAN				S	S	05 40 54.6	+5.6
XAN				pmax	pmax		
	comp=Z,29nm,1.0s						
XAN				pmax	pmax		
	comp=Z,450nm,5.4s						
XAN				LR	LR		
	comp=Z,1µm,23.3s						
XAN				LR	LR		
	comp=Z,2µm,22.8s						
XAN				LR	LR		
	comp=Z,2µm,20.0s						
XAN	**Xi'an**	28.65	331	P	P	05 36 01.0	-1.7
XAN				pmax	pmax		
	comp=Z,23nm,0.8s						
XAN	**Xi'an**	28.65	331	P	P	05 36 01.0	-1.7
PMG	**Port Moresby**	28.76	130	P	P	05 36 02.5	-1.3
	comp=Z,14nm,0.9s,baz=330,slow=3.9,SNR=4.1						
PMG	**Port Moresby**	28.76	130	⇓eP	P	05 36 03.9	+0.1
PMG				pmax	pmax		
	comp=Z,88nm,1.0s						
PMG	**Port Moresby**	28.76	130	P	P	05 36 02.3	-1.5
PMG				IAmb	IAmb	05 36 09.9	
	comp=Z,49nm,1.1s						
MAJO	**Matsushiro**	29.30	22	P	P	05 36 06.8	-1.5
MAJO				pmax	pmax		
	comp=Z,18nm,1.0s						
MAJO	**Matsushiro**	29.30	22	P	P	05 36 06.8	-1.5
MAT	**Matsushiro**	29.30	22	P	P	05 36 07.1	-1.2
MAT				S	S	05 40 58.2	-0.9
MJAR	**Matsushiro Arr**	29.30	22	P	P	05 36 06.9	-1.5
	comp=Z,4.5nm,0.7s,baz=202,slow=9.0,SNR=4.1						
MJAR	**Matsushiro Arr**	29.30	22	P	P	05 36 06.4	-1.9
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MJAR	**Matsushiro Arr**	29.30	22	P	P	05 36 06.4	-1.9
MJB9	**Matsu-Tunnel**	29.30	22	P	P	05 36 06.1	-2.2
COEN	**Coen**	29.32	143	P	P	05 36 10.8	+2.1
	baz=29,SNR=12						
COEN	**Coen**	29.32	143	P	P	05 36 08.4	-0.3
COEN				IAmb	IAmb	05 36 17.5	
	comp=Z,35nm,0.8s						
WRAB	**Tennant Creek**	30.62	163	⇑eP	P	05 36 23.1	+2.9
WRAB				pmax	pmax		
	comp=Z,30nm,1.4s						
WRA	**Warramunga Arr**	30.63	163	P	P	05 36 19.7	-0.6
	comp=Z,2.2nm,0.7s,baz=346,slow=9.2,SNR=3.8						
WRA	**Warramunga Arr**	30.63	163	i P	P	05 36 24.0	+3.7
WRA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WRA	**Warramunga Arr**	30.63	163	P	P	05 36 23.3	+3.0
WR0	**Warramunga Arr**	30.70	163	P	P	05 36 23.7	+2.8
PSA00	**Pilbara Seismi**	31.40	190	P	P	05 36 27.6	+0.5
PSA00				IAmb	IAmb	05 36 36.3	
	comp=Z,27nm,0.7s						
PSA00	**Pilbara Seismi**	31.40	190	P	P	05 36 28.3	+1.2
PSA00				IAmb	IAmb	05 36 36.4	
	comp=Z,12nm,0.8s						
BJT	**Baijiatuau**	31.41	346	P	P	05 36 26.6	-0.3
BJT				pmax	pmax		
	comp=Z,16nm,0.7s						
BJT	**Baijiatuau**	31.41	346	P	P	05 36 26.6	-0.3
BJI	**Beijing**	31.43	346	eP	P	05 36 27.3	+0.2
BJI				pmax	pmax		
	comp=Z,19nm,0.9s						
BJI				LR	LR		
	comp=Z,1µm,16.3s						
BJI				LR	LR		
	comp=Z,880nm,16.3s						
BJI				LR	LR		
	comp=Z,660nm,18.9s						
SNY	**Shenyang**	32.18	358	⇓P	P	05 36 34.1	+0.4
SNY				sP	sP	05 37 00.0	+11
SNY				PP	PnPn	05 37 38.8	-1.6
SNY				S	S	05 41 32.0	-12
SNY				pmax	pmax		
	comp=Z,47nm,0.9s						
SNY				LR	LR		
	comp=Z,3µm,15.4s						
SNY				LR	LR		
	comp=Z,3µm,14.7s						
SNY				LR	LR		
	comp=Z,2µm,16.1s						
LZH	**Lanzhou**	32.84	327	eP	P	05 36 45.5	+5.7
LZH				pP	sP	05 36 58.8	+4.0
LZH				sP	pP	05 37 09.6	+20
LZH				PP	PP	05 37 53.4	-1.1
LZH				pmax	pmax		
	comp=Z,18nm,1.2s						
LZH				pmax	pmax		
	comp=Z,62nm,4.3s						
LZH				LR	LR		
	comp=Z,2µm,16.3s						
LZH				LR	LR		
	comp=Z,2µm,15.2s						
LZH				LR	LR		
	comp=Z,3µm,16.6s						
QIS	**Mount Isa**	33.06	155	P	P	05 36 42.9	+1.3
	baz=33,SNR=8.6						
MTSU	**Mount Surprise**	33.30	146	P	P	05 36 44.1	+0.4
	baz=33,SNR=16						
HHC	**Hu-ho-hao-te**	33.47	341	eP	P	05 36 49.1	+4.0
HHC				pmax	pmax		
	comp=Z,100nm,0.8s						
HHC				pmax	pmax		
	comp=Z,500nm,4.3s						
AS31	**Alice Springs**	34.07	166	P	P	05 36 50.4	0.0
ASAR	**Alice Springs**	34.07	166	P	P	05 36 50.5	+0.1
	comp=Z,3.0nm,0.7s,baz=350,slow=6.9,SNR=16						
WRKA	**Warakurna**	34.51	175	P	P	05 36 54.0	-0.2
	baz=34,SNR=7.4						
BRDH	**Bariadhala**	34.79	296	P	P	05 36 55.7	-1.0
	comp=Z,61nm,0.3s,baz=78,slow=14,SNR=3.6						
USA0B	**Ussuriysk Arra**	34.99	8	⇓eP	P	05 36 58.7	+0.6
USA0B	**Ussuriysk Arra**	34.99	8	P	P	05 36 57.2	-0.9
USA0B				IAmb	IAmb	05 37 07.2	
	comp=Z,28nm,0.8s						
USRK	**Ussuriysk Ar.**	34.99	8	P	P	05 36 58.3	+0.1
	comp=Z,13nm,0.8s,baz=189,slow=7.9,SNR=12						
USRK	**Ussuriysk Ar.**	34.99	8	P	P	05 36 57.5	-0.6
USRK	**Ussuriysk Ar.**	34.99	8	P	P	05 36 57.5	-0.6
MDJ	**Mudanjiang**	35.12	5	P	P	05 36 59.7	+0.5
MDJ				IAmb	IAmb	05 37 09.4	
	comp=Z,67nm,1.5s						
CTA	**Charters Tower**	35.95	145	P	P	05 37 06.8	+0.1
	comp=Z,32nm,1.1s,baz=326,slow=13,SNR=12						
MEEK	**Meekatharra**	36.57	190	P	P	05 37 12.8	+0.9
	baz=36,SNR=11						
TEY	**Ternei**	36.66	13	⇑eP	P	05 37 12.4	0.0
TEY				pmax	pmax		
	comp=N,20nm,1.0s						
TEY				pmax	pmax		
	comp=Z,20nm,1.0s						
GTA	**Gaotai**	37.45	327	eP	P	05 37 25.8	+6.4
GTA				pP	sP	05 37 44.8	+10
GTA				sP	pP	05 37 53.4	+24
GTA				pmax	pmax		
	comp=Z,8.0nm,1.7s						
ASAJ	**Asahikawa**	37.55	21	P	P	05 37 20.9	+0.9
	comp=Z,6.3nm,0.5s,baz=203,slow=15,SNR=4.5						
JKA	**Kamikawa-asahi**	37.55	21	P	P	05 37 20.9	+0.9
MORW	**Morawa**	39.43	193	P	P	05 37 37.7	+1.7
	baz=39,SNR=3.4						
MORW	**Morawa**	39.43	193	P	P	05 37 35.7	-0.3
MORW				IAmb	IAmb	05 37 51.4	
	comp=Z,35nm,1.2s						
KLR	**Kul'dur**	39.91	7	P	P	05 37 39.5	-0.2
	comp=Z,8.0nm,0.9s,baz=118,slow=7.4,SNR=5.6						
KLR	**Kul'dur**	39.91	7	⇓iP	P	05 37 39.6	-0.1
KLR				pmax	pmax		
	comp=Z,30nm,1.5s						
YSS	**Yuzh-Sakhalins**	40.11	19	eP	P	05 37 48.1	+6.7
YSS				pmax	pmax		
	comp=Z,30nm,1.1s						
FORT	**Forrest**	40.19	176	P	P	05 37 42.7	+0.5
	baz=40,SNR=15						
FORT	**Forrest**	40.19	176	P	P	05 37 42.0	-0.2
QLP	**Quilpie**	40.35	153	P	P	05 37 43.8	+0.2
	baz=40,SNR=5.5						
KMBL	**Kambalda**	40.83	185	P	P	05 37 47.5	0.0
	baz=40,SNR=6.8						
ULN	**Ulaanbaatar**	41.18	341	P	P	05 37 50.5	0.0
ULN				pmax	pmax		
	comp=Z,18nm,1.1s						
ULN	**Ulaanbaatar**	41.18	341	P	P	05 37 50.5	0.0
SONM	**Songino Array**	41.37	341	P	P	05 37 53.4	+1.4
	comp=Z,1.3nm,0.7s,baz=150,slow=6.6,SNR=2.8						
SONM	**Songino Array**	41.37	341	P	P	05 37 53.9	+1.9
GRNR	**Gornyy**	42.09	11	⇑iP	P	05 37 58.1	+0.4
GRNR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GRNR				MLR	MLR		
	comp=Z,390nm,16.0s						
MUN	**Mundaring**	42.21	192	P	P	05 38 00.6	+1.8
	baz=42,SNR=6.0						
RMQ	**Roma**	42.45	148	P	P	05 38 03.8	+2.9
	baz=42,SNR=4.2						
EIDS	**Eidsvold**	42.83	145	P	P	05 38 04.6	+0.6
	baz=42,SNR=4.3						
EIDS	**Eidsvold**	42.83	145	P	P	05 38 03.3	-0.7
NWAO	**Narrogin (SRO)**	42.95	190	P	P	05 38 04.7	-0.1
	baz=43,SNR=5.9						
NWAO	**Narrogin (SRO)**	42.95	190	P	P	05 38 05.8	+1.0
	comp=Z,19nm,0.7s,baz=358,slow=8.7,SNR=4.3						
NWAO	**Narrogin (SRO)**	42.95	190	P	P	05 38 04.9	+0.1
NWAO				pmax	pmax		
	comp=Z,22nm,0.9s						
NWAO	**Narrogin (SRO)**	42.95	190	P	P	05 38 04.9	+0.1
NWAO				IAmb	IAmb	05 38 11.7	
	comp=Z,22nm,0.8s						
BBOO	**Buckleboo**	43.36	167	P	P	05 38 08.0	-0.1
	baz=43,SNR=18						
BBOO	**Buckleboo**	43.36	167	P	P	05 38 07.7	-0.4
STKA	**Stephens Creek**	44.04	160	P	P	05 38 14.3	+0.6
	baz=44,SNR=12						
STKA	**Stephens Creek**	44.04	160	P	P	05 38 14.5	+0.9
	comp=Z,6.4nm,0.6s,baz=337,slow=7.9,SNR=18						
STKA	**Stephens Creek**	44.04	160	P	P	05 38 13.2	-0.5
STKA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
STKA	**Stephens Creek**	44.04	160	P	P	05 38 13.2	-0.5
HTT	**Hallett**	44.67	164	P	P	05 38 20.1	+1.4
	baz=44,SNR=16						
CMSA	**Cobar Meteorol**	45.28	155	P	P	05 38 25.4	+1.8
	baz=45,SNR=12						
TLY	**Talaya**	45.59	341	P	P	05 38 26.4	+0.6
	comp=Z,3.1nm,0.6s,baz=229,slow=20,SNR=3.2						
TLY	**Talaya**	45.59	341	⇓eP	P	05 38 26.1	+0.3
TLY				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TLY	**Talaya**	45.59	341	P	P	05 38 25.8	0.0
HYB	**Hyderabad**	46.05	285	i P	P	05 38 35.0	+5.0
ARMA	**Armidale**	47.10	149	P	P	05 38 39.8	+1.7
	baz=47,SNR=8.2						
ARMA	**Armidale**	47.10	149	P	P	05 38 41.2	+3.1
ARMA				IAmb	IAmb	05 38 45.0	
	comp=Z,37nm,1.1s						
WMQ	**Urumqi**	47.22	323	eP	P	05 38 40.8	+2.0
WMQ				pP	sP	05 39 00.8	+6.6
WMQ				pmax	pmax		
	comp=Z,17nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,150nm,4.3s						
WMQ				LR	LR		
	comp=Z,1µm,16.5s						
WMQ				LR	LR		
	comp=Z,2µm,18.3s						
WMQ				LR	LR		
	comp=Z,2µm,20.5s						
YNG	**Young**	48.80	154	P	P	05 38 53.7	+2.7
	baz=48,SNR=12						
CAN	**Canberra**	49.93	155	P	P	05 38 58.9	-0.7
CAN				pmax	pmax		
	comp=Z,32nm,0.9s						
CAN	**Canberra**	49.93	155	P	P	05 38 58.9	-0.7
CAN				IAmb	IAmb	05 39 16.4	
	comp=Z,32nm,0.9s						
CNB	**Canberra Magne**	50.08	154	P	P	05 39 04.1	+3.3
	baz=50,SNR=9.5						
TOO	**Toolangi**	50.54	159	P	P	05 39 06.2	+1.9
	baz=50,SNR=6.8						
PEA0B	**Petropavlovsk-**	50.67	25	⇑eP	P	05 39 03.7	-1.2
PEA0B	**Petropavlovsk-**	50.67	25	P	P	05 39 03.9	-1.0
PETK	**Petropavlovsk-**	50.67	25	P	P	05 39 05.7	+0.7
	comp=Z,18nm,1.0s,baz=212,slow=4.4,SNR=11						
PETK	**Petropavlovsk-**	50.67	25	P	P	05 39 04.8	-0.2
PETK	**Petropavlovsk-**	50.67	25	P	P	05 39 04.8	-0.2
DZM	**Mont Dzumac**	51.12	128	P	P	05 39 08.5	-0.4
	comp=Z,9.6nm,0.6s,baz=249,slow=13,SNR=8.7						
DZM	**Mont Dzumac**	51.12	128	P	P	05 39 08.3	-0.7
MK31	**Makanchi Array**	52.03	324	P	P	05 39 12.9	-2.5
MK31				pmax	pmax		
	comp=Z,13nm,0.9s						
MK31	**Makanchi Array**	52.03	324	P	P	05 39 12.9	-2.5
MK31				IAmb	IAmb	05 39 21.4	
	comp=Z,13nm,0.8s						
MKAR	**Makanchi Array**	52.03	324	ceP	P	05 39 14.1	-1.3
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MKAR	**Makanchi Array**	52.03	324	P	P	05 39 14.6	-0.8
MAKZ	**Makanchi**	52.23	323	P	P	05 39 13.5	-3.3
MAKZ				pmax	pmax		
	comp=Z,20nm,0.8s						
MAKZ	**Makanchi**	52.23	323	P	P	05 39 13.5	-3.3
MAKZ				IAmb	IAmb	05 39 21.4	
	comp=Z,20nm,0.8s						
YAK	**Yakutsk**	52.47	3	P	P	05 39 17.6	-0.6
	comp=Z,6.2nm,0.3s,baz=160,slow=18,SNR=2.8						
YAK	**Yakutsk**	52.47	3	eP	P	05 39 16.3	-1.9
YAK				e		05 39 27.0	
YAK				pmax	pmax		
	comp=Z,18nm,1.0s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,42nm,0.9s						
YAK				pmax	pmax		
	comp=N,17nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.1s						
YAK	**Yakutsk**	52.47	3	P	P	05 39 17.2	-1.1
KSH	**Kashi**	53.02	313	P	P	05 39 27.1	+4.2
KSH				pP	sP	05 39 46.3	+8.3
KSH				PP	PP	05 41 29.1	+6.2
KSH				PcS	PcS	05 44 30.8	+0.7
KSH				S	S	05 46 50.3	-0.2
KSH				SS	SS	05 50 29.0	-1.0
KSH				pmax	pmax		
	comp=E,66nm,1.3s						
KSH				pmax	pmax		
	comp=E,610nm,7.1s						
KSH				LR	LR		
	comp=E,690nm,14.8s						
KSH				LR	LR		
	comp=E,580nm,12.3s						
KSH				LR	LR		
	comp=E,580nm,11.5s						
MA2	**Magadan**	53.47	16	P	P	05 39 25.7	+0.1
	comp=E,10nm,0.7s,baz=191,slow=4.7,SNR=16						
MA2	**Magadan**	53.47	16	⇑eP	P	05 39 25.7	+0.1
MA2				pmax	pmax		
	comp=Z,29nm,1.7s						
MA2	**Magadan**	53.47	16	P	P	05 39 25.7	+0.1
MA2				IAmb	IAmb	05 39 44.0	
	comp=Z,18nm,0.7s						
AAK	**Ala-Archa**	55.18	316	P	P	05 39 39.7	+1.0
	comp=Z,3.1nm,0.9s,baz=76,slow=8.3,SNR=2.7						
AAK	**Ala-Archa**	55.18	316	P	P	05 39 39.4	+0.7
AAK				IAmb	IAmb	05 39 54.5	
	comp=Z,17nm,1.1s						
KURK	**Kurchatov**	56.13	326	⇓eP	P	05 39 44.7	-0.4
KURK				pmax	pmax		
	comp=Z,30nm,1.7s						
KURK	**Kurchatov**	56.13	326	P	P	05 39 45.2	+0.1
KURK				IAmb	IAmb	05 39 53.6	
	comp=Z,34nm,1.0s						
KURBB	**Kurchatov Arra**	56.13	326	P	P	05 39 45.2	+0.1
	comp=Z,4.0nm,0.8s,baz=126,slow=6.7,SNR=18						
SEY	**Seymchan**	56.73	14	P	P	05 39 50.3	+1.1
	comp=Z,5.3nm,0.7s,baz=168,slow=9.3,SNR=7.1						
SEY	**Seymchan**	56.73	14	⇓eP	P	05 39 49.7	+0.5
KBL	**Kabul**	56.97	305	P	P	05 39 52.0	+0.3
KBL				pmax	pmax		
	comp=Z,17nm,0.9s						
KBL	**Kabul**	56.97	305	P	P	05 39 52.0	+0.3
KBL				IAmb	IAmb	05 40 04.1	
	comp=Z,17nm,0.8s						
KK31	**Karatay Array**	58.09	315	P	P	05 39 59.8	+0.6
KK31				pmax	pmax		
	comp=Z,30nm,1.1s						
KK31	**Karatay Array**	58.09	315	P	P	05 39 59.8	+0.6
KK31				IAmb	IAmb	05 40 08.0	
	comp=Z,30nm,1.1s						
KKAR	**Karatay Array**	58.09	315	P	P	05 39 59.7	+0.5
KKAR				pmax	pmax		
	comp=Z,30nm,1.1s						
KKAR	**Karatay Array**	58.09	315	P	P	05 39 60.0	+0.8
KKAR	**Karatay Array**	58.09	315	P	P	05 39 59.7	+0.5
KKAR				IAmb	IAmb	05 40 08.0	
	comp=Z,30nm,1.1s						
BVAR	**Borovoye Array**	61.72	326	P	P	05 40 24.4	+0.5
	comp=Z,6.3nm,1.0s,baz=126,slow=9.3,SNR=7.8						
BRVK	**Borovoye**	61.80	326	⇓eP	P	05 40 24.6	+0.2
BRVK				pmax	pmax		
	comp=Z,23nm,1.7s						
BRVK	**Borovoye**	61.80	326	P	P	05 40 24.1	-0.2
BRVK				IAmb	IAmb	05 40 32.5	
	comp=Z,20nm,0.9s						
TIXI	**Tiksi**	62.08	1	P	P	05 40 25.0	-0.9
	comp=Z,3.0nm,0.7s,baz=166,slow=6.2,SNR=6.3						
TIXI	**Tiksi**	62.08	1	⇓eP	P	05 40 24.8	-1.1
TIXI				pmax	pmax		
	comp=Z,19nm,1.7s						
TIXI	**Tiksi**	62.08	1	P	P	05 40 24.9	-0.9
TIXI				IAmb	IAmb	05 40 41.5	
	comp=Z,24nm,1.1s						
HRA	**Herat**	62.48	304	P	P	05 40 29.9	+0.3
HRA				IAmb	IAmb	05 40 38.7	
	comp=Z,17nm,1.4s						
BILL	**Bilibino**	64.34	16	⇑eP	P	05 40 40.6	-0.4
BILL				e		05 41 11.2	
BILL				e		05 43 06.1	
BILL				eS	S	05 49 18.3	+2.0
BILL				pmax	pmax		
	comp=Z,12nm,0.9s						
BILL	**Bilibino**	64.34	16	P	P	05 40 40.7	-0.2
BILL				IAmb	IAmb	05 40 55.1	
	comp=Z,25nm,1.0s						
NRIK	**Noril'sk**	64.47	346	P	P	05 40 41.1	-0.7
	comp=Z,4.2nm,0.8s,baz=118,slow=5.5,SNR=4.3						
GEYT	**Alibeck**	66.23	307	P	P	05 40 55.7	+1.8
	comp=Z,7.4nm,1.0s,baz=84,slow=4.5,SNR=5.3						
AB31	**Akbulak array**	66.81	320	P	P	05 40 57.2	-0.1
ABKAR	**Akbulak array**	66.81	320	P	P	05 40 58.2	+0.9
ABKAR	**Akbulak array**	66.81	320	P	P	05 40 57.8	+0.5
ABKAR				IAmb	IAmb	05 41 07.4	
	comp=Z,17nm,1.1s						
THZ	**Tophouse**	67.15	143	P	P	05 41 00.5	+0.9
THZ				IAmb	IAmb	05 41 12.8	
	comp=Z,20nm,0.7s						
LBZ	**Lake Benmore**	67.28	147	P	P	05 40 58.4	-1.9
BKZ	**Black Stump Fm**	67.85	139	P	P	05 41 02.9	-1.1
AKTO	**Aktyubinsk**	68.28	321	P	P	05 41 07.5	+0.9
	comp=Z,5.6nm,0.8s,baz=157,slow=7.0,SNR=5.8						
SVE	**Sverdlovsk**	68.31	328	eP	P	05 41 07.2	+0.6
SVE				pmax	pmax		
	comp=Z,27nm,1.0s						
ARU	**Arti**	69.31	327	d iP	P	05 41 12.3	-0.5
ARU				*PP	sP	05 41 32.2	+3.8
ARU						05 41 36.9	
ARU						05 43 40.8	
ARU				S	S	05 50 08.5	-8.2
ARU				pmax	pmax		
	comp=Z,31nm,1.9s						
ARU	**Arti**	69.31	327	P	P	05 41 11.7	-1.2
ARU				IAmb	IAmb	05 41 22.1	
	comp=Z,13nm,0.7s						
GAMB	**Gambell**	69.70	25	P	P	05 41 15.3	+0.2
GAMB				IAmb	IAmb	05 41 34.9	
	comp=Z,18nm,1.0s						
NIUE	**Niue**	69.86	114	P	P	05 41 14.7	-2.2
ANM	**Nome**	72.58	25	P	P	05 41 32.8	+0.3
ANM				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ANM	**Nome**	72.58	25	P	P	05 41 32.8	+0.3
RDOG	**Red Dog Mine**	74.40	22	P	P	05 41 42.7	-0.5
RDOG				IAmb	IAmb	05 41 53.2	
	comp=Z,39nm,1.1s						
KIRV	**Kirov**	74.56	328	LR	LR	06 18 26.9	
	comp=Z,6µm,21.2s,baz=289,slow=39						

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CASY  Casey             76.41 186   P      P        05 41 56.0 +1.4
CASY                                IAmb   IAmb     05 42 10.2
      comp=Z,23nm,1.1s
PRGR  Permogore         76.75 331  eP      P        05 41 55.0 -1.7
PRGR                                pmax   pmax
      comp=Z,13nm,0.6s
RAYN  Ar Rayn           76.97 292   P      P        05 41 57.9 -1.0
RAYN                                pmax   pmax
      comp=Z,21nm,0.9s
RAYN  Ar Rayn           76.97 292   P      P        05 41 57.9 -1.0
RAYN                                IAmb   IAmb     05 42 13.9
      comp=Z,20nm,0.8s
ZEI   Tsey              77.30 312  eP      P        05 42 03.1 +2.6
ZEI                                 pmax   pmax
      comp=Z,22nm,1.1s
KDAK  Kodiak Island     77.76  33   P      P        05 42 04.1 +1.7
      comp=Z,17nm,0.7s,baz=199,slow=2.6,SNR=18
KDAK  Kodiak Island     77.76  33   P      P        05 42 01.8 -0.7
KDAK                                pmax   pmax
      comp=Z,43nm,1.1s
KDAK  Kodiak Island     77.76  33   P      P        05 42 01.8 -0.7
KBZ   Khabaz            78.00 313   P      P        05 42 05.8 +1.7
      comp=Z,2.5nm,0.8s,baz=120,slow=14,SNR=3.1
KIV   Kislovodsk        78.15 313  eP      P        05 42 02.7 -2.4
KIV                                 pmax   pmax
      comp=Z,37nm,1.1s
VRH   Novokhopyorsk     78.62 320  eP      P        05 42 07.3 -0.1
VRH                                 pmax   pmax
      comp=Z,40nm,1.1s
BPAW  Bear Paw Mtn.     78.70  26   P      P        05 42 08.0 +0.3
MLY   Manley            78.83  25   P      P        05 42 08.5 +0.2
MLY                                 IAmb   IAmb     05 42 16.1
      comp=Z,34nm,1.3s
TRF   Thorofare Moun    79.00  27   P      P        05 42 07.8 -1.7
TRF                                 IAmb   IAmb     05 42 20.1
      comp=Z,33nm,1.2s
COLD  Coldfoot          79.11  23   P      P        05 42 08.8 -1.0
TOLK  Toolik Lake Re    79.38  22   P      P        05 42 10.5 -0.7
TOLK                                IAmb   IAmb     05 42 21.4
      comp=Z,18nm,0.9s
SEW   Seward            79.40  31   P      P        05 42 10.3 -1.2
PMR   Palmer            79.54  29   P      P        05 42 11.5 -0.7
PMR                                 pmax   pmax
      comp=Z,25nm,1.0s
PMR   Palmer            79.54  29   P      P        05 42 11.5 -0.7
PMR                                 IAmb   IAmb     05 42 25.6
      comp=Z,25nm,1.0s
NEA   Nenana            79.54  26   P      P        05 42 11.6 -0.6
MCK   McKinley          79.61  27   P      P        05 42 12.1 -0.5
MCK                                 pmax   pmax
      comp=Z,71nm,1.2s
MCK   McKinley          79.61  27   P      P        05 42 12.1 -0.5
RND   Reindeer          79.65  27   P      P        05 42 12.0 -0.9
RND                                 pmax   pmax
      comp=Z,20nm,0.9s
RND   Reindeer          79.65  27   P      P        05 42 12.0 -0.9
RND                                 IAmb   IAmb     05 42 21.5
      comp=Z,20nm,0.9s
KLMR  Klimovskoe        79.68 330  eP      P        05 42 09.6 -3.4
KLMR                                pmax   pmax
      comp=Z,25nm,0.9s
KLMR  Klimovskoe        79.68 330  eP      P        05 42 09.6 -3.4
KLMR                                AMP             05 42 22.8
      comp=Z,25nm,0.9s
KNK   Knik Glacier      79.86  29   P      P        05 42 13.2 -0.8
KNK                                 IAmb   IAmb     05 42 23.7
      comp=Z,32nm,1.0s
SML   Sawmill           79.92  29   P      P        05 42 14.6 +0.2
CCB   Clear Creek Bu    80.09  26   P      P        05 42 14.8 -0.3
VSR   Storozhevoye      80.22 320  eP      P        05 42 16.9 +0.8
VSR                                 pmax   pmax
      comp=Z,20nm,1.4s
LPSR  Galich'ya Gora    80.30 322  eP      P        05 42 16.5  0.0
LPSR                                pmax   pmax
      comp=Z,10.0nm,1.0s
DHY   Denali Highway    80.32  27   P      P        05 42 15.0 -1.7
SCM   Sheep Creek Mo    80.39  29   P      P        05 42 17.1 +0.2
SCM   Sheep Creek Mo    80.39  29   P      P        05 42 17.1 +0.2
SCM                                 IAmb   IAmb     05 42 36.5
      comp=Z,35nm,1.0s
HDA   Harding Lake      80.47  26   P      P        05 42 16.0 -1.2
HDA                                 IAmb   IAmb     05 42 31.6
      comp=Z,15nm,0.8s
IL31                    80.48  26   P      P        05 42 16.2 -1.0
ILAR  Eielson Array     80.48  26   P      P        05 42 16.4 -0.9
      comp=Z,1.3nm,0.7s,baz=247,slow=4.3,SNR=12
ILAR  Eielson Array     80.48  26   P      P        05 42 15.8 -1.4
ILAR  Eielson Array     80.48  26   P      P        05 42 15.8 -1.4
PAX   Paxson            81.20  28   P      P        05 42 20.3 -0.9
PAX                                 pmax   pmax
      comp=Z,28nm,1.0s
PAX   Paxson            81.20  28   P      P        05 42 20.3 -0.9
PAX                                 IAmb   IAmb     05 42 35.6
      comp=Z,28nm,1.0s
BMAR  Burnt Mountain    81.28  23   P      P        05 42 20.4 -1.2
RIDG  Independent Ri    81.43  27   P      P        05 42 21.0 -1.4
OBN   Obninsk           81.53 324⇑eP      P        05 42 24.2 +1.2
OBN                                e                05 45 31.3
OBN                                eS      S        05 52 33.0 +0.9
OBN                                 pmax   pmax
      comp=Z,45nm,1.6s
SCRK  Sand Creek        81.79  26   P      P        05 42 23.3 -1.1
SCRK                                IAmb   IAmb     05 42 34.3
      comp=Z,23nm,1.1s
APA   Apatity           81.97 337⇑iP      P        05 42 30.7 +5.6
APA                                 pmax   pmax
      comp=Z,8.0nm,0.8s
APA                                 MLR    MLR
      comp=Z,4µm,19.0s
GLB   Gilahina Butte    82.09  29   P      P        05 42 26.3 +0.3
GLB                                 IAmb   IAmb     05 42 36.2
      comp=Z,35nm,1.1s
CRQM  Cirque            82.49  30   P      P        05 42 27.5 -0.7
TGL   Tana Glacier      82.64  30   P      P        05 42 27.6 -1.2
BCAR  Beaver Creek A    82.86  27   P      P        05 42 27.7 -2.2
EGAK  Eagle             82.92  26   P      P        05 42 28.7 -1.4
EGAK                                IAmb   IAmb     05 42 44.2
      comp=Z,16nm,1.1s
BARN  Barnard Glacie    83.17  29   P      P        05 42 32.7 +1.0
CTGM  Chitina Glacie    83.34  29   P      P        05 42 33.0 +0.5
DAWY  Dawson            83.78  26   P      P        05 42 34.1 -0.6
DAWY                                IAmb   IAmb     05 42 44.9
      comp=Z,41nm,1.2s
PCA   Pinnacle          83.99  30   P      P        05 42 35.7 -0.1
EPYK  Eagle Plains      84.49  24   P      P        05 42 37.6 -0.6
ARCES ARCESS Array B    84.53 340   P      P        05 42 38.1 -0.2
      comp=Z,3.4nm,0.7s,baz=72,slow=5.8,SNR=6.4
ARCES ARCESS Array B    84.53 340   P      P        05 42 37.3 -1.0
ARCES ARCESS Array B    84.53 340   P      P        05 42 37.3 -1.0
MMAI  Mount Meron Ar    84.81 302   P      P        05 42 42.0 +1.5
      comp=Z,0.3nm,0.2s,baz=153,slow=9.7,SNR=2.9
HYT   Haines Junctio    85.21  29   P      P        05 42 42.0 -0.1
BR131 Keskin Array S    85.26 309   P      P        05 42 41.6 -1.2
BR131                               pmax   pmax
      comp=Z,6.0nm,1.0s
BR131 Keskin Array S    85.26 309   P      P        05 42 41.6 -1.2
BRTR  Keskin Array B    85.26 309   P      P        05 42 43.9 +1.1
      comp=Z,2.1nm,0.8s,baz=90,slow=2.9,SNR=6.5
BRTR  Keskin Array B    85.26 309   P      P        05 42 43.5 +0.7
BRTR  Keskin Array B    85.26 309   P      P        05 42 43.5 +0.7
INK   Inuvik            85.28  21   P      P        05 42 41.7 -0.3
      comp=Z,11nm,1.0s,baz=262,slow=7.2,SNR=10
INK   Inuvik            85.28  21   P      P        05 42 42.2 +0.2
FINES FINESS Array B    86.07 332   P      P        05 42 45.6 -0.5
      comp=Z,2.0nm,0.5s,baz=71,slow=5.5,SNR=12
FINES FINESS Array B    86.07 332   P      P        05 42 44.9 -1.2
FINES FINESS Array B    86.07 332   P      P        05 42 44.9 -1.2
WHY   Whitehorse        86.50  29   P      P        05 42 48.2 -0.2
WHY                                 IAmb   IAmb     05 42 58.6
      comp=Z,20nm,0.9s
AKASG Malin Array Be    86.52 321   P      P        05 42 49.2 +0.6
      comp=Z,3.6nm,0.7s,baz=63,slow=4.7,SNR=5.0
AKASG Malin Array Be    86.52 321   P      P        05 42 45.7 -2.9
AKASG                               pmax   pmax
      comp=Z,6.0nm,1.1s
AKASG Malin Array Be    86.52 321   P      P        05 42 45.7 -2.9
C36M  Paulatuk          88.22  19   P      P        05 42 55.5 -0.8
KMBO  Kilima Mbogo      88.29 269   P      P        05 42 59.7 +1.6
      comp=Z,2.1nm,0.8s,baz=79,slow=6.2,SNR=4.5
KMBO  Kilima Mbogo      88.29 269   P      P        05 42 55.5 -2.6
KMBO                                pmax   pmax
      comp=Z,7.0nm,1.2s
KMBO  Kilima Mbogo      88.29 269   P      P        05 42 55.5 -2.6
VNDA  Vanda             89.35 173   P      P        05 43 02.0 +0.6
      comp=Z,6.7nm,1.1s,baz=306,slow=6.4,SNR=11
VNDA  Vanda             89.35 173   P      P        05 43 01.2 -0.2
VNDA                                pmax   pmax
      comp=Z,11nm,0.9s
VNDA  Vanda             89.35 173   P      P        05 43 01.2 -0.2
VNDA                                IAmb   IAmb     05 43 15.7
      comp=Z,10nm,0.9s
SBA   Scott Base        90.26 172   P      P        05 43 07.4 +1.8
SBA                                 pmax   pmax
      comp=Z,27nm,1.4s
SBA   Scott Base        90.26 172   P      P        05 43 07.4 +1.8
UZH   Uzhgorod          91.38 320  eP      P        05 43 17.0 +5.4
CRVS  Cervenica-Dubn    91.83 320  eP      P        05 43 14.3 +0.5
CRVS  Cervenica-Dubn    91.83 320  eP      P        05 43 14.2 +0.5
RES   Resolute Bay      92.35  10   P      P        05 43 15.3 -0.2
      comp=Z,2.8nm,0.8s,baz=319,slow=5.5,SNR=6.6
RES   Resolute Bay      92.35  10   P      P        05 43 15.0 -0.5
RES                                 pmax   pmax
      comp=Z,10.0nm,1.0s
RES   Resolute Bay      92.35  10   P      P        05 43 15.0 -0.5
RES                                 IAmb   IAmb     05 43 24.9
      comp=Z,10nm,1.0s
NB2   NORSAR Subarra    92.98 334   P      P        05 43 14.6 -4.2
      comp=Z,20nm,1.7s,baz=64,slow=4.6
NB2   NORSAR Subarra    92.98 334   P      P        05 43 14.6 -4.2
      baz=64,slow=4.6
NOA   NORSAR Array B    92.98 334   P      P        05 43 18.2 -0.6
      comp=Z,1.3nm,0.8s,baz=101,slow=3.8,SNR=2.7
YKA   Yellowknife Ar    94.78  24   P      P        05 43 26.9  0.0
      comp=Z,3.4nm,1.0s,baz=293,slow=4.3,SNR=13
YKA                                 PP     PP       05 47 16.0 +0.8
      comp=Z,0.1nm,0.4s,baz=302,slow=6.1,SNR=3.8
GERES GERESS Array B    96.68 322   P      P        05 43 35.9 -0.2
      comp=Z,0.7nm,0.4s,baz=52,slow=6.4,SNR=4.0
GERES GERESS Array B    96.68 322   P      P        05 43 34.3 -1.7
GERES GERESS Array B    96.68 322   P      P        05 43 34.3 -1.7
NVAR  Mina Array Bea   104.00  46   Pdiff  Pdif     05 44 11.7 +2.6
      comp=Z,0.4nm,0.6s,baz=262,slow=2.7,SNR=3.1
NVAR                                PP     PP       05 48 27.1 +0.7
      comp=Z,0.7nm,0.9s,baz=292,slow=9.6,SNR=2.7
NVAR  Mina Array Bea   104.00  46   Pdif   Pdif     05 44 08.0 -1.1
PDAR  Pinedale Array   107.83  39   PP     PP       05 48 50.4 -4.1
      comp=Z,0.8nm,1.0s,baz=270,slow=1.8,SNR=3.5
TXAR  Lajitas Array    118.99  49   PKP    PKiKP    05 48 56.6 +1.5
      comp=Z,1.0nm,1.0s,baz=202,slow=6.3,SNR=4.2
TXAR  Lajitas Array    118.99  49   PKIKP  PKPdf    05 48 55.0  0.0
TXAR  Lajitas Array    118.99  49          PKPdf    05 48 55.0  0.0
TORD  Torodi Ar. Bea   119.66 291   PKP    PKPdf    05 48 55.4 -1.1
      comp=Z,1.8nm,0.8s,baz=62,slow=2.8,SNR=7.6
DBIC  Dimbokro         127.81 286   PKP    PKiKP    05 49 13.7 +1.0
      comp=Z,4.4nm,1.1s,baz=140,slow=7.9,SNR=3.1
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NEIC ***17*** *05:31:25.6±1.3, 19°.18N±0°.05×66°.66W±0°.04, h37^{km}±51^{km}, Error ellipse: s-maj=7.5km s-min=5.3km az=196.0*

RSPR ***17*** *05:31:26.5, 19°.22N×66°.69W, h34^{km}±5^{km}, MD3.0/12*

OSPL ***17*** *05:31:26.7±1.5, 19°.06N×66°.55W, h23^{km}±23^{km}, ML2.9*

ISC 17 05:31:22.3±1.9**, 19°.18N**±0°.04×**66°.64W**±0°.03**, h6**^{km}±14^{km}**, n54,** σ0^{s}.**72**/68**, 11C-1D, Puerto Rico region**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                    Op     ISC       h  m  s     ISC
EMPR  Esperanza - Ma    0.71 171⇑eP        Pn       05 31 39.2 +0.3
EMPR  Esperanza - Ma    0.71 171  eS       Sn       05 31 49.4 -0.7
EMPR  Esperanza - Ma    0.71 171           Pn       05 31 39.2 +0.3
EMPR                                       Sn       05 31 49.7 -0.4
AOPR  Arecibo Observ    0.83 187⇑eP        Pn       05 31 40.6 -0.1
AOPR  Arecibo Observ    0.83 187  eS       Sb       05 31 52.2 +1.4
AOPR  Arecibo Observ    0.83 187           Pn       05 31 41.0 +0.3
AOPR                                       Sb       05 31 52.3 +1.5
AGPR  Aguadilla, PR     0.84 212  i P      Pn       05 31 40.8 +0.1
AGPR                              eS       Sb       05 31 50.8  0.0
AGPR                               IAML             05 31 56.6
      comp=N,645nm,0.2s
AGPR  Aguadilla, PR     0.84 212⇓eP        Pb       05 31 39.9 +0.6
AGPR  Aguadilla, PR     0.84 212           Pb       05 31 40.1 +0.8
AGPR                                       Sb       05 31 50.9  0.0
GCPR  Guaynabo City     1.01 149⇑eP        Pn       05 31 43.3 +0.2
GCPR  Guaynabo City     1.01 149  eS       Sn       05 31 57.2 -0.5
GCPR  Guaynabo City     1.01 149           Pn       05 31 43.4 +0.2
GCPR                                       Sb       05 31 56.0 +0.1
MPR   Mayaguez          1.07 206  i P      Pb       05 31 43.7 +0.4
MPR                               eS       Sg       05 31 56.7 -0.1
MPR                                IAML             05 32 01.6
      comp=Z,166nm,0.3s
MPR   Mayaguez          1.07 206           Pb       05 31 43.8 +0.4
LSP   Las Mesas         1.08 203⇑eP        Pn       05 31 44.2  0.0
LSP   Las Mesas         1.08 203  eS       Sb       05 31 57.9  0.0
LSP   Las Mesas         1.08 203           Pn       05 31 44.2  0.0
LSP                                        Sb       05 31 57.9  0.0
OBIP  Obispado Ponce    1.13 178⇑eP        Pb       05 31 44.3  0.0
OBIP  Obispado Ponce    1.13 178  eS       Sb       05 31 59.8 +0.5
OBIP  Obispado Ponce    1.13 178           Pb       05 31 44.2  0.0
OBIP                                       Sb       05 31 59.6 +0.4
SJG   San Juan          1.16 156           Pn       05 31 45.9 +0.8
CBYP  Canovanas         1.17 140   Pn      Pn       05 31 45.5 +0.2
GBPR  Guanica, Bosqu    1.22 191⇑eP        Pn       05 31 46.4 +0.5
GBPR  Guanica, Bosqu    1.22 191  eS       Sg       05 32 01.4 -0.1
GBPR  Guanica, Bosqu    1.22 191           Pn       05 31 46.4 +0.5
GBPR                                       Sg       05 32 01.4 -0.1
CRPR  Cabo Rojo, PR     1.25 201⇑eP        Pn       05 31 46.6 +0.2
CRPR  Cabo Rojo, PR     1.25 201  eS       Sg       05 32 01.8 -0.6
CRPR  Cabo Rojo, PR     1.25 201           Pn       05 31 46.7 +0.4
CRPR                                       Sg       05 32 02.1 -0.4
MLPR  Magueyes Islan    1.26 198⇑eP        Pn       05 31 46.9 +0.4
MLPR  Magueyes Islan    1.26 198  eS       Sg       05 32 02.6 -0.3
MLPR  Magueyes Islan    1.26 198           Pn       05 31 46.8 +0.2
MLPR                                       Sg       05 32 02.4 -0.5
ICMP  Isla Caja de M    1.29 175           Pn       05 31 47.8 +0.9
PDPR  Patillas Dam,     1.29 153⇑eP        Pn       05 31 47.7 +0.7
PDPR  Patillas Dam,     1.29 153  eS       Sb       05 32 04.1 +0.1
PDPR  Patillas Dam,     1.29 153   Pn      Pn       05 31 47.2 +0.3
PDPR                                       Sg       05 32 03.4 -0.5
IGPR  InterUniversit    1.31 157⇑eP        Pn       05 31 48.0 +0.8
IGPR  InterUniversit    1.31 157  eS       Sb       05 32 04.4 -0.1
IGPR  InterUniversit    1.31 157           Pn       05 31 48.0 +0.8
IGPR                                       Sg       05 32 03.7 -0.7
CUPR  Culebra, Puert    1.55 124   Pn      Pb       05 31 51.5 +0.1
PCDR  Punta Cana, DR    1.78 248  i P      Pb       05 31 55.6 +0.3
PCDR                               IAML             05 32 27.5
      comp=Z,114nm,0.3s
PCDR  Punta Cana, DR    1.78 248   Pn      Pb       05 31 55.1 -0.2
STVI  Saint Thomas      1.80 117⇑eP        Pn       05 31 54.8 +0.9
STVI  Saint Thomas      1.80 117  eS       Sn       05 32 16.6 -0.5
STVI  Saint Thomas      1.80 117           Pn       05 31 54.6 +0.7
STVI                                       Sn       05 32 15.5 -1.6
CDVI  St. Croix         2.28 128   Pn      Pn       05 32 02.3 +1.8
DR12  Loma Pena Alta    2.62 262           Pn       05 32 06.1 +0.8
SDD   Santo Domingo     3.18 258   Pn      Pn       05 32 12.4 -0.5
BANI  BANI              3.61 258   Pn      Pn       05 32 18.8 -0.1
SC01  Santiago de lo    3.87 274  i P      Pn       05 32 23.6 +1.1
SC01  Santiago de lo    3.87 274   Pn      Pn       05 32 23.5 +1.1
SDDR  Presa de Saban    4.40 268  i P      Pn       05 32 32.6 +2.8
SDDR  Presa de Saban    4.40 268           Pn       05 32 28.8 -1.0
GRTK  Grand Turk        4.81 300   Pn      Pn       05 32 35.5 +0.1
BBSR  BB Station       13.25   7   Pn      Pn       05 34 30.6 -0.5
```

IDC ***17*** *05:39:21.9±1.9, 20°.11S×70°.99W, h0^{km}, mb3.8/2, mb1 3.9/4, mb1mx3.6/34, mbtmp3.7/4, ML3.5/2, Error ellipse: s-maj=58.9km s-min=37.2km az=44.0*

GUC ***17*** *05:39:25.0±0.5, 20°.06S×70°.86W, h28^{km}±4^{km}, ML3.4*

ISC 17 05:39:22.2±2.3**, 20°.05S**±0°.05×**70°.90W**±0°.09**, h5**^{km}±13^{km}**, n12,** σ1^{s}.**15**/18**, 4C-1D, Near coast of northern Chile**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                    Op     ISC       h  m  s     ISC
TA01  Diego Aracena     0.85 127⇑iP        Pb       05 39 39.1 -0.3
TA01                              i S      Sb       05 39 50.2 -1.0
TA01                               IAML             05 39 52.4
      comp=N,3µm,0.2s
PSGC  Pisagua           0.86  58⇑iP        Pb       05 39 39.7 -0.1
PSGC                              i S      Sg       05 39 51.0 +0.9
PSGC                               IAML             05 39 53.6
      comp=N,2µm,0.5s
PB12  IPOC Station P    1.53  21⇑iP        Pg       05 39 52.0 +0.4
PB12                              i S      Sn       05 40 09.6 -1.1
PB12                               IAML             05 40 16.5
      comp=E,767nm,0.5s
PB08  IPOC Station P    1.65  93  eP       Pb       05 39 52.6 -0.7
PB08                              i S      Sb       05 40 14.2 -0.3
PB08                               IAML             05 40 16.2
      comp=N,1µm,0.2s
GO01  Chusmiza          1.65  77⇑iP        Pb       05 39 53.1 -0.4
GO01                              i S      Sb       05 40 15.0 +0.2
PB16  IPOC Station P    2.16  38⇓iP        Pb       05 40 02.1 -0.1
PB16                              i S      Sb       05 40 30.0 +0.5
PB16                               IAML             05 40 32.0
      comp=N,517nm,0.4s
LVC   Limon Verde       3.15 144   Pn      Pn       05 40 12.3 -0.6
      comp=N,2.7nm,0.3s,baz=336,slow=20,SNR=2.1
LPAZ  La Paz            4.58  36   Pn      Pb       05 40 40.7 -2.8
      comp=N,1.1nm,0.3s,baz=205,slow=3.0,SNR=4.6
SIV   San Ignacio      10.19  68   Pn      Pn       05 41 49.0 -0.3
      comp=N,0.9nm,0.3s,baz=269,slow=12,SNR=11
TORD  Torodi Ar. Bea   78.65  71   P       P        05 51 28.2 +2.3
      comp=N,0.6nm,0.6s,baz=256,slow=5.3,SNR=4.3
YKA   Yellowknife Ar   89.22 341   P       P        05 52 18.8 +0.1
      comp=N,0.4nm,0.8s,baz=146,slow=5.3,SNR=4.1
MKAR  Makanchi Array  145.51  33   PKPbc   PKPab    05 59 01.6 -0.2
      comp=N,0.7nm,0.8s,baz=328,slow=3.4,SNR=6.3
```

IDC ***17*** *05:40:19.2±1.3, 19°.93S×70°.77W, h0^{km}, mb4.0/6, mb1 4.2/8, mb1mx3.9/34, mbtmp4.1/8, ML4.3/2, Error ellipse: s-maj=31.2km s-min=23.3km az=83.0*

ISC 17 05:40:19.7±1.2**, 19°.85S**±0°.08×**70°.8W**±0°.1**, h10**^{km}**, n11,** σ1^{s}.**28**/12**, mb4.1**/5**, Near coast of northern Chile**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                    Op     ISC       h  m  s     ISC
LVC   Limon Verde       3.28 147   Pn      Pn       05 41 11.5  0.0
      28nm,0.3s,baz=227,slow=17,SNR=8.1
LVC                                Sn      Sn       05 41 50.2 -0.6
      36nm,0.3s,baz=252,slow=20,SNR=4.8
LPAZ  La Paz            4.38  36   Pn      Pb       05 41 35.6 -1.6
      1.7nm,0.3s,baz=230,slow=4.9,SNR=3.9
SIV   San Ignacio      10.05  69   Pn      Pn       05 42 45.0 +0.7
      2.5nm,0.3s,baz=263,slow=10,SNR=18
PLCA  Paso Flores      20.81 179   P       P        05 45 01.1 -0.2
      1.8nm,0.7s,baz=62,slow=6.0,SNR=3.2
PTGA  Pitinga          21.78  31   P       P        05 45 13.4 +1.5
      3.6nm,0.5s,baz=198,slow=14,SNR=6.0
BDFB  Brasilia         22.13  83   P       P        05 45 16.8 +1.0
      0.9nm,0.4s,baz=261,slow=13,SNR=2.5
RCBR  Riachuelo        36.70  72   P       P        05 47 27.1 -0.1
      5.4nm,0.7s,baz=229,slow=6.9,SNR=4.9
TORD  Torodi Ar. Bea   78.52  71   P       P        05 52 22.1 +0.2
      1.8nm,0.5s,baz=250,slow=5.3,SNR=13
YKA   Yellowknife Ar   89.05 341   P       P        05 53 14.6  0.0
      0.3nm,0.6s,baz=138,slow=4.9,SNR=3.6
MKAR  Makanchi Array  145.30  33   PKPbc   PKiKP    05 59 59.5 -2.3
      2.5nm,0.8s,baz=330,slow=4.3,SNR=19
SONM  Songino Array   152.00   4   PKPbc   PKiKP    06 00 17.3 +1.6
      0.4nm,0.4s,baz=349,slow=1.0,SNR=4.6
```

IDC ***17*** *05:43:19.4±0.9, 19°.94S×70°.82W, h0^{km}, mb3.8/7, mb1 4.2/10, mb1mx3.9/33, mbtmp4.0/10, ML4.1/3, Error ellipse: s-maj=26.2km s-min=15.3km az=58.0*

NEIC ***17*** *05:43:20.6±3.0, 19°.92S±0°.03×70°.90W±0°.07, h10^{km}±1^{km}, mb4.4/10, Error ellipse: s-maj=10.6km s-min=4.9km az=83.0*

GUC ***17*** *05:43:23.4±0.9, 19°.94S×70°.85W, h23^{km}±22^{km}, ML4.2*

ISC 17 05:43:19.9±1.6**, 19°.95S**±0°.04×**70°.86W**±0°.06**, h3**^{km}±10^{km}**, n47,** σ1^{s}.**56**/60**, mb4.1**/9**, 2C, Near coast of northern Chile**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                    Op     ISC       h  m  s     ISC
TA01  Diego Aracena     0.89 134⇑iP        Pn       05 43 38.6 -0.7
TA01                              i S      Sn       05 43 51.2 -1.6
TA01                               IAML             05 43 52.6
      comp=E,15µm,0.5s
PB11  IPOC Station P    1.15  81⇑iP        Pn       05 43 43.5 +0.4
PB11                              i S      Sn       05 43 59.1 -0.4
PB11                               IAML             05 44 01.1
      comp=N,15µm,0.2s
PB11  IPOC Station P    1.15  81           Pn       05 43 43.4 +0.4
PB11                               Sn      Sn       05 43 58.4 -1.1
PB12  IPOC Station P    1.42  21  eP       Pg       05 43 47.6 +0.6
PB12                              i S      Sg       05 44 06.0 +0.5
GO01  Chusmiza          1.60  80           Pg       05 43 50.8 +0.3
GO01                               Sn      Sn       05 44 05.7 -5.2
PB08  IPOC Station P    1.62  97  i P      Pb       05 43 50.8 +0.1
PB08                              i S      Sg       05 44 12.5 +0.5
PB08                               IAML             05 44 15.9
      comp=N,3µm,0.4s
PB01  IPOC Station P    1.69 130           Pb       05 43 51.1 -0.6
PB01                               Sn      Sn       05 44 12.2 -0.5
PB07  IPOC Station P    1.99 153  eP       Pn       05 43 54.4 -0.3
PB07                              i S      Sb       05 44 21.9 -0.3
PB07                               IAML             05 44 35.7
      comp=E,4µm,0.6s
PB16  IPOC Station P    2.05  39  eP       Pg       05 43 59.2 -0.1
PB16                              i S      Sg       05 44 26.2 +0.3
PB16                               IAML             05 44 33.8
      comp=E,2µm,0.6s
PB04  IPOC Station P    2.47 164           Pn       05 44 00.1 -1.1
PB04                               Sn      Sn       05 44 27.7 -4.3
LVC   Limon Verde       3.22 146   Pn      Pn       05 44 13.2 +1.5
      comp=E,18nm,0.3s,baz=352,slow=9.3,SNR=4.9
LVC                                Sn      Sn       05 44 50.4 -0.3
      comp=E,37nm,0.3s,baz=270,slow=20,SNR=3.2
LVC                                Lg      Lg       05 44 59.4
      comp=E,106nm,0.3s,baz=134,slow=16,SNR=4.8
LVC   Limon Verde       3.22 146           Pn       05 44 13.2 +1.5
LVC                                Sn      Sn       05 44 48.1 -2.6
PB10  IPOC Station P    3.56 175   Pn      Pn       05 44 14.4 -1.7
LPAZ  La Paz            4.47  36   Pn      Pb       05 44 36.3 -3.1
      comp=E,1.5nm,0.3s,baz=217,slow=2.2,SNR=6.4
LPAZ  La Paz            4.47  36   Pn      Pn       05 44 27.5 -1.7
GO02  Mina Guanaco      5.32 167   Pn      Pn       05 44 39.8 -0.8
GO03  Copiap            7.63 176   Pn      Pn       05 45 11.2 -0.9
SIV   San Ignacio      10.11  69   Pn      Pn       05 45 46.7 +0.5
      comp=E,2.6nm,0.3s,baz=266,slow=12,SNR=11
GO04  Tololo Observa   10.18 180   Pn      Pn       05 45 46.7 -0.5
CPUP  Villa Florida    13.97 120   Pn      Pn       05 46 39.7 +0.8
      comp=E,0.1nm,0.3s,baz=313,slow=14,SNR=4.9
CPUP  Villa Florida    13.97 120           Pn       05 46 38.8 -0.1
GO06  Curarrehue       19.58 181   P       Pn       05 47 50.2 -0.2
PLCA  Paso Flores      20.72 179   P       P        05 48 02.2 +0.6
      comp=E,4.2nm,0.9s,baz=17,slow=12,SNR=5.4
PLCA  Paso Flores      20.72 179   P       Pn       05 48 02.5 -1.3
PTGA  Pitinga          21.88  30   P       P        05 48 14.3 +0.2
      comp=E,2.1nm,0.3s,baz=275,slow=22,SNR=4.7
BDFB  Brasilia         22.17  83   P       P        05 48 16.8 -0.6
      comp=E,4.0nm,0.6s,baz=239,slow=12,SNR=2.8
BDFB  Brasilia         22.17  83   P       P        05 48 16.5 -0.9
BDFB                               IAmb    IAmb     05 48 26.1
      comp=Z,9.4nm,1.1s
RCBR  Riachuelo        36.75  72   P       P        05 50 28.7 -0.3
GCPR  Guaynabo City    38.31   7   P       P        05 50 43.2 +1.3
TXAR  Lajitas Array    58.32 326   P       P        05 53 15.9 -0.6
      comp=Z,0.3nm,0.7s,baz=142,slow=8.0,SNR=3.1
TXAR  Lajitas Array    58.32 326   P       P        05 53 16.7 +0.3
TX31  Lajitas Ar. Si   58.32 326   P       P        05 53 15.4 -1.1
TX31                               IAmb    IAmb     05 53 28.2
      comp=Z,6.4nm,1.5s
W35A  Tecumseh         60.10 336   P       P        05 53 29.4 +0.8
QSPA  South Pole Qui   70.23 180   P       P        05 54 35.3 +1.1
QSPA                               IAmb    IAmb     05 54 43.2
      comp=Z,5.0nm,1.3s
NVAR  Mina Array Bea   73.15 323   P       P        05 54 52.9 +0.7
      comp=Z,0.5nm,0.8s,baz=133,slow=4.0,SNR=3.1
YNE   Yellowstone No   73.83 332   P       P        05 54 56.8 +0.7
TOA0  Torodi Ar. Sit   78.58  71   P       P        05 55 22.3 -1.2
TOA0                               IAmb    IAmb     05 55 34.9
      comp=Z,4.9nm,1.1s
TORD  Torodi Ar. Bea   78.58  71   P       P        05 55 22.4 -1.1
      comp=Z,3.1nm,1.0s,baz=247,slow=5.6,SNR=7.0
YKA   Yellowknife Ar   89.13 341   P       P        05 56 16.1 -0.2
      comp=Z,0.5nm,0.9s,baz=136,slow=4.5,SNR=4.6
ASAR  Alice Springs   130.38 210   PKP     PKPdf    06 02 32.1 -0.5
      comp=Z,0.5nm,0.9s,baz=183,slow=3.7,SNR=3.7
ASAR  Alice Springs   130.38 210           PKPdf    06 02 31.8 -0.9
MKAR  Makanchi Array  145.40  33   PKPbc   PKPab    06 02 59.4 -0.1
      comp=Z,0.8nm,0.7s,baz=308,slow=3.9,SNR=6.1
KSH   Kashi           145.50  48   PKPbc   PKiKP    06 03 06.8 +2.9
KSH                                PP      PP       06 06 28.1 +8.1
KSH                                PKS     PKSdf    06 06 41.0 +5.5
MJAR  Matsushiro Arr  149.68 309   PKPbc   PKiKP    06 03 11.6 -0.9
      comp=Z,0.7nm,0.3s,baz=181,slow=1.9,SNR=4.8
MJAR  Matsushiro Arr  149.68 309   PKPbc   PKPbc    06 03 11.3 -0.2
SONM  Songino Array   152.09   4   PKPbc   PKPbc    06 03 15.6 -1.3
      comp=Z,0.8nm,0.9s,baz=323,slow=1.2,SNR=3.4
SONM  Songino Array   152.09   4           PKPbc    06 03 16.4 -0.5
```

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM				PKPab	PKPab	06 03 25.3	-1.0

IDC ***17*** *05:44:29.6±0.6, 19°.89S×70°.86W, h0^{km}, mb4.3/14, mb1 4.4/18, mb1mx4.3/35, mbtmp4.3/18, ML4.1/4, Error ellipse: s-maj=21.0km s-min=14.8km az=51.0*

NEIC ***17*** *05:44:33.2±2.1, 19°.96S±0°.05×70°.96W±0°.06, h24^{km}±4^{km}, mb4.7/62, Error ellipse: s-maj=8.2km s-min=6.7km az=105.0*

GUC ***17*** *05:44:33.5±0.7, 20°.01S×70°.83W, h10^{km}±5^{km}, ML4.5*

ISC 17 05:44:32.1±0.9**, 19°.95S**±0°.03×**70°.88W**±0°.04**, h17^{km}**±5^{km}**, n98,** σ**1^{s}.05**/98**, mb4.7**/36**, 3C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.80	64	*e*P	Pn	05 44 48.1	-0.5
PSGC				*e*S	Sn	05 44 59.5	-0.7
PSGC				IAML		05 45 02.2	
	comp=N,18µm,0.7s						
TA01	Diego Aracena	0.90	133	*e*P	Pb	05 44 49.0	-0.2
TA01				*e*S	Sg	05 45 00.9	-0.6
TA01				IAML		05 45 03.5	
	comp=E,25µm,0.2s						
PATCX	Punta Patache	1.10	142	⇑*i*P	Pb	05 44 52.3	-0.5
PATCX				*e*S	Sb	05 45 06.5	-0.4
PATCX				IAML		05 45 14.1	
	comp=E,18µm,0.5s						
PB11	IPOC Station P	1.17	81	⇑*i*P	Pg	05 44 54.4	-0.4
PB11				*e*S	Sg	05 45 10.4	+0.3
PB11				IAML		05 45 12.4	
	comp=E,44µm,0.5s						
PB11	IPOC Station P	1.17	81	Pn	Pg	05 44 54.2	-0.6
PB11				Sn	Sg	05 45 09.9	-0.2
PB12	IPOC Station P	1.43	22	*e*P	Pg	05 44 59.4	-0.3
PB12				*e*S	Sg	05 45 19.0	+0.6
PB12				IAML		05 45 26.3	
	comp=N,7µm,0.5s						
GO01	Chusmiza	1.62	80	⇑*i*P	Pb	05 45 01.9	+0.1
GO01				*e*S	Sg	05 45 23.9	-0.5
GO01	Chusmiza	1.62	80	Pn	Pb	05 45 01.7	0.0
GO01				Sn	Sg	05 45 23.1	-1.3
PB08	IPOC Station P	1.64	97	*e*P	Pb	05 45 02.1	0.0
PB08				*e*S	Sg	05 45 23.2	-1.9
PB08				IAML		05 45 27.1	
	comp=N,11µm,0.2s						
AP01	Chacalluta	1.66	18	*e*P	Pb	05 45 02.6	+0.5
AP01				*e*S	Sg	05 45 25.3	-0.2
AP01				IAML		05 45 32.3	
	comp=E,23µm,0.2s						
PB01	IPOC Station P	1.70	130	⇓*i*P	Pb	05 45 02.0	-1.0
PB01				*e*S	Sb	05 45 23.2	-0.8
PB01				IAML		05 45 28.7	
	comp=N,16µm,0.4s						
PB01	IPOC Station P	1.70	130	Pn	Pb	05 45 02.0	-1.0
PB01				Sn	Sb	05 45 22.9	-1.2
PB04	IPOC Station P	2.46	164	Pn	Pb	05 45 14.4	-1.7
LVC	Limon Verde	3.22	145	Pn	Pn	05 45 23.2	+1.0
	comp=N,41nm,0.3s,baz=294,slow=20,SNR=3.0						
LVC				Sn	Sn	05 46 01.3	+0.9
	comp=N,104nm,0.3s,baz=335,slow=17,SNR=2.3						
LVC	Limon Verde	3.22	145		Pn	05 45 23.4	+1.2
PB10	IPOC Station P	3.56	175	Pn	Pn	05 45 22.6	-3.9
LPAZ	La Paz	4.49	36	Pn	Pb	05 45 47.0	-3.9
	comp=N,9.8nm,0.3s,baz=215,slow=5.1,SNR=7.4						
LPAZ	La Paz	4.49	36	Pn	Pn	05 45 40.6	+0.7
LCO	Las Campanas	9.02	179	Pn	Pn	05 46 42.2	+0.4
NNA	Nana	9.77	323	Pn	Pn	05 46 50.5	-1.5
	comp=N,0.6nm,0.3s,baz=196,slow=14,SNR=1.7						
NNA				Sn	Sn	05 48 33.1	-8.4
	comp=N,0.9nm,0.3s,baz=86,slow=19,SNR=2.3						
NNA	Nana	9.77	323		Pn	05 46 50.9	-1.2
SIV	San Ignacio	10.13	69	Pn	Pn	05 46 58.1	+1.1
	comp=N,10.0nm,0.3s,baz=261,slow=12,SNR=22						
SAML	Samuel	13.23	35	Pn	Pn	05 47 40.5	+1.1
CPUP	Villa Florida	13.98	120	Pn	Pn	05 47 49.8	+0.3
	comp=N,0.1nm,0.3s,baz=317,slow=14,SNR=1.6						
CPUP	Villa Florida	13.98	120	Pn	Pn	05 47 52.6	+3.1
GO06	Curarrehue	19.57	181		P	05 48 59.9	+0.6
PLCA	Paso Flores	20.71	179	P	P	05 49 12.6	+0.9
	comp=N,7.7nm,0.8s,baz=15,slow=12,SNR=8.1						
PLCA	Paso Flores	20.71	179	P	P	05 49 12.7	+1.1
PTGA	Pitinga	21.89	31	P	P	05 49 24.6	+0.2
	comp=N,4.2nm,0.4s,baz=192,slow=17,SNR=5.3						
PTGA	Pitinga	21.89	31	P	P	05 49 25.2	+0.8
FLOC	Florencia	21.91	347	P	P	05 49 26.3	+1.6
BDFB	Brasilia	22.19	83	P	P	05 49 27.7	0.0
	comp=N,9.4nm,0.6s,baz=258,slow=8.5,SNR=3.2						
BDFB	Brasilia	22.19	83	P	P	05 49 27.8	0.0
ROSC	El Rosal	24.87	352	P	P	05 49 53.7	-0.7
	comp=N,2.9nm,0.4s,baz=150,slow=20,SNR=1.9						
ROSC	El Rosal	24.87	352	P	P	05 49 53.8	-0.7
RUSC	La Rusia	25.77	355	P	P	05 50 01.9	-0.8
EFI	East Falkland	33.22	165	P	P	05 51 08.3	+0.3
EFI				IAmb	IAmb	05 51 15.1	
	comp=Z,27nm,1.4s						
RCBR	Riachuelo	36.77	72	P	P	05 51 38.1	-1.0
	comp=Z,12nm,1.0s,baz=240,slow=13,SNR=3.7						
RCBR	Riachuelo	36.77	72	P	P	05 51 39.2	+0.1
Z50A	Ashland	54.82	345	P	P	05 54 01.1	-0.2
Z50A				IAmb	IAmb	05 54 01.9	
	comp=Z,13nm,1.2s						
BIRD	Birdtown, Kers	55.05	350	P	P	05 54 03.8	+0.9
WLAR	White Oak Lake	57.40	338	P	P	05 54 19.8	+0.1
TX31	Lajitas Ar. Si	58.32	326	P	P	05 54 26.9	+0.5
TXAR	Lajitas Array	58.32	326	P	P	05 54 26.8	+0.4
	comp=Z,2.1nm,1.0s,baz=156,slow=8.1,SNR=6.7						
TXAR	Lajitas Array	58.32	326	P	P	05 54 24.5	-1.9
MIAR	Mount Ida	58.34	338	P	P	05 54 26.9	+0.6
MIAR				IAmb	IAmb	05 54 35.6	
	comp=Z,8.4nm,0.8s						
ABTX	Abilene, Hawle	59.08	332	P	P	05 54 31.0	-0.5
ABTX				IAmb	IAmb	05 54 32.9	
	comp=Z,9.1nm,0.9s						
Q56A	Snyder Ridge,	59.20	352	P	P	05 54 33.8	+1.6
MNTX	Cornudas Mount	61.09	327	P	P	05 54 45.9	+0.6
MNTX				IAmb	IAmb	05 54 47.4	
	comp=Z,8.2nm,1.2s						
N54A	Moraine State	61.19	352	P	P	05 54 46.5	+0.7
319A	Douglas	62.95	323	IAmb	IAmb	05 55 01.0	
	comp=Z,9.6nm,1.0s						
SNAA	Sanae	64.34	161	P	P	05 55 07.4	+0.9
	comp=Z,2.5nm,0.9s,baz=278,slow=7.1,SNR=4.7						
SNAA	Sanae	64.34	161	P	P	05 55 06.9	+0.4
SNAA				IAmb	IAmb	05 55 15.5	
	comp=Z,4.1nm,0.8s						
SDCO	Great Sand Dun	65.99	330	IAmb	IAmb	05 55 20.8	
	comp=Z,5.2nm,1.0s						
X16A	Lo Mia Camp, P	66.42	324	IAmb	IAmb	05 55 24.8	
	comp=Z,4.9nm,1.0s						
ECSD	EROS Data Cent	67.63	340	P	P	05 55 27.6	-0.3
ECSD				IAmb	IAmb	05 55 29.2	
	comp=Z,11nm,1.3s						
U15A	North Rim	68.38	325	IAmb	IAmb	05 55 36.5	
	comp=Z,7.8nm,1.1s						
DBIC	Dimbokro	70.09	75	P	P	05 55 43.0	-0.9
	comp=Z,4.5nm,1.0s,baz=211,slow=5.9,SNR=2.5						
DBIC	Dimbokro	70.09	75	P	P	05 55 42.8	-1.1
DBIC				IAmb	IAmb	05 55 51.6	
	comp=Z,7.7nm,1.1s						
TPNV	Topopah Spring	70.95	323	IAmb	IAmb	05 55 53.2	
	comp=Z,5.5nm,0.9s						
ISA	Isabella, Lake	71.35	321	IAmb	IAmb	05 55 54.9	
	comp=Z,7.8nm,1.1s						
DUG	Dugway, Tooele	71.46	327	IAmb	IAmb	05 55 55.3	
	comp=Z,4.9nm,1.1s						
PDAR	Pinedale Array	71.86	331	P	P	05 55 54.4	+0.1
	comp=Z,1.0nm,1.0s,baz=120,slow=8.8,SNR=4.2						
PDAR	Pinedale Array	71.86	331	P	P	05 55 55.1	+0.8
HWUT	Hardware Ranch	71.91	329	P	P	05 55 54.3	-0.2
HWUT				IAmb	IAmb	05 55 58.6	
	comp=Z,4.7nm,1.0s						
AHID	Auburn Hatcher	72.57	330	IAmb	IAmb	05 56 08.8	
	comp=Z,5.5nm,0.9s						
ELK	Elko	73.11	326	P	P	05 56 03.3	+1.5
NVAR	Mina Array Bea	73.15	323	P	P	05 56 02.4	+0.3
	comp=Z,2.8nm,0.9s,baz=148,slow=6.2,SNR=12						
NVAR	Mina Array Bea	73.15	323	P	P	05 56 03.6	+1.5
ULM	Lac du Bonnet	73.31	344	P	P	05 56 01.3	-1.1
	comp=Z,2.7nm,0.8s,baz=120,slow=4.3,SNR=4.3						
ULM	Lac du Bonnet	73.31	344	P	P	05 56 02.1	-0.3
FLWY	Flagg Ranch	73.41	331	IAmb	IAmb	05 56 06.8	
	comp=Z,9.6nm,1.1s						
RYN	Ryan	73.41	323	IAmb	IAmb	05 56 06.4	
	comp=Z,5.5nm,1.1s						
KVN	Kaiserville	73.46	323	P	P	05 56 05.3	+1.4
KVN				IAmb	IAmb	05 56 07.1	
	comp=Z,8.1nm,1.1s						
PAHR	Pah Rah Range	74.63	323	IAmb	IAmb	05 56 14.4	
	comp=Z,8.8nm,1.0s						
MFID	Camas Ranch	75.35	328	IAmb	IAmb	05 56 18.9	
	comp=Z,6.2nm,1.2s						
ORV	Oroville	75.74	322	IAmb	IAmb	05 56 21.2	
	comp=Z,18nm,1.4s						
EGMT	Eagleton	76.10	334	IAmb	IAmb	05 56 29.8	
	comp=Z,5.3nm,0.9s						
TOA0	Torodi Ar. Sit	78.60	71	IAmb	IAmb	05 56 34.1	
	comp=Z,10nm,1.0s						
TORD	Torodi Ar. Bea	78.60	71	P	P	05 56 32.6	-0.8
	comp=Z,7.4nm,0.9s,baz=252,slow=5.2,SNR=11						
TORD	Torodi Ar. Bea	78.60	71	P	P	05 56 32.0	-1.4
ESDC	Sonseca Array	86.05	45	P	P	05 57 12.7	+0.8
	comp=Z,0.2nm,0.3s,baz=289,slow=8.0,SNR=4.4						
ESDC	Sonseca Array	86.05	45	P	P	05 57 11.3	-0.7
YKA	Yellowknife Ar	89.13	341	P	P	05 57 26.2	+0.2
	comp=Z,2.3nm,0.8s,baz=139,slow=5.3,SNR=9.0						
ASAR	Alice Springs	130.36	210	PKP	PKPdf	06 03 42.5	+0.1
	comp=Z,1.6nm,0.9s,baz=135,slow=2.1,SNR=10.0						
ASAR	Alice Springs	130.36	210	PKPdf	PKPdf	06 03 42.7	+0.3
ABKAR	Akbulak array	131.24	41		PKiKP	06 03 44.2	+0.1
WRA	Warramunga Arr	133.28	213	PKP	PKPdf	06 03 48.0	0.0
	comp=Z,0.6nm,0.5s,baz=161,slow=1.9,SNR=3.2						
ZALV	Zalesovo Beam	141.30	23	PKP	PKPdf	06 04 00.8	-0.8
	comp=Z,2.0nm,0.6s,baz=302,slow=3.2,SNR=5.5						
ZALV	Zalesovo Beam	141.30	23		PKPdf	06 04 01.3	-0.4
MK31	Makanchi Array	145.41	33	PKPdf	PKPdf	06 04 09.6	+0.4
MKAR	Makanchi Array	145.41	33	PKPbc	PKPab	06 04 09.7	+0.4
	comp=Z,5.9nm,0.8s,baz=316,slow=3.3,SNR=17						
MKAR	Makanchi Array	145.41	33		PKPbc	06 04 09.1	0.0
USRK	Ussuriysk Ar.	149.21	327	PKPbc	PKPbc	06 04 19.0	-0.7
	comp=Z,7.1nm,0.9s,baz=46,slow=5.5,SNR=8.7						
MJAR	Matsushiro Arr	149.67	309	PKPbc	PKPbc	06 04 21.4	+0.2
	comp=Z,2.9nm,0.6s,baz=141,slow=1.2,SNR=9.3						
MJAR	Matsushiro Arr	149.67	309	PKPbc	PKPbc	06 04 21.7	+0.5
MJAR				PKPab	sPKPdf	06 04 25.3	+1.8
SONM	Songino Array	152.10	4	PKPbc	PKPbc	06 04 27.3	+0.6
	comp=Z,3.4nm,0.8s,baz=351,slow=1.0,SNR=11						
SONM	Songino Array	152.10	4	PKPbc	PKiKP	06 04 27.6	+0.6
SONM				PKPab	PKPab	06 04 35.8	-0.3

IDC ***17*** *05:46:04.8±0.7, 20°.00S×70°.71W, h0^{km}, mb4.3/10, mb1 4.5/12, mb1mx4.2/34, mbtmp4.3/12, ML4.2/1, Error ellipse: s-maj=24.7km s-min=18.0km az=42.0*

NEIC ***17*** *05:46:09.3±1.7, 19°.97S±0°.04×70°.72W±0°.05, h29^{km}±4^{km}, mb4.8/63, Error ellipse: s-maj=9.5km s-min=1.5km az=132.0*

ISC 17 05:46:06.7±0.5**, 19°.95S**±0°.05×**70°.75W**±0°.06**, h10^{km}, n102,** σ**1^{s}.25**/105**, mb4.7**/30**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB11	IPOC Station P	1.05	80	Pn	Pg	05 46 27.7	+0.8
PB11				Sn	Sg	05 46 41.9	+1.3
GO01	Chusmiza	1.49	79	Pn	Pn	05 46 35.8	+1.7
GO01				Sn	Sn	05 46 53.0	-0.8
PB01	IPOC Station P	1.61	133	Pn	Pn	05 46 35.6	+0.3
PB01				Sn	Sn	05 46 55.3	-0.9
LVC	Limon Verde	3.15	147	Pn	Pn	05 46 56.9	+0.1
	baz=345,slow=20,SNR=0.9						
LVC				Sn	Sn	05 47 34.8	+0.1
	22nm,0.3s,baz=333,slow=4.5,SNR=3.3						
LVC	Limon Verde	3.15	147		Pn	05 46 56.6	-0.2
LVC					Sn	05 47 33.4	-1.4
LPAZ	La Paz	4.41	35	Pn	Pn	05 47 21.9	+7.5
	baz=286,slow=18,SNR=2.2						
LPAZ	La Paz	4.41	35		Pn	05 47 12.8	-1.5
GO02	Mina Guanaco	5.30	169	Pn	Pn	05 47 25.1	-1.2
SIV	San Ignacio	10.02	68	Pn	Pn	05 48 30.5	-0.3
	2.3nm,0.3s,baz=264,slow=13,SNR=3.2						
GO04	Tololo Observa	10.18	180	Pn	Pn	05 48 33.6	+0.4
ROC1	El Roble	12.97	181	Pn	Pn	05 49 10.4	-1.1
BDFB	Brasilia	22.06	82	P	P	05 51 00.9	-1.2
	3.5nm,0.8s,baz=165,slow=12,SNR=1.9						
BDFB	Brasilia	22.06	82	P	P	05 51 00.8	-1.2
RUSC	La Rusia	25.78	355	P	P	05 51 39.1	+0.6
RCBR	Riachuelo	36.65	72	P	P	05 53 12.3	-1.6
	8.3nm,0.8s,baz=270,slow=6.1,SNR=3.2						
RCBR	Riachuelo	36.65	72	P	P	05 53 12.6	-1.3
RCBR				IAmb	IAmb	05 53 14.2	
	comp=Z,13nm,0.9s						
GCPR	Guaynabo City	38.30	7	P	P	05 53 25.2	-2.4
V58A	Windy Hill, Pi	56.00	352	P	P	05 55 45.4	-0.1
V55A	Taylorsville	56.38	350	P	P	05 55 48.0	-0.2
V52A	Sevierville	56.81	348	P	P	05 55 50.8	-0.4
V52A				IAmb	IAmb	05 55 51.3	
	comp=Z,14nm,0.9s						
WLAR	White Oak Lake	57.44	338	P	P	05 55 56.0	+0.2
S54A	Dingess, Beckl	58.30	350	P	P	05 56 01.1	-0.7
MIAR	Mount Ida	58.38	338	P	P	05 56 00.8	-1.6
MIAR				IAmb	IAmb	05 56 02.6	
	comp=Z,8.2nm,0.8s						
TXAR	Lajitas Array	58.38	326	P	P	05 56 01.8	-0.9
	comp=Z,1.9nm,0.8s,baz=156,slow=8.3,SNR=7.7						
TXAR	Lajitas Array	58.38	326	P	P	05 56 02.0	-0.6
TX31	Lajitas Ar. Si	58.38	326	P	P	05 56 03.1	+0.5
TX32	Lajitas Array	58.38	326	P	P	05 56 02.6	0.0
T49A	Edmonton	58.44	346	P	P	05 56 02.4	-0.3
T49A				IAmb	IAmb	05 56 04.0	
	comp=Z,17nm,1.1s						
W41B	Gary Mavity, V	58.50	339	P	P	05 56 03.3	+0.1
W41B				IAmb	IAmb	05 56 11.6	
	comp=Z,13nm,1.4s						
Q56A	Snyder Ridge,	59.21	352	P	P	05 56 08.8	+0.8
HHAR	Hobbs	60.08	338	P	P	05 56 13.0	-1.1
HHAR				IAmb	IAmb	05 56 13.9	
	comp=Z,5.5nm,0.9s						
S39A	Bolivar	61.15	340	P	P	05 56 20.5	-0.8
S39A				IAmb	IAmb	05 56 21.5	
	comp=Z,8.3nm,0.8s						
MNTX	Cornudas Mount	61.16	326	P	P	05 56 21.0	-0.6
MNTX				IAmb	IAmb	05 56 21.8	
	comp=Z,4.0nm,0.8s						
M55A	Ridgway	61.56	353	P	P	05 56 24.2	+0.2
T35A	Sooner Cattle	61.57	337	P	P	05 56 24.4	+0.1
T35A				IAmb	IAmb	05 56 24.9	
	comp=Z,12nm,1.2s						
M54A	Oil Creek Stat	61.70	352	P	P	05 56 25.1	0.0
N49A	Columbus Grove	61.83	348	P	P	05 56 24.8	-1.1
ERPA	Erie	62.34	352	P	P	05 56 28.8	-0.5
P38A	Dawn	62.97	340	P	P	05 56 32.5	-1.1
P38A				IAmb	IAmb	05 56 33.2	
	comp=Z,5.7nm,0.8s						
319A	Douglas	63.02	323	P	P	05 56 33.4	-0.8
319A				IAmb	IAmb	05 56 36.0	
	comp=Z,9.1nm,0.9s						
SNAA	Sanae	64.30	161	P	P	05 56 41.4	-0.7
	comp=Z,1.8nm,0.7s,baz=308,slow=12,SNR=2.8						
SNAA	Sanae	64.30	161	P	P	05 56 41.3	-0.7
SNAA				IAmb	IAmb	05 56 48.7	
	comp=Z,8.0nm,1.3s						
G62A	West of Eustis	64.85	0	P	P	05 56 46.9	+1.0
SADO	Sadowa	64.86	353	P	P	05 56 45.7	-0.1
SADO				IAmb	IAmb	05 56 45.8	
	comp=Z,5.3nm,0.8s						
X16A	Lo Mia Camp, P	66.49	324	P	P	05 56 57.4	+0.5
S22A	4UR Ranch, Cre	66.68	329	P	P	05 56 57.7	-0.4
D62A	Allapoint, All	66.73	1	P	P	05 56 57.9	0.0
WUAZ	Wupatki	67.28	325	P	P	05 57 00.2	-1.7
WUAZ				IAmb	IAmb	05 57 04.1	
	comp=Z,6.2nm,0.9s						
SPMN	Marine on St.	67.90	343	P	P	05 57 04.1	-1.3
SPMN				IAmb	IAmb	05 57 14.9	
	comp=Z,4.7nm,1.1s						
PV13	Radium Mtn., P	67.97	328	P	P	05 57 06.2	-0.1
PV09	Paradox Valley	68.39	328	P	P	05 57 08.0	-1.0
KNB	Kanab	69.17	325	P	P	05 57 15.6	+1.9
LCMT	Little Creek M	69.39	325	P	P	05 57 16.2	+1.1
SRU	San Rafael Swe	69.55	328	P	P	05 57 16.4	+0.4
MTPU	Mount Pierson	69.59	326	P	P	05 57 17.4	+0.8
SZCU	Shurtz Canyon	69.74	325	P	P	05 57 18.3	+1.0
CCUT	Cedar City	69.86	325	P	P	05 57 20.2	+2.2
P17A	Butcher Ranch,	69.93	328	P	P	05 57 18.4	0.0
MSU	Marysvale	69.94	326	P	P	05 57 19.5	+1.0
DBIC	Dimbokro	69.97	75	P	P	05 57 19.6	+0.7
	comp=Z,4.5nm,0.9s,baz=254,slow=9.2,SNR=2.4						
DBIC	Dimbokro	69.97	75	P	P	05 57 18.8	-0.1
DBIC				IAmb	IAmb	05 57 20.5	
	comp=Z,5.1nm,0.9s						
QSPA	South Pole Qui	70.23	180	P	P	05 57 20.2	+0.4
ISA	Isabella, Lake	71.43	321	P	P	05 57 28.7	+1.2
ISA				IAmb	IAmb	05 57 29.9	
	comp=Z,5.6nm,0.8s						
DUG	Dugway, Tooele	71.52	327	P	P	05 57 28.1	0.0
R11A	Troy Canyon, C	71.64	324	P	P	05 57 30.0	+1.2
PDAR	Pinedale Array	71.92	331	P	P	05 57 30.6	+0.2
	comp=Z,0.5nm,0.7s,baz=134,slow=10,SNR=3.1						
PDAR	Pinedale Array	71.92	331	P	P	05 57 30.3	-0.2
HWUT	Hardware Ranch	71.97	329	P	P	05 57 30.1	-0.7
BGU	Big Grassy Mou	72.18	328	P	P	05 57 32.0	0.0
AHID	Auburn Hatcher	72.63	330	P	P	05 57 32.9	-1.8
AHID				IAmb	IAmb	05 57 36.0	
	comp=Z,4.5nm,0.8s						
NVAR	Mina Array Bea	73.22	323	P	P	05 57 39.3	+1.0
	comp=Z,2.0nm,0.8s,baz=162,slow=6.6,SNR=6.9						
NVAR	Mina Array Bea	73.22	323	P	P	05 57 39.1	+0.8
ULM	Lac du Bonnet	73.34	343	P	P	05 57 37.6	-0.8
KVN	Kaiserville	73.53	323	P	P	05 57 41.2	+1.1
YNE	Yellowstone No	73.88	332	P	P	05 57 41.8	-0.3
YHH	Holmes Hill	74.08	332	P	P	05 57 43.6	+0.3
YHL	Hebgen Lake	74.28	331	P	P	05 57 43.7	-0.8
GCMT	Greycliff	74.35	333	P	P	05 57 44.0	-0.7
QLMT	Earthquake Lak	74.38	331	P	P	05 57 44.1	-0.8
PAHR	Pah Rah Range	74.71	323	P	P	05 57 48.7	+1.8
PAHR				IAmb	IAmb	05 57 49.3	
	comp=Z,7.0nm,0.8s						
MCMT	McKenzie Canyo	75.03	330	P	P	05 57 49.8	+1.1
MFID	Camas Ranch	75.42	328	P	P	05 57 51.6	+0.8
MFID				IAmb	IAmb	05 57 53.1	
	comp=Z,9.1nm,1.3s						
ORV	Oroville	75.82	322	P	P	05 57 53.8	+0.7
ORV				IAmb	IAmb	05 57 55.3	
	comp=Z,11nm,1.1s						
EGMT	Eagleton	76.15	334	P	P	05 57 55.0	+0.1
EGMT				IAmb	IAmb	05 57 56.1	
	comp=Z,7.5nm,1.1s						
VNDA	Vanda	78.07	190	P	P	05 58 03.6	-1.7
	comp=Z,1.3nm,0.8s,baz=122,slow=3.9,SNR=3.9						
TOA0	Torodi Ar. Sit	78.48	71	P	P	05 58 07.1	-1.5
TOA0				IAmb	IAmb	05 58 08.1	
	comp=Z,10nm,0.9s						
TORD	Torodi Ar. Bea	78.48	71	P	P	05 58 07.1	-1.5
	comp=Z,7.5nm,0.8s,baz=251,slow=5.1,SNR=7.1						
TORD	Torodi Ar. Bea	78.48	71	P	P	05 58 06.8	-1.8
YKA	Yellowknife Ar	89.17	341	P	P	05 59 01.7	-0.4
	comp=Z,2.7nm,0.7s,baz=138,slow=5.2,SNR=6.0						
ASAR	Alice Springs	130.43	210	PKP	PKPdf	06 05 17.5	-0.9
	comp=Z,0.9nm,0.8s,baz=112,slow=2.1,SNR=4.7						
ASAR	Alice Springs	130.43	210		PKPdf	06 05 17.4	-1.0
WRA	Warramunga Arr	133.35	213	PKP	PKPdf	06 05 23.4	-0.6
	comp=Z,1.0nm,0.8s,baz=154,slow=1.7,SNR=4.6						
ZALV	Zalesovo Beam	141.25	23	PKP	PKPdf	06 05 37.5	+0.1
	comp=Z,2.4nm,0.7s,baz=287,slow=3.1,SNR=4.5						
ZALV	Zalesovo Beam	141.25	23		PKPdf	06 05 37.4	0.0
MKAR	Makanchi Array	145.34	33	PKPbc	PKPbc	06 05 44.8	+0.1
	comp=Z,7.9nm,0.7s,baz=327,slow=3.9,SNR=16						
MKAR	Makanchi Array	145.34	33		PKPbc	06 05 44.0	-0.7
USRK	Ussuriysk Ar.	149.28	327	PKPbc	PKPdf	06 05 55.8	+4.3
	comp=Z,5.5nm,0.8s,baz=26,slow=4.5,SNR=6.7						
USRK	Ussuriysk Ar.	149.28	327		PKPdf	06 05 55.4	+3.9
MJAR	Matsushiro Arr	149.76	309	PKPbc	PKPdf	06 05 57.0	+4.5
	comp=Z,4.5nm,0.9s,baz=142,slow=1.2,SNR=6.1						
MJAR	Matsushiro Arr	149.76	309		PKPdf	06 05 57.2	+4.7
SONM	Songino Array	152.09	4	PKPbc	PKPbc	06 06 02.6	0.0
	comp=Z,3.2nm,0.8s,baz=313,slow=1.5,SNR=7.0						
SONM	Songino Array	152.09	4		PKPbc	06 06 02.5	-0.1

IDC ***17*** *05:47:54.1±0.9, 20°.04S×70°.92W, h0^{km}, mb3.8/6, mb1 4.1/8, mb1mx3.9/35, mbtmp3.9/8, ML4.1/1, Error ellipse: s-maj=29.6km s-min=20.4km az=57.0*

NEIC ***17*** *05:47:57.2±1.8, 20°.01S±0°.05×70°.88W±0°.08, h24^{km}±4^{km}, mb4.1/6, Error ellipse: s-maj=12.0km s-min=5.4km az=115.0*

ISC 17 05:47:55.5±0.6**, 20°.00S**±0°.06×**70°.89W**±0°.07**, h10^{km}, n26,** σ**1^{s}.24**/30**, mb4.0**/6**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB11	IPOC Station P	1.18	78	Pn	Pb	05 48 17.7	-0.5
PB11				Sn	Sb	05 48 34.2	+0.6
GO01	Chusmiza	1.63	78		Pn	05 48 25.2	+0.5
GO01				Sn	Sn	05 48 46.8	+0.8
PB01	IPOC Station P	1.67	129	Pn	Pn	05 48 24.3	-0.7
PB04	IPOC Station P	2.42	164	Pn	Pn	05 48 36.8	+1.4
PB04				Sn	Sn	05 49 05.0	-0.1
LVC	Limon Verde	3.18	145	Pn	Pn	05 48 45.2	-0.8
	baz=355,slow=11,SNR=0.6						
LVC				Sn	Sn	05 49 23.8	-0.4
	39nm,0.3s,baz=308,slow=17,SNR=3.4						
LVC	Limon Verde	3.18	145		Pn	05 48 45.7	-0.3
LPAZ	La Paz	4.53	36	Pn	Pb	05 49 12.1	-3.5
	1.2nm,0.3s,baz=220,slow=4.1,SNR=2.9						
SIV	San Ignacio	10.15	68	Pn	Pn	05 50 20.7	-0.8
	1.6nm,0.3s,baz=198,slow=20,SNR=4.2						
ROC1	El Roble	12.92	180		Pn	05 50 58.8	-0.8
PLCA	Paso Flores	20.66	179	P	P	05 52 35.4	-0.3
	3.8nm,0.7s,baz=29,slow=9.4,SNR=3.1						
PLCA	Paso Flores	20.66	179	P	P	05 52 35.7	+0.1
PLCA				IAmb	IAmb	05 52 54.8	
	comp=Z,9.9nm,1.4s						
PTGA	Pitinga	21.93	30	P	P	05 52 50.0	+0.7
	comp=Z,2.4nm,0.4s,baz=302,slow=19,SNR=1.7						
PTGA	Pitinga	21.93	30	P	P	05 52 49.1	-0.3
PTGA				IAmb	IAmb	05 52 58.8	
	comp=Z,7.8nm,0.8s						
FLOC	Florencia	21.96	347	P	P	05 52 48.3	-1.3
TXAR	Lajitas Array	58.36	326	P	P	05 57 51.0	-0.2
	comp=Z,0.2nm,0.7s,baz=135,slow=10,SNR=2.3						
TX31	Lajitas Ar. Si	58.36	326	P	P	05 57 49.9	-1.3
TX31				IAmb	IAmb	05 58 04.0	
	comp=Z,2.4nm,1.4s						
NVAR	Mina Array Bea	73.19	323	P	P	05 59 27.5	+0.6
	comp=Z,0.6nm,0.8s,baz=147,slow=8.6,SNR=3.9						
TORD	Torodi Ar. Bea	78.62	71	P	P	05 59 59.3	+1.1
	comp=Z,1.5nm,0.7s,baz=237,slow=5.9,SNR=2.2						
TORD	Torodi Ar. Bea	78.62	71	IAmb	IAmb	06 00 05.2	
	comp=Z,3.9nm,0.9s						
YKA	Yellowknife Ar	89.17	341	P	P	06 00 50.3	-0.7
	comp=Z,0.6nm,0.7s,baz=137,slow=5.4,SNR=3.6						
MKAR	Makanchi Array	145.45	33	PKPbc	PKPbc	06 07 33.7	-0.2
	comp=Z,1.7nm,0.7s,baz=332,slow=3.9,SNR=4.9						
MKAR	Makanchi Array	145.45	33		PKPbc	06 07 32.6	-1.3
MJAR	Matsushiro Arr	149.70	309	PKPbc	PKPbc	06 07 46.2	+0.2
	comp=Z,1.0nm,0.4s,baz=100,slow=1.2,SNR=3.1						
MJAR	Matsushiro Arr	149.70	309		PKPbc	06 07 45.6	-0.3
SONM	Songino Array	152.15	4	PKPbc	PKPbc	06 07 51.5	0.0
	comp=Z,0.5nm,0.7s,baz=349,slow=2.9,SNR=2.3						
SONM	Songino Array	152.15	4	PKPdf	PKPdf	06 07 44.0	-0.9
SONM				PKPbc	sPKPdf	06 07 51.2	+2.7
SONM				PKPab	sPKPbc	06 07 59.5	+4.4

IDC 17 05:56:29.8±2.9**, 20°.93S**×**71°.03W, h0^{km}, mb3.5**/2**, mb1 3.7**/4**, mb1mx3.5**/25**, mbtmp3.6**/4**, ML3.7**/2**, Error ellipse: s-maj=75.9km s-min=50.4km az=163.0, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	5.37	31	Pn	Pn	05 57 52.0	+0.1
	1.3nm,0.3s,baz=226,slow=5.9,SNR=12						
SIV	San Ignacio	10.65	64	Pn	Pn	05 59 03.4	-0.2
	0.8nm,0.3s,baz=260,slow=10,SNR=14						
TORD	Torodi Ar. Bea	79.04	71	P	P	06 08 36.5	+0.1
	0.2nm,0.4s,baz=253,slow=4.4,SNR=2.1						
YKA	Yellowknife Ar	90.01	341	P	P	06 09 30.6	-0.1
	0.1nm,0.6s,baz=134,slow=4.7,SNR=2.1						

IDC 17 06:01:52.6±2.0**, 19°.90S**×**70°.87W, h0^{km}, mb3.5**/2**, mb1 3.7**/4**, mb1mx3.4**/32**, mbtmp3.6**/4**, ML3.6**/2**, Error ellipse: s-maj=55.9km s-min=30.4km az=60.0, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	3.25	146	Pn	Pn	06 02 45.7	+0.5
	8.3nm,0.3s,baz=327,slow=10,SNR=9.6						
LVC				Sn	Sn	06 03 25.9	+1.0
	13nm,0.3s,baz=92,slow=19,SNR=3.1						
LPAZ	La Paz	4.43	36	Pn	Pb	06 03 08.2	-3.6
	0.4nm,0.3s,baz=230,slow=7.8,SNR=3.7						

SIV	San Ignacio	10.10	69	Pn	Pn	06 04 20.9	+1.9
	0.4nm,0.3s,baz=265,slow=11,SNR=6.5						
TORD	Torodi Ar. Bea	78.56	71	P	P	06 13 54.9	-1.7
	0.5nm,0.7s,baz=246,slow=5.7,SNR=2.9						
YKA	Yellowknife Ar	89.08	341	P	P	06 14 49.5	+0.3
	0.1nm,0.8s,baz=131,slow=6.6,SNR=2.1						
MKAR	Makanchi Array	145.36	33	PKPbc	PKPab	06 21 32.4	-0.1
	0.1nm,0.6s,baz=334,slow=1.5,SNR=2.4						

IDC 17 06:04:48.8±2.9,20°.16S×70°.51W,h0^{km},mb3.6/1,mb1 3.5/4,mb1mx3.3/33,mbtmp3.5/4,ML3.3/3,Error ellipse: s-maj=60.7km s-min=20.3km az=75.0,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.86	149	Pn	Pn	06 05 34.1	-1.9
	1.4nm,0.3s,baz=332,slow=8.3,SNR=3.1						
LVC				Lg	Lg	06 06 21.7	
	9.4nm,0.3s,baz=188,slow=16,SNR=5.4						
LPAZ	La Paz	4.47	31	Pn	Pn	06 06 00.6	+2.1
	1.2nm,0.3s,baz=208,slow=12,SNR=15						
SIV	San Ignacio	9.89	67	Pn	Pn	06 07 10.2	-2.2
	0.5nm,0.3s,baz=255,slow=12,SNR=8.7						
TORD	Torodi Ar. Bea	78.33	71	P	P	06 16 51.4	-0.1
	1.0nm,1.2s,baz=232,slow=6.8,SNR=2.7						
MKAR	Makanchi Array	145.39	34	PKPbc	PKPbc	06 24 28.1	-0.6
	0.3nm,0.7s,baz=337,slow=2.2,SNR=3.2						

IDC 17 06:05:47.1±1.0,20°.01S×70°.71W,h0^{km},mb3.8/6,mb1 4.0/9,mb1mx3.8/32,mbtmp3.8/9,ML3.7/3,Error ellipse: s-maj=27.9km s-min=15.3km az=67.0

GUC 17 06:05:50.2±1.1,20°.09S×70°.89W,h35^{km}±7^{km},ML4.0

ISC 17 06:05:47.7±1.7,20°.04S±0°.04×70°.83W±0°.07,h8^{km}±10^{km},n27,σ1^{s}28/30,mb3.9/5,2C-3D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.80	56	*e*P	Pn	06 06 05.3	-0.1
PSGC				*e*S	Sn	06 06 18.1	+0.6
PSGC				IAML		06 06 19.6	
	comp=N,5µm,0.2s						
TA01	Diego Aracena	0.80	131	⇑*i*P	Pn	06 06 04.9	-0.5
TA01				*e*S	Sn	06 06 15.7	-1.8
TA01				IAML		06 06 17.9	
	comp=N,5µm,0.3s						
PATCX	Punta Patache	1.00	141	⇑*i*P	Pn	06 06 07.9	-0.3
PATCX				*e*S	Sn	06 06 21.2	-1.4
PB12	IPOC Station P	1.50	19	*e*P	Pg	06 06 16.5	0.0
PB12				*e*S	Sg	06 06 37.4	+1.4
PB12				IAML		06 06 44.5	
	comp=E,3µm,0.6s						
PB02	IPOC Station P	1.54	146	⇓*i*P	Pn	06 06 15.8	+0.1
PB02				*e*S	Sg	06 06 36.4	-0.9
PB02				IAML		06 06 42.7	
	comp=E,6µm,0.3s						
PB08	IPOC Station P	1.58	94	⇓*i*P	Pg	06 06 18.2	+0.1
PB08				*e*S	Sg	06 06 40.5	+1.9
PB08				IAML		06 06 46.8	
	comp=N,2µm,0.6s						
GO01	Chusmiza	1.58	77	⇓*i*P	Pg	06 06 18.7	+0.5
GO01				*e*S	Sg	06 06 40.8	+2.1
GO01				IAML		06 06 42.1	
	comp=N,9µm,0.3s						
AP01	Chacalluta	1.73	16	*e*P	Pg	06 06 20.7	-0.2
AP01				*e*S	Sg	06 06 43.8	+0.5
AP01				IAML		06 06 53.1	
	comp=E,5µm,0.6s						
LVC	Limon Verde	3.12	145	Pn	Pn	06 06 39.0	+1.4
	comp=E,9.9nm,0.3s,baz=215,slow=20,SNR=3.0						
LVC				Sn	Sn	06 07 16.7	+1.5
	comp=E,28nm,0.3s,baz=95,slow=15,SNR=4.3						
LVC				Lg	Lg	06 07 25.1	
	comp=E,58nm,0.3s,baz=187,slow=7.2,SNR=8.1						
LPAZ	La Paz	4.53	35	Pn	Pb	06 07 04.4	-3.5
	comp=E,1.3nm,0.3s,baz=95,slow=6.1,SNR=14						
LPAZ	La Paz	4.53	35	*e*		06 05 41.9	
SIV	San Ignacio	10.12	68	Pn	Pn	06 08 13.4	0.0
	comp=E,2.2nm,0.3s,baz=273,slow=9.8,SNR=25						
CFA	Coronel Fontan	11.75	169	Pn	Pn	06 08 36.2	+0.5
	comp=E,0.1nm,0.3s,baz=0.0,slow=12,SNR=2.4						
PLCA	Paso Flores	20.62	179	P	P	06 10 28.9	+1.3
	comp=E,1.7nm,0.9s,baz=20,slow=12,SNR=2.3						
PTGA	Pitinga	21.94	30	P	P	06 10 42.9	+0.9
	comp=E,2.8nm,0.3s,baz=224,slow=15,SNR=10						
BDFB	Brasilia	22.15	82	P	P	06 10 43.3	-1.0
	comp=E,0.9nm,0.4s,baz=228,slow=8.9,SNR=4.8						
NVAR	Mina Array Bea	73.25	323	P	P	06 17 21.5	+1.7
	comp=E,0.1nm,0.4s,baz=148,slow=5.3,SNR=2.5						
TORD	Torodi Ar. Bea	78.58	71	P	P	06 17 49.3	-1.2
	comp=E,2.8nm,0.7s,baz=256,slow=5.1,SNR=13						
YKA	Yellowknife Ar	89.23	341	P	P	06 18 43.8	+0.1
	comp=E,0.6nm,0.8s,baz=143,slow=5.0,SNR=9.3						
H11S2	WAKE ISLAND Hy	125.90	279	T	T	08 44 14.4	
	baz=101,slow=74,SNR=20						
H11S1	WAKE ISLAND Hy	125.91	279	T	T	08 44 11.9	
	baz=101,slow=74,SNR=8.0						
H11S3	WAKE ISLAND Hy	125.92	279	T	T	08 44 13.8	
	baz=101,slow=74,SNR=8.9						
H11N3	WAKE ISLAND Hy	125.95	280	T	T	08 44 16.9	
	baz=101,slow=74,SNR=3.2						
H11N2	WAKE ISLAND Hy	125.96	280	T	T	08 44 16.9	
	baz=101,slow=74,SNR=3.1						
H11N1	WAKE ISLAND Hy	125.96	280	T	T	08 44 16.9	
	baz=101,slow=74,SNR=3.1						
MKAR	Makanchi Array	145.46	33	PKPbc	PKPbc	06 25 26.7	+0.2
	comp=E,2.2nm,0.7s,baz=324,slow=3.5,SNR=20						
SONM	Songino Array	152.19	4	PKPbc	PKPbc	06 25 44.5	+0.4
	comp=E,0.8nm,1.0s,baz=47,slow=2.6,SNR=4.5						
SONM				PKPab	PKPab	06 25 53.3	-0.4
	comp=E,0.3nm,0.7s,baz=48,slow=2.1,SNR=4.1						

IDC 17 06:08:43.2±2.1,20°.20S×70°.75W,h0^{km},mb3.4/2,mb1 3.5/4,mb1mx3.4/30,mbtmp3.3/4,ML3.1/2,Error ellipse: s-maj=64.3km s-min=35.8km az=72.0,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.95	145	Pn	Pn	06 09 31.9	+0.2
	4.4nm,0.3s,baz=328,slow=12,SNR=4.5						
LPAZ	La Paz	4.62	33	Pn	Pn	06 09 55.9	+0.9
	0.4nm,0.3s,baz=218,slow=12,SNR=4.1						
TORD	Torodi Ar. Bea	78.56	71	P	P	06 20 46.9	-0.3
	0.3nm,0.6s,baz=256,slow=5.5,SNR=2.7						
YKA	Yellowknife Ar	89.40	341	P	P	06 21 40.9	-0.5
	0.1nm,0.5s,baz=121,slow=7.5,SNR=2.0						
MKAR	Makanchi Array	145.55	33	PKPbc	PKPdf	06 28 23.2	-0.3
	0.3nm,0.6s,baz=322,slow=4.7,SNR=4.2						

IDC 17 06:09:10.0±1.3,19°.98S×70°.84W,h0^{km},mb3.6/4,mb1 3.9/6,mb1mx3.6/30,mbtmp3.8/6,ML3.8/2,Error ellipse: s-maj=34.7km s-min=19.5km az=65.0

ISC 17 06:09:11.4±1.3,19°.96S±0°.06×70°.8W±0°.1,h10^{km},n19,σ1^{s}35/15,mb3.6/3,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA01	Diego Aracena	0.82	138	*e*P	Pg	06 09 16.7	-11
TA01				*i* S	Sb	06 09 38.5	-0.5
TA01				IAML		06 09 41.4	
	comp=N,12µm,0.4s						
PATCX	Punta Patache	1.04	146	*e*P	Pg	06 09 22.6	-8.8
PATCX				*i* S	Sb	06 09 44.2	-1.2
PATCX				IAML		06 09 51.4	
	comp=E,2µm,0.4s						
PB02	IPOC Station P	1.59	149	*e*P	Pb	06 09 39.7	-1.2
PB02				*i* S	Sn	06 09 58.6	-1.7
PB02				IAML		06 10 04.7	
	comp=E,3µm,0.4s						
PB01	IPOC Station P	1.62	132	*e*P	Pb	06 09 40.4	-1.1
PB01				*i* S	Sn	06 10 00.8	-0.3
PB01				IAML		06 10 05.6	
	comp=N,2µm,0.2s						
LVC	Limon Verde	3.16	147	Pn	Pn	06 10 02.8	+1.1
	comp=N,6.8nm,0.3s,baz=328,slow=13,SNR=3.9						
LVC				Sn	Sn	06 10 40.4	+0.8
	comp=N,19nm,0.3s,baz=109,slow=23,SNR=5.4						
LVC				Lg	Lg	06 10 49.5	
	comp=N,27nm,0.3s,baz=192,slow=17,SNR=4.9						
LPAZ	La Paz	4.43	35	Pn	Pb	06 10 27.7	-2.0
	comp=N,0.9nm,0.3s,baz=203,slow=16,SNR=5.8						
SIV	San Ignacio	10.04	68	Pn	Pn	06 11 37.2	+1.4
	comp=N,1.5nm,0.3s,baz=264,slow=11,SNR=9.2						
PLCA	Paso Flores	20.71	180	P	Pn	06 13 52.6	-1.8
	comp=N,1.4nm,0.9s,baz=15,slow=11,SNR=3.6						
BDFB	Brasilia	22.08	82	P	P	06 14 09.1	+2.0
	comp=N,2.3nm,1.0s,baz=257,slow=14,SNR=3.7						
TORD	Torodi Ar. Bea	78.50	71	P	P	06 21 12.7	-0.7
	comp=N,1.1nm,0.8s,baz=248,slow=5.1,SNR=5.4						
YKA	Yellowknife Ar	89.17	341	P	P	06 22 07.2	+0.4
	comp=N,0.2nm,0.8s,baz=144,slow=4.6,SNR=4.5						
H11S2	WAKE ISLAND Hy	125.94	279	T	T	08 47 37.2	
	baz=104,slow=75						
H11S1	WAKE ISLAND Hy	125.94	279	T	T	08 47 37.2	
	baz=104,slow=75						
H11S3	WAKE ISLAND Hy	125.95	279	T	T	08 47 40.4	
	baz=104,slow=75						
H11N3	WAKE ISLAND Hy	125.98	280	T	T	08 47 39.9	
	baz=86						
H11N2	WAKE ISLAND Hy	126.00	280	T	T	08 47 40.2	
	baz=86						
H11N1	WAKE ISLAND Hy	126.00	280	T	T	08 47 42.4	
	baz=86						
MKAR	Makanchi Array	145.36	33	PKPbc	PKPab	06 28 50.2	+0.6
	comp=N,0.5nm,0.6s,baz=325,slow=4.2,SNR=6.1						
SONM	Songino Array	152.09	4	PKPbc	PKiKP	06 29 06.4	-1.2
	comp=N,0.3nm,0.6s,baz=343,slow=1.5,SNR=2.5						

IDC 17 06:10:20.9±2.4,20°.59S×70°.91W,h0^{km},mb3.8/2,mb1 4.0/4,mb1mx3.6/30,mbtmp3.9/4,ML3.2/2,Error ellipse: s-maj=76.6km s-min=47.6km az=166.0

NEIC 17 06:10:25.3±2.8,19°.80S±0°.06×70°.92W±0°.07,h10^{km}±1^{km},mb4.0/2,Error ellipse: s-maj=13.1km s-min=9.2km az=129.0

ISC 17 06:10:25.1±0.8,19°.78S±0°.05×70°.80W±0°.08,h10^{km},n15,σ1^{s}84/17,mb3.8/3,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	IPOC Station P	1.07	89	Pn	Pb	06 10 47.1	+1.2
GO01	Chusmiza	1.51	86	Pn	Pn	06 10 54.4	+1.7
PB01	IPOC Station P	1.76	136	Pn	Pn	06 10 54.1	-1.7
PB01				Sn	Sn	06 11 14.8	-3.6
PB04	IPOC Station P	2.62	167	Pn	Pb	06 11 10.7	-1.5
PB04				Sn	Sn	06 11 41.1	+1.5
LVC	Limon Verde	3.33	148	Pn	Pn	06 11 19.5	+2.0
LPAZ	La Paz	4.30	37	Pn	Pb	06 11 38.5	-2.6
	0.2nm,0.3s,baz=232,slow=19,SNR=1.4						
GO03	Copiap	7.80	176	Pn	Pn	06 12 18.6	-0.2
NNA	Nana	9.68	322	Pn	Pn	06 12 46.0	+1.4
SIV	San Ignacio	9.99	69	Pn	Pn	06 12 51.4	+2.5
	0.8nm,0.3s,baz=244,slow=17,SNR=3.8						
GO06	Curarrehue	19.75	182		P	06 14 55.5	+0.3
GO06				IAmb	IAmb	06 15 05.3	
	comp=Z,13nm,1.4s						
PTGA	Pitinga	21.70	31	P	P	06 15 15.2	-1.2
PTGA				IAmb	IAmb	06 15 21.6	
	comp=Z,8.6nm,1.5s						
TORD	Torodi Ar. Bea	78.47	71	P	P	06 22 25.6	-1.3
	comp=Z,0.7nm,0.7s,baz=242,slow=4.7,SNR=2.7						
YKA	Yellowknife Ar	88.99	341	P	P	06 23 19.8	+0.1
	comp=Z,0.4nm,0.8s,baz=135,slow=5.3,SNR=5.1						
MKAR	Makanchi Array	145.22	33	PKPbc	PKPbc	06 30 03.0	+0.3
	comp=Z,0.8nm,0.7s,baz=330,slow=3.6,SNR=6.6						
MKAR	Makanchi Array	145.22	33		PKPbc	06 30 03.0	+0.3

IDC 17 06:13:38.1±1.0,19°.95S×70°.98W,h0^{km},mb3.6/6,mb1 4.0/8,mb1mx3.8/28,mbtmp3.8/8,ML3.7/2,Error ellipse: s-maj=31.5km s-min=14.6km az=55.0

NEIC 17 06:13:38.9±1.9,20°.00S±0°.04×71°.00W±0°.06,h10^{km}±1^{km},mb4.1/3,Error ellipse: s-maj=9.9km s-min=6.2km az=297.0

GUC 17 06:13:41.5±0.6,19°.99S×70°.88W,h40^{km}±2^{km},ML3.8

ISC 17 06:13:37.8±1.8,19°.96S±0°.04×71°.03W±0°.06,h6^{km}±11^{km},n33,σ1^{s}30/47,mb3.6/5,3C-2D,Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PATCX	Punta Patache	1.19	136	⇓*i*P	Pg	06 14 00.8	+0.3
PATCX				*i* S	Sb	06 14 15.7	-0.7
PATCX				IAML		06 14 22.9	
	comp=E,3µm,0.4s						
PB11	IPOC Station P	1.31	81	⇑*i*P	Pn	06 14 02.6	-0.2
PB11				*i* S	Sb	06 14 18.4	-1.5
PB11				IAML		06 14 20.7	
	comp=E,6µm,0.6s						
PB11	IPOC Station P	1.31	81		Pn	06 14 02.4	-0.4
PB11				Sg	Sb	06 14 18.4	-1.5
PB02	IPOC Station P	1.72	142	⇑*i*P	Pn	06 14 08.8	+0.4
PB02				*i* S	Sn	06 14 29.9	-0.8
PB02				IAML		06 14 38.5	
	comp=E,6µm,0.5s						
GO01	Chusmiza	1.75	81		Pb	06 14 10.1	-0.5
GO01				Sn	Sn	06 14 31.9	-0.1
PB08	IPOC Station P	1.77	96	*i* P	Pn	06 14 10.1	+0.7
PB08				*i* S	Sn	06 14 31.5	-0.8
PB08				IAML		06 14 35.0	
	comp=N,2µm,0.3s						
PB01	IPOC Station P	1.80	127	⇑*i*P	Pb	06 14 10.4	-0.9
PB01				*i* S	Sn	06 14 31.7	-1.1
PB01				IAML		06 14 36.3	
	comp=E,2µm,0.3s						
PB01	IPOC Station P	1.80	127		Pn	06 14 10.0	+0.5
PB01				Sn	Sn	06 14 31.8	-0.9
PB07	IPOC Station P	2.06	149	*e*P	Pb	06 14 15.0	-0.7
PB07				*i* S	Sg	06 14 44.0	+0.1
PB07				IAML		06 14 49.5	
	comp=E,1µm,0.4s						
PB16	IPOC Station P	2.16	42	⇓*i*P	Pb	06 14 18.3	+0.6
PB16				*i* S	Sb	06 14 45.5	+0.5
PB16				IAML		06 14 49.8	
	comp=E,547nm,0.4s						
PB04	IPOC Station P	2.50	161	Pn	Pn	06 14 19.1	0.0
PB04				Sn	Sn	06 14 47.8	-2.3
LVC	Limon Verde	3.29	144	Pn	Pn	06 14 32.2	+1.9
	comp=E,8.9nm,0.3s,baz=321,slow=8.9,SNR=3.2						
LVC				Pg	Pb	06 14 37.2	+0.3
	comp=E,23nm,0.3s,baz=302,slow=6.8,SNR=7.2						
LVC				Sn	Sn	06 15 11.5	+1.5
	comp=E,25nm,0.3s,baz=327,slow=8.9,SNR=2.2						
LVC				Lg	Lg	06 15 21.1	
	comp=E,67nm,0.3s,baz=230,slow=17,SNR=6.7						
LVC	Limon Verde	3.29	144	Pn	Pn	06 14 31.6	+1.3
LVC				Sn	Sn	06 15 09.7	-0.3
PB10	IPOC Station P	3.56	173	Pn	Pn	06 14 33.0	-0.7
PB10				Sn	Sn	06 15 14.4	-1.7
LPAZ	La Paz	4.58	37	Pn	Pb	06 14 55.3	-3.5
	comp=E,1.5nm,0.3s,baz=233,slow=6.2,SNR=6.9						
GO02	Mina Guanaco	5.34	166	Pn	Pn	06 14 58.6	+0.2
SIV	San Ignacio	10.26	69	Pn	Pn	06 16 06.6	+0.8
	comp=E,0.7nm,0.3s,baz=274,slow=11,SNR=14						
GO06	Curarrehue	19.56	181	P	Pn	06 18 08.9	+1.2
GO06				IAmb	IAmb	06 18 14.7	
	comp=Z,22nm,1.5s						
PLCA	Paso Flores	20.71	179	P	Pn	06 18 20.9	-0.3
	comp=Z,2.0nm,0.8s,baz=35,slow=9.6,SNR=4.0						
PLCA	Paso Flores	20.71	179	P	P	06 18 19.9	+1.0
PLCA				IAmb	IAmb	06 18 30.3	
	comp=Z,8.9nm,1.2s						
BDFB	Brasilia	22.32	83	P	P	06 18 38.5	+2.0
	comp=Z,2.7nm,1.0s,baz=287,slow=13,SNR=3.6						
TXAR	Lajitas Array	58.25	326	P	P	06 23 33.2	-0.1
	comp=Z,0.2nm,0.6s,baz=143,slow=9.1,SNR=3.6						
TXAR	Lajitas Array	58.25	326	P	P	06 23 33.5	+0.2
QSPA	South Pole Qui	70.22	180	P	P	06 24 48.0	-3.5
NVAR	Mina Array Bea	73.07	323	P	P	06 25 10.9	+1.7
	comp=Z,0.4nm,0.7s,baz=144,slow=0.8,SNR=3.6						
NVAR	Mina Array Bea	73.07	323	P	P	06 25 07.7	-1.5
TORD	Torodi Ar. Bea	78.73	72	P	P	06 25 41.3	-0.4
	comp=Z,1.4nm,0.7s,baz=251,slow=5.2,SNR=6.3						
TORD	Torodi Ar. Bea	78.73	72	P	P	06 25 41.3	-0.4
YKA	Yellowknife Ar	89.09	341	P	P	06 26 34.7	+1.3
	comp=Z,0.4nm,0.7s,baz=135,slow=5.1,SNR=9.4						
MKAR	Makanchi Array	145.49	33	PKPbc	PKPab	06 33 18.4	+1.3
	comp=Z,1.0nm,0.7s,baz=328,slow=4.1,SNR=12						
MKAR	Makanchi Array	145.49	33		PKPab	06 33 18.0	+0.8
SONM	Songino Array	152.12	4	PKPbc	PKiKP	06 33 36.3	+1.6
	comp=Z,0.4nm,0.5s,baz=28,slow=6.7,SNR=4.2						
SONM	Songino Array	152.12	4	PKPbc	PKiKP	06 33 35.3	+0.7

IDC 17 06:16:04.5±3.4,20°.34S×70°.91W,h0^{km},mb3.8/2,mb1 3.9/3,mb1mx3.6/29,mbtmp3.8/3,ML3.8/1,Error ellipse: s-maj=154.2km s-min=49.1km az=1.0,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	4.82	34	Pn	Pn	06 17 24.0	+5.1
	1.1nm,0.3s,baz=227,slow=18,SNR=3.7						
SIV	San Ignacio	10.30	67	Pn	Pn	06 18 34.2	+0.5
	0.8nm,0.3s,baz=257,slow=13,SNR=4.5						
TORD	Torodi Ar. Bea	78.74	71	P	P	06 28 08.5	-0.9
	0.9nm,0.8s,baz=249,slow=5.6,SNR=3.8						
YKA	Yellowknife Ar	89.49	341	P	P	06 29 02.1	-0.9
	0.2nm,0.6s,baz=140,slow=4.6,SNR=3.3						
MKAR	Makanchi Array	145.75	33	PKPbc	PKPab	06 35 46.0	+0.2
	0.7nm,0.6s,baz=306,slow=3.2,SNR=7.1						
SONM	Songino Array	152.48	4	PKPbc	PKPbc	06 36 03.0	+0.1
	0.2nm,0.4s,baz=51,slow=0.9,SNR=2.5						

IDC 17 06:16:59.4±0.7,20°.06S×70°.79W,h0^{km},mb3.9/8,mb1 4.2/10,mb1mx4.0/33,mbtmp4.0/10,ML4.2/2,Error ellipse: s-maj=25.3km s-min=14.5km az=56.0

NEIC 17 06:17:00.8±2.1,20°.12S±0°.04×70°.82W±0°.06,h10^{km}±1^{km},mb4.0/12,Error ellipse: s-maj=10.5km s-min=7.1km az=291.0

GUC 17 06:17:02.4±0.7,20°.11S×70°.85W,h38^{km}±12^{km},ML4.1

ISC 17 06:17:00.6±1.1,20°.07S±0°.04×70°.85W±0°.05,h10^{km}±6^{km},n58,σ1^{s}15/74,mb3.9/8,1C,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA01	Diego Aracena	0.79	128	⇑*i*P	Pb	06 17 16.4	-0.1
TA01				*e*S	Sb	06 17 26.7	-0.6
TA01				IAML		06 17 29.6	
	comp=N,12µm,0.4s						
PSGC	Pisagua	0.83	55	*e*P	Pb	06 17 17.3	+0.1
PSGC				*e*S	Sb	06 17 29.3	+0.9
PSGC				IAML		06 17 30.6	
	comp=N,10µm,0.5s						
PATCX	Punta Patache	0.99	139	*e*P	Pb	06 17 19.6	-0.3
PATCX				*e*S	Sb	06 17 32.8	-0.2
PATCX				IAML		06 17 38.9	
	comp=E,4µm,0.7s						
PB11	IPOC Station P	1.16	75	*e*P	Pn	06 17 23.3	+0.2
PB11				*e*S	Sn	06 17 39.2	+0.2
PB11				IAML		06 17 41.7	
	comp=N,11µm,0.3s						
PB11	IPOC Station P	1.16	75	Pn	Pn	06 17 23.1	+0.1
PB11				Sn	Sg	06 17 37.7	-0.4
PB02	IPOC Station P	1.53	144	*e*P	Pn	06 17 27.6	-0.5
PB02				*e*S	Sb	06 17 47.9	-0.6
PB02				IAML		06 17 53.2	
	comp=E,9µm,0.5s						
PB08	IPOC Station P	1.59	93	*e*P	Pb	06 17 29.9	-0.5
PB08				*e*S	Sg	06 17 51.2	-0.8
PB08				IAML		06 17 54.1	
	comp=E,3µm,0.3s						
PB01	IPOC Station P	1.60	127	*e*P	Pb	06 17 29.6	-0.7
PB01				*e*S	Sb	06 17 50.1	-0.4
PB01				IAML		06 17 54.2	
	comp=N,4µm,0.6s						
PB01	IPOC Station P	1.60	127		Pn	06 17 29.2	+0.2
PB01				Sn	Sn	06 17 49.3	-0.4
GO01	Chusmiza	1.61	76	*e*P	Pb	06 17 30.7	+0.1
GO01				*e*S	Sg	06 17 52.2	-0.2
GO01				IAML		06 17 54.1	
	comp=E,6µm,0.1s						
GO01	Chusmiza	1.61	76		Pb	06 17 30.8	+0.1
GO01				Sn	Sg	06 17 52.1	-0.3
PB04	IPOC Station P	2.34	164	Pn	Pn	06 17 39.2	-0.1
LVC	Limon Verde	3.10	145	Pn	Pn	06 17 50.1	+0.1
	comp=E,18nm,0.3s,baz=330,slow=16,SNR=4.2						
LVC				Sn	Sn	06 18 28.8	+1.6
	comp=E,42nm,0.3s,baz=110,slow=22,SNR=3.5						
LVC				Lg	Lg	06 18 37.4	
	comp=E,72nm,0.3s,baz=172,slow=7.7,SNR=15						
LVC	Limon Verde	3.10	145		Pn	06 17 49.5	-0.5
PB10	IPOC Station P	3.43	176	Pn	Pn	06 17 52.4	-1.8
LPAZ	La Paz	4.57	35	Pn	Pb	06 18 16.9	-4.3
	comp=E,1.8nm,0.3s,baz=229,slow=6.2,SNR=6.1						
GO02	Mina Guanaco	5.20	167	Pn	Pn	06 18 17.6	-1.1
GO03	Copiap	7.51	176	Pn	Pn	06 18 50.0	-0.2
SIV	San Ignacio	10.14	68	Pn	Pn	06 19 27.1	+0.7
	comp=E,2.7nm,0.3s,baz=262,slow=9.5,SNR=12						
ROC1	El Roble	12.85	181	Pn	Pn	06 20 03.1	-0.5
GO06	Curarrehue	19.45	181	P	P	06 21 27.2	-0.2
PLCA	Paso Flores	20.59	179	P	P	06 21 40.8	+0.9
	comp=E,4.2nm,0.7s,baz=25,slow=9.8,SNR=5.8						
PLCA	Paso Flores	20.59	179	P	P	06 21 40.5	+0.6
PLCA				IAmb	IAmb	06 21 44.7	
	comp=Z,5.9nm,0.8s						
PTGA	Pitinga	21.98	30	P	P	06 21 55.3	+0.5
	comp=Z,1.8nm,0.3s,baz=196,slow=19,SNR=4.0						
PTGA	Pitinga	21.98	30	P	P	06 21 56.3	+1.5
PTGA				IAmb	IAmb	06 22 05.3	
	comp=Z,4.4nm,0.9s						
FLOC	Florencia	22.03	347	P	P	06 21 57.8	+2.3
BDFB	Brasilia	22.17	82	P	P	06 21 58.2	+1.1
	comp=Z,1.4nm,0.5s,baz=256,slow=12,SNR=2.6						
BDFB	Brasilia	22.17	82	P	P	06 21 55.7	-1.4
BDFB				IAmb	IAmb	06 22 10.0	
	comp=Z,9.6nm,1.3s						
RUSC	La Rusia	25.90	355	P	P	06 22 34.3	+0.9
TX31	Lajitas Ar. Si	58.44	326	P	P	06 26 57.2	+0.4
TX31				IAmb	IAmb	06 27 00.3	
	comp=Z,3.4nm,1.4s						
TXAR	Lajitas Array	58.44	326	P	P	06 26 56.2	-0.6
	comp=Z,0.3nm,0.5s,baz=152,slow=8.4,SNR=4.7						
TXAR	Lajitas Array	58.44	326	P	P	06 26 56.6	-0.2
MIAR	Mount Ida	58.46	338	P	P	06 26 56.9	+0.2
CCUT	Cedar City	69.90	325	P	P	06 28 14.6	+2.5
MSU	Marysvale	69.99	327	P	P	06 28 14.2	+1.5
PDAR	Pinedale Array	71.98	331	P	P	06 28 25.8	+1.1
	comp=Z,0.2nm,0.6s,baz=133,slow=6.6,SNR=2.7						
PDAR	Pinedale Array	71.98	331	P	P	06 28 25.5	+0.8
NVAR	Mina Array Bea	73.26	323	P	P	06 28 34.2	+1.9
	comp=Z,0.9nm,0.7s,baz=168,slow=6.0,SNR=5.5						
NVAR	Mina Array Bea	73.26	323	P	P	06 28 33.8	+1.4
YNE	Yellowstone No	73.95	332	P	P	06 28 37.2	+0.9
TORD	Torodi Ar. Bea	78.60	71	P	P	06 29 01.7	-1.4
	comp=Z,1.6nm,0.5s,baz=248,slow=5.5,SNR=10						
TORD	Torodi Ar. Bea	78.60	71	P	P	06 29 01.5	-1.6
YKA	Yellowknife Ar	89.25	341	P	P	06 29 56.4	0.0
	comp=Z,1.7nm,0.8s,baz=138,slow=5.2,SNR=16						
ASAR	Alice Springs	130.28	210	PKP	PKPdf	06 36 11.6	-0.3
	comp=Z,0.2nm,0.8s,baz=109,slow=0.9,SNR=4.9						
ASAR	Alice Springs	130.28	210		PKPdf	06 36 11.5	-0.5
WRA	Warramunga Arr	133.20	213	PKP	PKPdf	06 36 17.8	+0.3
	comp=Z,0.3nm,0.6s,baz=170,slow=1.5,SNR=3.3						
WRA	Warramunga Arr	133.20	213		PKPdf	06 36 13.3	-4.2
ZALV	Zalesovo Beam	141.40	23	PKP	PKPdf	06 36 31.9	+0.4
	comp=Z,0.9nm,0.6s,baz=340,slow=1.7,SNR=3.2						
ZALV	Zalesovo Beam	141.40	23		PKPdf	06 36 30.4	-1.2
MKAR	Makanchi Array	145.49	33	PKPbc	PKPdf	06 36 39.0	0.0
	comp=Z,2.8nm,0.7s,baz=324,slow=3.3,SNR=21						
MKAR	Makanchi Array	145.49	33		PKPdf	06 36 37.9	-1.1
KLR	Kul'dur	145.75	333	PKPbc	PKPbc	06 36 39.9	+0.1
	comp=Z,0.5nm,0.3s,baz=85,slow=3.0,SNR=4.7						
USRK	Ussuriysk Ar.	149.33	327	PKPbc	PKPbc	06 36 50.6	+0.9
	comp=Z,2.0nm,0.8s,baz=140,slow=6.8,SNR=4.1						
USRK	Ussuriysk Ar.	149.33	327	PKPdf	PKPdf	06 36 46.0	+0.5
USRK				PKPbc	PKPbc	06 36 50.7	+0.9
MJAR	Matsushiro Arr	149.77	309	PKPbc	PKPbc	06 36 51.5	+0.4
	comp=Z,0.5nm,0.3s,baz=211,slow=3.1,SNR=4.1						
MJAR	Matsushiro Arr	149.77	309	PKPdf	PKPdf	06 36 45.3	-1.1
MJAR					PKPbc	06 36 51.4	+0.3
MJAR				PKPab	sPKPbc	06 36 55.9	+1.0
SONM	Songino Array	152.22	4	PKPbc	PKPbc	06 36 57.0	+0.4
	comp=Z,1.1nm,0.9s,baz=323,slow=1.1,SNR=5.4						
SONM	Songino Array	152.22	4		PKiKP	06 36 57.2	+0.2
SONM				PKPab	PKPab	06 37 04.9	-1.4

IDC 17 06:25:30.8±1.6,19°.88S×70°.87W,h0^{km},mb3.6/3,mb1 3.8/5,mb1mx3.6/35,mbtmp3.8/5,ML4.0/2,Error ellipse: s-maj=44.7km s-min=20.1km az=64.0

SJA 17 06:25:32.7±1.1,20°.04S×70°.92W,h30^{km}±3^{km},ML3.7,MW3.9

ISC 17 06:25:33.9±2.1,19°.99S±0°.05×70°.92W±0°.09,h23^{km}±14^{km},n20,σ1^{s}21/23,mb3.7/3,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGCX	Pisagua	0.84	63	eP	Pb	06 25 49.6	-0.4
PSGCX				IAML		06 26 02.4	
	comp=Z,2μm,0.7s						
PSGCX				eS	Sn	06 26 02.4	+0.2
PATCX	Punta Patache	1.10	139	eP	Pn	06 25 53.4	-0.7
PATCX				eS	Sn	06 26 08.8	+0.3
PATCX				IAML		06 26 11.4	
	comp=Z,2μm,0.4s						
PB11	IPOC Station P	1.21	80	eP	Pn	06 25 55.4	-0.3
PB11				eS	Sb	06 26 12.2	+0.6
PB11				IAML		06 26 13.0	
	comp=Z,3μm,0.3s						
PB12	IPOC Station P	1.47	22	eP	Pb	06 26 00.1	-0.7
PB12				eS	Sb	06 26 20.8	+1.7
PB12				IAML		06 26 28.6	
	comp=Z,673nm,1.0s						
PB08	IPOC Station P	1.67	96	eP	Pb	06 26 03.0	-1.2
PB08				eS	Sb	06 26 24.7	-0.2
PB08				IAML		06 26 29.2	
	comp=Z,713nm,0.4s						
PB09	IPOC Station P	2.39	139	eP	Pn	06 26 11.9	+0.1
PB09				IAML		06 26 52.7	
	comp=Z,713nm,0.4s						
PB04	IPOC Station P	2.44	163	iP	Pn	06 26 12.8	+0.1
PB04				eS	Sn	06 26 41.4	-0.5
PB05	IPOC Station P	2.93	167	iP	Pn	06 26 19.0	-0.3
PB05				IAML		06 27 21.6	
	comp=Z,191nm,0.7s						
LVC	Limon Verde	3.21	145	Pn	Pn	06 26 25.7	+2.3
	comp=Z,19nm,0.3s,baz=326,slow=10,SNR=9.6						
LVC				Sn	Sn	06 27 02.3	+1.1
	comp=Z,10nm,0.3s,baz=80,slow=19,SNR=4.6						
LVC				Lg	Lg	06 27 14.3	
	comp=Z,36nm,0.3s,baz=72,slow=18,SNR=4.4						
LPAZ	La Paz	4.53	36	Pn	Pb	06 26 47.2	-6.1
	comp=Z,1.7nm,0.3s,baz=195,slow=3.9,SNR=14						
YJA	Yavi	5.50	114	eP	Pn	06 26 57.4	+2.5
SIV	San Ignacio	10.18	69	Pn	Pn	06 27 59.0	+0.3
	comp=Z,1.1nm,0.3s,baz=273,slow=9.9,SNR=17						
PTGA	Pitinga	21.93	31	P	P	06 30 24.9	-1.0
	comp=Z,1.1nm,0.3s,baz=189,slow=4.2,SNR=4.0						
TORD	Torodi Ar. Bea	78.64	71	P	P	06 37 33.1	-1.5
	comp=Z,0.9nm,0.7s,baz=237,slow=5.1,SNR=5.1						
YKA	Yellowknife Ar	89.15	341	P	P	06 38 28.3	+1.2
	comp=Z,0.1nm,0.7s,baz=135,slow=4.8,SNR=3.0						
H11S2	WAKE ISLAND Hy	125.81	279	T	T	09 04 00.6	
	baz=105						
H11S1	WAKE ISLAND Hy	125.81	279	T	T	09 03 57.5	
	baz=105						
H11S3	WAKE ISLAND Hy	125.82	279	T	T	09 03 59.3	
	baz=105						
MKAR	Makanchi Array	145.46	33	PKPbc	PKPab	06 45 11.6	+1.2
	comp=Z,0.6nm,0.7s,baz=333,slow=4.5,SNR=5.7						
SONM	Songino Array	152.13	4	PKPbc	PKPbc	06 45 26.3	-1.4
	comp=Z,0.3nm,0.5s,baz=27,slow=0.6,SNR=2.1						

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*INET **17** 06:27:14.5, 11°.00N×87°.78W, h15^{km}, ML3.7*

*UCR **17** 06:27:16.1±2.3, 11°.10N×87°.72W, h36^{km}±22^{km}, MD4.3, ML3.8, mb4.5(NEIC)*

*NEIC **17** 06:27:18.2±2.2, 11°.19N±0°.08×87°.57W±0°.09, h41^{km}±10^{km}, mb4.5/18, Error ellipse: s-maj=15.3km s-min=6.9km az=47.0*

*SNET **17** 06:27:18.1±1.6, 11°.27N×87°.58W, h34^{km}±999^{km}, ML4.0*

*IDC **17** 06:27:19.2±2.1, 11°.33N×87°.46W, h45^{km}±20^{km}, mb3.5/9, mb1 3.8/13, mb1mx3.6/46, mbtmp3.7/13, ML3.0/4, Error ellipse: s-maj=51.5km s-min=13.1km az=31.0*

ISC 17 06:27:13.8±3.2**, 11°.12N**±0°.06×**87°.66W**±0°.07**, h11**^{km}±20^{km}**, n75,** σ1^{s}.**24**/88**, mb4.3**/16**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	1.85	3	eP	Pb	06 27 47.1	-0.5
CSGN	Cosiguina Volc	1.85	3		Pb	06 27 47.3	-0.3
CSGN				Sn	Sn	06 28 06.8	-2.0
NY14	Universidad de	2.14	103	iP	Pb	06 27 50.5	-2.0
NY14				iS	Sn	06 28 16.1	+0.2
CNCH	Conchagua	2.15	355	eP	Pn	06 27 50.2	+0.6
CNCH				eS	Sn	06 28 14.3	-2.1
CNCH	Conchagua	2.15	355	eP	Pn	06 27 50.2	+0.6
CNCH				eS	Sn	06 28 14.3	-2.1
LCND	La Caada	2.19	354	eP	Pn	06 27 50.7	+0.7
LCND				eS	Sn	06 28 14.9	-2.3
LCND				IAML		06 28 23.3	
	comp=Z,1μm,0.3s						
LCND	La Caada	2.19	354	eP	Pn	06 27 50.7	+0.7
LCND				eS	Sn	06 28 14.9	-2.3
LCND				IAML		06 28 23.3	
	comp=Z,1μm,0.3s						
JUCU	Jucuar¡n	2.20	345	eP	Pn	06 27 50.6	+0.4
JUCU	Jucuar¡n	2.20	345	eP	Pn	06 27 50.6	+0.4
BUEV	Buena Vista	2.23	98	iP	Pn	06 27 51.4	+0.6
GUAB	Guayabo de Bag	2.42	100	iP	Pn	06 27 53.8	+0.4
PACA	Pacayal	2.42	344	eP	Pn	06 27 54.1	+0.7
PACA	Pacayal	2.42	344	eP	Pn	06 27 54.1	+0.7
COLC	Colonia	2.45	100	iP	Pn	06 27 54.6	+0.9
MATN	Matagalpa	2.47	43	eP	Pn	06 27 55.0	+1.0
CUI	Cuipilapa	2.49	100	eP	Pn	06 27 55.3	+1.0
CUI				eS	Sn	06 28 24.9	+0.2
TECA	Tecapa	2.50	341	eP	Pn	06 27 54.9	+0.3
TECA	Tecapa	2.50	341	eP	Pn	06 27 54.9	+0.3
COEB	Comit de Eme	2.51	340	eS	Sn	06 28 24.8	-0.6
COEB	Comit de Eme	2.51	340	eS	Sn	06 28 24.8	-0.6
ACON	Acoyapa	2.57	71	eP	Pn	06 27 55.7	+0.4
ACON	Acoyapa	2.57	71		Pn	06 27 55.8	+0.4
FAGO	Alcalda de S	2.60	350	eP	Pn	06 27 56.7	+1.0
FAGO				eS	Sn	06 28 27.2	-0.1
FAGO	Alcalda de S	2.60	350	eP	Pn	06 27 56.7	+1.0
FAGO				eS	Sn	06 28 27.2	-0.1
ACAL	Aguas Claras	2.62	100	iP	Pn	06 27 57.5	+1.4
ACAL				iS	Sn	06 28 28.4	+0.5
PTEN	Parque Tenorio	2.65	99	iP	Pn	06 27 58.0	+1.5
PTEN				iS	Sn	06 28 29.8	+1.0
JTS	Las Juntas de	2.78	107	P	Pn	06 27 58.4	+0.1
	comp=Z,6.6nm,0.3s,baz=1.5,slow=22,SNR=56						
JTS				S	Sn	06 28 31.6	-0.3
	comp=Z,37nm,0.3s,baz=329,slow=18,SNR=18						
JTS	Las Juntas de	2.78	107		Pn	06 27 59.0	+0.7
JTS					Sn	06 28 30.6	-1.3
LFRS	El Faro	2.84	331	eP	Pn	06 28 00.6	+1.5
TGUH	Tegucigalpa,Un	2.94	7		Pn	06 28 02.2	+1.6
CEDE	Laguna Cedeo	2.97	102	eP	Pn	06 28 02.5	+1.6
SNET	Serv Nac Est T	2.98	329	Pn	Pn	06 28 00.6	-0.5
CEVE	Cerro Verde	3.31	325	IAML		06 28 54.1	
	comp=Z,331nm,0.3s						
CEVE	Cerro Verde	3.31	325	IAML		06 28 54.1	
	comp=Z,331nm,0.3s						
ESPN	Las Esperanzas	3.46	72	Pn	Pn	06 28 08.6	+1.0
HDC	Heredia	3.66	107	Pn	Pn	06 28 12.8	+2.3
LCR2	La Lucha 2	3.84	111	eP	Pn	06 28 14.9	+1.8
APG	El Apazote	4.73	325	P	Pn	06 28 28.0	+2.7
	comp=Z,0.4nm,0.3s,baz=329,slow=21,SNR=3.5						
ICCO	Coco Island	5.57	174	eP	Pn	06 28 34.0	-2.7
CCIG	Comitan	6.73	320	Pn	Pn	06 28 55.0	+2.3
BCIP	Isla Barro Col	7.94	103	Pn	Pn	06 29 08.9	-0.3
CMIG	Matias Romero	9.18	311	P	Pn	06 29 28.5	+2.2
	comp=Z,0.4nm,0.3s,baz=156,slow=14,SNR=8.3						
SDV	Santo Domingo	16.91	96	P	P	06 31 11.8	-0.9
	comp=Z,0.1nm,0.3s,baz=280,slow=12,SNR=2.9						
Y49A	Blount Mountai	22.66	3	P	P	06 32 16.5	+1.4
Y49A				IAmb	IAmb	06 32 24.6	
	comp=Z,23nm,1.4s						
TXAR	Lajitas Array	23.49	323	P	P	06 32 24.7	+0.9
	comp=Z,0.5nm,0.8s,baz=134,slow=11,SNR=5.0						
TXAR	Lajitas Array	23.49	323	P	P	06 32 24.5	+0.7
TX31	Lajitas Ar. Si	23.49	323	P	P	06 32 24.2	+0.4
TX32	Lajitas Array	23.49	323	P	P	06 32 24.2	+0.4
MIAR	Mount Ida	23.93	348	P	P	06 32 27.2	-0.7
W50A	Signal Mountai	24.07	5	P	P	06 32 29.6	+0.4
W50A				IAmb	IAmb	06 32 33.8	
	comp=Z,10nm,1.1s						
TKL	Tuckaleechee C	24.68	8	P	P	06 32 34.9	+0.1
	comp=Z,9.0nm,1.2s,baz=180,slow=15,SNR=3.7						
TKL	Tuckaleechee C	24.68	8	P	P	06 32 35.7	+1.0
TKL				IAmb	IAmb	06 32 43.6	
	comp=Z,24nm,1.4s						
CLTN	Cedars of Leba	24.89	3	P	P	06 32 36.2	-0.4
CLTN				IAmb	IAmb	06 32 39.2	
	comp=Z,11nm,1.3s						
V58A	Windy Hill, Pi	25.75	16	P	P	06 32 46.4	+1.9
S39A	Bolivar	26.94	350	P	P	06 32 54.6	-0.6
SAML	Samuel	31.47	128	P	P	06 33 34.6	-1.1
SAML				IAmb	IAmb	06 33 35.7	
	comp=Z,5.0nm,0.7s						
PDAR	Pinedale Array	36.85	333	P	P	06 34 24.5	+2.1
	comp=Z,0.2nm,0.6s,baz=146,slow=8.7,SNR=2.4						
NVAR	Mina Array Bea	38.58	320	P	P	06 34 39.5	+2.5
	comp=Z,0.9nm,0.7s,baz=130,slow=6.5,SNR=7.8						
NVAR				PcP	PcP	06 36 50.5	+1.0
	comp=Z,0.2nm,0.5s,baz=160,slow=2.9,SNR=2.8						
NVAR	Mina Array Bea	38.58	320	P	P	06 34 39.2	+2.2
YMR	Madison River	38.98	333	P	P	06 34 39.9	-0.4
ULM	Lac du Bonnet	39.60	352	P	P	06 34 43.2	-1.9
	comp=Z,1.0nm,0.5s,baz=167,slow=11,SNR=2.9						
SCHQ	Schefferville	46.60	16	P	P	06 35 41.3	-0.5
	comp=Z,2.1nm,1.0s,baz=185,slow=8.3,SNR=3.7						
YKA	Yellowknife Ar	54.83	345	P	P	06 36 42.9	-0.7
	comp=Z,0.8nm,0.9s,baz=142,slow=7.7,SNR=10						
YKA				PcP	PcP	06 37 45.8	-0.1
	comp=Z,0.3nm,0.7s,baz=138,slow=4.7,SNR=5.6						
BCAR	Beaver Creek A	64.37	336	P	P	06 37 50.5	+0.9
INK	Inuvik	64.41	343	P	P	06 37 48.8	-0.8
	comp=Z,1.6nm,0.8s,baz=132,slow=8.9,SNR=5.2						
INK	Inuvik	64.41	343	P	P	06 37 50.1	+0.6
INK				IAmb	IAmb	06 37 59.1	
	comp=Z,3.6nm,1.2s						
RC01	Rabbit Creek A	67.00	332	P	P	06 38 07.7	+1.2
ILAR	Eielson Array	67.15	336	P	P	06 38 05.7	-1.7
	comp=Z,1.2nm,1.1s,baz=128,slow=5.8,SNR=6.2						
RND	Reindeer	67.42	335	P	P	06 38 10.3	+1.1
RND				IAmb	IAmb	06 38 10.4	
	comp=Z,7.6nm,0.9s						
BMAR	Burnt Mountain	67.45	339	P	P	06 38 10.3	+1.0
SUA	Susitna One	67.58	332	P	P	06 38 11.0	+0.7
SUA				IAmb	IAmb	06 38 24.8	
	comp=Z,7.6nm,1.2s						
BPAW	Bear Paw Mtn.	68.55	335	P	P	06 38 16.3	0.0
PPLA	Purkeypile	68.67	334	P	P	06 38 18.1	+0.9
MLY	Manley	68.77	336	P	P	06 38 18.0	+0.3
MLY				IAmb	IAmb	06 38 18.2	
	comp=Z,4.2nm,0.9s						
IMAR	Indian Mountai	70.27	337	P	P	06 38 26.4	-0.4

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*IDC **17** 06:31:38.4±1.1, 20°.07S×70°.86W, h0^{km}, mb3.6/4, mb1 3.9/7, mb1mx3.7/37, mbtmp3.7/7, ML3.5/3, Error ellipse: s-maj=36.5km s-min=16.9km az=63.0*

*GUC **17** 06:31:42.5±0.7, 19°.95S×70°.83W, h9^{km}±6^{km}, ML3.8*

ISC 17 06:31:40.6±1.7**, 19°.97S**±0°.04×**70°.88W**±0°.07**, h15**^{km}±10^{km}**, n20,** σ1^{s}.**20**/24**, mb3.8**/3**, 2C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	0.80	63	⇑iP	Pg	06 31 57.0	+0.8
PSGC				iS	Sn	06 32 08.4	-0.8
TA01	Diego Aracena	0.88	132	⇓iP	Pb	06 31 57.9	+0.3
TA01				iS	Sg	06 32 10.1	+0.7
TA01				IAML		06 32 11.9	
	comp=E,5μm,0.4s						
PB11	IPOC Station P	1.17	80	⇓iP	Pb	06 32 03.1	+0.5
PB11				iS	Sg	06 32 18.7	+0.2
PB11				IAML		06 32 20.6	
	comp=N,6μm,0.3s						
PB12	IPOC Station P	1.45	21	eP	Pb	06 32 07.8	+0.6
PB12				iS	Sg	06 32 26.7	-0.6
PB12				IAML		06 32 34.5	
	comp=E,2μm,0.4s						
PB08	IPOC Station P	1.63	96	⇑iP	Pb	06 32 10.7	+0.1
PB08				iS	Sg	06 32 32.8	-0.5
PB08				IAML		06 32 33.9	
	comp=N,2μm,0.3s						
PB01	IPOC Station P	1.69	130	iP	Pb	06 32 11.0	-0.3
PB01				iS	Sn	06 32 31.8	+0.9
PB01				IAML		06 32 37.2	
	comp=N,3μm,0.8s						
PB07	IPOC Station P	1.98	152	eP	Pb	06 32 16.7	+0.2
PB07				iS	Sg	06 32 43.5	-0.9
PB07				IAML		06 32 53.3	
	comp=E,1μm,0.4s						
LVC	Limon Verde	3.21	145	Pn	Pn	06 32 27.5	-3.2
	comp=E,5.2nm,0.3s,baz=205,slow=17,SNR=5.9						
LVC				Lg	Lg	06 33 18.2	
	comp=E,44nm,0.3s,baz=103,slow=18,SNR=8.6						
LPAZ	La Paz	4.50	36	Pn	Pb	06 32 57.2	-2.5
	comp=E,1.2nm,0.3s,baz=224,slow=2.2,SNR=12						
SIV	San Ignacio	10.13	69	Pn	Pn	06 34 07.2	+1.5
	comp=E,1.1nm,0.3s,baz=259,slow=12,SNR=16						
CFA	Coronel Fontan	11.83	169	Pn	Pn	06 34 27.9	-0.9
	comp=E,0.1nm,0.3s,baz=349,slow=16,SNR=2.4						
PLCA	Paso Flores	20.70	179	P	P	06 36 19.4	-0.8
	comp=E,2.8nm,0.9s,baz=344,slow=7.4,SNR=2.7						
TXAR	Lajitas Array	58.33	326	P	P	06 41 36.2	+1.0
	comp=E,0.3nm,0.8s,baz=150,slow=8.6,SNR=3.7						
TORD	Torodi Ar. Bea	78.60	71	P	P	06 43 41.6	-0.6
	comp=E,0.8nm,0.8s,baz=237,slow=4.3,SNR=6.3						
YKA	Yellowknife Ar	89.15	341	P	P	06 44 35.9	+0.9
	comp=E,0.4nm,0.8s,baz=135,slow=4.8,SNR=3.5						
H11S2	WAKE ISLAND Hy	125.84	279	T	T	09 10 06.5	
	baz=104,slow=74						
H11S1	WAKE ISLAND Hy	125.85	279	T	T	09 10 07.2	
	baz=104						
H11S3	WAKE ISLAND Hy	125.86	279	T	T	09 10 07.1	
	baz=104,slow=74						
MKAR	Makanchi Array	145.42	33	PKPbc	PKPab	06 51 19.4	+1.2
	comp=E,0.9nm,0.8s,baz=336,slow=2.7,SNR=6.4						
SONM	Songino Array	152.12	4	PKPbc	PKPbc	06 51 35.2	-0.4
	comp=E,0.8nm,0.8s,baz=27,slow=1.6,SNR=4.1						

IDC 17 06:34:58.7±2.0**, 19°.94S**×**70°.71W, h0**^{km}**, mb3.8**/2**, mb1 3.9**/4**, mb1mx3.6**/35**, mbtmp3.7**/4**, ML3.5**/2**, Error ellipse: s-maj=56.1km s-min=30.4km az=61.0, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	3.15	148	Pn	Pn	06 35 50.4	+0.6
	3.6nm,0.3s,baz=4.9,slow=5.8,SNR=3.5						
LVC				Sn	Sn	06 36 29.0	+0.7
	6.6nm,0.3s,baz=249,slow=19,SNR=5.5						
LPAZ	La Paz	4.38	34	Pn	Pb	06 36 13.3	-3.5
	0.6nm,0.3s,baz=318,slow=7.4,SNR=8.8						
SIV	San Ignacio	9.97	68	Pn	Pn	06 37 24.8	+1.5
	0.6nm,0.3s,baz=265,slow=14,SNR=4.7						
TORD	Torodi Ar. Bea	78.44	71	P	P	06 47 00.5	-1.4
	1.3nm,1.0s,baz=249,slow=4.2,SNR=3.6						
YKA	Yellowknife Ar	89.17	341	P	P	06 47 55.7	-0.1
	0.2nm,0.8s,baz=142,slow=5.5,SNR=4.1						
MKAR	Makanchi Array	145.31	33	PKPbc	PKPdf	06 54 38.8	+0.3
	0.6nm,0.5s,baz=329,slow=2.9,SNR=1.5						

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*NEIC **17** 06:39:26.8±2.8, 11°.28S±0°.05×111°.73E±0°.07, h14^{km}±4^{km}, mb4.1/11, Error ellipse: s-maj=10.5km s-min=7.8km az=90.0*

*DJA **17** 06:39:31.6±1.5, 11°S±11°×11°2E±°, h23^{km}±22^{km}, M4.5/9, mB5.3/1, mb4.3/4, MLv4.6/9, Mw(mB)4.7/1*

*IDC **17** 06:39:42.1±8.4, 11°.03S×112°.12E, h130^{km}±73^{km}, mb3.5/8, mb1 3.6/8, mb1mx3.3/42, mbtmp3.9/8, Error ellipse: s-maj=118.3km s-min=18.6km az=48.0*

ISC 17 06:39:28.6±0.9**, 11°.03S**±0°.10×**111°.75E**±0°.08**, h10**^{km}**, n44,** σ1^{s}.**46**/39**, mb4.2**/12**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	Pacitan	2.88	349	P	Pn	06 40 14.3	-0.3
WOJI	Wonogiri, Jawa	3.28	346	P	Pn	06 40 20.3	+0.2
WOJI				S	Sn	06 40 58.2	-1.0
UGM	Wanagama	3.33	339	P	Pn	06 40 20.7	-0.1
UGM				S	Sn	06 40 59.5	-1.0
UGM	Wanagama	3.33	339		Pn	06 40 21.0	+0.1
UGM				Sn	Sn	06 40 59.6	-0.8
JAGI	Jajag, Banyuwa	3.48	43	P	Pn	06 40 23.5	+0.6
JAGI	Jajag, Banyuwa	3.48	43		Pn	06 40 24.2	+1.3
JAGI				Sn	Sn	06 41 02.6	-1.5
SMRI	Semarang	4.16	342	P	Pn	06 40 22.5	-10
SMRI	Semarang	4.16	342	Pn	Pn	06 40 32.1	-0.3
SMRI					Sn	06 41 22.3	+1.2
SRBI	Singaraja	4.50	50	P	Pn	06 40 39.4	+2.5
KPJI	Karang Pucung	4.61	323	P	Pn	06 40 39.9	+1.5
UWJI	Ujung Watu	4.65	350	P	Pn	06 40 31.7	-7.3
CISI	Cisompet, Garu	5.20	311	P	Pn	06 40 47.4	+0.8
	0.8nm3μm74nm,0.6s						
CISI	Cisompet, Garu	5.20	311		Pn	06 40 46.2	-0.4
XMIS	Christmas Isla	6.01	275	Pn	Pn	06 40 53.8	-4.0
PLAI	Plampang	6.33	70	P	Pn	06 41 03.3	+1.2
	0.3nm19nm,0.7s						
MDSI	Maura Dua	9.93	310	P	Pn	06 41 51.1	-0.4
GIRL	Giralia	11.79	169	Pn	Pn	06 42 11.6	-5.4
PSA00	Pilbara Seismi	13.04	144	Pn	Pn	06 42 27.8	-6.4
FITZ	Fitzroy Crossi	15.16	119	P	Pn	06 43 05.9	+2.9
	0.2nm,0.3s,baz=0.0,slow=7.1,SNR=4.4						
FITZ	Fitzroy Crossi	15.16	119	Pn	Pn	06 42 59.1	-4.0
MORW	Morawa	18.39	168	P	P	06 43 37.1	-6.7
MORW				IAmb	IAmb	06 43 56.6	
	comp=Z,9.3nm,1.2s						
WB0	Warramunga Arr	23.47	114	P	P	06 44 36.7	-2.0
WB0				IAmb	IAmb	06 44 47.9	
	comp=Z,18nm,1.4s						
WRA	Warramunga Arr	23.48	115	P	P	06 44 37.0	-1.8
	comp=Z,1.0nm,0.8s,baz=295,slow=11,SNR=6.1						
WRAB	Tennant Creek	23.49	115	P	P	06 44 36.9	-1.9
WRAB				IAmb	IAmb	06 44 40.9	
	comp=Z,5.4nm,0.8s						
AS31	Alice Springs	24.55	124	P	P	06 44 45.4	-3.5
ASAR	Alice Springs	24.55	124	P	P	06 44 47.1	-1.8
	comp=Z,1.4nm,0.6s,baz=298,slow=9.3,SNR=30						
ASAR	Alice Springs	24.55	124	P	P	06 44 45.1	-3.8
CMAR	Chiang Mai Arr	31.91	337	P	P	06 45 58.4	+3.9
	comp=Z,0.9nm,0.3s,baz=170,slow=9.0,SNR=9.2						
SONM	Songino Array	58.80	356	P	P	06 49 26.8	-0.4
	comp=Z,0.5nm,0.5s,baz=177,slow=7.6,SNR=5.3						
SONM	Songino Array	58.80	356	P	P	06 49 27.0	-0.2
MK31	Makanchi Array	63.31	338	P	P	06 49 56.5	-1.3
MK31				IAmb	IAmb	06 50 13.5	
	comp=Z,1.6nm,1.3s						
MKAR	Makanchi Array	63.31	338	P	P	06 49 57.4	-0.4
	comp=Z,1.0nm,0.6s,baz=148,slow=7.6,SNR=14						
MKAR	Makanchi Array	63.31	338	P	P	06 49 57.3	-0.5
AAK	Ala-Archa	63.36	330	P	P	06 49 58.7	+0.3
	comp=Z,0.9nm,0.7s,baz=146,slow=11,SNR=2.5						
AAK	Ala-Archa	63.36	330	P	P	06 49 58.3	-0.1
AAK				IAmb	IAmb	06 49 59.7	
	comp=Z,1.9nm,1.0s						
KURBB	Kurchatov Arra	67.88	338	P	P	06 50 26.7	-0.5
	comp=Z,0.7nm,0.4s,baz=157,slow=5.9,SNR=3.6						
ZAA0	Zalesovo Array	68.65	343	P	P	06 50 31.0	-0.9
ZALV	Zalesovo Beam	68.65	343	P	P	06 50 30.8	-1.1
	comp=Z,1.1nm,0.4s,baz=146,slow=6.4,SNR=4.8						
ZALV	Zalesovo Beam	68.65	343	P	P	06 50 31.1	-0.8
PEA0B	Petropavlovsk-	74.94	27	P	P	06 51 06.6	-3.2
ABKAR	Akbulak array	75.28	328	P	P	06 51 11.3	-0.6
ABKAR	Akbulak array	75.28	328	P	P	06 51 10.5	-1.3
ABKAR				IAmb	IAmb	06 51 11.9	
	comp=Z,1.4nm,0.8s						
QSPA	South Pole Qui	78.98	180	P	P	06 51 30.5	-2.1
YKA	Yellowknife Ar	118.88	23	PKP	PKPdf	06 58 16.3	-0.7
	comp=Z,0.2nm,0.6s,baz=316,slow=1.8,SNR=4.5						

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*IDC **17** 06:40:50.5±1.4, 20°.17S×70°.93W, h0^{km}, mb3.7/3, mb1 3.8/5, mb1mx3.6/34, mbtmp3.7/5, ML3.4/2, Error ellipse: s-maj=39.1km s-min=18.2km az=64.0*

ISC 17 06:40:51.8±1.6**, 20°.1S**±0°.1×**70°.9W**±0°.2**, h10**^{km}**, n13,** σ1^{s}.**38**/6**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	3.08	143	Pn	Pn	06 41 40.9	+0.1
	1.4nm,0.3s,baz=321,slow=14,SNR=5.3						
LVC				Sn	Sn	06 42 17.5	-0.4
	7.7nm,0.3s,baz=41,slow=17,SNR=4.7						
LVC				Lg	Lg	06 42 27.3	
	19nm,0.3s,baz=73,slow=22,SNR=11						
LPAZ	La Paz	4.64	35	Pn	Pb	06 42 07.7	-6.0
	0.9nm,0.3s,baz=209,slow=10,SNR=18						
SIV	San Ignacio	10.21	68	Pn	Pn	06 43 18.0	-0.5
	0.9nm,0.3s,baz=257,slow=14,SNR=16						
PLCA	Paso Flores	20.53	179	P	Pn	06 45 30.9	-1.7
	4.2nm,1.2s,baz=9.4,slow=5.8,SNR=2.1						
TORD	Torodi Ar. Bea	78.67	71	P	P	06 52 56.6	+1.9
	0.5nm,0.5s,baz=252,slow=4.6,SNR=3.8						
YKA	Yellowknife Ar	89.30	341	P	P	06 53 47.3	-0.5
	0.3nm,0.7s,baz=136,slow=5.4,SNR=6.3						
H11S2	WAKE ISLAND Hy	125.85	279	T	T	09 18 38.4	
	baz=102						
H11S1	WAKE ISLAND Hy	125.86	279	T	T	09 18 35.9	
	baz=102						
H11S3	WAKE ISLAND Hy	125.87	279	T	T	09 18 41.4	
	baz=102						
H11N3	WAKE ISLAND Hy	125.90	280	T	T	09 18 38.3	
	baz=111						
H11N2	WAKE ISLAND Hy	125.92	280	T	T	09 18 39.6	
	baz=111						
H11N1	WAKE ISLAND Hy	125.92	280	T	T	09 18 42.9	
	baz=111						
MKAR	Makanchi Array	145.57	33	PKPbc	PKPbc	07 00 29.4	-1.1
	0.7nm,0.7s,baz=318,slow=1.9,SNR=3.5						

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*IDC **17** 06:40:56.0±1.6, 15°.19N×98°.24W, h0^{km}, mb3.5/5, mb1 3.7/7, mb1mx3.6/47, mbtmp3.4/7, ML3.2/2, Error ellipse: s-maj=28.1km s-min=23.2km az=13.0*

*NEIC **17** 06:41:01.8±2.5, 15°.93N±0°.07×98°.43W±0°.06, h11^{km}±12^{km}, mb4.0/5, Md4.0/18(MEX), Error ellipse: s-maj=13.0km s-min=4.2km az=144.0*

*MEX **17** 06:41:02.0±0.5, 15°.78N×98°.36W, h9^{km}±10^{km}, MD4.0*

ISC 17 06:41:02.6±1.3**, 15°.91N**±0°.09×**98°.37W**±0°.04**, h17**^{km}**, n31,** σ1^{s}.**40**/43**, mb3.8**/6**, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOIG	Yosondua	1.23	40	eP	Pn	06 41 23.3	-2.1
YOIG				iS	Sb	06 41 39.4	-1.9
TLIG	Tlapa	1.66	353	eP	Pn	06 41 29.3	-1.8
TLIG				iS	Sn	06 41 50.6	-1.4
TLIG	Tlapa	1.66	353		Pn	06 41 29.4	-1.8
TLIG				Sn	Sn	06 41 52.5	+0.4
TLIG	Tlapa	1.66	353		Pn	06 41 29.3	-1.8
TLIG					Sn	06 41 50.6	-1.4
VHO	Vista Hermosa	1.95	53	eP	Pn	06 41 33.0	-2.2
VHO				eS	Sn	06 41 57.6	-1.7
HLIG	Huajuapan de L	1.99	16	eP	Pn	06 41 34.2	-1.5
HLIG				eS	Sn	06 41 59.9	-0.5
CAIG	El Cayaco	2.15	302	eP	Pn	06 41 35.4	-2.3
CAIG				iS	Sn	06 42 02.1	-1.9
CAIG	El Cayaco	2.15	302		Pn	06 41 35.4	-2.3
CAIG					Sn	06 42 02.1	-1.9
MEIG	Mezcala	2.34	329	eP	Pn	06 41 39.4	-1.0
MEIG				eS	Sn	06 42 08.7	0.0
MEIG	Mezcala	2.34	329		Pn	06 41 39.4	-1.0
MEIG					Sn	06 42 08.7	0.0
PLIG	Platanillo	2.70	336	eP	Pn	06 41 44.3	-1.1
PLIG				eS	Sn	06 42 17.9	+0.2
PLIG	Platanillo	2.70	336		Pn	06 41 44.3	-1.1
PLIG					Sn	06 42 17.9	+0.2
ARIG	Puente Sto Nin	3.02	322	eP	Pn	06 41 49.1	-0.7
ARIG				iS	Sn	06 42 24.7	-1.0
ARIG	Puente Sto Nin	3.02	322		Pn	06 41 49.1	-0.7
ARIG					Sn	06 42 24.7	-1.0
ZIIG	Zihuatanejo	3.41	300	eP	Pn	06 41 54.0	-1.2
ZIIG				iS	Sn	06 42 34.1	-1.1
ZIIG	Zihuatanejo	3.41	300		Pn	06 41 54.0	-1.2
ZIIG					Sn	06 42 34.1	-1.1
UNM	Universidad Na	3.49	347	Pn	Pn	06 41 58.1	+1.6
CMIG	Matias Romero	3.54	70	Pn	Pn	06 41 56.3	-0.6
	0.9nm,0.3s,baz=235,slow=15,SNR=21						
CMIG				Lg	Lg	06 42 54.2	
	11nm,0.3s,baz=314,slow=4.5,SNR=27						
CCIG	Comitan	6.00	86	Pn	Pn	06 42 30.3	-0.6
TEIG	Tepich	10.51	64	Pn	Pn	06 43 34.0	+1.3
TXAR	Lajitas Array	14.23	341	Pn	P	06 44 32.0	+1.2
	0.0nm,0.3s,baz=163,slow=10,SNR=3.4						
ABTX	Abilene, Hawle	16.68	356	P	P	06 44 59.5	+1.5
ABTX				IAmb	IAmb	06 45 00.5	
	comp=Z,9.2nm,1.0s						
ANMO	Albuquerque	20.30	341	P	Pn	06 45 40.0	0.0
	comp=Z,1.6nm,0.8s,baz=162,slow=9.9,SNR=6.3						
ANMO	Albuquerque	20.30	341	P	Pn	06 45 39.0	-1.0
S39A	Bolivar	22.15	11	P	P	06 45 59.9	+2.2
S39A				IAmb	IAmb	06 46 00.7	
	comp=Z,6.0nm,1.0s						
WVT	Waverly	22.22	23	P	P	06 45 57.9	-0.5
WVT				IAmb	IAmb	06 46 00.9	
	comp=Z,6.6nm,0.9s						
W50A	Signal Mountai	22.49	29	P	P	06 46 01.5	+0.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDAR	**Pinedale Array**	**28.43**	**343**	P	P	06 47 00.8	+4.0
	comp=Z,0.1nm,0.4s,baz=160,slow=11,SNR=2.5						
YKA	**Yellowknife Ar**	**47.92**	**350**	P	**P**	**06 49 40.2**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=155,slow=7.5,SNR=6.5						
CPUP	**Villa Florida**	**57.92**	**136**	P	P	06 50 45.8	-8.3
	comp=Z,1.2nm,0.7s,baz=316,slow=8.2,SNR=3.8						
ILAR	**Eielson Array**	**58.72**	**338**	P	**P**	**06 51 00.7**	**+1.5**
	comp=Z,0.5nm,0.9s,baz=131,slow=4.9,SNR=4.1						

SJA 17 06:46:57.8±1.1, 18°.73S×71°.40W, h54^{km}±12^{km}, ML4.5, MW4.4

IDC 17 06:47:15.4±1.0, 19°.82S×70°.69W, h0^{km}, mb3.7/6, mb1 3.9/9, mb1mx3.7/35, mbtmp3.8/9, ML3.6/3, MS4.2/1, Ms1 4.2/1, ms1mx3.7/22, Error ellipse: s-maj=28.8km s-min=15.4km az=69.0

NEIC 17 06:47:16±2.6, 19°.99S±0°.05×70°.89W±0°.08, h10^{km}±1^{km}, mb4.1/10, Error ellipse: s-maj=13.0km s-min=8.6km az=287.0

GUC 17 06:47:18.2±0.8, 19°.95S×70°.86W, h45^{km}±6^{km}, ML4.0

ISC 17 06:47:16.3±1.3, 19°.93S±0°.03×70°.85W±0°.05, h17^{km}±8^{km}, n51, σ1^{s}.74/66, mb3.9/6, 4C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB11	**IPOC Station P**	**1.14**	**82**	⇓*i*P	**Pg**	**06 47 38.5**	**+0.1**
PB11				*i* S	**Sg**	**06 47 53.9**	**+0.6**
PB11				IAML		06 47 57.2	
	comp=E,6µm,0.8s						
PB11	**IPOC Station P**	**1.14**	**82**		**Pg**	**06 47 38.4**	**+0.1**
PB11				Sn	**Sg**	**06 47 53.9**	**+0.6**
PB12	**IPOC Station P**	**1.40**	**21**	⇑*i*P	**Pg**	**06 47 42.3**	**-1.0**
PB12				*i* S	**Sg**	**06 48 00.9**	**-0.7**
PB12				IAML		06 48 09.0	
	comp=E,2µm,0.4s						
GO01	**Chusmiza**	**1.58**	**81**		**Pg**	**06 47 46.1**	**-0.7**
GO01				Sn	**Sg**	**06 48 07.8**	**+0.3**
PB08	**IPOC Station P**	**1.61**	**98**	⇑*i*P	**Pg**	**06 47 46.5**	**-0.9**
PB08				*i* S	**Sg**	**06 48 07.3**	**-1.1**
PB08				IAML		06 48 10.1	
	comp=N,1µm,0.5s						
AP01	**Chacalluta**	**1.62**	**17**	*e*P	**Pb**	**06 47 44.3**	**-1.5**
AP01				*i* S	**Sg**	**06 48 08.8**	**+0.1**
AP01				IAML		06 48 17.1	
	comp=E,9µm,0.8s						
PB02	**IPOC Station P**	**1.65**	**147**	⇑*i*P	**Pb**	**06 47 45.4**	**-0.9**
PB02				*i* S	**Sb**	**06 48 06.3**	**-0.5**
PB02				IAML		06 48 14.8	
	comp=N,5µm,0.4s						
PB01	**IPOC Station P**	**1.69**	**131**	⇑*i*P	**Pb**	**06 47 46.5**	**-0.5**
PB01				*i* S	**Sb**	**06 48 08.5**	**+0.4**
PB01				IAML		06 48 13.8	
	comp=N,2µm,0.5s						
PB01	**IPOC Station P**	**1.69**	**131**		**Pb**	**06 47 46.5**	**-0.5**
PB01				Sn	**Sb**	**06 48 08.7**	**+0.6**
PB07	**IPOC Station P**	**2.00**	**153**	*e*P	**Pn**	**06 47 50.1**	**+0.6**
PB07				*i* S	**Sb**	**06 48 17.3**	**+0.2**
PB07				IAML		06 48 32.0	
	comp=E,2µm,0.7s						
PB09	**IPOC Station P**	**2.39**	**141**	*e*P	**Pn**	**06 47 55.3**	**+0.5**
PB09				*e*S	**Sg**	**06 48 36.4**	**+3.2**
PB09				IAML		06 48 43.0	
	comp=Z,2µm,0.7s						
PB04	**IPOC Station P**	**2.48**	**165**		**Pn**	**06 47 55.9**	**-0.2**
PB04				Sn	**Sn**	**06 48 24.0**	**-2.0**
PB04	**IPOC Station P**	**2.48**	**165**	*e*P	**Pn**	**06 47 56.0**	**-0.1**
PB04				*e*S	**Sg**	**06 48 40.4**	**+4.3**
PB05	**IPOC Station P**	**2.97**	**168**	*i* P	**Pn**	**06 48 02.2**	**-0.6**
PB05				*e*S	**Sg**	**06 48 51.2**	**-0.6**
PB05				IAML		06 49 06.6	
	comp=Z,277nm,0.8s						
PB06	**IPOC Station P**	**3.01**	**157**	*i* P	**Pn**	**06 48 03.7**	**+0.4**
PB06				*e*S	**Sg**	**06 48 52.2**	**-0.8**
PB06				IAML		06 49 03.3	
	comp=Z,709nm,0.9s						
LVC	**Limon Verde**	**3.22**	**146**	Pn	**Pn**	**06 48 09.0**	**+2.5**
	comp=Z,16nm,0.3s,baz=325,slow=10.0,SNR=11						
LVC				Sn	**Sn**	**06 48 47.3**	**+2.7**
	comp=Z,19nm,0.3s,baz=317,slow=23,SNR=7.9						
LVC				Lg	Lg	06 48 57.2	
	comp=Z,44nm,0.3s,baz=58,slow=20,SNR=18						
LVC	**Limon Verde**	**3.22**	**146**	Sn	**Sn**	**06 48 45.9**	**+1.2**
LVC	**Limon Verde**	**3.22**	**146**	*e*P	**Pn**	**06 48 07.3**	**+0.9**
LVC				*e*S	**Sg**	**06 48 57.4**	**-2.6**
LVC				IAML		06 49 00.1	
	comp=Z,202nm,0.7s						
PB15	**IPOC Station P**	**3.50**	**159**	*i* P	**Pn**	**06 48 11.0**	**+0.8**
PB15				*e*S	**Sg**	**06 49 04.9**	**-4.1**
PB15				IAML		06 49 17.6	
	comp=Z,695nm,0.7s						
PB10	**IPOC Station P**	**3.58**	**176**		**Pn**	**06 48 10.3**	**-0.7**
PB10				Sn	**Sn**	**06 48 50.3**	**-2.6**
PB10	**IPOC Station P**	**3.58**	**176**	*i* P	**Pn**	**06 48 10.0**	**-1.0**
PB10				IAML		06 49 25.8	
	comp=Z,125nm,0.7s						
LPAZ	**La Paz**	**4.45**	**36**	Pn	Pb	06 48 28.4	-6.1
	comp=Z,1.4nm,0.3s,baz=220,slow=3.1,SNR=24						
LPAZ	**La Paz**	**4.45**	**36**	Pn	**Pn**	**06 48 26.4**	**+2.8**
GO02	**Mina Guanaco**	**5.34**	**168**	Pn	**Pn**	**06 48 36.2**	**+0.7**
SIV	**San Ignacio**	**10.10**	**69**	Pn	**Pn**	**06 49 41.0**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=266,slow=11,SNR=21						
SIV				Sn	**Sn**	**06 51 27.4**	**-6.2**
	comp=Z,0.4nm,0.3s,baz=285,slow=8.8,SNR=3.5						
GO04	**Tololo Observa**	**10.20**	**180**	Pn	**Pn**	**06 49 43.4**	**+1.2**
CFA	**Coronel Fontan**	**11.86**	**169**	Pn	**Pn**	**06 50 07.9**	**+3.2**
	comp=Z,0.1nm,0.3s,baz=356,slow=14,SNR=2.2						
CPUP	**Villa Florida**	**13.97**	**120**	LR	LR	06 56 39.6	
	comp=Z,895nm,18.5s,baz=26,slow=41						
GO06	**Curarrehue**	**19.59**	**181**	P	**Pn**	**06 51 45.7**	**+0.6**
PLCA	**Paso Flores**	**20.74**	**179**	P	Pn	06 51 59.0	+0.5
	comp=Z,3.0nm,1.0s,baz=27,slow=7.7,SNR=3.3						
PLCA	**Paso Flores**	**20.74**	**179**	P	**P**	**06 51 55.3**	**-0.8**
PLCA				IAmb	IAmb	06 52 00.7	
	comp=Z,6.8nm,1.2s						
PTGA	**Pitinga**	**21.86**	**30**	P	**P**	**06 52 08.1**	**-0.2**
	comp=Z,3.1nm,0.6s,baz=182,slow=18,SNR=5.0						
PTGA	**Pitinga**	**21.86**	**30**	P	**P**	**06 52 08.4**	**+0.2**
PTGA				IAmb	IAmb	06 52 17.7	
	comp=Z,14nm,1.4s						
FLOC	**Florencia**	**21.89**	**347**	P	**P**	**06 52 08.2**	**-0.4**
BDFB	**Brasilia**	**22.16**	**83**	P	**P**	**06 52 11.7**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=222,slow=12,SNR=2.7						
BDFB	**Brasilia**	**22.16**	**83**	P	**P**	**06 52 12.8**	**+1.2**
BDFB				IAmb	IAmb	06 52 26.7	
	comp=Z,4.6nm,0.9s						
RUSC	**La Rusia**	**25.75**	**355**	P	**P**	**06 52 48.4**	**+1.6**
STVI	**Saint Thomas**	**38.48**	**9**	P	**P**	**06 54 39.3**	**+1.7**
TXAR	**Lajitas Array**	**58.31**	**326**	P	**P**	**06 57 12.2**	**+1.7**
	comp=Z,0.3nm,0.8s,baz=153,slow=8.1,SNR=3.1						
TXAR	**Lajitas Array**	**58.31**	**326**	P	**P**	**06 57 13.0**	**+2.4**
QSPA	**South Pole Qui**	**70.25**	**180**	P	**P**	**06 58 27.1**	**-1.3**
QSPA				IAmb	IAmb	06 58 32.8	
	comp=Z,6.7nm,1.4s						
TORD	**Torodi Ar. Bea**	**78.56**	**71**	P	**P**	**06 59 17.4**	**0.0**
	comp=Z,2.7nm,0.7s,baz=253,slow=4.9,SNR=13						
TORD	**Torodi Ar. Bea**	**78.56**	**71**	P	**P**	**06 59 16.9**	**-0.5**
YKA	**Yellowknife Ar**	**89.12**	**341**	P	**P**	**07 00 11.5**	**+1.3**
	comp=Z,0.2nm,0.7s,baz=137,slow=5.0,SNR=7.3						
H11S2	**WAKE ISLAND Hy**	**125.86**	**279**	T	T	09 24 48.6	
	baz=106						
H11S1	**WAKE ISLAND Hy**	**125.87**	**279**	T	T	09 24 47.4	
	baz=106						
H11S3	**WAKE ISLAND Hy**	**125.88**	**279**	T	T	09 24 50.9	
	baz=106						
MKAR	**Makanchi Array**	**145.38**	**33**	PKPbc	**PKiKP**	**07 06 54.9**	**-2.4**
	comp=Z,1.0nm,0.7s,baz=326,slow=4.4,SNR=11						
MKAR	**Makanchi Array**	**145.38**	**33**		**PKiKP**	**07 06 54.5**	**-2.8**
SONM	**Songino Array**	**152.07**	**4**	PKPbc	**PKiKP**	**07 07 12.6**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=296,slow=2.9,SNR=4.6						
SONM	**Songino Array**	**152.07**	**4**		**PKiKP**	**07 07 12.4**	**+1.2**
SONM				PKPab	**PKPab**	**07 07 19.7**	**-0.6**

UCR 17 07:00:22.4±1.4, 9°.58N×84°.82W, h2^{km}±4^{km}, MD3.8, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCR2	**La Lucha 2**	**0.82**	**78**	*e*P	Pg	07 00 37.9	-0.4
LCR2				*e*S	Sb	07 00 51.3	+0.1
FORC	**Fortuna**	**0.90**	**10**	*i* P	Pg	07 00 40.1	+0.5
FORC				*i* S	Sb	07 00 53.1	0.0
CEDE	**Laguna Cedeo**	**0.91**	**7**	*e*P	Pb	07 00 40.6	-0.4
PLVR	**Palo Verde**	**0.93**	**326**	*e*P	Pg	07 00 40.1	-0.1
PLVR				*e*S	Sb	07 00 54.5	+0.4
GUAI	**GUAI**	**0.97**	**316**	*i* P	Pg	07 00 40.1	-0.9
ACAL	**Aguas Claras**	**1.07**	**349**	*i* P	Pg	07 00 42.5	-0.4
CUI	**Cuipilapa**	**1.12**	**343**	*i* P	Pg	07 00 44.0	0.0
CUI				*i* S	Sg	07 00 59.0	+0.4
PTEN	**Parque Tenorio**	**1.14**	**352**	*i* P	Pg	07 00 43.9	-0.4
COLC	**Colonia**	**1.14**	**341**	*i* P	Pg	07 00 43.6	-0.7
GUAB	**Guayabo de Bag**	**1.19**	**340**	*i* P	Pg	07 00 43.8	-1.5
MESS	**Mesas**	**1.21**	**342**	*i* P	Pg	07 00 45.0	-0.7

IDC 17 07:12:15.0±0.4, 3°.37S×131°.64E, h0^{km}, mb4.6/21, mb1 4.7/24, mb1mx4.6/35, mbtmp4.6/24, ML3.7/3, Error ellipse: s-maj=18.5km s-min=10.4km az=71.0

DJA 17 07:12:20.8±0.2, 3°S±3°×13°2E±°, h53^{km}±7^{km}, M4.8/13, mB5.2/3, mb5.0/7, MLv4.8/13, Mw(mB)4.6/3

NEIC 17 07:12:20.3±2.1, 3°.46S±0°.05×131°.57E±0°.05, h43^{km}±4^{km}, mb4.8/51, Error ellipse: s-maj=8.1km s-min=6.2km az=126.0

ISC 17 07:12:19.8±0.4, 3°.49S±0°.04×131°.64E±0°.04, h36^{km}±2^{km}, n164, σ1^{s}.73/177, mb4.8/45, MS4.6/4, 3C, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**0.83**	**47**	P	**Pn**	**07 12 35.1**	**+0.1**
FAKI				S	**Sn**	**07 12 45.3**	**-0.7**
FAKI	**Fak Fak**	**0.83**	**47**		**Pn**	**07 12 35.0**	**0.0**
FAKI					**Sn**	**07 12 48.0**	**+2.0**
BNDI	**Bandanaira**	**2.02**	**239**	P	**Pn**	**07 12 56.1**	**+4.8**
SIJI	**Sorong**	**2.63**	**352**	Pn	**Pn**	**07 12 58.1**	**-1.6**
	42nm,0.3s,baz=45,slow=21,SNR=68						
SIJI				Sn	**Sn**	**07 13 27.5**	**-2.9**
	248nm,0.3s,baz=225,slow=24,SNR=28						
SWI	**Sorong**	**2.63**	**352**	P	**Pn**	**07 12 58.2**	**-1.6**
MSAI	**Masohi**	**2.71**	**273**	P	**Pn**	**07 13 01.8**	**+0.9**
RKPI	**Ransiki, Papua**	**3.20**	**52**	P	**Pn**	**07 13 08.2**	**+0.5**
RKPI				S	**Sn**	**07 13 43.4**	**-1.3**
AAI	**Ambon**	**3.45**	**267**	P	**Pn**	**07 13 11.5**	**+0.5**
AAI				S	**Sn**	**07 13 51.4**	**+0.8**
SAUI	**Saumlaki**	**4.48**	**184**	P	Pn	07 13 32.0	+6.7
SAUI	**Saumlaki**	**4.48**	**184**	Pn	**Pn**	**07 13 23.1**	**-2.2**
SAUI				Sn	**Sn**	**07 14 16.4**	**+0.3**
NLAI	**Namlea**	**4.54**	**273**	P	**Pn**	**07 13 27.4**	**+1.3**
LBMI	**Labuha**	**5.01**	**304**	P	**Pn**	**07 13 31.8**	**-0.8**
SANI	**Sanana**	**5.83**	**284**	P	**Pn**	**07 13 41.8**	**-1.9**
	1.0nm2µm113nm,0.6s						
TNTI	**Ternate**	**6.01**	**315**		Pn	07 13 34.0	-12
SMPI	**Sarmi**	**7.21**	**78**	P	**Pn**	**07 14 04.9**	**+2.1**
	0.3nm58nm,0.8s						
GENI	**Genyem**	**8.56**	**84**	P	**Pn**	**07 14 23.2**	**+1.9**
	4µm97nm,0.7s						
LUWI	**Luwuk**	**9.19**	**285**	Pn	**Pn**	**07 14 29.0**	**-0.9**
MTN	**Manton Dam**	**9.31**	**183**		**Pn**	**07 14 29.8**	**-1.9**
SOEI	**Soe**	**9.61**	**229**	P	**Pn**	**07 14 38.1**	**+2.2**
	114nm,0.8s						
SOEI	**Soe**	**9.61**	**229**		**Pn**	**07 14 36.7**	**+0.8**
MRSI	**Marisa**	**10.46**	**292**	P	**Pn**	**07 14 45.1**	**-2.3**
KAPI	**Kappang**	**11.95**	**262**	Pn	**Pn**	**07 15 08.7**	**+0.9**
	1.2nm,0.3s,baz=85,slow=5.3,SNR=5.4						
KNRA	**Kununurra**	**12.44**	**193**		**Pn**	**07 15 10.9**	**-3.6**
WBSI	**Waikabubak, Su**	**13.62**	**243**	P	**Pn**	**07 15 29.0**	**-1.6**
COEN	**Coen**	**15.42**	**133**		**Pn**	**07 15 51.9**	**-3.0**
COEN				IAmb	IAmb	07 16 00.9	
	comp=Z,40nm,0.8s						
FITZ	**Fitzroy Crossi**	**15.67**	**202**	Pn	**Pn**	**07 15 52.5**	**-5.5**
	comp=Z,2.3nm,0.3s,baz=2.1,slow=0.1,SNR=34						
FITZ				Sn	Sn	07 18 36.4	-14
	comp=Z,5.1nm,0.3s,baz=52,slow=0.0,SNR=8.0						
FITZ	**Fitzroy Crossi**	**15.67**	**202**		**Pn**	**07 15 51.4**	**-6.6**
FITZ					Sn	07 18 35.5	-15
WB0	**Warramunga Arr**	**16.40**	**171**		**Pn**	**07 16 02.4**	**-5.1**
PMG	**Port Moresby**	**16.50**	**112**	Pn	**Pn**	**07 16 08.8**	**+0.1**
	comp=Z,2.2nm,0.3s,baz=300,slow=12,SNR=5.5						
PMG	**Port Moresby**	**16.50**	**112**	Pn	**Pn**	**07 16 04.5**	**-4.2**
WRAB	**Tennant Creek**	**16.56**	**171**		**Pn**	**07 16 05.4**	**-4.0**
WRAB				IAmb	IAmb	07 16 12.8	
	comp=Z,36nm,0.7s						
WRA	**Warramunga Arr**	**16.57**	**171**	Pn	**Pn**	**07 16 04.7**	**-4.9**
	comp=Z,1.6nm,0.3s,baz=355,slow=13,SNR=17						
WRA				Sn	Sn	07 18 54.7	-18
	comp=Z,0.9nm,0.3s,baz=356,slow=22,SNR=3.3						
WRA	**Warramunga Arr**	**16.57**	**171**	Pn	**Pn**	**07 16 05.1**	**-4.5**
WB2	**Warramunga Arr**	**16.57**	**171**		**Pn**	**07 16 04.5**	**-5.0**
WR0	**Warramunga Arr**	**16.62**	**170**		**Pn**	**07 16 08.2**	**-2.0**
KKM	**Kota Kinabalu**	**18.08**	**302**		**Pn**	**07 16 27.1**	**-1.4**
KKM				IAmb	IAmb	07 16 40.8	
	comp=Z,74nm,1.0s						
AS31	**Alice Springs**	**20.18**	**174**	P	**P**	**07 16 51.4**	**-0.1**
AS31				IAmb	IAmb	07 16 58.2	
	comp=Z,20nm,0.5s						
ASAR	**Alice Springs**	**20.18**	**174**	P	**P**	**07 16 51.7**	**+0.2**
	comp=Z,45nm,0.7s,baz=350,slow=10,SNR=406						
ASAR				S	S	07 20 24.3	-12
	comp=Z,4.5nm,0.8s,baz=352,slow=24,SNR=4.0						
ASAR	**Alice Springs**	**20.18**	**174**	P	**P**	**07 16 50.5**	**-0.9**
KRVT	**Keravat (AS076**	**20.35**	**93**	P	Pn	07 16 55.0	-0.6
	comp=Z,81nm,0.8s,baz=90,slow=6.6,SNR=7.6						
PSA00	**Pilbara Seismi**	**21.32**	**212**	P	**P**	**07 17 02.1**	**-1.6**
PSA00				IAmb	IAmb	07 17 18.6	
	comp=Z,20nm,0.6s						
PSA00	**Pilbara Seismi**	**21.32**	**212**	P	**P**	**07 17 01.7**	**-2.1**
PSA00				IAmb	IAmb	07 17 02.5	
	comp=Z,15nm,0.8s						
CTA	**Charters Tower**	**21.80**	**140**	P	**P**	**07 17 10.6**	**+1.6**
	comp=Z,34nm,0.9s,baz=323,slow=14,SNR=44						
FORT	**Forrest**	**27.36**	**187**	P	**P**	**07 18 01.5**	**-0.2**
EIDS	**Eidsvold**	**28.68**	**141**	P	**P**	**07 18 13.2**	**-0.4**
MORW	**Morawa**	**29.45**	**209**	P	**P**	**07 18 19.9**	**-0.5**
MORW				IAmb	IAmb	07 18 34.1	
	comp=Z,18nm,1.2s						
BBOO	**Buckleboo**	**29.46**	**172**	P	**P**	**07 18 20.9**	**+0.4**
BBOO				IAmb	IAmb	07 18 21.8	
	comp=Z,16nm,0.8s						
YHNB	**Yeheng**	**29.71**	**341**	P	**P**	**07 18 22.5**	**-0.3**
YHNB				IAmb	IAmb	07 18 35.2	
	comp=Z,31nm,1.4s						
STKA	**Stephens Creek**	**29.75**	**163**	P	**P**	**07 18 24.1**	**+1.0**
	comp=Z,7.5nm,0.7s,baz=336,slow=9.1,SNR=13						
STKA	**Stephens Creek**	**29.75**	**163**	P	**P**	**07 18 24.0**	**+1.0**
NWAO	**Narrogin (SRO)**	**32.25**	**203**	P	**P**	**07 18 43.8**	**-1.2**
NWAO				IAmb	IAmb	07 18 51.0	
	comp=Z,24nm,1.3s						
ARMA	**Armidale**	**32.78**	**147**	P	**P**	**07 18 49.5**	**-0.3**
RPSI	**Rantau Prapat**	**33.27**	**280**	P	**P**	**07 18 54.1**	**-0.1**
RPSI				IAmb	IAmb	07 18 54.6	
	comp=Z,12nm,0.9s						
RPSI	**Rantau Prapat**	**33.27**	**280**	P	**P**	**07 18 53.6**	**-0.6**
PSI	**Prapat**	**33.29**	**280**	P	**P**	**07 18 53.6**	**-1.0**
	comp=Z,10nm,0.8s,baz=94,slow=6.5,SNR=7.4						
JNU	**Nakatsue**	**36.42**	**359**	P	**P**	**07 19 20.3**	**-0.8**
	comp=Z,5.7nm,0.8s,baz=190,slow=11,SNR=4.2						
JNU	**Nakatsue**	**36.42**	**359**	P	**P**	**07 19 20.2**	**-1.0**
JNU				IAmb	IAmb	07 19 31.1	
	comp=Z,13nm,1.0s						
NJ2	**Nanjing**	**37.37**	**342**	*e*P	**P**	**07 19 31.8**	**+2.6**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
WHN	**Wuhan**	**37.66**	**335**	P	P	07 19 41.9	+10
WHN				S	S	07 25 33.3	+14
GYA	**Guiyang**	**38.34**	**322**	⇑*i*P	**P**	**07 19 37.8**	**+0.2**
GYA				PP	**PnPn**	**07 21 12.4**	**+4.7**
GYA				PcP	**PcP**	**07 21 51.8**	**+0.7**
GYA				S	**S**	**07 25 32.0**	**+2.0**
GYA				ScP	**ScP**	**07 25 36.5**	**+0.1**
GYA				sS	sS	07 25 50.5	+3.6
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=Z,410nm,17.5s						
GYA				LR	LR		
	comp=Z,330nm,17.7s						
GYA				LR	LR		
	comp=Z,430nm,16.8s						
CMAR	**Chiang Mai Arr**	**38.90**	**305**	P	**P**	**07 19 42.4**	**+0.1**
	comp=Z,2.6nm,0.4s,baz=132,slow=7.7,SNR=22						
CMAR				PcP	**PcP**	**07 21 54.3**	**+1.5**
	comp=Z,1.1nm,0.3s,baz=116,slow=2.1,SNR=4.7						
CMAR	**Chiang Mai Arr**	**38.90**	**305**	P	**P**	**07 19 42.3**	**0.0**
CHTO	**Chiang Mai**	**39.08**	**306**	P	**P**	**07 19 43.7**	**-0.1**
CHTO				IAmb	IAmb	07 19 55.2	
	comp=Z,16nm,1.0s						
ENH	**Enshi**	**39.69**	**329**	P	**P**	**07 19 48.1**	**-0.7**
ENH				IAmb	IAmb	07 19 49.0	
	comp=Z,10nm,0.7s						
MJAR	**Matsushiro Arr**	**40.29**	**8**	P	**P**	**07 19 51.8**	**-1.8**
	comp=Z,2.6nm,0.6s,baz=192,slow=9.6,SNR=6.1						
KSRS	**Korea Array**	**40.88**	**355**	P	**P**	**07 19 57.0**	**-1.4**
	comp=Z,2.1nm,0.6s,baz=174,slow=9.3,SNR=7.8						
XAN	**Xi'an**	**43.04**	**332**	P	**P**	**07 20 15.3**	**-0.9**
XAN				pP	pP	07 20 25.0	-1.5
XAN				pmax	pmax		
	comp=Z,14nm,0.9s						
XAN	**Xi'an**	**43.04**	**332**	P	**P**	**07 20 15.1**	**-1.1**
XAN				IAmb	IAmb	07 20 25.5	
	comp=Z,13nm,0.9s						
BJT	**Baijiatuau**	**45.57**	**343**	P	**P**	**07 20 35.9**	**-0.4**
BJI	**Beijing**	**45.58**	**343**	*e*P	**P**	**07 20 36.5**	**+0.1**
BJI				pP	**pP**	**07 20 46.3**	**-0.4**
BJI				pmax	pmax		
	comp=Z,20nm,0.7s						
LZH	**Lanzhou**	**47.17**	**329**	*e*P	**P**	**07 20 53.6**	**+4.4**
LZH				pP	sP	07 21 04.0	+0.5
LZH				sP	pP	07 21 07.9	+8.4
LZH				PP	**PP**	**07 22 44.9**	**+4.4**
LZH				pmax	pmax		
	comp=Z,15nm,1.4s						
LZH				pmax	pmax		
	comp=Z,58nm,4.3s						
LZH				LR	LR		
	comp=Z,520nm,16.8s						
LZH				LR	LR		
	comp=Z,440nm,16.3s						
LZH				LR	LR		
	comp=Z,560nm,17.2s						
USA0B	**Ussuriysk Arra**	**47.47**	**0**	P	**P**	**07 20 51.3**	**+0.1**
USA0B				IAmb	IAmb	07 20 51.7	
	comp=Z,6.9nm,0.9s						
USRK	**Ussuriysk Ar.**	**47.47**	**0**	P	**P**	**07 20 50.9**	**-0.3**
	comp=Z,4.0nm,0.6s,baz=181,slow=7.8,SNR=14						
USRK	**Ussuriysk Ar.**	**47.47**	**0**	P	**P**	**07 20 50.7**	**-0.4**
HHC	**Hu-ho-hao-te**	**47.79**	**339**	*e*P	**P**	**07 20 56.8**	**+3.0**
HHC				pmax	pmax		
	comp=Z,85nm,1.0s						
HHC				pmax	pmax		
	comp=Z,320nm,4.8s						
LSA	**Lhasa**	**50.90**	**313**	P	**P**	**07 21 17.8**	**-0.5**
YSS	**Yuzh-Sakhalins**	**51.17**	**10**	P	**P**	**07 21 17.8**	**-1.5**
GTA	**Gaotai**	**51.77**	**329**	*e*P	P	07 21 29.1	+4.9
GTA				pP	pP	07 21 34.3	-0.3
GTA				sP	sP	07 21 37.3	-1.2
GTA				PcP	**PcP**	**07 22 38.6**	**+1.5**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TAPN	**Taplejung**	**52.28**	**309**	*e*P	**P**	**07 21 28.1**	**-0.3**
	comp=Z,23nm,0.4s						
ODAN	**Odare**	**52.30**	**308**	*e*P	**P**	**07 21 28.1**	**-0.4**
	comp=Z,45nm,0.7s						
RAMN	**Ramite**	**52.96**	**308**	*e*P	**P**	**07 21 33.4**	**0.0**
	comp=Z,69nm,0.6s						
JIRN	**Jiri**	**53.62**	**308**	*e*P	**P**	**07 21 37.9**	**-0.4**
KHZ	**Kahutara**	**53.79**	**142**	P	**P**	**07 21 39.2**	**+0.3**
GUN	**Gumba**	**53.98**	**308**	*e*P	**P**	**07 21 40.5**	**-0.4**
	comp=Z,39nm,0.7s						
BKZ	**Black Stump Fm**	**53.98**	**137**	P	**P**	**07 21 40.6**	**+0.2**
PKI	**Pulchoki**	**54.19**	**308**	*e*P	**P**	**07 21 41.8**	**-0.7**
PKIN	**Phulchoki**	**54.20**	**308**	*e*P	**P**	**07 21 41.5**	**-1.0**
DMN	**Daman**	**54.45**	**308**	*e*P	**P**	**07 21 43.9**	**-0.4**
	comp=Z,22nm,0.7s						
GKN	**Gorkha**	**54.99**	**308**	*e*P	**P**	**07 21 47.8**	**-0.3**
SONM	**Songino Array**	**55.69**	**340**	P	**P**	**07 21 53.0**	**+0.3**
	comp=Z,2.8nm,0.8s,baz=160,slow=7.3,SNR=18						
SONM				PcP	**PcP**	**07 22 52.5**	**+0.6**
	comp=Z,1.5nm,0.6s,baz=161,slow=3.8,SNR=4.6						
SONM	**Songino Array**	**55.69**	**340**	P	**P**	**07 21 53.2**	**+0.5**
DANN	**Dangsing**	**55.84**	**308**	*e*P	**P**	**07 21 53.9**	**-0.5**
	comp=Z,27nm,0.8s						
PETK	**Petropavlovsk-**	**60.50**	**18**	P	**P**	**07 22 26.0**	**-0.2**
	comp=Z,5.3nm,0.9s,baz=188,slow=10,SNR=4.3						
PETK	**Petropavlovsk-**	**60.50**	**18**	P	**P**	**07 22 25.5**	**-0.7**
WMQ	**Urumqi**	**61.41**	**325**	P	**P**	**07 22 33.8**	**+1.2**
WMQ				pP	pP	07 22 42.3	-1.0
WMQ				sP	sP	07 22 53.4	+6.3
WMQ				pmax	pmax		
	comp=Z,26nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,280nm,7.5s						
WMQ				LR	LR		
	comp=Z,370nm,22.5s						
WMQ				LR	LR		
	comp=Z,260nm,18.7s						
WMQ	**Urumqi**	**61.41**	**325**	P	**P**	**07 22 30.1**	**-2.5**
MK31	**Makanchi Array**	**66.24**	**325**	P	**P**	**07 23 04.9**	**+0.6**
MK31				IAmb	IAmb	07 23 05.6	
	comp=Z,7.1nm,0.8s						
MKAR	**Makanchi Array**	**66.24**	**325**	P	**P**	**07 23 04.8**	**+0.4**
	comp=Z,7.8nm,0.6s,baz=115,slow=8.4,SNR=64						
MKAR				PcP	**PcP**	**07 23 35.1**	**+0.9**
	comp=Z,1.0nm,0.2s,baz=122,slow=5.4,SNR=5.1						
MKAR	**Makanchi Array**	**66.24**	**325**	P	**P**	**07 23 03.7**	**-0.6**
MAKZ	**Makanchi**	**66.43**	**325**	P	**P**	**07 23 05.6**	**+0.1**
MAKZ				IAmb	IAmb	07 23 06.3	
	comp=Z,9.3nm,0.7s						
KSH	**Kashi**	**66.60**	**316**	P	**P**	**07 23 08.0**	**+1.1**
KSH				pP	sP	07 23 19.8	-1.9
KSH				PcP	**PcP**	**07 23 37.6**	**+1.6**
KSH				PcS		07 27 37.1	
KSH				S	**S**	**07 31 53.9**	**-2.0**
KSH				ScS	**SKSac**	**07 32 57.3**	**-3.8**
KSH				pmax	pmax		
	comp=Z,36nm,0.8s						
KSH				pmax	pmax		
	comp=Z,340nm,4.0s						
KSH				LR	LR		
	comp=Z,330nm,11.6s						
KSH				LR	LR		
	comp=Z,240nm,8.8s						
KSH				LR	LR		
	comp=Z,350nm,12.1s						
ULHL	**Ulahol**	**67.64**	**319**	P	**P**	**07 23 14.3**	**+0.7**
	SNR=5.2						
BOOM	**Boomskoye usch**	**67.95**	**319**	P	**P**	**07 23 15.4**	**-0.1**
BOOM				IAmb	IAmb	07 23 17.1	
	comp=Z,10nm,0.8s						
KZA	**Kyzart**	**68.22**	**318**	P	**P**	**07 23 18.7**	**+1.2**
	SNR=16						
KBK	**Karagaybulak**	**68.68**	**319**	P	P	07 23 33.8	+14
	SNR=6.6						
UCH	**Uchtor**	**68.78**	**318**	P	**P**	**07 23 22.2**	**+1.2**
	SNR=17						
AAK	**Ala-Archa**	**68.97**	**318**	P	**P**	**07 23 22.7**	**+0.9**
	SNR=5.3						
AAK	**Ala-Archa**	**68.97**	**318**	P	**P**	**07 23 21.0**	**-0.8**
AAK				IAmb	IAmb	07 23 33.8	
	comp=Z,11nm,1.1s						
ZAA0	**Zalesovo Array**	**69.21**	**333**	P	**P**	**07 23 22.2**	**-0.6**
ZAA0				IAmb	IAmb	07 23 41.6	
	comp=Z,5.4nm,0.6s						
ZALV	**Zalesovo Beam**	**69.21**	**333**	P	**P**	**07 23 22.2**	**-0.6**
	comp=Z,2.8nm,0.5s,baz=122,slow=6.9,SNR=10.0						
USP	**Ospenovka**	**69.25**	**319**	P	**P**	**07 23 24.1**	**+0.8**
	SNR=22						
AML	**Almayashu**	**69.29**	**318**	P	**P**	**07 23 25.2**	**+1.2**
	SNR=17						
ARSB	**Arslanbob**	**69.43**	**317**	P	**P**	**07 23 23.3**	**-1.4**
EKS2	**Erkin-Say**	**69.46**	**318**	P	**P**	**07 23 26.0**	**+1.2**
	SNR=12						
KBL	**Kabul**	**69.81**	**309**	P	**P**	**07 23 26.5**	**-0.7**
KBL				IAmb	IAmb	07 23 27.9	
	comp=Z,10nm,0.7s						
KK31	**Karatay Array**	**71.83**	**318**	P	**P**	**07 23 39.3**	**+0.2**
KK31				IAmb	IAmb	07 23 40.4	
	comp=Z,13nm,0.9s						
KKAR	**Karatay Array**	**71.83**	**318**	P	**P**	**07 23 39.5**	**+0.4**
KKAR	**Karatay Array**	**71.83**	**318**	P	**P**	**07 23 39.2**	**+0.1**
KKAR				IAmb	IAmb	07 23 40.4	
	comp=Z,13nm,0.9s						
HRA	**Herat**	**75.14**	**307**	P	**P**	**07 23 58.9**	**-0.1**
VNDA	**Vanda**	**75.72**	**174**	P	**P**	**07 24 02.6**	**+1.4**
	comp=Z,5.1nm,0.9s,baz=321,slow=7.0,SNR=25						
VNDA	**Vanda**	**75.72**	**174**	P	**P**	**07 24 02.6**	**+1.4**
BRVK	**Borovoye**	**76.08**	**327**	P	**P**	**07 24 03.9**	**+0.2**
SBA	**Scott Base**	**76.59**	**173**	P	**P**	**07 24 05.7**	**-0.5**
UNV	**Unalaska Valle**	**76.68**	**32**	P	**P**	**07 24 07.2**	**+0.2**
NRIK	**Noril'sk**	**78.58**	**345**	P	**P**	**07 24 17.8**	**+0.4**

	comp=Z,3.0nm,0.5s,baz=105,slow=6.7,SNR=7.1						
SOCY	Socotra	78.70	283	P	P	07 24 19.1	-0.1
MAW	Mawson	78.80	201	P	P	07 24 20.2	+1.6
	comp=Z,6.0nm,0.9s,baz=142,slow=3.9,SNR=6.4						
MAW	Mawson	78.80	201	P	P	07 24 19.8	+1.2
GEYT	Alibeck	79.23	309	P	P	07 24 22.7	+1.0
	comp=Z,6.5nm,0.7s,baz=151,slow=4.2,SNR=10.0						
ABKAR	Akbulak array	80.81	321	P	P	07 24 29.7	-0.2
ABKAR	Akbulak array	80.81	321	P	P	07 24 29.5	-0.4
ABKAR				IAmb	IAmb	07 24 32.8	
	comp=Z,4.8nm,0.7s						
CHGN	Chignik	81.91	32	P	P	07 24 33.2	-2.3
QSPA	South Pole Qui	86.47	180	P	P	07 24 59.6	+0.9
	comp=Z,6.0nm,0.9s,baz=295,slow=1.3,SNR=18						
QSPA	South Pole Qui	86.47	180	P	P	07 24 59.0	+0.3
SYO	Syowa Base	87.51	201	⇑epP	pP	07 25 16.5	+2.0
SYO	Syowa Base	87.51	201	⇑esP	sP	07 25 20.8	+2.2
ILAR	Eielson Array	89.49	25	P	P	07 25 13.5	+0.5
	comp=Z,1.1nm,0.6s,baz=248,slow=4.7,SNR=11						
BMAR	Burnt Mountain	90.80	23	P	P	07 25 17.5	-1.6
BCAR	Beaver Creek A	91.52	27	P	P	07 25 20.6	-2.0
ARCES	ARCESS Array B	98.86	340	P	P	07 25 55.2	-0.6
	comp=Z,2.0nm,0.5s,baz=90,slow=5.5,SNR=16						
ARCES	ARCESS Array B	98.86	340	P	P	07 25 54.9	-0.9
BOSA	Boshof	102.64	240	P	Pdif	07 26 14.4	+0.7
	comp=Z,1.8nm,0.7s,baz=80,slow=6.5,SNR=3.1						
YKA	Yellowknife Ar	103.90	26	PKiKP	PKiKP	07 30 36.0	+0.2
	comp=Z,0.3nm,0.7s,baz=274,slow=1.3,SNR=7.4						
YKA				PKKPbc	PKKPbc	07 42 08.6	-2.5
	comp=Z,0.1nm,0.4s,baz=115,slow=2.6,SNR=4.2						
PDAR	Pinedale Array	113.26	45	PKiKP	PKiKP	07 30 55.5	+1.1
	comp=Z,0.8nm,1.0s,baz=270,slow=0.9,SNR=3.7						
ULM	Lac du Bonnet	118.63	33	PKP	PKPdf	07 31 03.9	-0.2
	comp=Z,2.1nm,0.8s,baz=348,slow=4.1,SNR=5.0						
ULM	Lac du Bonnet	118.63	33		PKPdf	07 31 03.1	-0.9
TXAR	Lajitas Array	121.70	58	PKP	PKiKP	07 31 11.3	+0.4
	comp=Z,0.7nm,0.8s,baz=231,slow=1.9,SNR=7.9						
TXAR	Lajitas Array	121.70	58		PKiKP	07 31 10.9	0.0
JCT	Junction City	124.58	55		PKPdf	07 31 15.3	-0.9
SCHQ	Schefferville	126.66	13	PKP	PKPdf	07 31 18.9	-0.5
	comp=Z,2.6nm,0.9s,baz=271,slow=7.8,SNR=2.4						
SCHQ	Schefferville	126.66	13		PKPdf	07 31 19.3	-0.2
S39A	Bolivar	126.66	44		PKPdf	07 31 18.2	-1.7
TORD	Torodi Ar. Bea	129.64	284	PKP	PKPdf	07 31 26.4	+0.2
	comp=Z,1.7nm,0.7s,baz=76,slow=1.4,SNR=5.7						
PLCA	Paso Flores	131.53	157	PKP	PKiKP	07 31 31.2	+1.0
	comp=Z,1.5nm,0.8s,baz=339,slow=5.2,SNR=6.2						
PLCA	Paso Flores	131.53	157		PKPdf	07 31 29.2	0.0
CFA	Coronel Fontan	140.30	153	PKhKP	PKPpre	07 31 41.8	
	comp=Z,1.5nm,0.5s,baz=222,slow=3.6,SNR=4.3						
CFA				PKP	PKiKP	07 31 47.2	-1.1
	comp=Z,1.6nm,0.6s,baz=207,slow=21,SNR=7.9						
GO02	Mina Guanaco	144.85	145		PKPab	07 31 52.8	-0.5
NNA	Nana	147.78	119	PKPbc	PKPbc	07 32 01.4	-0.6
	comp=Z,11nm,0.8s,baz=263,slow=8.2,SNR=5.9						
ATAH	Atahualpa	148.22	109	PKPbc	PKPbc	07 32 03.7	-0.1
	comp=Z,11nm,0.7s,baz=235,slow=5.6,SNR=7.8						
CPUP	Villa Florida	149.11	164	PKPbc	PKiKP	07 32 06.7	+0.2
	comp=Z,8.3nm,0.7s,baz=191,slow=2.3,SNR=22						
LPAZ	La Paz	152.28	136	PKPbc	PKiKP	07 32 15.5	+1.5
	comp=Z,8.5nm,0.8s,baz=202,slow=3.8,SNR=6.1						
LPAZ	La Paz	152.28	136		PKiKP	07 32 14.7	+0.7
SIV	San Ignacio	156.92	147	PKP	PKPdf	07 32 14.1	+1.4
	comp=Z,2.1nm,0.8s,baz=190,slow=2.4,SNR=10						
SIV				PKPab	PKPab	07 32 43.2	+0.7
	comp=Z,1.6nm,0.8s,baz=200,slow=3.5,SNR=5.4						
SDV	Santo Domingo	157.22	75	PKP	PKPdf	07 32 13.9	+0.6
	comp=Z,4.0nm,0.8s,baz=188,slow=2.7,SNR=6.2						

SJA ***17*** *07:13:51.1±0.9, 19°.67S×71°.55W, h20^{km}±67^{km}, ML3.4, MW3.1*
IDC ***17*** *07:14:01.4±1.5, 20°.07S×70°.84W, h0^{km}, mb3.6/3, mb1 3.7/5, mb1mx3.5/29, mbtmp3.6/5, ML3.0/2, MS4.2/2, Ms1 4.2/2, ms1mx3.6/28, Error ellipse: s-maj=42.2km s-min=18.2km az=65.0*
GUC ***17*** *07:14:04.0±0.7, 20°.14S×70°.87W, h43^{km}±2^{km}, ML3.5*
ISC 17 07:14:01.8±1.8**, 20°.11S**±0°.03×**70°.94W**±0°.07**, h7^{km}**±11^{km}**, n25, σ1^{s}.00**/36**, 4C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA01	Diego Aracena	0.84	122	⇓iP	Pg	07 14 18.2	+0.1
TA01				eS	Sb	07 14 29.1	-1.2
TA01				IAML		07 14 32.1	
	comp=N,2μm,0.5s						
PSGC	Pisagua	0.92	57	⇓iP	Pg	07 14 19.5	-0.1
PSGC				eS	Sb	07 14 32.3	-0.4
PB11	IPOC Station P	1.26	74	⇑iP	Pb	07 14 24.9	-1.0
PB11				eS	Sb	07 14 41.5	-0.9
PB11				IAML		07 14 42.6	
	comp=E,1μm,0.2s						
PB02	IPOC Station P	1.55	141	⇓iP	Pn	07 14 29.6	-0.3
PB02				eS	Sn	07 14 49.1	-1.2
PB02				IAML		07 14 56.0	
	comp=E,2μm,0.6s						
PB12	IPOC Station P	1.60	21	⇓iP	Pn	07 14 30.9	+0.4
PB12				eS	Sn	07 14 52.1	+0.7
PB08	IPOC Station P	1.68	91	⇑iP	Pn	07 14 32.0	+0.1
PB08				eS	Sn	07 14 53.0	-0.8
PB08				IAML		07 14 56.3	
	comp=N,508nm,0.3s						
GO01	Chusmiza	1.70	75	⇑iP	Pn	07 14 32.6	+0.4
GO01				eS	Sb	07 14 54.5	-1.0
GO01				IAML		07 14 56.0	
	comp=N,2μm,0.2s						
PB07	IPOC Station P	1.89	149	⇑iP	Pn	07 14 34.4	-0.2
PB07				eS	Sn	07 14 57.7	-1.0
PB07				IAML		07 15 07.2	
	comp=E,375nm,0.4s						
PB09	IPOC Station P	2.31	137	i P	Pn	07 14 41.5	+1.1
PB09				eS	Sg	07 15 17.3	+1.2
PB04	IPOC Station P	2.33	162	⇓iP	Pn	07 14 40.0	-0.7
PB04				IAML		07 15 25.0	
	comp=N,392nm,0.7s						
PB04	IPOC Station P	2.33	162	i P	Pn	07 14 40.0	-0.7
PB04				eS	Sg	07 15 16.1	-0.6
PB06	IPOC Station P	2.88	154	i P	Pn	07 14 47.7	-0.5
PB06				eS	Sb	07 15 30.6	+1.5
LVC	Limon Verde	3.12	143	Pn	Pn	07 14 53.1	+1.3
	comp=N,1.1nm,0.3s,baz=8.0,slow=6.7,SNR=7.8						
LVC				Sn	Sn	07 15 30.0	+0.5
	comp=N,8.0nm,0.3s,baz=132,slow=11,SNR=3.8						
LVC				Lg	Lg	07 15 39.2	
	comp=N,14nm,0.3s,baz=174,slow=16,SNR=17						
LVC	Limon Verde	3.12	143	eP	Pn	07 14 52.7	+1.0
LVC				eS	Sb	07 15 38.7	+2.3
LVC				IAML		07 15 41.9	
	comp=Z,58nm,0.8s						
PB15	IPOC Station P	3.37	156	i P	Pn	07 14 55.1	+0.1
PB15				eS	Sb	07 15 42.9	-0.4
PB10	IPOC Station P	3.41	174	eP	Pn	07 14 53.8	-1.5
PB14	IPOC Station P	4.52	174	i P	Pn	07 15 09.9	-1.0
LPAZ	La Paz	4.65	36	Pn	Pb	07 15 19.3	-4.7
	comp=Z,0.3nm,0.3s,baz=354,slow=3.1,SNR=8.0						
SIV	San Ignacio	10.24	68	Pn	Pn	07 16 29.8	+0.5
	comp=Z,0.2nm,0.3s,baz=267,slow=7.4,SNR=7.5						
CFA	Coronel Fontan	11.70	169	LR	LR	07 20 48.1	
	comp=Z,728nm,20.4s,baz=104,slow=35						
PLCA	Paso Flores	20.56	179	P	P	07 18 42.8	+1.8
	comp=Z,1.7nm,0.8s,baz=24,slow=11,SNR=1.9						
SDV	Santo Domingo	28.82	1	LR	LR	07 33 29.1	
	comp=Z,562nm,18.4s,baz=18,slow=41						
TORD	Torodi Ar. Bea	78.70	71	P	P	07 26 04.5	-0.8
	comp=Z,0.8nm,0.9s,baz=250,slow=4.5,SNR=3.2						
YKA	Yellowknife Ar	89.26	341	P	P	07 26 58.1	+0.1
	comp=Z,0.3nm,0.8s,baz=140,slow=5.5,SNR=5.7						
MKAR	Makanchi Array	145.57	33	PKPbc	PKPbc	07 33 41.9	+0.9
	comp=Z,0.7nm,0.8s,baz=335,slow=3.0,SNR=6.3						

VAO ***17*** *07:18:08.2±0.8, 20°.29S×73°.23W, h35^{km}, mb4.1*
IDC ***17*** *07:18:22.6±0.9, 19°.87S×70°.72W, h0^{km}, mb3.6/6, mb1 3.9/9, mb1mx3.7/25, mbtmp3.7/9, ML3.6/3, MS3.7/1, Ms1 3.7/1, ms1mx3.3/29, Error ellipse: s-maj=30.3km s-min=15.0km az=68.0*
NEIC ***17*** *07:18:24.2±1.8, 19°.97S±0°.04×70°.88W±0°.07, h18^{km}±4^{km}, mb4.5/9, Error ellipse: s-maj=10.4km s-min=5.5km az=104.0*
GUC ***17*** *07:18:25.7±0.8, 19°.92S×70°.80W, h45^{km}±8^{km}, ML4.0*
ISC 17 07:18:23.0±2.1**, 19°.94S**±0°.03×**70°.94W**±0°.06**, h7^{km}**±13^{km}**, n58, σ2^{s}.17**/63**, 5C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PATCX	Punta Patache	1.15	140	⇑iP	Pn	07 18 45.0	-0.5
PATCX				i S	Sg	07 18 59.5	-0.4
PATCX				IAML		07 19 01.2	
	comp=N,4μm,0.3s						
PATCX				IAML		07 19 06.3	
	comp=E,7μm,0.5s						
PB11	IPOC Station P	1.22	82	⇓iP	Pb	07 18 45.2	-1.3
PB11				i S	Sb	07 18 59.7	-2.9
PB11				IAML		07 19 00.8	
	comp=N,7μm,0.6s						
PB11	IPOC Station P	1.22	82	Pn	Pb	07 18 45.3	-1.3
PB11				Sn	Sb	07 18 59.5	-3.2
PB12	IPOC Station P	1.44	24	⇑iP	Pb	07 18 48.9	-1.3
PB12				i S	Sn	07 19 06.7	-2.2
PB12				IAML		07 19 13.0	
	comp=N,3μm,0.5s						
GO01	Chusmiza	1.67	81		Pb	07 18 52.7	-1.6
GO01				Sn	Sn	07 19 12.8	-2.2
PB02	IPOC Station P	1.69	145	⇑iP	Pb	07 18 52.9	-1.5
PB02				i S	Sn	07 19 13.6	-1.3
PB02				IAML		07 19 22.5	
	comp=E,7μm,0.5s						
PB08	IPOC Station P	1.69	97	⇑iP	Pb	07 18 52.8	-1.9
PB08				i S	Sn	07 19 13.3	-2.2
PB08				IAML		07 19 15.0	
	comp=N,3μm,0.5s						
PB01	IPOC Station P	1.75	129	⇑iP	Pb	07 18 53.6	-1.9
PB01				i S	Sn	07 19 15.0	-1.5
PB01				IAML		07 19 16.2	
	comp=E,4μm,0.3s						
PB01	IPOC Station P	1.75	129		Pb	07 18 54.0	-1.5
PB01				Sn	Sn	07 19 14.4	-2.1
PB16	IPOC Station P	2.09	41	eP	Pn	07 18 59.0	-0.1
PB16				i S	Sb	07 19 25.6	-2.5
PB16				IAML		07 19 27.6	
	comp=N,2μm,0.1s						
PB04	IPOC Station P	2.49	163		Pn	07 19 03.8	-0.4
PB04				Sn	Sn	07 19 31.4	-3.6
LVC	Limon Verde	3.26	145	Pn	Pn	07 19 16.2	+1.3
	comp=N,19nm,0.3s,baz=16,slow=8.9,SNR=6.5						
LVC				Sn	Sn	07 19 54.0	-0.2
	comp=N,38nm,0.3s,baz=91,slow=23,SNR=11						
LVC				Lg	Lg	07 20 03.3	
	comp=N,48nm,0.3s,baz=102,slow=22,SNR=6.5						
LVC	Limon Verde	3.26	145		Pn	07 19 16.0	+1.1
LVC	Limon Verde	3.26	145	eP	Pn	07 19 16.3	+1.3
PB10	IPOC Station P	3.57	174		Pn	07 19 17.8	-1.1
LPAZ	La Paz	4.51	37	Pn	Pb	07 19 37.6	-5.3
	comp=N,0.6nm,0.3s,baz=220,slow=12,SNR=3.5						
LPAZ	La Paz	4.51	37	eP	Pb	07 19 38.6	-4.3
LPAZ				eS	Sg	07 20 49.5	+1.5
GO02	Mina Guanaco	5.34	167		Pn	07 19 42.7	-0.9
GO03	Copiap	7.65	175	Pn	Pn	07 20 13.7	-1.2
SIV	San Ignacio	10.18	69	Pn	Pn	07 20 49.0	-0.7
	comp=N,0.3nm,0.3s,baz=273,slow=12,SNR=6.9						
GO04	Tololo Observa	10.19	179	Pn	Pn	07 20 48.1	-1.9
CFA	Coronel Fontan	11.87	169	Pn	Pn	07 21 15.2	+2.4
	comp=N,0.2nm,0.3s,baz=333,slow=16,SNR=3.4						
SAML	Samuel	13.25	36	eP	Pn	07 21 34.7	+2.9
CPUP	Villa Florida	14.04	119	LR	LR	07 27 32.9	
	comp=N,298nm,18.5s,baz=79,slow=40						
AQDB	Aquidauana	14.32	95	eP	P	07 21 55.5	+1.9
C2SB	Chapadao do Su	17.12	89	eP	P	07 22 29.7	+5.0
PTGB	Pitanga	18.09	109	eP	P	07 22 40.2	+4.7
ARAG	Araguaiana, MT	18.69	80	eP	Pn	07 22 47.4	+5.0
FRTB	Fartura	20.15	104	eP	Pn	07 23 01.4	+1.5
PLCA	Paso Flores	20.73	179	P	Pn	07 23 06.2	-0.4
	comp=N,3.7nm,0.9s,baz=8.6,slow=12,SNR=6.6						
PLCA	Paso Flores	20.73	179	P	P	07 23 03.9	-0.3
IPMB	Ipameri, GO	21.58	89	eP	P	07 23 18.2	+4.6
FLOC	Florencia	21.88	347	P	P	07 23 16.7	-0.1
PTGA	Pitinga	21.91	31	P	P	07 23 16.9	-0.1
	comp=N,2.3nm,0.6s,baz=230,slow=10,SNR=4.7						
PTGA	Pitinga	21.91	31	P	P	07 23 17.4	+0.5
PTGA				IAmb	IAmb	07 23 25.1	
	comp=Z,15nm,1.4s						
RUSC	La Rusia	25.76	355	P	P	07 23 54.6	-0.5
JSC	Jenkinsville	54.81	350	P	P	07 27 53.6	-0.1
JSC				IAmb	IAmb	07 28 12.3	
	comp=Z,11nm,1.2s						
TXAR	Lajitas Array	58.28	326	P	P	07 28 19.5	+0.8
	comp=Z,0.1nm,0.5s,baz=154,slow=9.0,SNR=3.2						
TXAR	Lajitas Array	58.28	326	P	P	07 28 16.4	-2.3
MSTX	Muleshoe	61.59	330	P	P	07 28 41.0	-0.4
E43A	Lone Tree Farm	67.58	348	P	P	07 29 21.0	+0.9
E43A				IAmb	IAmb	07 29 34.9	
	comp=Z,5.2nm,1.1s						
QSPA	South Pole Qui	70.24	180	P	P	07 29 37.7	+1.0
QSPA				IAmb	IAmb	07 29 55.3	
	comp=Z,5.0nm,1.2s						
NVAR	Mina Array Bea	73.10	323	P	P	07 29 56.7	+2.3
	comp=Z,0.1nm,0.5s,baz=140,slow=3.1,SNR=2.6						
NVAR	Mina Array Bea	73.10	323	P	P	07 29 53.3	-1.1
TORD	Torodi Ar. Bea	78.64	71	P	P	07 30 24.3	-2.0
	comp=Z,0.8nm,0.8s,baz=242,slow=5.4,SNR=4.2						
TORD	Torodi Ar. Bea	78.64	71	P	P	07 30 24.4	-1.8
YKA	Yellowknife Ar	89.10	341	P	P	07 31 18.7	+0.1
	comp=Z,0.3nm,0.9s,baz=140,slow=4.5,SNR=4.6						
H11S2	WAKE ISLAND Hy	125.78	279	T	T	09 56 44.0	
	baz=101,slow=75						
H11S1	WAKE ISLAND Hy	125.79	279	T	T	09 56 44.6	
	baz=101,slow=75						
H11S3	WAKE ISLAND Hy	125.80	279	T	T	09 56 45.3	
	baz=101,slow=75						
H11N3	WAKE ISLAND Hy	125.83	280	T	T	09 56 48.0	
	baz=110,slow=74						
H11N2	WAKE ISLAND Hy	125.84	280	T	T	09 56 53.9	
	baz=110,slow=74						
H11N1	WAKE ISLAND Hy	125.84	280	T	T	09 56 56.7	
	baz=110,slow=74						
ASAR	Alice Springs	130.35	210	PKP	PKiKP	07 37 34.8	-1.2
	comp=Z,0.3nm,0.5s,baz=133,slow=1.9,SNR=5.0						
MKAR	Makanchi Array	145.43	33	PKPbc	PKPab	07 38 01.5	-0.5
	comp=Z,0.7nm,0.5s,baz=329,slow=4.2,SNR=12						
KSH	Kashi	145.55	48	PKPbc	PKiKP	07 38 03.3	-3.2
KSH				PP	PP	07 41 26.8	+4.0
KSH				PKS	PKSdf	07 41 39.3	+1.3
SONM	Songino Array	152.09	4	PKPbc	PKiKP	07 38 19.3	-0.4
	comp=Z,0.6nm,0.5s,baz=278,slow=3.0,SNR=4.6						
SONM	Songino Array	152.09	4		PKiKP	07 38 18.5	-1.2

MOS ***17*** *07:39:09.5±0.9, 33°.70N×141°.69E, h27^{km}, mb4.5/16, Error ellipse: s-maj=16.2km s-min=7.0km az=110.7*
NEIC ***17*** *07:39:11.6±1.8, 33°.72N±0°.05×141°.65E±0°.06, h28^{km}±6^{km}, mb4.3/18, Error ellipse: s-maj=8.6km s-min=6.5km az=146.0*
JMA ***17*** *07:39:12.7±0.4, 33°.80N×141°.53E, h69^{km}±5^{km}, M3.4*
IDC ***17*** *07:39:14.6±0.7, 33°.64N×141°.58E, h48^{km}±6^{km}, mb3.5/11, mb1 3.7/13, mb1mx3.5/43, mbtmp3.8/13, MS3.5/1, Ms1 3.5/1, ms1mx3.0/36, Error ellipse: s-maj=12.1km s-min=7.6km az=144.0*
ISC 17 07:39:11.5±0.5**, 33°.79N**±0°.03×**141°.46E**±0°.03**, h24^{km}, n88, σ2^{s}.04**/84**, mb4.2**/30**, 3C-5D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	0.95	335	P	Pb	07 39 30.8	+1.8
BSO3	Boso 3	1.28	322	P	Pb	07 39 35.6	+0.9
BSO4	Boso 4	1.51	323	P	Pb	07 39 39.5	+0.7
JHJ2	Mitsune	1.53	244	P	Pb	07 39 39.5	+0.3
JHJ2	Mitsune	1.53	244		Pb	07 39 38.8	-0.4
JHJ2				Sn	Sb	07 39 58.3	+0.2
JHJ	Hachijo jima 2	1.55	245	P	Pb	07 39 39.5	0.0
	101nm,0.3s,baz=122,slow=22,SNR=15						
JHJ				S	Sb	07 39 59.1	+0.3
	137nm,0.3s,baz=243,slow=22,SNR=8.2						
JMKN	Mikurajimanish	1.56	274	P	Pb	07 39 39.9	+0.2
JHCJ	Hachijojimakas	1.56	243	P	Pb	07 39 39.7	0.0
JAOM	Aogashimamukai	1.94	228	P	Pb	07 39 44.0	-2.2
JIZS	Izushimoda	2.33	294	P	Pb	07 39 50.3	-2.5
JOD2	Odawara 2	2.45	308	P	Pb	07 39 51.5	-3.3
JHU	Hanno	2.73	320	P	Pb	07 39 54.9	-4.7
JHO	Hitachi	2.91	346	P	Pb	07 39 56.6	-6.0
JHO				S	Sn	07 40 30.7	+0.3
JYN	Shimob	2.94	306	P	Pb	07 39 59.0	-4.3
JRY	Ryogami san	3.06	317	P	Pb	07 40 00.2	-5.0
JAG	Ashikaga	3.10	329	P	Pb	07 40 00.7	-5.2
JNY	Yasuok	3.35	299	P	Pb	07 40 06.3	-4.0
MJA0	Matsu Arr-Jizo	3.80	317	eP	Pb	07 40 11.4	-6.5
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	Matsushiro Arr	3.82	317	P	Pb	07 40 11.4	-6.8
	comp=Z,0.5nm,0.3s,baz=144,slow=9.4,SNR=15						
MJAR				S	Sb	07 40 58.1	-6.0
	comp=Z,0.7nm,0.3s,baz=152,slow=19,SNR=9.5						
MJAR	Matsushiro Arr	3.82	317		Pn	07 40 10.3	+1.4
MJAR					Sb	07 40 57.3	-6.8
MAJO	Matsushiro	3.83	317	⇑eP	Pb	07 40 11.8	-6.5
MAJO	Matsushiro	3.83	317		Pb	07 40 11.0	-7.3
MAJO				Sn	Sb	07 40 57.5	-6.7
MAT	Matsushiro	3.83	317	P	Pb	07 40 12.0	-6.3
MAT				S	Sn	07 40 54.8	+1.7
MJB9	Matsu-Tunnel	3.83	317		Pn	07 40 09.8	+0.8
INU	Inuyama	3.98	294	Pn	Pn	07 40 11.9	+0.9
JCJ	Chichijima	6.70	174	P	Pn	07 40 47.0	-1.5
	comp=Z,13nm,0.3s,baz=270,slow=14,SNR=4.6						
JCJ				S	Sn	07 41 55.6	-8.5
	comp=Z,7.8nm,0.3s,baz=129,slow=22,SNR=3.2						
JCJ				LR	LR	07 43 22.3	
	comp=Z,398nm,20.0s,baz=31,slow=38						
ERM	Erimo	8.32	9	P	Pn	07 41 10.9	+0.3
ERM	Erimo	8.32	9	Pn	Pn	07 41 10.9	+0.3
NMR	Nemuro--Hokkai	10.13	18	eP	Pn	07 41 29.9	-5.5
ASAJ	Asahikawa	10.35	5	P	Pn	07 41 37.9	-0.4
	comp=Z,0.9nm,0.3s,baz=193,slow=21,SNR=2.8						
ASAJ				S	Sn	07 43 28.9	-4.6
	comp=Z,0.7nm,0.3s,baz=77,slow=32,SNR=4.6						
JKA	Kamikawa-asahi	10.35	5		Pn	07 41 38.0	-0.4
JKA					Sn	07 43 28.9	-4.6
YSS	Yuzh-Sakhalins	13.19	4	eP	Pn	07 42 13.5	-3.6
ZEA	Zeya	22.34	337	eP	P	07 44 08.8	+1.3
ZEA				pmax	pmax		
	comp=Z,32nm,1.4s						
MA2	Magadan	26.52	11	P	P	07 44 48.8	+1.8
	comp=Z,0.9nm,0.3s,baz=189,slow=12,SNR=3.0						
MA2	Magadan	26.52	11	⇑eP	P	07 44 48.3	+1.3
MA2				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MA2	Magadan	26.52	11	P	P	07 44 47.5	+0.5
ULN	Ulaanbaatar	29.32	309	P	P	07 45 12.9	+0.6
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ULN	Ulaanbaatar	29.32	309	P	P	07 45 12.9	+0.6
ULN				IAmb	IAmb	07 45 16.0	
	comp=Z,4.3nm,0.9s						
SONM	Songino Array	29.73	309	P	P	07 45 18.4	+2.5
	comp=Z,2.1nm,0.9s,baz=121,slow=9.5,SNR=10						
SONM				pP	pwP	07 45 32.1	+2.8
	comp=Z,1.5nm,0.8s,baz=106,slow=8.6,SNR=4.8						
SONM	Songino Array	29.73	309	P	P	07 45 17.8	+1.8
SONM				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SONM	Songino Array	29.73	309	P	P	07 45 17.8	+1.9
SEY	Seymchan	29.96	10	P	P	07 45 19.0	+1.4
	comp=Z,0.4nm,0.2s,baz=232,slow=4.7,SNR=3.8						
SEY				pP	pwP	07 45 32.4	+1.3
	comp=Z,0.9nm,0.5s,baz=156,slow=3.7,SNR=3.3						
SEY	Seymchan	29.96	10	⇓eP	P	07 45 18.1	+0.5
BOD	Bodaibo	30.33	331	eP	P	07 45 22.3	+1.4
BOD				pmax	pmax		
	comp=Z,4.0nm,1.3s						
TLY	Talaya	32.56	315	P	P	07 45 41.5	+0.8
TLY				pmax	pmax		
	comp=Z,7.0nm,1.5s						
TLY	Talaya	32.56	315	P	P	07 45 41.5	+0.8
TLY				IAmb	IAmb	07 45 45.5	
	comp=Z,7.5nm,1.5s						
TIXI	Tiksi	38.51	354	⇑eP	P	07 46 30.5	-0.9
TIXI				pmax	pmax		
	comp=Z,7.0nm,2.4s						
PBKT	Sadao Pong	40.16	255	P	P	07 46 45.6	-0.2
PBKT				IAmb	IAmb	07 46 46.6	
	comp=Z,5.4nm,1.0s						
CHTO	Chiang Mai	40.63	259	P	P	07 46 47.5	-2.3
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CHTO	Chiang Mai	40.63	259	P	P	07 46 47.5	-2.3
ZALV	Zalesovo Beam	44.17	315	P	P	07 47 19.6	+1.4
	comp=Z,0.4nm,0.3s,baz=106,slow=11,SNR=4.0						
ZALV				pP	pwP	07 47 32.6	+1.1
	comp=Z,0.6nm,0.3s,baz=96,slow=11,SNR=2.2						
ZALV	Zalesovo Beam	44.17	315	eP	P	07 47 20.2	+2.0
ZALV	Zalesovo Beam	44.17	315	P	P	07 47 19.4	+1.2
MK31	Makanchi Array	45.93	305	P	P	07 47 33.9	+1.5
MK31				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MK31	Makanchi Array	45.93	305	P	P	07 47 33.9	+1.5
MKAR	Makanchi Array	45.93	305	P	P	07 47 33.8	+1.5
	comp=Z,1.6nm,0.7s,baz=88,slow=9.5,SNR=16						
MKAR				pP	pwP	07 47 47.3	+1.4
	comp=Z,1.4nm,0.7s,baz=93,slow=9.3,SNR=6.5						
MKAR	Makanchi Array	45.93	305	P	P	07 47 33.5	+1.1
NRIK	Noril'sk	46.24	337	⇓eP	P	07 47 34.5	+0.2
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.8s						
KURK	Kurchatov	48.01	310	⇓eP	P	07 47 50.0	+1.6
KURK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KURK	Kurchatov	48.01	310	P	P	07 47 49.4	+0.9
ILAR	Eielson Array	52.23	31	P	P	07 48 20.2	0.0
	comp=Z,1.2nm,0.9s,baz=261,slow=6.4,SNR=7.7						
ILAR				pP	pwP	07 48 33.1	-2.3
	comp=Z,1.4nm,0.8s,baz=264,slow=6.6,SNR=7.0						
ILAR	Eielson Array	52.23	31	P	P	07 48 20.5	+0.2
BRVK	Borovoye	52.87	314	⇓iP	P	07 48 26.9	+1.7
BRVK				pmax	pmax		
	comp=Z,8.0nm,2.5s						
WB0	Warramunga Arr	53.68	188	P	P	07 48 30.2	-1.2
FITZ	Fitzroy Crossi	53.76	199	P	P	07 48 32.2	+0.3
FITZ				IAmb	IAmb	07 48 50.9	
	comp=Z,5.7nm,1.4s						
WRAB	Tennant Creek	53.85	188	P	P	07 48 31.8	-0.8
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.2s						
WRAB	Tennant Creek	53.85	188	P	P	07 48 31.8	-0.8
WR0	Warramunga Arr	53.85	188	P	P	07 48 31.0	-1.7
WR0				IAmb	IAmb	07 48 36.1	
	comp=Z,5.4nm,1.2s						
WRA	Warramunga Arr	53.86	188	P	P	07 48 31.6	-1.1
	comp=Z,1.6nm,0.5s,baz=21,slow=9.8,SNR=27						
WRA	Warramunga Arr	53.86	188	P	P	07 48 29.4	-3.3
KK31	Karatay Array	54.83	302	P	P	07 48 40.7	+1.0
KK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KK31	Karatay Array	54.83	302	P	P	07 48 40.6	+1.0
KK31				IAmb	IAmb	07 48 55.0	
	comp=Z,2.4nm,0.8s						
KKAR	Karatay Array	54.83	302	P	P	07 48 40.6	+1.0
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KKAR	Karatay Array	54.83	302	P	P	07 48 40.3	+0.7
KKAR	Karatay Array	54.83	302	P	P	07 48 40.6	+1.0
KKAR				IAmb	IAmb	07 48 55.1	
	comp=Z,2.4nm,0.8s						
INK	Inuvik	57.26	26	P	P	07 48 57.8	+1.2
	comp=Z,0.5nm,0.6s,baz=270,slow=7.1,SNR=2.1						
INK				pP	pwP	07 49 10.4	-1.5
	comp=Z,1.1nm,1.0s,baz=258,slow=5.7,SNR=2.0						
AS31	Alice Springs	57.59	188	P	P	07 49 01.4	+2.0
ASAR	Alice Springs	57.59	188	P	P	07 48 58.8	-0.6
	comp=Z,0.4nm,0.5s,baz=17,slow=13,SNR=14						
ASAR	Alice Springs	57.59	188	P	P	07 48 58.5	-1.0
ARU	Arti	58.84	320	d iP	P	07 49 08.4	+0.6
ARU				S	S	07 57 11.9	+0.2
ARU				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ABKAR	Akbulak array	60.09	312	P	P	07 49 16.1	-0.5
ABKAR	Akbulak array	60.09	312	P	P	07 49 17.3	+0.7
ABKAR				IAmb	IAmb	07 49 18.4	
	comp=Z,5.5nm,1.2s						
KEV	Kevo	66.49	340	P	P	07 50 01.0	+2.4
KEV				pmax	pmax		
	comp=Z,72nm,1.5s						
KEV	Kevo	66.49	340	P	P	07 50 01.0	+2.4
YKA	Yellowknife Ar	66.60	29	P	P	07 50 00.4	+0.9
	comp=Z,0.3nm,0.9s,baz=291,slow=5.5,SNR=3.8						
FINES	FINESS Array B	71.70	333	P	P	07 50 32.1	+1.0
FINES	FINESS Array B	71.70	333	P	P	07 50 32.1	+1.0
AKASG	Malin Array Be	76.89	323	P	P	07 51 02.2	+0.7
	comp=Z,0.4nm,0.5s,baz=46,slow=6.2,SNR=3.7						

IDC 17 07:44:59.6±1.8**, 20°.02S**×**70°.90W, h0^{km}, mb3.8**/2**, mb1 3.9**/4**, mb1mx3.5**/36**, mbtmp3.7**/4**, ML3.5**/2**, Error**

ellipse: s-maj=55.6km s-min=18.9km az=59.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	3.18	145	Pn	Pn	07 45 53.0	+1.8
	3.8nm,0.3s,baz=260,slow=12,SNR=3.9						
LVC				Sn	Sn	07 46 31.0	+1.0
	11nm,0.3s,baz=58,slow=21,SNR=6.0						
LVC				Lg	Lg	07 46 39.7	
	29nm,0.3s,baz=171,slow=13,SNR=14						
LPAZ	La Paz	4.55	36	Pn	Pb	07 46 17.9	-2.8
	0.5nm,0.3s,baz=170,slow=6.2,SNR=5.6						
SIV	San Ignacio	10.17	68	Pn	Pn	07 47 28.1	+1.1
	0.6nm,0.3s,baz=242,slow=11,SNR=9.1						
TORD	Torodi Ar. Bea	78.64	71	P	P	07 57 03.0	-1.0
	0.4nm,0.4s,baz=264,slow=4.3,SNR=2.6						
YKA	Yellowknife Ar	89.19	341	P	P	07 57 56.6	-0.1
	0.5nm,0.8s,baz=140,slow=5.2,SNR=7.6						
MKAR	Makanchi Array	145.47	33	PKPbc	PKPbc	08 04 39.3	-0.4
	0.8nm,0.7s,baz=325,slow=3.5,SNR=8.6						

SJA ***17*** *07:54:47.4±0.8, 19°.57S×71°.69W, h55^{km}±8^{km}, ML4.8, MW4.6*

IDC ***17*** *07:54:57.9±0.7, 19°.96S×70°.53W, h0^{km}, mb4.1/10, mb1 4.3/15, mb1mx4.1/30, mbtmp4.1/15, ML3.9/5, MS3.6/2, Ms1 3.6/2, ms1mx3.3/28, Error ellipse: s-maj=22.1km s-min=12.8km az=61.0*

NEIC ***17*** *07:54:58.6, 20°.06S×70°.86W, h19^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}3.24; $M_{\theta\theta}$0.17; $M_{\phi\phi}$-3.41; $M_{r\theta}$0.70; $M_{\theta\phi}$-0.63; $M_{\phi r}$-1.55; Fault plane solution: $M_0$3.79000×10^{15} NP1:ϕ_s24.58000°, δ35.58000°, λ114.84000°. NP2:ϕ_s174.94000°, δ58.13000°, λ73.27000°. Principal axes: T 3.7703, Plg72.0000°, Azm45.0000°; N 0.0398, Plg14.0000°, Azm184.0000°; P -3.8102, Plg12.0000°, Azm277.0000°;*

NEIC ***17*** *07:54:59.2±2.0, 20°.05S±0°.03×70°.75W±0°.02, h15^{km}±3^{km}, mb4.7/20, Mwr4.3/23 Error ellipse: s-maj=4.4km s-min=2.3km az=160.0*

GUC ***17*** *07:55:00.4±0.6, 20°.06S×70°.78W, h24^{km}±8^{km}, ML4.7*

VAO ***17*** *07:55:03.4±0.5, 20°.05S×70°.55W, h38^{km}±2^{km}, mb4.5*

ISC 17 07:54:58.2±1.4, **20°.00S**±0°.02×**70°.73W**±0°.05, **h8**^{km}±8^{km}, **n131**, σ**1^{s}51**/145, **mb4.6**/18, **1C-9D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.70	56	⇓iP	Pn	07 55 14.3	-0.2
PSGC				eS	Sn	07 55 24.6	-0.9
TA01	Diego Aracena	0.77	138	⇓iP	Pb	07 55 14.1	+0.2
TA01				eS	Sb	07 55 24.1	-0.4
TA01				IAML		07 55 27.8	
	comp=E,85µm,0.6s						
PATCX	Punta Patache	0.98	147	⇓iP	Pb	07 55 17.4	-0.3
PATCX				eS	Sg	07 55 30.4	+0.4
PATCX				IAML		07 55 33.4	
	comp=E,29µm,0.2s						
PB11	IPOC Station P	1.04	77	⇓iP	Pn	07 55 19.7	+0.4
PB11				eS	Sn	07 55 35.6	+1.5
PB11				IAML		07 55 38.5	
	comp=N,14µm,0.3s						
PB11	IPOC Station P	1.04	77		Pn	07 55 19.6	+0.3
PB11				Sg	Sn	07 55 33.5	-0.6
PB12	IPOC Station P	1.43	16	⇓iP	Pb	07 55 26.1	+0.9
PB12				eS	Sn	07 55 45.5	+2.0
GO01	Chusmiza	1.48	78	⇓iP	Pb	07 55 27.3	+1.0
GO01				eS	Sn	07 55 48.4	+2.9
GO01				IAML		07 55 49.8	
	comp=N,50µm,0.4s						
GO01	Chusmiza	1.48	78		Pb	07 55 27.4	+1.0
PB08	IPOC Station P	1.49	96	⇓iP	Pb	07 55 26.9	+0.5
PB08				eS	Sn	07 55 47.2	+1.7
PB08				IAML		07 55 49.2	
	comp=E,7µm,0.4s						
PB02	IPOC Station P	1.53	149	⇓iP	Pn	07 55 26.1	0.0
PB02				i S	Sn	07 55 46.0	-0.2
PB02				IAML		07 55 48.6	
	comp=E,45µm,0.3s						
PB01	IPOC Station P	1.57	132	⇓iP	Pb	07 55 26.8	-0.8
PB01				eS	Sg	07 55 47.8	-0.9
PB01				IAML		07 55 53.0	
	comp=N,18µm,0.4s						
PB01	IPOC Station P	1.57	132	Pn	Pb	07 55 26.8	-0.8
PB01				Sg	Sn	07 55 47.1	+0.1
PB07	IPOC Station P	1.90	155	eP	Pn	07 55 30.7	-0.4
PB07				eS	Sn	07 55 56.3	+1.0
PB07				IAML		07 56 06.6	
	comp=E,18µm,0.8s						
PB16	IPOC Station P	2.02	35	⇑iP	Pg	07 55 35.6	-1.4
PB16				eS	Sg	07 56 04.6	+1.4
PB09	IPOC Station P	2.27	142	i P	Pn	07 55 37.6	+1.4
PB09				eS	Sg	07 56 14.3	+3.0
PB09				IAML		07 56 17.4	
	comp=Z,7µm,0.8s						
PB04	IPOC Station P	2.39	167		Pn	07 55 36.6	-1.2
PB04	IPOC Station P	2.39	167	i P	Pn	07 55 36.6	-1.2
PB04				eS	Sb	07 56 13.1	+1.7
PB05	IPOC Station P	2.89	170	i P	Pn	07 55 42.8	-1.8
PB05				eS	Sn	07 56 23.7	+4.1
PB05				IAML		07 56 36.6	
	comp=Z,2µm,0.7s						
PB06	IPOC Station P	2.91	158	i P	Pn	07 55 44.2	-0.8
PB06				eS	Sb	07 56 27.5	+1.3
PB06				IAML		07 56 34.9	
	comp=Z,5µm,0.6s						
LVC	Limon Verde	3.11	147	Pn	Pn	07 55 49.3	+1.4
	comp=Z,39nm,0.3s,baz=23,slow=7.6,SNR=108						
LVC				Sn	Sn	07 56 27.4	+2.0
	comp=Z,169nm,0.3s,baz=312,slow=22,SNR=6.6						
LVC				Lg	Lg	07 56 34.6	
	comp=Z,384nm,0.3s,baz=91,slow=13,SNR=17						
LVC	Limon Verde	3.11	147	eP	Pn	07 55 49.3	+1.4
PB15	IPOC Station P	3.41	160	i P	Pn	07 55 51.1	-0.8
PB15				eS	Sb	07 56 38.8	-1.9
PB15				IAML		07 56 48.4	
	comp=Z,4µm,0.3s						
PB10	IPOC Station P	3.50	177		Pn	07 55 50.9	-2.2
LPAZ	La Paz	4.44	34	Pn	Pb	07 56 11.6	-5.2
	comp=Z,4.7nm,0.3s,baz=242,slow=5.5,SNR=57						
LPAZ				LR	LR	07 58 13.8	
	comp=Z,740nm,19.6s,baz=322,slow=46						
LPAZ	La Paz	4.44	34	eP	Pb	07 56 12.1	-4.8
PB14	IPOC Station P	4.62	176	eS	Sn	07 57 02.5	-0.2
PB14				IAML		07 57 38.1	
	comp=Z,643nm,1.0s						
GO02	Mina Guanaco	5.25	169		Pn	07 56 16.0	-1.3
YJA	Yavi	5.33	115	i P	Pn	07 56 21.9	+3.3
YJA				IAML		07 57 38.9	
	comp=Z,27nm,3.6s						
HJA	Humahuaca	5.89	124	eP	Pn	07 56 29.4	+3.2
HJA				IAML		07 57 54.2	
	comp=Z,22nm,0.6s						
GO03	Copiap	7.58	177	Pn	Pn	07 56 47.3	-1.8
NNA	Nana	9.89	323	Pn	Pn	07 57 23.8	+3.0
	comp=Z,0.8nm,0.3s,baz=119,slow=10,SNR=3.0						
NNA				LR	LR	08 00 57.5	
	comp=Z,266nm,19.1s,baz=232,slow=36						
NNA	Nana	9.89	323	Pn	Pn	07 57 22.1	+1.3
SIV	San Ignacio	10.02	68	Pn	Pn	07 57 22.5	-0.1
	comp=Z,3.2nm,0.3s,baz=264,slow=10,SNR=106						
CFA	Coronel Fontan	11.78	170	Pn	Pn	07 57 46.8	+0.1
	comp=Z,0.2nm,0.3s,baz=350,slow=15,SNR=6.7						
SAML	Samuel	13.19	35		Pn	07 58 07.3	+1.4
SAML	Samuel	13.19	35	eP	Pn	07 58 06.4	+0.5
CPUP	Villa Florida	13.84	120	Pn	Pn	07 58 14.4	-0.4
	comp=Z,0.2nm,0.3s,baz=280,slow=13,SNR=3.6						
CPUP	Villa Florida	13.84	120	Pn	Pn	07 58 15.0	+0.2
CPUP	Villa Florida	13.84	120	eP	Pn	07 58 15.3	+0.4
AQDB	Aquidauana	14.12	95	eP	Pn	07 58 18.1	-0.5
SALV	Santo Antonio	14.88	77	eP	Pn	07 58 29.4	+0.3
C2SB	Chapadao do Su	16.93	89	eP	P	07 58 55.9	-1.7
CLDB	Colider	17.00	60	eP	P	07 58 56.5	-2.0
TRCB	Terra Rica	17.08	103	eP	Pn	07 58 56.6	-1.0
PTGB	Pitanga	17.89	109	eP	Pn	07 59 07.5	-0.2
PCMB	Pacaembu	18.28	98	eP	Pn	07 59 11.1	-1.3
ITAB	Concordia	18.49	116	eP	P	07 59 14.3	-0.6
ARAG	Araguaiana, MT	18.51	80	eP	P	07 59 14.2	-0.9
CPSB	Cacapava Do Su	18.75	127	eP	P	07 59 17.6	0.0
PLTB	Pedras Altas	19.33	131	eP	P	07 59 24.4	+0.3
FRTB	Fartura	19.95	103	eP	P	07 59 30.1	-0.8
PLCA	Paso Flores	20.67	180	P	P	07 59 39.5	+0.8
	comp=Z,8.6nm,0.8s,baz=14,slow=11,SNR=10.0						
PLCA	Paso Flores	20.67	180	P	P	07 59 36.5	-2.2
PLCA	Paso Flores	20.67	180	eP	P	07 59 39.3	+0.7
BB19B	Bebedouro	20.82	97	eP	P	07 59 39.9	-0.6
IPMB	Ipameri, GO	21.39	88	eP	P	07 59 45.8	-0.8
RCLB	Rio Claro- Sao	21.76	100	eP	P	07 59 50.2	-0.3
PTGA	Pitinga	21.85	30	P	P	07 59 50.6	-0.9
	comp=Z,5.3nm,0.5s,baz=309,slow=23,SNR=14						
PTGA	Pitinga	21.85	30	P	P	07 59 50.7	-0.7
PTGA	Pitinga	21.85	30	eP	P	07 59 51.3	-0.1
FLOC	Florencia	21.98	347	eP	P	07 59 55.3	+2.5
FLOC	Florencia	21.98	347	P	P	07 59 53.1	+0.2
BDFB	Brasilia	22.05	82	P	P	07 59 53.1	-0.7
	comp=Z,10nm,0.7s,baz=248,slow=16,SNR=10.0						
BDFB	Brasilia	22.05	82	P	P	07 59 54.0	+0.3
VAO	Valinhos	22.31	102	eP	P	07 59 55.1	-1.4
SOTA	Rioblanco	22.74	345	eP	P	08 00 05.2	+3.8
PCON	Cinco Dias	22.87	345	eP	P	08 00 08.0	+5.0
PARB	Paraibuna	23.56	103	eP	P	08 00 08.7	-0.7
ORTC	Ortega, Tolima	24.16	349	eP	P	08 00 17.0	+1.8
BSCB	Bom Sucesso	24.33	97	eP	P	08 00 15.2	-1.5
YOTC	Yotoco, Valle	24.46	346	eP	P	08 00 18.2	+0.2
CHIC	Chingaza	24.65	353	eP	P	08 00 19.7	-0.2
SMTB	Santa Maria do	24.96	67	eP	P	08 00 22.2	-0.3
RREF	El Recreo	25.15	349	eP	P	08 00 27.5	+2.8
GUY2C	Guyana, Caldas	25.47	349	eP	P	08 00 29.1	+1.6
JANB	Januaria	25.65	83	eP	P	08 00 27.6	-1.2
SPBC	San Pablo de B	25.70	352	eP	P	08 00 29.2	+0.1
NORC	Norcasia	25.72	350	eP	P	08 00 30.3	+1.0
RUSC	La Rusia	25.83	355	eP	P	08 00 30.5	-0.3
RUSC	La Rusia	25.83	355	P	P	08 00 31.2	+0.4
CBOC	Ciudad Bolivar	26.22	348	eP	P	08 00 34.8	+0.9
PTBC	PUERTO BERRIO,	26.62	352	eP	P	08 00 36.1	-1.3
SJMB	Sao Joao De Ma	27.89	92	eP	P	08 00 48.7	-0.2
SDV	Santo Domingo	28.70	0	P	P	08 00 56.7	+0.5
	comp=Z,1.3nm,0.6s,baz=269,slow=9.8,SNR=2.5						
NBMO	Morrinhos-CE	34.22	65	eP	P	08 01 44.2	-0.5
NBMO				epP	sP	08 01 54.3	+6.6
NBLI	Livramento-PB	35.06	74	eP	P	08 01 51.5	-0.5
NBLI				epP	sP	08 02 01.9	+6.9
RCBR	Riachuelo	36.65	72	P	P	08 02 04.6	-1.0
RCBR				IAmb	IAmb	08 02 14.0	
	comp=Z,12nm,0.9s						
RCBR	Riachuelo	36.65	72	eP	P	08 02 05.6	-0.1
PDPR	Patillas Dam,	38.06	7	P	P	08 02 17.1	-0.2
PDPR				IAmb	IAmb	08 02 18.8	
	comp=Z,15nm,0.9s						
GCPR	Guaynabo City	38.34	7	P	P	08 02 19.4	-0.4
GCPR				IAmb	IAmb	08 02 32.2	
	comp=Z,22nm,1.1s						
TXAR	Lajitas Array	58.43	326	P	P	08 04 57.3	+2.5
	comp=Z,0.5nm,0.9s,baz=146,slow=13,SNR=3.1						
TXAR	Lajitas Array	58.43	326	P	P	08 04 55.5	+0.8
MIAR	Mount Ida	58.43	338	P	P	08 04 55.5	+1.0
MIAR				IAmb	IAmb	08 05 06.6	
	comp=Z,9.3nm,1.5s						
N49A	Columbus Grove	61.88	348	P	P	08 05 17.2	-0.8
N49A				IAmb	IAmb	08 05 19.5	
	comp=Z,8.8nm,0.8s						
R32A	Long Quarter,	63.77	336	P	P	08 05 30.7	-0.1
SNAA	Sanae	64.25	161	P	P	08 05 33.8	+0.2
SNAA				IAmb	IAmb	08 05 35.4	
	comp=Z,17nm,1.5s						
D53A	Lac Vacive, Po	67.06	355	P	P	08 05 52.2	+0.4
D53A				IAmb	IAmb	08 05 55.1	
	comp=Z,4.7nm,1.1s						
DBIC	Dimbokro	69.97	75	P	P	08 06 09.7	-1.0
	comp=Z,4.2nm,0.7s,baz=258,slow=6.6,SNR=3.9						
DBIC	Dimbokro	69.97	75	P	P	08 06 09.7	-1.0
QSPA	South Pole Qui	70.19	180	P	P	08 06 12.8	+1.4
QSPA				IAmb	IAmb	08 06 13.2	
	comp=Z,3.7nm,0.7s						
PDAR	Pinedale Array	71.97	331	P	P	08 06 23.2	+0.6
	comp=Z,0.2nm,0.5s,baz=166,slow=12,SNR=2.8						
PDAR	Pinedale Array	71.97	331	P	P	08 06 23.1	+0.5
NV11	Mina Array Sit	73.18	323	P	P	08 06 31.2	+1.4
NVAR	Mina Array Bea	73.27	323	P	P	08 06 33.0	+2.6
	comp=Z,0.4nm,0.6s,baz=163,slow=6.6,SNR=3.5						
YNE	Yellowstone No	73.93	332	P	P	08 06 36.0	+1.9
TOA0	Torodi Ar. Sit	78.48	71	P	P	08 06 59.6	-0.8
TORD	Torodi Ar. Bea	78.48	71	P	P	08 06 59.6	-0.7
	comp=Z,12nm,0.8s,baz=253,slow=5.1,SNR=52						
TSUM	Tsumeb	82.11	108	P	P	08 07 20.5	+0.3
TSUM				IAmb	IAmb	08 07 21.7	
	comp=Z,4.3nm,0.7s						
NRS	Narsarsuaq	83.40	12	P	P	08 07 25.6	0.0
YKA	Yellowknife Ar	89.21	341	P	P	08 07 54.7	+0.6
	comp=Z,1.7nm,0.8s,baz=138,slow=5.1,SNR=33						
H11S2	WAKE ISLAND Hy	125.98	279	T	T	10 33 30.0	
	baz=102,slow=75,SNR=125						
H11S1	WAKE ISLAND Hy	125.99	279	T	T	10 33 27.4	
	baz=102,slow=75,SNR=63						
H11S3	WAKE ISLAND Hy	126.00	279	T	T	10 33 20.6	
	baz=102,slow=75,SNR=73						
H11N3	WAKE ISLAND Hy	126.03	280	T	T	10 33 29.7	
	baz=101,slow=74,SNR=44						
H11N2	WAKE ISLAND Hy	126.04	280	T	T	10 33 28.1	
	baz=101,slow=74,SNR=38						
H11N1	WAKE ISLAND Hy	126.04	280	T	T	10 33 28.3	
	baz=101,slow=74,SNR=24						
ASAR	Alice Springs	130.40	210	PKP	PKPdf	08 14 09.9	-0.3
	comp=Z,0.8nm,0.8s,baz=168,slow=3.0,SNR=7.7						
ASAR	Alice Springs	130.40	210	PKPdf	PKPdf	08 14 07.7	-2.5
ABKAR	Akbulak array	131.18	41		PKPdf	08 14 08.0	-2.7
ZALV	Zalesovo Beam	141.28	23	PKP	PKPdf	08 14 29.9	+0.6
	comp=Z,1.8nm,0.6s,baz=308,slow=2.4,SNR=6.1						
ZALV	Zalesovo Beam	141.28	23		PKPdf	08 14 29.3	0.0
MAKZ	Makanchi	145.20	33		PKPdf	08 14 37.0	+0.5
MK31	Makanchi Array	145.37	33	PKPbc	PKPdf	08 14 37.3	+0.5
MKAR	Makanchi Array	145.37	33	PKPbc	PKPdf	08 14 37.3	+0.5
	comp=Z,7.6nm,0.7s,baz=325,slow=3.4,SNR=88						
MKAR	Makanchi Array	145.37	33	PKPbc	PKPdf	08 14 37.2	+0.4
KSH	Kashi	145.44	48	PKPbc	PKPdf	08 14 37.6	+0.3
KSH				PP	PP	08 17 59.8	+2.6
KSH				PKS	PKSdf	08 18 10.3	-2.6
USRK	Ussuriysk Ar.	149.33	327	PKPbc	PKiKP	08 14 49.2	+0.3
	comp=Z,2.1nm,0.7s,baz=72,slow=4.2,SNR=5.2						
MJAR	Matsushiro Arr	149.80	309	PKPbc	PKiKP	08 14 50.4	+0.2
	comp=Z,1.6nm,0.6s,baz=152,slow=2.6,SNR=3.7						
SONM	Songino Array	152.13	4	PKPbc	PKiKP	08 14 55.0	+0.2
	comp=Z,1.8nm,0.7s,baz=353,slow=1.8,SNR=10						
GTA	Gaotai	159.01	21	ePKP	PKPdf	08 14 53.3	-4.0
LZH	Lanzhou	163.28	15	ePKP	PKPdf	08 14 59.0	-3.0
LZH				pPKP	sPKPdf	08 15 08.3	+3.1
LZH				sPKP		08 15 13.3	

PGC 17 07:55:29.8±3.0, **50°.79N**×**138°.92W, h10**^{km}, **MLSn3.9**/6, **Mw4.5**/6, **558km Wsw of Sandspit, Bc West Of Vancouver Island, West of Vancouver Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIB	Van Inlet	4.65	55	Pn	Pn	07 56 39.5	-0.7
VIB				Sn	Sn	07 57 31.2	-3.0
DIB	Dawson Inlet,	4.66	56	Pn	Pn	07 56 39.3	-0.9
DIB				Sn	Sn	07 57 31.7	-2.6
BNB	Barry Inlet	4.81	65	Pn	Pn	07 56 41.5	-0.8
BNB				Sn	Sn	07 57 34.5	-3.5
NDB	Naden	4.85	47	Pn	Pn	07 56 42.8	0.0
MOBC	Moresby Island	4.91	59	Pn	Pn	07 56 42.9	-0.7
MOBC				Sn	Sn	07 57 38.1	-2.3
HG3B	Hotspring	4.99	66	Sn	Sn	07 57 39.9	-2.4
PNL	Peninsula	8.90	358	Pn	Pn	07 57 39.6	+1.2
PCA	Pinnacle	9.36	356	Pn	Pn	07 57 44.6	-0.1
YUK7	Dusty Glacier	9.78	2	Pn	Pn	07 57 52.8	+2.3
GRNC	Granite Creek	10.09	352	Pn	Pn	07 57 54.5	-0.4
HYT	Haines Junctio	10.09	4	Pn	Pn	07 57 56.9	+2.1
WHY	Whitehorse	10.15	11	Pn	Pn	07 57 58.7	+3.1
YUK6	Outpost Mounta	10.19	2	Pn	Pn	07 57 58.6	+2.5
CTGM	Chitina Glacie	10.29	353	Pn	Pn	07 57 57.5	0.0
KIAG	Kiagna River	10.34	351	Pn	Pn	07 57 57.2	-1.0
YUK5	Granite Creek	10.39	3	Pn	Pn	07 58 01.7	+2.9
BALM	Baldy	10.45	351	Pn	Pn	07 57 59.2	-0.4
YUK4	Talbot Arm	10.58	1	Pn	Pn	07 58 05.5	+3.9
PTPK	Patty Peak	10.61	351	Pn	Pn	07 58 01.9	0.0
YUK3	Moose Creek	11.05	356	Pn	Pn	07 58 10.1	+2.2
YUK2	White River	11.08	355	Pn	Pn	07 58 10.1	+1.8
YUK1	Sand Pete Hill	11.43	356	Pn	Pn	07 58 14.8	+1.7
BVCY	Beaver Creek	11.70	356	Pn	Pn	07 58 18.4	+1.7
DAWY	Dawson	13.32	359	Pn	Pn	07 58 40.9	+2.2

UCR 17 08:00:04.6±1.4, **9°.75N**×**84°.79W, h7**^{km}±5^{km}, **MD3.6, MW2.9, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRA1	San Ramn	0.45	43	eP	Pg	08 00 13.9	+0.5
SRA1				eS	Sg	08 00 20.6	+1.2
HDC	Heredia	0.71	69	eP	Pg	08 00 18.6	+0.2
HDC				eS	Sb	08 00 29.1	-0.4
FORC	Fortuna	0.72	10	i P	Pg	08 00 19.0	+0.4
FORC				i S	Sb	08 00 29.1	-0.5
CEDE	Laguna Cedeo	0.74	7	eP	Pb	08 00 19.8	0.0
SJS	Escuela Geolog	0.75	75	eP	Pg	08 00 19.1	0.0
SJS				eS	Sg	08 00 29.6	+0.7
ACAL	Aguas Claras	0.91	345	i P	Pg	08 00 21.7	-0.4
ACAL				i S	Sg	08 00 34.5	+0.6
CUI	Cuipilapa	0.97	338	i P	Pg	08 00 22.7	-0.6
CUI				eP	Pb	08 00 22.8	-1.1
CUI				i S	Sg	08 00 35.9	-0.1
LIM1	Limonal	1.04	334	i P	Pg	08 00 24.1	-0.6
MESS	Mesas	1.06	338	i P	Pg	08 00 24.3	-0.8

NEIC ***17*** *08:10:26.9±2.2, 31°.74S±0°.05×69°.73W±0°.04, h118^{km}±4^{km}, Error ellipse: s-maj=6.8km s-min=4.1km az=160.0*

SJA ***17*** *08:10:26.3±0.7, 31°.71S×69°.77W, h108^{km}±4^{km}, ML3.8, MW3.9*

IDC ***17*** *08:10:28.0±0.6, 31°.69S×69°.63W, h117^{km}±4^{km}, mb3.7/11, mb1 3.8/13, mb1mx3.7/34, mbtmp4.1/13, Error ellipse: s-maj=14.3km s-min=10.7km az=2.0*

ISC 17 08:10:26.7±0.5, **31°.72S**±0°.04×**69°.76W**±0°.04, **h114**^{km}±4^{km}, **n108**, σ**1^{s}02**/129, **mb4.4**/32, **San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLS	Leoncito	0.40	101	i P	Pn	08 10 43.9	+0.1
RTLS				eS	Sn	08 10 56.7	+0.1
RTLS				IAML		08 10 57.2	
	comp=Z,2µm,0.3s						
ZON	Zonda	0.94	80	i P	Pn	08 10 47.8	+0.1
ZON				eS	Sn	08 11 03.3	-0.3
ZON				IAML		08 11 06.7	
	comp=Z,2µm,0.5s						
RTCV	Cerro Valdivia	1.05	98	i P	Pn	08 10 49.0	+0.2
RTCV				IAML		08 11 08.7	
	comp=Z,2µm,4.8s						
RTLL	Cerro Villicun	1.17	71	i P	Pn	08 10 50.0	0.0
RTLL				eS	Sn	08 11 07.8	+0.1
RTLL				IAML		08 11 09.0	
	comp=Z,3µm,0.3s						
ACCO	Cerro Coronel	1.28	28	i P	Pn	08 10 51.8	+0.3
ACCO				IAML		08 11 12.4	
	comp=Z,1µm,0.5s						
CFA	Coronel Fontan	1.30	85	P	Pn	08 10 51.4	-0.2
	comp=Z,230nm,0.3s,baz=267,slow=8.4,SNR=3699						
CFA				S	Sn	08 11 10.0	-0.4
	comp=Z,600nm,0.3s,baz=97,slow=17,SNR=116						
ARCO	CERRO ARCO	1.32	148	i P	Pn	08 10 52.4	+0.6
ARCO				eS	Sn	08 11 11.8	+0.9
ARCO				IAML		08 11 15.2	
	comp=Z,4µm,0.2s						
AMOG	MOGNA	1.34	55	i P	Pn	08 10 52.0	+0.1
AMOG				eS	Sn	08 11 10.7	-0.4
AMOG				IAML		08 11 19.3	
	comp=Z,887nm,0.4s						
UTNM	Universidad Te	1.40	147	IPZ		01 21 53.9	
AROD	Rodeo	1.57	9	i P	Pn	08 10 56.0	+1.0
AROD				eS	Sn	08 11 17.3	+1.0
AROD				IAML		08 11 18.9	
	comp=Z,521nm,0.4s						
AAGR	Agrelo	1.57	150	i P	Pn	08 10 55.5	+0.8
AAGR				IAML		08 11 19.5	
	comp=Z,934nm,1.3s						
PEL	Peldehue	1.62	209		Pn	08 10 55.2	0.0
PEL				Sn	Sn	08 11 16.7	-0.2
PEL	Peldehue	1.62	209	i P	Pn	08 10 55.4	+0.2
ACDV	Cuesta del Vie	1.64	20	i P	Pn	08 10 56.1	+0.5
ACDV				eS	Sn	08 11 18.2	+0.6
ACDV				IAML		08 11 20.1	
	comp=Z,532nm,0.4s						
ROC1	El Roble	1.64	220		Pn	08 10 55.3	-0.4
ROC1				Sn	Sn	08 11 16.6	-1.2
ROC1	El Roble	1.64	220	i P	Pn	08 10 55.5	-0.2
GO04	Tololo Observa	1.78	330		Pn	08 10 57.1	-0.3
GO04				Sn	Sn	08 11 19.9	-0.9
ACAN	Cantantal	2.25	105	i P	Pn	08 11 03.4	+0.3
ACAN				IAML		08 11 35.5	
	comp=Z,281nm,0.5s						
AGUA	GUANDACOL	2.48	27	i P	Pn	08 11 06.8	+0.7
AGUA				IAML		08 11 44.3	
	comp=Z,80nm,0.4s						
LCO	Las Campanas	2.82	343	Pn	Pn	08 11 10.8	+0.1
LCO				Sn	Sn	08 11 42.7	-1.8
LAMA	Las Malvinas	3.24	172	i P	Pn	08 11 16.6	+0.6
GO05	Huala	3.75	208		Pn	08 11 20.2	-2.6
GO03	Copiap	4.13	354		Pn	08 11 27.3	-0.7
GO02	Mina Guanaco	6.54	1		Pn	08 11 58.2	-2.5
GO06	Curarrehue	7.97	190	Pn	Pn	08 12 17.0	-2.8
PLCA	Paso Flores	9.02	184	P	Pn	08 12 33.0	-1.0
	comp=Z,0.1nm,0.3s,baz=16,slow=18,SNR=6.0						
PLCA	Paso Flores	9.02	184		Pn	08 12 32.8	-1.1
LVC	Limon Verde	9.11	5	P	Pn	08 12 34.5	-1.0
	comp=Z,17nm,0.3s,baz=109,slow=18,SNR=8.9						
LVC	Limon Verde	9.11	5		Pn	08 12 35.4	-0.2
CPUP	Villa Florida	12.13	67	P	Pn	08 13 12.1	-3.7
	comp=Z,0.5nm,0.3s,baz=236,slow=14,SNR=9.0						
CPUP	Villa Florida	12.13	67		Pn	08 13 11.9	-3.9
LPAZ	La Paz	15.44	6	P	Pn	08 13 59.4	+0.5
	comp=Z,1.0nm,0.3s,baz=190,slow=6.0,SNR=3.7						
LPAZ	La Paz	15.44	6	P	Pn	08 13 59.5	+0.6
SIV	San Ignacio	17.55	29	P	P	08 14 23.2	-0.5
	comp=Z,0.8nm,0.3s,baz=225,slow=11,SNR=22						
EFI	East Falkland	21.71	160	P	P	08 15 07.6	-0.9
EFI				IAmb	IAmb	08 15 09.9	
	comp=Z,22nm,1.1s						
SAML	Samuel	23.47	17	P	P	08 15 25.7	-0.5
BDFB	Brasilia	25.47	56	P	P	08 15 44.5	0.0
	comp=Z,1.4nm,0.4s,baz=208,slow=9.5,SNR=3.8						
BDFB	Brasilia	25.47	56	P	P	08 15 43.6	-0.8
PTGA	Pitinga	32.19	19	P	P	08 16 43.4	-0.6
HOPE	Hope Point	32.69	143	P	P	08 16 46.2	-1.7
ORTC	Ortega, Tolima	35.81	351	eP	P	08 17 17.0	+1.6
RREF	El Recreo	36.80	351	eP	P	08 17 26.9	+2.5
GUY2C	Guyana, Caldas	37.13	351	eP	P	08 17 28.4	+1.5
NORC	Norcasia	37.40	352	eP	P	08 17 29.8	+1.1
RUSC	La Rusia	37.54	355	eP	P	08 17 30.4	0.0
RUSC	La Rusia	37.54	355	P	P	08 17 31.3	+0.9
HELC	Santa Helena	38.10	351	eP	P	08 17 36.1	+1.1
PTBC	PUERTO BERRIO,	38.31	352	eP	P	08 17 35.0	-1.4
SDV	Santo Domingo	40.39	359	P	P	08 17 54.3	+0.5
	comp=Z,0.7nm,0.4s,baz=195,slow=20,SNR=4.5						
SDV	Santo Domingo	40.39	359	P	P	08 17 54.1	+0.3
SDV				IAmb	IAmb	08 17 58.5	
	comp=Z,2.2nm,1.1s						
SMLC	San Martn de	40.50	353	eP	P	08 17 53.0	-1.6
JTS	Las Juntas de	44.23	338	P	P	08 18 26.2	+1.3
	comp=Z,2.1nm,0.7s,baz=220,slow=20,SNR=3.9						
ICMP	Isla Caja de M	49.42	4	P	P	08 19 04.1	-1.0
MLPR	Magueyes Islan	49.48	3	P	P	08 19 05.3	-0.2
CRPR	Cabo Rojo, PR	49.51	3	P	P	08 19 05.6	-0.2
OBIP	Obispado Ponce	49.57	4	P	P	08 19 05.3	-0.9
PDPR	Patillas Dam,	49.59	5	P	P	08 19 05.6	-0.7
PDPR				IAmb	IAmb	08 19 08.7	
	comp=Z,12nm,1.1s						
STVI	Saint Thomas	50.00	6	P	P	08 19 10.6	+1.2
GTBY	Guantanamo Bay	51.61	354	P	P	08 19 21.3	-0.2
SNAA	Sanae	52.98	159	P	P	08 19 32.2	+1.0
	comp=Z,1.9nm,0.8s,baz=330,slow=13,SNR=5.5						
SNAA	Sanae	52.98	159	P	P	08 19 32.0	+0.8
TEIG	Tepich	54.62	339	P	P	08 19 44.1	+0.5
TEIG				IAmb	IAmb	08 19 53.0	
	comp=Z,6.4nm,1.1s						
QSPA	South Pole Qui	58.51	180	P	P	08 20 12.0	+1.2
	comp=Z,0.9nm,0.8s,baz=221,slow=1.1,SNR=4.9						
QSPA				pP	pP	08 20 40.4	+1.1
	comp=Z,3.2nm,0.8s,baz=141,slow=3.0,SNR=6.1						
QSPA	South Pole Qui	58.51	180	P	P	08 20 11.8	+0.9
352A	Blakely	64.48	346	P	P	08 20 51.1	+0.1
Z50A	Ashland	66.40	345	P	P	08 21 04.2	+0.8
Z50A				IAmb	IAmb	08 21 13.6	
	comp=Z,4.4nm,1.1s						
LRAL	Lakeview Retre	66.43	344	P	P	08 21 04.0	+0.4
Y52A	Lilburn	66.61	347	P	P	08 21 05.5	+0.7

Y52A				IAmb	IAmb	08 21 05.7	
	comp=Z,6.0nm,0.7s						
V58A	Windy Hill, Pi	67.73	352	P	P	08 21 12.7	+0.9
V58A				IAmb	IAmb	08 21 13.2	
	comp=Z,6.1nm,0.8s						
W50A	Signal Mountai	68.16	346	P	P	08 21 15.4	+0.9
W50A				IAmb	IAmb	08 21 17.9	
	comp=Z,2.9nm,0.8s						
SWET	Sewanee	68.30	346	P	P	08 21 15.2	-0.2
SWET				IAmb	IAmb	08 21 16.3	
	comp=Z,6.9nm,0.7s						
TKL	Tuckaleechee C	68.31	348	P	P	08 21 15.3	-0.1
TKL				IAmb	IAmb	08 21 20.6	
	comp=Z,5.8nm,0.9s						
OXF	Oxford	68.43	343	P	P	08 21 16.3	+0.1
PLAL	Pickwick Lake	68.55	344	P	P	08 21 17.4	+0.5
PLAL				IAmb	IAmb	08 21 18.9	
	comp=Z,2.8nm,0.7s						
TXAR	Lajitas Array	68.74	328	P	P	08 21 19.7	+1.4
	comp=Z,0.7nm,0.6s,baz=156,slow=9.7,SNR=4.8						
V48A	Smith Brothers	68.99	345	P	P	08 21 20.4	+0.7
V48A				IAmb	IAmb	08 21 20.6	
	comp=Z,10.0nm,0.7s						
WVT	Waverly	69.59	344	P	P	08 21 23.0	-0.3
LCAR	Lake Charles	70.36	342	P	P	08 21 28.8	+0.8
LCAR				IAmb	IAmb	08 21 29.2	
	comp=Z,5.4nm,0.6s						
PBMO	Poplar Bluff	70.84	343	P	P	08 21 31.8	+0.9
PBMO				IAmb	IAmb	08 21 31.9	
	comp=Z,5.9nm,0.6s						
MNTX	Cornudas Mount	71.53	328	P	P	08 21 35.5	+0.3
CCM	Cathedral Cave	72.25	342	P	P	08 21 38.8	-0.6
CCM				IAmb	IAmb	08 21 40.4	
	comp=Z,5.7nm,0.6s						
S39A	Bolivar	72.47	341	P	P	08 21 41.5	+0.8
S39A				IAmb	IAmb	08 21 42.8	
	comp=Z,3.6nm,0.7s						
DBIC	Dimbokro	72.62	70	P	P	08 21 42.4	+0.2
	comp=Z,3.4nm,1.0s,baz=197,slow=11,SNR=1.9						
P46A	Rosedale	72.80	346	P	P	08 21 41.9	-0.7
P46A				IAmb	IAmb	08 21 52.8	
	comp=Z,11nm,1.1s						
N47A	Urbana	73.73	347	P	P	08 21 47.9	-0.1
N47A				IAmb	IAmb	08 21 48.3	
	comp=Z,8.6nm,0.6s						
HDIL	Hopedale	74.15	345	P	P	08 21 51.0	+0.5
P38A	Dawn	74.34	341	P	P	08 21 52.0	+0.4
P38A				IAmb	IAmb	08 21 53.5	
	comp=Z,3.9nm,0.8s						
L40A	Anamosa	76.03	344	P	P	08 22 01.9	+0.6
L40A				IAmb	IAmb	08 22 02.7	
	comp=Z,8.3nm,0.8s						
Q24A	Divide	77.65	332	P	P	08 22 10.8	+0.1
Q24A				IAmb	IAmb	08 22 13.2	
	comp=Z,5.4nm,0.8s						
TORD	Torodi Ar. Bea	81.62	69	P	P	08 22 32.1	-0.4
	comp=Z,1.2nm,0.6s,baz=285,slow=7.1,SNR=12						
TORD	Torodi Ar. Bea	81.62	69	IAmb	IAmb	08 22 38.6	
	comp=Z,24nm,0.8s						
PDAR	Pinedale Array	82.64	332	P	P	08 22 38.2	+0.8
	comp=Z,0.4nm,0.6s,baz=123,slow=7.8,SNR=4.0						
NVAR	Mina Array Bea	83.15	324	P	P	08 22 41.7	+1.6
	comp=Z,0.5nm,0.6s,baz=177,slow=4.9,SNR=3.3						
NVAR				pP	pP	08 23 12.5	+1.7
	comp=Z,0.3nm,0.6s,baz=204,slow=8.6,SNR=2.6						
ULM	Lac du Bonnet	84.83	344	P	P	08 22 48.4	+0.3
	comp=Z,2.0nm,0.6s,baz=158,slow=6.9,SNR=3.4						
ULM	Lac du Bonnet	84.83	344	P	P	08 22 48.4	+0.3
ULM				IAmb	IAmb	08 22 49.0	
	comp=Z,4.1nm,0.9s						
RAO	Raoul Island	88.72	236	P	P	08 23 08.7	+1.0
	comp=Z,601nm,0.3s,baz=217,slow=20,SNR=8.0						
ASAR	Alice Springs	120.45	205	PKP	PKPdf	08 29 04.7	-0.6
	comp=Z,0.2nm,0.7s,baz=125,slow=1.6,SNR=3.0						
ASAR	Alice Springs	120.45	205		PKPdf	08 29 04.5	-0.8
WRA	Warramunga Arr	123.67	207	PKP	PKPdf	08 29 10.8	-0.8
	comp=Z,0.4nm,0.4s,baz=159,slow=1.7,SNR=5.6						
SEY	Seymchan	138.97	332	PKP	PKiKP	08 29 40.7	-0.5
	comp=Z,1.0nm,0.7s,baz=137,slow=16,SNR=4.1						
AAK	Ala-Archa	149.71	59	PKPbc	PKiKP	08 30 04.7	+0.6
	baz=248,slow=19						
AAK				PKPab	PKPab	08 30 09.6	+0.7
	baz=296,slow=17						
AAK	Ala-Archa	149.71	59	PKPdf	PKPdf	08 29 55.8	-2.6
AAK					PKPbc	08 30 02.9	-0.3
AAK					PKPab	08 30 09.7	+0.8
KURBB	Kurchatov Arra	149.90	42	PKPbc	PKiKP	08 30 04.0	0.0
	comp=Z,1.8nm,0.5s,baz=299,slow=3.0,SNR=15						
KURBB				pPKPbc	pPKPbc	08 30 34.6	0.0
	comp=Z,1.3nm,1.0s,baz=296,slow=3.2,SNR=3.8						
KURK	Kurchatov	149.91	42		PKiKP	08 30 04.1	+0.1
ZALV	Zalesovo Beam	151.28	32	PKPbc	PKiKP	08 30 07.2	+0.5
	comp=Z,6.9nm,0.4s,baz=312,slow=3.1,SNR=25						
ZALV				pPKPbc	pPKPbc	08 30 38.1	+0.4
	comp=Z,3.8nm,0.7s,baz=293,slow=3.7,SNR=4.3						
ZALV	Zalesovo Beam	151.28	32		PKiKP	08 30 07.4	+0.7
MKAR	Makanchi Array	153.82	47	PKP	PKPdf	08 30 04.8	+0.6
	comp=Z,0.1nm,0.5s,baz=237,slow=5.0,SNR=2.6						
MKAR				PKPbc	PKiKP	08 30 12.8	+0.5
	comp=Z,0.7nm,0.6s,baz=304,slow=2.2,SNR=8.1						
MKAR				PKPab	PKPab	08 30 26.0	+0.2
	comp=Z,0.5nm,0.7s,baz=329,slow=4.2,SNR=4.3						
MKAR	Makanchi Array	153.82	47		PKPdf	08 30 04.6	+0.3
MKAR					PKiKP	08 30 12.9	+0.6
MKAR					PKPab	08 30 24.9	-0.9

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*ANF **17** 08:13:37.4±0.4, 35°.53N×97°.32W, h0^{km}, ML4.1/13, Error ellipse: s-maj=5.3km s-min=3.1km az=160.0*

*NEIC **17** 08:13:38.5±0.9, 35°.50N±0°.04×97°.31W±0°.04, h6^{km}, Error ellipse: s-maj=5.8km s-min=3.6km az=216.0*

*TUL **17** 08:13:38.0±0.8, 35°.50N±0°.03×97°.31W±0°.04, h7^{km}±4^{km}, ML3.4, Error ellipse: s-maj=4.7km s-min=3.6km az=220.0*

ISC 17 08:13:38.3±0.9**, 35°.49N**±0°.02×**97°.29W**±0°.02**, h8**^{km}±6^{km}**, n56, σ0^{s}92**/68**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK001	Jones High Sch	0.07	3	Pg	Pg	08 13 40.0	-0.3
OK001				Sg	Sg	08 13 41.4	-0.3
OK009	Oakdale Elemen	0.14	309		Pg	08 13 41.1	-0.2
OK009				Sg	Sg	08 13 43.4	0.0
OKCSW	OKLAHOMA CITY	0.15	233		Pg	08 13 41.3	-0.2
OKCSW				Sg	Sg	08 13 43.6	0.0
OKCFA	Oklahoma City	0.15	239		Pg	08 13 41.4	-0.2
OKCFA				Sg	Sg	08 13 43.9	+0.1
ADOK	Arcadia Dam	0.17	338		Pg	08 13 41.8	-0.1
ADOK				Sg	Sg	08 13 44.4	+0.1
OK005	Luther M Schoo	0.18	27		Pg	08 13 42.2	+0.1
OK005				Sg	Sg	08 13 45.1	+0.5
W35A	Tecumseh	0.48	135		Pg	08 13 47.7	0.0
W35A				Sg	Sg	08 13 54.6	+0.6
TUL1	Leonard	1.29	71		Pn	08 14 01.3	-1.4
TUL1				Sg	Sb	08 14 19.0	-0.6
TUL1	Leonard	1.29	71	P	Pn	08 14 02.0	-0.7
	baz=253						
TUL1				S	Sb	08 14 19.1	-0.5
	baz=253						
WMOK	Wichita Mounta	1.43	239	Pn	Pn	08 14 03.9	-0.8
WMOK	Wichita Mounta	1.43	239	P	Pn	08 14 03.9	-0.8
	baz=56						
WMOK				S	Sb	08 14 23.1	-0.7
	baz=56						
T35A	Sooner Cattle	1.55	24		Pn	08 14 05.8	-0.5
U32A	Winter Ranch,	1.64	303		Pn	08 14 07.5	-0.1
Z35A	Perchaven, San	2.16	179		Pn	08 14 15.3	+0.7
U38A	Gravette	2.54	67		Pn	08 14 20.9	+1.0
HHAR	Hobbs	2.83	73		Pn	08 14 24.6	+0.7
W39A	Magazine	2.88	95		Pn	08 14 25.1	+0.5
W39A	Magazine	2.88	95	P	Pn	08 14 25.1	+0.5
	baz=278						
W39A				Sb	Sg	08 15 09.2	-1.8
	baz=278						
Z38A	Mt. Pleasant	2.93	139	Pn	Pn	08 14 26.7	+1.4
R32A	Long Quarter,	3.14	339	Pn	Pn	08 14 28.8	+0.8
MIAR	Mount Ida	3.19	106		Pn	08 14 30.2	+1.4
MIAR	Mount Ida	3.19	106	P	Pn	08 14 30.2	+1.4
	baz=289						
ABTX	Abilene, Hawle	3.46	215		Pn	08 14 33.4	+0.8
ABTX	Abilene, Hawle	3.46	215	S	Sn	08 15 15.2	+1.3
	baz=33						
WHTX	Lake Whitney,	3.50	182	Pn	Pn	08 14 33.8	+0.8
WHTX	Lake Whitney,	3.50	182	P	Pn	08 14 33.8	+0.8
	baz=2.3						
KSU1	Kansas State U	3.64	8	P	Pn	08 14 35.0	0.0
	baz=189						
AMTX	Amarillo	3.65	262		Pn	08 14 36.3	+1.2
AMTX	Amarillo	3.65	262	P	Pn	08 14 36.4	+1.3
	baz=78						
237A	Washetta, Mont	3.70	160	Pn	Pn	08 14 36.6	+0.8
U40A	Yellville	3.70	75		Pn	08 14 36.5	+0.6
X40A	Basin Creek Fa	3.80	104		Pn	08 14 38.0	+0.9
CBKS	Cedar Bluff	3.85	330	Pn	Pn	08 14 38.1	+0.2
CBKS	Cedar Bluff	3.85	330	P	Pn	08 14 38.2	+0.4
	baz=148						
CBKS				S	Sn	08 15 22.6	-0.7
	baz=148						
S39A	Bolivar	3.88	54		Pn	08 14 38.1	-0.2
WLAR	White Oak Lake	3.89	116		Pn	08 14 38.8	+0.4
WHAR	Wooly Hollow	4.09	91		Pn	08 14 41.6	+0.4
UALR	University of	4.12	99		Pn	08 14 41.9	+0.3
W41B	Gary Mavity, V	4.14	93		Pn	08 14 42.4	+0.6
W41B	Gary Mavity, V	4.14	93	P	Pn	08 14 42.6	+0.8
	baz=276						
FCAR	Ozark Folk Cen	4.23	83	Pn	Pn	08 14 43.6	+0.6
Z41A	Richland Creek	4.33	120		Pn	08 14 44.8	+0.3
Z41A	Richland Creek	4.33	120	S	Sn	08 15 37.3	+2.1
	baz=303						
435B	Jarrell	4.71	183	Pn	Pn	08 14 49.6	0.0
435B	Jarrell	4.71	183	Sb	Sg	08 16 05.1	-4.3
	baz=3.0						
MSTX	Muleshoe	4.76	253		Pn	08 14 50.4	-0.1
MSTX	Muleshoe	4.76	253	P	Pn	08 14 51.0	+0.5
	baz=69						
LCAR	Lake Charles	5.02	82	Pn	Pn	08 14 54.5	+0.6
JCT	Junction City	5.43	204		Pn	08 14 59.9	+0.3
CCM	Cathedral Cave	5.49	60		Pn	08 14 60.0	-0.4
KSCO	Kaye Shedlock’	5.51	311		Pn	08 15 01.2	+0.3
T25A	Trinidad	5.98	288		Pn	08 15 06.8	-0.5
T25A	Trinidad	5.98	288	P	Pn	08 15 07.4	+0.1
	baz=104						
SDCO	Great Sand Dun	6.97	291		Pn	08 15 21.7	+0.7
SDCO	Great Sand Dun	6.97	291	P	Pn	08 15 21.9	+0.9
	baz=106						
Q24A	Divide	7.16	301	Pn	Pn	08 15 23.9	+0.3

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*NIED **17** 08:22:00, 36°.70N×143°.90E, h8^{km}, Mw4.3 Best double couple: $M_0 2.95000\times10^{15}$ NP1:ϕ_s196.00000°, δ57.00000°, λ-101.00000°. NP2:ϕ_s37.00000°, δ34.00000°, λ-73.00000°.*

*IDC **17** 08:22:53.0±0.6, 36°.57N×144°.24E, h0^{km}, mb4.1/24, mb1 4.2/31, mb1mx4.2/49, mbtmp4.1/31, ML3.6/6, MS3.3/5, Ms1 3.3/5, ms1mx2.9/63, Error ellipse: s-maj=14.7km s-min=12.9km az=121.0*

*MOS **17** 08:22:56.9±1.9, 36°.81N×144°.24E, h39^{km}, mb4.5/19, Error ellipse: s-maj=9.0km s-min=5.1km az=94.8*

*NEIC **17** 08:22:57.9±2.3, 36°.54N±0°.05×144°.2E±0°.1, h37^{km}±5^{km}, mb4.5/39, Error ellipse: s-maj=12.4km s-min=8.0km az=94.0*

*JMA **17** 08:22:57.4±0.2, 36°.70N×143°.93E, h55^{km}, M4.5*

ISC 17 08:22:53.2±2.7**, 36°.72N**±0°.05×**144°.16E**±0°.06**, h0**^{km}±16^{km}**, n162, σ2^{s}75**/186**, mb4.4**/49**, 5C-10D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	2.67	307	P	Pn	08 23 37.0	-0.4
JIKH				eS	Sn	08 24 06.2	-4.2
JFK	Kawauchi	2.71	285	P	Pn	08 23 37.4	-0.6
JFK				S	Sn	08 24 06.9	-4.6
ONAJ	Iwakimizuishiy	2.72	279	P	Pn	08 23 37.6	-0.6
ONAJ				eS	Sn	08 24 07.2	-4.6
JMST	Minamisoumatoc	2.80	292	P	Pn	08 23 38.6	-0.6
JMST				eS	Sn	08 24 09.3	-4.3
JIO	Ouri	2.83	309	P	Pn	08 23 39.5	-0.1
JIO				S	Sn	08 24 10.3	-4.0
CHOJ	Chosi	2.86	250	P	Pn	08 23 39.2	-0.8
CHOJ				eS	Sn	08 24 10.2	-4.9
JFT	Otama	3.16	286	P	Pn	08 23 44.5	+0.3
JFT				S	Sn	08 24 19.3	-3.3
JMK	Ichinoseki	3.22	315	P	Pn	08 23 45.2	+0.2
JMK				eS	Sn	08 24 20.2	-3.9
BSO1	Boso 1	3.31	232	P	Pn	08 23 44.7	-1.1
BSO1				eS	Sn	08 24 21.5	-4.0
JOM	Ohasama	3.56	321	P	Pn	08 23 50.0	+0.3
JOM				S	Sn	08 24 28.7	-3.7
JYK	Kaneyama	3.73	307	P	Pn	08 23 52.3	+0.3
JYK				eS	Sn	08 24 34.0	-2.5
JAG	Ashikaga	3.80	267	P	Pn	08 23 52.4	-0.6
JAG				eS	Sn	08 24 32.3	-6.1
JRY	Ryogami san	4.30	262	P	Pn	08 23 59.0	-0.9
JRY				eS	Sn	08 24 44.2	-6.6
JOD2	Odawara 2	4.36	252	P	Pn	08 24 00.1	-0.6
JOD2				eS	Sn	08 24 45.0	-7.3
MJA0	Matsu Arr-Jizo	4.76	270	eP	Pn	08 24 07.0	+0.8
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	Matsushiro Arr	4.79	270	Pn	Pn	08 24 07.0	+0.4
	comp=Z,1.3nm,0.3s,baz=81,slow=19,SNR=24						
MJAR				Sn	Sn	08 24 58.6	-4.2
	comp=Z,0.9nm,0.3s,baz=90,slow=14,SNR=4.9						
MJAR				LR	LR	08 26 44.2	
	comp=Z,116nm,19.6s,baz=110,slow=48						
MJAR	Matsushiro Arr	4.79	270		Pn	08 24 06.5	-0.2
MJAR					Sn	08 25 00.8	-2.1
MAJO	Matsushiro	4.79	270	c iP	Pn	08 24 07.4	+0.8
MAJO	Matsushiro	4.79	270		Pn	08 24 07.5	+0.9
MAT	Matsushiro	4.79	270	P	Pn	08 24 07.5	+0.9
MAT				S	Sn	08 24 57.9	-5.0
MJB9	Matsu-Tunnel	4.79	270		Pn	08 24 07.6	+0.9
JHJ2	Mitsune	5.07	226	P	Pn	08 24 09.0	-1.4
JHJ2				eS	Sn	08 25 01.7	-8.0
JHJ2	Mitsune	5.07	226	Pn	Pn	08 24 09.1	-1.4
JHJ2					Sn	08 25 03.7	-6.0
JHJ	Hachijo jima 2	5.08	226	Pn	Pn	08 24 08.3	-2.3
	comp=Z,31nm,0.3s,baz=54,slow=17,SNR=19						
JHJ				Sn	Sn	08 25 01.2	-8.8
	comp=Z,120nm,0.3s,baz=71,slow=18,SNR=12						
JOT	Ohata	5.25	333	P	Pn	08 24 14.3	+1.4
JOT				eS	Sn	08 25 09.2	-4.8
ERM	Erimo	5.34	352	⇓eP	Pn	08 24 13.6	-0.6
ERM	Erimo	5.34	352		Pn	08 24 13.8	-0.4
ERM				Sn	Sn	08 25 12.5	-3.9
JKB	Kayabe	5.70	336	P	Pn	08 24 20.1	+1.0
JKB				eS	Sn	08 25 19.3	-5.9
JCH	Churui	5.92	354	P	Pn	08 24 21.4	-0.7
JCH				eS	Sn	08 25 23.8	-6.8
INU	Inuyama	5.95	259		Pn	08 24 23.9	+1.4
JOSM	Okushiri--Mats	6.47	327	P	Pn	08 24 31.2	+1.6
NEM2	Nemuro 2	6.75	10	P	Pn	08 24 31.3	-2.1
NEM2				eS	Sn	08 25 42.7	-8.2
NMR	Nemuro--Hokkai	6.75	10	⇓iP	Pn	08 24 31.2	-2.3
NMR				i S	Sn	08 25 42.7	-8.3
GLVR	Golovnino	7.09	8	eP	Pn	08 24 36.5	-1.6
GLVR				eS	Sn	08 25 52.5	-6.8
GLVR				pmax	pmax		
	comp=Z,78nm,0.4s						
JTKR	Abashiri--Toko	7.25	359	P	Pn	08 24 39.6	-0.7
JTKR				eS	Sn	08 25 55.8	-7.4
JHR	Hokuryu	7.26	346	P	Pn	08 24 41.4	+0.9
JHR				eS	Sn	08 26 01.7	-1.8
GRPR	Tuman	7.37	9	eP	Pn	08 24 39.8	-2.2
GRPR				i S	Sn	08 25 57.8	-8.4
GRPR				pmax	pmax		
	comp=Z,229nm,0.3s						
GRPR				pmax	pmax		
	comp=N,71nm,0.2s						
YUK	Yuzh-Kuril'sk	7.42	10	⇓iP	Pn	08 24 40.6	-2.1
YUK				eS	Sn	08 25 59.6	-7.9
YUK				pmax	pmax		
	comp=Z,180nm,0.2s						
YUK				pmax	pmax		
	comp=N,48nm,0.5s						
YUK				pmax	pmax		
	comp=E,51nm,0.3s						
SHO	Shikotan	7.43	15	eP	Pn	08 24 40.1	-2.7
SHO				eS	Sn	08 25 59.1	-8.6
SHO				pmax	pmax		
	comp=Z,33nm,0.5s						
SHO				pmax	pmax		
	comp=E,26nm,0.4s						
SHO				pmax	pmax		
	comp=N,34nm,0.3s						
JKA	Kamikawa-asahi	7.48	351		Pn	08 24 43.7	+0.1
JKA					Sn	08 26 04.3	-4.8
ASAJ	Asahikawa	7.48	351	Pn	Pn	08 24 43.7	+0.1
	comp=N,3.0nm,0.3s,baz=210,slow=13,SNR=16						
ASAJ				Sn	Sn	08 26 04.3	-4.8
	comp=N,2.0nm,0.3s,baz=189,slow=19,SNR=3.5						
JCJ	Chichijima	9.74	190	Pn	Pn	08 25 09.8	-4.8
	comp=N,3.5nm,0.3s,baz=0.0,slow=20,SNR=4.1						
JCJ				Sn	Sn	08 26 49.1	-16
	comp=N,14nm,0.3s,baz=300,slow=20,SNR=8.1						
YSS	Yuzh-Sakhalins	10.28	355	eP	Pn	08 25 20.8	-1.1
YSS				eS	Sn	08 27 10.3	-7.4
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
YSS				MLR	MLR		
	comp=E,300nm,18.0s						
JNU	Nakatsue	11.48	256	LR	LR	08 30 46.6	
	comp=E,157nm,18.4s,baz=148,slow=41						
USRK	Ussuriysk Ar.	11.90	313	Pn	Pn	08 25 46.2	+2.2
	baz=122,slow=13,SNR=7.2						
USRK	Ussuriysk Ar.	11.90	313	P	Pn	08 25 46.4	+2.4
USRK	Ussuriysk Ar.	11.90	313		Pn	08 25 46.4	+2.4
KSRS	Korea Array	12.99	278	Pn	Pn	08 25 59.8	+0.8
	comp=E,0.1nm,0.3s,baz=84,slow=12,SNR=7.0						
KSRS				LR	LR	08 31 00.3	
	comp=E,98nm,20.9s,baz=35,slow=37						
KSRS	Korea Array	12.99	278	eP	Pn	08 26 01.7	+2.7
KLR	Kul'dur	15.43	328	Pn	P	08 26 35.9	-0.9
	comp=E,0.2nm,0.3s,baz=130,slow=14,SNR=17						
KLR				LR	LR	08 32 43.0	
	comp=E,105nm,18.2s,baz=126,slow=38						
SKR	Severo-Kuril’s	16.39	28	⇑eP	Pn	08 26 44.4	0.0
PETK	Petropavlovsk-	18.93	26	P	P	08 27 14.7	-0.8
	comp=E,0.1nm,0.3s,baz=208,slow=15,SNR=4.1						
PETK	Petropavlovsk-	18.93	26	P	P	08 27 14.1	-1.4
ZEA	Zeya	20.68	331	eP	P	08 27 35.9	+1.4
ZEA				pmax	pmax		
	comp=N,15nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,16nm,0.9s						
MA2	Magadan	23.27	9	P	P	08 28 03.0	+0.9
MA2				pmax	pmax		
	comp=Z,6.0nm,1.4s						
MA2	Magadan	23.27	9	P	P	08 28 03.0	+0.9
H11N2	WAKE ISLAND Hy	26.12	124	T	T	08 55 27.2	
	baz=316,slow=75,SNR=20						
H11N1	WAKE ISLAND Hy	26.13	124	T	T	08 55 32.3	
	baz=316,slow=75,SNR=14						
H11N3	WAKE ISLAND Hy	26.14	124	T	T	08 55 36.0	
	baz=316,slow=75,SNR=22						
SEY	Seymchan	26.73	8	P	P	08 28 35.9	+1.9
	comp=Z,2.4nm,0.9s,baz=168,slow=8.3,SNR=8.9						
SEY	Seymchan	26.73	8	⇑iP	P	08 28 34.1	+0.1
H11S1	WAKE ISLAND Hy	26.87	126	T	T	08 56 35.7	
	baz=317,slow=76,SNR=6.3						
H11S3	WAKE ISLAND Hy	26.87	126	T	T	08 56 31.4	
	baz=317,slow=76,SNR=7.5						
H11S2	WAKE ISLAND Hy	26.89	126	T	T	08 56 34.4	
	baz=317,slow=76,SNR=8.4						
YAK	Yakutsk	26.90	345	⇓eP	P	08 28 37.3	+1.7
YAK				pmax	pmax		
	comp=Z,14nm,0.5s						
SONM	Songino Array	29.79	304	P	P	08 29 04.3	+2.6
	comp=Z,1.1nm,0.7s,baz=100,slow=8.4,SNR=5.8						
BILL	Bilibino	33.74	15	⇓iP	P	08 29 35.3	-0.7
BILL				pmax	pmax		
	comp=Z,5.0nm,1.6s						
TIXI	Tiksi	35.89	352	⇓eP	P	08 29 54.8	+0.3
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.7s						
CMAR	Chiang Mai Arr	43.57	258	P	P	08 30 58.9	-0.2
	comp=Z,1.3nm,0.2s,baz=37,slow=9.1,SNR=6.5						
CMAR	Chiang Mai Arr	43.57	258	c eP	P	08 30 58.0	-1.1
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NRIK	Noril'sk	44.48	335	P	P	08 31 05.7	0.0
	comp=Z,0.5nm,0.3s,baz=88,slow=11,SNR=4.0						
MK31	Makanchi Array	46.15	303	P	P	08 31 20.9	+1.6
MK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MK31	Makanchi Array	46.15	303	P	P	08 31 20.9	+1.6
MK31				IAmb	IAmb	08 31 21.4	
	comp=Z,3.9nm,0.9s						
MKAR	Makanchi Array	46.15	303	P	P	08 31 20.8	+1.5
	comp=Z,2.5nm,0.7s,baz=88,slow=10,SNR=22						
MKAR	Makanchi Array	46.15	303	P	P	08 31 20.7	+1.4
PPLA	Purkeypile	46.17	35	P	P	08 31 21.8	+2.4
MLY	Manley	46.95	32	P	P	08 31 27.7	+2.3
RND	Reindeer	47.70	34	P	P	08 31 31.7	+0.4
RND				pmax	pmax		
	comp=Z,5.0nm,1.1s						
RND	Reindeer	47.70	34	P	P	08 31 31.7	+0.4
RND				IAmb	IAmb	08 31 33.7	
	comp=Z,4.7nm,1.1s						
TOLK	Toolik Lake Re	47.75	27	P	P	08 31 33.7	+2.1
TOLK				IAmb	IAmb	08 31 48.3	
	comp=Z,3.9nm,1.1s						
KURK	Kurchatov	47.85	309	⇓eP	P	08 31 33.3	+0.8
KURK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KURK	Kurchatov	47.85	309	P	P	08 31 32.9	+0.3
KURK				IAmb	IAmb	08 31 34.3	
	comp=Z,5.3nm,0.7s						
KURBB	Kurchatov Arra	47.92	309	P	P	08 31 33.8	+0.6
	comp=Z,3.9nm,0.7s,baz=82,slow=8.0,SNR=26						
CCB	Clear Creek Bu	48.19	32	P	P	08 31 34.6	-0.3
DHY	Denali Highway	48.37	35	P	P	08 31 36.3	-0.3
DHY				IAmb	IAmb	08 31 46.8	
	comp=Z,6.8nm,1.1s						
HDA	Harding Lake	48.55	33	P	P	08 31 38.9	+1.1
IL31		48.58	32	P	P	08 31 39.0	+1.0
IL31				IAmb	IAmb	08 31 39.5	
	comp=Z,2.7nm,0.8s						
ILAR	Eielson Array	48.58	32	P	P	08 31 38.6	+0.6
	comp=Z,1.5nm,0.8s,baz=258,slow=5.9,SNR=23						
ILAR	Eielson Array	48.58	32	eP	P	08 31 39.0	+1.0
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
RIDG	Independent Ri	49.49	34	P	P	08 31 45.8	+0.7
BMAR	Burnt Mountain	49.55	29	P	P	08 31 47.8	+2.4
SCRK	Sand Creek	49.86	33	P	P	08 31 49.0	+1.1
SCRK				IAmb	IAmb	08 32 08.0	
	comp=Z,10.0nm,1.5s						
CRQM	Cirque	50.51	37	P	P	08 31 54.7	+1.7
BALM	Baldy	50.87	37		P	08 31 57.4	+1.8
BCAR	Beaver Creek A	50.91	34	P	P	08 31 56.7	+0.9
EGAK	Eagle	51.03	32	P	P	08 31 57.8	+1.2
EGAK				IAmb	IAmb	08 32 00.5	
	comp=Z,9.4nm,1.4s						
BOOM	Boomskoye usch	51.60	299	P	P	08 32 02.0	+0.5
BOOM				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BOOM	Boomskoye usch	51.60	299	P	P	08 32 01.9	+0.5
BOOM				IAmb	IAmb	08 32 04.2	
	comp=Z,4.0nm,0.9s						
BVAR	Borovoye Array	52.41	313	P	P	08 32 07.7	+0.6
	comp=Z,2.3nm,0.6s,baz=87,slow=8.7,SNR=11						
BRVK	Borovoye	52.46	313	⇑eP	P	08 32 08.8	+1.3
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
BRVK	Borovoye	52.46	313	P	P	08 32 07.0	-0.4
BRVK				IAmb	IAmb	08 32 09.5	
	comp=Z,4.2nm,0.9s						
AAK	Ala-Archa	52.57	299	P	P	08 32 09.8	+1.2
	comp=Z,1.0nm,0.4s,baz=108,slow=9.0,SNR=4.5						
AAK	Ala-Archa	52.57	299	⇓eP	P	08 32 09.9	+1.2
AAK				pmax	pmax		
	comp=Z,9.0nm,2.5s						
AAK	Ala-Archa	52.57	299	P	P	08 32 07.7	-1.0
EPYK	Eagle Plains	52.70	30	P	P	08 32 09.8	+0.7
EPYK				IAmb	IAmb	08 32 11.6	
	comp=Z,4.6nm,0.8s						
INK	Inuvik	53.66	27	P	P	08 32 17.1	+1.1
	comp=Z,1.3nm,0.5s,baz=303,slow=5.3,SNR=7.9						
INK	Inuvik	53.66	27	P	P	08 32 15.9	-0.1
INK				IAmb	IAmb	08 32 18.2	
	comp=Z,8.3nm,1.3s						
ARSB	Arslanbob	54.07	298	P	P	08 32 21.0	+1.3
ARSB				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ARSB	Arslanbob	54.07	298	P	P	08 32 21.0	+1.3
KK31	Karatay Array	55.18	301	IAmb	IAmb	08 32 30.2	
	comp=Z,10.0nm,1.3s						
KKAR	Karatay Array	55.18	301	P	P	08 32 28.3	+0.7
KKAR	Karatay Array	55.18	301	P	P	08 32 28.3	+0.7
KKAR	Karatay Array	55.18	301	IAmb	IAmb	08 32 30.2	
	comp=Z,10.0nm,1.3s						

C36M	Paulatuk	56.78	25	P	P	08 32 39.7	+1.1
WB0	Warramunga Arr	56.93	191	P	P	08 32 39.1	-1.1
WB0				IAmb	IAmb	08 32 41.6	
	comp=Z,7.1nm,1.2s						
WRAB	Tennant Creek	57.10	191	⇓eP	P	08 32 39.1	-2.3
WRAB				pmax	pmax		
	comp=Z,22nm,2.6s						
WRAB	Tennant Creek	57.10	191	P	P	08 32 38.8	-2.6
WRAB				IAmb	IAmb	08 32 40.6	
	comp=Z,3.0nm,0.8s						
WRA	Warramunga Arr	57.12	191	P	P	08 32 39.9	-1.6
	comp=Z,1.5nm,0.6s,baz=8.6,slow=7.0,SNR=22						
WRA	Warramunga Arr	57.12	191	P	P	08 32 37.3	-4.2
FITZ	Fitzroy Crossi	57.26	201	P	P	08 32 40.5	-2.0
FITZ				IAmb	IAmb	08 32 45.8	
	comp=Z,6.2nm,1.2s						
ARU	Arti	58.05	319	P	P	08 32 48.5	+0.8
	comp=Z,3.5nm,0.2s,baz=68,slow=4.7,SNR=5.3						
ARU	Arti	58.05	319	d iP	P	08 32 48.7	+1.0
ARU				S	S	08 40 52.8	+3.6
ARU				SS	SS	08 44 42.7	+3.0
ARU				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ARU	Arti	58.05	319	P	P	08 32 48.8	+1.0
ABKAR	Akbulak array	59.82	311	P	P	08 33 00.5	+0.3
ABKAR				IAmb	IAmb	08 33 01.3	
	comp=Z,3.0nm,0.8s						
ABKAR	Akbulak array	59.82	311	P	P	08 33 00.6	+0.5
AKTO	Aktyubinsk	60.51	313	P	P	08 33 05.4	+0.5
	comp=Z,2.6nm,0.8s,baz=74,slow=12,SNR=7.9						
ASAR	Alice Springs	60.84	191	P	P	08 33 06.0	-1.3
	comp=Z,1.3nm,0.8s,baz=16,slow=6.8,SNR=13						
RES	Resolute Bay	62.34	15	P	P	08 33 17.6	+0.7
RES				pmax	pmax		
	comp=Z,6.0nm,1.3s						
RES	Resolute Bay	62.34	15	P	P	08 33 17.6	+0.7
RES				IAmb	IAmb	08 33 18.5	
	comp=Z,5.6nm,1.2s						
YKA	Yellowknife Ar	62.96	31	P	P	08 33 21.1	-0.1
	comp=Z,0.7nm,0.9s,baz=295,slow=6.1,SNR=7.5						
ARCES	ARCESS Array B	65.05	340	P	P	08 33 36.0	+1.2
	comp=Z,1.8nm,0.8s,baz=45,slow=6.8,SNR=2.9						
ARCES	ARCESS Array B	65.05	340	P	P	08 33 34.5	-0.3
STKA	Stephens Creek	68.28	182	P	P	08 33 55.3	-0.5
	comp=Z,2.5nm,0.8s,baz=350,slow=9.5,SNR=5.5						
STKA	Stephens Creek	68.28	182	P	P	08 33 53.4	-2.4
F10A	Beach Ranch, E	69.95	47		PcP	08 34 32.8	+4.1
FIA1	FINESS Array S	70.10	333	P	P	08 34 07.7	+0.9
FINES	FINESS Array B	70.10	333	P	P	08 34 07.2	+0.3
	comp=Z,4.0nm,0.9s,baz=50,slow=10,SNR=6.8						
FINES	FINESS Array B	70.10	333	P	P	08 34 07.0	+0.1
FFC	Flin Flon	72.76	34	P	P	08 34 23.9	+0.9
FFC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FFC	Flin Flon	72.76	34	P	P	08 34 23.9	+0.9
KIV	Kislovodsk	72.76	312	eP	P	08 34 24.4	+1.0
KIV				pmax	pmax		
	comp=Z,31nm,1.0s						
LRM	Limekiln Ridge	72.81	45	P	P	08 34 23.7	-0.2
NVAR	Mina Array Bea	73.40	54	P	P	08 34 28.7	+1.3
	comp=Z,1.2nm,0.7s,baz=294,slow=5.7,SNR=8.3						
NVAR	Mina Array Bea	73.40	54	P	P	08 34 25.9	-1.6
NC204	NORSAR Array S	75.25	339	P	P	08 34 39.2	+1.6
NB2	NORSAR Subarra	75.31	338	P	P	08 34 38.4	+0.5
	comp=Z,0.9nm,0.5s,baz=37,slow=6.2						
NOA	NORSAR Array B	75.31	338	P	P	08 34 38.3	+0.4
	comp=Z,1.3nm,0.6s,baz=38,slow=5.8,SNR=4.8						
NOA				LR	LR	09 12 47.6	
	comp=Z,42nm,19.1s,baz=255,slow=40						
NOA	NORSAR Array B	75.31	338	eP	P	08 34 38.7	+0.8
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
LAO	LASA Array	75.75	42	P	P	08 34 41.4	+0.7
AKASG	Malin Array Be	75.88	324	P	P	08 34 41.9	+0.7
	comp=Z,2.4nm,0.6s,baz=46,slow=6.3,SNR=15						
AKASG	Malin Array Be	75.88	324	eP	P	08 34 42.0	+0.7
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	Malin Array Be	75.88	324	P	P	08 34 40.8	-0.5
PDAR	Pinedale Array	76.30	47	P	P	08 34 44.1	0.0
	comp=Z,0.4nm,0.6s,baz=247,slow=1.0,SNR=6.3						
PDAR	Pinedale Array	76.30	47	P	P	08 34 44.6	+0.4
ULM	Lac du Bonnet	78.53	35	P	P	08 34 55.6	-0.6
	comp=Z,1.1nm,0.6s,baz=294,slow=8.3,SNR=3.5						
ULM	Lac du Bonnet	78.53	35	P	P	08 34 56.3	+0.1
ULM				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ULM	Lac du Bonnet	78.53	35	P	P	08 34 56.3	+0.1
BUR08	Bucovina Ar. S	79.89	323	P	P	08 35 02.7	-1.1
BUR08				IAmb	IAmb	08 35 04.3	
	comp=Z,9.1nm,1.4s						
BURAR	Bucovina Array	79.90	323	P	P	08 35 04.3	+0.4
GERES	GERESS Array B	84.12	330	P	P	08 35 24.9	-1.1
GERES	GERESS Array B	84.12	330	P	P	08 35 24.9	-1.1
TXAR	Lajitas Array	88.55	54	P	P	08 35 48.1	0.0
	comp=Z,0.3nm,0.5s,baz=310,slow=2.8,SNR=10						

IDC 17 08:24:57.1±1.9, 20°.01S×70°.91W, h0^{km}, mb3.7/2, mb1 3.8/4, mb1mx3.6/22, mbtmp3.7/4, ML3.6/2, Error ellipse: s-maj=53.7km s-min=17.5km az=61.0

SJA 17 08:24:58.8±1.1, 20°.11S×70°.85W, h29^{km}±5^{km}, ML3.6, MW3.9

GUC 17 08:24:59.2±0.8, 20°.12S×70°.91W, h36^{km}±3^{km}, ML3.7

ISC 17 08:24:56.5±1.7, **20°.08S**±0°.03×**70°.99W**±0°.07, **h4**^{km}±10^{km}, **n33, σ1^{s}14**/48, **2C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGCX	Pisagua	0.94	60	iP	Pb	08 25 15.4	-0.1
PSGCX				IAML		08 25 29.2	
	comp=Z,2µm,0.3s						
PATCX	Punta Patache	1.08	134	iP	Pb	08 25 17.9	+0.1
PATCX				IAML		08 25 35.4	
	comp=Z,1µm,0.5s						
PB11	IPOC Station P	1.29	76	⇑iP	Pg	08 25 20.8	-0.4
PB11				iS	Sb	08 25 37.9	-0.6
PB11				IAML		08 25 38.9	
	comp=N,3µm,0.1s						
PB11	IPOC Station P	1.29	76	iP	Pg	08 25 20.9	-0.4
PB11				iS	Sb	08 25 37.9	-0.6
PB11				IAML		08 25 38.4	
	comp=Z,2µm,0.3s						
PB12	IPOC Station P	1.58	23	⇓iP	Pn	08 25 26.2	+0.8
PB12				iS	Sg	08 25 48.0	+0.7
PB12				IAML		08 25 52.1	
	comp=E,599nm,0.2s						
PB12	IPOC Station P	1.58	23	iP	Pb	08 25 27.1	+0.7
PB12				IAML		08 25 55.6	
	comp=Z,347nm,0.5s						
PB02	IPOC Station P	1.61	141	⇓iP	Pn	08 25 26.0	+0.3
PB02				iS	Sn	08 25 45.6	-1.4
PB02				IAML		08 25 52.2	
	comp=E,4µm,0.5s						
PB02	IPOC Station P	1.61	141	iP	Pn	08 25 26.0	+0.3
PB02				iS	Sn	08 25 45.6	-1.4
PB02				IAML		08 25 52.3	
	comp=Z,2µm,0.5s						
PB01	IPOC Station P	1.70	125	⇓iP	Pn	08 25 27.7	+0.6
PB01				iS	Sn	08 25 48.6	-0.8
PB01				IAML		08 25 54.6	
	comp=N,2µm,0.2s						
PB08	IPOC Station P	1.73	93	⇑iP	Pn	08 25 28.1	+0.4
PB08				iS	Sn	08 25 49.0	-1.3
PB08				IAML		08 25 52.6	
	comp=N,793nm,0.3s						
PB08	IPOC Station P	1.73	93	iP	Pb	08 25 28.4	-0.6
PB08				IAML		08 25 55.1	
	comp=Z,798nm,0.7s						
GO01	Chusmiza	1.74	77	iP	Pb	08 25 28.8	-0.4
GO01				iS	Sb	08 25 50.7	-0.8
GO01				IAML		08 25 52.4	
	comp=N,5µm,0.1s						
PB07	IPOC Station P	1.94	148	eP	Pn	08 25 30.6	+0.2
PB07				iS	Sn	08 25 54.8	-0.6
PB07				IAML		08 26 04.2	
	comp=E,740nm,0.6s						
PB07	IPOC Station P	1.94	148	iP	Pn	08 25 30.6	+0.2
PB07				IAML		08 26 03.5	
	comp=Z,768nm,0.5s						
PB16	IPOC Station P	2.23	39	eP	Pb	08 25 37.7	+0.1
PB16				iS	Sb	08 26 06.5	+0.8
PB16				IAML		08 26 07.8	
	comp=N,370nm,0.4s						
PB16	IPOC Station P	2.23	39	iP	Pb	08 25 37.7	+0.1
PB16				IAML		08 26 08.5	
	comp=Z,590nm,0.6s						
PB03	IPOC Station P	2.28	150	eP	Pn	08 25 35.2	+0.2
PB03				iS	Sn	08 26 02.9	-0.8
PB03				IAML		08 26 19.9	
	comp=E,308nm,0.3s						
PB03	IPOC Station P	2.28	150	iP	Pn	08 25 35.2	+0.2
PB03				IAML		08 26 18.0	
	comp=Z,326nm,0.6s						
PB09	IPOC Station P	2.37	137	iP	Pn	08 25 37.8	+1.5
PB09				IAML		08 26 14.7	
	comp=Z,656nm,0.9s						
PB04	IPOC Station P	2.38	161	⇓iP	Pn	08 25 36.3	-0.2
PB04				iS	Sn	08 26 02.5	-3.7
PB04				IAML		08 26 20.7	
	comp=N,565nm,0.4s						
PB04	IPOC Station P	2.38	161	iP	Pn	08 25 36.4	-0.1
PB05	IPOC Station P	2.86	165	iP	Pn	08 25 42.5	-0.5
PB05				iS	Sg	08 26 28.7	+0.3
PB05				IAML		08 26 42.1	
	comp=Z,118nm,0.7s						
PB06	IPOC Station P	2.93	154	iP	Pn	08 25 44.0	-0.1
LVC	Limon Verde	3.18	143	Pn	Pn	08 25 49.5	+1.9
	comp=Z,3.5nm,0.3s,baz=321,slow=8.9,SNR=43						
LVC				Pg	Pb	08 25 55.5	+1.7
	comp=Z,19nm,0.3s,baz=323,slow=10,SNR=66						
LVC				Sn	Sn	08 26 27.4	+1.2
	comp=Z,16nm,0.3s,baz=294,slow=20,SNR=7.8						
LVC				Lg	Lg	08 26 38.6	
	comp=Z,27nm,0.3s,baz=141,slow=9.7,SNR=8.3						
LVC	Limon Verde	3.18	143	iP	Pn	08 25 49.5	+1.9
LVC				IAML		08 26 43.6	
	comp=Z,86nm,0.6s						
PB15	IPOC Station P	3.42	156	iP	Pn	08 25 50.7	-0.1
PB15				IAML		08 26 54.0	
	comp=Z,356nm,0.5s						
PB10	IPOC Station P	3.45	173	iP	Pn	08 25 50.4	-0.6
PB10				IAML		08 27 00.2	
	comp=Z,38nm,1.6s						
PB14	IPOC Station P	4.56	173	iP	Pn	08 26 05.7	-1.0
PB14				IAML		08 27 35.2	
	comp=Z,30nm,0.6s						
LPAZ	La Paz	4.64	36	Pn	Pb	08 26 15.4	-3.5
	comp=Z,0.6nm,0.3s,baz=225,slow=8.4,SNR=21						
SIV	San Ignacio	10.27	68	Pn	Pn	08 27 25.7	+1.0
	comp=Z,0.8nm,0.3s,baz=252,slow=13,SNR=19						
TORD	Torodi Ar. Bea	78.73	71	P	P	08 37 00.3	-0.4
	comp=Z,0.8nm,0.9s,baz=230,slow=6.8,SNR=3.1						
YKA	Yellowknife Ar	89.21	341	P	P	08 37 54.2	+1.1
	comp=Z,0.3nm,0.7s,baz=141,slow=6.0,SNR=4.2						
MKAR	Makanchi Array	145.57	33	PKPbc	PKPdf	08 44 37.2	+1.1
	comp=Z,0.6nm,0.7s,baz=302,slow=3.1,SNR=5.4						

JMA 17 08:30:01.1±0.3, 44°.00N×148°.10E, h0^{km}, M3.7

SKHL 17 08:30:01.4±0.3, 44°.44N×148°.34E, h55^{km}±5^{km}, mb4.0/5

ISC 17 08:29:58.9±3.2, **44°.39N**±0°.09×**148°.5E**±0°.2, **h55**^{km}, **n17, σ1^{s}55**/32, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	0.96	331	iP	Pn	08 30 16.6	+0.5
KUR				AMB	AMB	08 30 17.0	
	180nm,0.3s						
KUR				eS	Sn	08 30 27.0	-1.9
KUR				A	A	08 30 29.0	
	410nm,0.2s						
KUR				A	A	08 30 29.0	
	830nm,0.2s						
SHO	Shikotan	1.32	247	iP	Pn	08 30 21.1	+0.1
SHO				AMB	AMB	08 30 21.5	
	20nm,0.3s						
SHO				iS	Sn	08 30 35.9	-1.7
SHO				A	A	08 30 38.0	
	220nm,0.2s						
SHO				A	A	08 30 38.0	
	267nm,0.2s						
YUK	Yuzh-Kuril'sk	1.94	260	iP	Pn	08 30 29.9	+0.5
YUK				AMB	AMB	08 30 31.7	
	80nm,0.3s						
YUK				iS	Sn	08 30 51.5	-1.2
YUK				A	A	08 30 53.7	
	210nm,0.2s						
YUK				A	A	08 30 53.7	
	110nm,0.2s						
GRPR	Tuman	2.02	259	eP	Pn	08 30 31.1	+0.7
GRPR				AMB	AMB	08 30 33.0	
	50nm,0.4s						
GRPR				eS	Sn	08 30 53.2	-1.3
GRPR				A	A	08 30 57.0	
	270nm,0.4s						
GRPR				A	A	08 30 57.0	
	190nm,0.4s						
NEM2	Nemuro 2	2.26	244	P	Pn	08 30 34.0	+0.3
NEM2				eS	Sn	08 30 57.8	-2.5
GLVR	Golovnino	2.26	254	eP	Pn	08 30 34.8	+1.1
GLVR				AMB	AMB	08 30 35.0	
	40nm,0.4s						
GLVR				eS	Sn	08 30 59.6	-0.8
GLVR				A	A	08 31 07.0	
	310nm,0.3s						
GLVR				A	A	08 31 07.0	
	310nm,0.3s						
NMR	Nemuro--Hokkai	2.26	244	iP	Pn	08 30 34.0	+0.2
NMR				iS	Sn	08 30 58.5	-2.0
JRA	Rausu	2.49	261	P	Pn	08 30 38.7	+1.9
JRA				eS	Sn	08 31 06.4	+0.4
JNSB	Nemuroshibetsu	2.61	258	P	Pn	08 30 40.2	+1.7
JKHN	Kushirohamanak	2.77	243	P	Pn	08 30 41.5	+0.8
JKHN				eS	Sn	08 31 11.8	-1.0
JNK	Nakash	2.86	255	P	Pn	08 30 43.6	+1.6
JNK				eS	Sn	08 31 14.3	-0.9
JAK	Akkeshi	3.10	245	P	Pn	08 30 46.2	+0.9
JAK				eS	Sn	08 31 19.5	-1.6
JAR	Ashorobuto	3.61	254	P	Pn	08 30 54.8	+2.6
JAR				eS	Sn	08 31 34.0	+0.5
JCH	Churui	4.15	246	P	Pn	08 31 01.2	+1.5
JCH				eS	Sn	08 31 45.6	-1.3
JNBK	Urakawa-nobuka	4.71	245	P	Pn	08 31 09.7	+2.4
JKB	Kayabe	6.02	248	P	Pn	08 31 27.2	+1.9
JKB				eS	Sn	08 32 31.2	-1.6
JOT	Ohata	6.26	244	P	Pn	08 31 29.9	+1.4
JOT				eS	Sn	08 32 36.1	-2.6

ASRS 17 08:32:14.1, 54°.16N×87°.29E, M1.6, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)

NNC 17 08:32:18.4±2.6, **54°.05N×87°.23E, h0**^{km}**, mb3.1, mpv2.9, 5C-5D, Error ellipse: s-maj=22.8km s-min=12.5km az=21.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array	1.43	267	⇑P	Pn	08 32 44.2	-1.4
	1.0nm,0.3s						
ZAA0				⇓S	Sb	08 33 04.6	-0.1
	3.8nm,0.4s						
ZAA0	Zalesovo Array	1.43	267		Pb	08 32 44.3	-1.6
KURK	Kurchatov	6.24	241	⇑Pn	Pn	08 33 53.4	+1.7
	3.4nm,1.2s						
KURK				⇑Sn	Sn	08 35 03.3	-0.3
	2.5nm,1.1s						
KURK				⇑Lg	Lg	08 35 38.1	
	3.7nm,0.5s						
KURBB	Kurchatov Arra	6.34	241	⇓Pn	Pn	08 33 54.6	+1.5
	1.5nm,0.4s						
KURBB				⇓Sn	Sn	08 35 06.3	+0.1
	4.8nm,0.6s						
KURBB				⇓Lg	Lg	08 35 45.1	
	7.7nm,0.7s						
MK31	Makanchi Array	7.92	205	Pn	Pn	08 34 17.7	+2.9
	0.1nm,0.3s,baz=31,slow=15,SNR=11						
MK31				⇓Sn	Sn	08 35 44.6	-0.4
	0.7nm,0.5s						
MK31				⇑Lg	Lg	08 36 30.2	
	4.3nm,1.0s,baz=31,slow=32,SNR=3.6						

SJA 17 08:32:29.4±0.9, 19°.58S×71°.33W, h59^{km}±17^{km}, ML5.2, MW5.1

IDC 17 08:32:35.9±0.3, 19°.85S×70°.51W, h0^{km}, mb4.7/35, mb1 4.8/40, mb1mx4.8/46, mbtmp4.7/40, ML4.3/5, MS4.4/21, Ms1 4.4/21, ms1mx4.3/30, Error ellipse: s-maj=13.8km s-min=8.6km az=68.0

NEIC 17 08:32:35.8±2.0, 19°.99S±0°.05×70°.76W±0°.04, h8^{km}±1^{km}, mb5.3/265, Mwr5.0/22, Mww5.2, ML5.2(GUC), Error ellipse: s-maj=8.8km s-min=6.6km az=344.0

NEIC 17 08:32:36.2, 20°.04S×70°.64W, h9^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.16; M$_{\theta\theta}$-0.16; M$_{\phi\phi}$1.31; M$_{r\theta}$2.55; M$_{\theta\phi}$1.00; M$_{\phi r}$2.55; Fault plane solution: M$_0$3.94000×10^{16} NP1:φ$_s$224.84000°, δ79.68000°, λ-79.41000°. NP2:φ$_s$358.61000°, δ14.74000°, λ-135.27000°. Principal axes: T 4.1419, Plg34.0000°, Azm306.0000°; N -0.4465, Plg10.0000°, Azm43.0000°; P -3.6955, Plg54.0000°, Azm148.0000°;

BJI 17 08:32:36.0±0.0, 20°.00S×70°.80W, h2^{km}, mB5.5/17, Ms5.5/7, Ms7 5.2/7

VAO 17 08:32:38.6±0.4, 19°.91S×70°.72W, h27^{km}±1^{km}, mb4.9

GUC 17 08:32:38.3±0.6, 19°.95S×70°.70W, h38^{km}±2^{km}, ML5.2

MOS 17 08:32:39.1±1.6, 19°.85S×70°.63W, h33^{km}, mb5.3/22, Error ellipse: s-maj=12.5km s-min=7.1km az=106.2

GCMT 17 08:32:42.8±0.3, 20°.02S±0°.02×70°.91W±0°.03, h23^{km}±2^{km}, MW5.1/85, Moment Tensor Solution. s16,c18; s85,c112; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.14±.42; M$_{\theta\theta}$-0.67±.20; M$_{\phi\phi}$3.81±.30; M$_{r\theta}$3.52±.42; M$_{\theta\phi}$2.04±.12; M$_{\phi r}$1.23±.33; Best double couple: M$_0$5.51600×10^{16} NP1:φ$_s$352.00000°, δ38.00000°, λ-144.00000°. NP2: φ$_s$232.00000°, δ69.00000°, λ-58.00000°. Principal axes: T 5.3940, Plg18.0000°, Azm299.0000°; N 0.2450, Plg30.0000°, Azm40.0000°; P -5.6390, Plg54.0000°, Azm182.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

NEIC 17 08:32:44, 20°.14S×70°.96W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.00; M$_{\theta\theta}$-0.85; M$_{\phi\phi}$2.85; M$_{r\theta}$4.04; M$_{\theta\phi}$1.44; M$_{\phi r}$4.54; Fault plane solution: M$_0$6.74000×10^{16} NP1:φ$_s$221.00000°, δ80.00000°, λ-76.00000°. NP2:φ$_s$347.00000°, δ17.00000°, λ-143.00000°. Principal axes: T 7.0814, Plg33.0000°, Azm299.0000°; N -0.7343, Plg14.0000°, Azm39.0000°; P -6.3471, Plg53.0000°, Azm148.0000°;

ISC 17 08:32:37.3±0.6, **19°.98S**±0°.02×**70°.71W**±0°.04, **h15**^{km}±3^{km}, **n845, σ1^{s}27**/812, **mb5.2**/149, **MS4.4**/19, **19C-15D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.67	56	⇓iP	Pg	08 32 50.4	0.0
PSGC				iS	Sg	08 32 59.5	+0.1
PSGCX	Pisagua	0.67	56	iP	Pg	08 32 50.5	0.0
PSGCX				IAML		08 33 07.4	
	comp=Z,15µm,0.7s						
TA01	Diego Aracena	0.77	140	⇑iP	Pg	08 32 52.3	0.0
TA01				eS	Sg	08 33 01.0	-1.4
PATCX	Punta Patache	0.99	148	⇑iP	Pb	08 32 55.9	-0.3
PATCX				iS	Sg	08 33 09.9	+0.4
PB11	IPOC Station P	1.01	78	⇑iP	Pb	08 32 56.5	-0.2
PB11				eS	Sb	08 33 09.9	+0.1
PB11				IAML		08 33 10.8	
	comp=N,128µm,0.3s						
PB11	IPOC Station P	1.01	78	Pg	Pb	08 32 56.1	-0.5
PB11				Sg	Sb	08 33 09.9	+0.1
PB11	IPOC Station P	1.01	78	iP	Pb	08 32 56.5	-0.2
PB11				IAML		08 33 17.9	
	comp=Z,29µm,0.7s						
PB12	IPOC Station P	1.40	15	⇑iP	Pn	08 33 01.7	-0.7
PB12				eS	Sn	08 33 20.3	-0.4
GO01	Chusmiza	1.46	78	eP	Pn	08 33 03.9	+0.4
GO01				iS	Sb	08 33 23.6	+0.7
GO01				IAML		08 33 24.5	
	comp=N,90µm,0.1s						
GO01	Chusmiza	1.46	78	Pn	Pb	08 33 04.1	-0.3
PB08	IPOC Station P	1.47	97	⇑iP	Pn	08 33 04.1	+0.5
PB08				iS	Sb	08 33 23.6	+0.3
PB02	IPOC Station P	1.54	150	⇓iP	Pn	08 33 04.9	+0.6
PB02				eS	Sb	08 33 25.4	+0.5
PB02				IAML		08 33 32.5	
	comp=N,54µm,0.6s						
PB02	IPOC Station P	1.54	150	iP	Pb	08 33 05.2	-0.3
PB02				IAML		08 33 34.1	
	comp=Z,49µm,0.6s						
PB01	IPOC Station P	1.56	133	⇑iP	Pn	08 33 05.1	+0.5
PB01				eS	Sb	08 33 25.7	+0.1
PB01	IPOC Station P	1.56	133		Pn	08 33 05.2	+0.5
AP01	Chacalluta	1.64	12	⇓iP	Pn	08 33 05.6	+0.1
AP01				eS	Sn	08 33 26.7	+0.5
AP01				IAML		08 33 33.7	
	comp=N,64µm,0.4s						
PB07	IPOC Station P	1.90	156	⇓iP	Pn	08 33 10.1	+0.7
PB07				iS	Sb	08 33 35.1	-0.4
PB07				IAML		08 33 45.8	
	comp=E,18µm,0.7s						
PB16	IPOC Station P	1.99	35	⇑iP	Pn	08 33 12.0	+1.1
PB16				iS	Sb	08 33 38.0	-0.3
PB03	IPOC Station P	2.25	157	⇓iP	Pn	08 33 14.8	+0.7
PB03				eS	Sb	08 33 44.4	-1.0
PB03	IPOC Station P	2.25	157	iP	Pn	08 33 14.7	+0.7
PB03				IAML		08 33 50.7	
	comp=Z,10µm,1.4s						
PB09	IPOC Station P	2.27	143	⇓iP	Pb	08 33 16.8	-1.3
PB09				iS	Sb	08 33 46.2	+0.1
PB09				IAML		08 33 58.4	
	comp=E,15µm,0.5s						
PB09	IPOC Station P	2.27	143	iP	Pb	08 33 16.9	-1.3
PB09				IAML		08 33 54.8	
	comp=Z,22µm,0.6s						
PB04	IPOC Station P	2.40	168	⇓iP	Pn	08 33 16.1	-0.1
PB04				iS	Sn	08 33 46.3	+0.8
PB04				IAML		08 34 03.8	
	comp=E,12µm,0.5s						
PB04	IPOC Station P	2.40	168		Pn	08 33 15.8	-0.5
PB04	IPOC Station P	2.40	168	iP	Pn	08 33 16.3	+0.1
PB05	IPOC Station P	2.90	171	⇓iP	Pn	08 33 22.4	-0.6
PB05				iS	Sb	08 34 02.7	-1.5
PB05				IAML		08 34 20.7	
	comp=E,4µm,0.7s						
PB06	IPOC Station P	2.92	159	⇓iP	Pn	08 33 23.5	+0.3
PB06				iS	Sn	08 33 59.5	+1.4
PB06				IAML		08 34 17.0	
	comp=N,8µm,0.5s						
LVC	Limon Verde	3.11	148	Pn	Pn	08 33 28.5	+2.3
	comp=N,203nm,0.3s,baz=328,slow=9.3,SNR=422						
LVC				Sn	Sb	08 34 08.1	-2.4
	comp=N,229nm,0.3s,baz=118,slow=15,SNR=7.9						
LVC				Lg	Lg	08 34 15.6	
	comp=N,369nm,0.3s,baz=43,slow=19,SNR=12						
LVC				LR	LR	08 34 53.3	
	comp=N,19µm,18.1s,baz=293,slow=44						
LVC	Limon Verde	3.11	148	eP	Pn	08 33 28.4	+2.3
LVC				eS	Sn	08 34 05.5	+2.2
LVC	Limon Verde	3.11	148	P	Pn	08 33 28.1	+1.9
LVC	Limon Verde	3.11	148		Pn	08 33 28.1	+1.9
LVC	Limon Verde	3.11	148	eP	Pn	08 33 28.5	+2.3
LVC	Limon Verde	3.11	148	iP	Pn	08 33 28.6	+2.3
LVC				iS	Sb	08 34 11.2	+0.7
LVC				IAML		08 34 16.2	
	comp=Z,4µm,1.6s						
PB15	IPOC Station P	3.42	161	iP	Pn	08 33 30.5	+0.3
PB15				IAML		08 34 30.8	
	comp=Z,10µm,1.2s						
PB10	IPOC Station P	3.52	178		Pn	08 33 30.4	-1.2
PB10	IPOC Station P	3.52	178	iP	Pn	08 33 30.3	-1.2
PB10				IAML		08 34 51.1	
	comp=Z,1µm,1.3s						
LPAZ	La Paz	4.41	34	Pn	Pn	08 33 48.6	+4.4
	comp=Z,3.8nm,0.3s,baz=178,slow=2.9,SNR=116						
LPAZ				LR	LR	08 35 22.0	
	comp=Z,741nm,22.0s,baz=202,slow=40						
LPAZ	La Paz	4.41	34	P	Pn	08 33 48.0	+3.7
LPAZ	La Paz	4.41	34		Pn	08 33 48.0	+3.7
LPAZ	La Paz	4.41	34	eP	Pn	08 33 43.6	-0.7
PB14	IPOC Station P	4.63	177	iP	Pn	08 33 45.6	-1.5
PB14				IAML		08 35 16.3	
	comp=Z,2µm,0.9s						
GO02	Mina Guanaco	5.26	169		Pn	08 33 55.2	-0.5
YJA	Yavi	5.32	115	iP	Pn	08 34 01.0	+4.4
YJA				IAML		08 35 17.8	
	comp=Z,300nm,3.4s						
HJA	Humahuaca	5.89	124	iP	Pn	08 34 09.6	+5.2
HJA				IAML		08 35 55.2	

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       comp=Z,187nm,1.7s
AZAP   Zapla               6.72 130  i P    Pn      08 34 18.7 +3.0
AZAP                                 IAML           08 36 28.4
       comp=Z,109nm,3.3s
GO03   Copiap              7.59 177         Pn      08 34 25.5 -2.0
VCA    Vinchina            9.01 166  i P    Pn      08 34 47.4 +0.3
NNA    Nana                9.89 323  Pn     Pn      08 34 59.3 +0.2
       comp=Z,3.2nm,0.3s,baz=173,slow=11,SNR=6.8
NNA                                  Sn     Sn      08 36 49.6 -0.3
       comp=Z,5.3nm,0.3s,baz=211,slow=12,SNR=5.0
NNA    Nana                9.89 323⇑ eP     Pn      08 34 59.1  0.0
NNA    Nana                9.89 323         Pn      08 34 57.2 -1.9
SIV    San Ignacio         9.99  68  Pn     Pn      08 34 59.6 -0.8
       comp=Z,2.4nm,0.3s,baz=262,slow=12,SNR=98
GO04   Tololo Observa     10.15 180         Pn      08 35 00.1 -2.7
CFA    Coronel Fontan     11.79 170  Pn     Pn      08 35 23.4 -1.7
       comp=Z,2.2nm,0.3s,baz=352,slow=16,SNR=25
CFA                                  Sn     Sn      08 37 37.1 +0.7
       comp=Z,0.6nm,0.3s,baz=356,slow=16,SNR=2.1
CFA                                  LR     LR      08 39 41.3
       comp=Z,3µm,19.3s,baz=322,slow=36
ROC1   El Roble           12.95 181  Pn     Pn      08 35 36.5 -4.6
PEL    Peldehue           13.11 180  P      Pn      08 35 41.0 -2.1
PEL    Peldehue           13.11 180  Pn     Pn      08 35 41.0 -2.1
SAML   Samuel             13.16  35  P      Pn      08 35 42.1 -1.7
SAML   Samuel             13.16  35         Pn      08 35 42.0 -1.7
SAML   Samuel             13.16  35  eP     Pn      08 35 43.0 -0.8
CPUP   Villa Florida      13.83 120  Pn     Pn      08 35 53.2 +0.4
       comp=Z,0.3nm,0.3s,baz=302,slow=12,SNR=11
CPUP                                 Sn     Sn      08 38 22.4 -3.8
       comp=Z,0.0nm,0.3s,baz=17,slow=11,SNR=1.6
CPUP                                 LR     LR      08 41 58.9
       comp=Z,2µm,18.3s,baz=299,slow=41
CPUP   Villa Florida      13.83 120  P      Pn      08 35 54.5 +1.7
CPUP   Villa Florida      13.83 120  Pn     Pn      08 35 54.5 +1.7
CPUP   Villa Florida      13.83 120  eP     Pn      08 35 54.5 +1.7
AQDB   Aquidauana         14.10  95  eP     Pn      08 35 56.9 +0.3
ATAH   Atahualpa          14.78 329  Pn     Pn      08 36 06.7 +0.3
       comp=Z,0.5nm,0.3s,baz=140,slow=14,SNR=9.5
SALV   Santo Antonio      14.85  77  eP     Pn      08 36 06.8  0.0
GO05   Huala              15.01 184  Pn     Pn      08 36 08.1 -0.9
GO05                                 IAmb   IAmb    08 36 17.4
       comp=Z,86nm,0.9s
ITQB   Itaqui             16.01 130  eP     Pn      08 36 22.9 +1.0
C2SB   Chapadao do Su     16.91  89  eP     Pn      08 36 34.1 +0.6
CLDB   Colider            16.98  60  eP     Pn      08 36 33.9 -0.5
TRCB   Terra Rica         17.07 103  eP     Pn      08 36 35.3 -0.2
PTGB   Pitanga            17.88 109  eP     Pn      08 36 45.2 -0.4
PCMB   Pacaembu           18.26  99  eP     Pn      08 36 49.5 -0.8
ARAG   Araguaiana, MT     18.48  80  eP     P       08 36 51.9 -1.0
ITAB   Concordia          18.48 117  eP     Pn      08 36 53.1 +0.2
LPA    La Plata           18.68 145  eP     P       08 36 42.8  -12
LPA                                  PPP    PPP     08 37 12.9
LPA                                  S      Sn      08 40 13.1  -11
LPA                                  SS     SnSn    08 40 40.3 +2.4
LPA                                  PCP    PcP     08 41 29.9 +6.9
LPA                                  PKIKP  PKiKP   08 49 12.9 -0.9
CPSB   Cacapava Do Su     18.74 127  eP     Pn      08 36 55.9 -0.1
ITRB   Iturama            19.15  93  eP     P       08 37 00.4 +0.2
PLTB   Pedras Altas       19.33 131  eP     Pn      08 37 02.8 -0.3
GO06   Curarrehue         19.55 182  P      Pn      08 37 06.1 +0.2
FRTB   Fartura            19.93 103  eP     P       08 37 09.5 +0.7
OGAUY  Aigu               20.14 139  eP     P       08 37 11.4 +0.6
CNLB   Canela             20.28 121  eP     P       08 37 13.1 +0.6
PLCA   Paso Flores        20.69 180  P      Pn      08 37 18.4 -0.8
       comp=Z,112nm,0.9s,baz=21,slow=12,SNR=134
PLCA                                 LR     LR      08 45 53.6
       comp=Z,1µm,18.3s,baz=43,slow=38
PLCA   Paso Flores        20.69 180  P      Pn      08 37 18.6 -0.6
PLCA                                 pmax   pmax
       comp=Z,159nm,1.1s
PLCA   Paso Flores        20.69 180  P      Pn      08 37 18.6 -0.7
PLCA                                 IAmb   IAmb    08 37 23.8
       comp=Z,159nm,1.1s
PLCA   Paso Flores        20.69 180  eP     Pn      08 37 18.8 -0.4
BB19B  Bebedouro          20.80  97  eP     P       08 37 16.0 -2.2
IPMB   Ipameri, GO        21.36  88  eP     P       08 37 24.0 -0.4
RCLB   Rio Claro- Sao     21.74 101  eP     P       08 37 27.6 -0.7
PTGA   Pitinga            21.83  30  P      P       08 37 27.1 -2.2
       comp=Z,37nm,0.7s,baz=211,slow=12,SNR=27
PTGA   Pitinga            21.83  30  P      P       08 37 27.8 -1.4
PTGA                                 IAmb   IAmb    08 37 35.8
       comp=Z,88nm,1.1s
PTGA   Pitinga            21.83  30  eP     P       08 37 28.4 -0.8
SPB    Sao Paulo          21.91 104  eP     P       08 37 30.2 +0.2
FLOC   Florencia          21.97 347  eP     P       08 37 30.7 -0.1
FLOC   Florencia          21.97 347  P      P       08 37 31.3 +0.5
BDFB   Brasilia           22.03  82  P      P       08 37 29.8 -1.7
       comp=Z,4.9nm,0.4s,baz=246,slow=9.9,SNR=11
BDFB                                 LR     LR      08 48 00.4
       comp=Z,1µm,19.3s,baz=270,slow=42
BDFB   Brasilia           22.03  82  P      P       08 37 29.8 -1.7
BDFB                                 pmax   pmax
       comp=Z,38nm,1.0s
BDFB   Brasilia           22.03  82  P      P       08 37 29.8 -1.7
GCUF   Volcan Galeras     22.05 342  eP     P       08 37 34.5 +2.3
MACC   Macarena, Meta     22.20 352  eP     P       08 37 29.4 -3.8
CRUC   La Cruz            22.27 343  eP     P       08 37 37.1 +2.8
VAO    Valinhos           22.29 102  eP     P       08 37 33.1 -1.2
GARC   Garzon, Huila      22.52 347  eP     P       08 37 37.0 +0.1
SOTA   Rioblanco          22.72 345  eP     P       08 37 40.2 +0.8
PCON   Cinco Dias         22.86 345  eP     P       08 37 42.5 +1.7
PARB   Paraibuna          23.55 103  eP     P       08 37 47.5 +0.3
GR1C   Gorgona, Isla      23.98 341  eP     P       08 37 51.6 +0.2
PTGC   Puerto Gaitan,     24.07 357  eP     P       08 37 49.6 -2.5
VILC   Villavicencio,     24.12 353  eP     P       08 37 52.0 -0.8
ORTC   Ortega, Tolima     24.15 349  eP     P       08 37 52.5 -0.5
BSCB   Bom Sucesso        24.31  97  eP     P       08 37 53.8 -0.7
YOTC   Yotoco, Valle      24.45 346  eP     P       08 37 55.6 -0.2
CHIC   Chingaza           24.63 353  eP     P       08 37 56.9 -0.9
ANIL   Santa Ana          24.75 349  eP     P       08 37 58.5 -0.2
ANIL                                 eP     P       08 38 01.4 +2.7
ROSC   El Rosal           24.92 351  P      P       08 38 02.3 +1.9
       comp=Z,22nm,0.7s,baz=131,slow=9.7,SNR=9.3
ROSC                                 LR     LR      08 48 29.0
       comp=Z,2µm,20.2s,baz=195,slow=38
ROSC   El Rosal           24.92 351  eP     P       08 38 01.5 +1.1
ROSC   El Rosal           24.92 351  P      P       08 37 59.1 -1.3
ROSC                                 IAmb   IAmb    08 38 12.0
       comp=Z,41nm,0.9s
SMTB   Santa Maria do     24.93  67  eP     P       08 37 59.3 -0.8
RREF   El Recreo          25.14 349  eP     P       08 38 04.4 +1.7
PLMC   San Jos del P      25.33 347  eP     P       08 38 03.5 -0.2
GUY2C  Guyana, Caldas     25.46 349  eP     P       08 38 06.4 +1.0
JANB   Januaria           25.63  83  eP     P       08 38 05.6 -0.9
PIZC   Pizarro, Choco     25.63 345  eP     P       08 38 07.4 +1.0
SPBC   San Pablo de B     25.68 352  eP     P       08 38 05.2 -1.8
NORC   Norcasia           25.71 350  eP     P       08 38 06.1 -1.0
RUSC   La Rusia           25.81 355  eP     P       08 38 06.5 -2.1
RUSC   La Rusia           25.81 355  P      P       08 38 08.9 +0.3
CBOC   Ciudad Bolivar     26.20 348  eP     P       08 38 11.8 +0.1
TAMC   Tame, Arauca       26.27 358  eP     P       08 38 11.5 -0.7
HELC   Santa Helena       26.43 349  eP     P       08 38 12.3 -1.8
BARC   Barichara          26.51 354  eP     P       08 38 14.7 +0.1
PTBC   PUERTO BERRIO,     26.61 352  eP     P       08 38 13.0 -2.2
SOLC   Bahia Solano       26.86 345  eP     P       08 38 19.1 +1.6
PAMC   Pamplona, Colo     27.21 356  eP     P       08 38 20.2 -1.0
DBBC   Dabeiba            27.37 348  eP     P       08 38 22.1 -0.1
ZARC   Zaragoza, Cauc     27.60 351  eP     P       08 38 22.8 -1.4
SJMB   Sao Joao De Ma     27.87  92  eP     P       08 38 25.4 -1.3
UREC   San Jos de Ur      27.96 350  eP     P       08 38 26.2 -1.2
BSFB   Barra de Sao F     28.17  93  eP     P       08 38 29.8 +0.5
SDV    Santo Domingo      28.68   0  P      P       08 38 33.2 -0.8
       comp=Z,12nm,1.0s,baz=172,slow=13,SNR=5.7
SDV                                  LR     LR      08 51 29.2
       comp=Z,2µm,18.1s,baz=190,slow=40
SDV    Santo Domingo      28.68   0  P      P       08 38 33.7 -0.3
SDV    Santo Domingo      28.68   0  eP     P       08 38 33.0 -1.1
SMLC   San Martn de       28.79 353  eP     P       08 38 31.0 -3.8
ARGC   Ariguani, Magd     29.85 353  eP     P       08 38 42.4 -1.8
SJCC   San Jacinto, C     30.01 351  eP     P       08 38 43.2 -2.5
NBIT   Itapeh - BA        30.23  85  eP     P       08 38 47.6  0.0
BCIP   Isla Barro Col     30.32 342  P      P       08 38 46.8 -1.6
BCIP                                 pmax   pmax
       comp=Z,67nm,1.5s
BCIP   Isla Barro Col     30.32 342  P      P       08 38 46.8 -1.6
BCIP                                 IAmb   IAmb    08 39 00.0
       comp=Z,67nm,1.5s
PLCV   Puerto La Cruz     30.55  12  P      P       08 38 51.5 +1.1
PCRV   Puerto La Cruz     30.55  12  P      P       08 38 51.5 +1.1
       comp=Z,7.2nm,0.6s,baz=210,slow=14,SNR=4.1
MDP    Montagnes des      30.61  37  P      P       08 38 50.0 -0.9
       comp=Z,24nm,0.9s,baz=207,slow=7.4,SNR=7.1
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MDP                                  LR     LR      08 51 53.1
       comp=Z,936nm,21.4s,baz=214,slow=38
NBPN   Ponto Novo - B     30.73  77  eP     P       08 38 51.5 -0.7
NBCP   Cabaceiras do      31.10  81  eP     P       08 38 53.9 -1.5
NBCP                                 epP    sP      08 39 01.0 -0.4
NBPS   Pedro II - PI      32.44  65  eP     P       08 39 06.9 -0.2
NBLA   Lagarto - SE       32.90  79  eP     P       08 39 09.6 -1.6
GO10   Punta Arenas       33.12 180  P      P       08 39 11.5 -1.1
EFI    East Falkland      33.15 166 deP     P       08 39 13.8 +0.9
EFI                                  pmax   pmax
       comp=Z,64nm,0.9s
EFI    East Falkland      33.15 166  P      P       08 39 11.9 -1.0
JTS    Las Juntas de      33.19 334  P      P       08 39 16.0 +2.4
       comp=Z,8.2nm,0.9s,baz=150,slow=4.3,SNR=6.1
JTS                                  LR     LR      08 53 25.6
       comp=Z,466nm,18.2s,baz=210,slow=38
JTS    Las Juntas de      33.19 334⇓ eP     P       08 39 15.6 +2.0
JTS                                  pmax   pmax
       comp=Z,17nm,1.0s
JTS    Las Juntas de      33.19 334  P      P       08 39 12.4 -1.2
NBTA   Tacaratu-PE        33.32  76  eP     P       08 39 13.7 -1.2
NBMA   Muriti-CE          33.40  72  eP     P       08 39 14.7 -0.9
NBPB   Pedra_Branca-C     33.48  69  eP     P       08 39 15.8 -0.5
NBMO   Morrinhos-CE       34.19  65  eP     P       08 39 22.2 -0.2
NBAN   Anadia - AL        34.76  78  eP     P       08 39 26.4 -0.9
MCLT   Moule a Chique     34.83  17  P      P       08 39 28.6 +0.8
USHA   Ushuaia            34.84 178  P      P       08 39 29.1 +1.6
       comp=Z,32nm,1.0s,baz=280,slow=9.0,SNR=14
NBLI   Livramento-PB      35.03  74  eP     P       08 39 29.4 -0.4
NBLI                                 epP    sP      08 39 36.4 +0.5
NBCL   Cascavel-CE        35.24  68  eP     P       08 39 30.9 -0.6
NBPA   Parau_RN           35.58  71  eP     P       08 39 33.4 -1.0
RCBR   Riachuelo          36.62  72  P      P       08 39 43.1 -0.3
       comp=Z,16nm,0.6s,baz=234,slow=7.3,SNR=12
RCBR   Riachuelo          36.62  72  P      P       08 39 43.4  0.0
RCBR                                 pmax   pmax
       comp=Z,21nm,0.8s
RCBR   Riachuelo          36.62  72  P      P       08 39 43.4  0.0
RCBR   Riachuelo          36.62  72  eP     P       08 39 43.4  0.0
RCBR                                 epP    sP      08 39 51.1 +1.6
NBPV   Pedro Velho        36.92  73  eP     P       08 39 45.5 -0.3
TGUH   Tegucigalpa,Un     37.54 333  P      P       08 39 49.9 -1.3
TGUH                                 IAmb   IAmb    08 39 53.6
       comp=Z,47nm,1.0s
ICMP   Isla Caja de M     37.85   6  P      P       08 39 53.1 -0.5
MLPR   Magueyes Islan     37.88   6  P      P       08 39 52.6 -1.3
MLPR                                 IAmb   IAmb    08 40 05.1
       comp=Z,50nm,0.9s
CRPR   Cabo Rojo, PR      37.91   6  P      P       08 39 53.5 -0.5
CRPR                                 IAmb   IAmb    08 39 58.2
       comp=Z,73nm,1.1s
OBIP   Obispado Ponce     38.00   6  P      P       08 39 54.3 -0.5
OBIP                                 IAmb   IAmb    08 40 01.9
       comp=Z,76nm,1.4s
PDPR   Patillas Dam,      38.04   7  P      P       08 39 54.4 -0.7
PDPR                                 IAmb   IAmb    08 40 00.7
       comp=Z,49nm,1.0s
SJG    San Juan           38.12   7  P      P       08 39 54.1 -1.7
       comp=Z,22nm,0.8s,baz=259,slow=4.0,SNR=7.7
SJG    San Juan           38.12   7  P      P       08 39 55.3 -0.5
SJG                                  pmax   pmax
       comp=Z,46nm,1.0s
SJG    San Juan           38.12   7  P      P       08 39 55.3 -0.5
SJG                                  IAmb   IAmb    08 40 01.4
       comp=Z,46nm,0.9s
GCPR   Guaynabo City      38.32   7  P      P       08 39 56.8 -0.7
GCPR                                 IAmb   IAmb    08 40 03.4
       comp=Z,28nm,0.7s
CUPR   Culebra, Puert     38.42   8  P      P       08 39 57.5 -0.9
CUPR                                 IAmb   IAmb    08 40 03.4
       comp=Z,63nm,1.2s
EMPR   Esperanza - Ma     38.44   6  P      P       08 39 58.3 -0.2
STVI   Saint Thomas       38.51   9  P      P       08 39 58.2 -0.9
SMRT   St. Maarten        38.53  12  P      P       08 39 56.4 -2.9
SMRT                                 IAmb   IAmb    08 40 08.5
       comp=Z,52nm,0.8s
SC01   Santiago de lo     39.16 360  P      P       08 40 02.1 -2.5
SC01                                 IAmb   IAmb    08 40 06.0
       comp=Z,116nm,1.3s
APG    El Apazote         39.82 329  P      P       08 40 11.5 +1.0
       comp=Z,32nm,1.1s,baz=182,slow=7.0,SNR=11
CCIG   Comitan            41.73 328  P      P       08 40 24.8 -1.3
TEIG   Tepich             43.50 336  P      P       08 40 39.8 -0.5
TEIG                                 IAmb   IAmb    08 40 42.1
       comp=Z,80nm,1.2s
CMIG   Matias Romero      43.83 326  P      P       08 40 43.5 +0.5
       comp=Z,16nm,1.0s,baz=131,slow=5.2,SNR=13
PMSA   Palmer Station     44.99 176  P      P       08 40 54.7 +3.0
       comp=Z,25nm,0.8s,baz=351,slow=2.8,SNR=3.5
PMSA   Palmer Station     44.99 176  eP     P       08 40 49.9 -1.8
PMSA                                 epP    sP      08 40 58.0 +0.2
TLIG   Tlapa              46.26 322  P      P       08 41 00.0 -2.4
TLIG                                 IAmb   IAmb    08 41 05.8
       comp=Z,36nm,1.1s
TIGA   Tifton             52.59 346  P      P       08 41 50.6 +0.1
       baz=165
BRAL   Brewton            53.22 342  P      P       08 41 55.7 +0.6
       baz=161
NHSC   New Hope           53.55 350  P      P       08 41 58.6 +1.1
       baz=169
Z58A   St. Stephen        53.72 351  P      P       08 41 59.5 +0.7
       baz=169
Z57A   Bowman             53.83 350  P      P       08 42 00.2 +0.7
       baz=168
Z56A   Williston          53.97 349  P      P       08 42 00.8 +0.3
       baz=168
152A   Waverly Hall       54.04 345  IAmb   IAmb    08 42 02.4
       comp=Z,20nm,0.9s
Y60A   Bolivia            54.16 352  P      P       08 42 02.9 +1.0
       baz=171
Y58A   Scranton           54.26 351  P      P       08 42 03.8 +1.2
       baz=170
Y56A   Pelion             54.41 349  P      P       08 42 03.8  0.0
       baz=168
GOGA   Godfrey            54.47 347  P      P       08 42 04.4 +0.2
       baz=165
Y57A   Sumter             54.48 350  IAmb   IAmb    08 42 06.4
       comp=Z,36nm,0.9s
Y57A   Sumter             54.48 350  P      P       08 42 04.8 +0.5
       baz=169
Y55A   Saluda             54.66 349  P      P       08 42 06.0 +0.5
       baz=167
X60A   Albert Glenn T     54.69 353  P      P       08 42 05.7  0.0
       baz=172
X59A   McDuffie Farm,     54.76 352  P      P       08 42 06.8 +0.5
       baz=171
X58A   Rowland            54.85 351  P      P       08 42 07.2 +0.3
       baz=170
Z50A   Ashland            54.89 344  P      P       08 42 05.9 -1.4
Z50A                                 IAmb   IAmb    08 42 08.0
       comp=Z,32nm,1.1s
Z50A   Ashland            54.89 344  P      P       08 42 06.8 -0.5
       baz=162,SNR=5.6
LRAL   Lakeview Retre     54.96 343  P      P       08 42 06.1 -1.7
LRAL                                 IAmb   IAmb    08 42 12.9
       comp=Z,37nm,1.4s
LRAL   Lakeview Retre     54.96 343  P      P       08 42 07.2 -0.6
       baz=161
HODGE  Hodges             55.02 348  P      P       08 42 08.2 +0.1
Y52A   Lilburn            55.03 346  P      P       08 42 08.5 +0.2
       baz=165
X56A   White Oak          55.05 350  P      P       08 42 08.4 +0.1
       baz=168
BIRD   Birdtown, Kers     55.11 350  P      P       08 42 09.0 +0.2
W60A   Pink Hill          55.13 353  P      P       08 42 09.4 +0.4
       baz=172
X55A   Gracelyn & Ava     55.13 349  P      P       08 42 09.4 +0.4
       baz=167
W61A   Ground Anchor      55.17 354  P      P       08 42 09.9 +0.7
       baz=173
HKT    Hockley            55.22 333  P      P       08 42 10.7 +1.1
HKT                                  pmax   pmax
       comp=Z,33nm,1.2s
HKT    Hockley            55.22 333  P      P       08 42 10.7 +1.1
HKT                                  IAmb   IAmb    08 42 12.1
       comp=Z,33nm,1.2s
W58A   Raeford            55.29 351  P      P       08 42 10.6 +0.5
       baz=170,SNR=5.2
W59A   Clinton            55.33 352  P      P       08 42 11.0 +0.7
       baz=171
X54A   Belton             55.35 348  P      P       08 42 10.9 +0.4
       baz=167
833A   Chaparral WMA,     55.45 329  P      P       08 42 10.8 -0.6
833A                                 IAmb   IAmb    08 42 13.3
       comp=Z,35nm,1.1s
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833A   Chaparral WMA,     55.45 329  P      P       08 42 11.8 +0.4
       baz=147,SNR=6.0
V62A   Hyde County Ai     55.46 355  P      P       08 42 11.5 +0.2
       baz=174
X53A   Estanollee         55.49 347  P      P       08 42 11.7 +0.1
       baz=166
W57A   Gilead             55.53 351  P      P       08 42 12.6 +0.8
W57A                                 IAmb   IAmb    08 42 14.3
       comp=Z,25nm,1.1s
W57A   Gilead             55.53 351  P      P       08 42 12.0 +0.2
       baz=169
W56A   Indian Trail       55.60 350  P      P       08 42 12.2 -0.2
       baz=169
KMSC   Kings Mountain     55.74 349  IAmb   IAmb    08 42 15.3
       comp=Z,25nm,1.1s
KMSC   Kings Mountain     55.74 349  P      P       08 42 13.0 -0.3
       baz=168
V60A   Jim Taylor Roa     55.78 354  P      P       08 42 14.1 +0.4
       baz=172
W54A   Cherokee Point     55.83 349  P      P       08 42 14.6 +0.6
       baz=167
X51A   Calhoun            55.89 346  P      P       08 42 14.4  0.0
       baz=164
V59A   Middlesex          55.89 353  P      P       08 42 15.0 +0.5
       baz=171
V58A   Windy Hill, Pi     56.03 352  P      P       08 42 15.7 +0.3
       baz=170
W52A   Murphy             56.19 347  IAmb   IAmb    08 42 17.7
       comp=Z,26nm,1.1s
V57A   Coltrane Farms     56.22 351  P      P       08 42 16.5 -0.3
       baz=170
V56A   Mocksville         56.25 350  P      P       08 42 17.1 +0.1
       baz=169
U61A   Possum Corner      56.27 354  P      P       08 42 17.2 +0.1
       baz=174
X48A   Hartselle          56.31 344  P      P       08 42 16.7 -0.8
X48A                                 IAmb   IAmb    08 42 18.8
       comp=Z,65nm,1.5s
NATX   Nacogdoches        56.34 335  P      P       08 42 18.3 +0.6
       baz=153
V55A   Taylorsville       56.41 350  P      P       08 42 18.2  0.0
       baz=168
U59A   Littleton          56.42 353  P      P       08 42 18.1 -0.1
       baz=172
V54A   Nebo               56.46 349  P      P       08 42 18.7 +0.2
       baz=167,SNR=6.4
U60A   Pendleton          56.47 354  P      P       08 42 18.3 -0.2
       baz=173
U58A   Oxford             56.55 352  P      P       08 42 19.6 +0.4
       baz=171
W50A   Signal Mountai     56.60 346  P      P       08 42 19.6 +0.1
W50A                                 IAmb   IAmb    08 42 20.3
       comp=Z,42nm,1.2s
U57A   Blanch             56.69 352  P      P       08 42 20.0 -0.1
       baz=170
435B   Jarrell            56.70 332  P      P       08 42 20.3  0.0
       baz=150
TKL    Tuckaleechee C     56.70 347  P      P       08 42 19.9 -0.3
       comp=Z,18nm,1.0s,baz=158,slow=10,SNR=9.1
TKL    Tuckaleechee C     56.70 347  P      P       08 42 19.9 -0.3
TKL                                  pmax   pmax
       comp=Z,29nm,1.1s
TKL    Tuckaleechee C     56.70 347  IAmb   IAmb    08 42 21.5
       comp=Z,29nm,1.1s
SWET   Sewanee            56.76 345  P      P       08 42 20.4 -0.3
SWET                                 IAmb   IAmb    08 42 21.3
       comp=Z,23nm,1.0s
U56A   King               56.76 351  IAmb   IAmb    08 42 23.1
       comp=Z,52nm,1.2s
U56A   King               56.76 351  P      P       08 42 20.9 +0.3
       baz=169
V52A   Sevierville        56.84 347  P      P       08 42 21.4 +0.2
V52A                                 IAmb   IAmb    08 42 22.1
       comp=Z,47nm,1.1s
Z41A   Richland Creek     56.99 338  P      P       08 42 23.0 +0.7
       baz=155,SNR=5.9
T59A   Double "B" Far     57.01 353  P      P       08 42 22.6 +0.3
T59A                                 IAmb   IAmb    08 42 24.0
       comp=Z,52nm,1.1s
T59A   Double "B" Far     57.01 353  P      P       08 42 22.6 +0.3
       baz=172,SNR=5.2
U55A   TA2, Sparta        57.02 350  P      P       08 42 22.4 -0.2
       baz=168
OXF    Oxford             57.03 342  P      P       08 42 22.0 -0.6
       baz=159,SNR=5.2
T58A   Grand View Acr     57.09 353  P      P       08 42 23.6 +0.6
       baz=171,SNR=6.7
U54A   Nelsons Funny      57.16 349  P      P       08 42 23.6  0.0
U54A                                 IAmb   IAmb    08 42 25.3
       comp=Z,51nm,1.1s
U54A   Nelsons Funny      57.16 349  P      P       08 42 23.5  0.0
       baz=168
T57A   Hurt               57.24 352  P      P       08 42 23.8 -0.2
T57A                                 IAmb   IAmb    08 42 25.8
       comp=Z,38nm,1.1s
T57A   Hurt               57.24 352  P      P       08 42 24.5 +0.5
       baz=170
T56A   Rocky Mt           57.38 351  P      P       08 42 25.6 +0.6
       baz=170
JCT    Junction City      57.44 330  P      P       08 42 26.0 +0.3
       baz=147,SNR=5.4
V48A   Smith Brothers     57.48 344  IAmb   IAmb    08 42 27.0
       comp=Z,31nm,1.1s
X43A   Marvell            57.49 340  P      P       08 42 26.0 +0.2
       baz=157
TZTN   Tazewell           57.51 348  P      P       08 42 25.8 -0.2
TZTN                                 IAmb   IAmb    08 42 26.8
       comp=Z,39nm,1.3s
TZTN   Tazewell           57.51 348  P      P       08 42 25.7 -0.2
       baz=166
T55A   Pulaski            57.58 350  P      P       08 42 27.2 +0.8
       baz=169,SNR=5.1
T54A   Tazewell           57.65 350  P      P       08 42 27.0  0.0
       baz=168
WHTX   Lake Whitney,      57.68 333  IAmb   IAmb    08 42 29.7
       comp=Z,55nm,1.4s
WHTX   Lake Whitney,      57.68 333  P      P       08 42 28.2 +1.0
       baz=150
CLTN   Cedars of Leba     57.69 345  IAmb   IAmb    08 42 32.2
       comp=Z,35nm,1.3s
S58A   Poland Farm, P     57.70 353  P      P       08 42 27.9 +0.7
       baz=172
T53A   Wise               57.74 349  P      P       08 42 27.4 -0.3
       baz=167
S59A   Mechanicsville     57.76 354  P      P       08 42 28.2 +0.6
       baz=173
Z38A   Mt. Pleasant       57.79 336  IAmb   IAmb    08 42 30.1
       comp=Z,37nm,1.0s
T52A   Hallie             57.95 348  P      P       08 42 27.9 -1.1
       baz=166
S56A   Natural Bridge     57.95 352  P      P       08 42 28.8 -0.2
       baz=170
S57A   Dark Hollow, R     57.95 352  P      P       08 42 29.3 +0.3
       baz=171
U49A   Red Boiling Sp     57.96 346  P      P       08 42 28.9 -0.2
U49A                                 IAmb   IAmb    08 42 36.2
       comp=Z,17nm,0.8s
T51A   Gray               58.00 348  P      P       08 42 29.2 -0.2
       baz=165
R58B   Mineral            58.02 353  IAmb   IAmb    08 42 31.5
       comp=Z,30nm,1.1s
R58B   Mineral            58.02 353  P      P       08 42 28.8 -0.7
       baz=172
WVT    Waverly            58.11 344  P      P       08 42 29.6 -0.5
WVT                                  pmax   pmax
       comp=Z,29nm,1.1s
WVT    Waverly            58.11 344  P      P       08 42 29.6 -0.5
WVT                                  IAmb   IAmb    08 42 30.7
       comp=Z,29nm,1.1s
WVT    Waverly            58.11 344  P      P       08 42 29.7 -0.5
       baz=161
X40A   Basin Creek Fa     58.11 339  P      P       08 42 28.8 -1.3
       baz=155
S55A   Lewisburg          58.17 351  P      P       08 42 31.0 +0.4
       baz=169
UALR   University of      58.20 339  IAmb   IAmb    08 42 32.1
       comp=Z,26nm,1.1s
T50A   Nancy              58.24 347  P      P       08 42 30.8 -0.2
       baz=164
S54A   Dingess, Beckl     58.33 350  P      P       08 42 31.7  0.0
       baz=168
S53A   Williamson         58.35 349  P      P       08 42 31.5 -0.3
       baz=167
R58A   Rapidan            58.37 353  P      P       08 42 32.1 +0.2
       baz=172
MIAR   Mount Ida          58.42 338  P      P       08 42 32.8 +0.4
MIAR                                 pmax   pmax
       comp=Z,42nm,1.2s
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MIAR	**Mount Ida**	**58.42**	**338**	P	**P**	**08 42 32.8**	**+0.4**
MIAR				IAmb	IAmb	08 42 33.9	
	comp=Z,42nm,1.1s						
MIAR	**Mount Ida**	**58.42**	**338**	P	**P**	**08 42 32.7**	**+0.3**
	baz=155,SNR=14						
R57A	**Stanardsville**	**58.43**	**353**	P	**P**	**08 42 32.8**	**+0.4**
	baz=171						
TXAR	**Lajitas Array**	**58.43**	**326**	P	**P**	**08 42 33.1**	**+0.5**
	comp=Z,7.5nm,0.9s,baz=147,slow=8.4,SNR=48						
TXAR				LR	LR	09 07 19.7	
	comp=Z,224nm,18.0s,baz=0.0,slow=36						
TXAR	**Lajitas Array**	**58.43**	**326**	P	**P**	**08 42 32.8**	**+0.1**
TXAR	**Lajitas Array**	**58.43**	**326**	P	**P**	**08 42 32.8**	**+0.1**
TX31	**Lajitas Ar. Si**	**58.43**	**326**	P	**P**	**08 42 33.1**	**+0.5**
TX32	**Lajitas Array**	**58.43**	**326**	P	**P**	**08 42 33.1**	**+0.5**
TX32					**P**	**08 42 33.6**	**+1.0**
T49A	**Edmonton**	**58.47**	**346**	P	**P**	**08 42 32.2**	**-0.5**
T49A	**Edmonton**	**58.47**	**346**	P	**P**	**08 42 32.2**	**-0.5**
	baz=164,SNR=12						
S52A	**Salyersville**	**58.52**	**349**	P	**P**	**08 42 32.1**	**-0.9**
	baz=166						
W41B	**Gary Mavity, V**	**58.54**	**339**	P	**P**	**08 42 33.6**	**+0.5**
W41B	**Gary Mavity, V**	**58.54**	**339**	P	**P**	**08 42 32.9**	**-0.2**
	baz=156,SNR=5.3						
S51A	**Beattyville**	**58.58**	**348**	P	**P**	**08 42 32.9**	**-0.5**
	baz=166						
R55A	**Marlinton**	**58.62**	**351**	P	**P**	**08 42 34.7**	**+1.0**
R55A				IAmb	IAmb	08 42 35.9	
	comp=Z,43nm,1.3s						
R55A	**Marlinton**	**58.62**	**351**	P	**P**	**08 42 33.4**	**-0.4**
	baz=170						
R56A	**Bull Pasture M**	**58.65**	**352**	P	**P**	**08 42 34.5**	**+0.6**
	baz=170						
R54A	**Victor**	**58.65**	**351**	P	**P**	**08 42 34.4**	**+0.4**
	baz=169						
S50A	**Richmond**	**58.78**	**347**	P	**P**	**08 42 34.5**	**-0.3**
	baz=165,SNR=8.1						
R53A	**Hurricane**	**58.95**	**350**	P	**P**	**08 42 36.2**	**+0.2**
	baz=168						
Q58A	**Fox Den Farm,**	**58.97**	**354**	P	**P**	**08 42 37.0**	**+0.9**
	baz=172						
LCAR	**Lake Charles**	**59.01**	**341**	IAmb	IAmb	08 42 37.1	
	comp=Z,20nm,1.1s						
S49A	**Springfield**	**59.07**	**347**	P	**P**	**08 42 36.5**	**-0.3**
	baz=164						
R52A	**Catlettsburg**	**59.08**	**349**	P	**P**	**08 42 36.2**	**-0.6**
	baz=167						
W39A	**Magazine**	**59.08**	**338**	P	**P**	**08 42 37.5**	**+0.5**
W39A				IAmb	IAmb	08 42 39.0	
	comp=Z,32nm,1.1s						
W39A	**Magazine**	**59.08**	**338**	P	**P**	**08 42 37.5**	**+0.5**
	baz=155,SNR=7.4						
Q57A	**Strasburg**	**59.14**	**353**	P	**P**	**08 42 38.3**	**+1.0**
	baz=172,SNR=6.8						
FCAR	**Ozark Folk Cen**	**59.15**	**340**	IAmb	IAmb	08 42 38.0	
	comp=Z,22nm,1.2s						
ABTX	**Abilene, Hawle**	**59.17**	**332**	P	**P**	**08 42 38.3**	**+0.6**
ABTX				IAmb	IAmb	08 42 39.3	
	comp=Z,36nm,1.1s						
ABTX	**Abilene, Hawle**	**59.17**	**332**	P	**P**	**08 42 38.1**	**+0.4**
	baz=148,SNR=15						
R51A	**Hillsboro**	**59.22**	**348**	P	**P**	**08 42 37.8**	**0.0**
	baz=166						
Q56A	**Snyder Ridge,**	**59.24**	**352**	P	**P**	**08 42 39.2**	**+1.2**
Q56A	**Snyder Ridge,**	**59.24**	**352**	P	**P**	**08 42 39.0**	**+1.0**
	baz=171,SNR=8.9						
Q55A	**Buckhannon**	**59.31**	**352**	P	**P**	**08 42 39.3**	**+0.7**
	baz=170						
R50A	**Paris**	**59.34**	**348**	P	**P**	**08 42 38.3**	**-0.4**
	baz=165						
Q53A	**Leroy**	**59.40**	**350**	P	**P**	**08 42 38.5**	**-0.6**
	baz=168						
Q54A	**Coxs Mills**	**59.41**	**351**	P	**P**	**08 42 39.0**	**-0.1**
	baz=169						
PBMO	**Poplar Bluff**	**59.44**	**342**	IAmb	IAmb	08 42 45.1	
	comp=Z,53nm,1.4s						
P59A	**Jarrettsville**	**59.52**	**355**	P	**P**	**08 42 40.6**	**+0.7**
	baz=174,SNR=5.4						
P57A	**Homestead Farm**	**59.54**	**353**	P	**P**	**08 42 40.7**	**+0.7**
	baz=172						
Q52A	**Bidwell**	**59.62**	**350**	P	**P**	**08 42 40.4**	**-0.1**
	baz=167						
P60A	**Greenville**	**59.65**	**356**	P	**P**	**08 42 40.8**	**0.0**
	baz=175						
P56A	**Dayton Farm, R**	**59.66**	**353**	P	**P**	**08 42 42.4**	**+1.6**
	baz=171						
WCI	**Wyandotte Cave**	**59.72**	**346**	P	**P**	**08 42 41.3**	**0.0**
WCI				pmax	pmax		
	comp=Z,42nm,1.4s						
WCI	**Wyandotte Cave**	**59.72**	**346**	P	**P**	**08 42 41.3**	**0.0**
WCI				IAmb	IAmb	08 42 41.8	
	comp=Z,42nm,1.4s						
WCI	**Wyandotte Cave**	**59.72**	**346**	P	**P**	**08 42 41.0**	**-0.3**
	baz=163						
P55A	**Reedsville**	**59.78**	**352**	P	**P**	**08 42 42.5**	**+0.7**
	baz=170						
U40A	**Yellville**	**59.81**	**339**	P	**P**	**08 42 41.8**	**-0.2**
	baz=156,SNR=9.1						
Q50A	**Georgetown**	**59.82**	**348**	P	**P**	**08 42 41.7**	**-0.3**
	baz=166						
Q51A	**Peebles**	**59.87**	**349**	P	**P**	**08 42 42.1**	**-0.3**
	baz=166						
MCWV	**Mont Chateau**	**59.94**	**352**	P	**P**	**08 42 42.7**	**0.0**
MCWV				IAmb	IAmb	08 42 45.0	
	comp=Z,17nm,1.0s						
MCWV	**Mont Chateau**	**59.94**	**352**	P	**P**	**08 42 42.5**	**-0.2**
	baz=170						
S44A	**Carbondale**	**59.96**	**343**	P	**P**	**08 42 43.0**	**0.0**
P54A	**Burton**	**59.97**	**351**	P	**P**	**08 42 43.5**	**+0.5**
	baz=169,SNR=6.2						
P53A	**Whipple**	**59.99**	**350**	P	**P**	**08 42 44.1**	**+0.9**
P53A				IAmb	IAmb	08 42 51.1	
	comp=Z,27nm,1.0s						
P53A	**Whipple**	**59.99**	**350**	P	**P**	**08 42 42.9**	**-0.3**
	baz=168						
HHAR	**Hobbs**	**60.11**	**338**	IAmb	IAmb	08 42 45.3	
	comp=Z,24nm,1.1s						
Q49A	**Aurora**	**60.16**	**347**	P	**P**	**08 42 43.8**	**-0.5**
	baz=165						
O59A	**Robesonia**	**60.19**	**355**	P	**P**	**08 42 45.2**	**+0.7**
	baz=174						
O57A	**Amberson**	**60.22**	**354**	P	**P**	**08 42 45.6**	**+0.9**
	baz=172						
P52A	**Corning**	**60.25**	**350**	P	**P**	**08 42 44.4**	**-0.5**
	baz=168						
Q48A	**North Vernon**	**60.26**	**347**	P	**P**	**08 42 44.4**	**-0.6**
	baz=164						
P51A	**Williamsport**	**60.27**	**349**	P	**P**	**08 42 44.4**	**-0.6**
	baz=167						
O56A	**Blue Knob Stat**	**60.38**	**353**	P	**P**	**08 42 46.8**	**+1.0**
	baz=172,SNR=7.0						
O55A	**Ligonier**	**60.41**	**352**	P	**P**	**08 42 46.7**	**+0.7**
	baz=171,SNR=7.5						
U38A	**Gravette**	**60.41**	**338**	IAmb	IAmb	08 42 47.3	
	comp=Z,23nm,1.2s						
TUL1	**Leonard**	**60.45**	**337**	P	**P**	**08 42 46.7**	**+0.3**
	baz=153,SNR=14						
N61A	**South Mountain**	**60.51**	**357**	P	**P**	**08 42 46.1**	**-0.6**
	baz=176						
P50A	**Jamestown**	**60.52**	**348**	P	**P**	**08 42 46.2**	**-0.6**
	baz=166						
WMOK	**Wichita Mounta**	**60.60**	**334**	P	**P**	**08 42 46.5**	**-0.9**
	baz=150						
P49A	**Miami Univ. Ec**	**60.63**	**348**	P	**P**	**08 42 46.7**	**-0.8**
	baz=165,SNR=5.3						
SSPA	**Standing Stone**	**60.67**	**354**	P	**P**	**08 42 47.2**	**-0.6**
SSPA				IAmb	IAmb	08 42 57.1	
	comp=Z,48nm,1.4s						
SSPA	**Standing Stone**	**60.67**	**354**	P	**P**	**08 42 47.6**	**-0.1**
	baz=172						
N60A	**Cedar Hill Far**	**60.67**	**356**	P	**P**	**08 42 47.5**	**-0.2**
	baz=175						
O52A	**Adamsville**	**60.67**	**350**	P	**P**	**08 42 47.3**	**-0.5**
	baz=168						
P48A	**Milroy**	**60.71**	**347**	P	**P**	**08 42 47.0**	**-1.1**
	baz=164						
O53A	**New Philadelph**	**60.71**	**351**	P	**P**	**08 42 48.0**	**0.0**
	baz=169						
N58A	**Sunbury**	**60.76**	**355**	P	**P**	**08 42 48.4**	**0.0**
N58A				IAmb	IAmb	08 42 50.3	
	comp=Z,41nm,1.1s						
N58A	**Sunbury**	**60.76**	**355**	P	**P**	**08 42 48.2**	**-0.1**
	baz=174						
N59A	**State Game Lan**	**60.76**	**356**	P	**P**	**08 42 48.5**	**+0.1**
	baz=174						
O51A	**Pataskala**	**60.83**	**350**	P	**P**	**08 42 48.3**	**-0.6**
	baz=167						
ODNJ	**Ogdensburg**	**60.85**	**357**	P	**P**	**08 42 49.6**	**+0.6**
ODNJ				IAmb	IAmb	08 42 50.5	
	comp=Z,24nm,1.2s						
CCM	**Cathedral Cave**	**60.87**	**342**	P	**P**	**08 42 49.7**	**+0.5**
CCM				pmax	pmax		
	comp=Z,28nm,1.2s						
CCM	**Cathedral Cave**	**60.87**	**342**	P	**P**	**08 42 49.7**	**+0.5**
CCM				IAmb	IAmb	08 42 55.0	
	comp=Z,28nm,1.1s						
CCM	**Cathedral Cave**	**60.87**	**342**	P	**P**	**08 42 48.6**	**-0.6**
	baz=158						
N55A	**Marion Center**	**60.93**	**353**	P	**P**	**08 42 50.3**	**+0.7**
	baz=171,SNR=13						
ACSO	**Alum Creek Sta**	**60.98**	**349**	P	**P**	**08 42 49.7**	**-0.1**
ACSO				IAmb	IAmb	08 42 51.1	
	comp=Z,28nm,0.8s						
ACSO	**Alum Creek Sta**	**60.98**	**349**	P	**P**	**08 42 49.6**	**-0.3**
	baz=167,SNR=7.4						
N56A	**West Decatur**	**60.99**	**353**	P	**P**	**08 42 50.7**	**+0.7**
	baz=172,SNR=8.7						
O50A	**Cable**	**61.01**	**349**	P	**P**	**08 42 49.8**	**-0.3**
	baz=166						
Q44A	**Meyer Farm, Va**	**61.03**	**344**	IAmb	IAmb	08 42 55.4	
	comp=Z,28nm,1.1s						
M60A	**Port Jervis**	**61.10**	**357**	P	**P**	**08 42 50.9**	**+0.2**
	baz=176						
M62A	**Hamden**	**61.14**	**358**	P	**P**	**08 42 51.1**	**+0.3**
	baz=178						
S39A	**Bolivar**	**61.18**	**340**	P	**P**	**08 42 50.9**	**-0.4**
S39A				IAmb	IAmb	08 42 52.9	
	comp=Z,34nm,1.1s						
O49A	**Covington**	**61.19**	**348**	P	**P**	**08 42 50.0**	**-1.3**
	baz=165						
MNTX	**Cornudas Mount**	**61.20**	**326**	P	**P**	**08 42 51.4**	**-0.2**
MNTX				IAmb	IAmb	08 42 52.8	
	comp=Z,19nm,1.1s						
MNTX	**Cornudas Mount**	**61.20**	**326**	P	**P**	**08 42 51.6**	**+0.1**
	baz=142,SNR=18						
N53A	**Lisbon**	**61.20**	**351**	P	**P**	**08 42 50.8**	**-0.6**
	baz=169						
N54A	**Moraine State**	**61.24**	**352**	P	**P**	**08 42 51.6**	**0.0**
N54A	**Moraine State**	**61.24**	**352**	P	**P**	**08 42 52.3**	**+0.6**
	baz=170,SNR=7.3						
M58A	**Price’s Panora**	**61.27**	**355**	P	**P**	**08 42 52.7**	**+0.9**
	baz=174,SNR=5.5						
M57A	**Sunshine Farm,**	**61.29**	**354**	P	**P**	**08 42 52.4**	**+0.4**
	baz=173						
N52A	**McGinn’s Farm,**	**61.33**	**351**	P	**P**	**08 42 52.2**	**0.0**
	baz=168						
M59A	**Waymart**	**61.36**	**356**	P	**P**	**08 42 52.9**	**+0.4**
	baz=175,SNR=6.1						
O48A	**Farmland**	**61.42**	**347**	P	**P**	**08 42 52.1**	**-0.8**
	baz=164,SNR=5.3						
L63A	**North Scituate**	**61.53**	**359**	P	**P**	**08 42 53.0**	**-0.6**
	baz=179						
N50A	**Nevada**	**61.53**	**349**	P	**P**	**08 42 52.7**	**-0.9**
	baz=167						
M56A	**Emporium**	**61.54**	**354**	P	**P**	**08 42 54.3**	**+0.6**
M56A	**Emporium**	**61.54**	**354**	P	**P**	**08 42 54.3**	**+0.6**
	baz=172,SNR=7.5						
N51A	**Ashland**	**61.55**	**350**	P	**P**	**08 42 53.1**	**-0.6**
	baz=168						
BRYW	**Bryant College**	**61.59**	**359**	P	**P**	**08 42 53.7**	**-0.3**
M55A	**Ridgway**	**61.59**	**353**	P	**P**	**08 42 54.5**	**+0.5**
M55A	**Ridgway**	**61.59**	**353**	P	**P**	**08 42 54.5**	**+0.5**
	baz=171,SNR=10						
M54A	**Oil Creek Stat**	**61.73**	**352**	P	**P**	**08 42 55.1**	**+0.2**
M54A	**Oil Creek Stat**	**61.73**	**352**	P	**P**	**08 42 55.3**	**+0.3**
	baz=170,SNR=6.9						
MSTX	**Muleshoe**	**61.73**	**330**	P	**P**	**08 42 54.7**	**-0.5**
MSTX	**Muleshoe**	**61.73**	**330**	P	**P**	**08 42 55.1**	**-0.2**
	baz=146,SNR=20						
L60A	**Shokan**	**61.74**	**357**	P	**P**	**08 42 55.1**	**+0.1**
	baz=176						
M53A	**WI Miller and**	**61.80**	**352**	P	**P**	**08 42 55.5**	**+0.1**
	baz=169						
P43A	**Skaggs, Pawnee**	**61.86**	**344**	P	**P**	**08 42 54.6**	**-1.2**
N49A	**Columbus Grove**	**61.87**	**348**	P	**P**	**08 42 55.4**	**-0.4**
	baz=166,SNR=12						
L58A	**Harry Jones Me**	**61.89**	**356**	P	**P**	**08 42 56.8**	**+0.8**
	baz=174,SNR=6.7						
L61A	**Hillsdale 1, H**	**61.91**	**358**	P	**P**	**08 42 55.9**	**-0.2**
	baz=177						
M51A	**Elyria**	**61.92**	**350**	P	**P**	**08 42 56.1**	**-0.1**
	baz=168						
L57A	**Andrews Acres**	**61.92**	**355**	P	**P**	**08 42 57.1**	**+0.9**
	baz=173						
SFIN	**Lafayette**	**61.95**	**346**	P	**P**	**08 42 55.3**	**-1.2**
	baz=162						
N48A	**Decatur**	**61.97**	**348**	P	**P**	**08 42 56.1**	**-0.5**
	baz=165						
L59A	**Walton**	**61.98**	**356**	P	**P**	**08 42 57.5**	**+0.9**
	baz=175,SNR=8.9						
AMTX	**Amarillo**	**61.99**	**331**	P	**P**	**08 42 56.4**	**-0.5**
	baz=147						
M52A	**Chesterland**	**61.99**	**351**	P	**P**	**08 42 56.2**	**-0.5**
	baz=169						
VNA3	**Neumayer Olymp**	**62.05**	**161**	P	**P**	**08 42 58.7**	**+1.8**
BINY	**Binghamton**	**62.05**	**356**	P	**P**	**08 42 58.0**	**+0.8**
	baz=174,SNR=7.9						
U32A	**Winter Ranch,**	**62.11**	**334**	IAmb	IAmb	08 42 58.9	
	comp=Z,27nm,0.9s						
L56A	**Greenwood**	**62.12**	**354**	P	**P**	**08 42 58.2**	**+0.6**
	baz=173,SNR=6.1						
N47A	**Urbana**	**62.13**	**347**	P	**P**	**08 42 56.9**	**-0.7**
	baz=164						
M50A	**Fremont**	**62.13**	**350**	P	**P**	**08 42 56.9**	**-0.7**
	baz=167						
L61B	**Northampton**	**62.14**	**358**	P	**P**	**08 42 57.6**	**0.0**
	baz=178						
HRV	**Adam Dziewonsk**	**62.17**	**359**	P	**P**	**08 42 57.6**	**-0.3**
HRV				pmax	pmax		
	comp=Z,46nm,1.0s						
HRV	**Adam Dziewonsk**	**62.17**	**359**	P	**P**	**08 42 57.6**	**-0.3**
HRV	**Adam Dziewonsk**	**62.17**	**359**	P	**P**	**08 42 58.4**	**+0.6**
	baz=179						
L53A	**Girard**	**62.25**	**352**	P	**P**	**08 42 58.7**	**+0.2**
	baz=170,SNR=9.0						
L55A	**Hinsdale**	**62.26**	**354**	P	**P**	**08 42 59.1**	**+0.6**
	baz=172,SNR=7.7						
VNA1	**Neumayer--Stat**	**62.28**	**160**	P	**P**	**08 43 00.9**	**+2.6**
K60A	**Five Rivers En**	**62.35**	**357**	P	**P**	**08 42 60.0**	**+0.9**
	baz=177						
K63A	**Dunstable**	**62.35**	**359**	P	**P**	**08 43 00.1**	**+1.0**
	baz=179						
M49A	**Liberty Center**	**62.36**	**349**	P	**P**	**08 42 59.6**	**+0.4**
	baz=166,SNR=5.6						
ERPA	**Erie**	**62.37**	**352**	P	**P**	**08 42 59.7**	**+0.5**
	baz=170,SNR=8.6						
K61A	**Williamstown**	**62.38**	**358**	P	**P**	**08 42 59.2**	**0.0**
	baz=177						
L54A	**Sinclairville**	**62.41**	**353**	P	**P**	**08 43 00.1**	**+0.6**
	baz=171,SNR=13						
K59A	**Cooperstown**	**62.55**	**357**	P	**P**	**08 43 01.2**	**+0.7**
	baz=176,SNR=11						
K58A	**Earlville**	**62.59**	**356**	P	**P**	**08 43 01.3**	**+0.6**
	baz=175,SNR=7.1						
K57A	**Scipio Center**	**62.62**	**355**	P	**P**	**08 43 01.3**	**+0.4**
	baz=174						
VNA2	**Neumayer--Watz**	**62.64**	**161**	P	**P**	**08 43 02.6**	**+1.9**
	baz=305,slow=5.5						
HDIL	**Hopedale**	**62.66**	**344**	P	**P**	**08 43 00.7**	**-0.4**
	baz=160						
K56A	**Middlesex**	**62.66**	**355**	P	**P**	**08 43 01.1**	**0.0**
	baz=173						
K54A	**Basiliko Farm,**	**62.71**	**353**	P	**P**	**08 43 02.0**	**+0.6**
	baz=172,SNR=12						
L50A	**Kingsville**	**62.71**	**350**	P	**P**	**08 43 00.7**	**-0.8**
	baz=167						
K55A	**Perry**	**62.76**	**354**	P	**P**	**08 43 02.3**	**+0.4**
	baz=172,SNR=5.7						
J62A	**Henniker**	**62.90**	**359**	P	**P**	**08 43 03.3**	**+0.6**
	baz=179						
L48A	**N Adams**	**62.90**	**349**	P	**P**	**08 43 02.0**	**-0.8**
	baz=166,SNR=5.2						
L49A	**Milan**	**62.94**	**349**	P	**P**	**08 43 02.7**	**-0.3**
	baz=166,SNR=5.7						
J60A	**Lant Hill Farm**	**62.95**	**358**	P	**P**	**08 43 03.0**	**-0.1**
	baz=177						
P38A	**Dawn**	**63.01**	**340**	IAmb	IAmb	08 43 11.0	
	comp=Z,32nm,1.3s						
J61A	**Chester**	**63.03**	**358**	P	**P**	**08 43 03.6**	**0.0**
	baz=178						
L47A	**Sherwood**	**63.08**	**348**	P	**P**	**08 43 03.0**	**-1.0**
	baz=165,SNR=6.8						
ACCN	**Adirondack Com**	**63.10**	**358**	IAmb	IAmb	08 43 06.2	
	comp=Z,36nm,1.2s						
121A	**Cookes Peak, D**	**63.12**	**325**	IAmb	IAmb	08 43 07.6	
	comp=Z,22nm,1.1s						
121A	**Cookes Peak, D**	**63.12**	**325**	P	**P**	**08 43 02.9**	**-1.8**
	baz=141,SNR=8.1						
J58A	**Remsen**	**63.16**	**356**	P	**P**	**08 43 05.2**	**+0.7**
	baz=175						
K51A	**Iona Station**	**63.17**	**351**	P	**P**	**08 43 04.6**	**0.0**
	baz=169						
J56A	**Wolcott**	**63.19**	**355**	P	**P**	**08 43 04.5**	**-0.2**
	baz=174,SNR=5.9						
J59A	**Piesco**	**63.22**	**357**	P	**P**	**08 43 05.4**	**+0.5**
	baz=176,SNR=8.1						
J57A	**Williamstown**	**63.26**	**356**	P	**P**	**08 43 05.4**	**+0.3**
	baz=174,SNR=6.5						
J55A	**Hilton**	**63.27**	**354**	P	**P**	**08 43 05.3**	**+0.2**
	baz=172						
I58A	**Old Forge**	**63.47**	**357**	P	**P**	**08 43 06.3**	**-0.3**
	baz=176						
I62A	**Tamworth**	**63.54**	**359**	P	**P**	**08 43 06.9**	**0.0**
	baz=179						
J52A	**Paris**	**63.54**	**352**	P	**P**	**08 43 06.8**	**-0.2**
	baz=170,SNR=6.5						
K49A	**Clarkson**	**63.54**	**350**	P	**P**	**08 43 06.1**	**-0.9**
	baz=167						
I60A	**Shoreham**	**63.55**	**358**	P	**P**	**08 43 07.4**	**+0.4**
	baz=177,SNR=6.4						
KSU1	**Kansas State U**	**63.58**	**338**	P	**P**	**08 43 07.2**	**-0.1**
	baz=153						
I61A	**Oroboro, Fairl**	**63.61**	**359**	P	**P**	**08 43 07.9**	**+0.5**
	baz=178,SNR=9.2						
K48A	**Perry**	**63.68**	**349**	P	**P**	**08 43 06.9**	**-1.0**
	baz=166,SNR=6.8						
K47A	**Vermontville**	**63.71**	**348**	P	**P**	**08 43 07.2**	**-0.9**
	baz=165						
I57A	**Carthage**	**63.76**	**356**	P	**P**	**08 43 08.7**	**+0.3**
	baz=175,SNR=5.8						
PECO	**Prince Edward**	**63.86**	**355**	IAmb	IAmb	08 43 10.4	
	comp=Z,33nm,1.1s						
LBNH	**Lisbon**	**63.91**	**359**	IAmb	IAmb	08 43 12.3	
	comp=Z,34nm,1.1s						
LBNH	**Lisbon**	**63.91**	**359**	P	**P**	**08 43 10.4**	**+1.0**
	baz=179						
I53A	**Kortright Cn E**	**64.01**	**353**	P	**P**	**08 43 09.9**	**-0.1**
	baz=171						
J49A	**Marlette**	**64.05**	**350**	P	**P**	**08 43 09.6**	**-0.7**
	baz=167						
J48A	**Bridge Port**	**64.10**	**349**	P	**P**	**08 43 10.1**	**-0.6**
	baz=166						
H58A	**Gabriels**	**64.16**	**357**	P	**P**	**08 43 11.0**	**0.0**
	baz=176,SNR=5.6						
I51A	**Listowel**	**64.17**	**352**	P	**P**	**08 43 10.8**	**-0.4**
	baz=169,SNR=6.9						
I55A	**Frankford**	**64.20**	**354**	P	**P**	**08 43 11.4**	**+0.2**
	baz=173,SNR=5.5						
H61A	**Lyndonville**	**64.20**	**359**	P	**P**	**08 43 12.2**	**+0.9**
	baz=179						
J47A	**Sunmer**	**64.23**	**349**	P	**P**	**08 43 11.0**	**-0.5**
J47A				IAmb	IAmb	08 43 11.9	
	comp=Z,29nm,0.9s						
J47A	**Sunmer**	**64.23**	**349**	P	**P**	**08 43 10.8**	**-0.7**
	baz=165						
H62A	**Milan**	**64.24**	**360**	P	**P**	**08 43 12.4**	**+0.9**
	baz=180						
SNAA	**Sanae**	**64.26**	**161**	P	**P**	**08 43 13.2**	**+1.7**
SNAA	**Sanae**	**64.26**	**161**	*d i*P	**P**	**08 43 12.9**	**+1.4**
SNAA	**Sanae**	**64.26**	**161**	P	**P**	**08 43 12.8**	**+1.2**
H57A	**Richville**	**64.27**	**356**	P	**P**	**08 43 12.2**	**+0.5**
	baz=175,SNR=9.0						
ANMO	**Albuquerque**	**64.31**	**328**	P	**P**	**08 43 13.6**	**+1.1**
	comp=Z,3.0nm,0.8s,baz=141,slow=9.6,SNR=16						
ANMO	**Albuquerque**	**64.31**	**328**	⇑*e*P	**P**	**08 43 13.6**	**+1.1**
ANMO				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ANMO	**Albuquerque**	**64.31**	**328**	P	**P**	**08 43 13.6**	**+1.1**
	baz=142						
H64A	**Troy**	**64.32**	**1**	P	**P**	**08 43 13.1**	**+1.0**
	baz=182						
H63A	**New Sharon**	**64.33**	**1**	P	**P**	**08 43 12.8**	**+0.7**
	baz=181,SNR=5.7						
H59A	**Cadyville**	**64.36**	**358**	P	**P**	**08 43 13.1**	**+0.7**
	baz=177,SNR=6.3						
LONY	**Lake Ozonia**	**64.38**	**357**	IAmb	IAmb	08 43 20.9	
	comp=Z,24nm,0.8s						
LONY	**Lake Ozonia**	**64.38**	**357**	P	**P**	**08 43 12.9**	**+0.4**
	baz=176,SNR=5.3						
H56A	**Elgin**	**64.45**	**356**	P	**P**	**08 43 13.2**	**+0.3**
	baz=174,SNR=5.8						
H55A	**Tweed**	**64.48**	**355**	P	**P**	**08 43 13.8**	**+0.7**
	baz=173						
DELO	**Deloro Mine**	**64.49**	**355**	IAmb	IAmb	08 43 14.5	
	comp=Z,26nm,1.2s						
CBKS	**Cedar Bluff**	**64.50**	**335**	P	**P**	**08 43 14.3**	**+0.8**
	baz=150						
I49A	**Point Hope**	**64.57**	**350**	P	**P**	**08 43 13.1**	**-0.6**
	baz=167,SNR=6.5						
L40A	**Anamosa**	**64.58**	**343**	IAmb	IAmb	08 43 21.6	
	comp=Z,22nm,1.0s						
TUC	**Tucson**	**64.61**	**323**	P	**P**	**08 43 15.4**	**+1.0**
	baz=138						
H53A	**Bobcaygeon**	**64.64**	**354**	P	**P**	**08 43 14.2**	**0.0**
	baz=172,SNR=8.0						
G60A	**Masonville**	**64.78**	**359**	P	**P**	**08 43 16.2**	**+1.1**
	baz=178						
G59A	**Clarenceville**	**64.78**	**358**	P	**P**	**08 43 16.2**	**+1.2**
	baz=177						
G63A	**Kingsbury**	**64.78**	**1**	P	**P**	**08 43 16.2**	**+1.1**
	baz=181						
H52A	**Wyevale**	**64.85**	**353**	P	**P**	**08 43 16.1**	**+0.6**
	baz=170						
G62A	**West of Eustis**	**64.88**	**0**	P	**P**	**08 43 15.3**	**-0.5**
G62A	**West of Eustis**	**64.88**	**0**	P	**P**	**08 43 16.5**	**+0.8**
	baz=180,SNR=10.0						
G57A	**Newington**	**64.88**	**357**	P	**P**	**08 43 16.1**	**+0.4**
	baz=176,SNR=6.1						
G58A	**Ormstown**	**64.88**	**357**	P	**P**	**08 43 16.7**	**+1.0**
	baz=176						
SADO	**Sadowa**	**64.89**	**353**	P	**P**	**08 43 15.7**	**-0.1**
	comp=Z,20nm,0.9s,baz=207,slow=2.1,SNR=16						
SADO	**Sadowa**	**64.89**	**353**	P	**P**	**08 43 15.2**	**-0.6**
G65A	**Princeton**	**64.92**	**2**	P	**P**	**08 43 17.0**	**+1.0**
	baz=183						
I47A	**Gladwin**	**64.93**	**349**	IAmb	IAmb	08 43 16.8	
	comp=Z,21nm,0.8s						
I47A	**Gladwin**	**64.93**	**349**	P	**P**	**08 43 15.6**	**-0.5**
	baz=166						
G64A	**Maxfield**	**64.94**	**2**	P	**P**	**08 43 15.9**	**-0.2**
	baz=182						
PKME	**Peaks-Kenny Pk**	**64.94**	**1**	P	**P**	**08 43 17.1**	**+1.0**
	baz=181						
G61A	**St-Isidore-de-**	**64.95**	**359**	P	**P**	**08 43 17.2**	**+1.0**
	baz=179						
I48A	**Sherman Twp**	**64.95**	**350**	P	**P**	**08 43 15.3**	**-0.9**
	baz=166,SNR=16						
PLVO	**Plevna**	**64.96**	**355**	IAmb	IAmb	08 43 22.4	
	comp=Z,24nm,1.3s						
I46A	**Reed City**	**65.02**	**348**	P	**P**	**08 43 15.5**	**-1.2**
	baz=165,SNR=5.1						
T25A	**Trinidad**	**65.09**	**331**	P	**P**	**08 43 18.8**	**+1.2**
	baz=145,SNR=9.9						
JFWS	**Jewell Farm**	**65.12**	**344**	IAmb	IAmb	08 43 18.1	
	comp=Z,37nm,1.4s						
JFWS	**Jewell Farm**	**65.12**	**344**	P	**P**	**08 43 16.7**	**-0.7**
	baz=160						
G55A	**Calabogie**	**65.14**	**355**	P	**P**	**08 43 18.1**	**+0.7**
	baz=174,SNR=6.2						
G53A	**Haliburton**	**65.19**	**354**	P	**P**	**08 43 18.2**	**+0.5**
	baz=172,SNR=18						
H48A	**Harrisville**	**65.39**	**350**	P	**P**	**08 43 18.5**	**-0.5**
	baz=167,SNR=5.5						
G54A	**Lake Saint Pet**	**65.41**	**354**	P	**P**	**08 43 19.1**	**0.0**
	baz=172						
H47A	**Mio**	**65.44**	**349**	P	**P**	**08 43 18.5**	**-0.8**
	baz=166						
214A	**Organ Pipe Nat**	**65.52**	**321**	IAmb	IAmb	08 43 23.5	
	comp=Z,27nm,1.1s						
214A	**Organ Pipe Nat**	**65.52**	**321**	P	**P**	**08 43 22.0**	**+1.7**
	baz=136,SNR=19						
F64A	**Sherman**	**65.56**	**2**	P	**P**	**08 43 21.0**	**+0.9**
	baz=182						
F61A	**St Evariste**	**65.64**	**360**	P	**P**	**08 43 21.3**	**+0.7**
	baz=180						
F60A	**Warwick**	**65.64**	**359**	P	**P**	**08 43 21.5**	**+0.9**
	baz=179						
H45A	**Beulah**	**65.80**	**348**	P	**P**	**08 43 20.7**	**-0.9**
	baz=164						
X18A	**Snowflake**	**65.81**	**325**	IAmb	IAmb	08 43 25.3	
	comp=Z,18nm,1.2s						
KSCO	**Kaye Shedlock’**	**65.85**	**333**	P	**P**	**08 43 23.1**	**+0.8**

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      baz=147,SNR=5.4
F52A  Sundridge        65.92 353  P        P       08 43 22.7 +0.3
      baz=171,SNR=9.0
G47A  Hillman          65.93 350  P        P       08 43 21.7 -0.8
      baz=166
ALGO  Algonquin Park   65.95 354  P        P       08 43 22.6 -0.1
      baz=172
H43A  Windswept, Lux   66.00 347  IAmb     IAmb    08 43 30.7
      comp=Z,16nm,0.8s
E60A  Ste Agathe de    66.03 359  P        P       08 43 23.2  0.0
      baz=179
E58A  La Victoria      66.08 358  P        P       08 43 23.7 +0.2
      baz=177
SDCO  Great Sand Dun   66.09 330  IAmb     IAmb    08 43 26.6
      comp=Z,28nm,1.1s
SDCO  Great Sand Dun   66.09 330  P        P       08 43 25.3 +1.1
      baz=144,SNR=34
F51A  Arnstein         66.12 353  P        P       08 43 23.6 -0.1
      baz=170
G45A  Suttons Bay      66.12 348  P        P       08 43 23.2 -0.6
      baz=165
E64A  Bridgewater      66.13   2  P        P       08 43 24.1 +0.3
      baz=183
E57A  Chemin Saint G   66.15 357  P        P       08 43 24.0 +0.1
      baz=176
BGNE  Belgrade         66.16 338  P        P       08 43 24.1  0.0
      baz=152
F49A  Sandfield        66.23 351  P        P       08 43 23.6 -0.9
      baz=168,SNR=6.1
G46A  Petoskey         66.25 349  P        P       08 43 23.7 -0.8
      baz=165
E56A  St. Veronique    66.32 357  P        P       08 43 24.9 -0.1
      baz=176,SNR=6.1
E52A  Mattawa          66.34 354  P        P       08 43 24.8 -0.3
      baz=172
E53A  Dumoine, Ponti   66.34 355  P        P       08 43 24.9 -0.2
      baz=173
E54A  Lac Daplat, Po   66.36 355  P        P       08 43 25.2 -0.1
      baz=173,SNR=5.6
F48A  Evansville       66.38 351  P        P       08 43 25.0 -0.3
      baz=168
X16A  Lo Mia Camp, P   66.54 324  IAmb     IAmb    08 43 30.8
      comp=Z,17nm,1.1s
D60A  Saint Jean D'O   66.58 360  P        P       08 43 27.3 +0.7
      baz=180
E51A  G1948 Merrick    66.67 353  P        P       08 43 27.5 +0.3
      baz=171,SNR=6.7
F45A  CMU Biological   66.72 349  P        P       08 43 27.0 -0.6
      baz=165
S22A  4UR Ranch, Cre   66.72 329  P        P       08 43 29.0 +0.8
      baz=143,SNR=8.6
D63A  Stockholm        66.74   2  P        P       08 43 28.2 +0.5
      baz=183
D57A  Chemin Vers le   66.74 358  P        P       08 43 28.3 +0.6
      baz=177,SNR=7.7
D62A  Allapoint, All   66.76   1  P        P       08 43 27.5 -0.3
D62A  Allapoint, All   66.76   1  P        P       08 43 28.6 +0.8
      baz=182,SNR=7.4
D58A  Chemin du LacG   66.79 358  P        P       08 43 28.6 +0.6
      baz=178,SNR=12
D56A  ZEC Mazanza, M   66.81 357  P        P       08 43 28.0 -0.1
      baz=176
D55A  Sainte-Anne-du   66.82 356  P        P       08 43 28.9 +0.7
      baz=175,SNR=5.3
D61A  St Aubert, Com   66.87   0  P        P       08 43 29.0 +0.6
      baz=180
Q24A  Divide           66.92 331  P        P       08 43 30.2 +0.8
      baz=145
E48A  Lockeyer         66.95 351  P        P       08 43 29.1 +0.1
      baz=168
D54A  Lac Fusel, La    67.03 356  P        P       08 43 29.7 +0.2
      baz=174
D53A  Lac Vacive, Po   67.04 355  IAmb     IAmb    08 43 37.6
      comp=Z,17nm,0.8s
D53A  Lac Vacive, Po   67.04 355  P        P       08 43 29.8 +0.2
      baz=173
LATQ  La Tuque         67.07 358  P        P       08 43 30.3 +0.6
LATQ  La Tuque         67.07 358  P        P       08 43 30.3 +0.6
      baz=178
E47A  Iron Bridge      67.09 351  P        P       08 43 29.4 -0.5
      baz=167
MVCO  Mesa Verde       67.11 328  P        P       08 43 29.3 -1.3
MVCO  Mesa Verde       67.11 328  P        P       08 43 31.5 +0.9
      baz=141,SNR=8.2
E46A  Sault Ste Mari   67.17 350  P        P       08 43 30.0 -0.4
D51A  Lot 18 Range I   67.21 354  P        P       08 43 31.1 +0.5
      baz=171
G40A  Rib Lake         67.31 345  P        P       08 43 31.4  0.0
WUAZ  Wupatki          67.32 325  P        P       08 43 31.6 -0.2
WUAZ                              IAmb     IAmb    08 43 35.1
      comp=Z,24nm,1.0s
WUAZ  Wupatki          67.32 325  P        P       08 43 33.4 +1.5
      baz=138,SNR=13
D50A  G1974 Best Tow   67.33 353  P        P       08 43 31.4 -0.1
      baz=171,SNR=8.0
GLA   Glamis           67.50 321  P        P       08 43 34.2 +1.3
      baz=135
D48A  Paudash Townsh   67.58 352  P        P       08 43 32.2 -0.8
      baz=169
D46A  Sault St. Mari   67.63 350  P        P       08 43 32.6 -0.7
      baz=166
D47A  Chapleau         67.65 351  P        P       08 43 32.9 -0.6
      baz=167
E43A  Lone Tree Farm   67.67 348  P        P       08 43 33.2 -0.3
ECSD  EROS Data Cent   67.71 340  P        P       08 43 33.9  0.0
      baz=154,SNR=6.6
ISCO  Idaho Springs    67.81 332  P        P       08 43 36.1 +1.1
      baz=144,SNR=9.6
Y12C  Blythe           67.81 321  P        P       08 43 36.3 +1.5
      baz=135,SNR=5.4
COWI  Conover          67.85 346  P        P       08 43 33.7 -1.1
SPMN  Marine on St.    67.94 343  P        P       08 43 35.1 -0.2
      baz=158
PDMCI Parker Dam,Lak   67.98 322  P        P       08 43 37.5 +1.7
      baz=136
PV15  Paradox Valley   67.99 329  P        P       08 43 34.6 -1.6
PV15                              IAmb     IAmb    08 43 39.1
      comp=Z,30nm,1.0s
IKP   In-Ko-Pah, Jac   67.99 320  P        P       08 43 37.5 +1.5
      baz=134,SNR=9.9
SWSC  Sam W. Stewart   68.00 320  P        P       08 43 37.4 +1.4
      baz=134,SNR=7.5
VLDQ  Val d'Or         68.04 355  IAmb     IAmb    08 43 44.2
      comp=Z,12nm,0.8s
PV11  David Mesa, Pa   68.15 328  IAmb     IAmb    08 43 39.8
      comp=Z,21nm,1.4s
PV16  Nyswonger Mesa   68.18 328  IAmb     IAmb    08 43 39.9
      comp=Z,19nm,1.4s
PV22  Blue Mesa, Par   68.29 329  IAmb     IAmb    08 43 40.6
      comp=Z,20nm,1.3s
BC3   Big Chuckawall   68.29 321  P        P       08 43 39.2 +1.2
      baz=135,SNR=12
MONP2 Monument Peak    68.35 320  P        P       08 43 39.7 +1.2
      baz=134,SNR=8.0
BAR   Barrett          68.35 319  P        P       08 43 38.7 +0.4
BAR                               IAmb     IAmb    08 43 41.5
      comp=Z,31nm,1.0s
IRM   Iron Mountain    68.46 321  P        P       08 43 40.6 +1.7
      baz=135,SNR=28
U15A  North Rim        68.49 325  IAmb     IAmb    08 43 42.9
      comp=Z,25nm,1.1s
NEE2  Needles Airpor   68.59 322  P        P       08 43 41.2 +1.5
      baz=136
D41A  Chassel          68.64 347  IAmb     IAmb    08 43 47.5
      comp=Z,17nm,0.8s
109C  Camp Elliot, M   68.76 319  P        P       08 43 42.4 +1.7
      baz=133
N23A  Red Feather La   68.84 332  P        P       08 43 42.7 +1.3
      baz=144,SNR=11
NVL   N'lazarevskaya   68.84 159 eP        P       08 43 41.1 +0.4
NVL                               pmax     pmax
      comp=Z,55nm,1.1s
BELC  Belle Mtn. Jos   68.86 321  P        P       08 43 43.3 +1.8
      baz=134,SNR=6.5
XPFO  Pion Flat        68.86 320  P        P       08 43 40.6 -1.0
XPFO                              IAmb     IAmb    08 43 45.0
      comp=Z,16nm,0.9s
PFO   Pinyon Flats O   68.86 320  P        P       08 43 43.2 +1.7
      comp=Z,11nm,0.9s,baz=111,slow=4.9,SNR=22
PFO   Pinyon Flats O   68.86 320ceP        P       08 43 44.0 +2.4
PFO                               pmax     pmax
      comp=Z,29nm,1.0s
PFO   Pinyon Flats O   68.86 320  P        P       08 43 40.7 -0.8
PFO                               IAmb     IAmb    08 43 45.0
      comp=Z,16nm,0.9s
PFO   Pinyon Flats O   68.86 320  P        P       08 43 43.2 +1.7
      baz=134,SNR=11
GMRC  Granite Mounta   69.21 322  P        P       08 43 45.5 +1.8
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      baz=135,SNR=23
O20A  White River Ci   69.28 330  IAmb     IAmb    08 43 46.7
      comp=Z,29nm,1.2s
O20A  White River Ci   69.28 330  P        P       08 43 45.6 +1.5
      baz=142,SNR=7.3
MURC  Murrieta         69.30 320  P        P       08 43 45.4 +1.3
      baz=133
LIC   Lamto            69.60  75 eP        P       08 43 44.1 -2.3
      comp=Z,24nm,0.8s
HEC   Hector,Ludlow    69.63 321  P        P       08 43 48.4 +2.1
      baz=134,SNR=6.4
MATQ  Matagami         69.69 355  P        P       08 43 45.9 -0.3
      baz=173,SNR=5.6
TIC   Toumodi          69.78  75 eP        P       08 43 45.4 -2.1
TUQ   Turquoise Moun   69.82 322  P        P       08 43 49.6 +2.1
      baz=135
CCUT  Cedar City       69.90 325  P        P       08 43 47.5 -0.5
KIC   Kosan Boka       69.92  75 eP        P       08 43 47.3 -1.1
      comp=Z,11nm,0.6s
DBIC  Dimbokro         69.94  75  P        P       08 43 47.2 -1.2
      comp=Z,9.5nm,0.8s,baz=243,slow=6.3,SNR=8.5
DBIC                              LR       LR      09 13 53.2
      comp=Z,150nm,20.1s,baz=232,slow=36
DBIC  Dimbokro         69.94  75  P        P       08 43 47.1 -1.4
DBIC                              pmax     pmax
      comp=Z,13nm,0.7s
DBIC  Dimbokro         69.94  75  P        P       08 43 47.1 -1.4
DBIC                              IAmb     IAmb    08 43 58.6
      comp=Z,13nm,0.7s
BFSC  Mount Baldy Ra   70.02 320  P        P       08 43 50.6 +1.9
      baz=133,SNR=8.4
RWWY  Rawlins          70.05 332  IAmb     IAmb    08 43 50.4
      comp=Z,24nm,1.1s
EYMN  Ely              70.14 345  P        P       08 43 48.4 -0.6
EYMN  Ely              70.14 345  P        P       08 43 48.5 -0.5
      baz=159,SNR=5.1
TCRU  Three Creeks R   70.20 326  P        P       08 43 49.1 -0.7
QSPA  South Pole Qui   70.20 180  P        P       08 43 43.7 -5.7
GSC   Goldstone, Bar   70.24 321  P        P       08 43 52.2 +2.2
      baz=134,SNR=9.1
PASC  Pasadena Art C   70.29 320  P        P       08 43 49.9 -0.3
PASC                              IAmb     IAmb    08 43 53.7
      comp=Z,35nm,1.2s
SHOC  Shoshone, Teco   70.34 322  P        P       08 43 53.1 +2.6
      baz=135,SNR=10
DECC  Green Verdugo    70.44 320  P        P       08 43 53.5 +2.4
      baz=133,SNR=6.1
K22A  Casper           70.52 333  P        P       08 43 49.0 -2.6
K22A                              IAmb     IAmb    08 43 53.9
      comp=Z,17nm,1.0s
K22A  Casper           70.52 333  P        P       08 43 52.9 +1.3
      baz=144,SNR=5.4
EDW2  Edwards Air Fo   70.66 320  P        P       08 43 54.3 +1.8
      baz=133,SNR=7.1
RSSD  Black Hills      70.71 335  P        P       08 43 50.6 -2.2
RSSD                              pmax     pmax
      comp=Z,13nm,1.0s
RSSD  Black Hills      70.71 335  P        P       08 43 50.5 -2.2
RSSD  Black Hills      70.71 335  P        P       08 43 53.9 +1.1
      baz=147
LRMC  Laurel Mtn Rad   70.88 321  P        P       08 43 55.9 +2.0
      baz=133
OSI   Osito Audit: C   70.92 320  P        P       08 43 56.0 +1.9
      baz=132
TPNV  Topopah Spring   71.07 323  IAmb     IAmb    08 43 58.8
      comp=Z,23nm,1.0s
TPNV  Topopah Spring   71.07 323  P        P       08 43 57.3 +2.2
      baz=135,SNR=13
FURC  Furnace Creek,   71.08 322  P        P       08 43 57.3 +2.4
      baz=134,SNR=20
MPMC  Manual Prospec   71.16 321  P        P       08 43 57.4 +1.6
      baz=134,SNR=13
ARVC  Arvin            71.33 320  P        P       08 43 58.0 +1.5
      baz=132
ISA   Isabella, Lake   71.48 321  IAmb     IAmb    08 44 01.0
      comp=Z,24nm,0.9s
ISA   Isabella, Lake   71.48 321  P        P       08 43 59.6 +2.2
      baz=133,SNR=16
DUG   Dugway, Tooele   71.57 327  IAmb     IAmb    08 44 01.2
      comp=Z,25nm,1.1s
DUG   Dugway, Tooele   71.57 327  P        P       08 43 60.0 +2.0
      baz=138,SNR=18
AGMN  Agassiz Nation   71.60 343  P        P       08 43 57.6 -0.2
AGMN  Agassiz Nation   71.60 343  P        P       08 43 57.5 -0.3
      baz=155,SNR=6.3
R11A  Troy Canyon, C   71.69 324  P        P       08 43 57.2 -1.6
R11A  Troy Canyon, C   71.69 324  P        P       08 44 00.8 +2.0
      baz=136,SNR=15
GRAC  Grapevine Rang   71.74 322  P        P       08 44 00.4 +1.5
      baz=134
CWC   Cottonwood Cre   71.77 321  P        P       08 44 00.8 +1.5
      baz=133
PKM   Mcpherson Peak   71.77 319  P        P       08 44 01.3 +1.9
      baz=132,SNR=7.6
BW06  Boulder Array    71.96 331  P        P       08 43 59.4 -1.0
BW06  Boulder Array    71.96 331  P        P       08 44 01.1 +0.6
      baz=142,SNR=7.8
PD31  Pinedale Array   71.96 331  P        P       08 43 59.4 -1.1
PDAR  Pinedale Array   71.96 331  P        P       08 44 01.4 +1.0
      comp=Z,3.6nm,0.9s,baz=149,slow=6.6,SNR=19
PDAR                              LR       LR      09 17 33.9
      comp=Z,152nm,19.1s,baz=132,slow=38
PDAR  Pinedale Array   71.96 331  P        P       08 44 00.1 -0.3
VES   Vestal, Richgr   71.96 320  P        P       08 44 02.5 +2.2
      baz=132,SNR=12
HWUT  Hardware Ranch   72.01 329  P        P       08 43 59.7 -1.0
SMMC  Simmler          72.16 319  P        P       08 44 04.0 +2.4
      baz=132,SNR=5.7
BGU   Big Grassy Mou   72.22 328  P        P       08 44 00.9 -1.0
TIN   Tinemaha, Big    72.28 322  P        P       08 44 04.1 +1.8
      baz=133
MDND  Maddock          72.32 340  P        P       08 44 01.6 -0.5
MDND  Maddock          72.32 340  P        P       08 44 03.1 +1.0
      baz=152,SNR=7.3
AHID  Auburn Hatcher   72.68 330  IAmb     IAmb    08 44 06.9
      comp=Z,21nm,1.0s
OMMB  Old Mammoth Mi   73.11 322  IAmb     IAmb    08 44 11.3
      comp=Z,23nm,1.0s
ELK   Elko             73.22 326  P        P       08 44 09.3 +1.3
      comp=Z,6.4nm,1.0s,baz=137,slow=3.3,SNR=15
NVAR  Mina Array Bea   73.27 323  P        P       08 44 10.6 +2.4
      comp=Z,7.7nm,0.9s,baz=146,slow=6.5,SNR=33
NVAR  Mina Array Bea   73.27 323  P        P       08 44 08.8 +0.5
FXWY  Fox Creek        73.31 331  P        P       08 44 07.4 -1.1
ULM   Lac du Bonnet    73.38 343  P        P       08 44 07.8 -0.5
      comp=Z,3.7nm,0.5s,baz=140,slow=5.9,SNR=9.2
ULM                               LR       LR      09 18 37.8
      comp=Z,143nm,21.1s,baz=148,slow=38
ULM   Lac du Bonnet    73.38 343  P        P       08 44 08.0 -0.4
ULM                               pmax     pmax
      comp=Z,17nm,1.3s
ULM   Lac du Bonnet    73.38 343  P        P       08 44 08.0 -0.4
FLWY  Flagg Ranch      73.51 331  P        P       08 44 09.3 -0.3
FLWY                              IAmb     IAmb    08 44 12.6
      comp=Z,32nm,1.0s
RLMT  Red Lodge        73.69 333  P        P       08 44 12.1 +1.5
      baz=142
H17A  Grant Village    73.70 331  P        P       08 44 12.9 +2.2
      baz=141
LAO   LASA Array       73.70 335  IAmb     IAmb    08 44 13.3
      comp=Z,24nm,1.1s
LAO   LASA Array       73.70 335  P        P       08 44 11.4 +1.0
      baz=145,SNR=8.3
DGMT  Dagmar           74.42 338  IAmb     IAmb    08 44 17.6
      comp=Z,23nm,1.0s
DGMT  Dagmar           74.42 338  P        P       08 44 15.8 +1.2
      baz=147,SNR=5.8
SCHQ  Schefferville    74.58   2  P        P       08 44 15.2 -0.1
      comp=Z,3.2nm,0.7s,baz=215,slow=8.7,SNR=5.5
SCHQ                              LR       LR      09 17 20.4
      comp=Z,198nm,21.3s,baz=194,slow=36
SCHQ  Schefferville    74.58   2  IAmb     IAmb    08 44 23.3
      comp=Z,11nm,1.0s
MFID  Camas Ranch      75.46 328  IAmb     IAmb    08 44 24.1
      comp=Z,30nm,1.2s
LRM   Limekiln Ridge   75.64 331  P        P       08 44 24.4 +2.4
ORV   Oroville         75.86 322  IAmb     IAmb    08 44 26.5
      comp=Z,31nm,1.1s
EGMT  Eagleton         76.19 334  IAmb     IAmb    08 44 27.5
      comp=Z,20nm,1.0s
EGMT  Eagleton         76.19 334  P        P       08 44 25.8 +0.9
      baz=142,SNR=10.0
O03E  Paynes Creek     76.52 322  P        P       08 44 28.0 +1.1
      baz=131
SBA   Scott Base       77.01 191  P        P       08 44 28.7 -0.3
SBA                               pmax     pmax
      comp=Z,27nm,1.4s
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SBA   Scott Base       77.01 191  P        P       08 44 28.7 -0.3
SBA                               IAmb     IAmb    08 44 40.5
      comp=Z,27nm,1.4s
O02D  Mt. Diablo Mer   77.02 322  P        P       08 44 30.1 +0.4
      baz=130
MSO   Missoula         77.08 331  P        P       08 44 31.6 +1.7
      baz=139
M04C  Macdoel          77.53 323  P        P       08 44 34.2 +1.7
      baz=132
I07A  Izee             77.81 326  IAmb     IAmb    08 44 47.0
      comp=Z,24nm,1.3s
M02C  Callahan         77.84 323  P        P       08 44 35.4 +1.1
      baz=131
YBH   Yreka Blue Hor   77.98 323  P        P       08 44 36.2 +1.1
      comp=Z,4.6nm,1.1s,baz=107,slow=4.8,SNR=3.6
YBH   Yreka Blue Hor   77.98 323  P        P       08 44 36.2 +1.1
YBH                               pmax     pmax
      comp=Z,26nm,1.5s
YBH   Yreka Blue Hor   77.98 323  IAmb     IAmb    08 44 36.6
      comp=Z,26nm,1.5s
VNDA  Vanda            78.05 190  P        P       08 44 37.3 +2.5
      comp=Z,4.9nm,0.9s,baz=127,slow=4.3,SNR=15
L04D  Klamath Falls    78.07 323  P        P       08 44 36.6 +1.0
      baz=131
J05D  Fort Rock, OR    78.19 325  P        P       08 44 37.3 +1.0
      baz=132
TOA0  Torodi Ar. Sit   78.45  71  IAmb     IAmb    08 44 50.1
      comp=Z,42nm,1.1s
TORD  Torodi Ar. Bea   78.45  71  P        P       08 44 37.5 -0.6
      comp=Z,22nm,0.9s,baz=248,slow=5.2,SNR=77
TORD                              LR       LR      09 18 50.7
      comp=Z,328nm,19.4s,baz=270,slow=36
SYO   Syowa Base       78.51 160⇑epP       P       08 44 37.0 -0.5
WALA  Waterton Lakes   78.74 333  P        P       08 44 37.7 -1.4
I05D  Terrebonne, OR   78.96 326  P        P       08 44 42.4 +2.0
      baz=132
NEW   Newport          79.59 331  P        P       08 44 44.4 +0.6
      comp=Z,2.4nm,0.9s,baz=144,slow=8.9,SNR=2.6
NEW   Newport          79.59 331  P        P       08 44 43.6 -0.1
NEW                               pmax     pmax
      comp=Z,6.0nm,1.1s
NEW   Newport          79.59 331  P        P       08 44 43.6 -0.1
NEW   Newport          79.59 331  P        P       08 44 44.3 +0.6
      baz=136
PFVI  Vila Bisbo       81.37  45 eP        P       08 44 55.9 +2.5
MORF  Marmelete        81.58  45 eP        P       08 44 56.6 +2.0
PBDV  Barranco-do-Ve   82.03  46 eP        P       08 44 56.1 -0.9
MDT   Midelt           82.09  51  P        P       08 44 57.5  0.0
      comp=Z,2.4nm,0.8s,baz=281,slow=5.2,SNR=7.6
PNCL  Nicolau / Gran   82.10  45 eP        P       08 44 58.6 +1.3
TSUM  Tsumeb           82.10 108  P        P       08 44 56.3 -1.6
PCVE  Castro Verde     82.16  45 eP        P       08 44 59.5 +1.9
LLLB  Lillooet         83.45 330  IAmb     IAmb    08 45 21.5
      comp=Z,18nm,1.3s
MVO   Moncorvo         84.71  43 eP        P       08 45 12.3 +1.5
      comp=Z,22nm,1.4s
PBRG  Braganca         85.23  42 eP        P       08 45 14.6 +1.2
      comp=Z,22nm,1.7s
BOSA  Boshof           85.65 119  P        P       08 45 15.8 -0.2
      comp=Z,4.7nm,1.0s,baz=290,slow=6.1,SNR=4.5
BOSA                              LR       LR      09 19 42.0
      comp=Z,267nm,21.5s,baz=229,slow=33
BOSA  Boshof           85.65 119  P        P       08 45 15.8 -0.2
BOSA                              pmax     pmax
      comp=Z,20nm,1.3s
BOSA  Boshof           85.65 119  IAmb     IAmb    08 45 25.8
      comp=Z,20nm,1.3s
ESDC  Sonseca Array    85.95  45  P        P       08 45 18.0 +1.0
      comp=Z,0.2nm,0.3s,baz=264,slow=5.2,SNR=4.1
ESDC                              LR       LR      09 23 55.2
      comp=Z,100nm,18.1s,baz=245,slow=36
ESDC  Sonseca Array    85.95  45  P        P       08 45 17.2 +0.3
MAW   Mawson           86.26 164  P        P       08 45 19.5 +1.5
      comp=Z,7.4nm,0.9s,baz=212,slow=6.1,SNR=6.2
MAW                               LR       LR      09 24 50.5
      comp=Z,264nm,18.2s,baz=236,slow=36
MAW   Mawson           86.26 164  P        P       08 45 17.9 -0.1
MAW                               pmax     pmax
      comp=Z,6.0nm,1.4s
MAW   Mawson           86.26 164  P        P       08 45 17.9 -0.1
YKA   Yellowknife Ar   89.20 341  P        P       08 45 32.4 +0.4
      comp=Z,6.3nm,0.8s,baz=139,slow=5.1,SNR=67
YKA                               LR       LR      09 29 00.6
      comp=Z,260nm,19.9s,baz=0.0,slow=38
KEST  Kesra            93.74  53  LR       LR      09 30 32.9
      comp=Z,192nm,18.1s,baz=272,slow=37
SUMG  Summit           94.83   9  IAmb     IAmb    08 46 00.6
      comp=Z,13nm,1.4s
RES   Resolute Bay     95.70 354  P        P       08 46 01.0 -0.8
      comp=Z,1.1nm,1.1s,baz=141,slow=7.1,SNR=2.5
KIV   Kislovodsk      120.31  50 ePKIKP    PKPdf   08 51 27.9 -0.2
KIV                               pmax     pmax
      comp=Z,25nm,1.0s
KBZ   Khabaz          120.46  50  PKP      PKiKP   08 51 29.9 +1.6
      comp=Z,6.7nm,0.9s,baz=228,slow=2.5,SNR=6.0
BILL  Bilibino        120.50 339⇑iPKIKP    PKiKP   08 51 28.0 +0.3
BILL                             e                 08 52 50.6
BILL                             eSS       SS      09 09 31.8 +9.1
BILL                              pmax     pmax
      comp=Z,10.0nm,2.4s
H11S2 WAKE ISLAND Hy126.00 279    T        T       11 10 58.0
H11S1 WAKE ISLAND Hy126.01 279    T        T       11 11 00.6
H11S3 WAKE ISLAND Hy126.02 279    T        T       11 11 02.0
H11N3 WAKE ISLAND Hy126.05 280    T        T       11 11 10.1
      baz=101,slow=74,SNR=175
H11N2 WAKE ISLAND Hy126.06 280    T        T       11 11 03.4
      baz=101,slow=74,SNR=168
H11N1 WAKE ISLAND Hy126.06 280    T        T       11 11 05.5
      baz=101,slow=74,SNR=105
TIXI  Tiksi           127.07 352⇑iPKIKP    PKPdf   08 51 40.2 +0.1
ARU   Arti            127.82  33 i PKIKP   PKiKP   08 51 43.7 +1.2
ARU                                                08 53 42.1
ARU                                                08 58 54.8
ARU                               SS       SS      09 10 49.1 -6.6
SEY   Seymchan        128.04 337⇓iPKIKP    PKiKP   08 51 43.3 +0.5
PETK  Petropavlovsk-  130.34 324  PKP      PKiKP   08 51 47.4 -0.3
      comp=Z,3.4nm,0.9s,baz=116,slow=3.4,SNR=5.5
PETK  Petropavlovsk-  130.34 324  PKIKP    PKPdf   08 51 45.8 -1.1
PETK  Petropavlovsk-  130.34 324  PKPdf    PKPdf   08 51 45.8 -1.1
ASAR  Alice Springs   130.43 210  PKP      PKPdf   08 51 48.5 +0.4
      comp=Z,1.4nm,0.5s,baz=122,slow=1.7,SNR=13
ASAR                              SKPbc    SKPbc   08 55 12.7 +1.7
      comp=Z,0.2nm,0.7s,baz=157,slow=5.0,SNR=3.2
MA2   Magadan         130.62 334⇓iPKIKP    PKPdf   08 51 47.4 +0.2
ABKAR Akbulak array   131.15  41  PKPdf    PKPdf   08 51 48.7 +0.2
WRA   Warramunga Arr  133.35 213  PKhKP    PKPpre  08 51 50.5
      comp=Z,1.3nm,0.5s,baz=153,slow=1.7,SNR=8.7
WRA                               PKP      PKiKP   08 51 54.3 -0.6
      comp=Z,1.3nm,0.5s,baz=152,slow=1.7,SNR=9.0
WRA                               SKPbc    SKPbc   08 55 21.6 +0.1
      comp=Z,1.5nm,0.7s,baz=148,slow=3.5,SNR=4.7
WRAB  Tennant Creek   133.35 213⇑iPKIKP    PKPdf   08 51 54.1 +0.4
BRVK  Borovoye        135.39  33⇑ePKIKP    PKPdf   08 51 55.3 -1.1
FITZ  Fitzroy Crossi  138.90 204  PKhKP    PKPpre  08 52 01.4
      comp=Z,1.6nm,0.8s,baz=180,slow=3.6,SNR=2.7
FITZ                              PKP      PKiKP   08 52 06.6 +0.5
      comp=Z,2.2nm,0.8s,baz=179,slow=0.0,SNR=4.2
FITZ  Fitzroy Crossi  138.90 204           PKPdf   08 52 03.0 -1.0
KURK  Kurchatov       140.94  31⇑iPKIKP    PKiKP   08 52 09.0 -0.3
KURK  Kurchatov       140.94  31           PKPdf   08 52 03.2 -3.4
KURBB Kurchatov Arra  140.95  31  PKhKP    PKPpre  08 52 03.0
      comp=Z,0.5nm,0.5s,baz=310,slow=3.5,SNR=2.2
KURBB                             PKP      PKiKP   08 52 08.1 -1.2
      comp=Z,2.6nm,0.8s,baz=306,slow=2.5,SNR=5.0
ZAA0  Zalesovo Array  141.26  23           PKPdf   08 52 06.5 -0.6
ZALV  Zalesovo Beam   141.26  23  PKhKP    PKPpre  08 52 04.2
      comp=Z,6.8nm,0.7s,baz=336,slow=6.5,SNR=11
ZALV                              PKP      PKPdf   08 52 07.7 +0.5
      comp=Z,6.5nm,0.7s,baz=298,slow=3.1,SNR=12
ZALV                              SKPbc    SKiKP   08 55 46.4 +0.8
      comp=Z,0.6nm,0.5s,baz=235,slow=5.2,SNR=3.6
NMR   Nemuro--Hokkai  141.65 316 eP        Pdif    08 49 41.3  +14
YSS   Yuzh-Sakhalins  141.71 322 ePKHKP    PKPpre  08 51 55.4
AAK   Ala-Archa       143.05  44⇑ePKIKP    PKPdf   08 52 10.2 -0.7
AAK   Ala-Archa       143.05  44           PKPdf   08 52 10.2 -0.7
MAKZ  Makanchi        145.17  33  PKP2     PKPbc   08 52 12.4 -1.4
MAKZ  Makanchi        145.17  33           PKPbc   08 52 12.4 -1.4
MK31  Makanchi Array  145.34  33  PKIKP    PKPdf   08 52 15.4 +0.8
MK31  Makanchi Array  145.34  33           PKPdf   08 52 15.4 +0.8
MKAR  Makanchi Array  145.34  33  PKPbc    PKPdf   08 52 15.2 +0.6
      comp=Z,18nm,0.8s,baz=324,slow=3.1,SNR=149
MKAR  Makanchi Array  145.34  33  PKIKP    PKPdf   08 52 15.1 +0.5
MKAR  Makanchi Array  145.34  33           PKPdf   08 52 15.1 +0.5
KSH   Kashi           145.41  48  PKPbc    PKPbc   08 52 14.8 -0.2
KSH                               PP       PP      08 55 36.8 +1.9
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KSH				PKS	**PKSdf**	**08 55 48.3**	**-2.3**
KSH				SKKS		09 02 25.8	
KSH				AMB	AMB		
	comp=Z,390nm,4.6s						
KSH				LR	LR		
	comp=Z,230nm,14.7s						
KSH				LR	LR		
	comp=Z,160nm,12.7s						
KSH				LR	LR		
	comp=Z,200nm,15.5s						
KLR	**Kul'dur**	**145.72**	**334**	PKPbc	**PKPab**	**08 52 16.5**	**+0.7**
	comp=Z,13nm,0.8s,baz=60,slow=3.0,SNR=50						
KLR	**Kul'dur**	**145.72**	**334**	c iPKP2	**PKPab**	**08 52 16.4**	**+0.6**
TEY	**Ternei**	**146.31**	**324**	⇓iPKP2	**PKPab**	**08 52 19.2**	**+1.0**
TEY				pmax	pmax		
	comp=Z,40nm,0.8s						
POO	**Poona**	**146.54**	**86**	eP	**PKPdf**	**08 52 15.5**	**-2.0**
MOY	**Mondy**	**147.71**	**10**	ePKP2	**PKPab**	**08 52 23.5**	**-0.1**
TLY	**Talaya**	**148.05**	**7**	⇑ePKIKP	**PKPdf**	**08 52 18.5**	**-0.5**
ZAK	**Zakamensk**	**149.29**	**8**	ePKP2	**PKiKP**	**08 52 26.8**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
USA0B	**Ussuriysk Arra**	**149.32**	**327**	PKP2	**PKiKP**	**08 52 27.0**	**+0.2**
USA0B	**Ussuriysk Arra**	**149.32**	**327**	PKPbc	**PKiKP**	**08 52 27.0**	**+0.2**
USRK	**Ussuriysk Ar.**	**149.32**	**327**	PKPbc	**PKiKP**	**08 52 27.1**	**+0.3**
	comp=Z,16nm,0.9s,baz=41,slow=1.7,SNR=24						
USRK	**Ussuriysk Ar.**	**149.32**	**327**	PKP2	**PKiKP**	**08 52 26.9**	**+0.1**
USRK	**Ussuriysk Ar.**	**149.32**	**327**		**PKiKP**	**08 52 26.9**	**+0.1**
MJAR	**Matsushiro Arr**	**149.81**	**309**	PKPbc	**PKiKP**	**08 52 28.4**	**+0.3**
	comp=Z,13nm,0.8s,baz=118,slow=0.9,SNR=30						
MAT	**Matsushiro**	**149.81**	**309**	PKP	**PKPdf**	**08 52 24.1**	**+1.8**
SIJI	**Sorong**	**150.11**	**229**	PKPbc	**PKiKP**	**08 52 29.5**	**+0.1**
	comp=Z,12nm,0.6s,baz=357,slow=9.1,SNR=4.7						
WMQ	**Urumqi**	**150.15**	**32**	ePKPbc	**PKPdf**	**08 52 21.8**	**-0.9**
WMQ				AMB	AMB		
	comp=Z,140nm,5.5s						
WMQ				LR	LR		
	comp=Z,390nm,21.3s						
WMQ				LR	LR		
	comp=Z,160nm,22.9s						
HYB	**Hyderabad**	**150.79**	**90**	i PKP	**PKPbc**	**08 52 30.0**	**0.0**
SONM	**Songino Array**	**152.11**	**4**	PKP	**PKPdf**	**08 52 26.9**	**+1.3**
	comp=Z,0.8nm,0.7s,baz=352,slow=0.6,SNR=4.0						
SONM				PKPbc	**PKiKP**	**08 52 33.1**	**+0.5**
	comp=Z,8.1nm,0.9s,baz=327,slow=1.5,SNR=26						
SONM				PKPab	**PKPab**	**08 52 42.8**	**+1.1**
	comp=Z,7.1nm,0.9s,baz=335,slow=1.8,SNR=7.1						
SONM	**Songino Array**	**152.11**	**4**	PKIKP	**PKiKP**	**08 52 33.4**	**+0.8**
SONM	**Songino Array**	**152.11**	**4**	PKPbc	**PKiKP**	**08 52 33.4**	**+0.8**
ULN	**Ulaanbaatar**	**152.12**	**3**	PKIKP	**PKPbc**	**08 52 31.3**	**-1.0**
ULN	**Ulaanbaatar**	**152.12**	**3**		**PKPbc**	**08 52 31.3**	**-1.0**
KAPI	**Kappang**	**153.12**	**204**	PKPbc	**PKiKP**	**08 52 37.1**	**+1.6**
	comp=Z,2.5nm,0.5s,baz=94,slow=7.1,SNR=3.7						
KAPI				PKPab	**PKPab**	**08 52 49.0**	**+2.3**
	comp=Z,15nm,1.0s,baz=206,slow=3.3,SNR=7.8						
KSRS	**Korea Array**	**156.20**	**321**	PKP	**PKPdf**	**08 52 33.3**	**+1.8**
	comp=Z,1.8nm,0.9s,baz=75,slow=1.4,SNR=3.9						
GTA	**Gaotai**	**158.98**	**21**	ePKP	**PKPdf**	**08 52 39.4**	**+4.3**
HHC	**Hu-ho-hao-te**	**159.10**	**355**	ePKP	**PKPdf**	**08 52 35.8**	**+0.6**
LZH	**Lanzhou**	**163.25**	**15**	ePKP	**PKPdf**	**08 52 32.5**	**-7.3**
LZH				pPKP	pPKPdf	08 52 44.3	-0.4
LZH				sPKP		08 52 48.8	
NJ2	**Nanjing**	**165.23**	**326**	ePKP	**PKPdf**	**08 52 40.1**	**-1.4**
XAN	**Xi'an**	**165.99**	**1**	P	PKPab	08 53 32.0	-10
XAN				pP	pPKPab	08 53 44.4	-2.3
CD2	**Chengdu**	**168.02**	**24**	PKP	**PKPdf**	**08 52 42.0**	**-1.8**
WHN	**Wuhan**	**168.53**	**338**	PKP	**PKPdf**	**08 52 42.8**	**-1.2**
GYA	**Guiyang**	**173.11**	**20**	ePKP	**PKPdf**	**08 52 44.8**	**-1.9**
GYA				PKPab	**PKPab**	**08 54 14.3**	**+0.5**
GYA				PKS	**PKSdf**	**08 56 15.0**	**-4.2**
GYA				PP	**PP**	**08 58 06.3**	**+2.0**
GYA				AMB	AMB		
	comp=Z,120nm,8.2s						

JMA 17 08:48:14.1±0.2**, 37°.25N×144°.47E, h40^{km}, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.60**	**295**	P	Pn	08 48 55.3	+1.6
JIKH				eS	Sn	08 49 26.1	+2.0
JIO	**Ouri**	**2.75**	**297**	P	Pn	08 48 57.5	+1.9
JIO				eS	Sn	08 49 29.6	+2.0
JKMT	**Kesennumamotoy**	**2.83**	**304**	P	Pn	08 48 58.3	+1.5
JKMT				eS	Sn	08 49 31.0	+1.3
OFUJ	**Ofunato**	**2.87**	**310**	P	Pn	08 48 58.7	+1.4
OFUJ				eS	Sn	08 49 31.6	+1.1
JFK	**Kawauchi**	**2.87**	**273**	P	Pn	08 48 58.7	+1.3
JFK				S	Sn	08 49 31.8	+1.1
JMST	**Minamisoumatoc**	**2.89**	**281**	P	Pn	08 48 58.9	+1.3
JMST				eS	Sn	08 49 32.9	+1.8
JMK	**Ichinoseki**	**3.08**	**305**	P	Pn	08 49 02.0	+1.9
JMK				eS	Sn	08 49 37.6	+1.9
JOU	**Okura**	**3.21**	**291**	P	Pn	08 49 04.4	+2.3
JOU				eS	Sn	08 49 41.5	+2.4
JFT	**Otama**	**3.30**	**276**	P	Pn	08 49 05.8	+2.5
JFT				eS	Sn	08 49 44.1	+2.8
JYK	**Kaneyama**	**3.65**	**298**	P	Pn	08 49 10.6	+2.6
JYK				eS	Sn	08 49 52.0	+2.2
JRG	**Rokugo**	**3.70**	**307**	P	Pn	08 49 11.3	+2.6
JRG				S	Sn	08 49 54.4	+3.3
BSO1	**Boso 1**	**3.84**	**229**	eS	Sn	08 49 55.1	+1.3
JTM	**Tenmabayashi**	**4.42**	**324**	eS	Sn	08 50 08.8	+0.1
JRY	**Ryogami san**	**4.64**	**256**	P	Pn	08 49 22.8	+1.0
JRY				eS	Sn	08 50 14.1	-0.3
JOT	**Ohata**	**4.91**	**328**	P	Pn	08 49 27.0	+1.7
JOT				eS	Sn	08 50 20.4	-0.3
JKB	**Kayabe**	**5.34**	**331**	eS	Sn	08 50 30.5	-0.9
JCH	**Churui**	**5.42**	**351**	P	Pn	08 49 32.5	+0.1
JCH				eS	Sn	08 50 30.6	-2.9
NEM2	**Nemuro 2**	**6.18**	**9**	P	Pn	08 49 40.3	-2.5
NEM2				eS	Sn	08 50 46.2	-6.0
JTKR	**Abashiri--Toko**	**6.73**	**357**	eS	Sn	08 51 01.1	-4.5

IDC ***17*** *08:51:04.3±0.5, 19°.87S×70°.64W, h0^{km}, mb4.3/18, mb1 4.4/23, mb1mx4.4/32, mbtmp4.3/23, ML3.9/5, MS3.9/10, Ms1 3.8/10, ms1mx3.6/29, Error ellipse: s-maj=19.8km s-min=11.4km az=61.0*

SJA ***17*** *08:51:04.5±1.2, 19°.94S×70°.74W, h29^{km}±4^{km}, ML4.7, MW5.0*

NEIC ***17*** *08:51:04.3±2.0, 19°.99S±0°.05×70°.77W±0°.05, h13^{km}±3^{km}, mb4.9/106, Mwr4.7/21, Error ellipse: s-maj=7.9km s-min=6.6km az=165.0*

NEIC ***17*** *08:51:05.2, 20°.04S×70°.83W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.12; $M_{\theta\theta}$-0.89; $M_{\phi\phi}$-0.23; $M_{r\theta}$0.56; $M_{\theta\phi}$-0.10; $M_{\phi r}$0.81; Fault plane solution: $M_0$1.42000×10^{16} NP1:ϕ_s269.57000°, δ27.96000°, λ123.49000°. NP2:ϕ_s52.73000°, δ66.98000°, λ73.67000°. Principal axes: T 1.5831, Plg64.0000°, Azm295.0000°; N -0.4197, Plg15.0000°, Azm59.0000°; P -1.1634, Plg20.0000°, Azm155.0000°;*

GUC ***17*** *08:51:06.7±0.6, 19°.91S×70°.76W, h35^{km}±2^{km}, ML4.7*

VAO ***17*** *08:51:08.9±1.0, 19°.79S×70°.65W, h39^{km}±8^{km}, mb4.7*

ISC 17 08:51:06.0±0.6**, 19°.96S**±0°.02×**70°.78W**±0°.04**, h19**^{km}±2^{km}**, n520,** σ1^{s}.**48**/526**, mb4.8**/59**, MS3.8**/8**, 1C-15D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.72**	**60**	⇓iP	**Pb**	**08 51 18.6**	**-1.3**
PSGC				i S	**Sb**	**08 51 27.8**	**-1.6**
PSGCX	**Pisagua**	**0.72**	**60**	i P	**Pb**	**08 51 18.7**	**-1.2**
PSGCX				i S	**Sb**	**08 51 28.3**	**-1.1**
TA01	**Diego Aracena**	**0.82**	**137**	⇓iP	**Pb**	**08 51 20.3**	**-1.3**
TA01				i S	**Sb**	**08 51 31.4**	**-1.0**
TA01				IAML		08 51 36.1	
	comp=E,37µm,0.3s						
PATCX	**Punta Patache**	**1.04**	**145**	⇓iP	**Pb**	**08 51 23.8**	**-1.6**
PATCX				i S	**Sb**	**08 51 39.1**	**+0.5**
PATCX				IAML		08 51 47.7	
	comp=E,24µm,0.7s						
PATCX	**Punta Patache**	**1.04**	**145**	i P	**Pb**	**08 51 23.9**	**-1.6**
PATCX				i S	**Sg**	**08 51 40.4**	**+0.5**
PATCX				IAML		08 51 47.1	
	comp=Z,20µm,1.1s						
PB11	**IPOC Station P**	**1.08**	**80**	⇓iP	**Pb**	**08 51 24.8**	**-1.3**
PB11				i S	**Sb**	**08 51 38.9**	**-1.0**
PB11				IAML		08 51 39.9	
	comp=N,34µm,0.5s						
PB11	**IPOC Station P**	**1.08**	**80**		**Pb**	**08 51 24.8**	**-1.3**
PB11					**Sb**	**08 51 38.9**	**-1.0**
PB11	**IPOC Station P**	**1.08**	**80**	i P	**Pb**	**08 51 24.9**	**-1.2**
PB11				i S	**Sb**	**08 51 39.0**	**-0.9**
PB11				IAML		08 51 45.9	
	comp=Z,16µm,0.3s						
PB12	**IPOC Station P**	**1.41**	**18**	⇓iP	**Pn**	**08 51 29.8**	**-0.8**
PB12				i S	**Sn**	**08 51 48.6**	**-0.1**
PB12				IAML		08 51 58.0	
	comp=E,17µm,0.8s						
PB12	**IPOC Station P**	**1.41**	**18**	eP	**Pn**	**08 51 29.8**	**-0.8**
GO01	**Chusmiza**	**1.52**	**79**	⇓iP	**Pn**	**08 51 32.4**	**-0.2**
GO01				eS	**Sn**	**08 51 52.0**	**-0.1**
GO01				IAML		08 51 59.9	
	comp=N,20µm,0.2s						
GO01	**Chusmiza**	**1.52**	**79**	Pn	**Pn**	**08 51 32.4**	**-0.2**
GO01					**Sn**	**08 51 51.6**	**-0.5**
PB08	**IPOC Station P**	**1.54**	**97**	⇓iP	**Pn**	**08 51 32.3**	**-0.4**
PB08				i S	**Sn**	**08 51 52.3**	**-0.1**
PB08	**IPOC Station P**	**1.54**	**97**	i P	**Pn**	**08 51 32.5**	**-0.3**
PB08				i S	**Sn**	**08 51 52.4**	**-0.1**
PB08				IAML		08 52 02.5	
	comp=Z,6µm,1.2s						
PB02	**IPOC Station P**	**1.59**	**149**	⇓iP	**Pn**	**08 51 32.6**	**-0.5**
PB02				i S	**Sn**	**08 51 52.8**	**-0.3**
PB02				IAML		08 51 57.1	
	comp=E,23µm,0.6s						
PB02	**IPOC Station P**	**1.59**	**149**	i P	**Pn**	**08 51 32.6**	**-0.5**
PB02				eS	**Sn**	**08 51 53.0**	**-0.2**
PB02				IAML		08 51 59.7	
	comp=Z,20µm,0.4s						
PB01	**IPOC Station P**	**1.62**	**132**	⇓iP	**Pn**	**08 51 33.1**	**-0.6**
PB01				i S	**Sn**	**08 51 54.5**	**+0.5**
PB01				IAML		08 52 04.5	
	comp=N,14µm,0.7s						
PB01	**IPOC Station P**	**1.62**	**132**	Pn	**Pn**	**08 51 33.0**	**-0.6**
PB01	**IPOC Station P**	**1.62**	**132**	i P	**Pn**	**08 51 33.2**	**-0.4**
PB01				eS	**Sn**	**08 51 54.6**	**+0.5**
PB01				IAML		08 51 56.9	
	comp=Z,9µm,0.7s						
AP01	**Chacalluta**	**1.64**	**15**	eP	**Pn**	**08 51 33.5**	**-0.2**
AP01				i S	**Sn**	**08 51 52.9**	**-1.3**
AP01				IAML		08 52 11.9	
	comp=N,18µm,0.6s						
PB07	**IPOC Station P**	**1.95**	**155**	⇓iP	**Pn**	**08 51 38.0**	**-0.1**
PB07				i S	**Sn**	**08 52 03.2**	**+1.1**
PB07				IAML		08 52 11.7	
	comp=E,6µm,0.5s						
PB07	**IPOC Station P**	**1.95**	**155**	eP	**Pn**	**08 51 38.1**	**-0.1**
PB07				eS	**Sb**	**08 52 05.0**	**+0.1**
PB07				IAML		08 52 11.9	
	comp=Z,8µm,0.8s						
PB16	**IPOC Station P**	**2.02**	**37**	eP	**Pn**	**08 51 40.2**	**+0.7**
PB16				i S	**Sn**	**08 52 05.4**	**+1.0**
PB16	**IPOC Station P**	**2.02**	**37**	i P	**Pn**	**08 51 40.7**	**+1.2**
PB03	**IPOC Station P**	**2.29**	**155**	⇓iP	**Pn**	**08 51 42.6**	**-0.2**
PB03				i S	**Sn**	**08 52 11.2**	**+0.6**
PB03				IAML		08 52 27.0	
	comp=E,3µm,0.6s						
PB03	**IPOC Station P**	**2.29**	**155**	eP	**Pn**	**08 51 42.9**	**+0.1**
PB03				i S	**Sb**	**08 52 17.0**	**+2.2**
PB03				IAML		08 52 27.7	
	comp=Z,4µm,0.7s						
PB09	**IPOC Station P**	**2.33**	**142**	⇓iP	**Pn**	**08 51 44.9**	**+1.5**
PB09				eS	**Sb**	**08 52 13.8**	**-2.0**
PB09				IAML		08 52 24.4	
	comp=N,10µm,0.7s						
PB09	**IPOC Station P**	**2.33**	**142**	i P	**Pn**	**08 51 45.0**	**+1.6**
PB09				i S	**Sb**	**08 52 16.1**	**+0.3**
PB09				IAML		08 52 24.0	
	comp=Z,11µm,0.8s						
PB04	**IPOC Station P**	**2.43**	**166**	⇓iP	**Pn**	**08 51 43.9**	**-0.9**
PB04				i S	**Sn**	**08 52 13.8**	**-0.4**
PB04				IAML		08 52 34.1	
	comp=N,5µm,0.6s						
PB04	**IPOC Station P**	**2.43**	**166**		**Pn**	**08 51 43.8**	**-1.0**
PB04	**IPOC Station P**	**2.43**	**166**	i P	**Pn**	**08 51 44.1**	**-0.8**
PB04				eS	**Sn**	**08 52 13.7**	**-0.5**
PB05	**IPOC Station P**	**2.93**	**169**	⇓iP	**Pn**	**08 51 50.3**	**-1.3**
PB05				i S	**Sn**	**08 52 25.0**	**-1.3**
PB05				IAML		08 52 58.1	
	comp=E,2µm,0.7s						
PB05	**IPOC Station P**	**2.93**	**169**	i P	**Pn**	**08 51 50.4**	**-1.3**
PB06	**IPOC Station P**	**2.96**	**158**	⇓iP	**Pn**	**08 51 51.4**	**-0.5**
PB06				i S	**Sn**	**08 52 28.0**	**+1.0**
PB06				IAML		08 52 43.8	
	comp=N,4µm,0.7s						
PB06	**IPOC Station P**	**2.96**	**158**	i P	**Pn**	**08 51 51.5**	**-0.5**
LVC	**Limon Verde**	**3.16**	**147**	Pn	**Pn**	**08 51 56.5**	**+1.5**
	comp=N,43nm,0.3s,baz=358,slow=7.5,SNR=226						
LVC				Sn	**Sn**	**08 52 36.1**	**+3.7**
	comp=N,143nm,0.3s,baz=61,slow=19,SNR=9.5						
LVC				Lg	Lg	08 52 44.4	
	comp=N,217nm,0.3s,baz=140,slow=4.2,SNR=5.9						
LVC				LR	LR	08 53 21.0	
	comp=N,4µm,18.1s,baz=334,slow=43						
LVC	**Limon Verde**	**3.16**	**147**		**Pn**	**08 51 55.5**	**+0.5**
LVC	**Limon Verde**	**3.16**	**147**	eP	**Pn**	**08 51 56.5**	**+1.5**
LVC				eS	**Sn**	**08 52 35.2**	**+2.8**
LVC	**Limon Verde**	**3.16**	**147**	i P	**Pn**	**08 51 56.7**	**+1.7**
LVC				i S	**Sn**	**08 52 36.1**	**+3.7**
LVC				IAML		08 52 46.5	
	comp=Z,2µm,0.9s						
LVC				IAML		08 52 46.8	
	comp=Z,941nm,0.8s						
PB15	**IPOC Station P**	**3.45**	**160**	i P	**Pn**	**08 51 58.2**	**-0.7**
PB10	**IPOC Station P**	**3.54**	**177**		**Pn**	**08 51 58.2**	**-1.7**
PB10	**IPOC Station P**	**3.54**	**177**	eP	**Pn**	**08 51 58.2**	**-1.7**
LPAZ	**La Paz**	**4.44**	**35**	Pn	**Pn**	**08 52 16.8**	**+3.9**
	comp=Z,1.7nm,0.3s,baz=198,slow=5.1,SNR=51						
LPAZ	**La Paz**	**4.44**	**35**	eP	**Pn**	**08 52 11.9**	**-1.0**
PB14	**IPOC Station P**	**4.66**	**176**	i P	**Pn**	**08 52 13.5**	**-2.0**
GO02	**Mina Guanaco**	**5.29**	**168**		**Pn**	**08 52 23.0**	**-1.3**
YJA	**Yavi**	**5.39**	**115**	i P	Pn	08 52 31.3	+5.5
HJA	**Humahuaca**	**5.95**	**124**	eP	Pn	08 52 38.6	+5.1
AZAP	**Zapla**	**6.79**	**130**	i P	**Pn**	**08 52 47.6**	**+2.8**
GO03	**Copiap**	**7.61**	**176**		**Pn**	**08 52 53.8**	**-2.1**
NNA	**Nana**	**9.84**	**323**	Pn	**Pn**	**08 53 27.3**	**+0.9**
	comp=Z,2.0nm,0.3s,baz=180,slow=12,SNR=4.0						
NNA				Sn	**Sn**	**08 55 11.9**	**-4.6**
	comp=Z,1.4nm,0.3s,baz=109,slow=18,SNR=1.8						
NNA	**Nana**	**9.84**	**323**	Pn	**Pn**	**08 53 24.5**	**-2.0**
SIV	**San Ignacio**	**10.05**	**68**	Pn	**Pn**	**08 53 28.4**	**-1.0**
	comp=Z,1.5nm,0.3s,baz=266,slow=10,SNR=52						
GO04	**Tololo Observa**	**10.17**	**180**	Pn	**Pn**	**08 53 27.1**	**-4.1**
CFA	**Coronel Fontan**	**11.82**	**169**	Pn	**Pn**	**08 53 51.0**	**-2.6**
	comp=Z,0.5nm,0.3s,baz=355,slow=10.0,SNR=7.7						
CFA				Sn	**Sn**	**08 55 58.4**	**-6.6**
	comp=Z,0.4nm,0.3s,baz=336,slow=18,SNR=2.1						
CFA				LR	LR	08 58 19.8	
	comp=Z,692nm,19.2s,baz=334,slow=37						
ROC1	**El Roble**	**12.96**	**181**	Pn	**Pn**	**08 54 08.1**	**-1.3**
SAML	**Samuel**	**13.19**	**35**	Pn	**Pn**	**08 54 10.1**	**-2.1**
SAML	**Samuel**	**13.19**	**35**	eP	**Pn**	**08 54 10.5**	**-1.8**
CPUP	**Villa Florida**	**13.90**	**120**	Pn	**Pn**	**08 54 21.9**	**0.0**
	comp=Z,0.1nm,0.3s,baz=297,slow=17,SNR=4.2						
CPUP	**Villa Florida**	**13.90**	**120**		**Pn**	**08 54 20.9**	**-1.1**
CPUP	**Villa Florida**	**13.90**	**120**	eP	**Pn**	**08 54 23.8**	**+1.8**
AQDB	**Aquidauana**	**14.17**	**95**	eP	**Pn**	**08 54 26.8**	**+1.1**
ATAH	**Atahualpa**	**14.73**	**329**	Pn	**Pn**	**08 54 34.3**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=139,slow=20,SNR=1.7						
SALV	**Santo Antonio**	**14.91**	**77**	eP	**Pn**	**08 54 34.1**	**-1.8**
GO05	**Huala**	**15.03**	**184**	Pn	**Pn**	**08 54 33.8**	**-3.5**
C2SB	**Chapadao do Su**	**16.98**	**89**	eP	**Pn**	**08 55 02.3**	**-0.1**
CLDB	**Colider**	**17.03**	**60**	eP	**Pn**	**08 55 01.9**	**-1.2**
TRCB	**Terra Rica**	**17.14**	**103**	eP	**Pn**	**08 55 02.6**	**-1.9**
PTGB	**Pitanga**	**17.95**	**109**	eP	**P**	**08 55 16.0**	**+0.9**
PCMB	**Pacaembu**	**18.33**	**99**	eP	**Pn**	**08 55 17.7**	**-1.5**
ARAG	**Araguaiana, MT**	**18.55**	**80**	eP	**P**	**08 55 20.7**	**-0.9**
ITAB	**Concordia**	**18.55**	**116**	eP	**Pn**	**08 55 21.9**	**0.0**
CPSB	**Cacapava Do Su**	**18.80**	**127**	eP	**Pn**	**08 55 25.9**	**+0.9**
PLTB	**Pedras Altas**	**19.39**	**131**	eP	**Pn**	**08 55 31.7**	**-0.3**
GO06	**Curarrehue**	**19.57**	**182**	P	**P**	**08 55 32.1**	**-0.6**
FRTB	**Fartura**	**20.00**	**103**	eP	**P**	**08 55 37.0**	**-0.6**
CNLB	**Canela**	**20.34**	**121**	eP	Pn	08 55 44.8	+1.4
PLCA	**Paso Flores**	**20.70**	**180**	P	Pn	08 55 46.9	-0.6
	comp=Z,14nm,0.9s,baz=21,slow=12,SNR=17						
PLCA				LR	LR	09 03 13.4	
	comp=Z,163nm,20.5s,baz=28,slow=35						
PLCA	**Paso Flores**	**20.70**	**180**	P	**P**	**08 55 45.8**	**+0.7**
PLCA	**Paso Flores**	**20.70**	**180**	eP	Pn	08 55 47.1	-0.4
BB19B	**Bebedouro**	**20.87**	**97**	eP	**P**	**08 55 45.5**	**-1.6**
IPMB	**Ipameri, GO**	**21.43**	**88**	eP	**P**	**08 55 52.7**	**-0.4**
RCLB	**Rio Claro- Sao**	**21.81**	**101**	eP	**P**	**08 55 55.7**	**-1.5**
PTGA	**Pitinga**	**21.85**	**30**	P	**P**	**08 55 57.0**	**-0.5**
	comp=Z,4.5nm,0.3s,baz=212,slow=16,SNR=13						
PTGA				S	Sn	09 00 05.8	-2.6
	comp=Z,3.7nm,0.8s,baz=206,slow=20,SNR=6.2						
PTGA	**Pitinga**	**21.85**	**30**		**P**	**08 55 56.9**	**-0.6**
PTGA	**Pitinga**	**21.85**	**30**	eP	**P**	**08 55 55.8**	**-1.7**
FLOC	**Florencia**	**21.94**	**347**	eP	**P**	**08 55 59.0**	**+0.4**
FLOC	**Florencia**	**21.94**	**347**	P	**P**	**08 55 57.1**	**-1.4**
GCUF	**Volcan Galeras**	**22.02**	**342**	eP	**P**	**08 56 05.4**	**+5.5**
BDFB	**Brasilia**	**22.09**	**82**	P	**P**	**08 56 00.9**	**+0.6**
	comp=Z,10nm,0.8s,baz=246,slow=15,SNR=10						
BDFB				LR	LR	09 03 54.2	
	comp=Z,255nm,20.6s,baz=282,slow=35						
BDFB	**Brasilia**	**22.09**	**82**	P	**P**	**08 56 00.4**	**+0.1**
VAO	**Valinhos**	**22.36**	**102**	eP	**P**	**08 56 03.1**	**0.0**
GARC	**Garzon, Huila**	**22.49**	**348**	eP	**P**	**08 56 05.2**	**+0.5**
SOTA	**Rioblanco**	**22.69**	**345**	eP	**P**	**08 56 10.6**	**+3.5**
PCON	**Cinco Dias**	**22.83**	**345**	eP	**P**	**08 56 13.4**	**+4.8**
ORTC	**Ortega, Tolima**	**24.12**	**349**	eP	**P**	**08 56 21.5**	**+0.7**
BSCB	**Bom Sucesso**	**24.38**	**97**	eP	**P**	**08 56 22.2**	**-1.1**
YOTC	**Yotoco, Valle**	**24.41**	**346**	eP	**P**	**08 56 25.2**	**+1.6**
CHIC	**Chingaza**	**24.61**	**353**	eP	**P**	**08 56 24.6**	**-1.0**
ROSC	**El Rosal**	**24.89**	**352**	P	**P**	**08 56 30.6**	**+2.5**
	comp=Z,4.8nm,0.4s,baz=90,slow=20,SNR=2.6						
ROSC				LR	LR	09 08 01.1	
	comp=Z,290nm,18.8s,baz=166,slow=41						
ROSC	**El Rosal**	**24.89**	**352**	P	**P**	**08 56 27.2**	**-0.9**
RREF	**El Recreo**	**25.11**	**349**	eP	**P**	**08 56 33.1**	**+2.7**
PLMC	**San Jos del P**	**25.30**	**347**	eP	**P**	**08 56 37.5**	**+6.1**
GUY2C	**Guyana, Caldas**	**25.43**	**349**	eP	**P**	**08 56 36.2**	**+3.1**
SPBC	**San Pablo de B**	**25.66**	**352**	eP	**P**	**08 56 35.0**	**+0.2**
NORC	**Norcasia**	**25.68**	**351**	eP	**P**	**08 56 35.2**	**+0.2**
JANB	**Januaria**	**25.70**	**83**	eP	**P**	**08 56 34.1**	**-1.1**
RUSC	**La Rusia**	**25.79**	**355**	eP	**P**	**08 56 36.6**	**+0.2**
RUSC	**La Rusia**	**25.79**	**355**	P	**P**	**08 56 34.6**	**-1.8**
CBOC	**Ciudad Bolivar**	**26.17**	**348**	eP	**P**	**08 56 41.1**	**+1.6**
HELC	**Santa Helena**	**26.40**	**349**	eP	**P**	**08 56 39.2**	**-2.6**
PTBC	**PUERTO BERRIO,**	**26.58**	**352**	eP	**P**	**08 56 40.7**	**-2.3**
PAYG	**Puerto Ayora**	**27.05**	**313**	P	**P**	**08 56 48.6**	**+1.2**
PAYG				IAmb	IAmb	08 56 48.9	
	comp=Z,28nm,1.1s						
PAMC	**Pamplona, Colo**	**27.20**	**356**	eP	**P**	**08 56 47.8**	**-1.3**
ZARC	**Zaragoza, Cauc**	**27.57**	**351**	eP	**P**	**08 56 51.8**	**-0.1**
UREC	**San Jos de Ur**	**27.93**	**350**	eP	**P**	**08 56 51.4**	**-3.8**
BSFB	**Barra de Sao F**	**28.24**	**93**	eP	**P**	**08 56 57.7**	**-0.4**
SDV	**Santo Domingo**	**28.67**	**0**	P	**P**	**08 57 01.8**	**-0.1**
	comp=Z,2.7nm,0.9s,baz=237,slow=17,SNR=4.7						
SDV				LR	LR	09 09 58.6	
	comp=Z,232nm,19.4s,baz=266,slow=40						
SDV	**Santo Domingo**	**28.67**	**0**	eP	**P**	**08 57 00.7**	**-1.2**
SMLC	**San Martn de**	**28.76**	**353**	eP	**P**	**08 57 00.1**	**-2.5**
JTS	**Las Juntas de**	**33.14**	**334**	P	**P**	**08 57 43.4**	**+2.2**
	comp=Z,2.4nm,0.8s,baz=174,slow=9.2,SNR=2.0						
JTS	**Las Juntas de**	**33.14**	**334**	P	**P**	**08 57 41.0**	**-0.2**
NBLI	**Livramento-PB**	**35.09**	**74**	eP	**P**	**08 57 57.6**	**-0.7**
RCBR	**Riachuelo**	**36.68**	**72**		**P**	**08 58 11.2**	**-0.7**
RCBR				IAmb	IAmb	08 58 18.4	
	comp=Z,14nm,0.7s						
RCBR	**Riachuelo**	**36.68**	**72**	eP	**P**	**08 58 11.9**	**0.0**
IGPR	**InterUniversit**	**37.97**	**7**	P	**P**	**08 58 21.7**	**-0.9**
SJG	**San Juan**	**38.11**	**7**	LR	LR	09 13 32.5	
	comp=Z,150nm,21.4s,baz=187,slow=36						
APG	**El Apazote**	**39.77**	**329**	P	**P**	**08 58 37.9**	**-0.2**
	comp=Z,10nm,1.2s,baz=98,slow=14,SNR=2.9						
CMIG	**Matias Romero**	**43.77**	**326**	LR	LR	09 15 23.4	
	comp=Z,148nm,20.3s,baz=155,slow=33						
PMSA	**Palmer Station**	**45.01**	**176**	LR	LR	09 16 41.0	
	comp=Z,83nm,19.1s,baz=316,slow=34						
X59A	**McDuffie Farm,**	**54.74**	**352**	P	**P**	**09 00 36.4**	**+2.3**
	baz=171						
Z50A	**Ashland**	**54.86**	**344**	P	**P**	**09 00 37.1**	**+2.0**
	baz=163						
X55A	**Gracelyn & Ava**	**55.11**	**349**	P	**P**	**09 00 38.0**	**+1.2**
	baz=168						
W58A	**Raeford**	**55.27**	**352**	P	**P**	**09 00 39.9**	**+2.0**
	baz=170						
V61A	**Roper**	**55.72**	**354**	P	**P**	**09 00 44.3**	**+3.1**
	baz=174						
V60A	**Jim Taylor Roa**	**55.76**	**354**	P	**P**	**09 00 44.8**	**+3.4**
	baz=173						
W54A	**Cherokee Point**	**55.80**	**349**	P	**P**	**09 00 44.5**	**+2.7**
	baz=167						
V59A	**Middlesex**	**55.87**	**353**	P	**P**	**09 00 44.3**	**+2.0**
	baz=172						
V58A	**Windy Hill, Pi**	**56.01**	**352**	P	**P**	**09 00 46.8**	**+3.6**
	baz=171						
V56A	**Mocksville**	**56.23**	**351**	P	**P**	**09 00 47.6**	**+2.7**
	baz=169						
U61A	**Possum Corner**	**56.24**	**354**	P	**P**	**09 00 48.3**	**+3.4**
	baz=174						
NATX	**Nacogdoches**	**56.29**	**336**	P	**P**	**09 00 47.7**	**+2.3**
	baz=153						
U59A	**Littleton**	**56.40**	**353**	P	**P**	**09 00 49.4**	**+3.3**
	baz=172						
V54A	**Nebo**	**56.43**	**349**	P	**P**	**09 00 48.8**	**+2.4**
	baz=168						
U58A	**Oxford**	**56.53**	**352**	P	**P**	**09 00 49.8**	**+2.8**
	baz=171						
U57A	**Blanch**	**56.67**	**352**	P	**P**	**09 00 50.2**	**+2.3**
	baz=170						
U56A	**King**	**56.73**	**351**	P	**P**	**09 00 50.4**	**+2.0**
	baz=169						
Z41A	**Richland Creek**	**56.95**	**338**	P	**P**	**09 00 51.9**	**+1.9**
	baz=155						
T59A	**Double "B" Far**	**56.98**	**354**	P	**P**	**09 00 51.5**	**+1.3**
	baz=172						
U55A	**TA2, Sparta**	**56.99**	**350**	P	**P**	**09 00 51.7**	**+1.4**
	baz=169						
OXF	**Oxford**	**57.00**	**342**	P	**P**	**09 00 51.8**	**+1.5**
	baz=159						
T58A	**Grand View Acr**	**57.07**	**353**	P	**P**	**09 00 52.1**	**+1.3**
	baz=171						
U54A	**Nelsons Funny**	**57.14**	**349**	P	**P**	**09 00 52.7**	**+1.4**
	baz=168						
T57A	**Hurt**	**57.21**	**352**	P	**P**	**09 00 53.3**	**+1.5**
	baz=171						
JCT	**Junction City**	**57.40**	**330**	P	**P**	**09 00 54.8**	**+1.5**
	baz=147						
WLAR	**White Oak Lake**	**57.44**	**338**	P	**P**	**09 00 54.1**	**+0.6**
T55A	**Pulaski**	**57.55**	**351**	P	**P**	**09 00 55.9**	**+1.7**
	baz=169						
S60A	**Water View**	**57.62**	**354**	P	**P**	**09 00 56.0**	**+1.3**
	baz=174						
WHTX	**Lake Whitney,**	**57.63**	**333**	P	**P**	**09 00 56.1**	**+1.2**
	baz=150						
S58A	**Poland Farm, P**	**57.67**	**353**	P	**P**	**09 00 56.6**	**+1.5**
	baz=172						
T53A	**Wise**	**57.71**	**349**	P	**P**	**09 00 56.0**	**+0.6**
	baz=167						
S56A	**Natural Bridge**	**57.92**	**352**	P	**P**	**09 00 58.3**	**+1.5**
	baz=170						
S57A	**Dark Hollow, R**	**57.93**	**352**	P	**P**	**09 00 58.3**	**+1.5**
	baz=171						
T51A	**Gray**	**57.97**	**348**	P	**P**	**09 00 58.6**	**+1.4**
	baz=166						
R58B	**Mineral**	**58.00**	**353**	P	**P**	**09 00 59.1**	**+1.8**
	baz=172						
WVT	**Waverly**	**58.07**	**344**	P	**P**	**09 00 58.4**	**+0.6**
	baz=161						
R61A	**Willards**	**58.14**	**356**	P	**P**	**09 01 00.4**	**+2.1**
	baz=175						
S55A	**Lewisburg**	**58.15**	**351**	P	**P**	**09 00 58.9**	**+0.4**
	baz=169						
T50A	**Nancy**	**58.21**	**347**	P	**P**	**09 00 59.7**	**+0.9**
	baz=164						
S54A	**Dingess, Beckl**	**58.30**	**350**	P	**P**	**09 01 00.4**	**+0.9**
	baz=168						
S53A	**Williamson**	**58.32**	**349**	P	**P**	**09 01 01.1**	**+1.4**
	baz=168						
R58A	**Rapidan**	**58.35**	**353**	P	**P**	**09 01 01.3**	**+1.5**
	baz=172						
TXAR	**Lajitas Array**	**58.38**	**326**	P	**P**	**09 00 58.9**	**-1.4**
TX31	**Lajitas Ar. Si**	**58.38**	**326**	P	**P**	**09 00 58.2**	**-2.1**
MIAR	**Mount Ida**	**58.38**	**338**	P	**P**	**09 00 59.4**	**-0.7**
MIAR				IAmb	IAmb	09 01 07.9	
	comp=Z,19nm,1.1s						
MIAR	**Mount Ida**	**58.38**	**338**	P	**P**	**09 01 00.6**	**+0.5**
	baz=155,SNR=7.0						
R57A	**Stanardsville**	**58.40**	**353**	P	**P**	**09 01 00.1**	**0.0**
	baz=172						
T49A	**Edmonton**	**58.44**	**346**	P	**P**	**09 00 59.4**	**-1.1**
T49A				IAmb	IAmb	09 01 07.4	
	comp=Z,16nm,0.8s						
T49A	**Edmonton**	**58.44**	**346**	P	**P**	**09 01 00.5**	**+0.1**
	baz=164						

S52A	Salyersville	58.49	349	P	P	09 01 02.0	+1.2
	baz=166						
W41B	Gary Mavity, V	58.50	339	P	P	09 01 01.0	+0.2
	baz=156						
R55A	Marlinton	58.59	351	P	P	09 01 03.5	+1.9
	baz=170						
R56A	Bull Pasture M	58.62	352	P	P	09 01 04.2	+2.4
	baz=171						
T47A	Sharon Grove	58.70	345	P	P	09 01 01.7	-0.5
S50A	Richmond	58.75	347	P	P	09 01 03.5	+0.9
	baz=165						
S49A	Springfield	59.04	347	P	P	09 01 05.2	+0.6
	baz=164						
W39A	Magazine	59.04	338	P	P	09 01 05.8	+1.2
	baz=155						
Q57A	Strasburg	59.12	353	P	P	09 01 07.2	+2.0
	baz=172						
ABTX	Abilene, Hawle	59.13	332	P	P	09 01 05.5	+0.1
ABTX	Abilene, Hawle	59.13	332	P	P	09 01 06.2	+0.8
	baz=148						
R51A	Hillsboro	59.19	348	P	P	09 01 06.3	+0.7
	baz=166						
Q56A	Snyder Ridge,	59.22	352	P	P	09 01 07.5	+1.6
Q56A	Snyder Ridge,	59.22	352	P	P	09 01 07.3	+1.5
	baz=171						
Q55A	Buckhannon	59.29	352	P	P	09 01 07.6	+1.2
	baz=170						
R50A	Paris	59.31	348	P	P	09 01 07.7	+1.2
	baz=165						
Q53A	Leroy	59.37	350	P	P	09 01 08.9	+2.0
	baz=168						
Q54A	Coxs Mills	59.39	351	P	P	09 01 08.2	+1.2
	baz=169						
Q52A	Bidwell	59.59	350	P	P	09 01 10.7	+2.3
	baz=168						
P56A	Dayton Farm, R	59.63	353	P	P	09 01 11.0	+2.3
	baz=171						
P60A	Greenville	59.63	356	P	P	09 01 08.7	0.0
	baz=175						
WCI	Wyandotte Cave	59.69	346	P	P	09 01 08.9	-0.2
	baz=163						
P55A	Reedsville	59.76	352	P	P	09 01 10.5	+1.0
	baz=170						
U40A	Yellville	59.78	339	P	P	09 01 10.4	+0.7
	baz=156						
MCWV	Mont Chateau	59.91	352	P	P	09 01 12.1	+1.5
	baz=170						
S44A	Carbondale	59.93	343	P	P	09 01 10.5	-0.2
S44A				IAmb	IAmb	09 01 11.9	
	comp=Z,18nm,1.1s						
P54A	Burton	59.94	351	P	P	09 01 12.0	+1.2
	baz=170						
P53A	Whipple	59.96	351	P	P	09 01 11.7	+0.7
	baz=169						
HHAR	Hobbs	60.08	338	P	P	09 01 11.8	0.0
HHAR				IAmb	IAmb	09 01 19.4	
	comp=Z,22nm,1.3s						
P52A	Corning	60.23	350	P	P	09 01 13.5	+0.7
	baz=168						
Q48A	North Vernon	60.23	347	P	P	09 01 14.5	+1.7
	baz=164						
P51A	Williamsport	60.24	349	P	P	09 01 13.3	+0.4
	baz=167						
MGMO	Mountain Grove	60.31	340	P	P	09 01 13.9	+0.4
O56A	Blue Knob Stat	60.35	353	P	P	09 01 15.4	+1.7
	baz=172						
O55A	Ligonier	60.38	352	P	P	09 01 15.1	+1.2
	baz=171						
TUL1	Leonard	60.41	337	P	P	09 01 12.6	-1.5
TUL1	Leonard	60.41	337	P	P	09 01 14.9	+0.8
	baz=153						
WMOK	Wichita Mounta	60.56	334	P	P	09 01 15.9	+0.7
	baz=150						
P49A	Miami Univ. Ec	60.60	348	P	P	09 01 15.5	+0.1
	baz=165						
SSPA	Standing Stone	60.65	354	P	P	09 01 17.2	+1.6
	baz=172						
P48A	Milroy	60.68	347	P	P	09 01 18.0	+2.2
	baz=164						
O51A	Pataskala	60.80	350	P	P	09 01 17.1	+0.4
	baz=167						
CCM	Cathedral Cave	60.83	342	P	P	09 01 16.2	-0.7
CCM				IAmb	IAmb	09 01 18.1	
	comp=Z,18nm,1.4s						
CCM	Cathedral Cave	60.83	342	P	P	09 01 17.2	+0.2
	baz=158						
N55A	Marion Center	60.91	353	P	P	09 01 18.4	+1.0
	baz=171						
N56A	West Decatur	60.97	353	P	P	09 01 19.8	+2.0
	baz=172						
O50A	Cable	60.98	349	P	P	09 01 19.4	+1.4
	baz=166						
S39A	Bolivar	61.14	340	P	P	09 01 19.5	+0.5
S39A				IAmb	IAmb	09 01 26.4	
	comp=Z,14nm,1.1s						
MNTX	Cornudas Mount	61.15	326	P	P	09 01 19.5	+0.3
MNTX				IAmb	IAmb	09 01 26.6	
	comp=Z,5.2nm,0.7s						
MNTX	Cornudas Mount	61.15	326	P	P	09 01 20.4	+1.2
	baz=143						
O49A	Covington	61.16	348	P	P	09 01 18.6	-0.5
O49A				IAmb	IAmb	09 01 25.1	
	comp=Z,9.8nm,0.9s						
N54A	Moraine State	61.21	352	P	P	09 01 20.7	+1.3
	baz=170						
M58A	Price's Panora	61.25	355	P	P	09 01 20.5	+0.8
	baz=174						
M57A	Sunshine Farm,	61.27	355	P	P	09 01 20.9	+1.0
	baz=173						
N52A	McGinn's Farm,	61.31	351	P	P	09 01 21.6	+1.5
	baz=168						
M59A	Waymart	61.34	356	P	P	09 01 21.6	+1.3
	baz=175						
O48A	Farmland	61.39	348	P	P	09 01 20.5	-0.1
	baz=165						
L63A	North Scituate	61.52	359	P	P	09 01 22.8	+1.4
	baz=179						
M56A	Emporium	61.52	354	P	P	09 01 22.0	+0.5
	baz=172						
N51A	Ashland	61.52	350	P	P	09 01 21.7	+0.2
	baz=168						
M55A	Ridgway	61.56	353	P	P	09 01 23.1	+1.3
	baz=172						
L64A	Middleborough	61.58	360	P	P	09 01 23.3	+1.4
	baz=180						
MSTX	Muleshoe	61.69	330	P	P	09 01 22.5	-0.5
MSTX	Muleshoe	61.69	330	P	P	09 01 24.2	+1.2
	baz=146						
M54A	Oil Creek Stat	61.71	352	P	P	09 01 24.1	+1.3
	baz=171						
L60A	Shokan	61.72	357	P	P	09 01 23.7	+0.8
	baz=176						
M53A	WI Miller and	61.77	352	P	P	09 01 24.0	+0.7
	baz=170						
N49A	Columbus Grove	61.84	349	P	P	09 01 22.1	-1.6
N49A	Columbus Grove	61.84	349	P	P	09 01 24.4	+0.7
	baz=166						
L58A	Harry Jones Me	61.87	356	P	P	09 01 24.9	+1.0
	baz=175						
L57A	Andrews Acres	61.90	355	P	P	09 01 24.6	+0.5
	baz=174						
SFIN	Lafayette	61.92	346	P	P	09 01 23.7	-0.5
SFIN	Lafayette	61.92	346	P	P	09 01 23.9	-0.4
	baz=163						
N48A	Decatur	61.94	348	P	P	09 01 24.3	-0.1
	baz=165						
AMTX	Amarillo	61.94	331	P	P	09 01 24.9	+0.3
	baz=147						
L59A	Walton	61.96	356	P	P	09 01 23.5	-1.1
L59A	Walton	61.96	356	P	P	09 01 26.3	+1.8
	baz=176						
M52A	Chesterland	61.97	351	P	P	09 01 25.5	+1.0
	baz=169						
BINY	Binghamton	62.03	356	P	P	09 01 26.8	+1.8
	baz=174						
VNA3	Neumayer Olymp	62.09	161	P	P	09 01 27.5	+2.5
N47A	Urbana	62.10	347	P	P	09 01 25.8	+0.4
	baz=164						
L56A	Greenwood	62.10	354	P	P	09 01 27.0	+1.5
	baz=173						
HRV	Adam Dziewonsk	62.16	359	P	P	09 01 27.4	+1.6
	baz=179						
L53A	Girard	62.22	352	P	P	09 01 27.0	+0.8
	baz=170						
L55A	Hinsdale	62.23	354	P	P	09 01 27.3	+1.0
	baz=172						
VNA1	Neumayer--Stat	62.31	160	P	P	09 01 29.1	+2.5
M49A	Liberty Center	62.34	349	P	P	09 01 27.2	+0.2
	baz=166						
ERPA	Erie	62.35	352	P	P	09 01 27.8	+0.8
	baz=170						
L54A	Sinclairville	62.38	353	P	P	09 01 28.3	+1.0
	baz=171						
WVNY	West Valley, N	62.47	353	P	P	09 01 27.7	-0.2
K59A	Cooperstown	62.53	357	P	P	09 01 30.2	+1.8
	baz=176						
K58A	Earlville	62.57	356	P	P	09 01 29.6	+1.0
	baz=175						
K57A	Scipio Center	62.60	355	P	P	09 01 30.1	+1.3
	baz=174						
K56A	Middlesex	62.64	355	P	P	09 01 29.5	+0.5
	baz=173						
VNA2	Neumayer--Watz	62.68	161	P	P	09 01 31.2	+2.2
	baz=289,slow=6.3						
K54A	Basiliko Farm,	62.68	353	P	P	09 01 30.3	+1.0
	baz=172						
L50A	Kingsville	62.69	350	P	P	09 01 30.3	+1.0
	baz=167						
K55A	Perry	62.74	354	P	P	09 01 29.9	+0.2
	baz=172						
L48A	N Adams	62.87	349	P	P	09 01 30.3	-0.3
	baz=166						
J60A	Lant Hill Farm	62.94	358	P	P	09 01 32.1	+1.1
	baz=177						
319A	Douglas	63.01	323	P	P	09 01 32.0	+0.1
L47A	Sherwood	63.05	348	P	P	09 01 31.7	-0.1
	baz=165						
J58A	Remsen	63.14	356	P	P	09 01 33.4	+1.1
	baz=175						
J56A	Wolcott	63.17	355	P	P	09 01 33.6	+1.1
	baz=174						
J59A	Piesco	63.20	357	P	P	09 01 34.5	+1.7
J59A	Piesco	63.20	357	P	P	09 01 34.1	+1.3
	baz=176						
J57A	Williamstown	63.24	356	P	P	09 01 33.8	+0.8
	baz=175						
J54A	Appleton	63.33	354	P	P	09 01 32.1	-1.4
J54A	Appleton	63.33	354	P	P	09 01 33.9	+0.3
	baz=172						
I58A	Old Forge	63.45	357	P	P	09 01 35.5	+1.0
	baz=176						
J52A	Paris	63.52	352	P	P	09 01 35.6	+0.8
	baz=170						
KSU1	Kansas State U	63.53	338	P	P	09 01 35.7	+0.6
	baz=153						
I64A	Boothbay	63.57	1	P	P	09 01 36.3	+1.2
	baz=181						
I61A	Oroboro, Fairl	63.59	359	P	P	09 01 36.4	+1.1
	baz=179						
K48A	Perry	63.65	349	P	P	09 01 36.2	+0.5
	baz=166						
K47A	Vermontville	63.68	348	P	P	09 01 37.4	+1.5
	baz=165						
R32A	Long Quarter,	63.72	336	P	P	09 01 35.4	-0.9
I57A	Carthage	63.74	356	P	P	09 01 37.4	+1.1
	baz=175						
K46A	Dorr	63.85	348	P	P	09 01 38.2	+1.2
	baz=164						
J48A	Bridge Port	64.07	349	P	P	09 01 39.2	+0.7
	baz=166						
H58A	Gabriels	64.14	357	P	P	09 01 40.8	+1.8
	baz=176						
I51A	Listowel	64.14	352	P	P	09 01 40.2	+1.3
	baz=169						
I55A	Frankford	64.17	354	P	P	09 01 37.1	-2.0
	baz=173						
J47A	Sunmer	64.20	349	P	P	09 01 39.8	+0.5
	baz=165						
H57A	Richville	64.25	356	P	P	09 01 40.2	+0.6
	baz=175						
ANMO	Albuquerque	64.27	328	P	P	09 01 40.2	0.0
ANMO	Albuquerque	64.27	328	P	P	09 01 38.4	-1.8
	baz=143						
SNAA	Sanae	64.30	161	P	P	09 01 41.8	+2.1
SNAA	Sanae	64.30	161	P	P	09 01 40.0	+0.2
H63A	New Sharon	64.31	1	P	P	09 01 41.1	+1.1
	baz=181						
H59A	Cadyville	64.35	358	P	P	09 01 41.6	+1.4
	baz=177						
H56A	Elgin	64.43	356	P	P	09 01 41.6	+0.8
	baz=174						
CBKS	Cedar Bluff	64.46	335	P	P	09 01 42.5	+1.3
	baz=150						
H55A	Tweed	64.46	355	P	P	09 01 42.6	+1.6
	baz=173						
I49A	Point Hope	64.54	350	P	P	09 01 41.8	+0.2
	baz=168						
TUC	Tucson	64.56	323	P	P	09 01 41.1	-0.9
TUC	Tucson	64.56	323	P	P	09 01 42.9	+0.9
	baz=138						
H53A	Bobcaygeon	64.61	354	P	P	09 01 42.5	+0.5
	baz=172						
G60A	Masonville	64.76	359	P	P	09 01 45.9	+2.9
	baz=178						
G58A	Ormstown	64.86	357	P	P	09 01 44.7	+1.1
	baz=177						
G62A	West of Eustis	64.86	0	P	P	09 01 44.5	+0.8
	baz=180						
I48A	Sherman Twp	64.92	350	P	P	09 01 44.8	+0.7
	baz=167						
G61A	St-Isidore-de-	64.93	359	P	P	09 01 46.7	+2.6
	baz=179						
T25A	Trinidad	65.05	331	P	P	09 01 46.7	+1.4
	baz=145						
JFWS	Jewell Farm	65.08	344	P	P	09 01 46.7	+1.6
	baz=160						
G55A	Calabogie	65.12	355	P	P	09 01 45.9	+0.6
	baz=174						
G53A	Haliburton	65.16	354	P	P	09 01 46.6	+1.1
	baz=172						
H48A	Harrisville	65.36	350	P	P	09 01 46.8	0.0
	baz=167						
G54A	Lake Saint Pet	65.38	354	P	P	09 01 48.8	+1.8
	baz=172						
214A	Organ Pipe Nat	65.47	321	IAmb	IAmb	09 01 56.7	
	comp=Z,13nm,1.1s						
F52A	Sundridge	65.90	353	P	P	09 01 51.1	+0.8
	baz=171						
ALGO	Algonquin Park	65.93	354	P	P	09 01 51.6	+1.1
	baz=173						
E60A	Ste Agathe de	66.02	359	P	P	09 01 51.9	+0.9
	baz=179						
SDCO	Great Sand Dun	66.04	330	IAmb	IAmb	09 01 54.7	
	comp=Z,14nm,1.2s						
SDCO	Great Sand Dun	66.04	330	P	P	09 01 52.7	+0.9
	baz=144,SNR=11						
E58A	La Victoria	66.06	358	P	P	09 01 51.4	+0.1
	baz=178						
W18A	Petrified Fore	66.09	326		pP	09 01 55.2	-2.6
F51A	Arnstein	66.10	353	P	P	09 01 52.1	+0.5
	baz=171						
BGNE	Belgrade	66.12	338	P	P	09 01 52.3	+0.3
	baz=152						
F49A	Sandfield	66.20	351	P	P	09 01 52.3	0.0
	baz=168						
G46A	Petoskey	66.22	349	P	P	09 01 53.1	+0.7
	baz=166						
E56A	St. Veronique	66.30	357	P	P	09 01 54.0	+1.1
	baz=176						
E52A	Mattawa	66.32	354	P	P	09 01 54.0	+1.1
	baz=172						
F48A	Evansville	66.35	351	P	P	09 01 53.5	+0.3
	baz=168						
X16A	Lo Mia Camp, P	66.49	324	IAmb	IAmb	09 02 07.1	
	comp=Z,17nm,1.4s						
D60A	Saint Jean D'O	66.56	360	P	P	09 01 55.9	+1.4
	baz=180						
E51A	G1948 Merrick	66.65	353	P	P	09 01 56.4	+1.3
	baz=171						
S22A	4UR Ranch, Cre	66.67	329	P	P	09 01 55.8	-0.1
	baz=143						
D57A	Chemin Vers le	66.72	358	P	P	09 01 56.1	+0.6
	baz=177						
D62A	Allapoint, All	66.75	1	P	P	09 01 57.3	+1.7
	baz=182						
D58A	Chemin du LacG	66.77	358	P	P	09 01 56.4	+0.6
	baz=178						
D56A	ZEC Mazanza, M	66.79	357	P	P	09 01 56.8	+0.8
	baz=176						
D55A	Sainte-Anne-du	66.80	357	P	P	09 01 56.4	+0.3
	baz=175						
Q24A	Divide	66.87	331	P	P	09 01 57.9	+0.8
	baz=145						
E48A	Lockeyer	66.93	351	P	P	09 01 57.9	+1.0
	baz=168						
D54A	Lac Fusel, La	67.01	356	P	P	09 01 57.9	+0.5
	baz=174						
D53A	Lac Vacive, Po	67.02	355	P	P	09 01 58.0	+0.5
	baz=173						
E47A	Iron Bridge	67.06	351	P	P	09 01 58.0	+0.2
	baz=167						
MVCO	Mesa Verde	67.06	328	P	P	09 01 57.0	-1.3
MVCO				IAmb	IAmb	09 02 06.5	
	comp=Z,7.4nm,1.0s						
MVCO	Mesa Verde	67.06	328	P	P	09 01 59.0	+0.7
	baz=142						
D51A	Lot 18 Range I	67.19	354	P	P	09 01 59.6	+1.1
	baz=171						
WUAZ	Wupatki	67.27	325	P	P	09 01 57.1	-2.4
WUAZ				IAmb	IAmb	09 02 09.0	
	comp=Z,9.6nm,1.0s						
WUAZ	Wupatki	67.27	325	P	P	09 02 01.5	+2.0
	baz=139,SNR=6.8						
D50A	G1974 Best Tow	67.31	353	P	P	09 02 00.4	+1.0
	baz=171						
D48A	Paudash Townsh	67.56	352	P	P	09 02 01.4	+0.5
	baz=169						
E43A	Lone Tree Farm	67.64	348	P	P	09 02 01.1	-0.3
E43A				IAmb	IAmb	09 02 07.9	
	comp=Z,5.7nm,0.8s						
ECSD	EROS Data Cent	67.67	340	P	P	09 02 01.9	+0.2
ECSD	EROS Data Cent	67.67	340	P	P	09 02 02.9	+1.2
	baz=154						
Y12C	Blythe	67.76	322	P	P	09 02 03.4	+1.0
	baz=136						
ISCO	Idaho Springs	67.76	332	P	P	09 02 04.5	+1.8
	baz=145						
IKP	In-Ko-Pah, Jac	67.93	320	P	P	09 02 05.8	+2.1
	baz=134						
PV15	Paradox Valley	67.94	329		pP	09 02 07.1	-2.5
SWSC	Sam W. Stewart	67.95	320	P	P	09 02 04.6	+0.9
	baz=134						
PV13	Radium Mtn., P	67.96	328	IAmb	IAmb	09 02 12.2	
	comp=Z,9.4nm,1.1s						
BC3	Big Chuckawall	68.24	321	P	P	09 02 07.4	+1.8
	baz=135						
PV22	Blue Mesa, Par	68.24	329	P	P	09 02 03.4	-2.2
PV22				IAmb	IAmb	09 02 08.9	
	comp=Z,9.7nm,1.4s						
MONP2	Monument Peak	68.29	320	P	P	09 02 07.2	+1.1
	baz=134						
BAR	Barrett	68.30	319	P	P	09 02 06.1	+0.2
W13A	Hualapai Mount	68.35	323	P	P	09 02 05.9	-0.6
PV09	Paradox Valley	68.38	328	P	P	09 02 05.0	-1.7
IRM	Iron Mountain	68.41	321	P	P	09 02 08.7	+2.1
	baz=135,SNR=9.0						
U15A	North Rim	68.44	325	P	P	09 02 05.2	-1.8
U15A				IAmb	IAmb	09 02 16.3	
	comp=Z,12nm,1.1s						
N23A	Red Feather La	68.80	332	P	P	09 02 08.2	-1.0
	baz=145						
BELC	Belle Mtn. Jos	68.80	321	P	P	09 02 10.2	+1.0
	baz=134						
XPFO	Pion Flat	68.81	320	P	P	09 02 08.7	-0.5
XPFO				IAmb	IAmb	09 02 18.4	
	comp=Z,8.9nm,1.0s						
PFO	Pinyon Flats O	68.81	320	P	P	09 02 10.2	+1.0
	baz=134						
LSQQ	Lebel-sur-Quev	68.93	356	P	P	09 02 10.0	+0.6
	baz=174						
GMRC	Granite Mounta	69.15	322	P	P	09 02 13.3	+2.0
	baz=135,SNR=12						
KNB	Kanab	69.16	325	P	P	09 02 12.4	+1.0
O20A	White River Ci	69.23	330	P	P	09 02 10.3	-1.5
O20A				IAmb	IAmb	09 02 20.2	
	comp=Z,7.9nm,0.9s						
O20A	White River Ci	69.23	330	P	P	09 02 13.4	+1.6
	baz=142						
MURC	Murrieta	69.25	320	P	P	09 02 13.4	+1.6
	baz=133						
LCMT	Little Creek M	69.39	325	P	P	09 02 10.8	-1.9
SRU	San Rafael Swe	69.54	328	P	P	09 02 12.2	-1.5
MTPU	Mount Pierson	69.58	326		pP	09 02 17.4	-2.6
MATQ	Matagami	69.67	355	P	P	09 02 14.6	+0.5
	baz=173						
Q16A	Castle Valley	69.72	327		pP	09 02 17.7	-2.9
SZCU	Shurtz Canyon	69.73	325		pP	09 02 18.2	-2.6
CCUT	Cedar City	69.85	325	P	P	09 02 16.8	+1.1
P17A	Butcher Ranch,	69.93	328	P	P	09 02 15.5	-0.5
BFSC	Mount Baldy Ra	69.96	320	P	P	09 02 17.8	+1.5
	baz=133						
DBIC	Dimbokro	70.00	75	P	P	09 02 16.1	-0.8
	comp=Z,12nm,1.1s,baz=249,slow=9.2,SNR=5.0						
DBIC	Dimbokro	70.00	75	P	P	09 02 15.2	-1.7
DBIC				IAmb	IAmb	09 02 22.4	
	comp=Z,9.3nm,0.8s						
SHPR	Sheep Range	70.08	323	P	P	09 02 15.1	-2.0
SHPR				IAmb	IAmb	09 02 26.2	
	comp=Z,9.4nm,1.0s						
EYMN	Ely	70.10	345	P	P	09 02 17.3	+0.6
	baz=159						
GSC	Goldstone, Bar	70.18	321	P	P	09 02 17.8	+0.1
GSC				IAmb	IAmb	09 02 26.8	
	comp=Z,9.4nm,1.1s						
GSC	Goldstone, Bar	70.18	321	P	P	09 02 20.0	+2.4
	baz=134,SNR=6.3						
RDMU	Red Mountain	70.20	330	P	P	09 02 17.1	-0.7
QSPA	South Pole Qui	70.22	180	P	P	09 02 16.4	-1.1
SHOC	Shoshone, Teco	70.29	322	P	P	09 02 20.2	+2.0
	baz=135						
K22A	Casper	70.48	333	P	P	09 02 20.4	+1.0
	baz=144						
EDW2	Edwards Air Fo	70.60	320	P	P	09 02 20.7	+0.6
	baz=133						
RSSD	Black Hills	70.67	335	P	P	09 02 19.1	-1.5
RSSD				IAmb	IAmb	09 02 28.4	
	comp=Z,17nm,1.4s						
RSSD	Black Hills	70.67	335	P	P	09 02 21.3	+0.8
	baz=147						
MPU	Maple Canyon	70.79	328	P	P	09 02 21.0	-0.4
PSUT	Pine Spring	70.83	325	P	P	09 02 21.8	+0.1
NLU	North Lily Min	70.96	328	P	P	09 02 21.8	-0.6
TPNV	Topopah Spring	71.01	323	P	P	09 02 21.4	-1.3
TPNV				IAmb	IAmb	09 02 32.1	
	comp=Z,12nm,1.1s						
TPNV	Topopah Spring	71.01	323	P	P	09 02 24.6	+1.9
	baz=135						
FURC	Furnace Creek,	71.03	322	P	P	09 02 24.4	+1.8
	baz=134,SNR=11						
MPMC	Manual Prospec	71.11	321	P	P	09 02 25.4	+2.0
	baz=134						
JLU	Jordanelle	71.14	328	P	P	09 02 22.0	-1.6
SBC	Santa Barbara	71.36	319	P	P	09 02 27.1	+2.4
	baz=132						
ISA	Isabella, Lake	71.42	321		pP	09 02 28.1	-2.9
ISA	Isabella, Lake	71.42	321	P	P	09 02 27.2	+2.0
	baz=133,SNR=7.7						
DUG	Dugway, Tooele	71.52	327	P	P	09 02 26.1	+0.5
DUG				IAmb	IAmb	09 02 29.4	
	comp=Z,20nm,1.3s						
DUG	Dugway, Tooele	71.52	327	P	P	09 02 27.2	+1.5
	baz=139,SNR=7.1						
AGMN	Agassiz Nation	71.56	343	P	P	09 02 26.9	+1.3
	baz=155						
R11A	Troy Canyon, C	71.63	324	P	P	09 02 25.2	-1.3
R11A				IAmb	IAmb	09 02 35.7	
	comp=Z,8.5nm,1.1s						
R11A	Troy Canyon, C	71.63	324	P	P	09 02 28.3	+1.9
	baz=136,SNR=10						
GRAC	Grapevine Rang	71.68	322	P	P	09 02 27.9	+1.2
	baz=134						
PKM	Mcpherson Peak	71.71	319	P	P	09 02 28.7	+1.7
	baz=132						
CWC	Cottonwood Cre	71.72	321	P	P	09 02 27.8	+0.8
	baz=134						
VES	Vestal, Richgr	71.91	320	P	P	09 02 29.5	+1.6
	baz=133,SNR=6.2						
BW06	Boulder Array	71.92	331	P	P	09 02 28.0	-0.1
BW06	Boulder Array	71.92	331	P	P	09 02 29.2	+1.1
	baz=142						
PD31	Pinedale Array	71.92	331	P	P	09 02 28.4	+0.2
PDAR	Pinedale Array	71.92	331	P	P	09 02 29.3	+1.2
	comp=Z,0.5nm,0.6s,baz=153,slow=7.6,SNR=6.9						
PDAR	Pinedale Array	71.92	331	P	P	09 02 26.9	-1.2
HWUT	Hardware Ranch	71.96	329	P	P	09 02 27.7	-0.7
HWUT				IAmb	IAmb	09 02 38.3	
	comp=Z,7.1nm,0.9s						
BGU	Big Grassy Mou	72.17	328	P	P	09 02 31.2	+1.6
AHID	Auburn Hatcher	72.63	330	P	P	09 02 31.9	-0.5
AHID				IAmb	IAmb	09 02 40.9	
	comp=Z,9.8nm,0.9s						

SNOW	Snow King Moun	73.01	331	P	P	09 02 35.5	+0.8
MDPB	Devils Postpil	73.11	322	P	P	09 02 33.4	-2.1
MDPB				IAmb	IAmb	09 02 44.8	
	comp=Z,9.9nm,1.1s						
TPAW	Teton Pass	73.12	331	P	P	09 02 35.0	-0.3
TPAW				IAmb	IAmb	09 02 43.2	
	comp=Z,9.2nm,1.1s						
NV11	Mina Array Sit	73.13	323	P	P	09 02 35.1	-0.3
ELK	Elko	73.17	326	P	P	09 02 34.0	-1.7
NVAR	Mina Array Bea	73.21	323	P	P	09 02 38.1	+2.1
	comp=Z,1.9nm,0.9s,baz=141,slow=6.6,SNR=11						
NVAR	Mina Array Bea	73.21	323	P	P	09 02 37.6	+1.7
ULM	Lac du Bonnet	73.34	343	P	P	09 02 36.4	+0.2
	comp=Z,1.5nm,0.6s,baz=167,slow=6.6,SNR=4.1						
ULM	Lac du Bonnet	73.34	343	IAmb	IAmb	09 02 37.3	
	comp=Z,17nm,1.4s						
KVN	Kaiserville	73.52	323	IAmb	IAmb	09 02 46.8	
	comp=Z,9.6nm,1.1s						
H17A	Grant Village	73.65	331	P	P	09 02 41.0	+2.6
	baz=141						
LAO	LASA Array	73.66	335	IAmb	IAmb	09 02 41.5	
	comp=Z,26nm,1.4s						
LAO	LASA Array	73.66	335	P	P	09 02 39.6	+1.5
	baz=146						
YHH	Holmes Hill	74.08	332		pP	09 02 44.0	-2.9
YHL	Hebgen Lake	74.28	331		pP	09 02 45.2	-2.7
DGMT	Dagmar	74.38	338	P	P	09 02 41.1	-1.3
DGMT				IAmb	IAmb	09 02 51.1	
	comp=Z,14nm,0.9s						
DGMT	Dagmar	74.38	338	P	P	09 02 43.9	+1.6
	baz=148						
SCHQ	Schefferville	74.57	2	P	P	09 02 43.5	+0.3
	comp=Z,2.1nm,0.8s,baz=204,slow=9.8,SNR=3.3						
SCHQ	Schefferville	74.57	2	P	P	09 02 43.0	-0.2
SCHQ				IAmb	IAmb	09 02 43.8	
	comp=Z,15nm,1.5s						
DLMT	Dillon	75.31	331	IAmb	IAmb	09 02 55.9	
	comp=Z,11nm,1.2s						
MFID	Camas Ranch	75.41	328	IAmb	IAmb	09 02 57.3	
	comp=Z,21nm,1.4s						
ORV	Oroville	75.81	322	IAmb	IAmb	09 02 59.8	
	comp=Z,16nm,1.1s						
EGMT	Eagleton	76.15	334	P	P	09 02 53.0	+0.4
EGMT				IAmb	IAmb	09 03 01.0	
	comp=Z,16nm,1.1s						
EGMT	Eagleton	76.15	334	P	P	09 02 54.0	+1.4
	baz=143						
MSO	Missoula	77.03	331	P	P	09 02 59.4	+1.7
	baz=139						
BMO	Blue Mountains	77.18	328	P	P	09 02 57.1	-1.4
BMO				IAmb	IAmb	09 03 06.8	
	comp=Z,14nm,1.2s						
N02D	Trinity Center	77.43	322	P	P	09 03 01.1	+1.1
	baz=131						
M04C	Macdoel	77.47	323	P	P	09 03 01.1	+0.8
	baz=132						
VNDA	Vanda	78.05	190	P	P	09 03 05.2	+2.4
	comp=Z,0.9nm,0.9s,baz=153,slow=4.5,SNR=2.3						
TOA0	Torodi Ar. Sit	78.51	71	P	P	09 03 05.5	-0.9
TORD	Torodi Ar. Bea	78.51	71	P	P	09 03 06.2	-0.2
	comp=Z,11nm,0.8s,baz=251,slow=5.1,SNR=39						
SYO	Syowa Base	78.55	160	⇑eP	P	09 03 03.0	-2.7
WALA	Waterton Lakes	78.70	333	P	P	09 03 06.7	-0.2
WALA				IAmb	IAmb	09 03 14.9	
	comp=Z,11nm,1.2s						
TSUM	Tsumeb	82.17	108	P	P	09 03 26.8	+0.5
TSUM				IAmb	IAmb	09 03 34.1	
	comp=Z,11nm,0.9s						
LLLB	Lillooet	83.41	330	IAmb	IAmb	09 03 39.5	
	comp=Z,6.6nm,1.1s						
BOSA	Boshof	85.72	119	P	P	09 03 47.2	+2.9
	comp=Z,2.6nm,1.0s,baz=257,slow=14,SNR=2.4						
BOSA	Boshof	85.72	119	P	P	09 03 43.1	-1.2
BOSA				IAmb	IAmb	09 03 43.2	
	comp=Z,8.9nm,1.4s						
ESDC	Sonseca Array	85.99	45	P	P	09 03 46.5	+1.3
	comp=Z,0.7nm,0.5s,baz=258,slow=6.4,SNR=3.2						
ESDC	Sonseca Array	85.99	45	P	P	09 03 44.1	-1.0
MAW	Mawson	86.29	164	P	P	09 03 47.6	+1.4
	comp=Z,4.0nm,0.9s,baz=270,slow=5.1,SNR=3.5						
MAW	Mawson	86.29	164	P	P	09 03 45.1	-1.1
YKA	Yellowknife Ar	89.17	341	P	P	09 04 00.5	+0.7
	comp=Z,1.5nm,0.5s,baz=140,slow=4.6,SNR=49						
BORG	Borgarnes	92.54	19	LR	LR	09 40 33.5	
	comp=Z,44nm,21.0s,baz=245,slow=32						
H11S2	WAKE ISLAND Hy	125.93	279	T	T	11 28 40.0	
	baz=102,slow=74,SNR=146						
H11S1	WAKE ISLAND Hy	125.94	279	T	T	11 28 37.0	
	baz=102,slow=74,SNR=105						
H11S3	WAKE ISLAND Hy	125.95	279	T	T	11 28 41.3	
	baz=102,slow=74,SNR=145						
H11N3	WAKE ISLAND Hy	125.98	280	T	T	11 28 48.3	
	baz=101,slow=75,SNR=87						
H11N2	WAKE ISLAND Hy	125.99	280	T	T	11 28 45.8	
	baz=101,slow=75,SNR=77						
H11N1	WAKE ISLAND Hy	125.99	280	T	T	11 28 42.5	
	baz=101,slow=75,SNR=50						
ARU	Arti	127.84	33	PKP	PKiKP	09 10 12.0	+1.5
	comp=Z,2.1nm,0.2s,baz=120,slow=9.5,SNR=3.1						
AKTO	Aktyubinsk	129.63	40	PKP	PKiKP	09 10 15.1	+0.8
	comp=Z,3.1nm,1.0s,baz=207,slow=4.5,SNR=3.7						
PETK	Petropavlovsk-	130.29	324	PKP	PKiKP	09 10 16.4	+0.9
	comp=Z,1.1nm,0.5s,baz=64,slow=3.4,SNR=4.5						
ASAR	Alice Springs	130.41	210	PKP	PKiKP	09 10 16.7	-0.1
	comp=Z,0.8nm,0.4s,baz=121,slow=1.7,SNR=22						
ASAR	Alice Springs	130.41	210		PKPdf	09 10 15.8	-0.2
ABKAR	Akbulak array	131.18	41		PKiKP	09 10 17.2	-0.2
WRA	Warramunga Arr	133.33	213	PKP	PKiKP	09 10 22.6	-0.2
	comp=Z,1.4nm,0.7s,baz=138,slow=1.5,SNR=14						
WRA	Warramunga Arr	133.33	213		PKiKP	09 10 22.3	-0.5
BVAR	Borovoye Array	135.49	33	PKP	PKiKP	09 10 26.1	0.0
	comp=Z,0.6nm,0.6s,baz=270,slow=4.4,SNR=3.7						
KURBB	Kurchatov Arra	140.98	31	PKP	PKiKP	09 10 36.2	-1.2
	comp=Z,1.2nm,0.6s,baz=302,slow=2.5,SNR=4.4						
ZALV	Zalesovo Beam	141.27	23	PKP	PKPdf	09 10 34.8	-0.3
	comp=Z,1.8nm,0.5s,baz=293,slow=2.3,SNR=15						
ZALV	Zalesovo Beam	141.27	23		PKPdf	09 10 31.8	-3.2
MAKZ	Makanchi	145.19	33		PKPdf	09 10 42.8	+0.5
NIL	Nilore	145.31	59		PKPbc	09 10 41.8	-0.9
MK31	Makanchi Array	145.37	33		PKPab	09 10 43.2	+0.5
MKAR	Makanchi Array	145.37	33	PKPbc	PKPab	09 10 43.4	+0.7
	comp=Z,7.4nm,0.6s,baz=324,slow=3.1,SNR=67						
MKAR	Makanchi Array	145.37	33		PKPab	09 10 42.9	+0.3
KSH	Kashi	145.45	48	PKPbc	PKPab	09 10 44.8	+1.5
KSH				PP	PP	09 14 06.0	+2.8
KSH				PKS	PKSdf	09 14 18.4	-0.3
KLR	Kul'dur	145.67	334	PKPbc	PKPab	09 10 44.3	+0.6
	comp=Z,4.7nm,0.6s,baz=74,slow=2.7,SNR=11						
USA0B	Ussuriysk Arra	149.27	327		PKPab	09 10 58.5	+0.6
USRK	Ussuriysk Ar.	149.27	327	PKPbc	PKiKP	09 10 54.9	+0.3
	comp=Z,4.2nm,0.6s,baz=343,slow=0.6,SNR=12						
USRK	Ussuriysk Ar.	149.27	327		PKiKP	09 10 55.5	+0.9
USRK					sPKPbc	09 11 01.0	-0.6
MJAR	Matsushiro Arr	149.75	309	PKPbc	PKiKP	09 10 56.2	+0.4
	comp=Z,4.0nm,0.6s,baz=238,slow=0.5,SNR=7.4						
MJAR	Matsushiro Arr	149.75	309		PKiKP	09 10 56.0	+0.1
MJAR				PKPab	sPKPbc	09 11 02.3	-0.8
MAT	Matsushiro	149.75	309	PKP	PKiKP	09 10 55.4	-0.5
WMQ	Urumqi	150.18	32	eP	PKPdf	09 10 50.0	-0.7
WMQ				pmax	pmax		
	comp=Z,75nm,4.3s						
SONM	Songino Array	152.10	4	PKP	PKPdf	09 10 55.9	+2.3
	comp=Z,0.7nm,0.8s,baz=294,slow=4.6,SNR=2.0						
SONM				PKPbc	sPKPdf	09 11 01.6	-0.3
	comp=Z,2.3nm,0.4s,baz=292,slow=1.1,SNR=13						
SONM	Songino Array	152.10	4	PKPbc	PKiKP	09 11 01.2	+0.7
SONM				PKPab	sPKPbc	09 11 07.5	-0.9
GTA	Gaotai	158.99	21	ePKP	PKPdf	09 11 04.8	+1.7
LZH	Lanzhou	163.25	15	ePKP	PKPdf	09 11 04.3	-3.5
LZH				pPKP	pPKPdf	09 11 13.3	-0.6
LZH				sPKP		09 11 16.8	

UCR 17 08:52:46.1±1.2, 9°.40N×84°.63W, h0^{km}±2^{km}, MD3.9, MW3.2, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCR2	La Lucha 2	0.70	61	eP	Pg	08 53 00.2	+0.5
LCR2				eS	Sb	08 53 12.4	+0.7
EDDO	Dominical	0.77	101	eP	Pg	08 52 59.4	-1.4
EDDO				eS	Sb	08 53 13.4	+0.1
HDC	Heredia	0.79	40	eP	Pg	08 53 01.7	+0.5
JTS	Las Juntas de	0.94	340	eP	Pg	08 53 04.1	-0.1
EDLM	Las Mercedes	1.03	96	eP	Pg	08 53 05.8	-0.1
FORC	Fortuna	1.06	358	i P	Pg	08 53 06.9	+0.4
FORC				i S	Sb	08 53 22.4	+0.5
PLVR	Palo Verde	1.18	323	eP	Pg	08 53 08.4	-0.4
PLVR				eS	Sb	08 53 26.0	+0.5
GUAI	GUAI	1.23	315	i P	Pg	08 53 08.9	-0.8
ACAL	Aguas Claras	1.29	342	i P	Pg	08 53 10.0	-0.9
ACAL				i S	Sb	08 53 29.0	+0.4
PTEN	Parque Tenorio	1.35	345	i P	Pg	08 53 11.4	-0.8
CUI	Cuipilapa	1.36	337	i P	Pg	08 53 11.2	-0.9
COLC	Colonia	1.38	336	i P	Pg	08 53 11.6	-1.1
MESS	Mesas	1.45	337	i P	Pn	08 53 12.8	-0.8

IDC 17 08:59:47.9±2.1, 7°.51S×146°.23E, h158^{km}±17^{km}, mb3.7/4, mb1 3.7/8, mb1mx3.4/41, mbtmp4.0/8, Error ellipse: s-maj=28.1km s-min=15.5km az=130.0

ISC 17 08:59:47.3±1.2, 7°.5S±0°.1×146°.2E±0°.1, h150^{km}, n10, σ1^s.36/11, mb3.9/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.18	153	P	Pn	09 00 25.8	+1.3
	13nm,0.3s,baz=324,slow=8.7,SNR=19						
PMG				S	Sn	09 00 53.3	+0.1
	6.5nm,0.3s,baz=18,slow=20,SNR=8.2						
KRVT	Keravat (AS076	6.63	62	P	Pn	09 01 23.7	+1.3
	7.1nm,0.3s,baz=218,slow=20,SNR=5.1						
CTA	Charters Tower	12.56	180	P	P	09 02 46.2	-0.3
	0.2nm,0.3s,baz=8.2,slow=11,SNR=3.4						
WRA	Warramunga Arr	16.89	222	P	P	09 03 34.1	-0.4
	0.4nm,0.3s,baz=45,slow=11,SNR=24						
ASAR	Alice Springs	19.95	215	P	P	09 04 07.7	-0.1
	0.4nm,0.3s,baz=52,slow=8.7,SNR=23						
ASAR				S	S	09 07 46.3	+2.1
	0.0nm,0.3s,baz=32,slow=21,SNR=3.4						
FITZ	Fitzroy Crossi	22.60	240	P	P	09 04 34.5	-0.9
	1.5nm,0.4s,baz=87,slow=0.8,SNR=8.8						
DZM	Mont Dzumac	24.37	129	P	P	09 04 49.4	-2.4
	3.3nm,0.6s,baz=294,slow=20,SNR=4.4						
STKA	Stephens Creek	24.67	189	P	P	09 04 53.8	-0.4
	1.1nm,0.3s,baz=354,slow=12,SNR=12						
NVAR	Mina Array Bea	98.92	52	P	Pdif	09 13 12.2	+1.1
	0.2nm,0.4s,baz=271,slow=5.1,SNR=2.5						
TORD	Torodi Ar. Bea	144.60	282	PKP	PKPab	09 19 06.4	+0.4
	0.5nm,0.5s,baz=77,slow=3.1,SNR=4.2						

NIED 17 09:02:00, 36°.90N×141°.50E, h5^{km}, Mw4.7 Best double couple: $M_0$1.33000×10^{16} NP1:ϕ_s51.00000°, δ62.00000°, λ-45.00000°. NP2:ϕ_s166.00000°, δ51.00000°, λ-143.00000°.

IDC 17 09:02:47.8±0.4, 36°.98N×141°.34E, h0^{km}, mb4.8/38, mb1 4.9/44, mb1mx4.8/56, mbtmp4.8/44, ML3.5/7, MS4.1/24, Ms1 4.1/24, ms1mx3.9/47, Error ellipse: s-maj=12.5km s-min=9.6km az=101.0

BJI 17 09:02:47.0±0.0, 36°.98N×141°.67E, h19^{km}, mB5.0/51, mb4.7/58, Ms4.7/53, Ms7 4.4/50

JMA 17 09:02:48.9±0.1, 36°.91N×141°.47E, h33^{km}±1^{km}, M5.1

JMA Felt III J1.

MOS 17 09:02:51.7±0.9, 37°.28N×141°.26E, h25^{km}, mb5.2/40, MS4.1/9, Error ellipse: s-maj=6.8km s-min=4.3km az=95.1

BGR 17 09:02:52.1±0.0, 37°.02N×142°.47E, h33^{km}, mb4.9, Ms4.3

NEIC 17 09:02:52.9±2.8, 36°.94N±0°.05×141°.47E±0°.08, h30^{km}±4^{km}, mb5.0/190, Error ellipse: s-maj=9.3km s-min=7.5km az=100.0

ISC 17 09:02:49.7±0.7, 36°.99N±0°.03×141°.51E±0°.03, h11^{km}±3^{km}, n598, σ1^s.59/573, mb5.0/184, MS4.3/33, 30C-34D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.58	281	⇑P	Pg	09 03 00.1	-0.9
ONAJ				S	Sg	09 03 08.5	-0.2
JFK	Kawauchi	0.63	307	P	Pg	09 03 01.5	-0.5
JFK				S	Sg	09 03 10.3	0.0
JFFD	Fukushimafurud	0.76	278	P	Pg	09 03 02.7	-1.8
JFFD				S	Sg	09 03 12.5	-2.0
JHO	Hitachi	0.84	244	P	Pg	09 03 03.3	-2.7
JHO				S	Sg	09 03 14.5	-2.6
JMST	Minamisoumatoc	0.88	326	⇓P	Pg	09 03 05.7	-1.1
JMST				S	Sg	09 03 17.7	-0.6
JMM	Marumori	1.04	327	⇓P	Pg	09 03 08.2	-1.6
JMM				eS	Sg	09 03 22.7	-0.7
JFT	Otama	1.07	300	P	Pg	09 03 08.8	-1.6
JFT				S	Sg	09 03 23.0	-1.4
JSB	Shiboa	1.27	269	⇑P	Pn	09 03 11.9	-1.5
JIKH	Ishinomakikobu	1.32	359	⇓P	Pn	09 03 12.5	-1.5
JYAR	Yonezawaarcadi	1.42	311	S	Sn	09 03 33.4	-0.8
JIO	Ouri	1.47	355	⇓P	Pn	09 03 15.0	-1.1
JIO				eS	Sn	09 03 34.3	-0.9
JFY	Yanaizu	1.50	287	P	Pn	09 03 15.4	-1.2
JFY				S	Sn	09 03 34.2	-1.9
JOU	Okura	1.53	334	⇓P	Pn	09 03 16.3	-0.6
JOU				S	Sn	09 03 37.0	+0.2
JAG	Ashikaga	1.75	252	P	Pn	09 03 17.3	-2.6
JKMT	Kesennumamotoy	1.82	359	⇓P	Pn	09 03 20.3	-0.6
JKT	Katashina	1.82	264	P	Pn	09 03 19.7	-1.4
I30JP	ISUMI INFRASON	1.94	210	Pn	Pn	09 03 22.0	-0.6
	baz=41,slow=20,SNR=1.4						
I30JP				i		09 10 00.0	
	baz=10,slow=328,SNR=2.8						
JHK	Hiroka	2.01	278	P	Pn	09 03 22.7	-0.8
OFUJ	Ofunato	2.09	3	⇓P	Pn	09 03 24.1	-0.6
JYK	Kaneyama	2.13	335	P	Pn	09 03 25.2	0.0
JYA	Atsumi	2.14	319	⇓P	Pn	09 03 25.2	-0.1
JIZZ	Izumozaki	2.30	284	P	Pn	09 03 28.0	+0.5
JAW	Awa shima	2.31	310	⇓P	Pn	09 03 27.5	-0.2
JRY	Ryogami san	2.31	246	P	Pn	09 03 25.3	-2.5
JGK	Kuni	2.34	260	P	Pn	09 03 27.6	-0.6
JYYZ	Yamagatayuza	2.38	329	⇓P	Pn	09 03 29.6	+1.0
JOM	Ohasama	2.48	356	P	Pn	09 03 30.0	-0.1
JRG	Rokugo	2.50	344	⇓P	Pn	09 03 30.8	+0.5
MIYJ	Miyakonagasawa	2.59	5	⇓P	Pn	09 03 30.9	-0.7
JJN	Nakama	2.68	273	P	Pn	09 03 32.7	0.0
MJAR	Matsushiro Arr	2.69	261	Pn	Pn	09 03 31.6	-1.3
	3.5nm,0.3s,baz=90,slow=14,SNR=154						
MJAR				Sn	Sn	09 04 04.3	-1.1
	7.5nm,0.3s,baz=84,slow=28,SNR=3.3						
MJAR				LR	LR	09 04 48.5	
	comp=Z,4µm,18.2s,baz=90,slow=48						
MJAR	Matsushiro Arr	2.69	261		Pn	09 03 31.8	-1.1
MAJO	Matsushiro	2.69	261	deP	Pn	09 03 32.5	-0.4
MAJO	Matsushiro	2.69	261		Pn	09 03 32.8	-0.1
MAT	Matsushiro	2.69	261	P	Pn	09 03 32.4	-0.5
MAT	Matsushiro	2.69	261	P	Pn	09 03 32.4	-0.5
MAT				S	Sn	09 04 05.4	0.0
MJB9	Matsu-Tunnel	2.69	261		Pn	09 03 32.7	-0.3
JYW	Yuwa	2.74	338	⇓P	Pn	09 03 34.6	+1.0
JSD	Sado	2.79	293	P	Pn	09 03 32.8	-1.4
JNG	Nsakai	2.80	259	P	Pn	09 03 33.9	-0.6
JKZ	Kuzumaki	2.99	357	⇓P	Pn	09 03 37.2	+0.1
JKEN	Kujiedanarisaw	3.21	3	⇓P	Pn	09 03 40.1	0.0
JAH	Hinai	3.27	348	⇓P	Pn	09 03 41.8	+1.0
JTM	Tenmabayashi	3.81	355	⇓P	Pn	09 03 49.0	+0.8
INU	Inuyama	3.99	247		Pn	09 03 51.4	+0.7
JHJ2	Mitsune	4.11	200		Pn	09 03 51.7	-0.7
JHJ	Hachijo jima 2	4.11	201	Pn	Pn	09 03 51.2	-1.3
	20nm,0.3s,baz=342,slow=19,SNR=6.8						
JHJ				Sn	Sn	09 04 38.0	-2.6
	122nm,0.3s,baz=49,slow=20,SNR=7.1						
JHJ				LR	LR	09 05 41.4	
	comp=Z,2µm,19.1s,baz=56,slow=43						
ERM	Erimo	5.18	14	deP	Pn	09 04 06.3	-0.8
ERM				pmax	pmax		
	comp=Z,53nm,0.7s						
ERM	Erimo	5.18	14		Pn	09 04 06.8	-0.2
NMR	Nemuro--Hokkai	7.14	26	⇑iP	Pn	09 04 32.1	-1.9
NMR				i S	Sn	09 05 50.6	-4.5
ASAJ	Asahikawa	7.17	6	Pn	Pn	09 04 34.3	-0.1
	comp=Z,4.1nm,0.3s,baz=233,slow=8.8,SNR=24						
JKA	Kamikawa-asahi	7.17	6		Pn	09 04 34.3	0.0
GLVR	Golovnino	7.40	23	eP	Pn	09 04 37.1	-0.5
GLVR				i S	Sn	09 05 58.3	-3.2
GLVR				pmax	pmax		
	comp=N,54nm,0.4s						
GLVR				pmax	pmax		
	comp=Z,101nm,0.4s						
GLVR				pmax	pmax		
	comp=E,90nm,0.3s						
GRPR	Tuman	7.71	24	eP	Pn	09 04 41.2	-0.6
GRPR				eS	Sn	09 06 06.4	-2.7
GRPR				pmax	pmax		
	comp=Z,91nm,0.3s						
YUK	Yuzh-Kuril'sk	7.78	24	eP	Pn	09 04 42.6	-0.1
YUK				i S	Sn	09 06 08.1	-2.6
YUK				pmax	pmax		
	comp=Z,147nm,0.6s						
YUK				pmax	pmax		
	comp=N,88nm,0.4s						
YUK				pmax	pmax		
	comp=E,58nm,0.3s						
YUK				MLR	MLR		
	comp=Z,798nm,13.0s						
YUK				MLR	MLR		
	comp=N,935nm,11.0s						
YUK				MLR	MLR		
	comp=E,899nm,11.0s						
SHO	Shikotan	7.98	29	⇑iP	Pn	09 04 43.2	-2.3
SHO				i S	Sn	09 06 09.7	-6.0
SHO				pmax	pmax		
	comp=Z,30nm,0.6s						
SHO				pmax	pmax		
	comp=E,12nm,0.3s						
SHO				pmax	pmax		
	comp=N,11nm,0.5s						
SHO				MLR	MLR		
	comp=Z,1µm,14.0s						
SHO				MLR	MLR		
	comp=N,1µm,15.0s						
SHO				MLR	MLR		
	comp=E,2µm,15.0s						
TEY	Ternei	8.85	337	⇑eP	Pn	09 04 59.1	+1.7
TEY				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.0s						
TEY				MLR	MLR		
	comp=E,100nm,15.0s						
TEY				MLR	MLR		
	comp=N,100nm,13.0s						
TEY				MLR	MLR		
	comp=Z,100nm,15.0s						
KUR	Kuril'sk	9.53	28	P	Pn	09 05 06.5	-0.2
KUR				eS	Sn	09 06 48.9	-4.8
KUR				pmax	pmax		
	comp=E,31nm,0.4s						
KUR				pmax	pmax		
	comp=Z,44nm,0.4s						
KUR				pmax	pmax		
	comp=N,19nm,0.3s						
KUR				smax	smax		
	comp=E,82nm,0.5s						
KUR				smax	smax		
	comp=N,43nm,0.6s						
KUR				MLR	MLR		
	comp=Z,1µm,13.0s						
JNU	Nakatsue	9.53	249	Pn	Pn	09 05 06.4	-0.5
	comp=Z,0.3nm,0.3s,baz=53,slow=10,SNR=2.7						
JNU				LR	LR	09 09 10.4	
	comp=Z,2µm,18.5s,baz=71,slow=41						
JNU	Nakatsue	9.53	249	Pn	Pn	09 05 08.6	+1.7
MSHR	Mys Shultsa	9.72	308	⇓eP	Pn	09 05 09.3	-0.1
JCJ	Chichijima	9.88	176	Pn	Pn	09 05 09.0	-2.7
	comp=Z,26nm,0.3s,baz=319,slow=12,SNR=12						
JCJ				Sn	Sn	09 06 52.7	-10
	comp=Z,7.8nm,0.3s,baz=347,slow=17,SNR=3.8						
JCJ				LR	LR	09 09 27.1	
	comp=Z,478nm,18.6s,baz=52,slow=40						
YSS	Yuzh-Sakhalins	10.00	5	P	Pn	09 05 12.6	-0.6
YSS	Yuzh-Sakhalins	10.00	5		Pn	09 05 12.6	-0.6
USA0B	Ussuriysk Arra	10.20	318	P	Pn	09 05 16.7	+0.6
USA0B	Ussuriysk Arra	10.20	318		Pn	09 05 16.7	+0.6
USRK	Ussuriysk Ar.	10.20	318	Pn	Pn	09 05 16.1	+0.1
	baz=132,slow=13,SNR=49						
USRK				LR	LR	09 08 52.3	
	comp=Z,1µm,18.5s,baz=125,slow=36						
USRK	Ussuriysk Ar.	10.20	318	P	Pn	09 05 18.6	+2.6
USRK	Ussuriysk Ar.	10.20	318		Pn	09 05 18.6	+2.6
KSRS	Korea Array	10.85	277	Pn	Pn	09 05 25.5	+0.7
	comp=Z,0.3nm,0.3s,baz=88,slow=14,SNR=13						
KSRS				LR	LR	09 09 12.6	
	comp=Z,1µm,21.3s,baz=91,slow=36						
KSAR	Wonju Array Be	10.88	276	P	Pn	09 05 26.8	+1.5
KSAR	Wonju Array Be	10.88	276	Pn	Pn	09 05 26.8	+1.5
MDJ	Mudanjiang	11.80	314	P	Pn	09 05 42.6	+4.7
MDJ				pP		09 05 45.8	
MDJ				sP		09 05 47.8	
MDJ				pmax	pmax		
	comp=Z,49nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,260nm,4.9s						
MDJ	Mudanjiang	11.80	314		Pn	09 05 41.0	+3.1
UGL	Uglegorsk	12.09	2	eP	Pn	09 05 46.4	+4.6
UGL				S	Sn	09 07 58.8	+2.4
UGL				pmax	pmax		
	comp=Z,33nm,0.8s						
UGL				MLR	MLR		
	comp=Z,2µm,15.0s						
UGL				MLR	MLR		
	comp=N,1µm,16.0s						
UGL				MLR	MLR		
	comp=E,2µm,13.0s						
TYV	Tymovskoe	13.89	3	eP	Pn	09 06 05.5	-0.9
TYV				eS	Sn	09 08 36.4	-4.1
TYV				pmax	pmax		
	comp=Z,300nm,5.2s						
TYV				pmax	pmax		
	comp=Z,20nm,1.3s						
TYV				smax	smax		
	comp=E,6.0nm,1.5s						
TYV				MLR	MLR		
	comp=Z,2µm,15.0s						
CN2	Changchun	13.99	304	eP	Pn	09 06 07.4	-0.4
CN2				eS	Sn	09 08 42.5	-0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,1.4s						
CN2				pmax	pmax		
	comp=Z,100nm,5.3s						
CN2				LR	LR		
	comp=Z,2µm,14.0s						
CN2				LR	LR		
	comp=Z,1µm,14.0s						
CN2				LR	LR		
	comp=Z,800nm,14.0s						
KLR	Kul'dur	14.14	333	Pn	Pn	09 06 08.7	-1.2
	comp=Z,0.3nm,0.3s,baz=159,slow=6.5,SNR=8.7						
KLR				LR	LR	09 11 18.6	
	comp=Z,856nm,19.7s,baz=148,slow=36						
KLR	Kul'dur	14.14	333	⇓eP	Pn	09 06 08.2	-1.6
KLR				pmax	pmax		
	comp=Z,14nm,3.4s						
GRNR	Gornyy	14.25	347	⇑iP	Pn	09 06 10.7	-0.6
GRNR				eS	Sn	09 08 51.0	+1.8
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GRNR				smax	smax		
	comp=E,2.0nm,1.0s						
GRNR				MLR	MLR		
	comp=Z,1µm,13.0s						
DL2	Dalian	15.80	283	eP	P	09 06 41.3	+5.4
DL2				S	S	09 09 44.1	+2.3
OKH	Okha	16.59	3	deP	Pn	09 06 37.2	-4.9
OKH				MLR	MLR		
	comp=N,2µm,14.0s						
OKH				MLR	MLR		
	comp=Z,1µm,15.0s						
NJ2	Nanjing	19.29	262	eP	P	09 07 14.8	+0.3
NJ2				S	Sn	09 10 50.8	-1.0
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,430nm,11.5s						
NJ2				LR	LR		
	comp=Z,2µm,18.0s						
NJ2				LR	LR		
	comp=Z,930nm,14.2s						
NJ2				LR	LR		
	comp=Z,1µm,14.2s						
ZEA	Zeya	19.45	334	eP	P	09 07 15.2	-0.9
ZEA				pmax	pmax		
	comp=E,31nm,0.8s						
ZEA				pmax	pmax		
	comp=N,50nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,61nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,14.0s						
ZEA				MLR	MLR		

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      comp=E,700nm,13.0s
ZEA                                   MLR    MLR
      comp=N,700nm,15.0s
TIA   Tai'an            19.59 275     P      Pn      09 07 21.3 +2.2
TIA                                   pmax   pmax
      comp=N,20nm,1.0s
TIA                                   LR     LR
      comp=N,1µm,14.4s
TIA                                   LR     LR
      comp=N,690nm,15.1s
TIA                                   LR     LR
      comp=N,1µm,15.5s
PEA0B Petropavlovsk-    19.69  30⇑eP         Pn      09 07 20.6 +0.5
PEA0B Petropavlovsk-    19.69  30     P      P       09 07 18.2 -0.5
PETK  Petropavlovsk-    19.69  30     P      Pn      09 07 19.7 -0.4
      comp=N,0.2nm,0.3s,baz=198,slow=9.0,SNR=7.4
PETK                                  LR     LR      09 14 26.3
      comp=N,256nm,21.6s,baz=228,slow=35
PETK  Petropavlovsk-    19.69  30     P      P       09 07 18.2 -0.5
BJI   Beijing           20.04 287    eP      Pn      09 07 23.6 -0.8
BJI                                   S      Sn      09 11 10.5 +0.9
BJI                                   pmax   pmax
      comp=N,8.0nm,0.9s
BJI                                   LR     LR
      comp=N,550nm,13.7s
BJI                                   LR     LR
      comp=N,300nm,18.9s
TPUB  Ta-pu             22.57 239     P      P       09 07 51.1 +1.1
MA2   Magadan           23.38  12     P      P       09 07 58.0 -0.2
      comp=N,30nm,0.8s,baz=195,slow=11,SNR=34
MA2   Magadan           23.38  12deP         P       09 07 58.9 +0.8
MA2                                   pmax   pmax
      comp=Z,42nm,1.0s
MA2   Magadan           23.38  12     P      P       09 07 58.3 +0.2
MA2                                   IAmb   IAmb    09 08 02.2
      comp=Z,28nm,0.8s
WHN   Wuhan             23.43 262     P      P       09 07 52.9 -6.0
HHC   Hu-ho-hao-te      23.56 289    eP      P       09 08 00.0 -0.2
HHC                                   pmax   pmax
      comp=Z,130nm,0.7s
HHC                                   pmax   pmax
      comp=Z,470nm,7.0s
HHC                                   LR     LR
      comp=Z,1µm,11.4s
HHC                                   LR     LR
      comp=Z,620nm,10.5s
HHC                                   LR     LR
      comp=Z,1µm,11.0s
BTO   Baotou            24.73 288    eP      P       09 08 04.1 -7.1
YAK   Yakutsk           26.13 347     P      P       09 08 22.5 -0.9
      comp=Z,12nm,0.6s,baz=169,slow=1.5,SNR=9.0
YAK   Yakutsk           26.13 347    eP      P       09 08 19.0 -4.4
YAK                                  e*PP    sP      09 08 30.0 +1.8
YAK                                  e               09 11 47.5
YAK                                  eS      S       09 12 44.3  -10
YAK                                  e*SS    sS      09 13 00.8 +0.7
YAK                                  e               09 19 13.5
YAK                                   pmax   pmax
      comp=Z,49nm,0.9s
YAK                                   pmax   pmax
      comp=N,22nm,1.2s
YAK                                   pmax   pmax
      comp=E,11nm,1.3s
YAK                                   pmax   pmax
      comp=N,21nm,0.9s
YAK                                   pmax   pmax
      comp=Z,46nm,0.9s
YAK                                   pmax   pmax
      comp=E,14nm,1.0s
YAK                                   smax   smax
      comp=E,218nm,4.8s
YAK                                   smax   smax
      comp=N,128nm,4.7s
YAK                                   MLR    MLR
      comp=Z,913nm,13.0s
YAK                                   MLR    MLR
      comp=E,220nm,12.0s
YAK                                   MLR    MLR
      comp=N,683nm,12.0s
YAK   Yakutsk           26.13 347     P      P       09 08 22.2 -1.2
YAK                                   IAmb   IAmb    09 08 36.7
      comp=Z,53nm,1.0s
XAN   Xi'an             26.62 273     P      P       09 08 32.1 +3.9
XAN                                   pP     sP      09 08 39.4 +6.4
XAN                                   S      S       09 13 08.0 +5.0
XAN                                   ScP    ScP     09 15 25.6 -6.4
XAN                                   pmax   pmax
      comp=Z,12nm,0.6s
XAN                                   pmax   pmax
      comp=Z,92nm,3.9s
XAN                                   LR     LR
      comp=Z,1µm,15.3s
XAN                                   LR     LR
      comp=Z,370nm,14.5s
XAN                                   LR     LR
      comp=Z,690nm,12.8s
SEY   Seymchan          26.82  11     P      P       09 08 30.4 +0.8
      comp=Z,13nm,1.0s,baz=198,slow=7.5,SNR=17
SEY   Seymchan          26.82  11⇓eP         P       09 08 30.0 +0.4
ENH   Enshi             27.41 265     P      P       09 08 33.8 -1.5
ENH                                   IAmb   IAmb    09 08 42.4
      comp=Z,19nm,0.7s
ULN   Ulaanbaatar       27.44 304     P      P       09 08 33.7 -1.9
ULN                                   pmax   pmax
      comp=Z,9.0nm,0.7s
ULN   Ulaanbaatar       27.44 304     P      P       09 08 33.7 -1.9
BOD   Bodaibo           27.61 328    eP      P       09 08 35.9 -0.9
BOD                                   pmax   pmax
      comp=Z,20nm,0.9s
SONM  Songino Array     27.87 304     P      P       09 08 37.3 -2.2
      comp=Z,5.4nm,0.7s,baz=102,slow=7.9,SNR=17
SONM                                  LR     LR      09 19 42.5
      comp=Z,310nm,20.0s,baz=104,slow=36
SONM  Songino Array     27.87 304     P      P       09 08 37.3 -2.2
H11N2 WAKE ISLAND Hy    28.06 121     T      T       09 37 58.9
      baz=313,slow=75,SNR=4045
H11N1 WAKE ISLAND Hy    28.07 121     T      T       09 38 03.2
      baz=313,slow=75,SNR=3885
H11N3 WAKE ISLAND Hy    28.08 121     T      T       09 38 02.8
      baz=313,slow=75,SNR=4480
H11S1 WAKE ISLAND Hy    28.77 123     T      T       09 38 57.1
      baz=315,slow=76,SNR=1946
H11S3 WAKE ISLAND Hy    28.77 123     T      T       09 38 55.2
      baz=315,slow=76,SNR=1488
H11S2 WAKE ISLAND Hy    28.79 123     T      T       09 38 58.3
      baz=315,slow=76,SNR=812
LZH   Lanzhou           30.15 280    eP      P       09 09 00.3 +0.5
LZH                                   pP     sP      09 09 05.8 +1.2
LZH                                   sP     pP      09 09 09.0 +5.8
LZH                                   pmax   pmax
      comp=Z,16nm,1.3s
LZH                                   pmax   pmax
      comp=Z,59nm,5.4s
LZH                                   LR     LR
      comp=Z,1µm,16.3s
LZH                                   LR     LR
      comp=Z,930nm,16.8s
LZH                                   LR     LR
      comp=Z,1µm,17.9s
ZAK   Zakamensk         30.36 308    eP      P       09 08 59.7 -1.7
ZAK                                   pmax   pmax
      comp=Z,6.0nm,1.0s
TLY   Talaya            30.41 311deP         P       09 09 01.3 -0.6
TLY                                   pmax   pmax
      comp=Z,8.0nm,0.8s
TLY   Talaya            30.41 311     P      P       09 09 00.9 -0.9
GYA   Guiyang           31.29 260⇓iP         P       09 09 11.3 +1.4
GYA                                   pP     sP      09 09 15.3 +0.6
GYA                                   PP     PnPn    09 10 12.9 +0.9
GYA                                   S      S       09 14 15.8 -0.9
GYA                                   SS     SnSn    09 15 58.9 -0.6
GYA                                   pmax   pmax
      comp=Z,20nm,0.5s
GYA                                   pmax   pmax
      comp=Z,120nm,4.9s
GYA                                   LR     LR
      comp=Z,470nm,12.5s
GYA                                   LR     LR
      comp=Z,270nm,10.8s
GYA                                   LR     LR
      comp=Z,310nm,10.8s
CD2   Chengdu           31.75 270     P      P       09 09 13.0 -0.9
CD2                                   S      S       09 14 23.0 -0.7
CD2                                   pmax   pmax
      comp=Z,10.0nm,0.5s
CD2                                   LR     LR
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      comp=Z,2µm,19.1s
CD2                                   LR     LR
      comp=Z,2µm,17.2s
CD2                                   LR     LR
      comp=Z,1µm,17.7s
MOY   Mondy             32.02 310    eP      P       09 09 14.7 -1.4
GTA   Gaotai            32.65 287 ⇑P         P       09 09 20.4 -1.4
GTA                                   pP     pP      09 09 24.3 -0.9
GTA                                   sP     sP      09 09 27.0 +0.4
GTA                                   PcP    PcP     09 12 11.1 +3.5
GTA                                   S      S       09 14 36.0 -1.7
GTA                                   SS     SnSn    09 16 34.3 +2.1
GTA                                   pmax   pmax
      comp=Z,7.0nm,1.2s
GTA                                   pmax   pmax
      comp=Z,160nm,6.2s
GTA                                   LR     LR
      comp=Z,420nm,15.9s
GTA                                   LR     LR
      comp=Z,420nm,16.2s
GTA                                   LR     LR
      comp=Z,460nm,16.2s
QIZ   Qiongzhong        32.98 246     P      P       09 09 24.8 +0.1
QIZ                                   S      S       09 14 43.6 +0.7
QIZ                                   LR     LR
      comp=Z,590nm,18.9s
QIZ                                   LR     LR
      comp=Z,420nm,16.1s
QIZ                                   LR     LR
      comp=Z,260nm,12.7s
BILL  Bilibino          34.05  16⇑iP         P       09 09 34.0 +0.5
BILL                                 e               09 10 45.6
BILL                                 eS      S       09 14 59.4 +0.9
BILL                                  pmax   pmax
      comp=Z,7.0nm,1.3s
BILL                                  MLR    MLR
      comp=Z,241nm,14.0s
BILL  Bilibino          34.05  16     P      P       09 09 32.6 -0.9
KMI   Kunming           35.03 261     P      P       09 09 41.3 -1.4
KMI                                   pmax   pmax
      comp=Z,18nm,0.6s
KMI                                   LR     LR
      comp=Z,350nm,14.8s
KMI                                   LR     LR
      comp=Z,300nm,18.0s
KMI                                   LR     LR
      comp=Z,510nm,14.9s
TIXI  Tiksi             35.34 353     P      P       09 09 43.9 -0.7
      comp=Z,8.7nm,1.0s,baz=146,slow=8.3,SNR=17
TIXI  Tiksi             35.34 353⇓eP         P       09 09 44.0 -0.6
TIXI                                  pmax   pmax
      comp=Z,12nm,1.0s
TIXI  Tiksi             35.34 353     P      P       09 09 44.0 -0.6
TNTI  Ternate           38.34 203     P      P       09 10 14.7 +4.0
      comp=Z,45nm,0.5s
SWI   Sorong            38.85 196     P      P       09 10 19.2 +4.3
      comp=Z,32nm,1.2s
SIJI  Sorong            38.85 196     P      P       09 10 15.1 +0.1
      comp=Z,8.9nm,0.5s,baz=53,slow=20,SNR=2.3
SMPI  Sarmi             38.87 184     P      P       09 10 18.8 +3.7
      comp=Z,65nm,1.4s
GENI  Genyem            39.40 182     P      P       09 10 23.2 +3.6
      comp=Z,104nm,1.2s
FAKI  Fak Fak           40.63 194     P      P       09 10 34.2 +4.4
      comp=Z,42nm,1.2s
FAKI  Fak Fak           40.63 194     P      P       09 10 31.2 +1.4
FAKI                                  IAmb   IAmb    09 10 36.7
      comp=Z,24nm,0.7s
WMQ   Urumqi            40.93 297    eP      P       09 10 33.3 +1.2
WMQ                                   pP     sP      09 10 38.5 +1.5
WMQ                                   sP     pP      09 10 45.3  +10
WMQ                                   pmax   pmax
      comp=Z,26nm,0.9s
WMQ                                   pmax   pmax
      comp=Z,120nm,4.5s
WMQ                                   LR     LR
      comp=Z,540nm,13.7s
WMQ                                   LR     LR
      comp=Z,140nm,16.5s
WMQ                                   LR     LR
      comp=Z,400nm,22.5s
WMQ   Urumqi            40.93 297     P      P       09 10 31.7 -0.4
WMQ                                   pmax   pmax
      comp=Z,23nm,0.8s
WMQ   Urumqi            40.93 297     P      P       09 10 31.7 -0.4
WMQ                                   IAmb   IAmb    09 10 45.9
      comp=Z,23nm,0.8s
PBKT  Sadao Pong        41.12 251     P      P       09 10 33.2 -0.6
CHTO  Chiang Mai        41.35 256     P      P       09 10 35.1 -0.7
CHTO                                  pmax   pmax
      comp=Z,12nm,1.4s
CHTO  Chiang Mai        41.35 256     P      P       09 10 35.1 -0.7
SANI  Sanana            41.44 204     P      P       09 10 39.2 +2.8
      comp=Z,58nm,0.8s
CMAR  Chiang Mai Arr    41.56 255     P      P       09 10 35.0 -2.5
      comp=Z,1.1nm,0.2s,baz=50,slow=5.6,SNR=5.0
CMAR                                  LR     LR      09 30 14.4
      comp=Z,247nm,18.9s,baz=5.0,slow=40
CMAR  Chiang Mai Arr    41.56 255     P      P       09 10 37.4 -0.1
CMAR  Chiang Mai Arr    41.56 255     P      P       09 10 37.4 -0.1
ANM   Nome              41.59  31     P      P       09 10 39.5 +2.3
ANM                                   pmax   pmax
      comp=Z,17nm,1.1s
ANM   Nome              41.59  31     P      P       09 10 39.5 +2.3
ZAA0  Zalesovo Array    42.00 312     IAmb   IAmb    09 10 41.3
      comp=Z,24nm,0.8s
ZALV  Zalesovo Beam     42.00 312     P      P       09 10 39.8 -0.9
      comp=Z,24nm,0.8s,baz=93,slow=7.0,SNR=63
ZALV                                  PcP    PcP     09 12 35.6  0.0
      comp=Z,2.7nm,0.6s,baz=82,slow=2.8,SNR=3.3
ZALV                                  LR     LR      09 28 52.0
      comp=Z,227nm,20.0s,baz=92,slow=37
NRIK  Noril'sk          43.34 335     P      P       09 10 50.1 -1.2
      comp=Z,9.3nm,1.0s,baz=113,slow=10,SNR=12
RDOG  Red Dog Mine      43.51  27     IAmb   IAmb    09 10 56.0
      comp=Z,44nm,1.2s
SBUM  Sibu              43.69 225     P      P       09 10 53.4 -1.4
MKAR  Makanchi Array    44.20 302     P      P       09 10 57.9 -0.8
      comp=Z,13nm,0.7s,baz=87,slow=10,SNR=21
MKAR                                  LR     LR      09 29 38.5
      comp=Z,213nm,20.7s,baz=89,slow=36
MKAR  Makanchi Array    44.20 302ceP         P       09 10 58.2 -0.5
MKAR                                  pmax   pmax
      comp=Z,13nm,0.7s
KURK  Kurchatov         46.02 308d iP        P       09 11 11.5 -1.5
KURK                                  pmax   pmax
      comp=Z,33nm,1.3s
KURK  Kurchatov         46.02 308     P      P       09 11 11.9 -1.0
TAPN  Taplejung         46.02 274    eP      P       09 11 12.9 -0.8
KURBB Kurchatov Arra    46.09 308     P      P       09 11 12.4 -1.1
      comp=Z,14nm,0.8s,baz=83,slow=7.8,SNR=42
KURBB Kurchatov Arra    46.09 308     P      P       09 11 12.1 -1.4
KAPI  Kappang           46.47 211     P      P       09 11 16.8  0.0
      comp=Z,24nm,0.4s,baz=40,slow=7.1,SNR=3.8
ODAN  Odare             46.49 274    eP      P       09 11 16.5 -0.8
      comp=Z,27nm,0.7s
IMAR  Indian Mountai    46.65  31     P      P       09 11 19.1 +1.3
KDAK  Kodiak Island     47.08  42     P      P       09 11 22.7 +1.5
KDAK                                  pmax   pmax
      comp=Z,28nm,0.8s
KDAK  Kodiak Island     47.08  42     P      P       09 11 22.7 +1.5
RAMN  Ramite            47.08 274    eP      P       09 11 21.0 -1.0
      comp=Z,82nm,0.8s
JIRN  Jiri              47.10 275    eP      P       09 11 21.6 -0.6
      comp=Z,61nm,0.8s
PPLA  Purkeypile        47.16  35     P      P       09 11 24.5 +2.6
GUN   Gumba             47.23 276    eP      P       09 11 22.6 -0.7
      comp=Z,41nm,0.7s
BPAW  Bear Paw Mtn.     47.72  33     P      P       09 11 27.9 +1.7
PKI   Pulchoki          47.76 276    eP      P       09 11 26.0 -1.3
MLY   Manley            47.84  32     P      P       09 11 29.6 +2.4
MLY                                   IAmb   IAmb    09 11 30.5
      comp=Z,22nm,1.0s
SUA   Susitna One       47.84  37     P      P       09 11 28.4 +1.1
TRF   Thorofare Moun    48.02  34     P      P       09 11 30.2 +1.6
TRF                                   IAmb   IAmb    09 11 32.6
      comp=Z,14nm,0.9s
GKN   Gorkha            48.18 277    eP      P       09 11 29.5 -0.9
      comp=Z,80nm,0.7s
TOLK  Toolik Lake Re    48.47  27     P      P       09 11 33.2 +1.3
      baz=266,SNR=12
MCK   McKinley          48.63  34     IAmb   IAmb    09 11 35.7
      comp=Z,23nm,1.0s
TCOL  CIGO, UAF Yank    49.07  32     P      P       09 11 37.8 +1.3
      baz=271
POKR  Poker Plat Res    49.25  32     P      P       09 11 39.4 +1.5
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      baz=271,SNR=20
DHY   Denali Highway    49.35  35     P      P       09 11 40.5 +1.6
DHY                                   IAmb   IAmb    09 11 40.7
      comp=Z,17nm,1.3s
SCM   Sheep Creek Mo    49.46  36     P      P       09 11 41.7 +2.1
SCM                                   pmax   pmax
      comp=Z,40nm,1.2s
SCM   Sheep Creek Mo    49.46  36     P      P       09 11 41.7 +2.1
HDA   Harding Lake      49.48  33     IAmb   IAmb    09 11 41.7
      comp=Z,24nm,1.0s
HDA   Harding Lake      49.48  33     P      P       09 11 40.1 +0.5
      baz=272,SNR=12
IL31                    49.49  32     IAmb   IAmb    09 11 41.9
      comp=Z,24nm,0.9s
ILAR  Eielson Array     49.49  32     P      P       09 11 40.5 +0.8
      comp=Z,14nm,0.8s,baz=269,slow=6.2,SNR=130
ILAR  Eielson Array     49.49  32     P      P       09 11 41.2 +1.5
ILAR  Eielson Array     49.49  32     P      P       09 11 41.2 +1.5
FYU   Fort Yukon        50.11  30     P      P       09 11 46.9 +2.6
FYU                                   IAmb   IAmb    09 11 48.3
      comp=Z,26nm,1.1s
BMAR  Burnt Mountain    50.33  29     P      P       09 11 49.2 +3.0
KSH   Kashi             50.49 294     P      P       09 11 52.6 +4.7
KSH                                   pP     sP      09 11 56.4 +3.6
KSH                                   PP     PP      09 13 49.8 +6.4
KSH                                   PcS    PcS     09 17 05.4 +2.2
KSH                                   S      S       09 19 07.4 +5.7
KSH                                   ScS    ScS     09 21 39.8 +0.8
KSH                                   pmax   pmax
      comp=Z,41nm,1.6s
KSH                                   pmax   pmax
      comp=Z,41nm,5.2s
KSH                                   LR     LR
      comp=Z,320nm,13.3s
KSH                                   LR     LR
      comp=Z,350nm,13.4s
KSH                                   LR     LR
      comp=Z,430nm,15.9s
AAK   Ala-Archa         50.58 298⇑eP         P       09 11 48.3 -0.2
AAK                                   pmax   pmax
      comp=Z,24nm,4.4s
BVAR  Borovoye Array    50.66 312     P      P       09 11 48.0 -0.7
      comp=Z,7.7nm,0.7s,baz=76,slow=7.8,SNR=31
BVAR                                  PcP    PcP     09 13 06.0  0.0
      comp=Z,5.2nm,0.8s,baz=86,slow=4.6,SNR=5.2
BRVK  Borovoye          50.71 312deP         P       09 11 48.4 -0.8
BRVK                                  pmax   pmax
      comp=Z,15nm,0.8s
BRVK  Borovoye          50.71 312     P      P       09 11 48.8 -0.3
BRVK                                  IAmb   IAmb    09 11 50.3
      comp=Z,15nm,0.8s
SCRK  Sand Creek        50.80  33     IAmb   IAmb    09 11 52.2
      comp=Z,23nm,1.0s
GLB   Gilahina Butte    51.17  37     IAmb   IAmb    09 11 55.8
      comp=Z,29nm,1.4s
VRDI  Verde Repeater    51.37  37     IAmb   IAmb    09 11 57.3
      comp=Z,21nm,1.1s
MCARA McCarthy VSAT     51.55  37     IAmb   IAmb    09 11 58.8
      comp=Z,28nm,1.0s
CRQM  Cirque            51.59  37     IAmb   IAmb    09 12 05.5
      comp=Z,19nm,0.9s
BCAR  Beaver Creek A    51.89  34     P      P       09 11 59.8 +2.0
BALM  Baldy             51.93  37     P      P       09 11 58.4 +0.1
BALM                                  IAmb   IAmb    09 12 01.2
      comp=Z,19nm,1.1s
EGAK  Eagle             51.94  32     IAmb   IAmb    09 12 01.5
      comp=Z,22nm,1.2s
SDSI  Sungai Dareh      52.92 234     P      P       09 12 05.3 -0.8
      comp=Z,32nm,1.5s
KKAR  Karatay Array     53.21 300     P      P       09 12 06.6 -1.4
KKAR  Karatay Array     53.21 300     P      P       09 12 06.5 -1.4
EPYK  Eagle Plains      53.52  30     P      P       09 12 11.0 +1.0
      baz=280,SNR=48
INK   Inuvik            54.39  27     IAmb   IAmb    09 12 18.9
      comp=Z,16nm,0.9s
SVE   Sverdlovsk        55.23 319⇓eP         P       09 12 22.8 +0.4
SVE                                   pmax   pmax
      comp=Z,50nm,0.8s
WHY   Whitehorse        55.58  36     IAmb   IAmb    09 12 28.6
      comp=Z,12nm,0.9s
ARU   Arti              56.44 319     P      P       09 12 30.4 -0.7
      comp=Z,13nm,0.6s,baz=71,slow=3.7,SNR=44
ARU   Arti              56.44 319c iP        P       09 12 30.4 -0.7
ARU                                                  09 14 33.0
ARU                                   S      S       09 20 24.0 +2.3
ARU                                   SS     SS      09 24 08.4 +0.2
ARU                                   pmax   pmax
      comp=Z,50nm,0.8s
FITZ  Fitzroy Crossi    56.80 198     P      P       09 12 33.8 -0.2
      comp=Z,6.7nm,0.9s,baz=350,slow=0.9,SNR=11
FITZ  Fitzroy Crossi    56.80 198     IAmb   IAmb    09 12 39.6
      comp=Z,24nm,1.1s
WB0   Warramunga Arr    56.85 188     P      P       09 12 33.6 -0.7
WRAB  Tennant Creek     57.02 188ceP         P       09 12 34.8 -0.8
WRAB                                  pmax   pmax
      comp=Z,33nm,1.0s
WRAB  Tennant Creek     57.02 188     P      P       09 12 34.7 -0.8
WRA   Warramunga Arr    57.03 188     P      P       09 12 34.5 -1.1
      comp=Z,9.7nm,0.7s,baz=4.1,slow=7.1,SNR=87
WRA   Warramunga Arr    57.03 188     P      P       09 12 35.0 -0.6
WRA                                   pmax   pmax
      comp=Z,2.0nm,1.0s
WRA   Warramunga Arr    57.03 188     P      P       09 12 35.0 -0.6
C36M  Paulatuk          57.44  25     IAmb   IAmb    09 12 40.4
      comp=Z,17nm,0.8s
C36M  Paulatuk          57.44  25     P      P       09 12 38.7 +0.7
      baz=289,SNR=15
KBL   Kabul             57.50 291     P      P       09 12 38.3 -1.0
KBL                                   pmax   pmax
      comp=Z,11nm,0.9s
KBL   Kabul             57.50 291     P      P       09 12 38.3 -1.0
KBL                                   IAmb   IAmb    09 12 39.0
      comp=Z,11nm,0.8s
AB31  Akbulak array     58.02 310   i P      P       09 12 41.3 -1.1
ABKAR Akbulak array     58.02 310     P      P       09 12 41.2 -1.2
ABKAR Akbulak array     58.02 310     IAmb   IAmb    09 12 42.4
      comp=Z,16nm,0.7s
HYB   Hyderabad         58.28 269   i P      P       09 12 44.0 -0.7
AKTO  Aktyubinsk        58.76 312     P      P       09 12 46.1 -1.4
      comp=Z,12nm,0.8s,baz=76,slow=13,SNR=29
AKTO                                  LR     LR      09 38 23.2
      comp=Z,170nm,21.1s,baz=53,slow=36
KIRV  Kirov             60.33 323     P      P       09 12 57.5 -0.7
      comp=Z,48nm,0.7s,baz=66,slow=0.8,SNR=14
KIRV                                  LR     LR      09 41 53.1
      comp=Z,279nm,18.3s,baz=68,slow=39
SPITS Spitsbergen Ar    60.58 349     LR     LR      09 41 37.0
      comp=Z,99nm,18.5s,baz=255,slow=38
AS31  Alice Springs     60.76 188     P      P       09 12 59.4 -2.1
ASAR  Alice Springs     60.76 188     P      P       09 13 00.5 -1.0
      comp=Z,6.2nm,0.7s,baz=15,slow=6.7,SNR=66
ASAR                                  LR     LR      09 38 57.6
      comp=Z,92nm,19.3s,baz=174,slow=36
ASAR  Alice Springs     60.76 188     P      P       09 13 00.6 -0.9
PRGR  Permogore         60.84 327    eP      P       09 12 59.6 -2.0
PRGR                                  pmax   pmax
      comp=Z,32nm,1.1s
APA   Apatity           62.76 336⇓iP         P       09 13 13.2 -1.3
APA                                   pmax   pmax
      comp=Z,16nm,0.9s
APA                                   MLR    MLR
      comp=Z,1µm,23.0s
YKA   Yellowknife Ar    63.81  30     P      P       09 13 22.3 +0.8
      comp=Z,6.5nm,0.8s,baz=300,slow=6.4,SNR=93
KLMR  Klimovskoe        63.83 328    eP      P       09 13 15.7 -6.0
KLMR                                  pmax   pmax
      comp=Z,12nm,0.8s
KLMR  Klimovskoe        63.83 328    eP      P       09 13 15.7 -6.0
KLMR                                  AMP            09 13 21.7
      comp=Z,12nm,0.8s
GEYT  Alibeck           63.92 299     P      P       09 13 22.0 -0.7
      comp=Z,10.0nm,0.8s,baz=33,slow=3.5,SNR=16
GEYT                                  LR     LR      09 42 38.0
      comp=Z,133nm,20.5s,baz=50,slow=38
GEYT  Alibeck           63.92 299     P      P       09 13 22.4 -0.3
ARCES ARCESS Array B    64.06 339     P      P       09 13 23.2 +0.1
      comp=Z,6.5nm,0.8s,baz=51,slow=6.4,SNR=6.5
DAG   Danmarks Havn     65.82 355   i P      P       09 13 34.0 -0.4
      comp=Z,16nm,1.2s
DAG   Danmarks Havn     65.82 355   i P      P       09 13 34.0 -0.4
DAG                                   pmax   pmax
      comp=Z,17nm,1.2s
D03D  Eldon             67.08  47     P      P       09 13 44.8 +1.9
      baz=300
B05A  Bryant            67.28  46     P      P       09 13 45.9 +1.7
      baz=300
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VRH   Novokhopyorsk     67.66 318 eP    P      09 13 44.7 -1.8
VRH                               pmax  pmax
      comp=Z,20nm,0.7s
G03D  McMinnville, O    68.15  49  P    P      09 13 51.8 +2.1
      baz=301
OBN   Obninsk           68.17 323  LR   LR     09 44 04.6
      comp=Z,39nm,19.1s,baz=1.0,slow=36
OBN   Obninsk           68.17 323⇓eP    P      09 13 49.7  0.0
OBN                               e            09 14 14.9
OBN                               e            09 16 16.6
OBN                               eS    S      09 22 52.3 +2.9
OBN                               pmax  pmax
      comp=Z,11nm,0.6s
LPSR  Galich'ya Gora    68.38 320 eP    P      09 13 49.9 -1.1
LPSR                              pmax  pmax
      comp=Z,30nm,0.8s
STKA  Stephens Creek    68.51 180  P    P      09 13 52.1 +0.2
      comp=Z,6.6nm,1.0s,baz=324,slow=7.4,SNR=6.0
STKA  Stephens Creek    68.51 180  P    P      09 13 50.4 -1.5
FORT  Forrest           68.58 192  P    P      09 13 52.5 +0.1
I03D  Drain, OR         68.88  51  P    P      09 13 56.4 +2.1
      baz=301
FIA1  FINESS Array S    68.89 332  IAmb IAmb   09 14 11.5
      comp=Z,21nm,1.1s
FINES FINESS Array B    68.89 332  P    P      09 13 53.6 -0.4
      comp=Z,12nm,0.7s,baz=57,slow=7.3,SNR=29
FINES FINESS Array B    68.89 332  P    P      09 13 53.5 -0.5
VSR   Storozhevoye      69.01 319 eP    P      09 13 53.8 -1.2
VSR                               pmax  pmax
      comp=Z,10.0nm,0.6s
G05D  Wamic, OR         69.31  49  P    P      09 13 59.2 +2.1
      baz=302
I04A  Tendick Farm,     69.41  50  P    P      09 13 59.6 +1.9
      baz=302
I05D  Terrebonne, OR    69.77  49  P    P      09 14 02.1 +2.1
      baz=302
NEW   Newport           70.11  44  P    P      09 14 03.4 +1.5
      baz=304
L04D  Klamath Falls     70.31  52  P    P      09 14 05.3 +1.9
      baz=302
N02D  Trinity Center    70.72  53  P    P      09 14 07.9 +2.1
      baz=302
SUMG  Summit            70.73 360 i P   P      09 14 07.0 +1.3
      comp=Z,48nm,1.2s
SUMG  Summit            70.73 360 i P   P      09 14 07.0 +1.3
SUMG                              pmax  pmax
      comp=Z,48nm,1.2s
SUMG  Summit            70.73 360  P    P      09 14 05.5 -0.2
SUMG                              IAmb  IAmb   09 14 07.8
      comp=Z,17nm,1.2s
M04C  Macdoel           70.83  52  P    P      09 14 08.5 +1.9
      baz=303
KBZ   Khabaz            70.99 311  P    P      09 14 06.7 -0.6
      comp=Z,10nm,0.9s,baz=65,slow=3.6,SNR=9.1
KBZ                               LR    LR     09 45 49.4
      comp=Z,168nm,18.9s,baz=40,slow=36
KIV   Kislovodsk        70.99 311 eP    P      09 14 07.4  0.0
KIV                               pmax  pmax
      comp=Z,105nm,1.1s
KIV                               MLR   MLR
      comp=Z,521nm,17.0s
O02D  Mt. Diablo Mer    71.09  54  P    P      09 14 09.6 +1.5
      baz=303
NEY   Neytrino          71.36 310⇓eP    P      09 14 10.7 +0.9
NEY                               pmax  pmax
      comp=Z,5.0nm,1.1s
WALA  Waterton Lakes    71.42  42  P    P      09 14 11.3 +1.3
O03E  Paynes Creek      71.66  53  P    P      09 14 12.7 +1.2
      baz=303
BMO   Blue Mountains    71.90  47  P    P      09 14 13.2 +0.2
BMO                               pmax  pmax
      comp=Z,9.0nm,1.0s
BMO   Blue Mountains    71.90  47  P    P      09 14 13.2 +0.2
JTMT  Jette             71.97  43  P    P      09 14 14.1 +0.7
MSO   Missoula          72.69  44  P    P      09 14 18.3 +0.6
MSO   Missoula          72.69  44  P    P      09 14 18.6 +1.0
      baz=306
FFC   Flin Flon         73.70  33  P    P      09 14 24.3 +1.0
FFC                               pmax  pmax
      comp=Z,18nm,0.9s
FFC   Flin Flon         73.70  33  P    P      09 14 24.3 +1.0
FFC                               IAmb  IAmb   09 14 25.4
      comp=Z,18nm,0.8s
CMB   Columbia Colle    73.83  54  P    P      09 14 25.2 +0.8
CMB                               pmax  pmax
      comp=Z,20nm,1.2s
CMB   Columbia Colle    73.83  54  P    P      09 14 25.2 +0.8
CMB                               IAmb  IAmb   09 14 27.5
      comp=Z,20nm,1.1s
FCC   Fort Churchill    74.00  27  IAmb IAmb   09 14 26.8
      comp=Z,28nm,1.1s
EGMT  Eagleton          74.25  41  P    P      09 14 28.1 +1.4
EGMT                              IAmb  IAmb   09 14 29.3
      comp=Z,22nm,1.1s
EGMT  Eagleton          74.25  41  P    P      09 14 28.0 +1.2
      baz=308,SNR=5.5
NB2   NORSAR Subarra    74.25 337  P    P      09 14 25.9 -0.6
      comp=Z,4.6nm,0.7s,baz=38,slow=5.9
NOA   NORSAR Array B    74.25 337  P    P      09 14 26.1 -0.4
      comp=Z,7.0nm,0.8s,baz=39,slow=5.8,SNR=19
NOA                               LR    LR     09 49 44.2
      comp=Z,194nm,20.6s,baz=55,slow=38
DLMT  Dillon            74.32  45  P    P      09 14 28.8 +1.5
DLMT                              IAmb  IAmb   09 14 30.1
      comp=Z,16nm,0.9s
AKASG Malin Array Be    74.38 322  P    P      09 14 26.3 -1.0
      comp=Z,5.2nm,0.5s,baz=47,slow=6.2,SNR=31
AKASG                             LR    LR     09 48 59.6
      comp=Z,122nm,21.2s,baz=45,slow=37
AKASG Malin Array Be    74.38 322  P    P      09 14 26.9 -0.4
AKASG                             pmax  pmax
      comp=Z,5.0nm,1.1s
AKASG Malin Array Be    74.38 322  P    P      09 14 26.9 -0.4
AKBB  Malin Array Si    74.38 322  IAmb IAmb   09 14 27.0
      comp=Z,13nm,0.7s
KVN   Kaiserville       74.72  53  IAmb IAmb   09 14 33.0
      comp=Z,21nm,1.1s
NVAR  Mina Array Bea    74.95  53  P    P      09 14 32.6 +1.4
      comp=Z,9.8nm,0.9s,baz=284,slow=6.3,SNR=34
NVAR  Mina Array Bea    74.95  53  P    P      09 14 33.0 +1.8
ELK   Elko              75.52  50  P    P      09 14 35.6 +1.2
ELK                               pmax  pmax
      comp=Z,4.0nm,1.0s
ELK   Elko              75.52  50  P    P      09 14 35.6 +1.2
GCMT  Greycliff         75.68  43  P    P      09 14 36.9 +1.8
YNR   Norris Junctio    75.79  44  P    P      09 14 38.8 +2.8
SFJD  Kangerlussuaq     75.92   5 i P   P      09 14 36.1 +0.2
SFJD  Kangerlussuaq     75.92   5 i P   P      09 14 36.1 +0.2
VES   Vestal, Richgr    75.94  56  P    P      09 14 37.6 +1.0
      baz=306,SNR=8.6
PKM   Mcpherson Peak    76.01  57  P    P      09 14 38.7 +1.4
      baz=306
H17A  Grant Village     76.05  45  P    P      09 14 40.2 +2.8
H17A                              IAmb  IAmb   09 14 42.1
      comp=Z,20nm,0.9s
H17A  Grant Village     76.05  45  P    P      09 14 39.8 +2.4
      baz=308,SNR=14
RAO   Raoul Island      76.10 144  LR   LR     09 43 29.3
      comp=Z,93nm,21.9s,baz=86,slow=32
IMW   Indian Meadow     76.15  45  P    P      09 14 40.5 +2.5
IMW                               IAmb  IAmb   09 14 41.6
      comp=Z,9.6nm,0.8s
CWC   Cottonwood Cre    76.25  55  P    P      09 14 39.6 +1.0
      baz=306
FXWY  Fox Creek         76.26  45  P    P      09 14 40.2 +1.6
GRAC  Grapevine Rang    76.39  54  P    P      09 14 41.1 +1.9
      baz=306,SNR=6.6
ISA   Isabella, Lake    76.45  56  P    P      09 14 40.1 +0.5
      baz=306
ARVC  Arvin             76.52  56  P    P      09 14 41.2 +1.2
      baz=306
REDW  Red Top Meadow    76.53  46  P    P      09 14 42.0 +1.9
R11A  Troy Canyon, C    76.73  52  P    P      09 14 41.8 +0.5
R11A                              IAmb  IAmb   09 14 44.4
      comp=Z,15nm,1.1s
R11A  Troy Canyon, C    76.73  52  P    P      09 14 42.7 +1.4
      baz=307,SNR=22
DGMT  Dagmar            76.82  39  P    P      09 14 42.6 +1.1
DGMT                              IAmb  IAmb   09 14 43.6
      comp=Z,15nm,0.9s
DGMT  Dagmar            76.82  39  P    P      09 14 42.7 +1.3
      baz=312,SNR=5.7
MPMC  Manual Prospec    76.86  55  P    P      09 14 43.2 +1.0
      baz=306,SNR=11
LAO   LASA Array        76.96  41  IAmb IAmb   09 14 45.2
      comp=Z,28nm,1.1s
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LAO   LASA Array        76.96  41  P    P      09 14 43.2 +0.9
      baz=311,SNR=9.6
FURC  Furnace Creek,    77.03  54  P    P      09 14 44.3 +1.6
      baz=306,SNR=11
TPNV  Topopah Spring    77.14  53  P    P      09 14 45.4 +1.8
TPNV                              pmax  pmax
      comp=Z,18nm,1.1s
TPNV  Topopah Spring    77.14  53  P    P      09 14 45.4 +1.8
TPNV                              IAmb  IAmb   09 14 46.6
      comp=Z,18nm,1.1s
TPNV  Topopah Spring    77.14  53  P    P      09 14 44.9 +1.3
      baz=307,SNR=8.2
HWUT  Hardware Ranch    77.20  47  P    P      09 14 45.7 +1.8
HWUT                              IAmb  IAmb   09 14 47.2
      comp=Z,17nm,1.2s
EDW2  Edwards Air Fo    77.22  56  P    P      09 14 45.4 +1.5
      baz=306,SNR=6.2
DUG   Dugway, Tooele    77.33  49  P    P      09 14 45.7 +1.1
DUG                               pmax  pmax
      comp=Z,14nm,1.1s
DUG   Dugway, Tooele    77.33  49  P    P      09 14 45.7 +1.1
DUG                               IAmb  IAmb   09 14 47.8
      comp=Z,14nm,1.1s
DUG   Dugway, Tooele    77.33  49  P    P      09 14 45.6 +1.1
      baz=308,SNR=9.9
BW06  Boulder Array     77.64  45  P    P      09 14 47.4 +1.0
      baz=309,SNR=5.6
PDAR  Pinedale Array    77.64  45  P    P      09 14 47.2 +0.8
      comp=Z,3.1nm,0.8s,baz=267,slow=2.4,SNR=23
PDAR  Pinedale Array    77.64  45  P    P      09 14 46.9 +0.5
SHOC  Shoshone, Teco    77.75  54  P    P      09 14 47.5 +0.7
      baz=307
GSC   Goldstone, Bar    77.76  55  P    P      09 14 48.6 +1.6
GSC                               pmax  pmax
      comp=Z,12nm,1.3s
GSC   Goldstone, Bar    77.76  55  P    P      09 14 48.6 +1.6
GSC   Goldstone, Bar    77.76  55  P    P      09 14 47.6 +0.6
      baz=307
BFSC  Mount Baldy Ra    77.83  56  P    P      09 14 48.0 +0.6
      baz=307
NLU   North Lily Min    77.92  49  P    P      09 14 48.8 +0.9
SHPR  Sheep Range       78.11  53  IAmb IAmb   09 14 52.3
      comp=Z,15nm,1.2s
MPU   Maple Canyon      78.15  49  P    P      09 14 50.8 +1.6
HEC   Hector,Ludlow     78.35  55  P    P      09 14 51.6 +1.3
      baz=307
BURAR Bucovina Array    78.39 322 ⇑P    P      09 14 50.7 +0.4
BURAR Bucovina Array    78.39 322  P    P      09 14 50.0 -0.2
BIZ   Bicaz             78.41 321 ⇑P    P      09 14 50.8 +0.5
TESR  Tescani           78.42 320 ⇑P    P      09 14 50.3 -0.1
MURC  Murrieta          78.52  57  P    P      09 14 52.1 +0.9
      baz=307
TOPG  Topolog           78.60 318 ⇑P    P      09 14 51.0 -0.4
MSU   Marysvale         78.75  50  P    P      09 14 54.3 +1.7
MSU   Marysvale         78.75  50  P    P      09 14 54.2 +1.7
SZCU  Shurtz Canyon     78.75  51  P    P      09 14 53.3 +0.7
VRI   Vrincioaia        78.81 320 ⇑P    P      09 14 53.1 +0.6
GMRC  Granite Mounta    78.82  55  P    P      09 14 54.3 +1.4
      baz=307,SNR=7.0
BRTR  Keskin Array B    78.94 312  P    P      09 14 53.4 -0.2
      comp=Z,3.9nm,0.8s,baz=75,slow=3.9,SNR=9.8
BRTR  Keskin Array B    78.94 312  P    P      09 14 52.9 -0.6
PFO   Pinyon Flats O    79.00  56  P    P      09 14 55.7 +1.8
PFO                               pmax  pmax
      comp=Z,15nm,1.3s
PFO   Pinyon Flats O    79.00  56  P    P      09 14 55.7 +1.8
PFO                               IAmb  IAmb   09 14 57.3
      comp=Z,15nm,1.2s
PFO   Pinyon Flats O    79.00  56  P    P      09 14 55.0 +1.0
      baz=307,SNR=6.2
109C  Camp Elliot, M    79.00  57  P    P      09 14 54.9 +1.1
      baz=307
XPFO  Pion Flat         79.00  56  P    P      09 14 55.7 +1.8
XPFO                              IAmb  IAmb   09 14 57.3
      comp=Z,15nm,1.2s
BISRR Bisoca            79.03 319 ⇑P    P      09 14 54.9 +1.1
BELC  Belle Mtn. Jos    79.07  56  P    P      09 14 55.4 +1.0
      baz=307
UZH   Uzhgorod          79.10 324 eP    P      09 14 54.9 +0.9
UZH                               e            09 15 00.1
TRPA  Tarpa             79.34 323 ⇑P    P      09 14 56.0 +0.7
DOPR  Dopca             79.43 320 ⇑P    P      09 14 56.4 +0.5
K22A  Casper            79.43  44  IAmb IAmb   09 14 58.5
      comp=Z,15nm,1.1s
K22A  Casper            79.43  44  P    P      09 14 57.0 +0.9
      baz=311
MONP2 Monument Peak     79.46  57  P    P      09 14 57.4 +0.8
      baz=307
ULM   Lac du Bonnet     79.50  33  P    P      09 14 55.0 -1.2
      comp=Z,4.9nm,0.7s,baz=324,slow=7.1,SNR=16
ULM   Lac du Bonnet     79.50  33  P    P      09 14 55.0 -1.2
IRM   Iron Mountain     79.54  55  P    P      09 14 57.8 +1.0
      baz=308,SNR=8.2
BC3   Big Chuckawall    79.64  56  P    P      09 14 58.3 +0.9
      baz=308,SNR=6.4
RSSD  Black Hills       79.81  42  P    P      09 14 59.0 +0.7
RSSD                              pmax  pmax
      comp=Z,9.0nm,1.1s
RSSD  Black Hills       79.81  42  P    P      09 14 59.0 +0.7
RSSD  Black Hills       79.81  42  P    P      09 14 59.0 +0.7
      baz=312
IKP   In-Ko-Pah, Jac    79.81  57  P    P      09 14 59.4 +1.1
      baz=308,SNR=5.8
SWSC  Sam W. Stewart    79.84  56  P    P      09 14 59.2 +0.9
      baz=308
VOIR                    79.96 320 ⇑P    P      09 14 59.1 +0.2
U15A  North Rim         79.98  52  IAmb IAmb   09 15 02.9
      comp=Z,17nm,1.2s
O20A  White River Ci    80.08  47  IAmb IAmb   09 15 01.8
      comp=Z,20nm,1.4s
O20A  White River Ci    80.08  47  P    P      09 15 00.9 +1.1
      baz=310,SNR=6.4
PDMCI Parker Dam,Lak    80.11  54  P    P      09 15 01.2 +1.4
      baz=308,SNR=5.8
Y12C  Blythe            80.20  55  IAmb IAmb   09 15 03.1
      comp=Z,16nm,1.1s
Y12C  Blythe            80.20  55  P    P      09 15 01.2 +1.0
      baz=308
ARR   Arges             80.22 320 ⇑P    P      09 15 00.6 +0.3
GLA   Glamis            80.42  56  IAmb IAmb   09 15 04.4
      comp=Z,21nm,1.1s
GLA   Glamis            80.42  56  P    P      09 15 02.8 +1.2
      baz=308
MORC  Moravsky Berou    80.44 327 ⇑P    P      09 15 01.5 +0.1
DPC   Dobruska-Polom    80.53 328 eP    P      09 15 01.7 -0.1
DPC   Dobruska-Polom    80.53 328 eP    P      09 15 01.7 -0.1
PV09  Paradox Valley    80.61  49  P    P      09 15 04.6 +1.8
PV23  Carpenter Ridg    80.71  49  P    P      09 15 04.8 +1.4
RAYN  Ar Rayn           80.74 292  P    P      09 15 03.1 -0.3
RAYN                              pmax  pmax
      comp=Z,6.0nm,0.7s
RAYN  Ar Rayn           80.74 292  P    P      09 15 03.1 -0.3
PV22  Blue Mesa, Par    80.79  48  IAmb IAmb   09 15 06.7
      comp=Z,17nm,1.1s
VYHS  Vyhne             80.80 325 eP    P      09 15 03.8 +0.5
VYHS  Vyhne             80.80 325 eP    P      09 15 03.8 +0.5
PV20  West Nyswonger    80.81  49  IAmb IAmb   09 15 06.7
      comp=Z,26nm,1.0s
PV04  Paradox Valley    80.81  49  IAmb IAmb   09 15 06.9
      comp=Z,27nm,1.2s
PV16  Nyswonger Mesa    80.86  49  IAmb IAmb   09 15 07.1
      comp=Z,23nm,1.1s
PV18  Skein Mesa, Pa    80.91  49  IAmb IAmb   09 15 07.2
      comp=Z,31nm,1.1s
N23A  Red Feather La    80.91  45  IAmb IAmb   09 15 07.4
      comp=Z,21nm,1.1s
N23A  Red Feather La    80.91  45  P    P      09 15 05.3 +1.0
      baz=312,SNR=7.7
AGMN  Agassiz Nation    80.93  35  IAmb IAmb   09 15 05.2
      comp=Z,15nm,1.1s
AGMN  Agassiz Nation    80.93  35  P    P      09 15 05.0 +1.0
      baz=317,SNR=5.5
PV03  Paradox Valley    80.94  49  IAmb IAmb   09 15 07.5
      comp=Z,30nm,1.2s
PV02  Paradox Valley    81.03  49  IAmb IAmb   09 15 08.6
      comp=Z,19nm,1.1s
Y14A  Wickenburg        81.07  54  IAmb IAmb   09 15 07.9
      comp=Z,14nm,1.1s
WUAZ  Wupatki           81.13  52  IAmb IAmb   09 15 08.7
      comp=Z,19nm,1.1s
WUAZ  Wupatki           81.13  52  P    P      09 15 06.7 +1.3
      baz=309,SNR=12
BRG   Berggiesshubel    81.13 329 i P   P      09 15 04.8 -0.2
      comp=Z,8.6nm,0.9s
BRG   Berggiesshubel    81.13 329 eP    P      09 15 04.6 -0.4
      comp=Z,8.6nm,0.9s,baz=37,slow=5.2
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BRG   Berggiesshubel    81.13 329 i P   P      09 15 04.8 -0.2
BRG                               pmax  pmax
      comp=Z,9.0nm,0.9s
PVCC  Panska Ves        81.13 329 eP    P      09 15 05.7 +0.7
PVCC  Panska Ves        81.13 329 eP    P      09 15 05.7 +0.7
GZR   Gura Zlata        81.14 321 ⇑P    P      09 15 05.3  0.0
CLL   Collm             81.17 330 i P   P      09 15 06.1 +1.0
      comp=Z,16nm,1.0s
CLL   Collm             81.17 330 eP    P      09 15 06.4 +1.2
      comp=Z,16nm,1.0s,baz=37,slow=5.2
CLL   Collm             81.17 330 i P   P      09 15 06.1 +1.0
CLL                               pmax  pmax
      comp=Z,16nm,1.0s
VRAC  Vranov            81.20 327  P    P      09 15 05.1 -0.3
      comp=Z,5.2nm,0.7s,baz=64,slow=4.8,SNR=5.3
VRAC  Vranov            81.20 327 ⇑P    P      09 15 05.8 +0.4
FBE   Freiberg          81.33 330 eP    P      09 15 06.6 +0.6
      comp=Z,15nm,1.1s,baz=37,slow=5.2
PRU   Pruhonice         81.56 329 eP    P      09 15 07.8 +0.6
PRU   Pruhonice         81.56 329 eP    P      09 15 07.8 +0.6
CLZ   Clausthal         81.77 332 eP    P      09 15 09.0 +0.6
      comp=Z,19nm,1.3s,baz=37,slow=5.2
X16A  Lo Mia Camp, P    81.78  53  IAmb IAmb   09 15 12.2
      comp=Z,12nm,1.1s
MVCO  Mesa Verde        81.82  49  IAmb IAmb   09 15 12.1
      comp=Z,13nm,1.0s
MVCO  Mesa Verde        81.82  49  P    P      09 15 10.0 +0.8
      baz=311,SNR=9.1
ISCO  Idaho Springs     81.83  46  P    P      09 15 10.1 +0.8
      baz=312
GUNZ  Gunzen            82.17 330 eP    P      09 15 10.8 +0.3
      comp=Z,6.7nm,1.0s,baz=37,slow=5.2
WERN  Wernitzgruen      82.21 330 eP    P      09 15 10.6 -0.2
      comp=Z,7.5nm,1.0s,baz=37,slow=5.2
MOX   Moxa              82.24 330 eP    P      09 15 10.9  0.0
      comp=Z,2.5nm,0.7s,baz=37,slow=5.2
MOX                               eL    L      09 49 19.3
      comp=Z,112nm,21.0s
W18A  Petrified Fore    82.41  52  P    P      09 15 13.2 +0.9
      baz=310
214A  Organ Pipe Nat    82.44  56  P    P      09 15 13.5 +1.2
      baz=309
S22A  4UR Ranch, Cre    82.48  48  IAmb IAmb   09 15 16.1
      comp=Z,10nm,1.0s
S22A  4UR Ranch, Cre    82.48  48  P    P      09 15 13.6 +0.9
      baz=312,SNR=12
CONA  Conrad Observa    82.56 327 i P   P      09 15 12.1 -0.5
      comp=Z,7.7nm,0.9s
MANZ  Manzenberg        82.56 330 eP    P      09 15 13.1 +0.5
      comp=Z,3.5nm,0.6s,baz=37,slow=5.2
KHC   Kasperske Hory    82.62 329 eP    P      09 15 12.9  0.0
KHC                               epP   PcP    09 15 25.2 +7.3
KHC   Kasperske Hory    82.62 329ceP    P      09 15 13.4 +0.5
KHC                               pmax  pmax
      comp=Z,27nm,1.0s
ROTZ  Rotzenmuhle       82.69 330 eP    P      09 15 13.6 +0.4
      comp=Z,12nm,1.3s,baz=37,slow=5.2
GEC2  GERESS Array S    82.79 328 eP    P      09 15 13.5 -0.3
      comp=Z,8.3nm,1.1s,baz=37,slow=5.2
GEC2                              eL    L      09 52 47.6
      comp=Z,156nm,20.3s
GERES GERESS Array B    82.79 328  P    P      09 15 13.2 -0.6
      comp=Z,3.5nm,0.8s,baz=35,slow=5.1,SNR=9.1
GERES                             LR    LR     09 54 19.1
      comp=Z,176nm,19.2s,baz=12,slow=37
GERES GERESS Array B    82.79 328  P    P      09 15 13.4 -0.4
GERES GERESS Array B    82.79 328  P    P      09 15 13.4 -0.4
VTS   Vitosha           82.86 319 ⇑P    P      09 15 15.2 +0.8
WET   Wettzell          82.90 329 eP    P      09 15 15.0 +0.6
      baz=37,slow=5.2
WET                               eL    L      09 56 53.7
      comp=Z,155nm,18.5s
OGNE  Ogallala          83.06  43  P    P      09 15 15.9 +0.5
      baz=314
EYMN  Ely               83.13  33  P    P      09 15 16.4 +0.8
EYMN                              IAmb  IAmb   09 15 17.1
      comp=Z,15nm,1.0s
EYMN  Ely               83.13  33  P    P      09 15 15.6 +0.1
      baz=320,SNR=10
GRF   Grafenberg Arr    83.14 330 eL    L      09 54 16.1
      comp=Z,109nm,19.1s
EKA   Eskdalemuir Ar    83.20 341  P    P      09 15 15.5 -0.2
      comp=Z,0.7nm,0.5s,baz=39,slow=5.4,SNR=5.0
ARSA  Arzberg           83.22 326 i P   P      09 15 15.9 -0.1
      comp=Z,3.6nm,0.7s
SDCO  Great Sand Dun    83.26  47  P    P      09 15 16.7 -0.1
      baz=312,SNR=10
MOA   Molln             83.31 327 i P   P      09 15 16.7 +0.2
      comp=Z,6.4nm,0.9s
TUC   Tucson            83.54  54  P    P      09 15 19.7 +1.7
TUC                               pmax  pmax
      comp=Z,7.0nm,1.1s
TUC   Tucson            83.54  54  P    P      09 15 19.7 +1.7
TUC   Tucson            83.54  54  P    P      09 15 18.5 +0.5
      baz=310
SOKA  Soboth            83.87 326 i PcP P      09 15 19.5 +0.1
      comp=Z,14nm,1.0s
ECSD  EROS Data Cent    83.90  38  IAmb IAmb   09 15 21.2
      comp=Z,9.4nm,0.9s
ECSD  EROS Data Cent    83.90  38  P    P      09 15 20.1 +0.5
      baz=317,SNR=9.4
RJOB  Jochberg          84.03 328 eP    P      09 15 20.8 +0.6
      comp=Z,11nm,0.9s,baz=37,slow=5.2
PMOR  Pomariorio Ree    84.09 114 eT    T      10 47 55.2
      comp=Z,27nm,0.2s
OBKA  Obir              84.22 326 i PcP P      09 15 21.0 -0.2
      comp=Z,4.0nm,0.8s
KBA   Koelnbreinsper    84.31 327 i PcP P      09 15 21.6 -0.1
      comp=Z,5.2nm,0.9s
T25A  Trinidad          84.31  47  P    P      09 15 23.0 +0.9
      baz=313,SNR=14
MYKA  Terra Mystica     84.52 327 i P   P      09 15 22.1 -0.7
      comp=Z,4.9nm,0.9s
ANMO  Albuquerque       84.56  50⇓eP    P      09 15 25.1 +1.8
ANMO                              pmax  pmax
      comp=Z,14nm,1.2s
ANMO  Albuquerque       84.56  50  P    P      09 15 25.2 +1.8
ANMO                              IAmb  IAmb   09 15 26.4
      comp=Z,13nm,1.1s
PPT2  Papeete2          84.56 117 eLR   LR     09 42 01.8
      comp=Z,229nm,26.5s
PPT2  Papeete2          84.56 117 eT    T      10 48 28.8
      comp=Z,5.5nm,0.2s
TIAR  Tiarei            84.70 116 eT    T      10 48 38.6
      comp=Z,3.2nm,0.2s
WTTA  Wattenberg        84.89 328 i PcP P      09 15 24.4 -0.4
      comp=Z,3.5nm,0.6s
ABTA  Abfaltersbach     84.92 328 i P   P      09 15 23.4 -1.3
      comp=Z,4.6nm,0.9s
PDG   Podgorica         85.04 321 ⇑P    P      09 15 25.1 -0.2
MOTA  Moosalm           85.05 329 i PcP P      09 15 25.4 -0.1
      comp=Z,9.8nm,1.4s
D41A  Chassel           85.07  32  IAmb IAmb   09 15 28.2
      comp=Z,13nm,1.0s
RETA  Reutte            85.08 329 i PcP P      09 15 25.5  0.0
      comp=Z,10.0nm,1.0s
319A  Douglas           85.12  54  IAmb IAmb   09 15 28.9
      comp=Z,12nm,1.0s
121A  Cookes Peak, D    85.32  52  P    P      09 15 27.9 +0.7
121A                              IAmb  IAmb   09 15 30.2
      comp=Z,12nm,0.9s
121A  Cookes Peak, D    85.32  52  P    P      09 15 28.5 +1.3
      baz=311,SNR=9.1
SCHQ  Schefferville     85.36  16  P    P      09 15 26.7  0.0
      comp=Z,8.8nm,0.8s,baz=355,slow=5.6,SNR=11
SCHQ  Schefferville     85.36  16  IAmb IAmb   09 15 28.4
      comp=Z,9.2nm,0.8s
BFO   Black Forest      85.38 331 eP    P      09 15 26.9 -0.1
      comp=Z,12nm,0.9s,baz=37,slow=5.2
BFO   Black Forest      85.38 331  P    P      09 15 26.4 -0.5
BFO                               pmax  pmax
      comp=Z,9.0nm,0.8s
BFO   Black Forest      85.38 331  P    P      09 15 26.4 -0.5
BFO                               IAmb  IAmb   09 15 27.7
      comp=Z,9.5nm,0.8s
FETA  Feichten          85.46 329 i PcP P      09 15 27.2 -0.3
      comp=Z,4.9nm,0.8s
DAVA  Damuels           85.60 329 i P   P      09 15 26.6 -1.7
      comp=Z,9.7nm,0.9s
CBKS  Cedar Bluff       85.81  43  P    P      09 15 29.0 -0.3
      baz=315
MEH   Mehetia           85.83 116 eT    T      10 50 03.9
      comp=Z,32nm,0.3s
DAVOX Davos/Dischmat    86.00 329  P    P      09 15 29.5 -0.8
      comp=Z,3.9nm,0.9s,baz=136,slow=4.1,SNR=5.0
DAVOX                             LR    LR     09 57 14.9
      comp=Z,288nm,18.3s,baz=81,slow=38
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E43A	Lone Tree Farm	86.27	31	IAmb	IAmb	09 15 32.9	
	comp=Z,10nm,0.9s						
E44A	Grand Marais A	86.52	31	P	P	09 15 33.1	+0.5
	baz=324,SNR=5.2						
MATQ	Matagami	86.94	24	P	P	09 15 34.2	-0.4
	baz=330						
D46A	Sault St. Mari	87.05	29	P	P	09 15 34.8	-0.4
	baz=325,SNR=7.4						
D47A	Chapleau	87.28	29	P	P	09 15 36.6	+0.2
	baz=326,SNR=5.4						
KSU1	Kansas State U	87.29	41	P	P	09 15 36.6	+0.1
	baz=317,SNR=5.8						
MNTX	Cornudas Mount	87.40	52	P	P	09 15 37.8	+0.6
	baz=313						
F45A	CMU Biological	87.44	31	P	P	09 15 37.9	+0.8
	baz=324						
MSTX	Muleshoe	87.45	49	P	P	09 15 38.5	+0.9
	baz=314						
AMTX	Amarillo	87.47	47	P	P	09 15 38.6	+1.0
AMTX	Amarillo	87.47	47	P	P	09 15 38.4	+0.8
	baz=314						
JFWS	Jewell Farm	87.57	35	P	P	09 15 37.6	-0.2
	baz=321						
D48A	Paudash Townsh	87.67	28	P	P	09 15 38.0	-0.2
	baz=327						
NRCA	Norcia	87.70	325	IAmb	IAmb	09 15 39.3	
	comp=Z,8.0nm,0.9s						
E47A	Iron Bridge	87.71	29	P	P	09 15 38.8	+0.4
	baz=326,SNR=5.3						
LSQQ	Lebel-sur-Quev	87.77	24	P	P	09 15 38.4	-0.2
	baz=330						
G45A	Suttons Bay	87.90	31	P	P	09 15 39.4	+0.1
	baz=324						
G46A	Petoskey	88.01	31	P	P	09 15 39.9	+0.1
	baz=325						
H45A	Beulah	88.08	32	P	P	09 15 40.5	+0.3
	baz=324						
E48A	Lockeyer	88.11	29	P	P	09 15 40.2	-0.1
	baz=326						
D50A	G1974 Best Tow	88.40	27	P	P	09 15 41.4	-0.3
	baz=328						
TBI	Tubuai	88.44	121	*e*LR	LR	09 44 01.5	
	comp=Z,474nm,31.5s						
TBI	Tubuai	88.44	121	*e*T	T	10 53 14.8	
	comp=Z,52nm,0.2s						
I45A	Fountain	88.47	32	P	P	09 15 42.2	+0.2
	baz=324						
F48A	Evansville	88.48	29	P	P	09 15 42.0	-0.1
	baz=326						
P38A	Dawn	88.50	39	IAmb	IAmb	09 15 44.2	
	comp=Z,11nm,0.9s						
G47A	Hillman	88.53	30	P	P	09 15 42.6	+0.3
	baz=325						
D51A	Lot 18 Range I	88.64	27	P	P	09 15 42.7	-0.1
	baz=328						
F49A	Sandfield	88.76	29	P	P	09 15 43.9	+0.5
	baz=327						
H47A	Mio	88.86	31	P	P	09 15 44.6	+0.7
	baz=325						
E51A	G1948 Merrick	89.07	27	P	P	09 15 44.8	0.0
	baz=328						
H48A	Harrisville	89.14	30	P	P	09 15 45.9	+0.7
	baz=326						
D53A	Lac Vacive, Po	89.23	26	P	P	09 15 45.7	+0.1
	baz=330						
WMOK	Wichita Mounta	89.25	46	IAmb	IAmb	09 15 48.9	
	comp=Z,13nm,1.4s						
WMOK	Wichita Mounta	89.25	46	P	P	09 15 46.6	+0.6
	baz=316,SNR=6.5						
I48A	Sherman Twp	89.41	31	P	P	09 15 46.4	-0.1
	baz=326						
F51A	Arnstein	89.43	28	P	P	09 15 46.2	-0.3
	baz=328						
D54A	Lac Fusel, La	89.53	25	P	P	09 15 46.3	-0.7
	baz=330						
E52A	Mattawa	89.58	27	P	P	09 15 47.0	-0.2
	baz=329						
J47A	Sunmer	89.72	32	P	P	09 15 48.6	+0.7
	baz=325						
F52A	Sundridge	89.76	27	P	P	09 15 48.4	+0.3
	baz=328						
E53A	Dumoine, Ponti	89.85	26	P	P	09 15 48.3	-0.2
	baz=330						
I49A	Point Hope	89.97	30	P	P	09 15 50.0	+0.9
	baz=326						
D55A	Sainte-Anne-du	90.04	24	P	P	09 15 49.7	+0.3
	baz=331						
S39A	Bolivar	90.06	40	IAmb	IAmb	09 15 50.9	
	comp=Z,7.5nm,0.9s						
TUL1	Leonard	90.07	43	P	P	09 15 50.3	+0.5
	baz=318						
TX31	Lajitas Ar. Si	90.09	52	IAmb	IAmb	09 15 52.3	
	comp=Z,6.7nm,1.1s						
TX32	Lajitas Array	90.09	52	IAmb	IAmb	09 15 52.4	
	comp=Z,6.8nm,1.1s						
TXAR	Lajitas Array	90.09	52	P	P	09 15 51.0	+1.0
	comp=Z,4.6nm,0.9s,baz=298,slow=3.2,SNR=38						
TXAR	Lajitas Array	90.09	52	P	P	09 15 51.3	+1.2
TXAR	Lajitas Array	90.09	52	P	P	09 15 51.2	+1.2
J48A	Bridge Port	90.10	31	P	P	09 15 50.3	+0.6
	baz=325						
D56A	ZEC Mazanza, M	90.25	24	P	P	09 15 50.8	+0.4
	baz=332						
ABTX	Abilene, Hawle	90.26	48	P	P	09 15 51.5	+0.8
	baz=316,SNR=6.3						
J49A	Marlette	90.32	31	P	P	09 15 51.2	+0.5
	baz=326						
U38A	Gravette	90.44	42	IAmb	IAmb	09 15 53.1	
	comp=Z,9.8nm,0.8s						
G54A	Lake Saint Pet	90.55	27	P	P	09 15 52.0	+0.2
	baz=329						
D57A	Chemin Vers le	90.55	23	P	P	09 15 52.2	+0.4
	baz=332						
G53A	Haliburton	90.59	27	P	P	09 15 52.5	+0.6
	baz=329						
E56A	St. Veronique	90.60	24	P	P	09 15 52.0	0.0
	baz=332						
HHAR	Hobbs	90.80	42	IAmb	IAmb	09 15 57.0	
	comp=Z,7.5nm,1.2s						
D58A	Chemin du LacG	90.80	23	P	P	09 15 52.7	-0.2
	baz=333						
I51A	Listowel	90.80	29	P	P	09 15 52.7	-0.2
	baz=327						
CCM	Cathedral Cave	90.85	39	P	P	09 15 54.8	+1.5
CCM				pmax	pmax		
	comp=Z,12nm,1.1s						
CCM	Cathedral Cave	90.85	39	P	P	09 15 54.8	+1.5
CCM				IAmb	IAmb	09 15 55.1	
	comp=Z,12nm,1.1s						
CCM	Cathedral Cave	90.85	39	P	P	09 15 53.7	+0.4
	baz=320						
L48A	N Adams	90.94	32	P	P	09 15 54.1	+0.4
	baz=325						
E57A	Chemin Saint G	91.01	24	P	P	09 15 54.1	+0.1
	baz=332						
N47A	Urbana	91.25	34	P	P	09 15 55.4	+0.2
	baz=324						
U40A	Yellville	91.32	41	P	P	09 15 55.7	+0.1
	baz=320,SNR=11						
E58A	La Victoria	91.32	23	P	P	09 15 55.3	0.0
	baz=333						
J52A	Paris	91.49	29	P	P	09 15 56.0	-0.1
	baz=328						
D61A	St Aubert, Com	91.51	21	P	P	09 15 57.0	+0.9
	baz=335						
L50A	Kingsville	91.55	31	P	P	09 15 56.6	+0.1
	baz=326						
D60A	Saint Jean D'O	91.55	22	P	P	09 15 56.8	+0.4
	baz=335						
H55A	Tweed	91.60	27	P	P	09 15 57.1	+0.4
	baz=330						
JCT	Junction City	91.69	49	P	P	09 15 58.1	+0.7
	baz=316						
W39A	Magazine	91.70	42	P	P	09 15 57.9	+0.6
	baz=319						
I55A	Frankford	91.71	27	P	P	09 15 57.1	0.0
	baz=330						
N49A	Columbus Grove	91.88	33	P	P	09 15 57.9	-0.1
	baz=325						
E60A	Ste Agathe de	91.89	22	P	P	09 15 58.5	+0.5
	baz=334						
D62A	Allapoint, All	91.94	20	P	P	09 15 58.1	0.0
	baz=336						
F59A	Saint Guilaume	91.94	23	P	P	09 15 58.0	-0.1
	baz=333						
O48A	Farmland	92.00	34	P	P	09 15 58.8	+0.2
	baz=324						
WHTX	Lake Whitney,	92.00	47	P	P	09 15 59.4	+0.7
	baz=317						
F60A	Warwick	92.09	23	P	P	09 15 59.1	+0.2
	baz=334						
G58A	Ormstown	92.15	24	P	P	09 15 58.8	-0.4
	baz=332						
MIAR	Mount Ida	92.30	43	P	P	09 15 59.2	-0.9
	baz=319						
H57A	Richville	92.31	25	P	P	09 16 00.2	+0.3
	baz=331						
F61A	St Evariste	92.38	22	P	P	09 15 59.3	-1.0
	baz=335						
W41B	Gary Mavity, V	92.53	41	P	P	09 16 01.1	-0.1
	baz=320						
L53A	Girard	92.66	30	P	P	09 16 01.8	+0.2
	baz=328						
X40A	Basin Creek Fa	92.74	42	P	P	09 16 02.5	+0.4
	baz=320						
O50A	Cable	92.77	33	P	P	09 16 02.3	+0.2
	baz=326						
G61A	St-Isidore-de-	92.84	23	P	P	09 16 02.5	+0.1
	baz=334						
ACSO	Alum Creek Sta	92.97	32	P	P	09 16 03.4	+0.3
	baz=326						
G63A	Kingsbury	93.57	22	P	P	09 16 04.4	-1.4
	baz=336						
P52A	Corning	93.83	32	P	P	09 16 06.2	-0.9
	baz=326						
T50A	Nancy	94.77	36	P	P	09 16 10.9	-0.5
	baz=325						
S55A	Lewisburg	96.08	32	P	P	09 16 16.8	-0.7
	baz=328						
P60A	Greenville	96.29	28	P	P	09 16 16.1	-2.2
	baz=331						
Q61A	Milford	97.22	28	P	P	09 16 22.0	-0.5
	baz=331						
TORD	Torodi Ar. Bea	117.41	315	PKP	PKPdf	09 21 35.3	-0.6
	comp=Z,0.3nm,0.4s,baz=24,slow=2.5,SNR=3.2						
DBIC	Dimbokro	126.37	317	PKP	PKPdf	09 21 52.9	-0.3
	comp=Z,2.3nm,0.7s,baz=29,slow=2.7,SNR=4.2						
SYO	Syowa Base	128.20	207	⇑*e*Pdiff	Pdif	09 18 42.0	+2.7

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*IDC **17** 09:06:39.0±1.9, 20°.02S×70°.87W, h0^{km}, mb3.6/2, mb1 3.8/4, mb1mx3.5/27, mbtmp3.7/4, ML3.7/2, MS3.2/1, Ms1 3.2/1, ms1mx2.8/24, Error ellipse: s-maj=54.7km s-min=19.1km az=61.0*

*GUC **17** 09:06:42.2±0.6, 20°.05S×70°.92W, h31^{km}±3^{km}, ML3.6*

ISC 17 09:06:39.0±2.4, **20°.02S**±0°.05×**70°.94W**±0°.09, **h5**^{km}±13^{km}, **n15, σ1^{s}03**/23, **4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.88	61	⇓*e*P	Pb	09 06 57.1	+0.3
PSGC				*e*S	Sg	09 07 08.1	+0.9
PSGC				IAML		09 07 12.0	
	comp=N,3μm,0.5s						
TA01	Diego Aracena	0.89	127	⇓*i*P	Pb	09 06 56.7	-0.2
TA01				*i* S	Sb	09 07 07.6	-1.6
TA01				IAML		09 07 10.5	
	comp=N,3μm,0.5s						
PATCX	Punta Patache	1.08	137	⇓*i*P	Pb	09 06 59.8	-0.5
PATCX				*i* S	Sb	09 07 13.4	-1.4
PB11	IPOC Station P	1.23	78	⇓*i*P	Pg	09 07 02.7	0.0
PB11				*e*S	Sb	09 07 19.3	+0.1
PB11				IAML		09 07 24.5	
	comp=N,3μm,0.5s						
PB02	IPOC Station P	1.62	143	*e*P	Pn	09 07 08.2	-0.1
PB02				*i* S	Sn	09 07 28.9	-0.7
PB02				IAML		09 07 34.0	
	comp=E,2μm,0.4s						
GO01	Chusmiza	1.68	78	*e*P	Pb	09 07 10.4	-0.3
GO01				*i* S	Sb	09 07 32.1	-0.3
PB08	IPOC Station P	1.68	94	*e*P	Pn	09 07 10.0	+0.6
PB08				*e*S	Sb	09 07 32.0	-0.3
PB08				IAML		09 07 37.8	
	comp=E,2μm,0.8s						
PB01	IPOC Station P	1.69	127	*e*P	Pn	09 07 09.7	+0.3
PB01				*i* S	Sn	09 07 30.4	-1.1
PB01				IAML		09 07 35.4	
	comp=N,1μm,0.4s						
LVC	Limon Verde	3.19	144	Pn	Pn	09 07 31.3	+1.1
	comp=N,8.0nm,0.3s,baz=318,slow=7.5,SNR=14						
LVC				Sn	Sn	09 08 09.3	+0.4
	comp=N,7.3nm,0.3s,baz=258,slow=19,SNR=3.8						
LVC				Lg	Lg	09 08 19.4	
	comp=N,20nm,0.3s,baz=191,slow=7.3,SNR=12						
LPAZ	La Paz	4.57	36	Pn	Pb	09 07 57.3	-2.9
	comp=N,1.0nm,0.3s,baz=272,slow=3.6,SNR=23						
NNA	Nana	9.80	324	LR	LR	09 12 22.5	
	comp=N,159nm,21.7s,baz=41,slow=35						
SIV	San Ignacio	10.21	68	Pn	Pn	09 09 06.9	+0.6
	comp=N,0.9nm,0.3s,baz=266,slow=14,SNR=18						
TORD	Torodi Ar. Bea	78.67	71	P	P	09 18 42.7	-0.1
	comp=N,0.8nm,0.9s,baz=258,slow=5.4,SNR=3.4						
YKA	Yellowknife Ar	89.18	341	P	P	09 19 36.6	+1.2
	comp=N,0.2nm,0.8s,baz=138,slow=5.8,SNR=4.2						
MKAR	Makanchi Array	145.50	33	PKPbc	PKPdf	09 26 18.1	-0.2
	comp=N,0.7nm,0.9s,baz=328,slow=1.9,SNR=4.6						

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*SOME **17** 09:06:46.8, 40°.40N×77°.15E, h10^{km}*

*KRNET **17** 09:06:47.5±0.1, 40°.44N×77°.30E, mb3.3*

*NNC **17** 09:06:50.9±1.9, 40°.54N×77°.12E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=13.0km s-min=10.3km az=155.0*

ISC 17 09:06:52.9±2.0, **40°.63N**±0°.08×**77°.07E**±0°.04, **h5**^{km}±13^{km}, **n58, σ1^{s}46**/87, **23C-12D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	1.14	315	⇑*i*P	Pg	09 07 13.9	-0.9
	baz=15						
NRN				⇑*i*S	Sn	09 07 33.7	+1.7
	baz=15						
KDJ	Kajisay	1.50	3	⇑*i*P	Pn	09 07 19.3	-1.4
	baz=57						
KDJ				⇑*i*S	Sg	09 07 42.6	+1.4
	baz=57						
ULHL	Ulahol	1.73	339	P	Pn	09 07 23.8	0.0
	SNR=26						
KZA	Kyzart	1.99	317	⇑*i*P	Pn	09 07 28.3	+0.7
	baz=17						
KZA				⇑*i*S	Sg	09 07 58.3	+1.3
	baz=17						
KZA	Kyzart	1.99	317	P	Pb	09 07 29.2	-0.7
	SNR=34						
BOOM	Boomskoye usch	2.04	336	⇑*i*P	Pn	09 07 27.8	-0.3
	baz=34						
BOOM				⇑*i*S	Sg	09 07 58.7	+0.1
	baz=34						
ANVS	Anan'yevo	2.20	12	⇓*i*P	Pn	09 07 29.4	-0.8
	baz=7.0						
ANVS				⇓*i*S	Sb	09 08 00.7	-0.1
	baz=7.0						
TNSS	Tian-Shan	2.41	358	*e*P	Pn	09 07 34.9	+1.6
	7.2nm,0.5s						
TNSS				*e*S	Sg	09 08 09.8	-0.5
	44nm,0.5s						
TNSS	Tian-Shan	2.41	358	Pg	Pn	09 07 34.9	+1.6
	7.2nm,0.5s						
TNSS				Lg	Lg	09 08 10.7	
	44nm,0.5s						
ARLS	Aral	2.41	302	⇓*i*P	Pn	09 07 33.6	+0.5
	baz=3.0						
ARLS				⇓*i*S	Sb	09 08 07.2	+0.3
	baz=3.0						
IZV	Izvestkoviy	2.43	352	*e*P	Pn	09 07 34.9	+1.5
	4.0nm,0.5s						
IZV				*e*S	Sg	09 08 09.8	-1.1
	32nm,0.7s						
IZV	Izvestkoviy	2.43	352	Pg	Pn	09 07 34.9	+1.5
	4.0nm,0.5s						
IZV				Lg	Lg	09 08 09.8	
	32nm,0.7s						
UCH	Uchtor	2.50	311	⇑*i*P	Pn	09 07 35.5	+0.9
	baz=11						
UCH				⇑*i*S	Sb	09 08 10.3	+0.6
	baz=11						
UCH	Uchtor	2.50	311	P	Pb	09 07 38.2	-0.3
	SNR=16						
MDOK	Medeo	2.53	360	*e*P	Pb	09 07 38.0	-0.9
	13nm,0.5s						
MDOK				*e*S	Sg	09 08 15.2	+1.0
	47nm,0.6s						
MDOK	Medeo	2.53	360	⇑Pg	Pb	09 07 37.7	-1.2
	22nm,1.0s						
MDOK				Lg	Lg	09 08 14.6	
	46nm,0.6s						
MDOK	Medeo	2.53	360	Pg	Pb	09 07 38.0	-0.9
	13nm,0.5s						
MDOK				Lg	Lg	09 08 15.5	
	47nm,0.6s						
MTBS	Maitube	2.54	349	*e*P	Pb	09 07 37.7	-1.3
	5.3nm,0.5s						
MTBS				*e*S	Sg	09 08 14.6	0.0
	17nm,0.5s						
MTBS	Maitube	2.54	349	Pg	Pb	09 07 37.7	-1.3
	5.3nm,0.5s						
MTBS				Lg	Lg	09 08 15.2	
	17nm,0.5s						
KST	Kastek	2.55	341	*e*P	Pb	09 07 38.5	-0.7
KST				*e*S	Sg	09 08 16.1	+1.4
KST	Kastek	2.55	341	Pg	Pb	09 07 38.5	-0.7
KST				Lg	Lg	09 08 16.2	
KNDC	Almaty	2.58	358	⇓Pg	Pg	09 07 43.4	+0.9
	28nm,0.5s						
KNDC				⇓Lg	Lg	09 08 17.2	
	68nm,0.6s						
KOTS	Kotyrbulak	2.60	1	*e*P	Pb	09 07 39.4	-0.7
	14nm,0.4s						
KOTS				*e*S	Sg	09 08 17.5	+1.0
	244nm,0.6s						
KOTS	Kotyrbulak	2.60	1	Pg	Pb	09 07 39.4	-0.7
	14nm,0.4s						
KOTS				Lg	Lg	09 08 17.5	
	244nm,0.6s						
SATY	Saty	2.62	22	*e*P	Pb	09 07 38.8	-1.7
	21nm,0.5s						
SATY				*e*S	Sg	09 08 16.6	-0.6
	58nm,0.7s						
SATY	Saty	2.62	22	Pg	Pb	09 07 38.8	-1.7
	21nm,0.5s						
SATY				Lg	Lg	09 08 17.1	
	58nm,0.7s						
AAK	Ala-Archa	2.78	317	⇑*i*P	Pn	09 07 39.3	+1.0
	baz=17						
AAK				⇑*i*S	Sb	09 08 16.9	-0.8
	baz=17						
AAK	Ala-Archa	2.78	317	P	Pb	09 07 43.9	+0.7
	SNR=14						
AAK	Ala-Archa	2.78	317	⇑Pn	Pb	09 07 42.2	-1.0
	6.4nm,0.3s						
AAK				⇑Lg	Lg	09 08 21.3	
	32nm,1.1s						
DGS	Degeres	2.78	340	*e*P	Pb	09 07 42.4	-0.8
	10nm,0.6s						
DGS				*e*S	Sg	09 08 22.5	+0.2
	33nm,0.6s						
DGS	Degeres	2.78	340	Pg	Pb	09 07 42.4	-0.8
	10nm,0.6s						
DGS				Lg	Lg	09 08 23.0	
	33nm,0.6s						
CHMS	Chumysh	2.93	325	⇑*i*P	Pn	09 07 41.5	+1.3
	baz=24						
CHMS				⇑*i*S	Sb	09 08 20.4	-1.4
	baz=24						
CHMS	Chumysh	2.93	325	P	Pb	09 07 43.8	-1.9
	SNR=6.0						
CHMS	Chumysh	2.93	325	⇓Pg	Pb	09 07 44.5	-1.1
	7.1nm,0.6s						
CHMS				⇓Lg	Lg	09 08 25.7	
	14nm,1.0s						
AML	Almayashu	2.95	302	⇓*i*P	Pn	09 07 41.7	+0.9
	baz=3.0						
AML				⇓*i*S	Sb	09 08 21.1	-1.6
	baz=3.0						
AML	Almayashu	2.95	302	P	Pb	09 07 44.4	-1.8
	SNR=6.2						
KURS	Kuram	2.97	16	*e*P	Pb	09 07 46.7	+0.4
KURS				*e*S	Sg	09 08 30.1	+1.8
KURS	Kuram	2.97	16	Pg	Pb	09 07 46.7	+0.4
KURS				Lg	Lg	09 08 30.1	
KTBS	Karatobe	3.09	355	*e*P	Pb	09 07 48.0	-0.4
	12nm,0.5s						
KTBS				*e*S	Sg	09 08 32.4	+0.1
	37nm,0.7s						
KTBS	Karatobe	3.09	355	Pg	Pb	09 07 48.0	-0.4
	12nm,0.5s						
KTBS				Lg	Lg	09 08 32.4	
	37nm,0.7s						
SHLS	Shalkode	3.09	34	*e*P	Pg	09 07 51.8	-0.4
	13nm,0.8s						
SHLS				*e*S	Sg	09 08 38.7	+6.5
	39nm,0.5s						
SHLS	Shalkode	3.09	34	Pg	Pg	09 07 51.8	-0.4
	13nm,0.8s						
SHLS				Lg	Lg	09 08 38.7	
	39nm,0.5s						
ARSB	Arslanbob	3.17	284	⇑*i*P	Pn	09 07 44.4	+0.8
	baz=86						
ARSB				⇑*i*S	Sb	09 08 25.4	-3.4
	baz=86						
EKS2	Erkin-Say	3.19	311	⇑*e*P	Pn	09 07 45.3	+1.4
	baz=11						
EKS2				⇑*i*S	Sb	09 08 26.8	-2.7
	baz=11						
CHKK	Chushkaly	3.22	359	*e*P	Pb	09 07 51.0	+0.4
	13nm,0.7s						
CHKK				*e*S	Sg	09 08 37.5	+1.1
	21nm,0.3s						
CHKK	Chushkaly	3.22	359	Pg	Pb	09 07 51.0	+0.4
	13nm,0.7s						
CHKK				Lg	Lg	09 08 37.5	
	21nm,0.3s						
USP	Ospenovka	3.26	325	⇓*i*P	Pn	09 07 46.0	+1.3
	baz=24						
USP				⇓*i*S	Sb	09 08 28.0	-3.2
	baz=24						
USP	Ospenovka	3.26	325	P	Pb	09 07 50.6	-0.6
	SNR=10						
KUU	Kurty	3.31	351	*e*P	Pb	09 07 53.2	+1.1
KUU				*e*S	Sg	09 08 41.4	+2.3
KUU	Kurty	3.31	351	Pg	Pb	09 07 53.2	+1.1
KUU				Lg	Lg	09 08 41.4	
SGDS	Sogindy	3.35	328	Pg	Pb	09 07 52.4	-0.4
	6.8nm,0.3s						
SGDS				Lg	Lg	09 08 39.8	
	9.4nm,0.6s						
MRKS	Merke	3.57	308	*e*P	Pb	09 07 56.4	-0.2
	5.5nm,0.5s						
MRKS				*e*S	Sg	09 08 46.7	-0.9
	5.3nm,0.6s						
MRKS	Merke	3.57	308	Pg	Pb	09 07 56.4	-0.2
	5.5nm,0.5s						
MRKS				Lg	Lg	09 08 47.6	
	5.3nm,0.6s						
ARXS	Arharly	3.62	9	*e*P	Pb	09 07 57.1	-0.4
	3.4nm,0.4s						
ARXS				*e*S	Sg	09 08 48.0	-1.3
	18nm,0.5s						
ARXS	Arharly	3.62	9	Pg	Pb	09 07 57.1	-0.4
	3.4nm,0.4s						
ARXS				Lg	Lg	09 08 48.0	
	18nm,0.5s						
DJR	Jarkent	4.21	28	*e*P	Pb	09 08 06.6	-0.9
	0.2nm,0.1s						
DJR				*e*S	Sg	09 09 04.3	-3.9
	9.9nm,0.7s						
DJR	Jarkent	4.21	28	Pg	Pb	09 08 06.6	-0.9
	0.2nm,0.1s						
DJR				Lg	Lg	09 09 04.3	
	9.9nm,0.7s						
KK31	Karatay Array	5.48	299	⇑Pg	Pb	09 08 31.3	+2.2
	0.7nm,0.6s,baz=118,slow=16,SNR=6.7						
KK31				⇑Lg	Lg	09 09 43.4	
	1.5nm,0.6s,baz=113,slow=28,SNR=3.7						

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*IDC **17** 09:08:03.1±1.1, 19°.83S×70°.87W, h0^{km}, mb3.9/5, mb1 4.1/8, mb1mx3.9/28, mbtmp4.0/8, ML3.8/3, MS3.7/2, Ms1 3.7/2, ms1mx3.0/29, Error ellipse: s-maj=32.8km s-min=16.3km az=65.0*

ISC 17 09:08:04.5±1.1, **19°.73S**±0°.09×**70°.8W**±0°.1, **h10**^{km}, **n12, σ1^{s}96**/11, **mb4.2**/4, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	3.36	149	Pn	Pn	09 08 54.9	-2.5
	19nm,0.3s,baz=43,slow=19,SNR=3.0						
LVC				Sn	Sn	09 09 37.4	-0.2
	34nm,0.3s,baz=150,slow=21,SNR=2.3						
LVC				Lg	Lg	09 09 49.1	
	39nm,0.3s,baz=60,slow=17,SNR=7.1						

LPAZ	La Paz	4.27	37	Pn	Pb	09 09 16.6	-3.4
	0.7nm,0.3s,baz=194,slow=12,SNR=2.2						
SIV	San Ignacio	9.98	70	Pn	Pn	09 10 31.1	+3.0
	1.6nm,0.3s,baz=269,slow=11,SNR=12						
SIV				LR	LR	09 14 50.7	
	comp=Z,213nm,18.2s,baz=324,slow=40						
CPUP	Villa Florida	14.03	120	Pn	Pn	09 11 24.6	+1.2
	0.1nm,0.3s,baz=333,slow=6.8,SNR=2.4						
PLCA	Paso Flores	20.93	179	P	Pn	09 12 46.8	-3.2
	3.8nm,1.1s,baz=20,slow=14,SNR=3.5						
PTGA	Pitinga	21.66	31	P	P	09 12 56.0	+0.6
	7.4nm,0.5s,baz=225,slow=16,SNR=5.5						
TXAR	Lajitas Array	58.18	326	P	P	09 17 59.0	0.0
	0.1nm,0.5s,baz=156,slow=7.9,SNR=2.1						
SCHQ	Schefferville	74.34	2	LR	LR	09 54 33.0	
	comp=Z,89nm,19.7s,baz=10.0,slow=38						
TORD	Torodi Ar. Bea	78.46	71	P	P	09 20 06.2	0.0
	2.4nm,0.6s,baz=247,slow=5.5,SNR=11						
YKA	Yellowknife Ar	88.95	341	P	P	09 20 59.3	+0.5
	1.0nm,1.0s,baz=136,slow=5.0,SNR=3.1						
MKAR	Makanchi Array	145.19	33	PKPbc	PKPdf	09 27 42.6	+0.2
	0.9nm,0.9s,baz=328,slow=4.3,SNR=4.2						
SONM	Songino Array	151.88	4	PKPbc	PKiKP	09 28 01.5	+1.3
	0.3nm,0.4s,baz=357,slow=1.5,SNR=2.2						

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*IDC **17** 09:12:56.5±0.7, 19°.99S×70°.75W, h0^{km}, mb3.9/8, mb1 4.3/11, mb1mx4.1/25, mbtmp4.0/11, ML4.1/3, Error ellipse: s-maj=24.6km s-min=14.0km az=55.0*

*NEIC **17** 09:12:58.5±1.5, 20°.02S±0°.03×70°.85W±0°.08, h14^{km}±1^{km}, mb4.5/9, Mwr4.1/21, Error ellipse: s-maj=12.3km s-min=5.7km az=99.0*

*NEIC **17** 09:12:58.9, 20°.07S×70°.78W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.73; M$_{\theta\theta}$-0.39; M$_{\phi\phi}$-1.33; M$_{r\theta}$-0.16; M$_{\theta\phi}$0.01; M$_{\phi r}$0.81; Fault plane solution: M$_0$1.77000×10^{15} NP1:φ$_s$354.93000°, δ59.15000°, λ86.62000°. NP2:φ$_s$181.51000°, δ31.02000°, λ95.64000°. Principal axes: T 1.9393, Plg76.0000°, Azm255.0000°; N -0.4003, Plg3.0000°, Azm357.0000°; P -1.5391, Plg14.0000°, Azm87.0000°;*

*GUC **17** 09:13:00.5±0.6, 19°.99S×70°.85W, h22^{km}±3^{km}, ML4.2*

ISC 17 09:12:59.3±1.5, **20°.00S**±0°.03×**70°.84W**±0°.06, **h19**^{km}±5^{km}, **n69**, σ**1^s.30**/88, **mb4.2**/9, **3C-7D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.79	59	⇓*i*P	Pb	09 13 13.6	-0.9
PSGC				*i* S	Sb	09 13 24.3	-0.5
PSGC				IAML		09 13 26.8	
	comp=E,13µm,0.3s						
TA01	Diego Aracena	0.84	132	⇓*i*P	Pb	09 13 14.7	-0.5
TA01				*e*S	Sb	09 13 25.6	-0.5
PATCX	Punta Patache	1.04	142	⇓*i*P	Pb	09 13 18.1	-0.7
PATCX				*i* S	Sb	09 13 32.0	-0.1
PB11	IPOC Station P	1.14	78	⇓*i*P	Pn	09 13 19.6	-0.8
PB11				*e*S	Sb	09 13 34.7	-0.4
PB11				IAML		09 13 37.6	
	comp=E,14µm,0.4s						
PB11	IPOC Station P	1.14	78		Pn	09 13 19.7	-0.8
PB11				Sn	Sb	09 13 34.9	-0.1
PB12	IPOC Station P	1.46	19	⇑*i*P	Pn	09 13 24.6	-0.3
PB12				*i* S	Sn	09 13 43.4	-0.1
PB12				IAML		09 13 47.3	
	comp=N,6µm,0.5s						
PB02	IPOC Station P	1.58	146	⇑*i*P	Pn	09 13 26.3	-0.2
PB02				*i* S	Sb	09 13 46.9	-0.8
PB02				IAML		09 13 54.4	
	comp=E,8µm,0.4s						
GO01	Chusmiza	1.58	78	⇓*i*P	Pn	09 13 27.2	+0.4
GO01				*i* S	Sb	09 13 48.1	-0.1
GO01	Chusmiza	1.58	78		Pn	09 13 27.2	+0.4
GO01				Sn	Sb	09 13 48.0	-0.1
PB08	IPOC Station P	1.59	95	⇓*i*P	Pn	09 13 27.1	+0.2
PB08				*e*S	Sb	09 13 48.3	0.0
PB08				IAML		09 13 54.8	
	comp=N,6µm,0.9s						
PB01	IPOC Station P	1.64	129	⇓*i*P	Pn	09 13 27.6	+0.4
PB01				*i* S	Sb	09 13 48.7	-0.7
PB01				IAML		09 13 53.3	
	comp=E,4µm,0.4s						
PB01	IPOC Station P	1.64	129		Pn	09 13 27.1	-0.1
PB01				Sn	Sb	09 13 48.8	-0.6
AP01	Chacalluta	1.69	16	*e*P	Pn	09 13 27.9	+0.1
AP01				*e*S	Sn	09 13 49.1	+0.1
AP01				IAML		09 13 56.5	
	comp=N,8µm,0.6s						
PB07	IPOC Station P	1.94	153	*e*P	Pn	09 13 31.9	+0.5
PB07				*e*S	Sb	09 13 57.5	-0.5
PB07				IAML		09 14 07.4	
	comp=N,2µm,0.4s						
PB16	IPOC Station P	2.08	37	*e*P	Pn	09 13 34.3	+0.5
PB16				*i* S	Sb	09 14 02.3	-0.3
PB16				IAML		09 14 06.7	
	comp=N,4µm,0.4s						
PB03	IPOC Station P	2.28	154	*e*P	Pb	09 13 40.1	+0.1
PB03				*i* S	Sb	09 14 09.8	+2.1
PB03				IAML		09 14 20.1	
	comp=E,1µm,0.5s						
PB09	IPOC Station P	2.33	140	*e*P	Pn	09 13 38.1	+1.3
PB09				*i* S	Sb	09 14 07.4	-1.9
PB09				IAML		09 14 15.1	
	comp=N,2µm,0.6s						
PB04	IPOC Station P	2.41	165	*e*P	Pn	09 13 36.9	-1.0
PB04				*i* S	Sb	09 14 12.9	+1.3
PB04				IAML		09 14 25.7	
	comp=N,1µm,0.5s						
PB04	IPOC Station P	2.41	165		Pn	09 13 36.9	-1.0
PB05	IPOC Station P	2.90	168	*e*P	Pn	09 13 43.2	-1.5
PB06	IPOC Station P	2.94	156	⇑*i*P	Pn	09 13 44.3	-0.9
PB06				*i* S	Sb	09 14 29.0	+2.1
LVC	Limon Verde	3.16	146	Pn	Pn	09 13 48.1	-0.3
	comp=N,8.5nm,0.3s,baz=342,slow=6.4,SNR=9.6						
LVC				Sn	Sn	09 14 27.8	+2.0
	comp=N,34nm,0.3s,baz=35,slow=12,SNR=5.1						
LVC				Lg	Lg	09 14 35.4	
	comp=N,104nm,0.3s,baz=108,slow=20,SNR=12						
LVC	Limon Verde	3.16	146		Pn	09 13 47.9	-0.5
PB10	IPOC Station P	3.50	176		Pn	09 13 50.8	-2.0
LPAZ	La Paz	4.50	35	Pn	Pn	09 14 10.1	+3.0
	comp=N,0.2nm,0.3s,baz=215,slow=10,SNR=3.0						
LPAZ	La Paz	4.50	35		Pn	09 14 08.5	+1.4
GO02	Mina Guanaco	5.26	168		Pn	09 14 16.0	-1.3
GO03	Copiap	7.58	176	Pn	Pn	09 14 48.8	-0.1
GO03					LR	09 16 57.3	
SIV	San Ignacio	10.11	68	Pn	Pn	09 15 23.5	-0.2
	comp=N,3.9nm,0.3s,baz=274,slow=9.8,SNR=35						
CPUP	Villa Florida	13.93	119	Pn	Pn	09 16 16.1	+0.3
	comp=N,0.2nm,0.3s,baz=303,slow=9.3,SNR=5.6						
PLCA	Paso Flores	20.67	179	P	P	09 17 37.3	-0.9
	comp=N,4.3nm,0.9s,baz=35,slow=13,SNR=4.9						
PLCA	Paso Flores	20.67	179	P	P	09 17 37.5	-0.7
PTGA	Pitinga	21.91	30	P	P	09 17 50.2	-1.5
	comp=N,2.1nm,0.3s,baz=226,slow=17,SNR=6.8						
PTGA	Pitinga	21.91	30	P	P	09 17 51.8	+0.1
PTGA				IAmb	IAmb	09 17 54.5	
	comp=Z,16nm,1.4s						
FLOC	Florencia	21.96	347	*e*P	P	09 17 53.4	+1.1
FLOC	Florencia	21.96	347	P	P	09 17 52.1	-0.1
GCUF	Volcan Galeras	22.04	342	*e*P	P	09 17 55.9	+2.3
BDFB	Brasilia	22.15	82	P	P	09 17 53.7	-0.7
	comp=Z,1.5nm,0.5s,baz=229,slow=19,SNR=2.1						
SOTA	Rioblanco	22.71	345	*e*P	P	09 18 02.1	+1.4
PCON	Cinco Dias	22.85	346	*e*P	P	09 18 04.9	+2.6
ORTC	Ortega, Tolima	24.15	349	*e*P	P	09 18 13.8	-0.7
YOTC	Yotoco, Valle	24.44	347	*e*P	P	09 18 14.3	-2.9
RREF	El Recreo	25.14	349	*e*P	P	09 18 26.2	+2.0
SPBC	San Pablo de B	25.69	353	*e*P	P	09 18 28.2	-0.3
RUSC	La Rusia	25.83	355	*e*P	P	09 18 28.4	-1.8
RUSC	La Rusia	25.83	355	P	P	09 18 30.8	+0.6
PTBC	PUERTO BERRIO,	26.61	352	*e*P	P	09 18 34.1	-2.7
TEIG	Tepich	43.47	336	P	P	09 21 01.4	0.0
TXAR	Lajitas Array	58.38	326	P	P	09 22 54.3	+0.5
	comp=Z,1.1nm,0.8s,baz=146,slow=7.3,SNR=8.9						
TXAR	Lajitas Array	58.38	326	P	P	09 22 53.8	+0.1
SDCO	Great Sand Dun	66.05	330	P	P	09 23 45.8	+0.5
SDCO				IAmb	IAmb	09 23 47.4	
	comp=Z,6.1nm,1.3s						
KNB	Kanab	69.16	325	P	P	09 24 06.1	+1.2
PDAR	Pinedale Array	71.92	331	P	P	09 24 21.9	+0.3
	comp=Z,0.3nm,0.7s,baz=141,slow=5.2,SNR=3.7						
NVAR	Mina Array Bea	73.21	323	P	P	09 24 29.9	+0.6
	comp=Z,0.7nm,0.6s,baz=145,slow=5.4,SNR=4.7						
TOA0	Torodi Ar. Sit	78.58	71	P	P	09 24 59.2	-1.0
TOA0				IAmb	IAmb	09 24 59.9	
	comp=Z,6.7nm,1.1s						
TORD	Torodi Ar. Bea	78.58	71	P	P	09 24 59.1	-1.1
	comp=Z,2.0nm,0.6s,baz=250,slow=5.2,SNR=12						
YKA	Yellowknife Ar	89.19	341	P	P	09 25 53.5	+0.2
	comp=Z,1.2nm,0.7s,baz=133,slow=5.1,SNR=13						
H11N3	WAKE ISLAND Hy	125.93	280	T	T	11 51 36.0	
	baz=100,slow=74,SNR=21						
H11N2	WAKE ISLAND Hy	125.94	280	T	T	11 51 31.2	
	baz=100,slow=74,SNR=30						
H11N1	WAKE ISLAND Hy	125.95	280	T	T	11 51 31.7	
	baz=100,slow=74,SNR=12						
ASAR	Alice Springs	130.34	210	PKP	PKPdf	09 32 08.5	-0.8
	comp=Z,0.9nm,1.0s,baz=134,slow=2.2,SNR=5.5						
WRA	Warramunga Arr	133.26	213	PKP	PKPdf	09 32 15.0	+0.1
	comp=Z,0.4nm,0.7s,baz=156,slow=1.7,SNR=5.4						
ZALV	Zalesovo Beam	141.33	23	PKP	PKPdf	09 32 28.5	-0.1
	comp=Z,0.9nm,0.5s,baz=270,slow=2.9,SNR=3.6						
MKAR	Makanchi Array	145.43	33	PKPbc	PKPab	09 32 36.3	0.0
	comp=Z,4.3nm,0.8s,baz=324,slow=4.3,SNR=31						
KSH	Kashi	145.52	48	PKPbc	PKPab	09 32 37.8	+0.8
KSH				PP	PP	09 36 01.8	+4.8
KSH				PKS	PKSdf	09 36 13.3	+1.1
USRK	Ussuriysk Ar.	149.28	327	PKPbc	PKiKP	09 32 47.7	-0.4
	comp=Z,3.2nm,0.8s,baz=92,slow=4.1,SNR=8.0						
MJAR	Matsushiro Arr	149.73	309	PKPbc	PKiKP	09 32 49.2	-0.1
	comp=Z,3.9nm,1.1s,baz=71,slow=3.4,SNR=5.6						
SONM	Songino Array	152.15	4	PKPbc	PKiKP	09 32 54.5	+0.4
	comp=Z,1.9nm,0.8s,baz=321,slow=1.8,SNR=11						
LZH	Lanzhou	163.31	15	*e*PKP	PKPdf	09 32 56.8	-4.5
LZH				pPKP	pPKPdf	09 33 06.4	-0.6
LZH				sPKP		09 33 10.5	

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*IDC **17** 09:19:34.7±2.5, 20°.53S×70°.28W, h0^{km}, mb3.9/2, mb1 4.0/2, mb1mx3.5/22, mbtmp4.0/2, MS3.2/1, Ms1 3.2/1, ms1mx2.7/23, Error ellipse: s-maj=95.7km s-min=67.9km az=118.0*

*SJA **17** 09:19:35.5±1.2, 19°.97S×70°.89W, h6^{km}±5^{km}, ML3.7, MW3.6*

*GUC **17** 09:19:39.6±0.5, 19°.96S×70°.84W, h13^{km}±4^{km}, ML3.8*

ISC 17 09:19:35.8±1.3, **19°.95S**±0°.02×**70°.86W**±0°.06, **h10**^{km}±9^{km}, **n30**, σ**0^s.97**/53, **6C-6D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.78	63	⇓*i*P	Pn	09 19 52.6	-0.3
PSGC				*i* S	Sb	09 20 02.5	+0.2
PSGCX	Pisagua	0.78	63	*e*P	Pn	09 19 52.6	-0.4
PSGCX				*e*S	Sn	09 20 03.9	-1.0
PSGCX				IAML		09 20 05.7	
	comp=Z,2µm,0.4s						
TA01	Diego Aracena	0.88	134	⇓*i*P	Pn	09 19 54.4	+0.1
TA01				*e*S	Sn	09 20 06.0	-1.2
TA01				IAML		09 20 08.4	
	comp=N,6µm,0.5s						
PATCX	Punta Patache	1.09	142	⇓*i*P	Pg	09 19 57.8	+1.0
PATCX				*e*S	Sn	09 20 12.4	0.0
PATCX	Punta Patache	1.09	142	*e*P	Pg	09 19 57.6	+0.8
PATCX				*e*S	Sn	09 20 12.4	0.0
PATCX				IAML		09 20 14.3	
	comp=Z,974nm,0.6s						
PB11	IPOC Station P	1.15	81	⇓*i*P	Pg	09 19 59.0	+1.0
PB11				*i* S	Sn	09 20 14.1	+0.1
PB11				IAML		09 20 15.8	
	comp=N,5µm,0.2s						
PB11	IPOC Station P	1.15	81	*e*P	Pg	09 19 58.9	+1.0
PB11				*e*S	Sn	09 20 15.0	+0.9
PB11				IAML		09 20 15.8	
	comp=Z,2µm,0.3s						
PB12	IPOC Station P	1.43	21	⇑*i*P	Pg	09 20 03.4	+0.2
PB12				*e*S	Sg	09 20 22.0	+0.3
PB12	IPOC Station P	1.43	21	*e*P	Pg	09 20 03.3	+0.1
PB12				*e*S	Sg	09 20 23.6	+1.9
PB12				IAML		09 20 33.3	
	comp=Z,970nm,0.9s						
GO01	Chusmiza	1.60	80	⇓*i*P	Pg	09 20 06.6	+0.1
GO01				*e*S	Sg	09 20 27.3	0.0
PB08	IPOC Station P	1.62	97	⇓*i*P	Pg	09 20 06.6	-0.2
PB08				*e*S	Sg	09 20 28.0	+0.1
PB08	IPOC Station P	1.62	97	*e*P	Pg	09 20 06.7	-0.2
PB08				IAML		09 20 31.1	
	comp=Z,731nm,0.6s						
PB02	IPOC Station P	1.63	146	⇑*i*P	Pb	09 20 05.8	-0.3
PB02				*e*S	Sb	09 20 26.5	-0.3
PB02				IAML		09 20 31.6	
	comp=E,2µm,0.6s						
AP01	Chacalluta	1.65	17	*e*P	Pg	09 20 07.1	-0.4
AP01				*i* S	Sg	09 20 28.6	-0.3
AP01				IAML		09 20 32.0	
	comp=N,3µm,0.4s						
PB01	IPOC Station P	1.68	130	⇑*i*P	Pb	09 20 06.8	-0.1
PB01				*i* S	Sb	09 20 28.5	+0.2
PB07	IPOC Station P	1.99	153	*e*P	Pb	09 20 10.5	-1.7
PB07				*i* S	Sg	09 20 38.7	-1.1
PB07				IAML		09 20 52.7	
	comp=E,846nm,0.7s						
PB07	IPOC Station P	1.99	153	*e*P	Pb	09 20 11.7	-0.5
PB07				*e*S	Sg	09 20 39.4	-0.3
PB07				IAML		09 20 45.6	
	comp=Z,663nm,0.4s						
PB16	IPOC Station P	2.06	39	⇑*i*P	Pb	09 20 13.2	-0.3
PB16				*e*S	Sg	09 20 41.5	-0.6
PB16	IPOC Station P	2.06	39	*e*P	Pb	09 20 13.3	-0.3
PB16				*e*S	Sg	09 20 42.6	+0.5
PB16				IAML		09 20 47.5	
	comp=Z,493nm,0.6s						
PB03	IPOC Station P	2.33	154	*e*P	Pn	09 20 15.3	+1.0
PB03				*e*S	Sb	09 20 46.4	-0.4
PB09	IPOC Station P	2.38	141	⇑*i*P	Pb	09 20 17.3	-1.5
PB09				*i* S	Sb	09 20 48.1	-0.2
PB09	IPOC Station P	2.38	141	*e*P	Pb	09 20 17.3	-1.5
PB09				*i* P	Pb	09 20 17.4	-1.5
PB09				*e*S	Sb	09 20 49.6	+1.2
PB09				IAML		09 20 58.2	
	comp=Z,674nm,1.2s						
PB04	IPOC Station P	2.46	164	⇑*i*P	Pn	09 20 16.3	+0.1
PB04				*e*S	Sg	09 20 54.5	-0.4
PB04				IAML		09 21 05.8	
	comp=E,600nm,0.8s						
PB06	IPOC Station P	2.99	157	*e*P	Pn	09 20 23.8	+0.3
PB06				*i* S	Sb	09 21 05.6	-0.3
LPAZ	La Paz	4.48	36	Pn	Pb	09 20 52.0	-2.9
	comp=E,0.4nm,0.3s,baz=180,slow=19,SNR=22						
CFA	Coronel Fontan	11.84	169	LR	LR	09 27 20.0	
	comp=E,138nm,21.1s,baz=258,slow=42						
PTGA	Pitinga	21.88	30	P	P	09 24 31.8	+2.7
	comp=E,1.1nm,0.3s,baz=297,slow=23,SNR=2.3						
TORD	Torodi Ar. Bea	78.58	71	P	P	09 31 36.8	-1.4
	comp=E,1.4nm,0.8s,baz=243,slow=5.6,SNR=6.0						
MKAR	Makanchi Array	145.40	33	PKPbc	PKPab	09 39 15.2	+1.0
	comp=E,0.7nm,0.6s,baz=328,slow=4.2,SNR=7.2						
SONM	Songino Array	152.10	4	PKPbc	PKiKP	09 39 32.7	+0.7
	comp=E,0.4nm,0.6s,baz=75,slow=1.6,SNR=1.6						

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*IDC **17** 09:26:49.3±1.1, 19°.88S×70°.72W, h0^{km}, mb3.6/5, mb1 3.9/8, mb1mx3.7/31, mbtmp3.7/8, ML3.7/3, Error ellipse: s-maj=33.1km s-min=15.6km az=66.0*

*SJA **17** 09:26:50.9±0.7, 20°.25S×71°.39W, h75^{km}±14^{km}, ML3.6, MW3.8*

*GUC **17** 09:26:52.6±0.6, 19°.98S×70°.92W, h33^{km}±2^{km}, ML3.8*

ISC 17 09:26:50.4±3.0, **20°.01S**±0°.03×**70°.95W**±0°.06, **h13**^{km}±19^{km}, **n34**, σ**1^s.12**/46, **mb3.8**/5, **6C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.88	62	⇑*i*P	Pb	09 27 06.8	-0.8
PSGC				*i* S	Sb	09 27 17.9	-1.4
TA01	Diego Aracena	0.91	128	⇑*i*P	Pb	09 27 08.2	+0.1
TA01				*e*S	Sb	09 27 20.7	+0.6
TA01				IAML		09 27 22.7	
	comp=N,4µm,0.3s						
PATCX	Punta Patache	1.10	137	⇓*i*P	Pb	09 27 11.4	+0.1
PATCX				*i* S	Sb	09 27 25.6	-0.1
PB11	IPOC Station P	1.24	79	⇑*i*P	Pn	09 27 13.2	-0.4
PB11				*e*S	Sb	09 27 29.0	-0.8
PB11				IAML		09 27 30.7	
	comp=N,4µm,0.4s						
PB12	IPOC Station P	1.51	23	⇑*i*P	Pn	09 27 17.0	-0.2
PB12				*e*S	Sn	09 27 35.9	-1.0
PB12				IAML		09 27 44.0	
	comp=N,1µm,0.5s						
PB02	IPOC Station P	1.63	143	⇓*i*P	Pn	09 27 19.3	+0.3
PB02				*i* S	Sn	09 27 40.0	0.0
PB02				IAML		09 27 49.9	
	comp=E,3µm,0.3s						
GO01	Chusmiza	1.68	79	⇑*i*P	Pn	09 27 20.5	+0.4
GO01				*i* S	Sn	09 27 42.2	+0.5
GO01				IAML		09 27 44.3	
	comp=N,3µm,0.2s						
PB08	IPOC Station P	1.69	95	*e*P	Pn	09 27 20.4	+0.3
PB08				*i* S	Sn	09 27 42.3	+0.5
PB08				IAML		09 27 44.2	
	comp=N,1µm,0.4s						
PB01	IPOC Station P	1.71	127	⇑*i*P	Pn	09 27 21.0	+0.9
PB01				*i* S	Sn	09 27 42.1	+0.2
PB01				IAML		09 27 48.6	
	comp=E,2µm,0.3s						
AP01	Chacalluta	1.73	19	*e*P	Pn	09 27 20.9	+0.6
AP01				*e*S	Sn	09 27 42.1	-0.1
PB07	IPOC Station P	1.98	150	*e*P	Pn	09 27 23.9	+0.1
PB07				*i* S	Sn	09 27 48.3	-0.3
PB07				IAML		09 28 01.1	
	comp=E,680nm,0.5s						
PB16	IPOC Station P	2.15	39	*e*P	Pn	09 27 27.0	+0.4
PB16				*e*S	Sn	09 27 54.4	+0.9
PB16				IAML		09 27 59.2	
	comp=E,660nm,0.4s						
PB03	IPOC Station P	2.31	151	*e*P	Pn	09 27 28.6	+0.2
PB03				*e*S	Sn	09 27 56.5	-0.4
PB09	IPOC Station P	2.39	138	*e*P	Pn	09 27 30.9	+1.4
PB09				*i* S	Sn	09 28 00.2	+1.4
PB09				IAML		09 28 12.1	
	comp=E,1µm,0.6s						
PB04	IPOC Station P	2.43	162	*i* P	Pn	09 27 29.7	-0.3
PB05	IPOC Station P	2.91	166	*i* P	Pn	09 27 36.0	-0.7
PB05				IAML		09 28 37.1	
	comp=Z,196nm,0.6s						
PB06	IPOC Station P	2.97	155	*i* P	Pn	09 27 37.4	-0.1
PB06				IAML		09 28 28.3	
	comp=Z,287nm,0.7s						
LVC	Limon Verde	3.21	144	Pn	Pn	09 27 43.0	+2.1
	comp=Z,3.5nm,0.3s,baz=314,slow=9.8,SNR=18						
LVC				Sn	Sn	09 28 20.4	+1.1
	comp=Z,14nm,0.3s,baz=357,slow=17,SNR=4.0						
LVC				Lg	Lg	09 28 30.3	
	comp=Z,12nm,0.3s,baz=110,slow=22,SNR=6.8						
LVC	Limon Verde	3.21	144	*i* P	Pn	09 27 42.9	+2.0
LVC				IAML		09 28 37.1	
	comp=Z,100nm,1.1s						
PB15	IPOC Station P	3.47	157	*i* P	Pn	09 27 44.1	-0.3
PB15				IAML		09 28 43.3	
	comp=Z,269nm,0.6s						
LPAZ	La Paz	4.57	36	Pn	Pn	09 28 03.3	+3.4
	comp=Z,1.2nm,0.3s,baz=240,slow=4.5,SNR=19						
LPAZ	La Paz	4.57	36	*i* P	Pn	09 28 05.9	+6.0
PB14	IPOC Station P	4.62	174	*i* P	Pn	09 27 58.1	-2.2
PB14				IAML		09 29 31.8	
	comp=Z,49nm,0.7s						
HJA	Humahuaca	6.05	123	*i* P	Pb	09 28 29.6	-6.5
HJA				IAML		09 29 51.3	
	comp=Z,6.8nm,2.1s						
SIV	San Ignacio	10.21	69	Pn	Pn	09 29 15.0	-1.8
	comp=Z,1.2nm,0.3s,baz=263,slow=13,SNR=20						
ATAH	Atahualpa	14.70	330	Pn	Pn	09 30 20.0	+1.4
	comp=Z,0.5nm,0.3s,baz=142,slow=17,SNR=2.9						
PLCA	Paso Flores	20.66	179	P	Pn	09 31 31.7	-0.7
	comp=Z,3.5nm,1.1s,baz=27,slow=16,SNR=2.6						
PTGA	Pitinga	21.97	31	P	P	09 31 42.5	-1.7
	comp=Z,1.4nm,0.3s,baz=297,slow=4.7,SNR=6.1						
TXAR	Lajitas Array	58.33	326	P	P	09 36 46.3	+0.8
	comp=Z,0.2nm,0.7s,baz=162,slow=9.5,SNR=3.3						
TORD	Torodi Ar. Bea	78.67	71	P	P	09 38 51.9	-1.0
	comp=Z,0.5nm,0.5s,baz=258,slow=5.5,SNR=6.8						
YKA	Yellowknife Ar	89.16	341	P	P	09 39 45.4	+0.1
	comp=Z,0.2nm,0.7s,baz=141,slow=4.3,SNR=4.9						
BORG	Borgarnes	92.63	19	P	P	09 40 00.4	-1.1
	comp=Z,36nm,1.0s,baz=208,slow=2.5,SNR=3.3						
MKAR	Makanchi Array	145.49	33	PKPbc	PKPab	09 46 28.9	+0.2
	comp=Z,0.2nm,0.6s,baz=323,slow=3.6,SNR=2.9						
SONM	Songino Array	152.16	4	PKPbc	PKiKP	09 46 47.7	+1.4
	comp=Z,0.3nm,0.4s,baz=147,slow=2.9,SNR=2.9						

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*IDC **17** 09:48:09.3±1.6, 19°.94S×70°.95W, h0^{km}, mb3.7/3, mb1 3.9/5, mb1mx3.7/23, mbtmp3.8/5, ML3.5/2, MS3.0/1, Ms1 3.0/1, ms1mx2.5/22, Error ellipse: s-maj=44.2km s-min=18.1km az=62.0*

*GUC **17** 09:48:14.0±0.5, 19°.94S×70°.90W, h34^{km}±1^{km}, ML3.7*

*SJA **17** 09:48:24.8±0.8, 20°.99S×70°.81W, h74^{km}±20^{km}, ML3.3, MW3.4*

ISC 17 09:48:10.6±1.5, **19°.94S**±0°.03×**70°.92W**±0°.06, **h11**^{km}±9^{km}, **n30**, σ**0^s.96**/40, **mb3.7**/3, **8C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.82	66	⇓*i*P	Pn	09 48 27.5	-0.8
PSGC				*i* S	Sn	09 48 38.5	-2.0
TA01	Diego Aracena	0.93	132	⇓*i*P	Pn	09 48 29.4	-0.3
TA01				*i* S	Sg	09 48 41.4	+0.6
TA01				IAML		09 48 43.9	
	comp=E,5µm,0.5s						
PATCX	Punta Patache	1.14	141	⇑*i*P	Pg	09 48 33.0	+0.5
PATCX				*i* S	Sg	09 48 47.5	+0.2
PATCX				IAML		09 48 51.6	
	comp=E,3µm,0.5s						
PB11	IPOC Station P	1.20	82	⇓*i*P	Pg	09 48 33.9	+0.1
PB11				*e*S	Sg	09 48 49.5	+0.1
PB11				IAML		09 48 52.4	
	comp=E,5µm,0.5s						
PB12	IPOC Station P	1.43	23	⇑*i*P	Pb	09 48 37.6	+0.2
PB12				*e*S	Sg	09 48 56.2	-0.5
PB12				IAML		09 49 05.2	
	comp=N,1µm,0.5s						
GO01	Chusmiza	1.65	81	⇑*i*P	Pb	09 48 41.5	+0.2
GO01				*e*S	Sg	09 49 03.0	-0.7
GO01				IAML		09 49 06.6	
	comp=N,3µm,0.2s						
AP01	Chacalluta	1.65	19	*e*P	Pg	09 48 42.5	+0.1
AP01				*e*S	Sb	09 49 01.9	0.0
PB08	IPOC Station P	1.67	97	⇑*i*P	Pb	09 48 41.5	-0.2
PB08				*e*S	Sb	09 49 03.0	+0.1
PB08				IAML		09 49 06.3	
	comp=N,1µm,0.2s						
PB02	IPOC Station P	1.68	145	⇑*i*P	Pb	09 48 40.7	-0.9
PB02				*i* S	Sb	09 49 01.9	-0.9
PB02				IAML		09 49 12.4	
	comp=E,3µm,0.3s						
PB01	IPOC Station P	1.73	130	⇑*i*P	Pb	09 48 41.9	-0.7
PB01				*i* S	Sb	09 49 03.2	-1.3
PB01				IAML		09 49 11.8	
	comp=E,1µm,0.3s						
PB07	IPOC Station P	2.03	152	⇑*i*P	Pn	09 48 45.3	+0.4
PB07				*e*S	Sn	09 49 10.7	+0.3
PB07				IAML		09 49 24.6	
	comp=E,884nm,0.7s						
PB16	IPOC Station P	2.08	40	⇑*i*P	Pb	09 48 47.8	-1.0
PB16				*i* S	Sb	09 49 14.2	-0.7
PB16				IAML		09 49 17.9	
	comp=N,487nm,0.2s						
PB09	IPOC Station P	2.42	140	*i* P	Pb	09 48 52.4	-2.1
PB09				IAML		09 49 33.2	
	comp=Z,751nm,0.5s						
PB04	IPOC Station P	2.49	163	*i* P	Pn	09 48 51.4	+0.1
PB05	IPOC Station P	2.98	167	*i* P	Pn	09 48 57.4	-0.6
PB05				IAML		09 49 55.0	
	comp=Z,160nm,0.5s						
PB06	IPOC Station P	3.03	156	*i* P	Pn	09 48 58.7	0.0
PB06				IAML		09 49 55.9	
	comp=Z,338nm,0.8s						
LVC	Limon Verde	3.25	145	Pn	Pn	09 49 03.9	+1.9
	comp=Z,3.1nm,0.3s,baz=322,slow=10,SNR=11						
LVC				Sn	Sn	09 49 42.2	+1.3
	comp=Z,14nm,0.3s,baz=288,slow=20,SNR=5.7						
LVC				Lg	Lg	09 49 52.6	
	comp=Z,31nm,0.3s,baz=59,slow=19,SNR=16						
LVC	Limon Verde	3.25	145	*i* P	Pn	09 49 04.3	+2.3
LVC				IAML		09 49 55.2	
	comp=Z,142nm,0.8s						
PB15	IPOC Station P	3.52	158	*i* P	Pn	09 49 05.8	+0.3
PB15				IAML		09 50 12.8	
	comp=Z,380nm,0.7s						

PB10	**IPOC Station P**	3.58	175	*i*P	Pn	09 49 05.9	-0.2
PB10				IAML		09 50 20.8	
	comp=Z,70nm,0.7s						
LPAZ	**La Paz**	4.49	37	Pn	Pn	09 49 24.0	+4.7
	comp=Z,0.9nm,0.3s,baz=236,slow=10,SNR=11						
PB14	**IPOC Station P**	4.69	174	*i*P	Pn	09 49 20.6	-1.1
PB14				IAML		09 50 46.6	
	comp=Z,31nm,0.6s						
YJA	**Yavi**	5.52	115	*i*P	Pb	09 49 41.0	-6.3
YJA				IAML		09 50 53.4	
	comp=Z,7.9nm,3.8s						
HJA	**Humahuaca**	6.07	123	*i*P	Pb	09 49 49.9	-6.8
HJA				IAML		09 51 29.2	
	comp=Z,7.7nm,1.7s						
SIV	**San Ignacio**	10.16	69	Pn	Pn	09 50 37.7	+1.1
	comp=Z,0.8nm,0.3s,baz=273,slow=10,SNR=15						
SIV				LR	LR	09 54 58.3	
	comp=Z,71nm,18.5s,baz=286,slow=40						
PTGA	**Pitinga**	21.89	31	P	P	09 53 05.1	+1.2
	comp=Z,1.4nm,0.4s,baz=148,slow=15,SNR=3.7						
TORD	**Torodi Ar. Bea**	78.62	71	P	P	10 00 12.3	-0.8
	comp=Z,1.2nm,0.7s,baz=252,slow=5.5,SNR=6.6						
YKA	**Yellowknife Ar**	89.10	341	P	P	10 01 05.8	+0.2
	comp=Z,0.2nm,0.6s,baz=138,slow=5.0,SNR=5.4						
MKAR	**Makanchi Array**	145.42	33	PKPbc	PKPab	10 07 50.1	+1.1
	comp=Z,0.5nm,0.6s,baz=318,slow=1.9,SNR=5.6						
SONM	**Songino Array**	152.09	4	PKPbc	PKiKP	10 08 06.2	-0.4
	comp=Z,0.3nm,0.5s,baz=22,slow=1.6,SNR=2.5						

*IDC **17** 10:13:12.6±1.3, 19°.88S×70°.75W, h0^{km}, mb3.7/5, mb1 3.9/7, mb1mx3.7/21, mbtmp3.8/7, ML3.9/2, MS3.3/3, Ms1 3.2/3, ms1mx2.8/35, Error ellipse: s-maj=35.2km s-min=17.0km az=58.0*

*GUC **17** 10:13:16.6±0.6, 19°.97S×70°.87W, h34^{km}±2^{km}, ML3.9*

ISC 17 10:13:13.5±3.3, 19°.97S±0°.03×70°.91W±0°.07, h11^{km}±20^{km}, n32, σ1^{s}.12/41, mb3.8/5, 3C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	0.83	63	⇑*i*P	Pb	10 13 29.7	-0.3
PSGC				*i*S	Sb	10 13 40.8	-0.4
TA01	**Diego Aracena**	0.90	131	⇓*i*P	Pb	10 13 31.2	0.0
TA01				*e*S	Sb	10 13 43.2	0.0
TA01				IAML		10 13 45.7	
	comp=N,4μm,0.4s						
PATCX	**Punta Patache**	1.10	140	⇓*i*P	Pb	10 13 34.6	0.0
PATCX				*i*S	Sb	10 13 49.1	+0.1
PB11	**IPOC Station P**	1.20	80	*e*P	Pn	10 13 36.2	-0.1
PB11				*i*S	Sb	10 13 51.8	-0.1
PB11				IAML		10 13 53.8	
	comp=E,7μm,0.5s						
PB12	**IPOC Station P**	1.46	22	*e*P	Pb	10 13 40.6	-0.1
PB12				*i*S	Sn	10 13 58.7	-0.3
PB12				IAML		10 14 06.4	
	comp=N,4μm,0.3s						
PB02	**IPOC Station P**	1.64	145	⇑*i*P	Pn	10 13 42.8	+0.4
PB02				*i*S	Sn	10 14 03.1	-0.4
PB02				IAML		10 14 10.0	
	comp=E,3μm,0.3s						
GO01	**Chusmiza**	1.64	80	*e*P	Pn	10 13 43.5	+0.7
GO01				*e*S	Sb	10 14 04.6	-0.4
GO01				IAML		10 14 06.9	
	comp=N,4μm,0.3s						
PB08	**IPOC Station P**	1.66	96	*e*P	Pn	10 13 43.9	+1.0
PB08				*i*S	Sb	10 14 05.0	-0.4
PB08				IAML		10 14 07.1	
	comp=N,2μm,0.6s						
AP01	**Chacalluta**	1.68	19	*e*P	Pn	10 13 43.7	+0.9
AP01				*i*S	Sn	10 14 04.7	+0.3
PB01	**IPOC Station P**	1.71	129	⇑*i*P	Pn	10 13 44.0	+0.7
PB01				*i*S	Sn	10 14 04.9	-0.2
PB01				IAML		10 14 12.1	
	comp=N,2μm,0.4s						
PB07	**IPOC Station P**	1.99	151	*e*P	Pn	10 13 47.2	0.0
PB07				*i*S	Sb	10 14 16.1	+1.4
PB07				IAML		10 14 22.1	
	comp=E,1μm,0.4s						
PB16	**IPOC Station P**	2.10	39	*e*P	Pn	10 13 50.5	+1.3
PB16				*i*S	Sb	10 14 16.9	-1.4
PB16				IAML		10 14 25.0	
	comp=N,1μm,0.5s						
PB03	**IPOC Station P**	2.33	153	*e*P	Pn	10 13 51.6	-0.3
PB03				*i*S	Sn	10 14 20.0	-0.7
PB09	**IPOC Station P**	2.39	140	*e*P	Pn	10 13 54.2	+1.4
PB09				*i*S	Sn	10 14 23.3	+1.1
PB09				IAML		10 14 34.4	
	comp=E,1μm,0.6s						
PB04	**IPOC Station P**	2.45	163	⇓*i*P	Pn	10 13 52.7	-0.9
PB04				*e*S	Sn	10 14 19.5	-4.2
LVC	**Limon Verde**	3.22	145	Pn	Pn	10 14 06.3	+2.0
	comp=E,6.3nm,0.3s,baz=323,slow=7.5,SNR=2.4						
LVC				Sn	Sn	10 14 45.0	+2.1
	comp=E,14nm,0.3s,baz=114,slow=18,SNR=3.6						
LVC				Lg	Lg	10 14 53.7	
	comp=E,36nm,0.3s,baz=87,slow=16,SNR=15						
LPAZ	**La Paz**	4.52	36	Pn	Pb	10 14 29.0	-4.2
	comp=E,2.7nm,0.3s,baz=232,slow=8.6,SNR=16						
SIV	**San Ignacio**	10.16	69	Pn	Pn	10 15 39.5	0.0
	comp=E,2.2nm,0.3s,baz=264,slow=11,SNR=21						
CPUP	**Villa Florida**	14.00	119	LR	LR	10 22 36.6	
	comp=E,65nm,21.5s,baz=321,slow=40						
PTGA	**Pitinga**	21.92	31	P	P	10 18 05.7	-1.4
	comp=E,1.9nm,0.3s,baz=301,slow=19,SNR=2.2						
BDFB	**Brasilia**	22.21	82	P	P	10 18 09.5	-0.8
	comp=E,1.7nm,0.5s,baz=190,slow=6.1,SNR=1.7						
MDP	**Montagnes des**	30.72	38	LR	LR	10 31 30.6	
	comp=E,48nm,19.3s,baz=264,slow=36						
TXAR	**Lajitas Array**	58.32	326	P	P	10 23 09.6	+0.8
	comp=E,0.2nm,0.6s,baz=156,slow=6.7,SNR=2.6						
YBH	**Yreka Blue Hor**	77.87	323	LR	LR	10 56 59.5	
	comp=E,29nm,18.5s,baz=311,slow=34						
TORD	**Torodi Ar. Bea**	78.63	71	P	P	10 25 14.9	-1.1
	comp=E,0.6nm,0.5s,baz=251,slow=5.8,SNR=6.1						
YKA	**Yellowknife Ar**	89.14	341	P	P	10 26 09.2	+0.6
	comp=E,0.2nm,0.7s,baz=142,slow=5.3,SNR=4.1						
H11S2	**WAKE ISLAND Hy**	125.81	279	T	T	12 51 38.7	
	baz=101,slow=75,SNR=9.6						
H11S1	**WAKE ISLAND Hy**	125.82	279	T	T	12 51 39.1	
	baz=101,slow=75,SNR=2.6						
H11S3	**WAKE ISLAND Hy**	125.83	279	T	T	12 51 34.2	
	baz=101,slow=75,SNR=2.3						
ZALV	**Zalesovo Beam**	141.33	23	PKP	PKPdf	10 32 44.5	+0.3
	comp=E,0.9nm,0.3s,baz=82,slow=10,SNR=5.1						
MKAR	**Makanchi Array**	145.44	33	PKPbc	PKPdf	10 32 51.7	0.0
	comp=E,0.3nm,0.6s,baz=319,slow=40,SNR=2.9						
SONM	**Songino Array**	152.12	4	PKPbc	PKiKP	10 33 10.6	+1.1
	comp=E,0.4nm,0.6s,baz=211,slow=1.7,SNR=2.6						

*IDC **17** 10:16:54.0±8.9, 7°.00N×95°.01E, h295^{km}±88^{km}, mb2.9/6, mb1 3.1/7, mb1mx2.9/41, mbtmp3.6/7, Error ellipse: s-maj=68.1km s-min=18.1km az=56.0*

ISC 17 10:16:45.0±1.4, 6°.9N±0°.2×94°.8E±0°.3, h206^{km}, n7, σ0^{s}.59/7, mb3.2/6, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	12.20	19	P	P	10 19 37.0	+0.6
	1.1nm,0.3s,baz=206,slow=11,SNR=8.4						
MKAR	**Makanchi Array**	41.22	347	P	P	10 24 09.5	-0.2
	0.2nm,0.3s,baz=153,slow=13,SNR=3.5						
SONM	**Songino Array**	42.00	12	P	P	10 24 15.4	-0.8
	0.3nm,0.3s,baz=188,slow=9.6,SNR=3.4						
WRA	**Warramunga Arr**	47.12	125	P	P	10 24 56.4	-0.4
	0.4nm,0.4s,baz=307,slow=8.4,SNR=3.3						
ZALV	**Zalesovo Beam**	47.64	352	P	P	10 25 00.5	+0.2
	0.7nm,0.3s,baz=176,slow=8.7,SNR=3.6						
ASAR	**Alice Springs**	48.74	130	P	P	10 25 09.8	+0.5
	0.1nm,0.3s,baz=305,slow=8.1,SNR=5.7						
BRTR	**Keskin Array B**	63.61	311	P	P	10 26 54.5	+0.2
	0.5nm,0.6s,baz=112,slow=10,SNR=2.1						

*MEX **17** 10:25:34.2±0.3, 14°.80N×92°.66W, h76^{km}±7^{km}, MD3.4*

*GCG **17** 10:25:35.5±0.7, 14°.96N×92°.58W, h34^{km}±999^{km}, MD3.4*

ISC 17 10:25:31.5±2.7, 14°.9N±0°.1×92°.6W±0°.1, h3^{km}±16^{km}, n5, σ0^{s}.64/10, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.98	323	*e*P	Pn	10 25 52.3	+0.2
PCIG				*e*S	Sn	10 26 06.4	-0.1
STG3	**Santiaguito 3,**	1.03	101	*e*P	Pn	10 25 53.7	+0.7
STG3				*e*S	Sn	10 26 07.9	-0.1
CCIG	**Comitan**	1.43	19	*e*P	Pg	10 25 59.1	+0.1
CCIG				*e*S	Sn	10 26 18.1	+0.1
FUG	**Fuego 3**	1.78	105	*e*P	Pb	10 26 04.5	-0.3
FUG				*e*S	Sn	10 26 26.7	+0.2
IXG	**Ixpaco**	2.23	109	*e*P	Pn	10 26 10.2	+0.7
IXG				*e*S	Sb	10 26 39.5	-1.1

*IDC **17** 10:26:01.9±0.8, 4°.05N×71°.43W, h0^{km}, mb3.8/9, mb1 4.1/13, mb1mx4.0/31, mbtmp4.0/13, ML3.2/3, MS3.4/11, Ms1 3.4/11, ms1mx3.1/42, Error ellipse: s-maj=18.3km s-min=13.7km az=34.0*

*RSNC **17** 10:26:05.5±0.8, 3°.89N×71°.55W, h4^{km}±4^{km}, ML3.9, Mw4.0*

ISC 17 10:26:02.5±0.6, 3°.96N±0°.03×71°.39W±0°.03, h10^{km}, n55, σ2^{s}.05/80, mb3.8/8, MS3.4/8, 2C-3D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTGC	**Puerto Gaitan,**	0.78	288	⇑*i*Pg	Pg	10 26 16.4	-1.2
PTGC				*e*Sg	Sg	10 26 26.0	-1.8
PTGC				*i*		10 26 38.8	
	comp=Z,2μm,0.3s						
GUVC	**San Jose del G**	1.87	221	*e*P	Pn	10 26 34.1	-0.5
GUVC				*e*S	Sn	10 26 57.9	-0.4
GUVC				*i*		10 27 01.3	
	comp=Z,2μm,0.1s						
VILC	**Villavicencio,**	2.30	274	*e*P	Pn	10 26 41.4	+0.7
VILC				*e*S	Sn	10 27 09.0	-0.1
VILC				*i*		10 27 14.8	
	comp=Z,2μm,0.3s						
CHIC	**Chingaza**	2.43	286	*e*P	Pn	10 26 43.3	+0.6
CHIC				*e*S	Sn	10 27 13.0	+0.3
CHIC				*i*		10 27 18.5	
	comp=Z,678nm,1.1s						
TAMC	**Tame, Arauca**	2.50	351	*e*P	Pb	10 26 46.5	-1.0
TAMC				*e*S	Sb	10 27 18.1	-0.3
TAMC				*i*		10 27 40.5	
	comp=Z,1μm,0.8s						
RUSC	**La Rusia**	2.56	319	⇓*e*P	Pb	10 26 46.3	-2.5
RUSC				*e*S	Sb	10 27 18.8	-1.8
RUSC				*i*		10 27 33.7	
	comp=Z,476nm,0.9s						
CVER	**Cruz Verde, Cu**	2.73	282	*e*P	Pb	10 26 49.4	-2.4
MACC	**Macarena, Meta**	3.04	234	*e*P	Pn	10 26 52.3	+1.6
MACC				*e*S	Sb	10 27 30.9	-3.1
MACC				*i*		10 27 42.2	
	comp=Z,684nm,0.6s						
ROSC	**El Rosal**	3.05	287	Pn	Pn	10 26 53.0	+1.8
	comp=Z,10nm,0.3s,baz=40,slow=20,SNR=25						
ROSC				Lg	Lg	10 27 38.2	
	comp=Z,37nm,0.3s,baz=72,slow=20,SNR=2.0						
ROSC	**El Rosal**	3.05	287	*e*P	Pn	10 26 53.5	+2.3
ROSC				*e*S	Sb	10 27 35.8	+1.2
ROSC				*i*		10 27 58.9	
	comp=Z,253nm,2.0s						
SPBC	**San Pablo de B**	3.16	302	*e*P	Pn	10 26 53.5	+1.0
SPBC				*e*S	Sb	10 27 39.2	+1.7
SPBC				*i*		10 27 46.6	
	comp=Z,188nm,0.9s						
BARC	**Barichara**	3.17	326	*e*P	Pn	10 26 54.4	+1.7
BARC				*e*S	Sn	10 27 33.5	+2.7
BARC				*i*		10 27 53.7	
	comp=Z,1μm,1.4s						
PAMC	**Pamplona, Colo**	3.60	339	*e*P	Pn	10 27 01.0	+2.1
PAMC				*e*S	Sn	10 27 44.7	+2.9
PAMC				*i*		10 28 07.3	
	comp=Z,428nm,0.5s						
NORC	**Norcasia**	3.82	295	*e*P	Pn	10 27 02.3	+0.8
NORC				*e*S	Sn	10 27 44.7	-1.8
NORC				*i*		10 28 10.2	
	comp=Z,164nm,1.1s						
ORTC	**Ortega, Tolima**	3.85	269	⇓*e*P	Pn	10 27 02.4	+0.5
ORTC				*e*S	Sg	10 28 01.9	-4.3
ORTC				*i*		10 28 13.8	
	comp=Z,403nm,0.7s						
TOLC	**Tolima**	3.97	279	*e*P	Pn	10 27 04.5	+0.7
TOLC				*e*S	Sb	10 28 03.4	+2.3
TOLC				*i*		10 28 12.9	
	comp=Z,132nm,0.8s						
PTBC	**PUERTO BERRIO,**	3.99	310	*e*P	Pn	10 27 03.6	-0.2
PTBC				*e*S	Sn	10 27 46.0	-4.7
PTBC				*i*		10 27 60.0	
	comp=Z,87nm,1.0s						
ANIL	**Santa Ana**	4.04	278	*e*P	Pn	10 27 04.9	+0.2
ANIL				*e*S	Sb	10 28 03.1	+0.1
ANIL				*i*		10 28 13.3	
	comp=Z,430nm,0.5s						
RREF	**El Recreo**	4.05	284	*e*P	Pn	10 27 05.8	+0.6
RREF				*e*S	Sb	10 28 04.8	+1.0
RREF				*i*		10 28 19.7	
	comp=Z,152nm,1.1s						
GUY2C	**Guyana, Caldas**	4.16	288	⇓*e*P	Pn	10 27 07.4	+0.9
GUY2C				*i*		10 28 20.9	
	comp=Z,80nm,1.0s						
GARC	**Garzon, Huila**	4.46	247	*e*P	Pn	10 27 10.7	+0.3
GARC				*e*S	Sn	10 28 06.8	+4.2
GARC				*i*		10 28 23.1	
	comp=Z,546nm,0.2s						
OCAC	**Ocana**	4.67	336	*e*P	Pn	10 27 15.3	+2.0
OCAC				*e*S	Sb	10 28 21.4	+0.4
OCAC				*i*		10 28 44.9	
	comp=Z,235nm,0.8s						
HELC	**Santa Helena**	4.68	298	*e*P	Pn	10 27 14.2	+0.6
HELC				*e*S	Sn	10 28 05.1	-3.1
HELC				*i*		10 28 19.5	
	comp=Z,37nm,0.8s						
FLOC	**Florencia**	4.87	241	*e*P	Pn	10 27 17.2	+1.3
FLOC				*e*S	Sb	10 28 27.9	+1.3
FLOC				*i*		10 28 37.3	
	comp=Z,427nm,1.5s						
ZARC	**Zaragoza, Cauc**	4.92	316	*e*P	Pn	10 27 19.2	+2.5
ZARC				*e*S	Sn	10 28 12.8	-0.9
ZARC				*i*		10 28 23.1	
	comp=Z,48nm,0.5s						
YOTC	**Yotoco, Valle**	4.94	270	*e*P	Pn	10 27 16.7	-0.3
YOTC				*e*S	Sb	10 28 31.2	+2.3
YOTC				*i*		10 28 43.2	
	comp=Z,72nm,1.5s						
SDV	**Santo Domingo**	4.96	9	Pn	Pn	10 27 18.5	+1.2
	comp=Z,20nm,0.3s,baz=174,slow=3.8,SNR=46						
SDV				Sn	Sn	10 28 15.6	+0.8
	comp=Z,34nm,0.3s,baz=265,slow=24,SNR=12						
SDV				Lg	Lg	10 28 37.9	
	comp=Z,44nm,0.3s,baz=266,slow=23,SNR=7.6						
SDV				LR	LR	10 29 40.2	
	comp=Z,245nm,20.7s,baz=249,slow=45						
SDV	**Santo Domingo**	4.96	9	*e*P	Pn	10 27 18.2	+0.9
SDV				*i*		10 28 21.5	
	comp=Z,142nm,0.3s						
PLMC	**San Jos del P**	4.97	281	*e*P	Pn	10 27 20.5	+3.1
PLMC				*i*		10 28 37.7	
	comp=Z,31nm,1.0s						
CBOC	**Ciudad Bolivar**	4.98	293	*e*P	Pn	10 27 18.9	+1.3
CBOC				*e*S	Sb	10 28 35.6	+5.6
CBOC				*i*		10 29 01.7	
	comp=Z,50nm,1.0s						
PCON	**Cinco Dias**	5.25	252	*e*P	Pn	10 27 24.1	+2.4
PCON				*e*S	Sb	10 28 41.5	+3.2
PCON				*i*		10 28 51.2	
	comp=Z,193nm,1.0s						
SMLC	**San Martn de**	5.50	331	*e*P	Pn	10 27 24.6	0.0
SMLC				*e*S	Sn	10 28 30.6	+2.6
SMLC				*i*		10 28 55.6	
	comp=Z,38nm,1.0s						
SOTA	**Rioblanco**	5.51	251	*e*P	Pn	10 27 26.8	+1.5
SOTA				*e*S	Sb	10 28 50.3	+4.6
SOTA				*i*		10 29 01.2	
	comp=Z,79nm,0.9s						
UREC	**San Jos de Ur**	5.58	313	*e*P	Pn	10 27 26.3	+0.5
UREC				*i*		10 28 30.7	
	comp=Z,19nm,1.2s						
UREC				*e*S	Sn	10 28 30.8	+0.7
DBBC	**Dabeiba**	5.68	303	⇑*e*P	Pn	10 27 29.1	+2.0
DBBC				*e*S	Sn	10 28 33.9	+1.4
DBBC				*i*		10 28 43.6	
	comp=Z,372nm,1.0s						
CODC	**Agustn Codazz**	6.28	341	*e*P	Pn	10 27 36.7	+1.4
CODC				*i*		10 28 49.2	
	comp=Z,25nm,0.8s						
SJCC	**San Jacinto, C**	7.00	328	*e*P	Pn	10 27 46.5	+1.2
SJCC				*i*		10 29 23.5	
	comp=Z,30nm,1.2s						
PCRV	**Puerto La Cruz**	9.12	47	Pn	Pn	10 28 16.6	+2.3
	comp=Z,4.7nm,0.3s,baz=214,slow=9.7,SNR=16						
PCRV				Sn	Sn	10 29 56.4	-0.7
	comp=Z,1.3nm,0.3s,baz=264,slow=18,SNR=2.6						
PCRV				Lg	Lg	10 30 52.1	
	comp=Z,2.4nm,0.3s,baz=180,slow=20,SNR=1.5						
PTGA	**Pitinga**	12.33	112	Pn	Pn	10 28 58.7	+0.4
	comp=Z,0.9nm,0.3s,baz=299,slow=23,SNR=3.0						
PTGA				Sn	Sn	10 31 11.0	-5.0
	comp=Z,1.8nm,0.3s,baz=357,slow=22,SNR=3.2						
PTGA				Lg	Lg	10 32 34.0	
	comp=Z,4.1nm,0.3s,baz=198,slow=19,SNR=9.5						
ATAH	**Atahualpa**	13.05	212	LR	LR	10 34 09.7	
	comp=Z,99nm,19.6s,baz=16,slow=37						
JTS	**Las Juntas de**	14.85	296	LR	LR	10 35 19.4	
	comp=Z,47nm,18.6s,baz=165,slow=38						
LPAZ	**La Paz**	20.37	171	P	Pn	10 30 43.3	+1.1
	comp=Z,5.4nm,0.8s,baz=350,slow=12,SNR=18						
LPAZ				LR	LR	10 38 54.2	
	comp=Z,175nm,18.5s,baz=44,slow=38						
APG	**El Apazote**	21.76	302	LR	LR	10 39 45.7	
	comp=Z,32nm,19.3s,baz=72,slow=38						
SIV	**San Ignacio**	22.29	153	P	P	10 31 03.9	+3.6
	comp=Z,3.7nm,0.8s,baz=348,slow=8.8,SNR=16						
SIV				LR	LR	10 40 00.2	
	comp=Z,129nm,18.8s,baz=86,slow=37						
CPUP	**Villa Florida**	33.04	156	LR	LR	10 47 08.6	
	comp=Z,92nm,19.2s,baz=80,slow=38						
TXAR	**Lajitas Array**	39.65	313	P	P	10 33 35.6	+0.6
	comp=Z,1.7nm,0.7s,baz=127,slow=8.5,SNR=24						
ULM	**Lac du Bonnet**	50.55	340	LR	LR	10 57 14.8	
	comp=Z,40nm,20.0s,baz=269,slow=37						
SCHQ	**Schefferville**	50.86	3	P	P	10 35 04.5	+1.1
	comp=Z,3.1nm,0.8s,baz=228,slow=14,SNR=7.0						
PDAR	**Pinedale Array**	51.39	324	P	P	10 35 07.8	-0.2
	comp=Z,0.8nm,0.9s,baz=109,slow=8.0,SNR=5.4						
PDAR				LR	LR	11 00 52.1	
	comp=Z,43nm,18.1s,baz=189,slow=41						
ELK	**Elko**	53.76	319	LR	LR	11 03 49.9	
	comp=Z,32nm,18.6s,baz=236,slow=42						
NVAR	**Mina Array Bea**	54.71	315	P	P	10 35 32.3	-0.3
	comp=Z,0.2nm,0.3s,baz=124,slow=9.0,SNR=2.1						
YKA	**Yellowknife Ar**	66.53	340	P	P	10 36 51.9	-0.5
	comp=Z,0.8nm,0.7s,baz=135,slow=6.8,SNR=18						
YKA				LR	LR	11 07 11.4	
	comp=Z,62nm,18.1s,baz=0.0,slow=37						
TORD	**Torodi Ar. Bea**	72.65	78	P	P	10 37 31.6	+0.5
	comp=Z,0.4nm,0.5s,baz=290,slow=6.5,SNR=3.4						
ILAR	**Eielson Array**	80.27	335	P	P	10 38 13.2	-0.2
	comp=Z,0.3nm,0.9s,baz=99,slow=5.6,SNR=2.1						
ASAR	**Alice Springs**	148.69	229	PKPbc	PKPbc	10 45 49.5	-1.6
	comp=Z,1.1nm,0.7s,baz=118,slow=3.6,SNR=7.6						

*IDC **17** 10:47:28.3±1.6, 20°.04S×70°.94W, h0^{km}, mb3.6/4, mb1 3.9/6, mb1mx3.7/36, mbtmp3.8/6, ML3.9/2, MS2.8/2, Ms1 2.8/2, ms1mx2.4/29, Error ellipse: s-maj=42.4km s-min=25.8km az=51.0*

*GUC **17** 10:47:31.3±0.6, 20°.09S×70°.90W, h27^{km}±5^{km}, ML3.8*

ISC 17 10:47:30.3±3.5, 20°.08S±0°.03×70°.84W±0°.08, h13^{km}±22^{km}, n26, σ1^{s}.33/31, mb3.6/4, 4C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TA01	**Diego Aracena**	0.78	128	⇑*i*P	Pb	10 47 45.5	-0.3
TA01				*e*S	Sb	10 47 56.0	-0.2
TA01				IAML		10 48 00.2	
	comp=N,7μm,0.3s						
PSGC	**Pisagua**	0.82	55	⇑*i*P	Pb	10 47 45.4	-1.1
PSGC				*i*S	Sb	10 47 56.6	-0.9
PSGC				IAML		10 48 00.9	
	comp=N,3μm,0.6s						
PATCX	**Punta Patache**	0.98	139	⇓*i*P	Pb	10 47 48.8	-0.3
PATCX				*e*S	Sb	10 48 01.2	-0.8
PATCX				IAML		10 48 11.1	
	comp=E,2μm,0.5s						
PB11	**IPOC Station P**	1.15	74	*e*P	Pn	10 47 51.1	-1.2
PB11				*e*S	Sb	10 48 07.5	+0.4
PB02	**IPOC Station P**	1.52	145	*e*P	Pn	10 47 55.6	-1.7
PB02				*i*S	Sn	10 48 16.6	-0.3
PB02				IAML		10 48 23.2	
	comp=E,5μm,0.5s						
PB12	**IPOC Station P**	1.53	18	*e*P	Pn	10 47 56.8	-0.6
PB12				*e*S	Sn	10 48 16.7	-0.6
PB12				IAML		10 48 20.1	
	comp=N,2μm,0.3s						
PB08	**IPOC Station P**	1.58	93	⇑*i*P	Pn	10 47 58.0	-0.4
PB08				*i*S	Sb	10 48 20.3	+0.6
PB01	**IPOC Station P**	1.59	127	⇓*i*P	Pn	10 47 58.7	+0.6
PB01				*i*S	Sn	10 48 18.7	+0.1
PB01				IAML		10 48 22.3	
	comp=E,2μm,0.3s						
GO01	**Chusmiza**	1.60	75	⇑*i*P	Pn	10 47 58.8	+0.2
GO01				*i*S	Sb	10 48 20.9	+0.6
AP01	**Chacalluta**	1.76	15	*e*P	Pn	10 48 00.3	-0.1
AP01				*i*S	Sn	10 48 23.2	+0.5
PB07	**IPOC Station P**	1.86	152	*e*P	Pn	10 48 01.4	-0.6
PB07				*i*S	Sb	10 48 27.2	-0.5
PB07				IAML		10 48 36.1	
	comp=E,2μm,0.5s						
LVC	**Limon Verde**	3.09	145	Pn	Pn	10 48 21.5	+2.3
	comp=E,5.8nm,0.3s,baz=325,slow=13,SNR=1.9						
LVC				Sn	Sn	10 48 58.6	+2.5
	comp=E,12nm,0.3s,baz=270,slow=20,SNR=1.9						
LVC				Lg	Lg	10 49 06.4	
	comp=E,54nm,0.3s,baz=42,slow=16,SNR=7.3						
LVC				LR	LR	10 49 30.5	
	comp=E,123nm,21.3s,baz=316,slow=38						
LPAZ	**La Paz**	4.56	35	Pn	Pn	10 48 44.3	+4.6
	comp=E,0.8nm,0.3s,baz=260,slow=4.4,SNR=5.0						
SIV	**San Ignacio**	10.14	68	Pn	Pn	10 49 56.3	+0.6
	comp=E,2.0nm,0.3s,baz=270,slow=9.6,SNR=25						
CPUP	**Villa Florida**	13.88	119	LR	LR	10 56 43.0	
	comp=E,44nm,21.2s,baz=128,slow=40						
PTGA	**Pitinga**	21.98	30	P	P	10 52 25.2	+1.1
	comp=E,1.3nm,0.3s,baz=287,slow=19,SNR=2.3						
TXAR	**Lajitas Array**	58.45	326	P	P	10 57 26.2	+0.1
	comp=E,0.2nm,0.7s,baz=139,slow=8.2,SNR=2.2						
TORD	**Torodi Ar. Bea**	78.59	71	P	P	10 59 31.6	-0.7
	comp=E,0.4nm,0.6s,baz=247,slow=5.1,SNR=2.7						
YKA	**Yellowknife Ar**	89.26	341	P	P	11 00 24.1	-1.5
	comp=E,0.3nm,0.7s,baz=137,slow=4.6,SNR=5.8						
H11S2	**WAKE ISLAND Hy**	125.90	279	T	T	13 25 57.4	
	baz=101,slow=74,SNR=8.6						
H11S1	**WAKE ISLAND Hy**	125.91	279	T	T	13 26 00.7	
	baz=101,slow=74,SNR=5.5						
H11S3	**WAKE ISLAND Hy**	125.92	279	T	T	13 25 55.8	
	baz=101,slow=74,SNR=5.5						
H11N3	**WAKE ISLAND Hy**	125.95	280	T	T	13 25 06.2	
	baz=102,slow=74,SNR=5.5						
H11N2	**WAKE ISLAND Hy**	125.96	280	T	T	13 25 06.9	
	baz=102,slow=74,SNR=3.9						
H11N1	**WAKE ISLAND Hy**	125.96	280	T	T	13 25 11.1	
	baz=102,slow=74,SNR=5.7						
MKAR	**Makanchi Array**	145.49	33	PKPbc	PKPab	11 07 08.8	+0.4
	comp=E,0.6nm,0.6s,baz=0.0,slow=1.6,SNR=6.1						

IDC 17 10:54:06.0±2.8, 15°.95S×69°.67W, h253^{km}±13^{km}, mb3.3/3, mb1 3.3/4, mb1mx3.0/30, mbtmp3.9/4, Error ellipse: s-maj=57.8km s-min=44.3km az=39.0, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	1.52	103	P	Pn	10 54 46.2	+0.7
	17nm,0.3s,baz=293,slow=7.8,SNR=215						
LPAZ				S	S	10 55 16.6	+0.1
	3.4nm,0.3s,baz=226,slow=25,SNR=23						
PTGA	**Pitinga**	17.90	33	P	P	10 57 57.8	+0.3
	0.4nm,0.3s,baz=310,slow=22,SNR=2.6						
DBIC	**Dimbokro**	67.97	76	P	P	11 04 38.7	+0.3
	4.8nm,1.1s,baz=251,slow=12,SNR=2.3						
TORD	**Torodi Ar. Bea**	76.25	72	P	P	11 05 27.4	-0.1
	0.6nm,0.5s,baz=258,slow=5.0,SNR=7.7						
YKA	**Yellowknife Ar**	85.74	341	P	P	11 06 15.8	-0.4
	0.2nm,0.7s,baz=126,slow=4.6,SNR=3.4						

*IDC **17** 11:03:29.6±1.9, 20°.01S×70°.86W, h0^{km}, mb3.5/2, mb1 3.7/4, mb1mx3.5/25, mbtmp3.5/4, ML3.5/2, Error ellipse: s-maj=53.6km s-min=19.1km az=60.0*

*GUC **17** 11:03:33.3±0.5, 20°.04S×70°.91W, h17^{km}±4^{km}, ML3.5*

ISC 17 11:03:30.4±1.8, 20°.01S±0°.03×70°.89W±0°.07, h8^{km}±10^{km}, n21, σ0^{s}.89/29, 5C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	0.83	61	⇑iP	Pb	**11 03 47.9**	+0.6
PSGC				iS	Sb	**11 03 59.0**	+0.3
TA01	**Diego Aracena**	0.87	130	⇓iP	Pg	**11 03 47.6**	+0.4
TA01				iS	Sb	**11 03 59.1**	-0.6
TA01				IAML		11 04 01.4	
	comp=N,3μm,0.4s						
PATCX	**Punta Patache**	1.07	140	⇓iP	Pg	**11 03 50.9**	-0.1
PATCX				eS	Sg	**11 04 04.6**	-0.3
PB11	**IPOC Station P**	1.19	78	⇑iP	Pg	**11 03 53.9**	+0.5
PB11				iS	Sn	**11 04 09.5**	-0.6
PB12	**IPOC Station P**	1.48	21	eP	Pb	**11 03 58.6**	+0.3
PB12				eS	Sb	**11 04 18.1**	+0.7
PB02	**IPOC Station P**	1.61	145	eP	Pn	**11 03 59.3**	0.0
PB02				iS	Sn	**11 04 19.8**	-0.5
GO01	**Chusmiza**	1.64	78	⇑iP	Pb	**11 04 01.5**	+0.3
GO01				iS	Sg	**11 04 23.5**	+0.3
PB08	**IPOC Station P**	1.64	95	⇑iP	Pb	**11 04 00.9**	-0.4
PB08				eS	Sg	**11 04 22.6**	-0.7
PB08				IAML		11 04 25.0	
	comp=N,702nm,0.3s						
PB01	**IPOC Station P**	1.68	128	⇑iP	Pn	**11 03 58.9**	-1.3
PB01				eS	Sn	**11 04 21.8**	-0.1
PB01				IAML		11 04 26.7	
	comp=N,994nm,0.5s						
AP01	**Chacalluta**	1.71	18	eS	Sb	**11 04 23.9**	+0.2
PB07	**IPOC Station P**	1.96	151	eP	Pb	**11 04 06.0**	-0.4
PB16	**IPOC Station P**	2.12	38	eP	Pb	**11 04 09.5**	+0.1
PB16				iS	Sg	**11 04 37.8**	-0.8
PB16				IAML		11 04 42.4	
	comp=N,401nm,0.4s						
LVC	**Limon Verde**	3.18	145	Pn	Pn	**11 04 22.9**	+1.6
	comp=N,4.7nm,0.3s,baz=322,slow=13,SNR=5.5						
LVC				Sn	Sn	**11 05 00.7**	+1.1
	comp=N,9.3nm,0.3s,baz=226,slow=14,SNR=4.2						
LVC				Lg	Lg	11 05 09.5	
	comp=N,20nm,0.3s,baz=91,slow=11,SNR=13						
LPAZ	**La Paz**	4.54	36	Pn	Pb	**11 04 48.0**	-2.7
	comp=N,0.9nm,0.3s,baz=199,slow=5.4,SNR=17						
SIV	**San Ignacio**	10.16	68	Pn	Pn	**11 05 57.9**	+1.1
	comp=N,0.5nm,0.3s,baz=275,slow=12,SNR=9.5						
TORD	**Torodi Ar. Bea**	78.62	71	P	P	**11 15 32.3**	-1.2
	comp=N,0.2nm,0.5s,baz=245,slow=3.6,SNR=0.9						
YKA	**Yellowknife Ar**	89.17	341	P	P	**11 16 26.7**	+0.5
	comp=N,0.1nm,0.4s,baz=139,slow=4.6,SNR=5.2						
H11S2	**WAKE ISLAND Hy**	125.83	279	T	T	13 42 01.7	
	baz=102,slow=75,SNR=3.8						
H11S1	**WAKE ISLAND Hy**	125.84	279	T	T	13 42 02.4	
	baz=102,slow=75,SNR=5.4						
H11S3	**WAKE ISLAND Hy**	125.85	279	T	T	13 42 03.1	
	baz=102,slow=75,SNR=4.9						
MKAR	**Makanchi Array**	145.46	33	PKPbc	PKPab	**11 23 09.5**	+0.1
	comp=N,0.6nm,0.7s,baz=298,slow=3.1,SNR=3.9						

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*SJA **17** 11:06:37.0±0.8, 20°.18S×71°.20W, h50^{km}±282^{km}, ML3.5, MW3.8*

*GUC **17** 11:06:37.4±0.8, 19°.95S×70°.83W, h35^{km}±3^{km}, ML3.2*

ISC 17 11:06:33.8±1.9**, 19°.92S**±0°.04×**70°.95W**±0°.08**, h1**^{km}±12^{km}**, n18, σ1**^{s}**.18**/26**, 4C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	0.84	68	⇓iP	Pg	**11 06 51.1**	+1.1
PSGC				iS	Sg	**11 07 01.7**	+0.7
PSGC				IAML		11 07 05.9	
	comp=E,974nm,0.4s						
TA01	**Diego Aracena**	0.97	132	⇓iP	Pg	**11 06 53.2**	+0.8
TA01				eS	Sg	**11 07 05.1**	+0.1
TA01				IAML		11 07 07.4	
	comp=N,3μm,0.3s						
PATCX	**Punta Patache**	1.17	140	⇑iP	Pg	**11 06 56.8**	+0.5
PATCX				eS	Sg	**11 07 10.8**	-0.6
PATCX				IAML		11 07 17.2	
	comp=N,720nm,0.4s						
PB11	**IPOC Station P**	1.23	83	⇓iP	Pg	**11 06 57.5**	+0.1
PB11				eS	Sg	**11 07 12.5**	-0.9
PB11				IAML		11 07 20.3	
	comp=N,2μm,0.5s						
PB12	**IPOC Station P**	1.43	25	⇑iP	Pn	**11 07 01.9**	+1.0
PB12				eS	Sb	**11 07 21.1**	+1.1
PB12				IAML		11 07 28.6	
	comp=N,652nm,0.6s						
GO01	**Chusmiza**	1.67	82	⇓iP	Pn	**11 07 05.0**	+0.3
GO01				eS	Sn	**11 07 26.3**	-0.7
PB08	**IPOC Station P**	1.71	98	⇓iP	Pn	**11 07 05.2**	+0.2
PB08				eS	Sn	**11 07 26.6**	-1.1
PB08				IAML		11 07 31.1	
	comp=N,468nm,0.5s						
PB02	**IPOC Station P**	1.71	145	⇑iP	Pn	**11 07 04.8**	-0.1
PB01	**IPOC Station P**	1.77	129	⇑iP	Pn	**11 07 05.8**	+0.1
PB01				eS	Sn	**11 07 28.3**	-0.6
PB01				IAML		11 07 32.9	
	comp=N,548nm,0.2s						
PB09	**IPOC Station P**	2.46	140	iP	Pn	**11 07 16.4**	+1.2
PB09				IAML		11 07 55.4	
	comp=Z,244nm,0.4s						
PB04	**IPOC Station P**	2.52	163	iP	Pn	**11 07 15.5**	-0.5
PB05	**IPOC Station P**	3.00	167	iP	Pn	**11 07 21.7**	-0.9
PB06	**IPOC Station P**	3.06	155	iP	Pn	**11 07 22.9**	-0.5
PB06				IAML		11 08 15.9	
	comp=Z,125nm,0.6s						
LVC	**Limon Verde**	3.29	145	iP	Pn	**11 07 28.3**	+1.5
PB15	**IPOC Station P**	3.55	157	iP	Pn	**11 07 30.8**	+0.5
PB15				IAML		11 08 38.1	
	comp=Z,138nm,0.3s						
PB10	**IPOC Station P**	3.60	174	iP	Pn	**11 07 29.7**	-1.0
LPAZ	**La Paz**	4.50	37	iP	Pb	**11 07 50.8**	-3.2
ACAN	**Cantantal**	12.76	165	iP	Pn	**11 09 38.9**	+2.4

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*SJA **17** 11:12:13.3±1.4, 19°.94S×71°.03W, h19^{km}±13^{km}, ML5.0, MW4.9*

*NEIC **17** 11:12:14.9, 19°.94S×70°.95W, h19^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.29; M$_{\theta\theta}$-0.07; M$_{\phi\phi}$-2.22; M$_{r\theta}$0.67; M$_{\theta\phi}$1.02; M$_{\phi r}$-1.27; Fault plane solution: M$_0$2.86000×10^{16} NP1:φ$_s$342.41000°, δ30.02000°, λ96.50000°. NP2:φ$_s$154.92000°, δ60.19000°, λ86.26000°. Principal axes: T 2.6827, Plg75.0000°, Azm55.0000°; N 0.3292, Plg3.0000°, Azm157.0000°; P -3.0119, Plg15.0000°, Azm248.0000°;*

*IDC **17** 11:12:14.6±0.5, 19°.78S×70°.61W, h0^{km}, mb4.5/21, mb1 4.6/26, mb1mx4.5/34, mbtmp4.5/26, ML4.0/5, MS4.3/24, Ms1 4.3/24, ms1mx4.2/35 Error ellipse: s-maj=18.5km s-min=10.6km az=59.0*

*NEIC **17** 11:12:14.3±1.6, 19°.94S±0°.03×70°.91W±0°.05, h13^{km}±3^{km}, mb5.1/98, Mwr4.9/21, ML5.1(GUC), Error ellipse: s-maj=7.9km s-min=2.4km az=123.0*

*BJI **17** 11:12:16.0±0.0, 19°.90S×70°.90W, h10^{km}, mB5.4/16, Ms5.5/9, Ms7 5.2/9*

*MOS **17** 11:12:17.3±1.7, 19°.88S×70°.85W, h33^{km}, mb5.1/20, Error ellipse: s-maj=11.9km s-min=7.6km az=108.3*

*GUC **17** 11:12:17.8±0.7, 19°.91S×70°.91W, h33^{km}±2^{km}, ML5.1*

*VAO **17** 11:12:19.1±0.8, 19°.90S×70°.74W, h40^{km}±5^{km}, mb4.9*

*GCMT **17** 11:12:21.3±0.3, 19°.92S±0°.02×71°.03W±0°.02, h21^{km}±1^{km}, MW5.0/86, Moment Tensor Solution. s32,c34; s86,c109; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.48±.20; M$_{\theta\theta}$-0.16±.11; M$_{\phi\phi}$-3.32±.14; M$_{r\theta}$0.55±.19; M$_{\theta\phi}$0.69±.07; M$_{\phi r}$-2.86±.24; Best double couple: M$_0$4.53200×10^{16} NP1:φ$_s$348.00000°, δ25.00000°, λ89.00000°. NP2: φ$_s$169.00000°, δ65.00000°, λ90.00000°. Principal axes: T 4.5400, Plg70.0000°, Azm80.0000°; N -0.0140, Plg0.0000°, Azm349.0000°; P -4.5250, Plg20.0000°, Azm258.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 11:12:17.4±0.9**, 19°.94S**±0°.02×**70°.85W**±0°.04**, h26**^{km}±5^{km}**, n647, σ1**^{s}**.26**/643**, mb5.0**/77**, MS4.5**/26**, 20C-7D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	0.77	64	⇓iP	Pb	**11 12 31.2**	-1.0
PSGC				iS	Sb	**11 12 41.9**	-0.3
TA01	**Diego Aracena**	0.89	135	⇓iP	Pb	**11 12 33.9**	-0.2
TA01				eS	Sn	**11 12 46.5**	+0.2
TA01				IAML		11 12 49.0	
	comp=E,95μm,0.7s						
PATCX	**Punta Patache**	1.10	143	⇑iP	Pn	**11 12 37.1**	0.0
PATCX				iS	Sn	**11 12 52.0**	+0.5
PATCX				IAML		11 12 58.3	
	comp=E,45μm,0.6s						
PATCX	**Punta Patache**	1.10	143	iP	Pn	**11 12 37.2**	0.0
PATCX				iS	Sn	**11 12 52.9**	+1.3
PATCX				IAML		11 12 56.4	
	comp=Z,43μm,0.8s						
PB11	**IPOC Station P**	1.14	81	⇓iP	Pn	**11 12 37.7**	-0.1
PB11				iS	Sn	**11 12 53.4**	+0.7
PB11				IAML		11 12 56.7	
	comp=E,87μm,0.9s						
PB11	**IPOC Station P**	1.14	81	Pn	Pn	**11 12 37.7**	-0.1
PB11				Sn	Sn	**11 12 53.0**	+0.4
PB11	**IPOC Station P**	1.14	81	iP	Pn	**11 12 37.8**	-0.1
PB11				IAML		11 13 04.8	
	comp=Z,34μm,0.9s						
PB12	**IPOC Station P**	1.41	21	⇑iP	Pn	**11 12 41.1**	-0.3
PB12				iS	Sn	**11 12 59.3**	+0.2
PB12	**IPOC Station P**	1.41	21	iP	Pn	**11 12 41.1**	-0.3
PB12				IAML		11 13 08.9	
	comp=Z,10μm,0.9s						
GO01	**Chusmiza**	1.58	81	⇑iP	Pn	**11 12 45.1**	+0.9
GO01				iS	Sb	**11 13 07.0**	+0.9
GO01				IAML		11 13 08.7	
	comp=N,29μm,0.6s						
GO01	**Chusmiza**	1.58	81	Pn	Pn	**11 12 45.1**	+0.9
GO01				Sn	Sn	**11 13 03.9**	-0.2
PB08	**IPOC Station P**	1.61	98	⇑iP	Pn	**11 12 45.3**	+0.8
PB08				eS	Sb	**11 13 07.2**	+0.4
PB08				IAML		11 13 09.0	
	comp=N,23μm,0.3s						
PB08	**IPOC Station P**	1.61	98	iP	Pn	**11 12 45.3**	+0.8
PB08				IAML		11 13 12.1	
	comp=Z,21μm,0.7s						
AP01	**Chacalluta**	1.63	17	eP	Pn	**11 12 44.1**	-0.3
AP01				iS	Sn	**11 13 03.9**	-0.7
AP01				IAML		11 13 12.6	
	comp=N,30μm,0.5s						
PB02	**IPOC Station P**	1.64	147	⇑iP	Pn	**11 12 45.3**	+0.6
PB02				iS	Sn	**11 13 05.9**	+0.9
PB02	**IPOC Station P**	1.64	147	iP	Pn	**11 12 45.0**	+0.3
PB02				IAML		11 13 16.9	
	comp=Z,72μm,0.5s						
PB01	**IPOC Station P**	1.69	131	⇑iP	Pn	**11 12 46.3**	+1.0
PB01				eS	Sb	**11 13 07.9**	-0.8
PB01				IAML		11 13 15.0	
	comp=E,52μm,0.5s						
PB01	**IPOC Station P**	1.69	131	Pn	Pn	**11 12 45.8**	+0.5
PB01				Sn	Sn	**11 13 05.7**	-0.4
PB07	**IPOC Station P**	2.00	153	⇑iP	Pn	**11 12 49.9**	+0.3
PB07				iS	Sb	**11 13 18.5**	+0.9
PB07				IAML		11 13 23.3	
	comp=E,35μm,0.8s						
PB07	**IPOC Station P**	2.00	153	iP	Pn	**11 12 49.9**	+0.3
PB07				IAML		11 13 23.7	
	comp=Z,30μm,0.5s						
PB16	**IPOC Station P**	2.04	39	⇑iP	Pn	**11 12 51.5**	+0.9
PB16				iS	Sb	**11 13 18.3**	-0.9
PB16				IAML		11 13 28.1	
	comp=N,18μm,0.9s						
PB16	**IPOC Station P**	2.04	39	iP	Pn	**11 12 51.5**	+0.9
PB16				IAML		11 13 23.8	
	comp=Z,15μm,1.7s						
PB03	**IPOC Station P**	2.34	154	⇑iP	Pn	**11 12 54.7**	+0.4
PB03				iS	Sn	**11 13 20.7**	-1.6
PB03				IAML		11 13 39.1	
	comp=E,13μm,0.4s						
PB03	**IPOC Station P**	2.34	154	iP	Pn	**11 12 54.7**	+0.4
PB03				IAML		11 13 39.1	
	comp=Z,20μm,0.5s						
PB09	**IPOC Station P**	2.38	141	eP	Pn	**11 12 56.5**	+1.5
PB09				iS	Sn	**11 13 25.7**	+2.2
PB09	**IPOC Station P**	2.38	141	iP	Pn	**11 12 56.7**	+1.7
PB09				IAML		11 13 36.1	
	comp=Z,35μm,0.5s						
PB04	**IPOC Station P**	2.47	165	eP	Pn	**11 12 55.0**	-1.2
PB04				iS	Sn	**11 13 23.7**	-2.0
PB04	**IPOC Station P**	2.47	165	Pn	Pn	**11 12 55.6**	-0.6
PB04				Sn	Sn	**11 13 24.3**	-1.4
PB04	**IPOC Station P**	2.47	165	iP	Pn	**11 12 55.7**	-0.5
PB05	**IPOC Station P**	2.96	168	eP	Pn	**11 13 01.6**	-1.3
PB05				iS	Sn	**11 13 34.4**	-3.3
PB05				IAML		11 14 02.2	
	comp=N,8μm,0.6s						
PB05	**IPOC Station P**	2.96	168	iP	Pn	**11 13 02.0**	-0.9
PB05				IAML		11 14 01.5	
	comp=Z,7μm,0.8s						
PB06	**IPOC Station P**	3.00	157	⇑iP	Pn	**11 13 03.2**	-0.2
PB06				iS	Sn	**11 13 38.3**	-0.4
PB06	**IPOC Station P**	3.00	157	iP	Pn	**11 13 03.2**	-0.2
PB06				iS	Sb	**11 13 49.3**	+2.7
PB06				IAML		11 13 58.0	
	comp=Z,13μm,0.6s						
LVC	**Limon Verde**	3.22	146	Pn	Pn	**11 13 07.6**	+1.0
	comp=Z,78nm,0.3s,baz=310,slow=9.1,SNR=107						
LVC				Sn	Sn	**11 13 46.0**	+1.7
	comp=Z,261nm,0.3s,baz=50,slow=22,SNR=6.2						
LVC				Lg	Lg	11 13 58.0	
	comp=Z,463nm,0.3s,baz=106,slow=12,SNR=5.9						
LVC	**Limon Verde**	3.22	146	P	Pn	**11 13 07.3**	+0.7
LVC	**Limon Verde**	3.22	146		Pn	**11 13 07.3**	+0.7
LVC	**Limon Verde**	3.22	146	eP	Pn	**11 13 05.9**	-0.7
LVC	**Limon Verde**	3.22	146	iP	Pn	**11 13 08.3**	+1.7
LVC				IAML		11 14 02.9	
	comp=Z,3μm,0.6s						
LVC				IAML		11 14 03.1	
	comp=Z,4μm,0.6s						
PB15	**IPOC Station P**	3.50	159	iP	Pn	**11 13 10.5**	+0.2
PB15				IAML		11 14 11.1	
	comp=Z,11μm,0.6s						
PB10	**IPOC Station P**	3.57	176		Pn	**11 13 09.7**	-1.4
PB10				Sn	Sn	**11 13 50.4**	-2.1
PB10	**IPOC Station P**	3.57	176	iP	Pn	**11 13 09.5**	-1.6
PB10				IAML		11 14 24.3	
	comp=Z,2μm,0.7s						
LPAZ	**La Paz**	4.46	36	Pn	Pn	**11 13 27.3**	+3.4
	comp=Z,1.7nm,0.3s,baz=208,slow=10,SNR=31						
LPAZ				LR	LR	11 15 17.5	
	comp=Z,4μm,20.5s,baz=242,slow=44						
LPAZ	**La Paz**	4.46	36	P	Pn	**11 13 25.8**	+1.9
LPAZ	**La Paz**	4.46	36		Pn	**11 13 25.8**	+1.9
LPAZ	**La Paz**	4.46	36	eP	Pn	**11 13 25.2**	+1.3
GO02	**Mina Guanaco**	5.33	168		Pn	**11 13 35.0**	-0.5
YJA	**Yavi**	5.46	115	iP	Pn	**11 13 40.9**	+3.4
YJA				IAML		11 15 14.3	
	comp=Z,177nm,2.1s						
HJA	**Humahuaca**	6.02	124	iP	Pn	**11 13 49.2**	+4.1
HJA				IAML		11 14 00.1	
	comp=Z,178nm,0.5s						
HJA				IAML		11 15 32.0	
	comp=Z,172nm,2.7s						
AZAP	**Zapla**	6.85	130	iP	Pn	**11 13 57.9**	+1.4
AZAP				IAML		11 14 41.6	
	comp=Z,70nm,0.7s						
AZAP				IAML		11 16 40.1	
	comp=Z,92nm,1.6s						
ASTB	**Santa Barbara**	7.16	125	iP	Pn	**11 14 03.2**	+2.7
ASTB				IAML		11 16 11.1	
	comp=Z,49nm,1.4s						
GO03	**Copiap**	7.64	176		Pn	**11 14 05.8**	-1.3
VCA	**Vinchina**	9.09	165	iP	Pn	**11 14 28.4**	+1.4
NNA	**Nana**	9.78	323	Pn	Pn	**11 14 38.1**	+1.6
	comp=Z,0.5nm,0.3s,baz=254,slow=7.5,SNR=2.2						
NNA				LR	LR	11 18 02.9	
	comp=Z,745nm,21.5s,baz=156,slow=36						
NNA	**Nana**	9.78	323	⇑eP	Pn	**11 14 38.5**	+2.0
NNA	**Nana**	9.78	323	Pn	Pn	**11 14 34.3**	-2.1
ACLC	**CERRO LA CRUZ**	10.09	160	iP	Pn	**11 14 39.0**	-1.8
SIV	**San Ignacio**	10.10	69	Pn	Pn	**11 14 38.5**	-2.3
	comp=Z,3.8nm,0.3s,baz=264,slow=13,SNR=35						
GO04	**Tololo Observa**	10.19	180	Pn	Pn	**11 14 40.2**	-2.1
CFA	**Coronel Fontan**	11.85	169	Pn	Pn	**11 15 08.4**	+3.5
	comp=Z,0.6nm,0.3s,baz=333,slow=6.8,SNR=2.2						
CFA				LR	LR	11 20 08.2	
	comp=Z,2μm,18.8s,baz=340,slow=40						
ROC1	**El Roble**	12.99	181	Pn	Pn	**11 15 19.8**	-0.7
PEL	**Peldehue**	13.15	179	P	Pn	**11 15 22.3**	-0.3
PEL	**Peldehue**	13.15	179	Pn	Pn	**11 15 22.3**	-0.3
SAML	**Samuel**	13.20	35	P	Pn	**11 15 22.0**	-1.3
SAML	**Samuel**	13.20	35	Pn	Pn	**11 15 22.0**	-1.3
SAML	**Samuel**	13.20	35	eP	Pn	**11 15 22.7**	-0.6
CPUP	**Villa Florida**	13.97	120	Pn	Pn	**11 15 33.0**	-0.7
	comp=Z,0.1nm,0.3s,baz=312,slow=15,SNR=2.7						
CPUP				LR	LR	11 21 58.1	
	comp=Z,1μm,19.9s,baz=299,slow=42						
CPUP	**Villa Florida**	13.97	120	P	Pn	**11 15 35.8**	+2.1
CPUP	**Villa Florida**	13.97	120		Pn	**11 15 35.8**	+2.1
AQDB	**Aquidauana**	14.24	95	eP	Pn	**11 15 36.1**	-1.3
ATAH	**Atahualpa**	14.68	329	LR	LR	11 21 43.3	
	comp=Z,679nm,19.1s,baz=123,slow=39						
SALV	**Santo Antonio**	14.97	77	eP	Pn	**11 15 46.2**	-1.2
GO05	**Huala**	15.04	183	Pn	Pn	**11 15 47.1**	-1.2
C2SB	**Chapadao do Su**	17.04	89	eP	Pn	**11 16 13.3**	-0.6
CLDB	**Colider**	17.07	60	eP	Pn	**11 16 12.5**	-1.9
TRCB	**Terra Rica**	17.20	103	eP	Pn	**11 16 14.8**	-1.3
PTGB	**Pitanga**	18.02	109	eP	P	**11 16 26.9**	+0.4
PCMB	**Pacaembu**	18.39	99	eP	P	**11 16 29.1**	-1.5
ARAG	**Araguaiana, MT**	18.61	80	eP	P	**11 16 31.6**	-1.3
ITAB	**Concordia**	18.62	116	eP	P	**11 16 32.9**	-0.1
LPA	**La Plata**	18.78	145	eP	P	**11 16 32.1**	-2.6
LPA				S	Sn	**11 20 03.6**	-1.2
LPA				SS	SnSn	**11 20 18.9**	-0.1
LPA				SSS	SSS	11 20 37.3	
LPA				PCP	PcP	**11 21 08.8**	+7.3
CPSB	**Cacapava Do Su**	18.87	127	eP	P	**11 16 35.6**	-0.1
PLTB	**Pedras Altas**	19.45	131	eP	P	**11 16 42.9**	+0.7
GO06	**Curarrehue**	19.59	181	P	P	**11 16 42.8**	-0.9
FRTB	**Fartura**	20.07	104	eP	P	**11 16 48.9**	-0.1
PLCA	**Paso Flores**	20.73	179	P	Pn	11 16 57.9	-0.6
	comp=Z,7.6nm,0.8s,baz=16,slow=12,SNR=13						
PLCA				LR	LR	11 25 20.9	
	comp=Z,541nm,18.3s,baz=20,slow=38						
PLCA	**Paso Flores**	20.73	179	P	P	**11 16 55.9**	-0.1
PLCA				pmax	pmax		
	comp=Z,31nm,1.1s						
PLCA	**Paso Flores**	20.73	179	P	P	**11 16 55.9**	-0.1
PLCA	**Paso Flores**	20.73	179	eP	P	**11 16 55.9**	-0.1
IPMB	**Ipameri, GO**	21.50	89	eP	P	**11 17 04.0**	-0.4
PTGA	**Pitinga**	21.86	30	P	P	**11 17 06.7**	-1.6
	comp=Z,11nm,0.3s,baz=222,slow=23,SNR=39						
PTGA				LR	LR	11 26 19.2	
	comp=Z,2μm,18.8s,baz=208,slow=39						
PTGA	**Pitinga**	21.86	30	P	P	**11 17 06.2**	-2.1
PTGA	**Pitinga**	21.86	30	eP	P	**11 17 06.3**	-2.1
FLOC	**Florencia**	21.90	347	eP	P	**11 17 10.3**	+1.6
FLOC	**Florencia**	21.90	347	P	P	**11 17 06.9**	-1.8
GCUF	**Volcan Galeras**	21.98	342	eP	P	11 17 18.1	+8.1
SPB	**Sao Paulo**	22.05	104	P	P	**11 17 09.1**	-1.1
SPB				IAmb	IAmb	11 17 22.3	
	comp=Z,89nm,1.5s						
SPB	**Sao Paulo**	22.05	104	eP	P	**11 17 09.9**	-0.3
BDFB	**Brasilia**	22.16	83	P	P	**11 17 10.8**	-0.8
	comp=Z,14nm,0.9s,baz=254,slow=14,SNR=10						
BDFB				LR	LR	11 27 17.9	
	comp=Z,1μm,19.4s,baz=284,slow=41						
BDFB	**Brasilia**	22.16	83	P	P	**11 17 10.5**	-1.1
BDFB				pmax	pmax		
	comp=Z,57nm,1.1s						
BDFB	**Brasilia**	22.16	83	P	P	**11 17 10.5**	-1.1
BDFB				IAmb	IAmb	11 17 16.9	
	comp=Z,57nm,1.1s						
CRUC	**La Cruz**	22.19	344	eP	P	**11 17 18.4**	+6.1
VAO	**Valinhos**	22.43	102	eP	P	**11 17 13.7**	-0.8
GARC	**Garzon, Huila**	22.45	348	eP	P	**11 17 16.3**	+1.4
SOTA	**Rioblanco**	22.65	345	eP	P	**11 17 20.0**	+2.8
PCON	**Cinco Dias**	22.79	346	eP	P	**11 17 23.0**	+4.2
PARB	**Paraibuna**	23.69	103	eP	P	**11 17 27.2**	-0.1
ORTC	**Ortega, Tolima**	24.09	349	eP	P	**11 17 31.3**	+0.3
YOTC	**Yotoco, Valle**	24.38	347	eP	P	**11 17 35.9**	+2.2
BSCB	**Bom Sucesso**	24.45	97	eP	P	**11 17 33.1**	-1.3
CHIC	**Chingaza**	24.58	353	eP	P	**11 17 36.3**	+0.4
ROSC	**El Rosal**	24.86	352	P	P	**11 17 37.5**	-0.8
	comp=Z,4.1nm,0.3s,baz=139,slow=20,SNR=1.4						
ROSC				LR	LR	11 28 54.0	
	comp=Z,1μm,19.7s,baz=198,slow=40						
ROSC	**El Rosal**	24.86	352	P	P	**11 17 36.2**	-2.2
ROSC				IAmb	IAmb	11 17 51.5	
	comp=Z,45nm,1.4s						
SMTB	**Santa Maria do**	25.04	67	eP	P	**11 17 38.4**	-1.3
RREF	**El Recreo**	25.07	349	eP	P	**11 17 43.4**	+2.7
GUY2C	**Guyana, Caldas**	25.39	349	eP	P	**11 17 44.9**	+1.6
SPBC	**San Pablo de B**	25.62	353	eP	P	11 17 53.2	+8.2
NORC	**Norcasia**	25.65	351	eP	P	**11 17 46.0**	+0.8
JANB	**Januaria**	25.76	83	eP	P	**11 17 45.0**	-1.2
RUSC	**La Rusia**	25.76	355	eP	P	**11 17 46.4**	-0.3
TAMC	**Tame, Arauca**	26.22	358	eP	P	**11 17 57.5**	+7.1
HELC	**Santa Helena**	26.37	349	eP	P	**11 17 54.0**	+1.9
BARC	**Barichara**	26.46	355	eP	P	**11 17 51.9**	-0.8
PTBC	**PUERTO BERRIO,**	26.55	352	eP	P	**11 17 51.3**	-2.0
PAMC	**Pamplona, Colo**	27.17	356	eP	P	11 17 50.5	-8.8
DBBC	**Dabeiba**	27.30	348	eP	P	11 18 10.4	+10
ZARC	**Zaragoza, Cauc**	27.54	351	eP	P	**11 18 01.9**	-0.3
UREC	**San Jos de Ur**	27.90	350	eP	P	**11 18 04.2**	-1.2
SJMB	**Sao Joao De Ma**	28.01	93	eP	P	**11 18 05.2**	-1.3
BSFB	**Barra de Sao F**	28.31	93	eP	P	**11 18 07.5**	-1.6
SDV	**Santo Domingo**	28.64	0	P	P	**11 18 11.3**	-1.0
	comp=Z,10nm,1.1s,baz=239,slow=9.7,SNR=4.2						
SDV	**Santo Domingo**	28.64	0	P	P	**11 18 10.1**	-2.2
SDV	**Santo Domingo**	28.64	0	eP	P	**11 18 11.3**	-1.0
SMLC	**San Martn de**	28.73	353	eP	P	**11 18 10.4**	-2.4
SJCC	**San Jacinto, C**	29.95	351	eP	P	**11 18 22.6**	-1.1
NBIT	**Itapeh - BA**	30.36	86	eP	P	**11 18 26.0**	-1.3
NBPN	**Ponto Novo - B**	30.86	78	eP	P	**11 18 29.1**	-2.7
NBPS	**Pedro II - PI**	32.54	66	eP	P	**11 18 45.3**	-1.3
NBLA	**Lagarto - SE**	33.03	79	eP	P	**11 18 49.0**	-1.8
JTS	**Las Juntas de**	33.09	334	LR	LR	11 32 00.0	
	comp=Z,301nm,19.2s,baz=210,slow=36						
EFI	**East Falkland**	33.23	165	⇑eP	P	**11 18 52.1**	0.0
NBTA	**Tacaratu-PE**	33.44	76	eP	P	**11 18 53.4**	-1.1
NBMA	**Muriti-CE**	33.51	73	eP	P	**11 18 54.0**	-1.1
NBPB	**Pedra_Branca-C**	33.60	69	eP	P	**11 18 55.0**	-0.8
NBMO	**Morrinhos-CE**	34.30	65	eP	P	**11 19 00.9**	-1.0
NBAN	**Anadia - AL**	34.88	78	eP	P	**11 19 06.2**	-0.8
NBLI	**Livramento-PB**	35.15	74	eP	P	**11 19 07.7**	-1.6
NBCL	**Cascavel-CE**	35.35	68	eP	P	**11 19 10.8**	-0.2
NBPA	**Parau_RN**	35.69	71	eP	P	**11 19 13.0**	-0.9
RPN	**Rapa Nui**	35.90	251	LR	LR	11 30 04.9	
	comp=Z,1μm,19.8s,baz=100,slow=30						
RCBR	**Riachuelo**	36.74	72	LR	LR	11 36 08.6	
	comp=Z,938nm,18.1s,baz=238,slow=39						
RCBR	**Riachuelo**	36.74	72	P	P	**11 19 21.8**	-1.1
RCBR				pmax	pmax		
	comp=Z,44nm,1.0s						
RCBR	**Riachuelo**	36.74	72	P	P	**11 19 21.8**	-1.1
RCBR				IAmb	IAmb	11 19 23.8	
	comp=Z,44nm,1.0s						
RCBR	**Riachuelo**	36.74	72	eP	P	**11 19 22.6**	-0.3
NBPV	**Pedro Velho**	37.04	74	eP	P	**11 19 24.5**	-0.9
MLPR	**Magueyes Islan**	37.86	6	P	P	**11 19 29.6**	-2.5
PDPR	**Patillas Dam,**	38.02	7	P	P	**11 19 31.5**	-2.0
PDPR				IAmb	IAmb	11 19 32.9	
	comp=Z,47nm,1.2s						
SC01	**Santiago de lo**	39.12	0	P	P	**11 19 41.2**	-1.6
SC01				IAmb	IAmb	11 19 54.5	
	comp=Z,80nm,1.1s						
APG	**El Apazote**	39.72	329	P	P	**11 19 50.7**	+2.6
	comp=Z,6.3nm,1.1s,baz=309,slow=6.5,SNR=3.5						
NHSC	**New Hope**	53.49	350	P	P	**11 21 36.2**	+0.7
	baz=169						
Z57A	**Bowman**	53.77	350	P	P	**11 21 38.4**	+0.9
	baz=169						
Y55A	**Saluda**	54.59	349	P	P	**11 21 43.5**	-0.1
	baz=167						
X59A	**McDuffie Farm,**	54.71	352	P	P	**11 21 45.5**	+1.2
	baz=171						
X58A	**Rowland**	54.79	351	P	P	**11 21 45.5**	+0.6
	baz=170						
Z50A	**Ashland**	54.82	345	P	P	**11 21 45.6**	+0.3
	baz=163						
LRAL	**Lakeview Retre**	54.89	343	P	P	**11 21 46.6**	+0.9
	baz=162						
Y52A	**Lilburn**	54.96	347	P	P	**11 21 46.9**	+0.7
	baz=165						
X56A	**White Oak**	54.99	350	P	P	**11 21 47.3**	+0.9
	baz=168						
W58A	**Raeford**	55.23	352	P	P	**11 21 49.0**	+0.8
	baz=170						
X54A	**Belton**	55.28	348	P	P	**11 21 49.5**	+0.9
	baz=167						
833A	**Chaparral WMA,**	55.35	329	P	P	**11 21 49.0**	-0.1
	baz=147						
V62A	**Hyde County Ai**	55.41	355	P	P	**11 21 49.8**	+0.5
	baz=174						
W57A	**Gilead**	55.47	351	P	P	**11 21 50.3**	+0.5
	baz=170						
KMSC	**Kings Mountain**	55.67	350	P	P	**11 21 52.6**	+1.2

	baz=168						
V60A	Jim Taylor Roa	55.73	354	P	P	11 21 52.5	+0.8
	baz=173						
W54A	Cherokee Point	55.77	349	P	P	11 21 52.2	+0.2
	baz=167						
X51A	Calhoun	55.81	346	P	P	11 21 52.9	+0.6
	baz=164						
V59A	Middlesex	55.84	353	P	P	11 21 53.4	+0.9
	baz=172						
V58A	Windy Hill, Pi	55.98	352	P	P	11 21 54.7	+1.2
	baz=171						
V57A	Coltrane Farms	56.16	351	P	P	11 21 55.6	+0.8
	baz=170						
V56A	Mocksville	56.19	351	P	P	11 21 56.1	+1.0
	baz=169						
X48A	Hartselle	56.24	344	P	P	11 21 54.2	-1.2
X48A				IAmb	IAmb	11 21 57.0	
	comp=Z,49nm,1.4s						
NATX	Nacogdoches	56.24	336	P	P	11 21 56.4	+0.9
	baz=153						
V55A	Taylorsville	56.35	350	P	P	11 21 56.8	+0.7
	baz=168						
U59A	Littleton	56.37	353	P	P	11 21 57.0	+0.8
	baz=172						
V54A	Nebo	56.40	349	P	P	11 21 57.2	+0.6
	baz=168						
U60A	Pendleton	56.42	354	P	P	11 21 57.4	+0.8
	baz=173						
U58A	Oxford	56.50	353	P	P	11 21 58.0	+0.7
	baz=171						
U57A	Blanch	56.63	352	P	P	11 21 58.9	+0.7
	baz=170						
U56A	King	56.70	351	P	P	11 21 59.1	+0.4
	baz=169						
Z41A	Richland Creek	56.90	338	P	P	11 22 00.4	+0.3
	baz=155						
OXF	Oxford	56.95	342	P	P	11 22 00.7	+0.2
	baz=159						
T59A	Double "B" Far	56.95	354	P	P	11 22 01.3	+0.9
	baz=172						
U55A	TA2, Sparta	56.95	350	P	P	11 22 00.9	+0.4
	baz=169						
PLAL	Pickwick Lake	57.02	343	IAmb	IAmb	11 22 12.9	
	comp=Z,21nm,1.2s						
T58A	Grand View Acr	57.04	353	P	P	11 22 02.1	+1.1
	baz=171						
U54A	Nelsons Funny	57.10	349	P	P	11 22 02.5	+0.9
	baz=168						
T57A	Hurt	57.18	352	P	P	11 22 03.1	+1.1
	baz=171						
T56A	Rocky Mt	57.32	351	P	P	11 22 04.2	+1.1
	baz=170						
V48A	Smith Brothers	57.40	345	IAmb	IAmb	11 22 04.5	
	comp=Z,42nm,1.4s						
W45A	Hickory Valley	57.49	342	IAmb	IAmb	11 22 14.9	
	comp=Z,27nm,1.0s						
T55A	Pulaski	57.52	351	P	P	11 22 05.7	+1.2
	baz=169						
T54A	Tazewell	57.59	350	P	P	11 22 05.8	+0.8
	baz=168						
T53A	Wise	57.68	349	P	P	11 22 06.1	+0.5
	baz=167						
T52A	Hallie	57.88	349	P	P	11 22 07.9	+0.9
	baz=167						
S56A	Natural Bridge	57.89	352	P	P	11 22 08.7	+1.6
	baz=170						
U49A	Red Boiling Sp	57.89	346	IAmb	IAmb	11 22 07.3	
	comp=Z,54nm,1.6s						
S57A	Dark Hollow, R	57.89	352	P	P	11 22 08.6	+1.5
	baz=171						
R58B	Mineral	57.97	353	P	P	11 22 08.5	+0.9
	baz=172						
WVT	Waverly	58.03	344	P	P	11 22 06.3	-1.8
WVT				pmax	pmax		
	comp=Z,54nm,1.6s						
WVT	Waverly	58.03	344	P	P	11 22 06.2	-1.8
WVT				IAmb	IAmb	11 22 14.1	
	comp=Z,54nm,1.6s						
WVT	Waverly	58.03	344	P	P	11 22 08.4	+0.3
	baz=161						
R61A	Willards	58.11	356	P	P	11 22 09.4	+0.9
	baz=175						
S55A	Lewisburg	58.12	351	P	P	11 22 09.4	+0.7
	baz=169						
T50A	Nancy	58.17	347	P	P	11 22 09.7	+0.7
	baz=165						
S54A	Dingess, Beckl	58.27	350	P	P	11 22 10.4	+0.6
	baz=168						
R58A	Rapidan	58.31	353	P	P	11 22 10.7	+0.7
	baz=172						
TX32	Lajitas Array	58.32	326	P	P	11 22 08.8	-1.5
TXAR	Lajitas Array	58.32	326	P	P	11 22 11.5	+1.1
	comp=Z,1.2nm,0.8s,baz=154,slow=6.5,SNR=12						
TXAR				LR	LR	11 46 55.7	
	comp=Z,75nm,18.6s,baz=0.0,slow=36						
TXAR	Lajitas Array	58.32	326	P	P	11 22 09.7	-0.7
TXAR	Lajitas Array	58.32	326	P	P	11 22 09.7	-0.7
MIAR	Mount Ida	58.34	338	P	P	11 22 09.7	-0.5
MIAR				pmax	pmax		
	comp=Z,35nm,1.4s						
MIAR	Mount Ida	58.34	338	P	P	11 22 09.7	-0.5
MIAR				IAmb	IAmb	11 22 12.6	
	comp=Z,35nm,1.4s						
MIAR	Mount Ida	58.34	338	P	P	11 22 10.5	+0.3
	baz=155,SNR=7.2						
R57A	Stanardsville	58.37	353	P	P	11 22 11.1	+0.7
	baz=172						
T49A	Edmonton	58.40	346	P	P	11 22 10.4	-0.3
	baz=164,SNR=8.1						
W41B	Gary Mavity, V	58.45	339	P	P	11 22 11.4	+0.4
	baz=156						
R54A	Victor	58.59	351	P	P	11 22 13.2	+1.2
	baz=169						
S50A	Richmond	58.71	347	P	P	11 22 13.4	+0.6
	baz=165						
R53A	Hurricane	58.89	350	P	P	11 22 15.0	+0.9
	baz=168						
Q58A	Fox Den Farm,	58.92	354	P	P	11 22 15.2	+1.0
	baz=173						
W39A	Magazine	58.99	338	P	P	11 22 15.5	+0.7
	baz=155						
S49A	Springfield	59.00	347	P	P	11 22 15.1	+0.3
	baz=164						
ABTX	Abilene, Hawle	59.08	332	P	P	11 22 14.4	-1.0
ABTX				IAmb	IAmb	11 22 23.6	
	comp=Z,11nm,1.1s						
ABTX	Abilene, Hawle	59.08	332	P	P	11 22 16.0	+0.5
	baz=148						
Q57A	Strasburg	59.09	353	P	P	11 22 17.1	+1.7
	baz=172						
R51A	Hillsboro	59.15	348	P	P	11 22 16.4	+0.6
	baz=166						
Q56A	Snyder Ridge,	59.19	352	P	P	11 22 17.3	+1.2
	baz=171						
Q55A	Buckhannon	59.26	352	P	P	11 22 17.6	+1.0
	baz=170						
R50A	Paris	59.28	348	P	P	11 22 16.9	+0.2
	baz=165						
PBMO	Poplar Bluff	59.36	342	IAmb	IAmb	11 22 18.9	
	comp=Z,16nm,1.1s						
P59A	Jarrettsville	59.47	355	P	P	11 22 18.7	+0.7
	baz=174						
P57A	Homestead Farm	59.49	354	P	P	11 22 19.1	+0.9
	baz=172						
Q52A	Bidwell	59.56	350	P	P	11 22 19.5	+0.8
	baz=168						
P56A	Dayton Farm, R	59.60	353	P	P	11 22 19.9	+1.0
	baz=171						
P60A	Greenville	59.60	356	P	P	11 22 19.8	+0.9
	baz=175						
WCI	Wyandotte Cave	59.65	346	P	P	11 22 19.3	+0.1
	baz=163						
P55A	Reedsville	59.73	352	P	P	11 22 20.6	+0.7
	baz=170						
U40A	Yellville	59.73	340	IAmb	IAmb	11 22 32.3	
	comp=Z,13nm,1.1s						
U40A	Yellville	59.73	340	P	P	11 22 19.9	0.0
	baz=156,SNR=6.1						
MCWV	Mont Chateau	59.88	352	P	P	11 22 21.9	+1.1
	baz=170						
P54A	Burton	59.91	351	P	P	11 22 21.3	+0.3
	baz=170						
P53A	Whipple	59.93	351	P	P	11 22 21.8	+0.6
	baz=169						
O58A	Lewisberry	60.02	355	P	P	11 22 22.8	+1.0
	baz=174						
HHAR	Hobbs	60.03	339	IAmb	IAmb	11 22 24.1	
	comp=Z,35nm,1.5s						
Q49A	Aurora	60.09	347	P	P	11 22 23.0	+0.7
	baz=165						
O59A	Robesonia	60.14	355	P	P	11 22 23.4	+0.7
	baz=174						
O57A	Amberson	60.17	354	P	P	11 22 23.6	+0.8
	baz=173						
P52A	Corning	60.19	350	P	P	11 22 23.8	+0.8
	baz=168						
MGMO	Mountain Grove	60.27	340	P	P	11 22 22.2	-1.4
MGMO				IAmb	IAmb	11 22 26.2	
	comp=Z,32nm,1.4s						
O56A	Blue Knob Stat	60.32	353	P	P	11 22 25.2	+1.3
	baz=172						
O55A	Ligonier	60.35	353	P	P	11 22 25.1	+1.0
	baz=171						
TUL1	Leonard	60.36	337	P	P	11 22 23.0	-1.2
TUL1				IAmb	IAmb	11 22 26.4	
	comp=Z,33nm,1.3s						
TUL1	Leonard	60.36	337	P	P	11 22 25.0	+0.8
	baz=153						
P50A	Jamestown	60.46	349	P	P	11 22 24.7	-0.1
	baz=166						
N61A	South Mountain	60.46	357	P	P	11 22 26.5	+1.7
	baz=176						
P49A	Miami Univ. Ec	60.56	348	P	P	11 22 26.0	+0.5
	baz=165						
SSPA	Standing Stone	60.62	354	P	P	11 22 27.4	+1.5
	baz=172						
P48A	Milroy	60.64	347	P	P	11 22 25.6	-0.5
	baz=164						
O53A	New Philadelph	60.65	351	P	P	11 22 26.7	+0.6
	baz=169						
PAL	Palisades	60.70	357	P	P	11 22 27.5	+1.1
	baz=177						
N58A	Sunbury	60.71	355	P	P	11 22 27.4	+1.0
	baz=174						
O51A	Pataskala	60.77	350	P	P	11 22 27.6	+0.7
	baz=167						
CCM	Cathedral Cave	60.79	342	P	P	11 22 25.9	-1.2
CCM				pmax	pmax		
	comp=Z,24nm,1.3s						
CCM	Cathedral Cave	60.79	342	P	P	11 22 25.9	-1.2
CCM				IAmb	IAmb	11 22 28.7	
	comp=Z,24nm,1.2s						
CCM	Cathedral Cave	60.79	342	P	P	11 22 27.5	+0.4
	baz=158						
N55A	Marion Center	60.88	353	P	P	11 22 28.8	+1.1
	baz=171,SNR=7.9						
ACSO	Alum Creek Sta	60.92	349	P	P	11 22 27.1	-0.9
ACSO	Alum Creek Sta	60.92	349	P	P	11 22 28.5	+0.6
	baz=167						
N56A	West Decatur	60.94	354	P	P	11 22 28.9	+0.8
	baz=172						
O50A	Cable	60.95	349	P	P	11 22 28.6	+0.5
	baz=166						
M63A	Gales Ferry	61.04	359	P	P	11 22 29.5	+0.8
	baz=179						
M60A	Port Jervis	61.05	357	P	P	11 22 29.3	+0.5
	baz=176						
MNTX	Cornudas Mount	61.09	326	P	P	11 22 28.0	-1.3
MNTX	Cornudas Mount	61.09	326	P	P	11 22 29.6	+0.3
	baz=143,SNR=7.9						
S39A	Bolivar	61.10	340	IAmb	IAmb	11 22 31.1	
	comp=Z,20nm,1.1s						
O49A	Covington	61.12	348	IAmb	IAmb	11 22 30.5	
	comp=Z,25nm,1.2s						
O49A	Covington	61.12	348	P	P	11 22 29.9	+0.6
	baz=166						
N53A	Lisbon	61.14	351	P	P	11 22 30.1	+0.7
	baz=169						
N54A	Moraine State	61.18	352	P	P	11 22 30.6	+0.9
	baz=170						
M58A	Price's Panora	61.22	355	P	P	11 22 30.9	+0.9
	baz=174						
M57A	Sunshine Farm,	61.24	355	P	P	11 22 27.7	-2.4
M57A	Sunshine Farm,	61.24	355	P	P	11 22 31.3	+1.2
	baz=173						
N52A	McGinn's Farm,	61.27	351	P	P	11 22 31.1	+0.8
	baz=168						
M59A	Waymart	61.31	356	P	P	11 22 31.3	+0.7
	baz=175						
O48A	Farmland	61.35	348	P	P	11 22 31.4	+0.5
	baz=165,SNR=5.6						
N50A	Nevada	61.47	349	P	P	11 22 31.8	+0.2
	baz=167						
M56A	Emporium	61.48	354	P	P	11 22 32.4	+0.6
	baz=172,SNR=6.9						
L63A	North Scituate	61.49	359	P	P	11 22 32.6	+0.8
	baz=179						
M55A	Ridgway	61.53	353	P	P	11 22 32.7	+0.6
	baz=172,SNR=6.6						
MSTX	Muleshoe	61.63	330	P	P	11 22 32.0	-1.0
MSTX				IAmb	IAmb	11 22 40.9	
	comp=Z,20nm,1.2s						
MSTX	Muleshoe	61.63	330	P	P	11 22 33.3	+0.2
	baz=146						
M54A	Oil Creek Stat	61.67	352	P	P	11 22 34.2	+1.1
	baz=171						
L60A	Shokan	61.69	357	P	P	11 22 34.0	+0.9
	baz=176						
M53A	WI Miller and	61.74	352	P	P	11 22 33.7	+0.2
	baz=170						
N49A	Columbus Grove	61.80	349	P	P	11 22 33.8	-0.1
	baz=166,SNR=7.0						
L58A	Harry Jones Me	61.84	356	P	P	11 22 35.2	+1.1
	baz=175						
L61A	Hillsdale 1, H	61.87	358	P	P	11 22 34.4	+0.1
	baz=177						
L57A	Andrews Acres	61.87	355	P	P	11 22 35.0	+0.6
	baz=174						
SFIN	Lafayette	61.88	346	P	P	11 22 34.1	-0.4
	baz=163						
N48A	Decatur	61.90	348	P	P	11 22 34.3	-0.3
	baz=165						
L59A	Walton	61.93	356	P	P	11 22 35.7	+0.9
	baz=176,SNR=6.0						
M52A	Chesterland	61.94	351	P	P	11 22 34.9	+0.1
	baz=169						
BINY	Binghamton	62.00	356	P	P	11 22 35.8	+0.5
	baz=175						
N47A	Urbana	62.06	347	P	P	11 22 35.4	-0.2
	baz=164						
L56A	Greenwood	62.07	354	P	P	11 22 34.0	-1.7
L56A	Greenwood	62.07	354	P	P	11 22 35.6	-0.1
	baz=173						
L61B	Northampton	62.09	358	P	P	11 22 36.4	+0.6
	baz=178						
HRV	Adam Dziewonsk	62.13	359	P	P	11 22 36.8	+0.7
	baz=179						
VNA3	Neumayer Olymp	62.13	161	P	P	11 22 37.6	+1.7
L53A	Girard	62.19	352	P	P	11 22 36.8	+0.3
	baz=170						
L55A	Hinsdale	62.20	354	P	P	11 22 37.4	+0.8
	baz=172,SNR=7.1						
M49A	Liberty Center	62.30	349	P	P	11 22 37.6	+0.4
	baz=166						
ERPA	Erie	62.32	352	P	P	11 22 36.2	-1.1
ERPA	Erie	62.32	352	P	P	11 22 38.3	+0.9
	baz=170						
K61A	Williamstown	62.33	358	P	P	11 22 38.7	+1.2
	baz=178						
L54A	Sinclairville	62.35	353	P	P	11 22 38.4	+0.8
	baz=171,SNR=8.6						
K59A	Cooperstown	62.51	357	P	P	11 22 39.8	+1.1
	baz=176,SNR=7.0						
K58A	Earlville	62.54	356	P	P	11 22 39.9	+1.1
	baz=175						
K57A	Scipio Center	62.57	355	P	P	11 22 39.4	+0.4
	baz=174						
K56A	Middlesex	62.61	355	P	P	11 22 39.9	+0.6
	baz=173						
K54A	Basiliko Farm,	62.65	353	P	P	11 22 40.3	+0.8
	baz=172,SNR=7.0						
K55A	Perry	62.70	354	P	P	11 22 40.5	+0.6
	baz=172						
VNA2	Neumayer--Watz	62.72	161	P	P	11 22 41.5	+1.8
	baz=280,slow=6.4						
L48A	N Adams	62.84	349	P	P	11 22 40.6	-0.2
	baz=166						
L49A	Milan	62.88	349	P	P	11 22 40.9	-0.1
	baz=166						
J60A	Lant Hill Farm	62.91	358	P	P	11 22 42.6	+1.4
	baz=177						
L47A	Sherwood	63.02	348	P	P	11 22 41.5	-0.4
	baz=165,SNR=5.5						
J58A	Remsen	63.11	356	P	P	11 22 43.5	+0.9
	baz=175						
J56A	Wolcott	63.14	355	P	P	11 22 43.8	+1.0
	baz=174						
J59A	Piesco	63.18	357	P	P	11 22 43.8	+0.8
	baz=176,SNR=6.7						
J57A	Williamstown	63.21	356	P	P	11 22 43.8	+0.6
	baz=175						
J55A	Hilton	63.21	354	P	P	11 22 44.0	+0.8
	baz=173						
J54A	Appleton	63.30	354	P	P	11 22 44.5	+0.7
	baz=172						
I58A	Old Forge	63.42	357	P	P	11 22 45.1	+0.4
	baz=176						
I59A	Olmsteadville	63.48	358	P	P	11 22 45.5	+0.5
	baz=177						
J52A	Paris	63.48	352	P	P	11 22 45.2	+0.1
	baz=170,SNR=6.6						
I60A	Shoreham	63.51	358	P	P	11 22 46.1	+1.0
	baz=178						
I64A	Boothbay	63.55	1	P	P	11 22 46.1	+0.7
	baz=181						
I61A	Oroboro, Fairl	63.57	359	P	P	11 22 46.2	+0.6
	baz=179,SNR=5.9						
K48A	Perry	63.61	349	P	P	11 22 46.2	+0.3
	baz=166						
I63A	Otisfield	63.67	0	P	P	11 22 46.7	+0.4
	baz=180						
I57A	Carthage	63.71	356	P	P	11 22 47.2	+0.7
	baz=175						
LBNH	Lisbon	63.87	359	P	P	11 22 48.5	+0.9
	baz=179						
J49A	Marlette	63.99	350	P	P	11 22 48.6	+0.2
	baz=167						
J48A	Bridge Port	64.04	350	P	P	11 22 48.6	-0.1
	baz=166						
I51A	Listowel	64.11	352	P	P	11 22 49.2	0.0
	baz=169						
H58A	Gabriels	64.11	357	P	P	11 22 49.9	+0.7
	baz=177,SNR=5.7						
I55A	Frankford	64.14	355	P	P	11 22 50.0	+0.7
	baz=173						
J47A	Sunmer	64.16	349	P	P	11 22 49.5	0.0
	baz=166						
H61A	Lyndonville	64.16	359	P	P	11 22 50.2	+0.7
	baz=179						
H62A	Milan	64.20	360	P	P	11 22 51.5	+1.7
	baz=180						
H60A	Morristown	64.20	359	P	P	11 22 50.4	+0.6
	baz=178						
ANMO	Albuquerque	64.21	328⇑e	P	P	11 22 50.7	+0.4
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.5s						
ANMO	Albuquerque	64.21	328	P	P	11 22 49.9	-0.4
	baz=143						
H57A	Richville	64.22	356	P	P	11 22 50.7	+0.8
	baz=175,SNR=5.5						
H64A	Troy	64.28	1	P	P	11 22 51.2	+1.0
	baz=182						
H63A	New Sharon	64.29	1	P	P	11 22 51.3	+1.0
	baz=181						
H59A	Cadyville	64.32	358	P	P	11 22 51.6	+1.0
	baz=177,SNR=5.4						
LONY	Lake Ozonia	64.33	357	P	P	11 22 51.5	+0.8
	baz=176,SNR=5.3						
SNAA	Sanae	64.34	161	P	P	11 22 52.1	+1.6
SNAA	Sanae	64.34	161*c i*	P	P	11 22 52.0	+1.5
SNAA	Sanae	64.34	161	P	P	11 22 50.1	-0.4
SNAA				IAmb	IAmb	11 22 54.0	
	comp=Z,33nm,1.3s						
H65A	Eastbrook	64.36	2	P	P	11 22 52.0	+1.2
	baz=183						
H56A	Elgin	64.41	356	P	P	11 22 51.8	+0.7
	baz=174						
CBKS	Cedar Bluff	64.41	335	P	P	11 22 52.6	+1.3
	baz=150						
H55A	Tweed	64.43	355	P	P	11 22 51.7	+0.5
	baz=174						
TUC	Tucson	64.50	323	P	P	11 22 51.3	-0.8
TUC				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TUC	Tucson	64.50	323	P	P	11 22 51.2	-0.8
TUC	Tucson	64.50	323	P	P	11 22 53.3	+1.2
	baz=138						
L40A	Anamosa	64.50	343	IAmb	IAmb	11 22 53.2	
	comp=Z,28nm,1.2s						
I49A	Point Hope	64.50	350	P	P	11 22 51.5	-0.2
	baz=168						
H53A	Bobcaygeon	64.58	354	P	P	11 22 52.3	+0.1
	baz=172						
G60A	Masonville	64.73	359	P	P	11 22 54.0	+0.7
	baz=178						
G59A	Clarenceville	64.74	358	P	P	11 22 54.3	+1.1
	baz=178						
G63A	Kingsbury	64.75	1	P	P	11 22 54.6	+1.3
	baz=181						
H52A	Wyevale	64.79	353	P	P	11 22 54.5	+0.9
	baz=171						
G57A	Newington	64.83	357	P	P	11 22 54.7	+0.8
	baz=176,SNR=5.7						
SADO	Sadowa	64.83	353	P	P	11 22 52.2	-1.6
G58A	Ormstown	64.84	357	P	P	11 22 54.5	+0.6
	baz=177						
G62A	West of Eustis	64.84	0	P	P	11 22 53.5	-0.4
G62A	West of Eustis	64.84	0	P	P	11 22 55.3	+1.4
	baz=180,SNR=7.3						
I48A	Sherman Twp	64.89	350	P	P	11 22 54.8	+0.6
	baz=167						
PKME	Peaks-Kenny Pk	64.90	1	P	P	11 22 53.5	-0.8
PKME				IAmb	IAmb	11 23 06.1	
	comp=Z,26nm,1.1s						
PKME	Peaks-Kenny Pk	64.90	1	P	P	11 22 55.4	+1.1
	baz=182						
G64A	Maxfield	64.90	2	P	P	11 22 55.2	+0.9
	baz=182						
G61A	St-Isidore-de-	64.91	359	P	P	11 22 55.6	+1.2
	baz=179,SNR=5.4						
I46A	Reed City	64.96	348	P	P	11 22 54.9	+0.2
	baz=165						
JFWS	Jewell Farm	65.04	344	IAmb	IAmb	11 23 02.7	
	comp=Z,16nm,1.1s						
JFWS	Jewell Farm	65.04	344	P	P	11 22 55.7	+0.4
	baz=160						
G55A	Calabogie	65.09	355	P	P	11 22 55.8	+0.2
	baz=174						
G53A	Haliburton	65.13	354	P	P	11 22 56.4	+0.6
	baz=172,SNR=8.3						
H48A	Harrisville	65.33	350	P	P	11 22 57.1	0.0
	baz=167						
F63A	Nahmakanta, Br	65.34	1	P	P	11 22 57.7	+0.5
	baz=182						
G54A	Lake Saint Pet	65.35	354	P	P	11 22 57.8	+0.5
	baz=173						
F60A	Warwick	65.60	359	P	P	11 22 59.9	+1.1
	baz=179						
I42A	Draeger Farm,	65.64	346	IAmb	IAmb	11 23 00.9	
	comp=Z,26nm,1.3s						
KSCO	Kaye Shedlock'	65.76	333	P	P	11 23 01.1	+0.9
	baz=147						
F52A	Sundridge	65.87	354	P	P	11 23 00.9	+0.3
	baz=171,SNR=5.8						
G47A	Hillman	65.87	350	P	P	11 23 01.1	+0.5
	baz=167						
ALGO	Algonquin Park	65.90	355	P	P	11 23 00.9	+0.1
	baz=173						
H43A	Windswept, Lux	65.93	347	IAmb	IAmb	11 23 08.3	
	comp=Z,33nm,1.4s						
SDCO	Great Sand Dun	65.99	330	P	P	11 23 03.1	+1.2
	baz=144,SNR=12						
E58A	La Victoria	66.03	358	P	P	11 23 02.7	+1.1
	baz=178						
E61A	Lac Etchemin	66.05	0	P	P	11 23 02.7	+0.9
	baz=180						
F51A	Arnstein	66.06	353	P	P	11 23 01.9	+0.1
	baz=171						
E63A	Oxbow	66.08	2	P	P	11 23 02.9	+1.0
	baz=182						
E64A	Bridgewater	66.10	2	P	P	11 23 02.8	+0.8
	baz=183						
E57A	Chemin Saint G	66.10	358	P	P	11 23 03.1	+1.0
	baz=177						
F49A	Sandfield	66.17	351	P	P	11 23 02.6	+0.1
	baz=169						
E56A	St. Veronique	66.27	357	P	P	11 23 03.6	+0.5
	baz=176,SNR=5.1						
E52A	Mattawa	66.29	354	P	P	11 23 03.6	+0.3
	baz=172						
E54A	Lac Daplat, Po	66.31	355	P	P	11 23 03.7	+0.3
	baz=174						
F48A	Evansville	66.32	351	P	P	11 23 03.7	+0.3
	baz=168						

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E51A  G1948 Merrick      66.62 354  P       P        11 23 05.8 +0.4
      baz=171
F45A  CMU Biological     66.65 349  P       P        11 23 05.7 +0.1
      baz=165
D57A  Chemin Vers le     66.70 358  P       P        11 23 06.7 +0.9
      baz=177,SNR=6.1
D62A  Allapoint, All     66.72   1  P       P        11 23 04.9 -1.1
D62A  Allapoint, All     66.72   1  P       P        11 23 06.6 +0.5
      baz=182
D58A  Chemin du LacG     66.74 358  P       P        11 23 06.9 +0.8
      baz=178,SNR=5.9
D56A  ZEC Mazanza, M     66.76 357  P       P        11 23 06.2 -0.1
      baz=176
D55A  Sainte-Anne-du     66.77 357  P       P        11 23 06.5 +0.1
      baz=175
D61A  St Aubert, Com     66.83   0  P       P        11 23 08.0 +1.3
      baz=181
D54A  Lac Fusel, La      66.98 356  P       P        11 23 07.9 +0.2
      baz=174
D53A  Lac Vacive, Po     66.99 355  IAmb    IAmb     11 23 09.1
      comp=Z,14nm,1.2s
D53A  Lac Vacive, Po     66.99 355  P       P        11 23 07.8 +0.1
      baz=173
MVCO  Mesa Verde         67.01 328  P       P        11 23 06.9 -1.5
MVCO  Mesa Verde         67.01 328  P       P        11 23 08.2 -0.2
      baz=142
E47A  Iron Bridge        67.03 351  P       P        11 23 08.1 +0.1
      baz=167
LATQ  La Tuque           67.03 359  P       P        11 23 08.2 +0.3
      baz=178
OGNE  Ogallala           67.14 335  P       P        11 23 09.6 +0.6
      baz=148
D51A  Lot 18 Range I     67.16 354  P       P        11 23 08.6 -0.1
      baz=171
WUAZ  Wupatki            67.21 325  P       P        11 23 08.8 -0.8
WUAZ                                IAmb    IAmb     11 23 24.3
      comp=Z,13nm,1.1s
WUAZ  Wupatki            67.21 325  P       P        11 23 10.9 +1.3
      baz=139
D50A  G1974 Best Tow     67.28 353  P       P        11 23 09.7 +0.1
      baz=171,SNR=7.3
GLA   Glamis             67.38 321  P       P        11 23 09.0 -1.6
GLA                                 pmax    pmax
      comp=Z,7.0nm,1.0s
GLA   Glamis             67.38 321  P       P        11 23 09.0 -1.6
D48A  Paudash Townsh     67.52 352  P       P        11 23 10.9 -0.2
      baz=169
D46A  Sault St. Mari     67.57 350  P       P        11 23 11.2 -0.2
      baz=167
D47A  Chapleau           67.59 351  P       P        11 23 11.4 -0.1
      baz=168
ECSD  EROS Data Cent     67.62 340  P       P        11 23 10.5 -1.4
ECSD                                IAmb    IAmb     11 23 14.0
      comp=Z,21nm,1.2s
ECSD  EROS Data Cent     67.62 340  P       P        11 23 11.6 -0.2
      baz=154,SNR=11
TAOE  Nuku Hiva Isla     67.63 268 eLR      LR       11 43 47.9
      comp=Z,174nm,24.9s
ISCO  Idaho Springs      67.71 332  P       P        11 23 14.6 +1.7
      baz=145
PDMCI Parker Dam,Lak     67.87 322  P       P        11 23 15.7 +2.2
      baz=136
IKP   In-Ko-Pah, Jac     67.87 320  P       P        11 23 15.9 +2.1
      baz=134
SWSC  Sam W. Stewart     67.89 320  P       P        11 23 15.9 +2.2
      baz=134
VLDQ  Val d'Or           67.99 355  P       P        11 23 13.0 -1.0
VLDQ                                IAmb    IAmb     11 23 15.8
      comp=Z,33nm,1.5s
BC3   Big Chuckawall     68.18 321  P       P        11 23 17.5 +1.8
      baz=135
PV22  Blue Mesa, Par     68.18 329  P       P        11 23 13.8 -2.0
PV22                                IAmb    IAmb     11 23 19.3
      comp=Z,14nm,1.5s
MONP2 Monument Peak      68.23 320  P       P        11 23 17.1 +1.0
      baz=134
BAR   Barrett            68.24 319  P       P        11 23 14.5 -1.5
BAR                                 IAmb    IAmb     11 23 28.0
      comp=Z,11nm,1.1s
IRM   Iron Mountain      68.35 321  P       P        11 23 17.7 +1.1
      baz=135
D41A  Chassel            68.57 347  IAmb    IAmb     11 23 30.1
      comp=Z,21nm,1.1s
N23A  Red Feather La     68.75 332  P       P        11 23 20.3 +1.0
      baz=145
PFO   Pinyon Flats O     68.75 320⇑eP       P        11 23 21.7 +2.4
PFO                                 pmax    pmax
      comp=Z,17nm,1.8s
PHWY  Pilot Hill         68.87 333  IAmb    IAmb     11 23 22.5
      comp=Z,23nm,1.6s
LSQQ  Lebel-sur-Quev     68.90 356  P       P        11 23 19.9 +0.2
      baz=174
NVL   N'lazarevskaya     68.93 159 eP       P        11 23 20.8 +1.1
NVL                                 pmax    pmax
      comp=Z,7.0nm,0.6s
GMRC  Granite Mounta     69.09 322  P       P        11 23 22.3 +1.0
      baz=135
KNB   Kanab              69.11 325  P       P        11 23 20.9 -0.6
KNB                                 pmax    pmax
      comp=Z,34nm,1.5s
KNB   Kanab              69.11 325  P       P        11 23 20.9 -0.6
O20A  White River Ci     69.18 330  P       P        11 23 23.4 +1.5
      baz=142
MTPU  Mount Pierson      69.53 326  P       P        11 23 23.8 -0.5
MATQ  Matagami           69.64 355  P       P        11 23 24.6 +0.4
      baz=173
LIC   Lamto              69.72  75 eP       P        11 23 24.5 -1.1
      comp=Z,50nm,1.3s
MSU   Marysvale          69.88 327  P       P        11 23 24.7 -1.6
MSU   Marysvale          69.88 327  P       P        11 23 24.7 -1.6
TIC   Toumodi            69.90  75 eP       P        11 23 25.6 -1.1
SHPR  Sheep Range        70.02 323  P       P        11 23 25.4 -1.8
KIC   Kosan Boka         70.04  75 eP       P        11 23 26.3 -1.2
      comp=Z,42nm,1.1s
DBIC  Dimbokro           70.06  75  P       P        11 23 26.8 -0.9
      comp=Z,13nm,0.9s,baz=223,slow=6.7,SNR=11
DBIC                                LR      LR       11 52 48.1
      comp=Z,438nm,19.7s,baz=225,slow=35
DBIC  Dimbokro           70.06  75  P       P        11 23 26.5 -1.2
DBIC                                pmax    pmax
      comp=Z,49nm,1.5s
DBIC  Dimbokro           70.06  75  P       P        11 23 26.5 -1.2
EYMN  Ely                70.06 345  P       P        11 23 26.9  0.0
      baz=159
GSC   Goldstone, Bar     70.12 321  P       P        11 23 28.7 +1.0
      baz=134
QSPA  South Pole Qui     70.25 180  P       P        11 23 27.7 -0.4
QSPA                                IAmb    IAmb     11 23 42.3
      comp=Z,14nm,1.1s
K22A  Casper             70.43 333  P       P        11 23 30.6 +1.2
      baz=144
RSSD  Black Hills        70.62 335  P       P        11 23 29.3 -1.4
RSSD                                pmax    pmax
      comp=Z,8.0nm,1.1s
RSSD  Black Hills        70.62 335  P       P        11 23 29.3 -1.4
RSSD  Black Hills        70.62 335  P       P        11 23 31.9 +1.2
      baz=147
TPNV  Topopah Spring     70.95 323  P       P        11 23 33.9 +1.1
      baz=135
FURC  Furnace Creek,     70.97 322  P       P        11 23 33.9 +1.2
      baz=134
MPMC  Manual Prospec     71.05 321  P       P        11 23 34.8 +1.3
      baz=134
ISA   Isabella, Lake     71.36 321  P       P        11 23 36.1 +0.9
      baz=133
DUG   Dugway, Tooele     71.46 327  P       P        11 23 34.5 -1.3
DUG                                 pmax    pmax
      comp=Z,17nm,1.3s
DUG   Dugway, Tooele     71.46 327  P       P        11 23 34.5 -1.3
DUG                                 IAmb    IAmb     11 23 50.6
      comp=Z,17nm,1.3s
DUG   Dugway, Tooele     71.46 327  P       P        11 23 38.1 +2.3
      baz=139,SNR=7.2
AGMN  Agassiz Nation     71.52 343  P       P        11 23 35.0 -0.8
AGMN  Agassiz Nation     71.52 343  P       P        11 23 36.6 +0.8
      baz=155
R11A  Troy Canyon, C     71.58 324  P       P        11 23 39.1 +2.5
      baz=136,SNR=6.6
CWC   Cottonwood Cre     71.66 321  P       P        11 23 38.9 +1.8
      baz=133
VES   Vestal, Richgr     71.85 320  P       P        11 23 40.1 +2.1
      baz=132
BW06  Boulder Array      71.86 331  P       P        11 23 39.8 +1.6
      baz=142
PD31  Pinedale Array     71.86 331  P       P        11 23 37.0 -1.3
PDAR  Pinedale Array     71.86 331  P       P        11 23 39.3 +1.0
      comp=Z,0.7nm,0.7s,baz=141,slow=5.2,SNR=8.0
PDAR                                LR      LR       11 56 27.2
      comp=Z,83nm,18.9s,baz=120,slow=37
PDAR  Pinedale Array     71.86 331  P       P        11 23 37.0 -1.3
TBI   Tubuai             72.28 251 eS       SKiKP    11 33 12.4 -3.2
      comp=Z,187nm,33.0s
TBI   Tubuai             72.28 251 eLR      LR       11 45 52.7
      comp=Z,386nm,25.8s
NVAR  Mina Array Bea     73.15 323  P       P        11 23 48.3 +2.2
      comp=Z,2.2nm,0.9s,baz=144,slow=5.8,SNR=10.0
NVAR  Mina Array Bea     73.15 323  P       P        11 23 45.5 -0.6
ULM   Lac du Bonnet      73.30 344  P       P        11 23 46.5 +0.2
      comp=Z,3.6nm,0.8s,baz=150,slow=7.1,SNR=7.0
ULM                                 LR      LR       11 57 53.8
      comp=Z,191nm,21.5s,baz=148,slow=37
IMW   Indian Meadow      73.37 331  P       P        11 23 45.3 -2.0
RLMT  Red Lodge          73.59 333  P       P        11 23 50.0 +1.5
      baz=143
LAO   LASA Array         73.61 335  P       P        11 23 49.6 +1.2
      baz=146,SNR=7.9
PPT2  Papeete2           73.90 257 eS       S        11 33 34.7  +13
      comp=Z,203nm,24.8s
PPT2  Papeete2           73.90 257 eLR      LR       11 46 38.5
      comp=Z,285nm,23.8s
GCMT  Greycliff          74.29 333  P       P        11 23 51.6 -0.8
DGMT  Dagmar             74.33 338  P       P        11 23 54.4 +1.9
      baz=148,SNR=5.5
SCHQ  Schefferville      74.54   2  P       P        11 23 53.5  0.0
      comp=Z,1.7nm,0.6s,baz=122,slow=13,SNR=2.8
SCHQ                                LR      LR       11 58 52.1
      comp=Z,101nm,19.4s,baz=280,slow=38
SCHQ  Schefferville      74.54   2  P       P        11 23 52.4 -1.2
SCHQ                                IAmb    IAmb     11 24 09.2
      comp=Z,17nm,1.4s
MCMT  McKenzie Canyo     74.97 330  P       P        11 23 56.2 -0.4
EGMT  Eagleton           76.10 334  P       P        11 24 01.9 -0.9
EGMT                                IAmb    IAmb     11 24 05.7
      comp=Z,24nm,1.4s
EGMT  Eagleton           76.10 334  P       P        11 24 03.7 +1.0
      baz=143
MSO   Missoula           76.98 331  P       P        11 24 09.7 +1.9
      baz=139
M04C  Macdoel            77.41 323  P       P        11 24 11.7 +1.4
      baz=132
M02C  Callahan           77.73 323  P       P        11 24 13.5 +1.4
      baz=131
VNDA  Vanda              78.06 190  P       P        11 24 15.8 +2.5
      comp=Z,1.9nm,1.0s,baz=148,slow=2.9,SNR=4.2
J05D  Fort Rock, OR      78.08 325  P       P        11 24 15.9 +1.9
      baz=132
TOA0  Torodi Ar. Sit     78.56  71  P       P        11 24 16.0 -1.2
TORD  Torodi Ar. Bea     78.56  71  P       P        11 24 16.4 -0.8
      comp=Z,22nm,0.9s,baz=252,slow=4.3,SNR=91
TORD                                LR      LR       11 57 24.1
      comp=Z,457nm,20.8s,baz=225,slow=35
TORD  Torodi Ar. Bea     78.56  71  P       P        11 24 15.5 -1.7
SYO   Syowa Base         78.59 160⇑ePcP     PcP      11 24 24.6 -0.7
I05D  Terrebonne, OR     78.85 326  P       P        11 24 19.8 +1.7
      baz=132
FFC   Flin Flon          78.98 342  P       P        11 24 17.7 -0.9
FFC                                 pmax    pmax
      comp=Z,7.0nm,1.5s
FFC   Flin Flon          78.98 342  P       P        11 24 17.7 -0.9
K02D  Willamette Mer     79.04 323  P       P        11 24 20.3 +1.1
      baz=130
H04D  Lebanon            79.72 325  P       P        11 24 23.3 +0.5
      baz=131
PNCL  Nicolau / Gran     82.16  45 eP       P        11 24 37.3 +1.3
PCVE  Castro Verde       82.23  45 eP       P        11 24 37.7 +1.3
      comp=Z,24nm,1.7s
TSUM  Tsumeb             82.24 108  P       P        11 24 38.1 +1.0
      comp=Z,16nm,1.1s,baz=250,slow=5.8,SNR=12
TSUM  Tsumeb             82.24 108  P       P        11 24 35.2 -1.9
TSUM                                IAmb    IAmb     11 24 39.2
      comp=Z,15nm,1.0s
PVAQ  Vaqueiros          82.33  46  P       P        11 24 34.6 -2.3
PVAQ                                IAmb    IAmb     11 24 44.4
      comp=Z,15nm,1.4s
PMTG  Montargil          82.88  44 eP       P        11 24 40.8 +1.1
      comp=Z,26nm,1.6s
PVIS  Viseu              83.98  43 eP       P        11 24 46.7 +1.2
      comp=Z,25nm,1.5s
MTE   Manteigas          84.04  43  P       P        11 24 44.7 -1.1
MTE                                 IAmb    IAmb     11 24 48.0
      comp=Z,29nm,1.3s
MTE   Manteigas          84.04  43 eP       P        11 24 46.9 +1.1
      comp=Z,35nm,1.3s
PCAB  Cabril             84.43  42 eP       P        11 24 48.4 +0.7
      comp=Z,21nm,1.4s
MVO   Moncorvo           84.77  43 eP       P        11 24 50.7 +1.2
      comp=Z,28nm,1.4s
PBRG  Braganca           85.30  42 eP       P        11 24 53.1 +1.0
      comp=Z,39nm,1.6s
PAB   San Pablo          85.69  45  P       P        11 24 53.4 -0.8
PAB                                 pmax    pmax
      comp=Z,14nm,1.1s
PAB   San Pablo          85.69  45  P       P        11 24 53.4 -0.8
PAB                                 IAmb    IAmb     11 24 55.8
      comp=Z,14nm,1.1s
TAM   Tamanrasset        85.76  64  P       P        11 24 54.2 -0.7
TAM                                 pmax    pmax
      comp=Z,31nm,1.3s
TAM   Tamanrasset        85.76  64  P       P        11 24 54.2 -0.7
TAM                                 IAmb    IAmb     11 24 57.9
      comp=Z,31nm,1.3s
BOSA  Boshof             85.79 119  P       P        11 24 55.7 +0.6
      comp=Z,7.5nm,1.1s,baz=240,slow=9.6,SNR=5.4
BOSA                                LR      LR       12 00 11.6
      comp=Z,212nm,19.4s,baz=212,slow=34
BOSA  Boshof             85.79 119  P       P        11 24 54.1 -1.0
BOSA                                pmax    pmax
      comp=Z,22nm,1.4s
BOSA  Boshof             85.79 119  P       P        11 24 54.1 -1.0
BOSA                                IAmb    IAmb     11 24 56.8
      comp=Z,22nm,1.4s
ESDC  Sonseca Array      86.02  45  P       P        11 24 56.5 +0.8
      comp=Z,0.8nm,0.3s,baz=235,slow=5.4,SNR=5.8
ESDC                                LR      LR       11 59 28.7
      comp=Z,105nm,21.0s,baz=235,slow=33
ESDC  Sonseca Array      86.02  45  P       P        11 24 55.4 -0.4
ESBB  Sonseca Array      86.02  45  P       P        11 24 54.3 -1.4
MAW   Mawson             86.33 164  P       P        11 24 58.6 +1.8
      comp=Z,12nm,1.2s,baz=229,slow=10.0,SNR=4.4
MAW                                 LR      LR       12 03 53.3
      comp=Z,121nm,18.6s,baz=233,slow=36
LBTB  Lobatse            87.33 116  P       P        11 25 03.4 +0.7
      comp=Z,3.0nm,0.7s,baz=202,slow=2.3,SNR=4.2
LBTB  Lobatse            87.33 116  P       P        11 25 01.6 -1.0
LBTB                                pmax    pmax
      comp=Z,8.0nm,1.2s
LBTB  Lobatse            87.33 116  P       P        11 25 01.6 -1.0
YKA   Yellowknife Ar     89.12 341  P       P        11 25 10.8 +0.8
      comp=Z,3.8nm,0.9s,baz=139,slow=5.0,SNR=44
YKA                                 LR      LR       12 08 24.8
      comp=Z,228nm,20.6s,baz=0.0,slow=38
MATP  Matopo             91.48 112  P       P        11 25 23.2 +0.9
      comp=Z,2.3nm,0.9s,baz=285,slow=10,SNR=4.1
KEST  Kesra              93.83  53  LR      LR       12 08 30.2
      comp=Z,274nm,20.2s,baz=202,slow=36
AFI   Afiamalu           95.29 253  LR      LR       11 57 51.3
      comp=Z,159nm,20.3s,baz=130,slow=29
TOLK  Toolik Lake Re    104.36 338  P       Pdif     11 26 20.1 +0.9
      baz=108
DZM   Mont Dzumac       110.17 236 eLR      LR       12 03 32.2
      comp=Z,210nm,22.7s
KIV   Kislovodsk        120.39  50 i PKIKP  PKiKP    11 31 07.5 +0.8
KIV                                 pmax    pmax
      comp=Z,36nm,1.1s
KIV                                 MLR     MLR
      comp=Z,255nm,22.0s
H11S2 WAKE ISLAND Hy    125.86 279  T       T        13 50 43.4
      baz=101,slow=74,SNR=125
H11S1 WAKE ISLAND Hy    125.87 279  T       T        13 50 44.0
      baz=101,slow=74,SNR=85
H11S3 WAKE ISLAND Hy    125.88 279  T       T        13 50 44.6
      baz=101,slow=74,SNR=78
H11N3 WAKE ISLAND Hy    125.91 280  T       T        13 50 50.3
      baz=101,slow=74,SNR=51
H11N2 WAKE ISLAND Hy    125.92 280  T       T        13 50 53.7
      baz=101,slow=74,SNR=46
H11N1 WAKE ISLAND Hy    125.92 280  T       T        13 50 47.5
      baz=101,slow=74,SNR=50
TIXI  Tiksi             127.02 352  PKP     PKiKP    11 31 18.9 +0.1
      comp=Z,1.9nm,0.8s,baz=42,slow=2.1,SNR=6.5
TIXI  Tiksi             127.02 352⇓ePKIKP   PKPdf    11 31 18.7 +0.4
TIXI  Tiksi             127.02 352          PKPdf    11 31 17.4 -0.9
ARU   Arti              127.86  33 i PKIKP  PKiKP    11 31 21.8 +0.9
ARU                                                  11 33 26.3
ARU                                                  11 38 32.7
SEY   Seymchan          127.95 337  PKP     PKiKP    11 31 21.9 +1.0
      comp=Z,5.4nm,1.0s,baz=116,slow=2.3,SNR=8.2
SEY   Seymchan          127.95 337⇑ePKIKP   PKPdf    11 31 20.6 +0.3
ASAR  Alice Springs     130.39 210  PKP     PKiKP    11 31 27.1 -0.1
      comp=Z,2.2nm,1.1s,baz=145,slow=2.3,SNR=9.4
ASAR  Alice Springs     130.39 210  PKIKP   PKPdf    11 31 26.2 -0.2
ASAR  Alice Springs     130.39 210          PKPdf    11 31 26.2 -0.2
ABKAR Akbulak array     131.21  41          PKiKP    11 31 28.2 +0.3
GEYT  Alibeck           132.48  56  PKP     PKPdf    11 31 29.8  0.0
      comp=Z,0.8nm,0.4s,baz=323,slow=9.4,SNR=3.6
GEYT  Alibeck           132.48  56          PKPdf    11 31 27.7 -2.1
WRA   Warramunga Arr    133.31 213  PKP     PKiKP    11 31 33.0 -0.1
      comp=Z,1.5nm,1.0s,baz=172,slow=1.9,SNR=5.0
WRA   Warramunga Arr    133.31 213  PKIKP   PKPdf    11 31 32.0  0.0
WRA   Warramunga Arr    133.31 213          PKPdf    11 31 31.9  0.0
BRVK  Borovoye          135.43  33⇓iPKIKP   PKiKP    11 31 36.5 +0.2
KKAR  Karatay Array     140.27  46  PKIKP   PKPdf    11 31 44.9 +0.8
KKAR  Karatay Array     140.27  46          PKPdf    11 31 44.9 +0.8
KURK  Kurchatov         140.97  31⇓iPKIKP   PKiKP    11 31 46.7 -1.0
KURK  Kurchatov         140.97  31          PKPdf    11 31 45.7 +0.7
ZAA0  Zalesovo Array    141.27  23          PKPdf    11 31 43.1 -2.4
ZALV  Zalesovo Beam     141.27  23  PKP     PKPdf    11 31 46.6 +1.1
      comp=Z,3.8nm,0.6s,baz=283,slow=2.2,SNR=15
ZALV  Zalesovo Beam     141.27  23  PKIKP   PKPdf    11 31 43.7 -1.8
ZALV  Zalesovo Beam     141.27  23          PKPdf    11 31 43.6 -1.8
AAK   Ala-Archa         143.12  44⇑ePKIKP   PKPdf    11 31 49.2 -0.2
AAK   Ala-Archa         143.12  44          PKPbc    11 31 47.9 +1.6
ZEA   Zeya              143.50 342 ePKIKP   PKPdf    11 31 50.7 +1.2
ZEA                                 pmax    pmax
      comp=Z,12nm,1.0s
BOOM  Boomskoye usch    144.13  44  PKIKP   PKPbc    11 31 50.2 +0.9
BOOM  Boomskoye usch    144.13  44          PKPbc    11 31 50.2 +0.9
MAKZ  Makanchi          145.21  33  PKIKP   PKPab    11 31 52.6 +0.2
MAKZ  Makanchi          145.21  33          PKPab    11 31 52.6 +0.2
NIL   Nilore            145.35  59  PKIKP   PKPbc    11 31 53.2  0.0
NIL   Nilore            145.35  59          PKPbc    11 31 53.2  0.0
MKAR  Makanchi Array    145.38  33  PKPbc   PKPab    11 31 54.0 +0.9
      comp=Z,18nm,1.0s,baz=344,slow=1.8,SNR=80
MKAR  Makanchi Array    145.38  33  PKIKP   PKPab    11 31 54.0 +0.9
KSH   Kashi             145.48  48  PKPbc   PKPab    11 31 54.8 +1.0
KSH                                 PP      PP       11 35 16.8 +3.0
KSH                                 PKS     PKSdf    11 35 27.4 -1.7
KSH                                 SKKS             11 42 07.3
KSH                                 AMB     AMB
      comp=Z,340nm,4.9s
KSH                                 LR      LR
      comp=Z,190nm,11.4s
KSH                                 LR      LR
      comp=Z,200nm,10.2s
KSH                                 LR      LR
      comp=Z,110nm,11.2s
KLR   Kul'dur           145.62 334  PKPbc   PKPab    11 31 54.8 +0.9
      comp=Z,13nm,1.1s,baz=39,slow=3.6,SNR=20
KLR   Kul'dur           145.62 334⇑ePKP2    PKPab    11 31 53.9 +0.1
MOY   Mondy             147.69  10 ePKP2    PKiKP    11 32 01.5 -0.2
MOY                                 pmax    pmax
      comp=Z,30nm,1.6s
TLY   Talaya            148.03   6  PKPbc   PKPbc    11 31 59.4 -1.0
      comp=Z,2.8nm,0.8s,baz=187,slow=1.8,SNR=9.7
TLY   Talaya            148.03   6⇑ePKIKP   PKPdf    11 31 58.0 +0.7
TLY   Talaya            148.03   6          PKPbc    11 31 59.1 -1.3
USRK  Ussuriysk Ar.     149.22 327  PKPbc   PKiKP    11 32 05.5 +0.6
      comp=Z,15nm,1.1s,baz=90,slow=0.6,SNR=15
USRK  Ussuriysk Ar.     149.22 327  PKP2    PKiKP    11 32 05.1 +0.2
USRK  Ussuriysk Ar.     149.22 327          PKiKP    11 32 05.1 +0.2
ZAK   Zakamensk         149.27   7 ePKP2    PKPbc    11 32 04.2 +0.4
ZAK                                 pmax    pmax
      comp=Z,10.0nm,1.3s
MJAR  Matsushiro Arr    149.68 309  PKPbc   PKiKP    11 32 06.6 +0.4
      comp=Z,11nm,1.1s,baz=134,slow=0.8,SNR=21
MJAR  Matsushiro Arr    149.68 309  PKP2    PKiKP    11 32 05.8 -0.3
MJAR  Matsushiro Arr    149.68 309          PKiKP    11 32 05.8 -0.3
MAJO  Matsushiro        149.68 309⇓iPKP2    PKiKP    11 32 06.6 +0.5
MAJO  Matsushiro        149.68 309          PKPdf    11 31 59.2 -1.3
MAT   Matsushiro        149.68 309  PKP     PKPbc    11 32 03.1 -2.0
WMQ   Urumqi            150.19  32 ePKPbc   PKPdf    11 32 00.3 -0.8
WMQ                                 AMB     AMB
      comp=Z,63nm,4.1s
WMQ                                 LR      LR
      comp=Z,300nm,24.1s
WMQ                                 LR      LR
      comp=Z,150nm,22.1s
HYB   Hyderabad         150.93  90 i PKP    PKPbc    11 32 09.0 +0.4
SONM  Songino Array     152.08   4  PKP     PKPdf    11 32 05.4 +1.4
      comp=Z,1.8nm,1.1s,baz=181,slow=1.0,SNR=8.3
SONM                                PKPbc   PKiKP    11 32 11.8 +0.9
      comp=Z,5.8nm,0.8s,baz=318,slow=1.4,SNR=22
SONM  Songino Array     152.08   4  PKIKP   PKiKP    11 32 11.8 +0.9
SONM                                                 11 32 21.8
SONM  Songino Array     152.08   4          PKPdf    11 32 05.0 +1.1
SONM                                PKPbc   PKiKP    11 32 11.8 +0.9
SONM                                        sPKPbc   11 32 21.8 +0.6
KSRS  Korea Array       156.08 321  PKP     PKPdf    11 32 10.1 +0.4
      comp=Z,2.1nm,0.9s,baz=270,slow=2.0,SNR=5.7
KSAR  Wonju Array Be    156.11 321  PKIKP   PKPdf    11 32 10.9 +1.1
KSAR  Wonju Array Be    156.11 321          PKPdf    11 32 10.9 +1.1
GTA   Gaotai            158.99  21 ePKP     PKPdf    11 32 14.8 +1.3
HHC   Hu-ho-hao-te      159.05 355 ePKP     PKPdf    11 32 09.3 -4.2
LZH   Lanzhou           163.25  15 ePKP     PKPdf    11 32 15.1 -3.1
LZH                                 pPKP    pPKPdf   11 32 23.5 -2.6
LZH                                 sPKP             11 32 27.8
LZH                                 LR      LR
      comp=Z,140nm,17.9s
LZH                                 LR      LR
      comp=Z,140nm,18.1s
LZH                                 LR      LR
      comp=Z,200nm,20.1s
NJ2   Nanjing           165.12 326 ePKP     PKPdf    11 32 19.3 -0.4
XAN   Xi'an             165.95   1  PKP     PKPdf    11 32 22.3 +1.9
XAN                                 pPKP    pPKPdf   11 32 28.5 +0.1
XAN                                 LR      LR
      comp=Z,310nm,23.9s
XAN                                 LR      LR
      comp=Z,290nm,22.8s
XAN                                 LR      LR
      comp=Z,510nm,28.4s
CD2   Chengdu           168.04  23  PKP     PKPdf    11 32 21.0 -1.1
WHN   Wuhan             168.44 337  PKPbc   PKPdf    11 32 32.8  +11
CMAR  Chiang Mai Arr    170.25  97  PKP     PKPdf    11 32 24.9 +1.1
      comp=Z,0.5nm,0.3s,baz=278,slow=1.0,SNR=4.6
CMAR                                PKPab   PKPab    11 33 40.4 +0.5
      comp=Z,0.6nm,0.2s,baz=262,slow=5.3,SNR=5.8
CMAR  Chiang Mai Arr    170.25  97  PKIKP   PKPdf    11 32 24.5 +0.7
CMAR                                                 11 33 39.7
CMAR  Chiang Mai Arr    170.25  97          PKPdf    11 32 24.5 +0.7
CMAR                                PKPab   PKPab    11 33 39.7 -0.2
GYA   Guiyang           173.12  19 ePKP     PKPdf    11 32 23.6 -1.5
GYA                                 PKPab   PKPab    11 33 53.3 +1.1
GYA                                 PKS     PKSdf    11 35 54.0 -3.6
GYA                                 PP      PP       11 37 45.8 +3.1
GYA                                 AMB     AMB
      comp=Z,120nm,8.2s
```

IDC ***17*** *11:12:33.4±0.8, 50°.87N×73°.65E, h0km, mb3.5/2, mb1 3.5/8, mb1mx3.3/62, mbtmp3.4/8, ML2.8/6, MS3.2/2, Ms1 3.2/2, ms1mx2.4/37, Error ellipse: s-maj=13.8km s-min=8.3km az=26.0*

NNC ***17*** *11:12:34.0±1.1, 50°.79N×73°.69E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=14.3km s-min=10.0km az=24.0, Suspected Mining explosion.*

ISC 17 11:12:32.4±0.8**, 50°.95N**±0°.07×**73°.45E**±0°.07**, h0km, n18, σ1ˢ17**/16**, 8C-7D, Central Kazakhstan**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time       Res
                                     Op      ISC       h  m  s    ISC
BVAR  Borovoye Array     2.81 319   Pn      Pb       11 13 22.1 -1.5
      2.3nm,0.3s,baz=135,slow=17,SNR=32
BVAR                                Lg      Lg       11 14 07.2
      5.5nm,0.3s,baz=132,slow=29,SNR=12
BRVK  Borovoye           2.88 318  ⇑Pn      Pb       11 13 25.9 +1.2
      9.2nm,0.7s
BRVK                               ⇑Lg      Lg       11 14 06.2
      145nm,0.8s
KURBB Kurchatov Arra     3.24  94   Pn      Pn       11 13 24.2 -0.3
      0.2nm,0.3s,baz=278,slow=14,SNR=39
KURBB                               Lg      Lg       11 14 10.2
      0.6nm,0.3s,baz=278,slow=30,SNR=12
KURBB Kurchatov Arra     3.24  94  ⇓Pn      Pn       11 13 24.2 -0.3
      25nm,0.6s
KURBB                              ⇓Lg      Lg       11 14 12.9
      304nm,0.8s
```

KURK	**Kurchatov**	**3.29**	**92**	⇓Pn	**Pn**	**11 13 24.4**	**-0.7**
	9.2nm,0.7s						
KURK				⇑Lg	Lg	11 14 12.6	
	93nm,0.9s						
MAKZ	**Makanchi**	**6.98**	**123**	⇑Pg	**Pb**	**11 14 35.6**	**+1.0**
	2.7nm,0.8s						
MAKZ				⇓Lg	Lg	11 16 06.6	
	27nm,0.9s						
MK31	**Makanchi Array**	**7.16**	**122**	⇓Pg	**Pb**	**11 14 38.9**	**+1.4**
	1.5nm,0.5s,baz=300,slow=12,SNR=5.4						
MK31				⇑Lg	Lg	11 16 13.0	
	20nm,0.8s,baz=318,slow=29,SNR=7.9						
MKAR	**Makanchi Array**	**7.16**	**122**	Pn	**Pn**	**11 14 17.3**	**-1.1**
	0.1nm,0.3s,baz=308,slow=11,SNR=3.6						
MKAR				Lg	Lg	11 16 12.2	
	0.6nm,0.3s,baz=324,slow=27,SNR=5.6						
ZALV	**Zalesovo Beam**	**7.57**	**62**	Pn	**Pn**	**11 14 23.7**	**-0.2**
	0.3nm,0.3s,baz=250,slow=15,SNR=7.3						
ZALV				Sn	**Sn**	**11 15 49.4**	**-0.9**
	0.3nm,0.3s,baz=250,slow=21,SNR=6.3						
ZALV				Lg	Lg	11 16 30.5	
	0.4nm,0.3s,baz=250,slow=21,SNR=1.5						
CHMS	**Chumysh**	**8.00**	**173**	⇓Lg	Lg	11 16 44.0	
	21nm,1.1s						
KK31	**Karatay Array**	**8.10**	**195**	⇑Pn	**Pn**	**11 14 28.7**	**-2.6**
	1.5nm,0.8s,baz=12,slow=11,SNR=3.6						
KK31				⇓Sn	**Sn**	**11 16 04.3**	**+0.8**
	4.1nm,1.1s						
KK31				⇑Lg	Lg	11 16 51.5	
	4.7nm,0.7s,baz=18,slow=30,SNR=2.7						
AAK	**Ala-Archa**	**8.35**	**175**	Pn	**Pn**	**11 14 34.5**	**-0.3**
	0.3nm,0.3s,baz=89,slow=8.9,SNR=2.3						
AAK				Lg	Lg	11 16 52.8	
	0.3nm,0.3s,baz=224,slow=22,SNR=3.6						
AAK	**Ala-Archa**	**8.35**	**175**	⇑Lg	Lg	11 16 56.9	
	38nm,1.2s						
AKTO	**Aktyubinsk**	**9.81**	**273**	Pn	**Pn**	**11 14 55.6**	**+0.9**
	0.4nm,0.3s,baz=84,slow=13,SNR=5.0						
AKTO				Lg	Lg	11 17 45.5	
	0.0nm,0.3s,baz=220,slow=5.7,SNR=3.6						
YAK	**Yakutsk**	**31.92**	**48**	LR	LR	11 32 37.5	
	comp=Z,22nm,20.3s,baz=95,slow=38						
ATD	**Arta Tunnel**	**46.58**	**223**	LR	LR	11 42 26.9	
	comp=Z,62nm,19.3s,baz=34,slow=38						
ILAR	**Eielson Array**	**60.45**	**19**	P	**P**	**11 22 43.6**	**+0.3**
	0.3nm,0.5s,baz=326,slow=5.7,SNR=12						
YKA	**Yellowknife Ar**	**66.72**	**4**	P	**P**	**11 23 25.1**	**+0.4**
	0.3nm,0.8s,baz=357,slow=6.7,SNR=7.6						

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*NEIC **17** 11:15:15.2±0.6,3°.76N±0°.08×126°.2E±0°.1,h111^{km}±10^{km}, mb4.4/19,Error ellipse: s-maj=21.3km s-min=9.3km az=67.0*

*MAN **17** 11:15:15.6,3°.76N×126°.25E,h100^{km},mb5.0,ML3.9, MS3.9*

*IDC **17** 11:15:16.4±2.8,3°.71N×126°.12E,h119^{km}±31^{km},mb4.0/6, mb1 4.1/7,mb1mx3.5/49,mbtmp4.4/7,MS3.7/2,Ms1 3.7/2, ms1mx2.6/34,Error ellipse: s-maj=59.0km s-min=17.9km az=73.0*

*DJA **17** 11:15:16.6±0.7,4°N±6°×12°6E±°,h125^{km}±8^{km},M4.6/11, mb4.5/8,mB5.1/5,MLv4.7/11,Mw(mB)4.5/5*

ISC 17 11:15:14.9±0.6,**3°.72N**±0°.04×**126°.29E**±0°.06,**h100**^{km}**,n51,** σ**1^{s}56**/60,**mb4.5**/14,**1C-2D,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**2.43**	**346**	*e*P	**Pn**	**11 15 54.1**	**+0.9**
DDMP				*e*S	**Sn**	**11 16 22.2**	**-0.3**
GSPH	**General Santos**	**2.70**	**331**	⇓*i*P	**Pn**	**11 15 56.9**	**+0.1**
GSPH				*i* S	**Sn**	**11 16 27.9**	**-1.1**
TNTI	**Ternate**	**3.12**	**160**	P	**Pn**	**11 16 04.5**	**+2.2**
TNTI				S	**Sn**	**11 16 40.6**	**+1.7**
TNTI	**Ternate**	**3.12**	**160**		**Pn**	**11 16 04.7**	**+2.3**
TNTI				Sn	**Sn**	**11 16 40.9**	**+2.0**
MATI	**Mati**	**3.20**	**359**	*e*P	**Pn**	**11 16 04.0**	**+0.6**
MATI				*e*S	**Sn**	**11 16 41.9**	**+1.2**
SKMP	**Bagumbayan, Su**	**3.28**	**328**	*e*P	**Pn**	**11 16 05.7**	**+1.3**
SKMP				*e*S	**Sn**	**11 16 42.5**	**0.0**
DAV	**Davao City (W)**	**3.40**	**348**	P	**Pn**	**11 16 08.1**	**+2.1**
	47nm,0.3s,baz=58,slow=3.1,SNR=1.2						
DAV	**Davao City (W)**	**3.40**	**348**		**Pn**	**11 16 06.1**	**+0.1**
DMPH	**Davao City--Mi**	**3.43**	**347**	⇓*e*P	Pn	11 16 13.3	+6.9
DMPH				*e*S	**Sn**	**11 16 50.9**	**+4.7**
KMSI	**Cibinong**	**3.88**	**216**	P	**Pn**	**11 16 14.9**	**+2.4**
KMSI				S	**Sn**	**11 16 59.2**	**+2.0**
CTBH	**Cotabato--PC H**	**4.03**	**330**	⇑*i*P	**Pn**	**11 16 15.6**	**+1.2**
BUKP	**Musuan**	**4.30**	**344**	*e*P	**Pn**	**11 16 20.0**	**+1.8**
BUKP				*e*S	**Sn**	**11 17 08.7**	**+1.3**
LBMI	**Labuha**	**4.50**	**164**	P	**Pn**	**11 16 23.2**	**+2.4**
LBMI				S	**Sn**	**11 17 13.5**	**+1.4**
MRSI	**Marisa**	**5.41**	**234**	P	**Pn**	**11 16 36.1**	**+3.0**
	0.8nm3µm170nm,0.5s						
MRSI				S	**Sn**	**11 17 35.9**	**+1.8**
	0.8nm3µm170nm,0.5s						
SANI	**Sanana**	**5.74**	**183**	P	**Pn**	**11 16 37.0**	**-0.7**
	1.0nm6µm74nm,0.9s						
SANI				S	**Sn**	**11 17 36.7**	**-5.6**
	1.0nm6µm74nm,0.9s						
LUWI	**Luwuk**	**5.89**	**217**	P	Pn	11 16 45.5	+5.8
NLAI	**Namlea**	**6.96**	**173**	P	**Pn**	**11 16 54.3**	**0.0**
	2.6nm6µm218nm,0.6s						
MPSI	**Mapaga**	**7.21**	**242**	P	**Pn**	**11 16 57.9**	**+0.2**
	0.1nm505nm13nm,0.9s						
AAI	**Ambon**	**7.60**	**165**	P	**Pn**	**11 17 02.8**	**-0.2**
	0.2nm33nm,0.5s						
FAKI	**Fak Fak**	**8.89**	**138**	Pn	**Pn**	**11 17 22.6**	**+2.0**
TTSI	**Tana Toraja**	**9.32**	**224**	P	**Pn**	**11 17 29.3**	**+2.9**
	17nm,0.8s						
KKM	**Kota Kinabalu**	**10.29**	**283**	Pn	**Pn**	**11 17 39.4**	**-0.4**
PLAI	**Plampang**	**15.08**	**214**	P	**Pn**	**11 18 43.5**	**+0.8**
	29nm,1.0s						
MTN	**Manton Dam**	**17.15**	**164**	P	**Pn**	**11 19 06.8**	**-1.6**
MTN				IAmb	IAmb	11 19 07.8	
	comp=Z,12nm,0.9s						
KNRA	**Kununurra**	**19.43**	**173**	P	**P**	**11 19 33.5**	**0.0**
YOJ	**Yonaguni jima**	**20.86**	**352**	P	**P**	**11 19 48.6**	**-0.2**
FITZ	**Fitzroy Crossi**	**21.69**	**182**	P	**P**	**11 19 57.5**	**-0.3**
	comp=Z,16nm,0.7s,baz=154,slow=0.2,SNR=36						
FITZ	**Fitzroy Crossi**	**21.69**	**182**	P	**P**	**11 19 57.7**	**-0.1**
FITZ				IAmb	IAmb	11 20 00.8	
	comp=Z,16nm,0.8s						
COEN	**Coen**	**24.27**	**137**	P	**P**	**11 20 23.1**	**+0.2**
COEN				IAmb	IAmb	11 20 24.2	
	comp=Z,10nm,1.1s						
WB0	**Warramunga Arr**	**24.67**	**161**	P	**P**	**11 20 26.2**	**-0.3**
WB0				IAmb	IAmb	11 20 28.2	
	comp=Z,19nm,0.8s						
WRAB	**Tennant Creek**	**24.81**	**162**	P	**P**	**11 20 27.6**	**-0.2**
WRAB				IAmb	IAmb	11 20 29.7	
	comp=Z,22nm,0.9s						
WRA	**Warramunga Arr**	**24.81**	**162**	P	**P**	**11 20 27.6**	**-0.2**
	comp=Z,14nm,0.7s,baz=342,slow=9.9,SNR=52						
WRA	**Warramunga Arr**	**24.81**	**162**	P	**P**	**11 20 27.7**	**-0.2**
WB2	**Warramunga Arr**	**24.82**	**162**	P	**P**	**11 20 27.7**	**-0.1**
WB2				IAmb	IAmb	11 20 29.8	
	comp=Z,22nm,0.8s						
WR0	**Warramunga Arr**	**24.89**	**161**	P	**P**	**11 20 28.6**	**0.0**
WR0				IAmb	IAmb	11 20 30.6	
	comp=Z,12nm,0.9s						
PSA00	**Pilbara Seismi**	**25.92**	**194**	P	**P**	**11 20 37.2**	**-0.7**
PSA00				IAmb	IAmb	11 20 38.3	
	comp=Z,14nm,0.7s						
AS31	**Alice Springs**	**28.22**	**165**	P	**P**	**11 20 58.3**	**-0.1**
ASAR	**Alice Springs**	**28.22**	**165**	P	**P**	**11 20 58.2**	**-0.3**
	comp=Z,2.5nm,0.6s,baz=344,slow=7.4,SNR=65						
ASAR				PcP	**PcP**	**11 24 09.4**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=354,slow=2.7,SNR=3.4						
ASAR	**Alice Springs**	**28.22**	**165**	P	**P**	**11 20 58.3**	**-0.1**
CMAR	**Chiang Mai Arr**	**30.49**	**301**	LR	LR	11 34 20.9	
	comp=Z,24nm,19.3s,baz=10,slow=38						
NWAO	**Narrogin (SRO)**	**37.45**	**193**	P	**P**	**11 22 18.0**	**-0.6**
	comp=Z,9.6nm,0.8s,baz=32,slow=7.9,SNR=5.6						
NWAO	**Narrogin (SRO)**	**37.45**	**193**	P	**P**	**11 22 17.9**	**-0.7**
BBOO	**Buckleboo**	**37.50**	**166**	P	**P**	**11 22 19.1**	**+0.1**
EIDS	**Eidsvold**	**37.62**	**142**	P	**P**	**11 22 19.9**	**-0.3**
EIDS				IAmb	IAmb	11 22 21.0	
	comp=Z,4.4nm,0.8s						
STKA	**Stephens Creek**	**38.28**	**159**	P	**P**	**11 22 26.2**	**+0.6**
	comp=Z,3.4nm,0.6s,baz=325,slow=7.4,SNR=9.9						
STKA	**Stephens Creek**	**38.28**	**159**	P	**P**	**11 22 25.9**	**+0.3**
ARMA	**Armidale**	**41.70**	**146**	P	**P**	**11 22 54.6**	**+0.5**
ARMA				IAmb	IAmb	11 23 02.7	
	comp=Z,14nm,1.4s						
MK31	**Makanchi Array**	**57.31**	**325**	P	**P**	**11 24 51.4**	**-1.0**
MKAR	**Makanchi Array**	**57.31**	**325**	P	**P**	**11 24 50.9**	**-1.5**
	comp=Z,0.4nm,0.5s,baz=109,slow=7.9,SNR=4.3						
VNDA	**Vanda**	**83.47**	**173**	P	**P**	**11 27 30.9**	**-0.1**
FINES	**FINESS Array B**	**91.63**	**332**	LR	LR	12 13 49.6	
	comp=Z,181nm,18.6s,baz=220,slow=38						

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*NEIC **17** 11:16:32.8±1.6,19°.93S±0°.08×71°.02W±0°.06,h10^{km}±2^{km}, mb4.2/4,ML4.0(GUC),Error ellipse: s-maj=15.7km s-min=5.0km az=323.0*

*IDC **17** 11:16:33.9±1.5,19°.95S×70°.79W,h0^{km},mb3.8/3, mb1 4.1/5,mb1mx3.8/35,mbtmp4.0/5,ML3.8/2,Error ellipse: s-maj=42.9km s-min=18.0km az=62.0*

*SJA **17** 11:16:35.3±0.7,19°.97S×70°.83W,h26^{km}±2^{km},ML3.6, MW3.6*

*GUC **17** 11:16:36.9±0.5,19°.95S×70°.90W,h32^{km}±1^{km},ML4.0*

ISC 17 11:16:33.5±1.7,**19°.95S**±0°.02×**70°.90W**±0°.05,**h6**^{km}±10^{km}, **n46,**σ**0^{s}99**/69,**mb4.2**/5,**4C-4D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.81**	**64**	⇓*i*P	**Pb**	**11 16 50.5**	**+0.3**
PSGC				*e*S	**Sb**	**11 17 01.5**	**0.0**
PSGCX	**Pisagua**	**0.81**	**64**	*i* P	**Pb**	**11 16 50.5**	**+0.3**
PSGCX				*e*S	**Sb**	**11 17 01.5**	**+0.1**
TA01	**Diego Aracena**	**0.91**	**132**	⇓*i*P	**Pg**	**11 16 52.1**	**+1.0**
TA01				*e*S	**Sb**	**11 17 04.5**	**+0.3**
TA01				IAML		11 17 05.8	
	comp=E,8µm,0.2s						
PATCX	**Punta Patache**	**1.11**	**141**	⇑*i*P	**Pb**	**11 16 55.5**	**+0.2**
PATCX				*e*S	**Sb**	**11 17 10.0**	**-0.1**
PATCX				IAML		11 17 11.9	
	comp=N,5µm,0.3s						
PATCX	**Punta Patache**	**1.11**	**141**	*i* P	**Pb**	**11 16 55.6**	**+0.3**
PATCX				*e*S	**Sn**	**11 17 11.0**	**-0.6**
PB11	**IPOC Station P**	**1.19**	**81**	⇓*i*P	**Pb**	**11 16 56.7**	**+0.1**
PB11				*e*S	**Sn**	**11 17 12.2**	**-1.2**
PB11				IAML		11 17 13.3	
	comp=E,8µm,0.2s						
PB11	**IPOC Station P**	**1.19**	**81**	Pn	**Pb**	**11 16 56.7**	**+0.1**
PB11				Sn	**Sn**	**11 17 12.4**	**-1.1**
PB11	**IPOC Station P**	**1.19**	**81**	*i* P	**Pn**	**11 16 56.9**	**0.0**
PB11				*e*S	**Sn**	**11 17 12.0**	**-1.4**
PB12	**IPOC Station P**	**1.44**	**22**	*e*P	**Pn**	**11 17 00.7**	**+0.5**
PB12				*i* S	**Sn**	**11 17 18.8**	**-0.7**
PB12				IAML		11 17 26.9	
	comp=E,4µm,0.6s						
PB12	**IPOC Station P**	**1.44**	**22**	*i* P	**Pn**	**11 17 01.4**	**+1.1**
PB12				*e*S	**Sn**	**11 17 19.3**	**-0.1**
GO01	**Chusmiza**	**1.63**	**80**	⇑*i*P	**Pb**	**11 17 04.3**	**0.0**
GO01				*e*S	**Sg**	**11 17 25.7**	**-0.4**
GO01	**Chusmiza**	**1.63**	**80**	Pn	**Pb**	**11 17 04.2**	**-0.1**
GO01				Sn	**Sg**	**11 17 25.3**	**-0.7**
PB08	**IPOC Station P**	**1.65**	**97**	⇑*i*P	**Pb**	**11 17 04.5**	**-0.2**
PB08				*e*S	**Sg**	**11 17 25.8**	**-1.0**
PB08				IAML		11 17 32.5	
	comp=N,3µm,0.5s						
PB08	**IPOC Station P**	**1.65**	**97**	*i* P	**Pb**	**11 17 04.5**	**-0.2**
PB08				*e*S	**Sg**	**11 17 25.8**	**-1.0**
PB02	**IPOC Station P**	**1.66**	**146**	*e*P	**Pn**	**11 17 03.7**	**+0.4**
PB02				*i* S	**Sn**	**11 17 24.8**	**-0.1**
PB02	**IPOC Station P**	**1.66**	**146**	*i* P	**Pn**	**11 17 03.8**	**+0.5**
PB02				*e*S	**Sn**	**11 17 25.0**	**+0.1**
AP01	**Chacalluta**	**1.66**	**19**	*e*P	**Pb**	**11 17 05.1**	**+0.6**
AP01				*i* S	**Sn**	**11 17 24.9**	**+0.1**
PB01	**IPOC Station P**	**1.71**	**130**	⇓*i*P	**Pn**	**11 17 05.1**	**+1.0**
PB01				*e*S	**Sb**	**11 17 26.4**	**-1.0**
PB01				IAML		11 17 33.1	
	comp=E,3µm,0.2s						
PB01	**IPOC Station P**	**1.71**	**130**	Pn	**Pn**	**11 17 04.8**	**+0.8**
PB01	**IPOC Station P**	**1.71**	**130**	*i* P	**Pn**	**11 17 05.0**	**+0.9**
PB01				*e*S	**Sb**	**11 17 26.6**	**-0.8**
PB07	**IPOC Station P**	**2.00**	**152**	*e*P	**Pn**	**11 17 08.5**	**+0.4**
PB07				IAML		11 17 51.2	
	comp=E,1µm,0.4s						
PB16	**IPOC Station P**	**2.08**	**40**	⇑*i*P	**Pb**	**11 17 12.0**	**0.0**
PB16				*i* S	**Sb**	**11 17 37.9**	**-0.5**
PB16				IAML		11 17 44.4	
	comp=N,912nm,0.4s						
PB16	**IPOC Station P**	**2.08**	**40**	*i* P	**Pb**	**11 17 11.9**	**-0.1**
PB16				*e*S	**Sg**	**11 17 39.5**	**-1.0**
PB03	**IPOC Station P**	**2.35**	**153**	*i* P	**Pn**	**11 17 12.8**	**0.0**
PB03				*e*S	**Sb**	**11 17 46.6**	**+0.9**
PB09	**IPOC Station P**	**2.40**	**140**	*i* P	**Pn**	**11 17 15.5**	**+1.9**
PB04	**IPOC Station P**	**2.47**	**164**	Pn	**Pn**	**11 17 14.1**	**-0.5**
PB04	**IPOC Station P**	**2.47**	**164**	*i* P	**Pn**	**11 17 14.0**	**-0.6**
PB05	**IPOC Station P**	**2.96**	**167**	*i* P	**Pn**	**11 17 20.1**	**-1.1**
PB06	**IPOC Station P**	**3.01**	**156**	*i* P	**Pn**	**11 17 21.5**	**-0.4**
LVC	**Limon Verde**	**3.23**	**145**	Pn	**Pn**	**11 17 26.4**	**+1.2**
	comp=N,4.6nm,0.3s,baz=321,slow=12,SNR=0.9						
LVC				Sn	**Sn**	**11 18 04.0**	**-0.2**
	comp=N,34nm,0.3s,baz=107,slow=20,SNR=6.6						
LVC				Lg	Lg	11 18 15.3	
	comp=N,50nm,0.3s,baz=102,slow=14,SNR=3.7						
LVC	**Limon Verde**	**3.23**	**145**	Pn	**Pn**	**11 17 24.8**	**-0.4**
LVC					**Sn**	**11 18 02.3**	**-1.9**
LVC	**Limon Verde**	**3.23**	**145**	*i* P	**Pn**	**11 17 27.1**	**+1.9**
LVC				IAML		11 18 20.0	
	comp=Z,173nm,0.6s						
PB10	**IPOC Station P**	**3.56**	**175**	Pn	**Pn**	**11 17 28.6**	**-0.8**
PB10	**IPOC Station P**	**3.56**	**175**	*i* P	**Pn**	**11 17 27.9**	**-1.4**
LPAZ	**La Paz**	**4.50**	**36**	Pn	**Pb**	**11 17 50.4**	**-2.9**
	comp=Z,2.3nm,0.3s,baz=16,slow=19,SNR=1.4						
HJA	**Humahuaca**	**6.05**	**123**	*i* P	Pb	11 18 12.5	-7.2
SIV	**San Ignacio**	**10.15**	**69**	Pn	**Pn**	**11 19 00.9**	**+1.0**
	comp=Z,1.7nm,0.3s,baz=263,slow=14,SNR=2.4						
PTGA	**Pitinga**	**21.90**	**31**	P	**P**	**11 21 29.2**	**+1.6**
	comp=Z,3.6nm,0.5s,baz=214,slow=18,SNR=1.9						
PTGA	**Pitinga**	**21.90**	**31**	P	**P**	**11 21 26.3**	**-1.3**
PTGA				IAmb	IAmb	11 21 28.4	
	comp=Z,20nm,1.4s						
ROSC	**El Rosal**	**24.86**	**352**	P	**P**	**11 21 56.0**	**-1.6**
GO09	**Cerro Castillo**	**31.27**	**182**	P	**P**	**11 22 52.8**	**-1.4**
GO09				IAmb	IAmb	11 22 54.3	
	comp=Z,4.2nm,0.9s						
TXAR	**Lajitas Array**	**58.30**	**326**	P	**P**	**11 26 30.3**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=143,slow=7.9,SNR=2.1						
QSPA	**South Pole Qui**	**70.23**	**180**	P	**P**	**11 27 48.0**	**+0.7**
QSPA				IAmb	IAmb	11 27 57.3	
	comp=Z,0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**78.61**	**71**	P	**P**	**11 28 35.7**	**-1.1**
	comp=Z,2.0nm,0.8s,baz=248,slow=4.7,SNR=5.2						
MKAR	**Makanchi Array**	**145.42**	**33**	PKPbc	**PKPbc**	**11 36 13.1**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=318,slow=1.9,SNR=3.8						
SONM	**Songino Array**	**152.10**	**4**	PKPbc	**PKiKP**	**11 36 33.3**	**+2.9**
	comp=Z,0.5nm,0.5s,baz=333,slow=2.7,SNR=2.3						

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*IDC **17** 11:21:56.7±1.5,20°.18S×70°.72W,h0^{km},mb3.8/3, mb1 4.0/5,mb1mx3.6/36,mbtmp3.8/5,ML3.6/2,Error ellipse: s-maj=40.8km s-min=19.3km az=66.0*

*GUC **17** 11:22:01.0±0.5,20°.18S×70°.85W,h33^{km}±2^{km},ML3.6*

ISC 17 11:21:58.6±2.0,**20°.14S**±0°.03×**70°.82W**±0°.08,**h15**^{km}±11^{km}, **n21,**σ**1^{s}08**/33,**4C-6D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TA01	**Diego Aracena**	**0.73**	**125**	⇓*i*P	**Pb**	**11 22 13.7**	**+0.6**
TA01				*i* S	**Sn**	**11 22 23.8**	**-1.6**
TA01				IAML		11 22 25.5	
	comp=N,4µm,0.2s						
PSGC	**Pisagua**	**0.85**	**50**	⇓*i*P	**Pg**	**11 22 15.3**	**+0.2**
PSGC				*i* S	**Sn**	**11 22 27.6**	**-0.8**
PATCX	**Punta Patache**	**0.92**	**137**	⇓*i*P	**Pb**	**11 22 16.7**	**+0.4**
PATCX				*i* S	**Sn**	**11 22 28.9**	**-1.2**
PATCX				IAML		11 22 33.7	
	comp=N,3µm,0.4s						
PB11	**IPOC Station P**	**1.16**	**71**	⇓*i*P	**Pb**	**11 22 20.6**	**+0.1**
PB11				*e*S	**Sn**	**11 22 36.3**	**+0.1**
PB11				IAML		11 22 41.1	
	comp=E,1µm,0.5s						
PB02	**IPOC Station P**	**1.45**	**144**	⇑*i*P	**Pn**	**11 22 24.9**	**+0.3**
PB02				*i* S	**Sb**	**11 22 43.6**	**-0.3**
PB01	**IPOC Station P**	**1.53**	**126**	⇑*i*P	**Pb**	**11 22 26.4**	**-0.4**
PB01				*i* S	**Sn**	**11 22 44.5**	**-0.8**
PB01				IAML		11 22 51.2	
	comp=N,2µm,0.7s						
PB08	**IPOC Station P**	**1.56**	**90**	⇑*i*P	**Pb**	**11 22 27.4**	**-0.2**
PB08				*e*S	**Sn**	**11 22 46.0**	**-0.5**
PB12	**IPOC Station P**	**1.59**	**17**	⇑*i*P	**Pn**	**11 22 27.6**	**+1.2**
PB12				*e*S	**Sb**	**11 22 48.4**	**+0.7**
PB12				IAML		11 22 55.1	
	comp=N,758nm,0.6s						
GO01	**Chusmiza**	**1.60**	**73**	⇓*i*P	**Pb**	**11 22 28.3**	**+0.1**
GO01				*e*S	**Sg**	**11 22 49.9**	**-0.4**
GO01				IAML		11 22 50.6	
	comp=N,3µm,0.2s						
PB07	**IPOC Station P**	**1.80**	**151**	*e*P	**Pn**	**11 22 29.6**	**+0.3**
PB07				*e*S	**Sb**	**11 22 54.7**	**+0.8**
PB07				IAML		11 23 05.9	
	comp=E,942nm,0.6s						
AP01	**Chacalluta**	**1.82**	**14**	*i* S	**Sb**	**11 22 55.8**	**+1.5**
PB03	**IPOC Station P**	**2.14**	**153**	*e*P	**Pn**	**11 22 34.5**	**+0.5**
PB03				IAML		11 23 17.1	
	comp=E,518nm,0.3s						
PB16	**IPOC Station P**	**2.18**	**35**	⇓*i*P	**Pb**	**11 22 38.1**	**-0.1**
PB16				*i* S	**Sb**	**11 23 06.6**	**+1.2**
PB09	**IPOC Station P**	**2.21**	**138**	*e*P	**Pn**	**11 22 35.9**	**+0.9**
PB09				*i* S	**Sb**	**11 23 06.0**	**+0.4**
PB09				IAML		11 23 15.6	
	comp=N,1µm,0.4s						
LVC	**Limon Verde**	**3.03**	**144**	Pn	**Pn**	**11 22 46.1**	**-0.3**
	comp=N,4.9nm,0.3s,baz=328,slow=12,SNR=8.0						
LVC				Lg	Lg	11 23 30.5	
	comp=N,21nm,0.3s,baz=149,slow=3.5,SNR=3.6						
LPAZ	**La Paz**	**4.61**	**34**	Pn	**Pb**	**11 23 15.5**	**-4.1**
	comp=N,0.5nm,0.3s,baz=190,slow=2.0,SNR=14						
SIV	**San Ignacio**	**10.14**	**68**	Pn	**Pn**	**11 24 24.4**	**+0.5**
	comp=N,0.7nm,0.3s,baz=274,slow=11,SNR=13						
PLCA	**Paso Flores**	**20.52**	**179**	P	**P**	**11 26 36.2**	**-0.3**
	comp=N,1.5nm,0.9s,baz=38,slow=19,SNR=1.5						
TORD	**Torodi Ar. Bea**	**78.60**	**71**	P	**P**	**11 33 59.2**	**-1.2**
	comp=N,1.4nm,0.7s,baz=245,slow=4.5,SNR=6.1						
YKA	**Yellowknife Ar**	**89.33**	**341**	P	**P**	**11 34 54.8**	**+0.8**
	comp=N,0.5nm,0.8s,baz=137,slow=5.2,SNR=9.0						
MKAR	**Makanchi Array**	**145.54**	**33**	PKPbc	**PKPab**	**11 41 37.5**	**+0.8**
	comp=N,0.8nm,0.6s,baz=349,slow=1.5,SNR=1.9						

IDC 17 11:27:33.1±7.5,**19°.37S**×**67°.12W,h232**^{km}±43^{km},**mb3.2**/2, **mb1 3.3**/4,**mb1mx3.0**/39,**mbtmp3.7**/4,**MS3.1**/1,**Ms1 3.1**/1, **ms1mx2.5**/17,**Error ellipse: s-maj=113.6km s-min=27.9km az=23.0,Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.21**	**342**	P	Pn	11 28 27.3	-0.3
	1.6nm,0.3s,baz=161,slow=5.7,SNR=41						
LPAZ				S	S	11 29 11.0	+0.6
	0.2nm,0.3s,baz=264,slow=21,SNR=6.4						
SIV	**San Ignacio**	**6.67**	**61**	P	Pn	11 29 10.0	+0.4
	1.9nm,0.3s,baz=256,slow=11,SNR=22						
NNA	**Nana**	**11.89**	**307**	LR	LR	11 36 23.2	
	comp=Z,85nm,18.4s,baz=150,slow=45						
TORD	**Torodi Ar. Bea**	**75.06**	**70**	P	P	11 38 49.7	-0.2
	0.7nm,0.4s,baz=255,slow=5.3,SNR=9.2						
YKA	**Yellowknife Ar**	**89.76**	**340**	P	P	11 40 05.1	+0.4
	0.2nm,0.8s,baz=131,slow=6.6,SNR=4.0						

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*IDC **17** 11:29:32.9±0.8,20°.08S×70°.63W,h0^{km},mb4.2/11, mb1 4.3/14,mb1mx4.1/39,mbtmp4.3/14,ML4.2/3,MS3.7/5, Ms1 3.7/5,ms1mx3.3/35,Error ellipse: s-maj=20.9km s-min=14.5km az=56.0*

*NEIC **17** 11:29:33.5±2.1,20°.13S±0°.05×70°.95W±0°.07,h17^{km}±1^{km}, mb4.5/16,Mwr4.4/21,ML4.2(GUC),Error ellipse: s-maj=10.8km s-min=5.8km az=117.0*

*NEIC **17** 11:29:34.8,20°.16S×70°.87W,h21^{km},Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}3.40; $M_{\theta\theta}$0.51; $M_{\phi\phi}$-3.91; $M_{r\theta}$0.72; $M_{\theta\phi}$0.15; $M_{\phi r}$-2.30; Fault plane solution: $M_0$4.40000×10^{15} NP1:ϕ_s8.75000°, δ29.63000°,λ107.60000°. NP2:ϕ_s168.70000°,δ61.88000°, λ80.24000°. Principal axes: T 4.1817, Plg71.0000°, Azm57.0000°; N 0.4136, Plg9.0000°, Azm173.0000°; P -4.5953, Plg16.0000°, Azm266.0000°;*

*GUC **17** 11:29:36.2±0.6,20°.12S×70°.90W,h16^{km}±4^{km},ML4.2*

*VAO **17** 11:29:39.6±0.4,20°.06S×70°.66W,h55^{km},mb4.3*

ISC 17 11:29:35.5±1.3,**20°.14S**±0°.02×**70°.84W**±0°.05,**h27**^{km}±9^{km}, **n114,**σ**1^{s}28**/132,**mb4.4**/13,**10C-4D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TA01	**Diego Aracena**	**0.75**	**124**	⇓*i*P	**Pb**	**11 29 49.8**	**-0.3**
TA01				*i* S	**Sn**	**11 30 00.4**	**-0.5**
TA01				IAML		11 30 02.6	
	comp=N,14µm,0.3s						
PSGC	**Pisagua**	**0.87**	**52**	⇓*i*P	**Pn**	**11 29 51.3**	**-0.8**
PSGC				*i* S	**Sn**	**11 30 03.0**	**-0.9**
PATCX	**Punta Patache**	**0.94**	**136**	⇓*i*P	**Pn**	**11 29 52.9**	**-0.1**
PATCX				*e*S	**Sn**	**11 30 05.3**	**-0.3**
PATCX				IAML		11 30 14.5	
	comp=E,9µm,0.5s						
PB11	**IPOC Station P**	**1.18**	**72**	⇓*i*P	**Pb**	**11 29 56.5**	**-0.8**
PB11				*i* S	**Sb**	**11 30 12.9**	**+0.6**
PB11				IAML		11 30 14.5	
	comp=N,15µm,0.3s						
PB11	**IPOC Station P**	**1.18**	**72**		**Pb**	**11 29 56.4**	**-1.0**
PB11					**Sb**	**11 30 12.9**	**+0.6**
PB02	**IPOC Station P**	**1.47**	**143**	⇑*i*P	**Pn**	**11 30 01.2**	**+0.8**
PB02				*i* S	**Sb**	**11 30 20.7**	**0.0**
PB01	**IPOC Station P**	**1.56**	**126**	⇑*i*P	**Pn**	**11 30 02.7**	**+1.1**
PB01				*i* S	**Sb**	**11 30 23.3**	**+0.1**
PB01	**IPOC Station P**	**1.56**	**126**		**Pn**	**11 30 02.6**	**+1.1**
PB01				Sn	**Sb**	**11 30 22.4**	**-0.7**
PB08	**IPOC Station P**	**1.59**	**90**	⇑*i*P	**Pb**	**11 30 03.4**	**-1.1**
PB08				*i* S	**Sb**	**11 30 24.2**	**-0.1**
PB08				IAML		11 30 30.4	
	comp=E,3µm,0.5s						
PB12	**IPOC Station P**	**1.59**	**18**	⇑*i*P	**Pn**	**11 30 02.5**	**+0.5**
PB12				*e*S	**Sb**	**11 30 22.7**	**-1.5**
PB12				IAML		11 30 26.2	
	comp=E,6µm,0.6s						
GO01	**Chusmiza**	**1.62**	**74**	⇑*i*P	**Pb**	**11 30 04.0**	**-1.1**
GO01				*i* S	**Sb**	**11 30 25.9**	**+0.5**
GO01	**Chusmiza**	**1.62**	**74**		**Pb**	**11 30 03.7**	**-1.4**
GO01				Sn	**Sb**	**11 30 25.5**	**+0.1**
PB07	**IPOC Station P**	**1.82**	**151**	⇑*i*P	**Pn**	**11 30 05.8**	**+0.6**
PB07				*i* S	**Sb**	**11 30 31.6**	**+0.9**
PB07				IAML		11 30 43.3	
	comp=E,4µm,0.7s						
AP01	**Chacalluta**	**1.82**	**15**	*e*P	**Pb**	**11 30 07.1**	**-1.1**
AP01				*i* S	**Sb**	**11 30 30.7**	**+0.1**
PB03	**IPOC Station P**	**2.16**	**152**	⇑*i*P	**Pn**	**11 30 10.4**	**+0.5**
PB03				*i* S	**Sb**	**11 30 39.6**	**-0.8**
PB03				IAML		11 30 52.1	
	comp=E,2µm,0.8s						
PB16	**IPOC Station P**	**2.19**	**35**	⇑*i*P	**Pb**	**11 30 13.5**	**-1.4**
PB16				*i* S	**Sb**	**11 30 42.3**	**+0.4**
PB09	**IPOC Station P**	**2.23**	**138**	⇑*i*P	**Pn**	**11 30 12.9**	**+2.1**
PB09				*e*S	**Sb**	**11 30 40.8**	**-1.7**
PB04	**IPOC Station P**	**2.28**	**164**	⇑*i*P	**Pn**	**11 30 11.6**	**+0.1**
PB04				*e*S	**Sn**	**11 30 37.6**	**-1.2**
PB04				IAML		11 30 53.5	
	comp=E,3µm,0.6s						
PB04	**IPOC Station P**	**2.28**	**164**		**Pn**	**11 30 11.5**	**0.0**
PB04				Sn	**Sn**	**11 30 37.9**	**-0.9**
LVC	**Limon Verde**	**3.05**	**144**	Pn	**Pn**	**11 30 23.7**	**+1.4**
	comp=E,21nm,0.3s,baz=323,slow=9.1,SNR=14						
LVC				Lg	Lg	11 31 08.5	
	comp=E,99nm,0.3s,baz=232,slow=23,SNR=25						
LVC				LR	LR	11 31 31.4	
	comp=E,598nm,19.7s,baz=310,slow=40						
LVC	**Limon Verde**	**3.05**	**144**		**Pn**	**11 30 24.1**	**+1.8**
LVC	**Limon Verde**	**3.05**	**144**	*e*P	**Pn**	**11 30 24.9**	**+2.6**
PB10	**IPOC Station P**	**3.37**	**175**		**Pn**	**11 30 25.8**	**-0.6**
PB10				Sn	**Sn**	**11 31 03.5**	**-2.0**
LPAZ	**La Paz**	**4.62**	**34**	Pn	Pb	11 30 50.5	-5.7
	comp=E,2.4nm,0.3s,baz=226,slow=8.2,SNR=19						
LPAZ	**La Paz**	**4.62**	**34**		**Pn**	**11 30 48.0**	**+3.9**
LPAZ	**La Paz**	**4.62**	**34**	*e*P	**Pn**	**11 30 45.4**	**+1.3**
GO02	**Mina Guanaco**	**5.13**	**167**		**Pn**	**11 30 50.7**	**-0.2**
GO02				Sn	**Sn**	**11 31 49.9**	**+0.5**
GO03	**Copiap**	**7.44**	**176**	Pn	**Pn**	**11 31 21.4**	**-1.0**
GO03				Sn	**Sn**	**11 32 42.8**	**-3.2**
NNA	**Nana**	**9.94**	**324**	Pn	**Pn**	**11 31 59.8**	**+3.0**
	comp=E,1.4nm,0.3s,baz=264,slow=10,SNR=1.9						
GO04	**Tololo Observa**	**9.99**	**180**	Pn	**Pn**	**11 31 55.9**	**-1.6**
SIV	**San Ignacio**	**10.17**	**68**	Pn	**Pn**	**11 31 59.0**	**-0.9**
	comp=E,7.0nm,0.3s,baz=270,slow=10,SNR=50						
SIV				Sn	**Sn**	**11 33 52.1**	**-0.9**
	baz=316,slow=21,SNR=1.0						
CFA	**Coronel Fontan**	**11.66**	**169**	LR	LR	11 37 01.5	

	comp=E,266nm,18.3s,baz=276,slow=38						
SAML	Samuel	13.36	35		Pn	11 32 42.2	-1.3
SAML	Samuel	13.36	35	*e*P	Pn	11 32 44.2	+0.7
CPUP	Villa Florida	13.86	119	LR	LR	11 39 22.4	
	comp=E,298nm,18.2s,baz=299,slow=43						
CPUP	Villa Florida	13.86	119	Pn	Pn	11 32 51.4	+1.1
AQDB	Aquidauana	14.21	94	*e*P	Pn	11 32 56.5	+1.3
SALV	Santo Antonio	15.01	76	*e*P	Pn	11 33 06.6	+0.7
ITQB	Itaqui	16.00	129	*e*P	Pn	11 33 19.9	+1.1
C2SB	Chapadao do Su	17.04	88	*e*P	Pn	11 33 31.9	-0.1
TRCB	Terra Rica	17.16	102	*e*P	Pn	11 33 32.4	-1.1
CLDB	Colider	17.17	60	*e*P	Pn	11 33 32.8	-0.8
PTGB	Pitanga	17.95	108	*e*P	Pn	11 33 42.9	-0.4
PCMB	Pacaembu	18.36	98	*e*P	Pn	11 33 47.2	-1.1
ITAB	Concordia	18.52	116	*e*P	Pn	11 33 50.4	+0.1
ARAG	Araguaiana, MT	18.64	79	*e*P	Pn	11 33 50.7	-1.0
CPSB	Cacapava Do Su	18.75	126	*e*P	Pn	11 33 53.1	+0.2
ITRB	Iturama	19.27	92	*e*P	P	11 33 58.0	-0.2
PLTB	Pedras Altas	19.32	130	*e*P	Pn	11 33 59.4	-0.4
GO06	Curarrehue	19.39	181	P	P	11 33 59.0	-0.4
TRQA	Tornquist	19.44	159	*e*P	Pn	11 34 02.0	+0.7
FRTB	Fartura	20.02	103	*e*P	P	11 34 06.7	+0.3
OGAUY	Aigu	20.10	138	*e*P	P	11 34 08.5	+1.3
PLCA	Paso Flores	20.53	179	P	P	11 34 14.2	+2.3
	comp=E,3.2nm,0.7s,baz=13,slow=9.3,SNR=3.3						
PLCA	Paso Flores	20.53	179	P	P	11 34 11.2	-0.6
PLCA	Paso Flores	20.53	179	*e*P	P	11 34 14.6	+2.7
BB19B	Bebedouro	20.91	96	*e*P	P	11 34 15.7	-0.4
IPMB	Ipameri, GO	21.50	88	*e*P	P	11 34 22.4	-0.1
RCLB	Rio Claro- Sao	21.84	100	*e*P	P	11 34 25.7	-0.4
SPB	Sao Paulo	21.99	103	*e*P	P	11 34 28.0	+0.3
PTGA	Pitinga	22.03	30	P	P	11 34 27.2	-0.8
	comp=E,3.5nm,0.3s,baz=300,slow=22,SNR=14						
PTGA				LR	LR	11 43 59.9	
	comp=E,270nm,18.7s,baz=340,slow=40						
PTGA	Pitinga	22.03	30	P	P	11 34 27.3	-0.8
PTGA				IAmb	IAmb	11 34 30.9	
	comp=Z,13nm,1.1s						
PTGA	Pitinga	22.03	30	*e*P	P	11 34 27.9	-0.2
FLOC	Florencia	22.10	347	P	P	11 34 27.5	-1.3
BDFB	Brasilia	22.18	82	P	P	11 34 29.2	-0.6
	comp=Z,3.3nm,0.5s,baz=217,slow=18,SNR=2.4						
BDFB				LR	LR	11 44 12.9	
	comp=Z,292nm,18.3s,baz=270,slow=40						
BDFB	Brasilia	22.18	82	P	P	11 34 29.3	-0.5
BDFB				IAmb	IAmb	11 34 35.4	
	comp=Z,6.7nm,0.6s						
VAO	Valinhos	22.38	102	*e*P	P	11 34 31.9	-0.1
BSCB	Bom Sucesso	24.42	97	*e*P	P	11 34 51.5	-0.6
SMTB	Santa Maria do	25.11	67	*e*P	P	11 34 58.0	-0.3
JANB	Januaria	25.77	83	*e*P	P	11 35 04.0	-0.4
RUSC	La Rusia	25.96	355	P	P	11 35 07.2	+0.7
SJMB	Sao Joao De Ma	27.99	92	*e*P	P	11 35 24.1	-0.2
MDP	Montagnes des	30.81	37	P	P	11 35 49.2	0.0
	comp=Z,9.8nm,0.8s,baz=51,slow=13,SNR=1.9						
NBPN	Ponto Novo - B	30.89	77	*e*P	P	11 35 49.2	-0.9
NBPS	Pedro II - PI	32.62	65	*e*P	P	11 36 04.8	-0.5
EFI	East Falkland	33.03	165	P	P	11 36 08.4	0.0
NBMA	Muriti-CE	33.57	72	*e*P	P	11 36 13.0	-0.5
NBPB	Pedra_Branca-C	33.66	69	*e*P	P	11 36 14.2	-0.2
NBMO	Morrinhos-CE	34.38	65	*e*P	P	11 36 20.3	-0.3
NBAN	Anadia - AL	34.92	78	*e*P	P	11 36 24.6	-0.6
NBCL	Cascavel-CE	35.42	68	*e*P	P	11 36 29.1	-0.5
RCBR	Riachuelo	36.79	72	P	P	11 36 41.5	+0.1
	comp=Z,4.8nm,0.5s,baz=257,slow=7.9,SNR=5.4						
RCBR	Riachuelo	36.79	72	P	P	11 36 40.9	-0.5
RCBR				IAmb	IAmb	11 36 44.2	
	comp=Z,8.3nm,0.8s						
TXAR	Lajitas Array	58.49	326	P	P	11 39 31.9	+2.3
	comp=Z,0.4nm,0.7s,baz=148,slow=9.7,SNR=4.7						
TXAR	Lajitas Array	58.49	326	P	P	11 39 29.9	+0.4
S39A	Bolivar	61.29	340	IAmb	IAmb	11 39 49.1	
	comp=Z,3.9nm,0.7s						
SNAA	Sanae	64.15	161	P	P	11 40 08.4	+1.1
SNAA				IAmb	IAmb	11 40 13.9	
	comp=Z,5.8nm,1.3s						
CCUT	Cedar City	69.96	325	P	P	11 40 44.0	-0.8
QSPA	South Pole Qui	70.04	180	P	P	11 40 47.5	+2.6
QSPA				IAmb	IAmb	11 40 49.0	
	comp=Z,4.0nm,1.2s						
DBIC	Dimbokro	70.10	75	P	P	11 40 45.2	-0.6
	comp=Z,3.6nm,0.8s,baz=280,slow=3.8,SNR=3.8						
DBIC	Dimbokro	70.10	75	P	P	11 40 45.1	-0.7
PDAR	Pinedale Array	72.04	331	P	P	11 41 01.2	+3.9
	comp=Z,0.2nm,0.6s,baz=124,slow=8.0,SNR=1.9						
PDAR	Pinedale Array	72.04	331	P	P	11 40 56.1	-1.2
ORV	Oroville	75.91	322	P	P	11 41 18.1	-1.7
TOA0	Torodi Ar. Sit	78.62	71	P	P	11 41 34.9	-0.6
TORD	Torodi Ar. Bea	78.62	71	P	P	11 41 35.6	+0.2
	comp=Z,7.0nm,0.7s,baz=250,slow=4.8,SNR=30						
TORD	Torodi Ar. Bea	78.62	71	P	P	11 41 34.8	-0.7
TSUM	Tsumeb	82.17	108	P	P	11 41 54.4	-0.3
	comp=Z,2.2nm,0.7s,baz=155,slow=2.5,SNR=4.2						
YKA	Yellowknife Ar	89.32	341	P	P	11 42 30.2	+1.3
	comp=Z,2.2nm,1.0s,baz=140,slow=5.2,SNR=19						
H11S2	WAKE ISLAND Hy	125.90	279	T	T	14 08 06.6	
	baz=101,slow=74,SNR=9.5						
H11S1	WAKE ISLAND Hy	125.91	279	T	T	14 08 04.7	
	baz=101,slow=74,SNR=4.9						
H11S3	WAKE ISLAND Hy	125.92	279	T	T	14 08 07.7	
	baz=101,slow=74,SNR=8.7						
ASAR	Alice Springs	130.22	210	PKP	PKPdf	11 48 44.2	+0.2
	comp=Z,0.3nm,0.9s,baz=126,slow=1.7,SNR=2.3						
ASAR	Alice Springs	130.22	210		PKPdf	11 48 42.6	-1.4
WRA	Warramunga Arr	133.15	213	PKP	PKiKP	11 48 52.0	+1.2
	comp=Z,0.7nm,1.0s,baz=187,slow=1.7,SNR=3.1						
ZALV	Zalesovo Beam	141.46	23	PKP	PKiKP	11 49 06.0	-0.5
	comp=Z,1.0nm,0.5s,baz=264,slow=3.1,SNR=4.7						
ZALV	Zalesovo Beam	141.46	23		PKPdf	11 49 04.1	+0.3
MK31	Makanchi Array	145.55	33		PKPab	11 49 13.0	+1.3
MKAR	Makanchi Array	145.55	33	PKPbc	PKPab	11 49 13.2	+1.5
	comp=Z,3.8nm,0.8s,baz=346,slow=2.5,SNR=21						
KSH	Kashi	145.61	49	PKPbc	PKPbc	11 49 09.3	-2.7
KSH				pPKP	pPKPab	11 49 19.8	-0.7
KSH				PP	PP	11 52 32.3	-0.2
KSH				PKS	PKSdf	11 52 41.6	-5.7
MJAR	Matsushiro Arr	149.81	309	PKPbc	PKPbc	11 49 23.6	+0.2
	comp=Z,1.2nm,0.8s,baz=113,slow=1.0,SNR=2.4						
SONM	Songino Array	152.28	4	PKPbc	PKiKP	11 49 30.4	+1.2
	comp=Z,0.5nm,0.7s,baz=339,slow=2.0,SNR=2.6						
SONM	Songino Array	152.28	4		PKPbc	11 49 29.0	0.0
LZH	Lanzhou	163.44	15	*e*PKP	PKPdf	11 49 34.9	-1.4
LZH				pPKP	pPKPdf	11 49 42.4	-2.1
LZH				sPKP		11 49 45.1	

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*IDC **17** 11:33:13.3±1.4, 19°.82S×70°.79W, h0^{km}, mb3.6/4, mb1 3.9/6, mb1mx3.7/36, mbtmp3.8/6, ML3.9/2, Error ellipse: s-maj=38.9km s-min=17.8km az=72.0*

*SJA **17** 11:33:25.5±0.9, 20°.91S×70°.81W, h16^{km}±317^{km}, ML3.4, MW3.3*

ISC 17 11:33:17.3±1.0**, 19°.95S**±0°.08×**71°.2W**±0°.1**, h35^{km}, n18, σ2^{s}.07**/18**, mb4.0**/3**, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB04	IPOC Station P	2.55	158	*i* P	Pn	11 33 55.0	-1.4
PB09	IPOC Station P	2.57	136	*i* P	Pn	11 33 56.3	-0.2
PB05	IPOC Station P	3.02	163	*i* P	Pn	11 34 01.4	-1.4
PB06	IPOC Station P	3.12	152	*i* P	Pn	11 34 02.5	-1.6
LVC	Limon Verde	3.38	142	Pn	Pn	11 34 08.1	+0.1
	8.7nm,0.3s,baz=331,slow=11,SNR=1.8						
LVC				Sn	Sn	11 34 47.2	+0.3
	22nm,0.3s,baz=65,slow=14,SNR=2.7						
LVC				Lg	Lg	11 34 56.9	
	57nm,0.3s,baz=0.0,slow=20,SNR=6.4						
LVC	Limon Verde	3.38	142	*i* P	Pn	11 34 08.0	+0.1
LVC				IAML		11 35 07.5	
	comp=Z,169nm,0.6s						
PB10	IPOC Station P	3.59	171	*i* P	Pn	11 34 09.1	-1.3
PB15	IPOC Station P	3.60	154	*i* P	Pn	11 34 09.4	-1.4
LPAZ	La Paz	4.65	39	Pn	Pn	11 34 29.9	+4.4
	comp=Z,2.6nm,0.3s,baz=205,slow=1.2,SNR=8.9						
PB14	IPOC Station P	4.71	172	*i* P	Pn	11 34 24.4	-1.7
YJA	Yavi	5.72	114	*i* P	Pn	11 34 46.3	+6.1
SIV	San Ignacio	10.38	69	Pn	Pn	11 35 40.5	-3.2
	comp=Z,1.3nm,0.3s,baz=263,slow=10,SNR=2.7						
PLCA	Paso Flores	20.72	179	P	P	11 37 56.4	+1.7
	comp=Z,0.6nm,0.5s,baz=164,slow=20,SNR=1.1						
PTGA	Pitinga	22.02	31	P	P	11 38 05.6	-3.3
	comp=Z,1.8nm,0.3s,baz=311,slow=19,SNR=2.8						
TORD	Torodi Ar. Bea	78.85	72	P	P	11 45 16.3	-1.0
	comp=Z,1.0nm,0.7s,baz=262,slow=5.6,SNR=3.8						
YKA	Yellowknife Ar	89.04	341	P	P	11 46 10.6	+2.4
	comp=Z,0.1nm,0.5s,baz=136,slow=4.9,SNR=2.4						
MKAR	Makanchi Array	145.55	33	PKPbc	PKPbc	11 52 51.8	-0.2
	comp=Z,0.4nm,0.6s,baz=336,slow=3.2,SNR=2.4						
SONM	Songino Array	152.11	4	PKPbc	PKPbc	11 53 10.1	+0.9
	comp=Z,0.2nm,0.4s,baz=357,slow=2.9,SNR=1.8						

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*IDC **17** 11:36:13.3±1.6, 19°.89S×70°.80W, h0^{km}, mb3.7/4, mb1 3.9/6, mb1mx3.7/37, mbtmp3.8/6, ML3.6/2, Error ellipse: s-maj=40.1km s-min=17.9km az=72.0*

*NEIC **17** 11:36:15.2±2.2, 19°.95S±0°.06×70°.91W±0°.06, h14^{km}±9^{km}, mb4.1/4, ML3.7(GUC), Error ellipse: s-maj=10.8km s-min=6.3km az=142.0*

*SJA **17** 11:36:15.3±1.1, 19°.97S×70°.85W, h25^{km}±7^{km}, ML3.9, MW4.1*

*GUC **17** 11:36:18.0±0.6, 19°.96S×70°.89W, h24^{km}±5^{km}, ML3.9*

ISC 17 11:36:14.1±2.2**, 19°.96S**±0°.03×**70°.96W**±0°.05**, h9^{km}**±15^{km}**, n47, σ0^{s}.95**/67**, mb3.9**/3**, 6C-6D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.86	66	⇓*i*P	Pb	11 36 31.2	-0.1
PSGC				*e*S	Sb	11 36 42.2	-0.7
PSGCX	Pisagua	0.86	66	*i* P	Pb	11 36 31.2	-0.1
PSGCX				⇓*e*S	Sb	11 36 42.1	-0.9
TA01	Diego Aracena	0.95	130	⇑*i*P	Pb	11 36 32.9	+0.2
TA01				*i* S	Sb	11 36 45.1	-0.2
TA01				IAML		11 36 46.7	
	comp=E,7μm,0.4s						
PATCX	Punta Patache	1.14	139	⇑*i*P	Pn	11 36 36.2	-0.1
PATCX				*i* S	Sb	11 36 50.5	-0.5
PATCX				IAML		11 36 52.7	
	comp=E,4μm,0.3s						
PATCX	Punta Patache	1.14	139	*i* P	Pn	11 36 36.2	-0.1
PATCX				*e*S	Sb	11 36 51.1	0.0
PATCX				IAML		11 36 53.2	
	comp=Z,4μm,0.4s						
PB11	IPOC Station P	1.24	81	⇓*i*P	Pn	11 36 37.7	0.0
PB11				*i* S	Sb	11 36 53.1	-0.7
PB11				IAML		11 36 55.0	
	comp=N,10μm,0.2s						
PB11	IPOC Station P	1.24	81		Pn	11 36 37.6	-0.1
PB11				Sg	Sb	11 36 53.0	-0.8
PB11	IPOC Station P	1.24	81	*i* P	Pn	11 36 37.6	-0.1
PB11				*e*S	Sb	11 36 53.6	-0.3
PB11				IAML		11 36 54.8	
	comp=Z,8μm,0.3s						
PB12	IPOC Station P	1.46	24	⇓*i*P	Pb	11 36 41.6	+0.1
PB12				*i* S	Sb	11 37 00.1	-0.1
PB12	IPOC Station P	1.46	24	*i* P	Pb	11 36 41.5	+0.1
PB12				*e*S	Sg	11 37 01.6	+0.5
PB12				IAML		11 37 11.0	
	comp=Z,1μm,1.0s						
AP01	Chacalluta	1.68	20	*e*P	Pb	11 36 45.7	+0.5
AP01				*i* S	Sb	11 37 06.8	+0.4
PB02	IPOC Station P	1.68	144	⇓*i*P	Pn	11 36 44.0	+0.2
PB02				*i* S	Sn	11 37 05.0	-0.5
GO01	Chusmiza	1.68	81	⇓*i*P	Pb	11 36 45.4	-0.1
GO01				*e*S	Sb	11 37 06.6	-0.4
GO01				IAML		11 37 09.7	
	comp=N,4μm,0.3s						
GO01	Chusmiza	1.68	81		Pn	11 36 45.0	+0.9
GO01				Sg	Sb	11 37 06.3	-0.6
PB08	IPOC Station P	1.70	97	⇑*i*P	Pn	11 36 45.2	+0.8
PB08				*e*S	Sb	11 37 07.1	-0.4
PB08	IPOC Station P	1.70	97	*i* P	Pn	11 36 45.0	+0.7
PB08				*e*S	Sb	11 37 07.7	+0.2
PB08				IAML		11 37 08.6	
	comp=Z,1μm,0.3s						
PB01	IPOC Station P	1.75	128	⇑*i*P	Pn	11 36 45.5	+0.8
PB01				*e*S	Sn	11 37 06.3	-0.8
PB01				IAML		11 37 13.7	
	comp=N,2μm,0.7s						
PB01	IPOC Station P	1.75	128		Pn	11 36 45.5	+0.8
PB01				Sn	Sn	11 37 06.7	-0.5
PB01	IPOC Station P	1.75	128	*i* P	Pn	11 36 45.4	+0.8
PB01				*e*S	Sn	11 37 06.1	-1.1
PB01				IAML		11 37 13.0	
	comp=Z,1μm,0.8s						
PB07	IPOC Station P	2.03	151	⇑*i*P	Pn	11 36 48.6	+0.1
PB07				*i* S	Sb	11 37 15.4	-1.2
PB07				IAML		11 37 34.7	
	comp=E,1μm,0.4s						
PB07	IPOC Station P	2.03	151	*i* P	Pn	11 36 48.7	+0.1
PB07				IAML		11 37 21.9	
	comp=Z,1μm,0.4s						
PB03	IPOC Station P	2.37	152	⇑*i*P	Pn	11 36 53.5	+0.2
PB03				*e*S	Sn	11 37 20.3	-2.2
PB09	IPOC Station P	2.43	139	*i* P	Pn	11 36 55.9	+1.7
PB09				IAML		11 37 37.4	
	comp=Z,930nm,0.5s						
PB04	IPOC Station P	2.48	163		Pn	11 36 54.4	-0.4
PB04	IPOC Station P	2.48	163	*i* P	Pn	11 36 54.5	-0.3
PB04				IAML		11 37 40.7	
	comp=Z,763nm,0.7s						
PB05	IPOC Station P	2.97	166	*i* P	Pn	11 37 00.8	-0.7
PB05				IAML		11 37 54.6	
	comp=Z,227nm,1.1s						
PB06	IPOC Station P	3.02	155	*i* P	Pn	11 37 01.9	-0.4
PB06				IAML		11 37 56.3	
	comp=Z,487nm,0.6s						
LVC	Limon Verde	3.26	145	Pn	Pn	11 37 07.4	+1.7
	comp=Z,5.3nm,0.3s,baz=336,slow=12,SNR=2.0						
LVC				Sn	Sn	11 37 44.4	-0.4
	comp=Z,25nm,0.3s,baz=274,slow=22,SNR=6.8						
LVC				Lg	Lg	11 37 56.1	
	comp=Z,50nm,0.3s,baz=66,slow=14,SNR=10						
LVC	Limon Verde	3.26	145		Pn	11 37 07.2	+1.5
LVC	Limon Verde	3.26	145	*i* P	Pn	11 37 07.8	+2.1
LVC				IAML		11 37 58.2	
	comp=Z,231nm,0.6s						
LVC				IAML		11 37 58.3	
	comp=Z,204nm,0.7s						
PB10	IPOC Station P	3.56	174	Pn	Pn	11 37 08.3	-1.3
PB10	IPOC Station P	3.56	174	*i* P	Pn	11 37 08.4	-1.1
LPAZ	La Paz	4.53	37	Pn	Pb	11 37 30.0	-4.2
	comp=Z,0.4nm,0.3s,baz=128,slow=14,SNR=2.0						
LPAZ	La Paz	4.53	37	*i* P	Pb	11 37 30.9	-3.3
GO02	Mina Guanaco	5.33	167		Pn	11 37 33.8	-0.4
YJA	Yavi	5.54	114	*i* P	Pb	11 37 44.7	-6.6
SIV	San Ignacio	10.20	69	Pn	Pn	11 38 40.8	+0.1
	comp=Z,0.7nm,0.3s,baz=258,slow=16,SNR=4.2						
SAML	Samuel	13.27	36	Pn	Pn	11 39 22.8	-0.1
GO06	Curarrehue	19.57	181	P	Pn	11 40 44.2	+0.5
PLCA	Paso Flores	20.71	179	P	P	11 40 56.2	+1.4
	comp=Z,4.1nm,1.1s,baz=352,slow=14,SNR=3.0						
PLCA	Paso Flores	20.71	179	P	P	11 40 56.0	+1.2
PLCA				IAmb	IAmb	11 41 00.3	
	comp=Z,9.0nm,1.2s						
PTGA	Pitinga	21.93	31	P	P	11 41 07.0	-1.0
	comp=Z,1.1nm,0.3s,baz=308,slow=19,SNR=1.8						
PTGA	Pitinga	21.93	31	P	P	11 41 06.8	-1.2
PTGA				IAmb	IAmb	11 41 07.1	
	comp=Z,14nm,1.4s						
QSPA	South Pole Qui	70.23	180	P	P	11 47 29.4	+2.0
TORD	Torodi Ar. Bea	78.66	71	P	P	11 48 16.0	-1.1
	comp=Z,0.9nm,0.8s,baz=262,slow=3.9,SNR=3.4						
YKA	Yellowknife Ar	89.11	341	P	P	11 49 10.5	+1.2
	comp=Z,0.1nm,0.5s,baz=129,slow=5.7,SNR=2.0						
MKAR	Makanchi Array	145.45	33	PKPbc	PKPbc	11 55 52.0	-0.6
	comp=Z,0.4nm,0.6s,baz=298,slow=3.1,SNR=2.5						

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*IDC **17** 11:41:38.4±1.9, 20°.03S×70°.86W, h0^{km}, mb3.6/2, mb1 3.8/4, mb1mx3.5/37, mbtmp3.7/4, ML3.6/2, Error ellipse: s-maj=55.8km s-min=20.4km az=60.0*

*GUC **17** 11:41:42.9±0.7, 20°.07S×70°.87W, h29^{km}±3^{km}, ML3.5*

ISC 17 11:41:39.2±2.1**, 20°.02S**±0°.03×**70°.91W**±0°.08**, h9^{km}**±12^{km}**, n18, σ0^{s}.98**/28**, 2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.85	61	*e*P	Pb	11 41 56.2	0.0
PSGC				*i* S	Sb	11 42 07.8	-0.1
PSGC				IAML		11 42 10.6	
	comp=E,2μm,0.6s						
TA01	Diego Aracena	0.88	128	⇓*i*P	Pb	11 41 56.3	-0.2
TA01				*e*S	Sb	11 42 07.3	-1.1
TA01				IAML		11 42 10.3	
	comp=N,5μm,0.2s						
PATCX	Punta Patache	1.07	138	⇓*i*P	Pb	11 41 59.6	-0.3
PATCX				*e*S	Sb	11 42 13.4	-0.7
PB11	IPOC Station P	1.21	78	*e*P	Pg	11 42 02.8	+0.4
PB11				*e*S	Sn	11 42 18.7	-0.3
PB11				IAML		11 42 23.8	
	comp=E,2μm,0.3s						
PB12	IPOC Station P	1.50	22	*e*P	Pn	11 42 05.4	-1.0
PB12				*e*S	Sg	11 42 28.2	+0.6
PB02	IPOC Station P	1.61	144	*i* S	Sn	11 42 28.1	-0.6
PB02				IAML		11 42 36.7	
	comp=E,2μm,0.3s						
GO01	Chusmiza	1.66	78	*e*P	Pb	11 42 10.1	0.0
GO01				*e*S	Sg	11 42 32.0	-0.5
PB08	IPOC Station P	1.66	94	*e*P	Pb	11 42 09.7	-0.4
PB08				*i* S	Sb	11 42 30.8	-0.5
PB08				IAML		11 42 37.0	
	comp=N,658nm,0.6s						
PB01	IPOC Station P	1.68	128	*e*P	Pb	11 42 09.3	-1.0
PB01				*e*S	Sb	11 42 30.3	-1.3
PB01				IAML		11 42 32.7	
	comp=N,1μm,0.3s						
PB07	IPOC Station P	1.95	151	*e*P	Pn	11 42 13.6	+0.9
PB07				IAML		11 42 50.7	
	comp=E,493nm,0.6s						
PB16	IPOC Station P	2.14	39	*e*P	Pb	11 42 18.4	0.0
PB16				*i* S	Sb	11 42 45.7	+0.5
PB16				IAML		11 42 53.1	
	comp=N,316nm,0.5s						
PB09	IPOC Station P	2.36	139	*e*P	Pb	11 42 20.1	-1.8
PB09				*i* S	Sn	11 42 47.9	+0.5
PB09				IAML		11 43 02.3	
	comp=N,447nm,0.5s						
LVC	Limon Verde	3.18	144	Pn	Pn	11 42 31.1	+1.3
	comp=N,10nm,0.3s,baz=326,slow=10.0,SNR=14						
LVC				Lg	Lg	11 43 17.4	
	comp=N,31nm,0.3s,baz=221,slow=11,SNR=13						
LPAZ	La Paz	4.56	36	Pn	Pb	11 42 57.2	-2.5
	comp=N,0.5nm,0.3s,baz=195,slow=2.7,SNR=9.2						
SIV	San Ignacio	10.18	68	Pn	Pn	11 44 06.9	+1.3
	comp=N,0.3nm,0.3s,baz=252,slow=13,SNR=6.3						
TORD	Torodi Ar. Bea	78.64	71	P	P	11 53 41.1	-1.0
	comp=N,0.8nm,0.8s,baz=258,slow=5.8,SNR=3.1						
YKA	Yellowknife Ar	89.18	341	P	P	11 54 35.3	+0.5
	comp=N,0.2nm,0.7s,baz=135,slow=4.4,SNR=4.1						
MKAR	Makanchi Array	145.48	33	PKPbc	PKPab	12 01 18.8	+0.8
	comp=N,0.7nm,0.6s,baz=321,slow=2.0,SNR=4.6						

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*IDC **17** 11:46:37.4±0.9, 19°.89S×70°.67W, h0^{km}, mb3.8/6, mb1 4.1/8, mb1mx3.9/34, mbtmp3.9/8, ML4.0/2, MS3.0/3, Ms1 3.0/3, ms1mx2.8/29, Error ellipse: s-maj=27.2km s-min=15.8km az=66.0*

*NEIC **17** 11:46:38.2±0.8, 19°.90S±0°.07×70°.89W±0°.09, h20^{km}±5^{km}, mb4.3/9, ML4.0(GUC), Error ellipse: s-maj=12.9km s-min=8.0km az=124.0*

*GUC **17** 11:46:38.8±0.6, 19°.93S×70°.93W, h39^{km}±3^{km}, ML4.1*

ISC 17 11:46:35.8±1.7**, 19°.91S**±0°.03×**70°.86W**±0°.06**, h0^{km}**±10^{km}**, n52, σ1^{s}.16**/57**, mb4.1**/6**, 5C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.76	66	⇑*i*P	Pb	11 46 51.8	-0.1
PSGC				*i* S	Sn	11 47 04.4	-1.6
TA01	Diego Aracena	0.92	136	*e*P	Pn	11 46 54.6	-1.3
TA01				*e*S	Sb	11 47 07.2	-0.1
TA01				IAML		11 47 10.1	
	comp=E,17μm,0.5s						
PATCX	Punta Patache	1.13	144	*e*P	Pn	11 46 57.9	-1.0
PATCX				*e*S	Sn	11 47 13.0	-2.2
PATCX				IAML		11 47 16.8	
	comp=E,5μm,0.5s						
PB11	IPOC Station P	1.14	83	⇑*i*P	Pg	11 46 58.4	+0.7
PB11				*e*S	Sn	11 47 14.8	-0.9
PB11				IAML		11 47 16.1	
	comp=N,7μm,0.3s						
PB11	IPOC Station P	1.14	83		Pn	11 46 58.5	-0.6
PB11					Sn	11 47 15.4	-0.3
PB12	IPOC Station P	1.38	21	⇓*i*P	Pb	11 47 02.1	-0.4
PB12				*e*S	Sn	11 47 20.5	-0.9
PB12				IAML		11 47 31.4	
	comp=N,2μm,0.5s						
GO01	Chusmiza	1.59	82	⇑*i*P	Pb	11 47 05.9	-0.4
GO01				*e*S	Sg	11 47 27.9	+1.1
GO01	Chusmiza	1.59	82	Pn	Pb	11 47 06.2	-0.1
PB08	IPOC Station P	1.62	99	*i* P	Pb	11 47 06.3	-0.5
PB08				*e*S	Sb	11 47 27.6	-0.4
PB08				IAML		11 47 30.6	
	comp=N,3μm,0.3s						
PB02	IPOC Station P	1.67	147	⇑*i*P	Pn	11 47 05.9	-0.6
PB02				*i* S	Sn	11 47 27.1	-1.6
PB02				IAML		11 47 36.9	
	comp=E,5μm,0.3s						
PB01	IPOC Station P	1.71	132	⇑*i*P	Pg	11 47 08.7	+0.1
PB01				*i* S	Sb	11 47 30.3	0.0
PB01				IAML		11 47 34.1	
	comp=N,4μm,0.6s						
PB01	IPOC Station P	1.71	132		Pb	11 47 07.4	-0.8
PB16	IPOC Station P	2.02	40	*e*P	Pb	11 47 13.7	0.0
PB16				*i* S	Sg	11 47 40.7	0.0
PB16				IAML		11 47 47.8	
	comp=E,1μm,0.3s						
PB04	IPOC Station P	2.51	165		Pn	11 47 17.9	0.0
LVC	Limon Verde	3.25	146	Pn	Pn	11 47 29.6	+1.2
	comp=E,8.0nm,0.3s,baz=360,slow=7.1,SNR=19						
LVC				Sn	Sn	11 48 08.5	+0.5
	comp=E,29nm,0.3s,baz=128,slow=21,SNR=7.1						
LVC				Lg	Lg	11 48 17.0	
	comp=E,36nm,0.3s,baz=81,slow=23,SNR=6.6						
LVC	Limon Verde	3.25	146		Pn	11 47 28.7	+0.3
PB10	IPOC Station P	3.60	176		Pn	11 47 32.4	-0.5
LPAZ	La Paz	4.44	36	Pn	Pb	11 47 50.9	-4.0
	comp=E,2.2nm,0.3s,baz=241,slow=9.9,SNR=23						
LPAZ				LR	LR	11 49 11.0	
	comp=E,98nm,18.8s,baz=238,slow=36						
GO02	Mina Guanaco	5.36	168		Pn	11 47 57.0	-0.4
GO03	Copiap	7.68	176	Pn	Pn	11 48 28.7	-0.3
SIV	San Ignacio	10.10	69	Pn	Pn	11 49 02.3	+0.1
	comp=E,2.5nm,0.3s,baz=273,slow=9.8,SNR=35						
CFA	Coronel Fontan	11.89	169	LR	LR	11 54 02.4	
	comp=E,55nm,20.0s,baz=280,slow=38						
SAML	Samuel	13.18	35	Pn	Pn	11 49 44.8	+0.5
CPUP	Villa Florida	13.99	120	LR	LR	11 56 07.3	
	comp=E,106nm,19.8s,baz=328,slow=41						
GO05	Huala	15.08	183	Pn	Pn	11 50 09.5	-0.6
GO05				IAmb	IAmb	11 50 27.2	
	comp=Z,22nm,1.1s						
PLCA	Paso Flores	20.76	179	P	Pn	11 51 20.1	-0.5
	comp=Z,1.8nm,1.0s,baz=342,slow=16,SNR=1.6						
PLCA	Paso Flores	20.76	179	P	P	11 51 17.4	-1.0
PLCA				IAmb	IAmb	11 51 29.1	
	comp=Z,16nm,1.4s						
PTGA	Pitinga	21.84	31	P	P	11 51 29.7	-0.3
	comp=Z,3.6nm,0.4s,baz=207,slow=14,SNR=11						
PTGA	Pitinga	21.84	31	P	P	11 51 29.8	-0.1
FLOC	Florencia	21.87	347	P	P	11 51 30.2	-0.1
BDFB	Brasilia	22.16	83	P	P	11 51 34.4	+0.9
	comp=Z,1.8nm,0.4s,baz=245,slow=16,SNR=3.0						
BDFB	Brasilia	22.16	83	P	P	11 51 33.7	+0.1
BDFB				IAmb	IAmb	11 51 47.3	
	comp=Z,16nm,1.4s						
RUSC	La Rusia	25.73	355	P	P	11 52 08.3	-0.3
TXAR	Lajitas Array	58.29	326	P	P	11 56 34.9	+2.3
	comp=Z,0.2nm,0.5s,baz=150,slow=6.2,SNR=2.7						
TXAR	Lajitas Array	58.29	326	P	P	11 56 31.7	-0.9
SNAA	Sanae	64.38	161	P	P	11 57 13.9	+0.6
SNAA				IAmb	IAmb	11 57 17.9	
	comp=Z,3.0nm,1.1s						
QSPA	South Pole Qui	70.28	180	P	P	11 57 50.7	-0.1
TOA0	Torodi Ar. Sit	78.56	71	P	P	11 58 39.5	-0.3
TORD	Torodi Ar. Bea	78.56	71	P	P	11 58 39.7	-0.1
	comp=Z,3.0nm,0.7s,baz=251,slow=4.9,SNR=14						
YKA	Yellowknife Ar	89.09	341	P	P	11 59 33.6	+1.2
	comp=Z,0.4nm,0.6s,baz=136,slow=4.9,SNR=16						
H11S2	WAKE ISLAND Hy	125.85	279	T	T	14 25 09.8	
	baz=101,slow=74,SNR=36						
H11S1	WAKE ISLAND Hy	125.86	279	T	T	14 25 06.8	
	baz=101,slow=74,SNR=21						
H11S3	WAKE ISLAND Hy	125.87	279	T	T	14 25 07.3	
	baz=101,slow=74,SNR=4.0						
H11N3	WAKE ISLAND Hy	125.89	280	T	T	14 25 16.1	
	baz=102,slow=74,SNR=3.4						
H11N2	WAKE ISLAND Hy	125.91	280	T	T	14 25 17.6	
	baz=102,slow=74,SNR=8.7						
H11N1	WAKE ISLAND Hy	125.91	280	T	T	14 25 15.9	

	baz=102,slow=74,SNR=3.2						
ASAR	Alice Springs	130.42	210	PKP	PKiKP	12 05 50.3	+0.3
	comp=Z,0.4nm,0.9s,baz=132,slow=1.4,SNR=2.2						
WRA	Warramunga Arr	133.33	213	PKP	PKiKP	12 05 56.6	+0.6
	comp=Z,0.4nm,0.7s,baz=152,slow=1.7,SNR=2.6						
ZALV	Zalesovo Beam	141.25	23	PKP	PKiKP	12 06 09.7	-1.2
	comp=Z,1.1nm,0.6s,baz=291,slow=3.9,SNR=4.4						
MKAR	Makanchi Array	145.36	33	PKPbc	PKiKP	12 06 16.9	-2.7
	comp=Z,2.8nm,0.6s,baz=352,slow=1.7,SNR=26						
KSH	Kashi	145.47	48	PKPbc	PKPab	12 06 16.8	+0.3
KSH				PP	PP	12 09 39.6	+3.4
KSH				PKS	PKSdf	12 09 50.8	-1.0
SONM	Songino Array	152.05	4	PKPbc	PKiKP	12 06 34.9	+1.4
	comp=Z,0.9nm,0.6s,baz=290,slow=1.0,SNR=8.4						

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*IDC **17** 12:00:37.2±3.3, 24°.34S×179°.64W, h494^{km}±29^{km}, mb3.8/9, mb1 3.9/11, mb1mx3.4/43, mbtmp4.6/11, Error ellipse: s-maj=33.1km s-min=22.7km az=67.0*

*NEIC **17** 12:00:40.6±0.9, 24°.4S±0°.1×179°.9W±0°.1, h523^{km}±10^{km}, mb4.5/17, Error ellipse: s-maj=18.0km s-min=16.6km az=214.0*

ISC 17 12:00:39.4±0.7**, 24°.39S**±0°.08×**179°.9W**±0°.1**, h505**^{km}**, n55, σ0^{s}.80**/57**, mb4.3**/16**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	6.91	343	P	P	12 02 25.9	+0.8
NFK	Norfolk Island	11.85	244	P	P	12 03 17.6	+1.3
	baz=19,SNR=3.3						
OUZ	Omahuta	12.19	206	P	P	12 03 21.4	+1.6
DZM	Mont Dzumac	12.81	278	P	P	12 03 27.5	+0.9
	1.0nm,0.3s,baz=86,slow=17,SNR=9.7						
DZM	Mont Dzumac	12.81	278	P	P	12 03 27.3	+0.6
URZ	Urewera	14.06	190	P	P	12 03 40.0	+0.5
	0.6nm,0.3s,baz=291,slow=3.3,SNR=11						
URZ				S	S	12 06 06.8	-1.2
	0.5nm,0.3s,baz=210,slow=18,SNR=1.8						
URZ	Urewera	14.06	190	P	P	12 03 40.5	+1.0
RPZ	Rata Peaks	20.67	199	P	P	12 04 42.9	-0.7
	10.0nm,0.6s,baz=324,slow=3.1,SNR=7.3						
RPZ	Rata Peaks	20.67	199	P	P	12 04 43.3	-0.4
ARMA	Armidale	25.98	250	P	P	12 05 33.0	+1.6
	baz=33,SNR=6.0						
ARMA	Armidale	25.98	250	P	P	12 05 32.4	+0.9
ARMA				IAmb	IAmb	12 05 33.2	
	comp=Z,8.9nm,0.9s						
EIDS	Eidsvold	26.36	262	P	P	12 05 34.6	-0.1
EIDS				IAmb	IAmb	12 05 35.7	
	comp=Z,13nm,0.9s						
MGCD	Mangrove Creek	26.85	244	P	P	12 05 39.4	+0.5
	baz=34						
RMQ	Roma	28.39	259	P	P	12 05 54.1	+1.6
	baz=35,SNR=5.8						
CAN	Canberra	29.01	241	P	P	12 05 58.5	+0.6
PPT	Papeete	29.04	82	P	P	12 05 58.4	+0.1
CMSA	Cobar Meteorol	31.16	249	P	P	12 06 16.8	+0.3
	baz=38,SNR=23						
CTA	Charters Tower	31.61	271	P	P	12 06 21.0	+0.5
	comp=Z,18nm,0.5s,baz=95,slow=11,SNR=50						
TOO	Toolangi	32.30	238	P	P	12 06 26.1	0.0
TOO				IAmb	IAmb	12 06 37.0	
	comp=Z,13nm,1.1s						
QLP	Quilpie	32.42	258	P	P	12 06 27.7	+0.3
	baz=39,SNR=6.1						
TAU	Tasmania Unive	32.70	227	P	P	12 06 29.3	-0.2
MTSU	Mount Surprise	33.90	274	P	P	12 06 40.6	+0.6
	baz=41,SNR=23						
STKA	Stephens Creek	34.66	249	P	P	12 06 46.5	+0.3
	baz=42,SNR=7.9						
STKA	Stephens Creek	34.66	249	P	P	12 06 46.4	+0.2
	comp=Z,5.1nm,0.6s,baz=94,slow=9.0,SNR=13						
STKA	Stephens Creek	34.66	249	P	P	12 06 46.2	0.0
HTT	Hallett	36.99	246	P	P	12 07 05.4	-0.2
	baz=44,SNR=9.1						
BBOO	Buckleboo	39.38	247	P	P	12 07 24.2	-0.8
	baz=46,SNR=12						
BBOO	Buckleboo	39.38	247	P	P	12 07 24.0	-1.0
BBOO				IAmb	IAmb	12 07 25.0	
	comp=Z,9.5nm,0.9s						
AS31	Alice Springs	42.09	261	P	P	12 07 46.4	-0.4
ASAR	Alice Springs	42.09	261	P	P	12 07 46.4	-0.4
	comp=Z,5.1nm,0.7s,baz=95,slow=7.2,SNR=74						
ASAR	Alice Springs	42.09	261	P	P	12 07 45.8	-1.0
WB2	Warramunga Arr	42.50	267	P	P	12 07 49.2	-0.9
	baz=50						
WB2	Warramunga Arr	42.50	267	P	P	12 07 49.3	-0.7
WB2				IAmb	IAmb	12 07 50.0	
	comp=Z,12nm,0.7s						
WB0	Warramunga Arr	42.50	267	P	P	12 07 49.2	-0.9
WB0				IAmb	IAmb	12 07 50.0	
	comp=Z,15nm,0.7s						
WRA	Warramunga Arr	42.51	267	P	P	12 07 49.3	-0.9
	comp=Z,11nm,0.6s,baz=104,slow=8.1,SNR=85						
WRA				ScP	ScP	12 12 35.5	+1.5
	comp=Z,1.0nm,1.2s,baz=107,slow=3.6,SNR=4.8						
WRA	Warramunga Arr	42.51	267	P	P	12 07 48.9	-1.2
FORT	Forrest	46.27	250	P	P	12 08 17.9	-1.2
	baz=53,SNR=22						
FORT	Forrest	46.27	250	P	P	12 08 17.8	-1.2
KDU	Kakadu	46.47	276	P	P	12 08 19.8	-0.9
	baz=53,SNR=4.0						
WRKA	Warakurna	46.86	258	P	P	12 08 23.0	-0.7
	baz=54,SNR=57						
MTN	Manton Dam	47.62	275	P	P	12 08 28.5	-1.0
KNRA	Kununurra	48.82	270	P	P	12 08 38.1	-0.3
	baz=56,SNR=18						
KNRA	Kununurra	48.82	270	P	P	12 08 38.0	-0.4
KNRA				IAmb	IAmb	12 08 38.9	
	comp=Z,25nm,1.0s						
FITZ	Fitzroy Crossi	50.92	266	P	P	12 08 53.7	-0.1
	baz=58,SNR=13						
FITZ	Fitzroy Crossi	50.92	266	P	P	12 08 53.8	-0.1
	comp=Z,8.7nm,0.7s,baz=203,slow=0.3,SNR=27						
FITZ	Fitzroy Crossi	50.92	266	P	P	12 08 53.8	-0.1
SIJI	Sorong	52.72	289	P	P	12 09 06.4	-0.6
	comp=Z,14nm,0.8s,baz=90,slow=9.6,SNR=3.7						
QSPA	South Pole Qui	65.69	180	P	P	12 10 33.8	+0.5
KSM	Kuching	72.32	280	P	P	12 11 13.5	-0.5
KSM				IAmb	IAmb	12 11 14.0	
	comp=Z,8.0nm,0.8s						
MJAR	Matsushiro Arr	72.38	326	P	P	12 11 13.0	-0.8
	comp=Z,1.1nm,0.7s,baz=134,slow=8.6,SNR=2.6						
GSTR	Great Sitkin T	76.23	2	P	P	12 11 34.8	-0.4
KSAR	Wonju Array Be	78.72	320	P	P	12 11 48.4	-0.7
CMAR	Chiang Mai Arr	89.82	290	P	P	12 12 45.3	+1.0
	comp=Z,0.6nm,0.3s,baz=140,slow=4.4,SNR=6.1						
AKASG	Malin Array Be	145.45	327	PKPbc	PKPdf	12 19 19.0	-0.3
	comp=Z,0.9nm,0.6s,baz=41,slow=4.2,SNR=6.3						
BRTR	Keskin Array B	147.98	307	PKPbc	PKPdf	12 19 24.2	+0.1
	comp=Z,0.6nm,0.6s,baz=88,slow=4.8,SNR=2.2						

WEL 17 12:11:10.8, 41°S±2°×**17°4E**±°**, h66**^{km}±2^{km}**, ML4.0**/12**, MLv3.8**/12**, Error ellipse: s-maj=0.0km s-min=0.0km az=110.1, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TCW	Tory Channel	0.28	70	P	Pn	12 11 22.2	+0.8
TCW				S	Sn	12 11 29.5	+0.4
BSWZ	Blackbirch Sta	0.41	185	P	Pn	12 11 23.2	+0.8
NNZ	Nelson	0.42	282	P	Pn	12 11 22.6	+0.1
CMWZ	Cape Campbell	0.49	154	P	Pn	12 11 24.6	+1.4
DUWZ	D'Urville Isla	0.51	360	P	Pn	12 11 23.5	+0.2
WEL	Wellington	0.64	88	P	Pn	12 11 25.5	+0.8
WEL				S	Sn	12 11 35.6	+0.7
BHW	Baring Head	0.72	98	P	Pn	12 11 26.2	+0.5
BHW				S	Sn	12 11 37.1	+0.6
KIW	Kapiti Island	0.87	59	P	Pn	12 11 28.1	+0.6
CAW	Cannon Point	0.88	77	P	Pn	12 11 28.1	+0.4
THZ	Tophouse	0.89	239	P	Pn	12 11 28.2	+0.4
THZ				S	Sn	12 11 40.8	+0.5
MSWZ	Moikau Station	1.00	97	P	Pn	12 11 29.4	+0.3
MSWZ				S	Sn	12 11 42.7	0.0
PLWZ	Palliser	1.03	105	P	Pn	12 11 29.9	+0.4
PLWZ				S	Sn	12 11 43.3	-0.2
OGWZ	Otaki Gorge	1.06	63	P	Pn	12 11 30.3	+0.4
PAWZ	Paruwai Farm	1.13	94	P	Pn	12 11 30.9	+0.1
PAWZ				S	Sn	12 11 45.3	-0.5
KHZ	Kahutara	1.14	194	P	Pn	12 11 31.9	+1.0
KHZ				S	Sn	12 11 46.3	+0.4
QRZ	Quartz Range	1.16	294	P	Pn	12 11 31.6	+0.4
MTW	Mount Morrison	1.20	83	P	Pn	12 11 31.5	-0.2
HOWZ	Holdsworth Sta	1.27	72	P	Pn	12 11 32.5	-0.2
TRWZ	Traveller	1.33	94	P	Pn	12 11 33.4	0.0
MRZ	Mangatainoka R	1.41	63	P	Pn	12 11 34.2	-0.2
TMWZ	Te Maipa	1.50	83	P	Pn	12 11 35.3	-0.3
OHWZ	Ohakea	1.53	44	P	Pn	12 11 36.8	+0.8
TIWZ	Tintock	1.58	71	P	Pn	12 11 36.2	-0.5
DSZ	Denniston Nort	1.65	254	P	Pn	12 11 38.2	+0.5
POWZ	Post Office Ro	1.67	57	P	Pn	12 11 38.5	+0.6
PRWZ	Pori Road	1.72	65	P	Pn	12 11 38.2	-0.4
WAZ	Wanganui	1.75	28	P	Pn	12 11 40.4	+1.4
GVZ	Greta Valley S	1.78	201	P	Pn	12 11 39.7	+0.3
BFZ	Birch Farm	1.86	71	P	Pn	12 11 39.5	-1.0
LREZ	Lake Rotokare	1.88	11	P	Pn	12 11 42.6	+1.8
NMEZ	Namu Road	1.89	359	P	Pn	12 11 41.8	+0.9
LTZ	Lake Taylor	1.92	219	P	Pn	12 11 41.5	+0.2
PREZ	Palmer Road	1.97	5	P	Pn	12 11 43.2	+1.1
DVHZ	Dannevirke	1.98	60	P	Pn	12 11 41.0	-1.1
TSZ	Takapari Road	1.99	52	P	Pn	12 11 41.7	-0.6
KHEZ	Kahui Hut	2.01	2	P	Pn	12 11 43.6	+1.0
NBEZ	Newall Road No	2.04	359	P	Pn	12 11 43.9	+1.0
AMCZ	Amberley	2.09	206	P	Pn	12 11 43.3	-0.3
ANWZ	Angora Road	2.11	67	P	Pn	12 11 42.9	-0.9
PKE	Pukeiti	2.11	1	P	Pn	12 11 44.8	+0.9
DREZ	Durham Road	2.13	6	P	Pn	12 11 45.1	+1.0
PNHZ	Pukenui	2.22	52	P	Pn	12 11 44.4	-1.1
MHEZ	Mangahewa	2.25	8	P	Pn	12 11 47.3	+1.5
MTVZ	Mangateitei	2.26	32	P	Pn	12 11 46.6	+0.7
VRZ	Vera Road	2.27	17	P	Pn	12 11 47.3	+1.2
WPHZ	Waipukurau	2.28	58	P	Pn	12 11 48.3	+2.1
PKVZ	Pokaka	2.29	29	P	Pn	12 11 46.7	+0.3
PRHZ	Porangahau	2.31	64	P	Pn	12 11 45.2	-1.3
INZ	Inchbonnie	2.33	232	P	Pn	12 11 47.0	+0.2
MOVZ	Moawhango	2.36	37	P	Pn	12 11 46.9	-0.5
TRVZ	Turoa	2.36	32	P	Pn	12 11 47.9	+0.4
DRZ	Dome Shelter	2.39	32	P	Pn	12 11 48.8	+0.8
WHVZ	Whangaehu Hut	2.39	33	P	Pn	12 11 48.4	+0.5
FWVZ	Far West T-bar	2.40	32	P	Pn	12 11 48.5	+0.4
TUVZ	Tukino	2.43	34	P	Pn	12 11 48.9	+0.5
BHHZ	Black Hill Sta	2.44	43	P	Pn	12 11 48.0	-0.5
OXZ	Oxford	2.45	214	P	Pn	12 11 47.4	-1.1
NGZ	Ngauruhoe	2.49	32	P	Pn	12 11 49.6	+0.4
OKCZ	Okains Bay	2.50	195	P	Pn	12 11 48.5	-0.7
KRHZ	Kereru	2.50	49	P	Pn	12 11 48.0	-1.1
TWVZ	Taurewa	2.52	28	P	Pn	12 11 49.6	+0.1
WTVZ	West Tongariro	2.54	31	P	Pn	12 11 50.2	+0.5
KRVZ	Karewarewa	2.57	31	P	Pn	12 11 50.5	+0.3
MQZ	McQueen's Vall	2.57	201	P	Pn	12 11 48.6	-1.5
PXZ	Pawanui	2.57	61	P	Pn	12 11 48.9	-1.2
AKCZ	Akaroa Harbour	2.67	196	P	Pn	12 11 50.4	-1.1
KWHZ	Kaweka Forest	2.68	46	P	Pn	12 11 55.6	+3.9
KAHZ	Kahuranaki	2.71	57	P	Pn	12 11 51.0	-1.0
RITZ	Rihia Road	2.76	33	P	Pn	12 11 52.7	0.0
MCHZ	McNeill Hill	2.82	50	P	Pn	12 11 58.2	+4.6
RATZ	Rangitukua	2.82	31	P	Pn	12 11 54.4	+0.8
HIZ	Hauiti	2.88	15	P	Pn	12 11 55.1	+0.7
BKZ	Black Stump Fm	2.91	43	P	Pn	12 11 53.4	-1.3
WATZ	Wairara	2.95	29	P	Pn	12 11 56.5	+1.2
WVZ	Waitaha Valley	2.95	232	P	Pn	12 11 55.9	+0.6
ARHZ	Aropaoanui	3.11	50	P	Pn	12 11 57.3	-0.2
NMHZ	Naumai	3.12	46	P	Pn	12 11 56.5	-1.2
KUTZ	Kaahu Road	3.17	28	P	Pn	12 12 00.1	+1.7
RPZ	Rata Peaks	3.21	220	P	Pn	12 11 58.0	-0.8
TLZ	Tolley Road	3.23	23	P	Pn	12 11 59.0	-0.1
WPRZ	Whakapapatarin	3.27	32	P	Pn	12 11 59.0	-0.7
ALRZ	Allen Road	3.31	35	P	Pn	12 11 59.0	-1.3
MTHZ	Maungataniwha	3.32	43	P	Pn	12 11 58.6	-1.8
PRRZ	Plateau Road	3.39	35	P	Pn	12 11 60.0	-1.3
RTZ	Ruatahuna	3.57	42	P	Pn	12 12 07.5	+3.7
MUGZ	Murupara	3.58	39	P	Pn	12 12 01.4	-2.4
FOZ	Fox Glacier	3.77	233	P	Pn	12 12 06.3	0.0
TOZ	Tahuroa Road	3.78	19	P	Pn	12 12 06.6	0.0
TGRZ	Tauranga	4.01	28	P	Pn	12 12 09.3	-0.4
MWZ	Matawai	4.07	44	P	Pn	12 12 08.0	-2.6
LBZ	Lake Benmore	4.12	221	P	Pn	12 12 09.7	-1.7
KBAZ	Karaka Road Bo	4.28	10	P	Pn	12 12 14.6	+1.2
AWAZ	Awhitu Peninsu	4.28	8	P	Pn	12 12 14.1	+0.7
MKAZ	Moumakai	4.31	13	P	Pn	12 12 14.1	+0.3
WTAZ	Waiatarua	4.40	7	P	Pn	12 12 16.2	+1.1
ETAZ	East Tamaki Re	4.42	10	P	Pn	12 12 16.0	+0.7
ODZ	Otahua Downs	4.44	212	P	Pn	12 12 13.9	-1.7
EPAZ	Eden Park BICE	4.47	8	P	Pn	12 12 17.2	+1.1
HBAZ	Herne Bay Bore	4.50	8	P	Pn	12 12 17.6	+1.2
RVAZ	Riverhead Bore	4.56	7	P	Pn	12 12 17.9	+0.6
MBAZ	Motutapu North	4.60	10	P	Pn	12 12 18.7	+0.9
WIAZ	Waiheke Island	4.61	12	P	Pn	12 12 18.3	+0.4
JCZ	Jackson Bay	4.69	232	P	Pn	12 12 19.8	+0.7
ABAZ	Army Bay	4.75	9	P	Pn	12 12 20.8	+0.8
KUZ	Kuaotunu	4.77	18	P	Pn	12 12 19.5	-0.6
WKZ	Wanaka	5.03	224	P	Pn	12 12 21.6	-2.1
HHSZ	Highcliff Hill	5.17	207	P	Pn	12 12 23.7	-2.0
GRZ	Great Barrier	5.19	14	P	Pn	12 12 26.4	+0.4
WCZ	Waipu Caves	5.37	4	P	Pn	12 12 28.7	+0.3
TUZ	Tuapeka	5.59	212	P	Pn	12 12 30.9	-0.4
MLZ	Mavora Lakes	5.86	224	P	Pn	12 12 34.8	-0.3
OUZ	Omahuta	6.09	357	P	Pn	12 12 39.5	+1.3
SYZ	Scrubby Hill	6.26	212	P	Pn	12 12 39.6	-0.9
CTZ	Chatham Island	7.39	112	P	Pn	12 12 55.9	-0.1

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*MEX **17** 12:12:43.7±0.4, 14°.27N×93°.41W, h22^{km}±92^{km}, MD4.0*

*GCG **17** 12:12:45.4±0.5, 14°.28N×93°.14W, h35^{km}±999^{km}, MD4.1*

ISC 17 12:12:42.2±2.0**, 14°.3N**±0°.1×**93°.40W**±0°.08**, h36**^{km}**, n6, σ0^{s}.88**/9**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		1.44	7	eP	Pn	12 13 06.0	+0.2
PCIG				i S	Sn	12 13 22.3	-1.2
STG3	Santiaguito 3,	1.83	76	eP	Pn	12 13 11.5	+0.3
CCIG	Comitan	2.35	31	eP	Pn	12 13 19.1	+0.7
CCIG				i S	Sn	12 13 46.7	+0.6
FUG	Fuego 3	2.48	85	eP	Pn	12 13 21.0	+0.7
FUG				eS	Sn	12 13 48.2	-1.3
IXG	Ixpaco	2.87	91	eP	Pn	12 13 25.9	+0.3
HUIG	Huatulco	3.02	300	i P	Pn	12 13 27.7	+0.3

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*MAN **17** 12:25:59.6, 5°.11N×126°.63E, h9^{km}, mb5.5, ML4.5, MS4.8*

*GCMT **17** 12:26:01.1±0.3, 5°.14N±0°.02×126°.77E±0°.03, h39^{km}, MW5.0/52, Moment Tensor Solution. s50,c65; s52,c76; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.25±.16; $M_{\theta\theta}$-2.93±.09; $M_{\phi\phi}$-0.32±.13; $M_{r\theta}$-0.92±.09; $M_{\theta\phi}$1.14±.10; $M_{\phi r}$-0.43±.14; Best double couple: $M_0$3.45800×10^{16} NP1:ϕ_s122.00000°,δ40.00000°,λ109.00000°. NP2: ϕ_s279.00000°,δ52.00000°,λ75.00000°. Principal axes: T 3.4810, Plg77.0000°, Azm136.0000°; N -0.0470, Plg12.0000°, Azm288.0000°; P -3.4350, Plg6.0000°, Azm19.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **17** 12:26:01.1±1.4, 5°.09N×126°.62E, h51^{km}±12^{km}, mb4.3/32, mb1 4.3/35, mb1mx4.3/43, mbtmp4.5/35, ML4.4/3, MS3.9/20, Ms1 4.0/20, ms1mx3.8/33 Error ellipse: s-maj=16.2km s-min=8.4km az=78.0*

*NEIC **17** 12:26:03.1±1.3, 5°.03N±0°.06×126°.64E±0°.07, h75^{km}±5^{km}, mb4.8/99, Error ellipse: s-maj=11.2km s-min=6.5km az=57.0*

*DJA **17** 12:26:03.9±0.4, 5°N±3°×12°7E±°, h67^{km}±4^{km}, M4.8/41, mb4.8/41, mB5.2/13, MLv5.1/10, Mw(mB)4.7/13, Mwp5.0/2*

ISC 17 12:26:02.2±0.6**, 5°.04N**±0°.03×**126°.61E**±0°.05**, h61**^{km}±5^{km}**, n255, σ1^{s}.85**/274**, mb4.7**/69**, 7C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	1.39	320	eP	Pn	12 26 23.6	-1.7
DDMP				eS	Sn	12 26 41.8	-0.9
MATI	Mati	1.93	350	eP	Pn	12 26 31.3	-1.3
MATI				eS	Sn	12 27 01.9	+6.1
GSPH	General Santos	1.95	302	⇑i P	Pn	12 26 30.4	-2.7
GSPH				i S	Sn	12 26 53.6	-3.0
DAV	Davao City (W)	2.26	333	P	Pn	12 26 36.9	-0.3
	134nm,0.3s,baz=180,slow=1.4,SNR=14						
DAV				S	Sn	12 27 08.8	+4.8
	316nm,0.3s,baz=64,slow=23,SNR=9.0						
DAV				LR	LR	12 27 45.4	
	comp=Z,6μm,20.1s,baz=122,slow=47						
DAV	Davao City (W)	2.26	333	⇓eP	Pn	12 26 36.3	-0.9
DAV	Davao City (W)	2.26	333		Pn	12 26 38.7	+1.5
DAV				Sn	Sn	12 27 07.9	+3.9
DMPH	Davao City--Mi	2.31	332	⇑eP	Pn	12 26 41.1	+3.3
DMPH				eS	Sn	12 27 16.5	+11
KCP	Kidapawan	2.47	322	⇑eP	Pn	12 26 40.1	0.0
KCP				i S	Sn	12 27 27.6	+18
SKMP	Bagumbayan, Su	2.53	306	eP	Pn	12 26 41.0	+0.2
SKMP				eS	Sn	12 27 12.4	+1.9
CTBH	Cotabato--PC H	3.20	313	⇓i P	Pn	12 26 49.4	-0.6
BUKP	Musuan	3.21	332	eP	Pn	12 26 50.5	+0.2
BUKP				eS	Sn	12 27 30.0	+2.6
CGP	Cagayan de Oro	3.89	331	⇓eP	Pn	12 27 02.1	+2.6
CGP				eS	Sn	12 27 55.7	+12
BUTP	Butuan	4.03	346	eP	Pn	12 26 58.2	-3.2
BUTP				eS	Sn	12 28 01.2	+14
PAGZ	Pagadian	4.25	311	eP	Pn	12 27 03.7	-0.7
PAGZ				eS	Sn	12 27 33.7	-19
TNTI	Ternate	4.31	170	P	Pn	12 27 06.7	+1.5
TNTI	Ternate	4.31	170		Pn	12 27 06.2	+1.0
TNTI				Sn	Sn	12 27 54.5	+0.4
DCPH	Dipolog City	4.78	318	⇑eP	Pn	12 27 18.9	+7.3
KMSI	Cibinong	5.15	211	P	Pn	12 27 18.8	+2.0
	2.0nm6μm490nm,0.6s						
MSLP	Maasin	5.35	341	eP	Pn	12 27 19.3	-0.2
MSLP				eS	Sn	12 28 29.9	+10
TBP	Tagbilaran	5.37	330	eP	Pn	12 27 22.3	+2.6
TBP				i S	Sn	12 28 27.0	+6.8
SNPH	Sibulan	5.43	322	⇑eP	Pn	12 27 23.1	+2.5
LBMI	Labuha	5.71	171	P	Pn	12 27 26.6	+2.2
	1.5nm4μm231nm,1.5s						
LLP	Lapu-Lapu	5.86	334	eP	Pn	12 27 27.6	+1.1
LLP				eS	Sn	12 28 35.8	+3.4
OCLP	Ormoc	6.29	342	eP	Pn	12 27 34.6	+2.2
MRSI	Marisa	6.50	226	P	Pn	12 27 36.4	+1.1
	1.2nm2μm3μm265nm,0.7s						
GUIM	Jordan	6.83	325	eP	Pn	12 27 42.5	+2.8
SANI	Sanana	7.07	185	P	Pn	12 27 40.3	-2.7
LUWI	Luwuk	7.15	212	P	Pn	12 27 49.2	+5.0
	1.9nm7μm380nm,0.7s						
LUWI	Luwuk	7.15	212		Pn	12 27 44.9	+0.7
SIJI	Sorong	7.49	141	P	Pn	12 27 50.0	+1.2
	4.8nm,0.3s,baz=328,slow=23,SNR=12						
SIJI				S	Sn	12 29 10.9	-1.5
	2.0nm,0.3s,baz=247,slow=22,SNR=1.4						
RCP	Roxas	7.52	330	⇑i P	Pn	12 27 52.0	+2.8
MPSI	Mapaga	8.17	235	P	Pn	12 28 02.5	+4.4
	658nm59nm,0.9s						
NLAI	Namlea	8.24	177	P	Pn	12 28 00.0	+0.9
	3μm74nm,0.5s						
MSAI	Masohi	8.65	164	P	Pn	12 28 08.6	+4.0
	461nm19nm,1.0s						
AAI	Ambon	8.81	170	P	Pn	12 28 26.4	+19
FAKI	Fak Fak	9.71	144	P	Pn	12 28 21.5	+2.3
	29nm,1.2s						
FAKI	Fak Fak	9.71	144		Pn	12 28 20.0	+0.8
FAKI				Sn	Sn	12 30 05.5	-1.3
LQP	Lukban	10.31	331	eP	Pn	12 28 30.3	+2.8
KKM	Kota Kinabalu	10.39	276	Pn	Pn	12 28 30.3	+1.6
TTSI	Tana Toraja	10.51	220	P	Pn	12 28 33.0	+2.8
	1μm78nm,1.0s						
SPSI	Sidrap Palu	11.26	217	P	Pn	12 28 42.5	+2.2
	30nm,0.6s						
BAKI	Biak	11.33	123	P	Pn	12 28 47.2	+5.9
BNSI	Bone	11.41	215	P	Pn	12 28 44.3	+1.9
	35nm,0.8s						
KAPI	Kappang	12.11	215	P	Pn	12 28 53.4	+1.4
	1.6nm,0.3s,baz=7.7,slow=10,SNR=9.7						
BKSI	Bulukumba	12.16	212	P	Pn	12 28 52.4	-0.3
	14nm,1.1s						
SMPI	Sarmi	13.96	120	P	Pn	12 29 18.6	+1.5
	49nm,1.1s						
MMRI	Maumere	14.27	198	P	P	12 29 37.6	+11
MMRI	Maumere	14.27	198		Pn	12 29 22.0	+0.8
SBUM	Sibu	14.59	260		Pn	12 29 27.3	+1.9
SOEI	Soe	14.88	189	P	P	12 29 33.7	0.0
	1μm78nm,0.8s						
SOEI	Soe	14.88	189		Pn	12 29 30.6	+1.3
WBSI	Waikabubak, Su	16.26	206	P	P	12 29 49.4	+0.5
	1μm60nm,0.7s						
PLAI	Plampang	16.35	213	P	Pn	12 29 47.9	0.0
	763nm53nm,0.9s						
KSM	Kuching	16.65	258	P	P	12 29 52.7	-0.6
KSM				IAmb	IAmb	12 29 56.5	
	comp=Z,51nm,1.2s						
SRBI	Singaraja	17.30	221	P	P	12 30 13.7	+13
JAGI	Jajag, Banyuwa	18.29	223	P	Pn	12 30 13.0	+1.2
	comp=Z,50nm,1.1s						
JAGI	Jajag, Banyuwa	18.29	223	P	Pn	12 30 11.9	+0.1
JAGI				IAmb	IAmb	12 30 31.2	
	comp=Z,44nm,1.1s						
MTN	Manton Dam	18.33	166	P	P	12 30 10.7	-1.0
	baz=18,SNR=13						
MTN	Manton Dam	18.33	166	P	P	12 30 09.8	-1.8
MTN				IAmb	IAmb	12 30 14.8	
	comp=Z,68nm,1.1s						
KDU	Kakadu	18.55	162	P	P	12 30 13.3	-0.8
	baz=19,SNR=12						
YULB	Yu-li	18.95	345	P	P	12 30 17.4	-1.1
TPUB	Ta-pu	19.05	343	P	P	12 30 18.4	-1.2
DLV	T Lat	19.18	292	P	P	12 30 21.9	+0.6
SSLB	Suanglung	19.42	344	P	P	12 30 23.8	+0.2
YOJ	Yonaguni jima	19.62	350	P	P	12 30 25.4	-0.4
PWJI	Pagerwojo	19.66	229	P	Pn	12 30 37.9	+10
SMRI	Semarang	20.11	233	P	P	12 30 31.4	+0.2
SMRI				IAmb	IAmb	12 30 32.4	
	comp=Z,58nm,1.1s						
YHNB	Yeheng	20.16	346	P	P	12 30 31.0	-0.7
YHNB				IAmb	IAmb	12 30 41.5	
	comp=Z,30nm,1.0s						
UGM	Wanagama	20.57	231	P	P	12 30 37.0	+0.8
UGM				IAmb	IAmb	12 30 45.9	
	comp=Z,67nm,1.4s						
KNRA	Kununurra	20.69	174	P	P	12 30 37.8	+0.3
	baz=21,SNR=32						
KNRA	Kununurra	20.69	174	P	P	12 30 37.7	+0.2
KNRA				IAmb	IAmb	12 30 53.9	
	comp=Z,69nm,0.8s						
QIZ	Qiongzhong	21.47	312	P	P	12 30 45.3	-0.5
QIZ				S	S	12 34 41.8	+1.0
KPJI	Karang Pucung	21.50	235	P	P	12 30 48.0	+1.9
	comp=Z,36nm,1.0s						
JOW	Kunigami	21.73	4	P	P	12 30 47.8	-0.7
JOW				IAmb	IAmb	12 30 54.0	
	comp=Z,46nm,1.3s						
MYKOM	Kota Tinggi	22.94	263	P	P	12 31 01.9	+0.4
MYKOM				IAmb	IAmb	12 31 03.9	
	comp=Z,70nm,1.5s						
FITZ	Fitzroy Crossi	23.01	182	P	P	12 31 02.0	-0.1
	baz=23,SNR=39						
FITZ	Fitzroy Crossi	23.01	182	P	P	12 31 01.7	-0.4
	comp=Z,25nm,0.9s,baz=146,slow=0.2,SNR=45						
FITZ	Fitzroy Crossi	23.01	182	P	P	12 31 02.1	-0.1
FITZ				IAmb	IAmb	12 31 04.4	
	comp=Z,35nm,1.0s						
PMBI	Palembang	23.21	251	P	P	12 31 05.3	+1.2
MDSI	Maura Dua	24.32	247	P	P	12 31 15.1	+0.7
	comp=Z,18nm,1.0s						
PMG	Port Moresby	25.01	125	LR	LR	12 42 20.1	
	comp=Z,255nm,18.7s,baz=342,slow=39						
COEN	Coen	25.03	139	P	P	12 31 19.9	-0.9
IPM	Ipoh	25.50	270	P	P	12 31 25.0	-0.1
IPM				IAmb	IAmb	12 31 44.3	
	comp=Z,25nm,1.2s						
WB0	Warramunga Arr	25.81	163	P	P	12 31 27.6	-0.2
KULM	Kulim	25.85	272	P	P	12 31 28.1	-0.2
WRAB	Tennant Creek	25.96	163	P	P	12 31 29.3	+0.2
BKNI	Bangkinang	25.96	260	P	P	12 31 29.4	+0.1
WRA	Warramunga Arr	25.96	163	P	P	12 31 28.5	-0.7
	comp=Z,15nm,0.6s,baz=342,slow=10.0,SNR=84						
WRA				S	S	12 36 02.8	+7.2
	comp=Z,1.4nm,0.9s,baz=337,slow=13,SNR=3.3						
WRA				ScP	ScP	12 38 33.6	+2.3
	comp=Z,0.7nm,0.9s,baz=341,slow=2.9,SNR=2.0						
WRA				LR	LR	12 43 04.6	
	comp=Z,189nm,20.6s,baz=355,slow=39						
WRA	Warramunga Arr	25.96	163	P	P	12 31 28.7	-0.5
JCJ	Chichijima	26.49	32	P	P	12 31 31.6	-2.4
	comp=Z,62nm,0.7s,baz=194,slow=11,SNR=3.0						
PDSI	Padang	26.78	258	P	P	12 31 37.4	+0.7
	comp=Z,14nm,1.0s						
KRVT	Keravat (AS076	27.03	110	LR	LR	12 40 20.0	
	comp=Z,354nm,21.5s,baz=305,slow=32						
PSA00	Pilbara Seismi	27.27	194	P	P	12 31 40.9	0.0
PSA00				IAmb	IAmb	12 31 59.0	
	comp=Z,18nm,0.8s						

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PBKT  Sadao Pong        27.62 297  P      P        12 31 44.2  0.0
PSI   Prapat            27.71 266  P      P        12 31 44.6 -0.6
      comp=Z,2.9nm,0.5s,baz=127,slow=7.5,SNR=3.8
RPSI  Rantau Prapat     27.72 266  P      P        12 31 44.6 -0.5
NJ2   Nanjing           27.84 346 eP      P        12 31 46.5 +0.6
WHN   Wuhan             27.88 337  P      P        12 31 53.3 +7.0
WHN                                S      S        12 36 33.6 +8.1
JNU   Nakatsue          28.22   8  P      P        12 31 48.4 -1.0
      comp=Z,6.7nm,0.9s,baz=180,slow=14,SNR=2.0
JNU   Nakatsue          28.22   8  P      P        12 31 48.4 -1.0
JNU                                IAmb   IAmb     12 31 58.9
      comp=Z,24nm,1.1s
QIS   Mount Isa         28.46 154  P      P        12 31 52.1 +0.4
      baz=29,SNR=8.8
GYA   Guiyang           28.58 320 eP      P        12 31 55.0 +2.2
KCSI  Kotacane, Aceh    28.80 268  P      P        12 32 11.8  +17
AS31  Alice Springs     29.40 166  P      P        12 31 59.3 -0.8
ASAR  Alice Springs     29.41 166  P      P        12 31 59.5 -0.5
      comp=Z,3.8nm,0.5s,baz=339,slow=6.6,SNR=90
ASAR                               PcP    PcP      12 35 05.5 +0.6
      comp=Z,1.8nm,0.7s,baz=349,slow=2.5,SNR=5.0
ASAR                               ScP    ScP      12 38 43.6 +1.9
      comp=Z,0.5nm,0.8s,baz=345,slow=2.5,SNR=2.7
ENH   Enshi             29.84 329  P      P        12 32 03.2 -0.7
ENH                                IAmb   IAmb     12 32 10.2
      comp=Z,23nm,1.2s
WRKA  Warakurna         29.94 177  P      P        12 32 04.5 -0.2
      baz=30,SNR=15
CM31  Chiang Mai Arr    30.13 299  P      P        12 32 07.0 +0.5
CMAR  Chiang Mai Arr    30.13 299  P      P        12 32 07.2 +0.7
      comp=Z,1.2nm,0.7s,baz=116,slow=7.3,SNR=6.2
CMAR                               PcP    PcP      12 35 07.8 +0.9
      comp=Z,1.1nm,0.6s,baz=141,slow=1.1,SNR=5.8
CMAR                               ScP    ScP      12 38 45.8 +1.6
      comp=Z,0.6nm,0.3s,baz=113,slow=2.1,SNR=5.2
CMAR                               LR     LR       12 44 37.0
      comp=Z,161nm,19.4s,baz=105,slow=37
CMAR  Chiang Mai Arr    30.13 299  P      P        12 32 05.2 -1.3
CHTO  Chiang Mai        30.26 299  P      P        12 32 07.4 -0.3
CTA   Charters Tower    31.57 143  P      P        12 32 20.1 +1.0
      comp=Z,7.3nm,1.0s,baz=321,slow=13,SNR=8.0
KSAR  Wonju Array Be    32.27   2  P      P        12 32 25.4 +0.3
KSRS  Korea Array       32.28   2  P      P        12 32 25.3 +0.2
      comp=Z,1.3nm,0.6s,baz=176,slow=9.5,SNR=3.5
KSRS                               LR     LR       12 45 13.5
      comp=Z,206nm,21.9s,baz=185,slow=36
KS19  Wonju Array Si    32.33   2  P      P        12 32 24.6 -1.0
MEEK  Meekatharra       32.43 193  P      P        12 32 26.2 -0.4
      baz=32,SNR=14
MJAR  Matsushiro Arr    33.11  17  P      P        12 32 30.9 -1.6
      comp=Z,0.7nm,0.5s,baz=181,slow=8.5,SNR=2.2
MJAR                               LR     LR       12 44 50.6
      comp=Z,265nm,21.7s,baz=200,slow=34
MJAR  Matsushiro Arr    33.11  17  P      P        12 32 31.2 -1.3
XAN   Xi'an             33.20 333  P      P        12 32 31.8 -1.6
XAN                                pP     pwP      12 32 49.8 -1.6
XAN                                S      S        12 37 48.8 -0.2
XAN                                ScP    ScP      12 38 58.3 +4.0
XAN                                SS     SS       12 40 04.3  -10
XAN   Xi'an             33.20 333  P      P        12 32 31.9 -1.4
CD2   Chengdu           33.53 323 eP      P        12 32 36.0 -0.2
MORW  Morawa            35.40 196  P      P        12 32 52.2 -0.1
MORW                               IAmb   IAmb     12 33 09.5
      comp=Z,27nm,1.4s
FORT  Forrest           35.64 178  P      P        12 32 55.1 +0.7
      baz=36,SNR=9.0
FORT  Forrest           35.64 178  P      P        12 32 54.1 -0.3
QLP   Quilpie           35.77 152  P      P        12 32 56.0 +0.4
      baz=36,SNR=3.7
BJT   Baijiatuau        36.08 346  P      P        12 32 58.0  0.0
BJI   Beijing           36.09 346  P      P        12 32 58.3 +0.2
BJI                                pP     pP       12 33 07.4 -5.3
BJI                                S      S        12 38 27.3 -5.9
HNR   Honiara           36.20 113  LR     LR       12 46 31.0
      comp=Z,145nm,21.4s,baz=264,slow=34
KMBL  Kambalda          36.48 187  P      P        12 33 02.0 +0.4
      baz=37,SNR=5.8
LZH   Lanzhou           37.32 329 ⇑P      P        12 33 11.4 +2.5
LZH                                pP     sP       12 33 31.9 +1.9
LZH                                sP     pwP      12 33 42.1  +15
LZH                                PP     PnPn     12 34 41.6 +5.4
KLBR  Kellerberrin      37.39 192  P      P        12 33 09.4 +0.1
      baz=38,SNR=4.8
RMQ   Roma              37.98 147  P      P        12 33 15.5 +1.2
      baz=38,SNR=6.7
MUN   Mundaring         38.12 194  P      P        12 33 15.9 +0.5
      baz=38,SNR=4.6
HHC   Hu-ho-hao-te      38.13 341 eP      P        12 33 17.8 +2.3
EIDS  Eidsvold          38.46 143  P      P        12 33 18.9 +0.5
      baz=39,SNR=8.7
EIDS  Eidsvold          38.46 143  P      P        12 33 18.1 -0.3
CN2   Changchun         38.62 359 eP      P        12 33 22.1 +2.6
CN2                               eS      S        12 39 12.6 +1.1
BBOO  Buckleboo         38.70 167  P      P        12 33 20.5 +0.2
      baz=39,SNR=10.0
BBOO  Buckleboo         38.70 167  P      P        12 33 19.5 -0.8
NWAO  Narrogin (SRO)    38.79 193  P      P        12 33 22.3 +1.3
      comp=Z,16nm,0.9s,baz=35,slow=12,SNR=4.3
NWAO                               LR     LR       12 50 53.2
      comp=Z,130nm,18.6s,baz=30,slow=38
NWAO  Narrogin (SRO)    38.79 193  P      P        12 33 21.2 +0.1
NWAO  Narrogin (SRO)    38.79 193  P      P        12 33 21.2 +0.1
NWAO                               IAmb   IAmb     12 33 22.4
      comp=Z,26nm,1.2s
USRK  Ussuriysk Ar.     39.29   6  P      P        12 33 25.4 +0.3
      comp=Z,2.3nm,0.6s,baz=183,slow=6.2,SNR=7.7
USRK                               LR     LR       12 48 24.7
      comp=Z,182nm,21.9s,baz=174,slow=34
USRK  Ussuriysk Ar.     39.29   6  P      P        12 33 24.8 -0.3
STKA  Stephens Creek    39.39 160  P      P        12 33 26.6 +0.5
      baz=40,SNR=26
STKA  Stephens Creek    39.39 160  P      P        12 33 26.0 -0.1
      comp=Z,15nm,0.7s,baz=340,slow=8.9,SNR=18
STKA                               LR     LR       12 51 35.3
      comp=Z,169nm,22.0s,baz=327,slow=39
STKA  Stephens Creek    39.39 160  P      P        12 33 25.8 -0.3
MDJ   Mudanjiang        39.51   3  P      P        12 33 27.1 +0.3
MDJ                                IAmb   IAmb     12 33 31.3
      comp=Z,18nm,1.0s
HTT   Hallett           40.00 164  P      P        12 33 32.0 +0.8
      baz=40,SNR=5.0
RKGY  Rocky Gully       40.47 192  P      P        12 33 36.8 +1.8
      baz=41,SNR=6.1
ASAJ  Asahikawa         41.38  17  P      P        12 33 42.2 -0.2
      comp=Z,5.1nm,0.7s,baz=218,slow=8.6,SNR=8.1
LSA   Lhasa             41.50 310  P      P        12 33 43.8 -0.3
LSA                                IAmb   IAmb     12 33 46.0
      comp=Z,6.3nm,0.5s
H11N1 WAKE ISLAND Hy    41.82  66  T      T        13 18 19.2
      baz=254,slow=75,SNR=22
H11N2 WAKE ISLAND Hy    41.83  66  T      T        13 18 19.8
      baz=254,slow=75,SNR=17
H11N3 WAKE ISLAND Hy    41.84  66  T      T        13 18 24.0
      baz=254,slow=75,SNR=17
GTA   Gaotai            41.92 328 eP      P        12 33 47.5 +0.4
GTA                                pP     sP       12 34 08.4 +0.4
GTA                                sP     pwP      12 34 16.6  +11
GTA                                PcP    PcP      12 35 42.3 +0.6
GTA                                S      S        12 40 02.8 +1.6
GTA                                sS     sS       12 40 39.3  +13
GTA                                SS     SS       12 43 09.6 -0.3
GTA                                ScS    ScS      12 43 44.1 -0.4
ARMA  Armidale          42.62 147  P      P        12 33 53.8 +1.0
      baz=43,SNR=12
ARMA  Armidale          42.62 147  P      P        12 33 52.4 -0.4
TAPN  Taplejung         43.16 305 eP      P        12 33 57.2 -0.3
      comp=Z,12nm,0.4s
ODAN  Odare             43.23 304 eP      P        12 33 57.7 -0.3
      comp=Z,27nm,0.7s
RAMN  Ramite            43.91 304 eP      P        12 34 03.3 -0.2
      comp=Z,16nm,0.5s
YSS   Yuzh-Sakhalins    44.02  16  P      P        12 34 03.5 -0.2
YSS                                IAmb   IAmb     12 34 10.4
      comp=Z,7.7nm,0.8s
HIA   Hailar            44.45 354  P      P        12 34 07.2  0.0
HIA                                IAmb   IAmb     12 34 24.1
      comp=Z,21nm,1.4s
JIRN  Jiri              44.52 305 eP      P        12 34 08.2 -0.3
      comp=Z,43nm,0.6s
GUN   Gumba             44.87 305 eP      P        12 34 10.7 -0.6
      comp=Z,40nm,0.8s
CAN   Canberra          45.33 154  P      P        12 34 14.6 +0.2
CAN                                IAmb   IAmb     12 34 24.1
      comp=Z,15nm,1.1s
DMN   Daman             45.39 304 eP      P        12 34 15.1 -0.2
ULN   Ulaanbaatar       45.84 342  P      P        12 34 18.2 -0.2
ULN                                IAmb   IAmb     12 34 22.0
      comp=Z,11nm,0.8s
TOO   Toolangi          45.90 159  P      P        12 34 18.6 -0.2
TOO                                IAmb   IAmb     12 34 20.7
      comp=Z,21nm,1.3s
SONM  Songino Array     46.03 341  P      P        12 34 20.4 +0.6
      comp=Z,3.2nm,0.7s,baz=160,slow=9.5,SNR=11
SONM                               LR     LR       12 55 33.8
      comp=Z,127nm,20.7s,baz=158,slow=39
SONM  Songino Array     46.03 341  P      P        12 34 19.8  0.0
DANN  Dangsing          46.77 305 eP      P        12 34 25.2 -1.0
      comp=Z,36nm,0.7s
DZM   Mont Dzumac       47.39 126  P      P        12 34 29.8 -1.0
      comp=Z,11nm,1.0s,baz=106,slow=15,SNR=2.5
DZM   Mont Dzumac       47.39 126  P      P        12 34 29.7 -1.2
DZM                                IAmb   IAmb     12 34 33.3
      comp=Z,12nm,1.0s
TLY   Talaya            50.26 342  P      P        12 34 52.7 +0.4
TLY                                IAmb   IAmb     12 35 01.9
      comp=Z,7.6nm,0.7s
WMQ   Urumqi            51.59 325 eP      P        12 35 03.8 +1.3
WMQ   Urumqi            51.59 325  P      P        12 35 01.9 -0.5
WMQ                                IAmb   IAmb     12 35 20.7
      comp=Z,9.0nm,0.9s
PEA0B Petropavlovsk-    54.27  23  P      P        12 35 22.0  0.0
PETK  Petropavlovsk-    54.27  23  P      P        12 35 22.4 +0.4
      comp=Z,9.7nm,0.7s,baz=190,slow=6.0,SNR=15
PETK                               LR     LR       12 56 19.3
      comp=Z,66nm,21.6s,baz=241,slow=34
PETK  Petropavlovsk-    54.27  23  P      P        12 35 22.1 +0.1
MK31  Makanchi Array    56.42 325  P      P        12 35 36.5 -1.1
MK31                               IAmb   IAmb     12 35 43.2
      comp=Z,4.8nm,0.9s
MKAR  Makanchi Array    56.42 325  P      P        12 35 36.5 -1.0
      comp=Z,4.5nm,0.6s,baz=119,slow=7.5,SNR=36
MKAR                               ScP    ScP      12 40 28.7 +0.4
      comp=Z,0.6nm,0.6s,baz=119,slow=5.1,SNR=3.6
MKAR                               LR     LR       13 01 31.8
      comp=Z,166nm,21.9s,baz=117,slow=38
MAKZ  Makanchi          56.61 325  P      P        12 35 38.0 -0.9
MAKZ                               IAmb   IAmb     12 35 50.2
      comp=Z,6.4nm,0.8s
YAK   Yakutsk           56.91   2  P      P        12 35 39.8 -0.9
NIL   Nilore            57.04 307  P      P        12 35 40.8 -1.4
KSH   Kashi             57.04 315  P      P        12 35 46.1 +3.8
KSH                                pP     sP       12 36 05.1 +1.5
KSH                                PcP    PcP      12 36 39.9 +3.2
KSH                                S      S        12 43 34.1 +1.4
KSH                                sS     sS       12 44 07.3 +9.0
KSH                                ScS    ScS      12 45 24.9 -1.6
MA2   Magadan           57.47  14  P      P        12 35 44.5 -0.2
MA2                                IAmb   IAmb     12 36 03.7
      comp=Z,4.8nm,0.9s
BOOM  Boomskoye usch    58.28 318  P      P        12 35 50.0 -0.9
AAK   Ala-Archa         59.32 317  P      P        12 35 57.3 -0.8
ZAA0  Zalesovo Array    59.38 333  P      P        12 35 57.5 -0.6
ZAA0                               IAmb   IAmb     12 36 06.7
      comp=Z,9.0nm,0.9s
ZALV  Zalesovo Beam     59.38 333  P      P        12 35 56.5 -1.6
      comp=Z,1.3nm,0.3s,baz=128,slow=6.3,SNR=6.3
ZALV                               LR     LR       13 03 03.9
      comp=Z,122nm,19.5s,baz=130,slow=38
ZALV  Zalesovo Beam     59.38 333  P      P        12 35 56.9 -1.2
KURK  Kurchatov         60.58 327  P      P        12 36 04.9 -1.5
KBL   Kabul             60.64 307  P      P        12 36 06.0 -1.5
KBL                                IAmb   IAmb     12 36 11.3
      comp=Z,4.5nm,0.8s
DCZ   Deep Cove         61.92 149  P      P        12 36 15.2 -0.3
KK31  Karatay Array     62.20 317  P      P        12 36 16.2 -1.4
KK31                               IAmb   IAmb     12 36 33.2
      comp=Z,6.6nm,1.1s
KKAR  Karatay Array     62.20 317  P      P        12 36 16.2 -1.4
KKAR  Karatay Array     62.20 317  IAmb   IAmb     12 36 33.2
      comp=Z,6.6nm,1.1s
RPZ   Rata Peaks        62.90 145  P      P        12 36 22.7 +0.6
      comp=Z,9.7nm,0.8s,baz=198,slow=20,SNR=2.6
RPZ   Rata Peaks        62.90 145  P      P        12 36 22.1  0.0
RPZ                                IAmb   IAmb     12 36 28.9
      comp=Z,15nm,1.0s
BKZ   Black Stump Fm    63.63 138         P        12 36 26.7 -0.4
BKZ                                IAmb   IAmb     12 36 28.4
      comp=Z,12nm,0.8s
HRA   Herat             66.08 305  P      P        12 36 41.8 -1.6
BRVK  Borovoye          66.24 327  P      P        12 36 42.9 -0.8
BRVK                               IAmb   IAmb     12 36 48.0
      comp=Z,13nm,0.9s
TIXI  Tiksi             66.54   1  P      P        12 36 45.2 -0.2
      comp=Z,4.9nm,0.6s,baz=198,slow=4.0,SNR=33
TIXI  Tiksi             66.54   1  P      P        12 36 44.6 -0.7
TIXI                               IAmb   IAmb     12 36 52.0
      comp=Z,6.5nm,0.7s
BILL  Bilibino          68.33  15  P      P        12 36 57.7 +1.0
NRIK  Noril'sk          69.14 346  P      P        12 37 02.0 +0.4
      comp=Z,13nm,0.7s,baz=127,slow=5.6,SNR=28
NRIK                               LR     LR       13 10 20.9
      comp=Z,107nm,18.5s,baz=130,slow=38
GEYT  Alibeck           69.99 308  P      P        12 37 08.6 +1.0
      comp=Z,1.7nm,0.6s,baz=134,slow=4.2,SNR=2.2
GEYT  Alibeck           69.99 308  P      P        12 37 07.2 -0.4
UOSS  Minazif           70.13 295  P      P        12 37 08.0 -0.7
UOSS                               IAmb   IAmb     12 37 17.9
      comp=Z,12nm,1.3s
ABKAR Akbulak array     71.07 321  P      P        12 37 12.4 -1.5
SOCY  Socotra           71.99 281  P      P        12 37 19.4 -0.8
SOCY                               IAmb   IAmb     12 37 26.3
      comp=Z,31nm,1.5s
CASY  Casey             72.09 187  P      P        12 37 19.7 +0.1
CASY                               IAmb   IAmb     12 37 26.2
      comp=Z,17nm,1.1s
UNV   Unalaska Valle    72.42  35  P      P        12 37 21.1 -0.9
ARU   Arti              73.77 328  P      P        12 37 28.6 -1.3
ARU                                IAmb   IAmb     12 37 33.0
      comp=Z,11nm,0.8s
RAYN  Ar Rayn           79.86 293  P      P        12 38 03.2 -1.7
KDAK  Kodiak Island     80.86  32  P      P        12 38 08.8 -0.6
IMAR  Indian Mountai    81.20  24  P      P        12 38 11.2  0.0
ABPO  Ambohimpanom      81.64 250  P      P        12 38 13.6 -1.0
ABPO                               IAmb   IAmb     12 38 16.9
      comp=Z,17nm,1.5s
KBZ   Khabaz            82.00 313  LR     LR       13 19 29.0
      comp=Z,90nm,19.2s,baz=68,slow=39
SUA   Susitna One       82.08  29  P      P        12 38 15.3 -0.7
SUA                                IAmb   IAmb     12 38 17.7
      comp=Z,11nm,1.0s
BPAW  Bear Paw Mtn.     82.17  26  P      P        12 38 16.5 +0.1
BPAW                               IAmb   IAmb     12 38 22.8
      comp=Z,7.9nm,0.8s
RC01  Rabbit Creek A    82.54  29  P      P        12 38 17.9 -0.4
MCK   McKinley          83.05  26  IAmb   IAmb     12 38 22.6
      comp=Z,26nm,1.2s
CCB   Clear Creek Bu    83.58  26  IAmb   IAmb     12 38 29.6
      comp=Z,9.8nm,1.2s
IL31                    83.98  25  P      P        12 38 25.1 -0.5
ILAR  Eielson Array     83.98  25  P      P        12 38 24.6 -1.0
      comp=Z,2.2nm,0.9s,baz=239,slow=5.3,SNR=29
ILAR  Eielson Array     83.98  25  P      P        12 38 24.4 -1.2
KLMR  Klimovskoe        84.21 331 eP      P        12 38 24.5 -2.4
KLMR                               AMP             12 38 30.6
      comp=Z,29nm,1.0s
VNDA  Vanda             84.73 173  P      P        12 38 29.1  0.0
      comp=Z,4.8nm,0.8s,baz=309,slow=5.2,SNR=15
VNDA  Vanda             84.73 173  P      P        12 38 28.9 -0.2
VNDA                               IAmb   IAmb     12 38 30.7
      comp=Z,7.0nm,0.9s
BMAR  Burnt Mountain    84.92  23  P      P        12 38 31.1 +0.7
MAW   Mawson            84.93 200  P      P        12 38 30.8 +0.5
      comp=Z,5.2nm,1.0s,baz=59,slow=7.6,SNR=4.5
MAW   Mawson            84.93 200  P      P        12 38 30.5 +0.2
SBA   Scott Base        85.64 172  P      P        12 38 33.4 -0.3
OBN   Obninsk           85.93 325  P      P        12 38 34.7 -0.8
BCAR  Beaver Creek A    86.28  27  P      P        12 38 36.9 -0.4
BRTR  Keskin Array B    89.10 310  P      P        12 38 49.6 -1.8
      comp=Z,1.5nm,0.8s,baz=53,slow=6.4,SNR=4.9
BRTR                               LR     LR       13 24 49.3
      comp=Z,33nm,19.6s,baz=7.5,slow=40
BRTR  Keskin Array B    89.10 310  P      P        12 38 49.8 -1.6
ARCES ARCESS Array B    89.19 340  P      P        12 38 50.2 -0.8
      comp=Z,2.6nm,0.6s,baz=80,slow=5.5,SNR=14
KMBO  Kilima Mbogo      89.46 269  P      P        12 38 53.3 -0.4
      comp=Z,1.0nm,0.3s,baz=108,slow=9.9,SNR=3.5
KMBO  Kilima Mbogo      89.46 269  P      P        12 38 52.4 -1.3
KMBO                               IAmb   IAmb     12 38 56.8
      comp=Z,6.6nm,1.4s
FINES FINESS Array B    90.63 332  P      P        12 38 57.1 -0.7
      comp=Z,2.3nm,0.5s,baz=52,slow=4.9,SNR=14
FINES                              LR     LR       13 23 21.9
      comp=Z,205nm,18.1s,baz=66,slow=38
FINES FINESS Array B    90.63 332  P      P        12 38 56.8 -1.0
AKASG Malin Array Be    90.81 321  P      P        12 38 57.0 -1.8
      comp=Z,0.6nm,0.4s,baz=64,slow=6.1,SNR=4.4
AKASG Malin Array Be    90.81 321  P      P        12 38 57.9 -0.9
NB2   NORSAR Subarra    97.57 334  P      P        12 39 28.4 -1.3
      comp=Z,0.8nm,0.6s,baz=66,slow=4.6
NOA   NORSAR Array B    97.57 334  P      P        12 39 28.4 -1.3
      comp=Z,0.9nm,0.6s,baz=61,slow=1.9,SNR=4.1
NOA                                LR     LR       13 26 43.0
      comp=Z,137nm,21.9s,baz=65,slow=37
YKA   Yellowknife Ar    98.36  24  P      P        12 39 32.4 -0.7
      comp=Z,0.7nm,0.7s,baz=297,slow=4.2,SNR=15
YKA                                PKKPbc PKKPbc   12 56 03.4 -2.9
      comp=Z,0.4nm,0.6s,baz=125,slow=2.3,SNR=6.8
SCHQ  Schefferville    119.30   9  PKP    PKiKP    12 44 44.8 +0.2
      comp=Z,1.1nm,0.6s,baz=205,slow=13,SNR=1.6
TXAR  Lajitas Array    120.89  51  PKP    PKPdf    12 44 48.1 -0.4
      comp=Z,0.2nm,0.9s,baz=224,slow=39,SNR=3.2
TXAR                               PKKPbc PKKPbc   12 54 53.2 +0.4
      comp=Z,0.2nm,0.5s,baz=119,slow=5.6,SNR=3.6
TXAR  Lajitas Array    120.89  51         PKPdf    12 44 47.8 -0.7
TORD  Torodi Ar. Bea   122.39 289  PKP    PKPdf    12 44 51.1 -0.5
      comp=Z,1.6nm,0.6s,baz=52,slow=2.6,SNR=7.1
CPUP  Villa Florida    158.50 170  PKPab  PKPab    12 46 29.4 +1.2
      comp=Z,1.6nm,0.6s,baz=120,slow=4.7,SNR=3.3
LPAZ  La Paz           161.72 129  PKPab  PKPab    12 46 44.4 +0.8
      comp=Z,2.7nm,0.8s,baz=192,slow=3.0,SNR=4.1
```

ATH ***17*** *12:51:17.9, 38.°17N×20.°36E, h11km±1km, ML2.3/8, Error ellipse: s-maj=1.7km s-min=1.1km az=252.0*

THE ***17*** *12:51:18.0, 38.°17N×20.°35E, h10km, ML2.5/5, Error ellipse: s-maj=0.9km s-min=0.5km az=231.0*

ISC 17 12:51:17.3±1.6**, 38.°16N**±0.°05×**20.°34E**±0.°08**, h14**km±5km**, n36, σ0.s30**/57**, Greece**

```
Code  Station Name       Δ°   AZ°   Phase ID        Time      Res
                                    Op     ISC      h  m  s   ISC
CHV1  Chavriata, Kef     0.04  60   P      Pg       12 51 20.0 +0.2
CHV1                                S      Sg       12 51 21.2 -0.3
KEF3  Kipouria, Keph     0.04  12   P      Pg       12 51 20.2 +0.3
KEF3                                S      Sg       12 51 21.4 -0.2
LXRA  Lixouri, Kepha     0.09  65   P      Pg       12 51 20.5 +0.3
LXRA                                S      Sg       12 51 22.0 -0.2
LXR1  Lixouri, Cepha     0.09  65   P      Pg       12 51 20.1 -0.1
LXR1                                S      Sg       12 51 22.1 -0.1
AGT1  Agia Thekli        0.10  23   P      Pg       12 51 20.6 +0.3
ARGA  Argostoli. Kep     0.11  83   P      Pg       12 51 20.8 +0.3
ARGA                                S      Sg       12 51 21.9 -0.8
KEF4  Livadi, Kephal     0.12  36   P      Pg       12 51 20.9 +0.3
KEF4                                S      Sg       12 51 22.6 -0.2
KEF2  Argostoli. Kep     0.12  89   P      Pg       12 51 20.9 +0.3
KEF2                                S      Sg       12 51 22.6 -0.2
ARG2  Argostoli          0.12  83   P      Pg       12 51 20.9 +0.3
ARG2                                S      Sg       12 51 22.7 -0.2
      11μm,0.1s
KEF1  Kardakata, Kep     0.15  43   P      Pg       12 51 21.4 +0.3
KEF1                                S      Sg       12 51 23.5 -0.2
VLS   Valsamata          0.20  86   P      Pg       12 51 22.0 +0.2
VLS                                 S      Sg       12 51 24.9  0.0
      2μm,0.1s
VLS   Valsamata          0.20  86   P      Pg       12 51 22.0 +0.2
VLS                                 S      Sg       12 51 24.8 -0.1
VLS                                 AML    AML      12 51 24.9
      comp=E,4120μm,0.1s
VLS                                 AML    AML      12 51 25.0
      comp=N,5294μm,0.2s
VSK1  VASILIKIADES       0.30  36   P      Pg       12 51 23.9 +0.3
VSK1                                S      Sg       12 51 28.2 +0.4
      comp=N,2μm,0.1s
KONA  Konidatara, Ke     0.32  35   P      Pg       12 51 24.2 +0.3
KONA                                S      Sg       12 51 28.8 +0.4
KONA                                AML    AML      12 51 29.2
      comp=E,2363μm,0.2s
KONA                                AML    AML      12 51 30.7
      comp=N,1687μm,0.2s
FSK   Fiskardo           0.34  31   P      Pg       12 51 24.5 +0.2
FSK                                 S      Sg       12 51 29.4 +0.3
      comp=N,950nm,0.3s
FSK   Fiskardo           0.34  31   P      Pg       12 51 24.6 +0.2
FSK                                 S      Sg       12 51 29.0  0.0
FSK                                 AML    AML      12 51 30.3
      comp=N,1414μm,0.4s
FSK                                 AML    AML      12 51 30.4
      comp=E,2356μm,0.2s
KFL   Anninata           0.36  98   P      Pg       12 51 24.8 +0.2
KFL                                 S      Sb       12 51 30.5 -0.5
      comp=E,918nm,0.4s
KFL   Anninata           0.36  98   P      Pg       12 51 24.9 +0.4
KFL                                 S      Sg       12 51 29.5  0.0
KFL                                 AML    AML      12 51 32.7
      comp=E,2080μm,0.3s
KFL                                 AML    AML      12 51 34.7
      comp=N,1662μm,0.4s
EVGI  Lefkada island     0.52  29   P      Pg       12 51 27.7 +0.2
EVGI                                S      Sb       12 51 35.6 -0.1
MGNA  Meganis            0.61  36   P      Pg       12 51 29.3 +0.1
MGNA                                S      Sb       12 51 37.7 -0.4
MGNA                                AML    AML      12 51 38.5
      comp=N,530μm,0.2s
MGNA                                AML    AML      12 51 39.5
      comp=E,408μm,0.1s
LKD2  Lefkada island     0.67  22   P      Pg       12 51 30.3 -0.1
LKD2  Lefkada island     0.67  22   P      Pg       12 51 30.4 -0.1
LKD2                                AML    AML      12 51 46.3
      comp=E,184μm,0.3s
LKD2                                AML    AML      12 51 46.4
      comp=N,251μm,0.3s
TSLK  Tsoukalades, L     0.71  21   P      Pg       12 51 30.8 -0.2
VTN   Vitineika          0.71 110   P      Pb       12 51 31.7 +0.2
VTN                                 S      Sb       12 51 41.6 +0.5
RLS   Riolos of Patr     0.90  96   P      Pb       12 51 34.5 -0.1
RLS                                 AML    AML      12 51 53.8
      comp=E,140μm,0.4s
RLS                                 AML    AML      12 51 56.0
      comp=N,137μm,0.4s
PVO   Paravola           1.04  64   P      Pn       12 51 37.4  0.0
PVO   Paravola           1.04  64   P      Pn       12 51 37.4  0.0
PVO                                 S      Sn       12 51 51.7 -0.1
DRO   Drossia            1.10 101   P      Pb       12 51 38.3 +0.1
DRO                                 AML    AML      12 52 01.8
      comp=E,316μm,0.7s
DRO                                 AML    AML      12 52 04.5
      comp=N,322μm,0.3s
LAKA  Lakka              1.29  86   P      Pn       12 51 40.3 -0.7
ANX   Ano Chora          1.32  70   P      Pb       12 51 42.3 +0.4
SERG  Sergoula           1.38  79   P      Pn       12 51 42.4 +0.3
TRIZ  Trizonia           1.38  81   P      Pb       12 51 42.6 -0.3
KLV   Kalavryta, Ach     1.44  94   P      Pb       12 51 43.7 -0.1
KALE  Kalithea           1.44  80   P      Pn       12 51 43.4 +0.4
MAKR  Makrakomi, Fth     1.64  58   P      Pb       12 51 47.5 +0.2
AGG   Agios Georgios     1.78  61   P      Pg       12 51 51.3 -0.2
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NIED ***17*** *13:12:00, 24.°00N×122.°40E, h35km, Mw5.1   Best double couple: M0 5.55000×10^16   NP1: φs 60.00000°, δ82.00000°, λ61.00000°.   NP2: φs 316.00000°, δ30.00000°, λ165.00000°.*

MOS ***17*** *13:12:52.9±1.0, 24.°14N×122.°51E, h18km, mb5.5/69, MS4.9/12, Error ellipse: s-maj=7.2km s-min=4.2km az=112.7*

BJI ***17*** *13:12:53.8±0.0, 24.°05N×122.°45E, h10km, mB5.1/62, mb5.0/69, ML4.8/7, Ms4.9/85, Ms7 4.9/78*

NEIC ***17*** *13:12:55.1±1.4, 24.°11N±0.°06×122.°42E±0.°06, h22km±3km, mb5.4/186, ML5.3(TAP), Error ellipse: s-maj=9.1km s-min=7.7km az=148.0*

IDC ***17*** *13:12:55.7±2.5, 24.°18N×122.°56E, h22km±15km, mb4.8/35, mb1 4.8/37, mb1mx4.7/50, mbtmp4.9/37, ML3.1/2, MS4.5/32, Ms1 4.5/32, ms1mx4.4/51, Error ellipse: s-maj=12.7km s-min=8.9km az=76.0*

JMA ***17*** *13:12:55.9±0.2, 23.°97N×122.°42E, h21km±4km, M5.4*

JMA Felt II J1.

TAP ***17*** *13:12:56.6, 24.°02N×122.°42E, h29km, ML5.4, D*

GCMT ***17*** *13:12:57.1±0.2, 23.°80N±0.°02×122.°33E±0.°02, h40km±1km, MW5.1/79, Moment Tensor Solution.   s54,c78;   s79,c125;   Duration: 0   Moment tensor: Scale 10^16 Nm; Mrr 3.50±.18; Mθθ -4.39±.11; Mφφ 0.89±.13; Mrθ 2.65±.14; Mθφ 0.00±.10; Mφr 1.60±.15;   Best double couple: M0 5.06500×10^16*

NP1:ϕ_s292.00000°,δ32.00000°,λ127.00000°. NP2: ϕ_s70.00000°,δ65.00000°,λ69.00000°. Principal axes: T 4.8960, Plg64.0000°, Azm306.0000°; N 0.3450, Plg19.0000°, Azm79.0000°; P -5.2340, Plg18.0000°, Azm175.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ASIES ***17*** *13:12:57.1, 24°.06N×122°.37E, h27^{km}, MW4.7*

ISC 17 13:12:55.4±0.4**, 23°.98N**±0°.02×**122°.44E**±0°.01**, h25**^{km}±2^{km}**, h27**^{km}**:pP-P, n775,** σ1^{s}41/929**, mb5.3**/204**, MS4.7**/43**, 106C-49D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1** baz=326	**0.63**	**334**	⇓P	**Pn**	**13 13 08.6**	**-0.2**
EOS1	baz=326			S	**Sn**	**13 13 17.9**	**-0.1**
JYNG	**Yonagunijimaku**	**0.66**	**45**	⇓P	**Pn**	**13 13 08.9**	**-0.3**
JYNG				*e*S	**Sb**	**13 13 17.5**	**+0.3**
YOJ	**Yonaguni jima** baz=56	**0.71**	**48**	⇓P	**Pn**	**13 13 09.9**	**0.0**
YOJ	baz=56			*e*S	**Sb**	**13 13 18.6**	**0.0**
YOJ	**Yonaguni jima**	**0.71**	**48**	⇓P	**Pn**	**13 13 09.8**	**-0.1**
YOJ				*e*S	**Sb**	**13 13 18.6**	**0.0**
YOJ	**Yonaguni jima**	**0.71**	**48**	P	**Pn**	**13 13 09.9**	**0.0**
YOJ	**Yonaguni jima**	**0.71**	**48**		**Pn**	**13 13 09.9**	**0.0**
HWA	**Hwalien** baz=254	**0.76**	**270**	*e*P	**Pn**	**13 13 11.0**	**+0.4**
HWA	baz=254			*e*S	**Sn**	**13 13 21.1**	**-0.1**
ENLB	**Shoufeng** baz=250	**0.77**	**264**	⇑*i*P	**Pb**	**13 13 10.0**	**-0.1**
ENLB	baz=250			*e*S	**Sb**	**13 13 20.6**	**+0.4**
TWD	**Chiawan** baz=275	**0.77**	**278**	⇑*i*P	**Pn**	**13 13 10.7**	**-0.1**
TWD	baz=275			*e*S	**Sb**	**13 13 20.9**	**+0.5**
ENA	**Nanau** baz=312	**0.78**	**305**	⇓*i*P	**Pn**	**13 13 10.7**	**-0.2**
ENA	baz=312			*e*S	**Sb**	**13 13 20.5**	**+0.1**
NACB	**Ninganchiao** baz=268	**0.79**	**284**	⇑P	**Pn**	**13 13 11.1**	**+0.1**
NACB	baz=268			*e*S	**Sb**	**13 13 20.8**	**-0.1**
NACB	**Ninganchiao**	**0.79**	**284**		**Pn**	**13 13 10.9**	**-0.1**
TWC	**Suao** baz=319	**0.82**	**320**	⇓*i*P	**Pb**	**13 13 11.2**	**+0.1**
TWC	baz=319			*e*S	**Sb**	**13 13 20.6**	**-1.2**
ETLH	**Xiulin Townshi** baz=270	**0.90**	**285**	⇑P	**Pn**	**13 13 12.9**	**+0.3**
ETLH	baz=270			S	**Sn**	**13 13 25.1**	**+0.2**
ESL	**Shilin** baz=249	**0.93**	**260**	⇑*e*P	**Pb**	**13 13 12.6**	**-0.3**
ESL	baz=249			*e*S	**Sb**	**13 13 23.3**	**-1.6**
EGFH	**Guangfu** baz=249	**0.97**	**252**	*e*P	**Pb**	**13 13 14.0**	**+0.3**
EGFH	baz=249			*e*S	**Sb**	**13 13 25.8**	**-0.3**
ILA	**Ilan** baz=321	**1.00**	**321**	⇓*i*P	**Pb**	**13 13 14.9**	**+0.8**
ILA	baz=321			*e*S	**Sn**	**13 13 28.7**	**+1.4**
TWE	**Neicheng** baz=316	**1.02**	**317**	⇓*i*P	**Pb**	**13 13 14.9**	**+0.5**
TWE	baz=316			*e*S	**Sn**	**13 13 27.5**	**-0.1**
ENTT	**Nioudou** baz=295	**1.03**	**310**	⇓*i*P	**Pb**	**13 13 15.3**	**+0.7**
ENTT	baz=295			S	**Sn**	**13 13 28.6**	**+0.6**
NTC	**Toucheng** baz=327	**1.03**	**328**	⇓*i*P	**Pb**	**13 13 15.2**	**+0.6**
NTC	baz=327			S	**Sn**	**13 13 28.8**	**+0.8**
NDT	**Datong Townshi** baz=305	**1.04**	**307**	⇑P	**Pb**	**13 13 15.6**	**+0.7**
NDT	baz=305			*e*S	**Sn**	**13 13 28.7**	**+0.3**
HGSD	**Ruisui** baz=240	**1.05**	**243**	⇓P	**Pn**	**13 13 14.5**	**0.0**
HGSD	baz=240			*e*S	**Sb**	**13 13 26.6**	**-1.5**
NNSB	**Datong** baz=293	**1.06**	**295**	⇑P	**Pb**	**13 13 15.7**	**+0.5**
NNSB	baz=293			S	**Sb**	**13 13 28.8**	**+0.1**
NNSH	**Datong** baz=293	**1.06**	**295**	⇑*i*P	**Pb**	**13 13 15.6**	**+0.4**
NNSH	baz=293			*e*S	**Sn**	**13 13 28.8**	**-0.1**
SLBB	**Yuanshan** baz=316	**1.06**	**317**	⇓*i*P	**Pb**	**13 13 15.0**	**-0.1**
SLBB	baz=316			*e*S	**Sb**	**13 13 28.7**	**0.0**
NNS	**Nan Shan** baz=294	**1.07**	**296**	⇑*i*P	**Pb**	**13 13 15.7**	**+0.3**
NNS	baz=294			S	**Sn**	**13 13 30.1**	**+0.9**
WHF	**Hehuan Shan** baz=263	**1.08**	**279**	⇑*i*P	**Pb**	**13 13 15.7**	**0.0**
WHF	baz=263			*e*S	**Sb**	**13 13 28.7**	**-0.9**
TWB1	**Santiao Chiao** baz=355	**1.10**	**338**	⇓*i*P	**Pb**	**13 13 15.8**	**-0.1**
TWB1	baz=355			*e*S	**Sb**	**13 13 30.4**	**+0.6**
EHY	**Hungye** baz=258	**1.12**	**245**	⇓P	**Pb**	**13 13 16.0**	**-0.2**
EHY	baz=258			S	**Sn**	**13 13 30.0**	**-0.3**
TIPB	**Shuangxi** baz=330	**1.13**	**331**	⇑*i*P	**Pb**	**13 13 16.7**	**+0.3**
TIPB	baz=330			S	**Sn**	**13 13 30.3**	**-0.3**
OWD	**Renai** baz=266	**1.15**	**269**	⇑*e*P	**Pb**	**13 13 16.6**	**-0.2**
OWD	baz=266			*e*S	**Sn**	**13 13 30.6**	**-0.6**
CHGB	**Renai** baz=272	**1.16**	**274**	⇑P	**Pb**	**13 13 16.9**	**+0.1**
CHGB	baz=272			*e*S	**Sn**	**13 13 30.7**	**-0.7**
NWLT	**Wulai** baz=312	**1.16**	**313**	⇑P	**Pb**	**13 13 17.4**	**+0.5**
NWLT	baz=312			*e*S	**Sb**	**13 13 32.0**	**+0.5**
TWT	**Tachien** baz=269	**1.18**	**284**	⇑*i*P	**Pb**	**13 13 17.7**	**+0.4**
TWT	baz=269			*e*S	**Sb**	**13 13 33.0**	**+0.7**
YHNB	**Yeheng** baz=292	**1.19**	**306**	⇑P	**Pb**	**13 13 17.6**	**+0.3**
YHNB	baz=292			S	**Sb**	**13 13 32.8**	**+0.5**
YHNB	**Yeheng**	**1.19**	**306**		**Pb**	**13 13 17.6**	**+0.3**
YULB	**Yu-li** baz=254	**1.20**	**241**	⇓P	**Pb**	**13 13 17.2**	**-0.3**
YULB	baz=254			*e*S	**Sn**	**13 13 31.2**	**-0.9**
YULB	**Yu-li**	**1.20**	**241**		**Pn**	**13 13 16.9**	**+0.3**
TDCB	**Techi** baz=269	**1.20**	**283**	⇑P	**Pb**	**13 13 17.8**	**+0.2**
TDCB	baz=269			*e*S	**Sn**	**13 13 31.9**	**-0.4**
NSK	**Sanguang** baz=292	**1.20**	**305**	⇑*i*P	**Pb**	**13 13 17.8**	**+0.2**
NSK	baz=292			S	**Sb**	**13 13 32.6**	**-0.2**
VWDT	**VWDT** baz=257	**1.21**	**260**	⇑P	**Pb**	**13 13 17.5**	**-0.1**
VWDT	baz=257			*e*S	**Sn**	**13 13 31.4**	**-0.9**
TWF1	**Yuli** baz=236	**1.22**	**239**	⇓P	**Pn**	**13 13 17.4**	**+0.5**
TWF1	baz=236			*e*S	**Sn**	**13 13 31.6**	**-1.0**
IRIF	**Iriomote-Funau**	**1.23**	**73**	⇓P	**Pb**	**13 13 18.7**	**+0.6**
IRIF				*e*S	**Sb**	**13 13 34.6**	**+1.0**
NWF	**Wu-fen Shan** baz=330	**1.24**	**331**	⇑*i*P	**Pb**	**13 13 18.2**	**0.0**
WFSB	**Wu-fen Shan** baz=331	**1.24**	**331**	⇑P	**Pb**	**13 13 18.3**	**+0.1**
WFSB	baz=331			S	**Sb**	**13 13 33.8**	**+0.1**
HATJ	**Hateruma jima**	**1.25**	**86**	P	**Pb**	**13 13 18.9**	**+0.5**
HATJ				*e*S	**Sb**	**13 13 34.9**	**+0.7**
NHDH	**Xindian Distri** baz=319	**1.28**	**320**	⇑P	**Pb**	**13 13 19.5**	**+0.6**
NHDH	baz=319			*e*S	**Sb**	**13 13 35.6**	**+0.7**
FULB	**Fuli** baz=220	**1.30**	**234**	⇓*i*P	**Pn**	**13 13 18.2**	**+0.1**
FULB	baz=220			*e*S	**Sn**	**13 13 34.0**	**-0.8**
TATO	**Taipei** baz=318	**1.31**	**319**	⇑P	**Pb**	**13 13 19.8**	**+0.4**
TATO	baz=318			*e*S	**Sb**	**13 13 35.9**	**0.0**
TATO	**Taipei**	**1.31**	**319**		**Pb**	**13 13 19.7**	**+0.2**
CHKT	**Chengkung** baz=226	**1.32**	**228**	⇓*e*P	**Pn**	**13 13 18.0**	**-0.3**
CHKT	baz=226			*e*S	**Sn**	**13 13 33.5**	**-1.5**
TAP	**Taipei** baz=320	**1.35**	**321**	*e*P	**Pb**	**13 13 19.8**	**-0.3**
TAP	baz=320			*e*S	**Sb**	**13 13 38.5**	**+1.6**
SSLB	**Suanglung** baz=260	**1.37**	**262**	⇑P	**Pb**	**13 13 19.8**	**-0.6**
SSLB	baz=260			*e*S	**Sn**	**13 13 34.8**	**-1.6**
SSLB	**Suanglung**	**1.37**	**262**		**Pb**	**13 13 19.8**	**-0.6**
DPDB	**Guoxing** baz=271	**1.38**	**273**	⇑*i*P	**Pb**	**13 13 20.6**	**-0.1**
WLTB	**Daxi** baz=296	**1.39**	**309**	⇑*i*P	**Pb**	**13 13 21.3**	**+0.7**
WLTB	baz=296			*e*S	**Sb**	**13 13 38.1**	**+0.2**
WHP	**Taichung City** baz=270	**1.39**	**283**	⇑P	**Pb**	**13 13 21.0**	**+0.1**
WHP	baz=270			*e*S	**Sb**	**13 13 38.1**	**-0.1**
SMLT	**Sun Moon Lake** baz=264	**1.41**	**266**	⇑P	**Pb**	**13 13 20.9**	**-0.2**
SMLT	baz=264			*e*S	**Sn**	**13 13 37.9**	**+0.5**
YM10	**YM10** baz=340	**1.42**	**326**	⇑*i*P	**Pb**	**13 13 20.5**	**-0.7**
YM10	baz=340			*e*S	**Sb**	**13 13 39.1**	**+0.2**
YM11	**YM11** baz=325	**1.42**	**327**	⇑*i*P	**Pb**	**13 13 20.5**	**-0.8**
YM11	baz=325			S	**Sb**	**13 13 39.0**	**+0.1**
YM08	**YM08** baz=326	**1.43**	**328**	⇑P	**Pn**	**13 13 20.2**	**+0.4**
TYC	**Yuchr** baz=265	**1.45**	**267**	⇑*i*P	**Pb**	**13 13 21.4**	**-0.3**
TYC	baz=265			*e*S	**Sn**	**13 13 37.7**	**-0.5**
TWS1	**Kuangyinshan** baz=337	**1.45**	**321**	⇑P	**Pb**	**13 13 21.6**	**-0.2**
TWS1	baz=337			*e*S	**Sb**	**13 13 41.4**	**+1.6**
LIOB	**Emei** baz=296	**1.46**	**297**	⇑*i*P	**Pb**	**13 13 22.5**	**+0.7**
LIOB	baz=296			*e*S	**Sb**	**13 13 39.3**	**-0.7**
NSTT	**Nanjuang** baz=295	**1.46**	**297**	⇑*i*P	**Pb**	**13 13 22.4**	**+0.5**
NSTT	baz=295			*e*S	**Sn**	**13 13 38.7**	**+0.1**
JKRS	**Kuro-shima**	**1.46**	**80**	⇓P	**Pb**	**13 13 22.0**	**+0.1**
JKRS				*e*S	**Sb**	**13 13 40.9**	**+0.8**
ANP	**Anpu** baz=325	**1.46**	**325**	*e*P	**Pn**	**13 13 20.9**	**+0.5**
WHYT	**Xinyi Township** baz=245	**1.48**	**259**	⇑*e*P	**Pb**	**13 13 22.0**	**-0.2**
WHYT	baz=245			*e*S	**Sn**	**13 13 39.7**	**+0.7**
NTST	**Danshui** baz=337	**1.48**	**323**	*e*P	**Pb**	**13 13 21.9**	**-0.4**
TWY	**Chenhua** baz=329	**1.50**	**330**	⇑P	**Pb**	**13 13 21.7**	**-0.9**
NCU	**National Centr** baz=309	**1.50**	**311**	P	**Pb**	**13 13 22.6**	**-0.1**
NCU	baz=309			*e*S	**Sb**	**13 13 42.5**	**+1.1**
NCUH	**Zhongli** baz=309	**1.50**	**311**	⇑*e*P	**Pb**	**13 13 22.4**	**-0.3**
NCUH	baz=309			*e*S	**Sb**	**13 13 41.1**	**-0.3**
ELDTW	**Lidau** baz=237	**1.52**	**239**	⇓P	**Pn**	**13 13 21.6**	**+0.4**
TWH	**Lutao** baz=212	**1.54**	**215**	⇓*i*P	**Pn**	**13 13 21.6**	**+0.3**
TWH	baz=212			*e*S	**Sn**	**13 13 38.9**	**-1.7**
SBCB	**Hsinchu** baz=300	**1.55**	**302**	⇑P	**Pb**	**13 13 23.6**	**+0.2**
SBCB	baz=300			*e*S	**Sb**	**13 13 43.9**	**+1.3**
TWQ1	**Liyutan** baz=282	**1.56**	**284**	⇑P	**Pb**	**13 13 24.2**	**+0.5**
TWQ1	baz=282			*e*S	**Sb**	**13 13 42.9**	**-0.1**
ALS	**Alishan** baz=250	**1.56**	**253**	⇑P	**Pb**	**13 13 23.6**	**-0.3**
ALS	baz=250			*e*S	**Sb**	**13 13 42.9**	**-0.5**
HSN	**Hsinchu** baz=301	**1.57**	**302**	⇑P	**Pb**	**13 13 23.3**	**-0.4**
HSN	baz=301			*e*S	**Sb**	**13 13 43.1**	**-0.1**
WJS	**Zhushan** baz=262	**1.57**	**265**	⇑*e*P	**Pb**	**13 13 24.1**	**+0.3**
WJS	baz=262			*e*S	**Sb**	**13 13 45.3**	**+2.0**
NSY	**Sanyi** baz=284	**1.59**	**286**	⇑P	**Pb**	**13 13 24.7**	**+0.6**
NSY	baz=284			*e*S	**Sb**	**13 13 43.3**	**-0.5**
NMLH	**Miaoli** baz=288	**1.60**	**291**	⇑*e*P	**Pb**	**13 13 24.5**	**+0.2**
NMLH	baz=288			*e*S	**Sb**	**13 13 44.9**	**+0.8**
WNT	**Mingjian** baz=264	**1.60**	**267**	*e*P	**Pb**	**13 13 24.7**	**+0.3**
WNT	baz=264			*e*S	**Sb**	**13 13 45.0**	**+0.7**
JIJ	**Ishigaki jima**	**1.61**	**76**	⇓P	**Pn**	**13 13 23.3**	**+1.1**
JIJ				*e*S	**Sb**	**13 13 43.5**	**-0.8**
TCU	**Taichung** baz=274	**1.62**	**276**	⇑P	**Pb**	**13 13 25.2**	**+0.6**
TCU	baz=274			*e*S	**Sb**	**13 13 46.2**	**+1.6**
PTSB	**Yuanli** baz=284	**1.65**	**287**	*e*P	**Pb**	**13 13 25.2**	**+0.1**
CHN5	**Tsauling** baz=256	**1.65**	**257**	⇑*i*P	**Pb**	**13 13 25.1**	**-0.2**
PCYT	**Pengchaiyu** baz=334	**1.68**	**349**	⇓P	**Pn**	**13 13 23.3**	**+0.1**
WDJ	**Dajia District** baz=281	**1.68**	**283**	⇑P	**Pb**	**13 13 25.7**	**0.0**
WDJ	baz=281			*e*S	**Sb**	**13 13 45.7**	**-0.7**
TWGBT	**Beinan** baz=238	**1.70**	**227**	⇓P	**Pn**	**13 13 23.6**	**+0.1**
TWGBT	baz=238			*e*S	**Sn**	**13 13 43.1**	**-1.4**
TTN	**Taitung** baz=222	**1.70**	**224**	*e*P	**Pn**	**13 13 24.1**	**+0.6**
TTN	baz=222			*e*S	**Sn**	**13 13 45.0**	**+0.5**
TWG	**Pinlang** baz=238	**1.70**	**228**	⇓P	**Pn**	**13 13 23.7**	**+0.1**
TWG	baz=238			*e*S	**Sn**	**13 13 43.6**	**-1.0**
TWG	**Pinlang**	**1.70**	**228**		**Pn**	**13 13 23.6**	**0.0**
WCHH	**Zhanghua** baz=271	**1.72**	**274**	⇑*e*P	**Pb**	**13 13 26.4**	**+0.1**
WCHH	baz=271			*e*S	**Sb**	**13 13 48.5**	**+1.0**
WGK	**Gukeng** baz=259	**1.74**	**261**	*e*P	**Pb**	**13 13 26.7**	**0.0**
STYT	**Tauyuan** baz=231	**1.74**	**242**	⇓*e*P	**Pb**	**13 13 25.7**	**-1.1**
STYT	baz=231			*e*S	**Sn**	**13 13 46.6**	**+0.9**
WDLH	**Douliu** baz=258	**1.76**	**261**	*e*P	**Pb**	**13 13 27.0**	**0.0**
WDLH	baz=258			*e*S	**Sb**	**13 13 49.4**	**+0.7**
TPUB	**Ta-pu** baz=246	**1.79**	**248**	⇑P	**Pb**	**13 13 27.1**	**-0.4**
TPUB	baz=246			S	**Sb**	**13 13 48.3**	**-1.3**
TPUB	**Ta-pu**	**1.79**	**248**		**Pb**	**13 13 27.1**	**-0.4**
CHN4	**Tsaushan** baz=249	**1.80**	**250**	*e*P	**Pb**	**13 13 27.7**	**0.0**
JISG	**Ishigakijimahi**	**1.81**	**70**	⇓P	**Pn**	**13 13 26.2**	**+1.1**
JISG				S	**Sn**	**13 13 47.6**	**+0.3**
WTP	**Ta-pu** baz=244	**1.82**	**247**	⇓P	**Pb**	**13 13 27.9**	**-0.3**
WTP	baz=244			*e*S	**Sb**	**13 13 49.3**	**-1.3**
CHN2	**Minshiung** baz=254	**1.85**	**256**	*e*P	**Pb**	**13 13 28.9**	**+0.3**
CHN2	baz=254			*e*S	**Sb**	**13 13 51.1**	**-0.1**
RLNB	**Erlin** baz=279	**1.90**	**268**	⇑P	**Pb**	**13 13 29.1**	**-0.3**
RLNB	baz=279			*e*S	**Sb**	**13 13 51.7**	**-1.1**
CHY	**Chiayi** baz=253	**1.90**	**256**	⇑P	**Pb**	**13 13 28.8**	**-0.7**
CHY	baz=253			*e*S	**Sb**	**13 13 52.1**	**-0.7**
SLGT	**Liugui** baz=229	**1.91**	**239**	*e*P	**Pb**	**13 13 28.5**	**-1.1**
CHN1	**Nanshi** baz=243	**1.92**	**246**	⇓P	**Pb**	**13 13 29.4**	**-0.4**
CHN1	baz=243			*e*S	**Sb**	**13 13 53.0**	**-0.4**
SGST	**Jiashian** baz=232	**1.92**	**243**	*e*P	**Pb**	**13 13 28.6**	**-1.1**
SGST	baz=232			*e*S	**Sn**	**13 13 51.2**	**+1.2**
TWK	**Hsinying** baz=246	**1.92**	**249**	*e*P	**Pb**	**13 13 29.3**	**-0.5**
TWK	baz=246			*e*S	**Sb**	**13 13 52.5**	**-1.0**
SNST	**Tainan City** baz=245	**1.93**	**247**	*e*P	**Pb**	**13 13 29.8**	**-0.2**
SNST	baz=245			*e*S	**Sb**	**13 13 52.5**	**-1.1**
ECL	**Taimali** baz=223	**1.94**	**225**	⇓P	**Pn**	**13 13 26.8**	**0.0**
ECL	baz=223			*e*S	**Sn**	**13 13 48.3**	**-2.1**
WTCT	**Ta-ch'eng** baz=278	**1.97**	**267**	P	**Pb**	**13 13 29.9**	**-0.8**
WTCT	baz=278			*e*S	**Sb**	**13 13 54.3**	**-0.5**
WLGB	**Puzi** baz=255	**2.02**	**256**	*e*P	**Pb**	**13 13 30.4**	**-1.1**
WMLT	**Mailiao** baz=265	**2.03**	**266**	*e*P	**Pb**	**13 13 30.2**	**-1.5**
WSF	**Szhu** baz=258	**2.06**	**261**	*e*P	**Pb**	**13 13 31.0**	**-1.1**
WSF	baz=258			*e*S	**Sb**	**13 13 56.9**	**-0.3**
LAY	**Lan-yu** baz=202	**2.10**	**203**	⇓*e*P	**Pn**	**13 13 28.4**	**-0.6**
LAY	baz=202			*e*S	**Sn**	**13 13 52.6**	**-1.7**
CHN3	**Shinhua** baz=243	**2.10**	**245**	*e*P	**Pb**	**13 13 32.5**	**-0.4**
CHN3	baz=243			*e*S	**Sb**	**13 13 58.6**	**0.0**
CHN8	**Yiju** baz=251	**2.13**	**253**	*e*P	**Pb**	**13 13 31.6**	**-1.8**
CHN8	baz=251			*e*S	**Sb**	**13 13 57.8**	**-1.6**
MASBT	**Mashibuluo** baz=224	**2.14**	**231**	⇓*e*P	**Pn**	**13 13 31.0**	**+1.4**
MASBT	baz=224			*e*S	**Sn**	**13 13 57.3**	**+1.8**
TAW	**Tawu** baz=229	**2.15**	**222**	⇓*e*P	**Pn**	**13 13 30.0**	**+0.3**
TAW	baz=229			*e*S	**Sn**	**13 13 54.5**	**-1.0**
EAST	**Anshuo** baz=221	**2.16**	**223**	⇓*i*P	**Pn**	**13 13 30.4**	**+0.5**
JTJ	**Tarama**	**2.17**	**72**	P	**Pn**	**13 13 31.5**	**+1.5**
JTJ				S	**Sn**	**13 13 58.0**	**+1.9**
TWM1	**Shoushan** baz=237	**2.18**	**238**	*e*P	**Pb**	**13 13 34.1**	**-0.1**
SGLT	**Jiouru** baz=229	**2.18**	**235**	*e*P	**Pb**	**13 13 33.9**	**-0.3**
SCLT	**Jiali** baz=247	**2.21**	**249**	*e*P	**Pn**	**13 13 32.3**	**+1.8**
SCLT	baz=247			*e*S	**Sb**	**13 13 59.9**	**-1.7**
TAI1	**Yung-k'ang** baz=245	**2.23**	**246**	*e*P	**Pb**	**13 13 33.6**	**-1.4**
SSPT	**Xinbi** baz=223	**2.27**	**229**	*e*P	**Pn**	**13 13 33.6**	**+2.2**
SNJT	**Kaohsiung City** baz=238	**2.28**	**238**	*e*P	**Pb**	**13 13 34.5**	**-1.4**
SCZT	**Fangliau** baz=219	**2.31**	**227**	*e*P	**Pb**	**13 13 34.7**	**-1.8**
SCZT	baz=219			*e*S	**Sn**	**13 14 01.7**	**+2.0**
WSSB	**Gushan** baz=236	**2.40**	**237**	⇓P	**Pb**	**13 13 37.2**	**-0.7**
KAU	**Kaohsiung** baz=234	**2.41**	**235**	*e*P	**Pb**	**13 13 36.0**	**-2.0**
WLCH	**Liuqiu** baz=244	**2.49**	**230**	*e*P	**Pb**	**13 13 39.3**	**-0.2**
TSEB	**Hengchuen, Pin** baz=222	**2.51**	**215**	*e*P	**Pn**	**13 13 35.8**	**+1.2**
TSEB	baz=222			*e*S	**Sn**	**13 14 06.1**	**+1.7**
HEN	**Hengchun** baz=217	**2.51**	**219**	*e*P	**Pn**	**13 13 36.0**	**+1.3**
TWKBT	**Hengchun** baz=215	**2.52**	**217**	P	**Pn**	**13 13 35.7**	**+0.8**
TWKBT	baz=215			*e*S	**Sn**	**13 14 04.7**	**0.0**
TWK1	**Hengchun** baz=215	**2.52**	**217**	*e*P	**Pn**	**13 13 36.4**	**+1.5**
TWK1	baz=215			*e*S	**Sn**	**13 14 06.2**	**+1.4**
JIRB	**Irabujima**	**2.63**	**71**	P	**Pn**	**13 13 38.0**	**+1.6**
JIRB				*e*S	**Sn**	**13 14 08.5**	**+0.9**
WDGT	**Dungji** baz=241	**2.64**	**255**	⇑P	**Pn**	**13 13 38.2**	**+1.7**
WDGT	baz=241			*e*S	**Sn**	**13 14 07.9**	**+0.1**
PHUB	**P'eng-hu** baz=258	**2.66**	**261**	⇑P	**Pn**	**13 13 38.4**	**+1.6**
PHUB	baz=258			*e*S	**Sn**	**13 14 08.9**	**+0.6**
PNG	**Penghu** baz=259	**2.67**	**262**	⇑P	**Pn**	**13 13 38.6**	**+1.7**
PNG	baz=259			*e*S	**Sn**	**13 14 09.3**	**+0.8**
JIKM	**Ikemajima**	**2.73**	**69**	P	**Pn**	**13 13 39.2**	**+1.5**
JIKM				*e*S	**Sn**	**13 14 11.5**	**+1.6**
JMJ	**Miyako jima 2** baz=74	**2.74**	**72**	*e*P	**Pn**	**13 13 39.3**	**+1.6**
JMJ2	**Miyako jima3**	**2.75**	**73**	P	**Pn**	**13 13 39.7**	**+1.8**
JMJ2				S	**Sn**	**13 14 12.5**	**+2.2**
JOGS	**Gusukube**	**2.82**	**73**	P	**Pn**	**13 13 41.5**	**+2.6**
JOGS				*e*S	**Sn**	**13 14 15.2**	**+3.1**
PTTC	**Pingtan** baz=300	**2.86**	**303**	⇑*e*P	**Pn**	**13 13 39.7**	**+0.2**
VCHM	**Qimei** baz=255	**2.86**	**255**	*e*P	**Pn**	**13 13 41.5**	**+2.0**
VWUC	**VWUC** baz=288	**2.90**	**291**	⇑*e*P	**Pn**	**13 13 40.7**	**+0.7**
MATB	**Ma-tsu** baz=311	**3.13**	**314**	⇑*e*P	**Pn**	**13 13 43.4**	**+0.3**
PTMZ	**Houxiangcun** baz=287	**3.20**	**290**	⇑*e*P	**Pn**	**13 13 45.0**	**+0.8**
LYJJ	**Jianjiangzhen** baz=314	**3.52**	**317**	⇑*e*P	**Pn**	**13 13 48.9**	**+0.3**
BBP	**Basco**	**3.55**	**187**	*e*P	**Pn**	**13 13 48.4**	**-0.6**
BBP				*e*S	**Sn**	**13 14 27.1**	**-3.0**
XPSS	**Dashiqiu** baz=333	**3.57**	**326**	⇑*e*P	**Pn**	**13 13 49.2**	**0.0**
QZH	**Quanzhou**	**3.63**	**286**	⇑*i*Pn	**Pn**	**13 13 50.8**	**+0.7**
QZH				Sn	**Sn**	**13 14 29.1**	**-3.1**
QZH	comp=N,2μm,0.8s			smax	smax		

QZH				smax	smax		
	comp=E,1μm,0.8s						
QZH				LR	LR		
	comp=N,7μm,10.9s						
QZH				LR	LR		
	comp=E,10μm,12.8s						
QZH				LR	LR		
	comp=Z,12μm,13.3s						
KNM	**Kinmen**	**3.68**	**278**	⇑*i*P	**Pn**	**13 13 53.5**	**+2.7**
	baz=275						
KNM				*e*S	**Sn**	**13 14 34.1**	**+0.8**
	baz=275						
KNMB	**Chin-men Tao**	**3.73**	**278**	⇑P	**Pn**	**13 13 52.1**	**+0.7**
	baz=277						
KNMB	**Chin-men Tao**	**3.73**	**278**		**Pn**	**13 13 51.9**	**+0.5**
MHZQ	**Yeshan**	**3.74**	**305**	⇑*e*P	**Pn**	**13 13 51.6**	**0.0**
	baz=302						
AXDP	**Jialang**	**4.17**	**284**	⇑*e*P	**Pn**	**13 13 58.4**	**+0.9**
	baz=282						
ZPLA	**Ao Xicun**	**4.29**	**270**	⇑P	**Pn**	**13 14 00.0**	**+0.9**
	baz=267						
ZPLA				*e*S	**Sn**	**13 14 46.2**	**-2.1**
	baz=267						
ZZJH	**Jiuhuzhen**	**4.41**	**277**	⇑*e*P	**Pn**	**13 14 01.6**	**+0.7**
	baz=276						
SGCP	**Mt. Cagua**	**5.72**	**184**	*e*P	**Pn**	**13 14 18.5**	**-0.3**
SGCP				*e*S	**Sn**	**13 15 21.7**	**-2.1**
JOW	**Kunigami**	**6.00**	**61**	*e*P	**Pn**	**13 14 24.1**	**+1.5**
	baz=65						
JOW	**Kunigami**	**6.00**	**61**	Pn	**Pn**	**13 14 22.1**	**-0.5**
	1.4nm,0.3s,baz=194,slow=11,SNR=31						
JOW				Sn	**Sn**	**13 15 31.1**	**+0.6**
	baz=165,slow=12,SNR=2.0						
JOW	**Kunigami**	**6.00**	**61**		**Pn**	**13 14 22.5**	**-0.1**
APYP	**Conner**	**6.19**	**191**	*e*P	**Pn**	**13 14 26.0**	**+0.7**
VDOS	**Pratas Island**	**6.21**	**239**	⇑*e*P	**Pn**	**13 14 29.1**	**+3.5**
	baz=242						
SIPP	**Brgy, Tapao**	**6.30**	**197**	⇑*i*P	**Pn**	**13 14 29.5**	**+2.7**
SZP	**Santa**	**6.66**	**197**		**Pn**	**13 14 33.6**	**+1.8**
PALP	**Palanan**	**6.88**	**180**	*e*P	**Pn**	**13 14 35.4**	**+0.6**
CAUP	**Cauayan**	**7.02**	**185**	*e*P	**Pn**	**13 14 40.0**	**+3.2**
SSE	**Sheshan**	**7.17**	**351**	Pn	**Pn**	**13 14 39.0**	**+0.2**
SSE				Sn	**Sn**	**13 15 59.1**	**-0.4**
SSE				smax	smax		
	comp=N,160nm,0.9s						
SSE				smax	smax		
	comp=E,260nm,0.9s						
SSE				LR	LR		
	comp=N,4μm,13.7s						
SSE	**Sheshan**	**7.17**	**351**		**Pn**	**13 14 38.6**	**-0.2**
HKPS	**Hong Kong Po S**	**7.82**	**259**		**Pn**	**13 14 49.0**	**+1.4**
BOLP	**Bolinao**	**7.92**	**198**	*e*P	**Pn**	**13 14 49.6**	**+0.5**
SMPP	**San Manuel, Pa**	**7.96**	**192**	*e*P	**Pn**	**13 14 51.3**	**+1.6**
BALP	**Baler**	**8.24**	**186**	*e*P	**Pn**	**13 14 57.1**	**+3.7**
GZH	**Guangzhou**	**8.39**	**266**	P	**Pn**	**13 14 52.8**	**-2.7**
GZH				S	Sn	13 16 16.8	-13
SCZP	**Santa Cruz**	**8.50**	**197**	*e*P	**Pn**	**13 14 58.1**	**+1.1**
NJ2	**Nanjing**	**8.64**	**339**	*e*P	**Pn**	**13 14 58.4**	**-0.5**
NJ2				S	**Sn**	**13 16 36.1**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,150nm,0.6s						
NJ2				smax	smax		
	comp=N,410nm,1.5s						
NJ2				smax	smax		
	comp=E,390nm,1.0s						
NJ2				LR	LR		
	comp=N,11μm,12.8s						
NJ2				LR	LR		
	comp=E,5μm,8.8s						
NJ2				LR	LR		
	comp=Z,12μm,12.8s						
WHN	**Wuhan**	**9.72**	**314**	P	**Pn**	**13 15 11.8**	**-1.9**
WHN				S	**Sn**	**13 17 01.3**	**-0.7**
WHN				LR	LR		
	comp=N,9μm,9.3s						
WHN				LR	LR		
	comp=E,9μm,8.3s						
WHN				LR	LR		
	comp=Z,17μm,14.9s						
LQP	**Lukban**	**9.85**	**185**	*e*P	**Pn**	**13 15 17.2**	**+1.4**
TGY	**Tagaytay City**	**9.93**	**188**	Pn	**Pn**	**13 15 20.4**	**+3.7**
	59nm,0.3s,baz=268,slow=7.6,SNR=5.3						
TGY				Sn	**Sn**	**13 17 15.9**	**+8.5**
	20nm,0.3s,baz=87,slow=19,SNR=2.5						
TGY				LR	LR	13 19 17.1	
	comp=Z,2μm,21.1s,baz=56,slow=38						
JNU	**Nakatsue**	**11.74**	**37**	Pn	**Pn**	**13 15 42.0**	**+0.5**
	0.2nm,0.3s,baz=267,slow=19,SNR=2.7						
JNU				LR	LR	13 20 33.3	
	comp=Z,2μm,19.3s,baz=212,slow=40						
QIZ	**Qiongzhong**	**12.71**	**250**	P	**Pn**	**13 15 55.3**	**+0.6**
QIZ				S	**Sn**	**13 18 16.6**	**+1.1**
QIZ				LR	LR		
	comp=N,2μm,21.6s						
QIZ				LR	LR		
	comp=E,940nm,18.0s						
TIA	**Tai'an**	**13.03**	**341**	P	**Pn**	**13 15 59.3**	**+0.4**
TIA				pmax	pmax		
	comp=Z,8.0nm,0.5s						
TIA				LR	LR		
	comp=N,5μm,12.7s						
TIA				LR	LR		
	comp=E,3μm,10.8s						
TIA				LR	LR		
	comp=Z,8μm,12.6s						
ENH	**Enshi**	**13.12**	**301**		**Pn**	**13 15 59.4**	**-0.9**
MSLP	**Maasin**	**13.96**	**170**	*e*P	**Pn**	**13 16 07.6**	**-4.2**
KSAR	**Wonju Array Be**	**14.21**	**18**	P	**Pn**	**13 16 16.3**	**+1.2**
KSAR	**Wonju Array Be**	**14.21**	**18**		**Pn**	**13 16 16.3**	**+1.2**
KSRS	**Korea Array**	**14.23**	**18**	Pn	**Pn**	**13 16 17.2**	**+1.8**
	2.3nm,0.3s,baz=201,slow=13,SNR=54						
KSRS				LR	LR	13 22 27.0	
	comp=Z,3μm,19.0s,baz=198,slow=41						
KS19	**Wonju Array Si**	**14.26**	**18**		**Pn**	**13 16 16.9**	**+1.1**
GYA	**Guiyang**	**14.49**	**283**	⇓*i*P	**Pn**	**13 16 20.0**	**+0.9**
GYA				pP	P	13 16 29.0	+3.5
GYA				PP	**PnPn**	**13 16 31.8**	**+4.8**
GYA				S	**Sn**	**13 19 03.8**	**+4.8**
GYA				sS	S	13 19 13.3	-5.0
GYA				SS	**SnSn**	**13 19 21.0**	**+9.5**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,180nm,4.6s						
GYA				LR	LR		
	comp=N,980nm,12.4s						
GYA				LR	LR		
	comp=E,1μm,11.4s						
GYA				LR	LR		
	comp=Z,2μm,12.5s						
XAN	**Xi'an**	**15.48**	**313**	P	**Pn**	**13 16 33.1**	**+0.8**
XAN				S	**Sn**	**13 19 24.0**	**+0.9**
XAN				pmax	pmax		
	comp=Z,120nm,1.2s						
XAN				pmax	pmax		
	comp=Z,360nm,4.3s						
XAN				LR	LR		
	comp=N,2μm,9.4s						
XAN				LR	LR		
	comp=E,3μm,14.6s						
XAN				LR	LR		
	comp=Z,4μm,14.1s						
XAN	**Xi'an**	**15.48**	**313**	P	**Pn**	**13 16 31.8**	**-0.4**
XAN				pmax	pmax		
	comp=Z,202nm,1.3s						
XAN	**Xi'an**	**15.48**	**313**	Pn	**Pn**	**13 16 31.8**	**-0.4**
XAN				IAmb	IAmb	13 16 39.7	
	comp=Z,202nm,1.3s						
PAGZ	**Pagadian**	**16.07**	**177**	*e*P	**Pn**	**13 16 40.4**	**+0.6**
TIY	**Taiyuan**	**16.14**	**330**	*e*P	**P**	**13 16 42.8**	**-1.0**
TIY				pP	**pP**	**13 16 50.0**	**+0.1**
TIY				sP	**pwP**	**13 16 55.0**	**+1.9**
TIY				S	**Sn**	**13 19 38.9**	**-0.2**
TIY				SS	**SnSn**	**13 19 58.8**	**+6.4**
TIY				pmax	pmax		
	comp=Z,17nm,0.5s						
TIY				pmax	pmax		
	comp=Z,520nm,4.1s						
TIY				LR	LR		
	comp=Z,4μm,12.3s						
TIY				LR	LR		
	comp=Z,5μm,16.0s						
TIY				LR	LR		
	comp=Z,6μm,14.2s						
BUKP	**Musuan**	**16.21**	**171**	*e*P	**P**	**13 16 43.3**	**-1.3**
BUKP	**Musuan**	**16.21**	**171**	*e*P	**P**	**13 16 43.9**	**-0.8**
CTBH	**Cotabato--PC H**	**16.75**	**174**	⇑*i*P	**P**	**13 16 53.2**	**+2.6**
BJT	**Baijiatuau**	**16.84**	**343**	P	**Pn**	**13 16 50.2**	**+0.7**
BJT				pmax	pmax		
	comp=Z,47nm,1.1s						
BJT	**Baijiatuau**	**16.84**	**343**	P	**Pn**	**13 16 50.2**	**+0.7**
BJI	**Beijing**	**16.86**	**343**	P	**P**	**13 16 51.8**	**+0.1**
BJI				sP	**pwP**	**13 17 02.0**	**+0.8**
BJI				S	**Sn**	**13 19 57.6**	**+1.2**
BJI				pmax	pmax		
	comp=Z,18nm,1.2s						
BJI				pmax	pmax		
	comp=Z,530nm,4.6s						
BJI				LR	LR		
	comp=Z,2μm,18.0s						
BJI				LR	LR		
	comp=Z,840nm,13.3s						
BJI				LR	LR		
	comp=Z,1μm,21.6s						
INU	**Inuyama**	**16.98**	**45**		**Pn**	**13 16 51.7**	**+0.5**
KCP	**Kidapawan**	**17.07**	**171**	⇓*e*P	**P**	**13 16 54.3**	**+0.2**
DAV	**Davao City (W)**	**17.08**	**169**	LR	LR	13 23 19.3	
	comp=Z,2μm,20.9s,baz=354,slow=36						
SLVN	**Son La**	**17.30**	**265**		**Pn**	**13 16 55.8**	**+0.3**
JHJ	**Hachijo jima 2**	**17.73**	**55**	P	**Pn**	**13 16 58.9**	**-1.8**
	comp=Z,10nm,0.3s,baz=240,slow=16,SNR=4.1						
JHJ2	**Mitsune**	**17.76**	**55**		**Pn**	**13 17 00.9**	**-0.1**
JHJ2				IAmb	IAmb	13 17 15.0	
	comp=Z,234nm,0.9s						
CD2	**Chengdu**	**17.95**	**297**	⇑P	**Pn**	**13 17 02.4**	**-1.0**
CD2				pP	sP	13 17 11.6	-0.8
CD2				sP	pwP	13 17 15.3	+1.3
CD2				S	**Sn**	**13 20 22.8**	**-0.1**
CD2				pmax	pmax		
	comp=Z,150nm,0.8s						
CD2				pmax	pmax		
	comp=Z,750nm,6.3s						
CD2				LR	LR		
	comp=Z,3μm,7.5s						
CD2				LR	LR		
	comp=Z,6μm,15.7s						
CD2				LR	LR		
	comp=Z,7μm,16.2s						
KMI	**Kunming**	**17.95**	**278**	P	**P**	**13 17 05.5**	**+1.4**
KMI				pP	sP	13 17 12.9	+0.1
KMI				S	**Sn**	**13 20 22.3**	**-1.1**
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
KMI				pmax	pmax		
	comp=Z,450nm,10.6s						
KMI				LR	LR		
	comp=Z,2μm,8.1s						
KMI				LR	LR		
	comp=Z,3μm,16.0s						
KMI				LR	LR		
	comp=Z,5μm,13.7s						
JCJ	**Chichijima**	**18.09**	**76**	P	**P**	**13 17 06.2**	**+0.8**
	comp=Z,1.9nm,0.3s,baz=189,slow=17,SNR=2.5						
JCJ				LR	LR	13 23 24.2	
	comp=Z,967nm,20.1s,baz=256,slow=35						
MAJO	**Matsushiro**	**18.47**	**44**	⇓*e*P	**P**	**13 17 08.0**	**-1.5**
MAJO	**Matsushiro**	**18.47**	**44**	P	**P**	**13 17 08.1**	**-1.4**
MJAR	**Matsushiro Arr**	**18.47**	**44**	P	**P**	**13 17 08.1**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=242,slow=12,SNR=7.8						
MJAR				LR	LR	13 25 54.1	
	comp=Z,371nm,18.6s,baz=240,slow=43						
MJAR	**Matsushiro Arr**	**18.47**	**44**	P	**P**	**13 17 09.4**	**-0.2**
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MJAR	**Matsushiro Arr**	**18.47**	**44**	P	**P**	**13 17 09.4**	**-0.2**
MJB9	**Matsu-Tunnel**	**18.47**	**44**	P	**P**	**13 17 08.1**	**-1.4**
KKM	**Kota Kinabalu**	**18.81**	**200**	P	**Pn**	**13 17 14.0**	**0.0**
HHC	**Hu-ho-hao-te**	**19.13**	**334**	*e*P	**Pn**	**13 17 18.5**	**+0.7**
HHC				S	**Sn**	**13 20 46.1**	**-5.4**
HHC				pmax	pmax		
	comp=Z,220nm,0.6s						
HHC				pmax	pmax		
	comp=Z,660nm,4.7s						
HHC				LR	LR		
	comp=Z,4μm,10.9s						
HHC				LR	LR		
	comp=Z,2μm,9.1s						
HHC				LR	LR		
	comp=Z,3μm,10.5s						
BTO	**Baotou**	**19.58**	**331**	*e*P	**Pn**	**13 17 24.3**	**+1.1**
CN2	**Changchun**	**19.93**	**6**	*e*P	**P**	**13 17 24.3**	**-1.1**
CN2				*e*S	**S**	**13 21 07.0**	**-1.3**
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				pmax	pmax		
	comp=Z,200nm,6.3s						
CN2				LR	LR		
	comp=Z,4μm,15.0s						
CN2				LR	LR		
	comp=Z,2μm,15.0s						
CN2				LR	LR		
	comp=Z,5μm,15.0s						
LZH	**Lanzhou**	**20.07**	**311**	⇑P	Pn	13 17 29.8	+0.7
LZH				sP	pwP	13 17 42.3	+5.7
LZH				PP	**PnPn**	**13 17 54.0**	**+10**
LZH				SS	Sn	13 21 42.0	+28
LZH				pmax	pmax		
	comp=Z,110nm,1.1s						
LZH				pmax	pmax		
	comp=Z,500nm,4.3s						
LZH				LR	LR		
	comp=Z,2μm,15.2s						
LZH				LR	LR		
	comp=Z,4μm,14.6s						
LZH				LR	LR		
	comp=Z,5μm,14.6s						
MDJ	**Mudanjiang**	**21.40**	**14**	P	**P**	**13 17 40.8**	**-0.5**
MDJ				pP	pP	13 17 44.4	-3.0
MDJ				S	**S**	**13 21 37.3**	**-0.3**
MDJ				sS	Sn	13 21 43.3	-2.6
MDJ				pmax	pmax		
	comp=Z,200nm,4.6s						
MDJ				LR	LR		
	comp=Z,2μm,19.5s						
MDJ				LR	LR		
	comp=Z,3μm,16.2s						
MDJ				LR	LR		
	comp=Z,3μm,18.5s						
MDJ	**Mudanjiang**	**21.40**	**14**	P	**P**	**13 17 39.7**	**-1.6**
PBKT	**Sadao Pong**	**21.43**	**254**	P	**P**	**13 17 41.8**	**+0.1**
USA0B	**Ussuriysk Arra**	**21.64**	**19**	⇑*e*P	**P**	**13 17 42.0**	**-1.8**
USA0B	**Ussuriysk Arra**	**21.64**	**19**	P	**P**	**13 17 42.5**	**-1.4**
USRK	**Ussuriysk Ar.**	**21.64**	**19**	P	**P**	**13 17 42.4**	**-1.5**
	comp=Z,15nm,0.8s,baz=202,slow=9.4,SNR=26						
USRK				LR	LR	13 26 48.8	
	comp=Z,2μm,18.4s,baz=186,slow=39						
CHTO	**Chiang Mai**	**22.46**	**261**	P	**P**	**13 17 51.8**	**-1.1**
CHTO				pmax	pmax		
	comp=Z,27nm,1.0s						
CHTO	**Chiang Mai**	**22.46**	**261**	P	**P**	**13 17 51.8**	**-1.1**
CMAR	**Chiang Mai Arr**	**22.57**	**260**	P	**P**	**13 17 56.6**	**+2.5**
	comp=Z,8.0nm,0.8s,baz=66,slow=9.2,SNR=38						
CMAR				PcP	**PcP**	**13 21 49.1**	**+1.9**
	comp=Z,3.5nm,0.8s,baz=62,slow=1.0,SNR=10						
CMAR				ScP	**ScP**	**13 25 23.9**	**+0.5**
	comp=Z,1.9nm,0.8s,baz=21,slow=0.9,SNR=8.5						
CMAR				LR	LR	13 27 18.4	
	comp=Z,600nm,19.5s,baz=80,slow=38						
CMAR	**Chiang Mai Arr**	**22.57**	**260**	P	**P**	**13 17 54.7**	**+0.6**
MRSI	**Marisa**	**23.37**	**181**	P	**P**	**13 18 04.5**	**+2.2**
	comp=Z,1μmcomp=Z,984nmcomp=Z,73nm,0.8s						
TNTI	**Ternate**	**23.56**	**168**	P	**P**	**13 18 06.2**	**+2.0**
	comp=Z,1μmcomp=Z,169nm,1.1s						
TNTI	**Ternate**	**23.56**	**168**	P	**P**	**13 18 05.5**	**+1.4**
TNTI				IAmb	IAmb	13 18 07.8	
	comp=Z,175nm,1.1s						
SBUM	**Sibu**	**23.57**	**206**	P	**P**	**13 18 04.5**	**+0.2**
SBUM	**Sibu**	**23.57**	**206**	P	**P**	**13 18 05.0**	**+0.7**
GUMO	**Guam**	**23.59**	**112**	LR	LR	13 27 15.5	
	comp=Z,1μm,18.3s,baz=278,slow=36						
GUMO	**Guam**	**23.59**	**112**	P	**P**	**13 18 03.8**	**-0.7**
GUMO				pmax	pmax		
	comp=Z,560nm,1.4s						
GUMO	**Guam**	**23.59**	**112**	P	**P**	**13 18 03.8**	**-0.7**
MPSI	**Mapaga**	**23.63**	**186**	P	**P**	**13 18 06.8**	**+2.0**
	comp=Z,503nmcomp=Z,55nm,0.9s						
GTA	**Gaotai**	**24.54**	**314**	⇑P	**P**	**13 18 13.6**	**+0.3**
GTA				pP	pwP	13 18 23.3	-0.9
GTA				sP	sP	13 18 27.3	+5.1
GTA				PcP	**PcP**	**13 21 52.0**	**+0.8**
GTA				S	**S**	**13 22 30.8**	**-1.9**
GTA				sS	sS	13 22 46.3	+3.2
GTA				SS	**SnSn**	**13 23 28.3**	**+10**
GTA				ScP	**ScP**	**13 25 28.8**	**+0.4**
GTA				PcS	**PcS**	**13 25 30.8**	**-0.4**
GTA				pmax	pmax		
	comp=Z,27nm,1.0s						
GTA				pmax	pmax		
	comp=Z,440nm,7.1s						
GTA				LR	LR		
	comp=Z,860nm,15.2s						
GTA				LR	LR		
	comp=Z,2μm,15.2s						
GTA				LR	LR		
	comp=Z,3μm,15.5s						
ERM	**Erimo**	**24.90**	**39**	⇓*e*P	**P**	**13 18 13.8**	**-2.6**
ERM				pmax	pmax		
	comp=Z,12nm,0.9s						
LBMI	**Labuha**	**24.96**	**168**	P	**P**	**13 18 18.4**	**+1.3**
	comp=Z,3μmcomp=Z,317nm,1.3s						
KSM	**Kuching**	**25.27**	**209**	P	**P**	**13 18 22.0**	**+2.1**
HIA	**Hailar**	**25.33**	**356**	P	**P**	**13 18 18.2**	**-2.0**
HIA				pmax	pmax		
	comp=Z,45nm,1.3s						
HIA	**Hailar**	**25.33**	**356**	P	**P**	**13 18 18.2**	**-2.0**
ASAJ	**Asahikawa**	**26.00**	**34**	P	**P**	**13 18 24.3**	**-2.0**
	comp=Z,6.5nm,0.6s,baz=240,slow=11,SNR=16						
ASAJ				LR	LR	13 28 41.6	
	comp=Z,1μm,21.4s,baz=240,slow=37						
JKA	**Kamikawa-asahi**	**26.00**	**34**	P	**P**	**13 18 24.3**	**-2.0**
SANI	**Sanana**	**26.10**	**172**	P	**P**	**13 18 27.4**	**-0.1**
	comp=Z,62nm,0.9s						
SWI	**Sorong**	**26.14**	**160**	P	**P**	**13 18 32.6**	**+4.8**
	comp=Z,43nm,1.2s						
SIJI	**Sorong**	**26.15**	**160**	P	**P**	**13 18 29.1**	**+1.2**
	comp=Z,30nm,0.8s,baz=0.1,slow=11,SNR=9.8						
SIJI				LR	LR	13 27 36.0	
	comp=Z,498nm,19.0s,baz=353,slow=34						
KLR	**Kul'dur**	**26.25**	**14**	P	**P**	**13 18 26.8**	**-1.7**
	comp=Z,4.4nm,0.9s,baz=226,slow=2.6,SNR=12						
KLR				PcP	**PcP**	**13 21 54.7**	**+0.1**
	comp=Z,4.6nm,0.7s,baz=181,slow=3.0,SNR=6.9						
KLR	**Kul'dur**	**26.25**	**14**	⇓*e*P	**P**	**13 18 28.5**	**0.0**
KLR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ULN	**Ulaanbaatar**	**26.79**	**337**	P	**P**	**13 18 32.6**	**-1.0**
ULN				pmax	pmax		
	comp=Z,31nm,1.0s						
ULN	**Ulaanbaatar**	**26.79**	**337**	P	**P**	**13 18 32.6**	**-1.0**
SONM	**Songino Array**	**27.01**	**336**	P	**P**	**13 18 35.1**	**-0.5**
	comp=Z,86nm,1.0s,baz=153,slow=9.2,SNR=177						
SONM				PcP	**PcP**	**13 21 58.1**	**+1.4**
	comp=Z,2.4nm,0.7s,baz=142,slow=4.4,SNR=4.9						
SONM				ScP	**ScP**	**13 25 34.8**	**-0.6**
	comp=Z,1.8nm,0.9s,baz=130,slow=4.4,SNR=7.0						
SONM				LR	LR	13 30 28.8	
	comp=Z,3μm,18.4s,baz=158,slow=39						
SONM	**Songino Array**	**27.01**	**336**	P	**P**	**13 18 34.8**	**-0.8**
SONM				pmax	pmax		
	comp=Z,62nm,0.9s						
SONM	**Songino Array**	**27.01**	**336**	P	**P**	**13 18 34.8**	**-0.8**
NLAI	**Namlea**	**27.43**	**170**	P	**P**	**13 18 41.1**	**+1.7**
	comp=Z,179nm,0.8s						
MSAI	**Masohi**	**27.89**	**166**	P	**P**	**13 18 45.6**	**+2.1**
	comp=Z,34nm,0.9s						
SPSI	**Sidrap Palu**	**27.90**	**186**	P	**P**	**13 18 45.0**	**+1.4**
	comp=Z,12nm,1.3s						
AAI	**Ambon**	**28.07**	**168**	P	**P**	**13 18 47.0**	**+1.9**
	comp=Z,1μmcomp=Z,104nm,0.8s						
YSS	**Yuzh-Sakhalins**	**28.11**	**30**	*e*P	**P**	**13 18 45.9**	**+0.6**
YSS				*e*		13 18 52.5	
YSS				*e*		13 19 52.1	
YSS				*e*S	**S**	**13 23 27.9**	**-0.9**
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				MLR	MLR		
	comp=Z,1μm,15.0s						
YSS				MLR	MLR		
	comp=N,700nm,14.0s						
YSS	**Yuzh-Sakhalins**	**28.11**	**30**	P	**P**	**13 18 44.9**	**-0.4**
YSS				IAmb	IAmb	13 19 08.9	
	comp=Z,50nm,1.0s						
BNSI	**Bone**	**28.30**	**185**	P	**P**	**13 18 48.7**	**+1.5**
	comp=Z,17nm,1.4s						
IPM	**Ipoh**	**28.31**	**230**	P	**P**	**13 18 44.0**	**-3.4**
FAKI	**Fak Fak**	**28.39**	**159**	P	**P**	**13 18 49.1**	**+1.1**
	comp=Z,65nm,0.9s						
FAKI	**Fak Fak**	**28.39**	**159**	P	**P**	**13 18 48.4**	**+0.4**
FAKI				IAmb	IAmb	13 18 55.0	
	comp=Z,57nm,1.0s						
LSA	**Lhasa**	**28.44**	**288**	P	**P**	**13 18 48.3**	**-0.6**
LSA				pmax	pmax		
	comp=Z,24nm,0.7s						
LSA	**Lhasa**	**28.44**	**288**	P	**P**	**13 18 48.3**	**-0.6**
KAPI	**Kappang**	**28.94**	**186**	P	**P**	**13 18 53.4**	**+0.6**
	comp=Z,5.6nm,0.2s,baz=47,slow=9.1,SNR=3.8						
KAPI				LR	LR	13 30 19.9	
	comp=Z,390nm,21.5s,baz=9.5,slow=36						
ZEA	**Zeya**	**29.94**	**6**	*e*P	**P**	**13 18 59.5**	**-1.9**
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
ZEA				MLR	MLR		
	comp=N,2μm,14.0s						
ZEA				MLR	MLR		
	comp=Z,2μm,14.0s						
ZAK	**Zakamensk**	**30.27**	**335**	*e*P	**P**	**13 19 02.9**	**-1.6**
ZAK				pmax	pmax		
	comp=Z,13nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
TYV	**Tymovskoe**	**31.07**	**25**	*e*P	P	13 19 22.9	+12
TYV				pmax	pmax		
	comp=Z,7.0nm,1.2s						
TYV				pmax	pmax		
	comp=Z,200nm,4.7s						
TLY	**Talaya**	**31.20**	**337**	*e*P	**P**	**13 19 11.9**	**-0.7**
TLY				*e*		13 20 24.9	
TLY				*e*S	**S**	**13 24 19.8**	**+2.6**
TLY				*e*SS	**SnSn**	**13 26 03.7**	**+3.4**
TLY				*e*SSS	SSS	13 26 20.2	
TLY				pmax	pmax		
	comp=Z,85nm,1.4s						
TLY				MLR	MLR		
	comp=Z,8μm,15.0s						
TLY	**Talaya**	**31.20**	**337**	P	**P**	**13 19 11.4**	**-1.2**
TAPN	**Taplejung**	**31.42**	**284**	*e*P	**P**	**13 19 16.9**	**+1.7**
	comp=Z,106nm,1.0s						
IRK	**Irkutsk**	**31.45**	**338**	*e*P	**P**	**13 19 12.3**	**-2.5**
IRK				pmax	pmax		
	comp=Z,34nm,2.4s						
ODAN	**Odare**	**31.72**	**283**	*e*P	**P**	**13 19 19.3**	**+1.5**
	comp=Z,65nm,0.8s						
MOY	**Mondy**	**32.17**	**335**	*e*P	**P**	**13 19 20.4**	**-0.9**
MOY				pmax	pmax		
	comp=Z,40nm,1.6s						
MMRI	**Maumere**	**32.42**	**180**	P	**P**	**13 19 24.6**	**+1.0**
	comp=Z,53nm,1.2s						
MMRI	**Maumere**	**32.42**	**180**	P	**P**	**13 19 23.3**	**-0.2**
MMRI				IAmb	IAmb	13 19 45.8	
	comp=Z,44nm,0.9s						
RAMN	**Ramite**	**32.42**	**283**	*e*P	**P**	**13 19 25.3**	**+1.4**
	comp=Z,64nm,0.9s						
SRBI	**Singaraja**	**32.64**	**193**	P	**P**	**13 19 26.8**	**+1.3**
	comp=Z,23nm,1.0s						
JIRN	**Jiri**	**32.76**	**284**	*e*P	**P**	**13 19 28.4**	**+1.4**
PLAI	**Plampang**	**32.92**	**188**	P	**P**	**13 19 28.9**	**+0.9**
	comp=Z,27nm,0.8s						
GUN	**Gumba**	**33.03**	**285**	*e*P	**P**	**13 19 30.7**	**+1.4**
	comp=Z,84nm,0.9s						
JAGI	**Jajag, Banyuwa**	**33.25**	**195**	P	**P**	**13 19 30.8**	**-0.1**
MDSI	**Maura Dua**	**33.42**	**215**	P	**P**	**13 19 34.4**	**+2.0**
	comp=Z,16nm,1.3s						
PKI	**Pulchoki**	**33.45**	**284**	*e*P	**P**	**13 19 33.7**	**+0.7**
	comp=Z,20nm,0.8s						
PKIN	**Phulchoki**	**33.47**	**284**	*e*P	**P**	**13 19 33.7**	**+0.6**
KKN	**Kakani**	**33.56**	**285**	*e*P	**P**	**13 19 34.7**	**+0.9**
	comp=Z,58nm,0.9s						
WOJI	**Wonogiri, Jawa**	**33.56**	**201**	P	**P**	**13 19 35.6**	**+2.0**
	comp=Z,125nm,1.0s						
SOEI	**Soe**	**33.58**	**177**	P	P	13 19 38.7	+4.9
	comp=Z,31nm,1.2s						
SOEI	**Soe**	**33.58**	**177**	P	**P**	**13 19 32.4**	**-1.5**
SOEI				IAmb	IAmb	13 20 21.0	
	comp=Z,36nm,1.0s						
DMN	**Daman**	**33.72**	**284**	*e*P	**P**	**13 19 36.4**	**+1.1**
	comp=Z,52nm,1.0s						
UGM	**Wanagama**	**33.77**	**202**	P	**P**	**13 19 37.2**	**+1.8**

	comp=Z,118nm,1.5s						
UGM	**Wanagama**	**33.77**	**202**	P	**P**	**13 19 35.9**	**+0.5**
KPJI	**Karang Pucung**	**33.80**	**205**	P	**P**	**13 19 37.4**	**+1.7**
	comp=Z,40nm,1.4s						
GKN	**Gorkha**	**34.12**	**285**	*e*P	**P**	**13 19 39.5**	**+0.9**
	comp=Z,79nm,1.0s						
BOD	**Bodaibo**	**34.35**	**352**	*e*P	**P**	**13 19 37.2**	**-2.8**
BOD				pmax	pmax		
	comp=Z,5.0nm,2.0s						
WMQ	**Urumqi**	**34.62**	**313**	P	**P**	**13 19 44.1**	**+1.4**
WMQ				pP	pwP	13 19 54.3	+0.7
WMQ				sP	sP	13 19 58.3	+6.6
WMQ				pmax	pmax		
	comp=Z,46nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,200nm,4.9s						
WMQ				LR	LR		
	comp=Z,690nm,13.1s						
WMQ				LR	LR		
	comp=Z,860nm,12.5s						
WMQ				LR	LR		
	comp=Z,720nm,14.5s						
WMQ	**Urumqi**	**34.62**	**313**	P	**P**	**13 19 43.0**	**+0.3**
WMQ				pmax	pmax		
	comp=Z,42nm,0.8s						
WMQ	**Urumqi**	**34.62**	**313**	P	**P**	**13 19 43.0**	**+0.3**
WMQ				IAmb	IAmb	13 19 44.7	
	comp=Z,42nm,0.8s						
DANN	**Dangsing**	**34.88**	**286**	*e*P	**P**	**13 19 46.5**	**+1.1**
	comp=Z,59nm,0.9s						
SKR	**Severo-Kuril's**	**37.25**	**36**	*e*P	P	13 19 53.2	-12
SKR				MLR	MLR		
	comp=Z,400nm,16.0s						
MTN	**Manton Dam**	**37.57**	**166**	P	**P**	**13 20 07.4**	**-0.7**
YAK	**Yakutsk**	**38.35**	**5**	*e*P	**P**	**13 20 11.0**	**-3.1**
YAK				e*PP	**pP**	**13 20 18.9**	**-2.0**
YAK				*e*		13 21 41.1	
YAK				*e*		13 22 25.6	
YAK				*e*S	**S**	**13 26 04.3**	**-2.7**
YAK				e*SS	**sS**	**13 26 17.7**	**-1.2**
YAK				*e*SS	**SnSn**	**13 28 43.2**	**-10**
YAK				*e*		13 30 20.0	
YAK				pmax	pmax		
	comp=Z,50nm,1.0s						
YAK				pmax	pmax		
	comp=N,22nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,173nm,5.6s						
YAK				pmax	pmax		
	comp=E,73nm,5.3s						
YAK				smax	smax		
	comp=N,288nm,5.3s						
YAK				smax	smax		
	comp=E,74nm,4.7s						
YAK				MLR	MLR		
	comp=Z,1µm,16.0s						
YAK				MLR	MLR		
	comp=N,991nm,14.0s						
YAK				MLR	MLR		
	comp=E,330nm,14.0s						
YAK	**Yakutsk**	**38.35**	**5**	P	**P**	**13 20 11.5**	**-2.6**
YAK				IAmb	IAmb	13 20 14.0	
	comp=Z,37nm,0.8s						
MK31	**Makanchi Array**	**39.28**	**316**	P	**P**	**13 20 22.1**	**-0.1**
MK31				pmax	pmax		
	comp=Z,81nm,1.1s						
MK31	**Makanchi Array**	**39.28**	**316**	P	**P**	**13 20 22.1**	**-0.1**
MK31				IAmb	IAmb	13 20 23.6	
	comp=Z,81nm,1.1s						
MKAR	**Makanchi Array**	**39.28**	**316**	P	**P**	**13 20 22.6**	**+0.4**
	comp=Z,58nm,0.7s,baz=101,slow=11,SNR=421						
MKAR				PcP	**PcP**	**13 22 30.9**	**+0.2**
	comp=Z,6.7nm,0.7s,baz=92,slow=7.5,SNR=3.7						
MKAR				ScP	**ScP**	**13 26 16.9**	**-0.9**
	comp=Z,2.4nm,0.8s,baz=80,slow=6.8,SNR=5.6						
MKAR				LR	LR	13 37 58.0	
	comp=Z,1µm,18.8s,baz=100,slow=38						
PETK	**Petropavlovsk-**	**39.40**	**33**	P	**P**	**13 20 21.4**	**-1.7**
	comp=Z,1.0nm,0.4s,baz=224,slow=4.0,SNR=2.3						
PETK				LR	LR	13 37 29.3	
	comp=Z,533nm,19.0s,baz=234,slow=38						
MAKZ	**Makanchi**	**39.49**	**316**	P	**P**	**13 20 24.1**	**+0.2**
MAKZ	**Makanchi**	**39.49**	**316**	P	**P**	**13 20 24.2**	**+0.2**
MAKZ				IAmb	IAmb	13 20 25.4	
	comp=Z,119nm,1.1s						
KNRA	**Kununurra**	**39.90**	**170**	P	**P**	**13 20 27.8**	**+0.3**
KNRA				IAmb	IAmb	13 20 29.2	
	comp=Z,51nm,0.8s						
MA2	**Magadan**	**40.74**	**22**	P	**P**	**13 20 32.1**	**-1.9**
	comp=Z,2.7nm,0.7s,baz=196,slow=7.4,SNR=4.9						
MA2	**Magadan**	**40.74**	**22**⇓	*e*P	**P**	**13 20 32.2**	**-1.9**
MA2				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ZAA0	**Zalesovo Array**	**41.04**	**327**	P	**P**	**13 20 35.1**	**-1.6**
ZAA0				IAmb	IAmb	13 20 36.6	
	comp=Z,74nm,0.8s						
ZALV	**Zalesovo Beam**	**41.04**	**327**	P	**P**	**13 20 35.4**	**-1.2**
	comp=Z,77nm,0.7s,baz=114,slow=7.9,SNR=310						
ZALV				PcP	**PcP**	**13 22 35.2**	**-0.9**
	comp=Z,6.1nm,0.6s,baz=123,slow=3.9,SNR=4.0						
ZALV				LR	LR	13 38 22.8	
	comp=Z,833nm,21.7s,baz=124,slow=37						
ZALV	**Zalesovo Beam**	**41.04**	**327**	P	**P**	**13 20 35.2**	**-1.4**
PMG	**Port Moresby**	**41.04**	**141**	P	**P**	**13 20 38.2**	**+1.2**
	comp=Z,27nm,0.9s,baz=40,slow=4.3,SNR=5.9						
PMG	**Port Moresby**	**41.04**	**141**⇑	*e*P	**P**	**13 20 38.0**	**+0.9**
PMG				pmax	pmax		
	comp=Z,105nm,1.0s						
PMG	**Port Moresby**	**41.04**	**141**	IAmb	IAmb	13 20 39.9	
	comp=Z,37nm,0.9s						
HYB	**Hyderabad**	**41.44**	**269**	*i*P	**P**	**13 20 42.0**	**+1.6**
FITZ	**Fitzroy Crossi**	**41.94**	**175**	P	**P**	**13 20 44.9**	**+0.6**
	comp=Z,9.7nm,0.9s,baz=7.7,slow=0.3,SNR=14						
FITZ	**Fitzroy Crossi**	**41.94**	**175**	P	**P**	**13 20 44.5**	**+0.2**
KSH	**Kashi**	**41.97**	**303**	P	**P**	**13 20 49.0**	**+4.4**
KSH				sP	pwP	13 20 59.6	+4.1
KSH				PcP	**PcP**	**13 22 43.4**	**+3.7**
KSH				S	**S**	**13 27 07.8**	**+5.8**
KSH				sS	sS	13 27 20.3	+7.5
KSH				ScS	**ScS**	**13 30 48.1**	**+2.1**
KSH				pmax	pmax		
	comp=Z,76nm,0.8s						
KSH				pmax	pmax		
	comp=Z,540nm,4.8s						
KSH				LR	LR		
	comp=Z,1µm,14.0s						
KSH				LR	LR		
	comp=Z,3µm,17.5s						
KSH				LR	LR		
	comp=Z,740nm,14.4s						
ULHL	**Ulahol**	**42.20**	**307**	P	**P**	**13 20 48.5**	**+1.9**
	SNR=7.4						
COEN	**Coen**	**42.81**	**150**	P	**P**	**13 20 53.0**	**+1.5**
COEN				IAmb	IAmb	13 20 54.5	
	comp=Z,55nm,0.8s						
KZA	**Kyzart**	**42.89**	**307**	P	**P**	**13 20 54.6**	**+2.2**
	SNR=63						
KURK	**Kurchatov**	**42.98**	**320***c*	*i*P	**P**	**13 20 52.1**	**-0.4**
KURK				pmax	pmax		
	comp=Z,107nm,1.3s						
KURK	**Kurchatov**	**42.98**	**320**	P	**P**	**13 20 52.1**	**-0.4**
KURK				IAmb	IAmb	13 20 53.5	
	comp=Z,66nm,0.9s						
KBK	**Karagaybulak**	**43.21**	**307**	P	**P**	**13 20 56.6**	**+1.8**
	SNR=60						
CHMS	**Chumysh**	**43.41**	**308**	P	**P**	**13 20 57.6**	**+1.4**
	SNR=34						
CHMS	**Chumysh**	**43.41**	**308**	*i*P	**P**	**13 20 57.3**	**+1.1**
CHMS				pmax	pmax		
	comp=Z,114nm,1.1s						
UCH	**Uchtor**	**43.46**	**307**	P	**P**	**13 20 59.3**	**+2.3**
	SNR=203						
FRU1	**Bishkek**	**43.47**	**308**	P	**P**	**13 20 56.6**	**-0.1**
FRU1				pmax	pmax		
	comp=Z,98nm,1.1s						
FRU1	**Bishkek**	**43.47**	**308**	P	**P**	**13 20 56.6**	**-0.1**
FRU1				IAmb	IAmb	13 20 59.3	
	comp=Z,98nm,1.1s						
AAK	**Ala-Archa**	**43.54**	**307**	P	**P**	**13 20 59.0**	**+1.6**
	SNR=38						
AAK	**Ala-Archa**	**43.54**	**307**	*i*P	**P**	**13 20 58.8**	**+1.4**
	SNR=6.1						
AAK	**Ala-Archa**	**43.54**	**307**	P	**P**	**13 20 58.1**	**+0.7**
AAK				pmax	pmax		
	comp=Z,43nm,1.0s						
AAK	**Ala-Archa**	**43.54**	**307**	P	**P**	**13 20 58.1**	**+0.7**
AAK				IAmb	IAmb	13 20 59.9	
	comp=Z,43nm,0.9s						
USP	**Ospenovka**	**43.64**	**308**	P	**P**	**13 20 59.3**	**+1.2**
	SNR=41						
SEY	**Seymchan**	**43.78**	**19**⇑	*e*P	**P**	**13 20 57.6**	**-1.2**
AML	**Almayashu**	**44.04**	**306**	P	**P**	**13 21 03.7**	**+2.0**
	SNR=157						
EKS2	**Erkin-Say**	**44.06**	**307**	P	**P**	**13 21 03.1**	**+1.6**
	SNR=24						
ARSB	**Arslanbob**	**44.46**	**305**	P	**P**	**13 21 06.1**	**+1.3**
ARSB				pmax	pmax		
	comp=Z,93nm,1.2s						
ARSB	**Arslanbob**	**44.46**	**305**	P	**P**	**13 21 06.1**	**+1.3**
ARSB				IAmb	IAmb	13 21 07.4	
	comp=Z,93nm,1.1s						
WB0	**Warramunga Arr**	**45.02**	**164**	P	**P**	**13 21 09.6**	**+0.5**
WB0				IAmb	IAmb	13 21 11.5	
	comp=Z,56nm,1.1s						
WRAB	**Tennant Creek**	**45.17**	**164***d*	*i*P	**P**	**13 21 11.5**	**+1.2**
WRAB				pmax	pmax		
	comp=Z,87nm,1.7s						
WRAB	**Tennant Creek**	**45.17**	**164**	P	**P**	**13 21 11.1**	**+0.8**
WRAB				IAmb	IAmb	13 21 12.7	
	comp=Z,46nm,0.9s						
WRA	**Warramunga Arr**	**45.17**	**164**	P	**P**	**13 21 11.5**	**+1.1**
	comp=Z,33nm,0.8s,baz=344,slow=8.8,SNR=118						
WRA	**Warramunga Arr**	**45.17**	**164**	P	**P**	**13 21 10.1**	**-0.3**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WRA	**Warramunga Arr**	**45.17**	**164**	P	**P**	**13 21 10.1**	**-0.3**
WB2	**Warramunga Arr**	**45.17**	**164**	P	**P**	**13 21 11.0**	**+0.5**
WB2				IAmb	IAmb	13 21 12.8	
	comp=Z,49nm,0.9s						
WR0	**Warramunga Arr**	**45.24**	**164**	P	**P**	**13 21 11.6**	**+0.6**
WR0				IAmb	IAmb	13 21 13.2	
	comp=Z,44nm,0.8s						
PSA00	**Pilbara Seismi**	**45.35**	**183**	P	**P**	**13 21 11.7**	**-0.1**
PSA00				IAmb	IAmb	13 21 12.9	
	comp=Z,31nm,1.1s						
POO	**Poona**	**45.43**	**273**	*e*P	**P**	**13 21 11.0**	**-1.7**
KK31	**Karatay Array**	**46.50**	**307**	*i*P	**P**	**13 21 21.5**	**+0.7**
KK31	**Karatay Array**	**46.50**	**307**	P	**P**	**13 21 20.3**	**-0.4**
KK31				IAmb	IAmb	13 21 23.0	
	comp=Z,33nm,0.8s						
KKAR	**Karatay Array**	**46.50**	**307**	P	**P**	**13 21 21.3**	**+0.5**
KKAR				pmax	pmax		
	comp=Z,33nm,0.8s						
KKAR	**Karatay Array**	**46.50**	**307**	P	**P**	**13 21 20.8**	**0.0**
KKAR	**Karatay Array**	**46.50**	**307**	P	**P**	**13 21 21.2**	**+0.5**
KKAR				IAmb	IAmb	13 21 23.0	
	comp=Z,33nm,0.8s						
TAS	**Tashkent**	**47.23**	**305**	P	**P**	**13 21 27.2**	**+0.8**
TAS				pmax	pmax		
	comp=Z,110nm,0.7s						
TAS	**Tashkent**	**47.23**	**305**	P	**P**	**13 21 27.2**	**+0.8**
KBL	**Kabul**	**47.28**	**296**	P	**P**	**13 21 28.1**	**+0.9**
KBL				pmax	pmax		
	comp=Z,61nm,0.8s						
KBL	**Kabul**	**47.28**	**296**	P	**P**	**13 21 28.1**	**+0.9**
TIXI	**Tiksi**	**47.84**	**3**	LR	LR	13 44 15.2	
	comp=Z,2µm,18.2s,baz=186,slow=40						
TIXI	**Tiksi**	**47.84**	**3***c*	*i*P	**P**	**13 21 28.1**	**-2.6**
TIXI				pmax	pmax		
	comp=Z,12nm,0.8s						
TIXI	**Tiksi**	**47.84**	**3**	P	**P**	**13 21 27.5**	**-3.2**
TIXI				IAmb	IAmb	13 21 59.8	
	comp=Z,46nm,1.5s						
BRVK	**Borovoye**	**48.63**	**321***c*	*i*P	**P**	**13 21 36.6**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,59nm,1.0s						
BRVK	**Borovoye**	**48.63**	**321**	P	**P**	**13 21 36.6**	**-0.5**
BRVK				IAmb	IAmb	13 21 38.0	
	comp=Z,48nm,0.9s						
AS31	**Alice Springs**	**48.65**	**166**	P	**P**	**13 21 38.7**	**+1.1**
ASAR	**Alice Springs**	**48.65**	**166**	P	**P**	**13 21 39.3**	**+1.7**
	comp=Z,32nm,1.1s,baz=345,slow=6.6,SNR=122						
ASAR	**Alice Springs**	**48.65**	**166**	P	**P**	**13 21 38.6**	**+1.0**
ASAR	**Alice Springs**	**48.65**	**166**	P	**P**	**13 21 38.5**	**+1.0**
CTA	**Charters Tower**	**49.57**	**150**	P	**P**	**13 21 46.5**	**+1.9**
	comp=Z,13nm,0.9s,baz=326,slow=10,SNR=13						
NRIK	**Noril'sk**	**49.90**	**345**	P	**P**	**13 21 44.0**	**-2.5**
	comp=Z,5.0nm,0.7s,baz=124,slow=8.9,SNR=8.3						
NRIK				LR	LR	13 44 52.2	
	comp=Z,1µm,20.0s,baz=138,slow=38						
BILL	**Bilibino**	**51.49**	**19**⇑	*e*P	**P**	**13 21 57.9**	**-0.7**
BILL				*e*		13 23 13.5	
BILL				*e*		13 23 51.4	
BILL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,935nm,18.0s						
BILL	**Bilibino**	**51.49**	**19**	P	**P**	**13 21 56.9**	**-1.7**
HRA	**Herat**	**52.90**	**296**	P	**P**	**13 22 09.8**	**-0.1**
MORW	**Morawa**	**53.10**	**187**	P	**P**	**13 22 10.7**	**-0.2**
GSTR	**Great Sitkin T**	**54.04**	**42**	P	**P**	**13 22 17.1**	**-0.6**
ABKAR	**Akbulak array**	**54.40**	**314**	P	**P**	**13 22 20.5**	**+0.1**
FORT	**Forrest**	**54.71**	**174**	P	**P**	**13 22 23.7**	**+1.0**
FORT				IAmb	IAmb	13 22 25.4	
	comp=Z,74nm,1.3s						
SVE	**Sverdlovsk**	**54.88**	**324**	*e*P	**P**	**13 22 23.4**	**-0.3**
SVE				pmax	pmax		
	comp=Z,36nm,0.9s						
SVE				MLR	MLR		
	comp=Z,2µm,18.0s						
GEYT	**Alibeck**	**55.88**	**301**	P	**P**	**13 22 33.2**	**+1.9**
	comp=Z,65nm,0.8s,baz=90,slow=3.0,SNR=121						
GEYT				LR	LR	13 51 32.0	
	comp=Z,521nm,18.6s,baz=45,slow=42						
GEYT	**Alibeck**	**55.88**	**301**	P	**P**	**13 22 32.4**	**+1.1**
GYA0B	**ALIBECK ARRAY**	**55.88**	**301**	P	**P**	**13 22 32.4**	**+1.1**
ARU	**Arti**	**55.96**	**323**	LR	LR	13 49 48.5	
	comp=Z,312nm,18.4s,baz=96,slow=40						
ARU	**Arti**	**55.96**	**323***c*	*i*P	**P**	**13 22 30.5**	**-0.9**
ARU						13 23 28.1	
ARU						13 24 34.0	
ARU				S	**S**	**13 30 18.4**	**+0.5**
ARU				SS	**SS**	**13 34 01.3**	**-2.3**
ARU				pmax	pmax		
	comp=Z,34nm,0.9s						
ARU				MLR	MLR		
	comp=Z,523nm,16.0s						
ARU	**Arti**	**55.96**	**323**	P	**P**	**13 22 30.1**	**-1.3**
ARU				IAmb	IAmb	13 22 33.1	
	comp=Z,32nm,0.9s						
EIDS	**Eidsvold**	**56.36**	**149**	P	**P**	**13 22 35.4**	**+0.8**
EIDS				IAmb	IAmb	13 22 49.9	
	comp=Z,56nm,1.9s						
BBOO	**Buckleboo**	**57.95**	**166**	P	**P**	**13 22 47.1**	**+1.3**
BBOO				IAmb	IAmb	13 23 01.0	
	comp=Z,57nm,1.2s						
STKA	**Stephens Creek**	**58.49**	**161**	P	**P**	**13 22 51.1**	**+1.6**
	comp=Z,13nm,0.9s,baz=341,slow=6.6,SNR=20						
STKA	**Stephens Creek**	**58.49**	**161**	P	**P**	**13 22 50.9**	**+1.4**
STKA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
STKA	**Stephens Creek**	**58.49**	**161**	P	**P**	**13 22 50.9**	**+1.4**
BANOM	**Banah**	**59.40**	**287**	*i*P	**P**	**13 22 59.0**	**+2.7**
	SNR=6.0						
HATD	**Hatta, Dubai**	**59.82**	**286**	*i*P	**P**	**13 23 01.0**	**+1.9**
	SNR=6.9						
ASHO	**Ashiyiah**	**59.92**	**286**	*i*P	**P**	**13 23 01.2**	**+1.4**
	SNR=10						
ALNE	**Al Ain**	**60.34**	**285**	*i*P	**P**	**13 23 04.7**	**+2.0**
	SNR=7.4						
ANM	**Nome**	**60.97**	**28**	P	**P**	**13 23 06.1**	**-0.2**
ANM				pmax	pmax		
	comp=Z,38nm,2.0s						
ANM	**Nome**	**60.97**	**28**	P	**P**	**13 23 06.1**	**-0.2**
ANM				IAmb	IAmb	13 23 11.2	
	comp=Z,38nm,2.0s						
KIRV	**Kirov**	**61.04**	**325**	LR	LR	13 51 58.8	
	comp=Z,1µm,18.4s,baz=77,slow=38						
DZM	**Mont Dzumac**	**62.66**	**133**	LR	LR	13 46 07.4	
	comp=Z,436nm,21.3s,baz=310,slow=32						
PRGR	**Permogore**	**62.95**	**329**	*e*P	**P**	**13 23 17.8**	**-1.8**
PRGR				*e*		13 23 55.6	
PRGR				pmax	pmax		
	comp=Z,31nm,0.6s						
AKT	**Akhty**	**63.39**	**306**	*e*P	**P**	**13 23 23.8**	**+0.8**
AKT				*e*		13 24 01.0	
AKT				pmax	pmax		
	comp=Z,58nm,0.7s						
TBLG	**Delisi**	**65.55**	**307**	P	**P**	**13 23 36.4**	**-0.7**
TBLG	**Delisi**	**65.55**	**307**	P	**P**	**13 23 36.4**	**-0.7**
SOCY	**Socotra**	**65.59**	**273**	P	**P**	**13 23 36.9**	**-0.9**
SOCY				IAmb	IAmb	13 23 37.8	
	comp=Z,21nm,0.8s						
IMAR	**Indian Mountai**	**65.85**	**26**	P	**P**	**13 23 38.2**	**-0.4**
GNI	**Garni**	**65.86**	**305**	LR	LR	13 55 56.2	
	comp=Z,178nm,18.1s,baz=92,slow=39						
GNI	**Garni**	**65.86**	**305**	P	**P**	**13 23 40.9**	**+1.6**
GNI	**Garni**	**65.86**	**305***d*	*e*P	**P**	**13 23 40.4**	**+1.1**
GNI				pmax	pmax		
	comp=Z,59nm,1.1s						
GNI	**Garni**	**65.86**	**305**	P	**P**	**13 23 38.1**	**-1.2**
KLMR	**Klimovskoe**	**65.94**	**328**	*e*P	**P**	**13 23 36.3**	**-2.9**
KLMR				e*PP	**pP**	**13 23 46.7**	**+0.7**
KLMR				*e*		13 24 07.2	
KLMR				pmax	pmax		
	comp=Z,27nm,1.0s						
KLMR				MLR	MLR		
	comp=Z,2µm,17.0s						
KLMR	**Klimovskoe**	**65.94**	**328**	*e*P	**P**	**13 23 36.4**	**-2.8**
KLMR				AMP		13 23 40.6	
	comp=Z,27nm,1.0s						
KLMR				*e*pP	**pP**	**13 23 46.7**	**+0.7**
KLMR				*e*PcP	**PcP**	**13 24 07.3**	**-2.5**
KLMR				LQ	LQ	13 47 41.8	
KLMR				LQ	LQ	13 47 41.8	
KLMR				LR	LR	13 48 37.7	
KLMR				LRM	MLR	13 55 11.5	
KLMR				AMP		13 55 19.8	
	comp=Z,2µm,17.1s						
ZEI	**Tsey**	**65.96**	**308**	*e*P	**P**	**13 23 39.7**	**-0.2**
ZEI				pmax	pmax		
	comp=Z,49nm,0.8s						
VRH	**Novokhopyorsk**	**65.98**	**317**	*e*P	**P**	**13 23 38.9**	**-0.7**
VRH				pmax	pmax		
	comp=Z,60nm,1.4s						
NCK	**Nalchik**	**66.04**	**309**⇑	*e*P	**P**	**13 23 39.6**	**-0.6**
NCK				pmax	pmax		
	comp=Z,51nm,1.1s						
TMCR	**Tamitsa**	**66.27**	**332**	*e*P	**P**	**13 23 40.2**	**-1.0**
TMCR				pmax	pmax		
	comp=Z,17nm,0.8s						
ONI	**Oni**	**66.32**	**308**	P	**P**	**13 23 43.6**	**+1.5**
KBZ	**Khabaz**	**66.50**	**309**	P	**P**	**13 23 43.9**	**+0.8**
	comp=Z,40nm,0.9s,baz=107,slow=4.3,SNR=33						
KBZ				LR	LR	13 56 25.4	
	comp=Z,418nm,19.7s,baz=66,slow=39						
AKH	**Akhalkalaki**	**66.53**	**306**	⇑P	**P**	**13 23 45.4**	**+1.9**
AKH	**Akhalkalaki**	**66.53**	**306**	P	**P**	**13 23 45.6**	**+2.0**
AKH	**Akhalkalaki**	**66.53**	**306**	P	**P**	**13 23 43.3**	**-0.3**
AKH				pmax	pmax		
	comp=Z,75nm,0.9s						
AKH	**Akhalkalaki**	**66.53**	**306**	P	**P**	**13 23 43.3**	**-0.3**
KIV	**Kislovodsk**	**66.60**	**309**	*i*P	**P**	**13 23 45.9**	**+2.0**
	SNR=9.5						
KIV	**Kislovodsk**	**66.60**	**309**	*e*P	**P**	**13 23 44.8**	**+0.9**
KIV				pmax	pmax		
	comp=Z,245nm,1.0s						
KIV				MLR	MLR		
	comp=Z,797nm,17.0s						
KIV	**Kislovodsk**	**66.60**	**309**	P	**P**	**13 23 43.2**	**-0.7**
NEY	**Neytrino**	**66.72**	**308***d*	*i*P	**P**	**13 23 46.8**	**+2.1**
NEY				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TOLK	**Toolik Lake Re**	**67.18**	**23**	P	**P**	**13 23 46.4**	**-0.7**
TOLK	**Toolik Lake Re**	**67.18**	**23**	P	**P**	**13 23 46.9**	**-0.2**
	baz=277						
MLY	**Manley**	**67.21**	**27**	P	**P**	**13 23 47.3**	**0.0**
BPAW	**Bear Paw Mtn.**	**67.23**	**28**	P	**P**	**13 23 47.1**	**-0.4**
BPAW				IAmb	IAmb	13 24 13.7	
	comp=Z,56nm,2.0s						
SKT	**Skwentna**	**67.29**	**31**	P	**P**	**13 23 47.0**	**-0.8**
KTH	**Kantishna Hill**	**67.33**	**29**	P	**P**	**13 23 47.5**	**-0.7**
KTH				IAmb	IAmb	13 24 53.6	
	comp=Z,66nm,1.8s						
CUKT	**Cukurca**	**67.36**	**302**	P	**P**	**13 23 49.5**	**+0.6**
KDAK	**Kodiak Island**	**67.41**	**35**	P	**P**	**13 23 48.0**	**-0.6**
KDAK				pmax	pmax		
	comp=Z,309nm,2.0s						
KDAK	**Kodiak Island**	**67.41**	**35**	P	**P**	**13 23 48.0**	**-0.6**
LPSR	**Galich'ya Gora**	**67.46**	**319**	*e*P	**P**	**13 23 48.2**	**-0.8**
LPSR				pmax	pmax		
	comp=Z,30nm,1.5s						
SENK	**Senkaya-Erzuru**	**67.56**	**306**	P	**P**	**13 23 52.2**	**+2.0**
VSR	**Storozhevoye**	**67.56**	**317**	*e*P	**P**	**13 23 48.8**	**-0.9**
VSR				pmax	pmax		
	comp=Z,20nm,0.9s						
AKDM	**Akdamar-Van**	**67.59**	**303**	P	**P**	**13 23 51.9**	**+1.5**
TRF	**Thorofare Moun**	**67.63**	**29**	P	**P**	**13 23 50.4**	**+0.2**
TRF				IAmb	IAmb	13 25 31.0	
	comp=Z,48nm,1.7s						
MOS	**Moscow**	**67.66**	**322**	*e*P	P	13 23 56.8	+6.6
APA	**Apatity**	**67.72**	**336**⇓	*i*P	**P**	**13 23 49.1**	**-1.3**
APA				pmax	pmax		
	comp=Z,15nm,0.9s						
APA				MLR	MLR		
	comp=Z,1µm,23.0s						
SUA	**Susitna One**	**67.74**	**31**	P	**P**	**13 23 50.2**	**-0.6**
CNPM	**China Poot**	**67.82**	**33**	P	**P**	**13 23 50.8**	**-0.5**
BRLK	**Bradley Lake**	**67.95**	**33**	P	**P**	**13 23 51.7**	**-0.3**
SIRT	**Sirnak**	**68.20**	**302**	P	**P**	**13 23 55.3**	**+1.2**
MDM	**Murphy Dome**	**68.27**	**27**	P	**P**	**13 23 53.8**	**-0.2**
MDM				IAmb	IAmb	13 24 06.2	
	comp=Z,11nm,0.8s						
RND	**Reindeer**	**68.28**	**29**	P	**P**	**13 23 53.6**	**-0.5**
RND				pmax	pmax		
	comp=Z,30nm,1.1s						
RND	**Reindeer**	**68.28**	**29**	P	**P**	**13 23 53.6**	**-0.5**
RND				IAmb	IAmb	13 24 02.2	
	comp=Z,30nm,1.1s						
OBN	**Obninsk**	**68.37**	**322**	LR	LR	13 55 32.7	
	comp=Z,82nm,20.8s,baz=34,slow=37						
OBN	**Obninsk**	**68.37**	**322**⇓	*e*P	**P**	**13 23 54.1**	**-0.6**
OBN				*e*		13 24 19.9	
OBN				pmax	pmax		
	comp=Z,12nm,0.5s						
OBN				MLR	MLR		
	comp=Z,562nm,18.0s						
PMR	**Palmer**	**68.48**	**31**	P	**P**	**13 23 55.0**	**-0.3**
PMR	**Palmer**	**68.48**	**31**	P	**P**	**13 23 55.0**	**-0.3**
CCB	**Clear Creek Bu**	**68.51**	**28**	P	**P**	**13 23 55.1**	**-0.2**
CCB				IAmb	IAmb	13 25 51.3	
	comp=Z,33nm,2.0s						
GHO	**Glory Hole Cre**	**68.54**	**31**	P	**P**	**13 23 55.0**	**-0.8**
SEW	**Seward**	**68.60**	**33**	P	**P**	**13 23 55.7**	**-0.3**
SOC	**Sochi**	**68.78**	**309**	*e*P	**P**	**13 23 56.9**	**-0.6**
SOC				*e*		13 26 32.1	
SOC				*e*PPP	PPP	13 28 05.3	
SOC				*e*S	**S**	**13 33 00.0**	**+0.3**
SOC				*e*		13 33 50.0	
SOC				*e*SS	**SS**	**13 37 31.2**	**+6.7**
SOC				pmax	pmax		
	comp=Z,107nm,0.7s						
SOC				MLR	MLR		
	comp=Z,379nm,17.0s						
SML	**Sawmill**	**68.81**	**31**	P	**P**	**13 23 56.3**	**-1.2**
SML				IAmb	IAmb	13 24 16.9	
	comp=Z,72nm,1.6s						
KNK	**Knik Glacier**	**68.83**	**31**	P	**P**	**13 23 56.4**	**-1.1**
IL31		**68.87**	**27**	P	**P**	**13 23 55.8**	**-1.8**
IL31				IAmb	IAmb	13 25 25.9	
	comp=Z,30nm,1.8s						
ILAR	**Eielson Array**	**68.87**	**27**	P	**P**	**13 23 56.1**	**-1.6**
	comp=Z,1.2nm,0.7s,baz=268,slow=4.7,SNR=13						
ILAR				LR	LR	13 55 32.8	
	comp=Z,81nm,19.6s,baz=298,slow=37						
ILAR	**Eielson Array**	**68.87**	**27**	P	**P**	**13 23 56.0**	**-1.7**
HDA	**Harding Lake**	**68.92**	**28**	P	**P**	**13 23 56.9**	**-1.1**
HDA				IAmb	IAmb	13 24 40.4	
	comp=Z,37nm,1.8s						
HDA	**Harding Lake**	**68.92**	**28**	P	**P**	**13 23 58.1**	**+0.2**
	baz=282						
DHY	**Denali Highway**	**69.00**	**29**	P	**P**	**13 23 58.0**	**-0.7**
DHY				IAmb	IAmb	13 26 02.8	
	comp=Z,32nm,1.7s						
FYU	**Fort Yukon**	**69.17**	**25**	P	**P**	**13 23 59.6**	**+0.1**
FYU				IAmb	IAmb	13 25 02.3	
	comp=Z,37nm,1.7s						
BNGB	**Bingl**	**69.18**	**304**	P	**P**	**13 24 01.9**	**+1.7**
BMAR	**Burnt Mountain**	**69.24**	**24**	P	**P**	**13 23 60.0**	**-0.1**
SCM	**Sheep Creek Mo**	**69.27**	**30**	P	**P**	**13 24 00.0**	**-0.3**
SCM				pmax	pmax		
	comp=Z,104nm,1.5s						
SCM	**Sheep Creek Mo**	**69.27**	**30**	P	**P**	**13 24 00.0**	**-0.3**

PRP	Porcupine Dome	69.28	26	P	P	13 23 59.5	-0.8
RAYN	Ar Rayn	69.50	287	*i* P	P	13 24 03.1	+0.7
	SNR=36						
RAYN	Ar Rayn	69.50	287	P	P	13 24 01.8	-0.6
RAYN				pmax	pmax		
	comp=Z,26nm,1.0s						
RAYN	Ar Rayn	69.50	287	P	P	13 24 01.8	-0.6
RAYN				IAmb	IAmb	13 24 04.2	
	comp=Z,26nm,0.9s						
KEV	Kevo	69.59	338	P	P	13 24 01.7	-0.3
KEV				pmax	pmax		
	comp=Z,90nm,1.6s						
KEV	Kevo	69.59	338	P	P	13 24 01.7	-0.3
MAZI	Mazidag	69.75	303	P	P	13 24 04.9	+1.1
DYBB	Diyarbakir	69.85	303	P	P	13 24 05.7	+1.4
PAX	Paxson	69.87	29	P	P	13 24 03.5	-0.5
PAX				pmax	pmax		
	comp=Z,18nm,1.4s						
PAX	Paxson	69.87	29	P	P	13 24 03.5	-0.5
SPA0	Spitsbergen Ar	69.92	348	P	P	13 24 03.4	-0.6
SPA0				IAmb	IAmb	13 24 17.4	
	comp=Z,40nm,1.1s						
SPITS	Spitsbergen Ar	69.92	348	LR	LR	13 59 02.1	
	comp=Z,824nm,18.1s,baz=55,slow=40						
RIDG	Independent Ri	69.96	28	P	P	13 24 03.4	-1.1
RIDG				IAmb	IAmb	13 24 42.3	
	comp=Z,60nm,1.7s						
ARCES	ARCESS Array B	70.15	338	P	P	13 24 05.0	-0.5
	comp=Z,9.4nm,0.9s,baz=61,slow=7.2,SNR=9.0						
ARCES				LR	LR	13 58 19.5	
	comp=Z,292nm,18.9s,baz=100,slow=39						
ARCES	ARCESS Array B	70.15	338	P	P	13 24 04.4	-1.1
ARCES	ARCESS Array B	70.15	338	P	P	13 24 04.4	-1.1
ARE0	ARCESS Array S	70.15	338	P	P	13 24 05.1	-0.5
PTK	Pertek	70.17	305	P	P	13 24 07.9	+1.4
SCRK	Sand Creek	70.28	28	P	P	13 24 05.5	-1.0
RAGM	Ragged Mountai	70.86	32	P	P	13 24 08.3	-1.7
GLB	Gilahina Butte	71.00	30	P	P	13 24 10.5	-0.4
GLB				IAmb	IAmb	13 24 20.9	
	comp=Z,31nm,1.3s						
URFA	Urfa	71.00	303	P	P	13 24 12.6	+1.2
MALT	Malatya	71.06	304	P	P	13 24 13.6	+1.9
VRDI	Verde Repeater	71.22	31	P	P	13 24 12.1	-0.3
VRDI				IAmb	IAmb	13 25 43.2	
	comp=Z,81nm,1.8s						
EGAK	Eagle	71.25	27	P	P	13 24 10.8	-1.4
BCAR	Beaver Creek A	71.47	29	P	P	13 24 13.0	-0.7
SVSK	Karacayir	71.68	306	P	P	13 24 16.7	+1.4
DARE	Darende-Malaty	71.70	305	P	P	13 24 17.5	+1.9
KVT	Kavak	72.06	308	P	P	13 24 17.8	+0.2
DAWY	Dawson	72.19	27	P	P	13 24 17.4	-0.7
DAWY				IAmb	IAmb	13 24 31.3	
	comp=Z,45nm,1.9s						
FIA1	FINESS Array S	72.19	330	P	P	13 24 17.3	-0.7
FIA1				IAmb	IAmb	13 24 19.5	
	comp=Z,66nm,1.4s						
FINES	FINESS Array B	72.20	330	P	P	13 24 17.4	-0.5
	comp=Z,16nm,0.8s,baz=75,slow=8.7,SNR=26						
FINES				LR	LR	13 59 18.9	
	comp=Z,2µm,18.6s,baz=48,slow=39						
FINES	FINESS Array B	72.20	330	P	P	13 24 17.6	-0.4
GAZ	Gaziantep	72.30	303	P	P	13 24 20.5	+1.3
GAZ	Gaziantep	72.30	303	P	P	13 24 19.8	+0.6
KMRS	Kahramanmaras	72.44	304	P	P	13 24 21.1	+1.1
EPYK	Eagle Plains	72.51	25	P	P	13 24 18.4	-1.5
EPYK	Eagle Plains	72.51	25	P	P	13 24 19.2	-0.7
	baz=290						
SARI	SarD1z-Kayseri	72.55	305	P	P	13 24 21.9	+1.1
VSU	Vasula	72.78	327	⇓*e*P	P	13 24 20.4	-1.1
INK	Inuvik	72.98	22	P	P	13 24 21.1	-1.5
INK				pmax	pmax		
	comp=Z,11nm,1.1s						
INK	Inuvik	72.98	22	P	P	13 24 21.1	-1.5
YOZ	Yozgat	73.00	306	P	P	13 24 24.1	+0.7
TAHT	Tahtakopru-Hat	73.33	303	P	P	13 24 26.1	+0.9
CEYT	Ceyhan	73.47	304	P	P	13 24 27.6	+1.6
AKASG	Malin Array Be	73.78	319	P	P	13 24 27.0	-0.6
	comp=Z,5.7nm,0.7s,baz=58,slow=6.3,SNR=31						
AKASG				LR	LR	14 00 03.3	
	comp=Z,279nm,18.2s,baz=80,slow=38						
AKASG	Malin Array Be	73.78	319	*i* P	P	13 24 27.0	-0.6
AKASG				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AKASG	Malin Array Be	73.78	319	P	P	13 24 25.7	-1.9
AKBB	Malin Array Si	73.78	319	P	P	13 24 26.3	-1.3
AKBB				pmax	pmax		
	comp=Z,17nm,1.0s						
AKBB	Malin Array Si	73.78	319	P	P	13 24 26.3	-1.3
CMRD	Camardi-Nigde	73.84	304	P	P	13 24 29.6	+1.2
KARA	Karaisali	73.92	304	P	P	13 24 29.5	+0.8
BR131	Keskin Array S	74.21	307	P	P	13 24 30.2	-0.4
BR131				pmax	pmax		
	comp=Z,71nm,1.0s						
BR131	Keskin Array S	74.21	307	P	P	13 24 30.1	-0.4
BRTR	Keskin Array B	74.21	307	P	P	13 24 30.9	+0.3
	comp=Z,46nm,0.9s,baz=105,slow=5.7,SNR=117						
BRTR	Keskin Array B	74.21	307	P	P	13 24 31.0	+0.5
BRTR	Keskin Array B	74.21	307	P	P	13 24 30.5	-0.1
BRTR	Keskin Array B	74.21	307	P	P	13 24 30.5	-0.1
YAYX	Yaylak	74.33	306	P	P	13 24 31.6	+0.4
SERE	Sereflikochisa	74.51	306	P	P	13 24 32.6	+0.3
AFSR	Afar-Bala (An	74.72	307	P	P	13 24 34.4	+1.0
YESY	Yesilyurt	74.75	305	P	P	13 24 32.9	-0.8
SULT	Sultanhani-AKS	74.78	305	P	P	13 24 34.5	+0.7
ANTO	Ankara	74.78	307	⇑P	P	13 24 34.6	+0.8
ANTO	Ankara	74.78	307	P	P	13 24 33.4	-0.4
ANTO	Ankara	74.78	307	P	P	13 24 33.4	-0.4
BR231	Keskin MP Arra	74.81	307	P	P	13 24 33.9	-0.1
BR231				IAmb	IAmb	13 24 35.6	
	comp=Z,56nm,0.9s						
SORM	Soroca	75.14	316	⇑P	P	13 24 34.2	-1.4
TEVE	Tevekalti-Mers	75.41	304	P	P	13 24 37.9	+0.5
C36M	Paulatuk	75.61	20	P	P	13 24 37.1	-0.8
C36M	Paulatuk	75.61	20	P	P	13 24 36.6	-1.2
	baz=300						
MDUB	Mudurnu	75.75	308	P	P	13 24 39.1	-0.2
TLCR		75.82	313	⇑P	P	13 24 39.6	+0.1
CSS	Mathiatis	75.98	302	P	P	13 24 41.2	+0.5
CSS	Mathiatis	75.98	302	P	P	13 24 40.5	-0.1
TOPG	Topolog	76.22	313	⇑P	P	13 24 42.2	+0.4
CFR	Carcaliu	76.28	313	⇑P	P	13 24 42.7	+0.6
TIRR	Tirgusor	76.34	313	⇑P	P	13 24 42.8	+0.3
TIRR	Tirgusor	76.34	313	P	P	13 24 42.3	-0.2
TIRR				pmax	pmax		
	comp=Z,380nm,1.9s						
TIRR	Tirgusor	76.34	313	P	P	13 24 42.3	-0.2
HARR	Harsova	76.58	313	⇑P	P	13 24 44.1	+0.3
GIRR	Girov	76.72	316	P	P	13 24 45.0	+0.4
DAG	Danmarks Havn	76.74	351	*i* P	P	13 24 43.0	-1.2
	comp=Z,7.2nm,0.8s						
DAG	Danmarks Havn	76.74	351	*i* P	P	13 24 43.0	-1.2
DAG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TESR	Tescani	76.79	315	⇑P	P	13 24 44.9	-0.1
VRI	Vrincioaia	76.97	314	⇑P	P	13 24 46.4	+0.3
BIZ	Bicaz	76.98	316	⇑P	P	13 24 46.8	+0.7
ISP	Isparta	77.14	306	P	P	13 24 46.5	-0.8
ISP				pmax	pmax		
	comp=Z,71nm,0.9s						
ISP	Isparta	77.14	306	P	P	13 24 46.5	-0.8
BUR08	Bucovina Ar. S	77.30	317	P	P	13 24 47.5	-0.5
BURAR	Bucovina Array	77.30	317	⇑P	P	13 24 47.9	-0.1
BURAR	Bucovina Array	77.30	317	P	P	13 24 47.5	-0.5
MLR	Muntele Rosu	77.61	314	⇑P	P	13 24 50.6	+0.8
MLR	Muntele Rosu	77.61	314	P	P	13 24 49.5	-0.3
MLR				pmax	pmax		
	comp=Z,16nm,0.9s						
MLR	Muntele Rosu	77.61	314	P	P	13 24 49.5	-0.3
MLR				IAmb	IAmb	13 24 51.1	
	comp=Z,16nm,0.9s						
DOPR	Dopca	77.80	315	⇑P	P	13 24 51.9	+1.1
ELL	Elmali	77.97	305	P	P	13 24 51.8	-0.2
ELL				pmax	pmax		
	comp=Z,274nm,1.0s						
ELL	Elmali	77.97	305	P	P	13 24 51.8	-0.2
KWP	Kalwaria Pacla	78.08	319	*e*P	P	13 24 52.8	+0.6
KWP	Kalwaria Pacla	78.08	319	*e*P	P	13 24 52.8	+0.6
KWP	Kalwaria Pacla	78.08	319	P	P	13 24 52.4	+0.2
KWP				IAmb	IAmb	13 24 55.8	
	comp=Z,30nm,0.6s						
VOIR		78.22	314	⇑P	P	13 24 53.5	+0.3
BEL	Belsk	78.33	322	*e*P	P	13 24 52.5	-0.9
BEL	Belsk	78.33	322	*e*P	P	13 24 52.5	-0.9
MANT	Manisa	78.35	307	P	P	13 24 53.9	-0.3
ARR	Arges	78.52	315	⇑P	P	13 24 55.7	+1.0
DLBC	Dease Lake	78.54	31	P	P	13 24 55.3	+0.6
HUMR	Humele	78.61	314	⇑P	P	13 24 55.1	-0.1
RES	Resolute Bay	78.68	9	P	P	13 24 54.0	-1.0
RES				pmax	pmax		
	comp=Z,6.0nm,1.0s						
RES	Resolute Bay	78.68	9	P	P	13 24 54.0	-1.0
NC405	NORSAR Array S	78.69	332	P	P	13 24 53.9	-1.4
TRPA	Tarpa	78.77	318	⇑P	P	13 24 57.0	+1.0
NB201	NORSAR Array S	78.90	332	P	P	13 24 55.5	-1.0
NB2	NORSAR Subarra	78.94	332	P	P	13 24 55.8	-0.9
	comp=Z,4.6nm,0.7s,baz=57,slow=5.6						
NOA	NORSAR Array B	78.94	332	P	P	13 24 55.9	-0.8
	comp=Z,10nm,0.8s,baz=58,slow=5.6,SNR=18						
NOA				LR	LR	14 03 23.5	
	comp=Z,899nm,18.9s,baz=205,slow=38						
NC204	NORSAR Array S	79.01	333	P	P	13 24 55.9	-1.3
DRGR		79.19	316	⇑P	P	13 24 59.4	+0.9
ALN	Alexandroupoli	79.26	310	P	P	13 24 58.3	-0.5
ALN				pmax	pmax		
	comp=Z,16nm,1.3s						
ALN	Alexandroupoli	79.26	310	P	P	13 24 58.3	-0.5
OJC	Ojcow	79.56	320	*e*P	P	13 25 00.8	+0.5
OJC	Ojcow	79.56	320	*e*P	P	13 25 00.8	+0.5
OJC	Ojcow	79.56	320	P	P	13 24 59.4	-0.9
OJC				IAmb	IAmb	13 25 01.6	
	comp=Z,20nm,0.8s						
GZR	Gura Zlata	79.71	315	⇑P	P	13 25 02.2	+0.9
MOBC	Moresby Island	79.95	36	P	P	13 25 02.0	-0.4
LANS	Liptovska Anna	80.21	320	*e*P	P	13 25 04.8	+0.9
LANS	Liptovska Anna	80.21	320	*e*P	P	13 25 04.8	+0.9
URZ	Urewera	80.38	139	P	P	13 25 07.7	+3.0
	comp=Z,5.3nm,0.8s,baz=150,slow=20,SNR=2.2						
URZ				LR	LR	13 59 46.7	
	comp=Z,187nm,18.7s,baz=319,slow=35						
URZ	Urewera	80.38	139	IAmb	IAmb	13 27 35.8	
	comp=Z,88nm,1.8s						
KARP	Karpathos	80.48	305	P	P	13 25 04.7	-1.0
VTS	Vitosha	80.52	312	⇑P	P	13 25 06.4	+0.5
VTS	Vitosha	80.52	312	P	P	13 25 05.7	-0.1
VTS				pmax	pmax		
	comp=Z,23nm,0.9s						
VTS	Vitosha	80.52	312	P	P	13 25 05.7	-0.1
VTS				IAmb	IAmb	13 25 07.5	
	comp=Z,23nm,0.9s						
VYHS	Vyhne	80.87	319	*e*P	P	13 25 08.0	+0.6
VYHS				pmax	pmax		
	comp=Z,28nm,1.1s						
VYHS	Vyhne	80.87	319	*e*P	P	13 25 08.0	+0.6
MORC	Moravsky Berou	81.06	321	P	P	13 25 07.5	-1.0
MORC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MORC	Moravsky Berou	81.06	321	P	P	13 25 07.5	-1.0
KSP	Ksiaz	81.30	322	*e*P	P	13 25 10.4	+0.8
KSP	Ksiaz	81.30	322	*e*P	P	13 25 10.4	+0.8
SANT	Santorini	81.43	306	P	P	13 25 09.0	-1.7
DPC	Dobruska-Polom	81.51	322	*e*P	P	13 25 11.7	+0.9
DPC	Dobruska-Polom	81.51	322	*e*P	P	13 25 11.7	+0.9
SCO	Scoresbysund	82.49	349	*i* P	P	13 25 15.0	-0.5
	comp=Z,44nm,1.5s						
SCO	Scoresbysund	82.49	349	*i* P	P	13 25 15.0	-0.5
SCO				pmax	pmax		
	comp=Z,44nm,1.5s						
FNA	Florina	82.55	311	P	P	13 25 14.4	-2.1
FNA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
FNA	Florina	82.55	311	P	P	13 25 14.4	-2.1
BRG	Berggiesshubel	82.60	323	*e*PKP	P	13 25 16.2	-0.2
	comp=Z,8.6nm,1.1s						
BRG	Berggiesshubel	82.60	323	*e*P	P	13 25 16.2	-0.2
BRG				pmax	pmax		
	comp=Z,9.0nm,1.1s						
AGG	Agios Georgios	82.62	309	P	P	13 25 15.0	-1.9
AGG				pmax	pmax		
	comp=Z,21nm,0.9s						
AGG	Agios Georgios	82.62	309	P	P	13 25 15.0	-1.9
AGG				IAmb	IAmb	13 25 15.8	
	comp=Z,21nm,0.9s						
YKA	Yellowknife Ar	82.71	23	P	P	13 25 15.9	-0.9
	comp=Z,5.2nm,0.7s,baz=310,slow=4.5,SNR=125						
SUMG	Summit	82.82	354	*i* P	P	13 25 16.9	-0.8
	comp=Z,35nm,0.9s						
SUMG	Summit	82.82	354	*i* P	P	13 25 16.9	-0.8
SUMG				pmax	pmax		
	comp=Z,35nm,0.9s						
SUMG	Summit	82.82	354	P	P	13 25 17.2	-0.5
SUMG				IAmb	IAmb	13 25 25.2	
	comp=Z,18nm,1.0s						
CONA	Conrad Observa	82.90	319	*i* P	P	13 25 18.5	+0.3
	comp=Z,19nm,1.6s,SNR=5.7						
CLL	Collm	82.90	323	*i* P	P	13 25 18.5	+0.5
	comp=Z,11nm,0.8s						
CLL				L	L	14 06 00.0	
	comp=Z,900nm,18.1s						
CLL	Collm	82.90	323	*i* P	P	13 25 18.5	+0.5
CLL				pmax	pmax		
	comp=Z,11nm,0.8s						
CLL				MLR	MLR		
	comp=Z,900nm,18.1s						
PDG	Podgorica	83.27	313	⇓P	P	13 25 19.1	-0.9
PDG	Podgorica	83.27	313	P	P	13 25 19.1	-0.9
PDG				IAmb	IAmb	13 25 21.5	
	comp=Z,11nm,0.7s						
ARSA	Arzberg	83.42	319	*i* PcP	P	13 25 21.3	+0.5
	comp=Z,6.5nm,0.9s						
BLY	Banja Luka	83.56	316	P	P	13 25 20.8	-0.8
KHC	Kasperske Hory	83.65	321	*e*P	P	13 25 21.9	-0.1
KHC	Kasperske Hory	83.65	321	⇑*e*P	P	13 25 22.2	+0.2
KHC				pmax	pmax		
	comp=Z,33nm,1.2s						
KHC	Kasperske Hory	83.65	321	P	P	13 25 21.3	-0.7
ITM	Ithomi	83.69	308	P	P	13 25 21.1	-1.3
GEC2	GERESS Array S	83.72	321	P	P	13 25 21.9	-0.5
GEC2				IAmb	IAmb	13 25 23.6	
	comp=Z,14nm,0.9s						
GERES	GERESS Array B	83.72	321	P	P	13 25 23.2	+0.8
	comp=Z,8.3nm,0.9s,baz=59,slow=3.6,SNR=16						
GERES	GERESS Array B	83.72	321	P	P	13 25 21.4	-1.0
GERES	GERESS Array B	83.72	321	P	P	13 25 21.4	-1.0
MOA	Molln	83.88	320	*i* P	P	13 25 23.3	+0.2
	comp=Z,15nm,0.9s,SNR=7.8						
SOKA	Soboth	83.99	319	*i* P	P	13 25 23.9	0.0
	comp=Z,13nm,0.8s,SNR=9.7						
PDKS	Podkum	84.31	318	*i* P	P	13 25 25.0	-0.4
OBKA	Obir	84.36	319	*i* P	P	13 25 25.5	-0.2
	comp=Z,13nm,0.8s,SNR=6.0						
BOJS	Bojanci	84.42	318	*i* P	P	13 25 26.2	+0.3
KBA	Koelnbreinsper	84.80	320	*i* P	P	13 25 27.7	-0.3
	comp=Z,15nm,1.3s,SNR=9.3						
MYKA	Terra Mystica	84.85	319	*i* P	P	13 25 27.5	-0.7
	comp=Z,8.7nm,1.2s						
CADS	Cadrg	84.99	319	*i* P	P	13 25 27.7	-1.2
TRI	Trieste	85.23	318	P	P	13 25 28.2	-1.8
TRI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TRI	Trieste	85.23	318	P	P	13 25 28.2	-1.8
ABTA	Abfaltersbach	85.46	320	*i* P	P	13 25 30.4	-0.8
	comp=Z,17nm,0.9s,SNR=9.0						
STAL	STALIGIAL	85.59	319	P	P	13 25 29.9	-1.9
STAL				IAmb	IAmb	13 25 31.8	
	comp=Z,19nm,1.0s						
WATA	Walderalm	85.71	320	*i* PcP	P	13 25 32.3	-0.2
	comp=Z,9.4nm,0.6s						
WTTA	Wattenberg	85.72	320	*i* PcP	P	13 25 32.4	-0.2
	comp=Z,20nm,0.8s,SNR=7.0						
MOTA	Moosalm	85.98	321	*i* PcP	P	13 25 33.6	-0.4
	comp=Z,14nm,1.0s						
SQTA	Sankt Quirin	85.99	320	*i* PcP	P	13 25 34.0	+0.1
	comp=Z,20nm,1.0s,SNR=6.3						
KMBO	Kilima Mbogo	86.05	267	P	P	13 25 36.8	+1.9
	comp=Z,6.8nm,0.9s,baz=30,slow=4.1,SNR=16						
KMBO	Kilima Mbogo	86.05	267	*i* P	P	13 25 37.2	+2.3
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.4s						
RETA	Reutte	86.11	321	*i* PcP	P	13 25 34.1	-0.3
	comp=Z,6.5nm,1.2s						
ACER	Acerenza	86.23	313	P	P	13 25 34.4	-0.7
CTI	Castel Tesino	86.33	319	P	P	13 25 34.2	-1.4
CTI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CTI	Castel Tesino	86.33	319	P	P	13 25 34.2	-1.4
FETA	Feichten	86.37	320	*i* PcP	P	13 25 35.7	-0.2
	comp=Z,10.0nm,1.1s						
LLLB	Lillooet	86.62	35	P	P	13 25 37.2	+0.3
LLLB				IAmb	IAmb	13 25 38.5	
	comp=Z,26nm,1.3s						
TEOL	Teolo	86.68	319	P	P	13 25 36.6	-0.6
TEOL				IAmb	IAmb	13 25 40.4	
	comp=Z,24nm,0.8s						
DAVA	Damuels	86.72	321	*i* PcP	P	13 25 37.4	-0.2
	comp=Z,8.3nm,0.9s						
INTR	Introdacqua	86.97	315	P	P	13 25 38.1	-0.7
INTR				IAmb	IAmb	13 25 41.0	
	comp=Z,31nm,1.2s						
MEM	Membach	87.01	325	P	P	13 25 36.9	-1.8
MEM				PcP	PcP	13 25 39.1	-1.8
MEM				pP	sP	13 25 48.2	0.0
NRCA	Norcia	87.07	316	P	P	13 25 38.7	-0.6
NRCA				IAmb	IAmb	13 25 40.8	
	comp=Z,30nm,1.1s						
MURB	Monte Urbino	87.22	317	P	P	13 25 39.5	-0.5
TUE	Stuetta	87.47	320	P	P	13 25 40.4	-0.9
TUE				IAmb	IAmb	13 25 44.8	
	comp=Z,18nm,1.4s						
WLF	Walferdange	87.48	324	P	P	13 25 39.2	-1.8
	comp=Z,24nm,1.2s						
WLF				PcP	PcP	13 25 41.7	-1.2
WLF	Walferdange	87.48	324	P	P	13 25 41.1	+0.1
WLF				pmax	pmax		
	comp=Z,32nm,1.1s						
WLF	Walferdange	87.48	324	P	P	13 25 41.1	+0.1
WLF				IAmb	IAmb	13 25 42.5	
	comp=Z,32nm,1.1s						
BCLA	Clavier	87.49	325	P	P	13 25 38.1	-2.9
BCLA				PcP	PcP	13 25 40.5	-2.5
D03D	Eldon	87.68	38	P	P	13 25 43.3	+1.4
	baz=304						
ECH	Echery	87.75	323	P	P	13 25 41.7	-0.7
ECH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ECH	Echery	87.75	323	P	P	13 25 41.7	-0.7
BMRD	Maredsous	87.84	325	PcP	P	13 25 42.6	0.0
BMRD				pP	sP	13 25 52.6	+0.4
B06A	Marblemount	88.02	37	P	P	13 25 43.6	0.0
DOU	Dourbes	88.05	325	P	P	13 25 42.1	-1.6
DOU				PcP	PcP	13 25 43.3	-2.2
DOU				pP	pwP	13 25 54.5	-0.3
D05A	Enumclaw	88.50	38	P	P	13 25 45.0	-0.9
SENIN	Lac Senin/Sane	88.71	321	P	P	13 25 46.7	-0.5
SENIN				IAmb	IAmb	13 25 47.8	
	comp=Z,10nm,1.1s						
LON	Longmire	88.85	38	P	P	13 25 47.6	0.0
LON				pmax	pmax		
	comp=Z,22nm,1.1s						
LON	Longmire	88.85	38	P	P	13 25 47.5	0.0
LON				IAmb	IAmb	13 25 49.8	
	comp=Z,22nm,1.1s						
F04A	Amboy	88.96	39	P	P	13 25 48.5	+0.5
LTY	Liberty	89.19	37	P	P	13 25 48.7	-0.6
LTY				IAmb	IAmb	13 25 50.7	
	comp=Z,18nm,0.9s						
B08A	Colville Reser	89.28	36	P	P	13 25 49.7	+0.1
BNI	Bardonecchia	89.81	320	P	P	13 25 51.5	-0.8
BNI				pmax	pmax		
	comp=Z,12nm,0.9s						
BNI	Bardonecchia	89.81	320	P	P	13 25 51.5	-0.8
BNI				IAmb	IAmb	13 25 59.2	
	comp=Z,12nm,0.9s						
E07A	Sunnyside	90.06	38	P	P	13 25 52.5	-0.8
E07A				IAmb	IAmb	13 25 56.0	
	comp=Z,34nm,0.9s						
C09A	Chrisman Ranch	90.19	36	P	P	13 25 53.4	-0.4
C09A				IAmb	IAmb	13 25 55.7	
	comp=Z,24nm,0.9s						
D08A	Wollman Farm,	90.28	37	P	P	13 25 55.0	+0.8
D08A				IAmb	IAmb	13 25 56.1	
	comp=Z,27nm,0.9s						
HAWA	Hanford	90.33	38	P	P	13 25 54.9	+0.4
HAWA				IAmb	IAmb	13 25 56.6	
	comp=Z,26nm,1.1s						
F07A	Phinny Hill Vi	90.41	38	P	P	13 25 54.4	-0.4
F07A				IAmb	IAmb	13 25 57.1	
	comp=Z,36nm,1.3s						
NEW	Newport	90.52	35	P	P	13 25 56.5	+1.1
	comp=Z,29nm,1.0s,baz=297,slow=3.8,SNR=32						
NEW	Newport	90.52	35	P	P	13 25 55.7	+0.3
NEW				pmax	pmax		
	comp=Z,37nm,1.1s						
NEW	Newport	90.52	35	P	P	13 25 55.7	+0.3
NEW				IAmb	IAmb	13 25 57.7	
	comp=Z,37nm,1.1s						
NEW	Newport	90.52	35	P	P	13 25 56.1	+0.7
	baz=308						
E08A	Dider Farm, El	90.54	37	P	P	13 25 55.6	+0.2
E08A				IAmb	IAmb	13 25 58.0	
	comp=Z,28nm,1.2s						
SSB	Saint Sauveur	90.91	321	P	P	13 25 56.0	-1.3
SSB				pmax	pmax		
	comp=Z,14nm,1.0s						
SSB	Saint Sauveur	90.91	321	P	P	13 25 56.0	-1.3
SSB				IAmb	IAmb	13 25 58.1	
	comp=Z,14nm,1.0s						
E09A	Wood Farm, Sta	91.03	37	P	P	13 25 57.8	+0.1
E09A				IAmb	IAmb	13 25 59.9	
	comp=Z,28nm,1.0s						
PINE	Pine Mountain	91.04	40	P	P	13 25 58.4	+0.3
PINE				IAmb	IAmb	13 26 01.2	
	comp=Z,31nm,1.1s						
L04D	Klamath Falls	91.11	42	P	P	13 25 59.3	+0.9
	baz=304						
YBH	Yreka Blue Hor	91.13	43	P	P	13 25 58.8	+0.3
	comp=Z,5.6nm,1.0s,baz=288,slow=3.4,SNR=4.9						
YBH	Yreka Blue Hor	91.13	43	P	P	13 25 58.8	+0.3
YBH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YBH	Yreka Blue Hor	91.13	43	IAmb	IAmb	13 27 41.1	
	comp=Z,10nm,0.8s						
J05D	Fort Rock, OR	91.16	41	P	P	13 25 59.9	+1.3
	baz=305						
M04C	Macdoel	91.64	42	P	P	13 26 01.7	+0.8
	baz=305						
WALA	Waterton Lakes	91.66	33	P	P	13 26 01.0	+0.2
FCC	Fort Churchill	92.19	18	P	P	13 26 01.2	-1.6
FCC				pmax	pmax		
	comp=Z,21nm,1.1s						
FCC	Fort Churchill	92.19	18	P	P	13 26 01.2	-1.6
FCC				IAmb	IAmb	13 26 02.9	
	comp=Z,21nm,1.1s						
JTMT	Jette	92.32	34	P	P	13 26 04.1	+0.3
JTMT				IAmb	IAmb	13 26 06.2	
	comp=Z,12nm,1.0s						
MOD	Modoc Plateau	92.52	42	P	P	13 26 04.2	-0.7
J08A	Circle Bar Ran	92.75	40	P	P	13 26 05.4	-0.5
FFC	Flin Flon	92.86	24	P	P	13 26 05.0	-1.0
FFC				pmax	pmax		
	comp=Z,19nm,0.9s						
FFC	Flin Flon	92.86	24	P	P	13 26 05.0	-1.0
FFC				IAmb	IAmb	13 26 06.5	
	comp=Z,19nm,0.9s						
MSO	Missoula	93.09	35	P	P	13 26 07.3	-0.1
MSO				IAmb	IAmb	13 28 58.1	
	comp=Z,13nm,1.1s						
MSO	Missoula	93.09	35	P	P	13 26 08.0	+0.6
	baz=310						
KEST	Kesra	93.26	311	P	P	13 26 09.1	+0.7
	comp=Z,8.2nm,0.8s,baz=359,slow=3.3,SNR=8.4						
EGMT	Eagleton	94.41	32	P	P	13 26 12.8	-0.6
EGMT	Eagleton	94.41	32	P	P	13 26 13.9	+0.5
	baz=314						
DLMT	Dillon	94.76	35	P	P	13 26 14.4	-0.8
DLMT				IAmb	IAmb	13 28 47.8	
	comp=Z,19nm,1.1s						
NVAR	Mina Array Bea	95.80	44	P	P	13 26 21.0	+0.9
	comp=Z,1.6nm,0.7s,baz=284,slow=5.7,SNR=8.4						
NVAR	Mina Array Bea	95.80	44	P	P	13 26 17.9	-2.3
YHL	Hebgen Lake	95.85	35	P	P	13 26 20.2	-0.1
RLMT	Red Lodge	96.66	34	P	P	13 26 25.2	+1.3
	baz=314						
DGMT	Dagmar	96.68	29	P	P	13 26 22.9	-0.8
DGMT	Dagmar	96.68	29	P	P	13 26 23.5	-0.2
	baz=318						
LAO	LASA Array	97.05	31	P	Pdif	13 26 26.8	+1.2
	baz=316						
R11A	Troy Canyon, C	97.54	42	P	Pdif	13 26 28.5	+0.4
	baz=309						
PDAR	Pinedale Array	98.13	36	P	P	13 26 29.4	-1.2
	comp=Z,0.4nm,0.7s,baz=304,slow=0.3,SNR=3.1						
ULM	Lac du Bonnet	98.68	24	P	P	13 26 31.8	-0.8
	comp=Z,0.9nm,0.4s,baz=355,slow=9.7,SNR=4.2						

ULM	Lac du Bonnet	98.68	24	P	P	13 26 31.8	-0.8
ULM				pmax	pmax		
	comp=Z,35nm,1.9s						
ULM	Lac du Bonnet	98.68	24	IAmb	IAmb	13 27 05.7	
	comp=Z,35nm,1.9s						
SYO	Syowa Base	109.63	202	⇑ePdiff	pPdif	13 27 30.4	+2.9
TXAR	Lajitas Array	110.91	42	PKiKP	PKiKP	13 31 27.5	+0.4
	comp=Z,1.0nm,0.9s,baz=300,slow=2.0,SNR=4.5						
TORD	Torodi Ar. Bea	111.35	296	PP	PP	13 32 07.4	-0.7
	comp=Z,3.0nm,0.8s,baz=51,slow=8.4,SNR=4.0						
DBIC	Dimbokro	120.25	294	PKP	PKiKP	13 31 45.7	+0.3
	comp=Z,3.1nm,0.8s,baz=70,slow=4.6,SNR=3.8						
ZARC	Zaragoza, Cauc	144.45	30	eP	PKPdf	13 32 30.3	-0.2
SDV	Santo Domingo	144.93	23	PKP	PKPab	13 32 30.7	0.0
	comp=Z,34nm,0.9s,baz=11,slow=2.0,SNR=29						
SDV	Santo Domingo	144.93	23	eP	PKPab	13 32 30.1	-0.6
SDV	Santo Domingo	144.93	23		PKPab	13 32 29.9	-0.7
PCRV	Puerto La Cruz	145.36	12	PKPbc	PKPbc	13 32 30.6	-1.3
	comp=Z,11nm,0.6s,baz=158,slow=2.1,SNR=5.1						
PLCV	Puerto La Cruz	145.38	12		PKPbc	13 32 30.6	-1.3
PAMC	Pamplona, Colo	145.54	27	eP	PKPdf	13 32 33.0	0.0
BARC	Barichara	146.00	29	eP	PKPbc	13 32 34.0	-0.2
NORC	Norcasia	146.13	32	eP	PKPdf	13 32 33.8	+0.2
MALC	Bahia Malaga	146.16	37	eP	PKPdf	13 32 33.8	+0.3
GUY2C	Guyana, Caldas	146.18	33	eP	PKPdf	13 32 34.4	+0.3
SPBC	San Pablo de B	146.43	31	eP	PKPbc	13 32 35.2	-0.1
YOTC	Yotoco, Valle	146.72	36	eP	PKPdf	13 32 35.2	+0.6
ROSC	El Rosal	147.03	32	PKPbc	PKPbc	13 32 37.2	-0.2
	comp=Z,18nm,0.6s,baz=122,slow=19,SNR=5.2						
ORTC	Ortega, Tolima	147.37	34	eP	PKPdf	13 32 35.9	+0.4
CHIC	Chingaza	147.49	31	eP	PKPdf	13 32 36.4	+0.2
VILC	Villavicencio,	147.96	31	eP	PKPbc	13 32 39.1	-0.6
VILC	Villavicencio,	147.96	31	eP	PKPbc	13 32 38.7	-1.0
VILC				eP	PKiKP	13 32 40.3	-1.3
PCON	Cinco Dias	148.07	38	eP	PKPbc	13 32 40.0	-0.5
SOTA	Rioblanco	148.11	38	eP	PKPbc	13 32 40.7	+0.1
GARC	Garzon, Huila	148.69	36	eP	PKPdf	13 32 39.2	+1.1
FLOC	Florencia	149.10	37		PKPbc	13 32 40.8	-1.7
MACC	Macarena, Meta	149.59	34	eP	PKPbc	13 32 42.6	-1.1
MDP	Montagnes des	150.70	350	PKPbc	PKPbc	13 32 46.4	+0.1
	comp=Z,18nm,0.9s,baz=52,slow=6.8,SNR=3.4						
RCBR	Riachuelo	152.44	307	PKPbc	PKiKP	13 32 50.9	+0.2
	comp=Z,26nm,0.8s,baz=50,slow=1.4,SNR=12						
RCBR				PKPab	PKPab	13 33 01.1	+0.5
	comp=Z,15nm,0.8s,baz=350,slow=1.8,SNR=5.6						
RCBR	Riachuelo	152.44	307	PKIKP	PKPbc	13 32 50.1	-0.3
RCBR						13 33 01.1	
RCBR	Riachuelo	152.44	307		PKPbc	13 32 50.1	-0.3
ATAH	Atahualpa	153.93	53	PKPbc	PKiKP	13 32 55.6	+1.4
	comp=Z,6.7nm,0.9s,baz=196,slow=15,SNR=3.7						
ATAH				PKPab	PKPab	13 33 05.9	-1.4
	comp=Z,5.6nm,0.7s,baz=138,slow=15,SNR=3.5						
LPAZ	La Paz	167.47	54	PKIKP	PKPdf	13 33 01.4	+0.5
LPAZ	La Paz	167.47	54		PKPdf	13 33 01.4	+0.5

IDC 17 13:23:24.7±8.1, 24°.93S×13°.14W, h0^{km}, mb4.1/4, mb1 4.2/4, mb1mx3.7/46, mbtmp4.1/4, MS4.1/2, Ms1 4.1/2, ms1mx3.6/26, Error ellipse: s-maj=196.4km s-min=36.8km az=56.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H09W1	TRISTAN DA CUN	12.15	177	T	T	13 38 52.7	
	SNR=4.4						
H10S2	ASCENSION HYDR	15.95	355	T	T	13 43 30.4	
	baz=176,slow=74,SNR=32						
H10S3	ASCENSION HYDR	15.96	355	T	T	13 43 32.4	
	baz=44,slow=74,SNR=52						
H10N1	ASCENSION HYDR	17.04	355	T	T	13 44 52.0	
	baz=179						
H10N3	ASCENSION HYDR	17.05	355	T	T	13 44 52.5	
	baz=179						
H10N2	ASCENSION HYDR	17.06	355	T	T	13 44 54.4	
	baz=179						
BOSA	Boshof	34.38	105	P	P	13 30 13.3	-0.5
	3.8nm,0.9s,baz=238,slow=9.5,SNR=4.7						
LBTB	Lobatse	35.03	99	P	P	13 30 19.8	+0.3
	3.7nm,0.8s,baz=263,slow=5.8,SNR=6.0						
LBTB				LR	LR	13 41 29.7	
	comp=Z,501nm,20.9s,baz=266,slow=31						
TORD	Torodi Ar. Bea	40.52	23	P	P	13 31 05.5	-0.2
	2.5nm,0.9s,baz=197,slow=8.3,SNR=7.3						
MDT	Midelt	58.00	8	LR	LR	13 56 48.6	
	comp=Z,117nm,20.0s,baz=339,slow=35						
AKASG	Malin Array Be	84.09	26	P	P	13 35 57.2	+0.1
	0.3nm,0.4s,baz=221,slow=5.1,SNR=2.0						

IDC 17 13:24:48.5±0.3, 53°.17S×32°.23W, h0^{km}, mb5.2/33, mb1 5.2/34, mb1mx5.1/44, mbtmp5.1/34, ML4.7/1, MS5.2/15, Ms1 5.1/15, ms1mx4.9/21, Error ellipse: s-maj=12.1km s-min=9.3km az=38.0

NEIC 17 13:24:48.9±1.7, 53°.17S±0°.08×32°.3W±0°.1, h6^{km}±2^{km}, mb5.6/73, Ms_20 5.4/199, Mwb5.8/16, Mwc5.9(GCMT), Error ellipse: s-maj=11.7km s-min=8.7km az=152.0

MOS 17 13:24:48.9±1.3, 53°.20S×32°.34W, h11^{km}, mb5.7/15, MS5.2/4, Error ellipse: s-maj=15.5km s-min=9.7km az=103.6

NEIC 17 13:24:51.7, 53°.16S×32°.35W, h13^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.08; $M_{\theta\theta}$5.30; $M_{\phi\phi}$-5.23; $M_{r\theta}$0.32; $M_{\theta\phi}$-0.82; $M_{\phi r}$0.14; Fault plane solution: $M_0$5.34000×10^{17} NP1:ϕ_s139.45000°, δ86.39000°, λ1.02000°. NP2:ϕ_s49.39000°, δ88.98000°, λ176.39000°. Principal axes: T 5.3860, Plg3.0000°, Azm4.0000°; N -0.0901, Plg86.0000°, Azm214.0000°; P -5.2959, Plg2.0000°, Azm94.0000°;

GCMT 17 13:24:53.9±0.1, 53°.26S±0°.01×32°.21W±0°.01, h25^{km}, MW5.8/154, Moment Tensor Solution. s135,c272; s154,c446; Duration: 2^{s}0 Moment tensor: Scale 10^{18} Nm; M_{rr}0.05±.01; $M_{\theta\theta}$0.69±.01; $M_{\phi\phi}$-0.73±.01; $M_{r\theta}$-0.08±.01; $M_{\theta\phi}$0.02±.01; $M_{\phi r}$-0.04±.01; Best double couple: $M_0$0.71600×10^{18} NP1:ϕ_s314.00000°, δ83.00000°, λ3.00000°. NP2:ϕ_s224.00000°, δ87.00000°, λ173.00000°. Principal axes: T 0.6950, Plg7.0000°, Azm179.0000°; N 0.0420, Plg82.0000°, Azm24.0000°; P -0.7370, Plg3.0000°, Azm269.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function

NEIC 17 13:24:54, 53°.22S×32°.23W, h25^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.62; $M_{\theta\theta}$6.95; $M_{\phi\phi}$-7.57; $M_{r\theta}$-1.30; $M_{\theta\phi}$0.28; $M_{\phi r}$-0.67; Fault plane solution: $M_0$7.43000×10^{17} NP1:ϕ_s223.00000°, δ85.00000°, λ169.00000°. NP2:ϕ_s314.00000°, δ79.00000°, λ5.00000°. Principal axes: T 7.2177, Plg11.0000°, Azm178.0000°; N 0.4089, Plg78.0000°, Azm21.0000°; P -7.6266, Plg5.0000°, Azm269.0000°;

ISC 17 13:24:49.9±0.2, 53°.20S±0°.05×32°.45W±0°.05, h10^{km}, n454, σ1^{s}44/355, mb5.5/72, MS5.4/129, 6C-8D, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	2.63	244	P	Pn	13 25 32.8	+0.4
HOPE	Hope Point	2.63	244		Pn	13 25 32.8	+0.4
EFI	East Falkland	15.67	265	⇓eP	Pn	13 28 31.4	+0.8
EFI	East Falkland	15.67	265		Pn	13 28 26.7	-3.9
PMSA	Palmer Station	19.73	222	P	Pn	13 29 21.2	+0.5
	2.1nm,0.3s,baz=49,slow=9.3,SNR=9.6						
PMSA				LR	LR	13 35 52.6	
	comp=Z,7µm,19.8s,baz=64,slow=34						
PMSA	Palmer Station	19.73	222	Pn	Pn	13 29 21.7	+0.9
PMSA				IAmb	IAmb	13 29 34.3	
	comp=Z,246nm,0.9s						
PMSA	Palmer Station	19.73	222	eP	P	13 29 17.4	-1.9
VNA1	Neumayer--Stat	20.60	157	P	P	13 29 28.7	0.0
VNA3	Neumayer Olymp	20.73	159	P	P	13 29 29.7	-0.5
VNA2	Neumayer--Watz	21.00	157	P	P	13 29 32.2	-0.9
	baz=316,slow=12						
USHA	Ushuaia	21.07	251	P	P	13 29 35.9	+2.1
	comp=Z,129nm,0.8s,baz=101,slow=9.1,SNR=30						
USHA				S	Sn	13 33 32.0	-2.3
	comp=Z,11nm,0.9s,baz=280,slow=6.1,SNR=1.7						
SNAA	Sanae	22.60	156	P	P	13 29 49.5	-0.7
SNAA	Sanae	22.60	156	P	P	13 29 49.2	-1.0
	comp=Z,36nm,0.8s,baz=305,slow=11,SNR=66						
SNAA				S	S	13 33 58.6	+1.1
	comp=Z,7.2nm,0.8s,baz=220,slow=7.9,SNR=2.5						
SNAA				LR	LR	13 37 28.1	
	comp=Z,6µm,18.3s,baz=318,slow=34						
SNAA	Sanae	22.60	156	P	P	13 29 48.5	-1.8
SNAA				S	S	13 33 58.6	+1.1
SNAA				pmax	pmax		
	comp=Z,1µm,1.7s						
SNAA				MLR	MLR		
	comp=Z,6µm,19.0s						
SNAA	Sanae	22.60	156	P	P	13 29 48.5	-1.8
GO10	Punta Arenas	22.95	254	P	P	13 29 55.8	+1.7
GO09	Cerro Castillo	24.29	258	P	P	13 30 07.2	+0.1
NVL	N'lazarevskaya	26.31	149	⇑iP	P	13 30 26.6	+1.3
NVL				eS	S	13 34 59.8	+2.2
NVL				pmax	pmax		
	comp=Z,72nm,1.0s						
PLTB	Pedras Altas	26.32	316	eP	P	13 30 27.0	+1.4
CNLB	Canela	27.42	323	eP	P	13 30 37.8	+2.1
CPSB	Cacapava Do Su	27.44	318	eP	P	13 30 36.7	+1.0
PLCA	Paso Flores	28.48	280	P	P	13 30 46.2	+1.1
	comp=Z,15nm,1.1s,baz=161,slow=8.4,SNR=13						
PLCA				LR	LR	13 42 39.2	
	comp=Z,2µm,20.5s,baz=151,slow=37						
PLCA	Paso Flores	28.48	280	eP	P	13 30 45.0	-0.1
PLCA	Paso Flores	28.48	280	P	P	13 30 45.0	-0.1
PLCA	Paso Flores	28.48	280	eP	P	13 30 45.9	+0.8
ITQB	Itaqui	29.41	313	eP	P	13 30 54.0	+0.7
GO06	Curarrehue	29.75	281	P	P	13 30 55.8	-0.7
ITAB	Concordia	29.77	323	eP	P	13 30 58.7	+2.2
PARB	Paraibuna	31.45	336	eP	P	13 31 13.4	+1.9
ESAR	Angra dos Reis	31.48	338	eP	P	13 31 13.8	+2.1
SPB	Sao Paulo	31.67	333	P	P	13 31 13.6	+0.3
SPB				IAmb	IAmb	13 31 17.7	
	comp=Z,148nm,1.3s						
SPB	Sao Paulo	31.67	333	eP	P	13 31 15.8	+2.4
PTGB	Pitanga	32.06	325	eP	P	13 31 17.9	+1.1
VAO	Valinhos	32.11	334	eP	P	13 31 19.3	+2.0
FRTB	Fartura	32.52	330	eP	P	13 31 23.0	+2.2
CPUP	Villa Florida	32.63	316	P	P	13 31 22.0	+0.3
	comp=Z,43nm,0.8s,baz=156,slow=8.4,SNR=61						
CPUP				LR	LR	13 44 12.2	
	comp=Z,3µm,19.7s,baz=158,slow=36						
CPUP	Villa Florida	32.63	316	P	P	13 31 21.7	0.0
CPUP				pmax	pmax		
	comp=Z,56nm,1.0s						
CPUP	Villa Florida	32.63	316	P	P	13 31 21.7	0.0
CPUP				IAmb	IAmb	13 31 24.8	
	comp=Z,56nm,0.9s						
CPUP	Villa Florida	32.63	316	eP	P	13 31 22.3	+0.6
RCLB	Rio Claro- Sao	32.82	334	eP	P	13 31 25.6	+2.1
GO05	Huala	33.14	287	P	P	13 31 25.9	-0.2
BSCB	Bom Sucesso	33.51	339	eP	P	13 31 30.9	+1.3
PEL	Peldehue	33.78	291	P	P	13 31 31.5	-0.3
PEL				pmax	pmax		
	comp=Z,106nm,1.0s						
PEL				MLR	MLR		
	comp=Z,3µm,19.0s						
PEL	Peldehue	33.78	291	P	P	13 31 31.5	-0.3
PEL				IAmb	IAmb	13 31 34.4	
	comp=Z,106nm,1.0s						
TRCB	Terra Rica	34.02	325	eP	P	13 31 36.2	+2.3
ROC1	El Roble	34.09	291	P	P	13 31 34.6	-0.1
BB19B	Bebedouro	34.38	333	eP	P	13 31 38.4	+1.4
PCMB	Pacaembu	34.68	328	eP	P	13 31 40.9	+1.4
BSFB	Barra de Sao F	34.92	346	eP	P	13 31 42.9	+1.3
SJMB	Sao Joao De Ma	35.09	345	eP	P	13 31 43.9	+0.8
SYO	Syowa Base	35.71	144	⇓eP	P	13 31 45.4	-2.6
SYO	Syowa Base	35.71	144	⇓ipP	P	13 31 47.4	-0.6
SYO	Syowa Base	35.71	144	⇑ePnPn	PnPn	13 33 01.4	-6.0
GO04	Tololo Observa	36.10	294	P	P	13 31 51.9	-0.1
ITRB	Iturama	36.19	331	eP	P	13 31 54.5	+1.8
QSPA	South Pole Qui	37.06	180	P	P	13 32 00.7	+1.0
	comp=Z,185nm,0.5s,baz=343,slow=0.5,SNR=717						
QSPA	South Pole Qui	37.06	180	P	P	13 32 00.8	+1.0
IPMB	Ipameri, GO	37.23	335	eP	P	13 32 03.3	+1.7
AQDB	Aquidauana	37.25	322	eP	P	13 32 01.8	+0.2
GO03	Copiap	37.81	298	P	P	13 32 06.4	-0.1
C2SB	Chapadao do Su	37.84	327	eP	P	13 32 08.1	+1.5
JANB	Januaria	39.19	342	eP	P	13 32 18.9	+0.8
BDFB	Brasilia	39.43	336	P	P	13 32 21.7	+1.6
	comp=Z,18nm,0.5s,baz=152,slow=4.8,SNR=25						
BDFB				LR	LR	13 46 16.7	
	comp=Z,2µm,20.8s,baz=164,slow=33						
BDFB	Brasilia	39.43	336	P	P	13 32 21.5	+1.4
BDFB				pmax	pmax		
	comp=Z,205nm,1.7s						
BDFB	Brasilia	39.43	336	P	P	13 32 21.5	+1.4
BDFB				IAmb	IAmb	13 32 23.3	
	comp=Z,205nm,1.7s						
GO02	Mina Guanaco	39.43	301	P	P	13 32 21.2	+0.9
GO02				IAmb	IAmb	13 32 44.5	
	comp=Z,154nm,1.4s						
ARAG	Araguaiana, MT	40.40	330	eP	P	13 32 29.1	+1.1
LVC	Limon Verde	41.20	304	P	P	13 32 36.2	+1.2
	comp=Z,43nm,0.5s,baz=117,slow=3.8,SNR=32						
LVC	Limon Verde	41.20	304	P	P	13 32 35.4	+0.3
LVC	Limon Verde	41.20	304	eP	P	13 32 36.4	+1.3
PB10	IPOC Station P	41.28	301	P	P	13 32 35.0	-0.3
PB10				IAmb	IAmb	13 32 58.5	
	comp=Z,199nm,1.8s						
SALV	Santo Antonio	41.46	325	eP	P	13 32 37.8	+1.0
PB04	IPOC Station P	42.05	302	P	P	13 32 40.6	-1.2
SHEL	Horse Pasture	42.67	40	P	P	13 32 46.4	-0.3
SHEL				pmax	pmax		
	comp=Z,292nm,1.2s						
SHEL	Horse Pasture	42.67	40	P	P	13 32 46.4	-0.3
PB01	IPOC Station P	42.80	304	P	P	13 32 48.3	+0.5
PB01				IAmb	IAmb	13 33 03.0	
	comp=Z,340nm,1.6s						
SUR	Sutherland	43.09	83	P	P	13 32 50.0	-0.2
	comp=Z,134nm,0.9s,baz=221,slow=6.8,SNR=68						
SUR				LR	LR	13 46 42.0	
	comp=Z,2µm,19.4s,baz=279,slow=31						
SUR	Sutherland	43.09	83	P	P	13 32 50.0	-0.2
SUR				IAmb	IAmb	13 32 52.4	
	comp=Z,119nm,0.8s						
SIV	San Ignacio	43.40	318	P	P	13 32 52.6	0.0
	comp=Z,40nm,0.9s,baz=169,slow=7.8,SNR=71						
GO01	Chusmiza	43.82	305	P	P	13 32 57.3	+0.8
GO01				IAmb	IAmb	13 33 11.5	
	comp=Z,83nm,0.7s						
PB11	IPOC Station P	43.97	305	P	P	13 32 57.5	+0.1
MAW	Mawson	44.24	147	P	P	13 32 59.6	+0.8
	baz=44,SNR=18						
MAW	Mawson	44.24	147	P	P	13 32 58.2	-0.5
	comp=Z,9.9nm,0.5s,baz=222,slow=7.6,SNR=19						
MAW				LR	LR	13 48 31.6	
	comp=Z,3µm,21.4s,baz=255,slow=32						
MAW	Mawson	44.24	147	P	P	13 32 58.8	0.0
MAW				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MAW	Mawson	44.24	147	P	P	13 32 58.8	0.0
NBLI	Livramento-PB	45.85	354	eP	P	13 33 13.5	+1.3
SMTB	Santa Maria do	45.88	339	eP	P	13 33 13.6	+1.2
CLDB	Colider	46.19	327	eP	P	13 33 13.8	-1.1
LPAZ	La Paz	46.22	309	P	P	13 33 16.9	+1.2
	comp=Z,102nm,0.8s,baz=137,slow=6.9,SNR=98						
LPAZ				LR	LR	13 52 10.2	
	comp=Z,2µm,21.4s,baz=154,slow=36						
LPAZ	La Paz	46.22	309	P	P	13 33 16.8	+1.0
LPAZ	La Paz	46.22	309	eP	P	13 33 17.5	+1.7
H10S2	ASCENSION HYDR	46.41	25	T	T	14 23 17.3	
	baz=26,slow=74,SNR=76						
H10S3	ASCENSION HYDR	46.41	25	T	T	14 23 10.8	
	baz=194,slow=74,SNR=84						
RCBR	Riachuelo	47.31	355	P	P	13 33 24.0	+0.4
	comp=Z,29nm,0.8s,baz=168,slow=8.2,SNR=6.3						
RCBR	Riachuelo	47.31	355	P	P	13 33 24.2	+0.6
RCBR				pmax	pmax		
	comp=Z,108nm,1.5s						
RCBR	Riachuelo	47.31	355	P	P	13 33 24.2	+0.6
RCBR				IAmb	IAmb	13 33 37.3	
	comp=Z,108nm,1.5s						
RCBR	Riachuelo	47.31	355	eP	P	13 33 25.3	+1.6
H10N3	ASCENSION HYDR	47.52	24	T	T	14 24 32.4	
	baz=194,slow=76,SNR=99						
H10N1	ASCENSION HYDR	47.52	24	T	T	14 24 32.6	
	baz=194,slow=76,SNR=113						
H10N2	ASCENSION HYDR	47.54	24	T	T	14 24 30.2	
	baz=194,slow=76,SNR=91						
BOSA	Boshof	48.46	83	iP	P	13 33 31.1	-1.5
BOSA	Boshof	48.46	83	P	P	13 33 31.2	-1.4
	comp=Z,65nm,0.8s,baz=216,slow=6.5,SNR=76						
BOSA				LR	LR	13 50 00.1	
	comp=Z,2µm,20.2s,baz=216,slow=31						
BOSA	Boshof	48.46	83	iP	P	13 33 31.1	-1.5
BOSA	Boshof	48.46	83	P	P	13 33 30.9	-1.7
SBA	Scott Base	48.68	185	P	P	13 33 33.9	+0.4
SBA				pmax	pmax		
	comp=Z,59nm,1.2s						
SBA	Scott Base	48.68	185	P	P	13 33 33.9	+0.4
SBA				IAmb	IAmb	13 33 46.8	
	comp=Z,59nm,1.1s						
VNDA	Vanda	49.24	184	P	P	13 33 38.6	+0.7
	comp=Z,12nm,0.8s,baz=202,slow=6.4,SNR=29						
VNDA	Vanda	49.24	184	P	P	13 33 38.2	+0.3
VNDA				IAmb	IAmb	13 33 50.9	
	comp=Z,44nm,1.0s						
NBMO	Morrinhos-CE	50.12	350	eP	P	13 33 46.5	+1.3
SAML	Samuel	50.63	319	P	P	13 33 48.4	-0.7
SAML				pmax	pmax		
	comp=Z,33nm,0.9s						
SAML	Samuel	50.63	319	P	P	13 33 48.4	-0.7
SAML	Samuel	50.63	319	eP	P	13 33 49.2	+0.1
TSUM	Tsumeb	51.22	68	P	P	13 33 53.1	-0.6
	comp=Z,20nm,0.9s,baz=222,slow=6.6,SNR=25						
LBTB	Lobatse	51.33	80	iP	P	13 33 53.3	-1.1
LBTB	Lobatse	51.33	80	P	P	13 33 52.8	-1.7
	comp=Z,48nm,0.8s,baz=222,slow=8.2,SNR=64						
LBTB	Lobatse	51.33	80	iP	P	13 33 53.3	-1.1
LBTB	Lobatse	51.33	80	P	P	13 33 52.6	-1.9
LBTB				IAmb	IAmb	13 33 54.7	
	comp=Z,80nm,1.1s						
NNA	Nana	54.16	302	P	P	13 34 16.0	+0.6
	comp=Z,27nm,0.8s,baz=153,slow=6.5,SNR=9.1						
NNA	Nana	54.16	302	deP	P	13 34 16.5	+1.1
NNA				pmax	pmax		
	comp=Z,74nm,0.9s						
NNA	Nana	54.16	302	P	P	13 34 13.3	-2.1
NNA				IAmb	IAmb	13 34 19.1	
	comp=Z,43nm,0.9s						
MATP	Matopo	56.55	79	iP	P	13 34 28.5	-4.2
MATP	Matopo	56.55	79	P	P	13 34 27.6	-5.1
	comp=Z,59nm,0.9s,baz=216,slow=7.2,SNR=71						
MATP	Matopo	56.55	79	iP	P	13 34 28.5	-4.2
PTGA	Pitinga	57.07	327	P	P	13 34 35.6	-0.5
	comp=Z,7.8nm,0.8s,baz=160,slow=12,SNR=6.9						
PTGA	Pitinga	57.07	327	P	P	13 34 35.3	-0.9
PTGA				IAmb	IAmb	13 34 48.3	
	comp=Z,159nm,1.9s						
PTGA				IAMs_20	IAMs_20	13 57 21.4	
	comp=Z,3µm,20.0s						
PTGA	Pitinga	57.07	327	eP	P	13 34 37.3	+1.1
CASY	Casey	57.58	163	P	P	13 34 38.8	-0.3
CASY				IAmb	IAmb	13 34 41.5	
	comp=Z,42nm,0.9s						
CASY	Casey	57.58	163	IAMs_20	IAMs_20	13 58 08.4	
	comp=Z,4µm,20.0s						
ITZ	Itezhi-Tezhi	58.77	74	eP	P	13 34 46.9	-1.4
ITZ				e		13 42 59.4	
ITZ				i		13 46 46.6	
PAF	Port-aux-Franc	58.80	132	P	P	13 34 47.1	-0.8
PAF				pmax	pmax		
	comp=Z,494nm,1.5s						
PAF	Port-aux-Franc	58.80	132	P	P	13 34 47.1	-0.8
ATAH	Atahualpa	59.09	304	P	P	13 34 51.9	+1.1
	comp=Z,36nm,0.8s,baz=143,slow=4.1,SNR=15						
LSZ	Lusaka	60.41	75	P	P	13 34 58.8	-0.8
	comp=Z,13nm,0.8s,baz=214,slow=8.4,SNR=27						
LSZ	Lusaka	60.41	75	P	P	13 34 57.9	-1.7
LSZ	Lusaka	60.41	75	IAMs_20	IAMs_20	13 57 18.8	
	comp=Z,4µm,19.0s						
MDP	Montagnes des	60.54	337	P	P	13 35 00.2	0.0
	comp=Z,10nm,0.7s,baz=210,slow=8.0,SNR=5.3						
LIC	Lamto	63.58	31	eP	P	13 35 19.7	-1.0
	comp=Z,99nm,1.1s						
KIC	Kosan Boka	63.80	31	eP	P	13 35 21.7	-0.4
	comp=Z,28nm,1.0s						
TIC	Toumodi	63.98	31	eP	P	13 35 22.9	-0.5
	comp=Z,50nm,0.8s						
DBIC	Dimbokro	64.06	31	P	P	13 35 23.0	-0.8
	comp=Z,14nm,0.8s,baz=168,slow=7.4,SNR=15						
DBIC	Dimbokro	64.06	31	P	P	13 35 22.7	-1.1
MACC	Macarena, Meta	65.08	313	eP	P	13 35 37.8	+7.2
FLOC	Florencia	65.39	311	P	P	13 35 31.8	-0.8
GARC	Garzon, Huila	65.85	312	eP	P	13 35 35.2	-0.7
PTGC	Puerto Gaitan,	66.19	316	eP	P	13 35 52.6	+15
SOTA	Rioblanco	66.31	311	eP	P	13 35 37.0	-2.1
PCON	Cinco Dias	66.39	311	eP	P	13 35 40.2	+0.5
CHIC	Chingaza	67.26	315	eP	P	13 35 44.7	-0.3
ORTC	Ortega, Tolima	67.27	313	eP	P	13 35 44.3	-0.4
ROSC	El Rosal	67.70	314	LR	LR	14 08 38.9	
	comp=Z,2µm,18.6s,baz=195,slow=39						
ROSC	El Rosal	67.70	314	eP	P	13 35 57.1	+9.4
YOTC	Yotoco, Valle	67.83	312	eP	P	13 35 45.6	-2.7
TAMC	Tame, Arauca	68.07	317	eP	P	13 35 49.1	-0.6
SPBC	San Pablo de B	68.32	315	eP	P	13 35 48.6	-2.7
GUY2C	Guyana, Caldas	68.50	313	eP	P	13 35 51.2	-1.7
NORC	Norcasia	68.58	314	eP	P	13 35 46.0	-6.9
PLCV	Puerto La Cruz	68.81	326	P	P	13 35 54.7	+0.4
PCRV	Puerto La Cruz	68.84	326	P	P	13 35 54.7	+0.2
	comp=Z,13nm,0.4s,baz=298,slow=22,SNR=5.7						
ABPO	Ambohimpanom	68.86	94	P	P	13 35 53.6	-1.2
ABPO				pmax	pmax		
	comp=Z,52nm,1.8s						
ABPO	Ambohimpanom	68.86	94	P	P	13 35 53.5	-1.2
ABPO				IAmb	IAmb	13 36 39.5	
	comp=Z,52nm,1.8s						
ABPO	Ambohimpanom	68.86	94	IAMs_20	IAMs_20	14 02 16.6	
	comp=Z,3µm,18.0s						
OPO	Ambohidratompo	69.17	93	P	P	13 35 57.4	+0.6
	comp=Z,2.3nm,0.7s,baz=221,slow=7.8,SNR=4.1						
PTBC	PUERTO BERRIO,	69.28	315	eP	P	13 35 52.7	-4.5
CBOC	Ciudad Bolivar	69.35	313	eP	P	13 35 56.6	-1.3
HELC	Santa Helena	69.43	314	eP	P	13 35 55.2	-3.3
GRGR	Grenville	69.71	329	IAMs_20	IAMs_20	14 05 57.4	
	comp=Z,2µm,19.0s						
SDV	Santo Domingo	69.84	319	P	P	13 36 00.9	+0.1
	comp=Z,35nm,0.6s,baz=156,slow=4.2,SNR=15						
SDV	Santo Domingo	69.84	319	eP	P	13 36 00.2	-0.6
SDV	Santo Domingo	69.84	319	P	P	13 35 59.7	-1.1
SDV				IAmb	IAmb	13 36 08.4	
	comp=Z,64nm,0.8s						
SDV	Santo Domingo	69.84	319	eP	P	13 36 01.4	+0.6
DBBC	Dabeiba	70.47	313	eP	P	13 36 02.8	-1.8
PAYG	Puerto Ayora	70.76	296	P	P	13 36 05.8	-0.6
PAYG				IAmb	IAmb	13 36 10.8	
	comp=Z,35nm,0.8s						
SMLC	San Martn de	71.15	316	eP	P	13 36 05.7	-2.9
TOA0	Torodi Ar. Sit	72.27	35	P	P	13 36 14.3	-1.0
TORD	Torodi Ar. Bea	72.27	35	P	P	13 36 14.7	-0.6
	comp=Z,8.8nm,0.4s,baz=204,slow=6.3,SNR=37						
TORD				LR	LR	14 02 24.0	
	comp=Z,1µm,18.9s,baz=240,slow=31						
TORD	Torodi Ar. Bea	72.27	35	P	P	13 36 13.9	-1.4
SJCC	San Jacinto, C	72.60	316	eP	P	13 36 16.1	-1.3
MBAR	Mbarara	73.76	68	P	P	13 36 24.9	+0.4
	comp=Z,4.1nm,0.2s,baz=184,slow=4.5,SNR=7.6						
SKI	Saint Kitts	74.95	330	P	P	13 36 29.7	-1.3
SKI				pmax	pmax		
	comp=Z,89nm,0.7s						
SKI	Saint Kitts	74.95	330	P	P	13 36 29.7	-1.3
ANWB	Willy Bob	74.98	331	P	P	13 36 31.1	-0.1
ANWB				IAmb	IAmb	13 37 05.4	
	comp=Z,56nm,0.8s						
SABA	Saba	75.37	330	P	P	13 36 33.6	+0.1
SABA				IAMs_20	IAMs_20	14 09 15.4	
	comp=Z,2µm,20.0s						
CDVI	St. Croix	75.97	328	P	P	13 36 37.1	+0.3
MTP	Monte Pirata	76.54	328	P	P	13 36 39.0	-1.1
PDPR	Patillas Dam,	76.62	327	P	P	13 36 39.5	-1.0
CUPR	Culebra, Puert	76.65	328	P	P	13 36 40.2	-0.5
CUPR				IAmb	IAmb	13 37 01.0	
	comp=Z,62nm,1.0s						
SJG	San Juan	76.75	327	P	P	13 36 43.0	+1.8
	comp=Z,10nm,0.3s,baz=331,slow=19,SNR=2.3						
SJG	San Juan	76.75	327	P	P	13 36 43.0	+1.8
SJG	San Juan	76.75	327	IAMs_20	IAMs_20	14 07 58.9	
	comp=Z,2µm,22.0s						
CBYP	Canovanas	76.80	327	P	P	13 36 41.0	-0.6
CBYP				IAmb	IAmb	13 36 54.6	
	comp=Z,85nm,1.4s						
GCPR	Guaynabo City	76.91	327	P	P	13 36 41.8	-0.4
GCPR				IAmb	IAmb	13 36 43.1	
	comp=Z,56nm,1.2s						
CRPR	Cabo Rojo, PR	76.97	326	P	P	13 36 41.7	-0.8
CRPR				IAmb	IAmb	13 37 01.9	
	comp=Z,39nm,0.8s						
KMBO	Kilima Mbogo	77.04	74	LR	LR	14 08 17.3	
	comp=Z,3µm,18.5s,baz=214,slow=34						
KMBO	Kilima Mbogo	77.04	74	iP	P	13 36 46.7	+3.3

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KMBO                                  pmax     pmax
      comp=Z,1.0nm,0.3s
AOPR  Arecibo Observ     77.17 327    P        P         13 36 42.6  -1.0
AOPR                                  IAmb     IAmb      13 37 00.7
      comp=Z,25nm,0.7s
JTS   Las Juntas de      77.37 307    P        P         13 36 45.3  +0.4
      comp=Z,13nm,0.8s,baz=184,slow=2.1,SNR=11
JTS   Las Juntas de      77.37 307   eP        P         13 36 44.7  -0.2
JTS   Las Juntas de      77.37 307    P        P         13 36 44.7  -0.2
JTS                                   IAmb     IAmb      13 36 58.7
      comp=Z,41nm,1.1s
SDD   Santo Domingo      78.35 324    P        P         13 36 49.4  -0.8
BANI  BANI               78.45 323    P        P         13 36 49.8  -1.1
DR12  Loma Pena Alta     78.47 324    P        P         13 36 49.5  -1.5
ESPN  Las Esperanzas     78.72 308    P        P         13 36 50.7  -1.6
ACON  Acoyapa            78.93 307    P        P         13 36 52.7  -0.8
ACON                                  IAmb     IAmb      13 37 07.0
      comp=Z,104nm,1.4s
SDDR  Presa de Saban     79.33 323    IAMs_20  IAMs_20   14 10 32.3
      comp=Z,2µm,19.0s
SC01  Santiago de lo     79.54 324    IAMs_20  IAMs_20   14 10 50.8
      comp=Z,2µm,20.0s
WHZ   Wether Hill Ro     79.75 194    P        P         13 36 57.1  -0.6
WHZ                                   IAmb     IAmb      13 37 11.2
      comp=Z,61nm,1.0s
WKZ   Wanaka             80.63 195    P        P         13 37 02.2  -0.3
WKZ                                   IAmb     IAmb      13 37 15.9
      comp=Z,60nm,0.8s
RPZ   Rata Peaks         81.37 197    P        P         13 37 06.5   0.0
      comp=Z,25nm,0.9s,baz=223,slow=5.4,SNR=6.9
RPZ   Rata Peaks         81.37 197    P        P         13 37 06.4   0.0
RPZ                                   IAmb     IAmb      13 37 20.5
      comp=Z,72nm,0.9s
LTZ   Lake Taylor        82.05 198    P        P         13 37 09.9  -0.2
LTZ                                   IAmb     IAmb      13 37 23.6
      comp=Z,41nm,0.7s
TAM   Tamanrasset        82.53  35    P        P         13 37 12.3  -0.5
TAM                                   pmax     pmax
      comp=Z,35nm,1.4s
TAM   Tamanrasset        82.53  35    P        P         13 37 12.3  -0.5
THZ   Tophouse           82.92 199    P        P         13 37 13.9  -0.8
THZ                                   IAmb     IAmb      13 37 30.6
      comp=Z,51nm,0.9s
BFZ   Birch Farm         83.26 202    IAMs_20  IAMs_20   14 20 32.8
      comp=Z,2µm,18.0s
APG   El Apazote         84.12 305    P        P         13 37 21.7  +0.5
      comp=Z,13nm,0.8s,baz=332,slow=4.2,SNR=9.5
MSEY  Mahe Island        85.05  91    IAMs_20  IAMs_20   14 11 29.6
      comp=Z,2µm,18.0s
URZ   Urewera            85.38 203    P        P         13 37 27.4  +0.3
      comp=Z,14nm,1.0s,baz=141,slow=6.5,SNR=3.3
FURI  Furi               86.01  70    IAMs_20  IAMs_20   14 15 27.7
      comp=Z,1µm,18.0s
CCIG  Comitan            86.04 304    IAMs_20  IAMs_20   14 18 13.8
      comp=Z,2µm,18.0s
TBI   Tubuai             86.35 235   eS        S         13 48 06.7  -1.1
      comp=Z,870nm,31.0s
TBI   Tubuai             86.35 235   eLQ       LQ        14 01 14.1
      comp=Z,2µm,32.2s
TEIG  Tepich             87.55 309    P        P         13 37 38.0  +0.2
OUZ   Omahuta            89.08 201    P        P         13 37 45.6  +0.5
OUZ                                   IAmb     IAmb      13 38 00.3
      comp=Z,36nm,1.0s
TLIG  Tlapa              90.41 299    IAMs_20  IAMs_20   14 17 37.7
      comp=Z,1µm,19.0s
PPT2  Papeete2           91.25 238   eS        S         13 48 52.5  -1.7
      comp=Z,354nm,27.5s
PPT2  Papeete2           91.25 238   eLQ       LQ        14 03 12.6
      comp=Z,7µm,34.0s
PPT2                                 eLR       LR        14 07 07.9
      comp=Z,2µm,23.5s
PPT   Papeete            91.26 238    LR       LR        14 10 01.2
      comp=Z,1µm,18.6s,baz=172,slow=30
CAN   Canberra           91.84 181    P        P         13 37 58.4  +0.3
CAN                                   pmax     pmax
      comp=Z,20nm,0.8s
CAN   Canberra           91.84 181    P        P         13 37 58.4  +0.3
CAN                                   IAmb     IAmb      13 38 11.1
      comp=Z,20nm,0.8s
PVAQ  Vaqueiros          92.75  19   eP        P         13 38 06.1  +4.3
      comp=Z,41nm,1.8s
MESJ  Messejana          93.07  19   eP        P         13 38 05.2  +2.0
      comp=Z,24nm,1.2s
PBEJ  Beja               93.32  19   eP        P         13 38 07.1  +2.7
      comp=Z,17nm,0.9s
TAOE  Nuku Hiva Isla     93.36 251   eLR       LR        14 07 59.2
      comp=Z,1µm,26.7s
PMTG  Montargil          94.26  19   eP        P         13 38 11.0  +2.3
      comp=Z,27nm,1.6s
FORT  Forrest            94.67 163    P        P         13 38 10.8  -0.3
FORT                                  IAmb     IAmb      13 38 23.3
      comp=Z,39nm,0.9s
STKA  Stephens Creek     95.12 175    P        P         13 38 13.4  +0.2
      comp=Z,3.6nm,1.1s,baz=161,slow=11,SNR=2.7
STKA                                  PP       PP        13 42 01.9  +0.2
      comp=Z,3.2nm,0.8s,baz=184,slow=6.3,SNR=4.5
STKA                                  LR       LR        14 18 23.8
      comp=Z,2µm,20.1s,baz=185,slow=34
MTE   Manteigas          95.68  19    IAMs_20  IAMs_20   14 18 58.6
      comp=Z,942nm,18.0s
KEST  Kesra              95.71  33    LR       LR        14 16 26.0
      comp=Z,1µm,19.9s,baz=157,slow=32
KEST  Kesra              95.71  33    IAMs_20  IAMs_20   14 16 15.1
      comp=Z,2µm,20.0s
ESDC  Sonseca Array      95.73  22    P        P         13 38 16.1  +0.6
      comp=Z,0.4nm,0.3s,baz=192,slow=4.1,SNR=2.9
ESDC  Sonseca Array      95.73  22    P        P         13 38 14.3  -1.2
154A  Montrose           96.12 319    IAMs_20  IAMs_20   14 20 22.3
      comp=Z,1µm,20.0s
W52A  Murphy             98.62 320    IAMs_20  IAMs_20   14 21 22.6
      comp=Z,2µm,20.0s
TKL   Tuckaleechee C     99.06 320    IAMs_20  IAMs_20   14 22 29.1
      comp=Z,1µm,20.0s
V52A  Sevierville        99.15 320    IAMs_20  IAMs_20   14 23 09.0
      comp=Z,1µm,22.0s
CPCT  Cooper Cave        99.17 319    IAMs_20  IAMs_20   14 22 24.1
      comp=Z,1µm,21.0s
W50A  Signal Mountai     99.26 319    IAMs_20  IAMs_20   14 20 36.6
      comp=Z,1µm,20.0s
SWET  Sewanee            99.52 318    IAMs_20  IAMs_20   14 22 24.5
      comp=Z,1µm,20.0s
V48A  Smith Brothers    100.34 318    IAMs_20  IAMs_20   14 22 00.1
      comp=Z,1µm,22.0s
Q56A  Snyder Ridge,     100.37 325    IAMs_20  IAMs_20   14 19 27.7
      comp=Z,1µm,21.0s
YLE   Yale              100.41 330    IAMs_20  IAMs_20   14 17 19.5
      comp=Z,1µm,18.0s
W45A  Hickory Valley    100.81 316    IAMs_20  IAMs_20   14 25 24.6
      comp=Z,2µm,20.0s
K62A  Royalston         101.44 331    IAMs_20  IAMs_20   14 15 50.8
      comp=Z,1µm,20.0s
EIDS  Eidsvold          101.70 183    IAMs_20  IAMs_20   14 21 29.3
      comp=Z,1µm,19.0s
PSAD1 Pilbara Seismi    101.87 154    IAMs_20  IAMs_20   14 21 39.3
      comp=Z,1µm,18.0s
TRY   Troy              101.92 330    IAMs_20  IAMs_20   14 22 49.6
      comp=Z,1µm,20.0s
LPIG  La Paz            102.05 294    PP       PP        13 42 57.1  +1.1
      comp=Z,37nm,0.3s,baz=209,slow=3.7,SNR=6.6
W41B  Gary Mavity, V    102.13 314    IAMs_20  IAMs_20   14 24 02.2
      comp=Z,1µm,19.0s
PAOL  Paolisi           102.24  34    IAMs_20  IAMs_20   14 24 58.8
      comp=Z,902nm,18.0s
WHAR  Wooly Hollow      102.25 314    IAMs_20  IAMs_20   14 26 30.8
      comp=Z,1µm,18.0s
GGN   Saint George      102.28 336    IAMs_20  IAMs_20   14 17 42.5
      comp=Z,1µm,20.0s
LCAR  Lake Charles      102.42 315    IAMs_20  IAMs_20   14 26 11.3
      comp=Z,1µm,20.0s
LMN   Caledonia Moun    102.48 337    IAMs_20  IAMs_20   14 29 11.0
      comp=Z,1µm,18.0s
ASAR  Alice Springs     102.55 167    P        Pdif      13 38 45.5  -1.1
      comp=Z,1.0nm,0.8s,baz=181,slow=4.0,SNR=13
ASAR                                  PP       PP        13 42 56.5  -2.0
      comp=Z,2.4nm,0.8s,baz=185,slow=6.1,SNR=7.9
ASAR                                  PKKPbc   PKKPbc    13 54 44.8  +0.2
      comp=Z,0.2nm,0.7s,baz=0.1,slow=2.3,SNR=3.8
ASAR  Alice Springs     102.55 167             Pdif      13 38 45.3  -1.3
FCAR  Ozark Folk Cen    102.68 314    IAMs_20  IAMs_20   14 26 47.3
      comp=Z,2µm,20.0s
TXAR  Lajitas Array     102.72 302    P        Pdif      13 38 48.2  +1.1
      comp=Z,0.2nm,0.6s,baz=147,slow=8.6,SNR=3.7
TXAR                                  PKKP     PKKPdf    13 54 49.3  -3.3
      comp=Z,0.3nm,0.6s,baz=5.7,slow=1.8,SNR=3.7
S44A  Carbondale        103.01 317    IAMs_20  IAMs_20   14 24 22.8
      comp=Z,2µm,22.0s
ALLY  Alegheny Colle    103.03 325    IAMs_20  IAMs_20   14 16 60.0
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      comp=Z,1µm,20.0s
AQU   L'Aquila          103.04  33    IAMs_20  IAMs_20   14 24 24.0
      comp=Z,1µm,18.0s
DZM   Mont Dzumac       103.27 198   eSS       SS        13 57 52.0  +5.5
      comp=Z,2µm,28.9s
DZM   Mont Dzumac       103.27 198   eLQ       LQ        14 08 29.3
      comp=Z,1µm,27.9s
DZM                                  eLR       LR        14 12 51.7
      comp=Z,3µm,29.1s
G62A  West of Eustis    103.32 333    IAMs_20  IAMs_20   14 24 12.4
      comp=Z,1µm,20.0s
HHAR  Hobbs             103.80 313    IAMs_20  IAMs_20   14 27 13.1
      comp=Z,1µm,19.0s
MGMO  Mountain Grove    103.81 315    IAMs_20  IAMs_20   14 24 07.7
      comp=Z,2µm,20.0s
P46A  Rosedale          103.84 319    IAMs_20  IAMs_20   14 19 02.7
      comp=Z,1µm,22.0s
Q44A  Meyer Farm, Va    103.94 318    IAMs_20  IAMs_20   14 26 42.6
      comp=Z,1µm,21.0s
U38A  Gravette          104.13 313    IAMs_20  IAMs_20   14 27 43.2
      comp=Z,1µm,19.0s
CSS   Mathiatis         104.65  51    IAMs_20  IAMs_20   14 23 27.9
      comp=Z,1µm,21.0s
S39A  Bolivar           104.72 314    IAMs_20  IAMs_20   14 27 35.1
      comp=Z,2µm,19.0s
DELO  Deloro Mine       104.76 328    IAMs_20  IAMs_20   14 25 19.0
      comp=Z,1µm,18.0s
P43A  Skaggs, Pawnee    104.78 318    IAMs_20  IAMs_20   14 23 37.6
      comp=Z,1µm,21.0s
M44A  Midewin, Midew    105.68 320    IAMs_20  IAMs_20   14 25 36.6
      comp=Z,982nm,20.0s
N41A  Harden Midland    106.22 318    IAMs_20  IAMs_20   14 24 42.9
      comp=Z,2µm,22.0s
WRA   Warramunga Arr    106.27 167    Pdiff    Pdif      13 39 03.5  +0.3
      comp=Z,0.6nm,0.9s,baz=193,slow=4.4,SNR=3.2
WRA                                   PKiKP    PKiKP     13 43 15.8  +1.1
      comp=Z,1.3nm,0.8s,baz=225,slow=1.4,SNR=5.0
WRA                                   PKKPbc   PKKPbc    13 54 33.8  +0.4
      comp=Z,0.5nm,0.8s,baz=358,slow=3.3,SNR=3.6
WRA                                   PKKP     PKKPdf    13 54 45.9  +2.4
      comp=Z,0.6nm,0.6s,baz=357,slow=2.8,SNR=5.6
P38A  Dawn              106.42 315    IAMs_20  IAMs_20   14 25 47.3
      comp=Z,1µm,20.0s
L40A  Anamosa           107.51 318    IAMs_20  IAMs_20   14 28 10.0
      comp=Z,1µm,20.0s
Y22D  IRIS PASSCAL I    108.17 303    IAMs_20  IAMs_20   14 23 51.9
      comp=Z,1µm,18.0s
SCIA  State Center      108.19 317    IAMs_20  IAMs_20   14 25 46.1
      comp=Z,1µm,22.0s
GAZ   Gaziantep         108.27  52    IAMs_20  IAMs_20   14 28 35.7
      comp=Z,853nm,20.0s
CBKS  Cedar Bluff       108.49 311    IAMs_20  IAMs_20   14 30 47.2
      comp=Z,835nm,20.0s
BRTR  Keskin Array B    108.69  48    PP       PP        13 43 43.6  -1.6
      comp=Z,0.8nm,0.7s,baz=201,slow=9.3,SNR=3.8
UOSS  Minazif           108.80  73    IAMs_20  IAMs_20   14 26 22.4
      comp=Z,1µm,20.0s
GERES GERESS Array B    108.93  30    PP       PP        13 43 45.3  -1.5
      comp=Z,1.0nm,0.6s,baz=186,slow=7.8,SNR=2.5
N33A  J Bar K, Exete    109.03 313    IAMs_20  IAMs_20   14 27 35.6
      comp=Z,1µm,22.0s
KHC   Kasperske Hory    109.14  30    AMS      AMS       14 17 20.0
      comp=Z,1µm,29.6s
E43A  Lone Tree Farm    109.56 323    IAMs_20  IAMs_20   14 22 49.9
      comp=Z,1µm,21.0s
NKC   Novy Kostel       109.79  29    AMS      AMS       14 21 20.0
      comp=Z,700nm,17.8s
BGNE  Belgrade          109.88 313    IAMs_20  IAMs_20   14 28 01.0
      comp=Z,1µm,20.0s
W18A  Petrified Fore    110.42 301    IAMs_20  IAMs_20   14 27 07.6
      comp=Z,1µm,20.0s
X16A  Lo Mia Camp, P    110.76 300    IAMs_20  IAMs_20   14 28 39.7
      comp=Z,1µm,19.0s
CLL   Collm             110.91  29   eSS       SS        13 59 33.0  +1.3
DPC   Dobruska-Polom    111.06  31    AMS      AMS       14 19 30.0
      comp=Z,700nm,18.2s
UPC   Upice             111.10  31    AMS      AMS       14 19 30.0
      comp=Z,700nm,18.4s
ECSD  EROS Data Cent    111.11 316    IAMs_20  IAMs_20   14 27 30.4
      comp=Z,2µm,22.0s
OKC   Ostrava-Krasne    111.19  32    AMS      AMS       14 22 10.0
      comp=Z,700nm,24.7s
OGNE  Ogallala          111.25 310    IAMs_20  IAMs_20   14 32 08.3
      comp=Z,1µm,19.0s
SUSD  Miller            112.68 315    IAMs_20  IAMs_20   14 29 43.9
      comp=Z,1µm,20.0s
MTN   Manton Dam        112.73 163    IAMs_20  IAMs_20   14 26 26.1
      comp=Z,1µm,21.0s
PMBI  Palembang         113.61 132    IAMs_20  IAMs_20   14 24 38.7
      comp=Z,872nm,21.0s
AKH   Akhalkalaki       114.61  53    IAMs_20  IAMs_20   14 36 41.5
      comp=Z,716nm,18.0s
K22A  Casper            114.67 309    IAMs_20  IAMs_20   14 34 44.9
      comp=Z,1µm,18.0s
BKNI  Bangkinang        114.74 127    IAMs_20  IAMs_20   14 29 52.3
      comp=Z,1µm,18.0s
MDND  Maddock           115.66 316    IAMs_20  IAMs_20   14 34 03.7
      comp=Z,1µm,20.0s
AKASG Malin Array Be    115.78  38    PKKPbc   PKKPbc    13 54 04.8  +1.9
      comp=Z,0.5nm,0.4s,baz=30,slow=3.8,SNR=3.3
ULM   Lac du Bonnet     116.08 320    PKKPbc   PKKPbc    13 54 02.4  +0.5
      comp=Z,0.7nm,0.3s,baz=11,slow=5.2,SNR=2.6
KIV   Kislovodsk        116.17  51  i PKIKP    PKiKP     13 43 34.0  +1.4
KIV                                   pmax     pmax
      comp=Z,27nm,1.0s
KIV                                   MLR      MLR
      comp=Z,2µm,22.0s
PDAR  Pinedale Array    116.20 307    PKP      PKPdf     13 43 31.9  -1.0
      comp=Z,0.1nm,0.5s,baz=132,slow=1.3,SNR=3.1
PDAR                                  PKKPbc   PKKPbc    13 54 01.6  +0.1
      comp=Z,0.5nm,0.6s,baz=79,slow=1.3,SNR=5.4
AHID  Auburn Hatcher    116.95 306    IAMs_20  IAMs_20   14 36 23.3
      comp=Z,957nm,18.0s
RYN   Ryan              117.67 298    IAMs_20  IAMs_20   14 32 24.9
      comp=Z,728nm,18.0s
DGMT  Dagmar            118.09 314    IAMs_20  IAMs_20   14 33 16.0
      comp=Z,1µm,21.0s
KULM  Kulim             118.85 124    IAMs_20  IAMs_20   14 26 10.2
      comp=Z,1µm,20.0s
HRA   Herat             119.33  71    IAMs_20  IAMs_20   14 39 04.3
      comp=Z,769nm,18.0s
DLMT  Dillon            119.60 307    IAMs_20  IAMs_20   14 39 59.3
      comp=Z,999nm,20.0s
ASHT  Ashkhabad         119.74  66    IAMs_20  IAMs_20   14 28 56.2
      comp=Z,816nm,21.0s
EGMT  Eagleton          120.22 311    IAMs_20  IAMs_20   14 35 21.6
      comp=Z,1µm,20.0s
MSO   Missoula          121.31 307    IAMs_20  IAMs_20   14 38 45.9
      comp=Z,1µm,19.0s
FINES FINESS Array B    123.34  29    PKP      PKPdf     13 43 44.1  -1.6
      comp=Z,2.2nm,0.6s,baz=270,slow=0.8,SNR=10
NIL   Nilore            125.19  79    PKIKP    PKPdf     13 43 49.2  -1.0
NIL                                   MLR      MLR
      comp=Z,800nm,19.0s
NIL   Nilore            125.19  79             PKPdf     13 43 49.1  -1.0
NIL   Nilore            125.19  79    IAMs_20  IAMs_20   14 38 02.9
      comp=Z,797nm,19.0s
SUMG  Summit            125.55 358    PKIKP    PKPdf     13 43 49.8  -0.3
SUMG  Summit            125.55 358             PKPdf     13 43 49.8  -0.3
KLMR  Klimovskoe        127.25  36   ePKIKP    PKiKP     13 44 03.1  +9.4
KLMR                                 e                   13 45 54.7
KLMR                                  pmax     pmax
      comp=Z,56nm,2.6s
KLMR  Klimovskoe        127.25  36   ePKPdf    PKiKP     13 44 03.1  +9.4
KLMR                                  AMP                13 44 18.9
      comp=Z,56nm,2.6s
KLMR                                 ePP       PP        13 45 54.8  +1.2
ABKAR Akbulak array     128.31  57             PKPdf     13 43 55.0  -0.5
DLV   T  Lat            128.42 128    IAMs_20  IAMs_20   14 39 34.8
      comp=Z,888nm,18.0s
PBKT  Sadao Pong        128.53 117             PKPdf     13 43 55.9  -1.1
CMAR  Chiang Mai Arr    128.97 114    PKP      PKPdf     13 43 57.9  +0.1
      comp=Z,0.7nm,0.2s,baz=208,slow=5.3,SNR=7.0
CMAR                                  PP       PP        13 46 05.5  +0.3
      comp=Z,1.2nm,0.6s,baz=224,slow=5.0,SNR=3.7
CMAR  Chiang Mai Arr    128.97 114    PKIKP    PKPdf     13 43 56.9  -0.9
CMAR  Chiang Mai Arr    128.97 114             PKPdf     13 43 56.9  -0.9
ARCES ARCESS Array B    129.46  23    PKP      PKPdf     13 43 56.6  -0.6
      comp=Z,7.0nm,0.9s,baz=228,slow=2.4,SNR=8.6
PRGR  Permogore         129.97  38   ePKIKP    PKiKP     13 44 09.0  +10
PRGR                                  pmax     pmax
      comp=Z,6.0nm,0.6s
APA   Apatity           130.03  27⇓iPKIKP    PKiKP     13 43 58.8  -0.3
APA                                   pmax     pmax
      comp=Z,10.0nm,1.1s
DAV   Davao City (W)    130.65 151    PKP      PKPdf     13 44 00.5  -0.7
      comp=Z,297nm,0.4s,baz=354,slow=7.1,SNR=4.0
KSH   Kashi             130.79  76    PKP      PKPdf     13 43 58.3  -2.5
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KSH                                   sPKP               13 44 13.3
KSH                                   PP       PP        13 46 16.4  -0.9
KSH                                   PKS                13 47 33.8
KSH                                   SKKS               13 53 03.9
KSH                                   LR       LR
      comp=Z,360nm,15.2s
KSH                                   LR       LR
      comp=Z,280nm,9.1s
KSH                                   LR       LR
      comp=Z,660nm,11.9s
AAK   Ala-Archa         131.95  72⇓iPKIKP    PKiKP     13 44 03.5  -0.5
AAK   Ala-Archa         131.95  72    IAMs_20  IAMs_20   14 39 03.4
      comp=Z,676nm,21.0s
YKA   Yellowknife Ar    132.02 322    PKP      PKPdf     13 44 01.4  -0.8
      comp=Z,1.5nm,0.5s,baz=133,slow=2.4,SNR=31
YKA                                   PP       PP        13 46 20.5  -4.2
      comp=Z,1.4nm,0.8s,baz=131,slow=6.1,SNR=4.0
YKA                                   SKPbc    SKPab     13 47 33.1  +4.1
      comp=Z,0.7nm,0.8s,baz=131,slow=5.0,SNR=2.4
YKA                                   SKKPbc   SKKPbc    13 57 00.9  +4.8
      comp=Z,0.6nm,1.0s,baz=310,slow=4.6,SNR=4.0
ARU   Arti              132.07  48  i PKIKP    PKiKP     13 44 08.9  +5.4
ARU                                                      13 46 35.6
FRU1  Bishkek           132.13  72    IAMs_20  IAMs_20   14 39 48.1
      comp=Z,887nm,21.0s
SLVN  Son La            134.01 117    IAMs_20  IAMs_20   14 41 30.0
      comp=Z,567nm,19.0s
RES   Resolute Bay      134.12 341    PKP      PKPdf     13 44 05.6  -0.2
      comp=Z,1.1nm,0.8s,baz=264,slow=5.2,SNR=4.0
SPITS Spitsbergen Ar    134.42  13    PKP      PKiKP     13 44 08.0  +0.2
      comp=Z,17nm,1.0s,baz=197,slow=4.5,SNR=2.6
SPITS Spitsbergen Ar    134.42  13    PKIKP    PKiKP     13 44 08.0  +0.2
QIZ   Qiongzhong        135.17 125    PKP      PKPdf     13 44 06.1  -3.4
QIZ                                   SS       SS        14 04 36.5  -2.8
QIZ                                   LR       LR
      comp=Z,370nm,18.8s
QIZ                                   LR       LR
      comp=Z,250nm,20.8s
QIZ                                   LR       LR
      comp=Z,610nm,19.8s
QIZ   Qiongzhong        135.17 125    IAMs_20  IAMs_20   14 37 26.6
      comp=Z,696nm,20.0s
BRVK  Borovoye          135.80  58⇓ePKIKP    PKiKP     13 44 13.0  +1.8
BVAR  Borovoye Array    135.84  58    PKP      PKPdf     13 44 08.9  -0.7
      comp=Z,0.6nm,0.4s,baz=241,slow=3.1,SNR=5.4
BVAR                                  PP       PP        13 46 53.2  +4.0
      comp=Z,1.1nm,0.8s,baz=261,slow=5.4,SNR=3.2
DLBC  Dease Lake        136.15 311    PKP      PKPdf     13 44 10.7  +0.6
      comp=Z,3.0nm,0.9s,baz=214,slow=3.5,SNR=4.3
KURBB Kurchatov Arra    138.85  65    PKhKP    PKPpre    13 44 08.0
      comp=Z,0.4nm,0.3s,baz=239,slow=3.5,SNR=4.7
KURBB                                 PKP      PKPdf     13 44 14.3  -1.0
      comp=Z,0.4nm,0.3s,baz=239,slow=3.5,SNR=7.4
KURBB                                 PP       PP        13 47 08.8  +0.7
      comp=Z,0.3nm,0.3s,baz=258,slow=4.8,SNR=4.2
MK31  Makanchi Array    138.88  72    PKIKP    PKPdf     13 44 15.2  -0.3
MK31  Makanchi Array    138.88  72             PKPdf     13 44 15.2  -0.3
MKAR  Makanchi Array    138.88  72    PKhKP    PKPpre    13 44 07.1
      comp=Z,0.3nm,0.5s,baz=252,slow=4.7,SNR=4.2
MKAR                                  PKP      PKPdf     13 44 15.2  -0.3
      comp=Z,0.5nm,0.6s,baz=253,slow=2.2,SNR=6.7
MKAR  Makanchi Array    138.88  72    PKPdf    PKPdf     13 44 15.6   0.0
KURK  Kurchatov         138.95  65⇑ePKIKP    PKiKP     13 44 19.0  +1.3
KURK  Kurchatov         138.95  65             PKPpre    13 44 08.0
KURK                                           PKPdf     13 44 14.3  -1.2
KURK                                           PP        13 47 08.8  +0.2
GYA   Guiyang           139.62 115   ePdif     Pdif      13 41 30.6  -0.7
GYA                                   PKP      PKPdf     13 44 17.3  -0.4
GYA                                   PP       PP        13 47 16.0  +3.2
GYA                                   PKS      PKSdf     13 47 51.3  -2.6
GYA   Guiyang           139.62 115    PKP      PKPdf     13 44 17.3  -0.4
GYA                                   PP       PP        13 47 16.0  +3.2
GYA                                   PKS      PKSdf     13 47 51.3  -2.6
GYA                                   SKKS               13 54 03.0
GYA                                   SS       SS        14 05 31.8  -0.9
GYA                                   AMB      AMB
      comp=Z,140nm,8.3s
GYA                                   LR       LR
      comp=Z,280nm,19.8s
GYA                                   LR       LR
      comp=Z,250nm,19.4s
GYA                                   LR       LR
      comp=Z,310nm,20.5s
WMQ   Urumqi            140.34  79   ePKP      PKPdf     13 44 18.9  +0.5
WMQ                                   AMB      AMB
      comp=Z,220nm,6.3s
WMQ                                   LR       LR
      comp=Z,850nm,28.7s
WMQ                                   LR       LR
      comp=Z,570nm,28.5s
CD2   Chengdu           141.40 108    PKP      PKPdf     13 44 20.0  -0.7
INK   Inuvik            141.67 324    PKhKP    PKPpre    13 44 13.3
      comp=Z,1.6nm,0.6s,baz=83,slow=4.0,SNR=8.6
INK                                   PKP      PKPdf     13 44 18.5  -1.3
      comp=Z,2.2nm,0.8s,baz=344,slow=0.8,SNR=7.8
INK   Inuvik            141.67 324             PKPpre    13 44 13.8
INK                                   IAMs_20  IAMs_20   14 44 43.0
      comp=Z,984nm,21.0s
EPYK  Eagle Plains      142.26 320    PKPpre   PKPpre    13 44 15.8
EPYK                                           PKPdf     13 44 22.1  +1.0
DAWY  Dawson            142.61 316    PKPpre   PKPpre    13 44 15.9
DAWY                                  IAMs_20  IAMs_20   14 47 27.3
      comp=Z,899nm,20.0s
EGAK  Eagle             143.56 317             PKPdf     13 44 23.9  +0.6
EGAK                                  IAMs_20  IAMs_20   14 47 04.7
      comp=Z,1µm,22.0s
ZAA0  Zalesovo Array    143.82  63             PKPdf     13 44 24.1   0.0
ZAA0                                  IAMs_20  IAMs_20   14 53 07.5
      comp=Z,605nm,18.0s
ZALV  Zalesovo Beam     143.82  63    PKhKP    PKPpre    13 44 20.5
      comp=Z,1.7nm,0.4s,baz=239,slow=4.3,SNR=10.0
ZALV  Zalesovo Beam     143.82  63    PKHKP    PKPpre    13 44 19.8
ZALV  Zalesovo Beam     143.82  63             PKPpre    13 44 19.8
TPUB  Ta-pu             143.84 135             PKPdf     13 44 24.3  -0.9
ENH   Enshi             144.14 114             PKPbc     13 44 24.1  +0.5
SSLB  Suanglung         144.41 135             PKPab     13 44 23.7  -0.6
SCRK  Sand Creek        144.52 315             PKPab     13 44 23.1  -0.5
RIDG  Independent Ri    144.82 314             PKPab     13 44 24.2  -0.5
PAX   Paxson            144.89 313    PKIKP    PKPab     13 44 24.4  -0.6
PAX   Paxson            144.89 313             PKPab     13 44 24.4  -0.6
GTA   Gaotai            144.94  94  ⇑PKPbc    PKPbc     13 44 26.4  +0.4
GTA                                   pPKP     PKiKP     13 44 37.3  +6.8
GTA                                   sPKP               13 44 40.8
GTA                                   PP       PP        13 47 50.5  +5.2
GTA                                   SS       SS        14 06 37.8  +3.0
GTA                                   AMB      AMB
      comp=Z,290nm,9.7s
GTA                                   LR       LR
      comp=Z,290nm,19.0s
GTA                                   LR       LR
      comp=Z,440nm,18.1s
GTA                                   LR       LR
      comp=Z,450nm,20.6s
NACB  Ninganchiao       145.02 136             PKPab     13 44 26.6   0.0
LZH   Lanzhou           145.15 102  ⇑PKPbc    PKPdf     13 44 27.6  +0.3
LZH                                   pPKP     PKiKP     13 44 38.3  +7.2
LZH                                   LR       LR
      comp=Z,310nm,19.5s
LZH                                   LR       LR
      comp=Z,380nm,17.9s
LZH                                   LR       LR
      comp=Z,540nm,20.6s
YHNB  Yeheng            145.36 135             PKPab     13 44 28.3  +0.4
SCM   Sheep Creek Mo    145.41 311    PKIKP    PKPab     13 44 26.9  -0.1
SCM   Sheep Creek Mo    145.41 311             PKPab     13 44 26.9  -0.1
BMAR  Burnt Mountain    145.52 321             PKPdf     13 44 26.8   0.0
PRP   Porcupine Dome    145.53 317             PKPdf     13 44 26.5  -0.5
FYU   Fort Yukon        145.62 319             PKPdf     13 44 26.9  +0.1
DHY   Denali Highway    145.76 313             PKPdf     13 44 27.3  -0.1
SML   Sawmill           145.86 310             PKPdf     13 44 27.4  -0.1
HDA   Harding Lake      145.88 315    PKPdf    PKPdf     13 44 27.7  +0.3
IL31                    145.93 316             PKPdf     13 44 26.9  -0.5
ILAR  Eielson Array     145.93 316    PKPbc    PKPdf     13 44 27.2  -0.3
      comp=Z,13nm,1.1s,baz=110,slow=1.8,SNR=64
ILAR  Eielson Array     145.93 316             PKPdf     13 44 27.1  -0.4
GHO   Glory Hole Cre    146.12 310             PKPdf     13 44 28.1  +0.2
CCB   Clear Creek Bu    146.29 315             PKPdf     13 44 28.4  +0.4
RC01  Rabbit Creek A    146.32 309    PKPdf    PKPbc     13 44 28.9  -0.6
COLA  College           146.36 316    PKP2     PKPdf     13 44 28.8  +0.7
COLA  College           146.36 316             PKPdf     13 44 28.8  +0.7
WRH   Wood River Hil    146.38 315             PKPdf     13 44 28.6  +0.3
RND   Reindeer          146.48 313    PKP2     PKPbc     13 44 30.4  +0.4
RND   Reindeer          146.48 313    PKPbc    PKPbc     13 44 30.4  +0.4
MDM   Murphy Dome       146.53 316    PKPdf    PKPdf     13 44 28.9  +0.4
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MCK	**McKinley**	**146.59**	**314**	PKP2	**PKPbc**	**13 44 30.3**	**+0.1**
MCK	**McKinley**	**146.59**	**314**		**PKPbc**	**13 44 30.3**	**+0.1**
XAN	**Xi'an**	**146.65**	**109**	PKPbc	**PKPbc**	**13 44 30.8**	**-0.6**
XAN				PKPab	sPKPab	13 44 35.9	+0.3
XAN				pPKP	pPKPab	13 44 41.3	+6.5
XAN				SS	SS	14 06 57.8	+3.9
XAN				AMB	AMB		
	comp=Z,210nm,11.3s						
XAN				LR	LR		
	comp=Z,210nm,20.1s						
XAN				LR	LR		
	comp=Z,300nm,21.1s						
XAN				LR	LR		
	comp=Z,360nm,20.1s						
XAN	**Xi'an**	**146.65**	**109**	PKP2	**PKPdf**	**13 44 30.4**	**+0.7**
XAN	**Xi'an**	**146.65**	**109**		**PKPdf**	**13 44 30.4**	**+0.7**
KDAK	**Kodiak Island**	**146.75**	**302**	PKPbc	**PKPbc**	**13 44 30.3**	**-0.5**
	comp=Z,9.7nm,0.8s,baz=112,slow=1.6,SNR=12						
NEA	**Nenana**	**146.82**	**315**	PKPdf	**PKPdf**	**13 44 29.4**	**+0.4**
WHN	**Wuhan**	**146.95**	**120**	PKPbc	**PKPdf**	**13 44 31.0**	**+0.8**
WHN				PKPab	sPKPab	13 44 38.3	+1.5
WHN				PP	**PP**	**13 47 59.3**	**+2.5**
WHN				LR	LR		
	comp=Z,930nm,15.8s						
WHN				LR	LR		
	comp=Z,580nm,14.7s						
WHN				LR	LR		
	comp=Z,1µm,15.7s						
TRF	**Thorofare Moun**	**147.12**	**313**		**PKPbc**	**13 44 31.9**	**-0.1**
KTH	**Kantishna Hill**	**147.42**	**313**		**PKPbc**	**13 44 32.0**	**-0.6**
TOLK	**Toolik Lake Re**	**147.54**	**323**		**PKPbc**	**13 44 32.2**	**-0.6**
BPAW	**Bear Paw Mtn.**	**147.55**	**314**		**PKPbc**	**13 44 31.9**	**-1.0**
MLY	**Manley**	**147.59**	**316**	PKPdf	**PKPdf**	**13 44 31.2**	**+0.9**
MLY				IAMs_20	IAMs_20	14 49 28.2	
	comp=Z,767nm,22.0s						
COLD	**Coldfoot**	**147.65**	**320**		**PKPbc**	**13 44 33.0**	**-0.1**
PPLA	**Purkeypile**	**147.86**	**312**	PKPbc	**PKPbc**	**13 44 33.4**	**-0.6**
NRIK	**Noril'sk**	**148.60**	**36**	PKPbc	**PKPbc**	**13 44 35.2**	**-0.3**
	comp=Z,2.2nm,0.5s,baz=249,slow=4.2,SNR=7.1						
NRIK				PKKP	**PKKPdf**	**13 53 29.8**	**+4.4**
	comp=Z,1.4nm,0.5s,baz=54,slow=4.9,SNR=3.5						
IMAR	**Indian Mountai**	**148.95**	**317**		**PKPbc**	**13 44 36.0**	**-0.5**
NJ2	**Nanjing**	**150.46**	**124**	*e*PKPbc	**PKPdf**	**13 44 36.3**	**+0.4**
BTO	**Baotou**	**151.78**	**101**	*e*PKPbc	**PKPbc**	**13 44 42.9**	**-1.3**
MOY	**Mondy**	**151.96**	**74**	*e*PKIKP	**PKPbc**	**13 44 44.0**	**-0.2**
MOY				pmax	pmax		
	comp=Z,54nm,2.1s						
RDOG	**Red Dog Mine**	**152.49**	**322**		**PKPbc**	**13 44 44.4**	**-0.4**
RDOG				IAMs_20	IAMs_20	14 59 02.1	
	comp=Z,715nm,19.0s						
ZAK	**Zakamensk**	**152.80**	**78**	*e*PKIKP	**PKPbc**	**13 44 44.6**	**-1.6**
ZAK				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC	**Hu-ho-hao-te**	**152.84**	**102**	*e*PKPbc	**PKPdf**	**13 44 37.3**	**-2.1**
TLY	**Talaya**	**153.50**	**75**	PKPbc	**PKPbc**	**13 44 45.9**	**-1.6**
	comp=Z,2.7nm,0.2s,baz=67,slow=20,SNR=3.0						
TLY	**Talaya**	**153.50**	**75**	IAMs_20	IAMs_20	14 50 01.7	
	comp=Z,504nm,20.0s						
SONM	**Songino Array**	**153.57**	**85**	PKPbc	**PKPbc**	**13 44 46.5**	**-1.5**
	comp=Z,3.7nm,0.5s,baz=224,slow=3.0,SNR=17						
JCJ	**Chichijima**	**153.62**	**169**	PKPab	**PKPab**	**13 45 01.1**	**0.0**
	comp=Z,70nm,0.7s,baz=284,slow=18,SNR=3.5						
ULN	**Ulaanbaatar**	**153.97**	**85**	PKP2	**PKPab**	**13 45 01.7**	**-0.7**
ULN	**Ulaanbaatar**	**153.97**	**85**		**PKPab**	**13 45 01.7**	**-0.7**
JNU	**Nakatsue**	**156.64**	**143**	PKPab	**PKPab**	**13 45 13.3**	**-0.6**
	comp=Z,6.8nm,0.7s,baz=320,slow=6.8,SNR=4.8						
GAMB	**Gambell**	**156.65**	**313**	IAMs_20	IAMs_20	14 50 29.3	
	comp=Z,751nm,22.0s						
INCN	**Inchon**	**158.60**	**129**	IAMs_20	IAMs_20	14 52 40.9	
	comp=Z,706nm,20.0s						
TIXI	**Tiksi**	**159.75**	**17**	PKPab	**PKPab**	**13 45 26.1**	**-0.2**
	comp=Z,3.0nm,0.7s,baz=225,slow=0.7,SNR=11						
TIXI	**Tiksi**	**159.75**	**17**	IAMs_20	IAMs_20	15 01 01.4	
	comp=Z,647nm,22.0s						
BOD	**Bodaibo**	**160.58**	**63**	*e*PKP2	**PKPab**	**13 45 27.9**	**-2.5**
BOD				pmax	pmax		
	comp=Z,28nm,1.8s						
MJAR	**Matsushiro Arr**	**162.10**	**155**	PKPab	**PKPab**	**13 45 38.1**	**+0.6**
	comp=Z,2.9nm,0.8s,baz=193,slow=6.0,SNR=6.4						
BILL	**Bilibino**	**162.64**	**336**⇓	*e*PKIKP	**PKPdf**	**13 44 53.1**	**+2.6**
BILL				*e*		13 49 23.3	
BILL				pmax	pmax		
	comp=Z,12nm,1.6s						
CN2	**Changchun**	**162.66**	**114**	*e*PKP	**PKPdf**	**13 44 47.6**	**-3.6**
CN2				PP	**PP**	**13 49 29.0**	**+4.2**
CN2				AMB	AMB		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=Z,300nm,17.0s						
CN2				LR	LR		
	comp=Z,500nm,17.0s						
CN2				LR	LR		
	comp=Z,500nm,20.0s						
SEY	**Seymchan**	**169.91**	**347**	PKPab	**PKPab**	**13 46 12.5**	**+1.3**
	comp=Z,2.3nm,0.8s,baz=347,slow=6.4,SNR=4.9						
SEY	**Seymchan**	**169.91**	**347**⇑	*e*PKIKP	**PKPdf**	**13 44 58.3**	**+2.0**
YSS	**Yuzh-Sakhalins**	**173.03**	**152**	*e*PKP2	**PKPab**	**13 46 26.1**	**+0.6**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.7s						
MA2	**Magadan**	**173.36**	**346**	PKPab	**PKPab**	**13 46 27.0**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=71,slow=5.6,SNR=4.5						
MA2	**Magadan**	**173.36**	**346**	PKP2	**PKPab**	**13 46 27.0**	**+0.4**

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*IDC **17** 13:25:35.2±0.7, 34°.08N×118°.46W, h0^{km}, mb4.2/14, mb1 4.3/21, mb1mx4.1/70, mbtmp4.1/21, ML3.7/7, MS3.6/10, Ms1 3.5/10, ms1mx3.4/44, Error ellipse: s-maj=11.7km s-min=7.4km az=35.0*

*ANF **17** 13:25:35.8±0.1, 34°.11N×118°.49W, h12^{km}±1^{km}, ML4.9/46, Error ellipse: s-maj=1.2km s-min=1.0km az=32.0*

*NEIC **17** 13:25:36.8±1.9, 34°.156N±0°.008×118°.481W±0°.010, h13^{km}±1^{km}, Error ellipse: s-maj=1.3km s-min=1.1km az=209.0*

*PAS **17** 13:25:36.9±2.0, 34°.135N±0°.009×118°.486W±0°.010, h10^{km}±1^{km}, Mwr4.4/6, mb4.6/60(NEIC), Error ellipse: s-maj=1.3km s-min=1.0km az=208.0*

*SCEDC **17** 13:25:36.9, 34°.14N×118°.49W, h10^{km}*

ISC 17 13:25:37.4±0.7**, 34°.12N**±0°.01**×118°.48W**±0°.01**, h15**^{km}±4^{km}**,**
n368, **σ1^{s}26**/420**, mb4.6**/37**, MS3.5**/5**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJJ	**Donna J Jenkin**	**0.02**	**137**		**Pg**	**13 25 39.6**	**-0.5**
DJJ	**Donna J Jenkin**	**0.02**	**137**		**Pg**	**13 25 39.5**	**-0.5**
HLLC	**North Hollywoo**	**0.11**	**61**		**Pg**	**13 25 41.7**	**+0.9**
GR2C	**Griffith Obs.**	**0.14**	**92**		**Pb**	**13 25 40.0**	**-1.8**
GR2C					**Sb**	**13 25 42.2**	**-2.6**
LCGC	**La Cienega, Cu**	**0.15**	**147**		**Pg**	**13 25 44.6**	**+3.4**
BHPC	**Baldwin Hills**	**0.16**	**145**		**Pg**	**13 25 41.1**	**-0.4**
BHPC					**Sb**	**13 25 44.9**	**-0.3**
DECC	**Green Verdugo**	**0.17**	**42**		**Pg**	**13 25 40.4**	**-1.3**
DECC	**Green Verdugo**	**0.17**	**42**	P	**Pg**	**13 25 40.4**	**-1.3**
	baz=227,SNR=1000						
DECC				S	**Sg**	**13 25 43.1**	**-1.5**
	baz=227						
USC	**University of**	**0.19**	**124**		**Pg**	**13 25 41.4**	**-0.4**
BLCC	**Black Canyon**	**0.20**	**306**		**Pg**	**13 25 40.9**	**-1.2**
AGOC	**Agoura**	**0.24**	**275**		**Pb**	**13 25 44.9**	**+1.4**
PASC	**Pasadena Art C**	**0.24**	**79**		**Pg**	**13 25 41.6**	**-1.2**
OAT	**Oat Mountain**	**0.25**	**332**		**Pg**	**13 25 42.2**	**-0.7**
WTT2	**Watts, South G**	**0.25**	**134**		**Pg**	**13 25 42.9**	**+0.1**
IR2C	**Iron Canyon**	**0.27**	**13**		**Pg**	**13 25 42.1**	**-1.1**
GSA	**Caltech--GSA**	**0.29**	**87**		**Pg**	**13 25 42.5**	**-0.9**
GSA					**Sg**	**13 25 47.0**	**-0.7**
GSA	**Caltech--GSA**	**0.29**	**87**		**Pg**	**13 25 42.5**	**-0.9**
GSA					**Sg**	**13 25 47.0**	**-0.7**
CBCC	**Caltech Broad**	**0.29**	**87**		**Pg**	**13 25 42.6**	**-0.9**
CBCC					**Sg**	**13 25 47.1**	**-0.6**
CACC	**Caltech Cellar**	**0.29**	**87**		**Pg**	**13 25 42.7**	**-0.9**
CACC					**Sg**	**13 25 46.5**	**-1.3**
GVRC	**Garvey Reservo**	**0.30**	**104**		**Pg**	**13 25 43.3**	**-0.5**
GVRC					**Sg**	**13 25 48.5**	**+0.4**
MWC	**Mount Wilson**	**0.36**	**74**		**Pg**	**13 25 43.8**	**-1.0**
MWC	**Mount Wilson**	**0.36**	**74**		**Pg**	**13 25 43.8**	**-1.0**
MWC					**Sg**	**13 25 49.2**	**-0.8**
RPV	**Rancho Palos V**	**0.38**	**171**		**Pg**	**13 25 44.5**	**-0.7**
RPV					**Sg**	**13 25 50.2**	**-0.2**
DLAC	**Del Amo**	**0.42**	**131**		**Pg**	**13 25 45.9**	**+0.1**
CHFC	**Chilao Flat St**	**0.43**	**61**		**Pg**	**13 25 44.8**	**-1.2**
CHFC					**Sg**	**13 25 51.0**	**-0.9**
FMP	**Fort Macarthur**	**0.44**	**160**		**Pg**	**13 25 45.2**	**-0.9**
FMP					**Sg**	**13 25 52.0**	**-0.1**
FMP	**Fort Macarthur**	**0.44**	**160**	P	**Pg**	**13 25 45.3**	**-0.9**
	baz=339,SNR=181						
FMP				S	**Sg**	**13 25 51.0**	**-1.1**
	baz=339						
BALC	**Balcom Canyon**	**0.45**	**294**		**Pg**	**13 25 45.6**	**-0.7**
BLG	**Laguna Peak, P**	**0.49**	**268**		**Pg**	**13 25 45.4**	**-1.8**
BLG					**Sg**	**13 25 51.8**	**-1.9**
BLG	**Laguna Peak, P**	**0.49**	**268**	P	**Pg**	**13 25 45.3**	**-1.8**
	baz=87,SNR=1000						
BLG				S	**Sg**	**13 25 51.8**	**-1.9**
	baz=87						
PYR	**Pyramid**	**0.49**	**334**		**Pg**	**13 25 46.6**	**-0.7**
BREC	**Barre Substati**	**0.52**	**127**		**Pg**	**13 25 47.0**	**-0.6**
FULC	**Fullerton**	**0.52**	**119**		**Pg**	**13 25 47.7**	**-0.1**
LEOC	**Leona Valley**	**0.53**	**16**		**Pg**	**13 25 46.4**	**-1.5**
LEOC					**Sg**	**13 25 53.6**	**-1.3**
OSI	**Osito Audit: C**	**0.53**	**337**		**Pg**	**13 25 47.0**	**-0.9**
OSI	**Osito Audit: C**	**0.53**	**337**		**Sg**	**13 25 55.0**	**-0.1**
OSI	**Osito Audit: C**	**0.53**	**337**	P	**Pg**	**13 25 47.0**	**-0.9**
	baz=158,SNR=1000						
OSI				S	**Sg**	**13 25 54.6**	**-0.5**
	baz=158						
LRRC	**Littlerock Res**	**0.55**	**43**		**Pg**	**13 25 47.0**	**-1.2**
PSRC	**Puddingstone R**	**0.56**	**93**		**Pg**	**13 25 47.2**	**-1.2**
PSRC					**Sg**	**13 25 55.1**	**-0.7**
BTPC	**Burnt Peak**	**0.56**	**352**		**Pg**	**13 25 47.4**	**-1.1**
ALPC	**Antelope**	**0.58**	**14**		**Pg**	**13 25 47.5**	**-1.4**
ALPC					**Sg**	**13 25 55.6**	**-1.0**
STCC	**Santa Clara**	**0.62**	**287**		**Pg**	**13 25 48.6**	**-0.9**
STCC					**Sg**	**13 25 57.9**	**+0.2**
HOLC	**Holcomb Ridge**	**0.62**	**57**		**Pg**	**13 25 48.2**	**-1.4**
SANC	**Santa Ana**	**0.64**	**130**		**Pg**	**13 25 49.3**	**-0.7**
FOXC	**Fox Airport**	**0.65**	**18**		**Pg**	**13 25 48.8**	**-1.4**
SSK	**Sunset Peak**	**0.65**	**82**		**Pg**	**13 25 48.9**	**-1.4**
CHNC	**Chino**	**0.67**	**100**		**Pb**	**13 25 49.4**	**-1.3**
BFSC	**Mount Baldy Ra**	**0.69**	**80**		**Pb**	**13 25 49.3**	**-1.8**
BFSC	**Mount Baldy Ra**	**0.69**	**80**	P	**Pb**	**13 25 49.3**	**-1.8**
	baz=262,SNR=1000						
BFSC				S	**Sg**	**13 25 58.5**	**-1.5**
	baz=262						
CIAC	**Catalina I. Ai**	**0.72**	**176**		**Pb**	**13 25 50.5**	**-1.1**
CIAC					**Sb**	**13 26 00.6**	**-0.8**
CIS	**Catalina Islan**	**0.72**	**176**	P	**Pb**	**13 25 50.3**	**-1.4**
	baz=355,SNR=1000						
CIS				Sb	**Sb**	**13 26 00.9**	**-0.4**
	baz=355						
MLSC	**Mira Loma**	**0.77**	**99**		**Pb**	**13 25 50.7**	**-1.7**
MLSC					**Sb**	**13 26 00.9**	**-1.7**
SBB	**Saddle Back Bu**	**0.78**	**43**		**Pb**	**13 25 50.8**	**-1.8**
SBI	**Santa Barbara**	**0.79**	**216**		**Pb**	**13 25 51.8**	**-1.0**
THC	**Tehachapi Micr**	**0.80**	**349**		**Pb**	**13 25 51.5**	**-1.6**
CRNC	**Corona**	**0.80**	**108**		**Pb**	**13 25 51.6**	**-1.4**
SS2	**San Sevaine**	**0.81**	**84**		**Pb**	**13 25 51.6**	**-1.6**
EDW2	**Edwards Air Fo**	**0.85**	**28**		**Pb**	**13 25 52.1**	**-1.8**
EDW2	**Edwards Air Fo**	**0.85**	**28**	P	**Pb**	**13 25 52.1**	**-1.8**
	baz=209,SNR=1000						
EDW2				S	**Sb**	**13 26 03.7**	**-1.6**
	baz=209						
FON	**Fontana**	**0.86**	**91**		**Pb**	**13 25 52.4**	**-1.6**
FON					**Sb**	**13 26 04.3**	**-1.0**
MPI	**Mount Pinos, F**	**0.88**	**321**		**Pb**	**13 25 52.7**	**-1.9**
RYS	**Reyes Peak**	**0.89**	**306**		**Pb**	**13 25 53.1**	**-1.5**
RVR	**Riverside**	**0.92**	**98**		**Pb**	**13 25 53.2**	**-1.9**
RVR					**Sb**	**13 26 06.1**	**-1.1**
TJR	**Tejon Ranch**	**0.93**	**346**		**Pb**	**13 25 53.6**	**-1.6**
CSP	**Cedar Springs**	**0.94**	**79**		**Pb**	**13 25 53.9**	**-1.6**
ABL	**Mount Abel**	**0.95**	**320**		**Pb**	**13 25 53.7**	**-2.1**
ADO	**Adelanto Recei**	**0.96**	**63**		**Pb**	**13 25 54.6**	**-1.2**
CLTC	**Calectric**	**0.96**	**92**		**Pb**	**13 25 54.3**	**-1.4**
RSBC	**Riverside Bore**	**0.96**	**99**		**Pb**	**13 25 54.0**	**-1.8**
RSBC					**Sb**	**13 26 07.1**	**-1.3**
RSBC	**Riverside Bore**	**0.96**	**99**		**Pb**	**13 25 54.0**	**-1.8**
RSBC					**Sb**	**13 26 07.0**	**-1.3**
SCZ2	**Santa Cruz Isl**	**0.97**	**263**		**Pb**	**13 25 53.6**	**-2.3**
SCZ2	**Santa Cruz Isl**	**0.97**	**263**	P	**Pb**	**13 25 53.4**	**-2.5**
	baz=81,SNR=164						
SCZ2				S	**Sb**	**13 26 06.8**	**-1.7**
	baz=81						
SME	**Santa Rosa Min**	**0.98**	**108**		**Pb**	**13 25 54.4**	**-1.7**
CFSC	**Central Fire S**	**0.99**	**91**		**Pb**	**13 25 54.5**	**-1.7**
HLNC	**Highland**	**1.04**	**90**		**Pb**	**13 25 55.8**	**-1.3**
ARVC	**Arvin**	**1.04**	**344**		**Pb**	**13 25 55.6**	**-1.5**
ARVC	**Arvin**	**1.04**	**344**	P	**Pb**	**13 25 55.6**	**-1.5**
	baz=164,SNR=1000						
ARVC				S	**Sb**	**13 26 10.2**	**-0.4**
	baz=164						
HYS	**Haystack Butte**	**1.05**	**45**		**Pb**	**13 25 55.8**	**-1.6**
SBC	**Santa Barbara**	**1.07**	**288**		**Pb**	**13 25 56.0**	**-1.6**
SBC	**Santa Barbara**	**1.07**	**288**	P	**Pb**	**13 25 56.0**	**-1.6**
	baz=106,SNR=237						
SBC				S	**Sb**	**13 26 10.6**	**-0.9**
	baz=106						
PEC	**Perris**	**1.12**	**102**		**Pn**	**13 25 56.7**	**-1.8**
PEC					**Sb**	**13 26 11.3**	**-1.5**
TEJ	**El Tejon**	**1.12**	**351**		**Pn**	**13 25 56.8**	**-1.7**
BCW	**Bitter Crk WRg**	**1.12**	**317**		**Pb**	**13 25 56.9**	**-1.7**
CFT	**Crafton Hills**	**1.14**	**94**		**Pn**	**13 25 57.3**	**-1.5**
CFT					**Sb**	**13 26 13.1**	**-0.2**
SCI2	**San Clemente I**	**1.14**	**183**		**Pn**	**13 25 57.0**	**-1.8**
SCI2	**San Clemente I**	**1.14**	**183**	P	**Pn**	**13 25 57.0**	**-1.8**
	baz=2.5,SNR=279						
SCI2				S	**Sb**	**13 26 13.4**	**0.0**
	baz=2.5						
SVD	**Seven Oaks Dam**	**1.14**	**90**		**Pn**	**13 25 57.3**	**-1.6**
MURC	**Murrieta**	**1.19**	**116**		**Pn**	**13 25 57.8**	**-1.6**
MURC	**Murrieta**	**1.19**	**116**	P	**Pn**	**13 25 57.8**	**-1.6**
	baz=297,SNR=1000						
MURC				S	**Sb**	**13 26 13.7**	**-1.0**
	baz=297						
BTL	**Butler Peak**	**1.23**	**83**		**Pn**	**13 25 59.1**	**-1.1**
SNCC	**San Nicolas Is**	**1.24**	**225**		**Pn**	**13 25 58.0**	**-2.1**
SNCC	**San Nicolas Is**	**1.24**	**225**	P	**Pn**	**13 25 58.1**	**-2.1**
	baz=44,SNR=93						
SNCC				S	**Sb**	**13 26 14.7**	**-1.4**
	baz=44						
DTP	**Desert Tortois**	**1.25**	**24**		**Pn**	**13 25 59.4**	**-1.1**
BBSC	**Beaumont Base**	**1.26**	**99**		**Pn**	**13 25 59.4**	**-1.0**
MAGC	**SCE Magundon P**	**1.29**	**344**		**Pn**	**13 25 60.0**	**-0.9**
BBRC	**Big Bear Solar**	**1.30**	**83**		**Pn**	**13 26 00.3**	**-0.9**
BBRC	**Big Bear Solar**	**1.30**	**83**	P	**Pn**	**13 26 00.3**	**-0.9**
	baz=265,SNR=1000						
BBRC				S	**Sb**	**13 26 17.9**	**-0.2**
	baz=265						
BACC	**Bachelor Mtn.**	**1.30**	**113**		**Pn**	**13 25 59.1**	**-1.9**
BAKC	**Calstate**	**1.32**	**337**		**Pn**	**13 26 00.3**	**-1.0**
PKM	**Mcpherson Peak**	**1.34**	**305**	P	**Pn**	**13 26 00.4**	**-1.4**
	baz=124,SNR=1000						
PKM				S	**Sn**	**13 26 19.0**	**-0.4**
	baz=124						
POB	**Polly Butte**	**1.36**	**108**		**Pn**	**13 26 00.4**	**-1.5**
FIGC	**Figueroa Mtn.**	**1.39**	**296**		**Pn**	**13 26 01.0**	**-1.3**
JFS	**Joseph F. Stat**	**1.39**	**28**		**Pn**	**13 26 01.7**	**-0.7**
GORC	**Green Oak Ranc**	**1.42**	**133**		**Pn**	**13 26 00.8**	**-1.8**
WOFM	**Oak Flat**	**1.42**	**352**		**Pn**	**13 26 01.8**	**-1.0**
RRX	**Edison Barstow**	**1.43**	**58**	P	**Pn**	**13 26 02.0**	**-0.8**
	baz=239,SNR=122						
RRX				S	**Sn**	**13 26 21.5**	**+0.1**
	baz=239						
WBSM	**Bird Springs**	**1.44**	**11**		**Pn**	**13 26 02.4**	**-0.7**
LRMC	**Laurel Mtn Rad**	**1.50**	**26**	P	**Pn**	**13 26 03.2**	**-0.7**
	baz=206,SNR=192						
LRMC				S	**Sn**	**13 26 21.9**	**-1.4**
	baz=206						
ISA	**Isabella, Lake**	**1.54**	**0**		**Pn**	**13 26 03.7**	**-0.6**
ISA	**Isabella, Lake**	**1.54**	**0**	P	**Pn**	**13 26 03.8**	**-0.6**
	baz=180,SNR=964						
ISA				S	**Sn**	**13 26 23.1**	**-0.9**
	baz=180						
PLM	**Palomar**	**1.55**	**119**		**Pn**	**13 26 03.1**	**-1.5**
CRY	**Cary Ranch**	**1.55**	**111**		**Pn**	**13 26 03.3**	**-1.2**
WHFM	**Hanning Flat**	**1.57**	**4**		**Pn**	**13 26 04.3**	**-0.5**
WORM	**Onyx Ranch**	**1.58**	**7**		**Pn**	**13 26 04.3**	**-0.6**
DEVC	**Devers**	**1.59**	**96**		**Pn**	**13 26 04.8**	**-0.2**
WASM	**Alta Sierra Ca**	**1.61**	**358**		**Pn**	**13 26 05.0**	**-0.5**
BZNA	**Buzz No.'s Pla**	**1.63**	**112**		**Pn**	**13 26 04.7**	**-1.0**
DNR	**Dunn Ranch,Anz**	**1.63**	**109**		**Pn**	**13 26 04.9**	**-0.8**
CARC	**Carrizo Plain**	**1.63**	**317**		**Pn**	**13 26 04.6**	**-1.0**
SNDA	**J Saunders Pla**	**1.65**	**110**		**Pn**	**13 26 05.2**	**-0.8**
CCCA	**Chr Cany lake**	**1.67**	**33**		**Pn**	**13 26 05.8**	**-0.3**
HWB	**Hans Werner Br**	**1.67**	**130**		**Pn**	**13 26 04.6**	**-1.6**
109C	**Camp Elliot, M**	**1.68**	**137**		**Pn**	**13 26 04.4**	**-1.8**
109C	**Camp Elliot, M**	**1.68**	**137**	P	**Pn**	**13 26 04.4**	**-1.8**
	baz=318,SNR=186						
109C				S	**Sn**	**13 26 25.4**	**-2.1**
	baz=318						
FRD	**Ford Ranch, An**	**1.68**	**111**		**Pn**	**13 26 05.4**	**-0.9**
FRD	**Ford Ranch, An**	**1.68**	**111**		**Pn**	**13 26 05.4**	**-0.9**
BCH	**Branch Mountai**	**1.70**	**309**		**Pn**	**13 26 05.6**	**-1.0**
DPP	**Dos Picos Cty**	**1.70**	**131**		**Pn**	**13 26 04.8**	**-1.8**
EW2	**E Wide Canyon**	**1.73**	**96**		**Pn**	**13 26 06.4**	**-0.5**
SMMC	**Simmler**	**1.73**	**314**		**Pn**	**13 26 06.1**	**-0.8**
SMMC	**Simmler**	**1.73**	**314**	P	**Pn**	**13 26 06.1**	**-0.8**
	baz=133,SNR=411						
SMMC				Sb	**Sb**	**13 26 30.8**	**+0.4**
	baz=133						
GATR	**Gnd/Air Tx Cnt**	**1.73**	**285**		**Pn**	**13 26 05.6**	**-1.4**
BLAC	**Blackrock camp**	**1.73**	**91**		**Pn**	**13 26 06.5**	**-0.6**
PFO	**Pinyon Flats O**	**1.75**	**106**	Pg	**Pn**	**13 26 06.7**	**-0.7**
	236nm,0.3s,baz=286,slow=14,SNR=311						
PFO				Lg	Lg	13 26 30.6	
	2µm,0.3s,baz=15,slow=20,SNR=29						
PFO	**Pinyon Flats O**	**1.75**	**106**		**Pn**	**13 26 06.3**	**-1.1**
PFO	**Pinyon Flats O**	**1.75**	**106**	P	**Pn**	**13 26 06.2**	**-1.1**
	baz=288,SNR=84						
PFO				S	**Sn**	**13 26 28.8**	**-0.7**
	baz=288						
XPFO	**Pion Flat**	**1.76**	**106**		**Pn**	**13 26 06.2**	**-1.2**
TOW	**Tower One**	**1.78**	**19**		**Pn**	**13 26 07.2**	**-0.4**
VES	**Vestal, Richgr**	**1.79**	**344**		**Pn**	**13 26 06.4**	**-1.2**
VES	**Vestal, Richgr**	**1.79**	**344**	P	**Pn**	**13 26 06.4**	**-1.2**
	baz=164,SNR=407						
VES				S	**Sn**	**13 26 30.5**	**+0.5**
	baz=164						
WCHM	**Chimney Peak**	**1.79**	**10**		**Pn**	**13 26 07.2**	**-0.8**
YEG	**Yeguas Mountai**	**1.79**	**317**		**Pn**	**13 26 07.0**	**-0.9**
GSC	**Goldstone, Bar**	**1.81**	**49**		**Pn**	**13 26 07.4**	**-0.7**
GSC	**Goldstone, Bar**	**1.81**	**49**	P	**Pn**	**13 26 07.6**	**-0.5**
	baz=230,SNR=1000						
GSC				S	**Sn**	**13 26 30.4**	**-0.5**
	baz=230						
HEC	**Hector,Ludlow**	**1.90**	**68**	P	**Pn**	**13 26 08.3**	**-1.0**
	baz=249,SNR=1000						
HEC				S	**Sn**	**13 26 33.3**	**+0.2**
	baz=249						
BELC	**Belle Mtn. Jos**	**2.06**	**93**	P	**Pn**	**13 26 10.6**	**-1.0**
	baz=274,SNR=1000						
BELC				Sb	**Sb**	**13 26 40.3**	**+0.3**
	baz=274						
BAR	**Barrett**	**2.08**	**133**		**Pn**	**13 26 10.4**	**-1.5**
MPMC	**Manual Prospec**	**2.09**	**22**	P	**Pn**	**13 26 11.5**	**-0.6**
	baz=203,SNR=1000						
MPMC				S	**Sn**	**13 26 37.8**	**-0.1**
	baz=203						
MONP2	**Monument Peak**	**2.11**	**125**	P	**Pn**	**13 26 11.4**	**-0.9**
	baz=306,SNR=225						
MONP2				S	**Sn**	**13 26 38.1**	**-0.3**
	baz=306						
PAGB	**Antelope Grade**	**2.17**	**318**		**Pn**	**13 26 11.7**	**-1.2**
VOG	**Valley Oaks Go**	**2.31**	**342**	P	**Pn**	**13 26 13.9**	**-1.1**
	baz=161,SNR=17						
VOG				S	**Sn**	**13 26 43.3**	**+0.1**
	baz=161						
CWC	**Cottonwood Cre**	**2.33**	**8**	P	**Pn**	**13 26 14.9**	**-0.4**
	baz=188						
CWC				S	**Sn**	**13 26 43.7**	**-0.1**
	baz=188						
GMRC	**Granite Mounta**	**2.42**	**73**	P	**Pn**	**13 26 15.3**	**-1.2**
	baz=255,SNR=834						
GMRC				Sb	**Sb**	**13 26 51.4**	**+1.1**
	baz=255						
IKP	**In-Ko-Pah, Jac**	**2.46**	**126**	P	**Pn**	**13 26 16.3**	**-0.8**
	baz=308,SNR=149						
IKP				Sb	**Sb**	**13 26 51.9**	**+0.2**
	baz=308						
TUQ	**Turquoise Moun**	**2.47**	**57**	P	**Pn**	**13 26 16.2**	**-1.1**
	baz=239						
TUQ				Sb	**Sb**	**13 26 53.8**	**+1.8**
	baz=239						
SWSC	**Sam W. Stewart**	**2.52**	**117**	P	**Pn**	**13 26 15.9**	**-1.9**
	baz=299						
SWSC				Sb	**Sb**	**13 26 54.3**	**+1.1**
	baz=299						
SHOC	**Shoshone, Teco**	**2.53**	**45**	P	**Pn**	**13 26 17.4**	**-0.5**
	baz=226,SNR=193						
BC3	**Big Chuckawall**	**2.56**	**100**	P	**Pn**	**13 26 17.0**	**-1.4**
	baz=282,SNR=432						
FURC	**Furnace Creek,**	**2.68**	**29**	P	**Pn**	**13 26 19.5**	**-0.5**
	baz=210,SNR=51						
IRM	**Iron Mountain**	**2.76**	**88**	P	**Pn**	**13 26 19.7**	**-1.4**
	baz=270,SNR=33						
IRM				Sb	**Sb**	**13 27 01.6**	**+1.4**
	baz=270						
PMPB	**Monarch Peak**	**2.83**	**318**		**Pn**	**13 26 20.3**	**-1.7**
TIN	**Tinemaha, Big**	**2.93**	**4**	P	**Pn**	**13 26 23.6**	**+0.1**
	baz=184,SNR=20						
GRAC	**Grapevine Rang**	**3.00**	**17**	P	**Pn**	**13 26 25.0**	**+0.5**
	baz=198,SNR=80						
GLA	**Glamis**	**3.23**	**108**		**Pn**	**13 26 26.6**	**-0.9**
GLA	**Glamis**	**3.23**	**108**	P	**Pn**	**13 26 26.4**	**-1.1**
	baz=291,SNR=28						
NEE2	**Needles Airpor**	**3.25**	**78**	P	**Pn**	**13 26 27.2**	**-0.6**
	baz=260,SNR=32						
Y12C	**Blythe**	**3.31**	**95**		**Pn**	**13 26 26.8**	**-1.7**
Y12C	**Blythe**	**3.31**	**95**	P	**Pn**	**13 26 27.0**	**-1.6**
	baz=278,SNR=34						
Y12C				Sb	**Sb**	**13 27 19.3**	**+3.5**
	baz=278						
TPNV	**Topopah Spring**	**3.35**	**32**		**Pn**	**13 26 29.5**	**+0.1**
TPNV	**Topopah Spring**	**3.35**	**32**	P	**Pn**	**13 26 29.7**	**+0.3**
	baz=214,SNR=91						
OMMB	**Old Mammoth Mi**	**3.51**	**353**		**Pn**	**13 26 32.3**	**+0.6**
MLAC	**Mammoth, Mammo**	**3.51**	**355**	P	**Pn**	**13 26 31.2**	**-0.4**
	baz=175,SNR=15						
MLAC				Sb	**Sb**	**13 27 24.5**	**+2.6**
	baz=175						
MDPB	**Devils Postpil**	**3.54**	**352**		**Pn**	**13 26 32.8**	**+0.8**
SAO	**San Andreas Ge**	**3.58**	**318**		**Pn**	**13 26 30.5**	**-1.9**
PDMCI	**Parker Dam,Lak**	**3.59**	**86**	P	**Pn**	**13 26 31.4**	**-1.2**
	baz=268,SNR=47						
SHPR	**Sheep Range**	**3.60**	**48**		**Pn**	**13 26 33.1**	**+0.2**
W13A	**Hualapai Mount**	**3.91**	**74**		**Pn**	**13 26 36.4**	**-0.7**
CMB	**Columbia Colle**	**4.20**	**339**		**Pn**	**13 26 40.2**	**-0.7**
NVAR	**Mina Array Bea**	**4.30**	**2**	Pn	**Pn**	**13 26 43.7**	**+1.2**
	2.6nm,0.3s,baz=185,slow=16,SNR=31						
NVAR				Pg	**Pb**	**13 26 54.4**	**+1.6**
	11nm,0.3s,baz=192,slow=17,SNR=37						
NVAR				Lg	Lg	13 27 51.6	
	22nm,0.3s,baz=181,slow=20,SNR=4.0						
NVAR				LR	LR	13 28 06.9	
	comp=Z,165nm,19.6s,baz=270,slow=35						
NVAR	**Mina Array Bea**	**4.30**	**2**	Pn	**Pn**	**13 26 42.7**	**+0.3**
NV11	**Mina Array Sit**	**4.31**	**3**		**Pn**	**13 26 43.4**	**+0.9**
RYN	**Ryan**	**4.50**	**360**		**Pn**	**13 26 44.9**	**-0.2**
Y14A	**Wickenburg**	**4.55**	**91**		**Pn**	**13 26 44.5**	**-1.2**
R11A	**Troy Canyon, C**	**4.82**	**28**		**Pn**	**13 26 49.7**	**+0.1**
R11A	**Troy Canyon, C**	**4.82**	**28**	P	**Pn**	**13 26 49.3**	**-0.3**
	baz=210,SNR=8.9						
KVN	**Kaiserville**	**4.93**	**3**		**Pn**	**13 26 51.6**	**+0.6**
PNTR	**Pine Nut**	**5.04**	**350**		**Pn**	**13 26 52.7**	**+0.1**
RUBR	**Rubicon Trail**	**5.10**	**345**	Pn	**Pn**	**13 26 53.2**	**-0.2**
LCMT	**Little Creek M**	**5.15**	**54**		**Pn**	**13 26 54.5**	**+0.5**
AFDM	**Forest Hills D**	**5.22**	**338**		**Pn**	**13 26 54.2**	**-0.7**
214A	**Organ Pipe Nat**	**5.22**	**113**	Pn	**Pn**	**13 26 54.6**	**-0.3**
VCNR	**Virginia City**	**5.25**	**350**		**Pn**	**13 26 54.7**	**-0.8**
MCCM	**Marconi Confer**	**5.37**	**320**	Pn	**Pn**	**13 26 54.8**	**-2.1**
CCUT	**Cedar City**	**5.38**	**49**		**Pn**	**13 26 58.6**	**+1.3**
KNB	**Kanab**	**5.44**	**56**		**Pn**	**13 26 58.5**	**+0.5**
U15A	**North Rim**	**5.56**	**64**		**Pn**	**13 27 00.7**	**+1.0**
SZCU	**Shurtz Canyon**	**5.58**	**50**		**Pn**	**13 27 00.9**	**+0.8**
PAHR	**Pah Rah Range**	**5.62**	**353**		**Pn**	**13 27 00.5**	**0.0**
PSUT	**Pine Spring**	**5.77**	**39**		**Pn**	**13 27 03.0**	**+0.4**
GDXM	**Geysers**	**5.83**	**325**		**Pn**	**13 27 02.1**	**-1.2**
X16A	**Lo Mia Camp, P**	**5.83**	**85**		**Pn**	**13 27 02.9**	**-0.5**
BEKR	**Beckworth**	**5.93**	**346**		**Pn**	**13 27 04.2**	**-0.5**
ORV	**Oroville**	**5.94**	**337**		**Pn**	**13 27 04.7**	**-0.1**
WUAZ	**Wupatki**	**6.00**	**75**		**Pn**	**13 27 06.0**	**+0.2**
WUAZ	**Wupatki**	**6.00**	**75**	P	**Pn**	**13 27 05.1**	**-0.7**
	baz=259,SNR=17						
PKCU	**Pink Cliffs**	**6.01**	**55**		**Pn**	**13 27 06.4**	**+0.4**
HOPS	**Hopland Field**	**6.11**	**324**	Pn	**Pn**	**13 27 06.3**	**-0.8**
TCRU	**Three Creeks R**	**6.61**	**46**	Pn	**Pn**	**13 27 13.6**	**-0.6**
TUC	**Tucson**	**6.69**	**104**		**Pn**	**13 27 13.2**	**-2.0**
TUC	**Tucson**	**6.69**	**104**	P	**Pn**	**13 27 13.9**	**-1.3**
	baz=288						
O03E	**Paynes Creek**	**6.71**	**338**	P	**Pn**	**13 27 14.8**	**-0.5**
	baz=156,SNR=16						
MSU	**Marysvale**	**6.71**	**47**		**Pn**	**13 27 17.8**	**+2.3**
KCPM	**Cahto Peak**	**6.89**	**325**	Pn	**Pn**	**13 27 17.3**	**-0.7**

X18A	Snowflake	7.07	84		Pn	13 27 21.0	+0.6
ELK	Elko	7.09	20	Pn	Pn	13 27 22.5	+1.7
	1.2nm,0.3s,baz=223,slow=10,SNR=22						
ELK				Sn	Sn	13 28 41.7	+0.5
	4.1nm,0.3s,baz=64,slow=18,SNR=5.6						
ELK				Lg	Lg	13 29 18.7	
	2.2nm,0.3s,baz=279,slow=13,SNR=6.0						
ELK	Elko	7.09	20		Pn	13 27 22.4	+1.6
WDC	Whiskeytown Da	7.21	335		Pn	13 27 21.8	-0.4
W18A	Petrified Fore	7.27	80	Pn	Pn	13 27 24.8	+1.5
W18A	Petrified Fore	7.27	80	P	Pn	13 27 23.3	+0.1
	baz=265						
KMRM	Mail Ridge	7.38	327		Pn	13 27 25.0	+0.4
DUG	Dugway, Tooele	7.56	35	Pn	Pn	13 27 29.3	+2.2
DUG	Dugway, Tooele	7.56	35	P	Pn	13 27 27.5	+0.4
	baz=218,SNR=7.2						
Q16A	Castle Valley	7.58	49	Pn	Pn	13 27 29.5	+2.0
TMUT	Trail Mountain	7.79	46	Pn	Pn	13 27 33.1	+2.7
MOD	Modoc Plateau	7.90	350	Pn	Pn	13 27 33.0	+1.2
KHMM	Horse Mountain	7.93	330	Pn	Pn	13 27 33.7	+1.5
M02C	Callahan	8.04	336	P	Pn	13 27 33.8	+0.1
	baz=153						
BGU	Big Grassy Mou	8.05	31	Pn	Pn	13 27 33.8	-0.1
SRU	San Rafael Swe	8.10	50	Pn	Pn	13 27 37.7	+3.1
P17A	Butcher Ranch,	8.18	47	Pn	Pn	13 27 38.9	+3.2
319A	Douglas	8.21	107	Pn	Pn	13 27 36.1	-0.1
YBH	Yreka Blue Hor	8.30	337	Pn	Pn	13 27 39.5	+2.2
	0.5nm,0.3s,baz=150,slow=7.9,SNR=20						
YBH				Lg	Lg	13 29 55.4	
	0.1nm,0.3s,baz=75,slow=20,SNR=3.1						
KRMB	Red Mountain	8.54	331	Pn	Pn	13 27 39.9	-0.7
PV05	Paradox Valley	8.55	60	Pn	Pn	13 27 42.5	+1.7
SPUT	South Promonto	8.61	32	Pn	Pn	13 27 41.2	-0.4
MVCO	Mesa Verde	8.68	66		Pn	13 27 44.5	+1.9
MVCO	Mesa Verde	8.68	66	P	Pn	13 27 42.7	+0.1
	baz=252,SNR=8.0						
PV09	Paradox Valley	8.71	57	Pn	Pn	13 27 45.0	+1.9
PV14	Lion Creek, Pa	8.73	58	Pn	Pn	13 27 45.7	+2.4
PV19	Morning Glory	8.73	59	Pn	Pn	13 27 46.0	+2.7
PV17	East Wray Mesa	8.74	59	Pn	Pn	13 27 46.2	+2.8
PV18	Skein Mesa, Pa	8.76	59	Pn	Pn	13 27 45.1	+1.5
PV20	West Nyswonger	8.76	59	Pn	Pn	13 27 46.2	+2.5
PV23	Carpenter Ridg	8.78	58	Pn	Pn	13 27 45.7	+1.7
PV16	Nyswonger Mesa	8.78	59	Pn	Pn	13 27 44.6	+0.6
PV13	Radium Mtn., P	8.79	60	Pn	Pn	13 27 45.6	+1.6
PV03	Paradox Valley	8.80	59	Pn	Pn	13 27 46.5	+2.2
PV11	David Mesa, Pa	8.81	59	Pn	Pn	13 27 47.2	+2.9
PV04	Paradox Valley	8.82	58	Pn	Pn	13 27 46.8	+2.3
PV12	Saucer Basin,	8.86	59	Pn	Pn	13 27 45.8	+0.6
PV02	Paradox Valley	8.87	60	Pn	Pn	13 27 46.3	+1.2
PV22	Blue Mesa, Par	8.97	58	Pn	Pn	13 27 48.0	+1.5
PV07	Paradox Valley	9.03	59	Pn	Pn	13 27 48.7	+1.4
121A	Cookes Peak, D	9.09	97		Pn	13 27 48.2	0.0
121A	Cookes Peak, D	9.09	97	P	Pn	13 27 46.2	-1.9
	baz=283						
PV15	Paradox Valley	9.10	60	Pn	Pn	13 27 48.5	+0.1
HWUT	Hardware Ranch	9.25	34	Pn	Pn	13 27 50.9	+0.5
ANMO	Albuquerque	9.95	82	Pn	Pn	13 28 01.1	+1.1
	0.1nm,0.3s,baz=279,slow=17,SNR=2.8						
ANMO				Lg	Lg	13 30 50.3	
	0.1nm,0.3s,baz=17,slow=21,SNR=3.7						
ANMO				LR	LR	13 31 24.6	
	comp=Z,183nm,20.9s,baz=268,slow=35						
I07A	Izee	9.98	356	Pn	Pn	13 28 00.4	+0.1
O20A	White River Ci	10.13	51	P	Pn	13 28 02.1	-0.4
	baz=237,SNR=12						
PDAR	Pinedale Array	11.10	36	Pn	Pn	13 28 19.8	+4.0
	0.1nm,0.3s,baz=227,slow=13,SNR=16						
PDAR				Lg	Lg	13 31 26.9	
	0.1nm,0.3s,baz=230,slow=32,SNR=2.3						
PDAR				LR	LR	13 33 10.3	
	comp=Z,239nm,18.0s,baz=232,slow=41						
PDAR	Pinedale Array	11.10	36	Pn	Pn	13 28 16.7	+1.0
SDCO	Great Sand Dun	11.12	67	Pn	Pn	13 28 15.7	-0.4
MNTX	Cornudas Mount	11.27	99	Pn	Pn	13 28 18.1	+0.3
YPP	Pitchstone Pla	11.74	28	Pn	Pn	13 28 24.1	-0.5
LPIG	La Paz	12.27	142	LR	LR	13 33 00.2	
	comp=Z,404nm,18.9s,baz=12,slow=36						
MSO	Missoula	13.15	14	Pn	Pn	13 28 43.7	+0.1
TX31	Lajitas Ar. Si	13.47	107	Pn	Pn	13 28 48.7	+0.6
TX32	Lajitas Array	13.47	107	Pn	Pn	13 28 48.9	+0.8
TXAR	Lajitas Array	13.47	107	Pn	Pn	13 28 50.1	+2.0
	0.2nm,0.3s,baz=290,slow=12,SNR=15						
TXAR				Lg	Lg	13 32 41.5	
	0.0nm,0.3s,baz=298,slow=30,SNR=3.5						
TXAR	Lajitas Array	13.47	107	Pn	Pn	13 28 48.4	+0.3
NEW	Newport	14.16	4	Pn	Pn	13 29 00.1	+2.8
	0.2nm,0.3s,baz=159,slow=14,SNR=3.4						
NEW				LR	LR	13 35 00.3	
	comp=Z,227nm,18.9s,baz=186,slow=40						
WALA	Waterton Lakes	15.30	11	P	P	13 29 16.4	-1.3
WALA				IAmb	IAmb	13 29 21.6	
	comp=Z,32nm,1.0s						
EGMT	Eagleton	15.35	23	P	P	13 29 17.4	-0.7
EGMT				IAmb	IAmb	13 29 21.5	
	comp=Z,27nm,0.9s						
EGMT	Eagleton	15.35	23	P	Pn	13 29 12.2	-1.2
	baz=208,SNR=12						
JCT	Junction City	16.20	98	P	P	13 29 27.4	-0.2
WHTX	Lake Whitney,	17.75	91	P	Pn	13 29 43.9	0.0
WHTX	Lake Whitney,	17.75	91	P	Pn	13 29 42.4	-1.5
	baz=283						
W35A	Tecumseh	17.80	81	P	P	13 29 45.1	-0.2
DGMT	Dagmar	17.86	32	P	Pn	13 29 45.3	+0.1
	baz=222						
X37A	Clayton	19.08	82	P	Pn	13 30 00.3	+0.2
237A	Washetta, Mont	19.11	90	P	Pn	13 30 00.2	-0.3
ECSD	EROS Data Cent	19.48	54	P	Pn	13 30 04.5	-0.4
ECSD	EROS Data Cent	19.48	54	P	P	13 30 04.1	+0.4
	baz=248						
Z38A	Mt. Pleasant	19.56	86	P	Pn	13 30 05.3	-0.6
Z38A				IAmb	IAmb	13 30 43.4	
	comp=Z,21nm,0.8s						
MDND	Maddock	19.70	40	P	Pn	13 30 07.3	-0.2
MDND				IAmb	IAmb	13 30 15.7	
	comp=Z,34nm,1.1s						
HHAR	Hobbs	20.15	77	P	P	13 30 11.6	+0.5
MIAR	Mount Ida	20.56	82	P	Pn	13 30 16.7	-1.0
MIAR				IAmb	IAmb	13 30 24.1	
	comp=Z,25nm,0.8s						
MIAR	Mount Ida	20.56	82	P	P	13 30 15.7	+0.3
	baz=276						
S39A	Bolivar	20.66	73	P	Pn	13 30 17.8	-1.2
U40A	Yellville	21.03	77	P	P	13 30 21.6	+1.1
MGMO	Mountain Grove	21.49	74	P	P	13 30 26.4	+0.9
MGMO				IAmb	IAmb	13 30 30.4	
	comp=Z,18nm,0.9s						
DIB	Dawson Inlet,	21.52	337	P	P	13 30 26.1	+0.5
DIB				IAmb	IAmb	13 31 04.9	
	comp=Z,61nm,1.4s						
WHAR	Wooly Hollow	21.54	79	P	P	13 30 26.3	+0.2
WHAR				IAmb	IAmb	13 31 10.5	
	comp=Z,57nm,1.8s						
W41B	Gary Mavity, V	21.59	80	P	P	13 30 27.2	+0.7
FCAR	Ozark Folk Cen	21.64	78	P	P	13 30 27.4	+0.3
AGMN	Agassiz Nation	22.02	43	P	P	13 30 31.2	0.0
AGMN	Agassiz Nation	22.02	43	P	P	13 30 30.9	-0.3
	baz=238,SNR=8.6						
T42A	Van Buren	22.43	75	P	P	13 30 36.2	+0.6
N41A	Harden Midland	22.84	65	P	P	13 30 38.9	-1.0
N41A				IAmb	IAmb	13 30 45.1	
	comp=Z,18nm,0.9s						
ULM	Lac du Bonnet	23.10	39	P	P	13 30 41.2	-1.3
	comp=Z,17nm,1.2s,baz=240,slow=10,SNR=6.0						
ULM				LR	LR	13 40 38.7	
	comp=Z,173nm,20.7s,baz=250,slow=39						
ULM	Lac du Bonnet	23.10	39	P	P	13 30 41.3	-1.2
FFC	Flin Flon	23.61	24	P	P	13 30 46.9	-0.7
COWI	Conover	25.28	53	P	P	13 31 03.5	+0.5
COWI				IAmb	IAmb	13 31 06.8	
	comp=Z,17nm,1.1s						
DLBC	Dease Lake	25.52	346	P	P	13 31 07.3	+2.2
	comp=Z,7.2nm,0.8s,baz=167,slow=6.8,SNR=11						
DLBC	Dease Lake	25.52	346	IAmb	IAmb	13 31 09.9	
	comp=Z,14nm,1.0s						
T47A	Sharon Grove	25.62	75	P	P	13 31 05.9	-0.3
T47A				IAmb	IAmb	13 31 11.0	
	comp=Z,41nm,1.6s						
TKL	Tuckaleechee C	28.42	77	LR	LR	13 41 44.3	
	comp=Z,124nm,18.4s,baz=292,slow=34						
YKA	Yellowknife Ar	28.50	4	P	P	13 31 32.2	+0.5
	comp=Z,0.4nm,0.7s,baz=185,slow=8.6,SNR=20						
YKA				PcP	PcP	13 34 43.2	+0.1
	comp=Z,0.3nm,0.6s,baz=164,slow=1.6,SNR=4.5						
APG	El Apazote	31.64	120	LR	LR	13 46 39.0	
	comp=Z,62nm,19.0s,baz=290,slow=40						
SADO	Sadowa	31.90	59	LR	LR	13 45 43.1	
	comp=Z,138nm,20.7s,baz=322,slow=38						
BCAR	Beaver Creek A	32.43	340	P	P	13 32 07.8	+1.2
DAWY	Dawson	32.62	343	P	P	13 32 10.0	+1.7
DAWY				IAmb	IAmb	13 32 11.2	
	comp=Z,6.7nm,1.0s						
SCM	Sheep Creek Mo	33.25	335	P	P	13 32 15.9	+2.1
KNK	Knik Glacier	33.37	334	P	P	13 32 17.0	+2.2
SML	Sawmill	33.58	335	P	P	13 32 17.7	+1.1
RC01	Rabbit Creek A	33.63	333	P	P	13 32 18.6	+1.6
EGAK	Eagle	33.64	343	P	P	13 32 18.7	+1.6
EGAK				IAmb	IAmb	13 32 19.5	
	comp=Z,7.1nm,0.9s						
SCRK	Sand Creek	33.76	340	P	P	13 32 20.0	+1.7
SCRK				IAmb	IAmb	13 32 21.1	
	comp=Z,13nm,1.2s						
GHO	Glory Hole Cre	33.77	334	P	P	13 32 19.8	+1.5
RIDG	Independent Ri	33.83	339	P	P	13 32 20.9	+2.2
RIDG				IAmb	IAmb	13 33 23.1	
	comp=Z,22nm,1.4s						
EPYK	Eagle Plains	34.04	347	P	P	13 32 21.4	+0.8
EPYK				IAmb	IAmb	13 32 23.5	
	comp=Z,23nm,1.6s						
DHY	Denali Highway	34.13	337	P	P	13 32 21.4	-0.1
IL31		35.19	339	P	P	13 32 31.5	+1.1
IL31				IAmb	IAmb	13 32 32.5	
	comp=Z,5.7nm,0.7s						
ILAR	Eielson Array	35.19	339	P	P	13 32 31.9	+1.4
	comp=Z,3.3nm,0.7s,baz=156,slow=8.1,SNR=89						
ILAR				PcP	PcP	13 35 01.8	+0.6
	comp=Z,0.7nm,0.9s,baz=188,slow=2.6,SNR=4.9						
ILAR	Eielson Array	35.19	339	P	P	13 32 31.5	+1.0
INK	Inuvik	35.29	350	P	P	13 32 32.0	+0.8
	comp=Z,3.0nm,0.7s,baz=154,slow=8.8,SNR=19						
INK	Inuvik	35.29	350	P	P	13 32 32.3	+1.1
INK				IAmb	IAmb	13 32 43.1	
	comp=Z,12nm,1.3s						
WRH	Wood River Hil	35.34	338	P	P	13 32 32.8	+1.1
TRF	Thorofare Moun	35.35	336	P	P	13 32 33.4	+1.3
PRP	Porcupine Dome	35.36	341	P	P	13 32 33.8	+1.7
PRP				IAmb	IAmb	13 32 34.8	
	comp=Z,4.6nm,0.6s						
CCB	Clear Creek Bu	35.38	339	P	P	13 32 33.8	+1.7
CCB				IAmb	IAmb	13 32 47.5	
	comp=Z,13nm,1.5s						
C36M	Paulatuk	35.41	357	P	P	13 32 33.1	+0.8
C36M				IAmb	IAmb	13 32 40.1	
	comp=Z,18nm,1.8s						
KTH	Kantishna Hill	35.63	336	P	P	13 32 35.6	+1.2
PPLA	Purkeypile	35.66	334	P	P	13 32 36.5	+1.8
BPAW	Bear Paw Mtn.	36.01	336	P	P	13 32 38.5	+0.9
BPAW				IAmb	IAmb	13 32 39.6	
	comp=Z,11nm,0.7s						
FYU	Fort Yukon	36.09	342	P	P	13 32 40.2	+2.1
KHLU	Kahalu`u	36.17	256	P	P	13 32 40.2	+0.8
MLY	Manley	36.55	338	P	P	13 32 43.4	+1.3
MLY				IAmb	IAmb	13 32 44.3	
	comp=Z,7.3nm,0.6s						
BMAR	Burnt Mountain	36.61	343	P	P	13 32 44.4	+1.7
TTA	Tatalina	37.11	332	P	P	13 32 48.1	+1.1
IMAR	Indian Mountai	38.12	337	P	P	13 32 56.6	+1.1
TOLK	Toolik Lake Re	38.76	342	P	P	13 33 03.0	+2.2
TOLK				IAmb	IAmb	13 33 04.2	
	comp=Z,9.9nm,0.8s						
TOLK	Toolik Lake Re	38.76	342	P	P	13 33 02.2	+1.4
	baz=137,SNR=8.0						
ANM	Nome	41.55	332	P	P	13 33 25.4	+1.5
ANM				IAmb	IAmb	13 33 26.8	
	comp=Z,21nm,1.6s						
RES	Resolute Bay	42.24	9	P	P	13 33 29.6	+0.3
	comp=Z,1.2nm,0.8s,baz=203,slow=9.8,SNR=5.1						
RDOG	Red Dog Mine	42.26	337	P	P	13 33 30.6	+0.8
RDOG				IAmb	IAmb	13 33 32.0	
	comp=Z,14nm,0.8s						
GAMB	Gambell	43.87	329	P	P	13 33 43.6	+0.9
GAMB				IAmb	IAmb	13 33 45.0	
	comp=Z,15nm,1.6s						
BILL	Bilibino	53.36	333	P	P	13 34 56.1	+0.5
BILL				IAmb	IAmb	13 34 57.0	
	comp=Z,4.5nm,0.8s						
SUMG	Summit	54.85	21	P	P	13 35 07.2	+0.3
SEY	Seymchan	59.85	328	P	P	13 35 42.6	+0.7
	comp=Z,2.1nm,0.6s,baz=106,slow=4.8,SNR=25						
PETK	Petropavlovsk-	60.05	316	P	P	13 35 44.0	+0.5
	comp=Z,5.9nm,0.8s,baz=83,slow=11,SNR=14						
MA2	Magadan	61.63	325	P	P	13 35 55.4	+1.2
	baz=100,slow=7.4,SNR=10						
MA2	Magadan	61.63	325	P	P	13 35 54.8	+0.7
MA2				IAmb	IAmb	13 35 56.1	
	comp=Z,8.0nm,0.9s						
TIXI	Tiksi	64.63	341	P	P	13 36 13.6	-0.3
	comp=Z,3.0nm,0.7s,baz=73,slow=6.9,SNR=16						
TIXI	Tiksi	64.63	341	P	P	13 36 13.4	-0.4
TIXI				IAmb	IAmb	13 36 14.8	
	comp=Z,3.8nm,0.8s						
H11S1	WAKE ISLAND Hy	67.53	278	T	T	14 49 31.6	
	baz=61						
H11S2	WAKE ISLAND Hy	67.53	278	T	T	14 49 16.8	
	baz=61						
H11S3	WAKE ISLAND Hy	67.54	278	T	T	14 49 31.8	
	baz=61						
NRIK	Noril'sk	75.08	351	P	P	13 37 18.1	0.0
	comp=Z,1.9nm,0.6s,baz=26,slow=5.1,SNR=4.1						
USRK	Ussuriysk Ar.	79.14	316	P	P	13 37 40.9	-0.5
	comp=Z,2.9nm,0.9s,baz=17,slow=2.0,SNR=5.3						
FINES	FINESS Array B	80.50	16	P	P	13 37 48.9	+0.5
	comp=Z,3.4nm,0.9s,baz=305,slow=4.9,SNR=3.5						
SONM	Songino Array	89.05	332	P	P	13 38 33.1	+1.1
	comp=Z,0.3nm,0.5s,baz=20,slow=4.6,SNR=3.8						
ZALV	Zalesovo Beam	90.00	346	P	P	13 38 35.9	-0.1
	comp=Z,0.7nm,0.5s,baz=35,slow=3.6,SNR=3.7						
ZALV	Zalesovo Beam	90.00	346	P	P	13 38 35.8	-0.3
HHC	Hu-ho-hao-te	92.31	324	eP	P	13 38 45.5	-1.7
JOW	Kunigami	92.40	305	LR	LR	14 13 10.5	
	comp=Z,70nm,20.9s,baz=240,slow=31						
WMQ	Urumqi	98.84	341	eP	Pdif	13 39 18.3	+1.5

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*IDC **17** 13:35:10.1±1.6, 19°.80S×70°.76W, h0^{km}, mb4.1/3, mb1 4.2/5, mb1mx3.8/49, mbtmp4.1/5, ML3.7/2, MS3.9/1, Ms1 3.9/1, ms1mx3.2/23, Error ellipse: s-maj=43.8km s-min=27.4km az=69.0*

*NEIC **17** 13:35:10.8±2.6, 20°.00S±0°.08×71°.0W±0°.1, h13^{km}±6^{km}, mb4.5/2, Error ellipse: s-maj=19.1km s-min=4.5km az=126.0*

*SJA **17** 13:35:11.1±1.0, 19°.98S×70°.85W, h23^{km}±3^{km}, ML3.3, MW3.1*

*GUC **17** 13:35:13.4±0.5, 19°.95S×70°.88W, h34^{km}±1^{km}, ML3.8*

ISC 17 13:35:12.6±1.5**, 19°.95S**±0°.02×**70°.84W**±0°.06**, h23**^{km}±11^{km}**, n50, σ1**^{s}**51**/71**, mb4.2**/4**, 7C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.76	63	⇓iP	Pb	13 35 26.8	-0.4
PSGC				i S	Sb	13 35 37.7	+0.5
PSGCX	Pisagua	0.76	63	i P	Pb	13 35 26.9	-0.3
PSGCX				eS	Sb	13 35 37.8	+0.6
TA01	Diego Aracena	0.87	135	⇓iP	Pb	13 35 28.5	-0.5
TA01				i S	Sn	13 35 40.4	-1.0
TA01				IAML		13 35 42.9	
	comp=N,4μm,0.4s						
PATCX	Punta Patache	1.08	144	⇑iP	Pb	13 35 32.0	-0.6
PATCX				i S	Sn	13 35 46.4	-0.3
PATCX	Punta Patache	1.08	144	i P	Pb	13 35 31.9	-0.7
PATCX				eS	Sn	13 35 46.7	0.0
PB11	IPOC Station P	1.13	81	⇓iP	Pn	13 35 33.1	0.0
PB11				i S	Sn	13 35 48.5	+0.5
PB11	IPOC Station P	1.13	81		Pn	13 35 32.8	-0.3
PB11	IPOC Station P	1.13	81	i P	Pn	13 35 33.2	0.0
PB11				eS	Sn	13 35 48.5	+0.5
PB12	IPOC Station P	1.41	20	⇑iP	Pn	13 35 37.4	+0.3
PB12				i S	Sn	13 35 55.3	+0.3
PB12				IAML		13 36 04.4	
	comp=E,2μm,0.4s						
PB12	IPOC Station P	1.41	20	i P	Pn	13 35 37.4	+0.3
PB12				eS	Sb	13 35 58.3	+2.3
GO01	Chusmiza	1.57	80	eP	Pn	13 35 40.6	+1.1
GO01				eS	Sb	13 36 01.5	+0.5
GO01	Chusmiza	1.57	80	Pn	Pb	13 35 40.7	-0.6
PB08	IPOC Station P	1.60	97	⇑iP	Pn	13 35 40.6	+0.9
PB08				i S	Sb	13 36 02.2	+0.6
PB08				IAML		13 36 08.8	
	comp=N,2μm,0.4s						
PB08	IPOC Station P	1.60	97	i P	Pb	13 35 40.8	-0.8
PB08				eS	Sb	13 36 02.4	+0.9
PB02	IPOC Station P	1.62	147	⇑iP	Pn	13 35 39.8	-0.1
PB02				i S	Sn	13 36 00.1	0.0
PB02				IAML		13 36 08.6	
	comp=E,3μm,0.5s						
PB02	IPOC Station P	1.62	147	i P	Pn	13 35 39.9	-0.1
PB02				eS	Sb	13 36 03.9	+1.8
AP01	Chacalluta	1.64	17	eP	Pn	13 35 41.4	+1.4
AP01				eS	Sn	13 36 01.0	+0.6
PB01	IPOC Station P	1.67	131	⇑iP	Pn	13 35 41.0	+0.4
PB01				i S	Sb	13 36 02.3	-1.0
PB01	IPOC Station P	1.67	131		Pn	13 35 40.9	+0.4
PB01	IPOC Station P	1.67	131	i P	Pn	13 35 41.0	+0.4
PB01				eS	Sb	13 36 02.8	-0.5
PB07	IPOC Station P	1.98	153	eP	Pn	13 35 44.3	-0.5
PB07				i S	Sn	13 36 09.4	+0.3
PB07	IPOC Station P	1.98	153	i P	Pn	13 35 44.7	-0.2
PB16	IPOC Station P	2.04	38	⇑iP	Pn	13 35 47.3	+1.2
PB16				i S	Sb	13 36 15.0	+0.5
PB16				IAML		13 36 20.7	
	comp=N,1μm,0.5s						
PB03	IPOC Station P	2.32	154	⇑eP	Pn	13 35 49.1	-0.5
PB03				i S	Sn	13 36 18.7	+1.2
PB09	IPOC Station P	2.37	141	i P	Pn	13 35 51.4	+1.2
PB04	IPOC Station P	2.46	165	eP	Pn	13 35 50.3	-1.1
PB04	IPOC Station P	2.46	165		Pn	13 35 50.3	-1.1
PB04	IPOC Station P	2.46	165	i P	Pn	13 35 50.5	-0.9
PB04				eS	Sb	13 36 30.7	+4.6
PB06	IPOC Station P	2.98	157	i P	Pn	13 35 57.9	-0.8
PB06				eS	Sb	13 36 44.4	+3.1
LVC	Limon Verde	3.20	146	Pn	Pn	13 36 03.3	+1.6
	comp=N,3.2nm,0.3s,baz=327,slow=13,SNR=23						
LVC				Sn	Sb	13 36 44.0	-3.7
	comp=N,16nm,0.3s,baz=264,slow=22,SNR=7.4						
LVC	Limon Verde	3.20	146		Pn	13 36 03.2	+1.4
LVC	Limon Verde	3.20	146	i P	Pn	13 36 03.4	+1.6
LVC				IAML		13 36 56.7	
	comp=Z,83nm,0.5s						
PB15	IPOC Station P	3.48	159	i P	Pn	13 36 05.7	+0.1
PB15				eS	Sb	13 37 02.1	+6.4
PB10	IPOC Station P	3.56	176	Pn	Pn	13 36 04.4	-2.0
PB10	IPOC Station P	3.56	176	i P	Pn	13 36 04.5	-1.9
LPAZ	La Paz	4.46	36	Pn	Pb	13 36 26.4	-4.3
	comp=Z,1.7nm,0.3s,baz=226,slow=3.1,SNR=8.1						
LPAZ	La Paz	4.46	36		Pb	13 36 26.1	-4.5
LPAZ	La Paz	4.46	36	i P	Pb	13 36 27.6	-3.0
PB14	IPOC Station P	4.67	175	i P	Pn	13 36 19.6	-2.4
GO02	Mina Guanaco	5.31	168	Pn	Pn	13 36 30.3	-0.6
SIV	San Ignacio	10.09	69	Pn	Pn	13 37 36.8	+0.6
	comp=Z,1.5nm,0.3s,baz=277,slow=10,SNR=9.3						
ATAH	Atahualpa	14.70	329	LR	LR	13 43 36.8	
	comp=Z,518nm,20.6s,baz=251,slow=35						
PTGA	Pitinga	21.87	30	P	P	13 40 02.3	-1.6
	comp=Z,2.3nm,0.3s,baz=323,slow=19,SNR=4.0						
PTGA	Pitinga	21.87	30	P	P	13 40 02.9	-1.0
PTGA				IAmb	IAmb	13 40 03.6	
	comp=Z,12nm,1.3s						
RCBR	Riachuelo	36.73	72	P	P	13 42 17.2	-1.2
RCBR				IAmb	IAmb	13 42 19.9	
	comp=Z,29nm,1.4s						
TORD	Torodi Ar. Bea	78.56	71	P	P	13 47 12.3	-0.5
	comp=Z,2.1nm,0.8s,baz=248,slow=5.4,SNR=7.7						
YKA	Yellowknife Ar	89.14	341	P	P	13 48 06.4	+0.7
	comp=Z,0.4nm,0.6s,baz=142,slow=5.0,SNR=1.4						
MKAR	Makanchi Array	145.39	33	PKPbc	PKPab	13 54 49.7	+0.9
	comp=Z,1.1nm,0.6s,baz=332,slow=4.6,SNR=10						
MKAR	Makanchi Array	145.39	33		PKPbc	13 54 49.4	+0.8
SONM	Songino Array	152.09	4	PKPbc	PKiKP	13 55 07.3	+0.7
	comp=Z,0.4nm,0.5s,baz=14,slow=0.5,SNR=3.7						

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*MEX **17** 13:35:29.9±0.5, 15°.92N×98°.38W, h8^{km}±6^{km}, MD3.9*

*NEIC **17** 13:35:31.5±2.7, 16°.23N±0°.05×98°.58W±0°.06, h10^{km}±2^{km}, mb4.5/12, Md3.9/21(MEX), Error ellipse: s-maj=11.4km s-min=5.7km az=228.0*

ISC 17 13:35:28.2±1.1**, 16°.10N**±0°.06×**98°.39W**±0°.03**, h10**^{km}**, n30, σ1**^{s}**68**/45**, mb4.5**/4**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOIG	Yosondua	1.11	47	eP	Pn	13 35 49.6	-0.4
YOIG				eS	Sn	13 36 05.6	0.0
PEIG	Puerto Escondi	1.20	95	eP	Pn	13 35 49.2	-1.9
PEIG				i S	Sb	13 36 03.9	-2.8
TLIG	Tlapa	1.46	353	eP	Pg	13 35 55.5	-0.8
TLIG				i S	Sg	13 36 15.0	-0.4
TLIG	Tlapa	1.46	353		Sg	13 36 15.0	-0.4
TLIG	Tlapa	1.46	353	Pn	Pb	13 35 55.4	-0.2
HLIG	Huajuapan de L	1.81	18	eP	Pb	13 36 00.5	-1.1
HLIG				eS	Sb	13 36 24.2	-0.2
VHO	Vista Hermosa	1.86	59	eP	Pn	13 36 00.3	-0.1
VHO				i S	Sn	13 36 24.3	+0.2
VHO				i S	Sn	13 36 24.3	+0.2
CAIG	El Cayaco	2.03	298	eP	Pn	13 36 02.2	-0.3
CAIG				i S	Sn	13 36 27.7	-0.2
CAIG	El Cayaco	2.03	298		Pn	13 36 02.2	-0.3
CAIG					Sn	13 36 27.7	-0.2
MEIG	Mezcala	2.16	327	eP	Pn	13 36 04.8	+0.4
MEIG				eS	Sb	13 36 33.6	-0.8
MEIG	Mezcala	2.16	327		Pn	13 36 04.8	+0.4
MEIG					Sb	13 36 33.6	-0.8
PLIG	Platanillo	2.51	335	eP	Pb	13 36 11.3	-2.2
PLIG				i S	Sb	13 36 41.6	-2.9
PLIG	Platanillo	2.51	335		Pb	13 36 11.3	-2.2
PLIG					Sb	13 36 41.6	-2.9
ARIG	Puente Sto Nin	2.86	320	eP	Pn	13 36 15.1	+1.1
ARIG				eS	Sb	13 36 50.7	-3.8
ARIG	Puente Sto Nin	2.86	320		Pn	13 36 15.1	+1.1
ARIG					Sb	13 36 50.7	-3.8
ZIIG	Zihuatanejo	3.30	297	i P	Pn	13 36 20.5	+0.5
ZIIG				i S	Sn	13 36 59.6	+0.3
ZIIG	Zihuatanejo	3.30	297		Pn	13 36 20.5	+0.5
ZIIG					Sn	13 36 59.6	+0.3
MOIG	Morelia	4.44	324	Pn	Pn	13 36 36.2	+0.3
KVTX	Kingsville	11.40	2	Pn	Pn	13 38 11.4	+0.2
ABTX	Abilene, Hawle	16.49	356		P	13 39 23.7	+1.3
344A	Westbrook Farm	16.80	23	Pn	P	13 39 27.1	+1.3
344A				IAmb	IAmb	13 39 36.2	
	comp=Z,208nm,2.0s						
250A	Grady	19.27	33	P	Pn	13 39 54.2	+0.1
X16A	Lo Mia Camp, P	21.68	330	P	P	13 40 22.1	+2.7
PV20	West Nyswonger	24.03	339	P	P	13 40 45.2	+1.6
PV20				IAmb	IAmb	13 40 58.0	
	comp=Z,12nm,1.5s						
ISCO	Idaho Springs	24.44	346	P	P	13 40 50.5	+2.9
Y58A	Scranton	24.47	40	P	P	13 40 51.4	+4.0
OGNE	Ogallala	24.96	353	P	P	13 40 52.9	+0.9
OGNE				IAmb	IAmb	13 41 21.4	
	comp=Z,25nm,1.4s						
RLMT	Red Lodge	30.35	345	P	P	13 41 42.2	+1.9
RLMT				IAmb	IAmb	13 41 42.9	
	comp=Z,9.7nm,0.8s						
BEKR	Beckworth	30.45	325	P	P	13 41 40.2	-1.0
BEKR				IAmb	IAmb	13 42 37.2	
	comp=Z,3.6nm,0.7s						
SFJD	Kangerlussuaq	59.51	20	P	P	13 45 36.1	+4.8

IDC 17 14:03:03.8±2.1**, 1°.19S**×**127°.27E, h0**^{km}**, mb3.5**/2**, mb1 3.7**/3**, mb1mx3.4**/26**, mbtmp3.5**/3**, ML3.5**/1**, Error ellipse: s-maj=168.5km s-min=26.7km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	19.88	160	P	P	14 07 37.0	+0.2
	0.1nm,0.3s,baz=339,slow=11,SNR=5.8						
ASAR	Alice Springs	23.25	164	P	P	14 08 12.9	-0.1
	2.0nm,0.7s,baz=344,slow=11,SNR=41						
MKAR	Makanchi Array	61.91	327	P	P	14 13 25.2	-0.1
	0.2nm,0.4s,baz=112,slow=8.3,SNR=4.6						

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*IDC **17** 14:21:40.2±1.3, 5°.40S×153°.19E, h0^{km}, mb3.7/6, mb1 3.8/7, mb1mx3.6/41, mbtmp3.8/7, ML1.7/1, Error ellipse: s-maj=26.2km s-min=16.2km az=60.0*

ISC 17 14:21:46.3±1.5**, 5°.4S**±0°.1×**153°.1E**±0°.2**, h37**^{km}**, n9,**

σ0^{s}86/10, mb3.8/6, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.48**	**315**	Pg	**Pn**	**14 22 10.2**	**-0.2**
	152nm,0.3s,baz=193,slow=1.1,SNR=243						
KRVT				Lg	Lg	14 22 29.6	
	95nm,0.3s,baz=74,slow=17,SNR=11						
PMG	**Port Moresby**	**7.11**	**235**	Pn	**Pn**	**14 23 28.3**	**+0.5**
	0.8nm,0.3s,baz=93,slow=19,SNR=3.9						
PMG				Sn	**Sn**	**14 24 47.0**	**-0.3**
	2.0nm,0.3s,baz=254,slow=20,SNR=8.3						
WRA	**Warramunga Arr**	**23.29**	**230**	P	**P**	**14 26 50.4**	**-0.6**
	0.9nm,0.8s,baz=55,slow=10,SNR=4.5						
ASAR	**Alice Springs**	**25.93**	**224**	P	**P**	**14 27 14.8**	**-0.4**
	0.5nm,0.9s,baz=56,slow=9.4,SNR=4.7						
CMAR	**Chiang Mai Arr**	**58.36**	**295**	P	**P**	**14 31 39.5**	**+1.2**
	0.3nm,0.4s,baz=118,slow=5.2,SNR=3.2						
PETK	**Petropavlovsk-**	**58.38**	**3**	P	**P**	**14 31 38.5**	**+0.7**
	1.5nm,0.6s,baz=173,slow=8.2,SNR=7.0						
ZALV	**Zalesovo Beam**	**81.77**	**326**	P	**P**	**14 34 00.4**	**-0.7**
	0.9nm,0.8s,baz=75,slow=9.7,SNR=3.8						
BVAR	**Borovoye Array**	**89.85**	**323**	P	**P**	**14 34 40.9**	**-0.3**
	0.5nm,0.6s,baz=97,slow=8.2,SNR=4.0						
TORD	**Torodi Ar. Bea**	**150.74**	**287**	PKPbc	**PKPbc**	**14 41 34.4**	**-1.3**
	0.6nm,0.6s,baz=48,slow=2.1,SNR=3.2						

SJA ***17*** *14:42:32.7±1.2, 20°.02S×70°.81W, h24^{km}±4^{km}, ML3.8, MW3.9*
NEIC ***17*** *14:42:32.1±2.3, 20°.01S±0°.05×70°.87W±0°.08, h9^{km}±4^{km}, mb4.0/5, Error ellipse: s-maj=12.7km s-min=2.1km az=126.0*
IDC ***17*** *14:42:32.1±1.0, 19°.83S×70°.62W, h0^{km}, mb3.7/5, mb1 4.0/7, mb1mx3.8/34, mbtmp3.9/7, ML3.9/2, Error ellipse: s-maj=32.6km s-min=24.1km az=76.0*
GUC ***17*** *14:42:35.4±0.7, 20°.02S×70°.81W, h26^{km}±3^{km}, ML3.9*
ISC 17 14:42:31.8±1.4, **20°.02S**±0°.03×**70°.87W**±0°.05, **h9**^{km}±8^{km}, **n69**, σ**1^{s}10**/87, **mb3.8**/4, **6C-8D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.82**	**59**	⇓iP	**Pb**	**14 42 48.5**	**+0.1**
PSGC				i S	**Sg**	**14 42 58.6**	**+0.2**
PSGCX	**Pisagua**	**0.82**	**59**	i P	**Pb**	**14 42 48.5**	**+0.2**
PSGCX				eS	**Sg**	**14 42 59.1**	**+0.7**
PSGCX				IAML		14 43 01.4	
	comp=Z,3μm,0.5s						
TA01	**Diego Aracena**	**0.85**	**130**	⇓iP	**Pb**	**14 42 48.8**	**+0.1**
TA01				i S	**Sg**	**14 42 59.5**	**+0.2**
TA01				IAML		14 43 02.6	
	comp=N,10μm,0.4s						
PATCX	**Punta Patache**	**1.05**	**140**	⇓iP	**Pg**	**14 42 52.2**	**+0.2**
PATCX				i S	**Sg**	**14 43 05.4**	**-0.1**
PATCX	**Punta Patache**	**1.05**	**140**	i P	**Pg**	**14 42 52.2**	**+0.2**
PATCX				eS	**Sn**	**14 43 07.4**	**-0.1**
PATCX				IAML		14 43 08.6	
	comp=Z,2μm,0.5s						
PB11	**IPOC Station P**	**1.18**	**78**	⇓iP	**Pb**	**14 42 54.0**	**-0.4**
PB11				eS	**Sb**	**14 43 08.6**	**-1.2**
PB11				IAML		14 43 12.5	
	comp=E,5μm,0.6s						
PB11	**IPOC Station P**	**1.18**	**78**		**Pb**	**14 42 53.9**	**-0.4**
PB11	**IPOC Station P**	**1.18**	**78**	i P	**Pb**	**14 42 54.0**	**-0.4**
PB11				eS	**Sb**	**14 43 09.7**	**0.0**
PB11				IAML		14 43 10.5	
	comp=Z,2μm,0.2s						
PB12	**IPOC Station P**	**1.49**	**20**	⇓iP	**Pb**	**14 42 59.9**	**+0.2**
PB12				i S	**Sb**	**14 43 19.1**	**+0.3**
PB12				IAML		14 43 22.3	
	comp=E,2μm,0.2s						
PB12	**IPOC Station P**	**1.49**	**20**	i P	**Pb**	**14 42 59.9**	**+0.2**
PB12				eS	**Sg**	**14 43 20.7**	**+0.9**
PB12				IAML		14 43 22.0	
	comp=Z,1μm,0.3s						
PB02	**IPOC Station P**	**1.59**	**145**	⇑iP	**Pn**	**14 43 00.7**	**+0.5**
PB02				i S	**Sn**	**14 43 20.4**	**-0.5**
PB02				IAML		14 43 26.8	
	comp=E,5μm,0.5s						
PB02	**IPOC Station P**	**1.59**	**145**	i P	**Pn**	**14 43 00.8**	**+0.5**
PB02				eS	**Sn**	**14 43 20.6**	**-0.2**
PB02				IAML		14 43 25.9	
	comp=Z,5μm,0.4s						
GO01	**Chusmiza**	**1.62**	**78**	⇓iP	**Pb**	**14 43 01.7**	**-0.5**
GO01				i S	**Sb**	**14 43 22.6**	**-0.3**
GO01	**Chusmiza**	**1.62**	**78**		**Pb**	**14 43 01.6**	**-0.5**
PB08	**IPOC Station P**	**1.62**	**95**	⇓iP	**Pn**	**14 43 01.4**	**+0.5**
PB08				i S	**Sn**	**14 43 22.3**	**+0.1**
PB08				IAML		14 43 28.1	
	comp=N,2μm,0.3s						
PB08	**IPOC Station P**	**1.62**	**95**	i P	**Pn**	**14 43 01.4**	**+0.5**
PB08				eS	**Sb**	**14 43 22.8**	**-0.1**
PB08				IAML		14 43 26.9	
	comp=Z,1μm,0.5s						
PB01	**IPOC Station P**	**1.65**	**128**	⇓iP	**Pn**	**14 43 01.6**	**+0.6**
PB01				eS	**Sn**	**14 43 22.4**	**-0.1**
PB01				IAML		14 43 27.8	
	comp=E,3μm,0.5s						
PB01	**IPOC Station P**	**1.65**	**128**		**Pn**	**14 43 01.6**	**+0.6**
PB01	**IPOC Station P**	**1.65**	**128**	i P	**Pb**	**14 43 01.9**	**-0.6**
PB01				eS	**Sb**	**14 43 23.4**	**-0.1**
PB01				IAML		14 43 25.6	
	comp=Z,1μm,0.2s						
AP01	**Chacalluta**	**1.71**	**17**	eP	**Pb**	**14 43 02.9**	**-0.6**
AP01				eS	**Sb**	**14 43 25.3**	**+0.2**
AP01				IAML		14 43 28.8	
	comp=N,3μm,0.2s						
PB07	**IPOC Station P**	**1.93**	**152**	⇑iP	**Pn**	**14 43 05.3**	**+0.3**
PB07				i S	**Sb**	**14 43 30.8**	**-0.9**
PB07				IAML		14 43 39.0	
	comp=E,1μm,0.3s						
PB07	**IPOC Station P**	**1.93**	**152**	i P	**Pn**	**14 43 05.4**	**+0.4**
PB07				eS	**Sg**	**14 43 34.6**	**+0.6**
PB07				IAML		14 43 37.5	
	comp=Z,815nm,0.4s						
PB16	**IPOC Station P**	**2.12**	**38**	⇑iP	**Pb**	**14 43 09.5**	**-1.2**
PB16				i S	**Sb**	**14 43 37.1**	**-0.1**
PB16				IAML		14 43 41.8	
	comp=E,1μm,0.7s						
PB16	**IPOC Station P**	**2.12**	**38**	i P	**Pb**	**14 43 09.9**	**-0.7**
PB16				eS	**Sb**	**14 43 38.0**	**+0.8**
PB16				IAML		14 43 44.0	
	comp=Z,758nm,0.4s						
PB03	**IPOC Station P**	**2.27**	**153**	⇑iP	**Pn**	**14 43 10.0**	**+0.3**
PB03				i S	**Sn**	**14 43 38.2**	**+0.3**
PB03				IAML		14 43 48.0	
	comp=E,644nm,0.5s						
PB03	**IPOC Station P**	**2.27**	**153**	i P	**Pn**	**14 43 10.0**	**+0.3**
PB03				IAML		14 43 47.9	
	comp=Z,719nm,0.3s						
PB09	**IPOC Station P**	**2.34**	**140**	⇑iP	**Pn**	**14 43 12.3**	**+1.8**
PB09				eS	**Sn**	**14 43 40.5**	**+1.0**
PB09				IAML		14 43 51.6	
	comp=N,980nm,0.5s						
PB09	**IPOC Station P**	**2.34**	**140**	i P	**Pn**	**14 43 12.4**	**+1.8**
PB09				IAML		14 43 46.4	
	comp=Z,1μm,0.8s						
PB04	**IPOC Station P**	**2.40**	**164**	⇑iP	**Pn**	**14 43 11.3**	**-0.1**
PB04				i S	**Sn**	**14 43 38.7**	**-2.4**
PB04				IAML		14 43 56.0	
	comp=N,775nm,0.6s						
PB04	**IPOC Station P**	**2.40**	**164**		**Pn**	**14 43 11.1**	**-0.4**
PB04	**IPOC Station P**	**2.40**	**164**	i P	**Pn**	**14 43 11.4**	**-0.1**
PB05	**IPOC Station P**	**2.89**	**168**	i P	**Pn**	**14 43 17.6**	**-0.5**
PB05				IAML		14 44 12.4	
	comp=Z,258nm,0.6s						
PB06	**IPOC Station P**	**2.94**	**156**	i P	**Pn**	**14 43 18.8**	**0.0**
PB06				IAML		14 44 11.0	
	comp=Z,588nm,1.1s						
LVC	**Limon Verde**	**3.16**	**145**	Pn	**Pn**	**14 43 24.0**	**+1.9**
	comp=Z,13nm,0.3s,baz=338,slow=9.5,SNR=35						
LVC				Sn	**Sn**	**14 44 02.3**	**+2.1**
	comp=Z,22nm,0.3s,baz=56,slow=14,SNR=6.1						
LVC	**Limon Verde**	**3.16**	**145**		**Pn**	**14 43 23.5**	**+1.4**
LVC	**Limon Verde**	**3.16**	**145**	i P	**Pn**	**14 43 24.0**	**+1.9**
LVC				IAML		14 44 13.1	
	comp=Z,155nm,0.6s						
PB15	**IPOC Station P**	**3.43**	**158**	i P	**Pn**	**14 43 25.6**	**-0.1**
PB15				IAML		14 44 27.2	
	comp=Z,636nm,0.7s						
PB10	**IPOC Station P**	**3.49**	**175**		**Pn**	**14 43 25.3**	**-1.0**
PB10	**IPOC Station P**	**3.49**	**175**	i P	**Pn**	**14 43 25.4**	**-1.0**
PB10				IAML		14 44 46.6	
	comp=Z,58nm,0.4s						
LPAZ	**La Paz**	**4.54**	**36**	Pn	**Pb**	**14 43 47.8**	**-4.2**
	comp=Z,1.8nm,0.3s,baz=250,slow=2.4,SNR=18						
LPAZ	**La Paz**	**4.54**	**36**	Pn	**Pb**	**14 43 48.3**	**-3.7**
PB14	**IPOC Station P**	**4.61**	**175**	i P	**Pn**	**14 43 40.6**	**-1.3**
PB14				IAML		14 45 10.1	
	comp=Z,61nm,0.8s						
GO02	**Mina Guanaco**	**5.25**	**167**		**Pn**	**14 43 50.3**	**-0.5**
YJA	**Yavi**	**5.45**	**114**	i P	Pn	14 44 00.1	+6.6
YJA				IAML		14 45 50.7	
	comp=Z,5.6nm,2.9s						
GO04	**Tololo Observa**	**10.11**	**180**	Pn	**Pn**	**14 44 57.1**	**-0.3**
SIV	**San Ignacio**	**10.15**	**68**	Pn	**Pn**	**14 44 57.1**	**-0.7**
	comp=Z,1.2nm,0.3s,baz=272,slow=9.7,SNR=19						
SIV				Sn	**Sn**	**14 46 47.9**	**-3.9**
	baz=158,slow=19,SNR=1.9						
PLCA	**Paso Flores**	**20.65**	**179**	P	Pn	14 47 15.6	+1.5
	comp=Z,2.7nm,0.7s,baz=25,slow=11,SNR=5.4						
PLCA	**Paso Flores**	**20.65**	**179**	P	**P**	**14 47 12.2**	**+0.4**
PLCA				IAmb	IAmb	14 47 18.2	
	comp=Z,8.4nm,1.1s						
PTGA	**Pitinga**	**21.94**	**30**	P	**P**	**14 47 24.2**	**-1.6**
	comp=Z,1.3nm,0.3s,baz=329,slow=19,SNR=2.0						
RUSC	**La Rusia**	**25.84**	**355**	P	**P**	**14 48 05.1**	**+0.8**
URIC	**Uribia, Colomb**	**31.54**	**358**	P	**P**	**14 48 54.5**	**0.0**
BANI	**BANI**	**38.18**	**1**	P	**P**	**14 49 51.9**	**0.0**
TXAR	**Lajitas Array**	**58.38**	**326**	P	**P**	**14 52 29.1**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=161,slow=5.7,SNR=2.8						
PV09	**Paradox Valley**	**68.38**	**328**	P	**P**	**14 53 34.4**	**+0.3**
LCMT	**Little Creek M**	**69.38**	**325**	P	**P**	**14 53 40.0**	**-0.2**
MSU	**Marysvale**	**69.93**	**327**	P	**P**	**14 53 44.6**	**+0.9**
TORD	**Torodi Ar. Bea**	**78.61**	**71**	P	**P**	**14 54 33.9**	**-0.6**
	comp=Z,0.9nm,0.4s,baz=249,slow=5.3,SNR=14						
YKA	**Yellowknife Ar**	**89.19**	**341**	P	**P**	**14 55 28.7**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=140,slow=4.7,SNR=8.7						
H11S2	**WAKE ISLAND Hy**	**125.85**	**279**	T	T	17 21 04.9	
	baz=101,slow=74,SNR=48						
H11S1	**WAKE ISLAND Hy**	**125.86**	**279**	T	T	17 20 59.0	
	baz=101,slow=74,SNR=32						
H11S3	**WAKE ISLAND Hy**	**125.87**	**279**	T	T	17 21 03.8	
	baz=101,slow=74,SNR=26						
H11N3	**WAKE ISLAND Hy**	**125.90**	**280**	T	T	17 21 07.4	
	baz=102,slow=74,SNR=12						
H11N2	**WAKE ISLAND Hy**	**125.92**	**280**	T	T	17 21 08.8	
	baz=102,slow=74,SNR=14						
H11N1	**WAKE ISLAND Hy**	**125.92**	**280**	T	T	17 21 08.9	
	baz=102,slow=74,SNR=10.0						
MKAR	**Makanchi Array**	**145.46**	**33**	PKPbc	**PKPab**	**15 02 11.1**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=326,slow=2.8,SNR=15						
MKAR	**Makanchi Array**	**145.46**	**33**		**PKPab**	**15 02 10.9**	**+0.3**
KLR	**Kul'dur**	**145.69**	**333**	PKPbc	**PKPab**	**15 02 12.2**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=52,slow=7.0,SNR=4.5						
SONM	**Songino Array**	**152.16**	**4**	PKPbc	**PKiKP**	**15 02 29.1**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=63,slow=0.6,SNR=3.8						
SONM	**Songino Array**	**152.16**	**4**		**PKiKP**	**15 02 28.5**	**+0.2**

BJI ***17*** *14:43:05.9±0.0, 24°.71N×99°.58E, h5^{km}, ML3.6/6*
IDC ***17*** *14:43:07.8±1.7, 24°.68N×99°.55E, h0^{km}, mb3.4/2, mb1 3.5/3, mb1mx3.2/42, mbtmp3.4/3, ML3.6/1, MS4.1/1, Ms1 4.1/1, ms1mx3.2/36, Error ellipse: s-maj=42.1km s-min=18.9km az=90.0*
NEIC ***17*** *14:43:16.8±1.8, 25°.6N±0°.1×99°.57E±0°.05, h10^{km}±1^{km}, mb4.2/7, Error ellipse: s-maj=18.0km s-min=7.6km az=177.0*
ISC 17 14:43:08.1±0.7, **24°.51N**±0°.05×**99°.61E**±0°.07, **h10**^{km}, **n30**, σ**1^{s}67**/29, **mb4.0**/6, **Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**2.91**	**77**	Pg	**Pb**	**14 44 00.0**	**-0.3**
KMI				Sg	**Sb**	**14 44 38.3**	**+2.2**
KMI				smax	smax		
	comp=N,310nm,0.8s						
KMI				smax	smax		
	comp=E,150nm,0.9s						
KMI	**Kunming**	**2.91**	**77**	Pn	**Pb**	**14 44 00.1**	**-0.3**
SLVN	**Son La**	**5.07**	**128**		**Pg**	**14 44 44.8**	**-0.5**
CHTO	**Chiang Mai**	**5.71**	**186**		**Pg**	**14 44 55.8**	**-1.6**
CMMT	**Chiang Mai**	**5.71**	**186**	P	**Pn**	**14 44 34.0**	**+1.0**
CMMT				Pg	Pb	14 44 54.9	+7.1
CMMT				Sg	**Sg**	**14 46 10.4**	**-1.0**
LAMP	**Lampang**	**5.96**	**180**	Pg	Pg	14 45 00.4	-2.0
LAMP				Sg	**Sg**	**14 46 21.1**	**+1.5**
CM31	**Chiang Mai Arr**	**6.06**	**186**	Pg	Pb	14 45 01.1	+7.3
CM31	**Chiang Mai Arr**	**6.06**	**186**		Pb	14 45 01.5	+7.6
CMAR	**Chiang Mai Arr**	**6.06**	**186**	Pn	**Pn**	**14 44 39.5**	**+1.7**
	0.4nm,0.3s,baz=0.2,slow=13,SNR=7.2						
CMAR				Pg	Pg	14 45 02.1	-2.1
	1.3nm,0.3s,baz=356,slow=18,SNR=26						
CMAR				Lg	Lg	14 46 26.6	
	2.4nm,0.3s,baz=1.7,slow=29,SNR=16						
CMAR	**Chiang Mai Arr**	**6.06**	**186**		**Pg**	**14 45 02.3**	**-1.9**
CM15	**Chiang Mai Arr**	**6.06**	**186**	Pg	Pg	14 45 02.2	-2.1
CM09	**Chiang Mai Arr**	**6.07**	**186**	Pg	Pg	14 45 02.2	-2.1
CM02	**Chiang Mai Arr**	**6.08**	**186**	P	**Pn**	**14 44 39.0**	**+0.9**
CM02				Pg	Pg	14 45 02.5	-2.1
CM02				Sg	**Sg**	**14 46 22.3**	**-1.1**
CM04	**Chiang Mai Arr**	**6.11**	**186**	Pg	**Pg**	**14 45 03.3**	**-1.9**
CM04				Sg	**Sg**	**14 46 23.7**	**-0.7**
CM05	**Chiang Mai Arr**	**6.11**	**186**	P	**Pn**	**14 44 39.7**	**+1.1**
CM05				Sg	**Sg**	**14 46 25.3**	**+0.8**
MHMT	**Maesarieng**	**6.50**	**194**	Sg	**Sg**	**14 46 39.0**	**+2.3**
WHN	**Wuhan**	**14.39**	**62**	P	**P**	**14 46 35.3**	**-3.6**
WMQ	**Urumqi**	**21.59**	**336**	eP	**P**	**14 47 55.6**	**-2.5**
SONM	**Songino Array**	**23.89**	**11**	P	**P**	**14 48 21.0**	**-1.1**
	0.5nm,0.8s,baz=190,slow=8.5,SNR=3.7						
SONM	**Songino Array**	**23.89**	**11**	P	**P**	**14 48 20.1**	**-2.0**
ULN	**Ulaanbaatar**	**24.04**	**12**	P	**P**	**14 48 22.0**	**-1.5**
ULN				IAmb	IAmb	14 48 24.8	
	comp=Z,6.2nm,1.6s						
MK31	**Makanchi Array**	**26.20**	**332**	P	**P**	**14 48 42.6**	**-0.3**
MKAR	**Makanchi Array**	**26.20**	**332**	P	**P**	**14 48 43.4**	**+0.4**
	comp=Z,1.1nm,0.8s,baz=133,slow=8.9,SNR=9.0						
MKAR	**Makanchi Array**	**26.20**	**332**	P	**P**	**14 48 42.5**	**-0.4**
TLY	**Talaya**	**27.30**	**5**	LR	LR	15 01 32.7	
	comp=Z,408nm,18.7s,baz=60,slow=41						
TLY	**Talaya**	**27.30**	**5**	P	**P**	**14 48 53.2**	**+0.4**
TLY				IAmb	IAmb	14 48 54.3	
	comp=Z,2.4nm,0.6s						
HIA	**Hailar**	**29.31**	**27**	P	**P**	**14 49 11.5**	**+0.7**
HIA				IAmb	IAmb	14 50 07.0	
	comp=Z,5.3nm,0.7s						
SOEI	**Soe**	**41.71**	**142**	P	P	14 51 14.1	+17
GERES	**GERESS Array B**	**69.34**	**315**	P	**P**	**14 54 19.3**	**+3.3**
RDOG	**Red Dog Mine**	**70.26**	**23**	P	**P**	**14 54 22.8**	**+1.6**
RDOG				IAmb	IAmb	14 55 03.7	
	comp=Z,4.9nm,1.4s						

NEIC ***17*** *14:58:14.0±1.2, 28°.2N±0°.1×139°.3E±0°.2, h420^{km}±13^{km}, mb4.4/9, Error ellipse: s-maj=31.5km s-min=13.8km az=76.0*
IDC ***17*** *14:58:14.8±0.9, 28°.31N×139°.99E, h445^{km}±39^{km}, mb3.1/2, mb1 3.0/6, mb1mx2.6/65, mbtmp3.8/6, Error ellipse: s-maj=120.4km s-min=11.8km az=74.0*
JMA ***17*** *14:58:15.7±0.2, 28°.51N×140°.08E, h436^{km}, M3.5*
ISC 17 14:58:14.9±0.7, **28°.31N**±0°.08×**139°.8E**±0°.1, **h450**^{km}, **n24**, σ**1^{s}64**/28, **mb4.4**/6, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.40**	**120**	P	**P**	**14 59 17.3**	**-0.5**
CBIJ				eS	**S**	**15 00 05.6**	**-3.2**
JCJ	**Chichijima**	**2.40**	**120**	P	**P**	**14 59 17.5**	**-0.3**
	8.9nm,0.3s,baz=303,slow=22,SNR=13						
JCJ				S	**S**	**15 00 06.9**	**-1.9**
	21nm,0.3s,baz=284,slow=22,SNR=20						
JHH2	**Haha-jima-NKT2**	**2.66**	**128**	eS	**S**	**15 00 10.2**	**-1.7**
JHJ	**Hachijo jima 2**	**4.80**	**359**	P	**P**	**14 59 37.2**	**0.0**
	4.0nm,0.3s,baz=66,slow=20,SNR=2.9						
JHJ				S	**S**	**15 00 43.3**	**-1.1**
	4.1nm,0.3s,baz=60,slow=20,SNR=2.6						
JRY	**Ryogami san**	**7.73**	**354**	P	**P**	**15 00 07.3**	**0.0**
JAG	**Ashikaga**	**8.10**	**358**	P	**P**	**15 00 10.3**	**-0.9**
JAG				S	**S**	**15 01 42.2**	**-4.6**
JHO	**Hitachi**	**8.30**	**4**	P	**P**	**15 00 13.6**	**+0.2**
MJAR	**Matsushiro Arr**	**8.33**	**351**	P	**P**	**15 00 14.1**	**+0.4**
	0.1nm,0.3s,baz=166,slow=9.8,SNR=4.6						
MAJO	**Matsushiro**	**8.33**	**351**	P	**P**	**15 00 13.0**	**-0.7**
MJB9	**Matsu-Tunnel**	**8.33**	**351**	P	**P**	**15 00 12.9**	**-0.8**
ERM	**Erimo**	**13.94**	**10**	P	**P**	**15 01 16.5**	**+2.1**
USRK	**Ussuriysk Ar.**	**17.07**	**340**	P	**P**	**15 01 48.6**	**+1.0**
	baz=156,slow=12,SNR=3.5						
WB0	**Warramunga Arr**	**48.08**	**187**	P	**P**	**15 06 12.4**	**+0.1**
WB0				IAmb	IAmb	15 06 31.6	
	comp=Z,31nm,1.9s						
FITZ	**Fitzroy Crossi**	**48.13**	**198**	P	**P**	**15 06 12.4**	**-0.3**
WRAB	**Tennant Creek**	**48.25**	**187**	P	**P**	**15 06 13.5**	**-0.1**
WR0	**Warramunga Arr**	**48.26**	**187**	P	**P**	**15 06 13.4**	**-0.2**
WR0				IAmb	IAmb	15 06 52.9	
	comp=Z,34nm,1.9s						
WB2	**Warramunga Arr**	**48.26**	**187**	P	**P**	**15 06 13.5**	**-0.1**
WB2				IAmb	IAmb	15 07 32.6	
	comp=Z,37nm,1.9s						
WRA	**Warramunga Arr**	**48.26**	**187**	P	**P**	**15 06 13.8**	**+0.2**
	comp=Z,1.1nm,0.3s,baz=4.7,slow=7.6,SNR=17						
WRA	**Warramunga Arr**	**48.26**	**187**	P	**P**	**15 06 13.5**	**-0.2**
ASAR	**Alice Springs**	**51.99**	**187**	P	**P**	**15 06 41.2**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=3.6,slow=5.0,SNR=24						
KKAR	**Karatay Array**	**56.69**	**305**	P	**P**	**15 07 13.8**	**-0.5**
RIDG	**Independent Ri**	**58.54**	**30**	P	**P**	**15 07 30.9**	**+4.3**
FORT	**Forrest**	**59.82**	**192**	P	**P**	**15 07 36.2**	**+0.7**
KIV	**Kislovodsk**	**75.70**	**312**	P	**P**	**15 09 12.6**	**-0.6**
KIV				IAmb	IAmb	15 09 13.8	
	comp=Z,12nm,1.1s						

MEX 17 15:01:17.1±0.8, **18°.07N**×**99°.03W**, **h55**^{km}±8^{km}, **MD3.9, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLIG	**Platanillo**	**0.56**	**305**	i P	Pn	15 01 28.0	-1.4
PLIG				eS	Sn	15 01 36.5	-1.9
MEIG	**Mezcala**	**0.58**	**256**	eP	Pn	15 01 28.1	-1.7
MEIG				eS	Sn	15 01 37.4	-1.5
TLIG	**Tlapa**	**0.67**	**139**	eP	Pn	15 01 29.4	-1.4
TLIG				eS	Sn	15 01 38.7	-2.0
YAIG	**Yautepec**	**0.79**	**357**	i P	Pn	15 01 30.9	-1.5
YAIG				eS	Sn	15 01 40.9	-2.6
FTIG	**Fresnillo de T**	**0.86**	**101**	i P	Pn	15 01 32.2	-1.1
FTIG				i S	Sn	15 01 42.6	-2.6
HLIG	**Huajuapan de L**	**1.19**	**101**	i P	Pn	15 01 36.8	-0.9
HLIG				i S	Sn	15 01 51.0	-1.9
ARIG	**Puente Sto Nin**	**1.27**	**280**	eP	Pn	15 01 37.8	-0.9
ARIG				i S	Sn	15 01 53.9	-0.9
ARIG	**Puente Sto Nin**	**1.27**	**280**	i P	Pn	15 01 37.8	-0.9
ARIG				eS	Sn	15 01 53.2	-1.6
CAIG	**El Cayaco**	**1.56**	**230**	eP	Pn	15 01 40.3	-2.3
CAIG				i S	Sn	15 02 00.1	-1.6
ZIIG	**Zihuatanejo**	**2.37**	**259**	eP	Pn	15 01 52.0	-1.5
ZIIG				i S	Sn	15 02 20.0	-1.5
ZIIG	**Zihuatanejo**	**2.37**	**259**	eP	Pn	15 01 51.9	-1.6
ZIIG				i S	Sn	15 02 19.5	-1.9
MOIG	**Morelia**	**2.60**	**308**	eP	Pn	15 01 56.7	-0.2
MMIG	**Aquila**	**4.11**	**274**	i P	Pn	15 02 16.2	-1.3
MMIG				i S	Sn	15 03 03.3	-1.0

DJA ***17*** *15:07:52.8±0.9, 3°S±2°×13°0E±°, h15^{km}±7^{km}, M4.1/10, mB5.0/1, mb4.5/3, MLv4.0/10, Mw(mB)4.3/1*
IDC ***17*** *15:07:54.3±2.0, 3°.00S×130°.31E, h53^{km}±22^{km}, mb3.7/7, mb1 3.9/11, mb1mx3.7/32, mbtmp4.0/11, ML3.9/4, MS3.5/1, Ms1 3.5/1, ms1mx2.9/33, Error ellipse: s-maj=22.4km s-min=10.6km az=81.0*
NEIC ***17*** *15:07:54.4±1.8, 3°.01S±0°.07×130°.22E±0°.05, h50^{km}±8^{km}, mb4.3/20, Error ellipse: s-maj=10.7km s-min=6.7km az=156.0*
ISC 17 15:07:49.3±1.2, **2°.89S**±0°.03×**130°.27E**±0°.05, **h10**^{km}±8^{km}, **n60**, σ**1^{s}90**/66, **mb4.2**/13, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.42**	**251**	P	**Pn**	**15 08 13.6**	**-1.6**
MSAI				S	**Sb**	**15 08 30.4**	**-3.6**
BNDI	**Bandanaira**	**1.66**	**193**	P	**Pg**	**15 08 21.7**	**+0.5**
BNDI				S	**Sg**	**15 08 44.0**	**+1.1**
FAKI	**Fak Fak**	**1.97**	**91**	P	**Pg**	**15 08 29.2**	**+2.0**
FAKI	**Fak Fak**	**1.97**	**91**		**Pg**	**15 08 27.2**	**+0.1**
AAI	**Ambon**	**2.22**	**249**	P	**Pn**	**15 08 25.8**	**-0.5**
AAI				S	**Sn**	**15 08 51.0**	**-2.8**
SIJI	**Sorong**	**2.24**	**26**	P	**Pg**	**15 08 30.6**	**-1.6**
	14nm,0.3s,baz=223,slow=23,SNR=43						
SIJI				S	**Sb**	**15 08 57.9**	**+0.2**
	16nm,0.3s,baz=248,slow=7.5,SNR=5.5						
SIJI				LR	LR	15 09 50.4	
	comp=Z,993nm,18.7s,baz=179,slow=50						
SWI	**Sorong**	**2.24**	**26**	P	**Pb**	**15 08 30.4**	**+0.5**
SWI				S	**Sg**	**15 08 59.6**	**-1.8**
NLAI	**Namlea**	**3.19**	**264**	P	**Pn**	**15 08 38.6**	**-0.9**
LBMI	**Labuha**	**3.56**	**309**	P	**Pn**	**15 08 43.8**	**-0.9**
RKPI	**Ransiki, Papua**	**4.13**	**71**	P	**Pb**	**15 08 58.4**	**-3.8**
SANI	**Sanana**	**4.36**	**281**	P	**Pn**	**15 08 53.0**	**-2.7**
BAKI	**Biak**	**6.07**	**74**	P	Pn	15 09 25.8	+6.6
	106nm,0.9s						
BBSI	**Bau Bau**	**8.10**	**251**	P	**Pn**	**15 09 47.1**	**-0.1**
	0.0nm6.5nm,1.0s						
APSI	**Ampana**	**8.84**	**283**	P	**Pn**	**15 09 55.2**	**-2.1**
MRSI	**Marisa**	**8.97**	**292**	P	**Pn**	**15 09 57.5**	**-1.6**
SOEI	**Soe**	**9.06**	**221**		**Pn**	**15 10 02.2**	**+1.7**
MMRI	**Maumere**	**9.82**	**234**	Pn	**Pn**	**15 10 14.6**	**+3.9**
MTN	**Manton Dam**	**9.93**	**175**		**Pn**	**15 10 12.6**	**+0.4**
KAPI	**Kappang**	**10.71**	**258**	P	**Pn**	**15 10 24.3**	**+1.4**
	0.3nm,0.3s,baz=70,slow=15,SNR=3.1						
KNRA	**Kununurra**	**12.79**	**187**		**Pn**	**15 10 49.3**	**-2.2**
FITZ	**Fitzroy Crossi**	**15.78**	**196**	P	**Pn**	**15 11 31.5**	**-0.3**
	0.6nm,0.3s,baz=14,slow=0.3,SNR=17						
FITZ	**Fitzroy Crossi**	**15.78**	**196**		**Pn**	**15 11 31.6**	**-0.3**
COEN	**Coen**	**16.83**	**132**	P	**P**	**15 11 47.9**	**+0.4**
WRAB	**Tennant Creek**	**17.40**	**167**	P	**Pn**	**15 11 50.8**	**-1.6**
WRAB				IAmb	IAmb	15 11 57.7	
	comp=Z,41nm,1.8s						
WRA	**Warramunga Arr**	**17.41**	**167**	P	**Pn**	**15 11 50.4**	**-2.2**
	comp=Z,0.6nm,0.3s,baz=343,slow=13,SNR=20						
WRA				S	Sn	15 14 55.9	-11
	comp=Z,0.2nm,0.3s,baz=335,slow=27,SNR=5.1						
WRA	**Warramunga Arr**	**17.41**	**167**	Pn	**Pn**	**15 11 51.2**	**-1.3**
WB2	**Warramunga Arr**	**17.41**	**167**	Pn	**Pn**	**15 11 50.6**	**-1.9**
WB2				IAmb	IAmb	15 11 59.0	
	comp=Z,64nm,1.8s						
WR0	**Warramunga Arr**	**17.47**	**167**		**Pn**	**15 11 52.7**	**-0.6**
WR0				IAmb	IAmb	15 12 02.1	
	comp=Z,51nm,1.7s						
AS31	**Alice Springs**	**20.95**	**171**	P	**P**	**15 12 32.6**	**0.0**
ASAR	**Alice Springs**	**20.95**	**171**	P	**P**	**15 12 32.9**	**+0.2**
	comp=Z,22nm,0.8s,baz=349,slow=9.7,SNR=86						
ASAR				S	**S**	**15 16 21.2**	**-5.1**
	comp=Z,3.3nm,0.9s,baz=349,slow=22,SNR=9.8						
ASAR	**Alice Springs**	**20.95**	**171**	P	**P**	**15 12 32.4**	**-0.3**
PSA00	**Pilbara Seismi**	**21.16**	**208**	P	**P**	**15 12 35.0**	**+0.2**
PSA00				IAmb	IAmb	15 12 36.6	
	comp=Z,9.2nm,0.8s						
CTA	**Charters Tower**	**23.14**	**139**	P	**P**	**15 12 57.1**	**+1.1**
	comp=Z,2.2nm,0.7s,baz=323,slow=5.7,SNR=2.8						
TATO	**Taipei**	**28.98**	**343**	P	**P**	**15 13 50.5**	**+1.2**
KULM	**Kulim**	**30.69**	**285**	P	**P**	**15 14 06.2**	**+1.5**
STKA	**Stephens Creek**	**30.74**	**161**	P	**P**	**15 14 03.8**	**-1.1**
	comp=Z,0.9nm,0.3s,baz=343,slow=8.2,SNR=6.3						
STKA	**Stephens Creek**	**30.74**	**161**	P	**P**	**15 14 04.4**	**-0.5**
RPSI	**Rantau Prapat**	**31.82**	**280**	P	**P**	**15 14 15.4**	**+0.8**
RPSI				IAmb	IAmb	15 14 31.8	
	comp=Z,5.8nm,1.0s						
WHN	**Wuhan**	**36.56**	**337**	P	**P**	**15 14 58.4**	**+3.0**
CMAR	**Chiang Mai Arr**	**37.44**	**306**	P	**P**	**15 15 04.5**	**+1.4**
	comp=Z,0.5nm,0.4s,baz=124,slow=7.6,SNR=7.5						
CMAR	**Chiang Mai Arr**	**37.44**	**306**	P	**P**	**15 15 03.7**	**+0.5**
CHTO	**Chiang Mai**	**37.62**	**306**	P	**P**	**15 15 05.0**	**+0.2**
CHTO				IAmb	IAmb	15 15 18.0	
	comp=Z,5.1nm,1.2s						
ENH	**Enshi**	**38.49**	**330**	P	**P**	**15 15 11.2**	**-0.8**
LZH	**Lanzhou**	**45.97**	**330**	eP	**P**	**15 16 14.5**	**+1.5**
LZH				pP	sP	15 16 31.0	+14
LZH				sP	pP	15 16 38.1	+22
LZH				PP	PP	15 18 11.5	+11
HHC	**Hu-ho-hao-te**	**46.76**	**340**	eP	**P**	**15 16 21.8**	**+2.7**
GTA	**Gaotai**	**50.56**	**329**	eP	**P**	**15 16 46.9**	**-1.5**
GTA				pP	sP	15 17 04.0	+12
GTA				sP	pP	15 17 10.9	+20
ULN	**Ulaanbaatar**	**54.48**	**341**	P	**P**	**15 17 16.6**	**-0.7**
ULN				IAmb	IAmb	15 17 19.6	
	comp=Z,3.6nm,1.1s						
SONM	**Songino Array**	**54.67**	**340**	P	**P**	**15 17 18.9**	**+0.2**
	comp=Z,1.2nm,1.0s,baz=158,slow=8.5,SNR=6.2						
SONM	**Songino Array**	**54.67**	**340**	P	**P**	**15 17 19.0**	**+0.4**

WMQ	**Urumqi**	60.15	326	*e*P	P	15 18 00.0	+2.7
YAK	**Yakutsk**	64.74	360	P	P	15 18 28.8	+1.2
MKAR	**Makanchi Array**	64.98	326	P	P	15 18 29.4	-0.1
	comp=Z,0.4nm,0.5s,baz=115,slow=8.1,SNR=4.7						
KSH	**Kashi**	65.22	316	P	P	15 18 34.1	+2.7
KSH				sP	PcP	15 18 57.3	-6.6
KSH				PP	PP	15 21 01.5	+6.5
KSH				S	S	15 27 13.8	-1.3
KSH				sS	sS	15 27 41.1	+21
KSH	**Kashi**	65.22	316	SS	SS	15 31 29.0	+1.1
ZAA0	**Zalesovo Array**	68.05	333	P	P	15 18 48.9	-0.1
ZAA0				IAmb	IAmb	15 18 50.9	
	comp=Z,3.1nm,1.1s						
ZALV	**Zalesovo Beam**	68.05	333	P	P	15 18 47.7	-1.3
	comp=Z,0.4nm,0.4s,baz=128,slow=4.1,SNR=4.6						
ZALV	**Zalesovo Beam**	68.05	333	P	P	15 18 48.4	-0.6
KBL	**Kabul**	68.37	309	P	P	15 18 51.4	-0.3
KBL				IAmb	IAmb	15 20 34.8	
	comp=Z,13nm,1.9s						
KURK	**Kurchatov**	69.19	328	P	P	15 18 56.1	0.0
KURK				IAmb	IAmb	15 19 04.8	
	comp=Z,3.6nm,0.9s						
ABKAR	**Akbulak array**	79.49	321	P	P	15 19 55.8	-0.4

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*TAP **17** 15:19:56.3, 24°.88N×122°.19E, h7km, ML2.7, C*
*JMA **17** 15:19:56.7±0.1, 24°.79N×122°.22E, h2km, M2.5*
ISC 17 15:19:56.6±1.0, **24°.84N**±0°.02×**122°.22E**±0°.02, **h8**km±9km, **n65**, σ**0s.62**/121, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	0.27	308	*i* P	Pg	15 20 01.6	-0.3
	baz=306						
TWB1				*i* S	Sg	15 20 05.0	-0.5
	baz=306						
EOS1	**EOS1**	0.30	196	*e*P	Pb	15 20 03.8	-0.5
	baz=205						
EOS1				S	Sb	15 20 09.1	-0.4
	baz=205						
NTC	**Toucheng**	0.35	272	*e*P	Pg	15 20 03.7	+0.1
	baz=279						
NTC				S	Sg	15 20 09.3	+1.0
	baz=279						
TIPB	**Shuangxi**	0.38	290	*e*P	Pg	15 20 04.0	0.0
	baz=286						
TIPB				*e*S	Sg	15 20 08.9	-0.1
	baz=286						
TWC	**Suao**	0.41	235	*e*P	Pg	15 20 04.5	-0.1
	baz=231						
TWC				*e*S	Sg	15 20 10.2	+0.2
	baz=231						
NWF	**Wu-fen Shan**	0.46	300	P	Pg	15 20 05.7	+0.2
	baz=297						
NWF				*e*S	Sg	15 20 12.1	+0.5
	baz=297						
WFSB	**Wu-fen Shan**	0.46	300	*e*P	Pg	15 20 05.6	+0.1
	baz=297						
WFSB				*e*S	Sg	15 20 11.7	+0.2
	baz=297						
TWE	**Neicheng**	0.52	256	P	Pg	15 20 06.5	-0.1
	baz=254						
TWE				S	Sg	15 20 13.8	+0.4
	baz=254						
SLBB	**Yuanshan**	0.54	261	*e*P	Pg	15 20 07.0	0.0
	baz=259						
SLBB				S	Sb	15 20 14.8	-1.5
	baz=259						
TWA	**Mucha**	0.59	283	*e*P	Pb	15 20 09.3	+0.1
	baz=281						
TWA				*e*S	Sb	15 20 17.5	-0.4
	baz=281						
ENA	**Nanau**	0.60	227	P	Pg	15 20 08.2	0.0
	baz=224						
ENA				*e*S	Sg	15 20 16.2	+0.2
	baz=224						
ENTT	**Nioudou**	0.63	251	P	Pg	15 20 08.8	+0.1
	baz=249						
ENTT				*e*S	Sb	15 20 17.6	-1.2
	baz=249						
NHDH	**Xindian Distri**	0.64	281	*e*P	Pb	15 20 10.1	0.0
	baz=278						
NHDH				*e*S	Sb	15 20 18.3	-0.9
	baz=278						
NWLT	**Wulai**	0.65	264	*e*P	Pb	15 20 10.2	-0.1
	baz=253						
NWLT				*e*S	Sg	15 20 18.3	+0.6
	baz=253						
YM01	**YM01**	0.66	297	P	Pg	15 20 09.8	+0.4
	baz=295						
YM01				*e*S	Sb	15 20 19.6	-0.3
	baz=295						
YM08	**YM08**	0.67	301	*e*P	Pg	15 20 09.6	+0.2
	baz=299						
YM08				*e*S	Sb	15 20 19.2	-0.8
	baz=299						
YM11	**YM11**	0.67	299	P	Pg	15 20 09.8	+0.3
	baz=297						
YM11				S	Sb	15 20 19.4	-0.6
	baz=297						
YM05	**YM05**	0.67	298	*e*P	Pg	15 20 09.9	+0.3
	baz=296						
YM05				*e*S	Sb	15 20 19.4	-0.9
	baz=296						
YM10	**YM10**	0.67	298	*i* P	Pg	15 20 09.9	+0.3
	baz=295						
YM10				*e*S	Sb	15 20 19.8	-0.4
	baz=295						
NDT	**Datong Townshi**	0.69	250	*e*P	Pg	15 20 09.8	0.0
	baz=248						
NDT				S	Sb	15 20 19.3	-1.3
	baz=248						
YM04	**YM04**	0.69	297	P	Pg	15 20 10.3	+0.3
	baz=294						
YM04				*e*S	Sb	15 20 20.0	-0.7
	baz=294						
TWY	**Chenhua**	0.71	308	P	Pg	15 20 10.6	+0.4
	baz=306						
TWY				*e*S	Sb	15 20 20.5	-0.7
	baz=306						
JYNG	**Yonagunijimaku**	0.77	120	P	Pg	15 20 11.3	-0.1
JYNG				*e*S	Sg	15 20 21.9	+0.5
YHNB	**Yeheng**	0.79	257	P	Pg	15 20 11.5	-0.2
	baz=248						
YHNB				*e*S	Sg	15 20 21.8	-0.2
	baz=248						
PCYT	**Pengchaiyu**	0.79	350	*e*P	Pg	15 20 11.2	-0.8
	baz=349						
NSK	**Sanguang**	0.80	258	P	Pg	15 20 12.0	0.0
	baz=249						
NSK				*e*S	Sg	15 20 22.2	-0.3
	baz=249						
YOJ	**Yonaguni jima**	0.81	118	*e*P	Pg	15 20 12.6	+0.3
	baz=120						
YOJ	**Yonaguni jima**	0.81	118	P	Pg	15 20 11.8	-0.5
YOJ				*e*S	Sg	15 20 23.5	+0.6
NNSH	**Datong**	0.86	242	P	Pg	15 20 13.0	-0.2
	baz=241						
NNSH				S	Sb	15 20 24.9	-0.9
	baz=241						
NNSB	**Datong**	0.87	242	P	Pg	15 20 13.2	0.0
	baz=230						
NNSB				S	Sb	15 20 24.9	-0.9
	baz=230						
NNS	**Nan Shan**	0.87	243	*e*P	Pb	15 20 13.4	-0.6
	baz=230						
NNS				*e*S	Sb	15 20 24.9	-1.0
	baz=230						
NACB	**Ninganchiao**	0.88	221	*e*P	Pg	15 20 13.1	-0.4
	baz=221						
NACB				*e*S	Sb	15 20 25.3	-0.7
	baz=221						
WLTB	**Daxi**	0.88	271	*e*S	Sb	15 20 25.9	-0.2
	baz=261						
ETLH	**Xiulin Townshi**	0.92	227	*e*P	Pb	15 20 14.6	-0.4
	baz=227						
ETLH				*e*S	Sb	15 20 27.2	-0.3
	baz=227						
TWD	**Chiawan**	0.95	217	P	Pg	15 20 14.7	-0.1
	baz=218						
TWD				S	Sb	15 20 27.6	-0.5
	baz=218						
LIOB	**Emei**	1.11	260	*e*P	Pn	15 20 19.2	+0.6
	baz=261						
LIOB				*e*S	Sn	15 20 34.0	-0.1
	baz=261						
WHF	**Hehuan Shan**	1.11	232	*e*P	Pb	15 20 18.3	-0.1
	baz=233						
WHF				S	Sb	15 20 33.2	0.0
	baz=233						
TWT	**Tachien**	1.12	238	*e*P	Pb	15 20 18.5	+0.2
	baz=231						
TWT				S	Sn	15 20 34.2	-0.3
	baz=231						
NSTT	**Nanjuang**	1.13	259	*e*P	Pn	15 20 18.9	+0.1
	baz=260						
NSTT				*e*S	Sn	15 20 34.4	-0.1
	baz=260						
TDCB	**Techi**	1.13	239	*e*P	Pb	15 20 18.3	-0.2
	baz=231						
TDCB				*e*S	Sb	15 20 33.5	0.0
	baz=231						
CHGB	**Renai**	1.23	231	*e*P	Pn	15 20 20.7	+0.3
	baz=234						
CHGB				S	Sn	15 20 36.9	-0.5
	baz=234						
ESL	**Shilin**	1.25	215	*e*P	Pb	15 20 20.4	-0.1
	baz=225						
ESL				*e*S	Sb	15 20 36.5	-0.3
	baz=225						
WHP	**Taichung City**	1.29	244	P	Pn	15 20 21.8	+0.8
	baz=246						
WHP				*e*S	Sn	15 20 38.2	-0.3
	baz=246						
OWD	**Renai**	1.30	227	*e*P	Pn	15 20 21.3	+0.1
	baz=222						
OWD				*e*S	Sg	15 20 37.8	-0.6
	baz=222						
NMLH	**Miaoli**	1.33	257	S	Sn	15 20 41.0	+1.4
	baz=258						
EGFH	**Guangfu**	1.37	212	*e*S	Sn	15 20 41.5	+1.0
	baz=236						
TWQ1	**Liyutan**	1.41	250	*e*P	Pg	15 20 23.9	+0.3
	baz=266						
TWQ1				*e*S	Sn	15 20 42.7	+1.3
	baz=266						
DPDB	**Guoxing**	1.43	236	*e*P	Pg	15 20 24.5	+0.5
	baz=228						
VWDT	**VWDT**	1.46	222	*e*P	Pg	15 20 24.3	-0.4
	baz=220						
VWDT				*e*S	Sg	15 20 43.5	-0.2
	baz=220						
IRIF	**Iriomote-Funau**	1.47	110	P	Pn	15 20 23.9	+0.5
IRIF				*e*S	Sn	15 20 43.0	+0.2
HGSD	**Ruisui**	1.53	209	P	Pb	15 20 24.9	-0.3
	baz=214						
HGSD				S	Sg	15 20 47.5	+1.8
	baz=214						
SMLT	**Sun Moon Lake**	1.54	232	P	Pg	15 20 25.7	-0.4
	baz=235						
SMLT				*e*S	Sg	15 20 46.4	+0.3
	baz=235						
TYC	**Yuchr**	1.55	233	*e*P	Pg	15 20 26.1	-0.4
	baz=237						
TYC				S	Sg	15 20 46.8	+0.2
	baz=237						
SSLB	**Suanglung**	1.56	228	*e*P	Pb	15 20 25.6	-0.2
	baz=232						
SSLB				*e*S	Sb	15 20 45.8	0.0
	baz=232						
EHY	**Hungye**	1.56	212	P	Pn	15 20 24.7	-0.1
	baz=217						
EHY				S	Sn	15 20 45.2	0.0
	baz=217						
YULB	**Yu-li**	1.67	210	P	Pn	15 20 26.2	0.0
	baz=217						
YULB				*e*S	Sn	15 20 48.1	+0.2
	baz=217						
WHYT	**Xinyi Township**	1.69	228	*e*P	Pb	15 20 27.8	-0.2
	baz=232						
WJS	**Zhushan**	1.70	234	P	Pg	15 20 29.9	+0.7
	baz=238						
WJS				S	Sg	15 20 53.7	+2.5
	baz=238						
WNT	**Mingjian**	1.70	236	*e*S	Sg	15 20 53.0	+1.7
	baz=233						
TWF1	**Yuli**	1.71	210	*e*P	Pn	15 20 27.2	+0.4
	baz=216						
TWF1				*e*S	Sb	15 20 49.7	-0.2
	baz=216						
YUS	**Yu-Shan**	1.78	221	*e*S	Sg	15 20 52.8	-1.0
	baz=209						
CHN5	**Tsauling**	1.88	229	*e*P	Pb	15 20 31.3	+0.1
	baz=234						
CHN5				*e*S	Sg	15 20 56.0	-0.9
	baz=234						
ELDTW	**Lidau**	1.98	214	*e*P	Pn	15 20 31.3	+0.7
	baz=220						
ELDTW				*e*S	Sb	15 20 57.8	-0.1
	baz=220						
CHN4	**Tsaushan**	2.10	225	P	Pb	15 20 34.8	-0.2
	baz=218						
CHN4				S	Sg	15 21 03.8	-0.4
	baz=218						
TPUB	**Ta-pu**	2.11	224	*e*P	Pb	15 20 34.6	-0.7
	baz=212						
TPUB				*e*S	Sg	15 21 03.2	-1.4
	baz=212						

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*ATH **17** 15:33:45.8, 37°.58N×20°.35E, h20km±1km, ML3.3/5, Error ellipse: s-maj=3.2km s-min=1.0km az=57.0*
*THE **17** 15:33:46.8, 37°.61N×20°.35E, h14km, ML3.3/4, Error ellipse: s-maj=1.3km s-min=0.6km az=66.0*
ISC 17 15:33:45.3±1.5, **37°.56N**±0°.05×**20°.26E**±0°.05, **h18**km±4km, **n49**, σ**1s.23**/66, **Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRI1	**kERI**	0.46	77	P	Pg	15 33 54.1	-0.5
KRI1				S	Sg	15 34 00.0	-0.9
	7µm,0.3s						
ZAK2	**Zakynthos**	0.56	66	P	Pg	15 33 56.2	-0.3
CHV1	**Chavriata, Kef**	0.63	9	P	Pg	15 33 58.2	+0.4
KEF2	**Argostoli. Kep**	0.63	17	P	Pg	15 33 57.6	-0.2
KEF2				S	Sb	15 34 06.4	+0.3
ARGA	**Argostoli. Kep**	0.64	16	P	Pg	15 33 57.9	0.0
KEF3	**Kipouria, Keph**	0.65	7	P	Pg	15 33 58.3	+0.2
KEF3				S	Sg	15 34 06.5	-0.2
VLS	**Valsamata**	0.67	23	P	Pg	15 33 58.0	-0.5
VLS				S	Sb	15 34 07.2	-0.1
	3µm,0.3s						
VLS	**Valsamata**	0.67	23	P	Pg	15 33 57.8	-0.7
VLS				S	Sb	15 34 07.5	+0.2
VLS				AML	AML	15 34 11.5	
	comp=E,6568µm,0.3s						
VLS				AML	AML	15 34 12.6	
	comp=N,6154µm,0.3s						
KFL	**Anninata**	0.69	37	P	Pg	15 33 58.1	-0.8
KFL				S	Sb	15 34 07.3	-0.6
	comp=N,7µm,0.3s						
KFL	**Anninata**	0.69	37	P	Pg	15 33 58.2	-0.8
KFL				S	Sb	15 34 08.0	0.0
KFL				AML	AML	15 34 12.0	
	comp=E,15702µm,0.4s						
KFL				AML	AML	15 34 13.9	
	comp=N,13339µm,0.3s						
AGT1	**Agia Thekli**	0.70	8	P	Pg	15 33 59.0	0.0
KEF4	**Livadi, Kephal**	0.71	11	P	Pg	15 33 59.3	+0.1
KEF4				S	Sb	15 34 09.4	+1.0
KEF1	**Kardakata, Kep**	0.74	13	P	Pg	15 33 59.4	-0.3
KEF1				S	Sg	15 34 08.9	-0.6
VTN	**Vitineika**	0.82	64	P	Pg	15 34 00.8	-0.5
VTN	**Vitineika**	0.82	64	P	Pg	15 34 00.6	-0.7
VSK1	**VASILIKIADES**	0.88	16	P	Pg	15 34 01.9	-0.6
KONA	**Konidatara, Ke**	0.90	16	P	Pg	15 34 02.0	-0.8
FSK	**Fiskardo**	0.93	15	P	Pg	15 34 02.6	-0.8
FSK				S	Sb	15 34 15.7	+0.9
	comp=N,2µm,0.5s						
FSK	**Fiskardo**	0.93	15	P	Pg	15 34 02.6	-0.8
FSK				S	Sn	15 34 16.2	-0.1
FSK				AML	AML	15 34 20.1	
	comp=E,3142µm,0.7s						
FSK				AML	AML	15 34 23.1	
	comp=N,4557µm,0.4s						
RLS	**Riolos of Patr**	1.08	62	P	Pb	15 34 05.2	-0.2
RLS	**Riolos of Patr**	1.08	62	P	Pb	15 34 04.9	-0.5
RLS				S	Sb	15 34 18.2	-0.9
RLS				AML	AML	15 34 23.4	
	comp=E,1459µm,0.4s						
RLS				AML	AML	15 34 23.6	
	comp=N,1982µm,0.6s						
EVGI	**Lefkada island**	1.10	17	P	Pb	15 34 05.7	-0.1
EVGI				S	Sn	15 34 21.4	+0.8
AMT	**Artemida-Makis**	1.16	91	P	Pb	15 34 06.8	+0.1
AMT	**Artemida-Makis**	1.16	91	P	Pb	15 34 06.6	-0.1
AMT				S	Sb	15 34 20.8	-0.5
AMT				AML	AML	15 34 32.2	
	comp=E,2476µm,0.8s						
AMT				AML	AML	15 34 32.5	
	comp=N,3191µm,0.8s						
DRO	**Drossia**	1.22	71	P	Pb	15 34 07.8	+0.1
DRO	**Drossia**	1.22	71	P	Pb	15 34 08.0	+0.2
LKD2	**Lefkada island**	1.27	14	P	Pn	15 34 08.6	+0.5
PDO	**Prodromos**	1.27	35	P	Pg	15 34 09.6	-0.2
PYL	**PYLOS**	1.36	119	P	Pn	15 34 10.1	+0.9
ITM	**Ithomi**	1.39	105	P	Pn	15 34 11.0	+1.3
PVO	**Paravola**	1.46	43	P	Pb	15 34 11.9	+0.2
LAKA	**Lakka**	1.52	63	P	Pn	15 34 12.3	+0.8
EFP	**Efpalio**	1.56	56	P	Pn	15 34 13.1	+1.0
KLV	**Kalavryta, Ach**	1.58	72	P	Pb	15 34 14.0	+0.2
TRIZ	**Trizonia**	1.65	60	P	Pn	15 34 14.5	+1.3
SERG	**Sergoula**	1.66	59	P	Pb	15 34 15.2	-0.1
ANX	**Ano Chora**	1.67	51	P	Pb	15 34 15.4	-0.1
KALE	**Kalithea**	1.70	60	P	Pn	15 34 15.4	+1.3
EVR	**Evrytania**	1.82	42	P	Pb	15 34 18.3	+0.1
DYR	**Agios Nikonas**	1.84	115	P	Pb	15 34 19.7	+1.3
MAKR	**Makrakomi, Fth**	2.07	45	P	Pb	15 34 21.7	-0.5
LTK	**Loutraki**	2.20	77	P	Pn	15 34 22.2	+1.4
DID	**Didima**	2.37	90	P	Pn	15 34 24.2	+0.9
OHR	**Ohrid**	3.57	7	*i* Pn	Pg	15 34 55.7	+2.1
STIP	**Stip**	4.39	19	*i* Pn	Pn	15 34 55.2	+4.2
ZIRJ	**Zirje**	7.02	331	*e*Pn	Pn	15 35 27.2	+0.1
ZIRJ				Sn	Sn	15 36 41.6	-4.8
KIJV	**Kijevo**	7.07	337	*e*Pn	Pn	15 35 29.2	+1.5
KIJV				Sn	Sn	15 36 45.8	-1.8
MORI	**Morici**	7.18	333	*e*Pn	Pn	15 35 27.7	-1.6
MORI				Sn	Sn	15 36 47.5	-2.8
DUGI	**Dugi Otok**	7.54	330	*e*Pn	Pn	15 35 37.1	+2.9

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*IDC **17** 15:35:47.9±3.4, 1°.89N×128°.52E, h132km±35km, mb3.2/5, mb1 3.3/6, mb1mx3.1/31, mbtmp3.6/6, Error ellipse: s-maj=48.9km s-min=20.2km az=74.0*
*DJA **17** 15:35:47.2±0.6, 2°N±9°×12°8E±°, h128km±16km, M3.4/7, MLv3.4/7*
ISC 17 15:35:47.7±0.9, **1°.76N**±0°.09×**128°.26E**±0°.08, **h134**km, **n9**, σ**1s.32**/12, **mb3.3**/5, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	1.32	222	P	Pn	15 36 13.2	-1.0
TNTI				S	Sn	15 36 33.6	-0.7
LBMI	**Labuha**	2.50	198	P	Pn	15 36 28.1	+0.1
LBMI				S	Sn	15 36 59.4	+0.3
SWI	**Sorong**	3.97	131	P	Pn	15 36 47.9	+0.7
SIJI	**Sorong**	3.98	131	P	Pn	15 36 48.1	+0.8
	2.5nm,0.3s,baz=98,slow=23,SNR=17						
SIJI				S	Sn	15 37 30.5	-3.1
	0.2nm,0.3s,baz=131,slow=20,SNR=1.9						
WRA	**Warramunga Arr**	22.38	165	P	P	15 40 36.0	+0.9
	0.5nm,0.4s,baz=343,slow=10,SNR=10.0						
ASAR	**Alice Springs**	25.86	168	P	P	15 41 08.4	+1.4
	0.2nm,0.5s,baz=348,slow=7.8,SNR=6.6						
SONM	**Songino Array**	49.65	341	P	P	15 44 25.3	-0.5
	0.8nm,0.6s,baz=143,slow=8.2,SNR=3.7						
MKAR	**Makanchi Array**	60.03	325	P	P	15 45 41.0	+0.5
	2.2nm,0.5s,baz=111,slow=8.2,SNR=22						
ILAR	**Eielson Array**	86.22	25	P	P	15 48 13.6	-0.2
	0.1nm,0.5s,baz=268,slow=4.5,SNR=3.0						

TEH 17 15:43:34.3, 36°.34N×51°.34E, h10km, ML2.8, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QALM	**Alamut, Qazvin**	0.57	280	*e*Pg	Pg	15 43 45.8	+0.4
QALM				*e*Sg	Sb	15 43 54.4	-0.4
QALM				*e*		15 43 54.6	
IPRN	**Peran**	0.81	96	*e*Pg	Pg	15 43 50.2	+0.2
IMHD	**Mahdasht**	0.85	220	*e*Pg	Pb	15 43 51.5	+0.3
IMHD				*e*		15 43 51.7	
IHSB	**Hasanabad**	0.90	183	*e*Pg	Pb	15 43 52.4	+0.4
IHSB				*e*Sg	Sb	15 44 04.7	+0.6
IHSB				*e*		15 44 04.9	
IGZV	**Ghazvin**	0.91	274	*e*Pg	Pb	15 43 52.2	-0.1
IGZV				*e*		15 43 52.8	
IGZV				*e*Sg	Sb	15 44 05.1	+0.6
IALA	**Alasht**	1.21	102	*e*Pg	Pb	15 43 57.5	-0.1
IALA				*e*		15 44 18.5	
IVRN	**Varamin**	1.37	167	*e*		15 44 02.4	
IVRN				*e*Pg	Pg	15 44 01.0	+0.3

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*CNRM **17** 15:58:37.9±1.0, 36°.50N×7°.18W, h9km±7km, Error ellipse: s-maj=5.3km s-min=4.1km az=78.0*
*INMG **17** 15:58:42.5±1.7, 36°.61N×7°.54W, h17km±4km, ML1.8, Error ellipse: s-maj=5.3km s-min=3.8km az=6.0*
*IGIL **17** 15:58:42.3, 36°.58N×7°.53W, h20km, ML1.7*
*MDD **17** 15:58:42.6±1.1, 36°.57N×7°.53W, h34km±2km, mbLg2.7/1, Error ellipse: s-maj=10.3km s-min=6.4km az=1.0, PRXIMO*
ISC 17 15:58:39.7±1.3, **36°.56N**±0°.03×**7°.33W**±0°.03, **h25**km±13km, **n47**, σ**1s.35**/75, **3D**, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	0.84	325	Pg	Pn	15 58 56.1	+0.2
PBDV				Lg	Lg	15 59 05.5	
	14nm,0.2s						
PBDV	**Barranco-do-Ve**	0.84	325	⇓*i*Pg	Pn	15 58 56.1	+0.2
PBDV				*e*Sg	Sb	15 59 05.5	-1.0
PBDV				A	A	15 59 07.0	
	14nm,0.2s						
PVAQ	**Vaqueiros**	0.90	340	Pg	Pn	15 58 57.5	+0.8
PVAQ				Lg	Lg	15 59 08.0	
	28nm,0.2s						
PVAQ	**Vaqueiros**	0.90	340	P	Pn	15 58 57.9	+1.2
PVAQ				S	Sn	15 59 09.6	+0.7
PVAQ	**Vaqueiros**	0.90	340	⇓*e*Pg	Pn	15 58 57.5	+0.8
PVAQ				*e*Sg	Sb	15 59 08.0	-0.2
PVAQ				A	A	15 59 08.8	
	28nm,0.2s						
EGRO	**El Granado**	0.98	353	⇓Pg	Pn	15 58 59.4	+1.5
	3.8nm,0.1s,SNR=18						
EGRO				Lg	Lg	15 59 11.4	
	24nm,0.1s,SNR=15						
PCVE	**Castro Verde**	1.21	332	Pg	Pb	15 59 01.7	-0.3
PCVE				Lg	Lg	15 59 15.8	
	13nm,0.4s						
PCVE	**Castro Verde**	1.21	332	*e*P	Pb	15 59 01.7	-0.3
PCVE				*e*S	Sn	15 59 15.8	-0.9
PCVE				A	A	15 59 30.0	
	13nm,0.4s						
MORF	**Marmelete**	1.30	305	*e*P	Pn	15 59 01.5	-0.8
MORF	**Marmelete**	1.30	305	Pg	Pn	15 59 01.5	-0.8
MORF	**Marmelete**	1.30	305	*e*P	Pn	15 59 01.5	-0.8
MORF				A	A	15 59 22.3	
	19nm,0.1s						
EMIN	**Mina Concepcio**	1.31	23	Pn	Pb	15 59 04.9	+1.2
	0.1nm,0.0s,SNR=9.1						
EMIN				Sn	Sb	15 59 20.3	+0.2
	5.2nm,0.1s,SNR=12						
PFVI	**Vila Bisbo**	1.33	296	Pg	Pn	15 59 01.9	-0.8
	2.1nm,0.1s,SNR=6.7						
PFVI				Lg	Lg	15 59 17.7	
	11nm,0.1s,SNR=5.6						
PFVI	**Vila Bisbo**	1.33	296	P	Pb	15 59 05.6	+1.6
PFVI				S	Sb	15 59 24.9	+4.2
PFVI	**Vila Bisbo**	1.33	296	*e*P	Pn	15 59 01.9	-0.8
PFVI				*e*S	Sn	15 59 17.8	-1.8
PFVI				A	A	15 59 28.6	
	11nm,0.6s						
MESJ	**Messejana**	1.46	331	*e*P	Pn	15 59 04.8	+0.3
MESJ				*e*S	Sn	15 59 21.5	-1.3
MESJ				AML	AML	15 59 23.8	
	comp=N,9.7nm,0.3s						
MESJ	**Messejana**	1.46	331	Pn	Pn	15 59 05.0	+0.5
MESJ				Lg	Lg	15 59 23.9	
	comp=N,7.3nm,0.6s						
MESJ	**Messejana**	1.46	331	*e*Pn	Pn	15 59 05.0	+0.5
MESJ				*e*Sg	Sb	15 59 23.9	-0.5
MESJ				A	A	15 59 23.9	
	comp=N,7.3nm,0.6s						
PTEO	**Sao Teotonio**	1.49	312	Pn	Pn	15 59 04.8	-0.1

PTEO				Sn	Sn	15 59 21.3	-2.2
	comp=N,4.4nm,0.3s						
PTEO	Sao Teotonio	1.49	312	eP	Pn	15 59 04.8	-0.1
PTEO				eS	Sn	15 59 21.3	-2.2
PTEO				A	A	15 59 30.8	
	comp=N,8.9nm,0.3s						
PNCL	Nicolau / Gran	1.82	329	Pn	Pn	15 59 09.8	+0.4
PNCL				Sn	Sn	15 59 30.6	-1.1
	comp=N,5.3nm,0.3s						
PNCL	Nicolau / Gran	1.82	329	ePn	Pn	15 59 09.8	+0.4
PNCL				eSn	Sn	15 59 30.6	-1.1
PNCL				A	A	15 59 32.5	
	comp=N,5.3nm,0.3s						
EMIJ	Mijas	2.06	89	Sn	Sb	15 59 41.8	+0.3
	comp=N,3.7nm,0.3s,SNR=7.9						
HORN	Hornachuelos	2.09	52	P	Pn	15 59 11.8	-1.3
HORN				S	Sn	15 59 39.2	+0.8
ECAB	El Cabril	2.14	45	Pn	Pb	15 59 16.9	-1.0
	comp=N,0.3nm,0.1s,SNR=7.9						
ECAB				Sn	Sb	15 59 41.1	-2.9
	comp=N,1.3nm,0.1s,SNR=7.9						
EBAD	Badajoz	2.21	6	Pn	Pn	15 59 16.0	+1.3
	comp=N,0.7nm,0.1s,SNR=6.3						
EBAD				Sn	Sn	15 59 40.4	-0.7
	comp=N,3.0nm,0.1s,SNR=8.0						
PESTR	Estremoz	2.31	355	ePn	Pn	15 59 17.5	+1.3
PESTR				eSn	Sn	15 59 42.9	-0.9
PMTG	Montargil	2.60	344	Pn	Pn	15 59 21.2	+1.0
PMTG				Sn	Sn	15 59 50.8	-0.2
	comp=N,2.4nm,0.1s						
PMTG	Montargil	2.60	344	ePn	Pn	15 59 21.2	+1.0
PMTG				eSn	Sn	15 59 50.8	-0.2
PMTG				A	A	15 59 52.5	
	comp=N,2.4nm,0.1s						
EADA	Adamuz	2.71	53	Pn	Pb	15 59 25.1	-2.5
	comp=N,0.2nm,0.0s,SNR=7.9						
EADA				Sn	Sn	15 59 55.5	+1.7
	comp=N,3.4nm,0.1s,SNR=7.9						
PMAFR	Mafra	2.85	328	ePn	Pn	15 59 24.4	+0.8
PMRV	Marv??o	2.86	359	Pn	Pn	15 59 25.3	+1.5
PMRV				Sn	Sn	15 59 57.1	-0.3
	comp=N,2.1nm,0.3s						
PMRV	Marv??o	2.86	359	ePn	Pn	15 59 25.3	+1.5
PMRV				eSn	Sn	15 59 57.1	-0.3
PMRV				A	A	15 59 58.5	
	comp=N,2.1nm,0.3s						
ZHG	ZHG	3.16	170	P	Pn	15 59 27.3	-0.6
ZHG				S	Sn	16 00 06.6	+1.8
PCBR	Castelo Branco	3.28	358	Pn	Pn	15 59 31.1	+1.7
PCBR				Sn	Sn	16 00 07.5	-0.1
	comp=N,1.1nm,0.3s						
PCBR	Castelo Branco	3.28	358	ePn	Pn	15 59 31.1	+1.7
PCBR				eSn	Sn	16 00 07.5	-0.1
PCBR				A	A	16 00 08.4	
	comp=N,2.1nm,0.3s						
EQES	Quesada	3.62	69	Sn	Sn	16 00 19.9	+3.7
	comp=N,1.2nm,0.2s,SNR=7.9						
EPLA	Plasencia	3.63	15	Sn	Sn	16 00 15.9	-0.5
	comp=N,2.6nm,0.2s,SNR=7.9						
PAB	San Pablo	3.79	37	Sn	Sn	16 00 19.9	-0.7
	comp=N,1.8nm,0.3s,SNR=7.9						
SESP	Santiago Espad	4.12	66	Sn	Sn	16 00 31.4	+2.9
	comp=N,3.1nm,0.1s,SNR=7.9						
SESP	Santiago Espad	4.12	66	P	Pn	15 59 39.4	-1.7
SESP				S	Sn	16 00 28.2	-0.3
MD31	MD31	4.25	149	P	Pn	15 59 42.5	-0.4
MD31				S	Sn	16 00 31.6	-0.2
MDT	Midelt	4.36	148	P	Pn	15 59 44.7	+0.3
MDT				S	Sn	16 00 32.9	-1.6
MVO	Moncorvo	4.60	3	ePn	Pn	15 59 49.5	+1.8
ETOB	Tobarra	5.04	64	Sn	Sn	16 00 52.6	+1.5
	comp=N,1.3nm,0.1s,SNR=4.7						
ELOB	Lobios	5.33	354	Sn	Sn	16 00 57.3	-1.1
	comp=N,1.4nm,0.2s,SNR=7.9						
ECAL	Calabor	5.39	5	Sn	Sn	16 00 58.8	-1.1
	comp=N,1.5nm,0.2s,SNR=7.9						

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*VIE **17** 16:09:47.9±0.2, 48°.21N×15°.46E, h5^{km}±2^{km}, mb1.7/7, ml2.5/10, Error ellipse: s-maj=1.7km s-min=1.6km az=149.0 10 km ESE of Melk a.d. Donau felt 4 ems98 at Loosdorf / Lower Austria*

*IPEC **17** 16:09:48.7±0.1, 48°.19N×15°.48E, h7^{km}, ML2.5/10, Error ellipse: s-maj=0.6km s-min=0.5km az=45.0*

*PRU **17** 16:09:49.6±0.0, 48°.24N×15°.43E, h7^{km}*

ISC 17 16:09:48.2±1.1**, 48°.18N**±0°.02×**15°.45E**±0°.02**, h5**^{km}±10^{km}**, n33, σ0ˢ.85**/59**, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CONA	Conrad Observa	0.38	132	ePg	Pg	16 09 56.2	+0.6
	4.8nm,0.1s,SNR=25						
CONA				eSg	Sg	16 10 00.9	+0.4
	59nm,0.2s						
MOA	Molln	0.86	248	ePg	Pb	16 10 05.4	-0.2
	2.6nm,0.1s,SNR=20						
MOA				eSg	Sb	16 10 17.6	+0.2
	19nm,0.2s						
ARSA	Arzberg	0.93	177	ePg	Pg	16 10 06.2	+0.1
	12nm,0.3s,SNR=14						
ARSA				Sg	Sg	16 10 18.6	+0.4
	5.9nm,0.1s						
KRUC	Moravsky	1.08	35	ePg	Pg	16 10 08.7	-0.3
	baz=215						
KRUC				eSg	Sg	16 10 22.3	-0.8
	58nm,0.2s,baz=215						
KRUC	Moravsky	1.08	35	ePG	Pg	16 10 08.8	-0.3
KRUC				eSG	Sg	16 10 22.3	-0.8
ZST	Bratislava	1.11	89	ePG	Pg	16 10 09.0	-0.5
ZST				eSG	Sg	16 10 23.3	-0.5
ZST				eLG	Lg	16 10 27.3	
TREC	Trest	1.11	1	ePG	Pg	16 10 08.9	-0.7
TREC				eSG	Sg	16 10 23.9	-0.2
	comp=Z,73nm,0.3s						
MODS	Modra-Piesok	1.24	80	ePG	Pg	16 10 11.0	-1.0
MODS				eSG	Sg	16 10 27.5	-0.5
MODS				eLG	Lg	16 10 31.2	
VRAC	Vranov	1.36	34	ePg	Pn	16 10 13.6	-0.2
	baz=214						
VRAC				eSg	Sb	16 10 30.9	-0.9
	61nm,0.2s,baz=214						
VRAC	Vranov	1.36	34	ePG	Pn	16 10 13.7	-0.1
VRAC				eSG	Sb	16 10 30.9	-0.9
SMOL	Smolenice	1.36	75	ePG	Pg	16 10 15.3	+0.9
SMOL				eSG	Sn	16 10 32.9	+0.6
SMOL				eLG	Lg	16 10 35.4	
SOKA	Soboth	1.53	191	ePg	Pg	16 10 17.4	-0.1
	0.6nm,0.1s						
SOKA				Sn	Sg	16 10 37.6	+0.2
	5.7nm,0.2s,SNR=6.6						
KHC	Kasperske Hory	1.56	308	ePG	Pb	16 10 17.5	-0.1
KHC				eSG	Sb	16 10 37.7	+0.1
	comp=Z,42nm,0.4s						
OBKA	Obir	1.78	200	ePg	Pg	16 10 22.4	0.0
	3.1nm,0.4s						
OBKA				eSn	Sb	16 10 43.4	-0.6
	9.0nm,0.4s						
PBCC	Pribram	1.78	328	eSG	Sb	16 10 44.2	+0.2
KBA	Koelnbreinsper	1.80	233	ePg	Pb	16 10 21.9	+0.2
	3.6nm,0.2s						
KBA				Sn	Sg	16 10 45.5	-0.5
	17nm,0.4s						
PRU	Pruhonice	1.90	342	ePG	Pn	16 10 22.0	+0.7
PRU				eSG	Sb	16 10 47.8	+0.3
	comp=Z,27nm,0.4s						
MYKA	Terra Mystica	1.98	219	ePg	Pg	16 10 26.0	-0.1
	1.7nm,0.2s						
MORC	Moravsky Berou	2.11	40	eSg	Sb	16 10 54.1	+0.6
	16nm,0.4s,baz=221						
MORC	Moravsky Berou	2.11	40	ePN	Pn	16 10 24.9	+0.7
MORC				eSG	Sb	16 10 54.1	+0.6
DPC	Dobruska-Polom	2.25	14	ePG	Pb	16 10 29.6	+0.3
DPC				eSN	Sn	16 10 53.8	-0.3
DPC				eSG	Sb	16 10 58.4	+1.1
	comp=Z,10nm,0.3s						
VYHS	Vyhne	2.28	81	ePN	Pn	16 10 26.9	+0.4
VYHS				e		16 10 33.5	
VYHS	Vyhne	2.28	81	eSN	Sn	16 10 53.7	-1.3
UPC	Upice	2.36	9	ePG	Pb	16 10 30.9	-0.3
UPC				eSG	Sg	16 11 03.3	-0.6
	comp=Z,20nm,0.4s						
PVCC	Panska Ves	2.42	347	eSG	Sg	16 11 04.6	-1.3
	comp=Z,31nm,0.6s						
OSTC	Ostas	2.43	12	ePN	Pn	16 10 29.1	+0.5
OSTC				eSG	Sg	16 11 05.7	-0.6
	comp=Z,16nm,0.5s						
OKC	Ostrava-Krasne	2.43	46	eSN	Sn	16 10 59.2	+0.6
CHVC	Chvalec	2.44	9	ePN	Pn	16 10 29.4	+0.7
CHVC				eSG	Sg	16 11 05.3	-1.3
	comp=Z,11nm,0.5s						
ABTA	Abfaltersbach	2.45	235	ePg	Pg	16 10 34.8	-0.5
	0.7nm,0.2s						
ABTA				eSn	Sb	16 11 01.9	-1.4
	1.1nm,0.1s						
KSP	Ksiaz	2.72	11	ePg	Sn	16 11 04.9	-0.9
KSP				eSg	Sg	16 11 14.5	-1.1
NKC	Novy Kostel	2.84	317	eSG	Sg	16 11 17.4	-2.1
	comp=Z,17nm,0.5s						
BRG	Berggiesshubel	2.87	341	PG	Pb	16 10 41.0	+1.2
BRG				SG	Sg	16 11 18.9	-1.4
	12nm,0.6s						
CLL	Collm	3.51	334	i Pg	Pg	16 10 58.4	+3.0
CLL				i		16 11 37.0	
CLL				eSg	Sg	16 11 41.0	+0.2
	comp=Z,15nm,1.0s						

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*IDC **17** 16:14:00.5±3.4, 21°.15S×70°.24W, h0^{km}, mb4.0/1, mb1 3.8/2, mb1mx3.5/23, mbtmp3.8/2, ML3.4/1, Error ellipse: s-maj=127.2km s-min=46.1km az=103.0*

*GUC **17** 16:14:04.8±0.4, 20°.10S×70°.78W, h44^{km}±1^{km}, ML3.5*

ISC 17 16:14:02.0±1.9**, 20°.09S**±0°.03×**70°.75W**±0°.09**, h9**^{km}±11^{km}**, n13, σ1ˢ.31**/24**, 4C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA01	Diego Aracena	0.71	131	⇓iP	Pn	16 14 18.2	-0.1
TA01				i S	Sn	16 14 28.4	-0.9
TA01				IAML		16 14 31.4	
	comp=N,6μm,0.3s						
PSGC	Pisagua	0.77	50	⇓iP	Pn	16 14 19.4	+0.3
PSGC				i S	Sn	16 14 30.6	-0.3
PSGC				IAML		16 14 33.1	
	comp=N,3μm,0.5s						
PATCX	Punta Patache	0.92	142	⇓iP	Pg	16 14 21.4	+1.7
PATCX				i S	Sn	16 14 34.1	-0.4
PATCX				IAML		16 14 40.3	
	comp=N,2μm,0.4s						
PB11	IPOC Station P	1.08	72	⇓iP	Pn	16 14 24.7	+1.2
PB11				i S	Sn	16 14 39.6	+0.9
PB11				IAML		16 14 42.6	
	comp=N,3μm,0.6s						
PB02	IPOC Station P	1.46	147	eP	Pn	16 14 30.0	+1.3
PB02				i S	Sg	16 14 48.7	-0.3
PB08	IPOC Station P	1.50	92	⇑eP	Pg	16 14 31.4	+0.5
PB08				i S	Sg	16 14 51.8	+1.5
PB08				IAML		16 14 55.4	
	comp=N,845nm,0.3s						
PB01	IPOC Station P	1.52	129	⇑eP	Pg	16 14 31.2	+0.1
PB01				i S	Sg	16 14 50.6	-0.1
PB01				IAML		16 14 52.9	
	comp=E,2μm,0.3s						
PB12	IPOC Station P	1.52	15	⇑iP	Pn	16 14 30.7	+1.1
PB12				i S	Sn	16 14 50.7	+1.2
PB12				IAML		16 14 56.2	
	comp=N,696nm,0.5s						
PB07	IPOC Station P	1.81	154	eP	Pn	16 14 33.5	-0.1
PB07				i S	Sn	16 14 56.7	-0.2
PB07				IAML		16 15 08.1	
	comp=E,785nm,0.4s						
PB16	IPOC Station P	2.11	34	⇑eP	Pn	16 14 40.3	+2.4
PB16				i S	Sb	16 15 07.7	+0.5
PB16				IAML		16 15 16.9	
	comp=E,426nm,0.6s						
LPAZ	La Paz	4.53	34	Pn	Pb	16 15 19.4	-2.6
	comp=E,0.7nm,0.3s,baz=199,slow=8.8,SNR=4.1						
LPAZ				Sn	Sg	16 16 25.1	-2.5
	baz=255,slow=14,SNR=1.0						
TORD	Torodi Ar. Bea	78.52	71	P	P	16 26 03.6	-0.6
	comp=E,0.7nm,0.5s,baz=232,slow=6.8,SNR=5.2						
MKAR	Makanchi Array	145.46	33	PKPbc	PKPbc	16 33 41.7	+1.1
	comp=E,0.9nm,0.7s,baz=316,slow=3.2,SNR=7.7						

IDC 17 16:17:55.0±5.4**, 15°.51S**×**172°.94W, h0**^{km}**, mb3.6**/4**, mb1 3.9**/4**, mb1mx3.6**/33**, mbtmp3.6**/4**, Error ellipse: s-maj=252.9km s-min=22.9km az=140.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	1.94	35	Pn	Pn	16 18 28.1	-1.2
	38nm,0.3s,baz=213,slow=3.0,SNR=78						
AFI				Sn	Sn	16 18 47.0	-7.4
	84nm,0.3s,baz=182,slow=20,SNR=10						
WRA	Warramunga Arr	50.26	257	P	P	16 26 53.9	+0.4
	0.3nm,0.5s,baz=90,slow=6.7,SNR=7.6						
ASAR	Alice Springs	50.51	252	P	P	16 26 54.0	-1.3
	0.7nm,0.6s,baz=89,slow=7.9,SNR=26						
ILAR	Eielson Array	82.46	11	P	P	16 30 18.6	-0.2
	0.6nm,0.7s,baz=211,slow=6.5,SNR=5.5						
YKA	Yellowknife Ar	90.02	23	P	P	16 30 56.6	+0.5
	0.2nm,0.8s,baz=236,slow=4.4,SNR=2.5						
BRTR	Keskin Array B	146.52	321	PKPbc	PKPab	16 37 39.5	-0.3
	1.2nm,0.8s,baz=64,slow=2.9,SNR=6.4						

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*SJA **17** 16:29:47.7±1.4, 20°.16S×70°.88W, h26^{km}±5^{km}, ML3.3, MW3.5*

*GUC **17** 16:29:50.2±0.6, 20°.15S×70°.82W, h46^{km}±3^{km}, ML3.0*

ISC 17 16:29:48.1±1.9**, 20°.17S**±0°.03×**70°.90W**±0°.09**, h11**^{km}±10^{km}**, n27, σ0ˢ.80**/36**, 7C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA01	Diego Aracena	0.79	121	⇓iP	Pg	16 30 03.9	+0.6
TA01				i S	Sg	16 30 13.9	+0.3
TA01				IAML		16 30 15.7	
	comp=N,988nm,0.4s						
PSGC	Pisagua	0.93	53	⇓iP	Pg	16 30 05.5	-0.5
PSGC				i S	Sg	16 30 17.7	-0.4
PSGC				IAML		16 30 19.0	
	comp=N,669nm,0.2s						
PSGCX	Pisagua	0.93	53	eP	Pg	16 30 05.7	-0.3
PSGCX				eS	Sg	16 30 18.1	0.0
PATCX	Punta Patache	0.96	133	⇑iP	Pg	16 30 07.1	+0.5
PATCX				i S	Sg	16 30 19.3	+0.1
PATCX				IAML		16 30 24.8	
	comp=E,476nm,0.3s						
PATCX	Punta Patache	0.96	133	eP	Pg	16 30 07.2	+0.5
PATCX				eS	Sg	16 30 20.4	+1.2
PATCX				IAML		16 30 24.1	
	comp=Z,420nm,0.6s						
PB11	IPOC Station P	1.24	71	⇓iP	Pg	16 30 10.7	-1.3
PB11				i S	Sg	16 30 27.1	-1.1
PB11				IAML		16 30 28.6	
	comp=N,846nm,0.2s						
PB11	IPOC Station P	1.24	71	eP	Pg	16 30 10.8	-1.3
PB11				IAML		16 30 31.1	
	comp=Z,604nm,0.2s						
PB02	IPOC Station P	1.49	141	⇑iP	Pn	16 30 15.0	+0.1
PB02				i S	Sg	16 30 33.7	-2.4
PB02				IAML		16 30 38.1	
	comp=E,872nm,0.4s						
PB02	IPOC Station P	1.49	141	⇓eP	Pn	16 30 15.1	+0.1
PB02				eS	Sg	16 30 34.8	-1.2
PB02				IAML		16 30 39.4	
	comp=Z,647nm,0.3s						
PB01	IPOC Station P	1.59	124	⇑eP	Pn	16 30 16.4	+0.1
PB01				i S	Sn	16 30 36.3	-0.6
PB01				IAML		16 30 42.6	
	comp=E,623nm,0.4s						
PB01	IPOC Station P	1.59	124	eP	Pn	16 30 17.0	+0.7
PB01				eS	Sn	16 30 37.4	+0.5
PB01				IAML		16 30 41.1	
	comp=Z,330nm,0.8s						
PB12	IPOC Station P	1.64	20	⇑eP	Pn	16 30 16.7	-0.3
PB12				i S	Sn	16 30 37.7	-0.3
PB12				IAML		16 30 45.8	
	comp=E,361nm,0.2s						
PB12	IPOC Station P	1.64	20	i P	Pn	16 30 17.6	+0.6
PB08	IPOC Station P	1.65	89	⇑iP	Pn	16 30 17.4	+0.1
PB08				i S	Sn	16 30 38.1	-0.6
PB08				IAML		16 30 41.6	
	comp=N,256nm,0.3s						
PB08	IPOC Station P	1.65	89	i P	Pn	16 30 17.6	+0.3
PB08				eS	Sn	16 30 38.5	-0.2
PB08				IAML		16 30 42.2	
	comp=Z,213nm,0.5s						
GO01	Chusmiza	1.68	73	⇑eP	Pn	16 30 17.9	0.0
GO01				i S	Sn	16 30 39.2	-0.6
PB07	IPOC Station P	1.82	149	⇑eP	Pn	16 30 19.6	0.0
PB07				i S	Sn	16 30 42.9	+0.1
PB07				IAML		16 30 48.5	
	comp=E,266nm,0.7s						
PB07	IPOC Station P	1.82	149	i P	Pn	16 30 19.7	0.0
PB07				IAML		16 30 51.8	
	comp=Z,203nm,0.3s						
PB03	IPOC Station P	2.16	150	i P	Pn	16 30 24.6	+0.4
PB03				IAML		16 31 08.0	
	comp=Z,114nm,0.5s						
PB09	IPOC Station P	2.25	137	i P	Pn	16 30 26.8	+1.4
PB09				IAML		16 31 04.6	
	comp=Z,257nm,0.5s						
PB16	IPOC Station P	2.25	36	⇓iP	Pn	16 30 28.0	+2.2
PB16				IAML		16 31 00.6	
	comp=Z,153nm,0.9s						
PB04	IPOC Station P	2.27	162	i P	Pn	16 30 25.7	-0.1
PB05	IPOC Station P	2.75	166	i P	Pn	16 30 31.9	-0.5
PB05				IAML		16 31 33.4	
	comp=Z,60nm,0.6s						
PB06	IPOC Station P	2.82	154	i P	Pn	16 30 33.1	-0.2
PB06				IAML		16 31 23.6	
	comp=Z,94nm,0.9s						
PB15	IPOC Station P	3.31	157	i P	Pn	16 30 40.1	0.0
PB15				IAML		16 31 38.0	
	comp=Z,156nm,0.6s						
PB10	IPOC Station P	3.35	174	i P	Pn	16 30 39.4	-1.0
LPAZ	La Paz	4.67	35	i P	Pn	16 31 05.6	+6.4

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*KRNET **17** 16:34:54.3±0.1, 40°.67N×78°.42E, h11^{km}, mb4.5*

*BJI **17** 16:34:54.2±0.0, 40°.67N×78°.41E, h7^{km}, mB4.5/23, mb4.3/31, ML4.3/9, Ms3.9/18, Ms7 3.7/16*

*IDC **17** 16:34:54.0±0.7, 40°.68N×78°.46E, h0^{km}, mb3.9/16, mb1 4.0/23, mb1mx3.9/46, mbtmp3.9/23, ML3.5/7, MS3.1/5, Ms1 3.1/5, ms1mx2.7/45, Error ellipse: s-maj=12.5km s-min=11.2km az=58.0*

*SOME **17** 16:34:56.1, 40°.82N×78°.38E, h10^{km}*

*NNC **17** 16:34:56.0±1.0, 40°.76N×78°.40E, h0^{km}, mb5.0, mpv4.8, Error ellipse: s-maj=6.8km s-min=5.2km az=173.0*

*MOS **17** 16:34:56.4±1.4, 40°.58N×78°.48E, h29^{km}, mb4.4/4, Error ellipse: s-maj=7.9km s-min=5.3km az=92.3*

*NEIC **17** 16:35:00.1±1.3, 40°.73N±0°.06×78°.43E±0°.08, h41^{km}±7^{km}, mb4.7/25, Error ellipse: s-maj=11.1km s-min=6.9km az=134.0*

ISC 17 16:34:56.2±1.1**, 40°.74N**±0°.03×**78°.45E**±0°.02**, h12**^{km}±7^{km}**, n220, σ1ˢ.86**/280**, mb4.2**/31**, MS3.6**/7**, 36C-22D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	1.69	326	⇑iP	Pn	16 35 26.2	+0.4
	baz=28						
KDJ				⇑iS	Sb	16 35 49.2	+0.6
	baz=28						
PRZ	Przheval'sk	1.74	359	⇓iP	Pb	16 35 28.4	+0.1
	baz=60						
PRZ				⇓iS	Sg	16 35 53.5	+1.2
	baz=60						
ANVS	Anan'yevo	2.12	344	⇓iP	Pb	16 35 34.9	+0.1
	baz=45						
ANVS				⇓iS	Sb	16 36 03.2	+2.0
	baz=45						
ULHL	Ulahol	2.24	313	⇑iP	Pb	16 35 35.7	-1.1
	baz=14						
ULHL				⇑iS	Sb	16 36 05.4	+0.8
	baz=14						
ULHL	Ulahol	2.24	313	P	Pb	16 35 36.2	-0.6
	SNR=134						
KSH	Kashi	2.26	238	Pg	Pg	16 35 40.8	+1.2
KSH				Sn	Sg	16 36 10.8	+1.9
KSH				smax	smax		
	comp=N,2μm,0.6s						
KSH				smax	smax		
	comp=E,1μm,0.5s						
SATY	Saty	2.32	359	eP	Pb	16 35 38.6	+0.5
	164nm,0.5s						
SATY				eS	Sg	16 36 09.4	-1.3
	5μm,0.9s						
SATY	Saty	2.32	359	Pg	Pb	16 35 38.5	+0.5
	654nm,0.4s						
SATY				Lg	Lg	16 36 10.6	
	5μm,0.9s						
SATY	Saty	2.32	359	ePN	Pb	16 35 38.6	+0.5
SATY				eS	Sg	16 36 09.4	-1.3
UZB	Uzynbulak	2.44	10	eP	Pb	16 35 39.5	-0.7
	114nm,0.3s						
UZB				eS	Sb	16 36 10.7	+0.4
	1μm,0.8s						
UZB	Uzynbulak	2.44	10	Pg	Pb	16 35 39.6	-0.7
	198nm,0.5s						
UZB				Lg	Lg	16 36 12.7	
	2μm,0.4s						
UZB	Uzynbulak	2.44	10	ePN	Pb	16 35 39.5	-0.7
UZB				eS	Sb	16 36 10.7	+0.4
SHLS	Shalkode	2.53	17	eP	Pb	16 35 42.5	+0.8
	200nm,0.3s						
SHLS				eS	Sg	16 36 16.3	-1.2
	6μm,0.6s						
SHLS	Shalkode	2.53	17	Pg	Pg	16 35 43.7	-1.0
	971nm,0.6s						
SHLS				Lg	Lg	16 36 19.1	
	6μm,0.5s						
SHLS	Shalkode	2.53	17	ePN	Pb	16 35 42.5	+0.8
SHLS				eS	Sg	16 36 16.3	-1.2
TNSS	Tian-Shan	2.56	334	eP	Pb	16 35 40.7	-1.6
	315nm,0.6s						
TNSS				eS	Sb	16 36 12.9	-0.9
	1μm,0.7s						
TNSS	Tian-Shan	2.56	334	Pg	Pb	16 35 42.6	+0.3
	612nm,0.6s						
TNSS				Lg	Lg	16 36 17.6	
	1μm,0.8s						
TNSS	Tian-Shan	2.56	334	ePN	Pb	16 35 40.7	-1.6
TNSS				eS	Sb	16 36 12.9	-0.9
BOOM	Boomskoye usch	2.57	314	⇑iP	Pn	16 35 39.9	+2.0
	baz=15						
BOOM				⇑iS	Sb	16 36 11.9	-2.1
	baz=15						
MDOK	Medeo	2.64	337	eP	Pb	16 35 42.2	-1.3
	38nm,0.5s						
MDOK				eS	Sb	16 36 15.6	-0.4
	3μm,0.6s						
MDOK	Medeo	2.64	337	Pg	Pb	16 35 44.0	+0.5
	343nm,0.4s						
MDOK				Lg	Lg	16 36 19.5	
	3μm,0.6s						
MDOK	Medeo	2.64	337	ePN	Pb	16 35 42.2	-1.3
MDOK				eS	Sb	16 36 15.6	-0.4
IZV	Izvestkoviy	2.67	330	eP	Pb	16 35 44.6	+0.4
	197nm,0.5s						
IZV				eS	Sb	16 36 19.4	+2.4
	1μm,0.6s						
IZV	Izvestkoviy	2.67	330	Pg	Pb	16 35 44.3	+0.1
	353nm,0.5s						
IZV				Lg	Lg	16 36 19.7	
	1μm,0.5s						
KOTS	Kotyrbulak	2.68	339	eP	Pb	16 35 45.0	+0.6
	432nm,0.6s						
KOTS				eS	Sg	16 36 20.6	-1.8
	4μm,0.6s						
KOTS	Kotyrbulak	2.68	339	Pg	Pb	16 35 45.1	+0.8
	515nm,0.4s						
KOTS				Lg	Lg	16 36 21.7	
	4μm,0.5s						
KNDC	Almaty	2.71	336	⇑Pn	Pb	16 35 43.2	-1.5
	423nm,0.5s						
KNDC				⇓Lg	Lg	16 36 21.7	
	5μm,0.6s						
KNDC	Almaty	2.71	336	PN	Pb	16 35 43.2	-1.5
AAA	Alma-Ata	2.72	336	eP	Pb	16 35 46.0	+1.2
	767nm,0.4s						
AAA				eS	Sg	16 36 21.9	-1.7
	1μm,0.7s						
AAA	Alma-Ata	2.72	336	Pg	Pb	16 35 45.8	+1.0
	775nm,0.4s						
AAA				Lg	Lg	16 36 22.7	
	1μm,0.7s						
AAA	Alma-Ata	2.72	336	ePN	Pb	16 35 46.1	+1.2
AAA				eS	Sg	16 36 21.9	-1.7
KPKS	Kokpek	2.73	4	eP	Pb	16 35 45.3	+0.3

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             640nm,0.4s
KPKS                                eS     Sb     16 36 20.8 +2.2
             31µm,0.5s
KPKS   Kokpek           2.73   4 ePN    Pb     16 35 45.3 +0.3
KPKS                             eS     Sb     16 36 20.8 +2.2
KURS   Kuram            2.75 356 eP     Pb     16 35 46.7 +1.2
             326nm,0.6s
KURS                             eS     Sg     16 36 23.1  -1.5
             1µm,0.7s
KZA    Kyzart           2.75 300⇑iP     Pn     16 35 42.2 +1.6
             baz=1.0
KZA                             ⇑iS     Sb     16 36 17.2  -2.4
             baz=1.0
KZA    Kyzart           2.75 300  P     Pn     16 35 42.5 +1.9
             SNR=54
MTBS   Maitube          2.82 328 eP     Pb     16 35 46.6  -0.1
             120nm,0.3s
MTBS                             eS     Sb     16 36 23.1 +1.8
             521nm,0.5s
MTBS   Maitube          2.82 328  Pg    Pb     16 35 46.7 +0.1
             125nm,0.3s
MTBS                              Lg    Lg     16 36 24.2
             520nm,0.5s
MTBS   Maitube          2.82 328 ePN    Pb     16 35 46.6  -0.1
MTBS                             eS     Sb     16 36 23.1 +1.8
KST    Kastek           2.96 322 eP     Pb     16 35 48.8  -0.2
             262nm,0.6s
KST                              eS     Sb     16 36 26.7 +1.5
             670nm,0.6s
KST    Kastek           2.96 322  Pg    Pb     16 35 48.7  -0.2
             367nm,0.6s
KST                               Lg    Lg     16 36 27.9
             655nm,0.8s
KTMS   Ketmen           3.05  27 eP     Pb     16 35 51.4 +0.9
             3.2nm,0.1s
KTMS                             eS     Sb     16 36 31.2 +3.4
             1µm,0.6s
DGS    Degeres          3.20 322 eP     Pb     16 35 54.6 +1.5
             69nm,0.5s
DGS                              eS     Sg     16 36 36.5  -2.5
             829nm,0.7s
DGS    Degeres          3.20 322  Pg    Pb     16 35 53.5 +0.4
             107nm,0.6s
DGS                               Lg    Lg     16 36 36.6
             827nm,0.6s
KTBS   Karatobe         3.25 337 eP     Pb     16 35 55.7 +1.8
             108nm,0.6s
KTBS                             eS     Sg     16 36 38.4  -2.2
             782nm,0.8s
KTBS   Karatobe         3.25 337  Pg    Pb     16 35 54.4 +0.5
             180nm,0.5s
KTBS                              Lg    Lg     16 36 37.8
             1µm,0.6s
KBK    Karagaybulak     3.25 307⇑iP     Pn     16 35 49.3 +2.1
             baz=8.0
KBK                             ⇑iS     Sn     16 36 28.9 +3.0
             baz=8.0
KBK    Karagaybulak     3.25 307  P     Pn     16 35 49.8 +2.5
             SNR=30
CHKK   Chushkaly        3.29 341 eP     Pb     16 35 56.6 +1.9
             169nm,0.4s
CHKK                             eS     Sg     16 36 40.0  -2.0
             2µm,0.8s
CHKK   Chushkaly        3.29 341  Pg    Pb     16 35 55.2 +0.6
             208nm,0.4s
CHKK                              Lg    Lg     16 36 39.6
             2µm,0.8s
CHKK   Chushkaly        3.29 341 ePN    Pb     16 35 56.6 +1.9
CHKK                             eS     Sg     16 36 40.0  -2.0
ARLS   Aral             3.31 291⇓iP     Pn     16 35 49.1 +1.1
             baz=93
ARLS                            ⇓iS     Sn     16 36 28.9 +1.6
             baz=93
UCH    Uchtor           3.31 298⇓iP     Pn     16 35 50.1 +1.7
             baz=99
UCH                             ⇓iS     Sn     16 36 30.3 +2.4
             baz=99
UCH    Uchtor           3.31 298  P     Pn     16 35 50.0 +1.7
             SNR=11
ARXS   Arharly          3.50 353 eP     Pb     16 35 59.3 +1.1
             231nm,0.5s
ARXS                             eS     Sb     16 36 44.8 +4.1
             948nm,0.6s
ARXS   Arharly          3.50 353  Pg    Pb     16 35 59.4 +1.2
             230nm,0.5s
ARXS                              Lg    Lg     16 36 45.7
             948nm,0.6s
AAK    Ala-Archa        3.52 304  Pn    Pn     16 35 53.6 +2.7
             2.1nm,0.3s,baz=98,slow=8.0,SNR=42
AAK                               Pg    Pb     16 35 59.3 +0.8
             19nm,0.3s,baz=127,slow=15,SNR=75
AAK                               Lg    Lg     16 36 43.6
             21nm,0.3s,baz=262,slow=14,SNR=20
AAK    Ala-Archa        3.52 304⇑iP     Pn     16 35 53.0 +2.1
             baz=5.0
AAK                             ⇑iS     Sn     16 36 35.2 +2.6
             baz=5.0
AAK    Ala-Archa        3.52 304  P     Pb     16 35 55.7  -2.8
             SNR=28
AAK    Ala-Archa        3.52 304 ⇑Pg    Pb     16 35 58.9 +0.4
             186nm,1.2s
AAK                              ⇓Lg    Lg     16 36 43.9
             604nm,1.0s
AAK    Ala-Archa        3.52 304        Pn     16 35 53.5 +2.6
KUU    Kurty            3.52 334 eP     Pb     16 35 59.2 +0.7
             53nm,0.6s
KUU                              eS     Sb     16 36 44.6 +3.5
             1µm,0.8s
KUU    Kurty            3.52 334  Pg    Pb     16 35 58.7 +0.3
             70nm,0.6s
KUU                               Lg    Lg     16 36 44.9
             1µm,0.8s
KUU    Kurty            3.52 334 ePN    Pb     16 35 59.2 +0.7
KUU                              eS     Sb     16 36 44.6 +3.5
FRU1   Bishkek          3.53 307⇑iP     Pn     16 35 53.3 +2.3
             baz=8.0
FRU1                            ⇑iS     Sn     16 36 35.7 +3.0
             baz=8.0
FRU1   Bishkek          3.53 307  PN    Pn     16 35 53.8 +2.8
FRU1   Bishkek          3.53 307        Pn     16 35 53.8 +2.8
CHMS   Chumysh          3.57 310⇑iP     Pn     16 35 53.8 +2.3
             baz=11
CHMS                            ⇑iS     Sn     16 36 36.8 +3.2
             baz=11
CHMS   Chumysh          3.57 310  P     Pn     16 35 54.0 +2.5
             SNR=22
CHMS   Chumysh          3.57 310 ⇑Pg    Pb     16 35 59.3  0.0
             82nm,0.8s
CHMS                             ⇓Lg    Lg     16 36 46.5
             864nm,1.0s
DJR    Jarkent          3.72  15 eP     Pb     16 36 04.3 +2.3
             23nm,0.4s
DJR                              eS     Sg     16 36 53.1  -2.6
             547nm,0.9s
DJR    Jarkent          3.72  15  Pg    Pb     16 36 03.0 +1.0
             35nm,0.4s
DJR                               Lg    Lg     16 36 52.4
             524nm,0.5s
AML    Almayashu        3.84 293⇓iP     Pn     16 35 57.2 +1.7
             baz=94
AML                             ⇓iS     Sn     16 36 42.4 +1.6
             baz=94
AML    Almayashu        3.84 293  P     Pn     16 35 58.3 +2.8
             SNR=9.5
USP    Ospenovka        3.88 312⇑iP     Pn     16 35 58.5 +2.7
             baz=13
USP                             ⇑iS     Sn     16 36 44.3 +3.0
             baz=13
USP    Ospenovka        3.88 312  P     Pb     16 36 05.2 +0.5
             SNR=41
SGDS   Sogindy          3.93 315  Pg    Pb     16 36 06.3 +0.9
             53nm,0.5s
SGDS                              Lg    Lg     16 36 58.1
             198nm,0.6s
EKS2   Erkin-Say        3.99 300⇑iP     Pn     16 35 59.5 +2.1
             baz=1.0
EKS2                            ⇑iS     Sn     16 36 46.3 +2.1
             baz=1.0
EKS2   Erkin-Say        3.99 300  P     Pn     16 36 00.0 +2.6
             SNR=15
ARSB   Arslanbob        4.18 280⇑eP     Pn     16 36 01.2 +1.2
             baz=81
ARSB                            ⇑iS     Sn     16 36 49.4 +0.6
             baz=81
ARSB   Arslanbob        4.18 280  PN    Pn     16 36 02.1 +2.1
ARSB   Arslanbob        4.18 280        Pn     16 36 02.0 +2.1
TDK    Taldyqorghan     4.26 360 eP     Pb     16 36 13.8 +2.7
             181nm,0.5s
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TDK                              eS     Sg     16 37 09.9  -3.0
             2µm,1.2s
TDK    Taldyqorghan     4.26 360  Pg    Pb     16 36 13.5 +2.4
             794nm,0.7s
TDK                               Lg    Lg     16 37 10.0
             2µm,1.2s
TDK    Taldyqorghan     4.26 360 ePN    Pb     16 36 13.8 +2.7
TDK                              eS     Sg     16 37 10.0  -3.0
MRKS   Merke            4.39 299 eP     Pb     16 36 14.9 +1.5
             20nm,0.5s
MRKS                             eS     Sb     16 37 11.6 +5.2
             66nm,0.6s
KAPS   Kapalarasan      4.59   8 eP     Pb     16 36 18.7 +2.0
             40nm,0.6s
KAPS                             eS     Sb     16 37 17.9 +5.9
             352nm,0.8s
KAPS   Kapalarasan      4.59   8  Pg    Pb     16 36 19.0 +2.2
             91nm,0.6s
KAPS                              Lg    Lg     16 37 20.4
             355nm,0.8s
BTLS   Baital           5.38 324 eP     Pb     16 36 33.5 +3.4
             7.2nm,0.4s
BTLS                             eS     Sg     16 37 43.3  -5.6
             116nm,1.0s
BTLS   Baital           5.38 324 ePN    Pb     16 36 33.5 +3.4
BTLS                             eS     Sg     16 37 43.3  -5.6
KK31   Karatay Array    6.38 294 ⇑Pg    Pb     16 36 51.4 +4.3
             7.7nm,0.5s
KK31                             ⇑Lg    Lg     16 38 15.0
             39nm,0.7s
KK31   Karatay Array    6.38 294  PN    Pn     16 36 31.5 +1.5
KK31   Karatay Array    6.38 294  Pn    Pn     16 36 31.5 +1.5
KKAR   Karatay Array    6.38 294  PN    Pn     16 36 31.5 +1.4
KKAR   Karatay Array    6.38 294  Pn    Pn     16 36 31.4 +1.4
KKAR   Karatay Array    6.38 294  Pn    Pn     16 36 31.5 +1.4
MAKZ   Makanchi         6.58  22 ⇑Pn    Pn     16 36 34.6 +1.8
             13nm,0.8s
MAKZ                             ⇓Pg    Pg     16 36 57.4  -4.8
             13nm,0.5s
MAKZ                             ⇓Lg    Lg     16 38 20.0
             29nm,0.7s
MAKZ   Makanchi         6.58  22  PN    Pn     16 36 34.6 +1.8
MAKZ   Makanchi         6.58  22        Pn     16 36 34.6 +1.8
MK31   Makanchi Array   6.66  23  Pn    Pn     16 36 35.5 +1.6
             1.6nm,0.3s,baz=209,slow=13,SNR=73
MK31                             ⇑Pg    Pb     16 36 51.6  -0.3
             13nm,0.6s,baz=210,slow=10,SNR=7.1
MK31                             ⇓Lg    Lg     16 38 23.4
             123nm,0.8s
MK31   Makanchi Array   6.66  23 i PN   Pb     16 36 51.6  -0.3
MK31                                           16 38 23.4
MK31                              pmax  pmax
             comp=Z,13nm,0.6s
MK31                              pmax  pmax
             comp=Z,123nm,0.8s
MK31   Makanchi Array   6.66  23        Pn     16 36 34.9 +1.0
MKAR   Makanchi Array   6.66  23  Pn    Pn     16 36 35.3 +1.4
             comp=Z,4.5nm,0.3s,baz=212,slow=14,SNR=52
MKAR                              Pg    Pb     16 36 52.4 +0.5
             comp=Z,3.2nm,0.3s,baz=200,slow=13,SNR=5.5
MKAR                              Sn    Sn     16 37 50.8 +1.1
             comp=Z,4.2nm,0.3s,baz=200,slow=32,SNR=5.7
MKAR                              Lg    Lg     16 38 24.5
             comp=Z,8.6nm,0.3s,baz=250,slow=14,SNR=5.5
WMQ    Urumqi           7.51  63 ePn    Pn     16 36 48.1 +2.4
WMQ                               Sn    Sn     16 38 14.5 +3.7
WMQ                               smax  smax
             comp=Z,93nm,0.9s
WMQ                               smax  smax
             comp=Z,79nm,1.1s
WMQ                               LR    LR
             comp=Z,230nm,7.7s
WMQ                               LR    LR
             comp=Z,170nm,7.7s
WMQ                               LR    LR
             comp=Z,240nm,7.9s
WMQ    Urumqi           7.51  63  P     Pn     16 36 47.7 +2.0
WMQ    Urumqi           7.51  63        Pn     16 36 47.7 +2.0
CHCP   Chirah Chowk     8.19 212  P     Pn     16 36 55.6 +0.6
NIL    Nilore           8.20 212  P     Pn     16 36 55.3 +0.1
NIL    Nilore           8.20 212        Pn     16 36 55.3 +0.1
CEP    Cherat           8.65 219  P     Pn     16 37 01.6 +0.2
BHK    Bhakra           9.45 191 ex     Pn     16 37 11.0  -1.2
THW    Thamme Wali      9.58 216  P     Pn     16 37 13.1  -0.9
KBL    Kabul            9.69 233  P     Pn     16 37 14.7  -1.0
KBL    Kabul            9.69 233        Pn     16 37 14.7  -1.0
KURBB  Kurchatov Arra   9.88   0  Pn    Pn     16 37 19.1 +1.0
             comp=Z,0.5nm,0.3s,baz=187,slow=12,SNR=45
KURBB                             Sn    Sn     16 39 05.0  -3.9
             comp=Z,0.2nm,0.3s,baz=176,slow=27,SNR=4.5
KURBB                             Lg    Lg     16 40 07.2
             comp=Z,0.5nm,0.3s,baz=183,slow=29,SNR=8.5
KURBB  Kurchatov Arra   9.88   0 ⇑Pn    Pn     16 37 18.6 +0.6
             comp=Z,2.3nm,0.3s
KURBB                            ⇓Lg    Lg     16 40 09.9
             comp=Z,147nm,0.8s
KURBB  Kurchatov Arra   9.88   0  P     Pn     16 37 18.3 +0.2
KURK   Kurchatov        9.98   1 ⇑Pn    Pn     16 37 19.5 +0.2
             comp=Z,6.2nm,0.5s
KURK                             ⇑Lg    Lg     16 40 10.5
             comp=Z,79nm,0.8s
KURK   Kurchatov        9.98   1c iP    Pn     16 37 20.4 +1.1
KURK   Kurchatov        9.98   1        Pn     16 37 19.9 +0.6
KURK   Kurchatov        9.98   1        Sn     16 39 05.0  -6.2
NDI    New Delhi       12.07 185 eP     Pn     16 37 47.0  -1.1
NDI                              ex     x      16 39 53.0
DANN   Dangsing        13.11 159 eP     Pn     16 37 58.4  -4.1
             comp=Z,20nm,0.4s
BVAR   Borovoye Array  13.46 339  Pn    Pn     16 38 06.2  -0.7
             comp=Z,0.8nm,0.3s,baz=147,slow=13,SNR=20
BVAR                              Lg    Lg     16 41 55.6
             comp=Z,0.3nm,0.3s,baz=154,slow=28,SNR=9.2
BRVK   Borovoye        13.52 338 ⇓Pn    Pn     16 38 07.1  -0.6
             comp=Z,8.2nm,0.8s
BRVK   Borovoye        13.52 338⇓eP     Pn     16 38 06.9  -0.8
BRVK   Borovoye        13.52 338        Pn     16 38 07.0  -0.8
GKN    Gorkha          13.69 156 eP     Pn     16 38 06.9  -3.4
             comp=Z,23nm,0.3s
ZAA0   Zalesovo Array  13.89  16        Pn     16 38 13.7 +0.9
ZALV   Zalesovo Beam   13.89  16  Pn    Pn     16 38 12.4  -0.4
             comp=Z,0.1nm,0.3s,baz=200,slow=13,SNR=9.9
ZALV                              Lg    Lg     16 42 11.7
             comp=Z,0.1nm,0.3s,baz=203,slow=26,SNR=1.8
ZALV                              LR    LR     16 43 46.1
             comp=Z,153nm,18.6s,baz=148,slow=38
ZALV   Zalesovo Beam   13.89  16 i P    Pn     16 38 13.3 +0.5
ZALV                              pmax  pmax
             comp=Z,3.0nm,0.6s
ZALV   Zalesovo Beam   13.89  16        Pn     16 38 12.3  -0.5
KKN    Kakani          14.09 154 eP     Pn     16 38 13.3  -2.6
             comp=Z,17nm,0.6s
GUN    Gumba           14.18 152 eP     Pn     16 38 14.0  -3.3
             comp=Z,18nm,0.5s
DMN    Daman           14.20 155 eP     Pn     16 38 14.5  -3.0
PKIN   Phulchoki       14.33 154 eP     Pn     16 38 15.4  -3.8
             comp=Z,14nm,0.4s
PKI    Pulchoki        14.34 154 eP     Pn     16 38 15.3  -4.1
             comp=Z,15nm,0.4s
JIRN   Jiri            14.52 152 eP     Pn     16 38 19.6  -2.4
             comp=Z,35nm,0.4s
RAMN   Ramite          15.32 151 eP     Pn     16 38 29.0  -3.6
             comp=Z,20nm,0.5s
TAPN   Taplejung       15.39 147 eP     Pn     16 38 31.9  -1.6
ABKAR  Akbulak array   15.59 309  P     P      16 38 41.1 +1.2
ODAN   Odare           15.70 149 eP     Pn     16 38 35.4  -2.1
             comp=Z,20nm,0.6s
GEYT   Alibeck         15.98 266  Pn    Pn     16 38 39.7  -1.2
             comp=Z,0.1nm,0.3s,baz=58,slow=15,SNR=1.7
GTA    Gaotai          16.41  88 ⇑P     Pn     16 38 44.3  -2.1
GTA                               pP    P      16 38 49.9 +0.7
GTA                               sP    pP     16 38 53.3 +0.1
GTA                               S     Sn     16 41 48.0  -0.4
GTA                               pmax  pmax
             comp=Z,2.0nm,0.8s
GTA                               pmax  pmax
             comp=Z,120nm,5.7s
GTA                               LR    LR
             comp=Z,160nm,15.9s
GTA                               LR    LR
             comp=Z,150nm,15.9s
GTA                               LR    LR
             comp=Z,110nm,15.6s
AKTO   Aktyubinsk      17.23 311  P     Pn     16 38 55.6  -1.0
             comp=Z,0.1nm,0.3s,baz=141,slow=22,SNR=1.8
AKTO                              Lg    Lg     16 44 04.8
             comp=Z,0.1nm,0.3s,baz=116,slow=24,SNR=1.4
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AKTO                              LR    LR     16 45 45.0
             comp=Z,49nm,18.8s,baz=277,slow=38
MOY    Mondy           18.97  47 eP     Pn     16 39 19.8 +1.7
ZAK    Zakamensk       19.80  53 eP     P      16 39 27.0 +0.5
ZAK                               pmax  pmax
             comp=Z,4.0nm,1.2s
ZAK                               pmax  pmax
             comp=Z,3.0nm,1.4s
ARU    Arti            20.36 327  P     P      16 39 32.9 +0.4
             comp=Z,0.6nm,0.4s,baz=323,slow=23,SNR=2.0
ARU                               Lg    Lg     16 45 33.9
             comp=Z,0.3nm,0.3s,baz=208,slow=14,SNR=3.5
ARU    Arti            20.36 327d iP    P      16 39 33.3 +0.8
ARU                                            16 39 49.2
ARU                               S     Sn     16 43 25.5 +1.8
ARU                               SS    S      16 43 44.4  +24
ARU                               pmax  pmax
             comp=Z,5.0nm,1.3s
ARU    Arti            20.36 327  P     Pn     16 39 34.1  -0.5
LZH    Lanzhou         20.40  95 eP     Pn     16 39 34.5  -0.9
LZH                               pP    sP     16 39 45.3 +6.2
LZH                               PP    PnPn   16 39 54.3 +4.1
LZH                               pmax  pmax
             comp=Z,14nm,1.0s
LZH                               pmax  pmax
             comp=Z,57nm,5.0s
LZH                               LR    LR
             comp=Z,200nm,15.7s
LZH                               LR    LR
             comp=Z,170nm,14.1s
LZH                               LR    LR
             comp=Z,170nm,13.6s
TLY    Talaya          20.48  49  P     P      16 39 34.4 +0.6
TLY                               pmax  pmax
             comp=Z,14nm,2.0s
TLY    Talaya          20.48  49  P     P      16 39 34.4 +0.6
SONM   Songino Array   21.15  61  P     P      16 39 42.8 +1.6
             comp=Z,6.6nm,0.8s,baz=258,slow=11,SNR=24
SONM   Songino Array   21.15  61  P     P      16 39 41.8 +0.6
ULN    Ulaanbaatar     21.59  61  P     P      16 39 46.9 +0.9
ULN                               pmax  pmax
             comp=Z,6.0nm,0.9s
ULN    Ulaanbaatar     21.59  61  P     P      16 39 46.9 +0.9
CD2    Chengdu         22.68 108 eP     P      16 39 55.6  -2.0
HYB    Hyderabad       23.24 180 i P    P      16 40 03.5   0.0
HHC    Hu-ho-hao-te    24.99  79 eP     P      16 40 20.1 +0.2
HHC                               pmax  pmax
             comp=Z,260nm,3.9s
XAN    Xi'an           25.03  96  P     P      16 40 19.5  -0.8
XAN                               pP    pP     16 40 23.3  -1.2
XAN                               pmax  pmax
             comp=Z,7.0nm,0.8s
XAN                               pmax  pmax
             comp=Z,92nm,5.9s
XAN                               LR    LR
             comp=Z,150nm,11.9s
GYA    Guiyang         27.34 113 eP     P      16 40 42.0 +0.8
GYA                               pmax  pmax
             comp=Z,10.0nm,0.8s
CMAR   Chiang Mai Arr  28.34 136  P     P      16 40 50.8 +0.7
             comp=Z,0.5nm,0.6s,baz=312,slow=9.5,SNR=1.5
CMAR                              LR    LR     16 54 58.6
             comp=Z,16nm,18.5s,baz=245,slow=43
BJI    Beijing         28.60  79 eP     P      16 40 51.1  -1.1
NRIK   Noril'sk        29.07   7⇑eP     P      16 40 56.7 +0.6
NRIK                              pmax  pmax
             comp=Z,4.0nm,0.9s
WHN    Wuhan           30.71  98  P     P      16 41 15.6 +4.6
WHN                               S     S      16 46 07.5  -6.1
WHN                               LR    LR
             comp=Z,240nm,18.2s
RAYN   Ar Rayn         32.51 248  P     P      16 41 26.9  -0.1
RAYN                              pmax  pmax
             comp=Z,5.0nm,0.9s
RAYN   Ar Rayn         32.51 248  P     P      16 41 26.9  -0.1
RAYN                              IAmb  IAmb   16 41 30.4
             comp=Z,4.6nm,0.8s
NJ2    Nanjing         33.42  92 eP     P      16 41 35.6 +0.8
NJ2                               pmax  pmax
             comp=Z,11nm,0.5s
BR131  Keskin Array S  33.95 283  P     P      16 41 39.7 +0.2
BR131                             pmax  pmax
             comp=Z,11nm,1.6s
BR131  Keskin Array S  33.95 283  P     P      16 41 39.7 +0.2
BR131                             IAmb  IAmb   16 42 35.2
             comp=Z,11nm,1.6s
BRTR   Keskin Array B  33.95 283  P     P      16 41 39.0  -0.6
             comp=Z,2.5nm,0.9s,baz=81,slow=8.5,SNR=8.5
BRTR   Keskin Array B  33.95 283  P     P      16 41 39.6   0.0
BRTR   Keskin Array B  33.95 283  P     P      16 41 39.6   0.0
AKASG  Malin Array Be  35.19 303  P     P      16 41 49.4  -0.5
             comp=Z,0.3nm,0.3s,baz=72,slow=8.3,SNR=5.5
AKASG  Malin Array Be  35.19 303  P     P      16 41 49.4  -0.5
AKASG                             pmax  pmax
             comp=Z,1.0nm,0.7s
FINES  FINESS Array B  37.53 321  P     P      16 42 09.2  -0.5
             comp=Z,1.5nm,0.7s,baz=101,slow=9.9,SNR=5.1
FINES  FINESS Array B  37.53 321  P     P      16 42 10.0 +0.2
FINES  FINESS Array B  37.53 321  P     P      16 42 10.0 +0.2
KLR    Kul'dur         37.94  59⇓eP     P      16 42 12.4  -1.1
KLR                               pmax  pmax
             comp=Z,6.0nm,2.0s
KSRS   Korea Array     38.13  78  P     P      16 42 14.7  -0.5
             comp=Z,1.2nm,0.8s,baz=289,slow=9.0,SNR=4.5
KSRS                              LR    LR     17 00 51.3
             comp=Z,16nm,19.0s,baz=240,slow=41
BURAR  Bucovina Array  38.15 299  P     P      16 42 15.5 +0.1
TIXI   Tiksi           39.65  22  P     P      16 42 26.7  -0.8
             comp=Z,2.1nm,0.7s,baz=274,slow=4.7,SNR=10
TIXI   Tiksi           39.65  22⇓eP     P      16 42 27.3  -0.1
TIXI                              pmax  pmax
             comp=Z,2.0nm,0.7s
TIXI   Tiksi           39.65  22  P     P      16 42 26.9  -0.5
ARCES  ARCESS Array B  39.68 334  P     P      16 42 28.6 +0.8
             comp=Z,3.5nm,0.6s,baz=100,slow=8.4,SNR=17
ARCES  ARCESS Array B  39.68 334  P     P      16 42 28.2 +0.4
ARE0   ARCESS Array S  39.68 334  P     P      16 42 28.4 +0.6
NC405  NORSAR Array S  44.44 320  P     P      16 43 06.3  -0.4
NC602  NORSAR Array S  44.55 320  P     P      16 43 07.4  -0.2
NB2    NORSAR Subarra  44.68 320  P     P      16 43 08.8 +0.1
             comp=Z,1.3nm,0.7s,baz=87,slow=8.6
NOA    NORSAR Array B  44.68 320  P     P      16 43 08.5  -0.2
             comp=Z,1.4nm,0.7s,baz=86,slow=7.8,SNR=4.1
NOA                               LR    LR     17 00 19.9
             comp=Z,30nm,18.3s,baz=355,slow=34
NAO01  NORSAR Array S  44.86 320  P     P      16 43 09.2  -0.9
NC204  NORSAR Array S  44.88 321  P     P      16 43 10.1  -0.2
CLL    Collm           45.23 306 eP     P      16 43 14.0 +0.9
GEC2   GERESS Array S  45.40 303  P     P      16 43 14.7 +0.1
GEC2                              IAmb  IAmb   16 43 17.7
             comp=Z,7.9nm,1.3s
GERES  GERESS Array B  45.40 303  P     P      16 43 15.2 +0.6
             comp=Z,1.5nm,0.6s,baz=81,slow=8.2,SNR=6.7
GERES  GERESS Array B  45.40 303  P     P      16 43 13.8  -0.9
MJB9   Matsu-Tunnel    46.08  75  P     P      16 43 20.3 +0.2
MJB9                              IAmb  IAmb   16 44 01.0
             comp=Z,6.3nm,1.1s
MAJO   Matsushiro      46.08  75  P     P      16 43 20.4 +0.3
MAJO                              pmax  pmax
             comp=Z,24nm,1.9s
MAJO   Matsushiro      46.08  75  P     P      16 43 20.4 +0.3
MAJO                              IAmb  IAmb   16 44 49.4
             comp=Z,24nm,1.9s
GRA1   Grafenberg Arr  46.74 305  P     P      16 43 26.0 +0.9
GRA1                              IAmb  IAmb   16 43 27.1
             comp=Z,8.7nm,0.6s
GRF    Grafenberg Arr  46.74 305  P     P      16 43 26.0 +0.9
GRF                               pmax  pmax
             comp=Z,9.0nm,0.6s
INTR   Introdacqua     47.40 294  P     P      16 43 31.0 +0.6
INTR                              IAmb  IAmb   16 43 31.9
             comp=Z,7.2nm,0.9s
TEOL   Teolo           47.76 299  P     P      16 43 32.6  -0.5
TEOL                              IAmb  IAmb   16 44 32.9
             comp=Z,8.0nm,0.7s
BNI    Bardonecchia    51.17 300  P     P      16 43 59.0  -0.3
BNI                               pmax  pmax
             comp=Z,21nm,1.6s
BNI    Bardonecchia    51.17 300  P     P      16 43 59.0  -0.3
BNI                               IAmb  IAmb   16 44 01.7
             comp=Z,21nm,1.6s
BILL   Bilibino        52.17  28⇑eP     P      16 44 05.6  -0.7
BILL                             e             16 45 22.2
BILL                             e             16 46 05.3
BILL                             eS     S      16 51 31.7 +1.5
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Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
BILL				pmax	pmax		
	comp=Z,6.0nm,1.6s						
BILL				MLR	MLR		
	comp=Z,53nm,16.0s						
IMAR	Indian Mountai	66.26	21	P	P	16 45 43.0	-0.8
BMAR	Burnt Mountain	67.34	17	P	P	16 45 50.6	-0.1
MLY	Manley	67.80	20	P	P	16 45 53.5	-0.2
MLY				IAmb	IAmb	16 46 48.6	
	comp=Z,24nm,1.9s						
KTH	Kantishna Hill	68.91	21	P	P	16 46 00.3	-0.4
KTH				IAmb	IAmb	16 46 07.3	
	comp=Z,36nm,1.6s						
ILAR	Eielson Array	68.99	19	P	P	16 46 00.2	-0.8
	comp=Z,1.0nm,0.8s,baz=326,slow=4.8,SNR=9.6						
ILAR	Eielson Array	68.99	19	P	P	16 45 59.9	-1.2
PPLA	Purkeypile	69.07	22	P	P	16 46 02.0	+0.2
TORD	Torodi Ar. Bea	71.55	272	P	P	16 46 15.7	-1.8
	comp=Z,0.7nm,0.5s,baz=39,slow=6.3,SNR=4.9						
YKA	Yellowknife Ar	76.58	6	P	P	16 46 45.0	-1.1
	comp=Z,1.8nm,0.8s,baz=345,slow=5.1,SNR=27						
YKA	Yellowknife Ar	76.58	6	P	P	16 46 45.0	-1.1
WRA	Warramunga Arr	79.60	128	P	P	16 47 03.3	-0.1
	comp=Z,1.1nm,0.8s,baz=322,slow=5.0,SNR=6.3						
ASAR	Alice Springs	82.21	130	P	P	16 47 16.6	-0.7
	comp=Z,1.1nm,0.8s,baz=324,slow=5.1,SNR=16						

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*IDC **17** 16:54:33.1±0.9, 19°.94S×70°.58W, h0^{km}, mb3.9/5, mb1 4.2/7, mb1mx3.9/27, mbtmp4.0/7, ML3.8/2, MS3.1/3, Ms1 3.1/3, ms1mx2.8/22, Error ellipse: s-maj=31.6km s-min=14.3km az=68.0*

*NEIC **17** 16:54:34.9±2.4, 20°.05S±0°.04×70°.78W±0°.07, h15^{km}±4^{km}, mb4.4/4, Error ellipse: s-maj=8.9km s-min=6.5km az=91.0*

*GUC **17** 16:54:36.4±0.6, 20°.08S×70°.80W, h33^{km}±2^{km}, ML4.0*

ISC 17 16:54:32.9±1.7, 20°.04S±0°.03×70°.84W±0°.06, h4^{km}±10^{km}, n45, σ1^{s}.17/52, mb4.2/5, 3C-7D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.81	57	⇓iP	Pb	16 54 49.9	+0.3
PSGC				eS	Sb	16 55 01.1	+0.2
PSGC				IAML		16 55 03.4	
	comp=E,9μm,0.5s						
TA01	Diego Aracena	0.81	130	⇓iP	Pb	16 54 49.4	-0.1
TA01				iS	Sg	16 54 59.3	+0.3
PATCX	Punta Patache	1.01	140	⇓iP	Pg	16 54 52.7	+0.4
PATCX				iS	Sg	16 55 05.2	-0.2
PB11	IPOC Station P	1.15	76	⇓iP	Pg	16 54 55.3	+0.3
PB11				iS	Sg	16 55 10.3	+0.3
PB11				IAML		16 55 13.6	
	comp=N,6μm,0.3s						
PB11	IPOC Station P	1.15	76		Pg	16 54 55.3	+0.3
PB11				Sn	Sb	16 55 10.8	0.0
PB12	IPOC Station P	1.50	19	⇑iP	Pn	16 55 01.8	+1.1
PB12				iS	Sn	16 55 20.8	0.0
PB12				IAML		16 55 27.2	
	comp=N,2μm,0.5s						
PB02	IPOC Station P	1.55	145	⇑iP	Pn	16 55 01.4	0.0
PB02				iS	Sn	16 55 20.2	-1.9
PB02				IAML		16 55 28.1	
	comp=E,4μm,0.4s						
PB08	IPOC Station P	1.59	94	⇓iP	Pn	16 55 02.5	+0.3
PB08				iS	Sn	16 55 22.7	-0.7
PB08				IAML		16 55 25.6	
	comp=N,2μm,0.3s						
GO01	Chusmiza	1.59	77	⇓iP	Pn	16 55 02.9	+0.6
GO01				iS	Sb	16 55 24.0	0.0
GO01				IAML		16 55 25.0	
	comp=N,10μm,0.2s						
GO01	Chusmiza	1.59	77	Pn	Pn	16 55 03.0	+0.6
PB01	IPOC Station P	1.61	128	⇓iP	Pn	16 55 02.2	0.0
PB01				eS	Sn	16 55 21.9	-1.7
PB01				IAML		16 55 27.3	
	comp=E,2μm,0.5s						
PB01	IPOC Station P	1.61	128		Pn	16 55 02.3	0.0
AP01	Chacalluta	1.73	16	eP	Pn	16 55 05.2	+1.5
AP01				eS	Sn	16 55 27.3	+1.1
AP01				IAML		16 55 38.1	
	comp=E,5μm,0.4s						
PB07	IPOC Station P	1.90	152	eP	Pn	16 55 06.2	-0.1
PB07				iS	Sn	16 55 30.6	-0.1
PB03	IPOC Station P	2.24	153	eP	Pn	16 55 10.8	-0.2
PB09	IPOC Station P	2.30	140	⇑eP	Pn	16 55 13.0	+1.3
PB09				IAML		16 55 50.5	
	comp=N,932nm,0.5s						
PB04	IPOC Station P	2.37	164	eP	Pn	16 55 12.3	-0.5
PB04				IAML		16 56 00.1	
	comp=E,660nm,0.5s						
PB04	IPOC Station P	2.37	164		Pn	16 55 12.2	-0.6
LVC	Limon Verde	3.13	145	Pn	Pn	16 55 24.7	+1.4
	comp=E,4.0nm,0.3s,baz=309,slow=9.8,SNR=18						
LVC				Pg	Pb	16 55 30.3	+1.0
	comp=E,21nm,0.3s,baz=317,slow=11,SNR=25						
LVC				Sn	Sn	16 56 02.4	+1.1
	comp=E,14nm,0.3s,baz=274,slow=9.1,SNR=4.1						
LVC				Lg	Lg	16 56 08.9	
	comp=E,28nm,0.3s,baz=62,slow=16,SNR=12						
LVC				LR	LR	16 56 52.4	
	comp=E,175nm,19.1s,baz=2.0,slow=45						
LVC	Limon Verde	3.13	145		Pn	16 55 24.5	+1.2
PB10	IPOC Station P	3.47	176		Pn	16 55 26.5	-1.2
LPAZ	La Paz	4.54	35	Pn	Pb	16 55 49.8	-3.7
	comp=E,2.2nm,0.3s,baz=244,slow=4.3,SNR=24						
LPAZ	La Paz	4.54	35	Pn	Pn	16 55 45.1	+2.2
GO02	Mina Guanaco	5.23	167		Pn	16 55 50.7	-1.4
GO03	Copiap	7.54	176		Pn	16 56 26.7	+3.0
SIV	San Ignacio	10.13	68	Pn	Pn	16 56 58.2	-1.1
	comp=E,2.3nm,0.3s,baz=266,slow=11,SNR=48						
SIV				Sn	Sn	16 58 53.7	+0.3
	comp=E,0.1nm,0.3s,baz=352,slow=22,SNR=1.9						
SIV				LR	LR	17 01 18.7	
	comp=E,106nm,19.1s,baz=282,slow=41						
PLCA	Paso Flores	20.63	179	P	Pn	16 59 15.8	+0.2
	comp=E,2.3nm,0.8s,baz=1.5,slow=9.3,SNR=4.2						
PLCA	Paso Flores	20.63	179	IAmb	IAmb	16 59 52.8	
	comp=Z,37nm,1.8s						
PTGA	Pitinga	21.95	30	P	P	16 59 25.4	-2.3
	comp=Z,2.3nm,0.3s,baz=200,slow=15,SNR=2.2						
PTGA	Pitinga	21.95	30	IAmb	IAmb	16 59 29.8	
	comp=Z,21nm,1.7s						
TXAR	Lajitas Array	58.41	326	P	P	17 04 31.0	+1.1
	comp=Z,0.2nm,0.6s,baz=144,slow=11,SNR=3.0						
TOA0	Torodi Ar. Sit	78.59	71	P	P	17 06 35.1	-1.2
TOA0				IAmb	IAmb	17 06 36.0	
	comp=Z,4.7nm,0.9s						
TORD	Torodi Ar. Bea	78.59	71	P	P	17 06 35.1	-1.3
	comp=Z,2.7nm,0.7s,baz=256,slow=4.9,SNR=12						
YKA	Yellowknife Ar	89.22	341	P	P	17 07 30.2	+0.7
	comp=Z,1.3nm,0.8s,baz=136,slow=5.1,SNR=20						
YKA				LR	LR	17 50 19.4	
	comp=Z,14nm,18.6s,baz=0.0,slow=38						
H11S2	WAKE ISLAND Hy	125.89	279	T	T	19 33 04.3	
	baz=102,slow=74,SNR=29						
H11S1	WAKE ISLAND Hy	125.89	279	T	T	19 33 04.4	
	baz=102,slow=74,SNR=20						
H11S3	WAKE ISLAND Hy	125.90	279	T	T	19 33 03.3	
	baz=102,slow=74,SNR=11						
H11N2	WAKE ISLAND Hy	125.95	280	T	T	19 33 14.4	
	baz=100,slow=74,SNR=5.5						
H11N1	WAKE ISLAND Hy	125.95	280	T	T	19 33 07.9	
	baz=294,slow=74,SNR=2.5						
ASAR	Alice Springs	130.31	210	PKP	PKPdf	17 13 45.4	0.0
	comp=Z,0.6nm,1.1s,baz=122,slow=1.7,SNR=5.0						
ZALV	Zalesovo Beam	141.37	23	PKP	PKPdf	17 14 06.0	+1.2
	comp=Z,0.3nm,0.3s,baz=140,slow=7.4,SNR=3.6						
ZALV	Zalesovo Beam	141.37	23		PKPdf	17 14 05.6	+0.8
MKAR	Makanchi Array	145.46	33	PKPbc	PKPbc	17 14 12.8	+0.5
	comp=Z,3.1nm,0.8s,baz=357,slow=2.4,SNR=23						
SONM	Songino Array	152.18	4	PKPbc	PKPbc	17 14 30.3	+0.3
	comp=Z,0.5nm,0.6s,baz=302,slow=1.9,SNR=4.1						
SONM	Songino Array	152.18	4		PKPbc	17 14 29.9	-0.1

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*DDA **17** 17:03:51.3, 38°.60N×43°.16E, h10^{km}±3^{km}, ML2.5*

*ISK **17** 17:03:51.7, 38°.59N×43°.22E, h7^{km}, ML2.6/9*

ISC 17 17:03:51.6±1.0, 38°.60N±0°.03×43°.15E±0°.02, h8^{km}±9^{km}, n20, σ1^{s}.00/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.19	93	PG	Pg	17 03 56.1	+0.6
TVAN	Van	0.22	110	iP	Pg	17 03 55.8	-0.2
TVAN				iS	Sg	17 03 58.9	-0.2
TVAN				IAML		17 04 01.0	
	comp=E,2μm,0.4s						
TVAN				IAML		17 04 09.0	
	comp=N,2μm,1.0s						
GEVA	Gevas	0.30	194	iP	Pg	17 03 57.9	+0.2
GEVA				iS	Sb	17 04 03.0	-1.5
GEVA				IAML		17 04 05.0	
	comp=E,942nm,0.6s						
GEVA				IAML		17 04 06.0	
	comp=N,542nm,0.5s						
AKDM	Akdamar-Van	0.30	206	PG	Pg	17 03 57.9	+0.2
ADCV	BITLIS_Adilcev	0.39	302	iP	Pg	17 03 59.8	+0.5
ADCV				iS	Sg	17 04 05.1	+0.6
ADCV				IAML		17 04 09.0	
	comp=E,418nm,0.8s						
VMUR	Van-Muradiye	0.51	41	iP	Pb	17 04 01.9	-1.0
VMUR				iS	Sg	17 04 08.8	+0.6
VMUR				IAML		17 04 14.0	
	comp=N,368nm,0.3s						
VMUR				IAML		17 04 15.0	
	comp=E,309nm,0.6s						
MLAZ	Malazgirt-MUS	0.71	319	PG	Pg	17 04 06.2	+0.8
MLAZ				SG	Sb	17 04 18.1	+1.8
CLDR	Caldiran	0.81	48	PG	Pg	17 04 06.9	-0.3
CLDR				SG	Sb	17 04 18.3	-0.8
BLIS	Bitlis-Merkez	0.83	257	iP	Pg	17 04 07.2	-0.4
BLIS				iS	Sg	17 04 16.6	-1.8
BLIS				IAML		17 04 23.0	
	comp=N,269nm,0.6s						
BLIS				IAML		17 04 27.0	
	comp=E,135nm,0.5s						
AGRB	Hanur-Agry	0.98	353	PG	Pb	17 04 11.4	+0.5
AGRB				SG	Sn	17 04 25.3	-0.7
SRTM	Siirt_Merkez	1.14	238	iP	Pn	17 04 14.3	+0.3
SRTM				iS	Sg	17 04 26.7	-1.6
SRTM				IAML		17 04 37.0	
	comp=N,144nm,0.9s						
SRTM				IAML		17 04 37.0	
	comp=E,82nm,0.8s						
SIRT	Sirnak	1.23	207	PN	Pg	17 04 16.4	+1.1
SIRN	Sırnak	1.25	208	iP	Pg	17 04 15.8	+0.2
SIRN				iS	Sb	17 04 31.5	-0.2
MUSM	Mu-Merkez	1.29	276	iP	Pn	17 04 15.8	-0.2
MUSM				iS	Sb	17 04 31.0	-1.9
CUKT	Cukurca	1.40	165	iP	Pg	17 04 21.2	+2.7
CUKT				iS	Sg	17 04 36.7	0.0
CUKT				IAML		17 04 56.0	
	comp=E,66nm,0.9s						
VRTB	Varto-Mus	1.43	293	PN	Pb	17 04 19.3	+0.7
VRTB	Varto-Mus	1.43	293	iP	Pb	17 04 18.9	+0.3
VRTB				iS	Sn	17 04 37.7	+0.6
VRTB				IAML		17 04 43.0	
	comp=E,57nm,0.5s						
KOPR	Koprukoy-ERZUR	1.71	324	PN	Pb	17 04 23.2	-0.2
BNGB	Bingl	1.97	282	PN	Pb	17 04 27.6	-0.1
HANI	Diyarbakir_Han	2.17	266	iP	Pb	17 04 31.8	+0.7
HANI				iS	Sb	17 04 58.0	-0.1

IDC 17 17:12:20.3±3.2, 6°.85S×129°.52E, h0^{km}, mb3.2/1, mb1 3.6/3, mb1mx3.3/21, mbtmp3.4/3, ML3.8/2, Error ellipse: s-maj=283.2km s-min=33.2km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.83	161	Pn	Pn	17 15 37.9	+0.1
	0.7nm,0.3s,baz=340,slow=14,SNR=36						
WRA				Sn	Sn	17 18 01.1	-11
	0.5nm,0.3s,baz=333,slow=20,SNR=6.7						
ASAR	Alice Springs	17.24	166	P	Pn	17 16 22.6	-0.1
	0.2nm,0.3s,baz=344,slow=11,SNR=17						
ASAR				S	Sn	17 19 23.8	-12
	0.1nm,0.3s,baz=204,slow=23,SNR=5.2						
MKAR	Makanchi Array	67.84	327	P	P	17 23 20.5	0.0
	0.2nm,0.6s,baz=128,slow=7.7,SNR=1.9						

IDC 17 17:21:22.0±9.3, 5°.50S×129°.33E, h432^{km}±122^{km}, mb2.8/3, mb1 2.9/6, mb1mx2.7/31, mbtmp3.6/6, Error ellipse: s-maj=104.8km s-min=35.4km az=49.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.03	196	P	P	17 24 14.1	+1.8
	0.1nm,0.3s,baz=18,slow=0.3,SNR=1.5						
WRA	Warramunga Arr	15.16	162	P	P	17 24 35.8	+0.4
	0.6nm,0.3s,baz=344,slow=13,SNR=45						
WRA				S	S	17 27 07.9	-7.4
	0.2nm,0.3s,baz=352,slow=26,SNR=5.7						
ASAR	Alice Springs	18.59	167	P	P	17 25 10.7	-0.8
	0.2nm,0.3s,baz=344,slow=11,SNR=26						
CMAR	Chiang Mai Arr	38.27	309	P	P	17 28 03.1	-0.7
	0.3nm,0.6s,baz=141,slow=7.3,SNR=2.0						
MKAR	Makanchi Array	66.61	327	P	P	17 31 28.3	+0.1
	0.3nm,0.4s,baz=121,slow=7.7,SNR=9.4						
ZALV	Zalesovo Beam	69.95	334	P	P	17 31 48.7	+0.3
	0.3nm,0.3s,baz=98,slow=7.4,SNR=2.0						

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*IDC **17** 17:21:40.7±1.3, 19°.91S×70°.83W, h0^{km}, mb3.8/3, mb1 3.9/5, mb1mx3.7/31, mbtmp3.8/5, ML3.5/2, MS2.5/2, Ms1 2.5/2, ms1mx2.4/28, Error ellipse: s-maj=40.3km s-min=18.0km az=65.0*

*GUC **17** 17:21:43.6±0.5, 19°.91S×70°.96W, h27^{km}±2^{km}, ML3.6*

ISC 17 17:21:41.1±2.5, 19°.90S±0°.03×70°.91W±0°.07, h6^{km}±14^{km}, n23, σ0^{s}.74/35, 4C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.80	68	⇑iP	Pb	17 21 57.7	+0.1
PSGC				eS	Sb	17 22 08.7	0.0
TA01	Diego Aracena	0.95	134	eP	Pb	17 21 59.8	-0.2
TA01				iS	Sg	17 22 12.5	+0.7
TA01				IAML		17 22 16.2	
	comp=E,2μm,0.6s						
PATCX	Punta Patache	1.16	142	⇓iP	Pb	17 22 03.1	-0.5
PATCX				iS	Sb	17 22 18.3	-0.6
PATCX				IAML		17 22 25.5	
	comp=E,2μm,0.4s						
PB11	IPOC Station P	1.19	83	⇑iP	Pn	17 22 04.3	-0.2
PB11				iS	Sn	17 22 20.6	-0.5
PB11				IAML		17 22 25.2	
	comp=N,2μm,0.3s						
PB12	IPOC Station P	1.40	23	⇓iP	Pb	17 22 07.9	+0.2
PB12				eS	Sb	17 22 26.4	+0.6
AP01	Chacalluta	1.62	20	eP	Pn	17 22 10.6	+0.4
AP01				eS	Sb	17 22 31.6	-0.4
AP01				IAML		17 22 37.8	
	comp=N,1μm,0.3s						
GO01	Chusmiza	1.64	82	⇑iP	Pb	17 22 11.8	-0.2
GO01				iS	Sg	17 22 34.1	+0.3
GO01				IAML		17 22 36.9	
	comp=N,2μm,0.2s						
PB08	IPOC Station P	1.67	98	eP	Pb	17 22 12.3	-0.2
PB08				iS	Sg	17 22 34.6	-0.3
PB02	IPOC Station P	1.70	146	⇓iP	Pn	17 22 11.4	-0.1
PB02				iS	Sn	17 22 32.9	-0.8
PB01	IPOC Station P	1.75	131	⇓iP	Pn	17 22 12.8	+0.7
PB01				iS	Sb	17 22 35.2	-0.9
PB01				IAML		17 22 40.1	
	comp=N,947nm,0.5s						
PB16	IPOC Station P	2.05	41	⇑iP	Pb	17 22 18.4	-0.7
PB16				iS	Sb	17 22 44.9	-0.2
PB07	IPOC Station P	2.05	152	eP	Pn	17 22 15.8	-0.6
PB07				iS	Sn	17 22 42.5	+0.1
PB07				IAML		17 22 52.1	
	comp=E,610nm,0.6s						
PB03	IPOC Station P	2.39	153	eP	Pn	17 22 20.9	-0.2
LVC	Limon Verde	3.28	146	Pn	Pn	17 22 35.0	+1.6
	comp=E,7.4nm,0.3s,baz=318,slow=12,SNR=9.4						
LVC				Sn	Sn	17 23 13.5	+0.6
	comp=E,15nm,0.3s,baz=81,slow=12,SNR=6.5						
LVC				Lg	Lg	17 23 22.3	
	comp=E,12nm,0.3s,baz=48,slow=20,SNR=5.7						
LVC				LR	LR	17 23 25.1	
	comp=E,50nm,20.8s,baz=262,slow=32						
LPAZ	La Paz	4.46	37	Pn	Pb	17 22 58.1	-2.2
	comp=E,0.6nm,0.3s,baz=232,slow=4.6,SNR=8.7						
NNA	Nana	9.72	323	LR	LR	17 27 46.2	
	comp=E,36nm,20.1s,baz=144,slow=37						
SIV	San Ignacio	10.14	69	Pn	Pn	17 24 08.8	+1.4
	comp=E,0.3nm,0.3s,baz=266,slow=11,SNR=11						
PLCA	Paso Flores	20.77	179	P	P	17 26 23.1	+0.2
	comp=E,2.0nm,1.0s,baz=194,slow=23,SNR=1.9						
TORD	Torodi Ar. Bea	78.61	71	P	P	17 33 43.2	-1.1
	comp=E,2.0nm,0.8s,baz=250,slow=4.6,SNR=7.9						
YKA	Yellowknife Ar	89.07	341	P	P	17 34 37.1	+0.4
	comp=E,0.3nm,0.7s,baz=133,slow=4.8,SNR=6.1						
ZALV	Zalesovo Beam	141.26	23	PKP	PKPdf	17 41 12.7	+0.1
	comp=E,0.7nm,0.6s,baz=242,slow=3.1,SNR=2.4						
MKAR	Makanchi Array	145.38	33	PKPbc	PKPab	17 41 20.6	+0.4
	comp=E,0.7nm,0.7s,baz=354,slow=2.4,SNR=6.2						
SONM	Songino Array	152.05	4	PKPbc	PKiKP	17 41 38.5	+0.6
	comp=E,0.6nm,0.6s,baz=48,slow=0.9,SNR=4.2						

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*IDC **17** 17:24:37.9±1.4, 19°.88S×70°.64W, h0^{km}, mb3.8/3, mb1 4.0/5, mb1mx3.7/31, mbtmp3.8/5, ML3.6/2, Error ellipse: s-maj=41.6km s-min=16.7km az=70.0*

*GUC **17** 17:24:40.7±0.5, 20°.02S×70°.81W, h38^{km}±6^{km}, ML3.7*

ISC 17 17:24:39.3±1.7, 19°.95S±0°.03×70°.78W±0°.07, h15^{km}±10^{km}, n18, σ0^{s}.80/28, 2C-6D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.70	61	⇓iP	Pn	17 24 54.7	-0.1
PSGC				iS	Sn	17 25 05.4	-0.1
PSGC				IAML		17 25 08.0	
	comp=E,4μm,0.3s						
TA01	Diego Aracena	0.83	138	⇓iP	Pb	17 24 55.2	-0.3
TA01				iS	Sb	17 25 06.4	-0.1
TA01				IAML		17 25 09.2	
	comp=N,7μm,0.3s						
PATCX	Punta Patache	1.05	146	⇓iP	Pb	17 24 58.5	-0.7
PATCX				iS	Sb	17 25 12.1	-0.7
PB11	IPOC Station P	1.07	80	⇓iP	Pn	17 25 00.4	+0.5
PB11				iS	Sn	17 25 15.6	+1.0
PB11				IAML		17 25 17.6	
	comp=E,3μm,0.5s						
PB12	IPOC Station P	1.39	18	⇑iP	Pg	17 25 05.8	-0.2
PB12				iS	Sg	17 25 25.5	+1.3
GO01	Chusmiza	1.51	80	⇓iP	Pg	17 25 08.0	-0.5
GO01				iS	Sg	17 25 29.3	+1.1
GO01				IAML		17 25 30.9	
	comp=N,5μm,0.2s						
PB08	IPOC Station P	1.54	98	⇓iP	Pb	17 25 07.8	0.0
PB08				iS	Sg	17 25 29.0	0.0
PB08				IAML		17 25 31.0	
	comp=N,1μm,0.3s						
PB02	IPOC Station P	1.60	149	⇑eP	Pn	17 25 06.8	-0.3
PB02				iS	Sn	17 25 27.5	-0.1
PB02				IAML		17 25 34.7	
	comp=E,2μm,0.4s						
AP01	Chacalluta	1.62	15	eP	Pb	17 25 09.2	+0.3
AP01				IAML		17 25 39.1	
	comp=E,2μm,0.2s						
PB01	IPOC Station P	1.63	132	eP	Pb	17 25 08.1	-1.0
PB01				eS	Sb	17 25 29.3	-0.2
PB01				IAML		17 25 31.0	
	comp=E,1μm,0.5s						
PB07	IPOC Station P	1.96	155	eP	Pn	17 25 11.6	-0.6
LVC	Limon Verde	3.17	147	Pn	Pn	17 25 30.3	+1.2
	comp=E,4.0nm,0.3s,baz=321,slow=11,SNR=1.9						
LVC				Pg	Pb	17 25 36.0	+0.4
	comp=E,13nm,0.3s,baz=349,slow=5.4,SNR=6.6						
LVC				Sn	Sn	17 26 08.0	+1.2
	comp=E,12nm,0.3s,baz=93,slow=19,SNR=4.3						
LVC				Lg	Lg	17 26 15.8	
	comp=E,20nm,0.3s,baz=139,slow=6.0,SNR=7.8						
LPAZ	La Paz	4.42	35	Pn	Pb	17 25 55.1	-2.0
	comp=E,1.3nm,0.3s,baz=151,slow=2.0,SNR=15						
SIV	San Ignacio	10.04	68	Pn	Pn	17 27 03.5	+0.4
	comp=E,1.0nm,0.3s,baz=278,slow=10.0,SNR=15						
PLCA	Paso Flores	20.72	180	P	Pn	17 29 22.2	+0.6
	comp=E,1.7nm,0.9s,baz=342,slow=11,SNR=3.5						
TORD	Torodi Ar. Bea	78.50	71	P	P	17 36 39.9	-0.6
	comp=E,0.6nm,0.5s,baz=248,slow=5.1,SNR=5.3						
YKA	Yellowknife Ar	89.15	341	P	P	17 37 33.5	-0.3
	comp=E,0.3nm,0.7s,baz=136,slow=5.4,SNR=6.1						
MKAR	Makanchi Array	145.35	33	PKPbc	PKPdf	17 44 17.5	+0.8
	comp=E,1.1nm,0.7s,baz=314,slow=4.1,SNR=9.6						

IDC 17 17:24:48.2±12.0, 6°.68S×130°.62E, h359^{km}±146^{km}, mb3.0/2, mb1 3.0/4, mb1mx2.7/28, mbtmp3.7/4, Error ellipse: s-maj=93.3km s-min=48.6km az=52.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.67	165	P	P	17 27 46.2	-1.7
	0.6nm,0.3s,baz=346,slow=11,SNR=14						
WRA				S	S	17 30 08.2	-8.6
	0.6nm,0.3s,baz=339,slow=24,SNR=8.2						
ASAR	Alice Springs	17.18	170	P	P	17 28 24.9	-1.2
	0.2nm,0.3s,baz=346,slow=10,SNR=16						
STKA	Stephens Creek	27.08	159	P	P	17 30 01.0	+1.7
	0.8nm,0.6s,baz=323,slow=10,SNR=2.9						
MKAR	Makanchi Array	68.30	326	P	P	17 35 11.4	-0.1
	0.3nm,0.5s,baz=121,slow=7.7,SNR=3.8						

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*IDC **17** 17:34:01.1±3.4, 21°.25S×70°.38W, h0^{km}, mb3.8/1, mb1 3.8/2, mb1mx3.5/18, mbtmp3.7/2, ML3.7/1, Error ellipse: s-maj=140.1km s-min=45.9km az=105.0*

*GUC **17** 17:34:06.3±0.6, 20°.04S×70°.91W, h17^{km}±5^{km}, ML3.5*

ISC 17 17:34:04.7±2.0, 20°.01S±0°.05×70°.91W±0°.09, h29^{km}±14^{km}, n15, σ0^{s}.91/26, 2C-8D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.85	61	⇓iP	Pb	17 34 20.8	-0.1
PSGC				iS	Sn	17 34 31.8	-0.5
PSGC				IAML		17 34 34.8	
	comp=E,2μm,0.4s						
TA01	Diego Aracena	0.88	129	⇓iP	Pn	17 34 20.7	-0.4
TA01				iS	Sn	17 34 32.2	-0.7
TA01				IAML		17 34 34.6	
	comp=N,3μm,0.4s						
PATCX	Punta Patache	1.07	139	⇓iP	Pn	17 34 23.9	0.0
PATCX				iS	Sn	17 34 37.9	0.0
PB11	IPOC Station P	1.20	78	⇓iP	Pb	17 34 26.5	-0.5
PB11				iS	Sb	17 34 42.7	+0.5
PB11				IAML		17 34 44.3	
	comp=N,3μm,0.4s						
PB12	IPOC Station P	1.49	22	⇑iP	Pb	17 34 31.6	-0.2
PB12				iS	Sb	17 34 51.0	+0.6
PB12				IAML		17 34 58.0	
	comp=E,1μm,0.6s						
PB02	IPOC Station P	1.61	144	⇓iP	Pn	17 34 32.1	+0.8
PB02				eS	Sn	17 34 52.6	+1.4
PB02				IAML		17 34 59.6	
	comp=E,1μm,0.5s						
GO01	Chusmiza	1.65	78	⇓iP	Pb	17 34 34.1	-0.6
GO01				iS	Sb	17 34 55.9	+0.6
PB08	IPOC Station P	1.65	95	⇓iP	Pb	17 34 33.9	-0.8
PB08				iS	Sb	17 34 55.6	+0.3
PB08				IAML		17 35 01.4	
	comp=N,948nm,0.6s						
PB01	IPOC Station P	1.68	128	⇓iP	Pn	17 34 33.6	+1.4
PB01				iS	Sb	17 34 55.1	-0.7
PB01				IAML		17 34 58.0	
	comp=E,823nm,0.3s						
AP01	Chacalluta	1.72	18	eP	Pb	17 34 35.0	-0.5
AP01				eS	Sb	17 34 57.1	+0.4
PB07	IPOC Station P	1.96	151	eP	Pn	17 34 36.7	+0.6
PB16	IPOC Station P	2.13	39	⇑iP	Pb	17 34 41.9	-1.0
PB16				iS	Sb	17 35 10.8	+1.7
PB16				IAML		17 35 19.1	
	comp=N,464nm,0.3s						
LPAZ	La Paz	4.55	36	Pn	Pb	17 35 22.3	-1.8
	comp=N,1.3nm,0.3s,baz=214,slow=3.4,SNR=9.0						
LPAZ				Sn	Sb	17 36 28.9	+10
	comp=N,0.0nm,0.3s,baz=88,slow=9.2,SNR=1.0						
TORD	Torodi Ar. Bea	78.64	71	P	P	17 46 05.1	+0.6
	comp=N,0.5nm,0.6s,baz=245,slow=4.3,SNR=2.4						
MKAR	Makanchi Array	145.47	33	PKPbc	PKiKP	17 53 42.8	-1.2
	comp=N,0.9nm,0.7s,baz=338,slow=2.9,SNR=8.2						

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*PDG **17** 17:40:52.3±1.4, 39°.30N×22°.11E, h11^{km}±3^{km}, ML3.8/13, Error ellipse: s-maj=1.6km s-min=2.4km az=0.0*

*ATH **17** 17:40:53.4, 39°.16N×22°.37E, h92^{km}±2^{km}, ML3.5/10, Error ellipse: s-maj=2.5km s-min=1.0km az=190.0*

*THE **17** 17:40:54.6, 39°.15N×22°.36E, h86^{km}±1^{km}, ML3.2/25, Error ellipse: s-maj=1.2km s-min=0.5km az=236.0*

ISC 17 17:40:52.3±1.2**,39°.18N**±0°.02×**22°.31E**±0°.02**,h103**^{km}±5^{km}**,**
n179,σ**1ˢ.62**/245**,10C-4D,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGG	Agios Georgios	0.16	175	P	Pn	17 41 07.0	+0.2
AGG				S	Sn	17 41 16.2	-1.4
	4µm,0.2s						
AGG	Agios Georgios	0.16	175	P	Pn	17 41 07.0	+0.2
AGG				S	Sn	17 41 15.5	-2.1
AGG				AML	AML	17 41 16.8	
	comp=E,9234µm,0.2s						
AGG				AML	AML	17 41 16.9	
	comp=N,5591µm,0.3s						
MAKR	Makrakomi, Fth	0.22	220	P	Pn	17 41 07.5	+0.5
MAKR				S	Sn	17 41 17.2	-0.7
	comp=N,18µm,0.3s						
MAKR	Makrakomi, Fth	0.22	220	P	Pn	17 41 07.5	+0.5
MAKR				S	Sn	17 41 16.3	-1.6
MAKR				AML	AML	17 41 17.5	
	comp=N,8019µm,0.3s						
MAKR				AML	AML	17 41 17.8	
	comp=E,26017µm,0.2s						
THL	Klokotos Trika	0.45	329	P	Pn	17 41 08.8	+0.8
THL				S	Sn	17 41 19.5	-0.3
	comp=E,3µm,0.3s						
THL	Klokotos Trika	0.45	329	P	Pn	17 41 08.8	+0.8
THL				S	Sn	17 41 19.3	-0.5
THL				AML	AML	17 41 19.8	
	comp=E,4080µm,0.3s						
THL				AML	AML	17 41 20.1	
	comp=N,6146µm,0.3s						
EVR	Evrytania	0.47	236	P	Pn	17 41 09.3	+0.9
EVR				S	Sn	17 41 19.8	-0.5
	comp=N,2µm,0.2s						
EVR	Evrytania	0.47	236	P	Pn	17 41 09.4	+1.1
EVR				S	Sn	17 41 18.2	-2.1
EVR				AML	AML	17 41 20.8	
	comp=N,3467µm,0.1s						
EVR				AML	AML	17 41 20.8	
	comp=E,4101µm,0.2s						
LRSO	Larissa Observ	0.49	7	P	Pn	17 41 09.3	+1.0
LRSO				S	Sn	17 41 19.9	-0.4
LRSO	Larissa Observ	0.49	7	P	Pn	17 41 09.2	+0.9
AXAR	Agios Charalam	0.49	147	P	Pn	17 41 09.2	+0.8
AXAR				S	Sn	17 41 19.6	-0.8
AXAR	Agios Charalam	0.49	147	P	Pn	17 41 09.2	+0.8
AXAR				S	Sn	17 41 18.3	-2.1
AXAR				AML	AML	17 41 20.3	
	comp=E,6128µm,0.3s						
AXAR				AML	AML	17 41 20.9	
	comp=N,7547µm,0.3s						
ANX	Ano Chora	0.66	208	P	Pn	17 41 10.8	+1.0
ANX				S	Sn	17 41 22.7	-0.2
	comp=N,3µm,0.3s						
ANX	Ano Chora	0.66	208	P	Pn	17 41 10.7	+1.0
ANX				S	Sn	17 41 21.9	-1.0
ANX				AML	AML	17 41 22.9	
	comp=E,4742µm,0.3s						
ANX				AML	AML	17 41 24.0	
	comp=N,6219µm,0.3s						
XOR	Xorichti	0.71	75	P	Pn	17 41 10.7	+0.6
XOR				S	Sn	17 41 22.5	-0.9
	comp=N,580nm,0.4s						
XOR	Xorichti	0.71	75	P	Pn	17 41 10.7	+0.6
DLFA	Delphi	0.72	168	P	Pn	17 41 10.4	+0.2
NEO	Neokhori	0.72	80	P	Pn	17 41 10.9	+0.7
NEO				S	Sn	17 41 22.5	-1.1
	comp=N,570nm,0.2s						
NEO	Neokhori	0.72	80	P	Pn	17 41 10.9	+0.7
LKR	Lokris	0.75	135	P	Pn	17 41 10.9	+0.5
LKR	Lokris	0.75	135	P	Pn	17 41 11.0	+0.5
SERG	Sergoula	0.79	195	P	Pn	17 41 11.8	+0.9
SERG				S	Sn	17 41 24.3	-0.5
	comp=N,2µm,0.4s						
SERG	Sergoula	0.79	195	P	Pn	17 41 11.8	+0.9
SERG				S	Sn	17 41 23.5	-1.3
SERG				AML	AML	17 41 25.6	
	comp=E,3280µm,0.4s						
SERG				AML	AML	17 41 26.4	
	comp=N,3623µm,0.3s						
KALE	Kalithea	0.80	190	P	Pn	17 41 11.7	+0.7
KALE				S	Sn	17 41 24.4	-0.6
	comp=N,1µm,0.2s						
KALE	Kalithea	0.80	190	P	Pn	17 41 11.8	+0.7
KALE				S	Sn	17 41 24.3	-0.8
KALE				AML	AML	17 41 24.8	
	comp=N,3200µm,0.2s						
KALE				AML	AML	17 41 25.6	
	comp=E,1596µm,0.3s						
EFP	Efpalio	0.82	203	P	Pn	17 41 12.2	+1.1
EFP	Efpalio	0.82	203	P	Pn	17 41 12.3	+1.1
PVO	Paravola	0.83	228	P	Pn	17 41 12.9	+1.7
PVO				S	Sn	17 41 26.1	+0.6
PVO	Paravola	0.83	228	P	Pn	17 41 12.9	+1.7
SKIA	Skiathos	0.90	91	P	Pn	17 41 12.2	+0.3
LIT	Litokhoron	0.93	8	P	Pn	17 41 13.1	+0.9
LIT				S	Sn	17 41 27.1	-0.1
	comp=E,1µm,0.2s						
LIT	Litokhoron	0.93	8	P	Pn	17 41 13.1	+0.9
LIT				S	Sn	17 41 26.8	-0.4
ALIK	Aliki, Aigiali	0.93	190	P	Pn	17 41 13.2	+1.0
LAKA	Lakka	0.98	196	P	Pn	17 41 12.8	0.0
LAKA				S	Sn	17 41 27.4	-0.7
LAKA	Lakka	0.98	196	P	Pn	17 41 12.8	0.0
PROD	Prodromos	1.03	153	P	Pn	17 41 13.8	+0.5
PROD				S	Sn	17 41 29.1	0.0
PROD	Prodromos	1.03	153	P	Pn	17 41 13.8	+0.5
PROD				S	Sn	17 41 28.0	-1.1
PROD				AML	AML	17 41 29.5	
	comp=E,3674µm,0.2s						
PROD				AML	AML	17 41 29.8	
	comp=N,3437µm,0.2s						
MEV	Metsovon	1.03	306	P	Pn	17 41 15.6	+2.2
KPRO	Kipourio	1.06	317	P	Pn	17 41 15.5	+1.8
KPRO				S	Sn	17 41 31.2	+1.3
KPRO	Kipourio	1.06	317	P	Pn	17 41 15.5	+1.8
KPRO				S	Sn	17 41 30.8	+0.9
MRKA	Markates	1.10	115	P	Pn	17 41 15.2	+1.1
MRKA				S	Sn	17 41 29.9	-0.6
	comp=N,468nm,0.5s						
MRKA	Markates	1.10	115	P	Pn	17 41 15.0	+0.9
KLV	Kalavryta, Ach	1.14	186	P	Pn	17 41 15.6	+1.0
KLV	Kalavryta, Ach	1.14	186	P	Pn	17 41 15.5	+0.8
AST1	Astakos	1.15	237	P	Pn	17 41 16.5	+1.9
AST1				S	Sn	17 41 32.3	+1.0
KZN	Kozani	1.20	340	P	Pn	17 41 17.4	+2.1
KZN				S	Sn	17 41 34.3	+1.8
	comp=N,460nm,0.5s						
KZN	Kozani	1.20	340	P	Pn	17 41 17.4	+2.1
KZN				S	Sn	17 41 33.4	+0.9
KZN				AML	AML	17 41 36.4	
	comp=E,2048µm,0.4s						
KZN				AML	AML	17 41 37.6	
	comp=N,716µm,0.4s						
AOS	Alonnisos	1.22	90	P	Pn	17 41 16.2	+0.8
AOS				S	Sn	17 41 32.1	-0.7
	comp=N,315nm,0.3s						
AOS	Alonnisos	1.22	90	P	Pn	17 41 15.0	-0.3
KTI	Kastanea	1.22	353	P	Pn	17 41 17.4	+1.9
VIL2	Platees	1.22	142	P	Pn	17 41 17.1	+1.7
JAN	Janina	1.23	293	P	Pn	17 41 18.5	+3.0
JAN				S	Sn	17 41 35.8	+2.8
JAN	Janina	1.23	293	P	Pn	17 41 18.3	+2.8
LTK	Loutraki	1.27	156	P	Pn	17 41 16.8	+0.9
LTK				S	Sn	17 41 33.4	-0.4
	comp=N,665nm,0.3s						
LTK	Loutraki	1.27	156	P	Pn	17 41 16.8	+0.9
VILL	Villia	1.28	142	P	Pn	17 41 17.1	+0.9
VILL				S	Sn	17 41 33.7	-0.5
	comp=N,762nm,0.5s						
PAIG	Paliouri	1.29	54	P	Pn	17 41 17.3	+1.1
PAIG	Paliouri	1.29	54	P	Pn	17 41 17.1	+0.9
MGNA	Meganis	1.30	247	P	Pn	17 41 17.8	+1.5
LOUT	Loutraki	1.30	156	P	Pn	17 41 17.3	+0.9
LOUT				S	Sn	17 41 33.7	-0.8
LOUT	Loutraki	1.30	156	P	Pn	17 41 17.3	+0.9
RLS	Riolos of Patr	1.30	211	P	Pn	17 41 18.1	+1.8
RLS				S	Sn	17 41 36.2	+1.7
RLS	Riolos of Patr	1.30	211	P	Pn	17 41 18.1	+1.8
DRO	Drossia	1.32	201	P	Pn	17 41 18.3	+1.8
DRO				S	Sn	17 41 36.4	+1.6
	comp=N,588nm,0.4s						
DRO	Drossia	1.32	201	P	Pn	17 41 18.4	+1.8
TSLK	Tsoukalades, L	1.34	255	P	Pn	17 41 18.5	+1.8
TSLK				S	Sn	17 41 36.2	+0.9
TSLK	Tsoukalades, L	1.34	255	P	Pn	17 41 18.6	+1.8
TSLK				S	Sn	17 41 35.6	+0.3
LKD2	Lefkada island	1.35	254	P	Pn	17 41 18.6	+1.7
LKD2				S	Sn	17 41 36.3	+0.8
	comp=N,805nm,0.2s						
LKD2	Lefkada island	1.35	254	P	Pn	17 41 18.6	+1.7
PENT	Pentalofos	1.36	319	P	Pn	17 41 19.7	+2.6
PENT				S	Sn	17 41 37.9	+2.0
PENT	Pentalofos	1.36	319	P	Pn	17 41 20.0	+2.8
EVGI	Lefkada island	1.41	247	P	Pn	17 41 19.4	+1.8
EVGI	Lefkada island	1.41	247	P	Pn	17 41 19.3	+1.7
THE	Thessaloniki	1.53	19	P	Pn	17 41 19.9	+0.8
HORT	Hortiatis	1.54	23	P	Pn	17 41 20.3	+1.0
HORT	Hortiatis	1.54	23	P	Pn	17 41 20.1	+0.8
FSK	Fiskardo	1.55	243	P	Pn	17 41 20.2	+1.0
FSK				S	Sn	17 41 39.6	-0.1
	comp=N,705nm,0.2s						
FSK	Fiskardo	1.55	243	P	Pn	17 41 20.2	+1.0
KONA	Konidatara, Ke	1.56	241	P	Pn	17 41 20.3	+0.9
NEST	Nestorio	1.57	322	P	Pn	17 41 22.6	+2.9
NEST	Nestorio	1.57	322	P	Pn	17 41 22.6	+2.9
VSK1	VASILIKIADES	1.57	241	P	Pn	17 41 20.8	+1.2
VSK1				S	Sn	17 41 40.6	+0.3
KFL	Anninata	1.60	229	P	Pn	17 41 21.2	+1.1
KFL				S	Sn	17 41 41.9	+0.9
	comp=N,905nm,0.3s						
KFL	Anninata	1.60	229	P	Pn	17 41 21.1	+1.1
ATH	Athens Observa	1.63	137	P	Pn	17 41 21.8	+1.4
ATH				S	Sn	17 41 41.5	-0.2
	comp=N,780nm,0.6s						
ATH	Athens Observa	1.63	137	P	Pn	17 41 21.3	+1.0
PTL	Penteli	1.66	132	P	Pn	17 41 22.2	+1.4
PTL				S	Sn	17 41 42.2	-0.1
	comp=N,358nm,0.6s						
PTL	Penteli	1.66	132	P	Pn	17 41 22.1	+1.3
ATHU	Athens Univers	1.68	136	P	Pn	17 41 22.3	+1.4
ATHU				S	Sn	17 41 42.0	-0.6
ATHU	Athens Univers	1.68	136	P	Pn	17 41 22.2	+1.3
DION	Dionisos Attik	1.68	130	P	Pn	17 41 22.6	+1.6
DION				S	Sn	17 41 42.3	-0.5
DION	Dionisos Attik	1.68	130	P	Pn	17 41 21.9	+0.9
VLS	Valsamata	1.68	234	P	Pn	17 41 22.0	+1.0
VLS				S	Sn	17 41 42.9	+0.1
VLS	Valsamata	1.68	234	P	Pn	17 41 21.8	+0.8
AMT	Artemida-Makis	1.71	196	P	Pn	17 41 23.5	+2.1
AMT	Artemida-Makis	1.71	196	P	Pn	17 41 23.4	+1.9
OUR	Ouranopolis	1.73	48	P	Pn	17 41 23.0	+1.5
OUR				S	Sn	17 41 44.6	+0.9
	comp=N,230nm,0.4s						
OUR	Ouranopolis	1.73	48	P	Pn	17 41 23.0	+1.5
FNA	Florina	1.75	336	P	Pn	17 41 24.3	+2.3
FNA				S	Sn	17 41 46.8	+2.3
FNA	Florina	1.75	336	P	Pn	17 41 24.2	+2.3
VLY	Voula,Athens	1.77	138	P	Pn	17 41 23.5	+1.5
VLY				S	Sn	17 41 44.2	-0.4
	comp=N,398nm,0.7s						
VLY	Voula,Athens	1.77	138	P	Pn	17 41 23.2	+1.2
SKY	Skiros Island	1.77	99	P	Pn	17 41 23.6	+1.5
SKY	Skiros Island	1.77	99	P	Pn	17 41 23.4	+1.4
GRG	Griva	1.77	2	P	Pn	17 41 23.7	+1.5
GRG	Griva	1.77	2	P	Pn	17 41 23.6	+1.5
VLX	Vlachokerasia	1.81	178	P	Pn	17 41 23.8	+1.1
VLX	Vlachokerasia	1.81	178	P	Pn	17 41 23.6	+0.9
SOH	Sokhos	1.82	26	P	Pn	17 41 24.7	+1.9
SOH	Sokhos	1.82	26	P	Pn	17 41 24.6	+1.9
DID	Didima	1.82	156	P	Pn	17 41 23.7	+0.9
DID				S	Sn	17 41 46.1	+0.1
	comp=N,835nm,0.3s						
DID	Didima	1.82	156	P	Pn	17 41 23.9	+1.1
KRND	KRANIDI	1.91	160	P	Pn	17 41 25.3	+1.4
KRND				S	Sn	17 41 47.6	-0.4
	comp=N,498nm,0.4s						
KRND	KRANIDI	1.91	160	P	Pn	17 41 25.1	+1.2
KRI1	kERI	1.92	218	P	Pn	17 41 25.2	+1.2
SRN	Sarande	1.92	292	P	Pn	17 41 25.9	+2.0
KEK	Kerkira	2.02	286	P	Pn	17 41 26.9	+1.7
KEK	Kerkira	2.02	286	P	Pn	17 41 26.9	+1.7
ITM	Ithomi	2.02	189	P	Pn	17 41 27.1	+1.8
ITM	Ithomi	2.02	189	P	Pn	17 41 27.1	+1.8
KARY	Karystos	2.02	124	P	Pn	17 41 26.9	+1.6
KNT	Kendrikon	2.03	13	P	Pn	17 41 27.5	+2.1
KNT	Kendrikon	2.03	13	P	Pn	17 41 27.4	+2.1
VAY	Valandovo	2.15	5	*i* Pn	Pn	17 41 29.0	+2.1
SRS	Serrai	2.17	27	P	Pn	17 41 28.9	+1.7
SRS	Serrai	2.17	27	P	Pn	17 41 28.9	+1.7
PYL	PYLOS	2.33	191	P	Pn	17 41 30.2	+0.9
PYL	PYLOS	2.33	191	P	Pn	17 41 29.7	+0.5
LIA	Limnos Island	2.33	71	P	Pn	17 41 30.9	+1.6
LIA				S	Sn	17 41 58.2	+0.6
THAS	Thassos island	2.33	52	P	Pn	17 41 30.6	+1.3
THAS	Thassos island	2.33	52	P	Pn	17 41 30.6	+1.3
DYR	Agios Nikonas	2.42	180	P	Pn	17 41 32.5	+2.0
DYR	Agios Nikonas	2.42	180	P	Pn	17 41 32.4	+2.0
NVR	Nevrokopi	2.47	28	P	Pn	17 41 32.9	+1.8
KAVA	Kavala	2.48	42	P	Pn	17 41 32.6	+1.4
VLI	Veliai	2.51	168	P	Pn	17 41 32.2	+0.6
STIP	Stip	2.51	358	*i* Pn	Pn	17 41 34.4	+2.7
SERI	Serifos	2.65	139	P	Pn	17 41 34.9	+1.4
SMTH	Samothraki Isl	2.79	62	P	Pn	17 41 36.7	+1.3
ALN	Alexandroupoli	3.34	58	P	Pn	17 41 44.3	+1.7
DRME	Dracevica, Mon	3.83	323	*e*Pn	Pn	17 41 50.3	+1.1
PDG	Podgorica	3.99	325	⇑P	Sn	17 42 37.6	+0.6
PDG	Podgorica	3.99	325	*e*Pn	Pn	17 41 52.2	+0.9
CGL1	Ceglie Messapi	4.00	293	⇑*i*Pn	Pn	17 41 52.8	+1.3
TAR1	Taranto	4.10	291	*e*Pn	Pn	17 41 54.2	+1.4
TIP	Timpagrande	4.32	272	⇓P	Sn	17 42 45.0	-0.2
HCY	Herceg Novi	4.36	320	*e*Pn	Pn	17 41 56.8	+0.4
MATE	Matera	4.55	291	⇓P	Sn	17 42 49.2	-1.5
BAI	Bari	4.59	297	⇑*i*Pn	Pn	17 42 00.4	+1.0
BAI				Sn	Sn	17 42 47.5	-4.0
ELND	Elena	4.61	35	⇑P	Pn	17 42 01.1	+1.4
SG1	Sgolgore (BA)	4.63	293	⇑*i*Pn	Pn	17 42 00.9	+0.8
SG1				Sn	Sn	17 42 48.3	-4.4
TREB	Trebinje	4.63	321	*e*Pn	Pn	17 42 00.3	+0.2
BRY	Bratogost	4.68	324	*e*Pn	Pn	17 42 01.9	+1.0
DBRK	Dubrovnik	4.70	319	*i* Pn	Pn	17 42 01.3	+0.3
DBRK				Sn	Sn	17 42 51.6	-2.7
UPM	Unac-Piva	4.77	328	*e*Pn	Pn	17 42 04.0	+1.9
STON	Ston	5.07	318	*e*Pn	Pn	17 42 05.8	-0.2
STON				Sn	Sn	17 43 00.2	-3.1
STON	Ston	5.07	318	*e*Pn	Pn	17 42 05.4	-0.6
BBLS	Lazići	5.16	336	*e*Pn	Pn	17 42 08.3	+1.0
DIVS	Divibare	5.21	341	*e*Pn	Pn	17 42 06.7	-1.2
HAPS	Han Pijesak,Bl	5.51	334	*e*Pn	Pn	17 42 12.0	0.0
MAKA	Makarska	5.72	317	*i* Pn	Pn	17 42 14.8	0.0
MAKA				Sn	Sn	17 43 15.8	-3.2
RICI	Ricice	5.81	320	*i* Pn	Pn	17 42 16.2	+0.2
RICI				Sn	Sn	17 43 17.7	-3.6
MTUR	Matau	6.38	18	⇑P	Pn	17 42 38.7	+15
SHAB	Shabla	6.43	45	⇓P	Pn	17 42 33.8	+9.4
MGRS	Mrkonjic Grad	6.53	325	*e*Pn	Pn	17 42 26.7	+1.0
KIJV	Kijevo	6.54	319	*e*Pn	Pn	17 42 26.4	+0.5
KIJV				Sn	Sn	17 43 35.3	-3.8
VOIR		6.57	17	⇑P	Pn	17 42 29.4	+3.0
ZIRJ	Zirje	6.71	314	*e*Pn	Pn	17 42 27.7	-0.5
ZIRJ				Sn	Sn	17 43 39.0	-4.1
BLY	Banja Luka	6.75	327	*e*Pn	Pn	17 42 28.4	-0.3
MORI	Morici	6.81	315	*e*Pn	Pn	17 42 30.0	+0.4
MORI				Sn	Sn	17 43 42.3	-3.3
MLR	Muntele Rosu	6.85	22	⇓P	Pn	17 42 33.9	+3.7
DOPR	Dopca	7.15	18	⇑P	Pn	17 42 37.8	+3.6
UDBI	Udbina	7.24	320	*e*Pn	Pn	17 42 36.4	+0.9
UDBI				Sn	Sn	17 43 53.2	-2.8
DUGI	Dugi Otok	7.25	314	*e*Pn	Pn	17 42 35.9	+0.3
DUGI				Sn	Sn	17 43 51.6	-4.7
OZUR		7.37	19	⇑P	Pn	17 42 41.9	+4.7
VRI	Vrincioaia	7.43	25	⇑P	Pn	17 42 32.7	-5.3
MOSL	Moslavina	7.63	329	*e*Pn	Pn	17 42 40.4	-0.3
MOSL				Sn	Sn	17 44 00.2	-5.2
NVLJ	Novalja	7.73	316	*e*Pn	Pn	17 42 42.1	+0.1
NVLJ				Sn	Sn	17 44 03.4	-4.3
CRES	Cresnjev	8.35	325	*e*Pn	Pn	17 42 50.5	+0.1

SJA ***17*** *17:46:13.7±0.8, 31°.21S×68°.38W, h103*^{km}*±2*^{km}*, ML3.4, MW3.3*
GUC ***17*** *17:46:15.2±0.5, 31°.25S×69°.21W, h205*^{km}*±11*^{km}*, ML3.6*

ISC 17 17:46:15.0±1.5**,31°.20S**±0°.04×**68°.38W**±0°.05**,h100**^{km}±8^{km}**,**
n22,σ**0ˢ.85**/32**,1C-1D,San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLL	Cerro Villicun	0.15	212	*i* P	Pn	17 46 28.7	-0.5
RTLL				*e*S	Sn	17 46 39.6	-0.1
AMOG	MOGNA	0.28	340	*i* P	Pn	17 46 29.2	-0.5
AMOG				*e*S	Sn	17 46 41.1	+0.6
ZON	Zonda	0.43	217	*i* P	Pn	17 46 30.0	-0.4
ZON				*e*S	Sn	17 46 42.0	+0.1
ZON				IAML		17 46 42.7	
	comp=Z,622nm,0.5s						
RTCV	Cerro Valdivia	0.67	192	*i* P	Pn	17 46 31.9	-0.4
RTCV				*e*S	Sn	17 46 45.2	0.0
ACCO	Cerro Coronel	0.85	316	*i* P	Pn	17 46 34.7	+0.4
ACCO				*e*S	Sn	17 46 49.6	+1.0
RTLS	Leoncito	0.98	232	*i* P	Pn	17 46 35.9	+0.3
RTLS				*e*S	Sn	17 46 52.2	+1.2
RTLS				IAML		17 46 53.4	
	comp=Z,371nm,0.3s						
ACDV	Cuesta del Vie	1.21	328	*i* P	Pn	17 46 36.6	-1.4
AROD	Rodeo	1.40	317	*i* P	Pn	17 46 40.6	+0.2
ASAL	Salagasta	1.44	195	*i* P	Pn	17 46 40.7	0.0
ACAN	Cantantal	1.48	137	*i* P	Pn	17 46 41.2	+0.2
ARCO	CERRO ARCO	1.70	196	*i* P	Pn	17 46 44.0	0.0
ARCO				IAML		17 47 08.4	
	comp=Z,659nm,0.7s						
AGUA	GUANDACOL	1.71	357	*i* P	Pn	17 46 44.5	+0.4
APLL	PUNTA DE LOS L	1.79	64	*i* P	Pn	17 46 44.7	-0.2
AAGR	Agrelo	1.92	191	*i* P	Pn	17 46 46.7	0.0
CO03	El Pedregal	2.02	280	*e*P	Pn	17 46 48.4	+0.5
CO03				*i* S	Sn	17 47 13.1	+0.2
CO03				IAML		17 47 15.4	
	comp=N,734nm,0.3s						
ACLC	CERRO LA CRUZ	2.16	35	*i* P	Pn	17 46 49.4	-0.4
CO02	Combarbal	2.25	269	⇑*i*P	Pn	17 46 50.9	0.0
CO02				*i* S	Sn	17 47 16.7	-1.6
CO02				IAML		17 47 20.8	
	comp=N,830nm,0.3s						
VCA	Vinchina	2.46	4	*i* P	Pn	17 46 54.2	+0.4
VCA				IAML		17 47 29.1	
	comp=Z,292nm,0.3s						
MRA	San Martin	2.57	119	*i* P	Pn	17 46 54.8	-0.4
FCH	Farellones	2.67	217	⇓*e*P	Pn	17 46 57.8	+1.1
FCH				*i* S	Sn	17 47 30.4	+1.8
FCH				IAML		17 47 40.2	
	comp=E,85nm,0.2s						
ROCH	El Roble	2.85	231	*e*P	Pn	17 46 58.0	-0.9
ROCH				*i* S	Sn	17 47 30.5	-2.2
ROCH				IAML		17 47 34.5	
	comp=N,148nm,0.3s						
ROC1	El Roble	2.85	231	*i* P	Pn	17 46 58.5	-0.6

IDC 17 17:46:59.4±2.4**,3°.97N**×**126°.51E,h0**^{km}**,mb3.2**/3**,**
mb1 3.4/3**,mb1mx3.1**/56**,mbtmp3.2**/3**,MS3.1**/1**,Ms1 3.1**/1**,**
ms1mx2.4/16**,Error ellipse: s-maj=208.7km**
s-min=26.7km az=66.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.98	162	P	P	17 52 24.7	-0.3
	0.3nm,0.4s,baz=342,slow=9.6,SNR=5.7						
ASAR	Alice Springs	28.40	166	P	P	17 52 56.2	+0.4
	0.2nm,0.8s,baz=342,slow=7.2,SNR=5.6						
KLR	Kul'dur	45.32	5	LR	LR	18 16 00.2	
	comp=Z,21nm,18.4s,baz=190,slow=38						
MKAR	Makanchi Array	57.23	325	P	P	17 56 48.6	-0.1
	0.1nm,0.3s,baz=112,slow=7.0,SNR=6.0						

IDC ***17*** *17:53:01.0±0.8, 20°.02S×70°.81W, h0*^{km}*, mb4.2/5, mb1 4.4/7, mb1mx4.0/36, mbtmp4.3/7, ML4.1/2, MS3.2/6, Ms1 3.2/6, ms1mx3.0/26, Error ellipse: s-maj=28.3km s-min=15.4km az=63.0*
NEIC ***17*** *17:53:02.9±2.0, 20°.06S±0°.06×70°.88W±0°.08, h12*^{km}*±3*^{km}*, mb4.4/5, Error ellipse: s-maj=11.8km s-min=8.0km az=116.0*
SJA ***17*** *17:53:03.2±0.7, 20°.04S×70°.78W, h28*^{km}*±3*^{km}*, ML4.0, MW4.1*
GUC ***17*** *17:53:05.2±0.6, 20°.06S×70°.83W, h34*^{km}*±2*^{km}*, ML4.0*
ISC 17 17:53:01.8±1.9**,20°.07S**±0°.02×**70°.86W**±0°.05**,h7**^{km}±12^{km}**,**
n73,σ**0ˢ.89**/84**,mb4.3**/4**,MS3.5**/3**,7C-14D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA01	Diego Aracena	0.80	128	*i* P	Pb	17 53 18.8	+0.7
TA01				*i* S	Sb	17 53 29.4	+0.3
TA01				IAML		17 53 32.9	
	comp=E,9µm,0.6s						
PSGC	Pisagua	0.84	56	⇓*i*P	Pb	17 53 18.6	-0.1
PSGC				*i* S	Sb	17 53 29.7	-0.5
PSGC				IAML		17 53 31.9	
	comp=E,8µm,0.5s						
PSGCX	Pisagua	0.84	56	⇓*i*P	Pb	17 53 18.6	-0.1
PSGCX				⇓*e*S	Sb	17 53 29.8	-0.4
PSGCX				IAML		17 53 31.9	
	comp=Z,9µm,0.5s						
PATCX	Punta Patache	0.99	139	⇓*i*P	Pn	17 53 22.1	-0.2
PATCX				*i* S	Sb	17 53 35.1	+0.3
PATCX	Punta Patache	0.99	139	⇓*i*P	Pn	17 53 22.3	0.0
PATCX				*e*S	Sn	17 53 36.5	-0.1
PATCX				IAML		17 53 37.8	
	comp=Z,4µm,1.5s						
PB11	IPOC Station P	1.17	75	⇓*i*P	Pb	17 53 24.2	-0.3
PB11				*i* S	Sn	17 53 39.8	-1.3
PB11				IAML		17 53 42.4	
	comp=N,8µm,0.3s						
PB11	IPOC Station P	1.17	75		Pb	17 53 24.1	-0.4
PB11	IPOC Station P	1.17	75	*i* P	Pb	17 53 24.2	-0.3
PB11				⇓*e*S	Sn	17 53 40.1	-0.9
PB11				IAML		17 53 55.5	
	comp=Z,4µm,0.7s						
PB02	IPOC Station P	1.53	144	⇑*i*P	Pb	17 53 30.5	-0.1
PB02				*i* S	Sn	17 53 49.9	-0.1
PB02				IAML		17 53 57.8	
	comp=E,5µm,0.5s						
PB02	IPOC Station P	1.53	144	⇓*i*P	Pb	17 53 30.6	-0.1
PB02				*e*S	Sn	17 53 49.8	-0.1
PB02				IAML		17 53 55.1	
	comp=Z,5µm,0.4s						
PB12	IPOC Station P	1.53	19	⇑*i*P	Pn	17 53 29.9	+0.2
PB12				*i* S	Sb	17 53 49.6	-0.7
PB12				IAML		17 53 52.6	
	comp=N,4µm,0.5s						
PB12	IPOC Station P	1.53	19	⇓*i*P	Pn	17 53 29.9	+0.2
PB12				*e*S	Sg	17 53 50.7	-0.4
PB12				IAML		17 53 51.5	
	comp=Z,3µm,0.7s						
PB08	IPOC Station P	1.60	93	⇓*i*P	Pb	17 53 31.5	-0.4
PB08				*i* S	Sb	17 53 52.0	-0.5
PB08				IAML		17 53 57.6	
	comp=N,3µm,0.6s						
PB01	IPOC Station P	1.61	127	⇓*i*P	Pb	17 53 31.6	-0.3
PB01				*e*S	Sn	17 53 51.4	-0.4
PB01				IAML		17 53 58.4	
	comp=N,3µm,0.6s						
PB01	IPOC Station P	1.61	127		Pb	17 53 31.5	-0.3
PB01	IPOC Station P	1.61	127	⇓*i*P	Pb	17 53 31.7	-0.1
PB01				⇓*e*S	Sg	17 53 53.0	-0.4
PB01				IAML		17 53 57.3	
	comp=Z,2µm,0.5s						
GO01	Chusmiza	1.61	76	⇓*i*P	Pb	17 53 31.8	-0.4
GO01				*i* S	Sg	17 53 52.8	-0.9
GO01	Chusmiza	1.61	76		Pb	17 53 31.8	-0.4
AP01	Chacalluta	1.76	16	*e*P	Pn	17 53 33.4	+0.6
AP01				*i* S	Sn	17 53 55.4	0.0
PB07	IPOC Station P	1.88	151	⇑*i*P	Pn	17 53 35.2	+0.6
PB07				*i* S	Sg	17 54 03.8	+1.5
PB16	IPOC Station P	2.15	37	⇑*i*P	Pn	17 53 39.5	+0.9
PB16				*i* S	Sn	17 54 05.6	-0.1
PB16				IAML		17 54 11.9	
	comp=N,2µm,0.4s						
PB03	IPOC Station P	2.22	153	⇑*i*P	Pn	17 53 39.8	+0.6
PB03				*i* S	Sn	17 54 07.2	+0.2
PB03				IAML		17 54 25.0	
	comp=E,796nm,0.5s						
PB09	IPOC Station P	2.29	139	⇑*i*P	Pb	17 53 42.2	-1.3
PB09				*i* S	Sb	17 54 10.1	-1.9
PB09				IAML		17 54 21.2	
	comp=E,2µm,0.7s						

PB09	IPOC Station P	2.29	139	iP	Pb	17 53 42.2	-1.3
PB09				IAML		17 54 19.6	
	comp=Z,2μm,0.4s						
PB04	IPOC Station P	2.34	164	⇑iP	Pn	17 53 41.1	+0.1
PB04				iS	Sn	17 54 08.2	-2.0
PB04				IAML		17 54 25.9	
	comp=E,1μm,0.5s						
PB04	IPOC Station P	2.34	164		Pn	17 53 41.0	+0.1
PB04	IPOC Station P	2.34	164	iP	Pn	17 53 41.1	+0.1
PB05	IPOC Station P	2.83	168	iP	Pn	17 53 47.4	-0.3
PB05				IAML		17 54 42.4	
	comp=Z,360nm,0.7s						
PB06	IPOC Station P	2.88	156	iP	Pn	17 53 48.6	+0.3
PB06				IAML		17 54 42.2	
	comp=Z,725nm,0.7s						
LVC	Limon Verde	3.11	145	Pn	Pn	17 53 53.8	+2.2
	comp=Z,16nm,0.3s,baz=311,slow=9.0,SNR=59						
LVC				Sn	Sn	17 54 30.6	+1.4
	comp=Z,43nm,0.3s,baz=23,slow=22,SNR=6.9						
LVC				Lg	Lg	17 54 39.2	
	comp=Z,75nm,0.3s,baz=53,slow=12,SNR=13						
LVC				LR	LR	17 55 00.0	
	comp=Z,198nm,19.2s,baz=352,slow=38						
LVC	Limon Verde	3.11	145		Pn	17 53 53.7	+2.1
PB15	IPOC Station P	3.38	158	iP	Pn	17 53 55.5	+0.3
PB10	IPOC Station P	3.44	175		Pn	17 53 54.9	-0.9
PB10	IPOC Station P	3.44	175	iP	Pn	17 53 55.2	-0.6
PB10				IAML		17 54 38.1	
	comp=Z,113nm,0.6s						
PB14	IPOC Station P	4.55	175	iP	Pn	17 54 10.5	-0.9
PB14				IAML		17 55 38.7	
	comp=Z,123nm,1.6s						
LPAZ	La Paz	4.57	35	Pn	Pb	17 54 17.9	-4.8
	comp=Z,2.7nm,0.3s,baz=218,slow=5.2,SNR=33						
LPAZ	La Paz	4.57	35		Pn	17 54 14.6	+2.7
GO02	Mina Guanaco	5.20	167		Pn	17 54 20.2	-0.1
YJA	Yavi	5.41	114	iP	Pn	17 54 29.2	+5.9
YJA				IAML		17 55 45.0	
	comp=Z,17nm,2.5s						
AZAP	Zapla	6.77	129	iP	Pn	17 54 49.4	+7.5
AZAP				IAML		17 56 41.0	
	comp=Z,12nm,2.0s						
ASTB	Santa Barbara	7.08	124	iP	Pn	17 54 51.6	+5.5
GO03	Copiap	7.51	176	Pn	Pn	17 54 51.3	-0.5
NNA	Nana	9.88	324	LR	LR	17 59 06.0	
	comp=Z,64nm,20.1s,baz=166,slow=37						
SIV	San Ignacio	10.15	68	Pn	Pn	17 55 28.9	+0.8
	comp=Z,2.6nm,0.3s,baz=267,slow=10,SNR=46						
CPUP	Villa Florida	13.90	119	LR	LR	18 02 29.0	
	comp=Z,91nm,21.6s,baz=273,slow=41						
PLCA	Paso Flores	20.60	179	P	P	17 57 42.8	+1.2
	comp=Z,4.2nm,0.8s,baz=24,slow=10,SNR=4.5						
PLCA	Paso Flores	20.60	179	P	P	17 57 42.6	+1.1
PLCA				IAmb	IAmb	17 57 55.8	
	comp=Z,48nm,1.8s						
PTGA	Pitinga	21.98	30	P	P	17 57 56.1	-0.4
	comp=Z,3.8nm,0.4s,baz=216,slow=17,SNR=7.4						
PTGA	Pitinga	21.98	30	P	P	17 57 56.6	+0.1
PTGA				IAmb	IAmb	17 58 06.7	
	comp=Z,14nm,1.3s						
BDFB	Brasilia	22.18	82	LR	LR	18 08 10.8	
	comp=Z,162nm,18.5s,baz=263,slow=41						
MDP	Montagnes des	30.76	37	LR	LR	18 11 59.3	
	comp=Z,45nm,20.5s,baz=238,slow=37						
TXAR	Lajitas Array	58.43	326	P	P	18 02 58.1	-0.3
	comp=Z,1.0nm,0.9s,baz=143,slow=7.3,SNR=7.2						
TXAR	Lajitas Array	58.43	326	P	P	18 02 59.5	+1.0
YNE	Yellowstone No	73.94	332	P	P	18 04 39.3	+1.3
YHH	Holmes Hill	74.14	332	P	P	18 04 40.7	+1.4
TORD	Torodi Ar. Bea	78.61	71	P	P	18 05 03.9	-1.0
	comp=Z,5.2nm,0.7s,baz=251,slow=5.4,SNR=22						
TORD				LR	LR	18 37 49.4	
	comp=Z,40nm,20.9s,baz=310,slow=34						
TORD	Torodi Ar. Bea	78.61	71	P	P	18 05 04.0	-0.9
YKA	Yellowknife Ar	89.25	341	P	P	18 05 58.1	0.0
	comp=Z,1.8nm,0.8s,baz=138,slow=5.1,SNR=32						
H11S2	WAKE ISLAND Hy	125.88	279	T	T	20 30 42.1	
	baz=104,slow=74,SNR=81						
H11S1	WAKE ISLAND Hy	125.89	279	T	T	20 31 29.4	
	SNR=47						
H11S3	WAKE ISLAND Hy	125.89	279	T	T	20 30 44.1	
	baz=104,slow=74,SNR=34						
ASAR	Alice Springs	130.28	210	PKP	PKPdf	18 12 13.7	0.0
	comp=Z,0.9nm,0.9s,baz=114,slow=1.7,SNR=8.4						
WRA	Warramunga Arr	133.20	213	PKP	PKPdf	18 12 18.9	-0.4
	comp=Z,2.7nm,0.9s,baz=152,slow=1.8,SNR=5.5						
WRA	Warramunga Arr	133.20	213		PKPdf	18 12 17.1	-2.2
ZALV	Zalesovo Beam	141.40	23	PKP	PKPdf	18 12 31.3	-2.0
	comp=Z,1.6nm,0.6s,baz=291,slow=2.2,SNR=5.5						
ZALV	Zalesovo Beam	141.40	23		PKPdf	18 12 32.4	-0.9
MAKZ	Makanchi	145.32	33		PKPdf	18 12 40.8	+0.3
MK31	Makanchi Array	145.50	33		PKPab	18 12 41.2	+0.2
MKAR	Makanchi Array	145.50	33	PKPbc	PKPab	18 12 41.4	+0.3
	comp=Z,6.1nm,0.7s,baz=4.1,slow=1.7,SNR=58						
MJAR	Matsushiro Arr	149.76	309	PKPbc	PKPbc	18 12 53.1	+0.3
	comp=Z,0.8nm,0.5s,baz=135,slow=2.2,SNR=4.3						
MJAR	Matsushiro Arr	149.76	309		PKPbc	18 12 53.0	+0.1
SONM	Songino Array	152.22	4	PKPbc	PKiKP	18 12 58.9	+0.2
	comp=Z,2.0nm,0.8s,baz=332,slow=1.2,SNR=16						
SONM	Songino Array	152.22	4		PKiKP	18 12 59.2	+0.4

*IDC **17** 17:57:47.4±2.8, 0°.32S×122°.92E, h92^{km}±28^{km}, mb2.8/4, mb1 3.1/6, mb1mx2.9/43, mbtmp3.3/6, Error ellipse: s-maj=23.3km s-min=20.7km az=95.0*

*DJA **17** 17:57:47.1±1.0, 0°S±3°×12°3E±°, h34^{km}±19^{km}, M4.0/11, mB4.4/1, mb4.0/2, MLv4.0/11, Mw(mB)3.6/1*

ISC 17 17:57:46.3±0.8, 0°.28S±0°.05×122°.99E±0°.06, h78^{km}, n17, σ1^{s}26/22, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	Luwuk	0.79	196	P	Pn	17 58 02.4	-0.4
MRSI	Marisa	1.29	305	P	Pn	17 58 07.9	-0.9
MRSI				S	Sn	17 58 25.0	-0.8
KMSI	Cibinong	1.30	49	P	Pn	17 58 08.2	-0.7
KMSI				S	Sn	17 58 26.2	+0.2
APSI	Ampana	1.48	245	P	Pn	17 58 11.9	+0.6
MPSI	Mapaga	3.15	281	P	Pn	17 58 35.7	+2.0
SANI	Sanana	3.47	120	P	Pn	17 58 35.1	-2.9
TTSI	Tana Toraja	4.20	229	P	Pn	17 58 48.8	+0.9
LBMI	Labuha	4.52	95	P	Pn	17 58 54.2	+1.9
SPSI	Sidrap Palu	4.88	221	P	Pn	17 58 58.2	+1.0
BBSI	Bau Bau	5.19	185	P	Pn	17 59 02.5	+1.0
	0.0nm383nm5.2nm,0.6s						
KAPI	Kappang	5.71	214	P	Pn	17 59 09.5	+1.0
	1.6nm,0.3s,baz=58,slow=11,SNR=2.3						
KAPI				S	Sn	18 00 11.2	-1.6
	1.7nm,0.3s,baz=13,slow=23,SNR=6.1						
BKSI	Bulukumba	5.77	210	P	Pn	17 59 10.1	+0.7
SIJI	Sorong	8.29	94	P	Pn	17 59 44.5	+0.7
	0.6nm,0.3s,baz=13,slow=20,SNR=7.7						
WRA	Warramunga Arr	22.48	151	P	P	18 02 39.4	0.0
	0.1nm,0.3s,baz=336,slow=10.0,SNR=1.3						
ASAR	Alice Springs	25.55	156	P	P	18 03 08.8	+0.8
	0.2nm,0.9s,baz=339,slow=15,SNR=2.0						
ASAR				PcP	PcP	18 06 36.5	-1.2
	0.2nm,0.8s,baz=345,slow=2.5,SNR=4.5						
SONM	Songino Array	50.05	345	P	P	18 06 33.0	-0.2
	0.8nm,0.8s,baz=158,slow=7.7,SNR=7.6						
MKAR	Makanchi Array	58.84	328	P	P	18 07 36.6	-0.3
	0.2nm,0.4s,baz=117,slow=8.9,SNR=4.8						
MKAR				pP	pwP	18 08 00.1	+1.4
	0.2nm,0.4s,baz=96,slow=7.4,SNR=3.1						

*IDC **17** 18:01:45.9±1.3, 19°.80S×70°.56W, h0^{km}, mb3.6/3, mb1 3.9/4, mb1mx3.6/28, mbtmp3.7/4, ML3.4/1, MS2.0/1, Ms1 2.1/1, ms1mx2.0/30, Error ellipse: s-maj=53.2km s-min=16.0km az=69.0*

*NEIC **17** 18:01:46.0±1.6, 19°.98S±0°.05×71°.0W±0°.1, h10^{km}±1^{km}, mb4.0/1, Error ellipse: s-maj=18.6km s-min=7.0km az=286.0*

*GUC **17** 18:01:49.8±0.6, 19°.98S×70°.91W, h32^{km}±2^{km}, ML3.6*

ISC 17 18:01:45.1±1.6, 19°.98S±0°.03×70°.95W±0°.06, h5^{km}±10^{km}, n33, σ1^{s}10/50, 5C-5D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.86	64	⇑iP	Pn	18 02 03.8	-0.3
PSGC				iS	Sb	18 02 14.7	+0.2
TA01	Diego Aracena	0.92	129	⇑iP	Pn	18 02 04.8	+0.1
TA01				iS	Sn	18 02 17.0	-1.4
PATCX	Punta Patache	1.12	138	⇓iP	Pn	18 02 08.1	+0.5
PATCX				eS	Sn	18 02 22.5	-0.9
PATCX				IAML		18 02 29.8	
	comp=E,2μm,0.3s						
PB11	IPOC Station P	1.23	80	⇑iP	Pg	18 02 09.9	+1.1
PB11				iS	Sn	18 02 25.5	-0.8
PB11				IAML		18 02 27.9	
	comp=E,4μm,0.4s						
PB11	IPOC Station P	1.23	80		Pg	18 02 09.9	+1.1
PB12	IPOC Station P	1.48	23	eP	Pg	18 02 13.9	+0.4
PB12				iS	Sg	18 02 32.8	+0.1
PB02	IPOC Station P	1.66	144	⇓iP	Pb	18 02 15.9	-0.2
PB02				iS	Sb	18 02 36.8	-0.6
PB02				IAML		18 02 46.5	
	comp=E,2μm,0.4s						
GO01	Chusmiza	1.68	80	eP	Pg	18 02 17.5	+0.2
GO01				eS	Sg	18 02 39.3	+0.2
GO01				IAML		18 02 40.6	
	comp=N,2μm,0.2s						
GO01	Chusmiza	1.68	80		Pg	18 02 17.4	+0.1
PB08	IPOC Station P	1.69	96	⇑iP	Pg	18 02 17.4	-0.2
PB08				iS	Sb	18 02 38.6	-0.1
PB08				IAML		18 02 41.4	
	comp=N,947nm,0.5s						
AP01	Chacalluta	1.70	20	eP	Pb	18 02 17.6	+0.7
AP01				iS	Sb	18 02 38.9	+0.4
PB01	IPOC Station P	1.73	128	⇓iP	Pb	18 02 17.2	-0.2
PB01				iS	Sb	18 02 39.1	-0.3
PB01				IAML		18 02 45.4	
	comp=N,878nm,0.4s						
PB01	IPOC Station P	1.73	128		Pb	18 02 17.1	-0.3
PB07	IPOC Station P	2.00	150	⇓iP	Pn	18 02 20.4	+0.7
PB07				iS	Sb	18 02 47.0	-0.4
PB07				IAML		18 02 56.3	
	comp=E,644nm,0.6s						
PB16	IPOC Station P	2.13	40	⇑iP	Pb	18 02 24.5	0.0
PB16				eS	Sb	18 02 51.3	-0.2
PB16				IAML		18 02 57.3	
	comp=E,440nm,0.7s						
PB03	IPOC Station P	2.34	152	⇓eP	Pn	18 02 25.1	+0.7
PB03				iS	Sn	18 02 53.8	+0.2
PB09	IPOC Station P	2.41	139	eP	Pn	18 02 27.3	+1.9
PB09				iS	Sb	18 02 58.4	-0.7
PB09				IAML		18 03 06.3	
	comp=E,710nm,0.5s						
PB04	IPOC Station P	2.46	163	eP	Pn	18 02 26.1	+0.1
PB04				eS	Sb	18 03 01.1	+0.6
PB04				IAML		18 03 13.0	
	comp=N,316nm,0.6s						
PB04	IPOC Station P	2.46	163		Pn	18 02 25.9	-0.1
LVC	Limon Verde	3.23	144	Pn	Pn	18 02 38.8	+1.9
	comp=N,4.6nm,0.3s,baz=320,slow=10,SNR=11						
LVC				Pg	Pg	18 02 46.0	-1.1
	comp=N,11nm,0.3s,baz=316,slow=13,SNR=8.9						
LVC				Sn	Sn	18 03 17.3	+1.3
	comp=N,6.8nm,0.3s,baz=349,slow=13,SNR=3.3						
LVC				Lg	Lg	18 03 25.8	
	comp=N,13nm,0.3s,baz=359,slow=12,SNR=9.7						
LVC	Limon Verde	3.23	144		Pn	18 02 39.3	+2.5
PB10	IPOC Station P	3.53	174	Pn	Pn	18 02 40.1	-0.5
LPAZ	La Paz	4.54	37	Pn	Pb	18 03 03.5	-2.2
	comp=N,0.9nm,0.3s,baz=252,slow=4.6,SNR=10						
LPAZ				LR	LR	18 04 08.3	
	comp=N,19nm,21.2s,baz=278,slow=34						
LPAZ	La Paz	4.54	37	Pn	Pb	18 03 02.0	-3.8
GO02	Mina Guanaco	5.31	167		Pn	18 03 05.5	+0.2
SIV	San Ignacio	10.20	69	Pn	Pn	18 04 12.6	+0.3
	comp=N,1.2nm,0.3s,baz=264,slow=9.6,SNR=14						
PLCA	Paso Flores	20.69	179	P	Pn	18 06 28.7	+0.3
	comp=N,2.7nm,1.0s,baz=12,slow=5.2,SNR=2.9						
PLCA	Paso Flores	20.69	179	P	P	18 06 26.5	+0.4
PLCA				IAmb	IAmb	18 06 33.3	
	comp=Z,11nm,1.3s						
TORD	Torodi Ar. Bea	78.66	71	P	P	18 13 47.3	-1.5
	comp=Z,0.8nm,1.0s,baz=249,slow=5.2,SNR=3.5						
YKA	Yellowknife Ar	89.14	341	P	P	18 14 41.3	+0.2
	comp=Z,0.3nm,0.7s,baz=137,slow=5.5,SNR=3.4						
MKAR	Makanchi Array	145.47	33	PKPbc	PKPab	18 21 25.9	+1.3
	comp=Z,0.7nm,0.7s,baz=339,slow=2.4,SNR=7.8						
SONM	Songino Array	152.13	4	PKPbc	PKiKP	18 21 43.7	+1.5
	comp=Z,0.2nm,0.6s,baz=305,slow=3.5,SNR=3.7						
SONM	Songino Array	152.13	4	PKPdf	PKPdf	18 21 34.3	-0.9
SONM					PKiKP	18 21 43.7	+1.5

KEA 17 18:15:48.0±0.0, 41°.74N×121°.41E, h0^{km}, ML2.9/2, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUJ	Sinuiju	2.85	124	Pg	Pg	18 16 41.5	-1.2
SUJ				Sg	Sg	18 17 17.9	-1.8
KGE	Kanggye	4.00	100	Pg	Pb	18 17 00.0	+0.7
KGE				Sg	Sb	18 17 51.8	+3.6
PYS	Pyongsong	4.21	125	Pg	Pg	18 17 06.2	-2.4
PYS				Sg	Sg	18 17 59.4	-3.7
PYAG	Pyongyang	4.27	128	Sg	Sg	18 18 03.7	-1.5
HJU	Haeju	4.97	137	Sg	Sg	18 18 28.6	+1.1
HHU	Hamhung	4.98	109	Sg	Sg	18 18 24.3	-3.8
WOSN	Wonsan	5.26	117	Sg	Sg	18 18 36.7	-0.2

*MOS **17** 18:18:38.0±1.1, 46°.22N×151°.24E, h136^{km}, mb3.9/9, Error ellipse: s-maj=9.7km s-min=8.1km az=53.8*

*SKHL **17** 18:18:38.3±0.3, 45°.99N×151°.37E, h137^{km}±4^{km}, mb5.0/3, msh4.9/3*

*NEIC **17** 18:18:42.6±0.6, 46°.3N±0°.1×151°.0E±0°.2, h155^{km}±6^{km}, mb4.1/5, Error ellipse: s-maj=19.6km s-min=14.5km az=146.0*

*IDC **17** 18:18:42.4±2.3, 46°.36N×150°.98E, h154^{km}±21^{km}, mb3.4/14, mb1 3.6/18, mb1mx3.4/47, mbtmp3.9/18, Error ellipse: s-maj=16.5km s-min=12.2km az=133.0*

ISC 17 18:18:39.7±0.6, 46°.02N±0°.06×151°.22E±0°.06, h150^{km}, n101, σ2^{s}06/110, mb3.8/19, 7C-3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	2.48	253	iP	Pn	18 19 20.4	-0.1
KUR				AMB	AMB	18 19 27.0	
	90nm,0.6s						
KUR				iS	Sn	18 19 52.0	+0.1
KUR				A	A	18 19 53.0	
	440nm,0.6s						
KUR				A	A	18 19 53.0	
	450nm,0.6s						
KUR	Kuril'sk	2.48	253	ePN	Pn	18 19 20.4	-0.1
SHO	Shikotan	3.79	237	eP	Pn	18 19 36.1	-1.0
SHO				AMB	AMB	18 19 37.6	
	400nm,2.0s						
SHO				AMB	AMB	18 19 38.0	
	10.0nm,0.2s						
SHO				eS	Sn	18 20 18.2	-3.4
SHO				A	A	18 20 22.0	
	60nm,0.2s						
SHO				A	A	18 20 22.0	
	90nm,0.2s						
SHO				A	A	18 20 23.6	
	300nm,3.0s						
SHO				A	A	18 20 23.6	
	400nm,3.0s						
SHO	Shikotan	3.79	237	ePN	Pn	18 19 35.7	-1.4
SHO				eS	Sn	18 20 17.7	-3.9
SHO				pmax	pmax		
	comp=Z,13μm,0.5s						
SHO				pmax	pmax		
	comp=E,5μm,0.2s						
SHO				pmax	pmax		
	comp=N,8μm,0.4s						
SHO				smax	smax		
	comp=N,58nm,0.2s						
SHO				smax	smax		
	comp=E,73nm,0.2s						
YUK	Yuzh-Kuril'sk	4.29	244	eP	Pn	18 19 44.0	+0.4
YUK				AMB	AMB	18 19 48.0	
	comp=E,60nm,0.3s						
YUK				iS	Sn	18 20 32.6	-0.7
YUK				A	A	18 20 35.0	
	comp=E,90nm,0.3s						
YUK				A	A	18 20 35.0	
	comp=E,90nm,0.3s						
YUK				A	A	18 20 36.0	
	comp=E,500nm,2.0s						
YUK				A	A	18 20 36.0	
	comp=E,500nm,2.0s						
YUK	Yuzh-Kuril'sk	4.29	244	d iPN	Pn	18 19 43.9	+0.4
GRPR	Tuman	4.36	244	eP	Pn	18 19 45.7	+1.1
GRPR				AMB	AMB	18 19 47.0	
	comp=E,50nm,0.4s						
GRPR				iS	Sn	18 20 34.8	-0.3
GRPR				A	A	18 20 36.0	
	comp=E,70nm,0.4s						
GRPR				A	A	18 20 36.0	
	comp=E,90nm,0.4s						
GRPR	Tuman	4.36	244	ePN	Pn	18 19 45.7	+1.1
GRPR				iS	Sn	18 20 34.8	-0.3
GRPR				pmax	pmax		
	comp=Z,45nm,0.1s						
GRPR				smax	smax		
	comp=E,93nm,0.4s						
GRPR				smax	smax		
	comp=N,73nm,0.2s						
GLVR	Golovnino	4.65	243	eP	Pn	18 19 48.3	-0.1
GLVR				AMB	AMB	18 19 54.0	
	comp=N,30nm,0.4s						
GLVR				iS	Sn	18 20 40.6	-1.3
GLVR				A	A	18 20 45.0	
	comp=N,100nm,0.4s						
GLVR				A	A	18 20 45.0	
	comp=N,120nm,0.4s						
GLVR	Golovnino	4.65	243	ePN	Pn	18 19 48.3	-0.1
GLVR				iS	Sn	18 20 40.6	-1.3
GLVR				pmax	pmax		
	comp=Z,32nm,0.4s						
GLVR				smax	smax		
	comp=E,123nm,0.4s						
GLVR				smax	smax		
	comp=N,100nm,0.3s						
NEM2	Nemuro 2	4.72	238	P	Pn	18 19 48.0	-1.3
NEM2				eS	Sn	18 20 39.4	-4.2
NMR	Nemuro--Hokkai	4.73	238	eP	Pn	18 19 48.1	-1.3
NMR				eS	Sn	18 20 40.7	-3.0
NMR	Nemuro--Hokkai	4.73	238	ePN	Pn	18 19 48.1	-1.3
NMR				iS	Sn	18 20 40.1	-3.6
JRA	Rausu	4.80	247	P	Pn	18 19 50.6	+0.2
JNK	Nakash	5.23	245	P	Pn	18 19 56.2	+0.2
JAK	Akkeshi	5.56	239	P	Pn	18 19 59.1	-1.3
JAK				eS	Sn	18 20 59.5	-4.0
JTKR	Abashiri--Toko	5.58	251	P	Pn	18 20 01.0	+0.4
SKR	Severo-Kuril's	5.70	33	eP	Pn	18 19 59.6	-2.5
SKR				AMB	AMB	18 20 00.7	
	comp=N,20nm,0.6s						
SKR				AMB	AMB	18 20 07.0	
	comp=N,400nm,4.0s						
SKR				eS	Sn	18 21 00.9	-5.7
SKR				A	A	18 21 02.3	
	comp=N,40nm,0.5s						
SKR				A	A	18 21 02.3	
	comp=N,30nm,0.5s						
SKR				A	A	18 21 04.0	
	comp=N,800nm,5.0s						
SKR				A	A	18 21 04.0	
	comp=N,800nm,5.0s						
SKR	Severo-Kuril's	5.70	33	⇓ePN	Pn	18 19 58.5	-3.6
YSS	Yuzh-Sakhalins	5.92	282	eP	Pn	18 20 05.6	+0.4
YSS				AMB	AMB	18 20 06.5	
	comp=N,30nm,0.9s						
YSS				eS	Sn	18 21 10.7	-1.4
YSS				A	A	18 21 18.8	
	comp=N,10.0nm,0.9s						
YSS	Yuzh-Sakhalins	5.92	282	⇑ePN	Pn	18 20 05.6	+0.4
YSS				eS	Sn	18 21 13.7	+1.6
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS				smax	smax		
	comp=E,10.0nm,1.1s						
YSS	Yuzh-Sakhalins	5.92	282		Pn	18 20 05.1	-0.1
JAR	Ashorobuto	5.97	246	P	Pn	18 20 07.1	+1.2
JKK2	Kamakawa 2	6.38	253	P	Pn	18 20 12.5	+1.1
JKA	Kamikawa-asahi	6.39	256	eP	Pn	18 20 12.9	+1.4
JKA	Kamikawa-asahi	6.39	256		Pn	18 20 12.9	+1.4
ASAJ	Asahikawa	6.40	256	P	Pn	18 20 13.1	+1.5
ASAJ	Asahikawa	6.40	256	P	Pn	18 20 12.9	+1.3
	comp=E,0.5nm,0.3s,baz=80,slow=14,SNR=11						
JCH	Churui	6.58	242	P	Pn	18 20 13.5	-0.6
ERM	Erimo	7.06	238	⇑ePN	Pn	18 20 21.0	+0.6
TYV	Tymovskoe	7.48	314	eP	Pn	18 20 25.2	-0.7
TYV				AMB	AMB	18 20 26.0	
	comp=E,10.0nm,1.0s						
TYV				AMB	AMB	18 20 26.0	
	comp=E,200nm,5.0s						
TYV				eS	Sn	18 21 46.8	-2.6
TYV				A	A	18 21 51.0	
	comp=E,10.0nm,1.0s						
TYV	Tymovskoe	7.48	314	ePN	Pn	18 20 25.2	-0.7
TYV				eS	Sn	18 21 49.8	+0.4
TYV				pmax	pmax		
	comp=Z,11nm,1.0s						
TYV				pmax	pmax		
	comp=Z,200nm,4.9s						
TYV				smax	smax		
	comp=N,5.0nm,1.0s						
PETK	Petropavlovsk-	8.25	28	P	Pn	18 20 37.4	+1.2
	comp=N,0.4nm,0.3s,baz=207,slow=15,SNR=7.4						
PETK	Petropavlovsk-	8.25	28		Pn	18 20 36.8	+0.6
JKB	Kayabe	8.43	244	P	Pn	18 20 37.3	-1.4
JKB				eS	Sn	18 22 05.7	-6.7
JTM	Tenmabayashi	9.05	238	eS	Sn	18 22 18.9	-8.4
JANG	Nango	9.06	235	eS	Sn	18 22 18.2	-9.3
KLR	Kul'dur	13.52	291	P	Pn	18 21 44.5	-0.7
	comp=N,0.1nm,0.3s,baz=100,slow=13,SNR=10						
KLR	Kul'dur	13.52	291	eP	Pn	18 21 45.8	+0.6
KLR	Kul'dur	13.52	291	cePN	Pn	18 21 45.8	+0.6
KLR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
USRK	Ussuriysk Ar.	13.71	269	P	P	18 21 48.7	-2.7
	baz=78,slow=13,SNR=6.9						
USRK	Ussuriysk Ar.	13.71	269	P	P	18 21 49.5	-1.9
USRK	Ussuriysk Ar.	13.71	269	P	P	18 21 49.5	-1.9
EKMR	Ekimchan	13.78	307	eP	Pn	18 21 46.8	-1.8
EKMR				AMB	AMB	18 21 54.0	
	comp=Z,4.0nm,0.6s						
BMKR	Bomnak	16.66	310	eP	Pn	18 22 23.6	-0.5
ZEA	Zeya	17.21	305	eP	Pn	18 22 29.8	-1.0
ZEA				AMB	AMB	18 22 31.2	
	comp=Z,10.0nm,1.0s						
ZEA	Zeya	17.21	305	eP	Pn	18 22 29.8	-1.0
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
KROS	Kirovskiy	17.58	307	eP	P	18 22 32.9	-1.2
KROS				AMB	AMB	18 22 34.1	
	comp=Z,6.0nm,0.8s						
KSRS	Korea Array	19.33	252	P	Pn	18 22 58.1	+2.3
	comp=Z,0.1nm,0.3s,baz=54,slow=11,SNR=9.4						
YAK	Yakutsk	20.27	330	eP	P	18 23 02.7	-0.3
YAK	Yakutsk	20.27	330	eP	P	18 23 02.7	-0.3
YAK				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BILL	Bilibino	23.41	14	eP	P	18 23 33.6	-1.1
BILL	Bilibino	23.41	14	⇑eP	P	18 23 33.6	-1.1
BILL				e*PP	pwP	18 24 06.7	+0.1
BILL				eS	S	18 27 35.3	-0.9
BILL				pmax	pmax		
	comp=Z,9.0nm,3.1s						
TIXI	Tiksi	27.82	345	P	P	18 24 11.9	-2.4
	comp=Z,0.5nm,0.3s,baz=144,slow=8.9,SNR=12						
TIXI	Tiksi	27.82	345	⇓eP	P	18 24 12.3	-2.0
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.4s						
TIXI	Tiksi	27.82	345	P	P	18 24 12.0	-2.3
TIXI				IAmb	IAmb	18 24 33.2	
	comp=Z,12nm,2.0s						
H11N2	WAKE ISLAND Hy	29.22	149	T	T	18 56 02.8	
	baz=339,slow=76,SNR=48						
H11N1	WAKE ISLAND Hy	29.24	149	T	T	18 56 15.3	
	baz=339,slow=76,SNR=218						
H11N3	WAKE ISLAND Hy	29.24	149	T	T	18 56 16.5	
	baz=339,slow=76,SNR=223						
H11S1	WAKE ISLAND Hy	30.28	150	T	T	18 57 36.9	
	baz=340,slow=76,SNR=302						
H11S3	WAKE ISLAND Hy	30.29	150	T	T	18 57 34.8	
	baz=340,slow=76,SNR=176						
H11S2	WAKE ISLAND Hy	30.30	150	T	T	18 57 30.8	
	baz=340,slow=76,SNR=8.3						
SONM	Songino Array	30.35	290	P	P	18 24 37.4	+0.3
	comp=Z,0.1nm,0.3s,baz=81,slow=9.3,SNR=2.4						
ILAR	Eielson Array	37.93	38	P	P	18 25 42.5	+0.5
	comp=Z,0.4nm,0.5s,baz=270,slow=7.2,SNR=7.4						
ILAR	Eielson Array	37.93	38	P	P	18 25 42.3	+0.2
INK	Inuvik	42.97	32	P	P	18 26 24.1	+0.8
	comp=Z,1.7nm,0.8s,baz=293,slow=7.5,SNR=5.6						

INK	Inuvik	42.97	32	P	P	18 26 24.2	+0.9
MK31	Makanchi Array	46.11	297	P	P	18 26 48.8	+0.2
MK31				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MK31	Makanchi Array	46.11	297	P	P	18 26 48.8	+0.2
MKAR	Makanchi Array	46.11	297	P	P	18 26 48.9	+0.3
	comp=Z,1.2nm,0.6s,baz=74,slow=9.3,SNR=12						
MAKZ	Makanchi	46.30	297	P	P	18 26 50.2	+0.2
MAKZ				pmax	pmax		
	comp=Z,7.0nm,1.4s						
MAKZ	Makanchi	46.30	297	P	P	18 26 50.2	+0.2
MAKZ				IAmb	IAmb	18 26 51.5	
	comp=Z,6.5nm,1.4s						
KURK	Kurchatov	46.68	304	*e*P	P	18 26 52.1	-0.8
KURK	Kurchatov	46.68	304	⇑*e*P	P	18 26 52.1	-0.8
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YKA	Yellowknife Ar	52.29	36	P	P	18 27 36.5	+1.4
	comp=Z,0.7nm,0.8s,baz=295,slow=6.4,SNR=8.0						
AAK	Ala-Archa	52.98	296	*e*P	P	18 27 42.6	+1.8
AAK	Ala-Archa	52.98	296	⇑*e*P	P	18 27 42.6	+1.8
AAK				pmax	pmax		
	comp=Z,2.0nm,1.4s						
ODAN	Odare	53.35	272	*e*P	P	18 27 48.4	+4.6
JIRN	Jiri	53.69	274	*e*P	P	18 27 49.9	+3.5
	comp=Z,10nm,0.5s						
GUN	Gumba	53.75	274	*e*P	P	18 27 50.3	+3.5
RAMN	Ramite	53.85	273	*e*P	P	18 27 50.6	+3.2
GKN	Gorkha	54.56	275	*e*P	P	18 27 56.2	+3.8
ARU	Arti	54.66	317	*e*P	P	18 27 53.0	+0.5
ARU	Arti	54.66	317	*c* *i*P	P	18 27 53.0	+0.5
ARU						18 29 55.2	
ARU				S	S	18 35 22.6	+2.1
ARU				SS	SS	18 39 01.2	-3.6
ARU				pmax	pmax		
	comp=Z,4.0nm,1.1s						
DANN	Dangsing	54.95	276	*e*P	P	18 27 59.1	+3.7
	comp=Z,11nm,0.6s						
ARCES	ARCESS Array B	58.11	340	P	P	18 28 16.5	-0.2
	comp=Z,4.0nm,0.8s,baz=38,slow=8.0,SNR=2.6						
FINES	FINESS Array B	64.14	334	P	P	18 28 57.0	-0.4
	comp=Z,1.4nm,0.7s,baz=46,slow=11,SNR=4.3						
FINES	FINESS Array B	64.14	334	*i* P	P	18 28 57.9	+0.5
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	FINESS Array B	64.14	334	P	P	18 28 56.9	-0.4
PDAR	Pinedale Array	66.23	53	P	P	18 29 12.9	+1.4
	comp=Z,0.6nm,0.7s,baz=298,slow=3.2,SNR=5.7						
PDAR	Pinedale Array	66.23	53	P	P	18 29 12.8	+1.3
WRA	Warramunga Arr	67.41	197	P	P	18 29 21.9	+3.1
	comp=Z,1.6nm,0.8s,baz=12,slow=6.3,SNR=8.0						
WRA	Warramunga Arr	67.41	197	*i* P	P	18 29 22.6	+3.8
WRA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WRA	Warramunga Arr	67.41	197	P	P	18 29 22.3	+3.5
NOA	NORSAR Array B	68.49	340	P	P	18 29 25.4	+0.3
	comp=Z,0.7nm,0.7s,baz=42,slow=5.4,SNR=3.6						
ASAR	Alice Springs	71.11	197	P	P	18 29 46.2	+4.7
	comp=Z,1.3nm,0.8s,baz=13,slow=5.1,SNR=19						
ASAR	Alice Springs	71.11	197	P	P	18 29 45.5	+3.9
ASAR	Alice Springs	71.11	197	P	P	18 29 45.5	+3.9
AKASG	Malin Array Be	71.42	325	P	P	18 29 43.5	+0.4
	comp=Z,0.7nm,0.4s,baz=36,slow=6.3,SNR=5.4						
TXAR	Lajitas Array	78.99	59	P	P	18 30 29.1	+2.1
	comp=Z,1.1nm,0.5s,baz=297,slow=4.4,SNR=16						
PLCA	Paso Flores	149.44	95	PKPbc	PKPab	18 38 13.6	-2.5
	comp=Z,2.7nm,1.1s,baz=334,slow=3.3,SNR=4.9						

IDC 17 18:25:12.8±2.1, 0°.10S×127°.08E, h0^{km}, mb3.1/3, mb1 3.4/3, mb1mx3.2/31, mbtmp3.2/3, Error ellipse: s-maj=182.4km s-min=25.3km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.97	161	P	P	18 29 56.6	-1.1
	0.3nm,0.4s,baz=339,slow=11,SNR=8.1						
ASAR	Alice Springs	24.35	165	P	P	18 30 33.4	+0.7
	0.7nm,0.8s,baz=343,slow=12,SNR=12						
MKAR	Makanchi Array	60.90	326	P	P	18 35 27.4	-0.1
	0.1nm,0.4s,baz=129,slow=8.9,SNR=2.0						

IDC 17 18:28:24.9±2.0, 20°.33S×70°.42W, h0^{km}, mb3.7/2, mb1 3.9/2, mb1mx3.6/20, mbtmp3.8/2, Error ellipse: s-maj=101.6km s-min=42.1km az=102.0

GUC 17 18:28:28.8±0.5, 19°.97S×70°.91W, h21^{km}±4^{km}, ML3.5

ISC 17 18:28:26.0±1.7, 19°.95S±0°.03×70°.86W±0°.07, h12^{km}±10^{km}, n19, σ1^{s}06/33, 3C-7D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.78	63	⇑*i*P	Pn	18 28 42.7	-0.2
PSGC				*i* S	Sn	18 28 53.7	-0.9
TA01	Diego Aracena	0.89	134	⇑*i*P	Pb	18 28 43.9	+0.6
TA01				*i* S	Sg	18 28 55.7	+1.0
TA01				IAML		18 28 57.6	
	comp=E,2μm,0.3s						
PATCX	Punta Patache	1.09	143	⇓*i*P	Pb	18 28 46.9	+0.1
PATCX				*i* S	Sb	18 29 01.7	+0.6
PB11	IPOC Station P	1.15	81	⇑*i*P	Pn	18 28 48.9	+0.8
PB11				*e*S	Sn	18 29 04.6	+0.8
PB11				IAML		18 29 06.9	
	comp=E,3μm,0.4s						
PB12	IPOC Station P	1.42	21	⇓*i*P	Pn	18 28 52.9	+1.2
PB12				*i* S	Sg	18 29 11.6	-0.3
PB12				IAML		18 29 15.5	
	comp=N,759nm,0.6s						
GO01	Chusmiza	1.60	80	*i* P	Pg	18 28 56.3	-0.4
GO01				*i* S	Sg	18 29 18.1	+0.6
PB08	IPOC Station P	1.62	97	*e*P	Pb	18 28 56.2	+0.2
PB08				*i* S	Sg	18 29 18.2	0.0
PB08				IAML		18 29 22.5	
	comp=N,816nm,0.4s						
PB02	IPOC Station P	1.64	147	⇓*i*P	Pn	18 28 54.7	0.0
PB02				*i* S	Sn	18 29 15.7	0.0
PB02				IAML		18 29 23.0	
	comp=E,2μm,0.5s						
AP01	Chacalluta	1.65	17	*e*P	Pb	18 28 58.2	+1.9
AP01				*i* S	Sg	18 29 19.3	+0.2
PB01	IPOC Station P	1.69	130	*e*P	Pn	18 28 56.0	+0.7
PB01				*i* S	Sb	18 29 18.1	-0.1
PB01				IAML		18 29 24.2	
	comp=N,886nm,0.3s						
PB07	IPOC Station P	1.99	153	⇓*i*P	Pn	18 28 59.3	-0.3
PB07				*e*S	Sb	18 29 29.2	+2.1
PB07				IAML		18 29 35.4	
	comp=E,609nm,0.8s						
PB16	IPOC Station P	2.06	39	⇓*i*P	Pb	18 29 02.8	-0.8
PB16				*i* S	Sg	18 29 31.3	-0.9
PB16				IAML		18 29 35.8	
	comp=E,334nm,0.5s						
PB03	IPOC Station P	2.33	154	⇓*i*P	Pn	18 29 03.9	-0.4
PB03				*i* S	Sg	18 29 41.0	0.0
PB09	IPOC Station P	2.38	141	⇓*i*P	Pn	18 29 06.3	+1.3
PB09				*i* S	Sb	18 29 39.0	+0.6
PB09				IAML		18 29 44.8	
	comp=E,611nm,0.5s						
LPAZ	La Paz	4.47	36	Pn	Pb	18 29 44.5	-0.4
	comp=E,1.1nm,0.3s,baz=197,slow=2.3,SNR=11						
PLCA	Paso Flores	20.72	179	P	P	18 33 02.9	-3.4
	comp=E,3.5nm,1.0s,baz=12,slow=6.5,SNR=3.5						
TORD	Torodi Ar. Bea	78.58	71	P	P	18 40 27.4	-0.7
	comp=E,0.5nm,0.7s,baz=249,slow=5.9,SNR=2.3						
MKAR	Makanchi Array	145.40	33	PKPbc	PKPbc	18 48 04.8	+0.9
	comp=E,0.5nm,0.7s,baz=337,slow=3.4,SNR=6.1						
SONM	Songino Array	152.10	4	PKPbc	PKPbc	18 48 22.7	+1.2
	comp=E,0.2nm,0.5s,baz=335,slow=5.0,SNR=2.3						

IDC 17 18:28:27.1±1.6, 7°.07S×149°.18E, h50^{km}±27^{km}, mb3.3/4, mb1 3.6/6, mb1mx3.4/28, mbtmp3.7/6, ML3.6/3, MS2.4/1, Ms1 2.4/1, ms1mx2.2/16, Error ellipse: s-maj=84.7km s-min=9.2km az=133.0

ISC 17 18:28:26.4±0.9, 6°.8S±0°.2×148°.9E±0°.2, h35^{km}, n8, σ0^{s}86/10, mb3.5/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.10	214	P	Pn	18 29 13.4	+0.6
	68nm,0.3s,baz=40,slow=6.7,SNR=289						
PMG				LR	LR	18 29 48.7	
	comp=Z,62nm,21.5s,baz=63,slow=27						
PMG				S	Sn	18 29 49.4	+0.7
	42nm,0.3s,baz=97,slow=17,SNR=11						
KRVT	Keravat (AS076	3.98	51	P	Pn	18 29 25.6	+0.6
	18nm,0.3s,baz=188,slow=0.1,SNR=34						
KRVT				S	Sn	18 30 10.7	+0.2
	6.9nm,0.3s,baz=193,slow=21,SNR=1.5						
WRA	Warramunga Arr	19.24	226	P	P	18 32 47.1	-0.8
	0.5nm,0.3s,baz=55,slow=12,SNR=20						
ASAR	Alice Springs	22.10	219	P	P	18 33 17.6	-1.3
	1.1nm,0.8s,baz=58,slow=9.3,SNR=27						
MKAR	Makanchi Array	79.35	320	P	P	18 40 29.7	+0.9
	0.2nm,0.5s,baz=109,slow=7.3,SNR=2.8						
ZALV	Zalesovo Beam	80.73	327	P	P	18 40 36.3	+0.3
	0.4nm,0.5s,baz=101,slow=7.5,SNR=2.0						
ILAR	Eielson Array	85.50	23	P	P	18 40 59.5	-0.9
	0.3nm,0.6s,baz=242,slow=6.6,SNR=1.9						
TORD	Torodi Ar. Bea	147.14	284	PKPbc	PKPbc	18 48 07.0	+0.1
	1.0nm,0.6s,baz=42,slow=3.0,SNR=7.0						

JMA 17 18:41:51.2±0.2, 37°.40N×144°.35E, h43^{km}, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.46	293	P	Pn	18 42 30.2	+1.4
JIKH				*e*S	Sn	18 42 59.2	+1.7
JIO	Ouri	2.60	295	P	Pn	18 42 32.1	+1.4
JIO				*e*S	Sn	18 43 02.6	+1.7
JKMT	Kesennumamotoy	2.67	303	P	Pn	18 42 33.1	+1.4
JKMT				*e*S	Sn	18 43 04.1	+1.3
OFUJ	Ofunato	2.70	309	P	Pn	18 42 33.7	+1.7
OFUJ				S	Sn	18 43 04.6	+1.2
JMK	Ichinoseki	2.91	303	P	Pn	18 42 36.7	+1.7
JMK				*e*S	Sn	18 43 10.8	+2.0
JOU	Okura	3.07	289	P	Pn	18 42 39.3	+2.1
JOU				*e*S	Sn	18 43 15.0	+2.3
JOM	Ohasama	3.17	312	P	Pn	18 42 40.5	+1.9
JOM				*e*S	Sn	18 43 17.2	+2.1
JFT	Otama	3.20	273	P	Pn	18 42 41.0	+2.1
JFT				*e*S	Sn	18 43 17.6	+1.8
JYK	Kaneyama	3.49	297	P	Pn	18 42 45.4	+2.4
JYK				*e*S	Sn	18 43 25.2	+2.2
JRG	Rokugo	3.54	305	P	Pn	18 42 46.3	+2.7
JRG				*e*S	Sn	18 43 26.9	+2.8
BSO1	Boso 1	3.87	226	P	Pn	18 42 46.5	-1.2
BSO1				*e*S	Sn	18 43 30.3	-1.3
JTM	Tenmabayashi	4.24	324	*e*S	Sn	18 43 42.4	+1.0
JRY	Ryogami san	4.59	254	P	Pn	18 42 58.4	+0.3
JRY				*e*S	Sn	18 43 49.3	-0.9
JOT	Ohata	4.73	328	P	Pn	18 43 01.8	+1.9
JOT				*e*S	Sn	18 43 54.5	+1.1
JKB	Kayabe	5.16	331	P	Pn	18 43 07.8	+1.9
JCH	Churui	5.26	352	P	Pn	18 43 06.9	-0.4
JCH				S	Sn	18 44 04.5	-2.1
NEM2	Nemuro 2	6.05	10	P	Pn	18 43 15.3	-2.8
NEM2				*e*S	Sn	18 44 19.2	-6.8
JTKR	Abashiri--Toko	6.57	357	*e*S	Sn	18 44 35.5	-3.3

IDC 17 19:05:26.3±0.5, 19°.94S×70°.60W, h0^{km}, mb4.8/21, mb1 4.8/26, mb1mx4.8/30, mbtmp4.7/26, ML4.3/5, MS4.0/23, Ms1 4.0/23, ms1mx3.9/33, Error ellipse: s-maj=16.9km s-min=10.1km az=65.0

NEIC 17 19:05:26.8±2.0, 20°.02S±0°.04×70°.76W±0°.05, h8^{km}±1^{km}, mb5.4/228, Mwr4.8/19, ML4.9(GUC), Error ellipse: s-maj=8.4km s-min=5.5km az=235.0

SJA 17 19:05:27.1±1.0, 20°.00S×70°.76W, h26^{km}±5^{km}, ML4.8, MW5.0

VAO 17 19:05:28.7±0.5, 19°.85S×70°.55W, h10^{km}, mb5.0

BJI 17 19:05:28.0±0.0, 20°.00S×70°.80W, h10^{km}, mB5.4/24, Ms5.4/11, Ms7 5.2/11

MOS 17 19:05:29.1±1.7, 19°.80S×70°.65W, h27^{km}, mb5.0/5, Error ellipse: s-maj=12.7km s-min=6.9km az=110.2

GUC 17 19:05:29.1±0.6, 20°.05S×70°.79W, h27^{km}±2^{km}, ML4.9

NEIC 17 19:05:30.3, 20°.03S×70°.67W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.11; $M_{\theta\theta}$-0.10; $M_{\phi\phi}$-1.02; $M_{r\theta}$1.22; $M_{\theta\phi}$0.46; $M_{\phi r}$-1.59; Fault plane solution: $M_0$2.32000×10^{16} NP1:ϕ_s351.36000°, δ16.30000°, λ115.90000°. NP2:ϕ_s144.52000°, δ75.38000°, λ82.72000°. Principal axes: T 2.3056, Plg59.0000°, Azm45.0000°; N 0.0268, Plg7.0000°, Azm146.0000°; P -2.3324, Plg30.0000°, Azm240.0000°;

GCMT 17 19:05:30.8±0.3, 19°.97S±0°.02×71°.03W±0°.02, h15^{km}, MW4.9/105, Moment Tensor Solution. s34,c36; s105,c126; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.89±.15; $M_{\theta\theta}$-0.97±.09; $M_{\phi\phi}$-1.92±.11; $M_{r\theta}$0.00±.20; $M_{\theta\phi}$1.04±.06; $M_{\phi r}$-1.36±.23; Best double couple: $M_0$3.04600×10^{16} NP1:ϕ_s317.00000°, δ35.00000°, λ71.00000°. NP2:ϕ_s160.00000°, δ58.00000°, λ102.00000°. Principal axes: T 3.2650, Plg74.0000°, Azm104.0000°; N -0.4410, Plg11.0000°, Azm333.0000°; P -2.8270, Plg12.0000°, Azm241.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 17 19:05:27.5±1.2, 20°.04S±0°.02×70°.77W±0°.04, h12^{km}±7^{km}, n839, σ1^{s}13/838, mb5.3/145, MS4.4/26, 16C-14D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.75	54	⇑*i*P	Pg	19 05 41.9	-0.2
PSGC				*i* S	Sg	19 05 51.5	-0.4
PSGCX	Pisagua	0.75	54	*i* P	Pg	19 05 41.9	-0.1
PSGCX				*e*S	Sb	19 05 52.5	-0.3
PSGCX				IAML		19 05 53.9	
	comp=Z,50μm,0.7s						
TA01	Diego Aracena	0.76	134	⇑*i*P	Pg	19 05 42.2	0.0
TA01				*i* S	Sg	19 05 52.7	+0.4
TA01				IAML		19 05 57.7	
	comp=N,55μm,0.4s						
PATCX	Punta Patache	0.97	143	⇓*i*P	Pg	19 05 45.5	-0.7
PATCX				*i* S	Sg	19 05 58.1	-0.8
PATCX	Punta Patache	0.97	143	*i* P	Pg	19 05 45.6	-0.7
PATCX				*e*S	Sn	19 06 01.8	+1.0
PATCX				IAML		19 06 04.7	
	comp=Z,20μm,0.5s						
PB11	IPOC Station P	1.08	75	⇑*i*P	Pb	19 05 47.5	-0.7
PB11				*i* S	Sb	19 06 02.4	-0.1
PB11				IAML		19 06 08.5	
	comp=E,50μm,0.8s						
PB11	IPOC Station P	1.08	75	Pg	Pb	19 05 47.6	-0.7
PB11	IPOC Station P	1.08	75	*i* P	Pb	19 05 47.8	-0.5
PB11				*e*S	Sg	19 06 02.7	+0.1
PB11				IAML		19 06 03.7	
	comp=Z,23μm,1.4s						
PB12	IPOC Station P	1.48	17	⇑*i*P	Pn	19 05 53.3	-0.7
PB12				*i* S	Sn	19 06 13.1	-0.1
PB12				IAML		19 06 17.9	
	comp=N,27μm,0.8s						
PB12	IPOC Station P	1.48	17	*i* P	Pn	19 05 54.0	0.0
PB12				*e*S	Sn	19 06 13.1	-0.1
PB12				IAML		19 06 17.0	
	comp=Z,23μm,1.0s						
PB02	IPOC Station P	1.52	147	⇓*i*P	Pn	19 05 54.2	-0.3
PB02				*e*S	Sn	19 06 14.2	-0.1
PB02				IAML		19 06 18.8	
	comp=E,74μm,0.5s						
PB02	IPOC Station P	1.52	147	*i* P	Pn	19 05 54.4	-0.2
PB02				*e*S	Sg	19 06 17.1	+0.8
PB02				IAML		19 06 25.7	
	comp=Z,23μm,0.5s						
PB08	IPOC Station P	1.52	94	⇑*i*P	Pn	19 05 54.9	+0.1
PB08				*i* S	Sb	19 06 15.4	+0.1
PB08	IPOC Station P	1.52	94	*i* P	Pn	19 05 55.1	+0.3
PB08				*e*S	Sb	19 06 15.8	+0.5
PB08				IAML		19 06 25.4	
	comp=Z,14μm,0.9s						
GO01	Chusmiza	1.53	76	⇑*i*P	Pn	19 05 55.2	+0.1
GO01				*i* S	Sb	19 06 15.7	+0.2
GO01				IAML		19 06 21.4	
	comp=N,21μm,0.3s						
GO01	Chusmiza	1.53	76		Pn	19 05 55.1	0.0
PB01	IPOC Station P	1.56	130	⇑*i*P	Pn	19 05 55.1	-0.1
PB01				*i* S	Sn	19 06 15.3	-0.2
PB01	IPOC Station P	1.56	130		Pn	19 05 54.7	-0.5
PB01	IPOC Station P	1.56	130	*i* P	Pn	19 05 55.5	+0.3
PB01				*e*S	Sb	19 06 16.4	+0.2
PB01				IAML		19 06 24.4	
	comp=Z,10μm,1.1s						
AP01	Chacalluta	1.71	14	⇑*i*P	Pn	19 05 57.5	+0.4
AP01				*i* S	Sb	19 06 19.8	-0.4
AP01				IAML		19 06 30.5	
	comp=N,46μm,0.7s						
PB07	IPOC Station P	1.87	154	⇓*i*P	Pn	19 05 59.5	0.0
PB07				*i* S	Sn	19 06 23.0	-0.2
PB07				IAML		19 06 36.7	
	comp=E,10μm,0.5s						
PB16	IPOC Station P	2.07	35	⇑*i*P	Pn	19 06 03.9	+1.3
PB16				*i* S	Sb	19 06 30.9	-0.4
PB16				IAML		19 06 45.8	
	comp=N,8μm,0.7s						
PB16	IPOC Station P	2.07	35	*i* P	Pb	19 06 04.2	-1.2
PB16				*e*S	Sb	19 06 31.6	+0.3
PB16				IAML		19 06 40.0	
	comp=Z,16μm,1.1s						
PB03	IPOC Station P	2.21	155	⇓*i*P	Pn	19 06 04.1	-0.1
PB03				*i* S	Sn	19 06 32.0	+0.3
PB03	IPOC Station P	2.21	155	*i* P	Pn	19 06 04.2	-0.1
PB03				*e*S	Sg	19 06 39.0	+0.3
PB03				IAML		19 06 43.6	
	comp=Z,5μm,0.7s						
PB09	IPOC Station P	2.26	141	⇓*i*P	Pn	19 06 06.6	+1.7
PB09				*e*S	Sn	19 06 33.7	+1.0
PB09	IPOC Station P	2.26	141	*i* P	Pb	19 06 06.8	-1.5
PB09				IAML		19 06 44.6	
	comp=Z,10μm,1.0s						
PB04	IPOC Station P	2.36	166	⇓*i*P	Pn	19 06 05.3	-0.8
PB04				*e*S	Sn	19 06 34.2	-0.9
PB04				IAML		19 06 53.0	
	comp=N,6μm,0.6s						
PB04	IPOC Station P	2.36	166		Pn	19 06 05.0	-1.2
PB04	IPOC Station P	2.36	166	*i* P	Pn	19 06 05.4	-0.8
PB06	IPOC Station P	2.88	157	*i* P	Pn	19 06 12.9	-0.5
PB06				IAML		19 07 05.0	
	comp=Z,5μm,1.3s						
LVC	Limon Verde	3.09	146	Pn	Pn	19 06 18.1	+1.6
	comp=Z,46nm,0.3s,baz=354,slow=7.4,SNR=54						
LVC				Pg	Pb	19 06 23.9	+1.2
	comp=Z,179nm,0.3s,baz=332,slow=9.2,SNR=80						
LVC				LR	LR	19 06 58.3	
	comp=Z,574nm,21.0s,baz=289,slow=30						
LVC				Lg	Lg	19 07 03.1	
	comp=Z,174nm,0.3s,baz=68,slow=17,SNR=6.3						
LVC	Limon Verde	3.09	146	P	Pn	19 06 17.6	+1.1
LVC	Limon Verde	3.09	146		Pn	19 06 17.6	+1.1
LVC	Limon Verde	3.09	146	*e*P	Pn	19 06 18.0	+1.6
PB15	IPOC Station P	3.38	159	*i* P	Pn	19 06 19.8	-0.5
PB15				IAML		19 07 19.2	
	comp=Z,4μm,0.7s						
PB10	IPOC Station P	3.46	177		Pn	19 06 19.1	-2.2
PB10	IPOC Station P	3.46	177	*i* P	Pn	19 06 19.3	-1.9
PB10				IAML		19 07 49.1	
	comp=Z,593nm,2.1s						
LPAZ	La Paz	4.50	34	Pn	Pn	19 06 40.2	+4.2
	comp=Z,6.2nm,0.3s,baz=210,slow=7.7,SNR=51						
LPAZ	La Paz	4.50	34	P	Pn	19 06 39.7	+3.7
LPAZ	La Paz	4.50	34		Pn	19 06 39.7	+3.7
PB14	IPOC Station P	4.58	176	*i* P	Pn	19 06 34.5	-2.3
PB14				IAML		19 08 09.9	
	comp=Z,586nm,0.7s						
GO02	Mina Guanaco	5.22	168		Pn	19 06 44.1	-1.5
YJA	Yavi	5.35	114	*i* P	Pn	19 06 52.2	+4.7
AZAP	Zapla	6.73	129	*i* P	Pn	19 07 08.6	+2.2
AZAP				IAML		19 09 09.2	
	comp=Z,45nm,1.7s						
ASTB	Santa Barbara	7.04	125	*i* P	Pn	19 07 11.3	+0.8
GO03	Copiap	7.54	176		Pn	19 07 14.8	-2.5
NNA	Nana	9.90	323	Pn	Pn	19 07 51.8	+2.0
	comp=Z,3.1nm,0.3s,baz=292,slow=19,SNR=4.7						
NNA				Sn	Sn	19 09 40.6	-0.4
	comp=Z,3.9nm,0.3s,baz=272,slow=16,SNR=4.4						
NNA				LR	LR	19 11 06.7	
	comp=Z,254nm,19.9s,baz=159,slow=34						
NNA	Nana	9.90	323	P	Pn	19 07 48.1	-1.7
NNA						19 09 40.6	
NNA	Nana	9.90	323		Pn	19 07 48.1	-1.7
SIV	San Ignacio	10.06	68	Pn	Pn	19 07 51.6	-0.3
	comp=Z,5.5nm,0.3s,baz=264,slow=12,SNR=88						
SIV				LR	LR	19 12 14.4	
	comp=Z,3μm,19.6s,baz=272,slow=41						
SAML	Samuel	13.24	35	P	Pn	19 08 33.2	-2.2
SAML	Samuel	13.24	35		Pn	19 08 33.2	-2.2
SAML	Samuel	13.24	35	*e*P	Pn	19 08 33.0	-2.5
CPUP	Villa Florida	13.85	119	Pn	Pn	19 08 44.3	+0.6
	comp=Z,0.3nm,0.3s,baz=304,slow=12,SNR=14						
CPUP				LR	LR	19 15 18.4	
	comp=Z,582nm,18.4s,baz=302,slow=43						
CPUP	Villa Florida	13.85	119	P	Pn	19 08 43.5	-0.2
CPUP	Villa Florida	13.85	119		Pn	19 08 43.5	-0.2
CPUP	Villa Florida	13.85	119	*e*P	Pn	19 08 44.4	+0.7
AQDB	Aquidauana	14.15	94	*e*P	Pn	19 08 47.3	-0.5
ATAH	Atahualpa	14.80	329	Pn	Pn	19 08 59.4	+2.2
	comp=Z,0.4nm,0.3s,baz=114,slow=14,SNR=3.9						
SALV	Santo Antonio	14.92	76	*e*P	Pn	19 08 55.0	-3.4
CLDB	Colider	17.06	60	*e*P	Pn	19 09 24.7	-1.2
PCMB	Pacaembu	18.30	98	*e*P	Pn	19 09 40.3	-1.1
ITAB	Concordia	18.51	116	*e*P	Pn	19 09 44.3	+0.5
ARAG	Araguaiana, MT	18.55	80	*e*P	P	19 09 43.6	-0.6
PLTB	Pedras Altas	19.33	131	*e*P	P	19 09 52.8	+0.1
GO06	Curarrehue	19.49	182	P	P	19 09 53.1	-1.4
PLCA	Paso Flores	20.63	180	P	Pn	19 10 08.3	-0.8
	comp=Z,13nm,0.7s,baz=22,slow=12,SNR=18						
PLCA				LR	LR	19 18 37.6	
	comp=Z,491nm,18.5s,baz=30,slow=38						
PLCA	Paso Flores	20.63	180	P	P	19 10 08.0	+1.1
PLCA				pmax	pmax		
	comp=Z,137nm,1.9s						
PLCA	Paso Flores	20.63	180	P	P	19 10 08.0	+1.1
IPMB	Ipameri, GO	21.43	88	*e*P	P	19 10 15.6	0.0
RCLB	Rio Claro- Sao	21.79	100	*e*P	P	19 10 18.9	-0.6
PTGA	Pitinga	21.91	30	P	P	19 10 19.5	-1.2
	comp=Z,84nm,0.7s,baz=205,slow=11,SNR=70						
PTGA	Pitinga	21.91	30	P	P	19 10 18.4	-2.3
PTGA				IAmb	IAmb	19 10 25.5	
	comp=Z,99nm,0.8s						
PTGA	Pitinga	21.91	30	*e*P	P	19 10 19.8	-0.9
SPB	Sao Paulo	21.95	104	P	P	19 10 21.1	0.0
SPB	Sao Paulo	21.95	104	*e*P	P	19 10 21.4	+0.3
FLOC	Florencia	22.01	347	*e*P	P	19 10 21.9	0.0
BDFB	Brasilia	22.09	82	P	P	19 10 22.6	-0.3
	comp=Z,6.6nm,0.5s,baz=260,slow=14,SNR=5.4						
BDFB				LR	LR	19 20 29.9	
	comp=Z,1μm,19.2s,baz=276,slow=41						
BDFB	Brasilia	22.09	82	P	P	19 10 22.5	-0.3
BDFB				pmax	pmax		
	comp=Z,31nm,0.7s						
BDFB	Brasilia	22.09	82	P	P	19 10 22.5	-0.3
GCUF	Volcan Galeras	22.09	342	*e*P	P	19 10 29.2	+6.0
MACC	Macarena, Meta	22.25	352	*e*P	P	19 10 24.7	+0.3
CRUC	La Cruz	22.31	344	*e*P	P	19 10 31.7	+6.3
VAO	Valinhos	22.34	102	*e*P	P	19 10 25.0	-0.4
GARC	Garzon, Huila	22.57	348	*e*P	P	19 10 28.4	+0.4
SOTA	Rioblanco	22.77	345	*e*P	P	19 10 33.1	+2.6
PCON	Cinco Dias	22.90	345	*e*P	P	19 10 30.9	-1.0
POPC	Popayan, Colom	23.17	345	*e*P	P	19 10 35.4	+1.0
PARB	Paraibuna	23.59	103	*e*P	P	19 10 38.1	-0.3
GR1C	Gorgona, Isla	24.02	342	*e*P	P	19 10 40.7	-1.7
PTGC	Puerto Gaitan,	24.12	357	*e*P	P	19 10 43.4	+0.1
VILC	Villavicencio,	24.17	353	*e*P	P	19 10 44.4	+0.4
ORTC	Ortega, Tolima	24.20	349	*e*P	P	19 10 42.5	-1.6
BSCB	Bom Sucesso	24.36	97	*e*P	P	19 10 44.9	-0.8
YOTC	Yotoco, Valle	24.49	346	*e*P	P	19 10 46.7	-0.2
CHIC	Chingaza	24.68	353	*e*P	P	19 10 44.0	-4.9
ANIL	Santa Ana	24.80	349	*e*P	P	19 10 53.5	+3.6
TOLC	Tolima	24.88	349	*e*P	P	19 10 52.2	+1.6
ROSC	El Rosal	24.97	352	P	P	19 10 51.8	+0.3
	comp=Z,21nm,0.4s,baz=129,slow=8.9,SNR=6.2						
ROSC	El Rosal	24.97	352	*e*P	P	19 10 57.5	+6.1
ROSC	El Rosal	24.97	352	P	P	19 10 51.8	+0.3
SMTB	Santa Maria do	25.01	67	*e*P	P	19 10 51.4	-0.1
GUY2C	Guyana, Caldas	25.51	349	*e*P	P	19 10 57.6	+1.2
PIZC	Pizarro, Choco	25.68	345	*e*P	P	19 11 01.2	+3.7
JANB	Januaria	25.70	83	*e*P	P	19 10 56.8	-0.9
SPBC	San Pablo de B	25.73	352	*e*P	P	19 10 59.1	+1.0
NORC	Norcasia	25.76	351	*e*P	P	19 10 55.0	-3.3
CBOC	Ciudad Bolivar	26.25	348	*e*P	P	19 11 02.9	0.0
HELC	Santa Helena	26.48	349	*e*P	P	19 11 00.3	-4.9
BARC	Barichara	26.57	355	*e*P	P	19 11 04.1	-1.7
PTBC	PUERTO BERRIO,	26.66	352	*e*P	P	19 11 05.8	-0.6
PAMC	Pamplona, Colo	27.27	356	*e*P	P	19 11 11.0	-1.4
ZARC	Zaragoza, Cauc	27.65	351	*e*P	P	19 11 14.5	-0.8
SJMB	Sao Joao De Ma	27.93	92	*e*P	P	19 11 18.3	+0.5

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UREC San Jos de Ur      28.01 350 eP    P       19 11 18.5  0.0
BSFB Barra de Sao F     28.23  93 eP    P       19 11 21.0 +0.5
SDV  Santo Domingo      28.74   0  P    P       19 11 24.8 -0.5
     comp=Z,23nm,1.0s,baz=215,slow=8.3,SNR=10.0
SDV  Santo Domingo      28.74   0 eP    P       19 11 24.7 -0.6
SDV  Santo Domingo      28.74   0  P    P       19 11 23.8 -1.4
SDV  Santo Domingo      28.74   0 eP    P       19 11 24.4 -0.9
SMLC San Martn de       28.84 353 eP    P       19 11 24.1 -1.8
SJCC San Jacinto, C     30.06 351 eP    P       19 11 36.4 -0.4
NBIT Itapeh - BA        30.29  85 eP    P       19 11 38.1 -0.7
NBPN Ponto Novo - B     30.80  77 eP    P       19 11 42.4 -1.0
NBPS Pedro II - PI      32.51  65 eP    P       19 11 56.0 -2.5
NBLA Lagarto - SE       32.97  79 eP    P       19 12 01.5 -1.0
JTS  Las Juntas de      33.22 334⇓eP    P       19 12 07.7 +3.2
JTS                                pmax pmax
     comp=Z,14nm,1.4s
NBTA Tacaratu-PE        33.40  76 eP    P       19 12 05.9 -0.2
NBMA Muriti-CE          33.47  72 eP    P       19 12 05.9 -0.9
NBPB Pedra_Branca-C     33.56  69 eP    P       19 12 07.6  0.0
NBMO Morrinhos-CE       34.27  65 eP    P       19 12 13.4 -0.4
USHA Ushuaia            34.78 178  P    P       19 12 18.0 +0.3
     comp=Z,8.2nm,0.6s,baz=5.5,slow=14,SNR=2.2
NBAN Anadia - AL        34.83  78 eP    P       19 12 18.1 -0.6
NBLI Livramento-PB      35.10  74 eP    P       19 12 20.3 -0.8
NBCL Cascavel-CE        35.32  68 eP    P       19 12 22.2 -0.6
NBPA Parau_RN           35.65  71 eP    P       19 12 24.1 -1.5
FDF  Fort de France     35.83  16  P    P       19 12 25.8 -1.3
FDF                                pmax pmax
     comp=Z,75nm,0.6s
FDF  Fort de France     35.83  16  P    P       19 12 25.8 -1.3
RCBR Riachuelo          36.70  72  P    P       19 12 34.0 -0.7
     comp=Z,35nm,0.6s,baz=239,slow=9.1,SNR=23
RCBR Riachuelo          36.70  72  P    P       19 12 34.5 -0.2
RCBR                               pmax pmax
     comp=Z,42nm,0.8s
RCBR Riachuelo          36.70  72  P    P       19 12 34.5 -0.2
RCBR                               IAmb IAmb    19 12 35.7
     comp=Z,42nm,0.8s
RCBR Riachuelo          36.70  72 eP    P       19 12 34.7  0.0
NBPV Pedro Velho        36.99  73 eP    P       19 12 36.8 -0.4
SJG  San Juan           38.18   7  P    P       19 12 45.6 -1.4
SJG                                pmax pmax
     comp=Z,85nm,0.9s
SJG  San Juan           38.18   7  P    P       19 12 45.6 -1.4
SJG                                IAmb IAmb    19 12 47.0
     comp=Z,85nm,0.9s
BANI BANI               38.19   1  P    P       19 12 46.3 -1.0
SMRT St. Maarten        38.60  12  P    P       19 12 48.0 -2.6
SMRT                               IAmb IAmb    19 12 48.6
     comp=Z,89nm,0.8s
PMSA Palmer Station     44.94 176 eP    P       19 13 45.2 +3.3
TIGA Tifton             52.64 346  P    P       19 14 41.5  0.0
     baz=165
158A Hollywood          53.24 350  P    P       19 14 47.4 +1.5
     baz=169
154A Montrose           53.67 347  P    P       19 14 48.2 -0.8
Z58A St. Stephen        53.77 351  P    P       19 14 51.3 +1.6
     baz=169
Z57A Bowman             53.88 350  P    P       19 14 51.6 +1.1
     baz=168
Z56A Williston          54.02 349  P    P       19 14 52.5 +0.9
     baz=168
152A Waverly Hall       54.08 345  P    P       19 14 51.5 -0.6
152A                               IAmb IAmb    19 14 54.9
     comp=Z,32nm,1.1s
Y60A Bolivia            54.21 352  P    P       19 14 53.8 +0.9
Y60A Bolivia            54.21 352  P    P       19 14 54.5 +1.5
     baz=171
Y59A Loris              54.28 352  P    P       19 14 53.5  0.0
     baz=170
Y57A Sumter             54.53 350  P    P       19 14 55.9 +0.6
     baz=169
Y55A Saluda             54.70 349  P    P       19 14 57.7 +1.1
     baz=167
X60A Albert Glenn T     54.74 353  P    P       19 14 57.5 +0.7
     baz=172,SNR=5.1
X59A McDuffie Farm,     54.82 352  P    P       19 14 58.0 +0.6
     baz=171
X58A Rowland            54.90 351  P    P       19 14 58.9 +1.0
     baz=170
Z50A Ashland            54.93 344  P    P       19 14 58.1 -0.2
Z50A                               IAmb IAmb    19 14 59.1
     comp=Z,32nm,1.1s
Z50A Ashland            54.93 344  P    P       19 14 58.1 -0.2
     baz=162,SNR=5.5
Y52A Lilburn            55.08 347  P    P       19 14 59.3  0.0
     baz=165
X56A White Oak          55.10 350  P    P       19 14 59.8 +0.4
     baz=168
342A Flagon Creek P     55.15 337  P    P       19 14 60.0 +0.2
342A                               IAmb IAmb    19 15 04.6
     comp=Z,64nm,1.2s
BIRD Birdtown, Kers     55.16 350  P    P       19 14 59.8  0.0
W60A Pink Hill          55.18 353  P    P       19 15 01.2 +1.2
     baz=172
X55A Gracelyn & Ava     55.18 349  P    P       19 15 00.5 +0.5
     baz=168,SNR=5.4
W61A Ground Anchor      55.23 354  P    P       19 15 01.3 +1.0
     baz=173
HKT  Hockley            55.25 333  P    P       19 15 00.7 +0.2
HKT                                pmax pmax
     comp=Z,17nm,1.2s
HKT  Hockley            55.25 333  P    P       19 15 00.7 +0.2
W58A Raeford            55.34 352  P    P       19 15 02.0 +0.9
     baz=170,SNR=9.0
W59A Clinton            55.38 352  P    P       19 15 02.4 +1.0
     baz=171
X54A Belton             55.39 348  P    P       19 15 02.0 +0.4
     baz=167
833A Chaparral WMA,     55.47 329  P    P       19 15 02.0 -0.2
833A                               IAmb IAmb    19 15 06.1
     comp=Z,21nm,1.0s
833A Chaparral WMA,     55.47 329  P    P       19 15 01.7 -0.5
     baz=147
X53A Estanollee         55.53 347  P    P       19 15 02.8 +0.2
     baz=166
W57A Gilead             55.58 351  P    P       19 15 03.3 +0.4
W57A                               IAmb IAmb    19 15 04.5
     comp=Z,64nm,1.1s
W57A Gilead             55.58 351  P    P       19 15 03.7 +0.9
     baz=169
W56A Indian Trail       55.65 350  P    P       19 15 04.0 +0.5
     baz=169
KMSC Kings Mountain     55.78 350  P    P       19 15 04.8 +0.4
KMSC                               IAmb IAmb    19 15 05.9
     comp=Z,52nm,1.2s
KMSC Kings Mountain     55.78 350  P    P       19 15 04.8 +0.4
     baz=168
V61A Roper              55.80 354  P    P       19 15 05.5 +1.1
     baz=173
V60A Jim Taylor Roa     55.84 354  P    P       19 15 05.6 +0.9
     baz=172
W54A Cherokee Point     55.88 349  P    P       19 15 05.6 +0.6
     baz=167
X51A Calhoun            55.93 346  P    P       19 15 05.6 +0.2
     baz=164
V59A Middlesex          55.95 353  P    P       19 15 06.4 +1.0
     baz=171
FPAL Fort Paine         56.08 345  P    P       19 15 05.2 -1.4
FPAL                               IAmb IAmb    19 16 21.2
     comp=Z,85nm,2.0s
V58A Windy Hill, Pi     56.09 352  P    P       19 15 06.5  0.0
V58A                               IAmb IAmb    19 15 08.1
     comp=Z,46nm,1.0s
V58A Windy Hill, Pi     56.09 352  P    P       19 15 06.7 +0.2
     baz=170,SNR=5.8
V57A Coltrane Farms     56.27 351  P    P       19 15 08.4 +0.6
     baz=170
V56A Mocksville         56.30 350  P    P       19 15 08.7 +0.6
     baz=169
U61A Possum Corner      56.32 354  P    P       19 15 09.2 +1.1
     baz=174
X48A Hartselle          56.36 344  P    P       19 15 07.4 -1.1
X48A                               IAmb IAmb    19 15 09.3
     comp=Z,38nm,1.3s
V55A Taylorsville       56.46 350  P    P       19 15 09.2  0.0
V55A                               IAmb IAmb    19 15 15.8
     comp=Z,38nm,1.0s
V55A Taylorsville       56.46 350  P    P       19 15 09.7 +0.5
     baz=168,SNR=5.3
U59A Littleton          56.48 353  P    P       19 15 10.1 +0.9
U59A Littleton          56.48 353  P    P       19 15 10.0 +0.7
     baz=172,SNR=5.6
V54A Nebo               56.51 349  P    P       19 15 09.8 +0.2
     baz=167,SNR=5.6
U60A Pendleton          56.53 354  P    P       19 15 10.5 +0.9
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     baz=173
U58A Oxford             56.61 352  P    P       19 15 11.1 +0.9
     baz=171
W50A Signal Mountai     56.64 346  P    P       19 15 09.2 -1.4
CPCT Cooper Cave        56.70 347  P    P       19 15 11.0  0.0
CPCT                               IAmb IAmb    19 15 12.6
     comp=Z,31nm,1.2s
U57A Blanch             56.74 352  P    P       19 15 11.7 +0.5
     baz=170
TKL  Tuckaleechee C     56.75 347  P    P       19 15 09.7 -1.6
TKL                                pmax pmax
     comp=Z,29nm,1.0s
TKL  Tuckaleechee C     56.75 347  P    P       19 15 09.7 -1.6
TKL                                IAmb IAmb    19 15 12.6
     comp=Z,29nm,1.0s
SWET Sewanee            56.80 345  P    P       19 15 10.1 -1.6
SWET                               IAmb IAmb    19 15 12.5
     comp=Z,33nm,1.2s
U56A King               56.81 351  P    P       19 15 11.2 -0.5
U56A King               56.81 351  P    P       19 15 12.4 +0.7
     baz=169
V51A Loudon             57.01 347  P    P       19 15 11.5 -1.6
V51A                               IAmb IAmb    19 17 05.0
     comp=Z,47nm,1.4s
Z41A Richland Creek     57.02 338  P    P       19 15 13.3 +0.1
     baz=155
T59A Double "B" Far     57.06 354  P    P       19 15 13.8 +0.4
T59A Double "B" Far     57.06 354  P    P       19 15 14.4 +1.0
     baz=172
U55A TA2, Sparta        57.07 350  P    P       19 15 14.3 +0.8
     baz=168
PLAL Pickwick Lake      57.13 343  P    P       19 15 12.6 -1.4
PLAL                               IAmb IAmb    19 15 13.6
     comp=Z,59nm,1.6s
T58A Grand View Acr     57.15 353  P    P       19 15 14.7 +0.7
     baz=171,SNR=11
U54A Nelsons Funny      57.21 349  P    P       19 15 14.1 -0.5
U54A                               IAmb IAmb    19 15 15.9
     comp=Z,44nm,1.0s
U54A Nelsons Funny      57.21 349  P    P       19 15 15.1 +0.4
     baz=168
CCAR Cane Creek         57.27 339  P    P       19 15 15.1 +0.2
T57A Hurt               57.29 352  P    P       19 15 15.2 +0.2
T57A                               IAmb IAmb    19 15 16.9
     comp=Z,36nm,1.0s
T57A Hurt               57.29 352  P    P       19 15 15.8 +0.7
     baz=170,SNR=5.5
T56A Rocky Mt           57.43 351  P    P       19 15 16.8 +0.7
     baz=170
JCT  Junction City      57.47 330  P    P       19 15 16.2 -0.3
JCT                                pmax pmax
     comp=Z,8.0nm,0.8s
JCT  Junction City      57.47 330  P    P       19 15 16.2 -0.3
WLAR White Oak Lake     57.52 338  P    P       19 15 18.0 +1.3
V48A Smith Brothers     57.52 345  P    P       19 15 14.8 -1.9
V48A                               IAmb IAmb    19 15 18.1
     comp=Z,45nm,1.3s
X43A Marvell            57.53 340  P    P       19 15 17.1 +0.3
     baz=158
W45A Hickory Valley     57.61 342  P    P       19 15 16.1 -1.2
W45A                               IAmb IAmb    19 15 17.6
     comp=Z,38nm,1.1s
T55A Pulaski            57.63 351  P    P       19 15 18.0 +0.5
     baz=169,SNR=6.6
HPIG                    57.66 323  P    P       19 15 19.1 +1.0
T54A Tazewell           57.70 350  P    P       19 15 18.5 +0.5
     baz=168
WHTX Lake Whitney,      57.71 333  P    P       19 15 18.4 +0.3
     baz=150
CLTN Cedars of Leba     57.73 345  P    P       19 15 17.5 -0.7
CLTN                               IAmb IAmb    19 15 19.1
     comp=Z,30nm,1.1s
S58A Poland Farm, P     57.75 353  P    P       19 15 19.6 +1.3
     baz=172
T53A Wise               57.79 349  P    P       19 15 19.0 +0.3
     baz=167
S59A Mechanicsville     57.82 354  P    P       19 15 19.8 +1.1
     baz=173
T52A Hallie             57.99 348  P    P       19 15 20.5 +0.5
     baz=166
S56A Natural Bridge     58.00 352  P    P       19 15 21.4 +1.3
     baz=170
S57A Dark Hollow, R     58.00 352  P    P       19 15 20.0  0.0
S57A                               IAmb IAmb    19 15 22.0
     comp=Z,47nm,1.1s
S57A Dark Hollow, R     58.00 352  P    P       19 15 20.9 +0.9
     baz=171,SNR=6.5
U49A Red Boiling Sp     58.01 346  P    P       19 15 18.5 -1.6
U49A                               IAmb IAmb    19 15 20.2
     comp=Z,72nm,1.7s
T51A Gray               58.04 348  P    P       19 15 20.6 +0.3
     baz=165
R58B Mineral            58.08 353  P    P       19 15 20.0 -0.5
R58B                               IAmb IAmb    19 15 22.6
     comp=Z,34nm,0.9s
R58B Mineral            58.08 353  P    P       19 15 21.6 +1.0
     baz=172
X40A Basin Creek Fa     58.15 339  P    P       19 15 20.8 -0.3
     baz=155
WVT  Waverly            58.15 344  P    P       19 15 19.7 -1.4
WVT                                pmax pmax
     comp=Z,25nm,1.1s
WVT  Waverly            58.15 344  P    P       19 15 19.7 -1.4
WVT                                IAmb IAmb    19 15 21.4
     comp=Z,25nm,1.1s
S55A Lewisburg          58.23 351  P    P       19 15 22.7 +1.0
     baz=169
R59A King George, V     58.23 354  P    P       19 15 22.6 +1.0
     baz=173
T50A Nancy              58.28 347  P    P       19 15 22.3 +0.3
     baz=164
S54A Dingess, Beckl     58.38 350  P    P       19 15 21.8 -1.0
S54A Dingess, Beckl     58.38 350  P    P       19 15 23.0 +0.3
     baz=168,SNR=5.1
S53A Williamson         58.40 349  P    P       19 15 23.4 +0.6
     baz=167
R58A Rapidan            58.42 353  P    P       19 15 23.8 +0.8
     baz=172,SNR=5.8
TXAR Lajitas Array      58.45 326  P    P       19 15 23.7 +0.2
     comp=Z,4.9nm,0.9s,baz=148,slow=9.6,SNR=17
TXAR                               LR   LR      19 40 48.6
     comp=Z,40nm,18.5s,baz=0.0,slow=36
TXAR Lajitas Array      58.45 326  P    P       19 15 23.3 -0.2
TXAR Lajitas Array      58.45 326  P    P       19 15 23.3 -0.2
TX31 Lajitas Ar. Si     58.45 326  P    P       19 15 23.3 -0.2
TX32 Lajitas Array      58.45 326  P    P       19 15 23.5  0.0
MIAR Mount Ida          58.46 338  P    P       19 15 23.5 +0.2
MIAR                               pmax pmax
     comp=Z,22nm,1.0s
MIAR Mount Ida          58.46 338  P    P       19 15 23.4 +0.2
MIAR                               IAmb IAmb    19 15 24.8
     comp=Z,22nm,0.9s
R57A Stanardsville      58.48 353  P    P       19 15 24.2 +0.9
     baz=171,SNR=6.4
T49A Edmonton           58.52 346  P    P       19 15 23.3 -0.3
T49A Edmonton           58.52 346  P    P       19 15 23.3 -0.3
     baz=164,SNR=11
S51A Beattyville        58.62 348  P    P       19 15 25.0 +0.6
     baz=166
R55A Marlinton          58.67 351  P    P       19 15 26.4 +1.6
     baz=170
WHAR Wooly Hollow       58.69 339  P    P       19 15 24.4 -0.5
R56A Bull Pasture M     58.70 352  P    P       19 15 26.3 +1.3
     baz=170
R54A Victor             58.70 351  P    P       19 15 25.5 +0.5
     baz=169
T47A Sharon Grove       58.78 345  P    P       19 15 24.5 -0.9
Z35A Perchaven, San     58.78 334  P    P       19 15 26.7 +1.1
Z35A                               IAmb IAmb    19 15 30.0
     comp=Z,41nm,0.9s
S50A Richmond           58.83 347  P    P       19 15 26.6 +0.8
     baz=165
R53A Hurricane          59.00 350  P    P       19 15 27.7 +0.7
     baz=168
Q58A Fox Den Farm,      59.02 354  P    P       19 15 28.2 +1.1
     baz=172
LCAR Lake Charles       59.05 341  P    P       19 15 26.6 -0.7
S49A Springfield        59.12 347  P    P       19 15 28.3 +0.5
     baz=164
W39A Magazine           59.12 338  P    P       19 15 28.2 +0.4
W39A                               IAmb IAmb    19 15 32.1
     comp=Z,32nm,1.1s
W39A Magazine           59.12 338  P    P       19 15 28.9 +1.1
     baz=155,SNR=6.7
R52A Catlettsburg       59.13 349  P    P       19 15 27.8 -0.1
     baz=167
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X37A Clayton            59.15 336  P    P       19 15 28.3 +0.2
X37A                               IAmb IAmb    19 15 30.2
     comp=Z,39nm,1.0s
FCAR Ozark Folk Cen     59.19 340  P    P       19 15 27.4 -0.9
Q57A Strasburg          59.20 353  P    P       19 15 29.5 +1.2
     baz=172
ABTX Abilene, Hawle     59.20 332  P    P       19 15 28.5 -0.1
ABTX                               IAmb IAmb    19 15 35.2
     comp=Z,17nm,0.7s
ABTX Abilene, Hawle     59.20 332  P    P       19 15 29.3 +0.8
     baz=148
R51A Hillsboro          59.26 348  P    P       19 15 30.0 +1.2
     baz=166
Q56A Snyder Ridge,      59.29 352  P    P       19 15 29.9 +0.9
Q56A Snyder Ridge,      59.29 352  P    P       19 15 30.0 +0.9
     baz=171,SNR=7.9
Q55A Buckhannon         59.37 352  P    P       19 15 30.4 +0.8
     baz=170
R50A Paris              59.39 348  P    P       19 15 30.0 +0.3
     baz=165
Q53A Leroy              59.45 350  P    P       19 15 30.7 +0.6
     baz=168
Q54A Coxs Mills         59.46 351  P    P       19 15 30.7 +0.5
Q54A Coxs Mills         59.46 351  P    P       19 15 30.9 +0.7
     baz=169
PBMO Poplar Bluff       59.48 342  P    P       19 15 29.7 -0.7
PBMO                               IAmb IAmb    19 15 31.2
     comp=Z,30nm,1.2s
P58A Pank, Wackersv     59.53 354  P    P       19 15 31.7 +1.1
     baz=173
P59A Jarrettsville      59.57 355  P    P       19 15 32.4 +1.5
     baz=174
R49A Shelbyville        59.58 347  P    P       19 15 31.7 +0.7
     baz=164
P57A Homestead Farm     59.60 354  P    P       19 15 32.0 +0.9
P57A                               IAmb IAmb    19 15 33.6
     comp=Z,35nm,0.9s
P57A Homestead Farm     59.60 354  P    P       19 15 31.9 +0.9
     baz=172
Q52A Bidwell            59.67 350  P    P       19 15 32.0 +0.4
     baz=167
P56A Dayton Farm, R     59.71 353  P    P       19 15 33.3 +1.5
     baz=171
P60A Greenville         59.71 356  P    P       19 15 32.8 +1.0
     baz=175
WCI  Wyandotte Cave     59.77 346  P    P       19 15 31.4 -0.9
WCI                                pmax pmax
     comp=Z,43nm,1.4s
WCI  Wyandotte Cave     59.77 346  P    P       19 15 31.4 -0.9
WCI                                IAmb IAmb    19 15 39.2
     comp=Z,43nm,1.4s
P55A Reedsville         59.84 352  P    P       19 15 33.0 +0.2
     baz=170
U40A Yellville          59.85 339  P    P       19 15 32.4 -0.5
U40A                               IAmb IAmb    19 15 34.0
     comp=Z,16nm,0.9s
U40A Yellville          59.85 339  P    P       19 15 33.1 +0.1
     baz=156,SNR=8.5
Q50A Georgetown         59.87 348  P    P       19 15 32.8 -0.1
     baz=166
T42A Van Buren          59.91 341  P    P       19 15 31.2 -2.1
O61A Allentown          59.92 357  P    P       19 15 34.5 +1.2
     baz=176
Q51A Peebles            59.92 349  P    P       19 15 32.5 -0.9
Q51A                               IAmb IAmb    19 15 34.7
     comp=Z,24nm,1.1s
Q51A Peebles            59.92 349  P    P       19 15 33.5 +0.1
     baz=166
MVL  Millersville       59.95 355  P    P       19 15 34.0 +0.5
MVL                                IAmb IAmb    19 15 35.6
     comp=Z,30nm,0.9s
MCWV Mont Chateau       59.99 352  P    P       19 15 34.0 +0.2
MCWV                               IAmb IAmb    19 15 35.7
     comp=Z,13nm,0.8s
S44A Carbondale         60.00 343  P    P       19 15 33.1 -0.8
S44A                               IAmb IAmb    19 16 01.1
     comp=Z,34nm,0.9s
P54A Burton             60.02 351  P    P       19 15 34.4 +0.3
     baz=169
P53A Whipple            60.04 351  P    P       19 15 34.2  0.0
P53A                               IAmb IAmb    19 15 35.5
     comp=Z,22nm,0.8s
P53A Whipple            60.04 351  P    P       19 15 34.6 +0.5
     baz=168
O58A Lewisberry         60.12 355  P    P       19 15 36.2 +1.5
     baz=173
X34A Smith Ranch, M     60.12 334  P    P       19 15 34.1 -0.7
X34A                               IAmb IAmb    19 15 36.6
     comp=Z,30nm,1.1s
HHAR Hobbs              60.15 338  P    P       19 15 35.1 +0.1
HHAR                               IAmb IAmb    19 15 38.0
     comp=Z,23nm,1.1s
O60A Telford            60.20 356  P    P       19 15 35.6 +0.4
     baz=175
Q49A Aurora             60.20 347  P    P       19 15 35.1 -0.2
     baz=165
O59A Robesonia          60.25 355  P    P       19 15 35.7 +0.2
     baz=174
O57A Amberson           60.28 354  P    P       19 15 35.8  0.0
     baz=172,SNR=5.2
P52A Corning            60.30 350  P    P       19 15 36.0  0.0
     baz=168
Q48A North Vernon       60.31 347  P    P       19 15 35.5 -0.5
     baz=164
P51A Williamsport       60.31 349  P    P       19 15 34.7 -1.3
P51A                               IAmb IAmb    19 15 36.7
     comp=Z,21nm,0.9s
P51A Williamsport       60.31 349  P    P       19 15 36.0  0.0
     baz=167
MGMO Mountain Grove     60.39 340  P    P       19 15 36.3 -0.3
MGMO                               IAmb IAmb    19 15 37.8
     comp=Z,36nm,1.2s
O56A Blue Knob Stat     60.43 353  P    P       19 15 37.5 +0.6
O56A Blue Knob Stat     60.43 353  P    P       19 15 37.1 +0.2
     baz=172,SNR=7.5
U38A Gravette           60.45 338  P    P       19 15 37.2 +0.2
O55A Ligonier           60.46 352  P    P       19 15 37.0 -0.1
     baz=171,SNR=7.2
TUL1 Leonard            60.48 337  P    P       19 15 36.1 -1.2
TUL1                               IAmb IAmb    19 15 38.8
     comp=Z,44nm,1.1s
TUL1 Leonard            60.48 337  P    P       19 15 37.2 -0.1
     baz=153
N61A South Mountain     60.56 357  P    P       19 15 37.4 -0.3
     baz=176
P50A Jamestown          60.57 348  P    P       19 15 37.8  0.0
     baz=166
O54A Avella             60.57 352  P    P       19 15 38.5 +0.7
     baz=170
WMOK Wichita Mounta     60.63 334  P    P       19 15 37.4 -1.0
WMOK                               pmax pmax
     comp=Z,7.0nm,1.0s
WMOK Wichita Mounta     60.63 334  P    P       19 15 37.4 -1.0
P49A Miami Univ. Ec     60.68 348  P    P       19 15 38.4 -0.1
     baz=165
N62A Caumsett State     60.71 358  P    P       19 15 39.0 +0.3
     baz=177
SSPA Standing Stone     60.72 354  P    P       19 15 39.0 +0.2
SSPA                               IAmb IAmb    19 15 40.9
     comp=Z,50nm,1.2s
O52A Adamsville         60.73 350  P    P       19 15 38.0 -0.9
O52A                               IAmb IAmb    19 15 39.4
     comp=Z,56nm,1.4s
O52A Adamsville         60.73 350  P    P       19 15 38.7 -0.2
     baz=168
N60A Cedar Hill Far     60.73 356  P    P       19 15 38.9 +0.1
     baz=175
P48A Milroy             60.75 347  P    P       19 15 39.2 +0.1
     baz=164
O53A New Philadelph     60.76 351  P    P       19 15 39.8 +0.7
     baz=169
N58A Sunbury            60.82 355  P    P       19 15 39.9 +0.5
N58A                               IAmb IAmb    19 15 41.6
     comp=Z,37nm,0.9s
N58A Sunbury            60.82 355  P    P       19 15 40.2 +0.8
     baz=174,SNR=5.4
N59A State Game Lan     60.82 356  P    P       19 15 40.4 +0.9
     baz=174
O51A Pataskala          60.88 350  P    P       19 15 40.5 +0.6
     baz=167
CCM  Cathedral Cave     60.91 342  P    P       19 15 39.1 -1.0
CCM                                pmax pmax
     comp=Z,28nm,1.2s
CCM  Cathedral Cave     60.91 342  P    P       19 15 39.1 -1.0
CCM                                IAmb IAmb    19 15 41.0
     comp=Z,28nm,1.2s
M66A Nantucket          60.99   1  P    P       19 15 41.0 +0.5
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      baz=181
N55A  Marion Center   60.99 353  P     P     19 15 41.0 +0.4
      baz=171,SNR=13
ACSO  Alum Creek Sta  61.03 349  P     P     19 15 39.8 -1.1
ACSO                             IAmb  IAmb  19 15 41.8
      comp=Z,32nm,0.8s
N56A  West Decatur    61.04 353  P     P     19 15 41.5 +0.5
      baz=172,SNR=5.5
O50A  Cable           61.06 349  P     P     19 15 40.9 -0.3
      baz=166
Q44A  Meyer Farm, Va  61.07 344  P     P     19 15 40.5 -0.8
Q44A                             IAmb  IAmb  19 15 41.5
      comp=Z,29nm,1.1s
M63A  Gales Ferry     61.14 359  P     P     19 15 41.9 +0.3
      baz=178
M60A  Port Jervis     61.16 357  P     P     19 15 42.6 +0.9
      baz=176
M62A  Hamden          61.20 358  P     P     19 15 42.2 +0.2
      baz=178
MNTX  Cornudas Mount  61.22 326  P     P     19 15 41.5 -0.9
S39A  Bolivar         61.22 340  P     P     19 15 41.5 -0.8
S39A                             IAmb  IAmb  19 15 43.4
      comp=Z,27nm,1.0s
O49A  Covington       61.23 348  P     P     19 15 40.8 -1.5
O49A                             IAmb  IAmb  19 15 42.8
      comp=Z,24nm,0.9s
O49A  Covington       61.23 348  P     P     19 15 42.0 -0.3
      baz=165
N53A  Lisbon          61.25 351  P     P     19 15 42.8 +0.4
      baz=169
N54A  Moraine State   61.29 352  P     P     19 15 41.3 -1.3
N54A  Moraine State   61.29 352  P     P     19 15 42.1 -0.5
      baz=170,SNR=6.1
M58A  Price’s Panora  61.32 355  P     P     19 15 42.6 -0.3
      baz=174,SNR=6.1
M57A  Sunshine Farm,  61.35 355  P     P     19 15 41.7 -1.4
M57A                             IAmb  IAmb  19 15 44.8
      comp=Z,45nm,1.1s
M57A  Sunshine Farm,  61.35 355  P     P     19 15 42.5 -0.5
      baz=173,SNR=6.3
N52A  McGinn’s Farm,  61.38 351  P     P     19 15 43.3 +0.1
      baz=168
M59A  Waymart         61.42 356  P     P     19 15 43.9 +0.4
      baz=175,SNR=5.3
O48A  Farmland        61.46 348  P     P     19 15 43.2 -0.6
      baz=164,SNR=5.7
N50A  Nevada          61.58 349  P     P     19 15 44.8 +0.1
      baz=167
L63A  North Scituate  61.59 359  P     P     19 15 44.6 -0.1
      baz=179
M56A  Emporium        61.59 354  P     P     19 15 44.9 +0.2
M56A  Emporium        61.59 354  P     P     19 15 44.5 -0.2
      baz=172,SNR=9.6
N51A  Ashland         61.59 350  P     P     19 15 44.8 +0.1
      baz=168
T35A  Sooner Cattle   61.64 337  P     P     19 15 45.3 +0.2
T35A                             IAmb  IAmb  19 15 49.1
      comp=Z,31nm,1.0s
M55A  Ridgway         61.64 353  P     P     19 15 45.0  0.0
M55A  Ridgway         61.64 353  P     P     19 15 44.8 -0.2
      baz=171,SNR=12
BRYW  Bryant College  61.65 359  P     P     19 15 45.4 +0.4
L64A  Middleborough   61.66 360  P     P     19 15 44.7 -0.4
      baz=180
MSTX  Muleshoe        61.76 330  P     P     19 15 44.9 -1.3
MSTX                             IAmb  IAmb  19 15 53.0
      comp=Z,29nm,1.1s
MSTX  Muleshoe        61.76 330  P     P     19 15 46.0 -0.2
      baz=146
M54A  Oil Creek Stat  61.78 352  P     P     19 15 46.0  0.0
M54A  Oil Creek Stat  61.78 352  P     P     19 15 45.9  0.0
      baz=170
L60A  Shokan          61.80 357  P     P     19 15 46.3 +0.3
      baz=176
M53A  WI Miller and   61.85 352  P     P     19 15 46.5 +0.1
      baz=169,SNR=5.2
P43A  Skaggs, Pawnee  61.90 344  P     P     19 15 45.6 -1.2
N49A  Columbus Grove  61.92 349  P     P     19 15 45.6 -1.3
N49A  Columbus Grove  61.92 349  P     P     19 15 46.8 -0.1
      baz=166,SNR=15
L58A  Harry Jones Me  61.95 356  P     P     19 15 47.6 +0.5
      baz=174
M51A  Elyria          61.97 350  P     P     19 15 47.5 +0.2
      baz=168
L61A  Hillsdale 1, H  61.97 358  P     P     19 15 47.1 -0.1
      baz=177
L57A  Andrews Acres   61.98 355  P     P     19 15 46.7 -0.7
      baz=173
ALLY  Alegheny Colle  61.98 352  P     P     19 15 47.4  0.0
SFIN  Lafayette       62.00 346  P     P     19 15 46.2 -1.2
SFIN                             IAmb  IAmb  19 15 47.3
      comp=Z,27nm,0.9s
SFIN  Lafayette       62.00 346  P     P     19 15 46.6 -0.8
      baz=162,SNR=7.5
N48A  Decatur         62.02 348  P     P     19 15 47.2 -0.4
      baz=165,SNR=6.2
L59A  Walton          62.04 356  P     P     19 15 47.7 -0.1
L59A  Walton          62.04 356  P     P     19 15 48.0 +0.2
      baz=175,SNR=7.0
M52A  Chesterland     62.05 351  P     P     19 15 46.5 -1.3
M52A                             IAmb  IAmb  19 15 48.9
      comp=Z,25nm,0.7s
M52A  Chesterland     62.05 351  P     P     19 15 47.6 -0.2
      baz=169
BINY  Binghamton      62.11 356  P     P     19 15 46.1 -2.1
N47A  Urbana          62.17 347  P     P     19 15 48.0 -0.6
N47A                             IAmb  IAmb  19 16 07.8
      comp=Z,40nm,1.2s
N47A  Urbana          62.17 347  P     P     19 15 48.5 -0.1
      baz=164
L56A  Greenwood       62.18 354  P     P     19 15 48.4 -0.2
L56A  Greenwood       62.18 354  P     P     19 15 48.8 +0.1
      baz=173,SNR=8.0
M50A  Fremont         62.18 350  P     P     19 15 48.8 +0.2
      baz=167
L61B  Northampton     62.20 358  P     P     19 15 50.0 +1.2
      baz=178
HRV   Adam Dziewonsk  62.23 359  P     P     19 15 49.9 +0.9
HRV                              pmax  pmax
      comp=Z,58nm,0.9s
HRV   Adam Dziewonsk  62.23 359  P     P     19 15 49.9 +0.9
L53A  Girard          62.30 352  P     P     19 15 49.6 +0.2
      baz=170,SNR=7.3
L55A  Hinsdale        62.31 354  P     P     19 15 50.7 +1.1
      baz=172,SNR=10
K62A  Royalston       62.40 359  P     P     19 15 50.8 +0.7
      baz=178
K60A  Five Rivers En  62.41 357  P     P     19 15 51.2 +1.1
      baz=177
M49A  Liberty Center  62.41 349  P     P     19 15 50.5 +0.3
      baz=166,SNR=6.1
K63A  Dunstable       62.41 359  P     P     19 15 50.8 +0.6
      baz=179
ERPA  Erie            62.43 352  P     P     19 15 49.2 -1.1
K61A  Williamstown    62.44 358  P     P     19 15 51.3 +1.0
      baz=177
L54A  Sinclairville   62.46 353  P     P     19 15 51.1 +0.6
      baz=171,SNR=17
TRY   Troy            62.51 358  P     P     19 15 49.7 -1.1
WVNY  West Valley, N  62.55 353  P     P     19 15 50.5 -0.7
M48A  Edgerton        62.56 348  P     P     19 15 51.6 +0.4
      baz=165
K59A  Cooperstown     62.61 357  P     P     19 15 52.2 +0.7
      baz=176,SNR=11
K58A  Earlville       62.65 356  P     P     19 15 52.1 +0.3
K58A  Earlville       62.65 356  P     P     19 15 52.8 +1.0
      baz=175,SNR=8.4
K57A  Scipio Center   62.68 355  P     P     19 15 52.4 +0.4
      baz=174,SNR=5.0
K56A  Middlesex       62.71 355  P     P     19 15 53.0 +0.8
      baz=173
K54A  Basiliko Farm,  62.76 353  P     P     19 15 52.9 +0.4
      baz=172,SNR=12
L50A  Kingsville      62.76 350  P     P     19 15 52.7 +0.2
      baz=167
K55A  Perry           62.81 354  P     P     19 15 52.9  0.0
      baz=172,SNR=7.4
L48A  N Adams         62.95 349  P     P     19 15 53.8  0.0
      baz=166,SNR=6.0
J62A  Henniker        62.96 359  P     P     19 15 54.1 +0.3
      baz=179
L49A  Milan           62.99 349  P     P     19 15 54.2 +0.2
      baz=166
J63A  Strafford       63.00 360  P     P     19 15 54.8 +0.7
      baz=180
J60A  Lant Hill Farm  63.01 358  P     P     19 15 55.0 +0.9
      baz=177
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P38A  Dawn            63.05 340  P     P     19 15 54.2 -0.3
P38A                             IAmb  IAmb  19 15 54.9
      comp=Z,32nm,1.4s
319A  Douglas         63.08 323  P     P     19 15 55.5 +0.5
319A                             IAmb  IAmb  19 16 00.1
      comp=Z,26nm,1.1s
J61A  Chester         63.09 359  P     P     19 15 55.5 +0.8
      baz=178
L47A  Sherwood        63.13 348  P     P     19 15 54.9 -0.1
      baz=165,SNR=6.7
121A  Cookes Peak, D  63.14 325  P     P     19 15 56.0 +0.5
121A  Cookes Peak, D  63.14 325  P     P     19 15 56.3 +0.9
      baz=141
ACCN  Adirondack Com  63.16 358  P     P     19 15 55.2  0.0
ACCN                             IAmb  IAmb  19 15 57.5
      comp=Z,36nm,1.2s
K52A  Tillsonburg     63.17 352  P     P     19 15 55.6 +0.4
      baz=169
J58A  Remsen          63.22 356  P     P     19 15 54.6 -0.9
J58A  Remsen          63.22 356  P     P     19 15 56.2 +0.6
      baz=175
K51A  Iona Station    63.23 351  P     P     19 15 55.6  0.0
      baz=169
J56A  Wolcott         63.25 355  P     P     19 15 55.1 -0.6
J56A  Wolcott         63.25 355  P     P     19 15 55.7  0.0
      baz=174,SNR=9.3
N41A  Harden Midland  63.26 343  P     P     19 15 55.1 -0.7
J59A  Piesco          63.28 357  P     P     19 15 56.0  0.0
J59A  Piesco          63.28 357  P     P     19 15 55.8 -0.2
      baz=176
MEDO  Medina          63.28 354  P     P     19 15 55.1 -0.8
J57A  Williamstown    63.31 356  P     P     19 15 56.2  0.0
J57A                             IAmb  IAmb  19 15 57.8
      comp=Z,34nm,0.9s
J57A  Williamstown    63.31 356  P     P     19 15 56.1  0.0
      baz=174,SNR=7.6
J55A  Hilton          63.32 354  P     P     19 15 56.3 +0.1
J55A  Hilton          63.32 354  P     P     19 15 55.9 -0.2
      baz=172
L46A  Eue Claire      63.39 347  P     P     19 15 56.5 -0.2
      baz=164
J54A  Appleton        63.41 354  P     P     19 15 57.6 +0.8
      baz=172
HNH   Hanover         63.44 359  P     P     19 15 55.9 -1.1
K50A  Casco           63.45 350  P     P     19 15 57.3 +0.3
      baz=168
I58A  Old Forge       63.53 357  P     P     19 15 58.6 +1.0
      baz=176,SNR=7.1
I59A  Olmsteadville   63.58 357  P     P     19 15 58.4 +0.5
      baz=177
J52A  Paris           63.59 352  P     P     19 15 58.0  0.0
      baz=170,SNR=16
I62A  Tamworth        63.60 360  P     P     19 15 58.4 +0.4
      baz=179
I60A  Shoreham        63.61 358  P     P     19 15 59.1 +1.0
      baz=177,SNR=6.8
I64A  Boothbay        63.65   1  P     P     19 15 59.6 +1.3
      baz=181
I61A  Oroboro, Fairl  63.67 359  P     P     19 15 59.2 +0.7
      baz=178
K48A  Perry           63.73 349  P     P     19 15 59.0 +0.1
      baz=166,SNR=8.3
K47A  Vermontville    63.76 348  P     P     19 15 59.3 +0.2
      baz=165
NCB   Newcomb         63.77 357  P     P     19 15 58.5 -0.7
NCB                              IAmb  IAmb  19 16 01.1
      comp=Z,59nm,1.6s
I63A  Otisfield       63.77   0  P     P     19 16 00.3 +1.2
      baz=180
I57A  Carthage        63.82 356  P     P     19 15 59.5 +0.1
      baz=175
L44A  Lake County Fo  63.90 346  P     P     19 15 59.7 -0.3
      baz=162
PECO  Prince Edward   63.91 355  P     P     19 16 00.1 +0.1
K46A  Dorr            63.93 348  P     P     19 15 59.8 -0.5
      baz=164
LBNH  Lisbon          63.97 359  P     P     19 15 59.1 -1.4
LBNH                             pmax  pmax
      comp=Z,64nm,1.2s
LBNH  Lisbon          63.97 359  P     P     19 15 59.1 -1.4
J49A  Marlette        64.10 350  P     P     19 16 01.8 +0.4
      baz=167
J48A  Bridge Port     64.15 349  P     P     19 15 60.0 -1.7
J48A  Bridge Port     64.15 349  P     P     19 16 01.8 +0.2
      baz=166
H58A  Gabriels        64.22 357  P     P     19 16 02.5 +0.4
      baz=176,SNR=9.1
I51A  Listowel        64.22 352  P     P     19 16 02.5 +0.4
      baz=169,SNR=7.5
SNAA  Sanae           64.22 161  P     P     19 16 02.7 +0.8
      comp=Z,4.2nm,0.9s,baz=288,slow=13,SNR=8.0
SNAA  Sanae           64.22 161⇑eP     P     19 16 03.5 +1.5
SNAA  Sanae           64.22 161  P     P     19 16 02.5 +0.5
SNAA                             IAmb  IAmb  19 16 10.8
      comp=Z,18nm,1.2s
I55A  Frankford       64.25 354  P     P     19 16 02.7 +0.4
      baz=173,SNR=6.8
H61A  Lyndonville     64.27 359  P     P     19 16 03.0 +0.6
      baz=179,SNR=5.6
J47A  Sunmer          64.28 349  P     P     19 16 00.8 -1.7
J47A  Sunmer          64.28 349  P     P     19 16 03.1 +0.6
      baz=165
WVL   Waterville      64.30   1  P     P     19 16 01.9 -0.6
WVL                              IAmb  IAmb  19 16 04.9
      comp=Z,33nm,1.0s
H62A  Milan           64.30 360  P     P     19 16 04.4 +1.7
      baz=180
H60A  Morristown      64.31 358  P     P     19 16 04.2 +1.5
      baz=178
H57A  Richville       64.32 356  P     P     19 16 03.7 +1.0
      baz=175,SNR=13
ANMO  Albuquerque     64.33 328⇓eP     P     19 16 03.9 +0.6
ANMO                             pmax  pmax
      comp=Z,10.0nm,1.4s
ANMO  Albuquerque     64.33 328  P     P     19 16 03.3  0.0
H64A  Troy            64.38   1  P     P     19 16 03.7 +0.6
      baz=182
H63A  New Sharon      64.39   1  P     P     19 16 04.5 +1.3
      baz=181,SNR=6.9
H59A  Cadyville       64.42 358  P     P     19 16 04.2 +0.7
      baz=177,SNR=8.5
LONY  Lake Ozonia     64.44 357  P     P     19 16 04.1 +0.5
LONY                             IAmb  IAmb  19 16 05.6
      comp=Z,26nm,1.0s
H65A  Eastbrook       64.46   2  P     P     19 16 04.4 +0.7
      baz=182
H56A  Elgin           64.51 356  P     P     19 16 04.9 +0.9
      baz=174,SNR=6.9
H55A  Tweed           64.54 355  P     P     19 16 04.9 +0.7
      baz=173
DELO  Deloro Mine     64.55 355  P     P     19 16 04.1 -0.1
DELO                             IAmb  IAmb  19 16 05.6
      comp=Z,32nm,1.2s
H66A  Whiting         64.58   3  P     P     19 16 05.6 +1.1
      baz=184
FRNY  Flat Rock       64.61 358  P     P     19 16 04.5 -0.1
I49A  Point Hope      64.62 350  P     P     19 16 03.5 -1.2
I49A  Point Hope      64.62 350  P     P     19 16 04.6 -0.1
      baz=167
L40A  Anamosa         64.62 343  P     P     19 16 03.6 -1.2
L40A                             IAmb  IAmb  19 16 05.5
      comp=Z,38nm,1.1s
TUC   Tucson          64.62 323  P     P     19 16 04.4 -0.8
TUC                              pmax  pmax
      comp=Z,3.0nm,0.8s
TUC   Tucson          64.62 323  P     P     19 16 04.4 -0.8
H53A  Bobcaygeon      64.69 354  P     P     19 16 06.3 +1.1
      baz=172,SNR=12
G60A  Masonville      64.83 359  P     P     19 16 06.6 +0.5
      baz=178
G59A  Clarenceville   64.84 358  P     P     19 16 06.9 +0.8
      baz=177
G63A  Kingsbury       64.84   1  P     P     19 16 06.8 +0.6
      baz=181,SNR=5.2
H52A  Wyevale         64.90 353  P     P     19 16 06.8 +0.3
      baz=170
G57A  Newington       64.94 357  P     P     19 16 07.1 +0.3
      baz=176,SNR=9.2
G58A  Ormstown        64.94 357  P     P     19 16 07.7 +0.9
      baz=176
G62A  West of Eustis  64.94   0  P     P     19 16 06.9  0.0
G62A  West of Eustis  64.94   0  P     P     19 16 08.1 +1.3
      baz=180,SNR=10
SADO  Sadowa          64.94 353  P     P     19 16 06.3 -0.6
I47A  Gladwin         64.97 349  P     P     19 16 06.3 -0.8
I47A                             IAmb  IAmb  19 16 07.5
      comp=Z,25nm,0.7s
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I47A  Gladwin         64.97 349  P     P     19 16 07.0  0.0
      baz=166
G65A  Princeton       64.99   3  P     P     19 16 07.8 +0.7
G65A                             IAmb  IAmb  19 16 09.2
      comp=Z,39nm,1.1s
G65A  Princeton       64.99   3  P     P     19 16 07.5 +0.4
      baz=183
I48A  Sherman Twp     65.00 350  P     P     19 16 07.2  0.0
      baz=166,SNR=14
PKME  Peaks-Kenny Pk  65.00   1  P     P     19 16 07.7 +0.5
PKME                             IAmb  IAmb  19 16 09.2
      comp=Z,24nm,0.9s
G64A  Maxfield        65.00   2  P     P     19 16 07.7 +0.5
      baz=182,SNR=5.0
G61A  St-Isidore-de-  65.01 359  P     P     19 16 07.5 +0.3
      baz=179,SNR=6.9
PLVO  Plevna          65.02 355  P     P     19 16 07.9 +0.6
PLVO                             IAmb  IAmb  19 16 11.4
      comp=Z,31nm,1.4s
I46A  Reed City       65.07 348  P     P     19 16 07.4 -0.3
      baz=165
T25A  Trinidad        65.12 331  P     P     19 16 08.4  0.0
      baz=145
JFWS  Jewell Farm     65.16 344  P     P     19 16 06.9 -1.4
JFWS                             pmax  pmax
      comp=Z,17nm,0.8s
JFWS  Jewell Farm     65.16 344  P     P     19 16 06.9 -1.4
JFWS                             IAmb  IAmb  19 16 32.2
      comp=Z,17nm,0.8s
G55A  Calabogie       65.20 355  P     P     19 16 09.1 +0.6
      baz=174,SNR=6.8
G53A  Haliburton      65.24 354  P     P     19 16 09.0 +0.3
      baz=172,SNR=14
H48A  Harrisville     65.44 350  P     P     19 16 09.8 -0.2
H48A  Harrisville     65.44 350  P     P     19 16 10.2 +0.2
      baz=167
G54A  Lake Saint Pet  65.46 354  P     P     19 16 10.6 +0.4
      baz=172,SNR=6.1
214A  Organ Pipe Nat  65.53 321  P     P     19 16 11.5 +0.5
214A  Organ Pipe Nat  65.53 321  P     P     19 16 11.1 +0.1
      baz=136
F64A  Sherman         65.62   2  P     P     19 16 11.9 +0.8
F64A                             IAmb  IAmb  19 16 13.2
      comp=Z,36nm,1.1s
F64A  Sherman         65.62   2  P     P     19 16 12.0 +0.8
      baz=182,SNR=5.8
F61A  St Evariste     65.70 360  P     P     19 16 12.3 +0.6
      baz=180
F60A  Warwick         65.70 359  P     P     19 16 12.4 +0.7
      baz=179,SNR=5.4
F52A  Sundridge       65.98 353  P     P     19 16 13.7 +0.2
      baz=171,SNR=8.1
G47A  Hillman         65.98 350  P     P     19 16 13.4 -0.1
      baz=166
TRQ   Mont Tremblant  66.03 357  P     P     19 16 13.7 -0.2
E60A  Ste Agathe de   66.09 359  P     P     19 16 15.1 +0.8
      baz=179
SDCO  Great Sand Dun  66.11 330  P     P     19 16 15.3 +0.3
SDCO                             IAmb  IAmb  19 16 20.0
      comp=Z,19nm,1.1s
E58A  La Victoria     66.13 358  P     P     19 16 14.8 +0.3
      baz=177
E61A  Lac Etchemin    66.15   0  P     P     19 16 15.2 +0.6
      baz=180
G45A  Suttons Bay     66.17 349  P     P     19 16 14.7  0.0
      baz=165
F51A  Arnstein        66.17 353  P     P     19 16 14.6 -0.2
      baz=170,SNR=7.1
E63A  Oxbow           66.18   2  P     P     19 16 16.2 +1.4
E63A                             IAmb  IAmb  19 16 20.3
      comp=Z,35nm,1.2s
E63A  Oxbow           66.18   2  P     P     19 16 15.4 +0.6
      baz=182
E64A  Bridgewater     66.19   2  P     P     19 16 15.7 +0.8
      baz=183
BGNE  Belgrade        66.20 338  P     P     19 16 14.4 -0.7
BGNE  Belgrade        66.20 338  P     P     19 16 15.1  0.0
      baz=152
E57A  Chemin Saint G  66.20 357  P     P     19 16 15.6 +0.6
      baz=176
F49A  Sandfield       66.28 351  P     P     19 16 15.4 -0.1
      baz=168
E55A  Montcerf-Lytto  66.35 356  P     P     19 16 16.7 +0.9
      baz=174
E56A  St. Veronique   66.38 357  P     P     19 16 16.3 +0.2
      baz=176,SNR=6.2
E52A  Mattawa         66.39 354  P     P     19 16 16.4 +0.2
      baz=172
E53A  Dumoine, Ponti  66.39 355  P     P     19 16 16.6 +0.4
      baz=173
E54A  Lac Daplat, Po  66.41 355  P     P     19 16 16.8 +0.5
      baz=173
F48A  Evansville      66.43 351  P     P     19 16 17.0 +0.6
      baz=168
PQI   Presque Isle    66.44   2  P     P     19 16 16.5 +0.1
PQI                              IAmb  IAmb  19 16 21.3
      comp=Z,47nm,1.5s
X16A  Lo Mia Camp, P  66.55 324  P     P     19 16 18.4 +0.7
D60A  Saint Jean D’O  66.64 360  P     P     19 16 19.1 +1.5
      baz=180
E51A  G1948 Merrick   66.72 353  P     P     19 16 18.9 +0.6
      baz=171
D59A  Saint-Raymond   66.74 359  P     P     19 16 18.6 +0.3
      baz=179
S22A  4UR Ranch, Cre  66.74 329  P     P     19 16 18.9 -0.1
      baz=143
F45A  CMU Biological  66.77 349  P     P     19 16 18.5  0.0
      baz=165,SNR=5.5
D57A  Chemin Vers le  66.80 358  P     P     19 16 19.3 +0.5
      baz=177,SNR=7.7
D63A  Stockholm       66.80   2  P     P     19 16 18.8  0.0
      baz=183
D62A  Allapoint, All  66.82   1  P     P     19 16 19.9 +1.0
D62A                             IAmb  IAmb  19 16 21.0
      comp=Z,30nm,1.1s
D62A  Allapoint, All  66.82   1  P     P     19 16 19.6 +0.7
      baz=182
D58A  Chemin du LacG  66.84 358  P     P     19 16 20.0 +0.9
      baz=178,SNR=7.5
D56A  ZEC Mazanza, M  66.87 357  P     P     19 16 19.6 +0.4
      baz=176
D55A  Sainte-Anne-du  66.88 357  P     P     19 16 19.7 +0.4
      baz=175
D61A  St Aubert, Com  66.93   0  P     P     19 16 20.4 +0.8
      baz=180
Q24A  Divide          66.94 331  P     P     19 16 20.6 +0.3
      baz=145
E48A  Lockeyer        67.00 351  P     P     19 16 19.7 -0.3
      baz=168
D54A  Lac Fusel, La   67.08 356  P     P     19 16 21.0 +0.4
      baz=174
D53A  Lac Vacive, Po  67.09 355  P     P     19 16 20.6 -0.1
D53A                             IAmb  IAmb  19 16 22.1
      comp=Z,21nm,1.1s
D53A  Lac Vacive, Po  67.09 355  P     P     19 16 20.9 +0.3
      baz=173
LATQ  La Tuque        67.13 359  P     P     19 16 19.8 -1.0
LATQ  La Tuque        67.13 359  P     P     19 16 21.5 +0.6
      baz=178
MVCO  Mesa Verde      67.13 328  P     P     19 16 21.8 +0.4
MVCO                             IAmb  IAmb  19 16 25.2
      comp=Z,39nm,1.8s
BATG  Bathurst New B  67.13   3  P     P     19 16 20.7 -0.2
BATG                             IAmb  IAmb  19 16 22.7
      comp=Z,46nm,1.2s
E47A  Iron Bridge     67.14 351  P     P     19 16 20.7 -0.3
      baz=167,SNR=5.2
E46A  Sault Ste Mari  67.22 350  P     P     19 16 20.0 -1.4
E46A                             IAmb  IAmb  19 16 22.0
      comp=Z,14nm,0.8s
D51A  Lot 18 Range I  67.26 354  P     P     19 16 21.9 +0.2
      baz=171,SNR=5.1
D50A  G1974 Best Tow  67.39 353  P     P     19 16 22.3 -0.2
      baz=171,SNR=10
D48A  Paudash Townsh  67.63 352  P     P     19 16 23.5 -0.6
      baz=169
D49A  Beulah Townshi  67.67 352  P     P     19 16 24.1 -0.2
      baz=169
D46A  Sault St. Mari  67.68 350  P     P     19 16 23.6 -0.7
      baz=166
D47A  Chapleau        67.70 351  P     P     19 16 23.9 -0.6
      baz=167
E43A  Lone Tree Farm  67.71 348  P     P     19 16 23.2 -1.4
ECSD  EROS Data Cent  67.75 340  P     P     19 16 24.2 -0.7
ECSD                             IAmb  IAmb  19 16 26.2
      comp=Z,28nm,1.2s
COWI  Conover         67.90 346  P     P     19 16 24.6 -1.2
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SPMN	Marine on St.	67.98	343	P	P	19 16 25.1	-1.1
SPMN				IAmb	IAmb	19 16 28.4	
	comp=Z,21nm,1.1s						
SPMN	Marine on St.	67.98	343	P	P	19 16 26.7	+0.5
	baz=158						
VLDQ	Val d'Or	68.10	355	P	P	19 16 26.6	-0.3
VLDQ				IAmb	IAmb	19 16 28.1	
	comp=Z,31nm,1.4s						
W13A	Hualapai Mount	68.42	323	P	P	19 16 30.2	+0.7
U15A	North Rim	68.51	325	P	P	19 16 31.6	+1.4
D41A	Chassel	68.69	347	P	P	19 16 30.7	0.0
D41A				IAmb	IAmb	19 16 32.4	
	comp=Z,29nm,0.9s						
N23A	Red Feather La	68.87	332	P	P	19 16 33.3	+1.0
	baz=144						
E38A	The Farm, Brul	68.94	345	P	P	19 16 30.5	-1.8
E38A				IAmb	IAmb	19 16 33.0	
	comp=Z,15nm,1.0s						
KNB	Kanab	69.23	325	P	P	19 16 36.6	+2.1
KNB				pmax	pmax		
	comp=Z,31nm,1.0s						
KNB	Kanab	69.23	325	P	P	19 16 36.6	+2.1
O20A	White River Ci	69.31	330	P	P	19 16 36.7	+1.7
	baz=142						
LCMT	Little Creek M	69.45	325	P	P	19 16 36.4	+0.6
LIC	Lamto	69.68	75	*e*P	P	19 16 36.7	-0.8
	comp=Z,39nm,1.1s						
TIC	Toumodi	69.85	75	*e*P	P	19 16 38.0	-0.7
CCUT	Cedar City	69.92	325	P	P	19 16 40.6	+1.8
DRLN	Deer Lake	69.99	9	P	P	19 16 38.5	-0.1
KIC	Kosan Boka	69.99	75	*e*P	P	19 16 38.8	-0.7
	comp=Z,34nm,0.8s						
P17A	Butcher Ranch,	70.00	328	P	P	19 16 40.5	+1.3
MSU	Marysvale	70.00	326	P	P	19 16 40.9	+1.6
MSU	Marysvale	70.00	326	P	P	19 16 40.9	+1.6
DBIC	Dimbokro	70.01	75	P	P	19 16 38.6	-1.0
	comp=Z,18nm,0.8s,baz=222,slow=5.0,SNR=19						
DBIC				LR	LR	19 45 51.2	
	comp=Z,262nm,19.7s,baz=222,slow=35						
DBIC	Dimbokro	70.01	75	P	P	19 16 38.8	-0.8
DBIC				pmax	pmax		
	comp=Z,31nm,1.0s						
DBIC	Dimbokro	70.01	75	P	P	19 16 38.8	-0.8
DBIC				IAmb	IAmb	19 16 40.0	
	comp=Z,31nm,1.0s						
RWWY	Rawlins	70.07	332	P	P	19 16 38.3	-1.4
RWWY				IAmb	IAmb	19 16 42.2	
	comp=Z,23nm,0.8s						
QSPA	South Pole Qui	70.14	180	P	P	19 16 41.3	+1.6
QSPA				IAmb	IAmb	19 16 45.2	
	comp=Z,37nm,1.4s						
SHPR	Sheep Range	70.15	323	P	P	19 16 40.7	+0.5
EYMN	Ely	70.18	345	P	P	19 16 38.3	-1.6
K22A	Casper	70.55	333	P	P	19 16 43.5	+1.0
	baz=144						
PSUT	Pine Spring	70.90	325	P	P	19 16 45.9	+1.1
NLU	North Lily Min	71.03	328	P	P	19 16 44.5	-1.1
TPNV	Topopah Spring	71.08	323	P	P	19 16 47.8	+1.9
TPNV				pmax	pmax		
	comp=Z,13nm,1.0s						
TPNV	Topopah Spring	71.08	323	P	P	19 16 47.8	+1.9
DUG	Dugway, Tooele	71.59	327	P	P	19 16 49.9	+1.1
DUG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
DUG	Dugway, Tooele	71.59	327	P	P	19 16 49.9	+1.1
AGMN	Agassiz Nation	71.64	343	P	P	19 16 47.7	-1.0
R11A	Troy Canyon, C	71.70	324	P	P	19 16 49.5	-0.1
R11A	Troy Canyon, C	71.70	324	P	P	19 16 50.3	+0.7
	baz=136						
PDAR	Pinedale Array	71.99	331	P	P	19 16 51.5	+0.2
	comp=Z,1.0nm,0.6s,baz=189,slow=8.7,SNR=4.6						
PDAR				LR	LR	19 49 32.4	
	comp=Z,55nm,19.7s,baz=128,slow=37						
PDAR	Pinedale Array	71.99	331	P	P	19 16 49.3	-2.0
TBI	Tubuai	72.32	251	*e*S	S	19 26 14.2	-2.7
	comp=Z,90nm,26.5s						
TBI	Tubuai	72.32	251	*e*LR	LR	19 38 56.6	
	comp=Z,423nm,28.0s						
MDND	Maddock	72.36	340	P	P	19 16 53.4	+0.3
MDND	Maddock	72.36	340	P	P	19 16 54.1	+1.0
	baz=152						
AHID	Auburn Hatcher	72.70	330	P	P	19 16 54.4	-1.1
AHID				IAmb	IAmb	19 16 57.9	
	comp=Z,57nm,1.9s						
REDW	Red Top Meadow	73.05	331	P	P	19 16 55.1	-2.5
REDW				IAmb	IAmb	19 17 01.1	
	comp=Z,57nm,1.8s						
OMMB	Old Mammoth Mi	73.12	322	P	P	19 16 58.2	-0.1
NV11	Mina Array Sit	73.19	323	P	P	19 16 57.5	-1.0
ELK	Elko	73.24	326	P	P	19 16 56.1	-2.7
ELK				pmax	pmax		
	comp=Z,14nm,1.5s						
ELK	Elko	73.24	326	P	P	19 16 56.1	-2.7
NVAR	Mina Array Bea	73.28	323	P	P	19 17 00.6	+1.5
	comp=Z,7.9nm,1.1s,baz=157,slow=5.1,SNR=9.4						
NVAR	Mina Array Bea	73.28	323	P	P	19 16 58.4	-0.6
FXWY	Fox Creek	73.34	331	P	P	19 16 59.1	-0.2
ULM	Lac du Bonnet	73.42	343	P	P	19 16 58.6	-0.7
	comp=Z,9.1nm,1.0s,baz=150,slow=6.8,SNR=9.4						
ULM				LR	LR	19 50 26.4	
	comp=Z,70nm,20.6s,baz=140,slow=37						
ULM	Lac du Bonnet	73.42	343	P	P	19 16 56.3	-3.0
ULM				pmax	pmax		
	comp=Z,15nm,1.1s						
ULM	Lac du Bonnet	73.42	343	P	P	19 16 56.3	-3.0
FLWY	Flagg Ranch	73.53	331	P	P	19 17 01.2	+0.7
FLWY				IAmb	IAmb	19 17 09.1	
	comp=Z,23nm,0.9s						
KVN	Kaiserville	73.59	323	P	P	19 17 00.9	+0.1
KVN				pmax	pmax		
	comp=Z,13nm,1.1s						
KVN	Kaiserville	73.59	323	P	P	19 17 00.9	+0.1
RLMT	Red Lodge	73.72	333	P	P	19 17 01.3	-0.2
RLMT				IAmb	IAmb	19 17 04.2	
	comp=Z,43nm,1.6s						
LAO	LASA Array	73.73	335	P	P	19 17 01.4	0.0
YNE	Yellowstone No	73.95	332	P	P	19 17 04.2	+1.4
PPT2	Papeete2	73.95	257	*e*LR	LR	19 39 41.0	
	comp=Z,297nm,25.2s						
YMR	Madison River	74.11	331	P	P	19 17 05.2	+1.4
YHH	Holmes Hill	74.15	332	P	P	19 17 04.3	+0.2
YERR	Yerington	74.19	323	P	P	19 17 04.8	+0.4
YHB	Horse Butte	74.28	331	P	P	19 17 05.7	+0.9
YHL	Hebgen Lake	74.35	331	P	P	19 17 07.0	+1.8
GCMT	Greycliff	74.42	333	P	P	19 17 06.5	+1.1
DGMT	Dagmar	74.46	338	P	P	19 17 06.5	+1.0
SCHQ	Schefferville	74.64	2	P	P	19 17 06.3	-0.1
	comp=Z,9.0nm,0.9s,baz=194,slow=4.3,SNR=12						
SCHQ				LR	LR	19 50 55.3	
	comp=Z,54nm,19.5s,baz=30,slow=37						
SCHQ	Schefferville	74.64	2	P	P	19 17 06.2	-0.2
SCHQ				IAmb	IAmb	19 17 60.0	
	comp=Z,67nm,1.9s						
PAHR	Pah Rah Range	74.77	323	P	P	19 17 08.7	+1.1
AFDM	Forest Hills D	75.17	322	P	P	19 17 10.3	+0.5
MFID	Camas Ranch	75.48	328	P	P	19 17 12.3	+0.7
MFID				IAmb	IAmb	19 17 27.1	
	comp=Z,40nm,1.4s						
ORV	Oroville	75.87	322	P	P	19 17 15.5	+1.7
ORV				pmax	pmax		
	comp=Z,22nm,1.3s						
ORV	Oroville	75.87	322	P	P	19 17 15.5	+1.7
EGMT	Eagleton	76.22	334	P	P	19 17 16.3	+0.6
MOD	Modoc Plateau	76.77	324	P	P	19 17 21.0	+2.0
MSO	Missoula	77.10	331	P	P	19 17 22.6	+1.8
VNDA	Vanda	77.98	190	P	P	19 17 26.9	+1.7
	comp=Z,3.1nm,1.1s,baz=11,slow=3.6,SNR=3.1						
VNDA				LR	LR	19 43 50.7	
	comp=Z,52nm,20.6s,baz=20,slow=30						
SYO	Syowa Base	78.47	160	⇑*e*PcP	PcP	19 17 35.4	-1.7
TOA0	Torodi Ar. Sit	78.52	71	P	P	19 17 27.9	-1.4
TORD	Torodi Ar. Bea	78.52	71	P	P	19 17 28.4	-0.8
	comp=Z,43nm,0.8s,baz=253,slow=5.2,SNR=164						
TORD				PP	PP	19 20 25.8	-1.3
	comp=Z,2.6nm,0.9s,baz=241,slow=7.6,SNR=3.7						
TORD				LR	LR	19 51 06.7	
	comp=Z,237nm,19.0s,baz=255,slow=35						
TORD	Torodi Ar. Bea	78.52	71	P	P	19 17 27.0	-2.3
WALA	Waterton Lakes	78.77	333	P	P	19 17 30.3	+0.3
L02E	Cave Junction	78.78	323	P	P	19 17 31.4	+1.3
	baz=130						
I05D	Terrebonne, OR	78.97	326	P	P	19 17 32.6	+1.4
	baz=132						
FFC	Flin Flon	79.10	342	*ce*P	P	19 17 32.6	+1.1
FFC				pmax	pmax		
	comp=Z,39nm,2.5s						
HAWA	Hanford	79.45	328	P	P	19 17 35.0	+1.4
SUR	Sutherland	80.82	121	P	P	19 17 42.4	+0.7
	comp=Z,9.5nm,1.0s,baz=198,slow=9.6,SNR=3.1						
SUR	Sutherland	80.82	121	IAmb	IAmb	19 19 21.4	
	comp=Z,65nm,1.8s						
FCC	Fort Churchill	80.84	348	P	P	19 17 41.0	+0.2
FCC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
FCC	Fort Churchill	80.84	348	P	P	19 17 41.0	+0.2
PBDV	Barranco-do-Ve	82.11	46	*e*P	P	19 17 49.6	+1.5
TSUM	Tsumeb	82.13	108	P	P	19 17 46.7	-2.2
TSUM				IAmb	IAmb	19 17 51.0	
	comp=Z,15nm,0.8s						
PNCL	Nicolau / Gran	82.18	45	*e*P	P	19 17 50.1	+1.7
MESJ	Messejana	82.24	45	*e*P	P	19 17 50.4	+1.7
PCVE	Castro Verde	82.25	45	*e*P	P	19 17 50.2	+1.4
	comp=Z,34nm,1.6s						
PVAQ	Vaqueiros	82.34	46	*e*P	P	19 17 53.2	+3.9
PVAQ	Vaqueiros	82.34	46	*e*LR	LR	19 45 25.3	
	comp=Z,76nm,20.0s						
PBEJ	Beja	82.57	45	*e*P	P	19 17 51.6	+1.1
PMTG	Montargil	82.90	44	*e*P	P	19 17 53.3	+1.2
	comp=Z,34nm,1.5s						
LLLB	Lillooet	83.48	330	P	P	19 17 54.1	-0.8
LLLB				IAmb	IAmb	19 17 59.4	
	comp=Z,28nm,1.4s						
PMRV	Marv??o	83.64	44	*e*LR	LR	19 45 44.2	
	comp=Z,123nm,16.0s						
PCBR	Castelo Branco	83.80	44	*e*P	P	19 17 54.5	-2.3
	comp=Z,18nm,1.8s						
PVIS	Viseu	84.00	43	*e*P	P	19 17 58.9	+1.0
	comp=Z,30nm,1.7s						
MTE	Manteigas	84.06	43	P	P	19 17 56.8	-1.4
MTE				IAmb	IAmb	19 17 59.8	
	comp=Z,22nm,1.1s						
MTE	Manteigas	84.06	43	*e*P	P	19 17 59.3	+1.1
	comp=Z,34nm,1.4s						
MTE	Manteigas	84.06	43	*e*LR	LR	19 50 05.3	
	comp=Z,195nm,18.0s						
PVRL	Vila Real	84.42	42	*e*P	P	19 18 01.1	+1.1
	comp=Z,36nm,1.6s						
PGAV	Gavieira, Arco	84.44	42	*e*LR	LR	19 49 51.2	
	comp=Z,196nm,20.0s						
PCAB	Cabril	84.46	42	*e*P	P	19 18 00.9	+0.8
	comp=Z,46nm,1.7s						
MVO	Moncorvo	84.80	43	*e*P	P	19 18 00.7	-1.2
	comp=Z,34nm,1.2s						
MVO	Moncorvo	84.80	43	*e*LR	LR	19 50 39.4	
	comp=Z,158nm,18.0s						
PBRG	Braganca	85.32	42	*e*P	P	19 18 05.3	+0.8
	comp=Z,38nm,1.6s						
BOSA	Boshof	85.67	119	P	P	19 18 06.6	-0.2
	comp=Z,6.2nm,0.9s,baz=186,slow=2.8,SNR=7.2						
BOSA				LR	LR	19 55 11.5	
	comp=Z,90nm,18.5s,baz=214,slow=35						
BOSA	Boshof	85.67	119	P	P	19 18 07.8	+1.0
BOSA				pmax	pmax		
	comp=Z,31nm,1.6s						
BOSA	Boshof	85.67	119	P	P	19 18 07.8	+1.0
BOSA				IAmb	IAmb	19 19 09.5	
	comp=Z,31nm,1.6s						
PAB	San Pablo	85.71	45	P	P	19 18 06.0	-0.5
PAB				pmax	pmax		
	comp=Z,18nm,1.1s						
PAB	San Pablo	85.71	45	P	P	19 18 06.0	-0.5
PAB				IAmb	IAmb	19 18 08.2	
	comp=Z,18nm,1.1s						
TAM	Tamanrasset	85.73	64	P	P	19 18 07.1	0.0
TAM				pmax	pmax		
	comp=Z,26nm,1.0s						
TAM	Tamanrasset	85.73	64	P	P	19 18 07.1	0.0
TAM				IAmb	IAmb	19 18 09.4	
	comp=Z,26nm,1.0s						
ESDC	Sonseca Array	86.03	45	P	P	19 18 07.2	-0.9
	comp=Z,0.6nm,0.3s,baz=248,slow=5.5,SNR=9.6						
ESDC				LR	LR	19 56 01.6	
	comp=Z,46nm,18.2s,baz=240,slow=35						
ESDC	Sonseca Array	86.03	45	P	P	19 18 08.1	0.0
ESBB	Sonseca Array	86.03	45	P	P	19 18 09.2	+1.1
MAW	Mawson	86.22	164	LR	LR	19 55 33.6	
	comp=Z,97nm,21.3s,baz=236,slow=35						
BBB	Bella Bella	87.48	329	LR	LR	20 00 15.1	
	comp=Z,43nm,19.1s,baz=144,slow=38						
YKA	Yellowknife Ar	89.24	341	P	P	19 18 23.4	+0.6
	comp=Z,8.9nm,0.9s,baz=138,slow=5.1,SNR=116						
DLBC	Dease Lake	92.11	333	LR	LR	20 03 20.5	
	comp=Z,226nm,18.8s,baz=280,slow=38						
KEST	Kesra	93.83	53	P	P	19 18 45.9	+1.0
	comp=Z,4.9nm,0.9s,baz=329,slow=1.9,SNR=5.4						
KEST				LR	LR	20 01 44.6	
	comp=Z,170nm,19.5s,baz=266,slow=36						
KEST	Kesra	93.83	53	IAmb	IAmb	19 18 48.8	
	comp=Z,6.1nm,0.9s						
SUMG	Summit	94.90	9	*i* P	P	19 18 50.9	+1.5
	comp=Z,35nm,1.0s						
SUMG	Summit	94.90	9	P	P	19 18 50.7	+1.3
SUMG				pmax	pmax		
	comp=Z,13nm,1.0s						
SUMG	Summit	94.90	9	P	P	19 18 50.7	+1.3
SUMG				IAmb	IAmb	19 18 56.5	
	comp=Z,13nm,1.0s						
RPZ	Rata Peaks	95.01	220	LR	LR	19 51 47.3	
	comp=Z,180nm,21.1s,baz=150,slow=29						
AFI	Afiamalu	95.33	253	LR	LR	19 50 42.7	
	comp=Z,207nm,18.7s,baz=165,slow=28						
DOU	Dourbes	96.18	39	P	P	19 18 54.6	-0.6
WLF	Walferdange	96.93	40	x	P	19 18 59.0	+0.3
ECH	Echery	96.99	41	P	P	19 18 57.6	-1.4
ECH				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ECH	Echery	96.99	41	P	P	19 18 57.6	-1.4
DAVOX	Davos/Dischmat	98.19	43	LR	LR	20 02 05.6	
	comp=Z,55nm,19.2s,baz=263,slow=35						
VAE	Valguarnera	98.25	53	LR	LR	20 02 49.9	
	comp=Z,71nm,18.6s,baz=308,slow=35						
ILAR	Eielson Array	102.18	335	PP	PP	19 23 38.2	+4.2
	comp=Z,1.2nm,1.0s,baz=98,slow=5.4,SNR=5.2						
DZM	Mont Dzumac	110.18	236	*e*LR	LR	19 56 29.8	
	comp=Z,191nm,24.4s						
OBN	Obninsk	116.09	38	⇑*i*PKIKP	PKiKP	19 24 10.9	+0.8
OBN				*e*		19 25 21.9	
OBN				pmax	pmax		
	comp=Z,30nm,1.8s						
OBN				MLR	MLR		
	comp=Z,110nm,19.0s						
KBZ	Khabaz	120.55	50	PKP	PKiKP	19 24 19.9	+0.8
	comp=Z,6.0nm,1.0s,baz=237,slow=2.9,SNR=4.4						
KBZ	Khabaz	120.55	50	PKIKP	PKiKP	19 24 20.0	+0.8
H11S2	WAKE ISLAND Hy	125.95	279	T	T	21 43 54.7	
	baz=101,slow=74,SNR=205						
H11S1	WAKE ISLAND Hy	125.96	279	T	T	21 43 53.0	
	baz=101,slow=74,SNR=186						
H11S3	WAKE ISLAND Hy	125.97	279	T	T	21 43 56.0	
	baz=101,slow=74,SNR=173						
H11N3	WAKE ISLAND Hy	126.00	280	T	T	21 43 07.8	
	baz=53,slow=74,SNR=130						
H11N2	WAKE ISLAND Hy	126.02	280	T	T	21 43 57.9	
	SNR=90						
H11N1	WAKE ISLAND Hy	126.02	280	T	T	21 43 04.4	
	baz=100,slow=74,SNR=59						
TIXI	Tiksi	127.13	352	⇓*e*PKIKP	PKPdf	19 24 30.1	-0.8
TIXI	Tiksi	127.13	352		PKPdf	19 24 30.4	-0.5
ARU	Arti	127.90	33	*i* PKIKP	PKiKP	19 24 34.5	+1.1
ARU						19 26 37.7	
ARU						19 31 42.6	
ARU				SS	SS	19 43 43.2	-4.5
SEY	Seymchan	128.07	337	⇓*i*PKIKP	PKiKP	19 24 33.5	-0.1
ASAR	Alice Springs	130.34	210	PKP	PKPdf	19 24 39.0	+0.3
	comp=Z,2.6nm,1.1s,baz=118,slow=1.7,SNR=14						
ASAR	Alice Springs	130.34	210	PKIKP	PKPdf	19 24 38.0	-0.6
ASAR	Alice Springs	130.34	210		PKPdf	19 24 38.0	-0.6
ABKAR	Akbulak array	131.23	41		PKPdf	19 24 38.8	-0.6
GEYT	Alibeck	132.47	57	PKP	PKPdf	19 24 42.5	+0.3
	comp=Z,0.9nm,0.5s,baz=107,slow=5.1,SNR=4.0						
WRA	Warramunga Arr	133.27	213	PKP	PKPdf	19 24 44.5	+0.3
	comp=Z,1.3nm,0.7s,baz=153,slow=1.7,SNR=10						
WRA	Warramunga Arr	133.27	213	PKIKP	PKPdf	19 24 42.9	-1.3
WRA	Warramunga Arr	133.27	213		PKPdf	19 24 42.9	-1.3
WRAB	Tennant Creek	133.27	213	⇓*i*PKIKP	PKPdf	19 24 44.4	+0.2
BRVK	Borovoye	135.47	33	⇓*i*PKIKP	PKiKP	19 24 50.3	+1.5
HRA	Herat	136.21	61		PKPdf	19 24 48.6	-1.0
KURK	Kurchatov	141.02	31	⇑*i*PKIKP	PKiKP	19 24 59.6	-0.6
KURK	Kurchatov	141.02	31		PKPdf	19 24 56.2	-1.3
ZAA0	Zalesovo Array	141.34	23		PKPpre	19 24 52.3	
ZALV	Zalesovo Beam	141.34	23	PKhKP	PKPpre	19 24 52.4	
	comp=Z,2.3nm,0.5s,baz=322,slow=4.7,SNR=6.8						
ZALV	Zalesovo Beam	141.34	23	PKHKP	PKPpre	19 24 51.4	
ZALV	Zalesovo Beam	141.34	23		PKPpre	19 24 51.4	
BOD	Bodaibo	142.11	356	*e*PKHKP	PKPpre	19 24 53.5	
BOD				pmax	pmax		
	comp=Z,8.0nm,1.4s						
AAK	Ala-Archa	143.13	44	⇑*e*PKIKP	PKPdf	19 25 01.6	-0.2
AAK	Ala-Archa	143.13	44		PKPdf	19 25 01.1	-0.6
ZEA	Zeya	143.62	342	*e*PKIKP	PKPbc	19 25 00.5	+1.1
ZEA				pmax	pmax		
	comp=Z,14nm,1.2s						
MAKZ	Makanchi	145.25	33	PKIKP	PKPab	19 25 04.9	-0.1
MAKZ	Makanchi	145.25	33		PKPab	19 25 04.8	-0.1
NIL	Nilore	145.34	60	PKIKP	PKPbc	19 25 05.4	-0.2
NIL	Nilore	145.34	60		PKPbc	19 25 05.4	-0.2
MKAR	Makanchi Array	145.42	33	PKPbc	PKPab	19 25 06.2	+0.6
	comp=Z,34nm,0.7s,baz=333,slow=4.6,SNR=4.0						
KSH	Kashi	145.49	48	PKPbc	PKPab	19 25 07.1	+0.9
KSH				PP	PP	19 28 29.6	+3.5
KSH				PKS	PKSdf	19 28 40.3	-1.2
KSH				SKKS		19 35 15.5	
KSH				AMB	AMB		
	comp=Z,600nm,5.9s						
KSH				LR	LR		
	comp=Z,220nm,11.7s						
KSH				LR	LR		
	comp=Z,160nm,11.5s						
KSH				LR	LR		
	comp=Z,190nm,10.5s						
KLR	Kul'dur	145.75	334	*c i*PKP2	PKPab	19 25 06.9	+0.3
TEY	Ternei	146.32	324	⇓*e*PKIKP	PKPdf	19 25 05.2	-1.8
TEY				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SOEI	Soe	146.90	208		PKPdf	19 25 08.5	-0.5
MOY	Mondy	147.78	10	*e*PKP2	PKiKP	19 25 13.8	-0.4
MOY				pmax	pmax		
	comp=Z,48nm,1.8s						
CIT	Chita	147.90	355	*e*PKP2	PKPbc	19 25 11.4	-1.1
CIT				pmax	pmax		
	comp=Z,48nm,1.4s						
TLY	Talaya	148.12	7	*d i*PKP2	PKPbc	19 25 13.6	+0.6
TLY	Talaya	148.12	7		PKPdf	19 25 10.6	+0.8
MMRI	Maumere	148.76	205		PKPab	19 25 20.4	+1.1
USA0B	Ussuriysk Arra	149.34	327	PKP2	PKiKP	19 25 18.0	+0.5
USA0B	Ussuriysk Arra	149.34	327		PKiKP	19 25 18.0	+0.5
USRK	Ussuriysk Ar.	149.34	327	PKPbc	PKiKP	19 25 17.5	0.0
	comp=Z,11nm,0.9s,baz=355,slow=2.5,SNR=15						
USRK	Ussuriysk Ar.	149.34	327	PKP2	PKPbc	19 25 16.2	-0.2
USRK	Ussuriysk Ar.	149.34	327		PKPbc	19 25 16.2	-0.2
ZAK	Zakamensk	149.35	7	*e*PKP2	PKPbc	19 25 15.8	-0.5
ZAK				pmax	pmax		
	comp=Z,12nm,1.2s						
MJAR	Matsushiro Arr	149.80	309	PKPbc	PKiKP	19 25 18.8	0.0
	comp=Z,8.2nm,0.8s,baz=144,slow=0.7,SNR=15						
MJAR	Matsushiro Arr	149.80	309		PKPbc	19 25 16.7	-1.1
MAJO	Matsushiro	149.80	309	PKP2	PKiKP	19 25 18.6	-0.2
MAJO	Matsushiro	149.80	309		PKiKP	19 25 18.6	-0.2
MAT	Matsushiro	149.80	309	PKP	PKiKP	19 25 18.4	-0.4
MJB9	Matsu-Tunnel	149.80	309		PKiKP	19 25 18.6	-0.2
MDJ	Mudanjiang	150.22	330		PKiKP	19 25 18.9	-0.4
WMQ	Urumqi	150.23	32	*e*PKPbc	PKPdf	19 25 12.4	-1.1
WMQ				AMB	AMB		
	comp=Z,120nm,5.7s						
WMQ				LR	LR		
	comp=Z,160nm,24.9s						
WMQ				LR	LR		
	comp=Z,100nm,26.7s						
HYB	Hyderabad	150.85	90	*i* PKP	PKiKP	19 25 21.5	0.0
JAGI	Jajag, Banyuwa	151.26	190		PKPbc	19 25 21.4	-0.5
SONM	Songino Array	152.18	4	PKPbc	PKiKP	19 25 23.9	+0.5
	comp=Z,7.9nm,0.7s,baz=328,slow=1.7,SNR=36						
SONM	Songino Array	152.18	4	PKIKP	PKPdf	19 25 16.1	-0.4
SONM						19 25 23.9	
SONM	Songino Array	152.18	4		PKPdf	19 25 16.1	-0.4
ULN	Ulaanbaatar	152.19	3	PKIKP	PKPdf	19 25 17.3	+0.8
ULN	Ulaanbaatar	152.19	3		PKPdf	19 25 17.3	+0.8
KAPI	Kappang	153.04	204	PKPbc	PKiKP	19 25 28.3	+2.2
	comp=Z,5.6nm,1.0s,baz=60,slow=2.3,SNR=4.0						
LEM	Lembang	153.26	176	PKPbc	PKiKP	19 25 29.5	+2.8
	comp=Z,7.0nm,0.4s,baz=26,slow=5.9,SNR=4.4						
GTA	Gaotai	159.06	21	*e*PKP	PKPdf	19 25 27.1	+1.1
GTA				PKPab	PKPab	19 26 03.3	+0.9
GTA				LR	LR		
	comp=Z,79nm,20.0s						
GTA				LR	LR		
	comp=Z,100nm,20.0s						
GTA				LR	LR		
	comp=Z,99nm,21.9s						
HHC	Hu-ho-hao-te	159.16	355	*e*PKP	PKPdf	19 25 24.3	-1.7
LSA	Lhasa	161.00	56	PKIKP	PKPdf	19 25 29.3	+0.4
LSA	Lhasa	161.00	56		PKPdf	19 25 29.3	+0.4
LZH	Lanzhou	163.33	15	*e*PKP	PKPdf	19 25 27.6	-3.0
LZH				pPKP	sPKPdf	19 25 38.3	+3.0
LZH				LR	LR		
	comp=Z,140nm,17.9s						
LZH				LR	LR		
	comp=Z,140nm,18.1s						
LZH				LR	LR		
	comp=Z,200nm,20.1s						
NJ2	Nanjing	165.25	326	*e*PKP	PKPdf	19 25 32.3	+0.1
XAN	Xi'an	166.05	1	PKP	PKPdf	19 25 44.8	+12
XAN				pPKP	sPKPdf	19 25 57.8	+20
CD2	Chengdu	168.10	23	PKP	PKPdf	19 25 33.0	-1.5
WHN	Wuhan	168.56	337	PKPbc	PKPdf	19 25 42.8	+8.1
CMAR	Chiang Mai Arr	170.16	97	PP	PP	19 30 43.2	+0.9
	comp=Z,0.3nm,0.4s,baz=312,slow=5.1,SNR=4.4						
CMAR	Chiang Mai Arr	170.16	97	PKIKP	PKPdf	19 25 36.7	+0.6
CMAR	Chiang Mai Arr	170.16	97	PKPdf	PKPdf	19 25 36.7	+0.6
GYA	Guiyang	173.19	20	PKP	PKPdf	19 25 35.3	-2.2
GYA				PKS	PKSdf	19 29 06.4	-3.6
GYA				PP	PP	19 30 57.5	+2.1
GYA				AMB	AMB		
	comp=Z,130nm,8.6s						

MAN 17 19:14:38.9, 16°.84N×120°.10E, h30^{km}, mb4.2, ML3.0, MS2.7, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLP	Bolinao	0.49	201	*e*P	Pn	19 14 50.1	+0.1
BOLP				*e*S	Sn	19 14 59.1	+1.7
SMPP	San Manuel, Pa	0.89	141	*e*P	Pn	19 14 55.2	-0.2
SMPP				*e*S	Sb	19 15 07.8	+0.4
SCZP	Santa Cruz	1.08	190	*e*P	Pn	19 14 58.0	0.0
SCZP				*e*S	Sn	19 15 12.1	+0.2
APYP	Conner	1.49	47	*e*P	Pn	19 15 04.0	+0.3
APYP				*e*S	Sn	19 15 22.4	+0.2
CAUP	Cauayan	1.66	86	*e*P	Pb	19 15 08.9	+0.1

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*IDC **17** 19:17:10.8±1.4, 7°.31N×93°.37E, h0^{km}, mb3.7/5, mb1 3.9/7, mb1mx3.6/33, mbtmp3.8/7, ML3.9/2, MS3.3/8, Ms1 3.3/8, ms1mx3.0/54, Error ellipse: s-maj=48.5km s-min=23.2km az=56.0*

ISC 17 19:17:16.1±1.3, 7°.1N±0°.2×93°.3E±0°.3, h35^{km}, n23, σ2^{s}26/14, mb3.7/5, MS3.3/5, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	7.08	127	Pn	Pn	19 18 58.2	+0.8
	0.9nm,0.3s,baz=149,slow=19,SNR=2.1						
PSI				LR	LR	19 22 17.4	
	comp=Z,209nm,20.4s,baz=286,slow=43						
CMAR	Chiang Mai Arr	12.52	26	Pn	Pn	19 20 06.1	-5.8
	0.4nm,0.3s,baz=212,slow=14,SNR=14						
CMAR				LR	LR	19 24 35.8	
	comp=Z,135nm,18.4s,baz=188,slow=36						
LEM	Lembang	19.92	134	LR	LR	19 29 07.2	
	comp=Z,105nm,20.1s,baz=245,slow=36						
TAPN	Taplejung	20.78	346	*e*P	P	19 21 55.6	+1.0
	19nm,0.9s						
JIRN	Jiri	21.49	343	*e*P	P	19 22 03.7	+1.4
	35nm,1.0s						
PKI	Pulchoki	21.65	341	*e*P	P	19 22 07.5	+3.6
PKIN	Phulchoki	21.66	341	*e*P	P	19 22 07.7	+3.7
	10.0nm,0.8s						
DMN	Daman	21.78	340	*e*P	P	19 22 09.0	+3.7
GUN	Gumba	21.82	342	*e*P	P	19 22 06.8	+1.0
GKN	Gorkha	22.31	339	*e*P	P	19 22 12.3	+1.5
DANN	Dangsing	22.94	338	*e*P	P	19 22 19.4	+1.7
	18nm,0.8s						
H08S3	Diego Garcia H	25.41	235	T	T	19 49 43.6	

	baz=55,slow=75,SNR=30						
H08S2	Diego Garcia H	25.42	235	T	T	19 49 43.9	
	baz=55,slow=75,SNR=13						
H08S1	Diego Carcia H	25.43	235	T	T	19 49 45.1	
	baz=55,slow=75,SNR=8.3						
KAPI	Kappang	29.04	114	LR	LR	19 36 07.0	
	comp=Z,51nm,20.5s,baz=308,slow=39						
MKAR	Makanchi Array	40.62	348	P	P	19 24 52.7	+0.1
	1.8nm,0.8s,baz=159,slow=7.3,SNR=16						
SONM	Songino Array	42.06	13	P	P	19 25 02.6	-2.0
	1.1nm,0.9s,baz=194,slow=8.3,SNR=5.1						
SONM				LR	LR	19 43 12.1	
	comp=Z,47nm,19.0s,baz=174,slow=37						
KSRS	Korea Array	43.56	41	LR	LR	19 43 58.4	
	comp=Z,34nm,18.7s,baz=180,slow=37						
GEYT	Alibeck	44.19	319	LR	LR	19 47 38.1	
	comp=Z,10nm,18.9s,baz=25,slow=41						
ASAR	Alice Springs	50.11	129	P	P	19 26 08.2	0.0
	0.3nm,0.8s,baz=303,slow=6.5,SNR=5.8						
BRTR	Keskin Array B	62.27	311	P	P	19 27 34.2	-0.8
	0.5nm,0.8s,baz=122,slow=5.2,SNR=2.3						
FINES	FINESS Array B	72.96	332	P	P	19 28 40.5	-1.3
	1.3nm,0.7s,baz=97,slow=11,SNR=1.9						
VRAC	Vranov	75.94	319	LR	LR	20 07 08.3	
	comp=Z,40nm,18.1s,baz=220,slow=40						

MAN 17 19:38:50.1, 9°.54N×125°.48E, h36^{km}, mb3.9, ML2.7, MS2.3, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.24	2	*e*P	Pn	19 38 58.9	+0.5
SCPH				*e*S	Sn	19 39 04.4	-1.4
MSLP	Maasin	0.85	314	*e*P	Pn	19 39 06.1	+0.6
MSLP				*e*S	Sn	19 39 17.9	+1.2
CGP	Cagayan de Oro	1.33	216	⇑*e*P	Pn	19 39 13.6	+1.5
CGP				*e*S	Sn	19 39 28.7	+0.2
TBP	Tagbilaran	1.60	275	*e*P	Pn	19 39 15.7	-0.1

THE 17 19:41:17.8, 38°.21N×20°.44E, h12^{km}, ML2.9/7, Error ellipse: s-maj=0.6km s-min=0.3km az=240.0

ATH 17 19:41:17.6, 38°.21N×20°.41E, h13^{km}±1^{km}, ML2.7/3, Error ellipse: s-maj=2.5km s-min=1.1km az=227.0

ISC 17 19:41:18.6±0.9, 38°.22N±0°.03×20°.47E±0°.03, h8^{km}±5^{km}, n37, σ1^s.57/61, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.03	238	P	Pg	19 41 20.0	0.0
LXR1				S	Sg	19 41 21.8	+0.7
	37µm,0.2s						
LXRA	Lixouri, Kepha	0.03	238	P	Pg	19 41 20.0	-0.1
LXRA				S	Sg	19 41 21.6	+0.5
ARGA	Argostoli. Kep	0.04	167	P	Pg	19 41 20.1	0.0
ARGA				S	Sg	19 41 21.6	+0.3
ARG2	Argostoli	0.04	157	P	Pg	19 41 20.2	+0.1
ARG2				S	Sg	19 41 21.9	+0.6
	30µm,0.1s						
KEF2	Argostoli. Kep	0.05	163	P	Pg	19 41 20.2	-0.1
KEF2				S	Sg	19 41 22.0	+0.5
KEF4	Livadi, Kephal	0.06	321	P	Pg	19 41 20.1	-0.2
KEF4				S	Sg	19 41 21.7	+0.1
KEF1	Kardakata, Kep	0.06	2	P	Pg	19 41 20.3	-0.2
KEF1				S	Sg	19 41 22.0	+0.2
AGT1	Agia Thekli	0.07	298	P	Pg	19 41 20.2	-0.4
AGT1				S	Sg	19 41 21.9	-0.1
	15µm,0.1s						
CHV1	Chavriata, Kef	0.07	245	P	Pg	19 41 20.2	-0.4
CHV1				S	Sg	19 41 22.1	+0.1
KEF3	Kipouria, Keph	0.10	263	P	Pg	19 41 20.2	-0.6
KEF3				S	Sg	19 41 22.2	-0.3
VLS	Valsamata	0.10	112	P	Pg	19 41 21.0	0.0
VLS				S	Sg	19 41 23.4	+0.8
	7µm,0.1s						
VLS	Valsamata	0.10	112	P	Pg	19 41 21.0	0.0
VLS				S	Sg	19 41 23.5	+0.8
VLS				AML	AML	19 41 23.6	
	comp=N,15148µm,0.2s						
VLS				AML	AML	19 41 23.9	
	comp=E,11304µm,0.1s						
VSK1	VASILIKIADES	0.21	21	P	Pg	19 41 22.6	-0.2
VSK1				S	Sg	19 41 26.2	+0.5
	comp=E,3µm,0.4s						
KONA	Konidatara, Ke	0.22	21	P	Pg	19 41 22.9	-0.2
KONA				S	Sg	19 41 26.6	+0.5
KONA				AML	AML	19 41 27.3	
	comp=E,2117µm,0.2s						
KONA				AML	AML	19 41 27.3	
	comp=N,3840µm,0.2s						
FSK	Fiskardo	0.25	17	P	Pg	19 41 23.3	-0.4
FSK				S	Sg	19 41 27.5	+0.4
	comp=N,2µm,0.2s						
FSK	Fiskardo	0.25	17	P	Pg	19 41 23.1	-0.5
FSK				S	Sg	19 41 27.4	+0.4
FSK				AML	AML	19 41 28.0	
	comp=N,2556µm,0.2s						
FSK				AML	AML	19 41 28.1	
	comp=E,7055µm,0.2s						
KFL	Anninata	0.27	113	P	Pg	19 41 23.9	-0.1
KFL				S	Sg	19 41 28.4	+0.7
	comp=E,2µm,0.3s						
KFL	Anninata	0.27	113	P	Pg	19 41 23.8	-0.1
KFL				S	Sg	19 41 28.6	+0.9
EVGI	Lefkada island	0.43	20	P	Pg	19 41 26.4	-0.6
EVGI	Lefkada island	0.43	20	P	Pg	19 41 26.4	-0.6
MGNA	Meganis	0.51	30	P	Pg	19 41 27.8	-0.6
LKD2	Lefkada island	0.59	15	P	Pg	19 41 29.1	-0.9
LKD2	Lefkada island	0.59	15	P	Pg	19 41 29.1	-0.9
KRI1	kERI	0.62	153	P	Pg	19 41 29.6	-0.9
TSLK	Tsoukalades, L	0.63	14	P	Pg	19 41 30.0	-0.7
TSLK	Tsoukalades, L	0.63	14	P	Pg	19 41 30.1	-0.6
PDO	Prodromos	0.68	56	P	Pg	19 41 31.2	-0.5
PVO	Paravola	0.92	64	P	Pb	19 41 35.9	-0.9
LAKA	Lakka	1.19	88	P	Pn	19 41 39.1	-2.5
DBRK	Dubrovnik	4.79	339	*i* Pn	Pn	19 42 28.7	-2.3
DBRK				Sn	Sn	19 43 30.2	+3.6
STON	Ston	5.11	336	*e*Pn	Pn	19 42 32.9	-2.4
STON				Sn	Sn	19 43 36.7	+2.2
MAKA	Makarska	5.70	334	*e*Pn	Pn	19 42 42.0	-1.6
MAKA				Sn	Sn	19 43 53.5	+4.3
RICI	Ricice	5.85	335	*e*Pn	Pn	19 42 43.4	-2.1
RICI				Sn	Sn	19 43 56.5	+3.8
KIJV	Kijevo	6.55	333	*i* Pn	Pn	19 42 53.2	-2.0
ZIRJ	Zirje	6.55	328	*e*Pn	Pn	19 42 52.7	-2.4
ZIRJ				Sn	Sn	19 44 15.2	+5.3
MORI	Morici	6.69	329	*i* Pn	Pn	19 42 54.9	-2.2
MORI				Sn	Sn	19 44 16.6	+3.0
DUGI	Dugi Otok	7.07	326	*i* Pn	Pn	19 43 00.6	-1.7

IDC 17 19:47:18.1±2.9, 10°.98S×161°.35E, h0^{km}, mb3.8/6, mb1 3.9/8, mb1mx3.7/46, mbtmp3.8/8, ML4.1/2, MS3.6/4, Ms1 3.6/4, ms1mx3.1/30, Error ellipse: s-maj=66.1km s-min=26.7km az=102.0

NEIC 17 19:47:20.3±0.9, 10°.7S±0°.2×161°.6E±0°.1, h35^{km}±2^{km}, mb4.2/5, Error ellipse: s-maj=35.1km s-min=8.8km az=39.0

ISC 17 19:47:21.6±1.6, 10°.9S±0°.1×161°.3E±0°.2, h28^{km}, n21, σ1^s.41/18, mb3.8/8, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	1.96	316	Pn	Pn	19 47 53.9	+0.9
	60nm,0.3s,baz=154,slow=8.4,SNR=16						
HNR				Sn	Sn	19 48 17.5	+0.9
	66nm,0.3s,baz=291,slow=5.6,SNR=8.0						
HNR				LR	LR	19 48 43.0	
	comp=Z,322nm,19.8s,baz=219,slow=41						
HNR	Honiara	1.96	316	*e*P	Pn	19 47 52.0	-1.0
HNR				*e*S	Sn	19 48 16.0	-0.7
HNR	Honiara	1.96	316		Pn	19 47 52.9	-0.1
PMG	Port Moresby	14.02	275	LR	LR	19 55 41.3	
	comp=Z,364nm,19.9s,baz=98,slow=36						
CTA	Charters Tower	17.17	236	P	Pn	19 51 18.1	-1.5
	0.4nm,0.3s,baz=23,slow=6.7,SNR=1.7						
WRA	Warramunga Arr	27.51	248	P	P	19 53 06.3	+0.3
	1.6nm,0.8s,baz=77,slow=9.7,SNR=8.0						
WRA				LR	LR	20 04 06.1	
	comp=Z,182nm,18.3s,baz=80,slow=37						
WRA	Warramunga Arr	27.51	248	P	P	19 53 06.7	+0.8
STKA	Stephens Creek	27.75	218	P	P	19 53 08.4	+0.4
	2.2nm,1.1s,baz=37,slow=15,SNR=2.5						
STKA	Stephens Creek	27.75	218	IAmb	IAmb	19 53 21.2	
	comp=Z,0.6nm,1.1s						
ASAR	Alice Springs	29.05	240	P	P	19 53 19.8	0.0
	comp=Z,0.2nm,0.4s,baz=71,slow=9.9,SNR=4.6						
ASAR				LR	LR	20 04 48.4	
	comp=Z,157nm,18.4s,baz=118,slow=36						
H11S2	WAKE ISLAND Hy	29.64	10	T	T	20 24 22.3	
	baz=189,slow=76,SNR=9.9						
H11S3	WAKE ISLAND Hy	29.64	10	T	T	20 24 35.1	
	baz=189,slow=76,SNR=8.0						
H11S1	WAKE ISLAND Hy	29.65	10	T	T	20 24 24.7	
	baz=189,slow=76,SNR=7.6						
BBOO	Buckleboo	31.90	223	P	P	19 53 45.3	+0.6
BBOO				IAmb	IAmb	19 53 57.9	
	comp=Z,4.3nm,1.1s						
KNRA	Kununurra	32.03	258	P	P	19 53 47.1	+1.1
KNRA				IAmb	IAmb	19 53 53.3	
	comp=Z,16nm,1.1s						
CMAR	Chiang Mai Arr	68.08	295	P	P	19 58 21.5	+2.2
	comp=Z,0.8nm,0.8s,baz=108,slow=5.8,SNR=4.4						
CMAR	Chiang Mai Arr	68.08	295	P	P	19 58 16.4	-2.8
SONM	Songino Array	75.99	325	P	P	19 59 08.4	+2.1
	comp=Z,1.2nm,0.9s,baz=133,slow=5.5,SNR=7.5						
SONM	Songino Array	75.99	325	P	P	19 59 04.3	-2.0
MKAR	Makanchi Array	90.43	318	P	P	20 00 20.4	-0.3
	comp=Z,0.1nm,0.4s,baz=84,slow=3.9,SNR=2.6						
MKAR	Makanchi Array	90.43	318	P	P	20 00 20.2	-0.4

IPEC 17 19:50:11.8±0.1, 50°.21N×19°.04E, h0^{km}, ML2.6/4, Error ellipse: s-maj=1.9km s-min=0.6km az=164.0

IDC 17 19:50:11.9±0.8, 50°.10N×19°.08E, h0^{km}, mb2.8/1, mb1 3.6/6, mb1mx3.2/58, mbtmp3.4/6, ML3.0/6, Error ellipse: s-maj=18.9km s-min=7.3km az=149.0

VIE 17 19:50:11.8±1.0, 50°.29N×18°.94E, h0^{km}, mb2.4/6, ml2.7/6, Error ellipse: s-maj=8.8km s-min=7.6km az=4.0 6 km NNW of Katowice Suspected Mining induced.

PRU 17 19:50:12.3±0.0, 50°.23N×18°.97E, h0^{km}

ISC 17 19:50:11.1±0.6, 50°.27N±0°.03×19°.02E±0°.02, h0^{km}, n51, σ1^s.38/93, 3C-3D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	Ojcow	0.50	96	*e*Pg	Pg	19 50 21.2	+0.5
OJC				*e*Sg	Sg	19 50 28.0	+0.7
OKC	Ostrava-Krasne	0.71	233	*e*PG	Pg	19 50 24.5	-0.1
OKC				*e*SG	Sg	19 50 32.6	-1.2
	comp=Z,93nm,0.4s						
MORC	Moravsky Berou	1.07	243	⇑P	Sn	19 50 48.6	-0.4
MORC	Moravsky Berou	1.07	243	*e*Pg	Pb	19 50 32.0	-0.5
	baz=65						
MORC				*e*Sg	Sg	19 50 45.0	-0.5
	101nm,0.3s,baz=65						
MORC	Moravsky Berou	1.07	243	*e*PG	Pb	19 50 32.1	-0.5
MORC				*e*SG	Sg	19 50 45.0	-0.5
LANS	Liptovska Anna	1.16	165	*e*PG	Pb	19 50 33.4	-0.6
LANS				*e*SG	Sb	19 50 48.5	-1.1
LANS				*e*LG	Lg	19 50 53.1	
NIE	Niedzica	1.19	135	*e*Pg	Pb	19 50 34.4	-0.1
NIE				*e*Sg	Sb	19 50 50.4	-0.1
KRLC	Kraliky	1.45	263	*e*PG	Pn	19 50 38.6	0.0
KRLC				*e*SG	Sg	19 50 57.7	0.0
	comp=Z,60nm,0.3s						
JAVC	Velka Javorina	1.66	212	*e*Pn	Pn	19 50 41.5	0.0
	baz=33						
JAVC				*e*Sg	Sn	19 51 02.3	-1.3
	51nm,0.4s,baz=33						
JAVC	Velka Javorina	1.66	212	*e*PN	Pn	19 50 41.5	0.0
JAVC				*e*SG	Sn	19 51 02.3	-1.3
STHS	Stebnicka Huta	1.68	120	*e*PN	Pb	19 50 42.6	-0.2
STHS				*e*SN	Sg	19 51 06.1	+1.3
STHS				*e*LG	Lg	19 51 11.8	
DPC	Dobruska-Polom	1.73	274	*e*PG	Pn	19 50 43.1	+0.7
DPC				*e*SG	Sg	19 51 06.9	+0.3
	comp=Z,71nm,0.5s						
VYHS	Vyhne	1.78	184	*e*PN	Pn	19 50 42.4	-0.7
VYHS				*e*SN	Sn	19 51 05.7	-0.8
OSTC	Ostas	1.82	280	*e*PG	Pn	19 50 44.1	+0.5
OSTC				*e*SG	Sg	19 51 10.1	+0.7
	comp=Z,40nm,0.7s						
KSP	Ksiaz	1.83	289	*e*Pb	Pn	19 50 44.6	+0.8
KSP				*e*Pg	Pg	19 50 47.1	+1.0
KSP				*e*Sg	Sg	19 51 11.5	+1.7
VRAC	Vranov	1.84	239	Pn	Pn	19 50 43.9	0.0
	16nm,0.3s,baz=58,slow=14,SNR=78						
VRAC				Pg	Pb	19 50 45.5	-0.2
	16nm,0.3s,baz=58,slow=12,SNR=59						
VRAC				Lg	Lg	19 51 09.8	
	12nm,0.3s,baz=140,slow=20,SNR=20						
VRAC	Vranov	1.84	239	⇑P	Sg	19 51 10.2	0.0
VRAC	Vranov	1.84	239	*e*Pn	Pn	19 50 44.4	+0.4
	baz=59						
VRAC				*e*Sg	Sb	19 51 08.7	-0.5
	44nm,0.3s,baz=59						
VRAC	Vranov	1.84	239	*e*PN	Pn	19 50 44.4	+0.4
VRAC				*e*SG	Sb	19 51 08.8	-0.5
CHVC	Chvalec	1.92	281	*e*PG	Pn	19 50 45.9	+0.8
CHVC				*e*SG	Sg	19 51 13.1	+0.3
	comp=Z,45nm,0.8s						
UPC	Upice	1.94	278	*e*PG	Pb	19 50 47.7	+0.4
UPC				*e*SG	Sg	19 51 14.4	+1.1
	comp=Z,32nm,0.4s						
KECS	Kecovo	2.03	151	*e*PN	Pn	19 50 46.7	+0.2
KECS				*e*SN	Sn	19 51 12.0	-0.6
KECS				*e*LG	Lg	19 51 18.9	
SMOL	Smolenice	2.04	211	*e*PN	Pn	19 50 46.1	-0.6
SMOL				*e*SN	Sn	19 51 11.5	-1.4
SMOL				*e*LG	Lg	19 51 22.8	
KRUC	Moravsky	2.09	236	*e*Pn	Pn	19 50 47.7	+0.4
	baz=55						
KRUC				*e*Sg	Sb	19 51 16.3	0.0
	34nm,0.4s,baz=55						
KRUC	Moravsky	2.09	236	*e*PN	Pn	19 50 47.7	+0.4
KRUC				*e*SG	Sb	19 51 16.3	0.0
CRVS	Cervenica-Dubn	2.10	130	*e*PN	Pb	19 50 48.8	-1.2
CRVS				*e*SN	Sg	19 51 17.5	-0.9
PSZ	Piszkesteto	2.42	166	⇓P	Pg	19 51 02.0	+4.5
TREC	Trest	2.49	248	*e*PN	Pn	19 50 52.8	0.0
TREC				*e*SG	Sg	19 51 30.0	-1.0
	comp=Z,41nm,0.9s						
PVCC	Panska Ves	2.86	277	*e*PN	Pn	19 50 58.0	+0.1
PVCC				*e*PG	Pb	19 51 04.1	+1.2
PVCC				*e*SG	Sg	19 51 44.1	+1.2
	comp=Z,51nm,0.7s						
PRU	Pruhonice	2.89	266	*e*PN	Pn	19 50 58.0	-0.4
PRU				*e*PG	Pb	19 51 03.5	0.0
PRU				*e*SG	Sg	19 51 43.9	-0.1
	comp=Z,13nm,0.5s						
PRA	Prague	2.96	268	*e*SG	Sg	19 51 46.8	+0.9
	comp=Z,37nm,0.7s						
CONA	Conrad Observa	3.13	223	*i* Pn	Pn	19 51 01.3	-0.5
	1.4nm,0.3s						
CONA				*e*Sn	Sn	19 51 39.4	-0.4
	5.5nm,0.3s						
BRG	Berggiesshubel	3.29	283	PG	Pg	19 51 13.8	-0.3
BRG				SG	Sg	19 51 58.9	+2.1
	14nm,0.5s						
PBCC	Pribram	3.29	262	*e*SG	Sg	19 51 56.7	-0.1
KHC	Kasperske Hory	3.71	254	*e*PN	Pn	19 51 09.9	+0.2
KHC				*e*SN	Sn	19 51 52.5	-1.6
KHC				*e*SG	Sg	19 52 09.2	-1.0
	comp=Z,22nm,0.5s						
GERES	GERESS Array B	3.74	250	Pn	Pn	19 51 11.3	+1.1
	0.9nm,0.3s,baz=68,slow=14,SNR=20						
GERES				Lg	Lg	19 52 07.7	
	3.0nm,0.3s,baz=64,slow=28,SNR=8.6						
ARSA	Arzberg	3.81	219	*e*Pn	Pn	19 51 11.5	+0.6
	1.0nm,0.2s						
ARSA				*e*Sn	Sn	19 51 58.7	+2.3
	2.1nm,0.3s						
MOA	Molln	3.95	234	*i* Pn	Pn	19 51 13.9	+0.9
	1.1nm,0.2s						
MOA				*e*Sn	Sn	19 52 01.4	+1.3
	2.6nm,0.3s						
CLL	Collm	3.96	288	*e*Pn	Pn	19 51 15.0	+2.0
CLL				*i* Pg	Pg	19 51 28.7	+1.9
CLL				*e*Sg	Sg	19 52 23.0	+4.9
	comp=Z,16nm,0.7s						
NKC	Novy Kostel	4.22	272	*e*PN	Pn	19 51 17.1	+0.5
NKC				*e*SG	Sg	19 52 25.6	-0.8
	comp=Z,15nm,0.4s						
SOKA	Soboth	4.47	218	*i* Pn	Pn	19 51 19.8	-0.3
SOKA				Sg	Sg	19 52 37.4	+2.9
	comp=Z,1.6nm,0.6s						
BURAR	Bucovina Array	4.87	121	⇓P	Pn	19 51 26.3	+0.6
BZS	Buzias	4.97	158	⇑P	Pn	19 51 27.4	+0.4
BSD	Bornholm Skovb	5.46	334	*i* P	Pn	19 51 34.4	+0.9
BSD				*i* S	Sn	19 52 34.0	-2.9
GZR	Gura Zlata	5.50	151	⇓P	Pn	19 51 35.1	+0.9
AKASG	Malin Array Be	6.53	82	Pn	Pn	19 51 45.5	-2.7
	comp=Z,0.3nm,0.3s,baz=262,slow=13,SNR=1.7						
AKASG				Pg	Pb	19 52 10.2	+4.8
	comp=Z,0.9nm,0.3s,baz=272,slow=14,SNR=2.8						
AKASG				Lg	Lg	19 53 32.9	
	comp=Z,1.1nm,0.3s,baz=264,slow=24,SNR=5.3						
DAVOX	Davos/Dischmat	7.00	244	Pn	Pn	19 51 56.3	+1.3
	comp=Z,0.8nm,0.3s,baz=75,slow=7.7,SNR=9.4						
NOA	NORSAR Array B	11.65	341	Pn	Pn	19 52 55.8	-2.6
	comp=Z,0.0nm,0.3s,baz=161,slow=13,SNR=2.3						
FINES	FINESS Array B	11.87	17	Pn	Pn	19 52 58.9	-2.5
	comp=Z,0.3nm,0.3s,baz=196,slow=12,SNR=11						
FINES				Sn	Sn	19 55 04.5	-10
	comp=Z,0.2nm,0.3s,baz=198,slow=20,SNR=4.1						
ARCES	ARCESS Array B	19.58	7	Pn	P	19 54 38.4	-1.9
	comp=Z,0.1nm,0.3s,baz=197,slow=12,SNR=1.8						
MKAR	Makanchi Array	40.93	70	P	P	19 57 56.4	+1.5
	comp=Z,0.1nm,0.5s,baz=289,slow=8.8,SNR=1.5						

SJA 17 19:57:56.0±1.3, 19°.98S×70°.93W, h8^{km}±15^{km}, ML3.6, MW3.7

IDC 17 19:57:57.4±1.2, 20°.08S×70°.92W, h0^{km}, mb3.6/3, mb1 3.9/5, mb1mx3.7/27, mbtmp3.7/5, ML3.7/2, MS2.5/1, Ms1 2.5/1, ms1mx2.1/22, Error ellipse: s-maj=39.5km s-min=18.2km az=60.0

GUC 17 19:57:59.7±0.6, 19°.96S×70°.92W, h21^{km}±7^{km}, ML3.6

ISC 17 19:57:56.0±1.8, 19°.97S±0°.03×70°.96W±0°.06, h2^{km}±11^{km}, n45, σ1^s.18/59, 11C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	0.88	65	⇑*i*P	Pg	19 58 13.2	+0.5
PSGC				*i* S	Sg	19 58 24.2	+0.1
PSGCX	Pisagua	0.88	65	*i* P	Pb	19 58 13.4	-0.6
PSGCX				*e*S	Sg	19 58 24.7	+0.6
PSGCX				IAML		19 58 30.4	
	comp=Z,1µm,0.5s						
TA01	Diego Aracena	0.94	129	*e*P	Pb	19 58 14.8	-0.2
TA01				*e*S	Sb	19 58 27.1	-0.9
TA01				IAML		19 58 31.4	
	comp=E,3µm,0.2s						
PATCX	Punta Patache	1.14	138	⇑*e*P	Pb	19 58 17.8	-0.6
PATCX				*i* S	Sg	19 58 32.7	+0.2
PATCX				IAML		19 58 42.5	
	comp=E,2µm,0.6s						
PATCX	Punta Patache	1.14	138	*i* P	Pn	19 58 18.3	-0.7
PATCX				*e*S	Sn	19 58 35.4	+0.2
PATCX				IAML		19 58 37.0	
	comp=Z,2µm,0.6s						
PB11	IPOC Station P	1.25	81	⇑*i*P	Pn	19 58 19.6	-1.0
PB11				*i* S	Sb	19 58 35.5	-1.5
PB11				IAML		19 58 40.9	
	comp=N,3µm,0.5s						
PB11	IPOC Station P	1.25	81	*i* P	Pn	19 58 19.7	-0.9
PB11				*e*S	Sb	19 58 36.1	-0.9
PB11				IAML		19 58 42.5	
	comp=Z,962nm,0.2s						
PB12	IPOC Station P	1.48	24	⇑*i*P	Pb	19 58 23.7	-0.5
PB12				*e*S	Sn	19 58 42.2	-1.5
PB12				IAML		19 58 47.5	
	comp=N,1µm,0.6s						
PB12	IPOC Station P	1.48	24	*i* P	Pb	19 58 23.7	-0.5
PB12				IAML		19 58 51.8	
	comp=Z,712nm,0.4s						
PB02	IPOC Station P	1.67	143	⇑*i*P	Pb	19 58 26.7	-0.9
PB02				*i* S	Sn	19 58 47.7	-0.8
PB02				IAML		19 58 55.0	
	comp=E,3µm,0.3s						
PB02	IPOC Station P	1.67	143	*i* P	Pb	19 58 26.9	-0.7
PB02				IAML		19 58 55.0	
	comp=Z,2µm,0.7s						
GO01	Chusmiza	1.69	80	⇑*i*P	Pb	19 58 27.2	-0.9
GO01				*e*S	Sb	19 58 49.3	-0.7
AP01	Chacalluta	1.70	20	*e*P	Pb	19 58 27.3	-0.6
PB08	IPOC Station P	1.71	96	⇑*e*P	Pb	19 58 27.6	-0.8
PB08				*e*S	Sb	19 58 49.4	-1.1
PB08	IPOC Station P	1.71	96	*i* P	Pb	19 58 27.8	-0.6
PB08				⇓*e*S	Sg	19 58 51.6	+0.6
PB08				IAML		19 58 55.6	
	comp=Z,418nm,0.6s						
PB01	IPOC Station P	1.75	128	⇑*e*P	Pb	19 58 28.1	-0.7
PB01				*i* S	Sb	19 58 50.9	-0.4
PB01				IAML		19 58 53.9	
	comp=N,1µm,0.5s						
PB01	IPOC Station P	1.75	128	*i* P	Pb	19 58 28.3	-0.5
PB01				IAML		19 58 54.5	
	comp=Z,625nm,0.6s						
PB07	IPOC Station P	2.02	150	⇑*e*P	Pn	19 58 31.2	0.0
PB07				*i* S	Sb	19 58 59.1	0.0
PB07				IAML		19 59 07.7	
	comp=E,676nm,0.7s						
PB07	IPOC Station P	2.02	150	*i* P	Pn	19 58 31.4	+0.2
PB07				*e*S	Sg	19 59 01.5	+0.7
PB07				IAML		19 59 08.2	
	comp=Z,509nm,0.6s						
PB16	IPOC Station P	2.13	40	*e*P	Pb	19 58 34.4	-1.2
PB16				*e*S	Sb	19 59 01.5	-1.3
PB16				IAML		19 59 07.4	
	comp=E,795nm,0.3s						
PB16	IPOC Station P	2.13	40	*i* P	Pb	19 58 35.4	-0.3
PB16				IAML		19 59 07.1	
	comp=Z,890nm,0.4s						
PB03	IPOC Station P	2.36	152	⇑*i*P	Pn	19 58 36.0	+0.2
PB03				*i* S	Sb	19 59 08.1	-0.8
PB03				IAML		19 59 16.0	
	comp=E,414nm,0.5s						
PB03	IPOC Station P	2.36	152	*i* P	Pn	19 58 36.1	+0.2
PB03				IAML		19 59 21.0	
	comp=Z,312nm,1.0s						
PB09	IPOC Station P	2.43	139	⇑*i*P	Pb	19 58 38.5	-1.9
PB09				*i* S	Sb	19 59 09.6	-1.3
PB09				IAML		19 59 19.6	
	comp=E,606nm,0.7s						
PB09	IPOC Station P	2.43	139	*i* P	Pb	19 58 38.5	-1.9
PB09				IAML		19 59 23.0	
	comp=Z,559nm,0.8s						
PB04	IPOC Station P	2.47	162	*i* P	Pn	19 58 37.2	-0.2
PB05	IPOC Station P	2.95	166	*i* P	Pn	19 58 43.4	-0.6
PB05				IAML		19 59 38.1	
	comp=Z,137nm,1.0s						
PB06	IPOC Station P	3.01	155	*i* P	Pn	19 58 44.8	-0.1
PB06				IAML		19 59 39.3	
	comp=Z,371nm,0.9s						
LVC	Limon Verde	3.25	144	Pn	Pn	19 58 50.2	+1.8
	comp=Z,6.6nm,0.3s,baz=310,slow=10,SNR=31						
LVC				Lg	Lg	19 59 35.1	
	comp=Z,14nm,0.3s,baz=85,slow=11,SNR=10						
LVC				LR	LR	19 59 55.1	
	comp=Z,68nm,19.2s,baz=0.5,slow=37						
LVC	Limon Verde	3.25	144	*i* P	Pn	19 58 50.1	+1.8
LVC				IAML		19 59 43.1	
	comp=Z,122nm,1.1s						
PB15	IPOC Station P	3.51	157	*i* P	Pn	19 58 51.6	-0.1
PB10	IPOC Station P	3.54	174	*i* P	Pn	19 58 51.2	-0.8
PB10				IAML		20 00 03.9	
	comp=Z,42nm,0.6s						
LPAZ	La Paz	4.55	37	Pn	Pb	19 59 13.4	-3.5
	comp=Z,0.7nm,0.3s,baz=252,slow=2.0,SNR=8.8						
LPAZ	La Paz	4.55	37	*i* P	Pb	19 59 17.1	+0.2
PB14	IPOC Station P	4.66	174	*i* P	Pn	19 59 06.4	-1.3
PB14				IAML		20 00 37.8	
	comp=Z,40nm,0.7s						
SIV	San Ignacio	10.21	69	Pn	Pn	20 00 25.8	+2.1
	comp=Z,0.9nm,0.3s,baz=276,slow=7.8,SNR=12						
PLCA	Paso Flores	20.70	179	P	Pn	20 02 38.5	-1.4
	comp=Z,2.6nm,0.9s,baz=339,slow=12,SNR=3.7						
TXAR	Lajitas Array	58.29	326	P	P	20 07 53.6	+1.1
	comp=Z,0.4nm,0.7s,baz=124,slow=7.7,SNR=4.1						
TORD	Torodi Ar. Bea	78.67	71	P	P	20 10 01.5	+1.3
	comp=Z,0.6nm,0.8s,baz=247,slow=4.3,SNR=2.7						
H11S2	WAKE ISLAND Hy	125.76	279	T	T	22 35 25.8	
H11S1	WAKE ISLAND Hy	125.77	279	T	T	22 35 29.0	
	baz=101,slow=74,SNR=6.9						
H11S3	WAKE ISLAND Hy	125.78	279	T	T	22 35 25.3	
	baz=344,slow=74,SNR=6.5						
ZALV	Zalesovo Beam	141.34	23	PKP	PKiKP	20 17 29.9	-1.1
	comp=Z,0.3nm,0.3s,baz=358,slow=3.5,SNR=1.7						

MKAR	Makanchi Array	145.47	33	PKPbc	PKiKP	20 17 37.1	-2.6
	comp=Z,0.3nm,0.7s,baz=342,slow=4.7,SNR=1.9						
SONM	Songino Array	152.12	4	PKPbc	PKiKP	20 17 56.4	+2.9
	comp=Z,0.4nm,0.6s,baz=0.0,slow=0.1,SNR=2.4						

NNC 17 20:02:57.0±10.0**,40°.61N×66°.34E,h0^{km},mb3.7,mpv3.4, 4C,Error ellipse: s-maj=120.2km s-min=70.6km az=149.0,Southeastern Uzbekistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	3.99	50	Pg	Pg	20 04 14.2	+0.7
	1.4nm,0.2s,baz=226,slow=18,SNR=8.1						
KK31				Lg	Lg	20 05 00.3	
	13nm,0.3s,baz=236,slow=28,SNR=11						
AAK	Ala-Archa	6.44	69	⇑Pn	Pn	20 04 31.1	-2.2
	1.7nm,0.4s						
AAK				⇑Sn	Sn	20 05 50.1	+2.5
	3.4nm,0.7s						
AAK				⇑Lg	Lg	20 06 22.0	
	5.5nm,0.8s						
CHMS	Chumysh	6.72	66	⇑Lg	Lg	20 06 26.9	
	3.4nm,0.5s						

IDC 17 20:10:26.9±1.1, 19°.83S×70°.76W, h0^{km}, mb3.8/5, mb1 4.1/7, mb1mx3.9/20, mbtmp3.9/7, ML3.8/2, MS3.0/6, Ms1 3.0/6, ms1mx2.9/22, Error ellipse: s-maj=35.6km s-min=15.0km az=61.0
NEIC 17 20:10:27.2±1.7, 19°.92S±0°.08×71°.03W±0°.07, h11^{km}±7^{km}, mb4.4/1, ML4.3(GUC), Error ellipse: s-maj=12.2km s-min=7.8km az=153.0
GUC 17 20:10:31.0±0.6, 19°.95S×70°.92W, h35^{km}±2^{km}, ML4.3
ISC 17 20:10:27.7±1.7**,19°.88S**±0°.03×**70°.92W**±0°.06**,h8**^{km}±10^{km}**, n43,**σ1^{s}**21**/52**,mb3.7**/6**,8C-3D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.80	69	⇓iP	Pn	20 10 44.8	-0.7
PSGC				iS	Sn	20 10 55.9	-1.7
TA01	Diego Aracena	0.97	135	⇓iP	Pb	20 10 47.0	+0.3
TA01				iS	Sb	20 10 58.8	-0.9
PATCX	Punta Patache	1.18	143	⇑iP	Pb	20 10 50.1	-0.2
PATCX				iS	Sb	20 11 04.7	-1.1
PB11	IPOC Station P	1.19	84	⇓iP	Pg	20 10 51.2	+0.6
PB11				iS	Sn	20 11 06.9	-0.5
PB11				IAML		20 11 08.5	
	comp=N,18µm,0.3s						
PB11	IPOC Station P	1.19	84		Pg	20 10 51.1	+0.4
PB11				Sn	Sn	20 11 08.0	+0.7
PB12	IPOC Station P	1.38	24	⇑iP	Pb	20 10 54.7	+0.8
PB12				iS	Sg	20 11 13.4	+1.2
PB12				IAML		20 11 20.5	
	comp=E,5µm,0.4s						
AP01	Chacalluta	1.60	20	eP	Pb	20 10 57.6	+0.1
AP01				iS	Sg	20 11 18.9	-0.3
AP01				IAML		20 11 25.4	
	comp=E,12µm,0.6s						
GO01	Chusmiza	1.64	83	⇑iP	Pb	20 10 58.4	0.0
GO01				eS	Sg	20 11 19.9	-0.6
GO01				IAML		20 11 21.6	
	comp=N,11µm,0.4s						
GO01	Chusmiza	1.64	83	Pn	Pb	20 10 58.4	0.0
GO01				Sn	Sg	20 11 20.7	+0.2
PB08	IPOC Station P	1.68	99	⇑iP	Pb	20 10 58.5	-0.6
PB08				iS	Sg	20 11 20.4	-1.3
PB08				IAML		20 11 22.9	
	comp=N,4µm,0.3s						
PB02	IPOC Station P	1.72	146	⇑iP	Pn	20 10 58.0	-0.1
PB02				iS	Sn	20 11 18.6	-1.7
PB02				IAML		20 11 28.4	
	comp=N,4µm,0.4s						
PB01	IPOC Station P	1.77	131	⇑iP	Pn	20 10 59.1	+0.4
PB01				eS	Sn	20 11 20.9	-0.6
PB01				IAML		20 11 28.3	
	comp=E,4µm,0.5s						
PB01	IPOC Station P	1.77	131	Pn	Pn	20 10 58.9	+0.2
PB16	IPOC Station P	2.04	41	⇑iP	Pb	20 11 04.7	-0.7
PB16				iS	Sg	20 11 31.9	-1.4
PB16				IAML		20 11 40.2	
	comp=N,2µm,0.5s						
PB03	IPOC Station P	2.41	153	eP	Pn	20 11 07.5	-0.2
PB03				iS	Sn	20 11 36.0	-1.4
PB09	IPOC Station P	2.46	141	⇑iP	Pn	20 11 09.5	+1.1
PB09				eS	Sn	20 11 38.2	-0.6
PB09				IAML		20 11 51.5	
	comp=E,1µm,0.3s						
PB04	IPOC Station P	2.54	164	Pn	Pn	20 11 08.4	-1.0
LVC	Limon Verde	3.29	146	Pn	Pn	20 11 21.5	+1.5
	comp=E,8.1nm,0.3s,baz=323,slow=12,SNR=2.0						
LVC				Pg	Pb	20 11 27.3	+0.6
	comp=E,28nm,0.3s,baz=350,slow=8.0,SNR=11						
LVC				Sn	Sn	20 11 59.5	0.0
	comp=E,27nm,0.3s,baz=318,slow=7.9,SNR=4.6						
LVC				LR	LR	20 12 01.4	
	comp=E,57nm,21.2s,baz=326,slow=29						
LVC				Lg	Lg	20 12 08.3	
	comp=E,32nm,0.3s,baz=81,slow=13,SNR=8.1						
LVC	Limon Verde	3.29	146		Pn	20 11 21.3	+1.3
PB10	IPOC Station P	3.63	175	Pn	Pn	20 11 22.6	-1.7
LPAZ	La Paz	4.45	37	Pn	Pb	20 11 43.3	-3.2
	comp=E,3.6nm,0.3s,baz=307,slow=6.5,SNR=21						
LPAZ				Lg	Lg	20 12 50.5	
	baz=110,slow=21,SNR=1.4						
LPAZ				LR	LR	20 13 31.2	
	comp=E,214nm,18.9s,baz=235,slow=43						
LPAZ	La Paz	4.45	37	Pn	Pn	20 11 39.4	+3.3
GO02	Mina Guanaco	5.39	167		Pn	20 11 47.9	-0.9
SIV	San Ignacio	10.14	69	Pn	Pn	20 12 53.3	-0.4
	comp=E,1.1nm,0.3s,baz=276,slow=9.5,SNR=14						
SIV				LR	LR	20 17 14.5	
	comp=E,146nm,20.1s,baz=285,slow=41						
CPUP	Villa Florida	14.05	120	LR	LR	20 20 01.7	
	comp=E,63nm,19.7s,baz=321,slow=41						
PTGA	Pitinga	21.85	31	P	P	20 15 19.4	-1.5
	comp=E,4.4nm,0.3s,baz=334,slow=23,SNR=12						
PTGA	Pitinga	21.85	31	P	P	20 15 19.4	-1.5
PTGA				IAmb	IAmb	20 16 11.7	
	comp=Z,34nm,1.9s						
BDFB	Brasilia	22.21	83	P	P	20 15 27.9	+3.0
	comp=Z,2.5nm,0.6s,baz=248,slow=12,SNR=3.8						
BDFB				LR	LR	20 24 57.1	
	comp=Z,64nm,21.6s,slow=40						
ROSC	El Rosal	24.80	352	LR	LR	20 25 14.8	
	comp=Z,56nm,20.4s,baz=107,slow=36						
TXAR	Lajitas Array	58.24	326	P	P	20 20 24.1	+1.1
	comp=Z,0.2nm,0.7s,baz=130,slow=9.5,SNR=2.6						
PDAR	Pinedale Array	71.79	331	P	P	20 21 50.2	-0.8
	comp=Z,0.5nm,0.9s,baz=118,slow=7.2,SNR=2.2						
TORD	Torodi Ar. Bea	78.61	71	P	P	20 22 29.6	-1.0
	comp=Z,3.1nm,0.8s,baz=250,slow=5.3,SNR=12						
YKA	Yellowknife Ar	89.05	341	P	P	20 23 23.3	+0.4
	comp=Z,0.2nm,0.5s,baz=136,slow=4.8,SNR=5.2						
H11S2	WAKE ISLAND Hy	125.79	279	T	T	22 48 52.1	
	baz=101,slow=74,SNR=9.7						
H11S1	WAKE ISLAND Hy	125.80	279	T	T	22 48 52.4	
	baz=101,slow=74,SNR=12						
H11S3	WAKE ISLAND Hy	125.81	279	T	T	22 48 53.6	
	baz=101,slow=74,SNR=13						
H11N3	WAKE ISLAND Hy	125.84	280	T	T	22 48 54.9	
	baz=172,slow=74,SNR=10						
H11N2	WAKE ISLAND Hy	125.85	280	T	T	22 48 57.0	
	baz=102,slow=74,SNR=8.2						
H11N1	WAKE ISLAND Hy	125.85	280	T	T	22 48 54.5	
ZALV	Zalesovo Beam	141.25	23	PKP	PKPdf	20 29 59.2	+0.4
	comp=Z,0.7nm,0.5s,baz=325,slow=4.4,SNR=3.6						
ZALV	Zalesovo Beam	141.25	23		PKPdf	20 29 59.7	+0.9
MKAR	Makanchi Array	145.37	33	PKPbc	PKPdf	20 30 06.9	+0.6
	comp=Z,1.7nm,0.8s,baz=340,slow=1.8,SNR=15						
SONM	Songino Array	152.03	4	PKPbc	PKPbc	20 30 24.4	+0.6
	comp=Z,0.9nm,0.7s,baz=335,slow=1.3,SNR=6.8						

ISK 17 20:25:05.8, 38°.64N×26°.12E, h12^{km}, ML3.3/36
ATH 17 20:25:05.6, 38°.59N×26°.13E, h28^{km}, ML3.2/7, Error ellipse: s-maj=1.9km s-min=0.8km az=92.0
DDA 17 20:25:06.7, 38°.62N×26°.22E, h13^{km}±6^{km}, ML3.0
THE 17 20:25:07.3, 38°.58N×26°.10E, h13^{km}, ML3.3/5, Error ellipse: s-maj=1.4km s-min=0.6km az=81.0
ISC 17 20:25:05.8±0.8**,38°.63N**±0°.02×**26°.18E**±0°.02**,h16**^{km}±7^{km}**, n115,**σ1^{s}**08**/150**,6C-2D,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOS	Chios island	0.26	202	P	Pg	20 25 11.9	+0.3
CHOS				S	Sg	20 25 15.0	-0.4
	7µm,0.2s						
CHOS	Chios island	0.26	202	P	Pg	20 25 11.9	+0.3
CHOS				S	Sg	20 25 15.4	0.0
CHOS				AML	AML	20 25 16.2	
	comp=E,17226µm,0.2s						
CHOS				AML	AML	20 25 17.1	
	comp=N,12362µm,0.3s						
CHOS	Chios island	0.26	202	PG	Pg	20 25 11.9	+0.3
CHOS				SG	Sg	20 25 16.0	+0.6
KRBN	Karaburun	0.30	96	PG	Pb	20 25 13.5	+0.7
KRBN				SG	Sb	20 25 18.3	+0.8
CESE	eme	0.31	162	PG	Pb	20 25 13.1	+0.1
URLA	Izmir	0.42	129	PG	Pb	20 25 15.7	+0.7
URLA				SG	Sb	20 25 22.4	+1.3
URLA	Izmir	0.42	129	iP	Pb	20 25 15.7	+0.7
URLA				iS	Sg	20 25 20.6	+0.3
URLA				IAML		20 25 22.0	
	comp=E,999nm,0.3s						
URLA				IAML		20 25 24.0	
	comp=N,1µm,0.5s						
FOCM	Foa	0.44	79	PG	Pb	20 25 15.8	+0.5
FOCM				SG	Sb	20 25 22.4	+0.7
PRK	Paraskevi	0.62	7	P	Pn	20 25 19.6	-0.4
PRK				S	Sn	20 25 30.9	+1.2
	comp=N,4µm,0.5s						
PRK	Paraskevi	0.62	7	P	Pn	20 25 19.5	-0.5
PRK				S	Sn	20 25 29.2	-0.4
PRK				AML	AML	20 25 31.8	
	comp=N,5605µm,0.5s						
PRK				AML	AML	20 25 34.8	
	comp=E,3940µm,0.5s						
SIGR	SIGRI	0.64	337	P	Pb	20 25 18.6	0.0
SIGR				S	Sn	20 25 30.1	+0.1
	comp=E,4µm,0.5s						
SIGR	SIGRI	0.64	337	P	Pb	20 25 18.7	+0.1
SIGR				S	Sn	20 25 29.0	-1.0
SIGR				AML	AML	20 25 30.7	
	comp=N,7960µm,0.5s						
SIGR				AML	AML	20 25 31.3	
	comp=E,8392µm,0.5s						
SIGR	SIGRI	0.64	337	PG	Pb	20 25 18.4	-0.2
BLCB	Balcova	0.72	109	PG	Pn	20 25 21.1	-0.3
DKL	Dikili	0.72	52	PG	Pn	20 25 20.8	-0.6
ZEDA	zmir-Bergama	0.78	64	iP	Pn	20 25 22.4	+0.2
ZEDA				iS	Sb	20 25 31.6	+0.1
ZEDA				IAML		20 25 36.0	
	comp=N,958nm,0.4s						
ZEDA				IAML		20 25 36.0	
	comp=E,572nm,0.9s						
AYVA	Ayvalik	0.79	30	iP	Pn	20 25 22.2	-0.1
AYVA				iS	Sg	20 25 31.8	+0.1
AYVA				IAML		20 25 36.0	
	comp=N,930nm,0.5s						
AYVA				IAML		20 25 36.0	
	comp=E,464nm,0.3s						
GMLD	Gumuldur	0.80	133	PG	Pn	20 25 22.4	0.0
SMG	Samos	1.05	150	P	Pg	20 25 26.6	+0.4
SMG				S	Sn	20 25 41.3	+1.0
	comp=E,4µm,0.5s						
SMG	Samos	1.05	150	P	Pn	20 25 25.9	0.0
SMG				S	Sn	20 25 41.0	+0.7
SMG				AML	AML	20 25 42.7	
	comp=E,8952µm,0.7s						
SMG				AML	AML	20 25 43.2	
	comp=N,8338µm,0.4s						
BAYC	CANAKKALE_Bayr	1.15	14	iP	Pg	20 25 27.6	-0.4
BAYC				iS	Sb	20 25 40.4	-1.6
BAYC				IAML		20 25 48.0	
	comp=E,234nm,0.3s						
BAYC				IAML		20 25 49.0	
	comp=N,260nm,0.2s						
EZN	Ezine	1.20	6	PN	Pg	20 25 28.7	-0.4
BOZC	Bozcaada	1.22	356	PN	Pg	20 25 28.5	-0.8
BOZC	Bozcaada	1.22	356	iP	Pb	20 25 28.4	-0.1
BOZC				iS	Sb	20 25 42.2	-1.8
BOZC				IAML		20 25 49.0	
	comp=E,176nm,0.3s						
GCAM	G?zelcaml?	1.25	138	PN	Pg	20 25 30.2	+0.3
GCAM	G?zelcaml?	1.25	138	iP	Pb	20 25 29.3	+0.3
GCAM				iS	Sb	20 25 43.5	-1.2
GCAM				IAML		20 25 48.0	
	comp=E,450nm,0.4s						
GCAM				IAML		20 25 50.0	
	comp=N,676nm,0.4s						
SKY	Skiros Island	1.29	282	P	Pb	20 25 29.9	+0.1
SKY	Skiros Island	1.29	282	P	Pb	20 25 29.9	+0.1
AKS	Akhisar	1.30	78	PN	Pg	20 25 31.2	+0.2
AKHS	Akhisar	1.31	78	iP	Pg	20 25 32.3	+1.3
AKHS				iS	Sn	20 25 46.1	-0.4
AKHS				IAML		20 25 52.0	
	comp=E,302nm,0.5s						
TNSA	Tinos	1.35	217	P	Pn	20 25 30.0	+0.1
TNSA				S	Sn	20 25 47.1	-0.4
TNSA				AML	AML	20 25 49.8	
	comp=N,971µm,0.3s						
TNSA				AML	AML	20 25 52.3	
	comp=E,795µm,0.2s						
GOMA	Golmarmara-Man	1.37	86	PN	Pg	20 25 32.1	-0.1
STEP	BALIKESIR_Sava	1.42	58	iP	Pg	20 25 33.7	+0.6
STEP				iS	Sb	20 25 49.4	-0.4
STEP				IAML		20 25 56.0	
	comp=N,806nm,0.5s						
STEP				IAML		20 25 57.0	
	comp=E,694nm,0.4s						
LIA	Limnos Island	1.48	329	P	Pb	20 25 32.8	-0.3
LIA	Limnos Island	1.48	329	P	Pb	20 25 32.7	-0.3
LIA				S	Sg	20 25 52.2	-1.5
LIA				AML	AML	20 25 56.3	
	comp=E,986µm,0.5s						
LIA				AML	AML	20 25 56.5	
	comp=N,667µm,0.6s						
KARY	Karystos	1.49	247	P	Pn	20 25 32.0	0.0
KARY				S	Sn	20 25 49.6	-1.5
KARY	Karystos	1.49	247	P	Pn	20 25 31.9	0.0
KARY				S	Sb	20 25 51.7	-0.2
KARY				AML	AML	20 25 54.5	
	comp=E,568µm,0.3s						
KARY				AML	AML	20 25 55.0	
	comp=N,803µm,0.2s						
AYDB	Zeytinkoy-Aydi	1.51	116	PN	Pg	20 25 34.4	-0.5
APE	Apeiranthos	1.64	198	P	Pn	20 25 34.2	+0.1
APE	Apeiranthos	1.64	198	P	Pn	20 25 34.1	+0.1
APE				S	Sn	20 25 54.8	+0.1
APE	Apeiranthos	1.64	198	PN	Pn	20 25 34.7	+0.7
AYDN	Tasoluk	1.65	125	iP	Pb	20 25 35.5	-0.4
AYDN				iS	Sb	20 25 56.8	+0.2
AYDN				IAML		20 26 04.0	
	comp=N,118nm,0.9s						
AYDN				IAML		20 26 05.0	
	comp=E,216nm,0.3s						
BALB	Balikesir	1.67	52	PN	Pb	20 25 35.9	-0.3
GELI	Tayfur-Gelibol	1.78	7	PN	Pb	20 25 37.0	-1.1
LPK	Lapseki	1.80	14	PN	Pb	20 25 37.9	-0.5
BODT	Bodrum	1.80	150	PN	Pb	20 25 37.4	-1.1
AMGA	Amorgos Island	1.81	187	P	Pn	20 25 36.4	+0.1
AMGA				S	Sn	20 25 58.7	-0.2
	comp=E,225nm,0.2s						
AMGA	Amorgos Island	1.81	187	P	Pn	20 25 36.4	+0.1
GONE	Gonen-Balikesi	1.84	39	PN	Pb	20 25 38.5	-0.6
AOS	Alonnisos	1.87	288	P	Pn	20 25 38.0	+0.8
AOS	Alonnisos	1.87	288	PN	Pb	20 25 38.3	-1.3
MANT	Manisa	1.87	93	iP	Pb	20 25 39.0	-0.8
MANT				iS	Sn	20 26 01.3	+0.4
PTL	Penteli	1.91	253	P	Pn	20 25 38.0	+0.3
PTL	Penteli	1.91	253	P	Pn	20 25 38.0	+0.3
SMTH	Samothraki Isl	1.91	345	P	Pn	20 25 38.3	+0.6
SMTH	Samothraki Isl	1.91	345	P	Pn	20 25 38.3	+0.6
KULA	Kula-Manisa	1.95	93	PN	Pb	20 25 40.8	-0.3
KRBG	Karabiga-Canak	1.97	26	PN	Pb	20 25 39.9	-1.3
SERI	Serifos	1.98	223	P	Pn	20 25 38.5	-0.2
IOSP	Ios island	2.03	201	P	Pn	20 25 39.2	-0.1
IOSP	Ios island	2.03	201	P	Pn	20 25 39.1	-0.1
MRKA	Markates	2.03	273	P	Pn	20 25 39.8	+0.5
VLY	Voula,Athens	2.03	248	P	Pn	20 25 39.5	+0.1
VLY	Voula,Athens	2.03	248	P	Pn	20 25 39.5	+0.1
ERIK	Erikli-Kesan	2.06	7	PN	Pb	20 25 40.9	-1.9
ENEZ	Enez	2.11	360	PN	Pb	20 25 41.8	-1.8
EDC	Edincik	2.16	37	PN	Pb	20 25 42.5	-2.0
SKIA	Skiathos	2.18	285	P	Pn	20 25 42.1	+0.6
DAT	Datca	2.20	149	PN	Pn	20 25 43.1	+1.3
DAT	Datca	2.20	149	iP	Pn	20 25 42.6	+0.8
DAT				iS	Sn	20 26 06.1	-2.6
RKY	Sarkoy-Tekirda	2.20	20	PN	Pn	20 25 42.0	+0.3
SART	Tekirdag	2.20	20	iP	Pn	20 25 42.3	+0.5
SART				iS	Sn	20 26 09.6	+0.8
USAK	Uak-Merkez	2.23	87	iP	Pn	20 25 41.6	-0.5
USAK				iS	Sn	20 26 10.5	+1.1
KESN	Edirne-Kesan	2.23	10	iP	Pn	20 25 43.6	+1.1
KESN				iS	Sn	20 26 10.4	+0.6
KESN				IAML		20 26 25.0	
	comp=E,99nm,0.3s						
KESN				IAML		20 26 30.0	
	comp=N,92nm,0.3s						
YER	Yerkesik	2.24	131	PN	Pb	20 25 44.7	-1.2
SIMA	Simav-Kutahya	2.24	77	PN	Pb	20 25 44.9	-1.1
MRMT	Marmara Adasi	2.26	29	PN	Pb	20 25 44.2	-2.1
THT2	Imerovigli	2.27	196	PN	Pn	20 25 44.1	+1.4
ALN	Alexandroupoli	2.27	358	P	Pn	20 25 43.5	+0.8
ALN	Alexandroupoli	2.27	358	P	Pn	20 25 43.5	+0.8
ALN	Alexandroupoli	2.27	358	PN	Pn	20 25 43.4	+0.8
THAS	Thassos island	2.27	331	P	Pn	20 25 43.2	+0.4
THAS	Thassos island	2.27	331	P	Pn	20 25 43.1	+0.4
VILL	Villia	2.30	259	P	Pn	20 25 43.7	+0.6
THR3	Thira Island,	2.30	196	P	Pn	20 25 43.6	+0.6
VIL2	Platees	2.32	261	P	Pn	20 25 43.7	+0.3
PAIG	Paliouri	2.33	305	P	Pn	20 25 44.6	+1.1
KCTX	Karacabey (Bur	2.35	45	PN	Pb	20 25 46.2	-1.6
MHLO	Agia Marina, M	2.39	217	P	Pn	20 25 44.0	-0.4
OUR	Ouranopolis	2.41	316	P	Pn	20 25 45.7	+1.2
TAVA	DENIZLI_Tavas	2.45	117	iP	Pb	20 25 47.4	-2.2
TAVA				iS	Sb	20 26 18.4	-1.2
RDO	Rodhopi	2.56	349	P	Pn	20 25 48.0	+1.3
RDO	Rodhopi	2.56	349	P	Pn	20 25 47.9	+1.2
DID	Didima	2.58	245	P	Pn	20 25 47.0	+0.1
DID	Didima	2.58	245	P	Pn	20 25 47.4	+0.5
LTK	Loutraki	2.59	258	P	Pn	20 25 47.9	+0.7
LTK	Loutraki	2.59	258	P	Pn	20 25 47.9	+0.7
KHAL	Karahalli	2.62	95	iP	Pb	20 25 49.8	-2.6
KHAL				iS	Sb	20 26 24.8	+0.5
TVSB	Tavsanli	2.69	71	PN	Pb	20 25 51.1	-2.5
ULDT	Uludag	2.75	56	iP	Pg	20 25 58.0	-0.6
ULDT				iS	Sn	20 26 24.1	+1.7
ULDT				IAML		20 26 40.0	
	comp=E,65nm,0.5s						
ULDT				IAML		20 26 41.0	
	comp=N,45nm,0.9s						
FETY	Fethiye	3.05	130	PN	Pb	20 25 56.6	-3.1
BASM	Basmaki-Afyon	3.13	102	PN	Pn	20 25 57.0	+2.4
KZIL	AFYON_Kizioren	3.14	96	iP	Pn	20 25 56.9	+2.2
VLI	Veliai	3.20	234	P	Pn	20 25 55.9	+0.5
KIRK	Kırklareli	3.23	12	iP	Pn	20 25 56.7	+0.9
KIRK				iS	Sn	20 26 33.9	-0.1
NVR	Nevrokopi	3.25	328	P	Pn	20 25 57.5	+1.3
STIP	Stip	4.33	316	iP	Pn	20 26 11.9	+0.9
VTS	Vitosha	4.57	332	⇑P	Pn	20 26 16.4	+1.9
LOZB	Loznitsa	4.75	4	⇓P	Sn	20 27 10.6	-0.9
GOLR		6.27	352	⇑P	Pg	20 27 09.3	+3.4
MLR	Muntele Rosu	6.86	359	⇑P	Pn	20 26 48.8	+2.9
GZR	Gura Zlata	7.22	341	⇑P	Pn	20 26 51.4	+0.7
VRI	Vrincioaia	7.25	3	⇓P	Pn	20 26 55.7	+4.6
TESR	Tescani	7.89	2	⇑P	Pn	20 27 02.2	+2.3
BIZ	Bicaz	8.31	360	⇑P	Pn	20 27 08.8	+3.2

IDC 17 20:25:29.0±0.8, 85°.50N×84°.45E, h0^{km}, mb3.5/9, mb1 3.8/12, mb1mx3.6/47, mbtmp3.7/12, ML3.7/3, MS3.1/19, Ms1 3.1/19, ms1mx3.0/46, Error ellipse: s-maj=22.6km s-min=17.3km az=120.0
ISC 17 20:25:30.3±0.7**,85°.54N**±0°.09×**82°.65E**±0°.07**,h10**^{km}**,n31,** σ1^{s}**95**/23**,mb3.2**/9**,MS3.1**/14**,1C,North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZFI2	Zemlya Franca-	6.13	240	⇑iP	Pn	20 27 02.7	+2.0
ZFI2				eS	Sn	20 28 09.7	-1.1
KBS	Kingsbay	10.54	274	eP	Pn	20 28 02.9	+1.8
KBS				eS	Sn	20 29 38.0	-21
KBS				IAML		20 29 45.0	
	comp=Z,4.6nm,0.9s						
KBS	Kingsbay	10.54	274	eP	Pn	20 28 02.3	+1.2
KBS				eS	Sn	20 29 56.0	-3.0
SPA0	Spitsbergen Ar	10.89	268	eP	Pn	20 28 07.0	+1.1
SPA0				eS	Sn	20 30 06.2	-1.2
SPA0				IAML		20 30 14.2	
	comp=Z,4.1nm,0.9s						
SPA0	Spitsbergen Ar	10.89	268	eP	Pn	20 28 06.6	+0.7
SPA0				eS	Sn	20 30 02.2	-5.3
SPITS	Spitsbergen Ar	10.89	268	Pn	Pn	20 28 07.4	+1.6
	baz=34,slow=12,SNR=25						
SPITS				LR	LR	20 31 47.9	
	comp=Z,86nm,20.6s,baz=345,slow=34						
HSPB	Hornsund (broa	12.05	267	eP	Pn	20 28 24.7	+2.9
HSPB				iS	Sn	20 30 36.1	+0.1
TIXI	Tiksi	15.68	122	LR	LR	20 34 13.4	
	comp=Z,34nm,18.3s,baz=7.0,slow=34						
NRIK	Noril'sk	16.31	174	Pn	Pn	20 29 18.0	-1.0
	comp=Z,0.4nm,0.3s,baz=11,slow=9.2,SNR=4.8						
NRIK				LR	LR	20 36 06.4	
	comp=Z,154nm,18.0s,baz=9.0,slow=39						
ARCES	ARCESS Array B	18.52	248	P	Pn	20 29 48.9	+2.4
	comp=Z,0.2nm,0.3s,baz=17,slow=11,SNR=5.8						
ARCES				LR	LR	20 37 17.3	
	comp=Z,69nm,21.4s,baz=354,slow=38						
RES	Resolute Bay	19.90	358	LR	LR	20 35 55.2	
	comp=Z,39nm,21.4s,baz=251,slow=31						
INK	Inuvik	25.59	31	P	P	20 30 58.2	-0.7
	comp=Z,3.7nm,1.0s,baz=349,slow=10,SNR=6.6						
INK				LR	LR	20 42 20.6	
	comp=Z,45nm,18.7s,baz=348,slow=40						
SEY	Seymchan	25.98	102	P	P	20 31 02.4	-0.2
	comp=Z,1.6nm,0.8s,baz=334,slow=6.5,SNR=6.2						
FINES	FINESS Array B	26.49	244	LR	LR	20 41 07.5	
	comp=Z,31nm,21.7s,baz=351,slow=35						
KIRV	Kirov	27.93	218	LR	LR	20 43 33.8	
	comp=Z,50nm,19.1s,baz=225,slow=39						
NOA	NORSAR Array B	27.99	259	LR	LR	20 41 56.1	
	comp=Z,14nm,18.4s,baz=325,slow=35						
ILAR	Eielson Array	28.49	43	P	P	20 31 26.3	+1.3
	comp=Z,0.1nm,0.4s,baz=354,slow=7.3,SNR=1.7						
ILAR				LR	LR	20 44 20.0	
	comp=Z,36nm,18.2s,baz=64,slow=40						
MA2	Magadan	29.19	104	LR	LR	20 42 46.6	
	comp=Z,34nm,18.2s,baz=108,slow=36						
ZALV	Zalesovo Beam	31.75	178	LR	LR	20 45 30.3	
	comp=Z,49nm,19.4s,baz=200,slow=38						
YKA	Yellowknife Ar	31.98	15	P	P	20 31 54.7	-1.2
	comp=Z,0.1nm,0.4s,baz=21,slow=26,SNR=2.5						
YKA				LR	LR	20 44 49.7	
	comp=Z,40nm,18.9s,baz=0.0,slow=36						
KURBB	Kurchatov Arra	35.09	185	P	P	20 32 23.0	0.0
	comp=Z,0.3nm,0.8s,baz=19,slow=7.6,SNR=3.2						
AKTO	Aktyubinsk	35.71	207	LR	LR	20 48 12.7	
	comp=Z,72nm,18.1s,baz=8.7,slow=38						
PETK	Petropavlovsk-	36.14	99	LR	LR	20 47 55.7	
	comp=Z,18nm,18.6s,baz=62,slow=37						
SONM	Songino Array	38.28	154	P	P	20 32 48.9	-1.5
	comp=Z,0.2nm,0.4s,baz=121,slow=30,SNR=2.3						
MKAR	Makanchi Array	38.90	180	P	P	20 32 54.8	-0.8
	comp=Z,0.3nm,0.7s,baz=322,slow=10,SNR=3.9						
KBZ	Khabaz	43.08	223	LR	LR	20 55 28.9	
	comp=Z,32nm,18.4s,baz=132,slow=42						
ULM	Lac du Bonnet	44.43	359	LR	LR	20 51 16.3	
	comp=Z,52nm,19.0s,baz=174,slow=35						
BRTR	Keskin Array B	47.60	232	LR	LR	20 57 17.4	
	comp=Z,7.8nm,21.2s,baz=314,slow=40						
GEYT	Alibeck	48.19	206	LR	LR	20 56 02.0	
	comp=Z,28nm,18.3s,baz=130,slow=38						
TXAR	Lajitas Array	65.30	6	P	P	20 36 12.4	+0.4
	comp=Z,0.2nm,0.6s,baz=110,slow=15,SNR=2.0						
TORD	Torodi Ar. Bea	76.27	262	P	P	20 37 20.2	+1.4
	comp=Z,0.5nm,0.5s,baz=9.3,slow=5.5,SNR=7.6						

TAP 17 20:26:48.0,24°.83N×122°.16E,h12^{km}±1^{km},ML1.9,D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.23	319	eP	Pg	20 26 52.1	-0.8
	baz=320						
TWB1				eS	Sg	20 26 55.6	-0.6
	baz=320						

EOS1	**EOS1** baz=184	**0.28**	**185**	P	Pg	20 26 53.7	-0.1
EOS1	baz=184			*e*S	Sg	20 26 58.6	+0.9
TIPB	**Shuangxi** baz=294	**0.33**	**295**	P	Pg	20 26 55.0	+0.3
TIPB	baz=294			S	Sb	20 27 00.4	-0.8
TWC	**Suao** baz=230	**0.36**	**231**	*i* P	Pg	20 26 54.6	-0.6
TWC	baz=230			S	Sg	20 27 00.2	+0.2
NWF	**Wu-fen Shan** baz=305	**0.41**	**305**	*e*P	Pb	20 26 56.9	-0.5
NWF	baz=305			*e*S	Sg	20 27 02.2	+0.4
WFSB	**Wu-fen Shan** baz=305	**0.41**	**305**	*e*P	Pg	20 26 55.5	-0.8
WFSB	baz=305			*e*S	Sg	20 27 02.1	+0.4
TWE	**Neicheng** baz=255	**0.46**	**256**	*e*P	Pg	20 26 56.8	-0.3
TWE	baz=255			*e*S	Sg	20 27 03.0	-0.1
SLBB	**Yuanshan** baz=260	**0.48**	**261**	*e*P	Pg	20 26 57.6	+0.1
SLBB	baz=260			*e*S	Sg	20 27 03.8	0.0
ENA	**Nanau** baz=222	**0.55**	**223**	*e*P	Pg	20 26 58.2	-0.6
ENA	baz=222			*e*S	Sg	20 27 05.9	-0.2
ENTT	**Nioudou** baz=249	**0.57**	**250**	*e*P	Pb	20 27 00.1	+0.2
ENTT	baz=249			*e*S	Sg	20 27 06.8	+0.1
NHDH	**Xindian Distri** baz=282	**0.59**	**283**	*e*P	Pg	20 26 59.5	0.0
NHDH	baz=282			*e*S	Sg	20 27 06.8	-0.4
NWLT	**Wulai** baz=264	**0.60**	**265**	*e*P	Pb	20 27 00.3	-0.1
NWLT	baz=264			*e*S	Sg	20 27 07.0	-0.5
YM01	**YM01** baz=300	**0.62**	**301**	*e*P	Pg	20 26 59.8	-0.2
YM01	baz=300			*e*S	Sg	20 27 07.8	-0.4
YM08	**YM08** baz=304	**0.62**	**305**	*e*P	Pg	20 26 59.9	-0.3
YM08	baz=304			*e*S	Sg	20 27 08.6	+0.2
YM10	**YM10** baz=300	**0.63**	**301**	*e*P	Pg	20 26 59.6	-0.7
YM10	baz=300			*e*S	Sg	20 27 08.5	0.0
NDT	**Datong Townshi** baz=248	**0.63**	**249**	*e*P	Pb	20 27 00.8	-0.2
NDT	baz=248			*e*S	Sg	20 27 08.5	-0.1
YM05	**YM05** baz=301	**0.63**	**302**	*e*P	Pg	20 27 00.2	-0.1
YM05	baz=301			*e*S	Sb	20 27 10.5	+0.7
YM04	**YM04** baz=299	**0.65**	**300**	*e*P	Pg	20 27 00.1	-0.5
TWY	**Chenhua** baz=311	**0.67**	**311**	*e*P	Pg	20 27 00.6	-0.5
TWY	baz=311			*e*S	Sg	20 27 10.3	+0.4
YHNB	**Yeheng** baz=257	**0.73**	**257**	P	Pb	20 27 02.7	0.0
YHNB	baz=257			*e*S	Sg	20 27 10.6	-1.1
NSK	**Sanguang** baz=257	**0.74**	**258**	*e*P	Pb	20 27 02.8	-0.2
NSK	baz=257			S	Sg	20 27 11.6	-0.6
NNSB	**Datong** baz=240	**0.81**	**240**	*e*P	Pb	20 27 04.2	+0.1
NNSB	baz=240			*e*S	Sb	20 27 16.1	+1.0
NNSB	**Datong** baz=25	**0.81**	**240**	P	Pb	20 27 04.4	+0.3
NNSH	**Datong** baz=240	**0.81**	**240**	*e*P	Pb	20 27 04.2	+0.1
NNSH	baz=240			*e*S	Sg	20 27 14.6	+0.3
NNSH	**Datong** baz=25	**0.81**	**240**	*e*P	Pb	20 27 04.3	+0.1
NNS	**Nan Shan** baz=240	**0.81**	**241**	*e*P	Pn	20 27 04.8	-0.6
NNS	baz=240			*e*S	Sb	20 27 15.6	+0.4
NNS	**Nan Shan** baz=24	**0.81**	**241**	*e*P	Pn	20 27 04.9	-0.5
NACB	**Ninganchiao** baz=217	**0.83**	**218**	P	Pg	20 27 03.3	-0.8
NACB	baz=217			S	Sg	20 27 14.4	-0.5
NACB	**Ninganchiao** baz=89	**0.83**	**218**	*e*P	Pg	20 27 03.3	-0.8
ETLH	**Xiulin Townshi** baz=224	**0.87**	**225**	P	Pg	20 27 04.4	-0.6
ETLH	baz=224			S	Sg	20 27 15.5	-0.9
ETLH	**Xiulin Townshi** baz=80	**0.87**	**225**	*e*P	Pg	20 27 04.2	-0.7
TWD	**Chiawan** baz=213	**0.91**	**214**	*e*S	Sg	20 27 16.9	-0.5
CHGB	**Renai** baz=229	**1.18**	**229**	*e*P	Pb	20 27 08.9	-1.5
CHGB	baz=229			*e*S	Sb	20 27 25.8	-0.1
ESL	**Shilin** baz=212	**1.21**	**213**	*e*P	Pn	20 27 09.4	-1.4
WHP	**Taichung City** baz=243	**1.23**	**244**	*e*P	Pn	20 27 10.2	-1.0
WHP	baz=243			*e*S	Sb	20 27 27.4	+0.2
WHP	**Taichung City** baz=290	**1.23**	**244**	*e*S	Pn	20 27 10.4	-0.8
OWD	**Renai** baz=225	**1.25**	**226**	*e*P	Pn	20 27 10.4	-1.1
OWD	baz=225			*e*S	Sb	20 27 27.7	-0.1
EGFH	**Guangfu** baz=209	**1.34**	**210**	*e*S	Sb	20 27 29.1	-1.0
VWDT	**VWDT** baz=220	**1.42**	**221**	*e*P	Pn	20 27 13.7	+0.1
VWDT	baz=220			*e*S	Sb	20 27 32.9	+0.4

TAP 17 20:26:57.8, 24°.17N×121°.25E, h12^{km}, ML1.1, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHF	**Hehuan Shan** baz=142	**0.03**	**150**	*e*P	Pg	20 27 00.4	-0.1
WHF	baz=142			*e*S	Sg	20 27 03.0	+0.6
TWT	**Tachien** baz=314	**0.10**	**321**	*e*P	Pb	20 27 01.6	-0.4
TWT	baz=314			*e*S	Sg	20 27 03.3	+0.2
TDCB	**Techi** baz=314	**0.12**	**315**	*e*P	Pb	20 27 01.9	-0.3
TDCB	baz=314			S	Sg	20 27 03.4	+0.1
CHGB	**Renai** baz=211	**0.13**	**211**	P	Pb	20 27 02.3	-0.1
CHGB	baz=211			S	Sg	20 27 04.3	+0.6
ETLH	**Xiulin Townshi** baz=80	**0.22**	**81**	*e*S	Sg	20 27 06.6	+0.9
OWD	**Renai** baz=197	**0.23**	**197**	P	Pb	20 27 03.8	-0.2
OWD	baz=197			*e*S	Sg	20 27 06.9	+0.9
NNSB	**Datong** baz=25	**0.28**	**26**	S	Sb	20 27 09.7	-0.1
NNSH	**Datong** baz=25	**0.28**	**26**	*e*S	Sb	20 27 09.6	-0.1
NNS	**Nan Shan** baz=24	**0.29**	**23**	*e*S	Sb	20 27 10.5	+0.6
WHP	**Taichung City** baz=290	**0.29**	**291**	*e*P	Pb	20 27 05.6	+0.5
NACB	**Ninganchiao** baz=89	**0.32**	**90**	*e*S	Sg	20 27 09.5	+0.9
DPDB	**Guoxing** baz=244	**0.33**	**245**	*e*P	Pb	20 27 05.9	+0.3
DPDB	baz=244			*e*S	Sb	20 27 10.4	-0.4
TWD	**Chiawan** baz=105	**0.33**	**106**	*e*P	Pb	20 27 05.6	-0.1
TWD	baz=105			*e*S	Sb	20 27 11.2	+0.2
ESL	**Shilin** baz=153	**0.40**	**155**	*e*S	Sb	20 27 12.6	-0.2
ENLB	**Shoufeng** baz=129	**0.42**	**129**	*e*P	Pb	20 27 07.2	0.0
ENLB	baz=129			*e*S	Sb	20 27 13.2	-0.3
VWDT	**VWDT** baz=193	**0.43**	**193**	*e*P	Pb	20 27 07.2	-0.2
VWDT	baz=193			*e*S	Sg	20 27 12.9	+0.9
SMLT	**Sun Moon Lake** baz=227	**0.43**	**228**	*e*P	Pb	20 27 07.3	-0.1
SMLT	baz=227			*e*S	Sb	20 27 13.2	-0.7
TYC	**Yuchr** baz=232	**0.45**	**233**	*e*P	Pg	20 27 06.7	+0.1
TYC	baz=232			*e*S	Sg	20 27 12.9	+0.3
SSLB	**Suanglung** baz=215	**0.47**	**215**	*e*P	Pb	20 27 08.1	+0.1
SSLB	baz=215			*e*S	Sb	20 27 14.8	-0.2
NDT	**Datong Townshi** baz=29	**0.49**	**29**	*e*P	Pg	20 27 07.2	-0.3
NDT	baz=29			*e*S	Sb	20 27 15.6	-0.1
NSTT	**Nanjuang** baz=334	**0.51**	**334**	*e*P	Pb	20 27 08.6	-0.1
NSTT	baz=334			*e*S	Sb	20 27 15.6	-0.5
YHNB	**Yeheng** baz=13	**0.51**	**13**	*e*P	Pg	20 27 07.9	0.0
YHNB	baz=13			*e*S	Sb	20 27 15.4	-0.8
NSK	**Sanguang** baz=12	**0.51**	**11**	*e*P	Pb	20 27 08.5	-0.4
NSK	baz=12			*e*S	Sb	20 27 16.6	+0.3
LIOB	**Emei** baz=335	**0.52**	**336**	*e*S	Sb	20 27 16.9	+0.5
ENTT	**Nioudou** baz=32	**0.55**	**32**	*e*P	Pg	20 27 08.3	-0.3

MAN 17 20:29:52.9, 9°.25N×122°.46E, h30^{km}, mb4.6, ML3.3, MS3.4, 2C-1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.77**	**83**	⇑*i*P	Pn	20 30 07.4	-0.4
SNPH				*i* S	Sb	20 30 18.2	+0.1
DCPH	**Dipolog City**	**1.11**	**127**	⇑*e*P	Pn	20 30 12.1	-0.2
GUIM	**Jordan**	**1.37**	**5**	*e*P	Pn	20 30 16.9	+0.9
GUIM				*e*S	Sn	20 30 33.2	0.0
TBP	**Tagbilaran**	**1.45**	**72**	*e*P	Pn	20 30 17.3	+0.2
TBP				*i* S	Sn	20 30 35.4	+0.2
PAGZ	**Pagadian**	**1.67**	**147**	*e*P	Pn	20 30 20.4	+0.4
PAGZ				*e*S	Sn	20 30 41.3	+0.8
LLP	**Lapu-Lapu**	**1.82**	**54**	⇓*i*P	Pn	20 30 22.9	+0.7
LLP				*i* S	Sn	20 30 45.2	+0.9
MSLP	**Maasin**	**2.52**	**70**	*e*P	Pn	20 30 33.7	+1.9
MSLP				*e*S	Sn	20 31 02.3	+0.7
OCLP	**Ormoc**	**2.77**	**50**	*e*P	Pn	20 30 35.9	+0.6
ENPP	**El Nido**	**3.56**	**303**	*e*P	Pn	20 30 46.5	+0.4

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*IDC **17** 20:30:55.4±1.2, 19°.66S×70°.56W, h0^{km}, mb3.8/3, mb1 4.0/5, mb1mx3.7/21, mbtmp3.9/5, ML3.8/2, MS2.9/3, Ms1 2.9/3, ms1mx2.7/24, Error ellipse: s-maj=41.6km s-min=28.8km az=84.0*

*GUC **17** 20:30:58.8±0.6, 19°.94S×70°.82W, h28^{km}±2^{km}, ML4.0*

ISC 17 20:30:56.0±1.5**, 19°.87S**±0°.03×**70°.78W**±0°.06**, h11**^{km}±9^{km}**, n30, σ1^{s}.13**/38**, mb3.9**/3**, 7C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.67**	**67**	⇓*i*P	**Pn**	**20 31 11.4**	**-0.2**
PSGC				*i* S	**Sn**	**20 31 21.2**	**-1.0**
TA01	**Diego Aracena**	**0.90**	**141**	⇓*i*P	**Pb**	**20 31 13.3**	**-0.3**
TA01				*i* S	**Sg**	**20 31 24.9**	**-0.2**
TA01	comp=E,8µm,0.4s			IAML		20 31 27.9	
PB11	**IPOC Station P**	**1.06**	**85**	⇑*e*P	**Pn**	**20 31 17.8**	**+0.7**
PB11				*i* S	**Sn**	**20 31 32.0**	**0.0**
PB11	comp=E,9µm,0.3s			IAML		20 31 35.2	
PATCX	**Punta Patache**	**1.12**	**148**	⇑*e*P	**Pb**	**20 31 16.9**	**-0.6**
PATCX				*i* S	**Sb**	**20 31 31.0**	**-1.1**
PB12	**IPOC Station P**	**1.32**	**19**	⇑*i*P	**Pg**	**20 31 21.9**	**+0.6**
PB12				*i* S	**Sg**	**20 31 40.3**	**+1.8**
PB12	comp=N,4µm,0.4s			IAML		20 31 44.8	
GO01	**Chusmiza**	**1.51**	**83**	⇓*i*P	**Pg**	**20 31 25.4**	**+0.3**
GO01				*i* S	**Sg**	**20 31 45.6**	**+1.0**
AP01	**Chacalluta**	**1.54**	**16**	*e*P	**Pg**	**20 31 25.4**	**-0.3**
AP01				*i* S	**Sg**	**20 31 46.7**	**+1.0**
AP01	comp=N,8µm,0.4s			IAML		20 31 55.0	
PB08	**IPOC Station P**	**1.55**	**100**	*e*P	**Pg**	**20 31 25.4**	**-0.5**
PB08				*i* S	**Sg**	**20 31 46.6**	**+0.5**
PB08	comp=N,2µm,0.2s			IAML		20 31 48.6	
PB02	**IPOC Station P**	**1.67**	**150**	⇑*i*P	**Pn**	**20 31 24.6**	**-0.7**
PB02				*i* S	**Sn**	**20 31 45.8**	**-1.0**
PB02	comp=E,4µm,0.4s			IAML		20 31 52.3	
PB01	**IPOC Station P**	**1.69**	**134**	⇑*i*P	**Pn**	**20 31 25.8**	**+0.2**
PB01				*i* S	**Sn**	**20 31 47.7**	**+0.5**
PB16	**IPOC Station P**	**1.94**	**39**	⇑*i*P	**Pg**	**20 31 32.0**	**-1.3**
PB16				*e*S	**Sg**	**20 31 58.7**	**+0.1**
PB16	comp=N,1µm,0.2s			IAML		20 32 02.1	
PB07	**IPOC Station P**	**2.03**	**156**	*e*P	**Pn**	**20 31 29.5**	**-0.9**
PB07				*e*S	**Sn**	**20 31 55.8**	**-0.1**
PB07	comp=E,1µm,0.4s			IAML		20 32 06.1	
PB03	**IPOC Station P**	**2.37**	**156**	⇑*e*P	**Pn**	**20 31 35.4**	**+0.2**
PB03				*i* S	**Sn**	**20 32 03.3**	**-1.0**
PB09	**IPOC Station P**	**2.40**	**143**	*e*P	**Pn**	**20 31 36.3**	**+0.8**
PB09				*e*S	**Sn**	**20 32 06.0**	**+1.0**
PB09	comp=E,871nm,0.5s			IAML		20 32 16.4	
LVC	**Limon Verde** comp=E,6.5nm,0.3s,baz=327,slow=8.2,SNR=14	**3.24**	**148**	Pn	**Pn**	**20 31 48.1**	**+0.9**
LVC	comp=E,15nm,0.3s,baz=359,slow=14,SNR=4.2			Sn	**Sn**	**20 32 25.9**	**-0.1**
LVC	comp=E,23nm,0.3s,baz=160,slow=11,SNR=4.6			Lg	Lg	20 32 33.8	
LPAZ	**La Paz** comp=E,1.7nm,0.3s,baz=200,slow=3.6,SNR=29	**4.36**	**36**	Pn	**Pb**	**20 32 10.9**	**-2.1**
LPAZ	comp=E,117nm,21.0s,baz=272,slow=45			LR	LR	20 33 59.0	
SIV	**San Ignacio** comp=E,1.1nm,0.3s,baz=264,slow=8.8,SNR=13	**10.01**	**69**	Pn	**Pn**	**20 33 18.8**	**-1.1**
SIV	comp=E,40nm,19.5s,baz=286,slow=40			LR	LR	20 37 29.9	
PLCA	**Paso Flores** comp=E,2.0nm,0.9s,baz=54,slow=15,SNR=2.1	**20.80**	**180**	P	Pn	20 35 41.8	+1.9
BDFB	**Brasilia** comp=E,2.7nm,0.6s,baz=238,slow=10.0,SNR=3.0	**22.08**	**83**	P	**P**	**20 35 55.7**	**+4.3**
BDFB	comp=E,80nm,20.1s,slow=42			LR	LR	20 46 06.9	
TORD	**Torodi Ar. Bea** comp=E,2.0nm,0.7s,baz=246,slow=5.3,SNR=11	**78.48**	**71**	P	**P**	**20 42 56.6**	**-1.2**
YKA	**Yellowknife Ar** comp=E,0.2nm,0.6s,baz=135,slow=4.6,SNR=5.1	**89.08**	**341**	P	**P**	**20 43 51.0**	**+0.2**
H11S2	**WAKE ISLAND Hy** baz=101,slow=74,SNR=61	**125.92**	**279**	T	T	23 09 20.0	
H11S1	**WAKE ISLAND Hy** baz=101,slow=74,SNR=30	**125.93**	**279**	T	T	23 09 22.9	
H11S3	**WAKE ISLAND Hy** baz=101,slow=74,SNR=37	**125.94**	**279**	T	T	23 09 23.4	
H11N3	**WAKE ISLAND Hy** baz=100,slow=74,SNR=18	**125.96**	**280**	T	T	23 09 24.7	
H11N2	**WAKE ISLAND Hy** baz=100,slow=74,SNR=15	**125.98**	**280**	T	T	23 09 22.1	
H11N1	**WAKE ISLAND Hy** baz=100,slow=74,SNR=3.6	**125.98**	**280**	T	T	23 09 22.6	
ZALV	**Zalesovo Beam** comp=E,0.5nm,0.5s,baz=346,slow=1.8,SNR=2.4	**141.18**	**23**	PKP	**PKPdf**	**20 50 26.5**	**0.0**
MKAR	**Makanchi Array** comp=E,1.3nm,0.7s,baz=348,slow=1.7,SNR=12	**145.28**	**33**	PKPbc	**PKPab**	**20 50 34.1**	**+0.3**
SONM	**Songino Array** comp=E,0.4nm,0.5s,baz=291,slow=0.8,SNR=5.0	**152.01**	**4**	PKPbc	**PKPbc**	**20 50 51.8**	**+0.2**

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*BGR **17** 20:55:54.9±0.3, 51°.48N×16°.10E, h1^{km}, ML3.1/13, Error ellipse: s-maj=4.4km s-min=3.3km az=16.0*

*DNK **17** 20:55:54.5±2.1, 51°.76N×15°.98E, h0^{km}±72^{km}, ML2.3, Hypocentre not reviewed by the ISC*

*IPEC **17** 20:55:54.5±0.3, 51°.45N×16°.48E, h0^{km}, ML2.6/4, Error ellipse: s-maj=3.0km s-min=1.9km az=64.0*

*VIE **17** 20:55:55.5±0.8, 51°.37N×16°.04E, h0^{km}, mb2.5/11, ml3.0/11, ms3.2/2, Error ellipse: s-maj=7.3km s-min=4.5km az=58.0   74 km WNW of Wroclaw Suspected Mining induced.*

*IDC **17** 20:55:55.6±0.9, 51°.39N×16°.09E, h0^{km}, mb1 3.6/6, mb1mx3.2/68, mbtmp3.5/6, ML2.8/5, Error ellipse: s-maj=16.3km s-min=8.4km az=100.0*

*UPP **17** 20:55:57.2±3.0, 51°.86N×15°.59E, h0^{km}, ML2.2, Suspected explosion*

ISC 17 20:55:52.5±0.7**, 51°.55N**±0°.02×**16°.15E**±0°.02**, h0**^{km}**, n78, σ1^{s}.18**/143**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz** SNR=65	**0.72**	**173**	*e*Pg	**Pg**	**20 56 06.7**	**+0.5**
KSP	SNR=7.6			*e*Sg	**Sg**	**20 56 16.0**	**+0.6**
KSP	**Ksiaz**	**0.72**	**173**	*e*Pg	**Pg**	**20 56 06.6**	**+0.5**
KSP				*i* Sg	**Sg**	**20 56 15.9**	**+0.4**
CHVC	**Chvalec**	**0.97**	**184**	*e*PG	**Pg**	**20 56 11.4**	**+0.4**
CHVC	comp=Z,163nm,0.3s			*e*SG	**Sg**	**20 56 23.8**	**+0.3**
OSTC	**Ostas**	**1.00**	**178**	*e*PG	**Pg**	**20 56 11.9**	**+0.3**
OSTC	comp=Z,127nm,0.4s			*e*SG	**Sg**	**20 56 25.0**	**+0.5**
UPC	**Upice**	**1.05**	**185**	*e*PG	**Pg**	**20 56 12.7**	**+0.1**
UPC	comp=Z,346nm,0.2s			*e*SG	**Sg**	**20 56 26.1**	**-0.1**
DPC	**Dobruska-Polom** SNR=6.8	**1.21**	**175**	*e*Pg	**Pg**	**20 56 15.4**	**-0.2**
DPC	SNR=7.0			*e*Sg	**Sg**	**20 56 31.7**	**+0.4**
DPC	**Dobruska-Polom**	**1.21**	**175**	*e*PG	**Pg**	**20 56 15.2**	**-0.4**
DPC	comp=Z,126nm,0.9s			*e*SG	**Sg**	**20 56 31.3**	**0.0**
PVCC	**Panska Ves** SNR=33	**1.43**	**225**	*e*Pg	**Pb**	**20 56 20.0**	**0.0**
PVCC	SNR=6.5			*e*Sg	**Sn**	**20 56 39.7**	**+0.5**
PVCC	**Panska Ves**	**1.43**	**225**	*e*PG	**Pn**	**20 56 19.7**	**0.0**
PVCC	comp=Z,390nm,0.3s			*e*SG	**Sb**	**20 56 38.7**	**-0.1**
KRLC	**Kraliky**	**1.53**	**165**	*e*PG	**Pn**	**20 56 21.4**	**+0.3**
KRLC	comp=Z,127nm,0.2s			*e*SG	**Sg**	**20 56 41.3**	**-0.4**
BRG	**Berggiesshubel**	**1.55**	**245**	PN	**Pn**	**20 56 21.1**	**-0.2**
BRG				PG	**Pg**	**20 56 22.1**	**0.0**
BRG	211nm,0.4s			SG	**Sg**	**20 56 42.1**	**0.0**
BRG	**Berggiesshubel** SNR=24	**1.55**	**245**	*e*Pg	**Pb**	**20 56 21.9**	**-0.1**
BRG	SNR=11			*e*Sg	**Sg**	**20 56 42.3**	**+0.2**
RUE	**Ruedersdorf** SNR=3.4	**1.73**	**303**	*e*Sg	**Sg**	**20 56 49.1**	**+1.0**
PRA	**Prague**	**1.84**	**217**	*e*PN	**Pn**	**20 56 25.6**	**+0.3**
PRA	comp=Z,78nm,0.6s			*e*SG	**Sb**	**20 56 50.2**	**-0.4**
GKP	**Gorka Klasztor** SNR=2.6	**1.84**	**21**	*e*Sg	**Sg**	**20 56 55.4**	**+3.7**
FBE	**Freiberg** SNR=3.4	**1.87**	**251**	*e*Pn	**Pb**	**20 56 27.3**	**-0.1**
FBE	SNR=6.0			*e*Sg	**Sg**	**20 56 52.5**	**+0.1**
PRU	**Pruhonice** SNR=3.9	**1.87**	**214**	*e*Pn	**Pn**	**20 56 25.8**	**0.0**
PRU	SNR=5.1			*e*Sg	**Sb**	**20 56 51.2**	**-0.3**
PRU	**Pruhonice**	**1.87**	**214**	*e*PN	**Pn**	**20 56 25.7**	**0.0**
PRU				*e*PG	**Pb**	**20 56 26.8**	**-0.7**
PRU	comp=Z,127nm,0.3s			*e*SG	**Sb**	**20 56 51.1**	**-0.3**
CLL	**Collm** SNR=5.2	**1.99**	**264**	*e*Pn	**Pn**	**20 56 27.5**	**+0.2**
CLL	SNR=4.4			*e*Sg	**Sg**	**20 56 56.6**	**+0.4**
CLL	**Collm** comp=Z,8.0nm,0.4s	**1.99**	**264**	*i* Pn	**Pn**	**20 56 27.3**	**0.0**
CLL				*i* Pg	**Pg**	**20 56 31.4**	**+0.9**
CLL				*i*		20 56 33.5	
CLL	comp=Z,73nm,0.8s			*i* Sg	**Sg**	**20 56 56.3**	**+0.1**
MORC	**Moravsky Berou** SNR=9.9	**1.99**	**153**	*e*Pn	**Pn**	**20 56 27.2**	**-0.2**
MORC	**Moravsky Berou** baz=338	**1.99**	**153**	*e*Pg	**Pn**	**20 56 27.1**	**-0.3**
MORC	comp=Z,42nm,0.2s,baz=338			*e*Sg	**Sn**	**20 56 51.2**	**-1.7**
MORC	**Moravsky Berou**	**1.99**	**153**	*e*PG	**Pn**	**20 56 27.2**	**-0.2**
MORC				*e*SG	**Sn**	**20 56 51.3**	**-1.7**
OKC	**Ostrava-Krasne** SNR=2.6	**2.14**	**143**	*e*Pn	**Pn**	**20 56 29.0**	**-0.4**
OKC	SNR=5.4			*e*Sg	**Sg**	**20 57 00.2**	**-0.8**
OKC	**Ostrava-Krasne**	**2.14**	**143**	*e*PN	**Pn**	**20 56 30.0**	**+0.6**
OKC				*e*PG	**Pb**	**20 56 32.6**	**+0.6**
OKC	comp=Z,59nm,0.7s			*e*SG	**Sg**	**20 57 01.0**	**0.0**
VRAC	**Vranov** SNR=5.0	**2.27**	**173**	*e*Pn	**Pn**	**20 56 31.9**	**+0.7**
VRAC	SNR=3.5			*e*Sg	**Sg**	**20 57 04.2**	**-1.0**
VRAC	**Vranov** comp=Z,3.7nm,0.3s,baz=352,slow=15,SNR=11	**2.27**	**173**	Pn	**Pn**	**20 56 32.0**	**+0.9**
VRAC	comp=Z,3.7nm,0.3s,baz=344,slow=15,SNR=4.8			Pg	**Pg**	**20 56 35.6**	**-0.3**
VRAC	comp=Z,8.4nm,0.3s,baz=256,slow=20,SNR=9.7			Lg	Lg	20 57 03.2	
VRAC	**Vranov** baz=358	**2.27**	**173**	*e*Pn	**Pn**	**20 56 31.3**	**+0.1**
VRAC	comp=Z,32nm,0.3s,baz=358			*e*Sg	**Sb**	**20 57 01.7**	**-1.0**
VRAC	**Vranov**	**2.27**	**173**	*e*PN	**Pn**	**20 56 31.3**	**+0.1**
VRAC				*e*SG	**Sb**	**20 57 01.8**	**-1.0**
TREC	**Trest** SNR=2.7	**2.30**	**191**	*e*Sg	**Sg**	**20 57 05.5**	**-0.8**
TREC	**Trest**	**2.30**	**191**	*e*PN	**Pn**	**20 56 32.4**	**+0.7**
TREC				*e*PG	**Pb**	**20 56 35.2**	**+0.4**
TREC	comp=Z,62nm,0.2s			*e*SG	**Sg**	**20 57 05.2**	**-1.1**
PBCC	**Pribram**	**2.32**	**217**	*e*PG	**Pb**	**20 56 35.6**	**+0.5**
PBCC				*e*SG	**Sb**	**20 57 05.4**	**+1.1**
KRUC	**Moravsky** baz=1.2	**2.50**	**176**	*e*Pn	**Pn**	**20 56 35.1**	**+0.7**
KRUC	comp=Z,30nm,0.3s,baz=1.2			*e*Sg	**Sb**	**20 57 09.3**	**-0.2**
KRUC	**Moravsky**	**2.50**	**176**	*e*PN	**Pn**	**20 56 35.1**	**+0.7**
KRUC				*e*SG	**Sb**	**20 57 09.3**	**-0.2**
TANN	**Tannenbergstha** SNR=4.7	**2.60**	**245**	*e*Pn	**Pn**	**20 56 35.5**	**-0.2**
OJC	**Ojcow** SNR=3.4	**2.67**	**119**	*e*Pn	**Pg**	**20 56 43.3**	**-0.2**
OJC	SNR=3.2			*e*Sg	**Sg**	**20 57 19.3**	**+1.2**
OJC	**Ojcow**	**2.67**	**119**	*e*Pg	**Pg**	**20 56 43.5**	**0.0**
OJC				*e*Sg	**Sg**	**20 57 19.3**	**+1.2**
NKC	**Novy Kostel** SNR=4.7	**2.69**	**242**	*e*Pn	**Pn**	**20 56 37.0**	**0.0**
NKC	SNR=7.5			*e*Sg	**Sg**	**20 57 20.7**	**+1.8**
NKC	**Novy Kostel**	**2.69**	**242**	*e*PN	**Pn**	**20 56 37.3**	**+0.3**
NKC				*e*PG	**Pb**	**20 56 42.6**	**+1.1**
NKC	comp=Z,132nm,0.4s			*e*SG	**Sg**	**20 57 19.2**	**+0.3**
GUNZ	**Gunzen** SNR=9.5	**2.69**	**245**	*e*Sg	**Sg**	**20 57 18.9**	**-0.1**

WERN	Wernitzgruen	2.71	244	*e*Pn	Pn	20 56 37.7	+0.5
	SNR=5.8						
PLN	Plauen	2.74	249	*e*Sg	Sg	20 57 19.6	-0.8
	SNR=9.5						
NEUB	Neuenburg	2.76	265	*e*Sg	Sg	20 57 21.3	+0.1
	SNR=5.9						
JAVC	Velka Javorina	2.87	160	*e*Pn	Pn	20 56 39.6	+0.1
	baz=344						
JAVC				*e*Sg	Sb	20 57 19.5	-0.6
	comp=Z,20nm,0.4s,baz=344						
JAVC	Velka Javorina	2.87	160	*e*PN	Pn	20 56 39.6	+0.1
JAVC				*e*SG	Sb	20 57 19.6	-0.6
KHC	Kasperske Hory	2.93	215	*e*PN	Pn	20 56 40.7	+0.4
KHC				*e*PG	Pb	20 56 46.5	+0.9
KHC				*e*SN	Sn	20 57 14.5	-1.8
KHC				*e*SG	Sg	20 57 24.8	-1.8
	comp=Z,33nm,0.4s						
MOX	Moxa	3.00	254	*e*Pn	Pn	20 56 41.9	+0.7
	SNR=2.3						
MOX				*e*Sg	Sg	20 57 28.9	+0.1
	SNR=5.8						
MANZ	Manzenberg	3.01	240	*e*Sg	Sg	20 57 28.3	-0.8
	SNR=5.3						
ROTZ	Rotzenmuhle	3.08	236	*e*Pn	Pn	20 56 42.5	+0.1
	SNR=4.6						
GEC2	GERESS Array S	3.13	211	*e*Pn	Pn	20 56 43.9	+0.8
	SNR=5.4						
GEC2				*e*Sg	Sb	20 57 30.3	+2.4
	SNR=3.1						
GERES	GERESS Array B	3.13	211	Pn	Pn	20 56 44.0	+0.8
	comp=Z,1.4nm,0.3s,baz=30,slow=12,SNR=27						
GERES				Pg	Pb	20 56 49.7	+0.6
	comp=Z,2.6nm,0.3s,baz=26,slow=16,SNR=17						
GERES				Lg	Lg	20 57 28.8	
	comp=Z,9.1nm,0.3s,baz=32,slow=28,SNR=15						
SMOL	Smolenice	3.15	164	*e*PN	Pn	20 56 38.2	-5.1
SMOL				*e*PG	Pg	20 56 54.2	+1.4
SMOL				*e*SG	Sg	20 57 33.7	0.0
WET	Wettzell	3.20	222	*e*Pn	Pn	20 56 44.2	+0.3
	SNR=2.4						
WET				*e*Sg	Sg	20 57 33.3	-1.7
	SNR=2.7						
LANS	Liptovska Anna	3.21	137	*e*PN	Pn	20 56 45.5	+1.3
LANS				*e*PG	Pg	20 56 55.0	+1.1
LANS				*e*SG	Sg	20 57 36.0	+0.5
MODS	Modra-Piesok	3.27	167	*e*PN	Pn	20 56 45.0	+0.1
MODS				*e*PG	Pg	20 56 54.5	-0.5
MODS				*e*SG	Sg	20 57 35.2	-2.1
ZST	Bratislava	3.42	169	*e*SG	Sg	20 57 40.1	-2.1
VYHS	Vyhne	3.52	149	*e*PN	Pn	20 56 47.9	-0.5
VYHS				*e*PG	Pg	20 57 01.2	+1.4
VYHS				*e*SG	Sg	20 57 43.6	-1.8
CONA	Conrad Observa	3.63	183	*e*Pn	Pn	20 56 50.8	+0.8
	comp=Z,1.2nm,0.2s						
CONA				Sg	Sg	20 57 46.8	-2.3
	comp=Z,26nm,0.3s						
BSD	Bornholm Skovb	3.64	349	*i* P	Pn	20 56 49.2	-0.8
BSD				*i* S	Sn	20 57 29.2	-4.5
BSD	Bornholm Skovb	3.64	349	*i* P		20 56 49.2	
BSD				*i* S		20 57 29.2	
BSD				IAML		20 57 59.6	
	comp=Z,4.2nm,0.3s						
MOA	Molln	3.91	199	*i* Pn	Pn	20 56 54.0	+0.3
	comp=Z,3.1nm,0.1s,SNR=15						
MOA				Sg	Sg	20 57 56.7	-1.2
	comp=Z,22nm,0.5s						
ARSA	Arzberg	4.33	186	*e*Pn	Pn	20 57 00.3	+0.8
	comp=Z,1.1nm,0.2s						
ARSA				Sg	Sg	20 58 12.4	+1.0
	comp=Z,16nm,0.5s						
LUNU	Lund	4.39	340	P	Pn	20 56 59.2	-1.1
LUNU				S	Sn	20 57 47.7	-4.4
BLEU	Blekinge	4.76	358	P	Pn	20 57 04.8	-0.6
BLEU				S	Sn	20 57 55.5	-5.8
KBA	Koelnbreinsper	4.84	203	*e*Pn	Pn	20 57 06.7	0.0
	comp=Z,2.0nm,0.3s						
KBA				Sg	Sg	20 58 26.9	-1.0
	comp=Z,9.2nm,0.4s						
BJUU	Bjuv	4.89	339	P	Pn	20 57 05.7	-1.5
OBKA	Obir	5.16	192	Sg	Sg	20 58 38.6	+0.5
	comp=Z,4.5nm,0.4s						
MOTA	Moosalm	5.35	220	*i* Pn	Pn	20 57 15.0	+1.4
	comp=Z,0.5nm,0.1s						
MOTA				*e*Sn	Sn	20 58 14.9	-1.0
	comp=Z,5.4nm,0.4s						
ABTA	Abfaltersbach	5.37	208	*i* Pn	Pn	20 57 14.9	+1.0
	comp=Z,0.9nm,0.4s						
ABTA				*e*Sn	Sn	20 58 17.6	+1.2
	comp=Z,0.9nm,0.3s						
SQTA	Sankt Quirin	5.41	219	*i* Pn	Pn	20 57 15.2	+0.8
	comp=Z,0.9nm,0.1s						
SQTA				*e*Sn	Sn	20 58 17.2	-0.2
	comp=Z,2.4nm,0.2s						
OSKU	Oskarshamn	5.65	360	P	Pn	20 57 17.3	-0.4
OSKU	Oskarshamn	5.65	360	P		20 57 17.3	
FETA	Feichten	5.76	220	*e*Pn	Pn	20 57 20.2	+1.0
	comp=Z,0.6nm,0.4s						
BYXU	Byxelkrok	5.77	5	P	Pn	20 57 19.1	-0.1
BYXU	Byxelkrok	5.77	5	P		20 57 19.1	
ASPU	Aespoe	5.88	2	P	Pn	20 57 20.8	0.0
ASPU	Aespoe	5.88	2	P		20 57 20.8	
VSTU	Vaestervik	6.12	2	P	Pn	20 57 24.1	+0.1
VSTU	Vaestervik	6.12	2	P		20 57 24.1	
DAVOX	Davos/Dischmat	6.30	223	Pn	Pn	20 57 28.2	+1.4
	comp=Z,0.3nm,0.3s,baz=338,slow=21,SNR=1.8						
HFS	Hagfors	8.71	352	Pn	Pn	20 58 04.3	+4.7
	comp=Z,0.1nm,0.3s,baz=168,slow=14,SNR=2.3						
FINES	FINESS Array B	11.31	25	Pn	Pn	20 58 34.4	-0.7
	comp=Z,0.1nm,0.3s,baz=207,slow=11,SNR=5.5						
ARCES	ARCESS Array B	18.57	10	P	Pn	21 00 14.2	+3.4
	baz=195,slow=12,SNR=1.9						

PGC 17 21:03:30.8±9.6, 54°.61N×139°.64W, h10km, ML3.6/2, 382km Wsw of Sitka, Ak West Of Vancouver Island, West of Vancouver Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIB	Van Inlet	4.41	105	Pn	Pn	21 04 38.0	+0.2
DIB	Dawson Inlet,	4.47	106	Pn	Pn	21 04 37.8	-0.7
PNL	Peninsula	5.07	1	Pn	Pn	21 04 45.4	-1.4
PCA	Pinnacle	5.51	357	Pn	Pn	21 04 51.2	-1.7
YUK7	Dusty Glacier	5.99	7	Pn	Pn	21 04 59.3	-0.3
GRNC	Granite Creek	6.24	350	Pn	Pn	21 05 00.6	-2.4
HYT	Haines Junctio	6.33	10	Pn	Pn	21 05 03.1	-1.2
YUK6	Outpost Mounta	6.39	6	Pn	Pn	21 05 04.8	-0.2
CTGM	Chitina Glacie	6.43	353	Pn	Pn	21 05 03.6	-2.0
KIAG	Kiagna River	6.49	348	Pn	Pn	21 05 03.9	-2.6
WHY	Whitehorse	6.58	21	Pn	Pn	21 05 05.0	-2.6
BALM	Baldy	6.60	348	Pn	Pn	21 05 05.8	-2.1
YUK5	Granite Creek	6.61	8	Pn	Pn	21 05 07.8	-0.2
YUK4	Talbot Arm	6.77	4	Pn	Pn	21 05 11.6	+1.3
YUK3	Moose Creek	7.20	357	Pn	Pn	21 05 16.4	+0.3
YUK2	White River	7.22	355	Pn	Pn	21 05 16.2	-0.2
YUK1	Sand Pete Hill	7.58	357	Pn	Pn	21 05 21.4	+0.1
PAX	Paxson	8.91	343	Pn	Pn	21 05 36.3	-3.2
DAWY	Dawson	9.48	1	Pn	Pn	21 05 47.0	-0.3

IDC 17 21:04:18.5±1.1, 0°.15S×132°.57E, h0km, mb3.6/5, mb1 3.8/7, mb1mx3.6/35, mbtmp3.7/7, ML3.7/2, Error ellipse: s-maj=26.9km s-min=18.9km az=95.0

DJA 17 21:04:29.5±0.9, 1°S±14°×13°2E±1°0, h55km±24km, M3.4/5, MLv3.4/5

ISC 17 21:04:23.9±1.0, 0°.18S±0°.10×132°.45E±0°.10, h35km, n10, σ2.17/12, mb3.8/5, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	1.37	240	Pn	Pn	21 04 46.7	+0.2
	28nm,0.3s,baz=39,slow=15,SNR=30						
SIJI				Sn	Sn	21 05 07.7	+4.3
	27nm,0.3s,baz=290,slow=21,SNR=7.3						
SWI	Sorong	1.37	240	P	Pn	21 04 46.8	+0.3
SWI				S	Sn	21 04 58.9	-4.5
FAKI	Fak Fak	2.73	184	P	Pn	21 05 05.9	+0.6
FITZ	Fitzroy Crossi	19.03	200	P	P	21 08 43.2	+0.3
	0.1nm,0.3s,baz=0.2,slow=0.4,SNR=1.6						
WRA	Warramunga Arr	19.73	175	P	P	21 08 49.3	-1.4
	0.3nm,0.3s,baz=352,slow=11,SNR=16						
ASAR	Alice Springs	23.39	177	P	P	21 09 28.9	-0.8
	2.5nm,0.5s,baz=353,slow=7.5,SNR=54						
STKA	Stephens Creek	32.70	165	P	P	21 10 53.4	+0.3
	0.9nm,0.6s,baz=339,slow=4.3,SNR=3.1						
SONM	Songino Array	52.91	338	P	P	21 13 36.6	-0.1
	0.4nm,0.7s,baz=131,slow=5.9,SNR=2.4						
MKAR	Makanchi Array	64.02	324	P	P	21 14 54.3	+0.2
	0.5nm,0.6s,baz=111,slow=7.6,SNR=5.4						
ILAR	Eielson Array	86.17	25	P	P	21 17 01.3	0.0
	0.3nm,1.0s,baz=267,slow=3.5,SNR=1.3						

PGC 17 21:04:33.6±15.0, 54°.43N×139°.93W, h10km, ML3.7/4, 410km Wsw of Sitka, Ak West Of Vancouver Island, West of Vancouver Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIB	Van Inlet	4.53	102	Pn	Pn	21 05 43.5	+1.3
DIB	Dawson Inlet,	4.58	103	Pn	Pn	21 05 43.5	+0.7
HG1B	Mitchell Dam	4.87	105	Pn	Pn	21 05 45.1	-1.7
PNL	Peninsula	5.26	3	Pn	Pn	21 05 51.3	-0.9
HG3B	Hotspring	5.39	107	Pn	Pn	21 05 52.6	-1.3
PCA	Pinnacle	5.68	358	Pn	Pn	21 05 56.7	-1.4
YUK7	Dusty Glacier	6.19	8	Pn	Pn	21 06 05.0	-0.1
GRNC	Granite Creek	6.39	352	Pn	Pn	21 06 06.5	-1.5
HYT	Haines Junctio	6.54	10	Pn	Pn	21 06 09.1	-0.8
YUK6	Outpost Mounta	6.58	7	Pn	Pn	21 06 10.5	0.0
CTGM	Chitina Glacie	6.59	354	Pn	Pn	21 06 09.1	-1.5
KIAG	Kiagna River	6.64	350	Pn	Pn	21 06 08.9	-2.4
BALM	Baldy	6.75	350	Pn	Pn	21 06 10.6	-2.1
WHY	Whitehorse	6.81	21	Pn	Pn	21 06 10.5	-3.0
YUK5	Granite Creek	6.81	8	Pn	Pn	21 06 13.7	+0.1
PTPK	Patty Peak	6.91	350	Pn	Pn	21 06 13.8	-1.1
YUK4	Talbot Arm	6.97	5	Pn	Pn	21 06 17.4	+1.6
YUK3	Moose Creek	7.37	358	Pn	Pn	21 06 21.8	+0.4
YUK2	White River	7.39	357	Pn	Pn	21 06 21.9	+0.3
YUK1	Sand Pete Hill	7.75	358	Pn	Pn	21 06 27.0	+0.5
PAX	Paxson	9.03	344	Pn	Pn	21 06 42.3	-1.6
DAWY	Dawson	9.67	1	Pn	Pn	21 06 52.9	+0.3

IDC 17 21:31:26.2±5.6, 3°.92S×132°.81E, h0km, mb3.8/1, mb1 3.6/3, mb1mx3.4/21, mbtmp3.5/3, ML3.2/2, Error ellipse: s-maj=355.2km s-min=29.4km az=75.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.00	175	Pn	Pn	21 35 12.9	+0.1
	0.1nm,0.3s,baz=356,slow=13,SNR=4.8						
WRA				Sn	Sn	21 37 56.8	-14
	0.1nm,0.3s,baz=359,slow=24,SNR=5.8						
ASAR	Alice Springs	19.66	177	P	P	21 35 56.9	0.0
	0.1nm,0.3s,baz=351,slow=12,SNR=9.6						
MKAR	Makanchi Array	67.26	325	P	P	21 42 22.7	0.0
	0.6nm,0.5s,baz=105,slow=7.5,SNR=11						

VIE 17 21:58:07.2±0.9, 51°.45N×16°.38E, h0km, mb2.8/15, ml3.3/14, ms3.7/2, Error ellipse: s-maj=9.3km s-min=4.8km az=42.0 59 km NW of Wroclaw Suspected Mining induced.

IPEC 17 21:58:07.7±0.3, 51°.48N×16°.29E, h0km, ML2.8/4, Error ellipse: s-maj=3.4km s-min=1.6km az=58.0

LDG 17 21:58:08.1±0.2, 51°.40N×16°.18E, h1km, Ml3.4/6, Error ellipse: s-maj=3.8km s-min=3.5km az=107.0, Suspected Mining induced.

IDC 17 21:58:08.2±0.6, 51°.42N×16°.11E, h0km, mb3.4/2, mb1 3.6/10, mb1mx3.4/60, mbtmp3.4/10, ML3.1/8, Error ellipse: s-maj=13.0km s-min=5.8km az=100.0

BGR 17 21:58:09.5±0.3, 51°.43N×16°.17E, h1km, ML3.3/12, Error ellipse: s-maj=3.3km s-min=2.2km az=30.0

DNK 17 21:58:13.4±2.6, 51°.80N×14°.98E, h0km±145km, ML2.5, Hypocentre not reviewed by the ISC

UPP 17 21:58:15.6±3.4, 52°.04N×16°.69E, h0km, ML2.9, Suspected explosion

ISC 17 21:58:06.3±0.6, 51°.50N±0°.03×16°.15E±0°.02, h0km, n109, σ1.96/188, 4C-3D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.66	172	*e*Pg	Pg	21 58 20.4	+1.4
	SNR=117						
KSP				*e*Sg	Sg	21 58 28.3	+0.7
	SNR=3.8						
KSP	Ksiaz	0.66	172	*i* Pg	Pg	21 58 20.3	+1.4
KSP				*e*Sg	Sg	21 58 28.3	+0.7
CHVC	Chvalec	0.91	184	*e*PG	Pg	21 58 25.0	+1.2
CHVC				*e*SG	Sg	21 58 36.3	+0.7
	comp=Z,194nm,0.5s						
OSTC	Ostas	0.94	178	*e*PG	Pg	21 58 25.8	+1.4
OSTC				*e*SG	Sg	21 58 37.3	+0.7
	comp=Z,173nm,0.6s						
UPC	Upice	1.00	185	*e*PG	Pg	21 58 26.6	+1.2
UPC				*e*SG	Sg	21 58 38.9	+0.6
	comp=Z,427nm,0.5s						
DPC	Dobruska-Polom	1.15	175	*e*Pg	Pg	21 58 29.2	+0.8
	SNR=95						
DPC				*e*Sg	Sg	21 58 44.7	+1.4
	SNR=4.8						
DPC	Dobruska-Polom	1.15	175	*e*PG	Pg	21 58 29.2	+0.8
DPC				*e*SG	Sg	21 58 43.9	+0.5
	comp=Z,164nm,0.5s						
PVCC	Panska Ves	1.40	226	*e*Pn	Pn	21 58 34.2	+1.1
	SNR=7.0						
PVCC				*e*Pg	Pb	21 58 35.0	+1.7
	SNR=128						
PVCC	Panska Ves	1.40	226	*e*PG	Pn	21 58 34.3	+1.3
PVCC				*e*SG	Sg	21 58 52.9	+1.8
	comp=Z,686nm,0.3s						
KRLC	Kraliky	1.48	164	*e*PG	Pn	21 58 34.9	+0.6
KRLC				*e*SG	Sg	21 58 53.3	-0.5
	comp=Z,296nm,0.9s						
BRG	Berggiesshubel	1.53	247	PN	Pn	21 58 35.5	+0.7
BRG				PG	Pg	21 58 37.3	+1.8
BRG				SG	Sg	21 58 57.5	+2.2
	267nm,0.5s						
BRG	Berggiesshubel	1.53	247	*e*Pn	Pn	21 58 35.6	+0.7
	SNR=3.4						
BRG				*e*Pg	Pb	21 58 37.0	+1.5
	SNR=36						
BRG				*e*Sg	Sg	21 58 57.7	+2.4
	SNR=5.8						
RUE	Ruedersdorf	1.77	305	*e*Pn	Pn	21 58 39.7	+1.6
	SNR=7.3						
RUE				*e*Sg	Sg	21 59 07.8	+4.7
	SNR=3.4						
PRA	Prague	1.80	218	*e*PG	Pn	21 58 40.1	+1.5
PRA				*e*SG	Sb	21 59 04.4	+1.2
	comp=Z,155nm,0.6s						
PRU	Pruhonice	1.83	215	*e*Pn	Pn	21 58 39.7	+0.7
	SNR=6.2						
PRU				*e*Sg	Sb	21 59 05.6	+1.6
	SNR=4.0						
PRU	Pruhonice	1.83	215	*e*PN	Pn	21 58 40.2	+1.2
PRU				*e*PG	Pb	21 58 41.5	+0.9
PRU				*e*SG	Sb	21 59 05.2	+1.2
	comp=Z,146nm,0.4s						
FBE	Freiberg	1.85	253	*e*Pn	Pb	21 58 41.9	+0.8
	SNR=2.4						
FBE				*e*Sg	Sg	21 59 07.7	+1.8
	SNR=5.4						
MORC	Moravsky Berou	1.94	152	*e*Pn	Pn	21 58 41.0	+0.5
	SNR=34						
MORC				*e*Sg	Sb	21 59 08.2	+1.0
	SNR=3.9						
MORC	Moravsky Berou	1.94	152	⇓P	Pn	21 58 41.1	+0.5
MORC	Moravsky Berou	1.94	152	*e*Pn	Pn	21 58 41.0	+0.5
	baz=335						
MORC				*e*Sg	Sn	21 59 06.7	+1.1
	66nm,0.4s,baz=335						
MORC	Moravsky Berou	1.94	152	*e*PN	Pn	21 58 41.0	+0.5
MORC				*e*SG	Sn	21 59 06.7	+1.1
CLL	Collm	1.98	266	*e*Pn	Pn	21 58 43.2	+2.1
	SNR=8.6						
CLL	Collm	1.98	266	*i* Pn	Pn	21 58 43.5	+2.4
CLL				*i* Pg	Pg	21 58 46.4	+2.1
CLL				*i*		21 58 48.4	
CLL				*i* Sg	Sg	21 59 14.6	+4.6
	comp=Z,109nm,0.3s						
OKC	Ostrava-Krasne	2.09	142	*e*Pn	Pn	21 58 43.2	+0.6
	SNR=2.1						
OKC				*e*Sg	Sg	21 59 13.5	0.0
	SNR=4.3						
OKC	Ostrava-Krasne	2.09	142	*e*PG	Pb	21 58 46.2	+1.1
OKC				*e*SG	Sb	21 59 12.9	+1.3
	comp=Z,149nm,0.6s						
VRAC	Vranov	2.21	173	*e*Pn	Pn	21 58 45.5	+1.2
	SNR=13						
VRAC	Vranov	2.21	173	Pn	Pn	21 58 45.2	+0.9
	comp=Z,5.9nm,0.3s,baz=341,slow=15,SNR=30						
VRAC				Pg	Pb	21 58 46.4	-0.8
	comp=Z,8.7nm,0.3s,baz=348,slow=16,SNR=31						
VRAC				Lg	Lg	21 59 16.1	
	comp=Z,22nm,0.3s,baz=106,slow=20,SNR=8.0						
VRAC	Vranov	2.21	173	⇑P	Pn	21 58 46.0	+1.7
VRAC	Vranov	2.21	173	*e*Pn	Pn	21 58 45.6	+1.3
	baz=355						
VRAC				*e*Sg	Sb	21 59 16.1	+1.0
	comp=Z,41nm,0.2s,baz=355						
VRAC	Vranov	2.21	173	*e*PN	Pn	21 58 45.7	+1.4
VRAC				*e*SG	Sb	21 59 16.2	+1.1
TREC	Trest	2.25	191	*e*Pn	Pn	21 58 46.2	+1.4
	SNR=15						
TREC				*e*Sg	Sb	21 59 18.6	+2.4
	SNR=4.3						
TREC	Trest	2.25	191	*e*PN	Pn	21 58 46.0	+1.2
TREC				*e*PG	Pb	21 58 48.6	+0.8
TREC				*e*SG	Sb	21 59 18.4	+2.3
	comp=Z,123nm,0.3s						
PBCC	Pribram	2.28	218	*e*PN	Pn	21 58 46.3	+1.1
PBCC				*e*PG	Pb	21 58 49.7	+1.4
PBCC				*e*SG	Sb	21 59 19.4	+2.4
KRUC	Moravsky	2.44	176	*e*Pn	Pn	21 58 48.9	+1.5
	SNR=7.0						
KRUC	Moravsky	2.44	176	*e*Pn	Pn	21 58 48.7	+1.2
	baz=358						
KRUC				*e*Sg	Sb	21 59 23.6	+1.8
	comp=Z,28nm,0.3s,baz=358						
KRUC	Moravsky	2.44	176	*e*PN	Pn	21 58 48.7	+1.2
KRUC				*e*SG	Sb	21 59 23.6	+1.8
TANN	Tannenbergstha	2.58	247	*e*Pn	Pn	21 58 50.8	+1.4
	SNR=13						
TANN				*e*Sg	Sg	21 59 29.7	+0.7
	SNR=5.3						
OJC	Ojcow	2.64	118	*e*Pn	Pn	21 58 50.9	+0.7
	SNR=5.2						
OJC				*e*Sg	Sg	21 59 34.1	+3.0
	SNR=3.0						
OJC	Ojcow	2.64	118	*e*Pn	Pn	21 58 49.5	-0.7
OJC				*e*Pg	Pg	21 58 57.0	+0.1
OJC				*e*Sn	Sn	21 59 20.6	-2.2
OJC				*e*Sg	Sg	21 59 32.8	+1.7
NKC	Novy Kostel	2.67	243	*e*Pn	Pn	21 58 52.2	+1.6
	SNR=14						
NKC	Novy Kostel	2.67	243	*e*PN	Pn	21 58 52.2	+1.6
NKC				*e*PG	Pb	21 58 57.2	+2.2
NKC				*e*SG	Sg	21 59 32.9	+0.9
	comp=Z,172nm,0.3s						
GUNZ	Gunzen	2.67	246	*e*Pn	Pn	21 58 52.3	+1.6
	SNR=4.8						
WERN	Wernitzgruen	2.68	245	*e*Pn	Pn	21 58 52.5	+1.8
	SNR=13						
PLN	Plauen	2.72	250	*e*Pn	Pn	21 58 52.7	+1.4
	SNR=3.2						
NEUB	Neuenburg	2.76	266	*e*Pg	Pg	21 59 00.9	+1.7
	SNR=9.2						
JAVC	Velka Javorina	2.82	159	*e*Sg	Sb	21 59 34.4	+1.9
	comp=Z,66nm,0.7s,baz=342						
JAVC	Velka Javorina	2.82	159	*e*PN	Pn	21 58 55.1	+2.5
JAVC				*e*SG	Sb	21 59 34.5	+1.9
KHC	Kasperske Hory	2.89	216	*e*Pn	Pn	21 58 55.1	+1.5
	SNR=13						
KHC	Kasperske Hory	2.89	216	*e*PN	Pn	21 58 54.7	+1.1
KHC				*e*PG	Pb	21 58 59.8	+1.1
KHC				*e*SN	Sn	21 59 29.5	+0.4
KHC				*e*SG	Sg	21 59 38.8	-0.3
	comp=Z,45nm,0.3s						
MANZ	Manzenberg	2.98	241	*e*Pn	Pn	21 58 56.7	+1.7
	SNR=6.4						
MOX	Moxa	2.99	255	*e*Pn	Pn	21 58 56.8	+1.8
	SNR=3.6						
MOX				*e*Sg	Sg	21 59 45.6	+3.3
	SNR=9.3						
ROTZ	Rotzenmuhle	3.05	237	*e*Pn	Pn	21 58 57.4	+1.6
	SNR=20						
ROTZ				*e*Sg	Sg	21 59 45.7	+1.3
	SNR=5.2						
GEC2	GERESS Array S	3.09	212	*e*Pn	Pn	21 58 58.2	+1.8
	SNR=8.7						
GERES	GERESS Array B	3.09	212	Pn	Pn	21 58 57.5	+1.1
	comp=Z,1.5nm,0.3s,baz=31,slow=13,SNR=31						
GERES				Pg	Pb	21 59 04.2	+2.0
	comp=Z,9.3nm,0.3s,baz=33,slow=17,SNR=45						
GERES				Lg	Lg	21 59 44.1	
	comp=Z,23nm,0.3s,baz=26,slow=28,SNR=3.8						
SMOL	Smolenice	3.10	164	*e*PG	Pg	21 59 07.2	+1.5
SMOL				*e*SG	Sg	21 59 47.6	+1.8
SMOL				*e*LG	Lg	21 59 58.2	
WET	Wettzell	3.16	223	*e*Pn	Pn	21 58 58.7	+1.4
	SNR=12						
LANS	Liptovska Anna	3.17	137	*e*PN	Pn	21 58 58.5	+1.1
LANS				*e*PG	Pg	21 59 08.0	+1.0
LANS				*e*SG	Sg	21 59 50.9	+2.9
LANS				*e*LG	Lg	21 59 57.5	
MODS	Modra-Piesok	3.21	167	*e*PN	Pn	21 59 00.0	+2.0
MODS				*e*PG	Pg	21 59 08.4	+0.6
MODS				*e*SG	Sg	21 59 51.8	+2.4
MODS				*e*LG	Lg	22 00 00.8	
ZST	Bratislava	3.36	169	*e*PN	Pn	21 58 59.2	-0.9
ZST				*e*PG	Pg	21 59 09.8	-0.9
ZST				*e*SG	Sg	21 59 54.2	-0.1
ZST				*e*LG	Lg	22 00 08.2	
NIE	Niedzica	3.37	127	*e*Pg	Pg	21 59 13.0	+2.1
NIE				*e*Sg	Sg	21 59 58.5	+3.9
VYHS	Vyhne	3.47	149	*e*PN	Pn	21 59 02.3	+0.7
VYHS				*e*PG	Pg	21 59 13.6	+0.8
VYHS				*e*SG	Sg	21 59 59.0	+1.3
CONA	Conrad Observa	3.58	183	*e*Pn	Pn	21 59 04.6	+1.5
	comp=Z,1.2nm,0.2s,SNR=9.7						
CONA				Sg	Sg	22 00 00.7	-0.5
	comp=Z,64nm,0.4s						
CLZ	Clausthal	3.62	278	*e*Pn	Pn	21 59 06.2	+2.6
	SNR=5.5						
BSD	Bornholm Skovb	3.70	349	*i* P	Pn	21 59 05.8	+1.1
BSD				*i* S	Sn	21 59 46.8	-2.1
BSD	Bornholm Skovb	3.70	349	*e*		21 59 05.3	
	baz=187,slow=12						
BSD				*i* P		21 59 05.9	
BSD				*i* S		21 59 46.9	
BSD				IAML		21 59 56.0	
	comp=Z,5.9nm,0.3s						
MOA	Molln	3.85	199	*i* Pn	Pn	21 59 08.2	+1.3
	comp=Z,2.9nm,0.2s,SNR=16						
MOA				Sg	Sg	22 00 09.5	-0.5
	comp=Z,44nm,0.5s						
STHS	Stebnicka Huta	3.86	121	*e*PG	Pg	21 59 22.2	+1.9
ARSA	Arzberg	4.27	186	*e*Pn	Pn	21 59 14.8	+2.2
	comp=Z,2.0nm,0.3s						
ARSA				Sg	Sg	22 00 23.7	+0.2
	comp=Z,65nm,0.8s						
CRVS	Cervenica-Dubn	4.29	125	*e*PN	Pn	21 59 14.5	+1.7
CRVS				*e*PG	Pg	21 59 32.1	+3.7
BSEG	Bad Segeberg	4.31	307	*e*Pn	Pn	21 59 14.7	+1.7
	SNR=11						
PSZ	Piszkesteto	4.33	144	⇓P	Pn	21 59 14.7	+1.3
KBA	Koelnbreinsper	4.79	204	*e*Pn	Pn	21 59 21.2	+1.4
	comp=Z,3.8nm,0.4s						
KBA				Sg	Sg	22 00 39.5	-0.7
	comp=Z,36nm,0.7s						
SOKA	Soboth	4.88	189	*e*Pn	Pn	21 59 23.5	+2.5
	comp=Z,1.4nm,0.4s						
SOKA				*e*Sg	Sg	22 00 42.0	-1.0
	comp=Z,9.7nm,0.5s						
WATA	Walderalm	5.13	217	*e*Pn	Pn	21 59 26.6	+2.1
	comp=Z,2.1nm,0.2s,SNR=5.5						
WTTA	Wattenberg	5.16	217	*e*Pn	Pn	21 59 27.5	+2.5
	comp=Z,1.4nm,0.2s,SNR=5.6						
WTTA				*e*Sg	Sg	22 00 51.3	-0.8
	comp=Z,22nm,0.5s						
MOTA	Moosalm	5.30	220	*e*Pn	Pn	21 59 28.5	+1.6
	comp=Z,1.2nm,0.2s						
MOTA				*e*Sn	Sn	22 00 28.0	-0.7
	comp=Z,8.0nm,0.3s						
ABTA	Abfaltersbach	5.32	208	*e*Pn	Pn	21 59 29.3	+2.2
	comp=Z,1.5nm,0.4s						
ABTA				Sg	Sg	22 00 56.3	-0.9
	comp=Z,31nm,0.7s						
TRPA	Tarpa	5.33	127	⇑P	Pn	21 59 27.5	+0.4
RETA	Reutte	5.33	223	*i* Pn	Pn	21 59 28.5	+1.2
	comp=Z,1.3nm,0.1s,SNR=8.3						

SQTA	Sankt Quirin	5.36	219	*e*Pn	Pn	21 59 30.2	+2.5
	comp=Z,2.5nm,0.1s,SNR=14						
SQTA				*e*Sn	Sn	22 00 29.9	-0.3
	comp=Z,7.3nm,0.3s						
VXJU	Vaexsjoe	5.48	353	P	Pn	21 59 30.6	+1.5
VXJU				S	Sn	22 00 28.3	-4.5
VXJU	Vaexsjoe	5.48	353	P		21 59 30.6	
VXJU				S		22 00 28.3	
FETA	Feichten	5.72	220	*i* Pn	Pn	21 59 34.2	+1.6
	comp=Z,0.7nm,0.4s						
GNOU	Gnosjoe	5.97	347	P	Pn	21 59 37.1	+1.2
GNOU	Gnosjoe	5.97	347	P		21 59 37.1	
BMR	Baia Mare	6.12	126	⇓P	Pn	21 59 39.0	+1.0
DAVOX	Davos/Dischmat	6.26	224	Pn	Pn	21 59 41.4	+1.3
	comp=Z,0.5nm,0.3s,baz=42,slow=14,SNR=3.0						
DAVOX				Lg	Lg	22 01 21.9	
	comp=Z,0.7nm,0.3s,baz=2.8,slow=21,SNR=3.4						
BORU	Boraas	6.46	344	P	Pn	21 59 44.7	+2.2
CDF	Champ du Feu	6.51	245	*e*Pn	Pn	21 59 42.9	-0.5
CDF				*e*Sn	Sn	22 00 52.8	-5.5
CDF				*e*Sg	Sg	22 01 31.7	-3.5
	comp=Z,17nm,0.7s						
FKPU	Falk	6.82	349	P	Pn	21 59 49.8	+2.2
FKPU	Falk	6.82	349	P		21 59 49.8	
BURAR	Bucovina Array	7.06	120	⇑P	Pn	21 59 52.0	+1.1
HINF	Hinteralfeld	7.07	242	*e*Pn	Pn	21 59 50.5	-0.6
HINF	Hinteralfeld	7.07	242	*e*P	Pn	21 59 54.8	+3.7
HINF				*e*Sn	Sn	22 01 05.1	-7.0
HINF				*e*Sg	Sg	22 01 48.8	-4.5
	comp=Z,3.5nm,0.4s						
HAU	Haudompre	7.25	245	*e*Pn	Pn	21 59 52.1	-1.4
HAU				*e*Sg	Sg	22 01 54.2	-4.8
	comp=Z,8.0nm,0.4s						
GZR	Gura Zlata	7.53	142	⇑P	Pn	21 59 58.2	+0.9
CABF	La Chapelle	8.22	237	*e*Pn	Pn	22 00 04.6	-2.3
CABF	La Chapelle	8.22	237	*e*P	Pn	22 00 10.4	+3.5
CABF				*e*Sn	Sn	22 01 32.8	-7.7
CABF				*e*Sg	Sg	22 02 24.3	-5.9
	comp=Z,10nm,0.7s						
AKASG	Malin Array Be	8.27	90	Pn	Pn	22 00 07.4	0.0
	comp=Z,1.3nm,0.3s,baz=276,slow=12,SNR=3.7						
LPG	La Plagne	8.66	230	*e*Pn	Pn	22 00 13.6	+0.6
HFS	Hagfors	8.77	352	Pn	Pn	22 00 14.8	+0.6
	comp=Z,0.3nm,0.3s,baz=163,slow=14,SNR=18						
LOR	Lormes	9.07	247	*e*Pn	Pn	22 00 16.0	-2.4
LOR	Lormes	9.07	247	*e*P	Pn	22 00 23.4	+5.0
	baz=61						
LOR				*e*Sn	Sn	22 01 52.9	-8.2
	comp=Z,3.4nm,0.6s						
LOR				*e*Sg		22 02 51.0	
SBF	Sospel	9.63	221	*e*Pn	Pn	22 00 26.3	+0.1
NOA	NORSAR Array B	9.95	346	Pn	Pn	22 00 29.2	-1.2
	comp=Z,0.0nm,0.3s,baz=129,slow=15,SNR=8.2						
BGF	Bois d'Agland	10.04	246	*e*Pn	Pn	22 00 30.8	-0.9
FRF	La Foret Royal	10.21	223	*e*Pn	Pn	22 00 34.0	0.0
LMR	La Mourre	10.45	222	*e*Pn	Pn	22 00 39.1	+1.8
FINES	FINESS Array B	11.36	25	Pn	Pn	22 00 49.0	-0.7
	comp=Z,0.4nm,0.3s,baz=206,slow=11,SNR=16						
FINES				Sn	Sn	22 02 50.6	-6.6
	comp=Z,0.8nm,0.3s,baz=201,slow=21,SNR=9.6						
EKA	Eskdalemuir Ar	12.14	296	Pn	Pn	22 00 58.9	-1.4
	baz=101,slow=13,SNR=6.7						
ARCES	ARCESS Array B	18.63	10	Pn	P	22 02 22.7	-2.4
	comp=Z,0.2nm,0.3s,baz=190,slow=14,SNR=9.0						
TORD	Torodi Ar. Bea	40.00	202	P	P	22 05 43.7	+1.0
	comp=Z,0.4nm,0.8s,baz=14,slow=8.0,SNR=2.4						
YKA	Yellowknife Ar	59.88	336	P	P	22 08 14.8	+1.5
	comp=Z,0.4nm,0.8s,baz=34,slow=6.5,SNR=5.3						

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*ISK **17** 21:58:22.8, 36°.71N×36°.50E, h8^{km}, ML2.5/17*

*DDA **17** 21:58:23.3, 36°.77N×36°.52E, h10^{km}±6^{km}, ML2.4*

ISC 17 21:58:21.7±1.2**, 36°.71N**±0°.03×**36°.50E**±0°.02**, h9**^{km}±10^{km}**, n31,** σ**0^{s}79**/48**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAHT	Tahtakopru-Hat	0.42	218	PG	Pb	21 58 31.3	0.0
TAHT				SG	Sb	21 58 37.6	-0.2
KAMA	Osmaniye	0.50	15	*i* P	Pb	21 58 32.3	-0.4
KAMA				*i* S	Sg	21 58 37.3	-0.6
CEYT	Ceyhan	0.68	297	PG	Pb	21 58 36.5	+0.8
CEYT				SG	Sb	21 58 46.4	+1.2
YURE	YUREGIR	0.71	280	PG	Pb	21 58 36.9	+0.6
YURE	YUREGIR	0.71	280	*i* P	Pn	21 58 37.2	-0.8
YURE				*i* S	Sn	21 58 48.4	-0.6
GAZ	Gaziantep	0.73	51	PG	Pb	21 58 36.9	+0.1
YAYL	Yayladag	0.74	206	*i* P	Pn	21 58 38.2	-0.3
YAYL				*i* S	Sb	21 58 47.4	+0.1
YAYL				IAML		21 58 51.0	
	comp=E,106nm,0.4s						
AYKD	Aykdinkavak	0.75	19	*i* P	Pb	21 58 37.1	+0.1
AYKD				*i* S	Sg	21 58 45.2	-0.7
AYKD				IAML		21 58 49.0	
	comp=E,302nm,0.6s						
AYKD				IAML		21 58 50.0	
	comp=N,129nm,0.2s						
KMRS	Kahramanmaras	0.86	22	PG	Pn	21 58 39.8	-0.3
ANDN	Andirin	0.88	352	*i* P	Pn	21 58 40.4	0.0
ANDN				*i* S	Sg	21 58 50.5	+0.3
KRTS	Karatas	0.92	262	PG	Pn	21 58 40.8	0.0
KARA	Karaisali	1.28	296	PN	Pg	21 58 46.9	+0.5
SAIM	ADANA	1.31	345	*i* P	Pg	21 58 47.3	+0.4
SAIM				*i* S	Sb	21 59 03.4	-0.2
SAIM				IAML		21 59 06.0	
	comp=N,54nm,0.3s						
SAIM				IAML		21 59 10.0	
	comp=E,65nm,0.3s						
DED	Mersin	1.39	281	*i* P	Pb	21 58 48.2	+0.3
DED				*i* S	Sb	21 59 03.0	-2.8
CMRD	Camardi-Nigde	1.54	309	PN	Pg	21 58 51.3	0.0
CMRD				SN	Sg	21 59 11.6	+0.4
MERS	Mersin	1.60	276	PN	Pg	21 58 52.2	-0.2
MERS				SN	Sg	21 59 13.2	+0.1
YAHY	KAYSERI_Yahyal	1.66	327	*i* P	Pb	21 58 52.3	-0.2
YAHY				*i* S	Sn	21 59 11.8	-0.8
SARI	SarD1z-Kayseri	1.70	358	PN	Pb	21 58 53.3	0.0
SURC	SANLIURFA_SURC	1.70	84	*i* P	Pg	21 58 54.7	+0.3
SURC				*i* S	Sg	21 59 15.9	-0.6
SURC				IAML		21 59 20.0	
	comp=N,65nm,0.3s						
SURC				IAML		21 59 22.0	
	comp=E,58nm,0.5s						
KIZK	Mersin	1.91	264	PN	Pb	21 58 56.6	-0.2
AKCD	Akcadag	1.95	35	*i* P	Pg	21 58 59.8	+0.7
AKCD				*i* S	Sn	21 59 20.3	+0.5
AKCD				IAML		21 59 26.0	
	comp=N,55nm,0.3s						
AKCD				IAML		21 59 30.0	
	comp=E,43nm,0.6s						
URFA	Urfa	1.99	68	PN	Pb	21 58 57.9	-0.3
DARE	Darende-Malaty	2.02	22	PN	Pb	21 58 58.4	-0.3
KERG	Konya-Eregli	2.03	291	*i* P	Pb	21 58 59.0	+0.1
KERG				*i* S	Sn	21 59 21.8	0.0
SANL	SANLIURFA_Merk	2.04	76	*i* P	Pg	21 59 01.1	+0.2
SANL				*i* S	Sn	21 59 23.0	+0.9
SANL				IAML		21 59 32.0	
	comp=E,44nm,0.7s						
SANL				IAML		21 59 34.0	
	comp=N,38nm,0.4s						
BNN	Bunyan	2.20	347	PN	Pb	21 59 00.9	-1.0
MALT	Malatya	2.22	43	PN	Pb	21 59 01.3	-0.8
KEBE	Keben-Mersin	2.26	264	PN	Pb	21 59 01.9	-0.9
IKL	Isikli	2.32	259	PN	Pb	21 59 02.5	-1.2
HEKM	Malatya_Hekimh	2.46	28	*i* P	Pg	21 59 09.4	+0.6
HEKM				*i* S	Sb	21 59 37.0	+0.3
TEKE	Tekeli-Mersin	2.79	259	PN	Pn	21 59 09.2	+2.6

IDC 17 22:11:52.0±1.4**, 15°.02S**×**173°.31W, h0**^{km}**, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/37**, mbtmp3.8**/3**, Error ellipse: s-maj=58.3km s-min=24.5km az=144.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	1.85	54	Pn	Pn	22 12 24.9	-0.1
	51nm,0.3s,baz=237,slow=2.9,SNR=77						
AFI				Sn	Sn	22 12 44.3	-4.8
	187nm,0.3s,baz=222,slow=15,SNR=16						
URZ	Urewera	24.65	198	P	P	22 17 14.5	+0.1
	2.6nm,0.3s,baz=50,slow=4.3,SNR=2.2						
WRA	Warramunga Arr	50.02	256	P	P	22 20 48.5	-0.2
	0.2nm,0.6s,baz=94,slow=6.4,SNR=4.5						
ASAR	Alice Springs	50.31	252	P	P	22 20 50.6	-0.2
	0.6nm,0.4s,baz=87,slow=8.0,SNR=10						
BRTR	Keskin Array B	145.91	321	PKPbc	PKPdf	22 31 33.3	-0.1
	0.3nm,0.7s,baz=70,slow=6.3,SNR=1.4						

IDC 17 22:32:35.8±2.0**, 31°.40S**×**178°.95W, h0**^{km}**, mb3.8**/2**, mb1 4.0**/2**, mb1mx3.7**/26**, mbtmp3.8**/2**, Error ellipse: s-maj=70.6km s-min=46.6km az=11.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.26	268	P	P	22 40 31.1	-0.1
	0.5nm,0.5s,baz=107,slow=7.2,SNR=6.9						
WRA	Warramunga Arr	43.34	274	P	P	22 40 39.6	-0.2
	1.2nm,0.6s,baz=113,slow=7.7,SNR=13						
FINES	FINESS Array B	145.79	339	PKPbc	PKPdf	22 52 15.5	-0.1
	1.2nm,0.4s,baz=59,slow=3.4,SNR=10						
NB2	NORSAR Subarra	149.61	350	PKP	PKPbc	22 52 26.1	-0.5
	comp=Z,0.5nm,0.5s,baz=17,slow=4.1						
TORD	Torodi Ar. Bea	161.82	182	PKPab	PKPab	22 53 24.2	-0.6
	comp=Z,0.2nm,0.5s,baz=203,slow=3.4,SNR=4.0						

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*INET **17** 22:38:09.0, 12°.27N×90°.36W, h18^{km}, ML4.4*

*SNET **17** 22:38:09.9±1.2, 12°.29N×90°.32W, h35^{km}±89^{km}, ML4.6*

*UCR **17** 22:38:09.9±1.1, 12°.30N×90°.31W, h31^{km}±999^{km}, ML4.4, mb4.6(NEIC)*

*MEX **17** 22:38:09.7±0.4, 11°.75N×91°.28W, h15^{km}, MD4.1*

*NEIC **17** 22:38:09.4±2.7, 12°.32N±0°.07×90°.32W±0°.06, h25^{km}±6^{km}, mb4.6/73, Md4.6(SNET), Error ellipse: s-maj=11.7km s-min=7.4km az=216.0*

*IDC **17** 22:38:18.2±2.7, 12°.77N×89°.93W, h72^{km}±18^{km}, mb3.8/10, mb1 4.1/13, mb1mx3.8/35, mbtmp4.1/13, MS3.2/7, Ms1 3.2/7, ms1mx2.9/32, Error ellipse: s-maj=38.2km s-min=9.7km az=47.0*

*GCG **17** 22:38:20.1±0.7, 13°.01N×90°.48W, h36^{km}±999^{km}, MD4.1*

ISC 17 22:38:06.9±3.9**, 12°.31N**±0°.07×**90°.34W**±0°.05**, h7**^{km}±24^{km}**, n137,** σ**1^{s}50**/138**, mb4.6**/37**, MS3.3**/6**, 12C-2D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	1.54	40	*e*P	Pn	22 38 35.1	+0.2
LALI	Alcalda de L	1.54	40	*e*P	Pn	22 38 35.1	+0.2
CEVE	Cerro Verde	1.67	25	*e*P	Pn	22 38 37.2	+0.4
CEVE				*e*S	Sn	22 38 58.7	+0.1
CEVE				IAML		22 39 05.0	
	comp=Z,12µm,0.3s						
CEVE	Cerro Verde	1.67	25	*e*P	Pn	22 38 37.2	+0.4
CEVE				*e*S	Sn	22 38 58.7	+0.1
CEVE				IAML		22 39 05.0	
	comp=Z,12µm,0.3s						
SBLS	San Blas	1.68	25	⇑*e*P	Pn	22 38 37.4	+0.4
SBLS	San Blas	1.68	25	⇑*e*P	Pn	22 38 37.4	+0.4
SNJE	San Jose	1.71	25	⇑*i*P	Pn	22 38 37.8	+0.4
SNJE	San Jose	1.71	25	⇑*i*P	Pn	22 38 37.8	+0.4
RTR	El Retiro	1.72	23	⇑*i*P	Pn	22 38 38.0	+0.5
RTR	El Retiro	1.72	23	⇑*i*P	Pn	22 38 38.0	+0.5
SNET	Serv Nac Est T	1.75	38		Pn	22 38 38.0	+0.2
SNET				Sn	Sn	22 38 58.5	-1.9
BOQS	Boqueron	1.76	36	*e*P	Pn	22 38 38.4	+0.4
BOQS				*e*S	Sn	22 39 00.4	-0.4
LFRS	El Faro	1.81	44	⇑*i*P	Pn	22 38 38.9	+0.3
CUSC	Alcaldia de Cu	1.81	39	*e*P	Pn	22 38 39.2	+0.6
CUSC	Alcaldia de Cu	1.81	39	*e*P	Pn	22 38 39.2	+0.6
AEIL	Aeropuerto Ilo	1.83	41	*e*P	Pn	22 38 39.6	+0.7
AEIL				IAML		22 39 07.4	
	comp=Z,6µm,0.4s						
AEIL	Aeropuerto Ilo	1.83	41	*e*P	Pn	22 38 39.6	+0.7
AEIL				IAML		22 39 07.4	
	comp=Z,6µm,0.4s						
IXG	Ixpaco	1.86	357	⇓*e*P	Pn	22 38 40.1	+0.8
LBRS	Las Brisas	1.91	42	⇑*i*P	Pn	22 38 40.6	+0.6
PCG	Pacaya	2.09	353	⇓*i*P	Pn	22 38 43.9	+1.3
FUG	Fuego 3	2.18	347	*e*P	Pn	22 38 45.0	+1.1
JUCU	Jucuar¡n	2.25	65	*e*P	Pn	22 38 44.6	-0.1
JUCU				IAML		22 39 16.8	
	comp=Z,970nm,0.3s						
JUCU	Jucuar¡n	2.25	65	*e*P	Pn	22 38 44.6	-0.1
JUCU				IAML		22 39 16.8	
	comp=Z,970nm,0.3s						
NBG	Las Nubes	2.27	360	*e*P	Pn	22 38 47.8	+2.7
PACA	Pacayal	2.28	59	⇑*i*P	Pn	22 38 45.4	+0.2
PACA				*e*S	Sn	22 39 14.0	+0.3
PACA				IAML		22 39 20.6	
	comp=Z,10µm,0.5s						
PACA	Pacayal	2.28	59	⇑*i*P	Pn	22 38 45.4	+0.2
PACA				*e*S	Sn	22 39 14.0	+0.3
PACA				IAML		22 39 20.6	
	comp=Z,10µm,0.5s						
MTO3	Montecristo	2.29	25	⇑*e*P	Pn	22 38 46.2	+0.8
MTO3	Montecristo	2.29	25	⇑*e*P	Pn	22 38 46.2	+0.8
BLLM	Bellamira	2.34	61	*e*P	Pn	22 38 46.2	+0.3
BLLM	Bellamira	2.34	61	*e*P	Pn	22 38 46.2	+0.3
ERG	Entre ros, C	2.43	331	*e*P	Pn	22 38 48.5	+1.4
FAGO	Alcalda de S	2.58	57	*e*P	Pn	22 38 49.6	+0.4
FAGO				*e*S	Sn	22 39 20.6	-0.2
FAGO	Alcalda de S	2.58	57	*e*P	Pn	22 38 49.6	+0.4
FAGO				*e*S	Sn	22 39 20.6	-0.2
LCND	La Caada	2.59	67	*e*P	Pn	22 38 49.4	0.0
LCND				*e*S	Sn	22 39 20.6	-0.5
LCND				IAML		22 39 23.5	
	comp=Z,2µm,0.3s						
LCND	La Caada	2.59	67	*e*P	Pn	22 38 49.4	0.0
LCND				*e*S	Sn	22 39 20.6	-0.5
LCND				IAML		22 39 23.5	
	comp=Z,2µm,0.3s						
CNCH	Conchagua	2.63	68	*e*P	Pn	22 38 49.7	-0.3
CNCH				*e*S	Sn	22 39 20.8	-1.5
CNCH				IAML		22 39 24.1	
	comp=Z,4µm,0.8s						
CNCH	Conchagua	2.63	68	*e*P	Pn	22 38 49.7	-0.3
CNCH				*e*S	Sn	22 39 20.8	-1.5
CNCH				IAML		22 39 24.1	
	comp=Z,4µm,0.8s						
STG3	Santiaguito 3,	2.67	334	*e*P	Pn	22 38 51.5	+1.0
APG	El Apazote	2.69	358	P	Pn	22 38 52.5	+1.7
	comp=Z,60nm,0.3s,baz=35,slow=3.4,SNR=291						
APG				S	Sn	22 39 22.6	-1.1
	comp=Z,59nm,0.3s,baz=121,slow=23,SNR=11						
APG				LR	LR	22 39 53.0	
	comp=Z,261nm,20.9s,baz=140,slow=42						
CSGN	Cosiguina Volc	2.80	76		Pn	22 38 53.6	+1.4
CSGN					Sn	22 39 26.7	+0.3
MRL	Marmol	2.83	13	*e*P	Pn	22 38 55.1	+2.3
TGUH	Tegucigalpa,Un	3.46	59		Pn	22 39 02.0	+0.6
CCIG	Comitan	4.32	336	*e*P	Pn	22 39 16.1	+2.9
CCIG				*i* S	Sn	22 40 08.5	+4.5
CCIG	Comitan	4.32	336		Pn	22 39 16.8	+3.5
CCIG	Comitan	4.32	336		Pn	22 39 16.1	+2.9
PCIG		4.38	321	*e*P	Pn	22 39 13.8	-0.1
PCIG				*i* S	Sn	22 40 02.3	-3.0
PCIG		4.38	321		Pn	22 39 13.8	-0.1
ACON	Acoyapa	5.07	93		Pn	22 39 23.7	+0.4
JTS	Las Juntas de	5.65	110	P	Pn	22 39 35.2	+3.8
	comp=Z,3.5nm,0.3s,baz=32,slow=13,SNR=9.9						
JTS				S	Sn	22 40 39.4	+2.7
	comp=Z,5.2nm,0.3s,baz=200,slow=21,SNR=7.9						
JTS	Las Juntas de	5.65	110		Pn	22 39 33.4	+1.9
ESPN	Las Esperanzas	5.91	90	Pn	Pn	22 39 36.1	+1.2
TEIG	Tepich	8.12	14		Pn	22 40 07.7	+2.3
TLIG	Tlapa	9.51	304		Pn	22 40 25.9	+1.4
ROSC	El Rosal	17.48	114		Pn	22 42 12.0	+0.2
FLOC	Florencia	18.04	125		Pn	22 42 16.9	-1.5
LGNH	Logne	18.17	68		Pn	22 42 19.3	-0.6
RUSC	La Rusia	18.19	109	Pn	Pn	22 42 18.9	-1.8
HKT	Hockley	18.28	345	P	Pn	22 42 19.1	-2.1
344A	Westbrook Farm	19.06	359	P	P	22 42 29.0	-0.9
344A				IAmb	IAmb	22 42 39.5	
	comp=Z,52nm,0.9s						
SDDR	Presa de Saban	19.50	68	P	P	22 42 33.4	-1.6
435B	Jarrell	19.57	341	P	P	22 42 35.6	+0.1
435B				IAmb	IAmb	22 42 40.3	
	comp=Z,15nm,0.5s						
SDV	Santo Domingo	19.67	98	P	Pn	22 42 38.8	+0.5
	comp=Z,0.5nm,0.3s,baz=281,slow=5.2,SNR=17						
SDV	Santo Domingo	19.67	98	P	P	22 42 37.1	+0.2
NATX	Nacogdoches	19.77	349	P	P	22 42 37.7	0.0
VBMS	Vicksburg	19.82	360	P	P	22 42 38.7	+0.5
VBMS				IAmb	IAmb	22 42 43.4	
	comp=Z,42nm,0.9s						
JCT	Junction City	20.10	336	P	P	22 42 40.8	-0.6
HPIG		20.46	318	P	P	22 42 45.1	-0.4
WHTX	Lake Whitney,	20.66	343	IAmb	IAmb	22 42 49.3	
	comp=Z,19nm,0.6s						
LRAL	Lakeview Retre	20.86	8	P	P	22 42 49.1	-0.4
LRAL				IAmb	IAmb	22 42 55.8	
	comp=Z,35nm,1.2s						
TX32	Lajitas Array	20.99	326	P	Pn	22 42 53.2	-0.5
TXAR	Lajitas Array	20.99	326	P	Pn	22 42 54.5	+0.8
	comp=Z,3.7nm,0.8s,baz=148,slow=11,SNR=37						
TXAR				LR	LR	22 51 22.8	
	comp=Z,23nm,19.2s,baz=0.0,slow=38						
TXAR	Lajitas Array	20.99	326	P	Pn	22 42 53.7	0.0
DR12	Loma Pena Alta	21.19	70	P	P	22 42 51.9	-1.3
Z50A	Ashland	21.24	10	P	P	22 42 53.5	-0.2
Z38A	Mt. Pleasant	21.29	349	P	P	22 42 52.2	-1.9
WLAR	White Oak Lake	21.43	354	P	P	22 42 55.3	-0.4
WLAR				IAmb	IAmb	22 43 11.7	
	comp=Z,22nm,0.7s						
Z51A	Franklin	21.44	12	P	P	22 42 55.1	-0.7
Z51A				IAmb	IAmb	22 43 01.8	
	comp=Z,24nm,0.9s						
Y49A	Blount Mountai	21.75	9	IAmb	IAmb	22 43 03.1	
	comp=Z,24nm,1.1s						
OXF	Oxford	22.12	2	P	P	22 43 02.8	-0.3
OXF				IAmb	IAmb	22 43 08.0	
	comp=Z,31nm,0.8s						
X48A	Hartselle	22.25	7	P	P	22 43 02.3	-2.1
X48A				IAmb	IAmb	22 43 11.2	
	comp=Z,24nm,1.1s						
MIAR	Mount Ida	22.34	353	P	P	22 43 05.8	+0.4
FPAL	Fort Paine	22.55	10	P	P	22 43 05.8	-1.9
FPAL				IAmb	IAmb	22 43 12.1	
	comp=Z,33nm,1.2s						
PLAL	Pickwick Lake	22.67	5	P	P	22 43 08.7	-0.3
PLAL				IAmb	IAmb	22 43 12.7	
	comp=Z,12nm,0.7s						
WHAR	Wooly Hollow	22.95	356	P	P	22 43 10.4	-1.5
WHAR				IAmb	IAmb	22 43 23.0	
	comp=Z,16nm,1.2s						
HODGE	Hodges	23.04	17	P	P	22 43 11.2	-1.6
SWET	Sewanee	23.16	9	IAmb	IAmb	22 43 16.4	
	comp=Z,17nm,0.9s						
W50A	Signal Mountai	23.25	10	P	P	22 43 15.0	0.0
V48A	Smith Brothers	23.55	7	IAmb	IAmb	22 43 22.6	
	comp=Z,36nm,1.4s						
CPCT	Cooper Cave	23.64	12	P	P	22 43 16.5	-2.3
WVT	Waverly	23.83	5	P	P	22 43 20.1	-0.5
WVT				IAmb	IAmb	22 43 25.1	
	comp=Z,17nm,1.1s						
CLTN	Cedars of Leba	23.96	8	P	P	22 43 22.1	+0.1
CLTN				IAmb	IAmb	22 43 25.4	
	comp=Z,11nm,0.7s						
TKL	Tuckaleechee C	24.00	13	P	P	22 43 21.0	-1.3
	comp=Z,11nm,0.7s,baz=181,slow=13,SNR=9.8						
TKL	Tuckaleechee C	24.00	13	P	P	22 43 22.0	-0.3
TKL				IAmb	IAmb	22 43 25.9	
	comp=Z,13nm,0.8s						
MSTX	Muleshoe	24.36	334	P	P	22 43 24.8	-1.1
MSTX				IAmb	IAmb	22 43 42.5	
	comp=Z,20nm,1.2s						
U49A	Red Boiling Sp	24.45	9	P	P	22 43 26.2	-0.3
U49A				IAmb	IAmb	22 43 30.4	
	comp=Z,15nm,0.8s						
T49A	Edmonton	25.07	9	IAmb	IAmb	22 43 35.5	
	comp=Z,15nm,0.8s						
T35A	Sooner Cattle	25.12	348	P	P	22 43 32.3	-0.3
T35A				IAmb	IAmb	22 43 35.9	
	comp=Z,9.7nm,0.8s						
U54A	Nelsons Funny	25.30	16	IAmb	IAmb	22 43 37.6	
	comp=Z,20nm,0.9s						
CCM	Cathedral Cave	25.66	358	P	P	22 43 38.0	+0.6
CCM				IAmb	IAmb	22 43 41.8	
	comp=Z,9.5nm,0.8s						
121A	Cookes Peak, D	25.72	324		pP	22 43 44.5	+5.6
WCI	Wyandotte Cave	26.07	7	P	P	22 43 41.2	+0.1
OLIL	Olney	26.40	4	IAmb	IAmb	22 43 49.4	
	comp=Z,23nm,0.9s						
Q44A	Meyer Farm, Va	26.52	2	IAmb	IAmb	22 43 50.3	
	comp=Z,18nm,0.7s						
Q51A	Peebles	27.33	12	IAmb	IAmb	22 43 54.4	
	comp=Z,13nm,0.9s						
PV02	Paradox Valley	30.57	331	P	P	22 44 19.6	-2.0
G45A	Suttons Bay	32.87	6	P	P	22 44 40.2	-1.3
G45A					PcP	22 47 23.4	-2.7
COWI	Conover	33.70	2	IAmb	IAmb	22 44 49.8	
	comp=Z,5.5nm,0.7s						
HWUT	Hardware Ranch	34.58	331	IAmb	IAmb	22 45 01.2	
	comp=Z,8.9nm,1.1s						
PDAR	Pinedale Array	34.63	335	P	P	22 44 58.0	+0.9
	comp=Z,0.4nm,0.7s,baz=139,slow=8.4,SNR=2.6						
PDAR				LR	LR	23 01 50.2	
	comp=Z,26nm,21.6s,baz=146,slow=41						
REDW	Red Top Meadow	35.66	334	IAmb	IAmb	22 45 12.4	
	comp=Z,5.1nm,0.8s						
NVAR	Mina Array Bea	35.99	321	P	P	22 45 12.7	+3.8
	comp=Z,1.8nm,0.6s,baz=142,slow=7.5,SNR=7.8						
NVAR	Mina Array Bea	35.99	321	P	P	22 45 09.7	+0.8
AGMN	Agassiz Nation	36.18	354	IAmb	IAmb	22 45 12.8	
	comp=Z,9.2nm,0.8s						
MDND	Maddock	36.27	349	P	P	22 45 10.4	-0.5
ULM	Lac du Bonnet	38.11	354	P	P	22 45 25.2	-1.2
	comp=Z,3.0nm,0.6s,baz=170,slow=9.9,SNR=9.1						
ULM				LR	LR	23 04 16.6	
	comp=Z,36nm,18.3s,baz=166,slow=41						
SCHQ	Schefferville	46.27	19	P	P	22 46 31.1	-1.9
	comp=Z,7.0nm,0.6s,baz=219,slow=6.2,SNR=32						
SCHQ	Schefferville	46.27	19	P	P	22 46 31.7	-1.3
SCHQ				IAmb	IAmb	22 46 34.5	
	comp=Z,6.7nm,0.7s						
YKA	Yellowknife Ar	53.04	346	P	P	22 47 24.3	-0.1
	comp=Z,0.4nm,0.6s,baz=140,slow=7.7,SNR=9.5						
YKA				PcP	PcP	22 48 34.4	+1.5
	comp=Z,0.7nm,0.7s,baz=147,slow=4.4,SNR=9.9						
ILAR	Eielson Array	65.02	337	P	P	22 48 48.0	+0.5
	comp=Z,3.5nm,0.9s,baz=132,slow=4.0,SNR=24						
ILAR	Eielson Array	65.02	337	P	P	22 48 48.3	+0.7
BMAR	Burnt Mountain	65.43	340	P	P	22 48 51.8	+1.6
MLY	Manley	66.63	336	P	P	22 49 00.0	+2.0
MLY				IAmb	IAmb	22 49 00.6	
	comp=Z,6.1nm,0.8s						
USHA	Ushuaia	69.40	167	LR	LR	23 13 13.8	
	comp=Z,52nm,21.2s,baz=104,slow=30						
TIC	Toumodi	84.06	85	*e*P	P	22 50 43.2	+4.0
LIC	Lamto	84.14	85	*e*P	P	22 50 41.6	+2.1
	comp=Z,26nm,1.2s						
LIC	Lamto	84.14	85	P	P	22 50 41.6	+2.1
DBIC	Dimbokro	84.21	84	P	P	22 50 42.0	+2.1
	comp=Z,4.6nm,1.1s,baz=280,slow=5.8,SNR=4.4						
KIC	Kosan Boka	84.39	85	*e*P	P	22 50 42.8	+2.0
	comp=Z,22nm,1.3s						
KIC	Kosan Boka	84.39	85	P	P	22 50 42.8	+2.0
ARCES	ARCESS Array B	87.23	18	LR	LR	23 28 32.1	
	comp=Z,15nm,18.3s,baz=324,slow=35						
TORD	Torodi Ar. Bea	89.20	77	P	P	22 51 05.5	+1.2
	comp=Z,0.4nm,0.6s,baz=277,slow=3.6,SNR=5.3						
NRIK	Noril'sk	98.55	1	LR	LR	23 36 56.5	
	comp=Z,19nm,21.8s,baz=36,slow=36						
HHC	Hu-ho-hao-te	123.36	340	*e*P	PKPdf	22 57 04.6	-0.8
KSH	Kashi	126.89	13	PKP	PKPdf	22 57 10.9	-1.3
KSH				sPKP		22 57 25.6	
KSH				PP	PP	22 59 13.8	+5.5
KSH				PKS	PKSdf	23 00 47.3	-1.6
KSH				SKKS		23 06 01.8	
NJ2	Nanjing	127.78	328	*e*P	PKPdf	22 57 13.3	-0.6
LZH	Lanzhou	130.04	345	*e*PKP	PKPdf	22 57 15.8	-2.6
LZH				pPKP	sPKPdf	22 57 28.0	+8.6
LZH				sPKP		22 57 32.8	
CMAR	Chiang Mai Arr	148.09	343	PKPbc	PKiKP	22 57 56.1	-0.1
	comp=Z,3.4nm,0.8s,baz=345,slow=2.9,SNR=16						

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*IDC **17** 22:49:15.0±1.3, 3°.02S×129°.79E, h0^{km}, mb3.6/4, mb1 3.7/6, mb1mx3.5/42, mbtmp3.6/6, ML3.3/2, Error ellipse: s-maj=46.6km s-min=23.6km az=80.0*

*DJA **17** 22:49:16.1±0.8, 3°S±4°×13°0E±°, h165^{km}±9^{km}, M3.2/10, MLv3.2/10*

ISC 17 22:49:17.5±0.8**, 2°.76S**±0°.05×**129°.98E**±0°.05**, h25**^{km}**, n14,** σ**2^{s}27**/17**, mb3.8**/4**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.20	241	P	Pb	22 49 41.4	+1.8
BNDI	Bandanaira	1.76	182	P	Pb	22 49 48.9	-0.2
BNDI				S	Sb	22 50 13.9	+3.2

AAI	Ambon	2.01	242	P	Pn	22 49 50.7	+0.9
AAI				S	Sb	22 50 16.7	-1.2
SIJI	Sorong	2.27	35	Pn	Pb	22 49 58.2	+0.3
	6.9nm,0.3s,baz=237,slow=23,SNR=16						
SIJI				Sn	Sb	22 50 27.3	+1.7
	6.2nm,0.3s,baz=30,slow=22,SNR=5.4						
FAKI	Fak Fak	2.27	94	P	Pb	22 49 58.0	+0.1
SWI	Sorong	2.27	34	P	Pb	22 49 56.9	-1.0
NLAI	Namlea	2.91	260	P	Pn	22 49 59.3	-3.0
LBMI	Labuha	3.25	310	P	Pn	22 50 07.2	+0.3
SANI	Sanana	4.05	280	P	Pn	22 50 14.4	-3.5
WRA	Warramunga Arr	17.61	166	P	Pn	22 53 17.5	-3.8
	0.1nm,0.3s,baz=347,slow=12,SNR=2.9						
ASAR	Alice Springs	21.13	170	P	P	22 54 00.0	-0.7
	3.2nm,0.7s,baz=348,slow=10.0,SNR=34						
MKAR	Makanchi Array	64.70	326	P	P	22 59 55.3	+1.8
	0.1nm,0.3s,baz=110,slow=9.3,SNR=2.1						
ZALV	Zalesovo Beam	67.80	333	P	P	23 00 15.7	+2.5
	0.2nm,0.3s,baz=111,slow=6.3,SNR=1.6						
KURBB	Kurchatov Arra	68.92	328	P	P	23 00 22.9	+2.6
	0.4nm,0.5s,baz=128,slow=5.8,SNR=8.5						

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*IDC **17** 22:51:24.5±1.6, 3°.37N×125°.53E, h0^{km}, mb3.7/5, mb1 3.8/5, mb1mx3.5/48, mbtmp3.7/5, Error ellipse: s-maj=200.7km s-min=19.4km az=64.0*

ISC 17 22:51:30.1±1.0, **3°.3N**±0°.1×**125°.7E**±0°.4, **h35^{km}, n7,** σ1^s**39**/9, **mb3.8**/5, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKMP	Bagumbayan, Su	3.35	341	eP	Pn	22 52 21.0	+0.9
SKMP				eS	Sn	22 52 59.3	+0.6
KCP	Kidapawan	3.69	351	eP	Pn	22 52 26.4	+1.5
KCP				iS	Sn	22 53 05.7	-1.5
WRA	Warramunga Arr	24.65	160	P	P	22 56 47.5	-0.3
	0.6nm,0.4s,baz=338,slow=10,SNR=11						
ASAR	Alice Springs	28.01	164	P	P	22 57 19.6	+1.6
	0.2nm,0.4s,baz=343,slow=7.2,SNR=2.2						
STKA	Stephens Creek	38.16	158	P	P	22 58 45.4	-0.9
	1.1nm,0.5s,baz=337,slow=7.7,SNR=3.0						
MKAR	Makanchi Array	57.27	326	P	P	23 01 13.7	-0.7
	0.4nm,0.4s,baz=119,slow=8.0,SNR=21						
KURBB	Kurchatov Arra	61.50	328	P	P	23 01 42.0	-1.4
	0.3nm,0.3s,baz=130,slow=7.4,SNR=10						

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*IDC **17** 23:00:32.2±0.7, 54°.18N×59°.12E, h0^{km}, mb3.9/2, mb1 3.6/9, mb1mx3.4/53, mbtmp3.5/9, ML2.5/6, MS3.3/1, Ms1 3.3/1, ms1mx2.1/36, Error ellipse: s-maj=11.4km s-min=8.3km az=77.0*

*MIRAS **17** 23:00:33.9±0.0, 54°.23N×58°.91E, h0^{km}, ML3.1/7*

*NNC **17** 23:00:39.3±3.3, 53°.68N×59°.95E, h0^{km}, mb3.4, mpv3.0, Error ellipse: s-maj=33.6km s-min=13.2km az=137.0, Suspected Mining explosion.*

ISC 17 23:00:30.0±0.7, **54°.05N**±0°.03×**59°.14E**±0°.05, **h0^{km}, n21,** σ**2^{s}37**/34, **5C-4D, Ural Mountains region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARU	Arti	2.41	352	Pn	Pb	23 01 13.8	-0.3
	0.0nm,0.3s,baz=169,slow=11,SNR=64						
ARU				Pg	Pg	23 01 16.4	+0.3
	0.0nm,0.3s,baz=176,slow=5.6,SNR=38						
ARU				Lg	Lg	23 01 44.3	
	0.2nm,0.3s,baz=183,slow=23,SNR=23						
ARU	Arti	2.41	352	iP	Pb	23 01 13.9	-0.3
ARU				eS	Sb	23 01 43.6	-0.7
	386μm,0.5s						
SVE	Sverdlovsk	2.91	16	iP	Pb	23 01 22.1	-0.6
SVE				eS	Sb	23 01 57.0	-1.8
	201μm,0.3s						
PR3R	Kungur	3.61	341	iP	Pn	23 01 30.1	+3.1
PR3R				eS	Sn	23 02 12.2	+1.9
	341μm,0.4s						
AKTO	Aktyubinsk	3.69	191	Pn	Pb	23 01 33.4	-2.6
	0.6nm,0.3s,baz=13,slow=10,SNR=8.1						
AKTO				Lg	Lg	23 02 26.7	
	1.7nm,0.3s,baz=244,slow=22,SNR=7.2						
AKTO	Aktyubinsk	3.69	191	⇑Pn	Pb	23 01 35.4	-0.5
	6.6nm,0.9s						
AKTO				⇓Lg	Lg	23 02 27.6	
	14nm,0.5s						
PR4R	Vlasy	4.33	335	iP	Pn	23 01 37.4	+0.4
PR4R				eS	Sn	23 02 28.1	0.0
	322μm,0.5s						
PR7R	Sarany	4.52	357	iP	Pn	23 01 41.3	+1.8
PR7R				eS	Sn	23 02 33.8	+1.1
	342μm,5.1s						
AB31	Akbulak array	4.83	174	⇑Pn	Pn	23 01 46.9	+3.1
	0.3nm,0.2s,baz=4.7,slow=14,SNR=21						
AB31				⇓Pg	Pb	23 01 56.9	+1.5
	1.1nm,0.4s,baz=360,slow=12,SNR=6.4						
AB31				⇑Sn	Sn	23 02 42.1	+1.7
	3.6nm,0.5s						
AB31				⇓Lg	Lg	23 03 01.3	
	13nm,0.5s,baz=356,slow=31,SNR=17						
ABKAR	Akbulak array	4.83	174	iP	Pn	23 01 46.4	+2.6
ABKAR				eS	Sn	23 02 42.1	+1.7
PR1R	Pomanovo	5.31	347	iP	Pn	23 01 50.8	+0.3
PR1R				eS	Sn	23 02 50.9	-1.4
	73μm,0.5s						
BRVK	Borovoye	6.72	94	iP	Pn	23 02 13.3	+3.5
BRVK				eS	Sn	23 03 23.9	-3.0
BRVK	Borovoye	6.72	94	⇑Pn	Pn	23 02 13.0	+3.3
	1.6nm,0.6s						
BRVK				⇑Sn	Sn	23 03 24.3	-2.6
	1.8nm,0.4s						
BRVK				⇓Lg	Lg	23 04 00.3	
	6.8nm,0.7s						
BVAR	Borovoye Array	6.79	94	Pn	Pn	23 02 13.8	+3.1
	0.7nm,0.3s,baz=285,slow=14,SNR=17						
BVAR				Sn	Sn	23 03 26.5	-2.1
	1.0nm,0.3s,baz=279,slow=24,SNR=8.4						
BVAR				Lg	Lg	23 04 02.8	
	1.2nm,0.3s,baz=276,slow=30,SNR=4.6						
KURBB	Kurchatov Arra	12.34	98	Pn	Pn	23 03 28.2	+1.4
	0.0nm,0.3s,baz=294,slow=14,SNR=4.3						
KURBB				Lg	Lg	23 06 58.8	
	0.0nm,0.3s,baz=295,slow=33,SNR=4.1						
KBZ	Khabaz	14.82	232	Pn	Pn	23 04 00.8	+0.2
	0.3nm,0.3s,baz=277,slow=2.7,SNR=8.6						
KBZ				Sn	Sn	23 06 38.0	-7.4
	0.2nm,0.3s,baz=245,slow=13,SNR=1.9						
MKAR	Makanchi Array	16.39	107	Pn	Pn	23 04 21.6	+0.3
	0.0nm,0.3s,baz=298,slow=9.7,SNR=3.4						
FINES	FINESS Array B	18.96	306	Pn	P	23 04 50.5	-1.8
	0.1nm,0.3s,baz=102,slow=13,SNR=1.3						
ARCES	ARCESS Array B	21.76	328	P	P	23 05 22.9	+0.2
	3.8nm,1.0s,baz=122,slow=13,SNR=1.9						
MLR	Muntele Rosu	22.90	262	LR	LR	23 15 35.3	
	comp=Z,61nm,18.0s,baz=302,slow=39						
HFS	Hagfors	25.00	302	P	P	23 05 57.3	+2.2
	3.6nm,1.0s,baz=76,slow=12,SNR=1.8						

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*NEIC **17** 23:02:55.7±2.6, 28°.86S±0°.06×67°.00W±0°.10, h135^{km}±6^{km}, mb4.6/23, Md4.5(SJA), Error ellipse: s-maj=12.3km s-min=8.5km az=93.0*

*SJA **17** 23:02:56.3±1.0, 28°.90S×67°.05W, h143^{km}±7^{km}, ML4.5, MW4.3*

*IDC **17** 23:02:57.2±0.6, 28°.76S×66°.95W, h135^{km}±4^{km}, mb4.0/9, mb1 4.2/13, mb1mx4.0/34, mbtmp4.5/13, MS3.1/4, Ms1 3.1/4, ms1mx2.8/30, Error ellipse: s-maj=16.3km s-min=13.9km az=76.0*

*VAO **17** 23:03:02.1±1.0, 28°.39S×66°.69W, h143^{km}±6^{km}, mb4.5*

ISC 17 23:02:56.9±0.4, **28°.82S**±0°.05×**67°.08W**±0°.04, **h150^{km}, n129,** σ**1^{s}41**/138, **mb4.5**/19, **1C, La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCA	Vinchina	0.99	275	iP	Pn	23 03 21.6	-0.1
VCA				eS	Sn	23 03 39.7	-0.9
VCA				IAML		23 03 43.1	
	comp=Z,9μm,0.3s						
CYA	Choya	1.19	72	iP	Pn	23 03 23.2	-0.1
CYA				eS	Sn	23 03 41.9	-1.7
CYA				IAML		23 03 42.5	
	comp=Z,2μm,0.5s						
AGUA	GUANDACOL	1.40	241	iP	Pn	23 03 25.1	-0.4
APLL	PUNTA DE LOS L	1.64	163	iP	Pn	23 03 27.3	-0.7
ACDV	Cuesta del Vie	2.23	232	iP	Pn	23 03 35.6	+0.7
AMOG	MOGNA	2.44	210	iP	Pn	23 03 36.6	-0.7
ACCO	Cerro Coronel	2.47	224	iP	Pn	23 03 37.3	-0.6
AROD	Rodeo	2.48	237	iP	Pn	23 03 38.5	+0.5
RTLL	Cerro Villicun	2.78	205	iP	Pn	23 03 40.8	-0.6
GO03	Copiap	3.04	293		Pn	23 03 44.8	0.0
GO03					Sn	23 04 19.8	-2.1
ZON	Zonda	3.05	207	iP	Pn	23 03 44.2	-0.7
LCO	Las Campanas	3.18	266	Pn	Pn	23 03 46.9	+0.2
LCO				Sn	Sn	23 04 24.8	-0.5
RTCV	Cerro Valdivia	3.28	202	iP	Pn	23 03 47.2	-0.7
ACAN	Cantantal	3.44	182	iP	Pn	23 03 49.4	-0.6
GO04	Tololo Observa	3.51	247		Pn	23 03 50.6	-0.4
RTLS	Leoncito	3.53	212	iP	Pn	23 03 50.7	-0.6
RTLS				IAML		23 03 53.0	
	comp=Z,1μm,0.2s						
MRA	San Martin	3.77	162	iP	Pn	23 03 53.2	-1.1
ASAL	Salagasta	4.05	201	iP	Pn	23 03 57.2	-0.6
GO02	Mina Guanaco	4.28	328		Pn	23 04 01.4	+0.4
ARCO	CERRO ARCO	4.31	201	iP	Pn	23 04 00.7	-0.6
AAGR	Agrelo	4.51	199	iP	Pn	23 04 03.4	-0.4
AZAP	Zapla	4.92	22	iP	Pn	23 04 10.2	+0.7
AZAP				IAML		23 04 11.2	
	comp=Z,220nm,0.5s						
PB14	IPOC Station P	5.12	324	iP	Pn	23 04 11.7	-0.6
PEL	Peldehue	5.30	215		Pn	23 04 12.3	-2.0
PEL				Sn	Sn	23 05 12.8	-2.1
PEL	Peldehue	5.30	215	iP	Pn	23 04 13.2	-1.1
ROC1	El Roble	5.35	218		Pn	23 04 12.7	-2.4
ROC1	El Roble	5.35	218	iP	Pn	23 04 12.7	-2.4
PB15	IPOC Station P	5.99	338	iP	Pn	23 04 23.7	+0.1
PB10	IPOC Station P	6.14	329		Pn	23 04 24.2	-1.2
PB10	IPOC Station P	6.14	329	iP	Pn	23 04 24.7	-0.7
LAMA	Las Malvinas	6.36	196	iP	Pn	23 04 26.8	-1.6
LVC	Limon Verde	6.40	345	P	Pn	23 04 29.6	+0.3
	comp=Z,23nm,0.3s,baz=165,slow=8.9,SNR=168						
LVC				S	Sn	23 05 40.3	-1.3
	comp=Z,3.6nm,0.3s,baz=287,slow=18,SNR=1.7						
LVC	Limon Verde	6.40	345		Pn	23 04 29.1	-0.2
LVC	Limon Verde	6.40	345	eP	Pn	23 04 29.6	+0.3
PB06	IPOC Station P	6.49	339	iP	Pn	23 04 30.0	-0.3
PB05	IPOC Station P	6.57	334	iP	Pn	23 04 29.9	-1.5
YJA	Yavi	6.77	12	iP	Pn	23 04 36.7	+2.4
PB04	IPOC Station P	7.03	336		Pn	23 04 35.5	-2.0
PB04	IPOC Station P	7.03	336	iP	Pn	23 04 35.8	-1.7
EDS3	Malargue	7.20	195	iP	Pn	23 04 38.5	-1.2
PB09	IPOC Station P	7.26	344	iP	Pn	23 04 40.7	+0.1
GO05	Huala	7.42	212		Pn	23 04 38.9	-3.5
PB01	IPOC Station P	8.04	344		Pn	23 04 49.3	-1.8
CPUP	Villa Florida	9.00	76	P	Pn	23 05 02.3	-1.3
	comp=Z,0.8nm,0.3s,baz=264,slow=11,SNR=21						
CPUP				LR	LR	23 08 27.5	
	comp=Z,142nm,20.0s,baz=242,slow=37						
CPUP	Villa Florida	9.00	76		Pn	23 05 02.1	-1.5
CPUP	Villa Florida	9.00	76	eP	Pn	23 05 02.6	-1.1
GO01	Chusmiza	9.31	348		Pn	23 05 06.6	-1.7
PB11	IPOC Station P	9.32	345		Pn	23 05 06.1	-1.9
GO06	Curarrehue	11.33	198		Pn	23 05 31.5	-3.0
CPSB	Cacapava Do Su	11.98	101	eP	Pn	23 05 44.8	+2.0
PLTB	Pedras Altas	12.01	107	eP	P	23 05 46.8	-3.1
PLCA	Paso Flores	12.22	193	P	Pn	23 05 44.2	-1.7
	comp=Z,0.2nm,0.3s,baz=38,slow=13,SNR=4.8						
PLCA				LR	LR	23 10 48.8	
	comp=Z,60nm,18.1s,baz=38,slow=38						
PLCA	Paso Flores	12.22	193		Pn	23 05 42.6	-3.4
LPAZ	La Paz	12.51	355	P	Pn	23 05 49.1	-1.3
	comp=Z,1.3nm,0.3s,baz=154,slow=7.0,SNR=21						
LPAZ	La Paz	12.51	355	Pn	Pn	23 05 50.5	0.0
LPAZ	La Paz	12.51	355	eP	Pn	23 05 50.4	0.0
AQDB	Aquidauana	13.26	54	eP	Pn	23 05 59.5	0.0
ITAB	Concordia	13.30	87	eP	Pn	23 05 59.8	-0.2
SIV	San Ignacio	13.92	25	P	Pn	23 06 06.9	-1.0
	comp=Z,1.1nm,0.3s,baz=223,slow=14,SNR=31						
SIV				LR	LR	23 11 35.0	
	comp=Z,57nm,21.7s,baz=192,slow=38						
PTGB	Pitanga	14.02	77	eP	P	23 06 10.1	-2.3
CNLB	Canela	14.21	96	eP	P	23 06 13.3	-1.0
PCMB	Pacaembu	16.01	67	eP	Pn	23 06 33.3	-0.5
C2SB	Chapadao do Su	16.42	56	eP	Pn	23 06 37.9	-0.9
SALV	Santo Antonio	16.60	42	eP	P	23 06 39.5	-1.3
FRTB	Fartura	16.65	75	eP	Pn	23 06 41.8	+0.1
ITRB	Iturama	17.73	63	eP	P	23 06 53.4	+0.1
SPB	Sao Paulo	18.38	78	eP	Pn	23 07 01.6	-0.6
BB19B	Bebedouro	18.50	70	eP	Pn	23 07 02.3	-1.4
RCLB	Rio Claro- Sao	18.74	75	eP	Pn	23 07 04.8	-1.7
VAO	Valinhos	18.99	77	eP	Pn	23 07 08.0	-1.4
ARAG	Araguaiana, MT	19.21	50	eP	P	23 07 09.7	+0.3
PARB	Paraibuna	20.02	79	eP	P	23 07 18.4	+0.2
SAML	Samuel	20.11	11	P	P	23 07 18.4	-0.6
SAML				IAmb	IAmb	23 07 21.1	
	comp=Z,33nm,1.0s						
SAML	Samuel	20.11	11	eP	P	23 07 19.7	+0.7
IPMB	Ipameri, GO	20.37	62	eP	P	23 07 22.5	+0.5
CLDB	Colider	20.75	33	eP	P	23 07 25.0	-0.9
ESAR	Angra dos Reis	21.15	79	eP	P	23 07 31.0	+0.8
BSCB	Bom Sucesso	21.66	74	eP	P	23 07 36.2	+0.4
BDFB	Brasilia	21.95	57	P	P	23 07 38.1	-0.7
	comp=Z,5.0nm,0.4s,baz=269,slow=6.9,SNR=11						
BDFB				pP	pP	23 08 05.5	-0.4
	comp=Z,11nm,0.8s,baz=232,slow=11,SNR=11						
BDFB	Brasilia	21.95	57	P	P	23 07 37.6	-1.2
EFI	East Falkland	23.81	166	P	P	23 07 57.3	+1.6
JANB	Januaria	25.11	62	eP	P	23 08 07.5	-0.5
SJMB	Sao Joao De Ma	25.70	73	eP	P	23 08 15.5	+2.2
BSFB	Barra de Sao F	25.93	73	eP	P	23 08 17.7	+2.4
SMTB	Santa Maria do	27.02	47	eP	P	23 08 25.9	+0.8
PTGA	Pitinga	28.75	15	P	P	23 08 41.6	+1.1
	comp=Z,3.2nm,0.3s,baz=214,slow=14,SNR=11						
PTGA	Pitinga	28.75	15	P	P	23 08 41.7	+1.3
PTGA				IAmb	IAmb	23 08 42.5	
	comp=Z,14nm,1.2s						
PTGA	Pitinga	28.75	15	eP	P	23 08 41.5	+1.1
SDV	Santo Domingo	37.64	354	LR	LR	23 29 14.9	
	comp=Z,35nm,19.4s,baz=72,slow=42						
SNAA	Sanae	54.86	160	P	P	23 12 13.2	+1.9
SNAA				IAmb	IAmb	23 12 14.1	
	comp=Z,12nm,1.2s						
QSPA	South Pole Qui	61.40	180	P	P	23 12 59.0	+2.1
WVT	Waverly	67.49	342	P	P	23 13 37.6	+1.1
TXAR	Lajitas Array	67.57	326	P	P	23 13 39.4	+2.0
	comp=Z,1.1nm,0.7s,baz=148,slow=8.2,SNR=11						
LIC	Lamto	69.07	70	eP	P	23 13 47.9	+1.0
	comp=Z,4.4nm,0.4s						
LIC	Lamto	69.07	70	P	P	23 13 47.9	+1.0
SYO	Syowa Base	69.11	158	⇑eX	P	23 13 40.8	-5.4
TIC	Toumodi	69.31	70	eP	P	23 13 51.0	+2.6
KIC	Kosan Boka	69.39	70	eP	P	23 13 49.6	+0.8
	comp=Z,2.2nm,0.4s						
KIC	Kosan Boka	69.39	70	P	P	23 13 49.6	+0.8
DBIC	Dimbokro	69.46	70	P	P	23 13 50.2	+0.9
	comp=Z,1.8nm,0.3s,baz=211,slow=6.7,SNR=9.5						
DBIC	Dimbokro	69.46	70	IAmb	IAmb	23 13 55.9	
	comp=Z,14nm,1.4s						
VNDA	Vanda	69.96	190	P	P	23 13 53.8	+2.4
	comp=Z,2.4nm,0.8s,baz=130,slow=5.2,SNR=5.2						
S39A	Bolivar	70.58	338	IAmb	IAmb	23 13 58.4	
	comp=Z,11nm,0.8s						
HSIG		71.18	320	P	P	23 13 59.6	+0.3
HSIG				IAmb	IAmb	23 14 03.3	
	comp=Z,9.6nm,1.0s						
319A	Douglas	72.09	323	P	P	23 14 06.0	+1.1
319A				IAmb	IAmb	23 14 09.2	
	comp=Z,12nm,0.8s						
121A	Cookes Peak, D	72.23	325	P	P	23 14 06.4	+0.6
121A				IAmb	IAmb	23 14 10.1	
	comp=Z,8.5nm,0.9s						
L40A	Anamosa	73.97	342	P	P	23 14 16.0	+0.4
214A	Organ Pipe Nat	74.45	321	P	P	23 14 21.7	+3.0
214A				IAmb	IAmb	23 14 23.1	
	comp=Z,20nm,1.4s						
ECSD	EROS Data Cent	77.11	338	IAmb	IAmb	23 14 37.2	
	comp=Z,14nm,1.2s						
TORD	Torodi Ar. Bea	78.40	68	P	P	23 14 42.7	+1.4
	comp=Z,4.2nm,0.8s,baz=280,slow=6.9,SNR=36						
TORD				pP	pP	23 15 14.7	-3.9
	comp=Z,5.8nm,0.8s,baz=255,slow=5.3,SNR=12						
MTPU	Mount Pierson	78.77	325	P	P	23 14 43.9	+0.7
AGMN	Agassiz Nation	80.99	341	P	P	23 14 55.4	+1.0
HWUT	Hardware Ranch	81.24	328	P	P	23 14 57.3	+1.1
HWUT				IAmb	IAmb	23 14 59.5	
	comp=Z,5.8nm,0.8s						
PD31	Pinedale Array	81.25	330	P	P	23 14 55.3	-1.0
PDAR	Pinedale Array	81.25	330	P	P	23 14 58.4	+2.1
	comp=Z,1.6nm,0.8s,baz=131,slow=7.3,SNR=11						
PDAR				pP	pP	23 15 33.3	-0.7
	comp=Z,1.8nm,0.8s,baz=127,slow=6.6,SNR=6.5						
PDAR	Pinedale Array	81.25	330	P	P	23 14 58.0	+1.8
ULM	Lac du Bonnet	82.76	342	P	P	23 15 05.1	+1.5
	comp=Z,5.8nm,1.0s,baz=128,slow=2.8,SNR=7.2						
ULM	Lac du Bonnet	82.76	342	P	P	23 15 03.7	+0.1
ULM				IAmb	IAmb	23 15 09.4	
	comp=Z,13nm,1.4s						
PAHR	Pah Rah Range	83.75	322	P	P	23 15 08.7	-0.5
YKA	Yellowknife Ar	98.61	340	P	Pdif	23 16 19.8	+1.8
	comp=Z,0.8nm,0.9s,baz=137,slow=4.7,SNR=9.4						
YKA				pP	pP	23 16 54.8	-1.7
	comp=Z,0.5nm,0.7s,baz=141,slow=4.7,SNR=5.6						
ASAR	Alice Springs	124.04	203	PKP	PKiKP	23 21 38.8	+0.5
	comp=Z,2.1nm,0.8s,baz=144,slow=2.2,SNR=16						
ASAR				pPKP	pPKPdf	23 22 15.7	-3.2
	comp=Z,0.8nm,0.8s,baz=144,slow=1.8,SNR=3.9						
ASAR	Alice Springs	124.04	203		PKPdf	23 21 37.1	-1.0
WRA	Warramunga Arr	127.29	206	PKP	PKiKP	23 21 45.7	+0.8
	comp=Z,3.2nm,0.6s,baz=159,slow=1.7,SNR=23						
WRA				pPKP	pPKPdf	23 22 22.8	-2.2
	comp=Z,0.6nm,0.5s,baz=176,slow=13,SNR=2.8						
WRA	Warramunga Arr	127.29	206		PKiKP	23 21 44.9	0.0
KAPI	Kappang	145.72	192	PKPbc	PKiKP	23 22 21.0	-1.4
ZALV	Zalesovo Beam	147.61	31	PKP	PKPbc	23 22 22.4	-0.6
	comp=Z,7.5nm,0.5s,baz=329,slow=5.5,SNR=32						
ZALV				PKPbc	PKPab	23 22 25.8	+0.1
	comp=Z,7.6nm,0.4s,baz=310,slow=3.7,SNR=31						
ZALV				pPKPbc	pPKPdf	23 22 59.5	-1.0
	comp=Z,2.1nm,0.5s,baz=294,slow=4.4,SNR=3.4						
ZALV	Zalesovo Beam	147.61	31		PKPbc	23 22 23.4	+0.3
KSH	Kashi	147.82	61	PKPbc	PKPdf	23 22 19.1	-2.1
KSH				pPKP	pPKPbc	23 23 02.5	-1.6
KSH				PKS	PP	23 25 53.3	+0.1
KSH				PP	PP	23 25 54.9	+1.7
MKAR	Makanchi Array	150.14	45	PKPbc	PKiKP	23 22 31.8	+1.3
	comp=Z,8.5nm,0.9s,baz=321,slow=1.6,SNR=51						
MKAR				pPKPbc	pPKPbc	23 23 07.5	-2.1
	comp=Z,7.2nm,0.9s,baz=318,slow=1.6,SNR=9.5						

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*SJA **17** 23:36:30.8±1.1, 19°.88S×70°.73W, h21^{km}±3^{km}, ML3.3, MW3.5*

*GUC **17** 23:36:33.1±0.6, 19°.85S×70°.75W, h34^{km}±2^{km}, ML3.3*

ISC 17 23:36:30.2±1.6, **19°.87S**±0°.03×**70°.81W**±0°.06, **h13^{km}**±10^{km}, **n29,** σ**0^{s}92**/51, **3C-9D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.70	67	⇑iP	Pg	23 36 43.6	-0.4
PSGC				iS	Sg	23 36 53.2	-0.1
PSGCX	Pisagua	0.70	67	iP	Pg	23 36 43.9	-0.1
PSGCX				eS	Sg	23 36 53.2	-0.1
TA01	Diego Aracena	0.91	139	⇓iP	Pb	23 36 47.4	-0.5
TA01				iS	Sb	23 36 59.2	-0.8
TA01				IAML		23 37 04.7	
	comp=N,1μm,0.3s						
PB11	IPOC Station P	1.09	84	⇓iP	Pb	23 36 50.7	-0.5
PB11				iS	Sb	23 37 04.5	-0.9
PB11				IAML		23 37 06.1	
	comp=N,1μm,0.3s						
PB11	IPOC Station P	1.09	84	iP	Pb	23 36 50.7	-0.5
PB11				eS	Sb	23 37 04.9	-0.5
PB11				IAML		23 37 06.0	
	comp=Z,800nm,0.3s						
PATCX	Punta Patache	1.13	147	⇓iP	Pb	23 36 51.1	-0.6
PATCX				iS	Sb	23 37 06.2	-0.2
PATCX	Punta Patache	1.13	147	iP	Pb	23 36 51.2	-0.5
PATCX				⇓eS	Sn	23 37 07.7	+0.4
PATCX				IAML		23 37 14.2	
	comp=Z,407nm,0.7s						
PB12	IPOC Station P	1.33	20	⇓iP	Pn	23 36 54.3	-0.3
PB12				eS	Sb	23 37 11.9	-0.3
PB12				IAML		23 37 16.8	
	comp=N,1μm,0.5s						
PB12	IPOC Station P	1.33	20	iP	Pn	23 36 54.4	-0.3
PB12				eS	Sg	23 37 15.3	+2.1
PB12				IAML		23 37 16.6	
	comp=Z,482nm,0.4s						
GO01	Chusmiza	1.54	83	⇓iP	Pn	23 36 58.2	+0.4
GO01				eS	Sn	23 37 18.0	+0.1
AP01	Chacalluta	1.56	17	⇓iP	Pn	23 36 58.1	+0.5
AP01				eS	Sn	23 37 17.2	-0.5
AP01				IAML		23 37 23.7	
	comp=E,2μm,0.6s						
PB08	IPOC Station P	1.58	100	iP	Pn	23 36 58.9	+0.5
PB08				eS	Sn	23 37 18.7	-0.2
PB08				IAML		23 37 24.9	
	comp=N,721nm,0.5s						
PB08	IPOC Station P	1.58	100	iP	Pn	23 36 59.0	+0.5
PB08				eS	Sb	23 37 19.6	-0.2
PB08				IAML		23 37 20.2	
	comp=Z,445nm,0.3s						
PB02	IPOC Station P	1.68	149	⇓iP	Pn	23 36 59.8	+0.4
PB02				eS	Sn	23 37 19.9	-1.0
PB02				IAML		23 37 26.9	
	comp=E,760nm,0.4s						
PB02	IPOC Station P	1.68	149	iP	Pn	23 36 60.0	+0.5
PB02				eS	Sb	23 37 23.3	+1.1
PB02				IAML		23 37 27.3	
	comp=Z,623nm,0.3s						
PB01	IPOC Station P	1.70	133	⇑iP	Pn	23 37 00.3	+0.5
PB01				eS	Sn	23 37 21.7	+0.1
PB01				IAML		23 37 29.5	
	comp=N,390nm,0.3s						
PB01	IPOC Station P	1.70	133	iP	Pn	23 37 00.5	+0.8
PB01				eS	Sb	23 37 22.6	-0.3
PB01				IAML		23 37 28.3	
	comp=Z,224nm,0.6s						
PB16	IPOC Station P	1.96	39	⇓iP	Pn	23 37 05.1	+1.3
PB16				iS	Sb	23 37 30.7	-0.1
PB16				IAML		23 37 33.1	
	comp=N,246nm,0.3s						
PB16	IPOC Station P	1.96	39	iP	Pn	23 37 05.2	+1.3
PB16				eS	Sb	23 37 31.4	+0.5
PB16				IAML		23 37 40.5	
	comp=Z,157nm,0.5s						
PB07	IPOC Station P	2.04	155	⇑iP	Pn	23 37 05.5	+1.0
PB07				iS	Sn	23 37 30.3	+0.3
PB07				IAML		23 37 41.4	
	comp=E,289nm,0.4s						
PB07	IPOC Station P	2.04	155	iP	Pn	23 37 05.7	+1.2
PB07				eS	Sb	23 37 34.3	+1.7
PB07				IAML		23 37 38.0	
	comp=Z,183nm,0.5s						
PB09	IPOC Station P	2.41	143	eP	Pb	23 37 12.2	-1.5
PB09				eS	Sb	23 37 42.4	-1.0
PB09				IAML		23 37 55.7	
	comp=E,266nm,0.5s						
PB09	IPOC Station P	2.41	143	iP	Pb	23 37 12.6	-1.1
PB09				IAML		23 37 56.8	
	comp=Z,256nm,0.5s						
PB04	IPOC Station P	2.53	166	iP	Pn	23 37 11.5	+0.3
PB05	IPOC Station P	3.02	169	iP	Pn	23 37 17.7	-0.3
PB06	IPOC Station P	3.05	158	iP	Pn	23 37 18.8	+0.5
PB06				IAML		23 38 09.7	
	comp=Z,90nm,1.3s						
LVC	Limon Verde	3.25	147	iP	Pn	23 37 24.6	+3.3
PB15	IPOC Station P	3.55	160	iP	Pn	23 37 26.6	+1.3
PB15				IAML		23 38 27.2	
	comp=Z,92nm,1.1s						
PB10	IPOC Station P	3.63	176	iP	Pn	23 37 25.7	-0.5

IDC 18 00:04:09.7±1.6, **2°.91S**×**129°.84E, h0^{km}, mb3.5**/2, **mb1 3.7**/4, **mb1mx3.5**/35, **mbtmp3.5**/4, **ML3.5**/2, **Error ellipse: s-maj=44.7km s-min=22.9km az=97.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	2.48	35	Pn	Pn	00 04 51.8	+0.4
	5.4nm,0.3s,baz=244,slow=22,SNR=11						
SIJI				Sn	Sn	00 05 21.4	-0.9
	5.8nm,0.3s,baz=229,slow=23,SNR=3.7						
WRA	Warramunga Arr	17.49	166	P	P	00 08 16.1	-0.4
	0.2nm,0.3s,baz=334,slow=13,SNR=7.2						
ASAR	Alice Springs	21.01	170	P	P	00 08 54.5	-0.5
	3.5nm,0.7s,baz=348,slow=10.0,SNR=24						
MKAR	Makanchi Array	64.75	326	P	P	00 14 50.2	+0.1
	0.1nm,0.3s,baz=114,slow=7.9,SNR=4.2						

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*IDC **18** 00:12:41.6±0.7, 19°.81S×70°.67W, h0^{km}, mb3.9/10, mb1 4.2/12, mb1mx4.0/27, mbtmp4.0/12, ML3.8/2, MS2.4/3, Ms1 2.4/3, ms1mx2.3/30, Error ellipse: s-maj=27.0km*

s-min=16.0km az=76.0

*NEIC **18** 00:12:43.0±1.7, 19°.94S±0°.04×70°.85W±0°.07, h13^{km}±3^{km}, mb4.4/5, Error ellipse: s-maj=9.5km s-min=5.7km az=82.0*

*GUC **18** 00:12:45.1±0.7, 19°.89S×70°.84W, h30^{km}±3^{km}, ML4.0*

ISC 18 00:12:41.5±1.8**, 19°.89S**±0°.03×**70°.89W**±0°.06**, h4**^{km}±11^{km}**, n54,** σ**1^{s}07**/63**, mb4.1**/9**, 6C-7D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.78**	**68**	⇓*i*P	**Pb**	**00 12 57.5**	**-0.1**
PSGC				*e*S	**Sb**	**00 13 07.9**	**-0.8**
TA01	**Diego Aracena**	**0.95**	**135**	⇓*i*P	**Pg**	**00 13 00.4**	**+0.8**
TA01				*e*S	**Sg**	**00 13 12.3**	**+0.3**
TA01				IAML		00 13 16.3	
	comp=N,8μm,0.6s						
PATCX	**Punta Patache**	**1.16**	**143**	⇓*i*P	**Pb**	**00 13 03.9**	**-0.2**
PATCX				*e*S	**Sb**	**00 13 17.5**	**-2.0**
PB11	**IPOC Station P**	**1.17**	**84**	⇓*i*P	**Pb**	**00 13 04.1**	**-0.3**
PB11				*i* S	**Sg**	**00 13 19.3**	**+0.1**
PB11	**IPOC Station P**	**1.17**	**84**		**Pb**	**00 13 03.8**	**-0.5**
PB11				Sg	**Sg**	**00 13 19.3**	**+0.1**
PB12	**IPOC Station P**	**1.38**	**23**	*e*P	**Pn**	**00 13 07.9**	**+0.3**
PB12				*e*S	**Sb**	**00 13 24.8**	**-1.1**
AP01	**Chacalluta**	**1.60**	**19**	*e*P	**Pn**	**00 13 11.3**	**+0.8**
AP01				*e*S	**Sn**	**00 13 31.4**	**-0.2**
AP01				IAML		00 13 37.2	
	comp=E,6μm,0.4s						
GO01	**Chusmiza**	**1.62**	**82**	⇓*i*P	**Pb**	**00 13 11.6**	**-0.6**
GO01				*i* S	**Sb**	**00 13 32.0**	**-1.0**
GO01	**Chusmiza**	**1.62**	**82**		**Pb**	**00 13 11.5**	**-0.6**
PB08	**IPOC Station P**	**1.66**	**99**	⇓*i*P	**Pb**	**00 13 12.0**	**-0.7**
PB08				*i* S	**Sb**	**00 13 33.0**	**-1.2**
PB08				IAML		00 13 37.8	
	comp=N,2μm,0.6s						
PB02	**IPOC Station P**	**1.70**	**147**	⇑*i*P	**Pn**	**00 13 12.2**	**+0.2**
PB02				*e*S	**Sn**	**00 13 33.5**	**-0.8**
PB01	**IPOC Station P**	**1.75**	**131**	⇓*i*P	**Pn**	**00 13 13.1**	**+0.5**
PB01				*i* S	**Sn**	**00 13 35.0**	**-0.5**
PB01				IAML		00 13 41.2	
	comp=E,3μm,0.4s						
PB01	**IPOC Station P**	**1.75**	**131**		**Pn**	**00 13 13.2**	**+0.6**
PB16	**IPOC Station P**	**2.03**	**40**	⇑*i*P	**Pb**	**00 13 18.2**	**-1.0**
PB16				*e*S	**Sb**	**00 13 44.8**	**-0.2**
PB16				IAML		00 13 50.8	
	comp=N,2μm,0.4s						
PB07	**IPOC Station P**	**2.06**	**153**	⇑*i*P	**Pn**	**00 13 16.9**	**-0.1**
PB07				*e*S	**Sn**	**00 13 43.2**	**0.0**
PB07				IAML		00 13 55.6	
	comp=E,2μm,0.5s						
PB03	**IPOC Station P**	**2.40**	**154**	⇑*i*P	**Pn**	**00 13 21.5**	**-0.1**
PB03				*i* S	**Sn**	**00 13 51.1**	**-0.5**
PB03				IAML		00 14 03.1	
	comp=E,575nm,0.6s						
PB09	**IPOC Station P**	**2.45**	**141**	⇑*i*P	**Pn**	**00 13 23.7**	**+1.4**
PB09				*i* S	**Sn**	**00 13 53.0**	**+0.1**
PB09				IAML		00 14 06.6	
	comp=N,1μm,0.5s						
PB04	**IPOC Station P**	**2.53**	**164**	⇑*i*P	**Pn**	**00 13 22.9**	**-0.6**
PB04	**IPOC Station P**	**2.53**	**164**		**Pn**	**00 13 22.8**	**-0.6**
LVC	**Limon Verde**	**3.28**	**146**	Pn	**Pn**	**00 13 35.4**	**+1.5**
	comp=N,10nm,0.3s,baz=355,slow=5.3,SNR=46						
LVC				LR	LR	00 14 09.7	
	comp=N,40nm,22.0s,baz=322,slow=27						
LVC				Sn	**Sn**	**00 14 14.4**	**+0.8**
	comp=N,24nm,0.3s,baz=69,slow=22,SNR=7.2						
LVC	**Limon Verde**	**3.28**	**146**		**Pn**	**00 13 35.5**	**+1.5**
LVC					**Sn**	**00 14 12.1**	**-1.5**
PB10	**IPOC Station P**	**3.62**	**175**	Pn	**Pn**	**00 13 36.7**	**-1.6**
LPAZ	**La Paz**	**4.44**	**37**	Pn	**Pb**	**00 13 58.0**	**-2.4**
	comp=N,1.4nm,0.3s,baz=230,slow=6.1,SNR=20						
LPAZ				LR	LR	00 14 59.4	
	comp=N,17nm,21.5s,baz=194,slow=32						
LPAZ	**La Paz**	**4.44**	**37**		**Pn**	**00 13 51.8**	**+1.6**
LPAZ	**La Paz**	**4.44**	**37**		**Pn**	**00 13 52.1**	**+1.9**
GO02	**Mina Guanaco**	**5.38**	**167**		**Pn**	**00 14 02.3**	**-0.6**
GO03	**Copiap**	**7.69**	**176**	Pn	**Pn**	**00 14 33.1**	**-1.3**
SIV	**San Ignacio**	**10.12**	**69**	Pn	**Pn**	**00 15 07.1**	**-0.6**
	comp=N,0.9nm,0.3s,baz=262,slow=12,SNR=16						
SIV				LR	LR	00 19 24.9	
	comp=N,81nm,20.0s,baz=276,slow=41						
PLCA	**Paso Flores**	**20.78**	**179**	P	**P**	**00 17 24.7**	**+1.1**
	comp=N,1.2nm,0.7s,baz=19,slow=12,SNR=3.5						
PLCA	**Paso Flores**	**20.78**	**179**	IAmb	IAmb	00 17 26.0	
	comp=Z,8.1nm,1.2s						
PTGA	**Pitinga**	**21.84**	**31**	P	**P**	**00 17 33.8**	**-1.4**
	comp=Z,2.5nm,0.3s,baz=244,slow=22,SNR=12						
PTGA	**Pitinga**	**21.84**	**31**	P	**P**	**00 17 33.5**	**-1.6**
RUSC	**La Rusia**	**25.71**	**355**	P	**P**	**00 18 14.5**	**+1.0**
TXAR	**Lajitas Array**	**58.26**	**326**	P	**P**	**00 22 38.4**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=149,slow=10,SNR=7.3						
SNAA	**Sanae**	**64.40**	**161**	P	**P**	**00 23 19.1**	**+0.7**
	comp=Z,2.9nm,1.1s,baz=281,slow=5.2,SNR=2.5						
SNAA	**Sanae**	**64.40**	**161**	IAmb	IAmb	00 23 20.1	
	comp=Z,11nm,1.5s						
QSPA	**South Pole Qui**	**70.29**	**180**	P	**P**	**00 23 57.2**	**+1.3**
	comp=Z,0.7nm,0.5s,baz=140,slow=0.9,SNR=14						
PDAR	**Pinedale Array**	**71.80**	**331**	P	**P**	**00 24 07.0**	**+1.5**
	comp=Z,0.2nm,0.5s,baz=86,slow=4.6,SNR=2.2						
NVAR	**Mina Array Bea**	**73.09**	**323**	P	**P**	**00 24 15.5**	**+2.3**
	comp=Z,1.3nm,0.8s,baz=134,slow=4.3,SNR=3.7						
NVAR	**Mina Array Bea**	**73.09**	**323**	P	**P**	**00 24 12.3**	**-1.0**
SCHQ	**Schefferville**	**74.50**	**2**	P	**P**	**00 24 20.9**	**+0.1**
	comp=Z,2.3nm,0.9s,baz=104,slow=10,SNR=1.8						
SCHQ	**Schefferville**	**74.50**	**2**	IAmb	IAmb	00 24 38.8	
	comp=Z,15nm,1.5s						
TORD	**Torodi Ar. Bea**	**78.59**	**71**	P	**P**	**00 24 43.5**	**-1.3**
	comp=Z,1.3nm,0.5s,baz=248,slow=5.1,SNR=24						
YKA	**Yellowknife Ar**	**89.07**	**341**	P	**P**	**00 25 37.4**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=136,slow=4.9,SNR=10						
H11S2	**WAKE ISLAND Hy**	**125.81**	**279**	T	T	02 51 09.0	
	baz=101,slow=74,SNR=48						
H11S1	**WAKE ISLAND Hy**	**125.82**	**279**	T	T	02 51 06.4	
	baz=101,slow=74,SNR=29						
H11S3	**WAKE ISLAND Hy**	**125.83**	**279**	T	T	02 51 06.6	
	baz=101,slow=74,SNR=33						
H11N3	**WAKE ISLAND Hy**	**125.86**	**280**	T	T	02 51 09.3	
	baz=101,slow=74,SNR=14						
H11N2	**WAKE ISLAND Hy**	**125.88**	**280**	T	T	02 51 07.9	
	baz=101,slow=74,SNR=15						
H11N1	**WAKE ISLAND Hy**	**125.88**	**280**	T	T	02 51 09.8	
	baz=101,slow=74,SNR=8.1						
WRA	**Warramunga Arr**	**133.33**	**213**	PKP	**PKPdf**	**00 31 59.8**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=168,slow=1.5,SNR=2.0						
ZALV	**Zalesovo Beam**	**141.25**	**23**	PKP	**PKPdf**	**00 32 10.7**	**-2.4**
	comp=Z,0.8nm,0.6s,baz=270,slow=2.3,SNR=3.9						
MKAR	**Makanchi Array**	**145.37**	**33**	PKPbc	**PKPdf**	**00 32 21.0**	**+0.2**
	comp=Z,2.0nm,0.7s,baz=346,slow=2.5,SNR=22						
SONM	**Songino Array**	**152.04**	**4**	PKPbc	**PKiKP**	**00 32 38.5**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=312,slow=1.6,SNR=8.1						
SONM				PKPab	**PKPab**	**00 32 47.9**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=64,slow=3.4,SNR=2.0						

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*SJA **18** 00:21:46.7±0.9, 20°.03S×71°.00W, h28^{km}±4^{km}, ML3.3, MW3.6*

*GUC **18** 00:21:49.7±0.6, 19°.98S×70°.98W, h32^{km}±2^{km}, ML3.3*

ISC 18 00:21:47.1±3.3**, 20°.00S**±0°.03×**71°.00W**±0°.07**, h10**^{km}±24^{km}**, n24,** σ**0^{s}54**/38**, 4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.92**	**64**	*e*P	**Pb**	**00 22 04.6**	**-0.5**
PSGC				*i* S	**Sb**	**00 22 16.5**	**-0.9**
PSGCX	**Pisagua**	**0.92**	**64**	*e*P	**Pb**	**00 22 04.7**	**-0.4**
PSGCX				IAML		00 22 18.6	
	comp=Z,672nm,0.4s						
TA01	**Diego Aracena**	**0.95**	**126**	*e*P	**Pb**	**00 22 06.0**	**+0.4**
TA01				*i* S	**Sb**	**00 22 17.9**	**-0.3**
PATCX	**Punta Patache**	**1.13**	**136**	⇓*i*P	**Pb**	**00 22 09.0**	**+0.2**
PATCX				*i* S	**Sb**	**00 22 23.9**	**+0.2**
PATCX	**Punta Patache**	**1.13**	**136**	*e*S	**Sn**	**00 22 24.2**	**-0.5**
PB11	**IPOC Station P**	**1.28**	**79**	*e*P	**Pn**	**00 22 11.0**	**-0.2**
PB11				*i* S	**Sb**	**00 22 27.4**	**-0.7**
PB11	**IPOC Station P**	**1.28**	**79**	*e*P	**Pn**	**00 22 11.0**	**-0.2**
PB11				*e*S	**Sn**	**00 22 28.5**	**-0.1**
PB11				IAML		00 22 28.6	
	comp=Z,1μm,0.4s						
PB12	**IPOC Station P**	**1.52**	**25**	⇓*i*P	**Pn**	**00 22 14.6**	**+0.2**
PB12				*e*S	**Sn**	**00 22 33.4**	**-0.9**
PB12				IAML		00 22 43.3	
	comp=E,422nm,0.4s						
PB12	**IPOC Station P**	**1.52**	**25**	*e*P	**Pn**	**00 22 14.4**	**0.0**
PB12				*e*S	**Sb**	**00 22 35.5**	**+0.7**
PB12				IAML		00 22 43.4	
	comp=Z,245nm,0.3s						
PB02	**IPOC Station P**	**1.67**	**142**	⇓*i*P	**Pn**	**00 22 16.8**	**+0.3**
PB02				*i* S	**Sn**	**00 22 38.2**	**+0.3**
PB02				IAML		00 22 45.6	
	comp=E,1μm,0.4s						
GO01	**Chusmiza**	**1.73**	**79**	*e*P	**Pn**	**00 22 18.5**	**+0.9**
GO01				*i* S	**Sb**	**00 22 40.7**	**-0.5**
AP01	**Chacalluta**	**1.74**	**21**	*e*P	**Pb**	**00 22 19.1**	**0.0**
AP01				*e*S	**Sn**	**00 22 39.5**	**-0.1**
PB08	**IPOC Station P**	**1.74**	**95**	*e*P	**Pn**	**00 22 18.5**	**+0.8**
PB08				*i* S	**Sb**	**00 22 40.8**	**-0.6**
PB08				IAML		00 22 42.6	
	comp=N,399nm,0.4s						
PB01	**IPOC Station P**	**1.75**	**126**	*e*P	**Pn**	**00 22 18.2**	**+0.6**
PB01				*i* S	**Sn**	**00 22 40.2**	**+0.2**
PB07	**IPOC Station P**	**2.00**	**149**	*e*P	**Pn**	**00 22 21.3**	**+0.2**
PB07				*e*S	**Sb**	**00 22 48.3**	**-0.5**
PB07				IAML		00 22 59.3	
	comp=E,221nm,0.4s						
PB16	**IPOC Station P**	**2.18**	**41**	*e*P	**Pn**	**00 22 24.6**	**+0.8**
PB16				*e*S	**Sn**	**00 22 52.4**	**+1.2**
PB16				IAML		00 22 58.0	
	comp=N,354nm,0.7s						
PB03	**IPOC Station P**	**2.34**	**150**	*e*P	**Pn**	**00 22 26.0**	**+0.2**
PB09	**IPOC Station P**	**2.42**	**138**	*i* P	**Pn**	**00 22 27.5**	**+0.6**
PB09				IAML		00 23 10.3	
	comp=Z,188nm,0.5s						
PB04	**IPOC Station P**	**2.45**	**161**	⇓*i*P	**Pn**	**00 22 27.1**	**-0.1**
PB04	**IPOC Station P**	**2.45**	**161**	*i* P	**Pn**	**00 22 27.1**	**-0.1**
PB05	**IPOC Station P**	**2.93**	**166**	*i* P	**Pn**	**00 22 33.4**	**-0.5**
PB05				IAML		00 23 30.0	
	comp=Z,40nm,0.5s						
PB06	**IPOC Station P**	**3.00**	**154**	*i* P	**Pn**	**00 22 34.7**	**-0.1**
PB06				IAML		00 23 30.1	
	comp=Z,88nm,1.0s						
LVC	**Limon Verde**	**3.24**	**143**	*i* P	**Pn**	**00 22 39.0**	**+0.7**
PB15	**IPOC Station P**	**3.49**	**156**	*i* P	**Pn**	**00 22 41.8**	**+0.1**
PB15				IAML		00 23 47.6	
	comp=Z,87nm,0.5s						

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*IDC **18** 00:26:10.8±0.7, 16°.93S×167°.33E, h0^{km}, mb4.6/15, mb1 4.8/18, mb1mx4.6/33, mbtmp4.7/18, ML4.9/3, MS3.8/22, Ms1 3.8/22, ms1mx3.7/32, Error ellipse: s-maj=21.5km s-min=17.0km az=96.0*

*NEIC **18** 00:26:15.8±2.0, 16°.89S±0°.07×167°.29E±0°.09, h35^{km}±5^{km}, mb4.7/26, Error ellipse: s-maj=13.4km s-min=10.0km az=75.0*

ISC 18 00:26:14.8±0.5**, 16°.92S**±0°.05×**167°.26E**±0°.09**, h25**^{km}**, n110,** σ**1^{s}22**/96**, mb4.7**/23**, MS3.8**/24**, 1D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.18**	**188**	*e*Pn	**Pn**	**00 27 30.7**	**-0.1**
	84nm,0.2s						
DZM				*e*Sn	**Sn**	**00 28 27.0**	**-2.9**
	157nm,0.3s						
DZM				*e*LR	LR	00 28 38.1	
	comp=Z,2μm,24.3s						
DZM	**Mont Dzumac**	**5.18**	**188**	Pn	**Pn**	**00 27 30.6**	**-0.2**
	17nm,0.3s,baz=27,slow=16,SNR=229						
DZM				Sn	**Sn**	**00 28 28.3**	**-1.6**
	41nm,0.3s,baz=116,slow=23,SNR=16						
DZM				LR	LR	00 29 18.9	
	comp=Z,2μm,21.0s,baz=21,slow=36						
DZM	**Mont Dzumac**	**5.18**	**188**		**Pn**	**00 27 30.8**	**-0.1**
HNR	**Honiara**	**10.30**	**315**	Pn	**Pn**	**00 28 41.7**	**+0.7**
	28nm,0.3s,baz=172,slow=7.4,SNR=6.1						
HNR	**Honiara**	**10.30**	**315**	*e*P	**Pn**	**00 28 41.0**	**0.0**
HNR	**Honiara**	**10.30**	**315**	Sn	**Sn**	**00 30 33.4**	**-2.3**
EIDS	**Eidsvold**	**17.26**	**238**	P	**P**	**00 30 15.9**	**+0.4**
EIDS				IAmb	IAmb	00 30 17.8	
	comp=Z,76nm,1.1s						
OUZ	**Omahuta**	**19.08**	**164**	P	**P**	**00 30 34.9**	**-0.6**
KRVT	**Keravat (AS076**	**19.50**	**308**	P	**Pn**	**00 30 42.1**	**+0.5**
	comp=Z,3.2nm,0.3s,baz=244,slow=22,SNR=5.7						
ARMA	**Armidale**	**19.60**	**224**		**Pn**	**00 30 44.6**	**+1.8**
AFI	**Afiamalu**	**20.43**	**84**	LR	LR	00 36 55.9	
	comp=Z,155nm,20.0s,baz=190,slow=32						
PMG	**Port Moresby**	**20.93**	**288**	P	**P**	**00 30 57.2**	**+1.4**
	comp=Z,6.4nm,0.5s,baz=217,slow=22,SNR=2.9						
URZ	**Urewera**	**22.95**	**160**	P	**P**	**00 31 17.1**	**-0.1**
	comp=Z,6.3nm,0.7s,baz=108,slow=6.1,SNR=2.8						
URZ				LR	LR	00 38 41.8	
	comp=Z,250nm,20.7s,baz=336,slow=33						
URZ	**Urewera**	**22.95**	**160**	P	**P**	**00 31 17.8**	**+0.6**
URZ				IAmb	IAmb	00 31 34.2	
	comp=Z,19nm,0.9s						
BKZ	**Black Stump Fm**	**23.59**	**162**	P	**P**	**00 31 23.9**	**+0.3**
BKZ				IAmb	IAmb	00 31 28.2	
	comp=Z,16nm,0.9s						
CAN	**Canberra**	**24.51**	**218**	P	**P**	**00 31 33.6**	**+1.3**
CAN				IAmb	IAmb	00 31 35.3	
	comp=Z,22nm,0.9s						
BFZ	**Birch Farm**	**24.92**	**164**	P	**P**	**00 31 35.5**	**-0.4**
BFZ				IAmb	IAmb	00 31 45.1	
	comp=Z,27nm,1.1s						
THZ	**Tophouse**	**25.23**	**170**	P	**P**	**00 31 38.5**	**-0.2**
MSWZ	**Moikau Station**	**25.36**	**166**	P	**P**	**00 31 41.0**	**+1.1**
PLWZ	**Palliser**	**25.51**	**166**	P	**P**	**00 31 42.5**	**+1.3**
RPZ	**Rata Peaks**	**26.90**	**174**	LR	LR	00 42 08.2	
	comp=Z,283nm,18.8s,baz=350,slow=36						
STKA	**Stephens Creek**	**27.61**	**233**	P	**P**	**00 32 00.9**	**+0.6**
	comp=Z,14nm,0.8s,baz=56,slow=8.0,SNR=27						
STKA				LR	LR	00 42 25.1	
	comp=Z,213nm,18.6s,baz=90,slow=35						
STKA	**Stephens Creek**	**27.61**	**233**	P	**P**	**00 32 00.9**	**+0.6**
WR0	**Warramunga Arr**	**31.16**	**259**	P	**P**	**00 32 31.4**	**-0.5**
WR0				IAmb	IAmb	00 32 45.0	
	comp=Z,19nm,1.5s						
WB0	**Warramunga Arr**	**31.30**	**260**	P	**P**	**00 32 32.2**	**-0.9**
WB0				IAmb	IAmb	00 32 33.0	
	comp=Z,6.9nm,0.7s						
WB2	**Warramunga Arr**	**31.33**	**259**	P	**P**	**00 32 33.2**	**-0.3**
WB2				IAmb	IAmb	00 32 47.7	
	comp=Z,17nm,1.5s						
WRA	**Warramunga Arr**	**31.34**	**259**	P	**P**	**00 32 32.6**	**-1.0**
	comp=Z,3.3nm,0.8s,baz=89,slow=8.1,SNR=15						
WRA				PcP	**PcP**	**00 35 27.6**	**+0.3**
	comp=Z,1.0nm,1.0s,baz=360,slow=29,SNR=3.3						
WRA				LR	LR	00 44 30.1	
	comp=Z,181nm,18.6s,baz=85,slow=35						
AS31	**Alice Springs**	**31.94**	**252**	IAmb	IAmb	00 32 39.4	
	comp=Z,12nm,0.9s						
ASAR	**Alice Springs**	**31.94**	**252**	P	**P**	**00 32 38.1**	**-0.7**
	comp=Z,32nm,0.8s,baz=78,slow=8.9,SNR=242						
ASAR				PcP	**PcP**	**00 35 28.8**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=89,slow=2.3,SNR=4.1						
ASAR				LR	LR	00 45 11.3	
	comp=Z,405nm,18.5s,baz=82,slow=36						
ASAR	**Alice Springs**	**31.94**	**252**	P	**P**	**00 32 38.0**	**-0.8**
BBOO	**Buckleboo**	**32.27**	**235**	P	**P**	**00 32 41.9**	**+0.4**
BBOO				IAmb	IAmb	00 32 42.4	
	comp=Z,10.0nm,0.7s						
RKPI	**Ransiki, Papua**	**35.96**	**292**	P	**P**	**00 33 12.9**	**-0.9**
	comp=Z,90nm,0.7s						
KNRA	**Kununurra**	**36.93**	**266**	P	**P**	**00 33 21.3**	**-0.7**
KNRA				IAmb	IAmb	00 33 35.9	
	comp=Z,8.4nm,0.7s						
GUMO	**Guam**	**37.52**	**323**	LR	LR	00 48 09.0	
	comp=Z,138nm,19.2s,baz=76,slow=35						
FORT	**Forrest**	**38.21**	**242**	P	**P**	**00 33 32.1**	**-0.7**
FITZ	**Fitzroy Crossi**	**39.65**	**262**	P	**P**	**00 33 45.5**	**+0.6**
TBI	**Tubuai**	**41.02**	**106**	*e*LR	LR	00 45 26.2	
	comp=Z,132nm,26.8s						
PPT2	**Papeete2**	**41.16**	**98**	*e*LR	LR	00 45 24.4	
	comp=Z,158nm,23.0s						
SANI	**Sanana**	**43.17**	**286**	P	**P**	**00 34 14.2**	**+0.3**
	comp=Z,9.3nm,0.8s						
MJAR	**Matsushiro Arr**	**59.84**	**333**	P	**P**	**00 36 17.8**	**-0.4**
	comp=Z,10.0nm,0.7s,baz=159,slow=8.2,SNR=17						
MJAR				LR	LR	00 59 51.8	
	comp=Z,29nm,21.8s,baz=195,slow=34						
MJAR	**Matsushiro Arr**	**59.84**	**333**	P	**P**	**00 36 16.8**	**-1.4**
MAJO	**Matsushiro**	**59.84**	**333**	P	**P**	**00 36 17.7**	**-0.5**
MAT	**Matsushiro**	**59.84**	**333**	P	**P**	**00 36 17.8**	**-0.4**
MJB9	**Matsu-Tunnel**	**59.84**	**333**	P	**P**	**00 36 16.7**	**-1.5**
KSRS	**Korea Array**	**65.54**	**326**	P	**P**	**00 36 56.7**	**+0.5**
	comp=Z,2.4nm,0.8s,baz=149,slow=7.4,SNR=7.9						
KSRS				LR	LR	01 04 59.8	
	comp=Z,27nm,19.0s,baz=130,slow=36						
NJ2	**Nanjing**	**67.24**	**316**	*e*P	**P**	**00 37 07.9**	**+0.7**
USRK	**Ussuriysk Ar.**	**68.83**	**334**	P	**P**	**00 37 17.2**	**+0.2**
	comp=Z,5.9nm,0.9s,baz=162,slow=5.6,SNR=9.0						
USRK	**Ussuriysk Ar.**	**68.83**	**334**	P	**P**	**00 37 16.2**	**-0.7**
PETK	**Petropavlovsk-**	**70.22**	**354**	P	**P**	**00 37 25.8**	**+0.5**
	comp=Z,6.3nm,0.5s,baz=154,slow=8.7,SNR=9.9						
PETK				LR	LR	01 04 19.9	
	comp=Z,70nm,18.4s,baz=232,slow=33						
QSPA	**South Pole Qui**	**73.12**	**180**	P	**P**	**00 37 43.5**	**+0.5**
QSPA				IAmb	IAmb	00 38 02.4	
	comp=Z,7.9nm,0.8s						
BJI	**Beijing**	**73.96**	**322**	P	**P**	**00 37 48.8**	**+0.8**
XAN	**Xi'an**	**75.16**	**313**	P	**P**	**00 37 55.9**	**+0.7**
XAN				pP	pP	00 38 02.0	+0.3
CMAR	**Chiang Mai Arr**	**75.83**	**295**	P	**P**	**00 37 59.4**	**0.0**
	comp=Z,1.2nm,0.6s,baz=121,slow=4.2,SNR=4.7						
CMAR				LR	LR	01 09 38.3	
	comp=Z,8.3nm,20.3s,baz=110,slow=34						
CMAR	**Chiang Mai Arr**	**75.83**	**295**	P	**P**	**00 37 56.9**	**-2.5**
HHC	**Hu-ho-hao-te**	**77.24**	**320**	*e*P	**P**	**00 38 08.3**	**+1.3**
MA2	**Magadan**	**77.40**	**351**	P	**P**	**00 38 06.6**	**-0.7**
MAW	**Mawson**	**79.86**	**202**	LR	LR	01 10 27.9	
	comp=Z,80nm,18.5s,baz=73,slow=33						
ULN	**Ulaanbaatar**	**83.89**	**324**	P	**P**	**00 38 42.6**	**+0.1**
GTA	**Gaotai**	**84.17**	**314**	*e*P	**P**	**00 38 44.9**	**+0.7**
GTA				pP	pwP	00 38 55.5	-1.5
GTA				sP	sP	00 38 59.6	+6.5
SONM	**Songino Array**	**84.24**	**324**	P	**P**	**00 38 44.9**	**+0.6**
	comp=Z,4.8nm,0.8s,baz=147,slow=6.0,SNR=25						
SONM				LR	LR	01 14 46.4	
	comp=Z,33nm,20.7s,baz=100,slow=35						
SONM	**Songino Array**	**84.24**	**324**	P	**P**	**00 38 44.5**	**+0.2**
BILL	**Bilibino**	**84.72**	**360**	P	**P**	**00 38 46.4**	**+0.2**
SYO	**Syowa Base**	**86.61**	**197**	⇓*e*P	**P**	**00 38 54.4**	**-1.3**
PFO	**Pinyon Flats O**	**88.28**	**54**	LR	LR	01 11 03.9	
	comp=Z,627nm,19.2s,baz=101,slow=30						
IL31		**88.60**	**18**	P	**P**	**00 39 03.5**	**-1.6**
ILAR	**Eielson Array**	**88.60**	**18**	P	**P**	**00 39 03.8**	**-1.4**
	comp=Z,2.7nm,0.7s,baz=236,slow=4.5,SNR=29						
ILAR				LR	LR	01 18 01.1	
	comp=Z,60nm,18.3s,baz=226,slow=35						
ILAR	**Eielson Array**	**88.60**	**18**	P	**P**	**00 39 03.6**	**-1.5**
NVAR	**Mina Array Bea**	**88.70**	**49**	LR	LR	01 13 43.1	
	comp=Z,59nm,18.4s,baz=283,slow=32						
SNAA	**Sanae**	**91.37**	**183**	P	**P**	**00 39 19.4**	**+1.2**
ELK	**Elko**	**91.76**	**48**	LR	LR	01 12 37.4	
	comp=Z,364nm,21.7s,baz=33,slow=30						
VNA2	**Neumayer--Watz**	**92.30**	**182**	P	**P**	**00 39 23.3**	**+0.8**
NEW	**Newport**	**93.23**	**40**	LR	LR	01 13 55.5	
	comp=Z,92nm,20.8s,baz=58,slow=31						
WMQ	**Urumqi**	**94.25**	**314**	*e*P	**P**	**00 39 32.8**	**+0.9**
WMQ				sP	pwP	00 39 45.3	+0.5
PDAR	**Pinedale Array**	**96.43**	**47**	LR	LR	01 19 37.1	
	comp=Z,34nm,18.0s,baz=258,slow=33						
ANMO	**Albuquerque**	**96.55**	**56**	LR	LR	01 14 48.0	
	comp=Z,47nm,20.1s,baz=206,slow=30						
MKAR	**Makanchi Array**	**98.77**	**316**	P	Pdif	00 39 52.5	+0.1
	comp=Z,0.4nm,0.6s,baz=98,slow=6.5,SNR=6.1						
MKAR				LR	LR	01 24 54.1	
	comp=Z,14nm,19.8s,baz=62,slow=36						
ZALV	**Zalesovo Beam**	**99.14**	**324**	P	**Pdif**	**00 39 53.1**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=97,slow=6.0,SNR=4.0						
ZALV				LR	LR	01 22 25.1	
	comp=Z,21nm,21.9s,baz=88,slow=34						
YKA	**Yellowknife Ar**	**99.49**	**27**	P	**Pdif**	**00 39 54.6**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=251,slow=4.4,SNR=11						
KSH	**Kashi**	**101.53**	**308**	P	**Pdif**	**00 40 06.0**	**+1.1**
KSH				pP	pwP	00 40 16.8	-1.2
KSH	**Kashi**	**101.53**	**308**	sS	sS	00 51 57.5	+2.0
ARCES	**ARCESS Array B**	**122.36**	**345**	PKP	**PKiKP**	**00 45 07.0**	**-0.2**
	comp=Z,3.2nm,0.6s,baz=80,slow=1.9,SNR=16						
KLMR	**Klimovskoe**	**122.62**	**333**	*e*PKPdf	**PKPdf**	**00 45 06.7**	**-1.1**
KLMR				AMP		00 45 09.2	
	comp=Z,16nm,1.6s						
SCHQ	**Schefferville**	**124.11**	**34**	PKP	**PKPdf**	**00 45 10.2**	**-0.7**
	comp=Z,1.9nm,0.6s,baz=270,slow=4.0,SNR=4.8						
FINES	**FINESS Array B**	**127.74**	**338**	PKP	**PKiKP**	**00 45 18.5**	**+0.3**
	comp=Z,2.4nm,0.8s,baz=48,slow=2.8,SNR=8.6						
AKASG	**Malin Array Be**	**132.52**	**325**	PKP	**PKPdf**	**00 45 27.3**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=77,slow=2.0,SNR=6.6						
AKASG	**Malin Array Be**	**132.52**	**325**		**PKiKP**	**00 45 27.5**	**-0.6**
NB2	**NORSAR Subarra**	**132.72**	**344**	PKPdf	**PKiKP**	**00 45 28.7**	**+0.4**
	comp=Z,1.8nm,1.2s,baz=39,slow=1.9						
NOA	**NORSAR Array B**	**132.72**	**344**	PKP	**PKiKP**	**00 45 28.3**	**0.0**
	comp=Z,0.9nm,1.0s,baz=50,slow=1.7,SNR=3.9						
BRG	**Berggiesshubel**	**139.97**	**334**	*e*PKP	**PKiKP**	**00 45 43.4**	**+0.1**
	comp=Z,3.4nm,0.9s						
VTS	**Vitosha**	**140.08**	**317**		**PKPdf**	**00 45 41.9**	**+0.4**
CONA	**Conrad Observa**	**141.19**	**329**	*i* PKPdf	**PKPdf**	**00 45 42.0**	**-1.2**
	comp=Z,2.0nm,0.7s						
KHC	**Kasperske Hory**	**141.41**	**332**	*e*PKP	**PKiKP**	**00 45 47.0**	**+0.6**
KHC				*e*pPKP	**sPKPdf**	**00 46 00.0**	**+7.3**
GERES	**GERESS Array B**	**141.57**	**332**	PKhKP	PKPpre	00 45 38.7	
	comp=Z,0.5nm,0.6s,baz=40,slow=2.3,SNR=5.2						
GERES				PKP	**PKPdf**	**00 45 43.3**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=90,slow=1.3,SNR=8.5						
SOKA	**Soboth**	**142.46**	**328**	*i* PKiKP	**PKPdf**	**00 45 45.6**	**0.0**
	comp=Z,3.8nm,1.5s						
KBA	**Koelnbreinsper**	**143.01**	**330**	*i* PKPdf	**PKPdf**	**00 45 44.1**	**-2.5**
	comp=Z,1.4nm,0.6s						
MYKA	**Terra Mystica**	**143.18**	**329**	*i* PKPdf	PKPbc	00 45 43.3	-0.5
	comp=Z,1.8nm,0.6s						
ABTA	**Abfaltersbach**	**143.64**	**330**	*i* PKPdf	PKPab	00 45 44.5	+0.2
	comp=Z,2.8nm,0.6s						
WATA	**Walderalm**	**143.64**	**332**	*i* PKPdf	PKPbc	00 45 44.6	-0.6
	comp=Z,0.7nm,0.3s						
WTTA	**Wattenberg**	**143.67**	**332**	*i* PKPdf	**PKPdf**	**00 45 47.1**	**-0.8**
	comp=Z,9.7nm,1.2s						
BMRD	**Maredsous**	**143.84**	**341**	PKPdf	**PKPdf**	**00 45 46.4**	**-1.3**
BMRD				pPKP	**sPKPdf**	**00 45 58.2**	**+1.0**
MOTA	**Moosalm**	**143.85**	**332**	*i* PKPdf	PKPbc	00 45 45.4	-0.4
	comp=Z,6.1nm,1.2s						
RETA	**Reutte**	**143.89**	**333**	*i* PKPdf	**PKPdf**	**00 45 47.1**	**-1.0**
	comp=Z,1.2nm,0.5s						
SQTA	**Sankt Quirin**	**143.90**	**332**	*i* PKPdf	PKPbc	00 45 46.1	+0.2
	comp=Z,3.7nm,0.6s						
WLF	**Walferdange**	**143.94**	**339**	PKPdf	PKPbc	00 45 46.1	+0.4
WLF				PKiKP	**PKPdf**	**00 45 49.0**	**+1.0**
BFO	**Black Forest**	**144.24**	**336**		**PKPab**	**00 45 46.4**	**-0.1**
FETA	**Feichten**	**144.26**	**332**	*i* PKPdf	PKPbc	00 45 47.5	+0.4
	comp=Z,9.3nm,1.0s,SNR=6.8						
DAVA	**Damuels**	**144.43**	**333**	*i* PKPdf	**PKPdf**	**00 45 48.4**	**-0.7**
	comp=Z,5.8nm,0.8s						
BNI	**Bardonecchia**	**147.56**	**334**		**PKPdf**	**00 45 55.6**	**+1.1**
KEST	**Kesra**	**152.85**	**318**	PKPbc	**PKPbc**	**00 46 09.7**	**-0.5**
	comp=Z,3.7nm,0.9s,baz=301,slow=6.1,SNR=4.4						
KEST				PKPab	**PKPab**	**00 46 22.6**	**+1.4**
	comp=Z,4.0nm,0.9s,baz=198,slow=6.5,SNR=3.8						
TORD	**Torodi Ar. Bea**	**165.56**	**257**	PKP	**PKPdf**	**00 46 18.1**	**0.0**
	comp=Z,1.5nm,0.8s,baz=354,slow=1.2,SNR=8.4						

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*IDC **18** 00:42:17.2±14.0, 12°.30S×167°.54E, h89^{km}±116^{km}, mb3.8/7, mb1 4.1/7, mb1mx3.7/36, mbtmp4.1/7, Error ellipse: s-maj=62.4km s-min=37.1km az=131.0*

ISC 18 00:42:10.4±1.5**, 12°.4S**±0°.4×**167°.7E**±0°.3**, h35**^{km}**, n12,** σ**1^{s}01**/12**, mb4.0**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.87**	**252**	P	**P**	**00 48 41.2**	**-0.1**
	0.7nm,0.5s,baz=87,slow=8.7,SNR=7.4						
ASAR	**Alice Springs**	**33.96**	**246**	P	**P**	**00 48 51.5**	**+0.6**
	0.5nm,0.4s,baz=72,slow=9.1,SNR=8.7						
CMAR	**Chiang Mai Arr**	**74.38**	**293**	P	**P**	**00 53 45.4**	**+0.1**
	0.9nm,0.3s,baz=106,slow=4.0,SNR=5.4						
SONM	**Songino Array**	**80.84**	**323**	P	**P**	**00 54 21.5**	**+0.6**
	0.3nm,0.5s,baz=114,slow=3.5,SNR=3.5						
ILAR	**Eielson Array**	**84.15**	**18**	P	**P**	**00 54 38.6**	**+1.1**
	3.5nm,0.6s,baz=245,slow=5.1,SNR=62						
YKA	**Yellowknife Ar**	**95.26**	**27**	P	**P**	**00 55 30.7**	**+0.4**
	0.3nm,0.5s,baz=253,slow=4.5,SNR=5.1						
MKAR	**Makanchi Array**	**95.77**	**317**	P	**P**	**00 55 32.2**	**-0.9**
	1.6nm,0.7s,baz=90,slow=7.3,SNR=20						
ARCES	**ARCESS Array B**	**118.06**	**346**	PKP	**PKPdf**	**01 00 52.0**	**-1.1**
	1.5nm,0.6s,baz=79,slow=2.4,SNR=20						
SCHQ	**Schefferville**	**120.09**	**33**	PKP	**PKPdf**	**01 00 56.5**	**-0.9**
	1.2nm,0.6s,baz=231,slow=7.6,SNR=3.7						
FINES	**FINESS Array B**	**123.67**	**339**	PKP	**PKPdf**	**01 01 02.8**	**-1.2**
	0.3nm,0.5s,baz=93,slow=2.8,SNR=5.2						
MATP	**Matopo**	**128.31**	**231**	PKP	**PKiKP**	**01 01 16.1**	**+1.1**
	0.8nm,0.7s,baz=204,slow=12,SNR=4.4						
KEST	**Kesra**	**149.59**	**324**	PKPbc	**PKPbc**	**01 01 55.5**	**-1.3**
	2.4nm,0.7s,baz=229,slow=7.5,SNR=5.6						

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*EAF **18** 00:50:43.6±3.6, 26°.29S×27°.34E, h10^{km}, MD3.9*

*BUL **18** 00:50:45.6±1.0, 26°.46S×27°.37E, h10^{km}±27^{km}, MD4.3*

ISC 18 00:50:40.1±2.0**,26°.26S**±0°.09×**27°.4E**±0°.2**,h5^{km},n8,**
σ2^{s}.17/10**,South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	**Lobatse**	**2.05**	**307**	*i* P	**Pg**	**00 51 21.1**	**+1.7**
LBTB	**Lobatse**	**2.05**	**307**	*i* P	**Pg**	**00 51 21.1**	**+1.7**
BOSA	**Boshof**	**3.03**	**219**	*i* P	**Pn**	**00 51 29.8**	**+0.9**
BOSA	**Boshof**	**3.03**	**219**	*i* P	**Pn**	**00 51 29.8**	**+0.9**
MATP	**Matopo**	**5.89**	**10**	*i* P	**Pn**	**00 52 10.2**	**+1.9**
MATP				*i* S	**Sn**	**00 53 14.2**	**-2.0**
MATP	**Matopo**	**5.89**	**10**	*i* P	**Pn**	**00 52 10.2**	**+1.9**
MATP				*i* S	**Sn**	**00 53 14.2**	**-2.0**
TSUM	**Tsumeb**	**11.46**	**306**	*i* P	**Pn**	**00 53 22.4**	**-2.2**
TSUM				*i* S	Sn	00 55 17.2	-16
TSUM	**Tsumeb**	**11.46**	**306**	*i* P	**Pn**	**00 53 22.4**	**-2.2**
TSUM				*i* S	Sn	00 55 17.2	-16

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*IDC **18** 00:50:50.0±1.1, 38°.29N×20°.38E, h0^{km}, mb3.9/7, mb1 3.8/13, mb1mx3.5/64, mbtmp3.7/13, ML3.3/6, MS3.6/1, Ms1 3.6/1, ms1mx2.2/41, Error ellipse: s-maj=19.3km s-min=18.2km az=18.0*
*THE **18** 00:50:52.6, 38°.19N×20°.36E, h16^{km}, ML3.8/6, Error ellipse: s-maj=0.9km s-min=0.5km az=257.0*
*ATH **18** 00:50:52.3, 38°.17N×20°.39E, h18^{km}, ML3.5/11, Error ellipse: s-maj=1.5km s-min=0.8km az=241.0*
*PDG **18** 00:50:53.1±0.8, 38°.23N×20°.39E, h14^{km}±1^{km}, ML3.8/12, Error ellipse: s-maj=1.3km s-min=1.3km az=90.0*
ISC 18 00:50:51.8±0.7**,38°.17N**±0°.02×**20°.36E**±0°.03**,h17**^{km}±1^{km}**,**
n131,σ1^{s}.27/167**,mb4.0**/7**,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.02**	**57**	P	**Pg**	**00 50 55.6**	**+0.8**
CHV1				S	**Sg**	**00 50 57.5**	**+0.7**
KEF3	**Kipouria, Keph**	**0.03**	**345**	P	**Pg**	**00 50 55.6**	**+0.7**
KEF3				S	**Sg**	**00 50 57.6**	**+0.7**
LXRA	**Lixouri, Kepha**	**0.07**	**65**	P	**Pg**	**00 50 55.7**	**+0.7**
LXRA				S	**Sg**	**00 50 57.9**	**+0.7**
LXR1	**Lixouri, Cepha**	**0.07**	**65**	P	**Pg**	**00 50 55.9**	**+0.9**
LXR1				S	**Sg**	**00 50 58.2**	**+1.0**
AGT1	**Agia Thekli**	**0.08**	**14**	P	**Pg**	**00 50 55.8**	**+0.6**
AGT1				S	**Sg**	**00 50 58.0**	**+0.6**
ARGA	**Argostoli. Kep**	**0.10**	**87**	P	**Pg**	**00 50 55.9**	**+0.6**
ARGA				S	**Sg**	**00 50 57.9**	**+0.3**
KEF2	**Argostoli. Kep**	**0.10**	**93**	P	**Pg**	**00 50 56.0**	**+0.7**
KEF2				S	**Sg**	**00 50 58.0**	**+0.3**
KEF4	**Livadi, Kephal**	**0.10**	**31**	P	**Pg**	**00 50 56.0**	**+0.7**
KEF4				S	**Sg**	**00 50 58.4**	**+0.7**
ARG2	**Argostoli**	**0.10**	**86**	P	**Pg**	**00 50 56.0**	**+0.7**
ARG2				S	**Sg**	**00 50 58.2**	**+0.5**
KEF1	**Kardakata, Kep**	**0.14**	**40**	P	**Pb**	**00 50 57.1**	**+1.2**
KEF1				S	**Sb**	**00 50 59.3**	**+0.7**
VLS	**Valsamata**	**0.18**	**88**	P	**Pb**	**00 50 56.9**	**+0.2**
VLS				S	**Sb**	**00 51 00.0**	**+0.1**
	161µm,0.1s						
VLS	**Valsamata**	**0.18**	**88**	P	**Pg**	**00 50 56.7**	**+0.3**
VLS				S	**Sb**	**00 51 00.0**	**+0.1**
VLS				AML	AML	00 51 00.2	
VLS				AML	AML	00 51 00.2	
VSK1	**VASILIKIADES**	**0.29**	**34**	P	**Pb**	**00 50 58.5**	**0.0**
VSK1				S	**Sb**	**00 51 03.2**	**+0.2**
	30µm,0.2s						
KONA	**Konidatara, Ke**	**0.30**	**33**	P	**Pg**	**00 50 58.2**	**-0.1**
KONA				S	**Sb**	**00 51 03.4**	**0.0**
KONA				AML	AML	00 51 04.2	
	comp=E,14729µm,0.2s						
KONA				AML	AML	00 51 04.6	
	comp=N,30342µm,0.4s						
FSK	**Fiskardo**	**0.33**	**29**	P	**Pb**	**00 50 59.1**	**-0.1**
FSK				S	**Sb**	**00 51 04.2**	**0.0**
	comp=N,12µm,0.2s						
FSK	**Fiskardo**	**0.33**	**29**	P	**Pb**	**00 50 59.1**	**-0.1**
FSK				S	**Sb**	**00 51 03.8**	**-0.4**
KFL	**Anninata**	**0.34**	**100**	P	**Pb**	**00 50 59.5**	**+0.1**
KFL				S	**Sb**	**00 51 04.8**	**+0.2**
	comp=N,22µm,0.4s						
KFL	**Anninata**	**0.34**	**100**	P	**Pb**	**00 50 59.5**	**+0.1**
KFL				S	**Sb**	**00 51 04.4**	**-0.2**
KFL				AML	AML	00 51 05.8	
	comp=E,46105µm,0.4s						
KFL				AML	AML	00 51 07.7	
	comp=N,41552µm,0.4s						
EVGI	**Lefkada island**	**0.51**	**27**	P	**Pg**	**00 51 02.1**	**+0.2**
EVGI	**Lefkada island**	**0.51**	**27**	P	**Pg**	**00 51 02.1**	**+0.2**
EVGI				S	**Sb**	**00 51 10.0**	**+0.7**
ZAK2	**Zakynthos**	**0.57**	**132**	P	**Pb**	**00 51 03.8**	**+0.5**
MGNA	**Meganis**	**0.59**	**35**	P	**Pg**	**00 51 03.4**	**-0.1**
MGNA				S	**Sb**	**00 51 12.0**	**+0.2**
MGNA				AML	AML	00 51 14.0	
	comp=N,5143µm,0.2s						
MGNA				AML	AML	00 51 17.5	
	comp=E,6758µm,0.4s						
KRI1	**kERI**	**0.62**	**144**	P	**Pg**	**00 51 04.3**	**+0.2**
KRI1				S	**Sn**	**00 51 15.0**	**-0.4**
	comp=E,9µm,0.3s						
LKD2	**Lefkada island**	**0.66**	**21**	P	**Pg**	**00 51 04.6**	**-0.2**
LKD2	**Lefkada island**	**0.66**	**21**	P	**Pg**	**00 51 04.5**	**-0.2**
LKD2				AML	AML	00 51 21.0	
	comp=E,9046µm,0.2s						
LKD2				AML	AML	00 51 21.4	
	comp=N,6726µm,0.3s						
AST1	**Astakos**	**0.68**	**57**	P	**Pg**	**00 51 05.2**	**0.0**
TSLK	**Tsoukalades, L**	**0.69**	**20**	P	**Pg**	**00 51 05.4**	**0.0**
TSLK	**Tsoukalades, L**	**0.69**	**20**	P	**Pg**	**00 51 05.4**	**0.0**
TSLK				S	**Sb**	**00 51 15.9**	**+1.2**
TSLK				AML	AML	00 51 22.2	
	comp=E,7666µm,0.3s						
TSLK				AML	AML	00 51 23.7	
	comp=N,4604µm,0.5s						
VTN	**Vitineika**	**0.70**	**111**	P	**Pb**	**00 51 05.9**	**+0.4**
PDO	**Prodromos**	**0.78**	**56**	P	**Pg**	**00 51 06.8**	**-0.1**
PDO	**Prodromos**	**0.78**	**56**	P	**Pb**	**00 51 06.9**	**+0.1**
PDO				S	**Sb**	**00 51 17.3**	**+0.2**
PDO				AML	AML	00 51 23.9	
	comp=N,9153µm,0.4s						
PDO				AML	AML	00 51 24.7	
	comp=E,9148µm,0.7s						
RLS	**Riolos of Patr**	**0.88**	**97**	P	**Pb**	**00 51 08.6**	**0.0**
RLS	**Riolos of Patr**	**0.88**	**97**	P	**Pb**	**00 51 08.7**	**+0.1**
RLS				S	**Sg**	**00 51 21.2**	**+0.7**
RLS				AML	AML	00 51 27.7	
	comp=E,2549µm,0.6s						
RLS				AML	AML	00 51 33.6	
	comp=N,2756µm,0.5s						
PVO	**Paravola**	**1.02**	**64**	P	**Pg**	**00 51 11.7**	**+0.1**
PVO				S	**Sn**	**00 51 27.1**	**+1.9**
	comp=N,5µm,0.3s						
PVO	**Paravola**	**1.02**	**64**	P	**Pg**	**00 51 11.6**	**+0.1**
PVO				S	**Sg**	**00 51 24.7**	**-0.2**
PVO				AML	AML	00 51 32.8	
	comp=N,9064µm,0.3s						
PVO				AML	AML	00 51 34.9	
	comp=E,9994µm,0.4s						
DRO	**Drossia**	**1.09**	**101**	P	**Pn**	**00 51 12.6**	**+0.3**
DRO	**Drossia**	**1.09**	**101**	P	**Pn**	**00 51 12.5**	**+0.3**
DRO				S	**Sn**	**00 51 27.2**	**+0.3**
DRO				AML	AML	00 51 35.1	
	comp=E,7887µm,0.6s						
DRO				AML	AML	00 51 36.9	
	comp=N,5728µm,0.4s						
EFP	**Efpalio**	**1.24**	**78**	P	**Pn**	**00 51 14.7**	**+0.4**
EFP	**Efpalio**	**1.24**	**78**	P	**Pb**	**00 51 14.8**	**0.0**
EFP				AML	AML	00 51 40.2	
	comp=E,3455µm,0.5s						
EFP				AML	AML	00 51 40.4	
	comp=N,2538µm,0.4s						
AMT	**Artemida-Makis**	**1.25**	**120**	P	**Pg**	**00 51 16.0**	**+0.1**
LAKA	**Lakka**	**1.28**	**86**	P	**Pn**	**00 51 14.6**	**-0.3**
ANX	**Ano Chora**	**1.30**	**71**	P	**Pb**	**00 51 16.3**	**+0.5**
ANX	**Ano Chora**	**1.30**	**71**	P	**Pb**	**00 51 16.2**	**+0.5**
SERG	**Sergoula**	**1.36**	**79**	P	**Pb**	**00 51 16.6**	**-0.1**
SERG	**Sergoula**	**1.36**	**79**	P	**Pb**	**00 51 16.6**	**-0.1**
EVR	**Evrytania**	**1.36**	**56**	P	**Pb**	**00 51 16.9**	**+0.1**
EVR	**Evrytania**	**1.36**	**56**	P	**Pb**	**00 51 17.0**	**+0.1**
TRIZ	**Trizonia**	**1.36**	**81**	P	**Pb**	**00 51 16.7**	**-0.1**
ALIK	**Aliki, Aigiali**	**1.38**	**86**	P	**Pb**	**00 51 17.3**	**+0.2**
KALE	**Kalithea**	**1.42**	**81**	P	**Pn**	**00 51 17.5**	**+0.7**
KALE	**Kalithea**	**1.42**	**81**	P	**Pn**	**00 51 17.6**	**+0.7**
KLV	**Kalavryta, Ach**	**1.42**	**95**	P	**Pb**	**00 51 17.8**	**0.0**
KLV	**Kalavryta, Ach**	**1.42**	**95**	P	**Pb**	**00 51 17.9**	**+0.1**
JAN	**Janina**	**1.53**	**14**	P	**Pg**	**00 51 20.8**	**-0.5**
ITM	**Ithomi**	**1.59**	**128**	P	**Pb**	**00 51 21.6**	**+0.9**
KEK	**Kerkira**	**1.60**	**344**	P	**Pb**	**00 51 21.0**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.62**	**58**	P	**Pb**	**00 51 22.0**	**+0.7**
PYL	**PYLOS**	**1.68**	**139**	P	**Pb**	**00 51 22.2**	**-0.1**
MEV	**Metsovon**	**1.75**	**23**	P	**Pg**	**00 51 24.8**	**-0.6**
AXAR	**Agios Charalam**	**1.90**	**71**	P	**Pb**	**00 51 26.9**	**+1.0**
KPRO	**Kipourio**	**1.94**	**23**	P	**Pb**	**00 51 27.4**	**+0.6**
PROD	**Prodromos**	**2.00**	**87**	P	**Pb**	**00 51 27.5**	**-0.3**
LKR	**Lokris**	**2.13**	**76**	P	**Pb**	**00 51 29.2**	**-0.6**
VIL2	**Platees**	**2.29**	**88**	P	**Pb**	**00 51 31.8**	**-0.9**
CGL1	**Ceglie Messapi**	**3.34**	**319**	*e*Pn	**Pn**	**00 51 44.6**	**+1.5**
TAR1	**Taranto**	**3.35**	**316**	*e*Pn	**Pn**	**00 51 45.2**	**+1.9**
TAR1				Sn	**Sn**	**00 52 24.1**	**+1.5**
VAY	**Valandovo**	**3.58**	**28**	*i* Pn	**Pn**	**00 51 49.2**	**+2.8**
STIP	**Stip**	**3.79**	**21**	*i* Pn	**Pn**	**00 51 53.2**	**+3.9**
SKO	**Skopje**	**3.89**	**12**	*i* Pn	**Pn**	**00 51 53.4**	**+2.7**
SG1	**Sgolgore (BA)**	**3.90**	**314**	*e*Pn	**Pn**	**00 51 52.8**	**+1.9**
SG1				Sn	**Sn**	**00 52 36.6**	**+0.3**
BAI	**Bari**	**3.98**	**319**	*e*Pn	**Pn**	**00 51 53.3**	**+1.4**
BAI				Sn	**Sn**	**00 52 38.0**	**-0.1**
DRME	**Dracevica, Mon**	**4.11**	**348**	*e*Pn	**Pn**	**00 51 54.8**	**+1.0**
PDG	**Podgorica**	**4.34**	**349**	*e*Pn	**Pn**	**00 51 57.7**	**+0.8**
HCY	**Herceg Novi**	**4.50**	**342**	*e*Pn	**Pn**	**00 51 59.0**	**-0.2**
IDI	**Anoyia**	**4.64**	**127**	Pn	**Pn**	**00 52 03.4**	**+2.3**
	comp=N,0.5nm,0.3s,baz=280,slow=11,SNR=15						
IDI				Sn	**Sn**	**00 52 54.2**	**-0.4**
	comp=N,2.4nm,0.3s,baz=78,slow=20,SNR=2.2						
VAE	**Valguarnera**	**4.76**	**263**	Pn	**Pn**	**00 52 05.3**	**+2.6**
	comp=N,1.3nm,0.3s,baz=138,slow=7.9,SNR=8.7						
VAE				Sn	**Sn**	**00 52 57.8**	**+0.3**
	comp=N,2.3nm,0.3s,baz=181,slow=20,SNR=2.5						
TREB	**Trebinje**	**4.79**	**342**	*e*Pn	**Pn**	**00 52 03.1**	**0.0**
DBRK	**Dubrovnik**	**4.80**	**340**	*e*Pn	**Pn**	**00 52 03.4**	**+0.1**
BRY	**Bratogost**	**4.92**	**344**	*e*Pn	**Pn**	**00 52 05.4**	**+0.3**
STON	**Ston**	**5.11**	**338**	*i* Pn	**Pn**	**00 52 07.8**	**+0.3**
STON				Sn	**Sn**	**00 53 04.4**	**-1.7**
STON	**Ston**	**5.11**	**338**	*e*Pn	**Pn**	**00 52 07.7**	**+0.2**
UPM	**Unac-Piva**	**5.15**	**348**	*e*Pn	**Pn**	**00 52 09.1**	**+0.9**
RUDO	**Rudo**	**5.49**	**352**	*e*Pn	**Pn**	**00 52 13.6**	**+0.8**
MAKA	**Makarska**	**5.71**	**335**	*e*Pn	**Pn**	**00 52 16.4**	**+0.8**
BBLS	**Lazići**	**5.73**	**353**	*e*Pn	**Pn**	**00 52 18.0**	**+1.9**
RICI	**Ricice**	**5.85**	**336**	*i* Pn	**Pn**	**00 52 18.4**	**+0.7**
DIVS	**Divibare**	**5.93**	**357**	*e*Pn	**Pn**	**00 52 18.9**	**+0.1**
HAPS	**Han Pijesak,Bl**	**6.00**	**350**	*e*Pn	**Pn**	**00 52 19.5**	**-0.4**
ZIRJ	**Zirje**	**6.54**	**328**	*e*Pn	**Pn**	**00 52 27.1**	**0.0**
ZIRJ				Sn	**Sn**	**00 53 37.8**	**-3.4**
KIJV	**Kijevo**	**6.55**	**334**	*i* Pn	**Pn**	**00 52 28.5**	**+1.2**
KIJV				Sn	**Sn**	**00 53 38.6**	**-2.9**
MORI	**Morici**	**6.69**	**330**	*i* Pn	**Pn**	**00 52 30.4**	**+1.3**
MORI				Sn	**Sn**	**00 53 42.2**	**-2.7**
MGRS	**Mrkonjic Grad**	**6.71**	**339**	*e*Pn	**Pn**	**00 52 30.5**	**+1.0**
AQU	**L'Aquila**	**6.76**	**310**	*e*Pn	**Pn**	**00 52 33.6**	**+3.3**
BLY	**Banja Luka**	**6.99**	**341**	*e*Pn	**Pn**	**00 52 33.4**	**+0.1**
DUGI	**Dugi Otok**	**7.06**	**327**	*i* Pn	**Pn**	**00 52 35.1**	**+0.8**
DUGI				Sn	**Sn**	**00 53 51.5**	**-2.5**
UDBI	**Udbina**	**7.23**	**333**	*e*Pn	**Pn**	**00 52 38.5**	**+1.9**
NVLJ	**Novalja**	**7.60**	**329**	*e*Pn	**Pn**	**00 52 42.8**	**+1.1**
MOSL	**Moslavina**	**7.91**	**341**	Sn	**Sn**	**00 54 11.6**	**-3.3**
OZLJ	**Ozalj**	**8.28**	**335**	*e*Pn	**Pn**	**00 52 51.9**	**+0.9**
ZAG	**Zagreb**	**8.31**	**338**	*e*Pn	**Pn**	**00 52 51.8**	**+0.3**
RIY	**Rijeka**	**8.39**	**330**	*e*Pn	**Pn**	**00 52 53.5**	**+1.1**
PTJ	**Puntijarka**	**8.39**	**339**	*i* Pn	**Pn**	**00 52 53.2**	**+0.6**
PTJ				Sn	**Sn**	**00 54 22.0**	**-4.9**
CRES	**Cresnjev**	**8.47**	**336**	*e*Pn	**Pn**	**00 52 54.1**	**+0.4**
CEY	**Cerknica**	**8.76**	**332**	*e*Pn	**Pn**	**00 52 58.1**	**+0.6**
LJU	**Ljubljana**	**8.98**	**333**	*e*Pn	**Pn**	**00 53 01.4**	**+0.8**
KEST	**Kesra**	**9.15**	**258**	Pn	**Pn**	**00 53 03.9**	**+0.9**
	comp=N,0.2nm,0.3s,baz=47,slow=8.2,SNR=5.6						
SOKA	**Soboth**	**9.37**	**337**	Pn	**Pn**	**00 53 06.1**	**+0.1**
	comp=N,5.0nm,0.4s,SNR=20						
OBKA	**Obir**	**9.37**	**335**	*i* Pn	**Pn**	**00 53 06.9**	**+0.8**
	comp=N,2.1nm,0.3s,SNR=10.0						
ARSA	**Arzberg**	**9.74**	**340**	*i* Pn	**Pn**	**00 53 12.9**	**+1.8**
	comp=N,0.1nm,0.1s						
KBA	**Koelnbreinsper**	**10.29**	**332**	Pn	**Pn**	**00 53 20.9**	**+2.2**
	comp=N,1.4nm,0.4s,SNR=6.9						
CONA	**Conrad Observa**	**10.29**	**343**	*i* Pn	**Pn**	**00 53 21.4**	**+2.8**
	comp=N,0.2nm,0.3s						
ABTA	**Abfaltersbach**	**10.34**	**328**	*i* Pn	**Pn**	**00 53 22.1**	**+2.8**
	comp=N,0.8nm,0.5s						
BRTR	**Keskin Array B**	**10.46**	**77**	Pn	**Pn**	**00 53 23.1**	**+2.1**
	comp=N,0.1nm,0.3s,baz=228,slow=41,SNR=2.2						
MOA	**Molln**	**10.65**	**337**	*i* Pn	**Pn**	**00 53 24.5**	**+1.0**
	comp=N,0.8nm,0.2s,SNR=11						
WTTA	**Wattenberg**	**11.12**	**328**	Pn	**Pn**	**00 53 32.5**	**+2.5**
	comp=N,2.5nm,0.4s,SNR=4.1						
WATA	**Walderalm**	**11.20**	**328**	*i* Pn	**Pn**	**00 53 33.1**	**+2.1**
	comp=N,1.1nm,0.3s						
FETA	**Feichten**	**11.33**	**324**	*i* Pn	Pn	00 53 38.1	+5.2
MOTA	**Moosalm**	**11.41**	**326**	*i* Pn	**Pn**	**00 53 36.3**	**+2.3**
	comp=N,1.3nm,0.3s						
RETA	**Reutte**	**11.66**	**326**	*i* Pn	**Pn**	**00 53 41.8**	**+4.4**
GERES	**GERESS Array B**	**11.71**	**338**	Pn	**Pn**	**00 53 36.9**	**-1.1**
	comp=N,0.3nm,0.3s,baz=158,slow=14,SNR=6.9						
MMAI	**Mount Meron Ar**	**13.28**	**108**	Pn	**Pn**	**00 53 59.6**	**+0.1**
	comp=N,0.4nm,0.3s,baz=316,slow=10,SNR=5.1						
AKASG	**Malin Array Be**	**14.02**	**24**	Pn	**P**	**00 54 14.3**	**-3.0**
	comp=N,1.3nm,0.3s,baz=212,slow=8.8,SNR=5.5						
HFS	**Hagfors**	**22.39**	**351**	P	**P**	**00 55 49.3**	**+0.3**
	comp=N,4.2nm,0.8s,baz=150,slow=12,SNR=8.8						
FINES	**FINESS Array B**	**23.57**	**7**	P	**P**	**00 56 00.4**	**-0.7**
	comp=N,1.3nm,0.5s,baz=181,slow=10,SNR=13						
NB2	**NORSAR Subarra**	**23.60**	**349**	P	**P**	**00 56 02.6**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=155,slow=10						
NOA	**NORSAR Array B**	**23.60**	**349**	P	**P**	**00 56 02.3**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=157,slow=9.1,SNR=4.7						
TORD	**Torodi Ar. Bea**	**29.95**	**219**	P	**P**	**00 57 00.0**	**+0.9**
	comp=Z,0.8nm,0.9s,baz=32,slow=8.9,SNR=4.3						
ARCES	**ARCESS Array B**	**31.55**	**3**	P	**P**	**00 57 13.0**	**+0.2**
	comp=Z,11nm,1.3s,baz=192,slow=8.2,SNR=2.1						
MKAR	**Makanchi Array**	**45.41**	**58**	P	**P**	**00 59 09.6**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=265,slow=6.8,SNR=19						
ZALV	**Zalesovo Beam**	**45.79**	**48**	P	**P**	**00 59 12.2**	**0.0**
	comp=Z,1.8nm,0.4s,baz=275,slow=8.6,SNR=8.8						
NRIK	**Noril'sk**	**46.86**	**27**	LR	LR	01 22 24.8	
	comp=Z,76nm,20.2s,baz=71,slow=40						

MEX 18 01:15:43.6±0.5**,29°.41N**×**115°.05W,h5^{km},MD4.0,Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIG	**San Pedro Mart**	**1.67**	**348**	*e*P	Pn	01 16 09.8	-4.1
SPIG				*i* S	Sn	01 16 31.0	-4.9
TJIG	**Tijuana**	**3.33**	**336**	*i* P	Pn	01 16 33.9	-2.4
TJIG				*i* S	Sn	01 17 13.2	-3.0
HSIG		**3.60**	**95**	*e*P	Pn	01 16 37.8	-2.3
HSIG				*i* S	Sn	01 17 19.5	-3.6
CGIG		**6.21**	**79**	*i* P	Pn	01 17 14.1	-2.1
CGIG				*i* S	Sn	01 18 24.1	-3.6

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*JMA **18** 01:49:10.1±0.1, 37°.39N×141°.29E, h35^{km}±1^{km}, M3.7*
JMA Felt II J1.
*IDC **18** 01:49:23.1±1.9, 36°.45N×140°.44E, h164^{km}±23^{km}, mb3.2/5, mb1 3.3/6, mb1mx3.1/32, mbtmp3.7/6, MS2.3/1, Ms1 2.3/1, ms1mx2.0/18, Error ellipse: s-maj=41.1km s-min=26.8km az=21.0*
ISC 18 01:49:07.9±1.8**,37°.37N**±0°.03×**141°.44E**±0°.07**,h17**^{km}±9^{km}**,**
n26,σ0^{s}.98/31**,mb3.6**/5**,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.45**	**269**	P	**Pb**	**01 49 18.1**	**+0.8**
JFK				S	**Sg**	**01 49 23.5**	**+0.4**
JMST	**Minamisoumatoc**	**0.56**	**309**	P	**Pb**	**01 49 19.8**	**+0.6**
JMST				S	**Sg**	**01 49 26.6**	**0.0**
ONAJ	**Iwakimizuishiy**	**0.58**	**242**	P	**Pb**	**01 49 20.2**	**+0.7**
ONAJ				S	**Sb**	**01 49 27.3**	**-0.1**
JMM	**Marumori**	**0.71**	**314**	P	**Pb**	**01 49 22.0**	**+0.3**
JFFD	**Fukushimafurud**	**0.75**	**248**	P	**Pb**	**01 49 22.7**	**+0.2**
JFFD				S	**Sg**	**01 49 31.4**	**-1.2**
JFT	**Otama**	**0.89**	**280**	P	**Pg**	**01 49 25.1**	**0.0**
JFT				S	**Sb**	**01 49 35.6**	**-0.7**
JHO	**Hitachi**	**1.03**	**223**	P	**Pb**	**01 49 26.6**	**-0.6**
JHO				S	**Sb**	**01 49 38.6**	**-1.8**
JIO	**Ouri**	**1.08**	**356**	P	**Pn**	**01 49 28.4**	**+0.2**
JIO				S	**Sb**	**01 49 41.3**	**-0.6**
JOU	**Okura**	**1.17**	**329**	P	**Pn**	**01 49 29.4**	**0.0**
JOU				S	**Sb**	**01 49 44.0**	**-0.3**
JYS	**Shirataka**	**1.38**	**308**	P	**Pn**	**01 49 32.8**	**+0.5**
JYS				S	**Sn**	**01 49 49.4**	**-0.7**
JFY	**Yanaizu**	**1.38**	**272**	P	**Pn**	**01 49 32.4**	**+0.1**
JFY				S	**Sn**	**01 49 48.8**	**-1.3**
MJAR	**Matsushiro Arr**	**2.71**	**253**	P	**Pb**	**01 49 56.2**	**+0.3**
	0.6nm,0.3s,baz=93,slow=17,SNR=6.1						
MJAR				S	**Sb**	**01 50 27.0**	**-1.9**
	0.7nm,0.3s,baz=131,slow=20,SNR=6.1						
MAT	**Matsushiro**	**2.72**	**253**	P	**Pn**	**01 49 52.4**	**+1.7**
MAT				*e*S	**Sn**	**01 50 25.8**	**+2.7**
JHJ	**Hachijo jima 2**	**4.45**	**198**	P	**Pn**	**01 50 15.7**	**+1.2**
	8.2nm,0.3s,baz=60,slow=16,SNR=4.0						
JHJ				S	**Sn**	**01 51 05.6**	**-0.4**
	12nm,0.3s,baz=62,slow=23,SNR=4.0						
ASAJ	**Asahikawa**	**6.79**	**7**	LR	LR	01 54 37.4	
	comp=Z,20nm,20.5s,baz=151,slow=40						
SONM	**Songino Array**	**27.61**	**303**	P	**P**	**01 54 54.6**	**+0.3**
	0.6nm,0.7s,baz=92,slow=7.5,SNR=3.2						
H11N2	**WAKE ISLAND Hy**	**28.31**	**121**	T	T	02 25 03.8	
	baz=314,slow=75						
H11N1	**WAKE ISLAND Hy**	**28.31**	**121**	T	T	02 25 09.3	
	baz=314,slow=75						
H11N3	**WAKE ISLAND Hy**	**28.32**	**121**	T	T	02 25 01.6	
	baz=314,slow=75						
H11S1	**WAKE ISLAND Hy**	**29.03**	**123**	T	T	02 26 04.2	
H11S3	**WAKE ISLAND Hy**	**29.03**	**123**	T	T	02 25 27.1	
	baz=254,slow=74						
H11S2	**WAKE ISLAND Hy**	**29.05**	**123**	T	T	02 25 40.0	
	baz=314,slow=74						
ZALV	**Zalesovo Beam**	**41.70**	**312**	P	**P**	**01 56 55.3**	**-0.1**
	0.7nm,0.5s,baz=99,slow=8.9,SNR=3.3						
MKAR	**Makanchi Array**	**43.96**	**302**	P	**P**	**01 57 13.3**	**-0.5**
	0.8nm,0.6s,baz=90,slow=9.7,SNR=5.6						
ILAR	**Eielson Array**	**49.20**	**33**	P	P	01 58 04.0	+9.4
	0.4nm,0.9s,baz=264,slow=5.6,SNR=5.7						
NOA	**NORSAR Array B**	**73.88**	**337**	P	**P**	**02 00 41.4**	**0.0**
	0.6nm,0.9s,baz=38,slow=7.3,SNR=2.9						

IDC 18 02:13:53.3±4.4**,2°.52S**×**138°.91E,h0^{km},mb3.5**/2**,**
mb1 3.8/3**,mb1mx3.5**/30**,mbtmp3.6**/3**,ML3.9**/1**,MS3.2**/1**,**
Ms1 3.2/1**,ms1mx2.4**/27**,Error ellipse: s-maj=176.1km**
s-min=29.2km az=86.0,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**17.06**	**20**	LR	LR	02 23 38.0	
	comp=Z,80nm,20.2s,baz=106,slow=34						
WRA	**Warramunga Arr**	**17.88**	**194**	P	Pn	02 18 03.9	+0.2
	0.4nm,0.3s,baz=15,slow=13,SNR=16						
ASAR	**Alice Springs**	**21.57**	**193**	P	P	02 18 44.8	+0.1
	0.9nm,0.4s,baz=24,slow=9.9,SNR=17						
MKAR	**Makanchi Array**	**69.76**	**322**	P	P	02 25 05.4	-0.1
	0.5nm,0.7s,baz=110,slow=7.8,SNR=5.5						

IDC 18 02:14:09.2±3.1**,33°.83S**×**178°.94W,h0^{km},mb3.9**/2**,**
mb1 4.2/3**,mb1mx3.9**/34**,mbtmp4.0**/3**,ML3.9**/1**,Error**
ellipse: s-maj=71.0km s-min=36.1km az=117.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.45**	**215**	Pn	Pn	02 15 32.1	+0.3
	4.1nm,0.3s,baz=280,slow=3.6,SNR=23						
URZ				Sn	Sn	02 16 34.7	-0.4
	2.9nm,0.3s,baz=256,slow=3.3,SNR=7.7						
ASAR	**Alice Springs**	**42.25**	**271**	P	P	02 22 04.6	+0.2
	1.4nm,0.7s,baz=110,slow=7.4,SNR=12						
WRA	**Warramunga Arr**	**43.55**	**276**	P	P	02 22 14.5	-0.5
	1.4nm,0.6s,baz=118,slow=8.0,SNR=7.1						
FINES	**FINESS Array B**	**148.04**	**337**	PKPbc	PKPbc	02 33 55.1	-0.7
	2.7nm,0.8s,baz=31,slow=3.2,SNR=5.6						

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*GCMT **18** 02:26:05.0±0.2, 55°.69S±0°.01×124°.76W±0°.02, h22^{km}±1^{km}, MW5.1/113, Moment Tensor Solution. s69,c94; s113,c175; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.87±.16; $M_{\theta\theta}$4.12±.16; $M_{\phi\phi}$-3.25±.13; $M_{r\theta}$-0.34±.23; $M_{\theta\phi}$4.64±.11; $M_{\phi r}$-0.49±.21; Best double couple: $M_0$5.95300×10^{16} NP1:ϕ_s289.00000°,δ85.00000°, λ0.00000°. NP2:ϕ_s199.00000°,δ90.00000°,λ175.00000°. Principal axes: T 6.3970, Plg4.0000°, Azm154.0000°; N -0.8920, Plg85.0000°, Azm15.0000°; P -5.5080, Plg4.0000°, Azm244.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*
*IDC **18** 02:26:06.8±1.1, 54°.75S×124°.88W, h0^{km}, mb4.1/4, mb1 4.4/4, mb1mx4.0/28, mbtmp4.1/4, MS4.1/14, Ms1 4.1/14, ms1mx4.0/17 Error ellipse: s-maj=42.9km s-min=38.4km az=104.0*
ISC 18 02:26:08.5±1.1**,54°.8S**±0°.3×**124°.8W**±0°.3**,h10^{km},n31,**
σ1^{s}.63/7**,mb4.2**/4**,MS4.2**/17**,Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**30.95**	**133**	LR	LR	02 41 11.2	
	comp=Z,290nm,19.8s,baz=264,slow=29						
USHA	**Ushuaia**	**31.75**	**114**	LR	LR	02 41 41.3	
	comp=Z,314nm,19.0s,baz=248,slow=29						
TBI	**Tubuai**	**36.36**	**320**	*e*S	S	02 38 34.2	-19
	158nm,26.2s						
TBI				*e*LQ	LQ	02 41 08.7	
	400nm,25.8s						
TBI				*e*LR	LR	02 42 41.5	
	comp=Z,983nm,29.2s,baz=161						
TBI	**Tubuai**	**36.36**	**320**	*e*T	T	03 12 02.4	
	48nm,0.3s						
PLCA	**Paso Flores**	**38.09**	**91**	LR	LR	02 44 48.8	
	comp=Z,305nm,21.8s,baz=254,slow=29						
PPT2	**Papeete2**	**41.69**	**323**	*e*S	S	02 39 56.8	-17
	195nm,26.2s						
PPT2				*e*LR	LR	02 45 10.7	
	comp=Z,1µm,26.0s						
PPT	**Papeete**	**41.71**	**323**	LR	LR	02 46 33.8	
	comp=Z,412nm,21.1s,baz=166,slow=30						
VAH	**Vaihoa**	**43.23**	**327**	*e*T	T	03 20 38.0	
	103nm,0.2s						
PMOR	**Pomariorio Ree**	**43.54**	**327**	*e*T	T	03 21 16.9	
	8.7nm,0.3s						
SNAA	**Sanae**	**47.48**	**159**	P	**P**	**02 34 42.8**	**-0.2**
	2.7nm,0.9s,baz=205,slow=4.9,SNR=5.3						
CPUP	**Villa Florida**	**56.03**	**88**	LR	LR	02 55 46.3	
	comp=Z,199nm,20.3s,baz=228,slow=32						
LPAZ	**La Paz**	**57.79**	**72**	LR	LR	02 55 07.5	
	comp=Z,114nm,21.0s,baz=205,slow=30						
MAW	**Mawson**	**57.83**	**183**	LR	LR	02 58 46.7	
	comp=Z,134nm,18.7s,baz=192,slow=34						
DZM	**Mont Dzumac**	**60.05**	**274**	*e*LR	LR	02 53 34.8	
	comp=Z,350nm,24.8s						
STKA	**Stephens Creek**	**66.59**	**248**	LR	LR	03 02 16.0	
	comp=Z,93nm,18.2s,baz=196,slow=33						
BDFB	**Brasilia**	**69.76**	**89**	LR	LR	03 05 03.0	
	comp=Z,219nm,19.8s,baz=237,slow=34						
ASAR	**Alice Springs**	**77.22**	**247**	P	**P**	**02 38 01.6**	**-1.2**
	1.3nm,1.1s,baz=158,slow=6.2,SNR=4.2						
ASAR				LR	LR	03 06 07.6	
	comp=Z,143nm,21.8s,baz=160,slow=31						
WRA	**Warramunga Arr**	**80.01**	**250**	P	**P**	**02 38 17.9**	**-0.2**
	3.8nm,0.5s,baz=148,slow=4.8,SNR=10						
WRA				LR	LR	03 09 40.4	
	comp=Z,130nm,19.5s,baz=200,slow=33						
TXAR	**Lajitas Array**	**85.70**	**18**	P	**P**	**02 38 46.1**	**-1.1**
	0.5nm,0.8s,baz=187,slow=7.8,SNR=5.0						
NVAR	**Mina Array Bea**	**92.98**	**5**	LR	LR	03 12 19.9	
	comp=Z,102nm,20.7s,baz=182,slow=30						
BOSA	**Boshof**	**93.06**	**154**	LR	LR	03 18 45.7	
	comp=Z,86nm,18.8s,baz=184,slow=34						
H11S2	**WAKE ISLAND Hy**	**93.16**	**298**	T	T	04 23 08.9	
	baz=147,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	**93.18**	**298**	T	T	04 23 12.0	
	baz=147,slow=76,SNR=39						
H11S1	**WAKE ISLAND Hy**	**93.18**	**298**	T	T	04 23 11.8	
	baz=147,slow=76,SNR=36						
H11N3	**WAKE ISLAND Hy**	**94.09**	**299**	T	T	04 24 16.4	
	baz=147,slow=76,SNR=21						
H11N1	**WAKE ISLAND Hy**	**94.09**	**299**	T	T	04 24 21.2	
	baz=147,slow=76,SNR=22						
H11N2	**WAKE ISLAND Hy**	**94.10**	**299**	T	T	04 24 17.8	
	baz=147,slow=76,SNR=18						
PDAR	**Pinedale Array**	**98.01**	**11**	LR	LR	03 16 20.5	
	comp=Z,96nm,18.8s,baz=192,slow=31						
ILAR	**Eielson Array**	**120.40**	**349**	PKP	**PKPdf**	**02 44 59.6**	**+1.1**
	0.5nm,1.0s,baz=144,slow=3.2,SNR=3.6						
SONM	**Songino Array**	**147.88**	**279**	PKPbc	**PKPdf**	**02 45 52.5**	**+2.5**

	0.8nm,0.9s,baz=134,slow=4.3,SNR=4.8						
MKAR	**Makanchi Array**	**161.20**	**256**	PKPab	**PKPab**	**02 46 52.0**	**-0.1**
	0.6nm,0.7s,baz=97,slow=5.0,SNR=5.3						

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*IDC **18** 02:26:58.0±1.3, 31°.14S×178°.06W, h0^{km}, mb4.0/4, mb1 4.1/5, mb1mx3.8/36, mbtmp4.0/5, ML3.1/1, Error ellipse: s-maj=33.4km s-min=22.3km az=98.0*

*NEIC **18** 02:27:03.1±1.7, 31°.10S±0°.07×178°.3W±0°.2, h40^{km}±10^{km}, mb4.2/5, Error ellipse: s-maj=24.1km s-min=8.8km az=106.0*

ISC 18 02:27:02.4±0.9**, 31°.08S**±0°.08×**178°.2W**±0°.2**, h35^{km}, n17, σ1^{s}22**/20**, mb4.0**/5**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.84**	**7**	Pn	**Pn**	**02 27 32.1**	**+0.6**
	198nm,0.3s,baz=83,slow=22,SNR=3.0						
RAO				Sn	**Sn**	**02 27 51.5**	**-2.0**
	283nm,0.3s,baz=235,slow=23,SNR=5.1						
URZ	**Urewera**	**8.15**	**207**	Pn	**Pn**	**02 28 56.8**	**-1.3**
	0.3nm,0.3s,baz=296,slow=3.2,SNR=2.2						
URZ				Sn	**Sn**	**02 30 29.3**	**+0.3**
	0.8nm,0.3s,baz=165,slow=18,SNR=3.5						
URZ	**Urewera**	**8.15**	**207**		**Pn**	**02 28 56.5**	**-1.6**
URZ					**Sn**	**02 30 28.6**	**-0.3**
PYZ	**Puysegur Point**	**19.11**	**214**	P	**P**	**02 31 21.1**	**-1.0**
STKA	**Stephens Creek**	**34.19**	**258**	P	**P**	**02 33 47.5**	**+2.9**
	1.1nm,0.7s,baz=115,slow=9.0,SNR=2.9						
BBOO	**Buckleboo**	**38.65**	**255**	P	**P**	**02 34 20.9**	**-1.7**
ASAR	**Alice Springs**	**42.94**	**268**	P	**P**	**02 34 59.2**	**+1.1**
	2.0nm,0.6s,baz=105,slow=7.1,SNR=20						
WR0	**Warramunga Arr**	**43.81**	**273**	P	**P**	**02 35 04.9**	**-0.2**
WRA	**Warramunga Arr**	**43.99**	**273**	P	**P**	**02 35 07.4**	**+0.8**
	1.6nm,0.5s,baz=114,slow=7.8,SNR=5.7						
WRA	**Warramunga Arr**	**43.99**	**273**	P	**P**	**02 35 06.2**	**-0.4**
WB0	**Warramunga Arr**	**44.01**	**273**	P	**P**	**02 35 06.8**	**0.0**
WB0				IAmb	IAmb	02 35 08.7	
	comp=Z,5.0nm,1.1s						
VNDA	**Vanda**	**47.40**	**186**	P	**P**	**02 35 33.2**	**+0.4**
QSPA	**South Pole Qui**	**59.03**	**180**	P	**P**	**02 36 59.1**	**+0.5**
	comp=Z,1.2nm,0.9s,baz=87,slow=24,SNR=7.1						
QSPA	**South Pole Qui**	**59.03**	**180**	P	**P**	**02 36 58.8**	**+0.2**
QSPA				IAmb	IAmb	02 37 14.3	
	comp=Z,1.8nm,1.1s						
FINES	**FINESS Array B**	**145.74**	**339**	PKPbc	**PKPdf**	**02 46 36.5**	**+0.1**
	comp=Z,1.9nm,0.6s,baz=42,slow=4.3,SNR=10						
FINES	**FINESS Array B**	**145.74**	**339**		**PKPdf**	**02 46 36.2**	**-0.2**
TORD	**Torodi Ar. Bea**	**162.15**	**180**	PKPab	**PKPab**	**02 47 48.4**	**+1.1**
	comp=Z,0.5nm,0.9s,baz=164,slow=4.6,SNR=4.6						

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*ATH **18** 02:27:53.4, 38°.28N×20°.39E, h13^{km}±1^{km}, ML2.6/6, Error ellipse: s-maj=2.2km s-min=1.0km az=240.0*

*THE **18** 02:27:53.6, 38°.28N×20°.36E, h11^{km}±1^{km}, ML2.6/13, Error ellipse: s-maj=1.0km s-min=0.4km az=230.0*

ISC 18 02:27:53.1±0.8**, 38°.28N**±0°.03×**20°.35E**±0°.03**, h14**^{km}±4^{km}**, n62, σ0^{s}72**/95**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGT1	**Agia Thekli**	**0.04**	**130**	P	**Pg**	**02 27 55.7**	**+0.1**
KEF4	**Livadi, Kephal**	**0.06**	**106**	P	**Pg**	**02 27 55.7**	**-0.1**
KEF4				S	**Sg**	**02 27 56.9**	**-0.8**
KEF3	**Kipouria, Keph**	**0.07**	**179**	P	**Pg**	**02 27 56.2**	**+0.3**
KEF3				S	**Sg**	**02 27 58.2**	**+0.4**
CHV1	**Chavriata, Kef**	**0.10**	**163**	P	**Pg**	**02 27 56.5**	**+0.4**
CHV1				S	**Sg**	**02 27 58.6**	**+0.4**
	15µm,0.2s						
KEF1	**Kardakata, Kep**	**0.10**	**89**	P	**Pg**	**02 27 56.0**	**-0.2**
KEF1				S	**Sg**	**02 27 57.3**	**-1.0**
LXR1	**Lixouri, Cepha**	**0.10**	**136**	P	**Pg**	**02 27 56.4**	**+0.2**
LXR1				S	**Sg**	**02 27 58.5**	**+0.1**
LXRA	**Lixouri, Kepha**	**0.10**	**137**	P	**Pg**	**02 27 56.4**	**+0.2**
LXRA				S	**Sg**	**02 27 58.5**	**+0.2**
ARGA	**Argostoli. Kep**	**0.14**	**133**	P	**Pg**	**02 27 56.8**	**+0.1**
ARGA				S	**Sg**	**02 27 58.9**	**-0.4**
ARG2	**Argostoli**	**0.15**	**131**	P	**Pg**	**02 27 56.9**	**+0.1**
ARG2				S	**Sg**	**02 27 59.0**	**-0.3**
	10µm,0.1s						
KEF2	**Argostoli. Kep**	**0.16**	**135**	P	**Pg**	**02 27 57.1**	**+0.1**
KEF2				S	**Sg**	**02 27 59.2**	**-0.4**
VLS	**Valsamata**	**0.22**	**117**	P	**Pg**	**02 27 57.7**	**-0.2**
VLS				S	**Sg**	**02 28 00.9**	**-0.3**
	5µm,0.2s						
VLS	**Valsamata**	**0.22**	**117**	P	**Pg**	**02 27 57.7**	**-0.2**
VLS				S	**Sg**	**02 28 00.9**	**-0.3**
VLS				AML	AML	02 28 01.2	
	comp=E,11007µm,0.1s						
VLS				AML	AML	02 28 01.2	
	comp=N,9039µm,0.2s						
VSK1	**VASILIKIADES**	**0.22**	**52**	P	**Pg**	**02 27 58.0**	**+0.1**
VSK1				S	**Sg**	**02 28 01.3**	**+0.1**
KONA	**Konidatara, Ke**	**0.23**	**50**	P	**Pg**	**02 27 58.3**	**+0.1**
KONA				S	**Sg**	**02 28 01.6**	**+0.1**
KONA				AML	AML	02 28 02.2	
	comp=N,5312µm,0.2s						
KONA				AML	AML	02 28 02.6	
	comp=E,3198µm,0.2s						
FSK	**Fiskardo**	**0.25**	**43**	P	**Pg**	**02 27 58.6**	**+0.1**
FSK				S	**Sg**	**02 28 02.2**	**+0.1**
	comp=E,4µm,0.2s						
FSK	**Fiskardo**	**0.25**	**43**	P	**Pg**	**02 27 58.6**	**+0.1**
FSK				S	**Sg**	**02 28 02.3**	**+0.1**
FSK				AML	AML	02 28 02.7	
	comp=N,4114µm,0.2s						
FSK				AML	AML	02 28 03.2	
	comp=E,9853µm,0.1s						
KFL	**Anninata**	**0.39**	**115**	P	**Pg**	**02 28 00.8**	**-0.1**
KFL				S	**Sg**	**02 28 06.5**	**+0.4**
	comp=E,3µm,0.5s						
KFL	**Anninata**	**0.39**	**115**	P	**Pg**	**02 28 00.7**	**-0.1**
KFL				S	**Sg**	**02 28 06.6**	**+0.5**
KFL				AML	AML	02 28 06.8	
	comp=N,2505µm,0.5s						
KFL				AML	AML	02 28 07.1	
	comp=E,7632µm,0.4s						
EVGI	**Lefkada island**	**0.42**	**35**	P	**Pg**	**02 28 01.7**	**+0.1**
EVGI				S	**Sb**	**02 28 08.2**	**-0.5**
EVGI	**Lefkada island**	**0.42**	**35**	P	**Pg**	**02 28 01.7**	**+0.1**
EVGI				S	**Sg**	**02 28 07.8**	**+0.5**
MGNA	**Meganis**	**0.52**	**43**	P	**Pg**	**02 28 03.0**	**-0.3**
LKD2	**Lefkada island**	**0.57**	**25**	P	**Pg**	**02 28 04.1**	**-0.2**
LKD2				S	**Sg**	**02 28 12.2**	**+0.3**
	comp=E,168nm,0.2s						
LKD2	**Lefkada island**	**0.57**	**25**	P	**Pg**	**02 28 03.8**	**-0.5**
TSLK	**Tsoukalades, L**	**0.60**	**24**	P	**Pg**	**02 28 04.9**	**0.0**
TSLK	**Tsoukalades, L**	**0.60**	**24**	P	**Pg**	**02 28 05.0**	**+0.1**
AST1	**Astakos**	**0.64**	**65**	P	**Pg**	**02 28 05.2**	**-0.5**
AST1				S	**Sb**	**02 28 15.2**	**+0.2**
	comp=E,742nm,0.1s						
PDO	**Prodromos**	**0.73**	**64**	P	**Pg**	**02 28 07.1**	**-0.3**
PDO				S	**Sb**	**02 28 18.4**	**+0.8**
	comp=E,522nm,0.4s						
PDO	**Prodromos**	**0.73**	**64**	P	**Pg**	**02 28 07.1**	**-0.3**
PDO				AML	AML	02 28 19.4	
	comp=E,676µm,0.5s						
PDO				AML	AML	02 28 20.1	
	comp=N,799µm,0.3s						
VTN	**Vitineika**	**0.75**	**118**	P	**Pg**	**02 28 07.9**	**+0.1**
RLS	**Riolos of Patr**	**0.91**	**104**	P	**Pg**	**02 28 10.3**	**-0.4**
RLS	**Riolos of Patr**	**0.91**	**104**	P	**Pg**	**02 28 10.2**	**-0.5**
PVO	**Paravola**	**0.99**	**69**	P	**Pg**	**02 28 11.8**	**-0.4**
PVO				S	**Sn**	**02 28 27.5**	**+1.1**
	comp=N,248nm,0.3s						
PVO	**Paravola**	**0.99**	**69**	P	**Pg**	**02 28 12.0**	**-0.2**
PVO				AML	AML	02 28 28.4	
	comp=E,668µm,0.3s						
PVO				AML	AML	02 28 31.9	
	comp=N,326µm,0.2s						
DRO	**Drossia**	**1.12**	**106**	P	**Pb**	**02 28 13.7**	**-0.7**
DRO				S	**Sn**	**02 28 31.8**	**+2.0**
	comp=N,150nm,0.4s						
DRO	**Drossia**	**1.12**	**106**	P	**Pb**	**02 28 13.9**	**-0.5**
EFP	**Efpalio**	**1.24**	**83**	P	**Pn**	**02 28 15.5**	**-0.5**
EFP				S	**Sg**	**02 28 34.2**	**+1.2**
	comp=N,85nm,0.4s						
EFP	**Efpalio**	**1.24**	**83**	P	**Pn**	**02 28 15.5**	**-0.5**
ANX	**Ano Chora**	**1.28**	**75**	P	**Pn**	**02 28 17.1**	**+0.4**
ANX	**Ano Chora**	**1.28**	**75**	P	**Pn**	**02 28 16.5**	**-0.2**
LAKA	**Lakka**	**1.29**	**91**	P	**Pn**	**02 28 15.5**	**-1.3**
LAKA				S	**Sg**	**02 28 34.7**	**+0.1**
	comp=N,58nm,0.3s						
LAKA	**Lakka**	**1.29**	**91**	P	**Pn**	**02 28 15.7**	**-1.1**
AMT	**Artemida-Makis**	**1.31**	**124**	P	**Pg**	**02 28 18.6**	**+0.3**
SERG	**Sergoula**	**1.35**	**84**	P	**Pn**	**02 28 17.5**	**-0.1**
SERG	**Sergoula**	**1.35**	**84**	P	**Pn**	**02 28 17.6**	**-0.1**
TRIZ	**Trizonia**	**1.36**	**86**	P	**Pn**	**02 28 17.1**	**-0.7**
TRIZ				S	**Sg**	**02 28 37.4**	**+0.4**
	comp=N,105nm,0.4s						
TRIZ	**Trizonia**	**1.36**	**86**	P	**Pn**	**02 28 17.4**	**-0.3**
KALE	**Kalithea**	**1.42**	**85**	P	**Pn**	**02 28 18.3**	**-0.3**
KALE	**Kalithea**	**1.42**	**85**	P	**Pn**	**02 28 18.3**	**-0.3**
KLV	**Kalavryta, Ach**	**1.44**	**99**	P	**Pn**	**02 28 19.1**	**+0.2**
KLV	**Kalavryta, Ach**	**1.44**	**99**	P	**Pn**	**02 28 19.2**	**+0.2**
KEK	**Kerkira**	**1.50**	**344**	P	**Pb**	**02 28 21.0**	**+0.2**
MAKR	**Makrakomi, Fth**	**1.58**	**62**	P	**Pg**	**02 28 23.8**	**+0.3**
AGG	**Agios Georgios**	**1.72**	**64**	P	**Pb**	**02 28 25.1**	**+0.4**
KPRO	**Kipourio**	**1.85**	**25**	P	**Pb**	**02 28 27.6**	**+0.7**
DBRK	**Dubrovnik**	**4.70**	**340**	*e*Pn	**Pn**	**02 29 04.0**	**+0.3**
DBRK				Sn	**Sn**	**02 29 56.7**	**-1.2**
MAKA	**Makarska**	**5.61**	**334**	*e*Pn	**Pn**	**02 29 16.3**	**+0.2**
MAKA				Sn	**Sn**	**02 30 17.7**	**-2.6**
RICI	**Ricice**	**5.75**	**336**	*e*Pn	**Pn**	**02 29 17.8**	**-0.4**
RICI				Sn	**Sn**	**02 30 22.3**	**-1.7**
ZIRJ	**Zirje**	**6.44**	**328**	*e*Pn	**Pn**	**02 29 28.3**	**+0.7**
ZIRJ				Sn	**Sn**	**02 30 38.5**	**-2.4**
KIJV	**Kijevo**	**6.45**	**334**	*e*Pn	**Pn**	**02 29 28.9**	**+1.2**
KIJV				Sn	**Sn**	**02 30 40.4**	**-0.7**
MORI	**Morici**	**6.59**	**329**	*e*Pn	**Pn**	**02 29 30.5**	**+0.9**
DUGI	**Dugi Otok**	**6.96**	**327**	*i* Pn	**Pn**	**02 29 36.5**	**+1.7**
DUGI				Sn	**Sn**	**02 30 52.6**	**-1.2**
UDBI	**Udbina**	**7.13**	**333**	*e*Pn	**Pn**	**02 29 39.1**	**+2.0**

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*NIED **18** 02:29:00, 24°.40N×123°.10E, h50^{km}, Mw3.7 Best double couple: M$_0$4.55000×10^{14} NP1:φ$_s$9.00000°, δ54.00000°, λ54.00000°. NP2:φ$_s$240.00000°, δ49.00000°, λ129.00000°.*

JMA 18 02:29:42.9±0.1**, 24°.41N**×**123°.14E, h61**^{km}±1^{km}**, M3.8, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.13**	**294**	P	Pn	02 29 52.3	+0.2
YOJ				S	Sn	02 29 58.7	-0.1
JYNG	**Yonagunijimaku**	**0.18**	**283**	P	Pn	02 29 52.5	+0.1
JYNG				S	Sn	02 29 59.2	0.0
IRIF	**Iriomote-Funau**	**0.54**	**98**	P	Pn	02 29 55.4	0.0
IRIF				S	Sn	02 30 04.6	+0.1
HATJ	**Hateruma jima**	**0.70**	**120**	P	Pn	02 29 57.3	+0.1
HATJ				*e*S	Sn	02 30 07.6	-0.1
JKRS	**Kuro-shima**	**0.81**	**102**	P	Pn	02 29 58.9	+0.3
JKRS				S	Sn	02 30 11.0	+0.9
JIJ	**Ishigaki jima**	**0.92**	**93**	P	Pn	02 29 59.8	-0.1
JIJ				S	Sn	02 30 12.5	+0.1
JISG	**Ishigakijimahi**	**1.08**	**80**	P	Pn	02 30 02.2	+0.2
JISG				S	Sn	02 30 16.6	+0.4
JTJ	**Tarama**	**1.44**	**81**	P	Pn	02 30 07.4	+0.6
JTJ				*e*S	Sn	02 30 25.7	+0.9
JIRB	**Irabujima**	**1.90**	**77**	P	Pn	02 30 13.6	+0.6
JIKM	**Ikemajima**	**1.98**	**75**	P	Pn	02 30 15.0	+0.8
JIKM				S	Sn	02 30 38.6	+0.7

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*JMA **18** 02:34:31.0, 39°.76N×141°.85E, h58^{km}±1^{km}, M3.7*

JMA Felt II J1.

*IDC **18** 02:34:36.8±3.6, 39°.64N×141°.63E, h114^{km}±20^{km}, mb3.5/4, mb1 3.3/7, mb1mx3.0/45, mbtmp3.7/7, Error ellipse: s-maj=68.0km s-min=18.7km az=113.0*

ISC 18 02:34:31.0±1.2**, 39°.78N**±0°.04×**141°.87E**±0°.09**, h57**^{km}±7^{km}**, n20, σ0^{s}98**/29**, mb3.9**/4**, 2C-6D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**0.16**	**359**	⇑P	**Pn**	**02 34 40.3**	**+0.5**
JTH				S	**Sn**	**02 34 46.8**	**+0.6**
MIYJ	**Miyakonagasawa**	**0.21**	**190**	⇑P	**Pn**	**02 34 40.3**	**+0.2**
MIYJ				S	**Sn**	**02 34 46.6**	**0.0**
JKEN	**Kujiedanarisaw**	**0.44**	**344**	P	**Pn**	**02 34 42.4**	**+0.4**
JKEN				S	**Sn**	**02 34 50.6**	**+0.6**
JKZ	**Kuzumaki**	**0.46**	**296**	⇓P	**Pn**	**02 34 42.6**	**+0.3**
JKZ				S	**Sn**	**02 34 50.4**	**-0.1**
JOM	**Ohasama**	**0.54**	**235**	⇓P	**Pn**	**02 34 42.9**	**-0.2**
JOM				S	**Sn**	**02 34 51.5**	**-0.4**
JANG	**Nango**	**0.65**	**336**	⇓P	**Pn**	**02 34 44.5**	**+0.1**
JANG				S	**Sn**	**02 34 54.3**	**+0.1**
JMK	**Ichinoseki**	**0.97**	**211**	P	**Pn**	**02 34 48.1**	**-0.3**
JMK				S	**Sn**	**02 35 00.6**	**-0.8**
JRG	**Rokugo**	**1.03**	**248**	⇓P	**Pn**	**02 34 48.8**	**-0.4**
JRG				S	**Sn**	**02 35 02.3**	**-0.5**
JAH	**Hinai**	**1.03**	**294**	⇓P	**Pn**	**02 34 49.3**	**+0.1**
JAH				S	**Sn**	**02 35 03.5**	**+0.7**
JTM	**Tenmabayashi**	**1.18**	**329**	⇓P	**Pn**	**02 34 51.3**	**+0.1**
JTM				S	**Sn**	**02 35 06.6**	**+0.3**
JIO	**Ouri**	**1.39**	**197**	*e*S	**Sn**	**02 35 10.1**	**-1.2**
JYK	**Kaneyama**	**1.45**	**234**	P	**Pn**	**02 34 54.5**	**-0.4**
MAT	**Matsushiro**	**4.33**	**223**	P	**Pn**	**02 35 36.1**	**+1.8**
MAT				*e*S	**Sn**	**02 36 26.2**	**+2.6**
MJAR	**Matsushiro Arr**	**4.33**	**223**	P	**Pn**	**02 35 37.0**	**+2.7**
	0.2nm,0.3s,baz=32,slow=14,SNR=5.8						
ASAJ	**Asahikawa**	**4.37**	**7**	P	Pn	02 35 43.7	+9.0
	1.2nm,0.3s,baz=181,slow=18,SNR=3.2						
ASAJ				S	Sn	02 36 35.4	+11
	1.0nm,0.3s,baz=340,slow=26,SNR=4.1						
USRK	**Ussuriysk Ar.**	**8.58**	**304**	P	Pn	02 36 37.5	+5.1
	baz=107,slow=13,SNR=4.7						
ZALV	**Zalesovo Beam**	**40.38**	**310**	P	**P**	**02 42 02.6**	**-0.3**
	1.7nm,0.5s,baz=91,slow=8.2,SNR=5.9						
MKAR	**Makanchi Array**	**43.02**	**300**	P	**P**	**02 42 24.1**	**-0.6**
	0.9nm,0.6s,baz=85,slow=9.4,SNR=10						
KURBB	**Kurchatov Arra**	**44.64**	**306**	P	**P**	**02 42 37.0**	**-0.6**
	1.7nm,0.5s,baz=81,slow=8.5,SNR=10						
BVAR	**Borovoye Array**	**49.02**	**311**	P	**P**	**02 43 11.1**	**-0.7**
	0.3nm,0.4s,baz=69,slow=7.9,SNR=3.0						

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*SJA **18** 03:04:18.6±1.0, 20°.01S×71°.02W, h14^{km}±4^{km}, ML3.7, MW3.8*

*IDC **18** 03:04:19.4±4.4, 21°.01S×70°.27W, h0^{km}, mb3.9/1, mb1 3.8/2, mb1mx3.5/24, mbtmp3.8/2, ML3.6/1, Error ellipse: s-maj=140.7km s-min=63.0km az=97.0*

*GUC **18** 03:04:22.8±0.6, 19°.97S×70°.88W, h42^{km}±2^{km}, ML3.9*

ISC 18 03:04:20.1±1.4**, 19°.94S**±0°.03×**70°.92W**±0°.06**, h16**^{km}±9^{km}**, n26, σ0^{s}81**/45**, 5C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.82**	**66**	*i* P	**Pn**	**03 04 37.3**	**+0.1**
PSGC				*i* S	**Sn**	**03 04 48.4**	**-0.7**
PSGCX	**Pisagua**	**0.82**	**66**	*e*P	**Pn**	**03 04 37.3**	**+0.1**
PSGCX				*e*S	**Sn**	**03 04 49.6**	**+0.5**
PSGCX				IAML		03 04 50.5	
	comp=Z,1µm,1.0s						
TA01	**Diego Aracena**	**0.94**	**132**	*i* P	**Pn**	**03 04 38.7**	**0.0**
TA01				⇑*i*P	**Pn**	**03 04 38.7**	**0.0**
TA01				*i* S	**Sg**	**03 04 51.0**	**+0.4**
TA01				IAML		03 04 52.7	
	comp=N,6µm,0.3s						
PATCX	**Punta Patache**	**1.14**	**141**	⇓*i*P	**Pg**	**03 04 42.0**	**-0.1**
PATCX				*i* S	**Sn**	**03 04 56.6**	**-0.2**
PATCX				IAML		03 04 58.4	
	comp=N,4µm,0.3s						
PB11	**IPOC Station P**	**1.20**	**82**	⇓*i*P	**Pg**	**03 04 43.5**	**+0.2**
PB11				*i* S	**Sg**	**03 04 59.4**	**+0.3**
PB11				IAML		03 05 02.0	
	comp=E,3µm,0.7s						
PB11	**IPOC Station P**	**1.20**	**82**	*e*P	**Pg**	**03 04 43.6**	**+0.2**
PB11				IAML		03 05 11.4	
	comp=Z,1µm,0.8s						
PB12	**IPOC Station P**	**1.43**	**23**	⇑*i*P	**Pg**	**03 04 47.7**	**+0.1**
PB12				*i* S	**Sg**	**03 05 06.7**	**+0.4**
PB12	**IPOC Station P**	**1.43**	**23**	*e*P	**Pg**	**03 04 47.7**	**+0.1**
PB12				*e*S	**Sg**	**03 05 08.1**	**+1.9**
PB12				IAML		03 05 09.3	
	comp=Z,624nm,0.5s						
GO01	**Chusmiza**	**1.65**	**81**	⇑*i*P	**Pg**	**03 04 51.0**	**-0.9**
GO01				*i* S	**Sg**	**03 05 12.6**	**-0.7**
GO01				IAML		03 05 15.3	
	comp=N,2µm,0.2s						
AP01	**Chacalluta**	**1.65**	**19**	*e*P	**Pb**	**03 04 50.5**	**+0.4**
AP01				*e*S	**Sg**	**03 05 12.4**	**-0.9**
AP01				IAML		03 05 21.3	
	comp=E,4µm,0.5s						
PB08	**IPOC Station P**	**1.67**	**97**	⇑*i*P	**Pb**	**03 04 50.9**	**+0.1**
PB08				*i* S	**Sb**	**03 05 12.8**	**+1.0**
PB08	**IPOC Station P**	**1.67**	**97**	*e*P	**Pb**	**03 04 51.0**	**+0.2**
PB08				*e*S	**Sg**	**03 05 15.1**	**+0.9**
PB08				IAML		03 05 18.4	
	comp=Z,602nm,0.6s						
PB02	**IPOC Station P**	**1.68**	**145**	⇓*i*P	**Pb**	**03 04 49.9**	**-0.9**
PB02				*i* S	**Sb**	**03 05 11.0**	**-0.8**
PB02				IAML		03 05 18.5	
	comp=E,5µm,0.5s						
PB01	**IPOC Station P**	**1.74**	**130**	⇑*i*P	**Pb**	**03 04 51.1**	**-0.6**
PB01				*i* S	**Sb**	**03 05 13.2**	**-0.2**
PB01				IAML		03 05 18.3	
	comp=N,1µm,0.6s						
PB07	**IPOC Station P**	**2.03**	**152**	⇓*i*P	**Pn**	**03 04 54.5**	**+0.6**
PB07				*i* S	**Sn**	**03 05 19.2**	**+0.2**
PB07	**IPOC Station P**	**2.03**	**152**	*e*P	**Pn**	**03 04 54.4**	**+0.5**
PB07				*e*S	**Sb**	**03 05 21.2**	**-0.6**
PB07				IAML		03 05 32.8	
	comp=Z,620nm,0.5s						
PB16	**IPOC Station P**	**2.08**	**40**	*e*P	**Pb**	**03 04 57.7**	**-0.1**
PB16				*i* S	**Sg**	**03 05 25.0**	**-2.1**
PB16	**IPOC Station P**	**2.08**	**40**	*e*P	**Pb**	**03 04 57.6**	**-0.1**
PB16				*e*S	**Sg**	**03 05 26.5**	**-0.6**
PB16				IAML		03 05 38.4	
	comp=Z,483nm,0.6s						
PB09	**IPOC Station P**	**2.43**	**140**	*i* P	**Pn**	**03 05 00.8**	**+1.4**
PB09				IAML		03 05 43.3	
	comp=Z,804nm,1.0s						
PB04	**IPOC Station P**	**2.49**	**163**	*i* P	**Pn**	**03 05 00.4**	**+0.2**
PB06	**IPOC Station P**	**3.03**	**156**	*i* P	**Pn**	**03 05 08.0**	**+0.4**
PB06				IAML		03 06 03.2	
	comp=Z,317nm,0.4s						
LVC	**Limon Verde**	**3.25**	**145**	*i* P	**Pn**	**03 05 12.9**	**+2.0**
LVC				IAML		03 06 03.7	
	comp=Z,120nm,1.4s						
PB15	**IPOC Station P**	**3.52**	**158**	*i* P	**Pn**	**03 05 15.5**	**+1.0**
PB15				IAML		03 06 22.1	
	comp=Z,500nm,0.3s						
LPAZ	**La Paz**	**4.49**	**37**	Pn	**Pb**	**03 05 37.9**	**-1.1**
	comp=Z,1.2nm,0.3s,baz=201,slow=5.4,SNR=20						
LPAZ				Sn	**Sg**	**03 06 45.0**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=89,slow=23,SNR=1.0						
TORD	**Torodi Ar. Bea**	**78.62**	**71**	P	**P**	**03 16 22.5**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=246,slow=5.4,SNR=8.6						
MKAR	**Makanchi Array**	**145.41**	**33**	PKPbc	**PKiKP**	**03 24 00.2**	**-1.2**
	comp=Z,0.2nm,0.6s,baz=312,slow=3.8,SNR=2.7						

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*NEIC **18** 03:04:53.0±1.6, 31°.04S±0°.07×178°.2W±0°.2, h35^{km}±2^{km}, mb4.7/9, Error ellipse: s-maj=30.1km s-min=8.7km az=105.0*

*IDC **18** 03:04:56.9±1.9, 30°.84S×178°.24W, h53^{km}±17^{km}, mb4.3/7, mb1 4.5/8, mb1mx4.0/40, mbtmp4.5/8, ML4.0/1, MS3.4/7, Ms1 3.4/7, ms1mx3.1/36, Error ellipse: s-maj=23.6km s-min=12.4km az=111.0*

ISC 18 03:04:54.9±0.6**, 31°.01S**±0°.07×**178°.2W**±0°.2**, h46^{km}, n57, σ1^{s}61**/59**, mb4.6**/9**, MS3.6**/4**, 1C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.77**	**8**	P	**Pn**	**03 05 23.7**	**+0.7**
	464nm,0.3s,baz=64,slow=20,SNR=9.3						
RAO				S	**Sn**	**03 05 42.4**	**-1.9**
	1µm,0.3s,baz=287,slow=19,SNR=13						
RAO	**Raoul Island**	**1.77**	**8**	Pn	**Pn**	**03 05 21.2**	**-1.8**
RAO				Sn	**Sn**	**03 05 42.4**	**-1.9**
WMGZ	**Waiomatatini S**	**7.35**	**201**	P	**Pn**	**03 06 39.0**	**-0.6**
HAZ	**Te Kaha**	**7.51**	**205**	P	**Pn**	**03 06 40.8**	**-0.9**
PUZ	**Puketiti**	**7.63**	**202**	P	**Pn**	**03 06 42.8**	**-0.7**
RUGZ	**Raukumara Rang**	**7.73**	**205**	P	**Pn**	**03 06 43.2**	**-1.8**
CNGZ	**Carnagh Statio**	**8.02**	**201**	P	**Pn**	**03 06 46.4**	**-2.5**
MWZ	**Matawai**	**8.11**	**205**	P	**Pn**	**03 06 48.1**	**-2.0**
URZ	**Urewera**	**8.20**	**207**	P	**Pn**	**03 06 53.3**	**+2.0**
	2.1nm,0.3s,baz=247,slow=7.1,SNR=8.8						
URZ				S	**Sn**	**03 08 19.4**	**-3.2**
	4.1nm,0.3s,baz=144,slow=20,SNR=11						
URZ				LR	LR	03 10 05.2	
	comp=Z,87nm,21.7s,baz=32,slow=37						
URZ	**Urewera**	**8.20**	**207**		**Pn**	**03 06 48.9**	**-2.4**
URZ					**Sn**	**03 08 21.2**	**-1.4**
URZ	**Urewera**	**8.20**	**207**	P	**Pn**	**03 06 49.3**	**-2.0**
RAHZ	**Arahi**	**8.79**	**205**	P	**Pn**	**03 06 58.9**	**-0.4**
HATZ	**Hinemaiaia**	**9.15**	**209**	P	**Pn**	**03 07 07.4**	**+3.1**
BKZ	**Black Stump Fm**	**9.23**	**207**	Pn	**Pn**	**03 07 02.1**	**-3.3**
BKZ					**Sn**	**03 08 46.4**	**-1.5**
BKZ	**Black Stump Fm**	**9.23**	**207**	P	**Pn**	**03 07 07.2**	**+1.8**
BHHZ	**Black Hill Sta**	**9.68**	**207**	P	**Pn**	**03 07 14.5**	**+3.0**
BFZ	**Birch Farm**	**10.65**	**203**	Pn	**Pn**	**03 07 21.3**	**-3.5**
THZ	**Tophouse**	**12.90**	**211**	P	**Pn**	**03 07 57.5**	**+1.9**
OXZ	**Oxford**	**14.54**	**210**	P	**P**	**03 08 22.6**	**-0.7**
RPZ	**Rata Peaks**	**15.28**	**211**	LR	LR	03 14 02.8	
	comp=Z,173nm,19.5s,baz=24,slow=35						
DZM	**Mont Dzumac**	**16.36**	**299**	LR	LR	03 13 59.3	
	comp=Z,106nm,18.0s,baz=181,slow=33						
WKZ	**Wanaka**	**17.06**	**212**	Pn	**Pn**	**03 08 48.6**	**-1.5**
HNR	**Honiara**	**29.57**	**312**	LR	LR	03 19 55.4	
	comp=Z,59nm,20.3s,baz=198,slow=30						
STKA	**Stephens Creek**	**34.18**	**258**	P	**P**	**03 11 38.0**	**+2.1**
	3.5nm,0.4s,baz=81,slow=8.7,SNR=13						
STKA				LR	LR	03 24 01.7	
	comp=Z,115nm,19.0s,baz=201,slow=34						
AS31	**Alice Springs**	**42.91**	**268**	P	**P**	**03 12 48.6**	**-0.7**
AS31				IAmb	IAmb	03 12 51.1	
	comp=Z,4.1nm,0.6s						
ASAR	**Alice Springs**	**42.91**	**268**	P	**P**	**03 12 50.5**	**+1.2**
	comp=Z,12nm,0.6s,baz=105,slow=7.1,SNR=174						
ASAR	**Alice Springs**	**42.91**	**268**	P	**P**	**03 12 48.2**	**-1.1**
WR0	**Warramunga Arr**	**43.77**	**273**	P	**P**	**03 12 56.4**	**+0.1**
WR0				IAmb	IAmb	03 12 58.1	
	comp=Z,8.6nm,0.7s						
WB2	**Warramunga Arr**	**43.94**	**273**	P	**P**	**03 12 57.2**	**-0.4**
WRA	**Warramunga Arr**	**43.95**	**273**	P	**P**	**03 12 58.8**	**+1.1**
	comp=Z,11nm,0.6s,baz=112,slow=7.8,SNR=92						
WRA				LR	LR	03 30 01.6	
	comp=Z,85nm,19.1s,baz=205,slow=34						
WRA	**Warramunga Arr**	**43.95**	**273**	P	**P**	**03 12 57.0**	**-0.8**
WB0	**Warramunga Arr**	**43.98**	**273**	P	**P**	**03 12 57.2**	**-0.7**
WB0				IAmb	IAmb	03 13 00.5	
	comp=Z,22nm,1.1s						
QSPA	**South Pole Qui**	**59.10**	**180**	P	**P**	**03 14 53.5**	**+3.1**
	comp=Z,7.6nm,0.8s,baz=333,slow=0.4,SNR=23						
QSPA	**South Pole Qui**	**59.10**	**180**	P	**P**	**03 14 49.0**	**-1.5**
QSPA				IAmb	IAmb	03 14 59.4	
	comp=Z,8.3nm,0.9s						
SYO	**Syowa Base**	**76.49**	**193**	⇑*e*P	**P**	**03 16 39.2**	**-0.3**
SNAA	**Sanae**	**77.56**	**178**	P	**P**	**03 16 47.0**	**+1.4**
SNAA	**Sanae**	**77.56**	**178**	P	**P**	**03 16 47.0**	**+1.4**
	comp=Z,1.7nm,0.7s,baz=187,slow=8.9,SNR=5.9						
SNAA	**Sanae**	**77.56**	**178**	P	**P**	**03 16 45.6**	**0.0**
VNA3	**Neumayer Olymp**	**77.71**	**176**	P	**P**	**03 16 47.8**	**+1.4**
VNA2	**Neumayer--Watz**	**78.14**	**177**	P	**P**	**03 16 50.5**	**+1.7**
	baz=180,slow=4.3						
PSI	**Prapat**	**85.33**	**276**	LR	LR	03 58 30.3	
	comp=Z,27nm,18.2s,baz=177,slow=38						
NVAR	**Mina Array Bea**	**88.80**	**43**	P	**P**	**03 17 46.3**	**+2.2**
	comp=Z,0.7nm,0.6s,baz=219,slow=8.5,SNR=5.4						
NVAR	**Mina Array Bea**	**88.80**	**43**	P	**P**	**03 17 43.8**	**-0.3**
RWWY	**Rawlins**	**97.48**	**46**	P	**P**	**03 18 23.8**	**-0.2**
ILAR	**Eielson Array**	**98.55**	**13**	P	Pdif	03 18 28.8	+0.9
	comp=Z,0.4nm,0.9s,baz=209,slow=6.9,SNR=2.1						
MKAR	**Makanchi Array**	**118.03**	**310**	PKP	**PKPdf**	**03 23 36.0**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=200,slow=1.8,SNR=5.4						
MKAR	**Makanchi Array**	**118.03**	**310**		**PKPdf**	**03 23 36.0**	**-0.4**
KKAR	**Karatay Array**	**125.27**	**303**		**PKPdf**	**03 23 50.3**	**-0.1**
ARCES	**ARCESS Array B**	**139.14**	**348**	PKhKP	PKPpre	03 24 08.2	
	comp=Z,3.0nm,0.9s,baz=347,slow=10.0,SNR=4.0						
ARCES				PKP	**PKiKP**	**03 24 16.9**	**-1.0**
	comp=Z,3.8nm,1.0s,baz=326,slow=7.8,SNR=4.2						
FINES	**FINESS Array B**	**145.65**	**340**	PKPbc	**PKPbc**	**03 24 27.7**	**-0.1**
	comp=Z,10nm,0.6s,baz=53,slow=4.4,SNR=59						
NB2	**NORSAR Subarra**	**149.32**	**351**	PKP	**PKPbc**	**03 24 38.4**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**149.32**	**351**	PKPbc	**PKPbc**	**03 24 38.2**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=14,slow=4.1,SNR=9.1						
AKASG	**Malin Array Be**	**151.68**	**322**	PKPbc	**PKPbc**	**03 24 43.8**	**-0.1**
	comp=Z,2.3nm,0.5s,baz=47,slow=2.9,SNR=10						
AKASG				PKPab	**pPKPdf**	**03 24 51.6**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=42,slow=4.5,SNR=4.2						
AKASG	**Malin Array Be**	**151.68**	**322**		**PKPbc**	**03 24 44.0**	**+0.2**
BRTR	**Keskin Array B**	**152.73**	**297**	PKPbc	**PKiKP**	**03 24 47.3**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=132,slow=3.6,SNR=12						
BRTR				PKPab	**PKPab**	**03 24 57.8**	**0.0**
	comp=Z,0.4nm,0.5s,baz=200,slow=36,SNR=3.0						
BRTR	**Keskin Array B**	**152.73**	**297**		**PKPbc**	**03 24 46.2**	**-0.6**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
TORD	Torodi Ar. Bea	162.23	180	PKPab	PKPab	03 25 40.0	+1.2
	comp=Z,1.0nm,0.5s,baz=177,slow=3.8,SNR=8.7						

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*SJA **18** 03:11:39.9±1.1, 20°00S×71°05W, h15km±4km, ML3.8, MW3.8*

*IDC **18** 03:11:42.5±1.2, 19°90S×70°83W, h0km, mb3.7/4, mb1 4.0/6, mb1mx3.8/29, mbtmp3.9/6, ML3.8/2, MS2.7/1, Ms1 2.7/1, ms1mx2.3/25, Error ellipse: s-maj=38.2km s-min=24.0km az=52.0*

*GUC **18** 03:11:44.1±0.6, 20°00S×70°89W, h25km±2km, ML3.7*

ISC 18 03:11:42.0±1.6**, 20°01S**±0°03×**70°92W**±0°06**, h3**km±10km**, n38,** $\sigma 1^{s}01$/60**, mb3.8**/4**, 7C-6D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.85	61	⇑iP	Pg	03 11 59.1	+0.6
PSGC				i S	Sg	03 12 09.7	+0.2
PSGCX	Pisagua	0.85	61	eP	Pg	03 11 59.1	+0.7
PSGCX				eS	Sb	03 12 12.3	+0.9
PSGCX				IAML		03 12 15.4	
	comp=Z,2µm,0.8s						
TA01	Diego Aracena	0.89	129	⇑iP	Pg	03 11 59.6	+0.6
TA01				i S	Sg	03 12 10.8	+0.2
TA01				IAML		03 12 14.8	
	comp=E,6µm,0.5s						
PATCX	Punta Patache	1.08	138	⇑iP	Pg	03 12 02.8	+0.1
PATCX				i S	Sg	03 12 16.9	+0.2
PATCX				IAML		03 12 25.9	
	comp=E,3µm,0.6s						
PATCX	Punta Patache	1.08	138	eP	Pg	03 12 02.9	+0.1
PATCX				eS	Sb	03 12 18.4	+0.5
PATCX				IAML		03 12 19.5	
	comp=Z,2µm,0.7s						
PB11	IPOC Station P	1.21	78	⇑iP	Pn	03 12 04.9	-1.1
PB11				eS	Sb	03 12 20.8	-1.1
PB11				IAML		03 12 25.3	
	comp=E,5µm,0.7s						
PB11	IPOC Station P	1.21	78	eP	Pn	03 12 04.6	-1.4
PB11				eS	Sn	03 12 23.5	+0.5
PB11				IAML		03 12 28.3	
	comp=Z,3µm,0.6s						
PB12	IPOC Station P	1.50	22	⇑iP	Pn	03 12 10.2	+0.3
PB12				eS	Sn	03 12 28.7	-1.2
PB12				IAML		03 12 38.8	
	comp=E,2µm,0.6s						
PB02	IPOC Station P	1.62	144	eP	Pn	03 12 11.5	0.0
PB02				i S	Sn	03 12 32.9	0.0
GO01	Chusmiza	1.66	78	eP	Pn	03 12 12.5	+0.1
GO01				i S	Sn	03 12 34.5	+0.1
PB08	IPOC Station P	1.66	95	⇑iP	Pn	03 12 12.3	-0.1
PB08				i S	Sn	03 12 34.3	-0.1
PB08				IAML		03 12 40.5	
	comp=N,1µm,0.6s						
PB08	IPOC Station P	1.66	95	eP	Pn	03 12 12.3	-0.1
PB08				eS	Sg	03 12 37.1	+1.5
PB08				IAML		03 12 39.7	
	comp=Z,884nm,0.5s						
PB01	IPOC Station P	1.69	128	eP	Pn	03 12 12.2	-0.2
PB01				i S	Sn	03 12 34.5	-0.2
PB01				IAML		03 12 38.5	
	comp=E,2µm,0.6s						
AP01	Chacalluta	1.72	19	eP	Pb	03 12 14.3	+0.1
AP01				eS	Sn	03 12 35.5	+0.2
PB07	IPOC Station P	1.96	151	⇓iP	Pn	03 12 16.3	0.0
PB07				i S	Sb	03 12 43.1	-0.3
PB07	IPOC Station P	1.96	151	eP	Pn	03 12 16.2	0.0
PB07				eS	Sb	03 12 42.8	-0.6
PB07				IAML		03 12 51.0	
	comp=Z,768nm,0.4s						
PB16	IPOC Station P	2.13	39	⇑iP	Pn	03 12 20.6	+1.6
PB16				i S	Sb	03 12 48.9	+0.2
PB03	IPOC Station P	2.30	152	⇓iP	Pn	03 12 21.0	0.0
PB03				i S	Sb	03 12 51.9	-1.2
PB03	IPOC Station P	2.30	152	eP	Pn	03 12 20.9	0.0
PB03				eS	Sn	03 12 51.4	+1.5
PB03				IAML		03 13 08.3	
	comp=Z,244nm,0.3s						
PB09	IPOC Station P	2.37	139	⇓iP	Pn	03 12 23.4	+1.5
PB09				i S	Sb	03 12 53.5	-1.7
PB09	IPOC Station P	2.37	139	eP	Pn	03 12 22.6	+0.7
PB09				IAML		03 13 05.0	
	comp=Z,797nm,0.6s						
PB04	IPOC Station P	2.42	163	⇓iP	Pn	03 12 22.1	-0.5
PB04				i S	Sb	03 12 57.7	+1.0
PB04				IAML		03 13 07.4	
	comp=E,461nm,0.5s						
PB04	IPOC Station P	2.42	163	i P	Pn	03 12 22.1	-0.5
PB04				IAML		03 13 07.7	
	comp=Z,350nm,0.6s						
PB05	IPOC Station P	2.91	167	⇓iP	Pn	03 12 28.3	-0.9
PB05	IPOC Station P	2.91	167	i P	Pn	03 12 28.4	-0.9
PB05				IAML		03 13 19.2	
	comp=Z,115nm,0.7s						
PB06	IPOC Station P	2.96	155	⇓iP	Pn	03 12 29.7	-0.3
LVC	Limon Verde	3.19	144	Pn	Pn	03 12 35.0	+1.6
	comp=Z,7.5nm,0.3s,baz=316,slow=11,SNR=53						
LVC				Sn	Sn	03 13 14.5	+2.3
	comp=Z,20nm,0.3s,baz=125,slow=16,SNR=3.1						
LVC	Limon Verde	3.19	144	IAML		03 13 32.3	
	comp=Z,181nm,0.9s						
PB15	IPOC Station P	3.46	157	i P	Pn	03 12 36.7	-0.2
PB15				IAML		03 13 38.7	
	comp=Z,254nm,0.6s						
LPAZ	La Paz	4.55	36	Pn	Pb	03 12 59.5	-3.5
	comp=Z,3.0nm,0.3s,baz=203,slow=4.8,SNR=41						
SIV	San Ignacio	10.18	68	Pn	Pn	03 14 09.9	+0.7
	comp=Z,1.0nm,0.3s,baz=268,slow=10,SNR=18						
SIV				LR	LR	03 18 11.3	
	comp=Z,45nm,18.7s,baz=275,slow=39						
PTGA	Pitinga	21.96	31	P	P	03 16 36.8	-0.2
	comp=Z,1.4nm,0.3s,baz=241,slow=21,SNR=6.5						
TXAR	Lajitas Array	58.34	326	P	P	03 21 39.0	+0.3
	comp=Z,0.4nm,0.7s,baz=147,slow=7.4,SNR=4.4						
TORD	Torodi Ar. Bea	78.65	71	P	P	03 23 45.4	-0.5
	comp=Z,0.8nm,0.6s,baz=253,slow=5.7,SNR=12						
YKA	Yellowknife Ar	89.17	341	P	P	03 24 39.8	+1.2
	comp=Z,0.3nm,0.6s,baz=134,slow=5.3,SNR=9.4						
ZALV	Zalesovo Beam	141.36	23	PKP	PKiKP	03 31 15.8	-1.0
	comp=Z,0.8nm,0.4s,baz=325,slow=4.9,SNR=3.6						
MKAR	Makanchi Array	145.48	33	PKPbc	PKPab	03 31 22.6	+0.9
	comp=Z,2.0nm,0.7s,baz=343,slow=2.5,SNR=19						
SONM	Songino Array	152.16	4	PKPbc	PKiKP	03 31 40.9	+1.5
	comp=Z,0.8nm,0.7s,baz=349,slow=2.1,SNR=4.5						
SONM				PKPab	PKPab	03 31 46.6	-2.0
	comp=Z,0.7nm,0.5s,baz=294,slow=1.5,SNR=4.9						

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*IDC **18** 03:12:33.9±0.9, 45°61S×76°83W, h0km, mb4.3/12, mb1 4.3/14, mb1mx4.2/32, mbtmp4.2/14, ML3.5/2, MS3.8/12, Ms1 3.8/12, ms1mx3.6/21, Error ellipse: s-maj=31.9km s-min=18.1km az=100.0*

*NEIC **18** 03:12:34.2±1.2, 45°53S±0°08×77°0W±0°2, h10km±1km, mb4.7/21, ML4.8(GUC), Error ellipse: s-maj=29.5km s-min=12.8km az=272.0*

*GUC **18** 03:12:37.0, 45°13S×76°97W, h10km, ML4.8*

ISC 18 03:12:38.0±0.6**, 45°56S**±0°07×**76°8W**±0°1**, h35**km**, n57,** $\sigma 1^{s}12$/54**, mb4.4**/18**, MS3.8**/9**, 1C, Off coast of southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LL01	San Ignacio de	4.50	47	eP	Pn	03 13 41.8	-1.8
GO09	Cerro Castillo	6.45	154		Pn	03 14 09.7	-0.8
PLCA	Paso Flores	6.66	46	Pn	Pn	03 14 12.5	-0.8
	0.2nm,0.3s,baz=252,slow=13,SNR=12						
PLCA				LR	LR	03 16 47.2	
	comp=Z,888nm,19.6s,baz=244,slow=38						
PLCA	Paso Flores	6.66	46		Pn	03 14 13.0	-0.3
GO06	Curarrehue	7.16	35		Pn	03 14 19.3	-1.0
GO10	Punta Arenas	8.49	156	Pn	Pn	03 14 37.9	-0.5
USHA	Ushuaia	10.72	153	LR	LR	03 19 08.8	
	comp=Z,336nm,18.6s,baz=31,slow=37						
GO05	Huala	11.18	21		Pn	03 15 13.6	-1.7
PEL	Peldehue	13.27	23	Pn	Pn	03 15 42.1	-1.8
ROC1	El Roble	13.34	22	Pn	Pn	03 15 43.5	-1.5
CFA	Coronel Fontan	15.45	29	Pn	Pn	03 16 11.6	-1.7
	0.2nm,0.3s,baz=206,slow=11,SNR=2.2						
CFA				LR	LR	03 22 21.3	
	comp=Z,485nm,19.6s,baz=199,slow=38						
GO04	Tololo Observa	16.07	19	Pn	Pn	03 16 20.2	-1.3
PMSA	Palmer Station	20.52	164	LR	LR	03 23 24.4	
	comp=Z,167nm,19.6s,baz=312,slow=32						
LVC	Limon Verde	23.79	18	P	P	03 17 48.9	+1.1
	4.9nm,0.7s,baz=192,slow=10,SNR=4.3						
LVC	Limon Verde	23.79	18	P	P	03 17 46.6	-1.2
LVC				IAmb	IAmb	03 17 52.7	
	comp=Z,11nm,1.1s						
CPUP	Villa Florida	24.73	46	P	P	03 17 58.3	+2.2
	comp=Z,6.2nm,0.8s,baz=217,slow=10,SNR=14						
CPUP				LR	LR	03 28 18.1	
	comp=Z,275nm,18.0s,baz=216,slow=38						
CPUP	Villa Florida	24.73	46	P	P	03 17 56.5	+0.4
CPUP				IAmb	IAmb	03 18 06.9	
	comp=Z,13nm,1.1s						
LPAZ	La Paz	30.08	17	P	P	03 18 46.3	+1.6
	comp=Z,1.2nm,0.7s,baz=170,slow=6.1,SNR=3.0						
LPAZ	La Paz	30.08	17	P	P	03 18 44.5	-0.2
SIV	San Ignacio	32.31	29	P	P	03 19 04.2	+0.5
	comp=Z,2.7nm,1.1s,baz=242,slow=10,SNR=4.6						
SAML	Samuel	38.32	22	P	P	03 19 54.5	-0.8
SAML				IAmb	IAmb	03 19 57.4	
	comp=Z,10nm,1.1s						
BDFB	Brasilia	38.39	48	P	P	03 19 57.6	+1.4
	comp=Z,0.7nm,0.3s,baz=225,slow=11,SNR=4.1						
BDFB				LR	LR	03 37 09.9	
	comp=Z,272nm,19.3s,baz=273,slow=38						
VNA3	Neumayer Olymp	40.40	153	P	P	03 20 13.3	+1.1
VNA2	Neumayer--Watz	41.14	152	P	P	03 20 19.7	+1.5
	baz=277,slow=9.1						
SNAA	Sanae	42.58	153	P	P	03 20 31.3	+1.2
SNAA	Sanae	42.58	153	P	P	03 20 31.6	+1.5
	comp=Z,3.3nm,0.9s,baz=254,slow=7.9,SNR=4.9						
SNAA	Sanae	42.58	153	P	P	03 20 30.8	+0.7
QSPA	South Pole Qui	44.69	180	P	P	03 20 47.0	-0.2
QSPA				IAmb	IAmb	03 20 49.7	
	comp=Z,7.9nm,1.0s						
PTGA	Pitinga	47.05	23	P	P	03 21 06.8	+0.6
	comp=Z,6.0nm,0.7s,baz=194,slow=8.5,SNR=11						
PTGA	Pitinga	47.05	23	P	P	03 21 06.6	+0.4
PTGA				IAmb	IAmb	03 21 07.8	
	comp=Z,7.6nm,0.8s						
ROSC	El Rosal	50.22	3	P	P	03 21 33.5	+2.5
	comp=Z,3.3nm,0.3s,baz=98,slow=8.7,SNR=3.6						
ROSC				LR	LR	03 40 01.2	
	comp=Z,224nm,21.3s,baz=14,slow=33						
ROSC	El Rosal	50.22	3	P	P	03 21 30.5	-0.4
ROSC				IAmb	IAmb	03 21 37.5	
	comp=Z,9.2nm,1.1s						
VNDA	Vanda	52.04	194	P	P	03 21 43.6	+0.1
	comp=Z,1.3nm,1.0s,baz=132,slow=8.4,SNR=3.2						
VNDA				LR	LR	03 41 46.7	
	comp=Z,35nm,18.2s,baz=26,slow=34						
MDP	Montagnes des	54.86	30	LR	LR	03 46 45.8	
	comp=Z,50nm,18.9s,baz=182,slow=37						
SYO	Syowa Base	56.56	157	⇑eP	P	03 22 15.9	-0.5
MAW	Mawson	63.13	164	LR	LR	03 49 24.7	
	comp=Z,144nm,21.3s,baz=237,slow=35						
RPZ	Rata Peaks	72.65	225	LR	LR	03 47 47.8	
	comp=Z,128nm,19.9s,baz=217,slow=29						
BOSA	Boshof	77.90	118	P	P	03 24 32.0	-0.4
	comp=Z,2.4nm,0.9s,baz=176,slow=18,SNR=3.1						
TXAR	Lajitas Array	78.43	336	P	P	03 24 37.3	+2.3
	comp=Z,1.4nm,0.9s,baz=158,slow=7.2,SNR=10						
TXAR				LR	LR	03 53 25.1	
	comp=Z,23nm,19.2s,baz=0.0,slow=31						
TXAR	Lajitas Array	78.43	336	P	P	03 24 34.0	-1.0
JCT	Junction City	78.50	340	P	P	03 24 34.9	-0.4
JCT				IAmb	IAmb	03 24 37.6	
	comp=Z,6.8nm,0.9s						
143A	Socs Landing,	79.01	348	P	P	03 24 37.0	-0.9
143A				IAmb	IAmb	03 24 52.2	
	comp=Z,3.9nm,0.3s						
U40A	Yellville	82.81	347	P	P	03 24 58.0	-0.2
TUL1	Leonard	82.88	345	P	P	03 24 58.5	0.0
MGMO	Mountain Grove	83.50	348	P	P	03 25 01.0	-0.8
MGMO				IAmb	IAmb	03 25 11.9	
	comp=Z,5.0nm,1.1s						
S39A	Bolivar	84.19	347	P	P	03 25 05.3	0.0
CCM	Cathedral Cave	84.24	349	P	P	03 25 06.0	+0.6
ANMO	Albuquerque	84.49	336	P	P	03 25 06.1	-1.0
P38A	Dawn	86.11	347	P	P	03 25 15.5	+0.6
JFWS	Jewell Farm	88.89	350	P	P	03 25 28.2	+0.1
ECSD	EROS Data Cent	90.63	346	P	P	03 25 36.8	+0.6
ECSD				IAmb	IAmb	03 25 38.0	
	comp=Z,6.4nm,1.0s						
ULM	Lac du Bonnet	96.85	348	P	P	03 26 04.9	+0.3
	comp=Z,1.8nm,0.9s,baz=196,slow=6.2,SNR=3.0						
ULM	Lac du Bonnet	96.85	348	P	P	03 26 04.5	-0.1
ULM				IAmb	IAmb	03 26 05.4	
	comp=Z,3.3nm,1.1s						
ILAR	Eielson Array	122.70	331	PKP	PKiKP	03 31 28.9	0.0
	comp=Z,0.2nm,0.7s,baz=199,slow=3.2,SNR=4.3						
GEYT	Alibeck	145.90	87	PKPbc	PKiKP	03 32 15.7	-1.1
	comp=Z,2.6nm,0.6s,baz=183,slow=5.3,SNR=4.4						
ABKAR	Akbulak array	150.81	67		PKiKP	03 32 26.6	+0.1
KSH	Kashi	159.13	97	PKP	PKPdf	03 32 32.1	0.0
KSH				pPKP	pPKPdf	03 32 43.3	+0.8
KSH				PKS	PKSdf	03 36 03.3	-2.4
KSH				PP	PP	03 36 51.1	+0.3

IDC 18 03:44:49.3±42.0**, 3°12N**×**124°57E, h0**km**, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.5**/37**, mbtmp4.1**/3**, Error ellipse: s-maj=699.5km s-min=271.5km az=152.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.85	158	P	P	03 50 14.0	+0.3
	0.8nm,0.4s,baz=337,slow=9.6,SNR=16						
ASAR	Alice Springs	28.14	162	P	P	03 50 42.9	-0.5
	0.6nm,0.4s,baz=343,slow=7.0,SNR=11						
STKA	Stephens Creek	38.38	156	P	P	03 52 12.5	0.0
	3.4nm,0.4s,baz=333,slow=8.2,SNR=12						

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*IDC **18** 03:54:33.0±1.0, 16°98S×74°31W, h0km, mb4.0/7, mb1 4.2/11, mb1mx4.0/31, mbtmp4.1/11, ML4.1/3, MS3.0/6, Ms1 3.1/6, ms1mx2.8/24, Error ellipse: s-maj=29.0km s-min=19.6km az=58.0*

*NEIC **18** 03:54:35.5±1.1, 17°15S±0°07×74°36W±0°09, h32km±6km, mb4.5/3, Error ellipse: s-maj=14.7km s-min=5.1km az=51.0*

ISC 18 03:54:36.3±0.7**, 17°22S**±0°06×**74°43W**±0°07**, h35**km**, n33,** $\sigma 1^{s}83$/43**, mb4.3**/10**, Off coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	IPOC Station P	5.19	120		Pn	03 55 51.3	-0.3
PB11				Sn	Sn	03 56 50.8	+0.5
GO01	Chusmiza	5.53	117		Pn	03 55 56.9	+0.2
GO01				Sn	Sn	03 56 57.8	-1.5
NNA	Nana	5.70	336	Pn	Pn	03 55 58.1	-0.6
	2.0nm,0.3s,baz=158,slow=11,SNR=2.9						
NNA				Sn	Sn	03 56 59.4	-3.6
	7.4nm,0.3s,baz=196,slow=16,SNR=6.6						
NNA				LR	LR	03 58 16.7	
	comp=Z,75nm,20.5s,baz=150,slow=40						
NNA	Nana	5.70	336		Pn	03 55 57.3	-1.4
NNA					Sn	03 57 01.0	-2.0
PB01	IPOC Station P	6.02	130		Pn	03 56 02.4	-0.6
LPAZ	La Paz	6.11	82	Pn	Pn	03 56 06.8	+2.1
	1.7nm,0.3s,baz=297,slow=8.1,SNR=37						
LPAZ				Sn	Sn	03 57 13.2	-0.4
	0.3nm,0.3s,baz=288,slow=9.7,SNR=1.5						
LPAZ				LR	LR	03 58 41.1	
	comp=Z,152nm,21.0s,baz=250,slow=42						
LPAZ	La Paz	6.11	82		Pn	03 56 03.1	-1.5
LPAZ				Sn	Sn	03 57 11.0	-2.6
PB04	IPOC Station P	6.49	142		Pn	03 56 09.2	-0.3
PB04				Sn	Sn	03 57 17.9	-4.5
PB10	IPOC Station P	7.24	150		Pn	03 56 19.4	-0.3
LVC	Limon Verde	7.46	137	Pn	Pn	03 56 24.5	+1.4
	7.0nm,0.3s,baz=319,slow=9.5,SNR=38						
LVC				Sn	Sn	03 57 43.7	-3.0
	2.1nm,0.3s,baz=77,slow=21,SNR=6.3						
LVC	Limon Verde	7.46	137		Pn	03 56 22.8	-0.3
LVC					Sn	03 57 44.0	-2.7
GO02	Mina Guanaco	9.10	151		Pn	03 56 45.0	-0.5
GO02				Sn	Sn	03 58 23.1	-3.8
SIV	San Ignacio	12.86	86	Pn	Pn	03 57 34.6	-2.2
	1.5nm,0.3s,baz=288,slow=9.3,SNR=32						
SIV				LR	LR	04 01 57.9	
	comp=Z,18nm,19.0s,baz=332,slow=35						
CFA	Coronel Fontan	15.38	160	Pn	P	03 58 15.4	+0.3
	baz=331,slow=10						
PTGA	Pitinga	21.71	42	P	P	03 59 23.4	-1.1
	3.7nm,0.5s,baz=207,slow=9.8,SNR=13						
PTGA	Pitinga	21.71	42	P	P	03 59 23.1	-1.4
PTGA				IAmb	IAmb	03 59 26.6	
	comp=Z,4.1nm,0.6s						
PLCA	Paso Flores	23.67	173	P	P	03 59 48.5	+3.8
	comp=Z,2.6nm,0.8s,baz=354,slow=11,SNR=8.3						
PLCA	Paso Flores	23.67	173	P	P	03 59 45.1	+0.4
BDFB	Brasilia	25.38	90	P	P	04 00 01.9	+1.3
	comp=Z,1.7nm,0.5s,baz=268,slow=12,SNR=3.9						
BDFB				LR	LR	04 10 40.2	
	comp=Z,44nm,18.9s,baz=215,slow=38						
TXAR	Lajitas Array	54.21	328	P	P	04 03 59.5	+0.7
	comp=Z,0.2nm,0.5s,baz=153,slow=9.8,SNR=3.5						
TXAR	Lajitas Array	54.21	328	P	P	04 03 58.1	-0.6
LIC	Lamto	72.39	78	ePKP2	P	04 06 00.4	+1.0
	comp=Z,27nm,1.3s						
TIC	Toumodi	72.54	77	ePKP2	P	04 06 00.7	+0.3
DBIC	Dimbokro	72.70	77	P	P	04 06 02.6	+1.3
	comp=Z,3.6nm,0.8s,baz=214,slow=6.1,SNR=5.0						
DBIC	Dimbokro	72.70	77	P	P	04 06 00.4	-0.9
DBIC				IAmb	IAmb	04 06 02.4	
	comp=Z,8.1nm,1.1s						
KIC	Kosan Boka	72.70	77	ePKP2	P	04 06 01.7	+0.4
	comp=Z,16nm,1.0s						
VNDA	Vanda	80.11	191	LR	LR	04 36 02.8	
	comp=Z,37nm,18.4s,baz=285,slow=31						
TOA0	Torodi Ar. Sit	80.98	73	P	P	04 06 47.5	-0.5
TOA0				IAmb	IAmb	04 06 49.7	
	comp=Z,4.9nm,0.7s						
TORD	Torodi Ar. Bea	80.98	73	P	P	04 06 48.8	+0.8
	comp=Z,4.8nm,0.7s,baz=258,slow=4.9,SNR=26						
MDT	Midelt	83.17	53	LR	LR	04 41 01.7	
	comp=Z,15nm,19.6s,baz=225,slow=34						
YKA	Yellowknife Ar	85.50	343	P	P	04 07 10.8	+0.6
	comp=Z,0.7nm,0.8s,baz=139,slow=5.6,SNR=14						
KSH	Kashi	146.03	43	PKPbc	PKPab	04 14 14.5	+1.0
KSH				PP	PP	04 17 38.1	+3.6
KSH				PKS	PKSdf	04 17 48.5	+0.9
SONM	Songino Array	149.46	359	PKPbc	PKiKP	04 14 23.6	+0.5
	comp=Z,0.5nm,0.6s,baz=0.6,slow=1.4,SNR=4.6						

IDC 18 04:28:00.6±4.0**, 4°09S**×**152°52E, h0**km**, mb3.4**/2**, mb1 3.7**/2**, mb1mx3.4**/20**, mbtmp3.4**/2**, Error ellipse: s-maj=184.4km s-min=49.7km az=119.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.71	227	P	P	04 33 15.0	+0.5
	0.7nm,0.4s,baz=52,slow=9.4,SNR=1.7						
ASAR	Alice Springs	26.49	221	P	P	04 33 39.5	-0.3
	0.1nm,0.3s,baz=55,slow=8.7,SNR=4.1						
TORD	Torodi Ar. Bea	149.82	289	PKPbc	PKPbc	04 47 53.2	-0.6
	0.5nm,0.6s,baz=64,slow=2.7,SNR=5.2						

IDC 18 04:37:50.4±1.9**, 3°65S**×**145°58E, h0**km**, mb3.5**/4**, mb1 3.8**/5**, mb1mx3.6**/26**, mbtmp3.5**/5**, ML3.8**/1**, Error ellipse: s-maj=73.5km s-min=26.5km az=112.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.56	213	P	P	04 42 20.4	+0.4
	0.3nm,0.3s,baz=35,slow=10,SNR=22						
ASAR	Alice Springs	22.88	209	P	P	04 42 56.4	+0.6
	0.6nm,0.5s,baz=33,slow=11,SNR=9.9						
FITZ	Fitzroy Crossi	24.24	232	P	P	04 43 07.7	-1.6
	3.2nm,0.9s,baz=349,slow=0.0,SNR=3.4						
MKAR	Makanchi Array	74.80	321	P	P	04 49 33.8	+1.2
	0.1nm,0.7s,baz=104,slow=4.6,SNR=1.5						
ILAR	Eielson Array	83.89	23	P	P	04 50 21.0	-0.8
	0.3nm,0.8s,baz=257,slow=4.5,SNR=3.0						

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*IDC **18** 04:55:46.0±1.5, 17°73S×178°84W, h524km±17km, mb3.8/17, mb1 4.0/19, mb1mx3.9/27, mbtmp4.7/19, Error ellipse: s-maj=14.3km s-min=10.4km az=124.0*

*NEIC **18** 04:55:46.4±1.5, 17°69S±0°09×178°8W±0°1, h539km±5km, mb4.6/46, Error ellipse: s-maj=19.1km s-min=9.3km az=120.0*

ISC 18 04:55:46.8±0.4**, 17°74S**±0°08×**178°85W**±0°08**, h539**km**, n171,** $\sigma 1^{s}22$/174**, mb4.5**/37**, 15C-4D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.95	270	P	P	04 57 03.1	+2.3
AFI	Afiamalu	7.80	62	P	P	04 57 40.5	-2.0
	14nm,0.3s,baz=16,slow=2.4,SNR=14						
AFI				S	S	04 59 06.7	-10
	baz=130,slow=23,SNR=1.2						
AFI	Afiamalu	7.80	62	P	P	04 57 39.9	-2.6
DZM	Mont Dzumac	14.48	250	P	P	04 58 51.3	0.0
	2.5nm,0.3s,baz=69,slow=18,SNR=17						
DZM	Mont Dzumac	14.48	250	P	P	04 58 50.8	-0.5
OUZ	Omahuta	18.66	200	P	P	04 59 34.1	+3.0
URZ	Urewera	20.75	189	P	P	04 59 48.5	-1.5
	7.9nm,0.3s,baz=336,slow=20,SNR=33						
URZ				S	S	05 03 01.6	-5.3
	5.0nm,0.8s,baz=53,slow=20,SNR=3.5						
URZ	Urewera	20.75	189	P	P	04 59 49.2	-0.9
URZ				IAmb	IAmb	05 00 00.7	
	comp=Z,14nm,1.1s						
URZ					S	05 03 06.7	-0.3
BKZ	Black Stump Fm	21.73	190	P	P	04 59 56.5	-2.5
BKZ				IAmb	IAmb	05 00 15.2	
	comp=Z,12nm,1.2s						
BFZ	Birch Farm	23.25	189	P	P	05 00 12.4	-0.1
BFZ				IAmb	IAmb	05 00 19.2	
	comp=Z,11nm,1.0s						
QRZ	Quartz Range	24.18	196	P	P	05 00 21.9	+1.2
QRZ				IAmb	IAmb	05 00 33.5	
	comp=Z,34nm,1.1s						
PLWZ	Palliser	24.28	191	P	P	05 00 20.5	-1.2
KHZ	Kahutara	25.44	193	P	P	05 00 30.6	-1.2
KHZ				IAmb	IAmb	05 00 37.3	
	comp=Z,15nm,1.0s						
LTZ	Lake Taylor	26.08	195	P	P	05 00 36.6	-1.0
LTZ				IAmb	IAmb	05 00 41.4	
	comp=Z,15nm,0.7s						
OXZ	Oxford	26.65	195	P	P	05 00 42.2	-0.4
RPZ	Rata Peaks	27.27	196	P	P	05 00 47.4	-0.5
	comp=Z,9.3nm,0.4s,baz=302,slow=1.2,SNR=7.6						
RPZ	Rata Peaks	27.27	196	P	P	05 00 46.9	-1.1
RPZ				IAmb	IAmb	05 00 48.6	
	comp=Z,12nm,0.5s						
WKZ	Wanaka	28.86	198	P	P	05 01 01.6	-0.3
WKZ				IAmb	IAmb	05 01 14.4	
	comp=Z,28nm,0.9s						
EIDS	Eidsvold	28.93	250	P	P	05 01 03.1	+0.4
	baz=29,SNR=19						
EIDS	Eidsvold	28.93	250	P	P	05 01 03.1	+0.4
MLZ	Mavora Lakes	29.62	199	P	P	05 01 09.1	+0.6
ARMA	Armidale	29.66	239	P	P	05 01 10.8	+1.6
	baz=30,SNR=58						
ARMA	Armidale	29.66	239	P	P	05 01 10.1	+0.9
WHZ	Wether Hill Ro	30.14	199	P	P	05 01 13.6	+0.6
MGCD	Mangrove Creek	31.05	234	P	P	05 01 22.2	+1.3
	baz=31,SNR=60						
RMQ	Roma	31.17	248	P	P	05 01 23.5	+1.4
	baz=31,SNR=24						
CTA	Charters Tower	33.06	260	P	P	05 01 38.6	+0.4
	comp=Z,19nm,0.7s,baz=90,slow=12,SNR=9.4						
CNB	Canberra Magne	33.20	232	P	P	05 01 40.8	+1.5
	baz=33,SNR=62						
CAN	Canberra	33.47	232	P	P	05 01 41.8	+0.3
CAN				IAmb	IAmb	05 01 43.7	
	comp=Z,22nm,0.7s						
YNG	Young	33.55	234	P	P	05 01 43.4	+1.2
	baz=34,SNR=8.5						
CMSA	Cobar Meteorol	34.87	240	P	P	05 01 54.3	+1.0
	baz=35,SNR=44						
MTSU	Mount Surprise	35.01	264	P	P	05 01 54.9	+0.3
	baz=35,SNR=11						
QLP	Quilpie	35.20	249	P	P	05 01 56.7	+0.6
	baz=35,SNR=26						
COEN	Coen	36.68	270	P	P	05 02 09.1	+0.6
	baz=37,SNR=13						
COEN	Coen	36.68	270	P	P	05 02 08.2	-0.3
COEN				IAmb	IAmb	05 02 10.1	
	comp=Z,14nm,0.9s						
TOO	Toolangi	36.95	230	P	P	05 02 11.8	+1.3
	baz=37,SNR=24						

TOO	Toolangi	36.95	230	P	P	05 02 10.7	+0.3
MOO	Moorlands	37.93	222	P	P	05 02 19.8	+1.5
	baz=38,SNR=3.7						
TAU	Tasmania Unive	38.09	222	P	P	05 02 20.2	+0.7
TAU				IAmb	IAmb	05 02 30.1	
	comp=Z,33nm,1.1s						
STKA	Stephens Creek	38.34	241	P	P	05 02 23.2	+1.4
	baz=38,SNR=39						
STKA	Stephens Creek	38.34	241	P	P	05 02 23.2	+1.4
	comp=Z,30nm,0.5s,baz=92,slow=10,SNR=82						
STKA	Stephens Creek	38.34	241	P	P	05 02 22.7	+0.9
STKA				IAmb	IAmb	05 02 24.1	
	comp=Z,13nm,1.1s						
QIS	Mount Isa	39.27	259	P	P	05 02 29.1	-0.4
	baz=39,SNR=3.6						
ARPS	Mount Arapiles	39.41	233	P	P	05 02 31.4	+1.0
	baz=39,SNR=8.4						
HTT	Hallett	40.87	239	P	P	05 02 43.3	+1.1
	baz=41,SNR=27						
BBOO	Buckleboo	43.12	241	P	P	05 03 00.7	+0.8
	baz=43,SNR=68						
BBOO	Buckleboo	43.12	241	P	P	05 02 59.7	-0.1
WR0	Warramunga Arr	44.06	259	P	P	05 03 06.8	-0.5
WR0				IAmb	IAmb	05 03 08.3	
	comp=Z,8.3nm,0.9s						
WB0	Warramunga Arr	44.21	260	P	P	05 03 08.1	-0.4
WB0				IAmb	IAmb	05 03 09.0	
	comp=Z,20nm,1.1s						
WB2	Warramunga Arr	44.24	259	P	P	05 03 08.4	-0.3
WB2				IAmb	IAmb	05 03 09.2	
	comp=Z,16nm,0.8s						
WRA	Warramunga Arr	44.25	259	P	P	05 03 08.3	-0.5
	comp=Z,11nm,0.7s,baz=94,slow=7.1,SNR=18						
WRA				S	S	05 08 58.1	-5.5
	comp=Z,0.5nm,0.6s,baz=93,slow=14,SNR=1.2						
WRA	Warramunga Arr	44.25	259	P	P	05 03 07.6	-1.2
AS31	Alice Springs	44.43	254	P	P	05 03 10.0	-0.2
ASAR	Alice Springs	44.43	254	P	P	05 03 10.6	+0.3
	comp=Z,88nm,0.4s,baz=89,slow=8.2,SNR=1529						
ASAR				PcP	PcP	05 04 42.5	+0.3
	comp=Z,2.2nm,0.4s,baz=96,slow=4.6,SNR=3.1						
ASAR				ScP	ScP	05 07 42.7	-0.4
	comp=Z,0.9nm,0.5s,baz=106,slow=4.7,SNR=7.3						
ASAR				S	S	05 09 00.9	-5.2
	comp=Z,4.1nm,1.0s,baz=85,slow=17,SNR=18						
ASAR	Alice Springs	44.43	254	P	P	05 03 09.8	-0.4
ASAR					PcP	05 04 41.9	-0.3
ASAR					ScP	05 07 43.2	+0.1
ASAR					S	05 09 00.6	-5.5
ASPA	Alice Springs	44.43	254	P	P	05 03 10.5	+0.2
	baz=44						
KDU	Kakadu	47.14	269	P	P	05 03 30.9	+0.1
	baz=47,SNR=30						
MTN	Manton Dam	48.38	268	P	P	05 03 40.1	-0.1
	baz=48,SNR=12						
WRKA	Warakurna	49.49	252	P	P	05 03 48.9	+0.5
	baz=49,SNR=510						
FORT	Forrest	49.70	244	P	P	05 03 49.8	+0.1
	baz=50,SNR=95						
FORT	Forrest	49.70	244	P	P	05 03 49.5	-0.3
KNRA	Kununurra	50.09	264	P	P	05 03 52.8	0.0
	baz=50,SNR=11						
KNRA	Kununurra	50.09	264	P	P	05 03 52.3	-0.4
SWI	Sorong	51.79	283	P	P	05 04 06.4	+1.2
	comp=Z,37nm,0.8s						
FITZ	Fitzroy Crossi	52.64	261	P	P	05 04 11.8	+0.6
	baz=52,SNR=12						
FITZ	Fitzroy Crossi	52.64	261	P	P	05 04 11.2	0.0
KMBL	Kambalda	55.01	244	P	P	05 04 27.6	-0.2
	baz=55,SNR=8.2						
SOEI	Soe	55.65	270	P	P	05 04 33.2	+0.6
SOEI	Soe	55.65	270	P	P	05 04 32.7	+0.1
SOEI				IAmb	IAmb	05 04 35.3	
	comp=Z,38nm,0.7s						
MEEK	Meekatharra	58.10	249	P	P	05 04 49.0	-0.2
	baz=58,SNR=9.9						
KLBR	Kellerberrin	58.53	243	P	P	05 04 51.9	0.0
	baz=58,SNR=12						
NWAO	Narrogin (SRO)	58.92	242	P	P	05 04 55.2	+0.7
	baz=59,SNR=4.2						
BLDU	Ballidu	59.47	245	P	P	05 04 58.2	0.0
	baz=59,SNR=12						
MORW	Morawa	60.16	246	P	P	05 05 02.8	-0.1
	baz=60,SNR=5.7						
VNDA	Vanda	60.58	185	P	P	05 05 06.1	+1.3
	comp=Z,1.9nm,0.6s,baz=1.4,slow=6.8,SNR=7.8						
GIRL	Giralia	62.54	253	P	P	05 05 19.9	+1.4
	baz=62,SNR=8.3						
JAGI	Jajag, Banyuwa	65.62	269	P	P	05 05 37.3	-0.9
JAGI				IAmb	IAmb	05 05 38.9	
	comp=Z,16nm,0.8s						
MJAR	Matsushiro Arr	67.52	324	P	P	05 05 49.4	-0.2
	comp=Z,12nm,0.7s,baz=143,slow=6.4,SNR=14						
MJAR	Matsushiro Arr	67.52	324	P	P	05 05 49.3	-0.2
MAT	Matsushiro	67.52	324	P	P	05 05 49.4	-0.1
QSPA	South Pole Qui	72.31	180	P	P	05 06 18.4	+0.6
QSPA				IAmb	IAmb	05 06 19.7	
	comp=Z,9.1nm,0.7s						
PETK	Petropavlovsk-	73.41	346	P	P	05 06 24.0	+0.1
	comp=Z,9.7nm,0.7s,baz=133,slow=8.5,SNR=17						
PETK	Petropavlovsk-	73.41	346	P	P	05 06 23.9	-0.1
KSRS	Korea Array	74.29	319	P	P	05 06 29.2	-0.1
	comp=Z,0.8nm,0.6s,baz=112,slow=6.9,SNR=3.1						
USRK	Ussuriysk Ar.	76.24	326	P	P	05 06 40.7	+0.7
	comp=Z,2.6nm,0.6s,baz=119,slow=5.0,SNR=5.1						
YERR	Yerington	79.28	43	P	P	05 06 56.6	-0.2
NVAR	Mina Array Bea	79.59	44	P	P	05 06 59.4	+0.8
	comp=Z,2.4nm,0.8s,baz=224,slow=9.2,SNR=14						
NVAR	Mina Array Bea	79.59	44	P	P	05 06 57.2	-1.3
MOD	Modoc Plateau	80.23	40	P	P	05 07 00.9	-0.8
U15A	North Rim	82.72	48	P	P	05 07 13.4	-1.3
BMO	Blue Mountains	83.68	39	P	P	05 07 17.8	-1.3
MAW	Mawson	83.88	200	P	P	05 07 20.8	+1.3
	baz=84						
MAW	Mawson	83.88	200	P	P	05 07 19.9	+0.3
	comp=Z,3.6nm,0.6s,baz=148,slow=5.9,SNR=8.0						
MAW	Mawson	83.88	200	P	P	05 07 20.8	+1.3
TRF	Thorofare Moun	83.94	12	IAmb	IAmb	05 07 20.7	
	comp=Z,14nm,0.8s						
RND	Reindeer	84.20	13	IAmb	IAmb	05 07 21.8	
	comp=Z,11nm,0.7s						
MCK	McKinley	84.47	13	P	P	05 07 22.1	-0.3
MCK				IAmb	IAmb	05 07 22.7	
	comp=Z,14nm,1.1s						
HDA	Harding Lake	85.49	13	P	P	05 07 27.0	-0.4
CCB	Clear Creek Bu	85.51	13	P	P	05 07 26.7	-0.7
SCRK	Sand Creek	85.80	15	P	P	05 07 28.5	-0.5
IL31		85.82	13	P	P	05 07 28.3	-0.5
IL31				IAmb	IAmb	05 07 28.6	
	comp=Z,7.2nm,1.1s						
ILAR	Eielson Array	85.82	13	P	P	05 07 28.1	-0.7
	comp=Z,2.0nm,0.4s,baz=224,slow=5.2,SNR=56						
ILAR	Eielson Array	85.82	13	P	P	05 07 28.3	-0.6
TXAR	Lajitas Array	86.26	58	P	P	05 07 34.0	+2.0
	comp=Z,1.2nm,0.7s,baz=221,slow=6.3,SNR=19						
TXAR	Lajitas Array	86.26	58	P	P	05 07 33.0	+1.0
PD31	Pinedale Array	87.52	44	P	P	05 07 37.0	-0.8
PDAR	Pinedale Array	87.52	44	P	P	05 07 38.5	+0.7
	comp=Z,1.1nm,0.5s,baz=221,slow=3.8,SNR=16						
PDAR	Pinedale Array	87.52	44	P	P	05 07 36.6	-1.2
BMAR	Burnt Mountain	88.58	13	P	P	05 07 42.2	+0.3
SNAA	Sanae	90.78	179	P	P	05 07 52.5	+0.2
SNAA	Sanae	90.78	179	P	P	05 07 52.2	0.0
	comp=Z,1.2nm,0.5s,baz=211,slow=7.3,SNR=22						
SNAA	Sanae	90.78	179	P	P	05 07 52.4	+0.2
VNA3	Neumayer Olymp	90.94	177	P	P	05 07 53.5	+0.7
VNA2	Neumayer--Watz	91.37	177	P	P	05 07 54.5	-0.4
	baz=180,slow=2.8						
YKA	Yellowknife Ar	94.36	25	P	P	05 08 08.4	-0.1
	comp=Z,0.8nm,0.8s,baz=238,slow=4.3,SNR=17						
ARCES	ARCESS Array B	126.07	350	PKP	PKPdf	05 13 47.1	-0.2
	comp=Z,3.6nm,1.0s,baz=11,slow=2.6,SNR=5.3						
FINES	FINESS Array B	132.91	344	SKPbc	SKPbc	05 16 38.9	+1.1
	comp=Z,3.6nm,0.8s,baz=8.5,slow=3.9,SNR=6.8						
KWP	Kalwaria Pacla	143.75	336		PKPab	05 14 19.1	-0.5
BIR	Birlad	144.09	328	⇑P	PKPdf	05 14 22.8	+1.6
BUR08	Bucovina Ar. S	144.25	332	PKPbc	PKPbc	05 14 21.1	-0.2
BURAR	Bucovina Array	144.26	332	⇑P	PKPab	05 14 22.9	+1.2
BURAR	Bucovina Array	144.26	332		PKPbc	05 14 19.4	-2.0
BIZ	Bicaz	144.35	330	⇑P	PKPab	05 14 22.3	+0.4
BR131	Keskin Array S	144.36	315		PKPbc	05 14 21.3	-0.7
BRTR	Keskin Array B	144.36	315	PKP	PKPdf	05 14 22.2	+0.1
	comp=Z,1.5nm,0.5s,baz=115,slow=3.5,SNR=10.0						
BRTR	Keskin Array B	144.36	315		PKPbc	05 14 20.9	-1.1
TESR	Tescani	144.40	329	⇓P	PKPab	05 14 22.0	-0.1
CFR	Carcaliu	144.56	326	⇑P	PKPab	05 14 24.1	+1.4
TOPG	Topolog	144.63	326	⇑P	PKPab	05 14 23.4	+0.4
PLOR	Plostina	144.86	328	⇑P	PKPab	05 14 24.9	+0.9
HARR	Harsova	144.99	326	⇑P	PKPab	05 14 24.0	-0.4
TRPA	Tarpa	145.01	335	⇑P	PKPab	05 14 24.0	-0.4
OSTC	Ostas	145.11	343	*e*PKP	PKPab	05 14 25.0	+0.3
OSTC				*e*x	x	05 14 28.2	
OZUR		145.11	330	⇓P	PKPab	05 14 25.7	+0.8
CHVC	Chvalec	145.12	343	*e*PKP	PKPab	05 14 24.6	-0.2
CLL	Collm	145.20	347	⇑*i*PKPbc	PKPab	05 14 25.3	+0.3
	comp=Z,10.0nm,0.6s						
CLL				*i* PKiKP	PKiKP	05 14 28.1	+1.0
	comp=Z,4.0nm,0.6s						
CLL	Collm	145.20	347	PKPab	PKPab	05 14 24.7	-0.3
DPC	Dobruska-Polom	145.26	343	*e*PKP	PKPab	05 14 25.0	-0.4
LANS	Liptovska Anna	145.33	339	*e*PKP	PKPab	05 14 25.8	+0.1
KRLC	Kraliky	145.38	342	*e*PKP	PKPbc	05 14 24.5	-0.1
DOPR	Dopca	145.40	330	⇓P	PKPab	05 14 25.8	-0.3
BRG	Berggiesshubel	145.40	346	*e*PKP	PKPdf	05 14 21.0	-2.4
	comp=Z,5.3nm,0.9s						
MORC	Moravsky Berou	145.41	341	⇓P	PKPab	05 14 25.5	-0.5
VOIR		145.94	329	⇑P	PKPab	05 14 27.8	-0.4
PRU	Pruhonice	146.07	344	*e*PKP	PKPbc	05 14 26.8	+0.3
PRU				*e*x	x	05 14 28.9	
VYHS	Vyhne	146.11	339	*e*PKP	PKPab	05 14 28.1	-0.6
VRAC	Vranov	146.12	342	⇑P	PKiKP	05 14 30.3	+1.1
ARR	Arges	146.20	330	⇑P	PKPab	05 14 28.8	-0.4
GOLR		146.42	329	⇑P	PKPab	05 14 30.9	+0.8
SIRR	Siria	146.86	334	⇑P	PKPdf	05 14 24.1	-1.8
GZR	Gura Zlata	147.05	331	⇑P	PKiKP	05 14 30.8	-0.5
KHC	Kasperske Hory	147.10	345	*e*PKP	PKPbc	05 14 29.0	-0.4
KHC				*e*x	x	05 14 33.6	
GERES	GERESS Array B	147.34	345	PKPbc	PKPbc	05 14 30.6	+0.5
	comp=Z,2.1nm,0.5s,baz=27,slow=3.4,SNR=20						
GERES	GERESS Array B	147.34	345		PKPbc	05 14 28.8	-1.3
CONA	Conrad Observa	147.57	341	*i* PKiKP	PKPbc	05 14 31.1	+0.4
	comp=Z,4.0nm,0.7s,SNR=4.5						
MOA	Molln	148.10	343	*i* PKPdf	PKPdf	05 14 26.9	-1.1
	comp=Z,5.0nm,1.2s						
ARSA	Arzberg	148.28	341	*i* PKPdf	PKPdf	05 14 26.1	-2.2
	comp=Z,1.6nm,0.5s						
SOKA	Soboth	148.94	341	*i* PKiKP	PKPbc	05 14 34.2	+0.1
	comp=Z,1.4nm,0.5s						
KBA	Koelnbreinsper	149.06	344	*i* PKiKP	PKPbc	05 14 34.2	-0.3
	comp=Z,2.3nm,0.5s						
OBKA	Obir	149.24	342	*i* PKPbc	PKPbc	05 14 33.3	-1.7
	comp=Z,1.8nm,0.7s						
WATA	Walderalm	149.26	346	*i* PKiKP	PKPbc	05 14 34.9	-0.1
	comp=Z,3.4nm,0.5s						
RETA	Reutte	149.30	347	*i* PKiKP	PKPbc	05 14 35.2	+0.2
	comp=Z,1.4nm,0.4s						
WTTA	Wattenberg	149.31	346	*i* PKiKP	PKPbc	05 14 35.5	+0.3
	comp=Z,4.9nm,0.5s,SNR=6.5						
MOTA	Moosalm	149.36	347	*i* PKiKP	PKPbc	05 14 35.1	-0.2
	comp=Z,1.6nm,0.6s						
MYKA	Terra Mystica	149.39	343	*i* PKiKP	PKPbc	05 14 34.7	-0.5
	comp=Z,2.1nm,0.4s						
SQTA	Sankt Quirin	149.45	346	*i* PKiKP	PKPbc	05 14 35.7	+0.2
	comp=Z,3.8nm,0.5s						
ABTA	Abfaltersbach	149.58	344	*i* PKiKP	PKPbc	05 14 35.3	-0.4
	comp=Z,3.6nm,0.6s,SNR=4.1						
DAVA	Damuels	149.67	348	*i* PKiKP	PKPbc	05 14 34.9	-1.1
	comp=Z,2.2nm,0.6s						
FETA	Feichten	149.75	347	*i* PKiKP	PKPbc	05 14 36.4	+0.2
	comp=Z,1.9nm,0.6s						
STAL	STALIGIAL	149.98	344	PKPbc	PKPbc	05 14 35.7	-0.9
FNA	Florina	151.17	327		PKPbc	05 14 38.3	-1.3

OMAN ***18*** *05:04:40.6±1.0, 26°.95N×58°.12E, h45^{km}±9^{km}, ml3.2/11, Error ellipse: s-maj=36.0km s-min=19.9km az=238.0*

TEH ***18*** *05:04:40.0, 26°.49N×58°.04E, h10^{km}, ML3.6*

DSN ***18*** *05:04:43.5±1.4, 26°.24N×57°.99E, h10^{km}, ML3.5/5, Error ellipse: s-maj=18.8km s-min=6.3km az=15.0*

ISC 18 05:04:37.9±1.7**, 26°.51N**±0°.03×**58°.12E**±0°.06**, h5^{km}**±16^{km}**, n30,** σ1.^{s}10/39**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHNJ	Kahnooj	1.48	346	*e*Pg	Pg	05 05 07.6	+1.3
NIAN	Nian	1.55	313	*e*Pg	Pg	05 05 08.2	+0.5
IBND	Bandar-abas	1.69	304	*e*Pn	Pb	05 05 10.4	+0.9
IBND				*e*		05 05 40.6	
BANOM	Banah	1.73	251	*e*P	Pg	05 05 11.7	+0.5
	SNR=174						
BANOM				S	Sg	05 05 32.9	-0.7
BANOM	Banah	1.73	251	P	Pg	05 05 11.6	+0.5
	SNR=173						
BANOM				S	Sg	05 05 33.1	-0.4
BANOM	Banah	1.73	251	*e*Pn	Pg	05 05 11.6	+0.5
SHME	Shamm	1.83	256	*e*P	Pg	05 05 13.0	0.0
	SNR=48						
SHME				S	Sb	05 05 34.8	-0.4
SHME	Shamm	1.83	256	*e*Pn	Pg	05 05 13.2	+0.2
GENO	Geno	1.95	298	*e*Pn	Pb	05 05 14.0	0.0
MDH	Madha	2.03	234	P	Pb	05 05 15.1	-0.2
MDH	Madha	2.03	234	*e*Pn	Pb	05 05 15.1	-0.2
MSFE	Esma-Masafi	2.10	237	*e*P	Pb	05 05 15.5	-1.0
	SNR=8.1						
MSFE	Esma-Masafi	2.10	237	*e*Pn	Pb	05 05 16.3	-0.2
UOSS	Minazif	2.32	228	P	Pb	05 05 20.6	+0.3
UOSS	Minazif	2.32	228	*e*Pn	Pb	05 05 19.3	-1.0
HATD	Hatta, Dubai	2.45	227	P	Pn	05 05 19.7	+1.1
HATD	Hatta, Dubai	2.45	227	P	Pb	05 05 23.4	+0.9
HATD				S	Sg	05 05 55.7	-0.9
HATD	Hatta, Dubai	2.45	227	*e*Pn	Pb	05 05 21.1	-1.4
ASHO	Ashiyiah	2.60	226	*e*P	Pb	05 05 22.5	-2.4
	SNR=12						
ASHO	Ashiyiah	2.60	226	P	Pb	05 05 25.2	+0.2
ASHO	Ashiyiah	2.60	226	*e*Pn	Pb	05 05 23.7	-1.3
NAZ	Nazwa, Dubai	2.68	236	*e*Pn	Pb	05 05 24.6	-1.8
SOHO	SOHO	2.76	212	P	Pb	05 05 29.2	+1.4
SOHO				S	Sb	05 06 01.4	-0.6
SOHO	SOHO	2.76	212	*e*Pn	Pb	05 05 25.5	-2.3
HOQ	Hoqain	3.00	194	P	Pb	05 05 31.5	-0.3
HOQ				S	Sb	05 06 09.2	+0.4
NGRK	Negar Kerman	3.36	339	*e*Pn	Pb	05 05 36.0	-2.2
NGRK				*e*		05 05 42.2	
CHMN	Cheshme madani	3.38	351	*e*Pn	Pb	05 05 37.6	-1.0
CHMN				*e*		05 06 45.6	
ARQ	Araqi	3.47	205	P	Pb	05 05 40.3	+0.4
ARQ				S	Sb	05 06 23.2	+0.8
BSY	Bisya	3.84	193	P	Pb	05 05 46.4	+0.2
BSY				S	Sb	05 06 33.4	+0.5
WBK	Wadi Bani Khal	3.96	168	P	Pb	05 05 48.0	-0.2
	SNR=8.4						
WBK				S	Sb	05 06 34.0	-2.4

IDC ***18*** *05:06:16.2±0.4, 5°.35S×153°.08E, h0^{km}, mb4.8/32, mb1 4.9/34, mb1mx4.8/52, mbtmp4.8/34, ML3.5/2, MS4.5/31, Ms1 4.5/31, ms1mx4.4/40, Error ellipse: s-maj=14.6km s-min=10.5km az=87.0*

BJI ***18*** *05:06:17.2±0.0, 5°.39S×153°.40E, h30^{km}, mB5.2/41, mb4.9/53, Ms4.9/41, Ms7 4.6/40*

MOS ***18*** *05:06:19.7±0.9, 5°.24S×152°.91E, h29^{km}, mb5.2/20, MS4.8/5, Error ellipse: s-maj=12.4km s-min=8.0km az=91.5*

DJA ***18*** *05:06:20.1±1.5, 5°S±3°×15°3E±°, h27^{km}±11^{km}, M5.2/22, mb5.0/22, mB5.5/6, MLv5.5/2, Mw(mB)5.0/6, Mwp5.4/1*

NEIC ***18*** *05:06:21.8±1.4, 5°.33S±0°.06×152°.91E±0°.08, h35^{km}±3^{km}, mb5.0/53, Error ellipse: s-maj=12.7km s-min=7.7km az=66.0*

GCMT ***18*** *05:06:23.8±0.2, 5°.70S±0°.01×152°.98E±0°.01, h22^{km}, MW5.2/106, Moment Tensor Solution. s101,c143; s106,c172; Duration: 1.^{s}0 Moment tensor: Scale 10^{16} Nm; M_{rr}5.41±.17; $M_{\theta\theta}$-5.59±.12; $M_{\phi\phi}$0.18±.11; $M_{r\theta}$5.44±.24; $M_{\theta\phi}$-0.71±.09; $M_{\phi r}$0.34±.21; Best double couple: $M_0$7.77400×10^{16} NP1:ϕ_s261.00000°, δ23.00000°, λ85.00000°. NP2:ϕ_s85.00000°, δ67.00000°, λ92.00000°. Principal axes: T 7.6460, Plg68.0000°, Azm359.0000°; N 0.2580, Plg2.0000°, Azm265.0000°; P -7.9010, Plg22.0000°, Azm174.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 05:06:22.2±0.3**, 5°.44S**±0°.04×**152°.98E**±0°.05**, h37^{km}, n283,** σ1.^{s}63/275**, mb5.0**/89**, MS4.6**/45**, 14C-5D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.48	320	Pn	Pn	05 06 45.3	-0.9
	1µm,0.3s,baz=40,slow=0.4,SNR=219						
KRVT				Sn	Sn	05 07 05.8	+1.6
	901nm,0.3s,baz=49,slow=18,SNR=11						
KRVT				LR	LR	05 07 16.8	
	comp=Z,11µm,19.7s,baz=134,slow=41						
RABL	Rabaul	1.48	327		Pn	05 06 45.0	-1.4
PMG	Port Moresby	6.98	235	Pn	Pn	05 08 03.3	+1.3
	14nm,0.3s,baz=40,slow=9.5,SNR=25						
PMG				Sn	Sn	05 09 18.9	-1.3
	5.8nm,0.3s,baz=357,slow=17,SNR=3.5						
PMG				LR	LR	05 10 00.5	
	comp=Z,964nm,20.9s,baz=38,slow=32						
PMG	Port Moresby	6.98	235	*de*P	Pn	05 08 03.0	+1.0
PMG				pmax	pmax		
	comp=Z,646nm,0.8s						
PMG	Port Moresby	6.98	235		Pn	05 08 03.2	+1.3
PMG				Sn	Sn	05 09 16.0	-4.2
HNR	Honiara	7.96	120	LR	LR	05 11 05.4	
	comp=Z,2µm,19.7s,baz=303,slow=36						
COEN	Coen	12.84	228	Pn	Pn	05 09 22.2	-0.1
GENI	Genyem	13.09	282	P	P	05 09 44.4	+9.1
SMPI	Sarmi	14.64	283	P	P	05 09 59.8	+7.2
CTA	Charters Tower	15.96	204	Pn	Pn	05 10 05.6	+1.5
	comp=Z,0.5nm,0.3s,baz=22,slow=15,SNR=3.5						
CTA				LR	LR	05 16 13.5	
	comp=Z,2µm,18.1s,baz=30,slow=37						
EIDS	Eidsvold	19.90	185	P	P	05 10 51.0	+0.4
GUMO	Guam	20.55	337	P	P	05 10 57.8	+0.1
	comp=Z,192nm,1.0s,baz=184,slow=19,SNR=3.1						
GUMO				LR	LR	05 19 36.4	
	comp=Z,1µm,18.2s,baz=156,slow=39						
DZM	Mont Dzumac	21.05	143	*e*P	P	05 11 08.8	+5.6
	comp=Z,98nm,1.1s						
DZM				*e*S	S	05 14 57.8	+2.1
	comp=Z,636nm,24.9s						
DZM				*e*LQ	LQ	05 15 20.8	
	comp=Z,3µm,25.8s						
DZM				*e*LR	LR	05 16 14.0	
	comp=Z,3µm,26.4s						
DZM	Mont Dzumac	21.05	143	P	P	05 11 04.0	+0.8
	comp=Z,37nm,1.0s,baz=356,slow=14,SNR=5.5						
DZM	Mont Dzumac	21.05	143	P	P	05 11 04.5	+1.3
SIJI	Sorong	22.14	281	P	P	05 11 15.1	+0.1
	comp=Z,46nm,1.1s,baz=62,slow=11,SNR=5.0						
SWI	Sorong	22.15	281	P	P	05 11 17.7	+2.6
	comp=Z,82nm,0.9s						
WB0	Warramunga Arr	23.02	230	P	P	05 11 23.0	-1.2
WB0				IAmb	IAmb	05 11 35.1	
	comp=Z,57nm,1.1s						
WR0	Warramunga Arr	23.02	230	P	P	05 11 24.0	-0.2
WR0				IAmb	IAmb	05 11 35.1	
	comp=Z,53nm,1.1s						
WRAB	Tennant Creek	23.15	230	*de*P	P	05 11 25.4	-0.1
WRAB				pmax	pmax		
	comp=Z,44nm,1.0s						
WB2	Warramunga Arr	23.15	230	P	P	05 11 24.8	-0.7
WB2				IAmb	IAmb	05 11 36.4	
	comp=Z,80nm,1.3s						
WRA	Warramunga Arr	23.16	230	P	P	05 11 24.6	-1.1
	comp=Z,42nm,0.9s,baz=54,slow=10.0,SNR=68						
WRA				S	S	05 15 32.5	-2.4
	comp=Z,0.6nm,0.4s,baz=54,slow=14,SNR=1.4						
WRA				LR	LR	05 20 16.6	
	comp=Z,1µm,20.8s,baz=50,slow=36						
WRA	Warramunga Arr	23.16	230	P	P	05 11 25.5	-0.1
WRA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
WRA	Warramunga Arr	23.16	230	P	P	05 11 25.5	-0.1
AS31	Alice Springs	25.80	224	P	P	05 11 50.1	0.0
ASAR	Alice Springs	25.80	224	P	P	05 11 50.1	+0.1
	comp=Z,30nm,1.0s,baz=56,slow=9.0,SNR=89						
ASAR				LR	LR	05 21 26.3	
	comp=Z,1µm,21.0s,baz=44,slow=35						
ASAR	Alice Springs	25.80	224	P	P	05 11 50.0	-0.1
ASAR	Alice Springs	25.80	224	P	P	05 11 50.0	-0.1
LBMI	Labuha	25.88	280	P	P	05 11 54.1	+3.3
	comp=Z,1µmcomp=Z,136nm,1.1s						
STKA	Stephens Creek	28.38	201	P	P	05 12 11.8	-1.2
	comp=Z,13nm,0.8s,baz=356,slow=8.3,SNR=19						
STKA				LR	LR	05 24 14.4	
	comp=Z,2µm,18.2s,baz=19,slow=38						
STKA	Stephens Creek	28.38	201	P	P	05 12 12.1	-1.0
STKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
STKA	Stephens Creek	28.38	201	P	P	05 12 12.1	-1.0
FITZ	Fitzroy Crossi	29.51	242	P	P	05 12 22.8	-0.5
	comp=Z,26nm,1.0s,baz=3.6,slow=0.7,SNR=16						
KAPI	Kappang	33.09	269	LR	LR	05 28 44.0	
	comp=Z,291nm,18.2s,baz=98,slow=41						
MPSI	Mapaga	33.53	279	P	P	05 13 06.9	+8.2
FORT	Forrest	34.41	220	P	P	05 13 05.3	-0.8
PSA00	Pilbara Seismi	35.86	240	P	P	05 13 16.1	-2.7
BKZ	Black Stump Fm	39.74	151	P	P	05 13 52.3	+0.9
RPZ	Rata Peaks	41.31	160	P	P	05 14 04.5	+0.3
	comp=Z,7.4nm,0.4s,baz=334,slow=9.0,SNR=2.5						
RPZ				LR	LR	05 30 46.9	
	comp=Z,2µm,18.2s,baz=328,slow=36						
PCJI	Pacitan	41.58	264	P	P	05 14 07.5	+0.6
	comp=Z,44nm,0.9s						
MLZ	Mavora Lakes	41.90	164	P	P	05 14 10.0	+1.0
MLZ				IAmb	IAmb	05 14 20.3	
	comp=Z,39nm,1.2s						
YHNB	Yeheng	42.92	316	P	P	05 14 16.1	-1.6
YHNB				IAmb	IAmb	05 14 27.2	
	comp=Z,31nm,1.1s						
NWAO	Narrogin (SRO)	43.07	226	P	P	05 14 20.9	+2.2
	comp=Z,6.3nm,0.8s,baz=88,slow=5.4,SNR=3.6						
NWAO				LR	LR	05 32 26.2	
	comp=Z,1µm,19.9s,baz=57,slow=36						
JNU	Nakatsue	43.71	333	P	P	05 14 22.8	-1.2
	comp=Z,81nm,1.0s,baz=130,slow=4.7,SNR=19						
JNU				LR	LR	05 29 02.2	
	comp=Z,229nm,19.1s,baz=150,slow=31						
JNU	Nakatsue	43.71	333	P	P	05 14 22.6	-1.3
KPJI	Karang Pucung	43.80	265	P	P	05 14 36.6	+12
MJAR	Matsushiro Arr	44.00	343	P	P	05 14 23.0	-3.1
	comp=Z,8.4nm,0.9s,baz=163,slow=8.5,SNR=9.0						
MJAR				PcP	PcP	05 16 12.1	+0.7
	comp=Z,9.2nm,1.0s,baz=148,slow=3.1,SNR=8.7						
MJAR				LR	LR	05 30 45.7	
	comp=Z,535nm,21.3s,baz=190,slow=34						
MJAR	Matsushiro Arr	44.00	343	P	P	05 14 23.0	-3.1
MJAR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MJAR	Matsushiro Arr	44.00	343	IAmb	IAmb	05 14 23.8	
	comp=Z,3.6nm,1.1s						
MAJO	Matsushiro	44.00	343	⇓*e*P	P	05 14 23.4	-2.7
MAJO				pmax	pmax		
	comp=Z,14nm,0.8s						
CNJI	Cibinong	45.59	265	P	P	05 14 39.1	0.0
	comp=Z,3µmcomp=Z,88nm,1.0s						
TJN	Taejon	48.02	332	*ce*P	P	05 14 58.4	+0.6
RAR	Rarotonga	48.36	114	LR	LR	05 32 19.7	
	comp=Z,489nm,18.3s,baz=263,slow=32						
MDSI	Maura Dua	48.62	269	P	P	05 15 02.3	-0.5
	comp=Z,586nmcomp=Z,7.3nm,0.9s						
KSRS	Korea Array	48.65	333	P	P	05 15 01.8	-0.8
	comp=Z,6.1nm,1.0s,baz=144,slow=9.2,SNR=12						
KSRS				LR	LR	05 34 51.7	
	comp=Z,260nm,18.4s,baz=94,slow=35						
QIZ	Qiongzhong	48.95	301	P	P	05 15 04.5	-0.7
QIZ				S	S	05 22 06.3	-0.8
QIZ				LR	LR		
	comp=Z,280nm,18.4s						
QIZ				LR	LR		
	comp=Z,310nm,19.8s						
QIZ				LR	LR		
	comp=Z,380nm,20.2s						
NJ2	Nanjing	49.45	321	*e*P	P	05 15 09.4	+0.5
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
KUR	Kuril'sk	50.66	355	*e*P	P	05 15 17.7	0.0
KUR				S	S	05 22 32.6	+2.5
KUR				MLR	MLR		
	comp=Z,525nm,15.0s						
KUR				MLR	MLR		
	comp=E,287nm,14.0s						
WHN	Wuhan	51.44	316	⇓P	P	05 15 25.8	+1.9
WHN				LR	LR		
	comp=E,660nm,15.0s						
WHN				LR	LR		
	comp=E,870nm,14.5s						
WHN				LR	LR		

	comp=E,2µm,19.7s						
USRK	**Ussuriysk Ar.**	**52.91**	**341**	P	**P**	**05 15 33.6**	**-1.0**
	comp=E,16nm,1.2s,baz=145,slow=7.0,SNR=6.3						
USRK				LR	LR	05 38 02.4	
	comp=E,218nm,18.3s,baz=161,slow=36						
YSS	**Yuzh-Sakhalins**	**52.95**	**351**	⇑*e*P	**P**	**05 15 33.3**	**-1.5**
YSS				*e*		05 15 40.5	
YSS				*e*		05 15 46.9	
YSS				*e*S	**S**	**05 22 57.6**	**-4.0**
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS				MLR	MLR		
	comp=Z,400nm,15.0s						
YSS				MLR	MLR		
	comp=N,300nm,16.0s						
YSS				MLR	MLR		
	comp=E,200nm,16.0s						
MDJ	**Mudanjiang**	**54.08**	**340**	P	**P**	**05 15 45.5**	**+2.3**
MDJ				pP	pP	05 15 54.8	+1.3
MDJ				sP	sP	05 15 58.5	+0.7
MDJ				PcS	**PcS**	**05 20 47.9**	**+0.9**
MDJ				S	**S**	**05 23 19.8**	**+2.7**
MDJ				ScS	**ScS**	**05 25 29.8**	**+0.2**
MDJ				pmax	pmax		
	comp=E,17nm,2.7s						
MDJ				pmax	pmax		
	comp=E,380nm,3.0s						
RPSI	**Rantau Prapat**	**54.59**	**277**	P	**P**	**05 15 47.6**	**+0.1**
PSI	**Prapat**	**54.61**	**277**	P	**P**	**05 15 47.6**	**-0.2**
	comp=E,3.7nm,0.3s,baz=140,slow=13,SNR=4.5						
ENH	**Enshi**	**54.72**	**313**	P	**P**	**05 15 47.8**	**-0.4**
GYA	**Guiyang**	**54.92**	**308**	*e*P	**P**	**05 15 51.0**	**+1.2**
GYA				pmax	pmax		
	comp=E,10.0nm,1.0s						
CN2	**Changchun**	**54.95**	**336**	*e*P	**P**	**05 15 52.0**	**+2.4**
TYV	**Tymovskoe**	**56.78**	**352**	*e*P	**P**	**05 16 01.9**	**-0.6**
TYV				pmax	pmax		
	comp=Z,14nm,1.1s						
TYV				pmax	pmax		
	comp=Z,200nm,5.6s						
XAN	**Xi'an**	**57.21**	**317**	P	**P**	**05 16 04.9**	**-1.0**
XAN				pP	pP	05 16 14.8	-1.4
XAN				S	**S**	**05 24 06.8**	**+7.5**
XAN				pmax	pmax		
	comp=Z,14nm,0.9s						
XAN				pmax	pmax		
	comp=Z,75nm,3.5s						
XAN				LR	LR		
	comp=Z,270nm,22.8s						
XAN				LR	LR		
	comp=Z,350nm,21.7s						
XAN				LR	LR		
	comp=Z,510nm,20.6s						
XAN	**Xi'an**	**57.21**	**317**	P	**P**	**05 16 05.3**	**-0.6**
XAN				pmax	pmax		
	comp=Z,11nm,0.7s						
XAN	**Xi'an**	**57.21**	**317**	P	**P**	**05 16 05.3**	**-0.6**
XAN				IAmb	IAmb	05 16 05.8	
	comp=Z,11nm,0.7s						
PPT	**Papeete**	**57.37**	**107**	LR	LR	05 38 11.0	
	comp=Z,242nm,18.4s,baz=296,slow=33						
PPT2	**Papeete2**	**57.37**	**107**	*e*S	**S**	**05 24 07.7**	**+5.8**
	comp=Z,661nm,24.8s						
PPT2				*e*LQ	LQ	05 30 38.3	
	comp=Z,733nm,25.5s						
PPT2				*e*LR	LR	05 33 10.5	
	comp=Z,204nm,23.0s						
KMI	**Kunming**	**57.49**	**304**	P	**P**	**05 16 10.8**	**+2.5**
KMI				pmax	pmax		
	comp=Z,14nm,0.9s						
KLR	**Kul'dur**	**57.51**	**344**	P	**P**	**05 16 06.5**	**-1.1**
	comp=Z,20nm,1.1s,baz=148,slow=5.1,SNR=14						
KLR				PcP	**PcP**	**05 17 01.0**	**+0.1**
	comp=Z,7.0nm,0.9s,baz=170,slow=1.1,SNR=5.2						
KLR	**Kul'dur**	**57.51**	**344**	*ce*P	**P**	**05 16 06.7**	**-1.0**
KLR				pmax	pmax		
	comp=Z,31nm,1.2s						
TBI	**Tubuai**	**58.13**	**114**	*e*LQ	LQ	05 31 00.3	
	comp=Z,1µm,33.2s						
TBI				*e*LR	LR	05 33 30.1	
	comp=Z,528nm,27.2s						
CMAR	**Chiang Mai Arr**	**58.31**	**295**	P	**P**	**05 16 14.4**	**+0.5**
	comp=Z,8.5nm,0.8s,baz=108,slow=5.2,SNR=33						
CMAR				LR	LR	05 41 31.8	
	comp=Z,108nm,20.3s,baz=95,slow=36						
PET	**Petropavlovsk**	**58.45**	**4**	*e*P	**P**	**05 16 13.5**	**-0.6**
PET				*e*S	**S**	**05 24 13.7**	**-0.9**
PET				pmax	pmax		
	comp=Z,61nm,0.8s						
PEA0B	**Petropavlovsk-**	**58.47**	**3**	*c i*P	**P**	**05 16 13.7**	**-0.6**
PETK	**Petropavlovsk-**	**58.47**	**3**	P	**P**	**05 16 14.2**	**-0.2**
	comp=Z,44nm,0.8s,baz=171,slow=7.4,SNR=42						
PETK				LR	LR	05 37 30.9	
	comp=Z,484nm,21.9s,baz=232,slow=32						
CD2	**Chengdu**	**59.29**	**311**	P	**P**	**05 16 20.5**	**0.0**
CD2				sP	sP	05 16 33.5	-1.0
CD2				S	**S**	**05 24 26.5**	**-0.1**
CD2				sS	sS	05 24 44.5	-0.7
CD2				SS	**SS**	**05 28 28.5**	**+6.7**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,200nm,8.0s						
CD2				LR	LR		
	comp=Z,590nm,17.6s						
CD2				LR	LR		
	comp=Z,790nm,23.5s						
CD2				LR	LR		
	comp=Z,730nm,21.6s						
NKL	**Nikolayevsk**	**59.29**	**351**	*e*P	**P**	**05 16 24.4**	**+4.4**
NKL				*e*		05 17 06.8	
NKL				pmax	pmax		
	comp=N,7.0nm,1.0s						
NKL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NKL				pmax	pmax		
	comp=E,1.0nm,0.9s						
NKL				pmax	pmax		
	comp=Z,38nm,3.1s						
HHC	**Hu-ho-hao-te**	**59.67**	**324**	*e*P	**P**	**05 16 25.6**	**+2.5**
HHC				S	**S**	**05 24 34.9**	**+3.6**
HHC				SS	**SS**	**05 28 30.3**	**+2.7**
HHC				pmax	pmax		
	comp=Z,89nm,1.0s						
HHC				pmax	pmax		
	comp=Z,310nm,6.0s						
HHC				LR	LR		
	comp=Z,700nm,16.2s						
HHC				LR	LR		
	comp=Z,740nm,16.2s						
HHC				LR	LR		
	comp=Z,780nm,15.3s						
LZH	**Lanzhou**	**61.81**	**316**	*e*P	**P**	**05 16 37.8**	**0.0**
LZH				pP	pP	05 16 47.6	-0.3
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
LZH				pmax	pmax		
	comp=Z,230nm,4.9s						
LZH				LR	LR		
	comp=Z,380nm,14.6s						
LZH				LR	LR		
	comp=Z,350nm,13.7s						
LZH				LR	LR		
	comp=Z,490nm,14.6s						
ZEA	**Zeya**	**62.81**	**343**	*e*P	**P**	**05 16 42.0**	**-1.9**
ZEA				pmax	pmax		
	comp=Z,21nm,1.2s						
MA2	**Magadan**	**64.84**	**359**	P	**P**	**05 16 56.1**	**-1.0**
MA2				pmax	pmax		
	comp=Z,66nm,0.9s						
MA2	**Magadan**	**64.84**	**359**	P	**P**	**05 16 56.1**	**-1.0**
GTA	**Gaotai**	**66.25**	**317**	⇑P	**P**	**05 17 07.0**	**+0.2**
GTA				pP	pP	05 17 16.4	-0.6
GTA				sP	sP	05 17 20.9	0.0
GTA				S	**S**	**05 25 53.6**	**-0.1**
GTA				sS	pS	05 26 08.3	+1.7
GTA				SS	**SS**	**05 30 11.9**	**+1.4**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,160nm,6.8s						
GTA				LR	LR		
	comp=Z,170nm,19.0s						
GTA				LR	LR		
	comp=Z,240nm,20.9s						
GTA				LR	LR		
	comp=Z,340nm,20.0s						
SONM	**Songino Array**	**66.96**	**328**	P	**P**	**05 17 10.8**	**-0.4**
	comp=Z,4.9nm,0.6s,baz=137,slow=6.8,SNR=28						
SONM				LR	LR	05 44 23.2	
	comp=Z,369nm,21.5s,baz=108,slow=34						
SEY	**Seymchan**	**68.19**	**360**	⇑*e*P	**P**	**05 17 17.9**	**-0.6**
YAK	**Yakutsk**	**69.64**	**349**	P	**P**	**05 17 26.8**	**-0.6**
	comp=Z,11nm,0.3s,baz=323,slow=2.3,SNR=2.3						
YAK	**Yakutsk**	**69.64**	**349**	P	**P**	**05 17 26.8**	**-0.6**
YAK				pmax	pmax		
	comp=Z,21nm,0.6s						
YAK	**Yakutsk**	**69.64**	**349**	IAmb	IAmb	05 17 27.5	
	comp=Z,21nm,0.6s						
ZAK	**Zakamensk**	**70.13**	**329**	*e*P	**P**	**05 17 30.3**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,16nm,1.1s						
BOD	**Bodaibo**	**70.45**	**339**	*e*P	**P**	**05 17 30.7**	**-1.9**
BOD				pmax	pmax		
	comp=Z,12nm,1.1s						
TLY	**Talaya**	**70.72**	**330**	P	**P**	**05 17 34.0**	**-0.4**
	comp=Z,5.3nm,0.7s,baz=279,slow=3.0,SNR=3.5						
TLY	**Talaya**	**70.72**	**330**	*e*P	**P**	**05 17 34.3**	**-0.1**
TLY				pmax	pmax		
	comp=Z,22nm,1.0s						
TLY				MLR	MLR		
	comp=Z,609nm,14.0s						
MOY	**Mondy**	**72.05**	**329**	*e*P	**P**	**05 17 42.7**	**+0.1**
MOY				pmax	pmax		
	comp=Z,28nm,1.4s						
VNDA	**Vanda**	**72.18**	**178**	P	**P**	**05 17 43.1**	**+0.3**
	comp=Z,3.0nm,0.9s,baz=311,slow=7.4,SNR=4.5						
VNDA				LR	LR	05 47 04.6	
	comp=Z,176nm,18.1s,baz=355,slow=34						
VNDA	**Vanda**	**72.18**	**178**	P	**P**	**05 17 44.0**	**+1.2**
VNDA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
VNDA	**Vanda**	**72.18**	**178**	P	**P**	**05 17 44.0**	**+1.2**
BILL	**Bilibino**	**73.91**	**5**	*c i*P	**P**	**05 17 52.9**	**-0.2**
BILL				*i*		05 18 06.4	
BILL				*i*		05 20 32.4	
BILL				*i* SS	SS	05 32 00.5	-6.6
BILL				pmax	pmax		
	comp=Z,58nm,1.3s						
BILL				MLR	MLR		
	comp=Z,588nm,19.0s						
WMQ	**Urumqi**	**76.33**	**317**	*e*P	**P**	**05 18 08.4**	**+0.7**
WMQ				pP	PcP	05 18 18.8	-0.6
WMQ				pmax	pmax		
	comp=Z,11nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,150nm,4.1s						
WMQ				LR	LR		
	comp=Z,210nm,16.9s						
WMQ				LR	LR		
	comp=Z,280nm,19.5s						
WMQ				LR	LR		
	comp=Z,280nm,23.1s						
HYB	**Hyderabad**	**76.87**	**289**	*i* P	**P**	**05 18 10.5**	**-0.7**
SVW2	**Sparrevohn**	**77.34**	**23**	P	**P**	**05 18 12.7**	**-0.2**
SVW2				IAmb	IAmb	05 18 15.5	
	comp=Z,10nm,1.0s						
CNPM	**China Poot**	**78.22**	**26**	P	**P**	**05 18 16.8**	**-1.0**
TIXI	**Tiksi**	**78.55**	**352**	*ce*P	**P**	**05 18 18.2**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,14nm,1.3s						
PMR	**Palmer**	**80.19**	**24**	IAmb	IAmb	05 18 29.3	
	comp=Z,24nm,1.4s						
GHO	**Glory Hole Cre**	**80.37**	**24**	IAmb	IAmb	05 18 38.4	
	comp=Z,19nm,1.0s						
KTH	**Kantishna Hill**	**80.54**	**22**	IAmb	IAmb	05 18 29.6	
	comp=Z,16nm,1.0s						
TRF	**Thorofare Moun**	**80.72**	**22**	IAmb	IAmb	05 18 32.2	
	comp=Z,12nm,0.9s						
MKAR	**Makanchi Array**	**80.92**	**319**	P	**P**	**05 18 32.7**	**-0.1**
	comp=Z,1.7nm,0.5s,baz=100,slow=7.0,SNR=24						
MKAR				LR	LR	05 52 58.6	
	comp=Z,201nm,20.9s,baz=98,slow=35						
MKAR	**Makanchi Array**	**80.92**	**319**	*ce*P	**P**	**05 18 32.5**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MKAR	**Makanchi Array**	**80.92**	**319**	P	**P**	**05 18 32.1**	**-0.7**
IMAR	**Indian Mountai**	**80.93**	**19**	P	**P**	**05 18 31.8**	**-0.6**
MAKZ	**Makanchi**	**81.13**	**319**	P	**P**	**05 18 33.6**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,13nm,1.1s						
MAKZ	**Makanchi**	**81.13**	**319**	P	**P**	**05 18 33.6**	**-0.3**
RND	**Reindeer**	**81.25**	**23**	IAmb	IAmb	05 18 35.1	
	comp=Z,21nm,1.0s						
MLY	**Manley**	**81.42**	**21**	IAmb	IAmb	05 18 36.1	
	comp=Z,18nm,1.1s						
ZALV	**Zalesovo Beam**	**81.78**	**326**	P	**P**	**05 18 35.9**	**-1.2**
	comp=Z,15nm,0.9s,baz=109,slow=4.9,SNR=22						
ZALV				LR	LR	05 53 58.5	
	comp=Z,240nm,21.5s,baz=84,slow=35						
ZALV	**Zalesovo Beam**	**81.78**	**326**	P	**P**	**05 18 36.0**	**-1.2**
ZALV	**Zalesovo Beam**	**81.78**	**326**	P	**P**	**05 18 36.0**	**-1.2**
WRH	**Wood River Hil**	**82.09**	**22**	IAmb	IAmb	05 18 39.2	
	comp=Z,13nm,1.0s						
CCB	**Clear Creek Bu**	**82.28**	**22**	IAmb	IAmb	05 18 39.6	
	comp=Z,13nm,1.1s						
CRQM	**Cirque**	**82.35**	**26**	P	**P**	**05 18 39.2**	**-1.0**
GLB	**Gilahina Butte**	**82.36**	**26**	IAmb	IAmb	05 18 40.9	
	comp=Z,15nm,0.9s						
TCOL	**CIGO, UAF Yank**	**82.38**	**22**	P	**P**	**05 18 38.4**	**-1.6**
	baz=240						
VRDI	**Verde Repeater**	**82.42**	**26**	IAmb	IAmb	05 18 43.5	
	comp=Z,18nm,1.0s						
HDA	**Harding Lake**	**82.48**	**22**	P	**P**	**05 18 39.2**	**-1.4**
	baz=241						
IL31		**82.69**	**22**	IAmb	IAmb	05 18 42.5	
	comp=Z,16nm,1.1s						
ILAR	**Eielson Array**	**82.69**	**22**	P	**P**	**05 18 39.4**	**-2.3**
	comp=Z,10nm,1.0s,baz=253,slow=5.0,SNR=52						
ILAR				LR	LR	05 53 41.1	
	comp=Z,324nm,19.4s,baz=246,slow=34						
ILAR	**Eielson Array**	**82.69**	**22**	P	**P**	**05 18 38.9**	**-2.8**
ILAR	**Eielson Array**	**82.69**	**22**	P	**P**	**05 18 38.9**	**-2.8**
RIDG	**Independent Ri**	**82.97**	**23**	IAmb	IAmb	05 18 47.6	
	comp=Z,12nm,1.0s						
BARN	**Barnard Glacie**	**83.14**	**26**	P	**P**	**05 18 44.8**	**+0.5**
BARN				IAmb	IAmb	05 18 45.8	
	comp=Z,22nm,1.3s						
SCRK	**Sand Creek**	**83.42**	**23**	P	**P**	**05 18 44.6**	**-1.0**
SCRK				IAmb	IAmb	05 18 46.7	
	comp=Z,11nm,1.2s						
KSH	**Kashi**	**83.49**	**311**	P	**P**	**05 18 48.8**	**+2.3**
KSH				pP	sP	05 19 00.0	-1.0
KSH				S	**S**	**05 29 06.4**	**+0.6**
KSH				sS	sS	05 29 22.9	-2.6
KSH				SS	**SS**	**05 34 35.3**	**+2.9**
KSH				pmax	pmax		
	comp=Z,56nm,1.2s						
KSH				pmax	pmax		
	comp=Z,400nm,4.9s						
KSH				LR	LR		
	comp=Z,180nm,12.5s						
KSH				LR	LR		
	comp=Z,220nm,8.4s						
KSH				LR	LR		
	comp=Z,380nm,16.4s						
TOLK	**Toolik Lake Re**	**83.77**	**18**	P	**P**	**05 18 47.6**	**+0.3**
	baz=238						
BCAR	**Beaver Creek A**	**83.92**	**25**	P	**P**	**05 18 47.2**	**-0.9**
BOOM	**Boomskoye usch**	**84.16**	**314**	IAmb	IAmb	05 18 57.1	
	comp=Z,10nm,0.9s						
KURK	**Kurchatov**	**84.38**	**322**	*c i*P	**P**	**05 18 49.8**	**-0.8**
KURK				pmax	pmax		
	comp=Z,19nm,1.0s						
KURK	**Kurchatov**	**84.38**	**322**	P	**P**	**05 18 50.0**	**-0.6**
KURBB	**Kurchatov Arra**	**84.41**	**322**	P	**P**	**05 18 50.0**	**-0.8**
	comp=Z,8.0nm,1.0s,baz=103,slow=4.2,SNR=36						
QSPA	**South Pole Qui**	**84.52**	**180**	P	**P**	**05 18 52.2**	**+0.9**
KZA	**Kyzart**	**84.57**	**313**	P	**P**	**05 18 53.6**	**+1.2**
	SNR=29						
BMAR	**Burnt Mountain**	**84.79**	**20**	P	**P**	**05 18 52.3**	**-0.2**
EGAK	**Eagle**	**84.88**	**23**	IAmb	IAmb	05 18 54.4	
	comp=Z,9.6nm,1.0s						
KBK	**Karagaybulak**	**84.91**	**314**	P	**P**	**05 18 54.1**	**+0.3**
	SNR=5.6						
HYT	**Haines Junctio**	**84.92**	**27**	IAmb	IAmb	05 18 54.9	
	comp=Z,13nm,0.9s						
MAW	**Mawson**	**85.05**	**203**	P	**P**	**05 18 54.1**	**+0.4**
	comp=Z,3.5nm,0.8s,baz=48,slow=1.1,SNR=4.2						
MAW				LR	LR	05 53 43.0	
	comp=Z,305nm,21.4s,baz=64,slow=33						
MAW	**Mawson**	**85.05**	**203**	P	**P**	**05 18 54.1**	**+0.4**
MAW				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MAW	**Mawson**	**85.05**	**203**	IAmb	IAmb	05 18 56.8	
	comp=Z,1.0nm,0.9s						
CHMS	**Chumysh**	**85.12**	**314**	P	**P**	**05 18 54.8**	**+0.1**
	SNR=7.5						
UCH	**Uchtor**	**85.14**	**313**	P	**P**	**05 18 56.0**	**+0.8**
	SNR=28						
AAK	**Ala-Archa**	**85.23**	**313**	P	**P**	**05 18 55.5**	**+0.1**
	comp=Z,9.8nm,0.9s,baz=118,slow=2.7,SNR=19						
AAK	**Ala-Archa**	**85.23**	**313**	P	**P**	**05 18 55.8**	**+0.4**
	SNR=8.5						
AAK	**Ala-Archa**	**85.23**	**313**	*c i*P	**P**	**05 18 55.7**	**+0.4**
AAK				pmax	pmax		
	comp=Z,17nm,1.3s						
DAWY	**Dawson**	**85.30**	**24**	IAmb	IAmb	05 18 57.6	
	comp=Z,9.0nm,1.1s						
USP	**Ospenovka**	**85.36**	**314**	P	**P**	**05 18 56.0**	**+0.1**
	SNR=18						
AML	**Almayashu**	**85.72**	**313**	P	**P**	**05 18 58.5**	**+0.4**
	SNR=49						
EKS2	**Erkin-Say**	**85.76**	**313**	P	**P**	**05 18 58.5**	**+0.5**
	SNR=15						
NRIK	**Noril'sk**	**86.63**	**341**	P	**P**	**05 19 00.7**	**-0.8**
	comp=Z,10nm,0.8s,baz=106,slow=5.3,SNR=7.4						
NRIK				LR	LR	05 57 25.3	
	comp=Z,235nm,20.6s,baz=92,slow=36						
NRIK	**Noril'sk**	**86.63**	**341**	*i* P	**P**	**05 19 00.5**	**-0.9**
EPYK	**Eagle Plains**	**87.19**	**22**	P	**P**	**05 19 04.2**	**-0.2**
	baz=250						
KKAR	**Karatay Array**	**88.20**	**313**	P	**P**	**05 19 09.1**	**-0.5**
KKAR	**Karatay Array**	**88.20**	**313**	P	**P**	**05 19 09.1**	**-0.5**
INK	**Inuvik**	**88.99**	**21**	IAmb	IAmb	05 19 15.5	
	comp=Z,10nm,1.2s						
BRVK	**Borovoye**	**89.93**	**323**	*c i*P	**P**	**05 19 16.2**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,14nm,1.0s						
NVAR	**Mina Array Bea**	**92.34**	**52**	P	**P**	**05 19 29.3**	**-0.1**
	comp=Z,2.6nm,1.0s,baz=266,slow=6.1,SNR=8.9						
NVAR				LR	LR	05 54 36.4	
	comp=Z,628nm,20.4s,baz=286,slow=31						
C36M	**Paulatuk**	**92.57**	**21**	IAmb	IAmb	05 19 30.1	
	comp=Z,4.5nm,0.8s						
C36M	**Paulatuk**	**92.57**	**21**	P	**P**	**05 19 29.4**	**0.0**
	baz=262						
SYO	**Syowa Base**	**93.12**	**199**	⇑*e*P	**P**	**05 19 32.0**	**0.0**
SYO	**Syowa Base**	**93.12**	**199**	⇑*e*X	P	05 19 37.2	+5.2
TPNV	**Topopah Spring**	**93.85**	**53**	P	**P**	**05 19 35.6**	**-0.7**
	baz=266						
NEW	**Newport**	**93.95**	**42**	P	**P**	**05 19 34.2**	**-2.1**
	comp=Z,3.3nm,1.0s,baz=269,slow=3.5,SNR=4.4						
NEW	**Newport**	**93.95**	**42**	P	**P**	**05 19 35.8**	**-0.6**
	baz=266						
R11A	**Troy Canyon, C**	**94.47**	**52**	P	**P**	**05 19 38.7**	**-0.4**
	baz=267						
YKA	**Yellowknife Ar**	**95.91**	**28**	P	**P**	**05 19 43.9**	**-1.0**
	comp=Z,2.8nm,0.9s,baz=263,slow=4.3,SNR=36						
YKA				PKiKP	**PKiKP**	**05 24 21.9**	**-1.9**
	comp=Z,0.4nm,0.7s,baz=298,slow=1.3,SNR=5.8						
YKA				LR	LR	05 58 43.2	
	comp=Z,500nm,20.2s,baz=0.0,slow=33						
ABKAR	**Akbulak array**	**96.07**	**319**	P	**P**	**05 19 43.6**	**-2.3**
ARU	**Arti**	**96.95**	**326**	LR	LR	06 04 26.8	
	comp=Z,370nm,20.4s,baz=104,slow=36						
ARU	**Arti**	**96.95**	**326**	*d i*P	**P**	**05 19 47.6**	**-2.1**
ARU						05 23 42.0	
ARU				S	**SKSac**	**05 30 21.5**	**-2.3**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ARU				MLR	MLR		
	comp=Z,406nm,19.0s						
GEYT	**Alibeck**	**97.14**	**307**	LR	LR	06 04 10.0	
	comp=Z,136nm,21.7s,baz=325,slow=36						
AKTO	**Aktyubinsk**	**97.33**	**320**	LR	LR	06 05 11.7	
	comp=Z,242nm,18.5s,baz=91,slow=36						
PDAR	**Pinedale Array**	**99.15**	**48**	P	**Pdif**	**05 19 58.5**	**-1.8**
	comp=Z,0.3nm,0.8s,baz=292,slow=5.7,SNR=2.9						
PDAR				LR	LR	06 01 58.7	
	comp=Z,566nm,18.3s,baz=279,slow=34						
PRGR	**Permogore**	**102.98**	**332**	*e*P	**Pdif**	**05 20 03.7**	**-13**
PRGR				pmax	pmax		
	comp=Z,14nm,0.4s						
TXAR	**Lajitas Array**	**104.28**	**61**	PKiKP	**PKiKP**	**05 24 40.6**	**+0.7**
	comp=Z,0.3nm,0.8s,baz=282,slow=1.8,SNR=3.6						
TMCR	**Tamitsa**	**105.58**	**336**	*e*P	**Pdif**	**05 20 24.9**	**-3.1**
FINES	**FINESS Array B**	**111.71**	**336**	Pdiff	**Pdif**	**05 20 53.9**	**-1.4**
	comp=Z,1.1nm,0.7s,baz=90,slow=6.9,SNR=2.2						
U40A	**Yellville**	**112.62**	**53**	P	**PKiKP**	**05 24 55.3**	**0.0**
	baz=280						
AKASG	**Malin Array Be**	**115.12**	**324**	PKP	**PKiKP**	**05 24 58.9**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=64,slow=2.3,SNR=4.7						
BRTR	**Keskin Array B**	**115.86**	**312**	PKP	**PKiKP**	**05 25 01.8**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=101,slow=2.9,SNR=3.7						
BRTR				PKKPbc	**PKKPbc**	**05 35 33.5**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=247,slow=2.5,SNR=3.8						
D47A	**Chapleau**	**116.65**	**39**	P	**PKiKP**	**05 25 02.7**	**0.0**
	baz=293						
E48A	**Lockeyer**	**117.47**	**40**	P	**PKiKP**	**05 25 04.5**	**+0.3**
	baz=293						
NOA	**NORSAR Array B**	**117.57**	**340**	PKP	**PKPdf**	**05 25 03.4**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=47,slow=1.8,SNR=3.8						
D49A	**Beulah Townshi**	**117.66**	**39**	P	**PKPdf**	**05 25 04.6**	**0.0**
	baz=294						
N49A	**Columbus Grove**	**118.07**	**46**		**PKiKP**	**05 25 06.0**	**+0.5**
N49A	**Columbus Grove**	**118.07**	**46**	P	**PKiKP**	**05 25 05.9**	**+0.3**
	baz=289						
O49A	**Covington**	**118.19**	**47**	P	**PKiKP**	**05 25 06.2**	**+0.3**
	baz=288						
D50A	**G1974 Best Tow**	**118.65**	**38**	P	**PKiKP**	**05 25 06.5**	**0.0**
	baz=296						
N50A	**Nevada**	**118.86**	**46**	P	**PKiKP**	**05 25 07.5**	**+0.4**
	baz=290						
LSQQ	**Lebel-sur-Quev**	**119.49**	**35**	P	**PKPdf**	**05 25 07.9**	**-0.1**
	baz=299						
H52A	**Wyevale**	**119.67**	**41**	P	**PKiKP**	**05 25 08.9**	**+0.3**
	baz=294						
UZH	**Uzhgorod**	**120.07**	**324**	*e*PKIKP	**PKiKP**	**05 25 12.9**	**+3.7**
UZH				*i*		05 25 17.6	
UZH				*e*		05 25 23.0	
ALGO	**Algonquin Park**	**120.29**	**39**	P	**PKPdf**	**05 25 09.6**	**0.0**
	baz=297						
E53A	**Dumoine, Ponti**	**120.34**	**38**	P	**PKiKP**	**05 25 10.0**	**+0.2**
	baz=297						
N53A	**Lisbon**	**120.50**	**45**	P	**PKiKP**	**05 25 10.5**	**+0.2**
	baz=291						
G54A	**Lake Saint Pet**	**120.51**	**40**	P	**PKPdf**	**05 25 10.0**	**-0.1**
	baz=296						
P53A	**Whipple**	**120.57**	**47**	P	**PKiKP**	**05 25 10.6**	**+0.1**
	baz=290						
D54A	**Lac Fusel, La**	**120.59**	**37**	P	**PKPdf**	**05 25 09.9**	**-0.4**
	baz=298						
E54A	**Lac Daplat, Po**	**120.61**	**38**	P	**PKPdf**	**05 25 10.1**	**-0.1**
	baz=298						
O54A	**Avella**	**121.05**	**46**	P	**PKiKP**	**05 25 11.5**	**0.0**
	baz=292						
G55A	**Calabogie**	**121.44**	**39**	P	**PKiKP**	**05 25 12.1**	**+0.1**
	baz=297						
L55A	**Hinsdale**	**121.64**	**43**	P	**PKiKP**	**05 25 12.7**	**+0.1**
	baz=294						
D56A	**ZEC Mazanza, M**	**121.78**	**37**	P	**PKPdf**	**05 25 12.5**	**0.0**
	baz=300						
VYHS	**Vyhne**	**122.11**	**326**	*e*PKIKP	**PKiKP**	**05 25 14.4**	**+1.1**
VYHS	**Vyhne**	**122.11**	**326**	*e*PKP	**PKiKP**	**05 25 14.4**	**+1.1**
D57A	**Chemin Vers le**	**122.31**	**36**	P	**PKiKP**	**05 25 13.8**	**+0.1**
	baz=301						
E57A	**Chemin Saint G**	**122.46**	**37**	P	**PKiKP**	**05 25 14.0**	**0.0**
	baz=300						
Q57A	**Strasburg**	**122.89**	**46**	P	**PKiKP**	**05 25 15.6**	**+0.5**
	baz=292						
MODS	**Modra-Piesok**	**123.05**	**326**	*e*PKIKP	**PKPdf**	**05 25 14.5**	**-0.4**
MODS	**Modra-Piesok**	**123.05**	**326**	*e*PKP	**PKPdf**	**05 25 14.5**	**-0.4**
J58A	**Remsen**	**123.22**	**41**	P	**PKiKP**	**05 25 15.9**	**+0.3**
	baz=298						
N58A	**Sunbury**	**123.37**	**44**	P	**PKiKP**	**05 25 16.0**	**+0.1**
	baz=295						
H58A	**Gabriels**	**123.42**	**39**	P	**PKPdf**	**05 25 15.6**	**-0.1**
	baz=299						
CLL	**Collm**	**123.50**	**331**	*e*PKPdf	**PKiKP**	**05 25 17.0**	**+1.1**
CLL				*e*SP	SP	05 36 40.0	-9.1
CLL				*e*PPS	PPS	05 38 20.0	
CLL				*e*SS	**SS**	**05 43 42.0**	**+1.1**
CLL				L	L	06 21 00.0	
	comp=Z,300nm,20.6s						
D59A	**Saint-Raymond**	**123.51**	**35**	P	**PKPdf**	**05 25 15.9**	**+0.1**
	baz=303						
I59A	**Olmsteadville**	**123.92**	**40**	P	**PKiKP**	**05 25 17.2**	**+0.2**
	baz=299						

M59A	Waymart	123.94	43	P	PKiKP	05 25 17.4	+0.3
	baz=296						
F60A	Warwick	124.00	36	P	PKiKP	05 25 17.2	+0.1
	baz=302						
E60A	Ste Agathe de	124.08	36	P	PKiKP	05 25 17.6	+0.4
	baz=303						
I60A	Shoreham	124.26	39	P	PKiKP	05 25 18.2	+0.6
	baz=300						
FNA	Florina	124.28	317	PKIKP	PKPdf	05 25 17.3	-0.3
FNA	Florina	124.28	317		PKPdf	05 25 17.3	-0.3
KHC	Kasperske Hory	124.58	329	*e*PKPDF	PKPdf	05 25 17.2	-0.7
KHC	Kasperske Hory	124.58	329	*e*PKIKP	PKPdf	05 25 17.2	-0.7
E61A	Lac Etchemin	124.60	35	P	PKiKP	05 25 19.0	+0.7
	baz=304						
GERES	GERESS Array B	124.69	328	PKP	PKPdf	05 25 18.2	+0.1
	comp=Z,2.1nm,0.8s,baz=48,slow=2.0,SNR=11						
H61A	Lyndonville	124.76	38	P	PKiKP	05 25 19.4	+0.7
	baz=302						
K61A	Williamstown	124.85	40	P	PKiKP	05 25 19.5	+0.6
	baz=299						
LBNH	Lisbon	124.91	38	P	PKiKP	05 25 19.7	+0.7
	baz=301						
MOA	Molln	125.00	327	*i* PKiKP	PKiKP	05 25 19.1	+0.1
	comp=Z,4.1nm,1.3s						
SOKA	Soboth	125.26	326	*i* PKiKP	PKPdf	05 25 18.0	-1.3
	comp=Z,2.6nm,1.0s						
KBA	Koelnbreinsper	125.96	327	*i* PKiKP	PKPdf	05 25 20.1	-0.7
	comp=Z,4.7nm,1.1s						
ABTA	Abfaltersbach	126.61	327	*i* PKiKP	PKPdf	05 25 21.2	-0.7
	comp=Z,6.9nm,1.3s						
WATA	Walderalm	126.75	328	*i* PKiKP	PKPdf	05 25 21.9	-0.3
	comp=Z,3.5nm,0.9s						
WTTA	Wattenberg	126.76	328	*i* PKiKP	PKPdf	05 25 22.2	-0.1
	comp=Z,3.7nm,0.7s						
STAL	STALIGIAL	126.80	326		PKPdf	05 25 22.3	+0.1
MOTA	Moosalm	126.99	328	*i* PKiKP	PKPdf	05 25 22.5	-0.2
	comp=Z,9.2nm,1.4s						
SQTA	Sankt Quirin	127.01	328	*i* PKiKP	PKPdf	05 25 21.4	-1.2
	comp=Z,5.8nm,1.3s						
RETA	Reutte	127.08	329	*i* PKiKP	PKPdf	05 25 21.3	-1.4
	comp=Z,2.2nm,0.9s						
FETA	Feichten	127.39	328	*i* PKiKP	PKiKP	05 25 23.8	-0.2
	comp=Z,6.3nm,1.0s						
NNA	Nana	127.52	110	PKP	PKPdf	05 25 23.6	-0.9
	comp=Z,2.8nm,0.4s,baz=281,slow=5.5,SNR=3.6						
DAVA	Damuels	127.66	329	*i* PKiKP	PKPdf	05 25 23.4	-0.6
	comp=Z,4.2nm,1.1s						
BMRD	Maredsous	127.95	335	PKPdf	PKiKP	05 25 26.8	+2.0
BMRD	Maredsous	127.95	335	pPKP	pPKPdf	05 25 35.2	+0.3
BMRD	Maredsous	127.95	335	sPKP	sPKPdf	05 25 39.0	-0.1
LPAZ	La Paz	133.96	119	PKP	PKPdf	05 25 37.2	-0.1
	comp=Z,2.4nm,0.9s,baz=320,slow=1.3,SNR=6.6						
LPAZ	La Paz	133.96	119	PKIKP	PKPdf	05 25 36.6	-0.7
LPAZ	La Paz	133.96	119	PKPdf	PKPdf	05 25 36.6	-0.7
KEST	Kesra	134.99	317	PKP	PKPdf	05 25 37.6	-0.4
	comp=Z,2.5nm,0.9s,baz=281,slow=5.2,SNR=3.0						
CPUP	Villa Florida	136.87	139	PKP	PKPdf	05 25 42.0	+0.2
	comp=Z,3.8nm,0.9s,baz=277,slow=2.2,SNR=7.0						
SIV	San Ignacio	140.13	123	PKhKP	PKPpre	05 25 42.4	
	comp=Z,0.9nm,0.9s,baz=218,slow=3.4,SNR=4.3						
SIV				PKP	PKPdf	05 25 47.7	-0.3
	comp=Z,2.4nm,0.8s,baz=192,slow=1.5,SNR=9.8						
PALE	Palemas	143.51	327	P	PKPbc	05 25 51.0	+0.1
	SNR=7.5						
MDT	Midelt	145.67	325	P	PKPab	05 25 58.0	-0.1
	SNR=19						
CZD	Col de Zad	145.75	326	P	PKPab	05 25 60.0	+1.3
	SNR=37						
PTGA	Pitinga	146.53	100		PKPbc	05 26 00.7	-0.1
GOLM	Goulmima	146.68	324	P	PKPab	05 26 02.0	0.0
	SNR=8.4						
TZRR	Tazzarine	147.72	324	P	PKiKP	05 26 05.0	-0.8
	SNR=13						
ZGR	Zagora	148.23	323	P	PKPbc	05 26 06.0	+0.8
	SNR=12						
BDFB	Brasilia	150.49	136	PKP	PKPdf	05 26 06.2	+0.3
	comp=Z,4.3nm,0.9s,baz=258,slow=8.8,SNR=6.7						
BDFB				PKPbc	PKPbc	05 26 11.2	0.0
	comp=Z,14nm,0.8s,baz=226,slow=2.5,SNR=6.9						
BDFB	Brasilia	150.49	136	PKIKP	PKiKP	05 26 12.2	+0.3
BDFB	Brasilia	150.49	136		PKiKP	05 26 12.2	+0.3
TOA0	Torodi Ar. Sit	150.67	287		PKPbc	05 26 11.2	-0.3
TORD	Torodi Ar. Bea	150.67	287	PKP	PKPdf	05 26 05.7	-0.2
	comp=Z,7.0nm,1.1s,baz=165,slow=0.4,SNR=5.7						
TORD				PKPbc	PKPbc	05 26 10.8	-0.6
	comp=Z,14nm,0.8s,baz=57,slow=2.2,SNR=50						
KIC	Kosan Boka	157.82	273	*e*PKIKP	PKPab	05 26 48.5	-0.4
	comp=Z,18nm,1.3s						
KIC	Kosan Boka	157.82	273		PKPab	05 26 48.5	-0.4
DBIC	Dimbokro	157.92	274	PKPab	PKPab	05 26 48.2	-1.0
	comp=Z,3.3nm,0.8s,baz=75,slow=4.0,SNR=4.5						
TIC	Toumodi	158.09	274	*e*PKIKP	PKPab	05 26 48.9	-1.1
TIC	Toumodi	158.09	274	PKP2	PKPab	05 26 48.9	-1.1
TIC	Toumodi	158.09	274		PKPab	05 26 48.9	-1.1
LIC	Lamto	158.11	273	*e*PKIKP	PKPab	05 26 49.1	-1.0
	comp=Z,5.7nm,0.6s						
LIC	Lamto	158.11	273		PKPab	05 26 49.1	-1.0

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*IDC **18** 05:13:32.3±1.0, 20°.30N×122°.33E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.7/54, mbtmp3.8/8, MS3.9/1, Ms1 3.9/1, ms1mx3.0/37, Error ellipse: s-maj=42.0km s-min=18.6km az=65.0*

*JMA **18** 05:13:32.8±0.8, 20°.29N×121°.78E, h25km, M4.0*

*NEIC **18** 05:13:33.4±2.2, 20°.31N±0°.06×122°.36E±0°.08, h10km±1km, mb4.1/2, Error ellipse: s-maj=13.9km s-min=7.3km az=235.0*

*MAN **18** 05:13:38.2, 20°.11N×122°.00E, h8km, mb5.1, ML4.1, MS4.1*

MAN Intensity II - Basco Batanes.

ISC 18 05:13:34.6±0.7**, 20°.33N**±0°.03×**122°.09E**±0°.06**, h10km, n38, σ2s.13**/40**, mb3.8**/10**, 1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	Basco	0.16	313	*e*P	Pg	05 13 39.6	+1.5
BBP				*e*S	Sg	05 13 42.9	+2.3
SGCP	Mt. Cagua	2.08	181	*e*P	Pn	05 14 09.8	+0.2
SGCP				*e*S	Sn	05 14 34.9	-0.6
APYP	Conner	2.58	198	*e*P	Pn	05 14 13.9	-2.6
APYP				*e*S	Sn	05 14 44.6	-3.3
TWG	Pinlang	2.65	339		Pn	05 14 17.1	-0.3
SIPP	Brgy, Tapao	2.85	213⇑	*e*P	Pn	05 14 21.3	+1.2
SIPP				*e*S	Sn	05 14 47.6	-6.9
YULB	Yu-li	3.13	347	Pn	Pn	05 14 23.2	-0.8
SZP	Santa	3.17	209	Pn	Pn	05 14 24.8	+0.3
TPUB	Ta-pu	3.25	336		Pn	05 14 27.0	+1.3
CAUP	Cauayan	3.38	184	*e*P	Pn	05 14 30.2	+2.8
CAUP				*e*S	Sg	05 15 26.5	+3.3
SSLB	Suanglung	3.60	343		Pn	05 14 31.6	+1.1
NACB	Ninganchiao	3.85	353	Pn	Pn	05 14 32.7	-1.2
NACB				Sn	Sn	05 15 16.5	-2.7
HATJ	Hateruma jima	4.03	23	P	Pn	05 14 37.4	+1.0
YOJ	Yonaguni jima	4.20	12	P	Pn	05 14 39.9	+1.2
YOJ	Yonaguni jima	4.20	12	Pn	Pn	05 14 36.9	-1.8
IRIF	Iriomote-Funau	4.26	21	P	Pn	05 14 40.5	+0.9
IRIF				*e*S	Sn	05 15 28.4	-1.0
JKRS	Kuro-shima	4.27	24	P	Pn	05 14 40.7	+1.0
JKRS				*e*S	Sn	05 15 28.1	-1.6
YHNB	Yeheng	4.37	351		Pn	05 14 41.6	+0.5
JIJ	Ishigaki jima	4.44	25	P	Pn	05 14 42.6	+0.6
JIJ				*e*S	Sn	05 15 30.9	-2.9
BALP	Baler	4.59	186	*e*P	Pn	05 14 46.4	+2.3
JISG	Ishigakijimahi	4.71	25	S	Sn	05 15 37.4	-2.9
JTJ	Tarama	4.92	29	*e*S	Sn	05 15 43.2	-2.5
DAV	Davao City (W)	13.61	165	LR	LR	05 21 54.5	
	comp=Z,544nm,19.7s,baz=213,slow=37						
CMAR	Chiang Mai Arr	21.91	269	P	P	05 18 30.3	+2.1
	1.3nm,0.4s,baz=64,slow=8.4,SNR=3.2						
SONM	Songino Array	30.24	339	P	P	05 19 46.9	+1.3
	1.3nm,0.9s,baz=153,slow=9.7,SNR=3.1						
WB0	Warramunga Arr	41.63	162	P	P	05 21 21.2	-2.0
WB0				IAmb	IAmb	05 21 34.2	
	comp=Z,2.6nm,1.1s						
MKAR	Makanchi Array	41.73	319	P	P	05 21 24.2	+0.5
	comp=Z,0.5nm,0.5s,baz=101,slow=7.4,SNR=3.4						
WRA	Warramunga Arr	41.78	163	P	P	05 21 22.4	-2.0
	comp=Z,0.9nm,0.5s,baz=344,slow=9.0,SNR=13						
WR0	Warramunga Arr	41.86	162	P	P	05 21 23.1	-1.9
WR0				IAmb	IAmb	05 21 25.6	
	comp=Z,9.5nm,1.4s						
H11N1	WAKE ISLAND Hy	42.00	83	T	T	06 06 27.4	
	baz=278,slow=75,SNR=21						
H11N2	WAKE ISLAND Hy	42.00	83	T	T	06 06 27.2	
	baz=278,slow=75,SNR=14						
H11S3	WAKE ISLAND Hy	42.01	85	T	T	06 06 26.2	
	baz=281,slow=74,SNR=229						
H11N3	WAKE ISLAND Hy	42.02	83	T	T	06 06 30.4	
	baz=278,slow=75,SNR=16						
H11S1	WAKE ISLAND Hy	42.02	85	T	T	06 06 27.0	
	baz=281,slow=74,SNR=252						
H11S2	WAKE ISLAND Hy	42.03	85	T	T	06 06 27.6	
	baz=281,slow=74,SNR=209						
ZALV	Zalesovo Beam	43.94	329	P	P	05 21 41.1	-0.5
	comp=Z,1.8nm,0.6s,baz=113,slow=8.2,SNR=3.5						
ASAR	Alice Springs	45.22	165	P	P	05 21 50.9	-1.2
	comp=Z,0.7nm,0.6s,baz=352,slow=7.8,SNR=10						
KURBB	Kurchatov Arra	45.62	322	P	P	05 21 54.9	-0.1
	comp=Z,1.3nm,0.9s,baz=119,slow=7.5,SNR=3.2						
YKA	Yellowknife Ar	86.18	23	P	P	05 26 15.1	-0.8
	comp=Z,0.2nm,0.7s,baz=308,slow=4.2,SNR=7.2						

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*ATH **18** 05:31:23.5, 38°.22N×20°.42E, h15km±1km, ML2.9/3, Error ellipse: s-maj=2.4km s-min=1.4km az=240.0*

ISC 18 05:31:22.6±1.0**, 38°.22N**±0°.05×**20°.40E**±0°.06**, h19km**±2km**, n14, σ0s.70**/27**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LXRA	Lixouri, Kepha	0.04	128	P	Pg	05 31 26.2	+0.2
LXRA				S	Sg	05 31 28.2	-0.1
KEF4	Livadi, Kephal	0.04	28	P	Pg	05 31 26.1	+0.1
KEF4				S	Sg	05 31 28.1	-0.3
KEF3	Kipouria, Keph	0.05	244	P	Pg	05 31 26.3	+0.2
KEF3				S	Sg	05 31 28.5	+0.1
KEF1	Kardakata, Kep	0.08	45	P	Pg	05 31 26.3	0.0
KEF1				S	Sg	05 31 28.2	-0.6
KEF2	Argostoli. Kep	0.09	130	P	Pg	05 31 26.4	0.0
KEF2				S	Sg	05 31 28.4	-0.5
VLS	Valsamata	0.16	107	P	Pg	05 31 27.0	-0.2
VLS				S	Sg	05 31 29.8	-0.3
VLS				AML	AML	05 31 29.9	
	comp=N,14844µm,0.1s						
VLS				AML	AML	05 31 30.1	
	comp=E,25535µm,0.1s						
KONA	Konidatara, Ke	0.24	34	P	Pg	05 31 28.5	+0.2
KONA				S	Sg	05 31 32.1	-0.1
FSK	Fiskardo	0.27	28	P	Pg	05 31 29.0	+0.2
FSK				S	Sg	05 31 33.0	+0.1
FSK				AML	AML	05 31 33.4	
	comp=N,2614µm,0.2s						
FSK				AML	AML	05 31 33.6	
	comp=E,7008µm,0.1s						
KFL	Anninata	0.33	110	P	Pb	05 31 29.9	+0.1
KFL				S	Sb	05 31 34.8	+0.2
KFL				AML	AML	05 31 35.4	
	comp=E,5126µm,0.3s						
KFL				AML	AML	05 31 35.6	
	comp=N,3953µm,0.2s						
MAKA	Makarska	5.67	334	*e*Pn	Pn	05 32 46.7	+1.0
RICI	Ricice	5.82	336	*e*Pn	Pn	05 32 48.5	+0.7
RICI				Sn	Sn	05 33 53.0	-1.0
ZIRJ	Zirje	6.51	328	*e*Pn	Pn	05 32 56.9	-0.3
ZIRJ				Sn	Sn	05 34 09.2	-1.7
KIJV	Kijevo	6.52	334	*e*Pn	Pn	05 32 58.6	+1.3
KIJV				Sn	Sn	05 34 10.6	-0.5
MORI	Morici	6.66	329	*i* Pn	Pn	05 33 00.6	+1.3
MORI				Sn	Sn	05 34 13.5	-1.1

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*TAP **18** 05:31:59.3, 23°.95N×122°.41E, h22km±1km, ML3.4, D*

*JMA **18** 05:31:59.2±0.3, 23°.93N×122°.44E, h18km±4km, M2.9*

ISC 18 05:31:59.2±1.1**, 23°.93N**±0°.03×**122°.43E**±0°.02**, h20km**±6km**, n71, σ0s.41**/106**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.67	336	P	Pb	05 32 12.4	+0.1
	baz=337						
EOS1				*e*S	Sb	05 32 21.5	+0.2
	baz=337						
JYNG	Yonagunijimaku	0.70	42	P	Pb	05 32 12.5	-0.3
JYNG				S	Sb	05 32 20.9	-1.1
YOJ	Yonaguni jima	0.75	45	*i* P	Pb	05 32 13.5	-0.1
	baz=46						
YOJ	Yonaguni jima	0.75	45	P	Pb	05 32 13.4	-0.1
YOJ				*e*S	Sb	05 32 22.4	-0.9
ENLB	Shoufeng	0.76	268	*e*P	Pb	05 32 13.4	-0.3
	baz=266						
ENLB				*e*S	Sb	05 32 24.5	+0.8
	baz=266						
TWD	Chiawan	0.78	281	*i* P	Pb	05 32 14.2	+0.1
	baz=280						
TWD				*e*S	Sb	05 32 24.7	+0.5
	baz=280						
ENA	Nanau	0.80	308	*i* P	Pb	05 32 14.5	+0.1
	baz=308						
ENA				*e*S	Sb	05 32 25.5	+0.7
	baz=308						
NACB	Ninganchiao	0.80	288	P	Pb	05 32 14.5	0.0
	baz=286						
NACB				*e*S	Sb	05 32 25.6	+0.8
	baz=286						
TWC	Suao	0.86	322	P	Pb	05 32 14.9	-0.6
	baz=322						
TWC				*e*S	Sb	05 32 25.9	-0.6
	baz=322						
ETLH	Xiulin Townshi	0.91	288	*e*P	Pb	05 32 16.2	-0.2
	baz=286						
ETLH				*e*S	Sb	05 32 28.6	+0.5
	baz=286						
ESL	Shilin	0.92	263	*e*P	Pb	05 32 16.1	-0.4
	baz=261						
ESL				*e*S	Sb	05 32 28.7	+0.4
	baz=261						
EGFH	Guangfu	0.95	254	*e*P	Pn	05 32 17.4	0.0
	baz=252						
EGFH				*i* S	Sn	05 32 30.4	-0.1
	baz=252						
HGSD	Ruisui	1.02	245	*e*P	Pb	05 32 17.9	-0.4
	baz=243						
TWE	Neicheng	1.05	319	P	Pn	05 32 19.0	+0.2
	baz=319						
ENTT	Nioudou	1.06	312	P	Pn	05 32 19.1	+0.1
	baz=312						
NTC	Toucheng	1.07	329	*e*P	Pn	05 32 19.1	0.0
	baz=329						
NDT	Datong Townshi	1.07	309	*e*P	Pn	05 32 19.2	+0.1
	baz=308						
NDT				*e*S	Sn	05 32 33.7	+0.3
	baz=308						
NNSB	Datong	1.08	298	*e*P	Pn	05 32 19.2	-0.1
	baz=297						
NNSB				*e*S	Sn	05 32 33.4	-0.3
	baz=297						
NNSH	Datong	1.08	298	P	Pb	05 32 19.1	-0.2
	baz=297						
NNSH				*e*S	Sn	05 32 33.6	-0.1
	baz=297						
WHF	Hehuan Shan	1.09	282	P	Pb	05 32 19.2	-0.4
	baz=280						
WHF				S	Sb	05 32 33.2	-0.3
	baz=280						
NNS	Nan Shan	1.09	298	P	Pn	05 32 19.4	-0.1
	baz=297						
NNS				*e*S	Sb	05 32 33.5	+0.2
	baz=297						
SLBB	Yuanshan	1.09	319	*i* P	Pn	05 32 19.1	-0.3
	baz=318						
EHY	Hungye	1.10	248	*i* P	Pn	05 32 19.3	-0.2
	baz=245						
EHY				*i* S	Sn	05 32 34.0	-0.1
	baz=245						
TWB1	Santiao Chiao	1.15	340	*i* P	Pn	05 32 19.9	-0.2
	baz=340						
TWB1				*e*S	Sn	05 32 35.1	-0.1
	baz=340						
OWD	Renai	1.15	271	P	Pn	05 32 20.1	-0.1
	baz=270						
OWD				*e*S	Sb	05 32 34.6	-0.4
	baz=270						
CHGB	Renai	1.16	277	*e*P	Pn	05 32 20.2	-0.2
	baz=275						
CHGB				*e*S	Sb	05 32 35.0	-0.3
	baz=275						
YULB	Yu-li	1.17	243	*i* P	Pn	05 32 20.4	0.0
	baz=241						
YULB				*e*S	Sb	05 32 35.5	0.0
	baz=241						
TIPB	Shuangxi	1.17	332	P	Pn	05 32 20.4	-0.1
	baz=332						
TIPB				*e*S	Sb	05 32 35.4	-0.2
	baz=332						
TWF1	Yuli	1.19	241	*e*P	Pn	05 32 20.8	+0.1
	baz=239						
TWF1				*e*S	Sn	05 32 36.3	0.0
	baz=239						
TWT	Tachien	1.19	286	*e*P	Pb	05 32 21.6	+0.3
	baz=284						
NWLT	Wulai	1.19	315	P	Pb	05 32 21.2	0.0
	baz=315						
NWLT				*e*S	Sn	05 32 36.4	-0.1
	baz=315						
VWDT	VWDT	1.19	262	*e*P	Pn	05 32 20.9	+0.1
	baz=260						
VWDT				*e*S	Sn	05 32 36.4	0.0
	baz=260						
TDCB	Techi	1.21	286	*e*P	Pb	05 32 21.4	0.0
	baz=284						
YHNB	Yeheng	1.21	308	P	Pn	05 32 21.2	+0.1
	baz=307						
YHNB				*e*S	Sn	05 32 37.1	+0.2
	baz=307						
NSK	Sanguang	1.23	307	P	Pn	05 32 21.4	0.0
	baz=307						
NSK				*e*S	Sb	05 32 36.8	-0.4
	baz=307						
IRIF	Iriomote-Funau	1.25	71	P	Pb	05 32 21.9	-0.3
IRIF				*e*S	Sb	05 32 38.3	+0.4
HATJ	Hateruma jima	1.26	84	P	Pb	05 32 22.3	-0.1
HATJ				S	Sb	05 32 38.7	+0.5
FULB	Fuli	1.27	235	*e*P	Pn	05 32 21.5	-0.3
	baz=233						
NWF	Wu-fen Shan	1.28	333	P	Pn	05 32 22.0	-0.1
	baz=333						
NWF				*e*S	Sb	05 32 38.9	+0.1
	baz=333						
WFSB	Wu-fen Shan	1.28	333	P	Pn	05 32 22.0	0.0
	baz=332						
TWA	Mucha	1.30	324	*e*P	Pb	05 32 23.7	+0.8
	baz=324						
TATO	Taipei	1.35	321	*e*P	Pn	05 32 23.1	+0.2
	baz=320						
SSLB	Suanglung	1.36	264	*e*P	Pb	05 32 23.7	-0.3
	baz=263						
WHP	Taichung City	1.40	285	*e*P	Pb	05 32 25.3	+0.6
	baz=283						
SMLT	Sun Moon Lake	1.40	268	*e*P	Pn	05 32 24.2	+0.4
	baz=267						
SMLT				*e*S	Sn	05 32 41.8	+0.2
	baz=267						
YM01	YM01	1.44	327	*e*P	Pb	05 32 25.0	-0.4
	baz=327						
YM10	YM10	1.45	327	*e*P	Pn	05 32 24.5	+0.1
	baz=327						
YM05	YM05	1.46	327	*e*P	Pn	05 32 24.8	+0.3
	baz=327						
WHYT	Xinyi Township	1.46	261	*e*P	Pb	05 32 25.3	-0.4
	baz=259						
YM04	YM04	1.46	326	*e*P	Pb	05 32 25.4	-0.4
	baz=326						
LIOB	Emei	1.47	299	*e*P	Pb	05 32 26.2	+0.2
	baz=298						
JKRS	Kuro-shima	1.48	78	P	Pb	05 32 26.3	+0.3
JKRS				*e*S	Sb	05 32 44.9	+0.6
ELDTW	Lidau	1.49	241	*e*P	Pn	05 32 25.0	0.0
	baz=239						
TWH	Lutao	1.50	216	*e*P	Pn	05 32 24.6	-0.3
	baz=213						
ALS	Alishan	1.55	255	*e*P	Pn	05 32 25.5	-0.4
	baz=253						
TWQ1	Liyutan	1.57	286	*e*P	Pn	05 32 26.3	+0.3
	baz=284						
JIJ	Ishigaki jima	1.62	74	P	Pn	05 32 27.0	+0.3
JIJ				S	Sn	05 32 46.3	-0.7
CHN5	Tsauling	1.64	259	*e*P	Pn	05 32 26.1	-0.9
	baz=257						
TWGBT	Beinan	1.66	228	*e*P	Pn	05 32 27.4	+0.2
	baz=227						
TWG	Pinlang	1.67	229	*e*P	Pn	05 32 27.4	+0.1
	baz=227						
TWG				*e*S	Sn	05 32 47.6	-0.5
	baz=227						
WDLH	Douliu	1.75	262	*e*P	Pn	05 32 28.7	+0.3
	baz=261						
TPUB	Ta-pu	1.77	250	*e*P	Pb	05 32 30.5	-0.5
	baz=248						
CHN4	Tsaushan	1.78	251	*e*P	Pb	05 32 31.3	+0.1
	baz=250						
JISG	Ishigakijimahi	1.84	69	P	Pn	05 32 29.9	+0.3
JISG				*e*S	Sn	05 32 52.3	0.0
RLNB	Erlin	1.90	269	*e*P	Pb	05 32 32.5	-0.6
	baz=268						
CHN1	Nanshi	1.90	247	*e*P	Pb	05 32 33.2	0.0
	baz=246						
TWK	Hsinying	1.90	250	*e*P	Pb	05 32 33.0	-0.3
	baz=248						
SNST	Tainan City	1.91	249	*e*P	Pb	05 32 32.3	-1.1
	baz=247						
LAY	Lan-yu	2.05	203	*e*P	Pn	05 32 32.5	-0.1
	baz=202						
MASBT	Mashibuluo	2.11	232	*e*P	Pn	05 32 34.5	+1.1
	baz=230						
EAST	Anshuo	2.12	224	*e*P	Pn	05 32 34.6	+1.0
	baz=222						

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*ISK **18** 06:09:34.8, 39°.79N×26°.14E, h7km, ML2.6/13*

*ATH **18** 06:09:34.7, 39°.78N×26°.11E, h31km±1km, ML2.0/4, Error ellipse: s-maj=3.2km s-min=1.1km az=260.0*

ISC 18 06:09:34.6±0.9**, 39°.78N**±0°.02×**26°.15E**±0°.03**, h13km**±6km**, n21, σ0s.44**/30**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOZC	Bozcaada	0.10	311	PG	Pg	06 09 37.6	0.0
BOZC				SG	Sg	06 09 38.9	-0.8
EZN	Ezine	0.15	71	PG	Pg	06 09 38.5	+0.3
EZN				SG	Sg	06 09 41.0	+0.3
SIGR	SIGRI	0.61	202	P	Pb	06 09 47.0	0.0
SIGR				S	Sb	06 09 56.1	+0.6
SIGR				AML	AML	06 09 56.5	
	comp=N,944µm,0.4s						
SIGR				AML	AML	06 09 56.6	
	comp=E,349µm,0.2s						
SIGR	SIGRI	0.61	202	PG	Pb	06 09 47.1	0.0
SIGR				SG	Sb	06 09 56.1	+0.6
GELI	Tayfur-Gelibol	0.67	22	PG	Pb	06 09 48.1	+0.1
GELI				SG	Sb	06 09 57.4	+0.2
LIA	Limnos Island	0.75	279	P	Pb	06 09 49.5	+0.1
LIA				S	Sb	06 10 00.0	+0.4
LIA				AML	AML	06 10 03.1	
	comp=N,222µm,0.4s						
LIA				AML	AML	06 10 03.2	
	comp=E,245µm,0.6s						
SMTH	Samothraki Isl	0.84	326	P	Pb	06 09 50.9	-0.1
SMTH				S	Sb	06 10 02.7	+0.6
SMTH				AML	AML	06 10 04.8	
	comp=N,171µm,0.3s						
SMTH				AML	AML	06 10 05.1	
	comp=E,121µm,0.3s						
DKL	Dikili	0.92	140	PG	Pn	06 09 53.2	+0.1
ERIK	Erikli-Kesan	0.93	17	PG	Pg	06 09 52.2	-0.4
ALN	Alexandroupoli	1.12	356	P	Pb	06 09 55.6	-0.1
ALN				S	Sn	06 10 11.3	+0.1
ALN				AML	AML	06 10 12.2	
	comp=E,126µm,0.4s						
ALN				AML	AML	06 10 12.6	
	comp=N,196µm,0.4s						
ALN	Alexandroupoli	1.12	356	PN	Pn	06 09 56.3	+0.4
RKY	Sarkoy-Tekirda	1.20	41	PN	Pg	06 09 57.4	-0.3
GONE	Gonen-Balikesi	1.22	77	PN	Pg	06 09 58.6	+0.7
THAS	Thassos island	1.37	308	P	Pn	06 09 59.5	+0.2
THAS				S	Sb	06 10 16.5	-0.9
CHOS	Chios island	1.39	183	P	Pb	06 10 00.1	-0.3
CHOS	Chios island	1.39	183	PN	Pg	06 10 01.1	-0.2
UKOP	Uzunkopru-Edir	1.40	15	PN	Pg	06 10 01.2	-0.3
EDC	Edincik	1.44	66	PN	Pg	06 10 01.7	-0.4
RDO	Rodhopi	1.44	341	PN	Pb	06 10 01.2	0.0
URLA	Izmir	1.46	166	PN	Pg	06 10 01.9	-0.7
KCTX	Karacabey (Bur	1.77	73	PN	Pb	06 10 06.2	-0.6

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*ISK **18** 06:16:30.6, 37°.58N×43°.56E, h5km, ML3.8/14*

*DDA **18** 06:16:30.5, 37°.56N×43°.55E, h10km±4km, ML3.5*

*IDC **18** 06:16:32.2±1.8, 37°.29N×44°.08E, h0^{km}, mb3.6/2, mb1 3.6/4, mb1mx3.3/38, mbtmp3.4/4, ML2.0/2, Error ellipse: s-maj=25.6km s-min=21.2km az=86.0*

ISC 18 06:16:30.6±1.1**, 37°.63N**±0°.02×**43°.60E**±0°.03**, h8^{km}**±8^{km}**, n36,** σ1^s**66**/59**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUKT	Cukurca	0.38	179	PG	Pg	06 16 38.3	+0.1
CUKT				SG	Sg	06 16 44.0	+0.7
CUKT	Cukurca	0.38	179	*i* P	Pg	06 16 38.5	+0.3
CUKT				*i* S	Sg	06 16 41.7	-1.6
CUKT				IAML		06 16 45.0	
	comp=N,8µm,0.5s						
CUKT				IAML		06 16 45.0	
	comp=E,12µm,0.3s						
BASK	Baskale_VAN	0.53	37	*i* P	Pb	06 16 41.9	-0.3
BASK				*i* S	Sg	06 16 46.6	-1.3
BASK				IAML		06 16 52.0	
	comp=E,2µm,0.8s						
BASK				IAML		06 16 53.0	
	comp=N,2µm,0.7s						
GEVA	Gevas	0.80	328	*i* P	Pb	06 16 46.8	-0.1
GEVA				*i* S	Sg	06 16 55.6	-0.9
AKDM	Akdamar-Van	0.85	325	PG	Pb	06 16 48.2	+0.5
AKDM				SG	Sn	06 17 02.2	+0.4
TVAN	Van	0.91	350	*i* P	Pb	06 16 49.3	+0.6
TVAN				*i* S	Sg	06 16 59.0	-0.9
TVAN				IAML		06 17 06.0	
	comp=N,970nm,0.8s						
TVAN				IAML		06 17 07.0	
	comp=E,794nm,0.8s						
SIRT	Sirnak	0.93	262	PG	Pb	06 16 48.9	-0.2
SIRT				SG	Sn	06 17 02.3	-1.4
SIRN	Sırnak	0.95	262	*i* P	Pg	06 16 48.9	0.0
SIRN				*i* S	Sg	06 16 59.5	-1.8
SIRN				IAML		06 17 07.0	
	comp=E,2µm,0.9s						
SIRN				IAML		06 17 09.0	
	comp=N,2µm,0.7s						
VANB	Van	0.97	350	PG	Pg	06 16 49.1	-0.3
VANB				SG	Sn	06 17 03.9	-0.9
ADCV	BITLIS_Adilcev	1.36	330	*i* P	Pg	06 16 57.6	+0.9
ADCV				*i* S	Sb	06 17 10.9	-3.2
SRTM	Siirt_Merkez	1.38	286	*i* P	Pg	06 16 57.4	+0.3
SRTM				*i* S	Sg	06 17 17.0	+2.1
SRTM				IAML		06 17 20.0	
	comp=N,1µm,0.7s						
SRTM				IAML		06 17 32.0	
	comp=E,736nm,0.6s						
BLIS	Bitlis-Merkez	1.41	304	*i* P	Pg	06 16 58.9	+1.2
BLIS				*i* S	Sn	06 17 14.9	-0.6
BLIS				IAML		06 17 28.0	
	comp=N,466nm,0.7s						
MLAZ	Malazgirt-MUS	1.72	332	PN	Pg	06 17 03.6	0.0
MLAZ				SN	Sg	06 17 27.1	+1.2
DYDN	Diyadin	1.91	2	*i* P	Pg	06 17 07.6	+0.3
DYDN				*i* S	Sn	06 17 27.8	-0.2
SVAN	Silvan-Diyarba	1.97	286	PN	Pb	06 17 05.6	-1.1
SVAN	Silvan-Diyarba	1.97	286	*i* P	Pn	06 17 05.2	+0.9
SVAN				*i* S	Sn	06 17 25.5	-3.7
SVAN				IAML		06 17 42.0	
	comp=N,247nm,1.2s						
MUSM	Mu-Merkez	1.97	304	*i* P	Pb	06 17 05.7	-1.2
MUSM				*i* S	Sn	06 17 27.4	-2.0
AGRB	Hanur-Agry	2.00	346	PN	Pb	06 17 07.7	+0.4
MARD	Mardin	2.27	263	*i* P	Pb	06 17 11.8	0.0
MARD				*i* S	Sn	06 17 34.5	-2.2
MARD				IAML		06 17 47.0	
	comp=N,863nm,0.7s						
MARD				IAML		06 17 53.0	
	comp=E,634nm,0.7s						
VRTB	Varto-Mus	2.27	313	PN	Pb	06 17 10.9	-1.1
EATA	Eleskirt	2.39	339	*i* P	Pb	06 17 13.8	-0.3
EATA				*i* S	Sn	06 17 37.3	-2.7
MAZI	Mazidag	2.51	267	PN	Pn	06 17 13.6	+1.8
HANI	Diyarbakir_Han	2.65	288	*i* P	Pn	06 17 14.8	+1.2
HANI				*i* S	Sb	06 17 52.0	+1.0
HANI				IAML		06 18 12.0	
	comp=E,213nm,0.8s						
HANI				IAML		06 18 21.0	
	comp=N,159nm,1.0s						
GNI	Garni	2.67	19	Pn	Pg	06 17 22.7	+0.9
	comp=N,3.4nm,0.3s,baz=188,slow=15,SNR=11						
GNI				Lg	Lg	06 18 03.1	
	comp=N,4.3nm,0.3s,baz=278,slow=21,SNR=9.8						
GNI	Garni	2.67	19	PN	Pb	06 17 17.4	-1.3
BNGB	Bingl	2.67	301	PN	Pb	06 17 16.9	-1.8
KOPR	Koprukoy-ERZUR	2.72	330	PN	Pb	06 17 17.6	-2.1
DYBB	Diyarbakir	2.76	278	PN	Pn	06 17 17.3	+2.1
DIYA	Diyarbakir	2.77	277	*i* P	Pb	06 17 21.7	+1.3
DIYA				*i* S	Sn	06 17 49.7	+0.6
YEDI	Yedisu-Bingol	3.00	308	PN	Pn	06 17 21.2	+2.6
ELZG	Elazig	3.74	285	*i* P	Pn	06 17 29.8	+1.0
ELZG				*i* S	Sb	06 18 18.5	-4.1
ELZG				IAML		06 18 40.0	
	comp=E,103nm,1.0s						
ELZG				IAML		06 18 55.0	
	comp=N,100nm,0.9s						
SURC	SANLIURFA_SURC	4.05	261	*i* P	Pb	06 17 42.1	-0.1
SURC				*i* S	Sb	06 18 31.3	0.0
AYKD	Aykdinkavak	5.41	270	*i* P	Pg	06 18 10.4	-3.7
AYKD				*i* S	Sb	06 19 13.9	+3.6
BRTR	Keskin Array B	8.07	288	Pn	Pn	06 18 39.0	+11
	comp=N,0.1nm,0.3s,baz=89,slow=15,SNR=2.7						
BRTR				Pg	Pg	06 19 08.1	+3.0
	comp=N,0.1nm,0.3s,baz=126,slow=17,SNR=5.8						
MKAR	Makanchi Array	29.82	60	P	P	06 22 39.1	+1.0
	comp=N,0.2nm,0.7s,baz=262,slow=7.1,SNR=2.6						
CMAR	Chiang Mai Arr	51.69	96	P	P	06 25 38.0	-0.3
	comp=N,0.6nm,0.3s,baz=297,slow=8.0,SNR=5.1						

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*IDC **18** 06:29:37.1±1.2, 38°.29N×20°.32E, h0^{km}, mb3.7/9, mb1 3.6/14, mb1mx3.5/47, mbtmp3.6/14, ML3.3/5, Error ellipse: s-maj=20.3km s-min=19.9km az=63.0*

*PDG **18** 06:29:39.8±0.5, 38°.26N×20°.30E, h11^{km}±1^{km}, ML3.8/13, Error ellipse: s-maj=1.1km s-min=1.2km az=0.0*

*ATH **18** 06:29:39.5, 38°.18N×20°.33E, h18^{km}, ML3.4/24, Error ellipse: s-maj=1.7km s-min=0.8km az=63.0*

*THE **18** 06:29:40.0, 38°.19N×20°.36E, h16^{km}, ML3.7/5, Error ellipse: s-maj=1.1km s-min=0.5km az=255.0*

ISC 18 06:29:40.0±0.6**, 38°.21N**±0°.03×**20°.33E**±0°.03**, h18^{km}**±2^{km}**, n120,** σ1^s**36**/153**, mb3.8**/9**, 10C-5D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.01	113	P	Pg	06 29 42.9	-0.2
KEF3				S	Sg	06 29 45.2	0.0
CHV1	Chavriata, Kef	0.05	122	P	Pg	06 29 42.9	-0.3
CHV1				S	Sg	06 29 44.9	-0.4
AGT1	Agia Thekli	0.06	45	P	Pg	06 29 43.2	-0.1
AGT1				S	Sg	06 29 45.3	-0.2
LXRA	Lixouri, Kepha	0.08	96	P	Pg	06 29 43.2	-0.2
LXRA				S	Sg	06 29 45.5	-0.3
LXR1	Lixouri, Cepha	0.09	95	P	Pg	06 29 43.2	-0.3
LXR1				S	Sg	06 29 45.6	-0.2
KEF4	Livadi, Kephal	0.09	56	P	Pb	06 29 43.4	-0.1
KEF4				S	Sb	06 29 45.9	0.0
ARGA	Argostoli. Kep	0.12	105	P	Pb	06 29 43.3	-0.1
ARGA				S	Sg	06 29 45.5	-1.0
ARG2	Argostoli	0.13	104	P	Pb	06 29 43.4	-0.1
ARG2				S	Sg	06 29 45.6	-0.9
KEF1	Kardakata, Kep	0.13	58	P	Pb	06 29 43.7	+0.1
KEF1				S	Sg	06 29 46.3	-0.3
KEF2	Argostoli. Kep	0.13	109	P	Pb	06 29 43.4	-0.2
KEF2				S	Sg	06 29 45.7	-0.9
VSK1	VASILIKIADES	0.27	42	P	Pg	06 29 45.9	-0.2
VSK1				S	Sb	06 29 50.5	-0.2
	20µm,0.2s						
KONA	Konidatara, Ke	0.29	41	P	Pg	06 29 46.1	-0.2
KONA				S	Sg	06 29 50.5	-0.2
FSK	Fiskardo	0.31	36	P	Pg	06 29 46.5	-0.2
FSK				S	Sg	06 29 51.2	0.0
	7µm,0.3s						
FSK	Fiskardo	0.31	36	P	Pg	06 29 46.5	-0.2
FSK				S	Sb	06 29 51.6	-0.2
FSK				AML	AML	06 29 52.0	
	comp=N,15246µm,0.3s						
FSK				AML	AML	06 29 53.1	
	comp=E,14869µm,0.2s						
KFL	Anninata	0.37	105	P	Pg	06 29 46.9	-0.9
KFL				S	Sg	06 29 52.2	-0.9
	comp=E,25µm,0.4s						
KFL	Anninata	0.37	105	P	Pg	06 29 46.9	-0.9
KFL				S	Sg	06 29 52.5	-0.6
EVGI	Lefkada island	0.48	32	P	Pg	06 29 49.5	-0.3
EVGI	Lefkada island	0.48	32	P	Pg	06 29 49.5	-0.3
MGNA	Meganis	0.57	39	P	Pg	06 29 51.1	-0.4
MGNA				S	Sb	06 29 59.8	+0.4
LKD2	Lefkada island	0.63	24	P	Pg	06 29 52.0	-0.5
LKD2	Lefkada island	0.63	24	P	Pg	06 29 52.0	-0.5
LKD2				AML	AML	06 30 08.4	
	comp=E,6844µm,0.2s						
LKD2				AML	AML	06 30 08.8	
	comp=N,4448µm,0.4s						
TSLK	Tsoukalades, L	0.67	22	P	Pg	06 29 52.7	-0.4
TSLK	Tsoukalades, L	0.67	22	P	Pg	06 29 52.8	-0.4
TSLK				AML	AML	06 30 09.4	
	comp=N,4816µm,0.3s						
TSLK				AML	AML	06 30 09.6	
	comp=E,6064µm,0.4s						
VTN	Vitineika	0.73	113	P	Pg	06 29 53.4	-1.0
VTN	Vitineika	0.73	113	P	Pg	06 29 53.6	-0.8
PDO	Prodromos	0.77	60	P	Pb	06 29 54.2	-0.8
PDO				S	Sb	06 30 06.3	+1.1
	comp=E,7µm,0.4s						
PDO	Prodromos	0.77	60	P	Pb	06 29 54.2	-0.8
PDO				AML	AML	06 30 12.1	
	comp=E,10017µm,0.5s						
PDO				AML	AML	06 30 16.6	
	comp=N,10034µm,0.4s						
RLS	Riolos of Patr	0.91	99	P	Pb	06 29 56.0	-1.2
RLS	Riolos of Patr	0.91	99	P	Pb	06 29 56.2	-1.0
RLS				AML	AML	06 30 18.9	
	comp=N,2991µm,0.4s						
RLS				AML	AML	06 30 23.4	
	comp=E,3405µm,0.5s						
PVO	Paravola	1.02	66	P	Pb	06 29 59.0	-0.2
PVO				S	Sn	06 30 13.7	+0.3
	comp=E,4µm,0.3s						
PVO	Paravola	1.02	66	P	Pb	06 29 59.1	-0.2
PVO				AML	AML	06 30 20.2	
	comp=N,6905µm,0.3s						
PVO				AML	AML	06 30 22.3	
	comp=E,9048µm,0.4s						
DRO	Drossia	1.12	103	P	Pb	06 30 00.0	-0.8
DRO	Drossia	1.12	103	P	Pb	06 30 00.2	-0.7
DRO				AML	AML	06 30 24.4	
	comp=N,7427µm,0.4s						
DRO				AML	AML	06 30 26.1	
	comp=E,7390µm,0.6s						
AMT	Artemida-Makis	1.28	121	P	Pb	06 30 03.5	-0.2
AMT				AML	AML	06 30 30.2	
	comp=N,5226µm,0.6s						
AMT				AML	AML	06 30 38.8	
	comp=E,4914µm,0.7s						
EVR	Evrytania	1.36	58	P	Pg	06 30 06.1	-0.1
EVR				AML	AML	06 30 31.5	
	comp=N,1311µm,0.6s						
EVR				AML	AML	06 30 31.9	
	comp=E,1581µm,0.5s						
TRIZ	Trizonia	1.38	83	P	Pg	06 30 05.9	-0.7
KALE	Kalithea	1.44	82	P	Pb	06 30 06.2	-0.1
KALE				AML	AML	06 30 35.4	
	comp=N,2193µm,0.5s						
KALE				AML	AML	06 30 37.1	
	comp=E,2033µm,0.4s						
KLV	Kalavryta, Ach	1.44	96	P	Pb	06 30 05.9	-0.5
KLV				AML	AML	06 30 31.9	
	comp=N,1496µm,0.7s						
KLV				AML	AML	06 30 47.5	
	comp=E,1443µm,0.8s						
KEK	Kerkira	1.56	345	P	Pb	06 30 08.3	-0.1
KEK	Kerkira	1.56	345	P	Pb	06 30 08.3	-0.1
MAKR	Makrakomi, Fth	1.62	60	P	Pg	06 30 10.6	-0.7
MAKR				AML	AML	06 30 43.0	
	comp=E,2455µm,0.3s						
MAKR				AML	AML	06 30 46.1	
	comp=N,2295µm,0.6s						
ITM	Ithomi	1.63	129	P	Pb	06 30 09.7	+0.1
MEV	Metsovon	1.72	24	P	Pb	06 30 12.1	+0.8
PYL	PYLOS	1.73	139	P	Pb	06 30 10.1	-1.1
PYL				AML	AML	06 30 52.0	
	comp=E,663µm,0.5s						
PYL				AML	AML	06 30 52.3	
	comp=N,610µm,0.7s						
AGG	Agios Georgios	1.76	62	P	Pb	06 30 12.0	+0.1
AGG				AML	AML	06 30 45.9	
	comp=E,1400µm,1.2s						
AGG				AML	AML	06 30 48.3	
	comp=N,1402µm,0.6s						
VLX	Vlachokerasia	1.83	117	P	Pb	06 30 12.9	-0.1
VLX				AML	AML	06 30 47.3	
	comp=N,2056µm,0.5s						
VLX				AML	AML	06 30 49.6	
	comp=E,1488µm,0.5s						
THL	Klokotos Trika	1.89	44	P	Pb	06 30 14.2	+0.2
THL				AML	AML	06 30 50.1	
	comp=E,1112µm,0.6s						
THL				AML	AML	06 30 55.7	
	comp=N,769µm,0.9s						
AXAR	Agios Charalam	1.91	72	P	Pb	06 30 14.4	+0.1
AXAR				AML	AML	06 30 50.9	
	comp=N,3533µm,0.5s						
AXAR				AML	AML	06 30 58.4	
	comp=E,2583µm,0.9s						
PROD	Prodromos	2.02	88	P	Pb	06 30 15.2	-1.1
PROD				AML	AML	06 30 54.8	
	comp=E,1045µm,0.4s						
PROD				AML	AML	06 30 57.5	
	comp=N,843µm,0.4s						
LTK	Loutraki	2.09	94	P	Pb	06 30 15.6	-1.8
LTK				AML	AML	06 30 55.6	
	comp=N,634µm,0.9s						
LTK				AML	AML	06 30 57.2	
	comp=E,815µm,0.6s						
LOUT	Loutraki	2.10	95	P	Pb	06 30 15.9	-1.7
LOUT				AML	AML	06 30 55.0	
	comp=N,183µm,0.5s						
LOUT				AML	AML	06 30 57.4	
	comp=E,154µm,0.5s						
LKR	Lokris	2.14	77	P	Pb	06 30 16.8	-1.4
LKR				AML	AML	06 30 45.9	
	comp=N,813µm,0.5s						
LKR				AML	AML	06 30 46.2	
	comp=E,987µm,0.2s						
VIL2	Platees	2.31	89	P	Pb	06 30 19.4	-1.8
VIL2				AML	AML	06 31 05.4	
	comp=N,739µm,0.5s						
VIL2				AML	AML	06 31 11.1	
	comp=E,1048µm,0.5s						
SCTE	Santa Cesarea	2.36	323	P	Pn	06 30 19.3	+1.4
NEO	Neokhori	2.51	63	P	Pb	06 30 22.2	-2.4
NEO				AML	AML	06 31 05.3	
	comp=N,618µm,0.5s						
NEO				AML	AML	06 31 10.2	
	comp=E,490µm,0.4s						
XOR	Xorichti	2.52	62	P	Pn	06 30 21.8	+1.8
XOR				AML	AML	06 31 14.3	
	comp=E,328µm,0.6s						
XOR				AML	AML	06 31 16.9	
	comp=N,509µm,0.8s						
MRKA	Markates	2.60	78	P	Pn	06 30 23.1	+1.8
TIP	Timpagrande	2.96	290	P	Pn	06 30 27.6	+1.4
TIP	Timpagrande	2.96	290	⇑P	Pn	06 30 27.8	+1.6
TIP				⇑S	Sn	06 31 02.1	+0.8
CGL1	Ceglie Messapi	3.29	319	*e*Pn	Pn	06 30 32.4	+1.7
CGL1				Sn	Sn	06 31 11.7	+2.2
MATE	Matera	3.72	312	⇑P	Pn	06 30 38.5	+2.0
MATE				⇑S	Sn	06 31 20.6	+0.7
STIP	Stip	3.76	22	*e*Pn	Pb	06 30 42.0	-3.9
SG1	Sgolgore (BA)	3.86	314	*e*Pn	Pn	06 30 40.6	+2.1
SG1				Sn	Sn	06 31 23.8	+0.4
BAI	Bari	3.93	318	*e*Pn	Pn	06 30 41.6	+2.1
DRME	Dracevica, Mon	4.07	348	*e*Pn	Pn	06 30 41.7	+0.3
APE	Apeiranthos	4.28	104	⇑P	Pn	06 30 47.5	+3.2
APE				⇑S	Sn	06 31 38.1	+4.3
PDG	Podgorica	4.30	349	⇑P	Pn	06 30 45.8	+1.3
PDG				⇓S	Sn	06 31 35.0	+0.9
PDG	Podgorica	4.30	349	*e*Pn	Pn	06 30 45.0	+0.5
HCY	Herceg Novi	4.46	342	*e*Pn	Pn	06 30 45.9	-0.9
IDI	Anoyia	4.68	127	Pn	Pn	06 30 50.4	+0.5
	comp=N,0.1nm,0.3s,baz=318,slow=14,SNR=2.6						
IDI				Sn	Sn	06 31 40.6	-3.1
	comp=N,2.6nm,0.3s,baz=295,slow=19,SNR=3.6						
TREB	Trebinje	4.75	342	*e*Pn	Pn	06 30 50.3	-0.4
DBRK	Dubrovnik	4.76	340	*i* Pn	Pn	06 30 51.1	+0.3
DBRK				Sn	Sn	06 31 44.2	-1.3
BRY	Bratogost	4.88	344	*e*Pn	Pn	06 30 52.4	-0.3
VTS	Vitosha	4.93	26	⇑P	Pn	06 30 54.9	+1.5
STON	Ston	5.07	338	*i* Pn	Pn	06 30 55.2	+0.2
STON				Sn	Sn	06 31 50.7	-2.5
STON	Ston	5.07	338	*e*Pn	Pn	06 30 54.5	-0.6
UPM	Unac-Piva	5.11	348	*e*Pn	Pn	06 30 56.7	+0.9
RUDO	Rudo	5.45	353	*e*Pn	Pn	06 31 00.7	+0.3
MAKA	Makarska	5.66	335	*e*Pn	Pn	06 31 03.8	+0.5
MAKA				Sn	Sn	06 32 05.3	-2.5
RICI	Ricice	5.81	336	*i* Pn	Pn	06 31 05.5	+0.2
RICI				Sn	Sn	06 32 09.8	-1.7
DIVS	Divibare	5.89	358	*e*Pn	Pn	06 31 05.7	-0.8
HAPS	Han Pijesak,Bl	5.96	350	*e*Pn	Pn	06 31 09.3	+1.8
ZIRJ	Zirje	6.49	328	*e*Pn	Pn	06 31 14.4	-0.2
ZIRJ				Sn	Sn	06 32 24.6	-3.7
KIJV	Kijevo	6.50	334	*i* Pn	Pn	06 31 15.7	+0.9
KIJV				Sn	Sn	06 32 26.7	-1.8
MORI	Morici	6.64	330	*e*Pn	Pn	06 31 17.9	+1.2
MORI				Sn	Sn	06 32 28.9	-3.1
MDVR	Moldovita	6.65	9	⇓P	Pn	06 31 18.0	+1.2
MGRS	Mrkonjic Grad	6.67	340	*e*Pn	Pn	06 31 16.6	-0.5
DUGI	Dugi Otok	7.01	327	*i* Pn	Pn	06 31 23.5	+1.6
UDBI	Udbina	7.19	333	*i* Pn	Pn	06 31 26.2	+1.9
GZR	Gura Zlata	7.41	13	⇑P	Pn	06 31 29.4	+2.1
NVLJ	Novalja	7.56	329	*i* Pn	Pn	06 31 30.5	+1.3
ARR	Arges	7.84	23	⇑P	Pn	06 31 34.1	+0.8
MOSL	Moslavina	7.86	341	*e*Pn	Pn	06 31 33.1	-0.4
VOIR		8.03	24	⇓P	Pn	06 31 37.0	+1.1
OZLJ	Ozalj	8.24	335	*e*Pn	Pn	06 31 39.0	+0.4
MLR	Muntele Rosu	8.39	28	Pn	Pn	06 31 46.0	+5.2
	comp=N,0.3nm,0.3s,baz=141,slow=7.5,SNR=3.3						
MLR	Muntele Rosu	8.39	28	⇓P	Pn	06 31 42.7	+1.8
CRES	Cresnjev	8.43	336	*e*Pn	Pn	06 31 41.3	+0.1
CEY	Cerknica	8.71	332	*e*Pn	Pn	06 31 45.4	+0.3
PLOR	Plostina	8.96	30	⇓P	Pn	06 31 50.4	+1.8
KEST	Kesra	9.13	258	Pn	Pn	06 31 51.2	+0.3
	comp=N,0.3nm,0.3s,baz=224,slow=18,SNR=2.5						
KEST				Sn	Sn	06 33 31.1	-2.3
	comp=N,0.1nm,0.3s,baz=343,slow=20,SNR=1.1						
SOKA	Soboth	9.32	337	*i* Pn	Pn	06 31 53.7	+0.1
	comp=N,2.6nm,0.3s						
OBKA	Obir	9.33	335	*i* Pn	Pn	06 31 55.6	+1.9
	comp=N,1.3nm,0.2s						
ABTA	Abfaltersbach	10.30	328	*i* Pn	Pn	06 32 10.1	+3.2
	comp=N,1.2nm,0.3s						
BRTR	Keskin Array B	10.47	78	Pn	Pn	06 32 11.8	+2.4
	comp=N,0.1nm,0.3s,baz=259,slow=9.4,SNR=2.4						
WTTA	Wattenberg	11.07	328	*i* Pn	Pn	06 32 20.3	+2.7
	comp=N,4.3nm,0.4s						
WATA	Walderalm	11.15	328	*i* Pn	Pn	06 32 21.1	+2.4
	comp=N,3.0nm,0.3s						
FETA	Feichten	11.29	324	*i* Pn	Pn	06 32 23.2	+2.6
	comp=N,0.7nm,0.4s						
MOTA	Moosalm	11.36	326	*i* Pn	Pn	06 32 25.2	+3.6
	comp=N,1.5nm,0.4s						
GERES	GERESS Array B	11.66	338	Pn	Pn	06 32 24.2	-1.4
	comp=N,0.3nm,0.3s,baz=163,slow=13,SNR=5.1						
AKASG	Malin Array Be	14.00	24	Pn	Pn	06 32 55.5	-1.9
	comp=N,0.3nm,0.3s,baz=211,slow=8.9,SNR=2.4						
HFS	Hagfors	22.35	351	P	P	06 34 35.5	-1.2
	comp=N,3.6nm,0.7s,baz=180,slow=16,SNR=6.3						
FINES	FINESS Array B	23.53	7	P	P	06 34 47.9	-1.0
	comp=N,2.4nm,0.8s,baz=172,slow=9.8,SNR=9.6						
NOA	NORSAR Array B	23.56	349	P	P	06 34 48.3	-0.9
	comp=N,0.2nm,0.4s,baz=159,slow=9.7,SNR=3.2						
TORD	Torodi Ar. Bea	29.96	219	P	P	06 35 47.4	0.0
	comp=N,0.4nm,0.7s,baz=36,slow=10.0,SNR=3.8						
ARCES	ARCESS Array B	31.51	3	P	P	06 36 00.2	-0.4
	comp=N,3.9nm,1.1s,baz=189,slow=11,SNR=1.8						
BVAR	Borovoye Array	37.21	50	P	P	06 36 49.0	-1.1
	comp=N,0.3nm,0.4s,baz=222,slow=7.8,SNR=3.0						
KURBB	Kurchatov Arra	42.33	54	P	P	06 37 32.1	-0.6
	comp=N,0.3nm,0.5s,baz=280,slow=8.4,SNR=4.4						
MKAR	Makanchi Array	45.41	58	P	P	06 37 56.9	-0.6
	comp=N,0.9nm,0.5s,baz=272,slow=7.6,SNR=21						
ZALV	Zalesovo Beam	45.78	48	P	P	06 37 59.3	-1.0
	comp=N,2.6nm,0.6s,baz=270,slow=8.7,SNR=6.0						

KRSC 18 06:44:32.2±1.2**, 51°.00N×158°.48E, h47^{km}**±23^{km}**, ML3.9, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAU	Pauzhetka	1.15	295	*e*P	Pn	06 44 53.4	+1.6
PAU				*e*S	Sn	06 45 07.8	+1.5
ASAK	Asacha	1.43	346	*e*P	Pn	06 44 57.5	+1.7
ASAK				*e*S	Sn	06 45 15.4	+2.0
RUS	Russkaya	1.43	1	*e*P	Pn	06 44 56.9	+1.2
RUS				*e*S	Sn	06 45 14.3	+0.9
MTVR	Mutnovka	1.49	353	*e*P	Pn	06 44 58.4	+1.7
MTVR				*e*S	Sn	06 45 16.6	+1.5
SKR	Severo-Kuril's	1.53	259	*e*P	Pn	06 44 58.8	+1.8
SKR				*e*S	Sn	06 45 17.6	+1.9
GRL	Gorelyy	1.57	351	*e*P	Pn	06 44 59.9	+2.1
GRL				*e*S	Sn	06 45 19.2	+2.2
MIPR	Malaya Ipel'ka	1.67	321	*e*P	Pn	06 45 01.3	+2.4
KRMR	Karymshinskiy	1.84	353	*e*P	Pn	06 45 03.7	+2.4
KRMR				*e*S	Sn	06 45 26.1	+2.7
ALID	Alaid	1.86	267	*e*P	Pn	06 45 03.8	+2.1
PET	Petropavlovsk	2.03	3	*e*P	Pn	06 45 05.9	+2.0
PET				*e*S	Sn	06 45 30.1	+2.2
DALK	Dalny	2.04	5	*e*P	Pn	06 45 05.9	+1.9
DALK				*e*S	Sn	06 45 29.8	+1.6
APC	Apacha	2.09	338	*e*P	Pn	06 45 07.4	+2.7
UGLR	Uglovaya	2.22	5	*e*P	Pn	06 45 09.7	+3.1
AVH	Avacha	2.27	4	*e*P	Pn	06 45 11.1	+3.8
AVH				*e*S	Sn	06 45 38.9	+4.8
SMAR	Somma	2.27	5	*e*P	Pn	06 45 10.5	+3.0
SDLR	Sedlovina	2.29	6	*e*P	Pn	06 45 09.5	+1.9
KOK	Koryaka	2.29	2	*e*P	Pn	06 45 10.8	+3.2
SPN	Mys Shipunski	2.31	24	*e*P	Pn	06 45 09.9	+2.2
KRER	Koryakskii	2.31	4	*e*P	Pn	06 45 11.7	+3.7
KRER				*e*S	Sn	06 45 39.9	+4.6
KRX	Arik	2.36	3	*e*P	Pn	06 45 11.4	+2.8
KZV	Kizimen	4.26	14	*e*P	Pn	06 45 39.2	+4.5
TUMR	Tumrok	4.40	13	*e*P	Pn	06 45 40.6	+4.0
KBTR	Krutoberegovo	5.82	25	*e*P	Pn	06 45 58.4	+2.5

IDC 18 06:47:37.7±10.0**, 36°.19N×81°.86E, h0^{km}, mb3.0**/1**, mb1 3.3**/3**, mb1mx3.1**/47**, mbtmp3.3**/3**, ML3.0**/2**, Error ellipse: s-maj=152.2km s-min=53.3km az=52.0, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	10.60	2	Pn	Pn	06 50 11.5	+0.7
	0.1nm,0.3s,baz=180,slow=12,SNR=6.0						
MKAR				Sn	Sn	06 52 08.5	-1.7
	0.1nm,0.3s,baz=183,slow=24,SNR=2.9						
ZALV	Zalesovo Beam	17.88	6	P	Pn	06 51 47.7	+0.1
	0.3nm,0.3s,baz=183,slow=7.2,SNR=3.5						
SONM	Songino Array	21.53	50	P	P	06 52 28.4	0.0
	0.5nm,0.7s,baz=238,slow=11,SNR=3.0						

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*IDC **18** 06:47:57.0±0.8, 51°.46N×15°.92E, h0^{km}, mb3.0/1, mb1 3.3/6, mb1mx3.1/40, mbtmp3.1/6, ML2.6/4, MS3.6/1, Ms1 3.6/1, ms1mx2.4/28, Error ellipse: s-maj=14.5km s-min=7.9km az=111.0*

ISC 18 06:47:55.7±1.4**, 51°.53N**±0°.03×**16°.20E**±0°.03**, h0^{km}**±10^{km}**, n37,** σ1^s**52**/73**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.69	175	*i* Pg	Pg	06 48 09.2	+0.4
KSP				*e*Sg	Sb	06 48 17.9	-2.7
CHVC	Chvalec	0.95	186	*e*PG	Pg	06 48 13.9	+0.1
CHVC				*e*SG	Sg	06 48 25.5	-0.6
	comp=Z,76nm,0.3s						
OSTC	Ostas	0.97	179	*e*PG	Pb	06 48 14.6	-0.8
OSTC				*e*SG	Sb	06 48 26.5	-2.3
	comp=Z,132nm,0.4s						
UPC	Upice	1.03	187	*e*PG	Pg	06 48 15.3	-0.1
UPC				*e*SG	Sg	06 48 28.3	-0.4
	comp=Z,259nm,0.4s						
DPC	Dobruska-Polom	1.18	176	*e*PG	Pg	06 48 18.1	-0.2
DPC				*e*SG	Sg	06 48 32.5	-1.2
	comp=Z,64nm,0.4s						
PVCC	Panska Ves	1.44	226	*e*PG	Pn	06 48 22.7	-0.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVCC				*e*SG	Sg	06 48 41.2	-0.6
	comp=Z,294nm,0.2s						
KRLC	Kraliky	1.50	166	*e*PG	Pn	06 48 23.5	-0.4
KRLC				*e*SG	Sn	06 48 42.8	-1.4
	comp=Z,66nm,0.3s						
BRG	Berggiesshubel	1.56	246	PN	Pn	06 48 23.7	-1.0
BRG				PG	Pb	06 48 25.4	0.0
BRG				SG	Sn	06 48 45.1	-0.5
	108nm,0.3s						
PRA	Prague	1.84	218	*e*SG	Sn	06 48 53.0	+0.6
	comp=Z,51nm,0.6s						
PRU	Pruhonice	1.87	215	*e*PG	Pn	06 48 30.0	+1.2
PRU				*e*SG	Sn	06 48 53.6	+0.5
	comp=Z,41nm,0.3s						
MORC	Moravsky Berou	1.95	153	*e*PN	Pn	06 48 29.9	-0.2
MORC				*e*SG	Sg	06 48 55.0	-3.4
CLL	Collm	2.01	265	*i* Pn	Pn	06 48 31.4	+0.6
CLL				*i* Pg	Pb	06 48 33.6	+0.5
CLL				*i*		06 48 36.0	
CLL				*i* Sg	Sn	06 49 00.5	+3.8
	comp=Z,37nm,0.5s						
OKC	Ostrava-Krasne	2.10	143	*e*PG	Pg	06 48 35.5	-0.4
OKC				*e*SG	Sg	06 49 02.5	-0.6
	comp=Z,50nm,0.5s						
VRAC	Vranov	2.24	173	Pn	Pn	06 48 33.9	-0.1
	comp=Z,2.1nm,0.3s,baz=348,slow=16,SNR=8.6						
VRAC				Lg	Lg	06 49 05.3	
	comp=Z,10nm,0.3s,baz=73,slow=19,SNR=16						
VRAC	Vranov	2.24	173	*e*PN	Pn	06 48 34.9	+0.9
VRAC				*e*SG	Sg	06 49 05.1	-2.4
TREC	Trest	2.28	192	*e*PN	Pn	06 48 35.5	+0.9
TREC				*e*PG	Pb	06 48 37.7	0.0
TREC				*e*SG	Sg	06 49 07.2	-1.8
	comp=Z,37nm,0.2s						
PBCC	Pribram	2.32	218	*e*PG	Pb	06 48 38.1	-0.2
PBCC				*e*SG	Sb	06 49 08.2	+0.7
KRUC	Moravsky	2.47	177	*e*PG	Pb	06 48 40.6	-0.4
KRUC				*e*SG	Sg	06 49 13.1	-2.0
OJC	Ojcow	2.63	118	*e*Pn	Pn	06 48 39.3	-0.1
OJC				*e*Pg	Pg	06 48 47.1	+1.1
OJC				*e*Sn	Sn	06 49 11.7	-0.3
OJC				*e*Sg	Sg	06 49 22.0	+1.8
NKC	Novy Kostel	2.71	243	*e*PN	Pn	06 48 40.5	+0.1
NKC				*e*PG	Pb	06 48 45.3	+0.3
NKC				*e*SG	Sb	06 49 21.1	+2.4
	comp=Z,63nm,0.4s						
KHC	Kasperske Hory	2.93	216	*e*PN	Pn	06 48 43.5	0.0
KHC				*e*PG	Pb	06 48 48.7	-0.1
KHC				*e*SN	Sn	06 49 18.4	-1.0
KHC				*e*SG	Sb	06 49 26.9	+1.8
	comp=Z,24nm,0.4s						
SMOL	Smolenice	3.12	165	*e*SG	Sg	06 49 35.5	-0.4
SMOL				*e*LG	Lg	06 49 40.9	
GERES	GERESS Array B	3.13	212	Pn	Pn	06 48 45.4	-0.9
	comp=Z,0.9nm,0.3s,baz=27,slow=12,SNR=13						
GERES				Pg	Pb	06 48 51.9	-0.3
	comp=Z,3.6nm,0.3s,baz=31,slow=18,SNR=29						
GERES				Sn	Sn	06 49 23.1	-1.2
	comp=Z,2.9nm,0.3s,baz=32,slow=24,SNR=6.6						
GERES				Lg	Lg	06 49 30.9	
	comp=Z,3.1nm,0.3s,baz=23,slow=21,SNR=9.6						
LANS	Liptovska Anna	3.17	137	*e*PG	Pg	06 48 56.6	+0.2
LANS				*e*SG	Sg	06 49 36.1	-1.4
LANS				*e*LG	Lg	06 49 45.7	
MODS	Modra-Piesok	3.23	167	*e*PG	Pg	06 48 56.9	-0.8
MODS				*e*SG	Sg	06 49 40.8	+1.2
NIE	Niedzica	3.37	127	*e*Pg	Pg	06 49 02.8	+2.6
NIE				*e*Sg	Sg	06 49 47.1	+3.4
VYHS	Vyhne	3.48	150	*e*SG	Sg	06 49 49.0	+1.5
CONA	Conrad Observa	3.61	184	*i* Pn	Pn	06 48 53.4	+0.5
	comp=Z,0.3nm,0.1s						
CONA				*i* Sn	Sn	06 49 36.1	-0.2
	comp=Z,11nm,0.3s						
BSD	Bornholm Skovb	3.67	348	*i* P	Pn	06 48 53.3	-0.3
BSD				*i* S	Sn	06 49 33.0	-4.6
MOA	Molln	3.89	200	*i* Pn	Pn	06 48 56.9	+0.2
	comp=Z,1.7nm,0.2s						
MOA				*i* Sg	Sb	06 49 55.3	+2.5
	comp=Z,5.3nm,0.3s						
ARSA	Arzberg	4.31	186	*i* Pn	Pn	06 49 06.3	+3.9
	comp=Z,1.2nm,0.2s						
ARSA				*i* Sg	Sb	06 50 06.1	+1.4
	comp=Z,2.6nm,0.3s						
KBA	Koelnbreinsper	4.83	204	*i* Pn	Pn	06 49 09.1	-0.6
	comp=Z,0.4nm,0.1s						
KBA				*i* Sg	Sb	06 50 22.1	+2.2
	comp=Z,1.0nm,0.2s						
AKASG	Malin Array Be	8.24	91	Pn	Pn	06 49 57.4	+1.0
	comp=Z,1.0nm,0.3s,baz=279,slow=12,SNR=4.7						
HFS	Hagfors	8.74	352	Pn	Pn	06 50 02.7	-0.5
	comp=Z,0.1nm,0.3s,baz=168,slow=15,SNR=2.5						
FINES	FINESS Array B	11.32	25	Pn	Pn	06 50 36.8	-1.6
	comp=Z,0.1nm,0.3s,baz=196,slow=14,SNR=4.0						
KVAR	Kislovodsk Arr	19.29	103	LR	LR	07 01 15.9	
	comp=Z,175nm,18.7s,baz=124,slow=41						
YKA	Yellowknife Ar	59.86	336	P	P	06 58 02.6	+0.2
	comp=Z,0.1nm,0.6s,baz=34,slow=6.7,SNR=4.5						

IDC 18 06:55:45.5±7.5**, 9°.33S×128°.94E, h170**^{km}±77^{km}**, mb3.3**/2**, mb1 3.6**/4**, mb1mx3.2**/39**, mbtmp3.9**/4**, Error ellipse: s-maj=90.1km s-min=38.8km az=63.0, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	11.77	154	P	Pn	06 58 26.9	-1.4
	1.1nm,0.3s,baz=333,slow=11,SNR=3.8						
WRA				S	Sn	07 00 42.1	+3.1
	1.7nm,0.3s,baz=332,slow=23,SNR=4.0						
ASAR	Alice Springs	15.03	162	P	P	06 59 10.7	-0.1
	0.7nm,0.3s,baz=338,slow=9.7,SNR=38						
ASAR				S	Sn	07 01 55.7	-1.4
	0.1nm,0.3s,baz=343,slow=25,SNR=2.9						
STKA	Stephens Creek	25.33	154	P	P	07 00 56.4	-0.3
	0.7nm,0.4s,baz=332,slow=15,SNR=2.8						
MKAR	Makanchi Array	69.60	328	P	P	07 06 36.4	+0.2
	0.4nm,0.5s,baz=118,slow=9.6,SNR=2.8						

ASRS ***18*** *07:06:25.4, 54°.04N×86°.64E, M1.9, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NNC 18 07:06:27.5±2.1**, 54°.09N×86°.63E, h0**^{km}**, mb4.0, mpv3.8, 5C-7D, Error ellipse: s-maj=19.6km s-min=9.0km az=16.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.08	263	⇓P	Pg	07 06 47.3	-0.7
	4.4nm,0.4s						
ZAA0				⇑S	Sb	07 07 03.0	-0.5
	6.4nm,0.3s						
KURK	Kurchatov	5.95	239	⇑Pn	Pn	07 07 59.1	+2.4
	5.3nm,0.5s						
KURK				⇑Lg	Lg	07 09 35.6	
	7.1nm,0.5s						
KURBB	Kurchatov Arra	6.05	238	⇓Pn	Pn	07 07 59.7	+1.5
	20nm,0.3s						
KURBB				⇓Lg	Lg	07 09 39.1	
	16nm,0.7s						
MK31	Makanchi Array	7.81	202	⇓Pn	Pn	07 08 24.4	+2.1
	3.6nm,0.5s,baz=25,slow=13,SNR=78						
MK31				⇑Sn	Sn	07 09 50.7	-0.6
	2.0nm,0.5s,baz=25,slow=25,SNR=6.3						
MK31				⇓Lg	Lg	07 10 32.0	
	4.2nm,0.7s,baz=27,slow=30,SNR=7.4						
MAKZ	Makanchi	7.87	204	⇓Pn	Pn	07 08 25.4	+2.3
	2.3nm,0.5s						
MAKZ				⇓Sn	Sn	07 09 52.8	0.0
	2.6nm,0.6s						
MAKZ				⇑Lg	Lg	07 10 34.9	
	5.6nm,0.7s						

IDC ***18*** *07:11:39.9±0.7, 0°.68N×28°.70W, h0*^{km}*, mb4.1/16, mb1 4.2/17, mb1mx4.0/40, mbtmp4.2/17, ML4.4/1, MS3.9/26, Ms1 3.9/26, ms1mx3.9/32, Error ellipse: s-maj=31.0km s-min=12.7km az=143.0*

NEIC ***18*** *07:11:40.9±1.4, 0°.75N±0°.10×28°.80W±0°.08, h10*^{km}*±1*^{km}*, mb4.8/42, Error ellipse: s-maj=18.1km s-min=12.0km az=145.0*

GCMT ***18*** *07:11:43.9±0.2, 0°.97N±0°.02×28°.66W±0°.01, h25*^{km}*, MW5.0/111, Moment Tensor Solution. s42,c49; s111,c160; Duration: 0 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*-0.48±.13;* $M_{\theta\theta}$*1.11±.14;* $M_{\phi\phi}$*-0.63±.12;* $M_{r\theta}$*-0.43±.22;* $M_{\theta\phi}$*-3.73±.10;* $M_{\phi r}$*0.12±.23; Best double couple:* M_0*3.85500×10*^{16} *NP1:*ϕ_s*354.00000°, δ84.00000°, λ1.00000°. NP2:*ϕ_s*263.00000°, δ89.00000°, λ174.00000°. Principal axes: T 4.1050, Plg5.0000°, Azm218.0000°; N -0.5040, Plg84.0000°, Azm70.0000°; P -3.6040, Plg3.0000°, Azm309.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 07:11:40.9±0.4**, 0°.72N**±0°.08×**28°.81W**±0°.07**, h10**^{km}**, n94, σ1**^{s}.**42**/77**, mb4.6**/36**, MS3.9**/25**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	Riachuelo	9.61	227	Pn	Pn	07 13 59.3	-0.1
	3.3nm,0.3s,baz=36,slow=15,SNR=12						
RCBR				Sn	Sn	07 15 37.6	-10
	0.4nm,0.3s,baz=81,slow=14,SNR=1.9						
RCBR				LR	LR	07 16 52.1	
	comp=Z,2μm,21.4s,baz=106,slow=32						
RCBR	Riachuelo	9.61	227		Pn	07 13 59.3	-0.1
RCBR				Sn	Sn	07 15 46.6	-1.1
SACV	Santiago Islan	15.06	20	Pn	Pn	07 15 11.1	-2.9
H10N3	ASCENSION HYDR	16.61	121	T	T	07 32 31.9	
	baz=300,slow=74,SNR=576						
H10N2	ASCENSION HYDR	16.62	121	T	T	07 32 30.8	
	baz=300,slow=74,SNR=613						
H10N1	ASCENSION HYDR	16.63	121	T	T	07 32 29.6	
	baz=300,slow=74,SNR=586						
ASCN	Ascension	16.78	121	Pn	Pn	07 15 35.8	-0.4
ASCN				IAmb	IAmb	07 15 41.7	
	comp=Z,111nm,1.1s						
H10S3	ASCENSION HYDR	17.06	125	T	T	07 33 06.2	
	baz=277,slow=74,SNR=212						
H10S2	ASCENSION HYDR	17.08	125	T	T	07 33 04.3	
	baz=303,slow=74,SNR=55						
MDP	Montagnes des	24.19	281	LR	LR	07 24 38.8	
	comp=Z,130nm,21.3s,baz=94,slow=32						
LIC	Lamto	24.35	76	*e*P	P	07 16 59.4	+0.1
	comp=Z,67nm,1.0s						
LIC	Lamto	24.35	76	P	P	07 16 59.4	+0.1
TIC	Toumodi	24.45	76	*e*P	P	07 16 59.9	-0.4
TIC	Toumodi	24.45	76	P	P	07 16 59.9	-0.4
DBIC	Dimbokro	24.62	76	P	P	07 17 02.1	+0.4
	comp=Z,12nm,0.7s,baz=244,slow=12,SNR=17						
DBIC				LR	LR	07 25 07.2	
	comp=Z,636nm,18.0s,baz=237,slow=33						
DBIC	Dimbokro	24.62	76	P	P	07 17 02.0	+0.4
KIC	Kosan Boka	24.66	76	*e*P	P	07 17 02.6	+0.5
	comp=Z,75nm,1.2s						
KIC	Kosan Boka	24.66	76	P	P	07 17 02.6	+0.5
BDFB	Brasilia	24.98	229	P	P	07 17 04.9	-0.3
	comp=Z,9.8nm,1.1s,baz=82,slow=5.3,SNR=7.9						
BDFB				LR	LR	07 26 02.4	
	comp=Z,835nm,18.8s,baz=83,slow=34						
BDFB	Brasilia	24.98	229	P	P	07 17 05.8	+0.7
TOA0	Torodi Ar. Sit	32.65	66	P	P	07 18 13.0	-0.4
TORD	Torodi Ar. Bea	32.65	66	P	P	07 18 12.8	-0.6
	comp=Z,14nm,1.1s,baz=250,slow=8.1,SNR=26						
TORD				LR	LR	07 30 07.5	
	comp=Z,308nm,18.9s,baz=275,slow=34						
TORD	Torodi Ar. Bea	32.65	66	P	P	07 18 13.2	-0.2
SAML	Samuel	35.56	254	P	P	07 18 40.4	+1.6
SAML				IAmb	IAmb	07 18 46.4	
	comp=Z,23nm,1.9s						
SIV	San Ignacio	35.92	241	P	P	07 18 43.7	+1.9
	comp=Z,0.4nm,0.3s,baz=66,slow=6.6,SNR=5.5						
CPUP	Villa Florida	38.47	224	P	P	07 19 05.2	+2.0
	comp=Z,6.9nm,1.2s,baz=16,slow=5.2,SNR=4.1						
CPUP				LR	LR	07 34 42.0	
	comp=Z,941nm,19.0s,baz=58,slow=36						
CPUP	Villa Florida	38.47	224	P	P	07 19 04.3	+1.0
CPUP				IAmb	IAmb	07 19 21.2	
	comp=Z,34nm,2.0s						
TAM	Tamanrasset	39.93	54	P	P	07 19 15.3	-0.4
H09N1	TRISTAN DA CUN	40.59	160	T	T	08 02 41.8	
	SNR=12						
H09W1	TRISTAN DA CUN	40.61	160	T	T	08 02 51.4	
	SNR=7.9						
LPAZ	La Paz	42.32	245	P	P	07 19 38.1	+2.1
	comp=Z,1.3nm,0.7s,baz=61,slow=5.9,SNR=6.2						
LPAZ				LR	LR	07 36 51.8	
	comp=Z,353nm,18.4s,baz=66,slow=36						
LPAZ	La Paz	42.32	245	P	P	07 19 36.1	+0.1
SDV	Santo Domingo	42.41	282	P	P	07 19 37.2	+0.8
	comp=Z,3.8nm,0.9s,baz=78,slow=9.5,SNR=3.9						
SDV	Santo Domingo	42.41	282	P	P	07 19 37.0	+0.6
SDV				IAmb	IAmb	07 19 38.7	
	comp=Z,10nm,1.2s						
PAB	San Pablo	44.63	27	P	P	07 19 53.9	+0.2
PAB				IAmb	IAmb	07 19 55.7	
	comp=Z,11nm,1.3s						
ESDC	Sonseca Array	44.91	27	P	P	07 19 56.6	+0.7
	comp=Z,1.7nm,0.8s,baz=220,slow=8.9,SNR=7.8						
ESDC				LR	LR	07 36 00.2	
	comp=Z,69nm,21.4s,baz=175,slow=32						
ESDC	Sonseca Array	44.91	27	P	P	07 19 56.2	+0.2
ESBB	Sonseca Array	44.91	27	P	P	07 19 56.9	+0.9
ESBB				IAmb	IAmb	07 19 58.8	
	comp=Z,26nm,1.9s						
ROSC	El Rosal	45.62	276	LR	LR	07 38 31.3	
	comp=Z,505nm,19.3s,baz=68,slow=35						
ROSC	El Rosal	45.62	276	P	P	07 20 03.0	+0.6
GO02	Mina Guanaco	47.09	234	P	P	07 20 14.1	+0.4
GO02				IAmb	IAmb	07 20 17.5	
	comp=Z,11nm,1.1s						
TSUM	Tsumeb	49.64	116	P	P	07 20 33.0	-0.2
KEST	Kesra	49.69	41	P	P	07 20 33.1	-0.1
	comp=Z,4.1nm,0.8s,baz=199,slow=18,SNR=4.0						
KEST				LR	LR	07 41 33.3	
	comp=Z,200nm,20.7s,baz=178,slow=36						
KEST	Kesra	49.69	41	P	P	07 20 33.7	+0.4
KEST				IAmb	IAmb	07 20 35.2	
	comp=Z,6.4nm,0.9s						
SSB	Saint Sauveur	53.23	29	P	P	07 20 59.6	0.0
SSB				IAmb	IAmb	07 21 05.4	
	comp=Z,9.2nm,1.4s						
CORL	Corleone	53.53	41	P	P	07 21 01.9	0.0
CORL				IAmb	IAmb	07 21 10.8	
	comp=Z,15nm,0.8s						
OSSC	Osservatorio P	55.58	35	P	P	07 21 16.8	0.0
OSSC				IAmb	IAmb	07 21 29.0	
	comp=Z,6.2nm,0.9s						
GO06	Curarrehue	55.92	219		P	07 21 19.5	+0.1
GO06				IAmb	IAmb	07 21 22.6	
	comp=Z,12nm,1.1s						
PLCA	Paso Flores	56.02	218	LR	LR	07 45 39.6	
	comp=Z,179nm,18.5s,baz=77,slow=36						
NRCA	Norcia	56.24	36	P	P	07 21 20.8	-0.7
NRCA				IAmb	IAmb	07 21 26.8	
	comp=Z,6.7nm,1.1s						
CTI	Castel Tesino	57.40	32	P	P	07 21 28.9	-0.9
CTI				IAmb	IAmb	07 21 33.5	
	comp=Z,23nm,1.9s						
EKB2	Eskdalemuir Ar	58.30	17	P	P	07 21 36.6	+0.8
BOSA	Boshof	59.34	124	LR	LR	07 42 10.9	
	comp=Z,190nm,21.1s,baz=240,slow=31						
BLY	Banja Luka	59.75	36	P	P	07 21 46.4	+0.3
BLY				IAmb	IAmb	07 21 47.9	
	comp=Z,18nm,1.5s						
PDG	Podgorica	59.80	40	P	P	07 21 46.7	+0.3
PDG				IAmb	IAmb	07 21 48.6	
	comp=Z,15nm,1.4s						
GEC2	GERESS Array S	60.25	31	P	P	07 21 49.9	+0.4
GERES	GERESS Array B	60.25	31	P	P	07 21 49.7	+0.2
	comp=Z,1.9nm,0.8s,baz=246,slow=6.7,SNR=12						
GERES				PP	PP	07 23 59.8	-2.7
	comp=Z,0.2nm,0.3s,baz=202,slow=5.0,SNR=6.3						
GERES				LR	LR	07 47 55.4	
	comp=Z,48nm,18.4s,baz=271,slow=36						
GERES	GERESS Array B	60.25	31	P	P	07 21 49.3	-0.2
KHC	Kasperske Hory	60.36	31	P	P	07 21 50.2	0.0
FNA	Florina	60.38	42	P	P	07 21 51.1	+0.6
FNA				IAmb	IAmb	07 21 53.1	
	comp=Z,7.5nm,1.1s						
CLL	Collm	61.48	28	*e*S	S	07 30 28.0	+9.0
MODS	Modra-Piesok	61.86	33	*e*P	P	07 22 00.6	+0.2
SCHQ	Schefferville	62.23	336	P	P	07 22 04.2	+1.4
	comp=Z,1.8nm,1.0s,baz=232,slow=10.0,SNR=1.8						
MORC	Moravsky Berou	62.81	32	P	P	07 22 06.5	-0.3
MORC				IAmb	IAmb	07 22 23.7	
	comp=Z,3.8nm,1.0s						
PSZ	Piszkesteto	63.06	35	P	P	07 22 08.5	0.0
OJC	Ojcow	64.26	32	P	P	07 22 16.2	-0.1
OJC				IAmb	IAmb	07 22 18.2	
	comp=Z,14nm,1.3s						
BURAR	Bucovina Array	66.01	37	P	P	07 22 26.9	-1.0
LNXT	Lenox	66.18	309	P	P	07 22 27.0	-2.0
E46A	Sault Ste Mari	66.34	321	P	P	07 22 28.9	-1.0
NOA	NORSAR Array B	67.44	20	P	P	07 22 38.0	+1.3
	comp=Z,0.8nm,0.8s,baz=225,slow=6.2,SNR=2.1						
NOA				LR	LR	07 47 03.8	
	comp=Z,58nm,21.9s,baz=220,slow=32						
BR131	Keskin Array S	68.62	47	P	P	07 22 43.6	-0.9
BR131				IAmb	IAmb	07 23 00.1	
	comp=Z,17nm,1.6s						
BRTR	Keskin Array B	68.62	47	P	P	07 22 44.9	+0.3
	comp=Z,1.5nm,0.8s,baz=237,slow=8.6,SNR=7.0						
BRTR				LR	LR	07 54 17.7	
	comp=Z,69nm,18.8s,baz=249,slow=37						
BRTR	Keskin Array B	68.62	47	P	P	07 22 44.2	-0.4
AKASG	Malin Array Be	69.74	35	P	P	07 22 51.5	+0.4
	comp=Z,2.5nm,0.8s,baz=242,slow=6.7,SNR=10.0						
AKASG	Malin Array Be	69.74	35	P	P	07 22 50.3	-0.8
AKBB	Malin Array Si	69.74	35	P	P	07 22 50.4	-0.7
AKBB				IAmb	IAmb	07 23 07.8	
	comp=Z,16nm,1.4s						
FINES	FINESS Array B	73.30	24	P	P	07 23 12.2	-0.2
	comp=Z,2.6nm,1.0s,baz=225,slow=14,SNR=3.7						
FINES				LR	LR	07 52 02.9	
	comp=Z,91nm,21.1s,baz=256,slow=33						
FINES	FINESS Array B	73.30	24	P	P	07 23 11.8	-0.6
ULM	Lac du Bonnet	74.94	322	LR	LR	07 52 17.4	
	comp=Z,63nm,21.5s,baz=150,slow=32						
RAYN	Ar Rayn	75.34	66	P	P	07 23 24.8	-0.4
KBZ	Khabaz	76.34	45	LR	LR	07 58 46.0	
	comp=Z,62nm,21.1s,baz=230,slow=37						
TXAR	Lajitas Array	76.45	300	P	P	07 23 29.5	-1.9
	comp=Z,0.5nm,0.9s,baz=123,slow=9.1,SNR=4.1						
TXAR				LR	LR	08 00 46.9	
	comp=Z,11nm,18.7s,baz=0.0,slow=38						
TXAR	Lajitas Array	76.45	300	P	P	07 23 29.8	-1.7
TX32	Lajitas Array	76.45	300	P	P	07 23 29.0	-2.4
ARCES	ARCESS Array B	77.48	17	LR	LR	07 53 26.0	
	comp=Z,49nm,20.1s,baz=232,slow=32						
PDAR	Pinedale Array	82.71	313	LR	LR	07 57 02.3	
	comp=Z,50nm,20.3s,baz=120,slow=33						
RES	Resolute Bay	83.12	346	LR	LR	07 55 12.2	
	comp=Z,43nm,21.0s,baz=254,slow=31						
DUG	Dugway, Tooele	84.95	310	P	P	07 24 15.6	-1.2
DUG				IAmb	IAmb	07 24 23.1	
	comp=Z,11nm,1.6s						
GEYT	Alibeck	87.13	52	LR	LR	08 05 31.1	
	comp=Z,28nm,21.2s,baz=185,slow=37						
YKA	Yellowknife Ar	87.41	332	P	P	07 24 29.1	+0.9
	comp=Z,0.2nm,0.8s,baz=98,slow=5.8,SNR=2.5						
YKA				LR	LR	07 59 22.1	
	comp=Z,107nm,21.6s,baz=0.0,slow=33						
NEW	Newport	88.34	318	LR	LR	07 58 38.8	
	comp=Z,96nm,21.6s,baz=92,slow=32						
NVAR	Mina Array Bea	89.16	308	LR	LR	08 01 57.4	
	comp=Z,21nm,22.0s,baz=245,slow=34						
ASAR	Alice Springs	151.69	145	PKPbc	PKPbc	07 31 36.0	-0.6
	comp=Z,0.3nm,0.7s,baz=196,slow=1.9,SNR=3.8						
ASAR	Alice Springs	151.69	145		PKiKP	07 31 37.7	+0.6

KRSC ***18*** *07:23:42.1±1.1, 52°.84N×159°.81E, h60*^{km}*±11*^{km}*, ML4.3*

MOS ***18*** *07:23:43.3±0.9, 52°.82N×159°.76E, h59*^{km}*, mb3.9/1, Error ellipse: s-maj=9.8km s-min=4.7km az=83.6*

IDC ***18*** *07:23:47.6±1.2, 53°.08N×159°.31E, h87*^{km}*±10*^{km}*, mb3.3/12, mb1 3.6/12, mb1mx3.3/62, mbtmp3.7/12, Error ellipse: s-maj=31.2km s-min=16.5km az=169.0*

ISC 18 07:23:43.8±0.8**, 52°.85N**±0°.03×**159°.78E**±0°.03**, h50**^{km}±6^{km}**, n96, σ1**^{s}.**48**/140**, mb3.5**/12**, 2D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.29	30	*e*P	Pn	07 23 53.6	+0.7
SPN				*e*S	Sn	07 24 00.3	+1.0
SPN	Mys Shipunski	0.29	30	PN	Pn	07 23 53.6	+0.7
SPN				S	Sn	07 24 00.3	+1.0
NLC	Nalytchevo	0.42	321	*e*P	Pn	07 23 54.5	+0.4
NLC				*e*S	Sn	07 24 02.1	+0.6
NLC	Nalytchevo	0.42	321	PN	Pn	07 23 54.5	+0.4
NLC				S	Sn	07 24 02.1	+0.6
DALK	Dalny	0.65	287	*e*P	Pn	07 23 57.1	+0.2
DALK				*e*S	Sn	07 24 06.5	+0.2
DALK	Dalny	0.65	287	PN	Pn	07 23 57.1	+0.2
DALK				S	Sn	07 24 06.5	+0.2
UGLR	Uglovaya	0.69	303	*e*P	Pn	07 23 58.0	+0.6
UGLR				*e*S	Sn	07 24 07.9	+0.6
UGLR	Uglovaya	0.69	303	PN	Pn	07 23 58.0	+0.6
UGLR				S	Sn	07 24 07.9	+0.6
SDLR	Sedlovina	0.69	309	*e*P	Pn	07 23 58.0	+0.4
SDLR				*e*S	Sn	07 24 08.2	+0.6
SDLR	Sedlovina	0.69	309	PN	Pn	07 23 58.0	+0.4
SDLR				S	Sn	07 24 08.2	+0.6
PET	Petropavlovsk	0.71	285	*e*P	Pn	07 23 57.8	+0.2
PET				*e*S	Sn	07 24 07.6	0.0
PET	Petropavlovsk	0.71	285κ	*i*PN	Pn	07 23 57.9	+0.3
PET				*e*S	Sn	07 24 07.7	+0.1
PET				pmax	pmax		
	comp=Z,736nm,0.4s						
PET				smax	smax		
	comp=E,4μm,0.3s						
PET				smax	smax		
	comp=N,6μm,0.4s						
SMAR	Somma	0.73	306	*e*P	Pn	07 23 58.2	+0.1
SMAR				*e*S	Sn	07 24 08.3	-0.1
SMAR	Somma	0.73	306	PN	Pn	07 23 58.2	+0.1
SMAR				S	Sn	07 24 08.3	-0.1
AVH	Avacha	0.76	304	*e*P	Pn	07 23 59.1	+0.8
AVH				*e*S	Sn	07 24 10.5	+1.5
AVH	Avacha	0.76	304	PN	Pn	07 23 59.1	+0.8
AVH				S	Sn	07 24 10.5	+1.5
KRER	Koryakskii	0.78	307	*e*P	Pn	07 23 59.4	+0.7
KRER				*e*S	Sn	07 24 10.9	+1.4
KRER	Koryakskii	0.78	307	PN	Pn	07 23 59.4	+0.7
KRER				S	Sn	07 24 10.9	+1.4
KOK	Koryaka	0.82	303	*e*P	Pn	07 23 59.9	+0.7
KOK				*e*S	Sn	07 24 11.2	+0.7
KOK	Koryaka	0.82	303	PN	Pn	07 23 59.9	+0.7
KOK				S	Sn	07 24 11.2	+0.7
KRX	Arik	0.86	307	*e*P	Pn	07 24 00.1	+0.4
KRX				*e*S	Sn	07 24 11.7	+0.4
KRX	Arik	0.86	307	PN	Pn	07 24 00.1	+0.4
KRX				S	Sn	07 24 11.7	+0.4
RUS	Russkaya	0.88	242	*e*P	Pn	07 23 59.9	+0.1
RUS				*e*S	Sn	07 24 11.7	+0.1
RUS	Russkaya	0.88	242	PN	Pn	07 23 59.9	+0.1
RUS				S	Sn	07 24 11.7	+0.1
KRMR	Karymshinskiy	1.00	270	*e*P	Pn	07 24 01.5	0.0
KRMR				*e*S	Sn	07 24 14.8	+0.2
KRMR	Karymshinskiy	1.00	270	PN	Pn	07 24 01.5	0.0
KRMR				S	Sn	07 24 14.8	+0.2
MTVR	Mutnovka	1.04	250	*e*P	Pn	07 24 02.7	+0.6
MTVR				*e*S	Sn	07 24 16.2	+0.5
MTVR	Mutnovka	1.04	250	PN	Pn	07 24 02.7	+0.6
MTVR				S	Sn	07 24 16.2	+0.5
GRL	Gorelyy	1.08	255	*e*P	Pn	07 24 03.4	+0.7
GRL				*e*S	Sn	07 24 17.7	+1.0
GRL	Gorelyy	1.08	255	PN	Pn	07 24 03.4	+0.7
GRL				S	Sn	07 24 17.7	+1.0
KII	Karymskiy	1.21	351	*e*P	Pn	07 24 04.8	+0.4
KII				*e*S	Sn	07 24 20.6	+0.9
KII	Karymskiy	1.21	351	PN	Pn	07 24 04.8	+0.4
KII				S	Sn	07 24 20.6	+0.9
ASAK	Asacha	1.24	249	*e*P	Pn	07 24 05.7	+0.9
ASAK				*e*S	Sn	07 24 22.0	+1.6
ASAK	Asacha	1.24	249	PN	Pn	07 24 05.7	+0.9
ASAK				S	Sn	07 24 22.0	+1.6
PETK	Petropavlovsk-	1.29	283	P	Pn	07 24 06.5	+1.1
	comp=N,253nm,0.3s,baz=100,slow=18,SNR=2023						
PETK				S	Sn	07 24 21.5	0.0
	comp=N,108nm,0.3s,baz=86,slow=24,SNR=12						
APC	Apacha	1.59	274	*e*P	Pn	07 24 10.7	+1.2
APC				*e*S	Sn	07 24 30.8	+1.9
APC	Apacha	1.59	274	PN	Pn	07 24 10.7	+1.2
APC				S	Sn	07 24 30.8	+1.9
MIPR	Malaya Ipel'ka	1.93	254	*e*P	Pn	07 24 15.7	+1.5
MIPR	Malaya Ipel'ka	1.93	254	PN	Pn	07 24 15.7	+1.5
MKZ	Mys Kozlova	2.07	33	*e*P	Pn	07 24 17.0	+1.0
MKZ				*e*S	Sn	07 24 40.9	+0.4
MKZ	Mys Kozlova	2.07	33	PN	Pn	07 24 17.0	+1.0

MKZ				S	Sn	07 24 40.9	+0.4
KZV	Kizimen	2.29	7	eP	Pn	07 24 20.8	+1.6
KZV				eS	Sn	07 24 47.8	+1.5
KZV	Kizimen	2.29	7	PN	Pn	07 24 20.8	+1.6
KZV				S	Sn	07 24 47.8	+1.5
PAU	Pauzhetka	2.29	234	eP	Pn	07 24 21.0	+1.9
PAU				eS	Sn	07 24 47.6	+1.6
PAU	Pauzhetka	2.29	234	PN	Pn	07 24 21.0	+1.9
PAU				S	Sn	07 24 47.6	+1.6
TUMD	Tumrok D	2.39	8	eP	Pn	07 24 21.5	+1.1
TUMD				eS	Sn	07 24 48.7	+0.2
TUMR	Tumrok	2.45	5	eP	Pn	07 24 23.4	+2.0
TUMR				eS	Sn	07 24 51.7	+1.5
TUMR	Tumrok	2.45	5	PN	Pn	07 24 23.4	+2.0
TUMR				S	Sn	07 24 51.7	+1.5
KMNR	Kamenistaya	2.93	5	eP	Pn	07 24 30.1	+2.2
KMNR	Kamenistaya	2.93	5	PN	Pn	07 24 30.1	+2.2
KPT	Kopyto	3.14	5	eP	Pn	07 24 32.9	+2.2
KPT	Kopyto	3.14	5	PN	Pn	07 24 32.9	+2.2
SKR	Severo-Kuril's	3.14	228	eS	Sn	07 25 07.8	+0.8
SKR	Severo-Kuril's	3.14	228	ePN	Pn	07 24 33.4	+2.7
SKR				eS	Sn	07 25 07.7	+0.8
SKR				smax	smax		
	comp=N,129nm,0.4s						
SKR				smax	smax		
	comp=E,166nm,0.5s						
ESO	Esso	3.15	349	eP	Pn	07 24 32.1	+1.3
ESO	Esso	3.15	349	PN	Pn	07 24 32.1	+1.3
KOZ	Kozyrevsk	3.22	1	eP	Pn	07 24 34.3	+2.5
KOZ	Kozyrevsk	3.22	1	PN	Pn	07 24 34.3	+2.5
ZLN	Zelenaya	3.23	10	eP	Pn	07 24 34.9	+2.8
ZLN	Zelenaya	3.23	10	PN	Pn	07 24 34.9	+2.8
LGNR	Loginova	3.29	9	eP	Pn	07 24 36.0	+3.0
LGNR	Loginova	3.29	9	PN	Pn	07 24 36.0	+3.0
CIRR	Tsirk	3.33	9	eP	Pn	07 24 36.1	+2.8
CIRR	Tsirk	3.33	9	PN	Pn	07 24 36.1	+2.8
SRDR	Sredinnyy	3.48	359	eP	Pn	07 24 36.9	+1.5
SRDR	Sredinnyy	3.48	359	PN	Pn	07 24 36.9	+1.5
KBTR	Krutoberegovo	3.81	26	eP	Pn	07 24 42.6	+2.8
KBTR				eS	Sn	07 25 24.6	+1.4
KBTR	Krutoberegovo	3.81	26	PN	Pn	07 24 42.6	+2.8
KBTR				S	Sn	07 25 24.6	+1.4
KBG	Krutoberegovo	3.82	25	eP	Pn	07 24 42.8	+2.9
KBG	Krutoberegovo	3.82	25	PN	Pn	07 24 42.8	+2.9
BDR	Baidarnaya	3.82	12	eP	Pn	07 24 39.0	-1.1
BDR	Baidarnaya	3.82	12	PN	Pn	07 24 39.0	-1.1
SRKR	Sorokina	3.90	11	eP	Pn	07 24 44.2	+3.0
SRKR	Sorokina	3.90	11	PN	Pn	07 24 44.2	+3.0
BKI	Bering	4.35	55	eP	Pn	07 24 46.9	-0.3
BKI				eS	Sn	07 25 32.6	-3.9
BKI	Bering	4.35	55	PN	Pn	07 24 46.9	-0.3
ILAR	Eielson Array	29.12	45	P	P	07 29 39.3	-0.1
	comp=E,0.8nm,0.7s,baz=263,slow=7.3,SNR=11						
H11N2	WAKE ISLAND Hy	33.51	168	T	T	08 06 18.4	
	baz=352,slow=76,SNR=155						
H11N3	WAKE ISLAND Hy	33.52	168	T	T	08 06 16.5	
	baz=352,slow=76,SNR=191						
H11N1	WAKE ISLAND Hy	33.53	168	T	T	08 06 15.7	
	baz=352,slow=76,SNR=194						
INK	Inuvik	34.18	37	P	P	07 30 24.2	+0.5
	comp=E,1.5nm,0.5s,baz=289,slow=9.9,SNR=6.9						
H11S1	WAKE ISLAND Hy	34.69	168	T	T	08 07 38.2	
	baz=352,slow=76,SNR=40						
H11S3	WAKE ISLAND Hy	34.70	168	T	T	08 07 39.2	
	baz=352,slow=76,SNR=72						
H11S2	WAKE ISLAND Hy	34.71	168	T	T	08 07 43.5	
	baz=352,slow=76,SNR=25						
YKA	Yellowknife Ar	43.47	42	P	P	07 31 42.0	+0.7
	comp=E,0.8nm,0.6s,baz=297,slow=7.0,SNR=22						
KURK	Kurchatov	47.70	302	P	P	07 32 13.0	-2.0
KURBB	Kurchatov Arra	47.81	302	P	P	07 32 13.0	-2.8
	comp=E,0.5nm,0.4s,baz=57,slow=7.5,SNR=8.3						
MKAR	Makanchi Array	48.09	296	P	P	07 32 15.1	-3.0
	comp=E,0.2nm,0.5s,baz=57,slow=6.9,SNR=4.1						
BVAR	Borovoye Array	50.40	308	P	P	07 32 33.2	-2.3
	comp=E,0.2nm,0.4s,baz=59,slow=12,SNR=2.3						
NVAR	Mina Array Bea	56.00	70	P	P	07 33 18.6	+1.4
	comp=E,0.3nm,0.7s,baz=289,slow=8.5,SNR=2.9						
PDAR	Pinedale Array	57.81	60	P	P	07 33 31.4	+1.4
	comp=E,0.3nm,0.7s,baz=328,slow=5.3,SNR=3.9						
FINES	FINESS Array B	60.27	336	P	P	07 33 43.7	-2.6
	comp=E,1.4nm,0.8s,baz=23,slow=7.5,SNR=3.7						
SCHQ	Schefferville	65.96	27	P	P	07 34 23.0	-1.2
	comp=E,2.8nm,0.9s,baz=352,slow=7.1,SNR=3.2						
TXAR	Lajitas Array	70.91	67	P	P	07 34 56.5	+0.9
	comp=E,0.4nm,0.7s,baz=298,slow=4.7,SNR=5.6						
ASAR	Alice Springs	79.45	204	P	P	07 35 44.8	+0.3
	comp=E,0.4nm,0.8s,baz=11,slow=5.2,SNR=3.0						
PLCA	Paso Flores	144.19	91	PKP	PKPab	07 43 11.5	+0.3
	comp=E,0.7nm,0.8s,baz=18,slow=3.2,SNR=1.2						

IDC 18 07:30:56.5±4.3**, 17°.68N×120°.46E, h0^{km}, mb3.3**/4**, mb1 3.5**/4**, mb1mx3.2**/60**, mbtmp3.3**/4**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx2.7**/20**, Error ellipse: s-maj=480.2km s-min=22.5km az=62.0, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	39.80	159	P	P	07 38 30.8	-0.8
	0.4nm,0.7s,baz=337,slow=9.5,SNR=3.7						
MKAR	Makanchi Array	42.75	321	P	P	07 38 55.8	+0.1
	0.3nm,0.8s,baz=134,slow=6.9,SNR=4.0						
ASAR	Alice Springs	43.14	162	P	P	07 38 59.8	+0.7
	0.2nm,0.6s,baz=340,slow=7.2,SNR=4.4						
KURBB	Kurchatov Arra	46.80	324	P	P	07 39 27.5	-0.4
	0.7nm,0.8s,baz=122,slow=8.0,SNR=5.7						
NRIK	Noril'sk	55.51	346	LR	LR	08 05 30.5	
	comp=Z,65nm,19.6s,baz=280,slow=37						

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*NIC **18** 07:35:46.0±0.0, 34°.65N×33°.51E, h7^{km}, Ml2.7/4*
*GII **18** 07:35:46.4±0.0, 34°.68N×33°.54E, h18^{km}, Mm2.3/4*
*DDA **18** 07:35:47.1, 34°.76N×33°.28E, h16^{km}±2^{km}, ML2.4*
*ISK **18** 07:35:51.6, 35°.01N×33°.37E, h7^{km}, ML2.6/7*
ISC 18 07:35:45.6±1.2**, 34°.67N**±0°.03×**33°.53E**±0°.03**, h13^{km}**±9^{km}**, n43, σ1^{s}28**/66**, 1C-1D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASGA	Asgata	0.26	298	⇓P	Pg	07 35 51.7	+0.7
ASGA				S	Sb	07 35 56.2	-0.4
ASGA				AML	AML	07 35 56.3	
	6.6nm,0.4s						
ASGA				AML	AML	07 35 56.3	
	6.6nm,0.4s						
ASGA				AML	AML	07 35 57.8	
	3.5nm,0.2s						
ASGA				AML	AML	07 35 57.8	
	3.5nm,0.2s						
CSS	Mathiatis	0.34	332	PG	Pb	07 35 53.6	+0.1
CSS	Mathiatis	0.34	332	Pg	Pb	07 35 53.5	+0.1
CSS	Mathiatis	0.34	332	⇑P	Pb	07 35 53.4	0.0
CSS				S	Sn	07 36 00.1	-2.9
AKIN	Akıncılar- Kıb	0.35	352	PG	Pb	07 35 53.9	+0.2
MVOU	Mavrovouni	0.36	14	P	Pb	07 35 54.3	+0.4
MVOU				S	Sb	07 36 00.2	+0.7
SZAC	Souni	0.54	280	P	Pg	07 35 56.6	+0.5
SZAC				S	Sb	07 36 05.1	+0.5
SZAC				AML	AML	07 36 06.3	
	1.7nm,0.2s						
SZAC				AML	AML	07 36 06.3	
	1.7nm,0.2s						
SZAC				AML	AML	07 36 06.6	
	2.7nm,0.2s						
SZAC				AML	AML	07 36 06.6	
	2.7nm,0.2s						
LEF	Lefka	0.69	311	PG	Pn	07 36 00.8	-0.3
LEF	Lefka	0.69	311	i P	Pb	07 36 00.5	+1.0
LEF				i S	Sn	07 36 10.7	-1.0
NATA	Nata	0.80	278	P	Pg	07 36 00.9	0.0
ALFC	Alefka	0.91	303	P	Pb	07 36 03.5	+0.3
ALFC				S	Sn	07 36 17.3	+0.2
ALFC				AML	AML	07 36 17.6	
	1.3nm,0.5s						
ALFC				AML	AML	07 36 17.6	
	1.3nm,0.5s						
ALFC				AML	AML	07 36 18.7	
	1.7nm,0.3s						
ALFC				AML	AML	07 36 18.7	
	1.7nm,0.3s						
EREN	Erenkoy	1.01	31	PG	Pn	07 36 08.2	+2.7
EREN	Erenkoy	1.01	31	i P	Pn	07 36 07.9	+2.4
EREN				i S	Sn	07 36 24.3	+4.7
EREN				IAML		07 36 27.0	
	comp=E,77nm,0.6s						
AKMS	Akamas	1.04	290	P	Pb	07 36 05.6	+0.2
AKMS				S	Sn	07 36 21.2	+0.9
AKMS				AML	AML	07 36 23.8	
	comp=E,0.6nm,0.3s						
AKMS				AML	AML	07 36 23.8	
	comp=E,0.6nm,0.3s						
AKMS				AML	AML	07 36 25.3	
	comp=E,0.7nm,0.3s						
AKMS				AML	AML	07 36 25.3	
	comp=E,0.7nm,0.3s						
AKK2	Akkuyu-Mersin	1.47	1	PN	Pg	07 36 13.7	-0.1
TISA	Tisan-Mersin	1.50	5	PN	Pg	07 36 14.7	+0.4
TEKE	Tekeli-Mersin	1.51	347	PN	Pg	07 36 14.3	-0.3
GULN	MERSIN_Gulnar	1.52	1	i P	Pb	07 36 13.3	-0.2
GULN				i S	Sg	07 36 34.5	+0.2
GULN				IAML		07 36 36.0	
	comp=N,45nm,0.3s						
GULN				IAML		07 36 36.0	
	comp=E,55nm,0.4s						
YESI	Yesilovacik-Me	1.53	4	PN	Pg	07 36 15.0	+0.1
KARG	Kargicak-Mersi	1.54	6	PN	Pg	07 36 15.3	+0.1
TEPK	Tepekoy-MERSIN	1.56	1	PN	Pg	07 36 15.3	-0.1
IKL	Isikli	1.57	5	PN	Pg	07 36 15.6	-0.2
BERE	Bereket-Mersin	1.70	352	PN	Pg	07 36 17.3	-0.8
TEVE	Tevekalti-Mers	1.77	358	PN	Pb	07 36 18.0	+0.1
KEBE	Keben-Mersin	1.78	5	PN	Pg	07 36 19.1	-0.7
GAZI	Gazipasa	1.85	328	PN	Pb	07 36 18.6	-0.7
GAZI				SN	Sn	07 36 39.8	-0.6
GAZI	Gazipasa	1.85	328	i P	Pb	07 36 18.4	-0.9
GAZI				i S	Sb	07 36 41.9	-0.5
KIZK	Mersin	1.88	15	PN	Pg	07 36 21.0	-0.6
KIZK	Mersin	1.88	15	i P	Pb	07 36 20.4	+0.6
KIZK				i S	Sg	07 36 44.8	-1.2
OSC2	CSNet OBS 4	1.90	214	P	Pn	07 36 18.7	+1.0
OSC2				S	Sn	07 36 45.4	+3.8
HNTI	Hanita	2.09	139	Pn	Pn	07 36 20.4	0.0
HNTI				Sn	Sn	07 36 45.9	-0.4
MMA0B	Mount Meron ar	2.27	136	Pn	Pn	07 36 23.2	+0.3
MMA0B				Sn	Sn	07 36 50.9	+0.1
KSDI	Kefar Szold	2.30	129	Sn	Sn	07 36 50.7	-0.8
NATI	Neve Ativ	2.31	127	Pn	Pn	07 36 23.9	+0.6
NATI				Sn	Sn	07 36 51.6	0.0
OFRI	`Ofer	2.38	149	Pn	Pn	07 36 24.0	-0.3
OFRI				Sn	Sn	07 36 51.9	-1.4
HDMB	Hadim	2.44	340	PN	Pb	07 36 28.1	-1.4
KEPZ	Antalya-Kepez	2.72	326	i P	Pn	07 36 30.8	+1.7
KEPZ				i S	Sb	07 37 03.6	-3.9
MMLI	Mount Malkishu	2.73	144	Pn	Pn	07 36 29.8	+0.6
MMLI				Sn	Sn	07 37 02.1	0.0
KERG	Konya-Eregli	2.79	10	i P	Pb	07 36 33.9	-1.4
KERG				i S	Sb	07 37 09.9	+0.4
KERG				IAML		07 37 14.0	
	comp=E,14nm,0.8s						
KERG				IAML		07 37 14.0	
	comp=N,17nm,0.3s						
GULE	Gulek	2.80	21	i P	Pb	07 36 33.9	-1.7
GULE				i S	Sb	07 37 09.7	-0.3
GULE				IAML		07 37 24.0	
	comp=E,19nm,1.1s						
GULE				IAML		07 37 31.0	
	comp=N,16nm,1.4s						
HMDT	Nahal Hemdat	2.93	145	Pn	Pn	07 36 32.5	+0.6
HMDT				Sn	Sn	07 37 07.2	+0.2
DSI	Dead Sea	3.46	153	Pn	Pn	07 36 40.2	+1.0
DSI				Sn	Sn	07 37 19.3	-0.7
MBRI	Mt Berech	5.00	166	Pn	Pn	07 37 00.5	+0.1

IDC 18 07:58:28.6±3.5**, 6°.03S×134°.57E, h0^{km}, mb3.3**/1**, mb1 3.7**/4**, mb1mx3.5**/26**, mbtmp3.6**/4**, ML3.5**/3**, Error ellipse: s-maj=157.1km s-min=28.3km az=76.0, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	6.09	327	Pn	Pn	07 59 59.4	-0.6
	1.6nm,0.3s,baz=216,slow=22,SNR=9.3						
SIJI				Sn	Sn	08 00 57.7	-13
	8.2nm,0.3s,baz=267,slow=23,SNR=11						
WRA	Warramunga Arr	13.84	181	Pn	Pn	08 01 46.6	+0.5
	0.2nm,0.3s,baz=1.9,slow=13,SNR=3.0						
WRA				Sn	Sn	08 04 07.5	-13
	0.6nm,0.3s,baz=1.6,slow=23,SNR=6.8						
ASAR	Alice Springs	17.55	182	P	Pn	08 02 34.5	-0.4
	0.2nm,0.3s,baz=354,slow=14,SNR=13						
ASAR				S	Sn	08 05 37.8	-13
	0.2nm,0.3s,baz=2.9,slow=28,SNR=7.2						
MKAR	Makanchi Array	69.98	325	P	P	08 09 42.2	+0.2
	0.2nm,0.5s,baz=115,slow=6.8,SNR=2.8						

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*STR **18** 08:15:08.8±1.0, 50°N±3°×°±°, h19^{km}±6^{km}, MLv1.9/6*
LDG 18 08:15:07.8±0.1**, 49°.67N×8°.38E, h20^{km}, Ml2.4**/4**, Error ellipse: s-maj=1.2km s-min=0.9km az=99.0, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTD	Kalmit	0.40	209	Pg	Pb	08 15 16.2	0.0
ABH	Alteburg	0.58	291	Pg	Pb	08 15 19.3	0.0
ABH				Sg	Sb	08 15 27.1	0.0
LANF	Langenberg	0.79	209	Pg	Pb	08 15 22.9	+0.1
LANF				Sg	Sn	08 15 34.0	-1.0
SUBF	Surbourg	0.83	205	Pg	Pn	08 15 24.0	-0.4
SUBF				Sg	Sb	08 15 34.8	+0.5
OPP	Oppenau	1.18	186	Pg	Pb	08 15 30.3	+0.8
OPP				Sg	Sn	08 15 45.8	+1.0
CDF	Champ du Feu	1.46	210	ePn	Pn	08 15 30.9	-2.1
CDF	Champ du Feu	1.46	210	ePg	Pb	08 15 34.6	+0.4
CDF				eSg	Sb	08 15 53.6	+1.3
	4.6nm,0.2s						
HINF	Hinteralfeld	2.12	209	ePn	Pn	08 15 40.8	-1.3
HINF	Hinteralfeld	2.12	209	ePg	Pb	08 15 46.6	+1.2
HINF				eSg	Sb	08 16 14.2	+2.9
	3.3nm,0.2s						
HAU	Haudompre	2.14	220	ePn	Pn	08 15 41.2	-1.2
HAU	Haudompre	2.14	220	ePg	Pb	08 15 47.2	+1.3
HAU				eSg	Sb	08 16 14.4	+2.4
	3.0nm,0.2s						
GIVF	Givet	2.34	282	eSn	Sn	08 16 09.5	-3.7
GIVF				eSg	Sb	08 16 21.2	+3.5
	6.2nm,0.3s						
MEZF	Maizieres J'vi	2.48	243	ePn	Pn	08 15 45.1	-1.9
LOR	Lormes	3.85	233	ePn	Pn	08 16 03.8	-2.1

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*IDC **18** 08:50:35.9±2.1, 20°.39S×178°.11W, h512^{km}±25^{km}, mb3.7/17, mb1 3.9/19, mb1mx3.8/32, mbtmp4.5/19, Error ellipse: s-maj=16.8km s-min=12.2km az=130.0*
*NEIC **18** 08:50:36.9±1.5, 20°.4S±0°.1×178°.1W±0°.1, h527^{km}±7^{km}, mb4.2/56, Error ellipse: s-maj=19.7km s-min=14.5km az=124.0*
ISC 18 08:50:37.1±0.4**, 20°.44S**±0°.08×**178°.01W**±0°.08**, h534^{km}, n120, σ1^{s}26**/118**, mb4.2**/41**, 2C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.60	305	P	P	08 52 05.0	+2.3
AFI	Afiamalu	8.81	43	P	P	08 52 40.7	-2.0
	5.1nm,0.3s,baz=110,slow=5.6,SNR=5.5						
AFI				S	S	08 54 20.6	-5.2
	5.3nm,0.3s,baz=50,slow=22,SNR=5.6						
OUZ	Omahuta	16.48	205	P	P	08 54 03.0	+1.5
OUZ				IAmb	IAmb	08 54 05.6	
	comp=Z,9.6nm,1.0s						
WMGZ	Waiomatatini S	17.60	189	P	P	08 54 13.4	+1.6
HAZ	Te Kaha	17.64	191	P	P	08 54 13.2	+0.9
RUGZ	Raukumara Rang	17.86	191	P	P	08 54 14.5	0.0
PUZ	Puketiti	17.87	190	P	P	08 54 15.5	+1.1
TGRZ	Tauranga	17.93	195	P	P	08 54 17.4	+2.4
MWZ	Matawai	18.25	191	P	P	08 54 17.1	-0.8
URZ	Urewera	18.26	192	P	P	08 54 16.9	-0.9
	comp=Z,2.4nm,0.3s,baz=276,slow=2.3,SNR=22						
URZ				S	S	08 57 11.6	-6.0
	comp=Z,0.2nm,0.3s,baz=143,slow=20,SNR=3.6						
URZ	Urewera	18.26	192	P	P	08 54 16.1	-1.7
URZ	Urewera	18.26	192	P	P	08 54 16.1	-1.8
CNGZ	Carnagh Statio	18.28	190	P	P	08 54 19.5	+1.4
RIGZ	Rimuhau	18.57	190	P	P	08 54 20.9	+0.2
MTHZ	Maungataniwha	18.88	193	P	P	08 54 23.4	-0.2
RAHZ	Arahi	18.89	192	P	P	08 54 24.3	+0.6
MRHZ	Matea Rd	18.95	194	P	P	08 54 22.0	-2.3
NMHZ	Naumai	19.12	192	P	P	08 54 26.9	+1.0
RATZ	Rangitukua	19.13	195	P	P	08 54 26.3	+0.4
BKZ	Black Stump Fm	19.26	193	P	P	08 54 25.6	-1.4
BKZ				IAmb	IAmb	08 54 32.0	
	comp=Z,7.8nm,1.1s						
BKZ	Black Stump Fm	19.26	193	P	P	08 54 25.8	-1.2
TWVZ	Taurewa	19.41	196	P	P	08 54 28.8	+0.3
MCHZ	McNeill Hill	19.48	192	P	P	08 54 29.2	+0.2
KWHZ	Kaweka Forest	19.52	193	P	P	08 54 29.0	-0.4
BHHZ	Black Hill Sta	19.66	194	P	P	08 54 29.4	-1.4
KRHZ	Kereru	19.74	193	P	P	08 54 31.2	-0.2
KAHZ	Kahuranaki	19.79	192	P	P	08 54 31.2	-0.7
PXZ	Pawanui	20.02	192	P	P	08 54 33.5	-0.4
NNZ	Nelson	21.97	198	P	P	08 54 51.0	-0.5
RPZ	Rata Peaks	24.95	199	P	P	08 55 17.6	-0.4
	comp=Z,3.8nm,0.5s,baz=156,slow=5.5,SNR=3.6						
RPZ	Rata Peaks	24.95	199	P	P	08 55 18.3	+0.3
RPZ				IAmb	IAmb	08 55 32.4	
	comp=Z,14nm,1.1s						
WHZ	Wether Hill Ro	27.89	201	P	P	08 55 45.0	+1.1
EIDS	Eidsvold	28.86	254	P	P	08 55 52.5	-0.1
EIDS				IAmb	IAmb	08 55 53.3	
	comp=Z,4.1nm,0.7s						
ARMA	Armidale	29.09	244	P	P	08 55 55.0	+0.3
PMG	Port Moresby	35.32	283	P	P	08 56 47.8	+0.1
TOO	Toolangi	35.93	234	P	P	08 56 52.8	+0.2
TOO				IAmb	IAmb	08 56 56.8	
	comp=Z,4.1nm,0.9s						
COEN	Coen	37.57	274	P	P	08 57 05.7	-0.6
COEN				IAmb	IAmb	08 57 16.3	
	comp=Z,7.1nm,1.1s						
STKA	Stephens Creek	37.81	244	P	P	08 57 08.3	+0.2
	comp=Z,2.0nm,0.6s,baz=89,slow=13,SNR=5.6						
STKA	Stephens Creek	37.81	244	IAmb	IAmb	08 57 09.0	
	comp=Z,0.5nm,0.7s						
BBOO	Buckleboo	42.57	243	P	P	08 57 45.5	-0.6
WR0	Warramunga Arr	44.41	262	P	P	08 57 59.9	-0.7
WR0				IAmb	IAmb	08 58 00.9	
	comp=Z,5.0nm,0.4s						
AS31	Alice Springs	44.52	257	P	P	08 58 01.2	-0.3
ASAR	Alice Springs	44.52	257	P	P	08 58 01.2	-0.2
	comp=Z,9.8nm,0.5s,baz=95,slow=7.5,SNR=218						
ASAR				PcP	PcP	08 59 33.3	0.0
	comp=Z,1.4nm,0.7s,baz=108,slow=4.2,SNR=5.9						
ASAR				S	S	09 03 55.0	-3.2
	comp=Z,0.9nm,0.9s,baz=95,slow=16,SNR=6.2						
ASAR	Alice Springs	44.52	257	P	P	08 58 00.9	-0.6
WB2	Warramunga Arr	44.59	262	P	P	08 58 01.1	-0.9
WB2				IAmb	IAmb	08 58 02.6	
	comp=Z,8.5nm,0.9s						
WRA	Warramunga Arr	44.60	262	P	P	08 58 01.4	-0.7
	comp=Z,4.6nm,0.3s,baz=97,slow=7.5,SNR=142						
WRA	Warramunga Arr	44.60	262	P	P	08 58 01.4	-0.7
MTN	Manton Dam	49.15	270	P	P	08 58 35.9	-0.6
FORT	Forrest	49.31	247	P	P	08 58 36.7	-0.7
KNRA	Kununurra	50.66	266	P	P	08 58 46.8	-0.6
KNRA				IAmb	IAmb	08 58 47.5	
	comp=Z,9.6nm,0.7s						
FAKI	Fak Fak	51.48	283	P	P	08 58 52.8	-0.7
FAKI				IAmb	IAmb	08 59 11.2	
	comp=Z,16nm,1.0s						
FITZ	Fitzroy Crossi	53.03	262	P	P	08 59 04.6	0.0
PSA00	Pilbara Seismi	57.67	257	P	P	08 59 36.4	-0.5
PSA00				IAmb	IAmb	08 59 40.7	
	comp=Z,9.4nm,1.1s						
VNDA	Vanda	57.97	185	P	P	08 59 39.7	+1.8
	comp=Z,1.8nm,0.7s,baz=350,slow=6.4,SNR=8.2						
VNDA	Vanda	57.97	185	P	P	08 59 40.0	+2.0
MORW	Morawa	59.84	248	P	P	08 59 50.8	-0.6
MORW				IAmb	IAmb	09 00 04.6	
	comp=Z,12nm,1.1s						
GIRL	Giralia	62.56	254	P	P	09 00 09.1	-0.1
QSPA	South Pole Qui	69.63	180	P	P	09 00 54.0	+1.4
QSPA				IAmb	IAmb	09 00 54.5	
	comp=Z,6.0nm,0.7s						
UGM	Wanagama	69.96	269	P	P	09 00 54.9	-0.5
MJAR	Matsushiro Arr	70.16	324	P	P	09 00 55.7	-0.4
	comp=Z,2.1nm,0.4s,baz=135,slow=6.2,SNR=9.7						
MJAR	Matsushiro Arr	70.16	324	P	P	09 00 55.6	-0.4
ADK	Adak	72.02	1	P	P	09 01 06.1	-0.4
ASAJ	Asahikawa	73.67	332	P	P	09 01 17.7	+1.5
	comp=Z,14nm,0.8s,baz=222,slow=23,SNR=4.9						
UNV	Unalaska Valle	74.64	7	P	P	09 01 21.1	-0.4
PEA0B	Petropavlovsk-	76.21	345	P	P	09 01 30.6	+0.4
PEA0B				IAmb	IAmb	09 01 32.0	
	comp=Z,14nm,0.9s						
PETK	Petropavlovsk-	76.21	345	P	P	09 01 30.3	0.0
	comp=Z,8.3nm,0.7s,baz=151,slow=6.5,SNR=11						
PETK	Petropavlovsk-	76.21	345	P	P	09 01 30.4	+0.1
KSRS	Korea Array	76.84	319	P	P	09 01 34.6	+0.6
	comp=Z,1.0nm,0.5s,baz=130,slow=6.0,SNR=4.5						
USA0B	Ussuriysk Arra	78.91	326	P	P	09 01 45.4	+0.4
USA0B				IAmb	IAmb	09 01 47.0	
	comp=Z,4.7nm,0.7s						
USRK	Ussuriysk Ar.	78.91	326	P	P	09 01 46.2	+1.2
	comp=Z,5.5nm,0.7s,baz=117,slow=3.6,SNR=11						
USRK	Ussuriysk Ar.	78.91	326	P	P	09 01 45.9	+0.8
ORV	Oroville	79.64	41	P	P	09 01 50.8	+1.7
YBH	Yreka Blue Hor	80.25	39	P	P	09 01 54.2	+1.9
PNTR	Pine Nut	80.54	42	P	P	09 01 55.8	+1.8
PNTR				IAmb	IAmb	09 01 57.2	
	comp=Z,9.2nm,0.8s						
YERR	Yerington	80.71	42	P	P	09 01 56.3	+1.4
YERR				IAmb	IAmb	09 01 57.3	
	comp=Z,7.6nm,1.0s						
NVAR	Mina Array Bea	80.99	43	P	P	09 01 58.2	+1.8
	comp=Z,2.2nm,0.8s,baz=225,slow=9.5,SNR=17						
NVAR	Mina Array Bea	80.99	43	P	P	09 01 57.4	+1.0
NV11	Mina Array Sit	81.08	43	P	P	09 01 57.6	+0.8
KVN	Kaiserville	81.47	43	P	P	09 02 00.1	+1.3
KVN				IAmb	IAmb	09 02 01.1	
	comp=Z,4.0nm,0.8s						
MOD	Modoc Plateau	81.78	40	P	P	09 02 01.6	+1.3
MOD				IAmb	IAmb	09 02 02.4	
	comp=Z,4.5nm,0.8s						
KLR	Kul'dur	82.47	329	P	P	09 02 04.2	+0.9
	comp=Z,1.9nm,0.7s,baz=73,slow=2.0,SNR=6.1						
PINE	Pine Mountain	82.54	38	IAmb	IAmb	09 02 07.1	
	comp=Z,12nm,0.9s						
SVW2	Sparrevohn	83.24	11	P	P	09 02 07.2	+0.2
U15A	North Rim	83.93	48	IAmb	IAmb	09 02 14.2	
	comp=Z,3.7nm,0.9s						
F10A	Beach Ranch, E	85.96	38	IAmb	IAmb	09 02 22.6	
	comp=Z,7.8nm,0.8s						
TXAR	Lajitas Array	87.03	57	P	P	09 02 28.4	+2.2
	comp=Z,1.5nm,0.8s,baz=217,slow=6.8,SNR=15						
TXAR	Lajitas Array	87.03	57	P	P	09 02 28.1	+1.9
MLY	Manley	87.74	11	IAmb	IAmb	09 02 28.5	
	comp=Z,3.9nm,0.6s						
RIDG	Independent Ri	87.80	14	IAmb	IAmb	09 02 43.9	
	comp=Z,4.3nm,1.2s						
BCAR	Beaver Creek A	87.97	16	P	P	09 02 30.1	+0.4
IMAR	Indian Mountai	88.10	10	P	P	09 02 30.2	0.0
VNA3	Neumayer Olymp	88.20	176	P	P	09 02 30.9	0.0
IL31		88.26	13	P	P	09 02 30.5	-0.4
ILAR	Eielson Array	88.26	13	P	P	09 02 30.3	-0.7
	comp=Z,2.0nm,0.6s,baz=216,slow=5.2,SNR=26						
IMW	Indian Meadow	88.61	42	IAmb	IAmb	09 02 36.0	
	comp=Z,3.3nm,0.9s						
VNA2	Neumayer--Watz	88.64	177	P	P	09 02 33.5	+0.6
	baz=193,slow=3.0						
VNA1	Neumayer--Stat	88.87	177	P	P	09 02 34.3	+0.4
PD31	Pinedale Array	88.92	43	P	P	09 02 35.8	+0.8
PD31				IAmb	IAmb	09 02 36.4	
	comp=Z,1.9nm,0.8s						
PDAR	Pinedale Array	88.92	43	P	P	09 02 35.9	+1.0
	comp=Z,1.3nm,0.6s,baz=204,slow=3.1,SNR=16						
PDAR	Pinedale Array	88.92	43	P	P	09 02 35.5	+0.6
DAWY	Dawson	89.40	16	IAmb	IAmb	09 02 37.8	
	comp=Z,4.2nm,0.8s						
EGAK	Eagle	89.55	15	IAmb	IAmb	09 02 38.2	
	comp=Z,6.3nm,0.9s						
CMAR	Chiang Mai Arr	90.09	290	P	P	09 02 41.4	+0.8
	comp=Z,3.3nm,0.9s,baz=125,slow=2.8,SNR=12						
CMAR	Chiang Mai Arr	90.09	290	P	P	09 02 41.7	+1.1
YKA	Yellowknife Ar	96.46	25	P	P	09 03 08.5	-0.1
	comp=Z,0.2nm,0.6s,baz=236,slow=3.8,SNR=3.5						
MKAR	Makanchi Array	111.15	313	PKiKP	PKiKP	09 08 09.0	-1.0
	comp=Z,0.7nm,0.7s,baz=56,slow=0.4,SNR=5.9						
ARCES	ARCESS Array B	128.86	350	PKP	PKPdf	09 08 42.0	-1.3
	comp=Z,5.3nm,1.1s,baz=45,slow=1.9,SNR=5.4						
AKASG	Malin Array Be	142.96	331	PKhKP	PKPpre	09 09 06.4	
	comp=Z,8.2nm,0.6s,baz=43,slow=4.4,SNR=39						
BR131	Keskin Array S	146.79	312		PKPbc	09 09 19.1	-0.6
BRTR	Keskin Array B	146.79	312	PKPbc	PKPbc	09 09 19.4	-0.3

	comp=Z,2.5nm,0.7s,baz=138,slow=4.7,SNR=11						
BRTR	Keskin Array B	146.79	312		PKPbc	09 09 19.2	-0.6
BUR08	Bucovina Ar. S	146.99	331	PKPbc	PKPbc	09 09 20.4	+0.5
BURAR	Bucovina Array	147.00	331	PKPbc	PKPbc	09 09 20.6	+0.7
CLL	Collm	148.00	347	*i* PKPbc	PKiKP	09 09 23.4	-0.2
	comp=Z,11nm,0.8s						
CLL				*i* PKPab	PKPab	09 09 27.8	+0.9
CLL				L	L	10 26 00.0	
	comp=Z,100nm,20.2s						
DPC	Dobruska-Polom	148.06	343	⇑*e*PKP	PKPbc	09 09 23.0	+0.5
DPC				*e*PKPAB	PKPab	09 09 28.0	+0.7
BRG	Berggiesshubel	148.20	346	*i* PKP	PKPbc	09 09 22.9	+0.1
	comp=Z,5.8nm,0.8s						
BRG				*i*		09 09 27.5	
	comp=Z,5.2nm,0.7s						
KHC	Kasperske Hory	149.91	345	⇑*e*PKP	PKPbc	09 09 27.2	+0.2
KHC				*e*PKPAB	PKPab	09 09 35.1	+0.2
KHC	Kasperske Hory	149.91	345		PKPbc	09 09 27.1	+0.1
KHC					PKPab	09 09 35.3	+0.4
GERES	GERESS Array B	150.14	344	PKPbc	PKPbc	09 09 27.6	0.0
	comp=Z,0.6nm,0.3s,baz=70,slow=1.6,SNR=6.2						
GERES	GERESS Array B	150.14	344		PKPbc	09 09 27.4	-0.2

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*GCG **18** 09:03:56.0±0.3, 13.°39N×91.°28W, h8^{km}, MD3.6*
*MEX **18** 09:03:59.5±0.9, 13.°18N×91.°62W, h22^{km}±25^{km}, MD3.9*
ISC 18 09:03:59.7±3.0, **13.°6N**±0.°2×**91.°22W**±0.°07, **h28**^{km}, **n8**, σ**1.^{s}04**/12, **1C, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	0.91	24	*e*P	Pn	09 04 17.0	+0.2
IXG	Ixpaco	0.94	54	⇑*i*P	Pn	09 04 16.9	-0.4
STG3	Santiaguito 3,	1.14	343	*e*P	Pn	09 04 20.4	+0.3
NBG	Las Nubes	1.29	41	*e*P	Pn	09 04 23.3	+1.1
THIG		1.64	322	*e*P	Pn	09 04 27.1	+0.4
THIG				*i* S	Sn	09 04 47.8	+1.0
CCIG	Comitan	2.80	342	*i* P	Pn	09 04 44.7	+1.9
CCIG				*i* S	Sb	09 05 22.0	-1.1
PCIG		2.84	317	*i* P	Pn	09 04 43.5	+0.3
PCIG				*i* S	Sn	09 05 16.1	-0.5
CMIG	Matias Romero	4.94	315	*i* P	Pn	09 05 12.5	+0.3
CMIG				*i* S	Sn	09 06 07.1	-1.4

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*IDC **18** 09:24:31.7±1.2, 5.°41S×153.°27E, h0^{km}, mb3.7/7, mb1 3.8/7, mb1mx3.7/32, mbtmp3.7/7, MS2.9/1, Ms1 2.9/1, ms1mx2.4/45, Error ellipse: s-maj=30.4km s-min=22.6km az=108.0*
*NEIC **18** 09:24:37.5±2.9, 5.°37S±0.°10×153.°0E±0.°1, h35^{km}±5^{km}, mb4.7/7, Error ellipse: s-maj=22.1km s-min=11.0km az=119.0*
ISC 18 09:24:37.1±0.9, **5.°51S**±0.°08×**153.°1E**±0.°1, **h37**^{km}, **n25**, σ**1.^{s}43**/25, **1C-1D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.60	318	Pn	Pn	09 25 02.0	-0.9
	219nm,0.3s,baz=202,slow=1.1,SNR=69						
KRVT				Sn	Sn	09 25 24.3	+1.9
	235nm,0.3s,baz=100,slow=20,SNR=16						
RABL	Rabaul	1.61	324		Pn	09 25 00.9	-2.1
PMG	Port Moresby	7.05	236	Pn	Pn	09 26 17.4	-0.5
PMG				Sn	Sn	09 27 34.2	-2.7
HNR	Honiara	7.83	120	LR	LR	09 29 30.7	
	comp=Z,87nm,18.7s,baz=204,slow=39						
MTN	Manton Dam	22.87	250	P	P	09 29 36.4	-1.2
MTN				IAmb	IAmb	09 29 44.9	
	comp=Z,37nm,1.4s						
WB0	Warramunga Arr	23.07	230	P	P	09 29 41.1	+1.5
WRA	Warramunga Arr	23.22	230	P	P	09 29 43.0	+1.9
	comp=Z,1.3nm,0.9s,baz=52,slow=9.8,SNR=4.6						
ASAR	Alice Springs	25.84	224	P	P	09 30 06.8	+1.5
	comp=Z,0.6nm,0.8s,baz=55,slow=7.6,SNR=4.9						
KNRA	Kununurra	25.94	245	P	P	09 30 07.5	+1.2
FITZ	Fitzroy Crossi	29.60	243	P	P	09 30 37.5	-1.5
FITZ				IAmb	IAmb	09 30 50.1	
	comp=Z,5.2nm,1.3s						
CISI	Cisompet, Garu	45.03	265	P	P	09 32 51.7	+2.0
CISI				IAmb	IAmb	09 33 02.2	
	comp=Z,17nm,0.6s						
PEA0B	Petropavlovsk-	58.52	3	P	P	09 34 29.9	+0.3
PETK	Petropavlovsk-	58.52	3	P	P	09 34 30.2	+0.6
	comp=Z,1.5nm,0.5s,baz=164,slow=7.5,SNR=14						
PETK	Petropavlovsk-	58.52	3	P	P	09 34 30.1	+0.4
MA2	Magadan	64.90	359	P	P	09 35 12.0	-0.5
MA2				IAmb	IAmb	09 35 13.2	
	comp=Z,3.9nm,0.8s						
IMAR	Indian Mountai	80.94	19	P	P	09 36 46.2	-1.1
MKAR	Makanchi Array	81.05	319	P	P	09 36 49.2	+0.8
	comp=Z,0.2nm,0.6s,baz=108,slow=3.2,SNR=2.3						
MKAR	Makanchi Array	81.05	319	P	P	09 36 49.0	+0.5
EYAK	Cordova Ski Ar	81.11	26	P	P	09 36 46.6	-1.7
EYAK				IAmb	IAmb	09 36 56.2	
	comp=Z,29nm,1.2s						
ZALV	Zalesovo Beam	81.90	326	P	P	09 36 52.6	-0.1
	comp=Z,1.1nm,0.7s,baz=100,slow=1.8,SNR=4.0						
ILAR	Eielson Array	82.70	22	P	P	09 36 55.4	-1.2
	comp=Z,0.3nm,0.8s,baz=254,slow=5.5,SNR=3.6						
BVAR	Borovoye Array	89.98	323	P	P	09 37 32.5	-0.2
	comp=Z,0.5nm,0.5s,baz=100,slow=5.0,SNR=4.0						
SYO	Syowa Base	93.11	199	⇑*e*PcP	PcP	09 37 49.4	+2.0
SYO	Syowa Base	93.11	199	⇓*e*pP	pP	09 37 57.6	+0.3
TORD	Torodi Ar. Bea	150.81	287	PKPbc	PKiKP	09 44 27.2	-0.1
	comp=Z,1.1nm,0.7s,baz=96,slow=2.8,SNR=3.1						

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*DDA **18** 09:28:46.0, 38.°86N×43.°55E, h9^{km}±9^{km}, MW4.2*
*TEH **18** 09:28:46.9, 38.°87N×43.°53E, h8^{km}, ML4.1*
*ISK **18** 09:28:46.6, 38.°88N×43.°53E, h1^{km}, ML4.1/22*
*IDC **18** 09:28:47.5±0.8, 38.°78N×43.°54E, h0^{km}, mb3.9/13, mb1 3.9/18, mb1mx3.7/49, mbtmp3.8/18, ML3.2/4, MS3.2/6, Ms1 3.2/6, ms1mx2.8/45, Error ellipse: s-maj=16.2km s-min=9.2km az=144.0*
*NEIC **18** 09:28:47.8±2.6, 38.°86N±0.°04×43.°60E±0.°05, h10^{km}±5^{km}, Error ellipse: s-maj=6.2km s-min=4.6km az=118.0*
*NSSP **18** 09:28:47.0, 38.°90N×43.°58E, h10^{km}, Ms3.9*
ISC 18 09:28:47.8±1.0, **38.°85N**±0.°02×**43.°55E**±0.°02, **h5**^{km}±7^{km}, **n173**, σ**1.^{s}48**/203, **mb4.0**/16, **MS3.1**/4, **14C-16D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.14	8	⇓*i*P	Pg	09 28 49.3	-1.4
VMUR				*i* S	Sg	09 28 54.1	+1.4
VMUR				IAML		09 28 57.0	
	comp=N,50μm,0.7s						
VMUR				IAML		09 28 59.0	
	comp=E,75μm,0.6s						
VANB	Van	0.28	206	PG	Pb	09 28 55.2	-0.3
VANB	Van	0.28	206	*e*Pg	Pb	09 28 54.4	-1.1
VANB	Van	0.28	206	Pg	Pb	09 28 55.2	-0.3
CLDR	Caldiran	0.41	45	PG	Pg	09 28 55.1	-0.7
CLDR	Caldiran	0.41	45	⇓*i*P	Pg	09 28 54.6	-1.1
CLDR				*i* S	Sb	09 29 06.0	+1.6
CLDR				IAML		09 29 09.0	
	comp=N,4μm,0.6s						
CLDR				IAML		09 29 09.0	
	comp=E,5μm,0.8s						
CLDR	Caldiran	0.41	45	*e*Pg	Pg	09 28 54.4	-1.4
CLDR	Caldiran	0.41	45	Pg	Pg	09 28 55.1	-0.7
ADCV	BITLIS_Adilcev	0.64	266	⇓*i*P	Pg	09 28 59.7	-0.5
ADCV				*i* S	Sb	09 29 10.5	-0.6
ADCV				IAML		09 29 12.0	
	comp=N,9μm,0.5s						
ADCV				IAML		09 29 22.0	
	comp=E,4μm,0.7s						
ADCV	BITLIS_Adilcev	0.64	266	*e*Pg	Pg	09 28 59.7	-0.5
GEVA	Gevas	0.66	216	⇑*i*P	Pg	09 28 59.6	-0.9
GEVA				*i* S	Sb	09 29 12.5	+1.0
GEVA				IAML		09 29 14.0	
	comp=E,2μm,0.9s						
GEVA				IAML		09 29 21.0	
	comp=N,3μm,0.7s						
GEVA	Gevas	0.66	216	*e*Pg	Pg	09 28 59.7	-0.8
AKDM	Akdamar-Van	0.69	221	PG	Pg	09 29 00.3	-0.7
AKDM				SG	Sb	09 29 11.9	-0.4
AKDM	Akdamar-Van	0.69	221	*e*Pg	Pg	09 28 59.8	-1.2
AKDM	Akdamar-Van	0.69	221	Pg	Pg	09 29 00.4	-0.6
DYDN	Diyadin	0.70	9	⇓*i*P	Pg	09 28 59.5	-1.7
DYDN				*i* S	Sg	09 29 11.1	+0.7
DYDN				IAML		09 29 18.0	
	comp=E,3μm,0.9s						
DYDN				IAML		09 29 18.0	
	comp=N,3μm,0.5s						
MLAZ	Malazgirt-MUS	0.83	291	PG	Pg	09 29 02.4	-1.3
MLAZ				SG	Sb	09 29 15.9	-0.5
MLAZ	Malazgirt-MUS	0.83	291	*e*Pg	Pg	09 29 02.3	-1.4
AGRB	Hanur-Agry	0.84	329	PG	Pg	09 29 02.6	-1.4
AGRB				SG	Sg	09 29 15.3	+0.4
AGRB	Hanur-Agry	0.84	329	Pg	Pg	09 29 02.6	-1.4
BASK	Baskale_VAN	0.88	156	⇑*i*P	Pg	09 29 04.0	-0.6
BASK				*i* S	Sn	09 29 21.5	+1.2
BASK				IAML		09 29 33.0	
	comp=N,2μm,1.4s						
BASK	Baskale_VAN	0.88	156	*e*Pg	Pg	09 29 04.1	-0.5
IGDI	IGDIR	1.10	22	⇓*i*P	Pg	09 29 07.8	-1.0
IGDI				*i* S	Sn	09 29 26.9	+1.3
IGDI				IAML		09 29 30.0	
	comp=E,1μm,1.0s						
IGDI	IGDIR	1.10	22	*e*Pg	Pg	09 29 07.8	-1.0
BLIS	Bitlis-Merkez	1.20	249	⇑*i*P	Pg	09 29 09.3	-1.6
BLIS				*i* S	Sb	09 29 27.0	-0.2
BLIS				IAML		09 29 28.0	
	comp=N,2μm,0.6s						
BLIS				IAML		09 29 37.0	
	comp=E,1μm,0.7s						
EKAR	Karacoban	1.22	290	*i* P	Pn	09 29 12.2	+0.3
EKAR				*i* S	Sn	09 29 29.2	+0.3
EKAR				IAML		09 29 37.0	
	comp=E,5μm,1.5s						
EKAR				IAML		09 29 47.0	
	comp=N,5μm,0.9s						
EKAR	Karacoban	1.22	290	*e*Pg	Pn	09 29 11.8	-0.1
TASB	TASBURUN-IGDIR	1.25	25	PN	Pg	09 29 11.1	-0.7
TASB	TASBURUN-IGDIR	1.25	25	*e*Pg	Pg	09 29 11.4	-0.4
TASB	TASBURUN-IGDIR	1.25	25	Pn	Pg	09 29 11.1	-0.7
VNNZ	Vanand	1.27	10	*e*P	Pn	09 29 13.4	+1.0
VNNZ				*e*S	Sn	09 29 32.1	+2.3
EATA	Eleskirt	1.30	321	⇓*i*P	Pg	09 29 10.4	-2.4
EATA				*i* S	Sn	09 29 30.8	-0.2
EATA				IAML		09 29 35.0	
	comp=N,1μm,0.8s						
EATA				IAML		09 29 37.0	
	comp=E,1μm,0.7s						
METS	Metsamor	1.36	17	*e*P	Pn	09 29 13.2	-0.4
METS				*e*S	Sb	09 29 31.5	-0.1
NRKZ	NAREK	1.44	37	*e*P	Pn	09 29 14.6	0.0
NRKZ				*e*S	Sb	09 29 33.6	-0.1
ARUZ	Aruch	1.49	16	*e*P	Pg	09 29 16.6	+0.3
ARUZ				*e*S	Sg	09 29 37.6	+1.9
SRTM	Siirt_Merkez	1.54	237	⇑*i*P	Pb	09 29 16.6	-0.4
SRTM				*i* S	Sg	09 29 39.7	+2.5
SRTM				IAML		09 29 48.0	
	comp=N,4μm,1.0s						
SRTM				IAML		09 29 48.0	
	comp=E,2μm,0.8s						
SRTM	Siirt_Merkez	1.54	237	*e*Pg	Pb	09 29 16.5	-0.4
DIGO	Kars	1.57	355	⇓*i*P	Pn	09 29 16.3	-0.3
DIGO				*i* S	Sg	09 29 40.4	+2.1
DIGO				IAML		09 29 50.0	
	comp=E,1μm,0.6s						
DIGO				IAML		09 29 50.0	
	comp=N,840nm,0.5s						
GNI	Garni	1.59	35	Pg	Pb	09 29 17.6	-0.2
	comp=N,82nm,0.3s,baz=213,slow=2.9,SNR=159						
GNI				Lg	Lg	09 29 42.2	
	comp=N,39nm,0.3s,baz=162,slow=17,SNR=5.2						
GNI				LR	LR	09 30 12.8	
	comp=N,247nm,20.8s,baz=88,slow=52						
GNI	Garni	1.59	35	⇑*i*P	Pn	09 29 17.1	+0.3
GNI				⇓*i*S	Sg	09 29 39.2	+0.2
GNI	Garni	1.59	35	PN	Pn	09 29 16.8	0.0
GNI	Garni	1.59	35	*e*Pn	Pn	09 29 17.1	+0.3
GNI	Garni	1.59	35		Pn	09 29 16.9	0.0
MUSM	Mu-Merkez	1.60	266	⇓*i*P	Pn	09 29 15.7	-1.2
MUSM				*i* S	Sb	09 29 38.3	-0.1
CUKT	Cukurca	1.60	178	PN	Pn	09 29 17.2	+0.3
CUKT	Cukurca	1.60	178	⇑*i*P	Pn	09 29 16.7	-0.3
CUKT				*i* S	Sg	09 29 42.5	+3.3
CUKT				IAML		09 29 50.0	
	comp=E,2μm,1.2s						
CUKT				IAML		09 29 54.0	
	comp=N,2μm,1.0s						
CUKT	Cukurca	1.60	178	*e*Pn	Pn	09 29 16.7	-0.3
CUKT	Cukurca	1.60	178	Pn	Pn	09 29 17.2	+0.3
SIRT	Sirnak	1.61	213	PN	Pb	09 29 17.4	-0.7
SIRT	Sirnak	1.61	213	*e*Pn	Pb	09 29 17.6	-0.4
SIRT	Sirnak	1.61	213	Pn	Pb	09 29 17.4	-0.7
SIRN	Sırnak	1.62	214	⇓*i*P	Pn	09 29 17.4	+0.2
SIRN				*i* S	Sg	09 29 43.5	+3.6
SIRN				IAML		09 29 47.0	
	comp=N,1μm,1.4s						
SIRN				IAML		09 29 50.0	
	comp=E,1μm,0.7s						
VRTB	Varto-Mus	1.66	281	PN	Pn	09 29 17.9	+0.1
VRTB	Varto-Mus	1.66	281	⇓*i*P	Pb	09 29 18.3	-0.7
VRTB				*i* S	Sg	09 29 44.0	+2.9
VRTB				IAML		09 29 45.0	
	comp=E,2μm,0.7s						
VRTB				IAML		09 29 56.0	
	comp=N,2μm,1.7s						
VRTB	Varto-Mus	1.66	281	*e*Pn	Pb	09 29 18.3	-0.7
VRTB	Varto-Mus	1.66	281	Pn	Pn	09 29 17.9	+0.1
KAPZ	Kaputan	1.72	31	*e*P	Pb	09 29 20.2	+0.2
KAPZ				*e*S	Sg	09 29 43.2	+0.2
KOPR	Koprukoy-ERZUR	1.74	311	PN	Pn	09 29 18.9	0.0
KOPR	Koprukoy-ERZUR	1.74	311	Pn	Pn	09 29 18.9	0.0
HOMI	Horasan	1.74	314	⇓*i*P	Pb	09 29 20.0	-0.5
HOMI				*i* S	Sg	09 29 47.5	+3.6
HOMI				IAML		09 29 58.0	
	comp=N,2μm,0.9s						
HOMI				IAML		09 29 58.0	
	comp=E,2μm,0.7s						
EAK	Akyaka	1.83	1	⇑*i*P	Pg	09 29 22.4	-0.5
EAK				*i* S	Sg	09 29 51.4	+4.6
EAK				IAML		09 29 53.0	
	comp=E,408nm,0.8s						
EAK				IAML		09 29 57.0	
	comp=N,1μm,1.4s						
BNGL	BINGOL	1.87	274	⇓*i*P	Pb	09 29 22.4	-0.3
BNGL				*i* S	Sg	09 29 50.5	+2.5
BNGL	BINGOL	1.87	274	*e*Pn	Pb	09 29 22.8	+0.1
SENK	Senkaya-Erzuru	1.94	332	PN	Pn	09 29 21.8	+0.1
SENK	Senkaya-Erzuru	1.94	332	*e*Pn	Pn	09 29 22.1	+0.4
SENK	Senkaya-Erzuru	1.94	332	Pn	Pn	09 29 22.2	+0.5
SVAN	Silvan-Diyarba	1.97	250	PN	Pn	09 29 22.4	+0.4
SVAN				SN	Sb	09 29 48.6	-0.5
SVAN	Silvan-Diyarba	1.97	250	*i* P	Pb	09 29 23.2	-1.0
SVAN				*i* S	Sg	09 29 50.1	-1.0
SVAN				IAML		09 29 53.0	
	comp=N,605nm,1.7s						
SVAN				IAML		09 29 59.0	
	comp=E,404nm,1.9s						
SVAN	Silvan-Diyarba	1.97	250	*e*Pn	Pb	09 29 23.0	-1.2
SVAN	Silvan-Diyarba	1.97	250	Pn	Pn	09 29 22.7	+0.8
SVAN				Sn	Sn	09 29 47.7	+0.6
KARO	Karliova-Bingo	2.00	284	PN	Pn	09 29 22.6	+0.1
KARO	Karliova-Bingo	2.00	284	Pn	Pn	09 29 22.9	+0.4
AKDA	Akdag	2.10	307	⇓*i*P	Pn	09 29 25.0	+1.1
ITBZ	Tabriz	2.13	106	*e*Pn	Pb	09 29 25.9	-1.1
STE	Stepanavan	2.24	16	*e*P	Pb	09 29 27.7	-1.1
STE				*e*S	Sg	09 30 05.0	+5.3
BNGB	Bingl	2.24	274	PN	Pn	09 29 26.1	+0.4
BNGB	Bingl	2.24	274	Pn	Pn	09 29 26.5	+0.8
YEDI	Yedisu-Bingol	2.41	285	PN	Pn	09 29 28.4	+0.3
YEDI	Yedisu-Bingol	2.41	285	*e*Pn	Pb	09 29 30.1	-1.6
YEDI	Yedisu-Bingol	2.41	285	Pn	Pn	09 29 28.8	+0.7
DDEM	Demirkent	2.46	326	⇓*i*P	Pb	09 29 32.3	-0.3
DDEM				*i* S	Sg	09 30 10.4	+3.5
HANI	Diyarbakir_Han	2.50	261	*i* P	Pb	09 29 31.6	-1.8
HANI				*i* S	Sb	09 30 05.5	+1.0
KRIK	Erzurum-spir	2.51	307	*i* P	Pb	09 29 32.9	-0.7
KRIK				*i* S	Sg	09 30 10.2	+1.7
DAGI	Agillar	2.55	331	*i* P	Pb	09 29 33.5	-0.7
DAGI				*i* S	Sg	09 30 12.3	+2.5
AKH	Akhalkalaki	2.56	359	PN	Pn	09 29 30.4	+0.3
DBAD	Bademkaya	2.59	327	*i* P	Pn	09 29 30.3	-0.3
DBAD				*i* S	Sb	09 30 05.2	-1.9
KZRT	Kazreti	2.62	14	*i* P	Pb	09 29 33.9	-1.3
KOPT	Kop Dagi	2.63	297	*i* P	Pb	09 29 34.4	-1.3
KOPT				*i* S	Sg	09 30 15.1	+2.7
MARD	Mardin	2.67	236	*i* P	Pn	09 29 31.8	+0.2
MARD				*i* S	Sn	09 30 06.0	+1.6
MAHB	Mahabad	2.69	140	*e*Pn	Pb	09 29 34.7	-1.9
AHAR	Ahar	2.77	96	*e*Pn	Pn	09 29 35.1	+2.1
IHRS	Heris	2.79	100	*e*Pn	Pn	09 29 34.7	+1.3
IHRS				*e*		09 29 45.5	
MAZI	Mazidag	2.81	241	PN	Pn	09 29 34.5	+0.9
MAZI	Mazidag	2.81	241	Pn	Pn	09 29 34.0	+0.4
DYBB	Diyarbakir	2.82	253	PN	Pn	09 29 34.7	+1.0
DYBB	Diyarbakir	2.82	253	Pn	Pn	09 29 34.7	+1.0
DBOC	Borcka	2.88	331	*i* P	Pb	09 29 40.0	+0.3
BAYB	BAYBURT	2.91	300	*i* P	Pb	09 29 40.0	-0.2
BCA	Borcka	2.98	331	PN	Pn	09 29 36.6	+0.8
BCA	Borcka	2.98	331	Pn	Pn	09 29 36.6	+0.8
TBLG	Delisi	3.02	17	Pn	Pn	09 29 33.9	-2.4
BAYT	Aydıntepe-Bayb	3.05	301	PN	Pn	09 29 37.6	+0.7
BAYT	Aydıntepe-Bayb	3.05	301	Pn	Pn	09 29 37.6	+0.7
BATM	Batumi	3.09	333	PN	Pn	09 29 37.9	+0.5
BATM	Batumi	3.09	333	Pn	Pn	09 29 38.3	+1.0
EUZM	Uzumlu	3.11	287	*i* P	Pb	09 29 42.8	-0.9
PTK	Pertek	3.24	272	PN	Pn	09 29 40.6	+1.0
PTK	Pertek	3.24	272	Pn	Pn	09 29 40.6	+1.0
SVRC	Sivrice-ELAZID	3.35	263	PN	Pn	09 29 42.1	+1.0
SVRC	Sivrice-ELAZID	3.35	263	Pn	Pn	09 29 42.1	+1.0
ISRB	Sarab	3.40	106	*e*Pn	Pn	09 29 43.7	+2.0
KELT	Kelkit	3.56	293	*i* P	Pb	09 29 51.1	-0.4
URFA	Urfa	3.98	251	PN	Pn	09 29 51.2	+1.6
URFA	Urfa	3.98	251	Pn	Pn	09 29 51.3	+1.6
KBZ	Khabaz	4.90	354	Pn	Pn	09 30 07.0	+4.9
	comp=E,0.1nm,0.3s,baz=180,slow=8.0,SNR=5.6						
KIV	Kislovodsk	5.14	353	Pn	Pn	09 30 04.7	-0.9
BRTR	Keskin Array B	7.73	280	Pn	Pn	09 30 45.5	+4.3
	baz=108,slow=12,SNR=4.6						
ASF	Jabal al Asfar	8.59	221	Pn	Pn	09 30 54.3	+1.4
	comp=E,0.3nm,0.3s,baz=31,slow=15,SNR=1.7						
MMAI	Mount Meron Ar	8.80	231	LR	LR	09 34 53.8	
	comp=E,146nm,18.1s,baz=50,slow=42						
EIL	Elat	11.59	220	LR	LR	09 36 29.8	
	comp=E,102nm,19.1s,baz=10.0,slow=40						
PLOR	Plostina	14.30	305	⇑P	P	09 32 21.0	+2.6
TESR	Tescani	14.58	307	⇑P	P	09 32 22.6	+1.3
BIZ	Bicaz	15.10	308	⇑P	P	09 32 29.4	+2.2
DOPR	Dopca	15.16	304	⇑P	P	09 32 29.8	+2.0
VOIR		15.20	302	⇑P	P	09 32 27.3	-1.1
RAYN	Ar Rayn	15.37	173	Pn	Pn	09 32 22.4	-3.2
RAYN				IAmb	IAmb	09 32 35.2	
	comp=Z,5.7nm,0.8s						
ARR	Arges	15.46	301	⇑P	P	09 32 29.7	-1.5
AKTO	Aktyubinsk	15.46	37	Pn	Pn	09 32 26.3	-0.3
	comp=Z,0.1nm,0.3s,baz=223,slow=12,SNR=5.9						
AKASG	Malin Array Be	15.58	324	Pn	Pn	09 32 27.6	-0.4
	comp=Z,0.7nm,0.3s,baz=131,slow=11,SNR=5.5						
AKASG	Malin Array Be	15.58	324		Pn	09 32 27.3	-0.7
ABKAR	Akbulak array	15.69	43	Pn	Pn	09 32 26.8	-2.6
BURAR	Bucovina Array	15.94	309	⇑P	P	09 32 38.3	+1.7
BURAR	Bucovina Array	15.94	309		P	09 32 36.5	-0.1
BUR08	Bucovina Ar. S	15.97	309		Pn	09 32 30.4	-2.9
LIT	Litokhoron	16.31	281	Pn	Pn	09 32 36.7	-0.9
MDVR	Moldovita	17.30	297	⇓P	P	09 32 51.3	-0.3
CRVS	Cervenica-Dubn	18.76	310	*e*P	Pn	09 33 11.1	+3.0
ARU	Arti	20.21	25	P	P	09 33 23.9	+0.5
	comp=Z,1.6nm,0.4s,baz=238,slow=9.0,SNR=7.9						
ARU	Arti	20.21	25	P	P	09 33 23.1	-0.3
ARU				IAmb	IAmb	09 33 31.2	
	comp=Z,25nm,1.4s						
KK31	Karatay Array	20.76	70	P	P	09 33 28.3	-1.2
KK31				IAmb	IAmb	09 33 37.8	
	comp=Z,6.8nm,0.8s						
KKAR	Karatay Array	20.76	70	P	Pn	09 33 30.9	-0.9
KKAR	Karatay Array	20.76	70	P	P	09 33 28.2	-1.3
KKAR				IAmb	IAmb	09 33 37.7	
	comp=Z,6.8nm,0.8s						
KLMR	Klimovskoe	22.17	355	*e*	P	09 33 47.1	+2.6
KLMR				AMP		09 33 53.2	
	comp=Z,27nm,1.7s						
ARSB	Arslanbob	22.61	74	P	P	09 33 47.9	-1.7
BVAR	Borovoye Array	23.26	44	P	P	09 33 58.2	+2.2
	comp=Z,0.5nm,0.6s,baz=218,slow=9.4,SNR=4.9						
GEC2	GERESS Array S	23.59	305	P	P	09 33 57.4	-2.2
GERES	GERESS Array B	23.59	305	LR	LR	09 44 11.9	
	comp=Z,25nm,21.1s,baz=28,slow=39						
GERES	GERESS Array B	23.59	305	P	P	09 33 58.3	-1.2
AAK	Ala-Archa	23.68	71	P	P	09 34 02.7	+2.1
	comp=Z,0.6nm,0.3s,baz=244,slow=11,SNR=8.1						
AAK	Ala-Archa	23.68	71	P	P	09 33 57.4	-3.2
AAK				IAmb	IAmb	09 34 15.0	
	comp=Z,8.6nm,1.4s						
MURB	Monte Urbino	23.73	291	P	P	09 33 58.5	-2.4
MURB				IAmb	IAmb	09 34 17.1	
	comp=Z,10nm,1.1s						
KHC	Kasperske Hory	23.74	305	P	P	09 33 59.0	-1.9
KHC				IAmb	IAmb	09 34 17.5	
	comp=Z,4.8nm,1.2s						
BOOM	Boomskoye usch	24.75	71	P	P	09 34 08.1	-2.4
BOOM				IAmb	IAmb	09 34 18.8	
	comp=Z,3.2nm,0.7s						
KURBB	Kurchatov Arra	27.24	53	P	P	09 34 33.3	+0.6
	comp=Z,2.4nm,0.9s,baz=266,slow=9.8,SNR=12						
KURK	Kurchatov	27.31	53	P	P	09 34 32.6	-0.7
KURK				IAmb	IAmb	09 34 37.7	
	comp=Z,5.5nm,1.1s						
HFS	Hagfors	28.38	328	P	P	09 34 41.9	-0.8
	comp=Z,3.2nm,0.7s,baz=118,slow=8.6,SNR=5.0						
MK31	Makanchi Array	29.27	62	P	P	09 34 47.7	-3.1
MKAR	Makanchi Array	29.27	62	P	P	09 34 52.0	+1.1
	comp=Z,1.2nm,0.7s,baz=271,slow=6.5,SNR=14						
MKAR	Makanchi Array	29.27	62	P	P	09 34 49.3	-1.5
NOA	NORSAR Array B	29.90	329	LR	LR	09 48 13.6	
	comp=Z,37nm,19.1s,baz=35,slow=39						
ZALV	Zalesovo Beam	31.70	48	P	P	09 35 13.0	+0.8
	comp=Z,0.6nm,0.5s,baz=264,slow=13,SNR=2.7						
ZALV	Zalesovo Beam	31.70	48	P	P	09 35 10.9	-1.3
WMQ	Urumqi	33.22	67	*e*P	P	09 35 30.6	+4.9
NRIK	Noril'sk	38.43	23	P	P	09 36 12.3	+2.3
	comp=Z,1.3nm,0.5s,baz=234,slow=3.2,SNR=4.0						
TORD	Torodi Ar. Bea	44.95	247	P	P	09 37 02.4	-1.7
	comp=Z,1.5nm,0.9s,baz=57,slow=7.8,SNR=9.3						
HHC	Hu-ho-hao-te	51.04	65	*e*P	P	09 37 52.8	+1.7
CMAR	Chiang Mai Arr	51.87	97	P	P	09 37 58.7	+1.3
	comp=Z,0.5nm,0.3s,baz=291,slow=6.0,SNR=4.5						
TIXI	Tiksi	52.21	24	LR	LR	10 04 03.6	
	comp=Z,18nm,21.5s,baz=181,slow=40						
DBIC	Dimbokro	54.06	247	P	P	09 38 12.8	-0.7
	comp=Z,2.7nm,0.7s,baz=33,slow=12,SNR=3.5						
DBIC	Dimbokro	54.06	247	P	P	09 38 11.6	-1.9
KSRS	Korea Array	63.95	62	P	P	09 39 21.6	-0.4
	comp=Z,2.3nm,0.9s,baz=303,slow=5.3,SNR=3.8						
PETK	Petropavlovsk-	72.19	35	LR	LR	10 17 05.5	
	comp=Z,35nm,18.6s,baz=237,slow=40						
YKA	Yellowknife Ar	77.48	350	P	P	09 40 44.0	0.0
	comp=Z,0.9nm,0.8s,baz=22,slow=6.0,SNR=16						

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*IDC **18** 09:30:25.6±0.6, 19.°90S×70.°47W, h0^{km}, mb4.3/13, mb1 4.4/17, mb1mx4.3/28, mbtmp4.3/17, ML4.0/4, MS4.0/14, Ms1 4.0/14, ms1mx3.8/26, Error ellipse: s-maj=21.4km s-min=12.7km az=59.0*
*NEIC **18** 09:30:26.8±1.8, 20.°07S±0.°05×70.°72W±0.°06, h14^{km}±3^{km}, mb4.9/101, Mwr4.6/21, Error ellipse: s-maj=8.6km s-min=7.2km az=131.0*
*NEIC **18** 09:30:27, 20.°09S×70.°69W, h19^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.71; M$_{\theta\theta}$0.99; M$_{\phi\phi}$-3.71; M$_{r\theta}$3.46; M$_{\theta\phi}$1.34; M$_{\phi r}$-7.41; Fault plane solution: M$_{0}$8.93000×10^{15} NP1:φ$_{s}$154.91000°, δ79.04000°, λ83.98000°. NP2:φ$_{s}$3.92000°, δ12.48000°, λ118.43000°. Principal axes: T 8.2724, Plg56.0000°, Azm57.0000°; N 1.1935, Plg6.0000°, Azm156.0000°; P -9.4659, Plg34.0000°, Azm250.0000°;*
*GUC **18** 09:30:29.4±0.4, 20.°08S×70.°74W, h35^{km}±1^{km}, ML4.4*
*VAO **18** 09:30:30.0±0.5, 19.°99S×70.°63W, h34^{km}, mb4.6*
ISC 18 09:30:28.3±0.8, **20.°04S**±0.°03×**70.°71W**±0.°05, **h22**^{km}±6^{km}, **n334**, σ**1.^{s}34**/336, **mb4.8**/53, **MS4.1**/10, **3C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.71	51	*e*P	Pn	09 30 42.5	-0.5
PSGC				*i* S	Sn	09 30 52.9	-0.4
TA01	Diego Aracena	0.72	137	*e*P	Pb	09 30 41.7	-0.4
TA01				*i* S	Sb	09 30 51.9	+0.2
TA01				IAML		09 30 54.3	
	comp=E,23μm,0.2s						
PATCX	Punta Patache	0.94	146	⇓*i*P	Pn	09 30 45.1	-1.1
PATCX				*i* S	Sn	09 30 57.2	-1.7
PATCX				IAML		09 31 01.1	

	comp=E,24µm,0.9s						
PB11	IPOC Station P	1.03	74	eP	Pb	09 30 47.7	+0.1
PB11				i S	Sb	09 31 01.7	+1.0
PB11				IAML		09 31 02.9	
	comp=N,22µm,0.8s						
PB11	IPOC Station P	1.03	74		Pn	09 30 47.1	-0.4
PB11					Sb	09 31 01.6	+1.0
PB12	IPOC Station P	1.46	14	eP	Pb	09 30 54.2	-0.7
PB12				eS	Sb	09 31 13.6	+0.5
PB12				IAML		09 31 22.5	
	comp=E,17µm,0.6s						
PB08	IPOC Station P	1.47	94	eP	Pb	09 30 54.5	-0.5
PB08				i S	Sb	09 31 14.0	+0.6
PB08				IAML		09 31 20.6	
	comp=N,7µm,0.7s						
GO01	Chusmiza	1.47	76	eP	Pb	09 30 55.2	-0.1
GO01				i S	Sb	09 31 14.9	+1.2
GO01	Chusmiza	1.47	76		Pb	09 30 55.2	-0.1
GO01				Sn	Sb	09 31 14.7	+1.0
PB02	IPOC Station P	1.48	149	eP	Pn	09 30 53.6	-0.1
PB02				i S	Sn	09 31 11.8	-0.7
PB02				IAML		09 31 19.3	
	comp=E,13µm,0.5s						
PB01	IPOC Station P	1.52	131	eP	Pn	09 30 54.4	+0.2
PB01				i S	Sn	09 31 13.7	+0.4
PB01				IAML		09 31 18.9	
	comp=E,7µm,0.4s						
PB01	IPOC Station P	1.52	131		Pn	09 30 54.5	+0.2
AP01	Chacalluta	1.70	12	eP	Pb	09 30 57.4	-1.4
AP01				i S	Sb	09 31 19.3	-0.4
PB07	IPOC Station P	1.84	156	eP	Pn	09 30 58.4	-0.4
PB07				eS	Sn	09 31 21.2	-0.4
PB16	IPOC Station P	2.04	34	eP	Pb	09 31 03.4	-1.6
PB16				i S	Sb	09 31 31.6	+1.4
PB09	IPOC Station P	2.22	142⇑	iP	Pn	09 31 05.2	+1.3
PB09				i S	Sn	09 31 32.0	+1.1
PB09				IAML		09 31 43.8	
	comp=E,3µm,0.5s						
PB04	IPOC Station P	2.34	167		Pn	09 31 04.5	-1.2
LVC	Limon Verde	3.06	147	Pn	Pn	09 31 16.9	+1.2
	comp=E,14nm,0.3s,baz=14,slow=6.8,SNR=153						
LVC				Sn	Sn	09 31 54.5	+2.8
	comp=E,41nm,0.3s,baz=254,slow=18,SNR=3.2						
LVC				Lg	Lg	09 32 02.9	
	comp=E,77nm,0.3s,baz=200,slow=17,SNR=10.0						
LVC				LR	LR	09 32 47.5	
	comp=E,1µm,20.5s,baz=324,slow=46						
LVC	Limon Verde	3.06	147	eP	Pn	09 31 16.9	+1.2
PB10	IPOC Station P	3.46	178		Pn	09 31 18.1	-2.7
LPAZ	La Paz	4.46	34	Pn	Pn	09 31 39.9	+4.7
	comp=E,5.1nm,0.3s,baz=238,slow=7.4,SNR=92						
LPAZ				LR	LR	09 33 41.1	
	comp=E,3µm,18.9s,baz=236,slow=46						
LPAZ	La Paz	4.46	34		Pn	09 31 39.1	+3.8
GO02	Mina Guanaco	5.20	169		Pn	09 31 43.6	-1.5
GO03	Copiap	7.53	177	Pn	Pn	09 32 15.1	-1.7
NNA	Nana	9.94	323	Pn	Pn	09 32 52.2	+2.2
	comp=E,2.1nm,0.3s,baz=282,slow=18,SNR=3.6						
NNA				LR	LR	09 36 43.6	
	comp=E,218nm,21.9s,baz=154,slow=38						
NNA	Nana	9.94	323		Pn	09 32 49.9	-0.1
SIV	San Ignacio	10.01	68	Pn	Pn	09 32 49.2	-1.7
	comp=E,3.5nm,0.3s,baz=276,slow=9.1,SNR=42						
SIV				LR	LR	09 37 20.1	
	comp=E,2µm,18.4s,baz=268,slow=42						
GO04	Tololo Observa	10.09	180	Pn	Pn	09 32 50.1	-2.0
SAML	Samuel	13.21	34		Pn	09 33 33.6	-1.1
CPUP	Villa Florida	13.80	119	Pn	Pn	09 33 42.5	-0.1
	comp=E,0.1nm,0.3s,baz=287,slow=17,SNR=2.5						
CPUP				LR	LR	09 39 52.9	
	comp=E,492nm,20.9s,baz=298,slow=42						
CPUP	Villa Florida	13.80	119		Pn	09 33 41.4	-1.3
AQDB	Aquidauana	14.09	94	eP	Pn	09 33 46.6	-0.1
SALV	Santo Antonio	14.87	76	eP	Pn	09 33 58.0	+0.8
C2SB	Chapadao do Su	16.91	89	eP	Pn	09 34 23.3	-0.3
CLDB	Colider	17.01	60	eP	Pn	09 34 24.2	-0.8
TRCB	Terra Rica	17.05	102	eP	Pn	09 34 25.0	-0.5
PTGB	Pitanga	17.86	109	eP	P	09 34 36.3	+0.2
PCMB	Pacaembu	18.25	98	eP	P	09 34 40.3	0.0
ARAG	Araguaiana, MT	18.49	80	eP	P	09 34 42.5	-0.5
CPSB	Cacapava Do Su	18.70	127	eP	P	09 34 45.9	+0.6
ITRB	Iturama	19.14	92	eP	P	09 34 49.8	-0.4
PLTB	Pedras Altas	19.28	131	eP	P	09 34 50.5	-1.2
GO06	Curarrehue	19.49	182	P	P	09 34 54.2	+0.2
FRTB	Fartura	19.92	103	eP	P	09 34 58.8	+0.1
PLCA	Paso Flores	20.63	180	P	P	09 35 07.3	+1.1
	comp=E,5.8nm,0.8s,baz=23,slow=13,SNR=11						
PLCA				LR	LR	09 43 47.0	
	comp=E,242nm,18.3s,baz=24,slow=39						
PLCA	Paso Flores	20.63	180	P	P	09 35 06.0	-0.2
PLCA	Paso Flores	20.63	180	eP	P	09 35 07.7	+1.4
BB19B	Bebedouro	20.80	97	eP	P	09 35 07.9	-0.3
IPMB	Ipameri, GO	21.37	88	eP	P	09 35 13.3	-1.1
RCLB	Rio Claro- Sao	21.73	100	eP	P	09 35 16.8	-1.5
PTGA	Pitinga	21.88	30	P	P	09 35 18.2	-1.7
	comp=E,12nm,0.6s,baz=203,slow=11,SNR=17						
PTGA	Pitinga	21.88	30	P	P	09 35 18.3	-1.6
PTGA				IAmb	IAmb	09 35 28.3	
	comp=Z,32nm,1.1s						
PTGA	Pitinga	21.88	30	eP	P	09 35 19.0	-0.9
FLOC	Florencia	22.03	347	eP	P	09 35 24.8	+3.3
FLOC	Florencia	22.03	347	P	P	09 35 22.8	+1.4
BDFB	Brasilia	22.04	82	P	P	09 35 18.7	-3.0
	comp=Z,2.3nm,0.5s,baz=253,slow=14,SNR=2.5						
BDFB				LR	LR	09 45 02.9	
	comp=Z,801nm,19.1s,baz=269,slow=40						
BDFB	Brasilia	22.04	82	P	P	09 35 21.0	-0.7
GCUF	Volcan Galeras	22.11	342⇑	eP	P	09 35 29.2	+6.4
CRUC	La Cruz	22.33	343	eP	P	09 35 31.9	+6.9
SOTA	Rioblanco	22.79	345⇑	eP	P	09 35 30.1	+0.1
ORTC	Ortega, Tolima	24.21	349	eP	P	09 35 46.3	+2.7
BSCB	Bom Sucesso	24.30	97	eP	P	09 35 43.1	-1.3
YOTC	Yotoco, Valle	24.51	346	eP	P	09 35 47.2	+0.8
SMTB	Santa Maria do	24.96	67	eP	P	09 35 49.7	-0.7
ROSC	El Rosal	24.98	351	LR	LR	09 47 01.6	
	comp=Z,508nm,18.1s,baz=200,slow=40						
RREF	El Recreo	25.20	349	eP	P	09 36 00.6	+7.4
GUY2C	Guyana, Caldas	25.52	349	eP	P	09 35 57.0	+1.1
JANB	Januaria	25.64	83	eP	P	09 35 55.4	-1.2
RUSC	La Rusia	25.88	355	eP	P	09 36 00.6	+1.4
RUSC	La Rusia	25.88	355	P	P	09 35 58.5	-0.7
CBOC	Ciudad Bolivar	26.27	348	eP	P	09 36 08.7	+6.3
UREC	San Jos de Ur	28.02	350	eP	P	09 36 13.1	-4.8
SDV	Santo Domingo	28.75	0	P	P	09 36 23.6	-1.0
	comp=Z,6.8nm,1.0s,baz=223,slow=7.2,SNR=5.3						
SDV	Santo Domingo	28.75	0	eP	P	09 36 21.2	-3.4
SDV	Santo Domingo	28.75	0	P	P	09 36 23.4	-1.2
SDV	Santo Domingo	28.75	0	eP	P	09 36 24.3	-0.2
SMLC	San Martn de	28.85	353	eP	P	09 36 22.1	-3.2
SJCC	San Jacinto, C	30.07	351	eP	P	09 36 33.7	-2.5
NBPN	Ponto Novo - B	30.75	77	eP	P	09 36 40.7	-1.5
GO09	Cerro Castillo	31.19	182	P	P	09 36 46.0	+0.3
URIC	Uribia, Colomb	31.57	358	P	P	09 36 49.0	-0.3
NBPS	Pedro II - PI	32.46	65	eP	P	09 36 56.6	-0.8
NBMA	Muriti-CE	33.42	72	eP	P	09 37 04.7	-0.9
NBPB	Pedra_Branca-C	33.51	69	eP	P	09 37 06.0	-0.5
NBMO	Morrinhos-CE	34.22	65	eP	P	09 37 12.0	-0.6
NBCL	Cascavel-CE	35.27	68	eP	P	09 37 21.1	-0.5
RCBR	Riachuelo	36.64	72	P	P	09 37 33.2	-0.3
RCBR				IAmb	IAmb	09 37 42.8	
	comp=Z,18nm,0.8s						
MLPR	Magueyes Islan	37.95	6	P	P	09 37 43.5	-0.8
MLPR				IAmb	IAmb	09 37 50.2	
	comp=Z,28nm,0.9s						
CRPR	Cabo Rojo, PR	37.98	6	P	P	09 37 43.6	-1.0
OBIP	Obispado Ponce	38.06	6	P	P	09 37 45.0	-0.3
OBIP				IAmb	IAmb	09 37 45.5	
	comp=Z,21nm,0.7s						
PDPR	Patillas Dam,	38.10	7	P	P	09 37 43.9	-1.8
AOPR	Arecibo Observ	38.35	6	P	P	09 37 46.9	-0.9
GCPR	Guaynabo City	38.38	7	P	P	09 37 47.0	-1.1
GCPR				IAmb	IAmb	09 37 47.4	
	comp=Z,23nm,0.7s						
CUPR	Culebra, Puert	38.48	8	P	P	09 37 47.2	-1.7
STVI	Saint Thomas	38.57	9	P	P	09 37 48.9	-0.7
STVI				IAmb	IAmb	09 37 55.0	
	comp=Z,19nm,0.8s						
SMRT	St. Maarten	38.59	12	P	P	09 37 47.5	-2.3
DR12	Loma Pena Alta	38.61	2	P	P	09 37 49.3	-0.7
TEIG	Tepich	43.56	336	P	P	09 38 31.5	+0.8
TEIG				IAmb	IAmb	09 38 34.1	
	comp=Z,17nm,1.0s						
Y55A	Saluda	54.72	349	P	P	09 39 57.1	+1.2
	baz=167						
X59A	McDuffie Farm,	54.83	352	P	P	09 39 57.8	+1.1
	baz=171						
Z50A	Ashland	54.95	344	P	P	09 39 57.8	+0.1
Z50A	Ashland	54.95	344	P	P	09 39 58.4	+0.7
	baz=162						
BIRD	Birdtown, Kers	55.17	350	P	P	09 40 00.2	+1.1
BIRD				IAmb	IAmb	09 40 00.4	
	comp=Z,17nm,1.0s						
W58A	Raeford	55.35	351	P	P	09 40 01.7	+1.2
	baz=170						
W57A	Gilead	55.59	351	P	P	09 40 03.3	+1.1
	baz=169						
V59A	Middlesex	55.96	353	P	P	09 40 06.2	+1.4
	baz=172						
V58A	Windy Hill, Pi	56.10	352	P	P	09 40 06.6	+0.8
	baz=170						
V57A	Coltrane Farms	56.28	351	P	P	09 40 07.9	+0.8
	baz=170						
V56A	Mocksville	56.31	350	P	P	09 40 08.6	+1.2
	baz=169						
V54A	Nebo	56.52	349	P	P	09 40 09.7	+0.8
	baz=167						
U58A	Oxford	56.62	352	P	P	09 40 10.2	+0.7
	baz=171						
W50A	Signal Mountai	56.66	346	P	P	09 40 09.7	-0.2
W50A				IAmb	IAmb	09 40 17.3	
	comp=Z,8.4nm,1.1s						
TKL	Tuckaleechee C	56.76	347	P	P	09 40 10.3	-0.3
TKL				IAmb	IAmb	09 40 11.0	
	comp=Z,13nm,1.1s						
U56A	King	56.82	351	P	P	09 40 12.9	+1.9
	baz=169						
V52A	Sevierville	56.90	348	P	P	09 40 11.7	+0.1
V52A				IAmb	IAmb	09 40 14.3	
	comp=Z,12nm,1.0s						
T59A	Double "B" Far	57.07	353	P	P	09 40 13.3	+0.6
T59A	Double "B" Far	57.07	353	P	P	09 40 14.0	+1.3
	baz=172						
U55A	TA2, Sparta	57.08	350	P	P	09 40 13.9	+1.0
	baz=168						
OXF	Oxford	57.09	342	P	P	09 40 13.3	+0.4
	baz=159						
T58A	Grand View Acr	57.16	353	P	P	09 40 14.4	+1.1
	baz=171						
U54A	Nelsons Funny	57.23	349	P	P	09 40 14.5	+0.6
	baz=168						
T56A	Rocky Mt	57.44	351	P	P	09 40 16.8	+1.4
	baz=170						
T55A	Pulaski	57.64	350	P	P	09 40 17.7	+0.9
	baz=169						
T53A	Wise	57.80	349	P	P	09 40 18.2	+0.2
	baz=167						
S57A	Dark Hollow, R	58.01	352	P	P	09 40 20.6	+1.2
	baz=171						
U49A	Red Boiling Sp	58.02	346	P	P	09 40 19.4	0.0
R58B	Mineral	58.09	353	P	P	09 40 18.9	-1.0
R58B	Mineral	58.09	353	P	P	09 40 21.0	+1.2
	baz=172						
WVT	Waverly	58.17	344	P	P	09 40 20.4	-0.1
WVT				IAmb	IAmb	09 40 20.5	
	comp=Z,8.5nm,0.9s						
WVT	Waverly	58.17	344	P	P	09 40 20.1	-0.3
	baz=161						
S55A	Lewisburg	58.24	351	P	P	09 40 22.2	+1.2
	baz=169						
T50A	Nancy	58.30	347	P	P	09 40 21.2	-0.2
	baz=164						
S53A	Williamson	58.41	349	P	P	09 40 21.0	-1.2
	baz=167						
TXAR	Lajitas Array	58.48	326	P	P	09 40 23.4	+0.4
	comp=Z,1.1nm,1.1s,baz=148,slow=7.2,SNR=6.1						
TXAR	Lajitas Array	58.48	326	P	P	09 40 22.9	0.0
MIAR	Mount Ida	58.48	338	P	P	09 40 23.6	+0.9
MIAR				IAmb	IAmb	09 40 24.8	
	comp=Z,7.4nm,1.0s						
MIAR	Mount Ida	58.48	338	P	P	09 40 23.6	+0.9
	baz=155						
TX32	Lajitas Array	58.48	326	P	P	09 40 22.6	-0.4
R57A	Stanardsville	58.49	353	P	P	09 40 24.2	+1.5
	baz=171						
T49A	Edmonton	58.53	346	P	P	09 40 22.9	-0.1
T49A				IAmb	IAmb	09 40 23.8	
	comp=Z,12nm,0.8s						
T49A	Edmonton	58.53	346	P	P	09 40 22.9	-0.1
	baz=164						
W41B	Gary Mavity, V	58.60	339	P	P	09 40 25.0	+1.5
	baz=156						
R55A	Marlinton	58.68	351	P	P	09 40 25.5	+1.4
R55A				IAmb	IAmb	09 40 25.7	
	comp=Z,11nm,0.9s						
R54A	Victor	58.71	351	P	P	09 40 25.5	+1.2
	baz=169						
T47A	Sharon Grove	58.80	345	P	P	09 40 24.4	-0.4
T47A				IAmb	IAmb	09 40 25.5	
	comp=Z,12nm,0.9s						
S50A	Richmond	58.84	347	P	P	09 40 25.7	+0.6
	baz=165						
W39A	Magazine	59.14	338	P	P	09 40 28.2	+0.9
	baz=155						
Q57A	Strasburg	59.21	353	P	P	09 40 29.6	+2.0
	baz=172						
Q56A	Snyder Ridge,	59.30	352	P	P	09 40 28.5	+0.1
Q56A	Snyder Ridge,	59.30	352	P	P	09 40 30.0	+1.6
	baz=171						
Q54A	Coxs Mills	59.48	351	P	P	09 40 30.4	+0.9
Q54A				IAmb	IAmb	09 40 31.5	
	comp=Z,9.1nm,0.8s						
P57A	Homestead Farm	59.60	353	P	P	09 40 32.3	+1.9
	baz=172						
U40A	Yellville	59.87	339	P	P	09 40 31.3	-1.1
U40A				IAmb	IAmb	09 40 34.1	
	comp=Z,7.7nm,1.1s						
U40A	Yellville	59.87	339	P	P	09 40 32.8	+0.5
	baz=156						
MVL	Millersville	59.96	355	P	P	09 40 32.5	-0.3
MVL				IAmb	IAmb	09 40 38.4	
	comp=Z,15nm,1.1s						
S44A	Carbondale	60.02	343	P	P	09 40 32.2	-1.1
S44A				IAmb	IAmb	09 40 39.1	
	comp=Z,7.0nm,0.7s						
P53A	Whipple	60.05	350	P	P	09 40 33.7	+0.2
	baz=168						
X34A	Smith Ranch, M	60.15	334	P	P	09 40 34.0	-0.3
X34A				IAmb	IAmb	09 40 43.0	
	comp=Z,8.5nm,1.0s						
MGMO	Mountain Grove	60.41	340	P	P	09 40 36.1	0.0
MGMO				IAmb	IAmb	09 40 38.5	
	comp=Z,4.2nm,0.8s						
O55A	Ligonier	60.47	352	P	P	09 40 37.8	+1.5
	baz=171						
TUL1	Leonard	60.51	337	P	P	09 40 34.9	-1.7
TUL1				IAmb	IAmb	09 40 38.2	
	comp=Z,16nm,1.1s						
TUL1	Leonard	60.51	337	P	P	09 40 37.5	+0.8
	baz=153						
O52A	Adamsville	60.74	350	P	P	09 40 37.2	-1.0
O52A				IAmb	IAmb	09 40 39.8	
	comp=Z,6.7nm,0.7s						
CCM	Cathedral Cave	60.93	342	P	P	09 40 39.9	+0.5
	baz=158						
N55A	Marion Center	61.00	353	P	P	09 40 41.5	+1.5
	baz=171						
ACSO	Alum Creek Sta	61.04	349	P	P	09 40 40.1	-0.1
ACSO				IAmb	IAmb	09 40 40.9	
	comp=Z,12nm,0.8s						
ACSO	Alum Creek Sta	61.04	349	P	P	09 40 40.2	-0.1
	baz=167						
N56A	West Decatur	61.05	353	P	P	09 40 41.6	+1.3
	baz=172						
S39A	Bolivar	61.24	340	P	P	09 40 41.6	-0.1
S39A				IAmb	IAmb	09 40 42.8	
	comp=Z,13nm,1.1s						
MNTX	Cornudas Mount	61.25	326	P	P	09 40 42.2	+0.4
MNTX	Cornudas Mount	61.25	326	P	P	09 40 42.3	+0.4
	baz=143						
N54A	Moraine State	61.30	352	P	P	09 40 42.0	0.0
M59A	Waymart	61.42	356	P	P	09 40 44.0	+1.2
	baz=175						
R40A	Maddies Statio	61.45	341	P	P	09 40 42.6	-0.5
R40A				IAmb	IAmb	09 40 45.1	
	comp=Z,9.2nm,1.1s						
M56A	Emporium	61.60	354	P	P	09 40 44.0	0.0
M56A	Emporium	61.60	354	P	P	09 40 45.2	+1.2
	baz=172						
BRYW	Bryant College	61.65	359	P	P	09 40 45.2	+0.9
M55A	Ridgway	61.65	353	P	P	09 40 44.3	0.0
M55A	Ridgway	61.65	353	P	P	09 40 45.6	+1.3
	baz=171						
T35A	Sooner Cattle	61.66	337	P	P	09 40 44.4	-0.1
T35A				IAmb	IAmb	09 40 47.2	
	comp=Z,8.8nm,0.9s						
MSTX	Muleshoe	61.79	330	P	P	09 40 45.1	-0.4
MSTX				IAmb	IAmb	09 40 47.6	
	comp=Z,8.4nm,1.1s						
MSTX	Muleshoe	61.79	330	P	P	09 40 46.3	+0.8
	baz=146						
M54A	Oil Creek Stat	61.80	352	P	P	09 40 45.4	+0.1
M54A	Oil Creek Stat	61.80	352	P	P	09 40 46.3	+1.0
	baz=170						
M53A	WI Miller and	61.86	352	P	P	09 40 46.7	+1.0
	baz=169						
SRIG	Santa Rosalia	61.92	318	P	P	09 40 45.6	-0.8
SRIG				IAmb	IAmb	09 40 48.6	
	comp=Z,9.5nm,1.1s						
N49A	Columbus Grove	61.93	348	P	P	09 40 45.9	-0.3
N49A	Columbus Grove	61.93	348	P	P	09 40 46.3	+0.1
	baz=166						
L58A	Harry Jones Me	61.95	356	P	P	09 40 47.9	+1.6
	baz=174						
M52A	Chesterland	62.06	351	P	P	09 40 47.1	0.0
N47A	Urbana	62.19	347	P	P	09 40 47.3	-0.7
N47A				IAmb	IAmb	09 40 49.2	
	comp=Z,5.9nm,0.8s						
HRV	Adam Dziewonsk	62.24	359	P	P	09 40 49.1	+0.9
	baz=179						
L53A	Girard	62.31	352	P	P	09 40 49.1	+0.3
	baz=170						
L55A	Hinsdale	62.32	354	P	P	09 40 50.1	+1.2
	baz=172						
M49A	Liberty Center	62.43	349	P	P	09 40 49.5	0.0
	baz=166						
ERPA	Erie	62.44	352	P	P	09 40 50.5	+0.9
	baz=170						
L54A	Sinclairville	62.47	353	P	P	09 40 51.1	+1.3
	baz=171						
WVNY	West Valley, N	62.56	353	P	P	09 40 51.7	+1.3
VNA2	Neumayer--Watz	62.58	161	P	P	09 40 52.4	+2.2
	baz=290,slow=6.5						
K59A	Cooperstown	62.62	357	P	P	09 40 52.2	+1.4
	baz=176						
K58A	Earlville	62.66	356	P	P	09 40 52.1	+1.0
K58A	Earlville	62.66	356	P	P	09 40 52.4	+1.3
	baz=175						
K54A	Basiliko Farm,	62.77	353	P	P	09 40 53.1	+1.3
	baz=172						
K55A	Perry	62.82	354	P	P	09 40 53.1	+0.9
	baz=172						
L48A	N Adams	62.97	349	P	P	09 40 53.0	-0.2
	baz=166						
L49A	Milan	63.00	349	P	P	09 40 53.6	+0.2
	baz=166						
319A	Douglas	63.11	323	P	P	09 40 53.7	-0.8
319A				IAmb	IAmb	09 41 04.1	
	comp=Z,6.7nm,0.9s						
L47A	Sherwood	63.14	348	P	P	09 40 54.1	-0.2
	baz=165						
J56A	Wolcott	63.26	355	P	P	09 40 55.8	+0.8
	baz=174						
J59A	Piesco	63.29	357	P	P	09 40 54.8	-0.4
J59A				IAmb	IAmb	09 40 58.9	
	comp=Z,14nm,1.1s						
J59A	Piesco	63.29	357	P	P	09 40 56.3	+1.1
	baz=176						
I58A	Old Forge	63.54	357	P	P	09 40 58.0	+1.1
	baz=176						
J52A	Paris	63.60	352	P	P	09 40 57.8	+0.5
	baz=170						
I60A	Shoreham	63.61	358	P	P	09 40 58.9	+1.6
	baz=177						
I61A	Oroboro, Fairl	63.67	359	P	P	09 40 59.4	+1.6
	baz=178						
J48A	Bridge Port	64.16	349	P	P	09 41 00.6	-0.4
	baz=166						
SNAA	Sanae	64.20	161	P	P	09 41 02.6	+1.6
H58A	Gabriels	64.22	357	P	P	09 41 02.6	+1.2
	baz=176						
I51A	Listowel	64.23	352	P	P	09 41 01.7	+0.3
	baz=169						
I55A	Frankford	64.26	354	P	P	09 41 02.4	+0.8
	baz=173						
H61A	Lyndonville	64.27	359	P	P	09 41 03.5	+1.9
	baz=179						
H57A	Richville	64.33	356	P	P	09 41 03.1	+1.1
	baz=175						
H59A	Cadyville	64.43	358	P	P	09 41 04.2	+1.5
	baz=177						
G62A	West of Eustis	64.94	0	P	P	09 41 05.5	-0.5
G62A	West of Eustis	64.94	0	P	P	09 41 07.5	+1.4
	baz=180						
G57A	Newington	64.95	357	P	P	09 41 06.3	+0.2
	baz=176						
SADO	Sadowa	64.95	353	P	P	09 41 06.7	+0.6
SADO				IAmb	IAmb	09 41 07.2	
	comp=Z,10nm,0.8s						
I48A	Sherman Twp	65.01	350	P	P	09 41 06.2	-0.3
	baz=167						
T25A	Trinidad	65.15	331	P	P	09 41 09.6	+1.8
	baz=145						
G55A	Calabogie	65.21	355	P	P	09 41 08.2	+0.4
	baz=174						
G53A	Haliburton	65.25	354	P	P	09 41 08.8	+0.8
	baz=172						
G54A	Lake Saint Pet	65.47	354	P	P	09 41 10.4	+0.9
	baz=172						
F64A	Sherman	65.62	2	P	P	09 41 11.0	+0.6
F64A				IAmb	IAmb	09 41 13.2	
	comp=Z,10.0nm,1.1s						
F52A	Sundridge	65.99	353	P	P	09 41 13.5	+0.7
	baz=171						
TRQ	Mont Tremblant	66.04	357	P	P	09 41 13.3	+0.1
E58A	La Victoria	66.14	358	P	P	09 41 14.9	+1.2
	baz=177						
SDCO	Great Sand Dun	66.15	330	P	P	09 41 15.3	+0.9
SDCO				IAmb	IAmb	09 41 17.7	
	comp=Z,6.0nm,1.1s						
SDCO	Great Sand Dun	66.15	330	P	P	09 41 16.2	+1.8
	baz=144						
F51A	Arnstein	66.18	353	P	P	09 41 13.4	-0.7
	baz=171						
BGNE	Belgrade	66.22	338	P	P	09 41 14.3	-0.1
F49A	Sandfield	66.29	351	P	P	09 41 14.2	-0.5
	baz=168						
E56A	St. Veronique	66.38	357	P	P	09 41 16.4	+1.0
	baz=176						
X16A	Lo Mia Camp, P	66.59	324	P	P	09 41 16.9	-0.3
E51A	G1948 Merrick	66.73	353	P	P	09 41 18.5	+0.9
	baz=171						
D57A	Chemin Vers le	66.80	358	P	P	09 41 19.1	+1.1
	baz=177						
D62A	Allapoint, All	66.82	1	P	P	09 41 19.5	+1.4
	baz=182						
D58A	Chemin du LacG	66.85	358	P	P	09 41 19.6	+1.3
	baz=178						
D56A	ZEC Mazanza, M	66.87	357	P	P	09 41 19.3	+0.8
	baz=176						
D55A	Sainte-Anne-du	66.88	356	P	P	09 41 19.0	+0.5
	baz=175						
E48A	Lockeyer	67.01	351	P	P	09 41 19.6	+0.2
	baz=168						
D53A	Lac Vacive, Po	67.10	355	P	P	09 41 20.8	+0.9
	baz=173						
OGNE	Ogallala	67.30	335	P	P	09 41 20.5	-0.9
	baz=148						
D50A	G1974 Best Tow	67.40	353	P	P	09 41 21.6	-0.2
	baz=171						
K31A	O'Neill	67.50	338	P	P	09 41 23.1	+0.5
D41A	Chassel	68.70	347	IAmb	IAmb	09 41 31.2	
	comp=Z,6.8nm,0.9s						
LSQQ	Lebel-sur-Quev	69.01	356	P	P	09 41 31.8	-0.1
	baz=174						
KNB	Kanab	69.27	325	P	P	09 41 33.9	-0.1
SRU	San Rafael Swe	69.65	328	P	P	09 41 35.2	-1.0
MATQ	Matagami	69.76	355	P	P	09 41 36.8	+0.3
	baz=173						
CCUT	Cedar City	69.95	325	P	P	09 41 35.6	-2.6
DBIC	Dimbokro	69.96	75	P	P	09 41 37.1	-1.3
	comp=Z,4.2nm,0.7s,baz=227,slow=6.8,SNR=5.0						
DBIC				LR	LR	10 11 07.7	
	comp=Z,184nm,19.2s,baz=228,slow=35						
DBIC	Dimbokro	69.96	75	IAmb	IAmb	09 41 48.5	
	comp=Z,5.8nm,0.8s						
DRLN	Deer Lake	69.98	9	P	P	09 41 37.8	0.0
DRLN				IAmb	IAmb	09 41 38.2	

	comp=Z,6.8nm,1.0s						
QSPA	South Pole Qui	70.14	180	P	P	09 41 40.0	+1.0
TPNV	Topopah Spring	71.12	323		P	09 41 48.7	+3.4
DUG	Dugway, Tooele	71.62	327	P	P	09 41 50.7	+2.5
	baz=138						
AGMN	Agassiz Nation	71.66	343	P	P	09 41 48.2	+0.1
	baz=155						
PDAR	Pinedale Array	72.02	331	P	P	09 41 51.1	+0.5
	comp=Z,0.6nm,0.7s,baz=134,slow=6.4,SNR=6.7						
PDAR				LR	LR	10 14 44.9	
	comp=Z,30nm,19.1s,baz=134,slow=37						
MDND	Maddock	72.38	340	IAmb	IAmb	09 42 01.0	
	comp=Z,12nm,0.9s						
MDND	Maddock	72.38	340	P	P	09 41 53.7	+1.3
	baz=152						
NVAR	Mina Array Bea	73.32	323	P	P	09 41 60.0	+1.5
	comp=Z,1.2nm,0.9s,baz=145,slow=4.9,SNR=6.3						
NVAR	Mina Array Bea	73.32	323	P	P	09 41 59.2	+0.8
FXWY	Fox Creek	73.37	331	P	P	09 41 59.4	+0.7
ULM	Lac du Bonnet	73.44	343	P	P	09 41 57.7	-0.9
	comp=Z,1.7nm,0.6s,baz=140,slow=7.3,SNR=3.9						
FLWY	Flagg Ranch	73.56	331	IAmb	IAmb	09 42 09.9	
	comp=Z,7.4nm,1.1s						
RLMT	Red Lodge	73.75	333	P	P	09 42 03.0	+2.1
	baz=142						
YMR	Madison River	74.14	331	P	P	09 42 03.4	+0.2
YHH	Holmes Hill	74.18	332	P	P	09 42 02.5	-1.0
YHB	Horse Butte	74.31	331	P	P	09 42 05.0	+0.8
YHL	Hebgen Lake	74.38	331	P	P	09 42 03.3	-1.3
PNTR	Pine Nut	74.51	323	P	P	09 42 06.0	+0.5
SCHQ	Schefferville	74.64	2	P	P	09 42 05.4	-0.2
	comp=Z,2.2nm,0.8s,baz=164,slow=3.0,SNR=2.7						
SCHQ				LR	LR	10 14 50.7	
	comp=Z,62nm,21.8s,baz=8.5,slow=36						
SCHQ	Schefferville	74.64	2	P	P	09 42 05.1	-0.4
PAHR	Pah Rah Range	74.80	323	P	P	09 42 06.8	-0.3
MFID	Camas Ranch	75.52	328	P	P	09 42 11.3	+0.2
ORV	Oroville	75.91	322	P	P	09 42 13.5	+0.3
EGMT	Eagleton	76.25	334	P	P	09 42 16.0	+0.9
EGMT				IAmb	IAmb	09 42 24.3	
	comp=Z,11nm,1.1s						
EGMT	Eagleton	76.25	334	P	P	09 42 16.4	+1.3
	baz=142						
BMO	Blue Mountains	77.29	328	P	P	09 42 21.0	0.0
TOA0	Torodi Ar. Sit	78.47	71	P	P	09 42 27.2	-0.9
TORD	Torodi Ar. Bea	78.47	71	P	P	09 42 27.2	-0.9
	comp=Z,15nm,0.8s,baz=252,slow=4.7,SNR=72						
TORD				LR	LR	10 15 54.1	
	comp=Z,208nm,19.4s,baz=250,slow=35						
TORD	Torodi Ar. Bea	78.47	71	P	P	09 42 26.9	-1.2
TSUM	Tsumeb	82.08	107	P	P	09 42 47.3	-0.5
TSUM				IAmb	IAmb	09 42 49.3	
	comp=Z,9.3nm,0.9s						
BOSA	Boshof	85.62	119	LR	LR	10 16 19.9	
	comp=Z,61nm,21.5s,baz=212,slow=32						
ESDC	Sonseca Array	85.99	45	P	P	09 43 06.6	-0.5
	comp=Z,0.6nm,0.4s,baz=257,slow=5.2,SNR=4.4						
ESDC	Sonseca Array	85.99	45	IAmb	IAmb	09 43 08.7	
	comp=Z,3.3nm,1.1s						
YKA	Yellowknife Ar	89.27	341	P	P	09 43 22.5	+0.4
	comp=Z,4.7nm,0.8s,baz=136,slow=5.1,SNR=80						
KEST	Kesra	93.78	53	LR	LR	10 26 32.3	
	comp=Z,124nm,19.9s,baz=252,slow=36						
H11S2	WAKE ISLAND Hy	126.01	279	T	T	12 08 11.3	
	baz=102,slow=74,SNR=81						
H11S1	WAKE ISLAND Hy	126.02	279	T	T	12 08 07.3	
	baz=102,slow=74,SNR=89						
H11S3	WAKE ISLAND Hy	126.03	279	T	T	12 08 12.6	
	baz=102,slow=74,SNR=72						
H11N3	WAKE ISLAND Hy	126.06	280	T	T	12 08 22.9	
	baz=99,slow=74,SNR=45						
H11N2	WAKE ISLAND Hy	126.07	280	T	T	12 08 55.6	
	SNR=52						
H11N1	WAKE ISLAND Hy	126.08	280	T	T	12 08 47.5	
	baz=54,slow=74,SNR=25						
SEY	Seymchan	128.10	337	PKP	PKPdf	09 49 32.6	+0.5
	comp=Z,0.5nm,0.4s,baz=92,slow=4.2,SNR=8.8						
AKTO	Aktyubinsk	129.65	40	PKP	PKiKP	09 49 36.3	+0.1
	comp=Z,1.6nm,1.0s,baz=253,slow=3.9,SNR=3.5						
ASAR	Alice Springs	130.37	210	PKP	PKPdf	09 49 38.0	+0.2
	comp=Z,0.8nm,0.8s,baz=130,slow=2.7,SNR=7.0						
ABKAR	Akbulak array	131.20	41		PKiKP	09 49 39.3	-0.1
RABL	Rabaul	131.49	245		PKPdf	09 49 40.4	+0.3
WRA	Warramunga Arr	133.30	213	PKP	PKPdf	09 49 44.2	+0.8
	comp=Z,0.6nm,0.7s,baz=162,slow=1.7,SNR=6.5						
WRA	Warramunga Arr	133.30	213		PKPdf	09 49 42.1	-1.3
BVAR	Borovoye Array	135.52	33	PKP	PKPdf	09 49 46.7	+0.2
	comp=Z,0.7nm,0.7s,baz=270,slow=1.5,SNR=4.0						
ZALV	Zalesovo Beam	141.31	23	PKP	PKPdf	09 49 56.1	-0.9
	comp=Z,2.5nm,0.7s,baz=297,slow=2.3,SNR=6.6						
ZALV	Zalesovo Beam	141.31	23		PKPdf	09 49 55.2	-1.8
MAKZ	Makanchi	145.22	34		PKPbc	09 50 03.8	0.0
NIL	Nilore	145.29	60		PKPbc	09 50 04.3	-0.2
MK31	Makanchi Array	145.39	33		PKPbc	09 50 04.1	-0.3
MKAR	Makanchi Array	145.39	33	PKPbc	PKPdf	09 50 05.1	+0.5
	comp=Z,13nm,0.8s,baz=321,slow=3.4,SNR=26						
MKAR	Makanchi Array	145.39	33		PKPdf	09 50 04.9	+0.4
KSH	Kashi	145.45	49	PKPbc	PKPdf	09 50 05.3	+0.3
KSH				PP	PP	09 53 29.1	+4.0
KSH				PKS	PKSdf	09 53 40.3	-0.3
KSH				SKKS		10 00 13.8	
KSH				AMB	AMB		
	comp=Z,230nm,5.9s						
KSH				LR	LR		
	comp=Z,110nm,10.1s						
KLR	Kul'dur	145.78	334	PKPbc	PKPab	09 50 06.7	+0.8
	comp=Z,4.4nm,0.7s,baz=52,slow=4.7,SNR=14						
USRK	Ussuriysk Ar.	149.38	327	PKP	PKPdf	09 50 13.7	+2.5
	comp=Z,6.7nm,1.0s,baz=13,slow=2.5,SNR=5.7						
USRK				PKPbc	PKiKP	09 50 17.3	+0.6
	comp=Z,6.6nm,1.0s,baz=15,slow=2.2,SNR=5.8						
USRK	Ussuriysk Ar.	149.38	327		PKPbc	09 50 15.3	-0.3
MJAR	Matsushiro Arr	149.85	309	PKPbc	PKiKP	09 50 18.2	+0.2
	comp=Z,1.5nm,0.5s,baz=132,slow=1.2,SNR=4.6						
MJAR	Matsushiro Arr	149.85	309		PKiKP	09 50 20.7	+2.7
WMQ	Urumqi	150.21	32	*e*PKPbc	PKPdf	09 50 12.4	-0.2
WMQ				AMB	AMB		
	comp=Z,67nm,4.7s						
SONM	Songino Array	152.18	4	PKPbc	PKiKP	09 50 23.3	+0.8
	comp=Z,3.0nm,0.8s,baz=285,slow=1.9,SNR=10						
SONM	Songino Array	152.18	4		PKPbc	09 50 22.7	+0.5
CN2	Changchun	152.73	334	*e*PKPbc	PKPdf	09 50 14.4	-1.9
GTA	Gaotai	159.04	21	*e*PKP	PKPdf	09 50 26.3	+1.3
HHC	Hu-ho-hao-te	159.17	355	*e*PKP	PKPdf	09 50 22.0	-3.1
HHC				AMB	AMB		
	comp=Z,39nm,6.8s						
LZH	Lanzhou	163.31	16	*e*PKP	PKPdf	09 50 25.6	-4.1
LZH				pPKP	pPKPdf	09 50 35.3	-1.5
LZH				sPKP		09 50 41.1	
NJ2	Nanjing	165.28	326	*e*PKP	PKPdf	09 50 30.0	-1.4
CD2	Chengdu	168.08	24	PKP	PKPdf	09 50 32.5	-1.1

IDC 18 09:39:13.0±2.6**, 5°.44S**×**153°.15E, h0^{km}, mb3.5**/2**, mb1 3.9**/2**, mb1mx3.4**/41**, mbtmp3.6**/2**, Error ellipse: s-maj=53.4km s-min=25.1km az=76.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.59	315	Pn	Pn	09 39 42.4	-0.1
	101nm,0.3s,baz=106,slow=2.0,SNR=26						
KRVT				Sn	Sg	09 40 05.9	+1.8
	56nm,0.3s,baz=54,slow=21,SNR=7.3						
WRA	Warramunga Arr	23.29	230	P	P	09 44 22.6	-0.1
	1.7nm,0.8s,baz=53,slow=10,SNR=8.0						
ASAR	Alice Springs	25.92	224	P	P	09 44 47.5	+0.4
	1.0nm,0.9s,baz=57,slow=11,SNR=7.9						
TORD	Torodi Ar. Bea	150.83	287	PKPbc	PKPbc	09 59 07.9	-0.7
	0.4nm,0.7s,baz=90,slow=0.1,SNR=2.2						

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*SOME **18** 09:45:00.1, 41°.45N×84°.28E, h0^{km}*

*NNC **18** 09:45:07.9±5.5, 41°.53N×83°.68E, h1^{km}±27^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=40.2km s-min=25.8km az=157.0*

ISC 18 09:45:01.0±2.8**, 41°.4N**±0°.1×**84°.2E**±0°.1**, h10^{km}, n14,** σ**2^{s}.43**/20**, 6C-1D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	3.48	307	*e*P	Pg	09 46 07.7	-0.1
	2.1nm,0.0s						
KTMS				*e*S	Sg	09 46 56.0	+3.1
	17nm,0.1s						
KTMS	Ketmen	3.48	307	Pg	Pb	09 46 00.6	-2.3
	2.2nm,0.1s						
KTMS				Lg	Lg	09 46 42.0	
	8.0nm,0.3s						
SHLS	Shalkode	3.91	298	*e*P	Pb	09 46 09.0	-1.1
	7.2nm,0.1s						
SHLS				*e*S	Sb	09 46 58.2	+0.8
	58nm,0.3s						
SHLS	Shalkode	3.91	298	Pg	Pb	09 46 06.6	-3.5
	12nm,0.4s						
SHLS				Lg	Lg	09 46 52.1	
	48nm,0.4s						
PDGK	Podgornoye	3.96	300	Pg	Pb	09 46 11.5	+0.5
	3.4nm,0.4s						
PDGK				Lg	Lg	09 47 00.8	
	9.5nm,0.6s						
PDGK	Podgornoye	3.96	300	⇑Pn	Pn	09 46 04.8	+2.8
	0.8nm,0.4s						
PDGK				⇓Pg	Pg	09 46 16.0	-1.0
	3.1nm,0.4s						
PDGK				⇑Lg	Lg	09 47 00.9	
	19nm,0.7s						
DJR	Jarkent	4.34	313	*e*P	Pg	09 46 22.0	-2.2
	0.2nm,0.1s						
DJR				*e*S	Sg	09 47 20.9	+0.4
	5.6nm,0.2s						
DJR	Jarkent	4.34	313	Pg	Pn	09 46 11.4	+4.2
	0.4nm,0.2s						
DJR				Lg	Lg	09 47 00.8	
	6.3nm,0.5s						
KPKS	Kokpek	4.55	298	*e*P	Pg	09 46 25.3	-2.9
	4.5nm,0.1s						
KPKS				*e*S	Sg	09 47 26.2	-1.0
	30nm,0.3s						
SATY	Saty	4.59	293	*e*P	Pg	09 46 26.6	-2.4
	10.0nm,0.1s						
SATY				*e*S	Sg	09 47 28.2	-0.2
	16nm,0.2s						
KAPS	Kapalarasan	5.22	319	*e*P	Pg	09 46 38.6	-2.4
	1.5nm,0.2s						
KAPS				*e*S	Sg	09 47 48.9	+0.3
	4.4nm,0.2s						
KAPS	Kapalarasan	5.22	319	Pg	Pn	09 46 24.1	+4.8
	3.3nm,0.3s						
KAPS				Lg	Lg	09 47 21.7	
	4.5nm,0.4s						
MK31	Makanchi Array	5.53	346	⇑Pg	Pg	09 46 47.0	+0.1
	0.3nm,0.3s,baz=172,slow=16,SNR=5.0						
MK31				⇑Lg	Lg	09 47 59.9	
	6.5nm,0.7s,baz=164,slow=30,SNR=3.8						
MAKZ	Makanchi	5.61	344	⇑Pg	Pg	09 46 44.1	-4.3
	0.7nm,0.7s						
MAKZ				⇑Lg	Lg	09 48 01.1	
	4.9nm,0.9s						

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*IDC **18** 09:47:54.4±0.5, 9°.92N×126°.01E, h0^{km}, mb4.3/27, mb1 4.4/28, mb1mx4.3/43, mbtmp4.3/28, ML4.0/1, MS3.5/7, Ms1 3.5/7, ms1mx3.1/49, Error ellipse: s-maj=23.0km s-min=13.0km az=74.0*

*MAN **18** 09:47:57.7, 10°.03N×126°.33E, h7^{km}, mb5.1, ML4.1, MS4.2*

*NEIC **18** 09:48:00.7±2.1, 9°.97N±0°.07×126°.27E±0°.09, h44^{km}±6^{km}, mb4.7/70, Error ellipse: s-maj=13.5km s-min=10.0km az=76.0*

*DJA **18** 09:48:05.2±1.0, 10°N±5°×12°6E±°, h92^{km}±8^{km}, M4.8/24, mb4.6/24, mB5.4/6, Mw(mB)4.9/6*

ISC 18 09:48:01.9±1.0**, 9°.98N**±0°.03×**126°.31E**±0°.06**, h56^{km}**±9^{km}**, n169,** σ**1^{s}.41**/181**, mb4.5**/58**, MS3.3**/5**, 2C-5D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	Butuan	1.22	214	*e*P	Pn	09 48 20.2	-2.5
BUTP				*e*S	Sn	09 48 38.1	-0.1
MSLP	Maasin	1.44	276	*e*P	Pn	09 48 24.1	-1.6
MSLP				*e*S	Sn	09 48 44.1	+0.6
OCLP	Ormoc	1.98	303	*e*P	Pn	09 48 32.4	-0.7
OCLP				*e*S	Sn	09 48 59.5	+2.8
CGP	Cagayan de Oro	2.20	227	⇓*i*P	Pn	09 48 34.5	-1.6
CGP				*e*S	Sn	09 49 04.2	+2.0
LLP	Lapu-Lapu	2.33	278	⇓*e*P	Pn	09 48 38.0	+0.1
LLP				*e*S	Sn	09 49 08.2	+2.8
BUKP	Musuan	2.43	211	*e*P	Pn	09 48 39.2	0.0
BUKP				*e*S	Sn	09 49 12.6	+4.8
TBP	Tagbilaran	2.43	263	*e*P	Pn	09 48 38.9	-0.3
TBP				*i* S	Sn	09 49 05.2	-2.6
DAV	Davao City (W)	2.98	194	Pn	Pn	09 48 45.7	-1.1
	63nm,0.3s,baz=261,slow=4.8,SNR=2.4						
DAV				Lg	Lg	09 49 31.5	
	84nm,0.3s,baz=100,slow=20,SNR=4.7						
DAV	Davao City (W)	2.98	194	⇓*e*P	Pn	09 48 52.1	+5.2
DAV	Davao City (W)	2.98	194	Pn	Pn	09 48 43.4	-3.4
DAV				Sn	Sn	09 49 18.9	-2.5
CNP	Catarman	2.99	327	*e*P	Pn	09 48 46.0	-0.9
CNP				*e*S	Sn	09 49 21.7	+0.3
DMPH	Davao City--Mi	2.99	195	*e*P	Pn	09 48 46.1	-0.8
DMPH				*e*S	Sn	09 49 25.5	+4.0
MATI	Mati	3.02	181	*e*P	Pn	09 48 44.7	-2.6
MATI				*e*S	Sn	09 49 26.6	+4.4
SNPH	Sibulan	3.10	258	*i* P	Pn	09 48 49.7	+1.3
KCP	Kidapawan	3.19	202	⇑*e*P	Pn	09 48 50.6	+0.8
KCP				*i* S	Sn	09 49 29.9	+3.3
DCPH	Dipolog City	3.23	245	⇑*e*P	Pn	09 48 50.8	+0.5
CTBH	Cotabato--PC H	3.42	217	⇓*i*P	Pn	09 48 53.3	+0.5
PAGZ	Pagadian	3.59	234	*e*P	Pn	09 48 54.2	-0.9
GUIM	Jordan	3.72	280	*e*P	Pn	09 48 56.0	-0.8
RCP	Roxas	3.84	294	⇓*e*P	Pn	09 48 59.1	+0.6
DDMP	Don Marcelino,	3.90	189	*e*P	Pn	09 48 54.9	-4.5
DDMP				*e*S	Sn	09 49 42.3	-1.6
PVCP	Virac	4.17	330	*e*P	Pn	09 49 02.8	-0.1
OTRP	Odiongan	4.83	300	*e*P	Pn	09 49 10.4	-1.7
TGY	Tagaytay City	6.66	308	LR	LR	09 52 20.1	
	comp=Z,499nm,21.9s,baz=74,slow=41						
SMPP	San Manuel, Pa	8.22	319	*e*P	Pn	09 49 56.9	-1.7
MRSI	Marisa	10.40	205	P	Pn	09 50 30.6	+2.2
	2µm17nm,1.1s						
LUWI	Luwuk	11.51	198	Pn	Pn	09 50 42.1	-1.5
SIJI	Sorong	11.86	155	Pn	Pn	09 50 47.0	-1.4
	0.9nm,0.3s,baz=131,slow=20,SNR=1.5						
SIJI				LR	LR	09 55 53.9	
	comp=Z,219nm,18.7s,baz=339,slow=40						
FAKI	Fak Fak	14.12	155	Pn	Pn	09 51 19.2	+0.1
YULB	Yu-li	14.17	341		P	09 51 24.5	-1.2
TTSI	Tana Toraja	14.47	207	P	P	09 51 26.7	-2.3
	34nm,0.9s						
SPSI	Sidrap Palu	15.31	205	P	P	09 51 40.5	+2.1
	21nm,1.0s						
YHNB	Yeheng	15.34	343	Pn	Pn	09 51 33.7	-1.3
BNSI	Bone	15.57	204	P	P	09 51 40.5	-0.7
	24nm,0.9s						
SBUM	Sibu	15.87	243		P	09 51 43.3	-1.4
DLV	T Lat	17.61	278	Pn	P	09 52 06.5	+2.5
MMRI	Maumere	18.94	192	P	Pn	09 52 20.4	+0.8
MMRI				IAmb	IAmb	09 52 32.7	
	comp=Z,49nm,1.2s						
SOEI	Soe	19.71	186	P	Pn	09 52 30.6	+1.6
	comp=Z,49nm,1.1s						
SOEI	Soe	19.71	186	P	P	09 52 25.2	-1.9
SOEI				IAmb	IAmb	09 52 40.2	
	comp=Z,19nm,0.7s						
UBPT	Khong Chiam	21.00	287	P	P	09 52 41.3	+0.4
NJ2	Nanjing	23.02	344	*e*P	P	09 53 03.8	+1.6
MTN	Manton Dam	23.18	168	P	P	09 53 03.8	-0.1
MTN				IAmb	IAmb	09 53 19.0	
	comp=Z,58nm,1.3s						
PBKT	Sadao Pong	25.50	288	P	P	09 53 25.6	+0.4
PBKT				IAmb	IAmb	09 53 36.6	
	comp=Z,34nm,1.4s						
KNRA	Kununurra	25.61	175	P	P	09 53 26.1	-0.1
IPM	Ipoh	25.66	260	P	P	09 53 26.6	-0.2
IPM				IAmb	IAmb	09 53 37.4	
	comp=Z,28nm,1.1s						
MDSI	Maura Dua	26.32	238	P	P	09 53 33.8	+1.1
	comp=Z,8.0nm,1.0s						
KMI	Kunming	26.98	307	P	P	09 53 41.9	+3.1
KSAR	Wonju Array Be	27.38	3	P	P	09 53 40.4	-1.5
KSRS	Korea Array	27.39	3	P	P	09 53 42.2	+0.2
	comp=Z,0.9nm,0.5s,baz=182,slow=9.7,SNR=5.1						
KSRS				LR	LR	10 03 57.5	
	comp=Z,48nm,21.0s,baz=184,slow=35						
CMAR	Chiang Mai Arr	27.80	291	P	P	09 53 44.1	-1.9
	comp=Z,1.0nm,0.3s,baz=104,slow=7.5,SNR=13						
CMAR	Chiang Mai Arr	27.80	291	P	P	09 53 43.0	-3.0
CHTO	Chiang Mai	27.89	291	P	P	09 53 45.1	-1.7
FITZ	Fitzroy Crossi	27.91	181	P	P	09 53 45.8	-1.1
RPSI	Rantau Prapat	28.15	257	P	P	09 53 49.5	+0.4
MJAR	Matsushiro Arr	28.55	20	LR	LR	10 05 03.4	
	comp=Z,57nm,18.8s,baz=205,slow=36						
XAN	Xi'an	28.77	329	P	P	09 53 53.4	-1.1
XAN				pP	sP	09 54 28.6	+15
XAN	Xi'an	28.77	329	P	P	09 53 52.9	-1.6
XAN				IAmb	IAmb	09 53 54.0	
	comp=Z,13nm,0.6s						
WB0	Warramunga Arr	30.62	165	P	P	09 54 09.8	-1.1
WRAB	Tennant Creek	30.77	165	P	P	09 54 11.7	-0.5
WRAB				IAmb	IAmb	09 54 22.5	
	comp=Z,15nm,1.5s						
WRA	Warramunga Arr	30.77	165	P	P	09 54 11.5	-0.8
	comp=Z,1.2nm,0.7s,baz=345,slow=9.4,SNR=13						
WRA	Warramunga Arr	30.77	165	P	P	09 54 11.5	-0.8
WB2	Warramunga Arr	30.77	165	P	P	09 54 11.7	-0.6
WR0	Warramunga Arr	30.84	165	P	P	09 54 12.5	-0.3
PSAC1	Pilbara Seismi	31.96	191	P	P	09 54 23.0	+0.3
PSAC1				IAmb	IAmb	09 54 25.8	
	comp=Z,17nm,1.1s						
PSAC2	Pilbara Seismi	31.98	191	P	P	09 54 23.1	+0.3
PSAC2				IAmb	IAmb	09 54 26.1	
	comp=Z,12nm,0.8s						
PSAB2	Pilbara Seismi	31.98	191	P	P	09 54 22.8	0.0
PSAB2				IAmb	IAmb	09 54 26.1	
	comp=Z,14nm,0.8s						
PSAA2	Pilbara Seismi	31.99	191	P	P	09 54 22.8	-0.1
PSA00	Pilbara Seismi	32.00	191	P	P	09 54 23.3	+0.3
PSA00	Pilbara Seismi	32.00	191	P	P	09 54 22.7	-0.3
PSA00				IAmb	IAmb	09 54 26.6	
	comp=Z,4.0nm,0.8s						
PSAB1	Pilbara Seismi	32.00	191	P	P	09 54 23.4	+0.4
PSAA3	Pilbara Seismi	32.00	191	P	P	09 54 23.2	+0.1
PSAA3				IAmb	IAmb	09 54 25.8	
	comp=Z,20nm,1.1s						
PSAA1	Pilbara Seismi	32.00	191	P	P	09 54 23.4	+0.4
HHC	Hu-ho-hao-te	33.40	339	*e*P	P	09 54 36.4	+1.2
CN2	Changchun	33.70	359	*e*P	P	09 54 39.8	+2.1
AS31	Alice Springs	34.26	168	P	P	09 54 41.6	-1.2
ASAR	Alice Springs	34.26	168	P	P	09 54 42.6	-0.2
	comp=Z,1.1nm,0.4s,baz=352,slow=7.2,SNR=28						
ASAR				PcP	PcP	09 57 18.2	-0.1
	comp=Z,0.6nm,0.6s,baz=347,slow=2.9,SNR=2.6						
ASAR				S	S	10 00 07.5	+1.6
	comp=Z,0.7nm,0.9s,baz=353,slow=19,SNR=4.1						
ASAR	Alice Springs	34.26	168	P	P	09 54 41.8	-0.9
ASAR					PcP	09 57 16.6	-1.8
USRK	Ussuriysk Ar.	34.44	7	P	P	09 54 45.4	+1.3
	comp=Z,2.3nm,0.7s,baz=185,slow=4.9,SNR=5.9						
USRK	Ussuriysk Ar.	34.44	7	P	P	09 54 45.1	+1.0
GTA	Gaotai	37.64	326	*e*P	P	09 55 11.1	-0.6
GTA				pP	pP	09 55 20.1	-5.4
GTA				sP	pwP	09 55 24.4	-3.3
KLR	Kul'dur	39.38	6	P	P	09 55 26.7	+0.7
	comp=Z,1.1nm,0.6s,baz=229,slow=8.2,SNR=5.7						
H11S3	WAKE ISLAND Hy	39.97	73	T	T	10 38 28.1	
	baz=280,slow=78,SNR=78						
H11S1	WAKE ISLAND Hy	39.98	73	T	T	10 38 28.4	
	baz=280,slow=78,SNR=46						
H11S2	WAKE ISLAND Hy	39.98	73	T	T	10 38 27.2	
	baz=280,slow=78,SNR=50						
MORW	Morawa	40.07	194	P	P	09 55 32.1	+0.2
MORW				IAmb	IAmb	09 55 32.8	
	comp=Z,7.3nm,0.7s						
H11N1	WAKE ISLAND Hy	40.31	71	T	T	10 38 53.2	
	baz=265,slow=74,SNR=168						
H11N2	WAKE ISLAND Hy	40.32	71	T	T	10 38 55.1	
	baz=265,slow=74,SNR=108						
H11N3	WAKE ISLAND Hy	40.33	71	T	T	10 38 56.9	
	baz=265,slow=74,SNR=122						
FORT	Forrest	40.56	178	P	P	09 55 35.9	-0.1
ULN	Ulaanbaatar	41.10	340	P	P	09 55 40.9	+0.4
ULN				IAmb	IAmb	09 55 42.0	
	comp=Z,7.1nm,0.6s						
SONM	Songino Array	41.30	340	P	P	09 55 42.2	+0.1
	comp=Z,2.1nm,0.6s,baz=157,slow=9.4,SNR=11						
SONM	Songino Array	41.30	340	P	P	09 55 42.4	+0.3
NWAO	Narrogin (SRO)	43.54	191	P	P	09 56 00.6	+0.3
NWAO	Narrogin (SRO)	43.54	191	P	P	09 56 00.4	+0.2
NWAO				IAmb	IAmb	09 56 01.3	
	comp=Z,21nm,0.6s						
BBOO	Buckleboo	43.56	168	P	P	09 56 00.6	+0.2
TLY	Talaya	45.52	340	P	P	09 56 15.8	0.0
	comp=Z,3.8nm,0.6s,baz=214,slow=7.4,SNR=6.8						
TLY	Talaya	45.52	340	P	P	09 56 15.8	0.0
TLY				IAmb	IAmb	09 56 17.6	
	comp=Z,6.5nm,0.8s						
WMQ	Urumqi	47.47	322	*e*P	P	09 56 33.4	+2.1
PEA0B	Petropavlovsk-	49.88	24	P	P	09 56 48.7	-0.9
PETK	Petropavlovsk-	49.88	24	P	P	09 56 51.2	+1.6
	comp=Z,2.8nm,0.6s,baz=209,slow=2.6,SNR=6.7						
PETK	Petropavlovsk-	49.88	24	P	P	09 56 50.0	+0.4
MK31	Makanchi Array	52.28	323	P	P	09 57 07.2	-0.5
MK31				IAmb	IAmb	09 57 08.0	
	comp=Z,4.2nm,0.7s						
MKAR	Makanchi Array	52.28	323	P	P	09 57 07.3	-0.4
	comp=Z,5.2nm,0.6s,baz=120,slow=8.1,SNR=72						
MKAR				PcP	PcP	09 58 18.4	-0.1
	comp=Z,0.8nm,0.5s,baz=116,slow=5.5,SNR=4.1						
MKAR				LR	LR	10 20 21.4	
	comp=Z,62nm,19.5s,baz=123,slow=37						
MKAR	Makanchi Array	52.28	323	P	P	09 57 07.2	-0.5
MKAR				PcP	PcP	09 58 17.5	-0.9
MAKZ	Makanchi	52.47	323	P	P	09 57 08.4	-0.7
MAKZ				IAmb	IAmb	09 57 09.3	
	comp=Z,4.1nm,0.6s						
KSH	Kashi	53.45	312	P	P	09 57 19.5	+2.9
KSH				sP	sP	09 57 54.3	+17
KSH				PcP	PcP	09 58 24.5	+1.3
KSH				PcS	PcS	10 02 20.8	-1.5
KSH				S	S	10 04 42.1	-3.2
KSH				ScS	ScS	10 06 54.3	-7.2
ZAA0	Zalesovo Array	54.90	331	P	P	09 57 25.8	-0.9
ZALV	Zalesovo Beam	54.90	331	LR	LR	10 23 19.8	
	comp=Z,29nm,21.0s,baz=122,slow=39						
ZALV	Zalesovo Beam	54.90	331	P	P	09 57 25.6	-1.1
SEY	Seymchan	56.09	14	P	P	09 57 36.2	+1.1
	comp=Z,1.3nm,0.7s,baz=239,slow=7.0,SNR=6.8						
SEY				PcP	PcP	09 58 33.9	+1.3
	comp=Z,0.5nm,0.5s,baz=116,slow=0.7,SNR=4.8						
KURK	Kurchatov	56.32	326	P	P	09 57 36.3	-0.7
KURK				IAmb	IAmb	09 57 37.2	
	comp=Z,6.9nm,0.7s						
KURBB	Kurchatov Arra	56.33	325	P	P	09 57 36.2	-0.8
	comp=Z,3.9nm,0.5s,baz=125,slow=6.9,SNR=24						
KK31	Karatay Array	58.48	315	P	P	09 57 51.5	-0.9
KK31				IAmb	IAmb	09 57 51.8	
	comp=Z,2.1nm,0.6s						
KKAR	Karatay Array	58.48	315	P	P	09 57 51.2	-1.2
KKAR	Karatay Array	58.48	315	P	P	09 57 51.5	-0.9
KKAR				IAmb	IAmb	09 57 51.8	
	comp=Z,2.1nm,0.6s						
TIXI	Tiksi	61.64	1	P	P	09 58 13.6	+0.1
	comp=Z,3.3nm,0.6s,baz=167,slow=5.5,SNR=8.5						
TIXI	Tiksi	61.64	1	P	P	09 58 13.8	+0.4
TIXI				IAmb	IAmb	09 58 19.2	
	comp=Z,11nm,1.2s						
BVAR	Borovoye Array	61.92	325	P	P	09 58 15.0	-0.7
	comp=Z,1.3nm,0.7s,baz=131,slow=6.7,SNR=7.1						
BVAR				PcP	PcP	09 58 55.6	-0.4
	comp=Z,1.8nm,0.7s,baz=107,slow=5.0,SNR=5.1						
BRVK	Borovoye	61.99	325	P	P	09 58 15.1	-1.1
BRVK				IAmb	IAmb	09 58 16.3	
	comp=Z,3.9nm,0.7s						
BILL	Bilibino	63.67	16	P	P	09 58 28.4	+1.4
BILL				IAmb	IAmb	09 58 35.4	
	comp=Z,6.1nm,1.1s						
NRIK	Noril'sk	64.30	346	P	P	09 58 30.6	-0.6
	comp=Z,1.8nm,0.5s,baz=128,slow=4.7,SNR=4.9						
GEYT	Alibeck	66.75	307	P	P	09 58 47.2	-0.4
	comp=Z,1.8nm,0.5s,baz=48,slow=6.4,SNR=2.6						
GEYT	Alibeck	66.75	307	P	P	09 58 46.7	-0.9
ABKAR	Akbulak array	67.12	319	P	P	09 58 48.4	-1.3
BKZ	Black Stump Fm	67.54	140	P	P	09 58 53.0	+0.5
AKTO	Aktyubinsk	68.57	320	P	P	09 58 57.6	-1.2
	comp=Z,1.3nm,0.5s,baz=78,slow=8.6,SNR=4.1						
ARU	Arti	69.49	327	P	P	09 59 03.3	-1.1
	comp=Z,2.8nm,0.4s,baz=119,slow=7.1,SNR=10						
ARU	Arti	69.49	327	P	P	09 59 03.4	-0.9
SOCY	Socotra	70.82	279	P	P	09 59 12.8	-0.6
IMAR	Indian Mountai	76.85	24	P	P	09 59 48.6	+1.0
RAYN	Ar Rayn	77.71	292	P	P	09 59 52.6	-0.8
RAYN				IAmb	IAmb	09 59 54.2	
	comp=Z,8.6nm,1.4s						
KBZ	Khabaz	78.43	313	LR	LR	10 39 15.3	

	comp=Z,58nm,18.0s,baz=222,slow=39						
TOLK	Toolik Lake Re	78.62	22	P	P	09 59 58.6	+1.1
PMR	Palmer	78.70	29	P	P	09 59 59.1	+1.2
PMR				IAmb	IAmb	10 00 09.4	
	comp=Z,14nm,1.4s						
NEA	Nenana	78.74	26	P	P	09 59 59.4	+1.3
NEA				IAmb	IAmb	10 00 12.3	
	comp=Z,7.3nm,1.2s						
MCK	McKinley	78.80	27	P	P	09 59 58.8	+0.3
MCK				IAmb	IAmb	10 00 03.6	
	comp=Z,9.5nm,1.1s						
RND	Reindeer	78.83	27	P	P	09 59 59.6	+0.8
RND				IAmb	IAmb	10 00 07.3	
	comp=Z,14nm,1.4s						
WRH	Wood River Hil	79.17	26	P	P	10 00 01.9	+1.4
CCB	Clear Creek Bu	79.29	26	P	P	10 00 01.8	+0.6
HDA	Harding Lake	79.66	26	P	P	10 00 03.4	+0.2
ILAR	Eielson Array	79.68	26	P	P	10 00 03.7	+0.4
	comp=Z,0.5nm,0.7s,baz=239,slow=5.2,SNR=9.4						
ILAR	Eielson Array	79.68	26	P	P	10 00 03.2	-0.1
BMAR	Burnt Mountain	80.51	23	P	P	10 00 09.8	+2.0
RIDG	Independent Ri	80.61	27	P	P	10 00 09.4	+1.0
RIDG				IAmb	IAmb	10 00 13.0	
	comp=Z,8.5nm,1.1s						
BCAR	Beaver Creek A	82.04	27	P	P	10 00 17.7	+1.7
EGAK	Eagle	82.13	26	P	P	10 00 16.0	-0.3
EGAK				IAmb	IAmb	10 00 21.9	
	comp=Z,8.2nm,1.5s						
BARN	Barnard Glacie	82.33	29	P	P	10 00 17.8	+0.1
BARN				IAmb	IAmb	10 00 36.5	
	comp=Z,9.3nm,1.0s						
CTGM	Chitina Glacie	82.50	29	P	P	10 00 18.9	+0.3
CTGM				IAmb	IAmb	10 00 32.6	
	comp=Z,10nm,0.9s						
DAWY	Dawson	82.98	26	P	P	10 00 22.3	+1.4
EPYK	Eagle Plains	83.72	24	P	P	10 00 26.2	+1.7
EPYK				IAmb	IAmb	10 00 42.5	
	comp=Z,13nm,1.4s						
SPA0	Spitsbergen Ar	84.30	349	P	P	10 00 28.4	+1.1
ARCES	ARCESS Array B	84.47	340	P	P	10 00 28.5	+0.2
	comp=Z,3.7nm,0.7s,baz=82,slow=7.2,SNR=12						
ARCES	ARCESS Array B	84.47	340	P	P	10 00 28.7	+0.4
INK	Inuvik	84.53	22	P	P	10 00 29.7	+1.1
INK				IAmb	IAmb	10 00 41.2	
	comp=Z,5.1nm,1.2s						
BRTR	Keskin Array B	85.74	309	P	P	10 00 34.5	-1.0
	comp=Z,1.0nm,0.8s,baz=114,slow=4.4,SNR=5.0						
BRTR	Keskin Array B	85.74	309	P	P	10 00 34.7	-0.8
FINES	FINESS Array B	86.16	332	P	P	10 00 36.5	-0.4
	comp=Z,2.2nm,0.4s,baz=79,slow=4.6,SNR=24						
FINES	FINESS Array B	86.16	332	P	P	10 00 36.3	-0.5
AKASG	Malin Array Be	86.81	321	P	P	10 00 39.4	-0.9
	comp=Z,0.4nm,0.4s,baz=63,slow=4.6,SNR=7.6						
C36M	Paulatuk	87.50	20	P	P	10 00 44.0	+0.8
VNDA	Vanda	89.64	173	P	P	10 00 53.4	+0.3
	comp=Z,1.0nm,1.0s,baz=315,slow=10.0,SNR=1.3						
BUR08	Bucovina Ar. S	90.08	318	P	P	10 00 55.7	-0.4
BUR08				IAmb	IAmb	10 00 56.4	
	comp=Z,8.1nm,1.4s						
CRVS	Cervenica-Dubn	92.13	320	*e*P	P	10 01 04.8	-0.6
NOA	NORSAR Array B	93.03	334	P	P	10 01 08.4	-1.0
	comp=Z,1.1nm,0.9s,baz=62,slow=4.6,SNR=2.3						
YKA	Yellowknife Ar	94.00	24	P	P	10 01 14.9	+1.2
	comp=Z,2.0nm,0.7s,baz=298,slow=4.1,SNR=46						
GERES	GERESS Array B	96.94	322	P	P	10 01 27.2	-0.3
	comp=Z,0.3nm,0.2s,baz=74,slow=3.6,SNR=2.0						
TXAR	Lajitas Array	117.98	49	PKP	PKiKP	10 06 44.4	+1.1
	comp=Z,0.3nm,0.6s,baz=329,slow=1.4,SNR=6.2						
TORD	Torodi Ar. Bea	120.41	292	PKP	PKPdf	10 06 47.8	-0.2
	comp=Z,0.4nm,0.5s,baz=118,slow=2.4,SNR=4.8						
PLCA	Paso Flores	145.93	157	PKPbc	PKPab	10 07 37.5	+1.3
	comp=Z,1.4nm,0.7s,baz=175,slow=1.4,SNR=6.4						

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*IDC **18** 10:09:16.1±1.2, 37°.40N×142°.79E, h0^{km}, mb3.5/7, mb1 3.7/9, mb1mx3.5/49, mbtmp3.5/9, ML3.1/2, Error ellipse: s-maj=27.8km s-min=21.7km az=128.0*

*JMA **18** 10:09:17.6±0.2, 37°.52N×142°.63E, h18^{km}±3^{km}, M3.9*

ISC 18 10:09:19.6±0.9, **37°.50N**±0°.05×**142°.61E**±0°.07, **h21**^{km}, **n31**, σ**1^{s}21**/31, **mb3.5**/7, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	1.21	312	P	Pn	10 09 39.6	-1.7
JIO	Ouri	1.38	314	P	Pn	10 09 42.0	-1.5
JIO				*e*S	Sn	10 10 00.0	-1.1
JFK	Kawauchi	1.38	265	P	Pn	10 09 42.4	-1.3
JFK				*e*S	Sn	10 10 00.6	-0.8
JMST	Minamisoumatoc	1.38	280	P	Pn	10 09 42.2	-1.4
JMST				*e*S	Sn	10 10 00.2	-1.1
JMM	Marumori	1.48	285	P	Pn	10 09 43.8	-1.2
ONAJ	Iwakimizuishiy	1.49	255	P	Pn	10 09 44.2	-1.0
JOU	Okura	1.76	300	P	Pn	10 09 48.4	-0.5
JFT	Otama	1.81	271	P	Pn	10 09 49.5	+0.1
JMK	Ichinoseki	1.82	323	P	Pn	10 09 48.7	-0.9
JOM	Ohasama	2.23	333	P	Pn	10 09 54.8	-0.4
JOM				*e*S	Sn	10 10 21.7	-0.4
JYK	Kaneyama	2.27	309	P	Pn	10 09 55.7	-0.1
JAG	Ashikaga	2.74	248	P	Pn	10 10 02.5	+0.2
JANG	Nango	3.00	344	P	Pn	10 10 05.9	+0.1
BSO1	Boso 1	3.13	205	P	Pn	10 10 07.5	+0.4
MJAR	Matsushiro Arr	3.65	256	Pn	Pn	10 10 16.3	+1.5
	0.7nm,0.3s,baz=70,slow=12,SNR=30						
MJAR				Sn	Sb	10 11 06.3	-0.8
	0.3nm,0.3s,baz=105,slow=15,SNR=4.5						
MAT	Matsushiro	3.65	256	P	Pn	10 10 16.2	+1.4
MAT				*e*S	Sn	10 10 59.6	+2.4
JHJ	Hachijo jima 2	4.94	209	Sn	Sn	10 11 25.9	-3.1
	43nm,0.3s,baz=302,slow=22,SNR=6.2						
ASAJ	Asahikawa	6.61	360	Pn	Pn	10 10 56.0	+0.5
	0.5nm,0.3s,baz=152,slow=15,SNR=2.6						
SEY	Seymchan	26.16	10	P	P	10 14 52.9	+0.8
	0.7nm,0.6s,baz=189,slow=7.7,SNR=4.5						
H11N2	WAKE ISLAND Hy	27.59	123	T	T	10 43 59.4	
	baz=316,slow=75,SNR=47						
H11N1	WAKE ISLAND Hy	27.59	123	T	T	10 44 00.5	
	baz=316,slow=75,SNR=26						
H11N3	WAKE ISLAND Hy	27.60	123	T	T	10 44 02.6	
	baz=316,slow=75,SNR=39						
SONM	Songino Array	28.32	303	P	P	10 15 13.2	+1.3
	0.6nm,0.5s,baz=100,slow=5.0,SNR=3.3						
H11S1	WAKE ISLAND Hy	28.33	125	T	T	10 44 57.8	
	baz=317,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	28.33	125	T	T	10 44 57.6	
	baz=317,slow=76,SNR=20						
H11S2	WAKE ISLAND Hy	28.35	125	T	T	10 44 59.0	
	baz=317,slow=76,SNR=21						
MKAR	Makanchi Array	44.68	302	P	P	10 17 31.9	+1.1
	0.4nm,0.5s,baz=84,slow=11,SNR=3.0						
KURBB	Kurchatov Arra	46.47	308	P	P	10 17 45.1	+0.2
	1.1nm,0.6s,baz=83,slow=8.2,SNR=5.5						
ILAR	Eielson Array	48.59	33	P	P	10 18 00.9	-0.2
	0.3nm,0.7s,baz=260,slow=5.4,SNR=4.1						
WRA	Warramunga Arr	57.66	189	P	P	10 19 07.5	-0.8
	0.4nm,0.7s,baz=7.2,slow=7.3,SNR=3.3						
YKA	Yellowknife Ar	62.93	31	P	P	10 19 43.9	-0.1
	0.2nm,0.7s,baz=304,slow=6.0,SNR=3.4						

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*MOS **18** 10:11:24.3±0.9, 37°.25N×71°.73E, h142^{km}, mb4.4/12, Error ellipse: s-maj=10.7km s-min=5.5km az=82.3*

*BJI **18** 10:11:24.9±0.0, 37°.44N×71°.71E, h139^{km}, mB4.7/18, mb4.4/18*

*NEIC **18** 10:11:25.1±2.4, 37°.30N±0°.01×71°.72E±0°.08, h132^{km}±7^{km}, mb4.2/32, Error ellipse: s-maj=9.3km s-min=1.7km az=82.0*

*NNC **18** 10:11:26.3±2.6, 37°.44N×71°.56E, h135^{km}±35^{km}, mb3.9, mpv4.6, Error ellipse: s-maj=24.1km s-min=13.0km az=165.0*

*IDC **18** 10:11:26.1±4.0, 37°.32N×71°.80E, h134^{km}±30^{km}, mb3.6/14, mb1 3.7/19, mb1mx3.5/53, mbtmp4.1/19, MS3.2/1, Ms1 3.2/1, ms1mx2.4/43, Error ellipse: s-maj=31.5km s-min=13.7km az=178.0*

ISC 18 10:11:25.0±0.4, **37°.19N**±0°.04×**71°.72E**±0°.04, **h150**^{km}, **n165**, σ**2^{s}27**/184, **mb4.1**/34, **12C-17D**, **Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	3.36	177	P	Pn	10 12 17.7	+0.6
CEP				S	Sn	10 12 58.0	+0.6
KBL	Kabul	3.42	220	PN	Pn	10 12 19.6	+1.7
KBL						10 13 00.7	
KBL	Kabul	3.42	220		Pn	10 12 19.6	+1.7
KBL				Sn	Sn	10 13 00.7	+1.8
NIL	Nilore	3.74	160	PN	Pn	10 12 22.6	+0.7
NIL	Nilore	3.74	160		Pn	10 12 22.9	+1.0
NIL				Sn	Sn	10 13 06.8	+0.7
KSH	Kashi	4.07	54	P	Pn	10 12 21.5	-4.7
KSH				S	Sn	10 13 03.3	-11
KSH				smax	smax		
	comp=N,1µm,0.3s						
KSH				smax	smax		
	comp=E,1µm,0.3s						
ARSB	Arslanbob	4.25	13	PN	Pn	10 12 27.9	-0.6
ARSB	Arslanbob	4.25	13		Pn	10 12 27.9	-0.6
ARSB				Sn	Sn	10 13 13.2	-4.8
THW	Thamme Wali	4.38	180	⇑P	Pn	10 12 30.4	+0.1
JMU	Jammu	5.16	149	*e*P	Pn	10 12 33.0	-7.5
JMU				*e*S	Sn	10 13 28.0	-12
AML	Almayashu	5.17	16	P	Pn	10 12 41.0	0.0
	SNR=572						
CHM	Chimkent	5.38	343	PN	Pn	10 12 54.8	+11
UCH	Uchtor	5.48	22	P	Pn	10 12 35.0	-10
	SNR=6.2						
KZA	Kyzart	5.59	28	P	Pn	10 12 46.1	-0.5
	SNR=40						
EKS2	Erkin-Say	5.69	15	P	Pn	10 12 47.9	+0.2
	SNR=96						
THN	Thein Dam	5.77	144	*e*P	Pn	10 12 48.5	0.0
THN				*e*S	Sn	10 13 49.5	-4.4
AAK	Ala-Archa	5.85	20	P	Pn	10 12 49.9	+0.2
	36nm,0.3s,baz=177,slow=6.3,SNR=251						
AAK				S	Sn	10 13 52.4	-3.6
	14nm,0.3s,baz=332,slow=21,SNR=15						
AAK	Ala-Archa	5.85	20	P	Pn	10 12 50.1	+0.4
	SNR=78						
AAK	Ala-Archa	5.85	20	⇓P	Pn	10 12 49.9	+0.2
	53nm,0.3s						
AAK				⇓S	Sn	10 13 52.7	-3.3
	62nm,0.5s						
AAK	Ala-Archa	5.85	20	PN	Pn	10 12 49.8	+0.1
AAK	Ala-Archa	5.85	20		Pn	10 12 50.0	+0.2
AAK				Sn	Sn	10 13 52.7	-3.3
KK31	Karatay Array	5.98	351	⇑P	Pn	10 12 51.6	+0.2
	62nm,0.6s,baz=175,slow=13,SNR=308						
KK31				⇑S	Sn	10 13 54.3	-4.7
	71nm,0.6s,baz=175,slow=23,SNR=15						
KK31	Karatay Array	5.98	351	PN	Pn	10 12 51.4	0.0
KK31	Karatay Array	5.98	351		Pn	10 12 51.5	+0.2
KK31				Sn	Sn	10 13 54.9	-4.1
KKAR	Karatay Array	5.98	351	PN	Pn	10 12 51.6	+0.2
KKAR	Karatay Array	5.98	351		Pn	10 12 51.3	-0.1
KKAR				Sn	Sn	10 13 54.2	-4.8
KKAR	Karatay Array	5.98	351		Pn	10 12 51.5	+0.2
KKAR				Sn	Sn	10 13 54.9	-4.2
KBK	Karagaybulak	6.00	23	P	Pn	10 12 52.0	+0.2
	SNR=29						
ULHL	Ulahol	6.14	33	P	Pn	10 12 52.9	-0.7
	SNR=23						
DHRM	DHARAMSHALA	6.20	141	*e*P	Pn	10 12 54.2	-0.3
DHRM				*e*S	Sn	10 13 58.4	-6.2
DHRM				IAML		10 14 22.7	
	comp=E,136nm,0.5s						
DHRM				IAML		10 14 23.7	
	comp=N,100nm,0.4s						
BOOM	Boomskoye usch	6.21	30		Pn	10 12 54.3	-0.2
BOOM				Sn	Sn	10 14 00.7	-4.0
CHMS	Chumysh	6.25	21	P	Pn	10 12 55.1	+0.1
	SNR=30						
CHMS	Chumysh	6.25	21	⇓P	Pn	10 12 54.9	-0.2
	comp=N,35nm,0.4s						
CHMS				⇑S	Sn	10 14 01.6	-3.9
	comp=N,84nm,0.6s						
CHMS	Chumysh	6.25	21	*i* PN	Pn	10 12 54.8	-0.2
CHMS				pmax	pmax		
	comp=Z,35nm,0.4s						
USP	Ospenovka	6.43	18	P	Pn	10 12 57.0	-0.4
	SNR=40						
MDOK	Medeo	7.23	33	⇑P	Pn	10 13 08.7	+0.5
	comp=Z,12nm,0.5s						
MDOK				⇓S	Sn	10 14 25.9	-3.2
SMLA	Simla	7.54	142	*e*P	Pn	10 13 10.6	-1.6
SMLA				*e*S	Sn	10 14 28.1	-8.2
SMLA				IAML		10 14 32.9	
	comp=E,243nm,0.3s						
SMLA				IAML		10 14 34.2	
	comp=N,156nm,0.2s						
HRA	Herat	8.19	253		Pn	10 13 22.5	+1.4
PDGK	Podgornoye	8.54	42	⇓P	Pn	10 13 24.3	-1.2
	comp=N,4.3nm,0.6s						
PDGK				⇓S	Sn	10 14 57.7	-2.8
	comp=N,18nm,0.9s						
PDGK	Podgornoye	8.54	42	PN	Pn	10 13 24.3	-1.2
JOSI	Joshimath	9.28	133	*e*P	Pn	10 13 32.6	-3.0
JOSI				*e*S	Sn	10 15 08.7	-10
JOSI				IAML		10 15 18.0	
	comp=E,97nm,0.6s						
JOSI				IAML		10 15 18.9	
	comp=N,158nm,0.6s						
KUDL	Kundal	9.87	155	*e*P	Pn	10 13 27.8	-15
KUDL				*e*S	Sn	10 15 08.7	-24
GEYT	Alibeck	10.83	278	P	Pn	10 13 53.9	-2.0
	comp=N,4.0nm,0.3s,baz=104,slow=11,SNR=13						
GEYT				S	Sn	10 15 47.7	-7.9
	comp=N,2.1nm,0.3s,baz=90,slow=16,SNR=4.9						
GEYT	Alibeck	10.83	278		Pn	10 13 54.1	-1.8
GYA0B	ALIBECK ARRAY	10.83	278	⇓P	Pn	10 13 53.5	-2.4
GYA0B				⇑S	Sn	10 15 49.7	-6.0
GYA0B	ALIBECK ARRAY	10.83	278		Pn	10 13 54.4	-1.5
GYA0B					Sn	10 15 50.4	-5.2
MAKZ	Makanchi	12.26	35	⇑P	Pn	10 14 12.3	-2.2
	comp=N,7.3nm,0.9s						
MAKZ	Makanchi	12.26	35	P	Pn	10 14 13.2	-1.3
MAKZ	Makanchi	12.26	35		Pn	10 14 13.2	-1.3
MK31	Makanchi Array	12.40	36	⇓P	Pn	10 14 14.9	-1.4
	comp=N,1.8nm,0.5s,baz=222,slow=14,SNR=62						
MK31	Makanchi Array	12.40	36	P	Pn	10 14 14.9	-1.4
MK31	Makanchi Array	12.40	36		Pn	10 14 14.9	-1.4
MKAR	Makanchi Array	12.40	36	P	Pn	10 14 14.7	-1.6
	comp=N,0.3nm,0.3s,baz=225,slow=15,SNR=26						
MKAR	Makanchi Array	12.40	36	*e*P	Pn	10 14 14.0	-2.3
MKAR	Makanchi Array	12.40	36		Pn	10 14 13.5	-2.8
DANN	Dangsing	13.41	128	*e*P	Pn	10 14 26.3	-3.4
	comp=N,56nm,0.4s						
WMQ	Urumqi	13.83	56	*e*P	P	10 14 36.1	-2.1
WMQ				pmax	pmax		
	comp=N,9.0nm,0.7s						
WMQ				pmax	pmax		
	comp=N,65nm,4.1s						
GKN	Gorkha	14.21	126	*e*P	Pn	10 14 37.0	-2.7
	comp=N,46nm,0.3s						
KURBB	Kurchatov Arra	14.29	18	P	Pn	10 14 37.7	-2.6
	comp=N,0.1nm,0.3s,baz=207,slow=12,SNR=9.8						
KURBB	Kurchatov Arra	14.29	18	⇓P	P	10 14 43.1	0.0
	comp=N,15nm,0.6s						
KURK	Kurchatov	14.40	18	⇓P	P	10 14 43.7	-0.5
	comp=N,12nm,0.8s						
KURK	Kurchatov	14.40	18	*c i*P	Pn	10 14 38.6	-3.1
KURK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KURK	Kurchatov	14.40	18	Pn	P	10 14 42.1	-2.2
KKN	Kakani	14.77	125	*e*P	Pn	10 14 44.4	-2.4
	comp=Z,51nm,0.6s						
DMN	Daman	14.78	126	*e*P	Pn	10 14 44.7	-2.2
	comp=Z,26nm,0.3s						
AB31	Akbulak array	14.79	328	⇓P	Pn	10 14 46.1	-0.5
	comp=Z,16nm,0.5s,baz=134,slow=15,SNR=111						
AB31				⇓S	Sn	10 17 23.4	-7.1
	comp=Z,15nm,0.7s						
AB31	Akbulak array	14.79	328	P	Pn	10 14 46.0	-0.5
AB31				S	Sn	10 17 17.8	-13
ABKAR	Akbulak array	14.79	328		Pn	10 14 46.0	-0.5
PKIN	Phulchoki	14.99	126	*e*P	Pn	10 14 47.3	-2.3
PKI	Pulchoki	15.00	126	*e*P	Pn	10 14 47.5	-2.3
GUN	Gumba	15.09	124	*e*P	Pn	10 14 48.9	-1.9
	comp=Z,43nm,0.4s						
JIRN	Jiri	15.46	124	*e*P	Pn	10 14 53.0	-2.4
	comp=Z,137nm,0.5s						
BVAR	Borovoye Array	15.87	357	P	P	10 14 59.2	-1.4
	comp=Z,2.0nm,0.3s,baz=164,slow=10,SNR=21						
BRVK	Borovoye	15.90	357	⇓P	Pn	10 14 58.5	-1.8
	comp=Z,8.1nm,0.7s						
BRVK	Borovoye	15.90	357	*c i*P	P	10 14 59.9	-1.0
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BRVK	Borovoye	15.90	357	Pn	P	10 14 59.2	-1.7
BRVK				IAmb	IAmb	10 15 03.7	
	comp=Z,12nm,1.0s						
RAMN	Ramite	16.20	125	*e*P	Pn	10 15 02.2	-2.2
	comp=Z,19nm,0.3s						
AKTO	Aktyubinsk	16.49	328	P	P	10 15 08.7	+1.2
	comp=Z,1.3nm,0.3s,baz=115,slow=11,SNR=13						
AKTO	Aktyubinsk	16.49	328	⇓P	P	10 15 09.2	+1.7
	comp=Z,4.1nm,0.6s						
AKTO				⇓S	S	10 18 06.6	-4.0
	comp=Z,14nm,0.8s						
TAPN	Taplejung	16.68	121	*e*P	P	10 15 08.6	-1.5
	comp=Z,31nm,0.4s						
ODAN	Odare	16.78	123	*e*P	P	10 15 10.1	-1.0
	comp=Z,34nm,0.5s						
LSA	Lhasa	17.83	109	P	Pn	10 15 23.6	-0.6
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LSA	Lhasa	17.83	109	P	Pn	10 15 23.6	-0.6
LSA				IAmb	IAmb	10 15 30.3	
	comp=Z,5.9nm,0.6s						
UOSS	Minazif	18.02	232	P	Pn	10 15 26.2	+0.2
UOSS				IAmb	IAmb	10 15 30.1	
	comp=Z,12nm,0.9s						
ZAA0	Zalesovo Array	19.05	24	⇓P	Pn	10 15 35.7	-2.1
	comp=Z,2.3nm,0.8s						
ZAA0	Zalesovo Array	19.05	24	P	Pn	10 15 35.7	-2.1
ZAA0				IAmb	IAmb	10 15 37.1	
	comp=Z,13nm,0.8s						
ZALV	Zalesovo Beam	19.05	24	P	Pn	10 15 36.6	-1.2
	comp=Z,4.2nm,0.3s,baz=227,slow=9.8,SNR=56						
ZALV	Zalesovo Beam	19.05	24	P	Pn	10 15 35.8	-2.0
ARU	Arti	21.18	340	P	P	10 15 59.1	+0.8
	comp=Z,1.6nm,0.4s,baz=134,slow=3.6,SNR=3.8						
ARU	Arti	21.18	340	*d i*P	P	10 15 56.2	-2.1
ARU						10 16 27.5	
ARU				S	S	10 19 43.9	-1.0
ARU				SS		10 20 33.0	
ARU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ARU	Arti	21.18	340	P	P	10 15 57.8	-0.4
ARU				IAmb	IAmb	10 16 04.8	
	comp=Z,9.0nm,1.2s						
GTA	Gaotai	22.12	76	*e*P	P	10 16 11.5	+3.0
GTA				pP	pP	10 16 39.3	+2.5
GTA				sP	sP	10 16 53.6	-2.5
GTA				S	S	10 20 02.8	+1.1
GTA				pmax	pmax		
	comp=Z,15nm,1.4s						
GTA				pmax	pmax		
	comp=Z,51nm,5.6s						
GTA				LR	LR		
	comp=Z,61nm,17.5s						
GTA				LR	LR		
	comp=Z,62nm,15.6s						
GTA				LR	LR		
	comp=Z,46nm,14.9s						
KIV	Kislovodsk	23.00	296	*e*P	P	10 16 15.4	-1.2
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
MOY	Mondy	25.21	46	*e*P	P	10 16 40.0	+3.3
ZAK	Zakamensk	26.10	50	*e*P	P	10 16 46.3	+1.5
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VSR	Storozhevoye	26.97	312	⇑*i*P	P	10 16 52.2	-0.1
VSR				pmax	pmax		
	comp=Z,18nm,2.0s						
SONM	Songino Array	27.47	56	P	P	10 16 59.6	+2.6
	comp=Z,3.5nm,0.6s,baz=260,slow=9.7,SNR=13						
SONM	Songino Array	27.47	56	P	P	10 16 59.2	+2.2
ULN	Ulaanbaatar	27.91	56	P	P	10 17 02.0	+1.0
ULN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ULN	Ulaanbaatar	27.91	56	P	P	10 17 02.0	+1.0
ULN				IAmb	IAmb	10 17 04.1	
	comp=Z,5.0nm,0.6s						
BRTR	Keskin Array B	29.79	287	P	P	10 17 21.0	+3.3
	comp=Z,0.6nm,0.6s,baz=99,slow=7.6,SNR=4.0						
BRTR	Keskin Array B	29.79	287	P	P	10 17 18.2	+0.5
BRTR	Keskin Array B	29.79	287	P	P	10 17 18.2	+0.5
OBN	Obninsk	29.80	318	*i* P	P	10 17 16.2	-1.2
OBN				*i*		10 18 23.0	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
XAN	Xi'an	30.28	85	P	P	10 17 31.5	+10
XAN				pP	pP	10 17 36.3	-19
HHC	Hu-ho-hao-te	30.98	71	*e*P	P	10 17 30.1	+1.9
HHC				pmax	pmax		
	comp=Z,26nm,0.9s						
HHC				pmax	pmax		
	comp=Z,84nm,4.5s						
AKASG	Malin Array Be	32.98	308	P	P	10 17 48.6	+3.3
	comp=Z,0.5nm,0.3s,baz=80,slow=7.3,SNR=4.4						
AKASG				LR	LR	10 35 10.3	
	comp=Z,40nm,20.6s,baz=275,slow=43						
AKASG	Malin Array Be	32.98	308	P	P	10 17 48.1	+2.8
AKASG				pmax	pmax		
	comp=Z,2.0nm,1.5s						
AKASG	Malin Array Be	32.98	308	P	P	10 17 48.1	+2.8
NRIK	Noril'sk	33.35	10	P	P	10 17 50.4	+2.1
	comp=Z,4.4nm,0.6s,baz=185,slow=6.5,SNR=8.2						
WHN	Wuhan	35.78	88	P	P	10 18 12.3	+2.7
FINES	FINESS Array B	37.24	325	P	P	10 18 24.0	+2.3
	comp=Z,1.2nm,0.6s,baz=116,slow=9.0,SNR=7.1						
FINES	FINESS Array B	37.24	325	P	P	10 18 23.1	+1.4
FINES	FINESS Array B	37.24	325	P	P	10 18 23.1	+1.4
ARCES	ARCESS Array B	40.74	337	P	P	10 18 52.8	+2.2
	comp=Z,2.1nm,0.4s,baz=109,slow=8.7,SNR=22						
ARCES	ARCESS Array B	40.74	337	*e*P	P	10 18 53.5	+2.9
ARCES	ARCESS Array B	40.74	337	P	P	10 18 53.3	+2.7
ARE0	ARCESS Array S	40.74	337	P	P	10 18 52.7	+2.1
KSRS	Korea Array	44.11	72	P	P	10 19 20.2	+1.9
	comp=Z,1.0nm,0.6s,baz=284,slow=4.4,SNR=4.9						
NC303	NORSAR Array S	44.13	323	P	P	10 19 20.0	+1.9
NB201	NORSAR Array S	44.15	323	P	P	10 19 20.4	+2.1
NB2	NORSAR Subarra	44.19	323	P	P	10 19 20.9	+2.3
	comp=Z,0.7nm,0.6s,baz=93,slow=7.9						
NOA	NORSAR Array B	44.19	323	P	P	10 19 20.9	+2.3
	comp=Z,0.9nm,0.5s,baz=94,slow=7.7,SNR=6.2						
KLR	Kul'dur	44.27	54	P	P	10 19 21.1	+1.7
	comp=Z,1.8nm,0.5s,baz=286,slow=6.6,SNR=11						
KLR	Kul'dur	44.27	54	⇑*i*P	P	10 19 20.9	+1.5
KLR				pmax	pmax		
	comp=Z,8.0nm,2.1s						
NBO00	NORSAR Array S	44.40	323	P	P	10 19 21.3	+1.0
NC204	NORSAR Array S	44.42	323	P	P	10 19 22.2	+1.7
TIXI	Tiksi	44.92	22	*c i*P	P	10 19 25.8	+1.6
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KONO	Kongsberg	44.92	321	P	P	10 19 25.3	+0.9
KONO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KONO	Kongsberg	44.92	321	P	P	10 19 25.3	+0.9
KONO				IAmb	IAmb	10 19 37.1	
	comp=Z,7.4nm,0.9s						
SEY	Seymchan	53.53	34	P	P	10 20 31.0	+1.4
	comp=Z,1.1nm,0.8s,baz=257,slow=4.7,SNR=5.3						
SEY	Seymchan	53.53	34	P	P	10 20 31.0	+1.4
BILL	Bilibino	57.74	26	*i* P	P	10 21 01.2	+1.6
BILL				*i* *PP	pP	10 21 32.5	-3.6
BILL				*i*		10 21 53.1	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
TORD	Torodi Ar. Bea	66.31	269	P	P	10 21 59.7	+2.1
	comp=Z,0.2nm,0.3s,baz=52,slow=6.2,SNR=6.0						
RES	Resolute Bay	68.06	356	P	P	10 22 08.6	+0.9
RES	Resolute Bay	68.06	356	P	P	10 22 08.6	+0.9
TOLK	Toolik Lake Re	70.11	15	P	P	10 22 22.4	+1.9
TOLK				IAmb	IAmb	10 22 23.4	
	comp=Z,4.7nm,1.1s						
COLD	Coldfoot	71.15	16	P	P	10 22 29.2	+2.5
IMAR	Indian Mountai	71.34	18	P	P	10 22 29.4	+1.4
BMAR	Burnt Mountain	72.14	14	P	P	10 22 35.5	+2.8
MLY	Manley	72.85	17	P	P	10 22 38.5	+1.6
INK	Inuvik	73.14	10	P	P	10 22 41.0	+2.5
INK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
INK	Inuvik	73.14	10	P	P	10 22 41.0	+2.5
INK				IAmb	IAmb	10 22 48.2	
	comp=Z,4.7nm,1.3s						
C36M	Paulatuk	73.14	6	P	P	10 22 40.2	+1.8
BPAW	Bear Paw Mtn.	73.56	18	P	P	10 22 42.7	+1.6
BPAW				IAmb	IAmb	10 22 44.5	
	comp=Z,3.1nm,1.0s						
PRP	Porcupine Dome	73.61	15	P	P	10 22 42.6	+1.0
BWN	Browne	73.88	17	P	P	10 22 45.3	+2.4
WRH	Wood River Hil	73.95	17	P	P	10 22 44.9	+1.6

ILAR	Eielson Array	73.96	16	P	P	10 22 44.7	+1.3
	comp=Z,0.5nm,0.8s,baz=323,slow=4.8,SNR=6.7						
ILAR	Eielson Array	73.96	16	P	P	10 22 45.1	+1.7
ILAR	Eielson Array	73.96	16	P	P	10 22 45.1	+1.7
KTH	Kantishna Hill	74.03	18	P	P	10 22 45.9	+1.9
KTH				IAmb	IAmb	10 22 53.2	
	comp=Z,15nm,1.5s						
PPLA	Purkeypile	74.25	19	P	P	10 22 46.8	+1.5
PPLA				IAmb	IAmb	10 23 04.1	
	comp=Z,12nm,1.4s						
TRF	Thorofare Moun	74.28	18	P	P	10 22 49.3	+3.8
TRF				IAmb	IAmb	10 23 05.2	
	comp=Z,3.6nm,1.1s						
MCK	McKinley	74.37	18	P	P	10 22 47.4	+1.6
MCK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MCK	McKinley	74.37	18	P	P	10 22 47.4	+1.6
MCK				IAmb	IAmb	10 22 49.6	
	comp=Z,8.9nm,1.4s						
SCRK	Sand Creek	75.28	15	P	P	10 22 51.1	-0.1
DHY	Denali Highway	75.31	17	P	P	10 22 52.7	+1.4
DHY				IAmb	IAmb	10 22 54.9	
	comp=Z,4.8nm,1.3s						
RIDG	Independent Ri	75.31	16	P	P	10 22 52.0	+0.8
RIDG				IAmb	IAmb	10 22 52.6	
	comp=Z,7.7nm,1.3s						
DAWY	Dawson	76.12	14	P	P	10 22 56.3	+0.5
SML	Sawmill	76.16	18	P	P	10 22 58.0	+1.9
SCM	Sheep Creek Mo	76.38	18	P	P	10 22 59.1	+1.7
SCM				pmax	pmax		
	comp=Z,28nm,1.4s						
SCM	Sheep Creek Mo	76.38	18	P	P	10 22 59.1	+1.7
OHAK	Old Harbor	78.59	23	P	P	10 23 11.8	+2.3
YKA	Yellowknife Ar	80.53	3	P	P	10 23 21.9	+1.9
	comp=Z,0.9nm,0.4s,baz=353,slow=5.1,SNR=29						

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*IDC **18** 10:15:51.5±1.2, 1°.05N×97°.11E, h0^{km}, mb4.2/9, mb1 4.3/11, mb1mx4.0/39, mbtmp4.2/11, ML4.4/1, MS3.0/2, Ms1 3.1/2, ms1mx2.7/58, Error ellipse: s-maj=32.9km s-min=18.9km az=57.0*

*DJA **18** 10:15:54.0±0.8, 1°N±3°×9°7E±°, h17^{km}±7^{km}, M4.4/12, mB6.7/1, mb4.6/3, MLv4.3/12, Mw(mB)6.5/1*

*NEIC **18** 10:15:57.6±1.5, 1°.17N±0°.06×97°.18E±0°.04, h41^{km}±9^{km}, mb4.2/10, Error ellipse: s-maj=10.5km s-min=1.6km az=145.0*

ISC 18 10:15:55.6±0.6**, 1°.12N**±0°.05×**97°.15E**±0°.07**, h25^{km}, n55, σ1^{s}39**/55**, mb4.2**/14**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	1.53	327	P	Pn	10 16 21.4	+0.1
SNSI				S	Sn	10 16 39.6	-0.7
PBSI	Pulau Batu	1.62	136	P	Pn	10 16 22.6	0.0
PBSI				S	Sn	10 16 41.7	-1.0
TPTI		2.13	1	P	Pn	10 16 28.4	-1.2
TPTI				S	Sn	10 16 56.3	+1.1
RPSI	Rantau Prapat	2.37	48		Pn	10 16 33.7	+0.9
RPSI				Sn	Sn	10 17 00.4	-0.7
RPSI	Rantau Prapat	2.37	48		Pn	10 16 33.8	+0.9
PSI	Prapat	2.44	47	Pn	Pn	10 16 33.8	-0.2
PSI				LR	LR	10 17 23.3	
	comp=Z,235nm,21.4s,slow=38						
KCSI	Kotacane, Aceh	2.47	15	P	Pn	10 16 34.1	-0.2
SISI	Saibi	3.11	141	P	Pn	10 16 43.2	+0.2
MLSI	Meulaboh, Aceh	3.22	347	P	Pn	10 17 03.8	+19
MLSI				Pg	Pb	10 16 54.8	+2.7
PDSI	Padang	3.88	121	P	Pb	10 17 10.7	+7.4
BKNI	Bangkinang	3.97	101	P	Pb	10 17 15.8	+11
BKNI	Bangkinang	3.97	101	Pn	Pn	10 16 56.1	+1.3
LHMI	Lhok Sumawe	4.09	357	Pn	Pn	10 16 56.7	+0.2
LHMI				Sn	Sn	10 17 43.0	-0.7
SDSI	Sungai Dareh	4.74	115	P	Pn	10 17 07.4	+2.0
IPM	Ipoh	5.11	49		Pn	10 17 10.5	-0.2
RGRI	Rengat	5.38	106	P	Pn	10 17 13.9	-0.5
KULM	Kulim	5.42	40		Pn	10 17 15.2	+0.3
MNAI	Manna	7.95	133	Pn	Pn	10 17 51.5	+1.8
MDSI	Maura Dua	8.96	128	P	Pn	10 18 02.8	-0.7
CMAR	Chiang Mai Arr	17.32	6	P	Pn	10 19 55.0	-0.8
	0.4nm,0.3s,baz=191,slow=11,SNR=11						
CMAR				LR	LR	10 27 26.9	
	comp=Z,66nm,20.0s,baz=185,slow=40						
H08S2	Diego Garcia H	26.09	250	T	T	10 48 27.6	
	baz=71,slow=75,SNR=1168						
H08S3	Diego Garcia H	26.09	250	T	T	10 48 33.0	
	baz=71,slow=75,SNR=1612						
H08S1	Diego Carcia H	26.11	250	T	T	10 48 31.2	
	baz=71,slow=75,SNR=1505						
XAN	Xi'an	34.56	17	P	P	10 22 41.3	-1.0
XAN				pP	pP	10 22 46.8	-3.0
GTA	Gaotai	38.19	3	*e*P	P	10 23 13.5	+0.1
GTA				pP	pP	10 23 17.4	-3.5
GTA				sP	sP	10 23 19.8	-4.1
H01W3	Cape Leeuwin H	39.19	158	T	T	11 04 42.0	
	baz=333,slow=76,SNR=30						
H01W2	Cape Leeuwin H	39.20	158	T	T	11 04 49.7	
	baz=333,slow=76,SNR=34						
H01W1	Cape Leeuwin H	39.20	158	T	T	11 04 42.3	
	baz=333,slow=76,SNR=22						
WB0	Warramunga Arr	42.00	122	P	P	10 23 44.9	-0.3
WB0				IAmb	IAmb	10 23 59.8	
	comp=Z,6.4nm,1.2s						
WRA	Warramunga Arr	42.03	122	P	P	10 23 44.8	-0.6
	comp=Z,2.2nm,0.7s,baz=298,slow=9.2,SNR=12						
WRAB	Tennant Creek	42.04	122	P	P	10 23 45.1	-0.4
WR0	Warramunga Arr	42.21	122	P	P	10 23 46.4	-0.5
WR0				IAmb	IAmb	10 23 48.2	
	comp=Z,3.9nm,0.8s						
KSH	Kashi	42.83	336	P	P	10 23 53.9	+2.2
KSH				pP	sP	10 24 02.0	-0.3
KSH				PcP	PcP	10 25 46.6	+3.9
KSH				PcS	PcS	10 29 36.4	+1.4
KSH				S	S	10 30 16.4	+1.6
KSH				SS	SS	10 33 20.5	-6.0
ASAR	Alice Springs	43.38	127	P	P	10 23 56.5	+0.1
	comp=Z,1.1nm,0.9s,baz=301,slow=8.0,SNR=8.5						
ARSB	Arslanbob	45.59	334	P	P	10 24 13.0	-0.9
KSAR	Wonju Array Be	45.91	34	P	P	10 24 15.3	-1.0
KSRS	Korea Array	45.95	35	P	P	10 24 16.4	-0.1
	comp=Z,5.4nm,0.9s,baz=218,slow=9.1,SNR=11						
SONM	Songino Array	47.22	8	P	P	10 24 26.1	-0.5
	comp=Z,2.6nm,0.8s,baz=178,slow=9.3,SNR=8.1						
SONM	Songino Array	47.22	8	P	P	10 24 26.8	+0.2
MK31	Makanchi Array	47.31	346	P	P	10 24 26.9	-0.3
MKAR	Makanchi Array	47.31	346	P	P	10 24 27.5	+0.4
	comp=Z,2.2nm,0.7s,baz=158,slow=7.9,SNR=16						
MKAR	Makanchi Array	47.31	346	P	P	10 24 24.8	-2.3
MAKZ	Makanchi	47.40	346	P	P	10 24 28.0	+0.2
MAKZ				IAmb	IAmb	10 24 38.2	
	comp=Z,1.6nm,0.7s						
KKAR	Karatay Array	48.11	334	P	P	10 24 32.4	-1.0
GEYT	Alibeck	51.25	320	P	P	10 24 57.6	+0.1
	comp=Z,1.2nm,0.4s,baz=98,slow=9.3,SNR=2.7						
KURK	Kurchatov	51.86	345	P	P	10 25 02.6	+0.9
KURK				IAmb	IAmb	10 25 03.3	
	comp=Z,3.4nm,0.9s						
USRK	Ussuriysk Ar.	52.87	31	P	P	10 25 10.0	+0.7
	comp=Z,3.8nm,0.8s,baz=234,slow=4.3,SNR=6.6						
USRK	Ussuriysk Ar.	52.87	31	P	P	10 25 09.3	0.0
ZAA0	Zalesovo Array	53.63	351	P	P	10 25 14.9	+0.2
ZALV	Zalesovo Beam	53.63	351	P	P	10 25 15.2	+0.5
	comp=Z,5.2nm,0.8s,baz=180,slow=6.0,SNR=19						
ABKAR	Akbulak array	57.56	332	P	P	10 25 42.8	-0.3
TIXI	Tiksi	73.28	10	P	P	10 27 22.9	-1.5
TIXI				IAmb	IAmb	10 27 24.6	
	comp=Z,2.3nm,0.9s						
SEY	Seymchan	73.86	23	P	P	10 27 27.6	-0.3
	comp=Z,1.5nm,0.7s,baz=220,slow=5.6,SNR=6.6						
TXAR	Lajitas Array	143.76	32	PKP	PKPbc	10 35 27.3	+0.3
	comp=Z,0.2nm,0.8s,baz=260,slow=3.3,SNR=3.1						
CPUP	Villa Florida	144.91	222	PKP	PKPdf	10 35 30.8	-0.5
	comp=Z,1.0nm,0.8s,baz=117,slow=4.5,SNR=2.9						

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*NEIC **18** 10:33:57.6±2.2, 40°.72N±0°.04×125°.25W±0°.02, h10^{km}±1^{km}, Error ellipse: s-maj=6.3km s-min=2.9km az=197.0*

*IDC **18** 10:33:59.4±0.7, 40°.74N×124°.97W, h0^{km}, mb4.0/15, mb1 4.1/22, mb1mx4.0/71, mbtmp3.9/22, ML3.7/6, MS3.5/20, Ms1 3.5/20, ms1mx3.3/52, Error ellipse: s-maj=11.3km s-min=8.8km az=13.0*

*NCEDC **18** 10:33:59.3±2.5, 40°.69N±0°.04×125°.33W±0°.07, h23^{km}±6^{km}, Mwr4.4/9, mb4.3/32(NEIC), Error ellipse: s-maj=8.0km s-min=4.8km az=58.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.15; M$_{\theta\theta}$-3.29; M$_{\phi\phi}$2.14; M$_{r\theta}$1.93; M$_{\theta\phi}$-3.51; M$_{\phi r}$-1.27;*

*ANF **18** 10:34:00.5±0.9, 40°.84N×124°.86W, h0^{km}, ML3.9/17 Error ellipse: s-maj=10.5km s-min=4.6km az=75.0*

ISC 18 10:33:58.5±1.6**, 40°.74N**±0°.04×**125°.07W**±0°.06**, h3^{km}±9^{km}, n251, σ1^{s}55**/246**, mb4.2**/23**, MS3.5**/15**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	0.62	115		Pn	10 34 13.5	-0.7
KCTM					Sn	10 34 24.6	-0.1
KMPM	Mount Pierce	0.80	114		Pn	10 34 15.7	-0.9
JCC	Jacoby Creek,	0.80	84		Pn	10 34 15.7	-0.8
JCC				Sg	Sn	10 34 28.2	-0.7
KSMM	Slide Mountain	0.88	129		Pb	10 34 15.9	-0.5
KRPM	Rodgers	0.90	62		Pn	10 34 17.3	-0.8
KCRM	Chalk Rock	1.01	108		Pn	10 34 19.1	-0.5
KHMM	Horse Mountain	1.03	82		Pn	10 34 19.3	-0.6
KHMM					Sn	10 34 35.3	+0.3
KMRM	Mail Ridge	1.16	116		Pn	10 34 21.4	-0.3
KMRM					Sn	10 34 37.8	-0.3
KRMB	Red Mountain	1.18	48		Pb	10 34 20.9	-0.6
KRMB					Sg	10 34 35.3	-1.0
KCSM	Cold Springs	1.21	99		Pn	10 34 22.2	-0.2
KOMM	Orleans Mounta	1.34	66		Pg	10 34 23.4	-0.7
KPPM	Pickett Peak	1.36	106		Pn	10 34 24.4	-0.2
KBSM	Bell Springs	1.40	126		Pg	10 34 23.9	-1.4
KHBM	Hayfork Bally	1.41	93		Pg	10 34 24.8	-0.7
KSXB	Camp Six Broad	1.41	39		Pg	10 34 24.2	-1.4
KSXB					Sg	10 34 42.7	-1.2
KIPM	Iron Peak	1.53	127		Pn	10 34 25.7	-1.2
KCPM	Cahto Peak	1.55	132	Pn	Pn	10 34 25.6	-1.5
KBNM	Bluenose Ridge	1.67	120		Pn	10 34 28.2	-0.5
KFPM	Farley Peak	1.68	131		Pn	10 34 27.4	-1.4
LGPM	Granite Peak	1.71	84		Pn	10 34 28.9	-0.4
LBPM	Beegum Peak	1.72	103		Pn	10 34 29.1	-0.3
KTRM	Thompson Ridge	1.73	47		Pn	10 34 28.7	-0.9
GTC	Three Chop Rid	1.78	139		Pn	10 34 27.9	-2.2
L02E	Cave Junction	1.80	38		Pn	10 34 29.8	-0.6
L02E	Cave Junction	1.80	38	P	Pn	10 34 29.8	-0.6
	baz=223,SNR=282						
L02E				S	Sn	10 34 52.0	-1.7
	baz=223						
M02C	Callahan	1.80	68		Pn	10 34 30.0	-0.4
M02C	Callahan	1.80	68	P	Pn	10 34 30.1	-0.4
	baz=251,SNR=97						
M02C				S	Sn	10 34 51.3	-2.6
	baz=251						
N02D	Trinity Center	1.81	82		Pn	10 34 30.2	-0.4
N02D	Trinity Center	1.81	82	P	Pn	10 34 30.2	-0.4
	baz=263,SNR=130						
N02D				S	Sn	10 34 53.5	-0.7
	baz=263						
O02D	Mt. Diablo Mer	1.83	107		Pn	10 34 30.6	-0.3
O02D	Mt. Diablo Mer	1.83	107	P	Pn	10 34 30.7	-0.3
	baz=286,SNR=610						
O02D				S	Sn	10 34 54.4	-0.3
	baz=286						
LBKM	Bonanza King	1.86	79		Pn	10 34 31.3	-0.1
GNAM	Navarro Ridge	1.90	144		Pn	10 34 29.8	-2.0
WDC	Whiskeytown Da	1.93	94		Pn	10 34 32.1	-0.2
GROM	Round Mountain	2.01	113		Pn	10 34 33.5	0.0
YBH	Yreka Blue Hor	2.04	60	Pn	Pn	10 34 33.9	+0.1
	9.3nm,0.3s,baz=247,slow=16,SNR=185						
YBH				Lg	Lg	10 35 01.6	
	40nm,0.3s,baz=175,slow=14,SNR=15						
YBH				LR	LR	10 35 21.8	
	comp=Z,560nm,21.8s,baz=182,slow=42						
LAMM	Antelope Mount	2.04	64		Pn	10 34 33.9	0.0
GHMM	Hull Mountain	2.06	126		Pn	10 34 32.9	-1.2
GHOM	Hamilton Openi	2.07	145		Pn	10 34 31.7	-2.4
GVV	Valley View	2.07	117		Pn	10 34 34.1	-0.2
GASB	Alder Springs	2.11	120		Pn	10 34 34.3	-0.5
K02D	Willamette Mer	2.22	28	P	Pn	10 34 35.9	-0.4
	baz=213,SNR=31						
K02D				S	Sn	10 35 01.9	-2.3
	baz=213						
GGUM	Gualala	2.24	147		Pn	10 34 33.8	-2.7
LGBM	Gray Butte	2.26	74		Pn	10 34 37.7	+0.7
B040	Montague	2.28	61		Pn	10 34 37.5	+0.6
M03C	McCloud	2.30	76		Pn	10 34 38.4	+1.1
LSHM	Sage Hen Hill	2.31	88		Pn	10 34 37.6	+0.2
GSNM	Snow Mountain	2.31	141		Pn	10 34 35.6	-1.9
LTCM	Tuscan Springs	2.31	102		Pn	10 34 37.6	+0.1
GHLM	Highland Sprin	2.32	136		Pn	10 34 35.6	-2.0
LMPM	Military Pass	2.32	70		Pn	10 34 39.0	+1.2
HOPS	Hopland Field	2.33	138		Pn	10 34 36.2	-1.5
LHEM	Herd Peak	2.33	67		Pn	10 34 39.0	+1.1
GTSM	Trough Springs	2.38	126		Pn	10 34 37.4	-1.0
GDCM	Dry Creek	2.43	144		Pn	10 34 36.9	-2.2
HUMO	Hull Mountain	2.45	40	Pn	Pn	10 34 39.1	-0.2
GMKM	Mount Konoctai	2.50	134		Pn	10 34 38.9	-1.2
GPMM	Pine Mountain	2.50	138		Pn	10 34 38.5	-1.6
GACM	Adobe Creek	2.53	137		Pn	10 34 39.0	-1.5
GCVM	Cloverdale	2.53	140		Pn	10 34 38.6	-1.8
L04D	Klamath Falls	2.55	54	P	Pn	10 34 42.2	+1.4
	baz=238,SNR=157						
J01E	Myrtle Point	2.56	19	P	Pn	10 34 40.4	-0.5
	baz=204						
J01E				S	Sn	10 35 11.4	-1.2
	baz=204						
GDXM	Geysers	2.61	137		Pn	10 34 41.4	-0.3
M04C	Macdoel	2.65	66	P	Pn	10 34 43.1	+0.9
	baz=249,SNR=68						
ORV	Oroville	2.98	112		Pn	10 34 46.0	-0.7
MCCM	Marconi Confer	3.10	146	Pn	Pn	10 34 46.2	-2.0
K04D	Chiloquin, OR	3.12	52	P	Pn	10 34 48.5	-0.1
	baz=236						
I03D	Drain, OR	3.22	23	P	Pn	10 34 50.4	+0.5
	baz=208,SNR=441						
I03D				S	Sn	10 35 28.8	+0.1
	baz=208						
J04D	Umpqua Nationa	3.33	41	P	Pn	10 34 52.7	+1.0
	baz=225,SNR=96						
AFDM	Forest Hills D	3.63	118		Pn	10 34 55.8	+0.2
I04A	Tendick Farm,	3.63	32	P	Pn	10 34 56.3	+0.6
	baz=216,SNR=48						
I04A				S	Sn	10 35 38.4	-0.7
	baz=216						
BEKR	Beckworth	3.71	102		Pn	10 34 57.5	+0.7
MOD	Modoc Plateau	3.77	71		Pn	10 34 57.8	+0.1
J05D	Fort Rock, OR	3.83	47	P	Pn	10 34 59.3	+0.9
	baz=232						
COR	Corvallis	4.06	18	Pn	Pn	10 35 02.1	+0.7
RUBR	Rubicon Trail	4.14	112		Pn	10 35 04.8	+2.0
H04D	Lebanon	4.15	24	P	Pn	10 35 03.9	+1.1
	baz=208,SNR=28						
H04D				S	Sn	10 35 51.5	-0.3
	baz=208						
PINE	Pine Mountain	4.32	44		Pn	10 35 07.2	+1.9
VCNR	Virginia City	4.41	107		Pn	10 35 07.6	+1.2
H04A	Detroit Lake	4.48	27		Pn	10 35 07.9	+0.7
PAHR	Pah Rah Range	4.48	102		Pn	10 35 07.5	+0.1
PNTR	Pine Nut	4.52	110		Pn	10 35 09.8	+1.8
CMB	Columbia Colle	4.53	125		Pn	10 35 08.4	+0.4
I05D	Terrebonne, OR	4.53	36	P	Pn	10 35 08.8	+0.8
	baz=221						
G03D	McMinnville, O	4.66	16	P	Pn	10 35 11.2	+1.5
	baz=200,SNR=8.4						
YERR	Yerington	4.82	109		Pn	10 35 13.4	+1.3
SAO	San Andreas Ge	4.88	143	Pn	Pn	10 35 11.2	-1.5
WVOR	Wild Horse Val	5.11	69		Pn	10 35 16.8	+0.7
G05D	Wamic, OR	5.27	30	P	Pn	10 35 19.2	+1.0
	baz=215						
F03A	Seaside	5.30	12	Pn	Pn	10 35 20.6	+2.1
I07A	Izee	5.30	49		Pn	10 35 21.5	+2.8
RYN	Ryan	5.48	111		Pn	10 35 21.6	+0.5
F04A	Amboy	5.54	20		Pn	10 35 22.5	+0.8
G06A	Carlson Farm,	5.55	34		Pn	10 35 23.5	+1.6
J08A	Circle Bar Ran	5.56	60		Pn	10 35 23.3	+1.0
MDPB	Devils Postpil	5.60	122		Pn	10 35 23.8	+1.0
KVN	Kaiserville	5.62	105		Pn	10 35 24.1	+1.0
PMPB	Monarch Peak	5.63	142	Pn	Pn	10 35 21.9	-1.2
NVAR	Mina Array Bea	5.72	112	Pn	Pn	10 35 25.6	+1.1
	1.1nm,0.3s,baz=292,slow=14,SNR=27						
NVAR				Lg	Lg	10 36 52.5	
	0.6nm,0.3s,baz=288,slow=21,SNR=4.2						
NVAR				LR	LR	10 37 20.1	
	comp=Z,264nm,18.2s,baz=320,slow=35						
NVAR	Mina Array Bea	5.72	112		Pn	10 35 23.3	-1.2
NV11	Mina Array Sit	5.82	111		Pn	10 35 27.3	+1.5
E03A	Lebam	5.90	10	Pn	Pn	10 35 27.7	+0.9
VOG	Valley Oaks Go	6.28	133	P	Pn	10 35 32.5	+0.6
	baz=315						
F07A	Phinny Hill Vi	6.37	34		Pn	10 35 33.5	+0.3
G08A	Pilot Rock	6.38	43		Pn	10 35 34.6	+1.2
LON	Longmire	6.45	20		Pn	10 35 35.9	+1.5
VES	Vestal, Richgr	6.79	134	P	Pn	10 35 39.1	+0.1
	baz=316						
HAWA	Hanford	6.93	34		Pn	10 35 42.8	+1.9
E07A	Sunnyside	6.94	31		Pn	10 35 42.2	+1.2
D03D	Eldon	6.94	11	P	Pn	10 35 41.5	+0.5
	baz=194						
BMO	Blue Mountains	7.04	52		Pn	10 35 43.9	+1.5
E08A	Dider Farm, El	7.21	35		Pn	10 35 46.8	+2.1
LTY	Liberty	7.25	25		Pn	10 35 46.9	+1.7
ISA	Isabella, Lake	7.26	132		Pn	10 35 46.4	+0.9
ISA	Isabella, Lake	7.26	132	P	Pn	10 35 46.8	+1.3
	baz=315						
MFID	Camas Ranch	7.38	66		Pn	10 35 47.4	+0.3
ARVC	Arvin	7.46	137	P	Pn	10 35 49.6	+1.3
	baz=319						
ELK	Elko	7.47	87	Pn	Pn	10 35 51.0	+2.5
	0.1nm,0.3s,baz=284,slow=9.2,SNR=6.5						
ELK	Elko	7.47	87		Pn	10 35 48.4	-0.1
E09A	Wood Farm, Sta	7.65	39		Pn	10 35 51.2	+0.5
R11A	Troy Canyon, C	7.71	105	Pn	Pn	10 35 53.8	+2.0
D08A	Wollman Farm,	7.72	33		Pn	10 35 50.6	-1.1
F10A	Beach Ranch, E	7.75	45		Pn	10 35 51.3	-0.8
EDW2	Edwards Air Fo	8.10	134	P	Pn	10 35 57.7	+0.7
	baz=317						
GSC	Goldstone, Bar	8.49	127		Pn	10 36 03.2	+0.9
PASC	Pasadena Art C	8.54	138		Pn	10 36 05.4	+2.4
B08A	Colville Reser	8.64	26		Pn	10 36 06.7	+2.3
PSUT	Pine Spring	8.93	101		Pn	10 36 09.8	+1.2
HEC	Hector,Ludlow	9.09	128	P	Pn	10 36 11.7	+1.1
	baz=312						
BGU	Big Grassy Mou	9.13	85		Pn	10 36 13.7	+2.4
BBRC	Big Bear Solar	9.15	132	P	Pn	10 36 12.5	+1.0
	baz=316						
DUG	Dugway, Tooele	9.36	89		Pn	10 36 15.8	+1.4
DUG	Dugway, Tooele	9.36	89	P	Pn	10 36 15.0	+0.6
	baz=277						
NEW	Newport	9.42	34	Pn	Pn	10 36 18.3	+3.3
	0.2nm,0.3s,baz=208,slow=14,SNR=3.6						
NEW				LR	LR	10 40 12.0	
	comp=Z,266nm,18.2s,baz=227,slow=40						
NEW	Newport	9.42	34		Pn	10 36 15.9	+0.8
MCMT	McKenzie Canyo	9.87	62		Pn	10 36 24.2	+2.8
PFO	Pinyon Flats O	9.89	133	Pn	Pn	10 36 22.7	+1.0
	1.0nm,0.3s,baz=322,slow=13,SNR=9.4						
PFO				LR	LR	10 40 39.4	
	comp=Z,390nm,19.4s,baz=302,slow=41						
PFO	Pinyon Flats O	9.89	133		Pn	10 36 22.3	+0.7
PFO	Pinyon Flats O	9.89	133	P	Pn	10 36 22.6	+1.0
	baz=318						
XPFO	Pion Flat	9.89	133		Pn	10 36 22.4	+0.8
MSO	Missoula	10.09	49	Pn	Pn	10 36 26.0	+1.8
LLLB	Lillooet	10.12	12		Pn	10 36 24.5	-0.1
HWUT	Hardware Ranch	10.22	81		Pn	10 36 30.4	+4.2
DLMT	Dillon	10.23	59		Pn	10 36 29.7	+3.4
JTMT	Jette	10.43	44		Pn	10 36 31.3	+2.3
W13A	Hualapai Mount	10.48	119	Pn	Pn	10 36 33.0	+3.3
LRM	Limekiln Ridge	10.51	57		Pn	10 36 32.8	+2.6
AHID	Auburn Hatcher	10.64	74	Pn	Pn	10 36 35.3	+3.4
QLMT	Earthquake Lak	10.83	63	Pn	Pn	10 36 37.9	+3.4
REDW	Red Top Meadow	10.90	71		Pn	10 36 35.5	0.0
IMW	Indian Meadow	10.93	69		Pn	10 36 35.0	-1.0
YHB	Horse Butte	10.96	64		Pn	10 36 36.3	-0.1
SNOW	Snow King Moun	10.98	71	Pn	Pn	10 36 38.8	+2.1
YHL	Hebgen Lake	11.00	64		Pn	10 36 39.3	+2.3
P17A	Butcher Ranch,	11.05	92	Pn	Pn	10 36 40.9	+3.3
YMR	Madison River	11.10	65		Pn	10 36 38.4	+0.2
YPP	Pitchstone Pla	11.11	67		Pn	10 36 38.3	-0.1
FLWY	Flagg Ranch	11.14	68		Pn	10 36 38.6	-0.2
YHH	Holmes Hill	11.21	64		Pn	10 36 41.5	+1.7
SRU	San Rafael Swe	11.29	94		Pn	10 36 43.0	+2.1
H17A	Grant Village	11.30	66		Pn	10 36 41.4	+0.5
LKWY	Lake	11.46	66		Pn	10 36 43.5	+0.3
WALA	Waterton Lakes	11.47	40		Pn	10 36 41.9	-1.3
BBB	Bella Bella	11.63	351	LR	LR	10 40 17.6	
	comp=Z,235nm,19.0s,baz=184,slow=32						
Y14A	Wickenburg	11.76	121		Pn	10 36 48.0	+0.9
BW06	Boulder Array	11.77	75		Pn	10 36 48.6	+1.2
BW06	Boulder Array	11.77	75	P	Pn	10 36 48.3	+0.9
	baz=265						
PD31	Pinedale Array	11.77	75		Pn	10 36 48.1	+0.7
PDAR	Pinedale Array	11.77	75	Pn	Pn	10 36 50.6	+3.3
	0.1nm,0.3s,baz=257,slow=12,SNR=19						
PDAR	Pinedale Array	11.77	75		Pn	10 36 49.5	+2.1
YNE	Yellowstone No	11.85	64		Pn	10 36 49.9	+1.4
GCMT	Greycliff	12.31	61		Pn	10 36 55.1	+0.4
RLMT	Red Lodge	12.38	64		Pn	10 36 55.2	-0.6
X16A	Lo Mia Camp, P	12.52	116	Pn	Pn	10 36 57.9	+0.2
PV14	Lion Creek, Pa	12.61	96	Pn	Pn	10 36 57.4	-1.6
EGMT	Eagleton	13.14	51		Pn	10 37 05.8	-0.2
EGMT	Eagleton	13.14	51	P	Pn	10 37 06.8	+0.8
	baz=242						
K22A	Casper	13.99	76		Pn	10 37 18.8	+1.0
S22A	4UR Ranch, Cre	14.45	96	Pn	Pn	10 37 25.3	+1.1
N23A	Red Feather La	14.49	83	Pn	Pn	10 37 25.6	+0.9
LAO	LASA Array	14.86	60	Pn	Pn	10 37 28.7	-0.7
LAO				IAmb	IAmb	10 37 40.1	
	comp=Z,13nm,1.0s						
SDCO	Great Sand Dun	15.46	95	Pn	Pn	10 37 39.5	+1.8
SDCO				IAmb	IAmb	10 37 53.5	
	comp=Z,24nm,1.4s						
SDCO	Great Sand Dun	15.46	95	P	P	10 37 40.7	-1.6
	baz=287						
ANMO	Albuquerque	15.79	106	Pn	Pn	10 37 43.3	+1.3
	comp=Z,0.1nm,0.3s,baz=137,slow=21,SNR=3.1						
ANMO				LR	LR	10 44 50.6	
	comp=Z,123nm,20.4s,baz=291,slow=41						
ANMO	Albuquerque	15.79	106		Pn	10 37 43.3	+1.3
319A	Douglas	15.81	121	Pn	Pn	10 37 42.9	+0.8
319A				IAmb	IAmb	10 37 55.4	
	comp=Z,24nm,1.4s						
121A	Cookes Peak, D	16.10	115	Pn	Pn	10 37 45.4	-0.5
T25A	Trinidad	16.47	96	P	Pn	10 37 49.2	-1.5
	baz=289						
KSCO	Kaye Shedlock'	17.31	88		P	10 38 02.4	-0.3
KSCO				IAmb	IAmb	10 38 19.3	
	comp=Z,22nm,0.9s						
DLBC	Dease Lake	17.99	352	P	P	10 38 12.4	+2.4
	comp=Z,0.1nm,0.3s,baz=178,slow=4.8,SNR=3.8						
DLBC	Dease Lake	17.99	352	P	Pn	10 38 07.2	-2.2
CBKS	Cedar Bluff	19.55	87	P	P	10 38 27.4	+0.2
CBKS				IAmb	IAmb	10 38 30.0	
	comp=Z,30nm,0.8s						
CBKS	Cedar Bluff	19.55	87	P	P	10 38 27.3	0.0
	baz=284						
R32A	Long Quarter,	20.43	88	P	P	10 38 36.3	-0.5
LPIG	La Paz	20.70	139	LR	LR	10 46 23.5	
	comp=Z,232nm,19.1s,baz=274,slow=36						
FFC	Flin Flon	20.77	40	P	P	10 38 40.8	+0.4
FFC				IAmb	IAmb	10 38 42.4	
	comp=Z,19nm,1.1s						
TX31	Lajitas Ar. Si	20.84	116	P	P	10 38 40.4	-1.0
TX32	Lajitas Array	20.84	116	P	Pn	10 38 43.0	-0.8
TXAR	Lajitas Array	20.84	116	P	Pn	10 38 43.9	0.0
	comp=Z,3.2nm,0.8s,baz=299,slow=7.4,SNR=28						
TXAR				LR	LR	10 47 39.8	
	comp=Z,54nm,20.4s,baz=0.0,slow=40						
TXAR	Lajitas Array	20.84	116	P	P	10 38 42.4	+1.0
HPIG		21.14	125	P	P	10 38 43.4	-1.4
ECSD	EROS Data Cent	21.24	72	P	P	10 38 45.6	+0.1
ECSD				IAmb	IAmb	10 38 50.8	
	comp=Z,12nm,0.8s						
AGMN	Agassiz Nation	22.06	60	P	P	10 38 54.4	+0.1
AGMN				IAmb	IAmb	10 38 57.7	
	comp=Z,14nm,0.8s						
ULM	Lac du Bonnet	22.44	55	P	P	10 38 58.5	+0.1
	comp=Z,22nm,0.9s,baz=260,slow=10,SNR=40						
ULM				LR	LR	10 48 23.0	
	comp=Z,144nm,18.5s,baz=266,slow=39						
ULM	Lac du Bonnet	22.44	55	P	P	10 38 59.0	+0.7
YKA	Yellowknife Ar	22.67	13	P	P	10 39 03.2	+2.5
	comp=Z,5.1nm,0.9s,baz=197,slow=10,SNR=29						
YKA				LR	LR	10 47 43.0	
	comp=Z,118nm,20.2s,baz=0.0,slow=36						
KDAK	Kodiak Island	24.50	323	LR	LR	10 46 35.1	
	comp=Z,201nm,19.3s,baz=132,slow=31						
DAWY	Dawson	24.82	345	P	P	10 39 19.6	-2.0
DAWY				IAmb	IAmb	10 39 30.3	

	comp=Z,6.2nm,1.0s						
CNPM	**China Poot**	**24.91**	**328**	P	**P**	**10 39 20.6**	**-1.8**
BRLK	**Bradley Lake**	**24.92**	**328**	P	**P**	**10 39 20.1**	**-2.4**
G40A	**Rib Lake**	**25.77**	**68**	P	**P**	**10 39 31.3**	**+0.9**
G40A				IAmb	IAmb	10 39 33.2	
	comp=Z,7.1nm,1.0s						
DHY	**Denali Highway**	**25.99**	**337**	P	**P**	**10 39 27.9**	**-4.5**
DHY				IAmb	IAmb	10 39 40.8	
	comp=Z,6.4nm,0.8s						
D41A	**Chassel**	**26.88**	**64**	P	**P**	**10 39 37.8**	**-2.5**
D41A				IAmb	IAmb	10 39 44.1	
	comp=Z,19nm,1.1s						
ILAR	**Eielson Array**	**27.16**	**340**	P	**P**	**10 39 43.7**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=151,slow=7.3,SNR=6.7						
ILAR				LR	LR	10 48 59.6	
	comp=Z,52nm,21.4s,baz=151,slow=33						
ILAR	**Eielson Array**	**27.16**	**340**	P	**P**	**10 39 40.3**	**-2.4**
INK	**Inuvik**	**28.00**	**353**	P	**P**	**10 39 51.4**	**+1.2**
	comp=Z,1.8nm,0.9s,baz=162,slow=6.8,SNR=5.2						
INK				LR	LR	10 50 33.6	
	comp=Z,129nm,18.3s,baz=76,slow=36						
INK	**Inuvik**	**28.00**	**353**	P	**P**	**10 39 49.9**	**-0.3**
MLY	**Manley**	**28.43**	**337**	P	**P**	**10 39 51.8**	**-2.4**
MLY				IAmb	IAmb	10 40 02.2	
	comp=Z,4.2nm,1.0s						
IMAR	**Indian Mountai**	**30.00**	**337**	P	**P**	**10 40 06.1**	**-1.8**
D53A	**Lac Vacive, Po**	**34.28**	**63**	P	**P**	**10 40 45.9**	**+0.1**
RES	**Resolute Bay**	**36.74**	**13**	LR	LR	10 55 46.0	
	comp=Z,70nm,18.3s,baz=264,slow=36						
SCHQ	**Schefferville**	**40.39**	**49**	P	**P**	**10 41 37.0**	**-0.4**
	comp=Z,3.1nm,1.0s,baz=272,slow=13,SNR=2.8						
SCHQ				LR	LR	10 58 25.6	
	comp=Z,110nm,18.9s,baz=350,slow=36						
SCHQ	**Schefferville**	**40.39**	**49**	IAmb	IAmb	10 41 40.1	
	comp=Z,11nm,1.2s						
SEY	**Seymchan**	**51.45**	**325**	P	**P**	**10 43 04.5**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=87,slow=17,SNR=2.6						
TIXI	**Tiksi**	**56.63**	**339**	P	**P**	**10 43 42.9**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=33,slow=6.6,SNR=2.5						
TIXI	**Tiksi**	**56.63**	**339**	IAmb	IAmb	10 43 48.5	
	comp=Z,3.1nm,1.1s						
H11N3	**WAKE ISLAND Hy**	**60.92**	**272**	T	T	11 50 08.6	
	baz=57,slow=74,SNR=3.9						
H11N2	**WAKE ISLAND Hy**	**60.92**	**272**	T	T	11 50 08.1	
	baz=57,slow=74,SNR=5.0						
H11N1	**WAKE ISLAND Hy**	**60.94**	**272**	T	T	11 50 08.7	
	baz=57,SNR=3.6						
H11S1	**WAKE ISLAND Hy**	**61.80**	**271**	T	T	11 51 08.0	
	baz=277,slow=74,SNR=3.8						
H11S2	**WAKE ISLAND Hy**	**61.80**	**271**	T	T	11 51 08.6	
	baz=53,slow=74,SNR=3.5						
H11S3	**WAKE ISLAND Hy**	**61.81**	**271**	T	T	11 51 09.9	
HFS	**Hagfors**	**73.93**	**20**	P	**P**	**10 45 37.8**	**+3.3**
	comp=Z,2.1nm,0.8s,baz=352,slow=9.5,SNR=2.9						
LPAZ	**La Paz**	**77.48**	**124**	P	**P**	**10 45 58.5**	**+2.3**
	comp=Z,0.9nm,0.7s,baz=315,slow=6.1,SNR=3.7						
LPAZ	**La Paz**	**77.48**	**124**	IAmb	IAmb	10 46 12.7	
	comp=Z,2.2nm,1.2s						
SONM	**Songino Array**	**80.70**	**328**	P	**P**	**10 46 15.5**	**+2.6**
	comp=Z,0.6nm,0.3s,baz=39,slow=9.3,SNR=4.0						
SONM				LR	LR	11 21 15.7	
	comp=Z,82nm,20.6s,baz=204,slow=35						
BRG	**Berggiesshubel**	**81.98**	**25**	eP	**P**	**10 46 16.8**	**-2.7**
	comp=Z,5.6nm,1.2s						
ZALV	**Zalesovo Beam**	**82.24**	**343**	LR	LR	11 24 51.8	
	comp=Z,20nm,19.2s,baz=7.5,slow=37						
GERES	**GERESS Array B**	**83.65**	**26**	LR	LR	11 24 26.5	
	comp=Z,28nm,18.8s,baz=284,slow=36						
HHC	**Hu-ho-hao-te**	**83.88**	**320**	eP	**P**	**10 46 26.6**	**-3.1**
BVAR	**Borovoye Array**	**85.66**	**351**	P	**P**	**10 46 38.8**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=0.0,slow=7.2,SNR=2.8						
KURK	**Kurchatov**	**86.59**	**345**	IAmb	IAmb	10 46 50.1	
	comp=Z,3.6nm,1.1s						
KURBB	**Kurchatov Arra**	**86.69**	**345**	P	**P**	**10 46 45.9**	**+2.5**
	comp=Z,0.8nm,0.3s,baz=15,slow=4.6,SNR=11						
AKTO	**Aktyubinsk**	**89.16**	**358**	P	**P**	**10 46 58.1**	**+2.9**
	comp=Z,0.7nm,0.7s,baz=45,slow=4.3,SNR=3.2						
AKTO				LR	LR	11 28 49.9	
	comp=Z,18nm,20.6s,baz=356,slow=37						
MKAR	**Makanchi Array**	**89.50**	**342**	P	**P**	**10 46 58.5**	**+1.5**
	comp=Z,0.1nm,0.6s,baz=53,slow=5.6,SNR=2.1						
WMQ	**Urumqi**	**90.80**	**337**	eP	**P**	**10 47 01.8**	**-1.3**
VAE	**Valguarnera**	**93.76**	**31**	LR	LR	11 30 31.4	
	comp=Z,47nm,18.5s,baz=18,slow=36						
BRTR	**Keskin Array B**	**97.59**	**16**	LR	LR	11 32 27.3	
	comp=Z,14nm,18.7s,baz=346,slow=36						
KSH	**Kashi**	**97.85**	**344**	P	Pdif	10 47 36.1	+0.5
KSH				sP	PcP	10 47 43.1	+7.5
KSH				PP	**PP**	**10 51 38.5**	**+5.9**
KSH	**Kashi**	**97.85**	**344**	SKS	**SKSac**	**10 58 11.8**	**-2.4**
KSH	**Kashi**	**97.85**	**344**	S	**S**	**10 58 57.8**	**-4.8**

IDC ***18*** *10:38:06.5±5.1, 2°.94S×139°.99E, h0km, mb3.9/2, mb1 4.3/3, mb1mx3.7/40, mbtmp4.1/3, ML4.2/1, Error ellipse: s-maj=196.8km s-min=29.8km az=89.0*
DJA ***18*** *10:38:15.6±0.9, 3°S±4°×13°8E±°, h10km±10km, M3.9/4, MLv3.9/4*
ISC 18 10:38:18.6±1.0**, 3°.04S**±0°.09×**138°.41E**±0°.08**, h62km, n6, σ1s.85**/8**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**1.08**	**16**	P	**Pn**	**10 38 36.0**	**-1.9**
GENI	**Genyem**	**1.81**	**76**	P	**Pn**	**10 38 46.6**	**-1.0**
GENI				S	**Sn**	**10 39 10.9**	**+1.3**
BAKI	**Biak**	**2.94**	**309**	P	**Pn**	**10 39 02.1**	**-0.9**
WRA	**Warramunga Arr**	**17.27**	**193**	P	**Pn**	**10 42 13.7**	**-2.0**
	0.8nm,0.3s,baz=17,slow=12,SNR=14						
ASAR	**Alice Springs**	**20.96**	**192**	P	**P**	**10 42 56.7**	**-0.1**
	5.5nm,0.6s,baz=19,slow=10,SNR=109						
ASAR				S	**S**	**10 46 48.2**	**+1.2**
	0.9nm,0.6s,baz=17,slow=22,SNR=6.2						
MKAR	**Makanchi Array**	**69.86**	**323**	P	**P**	**10 49 25.1**	**+2.2**
	0.4nm,0.5s,baz=105,slow=7.4,SNR=5.5						

BGR ***18*** *10:42:54.7±0.0, 36°.48N×21°.02E, h33km, mb4.2, Ms3.1*
PDG ***18*** *10:43:01.3±0.6, 37°.69N×21°.29E, h14km, ML4.1/12, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*
ATH ***18*** *10:43:01.9, 37°.71N×21°.39E, h24km, ML4.0/34, Error ellipse: s-maj=1.0km s-min=0.7km az=246.0*
THE ***18*** *10:43:02.9, 37°.68N×21°.46E, h0km±1km, ML4.1/22, Error ellipse: s-maj=1.7km s-min=0.6km az=258.0*
IDC ***18*** *10:43:03.2±3.4, 37°.73N×21°.44E, h29km±25km, mb4.1/24, mb1 4.1/35, mb1mx3.9/62, mbtmp4.1/35, ML3.9/11, MS3.4/19, Ms1 3.4/19, ms1mx3.2/41, Error ellipse: s-maj=13.3km s-min=10.8km az=160.0*
NEIC ***18*** *10:43:03.2±2.2, 37°.78N±0°.05×21°.43E±0°.07, h31km±5km, Error ellipse: s-maj=7.7km s-min=6.9km az=81.0*
BEO ***18*** *10:43:03.1±0.9, 37°.81N×21°.16E, h0km, ML4.0/9*
HLW ***18*** *10:43:06.3, 35°.51N×18°.92E, h15km±12km, Md4.6, Ml4.6*
ISC 18 10:43:02.5±0.7**, 37°.71N**±0°.02×**21°.39E**±0°.02**, h26km**±5km**, n345, σ1s.67**/377**, mb4.3**/35**, MS3.5**/13**, 24C-4D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VTN	**Vitineika**	**0.26**	**322**	P	**Pb**	**10 43 09.2**	**+0.1**
VTN				S	**Sb**	**10 43 14.1**	**+0.5**
AMT	**Artemida-Makis**	**0.31**	**125**	P	**Pb**	**10 43 08.1**	**-1.7**
AMT	**Artemida-Makis**	**0.31**	**125**	P	**Pb**	**10 43 09.1**	**-0.6**
AMT				S	**Sb**	**10 43 14.4**	**-0.3**
AMT				AML	AML	10 43 17.6	
AMT				AML	AML	10 43 20.0	
DRO	**Drossia**	**0.35**	**46**	P	**Pb**	**10 43 10.1**	**-0.3**
DRO				S	**Sb**	**10 43 15.4**	**-0.4**
	100µm,0.4s						
DRO	**Drossia**	**0.35**	**46**	P	**Pb**	**10 43 10.1**	**-0.3**
DRO				S	**Sb**	**10 43 15.7**	**-0.1**
DRO				AML	AML	10 43 17.6	
DRO				AML	AML	10 43 18.1	
RLS	**Riolos of Patr**	**0.35**	**10**	P	**Pb**	**10 43 10.1**	**-0.3**
RLS				S	**Sb**	**10 43 16.0**	**+0.2**
	13µm,0.3s						
RLS	**Riolos of Patr**	**0.35**	**10**	P	**Pb**	**10 43 10.2**	**-0.3**
RLS				S	**Sb**	**10 43 16.1**	**+0.2**
RLS				AML	AML	10 43 20.9	
	comp=E,24631µm,0.3s						
RLS				AML	AML	10 43 27.4	
	comp=N,28711µm,0.8s						
ZAK2	**Zakynthos**	**0.40**	**281**	P	**Pb**	**10 43 11.6**	**+0.5**
ZAK2				S	**Sn**	**10 43 19.2**	**0.0**
	comp=N,54µm,0.4s						
KRI1	**kERI**	**0.46**	**264**	P	**Pb**	**10 43 12.0**	**-0.1**
KRI1				S	**Sn**	**10 43 20.8**	**+0.1**
	comp=N,67µm,0.3s						
KFL	**Anninata**	**0.62**	**310**	P	**Pn**	**10 43 15.4**	**-0.3**
KFL				S	**Sn**	**10 43 26.1**	**+1.3**
	comp=N,8µm,0.6s						
KFL	**Anninata**	**0.62**	**310**	P	**Pb**	**10 43 14.5**	**-0.3**
UPR	**University Cam**	**0.65**	**28**	P	**Pb**	**10 43 15.1**	**-0.2**
ITM	**Ithomi**	**0.68**	**141**	P	**Pb**	**10 43 15.3**	**-0.4**
ITM				S	**Sb**	**10 43 23.5**	**-1.3**
	comp=N,17µm,0.5s						
ITM	**Ithomi**	**0.68**	**141**	P	**Pb**	**10 43 15.3**	**-0.4**
ITM				S	**Sn**	**10 43 25.6**	**-0.6**
ITM				AML	AML	10 43 29.4	
	comp=E,42001µm,0.6s						
ITM				AML	AML	10 43 35.5	
	comp=N,30882µm,0.6s						
ITM	**Ithomi**	**0.68**	**141**	P	**Pb**	**10 43 15.4**	**-0.4**
ITM	**Ithomi**	**0.68**	**141**		**Pb**	**10 43 15.3**	**-0.4**
KLV	**Kalavryta, Ach**	**0.69**	**61**	P	**Pb**	**10 43 15.3**	**-0.6**
KLV				S	**Sb**	**10 43 25.9**	**+0.8**
	comp=N,11µm,0.5s						
KLV	**Kalavryta, Ach**	**0.69**	**61**	P	**Pb**	**10 43 15.2**	**-0.8**
KLV				S	**Sn**	**10 43 26.0**	**-0.5**
KLV				AML	AML	10 43 28.0	
	comp=E,18685µm,0.5s						
KLV				AML	AML	10 43 28.7	
	comp=N,23139µm,0.5s						
LAKA	**Lakka**	**0.70**	**41**	P	**Pb**	**10 43 14.7**	**-1.5**
LAKA				S	**Sb**	**10 43 25.5**	**0.0**
	comp=N,17µm,0.7s						
LAKA	**Lakka**	**0.70**	**41**	P	**Pb**	**10 43 15.1**	**-1.1**
LAKA				S	**Sb**	**10 43 26.0**	**+0.4**
LAKA				AML	AML	10 43 30.7	
	comp=E,31322µm,0.6s						
LAKA				AML	AML	10 43 32.4	
	comp=N,41077µm,0.8s						
VLS	**Valsamata**	**0.79**	**307**	P	**Pb**	**10 43 17.1**	**-0.5**
VLS				AML	AML	10 43 38.6	
	comp=N,9989µm,0.4s						
VLS				AML	AML	10 43 40.3	
	comp=E,6788µm,0.3s						
ALIK	**Aliki, Aigiali**	**0.79**	**46**	P	**Pb**	**10 43 17.5**	**-0.1**
EFP	**Efpalio**	**0.82**	**29**	P	**Pb**	**10 43 17.7**	**-0.5**
EFP				S	**Sn**	**10 43 31.3**	**+1.6**
	comp=E,8µm,1.0s						
EFP	**Efpalio**	**0.82**	**29**	P	**Pb**	**10 43 17.8**	**-0.5**
EFP				AML	AML	10 43 40.0	
	comp=N,13220µm,0.6s						
EFP				AML	AML	10 43 42.2	
	comp=E,16165µm,1.3s						
TRIZ	**Trizonia**	**0.85**	**39**	P	**Pb**	**10 43 18.2**	**-0.4**
TRIZ				S	**Sn**	**10 43 30.3**	**0.0**
	comp=E,12µm,0.8s						
TRIZ	**Trizonia**	**0.85**	**39**	P	**Pb**	**10 43 18.2**	**-0.4**
KEF2	**Argostoli. Kep**	**0.85**	**303**	P	**Pb**	**10 43 18.1**	**-0.5**
VLX	**Vlachokerasia**	**0.85**	**113**	P	**Pb**	**10 43 17.9**	**-0.9**
VLX				S	**Sb**	**10 43 29.3**	**-0.6**
	comp=E,25µm,0.7s						
VLX	**Vlachokerasia**	**0.85**	**113**	P	**Pb**	**10 43 18.0**	**-0.8**
VLX				AML	AML	10 43 35.9	
	comp=E,53754µm,0.7s						
VLX				AML	AML	10 43 38.5	
	comp=N,44193µm,0.8s						
PYL	**PYLOS**	**0.86**	**161**	P	**Pb**	**10 43 17.9**	**-0.9**
PYL				S	**Sn**	**10 43 30.6**	**0.0**
	comp=N,14µm,0.4s						
PYL	**PYLOS**	**0.86**	**161**	P	**Pb**	**10 43 18.0**	**-0.9**
PYL				S	**Sn**	**10 43 31.1**	**+0.5**
PYL				AML	AML	10 43 32.8	
	comp=N,25723µm,0.4s						
PYL				AML	AML	10 43 36.4	
	comp=E,32027µm,0.5s						
SERG	**Sergoula**	**0.88**	**37**	P	**Pb**	**10 43 18.6**	**-0.5**
SERG	**Sergoula**	**0.88**	**37**	P	**Pb**	**10 43 18.8**	**-0.3**
SERG				AML	AML	10 43 39.0	
	comp=N,28309µm,0.9s						
SERG				AML	AML	10 43 40.3	
	comp=E,19269µm,0.3s						
KALE	**Kalithea**	**0.90**	**41**	P	**Pb**	**10 43 19.1**	**-0.4**
KALE				S	**Sn**	**10 43 33.2**	**+1.4**
	comp=E,12µm,0.8s						
KALE	**Kalithea**	**0.90**	**41**	P	**Pb**	**10 43 19.1**	**-0.4**
KALE				AML	AML	10 43 39.1	
	comp=E,24780µm,0.8s						
KALE				AML	AML	10 43 40.5	
	comp=N,24592µm,0.8s						
PDO	**Prodromos**	**0.90**	**350**	P	**Pn**	**10 43 19.6**	**+0.1**
PDO				S	**Sn**	**10 43 35.2**	**+3.5**
PVO	**Paravola**	**0.91**	**7**	P	**Pb**	**10 43 20.0**	**+0.3**
PVO				AML	AML	10 43 41.0	
	comp=E,17953µm,0.5s						
PVO				AML	AML	10 43 48.6	
	comp=N,7533µm,0.7s						
KEF3	**Kipouria, Keph**	**0.96**	**301**	P	**Pb**	**10 43 20.8**	**+0.3**
KONA	**Konidatara, Ke**	**0.96**	**318**	P	**Pn**	**10 43 20.3**	**0.0**
ANX	**Ano Chora**	**0.98**	**25**	P	**Pn**	**10 43 20.3**	**-0.3**
ANX				S	**Sn**	**10 43 36.0**	**+2.3**
	comp=N,11µm,0.7s						
ANX	**Ano Chora**	**0.98**	**25**	P	**Pn**	**10 43 20.3**	**-0.3**
ANX				AML	AML	10 43 43.5	
	comp=N,23325µm,0.9s						
ANX				AML	AML	10 43 49.3	
	comp=E,20206µm,0.5s						
FSK	**Fiskardo**	**0.99**	**319**	P	**Pn**	**10 43 20.7**	**-0.1**
MGNA	**Meganis**	**1.06**	**334**	P	**Pn**	**10 43 21.7**	**+0.1**
EVGI	**Lefkada island**	**1.08**	**328**	P	**Pn**	**10 43 22.1**	**+0.1**
DYR	**Agios Nikonas**	**1.21**	**141**	P	**Pb**	**10 43 24.1**	**-0.6**
DYR				S	**Sb**	**10 43 41.8**	**+1.9**
	comp=E,2µm,0.6s						
DYR	**Agios Nikonas**	**1.21**	**141**	P	**Pb**	**10 43 24.6**	**-0.2**
DYR				AML	AML	10 43 45.2	
	comp=N,4068µm,0.5s						
DYR				AML	AML	10 43 52.2	
	comp=E,4294µm,0.6s						
LKD2	**Lefkada island**	**1.22**	**332**	P	**Pb**	**10 43 25.0**	**0.0**
EVR	**Evrytania**	**1.25**	**15**	P	**Pb**	**10 43 25.6**	**+0.1**
EVR	**Evrytania**	**1.25**	**15**	P	**Pb**	**10 43 25.5**	**+0.1**
EVR				AML	AML	10 43 49.7	
	comp=E,8696µm,1.1s						
EVR				AML	AML	10 43 56.8	
	comp=N,7827µm,0.8s						
TSLK	**Tsoukalades, L**	**1.26**	**333**	P	**Pb**	**10 43 25.9**	**+0.3**
LOUT	**Loutraki**	**1.28**	**77**	P	**Pb**	**10 43 26.2**	**+0.2**
LOUT				AML	AML	10 43 58.8	
	comp=N,2525µm,0.7s						
LOUT				AML	AML	10 44 00.8	
	comp=E,3875µm,0.6s						
LTK	**Loutraki**	**1.28**	**75**	P	**Pb**	**10 43 25.5**	**-0.5**
LTK				S	**Sb**	**10 43 43.4**	**+1.3**
	comp=E,6µm,0.7s						
LTK	**Loutraki**	**1.28**	**75**	P	**Pb**	**10 43 26.1**	**+0.1**
PROD	**Prodromos**	**1.31**	**65**	P	**Pb**	**10 43 26.5**	**0.0**
PROD				S	**Sb**	**10 43 45.7**	**+2.8**
PROD	**Prodromos**	**1.31**	**65**	P	**Pb**	**10 43 26.7**	**+0.2**
PROD				AML	AML	10 43 49.9	
	comp=E,16071µm,0.5s						
PROD				AML	AML	10 43 50.5	
	comp=N,13842µm,0.6s						
MAKR	**Makrakomi, Fth**	**1.43**	**24**	P	**Pb**	**10 43 28.8**	**+0.4**
MAKR				AML	AML	10 44 00.4	
	comp=N,9589µm,0.7s						
MAKR				AML	AML	10 44 04.6	
	comp=E,9941µm,0.8s						
KRND	**KRANIDI**	**1.44**	**103**	P	**Pb**	**10 43 29.4**	**+0.8**
KRND				S	**Sb**	**10 43 49.2**	**+2.8**
	comp=E,8µm,0.7s						
KRND	**KRANIDI**	**1.44**	**103**	P	**Pb**	**10 43 29.1**	**+0.5**
KRND				AML	AML	10 43 52.1	
	comp=N,13312µm,0.5s						
KRND				AML	AML	10 43 55.1	
	comp=E,17578µm,0.9s						
AXAR	**Agios Charalam**	**1.45**	**43**	P	**Pb**	**10 43 29.3**	**+0.4**
AXAR				AML	AML	10 43 59.1	
	comp=N,21455µm,1.0s						
AXAR				AML	AML	10 44 00.4	
	comp=E,16926µm,0.5s						
DID	**Didima**	**1.48**	**97**	P	**Pb**	**10 43 29.5**	**+0.1**
DID				AML	AML	10 43 54.4	
	comp=N,23693µm,0.5s						
DID				AML	AML	10 43 54.6	
	comp=E,18805µm,0.5s						
AGG	**Agios Georgios**	**1.50**	**29**	P	**Pb**	**10 43 29.8**	**0.0**
AGG	**Agios Georgios**	**1.50**	**29**	P	**Pb**	**10 43 30.0**	**+0.2**
AGG				AML	AML	10 43 59.2	
	comp=N,6643µm,0.6s						
AGG				AML	AML	10 44 07.5	
	comp=E,4917µm,0.7s						
AGG	**Agios Georgios**	**1.50**	**29**	eP	**Pn**	**10 43 28.6**	**+0.8**
AGG	**Agios Georgios**	**1.50**	**29**		**Pb**	**10 43 29.5**	**-0.2**
AGG				Sn	**Sn**	**10 43 43.9**	**-2.7**
VIL2	**Platees**	**1.56**	**71**	P	**Pb**	**10 43 31.2**	**+0.4**
VIL2				AML	AML	10 44 03.3	
	comp=E,13344µm,0.7s						
VIL2				AML	AML	10 44 06.8	
	comp=N,7252µm,0.8s						
LKR	**Lokris**	**1.58**	**53**	P	**Pb**	**10 43 30.4**	**-0.6**
LKR				S	**Sb**	**10 43 52.3**	**+1.8**
	comp=N,4µm,0.6s						
LKR	**Lokris**	**1.58**	**53**	P	**Pb**	**10 43 30.4**	**-0.6**
LKR				AML	AML	10 43 55.8	
	comp=N,8291µm,0.7s						
LKR				AML	AML	10 43 57.5	
	comp=E,8570µm,0.5s						
VLI	**Veliai**	**1.58**	**128**	P	**Pb**	**10 43 31.6**	**+0.5**
VLI				S	**Sb**	**10 43 53.1**	**+2.5**
	comp=E,5µm,0.8s						
VILL	**Villia**	**1.58**	**73**	P	**Pb**	**10 43 30.3**	**-0.9**
ATH	**Athens Observa**	**1.86**	**81**	P	**Pb**	**10 43 34.8**	**-1.0**
ATH				AML	AML	10 44 04.4	
	comp=N,6337µm,1.1s						
ATH				AML	AML	10 44 06.8	
	comp=E,9688µm,0.8s						
VLY	**Voula,Athens**	**1.91**	**85**	P	**Pb**	**10 43 35.4**	**-1.2**
VLY				S	**Sb**	**10 44 01.1**	**+1.1**
	comp=E,4µm,0.6s						
VLY	**Voula,Athens**	**1.91**	**85**	P	**Pb**	**10 43 35.5**	**-1.1**
ATHU	**Athens Univers**	**1.91**	**82**	P	**Pb**	**10 43 35.4**	**-1.3**
ATHU				AML	AML	10 44 07.9	
	comp=E,1441µm,0.6s						
ATHU				AML	AML	10 44 09.5	
	comp=N,2565µm,0.5s						
THL	**Klokotos Trika**	**1.92**	**15**	P	**Pb**	**10 43 36.6**	**-0.2**
THL	**Klokotos Trika**	**1.92**	**15**	P	**Pb**	**10 43 36.2**	**-0.6**
THL				AML	AML	10 44 12.7	
	comp=E,2492µm,0.7s						
THL				AML	AML	10 44 20.9	
	comp=N,1884µm,0.8s						
PTL	**Penteli**	**1.98**	**79**	P	**Pn**	**10 43 36.2**	**+1.7**
PTL				AML	AML	10 44 07.8	
	comp=N,7243µm,1.1s						
PTL				AML	AML	10 44 08.5	
	comp=E,6366µm,0.5s						
MRKA	**Markates**	**2.00**	**59**	P	**Pb**	**10 43 36.5**	**-1.6**
MRKA				S	**Sb**	**10 44 03.8**	**+1.2**
	comp=E,5µm,0.7s						
MRKA	**Markates**	**2.00**	**59**	P	**Pb**	**10 43 36.9**	**-1.2**
MRKA				AML	AML	10 44 09.5	
	comp=N,11652µm,0.8s						
MRKA				AML	AML	10 44 12.2	
	comp=E,6503µm,0.7s						
DION	**Dionisos Attik**	**2.04**	**79**	P	**Pb**	**10 43 37.4**	**-1.6**
NEO	**Neokhori**	**2.15**	**41**	P	**Pb**	**10 43 39.3**	**-1.4**
NEO				S	**Sb**	**10 44 08.2**	**+1.3**
	comp=E,2µm,0.6s						
NEO	**Neokhori**	**2.15**	**41**	P	**Pn**	**10 43 38.6**	**+1.9**
NEO				AML	AML	10 44 12.5	
	comp=E,3985µm,0.6s						
NEO				AML	AML	10 44 16.4	
	comp=N,3668µm,0.7s						
XOR	**Xorichti**	**2.17**	**40**	P	**Pn**	**10 43 39.1**	**+2.1**
XOR	**Xorichti**	**2.17**	**40**	P	**Pb**	**10 43 39.3**	**-1.9**
SKIA	**Skiathos**	**2.18**	**48**	P	**Pn**	**10 43 39.4**	**+2.2**
SKIA	**Skiathos**	**2.18**	**48**	P	**Pn**	**10 43 39.3**	**+2.2**
SKIA				AML	AML	10 44 11.1	
	comp=E,2620µm,1.0s						
SKIA				AML	AML	10 44 20.5	
	comp=N,2951µm,0.8s						
KARY	**Karystos**	**2.43**	**81**	P	**Pn**	**10 43 42.6**	**+2.1**
KARY				AML	AML	10 44 17.9	
	comp=E,2200µm,0.8s						
KARY				AML	AML	10 44 30.1	
	comp=N,2154µm,0.7s						
AOS	**Alonnisos**	**2.44**	**52**	P	**Pn**	**10 43 42.0**	**+1.4**
AOS	**Alonnisos**	**2.44**	**52**	P	**Pn**	**10 43 42.2**	**+1.6**
AOS	**Alonnisos**	**2.44**	**52**	eP	**Pn**	**10 43 42.0**	**+1.4**
SERI	**Serifos**	**2.52**	**102**	P	**Pn**	**10 43 43.4**	**+1.6**
SERI	**Serifos**	**2.52**	**102**	P	**Pn**	**10 43 43.7**	**+1.9**
SERI				AML	AML	10 44 21.9	
	comp=E,1971µm,0.9s						
SERI				AML	AML	10 44 30.1	
	comp=N,2695µm,0.9s						
LIT	**Litokhoron**	**2.54**	**19**	P	**Pn**	**10 43 44.2**	**+2.1**
LIT	**Litokhoron**	**2.54**	**19**		**Pn**	**10 43 42.3**	**+0.3**
MHLO	**Agia Marina, M**	**2.61**	**112**	P	**Pn**	**10 43 45.3**	**+2.3**
RODP	**Rodopos**	**2.87**	**138**	eP	**Pn**	**10 43 49.4**	**+2.9**
IMMV	**Iera Moni Meta**	**3.06**	**136**	eP	**Pn**	**10 43 52.1**	**+2.9**
FNA	**Florina**	**3.07**	**360**	eP	**Pn**	**10 43 52.0**	**+2.6**
FNA	**Florina**	**3.07**	**360**		**Pn**	**10 43 49.3**	**-0.1**
HORT	**Hortiatis**	**3.17**	**24**	eP	**Pn**	**10 43 52.5**	**+1.6**
SCTE	**Santa Cesarea**	**3.28**	**317**		**Pn**	**10 43 52.9**	**+0.6**
OUR	**Ouranopolis**	**3.31**	**37**	eP	**Pn**	**10 43 54.5**	**+1.9**
GRG	**Griva**	**3.34**	**13**	eP	**Pn**	**10 43 54.9**	**+1.9**
APE	**Apeiranthos**	**3.36**	**100**	⇑P	**Pb**	**10 44 03.9**	**+2.5**
APE	**Apeiranthos**	**3.36**	**100**	eP	**Pn**	**10 43 55.8**	**+2.5**
OHR	**Ohrid**	**3.43**	**352**	⇓iPn	**Pn**	**10 43 57.3**	**+2.9**
SANT	**Santorini**	**3.52**	**111**		**Pn**	**10 43 56.3**	**+0.8**
GVDS	**Gavdos**	**3.60**	**142**	eP	**Pn**	**10 43 58.0**	**+1.4**
GVD	**Gavdhos**	**3.60**	**142**	eP	**Pn**	**10 43 58.1**	**+1.5**
KNT	**Kendrikon**	**3.64**	**18**	eP	**Pn**	**10 43 58.6**	**+1.4**
IDI	**Anoyia**	**3.71**	**130**	Pn	**Pn**	**10 43 58.8**	**+0.5**
	comp=N,2.9nm,0.3s,baz=296,slow=17,SNR=18						
IDI				Sn	**Sn**	**10 44 41.6**	**+0.4**
	comp=N,14nm,0.3s,baz=277,slow=17,SNR=6.5						
IDI	**Anoyia**	**3.71**	**130**	eP	**Pn**	**10 44 00.3**	**+2.1**
VAY	**Valandovo**	**3.72**	**14**	⇓iPn	**Pn**	**10 44 01.0**	**+2.8**
CHOS	**Chios island**	**3.74**	**78**	eP	**Pn**	**10 44 00.8**	**+2.2**
SIGR	**SIGRI**	**3.81**	**65**	eP	**Pn**	**10 44 01.5**	**+2.0**
TIR	**Tirane**	**3.82**	**342**		**Pn**	**10 43 57.2**	**-2.5**
TIP	**Timpagrande**	**3.92**	**293**	⇑P	**Pn**	**10 44 03.8**	**+2.7**
TIP				⇓S	**Sn**	**10 44 46.8**	**+0.4**
TIP	**Timpagrande**	**3.92**	**293**		**Pn**	**10 44 01.3**	**+0.2**
STIP	**Stip**	**4.03**	**8**	⇓iPn	**Pn**	**10 44 05.9**	**+3.4**
URLA	**Izmir**	**4.16**	**79**	eP	**Pn**	**10 44 06.3**	**+2.0**
BOZC	**Bozcaada**	**4.22**	**58**	eP	**Pn**	**10 44 06.3**	**+1.2**
MMB	**Musomiste**	**4.27**	**24**	P	**Pn**	**10 44 08.1**	**+2.2**
KKB	**Krupnik**	**4.35**	**17**	P	**Pn**	**10 44 09.8**	**+2.8**
CEL	**Celeste**	**4.38**	**279**	Pn	**Pn**	**10 44 07.8**	**+0.5**
BLCB	**Balcova**	**4.51**	**80**	eP	**Pn**	**10 44 11.9**	**+2.8**
GCAM	**G?zelcaml?**	**4.63**	**88**	eP	**Pn**	**10 44 13.6**	**+2.8**
ZKR	**Zakros**	**4.67**	**122**	eP	**Pn**	**10 44 14.5**	**+3.1**
MATE	**Matera**	**4.68**	**310**	⇑P	**Pn**	**10 44 13.7**	**+2.3**
RZN	**Rozhen**	**4.73**	**32**	P	**Pn**	**10 44 15.1**	**+2.8**
BODT	**Bodrum**	**4.76**	**96**	eP	**Pn**	**10 44 14.3**	**+1.8**
ENEZ	**Enez**	**4.78**	**49**	eP	**Pn**	**10 44 14.9**	**+2.2**
GELI	**Tayfur-Gelibol**	**4.78**	**54**	eP	**Pn**	**10 44 14.7**	**+1.9**
DRME	**Dracevica, Mon**	**4.78**	**340**	ePn	**Pn**	**10 44 12.6**	**-0.3**
ALN	**Alexandroupoli**	**4.81**	**47**	eP	**Pn**	**10 44 15.2**	**+1.9**
ALN	**Alexandroupoli**	**4.81**	**47**		**Pn**	**10 44 15.2**	**+1.9**
BOSS	**Bosilegrad**	**4.85**	**10**	⇑ePn	**Pn**	**10 44 16.7**	**+2.9**
LPK	**Lapseki**	**4.95**	**56**	eP	**Pn**	**10 44 17.5**	**+2.3**
ERIK	**Erikli-Kesan**	**4.96**	**52**	eP	**Pn**	**10 44 17.4**	**+2.2**
PDG	**Podgorica**	**4.99**	**341**	⇑P	**Pn**	**10 44 17.0**	**+1.3**
PDG				⇑S	**Sn**	**10 45 14.3**	**+1.8**
PDG	**Podgorica**	**4.99**	**341**	ePn	**Pn**	**10 44 16.1**	**+0.4**
PDG	**Podgorica**	**4.99**	**341**		**Pn**	**10 44 16.9**	**+1.2**
KDZ	**Kurdzhali**	**5.01**	**37**	P	**Pn**	**10 44 17.4**	**+1.4**
KDZ	**Kurdzhali**	**5.01**	**37**	eP	**Pn**	**10 44 17.6**	**+1.6**
DAT	**Datca**	**5.03**	**99**	eP	**Pn**	**10 44 19.6**	**+3.2**
PLD	**Plovdiv**	**5.07**	**29**	ePn	**Pn**	**10 44 20.0**	**+3.1**
PLD	**Plovdiv**	**5.07**	**29**	P	Pb	10 44 24.9	-5.6
VTS	**Vitosha**	**5.10**	**15**	ePn	**Pn**	**10 44 19.5**	**+2.1**
VTS	**Vitosha**	**5.10**	**15**	⇑P	**Pn**	**10 44 19.7**	**+2.3**
VTS	**Vitosha**	**5.10**	**15**	P	**Pn**	**10 44 20.6**	**+3.2**
VTS	**Vitosha**	**5.10**	**15**		**Pn**	**10 44 19.3**	**+1.9**
KARP	**Karpathos**	**5.12**	**113**	eP	**Pn**	**10 44 18.5**	**+1.0**
KARP	**Karpathos**	**5.12**	**113**		**Pn**	**10 44 20.0**	**+2.5**
AYDB	**Zeytinkoy-Aydi**	**5.15**	**85**	eP	**Pn**	**10 44 20.9**	**+2.9**
ACER	**Acerenza**	**5.23**	**308**		**Pn**	**10 44 20.0**	**+0.9**
HCY	**Herceg Novi**	**5.23**	**336**	ePn	**Pn**	**10 44 18.8**	**-0.2**
KRBG	**Karabiga-Canak**	**5.32**	**58**	eP	**Pn**	**10 44 22.5**	**+2.3**
DIM	**Dimitrovgrad**	**5.38**	**35**	P	**Pn**	**10 44 23.7**	**+2.7**
RKY	**Sarkoy-Tekirda**	**5.39**	**55**	eP	**Pn**	**10 44 22.9**	**+1.7**
BALB	**Balikesir**	**5.43**	**67**	eP	**Pn**	**10 44 24.8**	**+3.1**
SELS	**Selova**	**5.51**	**358**	⇑ePn	**Pn**	**10 44 23.2**	**+0.3**
YER	**Yerkesik**	**5.51**	**94**	eP	**Pn**	**10 44 23.6**	**+0.6**
TREB	**Trebinje**	**5.52**	**336**	ePn	**Pn**	**10 44 21.9**	**-1.0**

DBRK	Dubrovnik	5.54	334	i Pn	Pn	10 44 22.9	-0.3
DBRK				Sn	Sn	10 45 24.0	-2.1
VAE	Valguarnera	5.55	270	Pn	Pn	10 44 25.1	+1.7
	comp=N,3.4nm,0.3s,baz=171,slow=15,SNR=4.7						
ARG	Arkhangelos	5.59	103	eP	Pn	10 44 26.7	+2.7
BRY	Bratogost	5.63	338	ePn	Pn	10 44 24.5	-0.1
ZAPS	Zavoj	5.64	9	⇑ePn	Pn	10 44 27.8	+3.2
SJES	Sjenica	5.65	349	ePn	Pn	10 44 26.5	+1.6
SJES				eSn	Sn	10 45 28.2	-0.8
UPM	Unac-Piva	5.81	342	ePn	Pn	10 44 28.0	+0.9
TURN	Turunc	5.81	96	eP	Pn	10 44 27.4	+0.4
WDD	Wied Dalam	5.82	253		Pn	10 44 26.4	-0.8
DALY	Dalyan (Mula)	5.86	97	eP	Pn	10 44 30.6	+3.0
STON	Ston	5.88	332	ePn	Pn	10 44 27.7	-0.2
STON				eSn	Sn	10 45 32.6	-1.7
STON	Ston	5.88	332	ePn	Pn	10 44 27.5	-0.4
STON				Sn	Sn	10 45 32.2	-2.2
STON	Ston	5.88	332	ePn	Pn	10 44 27.3	-0.6
MPEP	Malo Peshtene	5.92	17	P	Pn	10 44 31.6	+3.2
BOVS	Bovan	5.92	2	ePn	Pn	10 44 29.9	+1.4
IVAS	Ivanjica	5.94	351	⇑ePn	Pn	10 44 29.6	+0.8
SGRT	San Giovanni R	5.94	315		Pn	10 44 29.4	+0.6
RUDO	Rudo	6.10	346	ePn	Pn	10 44 32.7	+1.7
ZAGS	Zajecar	6.13	6	⇑ePn	Pn	10 44 33.0	+1.6
PLVB	Pleven	6.18	22	⇑P	Pn	10 44 37.1	+5.0
GRUS	Gruza	6.19	355	⇑ePn	Pn	10 44 33.2	+1.0
ELND	Elena	6.24	32	⇑P	Pn	10 44 35.8	+3.0
PAOL	Paolisi	6.24	304		Pn	10 44 35.8	+2.9
BBLS	Lazići	6.33	347	ePn	Pn	10 44 35.2	+1.0
BBLS				eSn	Sn	10 45 44.4	-1.3
BBLS	Lazići	6.33	347	ePn	Pn	10 44 33.6	-0.6
DIVS	Divibare	6.47	351	ePn	Pn	10 44 36.6	+0.5
DIVS				eSn	Sn	10 45 47.0	-2.1
DIVS	Divibare	6.47	351	ePn	Pn	10 44 35.8	-0.3
MAKA	Makarska	6.49	330	ePn	Pn	10 44 36.3	0.0
MAKA				Sn	Sn	10 45 47.2	-2.2
TRUS	Trudelj	6.55	354	⇑ePn	Pn	10 44 37.7	+0.6
RICI	Ricice	6.62	332	ePn	Pn	10 44 38.5	+0.3
RICI				Sn	Sn	10 45 48.6	-4.2
SLUM	Salum	6.96	152	P	Pn	10 44 43.1	+0.3
	baz=125						
SLUM				AMP		10 45 00.0	
	baz=125						
SLUM				S	Sn	10 45 53.8	-7.2
	baz=125						
TEKS	Tekeris	6.98	349	ePn	Pn	10 44 42.8	-0.2
MDVR	Moldovita	7.07	2	⇑P	Pn	10 44 45.2	+0.9
NEF	NEVSHA	7.13	37	P	Pn	10 44 48.2	+3.1
PRD	Provadia	7.14	38	P	Pn	10 44 47.3	+2.0
INTR	Introdacqua	7.18	309		Pn	10 44 47.1	+1.2
KIJV	Kijevo	7.34	331	ePn	Pn	10 44 48.2	+0.3
ZIRJ	Zirje	7.37	325	i Pn	Pn	10 44 48.2	-0.2
ORH	Orhaniye	7.43	62	P	Pn	10 44 36.8	-12
MORI	Morici	7.51	327	ePn	Pn	10 44 48.2	-2.1
MORI				Sn	Sn	10 46 11.2	-3.4
FRGS	Fruska Gora	7.54	351	ePn	Pn	10 44 44.2	-6.5
GZR	Gura Zlata	7.75	7	ePn	Pn	10 44 55.3	+1.7
GZR	Gura Zlata	7.75	7	⇑P	Pn	10 44 55.3	+1.7
DUGI	Dugi Otok	7.90	325	ePn	Pn	10 44 55.7	+0.1
ARR	Arges	8.03	17	⇑P	Pn	10 45 00.9	+3.5
NRCA	Norcia	8.14	312		Pn	10 44 55.5	-3.5
VOIR		8.19	18	⇑P	Pn	10 45 03.0	+3.3
NVLJ	Novalja	8.43	326	i Pn	Pn	10 45 03.5	+0.7
MLR	Muntele Rosu	8.49	22	ePn	Pn	10 45 06.6	+2.8
MLR	Muntele Rosu	8.49	22	Pn	Pn	10 45 05.9	+2.1
	comp=N,0.5nm,0.3s,baz=219,slow=9.3,SNR=7.6						
MLR	Muntele Rosu	8.49	22	⇑P	Pn	10 45 07.8	+4.0
MLR	Muntele Rosu	8.49	22		Pn	10 45 02.3	-1.6
TIRR	Tirgusor	8.57	36	⇑P	Pn	10 45 06.1	+1.2
DOPR	Dopca	8.77	19	⇑P	Pn	10 45 10.8	+3.2
PLOR	Plostina	9.03	24	⇑P	Pn	10 45 15.0	+3.9
VRI	Vrincioaia	9.07	24	⇑P	Pn	10 45 15.8	+4.1
SWA2		9.10	157	P	Pn	10 45 07.3	-4.8
	baz=136						
SWA2				S	Sn	10 46 35.5	-18
	baz=136						
GBRS	Gornja Briga	9.24	330	ePn	Pn	10 45 14.4	+0.4
GBRS				eSn	Sn	10 46 53.1	-3.9
CRES	Cresnjev	9.24	333	ePn	Pn	10 45 13.5	-0.5
CEY	Cerknica	9.56	329	ePn	Pn	10 45 18.8	+0.4
CEY				eSn	Sn	10 47 00.6	-4.4
CEY	Cerknica	9.56	329	ePn	Pn	10 45 18.4	0.0
SKDS	Skadanscina	9.58	327	ePn	Pn	10 45 18.1	-0.6
SKDS				eSn	Sn	10 47 00.8	-4.6
BR131	Keskin Array S	9.78	74		Pn	10 45 19.8	-1.8
BRTR	Keskin Array B	9.78	74	Pn	Pn	10 45 24.8	+3.2
	comp=N,0.1nm,0.3s,baz=256,slow=11,SNR=7.7						
BRTR				LR	LR	10 49 29.3	
	comp=N,97nm,21.0s,baz=301,slow=40						
KEST	Kesra	9.87	262	Pn	Pn	10 45 24.0	+1.2
	comp=N,0.6nm,0.3s,baz=176,slow=5.2,SNR=9.0						
KEST				LR	LR	10 49 51.3	
	comp=N,129nm,20.8s,baz=66,slow=41						
KEST	Kesra	9.87	262		Pn	10 45 21.7	-1.0
OBKA	Obir	10.15	332	i Pn	Pn	10 45 27.1	+0.5
	comp=N,1.6nm,0.3s						
PSZ	Piszkesteto	10.26	354	Pn	Pn	10 45 28.4	+0.3
ARSA	Arzberg	10.47	337	i Pn	Pn	10 45 31.4	+0.6
	comp=N,1.7nm,0.4s						
MYKA	Terra Mystica	10.60	330	i Pn	Pn	10 45 32.2	-0.5
	comp=N,0.9nm,0.3s						
ABTA	Abfaltersbach	11.17	327	i Pn	Pn	10 45 41.2	+0.7
	comp=N,1.8nm,0.4s						
MOA	Molln	11.40	335	i Pn	Pn	10 45 44.0	+0.4
	comp=N,0.9nm,0.3s						
GLL	Jalalah	11.81	130	P	Pn	10 45 47.3	-2.0
	baz=115						
RJOB	Jochberg	11.84	331	eL	L	10 51 45.9	
	comp=N,178nm,20.8s						
WTTA	Wattenberg	11.95	326	i Pn	Pn	10 45 52.5	+1.2
	comp=N,4.4nm,0.5s						
WATA	Walderalm	12.03	326	i Pn	Pn	10 45 53.7	+1.4
	comp=N,0.1nm,0.1s						
HFRF	Wahat Farafira	12.04	149	P	Pn	10 45 50.8	-1.6
	baz=133						
HFRF				AMP		10 47 00.0	
	baz=133						
HFRF				S	Sn	10 47 53.0	-13
	baz=133						
SQTA	Sankt Quirin	12.11	325	i Pn	Pn	10 45 54.3	+0.9
	comp=N,1.3nm,0.2s						
FETA	Feichten	12.19	323	i Pn	Pn	10 45 55.5	+1.0
	comp=N,0.5nm,0.4s						
MOTA	Moosalm	12.25	325	i Pn	Pn	10 45 56.4	+1.1
	comp=N,1.8nm,0.3s						
MMAI	Mount Meron Ar	12.36	108	Pn	Pn	10 45 56.9	+0.1
	comp=N,1.0nm,0.3s,baz=329,slow=11,SNR=2.5						
GEC2	GERESS Array S	12.45	336	eL	L	10 51 28.5	
	comp=N,243nm,19.7s						
GEC2	GERESS Array S	12.45	336	Pn	Pn	10 45 57.8	-0.3
GERES	GERESS Array B	12.45	336	Pn	Pn	10 46 00.0	+2.0
	comp=N,0.2nm,0.3s,baz=152,slow=12,SNR=4.4						
GERES				LR	LR	10 51 25.0	
	comp=N,86nm,21.8s,baz=95,slow=40						
GERES	GERESS Array B	12.45	336	Pn	Pn	10 45 57.1	-0.9
OJC	Ojcow	12.56	355	Pn	Pn	10 45 56.5	-2.9
KHC	Kasperske Hory	12.74	336	Pn	Pn	10 45 58.7	-3.2
FUR	Furstenfeldbru	12.80	328	eL	L	10 51 59.2	
	comp=N,222nm,19.0s						
WET	Wettzell	12.98	334	eL	L	10 51 57.0	
	comp=N,372nm,19.6s						
BNI	Bardonecchia	13.25	308	Pn	Pn	10 46 05.4	-3.6
EIL	Elat	13.84	121	Pn	Pn	10 46 15.8	-1.1
	comp=N,0.9nm,0.3s,baz=167,slow=9.3,SNR=3.4						
GRF	Grafenberg Arr	14.04	332	eP	P	10 46 29.8	+2.7
	comp=N,63nm,1.7s,baz=148,slow=12						
GRF				eL	L	10 52 42.1	
	comp=N,359nm,19.0s						
WERN	Wernitzgruen	14.13	336	eP	P	10 46 31.9	+3.7
	comp=N,8.3nm,1.3s,baz=148,slow=12						
AKASG	Malin Array Be	14.14	21	Pn	Pn	10 46 19.9	-1.0
	comp=N,1.8nm,0.3s,baz=208,slow=12,SNR=11						
AKASG				LR	LR	10 53 19.4	
	comp=N,164nm,19.3s,baz=220,slow=44						
AKASG	Malin Array Be	14.14	21		Pn	10 46 19.0	-1.9
GUNZ	Gunzen	14.21	336	eP	P	10 46 31.1	+1.9
	comp=N,12nm,1.2s,baz=148,slow=12						
TANN	Tannenbergstha	14.22	336	eP	P	10 46 31.7	+2.4
	comp=N,29nm,1.4s,baz=148,slow=12						
BFO	Black Forest	14.26	322	eL	L	10 54 30.4	
	comp=N,37nm,18.5s						
PLN	Plauen	14.38	336	eP	P	10 46 32.8	+1.9
	comp=N,6.4nm,0.9s,baz=148,slow=12						
FBE	Freiberg	14.39	339	eP	P	10 46 33.7	+2.6
	comp=N,27nm,1.5s,baz=148,slow=12						
MOX	Moxa	14.69	335	eL	L	10 51 33.5	
	comp=N,30nm,18.9s						
CLL	Collm	14.84	339	eP	P	10 46 39.5	+3.5
	comp=N,33nm,1.6s,baz=148,slow=12						
CLL				eL	L	10 52 03.3	
	comp=N,64nm,20.9s						
NEUB	Neuenburg	15.12	336	eP	P	10 46 41.7	+2.6
	comp=N,55nm,1.3s,baz=148,slow=12						
TNS	Taunus Mts	15.57	328	eP	P	10 46 46.7	+2.5
	comp=N,20nm,1.3s,baz=148,slow=12						
TNS				eL	L	10 53 51.9	
	comp=N,169nm,20.4s						
SUW	Suwalki	16.35	4	P	Pn	10 46 50.4	+0.3
KBZ	Khabaz	17.36	63	P	P	10 47 04.2	+0.3
	comp=N,0.1nm,0.3s,baz=274,slow=12,SNR=3.5						
KBZ				LR	LR	10 55 37.9	
	comp=N,69nm,19.1s,baz=227,slow=44						
AKH	Akhalkalaki	17.43	71	P	Pn	10 47 03.5	-0.4
NACGM	Naroch	17.59	10	e	Pn	10 47 06.0	+0.4
BSEG	Bad Segeberg	17.93	338	eL	L	10 54 30.3	
	comp=N,63nm,18.8s						
GNI	Garni	18.32	75	LR	LR	10 55 08.0	
	comp=N,86nm,21.9s,baz=268,slow=40						
ESDC	Sonseca Array	19.87	284	P	Pn	10 47 33.5	0.0
	comp=N,0.5nm,0.3s,baz=80,slow=12,SNR=4.9						
ESDC	Sonseca Array	19.87	284	P	P	10 47 32.3	+0.5
TAM	Tamanrasset	20.18	227	P	Pn	10 47 36.1	-1.2
OBN	Obninsk	20.23	26	LR	LR	10 56 15.5	
	comp=N,29nm,18.4s,baz=36,slow=39						
MDT	Midelt	21.75	265	P	P	10 47 51.8	-0.3
	comp=N,3.3nm,0.8s,baz=81,slow=11,SNR=6.1						
HFS	Hagfors	22.98	350	P	P	10 48 03.6	-1.2
	comp=N,3.5nm,0.6s,baz=172,slow=12,SNR=9.3						
FINES	FINESS Array B	23.94	6	P	P	10 48 13.4	-0.8
	comp=N,6.5nm,0.7s,baz=178,slow=9.4,SNR=21						
FINES				LR	LR	10 58 27.6	
	comp=N,259nm,18.4s,baz=180,slow=39						
FINES	FINESS Array B	23.94	6	P	P	10 48 13.6	-0.6
FIA1	FINESS Array S	23.94	6	P	P	10 48 13.8	-0.4
NAO01	NORSAR Array S	24.09	347	P	P	10 48 15.8	+0.2
NC405	NORSAR Array S	24.20	349	P	P	10 48 15.4	-1.3
NC405				IAmb	IAmb	10 48 17.6	
	comp=Z,18nm,0.9s						
EKA	Eskdalemuir Ar	24.21	325	P	P	10 48 17.1	+0.3
	comp=Z,5.3nm,0.7s,baz=126,slow=9.1,SNR=10						
NB201	NORSAR Array S	24.21	348	P	P	10 48 16.9	+0.1
NB2	NORSAR Subarra	24.22	348	P	P	10 48 16.6	-0.2
	comp=Z,19nm,1.7s,baz=160,slow=9.3						
NOA	NORSAR Array B	24.22	348	P	P	10 48 16.6	-0.2
	comp=Z,2.2nm,0.9s,baz=154,slow=9.6,SNR=8.8						
NOA				LR	LR	10 59 42.0	
	comp=Z,143nm,18.1s,baz=165,slow=41						
NC303	NORSAR Array S	24.37	348	P	P	10 48 17.9	-0.3
NC204	NORSAR Array S	24.51	348	P	P	10 48 18.2	-1.4
NC204				IAmb	IAmb	10 48 25.6	
	comp=Z,14nm,1.1s						
KLMR	Klimovskoe	25.83	20	eP	P	10 48 31.9	+0.5
KLMR				AMP		10 48 34.3	
	comp=Z,41nm,1.5s						
KIRV	Kirov	27.68	32	P	P	10 48 48.2	+0.1
	comp=Z,8.1nm,0.5s,baz=277,slow=11,SNR=4.0						
KIRV				LR	LR	11 00 25.2	
	comp=Z,81nm,19.3s,baz=208,slow=38						
AKTO	Aktyubinsk	28.92	52	P	P	10 48 59.1	-0.1
	comp=Z,2.9nm,0.8s,baz=257,slow=10,SNR=8.9						
AKTO				LR	LR	11 02 39.6	
	comp=Z,34nm,19.8s,baz=260,slow=41						
ABKAR	Akbulak array	29.94	55	P	P	10 49 07.7	-0.6
TOA0	Torodi Ar. Sit	30.11	221	P	P	10 49 10.4	+0.3
TOA0				IAmb	IAmb	10 49 11.5	
	comp=Z,5.6nm,0.8s						
TORD	Torodi Ar. Bea	30.11	221	P	P	10 49 10.6	+0.4
	comp=Z,5.2nm,0.7s,baz=31,slow=9.1,SNR=32						
TORD				LR	LR	11 03 09.7	
	comp=Z,58nm,18.2s,baz=90,slow=40						
ARU	Arti	30.96	41	P	P	10 49 16.6	-0.7
	comp=Z,2.1nm,0.2s,baz=230,slow=7.4,SNR=7.4						
ARU	Arti	30.96	41	P	P	10 49 16.5	-0.7
ARU				IAmb	IAmb	10 49 17.4	
	comp=Z,10.0nm,1.0s						
ARCES	ARCESS Array B	31.96	3	P	P	10 49 25.1	-0.8
	comp=Z,3.1nm,0.9s,baz=191,slow=9.3,SNR=8.0						
ARCES				LR	LR	11 03 36.0	
	comp=Z,156nm,19.6s,baz=156,slow=39						
ARCES	ARCESS Array B	31.96	3	P	P	10 49 24.4	-1.5
UOSS	Minazif	32.16	103	P	P	10 49 27.2	-0.9
UOSS				IAmb	IAmb	10 49 39.7	
	comp=Z,5.1nm,0.9s						
BRVK	Borovoye	36.83	49	P	P	10 50 08.3	0.0
BRVK				IAmb	IAmb	10 50 09.5	
	comp=Z,9.5nm,0.9s						
BVAR	Borovoye Array	36.90	49	P	P	10 50 08.9	+0.2
	comp=Z,4.3nm,0.9s,baz=256,slow=6.0,SNR=17						
KK31	Karatay Array	37.36	66	P	P	10 50 12.4	-0.5
KK31				IAmb	IAmb	10 50 13.4	
	comp=Z,3.0nm,0.6s						
KKAR	Karatay Array	37.36	66	P	P	10 50 11.8	-1.0
KKAR	Karatay Array	37.36	66	P	P	10 50 12.4	-0.4
KKAR				IAmb	IAmb	10 50 13.4	
	comp=Z,3.0nm,0.6s						
DBIC	Dimbokro	39.03	224	P	P	10 50 27.4	+0.4
	comp=Z,5.2nm,0.8s,baz=18,slow=12,SNR=6.1						
DBIC				LR	LR	11 08 38.2	
	comp=Z,39nm,18.1s,baz=24,slow=39						
DBIC	Dimbokro	39.03	224	P	P	10 50 27.5	+0.4
DBIC				IAmb	IAmb	10 50 28.3	
	comp=Z,6.7nm,0.8s						
TIC	Toumodi	39.14	224	eP	P	10 50 29.6	+1.5
KIC	Kosan Boka	39.22	224	eP	P	10 50 29.3	+0.6
	comp=Z,28nm,1.1s						
LIC	Lamto	39.49	224	eP	P	10 50 31.6	+0.6
	comp=Z,53nm,1.2s						
AAK	Ala-Archa	40.32	66	P	P	10 50 38.2	+0.3
	comp=Z,1.1nm,0.4s,baz=218,slow=11,SNR=5.0						
AAK	Ala-Archa	40.32	66	P	P	10 50 38.0	+0.2
SPITS	Spitsbergen Ar	40.63	358	P	P	10 50 40.7	+0.9
	comp=Z,18nm,1.0s,baz=169,slow=11,SNR=3.2						
BOOM	Boomskoye usch	41.40	66	P	P	10 50 45.0	-1.7
KURK	Kurchatov	42.01	53	P	P	10 50 51.0	-0.4
KURK				IAmb	IAmb	10 50 59.5	
	comp=Z,7.4nm,1.0s						
KSH	Kashi	42.13	70	P	P	10 50 51.5	-1.3
KSH				pP	pP	10 50 57.0	-3.7
KSH				PP	PP	10 52 31.4	+1.0
KSH				PcS	PcS	10 56 37.1	-1.7
KSH				S	S	10 57 06.3	-4.7
KSH				SS	SS	11 00 08.3	-11
MAKZ	Makanchi	44.75	58	P	P	10 51 11.3	-2.3
MK31	Makanchi Array	44.96	58	P	P	10 51 14.1	-1.2
MKAR	Makanchi Array	44.96	58	P	P	10 51 14.6	-0.8
	comp=Z,3.0nm,0.7s,baz=283,slow=6.6,SNR=36						
MKAR	Makanchi Array	44.96	58	P	P	10 51 14.4	-0.9
ZAA0	Zalesovo Array	45.49	48	P	P	10 51 18.3	-1.0
ZALV	Zalesovo Beam	45.49	48	P	P	10 51 18.8	-0.6
	comp=Z,4.7nm,0.7s,baz=276,slow=8.8,SNR=20						
ZALV	Zalesovo Beam	45.49	48	P	P	10 51 18.0	-1.3
NRIK	Noril'sk	46.91	26	P	P	10 51 31.0	+0.7
	comp=Z,1.9nm,0.8s,baz=271,slow=8.0,SNR=5.1						
WMQ	Urumqi	49.38	61	eP	P	10 51 52.8	+2.9
TIXI	Tiksi	59.85	20	P	P	10 53 05.2	-0.1
	comp=Z,1.4nm,0.5s,baz=312,slow=3.2,SNR=5.0						
TIXI	Tiksi	59.85	20	P	P	10 53 04.0	-1.2
TIXI				IAmb	IAmb	10 53 11.4	
	comp=Z,3.8nm,1.4s						
SONM	Songino Array	60.22	51	P	P	10 53 07.8	-0.5
	comp=Z,0.7nm,0.5s,baz=282,slow=7.0,SNR=6.8						
SONM	Songino Array	60.22	51	P	P	10 53 07.7	-0.7
RES	Resolute Bay	60.41	344	P	P	10 53 09.8	+0.8
ULN	Ulaanbaatar	60.61	50	P	P	10 53 09.9	-1.2
ULN				IAmb	IAmb	10 53 22.7	
	comp=Z,3.1nm,1.1s						
BOSA	Boshof	66.08	176	LR	LR	11 23 45.8	
	comp=Z,38nm,19.1s,baz=29,slow=37						
HHC	Hu-ho-hao-te	66.73	56	eP	P	10 53 53.5	+2.0
CMAR	Chiang Mai Arr	69.27	82	P	P	10 54 07.0	-0.6
	comp=Z,0.5nm,0.4s,baz=302,slow=8.1,SNR=4.3						
CMAR	Chiang Mai Arr	69.27	82	P	P	10 54 06.8	-0.8
SEY	Seymchan	72.32	21	P	P	10 54 25.7	+0.2
	comp=Z,1.1nm,0.2s,baz=343,slow=19,SNR=4.1						
YKA	Yellowknife Ar	74.06	340	P	P	10 54 36.2	+0.5
	comp=Z,0.3nm,0.7s,baz=40,slow=5.6,SNR=7.2						
MA2	Magadan	74.44	24	P	P	10 54 38.5	+0.5
NJ2	Nanjing	76.45	60	eP	P	10 54 51.4	+1.4
ULM	Lac du Bonnet	76.48	324	P	P	10 54 50.5	+0.6
	comp=Z,1.3nm,0.8s,baz=52,slow=10,SNR=3.5						
ULM				LR	LR	11 32 07.0	
	comp=Z,30nm,18.0s,baz=20,slow=38						
ULM	Lac du Bonnet	76.48	324	IAmb	IAmb	10 55 06.1	
	comp=Z,2.7nm,0.9s						
ILAR	Eielson Array	77.44	355	LR	LR	11 31 47.8	
	comp=Z,24nm,18.5s,baz=224,slow=38						
KSRS	Korea Array	79.09	51	LR	LR	11 34 09.6	
	comp=Z,25nm,18.4s,baz=270,slow=39						
DLBC	Dease Lake	81.28	345	P	P	10 55 16.6	+0.5
	comp=Z,1.0nm,0.6s,baz=127,slow=1.9,SNR=3.6						
DLBC	Dease Lake	81.28	345	P	P	10 55 15.5	-0.6
DLBC				IAmb	IAmb	10 55 30.5	
	comp=Z,11nm,1.4s						
PETK	Petropavlovsk-	81.94	25	LR	LR	11 35 31.3	
	comp=Z,47nm,18.2s,baz=241,slow=38						

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*IDC **18** 10:56:20.1±0.9, 38.°37N×20.°34E, h0^{km}, mb3.9/13, mb1 3.9/19, mb1mx3.7/54, mbtmp3.8/19, ML3.6/6, MS2.8/4, Ms1 2.8/4, ms1mx2.5/47, Error ellipse: s-maj=18.1km s-min=14.6km az=46.0*

*PDG **18** 10:56:21.4±0.4, 38.°40N×20.°30E, h11^{km}±1^{km}, ML3.9/13, Error ellipse: s-maj=1.1km s-min=1.1km az=90.0*

*THE **18** 10:56:22.6, 38.°32N×20.°40E, h15^{km}, ML3.9/9, Error ellipse: s-maj=0.9km s-min=0.3km az=268.0*

*ATH **18** 10:56:22.5, 38.°32N×20.°41E, h16^{km}, ML3.7/26, Error ellipse: s-maj=1.2km s-min=0.5km az=271.0*

*BEO **18** 10:56:23.6±1.5, 38.°15N×20.°23E, h47^{km}, ML3.8/15*

*NEIC **18** 10:56:23.4±2.1, 38.°35N±0.°06×20.°44E±0.°07, h21^{km}±6^{km}, Error ellipse: s-maj=8.9km s-min=6.6km az=215.0*

ISC 18 10:56:22.3±0.6, **38.°33N**±0.°02×**20.°39E**±0.°02, **h16**^{km}±4^{km}, **n227**, σ1^{s}**46**/281, **mb4.0**/17, **12C-5D**, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.08	156	P	Pg	10 56 25.4	0.0
KEF4				S	Sg	10 56 27.5	0.0
AGT1	Agia Thekli	0.08	180	P	Pg	10 56 25.5	+0.1
AGT1				S	Sg	10 56 27.6	+0.1
KEF1	Kardakata, Kep	0.09	127	P	Pg	10 56 25.3	-0.2
KEF1				S	Sg	10 56 27.2	-0.4
KEF3	Kipouria, Keph	0.13	193	P	Pb	10 56 26.3	-0.1
KEF3				S	Sb	10 56 28.8	-0.2
LXR1	Lixouri, Cepha	0.14	162	P	Pb	10 56 26.2	-0.2
LXR1				S	Sb	10 56 28.9	-0.2
LXRA	Lixouri, Kepha	0.14	162	P	Pb	10 56 26.2	-0.2
LXRA				S	Sg	10 56 28.7	+0.2
CHV1	Chavriata, Kef	0.14	181	P	Pb	10 56 26.4	-0.2
CHV1				S	Sb	10 56 29.2	-0.2
	245µm,0.2s						
VSK1	VASILIKIADES	0.16	60	P	Pg	10 56 26.4	-0.1
VSK1				S	Sg	10 56 29.1	-0.2
	80µm,0.1s						
ARGA	Argostoli. Kep	0.17	154	P	Pg	10 56 26.4	-0.1
ARGA				S	Sg	10 56 29.2	-0.1
ARG2	Argostoli	0.17	152	P	Pg	10 56 26.5	0.0
ARG2				S	Sg	10 56 29.4	0.0
KONA	Konidatara, Ke	0.17	57	P	Pg	10 56 26.6	0.0
KONA				S	Sg	10 56 28.7	-0.9
KONA				AML	AML	10 56 30.1	
KONA				AML	AML	10 56 30.3	
KEF2	Argostoli. Kep	0.18	154	P	Pg	10 56 26.6	-0.1
KEF2				S	Sg	10 56 29.4	-0.3
FSK	Fiskardo	0.19	47	P	Pg	10 56 26.8	-0.1
FSK				S	Sg	10 56 30.2	+0.2
	34µm,0.3s						
FSK	Fiskardo	0.19	47	P	Pg	10 56 26.9	0.0
FSK				S	Sg	10 56 29.8	-0.1
FSK				AML	AML	10 56 30.7	
	comp=N,66573µm,0.5s						
FSK				AML	AML	10 56 30.9	
	comp=E,67723µm,0.2s						
VLS	Valsamata	0.22	133	P	Pg	10 56 27.1	-0.3
VLS				S	Sg	10 56 30.4	-0.4
	comp=E,147µm,0.1s						
VLS	Valsamata	0.22	133	P	Pg	10 56 27.1	-0.3
VLS				S	Sg	10 56 30.4	-0.4
VLS				AML	AML	10 56 30.9	
VLS				AML	AML	10 56 30.9	
EVGI	Lefkada island	0.36	36	P	Pg	10 56 29.8	+0.1
EVGI				S	Sb	10 56 35.6	-0.2
EVGI	Lefkada island	0.36	36	P	Pg	10 56 29.9	+0.2
EVGI				S	Sb	10 56 35.6	-0.2
KFL	Anninata	0.39	124	P	Pg	10 56 29.8	-0.3
KFL				S	Sg	10 56 35.2	-0.3
	comp=E,56µm,0.3s						
KFL	Anninata	0.39	124	P	Pg	10 56 29.9	-0.3
KFL				S	Sg	10 56 35.7	+0.2
KFL				AML	AML	10 56 36.1	
KFL				AML	AML	10 56 36.5	
	comp=N,52616µm,0.3s						
MGNA	Meganis	0.46	44	P	Pg	10 56 31.3	-0.2
MGNA				AML	AML	10 56 41.5	
	comp=N,12866µm,0.5s						
MGNA				AML	AML	10 56 45.9	
	comp=E,13018µm,0.3s						
LKD2	Lefkada island	0.51	25	P	Pg	10 56 32.0	-0.4
LKD2				S	Sb	10 56 40.4	+0.4
	comp=E,7µm,0.3s						
LKD2	Lefkada island	0.51	25	P	Pg	10 56 32.2	-0.2
LKD2				S	Sb	10 56 40.1	+0.1
LKD2				AML	AML	10 56 47.6	
	comp=N,13346µm,0.2s						
LKD2				AML	AML	10 56 49.4	
	comp=E,13179µm,0.4s						
TSLK	Tsoukalades, L	0.54	23	P	Pg	10 56 33.0	+0.1
TSLK				S	Sb	10 56 41.4	+0.5
	comp=E,8µm,0.4s						
TSLK	Tsoukalades, L	0.54	23	P	Pg	10 56 33.1	+0.1
TSLK				S	Sg	10 56 40.6	+0.4
AST1	Astakos	0.59	69	P	Pg	10 56 33.9	-0.1
AST1				S	Sb	10 56 43.4	+1.0
ZAK2	Zakynthos	0.68	143	P	Pg	10 56 35.2	-0.3
PDO	Prodromos	0.68	66	P	Pg	10 56 35.2	-0.4
PDO				S	Sb	10 56 45.9	+0.9
	comp=E,11µm,0.4s						
PDO	Prodromos	0.68	66	P	Pg	10 56 35.3	-0.3
PDO				AML	AML	10 56 51.2	
	comp=N,18397µm,0.4s						
PDO				AML	AML	10 56 53.5	
	comp=E,13499µm,0.5s						
VTN	Vitineika	0.75	123	P	Pb	10 56 36.7	-0.3
RLS	Riolos of Patr	0.89	107	P	Pb	10 56 38.6	-0.8
RLS	Riolos of Patr	0.89	107	P	Pb	10 56 38.7	-0.6
RLS				AML	AML	10 57 00.5	
	comp=E,6131µm,0.6s						
RLS				AML	AML	10 57 03.9	
	comp=N,5026µm,0.5s						
PVO	Paravola	0.94	72	P	Pb	10 56 40.3	+0.1
PVO	Paravola	0.94	72	P	Pn	10 56 40.7	-0.1
PVO				AML	AML	10 56 59.2	
	comp=N,14533µm,0.5s						
PVO				AML	AML	10 56 59.9	
	comp=E,14001µm,0.3s						
DRO	Drossia	1.11	109	P	Pb	10 56 42.7	-0.4
DRO	Drossia	1.11	109	P	Pb	10 56 42.8	-0.4
DRO				AML	AML	10 57 06.5	
	comp=N,11493µm,0.6s						
DRO				AML	AML	10 57 06.5	
	comp=E,19033µm,0.4s						
EFP	Efpalio	1.20	85	P	Pn	10 56 44.3	0.0
EFP				S	Sg	10 57 01.3	+0.2
	comp=E,5µm,0.6s						
ANX	Ano Chora	1.23	77	P	Pb	10 56 45.3	+0.1
ANX				AML	AML	10 57 07.8	
	comp=N,10666µm,0.8s						
ANX				AML	AML	10 57 08.1	
	comp=E,10219µm,0.7s						
LAKA	Lakka	1.26	94	P	Pn	10 56 44.1	-1.1
LAKA	Lakka	1.26	94	P	Pn	10 56 44.1	-1.1
LAKA				S	Sg	10 57 03.1	+0.2
LAKA				AML	AML	10 57 09.3	
	comp=N,4079µm,0.6s						
LAKA				AML	AML	10 57 10.6	
	comp=E,3770µm,0.6s						
EVR	Evrytania	1.26	62	P	Pn	10 56 45.4	+0.1
EVR				AML	AML	10 57 12.2	
	comp=N,4104µm,1.1s						
EVR				AML	AML	10 57 19.4	
	comp=E,2896µm,0.7s						
AMT	Artemida-Makis	1.31	127	P	Pg	10 56 47.2	-0.4
AMT				AML	AML	10 57 11.8	

	comp=E,9594µm,1.1s						
AMT				AML	AML	10 57 19.8	
	comp=N,8858µm,0.8s						
SERG	Sergoula	1.32	86	P	Pn	10 56 45.8	-0.2
SERG	Sergoula	1.32	86	P	Pn	10 56 45.9	-0.1
SERG				AML	AML	10 57 12.7	
	comp=E,5535µm,0.5s						
SERG				AML	AML	10 57 13.3	
	comp=N,5267µm,0.4s						
TRIZ	Trizonia	1.33	88	P	Pn	10 56 46.1	0.0
TRIZ	Trizonia	1.33	88	P	Pn	10 56 46.2	0.0
JAN	Janina	1.38	15	P	Pg	10 56 49.5	+0.8
KALE	Kalithea	1.38	87	P	Pn	10 56 46.9	0.0
KALE				AML	AML	10 57 12.8	
	comp=E,3767µm,0.8s						
KALE				AML	AML	10 57 13.3	
	comp=N,4349µm,0.6s						
KLV	Kalavryta, Ach	1.42	101	P	Pn	10 56 47.9	+0.4
KLV				AML	AML	10 57 14.5	
	comp=N,2335µm,0.8s						
KLV				AML	AML	10 57 16.3	
	comp=E,2282µm,1.0s						
KEK	Kerkira	1.46	342	P	Pb	10 56 49.3	+0.3
KEK				AML	AML	10 57 20.3	
	comp=E,3465µm,0.6s						
KEK				AML	AML	10 57 21.0	
	comp=N,2704µm,0.5s						
KASA	Kassiopi	1.46	346	P	Pb	10 56 49.7	+0.7
MAKR	Makrakomi, Fth	1.53	63	P	Pb	10 56 51.0	+0.8
MAKR				AML	AML	10 57 21.8	
	comp=E,6637µm,0.4s						
MAKR				AML	AML	10 57 26.2	
	comp=N,5082µm,0.6s						
DLFA	Delphi	1.67	84	P	Pg	10 56 54.3	0.0
AGG	Agios Georgios	1.67	65	P	Pg	10 56 54.1	-0.4
AGG				AML	AML	10 57 24.1	
	comp=E,3032µm,0.6s						
AGG				AML	AML	10 57 26.2	
	comp=N,3269µm,0.7s						
AGG	Agios Georgios	1.67	65	Pn	Pb	10 56 51.9	-0.8
ITM	Ithomi	1.68	133	P	Pb	10 56 52.6	-0.1
ITM				AML	AML	10 57 29.2	
	comp=E,2283µm,0.9s						
ITM				AML	AML	10 57 32.3	
	comp=N,2440µm,1.0s						
ITM	Ithomi	1.68	133	Pn	Pb	10 56 52.6	-0.1
THL	Klokotos Trika	1.77	45	P	Pb	10 56 55.1	+0.8
THL				AML	AML	10 57 25.6	
	comp=E,2256µm,0.5s						
THL				AML	AML	10 57 28.4	
	comp=N,1743µm,0.7s						
PYL	PYLOS	1.79	143	P	Pb	10 56 54.0	-0.7
KPRO	Kipourio	1.79	25	P	Pb	10 56 55.3	+0.6
AXAR	Agios Charalam	1.84	76	P	Pb	10 56 55.8	+0.3
AXAR				AML	AML	10 57 32.6	
	comp=E,5539µm,0.8s						
AXAR				AML	AML	10 57 36.2	
	comp=N,6048µm,0.7s						
VLX	Vlachokerasia	1.85	121	P	Pb	10 56 56.0	+0.4
VLX				AML	AML	10 57 32.9	
	comp=E,3338µm,1.0s						
VLX				AML	AML	10 57 35.6	
	comp=N,2824µm,0.6s						
PENT	Pentalofos	1.95	17	P	Pg	10 56 58.8	-1.0
PROD	Prodromos	1.98	91	P	Pb	10 56 57.5	-0.5
PROD				AML	AML	10 57 35.1	
	comp=E,2328µm,0.7s						
PROD				AML	AML	10 57 38.0	
	comp=N,1515µm,0.7s						
LTK	Loutraki	2.06	98	P	Pb	10 56 58.1	-1.1
LOUT	Loutraki	2.07	99	P	Pb	10 56 58.2	-1.2
LKR	Lokris	2.08	80	P	Pb	10 56 59.2	-0.3
NEST	Nestorio	2.15	14	P	Pb	10 57 01.0	+0.2
DYR	Agios Nikonas	2.20	135	P	Pn	10 56 59.5	+1.3
DYR				AML	AML	10 57 41.8	
	comp=N,326µm,0.8s						
DYR				AML	AML	10 57 51.0	
	comp=E,261µm,0.7s						
KZN	Kozani	2.25	28	P	Pb	10 57 01.5	-1.0
VIL2	Platees	2.27	92	P	Pb	10 57 01.7	-1.2
SCTE	Santa Cesarea	2.29	320	Pn	Pn	10 57 00.3	+0.9
KRND	KRANIDI	2.38	112	P	Pb	10 57 03.3	-1.5
DID	Didima	2.40	109	P	Pb	10 57 03.4	-1.7
LIT	Litokhoron	2.41	42	P	Pb	10 57 03.7	-1.5
LIT	Litokhoron	2.41	42		Pn	10 57 01.4	+0.4
NEO	Neokhori	2.42	65	P	Pn	10 57 02.6	+1.4
XOR	Xorichti	2.42	64	P	Pb	10 57 03.5	-1.9
MRKA	Markates	2.54	80	P	Pn	10 57 04.5	+1.7
SKIA	Skiathos	2.55	70	P	Pn	10 57 05.2	+2.3
FNA	Florina	2.57	17	ePn	Pb	10 57 06.1	-1.9
FNA				eSn	Sn	10 57 36.2	+2.0
FNA	Florina	2.57	17		Pn	10 57 05.3	+2.1
VLI	Veliai	2.59	128	P	Pb	10 57 07.1	-1.2
ATH	Athens Observa	2.65	97	P	Pn	10 57 06.4	+2.1
VLY	Voula,Athens	2.73	99	P	Pn	10 57 06.4	+0.9
PTL	Penteli	2.76	95	P	Pn	10 57 07.6	+1.8
OHR	Ohrid	2.80	6	i Pn	Pb	10 57 09.4	-2.5
DION	Dionisos Attik	2.81	94	P	Pn	10 57 08.4	+1.9
AOS	Alonnisos	2.86	72	P	Pn	10 57 09.3	+2.1
TIP	Timpagrande	2.96	288	⇓P	Pn	10 57 09.8	+1.2
TIP				⇓S	Sn	10 57 46.3	+2.5
TIP	Timpagrande	2.96	288		Pn	10 57 10.4	+1.8
TIR	Tirane	3.04	353	ePn	Pn	10 57 11.9	+2.2
TIR	Tirane	3.04	353	⇓P	Pn	10 57 12.5	+2.8
TIR				⇑S	Sn	10 57 47.3	+1.5
TIR	Tirane	3.04	353		Pn	10 57 11.7	+2.0
GRG	Griva	3.05	30	P	Pn	10 57 12.0	+2.1
HORT	Hortiatis	3.09	42	P	Pn	10 57 12.6	+2.1
KARY	Karystos	3.21	94	P	Pn	10 57 13.5	+1.6
CGL1	Ceglie Messapi	3.23	317	⇓iPn	Pn	10 57 13.4	+1.1
TAR1	Taranto	3.25	313	ePn	Pn	10 57 14.8	+2.2
ANKY	Antikythira Is	3.39	136	P	Pn	10 57 17.6	+3.2
VAY	Valandovo	3.43	29	eSn	Sn	10 57 57.4	+2.1
VAY	Valandovo	3.43	29	i Pn	Pn	10 57 17.6	+2.6
CEL	Celeste	3.53	270	Pn	Pn	10 57 17.1	+0.6
STIP	Stip	3.63	22	ePn	Pn	10 57 21.4	+3.5
MATE	Matera	3.67	310	⇑P	Pn	10 57 19.0	+0.7
MATE				⇑S	Sn	10 58 03.3	+2.1
SRS	Serrai	3.72	41	ePn	Pn	10 57 21.5	+2.4
SG1	Sgolgore (BA)	3.81	312	ePn	Pn	10 57 21.9	+1.7
SG1				Sn	Sn	10 58 04.3	-0.4
BAI	Bari	3.87	317	ePn	Pn	10 57 22.1	+1.0
BAI				Sn	Sn	10 58 05.1	-1.1
DRME	Dracevica, Mon	3.96	347	ePn	Pn	10 57 22.8	+0.5
PDG	Podgorica	4.19	348	ePn	Pn	10 57 26.1	+0.7
PDG				eSn	Sn	10 58 13.8	-0.2
PDG	Podgorica	4.19	348	⇓P	Pn	10 57 26.5	+1.1
PDG				⇑S	Sn	10 58 14.0	0.0
PDG	Podgorica	4.19	348	ePn	Pn	10 57 21.7	-3.7
PDG	Podgorica	4.19	348		Pn	10 57 25.3	-0.1
ACER	Acerenza	4.22	307		Pn	10 57 27.4	+1.4
APE	Apeiranthos	4.27	106	⇑P	Pn	10 57 29.9	+3.3
HCY	Herceg Novi	4.36	341	ePn	Pn	10 57 26.8	-1.0
BOSS	Bosilegrad	4.46	20	ePn	Pn	10 57 30.1	+0.9
BARS	Barje	4.61	13	ePn	Pn	10 57 32.8	+1.5
BARS				eSn	Sn	10 58 23.4	-1.1
TREB	Trebinje	4.65	341	ePn	Pn	10 57 31.4	-0.4
TREB				eSn	Sn	10 58 23.8	-1.6
TREB	Trebinje	4.65	341	ePn	Pn	10 57 30.6	-1.2
DBRK	Dubrovnik	4.66	339	i Pn	Pn	10 57 31.7	-0.2
DBRK				Sn	Sn	10 58 23.3	-2.4
IDI	Anoyia	4.72	129	Pn	Pn	10 57 35.0	+2.1
	comp=E,0.4nm,0.3s,baz=322,slow=17,SNR=3.7						
IDI				Sn	Sn	10 58 30.0	+2.7
	comp=E,3.7nm,0.3s,baz=333,slow=22,SNR=8.9						
IDI				LR	LR	10 59 42.8	
	comp=E,136nm,21.9s,baz=280,slow=42						
BRY	Bratogost	4.78	343	ePn	Pn	10 57 32.9	-0.8
VTS	Vitosha	4.80	26	ePn	Pn	10 57 36.6	+2.5
VTS				eSn	Sn	10 58 27.0	-2.4
VTS	Vitosha	4.80	26	⇑P	Pn	10 57 35.3	+1.3
VTS				⇑S	Sn	10 58 31.3	+1.8
VTS	Vitosha	4.80	26		Pn	10 57 35.3	+1.3
SELS	Selova	4.92	6	ePn	Pn	10 57 35.5	0.0
SJES	Sjenica	4.94	357	ePn	Pn	10 57 37.5	+1.7
SGRT	San Giovanni R	4.94	315		Pn	10 57 36.3	+0.4
STON	Ston	4.98	337	ePn	Pn	10 57 36.4	+0.2
STON				eSn	Sn	10 58 30.1	-3.3
STON	Ston	4.98	337	ePn	Pn	10 57 36.0	-0.2
STON				Sn	Sn	10 58 30.3	-3.2
STON	Ston	4.98	337	ePn	Pn	10 57 35.8	-0.4
UPM	Unac-Piva	5.00	347	ePn	Pn	10 57 36.4	-0.3
ALN	Alexandroupoli	5.07	58		Pn	10 57 36.3	-1.3
ZAPS	Zavoj	5.23	18	ePn	Pn	10 57 42.0	+2.3
PAOL	Paolisi	5.24	303		Pn	10 57 39.9	-0.1
IVAS	Ivanjica	5.25	358	ePn	Pn	10 57 40.6	+0.6
IVAS				eSn	Sn	10 58 39.3	-0.9
WDD	Wied Dalam	5.30	244	Pn	Pn	10 57 42.5	+1.7
BOVS	Bovan	5.39	10	ePn	Pn	10 57 42.9	+0.9
BOVS				eSn	Sn	10 58 43.2	-0.6
GRUS	Gruza	5.56	2	ePn	Pn	10 57 45.3	+1.0
MAKA	Makarska	5.57	334	i Pn	Pn	10 57 44.9	+0.5
MAKA				Sn	Sn	10 58 44.7	-3.4
BBLS	Lazići	5.58	353	ePn	Pn	10 57 46.2	+1.5
BBLS				eSn	Sn	10 58 47.9	-0.6
BBLS	Lazići	5.58	353	ePn	Pn	10 57 43.1	-1.6
CORL	Corleone	5.60	268	Pn	Pn	10 57 44.6	-0.3
RICI	Ricice	5.72	336	ePn	Pn	10 57 46.4	-0.1
DIVS	Divibare	5.77	357	ePn	Pn	10 57 47.8	+0.5
DIVS				eSn	Sn	10 58 51.0	-2.2
DIVS	Divibare	5.77	357	ePn	Pn	10 57 47.0	-0.3
HAPS	Han Pijesak,BI	5.85	350	ePn	Pn	10 57 47.1	-1.3
TRUS	Trudelj	5.89	0	ePn	Pn	10 57 49.0	+0.2
TRUS				eSn	Sn	10 58 55.3	-0.7
KARP	Karpathos	6.10	115	Pn	Pn	10 57 50.4	-1.3
INTR	Introdacqua	6.18	309		Pn	10 57 55.4	+2.5
ZIRJ	Zirje	6.42	328	i Pn	Pn	10 57 56.0	0.0
ZIRJ				Sn	Sn	10 59 04.4	-4.4
KIJV	Kijevo	6.42	333	i Pn	Pn	10 57 56.9	+0.8
MORI	Morici	6.56	329	ePn	Pn	10 57 58.8	+0.8
MORI				Sn	Sn	10 59 08.7	-3.8
MGRS	Mrkonjic Grad	6.57	339	ePn	Pn	10 57 58.2	0.0
BLY	Banja Luka	6.85	341	⇑P	Pn	10 58 03.3	+1.3
BLY	Banja Luka	6.85	341	ePn	Pn	10 58 02.3	+0.3
BLY	Banja Luka	6.85	341	Pn	Pn	10 58 02.6	+0.6
DUGI	Dugi Otok	6.94	326	i Pn	Pn	10 58 03.7	+0.5
UDBI	Udbina	7.10	332	i Pn	Pn	10 58 07.2	+1.8
NRCA	Norcia	7.13	311		Pn	10 58 08.3	+2.4
NVLJ	Novalja	7.48	328	ePn	Pn	10 58 10.9	+0.3
ARR	Arges	7.71	23	⇑P	Pn	10 58 16.0	+2.0
MOSL	Moslavina	7.76	341	ePn	Pn	10 58 13.8	-0.8
VOIR		7.91	25	⇑P	Pn	10 58 19.6	+3.0
RIY	Rijeka	8.26	330	ePn	Pn	10 58 21.5	+0.2
MLR	Muntele Rosu	8.27	28	Pn	Pn	10 58 22.6	+1.1
	comp=E,0.2nm,0.3s,baz=164,slow=20,SNR=2.4						
CRES	Cresnjev	8.34	336	ePn	Pn	10 58 22.0	-0.4
CEY	Cerknica	8.63	331	ePn	Pn	10 58 26.9	+0.5
CEY				eSn	Sn	10 59 58.1	-5.3
CEY	Cerknica	8.63	331	ePn	Pn	10 58 26.8	+0.4
SKDS	Skadanscina	8.63	329	ePn	Pn	10 58 26.5	0.0
SKDS				eSn	Sn	10 59 56.1	-7.3
PLOR	Plostina	8.84	30	⇑P	Pn	10 58 32.8	+3.5
VRI	Vrincioaia	8.88	30	⇑P	Pn	10 58 32.4	+2.5
SOKA	Soboth	9.23	336	i Pn	Pn	10 58 34.7	0.0
	comp=E,8.0nm,0.0s						
OBKA	Obir	9.24	334	i Pn	Pn	10 58 36.2	+1.3
	comp=E,2.5nm,0.2s						
ARSA	Arzberg	9.60	340	i Pn	Pn	10 58 39.8	0.0
	comp=E,1.2nm,0.3s						
MYKA	Terra Mystica	9.67	331	i Pn	Pn	10 58 41.3	+0.5
	comp=E,2.4nm,0.3s						
STAL	STALIGIAL	9.75	327		Pn	10 58 41.0	-0.7
CTI	Castel Tesino	10.07	323		Pn	10 58 45.5	-0.7
KBA	Koelnbreinsper	10.16	332	i Pn	Pn	10 58 48.2	+0.7
	comp=E,0.5nm,0.2s						
ABTA	Abfaltersbach	10.22	328	i Pn	Pn	10 58 48.9	+0.6
	comp=E,0.3nm,0.2s						
BRTR	Keskin Array B	10.41	78	Pn	Pn	10 58 55.2	+4.3
	comp=E,0.1nm,0.3s,baz=250,slow=12,SNR=2.7						
MOA	Molln	10.51	337	i Pn	Pn	10 58 52.7	+0.5
	comp=E,3.3nm,0.3s						
WTTA	Wattenberg	10.99	327	i Pn	Pn	10 58 59.2	+0.2
	comp=E,3.0nm,0.3s						
WATA	Walderalm	11.08	327	i Pn	Pn	10 59 01.3	+1.3
	comp=E,1.1nm,0.2s						
SQTA	Sankt Quirin	11.15	326	i Pn	Pn	10 59 03.1	+2.1
	comp=E,1.4nm,0.2s						
FETA	Feichten	11.21	324	i Pn	Pn	10 59 04.0	+2.0
MOTA	Moosalm	11.29	326	i Pn	Pn	10 59 04.8	+1.8
	comp=E,3.9nm,0.5s						
VRAC	Vranov	11.31	347	LR	LR	11 04 39.0	
	comp=E,57nm,20.1s,baz=152,slow=44						
DAVOX	Davos/Dischmat	11.45	321	Sn	Sn	11 01 09.6	-3.3
	comp=E,0.7nm,0.3s,baz=306,slow=22,SNR=4.0						
DAVOX				LR	LR	11 04 05.3	
	comp=E,64nm,18.5s,baz=76,slow=41						
GERES	GERESS Array B	11.57	337	Pn	Pn	10 59 05.6	-1.2
	comp=E,0.3nm,0.3s,baz=155,slow=15,SNR=4.2						
GERES				Sn	Sn	11 01 09.6	-6.0
	comp=E,0.6nm,0.3s,baz=160,slow=24,SNR=5.6						
GERES	GERESS Array B	11.57	337		Pn	10 59 05.8	-0.9
SENIN	Lac Senin/Sane	12.56	314	Pn	Pn	10 59 22.4	+1.9
MMAI	Mount Meron Ar	13.31	109	Pn	Pn	10 59 30.3	-0.2
	comp=E,2.4nm,0.3s,baz=315,slow=14,SNR=3.3						
AKASG	Malin Array Be	13.87	24	Pn	Pn	10 59 38.5	+0.4
	comp=E,0.5nm,0.3s,baz=211,slow=12,SNR=2.4						
EIL	Elat	14.84	121	Pn	P	10 59 55.0	-2.2
	comp=E,0.8nm,0.3s,baz=338,slow=6.2,SNR=3.3						
EIL				LR	LR	11 07 23.8	
	comp=E,18nm,18.3s,baz=293,slow=45						
HFS	Hagfors	22.23	351	P	P	11 01 16.9	-1.1
	comp=E,5.5nm,0.8s,baz=165,slow=12,SNR=13						
NC602	NORSAR Array S	23.11	349	P	P	11 01 27.1	-0.1
EKA	Eskdalemuir Ar	23.24	325	P	P	11 01 29.1	+0.5
	comp=E,1.6nm,0.8s,baz=136,slow=11,SNR=4.0						
NAO01	NORSAR Array S	23.32	348	P	P	11 01 30.0	+0.7
FINES	FINESS Array B	23.41	7	P	P	11 01 29.6	-0.6
	comp=E,3.8nm,0.7s,baz=174,slow=9.3,SNR=13						
FINES	FINESS Array B	23.41	7	P	P	11 01 29.0	-1.2
FIA1	FINESS Array S	23.41	7	P	P	11 01 29.9	-0.2
FIA1				IAmb	IAmb	11 01 31.4	
	comp=Z,11nm,1.0s						
NC405	NORSAR Array S	23.45	349	P	P	11 01 30.9	+0.3
NB2	NORSAR Subarra	23.45	349	P	P	11 01 30.8	+0.1
	comp=Z,4.5nm,0.9s,baz=162,slow=10						
NOA	NORSAR Array B	23.45	349	P	P	11 01 31.5	+0.8
	comp=Z,1.8nm,0.8s,baz=167,slow=8.9,SNR=6.0						
NBO00	NORSAR Array S	23.51	348	P	P	11 01 31.7	+0.5
NBO00				IAmb	IAmb	11 01 39.4	
	comp=Z,4.3nm,0.8s						
NC303	NORSAR Array S	23.60	349	P	P	11 01 32.4	+0.3
NC204	NORSAR Array S	23.74	348	P	P	11 01 34.8	+1.2
GEYT	Alibeck	29.55	79	P	P	11 02 26.6	+0.5
	comp=Z,1.9nm,0.6s,baz=260,slow=8.6,SNR=3.1						
GEYT	Alibeck	29.55	79	P	P	11 02 27.3	+1.1
GYA0B	ALIBECK ARRAY	29.55	79	P	P	11 02 26.6	+0.4
GYA0B				IAmb	IAmb	11 02 28.4	
	comp=Z,4.3nm,0.6s						
TORD	Torodi Ar. Bea	30.08	219	P	P	11 02 31.2	+0.2
	comp=Z,0.6nm,0.9s,baz=27,slow=9.7,SNR=3.1						
ARCES	ARCESS Array B	31.39	3	P	P	11 02 40.6	-1.4
	comp=Z,1.5nm,0.7s,baz=192,slow=13,SNR=4.2						
ARCES	ARCESS Array B	31.39	3	P	P	11 02 41.0	-1.0
KK31	Karatay Array	37.83	66	P	P	11 03 38.1	+0.1
KK31				IAmb	IAmb	11 03 51.8	
	comp=Z,2.9nm,1.2s						
KKAR	Karatay Array	37.83	66	P	P	11 03 39.0	+1.0
MK31	Makanchi Array	45.31	58	P	P	11 04 38.6	-0.7
MKAR	Makanchi Array	45.31	58	P	P	11 04 39.2	0.0
	comp=Z,0.3nm,0.4s,baz=276,slow=7.0,SNR=7.0						
MKAR	Makanchi Array	45.31	58	P	P	11 04 38.8	-0.5
ZALV	Zalesovo Beam	45.67	48	P	P	11 04 42.2	+0.2
	comp=Z,1.3nm,0.4s,baz=275,slow=8.6,SNR=5.4						
ZALV	Zalesovo Beam	45.67	48	P	P	11 04 41.5	-0.4
TULEG	Thule	52.92	343	P	P	11 05 37.7	+0.7
SCHQ	Schefferville	58.28	317	P	P	11 06 17.0	+1.1
	comp=Z,2.3nm,0.7s,baz=42,slow=8.8,SNR=4.0						
CMAR	Chiang Mai Arr	69.97	82	P	P	11 07 32.9	-0.3
	comp=Z,0.6nm,0.3s,baz=295,slow=6.9,SNR=4.6						
YKA	Yellowknife Ar	73.21	340	P	P	11 07 52.8	+0.8
	comp=Z,0.3nm,0.7s,baz=38,slow=5.2,SNR=7.1						
ILAR	Eielson Array	76.75	354	P	P	11 08 12.1	-0.3
	comp=Z,0.4nm,1.0s,baz=25,slow=3.0,SNR=3.2						

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*IDC **18** 11:07:38.5±1.5, 5°.39S×152°.97E, h0^{km}, mb3.5/4, mb1 3.6/4, mb1mx3.4/33, mbtmp3.5/4, Error ellipse: s-maj=36.5km s-min=21.8km az=92.0*

ISC 18 11:07:43.1±1.5, **5°.4S**±0°.2×**153°.1E**±0°.2, **h37**^{km}, **n6,** σ1^{s}**18**/7, **mb3.2**/4, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.52	316	Pn	Pn	11 08 06.5	-1.2
	74nm,0.3s,baz=128,slow=2.6,SNR=50						
KRVT				Sn	Sn	11 08 27.5	+1.2
	103nm,0.3s,baz=146,slow=23,SNR=9.2						
KRVT				LR	LR	11 08 36.8	
	comp=Z,88nm,20.4s,baz=112,slow=41						
WRA	Warramunga Arr	23.27	230	P	P	11 12 47.7	+0.2
	0.9nm,1.1s,baz=53,slow=10,SNR=3.2						
ASAR	Alice Springs	25.91	224	P	P	11 13 11.3	-0.5
	0.4nm,0.8s,baz=54,slow=9.2,SNR=5.6						
PETK	Petropavlovsk-	58.43	3	P	P	11 17 34.8	-0.1
	0.8nm,0.4s,baz=173,slow=8.2,SNR=6.4						
MKAR	Makanchi Array	80.97	319	P	P	11 19 53.8	-0.1
	0.2nm,0.5s,baz=116,slow=3.4,SNR=2.7						
TORD	Torodi Ar. Bea	150.77	287	PKPbc	PKiKP	11 27 34.7	+1.5
	0.6nm,0.8s,baz=66,slow=3.0,SNR=3.4						

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*NEIC **18** 11:08:20.9±2.4, 30°.38S±0°.05×178°.0W±0°.2, h10^{km}±1^{km}, mb4.6/27, Error ellipse: s-maj=23.1km s-min=7.1km az=101.0*

*IDC **18** 11:08:26.9±1.5, 30°.24S×177°.98W, h43^{km}±12^{km}, mb4.4/10, mb1 4.5/11, mb1mx4.2/31, mbtmp4.6/11, ML4.6/1, MS3.7/4, Ms1 3.6/4, ms1mx3.2/18, Error ellipse: s-maj=22.9km s-min=12.1km az=103.0*

ISC 18 11:08:26.1±0.4, **30°.39S**±0°.05×**178°.01W**±0°.10, **h46**^{km}, **n144,** σ1^{s}**72**/137, **mb4.7**/19, **MS3.8**/5, **3C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.13	4	P	Pn	11 08 44.7	-0.8
GLKZ				S	Sn	11 08 58.2	-1.7
RAO	Raoul Island	1.14	4	P	Pn	11 08 44.4	-1.3
	440nm,0.3s,baz=100,slow=13,SNR=24						
RAO				S	Sn	11 08 57.6	-2.6
	5µm,0.3s,baz=60,slow=20,SNR=40						
RAO	Raoul Island	1.14	4		Pn	11 08 41.1	-4.6
RAO	Raoul Island	1.14	4		Sn	11 08 58.0	-2.2
RIZ	Raoul Island	1.15	3	P	Pn	11 08 45.7	-0.1
RIZ				S	Sn	11 08 59.2	-1.1
MXZ	Matakaoa Point	7.78	202	Pn	Pn	11 10 16.5	-0.2
MXZ				Sn	Sn	11 11 39.8	-3.7
WMGZ	Waiomatatini S	7.98	201	P	Pn	11 10 17.4	-2.1
WMGZ				S	Sn	11 11 46.1	-2.2
HAZ	Te Kaha	8.13	204	P	Pn	11 10 19.3	-2.3
HAZ				S	Sn	11 11 53.8	+1.7
PUZ	Puketiti	8.26	201	P	Pn	11 10 19.9	-3.5
PUZ				S	Sn	11 11 53.4	-1.9
RUGZ	Raukumara Rang	8.36	204	P	Pn	11 10 22.3	-2.4
RUGZ				S	Sn	11 11 56.8	-1.0
OUZ	Omahuta	8.55	234	P	Pn	11 10 34.6	+7.3
CNGZ	Carnagh Statio	8.65	200	P	Pn	11 10 25.8	-2.9
TKGZ	Te Karaka	8.72	202	P	Pn	11 10 27.8	-1.9
TKGZ				S	Sn	11 12 06.2	-0.5
MWZ	Matawai	8.74	204	P	Pn	11 10 26.1	-3.8
MWZ				S	Sn	11 12 05.9	-1.2
URZ	Urewera	8.82	206	P	Pn	11 10 28.5	-2.5
	0.9nm,0.3s,baz=263,slow=5.4,SNR=10						
URZ				S	Sn	11 12 08.2	-0.9
	5.3nm,0.3s,baz=223,slow=20,SNR=14						
URZ	Urewera	8.82	206	Pn	Pn	11 10 28.9	-2.1
URZ				Sn	Sn	11 12 08.2	-0.9
URZ	Urewera	8.82	206	P	Pn	11 10 28.0	-3.1
URZ				S	Sn	11 12 07.8	-1.3
RIGZ	Rimuhau	9.00	202	P	Pn	11 10 31.0	-2.5
MUGZ	Murupara	9.14	207	P	Pn	11 10 31.9	-3.6
MTHZ	Maungataniwha	9.44	205	P	Pn	11 10 38.4	-1.2
BKZ	Black Stump Fm	9.85	206	Pn	Pn	11 10 41.0	-4.2
BKZ					Sn	11 12 33.2	-1.1
BKZ	Black Stump Fm	9.85	206	P	Pn	11 10 41.3	-3.8
MCHZ	McNeill Hill	10.02	204	P	Pn	11 10 45.5	-1.9
KWHZ	Kaweka Forest	10.10	205	P	Pn	11 10 42.5	-6.1
TSZ	Takapari Road	10.83	205	P	Pn	11 10 54.6	-3.9
BFZ	Birch Farm	11.28	203	Pn	Pn	11 10 58.9	-5.7
BFZ				Sn	Sn	11 13 01.5	-7.7
BFZ	Birch Farm	11.28	203	P	Pn	11 11 00.3	-4.4
MRZ	Mangatainoka R	11.50	205	P	Pn	11 11 01.5	-6.1
MSWZ	Moikau Station	12.28	205	Pn	Pn	11 11 12.6	-5.7
SNZO	South Karori	12.39	206	Pn	Pn	11 11 16.0	-3.8
TUWZ	Tuamarina	12.79	208	Pn	Pn	11 11 23.3	-2.0
NNZ	Nelson	12.86	211	Pn	Pn	11 11 26.1	-0.1
THZ	Tophouse	13.51	210	Pn	Pn	11 11 34.6	-0.6
THZ	Tophouse	13.51	210	P	Pn	11 11 33.3	-1.9
KHZ	Kahutara	13.79	207	Pn	Pn	11 11 35.2	-3.6
KHZ	Kahutara	13.79	207	P	Pn	11 11 35.2	-3.6
GVZ	Greta Valley S	14.45	207	P	Pn	11 11 42.9	-4.9
LTZ	Lake Taylor	14.61	210	Pn	Pn	11 11 46.9	-3.0
LTZ	Lake Taylor	14.61	210	P	Pn	11 11 46.9	-3.0
OXZ	Oxford	15.15	209	Pn	Pn	11 11 54.7	-2.4
OXZ				IAmb	IAmb	11 12 05.8	
	comp=Z,45nm,1.4s						
OXZ	Oxford	15.15	209	P	Pn	11 11 54.7	-2.4
MQZ	McQueen’s Vall	15.22	207	Pn	Pn	11 11 55.2	-2.7
MQZ				IAmb	IAmb	11 12 09.6	
	comp=Z,42nm,1.5s						
MQZ	McQueen’s Vall	15.22	207	P	Pn	11 11 56.3	-1.6
WVZ	Waitaha Valley	15.52	212	P	P	11 12 04.9	-0.5
RPZ	Rata Peaks	15.89	210	P	Pn	11 12 07.3	+0.9
	comp=Z,2.2nm,0.3s,baz=30,slow=3.3,SNR=10						
RPZ	Rata Peaks	15.89	210	Pn	Pn	11 12 04.1	-2.4
RPZ	Rata Peaks	15.89	210	P	Pn	11 12 07.4	+0.9
DZM	Mont Dzumac	16.22	297	eLR	LR	11 15 47.2	
	comp=Z,433nm,24.9s						
DZM	Mont Dzumac	16.22	297	P	P	11 12 17.2	+3.8
	comp=Z,0.1nm,0.3s,baz=127,slow=20,SNR=2.7						
DZM				LR	LR	11 16 21.0	
	comp=Z,75nm,20.1s,baz=156,slow=29						
ODZ	Otahua Downs	17.14	208		Pn	11 12 21.4	-0.8
ODZ	Otahua Downs	17.14	208	P	Pn	11 12 21.8	-0.4
AFI	Afiamalu	17.38	21		Pn	11 12 24.5	-1.0
AFI				IAmb	IAmb	11 12 31.9	
	comp=Z,46nm,0.9s						
WKZ	Wanaka	17.67	212	Pn	Pn	11 12 25.7	-3.1
WKZ	Wanaka	17.67	212	P	Pn	11 12 28.9	+0.1
WHZ	Wether Hill Ro	18.97	211	P	P	11 12 41.7	-1.8
ARMA	Armidale	26.16	262	P	P	11 13 55.3	-1.0
TBI	Tubuai	26.36	81	eLR	LR	11 20 37.7	
	comp=Z,180nm,27.8s						
TBI	Tubuai	26.36	81	eT	T	11 40 21.2	
	comp=Z,32nm,0.3s						
EIDS	Eidsvold	27.73	273	P	P	11 14 09.6	-0.8
EIDS				IAmb	IAmb	11 14 14.3	
	comp=Z,8.0nm,0.9s						
CAN	Canberra	28.07	251	P	P	11 14 12.9	-0.5
CAN				IAmb	IAmb	11 14 26.7	
	comp=Z,23nm,1.2s						
PAE	Paea	28.80	70	eT	T	11 43 37.5	
	comp=Z,9.7nm,0.3s						
PPT2	Papeete2	28.84	70	eLR	LR	11 21 45.0	
	comp=Z,132nm,26.0s						
PPT2	Papeete2	28.84	70	eT	T	11 43 42.6	
	comp=Z,7.5nm,0.4s						
PMOR	Pomariorio Ree	31.59	68	eT	T	11 47 10.7	
	comp=Z,6.4nm,0.3s						
VAH	Vaihoa	31.68	68	eT	T	11 47 15.9	
	comp=Z,28nm,0.3s						
STKA	Stephens Creek	34.48	257	P	P	11 15 12.1	+2.4
	comp=Z,25nm,0.8s,baz=86,slow=9.3,SNR=52						
STKA				LR	LR	11 29 32.3	
	comp=Z,187nm,18.5s,baz=198,slow=37						
STKA	Stephens Creek	34.48	257	P	P	11 15 10.8	+1.1
STKA				IAmb	IAmb	11 15 14.1	
	comp=Z,5.9nm,0.8s						
BBOO	Buckleboo	38.97	254	P	P	11 15 45.2	-2.7
BBOO				IAmb	IAmb	11 15 50.8	
	comp=Z,28nm,1.4s						
COEN	Coen	39.27	286	P	P	11 15 51.2	+0.6
COEN				IAmb	IAmb	11 15 54.5	
	comp=Z,11nm,0.9s						
AS31	Alice Springs	43.10	267	P	P	11 16 23.3	+1.2
ASAR	Alice Springs	43.10	267	P	P	11 16 23.1	+0.9
	comp=Z,5.3nm,0.6s,baz=103,slow=7.4,SNR=122						
ASAR				ScP	ScP	11 22 01.2	+2.4
	comp=Z,0.6nm,0.8s,baz=109,slow=3.4,SNR=5.7						
ASAR				LR	LR	11 33 15.5	
	comp=Z,117nm,19.2s,slow=34						
ASAR	Alice Springs	43.10	267	P	P	11 16 22.6	+0.5
WR0	Warramunga Arr	43.91	272	P	P	11 16 29.6	+1.0
WR0				IAmb	IAmb	11 16 32.1	
	comp=Z,16nm,1.1s						
WB2	Warramunga Arr	44.08	272	P	P	11 16 31.1	+1.1
WRAB	Tennant Creek	44.09	272	P	P	11 16 28.8	-1.2
WRAB				IAmb	IAmb	11 16 33.5	
	comp=Z,12nm,0.7s						
WRA	Warramunga Arr	44.09	272	P	P	11 16 30.8	+0.8

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              comp=Z,12nm,0.5s,baz=111,slow=7.8,SNR=114
WRA                                 S       S        11 22 59.5  -0.2
              comp=Z,1.3nm,0.9s,baz=112,slow=14,SNR=5.1
WRA                                 LR      LR       11 33 30.7
              comp=Z,95nm,18.1s,baz=185,slow=34
WRA    Warramunga Arr   44.09 272   P       P        11 16 27.7  -2.4
FORT   Forrest          46.04 255   P       P        11 16 44.0  -1.4
VNDA   Vanda            48.10 186   P       P        11 17 03.7  +2.9
              comp=Z,1.2nm,0.6s,baz=18,slow=9.6,SNR=3.3
VNDA   Vanda            48.10 186   P       P        11 17 01.6  +0.8
MTN    Manton Dam       49.98 279   P       P        11 17 17.2  +1.2
KNRA   Kununurra        50.70 274   P       P        11 17 22.4  +0.9
KNRA                                IAmb    IAmb     11 17 27.9
              comp=Z,21nm,1.1s
FITZ   Fitzroy Crossi   52.35 270   P       P        11 17 34.6  +0.8
FITZ                                IAmb    IAmb     11 17 36.0
              comp=Z,7.9nm,0.9s
CASY   Casey            55.14 208   P       P        11 17 52.4  -1.1
QSPA   South Pole Qui   59.72 180   P       P        11 18 28.5  +2.6
              comp=Z,4.7nm,0.7s,baz=28,slow=1.1,SNR=22
QSPA   South Pole Qui   59.72 180   P       P        11 18 26.7  +0.8
MAW    Mawson           72.31 201   P       P        11 19 47.8  +1.4
              comp=Z,8.9nm,0.2s,baz=105,slow=8.4,SNR=57
SYO    Syowa Base       77.12 193⇑iP      P        11 20 14.0  -0.3
SYO    Syowa Base       77.12 193⇑epP     P        11 20 16.0  +1.7
SYO    Syowa Base       77.12 193⇑ePcP    PcP      11 20 25.0   0.0
SNAA   Sanae            78.16 178   P       P        11 20 21.4  +1.2
SNAA   Sanae            78.16 178   P       P        11 20 21.3  +1.2
SNAA                                IAmb    IAmb     11 20 29.9
              comp=Z,5.5nm,1.1s
MJAR   Matsushiro Arr   78.23 325   P       P        11 20 21.3  +0.4
              comp=Z,1.1nm,0.5s,baz=140,slow=4.2,SNR=2.8
VNA3   Neumayer Olymp   78.31 176   P       P        11 20 22.0  +1.1
VNA2   Neumayer--Watz   78.75 177   P       P        11 20 24.8  +1.4
              baz=174,slow=6.0
ADK    Adak             81.93   1   P       P        11 20 40.2  -0.2
PETK   Petropavlovsk-   85.81 346   P       P        11 21 00.9  +0.7
              comp=Z,5.3nm,0.7s,baz=146,slow=6.3,SNR=9.3
PETK   Petropavlovsk-   85.81 346   P       P        11 21 00.7  +0.6
NVAR   Mina Array Bea   88.24  43   P       P        11 21 13.9  +1.3
              comp=Z,1.2nm,0.7s,baz=219,slow=8.2,SNR=11
NVAR   Mina Array Bea   88.24  43   P       P        11 21 12.5  -0.1
X16A   Lo Mia Camp, P   89.95  49   P       P        11 21 20.2  -0.5
X16A                                IAmb    IAmb     11 21 24.2
              comp=Z,2.2nm,0.8s
ILAR   Eielson Array    97.92  13   P       Pdif     11 21 55.9  -0.5
              comp=Z,0.3nm,0.7s,baz=223,slow=5.2,SNR=5.1
ILAR   Eielson Array    97.92  13   P       Pdif     11 21 56.2  -0.1
MK31   Makanchi Array  117.77 310           PKiKP    11 27 07.2   0.0
MKAR   Makanchi Array  117.77 310   PKP     PKPdf    11 27 06.7  -0.4
              comp=Z,1.0nm,0.6s,baz=108,slow=0.9,SNR=18
MKAR   Makanchi Array  117.77 310           PKPdf    11 27 06.6  -0.5
MAKZ   Makanchi        117.98 310           PKiKP    11 27 07.5  -0.1
ZALV   Zalesovo Beam   118.03 318   PKP     PKPdf    11 27 06.6  -0.7
              comp=Z,0.6nm,0.3s,baz=234,slow=1.7,SNR=4.2
NRIK   Noril'sk        119.63 336   PKP     PKiKP    11 27 10.4  +0.4
              comp=Z,1.6nm,0.6s,baz=97,slow=2.6,SNR=4.0
KURK   Kurchatov       121.04 314   PKPdf   PKiKP    11 27 13.5  +0.2
KK31   Karatay Array   125.07 304           PKPdf    11 27 20.8  -0.4
KKAR   Karatay Array   125.07 304           PKPdf    11 27 20.9  -0.3
KKAR   Karatay Array   125.07 304           PKPdf    11 27 20.7  -0.5
BVAR   Borovoye Array  126.40 316   PKP     PKiKP    11 27 23.7  -0.2
              comp=Z,3.2nm,0.5s,baz=118,slow=2.2,SNR=14
ARU    Arti            133.08 321   PKP     PKiKP    11 27 36.9  -0.3
              comp=Z,1.9nm,0.2s,baz=236,slow=5.6,SNR=5.8
GEYT   Alibeck         133.55 295   PKP     PKiKP    11 27 39.4  +0.5
              comp=Z,2.3nm,0.5s,baz=243,slow=6.5,SNR=3.9
AKTO   Aktyubinsk      134.09 312   PKP     PKiKP    11 27 38.5  -0.9
              comp=Z,1.8nm,0.8s,baz=138,slow=1.5,SNR=5.3
H10S2  ASCENSION HYDR137.73 155     T       T        14 02 13.3
              baz=204,slow=74,SNR=28
H10S3  ASCENSION HYDR137.73 155     T       T        14 02 15.7
              baz=16,slow=74,SNR=60
ARCES  ARCESS Array B  138.58 348   PKhKP   PKPpre   11 27 41.3
              comp=Z,3.6nm,0.8s,baz=72,slow=1.8,SNR=6.6
ARCES                               PKP     PKiKP    11 27 46.8  -1.3
              comp=Z,2.9nm,0.7s,baz=27,slow=2.5,SNR=9.0
H10N3  ASCENSION HYDR138.82 155     T       T        14 04 24.2
              baz=203,slow=76,SNR=51
H10N1  ASCENSION HYDR138.82 155     T       T        14 04 24.5
              baz=203,slow=76,SNR=73
H10N2  ASCENSION HYDR138.83 155     T       T        14 04 25.5
              baz=203,slow=76,SNR=43
KBZ    Khabaz          145.10 304   PKPbc   PKPdf    11 27 58.8  +0.5
              comp=Z,2.7nm,0.7s,baz=44,slow=1.5,SNR=4.4
FIA1   FINESS Array S  145.14 340           PKPdf    11 27 57.5  -0.2
FINES  FINESS Array B  145.14 340   PKPbc   PKPdf    11 27 57.2  -0.6
              comp=Z,19nm,0.5s,baz=56,slow=3.6,SNR=87
FINES  FINESS Array B  145.14 340           PKPdf    11 27 57.4  -0.4
NC303  NORSAR Array S  148.54 351           PKiKP    11 28 07.6  -1.1
NB2    NORSAR Subarra  148.74 351   PKP     PKiKP    11 28 08.1  -1.1
              comp=Z,3.1nm,0.6s,baz=12,slow=2.6
NOA    NORSAR Array B  148.74 351   PKPbc   PKPbc    11 28 07.8   0.0
              comp=Z,3.6nm,0.6s,baz=13,slow=4.1,SNR=17
HFS    Hagfors         149.24 349   PKPbc   PKPbc    11 28 08.9  -0.1
              comp=Z,7.5nm,0.6s,baz=31,slow=4.0,SNR=17
ASF    Jabal al Asfar  150.19 283   PKPbc   PKPbc    11 28 11.9  -0.5
              comp=Z,1.2nm,0.4s,baz=9.9,slow=7.5,SNR=2.3
AKASG  Malin Array Be  151.29 323   PKPbc   PKiKP    11 28 14.2  -0.4
              comp=Z,10.0nm,0.7s,baz=47,slow=2.8,SNR=19
AKASG  Malin Array Be  151.29 323           PKiKP    11 28 14.8  +0.1
AKBB   Malin Array Si  151.29 323           PKiKP    11 28 14.8  +0.1
EIL    Elat            151.51 277   PKPbc   PKiKP    11 28 18.4  +2.5
              comp=Z,9.0nm,0.8s,baz=16,slow=3.2,SNR=6.1
MMAI   Mount Meron Ar  151.52 284   PKPbc   PKiKP    11 28 16.4  +0.5
              comp=Z,12nm,0.8s,baz=45,slow=1.3,SNR=9.6
BR131  Keskin Array S  152.59 298           PKiKP    11 28 18.1  +0.1
BRTR   Keskin Array B  152.59 298   PKPbc   PKiKP    11 28 17.8  -0.2
              comp=Z,2.3nm,0.6s,baz=134,slow=5.3,SNR=8.3
BRTR   Keskin Array B  152.59 298           PKiKP    11 28 18.0  +0.1
DAVOX  Davos/Dischmat  162.53 342   PKPab   PKPab    11 29 11.9  +1.0
              comp=Z,3.4nm,0.8s,baz=65,slow=7.5,SNR=4.7
TOA0   Torodi Ar. Sit  162.84 179           PKPab    11 29 14.1  +1.4
TORD   Torodi Ar. Bea  162.84 179   PKP     PKPdf    11 28 24.1  +0.2
              comp=Z,1.0nm,1.0s,baz=205,slow=6.4,SNR=4.2
TORD                                PKPab   PKPab    11 29 13.7  +0.9
              comp=Z,3.0nm,0.7s,baz=173,slow=3.4,SNR=12
TORD   Torodi Ar. Bea  162.84 179   PKPab   PKPab    11 29 13.6  +0.8
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*IDC **18** 11:12:37.0±2.9, 19°.90S×70°.90W, h0km, mb3.6/1, mb1 3.4/4, mb1mx3.3/26, mbtmp3.4/4, ML2.9/3, Error ellipse: s-maj=59.0km s-min=20.3km az=72.0*

*GUC **18** 11:12:40.1±0.5, 19°.85S×70°.89W, h34km±1km, ML3.4*

ISC 18 11:12:38.5±3.6, **19°.86S**±0°.03×**70°.87W**±0°.09, **h14**km±22km, **n17,** σ**0s.79**/30, **3C-3D, Near coast of northern Chile**

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Code   Station Name      Δ°   AZ°    Phase ID          Time      Res
                                    Op      ISC      h  m  s     ISC
PSGC   Pisagua           0.75  70⇓iP      Pb       11 12 52.9  -0.5
PSGC                              i S     Sb       11 13 03.4  -0.2
TA01   Diego Aracena     0.96 138⇓iP      Pb       11 12 56.7  -0.3
TA01                              i S     Sb       11 13 09.6  +0.1
TA01                                IAML           11 13 11.5
              comp=N,2µm,0.3s
PB11   IPOC Station P    1.14  86⇓iP      Pn       11 12 59.6  -0.7
PB11                              i S     Sb       11 13 15.4  +0.3
PB11                                IAML           11 13 20.6
              comp=N,1µm,0.4s
PATCX  Punta Patache     1.17 145 i P     Pn       11 12 59.9  -0.8
PATCX                             i S     Sb       11 13 15.3  -0.5
PB12   IPOC Station P    1.33  23⇑iP      Pn       11 13 02.2  -0.7
PB12                              i S     Sn       11 13 19.7  -0.9
PB12                                IAML           11 13 25.8
              comp=E,718nm,0.5s
AP01   Chacalluta        1.56  19 eP      Pn       11 13 05.8  -0.1
AP01                              i S     Sn       11 13 25.7  -0.2
GO01   Chusmiza          1.59  84⇑iP      Pn       11 13 07.2  +0.5
GO01                              i S     Sb       11 13 28.4  +0.2
GO01                                IAML           11 13 32.2
              comp=N,2µm,0.3s
PB08   IPOC Station P    1.64 100⇑iP      Pn       11 13 07.5  +0.2
PB08                              i S     Sn       11 13 29.0  +0.6
PB08                                IAML           11 13 36.8
              comp=N,437nm,0.7s
PB02   IPOC Station P    1.72 148 i P     Pn       11 13 07.9  -0.3
PB02                              i S     Sn       11 13 29.8  -0.3
PB02                                IAML           11 13 37.0
              comp=E,1µm,0.3s
PB01   IPOC Station P    1.75 133 eP      Pn       11 13 08.8  +0.1
PB01                              eS      Sn       11 13 31.0  +0.1
PB01                                IAML           11 13 36.0
              comp=E,493nm,0.3s
PB16   IPOC Station P    1.98  41 eP      Pn       11 13 12.5  +0.2
PB16                              i S     Sb       11 13 39.1  -0.5
PB16                                IAML           11 13 41.9
              comp=N,495nm,0.5s
PB07   IPOC Station P    2.08 154 eP      Pn       11 13 12.8  -0.4
PB07                              i S     Sn       11 13 38.6  -0.4
PB07                                IAML           11 13 53.3
              comp=E,339nm,0.5s
LVC    Limon Verde       3.29 147   Pn      Pn     11 13 31.6  +1.4
              comp=E,2.6nm,0.3s,baz=329,slow=9.8,SNR=30
LVC                                 Sn      Sn     11 14 09.7  +0.3
              comp=E,6.3nm,0.3s,baz=120,slow=20,SNR=2.4
LVC                                 Lg      Lg     11 14 21.4
              comp=E,11nm,0.3s,baz=234,slow=22,SNR=11
LPAZ   La Paz            4.40  37   Pn      Pn     11 13 48.4  +2.8
              comp=E,0.1nm,0.3s,baz=226,slow=5.6,SNR=1.6
SIV    San Ignacio      10.08  69   Pn      Pn     11 15 03.7  +0.6
              comp=E,0.3nm,0.3s,baz=242,slow=17,SNR=6.3
TORD   Torodi Ar. Bea   78.55  71   P       P      11 24 39.5  -0.8
              comp=E,0.3nm,0.6s,baz=250,slow=4.2,SNR=2.0
MKAR   Makanchi Array  145.32  33   PKPbc   PKPdf  11 32 16.9  +0.7
              comp=E,0.1nm,0.5s,baz=323,slow=3.6,SNR=1.9
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*SJA **18** 11:33:58.7±0.5, 19°.96S×70°.68W, h25km±1km, ML3.3, MW3.6*

*GUC **18** 11:34:00.1±0.7, 19°.91S×70°.76W, h27km±3km, ML3.3*

ISC 18 11:33:56.7±2.1, **19°.92S**±0°.03×**70°.84W**±0°.06, **h11**km±13km, **n31,** σ**0s.92**/48, **4C-7D, Near coast of northern Chile**

```
Code   Station Name      Δ°   AZ°    Phase ID          Time      Res
                                    Op      ISC      h  m  s     ISC
PSGC   Pisagua           0.75  65⇑iP      Pb       11 34 11.8   0.0
PSGC                              i S     Sg       11 34 21.1  +0.1
PSGC                                IAML           11 34 22.1
              comp=E,2µm,0.3s
PSGCX  Pisagua           0.75  65 i P     Pb       11 34 11.8   0.0
PSGCX                             i S     Sg       11 34 21.2  +0.2
PSGCX                               IAML           11 34 21.7
              comp=Z,2µm,0.2s
TA01   Diego Aracena     0.89 136⇓iP      Pb       11 34 14.2   0.0
TA01                              i S     Sb       11 34 25.8  -0.4
TA01                                IAML           11 34 30.2
              comp=E,1µm,0.3s
PATCX  Punta Patache     1.10 144⇓iP      Pb       11 34 17.9  -0.1
PATCX                             i S     Sb       11 34 32.2  -0.1
PATCX  Punta Patache     1.10 144 i P     Pb       11 34 17.9  -0.1
PATCX                               IAML           11 34 38.9
              comp=Z,471nm,0.5s
PB11   IPOC Station P    1.12  82⇑iP      Pb       11 34 18.2  -0.1
PB11                              i S     Sb       11 34 31.9  -1.1
PB11   IPOC Station P    1.12  82 i P     Pb       11 34 18.2  -0.1
PB11                              i S     Sb       11 34 31.8  -1.1
PB11                                IAML           11 34 32.7
              comp=Z,3µm,0.2s
PB12   IPOC Station P    1.38  20⇑iP      Pn       11 34 22.9  +0.8
PB12                              i S     Sb       11 34 41.6  +1.1
PB12                                IAML           11 34 42.9
              comp=E,776nm,0.3s
PB12   IPOC Station P    1.38  20 i P     Pn       11 34 22.9  +0.8
PB12                              i S     Sb       11 34 41.5  +1.1
PB12                                IAML           11 34 43.5
              comp=Z,394nm,0.2s
GO01   Chusmiza          1.57  81⇑iP      Pn       11 34 25.8  +0.8
GO01                              i S     Sn       11 34 45.3  -0.2
PB08   IPOC Station P    1.60  98⇓iP      Pn       11 34 25.9  +0.5
PB08                              i S     Sn       11 34 45.5  -0.6
PB08                                IAML           11 34 46.3
              comp=N,922nm,0.2s
PB08   IPOC Station P    1.60  98 i P     Pn       11 34 25.9  +0.5
PB08                              i S     Sn       11 34 46.0  -0.2
PB08                                IAML           11 34 46.4
              comp=Z,747nm,0.2s
AP01   Chacalluta        1.61  17 eP      Pn       11 34 22.8  -2.2
AP01                              eS      Sn       11 34 46.1  +0.3
PB02   IPOC Station P    1.65 148⇓iP      Pn       11 34 26.6  +0.8
PB02                              eS      Sn       11 34 47.4  +0.4
PB02                                IAML           11 34 55.1
              comp=E,843nm,0.3s
PB02   IPOC Station P    1.65 148 i P     Pn       11 34 26.6  +0.8
PB02                                IAML           11 34 57.2
              comp=Z,579nm,0.5s
PB01   IPOC Station P    1.69 132⇓iP      Pn       11 34 26.9  +0.6
PB01                              eS      Sn       11 34 47.9  -0.1
PB01                                IAML           11 34 51.2
              comp=E,544nm,0.4s
PB07   IPOC Station P    2.01 154 eP      Pn       11 34 31.7  +1.0
PB07   IPOC Station P    2.01 154 i P     Pn       11 34 32.2  +1.4
PB07                                IAML           11 35 13.4
              comp=Z,197nm,0.4s
PB16   IPOC Station P    2.02  39 eP      Pb       11 34 33.3  -0.5
PB16                              i S     Sb       11 34 58.8  -0.2
PB16                                IAML           11 35 01.3
              comp=N,252nm,0.3s
PB16   IPOC Station P    2.02  39 i P     Pb       11 34 33.4  -0.4
PB16                              i S     Sb       11 34 58.9  -0.2
PB16                                IAML           11 35 01.2
              comp=Z,188nm,0.3s
PB03   IPOC Station P    2.35 155⇓iP      Pn       11 34 36.7  +1.3
PB03   IPOC Station P    2.35 155 i P     Pn       11 34 36.8  +1.3
PB03                                IAML           11 35 18.5
              comp=Z,127nm,0.2s
PB09   IPOC Station P    2.39 142⇓iP      Pb       11 34 38.7  -1.2
PB09                              i S     Sb       11 35 08.4  -1.2
PB09                                IAML           11 35 17.0
              comp=N,238nm,0.7s
PB09   IPOC Station P    2.39 142 i P     Pb       11 34 38.7  -1.2
PB09                                IAML           11 35 19.2
              comp=Z,183nm,0.4s
PB04   IPOC Station P    2.49 165 i P     Pn       11 34 38.2  +0.9
PB05   IPOC Station P    2.98 169 i P     Pn       11 34 44.5  +0.4
PB05                                IAML           11 35 48.7
              comp=Z,48nm,0.5s
PB06   IPOC Station P    3.02 157 i P     Pn       11 34 45.5  +0.9
PB06                                IAML           11 35 36.0
              comp=Z,62nm,1.0s
LVC    Limon Verde       3.23 146 i P     Pn       11 34 50.5  +2.9
PB15   IPOC Station P    3.51 159 i P     Pn       11 34 52.4  +0.9
PB15                                IAML           11 35 53.7
              comp=Z,110nm,0.2s
PB10   IPOC Station P    3.59 176 i P     Pn       11 34 52.4  +0.1
PB14   IPOC Station P    4.70 175 i P     Pn       11 35 07.6  -0.3
PB14                                IAML           11 36 37.9
              comp=Z,12nm,1.2s
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*NEIC **18** 11:41:01.6±2.0, 17°.70S±0°.09×178°.5W±0°.1, h548km±6km, mb4.4/39, Error ellipse: s-maj=19.3km s-min=9.2km az=122.0*

*IDC **18** 11:41:01.3±1.9, 17°.69S×178°.59W, h535km±23km, mb3.3/7, mb1 3.6/9, mb1mx3.2/25, mbtmp4.3/9, Error ellipse: s-maj=42.6km s-min=14.5km az=143.0*

ISC 18 11:41:01.7±0.5, **17°.74S**±0°.10×**178°.46W**±0°.09, **h547**km, **n66,** σ**0s.98**/66, **mb4.3**/25, **Fiji Islands region**

```
Code   Station Name      Δ°   AZ°    Phase ID          Time      Res
                                    Op      ISC      h  m  s     ISC
MSVF   Nonsavu           3.32 270   P       P        11 42 21.5  +2.8
AFI    Afiamalu          7.48  60   P       P        11 42 55.1  +0.8
              6.7nm,0.3s,baz=73,slow=9.7,SNR=7.0
AFI    Afiamalu          7.48  60   P       P        11 42 54.8  +0.5
NIUE   Niue              8.21 101   P       P        11 42 59.0  -2.4
DZM    Mont Dzumac      14.83 251   P       P        11 44 07.8  -1.8
              1.4nm,0.3s,baz=128,slow=18,SNR=11
DZM    Mont Dzumac      14.83 251   P       P        11 44 08.4  -1.2
OUZ    Omahuta          18.79 201   P       P        11 44 49.4  +2.7
OUZ                                 IAmb    IAmb     11 45 01.6
              comp=Z,7.0nm,1.1s
URZ    Urewera          20.81 190   P       P        11 45 04.5  -0.5
URZ                                 IAmb    IAmb     11 45 07.2
              comp=Z,6.7nm,0.9s
THZ    Tophouse         25.06 195   P       P        11 45 44.4  +1.5
KHZ    Kahutara         25.52 194   P       P        11 45 46.9  -0.1
KHZ                                 IAmb    IAmb     11 45 51.6
              comp=Z,10nm,1.1s
LTZ    Lake Taylor      26.18 196   P       P        11 45 52.1  -0.7
FOZ    Fox Glacier      27.56 199   P       P        11 46 04.8  -0.1
ODZ    Otahua Downs     28.71 196   P       P        11 46 14.4  -0.5
WKZ    Wanaka           28.98 199   P       P        11 46 16.8  -0.4
WKZ                                 IAmb    IAmb     11 46 16.9
              comp=Z,8.2nm,1.0s
EIDS   Eidsvold         29.28 250   P       P        11 46 19.7  -0.4
EIDS                                IAmb    IAmb     11 46 20.2
              comp=Z,6.5nm,0.8s
MLZ    Mavora Lakes     29.74 199   P       P        11 46 24.8  +0.9
MLZ                                 IAmb    IAmb     11 46 25.0
              comp=Z,8.7nm,0.7s
ARMA   Armidale         29.98 240   P       P        11 46 26.7  +0.4
ARMA                                IAmb    IAmb     11 46 27.4
              comp=Z,9.2nm,0.6s
DCZ    Deep Cove        30.14 200   P       P        11 46 26.5  -0.7
WHZ    Wether Hill Ro   30.26 199   P       P        11 46 28.5  +0.1
CAN    Canberra         33.77 232   P       P        11 46 58.2  -0.1
CAN                                 IAmb    IAmb     11 47 14.7
              comp=Z,25nm,1.3s
COEN   Coen             37.05 270   P       P        11 47 25.8  -0.1
COEN                                IAmb    IAmb     11 47 25.9
              comp=Z,21nm,1.4s
TOO    Toolangi         37.24 231   P       P        11 47 27.8  +0.7
TOO                                 IAmb    IAmb     11 47 28.5
              comp=Z,13nm,0.7s
STKA   Stephens Creek   38.67 241   P       P        11 47 38.4  -0.4
              comp=Z,6.8nm,0.5s,baz=90,slow=11,SNR=32
STKA   Stephens Creek   38.67 241   P       P        11 47 39.1  +0.3
BBOO   Buckleboo        43.44 241   P       P        11 48 16.5  -0.2
OPA    Opana            44.01  28   P       P        11 48 20.5  -0.6
WB0    Warramunga Arr   44.58 260   P       P        11 48 24.3  -1.4
WB0                                 IAmb    IAmb     11 48 25.1
              comp=Z,5.8nm,0.8s
WB2    Warramunga Arr   44.60 259   P       P        11 48 24.4  -1.4
WB2                                 IAmb    IAmb     11 48 25.3
              comp=Z,6.0nm,0.6s
WRA    Warramunga Arr   44.61 259   P       P        11 48 24.8  -1.1
              comp=Z,3.7nm,0.6s,baz=98,slow=6.9,SNR=68
WRA                                 PcP     PcP      11 49 57.2  +0.2
              comp=Z,1.1nm,0.7s,baz=91,slow=3.0,SNR=4.9
WRA    Warramunga Arr   44.61 259   P       P        11 48 24.2  -1.7
AS31   Alice Springs    44.79 254   P       P        11 48 26.7  -0.5
AS31                                IAmb    IAmb     11 48 27.2
              comp=Z,12nm,0.6s
ASAR   Alice Springs    44.79 254   P       P        11 48 26.6  -0.6
              comp=Z,42nm,0.6s,baz=88,slow=8.2,SNR=754
ASAR                                PcP     PcP      11 49 57.6   0.0
              comp=Z,1.1nm,0.4s,baz=104,slow=3.8,SNR=6.3
ASAR   Alice Springs    44.79 254   P       P        11 48 26.1  -1.2
FORT   Forrest          50.03 244   P       P        11 49 05.4  -1.0
KNRA   Kununurra        50.45 264   P       P        11 49 09.1  -0.6
KNRA                                IAmb    IAmb     11 49 09.2
              comp=Z,11nm,0.8s
MORW   Morawa           60.50 246   P       P        11 50 18.8  -0.5
GIRL   Giralia          62.89 253   P       P        11 50 35.7  +0.7
JAGI   Jajag, Banyuwa   65.99 268   P       P        11 50 53.5  -1.2
MJAR   Matsushiro Arr   67.74 323   P       P        11 51 04.5  -0.6
              comp=Z,1.4nm,0.5s,baz=152,slow=5.4,SNR=4.3
MJAR   Matsushiro Arr   67.74 323   P       P        11 51 05.2  +0.2
KKM    Kota Kinabalu    68.65 284   P       P        11 51 10.8  -0.3
KKM                                 IAmb    IAmb     11 51 11.7
              comp=Z,10nm,0.8s
QSPA   South Pole Qui   72.31 180   P       P        11 51 34.1  +2.3
AKUT   Akutan           72.41   8   P       P        11 51 31.6  -0.6
PETK   Petropavlovsk-   73.50 345   P       P        11 51 39.0  +0.4
              comp=Z,3.1nm,0.8s,baz=138,slow=8.9,SNR=5.1
PETK   Petropavlovsk-   73.50 345   P       P        11 51 39.0  +0.4
OMMB   Old Mammoth Mi   78.43  44   P       P        11 52 06.8  +0.2
GHO    Glory Hole Cre   82.66  14   P       P        11 52 26.6  -1.0
GHO                                 IAmb    IAmb     11 52 29.4
              comp=Z,12nm,1.3s
PPLA   Purkeypile       82.98  12   P       P        11 52 24.5  -4.8
SCM    Sheep Creek Mo   83.08  14   P       P        11 52 29.8  +0.1
SCM                                 IAmb    IAmb     11 52 39.9
              comp=Z,25nm,1.4s
GLB    Gilahina Butte   83.62  16   P       P        11 52 32.5  +0.1
BALM   Baldy            83.67  17   P       P        11 52 33.6  +0.9
BALM                                IAmb    IAmb     11 52 51.1
              comp=Z,12nm,1.3s
RND    Reindeer         84.12  13   P       P        11 52 35.9  +1.0
RND                                 IAmb    IAmb     11 52 37.8
              comp=Z,9.4nm,1.4s
ILAR   Eielson Array    85.74  13   P       P        11 52 42.8  +0.2
              comp=Z,0.3nm,0.4s,baz=219,slow=5.3,SNR=9.6
ILAR   Eielson Array    85.74  13   P       P        11 52 43.2  +0.6
PDAR   Pinedale Array   87.27  43   P       P        11 52 50.4  -0.2
              comp=Z,0.2nm,0.6s,baz=199,slow=2.5,SNR=2.7
PDAR   Pinedale Array   87.27  43   P       P        11 52 50.1  -0.6
CMAR   Chiang Mai Arr   88.78 290   P       P        11 52 59.4  +1.4
              comp=Z,0.5nm,0.3s,baz=109,slow=2.2,SNR=7.5
CMAR   Chiang Mai Arr   88.78 290   P       P        11 52 58.7  +0.7
BUR08  Bucovina Ar. S  144.43 332   PKPbc   PKPdf    11 59 36.1  +0.1
BURAR  Bucovina Array  144.44 332           PKPab    11 59 36.4   0.0
BR131  Keskin Array S  144.63 315           PKPdf    11 59 35.9  -0.7
BRTR   Keskin Array B  144.63 315   PKP     PKPab    11 59 37.2  -0.3
              comp=Z,1.9nm,0.8s,baz=110,slow=2.9,SNR=8.8
BRTR   Keskin Array B  144.63 315           PKPbc    11 59 36.9   0.0
CLL    Collm           145.29 347  ePKPbc   PKPab    11 59 39.0  -0.4
GERES  GERESS Array B  147.44 345   PKPbc   PKPbc    11 59 44.6  +0.3
              comp=Z,1.4nm,0.5s,baz=7.1,slow=5.4,SNR=4.3
GERES  GERESS Array B  147.44 345   PKPbc   PKPbc    11 59 44.0  -0.4
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*INET **18** 12:06:42.9, 12°.49N×88°.13W, h18km, ML3.9*

SNET 18 12:06:43.6±0.8, **12°.60N×88°.25W, h29**km±5km, **ML3.4, 2C, Off coast of central America**

```
Code   Station Name      Δ°   AZ°    Phase ID          Time      Res
                                    Op      ISC      h  m  s     ISC
JUCU   Jucuar¡n          0.65   0 eP      Pb       12 06 56.7  +0.1
JUCU                              eS      Sn       12 07 07.0  +0.6
JUCU                                IAML           12 07 09.3
              comp=Z,2µm,0.2s
LCND   La Caada          0.79  26⇑eP      Pb       12 06 58.0  -0.8
LCND                              eS      Sn       12 07 09.7   0.0
LCND                                IAML           12 07 15.9
              comp=Z,736nm,0.2s
LCY    Lacayo            0.82 357 eP      Pn       12 06 59.3   0.0
RANC   El Ranchito       0.83 357 eP      Pn       12 06 59.5   0.0
BLLM   Bellamira         0.84   1 eP      Pn       12 06 59.4  -0.1
BLLM                              eS      Sn       12 07 11.8  +0.8
PACA   Pacayal           0.87 355⇑eP      Pn       12 06 60.0  -0.1
PACA                              eS      Sn       12 07 13.0  +1.2
PACA                                IAML           12 07 15.5
              comp=Z,5µm,0.2s
TECA   Tecapa            0.92 345 eP      Pn       12 07 00.9  +0.1
TECA                              eS      Sn       12 07 14.4  +1.1
COEB   Comit de Eme      0.93 343 eP      Pb       12 07 01.3  -0.1
COEB                              eS      Sb       12 07 14.3  +0.9
COEB                                IAML           12 07 16.7
              comp=Z,662nm,0.2s
FAGO   Alcalda de S      1.10   7 eP      Pn       12 07 03.0  -0.1
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*IDC **18** 12:08:51.6±0.7, 53°.59N×164°.00W, h0km, mb4.4/28, mb1 4.5/31, mb1mx4.4/63, mbtmp4.4/31, ML3.8/3, MS4.2/26, Ms1 4.2/26, ms1mx4.0/50, Error ellipse: s-maj=20.1km s-min=10.6km az=180.0*

*NEIC **18** 12:08:51.8±2.1, 53°.35N±0°.04×163°.96W±0°.06, h7km±3km, Error ellipse: s-maj=6.2km s-min=4.9km az=187.0*

*AEIC **18** 12:08:53.3±2.2, 53°.32N±0°.06×163°.95W±0°.06, h5km±4km, ML4.0/52, mb4.7/87(NEIC), Error ellipse: s-maj=8.5km s-min=5.1km az=168.0*

*MOS **18** 12:08:53.3±1.4, 53°.64N×164°.04W, h20km, mb4.9/30, Error ellipse: s-maj=9.7km s-min=5.4km az=88.9*

*GCMT **18** 12:08:56.3±0.3, 53°.29N±0°.02×163°.98W±0°.04, h16km±1km, MW4.9/90, Moment Tensor Solution. s37,c42; s90,c121; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.10±.14; $M_{\theta\theta}$-1.72±.10; $M_{\phi\phi}$-0.38±.08; $M_{r\theta}$2.49±.33; $M_{\theta\phi}$-0.92±.06; $M_{\phi r}$0.19±.23; Best double couple: $M_0$3.29200×10^{16} NP1:ϕ_s228.00000°,δ23.00000°,λ60.00000°. NP2: ϕ_s80.00000°,δ70.00000°,λ102.00000°. Principal axes: T 3.3440, Plg63.0000°, Azm8.0000°; N -0.1110, Plg11.0000°, Azm256.0000°; P -3.2410, Plg24.0000°, Azm160.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 12:08:52.5±1.6, **53°.37N**±0°.06×**163°.90W**±0°.03, **h11**km±9km, **n383,** σ**1s.58**/384, **mb4.7**/99, **MS4.2**/33, **10C-19D, Unimak Island region**

```
Code   Station Name      Δ°   AZ°    Phase ID          Time      Res
                                    Op      ISC      h  m  s     ISC
WESE   West Dahl East    1.18 340           Pn     12 09 14.7  -0.2
WESP   Westdahl Peak     1.22 337           Pn     12 09 15.5  -0.1
WECS   Westdahl Cape     1.27 336           Pb     12 09 16.6  +0.2
AKSA   Akutan Strait     1.31 306           Pn     12 09 16.3  -0.3
AKSA   Akutan Strait     1.31 306           Pn     12 09 16.1  -0.6
AKSA                                        Sb     12 09 34.5  +0.6
SSLS   Shishaldin Sou    1.35 358           Pb     12 09 18.2  +0.5
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AKUT	**Akutan**	**1.35**	**305**		**Pn**	**12 09 16.4**	**-0.7**
AKUT					**Sb**	**12 09 35.6**	**+0.7**
AHB	**Akutan Harbor**	**1.36**	**304**		**Pn**	**12 09 17.1**	**-0.2**
AKBBA	**Akutan Broad B**	**1.41**	**302**		**Pn**	**12 09 17.8**	**-0.2**
AKBBA					**Sn**	**12 09 36.5**	**0.0**
SSLW	**Shishaldin Wes**	**1.41**	**355**		**Pn**	**12 09 18.6**	**+0.5**
SSBA	**Shishaldin**	**1.41**	**355**		**Pn**	**12 09 18.1**	**0.0**
AKMO	**Akutan Morgan**	**1.45**	**301**		**Pn**	**12 09 18.3**	**-0.2**
AKMO					**Sb**	**12 09 38.0**	**+0.3**
HSB	**Akutan Spr's B**	**1.45**	**305**		**Pn**	**12 09 18.1**	**-0.4**
AKLV	**Akutan Long Va**	**1.45**	**304**		**Pn**	**12 09 18.3**	**-0.4**
AKLV					**Sn**	**12 09 37.5**	**-0.2**
AKGG	**Akutan Green G**	**1.49**	**305**		**Pn**	**12 09 18.9**	**-0.2**
AKRB	**Akutan Reef Bi**	**1.49**	**302**		**Pn**	**12 09 19.1**	**0.0**
FALS	**False Pass**	**1.52**	**11**		**Pn**	**12 09 19.9**	**+0.4**
UNV	**Unalaska Valle**	**1.62**	**288**		**Pn**	**12 09 20.2**	**-0.7**
UNV				Sn	**Sb**	**12 09 42.7**	**-0.1**
MNAT	**Makushin Natee**	**1.73**	**288**		**Pn**	**12 09 22.0**	**-0.5**
MTBL	**Makushin Table**	**1.76**	**291**		**Pn**	**12 09 22.9**	**+0.1**
MSW	**Makushin Switc**	**1.80**	**289**		**Pn**	**12 09 22.9**	**-0.5**
MSW					**Sn**	**12 09 47.0**	**+0.9**
MGOD	**Makushin Gods**	**1.82**	**285**		**Pn**	**12 09 23.5**	**-0.2**
MGOD					**Sn**	**12 09 46.7**	**0.0**
DT1	**Dutton Round H**	**1.98**	**28**		**Pn**	**12 09 26.4**	**+0.5**
DOL	**Dolgoi Island**	**2.15**	**33**		**Pn**	**12 09 28.8**	**+0.7**
HAG	**Hague Volcano**	**2.27**	**30**	P	**Pn**	**12 09 31.4**	**+1.4**
HAG	**Hague Volcano**	**2.27**	**30**		**Pn**	**12 09 31.4**	**+1.4**
PVV	**Pavlof Volcano**	**2.36**	**31**		**Pn**	**12 09 32.4**	**+1.4**
OKFG	**Magazine Ridge**	**2.40**	**273**		**Pn**	**12 09 31.6**	**0.0**
OKTU	**Okmok Mt. Tuli**	**2.48**	**272**		**Pn**	**12 09 32.5**	**-0.3**
OKSP	**Okmok Steeple**	**2.63**	**269**		**Pn**	**12 09 34.4**	**-0.5**
SDPT	**Sand Point**	**2.82**	**44**		**Pn**	**12 09 38.0**	**+0.6**
CNBA	**Chernabura Isl**	**2.93**	**59**		**Pn**	**12 09 39.3**	**+0.4**
CNBA				Sn	**Sn**	**12 10 14.5**	**+0.6**
NIKH	**Nikolski High**	**3.01**	**264**		**Pn**	**12 09 39.4**	**-0.6**
NIKH				Sn	**Sn**	**12 10 13.3**	**-2.6**
VNSS	**Veniaminof 8**	**3.85**	**40**		**Pn**	**12 09 53.1**	**+1.4**
VNFG	**Fog Glacier, M**	**3.85**	**39**		**Pn**	**12 09 53.3**	**+1.6**
VNNF	**Veniaminof 3**	**3.94**	**40**		**Pn**	**12 09 54.4**	**+1.4**
VNHG	**Veniaminof 1**	**3.96**	**42**		**Pn**	**12 09 54.6**	**+1.4**
CHGN	**Chignik**	**4.32**	**45**		Pn	12 09 52.2	-5.8
CHGN				Sn	**Sn**	**12 10 48.9**	**+0.6**
SPIA	**Saint Paul Isl**	**5.26**	**319**		**Pn**	**12 10 11.4**	**+0.5**
CHIR	**Chirikof Islan**	**5.41**	**60**	Pn	**Pn**	**12 10 12.2**	**-0.6**
ATKA	**Atka Island**	**6.35**	**264**	Pn	**Pn**	**12 10 25.7**	**-0.2**
SII	**Sitkinak Islan**	**6.44**	**56**	Pn	**Pn**	**12 10 26.8**	**-0.3**
OHAK	**Old Harbor**	**7.18**	**53**		**Pn**	**12 10 36.5**	**-0.8**
KAHC	**Katmai Hardscr**	**7.27**	**40**		**Pn**	**12 10 38.8**	**+0.3**
GSTR	**Great Sitkin T**	**7.49**	**265**	Pn	**Pn**	**12 10 44.4**	**+2.8**
GSMY	**Great Sitkin M**	**7.50**	**265**		**Pn**	**12 10 40.1**	**-1.6**
KDAK	**Kodiak Island**	**7.79**	**51**	Pn	**Pn**	**12 10 43.6**	**-1.9**
	1.8nm,0.3s,baz=182,slow=3.5,SNR=47						
KDAK				Sn	**Sn**	**12 12 07.7**	**-5.9**
	2.4nm,0.3s,baz=155,slow=23,SNR=5.7						
KDAK	**Kodiak Island**	**7.79**	**51**	P	**Pn**	**12 10 44.5**	**-1.0**
KDAK	**Kodiak Island**	**7.79**	**51**		**Pn**	**12 10 44.5**	**-1.0**
ADK	**Adak**	**7.92**	**264**	P	**Pn**	**12 10 47.6**	**+0.2**
ADK	**Adak**	**7.92**	**264**		**Pn**	**12 10 47.5**	**+0.2**
SVW2	**Sparrevohn**	**8.96**	**27**		**Pn**	**12 11 02.6**	**+1.0**
CNPM	**China Poot**	**9.33**	**44**	Pn	**Pn**	**12 11 07.0**	**+0.3**
RSO	**Redoubt South**	**9.35**	**36**		**Pn**	**12 11 09.5**	**+2.3**
BRLK	**Bradley Lake**	**9.62**	**43**	Pn	**Pn**	**12 11 10.5**	**-0.1**
SEW	**Seward**	**10.40**	**44**	Pn	**Pn**	**12 11 20.7**	**-0.6**
TTA	**Tatalina**	**10.44**	**20**	P	**Pn**	**12 11 23.7**	**+1.7**
TTA	**Tatalina**	**10.44**	**20**		**Pn**	**12 11 23.7**	**+1.7**
SUA	**Susitna One**	**10.76**	**36**		**Pn**	**12 11 25.8**	**-0.5**
SKT	**Skwentna**	**10.86**	**32**		**Pn**	**12 11 28.1**	**+0.4**
RC01	**Rabbit Creek A**	**10.88**	**39**		**Pn**	**12 11 27.6**	**-0.3**
ANM	**Nome**	**11.25**	**357**	P	**Pn**	**12 11 32.1**	**-0.9**
ANM	**Nome**	**11.25**	**357**		**Pn**	**12 11 32.1**	**-0.9**
PMR	**Palmer**	**11.42**	**38**	P	**Pn**	**12 11 33.8**	**-1.5**
PMR	**Palmer**	**11.42**	**38**		**Pn**	**12 11 33.8**	**-1.5**
KNK	**Knik Glacier**	**11.56**	**40**		**Pn**	**12 11 35.6**	**-1.7**
GHO	**Glory Hole Cre**	**11.61**	**38**		**Pn**	**12 11 36.1**	**-1.9**
HIN	**Hinchinbrook I**	**11.81**	**47**		**Pn**	**12 11 39.5**	**-1.1**
SML	**Sawmill**	**11.86**	**38**		**Pn**	**12 11 39.5**	**-1.8**
FID	**Port Fidalgo**	**11.99**	**45**	Pn	**Pn**	**12 11 41.1**	**-2.0**
EYAK	**Cordova Ski Ar**	**12.21**	**47**	Pn	**Pn**	**12 11 44.8**	**-1.2**
KTH	**Kantishna Hill**	**12.23**	**28**		**Pn**	**12 11 48.2**	**+1.8**
SCM	**Sheep Creek Mo**	**12.25**	**40**	P	**Pn**	**12 11 44.6**	**-2.1**
SCM	**Sheep Creek Mo**	**12.25**	**40**		**Pn**	**12 11 44.6**	**-2.1**
TRF	**Thorofare Moun**	**12.34**	**30**		**Pn**	**12 11 46.4**	**-1.6**
RAGM	**Ragged Mountai**	**12.61**	**49**	Pn	**Pn**	**12 11 50.1**	**-1.6**
BPAW	**Bear Paw Mtn.**	**12.64**	**27**		**Pn**	**12 11 51.7**	**-0.3**
RND	**Reindeer**	**12.75**	**32**	P	**Pn**	**12 11 52.2**	**-1.3**
RND	**Reindeer**	**12.75**	**32**		**Pn**	**12 11 52.1**	**-1.3**
MCK	**McKinley**	**12.96**	**31**	P	**Pn**	**12 11 56.8**	**+0.5**
MCK	**McKinley**	**12.96**	**31**		**Pn**	**12 11 56.8**	**+0.5**
DHY	**Denali Highway**	**13.01**	**35**		**Pn**	**12 11 54.4**	**-2.7**
MLY	**Manley**	**13.46**	**25**		**Pn**	**12 12 04.2**	**+1.1**
CRQM	**Cirque**	**13.46**	**48**		**Pn**	**12 12 02.1**	**-1.2**
GLB	**Gilahina Butte**	**13.46**	**45**		**Pn**	**12 12 01.9**	**-1.4**
VRDI	**Verde Repeater**	**13.52**	**46**		**Pn**	**12 12 02.8**	**-1.3**
NEA	**Nenana**	**13.54**	**28**		**Pn**	**12 12 04.6**	**+0.4**
TGL	**Tana Glacier**	**13.60**	**49**	Pn	**Pn**	**12 12 04.4**	**-0.7**
IMAR	**Indian Mountai**	**13.62**	**18**		**Pn**	**12 12 07.0**	**+1.6**
WRH	**Wood River Hil**	**13.75**	**30**		**Pn**	**12 12 04.5**	**-2.5**
MCARA	**McCarthy VSAT**	**13.78**	**46**		**Pn**	**12 12 06.4**	**-1.0**
BALM	**Baldy**	**13.93**	**48**		**Pn**	**12 12 08.3**	**-1.3**
CCB	**Clear Creek Bu**	**13.96**	**30**		**Pn**	**12 12 06.5**	**-3.4**
HDA	**Harding Lake**	**14.05**	**31**		**Pn**	**12 12 09.3**	**-1.9**
COLA	**College**	**14.12**	**29**	⇑*i*P	**Pn**	**12 12 12.1**	**+0.1**
COLA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BARN	**Barnard Glacie**	**14.24**	**48**		**Pn**	**12 12 13.5**	**-0.5**
MENT	**Mentasta**	**14.26**	**40**		**Pn**	**12 12 12.2**	**-2.0**
RIDG	**Independent Ri**	**14.31**	**36**		**Pn**	**12 12 12.8**	**-2.0**
IL31		**14.33**	**30**		**Pn**	**12 12 12.5**	**-2.4**
ILAR	**Eielson Array**	**14.33**	**30**	Pn	**Pn**	**12 12 11.8**	**-3.1**
	comp=Z,0.3nm,0.3s,baz=222,slow=13,SNR=20						
ILAR	**Eielson Array**	**14.33**	**30**	P	**Pn**	**12 12 11.3**	**-3.6**
ILAR	**Eielson Array**	**14.33**	**30**	Pn	**Pn**	**12 12 11.3**	**-3.6**
CTGM	**Chitina Glacie**	**14.35**	**49**		**Pn**	**12 12 14.6**	**-0.8**
PCA	**Pinnacle**	**14.56**	**53**	Pn	**Pn**	**12 12 19.6**	**+1.3**
SCRK	**Sand Creek**	**14.76**	**36**		**Pn**	**12 12 18.0**	**-3.0**
BCAR	**Beaver Creek A**	**15.08**	**41**		**Pn**	**12 12 23.3**	**-2.0**
PRP	**Porcupine Dome**	**15.26**	**30**	Pn	**Pn**	**12 12 27.9**	**+0.2**
COLD	**Coldfoot**	**15.41**	**20**	Pn	**Pn**	**12 12 29.7**	**+0.2**
HYT	**Haines Junctio**	**16.08**	**52**	Pn	**Pn**	**12 12 38.9**	**+0.6**
FYU	**Fort Yukon**	**16.09**	**28**	Pn	**Pn**	**12 12 39.2**	**+0.9**
EGAK	**Eagle**	**16.23**	**36**		**Pn**	**12 12 38.1**	**-2.0**
EGAK				IAmb	IAmb	12 12 52.3	
	comp=Z,22nm,0.7s						
DAWY	**Dawson**	**16.51**	**40**		**Pn**	**12 12 42.2**	**-1.5**
TOLK	**Toolik Lake Re**	**16.74**	**18**		**Pn**	**12 12 47.8**	**+1.2**
BMAR	**Burnt Mountain**	**16.90**	**26**		**Pn**	**12 12 44.8**	**-3.9**
BESE	**Bessie Mountai**	**16.99**	**61**	Pn	**P**	**12 12 52.1**	**+0.4**
WHY	**Whitehorse**	**17.29**	**54**	Pn	**P**	**12 12 54.6**	**-0.4**
WHY				IAmb	IAmb	12 13 08.7	
	comp=Z,41nm,1.4s						
EPYK	**Eagle Plains**	**18.64**	**35**	P	**P**	**12 13 09.9**	**0.0**
EPYK				IAmb	IAmb	12 13 15.0	
	comp=Z,23nm,0.8s						
DLBC	**Dease Lake**	**19.51**	**61**	P	**Pn**	**12 13 20.3**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=260,slow=13,SNR=9.3						
DLBC	**Dease Lake**	**19.51**	**61**	P	**Pn**	**12 13 22.1**	**+1.4**
BILL	**Bilibino**	**20.39**	**328**	*i* P	**P**	**12 13 28.3**	**-0.6**
BILL				*i*		12 13 48.0	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,3µm,16.0s						
INK	**Inuvik**	**20.71**	**32**	P	**P**	**12 13 30.7**	**-1.5**
	comp=Z,2.4nm,0.4s,baz=225,slow=14,SNR=16						
INK	**Inuvik**	**20.71**	**32**	P	**P**	**12 13 30.8**	**-1.5**
INK				IAmb	IAmb	12 13 38.2	
	comp=Z,21nm,0.7s						
BBB	**Bella Bella**	**21.55**	**79**	LR	LR	12 20 03.9	
	comp=Z,185nm,20.2s,baz=336,slow=31						
PEA0B	**Petropavlovsk-**	**22.80**	**285**	P	**P**	**12 13 54.4**	**-0.4**
PEA0B	**Petropavlovsk-**	**22.80**	**285**	P	**P**	**12 13 54.4**	**-0.4**
PEA0B				IAmb	IAmb	12 14 06.0	
	comp=Z,83nm,1.5s						
PETK	**Petropavlovsk-**	**22.80**	**285**	P	**P**	**12 13 53.6**	**-1.2**
	comp=Z,5.7nm,0.5s,baz=86,slow=14,SNR=22						
PETK				LR	LR	12 22 47.3	
	comp=Z,508nm,20.4s,baz=71,slow=37						
PETK	**Petropavlovsk-**	**22.80**	**285**	P	**P**	**12 13 51.1**	**-3.8**
PETK	**Petropavlovsk-**	**22.80**	**285**	P	**P**	**12 13 51.1**	**-3.8**
C36M	**Paulatuk**	**24.25**	**34**	P	**P**	**12 14 08.0**	**-0.9**
C36M				IAmb	IAmb	12 14 22.0	
	comp=Z,12nm,0.7s						
SEY	**Seymchan**	**24.49**	**310**	P	**P**	**12 14 09.8**	**-1.5**
	comp=Z,2.9nm,0.5s,baz=84,slow=22,SNR=15						
SEY				PcP	**PcP**	**12 17 50.0**	**+0.8**
	comp=Z,1.1nm,0.6s,baz=11,slow=5.2,SNR=4.5						
SEY	**Seymchan**	**24.49**	**310**	⇓*i*P	**P**	**12 14 10.3**	**-0.9**
SKR	**Severo-Kuril's**	**24.52**	**280**	*e*P	**P**	**12 14 05.0**	**-6.6**
SKR				*e*S	**S**	**12 18 24.4**	**-7.3**
SKR				*e*SS	**SnSn**	**12 19 25.8**	**+10**
SKR				pmax	pmax		
	comp=Z,300nm,4.9s						
SKR				pmax	pmax		
	comp=Z,200nm,5.5s						
SKR				pmax	pmax		
	comp=Z,55nm,1.4s						
SKR				MLR	MLR		
	comp=Z,200nm,18.0s						
MA2	**Magadan**	**25.37**	**302**	P	**P**	**12 14 18.6**	**-0.6**
MA2				pmax	pmax		
	comp=Z,18nm,1.4s						
MA2	**Magadan**	**25.37**	**302**	P	**P**	**12 14 18.6**	**-0.6**
MA2				IAmb	IAmb	12 14 20.4	
	comp=Z,18nm,1.4s						
YKA	**Yellowknife Ar**	**27.07**	**51**	P	**P**	**12 14 34.6**	**+0.2**
	comp=Z,5.0nm,0.7s,baz=268,slow=9.1,SNR=76						
YKA				LR	LR	12 26 26.5	
	comp=Z,902nm,18.4s,baz=0.0,slow=39						
HAWA	**Hanford**	**29.04**	**86**	P	**P**	**12 14 51.8**	**-0.5**
NEW	**Newport**	**29.56**	**81**	P	**P**	**12 14 58.4**	**+1.4**
	comp=Z,1.7nm,0.7s,baz=339,slow=8.6,SNR=3.5						
NEW				LR	LR	12 24 58.4	
	comp=Z,226nm,18.3s,baz=300,slow=33						
NEW	**Newport**	**29.56**	**81**	P	**P**	**12 14 58.9**	**+1.9**
NEW	**Newport**	**29.56**	**81**	P	**P**	**12 14 58.9**	**+1.9**
YBH	**Yreka Blue Hor**	**29.73**	**96**	LR	LR	12 24 28.3	
	comp=Z,319nm,18.5s,baz=307,slow=31						
MFID	**Camas Ranch**	**32.86**	**88**	P	**P**	**12 15 27.1**	**+1.0**
YERR	**Yerington**	**33.51**	**97**	P	**P**	**12 15 34.3**	**+2.4**
TIXI	**Tiksi**	**33.61**	**328**	P	**P**	**12 15 30.3**	**-1.9**
	comp=Z,3.7nm,0.8s,baz=99,slow=8.0,SNR=16						
TIXI				PcP	**PcP**	**12 18 11.7**	**-0.3**
	comp=Z,0.7nm,0.2s,baz=356,slow=0.5,SNR=3.7						
TIXI	**Tiksi**	**33.61**	**328**	⇓*i*P	**P**	**12 15 31.8**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TIXI	**Tiksi**	**33.61**	**328**	P	**P**	**12 15 31.2**	**-1.0**
TIXI				IAmb	IAmb	12 15 32.4	
	comp=Z,5.6nm,0.9s						
TIXI				PcP	**PcP**	**12 18 11.4**	**-0.6**
RES	**Resolute Bay**	**34.02**	**26**	P	**P**	**12 15 34.9**	**-0.9**
	comp=Z,1.8nm,0.6s,baz=262,slow=10,SNR=13						
RES	**Resolute Bay**	**34.02**	**26**	P	**P**	**12 15 35.3**	**-0.4**
RES	**Resolute Bay**	**34.02**	**26**	P	**P**	**12 15 35.3**	**-0.4**
NVAR	**Mina Array Bea**	**34.43**	**97**	P	**P**	**12 15 42.1**	**+2.2**
	comp=Z,1.4nm,0.8s,baz=296,slow=8.2,SNR=8.9						
NVAR				LR	LR	12 26 32.5	
	comp=Z,191nm,20.1s,baz=326,slow=31						
NVAR	**Mina Array Bea**	**34.43**	**97**	P	**P**	**12 15 44.1**	**+4.1**
YAK	**Yakutsk**	**35.01**	**311**	⇓*i*P	**P**	**12 15 44.5**	**+0.1**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
YHH	**Holmes Hill**	**35.06**	**82**	P	**P**	**12 15 46.5**	**+1.0**
H17A	**Grant Village**	**35.44**	**83**	P	**P**	**12 15 49.4**	**+0.7**
GRNR	**Gornyy**	**35.85**	**291**	⇑*i*P	**P**	**12 15 49.7**	**-2.1**
GRNR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GRNR				MLR	MLR		
	comp=Z,130nm,14.0s						
ERM	**Erimo**	**36.59**	**274**	⇓*i*P	**P**	**12 15 57.6**	**-0.5**
ERM				pmax	pmax		
	comp=Z,78nm,1.0s						
PDAR	**Pinedale Array**	**36.98**	**84**	P	**P**	**12 16 02.9**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=295,slow=5.8,SNR=3.6						
PDAR				LR	LR	12 29 19.8	
	comp=Z,147nm,19.0s,baz=324,slow=33						
PDAR	**Pinedale Array**	**36.98**	**84**	P	**P**	**12 16 03.3**	**+1.5**
DGMT	**Dagmar**	**36.99**	**73**	P	**P**	**12 16 02.6**	**+1.0**
DGMT				IAmb	IAmb	12 16 03.8	
	comp=Z,21nm,1.4s						
PSUT	**Pine Spring**	**37.02**	**93**	P	**P**	**12 16 03.5**	**+1.3**
FCC	**Fort Churchill**	**37.72**	**53**	P	**P**	**12 16 07.9**	**+0.4**
FCC	**Fort Churchill**	**37.72**	**53**	P	**P**	**12 16 07.9**	**+0.4**
FCC				IAmb	IAmb	12 16 22.0	
	comp=Z,8.1nm,1.1s						
MSU	**Marysvale**	**38.03**	**92**	P	**P**	**12 16 13.4**	**+2.6**
MSU	**Marysvale**	**38.03**	**92**	P	**P**	**12 16 13.4**	**+2.6**
KLR	**Kul'dur**	**39.23**	**291**	⇓*i*P	**P**	**12 16 18.7**	**-1.7**
KLR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
O20A	**White River Ci**	**39.36**	**87**	P	**P**	**12 16 22.0**	**+0.1**
PV09	**Paradox Valley**	**39.87**	**89**	P	**P**	**12 16 27.2**	**+1.0**
MDND	**Maddock**	**39.94**	**71**	P	**P**	**12 16 27.5**	**+1.1**
PV22	**Blue Mesa, Par**	**40.05**	**89**	P	**P**	**12 16 28.0**	**+0.4**
PV17	**East Wray Mesa**	**40.11**	**89**	P	**P**	**12 16 29.9**	**+1.8**
PV11	**David Mesa, Pa**	**40.15**	**89**	P	**P**	**12 16 28.4**	**0.0**
PV11				IAmb	IAmb	12 16 41.9	
	comp=Z,7.3nm,0.8s						
PV03	**Paradox Valley**	**40.20**	**89**	P	**P**	**12 16 29.9**	**+1.1**
PV03				IAmb	IAmb	12 16 42.7	
	comp=Z,12nm,1.4s						
PV13	**Radium Mtn., P**	**40.27**	**89**	P	**P**	**12 16 30.6**	**+1.0**
H11N2	**WAKE ISLAND Hy**	**40.41**	**225**	T	T	13 00 07.8	
	baz=26,slow=76,SNR=32						
H11N3	**WAKE ISLAND Hy**	**40.42**	**225**	T	T	13 00 22.5	
	baz=26,slow=76,SNR=39						
H11N1	**WAKE ISLAND Hy**	**40.43**	**225**	T	T	13 00 25.5	
	baz=26,slow=76,SNR=34						
WUAZ	**Wupatki**	**40.50**	**94**	P	**P**	**12 16 33.6**	**+2.3**
ULM	**Lac du Bonnet**	**40.73**	**66**	P	**P**	**12 16 33.3**	**+0.4**
	comp=Z,5.3nm,0.8s,baz=310,slow=9.1,SNR=13						
ULM	**Lac du Bonnet**	**40.73**	**66**	⇓*i*P	**P**	**12 16 33.5**	**+0.6**
ULM	**Lac du Bonnet**	**40.73**	**66**	P	**P**	**12 16 33.3**	**+0.4**
ULM				IAmb	IAmb	12 16 45.3	
	comp=Z,10nm,1.0s						
H11S1	**WAKE ISLAND Hy**	**41.58**	**225**	T	T	13 01 37.9	
	baz=25,slow=76,SNR=30						
H11S2	**WAKE ISLAND Hy**	**41.59**	**225**	T	T	13 01 46.6	
	baz=25,slow=76,SNR=34						
H11S3	**WAKE ISLAND Hy**	**41.60**	**225**	T	T	13 01 51.2	
	baz=25,slow=76,SNR=28						
W18A	**Petrified Fore**	**41.75**	**94**	P	**P**	**12 16 41.5**	**-0.2**
AGMN	**Agassiz Nation**	**41.79**	**68**	P	**P**	**12 16 41.6**	**-0.1**
AGMN				IAmb	IAmb	12 16 42.8	
	comp=Z,17nm,1.1s						
D32A	**Dogwood Acres,**	**41.79**	**70**	P	**P**	**12 16 42.0**	**+0.3**
D32A				IAmb	IAmb	12 16 42.6	
	comp=Z,31nm,1.5s						
USRK	**Ussuriysk Ar.**	**41.89**	**284**	LR	LR	12 33 17.0	
	comp=Z,220nm,21.8s,baz=52,slow=35						
Q24A	**Divide**	**41.95**	**86**	P	**P**	**12 16 42.4**	**-1.1**
Q24A				IAmb	IAmb	12 16 54.5	
	comp=Z,5.6nm,0.8s						
MJAR	**Matsushiro Arr**	**43.02**	**271**	LR	LR	12 35 13.6	
	comp=Z,192nm,20.5s,baz=70,slow=37						
ANMO	**Albuquerque**	**43.83**	**91**	⇓*i*P	**P**	**12 17 01.6**	**+3.1**
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BOD	**Bodaibo**	**43.91**	**310**	*e*P	**P**	**12 16 56.9**	**-1.7**
BOD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
EYMN	**Ely**	**44.41**	**66**	P	**P**	**12 17 03.1**	**+0.4**
EYMN				IAmb	IAmb	12 17 04.3	
	comp=Z,12nm,1.1s						
E38A	**The Farm, Brul**	**45.16**	**68**	P	**P**	**12 17 08.1**	**-0.7**
I37A	**Lemond, Waseca**	**45.68**	**72**	P	**P**	**12 17 13.1**	**+0.2**
CN2	**Changchun**	**45.90**	**288**	*e*P	**P**	**12 17 15.6**	**+1.0**
N35A	**Tabor**	**46.36**	**77**	P	**P**	**12 17 17.9**	**-0.5**
G40A	**Rib Lake**	**46.72**	**69**	P	**P**	**12 17 20.9**	**-0.2**
G40A				IAmb	IAmb	12 17 21.8	
	comp=Z,11nm,1.2s						
COWI	**Conover**	**46.80**	**67**	P	**P**	**12 17 21.2**	**-0.5**
COWI				IAmb	IAmb	12 17 21.7	
	comp=Z,3.4nm,0.6s						
NRIK	**Noril'sk**	**47.09**	**333**	P	**P**	**12 17 23.0**	**-0.7**
	comp=Z,8.6nm,0.6s,baz=64,slow=6.5,SNR=16						
NRIK				LR	LR	12 39 57.4	
	comp=Z,418nm,18.4s,baz=65,slow=40						
NRIK	**Noril'sk**	**47.09**	**333**	P	**P**	**12 17 23.0**	**-0.7**
I40A	**Norwalk**	**47.34**	**70**	P	**P**	**12 17 25.8**	**-0.1**
DAG	**Danmarks Havn**	**48.27**	**10**	*i* P	**P**	**12 17 32.0**	**-0.7**
	comp=Z,4.2nm,0.7s						
DAG	**Danmarks Havn**	**48.27**	**10**	*i* P	**P**	**12 17 32.0**	**-0.7**
DAG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
I42A	**Draeger Farm,**	**48.30**	**69**	P	**P**	**12 17 33.1**	**-0.2**
I42A				IAmb	IAmb	12 17 34.8	
	comp=Z,10nm,0.9s						
KSRS	**Korea Array**	**48.54**	**280**	P	**P**	**12 17 36.0**	**+0.7**
	comp=Z,11nm,0.9s,baz=51,slow=7.0,SNR=24						
KSRS				LR	LR	12 39 39.4	
	comp=Z,101nm,19.1s,baz=56,slow=38						
KSRS	**Korea Array**	**48.54**	**280**	P	**P**	**12 17 36.0**	**+0.7**
H43A	**Windswept, Lux**	**48.57**	**68**	P	**P**	**12 17 35.2**	**-0.2**
KSAR	**Wonju Array Be**	**48.57**	**280**	P	**P**	**12 17 35.9**	**+0.3**
KSAR	**Wonju Array Be**	**48.57**	**280**	P	**P**	**12 17 35.9**	**+0.3**
SUMG	**Summit**	**48.80**	**19**	*i* P	**P**	**12 17 38.8**	**+1.5**
	comp=Z,74nm,1.0s						
SUMG	**Summit**	**48.80**	**19**	*i* P	**P**	**12 17 38.8**	**+1.5**
SUMG				pmax	pmax		
	comp=Z,74nm,1.0s						
SUMG	**Summit**	**48.80**	**19**	P	**P**	**12 17 38.9**	**+1.6**
TX31	**Lajitas Ar. Si**	**49.46**	**94**	P	**P**	**12 17 43.7**	**+1.1**
TX31				IAmb	IAmb	12 17 54.9	
	comp=Z,12nm,1.4s						
TX32	**Lajitas Array**	**49.46**	**94**	P	**P**	**12 17 43.5**	**+0.8**
TX32				IAmb	IAmb	12 17 55.0	
	comp=Z,12nm,1.4s						
TXAR	**Lajitas Array**	**49.46**	**94**	P	**P**	**12 17 43.5**	**+0.9**
	comp=Z,1.7nm,0.5s,baz=302,slow=5.5,SNR=32						
TXAR				LR	LR	12 36 51.1	
	comp=Z,81nm,18.9s,baz=0.0,slow=34						
TXAR	**Lajitas Array**	**49.46**	**94**	P	**P**	**12 17 43.4**	**+0.8**
TXAR	**Lajitas Array**	**49.46**	**94**	P	**P**	**12 17 43.4**	**+0.8**
TJN	**Taejon**	**49.60**	**279**	⇓*i*P	**P**	**12 17 44.2**	**+0.8**
HDIL	**Hopedale**	**50.23**	**73**	P	**P**	**12 17 47.1**	**-1.1**
JCT	**Junction City**	**50.95**	**90**	P	**P**	**12 17 53.8**	**0.0**
JCT	**Junction City**	**50.95**	**90**	P	**P**	**12 17 53.8**	**0.0**
JCT				IAmb	IAmb	12 18 04.3	
	comp=Z,8.2nm,1.1s						
TLY	**Talaya**	**52.37**	**308**	*d* *i*P	**P**	**12 18 04.0**	**-0.1**
TLY				pmax	pmax		
	comp=Z,19nm,0.9s						
TLY	**Talaya**	**52.37**	**308**	P	**P**	**12 18 03.7**	**-0.4**
SCHQ	**Schefferville**	**52.39**	**46**	P	**P**	**12 18 04.2**	**+0.1**
	comp=Z,2.8nm,0.8s,baz=255,slow=8.6,SNR=4.5						
SCHQ				LR	LR	12 42 54.4	
	comp=Z,246nm,20.1s,baz=318,slow=39						
SCHQ	**Schefferville**	**52.39**	**46**	P	**P**	**12 18 04.6**	**+0.4**
SCHQ				IAmb	IAmb	12 18 17.4	
	comp=Z,4.7nm,0.9s						
833A	**Chaparral WMA,**	**52.76**	**92**	P	**P**	**12 18 07.1**	**-0.1**
833A				IAmb	IAmb	12 18 08.0	
	comp=Z,11nm,1.2s						
ULN	**Ulaanbaatar**	**53.23**	**303**	*d* *i*P	**P**	**12 18 10.6**	**-0.1**
ULN				pmax	pmax		
	comp=Z,18nm,0.9s						
ULN	**Ulaanbaatar**	**53.23**	**303**	P	**P**	**12 18 09.9**	**-0.8**
ULN				IAmb	IAmb	12 18 11.9	
	comp=Z,19nm,0.9s						
ZAK	**Zakamensk**	**53.40**	**307**	*e*P	**P**	**12 18 11.2**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
SONM	**Songino Array**	**53.58**	**303**	P	**P**	**12 18 13.2**	**-0.1**
	comp=Z,10nm,0.9s,baz=48,slow=7.3,SNR=41						
SONM	**Songino Array**	**53.58**	**303**	P	**P**	**12 18 12.9**	**-0.3**
SONM	**Songino Array**	**53.58**	**303**	P	**P**	**12 18 12.9**	**-0.3**
MOY	**Mondy**	**53.62**	**310**	*e*P	**P**	**12 18 13.5**	**+0.1**
MOY				pmax	pmax		
	comp=Z,16nm,1.4s						
HKT	**Hockley**	**53.71**	**87**	⇑*i*P	**P**	**12 18 17.9**	**+3.8**
HKT				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HHC	**Hu-ho-hao-te**	**55.60**	**294**	*e*P	**P**	**12 18 26.6**	**-1.4**
ARCES	**ARCESS Array B**	**57.21**	**356**	P	**P**	**12 18 37.5**	**-1.4**
	comp=Z,3.4nm,0.8s,baz=4.4,slow=7.0,SNR=10						
ARCES				LR	LR	12 43 56.1	
	comp=Z,174nm,19.3s,baz=323,slow=37						
ARCES	**ARCESS Array B**	**57.21**	**356**	P	**P**	**12 18 38.6**	**-0.3**
ARCES	**ARCESS Array B**	**57.21**	**356**	P	**P**	**12 18 38.6**	**-0.3**
NJ2	**Nanjing**	**57.64**	**281**	*e*P	**P**	**12 18 42.8**	**+0.4**
BATG	**Bathurst New B**	**57.95**	**53**	P	**P**	**12 18 44.1**	**-0.3**
BATG				IAmb	IAmb	12 18 53.3	
	comp=Z,6.6nm,1.1s						
ZAA0	**Zalesovo Array**	**58.85**	**320**	P	**P**	**12 18 50.5**	**-0.1**
ZAA0				IAmb	IAmb	12 18 51.1	
	comp=Z,5.0nm,0.7s						
ZALV	**Zalesovo Beam**	**58.85**	**320**	P	**P**	**12 18 50.5**	**-0.1**
	comp=Z,5.5nm,0.7s,baz=40,slow=7.4,SNR=19						
ZALV				LR	LR	12 46 54.1	
	comp=Z,331nm,18.9s,baz=42,slow=39						
DGZ	**Jazzator, Alta**	**61.03**	**315**	⇓*i*P	**P**	**12 19 05.8**	**0.0**
DGZ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TMCR	**Tamitsa**	**61.57**	**349**	*e*P	**P**	**12 19 08.7**	**-0.3**
XAN	**Xi'an**	**61.93**	**290**	P	**P**	**12 19 12.5**	**+0.5**
XAN				pP	pP	12 19 16.8	+2.4
XAN	**Xi'an**	**61.93**	**290**	P	**P**	**12 19 12.2**	**+0.2**
GTA	**Gaotai**	**62.91**	**300**	⇓P	**P**	**12 19 18.4**	**-0.2**
GTA				pP	pP	12 19 22.8	+1.8
GTA				sP	sP	12 19 25.3	+3.3
PRGR	**Permogore**	**62.97**	**345**	*e*P	**P**	**12 19 15.5**	**-2.9**
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
LZH	**Lanzhou**	**63.23**	**295**	*e*P	**P**	**12 19 20.6**	**-0.2**
LZH				pP	sP	12 19 26.0	+1.8
LZH				sP	pwP	12 19 29.3	+1.0
KURK	**Kurchatov**	**63.75**	**321**	⇑*e*P	**P**	**12 19 24.2**	**+0.4**
KURK				pmax	pmax		
	comp=Z,14nm,1.1s						
KURK	**Kurchatov**	**63.75**	**321**	P	**P**	**12 19 24.1**	**+0.2**
KURBB	**Kurchatov Arra**	**63.86**	**321**	P	**P**	**12 19 24.3**	**-0.2**
	baz=46,slow=7.2						
KURBB	**Kurchatov Arra**	**63.86**	**321**	P	**P**	**12 19 23.5**	**-1.0**
ENH	**Enshi**	**64.39**	**287**	P	**P**	**12 19 28.2**	**-0.2**
KLMR	**Klimovskoe**	**64.60**	**348**	*e*P	**P**	**12 19 27.6**	**-1.6**
KLMR				pmax	pmax		
	comp=Z,13nm,1.2s						
KLMR	**Klimovskoe**	**64.60**	**348**	*e*P	**P**	**12 19 27.7**	**-1.5**
KLMR				AMP		12 19 29.8	
	comp=Z,13nm,1.2s						
KLMR				LR	LR	12 45 29.0	
BRVK	**Borovoye**	**64.74**	**327**	*d* *i*P	**P**	**12 19 30.8**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,11nm,0.9s						
BRVK	**Borovoye**	**64.74**	**327**	P	**P**	**12 19 30.1**	**-0.2**
ARU	**Arti**	**65.16**	**336**	LR	LR	12 52 26.9	
	comp=Z,267nm,18.6s,baz=44,slow=40						
ARU	**Arti**	**65.16**	**336**	*d* *i*P	**P**	**12 19 32.7**	**-0.2**
ARU						12 20 06.9	
ARU						12 21 51.7	
ARU				S	**S**	**12 28 12.0**	**-3.2**
ARU				pmax	pmax		
	comp=Z,16nm,1.1s						
ARU				MLR	MLR		
	comp=Z,382nm,16.0s						
ARU	**Arti**	**65.16**	**336**	P	**P**	**12 19 32.8**	**-0.2**
TAOE	**Nuku Hiva Isla**	**65.19**	**154**	*e*LR	LR	12 38 56.6	
	comp=Z,240nm,28.6s						
FINES	**FINESS Array B**	**65.26**	**355**	P	**P**	**12 19 33.1**	**-0.3**
	comp=Z,6.3nm,0.8s,baz=17,slow=7.5,SNR=19						
FINES				LR	LR	12 50 22.8	
	comp=Z,200nm,18.3s,baz=32,slow=38						
FINES	**FINESS Array B**	**65.26**	**355**	P	**P**	**12 19 33.2**	**-0.2**
MK31	**Makanchi Array**	**65.45**	**316**	*i* P	**P**	**12 19 34.1**	**-0.9**
MK31	**Makanchi Array**	**65.45**	**316**	P	**P**	**12 19 34.1**	**-0.9**
MK31				IAmb	IAmb	12 19 35.3	
	comp=Z,5.4nm,0.9s						
MKAR	**Makanchi Array**	**65.45**	**316**	P	**P**	**12 19 34.0**	**-1.0**
	comp=Z,4.6nm,0.7s,baz=47,slow=6.1,SNR=55						
MKAR				LR	LR	12 49 35.0	
	comp=Z,316nm,18.8s,baz=28,slow=37						
MKAR	**Makanchi Array**	**65.45**	**316**	P	**P**	**12 19 34.4**	**-0.6**
WMQ	**Urumqi**	**65.45**	**311**	*e*P	**P**	**12 19 36.1**	**+1.0**
WMQ				pP	sP	12 19 40.6	+2.1
WMQ	**Urumqi**	**65.45**	**311**	P	**P**	**12 19 35.9**	**+0.8**
MAKZ	**Makanchi**	**65.57**	**316**	P	**P**	**12 19 33.7**	**-2.1**
MAKZ	**Makanchi**	**65.57**	**316**	P	**P**	**12 19 34.5**	**-1.3**
MAKZ				IAmb	IAmb	12 19 36.1	
	comp=Z,11nm,1.2s						
NC204	**NORSAR Array S**	**65.62**	**3**	P	**P**	**12 19 36.5**	**+0.6**
NC204				IAmb	IAmb	12 19 41.5	
	comp=Z,6.6nm,1.0s						
NC405	**NORSAR Array S**	**65.81**	**2**	P	**P**	**12 19 37.2**	**+0.1**
NC405				IAmb	IAmb	12 19 50.0	
	comp=Z,4.5nm,0.8s						
NB2	**NORSAR Subarra**	**65.87**	**3**	P	**P**	**12 19 37.7**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=360,slow=6.9						
NOA	**NORSAR Array B**	**65.87**	**3**	P	**P**	**12 19 37.1**	**-0.4**
	comp=Z,1.8nm,0.8s,baz=0.5,slow=6.6,SNR=5.4						

NOA				LR	LR	12 50 36.0	
	comp=Z,108nm,18.0s,baz=10.0,slow=38						
CD2	**Chengdu**	**67.16**	**291**	*e*P	**P**	**12 19 44.0**	**-2.2**
CD2				S	**S**	**12 28 38.0**	**-2.4**
VSU	**Vasula**	**68.19**	**354**	⇑*i*P	**P**	**12 19 52.9**	**+0.7**
VSU				pmax	pmax		
	comp=Z,37nm,1.2s						
GYA	**Guiyang**	**68.89**	**286**	⇓*i*P	**P**	**12 19 57.8**	**+0.5**
GYA				PP	**PP**	**12 22 31.9**	**+2.8**
GYA				S	**S**	**12 29 01.3**	**-0.1**
GYA				SKS	**SKSac**	**12 29 54.3**	**-2.5**
GYA	**Guiyang**	**68.89**	**286**	SS	SS	12 33 27.5	+1.4
PMOR	**Pomariorio Ree**	**69.47**	**163**	*e*T	T	13 35 43.3	
PMOR				*e*T	T	13 35 43.8	
OBN	**Obninsk**	**70.56**	**348**	⇑*i*P	**P**	**12 20 07.5**	**+0.6**
OBN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
AKTO	**Aktyubinsk**	**70.71**	**333**	P	**P**	**12 20 07.7**	**-0.2**
ABKAR	**Akbulak array**	**71.24**	**331**	P	**P**	**12 20 11.4**	**+0.2**
USP	**Ospenovka**	**71.49**	**319**	P	**P**	**12 20 13.6**	**+0.8**
	SNR=17						
BOOM	**Boomskoye usch**	**71.57**	**318**	P	**P**	**12 20 13.5**	**0.0**
BOOM				pmax	pmax		
	comp=Z,12nm,0.9s						
BOOM	**Boomskoye usch**	**71.57**	**318**	P	**P**	**12 20 13.5**	**0.0**
BOOM				IAmb	IAmb	12 20 15.2	
	comp=Z,12nm,0.8s						
CHMS	**Chumysh**	**71.62**	**319**	P	**P**	**12 20 14.9**	**+1.3**
	SNR=8.2						
ULHL	**Ulahol**	**71.65**	**317**	P	**P**	**12 20 15.1**	**+1.0**
	SNR=8.7						
PPT	**Papeete**	**71.72**	**166**	LR	LR	12 43 43.9	
	comp=Z,158nm,20.3s,baz=328,slow=29						
PPT2	**Papeete2**	**71.74**	**166**	*e*S	**S**	**12 29 37.2**	**+2.9**
	comp=Z,446nm,27.2s						
PPT2	**Papeete2**	**71.74**	**166**	*e*LR	LR	12 42 09.2	
	comp=Z,202nm,24.5s						
KBK	**Karagaybulak**	**71.83**	**318**	P	**P**	**12 20 16.4**	**+1.3**
	SNR=9.6						
AAK	**Ala-Archa**	**72.03**	**319**	P	**P**	**12 20 16.8**	**+0.6**
	comp=Z,12nm,0.8s,baz=118,slow=2.2,SNR=35						
AAK				LR	LR	12 54 31.5	
	comp=Z,316nm,18.6s,baz=20,slow=38						
AAK	**Ala-Archa**	**72.03**	**319**	P	**P**	**12 20 17.5**	**+1.3**
	SNR=15						
AAK	**Ala-Archa**	**72.03**	**319**	⇓*i*P	**P**	**12 20 17.5**	**+1.3**
AAK				pmax	pmax		
	comp=Z,15nm,0.9s						
AAK	**Ala-Archa**	**72.03**	**319**	P	**P**	**12 20 17.1**	**+0.9**
KZA	**Kyzart**	**72.19**	**318**	P	**P**	**12 20 18.4**	**+0.8**
	SNR=6.1						
EKS2	**Erkin-Say**	**72.29**	**319**	P	**P**	**12 20 19.2**	**+1.4**
	SNR=15						
UCH	**Uchtor**	**72.36**	**318**	P	**P**	**12 20 20.4**	**+1.7**
	SNR=5.8						
AML	**Almayashu**	**72.77**	**319**	P	**P**	**12 20 22.6**	**+1.7**
	SNR=22						
KK31	**Karatay Array**	**73.16**	**322**	*i* P	**P**	**12 20 22.7**	**-0.1**
KK31	**Karatay Array**	**73.16**	**322**	P	**P**	**12 20 24.0**	**+1.2**
KK31				IAmb	IAmb	12 20 24.5	
	comp=Z,16nm,1.2s						
KKAR	**Karatay Array**	**73.16**	**322**	P	**P**	**12 20 23.9**	**+1.1**
KSH	**Kashi**	**74.05**	**316**	P	**P**	**12 20 32.3**	**+4.1**
KSH				pP	pwP	12 20 37.4	+1.7
KSH				PP	**PP**	**12 23 19.8**	**+6.9**
KSH				S	**S**	**12 30 06.8**	**+6.2**
KSH				sS	sS	12 30 15.1	+10
KSH	**Kashi**	**74.05**	**316**	ScS	**ScS**	**12 30 41.1**	**+2.8**
LSA	**Lhasa**	**74.92**	**299**	P	**P**	**12 20 35.7**	**+1.8**
LSA	**Lhasa**	**74.92**	**299**	P	**P**	**12 20 35.7**	**+1.8**
LSA				IAmb	IAmb	12 20 35.9	
	comp=Z,9.3nm,0.6s						
CLL	**Collm**	**75.66**	**2**	*e*P	**P**	**12 20 39.0**	**+1.9**
AKASG	**Malin Array Be**	**75.71**	**351**	P	**P**	**12 20 36.6**	**-0.9**
	comp=Z,4.6nm,0.6s,baz=11,slow=5.8,SNR=20						
BRG	**Berggiesshubel**	**76.11**	**1**	*e*P	**P**	**12 20 37.7**	**-2.0**
	comp=Z,2.8nm,0.9s						
BRG				*e*		12 20 53.5	
	comp=Z,7.1nm,1.1s						
BRG	**Berggiesshubel**	**76.11**	**1**	*e*P	**P**	**12 20 37.7**	**-2.0**
BRG				*e*		12 20 53.5	
BRG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BMRD	**Maredsous**	**76.26**	**7**	pP	**P**	**12 20 41.7**	**+1.1**
BMRD	**Maredsous**	**76.26**	**7**	PcP	**PcP**	**12 20 50.0**	**-2.5**
TBI	**Tubuai**	**77.42**	**166**	*e*LR	LR	12 44 38.1	
	comp=Z,167nm,29.2s						
KHC	**Kasperske Hory**	**77.85**	**2**	⇓*i*P	**P**	**12 20 51.1**	**+1.5**
KHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CRVS	**Cervenica-Dubn**	**78.00**	**356**	*e*P	**P**	**12 20 51.6**	**+1.2**
CRVS	**Cervenica-Dubn**	**78.00**	**356**	*e*P	**P**	**12 20 51.6**	**+1.2**
GERES	**GERESS Array B**	**78.14**	**2**	P	**P**	**12 20 51.5**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=358,slow=12,SNR=4.3						
VYHS	**Vyhne**	**78.48**	**358**	*e*P	**P**	**12 20 54.0**	**+0.9**
VYHS	**Vyhne**	**78.48**	**358**	*e*P	**P**	**12 20 54.0**	**+0.9**
ECH	**Echery**	**78.50**	**6**	P	**P**	**12 20 54.9**	**+1.7**
ECH				IAmb	IAmb	12 21 06.8	
	comp=Z,5.8nm,1.0s						
TAPN	**Taplejung**	**78.59**	**301**	*e*P	**P**	**12 20 55.0**	**+0.6**
PSZ	**Piszkesteto**	**79.04**	**357**	P	**P**	**12 20 57.4**	**+1.2**
PSZ				IAmb	IAmb	12 20 58.5	
	comp=Z,6.8nm,0.8s						
BUR08	**Bucovina Ar. S**	**79.06**	**354**	P	**P**	**12 20 57.3**	**+0.8**
BUR08				IAmb	IAmb	12 20 58.4	
	comp=Z,5.5nm,1.1s						
GUN	**Gumba**	**79.08**	**302**	*e*P	**P**	**12 20 57.8**	**+0.7**
	comp=Z,88nm,1.2s						
CONA	**Conrad Observa**	**79.08**	**0**	*i* P	**P**	**12 20 55.7**	**-0.8**
	comp=Z,6.1nm,0.9s						
BURAR	**Bucovina Array**	**79.09**	**354**	⇑P	**P**	**12 20 57.3**	**+0.7**
BURAR	**Bucovina Array**	**79.09**	**354**	P	**P**	**12 20 56.9**	**+0.3**
JIRN	**Jiri**	**79.12**	**302**	*e*P	**P**	**12 20 58.0**	**+0.6**
	comp=Z,80nm,0.6s						
MOA	**Molln**	**79.14**	**1**	*i* sP	**P**	**12 21 00.7**	**+3.9**
	comp=Z,0.3nm,0.3s						
ODAN	**Odare**	**79.16**	**301**	*e*P	**P**	**12 20 57.9**	**+0.5**
DZM	**Mont Dzumac**	**79.40**	**208**	*e*LR	LR	12 45 41.5	
	comp=Z,184nm,22.4s						
DZM	**Mont Dzumac**	**79.40**	**208**	*e*LR	LR	12 21 07.7	
	comp=Z,98nm,23.0s						
RAMN	**Ramite**	**79.49**	**301**	*e*P	**P**	**12 20 59.8**	**+0.5**
	comp=Z,35nm,0.8s						
CMAR	**Chiang Mai Arr**	**79.56**	**287**	P	**P**	**12 20 59.9**	**+0.4**
	comp=Z,4.3nm,0.8s,baz=20,slow=5.7,SNR=27						
CMAR				LR	LR	12 59 23.4	
	comp=Z,89nm,20.2s,baz=45,slow=38						
CMAR	**Chiang Mai Arr**	**79.56**	**287**	*ce*P	**P**	**12 20 59.9**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**79.56**	**287**	P	**P**	**12 20 58.3**	**-1.1**
MOTA	**Moosalm**	**79.57**	**3**	*i* pP	**P**	**12 21 00.3**	**+1.1**
	comp=Z,9.9nm,1.0s						
PKI	**Pulchoki**	**79.59**	**302**	*e*P	**P**	**12 21 00.3**	**+0.4**
PKIN	**Phulchoki**	**79.59**	**302**	*e*P	**P**	**12 21 00.3**	**+0.5**
	comp=Z,9.2nm,0.5s						
WATA	**Walderalm**	**79.60**	**3**	*i* P	**P**	**12 21 00.2**	**+0.8**
	comp=Z,6.1nm,0.7s						
GKN	**Gorkha**	**79.62**	**303**	*e*P	**P**	**12 21 00.5**	**+0.6**
SQTA	**Sankt Quirin**	**79.70**	**3**	*i* pP	**P**	**12 21 01.1**	**+1.2**
	comp=Z,11nm,0.8s						
DMN	**Daman**	**79.71**	**303**	*e*P	**P**	**12 21 01.2**	**+0.7**
ARSA	**Arzberg**	**79.75**	**0**	*i* pP	**P**	**12 21 01.5**	**+1.4**
	comp=Z,6.0nm,1.0s						
DANN	**Dangsing**	**79.78**	**304**	*e*P	**P**	**12 21 01.8**	**+0.9**
	comp=Z,68nm,0.7s						
FETA	**Feichten**	**79.88**	**4**	*i* pP	**P**	**12 21 02.3**	**+1.3**
	comp=Z,6.3nm,1.0s						
PBKT	**Sadao Pong**	**79.89**	**284**	P	**P**	**12 21 00.7**	**-0.5**
PBKT				IAmb	IAmb	12 21 02.6	
	comp=Z,5.1nm,1.0s						
KBA	**Koelnbreinsper**	**79.90**	**2**	*i* pP	**P**	**12 21 02.4**	**+1.3**
	comp=Z,12nm,1.0s						
NIL	**Nilore**	**80.19**	**315**	P	**P**	**12 21 03.2**	**+0.5**
NIL				pmax	pmax		
	comp=Z,31nm,1.0s						
NIL	**Nilore**	**80.19**	**315**	P	**P**	**12 21 03.1**	**+0.5**
ABTA	**Abfaltersbach**	**80.21**	**2**	*i* P	**P**	**12 21 03.3**	**+0.6**
	comp=Z,7.2nm,1.5s						
SOKA	**Soboth**	**80.32**	**1**	*i* pP	**P**	**12 21 05.0**	**+1.7**
	comp=Z,11nm,1.2s						
MYKA	**Terra Mystica**	**80.35**	**2**	*i* P	**P**	**12 21 04.3**	**+0.9**
	comp=Z,4.0nm,0.9s						
KIV	**Kislovodsk**	**80.40**	**341**	*e*P	**P**	**12 21 05.3**	**+1.6**
KIV				pmax	pmax		
	comp=Z,33nm,1.0s						
OBKA	**Obir**	**80.49**	**1**	*i* P	**P**	**12 21 05.0**	**+0.8**
	comp=Z,9.0nm,0.8s						
KBZ	**Khabaz**	**80.58**	**341**	P	**P**	**12 21 06.2**	**+1.7**
	comp=Z,7.4nm,0.9s,baz=359,slow=3.9,SNR=10.0						
KBZ				LR	LR	13 03 01.1	
	comp=Z,161nm,18.4s,baz=11,slow=40						
KBL	**Kabul**	**81.15**	**318**	P	**P**	**12 21 07.0**	**-1.1**
KBL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KBL	**Kabul**	**81.15**	**318**	P	**P**	**12 21 07.0**	**-1.1**
KBL				IAmb	IAmb	12 21 08.1	
	comp=Z,8.7nm,0.9s						
MLR	**Muntele Rosu**	**81.16**	**353**	LR	LR	13 00 38.3	
	comp=Z,247nm,18.2s,baz=312,slow=38						
VOIR		**81.27**	**354**	⇓P	**P**	**12 21 09.9**	**+1.6**
GZR	**Gura Zlata**	**81.45**	**355**	⇑P	**P**	**12 21 09.7**	**+0.5**
AKT	**Akhty**	**81.67**	**337**	*e*P	**P**	**12 21 11.8**	**+1.2**
AKT				*e*		12 21 16.6	
AKT				pmax	pmax		
	comp=Z,22nm,1.0s						
GEYT	**Alibeck**	**82.07**	**328**	P	**P**	**12 21 13.7**	**+1.1**
	comp=Z,5.3nm,0.8s,baz=333,slow=8.5,SNR=8.1						
GEYT	**Alibeck**	**82.07**	**328**	P	**P**	**12 21 13.1**	**+0.5**
GYA0B	**ALIBECK ARRAY**	**82.07**	**328**	P	**P**	**12 21 13.5**	**+0.9**
MDVR	**Moldovita**	**82.11**	**356**	⇓P	**P**	**12 21 13.2**	**+0.4**
TBLG	**Delisi**	**82.11**	**339**	P	**P**	**12 21 14.3**	**+1.5**
GNI	**Garni**	**83.62**	**338**	LR	LR	13 04 25.3	
	comp=Z,141nm,19.1s,baz=20,slow=40						
MURB	**Monte Urbino**	**83.69**	**3**	P	**P**	**12 21 22.1**	**+1.1**
HRA	**Herat**	**83.87**	**323**	P	**P**	**12 21 22.7**	**+0.5**
HRA				IAmb	IAmb	12 21 23.3	
	comp=Z,6.9nm,0.9s						
PDG	**Podgorica**	**84.54**	**358**	⇑P	**P**	**12 21 26.0**	**+0.8**
ESDC	**Sonseca Array**	**85.72**	**15**	P	**P**	**12 21 31.8**	**+0.5**
	comp=Z,1.2nm,0.6s,baz=344,slow=4.6,SNR=5.5						
ESDC	**Sonseca Array**	**85.72**	**15**	P	**P**	**12 21 31.4**	**+0.1**
BRTR	**Keskin Array B**	**86.05**	**347**	P	**P**	**12 21 33.9**	**+0.9**
	comp=Z,5.5nm,1.0s,baz=32,slow=1.3,SNR=15						
BRTR				LR	LR	13 04 06.8	
	comp=Z,93nm,18.5s,baz=342,slow=39						
BRTR	**Keskin Array B**	**86.05**	**347**	*i* P	**P**	**12 21 33.9**	**+0.9**
BRTR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BRTR	**Keskin Array B**	**86.05**	**347**	P	**P**	**12 21 32.4**	**-0.6**
ASAR	**Alice Springs**	**93.63**	**234**	P	**P**	**12 22 09.0**	**+0.4**
	comp=Z,0.6nm,0.9s,baz=29,slow=5.4,SNR=4.6						
QSPA	**South Pole Qui**	**143.14**	**180**	PKhKP	PKPpre	12 28 20.6	
	comp=Z,0.9nm,0.6s,baz=279,slow=1.9,SNR=9.9						
MATP	**Matopo**	**145.75**	**339**	PKPbc	**PKPdf**	**12 28 28.8**	**-2.2**
	comp=Z,7.4nm,0.7s,baz=2.4,slow=3.5,SNR=14						
TSUM	**Tsumeb**	**145.88**	**357**	PKPbc	**PKPdf**	**12 28 30.4**	**-0.9**
	comp=Z,2.6nm,0.6s,baz=29,slow=6.8,SNR=4.4						
TSUM	**Tsumeb**	**145.88**	**357**		**PKPbc**	**12 28 31.8**	**-0.1**
BOSA	**Boshof**	**154.36**	**341**	PKPab	**PKPab**	**12 29 06.8**	**+0.2**
	comp=Z,3.5nm,0.8s,baz=1.1,slow=7.7,SNR=5.8						

IDC 18 12:12:44.6±3.6**,21°.14S**×**176°.92W,h0**^{km}**,mb4.0**/5**,mb1 4.3**/5**,mb1mx3.9**/40**,mbtmp4.0**/5**,Error ellipse: s-maj=207.7km s-min=27.4km az=156.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**34.44**	**265**	P	P	12 19 36.0	+1.9
	3.9nm,0.8s,baz=76,slow=13,SNR=2.8						
ASAR	**Alice Springs**	**45.36**	**257**	P	P	12 21 03.2	-1.7
	1.3nm,0.9s,baz=87,slow=8.1,SNR=11						
WRA	**Warramunga Arr**	**45.51**	**262**	P	P	12 21 05.2	-1.0
	2.3nm,0.8s,baz=93,slow=8.4,SNR=10						
NVAR	**Mina Array Bea**	**80.80**	**43**	P	P	12 25 00.5	+0.1
	0.4nm,0.9s,baz=200,slow=3.7,SNR=2.7						
CMAR	**Chiang Mai Arr**	**91.28**	**289**	P	P	12 25 54.5	+1.9
	1.4nm,0.8s,baz=130,slow=2.9,SNR=8.5						
BRTR	**Keskin Array B**	**148.01**	**312**	PKPbc	PKPdf	12 32 30.6	+1.3
	0.6nm,0.7s,baz=82,slow=3.1,SNR=2.8						

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*CNRM **18** 12:16:52.1, 36°.63N×8°.07W, h53*^{km}

*INMG **18** 12:16:54.7±2.0, 36°.72N×8°.04W, h26*^{km}*±6*^{km}*, MD3.1, ML3.1, Error ellipse: s-maj=4.2km s-min=2.7km az=53.0*

*IGIL **18** 12:16:54.5, 36°.71N×8°.04W, h25*^{km}*, ML3.2*

*SFS **18** 12:16:54.0, 36°.70N×8°.00W, h27*^{km}*, ML3.2, GOLFO DE CADIZ*

*MDD **18** 12:16:54.9±0.6, 36°.75N×8°.01W, h30*^{km}*±8*^{km}*, mbLg3.4/36, Error ellipse: s-maj=5.4km s-min=2.7km az=35.0, PRXIMO*

ISC 18 12:16:53.1±1.2**,36°.75N**±0°.03×**7°.98W**±0°.03**,h35**^{km}**,n119,** σ**1**^{s}**.65**/219**,2C-20D,Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.49**	**4**	Pg	**Pn**	**12 17 05.0**	**+1.4**
PBDV				Lg	Lg	12 17 12.4	
	497nm,0.2s						
PBDV	**Barranco-do-Ve**	**0.49**	**4**	⇓*i*Pg	**Pn**	**12 17 05.0**	**+1.4**
PBDV				*e*Sg	**Sn**	**12 17 12.4**	**+1.4**
PBDV				A	A	12 17 13.9	
	497nm,0.2s						
PVAQ	**Vaqueiros**	**0.68**	**18**	Pg	**Pn**	**12 17 07.6**	**+1.4**
PVAQ				Lg	Lg	12 17 16.7	
	375nm,0.3s						
PVAQ	**Vaqueiros**	**0.68**	**18**	P	**Pn**	**12 17 07.4**	**+1.2**
	SNR=316						
PVAQ	**Vaqueiros**	**0.68**	**18**	⇓*e*Pg	**Pn**	**12 17 07.6**	**+1.4**
PVAQ				*e*Sg	**Sn**	**12 17 16.7**	**+1.1**
PVAQ				A	A	12 17 17.4	
	375nm,0.3s						
MORF	**Marmelete**	**0.77**	**316**	*e*P	**Pn**	**12 17 08.3**	**+0.8**
MORF				*e*S	**Sn**	**12 17 18.1**	**+0.1**
MORF				AML	AML	12 17 19.0	
	comp=N,509nm,0.1s						
MORF	**Marmelete**	**0.77**	**316**	P	**Pn**	**12 17 08.3**	**+0.8**
MORF				S	**Sn**	**12 17 18.1**	**+0.1**
	comp=N,509nm,0.1s						
MORF	**Marmelete**	**0.77**	**316**	⇓*i*P	**Pn**	**12 17 08.3**	**+0.8**
MORF				*e*S	**Sn**	**12 17 18.4**	**+0.5**
MORF				A	A	12 17 25.0	
	comp=N,427nm,0.2s						
PFVI	**Vila Bisbo**	**0.78**	**299**	⇓P	**Pn**	**12 17 08.3**	**+0.7**
	comp=N,82nm,0.3s,SNR=18						
PFVI				S	**Sn**	**12 17 18.2**	**+0.2**
	comp=N,538nm,0.1s,SNR=16						
PFVI	**Vila Bisbo**	**0.78**	**299**	P	**Pn**	**12 17 08.1**	**+0.5**
	SNR=104						
PFVI				S	**Sn**	**12 17 17.4**	**-0.7**
PFVI	**Vila Bisbo**	**0.78**	**299**	⇓*i*P	**Pn**	**12 17 08.3**	**+0.7**
PFVI				*e*S	**Sn**	**12 17 18.2**	**+0.2**
PFVI				A	A	12 17 21.1	
	comp=N,352nm,0.2s						
EGRO	**El Granado**	**0.87**	**27**	P	**Pn**	**12 17 10.1**	**+1.3**
	comp=N,24nm,0.2s,SNR=57						
EGRO				S	**Sn**	**12 17 21.4**	**+1.0**
	comp=N,182nm,0.1s						
PCVE	**Castro Verde**	**0.88**	**357**	P	**Pn**	**12 17 10.6**	**+1.7**
PCVE				S	**Sn**	**12 17 21.8**	**+1.3**
	comp=N,362nm,0.2s						
PCVE	**Castro Verde**	**0.88**	**357**	⇓*i*P	**Pn**	**12 17 10.6**	**+1.7**
PCVE				*e*S	**Sn**	**12 17 21.8**	**+1.3**
PCVE				A	A	12 17 22.4	
	comp=N,362nm,0.2s						
PTEO	**Sao Teotonio**	**0.99**	**323**	P	**Pn**	**12 17 11.8**	**+1.3**
PTEO				S	**Sn**	**12 17 24.2**	**+0.9**
	comp=N,82nm,0.6s						
PTEO	**Sao Teotonio**	**0.99**	**323**	⇓*i*P	**Pn**	**12 17 11.8**	**+1.3**
PTEO				*e*S	**Sn**	**12 17 24.2**	**+0.9**
PTEO				A	A	12 17 38.6	
	comp=N,165nm,0.6s						
MESJ	**Messejana**	**1.10**	**350**	*e*P	**Pn**	**12 17 13.4**	**+1.4**
MESJ				*e*S	**Sn**	**12 17 26.8**	**+0.8**
MESJ				AML	AML	12 17 28.2	
	comp=E,342nm,0.2s						
MESJ	**Messejana**	**1.10**	**350**	P	**Pn**	**12 17 13.4**	**+1.4**
MESJ				S	**Sn**	**12 17 26.8**	**+0.8**
	comp=E,342nm,0.2s						
MESJ	**Messejana**	**1.10**	**350**	⇓*e*P	**Pn**	**12 17 13.5**	**+1.4**
MESJ				*e*S	**Sn**	**12 17 27.3**	**+1.3**
MESJ				A	A	12 17 28.5	
	comp=E,247nm,0.2s						
PBEJ	**Beja**	**1.27**	**4**	P	**Pn**	**12 17 15.8**	**+1.4**
PBEJ				S	**Sn**	**12 17 30.9**	**+0.6**
	comp=E,57nm,0.2s						
PBEJ	**Beja**	**1.27**	**4**	*e*P	**Pn**	**12 17 15.8**	**+1.4**
PBEJ				S	**Sn**	**12 17 30.9**	**+0.6**
PBEJ				A	A	12 17 45.1	
	comp=E,114nm,0.2s						
PNCL	**Nicolau / Gran**	**1.43**	**342**	P	**Pn**	**12 17 17.7**	**+1.3**
PNCL				S	**Sn**	**12 17 33.9**	**-0.1**
	comp=E,120nm,0.2s						
PNCL	**Nicolau / Gran**	**1.43**	**342**	⇓*e*P	**Pn**	**12 17 17.7**	**+1.3**
PNCL				*e*S	**Sn**	**12 17 33.9**	**-0.1**
PNCL				A	A	12 17 34.2	
	comp=E,120nm,0.2s						
EMIN	**Mina Concepcio**	**1.45**	**45**	⇓P	**Pn**	**12 17 18.1**	**+1.3**
	comp=E,1.9nm,0.3s,SNR=18						
EMIN				S	**Sn**	**12 17 35.6**	**+0.9**
	comp=E,31nm,0.1s,SNR=8.8						
CNIL	**Conil**	**1.59**	**103**	P	**Pn**	**12 17 20.8**	**+2.0**
CNIL				S	**Sn**	**12 17 39.5**	**+1.4**
CNIL	**Conil**	**1.59**	**103**	*i* P	**Pn**	**12 17 20.8**	**+2.0**
CNIL				*e*S	**Sn**	**12 17 39.5**	**+1.4**
GIBL	**Gibalbin**	**1.61**	**87**	S	**Sn**	**12 17 41.0**	**+2.4**
GIBL	**Gibalbin**	**1.61**	**87**	*e*S	**Sn**	**12 17 41.0**	**+2.4**
ESPR	**Espera**	**1.71**	**85**	⇓P	**Pn**	**12 17 21.7**	**+1.4**
	comp=E,80nm,0.3s,SNR=18						
ESPR				S	**Sn**	**12 17 42.3**	**+1.4**
	comp=E,1µm,0.3s,SNR=7.4						
ALJ	**Aljibe**	**1.89**	**96**	S	**Sn**	**12 17 47.4**	**+2.1**
ALJ	**Aljibe**	**1.89**	**96**	*e*S	**Sn**	**12 17 47.4**	**+2.1**
LIJA	**Lijar**	**2.07**	**85**	P	**Pn**	**12 17 27.6**	**+2.2**
LIJA				S	**Sn**	**12 17 50.6**	**+0.6**
LIJA	**Lijar**	**2.07**	**85**	*i* P	**Pn**	**12 17 27.6**	**+2.2**
LIJA				*e*S	**Sn**	**12 17 50.6**	**+0.6**
PESTR	**Estremoz**	**2.13**	**8**	*e*Pn	**Pn**	**12 17 27.4**	**+1.2**
PESTR				*e*Sn	**Sn**	**12 17 52.6**	**+1.1**
PESTR				A	A	12 18 08.6	
	comp=E,43nm,0.6s						
EBAD	**Badajoz**	**2.14**	**21**	⇓P	**Pn**	**12 17 27.4**	**+1.1**
	comp=E,4.1nm,0.2s,SNR=18						
EBAD				S	**Sn**	**12 17 52.0**	**+0.4**
	comp=E,25nm,0.1s,SNR=6.8						
LIS	**Lisbon**	**2.17**	**335**	*e*P	**Pn**	**12 17 27.8**	**+1.1**
LIS				*e*S	**Sn**	**12 17 52.2**	**-0.1**
LIS				AML	AML	12 17 55.6	
	comp=N,198nm,0.2s						
LIS	**Lisbon**	**2.17**	**335**	P	**Pn**	**12 17 27.8**	**+1.1**
LIS				S	**Sn**	**12 17 52.2**	**-0.1**
	comp=N,198nm,0.2s						
LIS	**Lisbon**	**2.17**	**335**	*e*Sn	**Sn**	**12 17 52.7**	**+0.4**
LIS				A	A	12 17 55.6	
	comp=N,123nm,0.3s						
INMG	**Instituto de M**	**2.21**	**336**	Pn	**Pn**	**12 17 28.5**	**+1.2**
INMG	**Instituto de M**	**2.21**	**336**	*e*Pn	**Pn**	**12 17 28.5**	**+1.2**
REAL	**Reales**	**2.24**	**96**	P	**Pn**	**12 17 30.1**	**+2.3**
REAL				S	**Sn**	**12 17 54.7**	**+0.3**
REAL	**Reales**	**2.24**	**96**	*i* P	**Pn**	**12 17 30.1**	**+2.3**
REAL				*e*S	**Sn**	**12 17 54.7**	**+0.3**
ECEU	**Ceuta**	**2.27**	**111**	P	**Pn**	**12 17 29.9**	**+1.9**
	comp=N,33nm,0.2s,SNR=18						
ECEU				S	**Sn**	**12 17 55.0**	**+0.3**
	comp=N,8.0nm,0.1s						
CEU	**Ceuta**	**2.27**	**111**	P	**Pn**	**12 17 30.5**	**+2.5**
CEU	**Ceuta**	**2.27**	**111**	⇓*i*P	**Pn**	**12 17 30.5**	**+2.5**
PMTG	**Montargil**	**2.32**	**355**	Pn	**Pn**	**12 17 30.1**	**+1.3**
PMTG				Sn	**Sn**	**12 17 56.9**	**+0.8**
	comp=N,137nm,0.2s						
PMTG	**Montargil**	**2.32**	**355**	⇓*e*Pn	**Pn**	**12 17 30.1**	**+1.3**
PMTG				*e*Sn	**Sn**	**12 17 56.9**	**+0.8**
PMTG				A	A	12 17 57.9	
	comp=N,137nm,0.2s						
SMIR	**Smir Dam**	**2.35**	**116**	P	**Pn**	**12 17 30.5**	**+1.3**
SMIR				S	**Sn**	**12 17 59.2**	**+2.3**
ECAB	**El Cabril**	**2.43**	**56**	P	**Pn**	**12 17 31.8**	**+1.5**
	comp=N,13nm,0.3s,SNR=5.8						
ECAB				S	**Sn**	**12 17 57.7**	**-1.1**
	comp=N,17nm,0.1s,SNR=6.6						
HORN	**Hornachuelos**	**2.43**	**62**	P	**Pn**	**12 17 31.2**	**+1.0**
	SNR=26						
HORN				S	**Sn**	**12 17 58.8**	**+0.1**
PMAFR	**Mafra**	**2.43**	**335**	⇓P	**Pn**	**12 17 31.9**	**+1.6**
	comp=N,56nm,0.3s,SNR=18						
PMAFR				S	**Sn**	**12 17 58.5**	**-0.2**
	comp=N,221nm,0.2s						
PMAFR	**Mafra**	**2.43**	**335**	⇓*e*Pn	**Pn**	**12 17 31.9**	**+1.6**
PMAFR				*e*Sn	**Sn**	**12 17 58.4**	**-0.4**
PMAFR				A	A	12 18 00.8	
	comp=N,362nm,0.2s						
RSA	**Sarsar**	**2.56**	**136**	P	**Pn**	**12 17 32.7**	**+0.6**
EMIJ	**Mijas**	**2.58**	**93**	P	**Pn**	**12 17 33.3**	**+0.9**
	comp=N,9.4nm,0.3s,SNR=13						
EMIJ				S	**Sn**	**12 18 03.5**	**+0.9**
	comp=N,33nm,0.3s						
CHEFC	**Chefchaouen**	**2.70**	**127**	P	**Pn**	**12 17 35.5**	**+1.5**
CHEFC				S	**Sn**	**12 18 06.7**	**+1.2**
PMRV	**Marv??o**	**2.71**	**10**	Pn	**Pn**	**12 17 35.4**	**+1.3**
PMRV				Sn	**Sn**	**12 18 05.7**	**0.0**
	comp=N,53nm,0.3s						
PMRV	**Marv??o**	**2.71**	**10**	⇓*e*Pn	**Pn**	**12 17 35.4**	**+1.3**
PMRV				*e*Sn	**Sn**	**12 18 05.7**	**0.0**
PMRV				A	A	12 18 08.5	
	comp=N,53nm,0.3s						
EMAL	**Malaga-Limoner**	**2.85**	**89**	*e*P	**Pn**	**12 17 38.0**	**+2.0**
EMAL				*e*S	**Sn**	**12 18 09.9**	**+0.9**
PTOM	**Tomar**	**2.88**	**353**	Pn	**Pn**	**12 17 38.1**	**+1.6**
PTOM				Sn	**Sn**	**12 18 10.5**	**+0.6**
	comp=N,33nm,0.2s						
PTOM	**Tomar**	**2.88**	**353**	⇓*e*Pn	**Pn**	**12 17 38.1**	**+1.6**
PTOM				*e*Sn	**Sn**	**12 18 10.5**	**+0.6**
PTOM				A	A	12 18 11.3	
	comp=N,66nm,0.2s						
EADA	**Adamuz**	**3.05**	**61**	⇓P	**Pn**	**12 17 40.3**	**+1.5**
	comp=N,9.0nm,0.2s,SNR=18						
EADA				S	**Sn**	**12 18 13.3**	**-0.8**
	comp=N,38nm,0.1s,SNR=13						
PCBR	**Castelo Branco**	**3.11**	**7**	Pn	**Pn**	**12 17 41.0**	**+1.4**
PCBR				Sn	**Sn**	**12 18 16.0**	**+0.5**
	comp=N,19nm,0.4s						
PCBR	**Castelo Branco**	**3.11**	**7**	*e*Pn	**Pn**	**12 17 41.0**	**+1.4**
PCBR				*e*Sn	**Sn**	**12 18 16.0**	**+0.5**
PCBR				A	A	12 18 16.8	
	comp=N,38nm,0.4s						
PCAS	**Casmilo, Conde**	**3.32**	**353**	Pn	**Pn**	**12 17 44.0**	**+1.5**
PCAS				Sn	**Sn**	**12 18 21.0**	**+0.3**
	comp=N,28nm,0.6s						
PCAS	**Casmilo, Conde**	**3.32**	**353**	*e*Pn	**Pn**	**12 17 44.0**	**+1.5**
PCAS				*e*Sn	**Sn**	**12 18 21.0**	**+0.3**
PCAS				A	A	12 18 22.8	
	comp=N,28nm,0.6s						
PVLZ	**Peæn de**	**3.37**	**117**	P	**Pn**	**12 17 43.6**	**+0.4**
PVLZ				S	**Sn**	**12 18 20.3**	**-1.7**
PVLZ	**Peæn de**	**3.37**	**117**	*e*P	**Pn**	**12 17 43.6**	**+0.4**
PVLZ				*e*S	**Sn**	**12 18 20.3**	**-1.7**
SICH	**Sidi Chahed**	**3.42**	**140**	P	**Pn**	**12 17 43.5**	**-0.4**
SICH				S	**Sn**	**12 18 21.5**	**-1.7**
COI	**Coimbra**	**3.47**	**354**	Pn	**Pn**	**12 17 46.1**	**+1.6**
COI				Sn	**Sn**	**12 18 24.1**	**-0.2**
	comp=N,23nm,0.3s						
COI	**Coimbra**	**3.47**	**354**	*e*Pn	**Pn**	**12 17 46.1**	**+1.6**
COI				*e*Sn	**Sn**	**12 18 24.1**	**-0.2**
COI				A	A	12 18 25.6	
	comp=N,45nm,0.3s						
ZHG	**ZHG**	**3.48**	**161**	P	**Pn**	**12 17 44.4**	**-0.3**
ZHG				S	**Sn**	**12 18 22.0**	**-2.7**
ELGU	**Los Guajares,**	**3.49**	**87**	P	**Pn**	**12 17 46.5**	**+1.5**
	comp=N,3.3nm,0.2s,SNR=7.9						
ELGU				S	**Sn**	**12 18 25.9**	**+0.8**
	comp=N,54nm,0.2s,SNR=7.9						
PALE	**Palemas**	**3.62**	**114**	P	**Pn**	**12 17 46.5**	**-0.1**
PALE				S	**Sn**	**12 18 27.2**	**-0.9**
EPLA	**Plasencia**	**3.63**	**24**	P	**Pn**	**12 17 48.3**	**+1.5**
	comp=N,1.8nm,0.3s,SNR=6.5						
EPLA				S	**Sn**	**12 18 27.6**	**-0.7**
	comp=N,14nm,0.2s,SNR=12						
MTE	**Manteigas**	**3.66**	**5**	Pn	**Pn**	**12 17 48.5**	**+1.3**
MTE				Sn	**Sn**	**12 18 28.7**	**-0.4**
	comp=N,12nm,0.3s						
MTE	**Manteigas**	**3.66**	**5**	*e*Pn	**Pn**	**12 17 48.5**	**+1.3**
MTE				*e*Sn	**Sn**	**12 18 28.7**	**-0.4**
MTE				A	A	12 18 29.8	
	comp=N,24nm,0.3s						
EQUE	**Quentar**	**3.66**	**82**	P	**Pn**	**12 17 50.4**	**+3.1**
	comp=N,6.0nm,0.3s,SNR=15						
EQUE				S	**Sn**	**12 18 29.2**	**-0.1**
	comp=N,20nm,0.3s,SNR=6.3						
PVIS	**Viseu**	**3.96**	**1**	Pn	**Pn**	**12 17 52.5**	**+1.2**
PVIS				Sn	**Sn**	**12 18 36.9**	**+0.4**

	comp=N,6.7nm,0.3s						
PVIS	Viseu	3.96	1	ePn	Pn	12 17 52.5	+1.2
PVIS				eSn	Sn	12 18 36.9	+0.4
PVIS				A	A	12 18 38.8	
	comp=N,13nm,0.3s						
IFR	Ifrane	3.98	143	⇓iP	Pn	12 17 51.8	0.0
IFR				eS	Sn	12 18 35.2	-2.2
LCRM	LCR	3.98	139	P	Pn	12 17 50.5	-1.3
LCRM				S	Sn	12 18 35.9	-1.4
PAB	San Pablo	3.99	45	P	Pn	12 17 53.4	+1.5
	comp=N,1.6nm,0.3s,SNR=7.9						
PAB				S	Sn	12 18 34.8	-2.6
	comp=N,7.8nm,0.2s,SNR=7.9						
GORA	Gorafe	4.01	78	P	Pn	12 17 54.9	+2.8
	comp=N,11nm,0.4s,SNR=7.9						
GORA				S	Sn	12 18 37.7	-0.1
	comp=N,36nm,0.2s,SNR=7.9						
EQES	Quesada	4.05	74	P	Pn	12 17 53.6	+1.0
	comp=N,2.9nm,0.3s,SNR=15						
EQES				S	Sn	12 18 39.1	+0.2
	comp=N,47nm,0.2s,SNR=7.9						
EALB	Alboran	4.07	100	P	Pn	12 17 53.0	+0.2
	comp=N,3.5nm,0.3s,SNR=6.9						
EALB				S	Sn	12 18 36.8	-2.4
	comp=N,13nm,0.2s,SNR=7.9						
EBER	Berja	4.08	86	P	Pn	12 17 55.3	+2.2
	comp=N,4.7nm,0.3s,SNR=17						
EBER				S	Sn	12 18 39.0	-0.8
	comp=N,24nm,0.3s,SNR=7.9						
SRHM	Skhour des Reh	4.27	179	P	Pn	12 17 55.9	+0.3
ESDC	Sonseca Array	4.30	46	P	Pn	12 17 57.4	+1.3
	comp=N,1.0nm,0.3s,baz=230,slow=13,SNR=5.9						
ESDC				S	Sn	12 18 41.1	-3.9
	comp=N,1.7nm,0.3s,baz=232,slow=13,SNR=18						
GOG	Mont Gurugu	4.32	109	P	Pn	12 17 55.3	-1.0
GOG				S	Sn	12 18 44.0	-1.5
CZD	Col de Zad	4.43	146	P	Pn	12 17 57.9	-0.1
CZD				S	Sn	12 18 44.0	-4.5
MVO	Moncorvo	4.47	9	P	Pn	12 17 59.4	+1.1
	comp=N,2.8nm,0.3s,SNR=12						
MVO				S	Sn	12 18 46.5	-2.6
	comp=N,31nm,0.2s,SNR=7.9						
MVO	Moncorvo	4.47	9	ePn	Pn	12 17 59.4	+1.1
MVO				eSn	Sn	12 18 47.1	-2.0
MVO				A	A	12 18 50.1	
	comp=N,29nm,0.5s						
PVRL	Vila Real	4.52	2	Sn	Sn	12 18 49.8	-0.6
PVRL	Vila Real	4.52	2	eSn	Sn	12 18 49.8	-0.6
SESP	Santiago Espad	4.53	71	P	Pn	12 18 00.4	+1.1
	comp=N,1.2nm,0.2s,SNR=7.9						
SESP				S	Sn	12 18 50.4	-0.5
	comp=N,100nm,0.2s,SNR=7.9						
ENIJ	Nijar	4.63	86	P	Pn	12 18 02.2	+1.7
	comp=N,1.3nm,0.2s,SNR=7.9						
ENIJ				S	Sn	12 18 52.7	-0.4
	comp=N,12nm,0.2s,SNR=7.9						
GUD	Guadarrama	4.90	36	P	Pn	12 18 06.5	+2.1
	comp=N,1.9nm,0.4s,SNR=8.6						
GUD				S	Sn	12 18 58.9	-1.0
	comp=N,3.5nm,0.3s,SNR=7.9						
PCAB	Cabril	4.95	360	Pn	Pn	12 18 06.2	+1.3
PCAB				Sn	Sn	12 18 58.7	-2.3
	comp=N,9.7nm,0.3s						
PCAB	Cabril	4.95	360	ePn	Pn	12 18 06.2	+1.3
PCAB				eSn	Sn	12 18 58.7	-2.3
PCAB				A	A	12 19 01.6	
	comp=N,19nm,0.3s						
ELOB	Lobios	5.11	359	⇑P	Pn	12 18 08.4	+1.3
	comp=N,5.2nm,0.2s,SNR=18						
ELOB				S	Sn	12 19 03.5	-1.4
	comp=N,14nm,0.1s,SNR=7.9						
PBRG	Braganca	5.13	10	Pn	Pn	12 18 08.6	+1.1
PBRG				Sn	Sn	12 19 03.3	-2.2
	comp=N,4.8nm,0.2s						
PBRG	Braganca	5.13	10	ePn	Pn	12 18 08.6	+1.1
PBRG				eSn	Sn	12 19 03.3	-2.2
PBRG				A	A	12 19 06.2	
	comp=N,9.7nm,0.2s						
PGAV	Gavieira, Arco	5.21	358	Pn	Pn	12 18 09.9	+1.3
PGAV				Sn	Sn	12 19 04.9	-2.6
	comp=N,11nm,0.4s						
PGAV	Gavieira, Arco	5.21	358	⇑ePn	Pn	12 18 09.9	+1.3
PGAV				eSn	Sn	12 19 04.9	-2.6
PGAV				A	A	12 19 07.9	
	comp=N,11nm,0.4s						
ECAL	Calabor	5.27	10	P	Pn	12 18 10.5	+1.2
	comp=N,4.3nm,0.5s,SNR=14						
ECAL				S	Sn	12 19 07.0	-1.9
	comp=N,19nm,0.2s,SNR=7.9						
EZAM	Zamans	5.42	354	P	Pn	12 18 12.4	+1.0
	comp=N,2.5nm,0.1s,SNR=7.9						
EZAM				S	Sn	12 19 09.5	-2.9
	comp=N,8.8nm,0.3s,SNR=7.9						
ETOB	Tobarra	5.44	68	P	Pn	12 18 12.2	+0.6
	comp=N,2.1nm,0.3s,SNR=15						
ETOB				S	Sn	12 19 10.7	-2.3
	comp=N,25nm,0.2s						
EMUR	La Murta	5.48	77	P	Pn	12 18 12.9	+0.6
	comp=N,0.0nm,0.0s,SNR=7.9						
EMUR				S	Sn	12 19 10.0	-4.0
	comp=N,17nm,0.5s,SNR=4.9						
EAGO	Agolada(Pontev	6.04	359	P	Pn	12 18 21.4	+1.5
	comp=N,1.9nm,0.1s,SNR=7.9						
EAGO				S	Sn	12 19 24.4	-3.5
	comp=N,5.5nm,0.1s,SNR=7.9						
ETOR	Torete	6.15	47	P	Pn	12 18 23.0	+1.4
	comp=N,8.6nm,0.3s,SNR=5.5						
ETOR				S	Sn	12 19 27.4	-3.2
	comp=N,31nm,0.3s,SNR=7.9						
AFON	Font Roja	6.20	70	P	Pn	12 18 23.4	+1.3
	comp=N,1.2nm,0.1s,SNR=7.9						
AFON				S	Sn	12 19 28.3	-3.5
	comp=N,19nm,0.4s,SNR=7.0						
EMAZ	Mazaricos	6.24	353	P	Pn	12 18 23.8	+1.2
	comp=N,1.6nm,0.2s,SNR=7.9						
EMAZ				S	Sn	12 19 28.1	-4.5
	comp=N,7.5nm,0.1s,SNR=7.9						
EBEN2	Beniarda presa	6.46	70	P	Pn	12 18 26.4	+0.7
	comp=N,2.3nm,0.1s,SNR=7.9						
EBEN2				S	Sn	12 19 35.5	-2.7
	comp=N,20nm,0.1s,SNR=7.9						
EPON	Pontenova	6.60	5	P	Pn	12 18 28.4	+0.9
	comp=N,0.0nm,0.1s,SNR=7.9						
EPON				S	Sn	12 19 37.4	-4.1
	comp=N,0.9nm,0.2s,SNR=7.9						
EARI	Arriondas	6.88	17	P	Pn	12 18 32.2	+0.8
	comp=N,0.5nm,0.2s,SNR=4.0						
EARI				S	Sn	12 19 44.0	-4.4
	comp=N,0.6nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	6.90	56	P	Pn	12 18 34.2	+2.4
	comp=N,0.4nm,0.2s,SNR=7.9						
EMOS				S	Sn	12 19 45.2	-3.9
	comp=N,6.4nm,0.3s,SNR=7.9						
EIBI	Ibiza	7.71	70	P	Pn	12 18 45.1	+2.3
	comp=N,0.2nm,0.2s,SNR=7.9						
EIBI				S	Sn	12 20 04.7	-4.2
	comp=N,4.3nm,0.2s,SNR=8.3						
ERTA	Horta de San J	7.72	55	S	Sn	12 20 01.8	-7.4
	comp=N,3.0nm,0.2s,SNR=7.9						
ECHI	Chisagues Biel	8.63	44	S	Sn	12 20 27.3	-4.4
	comp=N,1.5nm,0.3s,SNR=7.9						

IDC 18 12:25:56.5±2.6, 5°.51S×152°.95E, h0^{km}, mb3.4/3, mb1 3.7/3, mb1mx3.4/24, mbtmp3.4/3, MS3.3/1, Ms1 3.3/1, ms1mx2.9/15, Error ellipse: s-maj=57.3km s-min=22.8km az=83.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.51	322	Pn	Pg	12 26 25.9	+0.5
	55nm,0.3s,baz=226,slow=1.3,SNR=34						
KRVT				Sn	Sn	12 26 45.6	+0.5
	55nm,0.3s,baz=155,slow=14,SNR=11						
WRA	Warramunga Arr	23.09	230	P	P	12 31 04.7	+0.6
	1.4nm,0.8s,baz=54,slow=11,SNR=5.7						
WRA				LR	LR	12 41 17.0	
	comp=Z,63nm,18.0s,baz=185,slow=40						
ASAR	Alice Springs	25.73	224	P	P	12 31 29.3	+0.3
	0.6nm,0.8s,baz=55,slow=8.7,SNR=11						
MKAR	Makanchi Array	80.95	319	P	P	12 38 12.6	-0.4
	0.1nm,0.5s,baz=101,slow=6.2,SNR=2.5						
TORD	Torodi Ar. Bea	150.66	287	PKPbc	PKPbc	12 45 50.2	-1.6
	0.3nm,0.5s,baz=52,slow=2.6,SNR=2.3						

IDC 18 12:27:37.2±1.4, 58°.87S×25°.35W, h0^{km}, mb4.0/2, mb1 4.2/3, mb1mx3.8/18, mbtmp4.1/3, ML4.3/1, Error ellipse: s-maj=50.9km s-min=42.6km az=6.0

NEIC 18 12:27:41.5±1.2, 59°.3S±0°.2×25°.1W±0°.3, h35^{km}±2^{km}, mb4.5/8, Error ellipse: s-maj=32.6km s-min=17.8km az=220.0

ISC 18 12:27:39.8±0.7, 59°.4S±0°.1×25°.2W±0°.2, h27^{km}, n25, $\sigma 1^{s}.28$/27, mb4.5/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	8.02	304	Pn	Pn	12 29 40.6	+6.2
VNA1	Neumayer--Stat	13.32	155	P	P	12 30 54.3	-1.8
VNA3	Neumayer Olymp	13.51	158	P	P	12 30 56.5	-1.7
VNA2	Neumayer--Watz	13.72	155	P	P	12 30 58.9	-1.7
	baz=322,slow=13						
SNAA	Sanae	15.28	153	P	P	12 31 20.2	+2.3
SNAA	Sanae	15.28	153	Pn	P	12 31 20.2	+2.3
	1.2nm,0.3s,baz=315,slow=14,SNR=180						
SNAA	Sanae	15.28	153	P	P	12 31 20.4	+2.4
GO09	Cerro Castillo	27.51	266	P	P	12 33 22.0	-1.5
PLCA	Paso Flores	33.73	283	P	P	12 34 18.3	-0.4
	1.5nm,0.9s,baz=158,slow=11,SNR=3.5						
PLCA	Paso Flores	33.73	283	P	P	12 34 19.4	+0.7
PLCA				IAmb	IAmb	12 34 38.0	
	comp=Z,2.1nm,0.9s						
PB01	IPOC Station P	49.54	301	P	P	12 36 28.9	+0.7
PB01				IAmb	IAmb	12 36 29.2	
	comp=Z,8.7nm,1.4s						
CASY	Casey	50.42	158	P	P	12 36 35.1	+0.9
CASY				IAmb	IAmb	12 36 45.7	
	comp=Z,8.2nm,1.1s						
DBIC	Dimbokro	67.78	22	P	P	12 38 34.0	-1.0
DBIC				IAmb	IAmb	12 38 50.1	
	comp=Z,8.5nm,1.4s						
TOA0	Torodi Ar. Sit	75.46	27	P	P	12 39 20.8	-0.3
TOA0				IAmb	IAmb	12 39 25.4	
	comp=Z,5.2nm,1.5s						
TORD	Torodi Ar. Bea	75.46	27	P	P	12 39 20.6	-0.5
	comp=Z,1.0nm,0.5s,baz=201,slow=5.7,SNR=5.4						
TORD	Torodi Ar. Bea	75.46	27	P	P	12 39 20.9	-0.2
YKA	Yellowknife Ar	139.32	315	PKP	PKPdf	12 47 03.3	+0.7
	comp=Z,0.4nm,0.6s,baz=127,slow=2.6,SNR=12						
INK	Inuvik	149.01	317	PKPbc	PKiKP	12 47 23.8	-0.9
	comp=Z,3.6nm,0.6s,baz=114,slow=2.2,SNR=27						
INK	Inuvik	149.01	317		PKiKP	12 47 23.9	-0.8
BCAR	Beaver Creek A	150.36	305		PKiKP	12 47 27.8	+0.1
SCRK	Sand Creek	151.61	306		PKiKP	12 47 31.6	+1.2
SCM	Sheep Creek Mo	152.30	300		PKPdf	12 47 25.1	+0.4
IL31		153.05	306		PKPdf	12 47 25.8	+0.2
IL31				PKPbc	pPKPdf	12 47 34.3	+0.9
IL31				PKPab	PKPab	12 47 45.5	+0.9
ILAR	Eielson Array	153.05	306	PKPbc	PKiKP	12 47 34.0	+0.9
	comp=Z,0.9nm,0.4s,baz=131,slow=4.1,SNR=9.4						
ILAR	Eielson Array	153.05	306	PKPdf	PKPdf	12 47 24.2	-1.5
ILAR					PKiKP	12 47 34.1	+0.9

IDC 18 12:48:39.2±1.7, 12°.87N×95°.65E, h0^{km}, mb3.5/5, mb1 3.7/6, mb1mx3.4/51, mbtmp3.5/6, ML4.0/1, Error ellipse: s-maj=67.1km s-min=20.4km az=62.0

NEIC 18 12:48:43.3±1.7, 12°.88N±0°.06×95°.5E±0°.1, h35^{km}±2^{km}, mb4.2/6, Error ellipse: s-maj=24.8km s-min=8.0km az=75.0

ISC 18 12:48:40.9±0.8, 12°.8N±0°.1×95°.5E±0°.1, h18^{km}, n18, $\sigma 1^{s}.09$/18, mb3.6/8, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBKT	Sadao Pong	6.50	55	Pn	Pn	12 50 14.8	-0.8
CMAR	Chiang Mai Arr	6.52	31	Pn	Pn	12 50 15.3	-0.6
	0.8nm,0.3s,baz=219,slow=15,SNR=3.5						
SIMRM	Sittwe	7.66	342	Pn	Pn	12 50 30.1	-1.6
RPSI	Rantau Prapat	10.65	161	Pn	Pn	12 51 12.2	-0.5
MK31	Makanchi Array	35.62	344	P	P	12 55 36.1	-1.5
MKAR	Makanchi Array	35.62	344	P	P	12 55 39.5	+1.9
	0.8nm,0.8s,baz=149,slow=9.7,SNR=7.1						
MKAR	Makanchi Array	35.62	344	P	P	12 55 39.3	+1.7
MAKZ	Makanchi	35.71	344	P	P	12 55 38.3	-0.1
MAKZ				IAmb	IAmb	12 55 41.0	
	comp=Z,4.1nm,1.4s						
KURBB	Kurchatov Arra	40.13	343	P	P	12 56 15.9	+0.2
	comp=Z,0.8nm,0.7s,baz=159,slow=6.9,SNR=7.1						
KURK	Kurchatov	40.19	343	P	P	12 56 16.6	+0.4
KURK				IAmb	IAmb	12 56 18.9	
	comp=Z,3.9nm,1.2s						
GEYT	Alibeck	41.55	314	P	P	12 56 28.3	+0.7
GYA0B	ALIBECK ARRAY	41.55	314	P	P	12 56 27.8	+0.2
GYA0B				IAmb	IAmb	12 56 28.3	
	comp=Z,5.0nm,0.6s						
ZALV	Zalesovo Beam	41.87	351	P	P	12 56 30.7	+0.9
	comp=Z,0.7nm,0.7s,baz=168,slow=7.6,SNR=4.2						
ZALV	Zalesovo Beam	41.87	351	P	P	12 56 31.7	+1.9
ABKAR	Akbulak array	46.61	328	P	P	12 57 08.1	+0.2
WRA	Warramunga Arr	50.26	130	P	P	12 57 36.2	-0.2
	comp=Z,0.7nm,0.9s,baz=310,slow=8.2,SNR=4.7						
ASAR	Alice Springs	52.25	134	P	P	12 57 52.0	+0.6
	comp=Z,0.2nm,0.7s,baz=314,slow=7.4,SNR=5.6						
MBAR	Mbarara	65.53	263	P	P	12 59 24.2	0.0

KRNET 18 12:49:12.6±0.1, 41°.49N×70°.82E, mb2.9

SOME 18 12:49:12.4, 41°.18N×71°.02E, h0^{km}

NNC 18 12:49:13.9±4.8, 41°.21N×71°.12E, h0^{km}, mb3.0, mpv2.8, Error ellipse: s-maj=37.4km s-min=15.0km az=10.0

ISC 18 12:49:15.1±1.3, 41°.33N±0°.04×71°.04E±0°.03, h12^{km}±11^{km}, n13, $\sigma 1^{s}.35$/22, 12C, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	Iuzhnay	1.11	318	eP	Pb	12 49 35.1	-1.2
	0.5nm,0.1s						
IUG				eS	Sn	12 49 51.7	-0.3
	9.5nm,0.2s						
IUG	Iuzhnay	1.11	318	P	Pb	12 49 35.1	-1.2
	0.5nm,0.1s						
IUG				S	Sn	12 49 51.7	-0.3
	9.5nm,0.2s						
BTK	Batken	1.28	188	⇑iP	Pg	12 49 38.8	-1.0
	baz=80						
BTK				⇑iS	Sn	12 49 58.1	+1.9
	baz=80						
ARSB	Arslanbob	1.46	90	⇑iP	Pg	12 49 42.3	-1.0
	baz=95						
ARSB				⇑iS	Sg	12 50 04.2	+1.9
	baz=95						
KK31	Karatay Array	1.81	348	⇑Pn	Pg	12 49 49.3	-0.6
	3.7nm,0.5s,baz=158,slow=13,SNR=34						
KK31				⇑Sn	Sg	12 50 15.4	+1.9
	14nm,0.6s,baz=158,slow=25,SNR=16						
BRLS	Borolday	1.92	333	eP	Pn	12 49 48.5	+0.8
	2.1nm,0.1s						
BRLS				eS	Sb	12 50 14.6	+0.5
	2.4nm,0.5s						
BRLS	Borolday	1.92	333	Pg	Pn	12 49 48.5	+0.8
	2.1nm,0.1s						
BRLS				Lg	Lg	12 50 14.6	
	2.4nm,0.5s						
MRKS	Merke	2.16	48	eP	Pg	12 49 55.5	-1.0
	1.2nm,0.1s						
MRKS				eS	Sg	12 50 26.8	+2.3
	4.7nm,0.2s						
MRKS	Merke	2.16	48	Pg	Pg	12 49 55.3	-1.1
	1.2nm,0.1s						
MRKS				Lg	Lg	12 50 26.8	
	4.7nm,0.2s						
ARLS	Aral	2.52	77	⇑iP	Pn	12 49 56.9	+0.8
	baz=81						
ARLS				⇑iS	Sb	12 50 29.2	-2.3
	baz=81						
AAK	Ala-Archa	2.89	62	Pg	Pb	12 50 05.8	-0.9
	3.4nm,1.2s						
AAK				Lg	Lg	12 50 44.7	
	3.2nm,0.8s						
FRU1	Bishkek	3.05	60	⇑iP	Pn	12 50 03.5	+0.1
	baz=64						
FRU1				⇑iS	Sn	12 50 40.4	+0.5
	baz=64						
CHMS	Chumysh	3.22	58	⇑Pg	Pb	12 50 12.1	-0.3
	1.2nm,0.6s						
CHMS				⇑Lg	Lg	12 50 57.5	
	4.0nm,0.8s						

IDC 18 13:19:01.0±1.3, 20°.02S×70°.79W, h0^{km}, mb3.9/4, mb1 4.1/6, mb1mx3.8/37, mbtmp4.0/6, ML3.5/2, MS3.0/3, Ms1 3.0/3, ms1mx2.7/28, Error ellipse: s-maj=35.9km s-min=16.1km az=71.0

NEIC 18 13:19:03.2±1.6, 20°.23S±0°.07×70°.9W±0°.1, h20^{km}±6^{km}, mb4.2/5, Error ellipse: s-maj=17.2km s-min=4.4km az=121.0

GUC 18 13:19:03.8±0.6, 20°.18S×70°.98W, h39^{km}±2^{km}, ML3.7

ISC 18 13:19:02.7±1.4, 20°.18S±0°.03×70°.95W±0°.06, h19^{km}±4^{km}, n41, $\sigma 0^{s}.90$/52, mb4.3/4, 9C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TA01	Diego Aracena	0.82	119	⇓iP	Pb	13 19 18.2	0.0
TA01				iS	Sg	13 19 29.4	-0.2
PSGC	Pisagua	0.96	54	⇓iP	Pb	13 19 20.4	-0.5
PSGC				iS	Sg	13 19 33.7	-0.5
PSGC				IAML		13 19 36.2	
	comp=N,6µm,0.4s						
PATCX	Punta Patache	0.98	131	⇓iP	Pb	13 19 21.1	-0.1
PATCX				iS	Sg	13 19 34.4	-0.4
PB11	IPOC Station P	1.28	71	⇓iP	Pn	13 19 25.5	-0.3
PB11				iS	Sn	13 19 42.8	+0.3
PB11				IAML		13 19 45.1	
	comp=N,3µm,0.5s						
PB11	IPOC Station P	1.28	71		Pn	13 19 25.4	-0.3
PB02	IPOC Station P	1.50	139	iP	Pn	13 19 29.1	+0.2
PB02				iS	Sn	13 19 47.6	-0.4
PB02				IAML		13 19 55.6	
	comp=E,2µm,0.4s						
PB01	IPOC Station P	1.62	123	⇑iP	Pn	13 19 30.9	+0.5
PB01				iS	Sb	13 19 51.1	-1.0
PB01				IAML		13 19 56.5	
	comp=N,2µm,0.7s						
PB01	IPOC Station P	1.62	123		Pn	13 19 30.8	+0.5
PB12	IPOC Station P	1.66	21	⇑iP	Pn	13 19 30.9	0.0
PB12				iS	Sn	13 19 51.1	-0.7
PB12				IAML		13 20 03.4	
	comp=E,1µm,0.4s						
PB08	IPOC Station P	1.68	89	⇑iP	Pn	13 19 32.0	+0.5
PB08				iS	Sb	13 19 54.0	-0.3
PB08				IAML		13 20 00.9	
	comp=N,844nm,0.7s						
GO01	Chusmiza	1.72	73	⇑iP	Pn	13 19 32.6	+0.4
GO01				iS	Sb	13 19 55.6	+0.1
GO01	Chusmiza	1.72	73		Pn	13 19 32.6	+0.4
PB07	IPOC Station P	1.83	148	⇑iP	Pn	13 19 33.5	+0.1
PB07				iS	Sn	13 19 57.2	+0.9
PB07				IAML		13 20 10.2	
	comp=E,789nm,0.6s						
AP01	Chacalluta	1.88	18	eP	Pn	13 19 34.8	+0.9
AP01				iS	Sn	13 19 57.2	0.0
PB03	IPOC Station P	2.17	149	⇑iP	Pn	13 19 38.2	+0.1
PB03				eS	Sn	13 20 04.3	-0.2
PB03				IAML		13 20 22.2	
	comp=E,421nm,0.7s						
PB09	IPOC Station P	2.27	136	⇑iP	Pn	13 19 40.9	+1.5
PB09				iS	Sn	13 20 07.7	+0.7
PB09				IAML		13 20 18.4	
	comp=N,890nm,0.6s						
PB04	IPOC Station P	2.27	161	⇑iP	Pn	13 19 39.3	-0.2
PB04				iS	Sn	13 20 05.0	-2.1
PB04				IAML		13 20 23.4	
	comp=E,572nm,0.6s						
PB04	IPOC Station P	2.27	161		Pn	13 19 39.1	-0.3
PB16	IPOC Station P	2.28	37	⇑iP	Pn	13 19 40.5	+0.6
PB16				iS	Sn	13 20 09.4	+1.6
PB16				IAML		13 20 17.2	
	comp=E,1µm,0.5s						
LVC	Limon Verde	3.08	142	Pn	Pn	13 19 52.5	+1.8
	comp=E,2.9nm,0.3s,baz=309,slow=10,SNR=25						
LVC				Pg	Pb	13 19 59.1	+2.0
	comp=E,21nm,0.3s,baz=341,slow=13,SNR=29						
LVC				Sn	Sn	13 20 28.0	+0.8
	comp=E,13nm,0.3s,baz=341,slow=11,SNR=4.2						
LVC				Lg	Lg	13 20 40.9	
	comp=E,29nm,0.3s,baz=5.9,slow=6.5,SNR=15						
LVC	Limon Verde	3.08	142		Pn	13 19 52.3	+1.6
PB10	IPOC Station P	3.34	174	Pn	Pn	13 19 53.5	-0.6
LPAZ	La Paz	4.70	35	Pn	Pn	13 20 18.8	+5.5
	comp=E,1.2nm,0.3s,baz=166,slow=2.7,SNR=18						
LPAZ				LR	LR	13 21 45.5	
	comp=E,56nm,19.0s,baz=286,slow=37						
GO02	Mina Guanaco	5.12	166		Pn	13 20 18.6	-0.1
SIV	San Ignacio	10.27	68	Pn	Pn	13 21 26.9	-2.3
	comp=E,0.7nm,0.3s,baz=312,slow=23,SNR=14						
SIV				LR	LR	13 26 00.7	
	comp=E,117nm,18.1s,baz=310,slow=42						
TRQA	Tornquist	19.45	158	P	P	13 23 26.8	-1.4
PLCA	Paso Flores	20.50	179	P	Pn	13 23 41.5	-0.4
	comp=E,1.8nm,0.8s,baz=328,slow=9.5,SNR=2.6						
PLCA	Paso Flores	20.50	179	P	P	13 23 40.2	+0.5
PLCA				IAmb	IAmb	13 24 37.9	
	comp=Z,17nm,1.9s						
PTGA	Pitinga	22.11	30	P	P	13 23 56.9	-0.3
	comp=Z,1.7nm,0.5s,baz=226,slow=16,SNR=4.7						
PTGA	Pitinga	22.11	30	P	P	13 23 57.4	+0.3
PTGA				IAmb	IAmb	13 24 15.0	
	comp=Z,17nm,1.6s						
BDFB	Brasilia	22.27	82	LR	LR	13 34 14.0	
	comp=Z,98nm,20.6s,baz=332,slow=41						
URIC	Uribia, Colomb	31.69	358	P	P	13 25 25.5	+0.2
TOA0	Torodi Ar. Sit	78.72	71	P	P	13 31 03.9	-0.6
TOA0				IAmb	IAmb	13 31 04.9	
	comp=Z,3.1nm,0.8s						
TORD	Torodi Ar. Bea	78.72	71	P	P	13 31 03.6	-0.9
	comp=Z,3.0nm,0.8s,baz=246,slow=5.0,SNR=12						
TORD	Torodi Ar. Bea	78.72	71	P	P	13 31 03.4	-1.1
YKA	Yellowknife Ar	89.32	341	P	P	13 31 58.5	+1.1
	comp=Z,1.3nm,1.0s,baz=137,slow=5.4,SNR=14						
H11S2	WAKE ISLAND Hy	125.81	279	T	T	15 57 32.9	
	baz=101,slow=75,SNR=5.1						
H11S1	WAKE ISLAND Hy	125.82	279	T	T	15 57 38.6	
	baz=101,slow=75,SNR=5.8						
H11S3	WAKE ISLAND Hy	125.83	279	T	T	15 57 33.1	
	baz=101,slow=75,SNR=4.7						
MKAR	Makanchi Array	145.63	33	PKPbc	PKPab	13 38 41.3	+0.8
	comp=Z,2.2nm,0.9s,baz=311,slow=2.8,SNR=12						
MKAR	Makanchi Array	145.63	33		PKPab	13 38 40.7	+0.3

ATH 18 13:29:32.0, 38°.33N×20°.40E, h15^{km}±1^{km}, ML3.2/10, Error ellipse: s-maj=1.9km s-min=0.7km az=181.0

THE 18 13:29:32.2, 38°.32N×20°.42E, h14^{km}±1^{km}, ML3.4/8, Error ellipse: s-maj=1.2km s-min=0.3km az=244.0

ISC 18 13:29:31.4±0.9, 38°.33N±0°.02×20°.39E±0°.03, h17^{km}±2^{km}, n40, $\sigma 0^{s}.89$/66, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF4	Livadi, Kephal	0.08	162	P	Pg	13 29 35.0	+0.2
KEF4				S	Sg	13 29 37.1	0.0
KEF1	Kardakata, Kep	0.08	131	P	Pg	13 29 34.8	0.0
KEF1				S	Sg	13 29 36.7	-0.3
AGT1	Agia Thekli	0.08	186	P	Pg	13 29 35.1	+0.3
AGT1				S	Sg	13 29 37.2	+0.1
	55µm,0.2s						
KEF3	Kipouria, Keph	0.13	196	P	Pg	13 29 35.8	+0.4
KEF3				S	Sb	13 29 38.7	+0.6
LXRA	Lixouri, Kepha	0.14	165	P	Pg	13 29 35.8	+0.4
LXRA				S	Sb	13 29 38.6	+0.5
CHV1	Chavriata, Kef	0.15	184	P	Pg	13 29 36.0	+0.4
CHV1				S	Sg	13 29 38.9	+0.6
	44µm,0.5s						
VSK1	VASILIKIADES	0.15	60	P	Pg	13 29 35.9	+0.2
ARGA	Argostoli. Kep	0.17	156	P	Pg	13 29 36.0	+0.1
ARGA				S	Sg	13 29 38.9	+0.2
KONA	Konidatara, Ke	0.17	56	P	Pg	13 29 36.1	+0.2
KONA				S	Sg	13 29 38.9	0.0
KONA				AML	AML	13 29 39.3	
	comp=E,42574µm,0.2s						
KONA				AML	AML	13 29 39.7	
	comp=N,43902µm,0.2s						
ARG2	Argostoli	0.17	154	P	Pg	13 29 36.0	+0.1
ARG2				S	Sg	13 29 39.0	+0.2
	comp=N,37µm,0.5s						
KEF2	Argostoli. Kep	0.18	156	P	Pg	13 29 36.2	+0.1
KEF2				S	Sg	13 29 39.2	+0.1
FSK	Fiskardo	0.18	46	P	Pg	13 29 36.3	+0.2
FSK				S	Sg	13 29 39.5	+0.2
	comp=N,10µm,0.2s						
FSK	Fiskardo	0.18	46	P	Pg	13 29 36.3	+0.2

FSK				S	Sg	13 29 39.4	+0.1
FSK				AML	AML	13 29 39.9	
	comp=N,15369µm,0.3s						
FSK				AML	AML	13 29 41.1	
	comp=E,26073µm,0.2s						
VLS	Valsamata	0.22	135	P	Pg	13 29 36.6	0.0
VLS				S	Sg	13 29 40.0	-0.1
	comp=E,28µm,0.2s						
VLS	Valsamata	0.22	135	P	Pg	13 29 36.6	0.0
VLS				S	Sg	13 29 40.0	-0.1
VLS				AML	AML	13 29 40.3	
	comp=E,71537µm,0.2s						
VLS				AML	AML	13 29 40.4	
	comp=N,28873µm,0.1s						
EVGI	Lefkada island	0.35	35	P	Pg	13 29 39.4	+0.4
EVGI				S	Sb	13 29 45.1	+0.5
EVGI	Lefkada island	0.35	35	P	Pg	13 29 39.3	+0.4
EVGI				S	Sg	13 29 44.8	+0.8
KFL	Anninata	0.38	125	P	Pg	13 29 39.4	0.0
KFL				S	Sb	13 29 45.4	+0.1
	comp=N,38µm,0.3s						
KFL	Anninata	0.38	125	P	Pg	13 29 39.4	0.0
KFL				S	Sg	13 29 45.1	+0.4
KFL				AML	AML	13 29 45.5	
	comp=N,32982µm,0.4s						
KFL				AML	AML	13 29 45.6	
MGNA	Meganis	0.45	44	P	Pg	13 29 40.7	+0.1
MGNA				AML	AML	13 29 49.6	
	comp=N,3419µm,0.1s						
MGNA				AML	AML	13 29 51.1	
	comp=E,3104µm,0.4s						
LKD2	Lefkada island	0.50	24	P	Pg	13 29 41.6	0.0
LKD2				S	Sb	13 29 49.3	+0.4
	comp=E,2µm,0.3s						
LKD2	Lefkada island	0.50	24	P	Pg	13 29 41.6	0.0
LKD2				AML	AML	13 29 50.8	
	comp=E,3233µm,0.2s						
LKD2				AML	AML	13 29 50.9	
	comp=N,3528µm,0.3s						
TSLK	Tsoukalades, L	0.53	22	P	Pg	13 29 42.4	+0.3
TSLK				S	Sb	13 29 50.8	+1.0
	comp=N,2µm,0.3s						
TSLK	Tsoukalades, L	0.53	22	P	Pg	13 29 42.5	+0.4
TSLK				S	Sb	13 29 50.4	+0.7
AST1	Astakos	0.58	69	P	Pg	13 29 43.3	+0.2
PDO	Prodromos	0.68	66	P	Pg	13 29 45.2	+0.5
PDO				AML	AML	13 30 00.0	
	comp=E,3138µm,0.3s						
PDO				AML	AML	13 30 00.4	
	comp=N,5210µm,0.3s						
RLS	Riolos of Patr	0.89	108	P	Pb	13 29 48.6	+0.3
PVO	Paravola	0.93	72	P	Pg	13 29 50.0	+0.4
PVO				AML	AML	13 30 08.2	
	comp=E,3173µm,0.3s						
PVO				AML	AML	13 30 08.5	
	comp=N,3213µm,0.4s						
DRO	Drossia	1.10	110	P	Pn	13 29 52.9	+0.8
JAN	Janina	1.37	15	P	Pg	13 29 59.3	+1.4
JAN				AML	AML	13 30 21.1	
	comp=E,1062µm,0.4s						
JAN				AML	AML	13 30 21.3	
	comp=N,829µm,0.3s						
KEK	Kerkira	1.46	342	P	Pn	13 29 58.5	+1.5
KEK				AML	AML	13 30 26.7	
	comp=E,707µm,0.5s						
KEK				AML	AML	13 30 30.4	
	comp=N,850µm,0.6s						
KASA	Kassiopi	1.46	346	P	Pg	13 30 00.4	+0.9
DBRK	Dubrovnik	4.66	339	*i* Pn	Pn	13 30 41.6	+0.6
DBRK				Sn	Sn	13 31 33.6	-1.0
STON	Ston	4.98	337	*e*Pn	Pn	13 30 45.5	+0.2
STON				Sn	Sn	13 31 40.4	-2.0
MAKA	Makarska	5.57	334	*e*Pn	Pn	13 30 54.3	+0.8
MAKA				Sn	Sn	13 31 53.3	-3.8
RICI	Ricice	5.72	335	*i* Pn	Pn	13 30 55.6	0.0
RICI				Sn	Sn	13 31 59.1	-1.6
KIJV	Kijevo	6.42	333	*e*Pn	Pn	13 31 06.0	+0.9
ZIRJ	Zirje	6.42	327	*e*Pn	Pn	13 31 05.3	+0.2
MORI	Morici	6.56	329	*e*Pn	Pn	13 31 08.1	+1.0
MORI				Sn	Sn	13 32 18.1	-3.3
DUGI	Dugi Otok	6.94	326	*e*Pn	Pn	13 31 13.3	+1.0

SJA ***18*** *13:35:25.6±0.4, 19°.81S×71°.09W, h24^{km}±2^{km}, ML4.2, MW4.3*
IDC ***18*** *13:35:26.2±0.8, 19°.69S×70°.78W, h0^{km}, mb3.8/7, mb1 4.2/9, mb1mx4.0/26, mbtmp4.0/9, ML4.3/2, MS3.0/3, Ms1 3.1/3, ms1mx2.7/19, Error ellipse: s-maj=28.5km s-min=15.0km az=62.0*
NEIC ***18*** *13:35:28.3±1.8, 19°.80S±0°.05×70°.97W±0°.09, h17^{km}±4^{km}, mb4.5/7, ML4.1(GUC), Error ellipse: s-maj=11.8km s-min=7.9km az=88.0*
GUC ***18*** *13:35:29.6±0.7, 19°.77S×70°.99W, h34^{km}±2^{km}, ML4.2*
VAO ***18*** *13:35:54.9±1.5, 18°.59S×69°.71W, h143^{km}±8^{km}, mb4.1*

ISC 18 13:35:26.6±1.8, 19°.80S±0°.03×71°.04W±0°.05, h5^{km}±11^{km}, n88, σ1^{s}.59/96, 12C-2D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	0.89	77	⇓*i*P	Pg	13 35 43.7	0.0
PSGC				*i* S	Sg	13 35 54.7	-0.5
PSGCX	Pisagua	0.89	77	*e*P	Pg	13 35 43.7	0.0
PSGCX				IAML		13 35 58.0	
	comp=Z,5µm,0.4s						
TA01	Diego Aracena	1.11	134	⇑*i*P	Pb	13 35 48.3	-0.1
TA01				*i* S	Sg	13 36 02.2	-0.3
TA01				IAML		13 36 06.7	
	comp=E,9µm,0.7s						
PB11	IPOC Station P	1.31	89	⇓*i*P	Pn	13 35 50.7	-1.0
PB11				*i* S	Sg	13 36 07.2	-1.4
PB11				IAML		13 36 08.9	
	comp=N,8µm,0.4s						
PB11	IPOC Station P	1.31	89		Pn	13 35 50.7	-1.0
PB11	IPOC Station P	1.31	89	*e*P	Pn	13 35 51.1	-0.6
PB11				IAML		13 36 13.9	
	comp=Z,3µm,0.5s						
PATCX	Punta Patache	1.32	141	⇑*i*P	Pn	13 35 51.4	-0.4
PATCX				*i* S	Sb	13 36 07.6	-1.6
PATCX				IAML		13 36 19.3	
	comp=E,6µm,0.4s						
PATCX	Punta Patache	1.32	141	*e*S	Sn	13 36 09.5	-0.4
PATCX				IAML		13 36 22.6	
	comp=Z,3µm,0.5s						
PB12	IPOC Station P	1.36	30	⇑*i*P	Pn	13 35 51.5	-0.8
PB12				*i* S	Sb	13 36 08.6	-1.7
PB12	IPOC Station P	1.36	30	*e*P	Pn	13 35 51.4	-0.9
PB12				IAML		13 36 19.9	
	comp=Z,3µm,0.6s						
AP01	Chacalluta	1.56	25	⇑*i*P	Pn	13 35 54.4	-0.6
AP01				*i* S	Sn	13 36 14.1	-1.7
AP01				IAML		13 36 22.8	
	comp=E,10µm,0.7s						
GO01	Chusmiza	1.75	86	⇑*i*P	Pn	13 35 57.8	-0.2
GO01				*i* S	Sn	13 36 19.9	-1.1
GO01				IAML		13 36 23.4	
	comp=N,6µm,0.4s						
GO01	Chusmiza	1.75	86		Pn	13 35 57.9	-0.2
PB08	IPOC Station P	1.81	101	⇑*i*P	Pn	13 35 58.6	-0.3
PB08				*i* S	Sn	13 36 21.7	-0.7
PB08				IAML		13 36 23.5	
	comp=N,2µm,0.2s						
PB08	IPOC Station P	1.81	101	*e*P	Pn	13 35 58.5	-0.3
PB08				*e*S	Sb	13 36 22.7	-0.9
PB08				IAML		13 36 24.9	
	comp=Z,2µm,0.5s						
PB02	IPOC Station P	1.86	145	⇑*i*P	Pn	13 35 59.2	-0.1
PB02				*i* S	Sn	13 36 21.4	-1.7
PB02	IPOC Station P	1.86	145	*e*P	Pn	13 35 58.6	-0.6
PB02				*e*S	Sn	13 36 22.7	-0.5
PB02				IAML		13 36 30.6	
	comp=Z,9µm,0.4s						
PB01	IPOC Station P	1.92	131	⇑*i*P	Pn	13 36 00.0	0.0
PB01				*i* S	Sn	13 36 23.2	-1.4
PB01				IAML		13 36 31.7	
	comp=N,3µm,0.3s						
PB01	IPOC Station P	1.92	131		Pn	13 36 00.2	+0.2
PB16	IPOC Station P	2.06	45	⇑*i*P	Pn	13 36 02.4	0.0
PB16				*i* S	Sn	13 36 28.7	0.0
PB16				IAML		13 36 34.5	
	comp=N,3µm,0.6s						
PB16	IPOC Station P	2.06	45	*e*P	Pn	13 36 02.2	-0.2
PB16				IAML		13 36 39.7	
	comp=Z,3µm,0.7s						
PB07	IPOC Station P	2.21	151	⇑*i*P	Pn	13 36 03.8	-0.3
PB07				*i* S	Sn	13 36 29.5	-2.4
PB07				IAML		13 36 45.7	
	comp=E,3µm,0.4s						
PB07	IPOC Station P	2.21	151	*e*P	Pn	13 36 03.6	-0.5
PB07				*e*S	Sn	13 36 31.4	-0.4
PB07				IAML		13 36 45.1	
	comp=Z,3µm,0.5s						
PB03	IPOC Station P	2.54	152	⇑*i*P	Pn	13 36 08.5	-0.3
PB03				*i* S	Sn	13 36 37.4	-2.9
PB03				IAML		13 36 55.0	
	comp=E,1µm,0.7s						
PB03	IPOC Station P	2.54	152	*e*P	Pn	13 36 08.4	-0.4
PB03				IAML		13 36 55.2	
	comp=Z,1µm,0.4s						
PB09	IPOC Station P	2.61	140	⇑*i*P	Pn	13 36 10.5	+0.9
PB09				*i* S	Sn	13 36 41.4	-0.4
PB09	IPOC Station P	2.61	140	*e*P	Pn	13 36 09.4	-0.2
PB09				IAML		13 36 55.8	
	comp=Z,2µm,0.9s						
PB04	IPOC Station P	2.66	162	*e*P	Pn	13 36 09.7	-0.6
PB04				IAML		13 37 01.2	
	comp=N,1µm,0.4s						
PB04	IPOC Station P	2.66	162		Pn	13 36 09.8	-0.6
PB05	IPOC Station P	3.14	166	*e*P	Pn	13 36 15.7	-1.2
PB05	IPOC Station P	3.14	166	*e*P	Pn	13 36 16.2	-0.7
PB05				IAML		13 37 18.3	
	comp=Z,553nm,0.6s						
PB06	IPOC Station P	3.20	155	*i* P	Pn	13 36 17.3	-0.5
PB06				IAML		13 37 13.2	
	comp=Z,936nm,0.6s						
LVC	Limon Verde	3.44	145	Pn	Pn	13 36 22.3	+1.2
	comp=Z,16nm,0.3s,baz=322,slow=8.2,SNR=75						
LVC				Sn	Sn	13 37 02.0	-0.4
	comp=Z,35nm,0.3s,baz=102,slow=17,SNR=8.8						
LVC				LR	LR	13 37 13.4	
	comp=Z,52nm,19.9s,baz=320,slow=32						
LVC				Lg	Lg	13 37 14.4	
	comp=Z,92nm,0.3s,baz=45,slow=20,SNR=6.9						
LVC	Limon Verde	3.44	145		Pn	13 36 22.1	+1.0
LVC	Limon Verde	3.44	145	*e*S	Sn	13 37 02.4	-0.1
LVC				IAML		13 37 25.9	
	comp=Z,225nm,0.8s						
PB15	IPOC Station P	3.70	157	*e*P	Pn	13 36 24.8	+0.2
PB15				IAML		13 37 31.1	
	comp=Z,1µm,0.3s						
PB10	IPOC Station P	3.73	173		Pn	13 36 23.7	-1.2
LPAZ	La Paz	4.46	39	Pn	Pn	13 36 38.3	+2.9
	comp=Z,1.5nm,0.3s,baz=240,slow=6.4,SNR=23						
LPAZ	La Paz	4.46	39		Pn	13 36 37.5	+2.0
LPAZ	La Paz	4.46	39	*e*P	Pn	13 36 38.2	+2.7
GO02	Mina Guanaco	5.51	166		Pn	13 36 48.7	-0.9
HJA	Humahuaca	6.25	124	*e*P	Pn	13 37 01.2	+1.3
HJA				IAML		13 38 48.1	
	comp=Z,8.1nm,2.0s						
AZAP	Zapla	7.08	130	*e*P	Pn	13 37 12.0	+0.8
AZAP				IAML		13 39 36.9	
	comp=Z,5.9nm,1.3s						
GO03	Copiap	7.80	175	Pn	Pn	13 37 21.8	+0.9
NNA	Nana	9.56	323	Sn	Sn	13 39 33.3	+0.3
	comp=Z,2.1nm,0.3s,baz=234,slow=14,SNR=2.7						
SIV	San Ignacio	10.22	70	Pn	Pn	13 37 52.7	-1.4
	comp=Z,3.9nm,0.3s,baz=277,slow=8.9,SNR=51						
GO04	Tololo Observa	10.33	179	Pn	Pn	13 37 56.1	+0.3
SAML	Samuel	13.20	36		Pn	13 38 34.6	-0.2
SAML	Samuel	13.20	36	*e*P	Pn	13 38 36.4	+1.6
CPUP	Villa Florida	14.19	120	LR	LR	13 45 13.8	
	comp=Z,129nm,19.2s,baz=298,slow=42						
CPUP	Villa Florida	14.19	120	*e*P	P	13 39 04.6	+8.6
SALV	Santo Antonio	15.12	78	*e*P	Pn	13 39 02.0	+1.0
ITQB	Itaqui	16.36	130	*e*P	P	13 39 34.6	+15
CLDB	Colider	17.16	61	*e*P	Pn	13 39 24.9	-2.4
PLCA	Paso Flores	20.87	179	P	P	13 40 10.8	+1.1
	comp=Z,1.3nm,0.6s,baz=67,slow=3.0,SNR=2.9						
PLCA	Paso Flores	20.87	179	P	P	13 40 09.6	-0.1
PLCA				IAmb	IAmb	13 40 51.7	
	comp=Z,34nm,1.8s						
PTGA	Pitinga	21.83	31	P	P	13 40 17.7	-2.3
	comp=Z,5.9nm,0.3s,baz=211,slow=15,SNR=17						
PTGA	Pitinga	21.83	31	P	P	13 40 17.8	-2.3
PTGA				IAmb	IAmb	13 40 21.9	
	comp=Z,27nm,1.4s						
PTGA	Pitinga	21.83	31	*e*P	P	13 40 17.9	-2.2
SPB	Sao Paulo	22.25	104	*e*P	P	13 40 31.4	+6.9
BDFB	Brasilia	22.32	83	LR	LR	13 50 32.1	
	comp=Z,106nm,20.9s,baz=266,slow=41						
VAO	Valinhos	22.64	102	*e*P	P	13 40 35.6	+6.9
PARB	Paraibuna	23.89	103	*e*P	P	13 40 46.5	+5.0
SMTB	Santa Maria do	25.15	68	*e*P	P	13 40 51.9	-1.1
RUSC	La Rusia	25.61	355	P	P	13 40 57.7	+0.1
SDV	Santo Domingo	28.50	1	P	P	13 41 23.9	+0.6
TEIG	Tepich	43.21	336	P	P	13 43 29.9	+1.1
TXAR	Lajitas Array	58.10	326	P	P	13 45 22.0	+0.6
	comp=Z,0.3nm,0.8s,baz=162,slow=6.6,SNR=3.1						
T49A	Edmonton	58.22	346	P	P	13 45 21.6	-0.3
TRQ	Mont Tremblant	65.78	357	P	P	13 46 12.3	-0.3
PDAR	Pinedale Array	71.65	331	P	P	13 46 50.3	+0.7
	comp=Z,0.2nm,0.6s,baz=131,slow=4.9,SNR=3.3						
NVAR	Mina Array Bea	72.93	323	P	P	13 46 58.8	+1.5
	comp=Z,0.5nm,0.8s,baz=150,slow=6.0,SNR=4.1						
NVAR	Mina Array Bea	72.93	323	P	P	13 46 57.0	-0.3
ULM	Lac du Bonnet	73.11	344	P	P	13 46 56.3	-1.5
YNE	Yellowstone No	73.61	332	P	P	13 47 02.7	+1.4
TORD	Torodi Ar. Bea	78.69	72	P	P	13 47 28.5	-2.0
	comp=Z,2.9nm,0.6s,baz=254,slow=4.8,SNR=16						
YKA	Yellowknife Ar	88.93	341	P	P	13 48 21.9	+0.2
	comp=Z,1.6nm,0.9s,baz=136,slow=5.4,SNR=24						
H11S2	WAKE ISLAND Hy	125.66	279	T	T	16 13 47.1	
	baz=101,slow=74,SNR=50						
H11S1	WAKE ISLAND Hy	125.67	279	T	T	16 13 48.9	
	baz=101,slow=74,SNR=35						
H11S3	WAKE ISLAND Hy	125.68	279	T	T	16 13 48.4	
	baz=101,slow=74,SNR=32						
H11N3	WAKE ISLAND Hy	125.70	280	T	T	16 13 48.1	
	baz=100,slow=74,SNR=12						
H11N2	WAKE ISLAND Hy	125.72	280	T	T	16 13 49.9	
	baz=100,slow=74,SNR=14						
H11N1	WAKE ISLAND Hy	125.72	280	T	T	16 14 04.8	
	baz=100,slow=74,SNR=2.7						
ASAR	Alice Springs	130.42	211	PKP	PKPdf	13 54 38.9	-0.3
	comp=Z,0.4nm,0.8s,baz=110,slow=1.5,SNR=4.4						
MAKZ	Makanchi	145.19	33		PKPbc	13 55 04.3	-0.7
MK31	Makanchi Array	145.36	33		PKPbc	13 55 04.8	-0.7
MKAR	Makanchi Array	145.36	33	PKPbc	PKPbc	13 55 05.2	-0.3
	comp=Z,1.1nm,0.7s,baz=329,slow=4.0,SNR=11						
MKAR	Makanchi Array	145.36	33		PKPbc	13 55 05.0	-0.5

JMA 18 13:59:36.6, 24°.33N×123°.59E, h14^{km}±1^{km}, M1.2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.13	88	P	Pg	13 59 40.0	-0.1
IRIF				S	Sg	13 59 42.8	+0.4
HATJ	Hateruma jima	0.34	144	P	Pg	13 59 43.2	-0.3
HATJ				*e*S	Sg	13 59 48.5	+0.4
JKRS	Kuro-shima	0.39	103	P	Pg	13 59 44.6	+0.1
JKRS				S	Sb	13 59 50.7	-0.6
JIJ	Ishigaki jima	0.51	86	P	Pg	13 59 46.2	-0.4
JIJ				S	Sg	13 59 53.4	0.0
YOJ	Yonaguni jima	0.54	284	S	Sg	13 59 54.2	-0.4
JYNG	Yonagunijimaku	0.60	282	P	Pg	13 59 48.2	-0.2
JYNG				S	Sg	13 59 56.3	-0.1
JISG	Ishigakijimahi	0.70	69	P	Pg	13 59 50.2	-0.1
JISG				S	Sb	14 00 00.7	+0.5
JTJ	Tarama	1.06	73	P	Pb	13 59 56.8	+0.1
JTJ				*e*S	Sg	14 00 11.0	+0.1

MAN ***18*** *13:59:58.3, 3°.41N×123°.38E, h553^{km}, mb5.5, ML4.4, MS4.7*
KLM ***18*** *14:00:06.0, 4°.05N×123°.64E, h492^{km}, mb4.6*
NEIC ***18*** *14:00:08.0±1.6, 4°.00N±0°.08×123°.40E±0°.09, h505^{km}±7^{km}, mb4.8/55, Error ellipse: s-maj=13.1km s-min=11.1km az=106.0*
DJA ***18*** *14:00:07.1±0.3, 4°N±3°×12°4E±°, h490^{km}±3^{km}, M4.5/24, mb4.5/24, mB4.8/8, MLv4.9/10, Mw(mB)4.1/8*
IDC ***18*** *14:00:08.5±0.7, 4°.04N×123°.51E, h508^{km}±7^{km}, mb3.6/23, mb1 3.7/26, mb1mx3.5/52, mbtmp4.6/26, Error ellipse: s-maj=11.3km s-min=5.9km az=85.0*

ISC 18 14:00:07.7±0.3, 3°.96N±0°.04×123°.48E±0°.05, h500^{km}, n154, σ1^{s}.45/175, mb4.5/42, 1C-3D, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	General Santos	2.57	35	⇑*i*P	P	14 01 17.0	+0.9
DDMP	Don Marcelino,	3.08	46	*e*P	P	14 01 17.4	-1.9
CTBH	Cotabato--PC H	3.33	13	⇓*i*P	P	14 01 20.2	-0.8
KMSI	Cibinong	3.40	172	P	P	14 01 19.8	-1.7
KMSI				S	S	14 02 21.4	-0.1
KCP	Kidapawan	3.43	28	⇓*i*P	P	14 01 20.4	-1.4
DMPH	Davao City--Mi	3.70	33	⇓*e*P	P	14 01 25.1	+1.3
DMPH				*i* S	S	14 02 25.7	0.0
DAV	Davao City (W)	3.73	34	P	P	14 01 25.5	+1.5
	176nm,0.3s,baz=194,slow=1.2,SNR=22						
DAV				S	S	14 02 26.7	+0.6
	65nm,0.3s,baz=225,slow=19,SNR=2.6						
DAV	Davao City (W)	3.73	34	P	P	14 01 25.3	+1.3
MRSI	Marisa	3.79	204	P	P	14 01 23.1	-1.3
PAGZ	Pagadian	3.87	359	*e*P	P	14 01 24.5	-0.6
MATI	Mati	4.05	43	*e*P	P	14 01 24.7	-1.9
BUKP	Musuan	4.20	22	*e*P	P	14 01 27.2	-0.7
BUKP				*e*S	P	14 01 30.9	+3.1
TNTI	Ternate	5.00	129	P	P	14 01 34.0	-0.8
TNTI				S	S	14 02 44.5	-1.2
TNTI	Ternate	5.00	129	P	P	14 01 33.9	-0.8
LUWI	Luwuk	5.02	188	P	P	14 01 34.6	-0.3
	2.4nm4µm213nm,0.6s						
LUWI				S	S	14 02 42.5	-3.4
	2.4nm4µm213nm,0.6s						
LUWI	Luwuk	5.02	188	P	P	14 01 33.4	-1.5
MPSI	Mapaga	5.08	225	P	P	14 01 33.5	-1.9
	0.3nm1µm88nm,0.8s						
MPSI				S	S	14 02 43.2	-3.7
	0.3nm1µm88nm,0.8s						
APSI	Ampana	5.17	201	P	P	14 01 35.3	-1.0
	0.9nm3µm206nm,0.7s						
APSI				S	S	14 02 50.4	+1.9
	0.9nm3µm206nm,0.7s						
BUTP	Butuan	5.41	23	*e*P	P	14 01 39.2	+0.7
TBP	Tagbilaran	5.71	4	*e*P	P	14 01 40.7	-0.5
LBMI	Labuha	6.08	139	P	P	14 01 45.6	+0.8
	2.9nm1µm74nm,0.7s						
LBMI				S	S	14 03 02.3	-1.9
	2.9nm1µm74nm,0.7s						
MSLP	Maasin	6.29	12	*e*P	P	14 01 45.7	-1.1
SANI	Sanana	6.47	157	P	P	14 01 46.0	-2.7
	1.0nm3µm252nm,0.7s						
SANI				S	S	14 03 05.0	-6.2
	1.0nm3µm252nm,0.7s						
GUIM	Jordan	6.69	352	*e*P	P	14 01 48.6	-2.2
KKM	Kota Kinabalu	7.53	286	P	P	14 01 57.6	-1.8
SPSI	Sidrap Palu	8.70	205	P	P	14 02 12.6	+1.2
	24nm,0.6s						
KAPI	Kappang	9.66	203	P	P	14 02 22.3	+0.8
	1.5nm,0.3s,baz=135,slow=4.8,SNR=4.4						
KAPI				S	S	14 04 09.8	-1.8
	0.4nm,0.3s,baz=147,slow=11,SNR=2.5						
KBKI	Kotabaru	10.27	226	P	P	14 02 29.4	+1.4
	581nm18nm,0.7s						
FAKI	Fak Fak	11.11	128	P	P	14 02 36.9	0.0
SBUM	Sibu	11.35	263	P	P	14 02 39.0	-0.4
SBUM	Sibu	11.35	263	P	P	14 02 40.0	+0.6
MMRI	Maumere	12.57	186	P	P	14 02 53.7	+1.3
KSM	Kuching	13.39	260	P	P	14 03 00.3	-0.8
KSM	Kuching	13.39	260	P	P	14 03 01.0	-0.1
SOEI	Soe	13.64	177	P	P	14 03 04.5	+0.7
PLAI	Plampang	13.92	204	P	P	14 03 11.6	+5.0
SRBI	Singaraja	14.53	215	P	P	14 03 12.0	-1.1
	70nm,0.9s						
DNP	Denpasar	15.02	213	P	P	14 03 22.6	+4.4
JAGI	Jajag, Banyuwa	15.46	217	P	P	14 03 21.3	-1.5
JAGI				IAmb	IAmb	14 03 26.6	
	comp=Z,26nm,0.8s						
GMJI	Gumukmas	15.74	219	P	P	14 03 28.8	+3.1
	comp=Z,36nm,0.7s						
PWJI	Pagerwojo	16.65	224	P	P	14 03 34.4	-0.9
	comp=Z,59nm,0.8s						
DLV	T Lat	16.83	299	P	P	14 03 35.5	-1.8
WOJI	Wonogiri, Jawa	17.16	227	P	P	14 03 38.9	-1.4
	comp=Z,48nm,1.1s						
PCJI	Pacitan	17.22	225	P	P	14 03 36.8	-4.1
UGM	Wanagama	17.50	228	P	P	14 03 42.4	-1.2
MTN	Manton Dam	18.34	156	P	P	14 03 51.2	-0.1
KPJI	Karang Pucung	18.35	232	P	P	14 03 51.5	+0.1
	comp=Z,131nm,0.7s						
TWG	Pinlang	18.90	353	P	P	14 03 55.2	-1.1
LEM	Lembang	19.12	236	P	P	14 03 59.9	+1.2
	comp=Z,5.1nm,0.3s,baz=37,slow=10,SNR=4.3						
CISI	Cisompet, Garu	19.37	234	P	P	14 03 59.3	-1.5
	comp=Z,5µmcomp=Z,49nm,0.6s						
CISI	Cisompet, Garu	19.37	234	P	P	14 03 59.1	-1.7
TPUB	Ta-pu	19.43	352	P	P	14 04 00.7	-0.4
YULB	Yu-li	19.44	354	P	P	14 04 00.1	-1.1
YULB				IAmb	IAmb	14 04 01.1	
	comp=Z,14nm,0.5s						
MYKOM	Kota Tinggi	19.73	264	P	P	14 04 03.2	-0.8
MYKOM				IAmb	IAmb	14 04 06.5	
	comp=Z,20nm,0.8s						
MYKOM	Kota Tinggi	19.73	264	P	P	14 04 04.0	0.0
SSLB	Suanglung	19.87	353	P	P	14 04 05.0	-0.2
SSLB				IAmb	IAmb	14 04 08.2	
	comp=Z,26nm,0.7s						
KNRA	Kununurra	20.20	165	P	P	14 04 09.1	+0.9
KNRA				IAmb	IAmb	14 04 12.0	
	comp=Z,15nm,0.6s						
YOJ	Yonaguni jima	20.39	359	P	P	14 04 09.9	0.0
YHNB	Yeheng	20.69	355	P	P	14 04 12.8	+0.1
YHNB				IAmb	IAmb	14 04 16.4	
	comp=Z,16nm,0.6s						
UBPT	Khong Chiam	21.00	304	P	P	14 04 16.6	+1.0
MDSI	Maura Dua	21.03	247	P	P	14 04 17.5	+1.6
	comp=Z,9.5nm,0.8s						
LWLI	Liwa	21.35	245	P	P	14 04 20.2	+1.3
	comp=Z,47µmcomp=Z,19nm,0.5s						
FITZ	Fitzroy Crossi	22.02	175	P	P	14 04 25.3	+0.6
	comp=Z,12nm,0.7s,baz=359,slow=8.7,SNR=25						
FITZ				ScP	ScP	14 10 53.9	+0.7
	comp=Z,1.5nm,0.6s,baz=4.0,slow=1.7,SNR=7.1						
FITZ	Fitzroy Crossi	22.02	175	P	P	14 04 25.2	+0.6
FITZ				IAmb	IAmb	14 04 26.1	
	comp=Z,12nm,0.7s						
IPM	Ipoh	22.40	272	P	P	14 04 27.7	-0.6
IPM				IAmb	IAmb	14 05 03.8	
	comp=Z,16nm,1.3s						
IPM	Ipoh	22.40	272	P	P	14 04 28.0	-0.3
KULM	Kulim	22.80	274	P	P	14 04 30.6	-1.2
KULM				IAmb	IAmb	14 05 12.0	
	comp=Z,20nm,1.5s						
KULM	Kulim	22.80	274	P	P	14 04 31.0	-0.8
PBKT	Sadao Pong	25.41	301	P	P	14 04 54.2	-0.8
PSA00	Pilbara Seismi	25.62	188	P	P	14 04 56.6	-0.1
PSA00				IAmb	IAmb	14 04 58.4	
	comp=Z,79nm,1.9s						
WRAB	Tennant Creek	26.03	156	P	P	14 05 00.3	-0.1
WRAB				IAmb	IAmb	14 05 35.6	
	comp=Z,30nm,1.6s						
WRA	Warramunga Arr	26.04	156	P	P	14 05 00.7	+0.2
	comp=Z,2.7nm,0.4s,baz=336,slow=9.9,SNR=52						
WRA				S	S	14 08 54.2	-1.6
	comp=Z,0.7nm,0.5s,baz=339,slow=16,SNR=4.8						
WRA				ScP	ScP	14 11 04.4	-0.1
	comp=Z,1.9nm,0.8s,baz=339,slow=2.4,SNR=8.5						
WRA	Warramunga Arr	26.04	156	P	P	14 04 59.7	-0.8
WB2	Warramunga Arr	26.04	156	P	P	14 05 00.5	0.0
WR0	Warramunga Arr	26.13	156	P	P	14 05 01.3	0.0
PMG	Port Moresby	27.07	119	P	P	14 05 10.4	+0.7
	comp=Z,10nm,0.8s,baz=342,slow=6.4,SNR=4.5						
PMG	Port Moresby	27.07	119	P	P	14 05 10.6	+0.9
PMG				IAmb	IAmb	14 05 45.0	
	comp=Z,16nm,1.0s						
GYA	Guiyang	27.57	326	P	P	14 05 15.0	+1.0
GYA				pP	pP	14 06 37.8	+0.8
GYA				sP	sP	14 07 36.5	+1.3
GYA				S	S	14 09 21.3	+1.4
GYA				ScP	ScP	14 11 10.0	+0.8
GYA				ScS	ScS	14 15 01.4	-0.9
GIRL	Giralia	27.94	198	P	P	14 05 17.8	+0.7
CMAR	Chiang Mai Arr	28.00	303	P	P	14 05 18.5	+0.7
	comp=Z,0.4nm,0.3s,baz=119,slow=7.3,SNR=5.2						
CMAR				ScP	ScP	14 11 09.8	-0.7
	comp=Z,0.5nm,0.3s,baz=153,slow=2.9,SNR=8.4						
NJ2	Nanjing	28.29	352	*e*P	P	14 05 21.0	+1.0
KMI	Kunming	28.99	319	P	P	14 05 26.3	-0.4
JCJ	Chichijima	29.13	36	P	P	14 05 26.8	-0.8

	comp=Z,78nm,0.4s,baz=283,slow=22,SNR=34						
JCJ				S	S	14 09 41.3	-2.7
	comp=Z,36nm,0.7s,baz=290,slow=22,SNR=6.3						
AS31	Alice Springs	29.27	160	P	P	14 05 29.6	+0.7
ASAR	Alice Springs	29.27	160	P	P	14 05 29.8	+0.9
	comp=Z,2.4nm,0.4s,baz=334,slow=7.6,SNR=105						
ASAR				S	S	14 09 46.2	-0.1
	comp=Z,1.2nm,0.8s,baz=345,slow=14,SNR=8.0						
ASAR				ScP	ScP	14 11 14.6	+0.1
	comp=Z,1.3nm,0.4s,baz=338,slow=3.4,SNR=11						
KRVT	Keravat (AS076	29.68	106	P	P	14 05 34.6	+2.1
	comp=Z,23nm,0.6s,baz=325,slow=4.9,SNR=4.7						
JNU	Nakatsue	29.83	13	P	P	14 05 32.2	-1.3
	comp=Z,7.0nm,0.8s,baz=180,slow=3.0,SNR=4.3						
JNU	Nakatsue	29.83	13	P	P	14 05 32.5	-1.0
JNU				IAmb	IAmb	14 06 13.9	
	comp=Z,63nm,1.5s						
XAN	Xi'an	32.86	337	P	P	14 06 01.0	+1.4
XAN				pP	pP	14 07 25.3	+0.5
KSAR	Wonju Array Be	33.57	6	P	P	14 06 05.5	0.0
KSRS	Korea Array	33.59	6	P	P	14 06 05.5	0.0
	comp=Z,3.1nm,0.5s,baz=179,slow=9.4,SNR=13						
MORW	Morawa	33.60	192	P	P	14 06 06.0	+0.1
MORW				IAmb	IAmb	14 06 06.6	
	comp=Z,15nm,0.5s						
KS19	Wonju Array Si	33.63	6	P	P	14 06 05.6	-0.4
INU	Inuyama	33.66	20	P	P	14 06 06.0	-0.3
INU				IAmb	IAmb	14 06 48.8	
	comp=Z,82nm,1.7s						
FORT	Forrest	34.82	173	P	P	14 06 17.1	+1.0
MAJO	Matsushiro	35.15	21	P	P	14 06 17.6	-1.2
MAJO				IAmb	IAmb	14 07 45.6	
	comp=Z,73nm,1.8s						
MAT	Matsushiro	35.15	21	P	P	14 06 17.8	-1.0
MJAR	Matsushiro Arr	35.15	21	P	P	14 06 17.8	-1.0
	comp=Z,9.3nm,0.7s,baz=188,slow=8.5,SNR=22						
MJAR	Matsushiro Arr	35.15	21	P	P	14 06 16.9	-1.9
MJB9	Matsu-Tunnel	35.15	21	P	P	14 06 17.7	-1.1
MJB9				IAmb	IAmb	14 07 45.5	
	comp=Z,75nm,1.8s						
BJI	Beijing	36.52	351	P	P	14 06 25.3	-4.8
LZH	Lanzhou	36.75	333	eP	P	14 06 32.0	-0.3
LZH				pP	pP	14 07 51.8	-7.7
LZH				sP	PcP	14 08 45.0	+3.5
NWAO	Narrogin (SRO)	37.16	189	P	P	14 06 36.2	+0.7
	comp=Z,12nm,0.6s,baz=35,slow=9.0,SNR=16						
NWAO	Narrogin (SRO)	37.16	189	P	P	14 06 35.9	+0.5
HHC	Hu-ho-hao-te	38.27	345	eP	P	14 06 44.3	-0.3
BBOO	Buckleboo	38.46	163	P	P	14 06 47.0	+0.8
BBOO				IAmb	IAmb	14 07 52.5	
	comp=Z,87nm,2.0s						
STKA	Stephens Creek	39.58	155	P	P	14 06 56.9	+1.6
	comp=Z,3.9nm,0.4s,baz=340,slow=8.3,SNR=20						
STKA				S	S	14 12 23.1	+1.4
	comp=Z,1.6nm,0.6s,baz=12,slow=19,SNR=4.3						
EIDS	Eidsvold	39.59	139	P	P	14 06 56.3	+0.9
EIDS				IAmb	IAmb	14 08 19.5	
	comp=Z,39nm,1.8s						
CN2	Changchun	39.72	2	eP	P	14 06 56.0	-0.1
USA0B	Ussuriysk Arra	40.77	9	P	P	14 07 04.4	-0.2
USA0B				IAmb	IAmb	14 08 17.0	
	comp=Z,57nm,1.9s						
USRK	Ussuriysk Ar.	40.77	9	P	P	14 07 04.7	+0.1
	comp=Z,5.5nm,0.4s,baz=191,slow=6.4,SNR=24						
USRK	Ussuriysk Ar.	40.77	9	P	P	14 07 04.4	-0.2
ASAJ	Asahikawa	43.41	20	P	P	14 07 25.1	-0.4
	comp=Z,18nm,0.6s,baz=233,slow=8.2,SNR=19						
JKA	Kamikawa-asahi	43.41	20	P	P	14 07 25.1	-0.4
YSS	Yuzh-Sakhalins	45.97	18	P	P	14 07 45.0	-0.1
YSS				IAmb	IAmb	14 09 37.7	
	comp=Z,68nm,1.8s						
ULN	Ulaanbaatar	45.97	345	P	P	14 07 45.0	-0.3
SONM	Songino Array	46.12	344	P	P	14 07 46.6	+0.1
	comp=Z,2.1nm,0.6s,baz=157,slow=9.3,SNR=8.3						
SONM	Songino Array	46.12	344	P	P	14 07 45.8	-0.7
WMQ	Urumqi	50.72	327	eP	P	14 08 21.8	+1.0
MK31	Makanchi Array	55.56	327	P	P	14 08 55.0	-0.3
MKAR	Makanchi Array	55.56	327	P	P	14 08 55.5	+0.3
	comp=Z,1.0nm,0.4s,baz=120,slow=8.5,SNR=15						
MKAR	Makanchi Array	55.56	327	P	P	14 08 55.1	-0.1
KSH	Kashi	55.62	316	P	P	14 09 00.3	+4.4
KSH				PP	PP	14 11 13.3	+6.0
KSH				sP	sP	14 11 27.5	-1.4
KSH				PcS	PcS	14 13 50.3	+0.9
KSH				S	S	14 16 07.4	+3.7
KSH	Kashi	55.62	316	SS	SS	14 20 05.4	+6.6
MAKZ	Makanchi	55.74	327	P	P	14 08 56.1	-0.3
PEA0B	Petropavlovsk-	56.49	24	P	P	14 09 02.0	+0.4
PEA0B				IAmb	IAmb	14 09 03.3	
	comp=Z,41nm,1.3s						
PETK	Petropavlovsk-	56.49	24	P	P	14 09 02.4	+0.9
	comp=Z,6.3nm,0.6s,baz=204,slow=3.8,SNR=28						
PETK	Petropavlovsk-	56.49	24	P	P	14 09 02.2	+0.7
YAK	Yakutsk	58.13	3	P	P	14 09 12.3	-0.1
	comp=Z,13nm,0.7s,baz=258,slow=0.8,SNR=14						
YAK	Yakutsk	58.13	3	P	P	14 09 11.9	-0.6
YAK				IAmb	IAmb	14 09 13.5	
	comp=Z,23nm,0.8s						
ZAA0	Zalesovo Array	58.95	334	P	P	14 09 17.1	-1.2
ZALV	Zalesovo Beam	58.95	334	P	P	14 09 17.2	-1.1
	comp=Z,0.7nm,0.6s,baz=133,slow=6.3,SNR=4.9						
ZALV	Zalesovo Beam	58.95	334	P	P	14 09 16.6	-1.6
KURK	Kurchatov	59.84	329	P	P	14 09 23.9	-0.3
TUWZ	Tuamarina	64.38	140	P	P	14 09 54.1	+0.2
BKZ	Black Stump Fm	64.94	137	P	P	14 09 59.2	+1.5
BKZ				IAmb	IAmb	14 11 51.5	
	comp=Z,47nm,1.8s						
TIXI	Tiksi	67.69	2	P	P	14 10 12.7	-1.4
NRIK	Noril'sk	69.47	347	P	P	14 10 24.2	-0.7
	comp=Z,4.8nm,0.5s,baz=130,slow=6.4,SNR=12						
ABKAR	Akbulak array	69.94	321	P	P	14 10 27.1	-1.1
CASY	Casey	70.69	186	P	P	14 10 32.7	+0.5
CASY				IAmb	IAmb	14 10 46.4	
	comp=Z,57nm,1.9s						
AKTO	Aktyubinsk	71.48	322	P	P	14 10 36.9	-0.3
	comp=Z,1.0nm,0.4s,baz=101,slow=1.8,SNR=5.2						
UNV	Unalaska Valle	75.09	35	P	P	14 10 58.0	+0.3
AKUT	Akutan	75.58	35	P	P	14 11 01.0	+0.5
ANM	Nome	78.40	25	P	P	14 11 16.6	+0.8
IMAR	Indian Mountai	83.46	24	P	P	14 11 42.7	+0.8
MLY	Manley	84.65	25	P	P	14 11 48.3	+0.4
RND	Reindeer	85.44	27	P	P	14 11 51.4	-0.5
RND				IAmb	IAmb	14 15 06.0	
	comp=Z,28nm,1.7s						
ILAR	Eielson Array	86.29	25	P	P	14 11 54.4	-1.4
	comp=Z,0.7nm,0.5s,baz=240,slow=5.3,SNR=22						
BMAR	Burnt Mountain	87.12	23	P	P	14 11 59.9	+0.2
ARCES	ARCESS Array B	89.11	340	P	P	14 12 07.7	-1.2
	comp=Z,5.6nm,1.1s,baz=67,slow=7.0,SNR=3.0						
FINES	FINESS Array B	90.10	332	P	P	14 12 11.7	-1.9
	comp=Z,1.3nm,0.8s,baz=98,slow=8.6,SNR=3.4						
PDAR	Pinedale Array	113.29	40	PKKPab	PKKPab	14 28 42.4	-3.4
	comp=Z,0.3nm,0.5s,baz=104,slow=6.3,SNR=3.5						
TXAR	Lajitas Array	123.99	51	PKP	PKPdf	14 18 09.6	+0.1
	comp=Z,0.4nm,0.7s,baz=236,slow=2.3,SNR=4.8						
U38A	Gravette	126.48	38		PKPdf	14 18 12.0	-2.0

TAP 18 14:00:36.4, 24°.38N×121°.77E, h5^{km}±1^{km}, ML1.2, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ENA	Nanau	0.05	333	P	Pg	14 00 37.6	-0.2
	baz=339						
ENA				S	Sg	14 00 38.8	0.0
	baz=339						
TWC	Suao	0.24	18	eP	Pg	14 00 40.5	-0.7
	baz=20						
TWC				eS	Sg	14 00 44.4	+0.1
	baz=20						
NACB	Ninganchiao	0.26	217	eP	Pg	14 00 41.2	-0.3
	baz=217						
NACB				eS	Sg	14 00 45.2	+0.3
	baz=217						
ETLH	Xiulin Townshi	0.31	236	P	Pg	14 00 42.2	-0.4
	baz=236						
ETLH				eS	Sg	14 00 47.7	+1.0
	baz=236						
ENTT	Nioudou	0.32	325	i P	Pg	14 00 42.4	-0.2
	baz=325						
ENTT				S	Sg	14 00 46.9	+0.1
	baz=325						
NDT	Datong Townshi	0.32	314	P	Pg	14 00 42.6	-0.1
	baz=313						
NDT				S	Sg	14 00 47.3	+0.4
	baz=313						
TWD	Chiawan	0.34	208	eP	Pg	14 00 43.4	+0.5
	baz=206						
NNSB	Datong	0.35	278	P	Pg	14 00 43.5	+0.1
	baz=277						
NNSB				S	Sg	14 00 48.0	0.0
	baz=277						
NNSH	Datong	0.35	278	P	Pg	14 00 43.4	+0.1
	baz=277						
NNSH				S	Sg	14 00 47.8	-0.2
	baz=277						
NNS	Nan Shan	0.36	279	i S	Sg	14 00 48.5	+0.1
	baz=279						
EOS1	EOS1	0.37	63	P	Pg	14 00 43.6	0.0
	baz=62						
EOS1				eS	Sg	14 00 49.3	+0.9
	baz=62						
YHNB	Yeheng	0.46	309	P	Pg	14 00 45.3	0.0
	baz=308						
YHNB				S	Sg	14 00 51.8	+0.5
	baz=308						
NWLT	Wulai	0.46	329	eP	Pg	14 00 45.4	0.0
	baz=328						
NWLT				eS	Sg	14 00 51.9	+0.5
	baz=328						
NSK	Sanguang	0.47	308	eS	Sg	14 00 52.1	+0.3
	baz=308						

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*DDA **18** 14:02:24.9, 38°.12N×38°.58E, h7^{km}±3^{km}, MW2.5*
*ISK **18** 14:02:24.4, 38°.12N×38°.56E, h12^{km}, ML1.7/4*
ISC 18 14:02:25.3±1.1**, 38°.15N**±0°.04×**38°.60E**±0°.03**, h10**^{km}±9^{km}**, n9,** σ$0^{s}.$**51**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MALT	Malatya	0.21	320	PG	Pg	14 02 29.9	0.0
MALT				SG	Sg	14 02 32.9	-0.1
ELZG	Elazig	0.46	41	i P	Pg	14 02 34.4	0.0
ELZG				i S	Sb	14 02 42.1	-0.5
AKCD	Akcadag	0.56	286	i P	Pg	14 02 36.0	-0.1
AKCD				i S	Sg	14 02 44.0	+0.5
SVRC	Sivrice-ELAZID	0.60	67	PG	Pg	14 02 37.4	+0.4
SVRC				SG	Sb	14 02 46.9	+0.3
URFA	Urfa	0.73	166	PG	Pg	14 02 38.7	-0.6
URFA				SG	Sg	14 02 49.1	+0.3
PTK	Pertek	0.97	40	PG	Pg	14 02 43.9	-0.1
PTK				SG	Sn	14 02 58.7	-0.3
DARE	Darende-Malaty	0.98	296	PG	Pg	14 02 43.2	-0.9
GZT	Gaziantep	1.14	226	i P	Pn	14 02 47.8	+0.4
GZT				IAML		14 03 04.0	
	comp=E,17nm,0.3s						
GZT				i S	Sn	14 03 04.0	+0.8
MAZI	Mazidag	1.61	115	PN	Pn	14 02 53.6	-0.3

IDC 18 14:02:35.8±1.9**, 1°.84S×126°.60E, h0**^{km}**, mb3.6**/2**, mb1 3.9**/3**, mb1mx3.4**/43**, mbtmp3.7**/3**, ML3.7**/1**, Error ellipse: s-maj=162.9km s-min=25.6km az=65.0, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.52	158	P	Pn	14 07 05.7	-0.5
	0.2nm,0.3s,baz=336,slow=11,SNR=6.3						
ASAR	Alice Springs	22.82	162	P	P	14 07 40.0	-0.6
	0.8nm,0.6s,baz=344,slow=10,SNR=4.0						
MKAR	Makanchi Array	62.08	327	P	P	14 12 58.5	+0.1
	1.0nm,0.7s,baz=116,slow=5.5,SNR=7.2						

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*SJA **18** 14:18:25.2±0.9, 19°.91S×71°.49W, h10^{km}, ML4.7, MW4.4*
*IDC **18** 14:18:33.5±0.6, 20°.05S×70°.67W, h0^{km}, mb4.3/13, mb1 4.4/17, mb1mx4.3/32, mbtmp4.3/17, ML3.9/3, MS4.3/5, Ms1 4.3/5, ms1mx3.8/26, Error ellipse: s-maj=20.7km s-min=11.3km az=56.0*
*NEIC **18** 14:18:34.5±2.0, 20°.16S±0°.05×70°.84W±0°.07, h9^{km}±1^{km}, mb4.9/64, Mwr4.9/19, Error ellipse: s-maj=10.7km s-min=8.8km az=269.0*
*NEIC **18** 14:18:35.2, 20°.19S×70°.79W, h9^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.22; $M_{\theta\theta}$-0.07; $M_{\phi\phi}$-0.15; $M_{r\theta}$1.54; $M_{\theta\phi}$0.15; $M_{\phi r}$-2.34; Fault plane solution: $M_0$2.81000×10^{16} NP1:ϕ_s146.77000°, δ87.53000°, λ90.39000°. NP2:ϕ_s317.87000°, δ2.50000°, λ81.12000°. Principal axes: T 2.7915, Plg47.0000°, Azm57.0000°; N 0.0421, Plg0.0000°, Azm327.0000°; P -2.8335, Plg43.0000°, Azm236.0000°;*
*GUC **18** 14:18:36.8±0.7, 20°.11S×70°.81W, h36^{km}±3^{km}, ML4.8*
*VAO **18** 14:18:36.8±0.5, 19°.99S×70°.78W, h25^{km}, mb4.6*
ISC 18 14:18:33.8±1.5**, 20°.09S**±0°.02×**70°.85W**±0°.05**, h5**^{km}±9^{km}**, n201,** σ$1^{s}.$**49**/203**, mb4.8**/36**, MS4.4**/8**, 3C-8D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TA01	Diego Aracena	0.79	127	i P	Pb	14 18 50.5	+0.5
TA01				i S	Sb	14 19 00.9	+0.1
PSGC	Pisagua	0.84	54	⇓iP	Pn	14 18 51.6	-0.7
PSGC				i S	Sb	14 19 02.6	+0.1
PSGCX	Pisagua	0.84	54	eP	Pb	14 18 51.0	0.0
PSGCX				IAML		14 19 11.4	
	comp=Z,9μm,0.8s						
PATCX	Punta Patache	0.98	138	⇓iP	Pb	14 18 53.5	+0.3
PATCX				i S	Sb	14 19 06.7	+0.2
PATCX	Punta Patache	0.98	138	eP	Pb	14 18 53.4	+0.2
PATCX				IAML		14 19 19.0	
	comp=Z,7μm,0.6s						
PB11	IPOC Station P	1.17	74	⇓iP	Pn	14 18 57.0	+0.1
PB11				i S	Sb	14 19 12.1	0.0
PB11				IAML		14 19 18.9	
	comp=E,34μm,0.6s						
PB11	IPOC Station P	1.17	74		Pn	14 18 57.1	+0.1
PB11	IPOC Station P	1.17	74	eP	Pn	14 18 57.0	+0.1
PB11				IAML		14 19 24.7	
	comp=Z,13μm,0.7s						
PB02	IPOC Station P	1.52	144	⇓iP	Pn	14 19 01.7	0.0
PB02				i S	Sn	14 19 21.5	-0.3
PB02				IAML		14 19 26.0	
	comp=E,17μm,0.3s						
PB12	IPOC Station P	1.55	19	⇓iP	Pb	14 19 02.7	-0.3
PB12				i S	Sg	14 19 23.7	+0.2
PB12				IAML		14 19 29.2	
	comp=N,44μm,0.8s						
PB01	IPOC Station P	1.59	127	⇓iP	Pn	14 19 03.2	+0.5
PB01				i S	Sn	14 19 23.2	-0.5
PB01				IAML		14 19 31.3	
	comp=N,9μm,0.4s						
PB01	IPOC Station P	1.59	127		Pn	14 19 03.0	+0.3
PB08	IPOC Station P	1.59	92	⇑iP	Pb	14 19 04.0	+0.1
PB08				i S	Sg	14 19 24.8	-0.3
PB08				IAML		14 19 30.7	
	comp=N,11μm,0.8s						
GO01	Chusmiza	1.61	75	⇑iP	Pb	14 19 04.3	0.0
GO01				i S	Sg	14 19 26.0	+0.4
GO01				IAML		14 19 27.6	
	comp=N,43μm,0.3s						
GO01	Chusmiza	1.61	75		Pg	14 19 04.5	-0.2
AP01	Chacalluta	1.77	16	eP	Pb	14 19 07.0	+0.2
AP01				i S	Sg	14 19 29.9	-0.9
AP01				IAML		14 19 43.9	
	comp=N,40μm,0.6s						
PB07	IPOC Station P	1.86	151	⇓iP	Pn	14 19 06.2	-0.3
PB07				i S	Sg	14 19 34.3	+0.7
PB07				IAML		14 19 40.0	
	comp=E,5μm,0.5s						
PB07	IPOC Station P	1.86	151	eP	Pn	14 19 06.3	-0.1
PB07				IAML		14 19 46.3	
	comp=Z,5μm,0.7s						
PB16	IPOC Station P	2.16	36	⇑iP	Pb	14 19 12.3	-1.3
PB16				i S	Sg	14 19 42.5	-0.7
PB16				IAML		14 19 49.7	
	comp=E,13μm,0.6s						
PB03	IPOC Station P	2.20	152	eP	Pn	14 19 10.8	-0.4
PB03				IAML		14 19 56.2	
	comp=Z,2μm,1.4s						
PB09	IPOC Station P	2.27	139	⇓iP	Pn	14 19 13.4	+1.4
PB09				i S	Sn	14 19 41.5	+1.0
PB09				IAML		14 19 53.8	
	comp=E,7μm,0.7s						
PB09	IPOC Station P	2.27	139	i P	Pn	14 19 13.4	+1.4
PB09				IAML		14 19 57.7	
	comp=Z,8μm,0.6s						
PB04	IPOC Station P	2.33	164		Pn	14 19 11.9	-1.0
PB06	IPOC Station P	2.86	156	eP	Pn	14 19 20.1	-0.2
PB06				eS	Sb	14 20 00.9	0.0
PB06				IAML		14 20 15.1	
	comp=Z,3μm,0.9s						
LVC	Limon Verde	3.09	145	Pn	Pn	14 19 24.7	+1.2
	comp=Z,17nm,0.3s,baz=331,slow=9.9,SNR=46						
LVC				Pg	Pb	14 19 30.3	+0.8
	comp=Z,85nm,0.3s,baz=332,slow=12,SNR=80						
LVC				Sn	Sn	14 19 59.6	-1.5
	comp=Z,62nm,0.3s,baz=348,slow=12,SNR=3.7						
LVC				Lg	Lg	14 20 09.7	
	comp=Z,216nm,0.3s,baz=208,slow=24,SNR=17						
LVC	Limon Verde	3.09	145	eP	Pn	14 19 25.0	+1.4
LVC				i S	Sb	14 20 08.2	+0.6
LVC	Limon Verde	3.09	145	eP	Pn	14 19 25.0	+1.4
LVC	Limon Verde	3.09	145	eP	Pn	14 19 24.3	+0.7
LVC				eS	Sb	14 20 08.6	+1.0
LVC				IAML		14 20 26.0	
	comp=Z,1μm,0.9s						
PB15	IPOC Station P	3.36	158	i P	Pn	14 19 26.5	-0.6
PB15				eS	Sb	14 20 12.7	-2.5
PB15				IAML		14 20 23.8	
	comp=Z,2μm,0.8s						
PB10	IPOC Station P	3.42	175		Pn	14 19 25.5	-2.3
PB10	IPOC Station P	3.42	175	eP	Pn	14 19 25.7	-2.0
PB10				IAML		14 20 34.3	
	comp=Z,558nm,1.2s						
PB14	IPOC Station P	4.53	175	eP	Pn	14 19 41.8	-1.5
PB14				IAML		14 21 09.8	
	comp=Z,484nm,1.2s						
LPAZ	La Paz	4.58	35	Pn	Pn	14 19 44.9	+0.6
	comp=Z,0.1nm,0.3s,baz=205,slow=10,SNR=5.1						
LPAZ				Lg	Lg	14 21 03.9	
	comp=Z,6.6nm,0.3s,baz=186,slow=13,SNR=4.0						
LPAZ	La Paz	4.58	35		Pn	14 19 48.8	+4.5
GO02	Mina Guanaco	5.18	167		Pn	14 19 51.1	-1.1
YJA	Yavi	5.39	114	eP	Pn	14 19 58.9	+3.6
YJA				IAML		14 21 39.5	
	comp=Z,70nm,2.2s						
ASTB	Santa Barbara	7.07	124	eP	Pn	14 20 20.4	+2.4
GO03	Copiap	7.49	176	Pn	Pn	14 20 21.4	-2.4
NNA	Nana	9.90	324	Pn	Pn	14 20 58.4	+1.5
GO04	Tololo Observa	10.04	180	Pn	Pn	14 20 56.9	-2.1
SIV	San Ignacio	10.15	68	Pn	Pn	14 20 59.3	-1.0
	comp=Z,3.2nm,0.3s,baz=267,slow=11,SNR=68						
SAML	Samuel	13.33	35		Pn	14 21 43.2	-0.5
SAML	Samuel	13.33	35	eP	Pn	14 21 42.6	-1.1
CPUP	Villa Florida	13.89	119	Pn	Pn	14 21 52.0	+0.7
	comp=Z,0.1nm,0.3s,baz=212,slow=14,SNR=2.5						
CPUP				LR	LR	14 28 15.2	
	comp=Z,902nm,19.3s,baz=298,slow=42						
GO05	Huala	14.89	183	P	P	14 22 09.9	-1.0
SALV	Santo Antonio	15.01	76	eP	Pn	14 22 05.7	-1.0
CLDB	Colider	17.14	60	eP	Pn	14 22 33.4	-0.9
PTGB	Pitanga	17.96	108	eP	P	14 22 45.5	+0.4
PCMB	Pacaembu	18.37	98	eP	P	14 22 50.0	+0.5
ARAG	Araguaiana, MT	18.63	80	eP	P	14 22 51.5	-0.8
GO06	Curarrehue	19.44	181	P	P	14 23 00.2	-1.0
FRTB	Fartura	20.04	103	eP	P	14 23 07.5	-0.3
PLCA	Paso Flores	20.58	179	P	P	14 23 13.8	+0.3
	comp=Z,9.9nm,1.0s,baz=27,slow=12,SNR=13						
PLCA				LR	LR	14 31 33.4	
	comp=Z,499nm,18.7s,baz=25,slow=38						
PLCA	Paso Flores	20.58	179	P	P	14 23 13.9	+0.3
PLCA	Paso Flores	20.58	179	eP	P	14 23 14.7	+1.1
IPMB	Ipameri, GO	21.50	88	eP	P	14 23 23.3	-0.4
RCLB	Rio Claro- Sao	21.85	100	eP	P	14 23 27.1	-0.3
PTGA	Pitinga	21.99	30	P	P	14 23 28.0	-0.9
	comp=Z,7.2nm,0.5s,baz=208,slow=14,SNR=11						
PTGA				LR	LR	14 32 26.8	
	comp=Z,1μm,18.2s,baz=200,slow=38						
PTGA	Pitinga	21.99	30	P	P	14 23 27.8	-1.2
PTGA	Pitinga	21.99	30	eP	P	14 23 27.7	-1.2
SPB	Sao Paulo	22.01	103	eP	P	14 23 28.5	-0.6
FLOC	Florencia	22.05	347	eP	P	14 23 32.7	+3.2
FLOC	Florencia	22.05	347	P	P	14 23 30.2	+0.7
GCUF	Volcan Galeras	22.12	343	eP	P	14 23 39.2	+8.4
BDFB	Brasilia	22.17	82	P	P	14 23 29.1	-1.9
	comp=Z,2.9nm,0.6s,baz=254,slow=15,SNR=2.5						
BDFB				LR	LR	14 33 15.2	
	comp=Z,1μm,19.2s,baz=274,slow=40						
BDFB	Brasilia	22.17	82	IAmb	IAmb	14 23 36.1	
	comp=Z,30nm,1.3s						
CRUC	La Cruz	22.34	344	eP	P	14 23 40.0	+7.0
GARC	Garzon, Huila	22.60	348	eP	P	14 23 37.6	+1.9
SOTA	Rioblanco	22.80	345	eP	P	14 23 40.1	+2.1
PCON	Cinco Dias	22.93	346	eP	P	14 23 48.2	+8.7
POPC	Popayan, Colom	23.20	345	eP	P	14 23 43.3	+1.3
GR1C	Gorgona, Isla	24.05	342	eP	P	14 23 56.4	+6.4
ORTC	Ortega, Tolima	24.24	349	eP	P	14 23 53.4	+1.6
BSCB	Bom Sucesso	24.43	97	eP	P	14 23 53.0	-0.6
CHIC	Chingaza	24.73	353	eP	P	14 23 57.2	+0.5
ANIL	Santa Ana	24.83	349	eP	P	14 24 07.8	+10
ROSC	El Rosal	25.01	352	P	P	14 24 03.1	+3.9
	comp=Z,5.1nm,0.4s,baz=144,slow=19,SNR=2.5						
SMTB	Santa Maria do	25.10	67	eP	P	14 23 59.1	-0.5
RREF	El Recreo	25.23	349	eP	P	14 24 01.5	+0.1
GUY2C	Guyana, Caldas	25.54	350	eP	P	14 24 06.0	+1.8
JANB	Januaria	25.77	83	eP	P	14 24 04.2	-1.6
NORC	Norcasia	25.80	351	eP	P	14 24 06.6	+0.6
RUSC	La Rusia	25.91	355	P	P	14 24 08.4	+0.9
CBOC	Ciudad Bolivar	26.29	348	eP	P	14 24 12.5	+2.0
HELC	Santa Helena	26.52	350	eP	P	14 24 17.3	+4.4
BARC	Barichara	26.61	355	eP	P	14 24 14.3	+0.8
PTBC	PUERTO BERRIO,	26.70	352	eP	P	14 24 12.5	-1.6
DBBC	Dabeiba	27.45	348	eP	P	14 24 29.7	+8.8
ZARC	Zaragoza, Cauc	27.69	351	eP	P	14 24 17.3	-5.7
SDV	Santo Domingo	28.79	0	P	P	14 24 33.1	+0.1
	comp=Z,2.7nm,0.8s,baz=250,slow=16,SNR=3.0						
SDV	Santo Domingo	28.79	0	eP	P	14 24 29.8	-3.3
SDV	Santo Domingo	28.79	0	eP	P	14 24 32.4	-0.6
MDP	Montagnes des	30.77	37	LR	LR	14 38 13.4	
	comp=Z,685nm,20.1s,baz=176,slow=38						
NBPS	Pedro II - PI	32.60	65	eP	P	14 25 05.6	-1.0
CUPR	Culebra, Puert	38.55	9	P	P	14 25 57.6	+0.2
CUPR				IAmb	IAmb	14 25 59.5	
	comp=Z,34nm,1.1s						
ANWB	Willy Bob	38.56	14	P	P	14 25 56.5	-1.1
TEIG	Tepich	43.55	336	P	P	14 26 39.7	+1.0
	comp=Z,3.9nm,0.5s,baz=223,slow=0.0,SNR=3.5						
CMIG	Matias Romero	43.84	326	P	P	14 26 42.3	+1.1
	comp=Z,2.1nm,0.7s,baz=176,slow=14,SNR=2.8						
HKT	Hockley	55.26	334	P	P	14 28 09.3	+1.3
HKT				IAmb	IAmb	14 28 19.1	
	comp=Z,24nm,1.8s						
TX32	Lajitas Array	58.45	326	P	P	14 28 31.4	+0.5
TX32				IAmb	IAmb	14 30 37.1	
	comp=Z,18nm,1.9s						
TXAR	Lajitas Array	58.45	326	P	P	14 28 31.6	+0.7
	comp=Z,1.2nm,0.8s,baz=148,slow=8.4,SNR=10.0						
TXAR	Lajitas Array	58.45	326	P	P	14 28 31.2	+0.3
TX31	Lajitas Ar. Si	58.45	326	P	P	14 28 31.5	+0.6
TX31				IAmb	IAmb	14 30 37.1	
	comp=Z,17nm,1.9s						
MIAR	Mount Ida	58.48	338	P	P	14 28 31.2	+0.3
MIAR				IAmb	IAmb	14 28 40.2	
	comp=Z,11nm,0.8s						
T47A	Sharon Grove	58.81	345	P	P	14 28 32.6	-0.5
X37A	Clayton	59.17	336	P	P	14 28 35.9	+0.2
U40A	Yellville	59.87	340	P	P	14 28 40.4	-0.1
U40A				IAmb	IAmb	14 28 49.3	
	comp=Z,7.5nm,0.9s						
S44A	Carbondale	60.03	343	P	P	14 28 40.6	-0.9
MGMO	Mountain Grove	60.41	340	P	P	14 28 44.2	0.0
MNTX	Cornudas Mount	61.22	327	P	P	14 28 49.9	+0.1
S39A	Bolivar	61.24	340	P	P	14 28 49.8	-0.1
S39A				IAmb	IAmb	14 28 50.8	
	comp=Z,12nm,1.1s						
T35A	Sooner Cattle	61.66	337	P	P	14 28 52.3	-0.4
T35A				IAmb	IAmb	14 29 55.8	
	comp=Z,14nm,0.9s						
M55A	Ridgway	61.68	353	P	P	14 28 53.3	+0.6
VNA2	Neumayer--Watz	62.58	161	P	P	14 28 57.1	-1.3
	baz=346,slow=20						
319A	Douglas	63.07	323	P	P	14 29 02.8	+0.4
319A				IAmb	IAmb	14 29 13.3	
	comp=Z,8.4nm,0.8s						
J59A	Piesco	63.33	357	P	P	14 29 04.3	+0.5
J55A	Hilton	63.37	354	P	P	14 29 03.8	-0.1
J55A				IAmb	IAmb	14 29 46.1	
	comp=Z,14nm,0.8s						
SNAA	Sanae	64.20	161	P	P	14 29 09.7	+0.4

I49A	Point Hope	64.65	350	P	P	14 29 11.6	-0.8
KSCO	Kaye Shedlock'	65.89	333	P	P	14 29 21.0	+0.2
TRQ	Mont Tremblant	66.08	357	P	P	14 29 22.0	+0.3
SDCO	Great Sand Dun	66.12	330	P	P	14 29 22.7	+0.3
SDCO				IAmb	IAmb	14 29 33.1	
	comp=Z,7.5nm,1.1s						
WUAZ	Wupatki	67.33	325	P	P	14 29 31.2	+1.1
WUAZ				IAmb	IAmb	14 29 41.4	
	comp=Z,6.2nm,1.0s						
TAOE	Nuku Hiva Isla	67.63	268	*e*LR	LR	14 49 55.7	
	comp=Z,106nm,22.1s						
SRU	San Rafael Swe	69.62	328	P	P	14 29 45.5	+1.2
Q16A	Castle Valley	69.80	327	P	P	14 29 47.0	+1.6
CCUT	Cedar City	69.92	325	P	P	14 29 48.3	+2.0
P17A	Butcher Ranch,	70.00	328	P	P	14 29 48.2	+1.5
MSU	Marysvale	70.00	327	P	P	14 29 48.4	+1.7
QSPA	South Pole Qui	70.09	180	P	P	14 29 47.8	+1.0
QSPA				IAmb	IAmb	14 29 57.6	
	comp=Z,19nm,1.1s						
DBIC	Dimbokro	70.10	75	P	P	14 29 46.3	-1.3
	comp=Z,6.1nm,1.1s,baz=196,slow=4.1,SNR=4.2						
DBIC	Dimbokro	70.10	75	IAmb	IAmb	14 30 05.6	
	comp=Z,7.9nm,0.9s						
SHPR	Sheep Range	70.15	323	P	P	14 29 50.0	+2.4
SHPR				IAmb	IAmb	14 29 59.1	
	comp=Z,25nm,1.9s						
PSUT	Pine Spring	70.90	326	P	P	14 29 54.3	+2.1
NLU	North Lily Min	71.04	328	P	P	14 29 54.7	+1.7
TPNV	Topopah Spring	71.08	323	P	P	14 29 55.7	+2.4
TPNV				IAmb	IAmb	14 30 22.9	
	comp=Z,8.5nm,1.1s						
DUG	Dugway, Tooele	71.59	327	P	P	14 29 58.3	+2.0
DUG				IAmb	IAmb	14 30 08.4	
	comp=Z,26nm,1.7s						
R11A	Troy Canyon, C	71.70	324	P	P	14 29 58.9	+1.9
PDAR	Pinedale Array	72.00	331	P	P	14 29 58.9	+0.2
	comp=Z,0.3nm,0.5s,baz=134,slow=6.4,SNR=4.1						
PDAR	Pinedale Array	72.00	331	P	P	14 29 59.3	+0.5
TBI	Tubuai	72.23	251	*e*LR	LR	14 52 07.2	
	comp=Z,360nm,26.2s						
MDND	Maddock	72.38	340	P	P	14 30 00.9	+0.2
ELK	Elko	73.24	326	P	P	14 30 07.5	+1.2
NVAR	Mina Array Bea	73.27	323	P	P	14 30 08.4	+1.9
	comp=Z,2.0nm,0.8s,baz=163,slow=7.1,SNR=12						
NVAR	Mina Array Bea	73.27	323	P	P	14 30 07.2	+0.7
FXWY	Fox Creek	73.35	331	P	P	14 30 08.0	+1.2
ULM	Lac du Bonnet	73.44	344	P	P	14 30 06.6	-0.3
	comp=Z,1.1nm,0.4s,baz=192,slow=5.3,SNR=3.2						
ULM	Lac du Bonnet	73.44	344	IAmb	IAmb	14 30 14.9	
	comp=Z,7.7nm,1.1s						
IMW	Indian Meadow	73.51	331	P	P	14 30 08.7	+0.9
FLWY	Flagg Ranch	73.54	331	P	P	14 30 07.9	0.0
KVN	Kaiserville	73.59	323	P	P	14 30 09.2	+0.9
PPT2	Papeete2	73.87	257	*e*LR	LR	14 52 53.0	
	comp=Z,296nm,24.2s						
YNE	Yellowstone No	73.96	332	P	P	14 30 11.6	+1.2
YMR	Madison River	74.12	331	P	P	14 30 12.9	+1.6
YHH	Holmes Hill	74.16	332	P	P	14 30 13.6	+2.0
YHB	Horse Butte	74.29	331	P	P	14 30 10.8	-1.4
PAHR	Pah Rah Range	74.76	323	P	P	14 30 16.7	+1.7
PAHR				IAmb	IAmb	14 30 17.9	
	comp=Z,7.6nm,0.9s						
MCMT	McKenzie Canyo	75.10	330	P	P	14 30 18.2	+1.2
AFDM	Forest Hills D	75.16	322	P	P	14 30 18.6	+1.4
MFID	Camas Ranch	75.48	328	P	P	14 30 19.9	+0.8
MFID				IAmb	IAmb	14 30 32.5	
	comp=Z,26nm,1.8s						
ORV	Oroville	75.87	322	P	P	14 30 22.3	+1.0
ORV				IAmb	IAmb	14 30 33.7	
	comp=Z,18nm,1.4s						
WVOR	Wild Horse Val	76.23	326	P	P	14 30 24.4	+1.0
WVOR				IAmb	IAmb	14 31 21.7	
	comp=Z,13nm,1.7s						
EGMT	Eagleton	76.24	334	P	P	14 30 23.8	+0.5
EGMT				IAmb	IAmb	14 30 33.4	
	comp=Z,20nm,1.4s						
BMO	Blue Mountains	77.26	328	P	P	14 30 29.9	+0.8
BMO				IAmb	IAmb	14 30 41.4	
	comp=Z,10nm,1.4s						
TOA0	Torodi Ar. Sit	78.61	71	P	P	14 30 35.8	-1.4
TOA0				IAmb	IAmb	14 30 44.7	
	comp=Z,12nm,0.9s						
TORD	Torodi Ar. Bea	78.61	71	P	P	14 30 36.1	-1.0
	comp=Z,10nm,0.9s,baz=257,slow=4.8,SNR=37						
TORD	Torodi Ar. Bea	78.61	71	P	P	14 30 35.7	-1.5
TSUM	Tsumeb	82.19	108	P	P	14 30 55.2	-1.4
YKA	Yellowknife Ar	89.27	341	P	P	14 31 30.8	+0.4
	comp=Z,4.4nm,0.8s,baz=138,slow=5.3,SNR=61						
DZM	Mont Dzumac	110.09	236	*e*LR	LR	15 09 33.4	
	comp=Z,170nm,26.9s						
KBZ	Khabaz	120.64	50	PKP	PKiKP	14 37 27.2	+0.4
	comp=Z,5.8nm,1.1s,baz=252,slow=6.4,SNR=3.9						
H11S2	WAKE ISLAND Hy	125.89	279	T	T	16 57 04.5	
	baz=101,slow=74,SNR=213						
H11S1	WAKE ISLAND Hy	125.89	279	T	T	16 57 05.1	
	baz=101,slow=74,SNR=164						
H11S3	WAKE ISLAND Hy	125.90	279	T	T	16 57 05.8	
	baz=101,slow=74,SNR=120						
H11N3	WAKE ISLAND Hy	125.94	280	T	T	16 57 06.0	
	baz=101,slow=74,SNR=65						
H11N2	WAKE ISLAND Hy	125.95	280	T	T	16 57 13.8	
	baz=101,slow=74,SNR=63						
H11N1	WAKE ISLAND Hy	125.95	280	T	T	16 57 14.4	
	baz=101,slow=74,SNR=52						
ARU	Arti	127.98	33	PKP	PKPdf	14 37 39.8	-0.7
	comp=Z,1.0nm,0.3s,baz=138,slow=6.2,SNR=3.3						
ASAR	Alice Springs	130.26	210	PKhKP	PKPpre	14 37 43.1	
	comp=Z,1.3nm,0.9s,baz=148,slow=2.2,SNR=9.9						
ASAR	Alice Springs	130.26	210	PKPdf	PKPdf	14 37 45.3	-0.7
WRA	Warramunga Arr	133.19	213	PKP	PKPdf	14 37 51.9	+0.3
	comp=Z,0.9nm,0.9s,baz=147,slow=1.6,SNR=6.1						
WRA	Warramunga Arr	133.19	213		PKPdf	14 37 51.2	-0.4
BVAR	Borovoye Array	135.63	33	PKP	PKPdf	14 37 55.1	0.0
	comp=Z,0.6nm,0.8s,baz=230,slow=8.8,SNR=3.5						
KURK	Kurchatov	141.10	31		PKPdf	14 38 03.3	-1.8
KURBB	Kurchatov Arra	141.12	31	PKP	PKPdf	14 38 03.3	-1.9
	comp=Z,0.4nm,0.8s,baz=300,slow=2.8,SNR=6.2						
ZALV	Zalesovo Beam	141.41	23	PKP	PKPdf	14 38 05.0	-0.7
	comp=Z,2.7nm,0.8s,baz=285,slow=2.5,SNR=7.9						
ZALV	Zalesovo Beam	141.41	23		PKPdf	14 38 04.7	-0.9
AAK	Ala-Archa	143.22	44	PKP	PKPdf	14 38 08.3	-1.2
	comp=Z,0.6nm,0.7s,baz=234,slow=1.7,SNR=2.8						
MAKZ	Makanchi	145.34	33		PKPbc	14 38 12.2	-0.4
MK31	Makanchi Array	145.51	33		PKPab	14 38 13.5	+0.1
MKAR	Makanchi Array	145.51	33	PKPbc	PKPab	14 38 13.4	+0.1
	comp=Z,8.7nm,0.8s,baz=336,slow=2.7,SNR=66						
KSH	Kashi	145.58	48	PKPbc	PKPab	14 38 13.8	-0.2
KSH				pPKP	PKiKP	14 38 24.3	+6.7
KSH				PP	PP	14 41 37.6	+3.5
KSH				PKS	PKSdf	14 41 51.8	+2.7
KSH				SKKS		14 43 24.8	
TLY	Talaya	148.18	7	PKPbc	PKiKP	14 38 21.6	-0.8
USRK	Ussuriysk Ar.	149.34	327	PKPbc	PKiKP	14 38 24.3	-0.7
	comp=Z,4.7nm,0.9s,baz=46,slow=4.6,SNR=7.6						
USRK	Ussuriysk Ar.	149.34	327		PKiKP	14 38 24.7	-0.3
MJAR	Matsushiro Arr	149.78	309	PKPbc	PKPbc	14 38 25.5	+0.3
	comp=Z,3.5nm,0.8s,baz=175,slow=1.3,SNR=6.0						
HYB	Hyderabad	150.92	90	*i* PKP	PKiKP	14 38 29.0	-0.1
SONM	Songino Array	152.23	4	PKPbc	PKiKP	14 38 31.5	+0.5
	comp=Z,2.0nm,0.7s,baz=333,slow=1.7,SNR=7.7						
SONM	Songino Array	152.23	4		PKiKP	14 38 31.1	+0.1
ULN	Ulaanbaatar	152.24	3		PKPbc	14 38 30.4	-0.4
KSRS	Korea Array	156.20	321	PKPab	PKPab	14 38 58.8	+1.3
	comp=Z,1.4nm,0.9s,baz=46,slow=6.0,SNR=3.5						

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*NSSP **18** 14:33:09.0, 38.°78N×43.°65E, h10^{km}, Ms3.4*
*DDA **18** 14:33:10.6, 38.°85N×43.°58E, h9^{km}±2^{km}, MW4.0*
*TEH **18** 14:33:10.5, 38.°86N×43.°53E, h8^{km}, ML3.8*
*ISK **18** 14:33:10.1, 38.°88N×43.°55E, h5^{km}, ML4.0/19*
*IDC **18** 14:33:10.9±1.2, 38.°80N×43.°61E, h0^{km}, mb3.6/9, mb1 3.6/13, mb1mx3.5/46, mbtmp3.5/13, ML2.9/4, MS3.0/4, Ms1 3.0/4, ms1mx2.5/43, Error ellipse: s-maj=19.4km s-min=10.1km az=148.0*
ISC 18 14:33:11.3±1.1, **38.°85N**±0.°01×**43.°55E**±0.°02, **h1**^{km}±8^{km}, **n106**, σ1^{s}**53**/143, **mb3.6**/8, **MS3.1**/4, **8C-10D**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.14	7	⇓*i*P	Pg	14 33 13.2	-0.8
VMUR				IAML		14 33 16.0	
	comp=N,34μm,0.3s						
VMUR				*i* S	Sg	14 33 16.4	+0.5
VMUR				IAML		14 33 17.0	
	comp=E,49μm,0.3s						
VMUR	Van-Muradiye	0.14	7	*e*Pg	Pg	14 33 13.2	-0.8
VANB	Van	0.29	206	PG	Pb	14 33 18.8	-0.5
VANB				SG	Sb	14 33 25.2	+0.6
VANB	Van	0.29	206	*e*Pg	Pb	14 33 18.4	-0.9
TVAN	Van	0.34	199	⇑*i*P	Pg	14 33 18.6	+0.7
TVAN				*i* S	Sb	14 33 27.6	+1.3
TVAN				IAML		14 33 34.0	
	comp=N,6μm,0.6s						
TVAN				IAML		14 33 34.0	
	comp=E,6μm,0.6s						
TVAN	Van	0.34	199	*e*Pg	Pg	14 33 18.6	+0.7
CLDR	Caldiran	0.41	45	PG	Pg	14 33 19.0	-0.1
CLDR	Caldiran	0.41	45	⇓*i*P	Pg	14 33 18.5	-0.7
CLDR				*i* S	Sb	14 33 27.2	-1.1
CLDR				IAML		14 33 29.0	
	comp=N,4μm,0.5s						
CLDR				IAML		14 33 33.0	
	comp=E,5μm,0.5s						
CLDR	Caldiran	0.41	45	*e*Pg	Pg	14 33 19.1	-0.1
ADCV	BITLIS_Adilcev	0.65	266	⇓*i*P	Pg	14 33 23.6	-0.1
ADCV				IAML		14 33 34.0	
	comp=E,2μm,0.7s						
ADCV				*i* S	Sb	14 33 34.4	-0.7
ADCV				IAML		14 33 35.0	
	comp=N,4μm,0.5s						
ADCV	BITLIS_Adilcev	0.65	266	*e*Pg	Pg	14 33 23.4	-0.3
GEVA	Gevas	0.66	216	⇑*i*P	Pg	14 33 23.5	-0.6
GEVA				*i* S	Sn	14 33 38.9	-0.2
GEVA	Gevas	0.66	216	*e*Pg	Pg	14 33 23.4	-0.6
AKDM	Akdamar-Van	0.69	221	PG	Pg	14 33 24.2	-0.3
AKDM	Akdamar-Van	0.69	221	*e*Pg	Pg	14 33 23.9	-0.6
DYDN	Diyadin	0.70	9	⇓*i*P	Pg	14 33 23.4	-1.4
DYDN				*i* S	Sg	14 33 34.8	+1.0
DYDN				IAML		14 33 38.0	
	comp=E,2μm,0.7s						
DYDN				IAML		14 33 40.0	
	comp=N,2μm,0.9s						
DYDN	Diyadin	0.70	9	*e*Pg	Pg	14 33 23.6	-1.1
MLAZ	Malazgirt-MUS	0.83	291	PG	Pg	14 33 27.2	0.0
MLAZ				SG	Sb	14 33 39.7	-0.7
MLAZ	Malazgirt-MUS	0.83	291	*e*Pg	Pg	14 33 27.6	+0.4
AGRB	Hanur-Agry	0.84	329	PG	Pg	14 33 26.6	-0.9
AGRB				SG	Sb	14 33 39.6	-1.2
AGRB	Hanur-Agry	0.84	329	*e*Pg	Pg	14 33 27.1	-0.4
BASK	Baskale_VAN	0.88	156	*i* P	Pg	14 33 27.9	-0.2
BASK				*i* S	Sn	14 33 48.0	+3.6
BASK	Baskale_VAN	0.88	156	*e*Pg	Pg	14 33 28.3	+0.2
IGDI	IGDIR	1.09	22	*i* P	Pg	14 33 31.0	-1.4
IGDI				*i* S	Sn	14 33 50.4	+0.7
IGDI				IAML		14 33 52.0	
	comp=E,864nm,0.6s						
IGDI				IAML		14 33 54.0	
	comp=N,930nm,0.7s						
IGDI	IGDIR	1.09	22	*e*Pg	Pg	14 33 30.7	-1.6
BLIS	Bitlis-Merkez	1.21	249	⇑*i*P	Pg	14 33 32.9	-1.4
BLIS				*i* S	Sg	14 33 50.5	+0.5
BLIS				IAML		14 33 58.0	
	comp=N,1μm,0.8s						
BLIS				IAML		14 33 59.0	
	comp=E,929nm,1.4s						
BLIS	Bitlis-Merkez	1.21	249	*e*Pg	Pg	14 33 33.0	-1.4
EKAR	Karacoban	1.22	290	*i* P	Pg	14 33 34.7	-0.1
EKAR				*i* S	Sn	14 33 56.7	+3.6
EKAR				IAML		14 34 02.0	
	comp=E,4μm,1.1s						
EKAR				IAML		14 34 11.0	
	comp=N,3μm,0.9s						
TASB	TASBURUN-IGDIR	1.25	25	PN	Pg	14 33 34.8	-0.5
TASB	TASBURUN-IGDIR	1.25	25	*e*Pg	Pg	14 33 35.2	-0.1
VNNZ	Vanand	1.27	10	*e*P	Pn	14 33 36.7	+0.4
VNNZ				*e*S	Sn	14 33 56.1	+2.1
HAKT	HAKKARI	1.30	174	⇑*i*P	Pg	14 33 34.8	-1.4
HAKT				*i* S	Sn	14 33 59.2	+4.3
HAKT	HAKKARI	1.30	174	*e*Pg	Pg	14 33 34.7	-1.5
EATA	Eleskirt	1.30	321	⇓*i*P	Pg	14 33 34.4	-1.9
EATA				*i* S	Sb	14 33 54.3	+0.2
EATA				IAML		14 33 56.0	
	comp=N,998nm,0.4s						
EATA				IAML		14 34 00.0	
	comp=E,923nm,0.5s						
EATA	Eleskirt	1.30	321	*e*Pg	Pg	14 33 34.3	-1.9
HYR	Heyderabad	1.33	49	*e*Pg	Pb	14 33 38.8	+1.7
METS	Metsamor	1.36	17	*e*P	Pb	14 33 37.7	0.0
METS				*e*S	Sn	14 33 57.5	+1.3
YOVA	Hakkari_Yksek	1.39	155	*i* P	Pn	14 33 37.7	-0.4
YOVA				*i* S	Sn	14 34 00.5	+3.3
NRKZ	NAREK	1.43	37	*e*P	Pn	14 33 38.1	-0.5
NRKZ				*e*S	Sn	14 33 58.2	+0.1
ARUZ	Aruch	1.49	16	*e*P	Pg	14 33 40.0	+0.2
ARUZ				*e*S	Sn	14 34 01.3	+1.8
SRTM	Siirt_Merkez	1.54	237	⇓*i*P	Pn	14 33 39.9	-0.1
SRTM				*i* S	Sg	14 34 04.3	+3.6
SRTM				IAML		14 34 05.0	
	comp=E,1μm,1.0s						
SRTM				IAML		14 34 10.0	
	comp=N,1μm,1.1s						
NAX	Nakhchivan	1.55	77	*e*Pg	Pg	14 33 41.0	0.0
DIGO	Kars	1.57	355	*i* P	Pn	14 33 40.4	-0.2
DIGO				*i* S	Sg	14 34 06.1	+4.4
DIGO				IAML		14 34 13.0	
	comp=N,700nm,0.8s						
DIGO				IAML		14 34 14.0	
	comp=E,888nm,0.7s						
DIGO	Kars	1.57	355	*e*Pn	Pn	14 33 40.3	-0.2
GNI	Garni	1.59	35	Pg	Pb	14 33 41.1	-0.5
	comp=E,50nm,0.3s,baz=219,slow=1.8,SNR=117						
GNI				Lg	Lg	14 34 02.9	
	comp=E,53nm,0.3s,baz=18,slow=20,SNR=8.6						
GNI				LR	LR	14 34 36.6	
	comp=E,104nm,21.1s,baz=124,slow=53						
GNI	Garni	1.59	35	⇑*i*P	Pn	14 33 40.7	0.0
GNI				⇑*i*S	Sg	14 34 02.5	0.0
MUSM	Mu-Merkez	1.60	266	⇑*i*P	Pn	14 33 39.8	-1.1
MUSM				*i* S	Sg	14 34 03.2	+0.5
MUSM	Mu-Merkez	1.60	266	*e*Pn	Pn	14 33 39.7	-1.1
CUKT	Cukurca	1.60	178	PN	Pn	14 33 40.9	0.0
CUKT	Cukurca	1.60	178	*i* P	Pn	14 33 40.1	-0.8
CUKT				*i* S	Sg	14 34 14.4	+12
CUKT				IAML		14 34 22.0	
	comp=E,1μm,0.8s						
CUKT				IAML		14 34 25.0	
	comp=N,1μm,1.0s						
CUKT	Cukurca	1.60	178	*e*Pn	Pn	14 33 41.2	+0.3
SIRT	Sirnak	1.61	213	PN	Pn	14 33 41.1	+0.2
SIRT	Sirnak	1.61	213	*e*Pn	Pb	14 33 41.4	-0.5
SIRN	Sırnak	1.62	214	⇑*i*P	Pn	14 33 41.5	+0.3
SIRN				*i* S	Sg	14 34 13.3	+10
SIRN				IAML		14 34 15.0	
	comp=N,889nm,1.4s						
SIRN				IAML		14 34 21.0	
	comp=E,828nm,0.8s						
VRTB	Varto-Mus	1.66	281	PN	Pn	14 33 41.8	+0.1
VRTB				SN	Sb	14 34 04.4	+0.1
VRTB	Varto-Mus	1.66	281	⇓*i*P	Pn	14 33 41.3	-0.4
VRTB				*i* S	Sg	14 34 07.3	+2.6
VRTB				IAML		14 34 16.0	
	comp=N,1μm,1.0s						
VRTB				IAML		14 34 17.0	
	comp=E,2μm,0.9s						
KAPZ	Kaputan	1.72	31	*e*P	Pb	14 33 43.2	-0.6
KAPZ				*e*S	Sg	14 34 07.0	+0.5
KOPR	Koprukoy-ERZUR	1.74	311	PN	Pn	14 33 42.5	-0.3
EAK	Akyaka	1.83	1	*i* P	Pg	14 33 46.1	-0.4
EAK				*i* S	Sg	14 34 15.8	+5.6
EAK				IAML		14 34 21.0	
	comp=N,827nm,1.1s						
EAK				IAML		14 34 34.0	
	comp=E,592nm,1.5s						
BNGL	BINGOL	1.88	274	⇓*i*P	Pn	14 33 45.2	+0.4
BNGL				*i* S	Sg	14 34 13.2	+1.7
SENK	Senkaya-Erzuru	1.94	332	PN	Pn	14 33 45.4	-0.2
SVAN	Silvan-Diyarba	1.97	250	PN	Pn	14 33 46.1	+0.2
SVAN				SN	Sb	14 34 12.5	-0.7
SVAN	Silvan-Diyarba	1.97	250	⇓*i*P	Pb	14 33 47.7	-0.3
SVAN				*i* S	Sg	14 34 15.5	+0.8
KARO	Karliova-Bingo	2.00	284	PN	Pn	14 33 46.6	+0.2
AKDA	Akdag	2.10	307	*i* P	Pn	14 33 48.5	+0.6
AKDA				*i* S	Sg	14 34 25.1	+6.2
ITBZ	Tabriz	2.13	106	*e*Pn	Pn	14 33 49.1	+0.9
ECAT	Cat-ERZURUM	2.14	291	*i* P	Pb	14 33 49.6	-1.3
ECAT				*i* S	Sg	14 34 19.4	-0.6
STE	Stepanavan	2.24	16	⇓*e*P	Pb	14 33 52.2	-0.4
BNGB	Bingl	2.24	274	PN	Pn	14 33 50.2	+0.5
YEDI	Yedisu-Bingol	2.41	285	PN	Pn	14 33 52.5	+0.5
DDEM	Demirkent	2.46	326	*i* P	Pb	14 33 56.5	+0.1
DDEM				*i* S	Sg	14 34 29.0	-1.4
DDEM				IAML		14 34 35.0	
	comp=E,196nm,0.8s						
DDEM				IAML		14 34 38.0	
	comp=N,245nm,0.6s						
TVRZ	Varzaqan	2.46	97	*e*Pn	Pb	14 33 56.1	-0.4
TVRZ				*e*		14 34 42.9	
HANI	Diyarbakir_Han	2.50	261	*i* P	Pb	14 33 56.0	-1.2
HANI				*i* S	Sg	14 34 30.2	-1.6
DBAD	Bademkaya	2.59	327	*i* P	Pb	14 33 58.4	-0.3
DBAD				*i* S	Sg	14 34 38.6	+4.1
KOPT	Kop Dagi	2.63	297	*i* P	Pb	14 33 59.2	-0.3
KOPT				*i* S	Sg	14 34 39.1	+3.1
MARD	Mardin	2.67	236	*i* P	Pn	14 33 56.5	+0.9
MARD				*i* S	Sg	14 34 35.6	-1.5
MARD				IAML		14 34 50.0	
	comp=N,409nm,1.0s						
MARD				IAML		14 34 55.0	
	comp=E,284nm,0.8s						
MAHB	Mahabad	2.69	140	*e*Pn	Pb	14 33 58.4	-2.0
EPOS	Posof	2.72	347	*i* P	Pb	14 34 00.1	-0.7
EPOS				*i* S	Sg	14 34 50.2	+11
AHAR	Ahar	2.77	96	*e*Pn	Pb	14 34 01.3	-0.3
AHAR				*e*		14 34 11.3	
IHRS	Heris	2.79	100	*e*Pn	Pn	14 33 58.7	+1.4
IHRS				*e*		14 34 06.1	
MAZI	Mazidag	2.81	241	PN	Pn	14 33 58.3	+0.8
DYBB	Diyarbakir	2.83	253	PN	Pn	14 33 58.3	+0.6
IHSH	Hashtrud	2.96	99	*e*Pn	Pg	14 34 07.0	-1.1
BCA	Borcka	2.98	331	PN	Pn	14 34 00.2	+0.4
BAYT	Aydıntepe-Bayb	3.05	301	PN	Pn	14 34 01.4	+0.6
PTK	Pertek	3.25	272	PN	Pn	14 34 04.3	+0.7
SVRC	Sivrice-ELAZID	3.36	263	PN	Pn	14 34 06.1	+1.0
URFA	Urfa	3.98	251	PN	Pn	14 34 14.8	+1.2
MALT	Malatya	4.05	264	PN	Pn	14 34 15.8	+1.3
IDHR	Dehrash	4.73	150	*e*Pn	Pn	14 34 25.9	+1.9
KBZ	Khabaz	4.90	354	Pn	Pn	14 34 29.6	+3.6
	comp=E,0.1nm,0.3s,baz=191,slow=10,SNR=1.8						
QABG	Abgarm-Qazvin	5.74	121	*e*Pn	Pn	14 34 39.6	+1.7
BRTR	Keskin Array B	7.74	280	Pn	Pn	14 35 09.3	+4.1
	comp=E,0.1nm,0.3s,baz=94,slow=15,SNR=2.6						
BRTR				LR	LR	14 38 40.0	
	comp=E,59nm,19.5s,baz=90,slow=42						
AKTO	Aktyubinsk	15.46	37	Pn	Pn	14 36 49.0	-1.4
	comp=E,0.1nm,0.3s,baz=237,slow=16,SNR=3.4						
AKASG	Malin Array Be	15.58	324	Pn	Pn	14 36 51.7	-0.3
	comp=E,0.3nm,0.3s,baz=128,slow=11,SNR=3.3						
ARU	Arti	20.21	25	P	P	14 37 47.6	+0.3
	comp=E,0.8nm,0.3s,baz=224,slow=11,SNR=7.0						
KLMR	Klimovskoe	22.17	355	*e*	P	14 38 07.1	-1.4
KLMR				AMP		14 38 21.4	
	comp=Z,25nm,1.9s						
BVAR	Borovoye Array	23.26	44	P	P	14 38 20.4	+0.4
	comp=Z,1.3nm,1.0s,baz=263,slow=5.7,SNR=4.1						
FINES	FINESS Array B	25.07	340	P	P	14 38 35.4	-1.5
	comp=Z,0.8nm,0.6s,baz=152,slow=16,SNR=2.8						
ATD	Arta Tunnel	27.22	182	LR	LR	14 50 31.5	
	comp=Z,50nm,18.1s,baz=40,slow=38						
KURBB	Kurchatov Arra	27.24	53	P	P	14 38 57.5	+0.8
	comp=Z,1.0nm,0.7s,baz=263,slow=9.5,SNR=9.1						
HFS	Hagfors	28.38	328	P	P	14 39 07.0	+0.2
	comp=Z,3.5nm,0.9s,baz=146,slow=10,SNR=3.5						
HFS				LR	LR	14 51 30.2	
	comp=Z,41nm,18.4s,baz=132,slow=39						
NOA	NORSAR Array B	29.90	329	P	P	14 39 20.4	0.0
	comp=Z,0.3nm,0.6s,baz=125,slow=8.8,SNR=3.3						
NOA				LR	LR	14 52 48.8	
	comp=Z,19nm,19.4s,baz=220,slow=39						
TORD	Torodi Ar. Bea	44.95	247	P	P	14 41 26.3	-1.8
	comp=Z,0.5nm,0.7s,baz=54,slow=8.2,SNR=4.0						
TORD				LR	LR	15 04 15.9	
	comp=Z,429nm,19.0s,baz=260,slow=42						
CMAR	Chiang Mai Arr	51.86	97	P	P	14 42 21.3	-0.1
	comp=Z,0.3nm,0.3s,baz=306,slow=7.7,SNR=4.7						
YKA	Yellowknife Ar	77.48	350	P	P	14 45 07.0	-1.0
	comp=Z,0.5nm,1.0s,baz=20,slow=6.2,SNR=4.0						

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*SJA **18** 14:35:54.6±0.7, 20.°14S×71.°01W, h25^{km}±3^{km}, ML4.9, MW5.1*
*IDC **18** 14:35:55.4±0.5, 20.°04S×70.°62W, h0^{km}, mb4.7/16, mb1 4.8/21, mb1mx4.7/33, mbtmp4.6/21, ML3.9/5, MS4.3/18, Ms1 4.3/18, ms1mx4.3/24, Error ellipse: s-maj=19.7km s-min=10.4km az=57.0*
*NEIC **18** 14:35:56.9±1.9, 20.°19S±0.°05×70.°79W±0.°07, h14^{km}±1^{km}, mb5.2/168, Mwr5.0/21, ML4.9(GUC), Error ellipse: s-maj=10.4km s-min=8.6km az=276.0*
*GUC **18** 14:35:56.5±0.7, 20.°15S×70.°98W, h43^{km}±2^{km}, ML4.9*
*MOS **18** 14:35:57.8±1.1, 20.°01S×70.°64W, h27^{km}, mb5.2/24, Error ellipse: s-maj=13.7km s-min=8.1km az=109.6*
*NEIC **18** 14:35:58.4, 20.°21S×70.°84W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.47; M$_{\theta\theta}$-0.32; M$_{\phi\phi}$-2.15; M$_{r\theta}$0.64; M$_{\theta\phi}$1.48; M$_{\phi r}$-2.52; Fault plane solution: M$_0$3.79000×10^{16} NP1:φ$_s$162.14000°, δ67.27000°, λ100.40000°. NP2:φ$_s$316.73000°, δ24.88000°, λ66.69000°. Principal axes: T 3.5775, Plg66.0000°, Azm91.0000°; N 0.3953, Plg10.0000°, Azm338.0000°; P -3.9728, Plg22.0000°, Azm244.0000°;*
*BJI **18** 14:35:59.0±0.0, 20.°10S×70.°80W, h20^{km}, mB5.5/9, Ms5.3/4, Ms7 5.0/5*
*VAO **18** 14:36:00.5±1.0, 20.°02S×70.°71W, h38^{km}±7^{km}, mb4.8*
*GCMT **18** 14:36:01.8±0.2, 20.°13S±0.°02×71.°10W±0.°01, h22^{km}, MW5.1/102, Moment Tensor Solution. s59,c72; s102,c151; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$5.05±.18; M$_{\theta\theta}$0.04±.10; M$_{\phi\phi}$-5.09±.13; M$_{r\theta}$0.32±.17; M$_{\theta\phi}$0.86±.07; M$_{\phi r}$-2.68±.19; Best double couple: M$_0$5.80600×10^{16} NP1:φ$_s$349.00000°, δ31.00000°, λ88.00000°. NP2:φ$_s$172.00000°, δ59.00000°, λ91.00000°. Principal axes: T 5.7170, Plg76.0000°, Azm86.0000°; N 0.1810, Plg1.0000°, Azm351.0000°; P -5.8950, Plg14.0000°, Azm261.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 18 14:35:58.6±0.9, **20.°14S**±0.°03×**70.°84W**±0.°04, **h26**^{km}±6^{km}, **n695**, σ1^{s}**23**/707, **mb5.1**/96, **MS4.6**/21, **15C-11D**, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA01	Diego Aracena	0.75	124	⇑*e*P	Pb	14 36 12.1	-1.0
TA01				*i* S	Sn	14 36 24.0	0.0
TA01				IAML		14 36 25.9	
	comp=N,39μm,0.6s						
PSGC	Pisagua	0.87	51	⇓*i*P	Pb	14 36 13.6	-1.4
PSGC				*i* S	Sn	14 36 26.7	-0.3
PSGCX	Pisagua	0.87	51	*e*P	Pb	14 36 14.2	-0.9
PSGCX				*e*S	Sn	14 36 28.1	+1.1
PSGCX				IAML		14 36 29.5	
	comp=Z,22μm,0.3s						
PATCX	Punta Patache	0.93	136	⇑*i*P	Pn	14 36 14.9	-1.2
PATCX				*i* S	Sn	14 36 28.8	0.0
PATCX				IAML		14 36 35.6	
	comp=E,33μm,0.6s						
PATCX	Punta Patache	0.93	136	*e*P	Pn	14 36 15.1	-1.0
PATCX				*e*S	Sn	14 36 29.9	+1.1
PATCX				IAML		14 36 35.1	
	comp=Z,23μm,1.2s						
PB11	IPOC Station P	1.18	71	⇓*e*P	Pn	14 36 18.9	-0.6
PB11				*i* S	Sb	14 36 37.0	+1.7
PB11				IAML		14 36 39.5	
	comp=N,50μm,0.4s						
PB11	IPOC Station P	1.18	71	Pn	Pn	14 36 19.0	-0.6
PB11	IPOC Station P	1.18	71	*e*P	Pn	14 36 19.6	0.0
PB11				*e*S	Sb	14 36 37.4	+2.1
PB11				IAML		14 36 44.6	
	comp=Z,15μm,0.5s						
PB02	IPOC Station P	1.47	143	⇑*e*P	Pn	14 36 22.7	-0.8
PB02				*i* S	Sn	14 36 42.6	+0.7
PB02				IAML		14 36 51.4	
	comp=E,44μm,0.5s						
PB02	IPOC Station P	1.47	143	*i* P	Pn	14 36 23.2	-0.3
PB02				IAML		14 36 52.4	
	comp=Z,43μm,0.4s						
PB01	IPOC Station P	1.55	126	⇑*e*P	Pn	14 36 24.5	-0.2
PB01				*i* S	Sb	14 36 45.8	-0.3
PB01				IAML		14 36 55.0	

	comp=N,32µm,0.5s						
PB01	IPOC Station P	1.55	126	Pn	Pn	14 36 24.9	+0.3
PB08	IPOC Station P	1.58	90	⇑iP	Pn	14 36 25.6	+0.2
PB08				iS	Sb	14 36 48.3	+1.0
PB08				IAML		14 36 55.9	
	comp=N,10µm,0.4s						
PB08	IPOC Station P	1.58	90	eP	Pn	14 36 25.9	+0.6
PB08				⇓eS	Sb	14 36 49.1	+1.9
PB08				IAML		14 36 52.7	
	comp=Z,9µm,0.7s						
PB12	IPOC Station P	1.59	18	⇑eP	Pn	14 36 24.2	-1.0
PB12				iS	Sn	14 36 45.6	+0.5
PB12				IAML		14 36 53.7	
	comp=E,15µm,0.3s						
PB12	IPOC Station P	1.59	18	eP	Pn	14 36 24.1	-1.1
PB12				IAML		14 36 56.6	
	comp=Z,12µm,1.2s						
GO01	Chusmiza	1.62	73	eP	Pn	14 36 26.5	+0.5
GO01				iS	Sb	14 36 50.0	+1.6
GO01				IAML		14 36 52.6	
	comp=N,45µm,0.5s						
GO01	Chusmiza	1.62	73	Pn	Pn	14 36 26.4	+0.5
PB07	IPOC Station P	1.81	151	iP	Pn	14 36 27.7	-0.6
PB07				IAML		14 37 11.1	
	comp=Z,11µm,0.6s						
PB03	IPOC Station P	2.15	152	iP	Pn	14 36 33.1	+0.1
PB03				IAML		14 37 18.7	
	comp=Z,7µm,0.9s						
PB16	IPOC Station P	2.19	35	eP	Pb	14 36 36.5	-1.4
PB16				⇓eS	Sb	14 37 06.3	+1.3
PB16				IAML		14 37 11.3	
	comp=Z,9µm,0.4s						
PB09	IPOC Station P	2.22	138	⇓eP	Pn	14 36 35.6	+1.7
PB09				IAML		14 37 13.7	
	comp=Z,21µm,0.7s						
PB04	IPOC Station P	2.27	164		Pn	14 36 32.9	-1.7
PB04	IPOC Station P	2.27	164	iP	Pn	14 36 33.9	-0.7
PB05	IPOC Station P	2.76	168	eP	Pn	14 36 40.0	-1.4
PB05				IAML		14 37 37.1	
	comp=Z,3µm,1.0s						
PB06	IPOC Station P	2.81	155	iP	Pn	14 36 40.8	-1.2
PB06				IAML		14 37 43.8	
	comp=Z,6µm,0.7s						
LVC	Limon Verde	3.04	144	Pn	Pn	14 36 46.0	+0.6
	comp=Z,29nm,0.3s,baz=309,slow=9.0,SNR=206						
LVC				Pg	Pb	14 36 52.2	-0.1
	comp=Z,253nm,0.3s,baz=334,slow=13,SNR=53						
LVC				LR	LR	14 37 18.8	
	comp=Z,1µm,20.7s,baz=314,slow=28						
LVC				Sn	Sn	14 37 22.5	+1.3
	comp=Z,180nm,0.3s,baz=359,slow=11,SNR=4.6						
LVC				Lg	Lg	14 37 32.0	
	comp=Z,512nm,0.3s,baz=27,slow=2.6,SNR=22						
LVC	Limon Verde	3.04	144	P	Pn	14 36 45.7	+0.3
LVC	Limon Verde	3.04	144		Pn	14 36 45.7	+0.3
LVC	Limon Verde	3.04	144	eP	Pn	14 36 46.0	+0.6
LVC	Limon Verde	3.04	144	eP	Pn	14 36 46.0	+0.6
LVC				eS	Sb	14 37 34.5	+5.2
LVC				IAML		14 37 40.4	
	comp=Z,2µm,2.0s						
PB15	IPOC Station P	3.31	158	iP	Pn	14 36 48.5	-0.4
PB10	IPOC Station P	3.37	176		Pn	14 36 46.6	-2.9
PB10	IPOC Station P	3.37	176	eP	Pn	14 36 47.9	-1.7
PB10				IAML		14 37 57.5	
	comp=Z,1µm,0.9s						
PB14	IPOC Station P	4.48	175	eP	Pn	14 37 04.1	-1.1
PB14				IAML		14 38 29.5	
	comp=Z,943nm,0.8s						
LPAZ	La Paz	4.62	34	Pn	Pn	14 37 08.4	+1.1
	comp=Z,4.3nm,0.3s,baz=206,slow=9.0,SNR=60						
LPAZ				Lg	Lg	14 38 21.2	
	baz=77,slow=18,SNR=1.2						
LPAZ	La Paz	4.62	34	P	Pn	14 37 11.3	+4.0
LPAZ	La Paz	4.62	34		Pn	14 37 11.3	+4.0
LPAZ	La Paz	4.62	34	eP	Pn	14 37 05.9	-1.4
GO02	Mina Guanaco	5.13	167		Pn	14 37 12.2	-1.9
YJA	Yavi	5.37	113	eP	Pn	14 37 19.4	+1.9
YJA				IAML		14 39 02.9	
	comp=Z,88nm,1.9s						
GO03	Copiap	7.44	176		Pn	14 37 43.3	-2.3
NNA	Nana	9.95	324	Pn	Pn	14 38 22.5	+2.5
	comp=Z,1.9nm,0.3s,baz=117,slow=14,SNR=2.6						
NNA				Sn	Sn	14 40 08.7	-2.2
	comp=Z,3.1nm,0.3s,baz=342,slow=20,SNR=2.8						
NNA				LR	LR	14 41 56.1	
	comp=Z,994nm,18.3s,baz=154,slow=36						
NNA	Nana	9.95	324	⇓iP	Pn	14 38 18.3	-1.7
NNA				pmax	pmax		
	comp=Z,12nm,1.2s						
GO04	Tololo Observa	9.99	180	Pn	Pn	14 38 18.6	-2.1
SIV	San Ignacio	10.16	68	Pn	Pn	14 38 20.3	-2.6
	comp=Z,3.0nm,0.3s,baz=273,slow=10,SNR=51						
SAML	Samuel	13.36	35	P	Pn	14 39 04.1	-2.6
SAML	Samuel	13.36	35		Pn	14 39 04.1	-2.6
SAML	Samuel	13.36	35	eP	Pn	14 39 05.4	-1.3
CPUP	Villa Florida	13.86	119	Pn	Pn	14 39 12.4	-1.0
	comp=Z,0.1nm,0.3s,baz=302,slow=17,SNR=2.9						
CPUP				LR	LR	14 45 36.2	
	comp=Z,2µm,19.1s,baz=298,slow=42						
CPUP	Villa Florida	13.86	119	P	Pn	14 39 12.8	-0.6
CPUP	Villa Florida	13.86	119		Pn	14 39 12.8	-0.6
AQDB	Aquidauana	14.21	94	eP	Pn	14 39 17.7	-0.5
ATAH	Atahualpa	14.86	329	Pn	Pn	14 39 29.8	+2.3
	comp=Z,0.2nm,0.3s,baz=139,slow=20,SNR=2.0						
SALV	Santo Antonio	15.01	76	eP	Pn	14 39 28.1	-1.0
ITQB	Itaqui	16.00	129	eP	P	14 39 45.2	0.0
C2SB	Chapadao do Su	17.03	88	eP	Pn	14 39 54.2	-0.9
CLDB	Colider	17.16	60	eP	Pn	14 39 55.0	-1.8
PTGB	Pitanga	17.94	108	eP	Pn	14 40 06.0	-0.4
PCMB	Pacaembu	18.36	98	eP	P	14 40 10.9	-0.5
ITAB	Concordia	18.52	116	eP	P	14 40 13.0	-0.1
ARAG	Araguaiana, MT	18.63	79	eP	P	14 40 13.5	-0.9
CPSB	Cacapava Do Su	18.74	126	eP	Pn	14 40 16.5	+0.4
ITRB	Iturama	19.26	92	eP	P	14 40 21.3	-0.1
GO06	Curarrehue	19.39	181	P	Pn	14 40 23.6	-0.3
FRTB	Fartura	20.02	103	eP	P	14 40 29.2	-0.4
CNLB	Canela	20.30	121	eP	P	14 40 32.2	-0.5
PLCA	Paso Flores	20.53	179	P	Pn	14 40 36.1	-1.1
	comp=Z,24nm,0.9s,baz=23,slow=13,SNR=26						
PLCA				LR	LR	14 48 54.8	
	comp=Z,640nm,18.9s,baz=20,slow=38						
PLCA	Paso Flores	20.53	179	P	P	14 40 35.8	+0.8
PLCA				pmax	pmax		
	comp=Z,90nm,1.3s						
PLCA	Paso Flores	20.53	179	P	P	14 40 35.8	+0.8
PLCA				IAmb	IAmb	14 40 47.5	
	comp=Z,90nm,1.3s						
PLCA	Paso Flores	20.53	179	eP	Pn	14 40 36.1	-1.2
BB19B	Bebedouro	20.91	96	eP	P	14 40 38.4	-0.9
IPMB	Ipameri, GO	21.49	88	eP	P	14 40 44.9	-0.8
RCLB	Rio Claro- Sao	21.84	100	eP	P	14 40 48.4	-0.9
SPB	Sao Paulo	21.99	103	P	P	14 40 49.8	-1.0
SPB				IAmb	IAmb	14 40 54.9	
	comp=Z,74nm,1.2s						
SPB	Sao Paulo	21.99	103	eP	P	14 40 50.7	-0.1
PTGA	Pitinga	22.03	30	P	P	14 40 50.4	-0.9
	comp=Z,11nm,0.4s,baz=210,slow=15,SNR=17						
PTGA	Pitinga	22.03	30	P	P	14 40 49.7	-1.6
PTGA	Pitinga	22.03	30	eP	P	14 40 50.4	-0.9
FLOC	Florencia	22.10	347	eP	P	14 40 54.9	+2.8
FLOC	Florencia	22.10	347	P	P	14 40 53.5	+1.5
BDFB	Brasilia	22.17	82	P	P	14 40 52.0	-1.0
	comp=Z,6.5nm,0.6s,baz=270,slow=6.4,SNR=7.2						
BDFB				LR	LR	14 50 37.3	
	comp=Z,2µm,19.4s,baz=269,slow=40						
BDFB	Brasilia	22.17	82	P	P	14 40 52.0	-1.0
BDFB				pmax	pmax		
	comp=Z,45nm,1.0s						
BDFB	Brasilia	22.17	82	P	P	14 40 52.0	-1.0
GCUF	Volcan Galeras	22.17	343	eP	P	14 41 01.8	+8.5
VAO	Valinhos	22.38	102	eP	P	14 40 55.1	0.0
CRUC	La Cruz	22.39	344	eP	P	14 41 00.2	+4.7
GARC	Garzon, Huila	22.66	348	eP	P	14 40 59.6	+1.4
SOTA	Rioblanco	22.85	345	eP	P	14 41 03.7	+3.1
PCON	Cinco Dias	22.99	346	eP	P	14 41 04.9	+2.9
PARB	Paraibuna	23.63	102	eP	P	14 41 07.4	-0.5
ORTC	Ortega, Tolima	24.29	349	eP	P	14 41 14.3	+0.3
BSCB	Bom Sucesso	24.41	97	eP	P	14 41 15.2	-0.1
YOTC	Yotoco, Valle	24.58	347	eP	P	14 41 19.2	+2.4
CHIC	Chingaza	24.78	353	eP	P	14 41 19.0	+0.1
ANIL	Santa Ana	24.89	349	eP	P	14 41 25.3	+5.6
ROSC	El Rosal	25.06	352	P	P	14 41 22.4	+1.0
	comp=Z,15nm,0.3s,baz=128,slow=19,SNR=3.5						
ROSC				LR	LR	14 52 49.9	
	comp=Z,2µm,18.4s,baz=200,slow=41						
SMTB	Santa Maria do	25.11	67	eP	P	14 41 20.9	-0.6
RREF	El Recreo	25.28	349	eP	P	14 41 26.4	+2.8
GUY2C	Guyana, Caldas	25.60	350	eP	P	14 41 28.6	+2.2
JANB	Januaria	25.77	83	eP	P	14 41 26.6	-1.0
NORC	Norcasia	25.85	351	eP	P	14 41 27.4	-0.9
RUSC	La Rusia	25.96	355	eP	P	14 41 30.3	+0.5
RUSC	La Rusia	25.96	355	P	P	14 41 29.5	-0.2
CBOC	Ciudad Bolivar	26.34	348	eP	P	14 41 34.4	+1.6
PTBC	PUERTO BERRIO,	26.75	352	eP	P	14 41 34.1	-2.2
DBBC	Dabeiba	27.50	348	eP	P	14 41 45.9	+2.7
ZARC	Zaragoza, Cauc	27.74	351	eP	P	14 41 44.6	-0.6
SJMB	Sao Joao De Ma	27.99	92	eP	P	14 41 47.5	0.0
UREC	San Jos de Ur	28.10	350	eP	P	14 41 49.0	+0.5
SDV	Santo Domingo	28.85	0	P	P	14 41 54.4	-0.8
	comp=Z,3.6nm,0.8s,baz=174,slow=10,SNR=2.7						
SDV	Santo Domingo	28.85	0	eP	P	14 41 54.9	-0.4
SMLC	San Martn de	28.94	353	eP	P	14 41 53.8	-2.1
SJCC	San Jacinto, C	30.15	351	eP	P	14 42 06.1	-0.6
NBIT	Itapeh - BA	30.36	85	eP	P	14 42 07.6	-1.0
NBPN	Ponto Novo - B	30.89	77	eP	P	14 42 11.8	-1.5
NBPS	Pedro II - PI	32.62	65	eP	P	14 42 27.3	-1.2
EFI	East Falkland	33.03	165	⇓iP	P	14 42 32.5	+0.9
EFI				pmax	pmax		
	comp=Z,63nm,1.4s						
NBMA	Muriti-CE	33.56	72	eP	P	14 42 36.2	-0.6
NBPB	Pedra_Branca-C	33.66	69	eP	P	14 42 36.9	-0.6
NBAN	Anadia - AL	34.92	78	eP	P	14 42 47.4	-1.1
NBCL	Cascavel-CE	35.42	68	eP	P	14 42 51.6	-1.2
RCBR	Riachuelo	36.79	72	P	P	14 43 03.7	-0.9
RCBR				pmax	pmax		
	comp=Z,38nm,1.1s						
RCBR	Riachuelo	36.79	72	P	P	14 43 03.7	-0.9
RCBR				IAmb	IAmb	14 43 05.8	
	comp=Z,38nm,1.1s						
RCBR	Riachuelo	36.79	72	eP	P	14 43 04.3	-0.2
MLPR	Magueyes Islan	38.06	6	P	P	14 43 14.3	-0.8
OBIP	Obispado Ponce	38.17	7	P	P	14 43 14.5	-1.6
OBIP				IAmb	IAmb	14 43 16.9	
	comp=Z,63nm,1.2s						
PDPR	Patillas Dam,	38.22	7	P	P	14 43 14.7	-1.7
PDPR				IAmb	IAmb	14 43 16.4	
	comp=Z,36nm,1.0s						
SJG	San Juan	38.29	7	P	P	14 43 15.8	-1.3
SJG				pmax	pmax		
	comp=Z,29nm,0.9s						
SJG	San Juan	38.29	7	P	P	14 43 15.8	-1.3
SJG				IAmb	IAmb	14 43 18.1	
	comp=Z,29nm,0.8s						
MTP	Monte Pirata	38.35	8	P	P	14 43 16.0	-1.5
MTP				IAmb	IAmb	14 43 17.5	
	comp=Z,41nm,1.1s						
GCPR	Guaynabo City	38.50	7	P	P	14 43 17.3	-1.4
CUPR	Culebra, Puert	38.60	8	P	P	14 43 17.8	-1.8
CUPR				IAmb	IAmb	14 43 19.6	
	comp=Z,32nm,1.1s						
EMPR	Esperanza - Ma	38.61	7	P	P	14 43 19.1	-0.6
STVI	Saint Thomas	38.69	9	P	P	14 43 18.9	-1.5
STVI				IAmb	IAmb	14 44 31.5	
	comp=Z,52nm,1.4s						
NHSC	New Hope	53.70	350	P	P	14 45 20.5	+2.3
	baz=169						
Z57A	Bowman	53.97	350	P	P	14 45 22.0	+1.8
	baz=169						
X60A	Albert Glenn T	54.84	353	P	P	14 45 27.3	+0.8
	baz=172						
X59A	McDuffie Farm,	54.91	352	P	P	14 45 27.6	+0.5
	baz=171						
X58A	Rowland	54.99	351	P	P	14 45 29.1	+1.5
	baz=170						
Z50A	Ashland	55.02	345	P	P	14 45 28.4	+0.5
Z50A				IAmb	IAmb	14 45 29.0	
	comp=Z,32nm,1.2s						
Z50A	Ashland	55.02	345	P	P	14 45 28.2	+0.3
	baz=163						
LRAL	Lakeview Retre	55.09	343	P	P	14 45 28.2	-0.2
	baz=162						
X56A	White Oak	55.19	350	P	P	14 45 29.7	+0.6
	baz=168						
X55A	Gracelyn & Ava	55.27	349	P	P	14 45 30.2	+0.6
	baz=168						
W58A	Raeford	55.43	352	P	P	14 45 31.8	+1.0
	baz=170						
833A	Chaparral WMA,	55.53	329	P	P	14 45 32.4	+0.7
833A				IAmb	IAmb	14 45 39.9	
	comp=Z,13nm,0.8s						
833A	Chaparral WMA,	55.53	329	P	P	14 45 32.8	+1.1
	baz=147						
V62A	Hyde County Ai	55.61	355	P	P	14 45 32.8	+0.7
	baz=174						
W57A	Gilead	55.67	351	P	P	14 45 33.2	+0.7
	baz=170						
W56A	Indian Trail	55.74	350	P	P	14 45 33.6	+0.5
	baz=169						
KMSC	Kings Mountain	55.88	350	P	P	14 45 34.4	+0.4
	baz=168						
W54A	Cherokee Point	55.97	349	P	P	14 45 35.2	+0.5
	baz=167						
V59A	Middlesex	56.04	353	P	P	14 45 36.1	+1.0
	baz=172						
V58A	Windy Hill, Pi	56.18	352	P	P	14 45 37.2	+1.0
	baz=171						
V57A	Coltrane Farms	56.36	351	P	P	14 45 38.6	+1.1
	baz=170						
V56A	Mocksville	56.39	351	P	P	14 45 39.0	+1.3
	baz=169						
U61A	Possum Corner	56.42	355	P	P	14 45 39.2	+1.4
	baz=174						
X48A	Hartselle	56.44	344	P	P	14 45 37.4	-0.6
X48A				IAmb	IAmb	14 45 38.9	
	comp=Z,49nm,1.5s						
V55A	Taylorsville	56.55	350	P	P	14 45 39.8	+1.0
	baz=168						
U59A	Littleton	56.57	353	P	P	14 45 40.1	+1.2
	baz=172						
U58A	Oxford	56.70	353	P	P	14 45 41.1	+1.2
	baz=171						
TKL	Tuckaleechee C	56.83	347	P	P	14 45 41.3	+0.4
TKL				pmax	pmax		
	comp=Z,41nm,1.2s						
TKL	Tuckaleechee C	56.83	347	P	P	14 45 41.3	+0.4
U57A	Blanch	56.84	352	P	P	14 45 41.5	+0.7
	baz=170						
U56A	King	56.90	351	P	P	14 45 42.3	+1.0
	baz=169						
V52A	Sevierville	56.97	348	P	P	14 45 42.0	+0.2
V52A				IAmb	IAmb	14 45 43.9	
	comp=Z,35nm,1.2s						
V51A	Loudon	57.09	347	P	P	14 45 42.3	-0.4
V51A				IAmb	IAmb	14 45 59.4	
	comp=Z,30nm,1.4s						
T59A	Double "B" Far	57.16	354	P	P	14 45 42.5	-0.6
T59A				IAmb	IAmb	14 45 45.6	
	comp=Z,33nm,1.1s						
T59A	Double "B" Far	57.16	354	P	P	14 45 43.7	+0.7
	baz=172						
U55A	TA2, Sparta	57.16	350	P	P	14 45 44.0	+0.7
	baz=169						
T58A	Grand View Acr	57.24	353	P	P	14 45 44.6	+0.9
	baz=171						
U54A	Nelsons Funny	57.30	349	P	P	14 45 44.7	+0.5
	baz=168						
T57A	Hurt	57.38	352	P	P	14 45 45.5	+0.7
	baz=171						
T56A	Rocky Mt	57.52	351	P	P	14 45 46.6	+0.9
	baz=170						
V48A	Smith Brothers	57.60	345	P	P	14 45 45.8	-0.5
V48A				IAmb	IAmb	14 45 47.9	
	comp=Z,43nm,1.4s						
TZTN	Tazewell	57.64	348	P	P	14 45 46.7	+0.2
	baz=166						
W45A	Hickory Valley	57.69	342	P	P	14 45 47.1	+0.3
W45A				IAmb	IAmb	14 45 48.4	
	comp=Z,31nm,1.1s						
S61A	Accomac	57.69	355	P	P	14 45 47.6	+0.8
	baz=175						
T55A	Pulaski	57.72	351	P	P	14 45 47.4	+0.3
	baz=169						
WHTX	Lake Whitney,	57.77	333	P	P	14 45 48.4	+0.9
	baz=150						
T54A	Tazewell	57.79	350	P	P	14 45 47.7	+0.1
	baz=168						
S58A	Poland Farm, P	57.84	353	P	P	14 45 48.4	+0.4
	baz=172						
T53A	Wise	57.88	349	P	P	14 45 48.7	+0.5
	baz=167						
S56A	Natural Bridge	58.09	352	P	P	14 45 50.7	+1.0
	baz=170						
S57A	Dark Hollow, R	58.10	352	P	P	14 45 50.1	+0.4
	baz=171						
T51A	Gray	58.13	348	P	P	14 45 50.2	+0.2
	baz=166						
R58B	Mineral	58.17	353	P	P	14 45 50.9	+0.6
R58B	Mineral	58.17	353	P	P	14 45 51.3	+1.0
	baz=172						
WVT	Waverly	58.23	344	P	P	14 45 50.2	-0.5
WVT				pmax	pmax		
	comp=Z,11nm,1.0s						
WVT	Waverly	58.23	344	P	P	14 45 50.2	-0.5
WVT	Waverly	58.23	344	P	P	14 45 50.7	0.0
	baz=161						
UALR	University of	58.31	339	P	P	14 45 52.2	+0.9
UALR				IAmb	IAmb	14 45 52.9	
	comp=Z,42nm,1.4s						
S55A	Lewisburg	58.32	351	P	P	14 45 51.8	+0.4
	baz=169						
T50A	Nancy	58.37	347	P	P	14 45 51.7	+0.1
	baz=165						
TX31	Lajitas Ar. Si	58.49	326	P	P	14 45 53.0	+0.2
TX32	Lajitas Array	58.49	326	P	P	14 45 53.7	+0.9
TXAR	Lajitas Array	58.49	326	P	P	14 45 53.5	+0.7
	comp=Z,3.0nm,1.0s,baz=143,slow=6.7,SNR=17						
TXAR				LR	LR	15 09 59.1	
	comp=Z,104nm,19.4s,baz=0.0,slow=35						
TXAR	Lajitas Array	58.49	326	P	P	14 45 52.6	-0.2
TXAR	Lajitas Array	58.49	326	P	P	14 45 52.6	-0.2
R58A	Rapidan	58.52	353	P	P	14 45 53.3	+0.7
	baz=172						
MIAR	Mount Ida	58.53	338	P	P	14 45 53.1	+0.3
MIAR				pmax	pmax		
	comp=Z,20nm,1.1s						
MIAR	Mount Ida	58.53	338	P	P	14 45 53.1	+0.3
MIAR				IAmb	IAmb	14 45 55.5	
	comp=Z,20nm,1.1s						
MIAR	Mount Ida	58.53	338	P	P	14 45 53.0	+0.2
	baz=155,SNR=7.1						
R57A	Stanardsville	58.57	353	P	P	14 45 53.6	+0.6
	baz=172						
T49A	Edmonton	58.60	346	P	P	14 45 53.0	-0.3
T49A	Edmonton	58.60	346	P	P	14 45 53.5	+0.3
	baz=164,SNR=5.3						
W41B	Gary Mavity, V	58.65	340	P	P	14 45 53.8	+0.2
	baz=156						
S51A	Beattyville	58.71	348	P	P	14 45 54.2	+0.1
	baz=166						
R55A	Marlinton	58.76	351	P	P	14 45 55.1	+0.7
	baz=170						
R54A	Victor	58.79	351	P	P	14 45 54.9	+0.3
	baz=169						
T47A	Sharon Grove	58.86	345	P	P	14 45 55.1	+0.1
T47A				IAmb	IAmb	14 45 56.5	
	comp=Z,26nm,1.1s						
S50A	Richmond	58.91	347	P	P	14 45 55.7	+0.3
	baz=165						
Q58A	Fox Den Farm,	59.12	354	P	P	14 45 57.7	+0.9
	baz=173						
LCAR	Lake Charles	59.12	341	P	P	14 45 57.0	+0.1
W39A	Magazine	59.19	338	P	P	14 45 57.8	+0.5
W39A				IAmb	IAmb	14 46 00.1	
	comp=Z,30nm,1.1s						
W39A	Magazine	59.19	338	P	P	14 45 58.0	+0.7
	baz=155						
S49A	Springfield	59.20	347	P	P	14 45 57.6	+0.2
	baz=164						
X37A	Clayton	59.22	337	P	P	14 45 57.9	+0.3
X37A				IAmb	IAmb	14 45 59.8	
	comp=Z,18nm,0.9s						
ABTX	Abilene, Hawle	59.26	332	P	P	14 45 57.5	-0.5
ABTX				IAmb	IAmb	14 46 00.4	
	comp=Z,18nm,1.2s						
ABTX	Abilene, Hawle	59.26	332	P	P	14 45 59.4	+1.4
	baz=148						
Q57A	Strasburg	59.29	353	P	P	14 45 59.3	+1.3
	baz=172						
R51A	Hillsboro	59.35	348	P	P	14 45 59.1	+0.6
	baz=166						
Q55A	Buckhannon	59.46	352	P	P	14 46 00.3	+1.1
	baz=170						
R50A	Paris	59.48	348	P	P	14 45 59.6	+0.3
	baz=165						
Q53A	Leroy	59.54	350	P	P	14 46 00.3	+0.6
	baz=168						
P61A	Hammonton	59.62	356	P	P	14 46 00.4	+0.2
P58A	Pank, Wackersv	59.62	354	P	P	14 46 01.0	+0.7
	baz=173						
R49A	Shelbyville	59.66	347	P	P	14 46 01.1	+0.5
	baz=164						
P59A	Jarrettsville	59.67	355	P	P	14 46 01.8	+1.3
	baz=174						
P57A	Homestead Farm	59.69	354	P	P	14 46 01.9	+1.1
	baz=172						
P56A	Dayton Farm, R	59.80	353	P	P	14 46 02.2	+0.7
	baz=171						
P60A	Greenville	59.81	356	P	P	14 46 02.4	+0.9
	baz=175						
WCI	Wyandotte Cave	59.85	346	P	P	14 46 02.1	+0.2
WCI				pmax	pmax		
	comp=Z,32nm,1.4s						
WCI	Wyandotte Cave	59.85	346	P	P	14 46 02.0	+0.2
WCI				IAmb	IAmb	14 46 03.5	
	comp=Z,32nm,1.4s						
WCI	Wyandotte Cave	59.85	346	P	P	14 46 02.2	+0.4
	baz=163						
U40A	Yellville	59.92	340	P	P	14 46 02.9	+0.4
U40A				IAmb	IAmb	14 46 04.2	
	comp=Z,18nm,1.1s						
U40A	Yellville	59.92	340	P	P	14 46 01.9	-0.5
	baz=156,SNR=6.3						
P55A	Reedsville	59.93	352	P	P	14 46 03.4	+1.0
	baz=170						
Q50A	Georgetown	59.95	348	P	P	14 46 02.8	+0.2
	baz=166						
T42A	Van Buren	59.99	341	P	P	14 46 02.7	-0.1
T42A				IAmb	IAmb	14 47 41.2	
	comp=Z,48nm,1.9s						
Q51A	Peebles	60.01	349	P	P	14 46 02.5	-0.4
	baz=166						
S44A	Carbondale	60.08	343	P	P	14 46 03.1	-0.4
P54A	Burton	60.11	351	P	P	14 46 04.5	+0.8
	baz=170						
P53A	Whipple	60.13	351	P	P	14 46 04.6	+0.8
	baz=169						
X34A	Smith Ranch, M	60.19	334	P	P	14 46 04.9	+0.6
X34A				IAmb	IAmb	14 46 06.0	
	comp=Z,18nm,1.0s						
O58A	Lewisberry	60.22	355	P	P	14 46 05.4	+1.0
	baz=173						
HHAR	Hobbs	60.22	339	P	P	14 46 04.7	+0.2
HHAR				IAmb	IAmb	14 46 56.6	
	comp=Z,33nm,1.5s						
Q49A	Aurora	60.29	347	P	P	14 46 05.0	+0.1
	baz=165						
O59A	Robesonia	60.35	355	P	P	14 46 05.6	+0.4
	baz=174						
O57A	Amberson	60.37	354	P	P	14 46 06.6	+1.2
	baz=173						
P52A	Corning	60.39	350	P	P	14 46 05.3	-0.2
	baz=168						
Q48A	North Vernon	60.39	347	P	P	14 46 05.0	-0.6
	baz=164						
P51A	Williamsport	60.40	349	P	P	14 46 06.1	+0.4
P51A				IAmb	IAmb	14 46 07.4	
	comp=Z,25nm,1.4s						
P51A	Williamsport	60.40	349	P	P	14 46 06.0	+0.4
	baz=167						
MGMO	Mountain Grove	60.47	340	P	P	14 46 06.5	+0.4
MGMO				IAmb	IAmb	14 47 50.4	
	comp=Z,19nm,0.9s						
U38A	Gravette	60.52	338	P	P	14 46 06.9	+0.4
U38A				IAmb	IAmb	14 46 07.9	
	comp=Z,25nm,1.3s						
O56A	Blue Knob Stat	60.53	353	P	P	14 46 07.6	+1.1
O56A	Blue Knob Stat	60.53	353	P	P	14 46 07.2	+0.6
	baz=172,SNR=5.7						
TUL1	Leonard	60.55	337	P	P	14 46 07.3	+0.6
TUL1	Leonard	60.55	337	P	P	14 46 07.3	+0.6
	baz=153						
O55A	Ligonier	60.55	353	P	P	14 46 07.5	+0.8
	baz=171						
P50A	Jamestown	60.66	349	P	P	14 46 07.8	+0.4
	baz=166						
P49A	Miami Univ. Ec	60.77	348	P	P	14 46 08.5	+0.4
	baz=165						

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SSPA  Standing Stone  60.82 354  P     P     14 46 09.8 +1.4
SSPA  Standing Stone  60.82 354  P     P     14 46 09.7 +1.2
      baz=172
N60A  Cedar Hill Far  60.83 356  P     P     14 46 10.0 +1.5
      baz=175
P48A  Milroy          60.84 347  P     P     14 46 09.4 +0.8
N59A  State Game Lan  60.92 356  P     P     14 46 10.3 +1.1
      baz=175
O51A  Pataskala       60.97 350  P     P     14 46 10.0 +0.5
      baz=167
CCM   Cathedral Cave  60.98 342  P     P     14 46 09.0 -0.6
CCM                              pmax  pmax
      comp=Z,21nm,1.2s
CCM   Cathedral Cave  60.98 342  P     P     14 46 09.0 -0.6
CCM                              IAmb  IAmb  14 46 11.1
      comp=Z,21nm,1.2s
CCM   Cathedral Cave  60.98 342  P     P     14 46 10.2 +0.5
      baz=158
N55A  Marion Center   61.08 353  P     P     14 46 11.1 +0.8
      baz=171,SNR=6.7
ACSO  Alum Creek Sta  61.12 349  P     P     14 46 10.7 +0.2
ACSO                             IAmb  IAmb  14 46 12.1
      comp=Z,25nm,1.0s
ACSO  Alum Creek Sta  61.12 349  P     P     14 46 10.8 +0.4
      baz=167
N56A  West Decatur    61.14 354  P     P     14 46 11.6 +0.9
      baz=172
MNTX  Cornudas Mount  61.27 327  P     P     14 46 12.2 +0.5
MNTX  Cornudas Mount  61.27 327  P     P     14 46 11.9 +0.2
      baz=143,SNR=7.0
S39A  Bolivar         61.29 340  P     P     14 46 11.8  0.0
S39A                             IAmb  IAmb  14 46 13.5
      comp=Z,24nm,1.1s
O49A  Covington       61.32 348  P     P     14 46 12.3 +0.4
O49A  Covington       61.32 348  P     P     14 46 12.1 +0.2
      baz=166
N53A  Lisbon          61.34 351  P     P     14 46 12.7 +0.7
      baz=169
N54A  Moraine State   61.38 352  P     P     14 46 13.0 +0.8
      baz=170
M58A  Price’s Panora  61.42 355  P     P     14 46 13.3 +0.8
      baz=174
M59A  Waymart         61.52 356  P     P     14 46 14.3 +1.1
      baz=175
O48A  Farmland        61.55 348  P     P     14 46 14.1 +0.6
      baz=165
N50A  Nevada          61.67 349  P     P     14 46 14.6 +0.4
      baz=167
N51A  Ashland         61.69 350  P     P     14 46 14.7 +0.4
      baz=168
M56A  Emporium        61.69 354  P     P     14 46 15.1 +0.8
      baz=172
T35A  Sooner Cattle   61.71 337  P     P     14 46 15.2 +0.6
T35A                             IAmb  IAmb  14 46 17.4
      comp=Z,28nm,1.2s
M55A  Ridgway         61.73 353  P     P     14 46 14.2 -0.4
M55A  Ridgway         61.73 353  P     P     14 46 14.8 +0.2
      baz=172,SNR=7.7
L64A  Middleborough   61.76   0  P     P     14 46 16.2 +1.5
      baz=180
M54A  Oil Creek Stat  61.88 352  P     P     14 46 15.1 -0.6
M54A  Oil Creek Stat  61.88 352  P     P     14 46 15.4 -0.2
      baz=171,SNR=5.8
VNA3  Neumayer Olymp  61.94 161  P     P     14 46 17.4 +1.7
M53A  WI Miller and   61.94 352  P     P     14 46 16.8 +0.8
      baz=170
P43A  Skaggs, Pawnee  61.98 344  P     P     14 46 15.5 -0.8
N49A  Columbus Grove  62.00 349  P     P     14 46 15.7 -0.7
N49A  Columbus Grove  62.00 349  P     P     14 46 15.5 -0.9
      baz=166,SNR=5.6
L58A  Harry Jones Me  62.05 356  P     P     14 46 17.6 +0.9
      baz=175
SFIN  Lafayette       62.08 346  P     P     14 46 16.5 -0.5
SFIN  Lafayette       62.08 346  P     P     14 46 16.5 -0.5
      baz=163
N48A  Decatur         62.10 348  P     P     14 46 17.0 -0.1
      baz=165
L59A  Walton          62.14 356  P     P     14 46 18.6 +1.2
L59A  Walton          62.14 356  P     P     14 46 18.5 +1.1
      baz=176,SNR=5.3
M52A  Chesterland     62.14 351  P     P     14 46 17.9 +0.5
      baz=169
O44A  Mansfield       62.19 345  P     P     14 46 17.6 -0.2
BINY  Binghamton      62.21 356  P     P     14 46 18.8 +1.0
BINY  Binghamton      62.21 356  P     P     14 46 19.1 +1.2
      baz=175
N47A  Urbana          62.26 347  P     P     14 46 18.1  0.0
N47A  Urbana          62.26 347  P     P     14 46 18.0 -0.2
      baz=164
M50A  Fremont         62.27 350  P     P     14 46 18.3 +0.1
      baz=167
L56A  Greenwood       62.27 354  P     P     14 46 19.0 +0.7
L56A                             IAmb  IAmb  14 46 21.0
      comp=Z,22nm,1.1s
L56A  Greenwood       62.27 354  P     P     14 46 19.1 +0.8
      baz=173
L61B  Northampton     62.30 358  P     P     14 46 19.5 +1.1
      baz=178
HRV   Adam Dziewonsk  62.34 359  P     P     14 46 20.2 +1.6
      baz=179
L53A  Girard          62.39 352  P     P     14 46 19.8 +0.7
      baz=170
L55A  Hinsdale        62.41 354  P     P     14 46 20.0 +0.8
      baz=172,SNR=7.3
M49A  Liberty Center  62.50 349  P     P     14 46 20.3 +0.6
      baz=166
ERPA  Erie            62.52 352  P     P     14 46 20.4 +0.5
ERPA  Erie            62.52 352  P     P     14 46 20.5 +0.6
      baz=170
VNA2  Neumayer--Watz  62.52 161  P     P     14 46 21.2 +1.6
      baz=300,slow=8.2
K61A  Williamstown    62.54 358  P     P     14 46 21.2 +1.2
      baz=177
L54A  Sinclairville   62.55 353  P     P     14 46 20.7 +0.5
      baz=171,SNR=7.4
TRY   Troy            62.61 358  P     P     14 46 21.6 +1.2
WVNY  West Valley, N  62.65 354  P     P     14 46 21.3 +0.6
M47A  Cromwell        62.71 348  P     P     14 46 21.3 +0.2
      baz=164
K59A  Cooperstown     62.71 357  P     P     14 46 22.2 +1.0
      baz=176,SNR=6.0
K58A  Earlville       62.75 356  P     P     14 46 22.0 +0.6
K58A  Earlville       62.75 356  P     P     14 46 22.1 +0.6
      baz=175,SNR=5.7
K57A  Scipio Center   62.78 355  P     P     14 46 22.4 +0.8
      baz=174
HDIL  Hopedale        62.78 344  P     P     14 46 21.4 -0.2
HDIL                             IAmb  IAmb  14 46 23.1
      comp=Z,22nm,1.0s
HDIL  Hopedale        62.78 344  P     P     14 46 21.8 +0.1
      baz=161
K56A  Middlesex       62.81 355  P     P     14 46 22.8 +0.9
      baz=173
L50A  Kingsville      62.85 350  P     P     14 46 22.5 +0.4
      baz=167
K54A  Basiliko Farm,  62.85 353  P     P     14 46 23.0 +0.8
      baz=172,SNR=7.8
K55A  Perry           62.91 354  P     P     14 46 23.4 +0.9
      baz=172
L48A  N Adams         63.04 349  P     P     14 46 24.0 +0.7
      baz=166
J60A  Lant Hill Farm  63.11 358  P     P     14 46 25.2 +1.3
      baz=177
121A  Cookes Peak, D  63.18 325  P     P     14 46 26.6 +1.8
      baz=141
L47A  Sherwood        63.22 348  P     P     14 46 24.7 +0.2
      baz=165
N41A  Harden Midland  63.34 343  P     P     14 46 24.8 -0.6
J56A  Wolcott         63.34 355  P     P     14 46 25.4 +0.1
J56A  Wolcott         63.34 355  P     P     14 46 25.6 +0.3
      baz=174,SNR=6.9
MEDO  Medina          63.38 354  P     P     14 46 26.0 +0.4
MEDO                             IAmb  IAmb  14 46 27.9
      comp=Z,23nm,1.0s
J59A  Piesco          63.38 357  P     P     14 46 25.8 +0.1
J59A                             IAmb  IAmb  14 46 28.5
      comp=Z,22nm,1.1s
J59A  Piesco          63.38 357  P     P     14 46 26.4 +0.8
      baz=176
J57A  Williamstown    63.41 356  P     P     14 46 26.2 +0.4
J57A                             IAmb  IAmb  14 46 28.7
      comp=Z,18nm,1.1s
J57A  Williamstown    63.41 356  P     P     14 46 26.8 +1.0
      baz=175
J55A  Hilton          63.42 354  P     P     14 46 25.1 -0.7
J55A  Hilton          63.42 354  P     P     14 46 26.0 +0.2
      baz=173
I58A  Old Forge       63.63 357  P     P     14 46 28.0 +0.7
      baz=176
J52A  Paris           63.69 352  P     P     14 46 27.9 +0.3
      baz=170,SNR=6.0
I60A  Shoreham        63.71 358  P     P     14 46 28.8 +1.1
      baz=177
I64A  Boothbay        63.76   1  P     P     14 46 29.7 +1.7
      baz=181
I61A  Oroboro, Fairl  63.77 359  P     P     14 46 29.9 +1.7
      baz=179
K48A  Perry           63.82 349  P     P     14 46 28.4  0.0
      baz=166
K47A  Vermontville    63.85 348  P     P     14 46 29.3 +0.6
      baz=165
I57A  Carthage        63.92 356  P     P     14 46 30.0 +0.9
      baz=175
PECO  Prince Edward   64.01 355  P     P     14 46 29.8 +0.2
PECO                             IAmb  IAmb  14 46 32.0
      comp=Z,21nm,1.1s
LBNH  Lisbon          64.07 359  P     P     14 46 31.8 +1.7
      baz=179
SNAA  Sanae           64.15 161  P     P     14 46 32.0 +1.5
SNAA  Sanae           64.15 161⇓iP     P     14 46 31.3 +0.8
SNAA                             pmax  pmax
      comp=Z,673nm,1.1s
SNAA  Sanae           64.15 161  P     P     14 46 30.6 +0.2
SNAA                             IAmb  IAmb  14 46 41.5
      comp=Z,17nm,1.1s
J49A  Marlette        64.19 350  P     P     14 46 31.4 +0.5
      baz=167
J48A  Bridge Port     64.24 350  P     P     14 46 31.6 +0.4
      baz=167
I51A  Listowel        64.31 352  P     P     14 46 32.0 +0.3
      baz=169
H58A  Gabriels        64.32 357  P     P     14 46 32.4 +0.6
      baz=176
I55A  Frankford       64.35 355  P     P     14 46 32.3 +0.4
      baz=173
J47A  Sunmer          64.36 349  P     P     14 46 31.4 -0.7
J47A  Sunmer          64.36 349  P     P     14 46 32.7 +0.7
      baz=166
H61A  Lyndonville     64.37 359  P     P     14 46 33.0 +0.9
      baz=179
ANMO  Albuquerque     64.39 328  P     P     14 46 33.7 +1.0
      baz=143
H57A  Richville       64.42 356  P     P     14 46 33.5 +1.1
      baz=175
I52A  Shelburne       64.46 353  P     P     14 46 32.9 +0.2
      baz=170
H63A  New Sharon      64.49   1  P     P     14 46 34.1 +1.3
      baz=181
H59A  Cadyville       64.52 358  P     P     14 46 34.0 +1.0
      baz=177
LONY  Lake Ozonia     64.54 357  P     P     14 46 34.2 +1.0
      baz=176
H65A  Eastbrook       64.56   2  P     P     14 46 34.9 +1.6
      baz=183
H56A  Elgin           64.61 356  P     P     14 46 34.5 +0.9
      baz=174
H55A  Tweed           64.64 355  P     P     14 46 34.6 +0.8
      baz=173
L40A  Anamosa         64.70 343  P     P     14 46 34.6 +0.3
I49A  Point Hope      64.71 350  P     P     14 46 33.8 -0.5
I49A                             IAmb  IAmb  14 46 35.9
      comp=Z,24nm,1.1s
I49A  Point Hope      64.71 350  P     P     14 46 34.6 +0.4
      baz=168
FRNY  Flat Rock       64.71 358  P     P     14 46 35.0 +0.8
FRNY                             IAmb  IAmb  14 46 36.6
      comp=Z,26nm,1.1s
H53A  Bobcaygeon      64.79 354  P     P     14 46 35.5 +0.7
      baz=172
G60A  Masonville      64.94 359  P     P     14 46 37.6 +1.8
      baz=178
G59A  Clarenceville   64.94 358  P     P     14 46 37.3 +1.5
      baz=178
G63A  Kingsbury       64.95   1  P     P     14 46 37.5 +1.6
      baz=181
G57A  Newington       65.04 357  P     P     14 46 37.4 +1.0
      baz=176
SADO  Sadowa          65.04 353  P     P     14 46 36.6 +0.2
SADO                             IAmb  IAmb  14 46 37.7
      comp=Z,17nm,1.1s
G58A  Ormstown        65.04 357  P     P     14 46 37.6 +1.2
      baz=177
G62A  West of Eustis  65.04   0  P     P     14 46 37.3 +0.8
G62A  West of Eustis  65.04   0  P     P     14 46 37.6 +1.1
      baz=180,SNR=7.2
I48A  Sherman Twp     65.09 350  P     P     14 46 36.4 -0.3
      baz=167,SNR=7.5
G65A  Princeton       65.09   3  P     P     14 46 38.1 +1.3
      baz=183
PKME  Peaks-Kenny Pk  65.11   1  P     P     14 46 38.2 +1.4
      baz=182
G64A  Maxfield        65.11   2  P     P     14 46 38.0 +1.2
      baz=182
G61A  St-Isidore-de-  65.11 359  P     P     14 46 38.6 +1.7
      baz=179
SCIA  State Center    65.12 342  P     P     14 46 37.3 +0.3
      baz=157
T25A  Trinidad        65.18 331  P     P     14 46 38.7 +1.0
      baz=145
JFWS  Jewell Farm     65.24 344  P     P     14 46 38.0 +0.2
JFWS                             pmax  pmax
      comp=Z,31nm,1.4s
JFWS  Jewell Farm     65.24 344  P     P     14 46 38.0 +0.2
JFWS                             IAmb  IAmb  14 46 39.3
      comp=Z,32nm,1.4s
JFWS  Jewell Farm     65.24 344  P     P     14 46 38.0 +0.2
      baz=160
G55A  Calabogie       65.30 355  P     P     14 46 38.9 +0.8
      baz=174
G53A  Haliburton      65.33 354  P     P     14 46 38.8 +0.4
      baz=172,SNR=7.6
F63A  Nahmakanta, Br  65.55   1  P     P     14 46 41.1 +1.4
      baz=182
G54A  Lake Saint Pet  65.56 354  P     P     14 46 40.9 +1.1
      baz=173
214A  Organ Pipe Nat  65.57 321  P     P     14 46 41.0 +0.8
214A  Organ Pipe Nat  65.57 321  P     P     14 46 42.5 +2.3
      baz=137
F60A  Warwick         65.80 359  P     P     14 46 42.3 +1.0
      baz=179
I42A  Draeger Farm,   65.84 346  P     P     14 46 41.6  0.0
I42A                             IAmb  IAmb  14 46 42.9
      comp=Z,27nm,1.2s
LMN   Caledonia Moun  65.91   5  P     P     14 46 41.6 -0.4
F52A  Sundridge       66.07 354  P     P     14 46 43.4 +0.3
      baz=171
G47A  Hillman         66.07 350  P     P     14 46 43.3 +0.2
      baz=167
ALGO  Algonquin Park  66.11 355  P     P     14 46 43.7 +0.4
      baz=173
TRQ   Mont Tremblant  66.13 357  P     P     14 46 44.2 +0.6
H43A  Windswept, Lux  66.14 347  P     P     14 46 43.9 +0.4
SDCO  Great Sand Dun  66.17 330  P     P     14 46 45.5 +1.2
SDCO                             IAmb  IAmb  14 46 56.2
      comp=Z,16nm,1.4s
SDCO  Great Sand Dun  66.17 330  P     P     14 46 45.8 +1.5
      baz=144,SNR=10
E60A  Ste Agathe de   66.20 360  P     P     14 46 44.8 +1.0
      baz=179
W18A  Petrified Fore  66.21 326  P     P     14 46 45.7 +1.2
W18A  Petrified Fore  66.21 326  P     P     14 46 46.5 +2.0
      baz=140
E58A  La Victoria     66.23 358  P     P     14 46 44.8 +0.7
      baz=178
E61A  Lac Etchemin    66.26   0  P     P     14 46 45.6 +1.3
      baz=180
F51A  Arnstein        66.27 353  P     P     14 46 44.3  0.0
      baz=171
BGNE  Belgrade        66.27 338  P     P     14 46 45.0 +0.5
BGNE  Belgrade        66.27 338  P     P     14 46 44.8 +0.3
      baz=152
E63A  Oxbow           66.28   2  P     P     14 46 45.8 +1.4
      baz=182
E64A  Bridgewater     66.30   2  P     P     14 46 46.1 +1.6
      baz=183
E57A  Chemin Saint G  66.31 358  P     P     14 46 45.4 +0.8
      baz=177
F49A  Sandfield       66.37 351  P     P     14 46 45.0  0.0
      baz=169
E56A  St. Veronique   66.48 357  P     P     14 46 46.5 +0.8
      baz=176
E52A  Mattawa         66.49 354  P     P     14 46 46.7 +1.0
      baz=172
E53A  Dumoine, Ponti  66.49 355  P     P     14 46 46.5 +0.7
      baz=173
E54A  Lac Daplat, Po  66.51 355  P     P     14 46 46.6 +0.7
      baz=174
F48A  Evansville      66.52 351  P     P     14 46 46.3 +0.3
      baz=168
S22A  4UR Ranch, Cre  66.80 330  P     P     14 46 49.3 +1.0
      baz=143
F45A  CMU Biological  66.86 349  P     P     14 46 47.7 -0.3
      baz=165
D57A  Chemin Vers le  66.90 358  P     P     14 46 49.2 +0.8
      baz=177,SNR=5.0
D63A  Stockholm       66.91   2  P     P     14 46 49.9 +1.5
      baz=183
D62A  Allapoint, All  66.93   1  P     P     14 46 49.5 +1.0
D62A                             IAmb  IAmb  14 46 50.7
      comp=Z,20nm,1.1s
D62A  Allapoint, All  66.93   1  P     P     14 46 49.7 +1.2
      baz=182
D58A  Chemin du LacG  66.95 358  P     P     14 46 49.4 +0.8
      baz=178
D56A  ZEC Mazanza, M  66.97 357  P     P     14 46 49.4 +0.6
      baz=176
D55A  Sainte-Anne-du  66.98 357  P     P     14 46 49.4 +0.6
      baz=175
Q24A  Divide          67.00 331  P     P     14 46 51.0 +1.4
      baz=145
D61A  St Aubert, Com  67.03   0  P     P     14 46 50.3 +1.2
      baz=181
E48A  Lockeyer        67.09 352  P     P     14 46 49.5 -0.1
      baz=168
D54A  Lac Fusel, La   67.18 356  P     P     14 46 50.9 +0.7
      baz=174
MVCO  Mesa Verde      67.19 328  P     P     14 46 52.2 +1.5
MVCO                             IAmb  IAmb  14 47 04.8
      comp=Z,12nm,1.1s
MVCO  Mesa Verde      67.19 328  P     P     14 46 51.5 +0.8
      baz=142
D53A  Lac Vacive, Po  67.19 355  P     P     14 46 50.9 +0.6
      baz=173
E47A  Iron Bridge     67.23 351  P     P     14 46 50.4 -0.1
      baz=167
D51A  Lot 18 Range I  67.36 354  P     P     14 46 51.4 +0.1
      baz=171
WUAZ  Wupatki         67.38 325  P     P     14 46 53.5 +1.6
WUAZ                             IAmb  IAmb  14 46 56.5
      comp=Z,17nm,1.1s
WUAZ  Wupatki         67.38 325  P     P     14 46 53.8 +1.9
      baz=139,SNR=12
D50A  G1974 Best Tow  67.48 353  P     P     14 46 52.5 +0.4
      baz=171,SNR=5.8
D48A  Paudash Townsh  67.73 352  P     P     14 46 54.0 +0.4
      baz=169
D49A  Beulah Townshi  67.77 352  P     P     14 46 54.7 +0.8
      baz=169
D46A  Sault St. Mari  67.77 350  P     P     14 46 54.7 +0.8
      baz=167
D47A  Chapleau        67.79 351  P     P     14 46 54.5 +0.5
      baz=168
E43A  Lone Tree Farm  67.80 348  P     P     14 46 53.9 -0.2
ECSD  EROS Data Cent  67.82 340  P     P     14 46 54.6 +0.3
ECSD                             IAmb  IAmb  14 46 55.9
      comp=Z,18nm,1.2s
ECSD  EROS Data Cent  67.82 340  P     P     14 46 54.4 +0.1
      baz=154,SNR=6.7
ISCO  Idaho Springs   67.89 332  P     P     14 46 56.0 +0.8
ISCO                             pmax  pmax
      comp=Z,16nm,1.6s
ISCO  Idaho Springs   67.89 332  P     P     14 46 56.0 +0.8
ISCO                             IAmb  IAmb  14 47 17.5
      comp=Z,16nm,1.6s
ISCO  Idaho Springs   67.89 332  P     P     14 46 56.4 +1.2
      baz=145
COWI  Conover         67.98 346  P     P     14 46 56.0 +0.7
IKP   In-Ko-Pah, Jac  68.03 320  P     P     14 46 59.3 +3.3
      baz=134
SPMN  Marine on St.   68.06 343  P     P     14 46 56.0 +0.3
SPMN                             IAmb  IAmb  14 46 56.7
      comp=Z,16nm,1.1s
SPMN  Marine on St.   68.06 343  P     P     14 46 56.6 +0.9
      baz=158
PV15  Paradox Valley  68.06 329  P     P     14 46 56.7 +0.4
PV15                             IAmb  IAmb  14 47 00.6
      comp=Z,13nm,1.0s
BC3   Big Chuckawall  68.34 321  P     P     14 47 00.7 +2.8
      baz=135
PV09  Paradox Valley  68.50 328  P     P     14 47 00.8 +1.7
U15A  North Rim       68.56 325  P     P     14 47 01.6 +2.2
U15A                             IAmb  IAmb  14 47 04.2
      comp=Z,13nm,1.1s
D41A  Chassel         68.77 347  P     P     14 47 01.1 +1.0
D41A                             IAmb  IAmb  14 47 02.8
      comp=Z,30nm,1.2s
PFO   Pinyon Flats O  68.91 320  P     P     14 47 03.9 +2.4
      baz=134
N23A  Red Feather La  68.93 332  P     P     14 47 03.4 +1.7
      baz=145
LSQQ  Lebel-sur-Quev  69.10 356  P     P     14 47 02.7 +0.5
      baz=174
SUSD  Miller          69.22 339  P     P     14 47 03.6 +0.5
      baz=152
GMRC  Granite Mounta  69.26 322  P     P     14 47 06.0 +2.4
      baz=135,SNR=7.8
O20A  White River Ci  69.36 330  P     P     14 47 05.6 +1.4
      baz=143
LCMT  Little Creek M  69.50 325  P     P     14 47 06.8 +1.7
SRU   San Rafael Swe  69.67 328  P     P     14 47 07.4 +1.3
SRU                              pmax  pmax
      comp=Z,11nm,0.9s
SRU   San Rafael Swe  69.67 328  P     P     14 47 07.4 +1.3
HEC   Hector,Ludlow   69.68 321  P     P     14 47 09.1 +2.9
      baz=135
MTPU  Mount Pierson   69.70 326  P     P     14 47 08.2 +1.6
LIC   Lamto           69.77  75 eP     P     14 47 06.2 -0.9
      comp=Z,75nm,2.0s
MATQ  Matagami        69.85 355  P     P     14 47 07.1 +0.3
      baz=173
TUQ   Turquoise Moun  69.87 322  P     P     14 47 09.6 +2.2
      baz=135
TIC   Toumodi         69.94  75 eP     P     14 47 07.2 -1.0
CCUT  Cedar City      69.96 325  P     P     14 47 10.5 +2.4
MSU   Marysvale       70.05 327  P     P     14 47 09.5 +0.9
MSU   Marysvale       70.05 327  P     P     14 47 09.5 +0.9
P17A  Butcher Ranch,  70.05 328  P     P     14 47 09.1 +0.6
BFSC  Mount Baldy Ra  70.06 320  P     P     14 47 11.5 +2.9
      baz=133
KIC   Kosan Boka      70.08  75 eP     P     14 47 08.2 -0.8
      comp=Z,46nm,1.2s
DRLN  Deer Lake       70.10   9  P     P     14 47 08.5 +0.2
DRLN                             IAmb  IAmb  14 47 09.8
      comp=Z,26nm,1.1s
DBIC  Dimbokro        70.10  75  P     P     14 47 07.8 -1.3
      comp=Z,15nm,1.0s,baz=228,slow=5.8,SNR=12
DBIC                             LR    LR    15 16 41.6
      comp=Z,550nm,19.3s,baz=224,slow=35
DBIC  Dimbokro        70.10  75  P     P     14 47 07.7 -1.4
DBIC                             pmax  pmax
      comp=Z,21nm,1.1s
DBIC  Dimbokro        70.10  75  P     P     14 47 07.7 -1.4
DBIC                             IAmb  IAmb  14 47 09.6
      comp=Z,21nm,1.1s
RWWY  Rawlins         70.13 332  P     P     14 47 10.3 +1.3
RWWY                             IAmb  IAmb  14 47 18.9
      comp=Z,50nm,1.9s
SHPR  Sheep Range     70.19 323  P     P     14 47 10.3 +0.9
EYMN  Ely             70.26 345  P     P     14 47 09.2 -0.2
EYMN  Ely             70.26 345  P     P     14 47 09.4  0.0
      baz=160
GSC   Goldstone, Bar  70.29 321  P     P     14 47 12.5 +2.6
      baz=134
EDW2  Edwards Air Fo  70.70 320  P     P     14 47 14.9 +2.5
      baz=133
RSSD  Black Hills     70.81 335  P     P     14 47 13.9 +0.8
RSSD                             pmax  pmax
      comp=Z,7.0nm,1.1s
RSSD  Black Hills     70.81 335  P     P     14 47 13.8 +0.8
RSSD  Black Hills     70.81 335  P     P     14 47 14.1 +1.0
      baz=147
MPU   Maple Canyon    70.91 328  P     P     14 47 14.2 +0.4
LRMC  Laurel Mtn Rad  70.93 321  P     P     14 47 16.4 +2.5
      baz=134
PSUT  Pine Spring     70.95 326  P     P     14 47 14.6 +0.6
NLU   North Lily Min  71.08 328  P     P     14 47 15.3 +0.5
TPNV  Topopah Spring  71.12 323  P     P     14 47 17.6 +2.5
      baz=135,SNR=6.0
FURC  Furnace Creek,  71.13 322  P     P     14 47 17.6 +2.7
      baz=135
MPMC  Manual Prospec  71.21 322  P     P     14 47 17.5 +1.9
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      baz=134,SNR=5.2
JLU   Jordanelle        71.27 328   P       P        14 47 16.5 +0.6
ISA   Isabella, Lake    71.52 321   P       P        14 47 19.4 +2.0
ISA                                 pmax    pmax
      comp=Z,14nm,1.0s
ISA   Isabella, Lake    71.52 321   P       P        14 47 19.4 +2.0
ISA                                 IAmb    IAmb     14 47 22.1
      comp=Z,14nm,1.0s
ISA   Isabella, Lake    71.52 321   P       P        14 47 19.8 +2.4
      baz=133,SNR=7.9
DUG   Dugway, Tooele    71.64 327   P       P        14 47 19.8 +1.7
DUG                                 pmax    pmax
      comp=Z,13nm,1.1s
DUG   Dugway, Tooele    71.64 327   P       P        14 47 19.8 +1.7
DUG   Dugway, Tooele    71.64 327   P       P        14 47 19.8 +1.7
      baz=139,SNR=8.0
AGMN  Agassiz Nation    71.72 343   P       P        14 47 19.0 +0.8
R11A  Troy Canyon, C    71.75 324   P       P        14 47 20.7 +1.9
R11A  Troy Canyon, C    71.75 324   P       P        14 47 21.2 +2.4
      baz=136,SNR=9.3
PKM   Mcpherson Peak    71.81 319   P       P        14 47 22.5 +3.2
      baz=132
CWC   Cottonwood Cre    71.82 321   P       P        14 47 21.9 +2.6
      baz=134
PD31  Pinedale Array    72.05 331   P       P        14 47 21.6 +1.0
PDAR  Pinedale Array    72.05 331   P       P        14 47 22.0 +1.4
      comp=Z,1.0nm,0.8s,baz=150,slow=6.8,SNR=9.3
PDAR                                LR      LR       15 20 25.8
      comp=Z,97nm,20.4s,baz=119,slow=37
PDAR  Pinedale Array    72.05 331   P       P        14 47 21.3 +0.7
BW06  Boulder Array     72.05 331   P       P        14 47 21.4 +0.8
BW06  Boulder Array     72.05 331   P       P        14 47 22.0 +1.4
      baz=142
SMMC  Simmler           72.21 319   P       P        14 47 24.8 +3.3
      baz=132
TBI   Tubuai            72.22 251  eS       S        14 56 40.9 -2.5
      comp=Z,182nm,27.0s
TBI   Tubuai            72.22 251  eLR      LR       15 09 25.8
      comp=Z,551nm,27.5s
SPUT  South Promonto    72.29 328   P       P        14 47 23.3 +1.3
MDND  Maddock           72.44 340   P       P        14 47 23.2 +0.7
MDND  Maddock           72.44 340   P       P        14 47 23.3 +0.8
      baz=152,SNR=5.7
REDW  Red Top Meadow    73.10 331   P       P        14 47 27.8 +1.0
OMMB  Old Mammoth Mi    73.16 322   P       P        14 47 28.2 +0.8
OMMB                                IAmb    IAmb     14 47 31.4
      comp=Z,16nm,1.0s
NV11  Mina Array Sit    73.24 323   P       P        14 47 28.9 +1.2
TPAW  Teton Pass        73.25 331   P       P        14 47 28.9 +1.1
ELK   Elko              73.29 326   P       P        14 47 29.4 +1.3
ELK                                 pmax    pmax
      comp=Z,7.0nm,1.1s
ELK   Elko              73.29 326   P       P        14 47 29.4 +1.3
NVAR  Mina Array Bea    73.32 323   P       P        14 47 30.0 +1.8
      comp=Z,6.7nm,1.0s,baz=147,slow=6.2,SNR=27
NVAR                                LR      LR       15 16 56.2
      comp=Z,112nm,19.2s,baz=181,slow=34
NVAR  Mina Array Bea    73.32 323   P       P        14 47 29.4 +1.2
FXWY  Fox Creek         73.40 331   P       P        14 47 28.6  0.0
ULM   Lac du Bonnet     73.50 344   P       P        14 47 29.4 +0.7
      comp=Z,3.6nm,0.9s,baz=134,slow=5.5,SNR=6.1
ULM   Lac du Bonnet     73.50 344⇓iP       P        14 47 28.9 +0.2
ULM   Lac du Bonnet     73.50 344   P       P        14 47 28.3 -0.4
IMW   Indian Meadow     73.56 331   P       P        14 47 31.0 +1.4
RYN   Ryan              73.58 323   P       P        14 47 31.5 +1.8
FLWY  Flagg Ranch       73.59 331   P       P        14 47 31.2 +1.5
FLWY                                IAmb    IAmb     14 47 33.6
      comp=Z,17nm,1.0s
KVN   Kaiserville       73.64 323   P       P        14 47 31.5 +1.4
KVN                                 pmax    pmax
      comp=Z,14nm,1.0s
KVN   Kaiserville       73.64 323   P       P        14 47 31.5 +1.4
KVN                                 IAmb    IAmb     14 47 34.1
      comp=Z,14nm,1.0s
RLMT  Red Lodge         73.78 333   P       P        14 47 32.0 +1.3
RLMT                                IAmb    IAmb     14 47 42.1
      comp=Z,38nm,1.8s
RLMT  Red Lodge         73.78 333   P       P        14 47 32.2 +1.4
      baz=143,SNR=6.5
LAO   LASA Array        73.80 335   P       P        14 47 32.4 +1.7
      baz=146
PPT2  Papeete2          73.87 257  eLR      LR       15 10 12.9
      comp=Z,426nm,24.8s
PPT   Papeete           73.87 257   LR      LR       15 11 50.8
      comp=Z,270nm,19.1s,baz=208,slow=29
YNE   Yellowstone No    74.01 332   P       P        14 47 32.9 +0.7
YMR   Madison River     74.17 331   P       P        14 47 33.7 +0.7
YHH   Holmes Hill       74.21 332   P       P        14 47 34.7 +1.2
YHB   Horse Butte       74.34 331   P       P        14 47 33.7 -0.3
YHL   Hebgen Lake       74.41 331   P       P        14 47 35.8 +1.3
GCMT  Greycliff         74.48 333   P       P        14 47 35.5 +0.7
PNTR  Pine Nut          74.51 323   P       P        14 47 36.3 +1.1
DGMT  Dagmar            74.53 338   P       P        14 47 35.4 +0.5
DGMT                                IAmb    IAmb     14 47 37.7
      comp=Z,26nm,1.1s
DGMT  Dagmar            74.53 338   P       P        14 47 36.1 +1.3
      baz=148
SCHQ  Schefferville     74.75   2   P       P        14 47 36.0 +0.1
      comp=Z,3.3nm,1.0s,baz=155,slow=6.6,SNR=3.6
SCHQ                                LR      LR       15 22 39.0
      comp=Z,101nm,18.7s,baz=261,slow=38
PAHR  Pah Rah Range     74.81 323   P       P        14 47 38.0 +1.2
PAHR                                IAmb    IAmb     14 47 41.5
      comp=Z,17nm,1.0s
MCMT  McKenzie Canyo    75.15 330   P       P        14 47 40.0 +1.2
AFDM  Forest Hills D    75.20 322   P       P        14 47 40.1 +1.1
BEKR  Beckworth         75.47 323   P       P        14 47 41.8 +1.2
MFID  Camas Ranch       75.53 328   P       P        14 47 42.4 +1.5
ORV   Oroville          75.91 322   P       P        14 47 44.1 +1.1
ORV                                 pmax    pmax
      comp=Z,15nm,1.0s
ORV   Oroville          75.91 322   P       P        14 47 44.1 +1.1
ORV                                 IAmb    IAmb     14 47 47.2
      comp=Z,15nm,1.0s
EGMT  Eagleton          76.29 334   P       P        14 47 45.8 +0.7
EGMT                                IAmb    IAmb     14 47 48.5
      comp=Z,17nm,1.1s
EGMT  Eagleton          76.29 334   P       P        14 47 46.6 +1.6
      baz=143,SNR=8.9
O03E  Paynes Creek      76.58 322   P       P        14 47 48.0 +1.1
      baz=132
O02D  Mt. Diablo Mer    77.07 322   P       P        14 47 52.1 +2.5
      baz=131
MSO   Missoula          77.16 331   P       P        14 47 51.7 +1.7
      baz=139
BMO   Blue Mountains    77.31 328   P       P        14 47 52.0 +1.1
BMO                                 pmax    pmax
      comp=Z,8.0nm,1.1s
BMO   Blue Mountains    77.31 328   P       P        14 47 52.0 +1.1
N02D  Trinity Center    77.54 322   P       P        14 47 54.2 +2.0
      baz=131
M04C  Macdoel           77.58 323   P       P        14 47 55.0 +2.4
      baz=132
I07A  Izee              77.88 326   P       P        14 47 56.0 +1.8
JTMT  Jette             78.01 332   P       P        14 47 55.4 +0.6
J05D  Fort Rock, OR     78.25 325   P       P        14 47 59.0 +2.8
      baz=132
SYO   Syowa Base        78.40 160⇑eP       P        14 47 53.0 -3.5
SYO   Syowa Base        78.40 160⇓epP      P        14 47 57.5 +1.0
SYO   Syowa Base        78.40 160⇑ePcP     PcP      14 48 04.4 -1.3
PINE  Pine Mountain     78.44 325   P       P        14 47 58.7 +1.4
PINE                                IAmb    IAmb     14 48 10.3
      comp=Z,25nm,1.6s
TOA0  Torodi Ar. Sit    78.62  71   P       P        14 47 56.9 -1.8
TORD  Torodi Ar. Bea    78.62  71   P       P        14 47 57.6 -1.1
      comp=Z,45nm,1.0s,baz=251,slow=4.2,SNR=106
TORD                                LR      LR       15 21 28.0
      comp=Z,534nm,19.4s,baz=235,slow=35
TORD  Torodi Ar. Bea    78.62  71   P       P        14 47 56.7 -2.0
L02E  Cave Junction     78.82 323   P       P        14 48 01.2 +2.0
      baz=130
WALA  Waterton Lakes    78.83 333   P       P        14 48 00.6 +1.3
I05D  Terrebonne, OR    79.02 326   P       P        14 48 02.4 +2.1
      baz=132
K02D  Willamette Mer    79.21 323   P       P        14 48 03.3 +1.9
      baz=130
I04A  Tendick Farm,     79.23 325   P       P        14 48 03.6 +2.1
      baz=132
NEW   Newport           79.68 331   P       P        14 48 05.1 +1.3
      baz=136
H04D  Lebanon           79.89 325   P       P        14 48 07.8 +2.9
      baz=132
G03D  McMinnville, O    80.62 325   P       P        14 48 12.9 +4.0
      baz=131
LTY   Liberty           80.66 328   P       P        14 48 10.0 +0.9
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D05A  Enumclaw           81.28 327   P       P        14 48 13.5 +1.2
D05A                                 IAmb    IAmb     14 48 16.0
      comp=Z,18nm,0.8s
B05A  Bryant             82.05 328   P       P        14 48 18.4 +2.0
      baz=132
TSUM  Tsumeb             82.17 108   P       P        14 48 18.3 +0.4
      comp=Z,17nm,1.0s,baz=243,slow=4.3,SNR=16
TSUM  Tsumeb             82.17 108   P       P        14 48 17.3 -0.7
TSUM                                 IAmb    IAmb     14 48 20.3
      comp=Z,19nm,1.0s
LLLB  Lillooet           83.54 330   P       P        14 48 25.1 +1.0
LLLB                                 IAmb    IAmb     14 48 26.9
      comp=Z,15nm,1.1s
BOSA  Boshof             85.68 119   LR      LR       15 23 49.2
      comp=Z,282nm,18.4s,baz=232,slow=34
PAB   San Pablo          85.83  45   P       P        14 48 35.0 -1.0
PAB                                  pmax    pmax
      comp=Z,17nm,1.2s
PAB   San Pablo          85.83  45   P       P        14 48 35.0 -1.0
PAB                                  IAmb    IAmb     14 48 37.9
      comp=Z,17nm,1.2s
TAM   Tamanrasset        85.84  64   P       P        14 48 36.4 -0.1
TAM                                  pmax    pmax
      comp=Z,30nm,1.2s
TAM   Tamanrasset        85.84  64   P       P        14 48 36.4 -0.1
MAW   Mawson             86.14 164   P       P        14 48 37.8 +0.8
      comp=Z,10.0nm,1.1s,baz=232,slow=4.0,SNR=6.1
ESDC  Sonseca Array      86.15  45   P       P        14 48 38.5 +0.9
      comp=Z,3.5nm,0.8s,baz=237,slow=4.8,SNR=7.6
ESDC                                 LR      LR       15 23 03.5
      comp=Z,118nm,21.0s,baz=250,slow=33
ESDC  Sonseca Array      86.15  45   P       P        14 48 37.2 -0.4
YKA   Yellowknife Ar     89.32 341   P       P        14 48 52.1  0.0
      comp=Z,15nm,0.9s,baz=138,slow=5.3,SNR=86
YKA                                  LR      LR       15 31 28.8
      comp=Z,210nm,21.5s,baz=0.0,slow=37
KEST  Kesra              93.94  53   LR      LR       15 32 15.4
      comp=Z,407nm,19.7s,baz=218,slow=36
INK   Inuvik             99.06 340   LR      LR       15 37 25.0
      comp=Z,136nm,19.5s,baz=246,slow=37
HDA   Harding Lake      102.14 334   P       Pdif     14 49 50.5  0.0
      baz=111
DZM   Mont Dzumac       110.07 236  eLR      LR       15 26 45.4
      comp=Z,293nm,23.6s
AKBB  Malin Array Si    111.63  42⇑iPKIKP   PKiKP    14 54 31.3 +0.7
BR131 Keskin Array S    113.52  55⇑iPKIKP   PKiKP    14 54 34.0 -0.8
OBN   Obninsk           116.21  38⇑iPKIKP   PKPdf    14 54 38.9 -0.3
OBN                                  pmax    pmax
      comp=Z,5.0nm,1.0s
KLMR  Klimovskoe        117.29  31  ePKIKP   PKPdf    14 54 38.0 -3.1
KLMR                                 pmax    pmax
      comp=Z,23nm,1.9s
KLMR  Klimovskoe        117.29  31  ePKPdf   PKPdf    14 54 38.1 -3.1
KLMR                                 AMP              14 54 41.1
      comp=Z,23nm,1.9s
BILL  Bilibino          120.60 338⇑iPKIKP   PKPdf    14 54 45.5 -1.8
BILL                                 pmax    pmax
      comp=Z,2.0nm,1.1s
KBZ   Khabaz            120.66  50   PKP     PKiKP    14 54 48.5 +0.3
      comp=Z,7.1nm,1.0s,baz=196,slow=2.0,SNR=5.7
H11S2 WAKE ISLAND Hy125.90 279   T       T        17 14 32.4
      baz=101,slow=74,SNR=262
H11S1 WAKE ISLAND Hy125.91 279   T       T        17 14 33.2
      baz=101,slow=74,SNR=147
H11S3 WAKE ISLAND Hy125.92 279   T       T        17 14 32.1
      baz=101,slow=74,SNR=140
H11N3 WAKE ISLAND Hy125.95 280   T       T        17 14 27.9
      baz=101,slow=74,SNR=61
H11N2 WAKE ISLAND Hy125.97 280   T       T        17 14 29.0
      baz=101,slow=74,SNR=53
H11N1 WAKE ISLAND Hy125.97 280   T       T        17 14 28.7
      baz=101,slow=74,SNR=43
TIXI  Tiksi             127.22 352⇑iPKIKP   PKiKP    14 55 00.8 +0.4
ARU   Arti              128.02  33  i PKIKP  PKiKP    14 55 03.8 +1.3
ARU                                                   14 57 08.7
ARU                                                   15 02 13.4
ARU                                  SS      SS       15 14 21.8 +5.0
SEY   Seymchan          128.14 337⇓iPKIKP   PKiKP    14 55 03.7 +1.2
ASAR  Alice Springs     130.22 210   PKP     PKiKP    14 55 07.9 -0.2
      comp=Z,3.2nm,1.0s,baz=146,slow=2.5,SNR=19
ASAR  Alice Springs     130.22 210   PKIKP   PKPdf    14 55 06.1 -1.2
ASAR  Alice Springs     130.22 210           PKPdf    14 55 06.1 -1.2
ABKAR Akbulak array     131.35  41           PKPdf    14 55 08.7 +0.2
PMG   Port Moresby      132.45 235⇑iPKIKP   PKPdf    14 55 10.2 -1.4
WRA   Warramunga Arr    133.15 213   PKP     PKPdf    14 55 12.4 -0.4
      comp=Z,1.2nm,0.9s,baz=152,slow=1.9,SNR=9.4
WRAB  Tennant Creek     133.15 213⇑iPKIKP   PKPdf    14 55 13.3 +0.5
ZAA0  Zalesovo Array    141.46  23           PKPdf    14 55 25.7 -1.3
ZALV  Zalesovo Beam     141.46  23   PKhKP   PKPpre   14 55 22.8
      comp=Z,2.1nm,0.8s,baz=288,slow=6.1,SNR=4.9
ZALV                                 PKP     PKPdf    14 55 27.5 +0.5
      comp=Z,4.4nm,0.9s,baz=294,slow=3.1,SNR=8.3
ZALV  Zalesovo Beam     141.46  23   PKHKP   PKPpre   14 55 21.4
ZALV  Zalesovo Beam     141.46  23           PKPpre   14 55 21.4
AAK   Ala-Archa         143.25  45   PKIKP   PKPdf    14 55 30.7 -0.1
AAK   Ala-Archa         143.25  45           PKPdf    14 55 30.7 -0.1
MAKZ  Makanchi          145.38  34   PKIKP   PKPbc    14 55 34.1  0.0
MAKZ  Makanchi          145.38  34           PKPbc    14 55 34.1  0.0
NIL   Nilore            145.45  60   PKIKP   PKPbc    14 55 34.8  0.0
NIL   Nilore            145.45  60           PKPbc    14 55 34.8  0.0
MK31  Makanchi Array    145.55  33   PKIKP   PKPdf    14 55 34.4 -0.1
MK31  Makanchi Array    145.55  33           PKPdf    14 55 34.4 -0.1
MKAR  Makanchi Array    145.55  33   PKPbc   PKPbc    14 55 34.7 +0.1
      comp=Z,31nm,0.9s,baz=319,slow=2.9,SNR=132
MKAR  Makanchi Array    145.55  33   PKIKP   PKPdf    14 55 34.1 -0.4
MKAR  Makanchi Array    145.55  33           PKPdf    14 55 34.1 -0.4
KSH   Kashi             145.61  49   PKPbc   PKPab    14 55 36.6 +1.1
KSH                                  PP      PP       14 58 59.3 +3.5
KSH                                  PKS     PKSdf    14 59 11.1 +0.6
KSH                                  SS      SS       15 17 47.4 -0.1
KSH                                  AMB     AMB
      comp=Z,330nm,6.1s
KSH                                  LR      LR
      comp=Z,240nm,17.4s
IRK   Irkutsk           147.74   6  ePKP2    PKPbc    14 55 40.3 -0.5
IRK                                  pmax    pmax
      comp=Z,34nm,2.7s
MOY   Mondy             147.89  10  ePKP2    PKPbc    14 55 41.3 -0.1
MOY                                  pmax    pmax
      comp=Z,21nm,1.3s
TLY   Talaya            148.23   7  ePKP2    PKiKP    14 55 43.0 -0.9
TLY                                  pmax    pmax
      comp=Z,24nm,1.1s
TLY   Talaya            148.23   7           PKPbc    14 55 42.7 +0.6
USRK  Ussuriysk Ar.     149.39 327   PKPbc   PKiKP    14 55 46.8 +0.3
      comp=Z,13nm,0.9s,baz=31,slow=2.2,SNR=12
USRK  Ussuriysk Ar.     149.39 327   PKP2    PKiKP    14 55 46.4  0.0
USRK  Ussuriysk Ar.     149.39 327           PKiKP    14 55 46.4  0.0
ZAK   Zakamensk         149.47   7  ePKP2    PKiKP    14 55 46.0 -0.6
ZAK                                  pmax    pmax
      comp=Z,10.0nm,1.2s
MJAR  Matsushiro Arr    149.82 309   PKPbc   PKiKP    14 55 47.7 +0.1
      comp=Z,11nm,1.0s,baz=104,slow=1.3,SNR=13
MJAR  Matsushiro Arr    149.82 309   PKP2    PKPbc    14 55 46.8 +0.1
MJAR  Matsushiro Arr    149.82 309           PKPbc    14 55 46.8 +0.1
WMQ   Urumqi            150.36  32  ePKPbc   PKPdf    14 55 42.0 -0.6
WMQ                                  pPKP    pPKPdf   14 55 50.0 -0.7
WMQ                                  sPKP             14 55 56.4
WMQ                                  LR      LR
      comp=Z,440nm,25.9s
WMQ                                  LR      LR
      comp=Z,130nm,25.1s
HYB   Hyderabad         150.92  90  i PKP    PKiKP    14 55 50.5 +0.1
SONM  Songino Array     152.28   4   PKP     PKPdf    14 55 46.4 +0.9
      comp=Z,1.9nm,1.0s,baz=42,slow=2.4,SNR=3.7
SONM                                 PKPbc   pPKPdf   14 55 53.0 -0.2
      comp=Z,6.0nm,1.0s,baz=342,slow=1.6,SNR=13
SONM                                 PKPab   PKPab    14 56 01.7 -0.4
      comp=Z,6.9nm,1.1s,baz=331,slow=2.8,SNR=7.9
SONM  Songino Array     152.28   4   PKIKP   PKPdf    14 55 45.5  0.0
SONM                                                  14 56 01.7
SONM  Songino Array     152.28   4           PKPdf    14 55 45.5  0.0
SONM                                 PKPbc   PKPbc    14 55 52.3 +0.1
ULN   Ulaanbaatar       152.29   3   PKIKP   PKPdf    14 55 45.9 +0.4
ULN                                                   14 55 53.0
ULN   Ulaanbaatar       152.29   3           PKPdf    14 55 45.9 +0.4
ULN                                  PKPbc   pPKPdf   14 55 53.0 -0.3
KSRS  Korea Array       156.25 321   PKP     PKPdf    14 55 52.7 +1.6
      comp=Z,1.7nm,0.9s,baz=48,slow=1.8,SNR=4.8
KSRS                                 PKPab   PKPab    14 56 21.7 +2.7
      comp=Z,1.0nm,0.8s,baz=43,slow=2.2,SNR=4.2
GTA   Gaotai            159.18  21  ePKP     PKPdf    14 55 56.6 +1.7
GTA                                  pPKP    sPKPdf   14 56 06.3 +1.0
GTA                                  sPKP             14 56 09.9
GTA                                  LR      LR
```

```
      comp=Z,96nm,18.7s
GTA                                  LR      LR
      comp=Z,110nm,20.9s
GTA                                  LR      LR
      comp=Z,160nm,19.4s
HHC   Hu-ho-hao-te      159.26 355  ePKP     PKPdf    14 55 56.8 +1.9
LZH   Lanzhou           163.44  15  ePKP     PKPdf    14 55 57.8 -1.8
LZH                                  pPKP    pPKPdf   14 56 07.4 +0.1
LZH                                  sPKP             14 56 12.3
LZH                                  LR      LR
      comp=Z,130nm,17.9s
LZH                                  LR      LR
      comp=Z,150nm,18.0s
LZH                                  LR      LR
      comp=Z,190nm,19.1s
NJ2   Nanjing           165.30 326  ePKP     PKPdf    14 56 01.3 +0.2
CD2   Chengdu           168.22  23   PKP     PKPdf    14 56 02.0 -1.4
CMAR  Chiang Mai Arr    170.21  98   PKP     PKPdf    14 56 04.5 -0.5
      comp=Z,0.3nm,0.4s,baz=270,slow=3.5,SNR=5.7
CMAR                                 PKPab   PKPab    14 57 20.4 -0.5
      comp=Z,0.8nm,0.6s,baz=252,slow=5.2,SNR=7.8
CMAR  Chiang Mai Arr    170.21  98   PKIKP   PKPdf    14 56 04.2 -0.8
CMAR                                                  14 57 20.3
CMAR  Chiang Mai Arr    170.21  98           PKPdf    14 56 04.2 -0.8
CMAR                                         PKPab    14 57 20.3 -0.7
GYA   Guiyang           173.31  20   PKP     PKPdf    14 56 05.0 -1.4
GYA                                  PKPab   PKPab    14 57 35.8 +1.5
GYA                                  PKS     PKSdf    14 59 36.3 -2.5
GYA                                  PP      PP       15 01 28.3 +3.4
GYA                                  AMB     AMB
      comp=Z,130nm,8.0s
```

VAO ***18*** *14:58:31.4±2.4, 18.°98S×72.°50W, h52^{km}±13^{km}, mb4.2*

SJA ***18*** *14:58:37.3±0.7, 19.°39S×71.°43W, h10^{km}, ML4.2, MW4.0*

IDC ***18*** *14:58:41.3±0.8, 19.°30S×70.°80W, h0^{km}, mb4.1/6, mb1 4.3/10, mb1mx4.0/38, mbtmp4.1/10, ML3.8/4, MS3.6/3, Ms1 3.6/3, ms1mx3.1/38, Error ellipse: s-maj=25.9km s-min=13.9km az=65.0*

NEIC ***18*** *14:58:43.9, 19.°49S×71.°10W, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.42; $M_{\theta\theta}$-0.44; $M_{\phi\phi}$-0.98; $M_{r\theta}$1.16; $M_{\theta\phi}$0.84; $M_{\phi r}$-2.60; Fault plane solution: $M_0$3.22000×10^{15} NP1:ϕ_s311.10000°, δ14.90000°, λ67.09000°. NP2:ϕ_s154.72000°, δ76.30000°, λ95.91000°. Principal axes: T 3.1593, Plg58.0000°, Azm73.0000°; N 0.1179, Plg6.0000°, Azm333.0000°; P -3.2772, Plg31.0000°, Azm240.0000°;*

NEIC ***18*** *14:58:43.4±2.4, 19.°47S±0.°06×71.°07W±0.°07, h14^{km}±4^{km}, mb4.4/10, Mwr4.3/17 Error ellipse: s-maj=10.5km s-min=8.2km az=56.0*

GUC ***18*** *14:58:44.6±0.8, 19.°43S×71.°04W, h40^{km}±3^{km}, ML4.2*

ISC 18 14:58:44.9±1.5, **19.°40S**±0.°03×**71.°04W**±0.°06, **h31**^{km}±10^{km}, **n93, σ1.°85**/102, **mb4.3**/8, **3C-4D, Off coast of northern Chile**

```
Code  Station Name       Δ°   AZ°    Phase ID        Time      Res
                                     Op      ISC      h  m  s   ISC
PSGC  Pisagua             0.88 103⇓iP       Pn       14 59 00.1 -1.1
PSGC                                i S      Sb       14 59 12.3 -1.0
PSGC                                 IAML             14 59 15.1
      comp=N,14µm,0.3s
PSGCX Pisagua             0.88 103  eP       Pn       14 59 00.5 -0.8
PSGCX                                IAML             14 59 19.2
      comp=Z,4µm,0.8s
PB12  IPOC Station P      1.03  41⇑iP       Pn       14 59 03.2 -0.1
PB12                                i S      Sn       14 59 17.0 +0.2
PB12  IPOC Station P      1.03  41  eP       Pn       14 59 02.3 -1.0
PB12                                 IAML             14 59 23.6
      comp=Z,4µm,1.0s
AP01  Chacalluta          1.22  33  i P      Pn       14 59 06.3 +0.4
AP01                                i S      Sb       14 59 22.3 -0.4
AP01                                 IAML             14 59 35.9
      comp=E,8µm,0.7s
PB11  IPOC Station P      1.35 106⇓iP       Pn       14 59 07.9 +0.2
PB11                                i S      Sn       14 59 26.3 +1.6
PB11  IPOC Station P      1.35 106           Pn       14 59 08.2 +0.5
TA01  Diego Aracena       1.41 145⇓iP       Pn       14 59 08.5 +0.1
TA01                                i S      Sn       14 59 26.1 +0.1
TA01                                 IAML             14 59 34.6
      comp=E,8µm,0.8s
PATCX Punta Patache       1.64 150⇓iP       Pn       14 59 11.6 -0.1
PATCX                               i S      Sn       14 59 32.6 +0.9
PATCX                                IAML             14 59 46.9
      comp=E,5µm,0.5s
PATCX Punta Patache       1.64 150  eP       Pn       14 59 11.6 -0.1
PATCX                               eS       Sb       14 59 37.0 +2.3
PATCX                                IAML             14 59 42.3
      comp=Z,3µm,0.4s
GO01  Chusmiza            1.76  99⇑iP       Pn       14 59 14.9 +1.2
GO01                                i S      Sb       14 59 38.3 -0.3
GO01  Chusmiza            1.76  99           Pn       14 59 14.9 +1.2
PB16  IPOC Station P      1.79  54⇑iP       Pn       14 59 15.8 +1.5
PB16                                i S      Sb       14 59 39.9 +0.1
PB16                                 IAML             14 59 48.6
      comp=N,3µm,0.5s
PB08  IPOC Station P      1.92 113  i P      Pn       14 59 16.9 +1.1
PB08                                i S      Sb       14 59 42.2 -0.9
PB08                                 IAML             14 59 45.8
      comp=N,3µm,0.4s
PB08  IPOC Station P      1.92 113  eP       Pn       14 59 17.6 +1.8
PB08                                 IAML             14 59 51.0
      comp=Z,2µm,0.8s
PB01  IPOC Station P      2.18 139  eP       Pn       14 59 19.9 +0.6
PB01                                i S      Sn       14 59 47.1 +1.8
PB01                                 IAML             14 59 57.7
      comp=E,3µm,0.6s
PB01  IPOC Station P      2.18 139           Pn       14 59 19.8 +0.6
PB09  IPOC Station P      2.91 145  i P      Pn       14 59 30.6 +1.3
PB09                                i S      Sn       15 00 06.3 +2.9
PB09  IPOC Station P      2.91 145  eP       Pn       14 59 29.8 +0.5
PB09                                 IAML             15 00 23.3
      comp=Z,3µm,0.6s
PB04  IPOC Station P      3.03 164           Pn       14 59 30.1 -0.9
PB04  IPOC Station P      3.03 164  eP       Pn       14 59 30.2 -0.8
PB04                                eS       Sn       15 00 09.6 +3.3
PB05  IPOC Station P      3.52 167  eP       Pn       14 59 37.2 -0.4
PB05                                 IAML             15 00 45.2
      comp=Z,430nm,0.9s
LVC   Limon Verde         3.76 148   Pn      Pn       14 59 42.6 +1.5
      comp=Z,6.4nm,0.3s,baz=11,slow=8.5,SNR=45
LVC                                  Pg      Pb       14 59 49.4 -1.4
      comp=Z,55nm,0.3s,baz=330,slow=10,SNR=39
LVC                                  Sn      Sn       15 00 25.4 +0.9
      comp=Z,35nm,0.3s,baz=330,slow=7.9,SNR=6.0
LVC                                  Lg      Lg       15 00 38.9
      comp=Z,58nm,0.3s,baz=88,slow=22,SNR=11
LVC   Limon Verde         3.76 148           Pn       14 59 42.4 +1.3
LVC   Limon Verde         3.76 148  eP       Pn       14 59 42.7 +1.6
LVC   Limon Verde         3.76 148  eP       Pn       14 59 41.6 +0.5
LVC                                 i P      Pb       14 59 42.6 -8.2
LVC                                  IAML             15 00 47.4
      comp=Z,240nm,0.9s
PB15  IPOC Station P      4.06 159  eP       Pn       14 59 45.0 -0.1
PB15                                 IAML             15 01 04.9
      comp=Z,964nm,0.4s
PB10  IPOC Station P      4.11 174           Pn       14 59 43.7 -2.0
PB10  IPOC Station P      4.11 174  i P      Pn       14 59 44.2 -1.4
PB10                                 IAML             15 01 14.7
      comp=Z,175nm,0.9s
LPAZ  La Paz              4.15  42   Pn      Pn       14 59 48.4 +1.6
      comp=Z,0.5nm,0.3s,baz=211,slow=14,SNR=17
LPAZ  La Paz              4.15  42           Pn       14 59 51.3 +4.5
YJA   Yavi                5.86 119  eP       Pn       15 00 13.3 +3.3
YJA                                  IAML             15 02 08.7
      comp=Z,16nm,1.5s
GO02  Mina Guanaco        5.88 167           Pn       15 00 09.2 -1.1
AZAP  Zapla               7.33 132  eP       Pn       15 00 32.3 +2.2
GO03  Copiap              8.19 175   Pn      Pn       15 00 39.2 -2.4
NNA   Nana                9.25 322   Pn      Pn       15 00 57.5 +1.1
      comp=Z,1.1nm,0.3s,baz=274,slow=23,SNR=1.9
SIV   San Ignacio        10.08  72   Pn      Pn       15 01 06.3 -1.4
      comp=Z,1.4nm,0.3s,baz=277,slow=9.7,SNR=19
SIV                                  LR      LR       15 05 38.0
      comp=Z,503nm,20.8s,baz=279,slow=42
GO04  Tololo Observa     10.72 179   Pn      Pn       15 01 12.4 -4.3
SAML  Samuel             12.88  37           Pn       15 01 47.5 +1.6
CPUP  Villa Florida      14.38 121   Pn      Pn       15 02 06.2 -0.3
      comp=Z,0.1nm,0.3s,baz=307,slow=16,SNR=1.7
CPUP                                 LR      LR       15 08 38.7
      comp=Z,166nm,19.3s,baz=314,slow=42
CPUP  Villa Florida      14.38 121   P       P        15 02 11.0 -2.1
CPUP  Villa Florida      14.38 121  eP       P        15 02 10.9 -2.1
```

AQDB	**Aquidauana**	**14.46**	**97**	*e*P	**Pn**	**15 02 10.2**	**+2.7**
SALV	**Santo Antonio**	**15.03**	**79**	*e*P	**Pn**	**15 02 16.6**	**+1.4**
CLDB	**Colider**	**16.97**	**62**	*e*P	**Pn**	**15 02 38.5**	**-1.7**
ARAG	**Araguaiana, MT**	**18.69**	**82**	*e*P	**P**	**15 03 00.2**	**-0.7**
CPSB	**Cacapava Do Su**	**19.33**	**128**	*e*P	**P**	**15 03 07.3**	**-0.4**
PLTB	**Pedras Altas**	**19.93**	**132**	*e*P	**P**	**15 03 13.5**	**-0.8**
GO06	**Curarrehue**	**20.11**	**181**	P	**P**	**15 03 15.9**	**-0.5**
GO06				IAmb	IAmb	15 03 31.1	
	comp=Z,18nm,1.4s						
FRTB	**Fartura**	**20.37**	**105**	*e*P	**P**	**15 03 20.3**	**+1.1**
PLCA	**Paso Flores**	**21.26**	**179**	P	**P**	**15 03 30.5**	**+1.8**
	comp=Z,7.4nm,0.9s,baz=23,slow=11,SNR=13						
PLCA	**Paso Flores**	**21.26**	**179**	P	**P**	**15 03 30.6**	**+1.9**
PTGA	**Pitinga**	**21.50**	**32**	P	**P**	**15 03 30.0**	**-1.2**
	comp=Z,4.6nm,0.3s,baz=203,slow=12,SNR=16						
PTGA	**Pitinga**	**21.50**	**32**	P	**P**	**15 03 30.5**	**-0.8**
PTGA				IAmb	IAmb	15 03 40.8	
	comp=Z,11nm,0.9s						
IPMB	**Ipameri, GO**	**21.66**	**90**	*e*P	**P**	**15 03 32.5**	**-0.7**
SOTA	**Rioblanco**	**22.09**	**345**	*e*P	**P**	**15 03 43.6**	**+5.4**
BDFB	**Brasilia**	**22.26**	**84**	P	**P**	**15 03 42.3**	**+2.6**
	comp=Z,4.6nm,0.5s,baz=270,slow=8.7,SNR=5.6						
BDFB				LR	LR	15 14 02.6	
	comp=Z,181nm,20.3s,baz=308,slow=42						
BDFB	**Brasilia**	**22.26**	**84**	IAmb	IAmb	15 03 53.9	
	comp=Z,20nm,1.6s						
POPC	**Popayan, Colom**	**22.50**	**345**	*e*P	**P**	**15 03 47.1**	**+4.8**
VAO	**Valinhos**	**22.72**	**103**	*e*P	**P**	**15 03 42.7**	**-1.7**
PARB	**Paraibuna**	**23.98**	**104**	*e*P	**P**	**15 03 54.0**	**-2.9**
GUY2C	**Guyana, Caldas**	**24.84**	**350**	*e*P	**P**	**15 04 08.8**	**+3.6**
NORC	**Norcasia**	**25.10**	**351**	*e*P	**P**	**15 04 08.8**	**+1.8**
RUSC	**La Rusia**	**25.22**	**355**	*e*P	**P**	**15 04 11.4**	**+2.7**
RUSC	**La Rusia**	**25.22**	**355**	P	**P**	**15 04 10.6**	**+2.0**
PTBC	**PUERTO BERRIO,**	**26.00**	**352**	*e*P	**P**	**15 04 14.5**	**-0.7**
ZARC	**Zaragoza, Cauc**	**26.99**	**352**	*e*P	**P**	**15 04 25.2**	**+1.0**
SMLC	**San Martn de**	**28.19**	**354**	*e*P	**P**	**15 04 36.0**	**+1.1**
SJCC	**San Jacinto, C**	**29.40**	**352**	*e*P	**P**	**15 04 43.4**	**-2.3**
GRGR	**Grenville**	**32.67**	**17**	P	**P**	**15 05 15.8**	**+1.3**
PMSA	**Palmer Station**	**45.58**	**176**	*e*P	P	15 06 49.7	-12
TXAR	**Lajitas Array**	**57.78**	**326**	P	**P**	**15 08 33.7**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=135,slow=9.0,SNR=3.0						
VNA2	**Neumayer--Watz**	**63.28**	**161**	P	**P**	**15 09 10.5**	**+0.2**
SNAA	**Sanae**	**64.90**	**161**	P	**P**	**15 09 24.0**	**+3.0**
DBIC	**Dimbokro**	**70.09**	**75**	P	**P**	**15 09 52.5**	**-2.2**
	comp=Z,1.4nm,0.6s,baz=278,slow=4.7,SNR=3.1						
DBIC	**Dimbokro**	**70.09**	**75**	P	**P**	**15 09 53.2**	**-1.5**
DBIC				IAmb	IAmb	15 10 41.4	
	comp=Z,36nm,1.8s						
TOA0	**Torodi Ar. Sit**	**78.56**	**72**	P	**P**	**15 10 43.6**	**-0.4**
TOA0				IAmb	IAmb	15 10 45.6	
	comp=Z,3.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**78.56**	**72**	P	**P**	**15 10 43.7**	**-0.3**
	comp=Z,3.2nm,0.8s,baz=254,slow=5.3,SNR=13						
TORD	**Torodi Ar. Bea**	**78.56**	**72**	P	**P**	**15 10 43.4**	**-0.6**
YKA	**Yellowknife Ar**	**88.57**	**341**	P	**P**	**15 11 35.9**	**+1.7**
	comp=Z,1.1nm,0.9s,baz=138,slow=5.1,SNR=15						
H11S2	**WAKE ISLAND Hy**	**125.61**	**279**	T	T	17 37 00.3	
	baz=101,slow=74,SNR=64						
H11S1	**WAKE ISLAND Hy**	**125.62**	**279**	T	T	17 37 23.4	
	baz=101,slow=74,SNR=35						
H11S3	**WAKE ISLAND Hy**	**125.62**	**279**	T	T	17 37 03.2	
	baz=101,slow=74,SNR=12						
H11N3	**WAKE ISLAND Hy**	**125.64**	**281**	T	T	17 37 01.9	
	baz=100,slow=74,SNR=5.5						
H11N2	**WAKE ISLAND Hy**	**125.66**	**281**	T	T	17 37 04.2	
	baz=100,slow=74,SNR=5.5						
H11N1	**WAKE ISLAND Hy**	**125.66**	**281**	T	T	17 37 09.8	
	baz=100,slow=74,SNR=6.8						
ASAR	**Alice Springs**	**130.76**	**211**	PKP	**PKiKP**	**15 17 55.1**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=107,slow=1.0,SNR=3.4						
WRA	**Warramunga Arr**	**133.66**	**214**	PKP	**PKiKP**	**15 18 00.4**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=143,slow=1.4,SNR=2.7						
ZALV	**Zalesovo Beam**	**140.85**	**23**	PKP	**PKPdf**	**15 18 12.4**	**+0.9**
	comp=Z,0.5nm,0.4s,baz=336,slow=3.2,SNR=3.5						
MKAR	**Makanchi Array**	**145.03**	**33**	PKP	**PKPdf**	**15 18 19.5**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=339,slow=3.0,SNR=9.2						
MKAR	**Makanchi Array**	**145.03**	**33**		**PKPdf**	**15 18 19.9**	**+0.7**
KSH	**Kashi**	**145.25**	**48**	PKPbc	**PKPbc**	**15 18 16.9**	**-2.8**
KSH				pPKP	pPKPab	15 18 28.3	-0.8
KSH				PP	**PP**	**15 21 39.8**	**+0.6**
KSH				PKS	**PKSdf**	**15 21 49.9**	**-5.6**
USRK	**Ussuriysk Ar.**	**148.68**	**327**	PKPbc	**PKPab**	**15 18 31.9**	**-0.8**
	comp=Z,1.6nm,1.0s,baz=64,slow=3.4,SNR=2.6						

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*IDC **18** 15:09:53.1±2.3, 22°.76N×12°.11W, h0^{km}, mb3.6/3, mb1 3.6/4, mb1mx3.4/37, mbtmp3.6/4, ML3.3/1, MS4.1/4, Ms1 4.1/4, ms1mx3.2/51, Error ellipse: s-maj=59.0km s-min=36.9km az=66.0*

*NEIC **18** 15:09:55.2±1.0, 22°.6N±0°.1×12°.0W±0°.1, h15^{km}±7^{km}, mb4.1/4, Error ellipse: s-maj=24.2km s-min=13.5km az=214.0*

ISC 18 15:09:58.7±1.2**, 23°.82N**±0°.07×**11°.0W**±0°.1**, h10^{km}, n28,** σ**3^{s}10**/24**, mb3.8**/4**, MS4.2**/4**, Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TANT	**Tantan**	**4.58**	**357**	P	Pn	15 10 58.7	-9.2
TANT				S	Sg	15 12 36.1	+10
MACI	**Morro de la Ar**	**6.67**	**313**	Pn	**Pn**	**15 11 36.6**	**-0.3**
TTIG	**Tnine Tigouga,**	**7.06**	**18**	P	**Pn**	**15 11 39.4**	**-2.8**
TTIG				S	**Sg**	**15 13 48.4**	**+3.0**
OUK	**Oukaimeden**	**7.85**	**20**	P	**Pn**	**15 11 50.0**	**-3.2**
OUK				S	**Sg**	**15 14 07.0**	**-3.7**
ZGR	**Zagora**	**7.87**	**36**	P	**Pn**	**15 11 53.5**	**+0.2**
ZGR				S	**Sg**	**15 14 14.2**	**+3.0**
OUZM	**OUZ**	**7.98**	**27**	P	**Pn**	**15 11 51.6**	**-3.2**
OUZM				S	**Sg**	**15 14 10.2**	**-4.7**
TZRR	**Tazzarine**	**8.43**	**33**	P	**Pn**	**15 12 00.7**	**-0.2**
TZRR				S	**Sg**	**15 14 26.7**	**-2.4**
MD31	**MD31**	**10.53**	**30**	P	**Pn**	**15 12 25.7**	**-4.0**
MDT	**Midelt**	**10.56**	**31**	Sn	Sn	15 15 02.3	+34
	0.2nm,0.3s,baz=304,slow=3.6,SNR=1.4						
MDT				Lg	Lg	15 16 05.6	
	0.2nm,0.3s,baz=211,slow=10,SNR=1.9						
MDT	**Midelt**	**10.56**	**31**	P	**Pn**	**15 12 29.8**	**-0.3**
FIGM	**Figuig**	**11.90**	**44**	P	**Pn**	**15 12 50.5**	**+1.8**
TOA0	**Torodi Ar. Sit**	**16.00**	**129**	Pn	**Pn**	**15 13 40.8**	**-3.2**
TOA0				IAmb	IAmb	15 13 50.9	
	comp=Z,6.6nm,1.4s						
TORD	**Torodi Ar. Bea**	**16.00**	**129**	Pn	**Pn**	**15 13 41.0**	**-2.9**
	comp=Z,0.1nm,0.3s,baz=313,slow=12,SNR=3.7						
TORD				Sn	**Sn**	**15 16 41.0**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=297,slow=23,SNR=1.6						
TORD				Lg	Lg	15 18 28.6	
	baz=324,slow=29,SNR=1.8						
TORD	**Torodi Ar. Bea**	**16.00**	**129**		**Pn**	**15 13 40.7**	**-3.3**
SET	**Setif**	**18.75**	**45**	P	**Pn**	**15 14 22.0**	**+3.8**
SET	**Setif**	**18.75**	**45**	P	**Pn**	**15 14 22.0**	**+3.8**
KEST	**Kesra**	**21.19**	**51**	P	P	15 14 57.5	+13
	comp=Z,1.2nm,0.6s,baz=257,slow=9.4,SNR=1.9						
KEST	**Kesra**	**21.19**	**51**	IAmb	IAmb	15 15 23.7	
	comp=Z,16nm,1.9s						
I48TN	**KESRA INFRASON**	**21.21**	**51**	*i*		17 23 25.0	
	baz=242,slow=303,SNR=5.0						
FINES	**FINESS Array B**	**45.29**	**24**	P	P	15 18 22.4	+6.1
	comp=Z,0.8nm,0.6s,baz=230,slow=6.3,SNR=3.8						
ATD	**Arta Tunnel**	**52.41**	**94**	LR	LR	15 40 43.8	
	comp=Z,179nm,20.5s,baz=222,slow=35						
WSAR	**Wadi Sarin**	**63.16**	**75**	LR	LR	15 52 12.3	
	comp=Z,114nm,20.2s,baz=271,slow=39						
AAK	**Ala-Archa**	**71.05**	**51**	LR	LR	15 57 45.7	
	comp=Z,156nm,21.5s,baz=351,slow=40						
MK31	**Makanchi Array**	**75.15**	**45**	P	**P**	**15 21 45.3**	**+4.0**
MK31				IAmb	IAmb	15 24 08.5	
	comp=Z,3.8nm,1.8s						
MKAR	**Makanchi Array**	**75.15**	**45**	P	P	15 21 45.9	+4.6
	comp=Z,0.3nm,0.6s,baz=279,slow=7.2,SNR=6.2						
MKAR				LR	LR	15 58 49.1	
	comp=Z,156nm,20.5s,baz=298,slow=38						
MKAR	**Makanchi Array**	**75.15**	**45**	P	**P**	**15 21 45.3**	**+4.0**
WRA	**Warramunga Arr**	**147.61**	**90**	PKPbc	**PKPdf**	**15 29 42.3**	**+0.9**
	comp=Z,0.7nm,0.9s,baz=300,slow=2.5,SNR=3.1						
ASAR	**Alice Springs**	**147.88**	**97**	PKPbc	**PKPbc**	**15 29 43.4**	**-1.3**
	comp=Z,0.6nm,0.8s,baz=278,slow=1.8,SNR=5.9						

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*IDC **18** 15:20:32.0±1.1, 10°.82S×161°.42E, h0^{km}, mb3.9/8, mb1 4.0/10, mb1mx3.8/44, mbtmp3.9/10, ML3.6/3, MS3.7/3, Ms1 3.7/3, ms1mx3.1/35, Error ellipse: s-maj=26.3km s-min=23.0km az=90.0*

*NEIC **18** 15:20:37.3±1.1, 10°.8S±0°.1×161°.4E±0°.1, h37^{km}±9^{km}, mb4.6/8, Error ellipse: s-maj=23.6km s-min=11.7km az=59.0*

ISC 18 15:20:35.8±0.8**, 10°.87S**±0°.09×**161°.4E**±0°.1**, h28^{km}, n24,** σ**1^{s}25**/24**, mb4.0**/10**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.04**	**314**	Pn	**Pn**	**15 21 08.4**	**+0.1**
	59nm,0.3s,baz=200,slow=7.9,SNR=28						
HNR				Sn	**Sn**	**15 21 32.2**	**-0.6**
	245nm,0.3s,baz=133,slow=22,SNR=19						
HNR				LR	LR	15 22 09.0	
	comp=Z,324nm,20.0s,baz=184,slow=48						
HNR	**Honiara**	**2.04**	**314**		**Pn**	**15 21 08.0**	**-0.4**
DZM	**Mont Dzumac**	**12.13**	**157**	Pn	**Pn**	**15 23 27.8**	**+0.8**
	0.1nm,0.3s,baz=327,slow=22,SNR=3.1						
DZM				Sn	**Sn**	**15 25 37.8**	**-3.6**
	0.1nm,0.3s,baz=78,slow=19,SNR=2.5						
CTA	**Charters Tower**	**17.24**	**236**	P	**P**	**15 24 36.4**	**+0.3**
	0.2nm,0.3s,baz=68,slow=19,SNR=2.5						
WB0	**Warramunga Arr**	**27.50**	**248**	P	**P**	**15 26 20.4**	**+0.2**
WB2	**Warramunga Arr**	**27.58**	**248**	P	**P**	**15 26 21.3**	**+0.4**
WB2				IAmb	IAmb	15 26 56.6	
	comp=Z,34nm,1.9s						
WRA	**Warramunga Arr**	**27.59**	**248**	P	**P**	**15 26 21.5**	**+0.5**
	comp=Z,1.8nm,0.8s,baz=77,slow=9.9,SNR=12						
ASAR	**Alice Springs**	**29.13**	**240**	P	**P**	**15 26 34.6**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=67,slow=9.6,SNR=7.2						
BKZ	**Black Stump Fm**	**31.21**	**157**	P	**P**	**15 26 54.4**	**+1.4**
BBOO	**Buckleboo**	**31.95**	**223**	P	**P**	**15 27 00.8**	**+1.3**
MJAR	**Matsushiro Arr**	**51.98**	**336**	LR	LR	15 49 50.8	
	comp=Z,91nm,21.9s,baz=70,slow=34						
HKPS	**Hong Kong Po S**	**56.87**	**306**	P	**P**	**15 30 16.5**	**-1.9**
USRK	**Ussuriysk Ar.**	**60.98**	**336**	P	**P**	**15 30 47.5**	**+0.9**
	comp=Z,1.5nm,0.9s,baz=160,slow=9.2,SNR=4.8						
CMAR	**Chiang Mai Arr**	**68.17**	**295**	P	**P**	**15 31 34.1**	**0.0**
	comp=Z,0.7nm,0.7s,baz=114,slow=6.0,SNR=2.9						
CMAR	**Chiang Mai Arr**	**68.17**	**295**	P	**P**	**15 31 33.6**	**-0.5**
CHTO	**Chiang Mai**	**68.29**	**295**	P	**P**	**15 31 34.5**	**-0.4**
CHTO				IAmb	IAmb	15 32 25.7	
	comp=Z,6.0nm,1.5s						
BRDH	**Bariadhala**	**76.01**	**297**	LR	LR	16 05 40.5	
	comp=Z,168nm,20.9s,baz=270,slow=36						
SONM	**Songino Array**	**76.06**	**325**	P	**P**	**15 32 22.1**	**+1.2**
	comp=Z,1.2nm,0.6s,baz=126,slow=7.3,SNR=2.5						
SONM	**Songino Array**	**76.06**	**325**	P	**P**	**15 32 21.3**	**+0.4**
NVAR	**Mina Array Bea**	**89.18**	**51**	P	**P**	**15 33 30.0**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=236,slow=6.4,SNR=3.3						
MKAR	**Makanchi Array**	**90.51**	**318**	P	**P**	**15 33 35.3**	**0.0**
	comp=Z,0.3nm,0.6s,baz=100,slow=6.7,SNR=5.9						
MKAR	**Makanchi Array**	**90.51**	**318**	P	**P**	**15 33 34.8**	**-0.5**
ZALV	**Zalesovo Beam**	**90.95**	**325**	P	**P**	**15 33 35.7**	**-1.4**
	comp=Z,1.3nm,0.7s,baz=131,slow=6.1,SNR=4.2						
ZALV	**Zalesovo Beam**	**90.95**	**325**	P	**P**	**15 33 34.9**	**-2.2**

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*SJA **18** 15:26:27.8±0.5, 19°.69S×70°.92W, h19^{km}±2^{km}, ML4.0, MW4.0*

*NEIC **18** 15:26:29.4±1.4, 19°.74S±0°.05×70°.98W±0°.08, h19^{km}±4^{km}, mb4.6/4, Error ellipse: s-maj=11.4km s-min=7.9km az=84.0*

*IDC **18** 15:26:31.5±4.6, 19°.73S×70°.85W, h34^{km}±37^{km}, mb3.7/6, mb1 3.9/10, mb1mx3.7/41, mbtmp3.8/10, ML3.4/4, MS3.2/7, Ms1 3.2/7, ms1mx2.9/32, Error ellipse: s-maj=36.3km s-min=20.2km az=95.0*

*GUC **18** 15:26:32.1±0.7, 19°.80S×70°.82W, h43^{km}±2^{km}, ML3.8*

ISC 18 15:26:31.3±1.4**, 19°.76S**±0°.03×**70°.87W**±0°.06**, h31^{km}**±10^{km}**, n55,** σ**1^{s}18**/62**, MS3.5**/3**, 8C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.72**	**77**	⇓*i*P	**Pn**	**15 26 44.7**	**-0.7**
PSGC				*i* S	**Sb**	**15 26 54.7**	**-0.4**
PSGC				IAML		15 26 55.8	
	comp=E,3µm,0.5s						
TA01	**Diego Aracena**	**1.03**	**141**	⇓*i*P	**Pn**	**15 26 49.5**	**-0.1**
TA01				*i* S	**Sn**	**15 27 02.3**	**-0.8**
TA01				IAML		15 27 06.8	
	comp=E,5µm,0.5s						
PB11	**IPOC Station P**	**1.14**	**90**	⇓*i*P	**Pn**	**15 26 51.6**	**+0.3**
PB11				*i* S	**Sb**	**15 27 06.7**	**-0.4**
PB11				IAML		15 27 11.6	
	comp=N,4µm,0.2s						
PB11	**IPOC Station P**	**1.14**	**90**		**Pn**	**15 26 51.5**	**+0.1**
PB11	**IPOC Station P**	**1.14**	**90**	*e*P	**Pn**	**15 26 50.7**	**-0.7**
PB11				*e*S	**Sb**	**15 27 07.5**	**+0.4**
PB11				IAML		15 27 10.0	
	comp=Z,3µm,0.4s						
PB12	**IPOC Station P**	**1.24**	**24**	⇓*i*P	**Pb**	**15 26 53.6**	**-0.7**
PB12				*i* S	**Sb**	**15 27 10.9**	**+0.9**
PB12				IAML		15 27 12.4	
	comp=N,3µm,0.6s						
PATCX	**Punta Patache**	**1.25**	**148**	⇑*i*P	**Pn**	**15 26 52.9**	**+0.1**
PATCX				*i* S	**Sn**	**15 27 08.7**	**0.0**
PATCX				IAML		15 27 16.2	
	comp=E,4µm,0.4s						
PATCX	**Punta Patache**	**1.25**	**148**	*e*P	**Pn**	**15 26 53.2**	**+0.3**
PATCX				*e*S	**Sb**	**15 27 11.6**	**+1.3**
PATCX				IAML		15 27 13.8	
	comp=Z,2µm,0.7s						
AP01	**Chacalluta**	**1.46**	**20**	⇑*i*P	**Pb**	**15 26 57.3**	**-0.7**
AP01				*i* S	**Sb**	**15 27 16.6**	**+0.4**
GO01	**Chusmiza**	**1.58**	**87**	⇑*i*P	**Pb**	**15 26 59.2**	**-0.9**
GO01				*i* S	**Sb**	**15 27 19.2**	**-0.7**
GO01				IAML		15 27 22.5	
	comp=N,4µm,0.2s						
GO01	**Chusmiza**	**1.58**	**87**		**Pb**	**15 26 59.0**	**-1.2**
PB08	**IPOC Station P**	**1.66**	**104**	⇑*i*P	**Pn**	**15 26 59.9**	**+1.3**
PB08				*i* S	**Sb**	**15 27 21.3**	**-0.8**
PB08				IAML		15 27 24.8	
	comp=N,2µm,0.5s						
PB08	**IPOC Station P**	**1.66**	**104**	*e*P	**Pn**	**15 26 59.5**	**+0.9**
PB08				*e*S	**Sb**	**15 27 22.6**	**+0.5**
PB08				IAML		15 27 24.7	
	comp=Z,2µm,0.4s						
PB02	**IPOC Station P**	**1.80**	**150**	⇑*i*P	**Pn**	**15 27 00.8**	**+0.4**
PB02				*i* S	**Sn**	**15 27 23.1**	**+0.8**
PB02	**IPOC Station P**	**1.80**	**150**	*e*P	**Pn**	**15 27 01.1**	**+0.6**
PB02				IAML		15 27 32.6	
	comp=Z,3µm,0.8s						
PB01	**IPOC Station P**	**1.82**	**135**	⇑*i*P	**Pn**	**15 27 01.5**	**+0.9**
PB01				*i* S	**Sn**	**15 27 23.8**	**+1.1**
PB01				IAML		15 27 25.0	
	comp=N,2µm,0.3s						
PB01	**IPOC Station P**	**1.82**	**135**		**Pn**	**15 27 01.1**	**+0.5**
PB07	**IPOC Station P**	**2.17**	**155**	⇑*i*P	**Pn**	**15 27 05.5**	**0.0**
PB07				*i* S	**Sn**	**15 27 32.5**	**+1.1**
PB07				IAML		15 27 44.9	
	comp=E,1µm,0.4s						
PB09	**IPOC Station P**	**2.54**	**143**	⇑*i*P	**Pn**	**15 27 12.1**	**+1.5**
PB09				*i* S	**Sb**	**15 27 45.1**	**-2.0**
PB09	**IPOC Station P**	**2.54**	**143**	*e*P	**Pn**	**15 27 11.7**	**+1.1**
PB09				IAML		15 27 57.2	
	comp=Z,1µm,0.5s						
PB04	**IPOC Station P**	**2.65**	**165**		**Pn**	**15 27 11.4**	**-0.7**
PB04	**IPOC Station P**	**2.65**	**165**	*e*P	**Pn**	**15 27 13.5**	**+1.4**
PB04				*e*S	**Sb**	**15 27 47.6**	**-2.9**
PB06	**IPOC Station P**	**3.17**	**158**	*e*P	**Pn**	**15 27 21.1**	**+1.8**
PB06				IAML		15 28 19.1	
	comp=Z,406nm,0.7s						
LVC	**Limon Verde**	**3.38**	**148**	Pn	**Pn**	**15 27 23.5**	**+1.2**
	comp=Z,7.5nm,0.3s,baz=353,slow=7.1,SNR=27						
LVC				Pg	**Pb**	**15 27 32.1**	**+1.4**
	comp=Z,21nm,0.3s,baz=330,slow=12,SNR=22						
LVC				Sn	**Sn**	**15 28 02.0**	**+0.5**
	comp=Z,35nm,0.3s,baz=92,slow=18,SNR=7.0						
LVC				Lg	Lg	15 28 12.8	
	comp=Z,28nm,0.3s,baz=223,slow=19,SNR=9.2						
LVC				LR	LR	15 28 51.9	
	comp=Z,290nm,18.2s,baz=332,slow=41						
LVC	**Limon Verde**	**3.38**	**148**	*e*P	**Pn**	**15 27 24.0**	**+1.7**
LVC				IAML		15 28 25.5	
	comp=Z,155nm,1.7s						
PB15	**IPOC Station P**	**3.67**	**160**	*e*P	**Pn**	**15 27 27.7**	**+1.5**
PB15				IAML		15 28 38.1	
	comp=Z,476nm,0.4s						
PB10	**IPOC Station P**	**3.75**	**176**	Pn	**Pn**	**15 27 26.7**	**-0.4**
LPAZ	**La Paz**	**4.32**	**37**	Pn	**Pn**	**15 27 36.4**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=228,slow=5.3,SNR=6.3						
LPAZ				LR	LR	15 29 16.5	
	comp=Z,100nm,18.9s,baz=248,slow=38						
LPAZ	**La Paz**	**4.32**	**37**		**Pn**	**15 27 39.2**	**+3.7**
GO02	**Mina Guanaco**	**5.51**	**168**		**Pn**	**15 27 51.0**	**-0.6**
YJA	**Yavi**	**5.55**	**117**	*e*P	**Pn**	**15 27 55.0**	**+2.8**
YJA				IAML		15 29 29.3	
	comp=Z,7.1nm,2.8s						
AZAP	**Zapla**	**6.98**	**131**	*e*P	**Pn**	**15 28 14.2**	**+2.5**
SIV	**San Ignacio**	**10.05**	**70**	Pn	**Pn**	**15 28 54.1**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=256,slow=13,SNR=23						
SIV				LR	LR	15 33 13.7	
	comp=Z,103nm,20.1s,baz=286,slow=40						
CPUP	**Villa Florida**	**14.07**	**120**	Pn	**Pn**	**15 29 49.1**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=273,slow=19,SNR=2.2						
CPUP				LR	LR	15 36 16.1	
	comp=Z,56nm,19.0s,baz=318,slow=42						
TRQA	**Tornquist**	**19.81**	**159**	P	**P**	**15 30 58.5**	**-0.8**
PLCA	**Paso Flores**	**20.91**	**179**	P	**P**	**15 31 11.9**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=355,slow=11,SNR=2.3						
PLCA	**Paso Flores**	**20.91**	**179**	IAmb	IAmb	15 31 54.0	
	comp=Z,31nm,1.9s						
PTGA	**Pitinga**	**21.71**	**31**	P	**P**	**15 31 19.1**	**-1.0**
	comp=Z,6.5nm,0.3s,baz=210,slow=19,SNR=14						
PTGA	**Pitinga**	**21.71**	**31**	P	**P**	**15 31 19.4**	**-0.6**
PTGA				IAmb	IAmb	15 31 27.0	
	comp=Z,42nm,1.9s						
MDP	**Montagnes des**	**30.52**	**38**	LR	LR	15 45 41.8	
	comp=Z,113nm,20.3s,baz=40,slow=38						
RPN	**Rapa Nui**	**35.94**	**251**	LR	LR	15 44 45.2	
	comp=Z,19nm,19.8s,baz=133,slow=30						
ANMO	**Albuquerque**	**64.05**	**328**	LR	LR	16 05 49.8	
	comp=Z,40nm,18.5s,baz=79,slow=37						
PDAR	**Pinedale Array**	**71.70**	**331**	P	**P**	**15 37 50.0**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=150,slow=7.3,SNR=2.9						
MCMT	**McKenzie Canyo**	**74.80**	**330**	P	**P**	**15 38 08.2**	**-0.7**
TORD	**Torodi Ar. Bea**	**78.52**	**72**	P	**P**	**15 38 29.2**	**-1.0**
	comp=Z,1.3nm,0.6s,baz=255,slow=4.4,SNR=6.9						
TORD	**Torodi Ar. Bea**	**78.52**	**72**	P	**P**	**15 38 29.8**	**-0.4**
YKA	**Yellowknife Ar**	**88.95**	**341**	P	**P**	**15 39 22.3**	**-0.2**
	comp=Z,0.3nm,0.8s,baz=133,slow=5.9,SNR=4.1						
DLBC	**Dease Lake**	**91.82**	**333**	P	**P**	**15 39 36.3**	**+0.3**
	comp=Z,1.8nm,0.6s,baz=151,slow=6.2,SNR=3.2						
DLBC	**Dease Lake**	**91.82**	**333**	IAmb	IAmb	15 41 04.2	
	comp=Z,17nm,1.4s						
H11S2	**WAKE ISLAND Hy**	**125.82**	**279**	T	T	18 04 50.2	
	baz=101,slow=74,SNR=32						
H11S1	**WAKE ISLAND Hy**	**125.83**	**279**	T	T	18 04 50.3	
	baz=101,slow=74,SNR=38						
H11S3	**WAKE ISLAND Hy**	**125.84**	**279**	T	T	18 04 50.4	
	baz=101,slow=74,SNR=26						
H11N3	**WAKE ISLAND Hy**	**125.86**	**280**	T	T	18 04 52.8	
	baz=100,slow=75,SNR=8.2						
H11N2	**WAKE ISLAND Hy**	**125.88**	**280**	T	T	18 04 53.8	
	baz=100,slow=75,SNR=8.4						
H11N1	**WAKE ISLAND Hy**	**125.88**	**280**	T	T	18 04 51.8	
	baz=100,slow=75,SNR=6.1						

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*JMA **18** 15:29:32.6±0.1, 28°.55N×140°.39E, h451^{km}, M3.9*

*NEIC **18** 15:29:33.6±1.1, 28°.35N±0°.08×139°.73E±0°.09, h456^{km}±5^{km}, mb4.3/72, Error ellipse: s-maj=13.8km s-min=9.7km az=138.0*

*IDC **18** 15:29:33.2±0.6, 28°.35N×139°.79E, h451^{km}±6^{km}, mb3.4/30, mb1 3.5/37, mb1mx3.4/70, mbtmp4.2/37, Error ellipse: s-maj=11.3km s-min=7.4km az=88.0*

ISC 18 15:29:32.5±0.4**, 28°.37N**±0°.05×**139°.85E**±0°.07**, h443^{km}**±4^{km}**, h444^{km}:pP-P, n152,** σ**1^{s}34**/176**, mb4.2**/60**, 2C, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.43**	**121**	P	**P**	**15 30 34.4**	**-0.6**
CBIJ				S	**S**	**15 31 22.8**	**-2.8**
JCJ	**Chichijima**	**2.43**	**121**	P	**P**	**15 30 34.6**	**-0.4**
	184nm,0.3s,baz=55,slow=2.3,SNR=152						
JCJ				S	**S**	**15 31 22.7**	**-3.0**
	130nm,0.3s,baz=304,slow=22,SNR=15						
JHH2	**Haha-jima-NKT2**	**2.69**	**129**	P	**P**	**15 30 36.6**	**-0.2**
JHH2				S	**S**	**15 31 27.2**	**-1.7**
JHJ2	**Mitsune**	**4.73**	**360**	P	**P**	**15 30 54.0**	**+0.2**
JHJ	**Hachijo jima 2**	**4.74**	**359**	P	**P**	**15 30 53.8**	**-0.1**
	18nm,0.3s,baz=274,slow=19,SNR=3.9						
JHJ				S	**S**	**15 31 57.0**	**-3.3**
	33nm,0.3s,baz=73,slow=19,SNR=4.0						
JIE	**Ise**	**6.58**	**337**	P	**P**	**15 31 14.8**	**+2.3**
JKN2	**Miekihoku**	**6.61**	**333**	P	**P**	**15 31 14.1**	**+1.3**
BSO4	**Boso 4**	**6.62**	**3**	*e*S	**S**	**15 32 32.5**	**-2.4**
JEG	**Eigenji**	**7.36**	**337**	P	**P**	**15 31 23.3**	**+2.4**
INU	**Inuyama**	**7.37**	**342**	P	**P**	**15 31 21.9**	**+1.0**
JHU	**Hanno**	**7.48**	**356**	P	**P**	**15 31 21.1**	**-1.0**
JHU				*e*S	**S**	**15 32 46.5**	**-5.4**
MJAR	**Matsushiro Arr**	**8.27**	**351**	P	**P**	**15 31 29.9**	**-0.7**
	0.5nm,0.3s,baz=168,slow=11,SNR=23						
MJAR				S	**S**	**15 33 04.5**	**-3.2**
	0.1nm,0.3s,baz=118,slow=22,SNR=3.4						
MJAR	**Matsushiro Arr**	**8.27**	**351**	P	**P**	**15 31 29.5**	**-1.1**
MAJO	**Matsushiro**	**8.27**	**351**	P	**P**	**15 31 29.6**	**-1.1**
MAT	**Matsushiro**	**8.27**	**351**	P	**P**	**15 31 30.1**	**-0.6**
MAT				*e*S	**S**	**15 33 07.8**	**+0.1**
MJB9	**Matsu-Tunnel**	**8.28**	**351**	P	**P**	**15 31 30.4**	**-0.4**
JHS	**Saijyo**	**8.75**	**321**	P	**P**	**15 31 38.2**	**+2.3**
JNU	**Nakatsue**	**9.06**	**304**	P	**P**	**15 31 41.3**	**+2.0**
	0.2nm,0.3s,baz=185,slow=12,SNR=6.0						
JOW	**Kunigami**	**10.38**	**264**	P	**P**	**15 31 55.6**	**+1.7**
JOW	**Kunigami**	**10.38**	**264**	P	**P**	**15 31 55.5**	**+1.7**
	0.1nm,0.3s,baz=114,slow=14,SNR=5.6						
KSRS	**Korea Array**	**13.50**	**315**	P	**P**	**15 32 27.9**	**+0.4**
	0.2nm,0.3s,baz=125,slow=11,SNR=8.0						
ERM	**Erimo**	**13.88**	**10**	P	**P**	**15 32 33.9**	**+2.3**
JKA	**Kamikawa-asahi**	**15.87**	**7**	P	**P**	**15 32 54.2**	**+1.3**
ASAJ	**Asahikawa**	**15.87**	**7**	P	**P**	**15 32 54.2**	**+1.3**
	0.5nm,0.3s,baz=263,slow=8.5,SNR=7.8						
USA0B	**Ussuriysk Arra**	**17.01**	**340**	P	**P**	**15 33 06.2**	**+1.3**
USRK	**Ussuriysk Ar.**	**17.01**	**340**	P	**P**	**15 33 05.3**	**+0.4**
	baz=152,slow=9.7,SNR=26						
USRK	**Ussuriysk Ar.**	**17.01**	**340**	P	**P**	**15 33 05.1**	**+0.2**
YULB	**Yu-li**	**17.41**	**258**	P	**P**	**15 33 08.3**	**-1.1**
YULB				IAmb	IAmb	15 33 48.1	
	comp=Z,14nm,1.4s						
SSLB	**Suanglung**	**17.57**	**259**	P	**P**	**15 33 10.5**	**-0.7**
SSLB				IAmb	IAmb	15 33 12.9	
	comp=Z,11nm,0.8s						
SNY	**Shenyang**	**18.87**	**320**	⇑P	**P**	**15 33 23.8**	**+0.1**
SNY				S	**S**	**15 36 40.3**	**+7.6**
KLR	**Kul'dur**	**21.74**	**346**	P	**P**	**15 33 50.9**	**+1.0**
	comp=Z,2.8nm,0.6s,baz=159,slow=7.4,SNR=15						
HHC	**Hu-ho-hao-te**	**26.28**	**306**	*e*P	**P**	**15 34 30.6**	**-0.1**
XAN	**Xi'an**	**26.99**	**290**	P	**P**	**15 34 36.0**	**-1.0**
XAN				pP	pP	15 35 52.8	+0.1
PETK	**Petropavlovsk-**	**28.02**	**23**	P	**P**	**15 34 47.6**	**+1.9**
	comp=Z,4.0nm,1.0s,baz=204,slow=6.7,SNR=8.2						
ULN	**Ulaanbaatar**	**31.98**	**316**	P	**P**	**15 35 20.2**	**-0.3**
ULN				IAmb	IAmb	15 35 21.6	
	comp=Z,8.8nm,0.8s						
SONM	**Songino Array**	**32.37**	**316**	P	**P**	**15 35 23.8**	**0.0**
	comp=Z,4.5nm,0.6s,baz=130,slow=9.5,SNR=11						
SONM	**Songino Array**	**32.37**	**316**	P	**P**	**15 35 23.4**	**-0.4**
SLVN	**Son La**	**33.27**	**266**	P	**P**	**15 35 31.5**	**-0.2**
GTA	**Gaotai**	**34.76**	**299**	⇑P	**P**	**15 35 43.0**	**-1.2**
GTA				pP	pP	15 37 04.9	+1.9
GTA				sP	sP	15 37 55.3	+1.7
SEY	**Seymchan**	**35.53**	**10**	P	**P**	**15 35 51.2**	**+1.0**
	comp=Z,0.7nm,0.5s,baz=214,slow=9.4,SNR=16						
TLY	**Talaya**	**35.65**	**321**	P	**P**	**15 35 51.8**	**+0.4**
PBKT	**Sadao Pong**	**37.64**	**260**	P	**P**	**15 36 08.1**	**-0.2**
CHTO	**Chiang Mai**	**38.52**	**265**	P	**P**	**15 36 14.9**	**-0.7**
CMAR	**Chiang Mai Arr**	**38.65**	**264**	P	**P**	**15 36 16.3**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=49,slow=8.3,SNR=8.0						
CMAR				PcP	**PcP**	**15 38 18.6**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=48,slow=3.4,SNR=4.2						
CMAR	**Chiang Mai Arr**	**38.65**	**264**	P	**P**	**15 36 15.9**	**-0.7**
COEN	**Coen**	**42.20**	**175**	P	**P**	**15 36 45.5**	**+0.4**
COEN				IAmb	IAmb	15 38 04.7	
	comp=Z,15nm,1.2s						
BILL	**Bilibino**	**42.71**	**14**	P	**P**	**15 36 49.1**	**+0.6**
KULM	**Kulim**	**43.67**	**246**	P	**P**	**15 36 56.6**	**-0.2**
KULM				IAmb	IAmb	15 37 11.2	
	comp=Z,15nm,1.3s						
TIXI	**Tiksi**	**43.75**	**355**	P	**P**	**15 36 56.3**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=157,slow=9.1,SNR=4.7						
TIXI	**Tiksi**	**43.75**	**355**	P	**P**	**15 36 56.5**	**-0.1**
WMQ	**Urumqi**	**44.15**	**305**	*e*P	**P**	**15 37 00.8**	**+0.5**
RPSI	**Rantau Prapat**	**46.59**	**244**	P	**P**	**15 37 18.6**	**-0.8**
ZAA0	**Zalesovo Array**	**47.17**	**319**	P	**P**	**15 37 22.4**	**-0.8**
ZALV	**Zalesovo Beam**	**47.17**	**319**	P	**P**	**15 37 22.2**	**-1.0**
	comp=Z,2.6nm,0.8s,baz=101,slow=7.7,SNR=8.0						
ZALV				PcP	**PcP**	**15 38 45.5**	**-0.9**
	comp=Z,1.6nm,0.5s,baz=97,slow=3.0,SNR=6.5						

MK31	Makanchi Array	48.07	309	P	P	15 37 29.5	-0.7
MK31					PcP	15 38 49.1	-0.7
MKAR	Makanchi Array	48.07	309	P	P	15 37 29.8	-0.4
	comp=Z,4.1nm,0.7s,baz=92,slow=9.1,SNR=40						
MKAR				PcP	PcP	15 38 49.4	-0.4
	comp=Z,1.9nm,0.6s,baz=86,slow=6.0,SNR=11						
MKAR				ScP	ScP	15 41 59.6	-1.7
	comp=Z,0.7nm,0.6s,baz=84,slow=5.2,SNR=8.0						
MKAR	Makanchi Array	48.07	309	P	P	15 37 29.5	-0.7
MKAR					PcP	15 38 49.1	-0.7
WB0	Warramunga Arr	48.14	187	P	P	15 37 30.4	-0.6
WB0				IAmb	IAmb	15 38 00.1	
	comp=Z,23nm,1.8s						
FITZ	Fitzroy Crossi	48.19	198	P	P	15 37 31.2	-0.1
FITZ				IAmb	IAmb	15 38 05.1	
	comp=Z,28nm,1.9s						
MAKZ	Makanchi	48.29	309	P	P	15 37 31.2	-0.6
WR0	Warramunga Arr	48.31	187	P	P	15 37 31.6	-0.6
WR0				IAmb	IAmb	15 37 32.0	
	comp=Z,14nm,1.4s						
WB2	Warramunga Arr	48.32	187	P	P	15 37 31.7	-0.5
WB2				IAmb	IAmb	15 38 20.9	
	comp=Z,34nm,1.9s						
WRA	Warramunga Arr	48.32	187	P	P	15 37 31.8	-0.6
	comp=Z,2.1nm,0.3s,baz=3.6,slow=7.7,SNR=53						
WRA				PcP	PcP	15 38 51.2	+0.3
	comp=Z,0.4nm,0.7s,baz=358,slow=3.9,SNR=4.8						
WRA				pP	pP	15 39 00.3	+2.9
	comp=Z,0.6nm,0.9s,baz=8.7,slow=8.4,SNR=1.9						
WRA	Warramunga Arr	48.32	187	P	P	15 37 31.7	-0.6
CTA	Charters Tower	48.56	172	P	P	15 37 34.6	+0.5
	comp=Z,4.9nm,0.8s,baz=12,slow=8.3,SNR=2.7						
ANM	Nome	49.78	28	P	P	15 37 44.2	+1.6
KURK	Kurchatov	50.62	314	P	P	15 37 48.1	-0.9
KURK				IAmb	IAmb	15 37 49.9	
	comp=Z,13nm,1.0s						
NRIK	Noril'sk	50.72	339	P	P	15 37 49.3	-0.1
	comp=Z,2.6nm,0.6s,baz=104,slow=10.0,SNR=9.4						
NRIK				PcP	PcP	15 38 58.9	-0.1
	comp=Z,1.1nm,0.5s,baz=169,slow=10,SNR=2.9						
AS31	Alice Springs	52.05	187	P	P	15 37 59.1	-0.7
ASAR	Alice Springs	52.05	187	P	P	15 37 59.3	-0.5
	comp=Z,1.5nm,0.6s,baz=0.2,slow=5.6,SNR=57						
ASAR				PcP	PcP	15 39 04.3	-0.5
	comp=Z,0.5nm,0.8s,baz=6.3,slow=4.2,SNR=3.0						
ASAR				pP	pP	15 39 29.6	+3.0
	comp=Z,0.2nm,0.8s,baz=14,slow=7.9,SNR=1.2						
ASAR	Alice Springs	52.05	187	P	P	15 37 59.1	-0.7
ULHL	Ulahol	52.59	303	P	P	15 38 04.3	+0.5
	SNR=8.7						
KSH	Kashi	53.15	300	P	P	15 38 11.1	+3.3
KSH				pP	pwP	15 39 40.4	-0.5
KSH				PP	sP	15 40 19.8	-3.4
KSH				PcS	PcS	15 43 08.3	-0.5
KSH				S	S	15 45 06.5	+2.3
KSH				ScS	ScS	15 47 08.4	-2.1
KZA	Kyzart	53.35	303	P	P	15 38 10.4	+1.0
	SNR=5.9						
KBK	Karagaybulak	53.50	304	P	P	15 38 10.5	+0.3
	SNR=7.0						
AAK	Ala-Archa	53.83	304	P	P	15 38 12.4	-0.2
UCH	Uchtor	53.87	303	P	P	15 38 14.0	+0.7
	SNR=10						
AML	Almayashu	54.49	303	P	P	15 38 18.2	+0.6
	SNR=5.1						
KDAK	Kodiak Island	54.60	37	P	P	15 38 17.6	0.0
	comp=Z,6.0nm,0.8s,baz=297,slow=9.0,SNR=2.7						
KDAK	Kodiak Island	54.60	37	P	P	15 38 16.8	-0.8
IMAR	Indian Mountai	54.86	27	P	P	15 38 20.3	+1.1
PPLA	Purkeypile	55.14	31	P	P	15 38 21.9	+0.4
PPLA				IAmb	IAmb	15 38 25.3	
	comp=Z,31nm,1.6s						
SKT	Skwentna	55.37	32	P	P	15 38 23.5	+0.5
SKT				IAmb	IAmb	15 38 31.8	
	comp=Z,31nm,2.0s						
CNPM	China Poot	55.38	35	P	P	15 38 23.5	+0.5
BRLK	Bradley Lake	55.56	35	P	P	15 38 24.5	+0.2
SUA	Susitna One	55.71	33	P	P	15 38 25.1	-0.4
SUA				IAmb	IAmb	15 40 08.2	
	comp=Z,36nm,1.9s						
BRVK	Borovoye	55.77	317	P	P	15 38 25.2	-0.6
BRVK				IAmb	IAmb	15 38 26.6	
	comp=Z,10.0nm,0.8s						
KTH	Kantishna Hill	55.77	30	P	P	15 38 25.6	-0.2
KTH				IAmb	IAmb	15 39 56.2	
	comp=Z,43nm,2.0s						
BPAW	Bear Paw Mtn.	55.79	30	P	P	15 38 27.1	+1.3
BPAW				IAmb	IAmb	15 38 49.0	
	comp=Z,32nm,2.0s						
MLY	Manley	55.98	29	P	P	15 38 28.3	+1.1
TRF	Thorofare Moun	56.05	31	P	P	15 38 27.6	-0.2
TRF				IAmb	IAmb	15 39 50.1	
	comp=Z,30nm,1.8s						
RC01	Rabbit Creek A	56.18	33	P	P	15 38 29.2	+0.6
RC01				IAmb	IAmb	15 38 43.0	
	comp=Z,24nm,1.5s						
NIL	Nilore	56.45	293	P	P	15 38 30.8	-0.2
NIL				IAmb	IAmb	15 38 32.9	
	comp=Z,11nm,0.6s						
KK31	Karatay Array	56.66	305	P	P	15 38 31.7	-0.6
KK31				IAmb	IAmb	15 38 33.1	
	comp=Z,15nm,0.7s						
KKAR	Karatay Array	56.66	305	P	P	15 38 31.8	-0.5
KKAR	Karatay Array	56.66	305	P	P	15 38 32.0	-0.3
KKAR				IAmb	IAmb	15 38 33.1	
	comp=Z,15nm,0.7s						
KNK	Knik Glacier	56.80	33	P	P	15 38 33.4	+0.5
SML	Sawmill	56.87	33	P	P	15 38 34.2	+0.7
SML				IAmb	IAmb	15 39 49.3	
	comp=Z,43nm,1.7s						
SCM	Sheep Creek Mo	57.35	33	P	P	15 38 37.5	+0.7
SCM				IAmb	IAmb	15 40 22.2	
	comp=Z,34nm,1.4s						
HDA	Harding Lake	57.57	30	P	P	15 38 37.8	-0.3
HDA				IAmb	IAmb	15 39 53.6	
	comp=Z,15nm,1.7s						
IL31		57.60	29	P	P	15 38 38.3	0.0
ILAR	Eielson Array	57.60	29	P	P	15 38 38.0	-0.4
	comp=Z,0.6nm,0.7s,baz=243,slow=5.6,SNR=18						
ILAR	Eielson Array	57.60	29	P	P	15 38 38.4	0.0
HIN	Hinchinbrook I	57.76	34	P	P	15 38 39.7	+0.1
FYU	Fort Yukon	58.34	27	P	P	15 38 44.7	+1.3
FYU				IAmb	IAmb	15 40 57.7	
	comp=Z,33nm,1.8s						
RIDG	Independent Ri	58.48	30	P	P	15 38 45.4	+0.9
RIDG				IAmb	IAmb	15 40 45.3	
	comp=Z,19nm,1.6s						
BMAR	Burnt Mountain	58.62	26	P	P	15 38 46.9	+1.6
SCRK	Sand Creek	58.86	30	P	P	15 38 47.7	+0.6
SCRK				IAmb	IAmb	15 40 49.4	
	comp=Z,18nm,1.9s						
GLB	Gilahina Butte	59.04	33	P	P	15 38 49.1	+0.8
GLB				IAmb	IAmb	15 40 17.7	
	comp=Z,26nm,1.7s						
TGL	Tana Glacier	59.56	34	P	P	15 38 52.7	+0.9
TGL				IAmb	IAmb	15 41 07.9	
	comp=Z,38nm,1.4s						
KBL	Kabul	59.61	295	P	P	15 38 52.3	-0.5
BALM	Baldy	59.77	33	P	P	15 38 52.9	-0.4
FORT	Forrest	59.88	192	P	P	15 38 54.1	0.0
BCAR	Beaver Creek A	59.89	31	P	P	15 38 54.9	+1.0
STKA	Stephens Creek	59.93	178	P	P	15 38 54.4	-0.1
	comp=Z,2.6nm,0.8s,baz=318,slow=3.9,SNR=4.4						
STKA	Stephens Creek	59.93	178	P	P	15 38 54.4	-0.1
BBOO	Buckleboo	60.95	184	P	P	15 39 01.1	-0.2
YKU2	Yakutat	61.26	35	P	P	15 39 04.5	+1.5
ARU	Arti	62.15	322	P	P	15 39 08.3	-0.6
ARU				IAmb	IAmb	15 39 08.9	
	comp=Z,7.5nm,0.6s						
ABKAR	Akbulak array	62.73	313	P	P	15 39 11.8	-1.0
ABKAR	Akbulak array	62.73	313	P	P	15 39 12.1	-0.7
ABKAR				IAmb	IAmb	15 39 13.1	
	comp=Z,6.2nm,0.7s						
INK	Inuvik	62.74	25	P	P	15 39 13.3	+0.8
	comp=Z,0.4nm,0.5s,baz=303,slow=7.5,SNR=3.6						
INK	Inuvik	62.74	25	P	P	15 39 13.9	+1.4
INK				IAmb	IAmb	15 40 41.1	
	comp=Z,13nm,1.8s						
NWAO	Narrogin (SRO)	64.63	201	P	P	15 39 24.8	-0.3
NWAO	Narrogin (SRO)	64.63	201	P	P	15 39 24.9	-0.3
NWAO				IAmb	IAmb	15 39 38.8	
	comp=Z,63nm,1.8s						
HRA	Herat	65.03	297	P	P	15 39 28.0	-0.2
HRA				IAmb	IAmb	15 39 29.2	
	comp=Z,6.5nm,0.9s						
GEYT	Alibeck	67.08	302	P	P	15 39 40.6	-0.1
	comp=Z,2.7nm,0.7s,baz=345,slow=5.1,SNR=7.1						
GEYT	Alibeck	67.08	302	P	P	15 39 40.6	-0.1
SPITS	Spitsbergen Ar	68.76	349	P	P	15 39 51.2	+0.9
	comp=Z,17nm,1.1s,baz=334,slow=9.6,SNR=2.7						
ARCES	ARCESS Array B	71.66	340	P	P	15 40 07.8	+0.1
	comp=Z,2.0nm,0.5s,baz=68,slow=8.2,SNR=13						
YKA	Yellowknife Ar	72.01	28	P	P	15 40 10.4	+0.6
	comp=Z,0.3nm,0.8s,baz=281,slow=5.5,SNR=5.4						
YKA				pP	pP	15 41 47.0	+2.7
	comp=Z,0.2nm,0.7s,baz=288,slow=5.6,SNR=2.1						
KBZ	Khabaz	75.63	312	P	P	15 40 30.8	0.0
	comp=Z,8.2nm,0.8s,baz=60,slow=4.8,SNR=12						
NNZ	Nelson	75.88	155	P	P	15 40 31.9	-0.2
FIA1	FINESS Array S	75.89	333	P	P	15 40 31.6	-0.3
FINES	FINESS Array B	75.89	333	P	P	15 40 31.6	-0.4
	comp=Z,3.3nm,0.5s,baz=69,slow=5.5,SNR=21						
BFZ	Birch Farm	76.55	152	P	P	15 40 36.0	+0.2
AKASG	Malin Array Be	80.37	323	P	P	15 40 55.5	-0.9
	comp=Z,1.2nm,0.5s,baz=50,slow=6.0,SNR=9.2						
AKASG	Malin Array Be	80.37	323	IAmb	IAmb	15 41 01.6	
	comp=Z,1.5nm,1.2s						
NVAR	Mina Array Bea	81.35	51	P	P	15 41 02.2	+0.1
	comp=Z,0.4nm,0.6s,baz=302,slow=5.1,SNR=2.6						
NVAR				pP	pP	15 42 42.2	+2.9
	comp=Z,0.9nm,0.8s,baz=274,slow=4.4,SNR=2.3						
HFS	Hagfors	81.43	336	P	P	15 41 00.5	-1.3
	comp=Z,2.3nm,0.5s,baz=67,slow=3.9,SNR=15						
NB2	NORSAR Subarra	81.66	337	P	P	15 41 01.9	-1.1
	comp=Z,1.5nm,0.6s,baz=44,slow=5.3						
NOA	NORSAR Array B	81.66	337	P	P	15 41 02.2	-0.8
	comp=Z,2.2nm,0.7s,baz=46,slow=4.9,SNR=10						
RAYN	Ar Rayn	82.75	293	P	P	15 41 09.0	-0.3
BR131	Keskin Array S	83.62	312	P	P	15 41 12.8	-0.7
BR131				IAmb	IAmb	15 43 53.3	
	comp=Z,14nm,1.9s						
BRTR	Keskin Array B	83.62	312	P	P	15 41 12.9	-0.6
	comp=Z,1.1nm,0.6s,baz=72,slow=3.4,SNR=7.4						
ASF	Jabal al Asfar	85.24	304	P	P	15 41 21.2	-0.4
	comp=Z,0.9nm,0.4s,baz=79,slow=5.2,SNR=2.7						
MMAI	Mount Meron Ar	85.89	305	P	P	15 41 24.4	-0.3
	comp=Z,1.0nm,0.5s,baz=64,slow=6.6,SNR=2.6						
GERES	GERESS Array B	89.34	328	P	P	15 41 39.5	-1.1
	comp=Z,0.4nm,0.5s,baz=35,slow=3.6,SNR=3.9						
CTI	Castel Tesino	92.31	327	P	P	15 41 54.2	-0.2
TORD	Torodi Ar. Bea	122.19	310	PKP	PKPdf	15 47 35.6	-1.1
	comp=Z,0.6nm,0.5s,baz=101,slow=1.2,SNR=7.5						
LPAZ	La Paz	151.54	71	PKPbc	PKPbc	15 48 36.8	-0.2
	comp=Z,1.2nm,0.7s,baz=135,slow=4.3,SNR=4.1						
PLCA	Paso Flores	152.23	124	PKPbc	PKPbc	15 48 36.9	-0.3
	comp=Z,1.0nm,0.5s,baz=282,slow=1.3,SNR=7.9						

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*NEIC **18** 15:34:12.8±1.9, 21°.4S±0°.2×177°.8W±0°.3, h375^{km}±13^{km}, mb4.4/7, Error ellipse: s-maj=34.4km s-min=33.5km az=58.0*

*IDC **18** 15:34:18.6±4.3, 21°.67S×177°.98W, h422^{km}±44^{km}, mb3.3/6, mb1 3.4/8, mb1mx3.1/37, mbtmp4.2/8, Error ellipse: s-maj=32.8km s-min=27.0km az=37.0*

ISC 18 15:34:17.4±1.4**, 21°.5S**±0°.1×**177°.9W**±0°.2**, h412**^{km}**, n19, σ1^{s}.74**/20**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.55	265	P	P	15 37 26.0	+1.2
	0.5nm,0.3s,baz=97,slow=19,SNR=5.2						
URZ	Urewera	17.30	193	P	P	15 37 52.4	-1.5
	1.5nm,0.3s,baz=297,slow=6.8,SNR=9.2						
URZ				S	S	15 40 57.1	+4.1
	0.2nm,0.3s,baz=37,slow=20,SNR=3.0						
BKZ	Black Stump Fm	18.30	194	P	P	15 38 02.1	-2.4
BKZ				IAmb	IAmb	15 38 32.6	
	comp=Z,26nm,1.5s						
BFZ	Birch Farm	19.81	193	P	P	15 38 17.7	-1.4
MSWZ	Moikau Station	20.73	195	P	P	15 38 26.2	-1.3
TUWZ	Tuamarina	21.08	197	P	P	15 38 30.0	-0.8
CTA	Charters Tower	33.49	266	P	P	15 40 20.2	-0.4
	comp=Z,6.7nm,1.1s,baz=86,slow=8.5,SNR=4.7						
KRVT	Keravat (AS076	33.78	296	P	P	15 40 24.4	+1.2
	comp=Z,15nm,0.8s,baz=285,slow=20,SNR=2.5						
TOO	Toolangi	35.41	235	P	P	15 40 36.4	-0.3
TOO				IAmb	IAmb	15 41 04.5	
	comp=Z,86nm,1.9s						
STKA	Stephens Creek	37.46	245	P	P	15 40 53.4	-0.4
	comp=Z,0.9nm,0.5s,baz=96,slow=8.4,SNR=4.1						
ASAR	Alice Springs	44.39	258	P	P	15 41 48.9	-0.8
	comp=Z,1.8nm,0.7s,baz=98,slow=7.9,SNR=23						
ASAR				PcP	PcP	15 43 26.0	+0.8
	comp=Z,0.5nm,0.8s,baz=104,slow=3.9,SNR=3.6						
ASAR	Alice Springs	44.39	258	P	P	15 41 48.4	-1.3
WB0	Warramunga Arr	44.54	263	P	P	15 41 49.3	-1.5
WB0				IAmb	IAmb	15 43 15.5	
	comp=Z,30nm,1.9s						
WB2	Warramunga Arr	44.55	263	P	P	15 41 48.9	-2.0
WB2				IAmb	IAmb	15 42 43.3	
	comp=Z,25nm,1.6s						
WRA	Warramunga Arr	44.56	263	P	P	15 41 49.3	-1.7
	comp=Z,1.1nm,0.6s,baz=96,slow=7.9,SNR=12						
WRA	Warramunga Arr	44.56	263	P	P	15 41 48.5	-2.4
ILAR	Eielson Array	89.22	13	P	P	15 46 27.9	+0.6
	comp=Z,0.1nm,0.4s,baz=220,slow=5.5,SNR=3.3						
AKASG	Malin Array Be	143.88	331	PKP	PKPab	15 53 02.2	-0.7
	comp=Z,0.3nm,0.3s,baz=40,slow=4.1,SNR=6.9						
BRTR	Keskin Array B	147.53	311	PKPbc	PKPbc	15 53 14.8	+0.4
	comp=Z,0.4nm,0.6s,baz=151,slow=3.3,SNR=3.0						

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*IDC **18** 15:37:38.8±1.2, 38°.32N×20°.32E, h0^{km}, mb3.6/6, mb1 3.6/9, mb1mx3.4/55, mbtmp3.5/9, ML3.4/3, MS3.3/1, Ms1 3.2/1, ms1mx2.4/44, Error ellipse: s-maj=24.5km s-min=20.1km az=69.0*

*ATH **18** 15:37:40.7, 38°.19N×20°.39E, h18^{km}, ML3.2/15, Error ellipse: s-maj=1.3km s-min=0.8km az=226.0*

*PDG **18** 15:37:41.4±0.2, 38°.43N×20°.38E, h11^{km}±1^{km}, ML3.7/7, Error ellipse: s-maj=1.5km s-min=0.7km az=90.0*

*THE **18** 15:37:41.3, 38°.21N×20°.42E, h16^{km}, ML3.9/7, Error ellipse: s-maj=1.1km s-min=0.4km az=264.0*

ISC 18 15:37:41.2±0.7**, 38°.22N**±0°.03×**20°.41E**±0°.03**, h18**^{km}±3^{km}**, n87, σ1^{s}.06**/111**, mb3.6**/6**, 1C, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.03	128	P	Pg	15 37 44.2	-0.2
LXR1				S	Sg	15 37 46.5	0.0
	244µm,0.3s						
LXRA	Lixouri, Kepha	0.03	130	P	Pg	15 37 44.2	-0.1
LXRA				S	Sg	15 37 46.2	-0.2
AGT1	Agia Thekli	0.04	330	P	Pg	15 37 44.2	-0.2
AGT1				S	Sg	15 37 46.4	-0.2
	97µm,0.1s						
KEF4	Livadi, Kephal	0.04	21	P	Pg	15 37 44.3	-0.2
KEF4				S	Sg	15 37 46.5	-0.1
CHV1	Chavriata, Kef	0.04	207	P	Pg	15 37 44.2	-0.2
CHV1				S	Sg	15 37 46.4	-0.1
	518µm,0.1s						
KEF3	Kipouria, Keph	0.05	249	P	Pg	15 37 44.3	-0.1
KEF3				S	Sg	15 37 46.3	-0.3
ARGA	Argostoli. Kep	0.07	127	P	Pg	15 37 44.2	-0.4
ARGA				S	Sg	15 37 46.3	-0.6
ARG2	Argostoli	0.08	123	P	Pg	15 37 44.3	-0.3
KEF1	Kardakata, Kep	0.08	42	P	Pg	15 37 44.5	-0.2
KEF1				S	Sg	15 37 46.7	-0.2
KEF2	Argostoli. Kep	0.08	131	P	Pg	15 37 44.4	-0.3
KEF2				S	Sg	15 37 46.4	-0.6
VLS	Valsamata	0.15	107	P	Pg	15 37 45.1	-0.4
VLS				S	Sg	15 37 47.8	-0.6
	92µm,0.2s						
VLS	Valsamata	0.15	107	P	Pg	15 37 45.0	-0.4
VLS				S	Sg	15 37 47.7	-0.6
VLS				AML	AML	15 37 47.9	
VLS				AML	AML	15 37 48.2	
VSK1	VASILIKIADES	0.23	33	P	Pg	15 37 46.5	-0.1
VSK1				S	Sg	15 37 50.4	+0.2
	46µm,0.5s						
KONA	Konidatara, Ke	0.24	32	P	Pg	15 37 46.8	-0.1
KONA				S	Sb	15 37 51.0	+0.1
KONA				AML	AML	15 37 51.2	
	comp=E,37762µm,0.3s						
KONA				AML	AML	15 37 51.5	
	comp=N,44675µm,0.2s						
EVGI	Lefkada island	0.45	26	P	Pg	15 37 50.2	-0.1
EVGI				S	Sb	15 37 57.4	+0.4
EVGI	Lefkada island	0.45	26	P	Pg	15 37 50.2	-0.1
EVGI				S	Sb	15 37 57.2	+0.3
MGNA	Meganis	0.53	35	P	Pg	15 37 51.4	-0.5
MGNA				AML	AML	15 38 00.5	
	comp=N,5786µm,0.2s						
MGNA				AML	AML	15 38 03.8	
	comp=E,7111µm,0.2s						
ZAK2	Zakynthos	0.58	138	P	Pb	15 37 52.5	-0.4
LKD2	Lefkada island	0.60	19	P	Pg	15 37 52.6	-0.6
LKD2				S	Sb	15 38 02.3	+0.9
	comp=E,3µm,0.2s						
LKD2	Lefkada island	0.60	19	P	Pg	15 37 52.8	-0.4
LKD2				S	Sb	15 38 02.5	+1.1
LKD2				AML	AML	15 38 09.1	
	comp=E,6115µm,0.2s						
LKD2				AML	AML	15 38 09.4	
	comp=N,5259µm,0.2s						
AST1	Astakos	0.62	59	P	Pg	15 37 53.1	-0.5
TSLK	Tsoukalades, L	0.63	18	P	Pg	15 37 53.6	-0.2
TSLK				S	Sb	15 38 03.9	+1.6
	comp=N,4µm,0.4s						
TSLK	Tsoukalades, L	0.63	18	P	Pg	15 37 53.5	-0.3
TSLK				S	Sb	15 38 03.3	+1.0
TSLK				AML	AML	15 38 09.1	
	comp=E,7862µm,0.4s						
TSLK				AML	AML	15 38 10.6	
	comp=N,6421µm,0.4s						
RLS	Riolos of Patr	0.85	101	P	Pb	15 37 57.0	-0.5
RLS	Riolos of Patr	0.85	101	P	Pb	15 37 56.9	-0.5
RLS				S	Sn	15 38 10.1	-0.2
RLS				AML	AML	15 38 15.9	
	comp=E,2406µm,0.6s						
RLS				AML	AML	15 38 17.0	
	comp=N,2581µm,0.4s						
LAKA	Lakka	1.24	89	P	Pn	15 38 02.8	-0.9
LAKA				AML	AML	15 38 23.8	
	comp=N,1563µm,0.6s						
LAKA				AML	AML	15 38 26.0	
	comp=E,946µm,0.5s						
TRIZ	Trizonia	1.32	83	P	Pn	15 38 04.7	-0.1
KALE	Kalithea	1.37	82	P	Pn	15 38 05.6	0.0
KALE				AML	AML	15 38 33.8	
	comp=N,1676µm,0.5s						
KALE				AML	AML	15 38 35.7	
	comp=E,1630µm,0.7s						
KLV	Kalavryta, Ach	1.39	97	P	Pb	15 38 06.5	-0.2
KLV				AML	AML	15 38 32.6	
	comp=E,942µm,0.6s						
KLV				AML	AML	15 38 37.6	
	comp=N,1218µm,0.7s						
JAN	Janina	1.48	13	P	Pg	15 38 10.1	+0.4
JAN				AML	AML	15 38 34.2	
	comp=E,2505µm,0.5s						
JAN				AML	AML	15 38 34.8	
	comp=N,3189µm,0.4s						
KEK	Kerkira	1.56	343	P	Pb	15 38 09.3	-0.4
MAKR	Makrakomi, Fth	1.57	59	P	Pb	15 38 10.2	+0.5
MAKR				AML	AML	15 38 42.6	
	comp=E,2262µm,0.4s						
MAKR				AML	AML	15 38 45.8	
	comp=N,1797µm,0.8s						
KASA	Kassiopi	1.57	347	P	Pb	15 38 09.5	-0.2
ITM	Ithomi	1.59	130	P	Pb	15 38 10.0	-0.1
ITM				AML	AML	15 38 42.6	
	comp=E,701µm,0.5s						
ITM				AML	AML	15 38 47.1	
	comp=N,817µm,0.6s						
AGG	Agios Georgios	1.71	61	P	Pb	15 38 12.9	+0.8
AGG				AML	AML	15 38 46.7	
	comp=N,946µm,0.4s						
AGG				AML	AML	15 38 48.3	
	comp=E,878µm,0.8s						
AXAR	Agios Charalam	1.85	72	P	Pb	15 38 15.1	+0.6
KPRO	Kipourio	1.89	23	P	Pb	15 38 15.7	+0.5
PROD	Prodromos	1.96	88	P	Pb	15 38 16.0	-0.5
PROD				AML	AML	15 38 49.8	
	comp=E,678µm,0.7s						
PROD				AML	AML	15 38 54.6	
	comp=N,894µm,0.7s						
LOUT	Loutraki	2.04	96	P	Pb	15 38 17.0	-0.7
LKR	Lokris	2.08	77	P	Pb	15 38 18.1	-0.4
NEST	Nestorio	2.25	13	P	Pb	15 38 21.2	-0.2
VIL2	Platees	2.25	89	P	Pb	15 38 20.3	-1.1
SCTE	Santa Cesarea	2.39	321	P	Pn	15 38 20.6	+1.2
XOR	Xorichti	2.46	61	P	Pn	15 38 22.5	+2.0
SKIA	Skiathos	2.57	68	P	Pb	15 38 24.5	-2.4
AOS	Alonnisos	2.88	70	P	Pn	15 38 28.0	+1.8
AOS				AML	AML	15 39 04.3	
	comp=N,174µm,0.7s						
AOS				AML	AML	15 39 04.8	
	comp=E,161µm,0.7s						
TIP	Timpagrande	3.01	290	P	Pn	15 38 29.5	+1.4
CGL1	Ceglie Messapi	3.33	318	⇑*i*Pn	Pn	15 38 33.3	+0.9
TAR1	Taranto	3.34	315	*e*Pn	Pn	15 38 33.6	+1.0
NOCI	Noci	3.64	316	P	Pn	15 38 37.5	+0.8
SG1	Sgolgore (BA)	3.89	313	*e*Pn	Pn	15 38 41.7	+1.5
BAI	Bari	3.96	318	*e*Pn	Pn	15 38 42.1	+1.0
DRME	Dracevica, Mon	4.07	347	*e*Pn	Pn	15 38 42.6	0.0
PDG	Podgorica	4.30	349	*e*Pn	Pn	15 38 45.5	-0.2
HCY	Herceg Novi	4.47	342	*e*Pn	Pn	15 38 47.2	-0.9
IDI	Anoyia	4.64	128	Pn	Pn	15 38 53.7	+3.2
	comp=E,0.4nm,0.3s,baz=308,slow=12,SNR=5.5						
IDI				Sn	Sn	15 39 43.4	-0.6
	comp=E,1.4nm,0.3s,baz=306,slow=19,SNR=3.2						
TREB	Trebinje	4.76	341	*e*Pn	Pn	15 38 51.7	-0.4
DBRK	Dubrovnik	4.77	340	*e*Pn	Pn	15 38 51.1	-1.1
BRY	Bratogost	4.89	344	*e*Pn	Pn	15 38 53.1	-0.9
STON	Ston	5.08	337	*e*Pn	Pn	15 38 56.2	-0.2
STON				Sn	Sn	15 39 52.0	-2.7
STON	Ston	5.08	337	*e*Pn	Pn	15 38 56.1	-0.4
MAKA	Makarska	5.68	334	*e*Pn	Pn	15 39 04.8	+0.2
MAKA				Sn	Sn	15 40 06.1	-3.3
RICI	Ricice	5.82	336	*i* Pn	Pn	15 39 06.7	0.0
RICI				Sn	Sn	15 40 09.6	-3.4
HAPS	Han Pijesak,Bl	5.96	350	*e*Pn	Pn	15 39 11.1	+2.4
ZIRJ	Zirje	6.51	328	*e*Pn	Pn	15 39 15.8	-0.3
KIJV	Kijevo	6.52	334	*e*Pn	Pn	15 39 16.8	+0.6
KIJV				Sn	Sn	15 40 28.5	-1.7
MORI	Morici	6.66	329	*i* Pn	Pn	15 39 19.0	+0.8
DUGI	Dugi Otok	7.04	327	*i* Pn	Pn	15 39 23.6	+0.2
UDBI	Udbina	7.20	333	*e*Pn	Pn	15 39 27.0	+1.3
NVLJ	Novalja	7.58	328	*e*Pn	Pn	15 39 31.3	+0.5
MOSL	Moslavina	7.87	341	*e*Pn	Pn	15 39 33.4	-1.5
OZLJ	Ozalj	8.25	335	*e*Pn	Pn	15 39 40.6	+0.6
CRES	Cresnjev	8.44	336	*e*Pn	Pn	15 39 42.5	-0.2
CEY	Cerknica	8.73	331	*e*Pn	Pn	15 39 47.1	+0.5
SOKA	Soboth	9.34	337	*e*Pn	Pn	15 39 54.8	-0.2
	comp=E,2.1nm,0.3s,SNR=7.8						
OBKA	Obir	9.35	334	*e*Pn	Pn	15 39 56.2	+1.1
	comp=E,2.4nm,0.2s						
KBA	Koelnbreinsper	10.26	332	*e*Pn	Pn	15 40 08.4	+0.6
	comp=E,1.3nm,0.4s						
BRTR	Keskin Array B	10.41	78	Pn	Pn	15 40 13.6	+3.8
	comp=E,0.0nm,0.3s,baz=264,slow=13,SNR=2.4						
MOA	Molln	10.62	337	*e*Pn	Pn	15 40 14.8	+2.4
	comp=E,3.5nm,0.2s						
GERES	GERESS Array B	11.68	338	Pn	Pn	15 40 25.8	-1.2
	comp=E,0.4nm,0.3s,baz=165,slow=14,SNR=6.3						
KBZ	Khabaz	17.83	65	LR	LR	15 50 33.8	
	comp=E,92nm,19.7s,baz=260,slow=43						
HFS	Hagfors	22.34	351	P	P	15 42 38.1	+0.2
	comp=E,2.1nm,0.7s,baz=159,slow=13,SNR=5.1						
FINES	FINESS Array B	23.52	7	P	P	15 42 49.9	0.0
	comp=E,1.2nm,0.7s,baz=184,slow=12,SNR=3.5						
NOA	NORSAR Array B	23.56	349	P	P	15 42 49.8	-0.7
	comp=E,0.4nm,0.6s,baz=149,slow=9.8,SNR=3.2						
TORD	Torodi Ar. Bea	30.01	219	P	P	15 43 49.4	+0.3
	comp=E,0.3nm,0.5s,baz=20,slow=9.2,SNR=2.7						
MKAR	Makanchi Array	45.36	58	P	P	15 45 58.3	0.0
	comp=E,0.3nm,0.4s,baz=275,slow=6.9,SNR=13						
ZALV	Zalesovo Beam	45.73	48	P	P	15 45 60.0	-1.2
	comp=E,0.7nm,0.4s,baz=270,slow=8.1,SNR=3.8						

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*IDC **18** 15:54:33.0±1.4, 13°.20N×120°.38E, h0^{km}, mb3.8/3, mb1 4.1/3, mb1mx3.4/50, mbtmp3.8/3, Error ellipse: s-maj=30.9km s-min=11.2km az=112.0*

*MAN **18** 15:54:33.9, 13°.33N×120°.22E, h9^{km}, mb4.6, ML3.5, MS3.4*

ISC 18 15:54:34.4±1.2**, 13°.33N**±0°.03×**120°.31E**±0°.04**, h13**^{km}±9^{km}**, n17, σ1^{s}.02**/28**, 1C-3D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.40	352	*e*P	Pg	15 54 42.3	-0.2
LUBP				*e*S	Sg	15 54 47.5	-0.4

PGP	**Puerto Galera**	0.65	75	⇑eP	Pb	15 54 47.8	+0.2
PGP				eS	Sg	15 54 55.7	0.0
TGY	**Tagaytay City**	0.98	39	Pg	Pb	15 54 53.5	+0.3
	820nm,0.3s,baz=224,slow=4.3,SNR=20						
TGY				Lg	Lg	15 55 07.0	
	474nm,0.3s,baz=142,slow=22,SNR=17						
TGY	**Tagaytay City**	0.98	39	⇓eP	Pn	15 54 54.7	+0.8
TGY				eS	Sn	15 55 08.6	+0.9
BUSP	**Coron**	1.33	184	eP	Pn	15 54 58.3	-0.3
BUSP				eS	Sg	15 55 17.0	-0.3
LQP	**Lukban**	1.43	57	eP	Pn	15 55 00.3	+0.1
LQP				eS	Sn	15 55 15.7	-3.2
BOAC	**Boac**	1.50	85	eP	Pb	15 55 02.1	0.0
BOAC				eS	Sg	15 55 23.7	+0.9
OTRP	**Odiongan**	1.93	120	eP	Pn	15 55 08.0	+1.1
OTRP				eS	Sb	15 55 33.5	0.0
POLP	**Polilio Island**	2.11	49	eP	Pn	15 55 10.7	+1.3
POLP				eS	Sn	15 55 36.0	+0.6
GQP	**Guinayangan**	2.16	74	⇓eP	Pb	15 55 12.2	-1.1
GQP				eS	Sn	15 55 35.4	-1.2
ENPP	**El Nido**	2.28	202	eP	Pn	15 55 12.3	+0.6
ENPP				eS	Sn	15 55 39.3	-0.5
PCPH	**Palayan**	2.34	19	⇓eP	Pn	15 55 12.7	+0.1
CUYO	**Cuyo Island**	2.56	164	eP	Pn	15 55 16.5	+0.9
CUYO				eS	Sn	15 55 46.6	-0.1
SMPP	**San Manuel, Pa**	2.82	7	eP	Pn	15 55 19.1	-0.1
CMAR	**Chiang Mai Arr**	21.16	287	P	P	15 59 21.3	+1.8
	0.6nm,0.8s,baz=93,slow=10.0,SNR=6.0						
WRA	**Warramunga Arr**	35.84	157	P	P	16 01 32.9	-1.0
	3.1nm,0.7s,baz=330,slow=10,SNR=37						
ASAR	**Alice Springs**	39.10	160	P	P	16 02 01.2	-0.4
	1.8nm,0.6s,baz=339,slow=7.1,SNR=49						

IDC 18 15:56:26.7±4.0, 20°.98S×70°.50W, h0^{km}, mb4.0/1, mb1 3.7/2, mb1mx3.5/23, mbtmp3.7/2, ML2.8/1, Error ellipse: s-maj=140.6km s-min=68.9km az=103.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	5.18	26	Pn	Pn	15 57 46.0	0.0
	0.2nm,0.3s,baz=215,slow=16,SNR=2.4						
TORD	**Torodi Ar. Bea**	78.58	71	P	P	16 08 30.8	0.0
	1.1nm,0.8s,baz=255,slow=4.5,SNR=4.2						
MKAR	**Makanchi Array**	146.06	34	PKPbc	PKPdf	16 16 07.8	0.0
	0.4nm,0.7s,baz=306,slow=4.3,SNR=4.7						

SJA 18 16:14:31.6±0.8, 22°.15S×66°.04W, h286^{km}±6^{km}, ML3.5, MW3.6, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YJA	**Yavi**	0.49	93	iP	Pn	16 15 09.4	+0.2
YJA				eS	S	16 15 37.5	-1.4
YJA				IAML		16 15 37.8	
	comp=Z,53nm,0.8s						
AZAP	**Zapla**	2.25	157	iP	Pn	16 15 20.2	+0.6
AZAP				eS	S	16 15 55.9	-1.8
AZAP				IAML		16 15 58.7	
	comp=Z,13nm,1.1s						
ASTB	**Santa Barbara**	2.31	141	iP	Pn	16 15 20.8	+0.8
ASTB				IAML		16 16 27.7	
	comp=Z,11nm,3.2s						
LVC	**Limon Verde**	2.69	260	iP	Pn	16 15 23.8	0.0
LVC				IAML		16 16 18.2	
	comp=Z,13nm,3.9s						
PB09	**IPOC Station P**	2.99	276	iP	Pn	16 15 27.1	+0.5
PB09				eS	S	16 16 08.2	-2.1
PB09				IAML		16 16 10.2	
	comp=Z,98nm,0.2s						
PB06	**IPOC Station P**	3.31	260	iP	Pn	16 15 30.5	+0.7
PB06				IAML		16 16 19.6	
	comp=Z,68nm,0.3s						
PB15	**IPOC Station P**	3.34	251	iP	Pn	16 15 30.4	+0.3
PB15				IAML		16 16 20.2	
	comp=Z,486nm,0.2s						
PB03	**IPOC Station P**	3.44	271	iP	Pn	16 15 31.6	+0.4
PB03				IAML		16 16 19.2	
	comp=Z,128nm,0.2s						
PB08	**IPOC Station P**	3.53	304	iP	Pn	16 15 33.0	+0.6
PB08				IAML		16 16 23.2	
	comp=Z,37nm,0.2s						
PB07	**IPOC Station P**	3.59	276	iP	Pn	16 15 33.1	+0.3
PB07				IAML		16 16 21.3	
	comp=Z,85nm,0.2s						
PB02	**IPOC Station P**	3.68	282	iP	Pn	16 15 33.7	0.0
PB02				IAML		16 16 22.5	
	comp=Z,308nm,0.2s						
PB04	**IPOC Station P**	3.81	266	iP	Pn	16 15 35.2	+0.1
PB05	**IPOC Station P**	3.91	259	iP	Pn	16 15 36.2	-0.1
PB05				IAML		16 16 27.3	
	comp=Z,51nm,0.2s						
PATCX	**Punta Patache**	4.05	288	iP	Pn	16 15 38.2	+0.4
PATCX				IAML		16 16 30.1	
	comp=Z,109nm,0.3s						
PB11	**IPOC Station P**	4.13	304	iP	Pn	16 15 38.9	+0.1
PB11				IAML		16 16 32.8	
	comp=Z,80nm,0.2s						
PB10	**IPOC Station P**	4.38	251	iP	Pn	16 15 41.6	+0.3
PB10				IAML		16 16 38.4	
	comp=Z,34nm,0.2s						
PB14	**IPOC Station P**	4.70	238	iP	Pn	16 15 45.5	+0.1
PB14				IAML		16 16 43.2	
	comp=Z,64nm,0.2s						
PB16	**IPOC Station P**	5.00	319	iP	Pn	16 15 50.0	+0.7
PB16				IAML		16 16 52.7	
	comp=Z,11nm,0.4s						

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*KRNET **18** 16:22:33.2±0.1, 39°.14N×77°.44E, mb3.4*
*SOME **18** 16:22:35.1, 39°.57N×77°.13E, h0^{km}*
*NNC **18** 16:22:35.5±1.4, 39°.52N×77°.10E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=9.3km s-min=7.2km az=169.0*

ISC 18 16:22:37.5±1.2, 39°.25N±0°.05×77°.29E±0°.04, h25^{km}, n61, $\sigma 2^{s}.54$/87, 23C-15D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	2.87	358	⇓iP	Pn	16 23 22.9	+0.9
	baz=56						
KDJ				⇓iS	Sn	16 23 58.9	+3.1
	baz=56						
ULHL	**Ulahol**	3.09	345	⇑iP	Pn	16 23 25.9	+0.9
	baz=44						
ULHL				⇑iS	Sn	16 24 04.9	+3.6
	baz=44						
KZA	**Kyzart**	3.22	332	⇑iP	Pn	16 23 28.2	+1.3
	baz=31						
KZA				⇑iS	Sn	16 24 08.8	+4.1
	baz=31						
PRZ	**Przheval'sk**	3.33	14	⇑iP	Pn	16 23 28.9	+0.6
	baz=12						
PRZ				⇑iS	Sn	16 24 10.0	+2.8
	baz=12						
BOOM	**Boomskoye usch**	3.39	343	⇑iP	Pn	16 23 30.3	+1.2
	baz=42						
BOOM				⇑iS	Sn	16 24 11.8	+3.2
	baz=42						
ARLS	**Aral**	3.45	320	⇓iP	Pn	16 23 31.5	+1.7
	baz=20						
ARLS				⇓iS	Sn	16 24 13.3	+3.3
	baz=20						
ANVS	**Anan'yevo**	3.54	4	⇑iP	Pn	16 23 31.8	+0.7
	baz=3.0						
ANVS				⇑iS	Sn	16 24 14.9	+2.7
	baz=3.0						
UCH	**Uchtor**	3.64	325	⇑iP	Pn	16 23 34.3	+1.5
	baz=25						
UCH				⇑iS	Sn	16 24 19.2	+4.0
	baz=25						
TNSS	**Tian-Shan**	3.79	356	eP	Pb	16 23 40.6	-3.4
	4.5nm,0.2s						
TNSS				eS	Sb	16 24 28.1	-1.5
	14nm,0.4s						
TNSS	**Tian-Shan**	3.79	356	Pg	Pb	16 23 39.6	-4.4
	12nm,0.6s						
TNSS				Lg	Lg	16 24 27.0	
	14nm,0.7s						
IZV	**Izvestkoviy**	3.81	352	eP	Pb	16 23 41.2	-3.0
	1.9nm,0.1s						
IZV				eS	Sb	16 24 29.1	-0.9
	15nm,0.3s						
IZV	**Izvestkoviy**	3.81	352	Pg	Pb	16 23 40.0	-4.2
	6.7nm,0.4s						
IZV				Lg	Lg	16 24 28.8	
	17nm,0.6s						
KBK	**Karagaybulak**	3.83	333	⇑iP	Pn	16 23 36.5	+1.4
	baz=33						
KBK				⇑iS	Sn	16 24 23.1	+3.6
	baz=33						
ARSB	**Arslanbob**	3.89	303	⇑iP	Pn	16 23 37.2	+1.3
	baz=4.0						
ARSB				⇑iS	Sn	16 24 23.8	+2.9
	baz=4.0						
SATY	**Saty**	3.89	12	eP	Pb	16 23 42.2	-3.4
	5.2nm,0.3s						
SATY				eS	Sb	16 24 30.7	-1.6
	27nm,0.3s						
SATY	**Saty**	3.89	12	Pg	Pb	16 23 43.0	-2.6
	8.5nm,0.7s						
SATY				Lg	Lg	16 24 32.8	
	21nm,0.7s						
MDOK	**Medeo**	3.91	357	eP	Pb	16 23 42.5	-3.4
	3.0nm,0.2s						
MDOK				eS	Sb	16 24 31.4	-1.4
	12nm,0.4s						
MDOK	**Medeo**	3.91	357	Pg	Pb	16 23 41.6	-4.3
	7.8nm,0.6s						
MDOK				Lg	Lg	16 24 31.2	
	17nm,0.6s						
MDOK	**Medeo**	3.91	357	Pg	Pb	16 23 41.9	-4.0
	7.0nm,0.6s						
MDOK				Lg	Lg	16 24 31.0	
	14nm,0.6s						
KST	**Kastek**	3.92	346	eP	Pb	16 23 42.9	-3.0
	3.0nm,0.2s						
KST				eS	Sb	16 24 32.1	-0.8
	9.5nm,0.2s						
KST	**Kastek**	3.92	346	Pg	Pb	16 23 42.4	-3.6
	6.3nm,0.5s						
KST				Lg	Lg	16 24 31.9	
	7.2nm,0.4s						
MTBS	**Maitube**	3.93	351	eP	Pb	16 23 42.5	-3.6
	1.5nm,0.1s						
MTBS				eS	Sb	16 24 31.3	-1.9
	8.4nm,0.1s						
MTBS	**Maitube**	3.93	351	Pg	Pb	16 23 41.6	-4.5
	2.9nm,0.2s						
MTBS				Lg	Lg	16 24 30.6	
	12nm,0.4s						
AML	**Almayashu**	3.97	318	⇑iP	Pn	16 23 38.7	+1.5
	baz=18						
AML				⇑iS	Sn	16 24 27.1	+4.0
	baz=18						
KOTS	**Kotyrbulak**	3.98	358	eP	Pb	16 23 44.3	-2.7
	13nm,0.4s						
KOTS				eS	Sb	16 24 34.4	-0.3
	43nm,0.5s						
KOTS	**Kotyrbulak**	3.98	358	Pg	Pb	16 23 43.3	-3.8
	28nm,0.5s						
KOTS				Lg	Lg	16 24 33.7	
	49nm,0.6s						
AAK	**Ala-Archa**	3.99	329	⇓iP	Pn	16 23 38.7	+1.4
	baz=28						
AAK				⇓iS	Sn	16 24 27.1	+3.8
	baz=28						
AAK	**Ala-Archa**	3.99	329	⇓Pg	Pb	16 23 43.2	-4.0
	4.1nm,0.5s						
AAK				⇓Lg	Lg	16 24 31.2	
	26nm,0.7s						
FRU1	**Bishkek**	4.08	331	⇑iP	Pn	16 23 39.9	+1.4
	baz=31						
FRU1				⇑iS	Sn	16 24 29.3	+3.8
	baz=31						
UZB	**Uzynbulak**	4.10	18	eP	Pb	16 23 47.0	-2.1
	2.8nm,0.3s						
UZB				eS	Sb	16 24 39.1	+0.7
	19nm,0.8s						
UZB	**Uzynbulak**	4.10	18	Pg	Pb	16 23 46.9	-2.2
	4.7nm,0.7s						
UZB				Lg	Lg	16 24 39.6	
	16nm,0.6s						
DGS	**Degeres**	4.15	344	eP	Pb	16 23 47.3	-2.6
	9.4nm,0.4s						
DGS				eS	Sb	16 24 39.6	+0.1
	16nm,0.4s						
DGS	**Degeres**	4.15	344	Pg	Pb	16 23 46.5	-3.4
	9.2nm,0.6s						
DGS				Lg	Lg	16 24 39.5	
	16nm,0.6s						
CHMS	**Chumysh**	4.21	334	⇑eP	Pn	16 23 41.3	+1.2
	baz=33						
CHMS				⇑iS	Sn	16 24 31.9	+3.5
	baz=33						
CHMS	**Chumysh**	4.21	334	⇓Pg	Pn	16 23 41.3	+1.2
	5.3nm,0.8s						
CHMS				⇓Lg	Lg	16 24 37.6	
	15nm,0.7s						
SHLS	**Shalkode**	4.23	22	eP	Pb	16 23 53.0	+1.7
	4.1nm,0.2s						
SHLS				eS	Sb	16 24 49.5	+7.6
	31nm,0.5s						
SHLS	**Shalkode**	4.23	22	Pg	Pb	16 23 52.4	+1.1
	6.1nm,0.4s						
SHLS				Lg	Lg	16 24 49.0	
	32nm,0.6s						
KURS	**Kuram**	4.28	9	eP	Pb	16 23 49.7	-2.4
	2.3nm,0.2s						
KURS				eS	Sb	16 24 43.8	+0.4
	11nm,0.6s						
KURS	**Kuram**	4.28	9	Pg	Pb	16 23 49.4	-2.7
	7.1nm,0.6s						
KURS				Lg	Lg	16 24 44.5	
	11nm,0.7s						
EKS2	**Erkin-Say**	4.32	323	⇓eP	Pn	16 23 43.5	+1.7
	baz=23						
EKS2				⇓iS	Sn	16 24 34.9	+3.5
	baz=23						
KPKS	**Kokpek**	4.34	14	eP	Pb	16 23 50.8	-2.3
	1.5nm,0.2s						
KPKS				eS	Sb	16 24 45.8	+0.8
	20nm,0.4s						
PDGK	**Podgornoye**	4.39	21	Pg	Pb	16 23 51.9	-2.2
	2.0nm,0.7s						
PDGK				Lg	Lg	16 24 48.1	
	13nm,0.9s						
PDGK	**Podgornoye**	4.39	21	⇓Pg	Pb	16 23 53.2	-0.9
	4.0nm,0.7s						
PDGK				⇑Lg	Lg	16 24 48.7	
	33nm,0.8s						
KTBS	**Karatobe**	4.48	354	eP	Pb	16 23 52.6	-2.9
	2.7nm,0.1s						
KTBS				eS	Sb	16 24 48.9	-0.1
	6.0nm,0.5s						
KTBS	**Karatobe**	4.48	354	Pg	Pb	16 23 52.7	-2.9
	3.7nm,0.7s						
KTBS				Lg	Lg	16 24 50.1	
	13nm,0.4s						
CHKK	**Chushkaly**	4.60	357	eP	Pb	16 23 55.5	-2.1
	1.1nm,0.1s						
CHKK				eS	Sb	16 24 53.4	+0.9
	6.2nm,0.1s						
CHKK	**Chushkaly**	4.60	357	Pg	Pb	16 23 54.1	-3.4
	4.6nm,0.4s						
CHKK				Lg	Lg	16 24 52.6	
	9.0nm,0.6s						
KRBS	**Karabastau**	4.60	345	eP	Pb	16 23 54.5	-3.1
	3.7nm,0.3s						
KRBS				eS	Sb	16 24 51.6	-1.0
	5.0nm,0.4s						
SGDS	**Sogindy**	4.65	335	Pg	Pb	16 23 54.6	-3.8
	4.0nm,0.4s						
SGDS				Lg	Lg	16 24 52.6	
	8.0nm,0.6s						
MRKS	**Merke**	4.65	320	eP	Pb	16 23 54.8	-3.6
	3.2nm,0.1s						
MRKS				eS	Sb	16 24 52.6	-1.4
	7.7nm,0.4s						
MRKS	**Merke**	4.65	320	Pg	Pb	16 23 56.2	-2.2
	5.4nm,0.5s						
MRKS				Lg	Lg	16 24 55.9	
	16nm,0.7s						
KUU	**Kurty**	4.69	352	eP	Pb	16 23 56.1	-3.0
	0.4nm,0.0s						
KUU				eS	Sb	16 24 54.6	-0.4
	6.6nm,0.5s						
KUU	**Kurty**	4.69	352	Pg	Pb	16 23 58.1	-1.0
	3.3nm,0.5s						
KUU				Lg	Lg	16 24 59.4	
	13nm,0.6s						
KTMS	**Ketmen**	4.78	28	eP	Pb	16 24 00.1	-0.6
	0.8nm,0.0s						
KTMS				eS	Sb	16 25 01.6	+3.9
	6.3nm,0.2s						
KTMS	**Ketmen**	4.78	28	Pg	Pb	16 23 59.6	-1.1
	0.5nm,0.1s						
KTMS				Lg	Lg	16 25 01.5	
	11nm,0.5s						
ARXS	**Arharly**	4.97	4	eP	Pb	16 24 02.4	-1.5
	3.1nm,0.3s						
ARXS				eS	Sb	16 25 05.3	+2.1
	9.1nm,0.3s						
ARXS	**Arharly**	4.97	4	Pg	Pb	16 24 01.7	-2.2
	4.9nm,0.6s						
ARXS				Lg	Lg	16 25 04.7	
	8.5nm,0.6s						
DJR	**Jarkent**	5.41	19	eP	Pb	16 24 10.5	-0.8
	0.2nm,0.0s						
DJR				eS	Sb	16 25 19.8	+4.1
	7.9nm,0.3s						
DJR	**Jarkent**	5.41	19	Pg	Pb	16 24 10.0	-1.3
	0.3nm,0.1s						
DJR				Lg	Lg	16 25 19.6	
	8.4nm,0.5s						
KAPS	**Kapalarasan**	6.22	14	Pg	Pb	16 24 24.4	-0.7
	1.2nm,0.7s						
KAPS				Lg	Lg	16 25 44.2	
	4.6nm,0.8s						
KK31	**Karatay Array**	6.40	309	⇓Pg	Pb	16 24 29.7	+1.5
	1.1nm,0.8s,baz=126,slow=18,SNR=3.9						
KK31				⇓Lg	Lg	16 25 46.9	
	1.9nm,0.6s,baz=122,slow=26,SNR=3.6						

NNC 18 16:33:18.7±13.0, 37°.05N×70°.37E, h0^{km}, mb4.1, mpv3.7, 1C-3D, Error ellipse: s-maj=106.1km s-min=98.4km az=32.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	5.69	26	P	Pn	16 34 45.8	+0.9
	SNR=52						
KK31	**Karatay Array**	6.05	1	⇑P	Pn	16 34 51.5	+2.0
	1.6nm,0.3s,baz=180,slow=12,SNR=59						
KK31				⇓S	Sn	16 36 01.8	+2.4
	9.2nm,0.5s,baz=188,slow=24,SNR=16						
UCH	**Uchtor**	6.08	30	P	Pn	16 34 50.6	+0.3
	SNR=26						
EKS2	**Erkin-Say**	6.19	24	P	Pn	16 34 52.4	+0.9
	SNR=9.3						
AAK	**Ala-Archa**	6.42	28	P	Pn	16 34 54.9	+0.2
	SNR=9.8						
AAK	**Ala-Archa**	6.42	28	P	Pn	16 34 53.9	-0.8
	3.1nm,0.5s						
KBK	**Karagaybulak**	6.62	31	P	Pn	16 34 58.2	+0.8
	SNR=6.7						
CHMS	**Chumysh**	6.83	28	⇓P	Pn	16 34 59.5	-0.6
	3.7nm,0.5s						
CHMS				⇓S	Sn	16 36 17.5	-1.1
	6.5nm,0.9s						

IDC 18 16:41:44.8±4.1, 6°.99S×130°.78E, h77^{km}±59^{km}, mb2.8/1, mb1 3.5/4, mb1mx3.2/22, mbtmp3.6/4, ML3.7/3, Error ellipse: s-maj=130.1km s-min=26.1km az=82.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	6.10	5	P	Pn	16 43 12.5	+0.1
	3.4nm,0.3s,baz=190,slow=18,SNR=6.0						
WRA	**Warramunga Arr**	13.34	165	P	Pn	16 44 49.8	-1.2
	0.4nm,0.3s,baz=348,slow=13,SNR=10						
WRA				S	Sn	16 47 12.0	-5.6
	0.5nm,0.3s,baz=325,slow=28,SNR=7.9						
ASAR	**Alice Springs**	16.86	170	P	P	16 45 37.1	+0.2
	0.2nm,0.3s,baz=354,slow=11,SNR=6.6						
ASAR				S	Sn	16 48 36.5	-6.4
	0.1nm,0.3s,baz=355,slow=26,SNR=4.2						
MKAR	**Makanchi Array**	68.64	326	P	P	16 52 39.9	0.0
	0.1nm,0.4s,baz=116,slow=9.8,SNR=1.8						

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*IDC **18** 16:46:16.7±1.7, 19°.89S×70°.69W, h0^{km}, mb3.7/2, mb1 3.8/4, mb1mx3.6/24, mbtmp3.7/4, ML3.5/2, MS2.7/2, Ms1 2.7/2, ms1mx2.5/25, Error ellipse: s-maj=51.3km s-min=16.9km az=65.0*
*SJA **18** 16:46:17.6±0.8, 20°.04S×70°.84W, h10^{km}, ML3.5, MW3.4*
*GUC **18** 16:46:19.2±0.8, 19°.99S×70°.88W, h29^{km}±3^{km}, ML3.8*

ISC 18 16:46:17.4±2.0, 19°.98S±0°.03×70°.87W±0°.06, h9^{km}±13^{km}, n36, $\sigma 1^{s}.06$/53, 6C-6D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	0.80	62	⇓iP	Pb	16 46 33.7	+0.1
PSGC				iS	Sb	16 46 44.7	+0.1
PSGCX	**Pisagua**	0.80	62	iP	Pb	16 46 33.8	+0.2
PSGCX				eS	Sb	16 46 45.0	+0.4
TA01	**Diego Aracena**	0.87	132	⇓iP	Pb	16 46 34.7	0.0
TA01				iS	Sb	16 46 46.2	-0.3
TA01				IAML		16 46 48.9	
	comp=N,5µm,0.4s						
PATCX	**Punta Patache**	1.07	141	⇓iP	Pb	16 46 38.0	-0.2
PATCX				iS	Sb	16 46 52.3	-0.2
PATCX				IAML		16 46 58.3	
	comp=E,3µm,0.5s						
PATCX	**Punta Patache**	1.07	141	iP	Pn	16 46 38.2	-0.5
PATCX				eS	Sb	16 46 52.2	-0.2
PB11	**IPOC Station P**	1.17	79	⇓iP	Pn	16 46 39.8	-0.3
PB11				iS	Sn	16 46 55.5	-0.8
PB11				IAML		16 46 57.9	
	comp=N,6µm,0.2s						
PB11	**IPOC Station P**	1.17	79	iP	Pn	16 46 39.8	-0.3
PB12	**IPOC Station P**	1.45	21	⇑iP	Pb	16 46 44.5	-0.2
PB12				iS	Sg	16 47 04.1	-0.1
PB12	**IPOC Station P**	1.45	21	iP	Pb	16 46 45.2	+0.5
GO01	**Chusmiza**	1.61	79	⇓iP	Pb	16 46 47.5	-0.1
GO01				iS	Sg	16 47 09.3	+0.1
GO01				IAML		16 47 11.5	
	comp=N,4µm,0.3s						
PB02	**IPOC Station P**	1.62	146	⇑eP	Pn	16 46 46.0	-0.2
PB02				iS	Sb	16 47 07.5	-0.6
PB02				IAML		16 47 14.9	
	comp=E,5µm,0.3s						
PB02	**IPOC Station P**	1.62	146	iP	Pn	16 46 46.2	0.0
PB08	**IPOC Station P**	1.62	96	⇓iP	Pb	16 46 47.3	-0.5
PB08				iS	Sg	16 47 09.3	-0.3
PB08				IAML		16 47 11.2	
	comp=N,1µm,0.3s						
PB08	**IPOC Station P**	1.62	96	iP	Pb	16 46 47.4	-0.4
PB01	**IPOC Station P**	1.67	129	⇑iP	Pn	16 46 47.3	+0.3
PB01				iS	Sb	16 47 09.2	-0.5
PB01				IAML		16 47 12.6	
	comp=N,2µm,0.3s						
AP01	**Chacalluta**	1.68	17	eP	Pb	16 46 48.0	-0.5
AP01				iS	Sb	16 47 09.3	-0.4
AP01				IAML		16 47 17.5	
	comp=N,2µm,0.4s						
PB07	**IPOC Station P**	1.97	152	⇑eP	Pn	16 46 50.6	-0.5
PB07				iS	Sb	16 47 17.9	-0.4
PB07				IAML		16 47 28.6	
	comp=E,1µm,0.4s						
PB07	**IPOC Station P**	1.97	152	iP	Pb	16 46 52.8	-0.7
PB16	**IPOC Station P**	2.08	38	eP	Pb	16 46 54.9	-0.9
PB16				iS	Sg	16 47 23.1	-1.3
PB16				IAML		16 47 27.7	
	comp=E,584nm,0.3s						
PB16	**IPOC Station P**	2.08	38	iP	Pb	16 46 55.8	+0.1
PB03	**IPOC Station P**	2.31	153	⇑eP	Pn	16 46 55.2	-0.6
PB03				iS	Sg	16 47 31.8	+0.2
PB03				IAML		16 47 36.7	
	comp=E,510nm,0.4s						
PB03	**IPOC Station P**	2.31	153	iP	Pn	16 46 55.2	-0.6
PB09	**IPOC Station P**	2.36	140	⇑eP	Pn	16 46 56.8	+0.3
PB09				iS	Sb	16 47 28.6	-1.1
PB09				IAML		16 47 39.3	
	comp=E,2µm,0.5s						
PB09	**IPOC Station P**	2.36	140	iP	Pn	16 46 57.7	+1.2
PB04	**IPOC Station P**	2.44	164	eP	Pn	16 46 56.6	-0.9
PB04	**IPOC Station P**	2.44	164	iP	Pn	16 46 56.6	-0.9
PB06	**IPOC Station P**	2.97	156	iP	Pn	16 47 04.2	-0.6
LVC	**Limon Verde**	3.19	145	Pn	Pn	16 47 09.3	+1.1
	comp=E,4.3nm,0.3s,baz=333,slow=16,SNR=19						
LVC				Pg	Pb	16 47 15.6	+1.1
	comp=E,17nm,0.3s,baz=355,slow=11,SNR=25						
LVC				Sn	Sn	16 47 47.2	+0.6
	comp=E,27nm,0.3s,baz=338,slow=19,SNR=4.5						

LVC				Lg	Lg	16 47 56.9	
	comp=E,51nm,0.3s,baz=120,slow=20,SNR=12						
LVC				LR	LR	16 48 33.9	
	comp=E,211nm,18.1s,baz=227,slow=43						
LVC	Limon Verde	3.19	145	iP	Pn	16 47 10.0	+1.9
LVC				IAML		16 47 58.4	
	comp=Z,117nm,0.5s						
LPAZ	La Paz	4.50	36	Pn	Pn	16 47 30.4	+4.0
	comp=Z,0.2nm,0.3s,baz=224,slow=8.3,SNR=4.3						
LPAZ				LR	LR	16 48 51.6	
	comp=Z,43nm,19.8s,baz=222,slow=36						
YJA	Yavi	5.46	115	iP	Pn	16 47 43.5	+4.1
AZAP	Zapla	6.84	129	iP	Pb	16 48 11.0	-5.7
SIV	San Ignacio	10.13	69	Pn	Pn	16 48 42.3	-0.9
	comp=Z,0.6nm,0.3s,baz=259,slow=14,SNR=18						
TORD	Torodi Ar. Bea	78.60	71	P	P	16 58 18.7	-1.4
	comp=Z,1.1nm,0.7s,baz=252,slow=4.9,SNR=5.2						
YKA	Yellowknife Ar	89.16	341	P	P	16 59 13.2	+0.3
	comp=Z,0.2nm,0.7s,baz=134,slow=5.3,SNR=2.9						
MKAR	Makanchi Array	145.43	33	PKPbc	PKPab	17 05 56.4	+0.3
	comp=Z,0.7nm,0.7s,baz=320,slow=4.1,SNR=10						

DJA 18 16:56:35.0±0.3, 9°S±2°×12°4E±°, h10km, M3.7/4, mb4.2/3, MLv3.5/4, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	0.78	168	P	Pb	16 56 51.0	+0.3
SOEI				S	Sb	16 57 02.3	+0.9
MMRI	Maumere	1.87	281	P	Pn	16 57 07.1	0.0
MMRI				S	Sn	16 57 31.8	+0.9
EDFI	Ende, Flores	2.39	276	P	Pn	16 57 14.7	+0.3
WBSI	Waikabubak, Su	4.69	262	P	Pn	16 57 45.2	-0.8
BKSI	Bulukumba	5.37	312	P	Pn	16 57 55.4	+0.1
	9.2nm,1.4s						
PLAI	Plampang	6.25	271	P	Pn	16 58 06.8	-0.6

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*UCR **18** 17:07:37.5±1.9, 8°.37N×82°.83W, h23km±4km*
*UPA **18** 17:07:38.0±1.6, 8°.37N×82°.79W, h22km±4km, MW4.3*
ISC 18 17:07:37.7±0.9, 8°.36N±0°.04×82°.81W±0°.02, h34km±6km, n56, σ1s.35/87, 20C-19D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBAR3	San Bartolo, C	0.08	242	⇓iP	Pb	17 07 43.1	-0.3
SBAR3				iS	Sb	17 07 46.7	-0.7
BAGA3	Bagala, Chiriq	0.30	68	⇓iP	Pb	17 07 45.1	-0.4
DVD	David	0.36	77	⇑iP	Pb	17 07 45.5	-0.8
DVD				iS	Sb	17 07 51.7	-0.5
PEDE3	Pedregal, Chir	0.39	86	⇑iP	Pb	17 07 45.9	-0.7
PEDE3				eS	Sb	17 07 52.4	-0.4
LOCO3	Loma Colorada,	0.39	82	⇓iP	Pb	17 07 45.9	-0.8
LOMA3	Las Lomas, Chi	0.42	80	⇓iP	Pb	17 07 46.2	-0.9
LOMA3				iS	Sb	17 07 52.7	-0.9
BRU2	Volcan	0.45	15	⇓iP	Pb	17 07 46.8	-0.9
BRU2				iS	Sn	17 07 57.3	+2.4
BRU2	Volcan	0.45	15	⇓eP	Pb	17 07 46.6	-1.1
BRU2				eS	Sb	17 07 54.6	0.0
BCO2	Palmira	0.46	38	⇓iP	Pb	17 07 47.0	-0.8
BCO2				iS	Sb	17 07 54.7	0.0
PTAR3	Potrerillos Ar	0.46	43	⇓iP	Pb	17 07 47.0	-0.8
PTAR3				iS	Sb	17 07 53.9	-0.8
CHIR3	Chiriqui UPA,	0.48	85	⇓iP	Pb	17 07 46.9	-1.0
CHIR3				iS	Sb	17 07 54.6	-0.4
EDSV	San Vito	0.49	341	⇑iP	Pb	17 07 47.6	-0.7
EDSV				eS	Sn	17 07 56.5	+0.7
PTJ1	Puerto Jimnez	0.52	290	⇑eP	Pb	17 07 47.2	-1.4
PTJ1				iS	Sb	17 07 55.2	-0.9
PTJ1	Puerto Jimnez	0.52	290	⇑eP	Pb	17 07 47.3	-1.3
PTJ1				eS	Sb	17 07 56.1	0.0
GUAL3	Gualaca, Chiri	0.54	71	⇓eP	Pb	17 07 48.4	-0.5
GUAL3				eS	Sb	17 07 55.4	-1.2
LNBQ3	Los Naranjos,	0.56	40	⇓iP	Pb	17 07 48.1	-1.4
LNBQ3				iS	Sb	17 07 56.7	-0.9
EDPN	Palmar Norte	0.88	313	⇑eP	Pb	17 07 52.5	-2.0
EDPN				eS	Sb	17 08 05.0	-1.0
EDBA	Buenos Aires	0.92	330	⇑iP	Pb	17 07 53.8	-1.6
NANC3	Nancito, Chiri	1.07	96	⇓eP	Pn	17 07 55.3	-1.1
NANC3				eS	Sb	17 08 10.6	-1.0
CNI2	El Empalme, Bo	1.11	17	eP	Pn	17 07 56.4	-0.6
CNI2				eS	Sn	17 08 13.1	+2.1
EDLM	Las Mercedes	1.20	320	⇑eP	Pn	17 07 57.2	-0.9
EDLM				eS	Sn	17 08 14.8	+1.5
PVID3	Puerto Vidal,	1.23	104	eP	Pn	17 07 56.4	-2.1
EDDO	Dominical	1.37	311	⇑eP	Pn	17 08 00.4	0.0
EDDO				eS	Sb	17 08 19.9	-0.1
CNAZ3	Canazas, Verag	1.58	90	eP	Pn	17 08 04.1	+0.7
CNAZ3				iS	Sn	17 08 23.6	+0.9
MESA3	La Mesa, Verag	1.62	97	⇑eP	Pn	17 08 04.3	+0.4
GMAL	Guarumal, Vera	1.67	111	⇓eP	Pn	17 08 03.9	-0.7
GMAL				iS	Sn	17 08 25.3	+0.4
GMAL	Guarumal, Vera	1.67	111	⇓eP	Pn	17 08 03.6	-0.9
GMAL				eS	Sn	17 08 25.6	+0.8
RSUS3	Rio de Jesus,	1.68	103	eP	Pn	17 08 04.8	+0.2
RSUS3				eS	Sn	17 08 25.6	+0.7
LCR2	La Lucha 2	1.81	320	⇑eP	Pn	17 08 06.0	-0.7
LCR2				eS	Sn	17 08 31.3	+2.6
STIA3	Santiago, Vera	1.84	98	eP	Pn	17 08 07.2	+0.3
PONU3	Ponuga, Veragu	1.87	104	⇑eP	Pn	17 08 08.2	+0.8
PONU3				eS	Sn	17 08 31.1	+1.2
CALO3	Calobre, Verag	1.95	91	eP	Pn	17 08 08.9	+0.5
CALO3				eS	Sn	17 08 33.5	+1.8
OCU3	Ocu, Herrera	2.05	101	eP	Pn	17 08 05.3	-4.6
HDC	Heredia	2.08	322	⇓iP	Pn	17 08 12.0	+1.6
HDC				iS	Sb	17 08 39.0	-1.5
HDC	Heredia	2.08	322	⇑eP	Pn	17 08 10.7	+0.4
CRIS3	El Cristo, Coc	2.17	93	⇑eP	Pn	17 08 12.2	+0.7
CACAO	El Cacao, Vera	2.18	117	⇓eP	Pn	17 08 12.6	+1.0
CACAO				iS	Sn	17 08 37.6	+0.2
PESE3	Pese, Herrera	2.22	101	eP	Pn	17 08 12.0	-0.2
CHIT3	Chitre	2.40	99	⇑eP	Pb	17 08 18.6	-1.6
TOSI3	Tonosi	2.53	112	eP	Pn	17 08 17.2	+0.8
AZU	Azuero	2.57	102	iP	Pn	17 08 18.9	+1.9
	baz=281,slow=12						
AZU				iS	Sn	17 08 51.3	+4.2
AZU	Azuero	2.57	102	⇓eP	Pn	17 08 18.4	+1.5
AZU				eS	Sn	17 08 50.0	+2.9
VTON	El Valle, Cocl	2.68	84	iP	Pb	17 08 23.1	-2.0
VTON				iS	Sb	17 08 56.2	-1.4
ACHO3	Achotines, Los	2.77	110	eP	Pn	17 08 23.4	+3.6
JTS	Las Juntas de	2.86	312	⇑eP	Pn	17 08 21.4	+0.4
JTS				eS	Sn	17 08 54.8	+0.5
PEDA3	Pedasi	2.88	106	eP	Pn	17 08 14.4	-6.8
ZANG	Zanguenga, Cho	2.97	78	eP	Pn	17 08 22.5	0.0
BCIP	Isla Barro Col	3.05	74	⇑eP	Pn	17 08 25.3	+1.8
BCIP	Isla Barro Col	3.05	74	⇑eP	Pn	17 08 24.4	+0.9
MLIR	Monte Lirio	3.05	73	eP	Pb	17 08 28.4	-3.0
CHOR3	La Chorrera	3.06	80	⇓eP	Pn	17 08 24.8	+1.1
FRIJ	El Hiral	3.17	74	eP	Pn	17 08 26.9	+1.7
PLVR	Palo Verde	3.19	308	⇑eP	Pn	17 08 26.5	+0.8
CUI	Cuipilapa	3.26	315	⇓eP	Pn	17 08 28.6	+2.1
CUI				eS	Sn	17 09 06.1	+1.9
UPA	Univ. de Panam	3.30	79	eP	Pn	17 08 26.9	-0.1
ACON	Acoyapa	4.28	327	⇑eP	Pn	17 08 40.6	+0.2

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*IDC **18** 17:09:08.1±1.3, 1°.73S×136°.03E, h0km, mb3.6/4, mb1 3.8/6, mb1mx3.5/40, mbtmp3.6/6, ML3.6/2, MS2.8/1, Ms1 2.8/1, ms1mx2.3/28, Error ellipse: s-maj=41.9km s-min=24.3km az=83.0*
*DJA **18** 17:09:12.2±0.3, 2°S±5°×13°6E±°, h10km, M3.9/8, MLv3.9/8*
ISC 18 17:09:14.1±0.9, 1°.72S±0°.09×135°.72E±0°.04, h35km, n13, σ1s.60/15, mb3.5/4, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BAKI	Biak	0.65	36	P	Pn	17 09 25.4	-1.4
RKPI	Ransiki, Papua	1.56	277	P	Pn	17 09 39.4	+0.1
RKPI				S	Sn	17 10 00.0	+1.7
SMPI	Sarmi	3.00	95	P	Pn	17 09 59.2	+0.1
SMPI				S	Sn	17 10 36.6	+2.8
FAKI	Fak Fak	3.67	251	P	Pn	17 10 08.0	-0.4
GENI	Genyem	4.53	101	P	Pn	17 10 21.7	+1.6
SIJI	Sorong	4.54	281	Pn	Pn	17 10 21.2	+1.0
	1.3nm,0.3s,baz=18,slow=13,SNR=20						
SIJI				Sn	Sn	17 11 12.2	+0.4
	3.0nm,0.3s,baz=281,slow=23,SNR=7.0						
SWI	Sorong	4.54	281	P	Pn	17 10 21.9	+1.6
WRA	Warramunga Arr	18.16	184	P	Pn	17 13 20.6	-3.0
	0.2nm,0.3s,baz=7.8,slow=13,SNR=12						
ASAR	Alice Springs	21.89	184	P	P	17 14 04.2	-0.1
	0.9nm,0.6s,baz=9.2,slow=11,SNR=21						
PETK	Petropavlovsk-	57.65	15	LR	LR	17 46 21.4	
	comp=Z,6.9nm,18.0s,baz=241,slow=39						
MKAR	Makanchi Array	67.20	323	P	P	17 20 05.7	+0.9
	0.4nm,0.5s,baz=110,slow=7.8,SNR=4.8						
KURBB	Kurchatov Arra	71.21	326	P	P	17 20 30.2	+0.8
	0.3nm,0.6s,baz=128,slow=7.5,SNR=2.0						
ILAR	Eielson Array	86.18	25	P	P	17 21 50.3	-1.2
	0.3nm,0.9s,baz=270,slow=4.4,SNR=5.1						

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*JMA **18** 17:13:42.2±0.6, 32°.17N×138°.24E, h381km, M3.2*
*IDC **18** 17:13:43.4±1.2, 32°.45N×137°.51E, h382km±15km, mb2.6/4, mb1 2.8/8, mb1mx2.6/49, mbtmp3.5/8, Error ellipse: s-maj=44.1km s-min=13.7km az=84.0*
ISC 18 17:13:43.6±1.0, 32°.46N±0°.08×138°.2E±0°.2, h400km, n16, σ1s.96/23, mb2.7/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	Hachijo jima 2	1.51	64	P	Pn	17 14 38.1	+1.4
	13nm,0.3s,baz=270,slow=8.1,SNR=11						
JHJ				S	S	17 15 22.4	+2.7
	4.9nm,0.3s,baz=53,slow=20,SNR=1.5						
JIE	Ise	2.29	328	P	Pn	17 14 40.8	-0.6
JOD2	Odawara 2	2.90	15	P	Pn	17 14 46.0	0.0
JOD2				eS	S	17 15 36.4	-0.1
JNY	Yasuok	2.91	355	P	Pn	17 14 46.2	+0.1
JYN	Shimob	3.05	6	P	Pn	17 14 47.7	+0.5
JHU	Hanno	3.51	15	P	Pn	17 14 50.9	-0.2
JHU				eS	S	17 15 42.1	-3.8
JRY	Ryogami san	3.60	9	P	Pn	17 14 52.2	+0.2
JRY				eS	S	17 15 46.0	-1.4
MJAR	Matsushiro Arr	4.08	0	P	Pn	17 14 55.5	-0.9
	0.2nm,0.3s,baz=173,slow=11,SNR=12						
MJAR				S	S	17 15 53.1	-2.4
	0.1nm,0.3s,baz=127,slow=28,SNR=2.5						
JAG	Ashikaga	4.10	15	P	Pn	17 14 55.9	-0.6
JAG				S	S	17 15 51.9	-3.9
JCJ	Chichijima	6.38	146	P	Pn	17 15 19.7	-0.8
	4.5nm,0.3s,baz=348,slow=20,SNR=11						
JCJ				S	S	17 16 35.4	-4.1
	9.3nm,0.3s,baz=264,slow=23,SNR=10						
ASAJ	Asahikawa	12.15	15	P	Pn	17 16 27.6	+1.3
	0.8nm,0.3s,baz=215,slow=12,SNR=11						
KLR	Kul'dur	17.44	346	P	P	17 17 21.5	-0.4
	0.3nm,0.3s,baz=182,slow=11,SNR=6.2						
TIXI	Tiksi	39.57	355	P	P	17 20 38.3	+0.8
	0.3nm,0.3s,baz=157,slow=7.3,SNR=4.0						
WRA	Warramunga Arr	52.23	185	P	P	17 22 16.4	+0.7
	0.2nm,0.3s,baz=0.3,slow=7.6,SNR=10						
ILAR	Eielson Array	54.78	30	P	P	17 22 36.3	+2.9
	0.2nm,0.6s,baz=269,slow=6.3,SNR=1.7						
ASAR	Alice Springs	55.95	185	P	P	17 22 43.0	+0.8
	0.2nm,0.7s,baz=16,slow=12,SNR=4.9						

IDC 18 17:13:54.8±1.3, 28°.31N×99°.74E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.3/53, mbtmp3.5/5, ML3.8/1, MS2.7/2, Ms1 2.8/2, ms1mx2.4/39, Error ellipse: s-maj=58.3km s-min=18.0km az=73.0, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	9.83	184	Pn	Pn	17 16 18.3	+0.7
	0.2nm,0.3s,baz=348,slow=12,SNR=4.7						
CMAR				Pg		17 16 54.7	
	0.3nm,0.3s,baz=354,slow=17,SNR=3.3						
CMAR				Lg	Lg	17 19 06.8	
	0.2nm,0.3s,baz=13,slow=29,SNR=6.0						
CMAR				LR	LR	17 20 12.7	
	comp=Z,25nm,18.6s,baz=345,slow=38						
MKAR	Makanchi Array	22.97	328	P	P	17 19 00.9	0.0
	1.1nm,0.9s,baz=124,slow=10.0,SNR=9.1						
KURBB	Kurchatov Arra	27.47	330	P	P	17 19 42.4	-0.1
	0.4nm,0.7s,baz=141,slow=9.9,SNR=5.3						
ZALV	Zalesovo Beam	27.86	341	P	P	17 19 46.1	+0.1
	0.3nm,0.3s,baz=139,slow=9.5,SNR=2.1						
KLR	Kul'dur	32.18	41	LR	LR	17 35 40.2	
	comp=Z,22nm,20.1s,baz=146,slow=41						
WRA	Warramunga Arr	58.48	141	P	P	17 23 52.6	-0.3
	1.1nm,0.8s,baz=329,slow=7.5,SNR=6.0						

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*NIED **18** 17:24:00, 35°.80N×140°.10E, h68km, Mw4.2 Best double couple: $M_0 2.08000\times10^{15}$ NP1: ϕ_s0.00000°, δ65.00000°, λ90.00000°. NP2: ϕ_s181.00000°, δ25.00000°, λ90.00000°.*
*BJI **18** 17:24:37.9±0.0, 35°.78N×140°.58E, h51km, mB4.8/19, mb4.4/29, Ms4.5/3, Ms7 4.2/3*
*NEIC **18** 17:24:42.4±1.7, 35°.70N±0°.05×140°.21E±0°.09, h62km±6km, mb4.6/52, Error ellipse: s-maj=10.1km s-min=7.1km az=100.0*
*JMA **18** 17:24:43.6±0.2, 35°.80N×140°.10E, h64km±2km, M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s189.00000°, δ28.00000°, λ98.00000°. NP2: ϕ_s0.00000°, δ62.00000°, λ86.00000°. Principal axes: T Plg73.0000°, Azm260.0000°; N Plg4.0000°, Azm2.0000°; P Plg17.0000°, Azm93.0000°;*
JMA Felt II J1.
*IDC **18** 17:24:43.3±1.5, 35°.65N×140°.14E, h70km±12km, mb3.6/21, mb1 3.8/27, mb1mx3.7/48, mbtmp4.0/27, MS3.1/5, Ms1 3.2/5, ms1mx2.7/49 Error ellipse: s-maj=19.1km s-min=6.4km az=66.0*
ISC 18 17:24:42.3±0.7, 35°.70N±0°.04×140°.23E±0°.04, h59km±6km, n136, σ1s.40/149, mb4.4/46, MS3.2/4, 4C-4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSMT	Sammumatsuo	0.19	107	⇑P	Pn	17 24 55.0	+3.4
JIHU	Itakohorinouch	0.36	42	⇑P	Pn	17 24 55.1	+2.3
TOK	Tokyo	0.38	268	P	Pn	17 24 55.2	+2.2
JYT	Yasato	0.53	357	⇑P	Pn	17 24 55.2	+0.7
JYT				S	Sn	17 25 04.0	+0.6
BSO3	Boso 3	0.93	165	⇑P	Pn	17 25 01.4	+2.3
JAG	Ashikaga	0.96	319	⇓P	Pn	17 24 59.8	0.0
JOD2	Odawara 2	1.03	245	⇓P	Pn	17 25 01.1	+0.4
JOD2				S	Sn	17 25 13.8	-0.5
JRY	Ryogami san	1.12	287	⇓P	Pn	17 25 02.5	+0.5
JKT	Katashina	1.33	324	⇓P	Pn	17 25 04.6	-0.2
JKT				eS	Sn	17 25 20.3	-1.2
MJAR	Matsushiro Arr	1.84	298	P	Pn	17 25 11.9	+0.4
	10nm,0.3s,baz=118,slow=21,SNR=348						
MJAR				S	Sn	17 25 33.8	0.0
	6.4nm,0.3s,baz=291,slow=26,SNR=13						
MJAR				LR	LR	17 25 51.3	
	comp=Z,271nm,18.4s,baz=125,slow=38						
MJAR	Matsushiro Arr	1.84	298		Pn	17 25 14.3	+2.8
MAJO	Matsushiro	1.84	298		Pn	17 25 11.9	+0.3
MAT	Matsushiro	1.84	298	P	Pn	17 25 12.0	+0.4
MAT				eS	Sn	17 25 33.4	-0.4
MJB9	Matsu-Tunnel	1.84	298		Pn	17 25 11.9	+0.3
JHJ	Hachijo jima 2	2.60	188	P	Pn	17 25 23.3	+1.4
	85nm,0.3s,baz=322,slow=20,SNR=21						
JHJ				S	Sn	17 25 52.3	-0.1
	111nm,0.3s,baz=247,slow=22,SNR=8.8						
JHJ2	Mitsune	2.60	188		Pn	17 25 23.4	+1.4
INU	Inuyama	2.64	263		Pn	17 25 23.1	+0.6
ERM	Erimo	6.71	19	Pn	Pn	17 26 17.4	-0.7
JNU	Nakatsue	8.14	254	P	Pn	17 26 38.6	+0.7
	0.3nm,0.3s,baz=21,slow=5.4,SNR=5.5						
JNU				LR	LR	17 29 38.9	
	comp=Z,102nm,18.5s,baz=121,slow=37						
JNU	Nakatsue	8.14	254	Pn	Pn	17 26 37.5	-0.4
ASAJ	Asahikawa	8.60	11	P	Pn	17 26 43.0	-1.1
	1.4nm,0.3s,baz=203,slow=14,SNR=15						
ASAJ				S	Sn	17 28 16.2	-3.3
	0.6nm,0.3s,baz=143,slow=20,SNR=3.7						
JKA	Kamikawa-asahi	8.60	11		Pn	17 26 43.0	-1.1
JKA					Sn	17 28 16.2	-3.3
JCJ	Chichijima	8.74	168	P	Pn	17 26 45.0	-1.1
	12nm,0.3s,baz=355,slow=20,SNR=16						
JCJ				S	Sn	17 28 16.8	-6.3
	10nm,0.3s,baz=267,slow=20,SNR=4.8						
KSRS	Korea Array	10.05	284	P	Pn	17 27 05.3	+1.4
	0.2nm,0.3s,baz=100,slow=14,SNR=9.6						
KSRS				LR	LR	17 30 48.4	
	comp=Z,85nm,20.3s,baz=112,slow=36						
USRK	Ussuriysk Ar.	10.58	326	P	Pn	17 27 12.3	+1.2
	baz=147,slow=11,SNR=5.9						
USRK	Ussuriysk Ar.	10.58	326		Pn	17 27 09.2	-1.9
MDJ	Mudanjiang	12.05	321	P	Pn	17 27 30.1	-1.1
MDJ				pP	P	17 27 36.0	-6.2
MDJ				S	Sn	17 29 42.9	-1.0
MDJ				PcS	PcS	17 36 48.8	+2.8
MDJ				pmax	pmax		
	comp=Z,230nm,3.8s						
MDJ				LR	LR		
	comp=N,260nm,3.8s						
MDJ				LR	LR		
	comp=E,430nm,4.0s						
MDJ				LR	LR		
	comp=Z,350nm,4.3s						
MDJ	Mudanjiang	12.05	321	Pn	Pn	17 27 32.1	+0.9
KLR	Kul'dur	14.88	338	P	Pn	17 28 11.0	+1.9
	0.3nm,0.3s,baz=127,slow=5.1,SNR=2.8						
NJ2	Nanjing	18.11	265	eP	P	17 28 49.4	0.0
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
YOJ	Yonaguni jima	18.61	238	P	P	17 28 53.6	-1.3
YOJ				IAmb	IAmb	17 29 25.3	
	comp=Z,56nm,1.0s						
TATO	Taipei	19.35	242	P	P	17 29 02.9	-0.2
TATO				IAmb	IAmb	17 29 09.3	
	comp=Z,51nm,1.6s						
YHNB	Yeheng	19.62	241	P	P	17 29 05.7	-0.4
NACB	Ninganchiao	19.78	240	P	P	17 29 07.2	-0.5
NACB				IAmb	IAmb	17 29 29.1	
	comp=Z,18nm,0.9s						
SSLB	Suanglung	20.48	240	P	P	17 29 14.3	-1.0
YULB	Yu-li	20.49	238	P	P	17 29 12.6	-2.8
TPUB	Ta-pu	21.02	239	P	P	17 29 19.1	-2.1
HHC	Hu-ho-hao-te	23.03	292	eP	P	17 29 42.4	-0.1
HHC				pmax	pmax		
	comp=Z,63nm,0.6s						
HHC				pmax	pmax		
	comp=Z,240nm,3.8s						
MA2	Magadan	24.86	13	P	P	17 30 00.1	+1.0
ENH	Enshi	26.29	267	P	P	17 30 10.7	-1.6
ENH				IAmb	IAmb	17 30 11.7	
	comp=Z,12nm,0.7s						
YAK	Yakutsk	27.18	349	P	P	17 30 20.6	+0.7
YAK				IAmb	IAmb	17 30 22.0	
	comp=Z,7.3nm,0.8s						
H11N2	WAKE ISLAND Hy	28.34	117	T	T	18 00 28.7	
	baz=308,slow=74,SNR=30						
H11N1	WAKE ISLAND Hy	28.35	117	T	T	18 00 27.2	
	baz=308,SNR=27						
H11N3	WAKE ISLAND Hy	28.36	117	T	T	18 00 32.2	
	baz=308,slow=74,SNR=24						
H11S1	WAKE ISLAND Hy	28.99	119	T	T	18 01 26.5	
	baz=310,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	28.99	119	T	T	18 01 32.6	
	baz=310,slow=76,SNR=9.1						
H11S2	WAKE ISLAND Hy	29.01	119	T	T	18 01 22.9	
	baz=310,slow=76,SNR=8.5						
LZH	Lanzhou	29.37	282	eP	P	17 30 43.1	+3.1
LZH				pP	pP	17 30 58.3	+3.7
LZH				sP	sP	17 31 03.9	+2.3
LZH				pmax	pmax		
	comp=Z,24nm,1.0s						
ATKA	Atka Island	36.05	48	P	P	17 31 37.4	-0.4
TIXI	Tiksi	36.51	354	P	P	17 31 40.8	-0.7
	comp=Z,0.3nm,0.3s,baz=154,slow=6.9,SNR=5.0						
TIXI	Tiksi	36.51	354	P	P	17 31 41.0	-0.4
FAKI	Fak Fak	39.14	193	P	P	17 32 04.3	0.0
PBKT	Sadao Pong	39.73	252	P	P	17 32 07.9	-1.3
CMAR	Chiang Mai Arr	40.24	256	P	P	17 32 12.2	-1.3
	comp=Z,0.4nm,0.6s,baz=54,slow=8.3,SNR=1.8						
CMAR				LR	LR	17 48 51.5	
	comp=Z,41nm,18.8s,baz=202,slow=36						
CMAR	Chiang Mai Arr	40.24	256	P	P	17 32 14.3	+0.8
WMQ	Urumqi	40.60	298	eP	P	17 32 17.4	+1.1
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,97nm,5.1s						
ZAA0	Zalesovo Array	42.12	313	P	P	17 32 27.6	-0.9
ZAA0				IAmb	IAmb	17 32 30.3	
	comp=Z,6.3nm,1.2s						
ZALV	Zalesovo Beam	42.12	313	P	P	17 32 27.9	-0.6
	comp=Z,1.1nm,0.3s,baz=90,slow=5.9,SNR=12						
ZALV				PcP	PcP	17 34 21.1	-0.9
	comp=Z,1.3nm,0.6s,baz=96,slow=4.3,SNR=4.8						
ZALV				LR	LR	17 49 46.1	
	comp=Z,20nm,18.7s,baz=54,slow=36						
ZALV	Zalesovo Beam	42.12	313	P	P	17 32 27.7	-0.8
ZALV				PcP	PcP	17 34 20.9	-1.1
MK31	Makanchi Array	44.03	303	P	P	17 32 42.9	-1.1
MK31				PP	PP	17 34 25.5	-1.9
MKAR	Makanchi Array	44.03	303	P	P	17 32 43.4	-0.7
	comp=Z,2.2nm,0.8s,baz=91,slow=10,SNR=26						
MKAR				PcP	PP	17 34 27.9	+0.6
	comp=Z,0.7nm,0.8s,baz=70,slow=5.3,SNR=4.4						
MKAR	Makanchi Array	44.03	303	P	P	17 32 43.0	-1.1
MKAR					PP	17 34 27.3	-0.1
NRIK	Noril'sk	44.09	336	P	P	17 32 44.1	0.0
	comp=Z,3.3nm,1.0s,baz=110,slow=12,SNR=5.1						
MAKZ	Makanchi	44.24	303	P	P	17 32 45.5	-0.2
ODAN	Odare	45.55	274	eP	P	17 32 55.5	-1.1
KURK	Kurchatov	46.01	309	P	P	17 32 58.6	-1.0
KURK				IAmb	IAmb	17 33 01.2	
	comp=Z,12nm,1.1s						
KURBB	Kurchatov Arra	46.08	309	P	P	17 32 59.4	-0.8
	comp=Z,1.5nm,0.3s,baz=84,slow=8.1,SNR=24						
RAMN	Ramite	46.15	275	eP	P	17 33 00.6	-0.8
	comp=Z,22nm,0.8s						
JIRN	Jiri	46.19	276	eP	P	17 33 01.5	-0.4
	comp=Z,21nm,0.8s						
GUN	Gumba	46.34	276	eP	P	17 33 02.9	-0.1
PKI	Pulchoki	46.86	276	eP	P	17 33 05.9	-1.2
PKIN	Phulchoki	46.87	276	eP	P	17 33 05.9	-1.1
KKN	Kakani	46.88	276	eP	P	17 33 06.4	-0.6
GKN	Gorkha	47.31	277	eP	P	17 33 09.5	-0.8
SOEI	Soe	47.65	202	P	P	17 33 12.3	-0.7
CNPM	China Poot	49.34	39	P	P	17 33 22.9	-2.5
COEN	Coen	49.46	176	P	P	17 33 29.1	+2.4
COEN				IAmb	IAmb	17 33 32.7	
	comp=Z,16nm,1.2s						
KSH	Kashi	50.08	295	P	P	17 33 35.4	+3.9
KSH				pP	pP	17 33 50.3	+3.4
KSH				PP	PP	17 35 32.3	+5.5
KSH				S	S	17 40 41.0	+2.5
KSH				sS	sS	17 41 08.4	+3.8
KSH				ScS	ScS	17 43 17.3	-0.2
KSH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KSH				LR	LR		
	comp=Z,110nm,10.5s						
KSH				LR	LR		
	comp=Z,130nm,9.4s						
KSH				LR	LR		
	comp=Z,140nm,13.0s						
AAK	Ala-Archa	50.29	299	P	P	17 33 32.8	-0.2
	comp=Z,0.9nm,0.5s,baz=75,slow=12,SNR=2.7						
AAK	Ala-Archa	50.29	299	P	P	17 33 32.0	-1.0
AAK				IAmb	IAmb	17 33 39.5	
	comp=Z,6.9nm,1.6s						
BVAR	Borovoye Array	50.77	313	P	P	17 33 36.1	-0.2
	comp=Z,1.1nm,0.8s,baz=113,slow=11,SNR=5.3						
BRVK	Borovoye	50.83	313	P	P	17 33 37.7	+1.0
BRVK				IAmb	IAmb	17 33 40.1	
	comp=Z,5.9nm,1.3s						
ILAR	Eielson Array	51.13	32	P	P	17 33 39.4	+0.6
	comp=Z,1.1nm,1.2s,baz=273,slow=6.8,SNR=3.5						
ILAR	Eielson Array	51.13	32	P	P	17 33 42.2	+3.4
ARSB	Arslanbob	51.74	298	P	P	17 33 44.6	+0.7
ARSB				IAmb	IAmb	17 33 54.3	
	comp=Z,7.7nm,1.1s						
KNRA	Kununurra	52.24	194	P	P	17 33 47.6	+0.2
KNRA				IAmb	IAmb	17 33 48.3	
	comp=Z,12nm,0.9s						
KK31	Karatay Array	52.97	301	P	P	17 33 52.9	0.0
KK31				IAmb	IAmb	17 33 56.1	
	comp=Z,5.1nm,1.2s						
KKAR	Karatay Array	52.97	301	P	P	17 33 52.5	-0.3
KKAR	Karatay Array	52.97	301	P	P	17 33 53.0	+0.2
KKAR				IAmb	IAmb	17 33 56.1	
	comp=Z,5.1nm,1.2s						
CTGM	Chitina Glacie	54.08	36	P	P	17 33 59.9	-0.9
CTGM				IAmb	IAmb	17 34 39.0	
	comp=Z,11nm,1.3s						
NIL	Nilore	54.13	289	P	P	17 34 01.0	-0.4
NIL				IAmb	IAmb	17 34 29.9	

	comp=Z,5.4nm,1.1s						
FITZ	Fitzroy Crossi	55.26	197	P	P	17 34 09.7	+0.1
FITZ				IAmb	IAmb	17 34 10.7	
	comp=Z,8.9nm,1.0s						
WB0	Warramunga Arr	55.44	187	P	P	17 34 11.0	+0.1
WB0				IAmb	IAmb	17 34 11.7	
	comp=Z,4.2nm,0.8s						
WB2	Warramunga Arr	55.62	187	P	P	17 34 11.9	-0.2
WB2				IAmb	IAmb	17 34 16.8	
	comp=Z,5.2nm,1.1s						
WR0	Warramunga Arr	55.62	186	P	P	17 34 11.9	-0.2
WR0				IAmb	IAmb	17 34 14.9	
	comp=Z,4.7nm,1.0s						
WRA	Warramunga Arr	55.62	187	P	P	17 34 12.0	-0.2
	comp=Z,2.3nm,0.4s,baz=0.5,slow=7.6,SNR=44						
WRA	Warramunga Arr	55.62	187	P	P	17 34 11.5	-0.6
ARU	Arti	56.73	319	P	P	17 34 19.2	-0.5
	comp=Z,0.7nm,0.5s,baz=126,slow=14,SNR=6.2						
ARU	Arti	56.73	319	P	P	17 34 19.0	-0.7
ARU				IAmb	IAmb	17 34 19.4	
	comp=Z,2.9nm,0.7s						
ABKAR	Akbulak array	58.07	310	P	P	17 34 28.3	-0.9
AKTO	Aktyubinsk	58.86	312	P	P	17 34 34.5	-0.2
	comp=Z,1.0nm,0.6s,baz=71,slow=11,SNR=3.9						
ASAR	Alice Springs	59.34	187	P	P	17 34 38.2	-0.1
	comp=Z,0.8nm,0.6s,baz=21,slow=11,SNR=15						
ASAR	Alice Springs	59.34	187	P	P	17 34 38.6	+0.3
PSAD1	Pilbara Seismi	60.04	202	P	P	17 34 42.6	-0.5
PSAC2	Pilbara Seismi	60.12	202	P	P	17 34 43.4	-0.2
PSAC1	Pilbara Seismi	60.12	202	P	P	17 34 43.3	-0.3
PSAB2	Pilbara Seismi	60.12	202	P	P	17 34 42.6	-1.1
PSA00	Pilbara Seismi	60.14	202	P	P	17 34 43.0	-0.8
PSAB1	Pilbara Seismi	60.15	202	P	P	17 34 43.6	-0.2
PSAA1	Pilbara Seismi	60.15	202	P	P	17 34 43.6	-0.2
PSAA1				IAmb	IAmb	17 35 11.4	
	comp=Z,9.2nm,1.1s						
PSAD2	Pilbara Seismi	60.15	202	P	P	17 34 43.6	-0.3
PSAD2				IAmb	IAmb	17 35 17.9	
	comp=Z,16nm,1.4s						
RES	Resolute Bay	64.13	14	P	P	17 35 10.4	+0.5
ARCES	ARCESS Array B	64.91	339	P	P	17 35 14.7	-0.4
	comp=Z,2.6nm,1.0s,baz=56,slow=8.9,SNR=3.6						
ARCES	ARCESS Array B	64.91	339	P	P	17 35 15.0	0.0
YKA	Yellowknife Ar	65.44	30	P	P	17 35 19.0	+0.4
	comp=Z,0.2nm,0.6s,baz=291,slow=5.9,SNR=3.9						
FORT	Forrest	67.11	191	P	P	17 35 31.8	+2.2
FIA1	FINESS Array S	69.54	332	P	P	17 35 43.8	-0.7
FIA1				IAmb	IAmb	17 35 44.6	
	comp=Z,9.7nm,1.1s						
FINES	FINESS Array B	69.55	332	P	P	17 35 43.9	-0.5
	comp=Z,3.1nm,0.7s,baz=64,slow=4.4,SNR=6.9						
AKASG	Malin Array Be	74.76	322	P	P	17 36 15.0	-0.9
	comp=Z,1.0nm,0.3s,baz=49,slow=5.9,SNR=11						
AKASG	Malin Array Be	74.76	322	P	P	17 36 15.2	-0.6
AKBB	Malin Array Si	74.76	322	P	P	17 36 14.8	-1.0
AKBB				IAmb	IAmb	17 36 16.0	
	comp=Z,9.3nm,1.4s						
NC405	NORSAR Array S	74.83	337	P	P	17 36 16.0	-0.1
NC204	NORSAR Array S	75.00	337	P	P	17 36 17.0	-0.2
NC204				IAmb	IAmb	17 36 40.3	
	comp=Z,18nm,1.2s						
NB2	NORSAR Subarra	75.04	337	P	P	17 36 16.4	-0.9
	comp=Z,1.0nm,0.8s,baz=42,slow=5.9						
NOA	NORSAR Array B	75.04	337	P	P	17 36 16.9	-0.4
	comp=Z,0.7nm,0.6s,baz=41,slow=5.9,SNR=4.7						
NOA				LR	LR	18 15 27.4	
	comp=Z,8.9nm,18.7s,baz=245,slow=41						
BUR08	Bucovina Ar. S	78.75	321	P	P	17 36 39.2	+0.6
BURAR	Bucovina Array	78.76	321	P	P	17 36 38.4	-0.2
BRTR	Keskin Array B	79.01	311	P	P	17 36 40.1	0.0
	comp=Z,0.8nm,0.8s,baz=35,slow=5.3,SNR=3.6						
BRTR	Keskin Array B	79.01	311	P	P	17 36 40.0	-0.2
PDAR	Pinedale Array	79.28	45	P	P	17 36 42.5	+0.7
	comp=Z,0.4nm,0.8s,baz=268,slow=2.5,SNR=3.3						
PDAR	Pinedale Array	79.28	45	P	P	17 36 42.3	+0.5
RAYN	Ar Rayn	80.27	292	P	P	17 36 46.5	-0.6
VYHS	Vyhne	81.27	325	eP	P	17 36 52.2	+0.2
CLL	Collm	81.77	330	eP	P	17 36 56.0	+1.5
GERES	GERESS Array B	83.33	328	P	P	17 37 02.4	-0.5
	comp=Z,0.8nm,0.8s,baz=18,slow=6.6,SNR=4.4						
TORD	Torodi Ar. Bea	117.57	313	PKP	PKPdf	17 43 21.4	-0.8
	comp=Z,0.3nm,0.6s,baz=1.3,slow=2.4,SNR=2.5						

IDC 18 17:29:49.5±907.0, 31.°46N×132.°17E, h0^{km}, Error ellipse: s-maj=342.9km s-min=155.5km az=43.0, Southeast of Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I30JP	ISUMI INFRASON	7.82	58	i		18 18 50.0	
	baz=244,slow=318,SNR=16						
I45RU	USSURIYSK INFR	12.72	359	i		18 48 30.0	
	baz=180,slow=333,SNR=5.6						
I44RU	PETROPAVLOVSK	28.45	33	i		20 24 20.0	
	baz=226,slow=332,SNR=1.5						

LJU 18 17:37:32.5, 45.°74N×14.°89E, h2^{km}, ML0.0

VIE 18 17:38:27.6±0.8, 46.°48N×13.°25E, h6^{km}±20^{km}, ml0.8/2, 3C-3D, Error ellipse: s-maj=4.0km s-min=2.4km az=18.0 6 km SW of Pontebba, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLRO	Paularo	0.10	317	⇓ePg	Pg	17 38 29.6	-0.2
PLRO				eSg	Sg	17 38 31.4	+0.1
FUSE	Fusea	0.18	249	⇓ePg	Pg	17 38 31.1	0.0
FUSE				eSg	Sg	17 38 34.1	+0.5
BOO	Bordano	0.19	212	⇑ePg	Pg	17 38 31.1	-0.2
BOO				eSg	Sg	17 38 34.0	+0.2
ACOM	Acomizza, Ital	0.20	69	⇓ePg	Pg	17 38 31.7	+0.2
ACOM				eSg	Sg	17 38 34.7	+0.5
PRED	Cave del Predi	0.22	99	⇑ePg	Pg	17 38 31.9	-0.1
PRED				eSg	Sg	17 38 35.5	+0.5
VINO	Villanova	0.22	174	⇑ePg	Pg	17 38 31.8	-0.1
VINO				eSg	Sg	17 38 35.3	+0.4
CLUD	Cludinico	0.25	265	ePg	Pg	17 38 32.5	0.0
CLUD				eSg	Sg	17 38 36.3	+0.5
MPRI	Monte Prat	0.30	217	ePg	Pg	17 38 33.1	-0.2
MYKA	Terra Mystica	0.31	61	ePg	Pg	17 38 33.8	+0.1
	0.4nm,0.1s						
MYKA				eSg	Sg	17 38 38.3	+0.5
	0.7nm,0.1s						
ABTA	Abfaltersbach	0.57	298	ePg	Pg	17 38 38.5	-0.1
	0.1nm,0.1s						
ABTA				eSg	Sg	17 38 46.8	+0.8
	0.4nm,0.1s						

IDC 18 17:40:32.7±2.9, 17.°10N×145.°82E, h112^{km}±27^{km}, mb3.1/4, mb1 3.6/6, mb1mx3.2/46, mbtmp3.9/6, Error ellipse: s-maj=74.0km s-min=21.1km az=104.0

ISC 18 17:40:31.7±1.0, 17.°1N±0.°1×146.°0E±0.°3, h98^{km}, n6, σ1^{s}.48/7, mb3.4/4, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	3.69	198	P	Pn	17 41 28.7	+1.9
	13nm,0.3s,baz=356,slow=16,SNR=7.8						
GUMO				S	Sn	17 42 08.1	-1.3
	9.3nm,0.3s,baz=350,slow=17,SNR=1.5						
JHJ	Hachijo jima 2	16.89	342	P	P	17 44 22.8	+0.2
	12nm,0.3s,baz=73,slow=19,SNR=1.6						
WRA	Warramunga Arr	38.59	198	P	P	17 47 44.7	-0.7
	0.2nm,0.3s,baz=13,slow=8.5,SNR=8.3						
ASAR	Alice Springs	42.24	197	P	P	17 48 14.4	-1.1
	0.1nm,0.4s,baz=16,slow=11,SNR=5.6						
YKA	Yellowknife Ar	79.22	28	P	P	17 52 24.9	-1.0
	0.4nm,0.6s,baz=288,slow=5.1,SNR=5.5						
NVAR	Mina Array Bea	83.85	52	P	P	17 52 51.8	+0.8
	0.3nm,0.5s,baz=277,slow=7.1,SNR=1.7						

GUC 18 17:50:01.7±0.7, 24.°20S×67.°60W, h203^{km}±12^{km}, ML4.0

IDC 18 17:50:03.3±1.2, 23.°69S×67.°29W, h200^{km}±13^{km}, mb3.2/1, mb1 3.4/5, mb1mx3.1/27, mbtmp3.8/5, Error ellipse: s-maj=26.1km s-min=17.1km az=164.0

ISC 18 17:50:02.1±0.9, 23.°89S±0.°08×67.°40W±0.°08, h195^{km}±11^{km}, n20, σ1^{s}.55/31, 10C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.89	312	P	Pn	17 50 40.0	+0.4
	21nm,0.3s,baz=121,slow=9.3,SNR=65						
LVC				S	Sn	17 51 09.6	+1.0
	30nm,0.3s,baz=12,slow=20,SNR=26						
PB15	IPOC Station P	2.02	289	⇑iP	Pn	17 50 40.1	-0.7
PB15				i S	Sn	17 51 10.0	-0.7
PB06	IPOC Station P	2.32	300	⇑iP	Pn	17 50 44.0	0.0
PB06				i S	Sn	17 51 16.3	-0.2
PB06				IAML		17 51 18.4	
	comp=N,486nm,0.5s						
GO02	Mina Guanaco	2.36	237	⇑iP	Pn	17 50 40.4	-4.2
GO02				i S	Sn	17 51 11.0	-6.6
GO02				IAML		17 51 12.3	
	comp=N,484nm,0.3s						
PB05	IPOC Station P	2.78	291	⇑iP	Pn	17 50 48.4	-0.7
PB05				i S	Sn	17 51 24.0	-1.6
PB05				IAML		17 51 27.7	
	comp=N,180nm,0.5s						
PB03	IPOC Station P	2.84	310	⇑iP	Pn	17 50 50.2	+0.3
PB03				i S	Sn	17 51 27.7	+0.6
PB10	IPOC Station P	2.92	277	⇑iP	Pn	17 50 49.3	-1.3
PB10				i S	Sn	17 51 24.5	-3.9
PB10				IAML		17 51 30.5	
	comp=E,121nm,0.5s						
PB04	IPOC Station P	2.97	301	⇑iP	Pn	17 50 51.2	-0.2
PB04				i S	Sn	17 51 29.3	-0.5
PB04				IAML		17 51 36.3	
	comp=N,273nm,0.4s						
PB07	IPOC Station P	3.15	313	⇑iP	Pn	17 50 54.0	+0.5
PB07				i S	Sn	17 51 34.2	+0.6
PB07				IAML		17 51 36.0	
	comp=N,262nm,0.5s						
PB01	IPOC Station P	3.43	325	⇑iP	Pn	17 50 57.4	+0.5
PB01				i S	Sn	17 51 41.0	+1.3
PB01				IAML		17 51 41.7	
	comp=E,136nm,0.2s						
PB02	IPOC Station P	3.45	317	⇑iP	Pn	17 50 57.3	+0.2
PB02				i S	Sn	17 51 40.7	+0.6
PB02				IAML		17 51 45.1	
	comp=E,196nm,0.3s						
LPAZ	La Paz	7.60	355	P	Pn	17 51 53.1	+2.4
	comp=E,0.4nm,0.3s,baz=160,slow=4.4,SNR=8.1						
LPAZ				S	Sn	17 53 15.4	-1.6
	comp=E,0.1nm,0.3s,baz=228,slow=24,SNR=1.4						
CPUP	Villa Florida	9.44	107	P	Pn	17 52 16.3	+2.1
	comp=E,0.2nm,0.3s,baz=288,slow=11,SNR=5.3						
SIV	San Ignacio	9.86	38	P	Pn	17 52 17.1	-2.5
	comp=E,0.6nm,0.3s,baz=241,slow=14,SNR=11						
SIV				S	Sn	17 54 08.0	-1.9
	comp=E,0.1nm,0.3s,baz=278,slow=22,SNR=1.4						
PLCA	Paso Flores	17.00	188	P	P	17 53 50.9	+3.6
	comp=E,0.2nm,0.3s,baz=33,slow=9.8,SNR=6.0						
BDFB	Brasilia	19.99	69	P	P	17 54 18.1	-1.8
	comp=E,0.9nm,0.3s,baz=242,slow=10,SNR=8.8						
TORD	Torodi Ar. Bea	76.87	69	P	P	18 01 32.6	-0.5
	comp=E,0.3nm,0.4s,baz=242,slow=6.2,SNR=5.0						
ASAR	Alice Springs	128.40	205	PKP	PKPdf	18 08 45.9	-0.3
	comp=E,0.4nm,0.8s,baz=118,slow=2.3,SNR=2.6						
WRA	Warramunga Arr	131.55	208	PKP	PKPdf	18 08 51.9	-0.4
	comp=E,0.5nm,1.0s,baz=149,slow=1.8,SNR=1.8						
MKAR	Makanchi Array	146.67	39	PKPbc	PKPab	18 09 22.0	-0.4
	comp=E,0.3nm,0.6s,baz=289,slow=3.7,SNR=5.0						

IDC 18 18:10:27.9±1.5, 10.°10S×118.°67E, h0^{km}, mb3.7/4, mb1 3.7/8, mb1mx3.6/38, mbtmp3.6/8, ML3.5/4, MS2.9/4, Ms1 2.9/4, ms1mx2.6/39, Error ellipse: s-maj=68.8km s-min=19.9km az=54.0

DJA 18 18:10:32.9±0.4, 10°S±4°×11°9E±°, h10^{km}, M4.2/11, mB5.0/2, mb4.5/4, MLv4.1/11, MLv4.2/6, Mw(mB)4.3/2

ISC 18 18:10:32.6±0.8, 9.°94S±0.°06×119.°04E±0.°04, h33^{km}, n22, σ2^{s}.11/24, mb3.8/4, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.46	49	P	Pb	18 10 41.9	-0.7
WBSI				S	Sb	18 10 47.9	-1.6
WSI	Waingapu	1.27	78	P	Pn	18 10 54.3	+0.2
WSI				S	Sb	18 11 13.2	+1.1
BASI	Baing, Sumba	1.54	100	P	Pb	18 11 01.0	+0.4
BASI				S	Sb	18 11 21.8	+2.0
PLAI	Plampang	1.67	312	P	Pb	18 11 00.5	-2.2
PLAI				S	Sb	18 11 26.2	+2.8
EDFI	Ende, Flores	2.87	66	P	Pn	18 11 17.1	+0.9
MMRI	Maumere	3.42	68	P	Pn	18 11 25.7	+2.1
BKSI	Bulukumba	4.71	13	P	Pn	18 11 42.6	+1.1
KAPI	Kappang	4.95	8	Pn	Pn	18 11 46.5	+1.9
	1.9nm,0.3s,baz=202,slow=13,SNR=4.6						
KAPI				Sn	Sn	18 12 37.8	-3.0
	1.6nm,0.3s,baz=236,slow=23,SNR=1.6						
KAPI				LR	LR	18 14 07.2	
	comp=Z,54nm,20.0s,baz=220,slow=42						
JAGI	Jajag, Banyuwa	5.04	286	P	Pn	18 11 47.7	+1.8
	0.3nm1µm63nm,0.7s						
SOEI	Soe	5.16	88	P	Pn	18 11 50.0	+2.4
	0.3nm0.3nm2µm74nm,0.9s						
BNSI	Bone	5.61	11	P	Pn	18 11 55.0	+1.3
	0.1nm0.1nm22nm,0.7s						
FITZ	Fitzroy Crossi	10.33	142	Pn	Pn	18 12 59.2	+0.6
	0.3nm,0.3s,baz=3.9,slow=8.7,SNR=8.8						
FITZ				Sn	Sn	18 14 47.1	-6.1
	0.6nm,0.3s,baz=180,slow=20,SNR=12						
FITZ				LR	LR	18 17 17.4	
	comp=Z,76nm,19.4s,baz=87,slow=39						
WRA	Warramunga Arr	17.80	126	P	Pn	18 14 38.1	+0.2
	0.1nm,0.3s,baz=300,slow=13,SNR=5.1						
WRA				S	Sn	18 17 43.6	-12
	0.2nm,0.3s,baz=298,slow=28,SNR=5.1						
ASAR	Alice Springs	19.69	136	P	Pn	18 15 01.4	+0.5
	0.1nm,0.3s,baz=314,slow=11,SNR=17						
ASAR				S	S	18 18 28.9	-11
	baz=306,slow=22,SNR=2.4						
ASAR				LR	LR	18 22 51.9	
	comp=Z,60nm,19.3s,baz=158,slow=38						
CMAR	Chiang Mai Arr	34.49	325	P	P	18 17 17.0	-0.8
	0.4nm,0.5s,baz=158,slow=7.3,SNR=5.0						
H08S2	Diego Garcia H	46.03	269	T	T	19 08 03.4	
	baz=96,slow=76,SNR=24						
H08S3	Diego Garcia H	46.04	269	T	T	19 08 08.8	
	baz=96,slow=76,SNR=28						
H08S1	Diego Carcia H	46.05	269	T	T	19 08 04.9	
	baz=96,slow=76,SNR=24						
SONM	Songino Array	58.61	350	P	P	18 20 28.3	+1.9
	0.6nm,0.5s,baz=167,slow=7.6,SNR=3.8						
MKAR	Makanchi Array	65.31	333	P	P	18 21 11.9	+0.5
	0.6nm,0.7s,baz=149,slow=7.9,SNR=7.2						
ZALV	Zalesovo Beam	69.93	339	P	P	18 21 39.9	-0.4
	0.5nm,0.5s,baz=150,slow=5.7,SNR=2.0						
YAK	Yakutsk	72.23	5	LR	LR	18 56 57.4	
	comp=Z,9.0nm,18.2s,baz=116,slow=38						

GUC 18 18:11:20.7±0.7, 20.°05S×70.°71W, h39^{km}±4^{km}, ML2.7, 1C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.71	51	i P	Pn	18 11 33.8	-0.5
PSGC				IAML		18 11 44.5	
	comp=N,867nm,0.2s						
TA01	Diego Aracena	0.71	136	i P	Pn	18 11 33.9	-0.4
TA01				IAML		18 11 46.4	
	comp=E,961nm,0.3s						
PATCX	Punta Patache	0.93	146	i P	Pn	18 11 37.4	+0.1
PATCX				i S	Sn	18 11 49.8	+0.3
PATCX				IAML		18 11 51.8	
	comp=E,310nm,0.2s						
PB11	IPOC Station P	1.03	74	⇓iP	Pn	18 11 39.1	+0.3
PB11				i S	Sn	18 11 53.0	+0.9
PB11				IAML		18 11 54.2	
	comp=N,315nm,0.1s						
PB11				IAML		18 11 56.7	
	comp=E,301nm,0.2s						
PB08	IPOC Station P	1.46	94	⇑iP	Pn	18 11 46.4	+1.5
PB08				i S	Sn	18 11 59.6	-3.5
PB08				IAML		18 12 10.6	
	comp=N,140nm,0.4s						
PB12	IPOC Station P	1.47	14	i P	Pn	18 11 46.1	+1.3
PB12				IAML		18 12 06.9	
	comp=N,154nm,0.1s						
PB02	IPOC Station P	1.47	149	i P	Pn	18 11 45.7	+0.8
PB02				i S	Sn	18 11 58.7	-4.3
PB01	IPOC Station P	1.51	131	i P	Pn	18 11 46.6	+1.3
PB01				i S	Sn	18 11 59.9	-4.0
PB16	IPOC Station P	2.05	34	i P	Pn	18 11 54.7	+1.6
PB16				i S	Sn	18 12 22.5	+4.7

GUC 18 18:11:30.0±0.5, 20.°10S×70.°93W, h18^{km}±6^{km}, ML3.3, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA01	Diego Aracena	0.84	123	i P	Pb	18 11 43.9	-2.3
TA01				i S	Sb	18 11 56.2	-1.0
TA01				IAML		18 12 00.6	
	comp=N,2µm,0.3s						
TA01	Diego Aracena	0.84	123	i S	Pb	18 11 43.7	-2.4
PSGC	Pisagua	0.91	57	i P	Pb	18 11 43.8	-3.6
PSGC				i S	Sb	18 11 56.9	-2.3
PSGC	Pisagua	0.91	57	i S	Pb	18 11 43.8	-3.5
PATCX	Punta Patache	1.02	135	i P	Pb	18 11 48.3	-1.0
PATCX				i S	Sb	18 12 02.0	-0.4
PATCX				IAML		18 12 13.8	
	comp=E,787nm,0.6s						
PB12	IPOC Station P	1.58	21	i P	Pb	18 11 58.4	-0.5
PB12				i S	Sb	18 12 19.7	+1.1
PB12				IAML		18 12 20.9	
	comp=N,719nm,0.5s						
PB12	IPOC Station P	1.58	21	i S	Pb	18 11 58.8	-0.1
PB01	IPOC Station P	1.65	125	i P	Pn	18 11 58.4	+0.2
PB01				i S	Sb	18 12 19.8	-0.6
PB01				IAML		18 12 24.1	
	comp=N,730nm,0.5s						
PB16	IPOC Station P	2.21	38	i P	Pb	18 12 08.2	-1.6
PB16				i S	Sb	18 12 38.2	+1.0
PB16				IAML		18 12 41.1	
	comp=E,264nm,0.8s						

IDC 18 18:12:32.5±1.6, 1.°98S×129.°63E, h0^{km}, mb3.3/2, mb1 3.4/3, mb1mx3.2/37, mbtmp3.2/3, ML2.8/1, Error ellipse: s-maj=39.1km s-min=25.6km az=88.0

DJA 18 18:12:40.3±0.3, 2°S±3°×13°0E±°, h10^{km}, M2.8/7, MLv2.8/7

ISC 18 18:12:42.0±1.1, 2.°10S±0.°06×130.°28E±0.°06, h35^{km}, n9, σ2^{s}.45/12, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	1.57	39	Pn	Pn	18 13 07.2	-0.1
	4.0nm,0.3s,baz=238,slow=23,SNR=36						
SIJI				Sn	Sn	18 13 28.3	+1.8
	7.2nm,0.3s,baz=255,slow=18,SNR=6.9						
SWI	Sorong	1.57	39	P	Pn	18 13 08.4	+1.0
SWI				S	Sn	18 13 28.9	+2.4
MSAI	Masohi	1.83	227	P	Pn	18 13 11.7	+0.7
MSAI				S	Sn	18 13 36.3	+3.4
FAKI	Fak Fak	2.13	113	P	Pn	18 13 15.8	+0.7
FAKI				S	Sn	18 13 43.5	+3.1
BNDI	Bandanaira	2.44	189	P	Pn	18 13 20.7	+1.4
LBMI	Labuha	3.13	298	P	Pn	18 13 29.2	+0.4
WRA	Warramunga Arr	18.18	168	P	Pn	18 16 47.7	-4.0
	0.0nm,0.3s,baz=344,slow=11,SNR=1.6						
ASAR	Alice Springs	21.73	171	P	P	18 17 28.3	-2.1
	0.8nm,0.5s,baz=351,slow=11,SNR=18						
MKAR	Makanchi Array	64.33	326	P	P	18 23 07.6	-6.6
	0.3nm,0.9s,baz=120,slow=8.5,SNR=2.4						

IDC 18 18:12:48.5±1.4, 32.°59S×178.°38W, h0^{km}, mb4.3/3, mb1 4.4/4, mb1mx3.9/29, mbtmp4.2/4, ML3.9/1, Error ellipse: s-maj=42.5km s-min=34.3km az=158.0

NEIC 18 18:12:53.5±1.5, 32.°8S±0.°2×178.°46W±0.°09, h35^{km}±2^{km}, mb4.7/9, Error ellipse: s-maj=27.7km s-min=11.8km az=167.0

ISC 18 18:12:53.9±1.0, 32.°7S±0.°1×178.°6W±0.°2, h33^{km}, n38, σ1^{s}.07/39, mb4.6/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	5.53	207	Pn	Pn	18 14 14.8	+0.8
MXZ	Matakaoa Point	5.53	207	P	Pn	18 14 14.6	+0.7
WMGZ	Waiomatatini S	5.72	205	P	Pn	18 14 17.4	+0.9
PKGZ	Pakihiroa	5.91	207	P	Pn	18 14 19.4	+0.3
HAZ	Te Kaha	5.91	210	P	Pn	18 14 21.3	+2.2
PUZ	Puketiti	6.00	205	P	Pn	18 14 21.3	+0.9
RUGZ	Raukumara Rang	6.13	209	P	Pn	18 14 23.3	+1.0
TKGZ	Te Karaka	6.47	206	P	Pn	18 14 29.9	+3.0
MWZ	Matawai	6.51	208	P	Pn	18 14 27.9	+0.6
URZ	Urewera	6.62	211	Pn	Pn	18 14 29.1	+0.3
	2.3nm,0.3s,baz=231,slow=7.4,SNR=30						
URZ				Sn	Sn	18 15 43.5	+0.4
	2.5nm,0.3s,baz=178,slow=20,SNR=7.3						
URZ	Urewera	6.62	211		Pn	18 14 28.7	-0.1
URZ	Urewera	6.62	211	P	Pn	18 14 29.5	+0.6
RAGZ	Rawiri	6.69	208	P	Pn	18 14 30.3	+0.3
RIGZ	Rimuhau	6.74	205	P	Pn	18 14 30.9	+0.3
MUGZ	Murupara	6.95	212	P	Pn	18 14 33.0	-0.3
OUZ	Omahuta	7.01	246		Pn	18 14 40.6	+6.4
BKZ	Black Stump Fm	7.64	210	Pn	Pn	18 14 41.5	-1.4
KHZ	Kahutara	11.59	211	Pn	Pn	18 15 33.7	-3.2
CTA	Charters Tower	33.77	283	P	P	18 19 33.9	+1.1
	2.0nm,0.5s,baz=114,slow=10.0,SNR=1.3						
COEN	Coen	39.50	289	P	P	18 20 22.8	+1.2
COEN				IAmb	IAmb	18 20 50.2	
	comp=Z,17nm,1.1s						
XMAS	Kiritimati	39.87	34	P	P	18 20 25.6	+0.9
AS31	Alice Springs	42.57	270	P	P	18 20 47.3	+0.4
ASAR	Alice Springs	42.57	270	P	P	18 20 47.4	+0.4
	comp=Z,1.1nm,0.4s,baz=109,slow=7.6,SNR=24						
ASAR	Alice Springs	42.57	270	P	P	18 20 47.0	+0.1
WR0	Warramunga Arr	43.59	275	P	P	18 20 55.3	+0.1
WB2	Warramunga Arr	43.76	275	P	P	18 20 56.4	-0.1
WB2				IAmb	IAmb	18 21 32.9	
	comp=Z,24nm,1.8s						
WRA	Warramunga Arr	43.77	275	P	P	18 20 56.6	0.0
	comp=Z,2.6nm,0.4s,baz=116,slow=7.9,SNR=36						
WRA	Warramunga Arr	43.77	275	P	P	18 20 56.4	-0.2
WB0	Warramunga Arr	43.80	275	P	P	18 20 56.6	-0.2
WB0				IAmb	IAmb	18 20 59.9	
	comp=Z,19nm,1.6s						
KNRA	Kununurra	50.45	276	P	P	18 21 48.6	0.0
FITZ	Fitzroy Crossi	51.93	272	P	P	18 21 59.1	-0.6
FITZ				IAmb	IAmb	18 22 25.7	
	comp=Z,13nm,1.5s						
MKAR	Makanchi Array	118.85	309	PKP	PKPdf	18 31 37.3	-1.3
	comp=Z,0.2nm,0.5s,baz=90,slow=1.3,SNR=2.1						
MKAR	Makanchi Array	118.85	309		PKPdf	18 31 37.1	-1.4
FINES	FINESS Array B	147.08	338	PKPbc	PKPbc	18 32 31.9	-0.7
	comp=Z,3.1nm,0.9s,baz=65,slow=4.5,SNR=12						
FINES	FINESS Array B	147.08	338		PKPdf	18 32 29.3	-1.1
FINES				PKPbc	PKPbc	18 32 32.3	-0.3
NB2	NORSAR Subarra	150.90	350	PKP	PKPbc	18 32 42.4	0.0
	comp=Z,0.7nm,0.5s,baz=14,slow=2.5						
NOA	NORSAR Array B	150.90	350	PKPbc	PKPbc	18 32 42.4	0.0
	comp=Z,1.5nm,0.7s,baz=15,slow=4.1,SNR=7.9						
TORD	Torodi Ar. Bea	160.58	181	PKPab	PKPab	18 33 32.0	-0.2
	comp=Z,0.4nm,0.7s,baz=172,slow=3.9,SNR=2.2						

INET 18 18:24:37.7, 12.°39N×87.°87W, h61^{km}, ML3.2

UCR 18 18:24:39.7±1.0, 12.°50N×87.°88W, h32^{km}±53^{km}, ML3.7

SNET 18 18:24:39.5±0.8, 12.°50N×87.°88W, h32^{km}±4^{km}, ML3.6

ISC 18 18:24:39.3±5.0, 12.°5N±0.°2×87.°9W±0.°1, h31^{km}±18^{km}, n19, σ0^{s}.39/36, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.80	2	eP	Pn	18 24 54.1	-0.4
CNCH				eS	Sn	18 25 06.3	+0.9
CNCH				IAML		18 25 10.4	
	comp=Z,5µm,0.3s						
CNCH	Conchagua	0.80	2	eP	Pn	18 24 54.1	-0.4
CNCH				eS	Sn	18 25 06.3	+0.9
CNCH				IAML		18 25 10.4	
	comp=Z,5µm,0.3s						
LCND	La Caada	0.83	358	eP	Pn	18 24 54.6	-0.2
LCND				eS	Sb	18 25 06.7	+0.6
LCND				IAML		18 25 13.0	
	comp=Z,1µm,0.3s						
LCND	La Caada	0.83	358	eP	Pn	18 24 54.6	-0.2
LCND				eS	Sb	18 25 06.7	+0.6
LCND				IAML		18 25 13.0	
	comp=Z,1µm,0.3s						
BLLM	Bellamira	1.03	339	eP	Pn	18 24 57.4	-0.2
BLLM				eS	Sb	18 25 11.6	-0.2
BLLM	Bellamira	1.03	339	eP	Pn	18 24 57.4	-0.2
BLLM				eS	Sb	18 25 11.6	-0.2
LCY	Lacayo	1.03	336	eP	Pn	18 24 57.7	0.0
LCY				eS	Sb	18 25 11.7	-0.2

LCY	Lacayo	1.03	336	eP	Pn	18 24 57.7	0.0
LCY				eS	Sb	18 25 11.7	-0.2
RANC	El Ranchito	1.04	337	eP	Pn	18 24 57.8	0.0
RANC				eS	Sb	18 25 12.2	+0.1
RANC				IAML		18 25 13.0	
	comp=Z,1µm,0.2s						
RANC	El Ranchito	1.04	337	eP	Pn	18 24 57.8	0.0
RANC				eS	Sb	18 25 12.2	+0.1
RANC				IAML		18 25 13.0	
	comp=Z,1µm,0.2s						
PACA	Pacayal	1.08	336	eP	Pn	18 24 58.5	0.0
PACA				eS	Sb	18 25 13.1	-0.3
PACA	Pacayal	1.08	336	eP	Pn	18 24 58.5	0.0
PACA				eS	Sb	18 25 13.1	-0.3
ALJI	Alcalda de J	1.09	321	eP	Pn	18 24 58.2	-0.2
ALJI				eS	Sn	18 25 12.4	0.0
ALJI	Alcalda de J	1.09	321	eP	Pn	18 24 58.2	-0.2
ALJI				eS	Sn	18 25 12.4	0.0
COEB	Comit de Eme	1.21	328	eP	Pn	18 25 00.6	+0.4
COEB	Comit de Eme	1.21	328	eP	Pn	18 25 00.6	+0.4
FAGO	Alcalda de S	1.23	349	eP	Pn	18 24 59.8	-0.6
FAGO				eS	Sn	18 25 15.6	-0.4
FAGO	Alcalda de S	1.23	349	eP	Pn	18 24 59.8	-0.6
FAGO				eS	Sn	18 25 15.6	-0.4
LFRS	El Faro	1.63	314	eP	Pn	18 25 06.1	+0.1
LFRS				eS	Sn	18 25 26.3	+0.3

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*IDC **18** 18:45:46.9±1.4, 65°.35N×170°.58W, h0^{km}, mb3.6/6, mb1 3.8/10, mb1mx3.6/56, mbtmp3.7/10, ML3.3/4, MS3.2/2, Ms1 3.2/2, ms1mx2.5/43, Error ellipse: s-maj=40.0km s-min=14.0km az=11.0*

ISC 18 18:45:47.2±0.9**, 65°.3N**±0°.2×**170°.04W**±0°.08**, h10^{km}, n13, σ1^{s}.36**/13**, mb3.7**/8**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILAR	Eielson Array	9.78	83	Pn	Pn	18 48 07.5	-0.2
	0.3nm,0.3s,baz=280,slow=14,SNR=22						
ILAR				Sn	Sn	18 49 54.7	-2.8
	0.3nm,0.3s,baz=290,slow=22,SNR=7.1						
ILAR				Lg	Lg	18 51 04.1	
	baz=283,slow=30,SNR=4.3						
ILAR				LR	LR	18 51 25.9	
	comp=Z,67nm,18.4s,baz=303,slow=34						
KDAK	Kodiak Island	11.19	124	Pn	Pn	18 48 27.7	+0.7
	0.4nm,0.3s,baz=330,slow=11,SNR=4.3						
INK	Inuvik	14.55	62	Pn	Pn	18 49 14.5	+1.8
	0.1nm,0.3s,baz=273,slow=7.2,SNR=3.0						
SEY	Seymchan	16.41	279	Pn	Pn	18 49 35.8	-1.5
	0.0nm,0.3s,baz=90,slow=12,SNR=2.2						
TIXI	Tiksi	22.33	313	P	P	18 50 44.3	-0.2
	1.0nm,0.6s,baz=101,slow=12,SNR=6.3						
YKA	Yellowknife Ar	23.88	71	P	P	18 51 01.8	+1.4
	1.4nm,0.7s,baz=300,slow=8.3,SNR=21						
ULM	Lac du Bonnet	39.70	75	P	P	18 53 18.7	-0.4
	1.2nm,0.6s,baz=310,slow=7.9,SNR=3.5						
PDAR	Pinedale Array	39.97	94	P	P	18 53 20.9	-0.9
	0.3nm,0.7s,baz=324,slow=5.9,SNR=2.0						
PFO	Pinyon Flats O	44.91	108	LR	LR	19 12 20.2	
	comp=Z,54nm,22.0s,baz=176,slow=35						
SONM	Songino Array	45.39	290	P	P	18 54 05.5	0.0
	1.3nm,0.7s,baz=39,slow=6.9,SNR=7.1						
AKASG	Malin Array Be	63.38	346	P	P	18 56 15.7	-0.4
	0.5nm,0.5s,baz=14,slow=6.7,SNR=2.6						
GERES	GERESS Array B	66.16	357	P	P	18 56 35.6	+1.2
	0.2nm,0.3s,baz=30,slow=6.0,SNR=2.6						
BRTR	Keskin Array B	73.69	341	P	P	18 57 20.9	0.0
	0.4nm,0.6s,baz=30,slow=4.0,SNR=2.5						

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*IDC **18** 18:49:17.1±6.4, 35°.10N×23°.16E, h35^{km}±31^{km}, mb3.7/8, mb1 3.7/9, mb1mx3.4/48, mbtmp3.8/9, ML3.8/1, Error ellipse: s-maj=78.7km s-min=25.7km az=22.0*

*ATH **18** 18:49:19.7, 35°.28N×23°.20E, h72^{km}±3^{km}, ML3.3/7, Error ellipse: s-maj=3.8km s-min=1.4km az=61.0*

*THE **18** 18:49:21.4, 35°.19N×23°.13E, h43^{km}±8^{km}, ML3.2/7, Error ellipse: s-maj=9.2km s-min=1.1km az=53.0*

ISC 18 18:49:20.4±1.1**, 35°.24N**±0°.07×**23°.11E**±0°.07**, h60^{km}**±8^{km}**, n70, σ1^{s}.30**/82**, mb3.7**/8**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RODP	Rodopos	0.62	59	P	Pn	18 49 32.8	-0.9
RODP				S	Sn	18 49 42.8	-0.6
	690nm,0.4s						
ANKY	Antikythira Is	0.64	14	P	Pn	18 49 33.9	-0.1
ANKY				S	Sn	18 49 45.1	+1.3
	2µm,0.5s						
ANKY	Antikythira Is	0.64	14	P	Pn	18 49 33.8	-0.1
ANKY				S	Sn	18 49 45.0	+1.1
ANKY				AML	AML	18 49 45.7	
	comp=N,4132µm,0.6s						
ANKY				AML	AML	18 49 48.3	
	comp=E,3591µm,0.5s						
IMMV	Iera Moni Meta	0.74	73	P	Pn	18 49 34.6	-0.6
IMMV				S	Sn	18 49 45.6	-0.4
	comp=E,3µm,0.6s						
IMMV	Iera Moni Meta	0.74	73	P	Pn	18 49 34.6	-0.6
IMMV				S	Sn	18 49 45.7	-0.3
IMMV				AML	AML	18 49 47.1	
	comp=N,5283µm,0.4s						
IMMV				AML	AML	18 49 47.9	
	comp=E,6873µm,0.5s						
CHAN	Chania	0.81	70	P	Pn	18 49 36.0	0.0
CHAN				S	Sn	18 49 47.8	+0.3
	comp=E,790nm,0.8s						
GVD	Gavdhos	0.90	116	P	Pn	18 49 36.7	-0.5
GVD				S	Sn	18 49 49.1	-0.4
	comp=E,2µm,0.5s						
GVD	Gavdhos	0.90	116	P	Pn	18 49 36.6	-0.5
GVD				S	Sn	18 49 49.6	+0.1
GVD				AML	AML	18 49 53.1	
	comp=E,5143µm,0.4s						
GVD				AML	AML	18 50 00.7	
	comp=N,3213µm,0.3s						
GVDS	Gavdos	0.90	116	P	Pn	18 49 36.3	-0.8
GVDS				S	Sn	18 49 48.6	-0.9
	comp=N,1µm,0.4s						
VAM	Vamos	0.91	79	P	Pn	18 49 37.1	-0.1
VAM				S	Sn	18 49 50.2	+0.5
	comp=N,2µm,0.6s						
VAM	Vamos	0.91	79	P	Pn	18 49 37.1	-0.1
VAM				S	Sn	18 49 50.6	+1.0
VAM				AML	AML	18 49 55.8	
	comp=N,5847µm,0.5s						
VAM				AML	AML	18 49 56.2	
	comp=E,3444µm,0.7s						
KTHR	Kythira	1.02	355	P	Pn	18 49 39.8	+1.1
SIVA	Sivas	1.41	99	P	Pn	18 49 43.5	-0.4
SIVA				AML	AML	18 50 12.8	
	comp=N,1756µm,0.6s						
SIVA				AML	AML	18 50 19.4	
	comp=E,1295µm,0.5s						
IDI	Anoyia	1.46	88	P	Pn	18 49 44.7	+0.1
IDI	Anoyia	1.46	88	Pg	Pn	18 49 45.0	+0.4
	comp=E,5.9nm,0.3s,baz=292,slow=17,SNR=38						
IDI				Lg	Lg	18 50 02.7	
	comp=E,16nm,0.3s,baz=322,slow=19,SNR=5.2						
IDI	Anoyia	1.46	88	P	Pn	18 49 44.7	+0.1
IDI				AML	AML	18 50 15.5	
	comp=E,572µm,0.7s						
IDI				AML	AML	18 50 16.9	
	comp=N,523µm,0.6s						
VLI	Veliai	1.48	355	P	Pn	18 49 46.3	+1.5
VLI	Veliai	1.48	355	P	Pn	18 49 46.4	+1.6
VLI				AML	AML	18 50 17.7	
	comp=N,995µm,0.8s						
VLI				AML	AML	18 50 17.9	
	comp=E,1143µm,1.1s						
MHLO	Agia Marina, M	1.78	36	P	Pn	18 49 48.9	0.0
MHLA	Plaka, Milos I	1.84	35	P	Pn	18 49 50.9	+1.2
LAST	Lasithi	1.94	92	P	Pn	18 49 51.7	+0.5
LAST	Lasithi	1.94	92	P	Pn	18 49 52.0	+0.8
NPS	Neapolis	2.05	89	P	Pn	18 49 53.5	+1.0
KRND	KRANIDI	2.13	1	P	Pn	18 49 53.6	-0.1
ITM	Ithomi	2.15	334	P	Pn	18 49 54.6	+0.6
SAP1	Santorini-Akro	2.17	58	P	Pn	18 49 53.9	-0.2
SAP3	Santorini-Thir	2.17	56	P	Pn	18 49 53.7	-0.5
SERI	Serifos	2.21	30	P	Pn	18 49 54.3	-0.5
SANT	Santorini	2.22	59	P	Pn	18 49 54.5	-0.3
CMBO	Columbo, Santo	2.23	56	P	Pn	18 49 55.1	+0.1
IOSP	Ios island	2.30	50	P	Pn	18 49 55.3	-0.7
IOSP				S	Sn	18 50 20.8	-2.4
ANAF	Anafi Island	2.43	62	P	Pn	18 49 57.1	-0.7
VLY	Voula,Athens	2.66	12	P	Pn	18 50 01.9	+1.0
APE	Apeiranthos	2.67	46	P	Pn	18 50 00.5	-0.6
LOUT	Loutraki	2.74	358	P	Pn	18 50 01.7	-0.2
AMGA	Amorgos Island	2.76	54	P	Pn	18 50 01.7	-0.5
KLV	Kalavryta, Ach	2.90	345	P	Pn	18 50 06.0	+1.8
VIL2	Platees	2.96	2	P	Pn	18 50 04.4	-0.7
PROD	Prodromos	3.01	357	P	Pn	18 50 07.1	+1.4
LAKA	Lakka	3.12	343	P	Pn	18 50 07.5	+0.2
TRIZ	Trizonia	3.22	345	P	Pn	18 50 08.3	-0.2
KALE	Kalithea	3.24	346	P	Pn	18 50 09.9	+1.1
KARP	Karpathos	3.32	84	P	Pn	18 50 09.7	-0.3
LKR	Lokris	3.40	359	P	Pn	18 50 11.7	+0.8
MRKA	Markates	3.48	6	P	Pn	18 50 13.2	+1.1
AXAR	Agios Charalam	3.53	354	P	Pn	18 50 14.4	+1.6
AGG	Agios Georgios	3.82	351	P	Pn	18 50 18.2	+1.4
MAKR	Makrakomi, Fth	3.84	349	P	Pn	18 50 19.0	+1.9
SKIA	Skiathos	3.93	4	P	Pn	18 50 19.4	+1.2
CHOS	Chios island	3.93	36	P	Pn	18 50 18.1	-0.2
DBRK	Dubrovnik	8.36	334	ePn	Pn	18 51 16.2	-2.6
DBRK				Sn	Sn	18 52 40.4	-11
STON	Ston	8.70	333	i Pn	Pn	18 51 20.6	-2.8
STON				Sn	Sn	18 52 49.1	-11
MAKA	Makarska	9.31	331	ePn	Pn	18 51 28.9	-2.9
RICI	Ricice	9.45	333	ePn	Pn	18 51 30.8	-2.9
HVAR	Hvar	9.46	329	ePn	Pn	18 51 31.1	-2.7
HVAR				Sn	Sn	18 53 08.2	-10
KIJV	Kijevo	10.16	331	ePn	Pn	18 51 40.5	-2.9
ZIRJ	Zirje	10.19	328	ePn	Pn	18 51 40.3	-3.5
MORI	Morici	10.33	329	ePn	Pn	18 51 43.5	-2.2
DUGI	Dugi Otok	10.71	327	ePn	Pn	18 51 48.4	-2.6
UDBI	Udbina	10.85	331	ePn	Pn	18 51 51.0	-2.0
NVLJ	Novalja	11.25	328	i Pn	Pn	18 51 56.0	-2.3
GERES	GERESS Array B	15.26	336	Pn	Pn	18 52 53.5	+1.3
	comp=E,0.2nm,0.3s,baz=146,slow=13,SNR=1.6						
HFS	Hagfors	25.64	349	P	P	18 54 45.3	+1.1
	comp=E,0.9nm,0.4s,baz=163,slow=10,SNR=10.0						
FINES	FINESS Array B	26.29	3	P	P	18 54 49.3	-0.6
	comp=E,2.5nm,0.9s,baz=163,slow=12,SNR=7.4						
ARCES	ARCESS Array B	34.37	1	P	P	18 56 00.5	-0.7
	comp=E,2.9nm,0.9s,baz=173,slow=8.0,SNR=4.4						
SPITS	Spitsbergen Ar	43.13	358	P	P	18 57 15.7	+1.2
	comp=E,27nm,1.2s,baz=217,slow=8.3,SNR=5.1						
MKAR	Makanchi Array	45.13	56	P	P	18 57 30.8	0.0
	comp=E,0.4nm,0.5s,baz=268,slow=7.8,SNR=8.9						
ZALV	Zalesovo Beam	46.16	46	P	P	18 57 38.1	-0.6
	comp=E,0.8nm,0.4s,baz=277,slow=9.6,SNR=5.2						
TIXI	Tiksi	61.67	20	P	P	18 59 32.2	+0.6
	comp=E,0.2nm,0.3s,baz=308,slow=1.6,SNR=2.0						
YKA	Yellowknife Ar	76.84	341	P	P	19 01 05.1	-0.4
	comp=E,0.2nm,0.5s,baz=36,slow=6.3,SNR=5.6						

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*ISK **18** 18:50:05.2, 35°.79N×29°.31E, h5^{km}, ML2.8/12*

*NIC **18** 18:50:07.8±0.0, 35°.85N×29°.51E, h20^{km}±1^{km}, Ml3.1/2*

*DDA **18** 18:50:07.4, 35°.84N×29°.32E, h4^{km}±1^{km}, ML2.6*

ISC 18 18:50:05.4±1.6**, 35°.76N**±0°.06×**29°.37E**±0°.04**, h16^{km}**±9^{km}**, n29, σ0^{s}.79**/42**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSL	Kastellorizon	0.43	24	P	Pg	18 50 14.6	+0.5
KSL				S	Sg	18 50 20.1	+0.1
AKAS	Kas	0.51	22	PG	Pg	18 50 15.8	+0.1
AKAS				SG	Sb	18 50 23.1	-0.4
AKAS	Kas	0.51	22	i P	Pg	18 50 15.8	+0.1
AKAS				i S	Sg	18 50 21.7	-0.9
AKAS				IAML		18 50 25.0	
	comp=N,735nm,0.6s						
DEMR	Demre-Antalya	0.65	42	PG	Pg	18 50 18.2	+0.1
FETY	Fethiye	0.91	345	PG	Pb	18 50 22.4	-0.4
FETY				SG	Sg	18 50 34.7	-0.3
FETY	Fethiye	0.91	345	i P	Pb	18 50 22.5	-0.4
FETY				i S	Sb	18 50 34.1	-0.6
FETY				IAML		18 50 35.0	
	comp=E,226nm,0.3s						
FETY				IAML		18 50 36.0	
	comp=N,158nm,0.3s						
AKUM	Antalya-Kumluc	0.97	54	i P	Pb	18 50 23.6	-0.3
ELL	Elmali	1.08	24	PG	Pb	18 50 25.5	-0.4
ELL				SG	Sn	18 50 41.6	+0.7
ELL	Elmali	1.08	24	P	Pb	18 50 25.8	-0.1
DALY	Dalyan (Mula)	1.21	332	PN	Pn	18 50 27.8	+0.1
DALY				SN	Sg	18 50 44.2	-0.3
DALY	Dalyan (Mula)	1.21	332	i P	Pn	18 50 27.6	0.0
DALY				i S	Sb	18 50 42.8	-0.5
KORT	Korkueli	1.47	32	PN	Pb	18 50 33.2	+0.7
KORT	Korkueli	1.47	32	i P	Pb	18 50 33.5	+0.9
KORT				i S	Sg	18 50 52.2	-0.8
GOLH	Golhisar	1.49	6	i P	Pb	18 50 32.5	-0.3
ANTB	Antalya	1.54	42	PN	Pb	18 50 34.3	+0.7
YER	Yerkesik	1.63	328	PN	Pb	18 50 34.7	-0.5
DAT	Datca	1.75	304	i P	Pb	18 50 37.8	+0.7
TAVA	DENIZLI_Tavas	1.75	348	i P	Pn	18 50 35.4	+0.2
TAVA				i S	Sn	18 50 56.5	-0.7
BRDR	BURDUR-Merkez	2.02	16	i P	Pb	18 50 41.0	-0.8
BODT	Bodrum	2.11	309	PN	Pn	18 50 41.1	+0.9
KEPZ	Antalya-Kepez	2.14	57	i P	Pn	18 50 41.0	+0.5
AYDN	Tasoluk	2.25	328	i P	Pb	18 50 45.9	+0.1
AYDN				i S	Sb	18 51 12.7	-0.6
GAZI	Gazipasa	2.44	78	PN	Pb	18 50 47.5	-1.4
AYDB	Zeytinkoy-Aydi	2.49	332	PN	Pn	18 50 46.8	+1.4
BAGO	Egridir - ISPA	2.50	27	i P	Pn	18 50 47.5	+1.9
AKMS	Akamas	2.53	106	P	Pn	18 50 46.9	+1.0
AKMS				S	Sn	18 51 15.7	-0.8
AKMS				AML	AML	18 51 16.8	
	comp=N,0.3nm,0.3s						
AKMS				AML	AML	18 51 16.8	
	comp=N,0.3nm,0.3s						
SEYD	Seydisehir-KON	2.58	50	PN	Pn	18 50 48.9	+2.2
KHAL	Karahalli	2.61	2	i P	Pn	18 50 47.4	+0.3
ALFC	Alefka	2.70	102	P	Pn	18 50 49.0	+0.7
ALFC				S	Sn	18 51 20.0	-0.7
ALFC				AML	AML	18 51 20.3	
	comp=N,0.2nm,0.4s						
ALFC				AML	AML	18 51 20.3	
	comp=N,0.2nm,0.4s						

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*NEIC **18** 18:54:10.2±2.8, 23°.65S±0°.10×175°.87W±0°.09, h10^{km}±1^{km}, mb4.7/16, Error ellipse: s-maj=18.5km s-min=10.0km az=35.0*

*IDC **18** 18:54:11.2±0.8, 23°.50S×176°.29W, h0^{km}, mb3.9/8, mb1 4.3/9, mb1mx4.0/30, mbtmp4.0/9, ML4.7/1, MS3.9/2, Ms1 3.8/2, ms1mx3.0/32, Error ellipse: s-maj=36.0km s-min=21.3km az=137.0*

ISC 18 18:54:16.3±0.6**, 23°.7S**±0°.1×**176°.3W**±0°.2**, h33^{km}, n47, σ1^{s}.50**/46**, mb4.3**/14**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	7.47	54		Pn	18 55 54.6	-8.5
MSVF	Nonsavu	7.94	317		Pn	18 56 17.1	+7.6
AFI	Afiamalu	10.60	24	Pn	Pn	18 56 40.0	-6.0
URZ	Urewera	15.60	200	Pn	Pn	18 57 54.9	+1.1
	2.8nm,0.3s,baz=71,slow=3.2,SNR=9.0						
URZ				Sn	Sn	19 00 33.9	-12
	0.9nm,0.3s,baz=335,slow=17,SNR=1.6						
URZ	Urewera	15.60	200	P	P	18 57 57.6	-0.1
BKZ	Black Stump Fm	16.63	200	P	Pn	18 58 08.0	+1.1
BFZ	Birch Farm	18.09	199	P	Pn	18 58 23.6	-1.5
BFZ				IAmb	IAmb	18 58 27.3	
	comp=Z,39nm,1.4s						
MSWZ	Moikau Station	19.07	200	P	P	18 58 34.1	-1.8
BHW	Baring Head	19.18	201	P	P	18 58 34.1	-3.0
PLWZ	Palliser	19.20	200	P	P	18 58 34.9	-2.5
TUWZ	Tuamarina	19.51	202	P	P	18 58 38.0	-2.7
NNZ	Nelson	19.53	204	P	P	18 58 37.9	-3.1
KHZ	Kahutara	20.52	202	P	P	18 58 49.0	-2.7
KHZ				IAmb	IAmb	18 59 03.1	
	comp=Z,46nm,1.6s						
LTZ	Lake Taylor	21.30	204	P	P	18 58 59.0	-1.2
LTZ				IAmb	IAmb	18 59 26.4	
	comp=Z,28nm,1.6s						
RPZ	Rata Peaks	22.55	204	P	P	18 59 13.8	+0.2
	comp=Z,4.8nm,0.6s,baz=229,slow=22,SNR=2.8						
RPZ				LR	LR	19 07 14.0	
	comp=Z,242nm,20.0s,baz=24,slow=34						
RPZ	Rata Peaks	22.55	204	P	P	18 59 13.3	-0.3
RPZ				IAmb	IAmb	18 59 41.4	
	comp=Z,45nm,1.6s						
FOZ	Fox Glacier	22.89	207	P	P	18 59 16.4	-0.7
FOZ				IAmb	IAmb	18 59 23.5	
	comp=Z,57nm,1.6s						
AS31	Alice Springs	45.43	260	P	P	19 02 32.6	+0.2
ASAR	Alice Springs	45.43	260	P	P	19 02 32.8	+0.3
	comp=Z,2.4nm,0.9s,baz=91,slow=8.7,SNR=17						
ASAR				PcP	PcP	19 04 10.0	-1.3
	comp=Z,0.4nm,0.8s,baz=119,slow=4.7,SNR=1.4						
ASAR	Alice Springs	45.43	260	P	P	19 02 33.7	+1.3
WR0	Warramunga Arr	45.64	265	P	P	19 02 33.7	-0.3
WR0				IAmb	IAmb	19 03 02.6	
	comp=Z,23nm,1.7s						
WB2	Warramunga Arr	45.81	265	P	P	19 02 35.2	-0.2
WB2				IAmb	IAmb	19 02 38.2	
	comp=Z,16nm,1.6s						
WB0	Warramunga Arr	45.82	265	P	P	19 02 35.4	-0.1
WRA	Warramunga Arr	45.83	265	P	P	19 02 35.3	-0.2
	comp=Z,1.9nm,0.5s,baz=106,slow=8.5,SNR=25						
FORT	Forrest	49.58	249	P	P	19 03 04.9	+0.4
KNRA	Kununurra	52.10	268	P	P	19 03 23.3	-0.3
KNRA				IAmb	IAmb	19 03 42.5	
	comp=Z,23nm,1.4s						
FITZ	Fitzroy Crossi	54.25	264	P	P	19 03 40.3	+0.9
FITZ				IAmb	IAmb	19 04 00.2	
	comp=Z,8.5nm,1.2s						
CASY	Casey	61.81	206	P	P	19 04 32.0	+0.4
QSPA	South Pole Qui	66.42	180	P	P	19 05 03.3	+1.2
MAW	Mawson	79.13	200	LR	LR	19 40 38.5	
	comp=Z,73nm,18.3s,baz=87,slow=35						
PETK	Petropavlovsk-	79.73	344	P	P	19 06 20.2	-0.4
	comp=Z,2.4nm,1.0s,baz=136,slow=8.1,SNR=1.2						
PETK	Petropavlovsk-	79.73	344	P	P	19 06 19.8	-0.8
NVAR	Mina Array Bea	82.25	42	P	P	19 06 34.1	-0.6
	comp=Z,0.3nm,0.5s,baz=227,slow=8.2,SNR=3.7						
SNAA	Sanae	84.81	178	P	P	19 06 47.6	+0.4
VNA3	Neumayer Olymp	84.88	176	P	P	19 06 47.9	+0.4
VNA2	Neumayer--Watz	85.34	176	P	P	19 06 50.4	+0.6
	baz=202,slow=3.6						
TXAR	Lajitas Array	87.44	57	P	P	19 07 00.5	-0.3
	comp=Z,0.7nm,0.8s,baz=193,slow=3.7,SNR=4.4						
PDAR	Pinedale Array	90.18	43	P	P	19 07 13.8	+0.2
	comp=Z,0.1nm,0.5s,baz=238,slow=3.1,SNR=1.6						
ILAR	Eielson Array	91.05	12	P	P	19 07 15.8	-1.1
	comp=Z,0.3nm,0.6s,baz=214,slow=5.6,SNR=5.2						
ILAR	Eielson Array	91.05	12	P	P	19 07 14.8	-2.0
AKASG	Malin Array Be	146.54	330	PKPbc	PKPbc	19 13 53.3	-0.8
	comp=Z,0.6nm,0.4s,baz=45,slow=4.1,SNR=7.1						
AKASG	Malin Array Be	146.54	330		PKPdf	19 13 51.2	-1.4
BRTR	Keskin Array B	150.11	309	PKPbc	PKPbc	19 14 02.4	-1.6
	comp=Z,0.4nm,0.8s,baz=24,slow=1.9,SNR=2.7						
BRTR	Keskin Array B	150.11	309		PKPdf	19 14 01.2	+2.2
CLL	Collm	151.49	348	ePKPbc	PKiKP	19 14 08.0	+0.9
CLL				e(PKPab)	pPKPbc	19 14 18.0	+0.7
CLL				i pPKPbc	sPKPbc	19 14 20.6	-0.3
	comp=Z,7.0nm,0.8s						
BRG	Berggiesshubel	151.71	346	i PKP	PKPab	19 14 20.5	+4.5
	comp=Z,6.9nm,1.0s						
TORD	Torodi Ar. Bea	169.36	169	PKPab	PKPab	19 15 34.6	+1.2
	comp=Z,1.0nm,0.7s,baz=185,slow=4.1,SNR=5.0						

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*OMAN **18** 19:01:00.5±99.0, 29°.73N×50°.79E, h32^{km}, Error ellipse: s-maj=9999.0km s-min=2114.0km az=287.0*

*THR **18** 19:01:28.8±0.8, 27°.81N×52°.95E, h14^{km}±11^{km}, ML4.7*

*NEIC **18** 19:01:30.5±1.9, 27°.78N±0°.06×52°.69E±0°.07, h8^{km}±3^{km}, mb4.7/131, mb_Lg4.7(TEH), Error ellipse: s-maj=8.6km s-min=7.8km az=46.0*

*TEH **18** 19:01:31.6, 27°.85N×52°.73E, h14^{km}, ML4.7*

*GII **18** 19:01:32.9±0.0, 27°.76N×52°.79E, h2^{km}*

*MOS **18** 19:01:32.4±0.9, 27°.77N×52°.70E, h33^{km}, mb4.8/18, Error ellipse: s-maj=5.8km s-min=3.7km az=108.9*

*IDC **18** 19:01:34.5±2.7, 27°.84N×52°.74E, h28^{km}±18^{km}, mb4.2/32, mb1 4.3/41, mb1mx4.2/50, mbtmp4.4/41, ML3.9/8, MS3.7/15, Ms1 3.7/15, ms1mx3.5/46, Error ellipse: s-maj=11.1km s-min=10.2km az=122.0*

ISC 18 19:01:31.9±0.3**, 27°.85N**±0°.03×**52°.70E**±0°.03**, h15^{km}, n562, σ1^{s}.55**/577**, mb4.6**/135**, MS3.9**/15**, 35C-14D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMD1	Lamerd	0.65	141	ePg	Pg	19 01 43.8	-0.8
JHRM	Jahrom	1.01	49	ePg	Pg	19 01 50.8	-0.7
JHRM				e		19 02 15.3	
LAR1	LAR	1.49	96	ePg	Pb	19 01 59.3	0.0
LAR1				e		19 02 29.0	
ISRV	Sarvestan	1.57	13	ePn	Pg	19 02 01.2	-1.0
ISRV				e		19 02 33.1	
ISRV	Sarvestan	1.57	13	Pn	Pg	19 02 01.9	-0.3
AHBU	AHRAM	1.60	310	ePg	Pb	19 02 01.3	+0.1
SHI	Shiraz	1.80	355	ePn	Pb	19 02 04.0	-0.6
SHI				e		19 02 40.9	
IKAZ	Kazeroun	2.07	339	e		19 02 51.4	
IKAZ				ePn	Pn	19 02 07.9	+1.5
IKAZ	Kazeroun	2.07	339	Pn	Pb	19 02 08.2	-1.2
JRN	Qarnain Island	2.89	177	ePn	Pn	19 02 19.6	+2.2
GENO	Geno	3.11	97	ePn	Pn	19 02 21.0	+0.4
KLNJ	Kolanjah	3.30	343	ePn	Pn	19 02 23.8	+0.5
IBND	Bandar-abas	3.42	96	ePn	Pn	19 02 26.3	+1.6
IBND				e		19 03 45.2	
UMQ	Umm Al-Quwin	3.51	130	ePn	Pn	19 02 28.0	+2.1
SHME	Shamm	3.55	119	i Pn	Pn	19 02 26.6	0.0
	SNR=6.2						
SHME	Shamm	3.55	119	ePn	Pn	19 02 27.2	+0.7
NIAN	Nian	3.67	93	ePn	Pn	19 02 28.6	+0.4
BANOM	Banah	3.74	120	i Pn	Pn	19 02 29.8	+0.7
	SNR=62						
BANOM				Sn	Sn	19 03 14.1	+1.2
BANOM	Banah	3.74	120	P	Pn	19 02 30.0	+0.9
	SNR=62						
BANOM				S	Sg	19 03 37.2	+5.2
BANOM	Banah	3.74	120	ePn	Pn	19 02 29.9	+0.8
AJN	Ajban	3.86	147	i Pn	Pn	19 02 30.3	-0.3
	SNR=20						
AJN	Ajban	3.86	147	S	Sg	19 03 49.3	+13
AJN	Ajban	3.86	147	ePn	Pn	19 02 32.7	+2.0
GHWR	Ruwais	3.87	178	ePn	Pn	19 02 33.2	+2.4
SLWR	Sila	3.87	194	ePn	Pn	19 02 32.5	+1.7
NAZ	Nazwa, Dubai	3.89	136	i Pn	Pn	19 02 32.1	+1.0
	SNR=33						
NAZ	Nazwa, Dubai	3.89	136	P	Pn	19 02 32.7	+1.6
	SNR=33						
NAZ				S	Sg	19 03 50.8	+14
	SNR=6.0						
NAZ	Nazwa, Dubai	3.89	136	ePn	Pn	19 02 32.7	+1.6
IMEH	Mehriz	3.90	25	ePn	Pn	19 02 33.4	+1.8
IMEH	Mehriz	3.90	25	Pn	Pn	19 02 33.9	+2.3
IRAM	Ramesheh	3.96	356	ePn	Pn	19 02 33.7	+1.4
MSFE	Esma-Masafi	3.96	128	i Pn	Pn	19 02 32.3	+0.1
	SNR=13						
MSFE	Esma-Masafi	3.96	128	ePn	Pn	19 02 33.5	+1.3
NGRK	Negar Kerman	3.96	62	ePn	Pn	19 02 33.4	+0.9
FAQ	Al Faqa, Dubai	4.03	139	i Pn	Pn	19 02 33.9	+0.8
	SNR=12						
FAQ	Al Faqa, Dubai	4.03	139	P	Pn	19 02 34.3	+1.2
	SNR=12						
FAQ				S	Sg	19 03 52.9	+12
FAQ	Al Faqa, Dubai	4.03	139	ePn	Pn	19 02 34.3	+1.2
MDH	Madha	4.10	127	Pn	Pn	19 02 34.7	+0.7
MDH	Madha	4.10	127	P	Pn	19 02 36.5	+2.5
	SNR=7.7						
MDH	Madha	4.10	127	ePn	Pn	19 02 35.4	+1.4
ISAD	Sadrabad	4.14	12	ePn	Pn	19 02 37.5	+2.6
KRBR	Kerman	4.14	58	eSg	Sb	19 03 32.2	-2.5
TVBK	TV Kerman	4.15	58	ePn	Pn	19 02 36.5	+1.5
TVBK				e		19 03 32.0	
KHGB	Koh Gabri	4.15	52	ePn	Pn	19 02 36.8	+1.8
MZWR	Madinat Zayed	4.20	165	ePn	Pn	19 02 37.4	+2.0
UOSS	Minazif	4.26	132	i Pn	Pn	19 02 36.5	+0.3
	SNR=26						
UOSS	Minazif	4.26	132	ePn	Pn	19 02 36.6	+0.3
UOSS	Minazif	4.26	132		Pn	19 02 35.2	-1.1
HATD	Hatta, Dubai	4.30	134	i Pn	Pn	19 02 37.7	+0.9
	SNR=15						
HATD	Hatta, Dubai	4.30	134	P	Pn	19 02 38.3	+1.5
	SNR=15						
HATD	Hatta, Dubai	4.30	134	ePn	Pn	19 02 37.7	+0.9
ASHO	Ashiyiah	4.36	136	i Pn	Pn	19 02 37.9	+0.3
	SNR=34						
ASHO	Ashiyiah	4.36	136	P	Pn	19 02 38.3	+0.7
	SNR=50						
ASHO	Ashiyiah	4.36	136	ePn	Pn	19 02 38.3	+0.7
KHNJ	Kahnooj	4.43	88	ePn	Pn	19 02 40.1	+1.5
IBAF	Bafgh	4.49	33	ePn	Pn	19 02 41.6	+2.1

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IBAF  Bafgh              4.49  33   Pn      Pn     19 02 41.1 +1.6
IGAR  Gharneh            4.58 353  ePn      Pn     19 02 41.9 +1.1
ICHK  Chekchek           4.63  18  ePn      Pn     19 02 43.6 +2.1
ICHK  Chekchek           4.63  18   Pn      Pn     19 02 43.4 +1.9
ALNE  Al Ain             4.66 143  ePn      Pn     19 02 43.2 +1.4
CHMN  Cheshme madani     4.69  64  ePn      Pn     19 02 44.1 +1.6
JHBN  Jahan bin          4.71 338  ePn      Pn     19 02 44.1 +1.3
YZKH  Yazd               4.82  19  ePn      Pn     19 02 43.5 -0.5
YZKH  Yazd               4.82  19  ePn      Pn     19 02 43.5 -0.5
IZEF  Zefreh             5.04 356  ePn      Pn     19 02 48.3 +1.0
IZEF  Zefreh             5.04 356   Pn      Pn     19 02 48.3 +1.0
SOHO  SOHO               5.05 136   P       Pn     19 02 48.2 +1.1
      SNR=37
SOHO  SOHO               5.05 136  ePn      Pn     19 02 47.6 +0.5
ANAR  Anarak             5.40   9  ePn      Pn     19 02 53.2 +1.2
SHGR  Shooshtar-Gavs     5.43 322   IAML           19 03 57.4
      comp=E,241nm,0.6s
SHGR                                IAML           19 03 59.8
      comp=N,247nm,0.6s
IKLH  Kolahrood          5.54 350  ePn      Pn     19 02 54.8 +0.7
UMZA  Um Al Zommool      5.57 156  ePn      Pn     19 02 55.4 +1.1
ARQ   Araqi              5.66 142   P       Pn     19 02 57.5 +2.0
      SNR=23
HOQ   Hoqain             5.94 135   P       Pn     19 03 00.3 +0.9
      SNR=30
QAM   Ghamsar            6.00 350  ePn      Pn     19 03 01.8 +1.5
KRSH  Karshahi           6.12 356  ePn      Pn     19 03 02.6 +0.6
TPRV  Parvadeh(Tabas     6.20  33  ePn      Pn     19 03 03.9 +0.9
BSY   Bisya              6.51 140   P       Pn     19 03 07.8 +0.6
      SNR=54
BIDO  Bidbid             6.52 130  ePn      Pn     19 03 07.4 +0.2
BMDN  Meydan             6.70 331  ePn      Pn     19 03 09.7 -0.2
IKMR  Kamar-syah         6.77 328  ePn      Pn     19 03 09.6 -1.1
SMDO  Samad              6.79 133   P       Pn     19 03 12.0 +0.9
      SNR=51
TKDS  Koohdasht(Taba     6.89  32  ePn      Pn     19 03 13.7 +1.2
BDRS  Dareh Seyedi       6.92 333  ePn      Pn     19 03 13.6 +0.6
TABS  Tabas              6.92  32  ePn      Pn     19 03 11.3 -1.6
TABS  Tabas              6.92  32  ePn      Pn     19 03 11.3 -1.6
TNSJ  Nastanj            6.96  28  ePn      Pn     19 03 14.5 +1.1
WSAR  Wadi Sarin         7.05 129   Pn      Pn     19 03 14.4 -0.2
      comp=N,8.9nm,0.3s,baz=314,slow=11,SNR=78
WSAR                                Sn      Sn     19 04 32.3 -2.1
      comp=N,0.3nm,0.3s,baz=127,slow=20,SNR=1.9
WSAR                                LR      LR     19 06 25.6
      comp=N,156nm,21.8s,baz=329,slow=42
WSAR  Wadi Sarin         7.05 129   P       Pn     19 03 14.6 +0.1
      SNR=27
IQOM  Qom                7.11 349  ePn      Pn     19 03 15.5 -0.2
ITEG  Tejag              7.25  45  ePn      Pn     19 03 20.0 +2.5
HSAM  Samen              7.26 332  ePn      Pn     19 03 18.3 +0.7
ZHSF  Zahedan            7.30  74  ePn      Pn     19 03 14.6 -3.6
ZHSF  Zahedan            7.30  74  ePn      Pn     19 03 14.6 -3.6
NHDN  Nehbandan          7.31  59  ePn      Pn     19 03 19.5 +1.3
IHSB  Hasanabad          7.67 351  ePn      Pn     19 03 23.1  0.0
IANJ  Anjilo             7.67   7  ePn      Pn     19 03 24.2 +0.9
WBK   Wadi Bani Khal     7.70 131   P       Pn     19 03 24.0 +0.4
      SNR=24
IKOM  Komasi             7.72 326  ePn      Pn     19 03 24.4 +0.5
IDMV  Damavand           7.73 356  ePn      Pn     19 03 24.6 +0.4
AFRZ  Afriz              7.78  43  ePn      Pn     19 03 26.1 +1.4
RAYN  Ar Rayn            7.79 238  i Pn     Pn     19 03 24.7 -0.1
      SNR=5.3
RAYN  Ar Rayn            7.79 238   P       Pn     19 03 24.9 +0.1
RAYN  Ar Rayn            7.79 238           Pn     19 03 24.9 +0.1
IRAZ  Razeghan           7.90 343  ePn      Pn     19 03 26.0 -0.4
IMON  Monand             8.03  47  ePn      Pn     19 03 31.1 +2.9
QABG  Abgarm-Qazvin      8.28 342  ePn      Pn     19 03 30.9 -0.7
HSRG  Sareghieh          8.28 334  ePn      Pn     19 03 32.0 +0.2
MHTO  MHTO               8.34 144   P       Pn     19 03 33.0 +0.7
      SNR=12
IPRN  Peran              8.38 358  ePn      Pn     19 03 34.8 +1.9
IDHR  Dehrash            8.71 323  ePn      Pn     19 03 37.8 +0.3
SHRT  Shahrakht          8.72  47  ePn      Pn     19 03 35.5 -2.0
SHRT  Shahrakht          8.72  47  ePn      Pn     19 03 35.5 -2.0
QALM  Alamut, Qazvin     8.74 349  ePn      Pn     19 03 38.4 +0.5
IMND  Minoodasht         9.66  13  ePn      Pn     19 03 52.0 +1.7
WHFO  Wadi Hawf          9.93 174   P       Pn     19 03 53.0 -1.1
      SNR=41
SHAO  Shalim            10.14 164   P       Pn     19 03 56.0 -1.0
      SNR=12
DMTO  DMTO              10.29 168   P       Pn     19 03 58.3 -0.8
      SNR=21
RBK   Rabkut            10.38 172   P       Pn     19 04 00.2 -0.2
      SNR=12
HRA   Herat             10.45  49           Pn     19 04 01.7 +0.3
ABTO  Aybut             10.46 177   P       Pn     19 04 00.0 -1.3
      SNR=22
GEYT  Alibeck           11.03  23   Pn      Pn     19 04 11.4 +2.2
      comp=N,0.6nm,0.3s,baz=206,slow=13,SNR=30
GEYT  Alibeck           11.03  23           Pn     19 04 11.0 +1.8
GYA0B ALIBECK ARRAY     11.03  23           Pn     19 04 11.0 +1.8
AKDM  Akdamar-Van       13.25 325  eP       Pn     19 04 39.8 +0.2
GNI   Garni             13.93 334   Pn      Pn     19 04 53.0 +4.1
      comp=N,0.2nm,0.3s,baz=178,slow=0.7,SNR=4.2
GNI   Garni             13.93 334   P       Pn     19 04 53.0 +4.1
GNI   Garni             13.93 334           Pn     19 04 47.2 -1.6
MAZI  Mazidag           14.08 316  eP       Pn     19 04 54.0 +3.1
SVAN  Silvan-Diyarba    14.09 320  eP       P      19 04 59.2 +0.6
AKT   Akhty             14.20 345⇓iP        Pn     19 04 53.1 +0.6
ASF   Jabal al Asfar    14.36 291   Pn      Pn     19 04 55.0 +0.3
      comp=N,0.4nm,0.3s,baz=72,slow=3.2,SNR=3.0
ASF                                 Sn      Sn     19 07 18.7  -15
      comp=N,0.2nm,0.3s,baz=55,slow=9.2,SNR=1.7
ASF   Jabal al Asfar    14.36 291   P       Pn     19 04 55.0 +0.3
DYBB  Diyarbakir        14.58 317  eP       P      19 05 08.4 +4.3
BNGB  Bingl             14.96 321  eP       P      19 05 10.6 +2.2
URFA  Urfa              15.10 313   P       P      19 05 12.6 +2.7
GNBR  Gunib             15.24 344⇑iP        Pn     19 05 09.0 +2.4
SENK  Senkaya-Erzuru    15.29 329  eP       Pn     19 05 09.2 +1.8
DAMY  Dhamar            15.30 212           Pn     19 05 05.4 -2.4
DAMY                                IAmb    IAmb   19 05 22.6
      comp=Z,28nm,0.8s
TBLG  Delisi            15.31 337   P       Pn     19 05 07.4  0.0
TBLG                                pmax    pmax
      comp=Z,27nm,1.2s
TBLG  Delisi            15.31 337           Pn     19 05 07.4  0.0
TBLG                                IAmb    IAmb   19 05 15.6
      comp=Z,27nm,1.2s
YEDI  Yedisu-Bingol     15.35 322  eP       Pn     19 05 08.9 +0.8
SVRC  Sivrice-ELAZID    15.36 317  eP       P      19 05 11.5 -1.4
KBL   Kabul             15.48  60   P       Pn     19 05 10.6 +0.6
KBL                                 pmax    pmax
      comp=Z,13nm,1.0s
KBL   Kabul             15.48  60           Pn     19 05 10.6 +0.6
AKH   Akhalkalaki       15.50 333  ⇑P       P      19 05 14.4  0.0
AKH   Akhalkalaki       15.50 333   P       Pn     19 05 12.3 +2.3
AKH                                 pmax    pmax
      comp=Z,14nm,0.9s
AKH   Akhalkalaki       15.50 333           Pn     19 05 12.3 +2.3
HMDT  Nahal Hemdat      15.51 291   Pn      P      19 05 14.2 -0.2
ZFRI  Zfri              15.54 284   Pn      P      19 05 13.8 -1.0
NATI  Neve Ativ         15.58 294   Pn      P      19 05 14.1 -1.1
HRFI  Mount Harif       15.62 282   Pn      P      19 05 16.1 +0.4
SOCY  Socotra           15.62 175   Pn      Pn     19 05 06.9 -4.9
SOCY                                IAmb    IAmb   19 05 16.6
      comp=Z,18nm,0.9s
MMLI  Mount Malkishu    15.63 291   Pn      P      19 05 16.3 +0.4
PTK   Pertek            15.63 318  eP       Pn     19 05 09.4 -2.5
PRNI  Paran             15.67 283   Pn      P      19 05 16.9 +0.6
EIL   Elat              15.68 281   Pn      P      19 05 18.4 +2.0
      comp=Z,0.3nm,0.3s,baz=124,slow=2.0,SNR=6.1
EIL   Elat              15.68 281   Pn      P      19 05 16.5 +0.2
MMA0B Mount Meron ar    15.78 293   Pn      P      19 05 17.3 -0.3
MMAI  Mount Meron Ar    15.78 293   Pn      Pn     19 05 15.1 +1.3
      comp=Z,0.5nm,0.3s,baz=102,slow=16,SNR=10
MMAI                                Sn      Sn     19 08 00.1 -8.4
      comp=Z,0.4nm,0.3s,baz=98,slow=18,SNR=2.0
MALT  Malatya           15.86 315  eP       P      19 05 17.8 -0.6
BLGI  Bet Lehem HaGe    15.89 292   Pn      P      19 05 19.8 +1.2
KRMI  Paran Flat        15.90 282   Pn      P      19 05 19.6 +0.8
SLTI  Sal'it            15.91 290   Pn      P      19 05 19.3 +0.4
GAZ   Gaziantep         16.02 309  eP       Pn     19 05 18.2 +1.4
GAZ   Gaziantep         16.02 309           Pn     19 05 15.9 -0.9
OFRI  `Ofer             16.03 292   Pn      P      19 05 20.8 +0.5
KZIT  Kziot             16.25 285   Pn      Pn     19 05 21.7 +2.1
KMRS  Kahramanmaras     16.41 310  eP       Pn     19 05 22.7 +1.0
ZEI   Tsey              16.53 337  eP       Pn     19 05 24.2 +0.8
ZEI                                 pmax    pmax
      comp=Z,64nm,0.9s
DARE  Darende-Malaty    16.61 314  eP       P      19 05 29.2 +2.5
SARI  SarD1z-Kayseri    17.21 312  eP       Pn     19 05 32.6 +0.7
NEY   Neytrino          17.36 335ceP        P      19 05 35.8 +0.7
NEY                                 pmax    pmax
      comp=Z,17nm,2.2s
CEP   Cherat            17.53  65   P       Pn     19 05 35.4 -0.5
CEP                                 S       S      19 08 55.0 -3.8
KBZ   Khabaz            17.71 336   P       P      19 05 39.3 +0.6
      comp=Z,0.2nm,0.3s,baz=150,slow=8.2,SNR=14
KBZ   Khabaz            17.71 336⇑iP        P      19 05 40.8 +2.1
SHA1  Shidzhatmaz       17.81 336⇑iP        P      19 05 40.3 +0.2
CSS   Mathiatis         17.98 298   Pn      Pn     19 05 41.0 -0.3
CSS   Mathiatis         17.98 298   P       Pn     19 05 41.2 -0.2
KVAR  Kislovodsk Arr    17.98 336   P       P      19 05 42.8 +1.0
      baz=207,slow=4.5,SNR=3.7
KIV   Kislovodsk        17.98 336  eP       P      19 05 43.8 +1.9
KIV                                 pmax    pmax
      comp=Z,73nm,1.0s
KIV                                 MLR     MLR
      comp=Z,119nm,14.0s
KIV   Kislovodsk        17.98 336   P       P      19 05 42.8 +0.9
KEBE  Keben-Mersin      18.20 303  eP       P      19 05 44.9 +0.6
BERE  Bereket-Mersin    18.53 302  eP       Pn     19 05 49.1 +0.9
NIL   Nilore            18.57  67   P       Pn     19 05 48.4 -0.2
NIL                                 pmax    pmax
      comp=Z,120nm,1.0s
NIL   Nilore            18.57  67   P       Pn     19 05 48.4 -0.2
CHCP  Chirah Chowk      18.59  67   P       Pn     19 05 48.6 -0.2
YOZ   Yozgat            18.60 314  eP       Pn     19 05 50.2 +1.2
ATD   Arta Tunnel       18.68 212   P       Pn     19 05 51.0 +1.0
      comp=Z,0.4nm,0.3s,baz=2.2,slow=10,SNR=5.2
ATD   Arta Tunnel       18.68 212   P       P      19 05 49.6  0.0
RPOR  Krasnaya Polya    18.73 331⇓iP        Pn     19 05 52.1 +1.7
YESY  Yesilyurt         18.74 307  eP       Pn     19 05 54.8 +4.1
SOC   Sochi             18.88 330  eP       Pn     19 05 52.9 +0.7
SOC                                e               19 09 25.0
SOC                                 MLR     MLR
      comp=Z,109nm,9.0s
SULT  Sultanhani-AKS    19.08 308   P       P      19 05 52.5 -1.5
TAS   Tashkent          19.12  41   P       Pn     19 05 55.9 +0.7
TAS                                 pmax    pmax
      comp=Z,90nm,1.2s
TAS   Tashkent          19.12  41   P       Pn     19 05 55.9 +0.7
TAS                                 IAmb    IAmb   19 06 01.0
      comp=Z,90nm,1.2s
YAYX  Yaylak            19.23 310  eP       Pn     19 05 57.1 +0.5
HDMB  Hadim             19.31 303   P       Pn     19 05 59.7 +2.0
BR131 Keskin Array S    19.74 312d iP       Pn     19 06 02.6 -0.1
BR131 Keskin Array S    19.74 312   P       P      19 06 01.7 +0.5
BRTR  Keskin Array B    19.74 312   P       Pn     19 06 02.8 +0.1
      comp=Z,0.6nm,0.3s,baz=132,slow=13,SNR=66
BRTR                                LR      LR     19 15 54.8
      comp=Z,64nm,19.6s,baz=58,slow=44
BRTR  Keskin Array B    19.74 312   P       P      19 06 01.7 +0.5
BRTR  Keskin Array B    19.74 312   P       P      19 06 01.7 +0.5
KONT  Konya--Tatoy      19.79 306  eP       Pn     19 06 03.5 +0.2
KULU  Kulu              19.83 309  eP       Pn     19 06 05.4 +1.6
LADK  Ladik-KONYA       19.90 306  eP       Pn     19 06 05.8 +1.2
AFSR  Afar-Bala (An     19.98 310   P       Pn     19 06 06.2 +0.7
BR231 Keskin MP Arra    20.37 311   P       Pn     19 06 10.4 +0.2
BR231                               IAmb    IAmb   19 06 13.5
      comp=Z,88nm,1.5s
ANTO  Ankara            20.38 311  ⇑P       Pn     19 06 10.3 +0.2
ANTO  Ankara            20.38 311   P       P      19 06 09.0 +0.9
ANTO                                pmax    pmax
      comp=Z,97nm,1.5s
ANTO  Ankara            20.38 311   P       P      19 06 09.0 +0.9
ANTO                                IAmb    IAmb   19 06 13.6
      comp=Z,97nm,1.4s
ILGA  Ilgaz             20.41 315   P       P      19 06 09.8 +1.2
ILGA                                IAmb    IAmb   19 06 13.7
      comp=Z,50nm,1.3s
KK31  Karatay Array     20.96  39   P       P      19 06 13.8 -0.5
KK31                                pmax    pmax
      comp=Z,27nm,1.2s
KK31  Karatay Array     20.96  39   P       P      19 06 13.8 -0.5
KK31                                IAmb    IAmb   19 06 20.4
      comp=Z,27nm,1.1s
KKAR  Karatay Array     20.96  39   P       P      19 06 13.6 -0.7
KKAR  Karatay Array     20.96  39   P       P      19 06 13.6 -0.7
KKAR                                IAmb    IAmb   19 06 20.3
      comp=Z,27nm,1.1s
SVRH  Sivrihisar-ESK    21.04 309  i P      P      19 06 17.2 +1.9
ISP   Isparta           21.08 304   P       P      19 06 16.8 +1.0
ISP                                 pmax    pmax
      comp=Z,25nm,0.7s
ISP   Isparta           21.08 304   P       P      19 06 16.8 +1.0
ISP                                 IAmb    IAmb   19 06 23.4
      comp=Z,25nm,0.7s
ELL   Elmali            21.18 301  eP       P      19 06 18.7 +1.9
ELL   Elmali            21.18 301   P       P      19 06 17.4 +0.6
ELL                                 pmax    pmax
      comp=Z,116nm,1.0s
ELL   Elmali            21.18 301   P       P      19 06 17.4 +0.6
SHUT  Suhut-Afyon       21.34 306  eP       P      19 06 23.3 +4.7
ARSB  Arslanbob         21.37  46   P       P      19 06 18.8 -0.1
ARSB                                pmax    pmax
      comp=Z,27nm,0.8s
ARSB  Arslanbob         21.37  46   P       P      19 06 18.8 -0.1
ARSB                                IAmb    IAmb   19 06 21.6
      comp=Z,27nm,0.8s
MDUB  Mudurnu           21.74 311   P       P      19 06 22.8  0.0
FETY  Fethiye           21.77 300  i P      P      19 06 24.3 +1.2
ABKAR Akbulak array     22.09  13   P       P      19 06 26.1 -0.3
ABKAR Akbulak array     22.09  13   P       P      19 06 26.6 +0.2
ABKAR                               IAmb    IAmb   19 06 46.9
      comp=Z,44nm,0.6s
DALY  Dalyan (Mula)     22.16 300  eP       P      19 06 28.7 +1.5
GULT  Gulveren          22.18 310  eP       P      19 06 29.1 +1.6
TURN  Turunc            22.21 300  eP       P      19 06 32.3 +4.5
AML   Almayashu         22.25  45   P       P      19 06 28.9 +0.2
      SNR=26
TVSB  Tavsanli          22.48 307  eP       P      19 06 32.9 +2.1
KSH   Kashi             22.52  53   P       P      19 06 26.5 -4.8
KSH                                 pP      pP     19 06 31.3 -4.5
KSH                                 PP      PnPn   19 06 53.8 -0.8
KSH                                 S       S      19 10 24.1  -14
KSH                                 SS      SnSn   19 11 03.6 -3.3
KSH                                 PcS     PcS    19 13 59.9 -3.9
YER   Yerkesik          22.54 300  eP       P      19 06 30.3 -1.0
EKS2  Erkin-Say         22.60  44   P       P      19 06 33.8 +1.8
      SNR=20
SIM   Simferopol'       22.61 324  eP       P      19 06 30.4 -1.6
SIM                                 pmax    pmax
      comp=Z,105nm,1.1s
KULA  Kula-Manisa       22.70 304  eP       P      19 06 33.9 +0.8
MANT  Manisa            22.77 304   P       P      19 06 34.1 +0.2
UCH   Uchtor            22.82  45   P       P      19 06 37.2 +2.5
      SNR=12
AKTO  Aktyubinsk        22.92   9   P       P      19 06 36.3 +1.1
      comp=Z,7.8nm,0.7s,baz=198,slow=12,SNR=19
AKTO                                S       S      19 10 45.0 +0.4
      comp=Z,2.2nm,0.9s,baz=79,slow=21,SNR=2.6
KARP  Karpathos         23.01 296           P      19 06 34.4 -1.9
AAK   Ala-Archa         23.03  44   P       P      19 06 38.5 +1.9
      comp=Z,2.7nm,0.7s,baz=191,slow=9.5,SNR=19
AAK   Ala-Archa         23.03  44⇑iP        P      19 06 39.3 +2.7
AAK                                 pmax    pmax
      comp=Z,3.0nm,0.9s
AAK   Ala-Archa         23.03  44   P       P      19 06 37.7 +1.2
AYDB  Zeytinkoy-Aydi    23.08 302  eP       P      19 06 35.4 -1.7
SILT  Sile              23.10 311  eP       P      19 06 39.3 +2.2
FRU1  Bishkek           23.20  44   P       P      19 06 36.6 -1.7
FRU1                                pmax    pmax
      comp=Z,11nm,0.9s
FRU1  Bishkek           23.20  44   P       P      19 06 36.6 -1.7
KZA   Kyzart            23.21  46   P       P      19 06 40.6 +1.9
      SNR=14
USP   Ospenovka         23.38  43   P       P      19 06 41.5 +1.5
      SNR=5.1
ULHL  Ulahol            23.93  47   P       P      19 06 47.5 +1.9
      SNR=6.8
URLA  Izmir             24.18 302  eP       P      19 06 49.9 +2.2
SANT  Santorini         24.53 297   P       P      19 06 50.3 -0.6
SANT                                IAmb    IAmb   19 07 13.1
      comp=Z,27nm,0.9s
APE   Apeiranthos       24.64 299  ⇑P       P      19 06 51.7 -0.2
VRH   Novokhopyorsk     24.76 343  eP       P      19 06 53.2 +0.4
VRH                                eS       S      19 11 15.7 +1.3
VRH                                 pmax    pmax
      comp=Z,90nm,0.7s
VRH                                 smax    smax
      comp=E,430nm,4.3s
IDI   Anoyia            24.78 294   P       P      19 06 54.8 +1.5
      comp=E,29nm,0.7s,baz=105,slow=8.0,SNR=23
GELI  Tayfur-Gelibol    24.96 307   P       P      19 06 56.1 +1.4
BOZC  Bozcaada          25.07 305  eP       P      19 06 58.4 +2.7
PSN   Preselentsi       25.28 315  eP       P      19 06 59.8 +2.3
ALN   Alexandroupoli    25.45 308   P       P      19 06 59.2  0.0
ALN                                 pmax    pmax
      comp=Z,17nm,1.1s
ALN   Alexandroupoli    25.45 308   P       P      19 06 59.2  0.0
ALN                                 IAmb    IAmb   19 07 05.2
      comp=Z,17nm,1.1s
VSR   Storozhevoye      25.49 340  eP       P      19 06 59.3 -0.1
VSR                                eS       S      19 11 28.8 +2.8
VSR                                 pmax    pmax
      comp=Z,50nm,1.0s
VSR                                 smax    smax
      comp=N,110nm,1.2s
PRD   Provadia          25.53 314  eP       P      19 07 11.7  +12
TIRR  Tirgusor          25.54 317  ⇑P       P      19 07 00.8 +0.9
TIRR  Tirgusor          25.54 317   P       P      19 07 00.3 +0.4
TIRR                                pmax    pmax
      comp=Z,29nm,0.9s
TIRR  Tirgusor          25.54 317   P       P      19 07 00.3 +0.4
TIRR                                IAmb    IAmb   19 07 03.1
      comp=Z,29nm,0.9s
NEF   NEVSHA            25.64 314  eP       P      19 07 04.1 +3.2
TLCR                    25.70 319  ⇑P       P      19 07 02.7 +1.4
TOPG  Topolog           25.79 318  ⇑P       P      19 07 02.9 +0.8
VORR  Voronezh          25.88 341  eP       P      19 07 04.0 +1.1
VORR                                pmax    pmax
      comp=Z,300nm,1.4s
HARR  Harsova           25.95 317  ⇑P       P      19 07 05.9 +2.2
CFR   Carcaliu          26.09 318  ⇑P       P      19 07 05.5 +0.5
RAZG  Razgrad           26.28 314  ⇑P       P      19 07 08.6 +1.9
ELND  Elena             26.40 312  ⇑P       P      19 07 09.7 +1.9
SZH   Strazhica         26.52 313  eP       P      19 07 10.2 +1.4
LPSR  Galich'ya Gora    26.78 341  eP       P      19 07 11.4 +0.4
LPSR                               eS       S      19 11 49.0 +2.7
LPSR                                pmax    pmax
      comp=Z,50nm,1.2s
LPSR                                smax    smax
      comp=N,430nm,3.5s
BISRR Bisoca            27.14 318  ⇑P       P      19 07 15.1 +0.6
VRI   Vrincioaia        27.30 318  ⇑P       P      19 07 18.1 +2.2
PLOR  Plostina          27.34 318  ⇑P       P      19 07 18.3 +2.1
ITM   Ithomi            27.47 298   P       P      19 07 16.2 -1.3
ITM                                 IAmb    IAmb   19 07 44.2
      comp=Z,11nm,0.9s
AGG   Agios Georgios    27.57 302   P       P      19 07 17.5 -0.9
AGG                                 pmax    pmax
      comp=Z,14nm,1.3s
AGG   Agios Georgios    27.57 302   P       P      19 07 17.5 -0.9
AGG                                 IAmb    IAmb   19 07 40.0
      comp=Z,14nm,1.3s
MLR   Muntele Rosu      27.57 317   P       P      19 07 22.5 +4.0
      comp=Z,4.7nm,0.7s,baz=141,slow=7.3,SNR=8.2
MLR   Muntele Rosu      27.57 317  ⇑P       P      19 07 20.5 +2.1
MLR   Muntele Rosu      27.57 317   P       P      19 07 20.7 +2.2
MLR                                 pmax    pmax
      comp=Z,18nm,1.1s
MLR   Muntele Rosu      27.57 317   P       P      19 07 20.7 +2.2
MLR                                 IAmb    IAmb   19 07 43.5
      comp=Z,18nm,1.1s
TESR  Tescani           27.70 319  ⇑P       P      19 07 20.4 +1.0
LIT   Litokhoron        27.74 304   P       P      19 07 19.8 -0.1
LIT                                 pmax    pmax
      comp=Z,5.0nm,0.7s
LIT   Litokhoron        27.74 304   P       P      19 07 19.8 -0.1
OZUR                    27.98 318  ⇑P       P      19 07 23.9 +1.9
VTS   Vitosha           28.05 309   P       P      19 07 21.8 -1.0
VTS                                 pmax    pmax
      comp=Z,4.0nm,1.0s
VTS   Vitosha           28.05 309   P       P      19 07 21.8 -1.0
VAY   Valandovo         28.06 306  i P      P      19 07 16.5 -6.1
VOIR                    28.09 316  ⇑P       P      19 07 24.1 +1.1
DOPR  Dopca             28.15 317  ⇑P       P      19 07 24.8 +1.3
BIZ   Bicaz             28.24 320  ⇑P       P      19 07 25.7 +1.5
ARR   Arges             28.32 316  ⇑P       P      19 07 26.3 +1.3
BRVK  Borovoye          28.36  23⇑iP        P      19 07 26.1 +0.9
BRVK                                pmax    pmax
      comp=Z,4.0nm,0.9s
BRVK  Borovoye          28.36  23   P       P      19 07 25.4 +0.2
BVAR  Borovoye Array    28.37  23   P       P      19 07 26.0 +0.7
      comp=Z,8.0nm,0.9s,baz=214,slow=7.2,SNR=26
BVAR                                PcP     PcP    19 10 37.8 +0.2
      comp=Z,0.9nm,0.5s,baz=219,slow=1.9,SNR=3.6
FNA   Florina           28.75 305   P       P      19 07 29.2 +0.2
FNA                                 pmax    pmax
      comp=Z,5.0nm,0.6s
FNA   Florina           28.75 305   P       P      19 07 29.2 +0.2
ARU   Arti              28.87   7   P       P      19 07 31.0 +1.3
      comp=Z,0.3nm,0.3s,baz=171,slow=7.0,SNR=6.8
ARU   Arti              28.87   7d iP       P      19 07 31.1 +1.4
ARU                                                19 08 25.1
ARU                                 S       S      19 12 26.4 +7.2
ARU                                 SS      SnSn   19 13 52.5  +11
ARU                                 pmax    pmax
      comp=Z,11nm,1.3s
ARU   Arti              28.87   7   P       P      19 07 29.8 +0.1
ARU                                 IAmb    IAmb   19 08 04.4
      comp=Z,8.8nm,1.1s
LOT   Lotru             28.89 315  ⇑P       P      19 07 30.7 +0.5
AKASG Malin Array Be    28.95 328   P       P      19 07 30.4 -0.1
      comp=Z,3.2nm,0.8s,baz=132,slow=8.7,SNR=15
AKASG Malin Array Be    28.95 328   P       P      19 07 30.0 -0.5
AKBB  Malin Array Si    28.95 328   P       P      19 07 29.8 -0.6
AKBB                                pmax    pmax
      comp=Z,16nm,1.4s
AKBB  Malin Array Si    28.95 328   P       P      19 07 29.8 -0.6
AKBB                                IAmb    IAmb   19 07 33.1
      comp=Z,16nm,1.4s
SKO   Skopje            29.07 307  i P      P      19 07 34.1 +2.4
BURAR Bucovina Array    29.12 320  ⇓P       P      19 07 33.3 +1.1
BURAR Bucovina Array    29.12 320   P       P      19 07 32.7 +0.5
BUR08 Bucovina Ar. S    29.14 320   P       P      19 07 33.2 +0.8
BUR08                               IAmb    IAmb   19 08 33.2
      comp=Z,7.8nm,1.1s
GZR   Gura Zlata        29.49 314  ⇑P       P      19 07 36.5 +1.1
SVE   Sverdlovsk        29.51   9  eP       P      19 07 34.7 -0.7
OBN   Obninsk           29.66 341   P       P      19 07 37.3 +0.6
      comp=Z,1.6nm,0.3s,baz=90,slow=3.0,SNR=4.6
OBN   Obninsk           29.66 341⇓iP        P      19 07 37.6 +0.9
OBN                                 pmax    pmax
      comp=Z,10.0nm,0.9s
OBN                                 MLR     MLR
      comp=Z,58nm,17.0s
OBN   Obninsk           29.66 341   P       P      19 07 37.0 +0.4
OBN                                 IAmb    IAmb   19 07 39.6
      comp=Z,24nm,1.2s
MAKZ  Makanchi          29.74  43   P       P      19 07 38.0 +0.4
MAKZ                                pmax    pmax
      comp=Z,5.0nm,0.9s
MAKZ  Makanchi          29.74  43   P       P      19 07 38.0 +0.4
MDVR  Moldovita         29.91 313  ⇑P       P      19 07 40.4 +1.2
MOS   Moscow            29.92 343  eP       P      19 07 36.4 -2.6
MK31  Makanchi Array    29.93  43   P       P      19 07 39.2 -0.1
MK31                                pmax    pmax
      comp=Z,3.0nm,1.0s
MK31  Makanchi Array    29.93  43   P       P      19 07 39.2 -0.1
MKAR  Makanchi Array    29.93  43   P       P      19 07 39.6 +0.4
      comp=Z,1.5nm,0.6s,baz=229,slow=8.3,SNR=22
MKAR                                PcP     PcP    19 10 41.7  0.0
      comp=Z,0.3nm,0.5s,baz=240,slow=3.6,SNR=2.4
MKAR                                ScP     ScP    19 14 23.2 -0.2
      comp=Z,0.9nm,1.1s,baz=230,slow=3.4,SNR=3.0
MKAR                                LR      LR     19 21 31.0
      comp=Z,198nm,18.7s,baz=216,slow=40
MKAR  Makanchi Array    29.93  43   P       P      19 07 39.2 -0.1
MKAR                                        ScP    19 14 22.6 -0.8
TIR   Tirane            30.01 305   P       P      19 07 40.4 +0.4
TIR                                 pmax    pmax
      comp=Z,17nm,0.7s
TIR   Tirane            30.01 305   P       P      19 07 40.4 +0.4
TIR                                 IAmb    IAmb   19 08 03.2
      comp=Z,17nm,0.7s
KURBB Kurchatov Arra    30.02  34   P       P      19 07 41.0 +1.1
      comp=Z,8.0nm,0.9s,baz=235,slow=9.1,SNR=28
KURK  Kurchatov         30.12  34⇓iP        P      19 07 42.2 +1.4
KURK                                pmax    pmax
      comp=Z,11nm,1.0s
KURK  Kurchatov         30.12  34   P       P      19 07 41.0 +0.2
KURK                                IAmb    IAmb   19 07 44.4
      comp=Z,10.0nm,0.9s
DRGR                    30.17 317  ⇑P       P      19 07 42.7 +1.2
SCTE  Santa Cesarea     30.72 302   P       P      19 07 45.8 -0.5
SCTE                                IAmb    IAmb   19 08 08.8
      comp=Z,9.8nm,1.0s
PDG   Podgorica         30.76 307   P       P      19 07 46.5 -0.1
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PDG                                   IAmb   IAmb    19 08 41.5
      comp=Z,4.0nm,0.6s
KIRV  Kirov             30.81 357     P      P       19 07 47.8 +1.0
      comp=Z,17nm,0.7s,baz=242,slow=12,SNR=6.6
KWP   Kalwaria Pacla    31.61 322    eP      P       19 07 55.2 +1.2
KWP   Kalwaria Pacla    31.61 322    eP      P       19 07 55.2 +1.2
KWP   Kalwaria Pacla    31.61 322     P      P       19 07 53.5 -0.6
KWP                                   IAmb   IAmb    19 07 59.1
      comp=Z,9.9nm,0.9s
TIP   Timpagrande       31.84 300   ⇑P      P       19 07 56.7 +0.5
TIP   Timpagrande       31.84 300     P      P       19 07 56.6 +0.3
TIP                                   IAmb   IAmb    19 08 00.4
      comp=Z,23nm,1.4s
CRVS  Cervenica-Dubn    31.93 320    eP      P       19 07 57.8 +0.9
CRVS                                  pmax   pmax
      comp=Z,10.0nm,0.9s
CRVS  Cervenica-Dubn    31.93 320    eP      P       19 07 57.8 +0.9
WMQ   Urumqi            32.26  51    eP      P       19 08 01.8 +1.9
WMQ                                   pP     sP      19 08 06.3 -0.4
PSZ   Piszkesteto       32.39 317     P      P       19 08 01.3 +0.3
PSZ                                   pmax   pmax
      comp=Z,4.0nm,0.8s
PSZ   Piszkesteto       32.39 317     P      P       19 08 01.3 +0.3
KMBO  Kilima Mbogo      32.41 210     P      P       19 08 03.1 +1.5
      comp=Z,0.5nm,0.3s,baz=9.8,slow=9.8,SNR=3.9
KMBO  Kilima Mbogo      32.41 210     P      P       19 08 01.7 +0.1
KMBO  Kilima Mbogo      32.41 210            P       19 08 01.9 +0.3
ACER  Acerenza          32.75 303     P      P       19 08 04.6 +0.4
ACER                                  IAmb   IAmb    19 09 17.4
      comp=Z,9.6nm,1.0s
BLY   Banja Luka        32.91 310     P      P       19 08 06.3 +0.8
BLY                                   IAmb   IAmb    19 08 42.0
      comp=Z,4.7nm,0.5s
LANS  Liptovska Anna    33.20 319    eP      P       19 08 09.8 +1.8
LANS                                  pmax   pmax
      comp=Z,8.0nm,0.9s
LANS  Liptovska Anna    33.20 319    eP      P       19 08 09.8 +1.8
VYHS  Vyhne             33.28 318    eP      P       19 08 09.7 +1.0
VYHS  Vyhne             33.28 318    eP      P       19 08 09.7 +1.0
PALK  Pallekele         33.48 122     P      P       19 08 10.4 -0.4
PALK                                  pmax   pmax
      comp=Z,24nm,1.4s
PALK  Pallekele         33.48 122            P       19 08 10.4 -0.4
PALK                                  IAmb   IAmb    19 08 28.6
      comp=Z,24nm,1.4s
OJC   Ojcow             33.52 321    eP      P       19 08 11.6 +0.8
OJC   Ojcow             33.52 321     P      P       19 08 11.5 +0.7
OJC                                   pmax   pmax
      comp=Z,14nm,0.8s
OJC   Ojcow             33.52 321     P      P       19 08 11.5 +0.7
OJC                                   IAmb   IAmb    19 08 12.6
      comp=Z,14nm,0.8s
PAOL  Paolisi           33.82 303     P      P       19 08 14.6 +1.0
SUW   Suwalki           33.92 329    eP      P       19 08 14.7 +0.6
SUW   Suwalki           33.92 329     P      P       19 08 14.0 -0.1
SUW                                   pmax   pmax
      comp=Z,46nm,1.4s
SUW   Suwalki           33.92 329     P      P       19 08 14.0 -0.1
JAVC  Velka Javorina    34.13 317    eP      P       19 08 17.9 +1.7
KLMR  Klimovskoe        34.19 349    eP      P       19 08 14.5 -1.9
KLMR                                 eS      S       19 13 35.5 -6.5
KLMR                                  pmax   pmax
      comp=Z,28nm,1.0s
KLMR  Klimovskoe        34.19 349    eP      P       19 08 14.5 -1.9
KLMR                                 eP      P       19 08 14.5 -1.9
KLMR                                 eP      P       19 08 14.5 -1.9
KLMR                                  AMP            19 08 17.3
      comp=Z,28nm,1.0s
KLMR                                 eS      S       19 13 35.6 -6.5
KLMR                                 eS      S       19 13 35.6 -6.5
DGZ   Jazzator, Alta    34.32  41 ⇓iP      P       19 08 19.1 +1.2
DGZ                                   pmax   pmax
      comp=Z,3.0nm,0.9s
CORL  Corleone          34.36 297     P      P       19 08 19.4 +1.1
CORL                                  IAmb   IAmb    19 08 49.1
      comp=Z,11nm,0.8s
INTR  Introdacqua       34.50 304     P      P       19 08 20.4 +0.9
INTR                                  IAmb   IAmb    19 08 21.7
      comp=Z,8.7nm,1.0s
MORC  Moravsky Berou    34.61 319   ⇑P      P       19 08 20.8 +0.5
MORC  Moravsky Berou    34.61 319     P      P       19 08 20.3 +0.1
MORC                                  pmax   pmax
      comp=Z,6.0nm,1.0s
MORC  Moravsky Berou    34.61 319    eP      P       19 08 20.9 +0.7
MORC  Moravsky Berou    34.61 319     P      P       19 08 20.3 +0.1
MORC                                  IAmb   IAmb    19 08 22.7
      comp=Z,5.9nm,1.0s
AQU   L'Aquila          34.94 305     P      P       19 08 20.4 -2.8
AQU                                   pmax   pmax
      comp=Z,12nm,1.1s
AQU   L'Aquila          34.94 305     P      P       19 08 20.4 -2.8
AQU                                   IAmb   IAmb    19 09 36.4
      comp=Z,12nm,1.1s
VRAC  Vranov            34.97 318    eP      P       19 08 24.2 +0.9
KRUC  Moravsky          34.98 317    eP      P       19 08 24.2 +0.7
ZAA0  Zalesovo Array    35.10  33     P      P       19 08 23.9 -0.5
ZAA0                                  IAmb   IAmb    19 08 27.2
      comp=Z,22nm,0.9s
ZALV  Zalesovo Beam     35.10  33     P      P       19 08 24.7 +0.3
      comp=Z,12nm,0.4s,baz=243,slow=9.2,SNR=50
ZALV                                  LR     LR      19 24 37.0
      comp=Z,212nm,18.5s,baz=282,slow=39
ZALV  Zalesovo Beam     35.10  33     P      P       19 08 24.0 -0.4
ZALV  Zalesovo Beam     35.10  33     P      P       19 08 23.9 -0.4
OBKA  Obir              35.22 312    epP     P       19 08 27.2 +1.6
      comp=Z,3.6nm,0.8s
NRCA  Norcia            35.24 306     P      P       19 08 25.8 -0.1
NRCA                                  IAmb   IAmb    19 08 36.1
      comp=Z,5.6nm,0.8s
MBAR  Mbarara           35.28 220     LR     LR      19 23 33.6
      comp=Z,191nm,19.5s,baz=53,slow=37
MBAR  Mbarara           35.28 220     P      P       19 08 25.7 -0.8
MBAR                                  pmax   pmax
      comp=Z,6.0nm,1.2s
MBAR  Mbarara           35.28 220     P      P       19 08 25.7 -0.8
BRDH  Bariadhala        35.49  89     LR     LR      19 24 36.8
      comp=Z,147nm,21.4s,baz=277,slow=39
MURB  Monte Urbino      35.76 306     P      P       19 08 29.3 -1.0
MURB                                  IAmb   IAmb    19 08 35.1
      comp=Z,25nm,1.2s
KSP   Ksiaz             35.79 320    eP      P       19 08 31.3 +0.9
KSP   Ksiaz             35.79 320    eP      P       19 08 31.3 +0.9
CHVC  Chvalec           35.82 319    eP      P       19 08 31.1 +0.4
MOA   Molln             35.84 314    eP      P       19 08 31.0 +0.1
      comp=Z,1.6nm,0.5s
MYKA  Terra Mystica     35.85 312    epP     P       19 08 32.5 +1.4
      comp=Z,4.7nm,0.9s
KBA   Koelnbreinsper    36.19 313    epP     P       19 08 35.0 +1.0
      comp=Z,8.1nm,1.0s
STAL  STALIGIAL         36.36 311     P      P       19 08 34.7 -0.7
GEC2  GERESS Array S    36.54 316     P      P       19 08 35.9 -1.1
GERES GERESS Array B    36.54 316     P      P       19 08 38.1 +1.1
      comp=Z,0.7nm,0.6s,baz=92,slow=8.0,SNR=7.2
GERES GERESS Array B    36.54 316     P      P       19 08 35.9 -1.1
ABTA  Abfaltersbach     36.63 312    epP     P       19 08 38.6 +0.9
      comp=Z,3.5nm,1.0s
KHC   Kasperske Hory    36.72 316    eP      P       19 08 38.5 +0.1
KHC   Kasperske Hory    36.72 316 ⇓iP      P       19 08 38.8 +0.4
KHC                                   pmax   pmax
      comp=Z,8.0nm,0.9s
KHC   Kasperske Hory    36.72 316     P      P       19 08 37.5 -0.9
OSSC  Osservatorio P    36.72 306     P      P       19 08 38.2 -0.3
CASP  Castiglione de    36.86 305     P      P       19 08 39.0 -0.6
CASP                                  IAmb   IAmb    19 09 39.5
      comp=Z,18nm,1.1s
CTI   Castel Tesino     37.02 311     P      P       19 08 40.8 -0.2
CTI                                   pmax   pmax
      comp=Z,7.0nm,0.8s
CTI   Castel Tesino     37.02 311     P      P       19 08 40.8 -0.2
CTI                                   IAmb   IAmb    19 08 45.9
      comp=Z,6.9nm,0.8s
ZCCA  Zocca             37.08 308     P      P       19 08 42.0 +0.4
BRG   Berggiesshubel    37.16 319    eP      P       19 08 42.2 +0.2
      comp=Z,3.5nm,0.7s
BRG   Berggiesshubel    37.16 319    eP      P       19 08 42.2 +0.2
BRG                                   pmax   pmax
      comp=Z,4.0nm,0.7s
WTTA  Wattenberg        37.35 312    eP      P       19 08 43.8 -0.2
      comp=Z,8.6nm,0.8s
WATA  Walderalm         37.41 313    eP      P       19 08 44.4  0.0
      comp=Z,7.8nm,0.9s
KEST  Kesra             37.44 293     P      P       19 08 46.6 +1.8
      comp=Z,4.7nm,0.8s,baz=37,slow=4.5,SNR=6.3
KEST  Kesra             37.44 293     P      P       19 08 45.4 +0.6
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TMCR  Tamitsa           37.53 350    eP      P       19 08 45.1 +0.1
SQTA  Sankt Quirin      37.62 312    epP     P       19 08 46.3 +0.1
      comp=Z,8.9nm,0.7s
SALO  Salr              37.67 310     P      P       19 08 47.4 +0.8
SALO                                  IAmb   IAmb    19 08 50.0
      comp=Z,14nm,0.7s
MOTA  Moosalm           37.73 312    eP      P       19 08 46.6 -0.5
      comp=Z,7.3nm,0.9s
CLL   Collm             37.88 319    i P     P       19 08 49.0 +0.9
      comp=Z,12nm,1.6s
CLL   Collm             37.88 319     P      P       19 08 47.5 -0.6
CLL                                   pmax   pmax
      comp=Z,4.0nm,0.9s
CLL   Collm             37.88 319     P      P       19 08 47.5 -0.6
FETA  Feichten          37.88 312    epP     P       19 08 49.0 +0.6
      comp=Z,9.4nm,0.8s
RETA  Reutte            37.99 313    epP     P       19 08 50.0 +0.7
      comp=Z,4.6nm,0.7s
FIA1  FINESS Array S    38.02 340     P      P       19 08 48.8 -0.4
FIA1                                  IAmb   IAmb    19 08 52.1
      comp=Z,12nm,0.8s
FINES FINESS Array B    38.02 340     P      P       19 08 49.5 +0.4
      comp=Z,12nm,0.8s,baz=140,slow=10,SNR=38
FINES FINESS Array B    38.02 340     P      P       19 08 49.2 +0.1
FINES FINESS Array B    38.02 340     P      P       19 08 49.2 +0.1
MSSA  Maissana          38.10 307     P      P       19 08 49.7 -0.5
MSSA                                  IAmb   IAmb    19 09 13.2
      comp=Z,24nm,1.1s
GRA1  Grafenberg Arr    38.36 316     P      P       19 08 52.5 +0.2
GRA1                                  IAmb   IAmb    19 10 01.9
      comp=Z,13nm,1.2s
GRF   Grafenberg Arr    38.36 316     P      P       19 08 52.5 +0.2
GRF                                   pmax   pmax
      comp=Z,13nm,1.2s
DAVA  Damuels           38.51 312    eP      P       19 08 53.7 -0.1
      comp=Z,24nm,0.9s
SENIN Lac Senin/Sane    40.03 310     P      P       19 09 05.5 -1.0
BNI   Bardonecchia      40.22 308     P      P       19 09 06.9 -1.1
BNI                                   pmax   pmax
      comp=Z,4.0nm,0.7s
BNI   Bardonecchia      40.22 308     P      P       19 09 06.9 -1.1
GTA   Gaotai            40.48  61   ⇑P      P       19 09 11.1 +0.9
GTA                                   pP     pP      19 09 15.8 +0.7
GTA                                   sP     sP      19 09 18.1 +1.0
ECH   Echery            40.52 313     P      P       19 09 09.4 -0.9
ECH                                   pmax   pmax
      comp=Z,7.0nm,0.9s
ECH   Echery            40.52 313     P      P       19 09 09.4 -0.9
LVZ   Lovozero          41.52 350     P      P       19 09 16.5 -1.8
LVZ                                   pmax   pmax
      comp=Z,69nm,1.6s
LVZ   Lovozero          41.52 350     P      P       19 09 16.5 -1.8
SSB   Saint Sauveur     41.75 308     P      P       19 09 20.3 -0.2
SSB                                   pmax   pmax
      comp=Z,16nm,1.6s
SSB   Saint Sauveur     41.75 308     P      P       19 09 20.2 -0.2
SSB                                   IAmb   IAmb    19 09 55.5
      comp=Z,16nm,1.6s
TAM   Tamanrasset       42.74 274     P      P       19 09 29.1 +0.1
TAM                                   pmax   pmax
      comp=Z,15nm,1.2s
TAM   Tamanrasset       42.74 274     P      P       19 09 29.1 +0.1
TAM                                   IAmb   IAmb    19 09 32.3
      comp=Z,15nm,1.2s
NC602 NORSAR Array S    42.93 332     P      P       19 09 27.7 -2.1
NC602                                 IAmb   IAmb    19 10 44.3
      comp=Z,40nm,1.6s
NC405 NORSAR Array S    43.05 332     P      P       19 09 30.2 -0.6
NC405                                 IAmb   IAmb    19 09 32.9
      comp=Z,25nm,0.8s
MOY   Mondy             43.07  43    eP      P       19 09 32.8 +1.5
CHTO  Chiang Mai        43.19  92     P      P       19 09 32.6 +0.1
CHTO                                  pmax   pmax
      comp=Z,5.0nm,0.7s
CHTO  Chiang Mai        43.19  92     P      P       19 09 32.6 +0.1
NB201 NORSAR Array S    43.19 332     P      P       19 09 31.7 -0.3
NB2   NORSAR Subarra    43.22 332     P      P       19 09 31.7 -0.5
      comp=Z,1.1nm,0.6s,baz=113,slow=7.9
NOA   NORSAR Array B    43.22 332     P      P       19 09 31.9 -0.3
      comp=Z,4.4nm,0.8s,baz=121,slow=8.1,SNR=25
NOA                                   LR     LR      19 29 49.0
      comp=Z,29nm,18.9s,baz=255,slow=39
KONO  Kongsberg         43.23 330     P      P       19 09 32.1 -0.2
KONO                                  pmax   pmax
      comp=Z,54nm,1.6s
KONO  Kongsberg         43.23 330     P      P       19 09 32.0 -0.2
NC303 NORSAR Array S    43.25 332     P      P       19 09 31.4 -1.1
NAO01 NORSAR Array S    43.26 332     P      P       19 09 32.3 -0.2
CM31  Chiang Mai Arr    43.32  92     P      P       19 09 32.2 -1.3
CMAR  Chiang Mai Arr    43.32  92     P      P       19 09 33.5  0.0
      comp=Z,2.0nm,0.7s,baz=285,slow=8.9,SNR=17
CMAR                                  PcP    PcP     19 11 22.6 +0.3
      comp=Z,1.6nm,0.8s,baz=288,slow=5.8,SNR=5.1
CMAR  Chiang Mai Arr    43.32  92ceP     P       19 09 33.7 +0.2
CMAR                                  pmax   pmax
      comp=Z,2.0nm,0.7s
CMAR  Chiang Mai Arr    43.32  92     P      P       19 09 32.2 -1.3
CMAR                                         PcP     19 11 22.6 +0.3
NBO00 NORSAR Array S    43.40 332     P      P       19 09 32.8 -0.8
NBO00                                 IAmb   IAmb    19 10 16.4
      comp=Z,31nm,1.5s
NC204 NORSAR Array S    43.53 332     P      P       19 09 34.5 -0.3
LZH   Lanzhou           43.74  66    eP      P       19 09 38.4 +1.5
LZH                                   pP     sP      19 09 44.3 +0.5
LZH                                   sP     pP      19 09 47.3 +5.4
ZAK   Zakamensk         44.20  45    eP      P       19 09 40.3  0.0
CD2   Chengdu           44.28  73    eP      P       19 09 40.0 -1.2
KEV   Kevo              44.49 348     P      P       19 09 43.1 +0.9
KEV                                   pmax   pmax
      comp=Z,61nm,1.4s
KEV   Kevo              44.49 348     P      P       19 09 43.1 +0.9
ARCES ARCESS Array B    44.61 347     P      P       19 09 43.7 +0.6
      comp=Z,4.1nm,0.7s,baz=148,slow=7.6,SNR=26
ARE0  ARCESS Array S    44.61 347     P      P       19 09 43.7 +0.5
PBKT  Sadao Pong        45.81  94     P      P       19 09 53.8 +0.3
PBKT                                  IAmb   IAmb    19 09 56.6
      comp=Z,8.2nm,0.8s
SONM  Songino Array     45.84  49     P      P       19 09 54.2 +0.7
      comp=Z,2.9nm,0.9s,baz=262,slow=8.7,SNR=16
SONM  Songino Array     45.84  49     P      P       19 09 53.5  0.0
SONM                                  pmax   pmax
      comp=Z,4.0nm,1.1s
SONM  Songino Array     45.84  49     P      P       19 09 53.5  0.0
NRIK  Noril'sk          46.19  16     P      P       19 09 56.6 +0.9
      comp=Z,5.7nm,0.7s,baz=229,slow=5.1,SNR=13
NRIK                                  LR     LR      19 32 47.1
      comp=Z,92nm,18.4s,baz=210,slow=40
ULN   Ulaanbaatar       46.29  49 ⇓iP      P       19 09 57.9 +0.9
ULN                                   pmax   pmax
      comp=Z,3.0nm,0.8s
ULN   Ulaanbaatar       46.29  49     P      P       19 09 56.9 -0.2
ULN                                   IAmb   IAmb    19 10 00.1
      comp=Z,4.0nm,0.8s
OPO   Ambohidratompo    46.45 187     P      P       19 10 00.2 +1.7
      comp=Z,4.6nm,1.0s,baz=313,slow=10.0,SNR=4.0
ESBB  Sonseca Array     47.86 300     P      P       19 10 09.9 +0.6
ESBB                                  IAmb   IAmb    19 11 26.0
      comp=Z,16nm,1.6s
ESDC  Sonseca Array     47.86 300     P      P       19 10 09.8 +0.6
      comp=Z,0.7nm,0.3s,baz=81,slow=8.1,SNR=2.9
XAN   Xi'an             48.11  68     P      P       19 10 14.1 +2.8
XAN                                   pP     sP      19 10 17.9 -0.3
XAN   Xi'an             48.11  68     P      P       19 10 10.2 -1.1
XAN                                   pmax   pmax
      comp=Z,11nm,1.3s
XAN   Xi'an             48.11  68     P      P       19 10 10.2 -1.1
XAN                                   IAmb   IAmb    19 10 36.9
      comp=Z,11nm,1.3s
PAB   San Pablo         48.16 299     P      P       19 10 11.8 +0.1
PAB                                   pmax   pmax
      comp=Z,9.0nm,1.1s
PAB   San Pablo         48.16 299     P      P       19 10 11.8 +0.1
PAB                                   IAmb   IAmb    19 10 14.9
      comp=Z,8.6nm,1.1s
ESK   Eskdalemuir       48.32 321     P      P       19 10 12.4 -0.2
ESK                                   pmax   pmax
      comp=Z,86nm,1.7s
ESK   Eskdalemuir       48.32 321     P      P       19 10 12.3 -0.2
ENH   Enshi             49.25  73     P      P       19 10 19.4 -0.7
ENH                                   IAmb   IAmb    19 10 29.8
      comp=Z,4.8nm,0.8s
HHC   Hu-ho-hao-te      49.45  59    eP      P       19 10 22.0 +0.4
TOA0  Torodi Ar. Sit    49.63 264     P      P       19 10 22.5 -0.6
TORD  Torodi Ar. Bea    49.63 264     P      P       19 10 23.3 +0.2
      comp=Z,4.7nm,0.8s,baz=59,slow=6.6,SNR=19
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TORD                                  LR     LR      19 33 21.5
      comp=Z,100nm,18.6s,baz=45,slow=38
TORD  Torodi Ar. Bea    49.63 264     P      P       19 10 22.1 -1.0
DSB   Dublin            49.85 318     P      P       19 10 25.4 +1.2
MVO   Moncorvo          50.09 302    eP      P       19 10 27.5 +1.1
MTE   Manteigas         50.54 301     P      P       19 10 29.5 -0.3
PCBR  Castelo Branco    50.54 300    eP      P       19 10 32.4 +2.7
      comp=Z,26nm,1.7s
PVIS  Viseu             50.78 301    eP      P       19 10 33.4 +1.8
PBEJ  Beja              51.05 298    eP      P       19 10 34.3 +0.7
PTOM  Tomar             51.28 300    eP      P       19 10 37.4 +2.1
PCAS  Casmilo, Conde    51.30 300    eP      P       19 10 37.6 +2.1
IPM   Ipoh              51.46 108     P      P       19 10 35.8 -1.1
IPM                                   IAmb   IAmb    19 10 37.5
      comp=Z,7.8nm,0.9s
BOD   Bodaibo           51.68  37    eP      P       19 10 37.2 -0.8
BOD                                   pmax   pmax
      comp=Z,13nm,1.0s
SPA0  Spitsbergen Ar    53.01 351     P      P       19 10 48.3 +0.7
NJ2   Nanjing           56.67  68    eP      P       19 11 14.3 -0.5
MNAI  Manna             58.03 115     P      P       19 11 22.6 -2.0
DBIC  Dimbokro          58.30 260     P      P       19 11 27.3 +0.8
      comp=Z,6.6nm,0.9s,baz=26,slow=7.4,SNR=6.1
DBIC                                  LR     LR      19 38 10.8
      comp=Z,118nm,18.0s,baz=38,slow=38
DBIC  Dimbokro          58.30 260     P      P       19 11 26.0 -0.5
DBIC                                  pmax   pmax
      comp=Z,20nm,1.3s
DBIC  Dimbokro          58.30 260     P      P       19 11 26.0 -0.5
KIC   Kosan Boka        58.35 260    eP      P       19 11 26.5 -0.4
      comp=Z,60nm,1.5s
TIC   Toumodi           58.46 260    eP      P       19 11 28.6 +1.0
LIC   Lamto             58.66 260    eP      P       19 11 29.3 +0.2
      comp=Z,16nm,0.7s
LBTB  Lobatse           58.68 209     P      P       19 11 28.9 -0.1
LBTB                                  pmax   pmax
      comp=Z,10.0nm,0.9s
LBTB  Lobatse           58.68 209     P      P       19 11 28.9 -0.1
LBTB                                  IAmb   IAmb    19 11 31.9
      comp=Z,10.0nm,0.9s
LBTB  Lobatse           58.68 209            P       19 11 29.9 +0.9
ZEA   Zeya              59.07  42    eP      P       19 11 31.8 +0.5
ZEA                                   pmax   pmax
      comp=Z,9.0nm,1.0s
MDSI  Maura Dua         59.08 115     P      P       19 11 31.8 -0.1
TIXI  Tiksi             59.48  21 ⇑iP      P       19 11 36.1 +2.3
TIXI                                  pmax   pmax
      comp=Z,1.0nm,0.9s
TIXI  Tiksi             59.48  21     P      P       19 11 33.8  0.0
BOSA  Boshof            61.99 207     P      P       19 11 52.4 +0.8
      comp=Z,4.6nm,1.0s,baz=36,slow=8.7,SNR=4.6
BOSA                                  LR     LR      19 39 39.8
      comp=Z,96nm,19.7s,baz=34,slow=37
BOSA  Boshof            61.99 207     P      P       19 11 50.9 -0.7
BOSA                                  pmax   pmax
      comp=Z,18nm,1.4s
BOSA  Boshof            61.99 207     P      P       19 11 50.9 -0.7
KSAR  Wonju Array Be    62.51  60     P      P       19 11 54.8 -0.2
KSAR  Wonju Array Be    62.51  60     P      P       19 11 54.8 -0.2
KLR   Kul'dur           62.54  46     LR     LR      19 41 45.9
      comp=Z,125nm,18.3s,baz=9.0,slow=39
KLR   Kul'dur           62.54  46 ⇓iP      P       19 11 54.7 -0.3
KLR                                   pmax   pmax
      comp=Z,3.0nm,1.0s
KSRS  Korea Array       62.54  60     P      P       19 11 54.5 -0.6
      comp=Z,1.4nm,0.6s,baz=279,slow=6.8,SNR=6.5
KKM   Kota Kinabalu     63.81  97     P      P       19 12 03.2 -0.9
SUR   Sutherland        67.14 209     P      P       19 12 25.2 -0.1
SEY   Seymchan          69.81  29 ⇓iP      P       19 12 42.3 +0.9
TULEG Thule             69.93 348     P      P       19 12 41.5 -0.4
TULEG                                 IAmb   IAmb    19 12 42.6
      comp=Z,5.3nm,0.8s
YSS   Yuzh-Sakhalins    70.25  47    eP      P       19 12 44.6 +0.2
YSS                                   MLR    MLR
      comp=Z,300nm,16.0s
MRSI  Marisa            71.47 100     P      P       19 12 51.7 -0.6
BILL  Bilibino          72.70  21 ⇓iP      P       19 13 00.0 +1.2
BILL                                  pmax   pmax
      comp=Z,4.0nm,1.2s
BILL  Bilibino          72.70  21     P      P       19 12 59.2 +0.4
BILL                                  IAmb   IAmb    19 13 04.1
      comp=Z,10nm,1.4s
PETK  Petropavlovsk-    76.55  37     P      P       19 13 21.8 +0.4
      comp=Z,3.7nm,0.8s,baz=307,slow=5.4,SNR=4.0
PETK                                  LR     LR      19 50 55.7
      comp=Z,73nm,18.4s,baz=240,slow=39
PETK  Petropavlovsk-    76.55  37     P      P       19 13 20.9 -0.5
PETK  Petropavlovsk-    76.55  37     P      P       19 13 20.9 -0.5
TOLK  Toolik Lake Re    82.41   8     P      P       19 13 53.6 +0.6
TOLK                                  IAmb   IAmb    19 14 10.8
      comp=Z,6.6nm,1.3s
SCHQ  Schefferville     82.74 330     P      P       19 13 55.4 +0.4
      comp=Z,4.5nm,0.7s,baz=58,slow=4.9,SNR=6.3
SCHQ  Schefferville     82.74 330     P      P       19 13 55.4 +0.4
C36M  Paulatuk          83.06 359     P      P       19 13 55.7 -0.7
C36M                                  IAmb   IAmb    19 13 58.8
      comp=Z,4.7nm,0.9s
ANM   Nome              83.22  16     P      P       19 13 57.3  0.0
ANM                                   pmax   pmax
      comp=Z,9.0nm,1.4s
ANM   Nome              83.22  16     P      P       19 13 57.3  0.0
ANM                                   IAmb   IAmb    19 14 12.3
      comp=Z,8.7nm,1.4s
FITZ  Fitzroy Crossi    84.05 114     P      P       19 14 02.8 +0.5
BMAR  Burnt Mountain    84.13   7     P      P       19 14 02.6 +0.6
IMAR  Indian Mountai    84.29  11     P      P       19 14 02.0 -0.8
KNRA  Kununurra         85.37 110     P      P       19 14 09.2 +0.2
MLY   Manley            85.65  10     P      P       19 14 09.2 -0.5
MLY                                   IAmb   IAmb    19 15 26.8
      comp=Z,11nm,1.7s
PRP   Porcupine Dome    85.88   8     P      P       19 14 11.6 +0.6
PRP                                   IAmb   IAmb    19 14 14.0
      comp=Z,3.4nm,1.1s
MDM   Murphy Dome       86.08   9     P      P       19 14 11.5 -0.2
ILAR  Eielson Array     86.43   8     P      P       19 14 13.4 -0.1
      comp=Z,0.7nm,0.8s,baz=313,slow=3.0,SNR=7.4
ILAR  Eielson Array     86.43   8     P      P       19 14 12.6 -0.9
BPAW  Bear Paw Mtn.     86.49  10     P      P       19 14 13.6 -0.2
YKA   Yellowknife Ar    89.40 354     P      P       19 14 28.3 +0.6
      comp=Z,3.1nm,0.7s,baz=11,slow=4.6,SNR=43
WRA   Warramunga Arr    92.08 111     P      P       19 14 41.1 +0.2
      comp=Z,1.4nm,0.9s,baz=313,slow=4.2,SNR=8.3
WRAB  Tennant Creek     92.09 111 ⇓iP      P       19 14 41.8 +0.9
WRAB                                  pmax   pmax
      comp=Z,5.0nm,1.0s
LONY  Lake Ozonia       93.32 325     P      P       19 14 46.2  0.0
ASAR  Alice Springs     93.51 115     P      P       19 14 46.5 -1.0
      comp=Z,1.2nm,0.8s,baz=301,slow=4.3,SNR=11
ASAR                                  LR     LR      20 01 56.3
      comp=Z,85nm,18.1s,baz=150,slow=39
ASAR  Alice Springs     93.51 115     P      P       19 14 45.8 -1.7
ASAR  Alice Springs     93.51 115     P      P       19 14 45.8 -1.7
SADO  Sadowa            95.43 328     LR     LR      20 00 01.1
      comp=Z,24nm,19.8s,baz=43,slow=37
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*IDC **18** 19:20:43.0±1.1, 23°.15N×96°.28E, h0^{km}, mb3.8/8, mb1 3.9/9, mb1mx3.6/48, mbtmp3.8/9, ML3.9/1, MS3.2/4, Ms1 3.3/4, ms1mx2.8/42, Error ellipse: s-maj=55.9km s-min=13.8km az=64.0*

*NDI **18** 19:20:45.4±3.2, 22°.73N×96°.03E, h33^{km}, ML3.3, mb4.4(NEIC)*

*NEIC **18** 19:20:45.2±1.8, 22°.91N±0°.02×95°.97E±0°.07, h22^{km}±5^{km}, mb4.4/33, Error ellipse: s-maj=9.8km s-min=1.4km az=100.0*

*BJI **18** 19:20:45.2±0.0, 22°.98N×95°.79E, h26^{km}, mB4.5/21, mb4.3/27, ML4.1/3, Ms4.1/7, Ms7 3.8/7*

ISC 18 19:20:46.7±0.4**, 22°.97N**±0°.04×**95°.98E**±0°.05**, h32**^{km}**, n102,** $\sigma 1^{s}41$/107**, mb4.2**/25**, MS3.6**/5**, Myanmar**

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Code  Station Name       Δ°   AZ°     Phase ID         Time     Res
                                      Op     ISC     h  m  s    ISC
KOHI  KOHIMA             3.23 328    eP      Pn      19 21 37.6 +2.2
SIMRM Sittwe             4.03 226            Pn      19 21 45.1 -1.2
LKP   Lekhapani          4.35 358     IAML           19 23 09.3
      comp=E,82nm,0.4s
SHL   Shillong           4.55 306    eP      Pn      19 21 53.6 +0.1
SHL                                  eS      Sn      19 22 45.2 -0.1
SHL                                   IAML           19 22 47.8
      comp=N,61nm,0.3s
SHL                                   IAML           19 22 49.7
      comp=E,67nm,0.1s
TEZP  TEZPUR             4.64 322    eP      Pn      19 21 54.6 -0.1
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TEZP				eS	Sn	19 22 47.6	+0.2
TEZP				IAML		19 22 53.4	
	comp=E,51nm,0.2s						
TEZP				IAML		19 22 53.7	
	comp=N,49nm,0.2s						
ZIRO	ZIRO	4.93	337	eP	Pn	19 21 58.7	-0.1
CM33	Chiang Mai Arr	4.97	146	P	Pn	19 21 56.9	-2.3
CHTO	Chiang Mai	4.98	146		Pn	19 21 58.7	-0.6
CMMT	Chiang Mai	4.98	146	P	Pn	19 21 58.7	-0.6
CM34	Chiang Mai Arr	5.05	144	P	Pn	19 21 58.7	-1.7
CM32	Chiang Mai Arr	5.06	147	P	Pn	19 21 59.7	-0.7
MHMT	Maesarieng	5.11	159	P	Pn	19 22 00.7	-0.4
CM35	Chiang Mai Arr	5.20	145	P	Pn	19 22 01.1	-1.3
CM15	Chiang Mai Arr	5.27	148	P	Pn	19 22 02.9	-0.4
CM31	Chiang Mai Arr	5.28	148	P	Pn	19 22 03.1	-0.4
CM31	Chiang Mai Arr	5.28	148		Pn	19 22 03.0	-0.4
CMAR	Chiang Mai Arr	5.28	148	Pn	Pn	19 22 03.1	-0.3
	comp=N,1.0nm,0.3s,baz=322,slow=13,SNR=78						
CMAR				Pg	Pb	19 22 21.2	+2.9
	comp=N,4.2nm,0.3s,baz=328,slow=16,SNR=36						
CMAR				Lg	Lg	19 23 28.9	
	comp=N,4.1nm,0.3s,baz=325,slow=32,SNR=4.2						
CMAR				LR	LR	19 24 28.0	
	comp=N,232nm,19.9s,baz=4.0,slow=42						
CMAR	Chiang Mai Arr	5.28	148		Pn	19 22 03.0	-0.4
CMAR					Pb	19 22 20.7	+2.4
CM36	Chiang Mai Arr	5.30	146	P	Pn	19 22 03.0	-0.8
CM05	Chiang Mai Arr	5.32	148	P	Pn	19 22 03.6	-0.4
LAMP	Lampang	5.59	142	P	Pn	19 22 06.2	-1.6
PHRA	Phrae	5.96	137	P	Pn	19 22 11.9	-0.9
NANT	Nan	6.05	132	P	Pn	19 22 11.2	-3.0
KMI	Kunming	6.54	69	Pg	Pb	19 22 37.3	-2.7
KMI				Sg	Sb	19 24 10.1	+12
KMI	Kunming	6.54	69	Pn	Pn	19 22 20.8	-0.2
UTTA	Uttaradit	6.74	140	P	Pn	19 22 22.7	-0.8
PHIT	Phitsanulok	7.10	143	P	Pn	19 22 27.4	-1.1
SLVN	Son La	7.53	101	Pn	Pn	19 22 33.5	-0.8
PBKT	Sadao Pong	7.91	143	P	Pn	19 22 38.9	-0.7
PBKT	Sadao Pong	7.91	143		Pn	19 22 39.1	-0.5
GTK	Tadong	7.96	304	eP	Pn	19 22 42.2	+1.7
GTK				ex	x	19 24 13.1	
GTK				IAML		19 24 20.8	
	comp=N,27nm,0.5s						
GTK				IAML		19 24 21.2	
	comp=E,25nm,0.2s						
LSA	Lhasa	7.98	328		Pn	19 22 42.0	+1.0
LSA				Sn	Sn	19 24 07.7	-2.7
TAPN	Taplejung	8.67	302	eP	Pn	19 22 50.5	+0.3
	comp=E,52nm,0.5s						
ODAN	Odare	8.71	298	eP	Pn	19 22 50.4	-0.3
	comp=E,29nm,0.3s						
SRDT	SRDT	9.07	160	P	Pn	19 22 54.5	-1.1
RAMN	Ramite	9.39	297	eP	Pn	19 23 00.3	+0.2
	comp=E,38nm,0.4s						
JIRN	Jiri	10.01	300	eP	Pn	19 23 08.8	+0.1
	comp=E,45nm,0.3s						
GUN	Gumba	10.37	300	eP	Pn	19 23 13.3	-0.3
	comp=E,22nm,0.3s						
PKI	Pulchoki	10.61	298	eP	Pn	19 23 16.1	-0.7
	comp=E,9.1nm,0.3s						
PKIN	Phulchoki	10.62	298	eP	Pn	19 23 16.1	-0.8
	comp=E,15nm,0.4s						
KKN	Kakani	10.80	299	eP	Pn	19 23 18.6	-0.8
DMN	Daman	10.87	297	eP	Pn	19 23 19.7	-0.7
	comp=E,22nm,0.7s						
GKN	Gorkha	11.40	298	eP	Pn	19 23 26.1	-1.5
	comp=E,42nm,0.3s						
UBPT	Khong Chiam	11.78	129	Pn	Pn	19 23 31.5	-1.2
DANN	Dangsing	12.25	298	eP	Pn	19 23 37.7	-1.6
ENH	Enshi	14.10	56		Pn	19 24 06.2	+1.9
LZH	Lanzhou	14.75	26	eP	P	19 24 22.5	+3.6
LZH				pP	Pn	19 24 33.4	+20
LZH				sP		19 24 39.0	
XAN	Xi'an	15.83	43	Pn	Pn	19 24 26.7	-0.6
GTA	Gaotai	16.71	10	eP	P	19 24 45.9	+5.2
GTA				pP	sP	19 24 53.3	0.0
GTA				sP	pP	19 24 56.3	+7.1
GTA				S	S	19 27 53.8	+0.1
GTA				sS	sS	19 28 01.4	-5.7
GTA				SS	SnSn	19 28 14.3	+17
HKPS	Hong Kong Po S	16.79	89		Pn	19 24 39.2	-0.3
HKPS				IAmb	IAmb	19 24 41.7	
	comp=Z,94nm,1.6s						
LHMI	Lhok Sumawe	17.66	177		P	19 24 49.5	-1.6
LHMI				IAmb	IAmb	19 24 55.9	
	comp=Z,52nm,1.2s						
PSI	Prapat	20.25	171	LR	LR	19 32 26.5	
	comp=Z,88nm,19.4s,baz=342,slow=34						
PALK	Pallekele	21.43	226	P	P	19 25 30.9	-1.5
PALK				IAmb	IAmb	19 26 13.7	
	comp=Z,29nm,1.4s						
WMQ	Urumqi	21.90	344	eP	P	19 25 38.5	+1.4
WMQ				pP	pP	19 25 44.5	-1.3
WMQ				sP	sP	19 25 47.3	-2.6
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,100nm,4.5s						
WMQ	Urumqi	21.90	344		P	19 25 36.3	-0.8
WMQ				IAmb	IAmb	19 25 40.3	
	comp=Z,19nm,1.3s						
HHC	Hu-ho-hao-te	22.14	33	eP	P	19 25 41.9	+2.0
HHC				pmax	pmax		
	comp=Z,34nm,0.7s						
HHC				pmax	pmax		
	comp=Z,140nm,6.6s						
HHC				LR	LR		
	comp=Z,340nm,10.6s						
HHC				LR	LR		
	comp=Z,100nm,9.0s						
HHC				LR	LR		
	comp=Z,340nm,10.5s						
TIA	Tai'an	22.57	49	P	P	19 25 47.6	+3.2
TIA				pmax	pmax		
	comp=Z,11nm,0.9s						
NIL	Nilore	22.62	303	P	P	19 25 45.3	+0.3
NIL				IAmb	IAmb	19 25 47.4	
	comp=Z,11nm,0.7s						
KSH	Kashi	23.68	319	P	P	19 25 56.1	+0.4
KSH				pP	pP	19 26 02.1	-2.7
KSH				PcP	PcP	19 29 41.4	+1.9
KSH				S	S	19 30 06.1	-2.5
KSH				sS	pS	19 30 16.6	-1.6
KSH				pmax	pmax		
	comp=Z,16nm,0.8s						
KSH				pmax	pmax		
	comp=Z,160nm,4.6s						
KSH				LR	LR		
	comp=Z,210nm,11.7s						
KSH				LR	LR		
	comp=Z,250nm,12.5s						
KSH				LR	LR		
	comp=Z,100nm,10.5s						
BJT	Baijiatuau	24.10	40	P	P	19 26 02.4	+2.9
BJT				IAmb	IAmb	19 26 05.4	
	comp=Z,6.8nm,0.8s						
KSM	Kuching	25.50	145	P	P	19 26 13.1	+0.7
KSM				IAmb	IAmb	19 26 20.8	
	comp=Z,12nm,1.3s						
BOOM	Boomskoye usch	25.64	324	P	P	19 26 14.8	+1.1
SBUM	Sibu	25.77	140	P	P	19 26 17.6	+2.8
SBUM				IAmb	IAmb	19 26 20.7	
	comp=Z,7.5nm,1.2s						
SONM	Songino Array	26.18	16	P	P	19 26 17.1	-1.3
	comp=Z,0.8nm,0.9s,baz=191,slow=6.9,SNR=4.5						
SONM	Songino Array	26.18	16	P	P	19 26 18.7	+0.3
KBL	Kabul	26.20	302	P	P	19 26 17.9	-1.0
KBL				IAmb	IAmb	19 26 22.4	
	comp=Z,7.8nm,1.2s						
MK31	Makanchi Array	26.21	338	P	P	19 26 18.9	+0.3
MKAR	Makanchi Array	26.21	338	P	P	19 26 18.8	+0.1
	comp=Z,3.8nm,0.9s,baz=149,slow=8.8,SNR=18						
MKAR	Makanchi Array	26.21	338	P	P	19 26 18.5	-0.1
MAKZ	Makanchi	26.33	338	P	P	19 26 20.9	+1.2
ULN	Ulaanbaatar	26.38	17	P	P	19 26 20.5	+0.2
AAK	Ala-Archa	26.53	323	P	P	19 26 23.0	+1.3
	comp=Z,4.2nm,0.8s,baz=122,slow=5.9,SNR=26						
AAK				LR	LR	19 39 10.5	
	comp=Z,17nm,19.7s,baz=224,slow=42						
AAK	Ala-Archa	26.53	323	P	P	19 26 22.7	+1.0
AAK				IAmb	IAmb	19 26 24.0	
	comp=Z,6.1nm,0.9s						
FRU1	Bishkek	26.57	323	P	P	19 26 22.9	+1.0
FRU1				IAmb	IAmb	19 26 48.0	
	comp=Z,6.1nm,0.8s						
ARSB	Arslanbob	26.59	319	P	P	19 26 22.5	+0.2
ARSB				IAmb	IAmb	19 26 40.3	
	comp=Z,8.9nm,1.4s						
KK31	Karatay Array	29.12	320	P	P	19 26 44.6	-0.1
KKAR	Karatay Array	29.12	320	P	P	19 26 44.4	-0.2
KKAR	Karatay Array	29.12	320	P	P	19 26 44.8	+0.1
KKAR				IAmb	IAmb	19 27 41.8	
	comp=Z,4.3nm,1.4s						
ZAA0	Zalesovo Array	32.07	348	P	P	19 27 10.3	-0.2
ZAA0				IAmb	IAmb	19 27 23.9	
	comp=Z,4.6nm,1.5s						
ZALV	Zalesovo Beam	32.07	348	P	P	19 27 09.7	-0.8
	comp=Z,0.8nm,0.6s,baz=170,slow=10,SNR=4.0						
UGM	Wanagama	33.83	153	P	P	19 27 23.8	-2.6
MDJ	Mudanjiang	34.94	44	P	P	19 27 35.9	+0.2
MDJ				IAmb	IAmb	19 27 40.5	
	comp=Z,16nm,1.5s						
LUWI	Luwuk	35.36	129	P	P	19 27 39.3	-0.3
GEYT	Alibeck	35.62	304	P	P	19 27 41.2	-0.5
USA0B	Ussuriysk Arra	36.31	46	P	P	19 27 45.6	-1.8
USA0B				IAmb	IAmb	19 28 58.3	
	comp=Z,7.0nm,0.8s						
USRK	Ussuriysk Ar.	36.31	46	P	P	19 27 46.7	-0.7
ABKAR	Akbulak array	38.61	322	P	P	19 28 06.4	-0.4
ARU	Arti	43.17	330	P	P	19 28 42.5	-1.8
ARU				IAmb	IAmb	19 28 56.4	
	comp=Z,7.5nm,1.4s						
FAKI	Fak Fak	43.74	121	P	P	19 28 47.2	-2.3
TIXI	Tiksi	52.18	13	LR	LR	19 52 27.4	
	comp=Z,65nm,20.5s,baz=164,slow=37						
TIXI	Tiksi	52.18	13	P	P	19 29 54.0	+0.1
CSS	Mathiatis	55.31	297	P	P	19 30 17.4	-0.1
WRA	Warramunga Arr	56.75	136	P	P	19 30 28.0	+0.2
	comp=Z,1.3nm,1.0s,baz=319,slow=7.7,SNR=4.0						
WB2	Warramunga Arr	56.76	136	P	P	19 30 26.9	-1.0
LVZ	Lovozero	58.23	337	P	P	19 30 38.7	+1.0
ASAR	Alice Springs	59.22	139	P	P	19 30 46.5	+1.3
	comp=Z,0.8nm,0.9s,baz=322,slow=7.4,SNR=5.9						
ASAR	Alice Springs	59.22	139	P	P	19 30 44.4	-0.8
BFO	Black Forest	71.69	315	P	P	19 32 07.0	+1.5
BFO				IAmb	IAmb	19 33 57.1	
	comp=Z,12nm,1.5s						
MSSA	Maissana	71.88	311	P	P	19 32 07.3	+0.4
BMAR	Burnt Mountain	79.45	20	P	P	19 32 51.0	+1.3
ILAR	Eielson Array	80.19	23	P	P	19 32 53.7	+0.1
	comp=Z,0.4nm,0.7s,baz=287,slow=4.4,SNR=3.1						
YKA	Yellowknife Ar	91.42	14	P	P	19 33 49.4	0.0
	comp=Z,0.3nm,0.7s,baz=330,slow=4.3,SNR=3.5						

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*NIED **18** 19:24:00,24°.80N×124°.00E,h83^{km},Mw4.5 Best double couple: M$_0$7.06000×10^{15} NP1:φ$_s$265.00000°,δ85.00000°,λ76.00000°. NP2:φ$_s$157.00000°,δ15.00000°,λ162.00000°.*

*MOS **18** 19:24:20.1±1.0,24°.84N×123°.90E,h33^{km},mb5.1/19,Error ellipse: s-maj=16.2km s-min=7.4km az=112.9*

*BJI **18** 19:24:22.5±0.0,24°.52N×124°.30E,h84^{km},mB4.9/35,mb4.5/57,Ms4.1/23,Ms7 3.9/14*

*NEIC **18** 19:24:27.6,24°.83N×124°.02E,h76^{km},Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.93; M$_{θθ}$-0.74; M$_{φφ}$-0.19; M$_{rθ}$-7.26; M$_{θφ}$2.92; M$_{φr}$-1.44; Fault plane solution: M$_0$8.01000×10^{15} NP1:φ$_s$167.73000°,δ21.83000°,λ173.43000°. NP2:φ$_s$263.84000°,δ87.56000°,λ68.31000°. Principal axes: T 8.4722, Plg43.0000°, Azm153.0000°; N -1.0308, Plg22.0000°, Azm265.0000°; P -7.4414, Plg39.0000°, Azm13.0000°;*

*IDC **18** 19:24:27.4±0.4,24°.87N×124°.04E,h84^{km}±3^{km},mb4.2/29,mb1 4.3/31,mb1mx4.3/43,mbtmp4.5/31,MS3.3/11,Ms1 3.3/11,ms1mx3.1/39 Error ellipse: s-maj=9.7km s-min=8.2km az=86.0*

*NEIC **18** 19:24:27.5±1.7,24°.84N±0°.06×124°.02E±0°.07,h85^{km}±4^{km},mb4.9/186,Mwr4.5/14,Error ellipse: s-maj=9.4km s-min=8.1km az=139.0*

*JMA **18** 19:24:28.0±0.1,24°.82N×123°.99E,h77^{km}±2^{km},M4.3*

JMA Felt II J1.

ISC 18 19:24:27.5±0.3,**24°.85N**±0°.03×**124°.00E**±0°.03,**h85**^{km}±2^{km},**h85**^{km}**:pP-P,n386,**σ**1**^{s}**05**/457,**mb4.8**/146,**41C-13D,**
Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JISG	Ishigakijimahi	0.39	133	P	Pn	19 24 40.5	-0.4
JISG				S	Sn	19 24 49.8	-1.0
JIJ	Ishigaki jima	0.51	165	P	Pn	19 24 41.2	-0.6
JIJ				S	Sn	19 24 51.0	-1.4
IRIF	Iriomote-Funau	0.57	205	P	Pn	19 24 41.8	-0.6
IRIF				S	Sn	19 24 52.5	-0.8
JKRS	Kuro-shima	0.61	179	P	Pn	19 24 42.4	-0.4
JKRS				S	Sn	19 24 53.5	-0.5
JTJ	Tarama	0.68	108	P	Pn	19 24 43.5	+0.2
JTJ				S	Sn	19 24 55.0	-0.1
HATJ	Hateruma jima	0.81	192	P	Pn	19 24 44.4	-0.4
HATJ				S	Sn	19 24 56.8	-0.8
YOJ	Yonaguni jima	0.98	247	P	Pn	19 24 46.7	+0.1
YOJ				S	Sn	19 24 59.9	-1.0
YOJ	Yonaguni jima	0.98	247		Pn	19 24 46.8	+0.1
JYNG	Yonagunijimaku	1.04	248	P	Pn	19 24 47.5	+0.2
JYNG				eS	Sn	19 25 01.9	-0.2
JIRB	Irabujima	1.07	91	P	Pn	19 24 47.8	+0.1
JIRB				S	Sn	19 25 02.5	-0.3
JIKM	Ikemajima	1.14	86	P	Pn	19 24 49.0	+0.5
JIKM				S	Sn	19 25 04.4	+0.1
JMJ2	Miyako jima3	1.22	95	P	Pn	19 24 50.0	+0.6
JMJ2				S	Sn	19 25 06.5	+0.6
JOGS	Gusukube	1.28	94	P	Pn	19 24 50.9	+0.6
JOGS				S	Sn	19 25 08.4	+0.9
TATO	Taipei	2.28	274		Pn	19 25 04.5	+1.3
NACB	Ninganchiao	2.29	253		Pn	19 25 02.9	-0.5
YHNB	Yeheng	2.39	266		Pn	19 25 06.2	+1.3
YULB	Yu-li	2.86	240		Pn	19 25 09.7	-1.5
SSLB	Suanglung	2.97	250		Pn	19 25 12.4	-0.2
TWG	Pinlang	3.36	234		Pn	19 25 15.8	-1.9
TPUB	Ta-pu	3.44	244		Pn	19 25 19.5	+0.5
JOW	Kunigami	4.33	62	P	Pn	19 25 30.8	-0.2
	3.8nm,0.3s,baz=158,slow=13,SNR=116						
JOW				S	Sn	19 26 19.9	-0.4
	5.2nm,0.3s,baz=142,slow=12,SNR=7.6						
JOW	Kunigami	4.33	62		Pn	19 25 30.5	-0.5
QZH	Quanzhou	4.91	272	⇓iP	Pn	19 25 39.6	+0.7
QZH				S	Sn	19 26 32.6	-1.8
QZH				smax	smax		
	comp=N,76nm,0.5s						
QZH				smax	smax		
	comp=E,58nm,0.4s						
QZH				LR	LR		
	comp=N,450nm,4.5s						
KNMB	Chin-men Tao	5.12	267	Pn	Pn	19 25 42.1	+0.4
SSE	Sheshan	6.70	339	Pn	Pn	19 26 03.8	+0.6
SZP	Santa	7.98	205		Pn	19 26 20.0	-0.8
SZP				Sn	Sn	19 27 49.2	-0.3
NJ2	Nanjing	8.48	329	eP	Pn	19 26 29.3	+1.8
NJ2				pmax	pmax		
	comp=Z,30nm,0.5s						
HKPS	Hong Kong Po S	9.40	256	Pn	Pn	19 26 41.1	+1.0
JNU	Nakatsue	10.20	35	P	Pn	19 26 51.9	+0.8
	1.2nm,0.3s,baz=219,slow=6.5,SNR=12						
JNU				LR	LR	19 31 04.4	
	comp=Z,66nm,19.7s,baz=188,slow=39						
JNU	Nakatsue	10.20	35	Pn	Pn	19 26 51.4	+0.3
WHN	Wuhan	10.26	306	⇑P	Pn	19 26 54.0	+2.2
WHN				S	Sn	19 28 47.3	+2.4
WHN				LR	LR		
	comp=E,710nm,8.0s						
TGY	Tagaytay City	11.08	196	P	Pn	19 27 07.0	+3.9
	30nm,0.3s,baz=114,slow=1.7,SNR=3.7						
TGY				S	Sn	19 29 06.4	+1.2
	41nm,0.3s,baz=154,slow=20,SNR=3.7						
TJN	Taejon	11.85	13	⇓iP	Pn	19 27 15.5	+2.2
INCN	Inchon	12.79	10		Pn	19 27 27.7	+1.6
KSAR	Wonju Array Be	12.98	14		Pn	19 27 26.7	-1.9
KSRS	Korea Array	13.00	14	P	Pn	19 27 32.2	+3.4
	3.1nm,0.3s,baz=190,slow=12,SNR=34						
KSRS				LR	LR	19 33 22.6	
	comp=Z,101nm,19.3s,baz=186,slow=41						
KS19	Wonju Array Si	13.04	14		Pn	19 27 30.9	+1.6
ENH	Enshi	13.95	296	P	P	19 27 47.6	+0.8
INU	Inuyama	15.36	44	P	P	19 28 01.5	-0.8
XAN	Xi'an	15.99	308	P	P	19 28 11.8	+2.4
XAN				S	S	19 31 12.9	0.0
XAN				pmax	pmax		
	comp=Z,15nm,0.8s						
XAN				LR	LR		
	comp=N,160nm,17.3s						
XAN				LR	LR		
	comp=E,180nm,19.5s						
XAN	Xi'an	15.99	308	P	P	19 28 08.9	-0.5
JHJ2	Mitsune	16.09	56	P	P	19 28 10.3	-0.1
TIY	Taiyuan	16.17	325	eP	P	19 28 15.8	+4.5
BJI	Beijing	16.51	338	P	P	19 28 16.4	+1.4
BJI				S	Sn	19 31 18.8	+2.3
BJI				pmax	pmax		
	comp=Z,14nm,1.0s						
MAJO	Matsushiro	16.86	43	P	P	19 28 19.6	+0.7
MJB9	Matsu-Tunnel	16.86	43	P	P	19 28 19.7	+0.8
MJAR	Matsushiro Arr	16.86	43	P	P	19 28 18.7	-0.3
	0.1nm,0.3s,baz=227,slow=8.0,SNR=11						
MJAR				LR	LR	19 34 56.7	
	comp=Z,53nm,20.7s,baz=270,slow=37						
MJAR	Matsushiro Arr	16.86	43	P	P	19 28 18.9	-0.1
CTBH	Cotabato--PC H	17.54	179	⇓iP	Pn	19 28 27.8	+1.3
KCP	Kidapawan	17.77	176	⇓eP	Pn	19 28 31.4	+1.9
MSHR	Mys Shultsa	18.64	17	⇓iP	Pn	19 28 39.6	-0.1
CN2	Changchun	18.94	3	⇑P	Pn	19 28 43.1	-0.1
CN2				epP	pP	19 29 03.0	+4.9
CN2				eS	S	19 32 08.0	-4.3
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
HHC	Hu-ho-hao-te	19.03	330	eP	Pn	19 28 44.8	+0.3
HHC				pmax	pmax		
	comp=Z,66nm,0.8s						
HHC				pmax	pmax		
	comp=Z,270nm,3.9s						
HHC				LR	LR		
	comp=N,640nm,9.6s						
HHC				LR	LR		
	comp=E,300nm,10.0s						
HHC				LR	LR		
	comp=Z,640nm,10.5s						
KMI	Kunming	19.27	275	P	Pn	19 28 47.1	-0.5
KMI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KKM	Kota Kinabalu	20.14	203	P	P	19 28 54.7	-0.3
MDJ	Mudanjiang	20.24	12	P	P	19 28 54.8	-1.0
USA0B	Ussuriysk Arra	20.37	17	P	P	19 28 56.4	-0.8
USRK	Ussuriysk Ar.	20.37	17	P	P	19 28 56.8	-0.4
	5.7nm,0.7s,baz=192,slow=9.0,SNR=18						
USRK	Ussuriysk Ar.	20.37	17	P	P	19 28 55.8	-1.4
USRK				pP	pwP	19 29 15.8	-0.2
LZH	Lanzhou	20.62	308	eP	Pn	19 29 02.6	-0.7
LZH				pP	pwP	19 29 21.3	+2.6
LZH				sP	sP	19 29 33.8	+6.7
LZH				pmax	pmax		
	comp=Z,27nm,1.1s						
SPMM	Sapulut	21.30	201	P	P	19 29 10.0	+2.6
GUMO	Guam	22.64	116	P	P	19 29 20.2	-1.5
PBKT	Sadao Pong	23.04	253	P	P	19 29 27.0	+1.3
ERM	Erimo	23.34	38	P	P	19 29 26.7	-1.5
CHTO	Chiang Mai	24.00	260	P	P	19 29 35.1	+0.6
CM31	Chiang Mai Arr	24.12	260	P	P	19 29 36.3	+0.7
CMAR	Chiang Mai Arr	24.12	260	P	P	19 29 36.6	+1.0
	1.5nm,0.6s,baz=62,slow=8.3,SNR=8.0						
CMAR				PcP	PcP	19 33 15.7	+0.9
	0.4nm,0.7s,baz=47,slow=1.3,SNR=4.5						
CMAR				LR	LR	19 39 04.7	
	comp=Z,26nm,18.1s,baz=168,slow=36						
CMAR	Chiang Mai Arr	24.12	260	ceP	P	19 29 36.7	+1.1
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CMAR	Chiang Mai Arr	24.12	260	P	P	19 29 34.3	-1.3
TNTI	Ternate	24.16	172	P	P	19 29 37.7	+1.8
	comp=Z,53nm,0.8s						
TNTI	Ternate	24.16	172	P	P	19 29 35.4	-0.5
TNTI				IAmb	IAmb	19 29 39.2	
	comp=Z,32nm,0.7s						
MRSI	Marisa	24.31	185	P	P	19 29 38.1	+0.8
	comp=Z,662nmcomp=Z,84nm,0.7s						
ASAJ	Asahikawa	24.48	34	P	P	19 29 38.4	-0.2
	comp=Z,12nm,0.4s,baz=238,slow=9.5,SNR=6.2						
MPSI	Mapaga	24.69	190	P	P	19 29 42.2	+1.5
	comp=Z,21nm,1.0s						
GTA	Gaotai	25.00	311	eP	P	19 29 43.5	-0.1
GTA				pP	pwP	19 30 06.3	+1.4
GTA				sP	sP	19 30 17.5	+5.6
GTA				sS	sS	19 34 36.1	+2.2
GTA				ScP	ScP	19 36 47.3	-0.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,53nm,6.7s						
GTA				LR	LR		
	comp=Z,120nm,17.1s						
GTA				LR	LR		
	comp=Z,67nm,17.1s						
SBUM	Sibu	25.00	209	P	P	19 29 43.8	+0.2
SBUM	Sibu	25.00	209	P	P	19 29 44.0	+0.4
KLR	Kul'dur	25.08	12	P	P	19 29 43.6	-0.4
	comp=Z,6.5nm,0.7s,baz=210,slow=10,SNR=18						
KLR	Kul'dur	25.08	12	⇓iP	P	19 29 44.2	+0.2
KLR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
LBMI	Labuha	25.57	172	P	P	19 29 51.4	+2.7
	comp=Z,54nm,0.9s						
APSI	Ampana	25.71	185	P	P	19 29 49.4	-0.6
	comp=Z,37nm,0.6s						
LUWI	Luwuk	25.77	183	P	P	19 29 52.3	+1.8
YUK	Yuzh-Kuril'sk	26.15	38	⇓iP	P	19 29 54.1	+0.3
SIJI	Sorong	26.52	164	P	P	19 29 57.1	-0.2
	comp=Z,11nm,0.8s,baz=341,slow=8.9,SNR=7.1						
ULN	Ulaanbaatar	26.60	334	⇓iP	P	19 29 58.3	+0.4
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ULN	Ulaanbaatar	26.60	334	P	P	19 29 57.7	-0.3
KSM	Kuching	26.74	212	P	P	19 29 58.1	-1.2
KSM	Kuching	26.74	212	P	P	19 30 01.0	+1.7
SANI	Sanana	26.81	176	P	P	19 29 59.2	-0.7
	comp=Z,51nm,1.0s						
SONM	Songino Array	26.84	333	P	P	19 30 00.3	+0.2
	comp=Z,8.4nm,0.6s,baz=151,slow=9.2,SNR=50						
SONM				pP	pwP	19 30 20.8	-0.4
	comp=Z,3.2nm,0.8s,baz=147,slow=9.9,SNR=3.8						
SONM				LR	LR	19 41 23.7	
	comp=Z,61nm,19.8s,baz=174,slow=38						
SONM	Songino Array	26.84	333	P	P	19 29 60.0	-0.1
FAKI	Fak Fak	28.75	163	P	P	19 30 16.7	-0.5
FAKI				IAmb	IAmb	19 30 17.8	
	comp=Z,24nm,0.8s						
ZEA	Zeya	28.95	4	eP	P	19 30 18.8	+0.2
ZEA				pmax	pmax		
	comp=Z,20nm,0.7s						
SIMRM	Sittwe	29.09	267	P	P	19 30 20.0	-0.3
SIMRM				IAmb	IAmb	19 30 33.1	
	comp=Z,25nm,1.2s						
LSA	Lhasa	29.53	287	P	P	19 30 25.9	+1.2
KULM	Kulim	29.67	233	P	P	19 30 26.6	+1.1
KULM				IAmb	IAmb	19 30 42.1	
	comp=Z,41nm,1.5s						
IPM	Ipoh	29.96	231	P	P	19 30 28.0	-0.1
IPM				IAmb	IAmb	19 31 03.9	
	comp=Z,48nm,1.8s						
MYKOM	Kota Tinggi	30.07	223	P	P	19 30 28.7	-0.2
MYKOM				IAmb	IAmb	19 31 01.8	
	comp=Z,30nm,1.4s						
TLY	Talaya	30.98	335	P	P	19 30 37.1	+0.5
	comp=Z,7.5nm,0.5s,baz=183,slow=8.7,SNR=8.0						
TLY	Talaya	30.98	335	eP	P	19 30 37.2	+0.6
TLY				pmax	pmax		
	comp=Z,17nm,0.6s						
TLY	Talaya	30.98	335	P	P	19 30 36.4	-0.2
TLY				IAmb	IAmb	19 30 38.3	
	comp=Z,9.5nm,0.5s						
MOY	Mondy	32.03	333	eP	P	19 30 45.9	0.0
MOY				pmax	pmax		
	comp=Z,19nm,1.5s						
TAPN	Taplejung	32.61	282	eP	P	19 30 51.9	+0.3
	comp=Z,5.4nm,0.7s						
PSI	Prapat	32.63	232	P	P	19 30 52.6	+1.0
	comp=Z,1.6nm,0.3s,baz=0.0,slow=7.1,SNR=1.1						
PSI				pP	pP	19 31 11.2	+0.3
	comp=Z,4.1nm,0.5s,baz=26,slow=5.6,SNR=2.0						
RPSI	Rantau Prapat	32.70	232	P	P	19 30 52.6	+0.5
RPSI					pP	19 31 11.2	-0.2
ODAN	Odare	32.93	282	eP	P	19 30 55.3	+1.0
	comp=Z,7.3nm,0.5s						
MMRI	Maumere	33.33	183	P	P	19 30 57.0	-0.5
RAMN	Ramite	33.63	282	eP	P	19 31 01.2	+0.8

	comp=Z,4.6nm,0.4s						
GUN	Gumba	34.19	284	eP	P	19 31 05.8	+0.4
	comp=Z,6.6nm,0.4s						
JAGI	Jajag, Banyuwa	34.48	197	P	P	19 31 06.2	-1.3
JAGI				IAmb	IAmb	19 31 09.0	
	comp=Z,13nm,0.7s						
PKI	Pulchoki	34.63	283	eP	P	19 31 09.6	+0.4
	comp=Z,3.0nm,0.3s						
PKIN	Phulchoki	34.65	283	eP	P	19 31 09.5	+0.3
	comp=Z,3.5nm,0.4s						
DMN	Daman	34.90	283	eP	P	19 31 12.3	+0.9
	comp=Z,3.7nm,0.4s						
WOJI	Wonogiri, Jawa	34.90	203	P	P	19 31 12.1	+1.0
	comp=Z,54nm,1.0s						
MDSI	Maura Dua	34.96	216	P	P	19 31 12.1	+0.5
	comp=Z,13nm,1.1s						
WMQ	Urumqi	35.08	312	eP	P	19 31 13.8	+1.3
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,100nm,5.3s						
UGM	Wanagama	35.12	204	P	P	19 31 13.4	+0.4
KPJI	Karang Pucung	35.20	207	P	P	19 31 16.4	+2.7
	comp=Z,28nm,2.1s						
GKN	Gorkha	35.28	284	eP	P	19 31 15.4	+0.8
	comp=Z,9.9nm,0.5s						
MNAI	Manna	35.52	218	P	P	19 31 16.9	+0.4
CISI	Cisompet, Garu	35.87	208	P	P	19 31 18.2	-1.2
YAK	Yakutsk	37.36	4	⇓iP	P	19 31 30.4	-1.2
YAK				pmax	pmax		
	comp=Z,11nm,1.0s						
YAK	Yakutsk	37.36	4	P	P	19 31 29.8	-1.8
YAK				IAmb	IAmb	19 31 31.9	
	comp=Z,10nm,0.6s						
DGZ	Jazzator, Alta	37.66	321	⇓iP	P	19 31 34.6	+0.1
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.7s						
PEA0B	Petropavlovsk-	37.90	33	P	P	19 31 35.6	-0.6
PEA0B				IAmb	IAmb	19 32 12.5	
	comp=Z,41nm,1.4s						
PEA0B				PP	PnPn	19 33 08.5	+2.0
PETK	Petropavlovsk-	37.90	33	P	P	19 31 35.4	-0.9
	comp=Z,2.6nm,0.6s,baz=210,slow=4.1,SNR=5.9						
PETK	Petropavlovsk-	37.90	33	P	P	19 31 35.1	-1.1
PETK				PP	PnPn	19 33 08.4	+1.9
MTN	Manton Dam	38.11	169	P	P	19 31 37.1	-1.3
PET	Petropavlovsk	38.33	34	eP	P	19 31 38.1	-1.7
PET				eS	S	19 37 26.8	-1.1
PET				pmax	pmax		
	comp=Z,32nm,0.4s						
PET	Petropavlovsk	38.33	34	P	P	19 31 38.3	-1.5
MK31	Makanchi Array	39.67	314	P	P	19 31 50.7	-0.6
MK31				IAmb	IAmb	19 31 51.9	
	comp=Z,5.5nm,0.5s						
MK31					pwP	19 32 12.5	-1.0
MKAR	Makanchi Array	39.67	314	P	P	19 31 51.0	-0.3
	comp=Z,4.7nm,0.3s,baz=100,slow=9.4,SNR=123						
MKAR				pP	pP	19 32 09.9	-0.8
	comp=Z,3.1nm,0.6s,baz=96,slow=11,SNR=4.3						
MKAR				ScP	ScP	19 37 37.7	0.0
	comp=Z,0.3nm,0.7s,baz=94,slow=5.3,SNR=2.6						
MKAR				LR	LR	19 50 08.4	
	comp=Z,32nm,18.4s,baz=100,slow=39						
MKAR	Makanchi Array	39.67	314	P	P	19 31 50.1	-1.1
MKAR				pP	pwP	19 32 12.5	-1.0
MAKZ	Makanchi	39.88	314	P	P	19 31 52.4	-0.6
MAKZ				IAmb	IAmb	19 31 54.0	
	comp=Z,12nm,0.6s						
MAKZ					pwP	19 32 14.1	-1.1
KNRA	Kununurra	40.55	173	P	P	19 31 57.8	-0.9
PMG	Port Moresby	40.86	144	⇑iP	P	19 32 01.8	+0.5
PMG				pmax	pmax		
	comp=Z,147nm,1.2s						
PMG	Port Moresby	40.86	144	P	P	19 32 00.2	-1.1
PMG				IAmb	IAmb	19 32 02.8	
	comp=Z,41nm,1.2s						
ZAA0	Zalesovo Array	41.11	325	P	P	19 32 01.7	-1.3
ZAA0				IAmb	IAmb	19 32 02.8	
	comp=Z,11nm,0.7s						
ZAA0				pP	pP	19 32 22.7	+0.1
ZALV	Zalesovo Beam	41.11	325	P	P	19 32 02.0	-1.0
	comp=Z,12nm,0.4s,baz=118,slow=8.6,SNR=69						
ZALV				pP	pP	19 32 22.5	-0.1
	comp=Z,6.2nm,0.6s,baz=113,slow=8.1,SNR=6.0						
ZALV				LR	LR	19 50 02.4	
	comp=Z,38nm,19.9s,baz=128,slow=37						
ZALV	Zalesovo Beam	41.11	325	P	P	19 32 01.5	-1.4
ZALV				pP	pP	19 32 22.9	+0.4
KSH	Kashi	42.70	302	P	P	19 32 19.9	+3.6
KSH				pP	sP	19 32 43.3	-2.1
KSH				PP	PcP	19 34 05.0	-1.7
KSH				PcS	PcS	19 38 01.3	+2.3
KSH				S	S	19 38 37.8	+4.1
KSH				SS	SS	19 41 45.8	-1.2
KSH				pmax	pmax		
	comp=Z,20nm,1.1s						
KSH				pmax	pmax		
	comp=Z,180nm,4.4s						
KSH				LR	LR		
	comp=Z,270nm,15.0s						
KSH				LR	LR		
	comp=Z,190nm,9.7s						
KSH				LR	LR		
	comp=Z,84nm,11.8s						
FITZ	Fitzroy Crossi	42.72	178	P	P	19 32 16.0	-0.4
	comp=Z,17nm,0.7s,baz=0.2,slow=8.1,SNR=40						
FITZ	Fitzroy Crossi	42.72	178	P	P	19 32 15.4	-0.9
FITZ				IAmb	IAmb	19 32 16.6	
	comp=Z,26nm,0.9s						
COEN	Coen	42.87	152	P	P	19 32 18.4	+0.7
KURK	Kurchatov	43.26	319c	iP	P	19 32 20.2	-0.2
KURK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KURK	Kurchatov	43.26	319	P	P	19 32 19.4	-1.0
KURK				IAmb	IAmb	19 32 20.7	
	comp=Z,23nm,1.4s						
KURK				pwP	pP	19 32 41.1	+1.0
AAK	Ala-Archa	44.16	306	P	P	19 32 28.9	+0.9
	comp=Z,0.8nm,0.4s,baz=111,slow=8.6,SNR=8.3						
AAK				PcP	PP	19 34 12.0	-0.3
	comp=Z,1.0nm,0.6s,baz=153,slow=2.3,SNR=2.4						
AAK				ScP	ScP	19 37 55.5	-0.4
	comp=Z,0.5nm,0.4s,baz=135,slow=1.4,SNR=4.8						
AAK	Ala-Archa	44.16	306	⇓iP	P	19 32 29.1	+1.1
AAK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AAK	Ala-Archa	44.16	306	P	P	19 32 28.6	+0.6
NIL	Nilore	44.76	293	P	P	19 32 33.1	+0.3
ARSB	Arslanbob	45.14	304	P	P	19 32 35.9	+0.1
WB0	Warramunga Arr	45.49	166	P	P	19 32 38.1	-0.4
WB0				IAmb	IAmb	19 32 39.5	
	comp=Z,18nm,0.8s						
WRAB	Tennant Creek	45.64	166	⇓iP	P	19 32 40.2	+0.5
WRAB				pmax	pmax		
	comp=Z,20nm,0.9s						
WRAB	Tennant Creek	45.64	166	P	P	19 32 39.6	-0.1
WRAB				IAmb	IAmb	19 32 40.7	
	comp=Z,17nm,0.7s						
WRA	Warramunga Arr	45.65	166	P	P	19 32 39.7	-0.1
	comp=Z,12nm,0.6s,baz=347,slow=8.8,SNR=152						
WRA				pP	pP	19 32 59.2	-1.1
	comp=Z,11nm,0.9s,baz=347,slow=8.2,SNR=10						
WRA	Warramunga Arr	45.65	166	P	P	19 32 38.4	-1.4
WRA				pP	pP	19 32 58.8	-1.5
WB2	Warramunga Arr	45.65	166	P	P	19 32 39.4	-0.4
WB2				IAmb	IAmb	19 32 40.9	
	comp=Z,27nm,0.9s						
WB2					pP	19 32 58.4	-1.9
WR0	Warramunga Arr	45.71	166	P	P	19 32 39.7	-0.5
WR0				IAmb	IAmb	19 32 41.3	
	comp=Z,32nm,1.1s						
WR0					pP	19 32 59.5	-1.3
PSA00	Pilbara Seismi	46.32	185	P	P	19 32 44.4	-0.6
PSA00	Pilbara Seismi	46.32	185	P	P	19 32 44.1	-0.9
PSA00				IAmb	IAmb	19 32 45.2	
	comp=Z,37nm,0.8s						
TIXI	Tiksi	46.91	2c	iP	P	19 32 47.4	-1.6
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TIXI	Tiksi	46.91	2	P	P	19 32 46.7	-2.3
TIXI				IAmb	IAmb	19 32 48.4	
	comp=Z,5.4nm,0.5s						
TIXI					PcP	19 34 19.3	-1.0
KK31	Karatay Array	47.12	307	P	P	19 32 51.0	-0.2
KK31					PcP	19 34 20.8	-0.9
KKAR	Karatay Array	47.12	307	P	P	19 32 51.7	+0.5
KKAR					PcP	19 34 21.5	-0.2
KKAR	Karatay Array	47.12	307	P	P	19 32 51.5	+0.4
KKAR					PcP	19 34 21.2	-0.5
GIRL	Giralia	48.16	192	P	P	19 32 59.7	+0.5
KBL	Kabul	48.20	295	P	P	19 33 00.0	+0.1
KBL				IAmb	IAmb	19 33 02.2	
	comp=Z,14nm,1.1s						
BRVK	Borovoye	48.87	320	⇑iP	P	19 33 04.3	-0.1
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRVK	Borovoye	48.87	320	P	P	19 33 04.4	-0.1
AS31	Alice Springs	49.18	168	P	P	19 33 07.9	+0.8
ASAR	Alice Springs	49.18	168	P	P	19 33 07.6	+0.5
	comp=Z,11nm,0.7s,baz=349,slow=6.9,SNR=159						
ASAR				pP	pP	19 33 27.2	-0.7
	comp=Z,3.4nm,0.8s,baz=353,slow=7.0,SNR=3.9						
ASAR				PcP	PcP	19 34 28.8	-0.5
	comp=Z,1.6nm,0.5s,baz=340,slow=3.0,SNR=4.2						
ASAR				ScP	ScP	19 38 16.2	-0.7
	comp=Z,0.3nm,0.7s,baz=350,slow=4.2,SNR=3.0						
ASAR	Alice Springs	49.18	168	P	P	19 33 07.7	+0.5
ASAR					pP	19 33 27.4	-0.5
ASAR				PcP	PcP	19 34 29.2	0.0
NRIK	Noril'sk	49.45	344	P	P	19 33 08.3	-0.3
	comp=Z,3.3nm,0.5s,baz=118,slow=8.6,SNR=4.7						
NRIK				pP	pP	19 33 28.2	-0.5
	comp=Z,4.8nm,0.8s,baz=131,slow=7.4,SNR=3.5						
NRIK				LR	LR	19 56 33.8	
	comp=Z,56nm,18.4s,baz=148,slow=39						
MORW	Morawa	54.15	189	P	P	19 33 43.5	-0.5
MORW				IAmb	IAmb	19 33 44.6	
	comp=Z,14nm,0.9s						
ABKAR	Akbulak array	54.82	314	P	P	19 33 48.7	-0.1
ABKAR				pwP	pwP	19 34 12.9	+1.0
SVE	Sverdlovsk	55.03	323	eP	P	19 33 50.2	0.0
SVE				pmax	pmax		
	comp=Z,19nm,0.6s						
FORT	Forrest	55.45	176	P	P	19 33 53.8	+0.4
FORT				PcP	PcP	19 34 52.9	+0.3
ARU	Arti	56.13	323c	iP	P	19 33 56.7	-1.3
ARU						19 34 51.9	
ARU						19 35 58.4	
ARU				S	S	19 41 41.1	+0.7
ARU				SS	SS	19 45 22.7	-4.9
ARU				pmax	pmax		
	comp=Z,14nm,0.5s						
ARU	Arti	56.13	323	P	P	19 33 57.5	-0.6
EIDS	Eidsvold	56.38	150	P	P	19 34 00.1	0.0
GAMB	Gambell	56.67	29	P	P	19 34 02.8	+1.1
GEYT	Alibeck	56.67	300	P	P	19 34 03.4	+1.1
	comp=Z,6.5nm,0.6s,baz=90,slow=1.4,SNR=19						
GEYT				pP	pwP	19 34 24.2	-1.4
	comp=Z,2.7nm,0.8s,baz=62,slow=8.5,SNR=2.9						
GEYT	Alibeck	56.67	300	P	P	19 34 03.5	+1.2
GYA0B	ALIBECK ARRAY	56.67	300	P	P	19 34 03.2	+1.0
GYA0B				IAmb	IAmb	19 34 04.2	
	comp=Z,8.0nm,0.8s						
NWAO	Narrogin (SRO)	57.82	187	P	P	19 34 10.3	+0.2
NWAO	Narrogin (SRO)	57.82	187	P	P	19 34 10.4	+0.3
NWAO				IAmb	IAmb	19 34 15.5	
	comp=Z,65nm,1.6s						
UNV	Unalaska Valle	58.32	41	P	P	19 34 14.8	+1.4
BBOO	Buckleboo	58.48	168	P	P	19 34 15.0	+0.2
STKA	Stephens Creek	58.87	163	P	P	19 34 17.7	+0.2
	comp=Z,16nm,0.7s,baz=345,slow=6.1,SNR=46						
STKA	Stephens Creek	58.87	163	P	P	19 34 17.6	+0.2
UOSS	Minazif	60.86	286	P	P	19 34 32.1	+0.6
UOSS				IAmb	IAmb	19 34 52.3	
	comp=Z,22nm,1.4s						
ARMA	Armidale	61.01	153	P	P	19 34 33.2	+0.9
SDPT	Sand Point	61.79	39	P	P	19 34 36.2	-0.9
DZM	Mont Dzumac	62.25	135	P	P	19 34 41.2	+0.5
DZM				IAmb	IAmb	19 35 01.3	
	comp=Z,18nm,1.1s						
PRGR	Permogore	62.95	328	eP	P	19 34 42.7	-2.1
PRGR				pmax	pmax		
	comp=Z,16nm,0.6s						
TTA	Tatalina	63.65	30	P	P	19 34 50.1	+0.6
SVW2	Sparrevohn	63.98	32	P	P	19 34 52.2	+0.6
SVW2				IAmb	IAmb	19 35 11.9	
	comp=Z,16nm,1.2s						
CAN	Canberra	64.36	157	P	P	19 34 55.4	+1.0
CAN				IAmb	IAmb	19 34 56.1	
	comp=Z,8.2nm,0.6s						
IMAR	Indian Mountai	64.44	27	P	P	19 34 54.7	+0.1
TOO	Toolangi	65.30	161	P	P	19 35 01.3	+0.8
TOO				IAmb	IAmb	19 35 02.2	
	comp=Z,12nm,0.8s						
PPLA	Purkeypile	65.39	30	P	P	19 35 01.3	+0.4
PPLA				IAmb	IAmb	19 35 08.0	
	comp=Z,12nm,1.1s						
RSO	Redoubt South	65.42	33	P	P	19 35 01.6	+0.3
OHAK	Old Harbor	65.58	36	P	P	19 35 02.0	-0.1
MLY	Manley	65.78	28	P	P	19 35 03.9	+0.6
MLY				IAmb	IAmb	19 35 05.4	
	comp=Z,10nm,0.6s						
BPAW	Bear Paw Mtn.	65.78	29	P	P	19 35 03.9	+0.6
BPAW				IAmb	IAmb	19 35 05.2	
	comp=Z,8.6nm,0.6s						
TOLK	Toolik Lake Re	65.82	24	P	P	19 35 03.8	+0.3
TOLK				IAmb	IAmb	19 35 05.7	
	comp=Z,6.5nm,0.7s						
KDAK	Kodiak Island	65.88	36	P	P	19 35 04.1	+0.2
KTH	Kantishna Hill	65.88	29	P	P	19 35 04.5	+0.4
KLMR	Klimovskoe	65.97	328	eP	P	19 35 01.2	-3.2
KLMR				pmax	pmax		
	comp=Z,34nm,1.4s						
KLMR	Klimovskoe	65.97	328	eP	P	19 35 01.3	-3.2
KLMR				AMP		19 35 05.7	
	comp=Z,34nm,1.4s						
TRF	Thorofare Moun	66.18	29	P	P	19 35 06.5	+0.5
SUA	Susitna One	66.25	32	P	P	19 35 06.4	-0.1
CNPM	China Poot	66.31	34	P	P	19 35 06.2	-0.5
VRH	Novokhopyorsk	66.31	317	eP	P	19 35 06.0	-0.9
VRH				e*SP	pwP	19 35 29.9	-0.8
VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
BWN	Browne	66.44	28	P	P	19 35 08.9	+1.4
BWN				IAmb	IAmb	19 35 35.7	
	comp=Z,16nm,1.1s						
BRLK	Bradley Lake	66.44	33	P	P	19 35 06.7	-0.9
BRLK				IAmb	IAmb	19 35 08.8	
	comp=Z,36nm,1.3s						
NEA	Nenana	66.54	28	P	P	19 35 09.1	+1.0
NEA				IAmb	IAmb	19 35 09.8	
	comp=Z,18nm,0.7s						
MCK	McKinley	66.73	29	P	P	19 35 09.5	+0.1
MCK				IAmb	IAmb	19 35 10.9	
	comp=Z,36nm,1.6s						
RC01	Rabbit Creek A	66.79	32	P	P	19 35 10.0	+0.2
RND	Reindeer	66.82	29	P	P	19 35 09.8	-0.3
MDM	Murphy Dome	66.84	28	P	P	19 35 11.0	+0.9
MDM				IAmb	IAmb	19 35 11.9	
	comp=Z,15nm,0.5s						
SOCY	Socotra	66.96	273	P	P	19 35 10.7	-1.0
SOCY				IAmb	IAmb	19 35 36.0	
	comp=Z,30nm,1.2s						
WRH	Wood River Hil	66.98	28	P	P	19 35 11.6	+0.7
COLA	College	67.02	28	⇓iP	P	19 35 12.2	+1.1
COLA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
COLA	College	67.02	28	P	P	19 35 11.1	0.0
COLA				IAmb	IAmb	19 35 13.3	
	comp=Z,11nm,0.7s						
KBZ	Khabaz	67.06	309	P	P	19 35 12.0	+0.3
	comp=Z,2.3nm,0.7s,baz=101,slow=5.2,SNR=5.6						
KBZ				pP	pP	19 35 33.9	+1.0
	comp=Z,6.0nm,0.9s,baz=138,slow=5.3,SNR=5.9						
GHO	Glory Hole Cre	67.06	31	P	P	19 35 11.7	+0.1
GHO				IAmb	IAmb	19 35 18.2	
	comp=Z,8.8nm,0.8s						
CCB	Clear Creek Bu	67.07	28	P	P	19 35 11.4	-0.1
SEW	Seward	67.10	33	P	P	19 35 11.6	-0.1
KIV	Kislovodsk	67.16	309	eP	P	19 35 12.2	-0.3
KIV				pmax	pmax		
	comp=Z,44nm,1.1s						
AKH	Akhalkalaki	67.16	306	⇑P	P	19 35 14.1	+1.4
SML	Sawmill	67.33	31	P	P	19 35 12.9	-0.4
SML				IAmb	IAmb	19 35 15.9	
	comp=Z,13nm,0.7s						
KNK	Knik Glacier	67.35	31	P	P	19 35 13.5	+0.2
KNK				IAmb	IAmb	19 35 14.4	
	comp=Z,19nm,0.8s						
IL31		67.44	28	P	P	19 35 13.0	-0.7
ILAR	Eielson Array	67.44	28	P	P	19 35 13.3	-0.5
	comp=Z,2.7nm,0.5s,baz=262,slow=4.8,SNR=46						
ILAR	Eielson Array	67.44	28	P	P	19 35 12.7	-1.1
HDA	Harding Lake	67.48	28	P	P	19 35 13.3	-0.8
HDA				IAmb	IAmb	19 35 14.9	
	comp=Z,9.8nm,0.8s						
DHY	Denali Highway	67.54	30	P	P	19 35 14.6	-0.1
LPSR	Galich'ya Gora	67.74	319	eP	P	19 35 15.9	0.0
LPSR				e*SP	pwP	19 35 39.3	-0.5
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
FYU	Fort Yukon	67.78	26	P	P	19 35 17.1	+1.2
FYU				IAmb	IAmb	19 35 30.8	
	comp=Z,20nm,1.6s						
SCM	Sheep Creek Mo	67.80	31	P	P	19 35 16.7	+0.5
SCM				IAmb	IAmb	19 35 17.5	
	comp=Z,22nm,0.8s						
BMAR	Burnt Mountain	67.86	25	P	P	19 35 17.4	+0.9
PRP	Porcupine Dome	67.86	27	P	P	19 35 16.6	-0.1
VSR	Storozhevoye	67.89	317	eP	P	19 35 15.7	-1.1
VSR				e*SP	pwP	19 35 39.8	-1.0
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PAX	Paxson	68.41	29	P	P	19 35 20.5	+0.4
PAX				IAmb	IAmb	19 35 21.4	
	comp=Z,8.0nm,0.7s						
HIN	Hinchinbrook I	68.49	32	P	P	19 35 21.1	+0.6
RIDG	Independent Ri	68.52	29	P	P	19 35 20.7	0.0
RIDG				IAmb	IAmb	19 35 22.2	
	comp=Z,10.0nm,0.6s						
OBN	Obninsk	68.56	322	i P	P	19 35 20.0	-0.9
OBN				i		19 35 27.2	
OBN				i		19 35 42.4	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
OBN	Obninsk	68.56	322	P	P	19 35 20.5	-0.4
EYAK	Cordova Ski Ar	68.81	32	P	P	19 35 23.0	+0.5
EYAK				IAmb	IAmb	19 35 24.1	
	comp=Z,30nm,1.2s						
SCRK	Sand Creek	68.84	28	P	P	19 35 22.4	-0.4
SCRK				IAmb	IAmb	19 35 23.7	
	comp=Z,11nm,1.1s						
MENT	Mentasta	69.20	29	P	P	19 35 25.8	+1.0
MENT				IAmb	IAmb	19 35 26.7	
	comp=Z,11nm,0.7s						
KEV	Kevo	69.31	338	P	P	19 35 25.0	-0.3
RAGM	Ragged Mountai	69.37	32	P	P	19 35 27.1	+1.2
RAGM				IAmb	IAmb	19 35 31.9	
	comp=Z,37nm,1.4s						
SPA0	Spitsbergen Ar	69.37	348	P	P	19 35 26.0	+0.3
SPA0				IAmb	IAmb	19 35 38.0	
	comp=Z,31nm,1.2s						
GLB	Gilahina Butte	69.52	31	P	P	19 35 27.5	+0.6
GLB				IAmb	IAmb	19 35 28.4	
	comp=Z,20nm,1.0s						
VRDI	Verde Repeater	69.74	31	P	P	19 35 29.0	+0.6
VRDI				IAmb	IAmb	19 35 29.8	
	comp=Z,14nm,0.7s						
EGAK	Eagle	69.83	27	P	P	19 35 29.0	+0.3
EGAK				IAmb	IAmb	19 35 29.9	
	comp=Z,8.1nm,0.6s						
ARCES	ARCESS Array B	69.87	338	P	P	19 35 28.3	-0.6
	comp=Z,4.5nm,1.0s,baz=76,slow=8.3,SNR=10.0						
ARCES				pP	PcP	19 35 50.5	-0.3
	comp=Z,2.8nm,0.6s,baz=68,slow=4.8,SNR=3.6						
ARE0	ARCESS Array S	69.87	338	P	P	19 35 29.0	+0.1
ARE0				pP	pP	19 35 50.3	+0.2
MCARA	McCarthy VSAT	69.90	31	P	P	19 35 30.2	+1.0
MCARA				IAmb	IAmb	19 35 32.1	
	comp=Z,16nm,0.7s						
CRQM	Cirque	70.01	31	P	P	19 35 30.6	+0.5
CRQM				IAmb	IAmb	19 35 31.5	
	comp=Z,15nm,0.7s						
BCAR	Beaver Creek A	70.02	29	P	P	19 35 30.7	+0.7
TGL	Tana Glacier	70.16	31	P	P	19 35 31.3	+0.4
TGL				IAmb	IAmb	19 35 32.2	
	comp=Z,19nm,0.8s						
BALM	Baldy	70.31	31	P	P	19 35 32.4	+0.6
BALM				IAmb	IAmb	19 35 40.4	
	comp=Z,22nm,1.4s						
ANN	Anapa	70.59	311	eP	P	19 35 28.9	-4.8
ANN				pmax	pmax		
	comp=Z,223nm,2.3s						
RAYN	Ar Rayn	70.60	288	P	P	19 35 34.6	+0.4
BARN	Barnard Glacie	70.63	31	P	P	19 35 34.8	+0.9
BARN				IAmb	IAmb	19 35 35.5	
	comp=Z,14nm,0.8s						
DAWY	Dawson	70.77	28	P	P	19 35 35.1	+0.7
DAWY				IAmb	IAmb	19 35 36.1	
	comp=Z,8.7nm,0.7s						
TAU	Tasmania Unive	70.77	162	P	P	19 35 34.7	+0.2
CTGM	Chitina Glacie	70.81	31	P	P	19 35 35.6	+0.7
EPYK	Eagle Plains	71.13	25	P	P	19 35 37.0	+0.4
EPYK				IAmb	IAmb	19 35 37.7	
	comp=Z,11nm,0.6s						
PCA	Pinnacle	71.57	32	P	P	19 35 40.5	+1.1
INK	Inuvik	71.64	22	P	P	19 35 39.8	+0.2
FIA1	FINESS Array S	72.16	330	P	P	19 35 42.4	-0.4
FIA1				IAmb	IAmb	19 35 48.0	
	comp=Z,52nm,1.8s						
FINES	FINESS Array B	72.16	330	P	P	19 35 42.3	-0.5
	comp=Z,2.3nm,0.4s,baz=58,slow=5.2,SNR=28						
FINES				LR	LR	20 10 31.3	
	comp=Z,42nm,19.5s,baz=48,slow=38						
FINES	FINESS Array B	72.16	330	P	P	19 35 42.5	-0.3
HYT	Haines Junctio	72.63	31	P	P	19 35 47.1	+1.3
HYT				IAmb	IAmb	19 35 48.0	
	comp=Z,12nm,1.0s						
WHY	Whitehorse	73.89	30	P	P	19 35 54.4	+1.2
WHY				IAmb	IAmb	19 35 55.4	
	comp=Z,15nm,0.6s						
AKASG	Malin Array Be	74.07	319	P	P	19 35 53.5	-0.7
	comp=Z,2.7nm,0.4s,baz=59,slow=6.7,SNR=22						
AKASG	Malin Array Be	74.07	319	P	P	19 35 53.5	-0.7
AKBB	Malin Array Si	74.07	319	P	P	19 35 53.3	-1.0
AKBB				IAmb	IAmb	19 35 54.8	
	comp=Z,6.6nm,0.6s						
SKAG	Skagway	74.13	31	P	P	19 35 55.0	+0.5
SKAG				IAmb	IAmb	19 35 56.8	
	comp=Z,16nm,0.8s						
BR131	Keskin Array S	74.83	307c	iP	P	19 35 59.3	+0.2
BR131	Keskin Array S	74.83	307	P	P	19 35 59.0	0.0
BRTR	Keskin Array B	74.83	307	P	P	19 35 59.1	+0.1
	comp=Z,3.0nm,0.5s,baz=92,slow=4.3,SNR=22						
BRTR	Keskin Array B	74.83	307	i P	P	19 35 59.4	+0.3
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BRTR	Keskin Array B	74.83	307	P	P	19 35 58.8	-0.3
SIT	Sitka	75.04	34	P	P	19 36 01.1	+1.3
ANTO	Ankara	75.39	307	P	P	19 36 02.3	+0.1
ANTO				IAmb	IAmb	19 36 03.1	
	comp=Z,10nm,0.7s						
SORM	Soroca	75.50	316	⇑P	P	19 36 01.3	-1.2
SORM	Soroca	75.50	316	⇑P	P	19 36 01.3	-1.2
TLCR		76.26	314	⇑P	P	19 36 05.7	-1.3
TLCR		76.26	314	⇑P	P	19 36 05.7	-1.3
JURR	Jurilovca	76.37	313	⇑P	P	19 36 07.1	-0.5
TOPG	Topolog	76.66	313	⇑P	P	19 36 09.0	-0.2
CFR	Carcaliu	76.71	314	⇑P	P	19 36 09.5	0.0
CFR	Carcaliu	76.71	314	⇑P	P	19 36 09.5	0.0
HARR	Harsova	77.03	313	⇑P	P	19 36 10.7	-0.6
HARR	Harsova	77.03	313	⇑P	P	19 36 10.7	-0.6
TESR	Tescani	77.17	315	⇑P	P	19 36 11.0	-1.1
VRI	Vrincioaia	77.37	315	⇑P	P	19 36 13.2	0.0
VRI	Vrincioaia	77.37	315	⇑P	P	19 36 13.2	0.0
PLOR	Plostina	77.42	315	⇑P	P	19 36 13.4	-0.2
PLOR	Plostina	77.42	315	⇑P	P	19 36 13.4	-0.2
BISRR	Bisoca	77.50	314	⇑P	P	19 36 14.0	-0.1
RES	Resolute Bay	77.58	10	P	P	19 36 13.7	-0.1
BUR08	Bucovina Ar. S	77.64	317	P	P	19 36 14.4	-0.5
BURAR	Bucovina Array	77.65	317	⇑P	P	19 36 14.7	-0.1
BURAR	Bucovina Array	77.65	317	⇑P	P	19 36 14.7	-0.1
BURAR	Bucovina Array	77.65	317	P	P	19 36 14.4	-0.4
OZUR		77.88	315	⇑P	P	19 36 16.1	-0.1
MLR	Muntele Rosu	78.02	315	⇑P	P	19 36 16.8	-0.2
MLR	Muntele Rosu	78.02	315	⇑P	P	19 36 16.8	-0.2
MLR	Muntele Rosu	78.02	315	P	P	19 36 16.8	-0.2
MLR				IAmb	IAmb	19 36 19.1	
	comp=Z,7.2nm,0.6s						
DIB	Dawson Inlet,	78.11	37	P	P	19 36 16.3	-0.8
DOPR	Dopca	78.19	315	⇑P	P	19 36 17.8	0.0
KWP	Kalwaria Pacla	78.35	319	P	P	19 36 18.3	-0.3

KWP				IAmb	IAmb	19 36 20.9	
	comp=Z,15nm,0.6s						
NC405	NORSAR Array S	78.57	333	P	P	19 36 19.2	-0.4
ELL	Elmali	78.64	305	P	P	19 36 20.3	-0.3
NC303	NORSAR Array S	78.66	333	P	P	19 36 19.4	-0.6
NC303				IAmb	IAmb	19 36 31.0	
	comp=Z,40nm,1.4s						
NB201	NORSAR Array S	78.78	333	P	P	19 36 20.5	-0.3
NB201				IAmb	IAmb	19 36 46.6	
	comp=Z,39nm,1.6s						
NB2	NORSAR Subarra	78.82	333	P	P	19 36 19.6	-1.4
	comp=Z,10nm,1.1s,baz=58,slow=5.3						
NOA	NORSAR Array B	78.82	333	P	P	19 36 20.3	-0.7
	comp=Z,1.9nm,0.7s,baz=55,slow=5.6,SNR=16						
NOA				pP	pP	19 36 43.5	+0.8
	comp=Z,1.2nm,0.7s,baz=55,slow=5.6,SNR=3.9						
NOA				LR	LR	20 14 51.4	
	comp=Z,23nm,18.5s,baz=65,slow=38						
NC602	NORSAR Array S	78.84	332	P	P	19 36 20.7	-0.4
NC204	NORSAR Array S	78.88	333	P	P	19 36 19.9	-1.5
ARR	Arges	78.92	315	⇑P	P	19 36 21.7	-0.1
HUMR	Humele	79.03	314	⇑P	P	19 36 22.2	-0.2
NAO01	NORSAR Array S	79.06	333	P	P	19 36 21.1	-1.1
ELND	Elena	79.08	312	⇑P	P	19 36 23.1	+0.4
QRZ	Quartz Range	79.38	145	P	P	19 36 23.2	-1.0
CRVS	Cervenica-Dubn	79.40	319	eP	P	19 36 24.3	0.0
CRVS	Cervenica-Dubn	79.40	319	eP	P	19 36 24.3	0.0
DRGR		79.54	317	⇑P	P	19 36 24.9	-0.3
DRGR		79.54	317	⇑P	P	19 36 24.9	-0.3
ALN	Alexandroupoli	79.79	310	P	P	19 36 25.5	-1.1
OJC	Ojcow	79.79	321	P	P	19 36 25.8	-0.7
GZR	Gura Zlata	80.09	315	⇑P	P	19 36 27.9	-0.4
NNZ	Nelson	80.11	144	P	P	19 36 28.1	0.0
THZ	Tophouse	80.25	145	P	P	19 36 29.1	+0.2
THZ				IAmb	IAmb	19 36 57.0	
	comp=Z,29nm,1.4s						
BKZ	Black Stump Fm	80.38	141	P	P	19 36 30.4	+0.7
BKZ				IAmb	IAmb	19 36 31.6	
	comp=Z,19nm,1.5s						
LTZ	Lake Taylor	80.66	146	P	P	19 36 31.6	+0.6
RPZ	Rata Peaks	80.74	147	P	P	19 36 31.7	+0.3
RPZ				IAmb	IAmb	19 36 32.4	
	comp=Z,21nm,0.7s						
PSZ	Piszkesteto	80.77	319	P	P	19 36 33.1	+1.2
LBZ	Lake Benmore	80.82	148	P	P	19 36 31.0	-0.8
LBZ				IAmb	IAmb	19 36 51.5	
	comp=Z,19nm,1.3s						
VTS	Vitosha	80.98	313	⇑P	P	19 36 33.5	+0.3
VTS	Vitosha	80.98	313	⇑P	P	19 36 33.5	+0.3
VTS	Vitosha	80.98	313	P	P	19 36 33.6	+0.5
MDVR	Moldovita	81.04	315	⇑P	P	19 36 33.5	+0.2
KHZ	Kahutara	81.05	145	P	P	19 36 32.5	-0.5
KHZ				IAmb	IAmb	19 36 37.6	
	comp=Z,48nm,1.7s						
VYHS	Vyhne	81.14	319	eP	P	19 36 34.3	+0.6
VYHS	Vyhne	81.14	319	eP	P	19 36 34.3	+0.6
KARP	Karpathos	81.16	305	P	P	19 36 33.8	-0.3
MSWZ	Moikau Station	81.25	144	P	P	19 36 34.2	+0.1
BFZ	Birch Farm	81.28	143	P	P	19 36 33.4	-0.9
BFZ				IAmb	IAmb	19 36 35.5	
	comp=Z,27nm,0.9s						
YKA	Yellowknife Ar	81.35	24	P	P	19 36 34.5	0.0
	comp=Z,5.8nm,0.7s,baz=304,slow=4.7,SNR=94						
YKA				pP	pP	19 36 56.6	+0.3
	comp=Z,1.7nm,0.8s,baz=307,slow=4.5,SNR=3.7						
PLWZ	Palliser	81.36	144	P	P	19 36 34.2	-0.6
MQZ	McQueen's Vall	81.52	147	P	P	19 36 36.0	+0.5
MQZ				IAmb	IAmb	19 37 04.5	
	comp=Z,51nm,1.8s						
CHVC	Chvalec	81.74	322	eP	P	19 36 35.9	-0.9
LIT	Litokhoron	82.58	311	P	P	19 36 39.6	-1.9
LIT				IAmb	IAmb	19 36 41.8	
	comp=Z,7.4nm,0.7s						
CLL	Collm	83.05	324	eP	P	19 36 44.0	+0.4
AGG	Agios Georgios	83.17	310	P	P	19 36 42.8	-1.7
AGG				IAmb	IAmb	19 36 44.9	
	comp=Z,8.4nm,0.9s						
GERES	GERESS Array B	83.94	321	P	P	19 36 48.2	-0.1
	comp=Z,1.3nm,0.7s,baz=54,slow=6.8,SNR=9.7						
GERES				pP	pwP	19 37 12.3	-0.6
	comp=Z,0.8nm,0.7s,baz=40,slow=4.4,SNR=2.8						
GERES				LR	LR	20 16 40.8	
	comp=Z,49nm,18.9s,slow=37						
GERES	GERESS Array B	83.94	321	P	P	19 36 47.5	-0.8
MOA	Molln	84.12	320	ePcP	P	19 36 49.9	+0.7
	comp=Z,1.4nm,0.5s						
SOKA	Soboth	84.27	319	eP	P	19 36 49.9	-0.1
	comp=Z,1.1nm,0.5s						
ITM	Ithomi	84.27	308	P	P	19 36 49.0	-1.1
OBKA	Obir	84.64	319	ePcP	P	19 36 52.2	+0.3
	comp=Z,1.0nm,0.4s						
KBA	Koelnbreinsper	85.06	320	ePcP	P	19 36 54.6	+0.5
	comp=Z,2.3nm,0.5s						
SGRT	San Giovanni R	86.31	315	P	P	19 37 00.3	0.0
SGRT				IAmb	IAmb	19 37 07.9	
	comp=Z,14nm,1.1s						
NRCA	Norcia	87.42	317	P	P	19 37 06.3	+0.6
HUMO	Hull Mountain	88.89	43		P	19 37 14.3	+1.7
HUMO				IAmb	IAmb	19 37 16.1	
	comp=Z,17nm,1.7s						
NEW	Newport	88.98	36	P	P	19 37 14.1	+1.2
NEW				IAmb	IAmb	19 37 29.4	
	comp=Z,10nm,1.5s						
BNI	Bardonecchia	90.04	321	P	P	19 37 18.2	+0.1
BNI				IAmb	IAmb	19 37 27.3	
	comp=Z,5.6nm,1.1s						
FCC	Fort Churchill	90.91	19	P	P	19 37 20.6	-1.0
FCC				IAmb	IAmb	19 37 21.7	
	comp=Z,5.9nm,0.9s						
BMO	Blue Mountains	90.94	39	P	P	19 37 21.7	-0.5
BMO				IAmb	IAmb	19 37 50.1	
	comp=Z,7.1nm,1.6s						
FFC	Flin Flon	91.48	25	P	P	19 37 24.2	-0.1
FFC				IAmb	IAmb	19 37 24.8	
	comp=Z,3.3nm,0.8s						
CMB	Columbia Colle	93.08	45	P	P	19 37 30.6	-1.5
KEST	Kesra	93.74	312	P	P	19 37 35.9	+0.6
	comp=Z,2.0nm,0.7s,baz=349,slow=5.2,SNR=3.1						
KEST	Kesra	93.74	312	P	P	19 37 35.5	+0.2
KEST				IAmb	IAmb	19 37 37.7	
	comp=Z,4.5nm,1.0s						
NVAR	Mina Array Bea	94.18	44	P	P	19 37 38.0	+0.5
	comp=Z,0.7nm,0.6s,baz=307,slow=5.1,SNR=7.0						
NVAR	Mina Array Bea	94.18	44	P	P	19 37 37.3	-0.2
121A	Cookes Peak, D	104.54	43		Pdif	19 38 23.1	-0.9
VNA2	Neumayer--Watz	126.31	198	PKPdf	PKiKP	19 43 20.1	+0.1
VNA3	Neumayer Olymp	126.76	197	PKPdf	PKPdf	19 43 20.1	-0.3
RUSC	La Rusia	145.21	31		PKPbc	19 43 56.0	-0.5

IDC 18 19:36:59.9±2.7**, 23°.62S**×**170°.94E, h0**^{km}**, mb3.2**/2**, mb1 3.5**/3**, mb1mx3.3**/45**, mbtmp3.3**/3**, ML3.3**/1**, Error ellipse: s-maj=85.0km s-min=44.1km az=6.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.42	290	Pn	Pn	19 38 08.9	+0.6
	1.4nm,0.3s,baz=111,slow=17,SNR=22						
DZM				Sn	Sn	19 39 00.0	-0.6
	1.4nm,0.3s,baz=119,slow=22,SNR=1.5						
ASAR	Alice Springs	33.86	262	P	P	19 43 44.5	0.0
	0.4nm,1.0s,baz=94,slow=9.4,SNR=2.3						
WRA	Warramunga Arr	34.12	269	P	P	19 43 46.8	0.0
	0.1nm,0.5s,baz=99,slow=8.4,SNR=1.2						
GERES	GERESS Array B	149.07	330	PKPbc	PKPbc	19 56 49.3	-0.8
	0.2nm,0.3s,baz=40,slow=3.8,SNR=3.7						

JMA 18 20:02:24.1±0.1**, 24°.99N**×**123°.58E, h28**^{km}±4^{km}**, M1.3, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.67	168	P	Pb	20 02 36.8	-0.4
IRIF				eS	Sb	20 02 45.7	-0.4
JISG	Ishigakijimahi	0.78	121	eS	Sb	20 02 48.9	-0.3
JYNG	Yonagunijimaku	0.79	227	eS	Sb	20 02 49.3	-0.3
JIJ	Ishigaki jima	0.81	141	P	Pb	20 02 39.1	-0.5
JIJ				eS	Sb	20 02 50.0	-0.1
JKRS	Kuro-shima	0.84	152	P	Pn	20 02 39.6	-0.5
JKRS				eS	Sb	20 02 50.6	-0.6

TAP 18 20:02:55.7, 23°.99N×**121°.69E, h41**^{km}**, ML1.6, D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWD	Chiawan	0.13	317	P	Pn	20 03 02.7	+0.1
	baz=319						
TWD				eS	Sn	20 03 07.8	+0.5
	baz=319						
NACB	Ninganchiao	0.20	335	P	Pn	20 03 03.3	+0.2
	baz=324						
NACB				eS	Sn	20 03 08.3	0.0
	baz=324						
ETLH	Xiulin Townshi	0.29	319	P	Pn	20 03 03.8	-0.3
	baz=310						
ETLH				eS	Sn	20 03 09.5	-0.3
	baz=310						
ESL	Shilin	0.29	234	eS	Sn	20 03 09.9	+0.2
	baz=241						
WHF	Hehuan Shan	0.42	292	P	Pn	20 03 05.6	-0.2
	baz=286						
WHF				eS	Sn	20 03 12.3	-0.7
	baz=286						
OWD	Renai	0.47	266	eP	Pn	20 03 05.8	-0.5
	baz=269						
OWD				eS	Sn	20 03 12.8	-0.9
	baz=269						
CHGB	Renai	0.48	279	P	Pn	20 03 06.3	-0.1
	baz=275						
CHGB				S	Sn	20 03 13.9	-0.1
	baz=275						
NNSB	Datong	0.52	327	eP	Pn	20 03 06.8	-0.1
	baz=327						
NNSB				eS	Sn	20 03 14.8	+0.1
	baz=327						
NNSH	Datong	0.52	327	eP	Pn	20 03 06.8	-0.1
	baz=327						
NNSH				eS	Sn	20 03 13.9	-0.9
	baz=327						
NNS	Nan Shan	0.54	327	eP	Pn	20 03 06.8	-0.3
	baz=328						
NNS				S	Sn	20 03 15.3	+0.1
	baz=328						
HGSD	Ruisui	0.55	206	eP	Pn	20 03 07.7	+0.5
	baz=220						
HGSD				eS	Sn	20 03 17.6	+2.3
	baz=220						
VWDT	VWDT	0.55	245	eS	Sn	20 03 15.0	-0.3
	baz=240						
NDT	Datong Townshi	0.63	345	eP	Pn	20 03 08.4	+0.1
	baz=338						
NDT				eS	Sn	20 03 17.3	+0.1
	baz=338						
ENTT	Nioudou	0.66	350	P	Pn	20 03 09.1	+0.4
	baz=350						
ENTT				eS	Sn	20 03 17.9	0.0
	baz=350						
YHNB	Yeheng	0.74	337	P	Pn	20 03 09.9	+0.1
	baz=336						
YHNB				eS	Sn	20 03 19.6	-0.2
	baz=336						
NSK	Sanguang	0.75	336	eP	Pn	20 03 10.1	+0.2
	baz=336						
NSK				eS	Sn	20 03 20.2	+0.1
	baz=336						
NWLT	Wulai	0.80	348	eP	Pn	20 03 11.6	+0.9
	baz=340						
NWLT				eS	Sn	20 03 22.5	+1.0
	baz=340						
WHYT	Xinyi Township	0.82	249	P	Pn	20 03 11.6	+0.7
	baz=250						
WHYT				eS	Sn	20 03 23.1	+1.3
	baz=250						

*IDC **18** 20:04:29.2±1.1, 19°.86S×70°.82W, h0^{km}, mb3.8/4, mb1 4.0/6, mb1mx3.8/26, mbtmp3.9/6, ML3.7/2, MS3.4/6, Ms1 3.4/6, ms1mx3.2/28, Error ellipse: s-maj=34.1km s-min=15.5km az=70.0*

*NEIC **18** 20:04:32.3, 20°.06S×70°.87W, h15^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.90; $M_{\theta\theta}$-0.70; $M_{\phi\phi}$-2.19; $M_{r\theta}$0.41; $M_{\theta\phi}$0.79; $M_{\phi r}$-2.45; Fault plane solution: $M_0$3.69000×10^{15} NP1:ϕ_s330.56000°, δ24.44000°, λ76.35000°. NP2:ϕ_s165.50000°, δ66.29000°, λ96.12000°. Principal axes: T 3.8867, Plg68.0000°, Azm87.0000°; N -0.4198, Plg6.0000°, Azm343.0000°; P -3.4669, Plg21.0000°, Azm251.0000°;*

*NEIC **18** 20:04:32.3±1.7, 20°.06S±0°.06×70°.87W±0°.09, h23^{km}±4^{km}, mb4.2/3, Mwr4.3/14 Error ellipse: s-maj=12.8km s-min=7.7km az=119.0*

*GUC **18** 20:04:32.1±0.7, 19°.95S×70°.92W, h42^{km}±2^{km}, ML4.1*

ISC 18 20:04:30.4±1.8**, 19°.96S**±0°.03×**70°.90W**±0°.06**, h12**^{km}±10^{km}**, n46,** σ**1^{s}.50**/53**, mb4.2**/4**, MS3.7**/3**, 9C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.82	64	⇓iP	Pb	20 04 47.0	+0.4
PSGC				iS	Sb	20 04 58.5	+0.9
TA01	Diego Aracena	0.91	132	⇑iP	Pb	20 04 48.7	+0.6
TA01				iS	Sn	20 05 01.4	-0.6
TA01				IAML		20 05 03.6	
	comp=N,9µm,0.6s						
PATCX	Punta Patache	1.11	141	⇑iP	Pb	20 04 51.7	+0.2
PATCX				iS	Sg	20 05 06.8	+0.5
PATCX				IAML		20 05 12.7	
	comp=N,4µm,0.4s						
PB11	IPOC Station P	1.19	81	⇓iP	Pg	20 04 53.5	+0.2
PB11				iS	Sn	20 05 09.3	+0.1
PB11				IAML		20 05 11.8	
	comp=N,13µm,0.2s						
PB11	IPOC Station P	1.19	81		Pb	20 04 52.6	-0.3
PB11					Sn	20 05 09.8	+0.6
PB12	IPOC Station P	1.44	22	⇑iP	Pn	20 04 56.9	+0.5
PB12				iS	Sn	20 05 15.7	+0.4
PB12				IAML		20 05 23.1	
	comp=E,2µm,0.2s						
GO01	Chusmiza	1.64	80	⇑iP	Pb	20 05 00.5	-0.3
GO01				iS	Sg	20 05 22.8	-0.3
GO01	Chusmiza	1.64	80		Pb	20 05 00.4	-0.4
PB02	IPOC Station P	1.65	145	⇑iP	Pn	20 04 59.4	+0.1
PB02				iS	Sn	20 05 21.2	+0.7
PB02				IAML		20 05 29.9	
	comp=N,6µm,0.3s						
PB08	IPOC Station P	1.66	97	⇑iP	Pn	20 05 00.4	+0.8
PB08				iS	Sg	20 05 23.0	-0.8
PB08				IAML		20 05 27.6	
	comp=N,2µm,0.2s						
AP01	Chacalluta	1.67	19	eP	Pn	20 05 00.1	+0.8
AP01				iS	Sn	20 05 21.6	+1.0
AP01				IAML		20 05 30.0	
	comp=N,9µm,0.3s						
PB01	IPOC Station P	1.71	129	⇑iP	Pn	20 05 00.8	+0.7
PB01				iS	Sb	20 05 23.0	-0.4
PB01				IAML		20 05 27.8	
	comp=E,3µm,0.3s						
PB01	IPOC Station P	1.71	129		Pn	20 05 00.7	+0.6
PB07	IPOC Station P	2.00	152	eP	Pn	20 05 04.1	-0.1
PB07				iS	Sn	20 05 29.6	+0.4
PB16	IPOC Station P	2.08	40	⇑iP	Pn	20 05 06.9	+1.2
PB16				iS	Sb	20 05 34.2	-0.3
PB16				IAML		20 05 39.9	
	comp=N,1µm,0.3s						
PB09	IPOC Station P	2.40	140	⇑iP	Pn	20 05 11.1	+1.4
PB09				iS	Sn	20 05 41.3	+2.2
PB04	IPOC Station P	2.47	164		Pn	20 05 09.8	-0.8
LVC	Limon Verde	3.23	145	Pn	Pn	20 05 22.8	+1.6
	comp=N,7.7nm,0.3s,baz=329,slow=8.2,SNR=49						
LVC				Pg	Pb	20 05 30.0	+2.2
	comp=N,27nm,0.3s,baz=314,slow=14,SNR=21						
LVC				LR	LR	20 05 56.1	
	comp=N,162nm,21.7s,baz=320,slow=27						
LVC				Sn	Sn	20 06 03.5	+3.7
	comp=N,29nm,0.3s,baz=204,slow=20,SNR=4.2						
LVC				Lg	Lg	20 06 11.4	
	comp=N,23nm,0.3s,baz=59,slow=10,SNR=10						
LVC	Limon Verde	3.23	145		Pn	20 05 22.7	+1.4
PB10	IPOC Station P	3.55	175	Pn	Pn	20 05 24.2	-1.2
LPAZ	La Paz	4.50	36	Pn	Pn	20 05 43.5	+4.5
	comp=N,1.5nm,0.3s,baz=205,slow=9.9,SNR=22						
LPAZ	La Paz	4.50	36		Pn	20 05 42.5	+3.6
GO02	Mina Guanaco	5.32	167		Pn	20 05 49.2	-0.8
SIV	San Ignacio	10.15	69	Pn	Pn	20 06 56.7	+0.7
	comp=N,0.8nm,0.3s,baz=259,slow=13,SNR=12						
GO04	Tololo Observa	10.17	179	Pn	Pn	20 06 55.9	-0.6
CPUP	Villa Florida	14.00	119	LR	LR	20 14 13.1	
	comp=N,150nm,20.2s,baz=301,slow=42						
ATAH	Atahualpa	14.67	329	LR	LR	20 13 58.6	
	comp=N,110nm,18.5s,baz=110,slow=39						
PLCA	Paso Flores	20.71	179	P	P	20 09 12.1	+1.4
	comp=N,2.2nm,0.9s,baz=18,slow=16,SNR=3.0						
PLCA	Paso Flores	20.71	179	P	P	20 09 07.7	-2.9
PLCA				IAmb	IAmb	20 09 32.5	
	comp=Z,11nm,1.1s						
PTGA	Pitinga	21.90	31	P	P	20 09 22.7	-0.9
	comp=Z,2.2nm,0.3s,baz=217,slow=15,SNR=7.6						
PTGA				LR	LR	20 18 35.4	
	comp=Z,255nm,18.0s,baz=166,slow=39						
PTGA	Pitinga	21.90	31	P	P	20 09 22.5	-1.1
PTGA				IAmb	IAmb	20 09 33.0	
	comp=Z,14nm,1.4s						
BDFB	Brasilia	22.21	83	LR	LR	20 19 33.7	
	comp=Z,151nm,19.9s,baz=266,slow=41						
BDFB	Brasilia	22.21	83	P	P	20 09 22.6	-4.3
BDFB				IAmb	IAmb	20 09 39.2	
	comp=Z,18nm,1.6s						
TORD	Torodi Ar. Bea	78.62	71	P	P	20 16 31.9	-0.7
	comp=Z,2.7nm,0.8s,baz=245,slow=5.2,SNR=12						
TORD				LR	LR	20 49 59.5	
	comp=Z,50nm,19.5s,baz=285,slow=35						
TORD	Torodi Ar. Bea	78.62	71	P	P	20 16 31.6	-1.0
YKA	Yellowknife Ar	89.13	341	P	P	20 17 25.6	+0.4
	comp=Z,0.2nm,0.6s,baz=144,slow=5.6,SNR=6.8						
H11S2	WAKE ISLAND Hy	125.81	279	T	T	22 43 06.1	
	baz=102,slow=74,SNR=68						
H11S1	WAKE ISLAND Hy	125.82	279	T	T	22 43 06.8	
	baz=102,slow=74,SNR=32						
H11S3	WAKE ISLAND Hy	125.83	279	T	T	22 43 06.8	
	baz=102,slow=74,SNR=39						
H11N3	WAKE ISLAND Hy	125.86	280	T	T	22 43 00.4	
	baz=100,slow=74,SNR=16						
H11N2	WAKE ISLAND Hy	125.88	280	T	T	22 43 01.6	
	baz=100,slow=74,SNR=17						
H11N1	WAKE ISLAND Hy	125.88	280	T	T	22 43 07.4	
	baz=100,slow=74,SNR=2.8						
WRA	Warramunga Arr	133.27	213	PKP	PKPdf	20 23 48.2	+1.1
	comp=Z,0.6nm,1.0s,baz=144,slow=1.7,SNR=2.5						
MKAR	Makanchi Array	145.43	33	PKPbc	PKPbc	20 24 08.7	+0.5
	comp=Z,1.6nm,0.9s,baz=322,slow=3.5,SNR=14						
SONM	Songino Array	152.10	4	PKPbc	PKPbc	20 24 26.4	+0.6
	comp=Z,0.4nm,0.5s,baz=325,slow=2.3,SNR=4.9						
SONM	Songino Array	152.10	4		PKPbc	20 24 26.1	+0.3

*IDC **18** 20:06:08.8±2.0, 8°.12S×119°.28E, h0^{km}, mb3.4/2, mb1 3.8/5, mb1mx3.5/31, mbtmp3.6/5, ML3.4/3, MS3.0/2, Ms1 3.0/2, ms1mx2.5/20, Error ellipse: s-maj=76.4km s-min=22.4km az=63.0*

*DJA **18** 20:06:09.5±0.2, 8°S±2°×11°9E±°, h10^{km}, M3.9/12, mb3.9/2, MLv3.9/12, MLv3.9/3*

ISC 18 20:06:10.9±2.6**, 8°.19S**±0°.03×**119°.08E**±0°.04**, h26**^{km}±22^{km}**, n17,** σ**2^{s}.20**/29**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	1.44	244	P	Pn	20 06 34.9	-0.4
PLAI				S	Sn	20 06 54.2	+0.8
WBSI	Waikabubak, Su	1.47	168	P	Pn	20 06 34.9	-1.0
WBSI				S	Sn	20 06 54.6	+0.2
WSI	Waingapu	1.90	141	P	Pn	20 06 43.1	+1.4
WSI				S	Sb	20 07 07.9	-0.3
BASI	Baing, Sumba	2.50	144	P	Pn	20 06 51.9	+1.9
BASI				S	Sn	20 07 21.6	+2.0
BKSI	Bulukumba	3.03	20	P	Pn	20 06 56.9	-0.4
BKSI				S	Sn	20 07 30.9	-2.0
MMRI	Maumere	3.15	98	P	Pn	20 06 59.1	+0.1
MMRI				S	Sn	20 07 38.3	+2.4
KAPI	Kappang	3.23	12	Pn	Pn	20 06 59.4	-0.6
	3.6nm,0.3s,baz=210,slow=6.5,SNR=24						
KAPI				Sn	Sn	20 07 32.4	-5.3
	3.1nm,0.3s,baz=216,slow=16,SNR=2.3						
KAPI				LR	LR	20 08 25.3	
	comp=Z,211nm,21.1s,baz=186,slow=44						
BNSI	Bone	3.90	15	P	Pn	20 07 11.1	+1.8
BNSI				S	Sn	20 07 57.1	+2.8
IGBI	Denpasar	3.94	261	P	Pn	20 07 10.2	+0.4
IGBI				S	Sn	20 07 56.3	+1.1
SPSI	Sidrap Palu	4.25	9	P	Pn	20 07 14.5	+0.4
JAGI	Jajag, Banyuwa	4.88	266	P	Pn	20 07 22.6	-0.2
JAGI				S	Sn	20 08 19.1	+0.5
TTSI	Tana Toraja	5.17	8	P	Pn	20 07 27.4	+0.7
	0.1nm12nm,0.6s						
TTSI				S	Sn	20 08 28.1	+2.6
	0.1nm12nm,0.6s						
FITZ	Fitzroy Crossi	11.73	148	Pn	Pn	20 08 56.5	-0.3
	0.1nm,0.3s,baz=360,slow=12,SNR=2.1						
FITZ				Sn	Sn	20 11 02.8	-4.2
	0.2nm,0.3s,baz=180,slow=12,SNR=3.5						
WRA	Warramunga Arr	18.83	130	P	P	20 10 29.2	+0.1
	0.2nm,0.3s,baz=306,slow=13,SNR=9.7						
WRA				S	Sn	20 13 54.6	-5.3
	0.0nm,0.3s,baz=289,slow=22,SNR=2.9						
ASAR	Alice Springs	20.94	139	P	P	20 10 53.1	+1.0
	1.0nm,0.4s,baz=316,slow=10,SNR=18						
KSRS	Korea Array	46.16	10	LR	LR	20 36 25.2	
	comp=Z,17nm,18.1s,baz=176,slow=40						
MKAR	Makanchi Array	63.78	333	P	P	20 16 42.8	+2.0
	0.2nm,0.5s,baz=133,slow=5.3,SNR=3.9						

*IDC **18** 20:17:18.4±3.3, 19°.93S×70°.74W, h0^{km}, mb3.9/2, mb1 4.0/3, mb1mx3.6/25, mbtmp3.9/3, ML3.7/1, Error ellipse: s-maj=151.0km s-min=45.7km az=3.0*

*GUC **18** 20:17:21.6±0.7, 19°.97S×70°.91W, h39^{km}±4^{km}, ML3.6*

ISC 18 20:17:19.2±2.0**, 19°.93S**±0°.05×**70°.89W**±0°.08**, h12**^{km}±11^{km}**, n16,** σ**0^{s}.93**/24**, 6C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.80	65	iP	Pn	20 17 36.4	0.0
PSGC				iS	Sn	20 17 47.7	-0.5
PSGC				IAML		20 17 49.9	
	comp=N,2µm,0.3s						
TA01	Diego Aracena	0.92	133	⇑iP	Pn	20 17 37.9	-0.1
TA01				iS	Sn	20 17 49.7	-1.4
TA01				IAML		20 17 51.5	
	comp=E,4µm,0.2s						
TA01	Diego Aracena	0.92	133	⇑iP	Pn	20 17 37.9	0.0
TA01				iS	Sn	20 17 49.9	-1.2
TA01				IAML		20 17 51.6	
	comp=E,4µm,0.4s						
PATCX	Punta Patache	1.12	142	⇑iP	Pn	20 17 40.8	-0.1
PATCX				iS	Sn	20 17 56.0	-0.3
PATCX				IAML		20 18 01.4	
	comp=N,3µm,0.3s						
PB11	IPOC Station P	1.18	82	⇓iP	Pg	20 17 42.8	+0.9
PB11				iS	Sn	20 17 58.9	+1.2
PB12	IPOC Station P	1.42	22	⇑iP	Pg	20 17 46.2	-0.2
PB12				iS	Sg	20 18 05.8	+0.9
PB12				IAML		20 18 12.8	
	comp=E,2µm,0.5s						
GO01	Chusmiza	1.62	81	⇑iP	Pg	20 17 49.8	-0.6
GO01				iS	Sg	20 18 12.4	+1.0
AP01	Chacalluta	1.64	19	iP	Pb	20 17 49.7	+0.3
AP01				iS	Sg	20 18 11.7	-0.2
PB08	IPOC Station P	1.65	98	⇑iP	Pb	20 17 49.8	0.0
PB08				iS	Sg	20 18 12.6	+0.3
PB08				IAML		20 18 14.6	
	comp=E,1µm,0.2s						
LPAZ	La Paz	4.47	36	Pn	Pb	20 18 35.7	-2.5
	comp=E,0.5nm,0.3s,baz=189,slow=2.2,SNR=7.6						
SIV	San Ignacio	10.13	69	Pn	Pn	20 19 44.1	-0.6
	comp=E,0.7nm,0.3s,baz=247,slow=10,SNR=6.7						
CPUP	Villa Florida	14.00	120	Pn	Pn	20 20 27.9	-10
	comp=E,0.1nm,0.3s,baz=292,slow=13,SNR=3.2						
TORD	Torodi Ar. Bea	78.60	71	P	P	20 29 21.2	-0.2
	comp=E,2.2nm,0.8s,baz=250,slow=5.2,SNR=9.2						
YKA	Yellowknife Ar	89.11	341	P	P	20 30 14.6	+0.6
	comp=E,0.1nm,0.4s,baz=130,slow=5.3,SNR=3.7						
MKAR	Makanchi Array	145.40	33	PKPbc	PKPab	20 36 58.2	+0.9
	comp=E,0.8nm,0.6s,baz=324,slow=4.1,SNR=12						
SONM	Songino Array	152.08	4	PKPbc	PKiKP	20 37 16.0	+1.0
	comp=E,0.5nm,0.6s,baz=0.0,slow=1.6,SNR=5.0						

*SJA **18** 20:17:12.2±0.3, 22°.13S×71°.50W, h10^{km}, ML3.4, MW3.5*

*GUC **18** 20:17:35.3±0.6, 23°.12S×70°.16W, h55^{km}±3^{km}, ML4.1*

*IDC **18** 20:17:36.9±3.2, 23°.07S×70°.13W, h71^{km}±23^{km}, mb3.9/3, mb1 4.0/5, mb1mx3.6/25, mbtmp4.2/5, MS3.2/2, Ms1 3.2/2,* *ms1mx2.8/24, Error ellipse: s-maj=40.8km s-min=27.8km az=121.0*

ISC 18 20:17:34.9±0.8**, 23°.12S**±0°.04×**70°.22W**±0°.05**, h53**^{km}±7^{km}**, n27,** σ1^{s}.**11**/38**, mb4.0**/3**, 8C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB05	**IPOC Station P**	**0.26**	**4**	⇑ *i*P	**Pn**	**20 17 44.5**	**+0.3**
PB05				*i* S	**Sn**	**20 17 50.9**	**0.0**
PB05				IAML		20 17 51.4	
	comp=N,33µm,0.2s						
PB10	**IPOC Station P**	**0.50**	**217**	⇓ *i*P	**Pn**	**20 17 47.0**	**+0.6**
PB10				*i* S	**Sn**	**20 17 55.3**	**+0.7**
PB10				IAML		20 17 57.2	
	comp=E,13µm,0.3s						
PB15	**IPOC Station P**	**0.70**	**98**	⇑ *i*P	**Pn**	**20 17 49.0**	**0.0**
PB15				*i* S	**Sn**	**20 17 58.7**	**-0.4**
PB15	**IPOC Station P**	**0.70**	**98**	⇑ *e*P	**Pn**	**20 17 49.0**	**0.0**
PB15				*i* S	**Sn**	**20 17 59.1**	**-0.1**
PB15				IAML		20 18 01.4	
	comp=N,59µm,0.3s						
PB06	**IPOC Station P**	**0.73**	**56**	⇑ *i*P	**Pn**	**20 17 49.2**	**-0.1**
PB06				*i* S	**Sn**	**20 17 59.1**	**-0.6**
PB06				IAML		20 18 00.6	
	comp=N,20µm,0.3s						
PB04	**IPOC Station P**	**0.78**	**5**	⇑ *i*P	**Pn**	**20 17 50.4**	**+0.4**
PB04				*i* S	**Sn**	**20 18 01.6**	**+0.6**
LVC	**Limon Verde**	**1.31**	**68**	P	**Pn**	**20 17 58.1**	**+0.9**
	comp=N,201nm,0.3s,baz=252,slow=12,SNR=872						
LVC				S	**Sn**	**20 18 14.6**	**+0.8**
	comp=N,755nm,0.3s,baz=342,slow=19,SNR=24						
PB07	**IPOC Station P**	**1.42**	**13**	*e*P	**Pn**	**20 17 59.2**	**+0.7**
PB07				*i* S	**Sn**	**20 18 17.6**	**+1.5**
PB07				IAML		20 18 22.1	
	comp=N,5µm,0.1s						
PB14	**IPOC Station P**	**1.51**	**186**	⇑ *e*P	**Pn**	**20 17 59.9**	**0.0**
PB14				*i* S	**Sn**	**20 18 20.5**	**+1.8**
PB09	**IPOC Station P**	**1.60**	**35**	⇑ *e*P	**Pn**	**20 18 01.7**	**+0.8**
PB09				*i* S	**Sn**	**20 18 21.5**	**+1.0**
PB09				IAML		20 18 22.8	
	comp=N,3µm,0.2s						
GO02	**Mina Guanaco**	**2.12**	**164**	⇑ *e*P	**Pn**	**20 18 09.6**	**+1.5**
GO02				*e*S	**Sn**	**20 18 35.3**	**+1.8**
AZAP	**Zapla**	**4.86**	**104**	*e*P	**Pn**	**20 18 48.9**	**+3.2**
AZAP				IAML		20 20 39.5	
	comp=Z,11nm,1.7s						
VCA	**Vinchina**	**5.88**	**162**	*e*P	**Pn**	**20 19 01.6**	**+1.9**
VCA				*e*S	Sn	20 20 21.9	+16
AGUA	**GUANDACOL**	**6.53**	**167**	*e*P	**Pn**	**20 19 09.0**	**+0.5**
AGUA				*e*S	Sn	20 20 39.1	+17
CYA	**Choya**	**6.63**	**144**	*e*P	**Pn**	**20 19 11.4**	**+1.6**
ACLC	**CERRO LA CRUZ**	**6.94**	**156**	*e*P	**Pn**	**20 19 14.5**	**+0.5**
AROD	**Rodeo**	**7.05**	**175**	*e*P	**Pn**	**20 19 16.1**	**+0.3**
LPAZ	**La Paz**	**7.07**	**17**	LR	LR	20 22 20.4	
	comp=Z,168nm,20.7s,baz=230,slow=40						
ACCO	**Cerro Coronel**	**7.51**	**172**	*e*P	**Pn**	**20 19 21.9**	**-0.2**
APLL	**PUNTA DE LOS L**	**7.97**	**156**	*e*P	**Pn**	**20 19 27.0**	**-1.1**
ASAL	**Salagasta**	**9.52**	**173**	*e*P	**Pn**	**20 19 47.7**	**-1.7**
SIV	**San Ignacio**	**11.16**	**52**	P	**Pn**	**20 20 11.9**	**+0.1**
	comp=Z,2.8nm,0.3s,baz=247,slow=12,SNR=13						
SIV				S	**Sn**	**20 22 13.2**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=328,slow=23,SNR=1.7						
PLCA	**Paso Flores**	**17.57**	**181**	P	**P**	**20 21 36.7**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=3.2,slow=11,SNR=6.1						
PLCA				LR	LR	20 28 47.5	
	comp=Z,85nm,19.3s,baz=26,slow=38						
TORD	**Torodi Ar. Bea**	**79.04**	**71**	P	**P**	**20 29 33.2**	**-0.6**
	comp=Z,3.8nm,0.8s,baz=258,slow=5.1,SNR=14						
BOSA	**Boshof**	**83.76**	**118**	P	**P**	**20 29 58.7**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=252,slow=5.4,SNR=3.6						
YKA	**Yellowknife Ar**	**92.31**	**341**	P	**P**	**20 30 38.5**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=136,slow=4.9,SNR=7.3						
MKAR	**Makanchi Array**	**147.65**	**36**	PKPbc	**PKPbc**	**20 37 13.0**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=328,slow=2.2,SNR=11						

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*NEIC **18** 20:43:24.9±1.3, 5°.58S±0°.08×147°.2E±0°.1, h204^{km}±13^{km}, mb4.5/11, Error ellipse: s-maj=17.8km s-min=11.0km az=100.0*

*IDC **18** 20:43:25.7±2.0, 5°.97S×147°.56E, h212^{km}±19^{km}, mb3.4/3, mb1 3.7/5, mb1mx3.2/37, mbtmp4.0/5, MS2.9/1, Ms1 2.9/1, ms1mx2.3/22, Error ellipse: s-maj=47.8km s-min=16.6km az=119.0*

ISC 18 20:43:24.9±1.0**, 5°.73S**±0°.10×**147°.2E**±0°.1**, h200**^{km}**, n21,** σ**1**^{s}.**43**/23**, mb4.2**/3**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.65**	**181**	P	**Pn**	**20 44 22.9**	**+0.6**
	18nm,0.3s,baz=9.5,slow=6.1,SNR=40						
PMG				S	**Sn**	**20 45 04.2**	**-3.4**
	21nm,0.3s,baz=41,slow=23,SNR=8.6						
PMG	**Port Moresby**	**3.65**	**181**		**Pn**	**20 44 23.3**	**+0.9**
PMG					**Sn**	**20 45 09.5**	**+2.0**
MANU	**Manus Island**	**3.67**	**2**		Pn	20 44 21.5	-1.1
RABL	**Rabaul**	**5.15**	**73**		**Pn**	**20 44 42.1**	**+0.8**
COEN	**Coen**	**9.09**	**206**	Pn	**Pn**	**20 45 35.0**	**+2.6**
MTN	**Manton Dam**	**17.37**	**245**	P	**P**	**20 47 14.1**	**+0.1**
MTN				IAmb	IAmb	20 47 42.2	
	comp=Z,30nm,1.4s						
WB0	**Warramunga Arr**	**18.72**	**221**	P	**P**	**20 47 29.5**	**+0.8**
WR0	**Warramunga Arr**	**18.76**	**220**	P	**P**	**20 47 30.1**	**+0.9**
WR0				IAmb	IAmb	20 47 30.6	
	comp=Z,9.2nm,0.8s						
WRAB	**Tennant Creek**	**18.87**	**220**	P	**P**	**20 47 30.5**	**+0.3**
WRAB				IAmb	IAmb	20 47 33.3	
	comp=Z,14nm,0.6s						
WB2	**Warramunga Arr**	**18.87**	**220**	P	**P**	**20 47 31.1**	**+0.8**
WB2				IAmb	IAmb	20 47 35.9	
	comp=Z,33nm,1.6s						
WRA	**Warramunga Arr**	**18.88**	**220**	P	**P**	**20 47 31.1**	**+0.7**
	comp=Z,2.2nm,0.3s,baz=47,slow=12,SNR=107						
WRA				S	**S**	**20 50 52.9**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=41,slow=21,SNR=5.6						
WRA	**Warramunga Arr**	**18.88**	**220**	P	**P**	**20 47 30.3**	**-0.1**
EIDS	**Eidsvold**	**19.87**	**170**	P	**Pn**	**20 47 43.9**	**-1.2**
EIDS				IAmb	IAmb	20 47 45.7	
	comp=Z,19nm,1.4s						
KNRA	**Kununurra**	**20.64**	**240**	P	**P**	**20 47 48.9**	**-0.3**
AS31	**Alice Springs**	**21.96**	**214**	P	**P**	**20 48 03.3**	**+0.5**
ASAR	**Alice Springs**	**21.96**	**214**	P	**P**	**20 48 03.8**	**+0.9**
	comp=Z,5.1nm,0.7s,baz=48,slow=8.3,SNR=74						
ASAR				S	**S**	**20 51 51.9**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=33,slow=19,SNR=4.1						
SOEI	**Soe**	**23.09**	**259**	P	**P**	**20 48 12.5**	**-0.9**
FITZ	**Fitzroy Crossi**	**24.40**	**238**	P	**P**	**20 48 26.8**	**+1.7**
	comp=Z,1.8nm,0.4s,baz=359,slow=5.7,SNR=12						
FITZ	**Fitzroy Crossi**	**24.40**	**238**	P	**P**	**20 48 24.5**	**-0.6**
FITZ				IAmb	IAmb	20 48 48.7	
	comp=Z,12nm,1.5s						
MJAR	**Matsushiro Arr**	**42.89**	**349**	LR	LR	21 07 01.7	
	comp=Z,18nm,21.9s,baz=250,slow=33						
ILAR	**Eielson Array**	**85.15**	**23**	P	**P**	**20 55 36.1**	**-2.0**
	comp=Z,0.3nm,0.6s,baz=251,slow=5.0,SNR=4.0						

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*JMA **18** 20:52:15.2±0.1, 24°.35N×121°.90E, h21^{km}, M2.8*

*TAP **18** 20:52:15.2, 24°.40N×121°.92E, h19^{km}, ML3.2, B*

ISC 18 20:52:14.8±1.0**, 24°.39N**±0°.02×**121°.97E**±0°.02**, h19**^{km}±2^{km}**, n119,** σ**0**^{s}.**98**/204**, 7C-16D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.21**	**41**	⇑P	**Pg**	**20 52 21.3**	**+1.3**
	baz=46						
EOS1				S	**Sg**	**20 52 25.8**	**+2.2**
	baz=46						
ENA	**Nanau**	**0.22**	**281**	⇓ *i*P	**Pg**	**20 52 19.7**	**-0.3**
	baz=280						
ENA				S	**Sg**	**20 52 22.6**	**-1.0**
	baz=280						
TWC	**Suao**	**0.25**	**333**	⇓ *i*P	**Pg**	**20 52 20.6**	**0.0**
	baz=349						
TWC				*i* S	**Sg**	**20 52 23.8**	**-0.7**
	baz=349						
NACB	**Ninganchiao**	**0.41**	**238**	⇓P	**Pb**	**20 52 22.5**	**-1.0**
	baz=235						
NACB				S	**Sb**	**20 52 28.5**	**-0.8**
	baz=235						
ILA	**Ilan**	**0.43**	**331**	*i* P	**Pb**	**20 52 24.1**	**+0.3**
	baz=337						
ILA				*i* S	**Sb**	**20 52 29.8**	**-0.1**
	baz=337						
TWE	**Neicheng**	**0.43**	**320**	⇓ *i*P	**Pb**	**20 52 23.7**	**-0.2**
	baz=326						
TWE				S	**Sb**	**20 52 28.9**	**-1.2**
	baz=326						
ENTT	**Nioudou**	**0.45**	**304**	⇓ *i*P	**Pb**	**20 52 23.8**	**-0.4**
	baz=308						
ENTT				S	**Sb**	**20 52 29.3**	**-1.3**
	baz=308						
TWD	**Chiawan**	**0.46**	**229**	⇑P	**Pb**	**20 52 23.9**	**-0.5**
	baz=226						
NDT	**Datong Townshi**	**0.47**	**297**	⇓ *i*P	**Pb**	**20 52 24.2**	**-0.3**
	baz=300						
NDT				S	**Sg**	**20 52 29.9**	**-1.0**
	baz=300						
SLBB	**Yuanshan**	**0.48**	**320**	⇓ *i*P	**Pb**	**20 52 23.8**	**-0.8**
	baz=326						
SLBB				*e*S	**Sb**	**20 52 30.0**	**-1.3**
	baz=326						
NTC	**Toucheng**	**0.48**	**344**	⇑ *i*P	**Pb**	**20 52 24.8**	**+0.1**
	baz=348						
NTC				*e*S	**Sb**	**20 52 31.0**	**-0.4**
	baz=348						
ETLH	**Xiulin Townshi**	**0.48**	**248**	⇓P	**Pb**	**20 52 24.0**	**-0.7**
	baz=253						
ETLH				*e*S	**Sg**	**20 52 30.8**	**-0.5**
	baz=253						
HWA	**Hwalien**	**0.53**	**220**	*e*P	**Pb**	**20 52 26.4**	**+1.0**
	baz=220						
NNSB	**Datong**	**0.54**	**274**	⇓P	**Pb**	**20 52 25.2**	**-0.5**
	baz=281						
NNSB				S	**Sg**	**20 52 31.2**	**-1.9**
	baz=281						
NNSH	**Datong**	**0.54**	**274**	⇓ *i*P	**Pb**	**20 52 25.2**	**-0.5**
	baz=281						
NNSH				*e*S	**Sg**	**20 52 31.4**	**-1.6**
	baz=281						
NNS	**Nan Shan**	**0.55**	**276**	⇓ *i*P	**Pb**	**20 52 25.4**	**-0.5**
	baz=282						
NNS				*e*S	**Sg**	**20 52 31.6**	**-1.8**
	baz=282						
NWLT	**Wulai**	**0.58**	**312**	⇓P	**Pb**	**20 52 26.1**	**-0.1**
	baz=310						
NWLT				*e*S	**Sg**	**20 52 32.9**	**-1.3**
	baz=310						
ENLB	**Shoufeng**	**0.59**	**215**	*e*P	**Pb**	**20 52 27.1**	**+0.7**
	baz=212						
ENLB				S	**Sn**	**20 52 37.6**	**+0.3**
	baz=212						
TIPB	**Shuangxi**	**0.60**	**347**	⇑ *i*P	**Pb**	**20 52 26.9**	**+0.3**
	baz=350						
TIPB				S	**Sb**	**20 52 34.3**	**-0.3**
	baz=350						
YHNB	**Yeheng**	**0.61**	**297**	⇓P	**Pb**	**20 52 26.8**	**-0.1**
	baz=299						
YHNB				S	**Sg**	**20 52 34.0**	**-1.3**
	baz=299						
TWB1	**Santiao Chiao**	**0.62**	**1**	P	**Pb**	**20 52 27.4**	**+0.5**
	baz=358						
TWB1				S	**Sb**	**20 52 35.3**	**+0.2**
	baz=358						
NSK	**Sanguang**	**0.63**	**297**	⇓ *i*P	**Pb**	**20 52 26.9**	**-0.3**
	baz=299						
NSK				S	**Sg**	**20 52 34.3**	**-1.5**
	baz=299						
TWA	**Mucha**	**0.69**	**329**	*e*P	**Pn**	**20 52 28.8**	**-0.8**
	baz=322						
TWA				S	**Sb**	**20 52 37.3**	**+0.1**
	baz=322						
WHF	**Hehuan Shan**	**0.69**	**250**	⇓ *i*P	**Pb**	**20 52 27.9**	**-0.6**
	baz=255						
WHF				*e*S	**Sb**	**20 52 39.0**	**+1.2**
	baz=255						
NWF	**Wu-fen Shan**	**0.70**	**346**	P	**Pn**	**20 52 29.2**	**-0.6**
	baz=340						
NWF				S	**Sb**	**20 52 38.0**	**+0.2**
	baz=340						
WFSB	**Wu-fen Shan**	**0.70**	**346**	*e*P	**Pn**	**20 52 29.0**	**-0.7**
	baz=340						
WFSB				S	**Sb**	**20 52 38.0**	**+0.3**
	baz=340						
NHDH	**Xindian Distri**	**0.70**	**325**	*e*P	**Pb**	**20 52 28.8**	**+0.3**
	baz=319						
NHDH				*e*S	**Sb**	**20 52 37.6**	**-0.1**
	baz=319						
TATO	**Taipei**	**0.73**	**323**	*e*P	**Pn**	**20 52 29.6**	**-0.6**
	baz=317						
TATO				S	**Sb**	**20 52 37.9**	**-0.7**
	baz=317						
TWT	**Tachien**	**0.74**	**260**	P	**Pb**	**20 52 29.2**	**+0.1**
	baz=260						
TWT				*e*S	**Sg**	**20 52 38.3**	**-1.0**
	baz=260						
ESL	**Shilin**	**0.76**	**221**	*e*P	**Pb**	**20 52 29.5**	**+0.1**
	baz=225						
ESL				*e*S	**Sb**	**20 52 40.1**	**+0.9**
	baz=225						
TDCB	**Techi**	**0.76**	**260**	P	**Pb**	**20 52 29.1**	**-0.3**
	baz=260						
TDCB				*e*S	**Sg**	**20 52 38.7**	**-1.1**
	baz=260						
TAP	**Taipei**	**0.78**	**327**	*e*P	**Pn**	**20 52 29.9**	**-0.8**
	baz=322						
TAP				*e*S	**Sb**	**20 52 40.1**	**+0.3**
	baz=322						
CHGB	**Renai**	**0.80**	**246**	⇓P	**Pb**	**20 52 30.0**	**-0.2**
	baz=252						
CHGB				S	**Sb**	**20 52 40.9**	**+0.2**
	baz=252						
WLTB	**Daxi**	**0.80**	**305**	*e*P	**Pn**	**20 52 30.7**	**-0.4**
	baz=307						
WLTB				*e*S	**Sb**	**20 52 40.8**	**+0.2**
	baz=307						
YM01	**YM01**	**0.84**	**334**	*e*P	**Pn**	**20 52 31.6**	**-0.1**
	baz=329						
YM01				S	**Sb**	**20 52 42.5**	**+0.8**
	baz=329						
OWD	**Renai**	**0.85**	**240**	*e*P	**Pb**	**20 52 30.9**	**-0.1**
	baz=239						
OWD				*e*S	**Sb**	**20 52 42.6**	**+0.5**
	baz=239						
YM10	**YM10**	**0.85**	**334**	*e*P	**Pn**	**20 52 32.0**	**+0.2**
	baz=329						
YM10				*e*S	**Sb**	**20 52 42.3**	**+0.2**
	baz=329						
YM11	**YM11**	**0.86**	**335**	*e*P	**Pn**	**20 52 31.8**	**-0.1**
	baz=329						
YM11				S	**Sb**	**20 52 42.9**	**+0.7**
	baz=329						
YM05	**YM05**	**0.86**	**334**	P	**Pn**	**20 52 32.0**	**+0.1**
	baz=329						
YM05				*e*S	**Sb**	**20 52 42.7**	**+0.4**
	baz=329						
YM04	**YM04**	**0.86**	**333**	*e*P	**Pn**	**20 52 32.2**	**+0.3**
	baz=327						
YM04				*e*S	**Sb**	**20 52 42.7**	**+0.4**
	baz=327						
YM08	**YM08**	**0.87**	**336**	*e*P	**Pn**	**20 52 31.8**	**-0.2**
	baz=338						
YM08				*e*S	**Sb**	**20 52 42.6**	**0.0**
	baz=338						
TWS1	**Kuangyinshan**	**0.87**	**325**	*e*P	**Pn**	**20 52 32.4**	**+0.4**
	baz=321						
TWS1				*e*S	**Sb**	**20 52 43.6**	**+1.0**
	baz=321						
EGFH	**Guangfu**	**0.87**	**215**	*e*P	**Pb**	**20 52 31.8**	**+0.5**
	baz=228						
EGFH				*e*S	**Sn**	**20 52 44.8**	**+0.6**
	baz=228						
YM03	**YM03**	**0.88**	**333**	*e*P	**Pn**	**20 52 32.5**	**+0.2**
	baz=327						
YM03				*e*S	**Sb**	**20 52 43.7**	**+0.8**
	baz=327						
JYNG	**Yonagunijimaku**	**0.89**	**86**	P	**Pn**	**20 52 32.5**	**+0.3**
JYNG				*e*S	**Sn**	**20 52 45.2**	**+0.6**
ANP	**Anpu**	**0.90**	**333**	*e*P	**Pn**	**20 52 32.5**	**+0.1**
	baz=326						
ANP				*e*S	**Sn**	**20 52 44.6**	**-0.4**
	baz=326						
LIOB	**Emei**	**0.91**	**287**	*e*P	**Pn**	**20 52 32.3**	**-0.3**
	baz=288						
LIOB				*e*S	**Sb**	**20 52 44.3**	**+0.6**
	baz=288						
NSTT	**Nanjuang**	**0.92**	**285**	*e*P	**Pn**	**20 52 32.5**	**-0.2**
	baz=287						
NSTT				*e*S	**Sg**	**20 52 43.1**	**-1.7**
	baz=287						
NCU	**National Centr**	**0.92**	**309**	*e*P	**Pn**	**20 52 33.5**	**+0.8**
	baz=311						
NCUH	**Zhongli**	**0.92**	**309**	*e*P	**Pn**	**20 52 33.1**	**+0.4**
	baz=310						
WHP	**Taichung City**	**0.94**	**264**	*e*P	**Pn**	**20 52 33.0**	**-0.1**
	baz=264						
TWY	**Chenhua**	**0.95**	**339**	*e*P	**Pn**	**20 52 33.8**	**+0.7**
	baz=341						
TWY				*e*S	**Sb**	**20 52 45.6**	**+0.9**
	baz=341						
YOJ	**Yonaguni jima**	**0.95**	**85**	P	**Pn**	**20 52 33.4**	**+0.3**
	baz=75						
YOJ				*e*S	**Sn**	**20 52 46.3**	**+0.2**
	baz=75						
YOJ	**Yonaguni jima**	**0.95**	**85**	P	**Pn**	**20 52 33.4**	**+0.3**
YOJ				*e*S	**Sn**	**20 52 46.4**	**+0.3**
SBCB	**Hsinchu**	**0.99**	**294**	*e*P	**Pb**	**20 52 33.2**	**-0.1**
	baz=291						
SBCB				*e*S	**Sn**	**20 52 48.6**	**+1.6**
	baz=291						
VWDT	**VWDT**	**0.99**	**231**	⇑P	**Pb**	**20 52 33.5**	**+0.2**
	baz=237						
VWDT				*e*S	**Sn**	**20 52 48.1**	**+1.0**
	baz=237						
DPDB	**Guoxing**	**1.02**	**250**	P	**Pn**	**20 52 34.3**	**+0.1**
	baz=255						
DPDB				*e*S	**Sg**	**20 52 47.0**	**-1.1**
	baz=255						
HGSD	**Ruisui**	**1.02**	**210**	*e*P	**Pn**	**20 52 34.6**	**+0.5**
	baz=209						
HGSD				*e*S	**Sn**	**20 52 50.5**	**+2.5**
	baz=209						
EHY	**Hungye**	**1.06**	**214**	*e*P	**Pg**	**20 52 34.0**	**-1.4**
	baz=224						
EHY				*e*S	**Sb**	**20 52 49.0**	**+0.9**
	baz=224						
NMLH	**Miaoli**	**1.09**	**278**	*e*P	**Pn**	**20 52 36.5**	**+1.5**
	baz=279						
TWQ1	**Liyutan**	**1.10**	**268**	*e*P	**Pn**	**20 52 36.9**	**+1.8**
	baz=269						
TWQ1				*e*S	**Sn**	**20 52 51.3**	**+1.5**
	baz=269						
SMLT	**Sun Moon Lake**	**1.10**	**243**	⇑ *i*P	**Pn**	**20 52 36.0**	**+0.6**
	baz=238						
SMLT				*e*S	**Sn**	**20 52 51.2**	**+1.1**
	baz=238						
NSY	**Sanyi**	**1.11**	**272**	*e*P	**Pn**	**20 52 36.7**	**+1.4**
	baz=272						
SSLB	**Suanglung**	**1.11**	**238**	⇑P	**Pn**	**20 52 35.7**	**+0.4**
	baz=238						
SSLB				*e*S	**Sb**	**20 52 50.2**	**+0.8**
	baz=238						
TYC	**Yuchr**	**1.13**	**245**	*e*P	**Pn**	**20 52 36.0**	**+0.5**
	baz=255						
TYC				*e*S	**Sn**	**20 52 51.5**	**+0.9**
	baz=255						
YULB	**Yu-li**	**1.17**	**212**	*e*P	**Pg**	**20 52 35.8**	**-1.7**
	baz=213						
YULB				*e*S	**Sg**	**20 52 51.0**	**-1.7**
	baz=213						
TWF1	**Yuli**	**1.20**	**211**	*e*P	**Pg**	**20 52 36.1**	**-2.0**
	baz=211						
TWF1				*e*S	**Sb**	**20 52 52.8**	**+0.7**
	baz=211						
TCU	**Taichung**	**1.21**	**259**	*e*P	**Pn**	**20 52 38.5**	**+1.8**
	baz=259						
WHYT	**Xinyi Township**	**1.23**	**236**	*e*P	**Pn**	**20 52 38.1**	**+1.0**
	baz=236						
PCYT	**Pengchaiyu**	**1.24**	**4**	*e*P	**Pn**	**20 52 37.4**	**+0.3**
	baz=6.0						
WJS	**Zhushan**	**1.27**	**244**	*e*P	**Pg**	**20 52 39.5**	**+0.1**
	baz=235						
WJS				*e*S	**Sn**	**20 52 58.6**	**+4.5**
	baz=235						
WNT	**Mingjian**	**1.28**	**247**	*e*P	**Pg**	**20 52 39.4**	**-0.2**
	baz=248						
WNT				*e*S	**Sn**	**20 52 58.2**	**+3.9**
	baz=248						
WCHH	**Zhanghua**	**1.33**	**257**	*e*P	**Pg**	**20 52 40.2**	**-0.2**
	baz=258						
FULB	**Fuli**	**1.34**	**208**	*e*P	**Pn**	**20 52 38.9**	**+0.4**
	baz=222						
ALS	**Alishan**	**1.38**	**231**	*e*P	**Pg**	**20 52 40.7**	**-0.8**
	baz=217						
CHKT	**Chengkung**	**1.40**	**204**	*e*P	**Pn**	**20 52 38.7**	**-0.5**
	baz=187						
CHN5	**Tsauling**	**1.42**	**237**	*e*P	**Pg**	**20 52 41.7**	**-0.6**
	baz=238						
CHN5				*e*S	**Sg**	**20 53 02.3**	**+1.4**
	baz=238						
WGK	**Gukeng**	**1.47**	**242**	*e*P	**Pg**	**20 52 42.7**	**-0.4**
	baz=244						
WGK				*e*S	**Sg**	**20 53 02.4**	**+0.1**
	baz=244						
ELDTW	**Lidau**	**1.48**	**217**	*e*P	**Pn**	**20 52 41.0**	**+0.5**
	baz=203						
WDLH	**Douliu**	**1.49**	**242**	*e*P	**Pg**	**20 52 42.7**	**-0.7**
	baz=244						
WDLH				*e*S	**Sg**	**20 53 04.2**	**+1.4**
	baz=244						
RLNB	**Erlin**	**1.56**	**252**	*e*P	**Pg**	**20 52 43.4**	**-1.3**
	baz=266						
RLNB				*e*S	**Sg**	**20 53 05.4**	**+0.4**
	baz=266						
IRIF	**Iriomote-Funau**	**1.60**	**92**	P	**Pb**	**20 52 42.7**	**-1.0**
IRIF				*e*S	**Sn**	**20 53 02.9**	**+0.7**
CHN2	**Minshiung**	**1.61**	**238**	*e*P	**Pg**	**20 52 44.6**	**-1.2**
	baz=241						
CHN2				*e*S	**Sg**	**20 53 06.9**	**-0.1**
	baz=241						
CHN4	**Tsaushan**	**1.63**	**231**	P	**Pg**	**20 52 44.7**	**-1.5**
	baz=233						
CHN4				*e*S	**Sg**	**20 53 07.4**	**-0.1**
	baz=233						
TPUB	**Ta-pu**	**1.64**	**229**	P	**Pg**	**20 52 44.9**	**-1.5**
	baz=231						
TPUB				*e*S	**Sg**	**20 53 06.9**	**-0.8**
	baz=231						
STYT	**Tauyuan**	**1.65**	**223**	*e*P	**Pg**	**20 52 45.0**	**-1.6**
	baz=222						
CHY	**Chiayi**	**1.67**	**238**	*e*P	**Pg**	**20 52 45.2**	**-1.7**
	baz=225						
WTP	**Ta-pu**	**1.69**	**228**	*e*P	**Pb**	**20 52 45.2**	**-0.1**
	baz=230						
WTP				*e*S	**Sg**	**20 53 09.2**	**-0.1**
	baz=230						
TWH	**Lutao**	**1.73**	**195**	*e*P	**Pn**	**20 52 44.0**	**+0.2**
	baz=185						
TWH				*e*S	**Sn**	**20 53 04.0**	**-1.4**
	baz=185						
TWK	**Hsinying**	**1.76**	**231**	*e*P	**Pb**	**20 52 46.6**	**+0.1**
	baz=233						
TWK				*e*S	**Sg**	**20 53 10.9**	**-0.6**
	baz=233						
TWGBT	**Beinan**	**1.77**	**208**	*e*P	**Pn**	**20 52 44.5**	**+0.1**
	baz=194						
TWG	**Pinlang**	**1.77**	**208**	*e*P	**Pn**	**20 52 44.8**	**+0.4**
	baz=193						
WSF	**Szhu**	**1.77**	**245**	*e*P	**Pn**	**20 52 45.2**	**+0.8**
	baz=248						
WSF				*e*S	**Sg**	**20 53 10.6**	**-1.2**
	baz=248						
CHN1	**Nanshi**	**1.79**	**228**	*e*P	**Pb**	**20 52 46.8**	**-0.1**
	baz=230						
CHN1				*e*S	**Sg**	**20 53 11.4**	**-1.0**
	baz=230						
SGST	**Jiashian**	**1.82**	**225**	*e*P	**Pb**	**20 52 46.8**	**-0.7**
	baz=212						
SGST				*e*S	**Sb**	**20 53 11.5**	**+1.5**
	baz=212						
SLGT	**Liugui**	**1.85**	**222**	*e*P	**Pb**	**20 52 47.5**	**-0.5**
	baz=224						
SLGT				*e*S	**Sg**	**20 53 12.9**	**-1.4**
	baz=224						
JKRS	**Kuro-shima**	**1.86**	**94**	P	**Pb**	**20 52 46.9**	**-1.3**
JKRS				S	**Sn**	**20 53 09.7**	**+1.0**
CHN8	**Yiju**	**1.92**	**238**	*e*P	**Pb**	**20 52 49.6**	**+0.5**
	baz=225						
CHN8				*e*S	**Sg**	**20 53 15.2**	**-1.4**
	baz=225						
JIJ	**Ishigaki jima**	**1.98**	**90**	P	**Pn**	**20 52 48.2**	**+1.0**
JIJ				S	**Sn**	**20 53 11.4**	**-0.1**
ECL	**Taimali**	**2.01**	**208**	*e*P	**Pn**	**20 52 48.2**	**+0.5**
	baz=195						
SSD	**Sandimen**	**2.05**	**217**	*e*P	**Pn**	**20 52 49.9**	**+1.7**
	baz=228						
JISG	**Ishigakijimahi**	**2.14**	**84**	P	**Pn**	**20 52 49.8**	**+0.4**
JISG				*e*S	**Sn**	**20 53 15.4**	**-0.1**
MASBT	**Mashibuluo**	**2.15**	**215**	*e*P	**Pb**	**20 52 51.7**	**-1.4**
	baz=215						

EAST	Anshuo	2.25	208	*e*P	Pn	20 52 52.4	+1.4
	baz=196						
PTTC	Pingtan	2.29	299	*e*P	Pn	20 52 52.1	+0.6
	baz=301						
PTTC				*e*S	Sn	20 53 19.2	+0.1
	baz=301						
PNG	Penghu	2.36	250	*e*P	Pn	20 52 53.0	+0.5
	baz=252						
SCZT	Fangliau	2.36	212	*e*P	Pb	20 52 55.1	-1.6
	baz=198						
PHUB	P'eng-hu	2.36	249	*e*P	Pn	20 52 53.3	+0.8
	baz=252						
PHUB				*e*S	Sn	20 53 23.4	+2.4
	baz=252						
LAY	Lan-yu	2.37	190	*e*P	Pn	20 52 52.9	+0.2
	baz=188						
VWUC	VWUC	2.37	285	*e*P	Pn	20 52 53.0	+0.3
	baz=287						
VWUC				*e*S	Sn	20 53 21.6	+0.3
	baz=287						
WDGT	Dungji	2.40	243	*e*P	Pn	20 52 54.4	+1.3
	baz=244						
JTJ	Tarama	2.50	84	*e*S	Sn	20 53 25.1	+0.8
MATB	Ma-tsu	2.54	314	*e*P	Pn	20 52 55.9	+0.8
	baz=314						
VCHM	Qimei	2.61	244	*e*P	Pn	20 52 57.2	+1.2
	baz=245						
PTMZ	Houxiangcun	2.68	285	*e*P	Pn	20 52 57.9	+1.0
	baz=287						
PTMZ				*e*S	Sn	20 53 29.0	+0.3
	baz=287						
XPSS	Dashiqiu	3.00	328	*e*P	Pn	20 53 01.9	+0.6
	baz=327						
KNMB	Chin-men Tao	3.27	272	*e*P	Pn	20 53 05.2	+0.2
	baz=275						
AXDP	Jialang	3.68	279	*e*P	Pn	20 53 11.3	+0.6
	baz=281						
ZPLA	Ao Xicun	3.88	264	*e*P	Pn	20 53 13.7	+0.2
	baz=267						

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*IDC **18** 20:53:20.4±3.8, 52°.86N×163°.71W, h0^{km}, mb3.6/8, mb1 3.6/10, mb1mx3.5/56, mbtmp3.6/10, ML3.1/2, MS3.3/1, Ms1 3.3/1, ms1mx2.5/50, Error ellipse: s-maj=92.0km s-min=20.8km az=161.0*

*NEIC **18** 20:53:25.8±1.4, 53°.21N±0°.09×163°.85W±0°.04, h31^{km}±8^{km}, Error ellipse: s-maj=12.6km s-min=3.1km az=171.0*

*AEIC **18** 20:53:27.5±2.6, 53°.35N±0°.07×163°.98W±0°.08, h41^{km}±7^{km}, ML3.2/37, Error ellipse: s-maj=10.3km s-min=6.6km az=162.0*

ISC 18 20:53:26.1±0.9, 53°.17N±0°.09×163°.73W±0°.05, h35^{km}, n90, σ1^{s}.35/88, mb3.7/7, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WESP	Westdahl Peak	1.45	336		Pn	20 53 48.8	-1.1
WESP					Sn	20 54 04.9	-2.8
AKSA	Akutan Strait	1.52	310		Pn	20 53 49.2	-1.5
AKSA					Sn	20 54 07.2	-2.1
AKSA	Akutan Strait	1.52	310		Pn	20 53 49.3	-1.5
AKSA					Sn	20 54 07.0	-2.3
AKUT	Akutan	1.56	309		Pn	20 53 49.8	-1.4
AKUT	Akutan	1.56	309		Sn	20 54 08.2	-1.9
AHB	Akutan Harbor	1.56	308		Pn	20 53 50.1	-1.3
AKBBA	Akutan Broad B	1.61	306		Pn	20 53 50.9	-1.1
AKBBA					Sn	20 54 10.7	-0.8
SSBA	Shishaldin	1.62	352		Pn	20 53 52.1	-0.2
AKMO	Akutan Morgan	1.64	305		Pn	20 53 51.4	-1.1
AKMO					Sn	20 54 10.7	-1.7
AKLV	Akutan Long Va	1.66	308		Pn	20 53 51.3	-1.4
AKRB	Akutan Reef Bi	1.69	306		Pn	20 53 52.3	-0.8
LVA	Lava Point	1.69	307		Pn	20 53 52.5	-0.7
AKGG	Akutan Green G	1.70	308		Pn	20 53 52.1	-1.1
FALS	False Pass	1.70	6		Pn	20 53 52.3	-0.9
UNV	Unalaska Valle	1.79	293		Pn	20 53 52.7	-1.8
UNV	Unalaska Valle	1.79	293		Sn	20 54 14.1	-1.9
MNAT	Makushin Natee	1.91	293		Pn	20 53 55.1	-1.0
MNAT					Sn	20 54 16.9	-1.9
MREP	Makushin Rep't	1.92	291		Pn	20 53 55.5	-0.8
MTBL	Makushin Table	1.94	296		Pn	20 53 55.9	-0.7
MSW	Makushin Switc	1.97	293		Pn	20 53 56.2	-0.8
MSW					Sn	20 54 19.0	-1.4
MGOD	Makushin Gods	1.98	290		Pn	20 53 56.8	-0.4
DT1	Dutton Round H	2.12	23		Pn	20 53 59.4	+0.4
PS4A	Pavlof South-4	2.44	26		Pn	20 54 04.6	+1.2
OKTU	Okmok Mt. Tuli	2.60	276		Pn	20 54 05.6	-0.1
OKER	Okmok East Rim	2.61	278		Pn	20 54 05.9	+0.1
OKSP	Okmok Steeple	2.75	274		Pn	20 54 07.4	-0.3
SDPT	Sand Point	2.90	40		Pn	20 54 09.9	+0.3
CNBA	Chernabura Isl	2.95	54	Pn	Pn	20 54 12.6	+2.3
NIKH	Nikolski High	3.10	268	Pn	Pn	20 54 10.0	-2.5
ATKA	Atka Island	6.44	266	Pn	Pn	20 54 57.5	-0.8
OHAK	Old Harbor	7.22	52	Pn	Pn	20 55 09.0	0.0
GSTR	Great Sitkin T	7.58	267	Pn	Pn	20 55 11.3	-2.8
KDAK	Kodiak Island	7.83	49	Pn	Pn	20 55 16.7	-0.7
	0.5nm,0.3s,baz=234,slow=5.5,SNR=9.7						
KDAK				Sn	Sn	20 56 40.5	-4.2
	0.1nm,0.3s,baz=107,slow=15,SNR=2.0						
KDAK	Kodiak Island	7.83	49	Pn	Pn	20 55 17.4	0.0
CNPM	China Poot	9.40	42	Pn	Pn	20 55 40.3	+1.4
SUA	Susitna One	10.86	35	Pn	Pn	20 55 58.9	0.0
RC01	Rabbit Creek A	10.97	38	Pn	Pn	20 55 59.6	-0.7
SKT	Skwentna	10.97	32	Pn	Pn	20 56 01.2	+0.9
KNK	Knik Glacier	11.65	39	Pn	Pn	20 56 09.4	-0.3
GHO	Glory Hole Cre	11.71	37	Pn	Pn	20 56 10.4	-0.1
HIN	Hinchinbrook I	11.87	46	Pn	Pn	20 56 12.7	0.0
SCM	Sheep Creek Mo	12.34	39	Pn	Pn	20 56 18.9	-0.2
KTH	Kantishna Hill	12.36	28	Pn	Pn	20 56 17.4	-2.0
TRF	Thorofare Moun	12.46	29	Pn	Pn	20 56 22.5	+1.7
RAGM	Ragged Mountai	12.67	48	Pn	Pn	20 56 23.6	0.0
BPAW	Bear Paw Mtn.	12.78	26	Pn	Pn	20 56 25.1	+0.1
RND	Reindeer	12.86	31	Pn	Pn	20 56 26.4	+0.2
DHY	Denali Highway	13.11	34	Pn	Pn	20 56 29.8	+0.1
BWN	Browne	13.25	28	Pn	Pn	20 56 31.7	+0.3
CRQM	Cirque	13.51	48	Pn	Pn	20 56 35.4	+0.2
GLB	Gilahina Butte	13.53	44	Pn	Pn	20 56 36.2	+0.8
VRDI	Verde Repeater	13.58	46	Pn	Pn	20 56 36.7	+0.5
MLY	Manley	13.60	24	Pn	Pn	20 56 36.1	-0.1
TGL	Tana Glacier	13.65	48	Pn	Pn	20 56 36.5	-0.5
PAX	Paxson	13.72	37	Pn	Pn	20 56 35.8	-2.1
IMAR	Indian Mountai	13.78	17	Pn	Pn	20 56 41.9	+3.3
MCARA	McCarthy VSAT	13.84	45	Pn	Pn	20 56 39.8	+0.3
BALM	Baldy	13.98	47	Pn	Pn	20 56 39.9	-1.6
BARN	Barnard Glacie	14.29	48	Pn	Pn	20 56 46.6	+0.7
CTGM	Chitina Glacie	14.40	48	Pn	Pn	20 56 44.4	-2.9
RIDG	Independent Ri	14.41	35	Pn	Pn	20 56 46.5	-0.9
ILAR	Eielson Array	14.45	30	Pn	Pn	20 56 48.9	+1.1
	0.1nm,0.3s,baz=228,slow=11,SNR=1.8						
ILAR	Eielson Array	14.45	30		Pn	20 56 47.9	+0.1
SCRK	Sand Creek	14.86	36	Pn	Pn	20 56 51.7	-1.8
RDOG	Red Dog Mine	14.94	1	Pn	Pn	20 56 49.0	-5.4
HYT	Haines Junctio	16.12	51	Pn	Pn	20 57 10.2	+0.4
EGAK	Eagle	16.33	36	Pn	Pn	20 57 11.7	-0.6
DAWY	Dawson	16.59	39	Pn	Pn	20 57 15.2	-0.5
TOLK	Toolik Lake Re	16.90	18		Pn	20 57 20.1	+0.5
BMAR	Burnt Mountain	17.03	26	P	Pn	20 57 21.2	0.0
INK	Inuvik	20.82	32	P	Pn	20 58 07.6	+0.9
	1.1nm,0.6s,baz=219,slow=11,SNR=4.5						
INK	Inuvik	20.82	32	P	Pn	20 58 07.3	+0.6
PETK	Petropavlovsk-	22.96	285	P	P	20 58 27.6	+0.6
	1.0nm,0.5s,baz=87,slow=12,SNR=5.5						
PETK	Petropavlovsk-	22.96	285	P	P	20 58 27.5	+0.4
LLLB	Lillooet	25.69	79	P	P	20 58 50.8	-1.8
YKA	Yellowknife Ar	27.11	50	P	P	20 59 06.7	+1.4
	0.4nm,0.6s,baz=266,slow=8.2,SNR=8.7						
YBH	Yreka Blue Hor	29.60	96	LR	LR	21 08 40.5	
	comp=Z,56nm,18.1s,baz=324,slow=31						
H11N2	WAKE ISLAND Hy	40.35	226	T	T	21 44 37.3	
	baz=26						
H11N3	WAKE ISLAND Hy	40.35	226	T	T	21 44 38.5	
	baz=26						
H11N1	WAKE ISLAND Hy	40.37	226	T	T	21 44 49.1	
	baz=26						
H11S1	WAKE ISLAND Hy	41.52	225	T	T	21 46 17.2	
	baz=25,slow=76,SNR=2.6						
H11S2	WAKE ISLAND Hy	41.53	225	T	T	21 46 11.8	
	baz=25,slow=76,SNR=3.6						
H11S3	WAKE ISLAND Hy	41.53	225	T	T	21 46 18.6	
	baz=25,slow=76,SNR=3.6						
SONM	Songino Array	53.78	303	P	P	21 02 46.1	+1.2
	0.8nm,0.9s,baz=46,slow=8.3,SNR=5.9						
SONM	Songino Array	53.78	303	P	P	21 02 45.0	+0.1
FINES	FINESS Array B	65.47	355	P	P	21 04 05.7	+0.8
	0.9nm,0.8s,baz=8.9,slow=9.8,SNR=1.5						
MKAR	Makanchi Array	65.67	316	P	P	21 04 06.9	+0.4
	0.4nm,0.6s,baz=48,slow=6.4,SNR=6.1						
MKAR	Makanchi Array	65.67	316	P	P	21 04 06.1	-0.4
AKASG	Malin Array Be	75.93	352	P	P	21 05 09.7	+1.0
	0.1nm,0.3s,baz=348,slow=4.0,SNR=1.4						
BRTR	Keskin Array B	86.26	347	P	P	21 06 06.1	+2.1
	0.2nm,0.4s,baz=352,slow=3.4,SNR=1.5						

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*NIED **18** 21:00:00, 31°.40N×131°.10E, h53^{km}, Mw4.1 Best double couple: M$_0$1.58000×10^{15} NP1:ϕ$_s$200.00000°, δ75.00000°, λ-113.00000°. NP2:ϕ$_s$80.00000°, δ27.00000°, λ-34.00000°.*

*IDC **18** 21:00:37.4±0.6, 31°.40N×131°.01E, h59^{km}±4^{km}, mb3.6/18, mb1 3.8/23, mb1mx3.7/40, mbtmp3.9/23, MS3.0/4, Ms1 3.0/4, ms1mx2.7/46, Error ellipse: s-maj=14.9km s-min=6.8km az=92.0*

*JMA **18** 21:00:38.2, 31°.41N×131°.08E, h58^{km}±1^{km}, M3.7 Broadband fault plane solution: P waves. NP1: ϕ$_s$93.00000°, δ49.00000°, λ-10.00000°. NP2:ϕ$_s$189.00000°, δ83.00000°, λ-138.00000°. Principal axes: T Plg22.0000°, Azm314.0000°; N Plg48.0000°, Azm198.0000°; P Plg34.0000°, Azm60.0000°;*

JMA Felt II J1.

*NEIC **18** 21:00:38.5±1.3, 31°.40N±0°.05×131°.11E±0°.05, h69^{km}±7^{km}, mb4.2/8 Error ellipse: s-maj=9.5km s-min=2.4km az=143.0*

ISC 18 21:00:37.8±0.5, 31°.42N±0°.03×131°.10E±0°.04, h61^{km}±4^{km}, n56, σ0^{s}.97/80, mb4.0/21, 3C-9D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNAR	Kushima--Naru	0.18	53	⇓P	Pn	21 00 47.4	+0.1
JNAR				*e*S	Sn	21 00 53.7	-0.4
JTSR	Tashiro 2	0.29	212	⇓P	Pn	21 00 47.9	-0.1
JTSR				*e*S	Sn	21 00 55.2	-0.2
JNKG	Nichinankitago	0.34	44	⇓P	Pn	21 00 48.7	+0.4
JNKG				*e*S	Sn	21 00 56.9	+0.9
JTZ	Takazaki	0.48	359	⇑P	Pn	21 00 49.9	+0.2
JTZ				*e*S	Sn	21 00 58.5	+0.1
JSU	Suzuyama	0.56	279	⇓P	Pn	21 00 50.6	+0.1
JSU				*e*S	Sn	21 00 59.8	0.0
JTN	Tanegashima 3	0.77	188	⇓P	Pn	21 00 53.3	+0.4
JTN				*e*S	Sn	21 01 04.8	+0.8
JZO	Okuchi	0.84	329	⇑P	Pn	21 00 54.2	+0.3
JZO				*e*S	Sn	21 01 06.1	+0.4
JTSN	Tsuno	0.90	22	⇓P	Pn	21 00 54.8	+0.2
JTSN				*e*S	Sn	21 01 07.4	+0.5
JMTN	Minamitane	1.03	190	⇓P	Pn	21 00 57.1	+0.8
JMTN				*e*S	Sn	21 01 11.5	+1.5
JIU3	Izumi3	1.16	348	⇑P	Pn	21 00 58.6	+0.6
JIU3				*e*S	Sn	21 01 13.3	+0.3
JSJ	Shimokoshiki	1.21	283	⇓P	Pn	21 00 58.4	-0.3
JSJ				S	Sn	21 01 14.0	-0.3
JYAK	Yakushimahirau	1.28	204	⇓P	Pn	21 01 00.0	+0.4
JYAK				S	Sn	21 01 16.7	+0.9
JNU	Nakatsue	1.71	354	P	Pn	21 01 06.4	+1.0
	31nm,0.3s,baz=174,slow=17,SNR=358						
JNU				LR	LR	21 01 22.3	
	comp=Z,26nm,19.0s,baz=170,slow=26						
JNU				S	Sn	21 01 26.2	-0.1
	81nm,0.3s,baz=0.7,slow=15,SNR=8.1						
JOW	Kunigami	5.19	209	P	Pn	21 01 52.8	-0.2
	0.9nm,0.3s,baz=96,slow=18,SNR=21						
JOW				S	Sn	21 02 50.2	-1.3
	1.0nm,0.3s,baz=240,slow=30,SNR=2.8						
JOW	Kunigami	5.19	209	Pn	Pn	21 01 53.9	+1.0
INU	Inuyama	6.31	50		Pn	21 02 09.2	+1.0
INU					Sn	21 03 18.9	-0.1
KSRS	Korea Array	6.57	337	P	Pn	21 02 12.9	+1.1
	0.4nm,0.3s,baz=188,slow=25,SNR=4.8						
KSRS				LR	LR	21 04 30.7	
	comp=Z,60nm,19.4s,baz=150,slow=36						
KSAR	Wonju Array Be	6.57	337	Pn	Pn	21 02 13.7	+1.9
KS19	Wonju Array Si	6.63	337	Pn	Pn	21 02 12.5	-0.1
JHJ	Hachijo jima 2	7.55	75	P	Pn	21 02 26.7	+1.5
	13nm,0.3s,baz=133,slow=23,SNR=6.0						
JHJ				S	Sn	21 03 46.7	-2.6
	8.4nm,0.3s,baz=67,slow=18,SNR=1.2						
JHJ2	Mitsune	7.57	75	Pn	Pn	21 02 27.0	+1.5
MAJO	Matsushiro	7.81	47		Pn	21 02 29.9	+1.2
MAT	Matsushiro	7.81	47	P	Pn	21 02 29.7	+1.0
MAT				*e*S	Sn	21 03 54.3	-1.3
MJAR	Matsushiro Arr	7.81	47	P	Pn	21 02 29.6	+0.9
	0.5nm,0.3s,baz=248,slow=13,SNR=30						
MJAR				S	Sn	21 03 54.2	-1.5
	0.0nm,0.3s,baz=268,slow=30,SNR=1.5						
MJAR	Matsushiro Arr	7.81	47		Pn	21 02 30.2	+1.4
MJB9	Matsu-Tunnel	7.81	47		Pn	21 02 29.8	+1.0
KLR	Kul'dur	17.80	1	P	P	21 04 42.1	+0.9
	0.3nm,0.3s,baz=176,slow=9.4,SNR=10						
ULN	Ulaanbaatar	24.61	319	P	P	21 05 53.5	+1.2
SONM	Songino Array	24.96	318	P	P	21 05 55.6	0.0
	1.4nm,0.8s,baz=132,slow=8.5,SNR=11						
SONM				pP	pP	21 06 11.4	+0.9
	1.3nm,1.0s,baz=138,slow=8.7,SNR=4.3						
SONM				LR	LR	21 15 59.2	
	comp=Z,43nm,18.2s,baz=134,slow=37						
SONM	Songino Array	24.96	318	IAmb	IAmb	21 05 58.3	
	comp=Z,1.5nm,0.9s						
TLY	Talaya	28.57	323	LR	LR	21 17 24.6	
	comp=Z,24nm,21.1s,baz=125,slow=35						
CMAR	Chiang Mai Arr	31.76	254	P	P	21 06 56.0	-0.4
	comp=Z,0.3nm,0.3s,baz=51,slow=7.3,SNR=4.4						
CMAR				LR	LR	21 21 22.6	
	comp=Z,36nm,18.8s,baz=168,slow=39						
SEY	Seymchan	34.34	17	P	P	21 07 18.8	+0.4
	comp=Z,0.4nm,0.2s,baz=125,slow=10,SNR=1.3						
ZALV	Zalesovo Beam	39.86	318	P	P	21 08 04.9	-0.3
	comp=Z,0.4nm,0.4s,baz=86,slow=10,SNR=1.7						
MKAR	Makanchi Array	40.21	307	P	P	21 08 07.9	-0.3
	comp=Z,0.5nm,0.7s,baz=86,slow=11,SNR=8.0						
MKAR				PcP	PcP	21 10 11.4	+0.1
	comp=Z,0.2nm,0.4s,baz=90,slow=3.3,SNR=4.1						
MKAR				ScP	ScP	21 13 52.4	-2.8
	comp=Z,0.5nm,0.8s,baz=82,slow=2.9,SNR=4.4						
KURK	Kurchatov	43.00	312	P	P	21 08 31.0	0.0
KURK				IAmb	IAmb	21 08 32.6	
	comp=Z,1.8nm,0.7s						
BRVK	Borovoye	48.30	315	P	P	21 09 12.8	-0.1
BRVK				IAmb	IAmb	21 09 30.1	
	comp=Z,2.4nm,0.7s						
KK31	Karatay Array	48.65	302	P	P	21 09 16.2	+0.5
KKAR	Karatay Array	48.65	302	P	P	21 09 15.9	+0.2
KKAR	Karatay Array	48.65	302	IAmb	IAmb	21 09 32.2	
	comp=Z,3.9nm,1.0s						
WRA	Warramunga Arr	51.16	176	P	P	21 09 34.6	-0.2
	comp=Z,0.9nm,0.7s,baz=356,slow=8.0,SNR=6.9						
WRA				pP	pP	21 09 49.8	-0.8
	comp=Z,0.9nm,1.0s,baz=354,slow=7.8,SNR=3.0						
ASAR	Alice Springs	54.84	177	P	P	21 10 01.0	-0.9
	comp=Z,0.9nm,0.8s,baz=9.5,slow=13,SNR=11						
ASAR				pP	pP	21 10 16.8	-1.1
	comp=Z,0.5nm,0.7s,baz=0.8,slow=6.5,SNR=2.9						
ABKAR	Akbulak array	55.06	311	P	P	21 10 02.7	-0.5
ILAR	Eielson Array	58.70	30	P	P	21 10 28.6	-0.1
	comp=Z,0.3nm,0.6s,baz=276,slow=6.5,SNR=6.1						
ILAR				PcP	PcP	21 11 18.6	+0.5
	comp=Z,0.2nm,0.6s,baz=270,slow=3.6,SNR=1.6						
INK	Inuvik	63.14	25	P	P	21 10 58.7	-0.1
	comp=Z,1.0nm,0.6s,baz=276,slow=2.7,SNR=6.5						
STKA	Stephens Creek	63.73	170	P	P	21 11 03.6	+0.6
	comp=Z,0.9nm,0.4s,baz=359,slow=5.2,SNR=4.9						
ARCES	ARCESS Array B	66.13	338	P	P	21 11 17.3	-0.9
	comp=Z,2.2nm,0.7s,baz=60,slow=7.2,SNR=6.8						
KBZ	Khabaz	67.87	309	P	P	21 11 29.9	+0.2
	comp=Z,1.8nm,0.6s,baz=81,slow=2.8,SNR=7.7						
FINES	FINESS Array B	69.61	330	P	P	21 11 39.3	-0.9
	comp=Z,1.9nm,0.4s,baz=68,slow=5.5,SNR=34						
FINES				pP	pP	21 11 55.4	-1.5
	comp=Z,1.7nm,0.8s,baz=52,slow=5.8,SNR=1.9						
YKA	Yellowknife Ar	72.78	26	P	P	21 11 59.9	+0.6
	comp=Z,0.5nm,0.7s,baz=306,slow=5.3,SNR=8.6						
AKASG	Malin Array Be	73.24	319	P	P	21 12 01.3	-0.9
	comp=Z,0.7nm,0.3s,baz=56,slow=6.2,SNR=6.6						
AKASG	Malin Array Be	73.24	319	IAmb	IAmb	21 12 03.0	
	comp=Z,0.7nm,0.6s						
NB2	NORSAR Subarra	75.77	334	P	P	21 12 15.7	-1.2
	comp=Z,0.5nm,0.5s,baz=48,slow=5.9						
NOA	NORSAR Array B	75.77	334	P	P	21 12 15.7	-1.2
	comp=Z,0.9nm,0.7s,baz=50,slow=5.7,SNR=4.2						
NOA				pP	PcP	21 12 31.2	+1.9
	comp=Z,0.8nm,0.7s,baz=49,slow=5.6,SNR=3.9						
BRTR	Keskin Array B	75.84	308	P	P	21 12 17.7	-0.1
	comp=Z,1.5nm,0.7s,baz=98,slow=5.5,SNR=8.6						
BRTR				pP	PcP	21 12 32.7	+2.6
	comp=Z,0.9nm,0.8s,baz=72,slow=5.4,SNR=2.8						
PDAR	Pinedale Array	87.57	40	P	P	21 13 19.6	0.0
	comp=Z,0.3nm,0.7s,baz=270,slow=1.5,SNR=3.3						
PDAR				pP	pP	21 13 37.0	+0.2
	comp=Z,0.5nm,0.9s,baz=262,slow=2.6,SNR=2.7						

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*IDC **18** 21:21:13.7±1.2, 43°.36N×13°.05E, h0^{km}, mb3.2/3, mb1 3.5/8, mb1mx3.3/54, mbtmp3.3/8, ML3.2/4, MS3.0/3, Ms1 3.0/3, ms1mx2.4/34, Error ellipse: s-maj=34.4km s-min=14.3km az=100.0*

*ROM **18** 21:21:14.2±0.1, 43°.372N±0°.003×12°.544E±0°.005, h8^{km}, ML3.4/13, Mw3.2, Error ellipse: s-maj=0.3km s-min=0.3km az=24.0, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M$_{rr}$-6.05; M$_{\theta\theta}$1.54; M$_{\phi\phi}$4.52; M$_{r\theta}$-4.00; M$_{\theta\phi}$-5.61; M$_{\phi r}$0.91; Fault plane solution: M$_0$8.73555×10^{13} NP1:ϕ$_s$119.00000°, δ62.00000°, λ-119.00000°. NP2:ϕ$_s$349.00000°, δ40.00000°, λ-48.00000°.*

*LDG **18** 21:21:15.7±0.1, 43°.34N×12°.62E, h2^{km}, Ml2.9/22 Error ellipse: s-maj=2.9km s-min=2.1km az=29.0*

*PRU **18** 21:21:16.7±0.0, 43°.44N×12°.79E, h0^{km}*

ISC 18 21:21:14.6±0.6, 43°.41N±0°.02×12°.51E±0°.02, h12^{km}±3^{km}, n136, σ1^{s}.92/177, mb3.5/3, 17C, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATFO	Monte Foce - G	0.06	135	⇑P	Pg	21 21 15.7	-1.3
ATFO				S	Sg	21 21 16.6	-2.2
ATVO	AVT- Monte Val	0.08	250	⇑P	Pg	21 21 16.9	-0.3
ATVO				S	Sg	21 21 18.7	-0.4
ATPI	Pietralunga -	0.09	297	⇑P	Pg	21 21 17.6	+0.3
ATPI				S	Sg	21 21 20.1	+0.8
PIEI	Pieia	0.13	8	P	Pg	21 21 18.2	+0.4
PIEI				S	Sg	21 21 21.4	+1.2
MURB	Monte Urbino	0.15	176	⇑P	Pg	21 21 17.3	-0.8
MURB				S	Sg	21 21 19.7	-0.9
FRON	Frontone	0.19	55	⇑P	Pg	21 21 18.8	0.0
FRON				S	Sb	21 21 22.3	+0.7
ATMI	Monte Miggiano	0.19	247	P	Pg	21 21 18.9	+0.1
NARO	Abbazia di Nar	0.21	14	⇑P	Pg	21 21 19.5	+0.4
NARO				S	Sg	21 21 23.6	+1.5
CDCA	Citt' di Caste	0.21	283	P	Pg	21 21 19.6	+0.6
CDCA				S	Sg	21 21 23.9	+1.9
FOSV	Fossato di Vic	0.22	122	⇑P	Pg	21 21 18.4	-0.8
FOSV				S	Sg	21 21 21.2	-1.1
BADI	Badiali	0.22	297	P	Pg	21 21 20.0	+0.7
BADI				S	Sg	21 21 24.5	+2.1
ATTE	AVT- Monte Tez	0.24	209	⇑P	Pg	21 21 19.1	-0.5
ATTE				S	Sg	21 21 25.1	+2.0
ATCC	AVT- Casa Cast	0.24	157	P	Pg	21 21 19.1	-0.6
ATCC				S	Sg	21 21 23.0	-0.1
MPAG	Monte Paganucc	0.28	39	⇑P	Pb	21 21 20.8	-1.0
MPAG				S	Sb	21 21 25.9	-0.6
PE3	Peglio	0.29	358	P	Pb	21 21 21.6	-0.2
PE3				S	Sb	21 21 27.2	+0.7
FSSB	Fossombrone	0.34	34	P	Pb	21 21 21.9	-0.8
FSSB				S	Sb	21 21 28.1	0.0
SNTG	Esanatoglia	0.35	116	⇑P	Pg	21 21 20.9	-0.7
SNTG				S	Sg	21 21 26.2	-0.1
SNTG				AML	AML		
	comp=N,2645µm,0.3s						
SNTG				AML	AML		
	comp=E,2415µm,0.2s						
SNTG				AML	AML		
	comp=N,2650µm,0.3s						
SNTG				AML	AML		
	comp=E,2420µm,0.2s						
SNTG				AML	AML		
	comp=N,20650µm,0.3s						
SNTG				AML	AML		
	comp=E,19900µm,0.2s						
ASSB	Assisi San Ben	0.38	164	⇑P	Pg	21 21 21.3	-0.9
ASSB				S	Sg	21 21 26.9	-0.4
MTL1	Matelica	0.40	113	P	Pg	21 21 21.8	-0.6
MTL1				S	Sg	21 21 27.9	+0.3
MTL1				AML	AML		
	comp=E,19250µm,0.4s						
MTL1				AML	AML		
	comp=N,25950µm,0.4s						
MTL1				AML	AML		
	comp=E,19300µm,0.4s						
MTL1				AML	AML		
	comp=N,25950µm,0.4s						
MTL1				AML	AML		
	comp=N,25950µm,0.4s						
MTL1				AML	AML		
	comp=N,25950µm,0.4s						
EL6	Elcito	0.44	100	⇑P	Pg	21 21 22.7	-0.5
EL6				S	Sg	21 21 29.6	+0.5
EL6				AML	AML		
	comp=N,17150µm,0.5s						
EL6				AML	AML		
	comp=E,12300µm,1.6s						
EL6				AML	AML		
	comp=N,17100µm,0.5s						
EL6				AML	AML		
	comp=N,17150µm,0.5s						
EL6				AML	AML		
	comp=E,12400µm,1.6s						
GAG1	Gagliole	0.44	113	⇑P	Pg	21 21 22.9	-0.4
GAG1				S	Sg	21 21 29.7	+0.6
GAG1				AML	AML		
	comp=E,19000µm,0.5s						
GAG1				AML	AML		
	comp=N,36600µm,0.2s						
GAG1				AML	AML		
	comp=N,36650µm,0.2s						
GAG1				AML	AML		
	comp=N,36600µm,0.2s						
GAG1				AML	AML		
	comp=N,36600µm,0.2s						
CRM1	Catelraimondo	0.45	116	P	Pg	21 21 22.8	-0.6
CRM1				S	Sg	21 21 29.7	+0.4
CRM1				AML	AML		
	comp=E,14000µm,1.6s						
CRM1				AML	AML		
	comp=N,17200µm,0.3s						
CRM1				AML	AML		
	comp=N,17200µm,0.3s						
CRM1				AML	AML		
	comp=E,13950µm,1.6s						
CING	Cingoli	0.50	94	⇑P	Pg	21 21 23.9	-0.4
CING				S	Sg	21 21 31.8	+0.7
CING				AML	AML		
	comp=N,8155µm,0.3s						
CING				AML	AML		
	comp=E,4755µm,0.4s						
FDMO	Fiordimonte	0.56	131	⇑P	Pg	21 21 24.5	-1.1
FDMO				S	Sg	21 21 32.8	-0.2
FDMO				AML	AML		
	comp=N,2835µm,0.2s						
FDMO				AML	AML		
	comp=E,2680µm,0.7s						
PESA	Pesaro	0.58	24	P	Pn	21 21 26.8	-2.0
PESA				S	Sn	21 21 35.3	-3.0
CSP1	Cessapalombo	0.60	122	⇑P	Pg	21 21 25.3	-0.9
CSP1				S	Sg	21 21 34.3	+0.1
CSP1				AML	AML		
	comp=N,7080µm,0.6s						
CSP1				AML	AML		
	comp=E,5205µm,0.6s						
CSP1				AML	AML		
	comp=N,7075µm,0.6s						
CSP1				AML	AML		
	comp=E,5175µm,0.6s						
CSP1				AML	AML		
	comp=N,7055µm,0.6s						
CSP1				AML	AML		
	comp=E,5170µm,0.6s						
CSP1				AML	AML		
	comp=N,7050µm,0.6s						
SENI	Senigallia	0.60	60	P	Pb	21 21 27.5	+0.4
SENI				AML	AML		
	comp=E,17100µm,0.4s						
SENI				AML	AML		
	comp=N,2595µm,0.9s						
SENI				AML	AML		

	comp=E,17150µm,0.4s						
SENI				AML	AML		
	comp=E,4605µm,1.0s						
SENI				AML	AML		
	comp=N,2580µm,0.9s						
SENI				AML	AML		
	comp=E,17150µm,0.4s						
SENI				AML	AML		
	comp=N,20650µm,0.3s						
SENI				AML	AML		
	comp=N,2590µm,0.9s						
SENI				AML	AML		
	comp=E,17150µm,0.4s						
SENI				AML	AML		
	comp=E,4635µm,1.0s						
SENI				AML	AML		
	comp=N,20650µm,0.3s						
MOMA	Monte Martano	0.61	176	⇑P	Pg	21 21 25.4	-1.0
MOMA				AML	AML		
	comp=E,4525µm,0.5s						
MOMA				AML	AML		
	comp=N,3065µm,1.5s						
MOMA				AML	AML		
	comp=N,3175µm,1.5s						
MOMA				AML	AML		
	comp=E,4530µm,0.5s						
MOMA				AML	AML		
	comp=E,4385µm,0.5s						
PP3	Marolino	0.80	92	AML	AML		
	comp=N,5435µm,0.4s						
PP3				AML	AML		
	comp=E,4125µm,0.9s						
PP3				AML	AML		
	comp=E,3845µm,0.3s						
PP3				AML	AML		
	comp=N,5650µm,0.5s						
PP3				AML	AML		
	comp=E,4125µm,0.9s						
AOI	Ancona	0.81	80	P	Pg	21 21 29.9	-0.3
AOI				AML	AML		
	comp=E,1785µm,0.7s						
AOI				AML	AML		
	comp=E,1790µm,0.7s						
AOI				AML	AML		
	comp=N,2765µm,0.3s						
ARRO	Arrone	0.85	167	P	Pb	21 21 29.9	-1.5
ARRO				AML	AML		
	comp=E,1610µm,1.1s						
ARRO				AML	AML		
	comp=E,1605µm,1.1s						
ARRO				AML	AML		
	comp=N,1410µm,0.8s						
OFFI	Offida	0.98	119	AML	AML		
	comp=E,3450µm,1.1s						
OFFI				AML	AML		
	comp=N,6735µm,0.5s						
SRES	S.Oreste - Sor	1.17	180	AML	AML		
	comp=N,765µm,0.7s						
SRES				AML	AML		
	comp=E,524µm,1.0s						
FIAM	Fiamignano	1.23	158	P	Pn	21 21 35.4	-2.2
FIAM				AML	AML		
	comp=E,1064µm,0.6s						
FIAM				AML	AML		
	comp=E,1066µm,0.6s						
FIAM				AML	AML		
	comp=N,952µm,0.9s						
AQU	L'Aquila	1.24	148	ePn	Pn	21 21 37.2	-0.7
FAGN	Fagnano	1.39	145	AML	AML		
	comp=E,2780µm,0.7s						
FAGN				AML	AML		
	comp=N,2375µm,0.5s						
MTCE	Montecelio	1.40	173	AML	AML		
	comp=N,324µm,1.1s						
MTCE				AML	AML		
	comp=E,636µm,0.5s						
MTCE				AML	AML		
	comp=E,637µm,0.5s						
CERT	Cerreto	1.50	166	AML	AML		
	comp=E,766µm,0.6s						
CERT				AML	AML		
	comp=N,675µm,0.7s						
INTR	Introdacqua	1.73	143	AML	AML		
	comp=E,644µm,1.5s						
INTR				AML	AML		
	comp=N,972µm,1.1s						
DUGI	Dugi Otok	1.94	72	i Pn	Pn	21 21 48.1	+0.7
DUGI				Sn	Sb	21 22 13.8	-0.1
NVLJ	Novalja	2.06	55	ePn	Pb	21 21 50.0	-1.9
NVLJ				Sn	Sb	21 22 16.6	-0.8
ZIRJ	Zirje	2.29	83	i Pn	Pn	21 21 53.2	+0.9
ZIRJ				Sn	Sb	21 22 21.8	-2.4
MORI	Morici	2.37	78	ePn	Pn	21 21 54.6	+1.3
MORI				Sn	Sb	21 22 23.7	-2.5
RIY	Rijeka	2.38	36	ePn	Pb	21 21 55.1	-2.3
UDBI	Udbina	2.60	63	ePn	Pn	21 21 57.9	+1.4
UDBI				Sn	Sb	21 22 29.9	-3.3
SABO	M.te Sabotino	2.68	16	AML	AML		
	comp=N,355µm,0.7s						
SABO				AML	AML		
	comp=E,369µm,0.7s						
CEY	Cerknica	2.70	30	ePn	Pn	21 21 58.6	+0.7
PGF	Pioggiola	2.72	253	ePn	Pn	21 21 59.1	+0.9
PGF	Pioggiola	2.72	253	eP	Pn	21 22 02.0	+3.8
PGF				eSn	Sn	21 22 31.7	+0.6
	comp=E,10nm,0.5s						
KIJV	Kijevo	2.88	77	i Pn	Pn	21 22 02.8	+2.4
KIJV				Sn	Sb	21 22 39.1	-2.2
SGRT	San Giovanni R	2.90	124	AML	AML		
	comp=E,138µm,0.6s						
SGRT				AML	AML		
	comp=N,120µm,0.6s						
LJU	Ljubljana	3.00	28	ePn	Pn	21 22 03.3	+1.3
OZLJ	Ozalj	3.06	43	ePn	Pb	21 22 05.4	-3.5
OZLJ				Sn	Sb	21 22 41.0	-5.1
CRES	Cresnjev	3.20	40	ePn	Pn	21 22 06.9	+2.1
MAKA	Makarska	3.29	91	ePn	Pn	21 22 06.9	+0.9
MYKA	Terra Mystica	3.32	14	ePn	Pn	21 22 08.3	+1.9
	comp=N,1.5nm,0.3s						
ABTA	Abfaltersbach	3.34	0	ePn	Pn	21 22 09.0	+2.3
	comp=N,17nm,0.6s,SNR=14						
ABTA				eSn	Sb	21 22 51.4	-3.0
	comp=N,32nm,0.6s						
RICI	Ricice	3.37	87	i Pn	Pn	21 22 08.5	+1.5
RICI				Sn	Sn	21 22 49.2	+2.2
OBKA	Obir	3.42	24	ePn	Pn	21 22 08.9	+1.1
	comp=N,2.5nm,0.2s,SNR=7.0						
OBKA				Sg	Sg	21 23 11.2	+6.8
	comp=N,94nm,0.6s						
MGRS	Mrkonjic Grad	3.45	71	ePn	Pb	21 22 13.4	-2.3
BLY	Banja Luka	3.62	67	ePn	Pb	21 22 20.0	+1.4
SBF	Sospel	3.71	279	ePn	Pn	21 22 13.6	+1.8
SBF	Sospel	3.71	279	eP	Pb	21 22 17.6	-2.5
SBF				eSn	Sn	21 22 56.4	+0.8
	comp=N,22nm,0.6s						
KBA	Koelnbreinsper	3.71	9	i Pn	Pn	21 22 14.3	+2.4
	comp=N,4.9nm,0.3s,SNR=9.7						
SOKA	Soboth	3.72	28	ePn	Pn	21 22 14.0	+1.9
	comp=N,1.0nm,0.3s,SNR=10						
SOKA				Pg	Pg	21 22 25.3	-0.6
	comp=N,3.9nm,0.3s						
FETA	Feichten	3.82	341	ePn	Pb	21 22 17.2	-4.9
	comp=N,3.7nm,0.3s,SNR=9.6						
FETA				eSn	Sb	21 23 08.3	-0.2
	comp=N,9.9nm,0.8s						
STON	Ston	3.83	96	ePn	Pn	21 22 14.1	+0.6
STON				Sn	Sn	21 22 58.8	+0.3
STON	Ston	3.83	96	ePn	Pn	21 22 13.9	+0.5
DAVOX	Davos/Dischmat	3.85	332	Pn	Pb	21 22 18.6	-4.0
	comp=N,4.7nm,0.3s,baz=153,slow=16,SNR=29						
DAVOX				Sn	Sb	21 23 05.2	-4.1
	comp=N,1.3nm,0.3s,baz=121,slow=21,SNR=3.5						
WTTA	Wattenberg	3.90	351	ePn	Pb	21 22 18.5	-4.9
	comp=N,3.3nm,0.2s,SNR=7.2						
SQTA	Sankt Quirin	3.92	347	ePn	Pb	21 22 20.4	-3.3
	comp=N,17nm,0.4s,SNR=6.9						
WATA	Walderalm	3.98	351	ePn	Pn	21 22 19.1	+3.5
	comp=N,4.4nm,0.2s,SNR=8.0						
WATA				eSn	Sb	21 23 09.0	-3.9
	comp=N,13nm,0.5s						
SG1	Sgolgore (BA)	4.03	128	ePn	Pn	21 22 17.8	+1.7
SG1				Sn	Sn	21 23 04.4	+1.2
MOTA	Moosalm	4.06	346	ePn	Pb	21 22 21.4	-4.7
	comp=N,3.9nm,0.3s						
MOTA				eSn	Sb	21 23 11.1	-4.1
	comp=N,11nm,0.6s						
DBRK	Dubrovnik	4.20	98	ePn	Pn	21 22 19.5	+1.1
RETA	Reutte	4.26	344	ePn	Pn	21 22 23.4	+4.0
	comp=N,6.5nm,0.3s,SNR=7.4						
FRF	La Foret Royal	4.27	274	ePn	Pn	21 22 21.1	+1.7
FRF	La Foret Royal	4.27	274	eP	Pn	21 22 25.2	+5.8
FRF				eSn	Sn	21 23 09.4	+0.2
	comp=N,4.3nm,0.5s						
DAVA	Damuels	4.30	335	ePn	Pn	21 22 24.1	+4.1
	comp=N,3.8nm,0.3s,SNR=14						
DAVA				eSn	Sb	21 23 18.2	-3.8
	comp=N,17nm,0.5s						
TREB	Trebinje	4.33	97	ePn	Pn	21 22 21.3	+1.0
MBDF	Montbardon	4.34	290	ePn	Pn	21 22 22.0	+1.4
MBDF				eSn	Sn	21 23 11.8	+0.6
	comp=N,6.1nm,0.6s						
LMR	La Mourre	4.38	271	ePn	Pn	21 22 21.5	+0.6
LMR	La Mourre	4.38	271	eP	Pn	21 22 26.0	+5.1
LMR				eSn	Sn	21 23 12.1	+0.3
	comp=N,3.9nm,0.6s						
ARSA	Arzberg	4.39	28	ePn	Pn	21 22 22.7	+1.7
	comp=N,1.9nm,0.3s						
ARSA				eSn	Sn	21 23 14.7	+2.5
	comp=N,3.6nm,0.3s						
BRY	Bratogost	4.44	95	ePn	Pn	21 22 23.5	+1.6
HCY	Herceg Novi	4.50	100	ePn	Pn	21 22 23.6	+1.0
MOA	Molln	4.61	15	ePn	Pn	21 22 26.3	+2.2
	comp=N,3.0nm,0.2s,SNR=8.9						
MOA				eSn	Sb	21 23 21.5	-9.3
	comp=N,9.3nm,0.4s						
LPG	La Plagne	4.62	299	ePn	Pn	21 22 27.3	+2.8
LPG	La Plagne	4.62	299	eP	Pn	21 22 30.7	+6.2
LPG				eSn	Sn	21 23 18.5	+0.2
	comp=N,6.8nm,0.7s						
LPL	La Plagne	4.64	299	ePn	Pn	21 22 29.1	+4.3
LPL	La Plagne	4.64	299	eP	Pb	21 22 31.2	-4.9
LPL				eSn	Sn	21 23 19.1	+0.4
	comp=N,2.6nm,0.3s						
UPM	Unac-Piva	4.67	90	ePn	Pn	21 22 27.7	+2.6
HAPS	Han Pijesak,Bl	4.71	80	ePn	Pn	21 22 29.0	+3.4
RUDO	Rudo	4.99	85	ePn	Pn	21 22 32.0	+2.6
ORIF	Oris-en-Rattie	5.00	290	ePn	Pn	21 22 33.4	+3.8
ORIF				eSn	Sn	21 23 27.5	+0.1
	comp=N,6.9nm,0.5s						
BBLS	Lazići	5.02	82	ePn	Pn	21 22 33.8	+3.9
PDG	Podgorica	5.05	99	ePn	Pn	21 22 31.2	+1.1
DRME	Dracevica, Mon	5.06	102	ePn	Pn	21 22 31.4	+1.1
SMRF	Simiane la Rot	5.06	279	ePn	Pn	21 22 32.3	+1.9
SMRF	Simiane la Rot	5.06	279	eP	Pn	21 22 34.7	+4.3
SMRF				eSn	Sn	21 23 28.5	-0.3
	comp=N,3.0nm,0.6s						
CONA	Conrad Observa	5.09	26	ePn	Pn	21 22 32.5	+1.7
	comp=N,1.0nm,0.3s						
DIVS	Divibare	5.46	80	ePn	Pn	21 22 41.7	+5.8
GERES	GERESS Array B	5.50	8	Pn	Pn	21 22 37.8	+1.4
	comp=N,0.9nm,0.3s,baz=175,slow=13,SNR=12						
GERES				Sn	Sn	21 23 39.4	-0.3
	comp=N,1.5nm,0.3s,baz=181,slow=21,SNR=4.0						
GERES				Lg	Lg	21 24 13.8	
	baz=184,slow=26,SNR=1.4						
CABF	La Chapelle	5.57	307	ePn	Pn	21 22 38.5	+1.2
CABF	La Chapelle	5.57	307	eP	Pn	21 22 41.2	+3.9
CABF				eSn	Sn	21 23 42.1	+0.8
	comp=N,15nm,1.0s						
ZST	Bratislava	5.76	32	eSG	Sg	21 24 26.4	+7.0
KHC	Kasperske Hory	5.77	7	ePN	Pn	21 22 42.1	+2.0
KHC				eSN	Sn	21 23 47.4	+1.2
VIVF	Saint-Julien-l	5.82	287	ePn	Pn	21 22 43.4	+2.6
VIVF	Saint-Julien-l	5.82	287	eP	Pn	21 22 47.0	+6.2
VIVF				eSn	Sn	21 23 46.9	-0.6
	comp=N,1.0nm,0.3s						
HINF	Hinteralfeld	5.93	320	ePn	Pn	21 22 44.5	+2.2
HINF				eSn	Sn	21 23 49.4	-0.7
	comp=N,16nm,0.5s						
MODS	Modra-Piesok	5.97	32	ePN	Pn	21 22 45.0	+2.1
CDF	Champ du Feu	6.19	326	ePn	Pn	21 22 47.7	+1.8
CDF				eSn	Sn	21 23 55.4	-1.3
	comp=N,7.1nm,0.5s						
TREC	Trest	6.24	18	eSN	Sn	21 23 56.6	-1.0
HAU	Haudompre	6.30	319	ePn	Pn	21 22 49.3	+1.9
HAU				eSn	Sn	21 23 58.0	-1.3
	comp=N,15nm,0.6s						
LASF	Ste Croix	6.30	279	eSn	Sn	21 23 58.3	-1.1
	comp=N,0.3nm,0.2s						
VRAC	Vranov	6.54	24	Pn	Pn	21 22 50.3	-0.3
	baz=198,slow=13,SNR=1.2						
VRAC				LR	LR	21 25 51.1	
	comp=N,50nm,18.4s,baz=142,slow=43						
PRU	Pruhonice	6.73	11	eSN	Sn	21 24 10.1	+0.4
VYHS	Vyhne	6.73	39	ePN	Pn	21 22 56.2	+3.0
VYHS				eSN	Sn	21 24 07.1	-2.7
NKC	Novy Kostel	6.83	360	eSN	Sn	21 24 12.7	+0.5
SMF	Signal de Mont	6.94	301	ePn	Pn	21 22 58.8	+2.7
SMF				eSn	Sn	21 24 13.7	-1.3
	comp=N,2.9nm,0.5s						
SFTF	Sexfontaines	7.09	315	ePn	Pn	21 22 59.9	+1.8
	baz=131						
LOR	Lormes	7.21	305	ePn	Pn	21 23 03.4	+3.5
	baz=125						
LOR				eSn	Sn	21 24 20.4	-1.3
	comp=N,3.8nm,0.5s						
AVF	Avril sur Loir	7.31	301	ePn	Pn	21 23 03.3	+2.2
AVF				eSn	Sn	21 24 21.5	-2.5
	comp=N,1.0nm,0.3s						
SSF	Saint Saulge	7.33	303	eSn	Sn	21 24 22.9	-1.6
	comp=N,1.8nm,0.5s						
MTLF	Montolieu	7.50	273	eP	Pn	21 23 08.9	+5.1
BRG	Berggiesshubel	7.53	7	e	Pb	21 23 21.4	-3.6
BRG	Berggiesshubel	7.53	7	SG	Sn	21 24 29.2	-0.2
	comp=N,4.1nm,0.7s						
BRG				e		21 32 48.2	
BGF	Bois d'Agland	7.54	298	ePn	Pn	21 23 06.3	+2.0
KEST	Kesra	8.05	199	Pn	Pn	21 23 12.9	+1.5
	comp=N,0.1nm,0.3s,baz=30,slow=8.1,SNR=1.8						
LFF	La Frestale	8.60	284	ePn	Pn	21 23 20.1	+1.3
BRTR	Keskin Array B	16.23	96	LR	LR	21 32 00.5	
	comp=N,20nm,18.9s,baz=278,slow=41						
FINES	FINESS Array B	19.79	19	P	Pn	21 25 45.3	-0.8
	comp=N,0.1nm,0.3s,baz=193,slow=11,SNR=1.6						
JMIC	Jan Mayen	29.55	346	LR	LR	21 41 00.2	
	comp=N,148nm,20.1s,baz=82,slow=40						
TORD	Torodi Ar. Bea	31.56	200	P	P	21 27 37.7	+0.7
	comp=N,0.4nm,0.5s,baz=19,slow=9.2,SNR=4.4						
MKAR	Makanchi Array	47.88	60	P	P	21 29 51.1	-1.4
	comp=N,0.1nm,0.7s,baz=286,slow=6.1,SNR=1.6						
YKA	Yellowknife Ar	66.28	336	P	P	21 32 05.2	+3.0
	comp=N,0.2nm,0.6s,baz=48,slow=6.0,SNR=4.9						

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*SJA **18** 21:26:38.5±0.3, 17°.77S×69°.30W, h182^{km}±249^{km}, ML6.3, MW6.0*

*NEIC **18** 21:26:45.4±2.4, 19°.93S±0°.05×70°.80W±0°.05, h3^{km}±2^{km}, mb5.7/434, Ms_20 5.7/688, Mwb6.0/50, Mwr6.0/17, Mww5.8, ML5.7(GUC), Mwc5.9(GCMT), Error ellipse: s-maj=7.3km s-min=5.9km az=222.0*

*IDC **18** 21:26:45.6±0.3, 19°.87S×70°.67W, h0^{km}, mb5.0/39, mb1 5.0/43, mb1mx5.0/48, mbtmp5.0/43, ML4.7/4, MS5.7/35, Ms1 5.6/35, ms1mx5.6/42, Error ellipse: s-maj=13.5km s-min=8.2km az=62.0*

*GUC **18** 21:26:46.0±0.8, 19°.96S×70°.95W, h39^{km}±3^{km}, MW5.8*

*BJI **18** 21:26:47.4±0.0, 20°.00S×70°.70W, h10^{km}, mB5.9/54, Ms6.1/71, Ms7 6.0/66*

*NEIC **18** 21:26:47.2, 20°.03S×70°.79W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.25; M$_{\theta\theta}$-0.01; M$_{\phi\phi}$-0.23; M$_{r\theta}$0.25; M$_{\theta\phi}$-0.05; M$_{\phi r}$-1.02; Fault plane solution: M$_0$1.07000×10^{18} NP1:φ$_s$25.63000°, δ7.70000°, λ128.21000°. NP2:φ$_s$167.16000°, δ83.96000°, λ85.22000°. Principal axes: T 1.0952, Plg51.0000°, Azm72.0000°; N -0.0443, Plg5.0000°, Azm168.0000°; P -1.0508, Plg39.0000°, Azm261.0000°;*

*NEIC **18** 21:26:47.2, 20°.00S×70°.73W, h6^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.75; M$_{\theta\theta}$-0.15; M$_{\phi\phi}$-0.60; M$_{r\theta}$0.08; M$_{\theta\phi}$0.35; M$_{\phi r}$-1.24; Fault plane solution: M$_0$1.46000×10^{18} NP1:φ$_s$314.16000°, δ18.90000°, λ53.55000°. NP2:φ$_s$172.14000°, δ74.90000°, λ101.50000°. Principal axes: T 1.4958, Plg59.0000°, Azm98.0000°; N -0.0637, Plg11.0000°, Azm349.0000°; P -1.4321, Plg29.0000°, Azm253.0000°;*

*MOS **18** 21:26:48.4±1.4, 19°.74S×70°.62W, h22^{km}, mb5.6/11, MS5.7/38 Error ellipse: s-maj=10.7km s-min=6.7km az=100.0*

*NEIC **18** 21:26:49, 20°.03S×71°.37W, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.60; M$_{\theta\theta}$-1.03; M$_{\phi\phi}$-1.57; M$_{r\theta}$-0.25; M$_{\theta\phi}$0.32; M$_{\phi r}$-5.12; Fault plane solution: M$_0$5.62000×10^{17} NP1:φ$_s$181.00000°, δ79.00000°, λ94.00000°. NP2:φ$_s$343.00000°, δ12.00000°, λ72.00000°. Principal axes: T 6.0685, Plg56.0000°, Azm96.0000°; N -1.0456, Plg4.0000°, Azm0.0000°; P -5.0230, Plg34.0000°, Azm268.0000°;*

*VAO **18** 21:26:49.1±0.5, 19°.85S×70°.85W, h36^{km}±3^{km}, mb5.4*

*NEIC **18** 21:26:53, 20°.05S×71°.07W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$3.56; M$_{\theta\theta}$0.04; M$_{\phi\phi}$-3.61; M$_{r\theta}$0.37; M$_{\theta\phi}$-0.34; M$_{\phi r}$-7.72; Fault plane solution: M$_0$8.53000×10^{17} NP1:φ$_s$178.00000°, δ78.00000°, λ87.00000°. NP2:φ$_s$13.00000°, δ13.00000°, λ104.00000°. Principal axes: T 8.5184, Plg57.0000°, Azm84.0000°; N 0.0169, Plg3.0000°, Azm179.0000°; P -8.5353, Plg33.0000°, Azm271.0000°;*

*GCMT **18** 21:26:53.4±0.1, 20°.01S±0°.01×71°.02W±0°.01, h14^{km}, MW5.8/161, Moment Tensor Solution. s143, c268; s161, c444; Duration: 2^{s}0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$3.78±.04; M$_{\theta\theta}$0.05±.03; M$_{\phi\phi}$-3.83±.04; M$_{r\theta}$-0.10±.07; M$_{\theta\phi}$-0.52±.03; M$_{\phi r}$-5.87±.17; Best double couple: M$_0$7.01500×10^{17} NP1:φ$_s$13.00000°, δ17.00000°, λ101.00000°. NP2:φ$_s$182.00000°, δ73.00000°, λ87.00000°. Principal axes: T 6.9740, Plg61.0000°, Azm87.0000°; N 0.0790, Plg3.0000°, Azm183.0000°; P -7.0560, Plg28.0000°, Azm275.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 18 21:26:46.3±0.5, **19°.96S**±0°.02×**70°.78W**±0°.03, **h8**^{km}±2^{km}, **h8**^{km}**:pP-P, n1492,** σ1^s**65**/1196, **mb5.7**/255, **MS5.7**/418, **34C-17D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.72	60	⇓iP	Pb	21 27 01.3	+0.1
PSGC				i S	Sn	21 27 13.5	-0.7
TA01	Diego Aracena	0.83	137	⇓iP	Pg	21 27 02.6	+0.3
TA01				i S	Sb	21 27 15.6	+1.2
PATCX	Punta Patache	1.04	146	⇓iP	Pg	21 27 06.0	-0.4
PATCX				i S	Sb	21 27 20.7	+0.1
PB11	IPOC Station P	1.08	80	i P	Pb	21 27 07.5	+0.1
PB11				i S	Sn	21 27 23.4	+0.2
PB11	IPOC Station P	1.08	80		Pb	21 27 07.5	+0.1
PB11					Sn	21 27 22.9	-0.3
PB12	IPOC Station P	1.40	18	i P	Pn	21 27 12.2	-0.2
PB12				i S	Sb	21 27 31.0	0.0
GO01	Chusmiza	1.52	79	⇓iP	Pb	21 27 15.1	0.0
GO01				i S	Sg	21 27 37.9	+2.6
GO01	Chusmiza	1.52	79		Pb	21 27 15.1	0.0
PB08	IPOC Station P	1.54	97	⇓iP	Pn	21 27 14.9	+0.4
PB08				i S	Sg	21 27 37.7	+1.7
PB02	IPOC Station P	1.59	149	eP	Pn	21 27 14.7	-0.3
PB02				i S	Sb	21 27 36.5	+0.1
PB01	IPOC Station P	1.63	132	⇓iP	Pn	21 27 15.4	0.0
PB01				i S	Sb	21 27 38.0	+0.6
PB01	IPOC Station P	1.63	132		Pn	21 27 15.4	0.0
PB01				Sg	Sb	21 27 38.0	+0.6
PB07	IPOC Station P	1.95	155	⇓iP	Pn	21 27 19.2	-0.7
PB07				i S	Sn	21 27 44.3	-0.4
PB16	IPOC Station P	2.01	37	⇑iP	Pn	21 27 22.5	+1.3
PB16				i S	Sg	21 27 52.0	+0.9
PB03	IPOC Station P	2.29	155	⇓iP	Pn	21 27 24.0	-0.7
PB03				i S	Sn	21 27 52.9	-0.3
PB09	IPOC Station P	2.33	142	⇑iP	Pn	21 27 26.5	+1.3
PB09				i S	Sb	21 27 57.1	-0.6
PB04	IPOC Station P	2.44	166	⇓iP	Pn	21 27 25.2	-1.5
PB04				i S	Sg	21 28 03.9	-0.8
PB04	IPOC Station P	2.44	166		Pn	21 27 25.2	-1.5
PB06	IPOC Station P	2.96	158	⇓iP	Pn	21 27 32.6	-1.2
PB06				i S	Sn	21 28 09.5	-0.2
LVC	Limon Verde	3.17	147	Pn	Pn	21 27 38.2	+1.4
	181nm,0.3s,baz=316,slow=9.8,SNR=288						
LVC				Sn	Sn	21 28 17.3	+2.3
	548nm,0.3s,baz=322,slow=12,SNR=6.8						
LVC				Lg	Lg	21 28 24.0	
	2µm,0.3s,baz=95,slow=11,SNR=13						
LVC	Limon Verde	3.17	147	⇑iP	Pn	21 27 38.0	+1.2
LVC				i S	Sb	21 28 18.8	-3.3
LVC	Limon Verde	3.17	147	P	Pn	21 27 38.0	+1.2
LVC						21 28 11.7	
LVC	Limon Verde	3.17	147		Pn	21 27 38.0	+1.2
LVC					Sn	21 28 11.7	-3.3
LVC	Limon Verde	3.17	147	eP	Pn	21 27 38.0	+1.2
LVC				eS	Sn	21 28 17.3	+2.3
PB10	IPOC Station P	3.54	177		Pn	21 27 39.1	-2.6
LPAZ	La Paz	4.44	35	Pn	Pn	21 27 59.1	+4.5
	2.4nm,0.3s,baz=202,slow=8.9,SNR=96						
LPAZ				Lg	Lg	21 29 11.0	
	8.9nm,0.3s,baz=223,slow=15,SNR=1.7						
GO02	Mina Guanaco	5.30	168	Pn	Pn	21 28 05.1	-1.0
GO02				Pg	Pb	21 28 20.0	+0.6
GO03	Copiap	7.62	176		Pn	21 28 35.5	-2.3
GO03				Sn	Sn	21 29 59.6	-4.8
VCA	Vinchina	9.05	165	eP	Pn	21 29 10.9	+13
VCA				eS	Sn	21 31 04.1	+24
NNA	Nana	9.83	323	Pn	Pn	21 29 07.8	-0.3
	8.6nm,0.3s,baz=168,slow=9.2,SNR=10						
NNA				Sn	Sn	21 30 54.7	-4.2
	7.1nm,0.3s,baz=153,slow=18,SNR=1.3						
NNA				LR	LR	21 32 43.8	
	comp=Z,26µm,19.9s,baz=158,slow=36						
NNA	Nana	9.83	323	⇑iP	Pn	21 29 10.1	+1.9
NNA				pmax	pmax		
	comp=Z,28nm,0.8s						
NNA	Nana	9.83	323		Pn	21 29 06.0	-2.1
NNA					Sn	21 30 53.1	-5.8
SIV	San Ignacio	10.05	68	Pn	Pn	21 29 11.4	+0.3
	comp=Z,41nm,0.3s,baz=269,slow=9.8,SNR=175						
SIV				Lg	Lg	21 32 07.3	
	comp=Z,2.0nm,0.3s,baz=215,slow=22,SNR=0.9						
GO04	Tololo Observa	10.17	180		Pn	21 29 10.7	-2.3
AROD	Rodeo	10.23	174	eP	Pn	21 29 29.6	+16
AROD				eS	Sn	21 31 35.5	+26
ACDV	Cuesta del Vie	10.28	172	eP	Pn	21 29 29.1	+15
ACDV				eS	Sn	21 31 34.7	+25
ACCO	Cerro Coronel	10.70	172	eP	Pn	21 29 35.3	+15
APLL	PUNTA DE LOS L	11.08	161	eP	Pn	21 29 34.5	+9.3
APLL				IAML		21 32 53.4	
	comp=Z,158nm,2.1s						
RTLS	Leoncito	11.87	174	eP	Pn	21 29 49.6	+13
RTCV	Cerro Valdivia	12.03	171	eP	Pn	21 29 50.0	+12
ROC1	El Roble	12.97	181		Pn	21 29 52.1	+0.9
PEL	Peldehue	13.13	180	P	Pn	21 29 52.9	-0.4
PEL	Peldehue	13.13	180		Pn	21 29 52.9	-0.4
SAML	Samuel	13.18	35	P	Pn	21 29 52.4	-1.6
SAML	Samuel	13.18	35		Pn	21 29 52.4	-1.6
SAML	Samuel	13.18	35	eP	Pn	21 29 52.3	-1.7
CPUP	Villa Florida	13.90	120	Pn	Pn	21 30 06.5	+2.7
	comp=Z,0.7nm,0.3s,baz=302,slow=12,SNR=31						
CPUP				Sn	Sn	21 32 48.3	+10
	comp=Z,0.4nm,0.3s,baz=153,slow=18,SNR=2.0						
CPUP				Lg	Lg	21 34 15.7	
	baz=40,slow=18,SNR=2.1						
CPUP				LR	LR	21 36 19.2	
	comp=Z,40µm,18.1s,baz=297,slow=41						
CPUP	Villa Florida	13.90	120	P	Pn	21 30 02.1	-1.7
CPUP	Villa Florida	13.90	120		Pn	21 30 02.1	-1.7
CPUP	Villa Florida	13.90	120	eP	Pn	21 30 05.6	+1.9
AQDB	Aquidauana	14.17	95	eP	Pn	21 30 08.2	+0.7
ATAH	Atahualpa	14.73	329	Pn	Pn	21 30 13.9	-1.6
	comp=Z,0.4nm,0.3s,baz=120,slow=12,SNR=2.2						
ATAH				Sn	Sn	21 33 03.0	+3.7
	comp=Z,0.4nm,0.3s,baz=163,slow=8.3,SNR=1.5						
ATAH				Lg	Lg	21 34 31.8	
	comp=Z,0.5nm,0.3s,baz=309,slow=12,SNR=2.0						
ATAH				LR	LR	21 36 24.7	
	comp=Z,23µm,21.9s,baz=165,slow=39						
SALV	Santo Antonio	14.91	77	eP	Pn	21 30 17.3	-0.4
GO05	Huala	15.03	184		Pn	21 30 18.5	-0.6
ITQB	Itaqui	16.07	130	eP	P	21 30 37.7	+1.5
C2SB	Chapadao do Su	16.98	89	eP	Pn	21 30 44.5	+0.1
CLDB	Colider	17.03	60	eP	Pn	21 30 44.7	-0.3
TRCB	Terra Rica	17.14	103	eP	Pn	21 30 46.7	+0.3
PTGB	Pitanga	17.95	109	eS	S	21 34 21.5	-2.0
PCMB	Pacaembu	18.33	99	eP	Pn	21 30 59.5	-1.7
ARAG	Araguaiana, MT	18.55	80	eP	P	21 31 02.3	-1.3
ITAB	Concordia	18.55	116	eP	P	21 31 03.2	-0.5
ITAB				eS	Sn	21 34 33.0	+1.5

LPA	La Plata	18.73	145	*i* P	P	21 30 56.7	-8.8
LPA				PPP	PPP	21 31 22.6	
LPA				S	Sn	21 34 36.5	+0.9
LPA				PCP	PcP	21 35 32.6	-0.8
LPA				SCS	ScS	21 42 46.1	-4.7
CPSB	Cacapava Do Su	18.81	127	*e*P	P	21 31 05.8	-0.6
ITRB	Iturama	19.22	93	*e*P	Pn	21 31 11.6	-0.4
PLTB	Pedras Altas	19.39	131	*e*P	Pn	21 31 13.5	-0.4
PLTB				*e*S	S	21 34 54.2	+1.7
GO06	Curarrehue	19.57	182	P	P	21 31 14.7	-0.1
FRTB	Fartura	20.01	104	*e*P	P	21 31 19.4	-0.3
FRTB				*e*S	Sn	21 35 06.0	-0.8
CNLB	Canela	20.35	121	*e*P	P	21 31 23.4	0.0
CNLB				*e*S	S	21 35 11.1	-0.6
PLCA	Paso Flores	20.71	180	P	P	21 31 27.9	+0.6
	comp=Z,59nm,0.9s,baz=17,slow=11,SNR=44						
PLCA				S	S	21 35 17.4	-1.3
	comp=Z,6.6nm,1.1s,baz=73,slow=9.2,SNR=1.5						
PLCA				LR	LR	21 39 48.3	
	comp=Z,13µm,19.7s,baz=23,slow=38						
PLCA	Paso Flores	20.71	180	P	P	21 31 27.8	+0.6
PLCA				pmax	pmax		
	comp=Z,229nm,1.1s						
PLCA	Paso Flores	20.71	180	P	P	21 31 27.8	+0.6
PLCA	Paso Flores	20.71	180	*e*P	P	21 31 27.1	-0.1
PLCA				*e*S	S	21 35 17.5	-1.2
BB19B	Bebedouro	20.87	97	*e*P	P	21 31 28.4	-0.7
IPMB	Ipameri, GO	21.43	89	*e*P	P	21 31 34.5	-0.7
RCLB	Rio Claro- Sao	21.82	101	*e*P	P	21 31 38.2	-1.0
PTGA	Pitinga	21.85	30	P	P	21 31 38.5	-1.0
	comp=Z,54nm,0.3s,baz=237,slow=18,SNR=85						
PTGA				S	S	21 35 35.1	-6.3
	comp=Z,11nm,0.6s,baz=286,slow=21,SNR=2.1						
PTGA				LR	LR	21 41 11.5	
	comp=Z,32µm,19.3s,baz=208,slow=40						
PTGA	Pitinga	21.85	30	P	P	21 31 37.5	-2.0
PTGA				IAmb	IAmb	21 31 55.7	
	comp=Z,396nm,1.4s						
PTGA				IAMs_20	IAMs_20	21 40 58.7	
	comp=Z,34µm,18.0s						
PTGA	Pitinga	21.85	30	*e*P	P	21 31 38.6	-0.9
FLOC	Florencia	21.93	347	*e*P	P	21 31 41.7	+1.2
FLOC				*e*P	P	21 31 42.4	+1.9
FLOC	Florencia	21.93	347	P	P	21 31 41.7	+1.2
SPB	Sao Paulo	21.98	104	P	P	21 31 39.4	-1.5
SPB	Sao Paulo	21.98	104	*e*P	P	21 31 40.1	-0.8
BDFB	Brasilia	22.09	82	P	P	21 31 40.8	-1.5
	comp=Z,34nm,0.7s,baz=263,slow=11,SNR=18						
BDFB				S	S	21 35 43.4	-3.0
	comp=Z,16nm,1.0s,baz=217,slow=25,SNR=1.7						
BDFB				LR	LR	21 41 51.0	
	comp=Z,41µm,21.9s,baz=257,slow=41						
BDFB	Brasilia	22.09	82	P	P	21 31 39.2	-3.1
BDFB				IAmb	IAmb	21 32 01.0	
	comp=Z,574nm,1.7s						
CRUC	La Cruz	22.23	344	*e*P	P	21 31 49.4	+5.4
VAO	Valinhos	22.36	102	*e*P	P	21 31 43.9	-1.3
VAO				*e*S	S	21 35 49.9	-1.6
GARC	Garzon, Huila	22.49	348	*e*P	P	21 31 47.3	+0.6
SOTA	Rioblanco	22.69	345	*e*P	P	21 31 55.7	+6.6
PCON	Cinco Dias	22.82	345	*e*P	P	21 31 53.6	+3.0
POPC	Popayan, Colom	23.09	345	*e*P	P	21 31 55.0	+2.0
PARB	Paraibuna	23.62	103	*e*P	P	21 31 57.3	-0.8
PARB				*e*S	S	21 36 10.1	-3.0
GR1C	Gorgona, Isla	23.94	342	*e*P	P	21 32 02.7	+1.5
GR1C				*e*P	P	21 32 04.8	+3.6
PTGC	Puerto Gaitan,	24.04	357	*e*P	P	21 31 59.2	-2.9
PTGC				*e*P	P	21 32 05.5	+3.4
VILC	Villavicencio,	24.09	353	*e*P	P	21 32 02.7	0.0
VILC				*e*P	P	21 32 06.2	+3.5
ORTC	Ortega, Tolima	24.12	349	*e*P	P	21 32 04.8	+1.9
ORTC				*e*P	P	21 32 05.5	+2.6
BSCB	Bom Sucesso	24.38	97	*e*P	P	21 32 05.1	-0.3
YOTC	Yotoco, Valle	24.41	346	*e*P	P	21 32 06.2	+0.5
CHIC	Chingaza	24.60	353	*e*P	P	21 32 13.2	+5.4
MALC	Bahia Malaga	24.68	344	*e*P	P	21 32 11.1	+3.2
ESAR	Angra dos Reis	24.69	102	*e*P	P	21 32 08.6	+0.5
ANIL	Santa Ana	24.72	349	*e*P	P	21 32 03.4	-5.2
TOLC	Tolima	24.79	349	*e*P	P	21 32 11.8	+2.4
ROSC	El Rosal	24.89	352	P	P	21 32 11.1	+0.8
	comp=Z,29nm,0.7s,baz=121,slow=4.3,SNR=11						
ROSC				LR	LR	21 43 54.3	
	comp=Z,27µm,18.4s,baz=200,slow=42						
ROSC	El Rosal	24.89	352	*e*P	P	21 32 13.2	+2.9
ROSC	El Rosal	24.89	352	IAmb	IAmb	21 33 01.9	
	comp=Z,326nm,1.5s						
SMTB	Santa Maria do	24.99	67	*e*P	P	21 32 10.9	+0.1
RREF	El Recreo	25.11	349	*e*P	P	21 32 14.6	+2.1
PLMC	San Jos del P	25.29	347	*e*P	P	21 32 16.0	+2.4
PLMC				*e*P	P	21 32 16.7	+3.1
GUY2C	Guyana, Caldas	25.43	349	*e*P	P	21 32 13.9	-1.3
GUY2C				*e*P	P	21 32 15.3	+0.1
PIZC	Pizarro, Choco	25.60	345	*e*P	P	21 32 23.7	+7.4
SPBC	San Pablo de B	25.65	352	⇑*e*P	P	21 32 17.4	+0.5
NORC	Norcasia	25.68	351	*e*P	P	21 32 17.4	+0.3
JANB	Januaria	25.70	83	*e*P	P	21 32 15.9	-1.4
JANB				*e*S	S	21 36 44.0	-2.4
RUSC	La Rusia	25.79	355	*e*P	P	21 32 18.1	-0.4
CBOC	Ciudad Bolivar	26.17	348	*e*P	P	21 32 16.7	-5.0
CBOC				*e*P	P	21 32 23.7	+2.0
TAMC	Tame, Arauca	26.25	358	*e*P	P	21 32 11.8	-10
TAMC				⇑*e*P	P	21 32 21.6	-0.6
HELC	Santa Helena	26.40	349	*e*P	P	21 32 23.7	-0.3
BARC	Barichara	26.49	355	*e*P	P	21 32 25.1	+0.5
PTBC	PUERTO BERRIO,	26.58	352	*e*P	P	21 32 14.6	-11
SOLC	Bahia Solano	26.82	345	*e*P	P	21 32 29.3	+1.9
BRRC	Barranca, Sant	27.05	354	*e*P	P	21 32 29.3	-0.1
PAYG	Puerto Ayora	27.05	313	P	P	21 32 27.4	-2.1
PAYG	Puerto Ayora	27.05	313	IAMs_20	IAMs_20	21 43 11.4	
	comp=Z,16µm,18.0s						
PAMC	Pamplona, Colo	27.19	356	*e*P	P	21 32 31.4	+0.2
DBBC	Dabeiba	27.33	348	*e*P	P	21 32 34.9	+2.8
ZARC	Zaragoza, Cauc	27.57	351	*e*P	P	21 32 32.8	-1.3
ZARC				*e*P	P	21 32 34.9	+0.8
PTAC	Punta Ardita,	27.81	345	*e*P	P	21 32 37.7	+1.5
UREC	San Jos de Ur	27.93	350	*e*P	P	21 32 35.6	-1.7
SJMB	Sao Joao De Ma	27.94	92	*e*P	P	21 32 37.0	-0.5
SJMB				*e*S	S	21 37 20.8	-1.0
OCAC	Ocana	28.13	355	*e*P	P	21 32 37.0	-2.3
BSFB	Barra de Sao F	28.25	93	*e*P	P	21 32 39.5	-0.6
BSFB				*e*S	S	21 37 24.5	-2.0
SDV	Santo Domingo	28.66	0	P	P	21 32 42.9	-1.1
	comp=Z,13nm,1.0s,baz=198,slow=6.4,SNR=12						
SDV				S	S	21 37 36.7	+3.3
	comp=Z,2.5nm,0.4s,baz=61,slow=20,SNR=1.4						
SDV				LR	LR	21 43 33.6	
	comp=Z,14µm,19.3s,baz=252,slow=35						
SDV	Santo Domingo	28.66	0	P	P	21 32 43.2	-0.8
SDV	Santo Domingo	28.66	0	IAMs_20	IAMs_20	21 43 03.3	
	comp=Z,19µm,20.0s						
SDV	Santo Domingo	28.66	0	*e*P	P	21 32 43.9	-0.2
SDV				*e*S	S	21 37 27.7	-5.6
SMLC	San Martn de	28.76	353	*e*P	P	21 32 41.9	-2.8
BAUV	El Baul	28.84	6	*e*P	P	21 32 44.1	-1.3
ORIV	Oritupano	29.74	15	*e*P	P	21 32 49.5	-4.0
SJCC	San Jacinto, C	29.98	351	*e*P	P	21 32 54.5	-1.1
BCIP	Isla Barro Col	30.28	342	P	P	21 32 57.2	-1.0
BCIP				pmax	pmax		
	comp=Z,241nm,1.7s						
BCIP				MLR	MLR		
	comp=Z,13µm,22.0s						
BCIP	Isla Barro Col	30.28	342	P	P	21 32 57.2	-1.0
BCIP				IAmb	IAmb	21 33 32.0	
	comp=Z,241nm,1.6s						
BCIP				IAMs_20	IAMs_20	21 45 33.3	
	comp=Z,13µm,22.0s						
PLCV	Puerto La Cruz	30.55	12	P	P	21 33 00.6	0.0
PLCV					S	21 38 01.3	-1.3
PCRV	Puerto La Cruz	30.55	12	P	P	21 33 00.6	0.0
	comp=Z,9.5nm,0.6s,baz=216,slow=10,SNR=1.9						
PCRV				S	S	21 38 01.3	-1.4
	comp=Z,32nm,1.2s,baz=240,slow=6.7,SNR=2.5						
MDP	Montagnes des	30.63	37	P	P	21 33 01.2	-0.2
	comp=Z,19nm,0.7s,baz=220,slow=10,SNR=8.8						
MDP				LR	LR	21 46 04.7	
	comp=Z,54µm,18.1s,baz=212,slow=38						
TPP	Pointe-a-Pierr	31.46	18	*e*P	P	21 33 11.6	+3.0
TOSP	Speyside	32.66	19	*e*P	P	21 33 18.6	-0.5
TOSP	Speyside	32.66	19	P	P	21 33 18.6	-0.5
TOSP	Speyside	32.66	19	IAmb	IAmb	21 33 22.1	
	comp=Z,220nm,1.1s						
TOSP				IAMs_20	IAMs_20	21 48 16.2	
	comp=Z,26µm,20.0s						
GRFF	Grenada Fort F	33.03	16	*e*P	P	21 33 17.0	-5.3
GRGR	Grenville	33.13	16	*e*P	P	21 33 16.2	-7.0
GRGR	Grenville	33.13	16	IAMs_20	IAMs_20	21 47 57.5	
	comp=Z,17µm,19.0s						
GO10	Punta Arenas	33.14	180	P	P	21 33 20.8	-2.2
JTS	Las Juntas de	33.14	334	P	P	21 33 24.6	+1.3
	comp=Z,2.8nm,0.5s,baz=237,slow=12,SNR=7.6						
JTS				S	S	21 38 45.1	+1.9
	comp=Z,2.1nm,0.3s,baz=21,slow=23,SNR=1.2						
JTS	Las Juntas de	33.14	334	*c i*P	P	21 33 26.6	+3.2
JTS				pmax	pmax		
	comp=Z,12nm,1.2s						
JTS	Las Juntas de	33.14	334	P	P	21 33 22.6	-0.7
EFI	East Falkland	33.19	165	⇑*i*P	P	21 33 24.6	+1.2
EFI				pmax	pmax		
	comp=Z,86nm,1.0s						
EFI	East Falkland	33.19	165	P	P	21 33 22.2	-1.2
EFI				IAmb	IAmb	21 33 26.9	
	comp=Z,98nm,1.0s						
EFI	East Falkland	33.19	165	IAMs_20	IAMs_20	21 47 04.1	
	comp=Z,13µm,18.0s						
GRHS	Sauteurs	33.22	16	*e*P	P	21 33 15.9	-8.1
GRSS	Sisters	33.30	16	*e*P	P	21 33 16.0	-8.7
SVB	Belmont	34.33	17	*e*P	P	21 33 34.1	+0.4
SVB	Belmont	34.33	17	IAMs_20	IAMs_20	21 48 32.2	
	comp=Z,12µm,19.0s						
SVCV	St. Vincent, C	34.36	17	*e*P	P	21 33 33.3	-0.7
SVV	Soufriere Volc	34.38	17	*e*P	P	21 33 34.6	+0.5
SSV	Crater Summit	34.40	17	*e*P	P	21 33 34.6	+0.3
BBGH	Gun Hill	34.70	19	*e*P	P	21 33 41.3	+4.4
MCLT	Moule a Chique	34.83	17	*e*P	P	21 33 33.1	-4.9
MCLT	Moule a Chique	34.83	17	IAMs_20	IAMs_20	21 48 12.8	
	comp=Z,9µm,19.0s						
USHA	Ushuaia	34.86	178	P	P	21 33 38.6	+0.7
	comp=Z,21nm,0.9s,baz=298,slow=3.0,SNR=7.2						
USHA				S	S	21 39 09.6	+0.5
	comp=Z,5.8nm,1.0s,baz=285,slow=19,SNR=1.3						
SLB	Belfond	34.91	17	*e*P	P	21 33 39.1	+0.3
H05S1	Guadeloupe/Mar	35.54	17	P	P	21 33 44.2	+0.1
FDF	Fort de France	35.75	16	*e*P	P	21 33 44.5	-1.5
FDF	Fort de France	35.75	16	P	P	21 33 44.5	-1.5
FDF				pmax	pmax		
	comp=Z,156nm,1.2s						
FDF				MLR	MLR		
	comp=Z,12µm,18.0s						
FDF	Fort de France	35.75	16	P	P	21 33 44.5	-1.5
FDF				IAmb	IAmb	21 33 53.8	
	comp=Z,156nm,1.2s						
FDF				IAMs_20	IAMs_20	21 50 24.0	
	comp=Z,12µm,18.0s						
RPN	Rapa Nui	35.95	251	LR	LR	21 44 52.9	
	comp=Z,28µm,18.8s,baz=94,slow=30						
DLPL	La Plaine	36.30	16	*e*P	P	21 33 45.2	-5.4
DLPL	La Plaine	36.30	16	IAMs_20	IAMs_20	21 49 29.5	
	comp=Z,10µm,19.0s						
RCBR	Riachuelo	36.68	72	P	P	21 33 54.1	0.0
	comp=Z,94nm,0.8s,baz=239,slow=8.8,SNR=31						
RCBR				S	S	21 39 35.1	-2.9
	comp=Z,6.6nm,0.9s,baz=85,slow=13,SNR=1.2						
RCBR				LR	LR	21 50 40.8	
	comp=Z,15µm,18.7s,baz=230,slow=39						
RCBR	Riachuelo	36.68	72	P	P	21 33 54.1	0.0
RCBR				IAmb	IAmb	21 33 57.7	
	comp=Z,90nm,0.8s						
RCBR	Riachuelo	36.68	72	*e*P	P	21 33 53.8	-0.3
H05N1	Guadeloupe/Mar	37.29	16	P	P	21 33 58.3	-0.8
MLYT	Lee's Yard	37.41	14	*e*P	P	21 33 57.2	-2.9
TGUH	Tegucigalpa,Un	37.49	333	IAMs_20	IAMs_20	21 52 02.2	
	comp=Z,8µm,19.0s						
MLPR	Magueyes Islan	37.87	6	P	P	21 34 01.1	-2.8
MLPR				IAmb	IAmb	21 34 13.6	
	comp=Z,310nm,1.4s						
MLPR				PP	PP	21 35 25.0	-5.5
CRPR	Cabo Rojo, PR	37.90	6	IAmb	IAmb	21 34 05.6	
	comp=Z,316nm,1.4s						
OBIP	Obispado Ponce	37.99	6	IAmb	IAmb	21 34 12.5	
	comp=Z,272nm,1.6s						
SEUS	St. Eustatius	38.00	12	*e*P	P	21 34 00.7	-4.4
PDPR	Patillas Dam,	38.03	7	IAmb	IAmb	21 34 14.4	
	comp=Z,180nm,1.4s						
SABA	Saba	38.07	12	*e*P	P	21 34 07.0	+1.4
SJG	San Juan	38.10	7	P	P	21 34 03.6	-2.3
	comp=Z,70nm,1.0s,baz=211,slow=2.6,SNR=14						
SJG				S	S	21 39 50.7	-8.5
	comp=Z,4.8nm,0.3s,baz=358,slow=20,SNR=2.1						
SJG				LR	LR	21 50 56.6	
	comp=Z,3µm,19.1s,baz=199,slow=38						
SJG	San Juan	38.10	7	P	P	21 34 03.9	-2.0
SJG				pmax	pmax		
	comp=Z,97nm,1.1s						
SJG				MLR	MLR		
	comp=Z,7µm,18.0s						
SJG	San Juan	38.10	7	P	P	21 34 03.9	-2.0
SJG	San Juan	38.10	7	IAMs_20	IAMs_20	21 51 26.6	
	comp=Z,7µm,18.0s						
CUPR	Culebra, Puert	38.41	8	P	P	21 34 07.0	-1.5
CUPR				PP	PP	21 35 32.4	-4.0
MTDJ	Mount Denham	38.52	350	IAMs_20	IAMs_20	21 51 19.6	
	comp=Z,9µm,18.0s						
SMRT	St. Maarten	38.52	12	*e*P	P	21 33 59.1	-10
SDDR	Presa de Saban	38.70	359	IAMs_20	IAMs_20	21 51 53.4	
	comp=Z,11µm,20.0s						
APG	El Apazote	39.77	329	P	P	21 34 20.5	+0.3
	comp=Z,11nm,0.3s,baz=168,slow=8.2,SNR=14						
APG				S	S	21 40 28.2	+3.4
	comp=Z,5.7nm,0.3s,baz=64,slow=22,SNR=0.9						
GTBY	Guantanamo Bay	39.86	354	IAMs_20	IAMs_20	21 51 58.2	
	comp=Z,7µm,19.0s						
CCIG	Comitan	41.68	328	P	P	21 34 34.8	-1.1
CCIG				IAMs_20	IAMs_20	21 49 34.5	
	comp=Z,12µm,22.0s						
HOPE	Hope Point	43.07	151	P	P	21 34 47.1	+0.5
HOPE				pmax	pmax		
	comp=Z,95nm,1.1s						
HOPE				MLR	MLR		
	comp=Z,9µm,19.0s						
HOPE	Hope Point	43.07	151	P	P	21 34 47.1	+0.5
HOPE	Hope Point	43.07	151	IAMs_20	IAMs_20	21 51 33.6	
	comp=Z,9µm,19.0s						
TEIG	Tepich	43.45	336	P	P	21 34 50.6	+0.6
	comp=Z,32nm,0.7s,baz=325,slow=0.0						
TEIG				LR	LR	21 54 00.9	
	comp=Z,6µm,18.2s,baz=72,slow=38						
TEIG	Tepich	43.45	336	P	P	21 34 48.1	-2.0
CMIG	Matias Romero	43.77	326	P	P	21 34 53.5	+0.8
	comp=Z,9.9nm,0.9s,baz=126,slow=7.4,SNR=12						
CMIG				S	S	21 41 24.2	+0.6
	comp=Z,1.5nm,0.6s,baz=92,slow=5.0,SNR=3.6						
CMIG				LR	LR	21 52 59.5	
	comp=Z,2µm,19.3s,baz=147,slow=36						
PMSA	Palmer Station	45.02	176	IAMs_20	IAMs_20	21 54 45.1	
	comp=Z,7µm,19.0s						
TLIG	Tlapa	46.20	322	IAmb	IAmb	21 35 22.7	
	comp=Z,116nm,1.6s						
DWPF	Disney Wildern	48.88	347	IAMs_20	IAMs_20	21 57 32.1	
	comp=Z,6µm,20.0s						
DWPF	Disney Wildern	48.88	347	P	P	21 35 33.1	+0.4
	baz=167						
656A	Willston	50.33	347	IAmb	IAmb	21 35 53.3	
	comp=Z,150nm,1.1s						
TIGA	Tifton	52.56	346	IAMs_20	IAMs_20	22 00 00.5	
	comp=Z,6µm,20.0s						
TIGA	Tifton	52.56	346	P	P	21 36 01.1	+0.7
	baz=165						
257A	Skidaway Islan	52.56	349	IAMs_20	IAMs_20	21 57 58.5	
	comp=Z,5µm,21.0s						
255A	Hazlehurst	52.79	348	IAMs_20	IAMs_20	21 56 48.6	
	comp=Z,5µm,20.0s						
352A	Blakely	52.91	345	IAMs_20	IAMs_20	22 02 23.9	
	comp=Z,5µm,20.0s						
BRAL	Brewton	53.18	343	IAMs_20	IAMs_20	22 01 08.9	
	comp=Z,5µm,18.0s						
BRAL	Brewton	53.18	343	P	P	21 36 05.6	+0.6
	baz=161						
157A	Early Branch	53.24	349	P	P	21 36 06.2	+0.7
	baz=168						
NHSC	New Hope	53.52	350	P	P	21 36 08.7	+1.2
	baz=169,SNR=5.7						
Z58A	St. Stephen	53.69	351	P	P	21 36 10.4	+1.7
	baz=170						
250A	Grady	53.73	344	IAmb	IAmb	21 36 18.9	
	comp=Z,176nm,1.4s						
250A				IAMs_20	IAMs_20	22 03 11.5	
	comp=Z,4µm,18.0s						
Z57A	Bowman	53.80	350	P	P	21 36 10.4	+0.9
	baz=168,SNR=9.3						
Z56A	Williston	53.94	349	IAMs_20	IAMs_20	21 58 41.0	
	comp=Z,7µm,21.0s						
Z56A	Williston	53.94	349	P	P	21 36 11.7	+1.1
	baz=168						
152A	Waverly Hall	54.00	345	IAMs_20	IAMs_20	22 00 34.6	
	comp=Z,7µm,20.0s						
Y60A	Bolivia	54.13	352	IAMs_20	IAMs_20	22 00 12.0	
	comp=Z,5µm,20.0s						
Y60A	Bolivia	54.13	352	P	P	21 36 12.9	+1.0
	baz=171						
Y59A	Loris	54.20	352	IAMs_20	IAMs_20	22 00 23.8	
	comp=Z,7µm,20.0s						
Y58A	Scranton	54.23	351	IAMs_20	IAMs_20	22 01 05.6	
	comp=Z,7µm,21.0s						
Y58A	Scranton	54.23	351	P	P	21 36 13.9	+1.3
	baz=170						
GOGA	Godfrey	54.43	347	P	P	21 36 14.5	+0.3
	baz=165						
Y57A	Sumter	54.45	350	P	P	21 36 14.8	+0.5
	baz=169						
Y55A	Saluda	54.62	349	P	P	21 36 16.5	+1.0
	baz=167,SNR=5.9						
X60A	Albert Glenn T	54.66	353	P	P	21 36 16.8	+1.0
	baz=172						
Z51A	Franklin	54.73	345	IAmb	IAmb	21 36 27.4	
	comp=Z,161nm,1.9s						
Z51A				IAMs_20	IAMs_20	22 01 08.9	
	comp=Z,6µm,20.0s						
X59A	McDuffie Farm,	54.73	352	P	P	21 36 17.3	+1.0
	baz=171						
X58A	Rowland	54.82	351	IAMs_20	IAMs_20	22 00 31.3	
	comp=Z,6µm,20.0s						
X58A	Rowland	54.82	351	P	P	21 36 17.6	+0.7
	baz=170						
Z50A	Ashland	54.85	344	IAmb	IAmb	21 36 19.4	
	comp=Z,97nm,1.4s						
Z50A				IAMs_20	IAMs_20	22 01 50.2	
	comp=Z,4µm,19.0s						
Z50A	Ashland	54.85	344	P	P	21 36 18.2	+1.0
	baz=163,SNR=9.2						
LRAL	Lakeview Retre	54.92	343	IAmb	IAmb	21 36 19.7	
	comp=Z,165nm,1.9s						
LRAL	Lakeview Retre	54.92	343	P	P	21 36 18.3	+0.6
	baz=161,SNR=5.6						
HODGE	Hodges	54.98	348	IAMs_20	IAMs_20	21 59 13.7	
	comp=Z,6µm,22.0s						
Y52A	Lilburn	55.00	347	IAmb	IAmb	21 37 36.8	
	comp=Z,99nm,1.6s						
Y52A				IAMs_20	IAMs_20	22 02 04.1	
	comp=Z,6µm,19.0s						
Y52A	Lilburn	55.00	347	P	P	21 36 18.5	+0.2
	baz=165						
X56A	White Oak	55.02	350	P	P	21 36 19.2	+0.8
	baz=168,SNR=5.8						
BIRD	Birdtown, Kers	55.07	350	IAmb	IAmb	21 36 21.7	
	comp=Z,153nm,1.4s						
BIRD				IAMs_20	IAMs_20	22 01 20.1	
	comp=Z,8µm,20.0s						
W60A	Pink Hill	55.10	353	P	P	21 36 20.4	+1.4
	baz=172						
X55A	Gracelyn & Ava	55.10	349	P	P	21 36 20.2	+1.2
	baz=168,SNR=7.1						
W61A	Ground Anchor	55.15	354	P	P	21 36 21.1	+1.9
	baz=173						
HKT	Hockley	55.17	333	P	P	21 36 19.9	+0.4
HKT				pmax	pmax		
	comp=Z,47nm,1.2s						
HKT				MLR	MLR		
	comp=Z,2µm,21.0s						
HKT	Hockley	55.17	333	P	P	21 36 19.9	+0.4
VBMS	Vicksburg	55.22	340	P	P	21 36 20.9	+1.0
	baz=157						
W58A	Raeford	55.26	352	P	P	21 36 22.2	+2.1
	baz=170,SNR=7.1						
W59A	Clinton	55.30	352	P	P	21 36 22.5	+2.1
	baz=171						
CNNC	Cliffs of the	55.31	353	IAMs_20	IAMs_20	22 01 19.2	
	comp=Z,6µm,20.0s						
CNNC	Cliffs of the	55.31	353	P	P	21 36 22.0	+1.6
	baz=172						
X54A	Belton	55.31	348	P	P	21 36 22.0	+1.5
	baz=167						
833A	Chaparral WMA,	55.40	329	P	P	21 36 22.1	+0.8
	baz=147						
V62A	Hyde County Ai	55.43	355	P	P	21 36 23.1	+1.8
	baz=174						
X53A	Estanollee	55.45	347	P	P	21 36 22.7	+1.1
	baz=166						
PAULI	Pauline	55.48	349	IAMs_20	IAMs_20	21 59 37.7	
	comp=Z,7µm,21.0s						
W57A	Gilead	55.50	351	P	P	21 36 23.3	+1.4
	baz=170						
Y49A	Blount Mountai	55.55	344	IAMs_20	IAMs_20	22 02 10.7	
	comp=Z,4µm,20.0s						
W56A	Indian Trail	55.57	350	P	P	21 36 23.2	+0.9
	baz=169						
KMSC	Kings Mountain	55.70	350	IAmb	IAmb	21 36 26.1	
	comp=Z,151nm,1.6s						
KMSC				IAMs_20	IAMs_20	22 01 29.7	
	comp=Z,7µm,20.0s						
KMSC	Kings Mountain	55.70	350	P	P	21 36 24.4	+1.0
	baz=168,SNR=5.6						
H10N3	ASCENSION HYDR	55.71	86	P	P	21 36 25.1	+1.6
	baz=223,slow=7.2,SNR=3.6						
V61A	Roper	55.71	354	IAMs_20	IAMs_20	21 58 16.0	
	comp=Z,5µm,22.0s						
V61A	Roper	55.71	354	P	P	21 36 24.1	+0.8
	baz=173						
H10N2	ASCENSION HYDR	55.73	86	P	P	21 36 26.5	+2.8
	baz=223,slow=7.2,SNR=5.1						
H10N1	ASCENSION HYDR	55.73	86	P	P	21 36 27.1	+3.4
	baz=223,slow=7.2,SNR=4.7						
V60A	Jim Taylor Roa	55.76	354	IAmb	IAmb	21 36 26.6	
	comp=Z,126nm,1.3s						
V60A	Jim Taylor Roa	55.76	354	P	P	21 36 24.2	+0.5
	baz=173						
W54A	Cherokee Point	55.80	349	P	P	21 36 25.0	+0.9
	baz=167,SNR=6.4						
ASCN	Ascension	55.82	86	P	P	21 36 24.9	+0.2
X51A	Calhoun	55.85	346	IAMs_20	IAMs_20	22 01 06.6	
	comp=Z,5µm,21.0s						
X51A	Calhoun	55.85	346	P	P	21 36 24.3	0.0
	baz=164						
V59A	Middlesex	55.87	353	P	P	21 36 25.3	+0.9
	baz=172,SNR=9.5						
FPAL	Fort Paine	56.00	345	IAMs_20	IAMs_20	22 01 35.6	
	comp=Z,5µm,21.0s						
V58A	Windy Hill, Pi	56.01	352	IAmb	IAmb	21 36 37.3	
	comp=Z,139nm,1.3s						
V58A				IAMs_20	IAMs_20	22 01 16.7	
	comp=Z,5µm,19.0s						
V58A	Windy Hill, Pi	56.01	352	P	P	21 36 26.7	+1.2
	baz=171,SNR=8.4						
W52A	Murphy	56.15	347	IAmb	IAmb	21 36 38.0	
	comp=Z,202nm,1.9s						
W52A				IAMs_20	IAMs_20	22 01 57.6	
	comp=Z,4µm,20.0s						
V57A	Coltrane Farms	56.19	351	P	P	21 36 27.4	+0.7
	baz=170,SNR=5.6						
V56A	Mocksville	56.22	351	P	P	21 36 27.8	+0.8
	baz=169,SNR=11						
U61A	Possum Corner	56.24	354	P	P	21 36 28.2	+1.1
	baz=174						
X48A	Hartselle	56.28	344	IAmb	IAmb	21 36 37.1	
	comp=Z,74nm,1.2s						
X48A				IAMs_20	IAMs_20	22 00 29.9	
	comp=Z,5µm,22.0s						
NATX	Nacogdoches	56.29	336	P	P	21 36 28.2	+0.6
	baz=153						
V55A	Taylorsville	56.38	350	IAmb	IAmb	21 36 38.5	
	comp=Z,211nm,1.8s						
V55A				IAMs_20	IAMs_20	22 01 49.6	
	comp=Z,7µm,21.0s						
V55A	Taylorsville	56.38	350	P	P	21 36 29.4	+1.3
	baz=168,SNR=7.6						
U59A	Littleton	56.39	353	P	P	21 36 29.4	+1.2
	baz=172,SNR=7.8						
V54A	Nebo	56.43	349	P	P	21 36 29.6	+1.0
	baz=167,SNR=12						
U60A	Pendleton	56.45	354	P	P	21 36 30.2	+1.6
	baz=173						
U58A	Oxford	56.52	352	P	P	21 36 30.4	+1.3
	baz=171,SNR=6.8						
W50A	Signal Mountai	56.56	346	IAmb	IAmb	21 36 31.7	
	comp=Z,88nm,1.2s						
W50A				IAMs_20	IAMs_20	22 01 28.5	
	comp=Z,5µm,21.0s						
CPCT	Cooper Cave	56.62	347	IAMs_20	IAMs_20	22 02 16.1	

	comp=Z,5µm,20.0s						
435B	**Jarrell**	**56.65**	**332**	P	**P**	**21 36 30.3**	**+0.1**
	baz=150						
U57A	**Blanch**	**56.66**	**352**	P	**P**	**21 36 30.6**	**+0.5**
	baz=170,SNR=7.1						
TKL	**Tuckaleechee C**	**56.66**	**347**	P	**P**	**21 36 29.3**	**-0.9**
	comp=Z,43nm,1.1s,baz=161,slow=9.1,SNR=11						
TKL				LR	LR	22 02 10.0	
	comp=Z,5µm,19.5s,baz=158,slow=38						
TKL	**Tuckaleechee C**	**56.66**	**347**	IAmb	IAmb	21 36 32.2	
	comp=Z,130nm,1.4s						
TKL				IAMs_20	IAMs_20	22 01 49.2	
	comp=Z,6µm,20.0s						
SWET	**Sewanee**	**56.72**	**345**	IAmb	IAmb	21 36 40.2	
	comp=Z,104nm,1.4s						
SWET				IAMs_20	IAMs_20	22 02 07.7	
	comp=Z,5µm,20.0s						
U56A	**King**	**56.73**	**351**	P	**P**	**21 36 31.7**	**+1.0**
	baz=169						
V52A	**Sevierville**	**56.81**	**348**	IAmb	IAmb	21 36 33.4	
	comp=Z,158nm,1.4s						
V52A				IAMs_20	IAMs_20	22 01 52.9	
	comp=Z,6µm,19.0s						
V51A	**Loudon**	**56.93**	**347**	IAmb	IAmb	21 38 13.2	
	comp=Z,56nm,0.7s						
Z41A	**Richland Creek**	**56.94**	**338**	IAmb	IAmb	21 36 35.5	
	comp=Z,158nm,1.4s						
Z41A	**Richland Creek**	**56.94**	**338**	P	**P**	**21 36 32.7**	**+0.5**
	baz=155						
T59A	**Double "B" Far**	**56.98**	**354**	P	**P**	**21 36 33.2**	**+0.9**
	baz=172,SNR=13						
U55A	**TA2, Sparta**	**56.98**	**350**	P	**P**	**21 36 32.7**	**+0.2**
	baz=168						
OXF	**Oxford**	**56.99**	**342**	IAmb	IAmb	21 36 39.7	
	comp=Z,89nm,1.1s						
OXF				IAMs_20	IAMs_20	22 03 23.9	
	comp=Z,4µm,19.0s						
OXF	**Oxford**	**56.99**	**342**	P	**P**	**21 36 33.0**	**+0.4**
	baz=159						
PLAL	**Pickwick Lake**	**57.05**	**343**	IAmb	IAmb	21 36 50.5	
	comp=Z,111nm,1.7s						
PLAL				IAMs_20	IAMs_20	22 02 38.5	
	comp=Z,4µm,20.0s						
T58A	**Grand View Acr**	**57.07**	**353**	P	**P**	**21 36 33.7**	**+0.7**
	baz=171,SNR=16						
T60A	**Surry**	**57.07**	**354**	IAMs_20	IAMs_20	22 03 38.8	
	comp=Z,4µm,20.0s						
T60A	**Surry**	**57.07**	**354**	P	**P**	**21 36 33.5**	**+0.5**
	baz=173						
U54A	**Nelsons Funny**	**57.13**	**349**	IAmb	IAmb	21 37 46.1	
	comp=Z,55nm,0.8s						
U54A				IAMs_20	IAMs_20	22 02 14.6	
	comp=Z,6µm,20.0s						
U54A	**Nelsons Funny**	**57.13**	**349**	P	**P**	**21 36 33.9**	**+0.3**
	baz=168						
T57A	**Hurt**	**57.21**	**352**	IAmb	IAmb	21 36 46.9	
	comp=Z,168nm,1.4s						
T57A				IAMs_20	IAMs_20	22 02 25.6	
	comp=Z,4µm,21.0s						
T57A	**Hurt**	**57.21**	**352**	P	**P**	**21 36 34.5**	**+0.5**
	baz=171,SNR=10						
T56A	**Rocky Mt**	**57.35**	**351**	P	**P**	**21 36 35.9**	**+0.8**
	baz=170,SNR=6.8						
JCT	**Junction City**	**57.39**	**330**	IAmb	IAmb	21 36 44.2	
	comp=Z,168nm,2.0s						
JCT	**Junction City**	**57.39**	**330**	P	**P**	**21 36 35.0**	**-0.6**
	baz=147						
V48A	**Smith Brothers**	**57.44**	**345**	IAmb	IAmb	21 36 37.7	
	comp=Z,85nm,1.2s						
V48A				IAMs_20	IAMs_20	22 02 42.7	
	comp=Z,5µm,20.0s						
X43A	**Marvell**	**57.45**	**340**	P	**P**	**21 36 36.0**	**+0.3**
	baz=158						
TZTN	**Tazewell**	**57.48**	**348**	IAMs_20	IAMs_20	22 00 53.7	
	comp=Z,5µm,21.0s						
TZTN	**Tazewell**	**57.48**	**348**	P	**P**	**21 36 36.4**	**+0.4**
	baz=166						
S61A	**Accomac**	**57.51**	**355**	P	**P**	**21 36 37.2**	**+1.1**
	baz=175						
W45A	**Hickory Valley**	**57.53**	**342**	IAmb	IAmb	21 36 44.0	
	comp=Z,63nm,0.7s						
T55A	**Pulaski**	**57.55**	**351**	P	**P**	**21 36 37.2**	**+0.7**
	baz=169,SNR=7.3						
BLA	**Blacksburg**	**57.58**	**351**	IAmb	IAmb	21 38 12.7	
	comp=Z,72nm,0.8s						
BLA				IAMs_20	IAMs_20	22 02 36.5	
	comp=Z,7µm,19.0s						
BLA	**Blacksburg**	**57.58**	**351**	P	**P**	**21 36 37.7**	**+1.0**
	baz=169						
HPIG		**57.59**	**323**	IAMs_20	IAMs_20	22 00 15.6	
	comp=Z,4µm,18.0s						
T54A	**Tazewell**	**57.62**	**350**	P	**P**	**21 36 37.9**	**+0.9**
	baz=168						
S60A	**Water View**	**57.62**	**354**	P	**P**	**21 36 38.3**	**+1.4**
	baz=174						
WHTX	**Lake Whitney,**	**57.63**	**333**	IAmb	IAmb	21 36 47.8	
	comp=Z,60nm,1.0s						
WHTX	**Lake Whitney,**	**57.63**	**333**	P	**P**	**21 36 37.1**	**0.0**
	baz=150						
WHTX				S	**S**	**21 44 32.8**	**-2.9**
	baz=150						
CLTN	**Cedars of Leba**	**57.65**	**345**	IAmb	IAmb	21 36 39.2	
	comp=Z,119nm,1.5s						
CLTN				IAMs_20	IAMs_20	22 02 23.4	
	comp=Z,4µm,20.0s						
S58A	**Poland Farm, P**	**57.67**	**353**	IAmb	IAmb	21 36 40.4	
	comp=Z,93nm,1.2s						
S58A	**Poland Farm, P**	**57.67**	**353**	P	**P**	**21 36 38.1**	**+0.9**
	baz=172,SNR=6.8						
T53A	**Wise**	**57.71**	**349**	P	**P**	**21 36 38.6**	**+0.9**
	baz=167,SNR=6.3						
MET	**Memphis--Engin**	**57.72**	**341**	IAMs_20	IAMs_20	22 03 55.1	
	comp=Z,4µm,18.0s						
S59A	**Mechanicsville**	**57.74**	**354**	P	**P**	**21 36 38.4**	**+0.7**
	baz=173						
T52A	**Hallie**	**57.91**	**348**	IAMs_20	IAMs_20	22 01 04.2	
	comp=Z,7µm,21.0s						
T52A	**Hallie**	**57.91**	**348**	P	**P**	**21 36 40.0**	**+0.9**
	baz=166						
S56A	**Natural Bridge**	**57.92**	**352**	P	**P**	**21 36 40.3**	**+1.2**
	baz=170,SNR=6.2						
S57A	**Dark Hollow, R**	**57.92**	**352**	IAMs_20	IAMs_20	22 02 56.4	
	comp=Z,7µm,20.0s						
S57A	**Dark Hollow, R**	**57.92**	**352**	P	**P**	**21 36 39.7**	**+0.7**
	baz=171,SNR=8.4						
U49A	**Red Boiling Sp**	**57.93**	**346**	IAMs_20	IAMs_20	22 03 09.6	
	comp=Z,4µm,20.0s						
SACV	**Santiago Islan**	**57.93**	**57**	IAMs_20	IAMs_20	21 59 13.0	
	comp=Z,6µm,22.0s						
T51A	**Gray**	**57.96**	**348**	P	**P**	**21 36 40.1**	**+0.8**
	baz=165,SNR=6.7						
R58B	**Mineral**	**58.00**	**353**	IAmb	IAmb	21 36 51.8	
	comp=Z,167nm,1.5s						
R58B	**Mineral**	**58.00**	**353**	P	**P**	**21 36 40.8**	**+1.3**
	baz=172,SNR=10.0						
X40A	**Basin Creek Fa**	**58.07**	**339**	P	**P**	**21 36 40.5**	**+0.4**
	baz=156						
WVT	**Waverly**	**58.07**	**344**	P	**P**	**21 36 38.9**	**-1.2**
WVT				pmax	pmax		
	comp=Z,123nm,1.5s						
WVT				MLR	MLR		
	comp=Z,3µm,19.0s						
WVT	**Waverly**	**58.07**	**344**	P	**P**	**21 36 38.9**	**-1.2**
WVT				IAmb	IAmb	21 36 41.5	
	comp=Z,123nm,1.5s						
WVT	**Waverly**	**58.07**	**344**	P	**P**	**21 36 39.9**	**-0.2**
	baz=161						
R61A	**Willards**	**58.13**	**356**	P	**P**	**21 36 41.5**	**+1.0**
	baz=175						
S55A	**Lewisburg**	**58.15**	**351**	P	**P**	**21 36 41.4**	**+0.7**
	baz=169,SNR=9.6						
R59A	**King George, V**	**58.15**	**354**	P	**P**	**21 36 41.5**	**+0.9**
	baz=173						
UALR	**University of**	**58.16**	**339**	IAmb	IAmb	21 36 51.6	
	comp=Z,82nm,1.4s						
R60A	**Leonardtown, M**	**58.17**	**355**	P	**P**	**21 36 41.6**	**+0.9**
	baz=174						
CBN	**Corbin Frederi**	**58.18**	**354**	P	**P**	**21 36 41.7**	**+0.9**
	baz=173						
T50A	**Nancy**	**58.20**	**347**	P	**P**	**21 36 40.9**	**-0.1**
	baz=164,SNR=8.2						
LPAR	**Lepanto**	**58.27**	**341**	IAMs_20	IAMs_20	22 04 02.8	
	comp=Z,5µm,19.0s						
S54A	**Dingess, Beckl**	**58.30**	**350**	P	**P**	**21 36 42.1**	**+0.4**
	baz=168,SNR=6.0						
LPIG	**La Paz**	**58.31**	**317**	P	**P**	**21 36 42.4**	**+0.4**
	comp=Z,14nm,0.3s,baz=49,slow=1.0,SNR=4.8						
S53A	**Williamson**	**58.32**	**349**	P	**P**	**21 36 42.2**	**+0.3**
	baz=168						
HBAR	**Harrisburg**	**58.34**	**341**	IAMs_20	IAMs_20	22 04 17.5	
	comp=Z,4µm,20.0s						
R58A	**Rapidan**	**58.34**	**353**	P	**P**	**21 36 43.1**	**+1.1**
	baz=172,SNR=5.5						
TXAR	**Lajitas Array**	**58.37**	**326**	P	**P**	**21 36 42.6**	**+0.1**
	comp=Z,6.3nm,0.7s,baz=146,slow=8.3,SNR=27						
TXAR				LR	LR	22 00 45.4	
	comp=Z,2µm,19.6s,baz=0.0,slow=35						
TXAR	**Lajitas Array**	**58.37**	**326**	P	**P**	**21 36 42.4**	**-0.1**
MIAR	**Mount Ida**	**58.38**	**338**	IAmb	IAmb	21 36 52.6	
	comp=Z,119nm,1.4s						
MIAR	**Mount Ida**	**58.38**	**338**	P	**P**	**21 36 41.7**	**-0.6**
	baz=155						
R57A	**Stanardsville**	**58.40**	**353**	P	**P**	**21 36 43.3**	**+0.9**
	baz=172,SNR=10						
T49A	**Edmonton**	**58.44**	**346**	IAMs_20	IAMs_20	22 03 31.1	
	comp=Z,6µm,18.0s						
T49A	**Edmonton**	**58.44**	**346**	P	**P**	**21 36 43.7**	**+1.0**
	baz=164,SNR=24						
S52A	**Salyersville**	**58.48**	**349**	P	**P**	**21 36 43.1**	**+0.1**
	baz=166						
W41B	**Gary Mavity, V**	**58.49**	**339**	IAmb	IAmb	21 36 53.2	
	comp=Z,59nm,1.2s						
W41B	**Gary Mavity, V**	**58.49**	**339**	P	**P**	**21 36 43.4**	**+0.4**
	baz=156,SNR=6.2						
GNAR	**Gosnell**	**58.52**	**342**	IAMs_20	IAMs_20	22 04 42.5	
	comp=Z,5µm,19.0s						
S51A	**Beattyville**	**58.54**	**348**	IAMs_20	IAMs_20	22 03 25.9	
	comp=Z,6µm,20.0s						
S51A	**Beattyville**	**58.54**	**348**	P	**P**	**21 36 44.0**	**+0.6**
	baz=166						
R55A	**Marlinton**	**58.59**	**351**	IAmb	IAmb	21 36 54.9	
	comp=Z,69nm,1.1s						
R55A				IAMs_20	IAMs_20	22 02 36.1	
	comp=Z,5µm,22.0s						
R55A	**Marlinton**	**58.59**	**351**	P	**P**	**21 36 44.3**	**+0.5**
	baz=170						
WHAR	**Wooly Hollow**	**58.61**	**339**	IAmb	IAmb	21 36 54.0	
	comp=Z,60nm,1.2s						
R56A	**Bull Pasture M**	**58.62**	**352**	P	**P**	**21 36 44.9**	**+1.0**
	baz=170						
R54A	**Victor**	**58.62**	**351**	P	**P**	**21 36 45.0**	**+1.0**
	baz=169						
T47A	**Sharon Grove**	**58.70**	**345**	IAMs_20	IAMs_20	22 01 56.0	
	comp=Z,4µm,22.0s						
S50A	**Richmond**	**58.74**	**347**	P	**P**	**21 36 45.0**	**+0.2**
	baz=165,SNR=10.0						
HICK	**Hickman**	**58.84**	**343**	IAMs_20	IAMs_20	22 03 22.7	
	comp=Z,4µm,20.0s						
Q60A	**Greensboro**	**58.84**	**355**	IAMs_20	IAMs_20	22 03 56.7	
	comp=Z,5µm,19.0s						
Q60A	**Greensboro**	**58.84**	**355**	P	**P**	**21 36 46.0**	**+0.7**
	baz=174						
PVMO	**Portageville**	**58.85**	**342**	IAMs_20	IAMs_20	22 03 47.1	
	comp=Z,5µm,20.0s						
PENMO	**Penman**	**58.86**	**342**	IAMs_20	IAMs_20	22 03 36.4	
	comp=Z,5µm,20.0s						
R53A	**Hurricane**	**58.92**	**350**	IAmb	IAmb	21 37 57.7	
	comp=Z,32nm,0.6s						
R53A				IAMs_20	IAMs_20	22 03 40.9	
	comp=Z,7µm,21.0s						
R53A	**Hurricane**	**58.92**	**350**	P	**P**	**21 36 46.5**	**+0.5**
	baz=168						
Q58A	**Fox Den Farm,**	**58.94**	**354**	P	**P**	**21 36 46.9**	**+0.7**
	baz=172,SNR=5.9						
LCAR	**Lake Charles**	**58.97**	**341**	IAmb	IAmb	21 36 48.3	
	comp=Z,78nm,1.6s						
LCAR				IAMs_20	IAMs_20	22 04 28.1	
	comp=Z,4µm,19.0s						
S49A	**Springfield**	**59.03**	**347**	P	**P**	**21 36 47.1**	**+0.3**
	baz=164,SNR=6.0						
W39A	**Magazine**	**59.04**	**338**	IAmb	IAmb	21 36 57.8	
	comp=Z,64nm,1.1s						
W39A	**Magazine**	**59.04**	**338**	P	**P**	**21 36 47.5**	**+0.7**
	baz=155,SNR=8.8						
R52A	**Catlettsburg**	**59.05**	**349**	P	**P**	**21 36 47.2**	**+0.3**
	baz=167						
HENM	**Henderson Moun**	**59.07**	**343**	IAMs_20	IAMs_20	22 03 40.8	
	comp=Z,5µm,21.0s						
PARMO	**Parma**	**59.10**	**342**	IAMs_20	IAMs_20	22 03 42.6	
	comp=Z,5µm,20.0s						
FCAR	**Ozark Folk Cen**	**59.11**	**340**	IAmb	IAmb	21 36 52.2	
	comp=Z,144nm,2.0s						
Q57A	**Strasburg**	**59.12**	**353**	P	**P**	**21 36 48.1**	**+0.7**
	baz=172,SNR=17						
T45A	**Paducah**	**59.12**	**343**	IAMs_20	IAMs_20	22 02 12.2	
	comp=Z,4µm,21.0s						
ABTX	**Abilene, Hawle**	**59.12**	**332**	IAmb	IAmb	21 36 58.1	
	comp=Z,52nm,1.0s						
ABTX	**Abilene, Hawle**	**59.12**	**332**	P	**P**	**21 36 47.6**	**0.0**
	baz=148						
R51A	**Hillsboro**	**59.18**	**348**	P	**P**	**21 36 48.3**	**+0.5**
	baz=166,SNR=7.0						
Q56A	**Snyder Ridge,**	**59.21**	**352**	IAMs_20	IAMs_20	22 03 44.6	
	comp=Z,5µm,19.0s						
Q56A	**Snyder Ridge,**	**59.21**	**352**	P	**P**	**21 36 48.5**	**+0.5**
	baz=171,SNR=11						
Q55A	**Buckhannon**	**59.28**	**352**	P	**P**	**21 36 49.3**	**+0.7**
	baz=170,SNR=6.3						
R50A	**Paris**	**59.31**	**348**	IAmb	IAmb	21 36 50.8	
	comp=Z,68nm,1.4s						
R50A				IAMs_20	IAMs_20	22 02 01.2	
	comp=Z,6µm,22.0s						
R50A	**Paris**	**59.31**	**348**	P	**P**	**21 36 48.9**	**+0.2**
	baz=165,SNR=5.9						
Q53A	**Leroy**	**59.37**	**350**	P	**P**	**21 36 49.6**	**+0.5**
	baz=168,SNR=6.4						
Q54A	**Coxs Mills**	**59.38**	**351**	IAmb	IAmb	21 36 59.2	
	comp=Z,94nm,1.3s						
Q54A				IAMs_20	IAMs_20	22 03 42.1	
	comp=Z,5µm,20.0s						
Q54A	**Coxs Mills**	**59.38**	**351**	P	**P**	**21 36 49.4**	**+0.2**
	baz=169,SNR=7.3						
PBMO	**Poplar Bluff**	**59.40**	**342**	IAmb	IAmb	21 37 04.3	
	comp=Z,76nm,1.2s						
P61A	**Hammonton**	**59.44**	**356**	IAMs_20	IAMs_20	22 05 39.6	
	comp=Z,5µm,19.0s						
P61A	**Hammonton**	**59.44**	**356**	P	**P**	**21 36 49.9**	**+0.3**
	baz=176						
P58A	**Pank, Wackersv**	**59.45**	**354**	P	**P**	**21 36 50.5**	**+0.9**
	baz=173						
P59A	**Jarrettsville**	**59.49**	**355**	P	**P**	**21 36 51.4**	**+1.5**
	baz=174,SNR=8.8						
R49A	**Shelbyville**	**59.49**	**347**	IAmb	IAmb	21 38 20.6	
	comp=Z,31nm,0.7s						
R49A				IAMs_20	IAMs_20	22 02 41.1	
	comp=Z,4µm,19.0s						
R49A	**Shelbyville**	**59.49**	**347**	P	**P**	**21 36 49.9**	**-0.1**
	baz=164						
P57A	**Homestead Farm**	**59.51**	**354**	P	**P**	**21 36 50.9**	**+0.8**
	baz=172,SNR=7.6						
Q52A	**Bidwell**	**59.59**	**350**	P	**P**	**21 36 50.9**	**+0.3**
	baz=168						
P56A	**Dayton Farm, R**	**59.63**	**353**	P	**P**	**21 36 51.2**	**+0.4**
	baz=171,SNR=6.8						
P60A	**Greenville**	**59.63**	**356**	IAMs_20	IAMs_20	22 04 38.6	
	comp=Z,4µm,20.0s						
P60A	**Greenville**	**59.63**	**356**	P	**P**	**21 36 52.2**	**+1.4**
	baz=175						
WCI	**Wyandotte Cave**	**59.68**	**346**	P	**P**	**21 36 48.0**	**-3.3**
WCI				pmax	pmax		
	comp=Z,144nm,1.5s						
WCI				MLR	MLR		
	comp=Z,6µm,21.0s						
WCI	**Wyandotte Cave**	**59.68**	**346**	P	**P**	**21 36 48.0**	**-3.3**
WCI				IAmb	IAmb	21 37 00.6	
	comp=Z,144nm,1.5s						
WCI	**Wyandotte Cave**	**59.68**	**346**	IAMs_20	IAMs_20	22 04 01.1	
	comp=Z,6µm,21.0s						
WCI	**Wyandotte Cave**	**59.68**	**346**	P	**P**	**21 36 52.1**	**+0.8**
	baz=163						
PSUB	**Penn St. - Bra**	**59.73**	**356**	IAMs_20	IAMs_20	22 03 54.4	
	comp=Z,4µm,19.0s						
P55A	**Reedsville**	**59.76**	**352**	P	**P**	**21 36 51.9**	**+0.1**
	baz=170						
USIN	**University of**	**59.76**	**345**	IAmb	IAmb	21 37 04.1	
	comp=Z,85nm,1.1s						
USIN				IAMs_20	IAMs_20	22 02 40.2	
	comp=Z,4µm,22.0s						
U40A	**Yellville**	**59.77**	**339**	P	**P**	**21 36 52.4**	**+0.4**
	baz=156,SNR=9.5						
Q50A	**Georgetown**	**59.78**	**348**	P	**P**	**21 36 52.4**	**+0.5**
	baz=166						
T42A	**Van Buren**	**59.83**	**341**	IAmb	IAmb	21 37 01.6	
	comp=Z,85nm,1.6s						
T42A				IAMs_20	IAMs_20	22 05 15.1	
	comp=Z,4µm,18.0s						
Q51A	**Peebles**	**59.84**	**349**	IAmb	IAmb	21 38 12.2	
	comp=Z,48nm,0.7s						
Q51A				IAMs_20	IAMs_20	22 05 16.3	
	comp=Z,5µm,19.0s						
Q51A	**Peebles**	**59.84**	**349**	P	**P**	**21 36 52.5**	**+0.2**
	baz=166						
O61A	**Allentown**	**59.84**	**357**	P	**P**	**21 36 53.1**	**+0.8**
	baz=176						
MVL	**Millersville**	**59.87**	**355**	IAmb	IAmb	21 37 01.2	
	comp=Z,65nm,1.2s						
MVL				IAMs_20	IAMs_20	22 03 51.0	
	comp=Z,4µm,20.0s						
MCWV	**Mont Chateau**	**59.91**	**352**	IAmb	IAmb	21 37 03.5	
	comp=Z,136nm,1.9s						
MCWV	**Mont Chateau**	**59.91**	**352**	P	**P**	**21 36 53.5**	**+0.7**
	baz=170						
S44A	**Carbondale**	**59.92**	**343**	IAmb	IAmb	21 37 50.9	
	comp=Z,90nm,1.0s						
P54A	**Burton**	**59.94**	**351**	P	**P**	**21 36 53.6**	**+0.6**
	baz=170,SNR=12						
P53A	**Whipple**	**59.96**	**351**	IAMs_20	IAMs_20	22 04 19.4	
	comp=Z,6µm,19.0s						
P53A	**Whipple**	**59.96**	**351**	P	**P**	**21 36 53.8**	**+0.6**
	baz=168,SNR=6.8						
O58A	**Lewisberry**	**60.04**	**355**	P	**P**	**21 36 54.9**	**+1.2**
	baz=173,SNR=5.6						
X34A	**Smith Ranch, M**	**60.05**	**334**	IAmb	IAmb	21 37 04.5	
	comp=Z,90nm,1.1s						
HHAR	**Hobbs**	**60.07**	**338**	IAmb	IAmb	21 37 04.2	
	comp=Z,70nm,1.2s						
O60A	**Telford**	**60.12**	**356**	P	**P**	**21 36 55.2**	**+1.1**
	baz=175						
Q49A	**Aurora**	**60.12**	**347**	P	**P**	**21 36 55.1**	**+0.8**
	baz=165						
O59A	**Robesonia**	**60.17**	**355**	P	**P**	**21 36 55.7**	**+1.1**
	baz=174						
O57A	**Amberson**	**60.20**	**354**	P	**P**	**21 36 55.8**	**+1.1**
	baz=173,SNR=9.0						
P52A	**Corning**	**60.22**	**350**	P	**P**	**21 36 55.4**	**+0.4**
	baz=168						
Q48A	**North Vernon**	**60.23**	**347**	P	**P**	**21 36 55.7**	**+0.7**
	baz=164,SNR=6.0						
P51A	**Williamsport**	**60.23**	**349**	IAmb	IAmb	21 37 03.7	
	comp=Z,153nm,1.6s						
P51A				IAMs_20	IAMs_20	22 03 40.6	
	comp=Z,4µm,20.0s						
P51A	**Williamsport**	**60.23**	**349**	P	**P**	**21 36 55.7**	**+0.6**
	baz=167						
MGMO	**Mountain Grove**	**60.31**	**340**	IAMs_20	IAMs_20	22 05 20.8	
	comp=Z,4µm,20.0s						
O56A	**Blue Knob Stat**	**60.35**	**353**	P	**P**	**21 36 56.8**	**+0.9**
	baz=172						
U38A	**Gravette**	**60.37**	**338**	IAmb	IAmb	21 37 06.2	
	comp=Z,82nm,1.5s						
O55A	**Ligonier**	**60.38**	**352**	P	**P**	**21 36 56.6**	**+0.5**
	baz=171						
TUL1	**Leonard**	**60.40**	**337**	P	**P**	**21 36 56.6**	**+0.4**
	baz=153						
BRNJ	**Basking Ridge**	**60.43**	**357**	IAmb	IAmb	21 37 01.2	
	comp=Z,122nm,1.4s						
BRNJ				IAMs_20	IAMs_20	22 06 07.8	
	comp=Z,5µm,18.0s						
N61A	**South Mountain**	**60.48**	**357**	P	**P**	**21 36 57.7**	**+1.0**
	baz=176						
P50A	**Jamestown**	**60.49**	**348**	P	**P**	**21 36 57.1**	**+0.3**
	baz=166						
O54A	**Avella**	**60.49**	**352**	P	**P**	**21 36 57.5**	**+0.7**
	baz=170						
WMOK	**Wichita Mounta**	**60.56**	**334**	P	**P**	**21 36 57.7**	**+0.3**
	baz=150						
P49A	**Miami Univ. Ec**	**60.60**	**348**	P	**P**	**21 36 57.8**	**+0.3**
	baz=165,SNR=6.5						
OLIL	**Olney**	**60.60**	**345**	IAMs_20	IAMs_20	22 03 14.3	
	comp=Z,5µm,21.0s						
BLO	**Bloomington**	**60.64**	**346**	IAmb	IAmb	21 37 07.0	
	comp=Z,94nm,1.5s						
BLO				IAMs_20	IAMs_20	22 04 18.3	
	comp=Z,6µm,22.0s						
SSPA	**Standing Stone**	**60.64**	**354**	P	**P**	**21 36 56.6**	**-1.2**
SSPA	**Standing Stone**	**60.64**	**354**	IAMs_20	IAMs_20	22 04 08.4	
	comp=Z,4µm,21.0s						
SSPA	**Standing Stone**	**60.64**	**354**	P	**P**	**21 36 58.2**	**+0.4**
	baz=172						
O52A	**Adamsville**	**60.64**	**350**	IAmb	IAmb	21 37 07.7	
	comp=Z,73nm,1.3s						
O52A				IAMs_20	IAMs_20	22 04 22.5	
	comp=Z,6µm,20.0s						
O52A	**Adamsville**	**60.64**	**350**	P	**P**	**21 36 58.7**	**+0.9**
	baz=168						
N60A	**Cedar Hill Far**	**60.65**	**356**	P	**P**	**21 36 58.8**	**+1.0**
	baz=175						
P48A	**Milroy**	**60.67**	**347**	IAMs_20	IAMs_20	22 03 17.3	
	comp=Z,4µm,21.0s						
P48A	**Milroy**	**60.67**	**347**	P	**P**	**21 36 58.4**	**+0.4**
	baz=164						
O53A	**New Philadelph**	**60.68**	**351**	P	**P**	**21 36 58.6**	**+0.5**
	baz=169						
PAL	**Palisades**	**60.72**	**357**	IAmb	IAmb	21 37 10.0	
	comp=Z,90nm,1.4s						
PAL	**Palisades**	**60.72**	**357**	P	**P**	**21 36 59.4**	**+1.1**
	baz=177						
N58A	**Sunbury**	**60.73**	**355**	IAmb	IAmb	21 37 09.2	
	comp=Z,94nm,1.3s						
N58A				IAMs_20	IAMs_20	22 04 17.9	
	comp=Z,5µm,20.0s						
N58A	**Sunbury**	**60.73**	**355**	P	**P**	**21 36 59.0**	**+0.5**
	baz=174						
N59A	**State Game Lan**	**60.74**	**356**	IAmb	IAmb	21 37 09.4	
	comp=Z,82nm,1.5s						
N59A				IAMs_20	IAMs_20	22 05 31.0	
	comp=Z,5µm,19.0s						
N59A	**State Game Lan**	**60.74**	**356**	P	**P**	**21 36 58.9**	**+0.4**
	baz=175						
O51A	**Pataskala**	**60.80**	**350**	P	**P**	**21 36 59.1**	**+0.2**
	baz=167						
CCM	**Cathedral Cave**	**60.83**	**342**	P	**P**	**21 36 58.7**	**-0.4**
CCM				pmax	pmax		
	comp=Z,140nm,1.6s						
CCM				MLR	MLR		
	comp=Z,4µm,20.0s						
CCM	**Cathedral Cave**	**60.83**	**342**	P	**P**	**21 36 58.7**	**-0.4**
CCM				IAmb	IAmb	21 37 08.9	
	comp=Z,140nm,1.6s						
CCM	**Cathedral Cave**	**60.83**	**342**	IAMs_20	IAMs_20	22 04 59.4	
	comp=Z,4µm,20.0s						
CCM	**Cathedral Cave**	**60.83**	**342**	P	**P**	**21 36 59.2**	**+0.1**
	baz=158						
ODNJ	**Ogdensburg**	**60.83**	**357**	IAmb	IAmb	21 37 01.2	
	comp=Z,92nm,1.6s						
ODNJ				IAMs_20	IAMs_20	22 06 19.4	
	comp=Z,4µm,18.0s						
N55A	**Marion Center**	**60.91**	**353**	P	**P**	**21 37 00.4**	**+0.8**
	baz=171						
ACSO	**Alum Creek Sta**	**60.95**	**349**	IAmb	IAmb	21 37 02.5	
	comp=Z,70nm,1.1s						
ACSO				IAMs_20	IAMs_20	22 04 42.6	
	comp=Z,5µm,20.0s						
ACSO	**Alum Creek Sta**	**60.95**	**349**	P	**P**	**21 36 59.9**	**0.0**
	baz=167,SNR=8.4						
N56A	**West Decatur**	**60.96**	**353**	P	**P**	**21 37 00.7**	**+0.7**
	baz=172						
O50A	**Cable**	**60.98**	**349**	P	**P**	**21 37 00.2**	**0.0**
	baz=166						
YLE	**Yale**	**60.99**	**358**	IAMs_20	IAMs_20	22 04 50.7	
	comp=Z,5µm,20.0s						
Q44A	**Meyer Farm, Va**	**60.99**	**344**	IAMs_20	IAMs_20	22 04 52.8	
	comp=Z,4µm,19.0s						
M61A	**Granite Spring**	**61.02**	**357**	P	**P**	**21 37 01.0**	**+0.7**
	baz=177						
M63A	**Gales Ferry**	**61.06**	**359**	P	**P**	**21 37 02.0**	**+1.4**
	baz=179						
M60A	**Port Jervis**	**61.07**	**357**	P	**P**	**21 37 02.1**	**+1.4**
	baz=176						
SLM	**Saint Louis**	**61.07**	**343**	IAMs_20	IAMs_20	22 03 13.0	
	comp=Z,4µm,20.0s						
M62A	**Hamden**	**61.12**	**358**	P	**P**	**21 37 02.4**	**+1.4**
	baz=178						
S39A	**Bolivar**	**61.14**	**340**	IAmb	IAmb	21 37 11.9	
	comp=Z,73nm,1.1s						
S39A				IAMs_20	IAMs_20	22 05 42.7	
	comp=Z,4µm,19.0s						
MNTX	**Cornudas Mount**	**61.14**	**326**	IAmb	IAmb	21 37 11.7	
	comp=Z,50nm,1.1s						
MNTX	**Cornudas Mount**	**61.14**	**326**	P	**P**	**21 37 01.3**	**-0.2**
	baz=143						
O49A	**Covington**	**61.15**	**348**	IAmb	IAmb	21 37 03.1	
	comp=Z,67nm,1.2s						
O49A				IAMs_20	IAMs_20	22 04 45.0	

	comp=Z,6µm,20.0s						
O49A	Covington	61.15	348	P	P	21 37 01.5	+0.2
	baz=166						
N53A	Lisbon	61.17	351	IAmb	IAmb	21 37 12.3	
	comp=Z,132nm,1.6s						
N53A	Lisbon	61.17	351	P	P	21 37 02.1	+0.7
	baz=169						
M64A	Tiverton	61.20	360	P	P	21 37 02.9	+1.4
	baz=180						
N54A	Moraine State	61.21	352	IAMs_20	IAMs_20	22 04 18.4	
	comp=Z,6µm,21.0s						
N54A	Moraine State	61.21	352	P	P	21 37 02.8	+1.1
	baz=170						
M58A	Price’s Panora	61.24	355	P	P	21 37 03.1	+1.2
	baz=174						
M57A	Sunshine Farm,	61.26	355	IAMs_20	IAMs_20	22 04 44.9	
	comp=Z,6µm,20.0s						
M57A	Sunshine Farm,	61.26	355	P	P	21 37 02.7	+0.6
	baz=173						
N52A	McGinn’s Farm,	61.30	351	P	P	21 37 02.6	+0.3
	baz=168						
M59A	Waymart	61.34	356	P	P	21 37 03.0	+0.5
	baz=175						
O48A	Farmland	61.38	348	P	P	21 37 03.0	+0.1
	baz=165						
KSCT	Kent School, K	61.42	358	IAmb	IAmb	21 37 13.8	
	comp=Z,51nm,1.2s						
KSCT				IAMs_20	IAMs_20	22 08 03.0	
	comp=Z,4µm,18.0s						
N50A	Nevada	61.50	349	P	P	21 37 04.1	+0.4
	baz=167,SNR=7.5						
L63A	North Scituate	61.51	359	P	P	21 37 03.9	+0.3
	baz=179						
M56A	Emporium	61.51	354	IAMs_20	IAMs_20	22 04 44.5	
	comp=Z,4µm,19.0s						
M56A	Emporium	61.51	354	P	P	21 37 04.1	+0.4
	baz=172						
N51A	Ashland	61.51	350	IAmb	IAmb	21 37 21.5	
	comp=Z,32nm,0.8s						
N51A				IAMs_20	IAMs_20	22 04 59.5	
	comp=Z,6µm,20.0s						
N51A	Ashland	61.51	350	P	P	21 37 03.8	+0.1
	baz=168						
M55A	Ridgway	61.56	353	P	P	21 37 04.8	+0.7
	baz=172						
T35A	Sooner Cattle	61.56	337	IAmb	IAmb	21 37 17.0	
	comp=Z,75nm,1.1s						
L64A	Middleborough	61.58	360	P	P	21 37 04.7	+0.6
	baz=180						
MSTX	Muleshoe	61.68	330	P	P	21 37 04.9	-0.3
	baz=146						
M54A	Oil Creek Stat	61.70	352	IAMs_20	IAMs_20	22 04 32.6	
	comp=Z,5µm,21.0s						
M54A	Oil Creek Stat	61.70	352	P	P	21 37 05.3	+0.2
	baz=170						
L60A	Shokan	61.71	357	P	P	21 37 05.5	+0.4
	baz=176						
M53A	WI Miller and	61.77	352	P	P	21 37 05.8	+0.3
	baz=170						
EPT	El Paso	61.79	326	IAMs_20	IAMs_20	22 02 33.0	
	comp=Z,4µm,20.0s						
P43A	Skaggs, Pawnee	61.82	344	IAMs_20	IAMs_20	22 06 47.7	
	comp=Z,3µm,20.0s						
N49A	Columbus Grove	61.83	349	IAMs_20	IAMs_20	22 02 27.8	
	comp=Z,4µm,20.0s						
N49A	Columbus Grove	61.83	349	P	P	21 37 06.1	+0.2
	baz=166,SNR=19						
L58A	Harry Jones Me	61.87	356	P	P	21 37 06.8	+0.7
	baz=175						
M51A	Elyria	61.89	350	P	P	21 37 06.6	+0.3
	baz=168						
L61A	Hillsdale 1, H	61.89	358	P	P	21 37 06.6	+0.3
	baz=177						
L57A	Andrews Acres	61.90	355	P	P	21 37 06.9	+0.6
	baz=174,SNR=9.3						
ALLY	Alegheny Colle	61.90	352	IAMs_20	IAMs_20	22 05 11.9	
	comp=Z,6µm,20.0s						
SFIN	Lafayette	61.92	346	IAmb	IAmb	21 37 15.2	
	comp=Z,36nm,0.8s						
SFIN				IAMs_20	IAMs_20	22 04 35.3	
	comp=Z,5µm,21.0s						
SFIN	Lafayette	61.92	346	P	P	21 37 06.6	+0.1
	baz=163						
N48A	Decatur	61.94	348	P	P	21 37 07.4	+0.8
	baz=165						
QUA2	Belchertown	61.94	359	IAmb	IAmb	21 37 17.0	
	comp=Z,89nm,1.3s						
L59A	Walton	61.96	356	P	P	21 37 07.0	+0.3
	baz=176						
M52A	Chesterland	61.97	351	IAMs_20	IAMs_20	22 05 35.5	
	comp=Z,6µm,20.0s						
M52A	Chesterland	61.97	351	P	P	21 37 07.4	+0.7
	baz=169						
BINY	Binghamton	62.03	356	IAmb	IAmb	21 37 18.8	
	comp=Z,78nm,1.0s						
BINY				IAMs_20	IAMs_20	22 05 16.2	
	comp=Z,4µm,20.0s						
BINY	Binghamton	62.03	356	P	P	21 37 07.8	+0.6
	baz=174						
WES	Weston	62.03	360	IAmb	IAmb	21 37 17.8	
	comp=Z,90nm,1.4s						
O44A	Mansfield	62.03	345	IAMs_20	IAMs_20	22 05 48.3	
	comp=Z,5µm,18.0s						
VNA3	Neumayer Olymp	62.09	161	P	P	21 37 10.5	+3.2
N47A	Urbana	62.09	347	IAMs_20	IAMs_20	22 03 22.9	
	comp=Z,6µm,22.0s						
N47A	Urbana	62.09	347	P	P	21 37 07.8	+0.2
	baz=164						
L56A	Greenwood	62.10	354	IAMs_20	IAMs_20	22 05 10.9	
	comp=Z,6µm,20.0s						
L56A	Greenwood	62.10	354	P	P	21 37 07.8	+0.1
	baz=173,SNR=14						
M50A	Fremont	62.10	350	IAmb	IAmb	21 37 26.1	
	comp=Z,61nm,1.1s						
M50A	Fremont	62.10	350	P	P	21 37 07.7	+0.1
	baz=167						
L61B	Northampton	62.12	358	P	P	21 37 08.3	+0.6
	baz=178						
HRV	Adam Dziewonsk	62.15	359	P	P	21 37 07.5	-0.5
HRV				pmax	pmax		
	comp=Z,202nm,1.5s						
HRV				MLR	MLR		
	comp=Z,2µm,21.0s						
HRV	Adam Dziewonsk	62.15	359	P	P	21 37 07.5	-0.5
HRV	Adam Dziewonsk	62.15	359	P	P	21 37 08.9	+0.9
	baz=179						
L53A	Girard	62.22	352	P	P	21 37 09.2	+0.7
	baz=170						
L55A	Hinsdale	62.23	354	P	P	21 37 09.4	+0.8
	baz=172						
HSIG		62.23	320	IAmb	IAmb	21 37 18.6	
	comp=Z,51nm,1.3s						
VNA1	Neumayer--Stat	62.32	160	P	P	21 37 12.5	+3.7
K62A	Royalston	62.32	359	IAmb	IAmb	21 37 20.1	
	comp=Z,94nm,1.4s						
K62A	Royalston	62.32	359	P	P	21 37 10.4	+1.2
	baz=178						
K60A	Five Rivers En	62.33	357	P	P	21 37 10.5	+1.4
	baz=177						
M49A	Liberty Center	62.33	349	P	P	21 37 09.9	+0.7
	baz=166						
K63A	Dunstable	62.34	359	P	P	21 37 10.7	+1.5
	baz=179						
ERPA	Erie	62.34	352	IAMs_20	IAMs_20	22 05 02.5	
	comp=Z,6µm,20.0s						
ERPA	Erie	62.34	352	P	P	21 37 10.8	+1.5
	baz=170						
K61A	Williamstown	62.35	358	P	P	21 37 10.9	+1.6
	baz=177						
L54A	Sinclairville	62.38	353	P	P	21 37 10.6	+1.0
	baz=171						
TRY	Troy	62.43	358	IAMs_20	IAMs_20	22 08 34.8	
	comp=Z,4µm,18.0s						
M48A	Edgerton	62.48	348	IAMs_20	IAMs_20	22 02 57.1	
	comp=Z,5µm,20.0s						
M48A	Edgerton	62.48	348	P	P	21 37 10.4	+0.2
	baz=165						
K59A	Cooperstown	62.53	357	P	P	21 37 11.2	+0.6
	baz=176,SNR=21						
M47A	Cromwell	62.54	347	P	P	21 37 11.0	+0.4
	baz=164						
K58A	Earlville	62.57	356	IAMs_20	IAMs_20	22 06 25.4	
	comp=Z,4µm,18.0s						
K58A	Earlville	62.57	356	P	P	21 37 11.2	+0.4
	baz=175						
K57A	Scipio Center	62.60	355	P	P	21 37 11.4	+0.4
	baz=174						
HDIL	Hopedale	62.62	344	IAmb	IAmb	21 37 12.6	
	comp=Z,53nm,1.0s						
HDIL				IAMs_20	IAMs_20	22 04 14.8	
	comp=Z,4µm,21.0s						
HDIL	Hopedale	62.62	344	P	P	21 37 11.2	+0.1
	baz=160						
K56A	Middlesex	62.63	355	P	P	21 37 11.8	+0.6
	baz=173						
K54A	Basiliko Farm,	62.68	353	P	P	21 37 11.7	+0.1
	baz=172						
VNA2	Neumayer--Watz	62.68	161	P	P	21 37 13.6	+2.3
	baz=284,slow=6.7						
L50A	Kingsville	62.68	350	P	P	21 37 11.8	+0.2
	baz=167						
K55A	Perry	62.73	354	P	P	21 37 11.6	-0.3
	baz=172						
L48A	N Adams	62.87	349	P	P	21 37 13.1	+0.3
	baz=166						
J62A	Henniker	62.88	359	P	P	21 37 13.7	+0.9
	baz=179						
L49A	Milan	62.91	349	P	P	21 37 13.3	+0.2
	baz=166						
J63A	Strafford	62.92	360	P	P	21 37 14.3	+1.2
	baz=180						
J60A	Lant Hill Farm	62.93	358	P	P	21 37 14.6	+1.4
	baz=177						
P38A	Dawn	62.97	340	IAmb	IAmb	21 37 15.8	
	comp=Z,116nm,1.6s						
319A	Douglas	63.01	323	IAMs_20	IAMs_20	22 02 51.1	
	comp=Z,5µm,20.0s						
J61A	Chester	63.01	359	P	P	21 37 15.2	+1.5
	baz=178						
L47A	Sherwood	63.05	348	P	P	21 37 13.7	-0.3
	baz=165,SNR=15						
121A	Cookes Peak, D	63.06	325	IAmb	IAmb	21 37 24.6	
	comp=Z,75nm,1.4s						
121A				IAMs_20	IAMs_20	22 04 21.6	
	comp=Z,5µm,18.0s						
121A	Cookes Peak, D	63.06	325	P	P	21 37 14.9	+0.3
	baz=141						
AAM	Ann Arbor	63.08	349	IAMs_20	IAMs_20	22 06 07.9	
	comp=Z,5µm,20.0s						
AAM	Ann Arbor	63.08	349	P	P	21 37 14.3	+0.1
	baz=166						
ACCN	Adirondack Com	63.08	358	IAmb	IAmb	21 37 26.0	
	comp=Z,94nm,1.4s						
K52A	Tillsonburg	63.09	352	P	P	21 37 14.7	+0.5
	baz=170,SNR=6.7						
M44A	Midewin, Midew	63.10	346	IAmb	IAmb	21 37 24.8	
	comp=Z,120nm,1.7s						
M44A				IAMs_20	IAMs_20	22 04 32.5	
	comp=Z,4µm,22.0s						
J58A	Remsen	63.14	356	IAmb	IAmb	21 37 26.6	
	comp=Z,109nm,1.7s						
J58A	Remsen	63.14	356	P	P	21 37 15.1	+0.5
	baz=175,SNR=6.9						
K51A	Iona Station	63.15	351	P	P	21 37 15.0	+0.4
	baz=169						
J56A	Wolcott	63.17	355	IAMs_20	IAMs_20	22 06 04.3	
	comp=Z,6µm,20.0s						
J56A	Wolcott	63.17	355	P	P	21 37 15.2	+0.5
	baz=174,SNR=12						
J59A	Piesco	63.20	357	IAMs_20	IAMs_20	22 09 01.0	
	comp=Z,4µm,18.0s						
J59A	Piesco	63.20	357	P	P	21 37 15.5	+0.5
	baz=176,SNR=20						
MEDO	Medina	63.20	354	IAMs_20	IAMs_20	22 08 04.2	
	comp=Z,3µm,18.0s						
J57A	Williamstown	63.23	356	IAmb	IAmb	21 37 26.2	
	comp=Z,96nm,1.2s						
J57A				IAMs_20	IAMs_20	22 06 18.1	
	comp=Z,3µm,20.0s						
J57A	Williamstown	63.23	356	P	P	21 37 16.0	+0.8
	baz=174						
J55A	Hilton	63.24	354	IAMs_20	IAMs_20	22 05 55.2	
	comp=Z,5µm,20.0s						
J55A	Hilton	63.24	354	P	P	21 37 15.8	+0.6
	baz=173						
L46A	Eue Claire	63.30	347	IAmb	IAmb	21 37 16.9	
	comp=Z,62nm,1.1s						
L46A				IAMs_20	IAMs_20	22 04 11.0	
	comp=Z,5µm,22.0s						
L46A	Eue Claire	63.30	347	P	P	21 37 15.7	0.0
	baz=164						
J54A	Appleton	63.33	354	P	P	21 37 16.2	+0.4
	baz=172						
K50A	Casco	63.37	350	IAmb	IAmb	21 37 34.2	
	comp=Z,81nm,1.1s						
K50A				IAMs_20	IAMs_20	22 05 57.5	
	comp=Z,6µm,20.0s						
K50A	Casco	63.37	350	P	P	21 37 16.4	+0.4
	baz=168						
I58A	Old Forge	63.45	357	P	P	21 37 16.7	0.0
	baz=176,SNR=12						
I59A	Olmsteadville	63.50	357	P	P	21 37 17.7	+0.8
	baz=177						
K49A	Clarkson	63.51	350	P	P	21 37 17.6	+0.5
	baz=167						
J52A	Paris	63.51	352	P	P	21 37 17.5	+0.5
	baz=170,SNR=18						
I62A	Tamworth	63.52	360	IAmb	IAmb	21 37 26.1	
	comp=Z,73nm,1.3s						
I62A	Tamworth	63.52	360	P	P	21 37 17.5	+0.5
	baz=179						
I60A	Shoreham	63.53	358	P	P	21 37 18.1	+1.1
	baz=177,SNR=13						
KSU1	Kansas State U	63.53	338	P	P	21 37 16.9	-0.4
	baz=153						
I64A	Boothbay	63.57	1	P	P	21 37 18.3	+1.0
	baz=181						
I61A	Oroboro, Fairl	63.59	359	P	P	21 37 18.8	+1.3
	baz=178						
K48A	Perry	63.65	349	P	P	21 37 17.6	-0.4
	baz=166,SNR=10						
K47A	Vermontville	63.68	348	P	P	21 37 18.1	0.0
	baz=165,SNR=7.0						
NCB	Newcomb	63.69	357	IAmb	IAmb	21 37 29.0	
	comp=Z,75nm,1.4s						
I63A	Otisfield	63.69	0	IAmb	IAmb	21 37 27.5	
	comp=Z,86nm,1.4s						
I63A	Otisfield	63.69	0	P	P	21 37 19.0	+0.8
	baz=180						
R32A	Long Quarter,	63.72	336	IAmb	IAmb	21 37 29.0	
	comp=Z,55nm,1.0s						
I57A	Carthage	63.74	356	P	P	21 37 18.9	+0.4
	baz=175						
L44A	Lake County Fo	63.82	346	IAmb	IAmb	21 37 21.2	
	comp=Z,75nm,1.1s						
L44A				IAMs_20	IAMs_20	22 09 29.6	
	comp=Z,6µm,18.0s						
L44A	Lake County Fo	63.82	346	P	P	21 37 19.3	+0.3
	baz=162						
PECO	Prince Edward	63.83	355	IAMs_20	IAMs_20	22 06 22.8	
	comp=Z,6µm,20.0s						
K46A	Dorr	63.85	348	P	P	21 37 19.1	-0.2
	baz=164						
LBNH	Lisbon	63.89	359	P	P	21 37 20.1	+0.6
	baz=179,SNR=13						
I53A	Kortright Cn E	63.98	353	P	P	21 37 20.5	+0.4
	baz=171						
J49A	Marlette	64.02	350	P	P	21 37 20.6	+0.2
	baz=167						
J48A	Bridge Port	64.07	349	IAMs_20	IAMs_20	22 08 15.1	
	comp=Z,5µm,19.0s						
J48A	Bridge Port	64.07	349	P	P	21 37 21.0	+0.3
	baz=166,SNR=6.1						
L42A	Oliver, Polo	64.08	344	IAmb	IAmb	21 37 32.5	
	comp=Z,115nm,1.7s						
L42A				IAMs_20	IAMs_20	22 09 14.4	
	comp=Z,4µm,18.0s						
H58A	Gabriels	64.14	357	P	P	21 37 23.0	+1.9
	baz=176						
I51A	Listowel	64.14	352	P	P	21 37 21.6	+0.5
	baz=169,SNR=11						
I55A	Frankford	64.17	354	P	P	21 37 22.4	+1.1
	baz=173						
H61A	Lyndonville	64.18	359	P	P	21 37 22.9	+1.5
	baz=179,SNR=14						
J47A	Sunmer	64.19	349	IAMs_20	IAMs_20	22 06 57.5	
	comp=Z,6µm,20.0s						
J47A	Sunmer	64.19	349	P	P	21 37 22.1	+0.5
	baz=165						
WVL	Waterville	64.22	1	IAmb	IAmb	21 37 30.6	
	comp=Z,113nm,1.5s						
H62A	Milan	64.22	360	IAmb	IAmb	21 37 39.7	
	comp=Z,46nm,1.1s						
H62A	Milan	64.22	360	P	P	21 37 23.1	+1.5
	baz=180,SNR=5.6						
H60A	Morristown	64.23	358	P	P	21 37 23.4	+1.7
	baz=178						
H57A	Richville	64.24	356	P	P	21 37 23.1	+1.3
	baz=175						
ANMO	Albuquerque	64.26	328	P	P	21 37 23.1	+0.7
	comp=Z,4.0nm,0.8s,baz=146,slow=13,SNR=3.3						
ANMO				LR	LR	22 04 57.8	
	comp=Z,2µm,19.4s,baz=141,slow=36						
ANMO	Albuquerque	64.26	328	*e*P	P	21 37 23.0	+0.6
ANMO	Albuquerque	64.26	328	P	P	21 37 22.5	+0.1
ANMO	Albuquerque	64.26	328	P	P	21 37 23.9	+1.5
	baz=143						
I52A	Shelburne	64.29	352	P	P	21 37 23.4	+1.3
	baz=170						
H64A	Troy	64.30	1	P	P	21 37 23.8	+1.6
	baz=182,SNR=9.7						
SNAA	Sanae	64.30	161	P	P	21 37 23.3	+1.3
SNAA	Sanae	64.30	161	P	P	21 37 22.7	+0.6
	comp=Z,28nm,1.0s,baz=278,slow=7.6,SNR=33						
SNAA	Sanae	64.30	161	*d i*P	P	21 37 24.0	+1.9
SNAA				pmax	pmax		
	comp=Z,3µm,1.2s						
SNAA	Sanae	64.30	161	P	P	21 37 22.6	+0.6
SNAA				IAmb	IAmb	21 37 33.7	
	comp=Z,47nm,0.9s						
SNAA				IAMs_20	IAMs_20	22 05 18.8	
	comp=Z,4µm,18.0s						
H63A	New Sharon	64.31	1	P	P	21 37 23.5	+1.3
	baz=181,SNR=14						
H59A	Cadyville	64.34	358	P	P	21 37 23.6	+1.1
	baz=177,SNR=16						
LONY	Lake Ozonia	64.36	357	IAmb	IAmb	21 37 33.5	
	comp=Z,46nm,1.0s						
LONY				IAMs_20	IAMs_20	22 09 35.7	
	comp=Z,3µm,18.0s						
LONY	Lake Ozonia	64.36	357	P	P	21 37 23.7	+1.1
	baz=176,SNR=12						
H65A	Eastbrook	64.38	2	P	P	21 37 23.9	+1.2
	baz=183						
K43A	Burlington	64.42	346	IAMs_20	IAMs_20	22 09 47.3	
	comp=Z,6µm,18.0s						
EMMW	East Machias	64.42	3	IAmb	IAmb	21 37 35.5	
	comp=Z,68nm,1.3s						
H56A	Elgin	64.43	356	P	P	21 37 23.2	+0.2
	baz=174						
CBKS	Cedar Bluff	64.45	335	IAmb	IAmb	21 37 34.8	
	comp=Z,73nm,1.1s						
CBKS	Cedar Bluff	64.45	335	P	P	21 37 23.8	+0.4
	baz=150						
J46A	Howard City	64.46	348	P	P	21 37 23.6	+0.3
	baz=164						
H55A	Tweed	64.46	355	P	P	21 37 24.0	+0.8
	baz=173						
DELO	Deloro Mine	64.46	355	IAmb	IAmb	21 37 34.2	
	comp=Z,68nm,1.2s						
H66A	Whiting	64.51	3	P	P	21 37 24.2	+0.7
	baz=184						
I49A	Point Hope	64.53	350	IAMs_20	IAMs_20	22 06 43.5	
	comp=Z,6µm,20.0s						
I49A	Point Hope	64.53	350	P	P	21 37 24.0	+0.2
	baz=168,SNR=8.6						
L40A	Anamosa	64.54	343	IAMs_20	IAMs_20	22 08 01.6	
	comp=Z,4µm,18.0s						
TUC	Tucson	64.55	323	P	P	21 37 24.7	+0.5
TUC				pmax	pmax		
	comp=Z,31nm,1.3s						
TUC				MLR	MLR		
	comp=Z,3µm,20.0s						
TUC	Tucson	64.55	323	P	P	21 37 24.7	+0.5
TUC	Tucson	64.55	323	P	P	21 37 24.1	-0.1
	baz=138						
H53A	Bobcaygeon	64.61	354	P	P	21 37 25.3	+1.1
	baz=172						
J45A	Montague	64.69	347	IAMs_20	IAMs_20	22 04 13.6	
	comp=Z,4µm,21.0s						
J45A	Montague	64.69	347	P	P	21 37 26.2	+1.4
	baz=164						
G60A	Masonville	64.75	359	P	P	21 37 27.1	+1.9
	baz=178						
G59A	Clarenceville	64.76	358	P	P	21 37 26.4	+1.3
	baz=178						
G63A	Kingsbury	64.77	1	P	P	21 37 26.7	+1.5
	baz=181,SNR=10						
H52A	Wyevale	64.82	353	P	P	21 37 26.4	+0.9
	baz=171						
G57A	Newington	64.86	357	P	P	21 37 26.7	+0.9
	baz=176,SNR=14						
G58A	Ormstown	64.86	357	P	P	21 37 27.0	+1.2
	baz=177						
GGN	Saint George	64.86	3	IAmb	IAmb	21 37 29.2	
	comp=Z,103nm,1.4s						
G62A	West of Eustis	64.86	0	P	P	21 37 26.7	+0.8
	baz=180						
SADO	Sadowa	64.86	353	P	P	21 37 25.7	-0.2
	comp=Z,22nm,0.6s,baz=212,slow=2.4,SNR=19						
SADO				LR	LR	22 08 40.2	
	comp=Z,3µm,18.2s,baz=178,slow=39						
SADO	Sadowa	64.86	353	IAmb	IAmb	21 37 35.9	
	comp=Z,94nm,1.2s						
SADO				IAMs_20	IAMs_20	22 08 11.1	
	comp=Z,4µm,18.0s						
I47A	Gladwin	64.89	349	IAmb	IAmb	21 37 35.3	
	comp=Z,74nm,1.2s						
I47A				IAMs_20	IAMs_20	22 05 09.0	
	comp=Z,4µm,21.0s						
I47A	Gladwin	64.89	349	P	P	21 37 26.2	+0.1
	baz=166						
G65A	Princeton	64.91	3	IAmb	IAmb	21 37 35.7	
	comp=Z,41nm,1.0s						
G65A	Princeton	64.91	3	P	P	21 37 26.5	+0.4
	baz=183,SNR=6.6						
I48A	Sherman Twp	64.92	350	P	P	21 37 26.2	0.0
	baz=167						
PKME	Peaks-Kenny Pk	64.92	1	IAmb	IAmb	21 37 37.8	
	comp=Z,62nm,1.1s						
PKME	Peaks-Kenny Pk	64.92	1	P	P	21 37 27.7	+1.5
	baz=182,SNR=7.9						
G64A	Maxfield	64.92	2	P	P	21 37 27.6	+1.4
	baz=182						
G61A	St-Isidore-de-	64.93	359	P	P	21 37 27.4	+1.1
	baz=179						
PLVO	Plevna	64.94	355	IAmb	IAmb	21 37 36.9	
	comp=Z,54nm,1.2s						
PLVO				IAMs_20	IAMs_20	22 07 06.1	
	comp=Z,4µm,20.0s						
SCIA	State Center	64.96	342	IAmb	IAmb	21 37 36.4	
	comp=Z,89nm,1.2s						
SCIA				IAMs_20	IAMs_20	22 08 32.8	
	comp=Z,4µm,19.0s						
SCIA	State Center	64.96	342	P	P	21 37 26.6	0.0
	baz=157						
I46A	Reed City	64.99	348	P	P	21 37 27.3	+0.5
	baz=165						
T25A	Trinidad	65.04	331	IAmb	IAmb	21 37 38.9	
	comp=Z,58nm,1.2s						
T25A	Trinidad	65.04	331	P	P	21 37 27.3	-0.2
	baz=145						
JFWS	Jewell Farm	65.08	344	IAMs_20	IAMs_20	22 10 02.9	
	comp=Z,4µm,18.0s						
JFWS	Jewell Farm	65.08	344	P	P	21 37 27.6	+0.3
	baz=160						
G55A	Calabogie	65.12	355	P	P	21 37 28.9	+1.3
	baz=174						
G53A	Haliburton	65.16	354	P	P	21 37 28.6	+0.9
	baz=172						
I45A	Fountain	65.23	348	IAMs_20	IAMs_20	22 07 31.0	
	comp=Z,5µm,20.0s						
I45A	Fountain	65.23	348	P	P	21 37 28.4	+0.1
	baz=164						
N33A	J Bar K, Exete	65.28	338	IAMs_20	IAMs_20	22 08 28.3	
	comp=Z,3µm,20.0s						
H48A	Harrisville	65.36	350	IAMs_20	IAMs_20	22 07 17.2	
	comp=Z,5µm,20.0s						
H48A	Harrisville	65.36	350	P	P	21 37 29.4	+0.3
	baz=167						
F63A	Nahmakanta, Br	65.36	1	IAmb	IAmb	21 37 38.0	
	comp=Z,105nm,1.6s						
F63A	Nahmakanta, Br	65.36	1	P	P	21 37 29.9	+0.8
	baz=182						
G54A	Lake Saint Pet	65.38	354	P	P	21 37 30.2	+1.0
	baz=172						
H47A	Mio	65.40	349	P	P	21 37 29.4	0.0
	baz=166						
214A	Organ Pipe Nat	65.46	321	IAmb	IAmb	21 37 40.4	
	comp=Z,120nm,1.5s						
214A	Organ Pipe Nat	65.46	321	P	P	21 37 31.1	+1.0
	baz=136						
F59A	Saint Guilaume	65.52	358	P	P	21 37 30.4	+0.4
	baz=178						
H46A	Fife Lake	65.52	349	P	P	21 37 31.2	+1.0

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      baz=165
F64A  Sherman          65.54   2 P        P        21 37 31.5 +1.3
      baz=182
F58A  St-Lin Laurent   65.57 358 P        P        21 37 31.4 +1.1
      baz=177
GBN   Guysborough      65.59   7 IAMs_20  IAMs_20  22 07 15.0
      comp=Z,3µm,20.0s
F61A  St Evariste      65.62 360 P        P        21 37 32.2 +1.5
      baz=180
F60A  Warwick          65.62 359 P        P        21 37 31.9 +1.2
      baz=179,SNR=13
F55A  Otter Lake       65.67 356 P        P        21 37 32.4 +1.4
      baz=174
I42A  Draeger Farm,    65.67 346 IAmb     IAmb     21 37 41.0
      comp=Z,114nm,1.4s
I42A                             IAMs_20  IAMs_20  22 10 42.7
      comp=Z,5µm,18.0s
GLMI  Grayling         65.69 349 IAMs_20  IAMs_20  22 05 33.1
      comp=Z,5µm,21.0s
GLMI  Grayling         65.69 349 P        P        21 37 31.6 +0.3
      baz=166
LMN   Caledonia Moun   65.72   5 IAmb     IAmb     21 37 42.3
      comp=Z,60nm,1.2s
LMN                              IAMs_20  IAMs_20  22 05 27.8
      comp=Z,4µm,20.0s
X18A  Snowflake        65.75 325 IAmb     IAmb     21 37 42.3
      comp=Z,66nm,1.5s
X18A                             IAMs_20  IAMs_20  22 04 49.8
      comp=Z,5µm,20.0s
KSCO  Kaye Shedlock'   65.80 333 P        P        21 37 32.6 +0.3
      baz=147
F52A  Sundridge        65.90 353 P        P        21 37 33.9 +1.3
      baz=171
G47A  Hillman          65.90 350 P        P        21 37 33.7 +1.1
      baz=167
ALGO  Algonquin Park   65.93 354 P        P        21 37 34.9 +2.1
      baz=172,SNR=7.0
H43A  Windswept, Lux   65.97 347 IAmb     IAmb     21 37 35.0
      comp=Z,117nm,1.6s
H43A                             IAMs_20  IAMs_20  22 06 58.4
      comp=Z,6µm,19.0s
E60A  Ste Agathe de    66.01 359 P        P        21 37 35.0 +1.7
      baz=179
SDCO  Great Sand Dun   66.04 330 IAmb     IAmb     21 37 37.6
      comp=Z,55nm,1.2s
SDCO  Great Sand Dun   66.04 330 P        P        21 37 35.0 +1.0
      baz=144
E58A  La Victoria      66.05 358 P        P        21 37 35.2 +1.7
      baz=177,SNR=10
E61A  Lac Etchemin     66.07   0 P        P        21 37 35.2 +1.4
      baz=180
W18A  Petrified Fore   66.08 326 IAMs_20  IAMs_20  22 05 04.6
      comp=Z,3µm,18.0s
W18A  Petrified Fore   66.08 326 P        P        21 37 35.3 +1.0
      baz=140
I40A  Norwalk          66.09 344 IAmb     IAmb     21 38 10.7
      comp=Z,112nm,1.6s
I40A                             IAMs_20  IAMs_20  22 06 13.6
      comp=Z,4µm,21.0s
G45A  Suttons Bay      66.09 349 IAmb     IAmb     21 38 37.0
      comp=Z,31nm,0.7s
G45A                             IAMs_20  IAMs_20  22 08 04.7
      comp=Z,6µm,19.0s
G45A  Suttons Bay      66.09 349 P        P        21 37 35.1 +1.3
      baz=165
F51A  Arnstein         66.09 353 P        P        21 37 35.3 +1.5
      baz=171
E63A  Oxbow            66.10   2 IAmb     IAmb     21 37 44.7
      comp=Z,106nm,1.4s
E63A  Oxbow            66.10   2 P        P        21 37 35.1 +1.3
      baz=182
E64A  Bridgewater      66.11   2 P        P        21 37 35.4 +1.5
      baz=183,SNR=9.2
BGNE  Belgrade         66.12 338 IAMs_20  IAMs_20  22 09 03.5
      comp=Z,4µm,20.0s
BGNE  Belgrade         66.12 338 P        P        21 37 34.6 +0.5
      baz=152
E57A  Chemin Saint G   66.12 357 P        P        21 37 35.2 +1.2
      baz=177,SNR=6.7
F49A  Sandfield        66.20 351 P        P        21 37 34.5  0.0
      baz=168
G46A  Petoskey         66.21 349 P        P        21 37 34.7 +0.1
      baz=166
E56A  St. Veronique    66.30 357 P        P        21 37 36.1 +1.0
      baz=176
E52A  Mattawa          66.31 354 P        P        21 37 35.6 +0.4
      baz=172
E53A  Dumoine, Ponti   66.31 355 P        P        21 37 36.2 +1.0
      baz=173,SNR=6.2
E54A  Lac Daplat, Po   66.33 355 P        P        21 37 36.2 +0.9
      baz=173,SNR=8.7
F48A  Evansville       66.35 351 P        P        21 37 35.9 +0.5
      baz=168,SNR=13
PQI   Presque Isle     66.36   2 IAmb     IAmb     21 37 46.3
      comp=Z,93nm,1.4s
X16A  Lo Mia Camp, P   66.48 324 IAmb     IAmb     21 37 49.1
      comp=Z,65nm,1.2s
X16A                             IAMs_20  IAMs_20  22 05 21.1
      comp=Z,4µm,20.0s
D60A  Saint Jean D'O   66.56 360 P        P        21 37 38.6 +1.9
      baz=180,SNR=6.0
E51A  G1948 Merrick    66.64 353 P        P        21 37 38.5 +1.2
      baz=171
D59A  Saint-Raymond    66.66 359 P        P        21 37 38.3 +0.9
      baz=179
S22A  4UR Ranch, Cre   66.67 329 P        P        21 37 38.2 +0.2
      baz=143
F45A  CMU Biological   66.69 349 P        P        21 37 38.4 +0.8
      baz=165
D57A  Chemin Vers le   66.72 358 P        P        21 37 39.4 +1.6
      baz=177,SNR=16
D63A  Stockholm        66.72   2 P        P        21 37 39.0 +1.2
      baz=183
D62A  Allapoint, All   66.74   1 P        P        21 37 37.1 -0.9
D62A  Allapoint, All   66.74   1 P        P        21 37 39.5 +1.6
      baz=182
D58A  Chemin du LacG   66.76 358 P        P        21 37 39.7 +1.6
      baz=178,SNR=18
D56A  ZEC Mazanza, M   66.79 357 P        P        21 37 39.2 +1.0
      baz=176,SNR=8.4
D55A  Sainte-Anne-du   66.80 357 P        P        21 37 39.3 +1.0
      baz=175,SNR=10
D61A  St Aubert, Com   66.85   0 P        P        21 37 40.0 +1.4
      baz=181
Q24A  Divide           66.87 331 P        P        21 37 40.1 +0.8
      baz=145
E48A  Lockeyer         66.92 351 P        P        21 37 40.9 +1.8
      baz=168
D54A  Lac Fusel, La    67.00 356 P        P        21 37 40.1 +0.5
      baz=174,SNR=9.4
D53A  Lac Vacive, Po   67.01 355 IAmb     IAmb     21 37 50.0
      comp=Z,120nm,1.7s
D53A                             IAMs_20  IAMs_20  22 08 28.0
      comp=Z,4µm,20.0s
D53A  Lac Vacive, Po   67.01 355 P        P        21 37 40.7 +1.0
      baz=173
LATQ  La Tuque         67.05 359 P        P        21 37 41.1 +1.3
      baz=178
BATG  Bathurst New B   67.05   3 IAmb     IAmb     21 37 49.8
      comp=Z,65nm,1.2s
BATG                             IAMs_20  IAMs_20  22 08 15.8
      comp=Z,3µm,18.0s
E47A  Iron Bridge      67.06 351 P        P        21 37 40.3 +0.3
      baz=167,SNR=7.5
MVCO  Mesa Verde       67.06 328 IAmb     IAmb     21 37 51.2
      comp=Z,78nm,1.4s
MVCO  Mesa Verde       67.06 328 P        P        21 37 41.1 +0.6
      baz=141
E46A  Sault Ste Mari   67.14 350 IAmb     IAmb     21 38 37.6
      comp=Z,34nm,0.9s
E46A                             IAMs_20  IAMs_20  22 09 59.3
      comp=Z,5µm,19.0s
D51A  Lot 18 Range I   67.18 354 P        P        21 37 41.2 +0.5
      baz=171
OGNE  Ogallala         67.19 335 P        P        21 37 41.7 +0.6
      baz=148
WUAZ  Wupatki          67.26 325 IAMs_20  IAMs_20  22 06 11.8
      comp=Z,4µm,19.0s
WUAZ  Wupatki          67.26 325 P        P        21 37 43.1 +1.4
      baz=139
F42A  Maple Grove Fa   67.28 347 IAMs_20  IAMs_20  22 07 29.0
      comp=Z,5µm,21.0s
G40A  Rib Lake         67.28 345 IAmb     IAmb     21 38 18.4
      comp=Z,78nm,1.8s
G40A                             IAMs_20  IAMs_20  22 08 47.1
      comp=Z,5µm,20.0s
D50A  G1974 Best Tow   67.31 353 P        P        21 37 42.5 +1.0
      baz=171
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GLA   Glamis           67.44 321 IAmb     IAmb     21 37 54.0
      comp=Z,87nm,1.4s
GLA   Glamis           67.44 321 P        P        21 37 43.2 +0.4
      baz=135
D48A  Paudash Townsh   67.55 352 P        P        21 37 44.3 +1.1
      baz=169
D46A  Sault St. Mari   67.60 350 P        P        21 37 43.4  0.0
      baz=167
D47A  Chapleau         67.62 351 P        P        21 37 44.5 +1.0
      baz=168
E43A  Lone Tree Farm   67.63 348 IAmb     IAmb     21 37 53.2
      comp=Z,55nm,1.4s
E43A                             IAMs_20  IAMs_20  22 09 02.4
      comp=Z,5µm,19.0s
E44A  Grand Marais A   67.66 349 IAMs_20  IAMs_20  22 06 55.3
      comp=Z,5µm,22.0s
E44A  Grand Marais A   67.66 349 P        P        21 37 44.6 +0.8
      baz=165
ECSD  EROS Data Cent   67.67 340 IAmb     IAmb     21 37 54.2
      comp=Z,86nm,1.2s
ECSD  EROS Data Cent   67.67 340 IAMs_20  IAMs_20  22 09 05.4
      comp=Z,4µm,20.0s
ECSD  EROS Data Cent   67.67 340 P        P        21 37 44.7 +0.8
      baz=154,SNR=21
TAOE  Nuku Hiva Isla   67.70 268 eS       S        21 46 46.3 +3.1
      comp=Z,9µm,27.3s
TAOE  Nuku Hiva Isla   67.70 268 eLR      LR       21 58 06.9
      comp=Z,4µm,22.6s,baz=108
Y12C  Blythe           67.75 322 IAmb     IAmb     21 37 55.1
      comp=Z,44nm,1.2s
Y12C  Blythe           67.75 322 P        P        21 37 45.4 +0.7
      baz=136
ISCO  Idaho Springs    67.76 332 P        P        21 37 45.4 +0.5
      baz=145
COWI  Conover          67.82 346 IAMs_20  IAMs_20  22 08 14.4
      comp=Z,5µm,20.0s
SMCO  Snowmass         67.88 330 IAMs_20  IAMs_20  22 08 06.3
      comp=Z,4µm,20.0s
SPMN  Marine on St.    67.90 343 IAmb     IAmb     21 38 07.2
      comp=Z,70nm,1.4s
SPMN                             IAMs_20  IAMs_20  22 12 50.6
      comp=Z,3µm,18.0s
SPMN  Marine on St.    67.90 343 P        P        21 37 46.1 +0.7
      baz=158
PDMCI Parker Dam,Lak   67.92 322 P        P        21 37 47.0 +1.2
      baz=136
IKP   In-Ko-Pah, Jac   67.93 320 P        P        21 37 46.8 +0.9
      baz=134
PV15  Paradox Valley   67.93 329 IAmb     IAmb     21 37 58.0
      comp=Z,89nm,1.2s
PV15                             IAMs_20  IAMs_20  22 06 58.9
      comp=Z,4µm,19.0s
SWSC  Sam W. Stewart   67.94 320 P        P        21 37 47.6 +1.7
      baz=134
PV02  Paradox Valley   67.95 328 IAmb     IAmb     21 37 58.9
      comp=Z,50nm,1.2s
PV13  Radium Mtn., P   67.96 328 IAmb     IAmb     21 37 55.8
      comp=Z,128nm,1.9s
PV13                             IAMs_20  IAMs_20  22 06 42.5
      comp=Z,3µm,20.0s
VLDQ  Val d'Or         68.02 355 IAmb     IAmb     21 37 57.2
      comp=Z,102nm,1.5s
VLDQ                             IAMs_20  IAMs_20  22 12 19.9
      comp=Z,4µm,18.0s
PV05  Paradox Valley   68.03 328 IAmb     IAmb     21 37 50.1
      comp=Z,57nm,1.4s
PV03  Paradox Valley   68.05 328 IAmb     IAmb     21 37 56.3
      comp=Z,117nm,1.8s
PV03                             IAMs_20  IAMs_20  22 12 02.5
      comp=Z,3µm,18.0s
PV18  Skein Mesa, Pa   68.07 328 IAmb     IAmb     21 37 56.4
      comp=Z,123nm,1.8s
PV12  Saucer Basin,    68.07 329 IAMs_20  IAMs_20  22 06 48.6
      comp=Z,3µm,19.0s
PV07  Paradox Valley   68.09 329 IAmb     IAmb     21 37 56.8
      comp=Z,106nm,1.8s
PV07                             IAMs_20  IAMs_20  22 07 02.1
      comp=Z,3µm,19.0s
PV11  David Mesa, Pa   68.09 328 IAmb     IAmb     21 37 56.6
      comp=Z,136nm,1.8s
PV11                             IAMs_20  IAMs_20  22 06 48.1
      comp=Z,4µm,21.0s
PV17  East Wray Mesa   68.12 328 IAmb     IAmb     21 37 56.6
      comp=Z,125nm,1.8s
PV16  Nyswonger Mesa   68.12 328 IAmb     IAmb     21 37 56.9
      comp=Z,111nm,1.8s
PV16                             IAMs_20  IAMs_20  22 12 04.9
      comp=Z,3µm,19.0s
PV20  West Nyswonger   68.17 328 IAmb     IAmb     21 37 51.0
      comp=Z,67nm,1.7s
PV04  Paradox Valley   68.18 328 IAmb     IAmb     21 37 51.3
      comp=Z,96nm,1.8s
PV04                             IAMs_20  IAMs_20  22 12 16.4
      comp=Z,4µm,18.0s
PV14  Lion Creek, Pa   68.22 328 IAMs_20  IAMs_20  22 06 39.2
      comp=Z,4µm,20.0s
BC3   Big Chuckawall   68.23 321 P        P        21 37 49.3 +1.5
      baz=135
PV10  Paradox Valley   68.23 328 IAmb     IAmb     21 37 57.0
      comp=Z,111nm,1.7s
PV22  Blue Mesa, Par   68.23 329 IAmb     IAmb     21 37 57.6
      comp=Z,131nm,1.9s
PV22                             IAMs_20  IAMs_20  22 12 38.9
      comp=Z,4µm,18.0s
PV23  Carpenter Ridg   68.28 328 IAmb     IAmb     21 38 06.9
      comp=Z,77nm,1.7s
PV23                             IAMs_20  IAMs_20  22 11 00.0
      comp=Z,4µm,18.0s
MONP2 Monument Peak    68.29 320 P        P        21 37 49.0 +0.7
      baz=134
BAR   Barrett          68.29 319 P        P        21 37 48.7 +0.6
BAR                              PP       PP       21 40 13.4 -5.7
IRM   Iron Mountain    68.40 321 P        P        21 37 49.7 +0.9
      baz=135
U15A  North Rim        68.44 325 P        P        21 37 51.4 +2.1
U15A                             IAMs_20  IAMs_20  22 06 58.9
      comp=Z,4µm,19.0s
NEE2  Needles Airpor   68.53 322 P        P        21 37 50.5 +1.0
      baz=136
D41A  Chassel          68.61 347 IAmb     IAmb     21 37 52.2
      comp=Z,114nm,1.4s
D41A                             IAMs_20  IAMs_20  22 08 08.0
      comp=Z,4µm,21.0s
109C  Camp Elliot, M   68.70 319 P        P        21 37 51.6 +1.0
      baz=133
N23A  Red Feather La   68.79 332 IAmb     IAmb     21 38 00.2
      comp=Z,39nm,1.1s
N23A  Red Feather La   68.79 332 P        P        21 37 52.2 +0.8
      baz=145
BELC  Belle Mtn. Jos   68.80 321 P        P        21 37 52.4 +1.0
      baz=134
XPFO  Pion Flat        68.80 320 P        P        21 37 50.7 -0.7
XPFO                             IAmb     IAmb     21 38 03.0
      comp=Z,100nm,1.6s
XPFO                             PP       PP       21 40 25.2 +1.6
PFO   Pinyon Flats O   68.81 320 P        P        21 37 52.0 +0.6
      comp=Z,9.5nm,0.9s,baz=121,slow=8.4,SNR=8.6
PFO   Pinyon Flats O   68.81 320c iP      P        21 37 54.9 +3.5
PFO                              pmax     pmax
      comp=Z,80nm,1.7s
PFO   Pinyon Flats O   68.81 320 P        P        21 37 51.6 +0.2
PFO                              IAmb     IAmb     21 38 03.0
      comp=Z,100nm,1.6s
PFO                              PP       PP       21 40 24.4 +0.7
PFO   Pinyon Flats O   68.81 320 P        P        21 37 52.3 +0.8
      baz=134
NVL   N'lazarevskaya   68.89 159⇑iP       P        21 37 52.1 +0.8
NVL                             ePPP      PPP      21 42 13.0
NVL                              pmax     pmax
      comp=Z,64nm,1.0s
PHWY  Pilot Hill       68.91 333 IAmb     IAmb     21 37 55.5
      comp=Z,81nm,1.6s
LSQQ  Lebel-sur-Quev   68.92 356 P        P        21 37 53.2 +1.5
      baz=174
SUSD  Miller           69.07 339 IAmb     IAmb     21 38 02.9
      comp=Z,63nm,0.8s
SUSD                             IAMs_20  IAMs_20  22 13 36.6
      comp=Z,3µm,19.0s
SUSD  Miller           69.07 339 P        P        21 37 53.8 +1.1
      baz=152
GMRC  Granite Mounta   69.15 322 P        P        21 37 54.5 +0.9
      baz=135
KNB   Kanab            69.16 325 P        P        21 37 55.9 +2.3
KNB                              pmax     pmax
      comp=Z,203nm,1.5s
KNB   Kanab            69.16 325 P        P        21 37 55.9 +2.3
O20A  White River Ci   69.23 330 IAMs_20  IAMs_20  22 09 01.8
      comp=Z,4µm,20.0s
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O20A  White River Ci   69.23 330 P        P        21 37 56.0 +2.0
      baz=142,SNR=12
MURC  Murrieta         69.24 320 P        P        21 37 55.5 +1.5
      baz=133
BBRC  Big Bear Solar   69.53 320 P        P        21 37 57.2 +1.2
      baz=134
HEC   Hector,Ludlow    69.57 321 P        P        21 37 57.2 +1.1
      baz=134
SCI2  San Clemente I   69.66 318 P        P        21 37 57.5 +0.9
      baz=132
LIC   Lamto            69.67  75 eP       P        21 37 55.7 -1.4
      comp=Z,23nm,0.7s
MATQ  Matagami         69.67 355 P        P        21 37 57.1 +0.9
      baz=173,SNR=7.5
TUQ   Turquoise Moun   69.76 322 P        P        21 37 57.9 +0.6
      baz=135
CCUT  Cedar City       69.84 325 P        P        21 38 00.1 +2.2
TIC   Toumodi          69.84  75 eP       P        21 37 56.6 -1.6
CIS   Catalina Islan   69.86 319 P        P        21 37 58.7 +0.9
      baz=132
DRLN  Deer Lake        69.91   9 P        P        21 37 57.1 -0.6
DRLN                             IAmb     IAmb     21 38 08.3
      comp=Z,82nm,1.0s
DRLN                             IAMs_20  IAMs_20  22 14 01.0
      comp=Z,4µm,18.0s
BFSC  Mount Baldy Ra   69.96 320 P        P        21 38 00.1 +1.5
      baz=133
KIC   Kosan Boka       69.98  75 eP       P        21 37 57.5 -1.5
      comp=Z,75nm,1.0s
FMP   Fort Macarthur   69.99 319 P        P        21 37 59.8 +1.2
      baz=133
RWWY  Rawlins          70.00 332 IAmb     IAmb     21 38 07.4
      comp=Z,93nm,1.6s
RWWY                             IAMs_20  IAMs_20  22 08 27.1
      comp=Z,4µm,22.0s
RRX   Edison Barstow   70.00 321 P        P        21 37 59.8 +1.1
      baz=134
DBIC  Dimbokro         70.00  75 P        P        21 37 58.4 -0.7
      comp=Z,42nm,0.9s,baz=219,slow=5.9,SNR=25
DBIC                             LR       LR       22 07 22.0
      comp=Z,11µm,19.8s,baz=226,slow=35
DBIC  Dimbokro         70.00  75 IAmb     IAmb     21 38 05.2
      comp=Z,54nm,0.9s
EYMN  Ely              70.10 345 IAMs_20  IAMs_20  22 09 59.8
      comp=Z,4µm,19.0s
EYMN  Ely              70.10 345 P        P        21 38 00.6 +1.7
      baz=159
GSC   Goldstone, Bar   70.18 321 IAmb     IAmb     21 38 11.4
      comp=Z,130nm,1.6s
GSC                              IAMs_20  IAMs_20  22 04 20.1
      comp=Z,3µm,21.0s
GSC   Goldstone, Bar   70.18 321 P        P        21 38 01.1 +1.3
      baz=134
MWC   Mount Wilson     70.19 320 P        P        21 37 59.8 -0.3
MWC                              pmax     pmax
      comp=Z,90nm,1.4s
MWC   Mount Wilson     70.19 320 P        P        21 37 59.8 -0.3
MWC                              IAmb     IAmb     21 38 10.6
      comp=Z,90nm,1.4s
QSPA  South Pole Qui   70.22 180 P        P        21 38 00.6 +0.8
QSPA                             IAmb     IAmb     21 38 11.4
      comp=Z,87nm,1.3s
SHOC  Shoshone, Teco   70.29 322 P        P        21 38 01.4 +1.0
      baz=135
DECC  Green Verdugo    70.38 320 P        P        21 38 01.7 +0.7
      baz=133
K22A  Casper           70.47 333 IAmb     IAmb     21 38 05.0
      comp=Z,66nm,1.4s
K22A  Casper           70.47 333 P        P        21 38 02.0 +0.5
      baz=144
EDW2  Edwards Air Fo   70.60 320 P        P        21 38 02.8 +0.4
      baz=133
RSSD  Black Hills      70.66 335 P        P        21 38 02.0 -0.8
RSSD                             PP       PP       21 40 34.9 -4.7
RSSD  Black Hills      70.66 335 P        P        21 38 03.3 +0.5
      baz=147
BLG   Laguna Peak, P   70.73 319 P        P        21 38 04.1 +0.9
      baz=132
LRMC  Laurel Mtn Rad   70.82 321 P        P        21 38 05.1 +1.3
      baz=134
OSI   Osito Audit: C   70.86 320 P        P        21 38 05.9 +1.9
      baz=132
TPNV  Topopah Spring   71.01 323 IAmb     IAmb     21 38 19.5
      comp=Z,67nm,1.1s
TPNV  Topopah Spring   71.01 323 P        P        21 38 06.8 +1.8
      baz=135
SCZ2  Santa Cruz Isl   71.01 319 P        P        21 38 06.8 +1.9
      baz=132
FURC  Furnace Creek,   71.02 322 P        P        21 38 07.2 +2.4
      baz=134
MPMC  Manual Prospec   71.10 321 P        P        21 38 07.3 +1.7
      baz=134
ARVC  Arvin            71.27 320 P        P        21 38 08.7 +2.4
      baz=132
SBC   Santa Barbara    71.35 319 P        P        21 38 09.7 +2.8
      baz=132
ISA   Isabella, Lake   71.42 321 P        P        21 38 09.8 +2.4
      baz=133
CMLA  Cha da Macela    71.47  36 IAMs_20  IAMs_20  22 06 58.3
      comp=Z,4µm,19.0s
DUG   Dugway, Tooele   71.51 327 IAmb     IAmb     21 38 18.2
      comp=Z,142nm,1.6s
DUG   Dugway, Tooele   71.51 327 P        P        21 38 09.2 +1.3
      baz=138
AGMN  Agassiz Nation   71.56 343 IAMs_20  IAMs_20  22 13 15.4
      comp=Z,3µm,20.0s
AGMN  Agassiz Nation   71.56 343 P        P        21 38 08.7 +0.9
      baz=155
R11A  Troy Canyon, C   71.63 324 IAMs_20  IAMs_20  22 08 26.1
      comp=Z,3µm,20.0s
R11A  Troy Canyon, C   71.63 324 P        P        21 38 10.0 +1.3
      baz=136,SNR=32
GRAC  Grapevine Rang   71.68 322 P        P        21 38 11.0 +2.1
      baz=134
PKM   Mcpherson Peak   71.71 319 P        P        21 38 10.1 +0.8
      baz=132
CWC   Cottonwood Cre   71.71 321 P        P        21 38 10.3 +1.1
      baz=133
VES   Vestal, Richgr   71.90 320 P        P        21 38 11.4 +1.3
      baz=132
BW06  Boulder Array    71.91 331 P        P        21 38 11.1 +0.7
      baz=142
PDAR  Pinedale Array   71.91 331 P        P        21 38 10.6 +0.2
      comp=Z,2.2nm,0.7s,baz=131,slow=8.2,SNR=23
PDAR                             LR       LR       22 11 53.2
      comp=Z,1µm,18.3s,baz=128,slow=38
PDAR  Pinedale Array   71.91 331 P        P        21 38 10.2 -0.2
HWUT  Hardware Ranch   71.96 329 IAMs_20  IAMs_20  22 10 36.4
      comp=Z,4µm,20.0s
SMMC  Simmler          72.10 319 P        P        21 38 12.4 +0.9
      baz=132
TIN   Tinemaha, Big    72.22 322 P        P        21 38 12.9 +0.7
      baz=133
MDND  Maddock          72.28 340 IAMs_20  IAMs_20  22 11 21.5
      comp=Z,3µm,20.0s
MDND  Maddock          72.28 340 P        P        21 38 13.3 +1.1
      baz=152
TBI   Tubuai           72.33 251 eS       S        21 47 39.2 +2.0
      comp=Z,1µm,25.0s
TBI                              eLQ      LQ       21 57 19.6
      comp=Z,1µm,37.2s
TBI                              eLR      LR       22 00 21.6
      comp=Z,11µm,26.5s,baz=102
VOG   Valley Oaks Go   72.40 321 P        P        21 38 13.7 +0.6
      baz=132
AHID  Auburn Hatcher   72.62 330 IAmb     IAmb     21 38 25.9
      comp=Z,96nm,1.6s
AHID                             IAMs_20  IAMs_20  22 09 37.7
      comp=Z,3µm,21.0s
MLAC  Mammoth, Mammo72.97 322    P        P        21 38 17.8 +1.0
      baz=133
REDW  Red Top Meadow   72.97 331 IAmb     IAmb     21 38 20.4
      comp=Z,75nm,1.4s
SNOW  Snow King Moun   73.00 331 IAMs_20  IAMs_20  22 10 43.6
      comp=Z,3µm,18.0s
OMMB  Old Mammoth Mi   73.05 322 IAmb     IAmb     21 38 28.6
      comp=Z,100nm,1.4s
TPAW  Teton Pass       73.11 331 IAmb     IAmb     21 38 28.3
      comp=Z,91nm,1.4s
NV11  Mina Array Sit   73.12 323 IAmb     IAmb     21 38 27.9
      comp=Z,160nm,2.0s
ELK   Elko             73.17 326 P        P        21 38 18.1 +0.1
      comp=Z,5.9nm,0.9s,baz=128,slow=3.7,SNR=19
ELK   Elko             73.17 326 IAMs_20  IAMs_20  22 09 49.1
      comp=Z,4µm,18.0s
PMPB  Monarch Peak     73.19 320 P        P        21 38 17.8 -0.1
NVAR  Mina Array Bea   73.21 323 P        P        21 38 19.5 +1.3
      comp=Z,12nm,0.9s,baz=152,slow=6.5,SNR=29
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NVAR				LR	LR	22 07 44.3	
	comp=Z,2µm,19.5s,baz=120,slow=34						
FXWY	**Fox Creek**	73.26	331	IAmb	IAmb	21 38 30.0	
	comp=Z,62nm,1.4s						
PMOZ	**Porto Moniz, M**	73.31	45	*e*P	P	21 38 22.7	+3.9
PMOZ				*e*S	SKiKP	21 47 57.1	+6.1
PMOZ	**Porto Moniz, M**	73.31	45	*e*LQ	LQ	22 00 51.2	
PMOZ				*e*LR	LR	22 05 48.9	
	comp=Z,3µm,20.0s						
ULM	**Lac du Bonnet**	73.34	343	P	P	21 38 17.5	-0.9
	comp=Z,18nm,1.1s,baz=156,slow=6.2,SNR=13						
ULM				LR	LR	22 12 48.4	
	comp=Z,3µm,20.9s,baz=142,slow=38						
ULM	**Lac du Bonnet**	73.34	343	⇑*i*P	P	21 38 17.8	-0.6
ULM	**Lac du Bonnet**	73.34	343	IAMs_20	IAMs_20	22 12 26.8	
	comp=Z,4µm,21.0s						
IMW	**Indian Meadow**	73.42	331	IAmb	IAmb	21 38 31.2	
	comp=Z,91nm,1.5s						
PMAR	**Madeira**	73.44	45	*e*P	P	21 38 22.9	+3.2
FLWY	**Flagg Ranch**	73.46	331	IAmb	IAmb	21 38 23.7	
	comp=Z,119nm,1.4s						
FLWY				IAMs_20	IAMs_20	22 10 29.7	
	comp=Z,3µm,21.0s						
RYN	**Ryan**	73.47	323	IAmb	IAmb	21 38 29.8	
	comp=Z,82nm,1.6s						
RLMT	**Red Lodge**	73.64	333	IAMs_20	IAMs_20	22 14 26.5	
	comp=Z,3µm,19.0s						
RLMT	**Red Lodge**	73.64	333	P	P	21 38 21.6	+1.0
	baz=142						
H17A	**Grant Village**	73.64	331	P	P	21 38 22.6	+2.0
	baz=141						
LAO	**LASA Array**	73.65	335	IAmb	IAmb	21 38 31.6	
	comp=Z,89nm,1.3s						
LAO				IAMs_20	IAMs_20	22 13 59.7	
	comp=Z,3µm,20.0s						
LAO	**LASA Array**	73.65	335	P	P	21 38 21.9	+1.4
	baz=145						
PPT2	**Papeete2**	73.96	257	*e*S	S	21 48 00.4	+4.4
	comp=Z,9µm,24.5s						
PPT2	**Papeete2**	73.96	257	*e*LR	LR	22 01 07.5	
	comp=Z,9µm,24.0s,baz=104						
PPT	**Papeete**	73.97	257	LR	LR	22 02 41.5	
	comp=Z,4µm,18.6s,baz=130,slow=29						
PMPS	**Porto Santo**	74.03	45	*e*P	P	21 38 27.3	+4.4
PMPST	**Porto Santo, M**	74.05	45	*e*P	P	21 38 25.0	+2.0
PMPST				*e*S	S	21 48 05.3	+9.2
YERR	**Yerington**	74.12	323	IAmb	IAmb	21 38 34.1	
	comp=Z,108nm,1.5s						
DGMT	**Dagmar**	74.38	338	IAmb	IAmb	21 38 33.0	
	comp=Z,64nm,0.9s						
DGMT	**Dagmar**	74.38	338	P	P	21 38 26.3	+1.7
	baz=148						
PNTR	**Pine Nut**	74.40	323	P	P	21 38 27.4	+2.2
SCHQ	**Schefferville**	74.56	2	P	P	21 38 25.3	-0.2
	comp=Z,6.0nm,0.6s,baz=207,slow=4.3,SNR=21						
SCHQ				LR	LR	22 12 15.3	
	comp=Z,2µm,19.4s,baz=194,slow=37						
SCHQ	**Schefferville**	74.56	2	P	P	21 38 25.8	+0.3
SCHQ				PP	PP	21 41 09.6	-2.8
SCHQ				IAMs_20	IAMs_20	22 10 47.7	
	comp=Z,3µm,22.0s						
PAHR	**Pah Rah Range**	74.69	323	IAmb	IAmb	21 38 38.4	
	comp=Z,190nm,1.7s						
DLMT	**Dillon**	75.31	331	IAMs_20	IAMs_20	22 12 45.6	
	comp=Z,3µm,20.0s						
MFID	**Camas Ranch**	75.41	328	IAmb	IAmb	21 38 41.1	
	comp=Z,81nm,1.4s						
MFID				IAMs_20	IAMs_20	22 11 24.7	
	comp=Z,3µm,19.0s						
EGMT	**Eagleton**	76.14	334	P	P	21 38 36.3	+1.5
	baz=142,SNR=19						
WVOR	**Wild Horse Val**	76.16	326	IAMs_20	IAMs_20	22 11 00.3	
	comp=Z,3µm,20.0s						
O03E	**Paynes Creek**	76.47	322	P	P	21 38 37.5	+0.6
	baz=131						
J08A	**Circle Bar Ran**	76.72	326	IAmb	IAmb	21 38 42.2	
	comp=Z,90nm,2.0s						
J08A				IAMs_20	IAMs_20	22 12 30.1	
	comp=Z,3µm,20.0s						
O02D	**Mt. Diablo Mer**	76.96	322	P	P	21 38 39.9	+0.2
	baz=131						
MSO	**Missoula**	77.03	331	IAMs_20	IAMs_20	22 16 54.1	
	comp=Z,3µm,18.0s						
MSO	**Missoula**	77.03	331	P	P	21 38 41.5	+1.6
	baz=139						
N02D	**Trinity Center**	77.43	322	P	P	21 38 41.7	-0.5
	baz=131						
M04C	**Macdoel**	77.47	323	P	P	21 38 43.1	+0.6
	baz=132						
I07A	**Izee**	77.76	326	IAMs_20	IAMs_20	22 13 02.6	
	comp=Z,4µm,20.0s						
M02C	**Callahan**	77.79	323	P	P	21 38 44.1	-0.2
	baz=131						
JTMT	**Jette**	77.87	332	IAMs_20	IAMs_20	22 17 01.4	
	comp=Z,3µm,21.0s						
YBH	**Yreka Blue Hor**	77.93	323	P	P	21 38 44.9	-0.1
	comp=Z,4.5nm,0.9s,baz=104,slow=4.0,SNR=2.3						
YBH	**Yreka Blue Hor**	77.93	323	P	P	21 38 43.9	-1.2
YBH						21 41 38.3	
YBH				pmax	pmax		
	comp=Z,13nm,1.0s						
YBH				MLR	MLR		
	comp=Z,2µm,18.0s						
YBH	**Yreka Blue Hor**	77.93	323	P	P	21 38 43.9	-1.2
YBH				PP	PP	21 41 38.3	-3.0
K04D	**Chiloquin, OR**	77.98	324	P	P	21 38 46.5	+1.2
	baz=132						
L04D	**Klamath Falls**	78.02	324	P	P	21 38 46.2	+0.6
	baz=131						
VNDA	**Vanda**	78.05	190	P	P	21 38 46.2	+1.1
	comp=Z,5.7nm,0.9s,baz=139,slow=3.6,SNR=10						
VNDA	**Vanda**	78.05	190	P	P	21 38 45.9	+0.7
VNDA				pmax	pmax		
	comp=Z,40nm,1.5s						
VNDA	**Vanda**	78.05	190	P	P	21 38 45.9	+0.7
J05D	**Fort Rock, OR**	78.14	325	P	P	21 38 46.5	+0.3
	baz=132,SNR=11						
G08A	**Pilot Rock**	78.32	328	IAMs_20	IAMs_20	22 13 16.4	
	comp=Z,4µm,19.0s						
PINE	**Pine Mountain**	78.32	325	IAMs_20	IAMs_20	22 12 58.5	
	comp=Z,3µm,20.0s						
TORD	**Torodi Ar. Bea**	78.51	71	P	P	21 38 48.0	-0.8
	comp=Z,78nm,0.8s,baz=253,slow=4.5,SNR=158						
TORD				LR	LR	22 12 07.8	
	comp=Z,12µm,20.2s,baz=260,slow=35						
SYO	**Syowa Base**	78.55	160	⇑*i*P	P	21 38 46.0	-2.0
SYO	**Syowa Base**	78.55	160	⇑*e*pP	P	21 38 48.2	+0.2
SYO	**Syowa Base**	78.55	160	⇓*i*PcP	PcP	21 38 54.1	-3.0
J04D	**Umpqua Nationa**	78.58	324	P	P	21 38 49.6	+0.9
	baz=132						
WALA	**Waterton Lakes**	78.69	333	IAMs_20	IAMs_20	22 16 41.2	
	comp=Z,3µm,20.0s						
L02E	**Cave Junction**	78.71	323	P	P	21 38 50.0	+0.7
	baz=130						
E09A	**Wood Farm, Sta**	78.78	329	IAMs_20	IAMs_20	22 13 40.5	
	comp=Z,3µm,20.0s						
I05D	**Terrebonne, OR**	78.90	326	P	P	21 38 51.6	+1.3
	baz=132						
FFC	**Flin Flon**	79.02	342	P	P	21 38 51.3	+0.6
FFC				pmax	pmax		
	comp=Z,42nm,1.5s						
FFC				MLR	MLR		
	comp=Z,4µm,18.0s						
FFC	**Flin Flon**	79.02	342	P	P	21 38 51.3	+0.6
FFC	**Flin Flon**	79.02	342	IAMs_20	IAMs_20	22 19 26.6	
	comp=Z,4µm,18.0s						
K02D	**Willamette Mer**	79.09	323	P	P	21 38 52.7	+1.3
	baz=130						
I04A	**Tendick Farm,**	79.11	325	P	P	21 38 51.6	+0.2
	baz=131						
G06A	**Carlson Farm,**	79.14	327	IAMs_20	IAMs_20	22 14 53.1	
	comp=Z,3µm,21.0s						
E08A	**Dider Farm, El**	79.21	328	P	P	21 38 50.9	-0.9
E08A				IAMs_20	IAMs_20	22 16 07.9	
	comp=Z,3µm,21.0s						
HAWA	**Hanford**	79.37	328	IAMs_20	IAMs_20	22 19 17.3	
	comp=Z,3µm,18.0s						
G05D	**Wamic, OR**	79.50	326	P	P	21 38 54.7	+1.2
	baz=132						
D08A	**Wollman Farm,**	79.54	329	IAMs_20	IAMs_20	22 14 01.6	
	comp=Z,2µm,19.0s						
J01E	**Myrtle Point**	79.54	323	P	P	21 38 54.4	+0.6
	baz=130						
NEW	**Newport**	79.54	331	P	P	21 38 54.9	+1.2
	comp=Z,1.8nm,0.6s,baz=116,slow=7.3,SNR=8.3						
NEW	**Newport**	79.54	331	P	P	21 38 55.8	+2.1
NEW	**Newport**	79.54	331	IAMs_20	IAMs_20	22 18 33.7	
	comp=Z,3µm,20.0s						
NEW	**Newport**	79.54	331	P	P	21 38 54.6	+0.8
	baz=136						
I03D	**Drain, OR**	79.56	324	P	P	21 38 55.3	+1.5
	baz=131						
H04A	**Detroit Lake**	79.58	325	IAMs_20	IAMs_20	22 10 15.8	
	comp=Z,3µm,22.0s						
E07A	**Sunnyside**	79.65	328	IAMs_20	IAMs_20	22 14 17.6	
	comp=Z,3µm,19.0s						
C09A	**Chrisman Ranch**	79.75	330	IAmb	IAmb	21 39 05.7	
	comp=Z,124nm,1.7s						
H04D	**Lebanon**	79.77	325	P	P	21 38 55.3	+0.3
	baz=131						
F05D	**White Salmon**	80.00	327	P	P	21 38 57.3	+1.1
	baz=132						
I02D	**Swisshome**	80.10	324	P	P	21 38 57.5	+0.8
	baz=130						
COR	**Corvallis**	80.12	325	IAMs_20	IAMs_20	22 15 42.1	
	comp=Z,2µm,19.0s						
AVE	**Averroes**	80.34	49	⇑*i*P	P	21 38 57.3	-1.1
AVE				*i* S	S	21 49 05.0	+0.3
G03D	**McMinnville, O**	80.50	325	P	P	21 38 59.7	+0.8
	baz=131						
F04A	**Amboy**	80.53	326	IAmb	IAmb	21 39 10.8	
	comp=Z,86nm,1.3s						
F04A				IAMs_20	IAMs_20	22 13 42.0	
	comp=Z,3µm,22.0s						
LTY	**Liberty**	80.54	328	IAMs_20	IAMs_20	22 14 20.9	
	comp=Z,3µm,20.0s						
B08A	**Colville Reser**	80.65	330	IAMs_20	IAMs_20	22 19 47.1	
	comp=Z,3µm,18.0s						
LON	**Longmire**	80.77	327	IAMs_20	IAMs_20	22 14 42.1	
	comp=Z,4µm,19.0s						
F04D	**Rainier, OR**	80.94	326	P	P	21 39 02.5	+1.3
	baz=131						
ZHG	**ZHG**	80.97	50	P	P	21 39 02.0	+0.2
	SNR=5.6						
ZHG				P	P	21 39 02.0	+0.2
	SNR=5.6						
E04D	**Cinebar**	81.03	327	P	P	21 39 03.3	+1.7
	baz=132						
C06D	**Leavenworth**	81.10	329	P	P	21 39 02.9	+0.8
	baz=133						
F03A	**Seaside**	81.13	326	IAMs_20	IAMs_20	22 15 11.9	
	comp=Z,3µm,22.0s						
D05A	**Enumclaw**	81.15	327	IAmb	IAmb	21 39 14.0	
	comp=Z,64nm,1.0s						
D05A				IAMs_20	IAMs_20	22 15 03.3	
	comp=Z,4µm,20.0s						
PFVI	**Vila Bisbo**	81.40	46	IAMs_20	IAMs_20	22 10 20.5	
	comp=Z,4µm,21.0s						
PFVI	**Vila Bisbo**	81.40	46	*e*P	P	21 39 05.4	+1.5
PFVI	**Vila Bisbo**	81.40	46	*e*S	S	21 49 17.3	+1.8
E03A	**Lebam**	81.53	326	IAMs_20	IAMs_20	22 21 15.5	
	comp=Z,3µm,18.0s						
D04E	**Lakebay**	81.54	327	P	P	21 39 05.8	+1.5
	baz=132						
MORF	**Marmelete**	81.61	45	*e*P	P	21 39 06.5	+1.4
MORF				*e*S	S	21 49 19.5	+1.7
MORF				AMS	AMS	22 11 22.6	
	comp=Z,3µm,24.4s						
MORF	**Marmelete**	81.61	45	*e*P	P	21 39 06.5	+1.4
MORF				*e*S	S	21 49 19.5	+1.7
MORF	**Marmelete**	81.61	45	*e*P	P	21 39 08.6	+3.5
	comp=Z,79nm,1.7s						
MORF	**Marmelete**	81.61	45	*e*S	S	21 49 20.0	+2.2
PTEO	**Sao Teotonio**	81.69	45	*e*P	P	21 39 07.9	+2.5
	comp=Z,117nm,1.7s						
B06A	**Marblemount**	81.80	329	IAMs_20	IAMs_20	22 18 01.4	
	comp=Z,2µm,18.0s						
B05A	**Bryant**	81.93	328	P	P	21 39 08.0	+1.6
	baz=132,SNR=6.5						
D03D	**Eldon**	81.94	327	P	P	21 39 07.6	+1.1
	baz=131						
LIS	**Lisbon**	82.05	44	*e*P	P	21 39 08.7	+1.3
LIS				*e*S	S	21 49 23.8	+1.6
LIS				AMS	AMS	22 16 59.2	
	comp=Z,6µm,16.9s						
LIS	**Lisbon**	82.05	44	*e*P	P	21 39 08.6	+1.3
LIS				*e*S	S	21 49 23.7	+1.6
LIS	**Lisbon**	82.05	44	*e*P	P	21 39 10.4	+3.1
PBDV	**Barranco-do-Ve**	82.06	46	*e*P	P	21 39 08.5	+1.0
	comp=Z,56nm,1.5s						
PBDV	**Barranco-do-Ve**	82.06	46	*e*S	S	21 49 24.0	+1.6
RAR	**Rarotonga**	82.09	250	LR	LR	22 07 09.8	
	comp=Z,6µm,19.1s,baz=140,slow=30						
PMAFR	**Mafra**	82.10	44	*e*P	P	21 39 10.1	+2.5
PMAFR	**Mafra**	82.10	44	*e*S	S	21 49 24.0	+1.4
IFR	**Ifrane**	82.10	50	⇑*i*P	P	21 39 07.3	-0.6
IFR				*i* S	S	21 49 22.9	-0.4
MDT	**Midelt**	82.13	51	P	P	21 39 08.9	+0.9
	SNR=13						
PNCL	**Nicolau / Gran**	82.13	45	*e*P	P	21 39 09.1	+1.4
PNCL	**Nicolau / Gran**	82.13	45	*e*S	S	21 49 25.6	+2.6
TSUM	**Tsumeb**	82.17	108	P	P	21 39 08.5	-0.1
TSUM				PP	PP	21 42 12.3	-4.5
MESJ	**Messejana**	82.19	45	*e*P	P	21 39 09.4	+1.3
MESJ				*e*S	S	21 49 25.2	+1.5
MESJ				AMS	AMS	22 19 17.4	
	comp=Z,3µm,15.2s						
MESJ	**Messejana**	82.19	45	*e*P	P	21 39 09.3	+1.3
MESJ				*e*S	S	21 49 25.1	+1.5
MESJ	**Messejana**	82.19	45	*e*P	P	21 39 08.8	+0.8
	comp=Z,32nm,2.5s						
PCVE	**Castro Verde**	82.20	45	*e*P	P	21 39 09.5	+1.4
PCVE	**Castro Verde**	82.20	45	*e*S	S	21 49 24.9	+1.2
NLWA	**Neilton Lookou**	82.25	327	IAMs_20	IAMs_20	22 15 41.3	
	comp=Z,4µm,21.0s						
PVAQ	**Vaqueiros**	82.29	46	*e*P	P	21 39 09.9	+1.3
	comp=Z,40nm,1.6s						
PVAQ	**Vaqueiros**	82.29	46	*e*S	S	21 49 26.1	+1.4
PBEJ	**Beja**	82.53	45	*e*P	P	21 39 11.6	+1.8
	comp=Z,32nm,1.4s						
A04D	**Lummi Island**	82.53	328	P	P	21 39 10.8	+1.3
	baz=132						
SFS	**San Fernando**	82.83	47	⇑*i*P	P	21 39 10.1	-1.4
SFS				*i* S	S	21 49 32.9	+2.7
PMTG	**Montargil**	82.85	44	*e*P	P	21 39 11.8	+0.3
	comp=Z,84nm,1.9s						
PMTG	**Montargil**	82.85	44	*e*S	S	21 49 31.4	+1.1
PTOM	**Tomar**	83.03	44	*e*P	P	21 39 14.8	+2.4
	comp=Z,93nm,1.8s						
CEU	**Ceuta**	83.12	48	⇑*i*P	P	21 39 11.4	-1.5
CEU				*i* S	S	21 49 35.0	+1.9
PESTR	**Estremoz**	83.16	45	*e*S	S	21 49 35.4	+1.9
PCAS	**Casmilo, Conde**	83.20	43	*e*P	P	21 39 13.7	+0.4
	comp=Z,87nm,1.8s						
PCAS	**Casmilo, Conde**	83.20	43	*e*S	S	21 49 34.6	+0.7
COI	**Coimbra**	83.34	43	*e*P	P	21 39 16.2	+2.2
	comp=Z,85nm,1.8s						
COI	**Coimbra**	83.34	43	*e*S	S	21 49 36.5	+1.2
LLLB	**Lillooet**	83.40	330	IAMs_20	IAMs_20	22 20 41.8	
	comp=Z,3µm,19.0s						
FRB	**Frobisher Bay**	83.45	1	P	P	21 39 13.9	+0.1
	comp=Z,7.4nm,1.1s,baz=171,slow=5.6,SNR=4.4						
FRB	**Frobisher Bay**	83.45	1	P	P	21 39 14.0	+0.1
PVLZ	**Peæn de**	83.52	49	⇑*i*P	P	21 39 12.6	-2.4
PVLZ				*i* S	S	21 49 34.8	-2.4
PMRV	**Marv??o**	83.59	44	*e*P	P	21 39 15.1	-0.2
	comp=Z,27nm,1.7s						
PMRV	**Marv??o**	83.59	44	*e*S	S	21 49 37.4	-0.4
PMRV	**Marv??o**	83.59	44	*e*LQ	LQ	22 04 42.1	
PMRV				*e*LR	LR	22 11 55.3	
	comp=Z,6µm,16.0s						
LIJA	**Lijar**	83.61	47	*e*P	P	21 39 16.0	+0.4
PCBR	**Castelo Branco**	83.75	44	*e*P	P	21 39 17.3	+1.2
	comp=Z,42nm,2.0s						
PALE	**Palemas**	83.80	49	P	P	21 39 19.0	+2.6
	SNR=6.9						
PALE				P	P	21 39 19.0	+2.6
	SNR=6.9						
PALE				P	P	21 39 19.0	+2.6
	SNR=6.9						
PVIS	**Viseu**	83.95	43	*e*P	P	21 39 16.6	-0.6
	comp=Z,64nm,1.7s						
MTE	**Manteigas**	84.01	43	IAmb	IAmb	21 39 19.7	
	comp=Z,43nm,1.2s						
MTE	**Manteigas**	84.01	43	*e*P	P	21 39 17.2	-0.3
	comp=Z,61nm,1.5s						
MTE	**Manteigas**	84.01	43	*e*S	S	21 49 40.4	-1.7
MTE	**Manteigas**	84.01	43	*e*LR	LR	22 08 17.4	
	comp=Z,8µm,18.0s						
HORN	**Hornachuelos**	84.19	46	P	P	21 39 22.3	+3.9
	SNR=7.0						
EMAL	**Malaga-Limoner**	84.22	48	⇑*i*P	P	21 39 18.1	-0.4
EMAL				*i* S	S	21 49 44.0	-0.2
PVRL	**Vila Real**	84.37	42	*e*P	P	21 39 20.5	+1.2
	comp=Z,73nm,2.0s						
PGAV	**Gavieira, Arco**	84.39	42	*e*P	P	21 39 19.9	+0.4
	comp=Z,85nm,1.8s						
PGAV	**Gavieira, Arco**	84.39	42	*e*S	S	21 49 41.9	-4.1
PGAV	**Gavieira, Arco**	84.39	42	*e*LR	LR	22 10 31.1	
	comp=Z,9µm,20.0s						
PCAB	**Cabril**	84.40	42	*e*P	P	21 39 19.8	+0.4
	comp=Z,97nm,1.6s						
GOG	**Mont Gurugu**	84.47	50	P	P	21 39 22.0	+2.0
	SNR=9.0						
GOG				P	P	21 39 22.0	+2.0
	SNR=9.0						
GOG				P	P	21 39 22.0	+2.0
	SNR=9.0						
TAF	**Taforalt**	84.69	50	P	P	21 39 23.0	+1.9
	SNR=15						
TAF				P	P	21 39 23.0	+1.9
	SNR=15						
TAF				P	P	21 39 23.0	+1.9
	SNR=15						
MVO	**Moncorvo**	84.75	43	*e*P	P	21 39 21.0	-0.2
	comp=Z,98nm,1.7s						
MVO	**Moncorvo**	84.75	43	*e*S	S	21 49 45.7	-3.8
MVO	**Moncorvo**	84.75	43	*e*LR	LR	22 09 31.7	
	comp=Z,7µm,18.0s						
PBRG	**Braganca**	85.27	42	*e*P	P	21 39 24.3	+0.5
	comp=Z,78nm,1.5s						
PBRG	**Braganca**	85.27	42	*e*S	S	21 49 49.2	-5.4
PAB	**San Pablo**	85.66	45	P	P	21 39 23.6	-2.3
PAB				pmax	pmax		
	comp=Z,50nm,1.4s						
PAB				MLR	MLR		
	comp=Z,4µm,22.0s						
PAB	**San Pablo**	85.66	45	P	P	21 39 23.6	-2.3
PAB	**San Pablo**	85.66	45	IAMs_20	IAMs_20	22 13 21.2	
	comp=Z,4µm,22.0s						
TAM	**Tamanrasset**	85.71	64	P	P	21 39 27.0	+0.4
TAM				pmax	pmax		
	comp=Z,71nm,1.2s						
TAM				MLR	MLR		
	comp=Z,14µm,20.0s						
TAM	**Tamanrasset**	85.71	64	P	P	21 39 27.0	+0.4
TAM				IAmb	IAmb	21 39 37.5	
	comp=Z,71nm,1.2s						
BOSA	**Boshof**	85.72	119	P	P	21 39 27.3	+0.7
	comp=Z,14nm,1.0s,baz=263,slow=4.2,SNR=13						
BOSA				LR	LR	22 14 43.0	
	comp=Z,6µm,19.2s,baz=248,slow=34						
BOSA	**Boshof**	85.72	119	P	P	21 39 28.2	+1.6
BOSA				IAmb	IAmb	21 39 34.7	
	comp=Z,60nm,1.4s						
ESDC	**Sonseca Array**	85.98	45	P	P	21 39 28.2	+0.8
	comp=Z,6.9nm,0.8s,baz=243,slow=5.6,SNR=16						
ESDC				LR	LR	22 13 52.6	
	comp=Z,3µm,21.4s,baz=235,slow=33						
ESDC	**Sonseca Array**	85.98	45	P	P	21 39 26.5	-0.9
ESDC				PP	PP	21 42 49.5	+1.7
ESBB	**Sonseca Array**	85.99	45	IAMs_20	IAMs_20	22 13 43.1	
	comp=Z,4µm,21.0s						
MAW	**Mawson**	86.30	164	P	P	21 39 29.5	+1.0
	comp=Z,16nm,1.0s,baz=226,slow=9.6,SNR=11						
MAW				LR	LR	22 18 19.5	
	comp=Z,2µm,18.4s,baz=240,slow=36						
UCM	**Universidad Co**	86.78	45	⇑*i*P	P	21 39 32.2	+0.9
UCM				*i* S	S	21 50 02.0	-7.5
CART	**Cartagena**	87.01	48	⇑*i*P	P	21 39 31.1	-1.4
CART				*i* S	S	21 50 01.1	-11
LBTB	**Lobatse**	87.26	115	P	P	21 39 33.1	-1.1
LBTB				pmax	pmax		
	comp=Z,118nm,1.8s						
LBTB	**Lobatse**	87.26	115	P	P	21 39 33.1	-1.1
LBTB				IAmb	IAmb	21 39 42.7	
	comp=Z,118nm,1.8s						
YKA	**Yellowknife Ar**	89.16	341	P	P	21 39 42.0	0.0
	comp=Z,6.5nm,0.6s,baz=138,slow=4.7,SNR=53						
YKA				PKKPbc	PKKPbc	21 57 20.2	-2.0
	comp=Z,0.2nm,0.6s,baz=320,slow=2.7,SNR=3.7						
YKA				LR	LR	22 22 04.8	
	comp=Z,3µm,21.8s,baz=0.0,slow=37						
KEST	**Kesra**	93.79	53	P	P	21 40 04.1	-0.2
	comp=Z,7.0nm,1.0s,baz=254,slow=2.5,SNR=7.1						
KEST				LR	LR	22 23 04.4	
	comp=Z,8µm,19.9s,baz=208,slow=36						
JIS	**Juneau Island**	93.84	332	IAMs_20	IAMs_20	22 24 49.3	
	comp=Z,3µm,19.0s						
URZ	**Urewera**	93.98	227	LR	LR	22 12 58.5	
	comp=Z,7µm,20.5s,baz=191,slow=30						
CASY	**Casey**	94.02	181	IAMs_20	IAMs_20	22 21 16.2	
	comp=Z,2µm,19.0s						
SSB	**Saint Sauveur**	94.13	43	P	P	21 40 03.3	-2.4
SSB				pmax	pmax		
	comp=Z,29nm,1.5s						
SSB				MLR	MLR		
	comp=Z,8µm,20.0s						
SSB	**Saint Sauveur**	94.13	43	P	P	21 40 03.2	-2.4
BESE	**Bessie Mountai**	94.22	332	IAMs_20	IAMs_20	22 25 00.2	
	comp=Z,3µm,20.0s						
RPZ	**Rata Peaks**	95.06	220	LR	LR	22 13 00.4	
	comp=Z,4µm,21.1s,baz=104,slow=29						
AFI	**Afiamalu**	95.34	253	LR	LR	22 15 06.9	
	comp=Z,4µm,18.2s,baz=100,slow=30						
RES	**Resolute Bay**	95.68	354	P	P	21 40 11.6	-0.4
	comp=Z,0.7nm,0.7s,baz=141,slow=6.5,SNR=2.2						
RES				PKKP	PKKPdf	21 57 09.4	+3.0
	comp=Z,1.1nm,0.8s,baz=343,slow=2.6,SNR=4.9						
QRZ	**Quartz Range**	95.72	223	IAMs_20	IAMs_20	22 13 54.4	
	comp=Z,2µm,20.0s						
UCC	**Uccle**	96.27	38	IAMs_20	IAMs_20	22 20 32.5	
	comp=Z,3µm,20.0s						
HYT	**Haines Junctio**	96.52	333	IAMs_20	IAMs_20	22 26 39.9	
	comp=Z,3µm,20.0s						
C36M	**Paulatuk**	96.76	343	IAMs_20	IAMs_20	22 25 47.3	
	comp=Z,3µm,20.0s						
C36M	**Paulatuk**	96.76	343	P	P	21 40 18.3	+1.4
	baz=131,SNR=5.1						
ECH	**Echery**	96.94	41	IAmb	IAmb	21 40 27.7	
	comp=Z,21nm,1.3s						
VLC	**Villacollemand**	97.56	46	IAMs_20	IAMs_20	22 25 09.2	
	comp=Z,3µm,19.0s						
OSSC	**Osservatorio P**	97.93	47	IAMs_20	IAMs_20	22 30 26.0	
	comp=Z,3µm,18.0s						
OUZ	**Omahuta**	97.95	228	IAMs_20	IAMs_20	22 14 03.9	
	comp=Z,3µm,22.0s						
CTGM	**Chitina Glacie**	98.24	332	IAMs_20	IAMs_20	22 28 56.6	
	comp=Z,2µm,19.0s						
DAVA	**Damuels**	98.32	43	*e*pPdiff	Pdif	21 40 26.2	+1.4
	comp=Z,8.9nm,1.3s						
BALM	**Baldy**	98.72	332	IAMs_20	IAMs_20	22 24 07.1	
	comp=Z,2µm,21.0s						
FETA	**Feichten**	98.77	43	*e*pPdiff	Pdif	21 40 28.2	+1.4
	comp=Z,7.2nm,1.3s						
TGL	**Tana Glacier**	98.81	332	IAMs_20	IAMs_20	22 29 09.1	
	comp=Z,2µm,20.0s						
DAWY	**Dawson**	98.85	336	IAMs_20	IAMs_20	22 28 07.1	
	comp=Z,2µm,19.0s						
INK	**Inuvik**	98.91	340	P	P	21 40 26.1	-0.5
	comp=Z,3.0nm,1.1s,baz=96,slow=3.3,SNR=5.0						
INK				LR	LR	22 28 02.7	
	comp=Z,3µm,20.8s,baz=118,slow=37						
RETA	**Reutte**	98.95	43	*e*pPdiff	Pdif	21 40 28.7	+1.2
	comp=Z,5.5nm,1.2s						
CRQM	**Cirque**	98.95	332	IAMs_20	IAMs_20	22 29 25.3	
	comp=Z,2µm,22.0s						
EPYK	**Eagle Plains**	98.97	338	IAMs_20	IAMs_20	22 25 15.0	
	comp=Z,2µm,22.0s						
EPYK	**Eagle Plains**	98.97	338	P	P	21 40 26.9	-0.2
	baz=120						
CTI	**Castel Tesino**	99.05	44	IAMs_20	IAMs_20	22 23 39.4	
	comp=Z,3µm,20.0s						
MOTA	**Moosalm**	99.12	43	*e*pPdiff	Pdif	21 40 29.5	+1.1
	comp=Z,9.1nm,1.4s						
MOTA				*e*PP	PP	21 44 32.8	+1.8
	comp=Z,6.8nm,1.6s						
SQTA	**Sankt Quirin**	99.14	43	*e*pPdiff	Pdif	21 40 29.8	+1.3
	comp=Z,15nm,1.4s						
SQTA				PP	PP	21 44 30.1	-1.1
	comp=Z,6.1nm,1.3s						
MCARA	**McCarthy VSAT**	99.16	332	IAMs_20	IAMs_20	22 28 08.5	
	comp=Z,2µm,21.0s						
VRDI	**Verde Repeater**	99.29	332	IAMs_20	IAMs_20	22 30 49.4	
	comp=Z,2µm,19.0s						
BCAR	**Beaver Creek A**	99.36	334	P	Pdif	21 40 27.6	-1.3
WATA	**Walderalm**	99.42	43	*e*pPdiff	Pdif	21 40 31.0	+1.3
	comp=Z,8.6nm,1.3s						
WATA				*e*PP	PP	21 44 32.2	-1.1
	comp=Z,5.9nm,1.4s						

WTTA	Wattenberg	99.44	43	epPdiff	Pdif	21 40 31.4	+1.6
	comp=Z,6.1nm,0.9s						
PAOL	Paolisi	99.45	50	IAMs_20	IAMs_20	22 29 21.4	
	comp=Z,2µm,20.0s						
GLB	Gilahina Butte	99.53	332	IAMs_20	IAMs_20	22 30 48.3	
	comp=Z,2µm,18.0s						
ABTA	Abfaltersbach	99.84	44	ePP	PP	21 44 38.2	+1.8
	comp=Z,4.8nm,1.4s						
EGAK	Eagle	99.86	336	IAMs_20	IAMs_20	22 32 55.4	
	comp=Z,2µm,18.0s						
GRA1	Grafenberg Arr	99.97	41	IAMs_20	IAMs_20	22 21 24.5	
	comp=Z,3µm,21.0s						
MENT	Mentasta	100.11	334	IAMs_20	IAMs_20	22 27 46.8	
	comp=Z,2µm,20.0s						
HIN	Hinchinbrook I	100.33	331	IAMs_20	IAMs_20	22 29 07.6	
	comp=Z,3µm,22.0s						
KBA	Koelnbreinsper	100.48	44	epPdiff	Pdif	21 40 35.5	+1.0
	comp=Z,5.9nm,1.4s						
KBA				ePP	PP	21 44 41.4	-0.1
	comp=Z,6.6nm,1.6s						
SCRK	Sand Creek	100.64	335	IAMs_20	IAMs_20	22 27 54.0	
	comp=Z,2µm,19.0s						
GLI	Glacier Island	100.78	331	IAMs_20	IAMs_20	22 26 52.7	
	comp=Z,2µm,22.0s						
NKC	Novy Kostel	100.89	40	ePDIFF	Pdif	21 40 33.2	-2.8
NKC				ex	x	21 44 30.9	
NKC				eSKS		21 51 19.6	
NKC				AMS	AMS	22 24 20.0	
	comp=Z,3µm,18.9s						
NKC	Novy Kostel	100.89	40	eP	Pdif	21 40 33.2	-2.8
NKC				e		21 51 19.6	
NKC				MLR	MLR		
	comp=Z,3µm,18.9s						
RIDG	Independent Ri	100.89	334	IAMs_20	IAMs_20	22 29 02.6	
	comp=Z,2µm,19.0s						
OBKA	Obir	101.10	45	epPdiff	pPdif	21 40 38.5	-0.6
	comp=Z,4.7nm,0.9s						
SCM	Sheep Creek Mo	101.23	332	IAMs_20	IAMs_20	22 29 57.3	
	comp=Z,2µm,21.0s						
GERES	GERESS Array B	101.25	42	P	Pdif	21 40 36.4	-1.3
	comp=Z,0.2nm,0.3s,baz=215,slow=4.2,SNR=4.4						
GERES	GERESS Array B	101.25	42		Pdif	21 40 34.6	-3.1
KHC	Kasperske Hory	101.25	42	ePDIFF	Pdif	21 40 33.4	-4.3
KHC				ePP	PP	21 44 43.6	-3.4
KHC				eSKS		21 51 17.9	
KHC				AMS	AMS	22 23 10.0	
	comp=Z,3µm,19.8s						
KHC	Kasperske Hory	101.25	42	⇓iP	Pdif	21 40 37.3	-0.4
KHC				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MOA	Molln	101.31	43	PP	PP	21 44 45.9	-1.6
	comp=Z,3.5nm,1.0s						
SOKA	Soboth	101.47	44	epPdiff	pPdif	21 40 40.8	+0.1
	comp=Z,4.2nm,1.5s						
CLL	Collm	101.55	40	i Pdif	Pdif	21 40 40.5	+1.7
	comp=Z,16nm,1.6s						
CLL				ePP	PP	21 44 52.0	+2.9
CLL				ePPlp		21 45 06.0	
CLL				eSKSac	SKSac	21 51 24.0	+5.5
CLL				eSdif	Sdif	21 52 19.0	-0.8
CLL				ePS	PS	21 53 53.0	+0.1
CLL				eSS	SS	21 59 26.0	+4.1
CLL				Lm	MLR	22 23 00.0	
	comp=N,1µm,20.7s						
CLL				Lm	MLR	22 23 00.0	
	comp=E,4µm,20.8s						
CLL				Lm	MLR	22 23 00.0	
	comp=Z,5µm,21.0s						
CLL	Collm	101.55	40	i P	Pdif	21 40 40.5	+1.7
CLL				pmax	pmax		
	comp=Z,16nm,1.6s						
CLL				MLR	MLR		
	comp=Z,5µm,21.0s						
KNK	Knik Glacier	101.59	331	IAMs_20	IAMs_20	22 32 19.3	
	comp=Z,3µm,19.0s						
SEW	Seward	101.60	330	IAMs_20	IAMs_20	22 34 00.0	
	comp=Z,2µm,19.0s						
SML	Sawmill	101.67	332	IAMs_20	IAMs_20	22 30 21.7	
	comp=Z,2µm,19.0s						
DHY	Denali Highway	101.70	333	IAMs_20	IAMs_20	22 30 52.6	
	comp=Z,2µm,18.0s						
PRP	Porcupine Dome	101.84	336	IAMs_20	IAMs_20	22 31 49.1	
	comp=Z,2µm,19.0s						
PMR	Palmer	101.95	331	IAMs_20	IAMs_20	22 34 58.8	
	comp=Z,2µm,18.0s						
BRG	Berggiesshubel	101.99	40	eP	PKiKP	21 45 05.5	+2.0
	comp=Z,28nm,1.9s						
BRG	Berggiesshubel	101.99	40	eP	Pdif	21 40 42.2	+1.4
BRG						21 51 22.0	
BRG				S	Sdif	21 52 26.0	+2.5
BRG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BRG				pmax	pmax		
	comp=Z,21nm,2.0s						
BRG				MLR	MLR		
	comp=N,817nm,18.5s						
BRG				MLR	MLR		
	comp=E,3µm,20.8s						
BRG				MLR	MLR		
	comp=Z,4µm,19.5s						
BRG	Berggiesshubel	101.99	40	ePDIFF	Pdif	21 40 42.2	+1.4
	comp=Z,5.3nm,1.1s						
BRG				ePP	PP	21 44 39.0	-13
	comp=Z,21nm,2.0s						
BRG				SKS		21 51 22.0	
BRG				SDIFF	Sdif	21 52 26.0	+2.5
BRG				SS	SS	21 58 51.0	-37
HDA	Harding Lake	102.00	334	IAMs_20	IAMs_20	22 30 17.1	
	comp=Z,3µm,20.0s						
HDA	Harding Lake	102.00	334	P	Pdif	21 40 40.0	-0.5
	baz=111						
PRA	Prague	102.06	41	ePDIFF	Pdif	21 40 42.7	+1.6
PRA				ePP	PP	21 44 48.1	-4.9
PRA				eSKS		21 51 24.8	
PRA				AMS	AMS	22 26 20.0	
	comp=Z,2µm,16.1s						
PRA	Prague	102.06	41	eP	Pdif	21 40 42.7	+1.6
PRA				e		21 44 48.1	
PRA				e		21 51 24.8	
PRA				MLR	MLR		
	comp=Z,2µm,16.1s						
RC01	Rabbit Creek A	102.06	331	IAMs_20	IAMs_20	22 25 46.8	
	comp=Z,2µm,20.0s						
PRU	Pruhonice	102.10	41	ePDIFF	Pdif	21 40 40.2	-1.1
PRU				ePP	PP	21 44 48.0	-5.4
PRU				eSKS		21 51 22.0	
PRU				AMS	AMS	22 24 00.0	
	comp=Z,2µm,19.4s						
PRU	Pruhonice	102.10	41	eP	Pdif	21 40 40.2	-1.1
PRU				e		21 44 48.0	
PRU				e		21 51 22.0	
PRU				MLR	MLR		
	comp=Z,2µm,19.4s						
ILAR	Eielson Array	102.11	335	P	Pdif	21 40 41.1	+0.1
	comp=Z,0.3nm,0.7s,baz=160,slow=5.7,SNR=4.3						
ILAR				PP	PP	21 44 52.3	-0.7
	comp=Z,1.1nm,0.9s,baz=100,slow=5.9,SNR=4.8						
ILAR				PKKP	PKKPdf	21 56 51.8	-2.5
	comp=Z,0.4nm,0.7s,baz=293,slow=4.0,SNR=4.4						
FYU	Fort Yukon	102.13	337	IAMs_20	IAMs_20	22 27 33.5	
	comp=Z,2µm,22.0s						
BRLK	Bradley Lake	102.17	329	IAMs_20	IAMs_20	22 23 38.3	
	comp=Z,2µm,22.0s						
PVCC	Panska Ves	102.27	41	ePP	PP	21 44 48.3	-6.3
PVCC				eSKS		21 51 22.2	
PVCC				AMS	AMS	22 26 10.0	
	comp=Z,3µm,18.5s						
CCB	Clear Creek Bu	102.43	335	IAMs_20	IAMs_20	22 28 09.5	
	comp=Z,3µm,21.0s						
RND	Reindeer	102.44	333	IAMs_20	IAMs_20	22 36 40.8	
	comp=Z,2µm,18.0s						
POKR	Poker Plat Res	102.45	335	P	Pdif	21 40 42.2	-0.3
	baz=110						
WRH	Wood River Hil	102.49	334	IAMs_20	IAMs_20	22 27 50.1	
	comp=Z,2µm,20.0s						
TREC	Trest	102.50	42	ePDIFF	Pdif	21 40 46.3	+3.1
TREC				ePP	PP	21 44 46.8	-10
TREC				eSKS		21 51 26.0	
TREC				AMS	AMS	22 24 00.0	
	comp=Z,3µm,22.5s						
TREC	Trest	102.50	42	eP	Pdif	21 40 46.3	+3.1
TREC				e		21 51 26.0	
TREC				MLR	MLR		
	comp=Z,3µm,22.5s						
COLA	College	102.53	335	IAMs_20	IAMs_20	22 28 23.6	
	comp=Z,3µm,20.0s						
MCK	McKinley	102.59	334	IAMs_20	IAMs_20	22 26 28.1	
	comp=Z,2µm,22.0s						
OHAK	Old Harbor	102.59	326	IAMs_20	IAMs_20	22 34 01.4	
	comp=Z,2µm,18.0s						
NEA	Nenana	102.92	334	IAMs_20	IAMs_20	22 30 33.4	
	comp=Z,2µm,21.0s						
BWN	Browne	102.95	334	IAMs_20	IAMs_20	22 28 42.4	
	comp=Z,2µm,21.0s						
TRF	Thorofare Moun	103.07	333	IAMs_20	IAMs_20	22 35 55.4	
	comp=Z,2µm,19.0s						
UPC	Upice	103.15	41	ePDIFF	Pdif	21 40 48.0	+2.0
UPC				ePP	PP	21 44 57.8	-3.4
UPC				eSKS		21 51 27.4	
UPC				AMS	AMS	22 25 10.0	
	comp=Z,2µm,18.0s						
UPC	Upice	103.15	41	eP	Pdif	21 40 48.0	+2.0
UPC				e		21 44 57.8	
UPC				e		21 51 27.4	
UPC				MLR	MLR		
	comp=Z,2µm,18.0s						
CHVC	Chvalec	103.20	41	AMS	AMS	22 25 10.0	
	comp=Z,2µm,17.8s						
PDG	Podgorica	103.21	50	IAMs_20	IAMs_20	22 27 29.0	
	comp=Z,2µm,21.0s						
DPC	Dobruska-Polom	103.30	41	ePDIFF	Pdif	21 40 50.5	+3.7
DPC				ePP	PP	21 44 59.3	-3.1
DPC				eSKS		21 51 30.3	
DPC				AMS	AMS	22 27 10.0	
	comp=Z,2µm,17.7s						
DPC	Dobruska-Polom	103.30	41	eP	Pdif	21 40 50.5	+3.7
DPC				e		21 44 59.3	
DPC				e		21 51 30.3	
DPC				MLR	MLR		
	comp=Z,2µm,17.7s						
KTH	Kantishna Hill	103.37	333	IAMs_20	IAMs_20	22 31 54.3	
	comp=Z,2µm,20.0s						
NOA	NORSAR Array B	103.45	30	Pdiff	Pdif	21 40 48.7	+1.5
	comp=Z,1.5nm,1.1s,baz=252,slow=5.0,SNR=2.2						
KRLC	Kraliky	103.52	41	ePDIFF	Pdif	21 40 47.2	-0.5
KRLC				ePP	PP	21 45 04.3	+0.3
KRLC				eSKS		21 51 31.6	
KRLC				AMS	AMS	22 24 50.0	
	comp=Z,2µm,20.3s						
KRLC	Kraliky	103.52	41	eP	Pdif	21 40 47.2	-0.5
KRLC				e		21 45 04.3	
KRLC				e		21 51 31.6	
KRLC				MLR	MLR		
	comp=Z,2µm,20.3s						
PPLA	Purkeypile	103.72	332	IAMs_20	IAMs_20	22 27 42.4	
	comp=Z,2µm,20.0s						
MLY	Manley	103.74	335	IAMs_20	IAMs_20	22 31 08.3	
	comp=Z,2µm,20.0s						
COLD	Coldfoot	104.20	337	IAMs_20	IAMs_20	22 30 27.2	
	comp=Z,2µm,20.0s						
OKC	Ostrava-Krasne	104.31	42	ePDIFF	Pdif	21 40 52.2	+1.0
OKC				ex	x	21 44 41.8	
OKC				eSKS		21 51 34.2	
OKC				AMS	AMS	22 25 00.0	
	comp=Z,2µm,20.6s						
OKC	Ostrava-Krasne	104.31	42	eP	Pdif	21 40 52.2	+1.0
OKC				e		21 51 34.2	
OKC				MLR	MLR		
	comp=Z,2µm,20.6s						
TOLK	Toolik Lake Re	104.40	338	IAMs_20	IAMs_20	22 33 45.5	
	comp=Z,2µm,19.0s						
TOLK	Toolik Lake Re	104.40	338	P	Pdif	21 40 51.1	-0.1
	baz=108						
SVW2	Sparrevohn	104.78	330	IAMs_20	IAMs_20	22 32 24.2	
	comp=Z,2µm,19.0s						
VTS	Vitosha	106.11	50	IAMs_20	IAMs_20	22 31 23.8	
	comp=Z,2µm,19.0s						
KWP	Kalwaria Pacla	107.16	43	IAMs_20	IAMs_20	22 29 47.9	
	comp=Z,3µm,20.0s						
KARP	Karpathos	107.60	58	IAMs_20	IAMs_20	22 35 21.6	
	comp=Z,2µm,19.0s						
KBS	Kingsbay	108.05	12	IAMs_20	IAMs_20	22 34 41.9	
	comp=Z,2µm,19.0s						
RDOG	Red Dog Mine	109.12	337	IAMs_20	IAMs_20	22 32 36.6	
	comp=Z,3µm,22.0s						
ANM	Nome	109.79	333	IAMs_20	IAMs_20	22 29 13.8	
	comp=Z,1µm,21.0s						
DZM	Mont Dzumac	110.22	236	ePP	PP	21 45 55.9	+2.5
	comp=Z,348nm,23.6s						
DZM	Mont Dzumac	110.22	236	ePS	PS	21 55 26.9	+3.6
	comp=Z,901nm,23.6s						
DZM	Mont Dzumac	110.22	236	eLR	LR	22 17 56.4	
	comp=Z,6µm,22.8s						
ISP	Isparta	110.69	56	IAMs_20	IAMs_20	22 36 09.9	
	comp=Z,2µm,20.0s						
KIS	Kishinev	110.78	46	ePKP	PP	21 45 58.0	+0.7
KIS				eSKS	SKSac	21 52 08.0	+8.3
KIS				eSKKS	Sdif	21 53 40.0	+3.0
KIS	Kishinev	110.78	46	ePS	PS	21 55 36.0	+8.0
AKASG	Malin Array Be	111.46	42	PKiKP	PKiKP	21 45 20.6	-0.4
	comp=Z,0.5nm,0.5s,baz=269,slow=3.2,SNR=2.5						
AKASG				PP	PP	21 46 02.2	+0.1
	comp=Z,0.4nm,0.4s,baz=259,slow=6.9,SNR=4.6						
AKBB	Malin Array Si	111.46	42	⇓iPKIKP	PKiKP	21 45 21.0	0.0
AKBB	Malin Array Si	111.46	42	IAMs_20	IAMs_20	22 30 51.6	
	comp=Z,2µm,21.0s						
CSS	Mathiatis	112.45	60	IAMs_20	IAMs_20	22 41 32.2	
	comp=Z,2µm,19.0s						
ANTO	Ankara	112.74	54	IAMs_20	IAMs_20	22 36 43.4	
	comp=Z,2µm,19.0s						
BR131	Keskin Array S	113.37	54	⇑iPKIKP	PKiKP	21 45 25.6	+0.3
BRTR	Keskin Array B	113.37	54	PKiKP	PKiKP	21 45 25.2	-0.1
	comp=Z,1.6nm,0.8s,baz=266,slow=2.7,SNR=7.0						
BRTR				PP	PP	21 46 13.9	-2.4
	comp=Z,1.0nm,0.9s,baz=249,slow=5.9,SNR=1.8						
ILGA	Ilgaz	113.58	53	IAMs_20	IAMs_20	22 36 03.7	
	comp=Z,2µm,20.0s						
APA	Apatity	113.69	24	⇓iPKIKP	PKiKP	21 45 20.2	-4.6
APA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
APA				MLR	MLR		
	comp=Z,3µm,21.0s						
ARMA	Armidale	115.41	220	IAMs_20	IAMs_20	22 26 23.9	
	comp=Z,2µm,20.0s						
GAZ	Gaziantep	115.86	58	IAMs_20	IAMs_20	22 40 24.3	
	comp=Z,2µm,19.0s						
OBN	Obninsk	116.03	38	⇑iPKIKP	PKiKP	21 45 32.2	+2.6
OBN				i		21 46 36.3	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ANN	Anapa	116.59	49	i PKIKP	PKiKP	21 45 31.2	+0.1
ANN				e		21 46 38.0	
ANN				eSS	SS	22 02 43.3	-1.5
ANN				eSSS	SSS	22 07 06.3	
ANN				pmax	pmax		
	comp=Z,54nm,1.1s						
KLMR	Klimovskoe	117.11	31	ePP	PP	21 46 38.5	-3.1
KLMR				SP	SP	21 56 24.6	+1.1
KLMR				PS	PKKPdf	21 56 37.9	+12
KLMR				PS	PKKPdf	21 56 37.9	+12
KLMR				LR	LR	22 26 31.6	
KLMR				AMP		22 33 04.9	
	comp=Z,2µm,16.1s						
LPSR	Galich'ya Gora	117.54	40	i PKIKP	PKPdf	21 45 32.6	0.0
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LPSR				MLR	MLR		
	comp=Z,3µm,19.0s						
VSR	Storozhevoye	117.75	42	⇑iPKIKP	PKiKP	21 45 33.3	+0.2
SOC	Sochi	118.20	51	i PKIKP	PKPdf	21 45 32.2	-2.0
SOC				ePPP	PPP	21 49 18.6	
SOC				e		21 52 22.1	
SOC				ePS	PKKPdf	21 56 24.2	+0.9
VRH	Novokhopyorsk	119.36	42	i PKIKP	PKPdf	21 45 35.0	-1.2
VRH				eSS	SS	22 03 27.1	+6.9
VRH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VRH				MLR	MLR		
	comp=Z,4µm,18.0s						
STKA	Stephens Creek	119.84	212	PKP	PKiKP	21 45 38.9	+0.9
	comp=Z,2.4nm,0.8s,baz=244,slow=1.4,SNR=3.3						
PRGR	Permogore	119.86	30	ePKIKP	PKPdf	21 45 36.3	-0.5
PRGR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KIV	Kislovodsk	120.35	50	i PKIKP	PKPdf	21 45 38.5	0.0
KIV				e		21 47 05.3	
KIV				ePS	PS	21 56 56.2	+0.6
KIV				eSS	SS	22 03 28.9	-4.8
KIV				pmax	pmax		
	comp=Z,29nm,1.1s						
KIV				MLR	MLR		
	comp=Z,4µm,22.0s						
KIV	Kislovodsk	120.35	50	IAMs_20	IAMs_20	22 37 39.4	
	comp=Z,1µm,20.0s						
BILL	Bilibino	120.45	339	i PKIKP	PKiKP	21 45 38.2	+0.3
BILL				i		21 47 06.9	
BILL				i		21 52 29.9	
BILL				i PS	PS	21 56 51.1	-4.2
BILL				i SS	SS	22 03 28.8	-4.4
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KBZ	Khabaz	120.50	50	PKP	PKiKP	21 45 39.3	+0.6
	comp=Z,9.6nm,0.9s,baz=167,slow=2.3,SNR=11						
GOF	Gofitskoye	120.58	49	⇑ePKIKP	PKPdf	21 45 24.9	-14
RAYN	Ar Rayn	121.13	74	PKIKP	PKiKP	21 45 41.2	+0.5
RAYN				MLR	MLR		
	comp=Z,5µm,19.0s						
RAYN	Ar Rayn	121.13	74		PKiKP	21 45 41.2	+0.5
ZEI	Tsey	121.25	51	i PKIKP	PKiKP	21 45 41.3	+0.7
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GNI	Garni	121.91	55	IAMs_20	IAMs_20	22 43 09.1	
	comp=Z,2µm,20.0s						
MAK	Makhachkala	123.89	51	i PKIKP	PKPdf	21 45 42.4	-2.8
MAK				e		21 47 24.9	
MAK				pmax	pmax		
	comp=Z,553nm,1.7s						
H11S2	WAKE ISLAND Hy	125.93	279	T	T	00 05 24.2	
	baz=102,slow=74,SNR=496						
H11S1	WAKE ISLAND Hy	125.94	279	T	T	00 05 23.0	
	baz=102,slow=74,SNR=593						
H11S3	WAKE ISLAND Hy	125.94	279	T	T	00 05 23.7	
	baz=102,slow=74,SNR=478						
H11N3	WAKE ISLAND Hy	125.97	280	T	T	00 05 27.0	
	baz=100,slow=75,SNR=144						
H11N2	WAKE ISLAND Hy	125.99	280	T	T	00 05 28.2	
	baz=100,slow=75,SNR=165						
H11N1	WAKE ISLAND Hy	125.99	280	T	T	00 05 25.3	
	baz=100,slow=75,SNR=147						
CTAO	Charters Tower	126.15	225	IAMs_20	IAMs_20	22 29 32.4	
	comp=Z,2µm,22.0s						
TIXI	Tiksi	127.04	352	PKP	PKPdf	21 45 50.5	+0.1
	comp=Z,2.2nm,0.7s,baz=11,slow=1.7,SNR=13						
TIXI	Tiksi	127.04	352		PKPdf	21 45 50.4	0.0
TIXI				IAMs_20	IAMs_20	22 45 48.0	
	comp=Z,1µm,19.0s						
ARU	Arti	127.84	33	i PKIKP	PKiKP	21 45 53.1	+0.2
ARU						21 47 53.2	
ARU				PPP	PPP	21 50 34.3	
ARU						21 53 04.2	
ARU				SP	SP	21 57 52.9	-5.9
ARU				PS	PS	21 58 03.5	+2.6
ARU				MLR	MLR		
	comp=Z,2µm,19.0s						
ARU	Arti	127.84	33		PKPdf	21 45 52.5	+0.2
SEY	Seymchan	127.99	337	PKP	PKiKP	21 45 53.0	0.0
	comp=Z,9.3nm,0.8s,baz=117,slow=2.9,SNR=27						
SEY				PP	PP	21 47 56.0	+0.9
	comp=Z,3.7nm,0.8s,baz=64,slow=7.2,SNR=3.8						
SEY	Seymchan	127.99	337	⇑iPKIKP	PKiKP	21 45 53.0	0.0
SVE	Sverdlovsk	128.72	32	i PKIKP	PKiKP	21 45 55.4	+0.8
SVE				e		21 47 56.5	
SVE				pmax	pmax		
	comp=Z,13nm,1.5s						
SVE				MLR	MLR		
	comp=Z,3µm,21.0s						
SVE				MLR	MLR		
	comp=E,2µm,21.0s						
NRIK	Noril'sk	128.87	10	PKP	PKPdf	21 45 53.9	-0.1
	comp=E,1.2nm,0.4s,baz=300,slow=12,SNR=2.7						
PET	Petropavlovsk	129.78	323	IAMs_20	IAMs_20	22 50 30.3	
	comp=Z,1µm,20.0s						
AJN	Ajban	129.86	74	i Pdiff	SKPab	21 49 20.1	+0.5
	SNR=11						
PEA0B	Petropavlovsk-	130.29	324	IAMs_20	IAMs_20	22 52 28.7	
	comp=Z,1µm,19.0s						
PETK	Petropavlovsk-	130.29	324	PKP	PKPdf	21 45 57.1	0.0
	comp=Z,4.7nm,0.8s,baz=101,slow=7.7,SNR=6.5						
PETK	Petropavlovsk-	130.29	324		PKiKP	21 45 59.0	+1.1
ASAR	Alice Springs	130.41	210	PKhKP	PKPpre	21 45 50.9	
	comp=Z,0.5nm,0.7s,baz=137,slow=2.2,SNR=6.2						
ASAR				PKP	PKPdf	21 45 58.6	+0.2
	comp=Z,6.6nm,0.9s,baz=144,slow=2.2,SNR=25						
ASAR				SKPbc	SKPbc	21 49 24.8	+2.6
	comp=Z,1.2nm,0.9s,baz=162,slow=3.7,SNR=3.4						
AS31	Alice Springs	130.41	210		PKPdf	21 45 58.8	+0.4
AS31				PP	PP	21 48 10.5	-0.4
FAQ	Al Faqa, Dubai	130.43	74	i Pdiff	SKPab	21 49 21.4	-0.6
	SNR=9.0						
ALNE	Al Ain	130.50	75	i Pdiff	SKPab	21 49 21.6	-0.8
	SNR=14						
NAZ	Nazwa, Dubai	130.51	74	i Pdiff	SKPab	21 49 21.4	-1.0
	SNR=15						
MA2	Magadan	130.57	334	IAMs_20	IAMs_20	22 53 49.9	
	comp=Z,1µm,19.0s						
ASHO	Ashiyiah	130.84	74	i Pdiff	SKPab	21 49 22.3	-1.6
	SNR=6.3						
HATD	Hatta, Dubai	130.93	74	i Pdiff	SKPab	21 49 22.7	-1.5
	SNR=7.1						
MSFE	Esma-Masafi	131.00	73	i Pdiff	SKPab	21 49 23.0	-1.4
	SNR=9.4						
UOSS	Minazif	131.00	74	i Pdiff	SKPab	21 49 22.7	-1.8
	SNR=8.3						
SHME	Shamm	131.04	72	i Pdiff	SKPab	21 49 23.0	-1.6
	SNR=13						
MDH	Madha	131.12	73	i Pdiff	SKPab	21 49 22.9	-2.0
	SNR=8.5						
BANOM	Banah	131.17	73	i Pdiff	SKPab	21 49 22.9	-2.3
	SNR=11						
ABKAR	Akbulak array	131.18	41		PKiKP	21 45 59.8	-0.1
RABL	Rabaul	131.46	245	IAMs_20	IAMs_20	22 32 55.8	
	comp=Z,2µm,21.0s						
GEYT	Alibeck	132.44	56	PKP	PKPdf	21 46 01.5	-0.2
	comp=Z,3.5nm,1.0s,baz=260,slow=4.4,SNR=2.6						
WRA	Warramunga Arr	133.33	213	PKhKP	PKPpre	21 45 56.2	
	comp=Z,0.2nm,0.3s,baz=170,slow=1.8,SNR=14						
WRA				PKP	PKiKP	21 46 04.8	-0.3
	comp=Z,3.8nm,0.7s,baz=151,slow=1.8,SNR=22						
WRA				SKPbc	SKPbc	21 49 32.8	+0.1
	comp=Z,1.5nm,0.9s,baz=146,slow=3.4,SNR=7.3						
WRA	Warramunga Arr	133.33	213		PKPdf	21 46 03.8	-0.1
WRAB	Tennant Creek	133.33	213	c iPKIKP	PKPdf	21 46 04.2	+0.3
WB0	Warramunga Arr	133.45	213		PKiKP	21 46 04.9	-0.5
BRVK	Borovoye	135.41	33	PKIKP	PKiKP	21 46 08.2	-0.1
BRVK				MLR	MLR		
	comp=Z,3µm,20.0s						
BRVK	Borovoye	135.41	33		PKiKP	21 46 08.2	-0.1
YAK	Yakutsk	135.62	346	PKP	PKiKP	21 46 07.8	-0.6
	comp=Z,6.7nm,0.4s,baz=51,slow=2.8,SNR=1.7						
YAK	Yakutsk	135.62	346	ePKIKP	PKiKP	21 46 14.0	+5.6
YAK				e		21 48 51.7	
YAK				pmax	pmax		
	comp=Z,16nm,0.7s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.7s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,149nm,13.8s						
YAK				pmax	pmax		
	comp=N,124nm,13.4s						
YAK				pmax	pmax		
	comp=E,53nm,13.8s						
YAK				MLR	MLR		
	comp=Z,899nm,20.0s						
YAK				MLR	MLR		
	comp=N,1µm,21.0s						
YAK				MLR	MLR		
	comp=E,503nm,19.0s						
YAK	Yakutsk	135.62	346		PKPdf	21 46 06.5	-0.3
YAK				IAMs_20	IAMs_20	22 49 18.5	
	comp=Z,1µm,20.0s						
HRA	Herat	136.19	61		PKiKP	21 46 10.1	-0.6
NKL	Nikolayevsk	138.95	331	i PKIKP	PKiKP	21 46 21.2	+5.8
NKL				MLR	MLR		
	comp=Z,820nm,17.0s						
NKL				MLR	MLR		
	comp=E,43nm,16.0s						
NKL				MLR	MLR		
	comp=N,41nm,10.0s						
KK31	Karatay Array	140.23	46	PKIKP	PKPdf	21 46 16.9	+0.9
KK31	Karatay Array	140.23	46		PKPdf	21 46 16.9	+0.9
KKAR	Karatay Array	140.23	46	PKIKP	PKPdf	21 46 16.6	+0.6
KKAR	Karatay Array	140.23	46		PKPdf	21 46 16.7	+0.7
KKAR	Karatay Array	140.23	46		PKPdf	21 46 16.6	+0.6
KURK	Kurchatov	140.96	31	⇑iPKIKP	PKPdf	21 46 17.8	+0.8
KURK	Kurchatov	140.96	31		PKPdf	21 46 17.7	+0.8

YUK	Yuzh-Kuril'sk	141.21	317	*i* PKIKP	PKPdf	21 46 18.5	+0.9
ZAA0	Zalesovo Array	141.27	23		PKPdf	21 46 16.2	-1.3
ZAA0				IAMs_20	IAMs_20	22 51 44.3	
	comp=Z,1µm,20.0s						
ZALV	Zalesovo Beam	141.27	23	PKP	PKPdf	21 46 17.0	-0.5
	comp=Z,7.8nm,0.6s,baz=308,slow=2.7,SNR=10						
ZALV	Zalesovo Beam	141.27	23	PKIKP	PKPdf	21 46 17.0	-0.5
YSS	Yuzh-Sakhalins	141.66	322	*e*PKIKP	PKiKP	21 46 23.5	+2.3
YSS	Yuzh-Sakhalins	141.66	322	IAMs_20	IAMs_20	22 58 23.7	
	comp=Z,1µm,20.0s						
GENI	Genyem	142.25	237	PKP	PKPdf	21 46 18.5	-2.0
AAK	Ala-Archa	143.08	44	c*e*PKIKP	PKPbc	21 46 19.3	+1.2
AAK	Ala-Archa	143.08	44		PKPdf	21 46 19.9	-1.4
MNCY	Minicoy	143.12	103	IAMs_20	IAMs_20	22 48 37.3	
	comp=Z,4µm,19.7s						
BHUJ	Bhuj	143.15	78	*e*x	PKPab	21 46 14.5	-2.7
BHUJ				*i* PP	PP	21 49 31.1	-1.2
BHUJ				IAMs_20	IAMs_20	22 50 08.6	
	comp=Z,4µm,19.8s						
ZEA	Zeya	143.54	342	*i* PKIKP	PKPdf	21 46 20.4	-1.1
ZEA				*e*		21 49 32.0	
ZEA				pmax	pmax		
	comp=Z,250nm,3.0s						
ZEA				pmax	pmax		
	comp=Z,1µm,5.0s						
MAKZ	Makanchi	145.19	33	PKIKP	PKPdf	21 46 24.8	+0.1
MAKZ				MLR	MLR		
	comp=Z,3µm,21.0s						
MAKZ	Makanchi	145.19	33		PKPdf	21 46 24.8	+0.1
NIL	Nilore	145.31	59	PKIKP	PKPbc	21 46 25.0	-0.1
NIL				MLR	MLR		
	comp=Z,4µm,20.0s						
NIL	Nilore	145.31	59		PKPbc	21 46 25.0	-0.1
MKAR	Makanchi Array	145.36	33	PKPbc	PKPdf	21 46 25.4	+0.4
	comp=Z,29nm,0.6s,baz=324,slow=4.3,SNR=222						
KSH	Kashi	145.45	48	PKPbc	PKPab	21 46 26.1	+0.5
KSH				PP	PP	21 49 48.3	+2.9
KSH				PKS	PKSdf	21 49 59.3	-1.7
KSH				SKKS		21 56 37.9	
KSH				AMB	AMB		
	comp=Z,1µm,5.7s						
KSH				LR	LR		
	comp=Z,900nm,11.5s						
KSH				LR	LR		
	comp=Z,970nm,13.7s						
KSH				LR	LR		
	comp=Z,2µm,18.9s						
DGZ	Jazzator, Alta	145.61	25	c*i*PKIKP	PKPab	21 46 26.6	+0.7
KLR	Kul'dur	145.67	334	PKPbc	PKPbc	21 46 25.8	+0.2
	comp=Z,20nm,0.9s,baz=39,slow=3.3,SNR=31						
KLR	Kul'dur	145.67	334	c*i*PKIKP	PKPdf	21 46 25.3	-0.1
GOA	Goa	146.04	92	*e*P	PKPdf	21 46 26.4	-0.5
GOA				IAMs_20	IAMs_20	22 47 58.6	
	comp=Z,3µm,19.8s						
TEY	Ternei	146.25	324	⇓*e*PKP2	PKPbc	21 46 27.9	+0.4
TEY				pmax	pmax		
	comp=E,20nm,0.9s						
TEY				pmax	pmax		
	comp=Z,30nm,0.9s						
TEY				pmax	pmax		
	comp=E,30nm,1.0s						
TEY				pmax	pmax		
	comp=N,20nm,1.1s						
TEY				pmax	pmax		
	comp=Z,60nm,1.0s						
TEY				pmax	pmax		
	comp=Z,500nm,5.4s						
POO	Poona	146.61	86	*e*P	PKPdf	21 46 27.6	-0.3
TRD	Trivandrum	146.79	105	*e*P	PKPdf	21 46 27.1	-1.2
TRD				IAMs_20	IAMs_20	22 48 36.5	
	comp=Z,3µm,18.0s						
IRK	Irkutsk	147.55	6	*e*PKP2	PKiKP	21 46 33.3	+0.1
IRK				pmax	pmax		
	comp=Z,200nm,3.5s						
MOY	Mondy	147.70	10	*e*PKP2	PKPbc	21 46 32.4	+0.8
MOY				pmax	pmax		
	comp=Z,190nm,3.1s						
CIT	Chita	147.82	355	*e*PKP2	PKPab	21 46 34.7	+0.5
FAKI	Fak Fak	147.93	227	PKP	PKPbc	21 46 32.0	-1.3
FAKI	Fak Fak	147.93	227		PKPbc	21 46 33.4	+0.2
FAKI				IAMs_20	IAMs_20	22 49 02.0	
	comp=Z,1µm,19.0s						
TLY	Talaya	148.04	7	*e*PKP2	PKPab	21 46 35.3	+0.2
TLY				*e*SS	SS	22 08 56.8	-8.3
TLY				pmax	pmax		
	comp=Z,240nm,0.9s						
TLY				MLR	MLR		
	comp=Z,2µm,14.0s						
TLY	Talaya	148.04	7		PKPdf	21 46 28.5	-0.8
TLY				IAMs_20	IAMs_20	23 07 15.6	
	comp=Z,1µm,18.0s						
DHRM	DHARAMSHALA	148.13	61	*i* x	PKPbc	21 46 34.0	+0.4
BHK	Bhakra	148.43	62	*e*x	PKPab	21 46 38.2	+0.8
MMRI	Maumere	148.83	205	PKP	PKPdf	21 46 32.8	+1.1
MMRI	Maumere	148.83	205	IAMs_20	IAMs_20	22 43 54.1	
	comp=Z,1µm,21.0s						
JCJ	Chichijima	149.01	290	PKPbc	PKiKP	21 46 36.4	-0.6
	comp=Z,24nm,0.6s,baz=246,slow=13,SNR=5.4						
SMLA	Simla	149.12	62	*e*P	PKPdf	21 46 33.4	+1.7
SMLA				*i* x	x	21 49 52.1	
KLRI	Killari	149.13	88	*e*PKPbc	PKPbc	21 46 35.2	-1.0
KLRI				IVMs_BB	IVMs_BB	22 55 05.2	
	comp=Z,1µm,18.4s						
URV	Uravakonda	149.14	94	*e*PKPdf	PKPdf	21 46 31.4	-0.7
URV				*e*PKPbc	sPKPdf	21 46 35.1	+0.2
URV				IVMs_BB	IVMs_BB	22 53 43.1	
	comp=Z,865nm,17.0s						
USA0B	Ussuriysk Arra	149.27	327	PKP2	PKiKP	21 46 36.4	-0.5
USA0B				MLR	MLR		
	comp=Z,2µm,20.0s						
USA0B	Ussuriysk Arra	149.27	327		PKiKP	21 46 36.4	-0.5
USA0B				IAMs_20	IAMs_20	22 50 33.5	
	comp=Z,2µm,20.0s						
USRK	Ussuriysk Ar.	149.27	327	PKPbc	PKPbc	21 46 36.3	+0.5
	comp=Z,26nm,0.9s,baz=30,slow=1.3,SNR=39						
USRK	Ussuriysk Ar.	149.27	327	PKP2	PKiKP	21 46 36.7	-0.3
USRK	Ussuriysk Ar.	149.27	327		PKiKP	21 46 36.7	-0.3
USRK				PKPab	sPKPab	21 46 43.6	+0.7
ZAK	Zakamensk	149.28	7	*e*PKIKP	PKPbc	21 46 33.7	-2.0
ZAK				pmax	pmax		
	comp=Z,26nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
XMIS	Christmas Isla	149.55	173	IAMs_20	IAMs_20	23 03 39.2	
	comp=Z,1µm,18.0s						
HIA	Hailar	149.56	346	IAMs_20	IAMs_20	23 01 15.1	
	comp=Z,1µm,21.0s						
PALK	Pallekele	149.62	111	PKPbc	PKPbc	21 46 36.6	-1.0
	comp=Z,9.1nm,0.9s,baz=234,slow=6.3,SNR=4.7						
PALK	Pallekele	149.62	111		PKPdf	21 46 35.0	+2.0
NDI	New Delhi	149.65	67	*e*P	PKPbc	21 46 37.0	-0.2
MJAR	Matsushiro Arr	149.74	309	PKPbc	PKPbc	21 46 36.7	-0.6
	comp=Z,18nm,0.8s,baz=108,slow=1.1,SNR=31						
MJAR	Matsushiro Arr	149.74	309		PKPbc	21 46 36.3	-1.0
MAJO	Matsushiro	149.74	309		PKPbc	21 46 36.7	-0.5
MAT	Matsushiro	149.74	309	PKP	PKPbc	21 46 36.1	-1.1
AAI	Ambon	150.00	220	PKP	PKPdf	21 46 35.0	+1.4
DDI	Dehra Dun	150.05	64	*e*P	PKPdf	21 46 32.2	-1.0
DDI				IAMs_20	IAMs_20	22 55 27.7	
	comp=Z,3µm,18.1s						
SWI	Sorong	150.08	229	PKP	PKPdf	21 46 34.6	+0.9
MDJ	Mudanjiang	150.14	330	PKPbc	PKPdf	21 46 31.6	-1.3
MDJ				AMB	AMB		
	comp=Z,650nm,4.0s						
MDJ				LR	LR		
	comp=Z,1µm,20.4s						
MDJ				LR	LR		
	comp=Z,750nm,14.0s						
MDJ				LR	LR		
	comp=Z,2µm,19.8s						
WMQ	Urumqi	150.17	32	*e*PKPbc	PKPdf	21 46 35.6	+2.5
WMQ				pPKP	PKiKP	21 46 39.1	+0.1
WMQ				PKPab	pPKPab	21 46 46.4	+0.4
WMQ				PP	PP	21 50 16.8	+4.4
WMQ				SS	SS	22 09 31.5	+1.4
WMQ				AMB	AMB		
	comp=Z,450nm,5.7s						
WMQ				LR	LR		
	comp=Z,1µm,21.9s						
WMQ				LR	LR		
	comp=Z,2µm,22.9s						
WMQ				LR	LR		
	comp=Z,3µm,20.1s						
PLAI	Plampang	150.18	197	PKP	PKPdf	21 46 35.2	+1.3
BHPL	Bhopal	150.29	78	*e*x	x	21 46 35.5	
BHPL				IAMs_20	IAMs_20	22 55 23.8	
	comp=Z,2µm,16.1s						
IGBI	Denpasar	150.82	192	PKP	PKiKP	21 46 40.8	-0.3
HYB	Hyderabad	150.86	90	*i* PKP	PKPbc	21 46 38.0	-2.5
HYB				*e*		21 46 42.0	
HYB				*e*PP	PP	21 50 10.0	-7.9
HYB	Hyderabad	150.86	90	*i* P	PKPdf	21 46 35.2	+0.4
HYBB	Hyderabad (bro	150.86	90	*e*PKPbc	PKPbc	21 46 39.4	-1.0
HYBB				IVMs_BB	IVMs_BB	22 51 10.4	
	comp=Z,841nm,21.0s						
SRSP	Sriramsagar	150.89	87	*e*PKPdf	PKPdf	21 46 33.8	-1.0
SRSP				IVMs_BB	IVMs_BB	22 56 27.9	
	comp=Z,574nm,18.1s						
SRLM	Srisailam	150.93	93	*e*PKPbc	PKPbc	21 46 40.0	-0.6
SRLM				IVMs_BB	IVMs_BB	22 53 08.5	
	comp=Z,479nm,18.9s						
SKHT	Srikalahasti	151.12	98	*e*PKPdf	PKPdf	21 46 33.8	-1.4
SKHT				IVMs_BB	IVMs_BB	22 59 44.7	
	comp=Z,331nm,18.3s						
INU	Inuyama	151.12	308		PKPbc	21 46 40.7	+0.1
JAGI	Jajag, Banyuwa	151.34	190	PKP	PKPdf	21 46 36.7	+1.0
JAGI	Jajag, Banyuwa	151.34	190		PKPdf	21 46 34.7	-1.0
JAGI				PKPbc	PKPbc	21 46 41.5	-0.2
JAGI				PKPab	PKPab	21 46 47.4	-2.1
NJS	Nagarjunasagar	151.41	92	*e*PKPdf	PKPdf	21 46 34.6	-1.0
NJS				*e*		21 46 38.8	
NJS				IVMs_BB	IVMs_BB	22 53 23.5	
	comp=Z,511nm,18.6s						
MDRS	Chennai	151.42	99	*i* P	PKPdf	21 46 35.3	-0.4
RPR	Rampur	151.77	87	*e*PKPdf	PKPdf	21 46 35.2	-0.9
RPR				*e*		21 46 39.2	
ADKI	Addanki	151.89	94	*e*PKPdf	PKPdf	21 46 35.4	-1.0
ADKI				*e*PKPbc	PKPbc	21 46 41.8	-1.0
ADKI				IVMs_BB	IVMs_BB	22 50 45.3	
	comp=Z,403nm,19.4s						
PCJI	Pacitan	151.96	184	PKP	PKiKP	21 46 43.4	0.0
SONM	Songino Array	152.10	4	PKP	PKPdf	21 46 36.5	+0.5
	comp=Z,1.6nm,0.9s,baz=317,slow=1.2,SNR=12						
SONM				PKPbc	PKiKP	21 46 43.1	+0.2
	comp=Z,15nm,0.8s,baz=326,slow=1.3,SNR=46						
SONM	Songino Array	152.10	4		PKPdf	21 46 37.6	+1.7
ULN	Ulaanbaatar	152.10	3	PKIKP	PKPdf	21 46 36.3	+0.3
ULN				MLR	MLR		
	comp=Z,2µm,21.0s						
ULN	Ulaanbaatar	152.10	3		PKPdf	21 46 36.3	+0.3
GGR	Gangavaram	152.48	90	*e*PKPdf	PKPdf	21 46 34.9	-2.4
GGR				*e*PP	PP	21 50 25.4	-1.8
GGR				IVMs_BB	IVMs_BB	22 52 07.7	
	comp=Z,562nm,22.0s						
CISI	Cisompet, Garu	152.62	177		PKPbc	21 46 43.7	-0.9
CISI				IAMs_20	IAMs_20	22 50 30.3	
	comp=Z,964nm,20.0s						
SANI	Sanana	152.63	219	PKP	PKPdf	21 46 38.8	+1.2
MYLAV	Mylavaram	152.70	92	*e*PKPdf	PKPdf	21 46 36.7	-0.8
MYLAV				*e*		21 46 41.1	
MYLAV				IVMs_BB	IVMs_BB	22 53 43.8	
	comp=Z,645nm,19.0s						
CNJI	Cibinong	152.83	175	PKP	PKPdf	21 46 39.6	+1.7
KAPI	Kappang	153.11	204	PKPbc	PKiKP	21 46 46.1	+0.3
	comp=Z,17nm,0.9s,baz=225,slow=5.0,SNR=6.0						
PVM	Polavaram	153.72	91	*e*PKPdf	PKPdf	21 46 38.0	-1.0
PVM				IVMs_BB	IVMs_BB	22 57 06.1	
	comp=Z,456nm,16.8s						
SNY	Shenyang	155.03	334	⇑PKP	PKPdf	21 46 42.3	+2.2
SNY				PP	PP	21 50 42.6	+3.0
SNY				SKS	SKSdf	21 53 46.9	-0.2
SNY				SS	SS	22 10 22.5	-0.4
SNY				LR	LR		
	comp=Z,1µm,17.9s						
SNY				LR	LR		
	comp=Z,660nm,20.6s						
SNY				LR	LR		
	comp=Z,2µm,23.3s						
MDSI	Maura Dua	155.21	168	PKP	PKPdf	21 46 42.1	+0.8
LUWI	Luwuk	155.26	214	IAMs_20	IAMs_20	22 49 23.6	
	comp=Z,1µm,21.0s						
DANN	Dangsing	155.35	65	*e*P	PKPdf	21 46 41.7	+0.3
	comp=Z,44nm,0.9s						
KSRS	Korea Array	156.14	321	PKP	PKPdf	21 46 42.0	+0.2
	comp=Z,2.0nm,0.8s,baz=134,slow=0.2,SNR=7.3						
KSRS				PKPab	PKPab	21 47 09.4	+0.1
	comp=Z,3.4nm,0.9s,baz=54,slow=2.8,SNR=2.8						
KSAR	Wonju Array Be	156.17	321	PKIKP	PKPdf	21 46 41.9	+0.1
KSAR	Wonju Array Be	156.17	321		PKPdf	21 46 41.9	+0.1
GKN	Gorkha	156.19	66	*e*P	PKPdf	21 46 42.9	+0.5
CHLP	Challavanipeta	156.21	89	*e*PKPdf	PKPdf	21 46 41.4	-0.9
CHLP				*e*PP	PP	21 50 47.8	-0.3
CHLP				IVMs_BB	IVMs_BB	22 53 06.4	
	comp=Z,501nm,23.5s						
DMN	Daman	156.69	66	*e*P	PKPdf	21 46 43.9	+0.7
KKN	Kakani	156.79	66	*e*P	PKPdf	21 46 44.2	+1.0
INCN	Inchon	156.87	323	IAMs_20	IAMs_20	23 01 45.9	
	comp=Z,1µm,20.0s						
PKIN	Phulchoki	156.94	66	*e*P	PKPdf	21 46 44.4	+0.9
PKI	Pulchoki	156.96	66	*e*P	PKPdf	21 46 44.3	+0.7
GUN	Gumba	157.27	65	*e*P	PKPdf	21 46 45.1	+1.1
JIRN	Jiri	157.60	66	*e*P	PKPdf	21 46 45.1	+0.6
BOK	Bokaro	158.02	76	*e*P	PKPdf	21 46 42.6	-2.0
BOK				*i* PP	PP	21 50 55.5	-2.5
BOK				IAMs_20	IAMs_20	22 56 23.1	
	comp=Z,3µm,19.9s						
RAMN	Ramite	158.13	67	*e*P	PKPdf	21 46 46.3	+1.3
	comp=Z,15nm,0.7s						
DL2	Dalian	158.28	333	PKP	PKPdf	21 46 46.9	+2.5
DL2				PP	PP	21 50 57.6	-0.1
DL2				SS	SS	22 10 58.3	+0.4
DL2				AMB	AMB		
	comp=Z,410nm,4.3s						
DL2				LR	LR		
	comp=Z,1µm,17.5s						
DL2				LR	LR		
	comp=Z,750nm,18.5s						
DL2				LR	LR		
	comp=Z,2µm,18.6s						
ODAN	Odare	158.84	67	*e*P	PKPdf	21 46 46.6	+0.8
GTA	Gaotai	158.99	21	⇑PKP	PKPdf	21 46 45.3	-0.2
GTA				PP	PP	21 51 01.3	-0.3
GTA				SKKS		21 57 50.1	
GTA				SS	SS	22 11 07.4	+2.0
GTA				AMB	AMB		
	comp=Z,660nm,9.7s						
GTA				LR	LR		
	comp=Z,1µm,19.7s						
GTA				LR	LR		
	comp=Z,1µm,20.9s						
GTA				LR	LR		
	comp=Z,3µm,19.7s						
TAPN	Taplejung	158.99	65	*e*P	PKPdf	21 46 47.1	+1.0
HHC	Hu-ho-hao-te	159.08	355	*e*PKP	PKPdf	21 46 46.9	+1.4
HHC				PP	PP	21 51 02.0	+0.3
HHC				SKKS		21 57 53.3	
HHC				SS	SS	22 11 05.3	-0.5
HHC				AMB	AMB		
	comp=Z,1µm,9.3s						
HHC				LR	LR		
	comp=Z,5µm,19.6s						
HHC				LR	LR		
	comp=Z,2µm,20.0s						
HHC				LR	LR		
	comp=Z,4µm,20.7s						
BJI	Beijing	159.11	345	PKP	PKPdf	21 46 47.9	+2.5
BJI				PP	PP	21 51 03.9	+2.0
BJI				SS	SS	22 11 06.3	+0.2
BTO	Baotou	159.41	358	*e*PKP	PKPdf	21 46 45.8	-0.1
GTK	Tadong	159.76	65	*e*x	PKPdf	21 46 43.1	-3.6
GTK				*i* PP	PP	21 51 04.0	-3.3
KCP	Kidapawan	159.93	232	⇓*i*P	PKPdf	21 46 49.2	+2.0
RPSI	Rantau Prapat	160.12	148		PKPdf	21 46 46.7	-0.6
RPSI					PKPab	21 47 28.1	+1.1
PSI	Prapat	160.21	148	PKP	PKPdf	21 46 46.7	-0.9
	comp=Z,1.4nm,0.4s,baz=220,slow=5.7,SNR=4.3						
PSI				PKPab	PKPab	21 47 28.1	+0.5
	comp=Z,5.3nm,0.5s,baz=204,slow=6.2,SNR=6.5						
LSA	Lhasa	160.97	56	PKIKP	PKPdf	21 46 49.6	+1.1
LSA						21 47 30.4	
LSA	Lhasa	160.97	56		PKPdf	21 46 49.6	+1.1
LSA					PKPab	21 47 30.4	-0.7
TIY	Taiyuan	162.09	352	*e*PKP	PKPdf	21 46 52.1	+3.3
TIY				PKPab	pPKPab	21 47 37.8	+0.7
TIY				PP	PP	21 51 21.8	+3.9
TIY				SS	SS	22 11 39.4	+2.0
TIY				AMB	AMB		
	comp=Z,280nm,4.2s						
TIY				LR	LR		
	comp=Z,2µm,20.0s						
TIY				LR	LR		
	comp=Z,1µm,18.5s						
TIY				LR	LR		
	comp=Z,2µm,22.4s						
PBA	Port Blair	162.14	115	*e*P	PKPdf	21 46 47.5	-1.9
PBA				*i* PP	PP	21 51 24.2	+4.2
DGPR	DIGLIPUR	163.00	111	*e*P	PKPdf	21 46 47.1	-3.1
DGPR				*i* x	x	21 51 24.2	
SHL	Shillong	163.07	68	*e*P	PKPdf	21 46 50.6	+0.3
SHL				*i* PP	PP	21 51 23.4	-1.9
LZH	Lanzhou	163.25	15	*e*PKP	PKPdf	21 46 53.3	+3.1
LZH				SKKS		21 58 14.3	
LZH				SS	SS	22 11 50.0	+0.1
LZH				AMB	AMB		
	comp=Z,910nm,10.2s						
LZH				LR	LR		
	comp=Z,1µm,18.4s						
LZH				LR	LR		
	comp=Z,2µm,18.1s						
LZH				LR	LR		
	comp=Z,2µm,19.8s						
TEZP	TEZPUR	163.53	63	*e*x	PKPdf	21 46 56.1	+5.6
TEZP				*i* x	x	21 51 24.4	
KOHI	KOHIMA	164.94	65	*e*P	PKPdf	21 46 49.4	-2.5
KOHI				*i* PP	PP	21 51 37.6	+2.7
NJ2	Nanjing	165.18	326	*e*PKP	PKPdf	21 46 51.0	-0.8
NJ2				PKPab	sPKPab	21 47 52.4	+1.0
NJ2				PP	PP	21 51 39.3	+4.6
NJ2				SS	SS	22 12 13.5	+3.2
NJ2				AMB	AMB		
	comp=Z,910nm,3.8s						
NJ2				LR	LR		
	comp=Z,880nm,22.3s						
NJ2				LR	LR		
	comp=Z,970nm,20.4s						
NJ2				LR	LR		
	comp=Z,2µm,18.6s						
XAN	Xi'an	165.97	1	PKP	PKPdf	21 46 55.4	+2.9
XAN				pPKP	sPKPdf	21 46 59.3	+4.1
XAN				PP	PP	21 51 38.8	+0.6
XAN				SS	SS	22 12 15.3	-1.9
XAN				AMB	AMB		
	comp=Z,650nm,9.2s						
XAN				LR	LR		
	comp=Z,1µm,19.6s						
XAN				LR	LR		
	comp=Z,1µm,20.6s						
XAN				LR	LR		
	comp=Z,2µm,22.1s						
CD2	Chengdu	168.03	23	PKP	PKPdf	21 46 54.3	+0.2
CD2				sPKP		21 47 02.0	
CD2				PP	PP	21 51 48.3	-0.9
CD2				SKKS		21 58 38.5	
CD2				SS	SS	22 12 37.3	-1.4
CD2				AMB	AMB		
	comp=Z,1µm,7.1s						
CD2				LR	LR		
	comp=Z,2µm,19.2s						
CD2				LR	LR		
	comp=Z,2µm,21.6s						
CD2				LR	LR		
	comp=Z,2µm,20.6s						
WHN	Wuhan	168.48	337	⇑PKP	PKPdf	21 47 03.6	+9.3
WHN				PKPab	sPKPab	21 48 10.3	+4.3
WHN				PP	PP	21 51 52.5	+1.1
QZH	Quanzhou	170.01	301	*i* PKP	PKPdf	21 46 58.6	+3.2
QZH				PP	PP	21 51 59.9	-0.6
QZH				SKKS		21 58 52.3	
QZH				SS	SS	22 12 59.4	-1.4
QZH				AMB	AMB		
	comp=Z,1µm,4.7s						
QZH				LR	LR		
	comp=Z,450nm,19.4s						
QZH				LR	LR		
	comp=Z,930nm,19.0s						
QZH				LR	LR		
	comp=Z,2µm,18.5s						
CMAR	Chiang Mai Arr	170.18	97	PKP	PKPdf	21 46 55.5	-0.2
	comp=Z,1.2nm,0.8s,baz=301,slow=2.1,SNR=7.7						
CMAR				PKPab	PKPab	21 48 11.0	-0.5
	comp=Z,2.5nm,0.6s,baz=250,slow=5.6,SNR=8.3						
CMAR				PP	PP	21 52 02.2	+0.2
	comp=Z,0.5nm,0.4s,baz=273,slow=6.0,SNR=1.1						
CMAR	Chiang Mai Arr	170.18	97		PKPdf	21 46 54.4	-1.3
CHTO	Chiang Mai	170.24	95	PKP2	PKPab	21 48 10.5	-1.3
CHTO						22 46 56.5	
CHTO	Chiang Mai	170.24	95		PKPdf	21 46 56.5	+0.8
CHTO					PKPab	21 48 10.5	-1.3
KMI	Kunming	172.11	48	PKP	PKPdf	21 46 57.8	+1.0
KMI				pPKP	sPKPdf	21 47 01.6	+2.1
KMI				sPKP		21 47 03.0	
GYA	Guiyang	173.12	19	*i* PKP	PKPdf	21 46 55.3	-1.8
GYA				PKPab	PKPab	21 48 25.0	+0.9
GYA				PP	PP	21 52 19.0	+4.4
GYA				SKKS		21 59 02.5	
GYA				SS	SS	22 13 29.6	+0.7
GYA				AMB	AMB		
	comp=Z,220nm,8.1s						
GYA				LR	LR		
	comp=Z,410nm,19.8s						
GYA				LR	LR		
	comp=Z,400nm,19.1s						
GYA				LR	LR		
	comp=Z,390nm,20.8s						
GZH	Guangzhou	175.05	310	PKP	PKPdf	21 46 55.4	-2.2
GZH				PP	PP	21 52 21.6	-3.4
GZH				SS	SS	22 13 44.0	-5.4
GZH				LR	LR		
	comp=Z,770nm,19.1s						
GZH				LR	LR		
	comp=Z,2µm,21.4s						
QIZ	Qiongzhong	178.90	213	PKP	PKPdf	21 46 57.5	-0.9
QIZ				PP	PP	21 52 42.5	0.0
QIZ				SS	SS	22 14 25.9	+1.3
QIZ				LR	LR		
	comp=Z,1µm,20.6s						
QIZ				LR	LR		
	comp=Z,830nm,17.5s						
QIZ				LR	LR		
	comp=Z,2µm,21.4s						

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*PRU **18** 21:31:41.3±0.0, 50°.15N×19°.08E, h0^{km}*

ISC 18 21:31:41.1±0.9, **50°.13N**±0°.04×**19°.08E**±0°.02, **h0**^{km}**, n24,**
σ1^{s}.04/39, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.47	79	*e*Pg	Pg	21 31 49.3	-0.8
OJC				*e*Sg	Sg	21 31 55.4	-0.8
OKC	Ostrava-Krasne	0.67	244	*e*PG	Pg	21 31 54.5	+0.6
OKC				*e*SG	Sg	21 32 03.7	+1.1
	comp=Z,38nm,0.8s						
LANS	Liptovska Anna	1.01	165	*e*PG	Pg	21 32 00.3	-0.2
LANS				*e*SG	Sg	21 32 14.3	+0.7
LANS				*e*LG	Lg	21 32 14.8	
MORC	Moravsky Berou	1.05	251	*e*PG	Pg	21 32 01.7	+0.4
MORC				*e*SG	Sg	21 32 15.7	+0.7
NIE	Niedzica	1.06	132	*e*Pg	Pg	21 32 00.6	-0.9
NIE				*e*Sg	Sg	21 32 16.0	+0.7
KRLC	Kraliky	1.48	269	*e*PG	Pn	21 32 08.1	-0.9
KRLC				*e*SG	Sg	21 32 28.5	-0.1
	comp=Z,41nm,0.3s						
STHS	Stebnicka Huta	1.57	116	*e*SN	Sg	21 32 33.6	+2.0
STHS				*e*LG	Lg	21 32 39.2	
VYHS	Vyhne	1.65	186	*e*PN	Pn	21 32 10.2	-1.1
VYHS				*e*SN	Sn	21 32 31.8	-1.4
DPC	Dobruska-Polom	1.79	278	*e*PG	Pn	21 32 14.1	+0.9
DPC				*e*SG	Sg	21 32 38.6	+0.2
	comp=Z,25nm,0.6s						
VRAC	Vranov	1.81	244	*e*PN	Pn	21 32 14.1	+0.5
VRAC				*e*SG	Sb	21 32 38.7	+0.3
KECS	Kecovo	1.89	150	*e*SN	Sn	21 32 39.5	+0.4
KSP	Ksiaz	1.92	293	*e*Pg	Pg	21 32 18.2	+0.4
KSP				*e*Sg	Sg	21 32 43.8	+1.2
SMOL	Smolenice	1.95	214	*e*SN	Sn	21 32 40.1	-0.4
CRVS	Cervenica-Dubn	1.98	128	*e*PN	Pn	21 32 17.1	+1.2
CHVC	Chvalec	1.99	284	*e*PG	Pn	21 32 16.4	+0.4
CHVC				*e*SG	Sg	21 32 45.8	+0.8
	comp=Z,18nm,0.8s						
UPC	Upice	2.00	282	*e*SG	Sg	21 32 45.7	+0.3
	comp=Z,10nm,0.4s						
KRUC	Moravsky	2.05	240	*e*PN	Pn	21 32 17.4	+0.6

KRUC				eSG	Sb	21 32 45.6	+0.4
TREC	Trest	2.48	252	eSG	Sg	21 33 00.2	-0.5
	comp=Z,11nm,0.5s						
PVCC	Panska Ves	2.92	280	eSG	Sg	21 33 15.0	+0.2
	comp=Z,18nm,0.3s						
PRU	Pruhonice	2.93	269	ePG	Pb	21 32 34.7	+0.6
PRU				eSG	Sg	21 33 14.2	-0.9
	comp=Z,5.9nm,0.3s						
BRG	Berggiesshubel	3.36	285	SG	Sg	21 33 27.5	-1.6
	4.9nm,0.5s						
KHC	Kasperske Hory	3.71	256	ePN	Pn	21 32 38.0	-1.7
KHC				eSN	Sn	21 33 22.0	-2.2
KHC				eSG	Sg	21 33 39.4	-1.0
	comp=Z,8.6nm,0.6s						
CLL	Collm	4.04	289	eSg	Sg	21 33 53.0	+2.3
NKC	Novy Kostel	4.26	274	eSG	Sg	21 33 56.5	-1.5
	comp=Z,6.8nm,0.7s						

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*IDC **18** 21:31:53.5±0.8, 19°.81S×70°.53W, h0^{km}, mb4.1/7, mb1 4.4/8, mb1mx4.0/45, mbtmp4.1/8, ML3.7/1, Error ellipse: s-maj=38.9km s-min=22.9km az=61.0*

*NEIC **18** 21:31:55.0±1.7, 19°.89S±0°.03×70°.68W±0°.05, h10^{km}±1^{km}, mb4.0/2, Error ellipse: s-maj=8.8km s-min=5.2km az=107.0*

ISC 18 21:31:54.8±0.6**, 19°.83S**±0°.06×**70°.66W**±0°.07**, h10**^{km}**, n30,** σ**0^{s}.85**/25**, mb4.1**/8**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB11	IPOC Station P	0.95	86	Pg	Pb	21 32 14.4	+1.0
PB11				Sg	Sg	21 32 24.5	-0.9
GO01	Chusmiza	1.39	84	Pn	Pb	21 32 21.8	+0.7
PB01	IPOC Station P	1.63	138	Pn	Pn	21 32 23.4	-0.3
PB04	IPOC Station P	2.54	169	Pn	Pn	21 32 35.1	-1.1
LVC	Limon Verde	3.21	150	Pn	Pn	21 32 45.4	-0.2
	8.3nm,0.3s,baz=151,slow=20,SNR=1.1						
LVC				Sn	Sn	21 33 24.7	+0.6
	16nm,0.3s,baz=164,slow=14,SNR=3.3						
LVC				Lg	Lg	21 33 30.7	
	45nm,0.3s,baz=59,slow=22,SNR=7.4						
LPAZ	La Paz	4.26	35	Pn	Pb	21 33 08.7	-1.7
	1.4nm,0.3s,baz=123,slow=17,SNR=1.4						
LPAZ	La Paz	4.26	35	Pn	Pn	21 33 00.7	+0.3
PTGA	Pitinga	21.68	30	P	P	21 36 45.3	-0.6
	8.8nm,0.7s,baz=281,slow=23,SNR=1.2						
GOGA	Godfrey	54.34	347	P	P	21 41 23.0	+1.5
GOGA				IAmb	IAmb	21 41 28.5	
	comp=Z,0.7nm,0.4s						
TXAR	Lajitas Array	58.33	326	P	P	21 41 50.5	+0.2
	comp=Z,0.6nm,0.6s,baz=144,slow=9.9,SNR=3.0						
SADO	Sadowa	64.75	353	P	P	21 42 33.4	+0.1
	comp=Z,4.8nm,0.7s,baz=93,slow=2.2,SNR=3.3						
PDAR	Pinedale Array	71.86	331	P	P	21 43 19.1	+0.9
	comp=Z,0.3nm,0.6s,baz=120,slow=6.4,SNR=1.6						
NVAR	Mina Array Bea	73.18	323	P	P	21 43 27.6	+1.4
	comp=Z,1.2nm,0.8s,baz=144,slow=2.8,SNR=3.6						
TORD	Torodi Ar. Bea	78.36	71	P	P	21 43 55.3	-0.7
	comp=Z,6.4nm,1.1s,baz=254,slow=5.0,SNR=4.8						
TORD	Torodi Ar. Bea	78.36	71	IAmb	IAmb	21 43 56.0	
	comp=Z,4.4nm,1.0s						
YKA	Yellowknife Ar	89.08	341	P	P	21 44 49.9	0.0
	comp=Z,0.9nm,0.6s,baz=131,slow=5.3,SNR=4.2						
H11S2	WAKE ISLAND Hy	126.03	279	T	T	00 09 23.1	
	baz=107						
H11S1	WAKE ISLAND Hy	126.03	279	T	T	00 09 24.1	
	baz=107						
H11S3	WAKE ISLAND Hy	126.04	279	T	T	00 09 23.6	
	baz=107						
H11N3	WAKE ISLAND Hy	126.07	280	T	T	00 09 27.4	
	baz=97						
H11N2	WAKE ISLAND Hy	126.08	280	T	T	00 09 28.3	
	baz=97						
H11N1	WAKE ISLAND Hy	126.08	280	T	T	00 09 27.2	
	baz=97						
ASAR	Alice Springs	130.58	210	PKP	PKiKP	21 51 07.6	-0.1
	comp=Z,1.0nm,0.9s,baz=156,slow=4.7,SNR=2.0						
WRA	Warramunga Arr	133.50	213	PKP	PKPdf	21 51 11.5	-0.8
	comp=Z,0.5nm,0.7s,baz=162,slow=1.5,SNR=1.1						
ZALV	Zalesovo Beam	141.10	23	PKP	PKPdf	21 51 23.9	-1.3
	comp=Z,1.6nm,0.7s,baz=236,slow=1.4,SNR=1.8						
MKAR	Makanchi Array	145.19	33	PKPbc	PKPbc	21 51 32.4	+0.1
	comp=Z,5.6nm,0.7s,baz=312,slow=4.2,SNR=15						
KLR	Kul'dur	145.61	334	PKPbc	PKPbc	21 51 33.8	+0.3
	comp=Z,2.8nm,0.8s,baz=28,slow=4.2,SNR=3.4						
USRK	Ussuriysk Ar.	149.23	327	PKPbc	PKPbc	21 51 43.8	+0.1
	comp=Z,2.2nm,0.8s,baz=22,slow=1.0,SNR=5.3						
MJAR	Matsushiro Arr	149.75	309	PKPbc	PKPbc	21 51 44.5	-0.8
	comp=Z,1.7nm,0.7s,baz=108,slow=2.1,SNR=3.2						
SONM	Songino Array	151.96	4	PKPbc	PKPbc	21 51 50.7	+0.3
	comp=Z,2.3nm,1.0s,baz=270,slow=1.4,SNR=6.5						

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*IDC **18** 21:33:05.5±0.5, 19°.92S×70°.71W, h0^{km}, mb4.5/21, mb1 4.6/24, mb1mx4.5/46, mbtmp4.5/24, ML4.8/3, Error ellipse: s-maj=17.4km s-min=13.0km az=62.0*

*NEIC **18** 21:33:06.3±2.2, 19°.98S±0°.04×70°.91W±0°.05, h9^{km}±3^{km}, mb5.1/96, ML5.1(GUC), Error ellipse: s-maj=6.7km s-min=6.5km az=71.0*

*BJI **18** 21:33:07.5±0.0, 20°.00S×70°.90W, h15^{km}, mB5.6/3*

*GUC **18** 21:33:08.0±0.7, 20°.03S×70°.84W, h20^{km}±3^{km}, ML5.0*

ISC 18 21:33:05.9±0.9**, 20°.01S**±0°.03×**70°.94W**±0°.04**, h6**^{km}±5^{km}**, n233,** σ**1^{s}.38**/220**, mb5.0**/50**, 5C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.87	62	⇓iP	Pg	21 33 22.2	-0.3
PSGC				i S	Sg	21 33 33.2	-0.6
TA01	Diego Aracena	0.90	128	⇓iP	Pg	21 33 22.6	-0.5
TA01				i S	Sg	21 33 34.1	-0.7
TA01				IAML		21 33 37.6	
	comp=N,124μm,0.2s						
PATCX	Punta Patache	1.09	138	⇓iP	Pg	21 33 26.0	-0.9
PATCX				i S	Sg	21 33 40.2	-0.8
PB11	IPOC Station P	1.23	79	eP	Pg	21 33 28.4	-1.0
PB11				i S	Sb	21 33 45.6	-0.2
PB11				IAML		21 33 47.4	
	comp=N,40μm,0.3s						
PB11	IPOC Station P	1.23	79	Pn	Pg	21 33 28.2	-1.2
PB11				Sg	Sg	21 33 44.0	-1.4
PB12	IPOC Station P	1.50	23	e	Pn	21 33 26.4	-7.0
PB12				⇓iP	Pb	21 33 33.9	-0.3
PB12				i S	Sn	21 33 53.0	-0.4
PB02	IPOC Station P	1.63	143	⇑iP	Pn	21 33 34.8	-0.3
PB02				i S	Sn	21 33 55.4	-1.1
PB02				IAML		21 33 58.4	
	comp=E,42μm,0.1s						
GO01	Chusmiza	1.67	79	⇑iP	Pn	21 33 35.9	-0.2
GO01				i S	Sn	21 33 57.5	-0.6
GO01	Chusmiza	1.67	79	Pn	Pn	21 33 35.7	-0.4
GO01				Sg	Sg	21 33 59.5	-0.2
PB08	IPOC Station P	1.68	95	eP	Pn	21 33 35.8	-0.3
PB08				i S	Sn	21 33 58.0	-0.1
PB08				IAML		21 34 02.2	
	comp=N,17μm,0.6s						
PB01	IPOC Station P	1.70	127	i P	Pn	21 33 35.7	-0.5
PB01				i S	Sn	21 33 56.8	-1.5
PB01				IAML		21 34 00.9	
	comp=N,27μm,0.4s						
PB01	IPOC Station P	1.70	127	Pn	Pn	21 33 35.7	-0.5
PB01					Sn	21 33 58.1	-0.2
AP01	Chacalluta	1.72	19	⇑iP	Pn	21 33 36.9	+0.5
AP01				i S	Sb	21 33 59.6	-0.2
AP01				IAML		21 34 09.3	
	comp=E,53μm,0.5s						
PB07	IPOC Station P	1.97	150	eP	Pn	21 33 39.8	-0.1
PB07				i S	Sn	21 34 05.5	+0.5
PB07				IAML		21 34 14.1	
	comp=E,16μm,0.5s						
PB16	IPOC Station P	2.14	39	eP	Pb	21 33 44.8	-0.6
PB16				i S	Sb	21 34 13.2	+0.7
PB16				IAML		21 34 19.0	
	comp=E,15μm,0.8s						
PB03	IPOC Station P	2.31	152	eP	Pn	21 33 44.3	-0.3
PB03				i S	Sb	21 34 17.6	+0.7
PB03				IAML		21 34 25.6	
	comp=E,7μm,0.7s						
PB09	IPOC Station P	2.38	139	eP	Pn	21 33 47.4	+1.8
PB09				i S	Sn	21 34 17.2	+2.0
PB09				IAML		21 34 29.9	
	comp=E,20μm,0.7s						
PB04	IPOC Station P	2.43	163	Pn	Pn	21 33 45.6	-0.6
LVC	Limon Verde	3.20	144	Pn	Pn	21 33 57.9	+0.8
	comp=E,207nm,0.3s,baz=350,slow=9.7,SNR=10						
LVC				Sn	Sn	21 34 36.9	+1.2
	comp=E,128nm,0.3s,baz=245,slow=19,SNR=4.2						
LVC				Lg	Lg	21 34 43.0	
	comp=E,564nm,0.3s,baz=116,slow=7.2,SNR=16						
LVC	Limon Verde	3.20	144	Pn	Pn	21 33 58.1	+1.0
PB10	IPOC Station P	3.50	174	Pn	Pn	21 33 59.6	-1.3
LPAZ	La Paz	4.56	36	Pn	Pn	21 34 21.3	+5.3
	comp=E,12nm,0.3s,baz=240,slow=2.4,SNR=20						
LPAZ	La Paz	4.56	36		Pn	21 34 18.1	+2.1
LPAZ	La Paz	4.56	36	Pn	Pn	21 34 17.2	+1.2
GO02	Mina Guanaco	5.28	167	Pn	Pn	21 34 25.1	-0.4
GO02				Sn	Sn	21 35 23.8	-3.0
GO03	Copiap	7.58	175	Pn	Pn	21 34 55.0	-1.9
GO03				Sn	Sn	21 36 17.5	-5.7
NNA	Nana	9.79	324	Pn	Pn	21 35 28.4	+1.1
	comp=E,3.4nm,0.3s,baz=169,slow=12,SNR=2.1						
NNA				Sn	Sn	21 37 11.9	-5.8
	comp=E,1.1nm,0.3s,baz=43,slow=23,SNR=1.4						
GO04	Tololo Observa	10.12	179	Pn	Pn	21 35 32.9	+0.9
SIV	San Ignacio	10.20	69	Pn	Pn	21 35 32.0	-0.9
	comp=E,13nm,0.3s,baz=274,slow=9.3,SNR=16						
SAML	Samuel	13.31	35	Pn	Pn	21 36 16.9	+1.5
CPUP	Villa Florida	14.00	119	Pn	Pn	21 36 27.1	+2.3
	comp=E,0.4nm,0.3s,baz=300,slow=15,SNR=1.5						
CPUP	Villa Florida	14.00	119	Pn	Pn	21 36 27.6	+2.8
GO06	Curarrehue	19.52	181	P	Pn	21 37 35.0	-0.2
PLCA	Paso Flores	20.66	179	P	P	21 37 47.6	+1.2
	comp=E,9.0nm,0.8s,baz=215,slow=20,SNR=3.1						
PLCA	Paso Flores	20.66	179	IAmb	IAmb	21 38 06.8	
	comp=Z,107nm,1.3s						
PTGA	Pitinga	21.96	31	P	P	21 37 58.4	-2.1
	comp=Z,14nm,0.4s,baz=212,slow=23,SNR=12						
PTGA	Pitinga	21.96	31	P	P	21 37 59.4	-1.2
BDFB	Brasilia	22.24	82	P	P	21 38 02.4	-1.3
	comp=Z,6.2nm,0.5s,baz=44,slow=14,SNR=2.0						
BDFB	Brasilia	22.24	82	P	P	21 38 03.0	-0.7
BDFB				IAmb	IAmb	21 38 28.0	
	comp=Z,117nm,1.5s						
RUSC	La Rusia	25.83	355	P	P	21 38 39.8	+1.2
MDP	Montagnes des	30.76	38	P	P	21 39 21.2	-1.0
	comp=Z,12nm,0.8s,baz=206,slow=6.4,SNR=1.9						
USHA	Ushuaia	34.82	177	P	P	21 39 57.7	+0.4
	comp=Z,4.8nm,0.9s,baz=4.8,slow=19,SNR=1.7						
RCBR	Riachuelo	36.83	72	P	P	21 40 13.5	-1.7
	comp=Z,18nm,0.7s,baz=222,slow=6.5,SNR=11						
RCBR	Riachuelo	36.83	72	P	P	21 40 13.4	-1.7
RCBR				IAmb	IAmb	21 40 15.2	
	comp=Z,42nm,1.3s						
PDPR	Patillas Dam,	38.10	8	P	P	21 40 24.1	-1.5
PDPR				IAmb	IAmb	21 41 22.0	
	comp=Z,66nm,1.6s						
TEIG	Tepich	43.44	336	P	P	21 41 10.4	+0.6
	comp=Z,13nm,0.8s,baz=228,slow=0.0,SNR=9.5						
TEIG	Tepich	43.44	336	P	P	21 41 10.0	+0.2
W58A	Raeford	55.29	352	P	P	21 42 41.2	+1.1
	baz=170						
T59A	Double "B" Far	57.02	354	P	P	21 42 52.9	+0.5
	baz=172						
T58A	Grand View Acr	57.10	353	P	P	21 42 53.9	+0.8
	baz=171						
WLAR	White Oak Lake	57.43	338	P	P	21 42 53.5	-1.9
R58B	Mineral	58.03	354	P	P	21 43 00.6	+1.0
	baz=172						
S55A	Lewisburg	58.17	351	P	P	21 43 01.5	+0.9
	baz=169						
TXAR	Lajitas Array	58.34	326	P	P	21 43 02.7	+0.7
	comp=Z,1.0nm,0.5s,baz=149,slow=9.0,SNR=7.0						
TXAR	Lajitas Array	58.34	326	P	P	21 43 02.0	-0.1
MIAR	Mount Ida	58.37	338	P	P	21 43 01.8	-0.2
MIAR	Mount Ida	58.37	338	P	P	21 43 02.2	+0.1
	baz=155						
T49A	Edmonton	58.45	346	P	P	21 43 01.4	-1.2
T49A				IAmb	IAmb	21 43 09.6	
	comp=Z,20nm,0.9s						
T49A	Edmonton	58.45	346	P	P	21 43 02.6	0.0
	baz=164						
S50A	Richmond	58.76	348	P	P	21 43 04.6	-0.1
	baz=165						
W39A	Magazine	59.03	338	P	P	21 43 05.7	-0.9
Q57A	Strasburg	59.15	353	P	P	21 43 08.8	+1.5
	baz=172						
Q56A	Snyder Ridge,	59.25	353	P	P	21 43 08.0	-0.1
P54A	Burton	59.97	351	P	P	21 43 13.8	+0.7
	baz=170						
O56A	Blue Knob Stat	60.38	353	P	P	21 43 17.1	+1.2
	baz=172						
TUL1	Leonard	60.39	337	P	P	21 43 16.2	+0.2
TUL1				IAmb	IAmb	21 43 24.8	
	comp=Z,16nm,0.8s						
TUL1	Leonard	60.39	337	P	P	21 43 16.5	+0.5
	baz=153						
O55A	Ligonier	60.41	353	P	P	21 43 17.1	+1.1
	baz=171						
P50A	Jamestown	60.51	349	P	P	21 43 17.3	+0.6
	baz=166						
N55A	Marion Center	60.94	353	P	P	21 43 20.6	+1.0
	baz=171						
MNTX	Cornudas Mount	61.11	327	P	P	21 43 21.5	+0.5
MNTX				IAmb	IAmb	21 43 22.4	
	comp=Z,27nm,1.5s						
MNTX	Cornudas Mount	61.11	327	P	P	21 43 21.6	+0.6
	baz=143						
S39A	Bolivar	61.14	340	IAmb	IAmb	21 43 29.0	
	comp=Z,12nm,0.8s						
M56A	Emporium	61.55	354	P	P	21 43 22.6	-1.2
M56A	Emporium	61.55	354	P	P	21 43 24.4	+0.7
	baz=172						
L63A	North Scituate	61.56	359	P	P	21 43 24.6	+0.8
	baz=179						
M55A	Ridgway	61.59	353	P	P	21 43 23.8	-0.3
M55A	Ridgway	61.59	353	P	P	21 43 25.0	+0.9
	baz=172						
M54A	Oil Creek Stat	61.74	353	P	P	21 43 25.6	+0.6
M54A	Oil Creek Stat	61.74	353	P	P	21 43 25.6	+0.6
	baz=171						
L60A	Shokan	61.76	357	P	P	21 43 25.7	+0.5
	baz=176						
N49A	Columbus Grove	61.86	349	P	P	21 43 25.5	-0.3
N49A	Columbus Grove	61.86	349	P	P	21 43 25.6	-0.3
	baz=166						
L58A	Harry Jones Me	61.91	356	P	P	21 43 27.3	+1.2
	baz=175						
N48A	Decatur	61.96	348	P	P	21 43 25.6	-0.9
	baz=165						
BINY	Binghamton	62.07	356	P	P	21 43 28.4	+1.2
	baz=175						
VNA3	Neumayer Olymp	62.09	161	P	P	21 43 30.2	+3.1
L56A	Greenwood	62.13	354	P	P	21 43 27.2	-0.5
L56A	Greenwood	62.13	354	P	P	21 43 28.5	+0.8
	baz=173						
L61B	Northampton	62.16	359	P	P	21 43 28.5	+0.7
	baz=178						
HRV	Adam Dziewonsk	62.20	359	P	P	21 43 29.2	+1.1
	baz=179						
L53A	Girard	62.25	352	P	P	21 43 29.3	+0.9
	baz=170						
L55A	Hinsdale	62.27	354	P	P	21 43 29.4	+0.8
	baz=172						
M49A	Liberty Center	62.35	349	P	P	21 43 28.6	-0.5
	baz=166						
L54A	Sinclairville	62.41	353	P	P	21 43 30.4	+0.9
	baz=171						
WVNY	West Valley, N	62.50	354	P	P	21 43 30.6	+0.4
K59A	Cooperstown	62.57	357	P	P	21 43 31.7	+1.1
	baz=176						
K58A	Earlville	62.61	356	P	P	21 43 31.5	+0.6
K58A	Earlville	62.61	356	P	P	21 43 31.6	+0.7
	baz=175						
K57A	Scipio Center	62.64	355	P	P	21 43 32.0	+0.9
	baz=174						
VNA2	Neumayer--Watz	62.68	161	P	P	21 43 37.5	+6.5
	baz=289,slow=8.2						
319A	Douglas	62.96	323	IAmb	IAmb	21 43 44.4	
	comp=Z,15nm,0.9s						
121A	Cookes Peak, D	63.03	325	IAmb	IAmb	21 43 43.2	
	comp=Z,14nm,1.2s						
121A	Cookes Peak, D	63.03	325	P	P	21 43 36.2	+2.1
	baz=141						
J59A	Piesco	63.24	357	P	P	21 43 36.0	+0.9
	baz=176						
I58A	Old Forge	63.49	357	P	P	21 43 37.5	+0.8
	baz=176						
J52A	Paris	63.55	352	P	P	21 43 37.2	+0.1
	baz=170						
I59A	Olmsteadville	63.55	358	P	P	21 43 37.8	+0.7
	baz=177						
I60A	Shoreham	63.57	358	P	P	21 43 38.4	+1.2
	baz=177						
ANMO	Albuquerque	64.23	328	P	P	21 43 43.1	+1.1
	comp=Z,0.9nm,0.5s,baz=78,slow=5.1,SNR=4.4						
ANMO	Albuquerque	64.23	328	P	P	21 43 41.9	-0.1
ANMO				IAmb	IAmb	21 43 44.0	
	comp=Z,22nm,1.6s						
H57A	Richville	64.28	356	P	P	21 43 42.5	+0.6
	baz=175						
SNAA	Sanae	64.30	161	P	P	21 43 42.5	+0.6
SNAA	Sanae	64.30	161	P	P	21 43 42.5	+0.6
	comp=Z,4.1nm,1.1s,baz=34,slow=17,SNR=3.7						
SNAA	Sanae	64.30	161	IAmb	IAmb	21 43 50.0	
	comp=Z,32nm,1.6s						
H59A	Cadyville	64.39	358	P	P	21 43 43.6	+1.0
	baz=177						
FRNY	Flat Rock	64.57	358	IAmb	IAmb	21 43 51.9	
	comp=Z,14nm,0.9s						
G62A	West of Eustis	64.91	0	P	P	21 43 45.7	-0.3
G62A	West of Eustis	64.91	0	P	P	21 43 47.5	+1.5
	baz=180						
I48A	Sherman Twp	64.94	350	P	P	21 43 45.9	-0.3
	baz=167						
G61A	St-Isidore-de-	64.98	360	P	P	21 43 47.9	+1.5
	baz=179						
G55A	Calabogie	65.16	356	P	P	21 43 48.6	+1.0
	baz=174						
F52A	Sundridge	65.93	354	P	P	21 43 52.5	0.0
	baz=171						
SDCO	Great Sand Dun	66.01	331	IAmb	IAmb	21 43 56.2	
	comp=Z,18nm,1.3s						
SDCO	Great Sand Dun	66.01	331	P	P	21 43 55.4	+1.7
	baz=144						
F51A	Arnstein	66.13	353	P	P	21 43 53.8	0.0
	baz=171						
E57A	Chemin Saint G	66.17	358	P	P	21 43 54.7	+0.6
	baz=177						
D57A	Chemin Vers le	66.76	358	P	P	21 43 58.6	+0.8
	baz=177						
D58A	Chemin du LacG	66.81	359	P	P	21 43 58.6	+0.4
	baz=178						
D55A	Sainte-Anne-du	66.84	357	P	P	21 43 58.7	+0.3
	baz=175						
D53A	Lac Vacive, Po	67.05	355	P	P	21 44 00.1	+0.4
	baz=173						
WUAZ	Wupatki	67.22	325	IAmb	IAmb	21 44 04.6	
	comp=Z,14nm,1.2s						
WUAZ	Wupatki	67.22	325	P	P	21 44 03.4	+2.1
	baz=139						
ECSD	EROS Data Cent	67.67	340	IAmb	IAmb	21 44 05.0	
	comp=Z,24nm,1.4s						
ECSD	EROS Data Cent	67.67	340	P	P	21 44 04.2	+0.5
	baz=154						
ISCO	Idaho Springs	67.73	332	P	P	21 44 05.8	+1.2
	baz=145						
SWSC	Sam W. Stewart	67.89	320	P	P	21 44 08.3	+3.0
	baz=134						
BC3	Big Chuckawall	68.18	321	P	P	21 44 09.7	+2.4
	baz=135						
W13A	Hualapai Mount	68.30	323	IAmb	IAmb	21 44 17.1	
	comp=Z,22nm,1.8s						
IRM	Iron Mountain	68.36	322	P	P	21 44 10.8	+2.5
	baz=135						
U15A	North Rim	68.40	325	IAmb	IAmb	21 44 11.8	
	comp=Z,11nm,1.1s						
PFO	Pinyon Flats O	68.75	320	P	P	21 44 12.1	+1.2
	comp=Z,2.4nm,0.6s,baz=149,slow=5.9,SNR=3.3						
PFO	Pinyon Flats O	68.75	320	IAmb	IAmb	21 44 13.8	
	comp=Z,11nm,1.1s						
LSQQ	Lebel-sur-Quev	68.96	356	P	P	21 44 11.8	+0.1
	baz=174						
GMRC	Granite Mounta	69.10	322	P	P	21 44 15.4	+2.4
	baz=135						
O20A	White River Ci	69.20	330	P	P	21 44 14.9	+1.3
	baz=142						
HEC	Hector,Ludlow	69.53	321	P	P	21 44 18.0	+2.4
	baz=134						
TUQ	Turquoise Moun	69.71	322	P	P	21 44 19.3	+2.5
	baz=135						
SHPR	Sheep Range	70.03	323	IAmb	IAmb	21 44 27.7	
	comp=Z,31nm,1.8s						
GSC	Goldstone, Bar	70.13	321	IAmb	IAmb	21 44 23.0	
	comp=Z,28nm,1.6s						
DBIC	Dimbokro	70.15	75	P	P	21 44 18.4	-1.5
	comp=Z,2.3nm,0.4s,baz=183,slow=5.2,SNR=3.6						
DBIC	Dimbokro	70.15	75	IAmb	IAmb	21 44 47.5	
	comp=Z,19nm,1.1s						
QSPA	South Pole Qui	70.17	180	P	P	21 44 21.0	+1.7
QSPA				IAmb	IAmb	21 44 28.2	
	comp=Z,9.0nm,0.6s						
RSSD	Black Hills	70.65	335	P	P	21 44 23.8	+1.4
	baz=147						
TPNV	Topopah Spring	70.96	323	IAmb	IAmb	21 44 27.6	
	comp=Z,13nm,1.1s						
TPNV	Topopah Spring	70.96	323	P	P	21 44 27.0	+2.5
	baz=135						
FURC	Furnace Creek,	70.98	322	P	P	21 44 26.8	+2.5
	baz=134						
MPMC	Manual Prospec	71.06	322	P	P	21 44 26.9	+1.8
	baz=134						
ISA	Isabella, Lake	71.37	321	IAmb	IAmb	21 44 30.4	
	comp=Z,26nm,1.6s						
DUG	Dugway, Tooele	71.48	327	IAmb	IAmb	21 44 30.8	
	comp=Z,28nm,1.5s						
DUG	Dugway, Tooele	71.48	327	P	P	21 44 29.5	+2.0
	baz=139						
AGMN	Agassiz Nation	71.56	343	P	P	21 44 27.9	+0.2
	baz=155						
R11A	Troy Canyon, C	71.59	324	IAmb	IAmb	21 44 31.3	
	comp=Z,18nm,1.5s						
R11A	Troy Canyon, C	71.59	324	P	P	21 44 30.6	+2.4
	baz=136						
CWC	Cottonwood Cre	71.66	321	P	P	21 44 31.0	+2.3
	baz=134						
PDAR	Pinedale Array	71.89	331	P	P	21 44 30.7	+0.7
	comp=Z,0.5nm,0.5s,baz=125,slow=7.1,SNR=3.9						
PDAR	Pinedale Array	71.89	331	P	P	21 44 30.1	0.0
SMMC	Simmler	72.05	320	P	P	21 44 33.8	+2.9
	baz=132						
OMMB	Old Mammoth Mi	73.00	322	IAmb	IAmb	21 44 40.2	
	comp=Z,23nm,1.4s						
MDPB	Devils Postpil	73.06	322	IAmb	IAmb	21 44 40.9	
	comp=Z,7.5nm,0.6s						
NV11	Mina Array Sit	73.08	323	IAmb	IAmb	21 44 40.5	
	comp=Z,20nm,1.6s						
TPAW	Teton Pass	73.09	331	IAmb	IAmb	21 44 39.0	
	comp=Z,21nm,1.6s						
NVAR	Mina Array Bea	73.16	323	P	P	21 44 39.0	+1.3
	comp=Z,3.4nm,0.9s,baz=137,slow=5.5,SNR=8.6						
NVAR	Mina Array Bea	73.16	323	P	P	21 44 37.9	+0.1
ULM	Lac du Bonnet	73.34	344	P	P	21 44 38.5	+0.3
	comp=Z,6.0nm,1.0s,baz=144,slow=6.6,SNR=4.4						
ULM	Lac du Bonnet	73.34	344	IAmb	IAmb	21 44 43.6	
	comp=Z,18nm,1.3s						
RLMT	Red Lodge	73.62	333	P	P	21 44 42.0	+1.8
	baz=143						
LAO	LASA Array	73.64	336	P	P	21 44 42.0	+1.8
	baz=146						
SCHQ	Schefferville	74.62	2	P	P	21 44 45.1	-0.4
	comp=Z,4.4nm,1.0s,baz=191,slow=13,SNR=1.7						
SCHQ	Schefferville	74.62	2	IAmb	IAmb	21 45 36.1	
	comp=Z,29nm,1.8s						
PAHR	Pah Rah Range	74.65	323	IAmb	IAmb	21 44 49.9	
	comp=Z,29nm,1.4s						
AFDM	Forest Hills D	75.05	322	IAmb	IAmb	21 44 52.1	
	comp=Z,31nm,2.0s						
MFID	Camas Ranch	75.38	328	IAmb	IAmb	21 44 53.8	
	comp=Z,32nm,1.6s						
EGMT	Eagleton	76.13	334	IAmb	IAmb	21 45 07.3	
	comp=Z,25nm,1.4s						
EGMT	Eagleton	76.13	334	P	P	21 44 55.9	+1.3
	baz=143						
MSO	Missoula	77.00	331	P	P	21 45 02.4	+2.8
	baz=139						
VNDA	Vanda	77.98	190	P	P	21 45 06.5	+2.0
	comp=Z,2.2nm,1.1s,baz=146,slow=2.0,SNR=3.2						
SYO	Syowa Base	78.55	160	⇓eP	P	21 45 06.0	-1.8
SYO	Syowa Base	78.55	160	⇑epP	pP	21 45 09.0	+0.3
SYO	Syowa Base	78.55	160	⇑iPcP	PcP	21 45 14.0	-2.8
TOA0	Torodi Ar. Sit	78.66	71	P	P	21 45 07.6	-1.7
TOA0				IAmb	IAmb	21 45 15.4	
	comp=Z,21nm,0.9s						
TORD	Torodi Ar. Bea	78.66	71	P	P	21 45 08.1	-1.3
	comp=Z,24nm,1.2s,baz=248,slow=5.5,SNR=23						
C09A	Chrisman Ranch	79.72	330	IAmb	IAmb	21 45 18.1	
	comp=Z,48nm,1.9s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TAM	Tamanrasset	85.86	64	P	P	21 45 47.5	+0.4
ESDC	Sonseca Array	86.12	45	P	P	21 45 48.2	+0.3
	comp=Z,1.6nm,0.5s,baz=240,slow=2.0,SNR=6.1						
MAW	Mawson	86.29	164	P	P	21 45 49.0	+0.8
	comp=Z,6.2nm,1.0s,baz=209,slow=4.5,SNR=4.5						
YKA	Yellowknife Ar	89.17	341	P	P	21 46 01.8	0.0
	comp=Z,2.0nm,0.7s,baz=135,slow=4.9,SNR=11						
H11S2	WAKE ISLAND Hy	125.80	279	T	T	00 11 38.1	
	baz=102,slow=74,SNR=31						
H11S1	WAKE ISLAND Hy	125.80	279	T	T	00 11 38.2	
	baz=102,slow=74,SNR=30						
H11S3	WAKE ISLAND Hy	125.81	279	T	T	00 11 39.0	
	baz=102,slow=74,SNR=20						
H11N3	WAKE ISLAND Hy	125.84	280	T	T	00 11 40.5	
	baz=101,slow=75,SNR=24						
H11N2	WAKE ISLAND Hy	125.86	280	T	T	00 11 41.1	
	baz=101,slow=75,SNR=32						
H11N1	WAKE ISLAND Hy	125.86	280	T	T	00 11 42.0	
	baz=101,slow=75,SNR=16						
TIXI	Tiksi	127.08	352	PKP	PKPdf	21 52 10.6	+0.3
	comp=Z,0.4nm,0.6s,baz=78,slow=3.6,SNR=1.5						
SEY	Seymchan	127.98	337	PKP	PKiKP	21 52 13.2	+0.4
	comp=Z,1.0nm,0.2s,baz=312,slow=1.1,SNR=12						
PETK	Petropavlovsk-	130.25	324	PKP	PKPdf	21 52 17.0	+0.1
	comp=Z,3.3nm,0.9s,baz=151,slow=3.3,SNR=3.0						
ASAR	Alice Springs	130.29	210	PKP	PKPdf	21 52 17.8	-0.2
	comp=Z,0.9nm,0.8s,baz=136,slow=2.8,SNR=4.2						
RABL	Rabaul	131.31	245		PKPdf	21 52 20.7	+0.7
ABKAR	Akbulak array	131.31	41		PKPdf	21 52 14.6	-4.3
WRA	Warramunga Arr	133.21	213	PKP	PKPdf	21 52 23.5	0.0
	comp=Z,0.9nm,0.7s,baz=155,slow=1.7,SNR=3.8						
ZALV	Zalesovo Beam	141.37	23	PKP	PKPdf	21 52 36.1	-1.3
	comp=Z,1.3nm,0.5s,baz=290,slow=2.1,SNR=3.5						
AAK	Ala-Archa	143.22	44	PKP	PKPdf	21 52 41.4	+0.1
	comp=Z,1.9nm,0.9s,baz=281,slow=2.0,SNR=1.7						
MAKZ	Makanchi	145.31	33		PKPdf	21 52 45.0	+0.4
NIL	Nilore	145.46	59		PKPbc	21 52 45.3	0.0
MKAR	Makanchi Array	145.49	33	PKPbc	PKPbc	21 52 45.1	+0.1
	comp=Z,4.3nm,0.7s,baz=319,slow=3.6,SNR=26						
KSH	Kashi	145.59	48	PKPbc	PKPab	21 52 46.4	+0.5
KSH				PP	PP	21 56 08.8	+2.8
KSH				PKS	PKSdf	21 56 20.4	-0.6
KSH				SKKS		22 02 58.1	
KSH				AMB	AMB		
	comp=Z,180nm,8.1s						
KLR	Kul'dur	145.65	333	PKPbc	PKPbc	21 52 45.8	+0.4
	comp=Z,5.3nm,0.8s,baz=45,slow=4.2,SNR=7.8						
USA0B	Ussuriysk Arra	149.23	327		PKiKP	21 52 56.7	0.0
USA0B					sPKPab	21 53 01.9	+0.7
USRK	Ussuriysk Ar.	149.23	327	PKPbc	PKiKP	21 52 56.5	-0.1
	comp=Z,7.1nm,1.0s,baz=17,slow=2.0,SNR=8.5						
USRK	Ussuriysk Ar.	149.23	327		PKPbc	21 52 56.1	+0.7
MJAR	Matsushiro Arr	149.66	309	PKPbc	PKPbc	21 52 57.5	+0.6
	comp=Z,6.9nm,1.0s,baz=218,slow=0.5,SNR=9.1						
MJAR	Matsushiro Arr	149.66	309		PKiKP	21 52 57.9	0.0
MAT	Matsushiro	149.67	309	PKP	PKPbc	21 52 57.4	+0.6
MDJ	Mudanjiang	150.12	330	PKPbc	PKPdf	21 52 53.1	+0.5
WMQ	Urumqi	150.29	32	*e*PKPbc	PKPdf	21 52 53.3	+0.3
SONM	Songino Array	152.16	4	PKPbc	PKiKP	21 53 03.1	+0.3
	comp=Z,2.3nm,0.7s,baz=327,slow=1.1,SNR=10						
SONM	Songino Array	152.16	4	PKPdf	PKPdf	21 52 56.5	+0.7
SONM					PKPbc	21 53 02.8	+0.3
SONM				PKPab	PKPab	21 53 09.7	-2.3
ULN	Ulaanbaatar	152.16	3		PKiKP	21 53 03.4	+0.5
ULN				PKPab	PKPab	21 53 10.6	-1.5
HHC	Hu-ho-hao-te	159.12	355	*e*PKP	PKPdf	21 53 05.9	+0.6
LZH	Lanzhou	163.34	15	*e*PKP	PKPdf	21 53 05.3	-4.7
LZH				pPKP	sPKPdf	21 53 16.3	+5.0
NJ2	Nanjing	165.14	326	*e*PKP	PKPdf	21 53 11.6	+0.1
XAN	Xi'an	166.02	0	PKP	PKPdf	21 53 02.8	-9.5
XAN				pPKP	pPKPdf	21 53 07.8	-5.5
CD2	Chengdu	168.14	23	PKP	PKPdf	21 53 13.0	-0.9

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*IDC **18** 21:42:51.3±1.8, 19°.85S×70°.65W, h0^{km}, mb3.5/3, mb1 3.7/5, mb1mx3.5/36, mbtmp3.6/5, ML3.3/2, Error ellipse: s-maj=44.5km s-min=26.7km az=63.0*

ISC 18 21:42:52.6±1.3**, 19°.81S**±0°.09×**70°.7W**±0°.2**, h10^{km}, n10, σ1^{s}20**/8**, mb3.6**/3**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	3.24	150	Pn	Pn	21 43 43.3	-0.5
	4.0nm,0.3s,baz=333,slow=11,SNR=3.8						
LVC				Sn	Sn	21 44 22.6	0.0
	7.3nm,0.3s,baz=250,slow=23,SNR=2.0						
LPAZ	La Paz	4.25	35	Pn	Pb	21 44 06.6	-1.3
	0.4nm,0.3s,baz=189,slow=12,SNR=2.0						
SIV	San Ignacio	9.89	69	Pn	Pn	21 45 17.0	+1.9
	0.3nm,0.3s,baz=254,slow=18,SNR=1.8						
PTGA	Pitinga	21.66	30	P	P	21 47 43.5	-0.1
	0.9nm,0.3s,baz=229,slow=11,SNR=1.7						
TXAR	Lajitas Array	58.31	326	P	P	21 52 48.8	+0.8
	0.1nm,0.4s,baz=142,slow=6.7,SNR=1.5						
TORD	Torodi Ar. Bea	78.36	71	P	P	21 54 53.0	-0.8
	0.5nm,0.9s,baz=256,slow=5.8,SNR=1.8						
H11S2	WAKE ISLAND Hy	126.01	279	T	T	00 21 16.6	
	baz=102						
H11S1	WAKE ISLAND Hy	126.02	279	T	T	00 21 14.5	
	baz=102						
H11S3	WAKE ISLAND Hy	126.03	279	T	T	00 21 20.0	
	baz=102						
MKAR	Makanchi Array	145.18	33	PKPbc	PKPdf	22 02 30.5	-0.1
	0.2nm,0.5s,baz=316,slow=5.1,SNR=3.7						

WEL 18 21:43:11.0, 39°S±1°×**17°8E**±°**, h40^{km}**±7^{km}**, ML4.2**/11**, MLv3.5**/93**, Error ellipse: s-maj=0.0km s-min=0.0km az=81.5, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNZ	Kokohu	0.44	1	P	Pn	21 43 20.2	-0.6
KNZ				S	Sn	21 43 28.7	+0.9
CKHZ	Cape Kidnapper	0.50	246	P	Pn	21 43 22.1	+0.5
WHHZ	Waihua	0.51	319	P	Pn	21 43 21.1	-0.8
WHHZ				S	Sn	21 43 30.0	+0.5
ARHZ	Aropaoanui	0.56	291	P	Pn	21 43 22.0	-0.5
ARHZ				S	Sn	21 43 30.9	+0.3
PRGZ	Paritu Road	0.56	18	P	Pn	21 43 23.0	+0.4
KAHZ	Kahuranaki	0.69	241	P	Pn	21 43 25.3	+0.9
RAHZ	Arahi	0.71	320	P	Pn	21 43 24.1	-0.4
RAHZ				S	Sn	21 43 34.5	+0.3
SNGZ	Shannon Statio	0.72	339	P	Pn	21 43 24.7	-0.1
SNGZ				S	Sn	21 43 35.3	+0.6
MCHZ	McNeill Hill	0.75	271	P	Pn	21 43 25.6	+0.5
RIGZ	Rimuhau	0.76	6	P	Pn	21 43 25.6	+0.3
RIGZ				S	Sn	21 43 37.0	+1.4
NMHZ	Naumai	0.76	298	P	Pn	21 43 25.4	+0.1
NMHZ				S	Sn	21 43 36.2	+0.5
PXZ	Pawanui	0.84	227	P	Pn	21 43 27.0	+0.6
PXZ				S	Sn	21 43 39.3	+1.7
MTHZ	Maungataniwha	0.88	313	P	Pn	21 43 26.7	-0.3
BKZ	Black Stump Fm	0.96	288	P	Pn	21 43 27.9	-0.1
BKZ				S	Sn	21 43 40.6	+0.1
KWHZ	Kaweka Forest	0.96	272	P	Pn	21 43 28.2	+0.1
RAGZ	Rawiri	0.98	348	P	Pn	21 43 28.7	+0.3
RAGZ				S	Sn	21 43 41.8	+0.7
RTZ	Ruatahuna	1.00	327	P	Pn	21 43 28.5	-0.1
KRHZ	Kereru	1.02	259	P	Pn	21 43 28.9	+0.1
TKGZ	Te Karaka	1.03	8	P	Pn	21 43 29.2	+0.3
WPHZ	Waipukurau	1.12	237	P	Pn	21 43 30.7	+0.5
MWZ	Matawai	1.13	354	P	Pn	21 43 30.3	0.0
PRHZ	Porangahau	1.13	224	P	Pn	21 43 30.7	+0.3
MRHZ	Matea Rd	1.16	302	P	Pn	21 43 31.2	+0.5
MUGZ	Murupara	1.21	324	P	Pn	21 43 31.5	+0.1
PNHZ	Pukenui	1.22	248	P	Pn	21 43 32.0	+0.4
BHHZ	Black Hill Sta	1.24	268	P	Pn	21 43 32.1	+0.1
URZ	Urewera	1.27	340	P	Pn	21 43 32.5	+0.2
HATZ	Hinemaiaia	1.35	294	P	Pn	21 43 34.3	+0.9
ALRZ	Allen Road	1.37	311	P	Pn	21 43 34.0	+0.4
PRRZ	Plateau Road	1.38	314	P	Pn	21 43 34.1	+0.4
DVHZ	Dannevirke	1.43	234	P	Pn	21 43 34.6	+0.2
RRRZ	Republican Roa	1.44	321	P	Pn	21 43 36.5	+2.0
TSZ	Takapari Road	1.44	245	P	Pn	21 43 34.9	+0.2
PUZ	Puketiti	1.46	19	P	Pn	21 43 34.8	-0.1
MOVZ	Moawhango	1.48	271	P	Pn	21 43 36.3	+1.0
RITZ	Rihia Road	1.48	288	P	Pn	21 43 37.5	+2.3
RUGZ	Raukumara Rang	1.49	0	P	Pn	21 43 35.2	-0.2
WPRZ	Whakapapatarin	1.50	308	P	Pn	21 43 38.0	+2.5
HRRZ	Handcock Road	1.52	314	P	Pn	21 43 37.8	+2.2
TARZ	Mount Tarawera	1.52	323	P	Pn	21 43 36.3	+0.5
EDRZ	Edgecumbe	1.53	332	P	Pn	21 43 39.1	+3.2
WHTZ	Whakaora	1.55	300	P	Pn	21 43 41.3	+5.2
TUVZ	Tukino	1.57	276	P	Pn	21 43 38.2	+1.7
HLRZ	Highlands Stat	1.58	319	P	Pn	21 43 39.5	+2.9
RATZ	Rangitukua	1.59	291	P	Pn	21 43 37.8	+1.2
HSRZ	Hossack Road	1.60	316	P	Pn	21 43 40.1	+3.4
PKGZ	Pakihiroa	1.60	12	P	Pn	21 43 37.0	+0.1
KATZ	Kakaramea	1.61	287	P	Pn	21 43 38.1	+1.2
KRVZ	Karewarewa	1.61	282	P	Pn	21 43 39.4	+2.3
MKRZ	Makatiti	1.62	324	P	Pn	21 43 40.5	+3.4
WHVZ	Whangaehu Hut	1.62	276	P	Pn	21 43 39.1	+1.8
NGZ	Ngauruhoe	1.63	279	P	Pn	21 43 38.1	+0.8
BFZ	Birch Farm	1.64	221	P	Pn	21 43 37.1	-0.2
GRRZ	Galatos Road	1.64	312	P	Pn	21 43 38.0	+0.6
WTVZ	West Tongariro	1.65	281	P	Pn	21 43 39.0	+1.5
TRVZ	Turoa	1.65	275	P	Pn	21 43 40.4	+2.7
FWVZ	Far West T-bar	1.65	276	P	Pn	21 43 38.8	+1.1
MARZ	Manawahe	1.67	332	P	Pn	21 43 42.1	+4.4
WATZ	Wairara	1.68	296	P	Pn	21 43 40.9	+3.0
OMRZ	Omania	1.69	323	P	Pn	21 43 41.4	+3.4
WHRZ	Whale Island	1.69	341	P	Pn	21 43 38.9	+0.8
PRWZ	Pori Road	1.70	229	P	Pn	21 43 38.5	+0.4
MTVZ	Mangateitei	1.70	272	P	Pn	21 43 40.2	+2.0
HAZ	Te Kaha	1.70	3	P	Pn	21 43 38.2	+0.1
POWZ	Post Office Ro	1.73	237	P	Pn	21 43 39.0	+0.5
WMGZ	Waiomatatini S	1.74	20	P	Pn	21 43 38.9	+0.2
TWVZ	Taurewa	1.77	282	P	Pn	21 43 40.0	+0.7
PKVZ	Pokaka	1.81	275	P	Pn	21 43 44.2	+4.5
OPRZ	Ohinepanea	1.83	331	P	Pn	21 43 40.1	+0.2
TIWZ	Tintock	1.90	226	P	Pn	21 43 40.8	-0.1
MXZ	Matakaoa Point	1.96	15	P	Pn	21 43 42.2	+0.4
MRZ	Mangatainoka R	2.00	233	P	Pn	21 43 42.1	-0.2
TLZ	Tolley Road	2.01	304	P	Pn	21 43 48.9	+6.4
WAZ	Wanganui	2.09	261	P	Pn	21 43 46.0	+2.4
KMRZ	Kaimai	2.10	320	P	Pn	21 43 51.2	+7.5
TMWZ	Te Maipa	2.13	219	P	Pn	21 43 43.3	-0.8
HOWZ	Holdsworth Sta	2.19	228	P	Pn	21 43 44.1	-0.7
VRZ	Vera Road	2.28	278	P	Pn	21 43 48.1	+2.0
OGWZ	Otaki Gorge	2.34	234	P	Pn	21 43 46.6	-0.4
MTW	Mount Morrison	2.37	224	P	Pn	21 43 46.1	-1.2
HIZ	Hauiti	2.39	292	P	Pn	21 43 48.9	+1.3
TRWZ	Traveller	2.46	217	P	Pn	21 43 47.1	-1.5
KIW	Kapiti Island	2.53	236	P	Pn	21 43 49.3	-0.3
PAWZ	Paruwai Farm	2.57	221	P	Pn	21 43 48.8	-1.3
MSWZ	Moikau Station	2.69	223	P	Pn	21 43 50.2	-1.5
PLWZ	Palliser	2.80	220	P	Pn	21 43 51.4	-1.8
PKE	Pukeiti	2.87	274	P	Pn	21 43 56.6	+2.4
BHW	Baring Head	2.89	227	P	Pn	21 43 53.5	-1.0
TCW	Tory Channel	3.12	235	P	Pn	21 43 56.8	-0.9
DUWZ	D'Urville Isla	3.17	244	P	Pn	21 43 57.7	-0.7
QRZ	Quartz Range	4.17	249	P	Pn	21 44 10.7	-1.3
THZ	Tophouse	4.29	236	P	Pn	21 44 12.5	-1.3
KHZ	Kahutara	4.30	225	P	Pn	21 44 11.8	-2.0
GVZ	Greta Valley S	4.95	223	P	Pn	21 44 21.6	-1.2
DSZ	Denniston Nort	5.01	241	P	Pn	21 44 22.5	-1.2
LTZ	Lake Taylor	5.25	229	P	Pn	21 44 26.0	-1.0
AKCZ	Akaroa Harbour	5.67	217	P	Pn	21 44 31.0	-1.6
MQZ	McQueen's Vall	5.67	220	P	Pn	21 44 30.8	-1.8
CTZ	Chatham Island	6.05	137	P	Pn	21 44 40.3	+2.4

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*IDC **18** 21:54:52.3±0.8, 19°.82S×70°.65W, h0^{km}, mb3.7/8, mb1 4.0/10, mb1mx3.9/44, mbtmp3.8/10, ML3.7/2, Error ellipse: s-maj=26.3km s-min=21.7km az=47.0*

*NEIC **18** 21:54:53.0±2.0, 20°.06S±0°.06×70°.69W±0°.06, h10^{km}±1^{km}, mb4.1/6, Error ellipse: s-maj=10.6km s-min=8.0km az=315.0*

ISC 18 21:54:52.7±0.6**, 20°.04S**±0°.05×**70°.68W**±0°.07**, h10^{km}, n36, σ1^{s}29**/29**, mb3.8**/8**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	IPOC Station P	1.00	74		Pn	21 55 14.0	+1.0
PB11					Sg	21 55 25.1	0.0
GO01	Chusmiza	1.45	76		Pg	21 55 21.7	+1.1
PB01	IPOC Station P	1.50	132		Pg	21 55 22.3	+0.7
PB04	IPOC Station P	2.34	168		Pn	21 55 32.0	+0.6
LVC	Limon Verde	3.05	147	Pn	Pb	21 55 45.3	-2.0
	5.4nm,0.3s,baz=356,slow=8.7,SNR=15						
PB10	IPOC Station P	3.46	178	Pn	Pn	21 55 45.7	-1.0
LPAZ	La Paz	4.45	33	Pn	Pb	21 56 07.8	-3.5
	1.8nm,0.3s,baz=233,slow=9.7,SNR=23						
LPAZ	La Paz	4.45	33		Pn	21 56 04.4	+3.6
GO02	Mina Guanaco	5.20	169		Pn	21 56 11.4	+0.5
SIV	San Ignacio	9.99	68	Pn	Pn	21 57 17.8	+1.4
	1.2nm,0.3s,baz=266,slow=10,SNR=30						
PLCA	Paso Flores	20.63	180	P	Pn	21 59 35.6	+0.9
	0.8nm,0.7s,baz=349,slow=16,SNR=1.6						
PLCA	Paso Flores	20.63	180	P	P	21 59 32.4	0.0
PTGA	Pitinga	21.86	30	P	P	21 59 44.5	-1.3
	4.4nm,0.6s,baz=210,slow=9.7,SNR=9.2						
PTGA	Pitinga	21.86	30	P	P	21 59 44.9	-0.9
PTGA				IAmb	IAmb	21 59 48.1	
	comp=Z,5.6nm,0.7s						
BDFB	Brasilia	22.01	82	P	P	21 59 47.6	+0.1
	comp=Z,1.2nm,0.4s,baz=266,slow=13,SNR=1.8						
BDFB	Brasilia	22.01	82	IAmb	IAmb	21 59 48.0	
	comp=Z,3.2nm,1.0s						
RUSC	La Rusia	25.87	355	P	P	22 00 24.3	-1.1
RCBR	Riachuelo	36.62	72	P	P	22 01 59.5	-0.1
TXAR	Lajitas Array	58.49	326	P	P	22 04 49.1	-0.3
	comp=Z,0.3nm,0.7s,baz=151,slow=6.2,SNR=3.2						
PDAR	Pinedale Array	72.03	331	P	P	22 06 17.5	+0.4
	comp=Z,0.2nm,0.5s,baz=160,slow=5.6,SNR=1.7						
NVAR	Mina Array Bea	73.33	323	P	P	22 06 26.1	+1.2
	comp=Z,0.2nm,0.4s,baz=132,slow=5.8,SNR=4.5						
TOA0	Torodi Ar. Sit	78.44	71	P	P	22 06 53.8	-0.6
TOA0				IAmb	IAmb	22 06 55.0	
	comp=Z,5.3nm,0.9s						
TORD	Torodi Ar. Bea	78.44	71	P	P	22 06 54.3	-0.1
	comp=Z,4.4nm,0.9s,baz=249,slow=4.8,SNR=14						
TORD	Torodi Ar. Bea	78.44	71	P	P	22 06 53.9	-0.5
YKA	Yellowknife Ar	89.27	341	P	P	22 07 48.3	-0.3
	comp=Z,0.6nm,0.8s,baz=142,slow=6.4,SNR=4.2						
H11S2	WAKE ISLAND Hy	126.03	279	T	T	00 32 23.0	
	baz=102						
H11S1	WAKE ISLAND Hy	126.04	279	T	T	00 32 24.8	
	baz=102						
H11S3	WAKE ISLAND Hy	126.05	279	T	T	00 32 24.4	
	baz=102						
H11N3	WAKE ISLAND Hy	126.08	280	T	T	00 32 27.7	
	baz=103						
H11N2	WAKE ISLAND Hy	126.10	280	T	T	00 32 28.6	
	baz=103						
H11N1	WAKE ISLAND Hy	126.10	280	T	T	00 32 31.7	
	baz=103						
WRA	Warramunga Arr	133.32	213	PKP	PKPdf	22 14 10.7	+0.8
	comp=Z,0.2nm,0.6s,baz=153,slow=1.8,SNR=1.8						
ZALV	Zalesovo Beam	141.30	23	PKP	PKPdf	22 14 24.5	+1.0
	comp=Z,0.9nm,0.6s,baz=328,slow=5.3,SNR=4.3						
MKAR	Makanchi Array	145.38	33	PKPbc	PKPbc	22 14 31.2	+0.4
	comp=Z,2.3nm,0.8s,baz=324,slow=4.5,SNR=29						
MJAR	Matsushiro Arr	149.87	309	PKPbc	PKPbc	22 14 43.9	+0.4
	comp=Z,1.6nm,0.9s,baz=92,slow=3.7,SNR=2.0						
SONM	Songino Array	152.17	4	PKPbc	PKiKP	22 14 49.4	+0.4
	comp=Z,1.3nm,0.8s,baz=274,slow=0.7,SNR=10						

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*NEIC **18** 21:55:38.8±1.7, 20°.01S±0°.05×70°.92W±0°.05, h7^{km}±4^{km}, mb4.7/41, Error ellipse: s-maj=7.7km s-min=6.6km az=131.0*

*IDC **18** 21:55:38.2±0.5, 19°.87S×70°.73W, h0^{km}, mb4.3/17, mb1 4.5/21, mb1mx4.4/45, mbtmp4.4/21, ML4.1/4, Error ellipse: s-maj=19.6km s-min=14.1km az=55.0*

*GUC **18** 21:55:41.5±0.8, 20°.03S×70°.86W, h29^{km}±6^{km}, ML4.6*

*VAO **18** 21:56:15.7±4.1, 18°.98S×68°.71W, h151^{km}±22^{km}, mb4.5*

ISC 18 21:55:38.3±1.5**, 19°.98S**±0°.03×**70°.89W**±0°.05**, h4^{km}**±9^{km}**, n99, σ1^{s}47**/87**, mb4.7**/30**, 4C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.82	62	⇑*i*P	Pb	21 55 55.3	+0.1
PSGC				*i* S	Sb	21 56 06.9	+0.2
TA01	Diego Aracena	0.89	131	⇓*i*P	Pb	21 55 56.0	-0.3
TA01				*i* S	Sb	21 56 07.3	-1.1
TA01				IAML		21 56 10.7	
	comp=N,65µm,0.3s						
PATCX	Punta Patache	1.08	140	⇓*i*P	Pb	21 55 59.2	-0.5
PATCX				*i* S	Sb	21 56 13.6	-0.8
PATCX				IAML		21 56 18.3	
	comp=N,20µm,0.6s						
PB11	IPOC Station P	1.19	79	IAML		21 56 20.2	
	comp=N,23µm,0.5s						
PB11	IPOC Station P	1.19	79		Pn	21 56 01.7	-0.1
PB11					Sn	21 56 19.2	+0.7
PB12	IPOC Station P	1.46	21	*i* P	Pg	21 56 07.5	+1.1
PB12				*i* S	Sg	21 56 25.9	+0.5
PB02	IPOC Station P	1.62	145	⇑*i*P	Pb	21 56 08.1	-0.9
PB02				*i* S	Sn	21 56 28.3	-1.0
PB02				IAML		21 56 32.4	
	comp=E,22µm,0.5s						
GO01	Chusmiza	1.63	79	⇓*i*P	Pg	21 56 09.3	-0.3
GO01				*i* S	Sg	21 56 31.7	+0.9
GO01				*i*		21 56 31.8	
GO01	Chusmiza	1.63	79	Pn	Pb	21 56 09.2	-0.1
PB08	IPOC Station P	1.64	96	⇑*i*P	Pb	21 56 09.2	-0.2
PB08				*i* S	Sg	21 56 31.0	-0.2
PB08				IAML		21 56 34.0	
	comp=N,14µm,0.3s						
PB01	IPOC Station P	1.69	129	*i* P	Pb	21 56 09.4	-0.7
PB01				*i* S	Sb	21 56 30.6	-1.1
PB01				IAML		21 56 34.0	
	comp=N,17µm,0.4s						
PB01	IPOC Station P	1.69	129	Pn	Pb	21 56 09.3	-0.7
PB16	IPOC Station P	2.10	39	*i* P	Pg	21 56 18.2	-0.4
PB16				*i* S	Sg	21 56 45.8	-0.1
PB16				IAML		21 56 51.6	
	comp=N,5µm,0.6s						
PB04	IPOC Station P	2.44	164	Pn	Pn	21 56 19.0	-0.1
LVC	Limon Verde	3.20	145	Pn	Pn	21 56 31.2	+1.4
	comp=N,42nm,0.3s,baz=172,slow=21,SNR=12						
LVC				Sn	Sn	21 57 08.0	-0.6
	comp=N,112nm,0.3s,baz=352,slow=16,SNR=3.6						
LVC				Lg	Lg	21 57 15.5	
	comp=N,184nm,0.3s,baz=93,slow=2.0,SNR=3.5						
LVC	Limon Verde	3.20	145		Pn	21 56 28.7	-1.1
PB10	IPOC Station P	3.53	175	Pn	Pn	21 56 31.1	-2.9
LPAZ	La Paz	4.52	36	Pn	Pb	21 56 55.6	-3.0
	comp=N,4.5nm,0.3s,baz=197,slow=2.4,SNR=9.9						
GO02	Mina Guanaco	5.29	167	Pn	Pn	21 56 57.7	-0.8
GO03	Copiap	7.60	176	Pn	Pn	21 57 30.0	+0.1
NNA	Nana	9.79	323	Pn	Pn	21 58 00.8	+0.7
	comp=N,1.7nm,0.3s,baz=98,slow=12,SNR=1.8						
NNA				Sn	Sn	21 59 50.0	-0.6
	comp=N,1.6nm,0.3s,baz=229,slow=20,SNR=1.7						
SIV	San Ignacio	10.15	69	Pn	Pn	21 58 03.8	-1.3
	comp=N,3.4nm,0.3s,baz=262,slow=14,SNR=27						
SAML	Samuel	13.26	35		Pn	21 58 47.8	+0.2
SAML	Samuel	13.26	35	*e*P	P	21 58 53.2	-4.4
CPUP	Villa Florida	13.98	119	Pn	Pn	21 58 56.8	-0.5
	comp=N,0.1nm,0.3s,baz=297,slow=16,SNR=2.1						
SALV	Santo Antonio	15.02	77	*e*P	Pn	21 59 12.5	+0.9
CLDB	Colider	17.13	60	*e*P	Pn	21 59 38.2	-0.6
TRCB	Terra Rica	17.23	103	*e*P	P	21 59 46.5	+4.8
PCMB	Pacaembu	18.43	98	*e*P	P	21 59 59.6	+4.7
ARAG	Araguaiana, MT	18.65	80	*e*P	Pn	21 59 58.1	+0.5
PLCA	Paso Flores	20.68	179	P	Pn	22 00 20.7	-1.1
	comp=N,8.1nm,0.8s,baz=18,slow=12,SNR=8.8						
PLCA	Paso Flores	20.68	179		Pn	22 00 21.6	-0.2
RCLB	Rio Claro- Sao	21.91	101	*e*P	P	22 00 36.8	+3.9
PTGA	Pitinga	21.92	31	P	P	22 00 31.3	-1.5
	comp=N,3.9nm,0.3s,baz=328,slow=23,SNR=5.9						
PTGA	Pitinga	21.92	31	IAmb	IAmb	22 00 36.0	
	comp=Z,9.5nm,0.9s						
BDFB	Brasilia	22.20	82	P	P	22 00 34.8	-1.3
	comp=Z,10nm,0.8s,baz=261,slow=10,SNR=4.8						
BDFB	Brasilia	22.20	82	P	P	22 00 34.6	-1.4
BDFB				IAmb	IAmb	22 00 42.1	
	comp=Z,25nm,1.1s						
SMTB	Santa Maria do	25.09	67	*e*P	P	22 01 05.6	+1.2
RUSC	La Rusia	25.80	355	P	P	22 01 12.2	+1.0
RCBR	Riachuelo	36.79	72	P	P	22 02 46.5	-1.1
	comp=Z,15nm,0.8s,baz=256,slow=8.0,SNR=5.5						
RCBR	Riachuelo	36.79	72	IAmb	IAmb	22 02 48.3	
	comp=Z,21nm,0.9s						
TEIG	Tepich	43.44	336	P	P	22 03 43.0	+0.4
	comp=Z,15nm,0.8s,baz=159,slow=0.0,SNR=7.7						
TEIG	Tepich	43.44	336	IAmb	IAmb	22 03 44.4	
	comp=Z,22nm,0.8s						
BG3	Lake Jocassee	55.86	348	P	P	22 05 16.6	-0.5
BG3				IAmb	IAmb	22 05 17.6	
	comp=Z,5.9nm,0.5s						
SWET	Sewanee	56.72	345	P	P	22 05 23.1	-0.1
TXAR	Lajitas Array	58.34	326	P	P	22 05 35.4	+0.5
	comp=Z,1.8nm,0.7s,baz=147,slow=7.7,SNR=14						
TX31	Lajitas Ar. Si	58.34	326	P	P	22 05 34.9	0.0
WMOK	Wichita Mounta	60.53	334	IAmb	IAmb	22 05 49.5	
	comp=Z,6.4nm,0.8s						
MNTX	Cornudas Mount	61.11	327	IAmb	IAmb	22 05 54.9	
	comp=Z,4.5nm,0.8s						
SNAA	Sanae	64.31	161	P	P	22 06 15.3	+0.5
	comp=Z,0.6nm,0.6s,baz=264,slow=5.0,SNR=1.5						
SNAA	Sanae	64.31	161	P	P	22 06 14.1	-0.7
SNAA				IAmb	IAmb	22 06 23.2	
	comp=Z,4.4nm,0.9s						
SADO	Sadowa	64.88	354	P	P	22 06 18.4	-0.1
	comp=Z,5.5nm,0.7s,baz=276,slow=4.7,SNR=4.7						
SADO	Sadowa	64.88	354	P	P	22 06 17.1	-1.5
SADO				IAmb	IAmb	22 06 19.5	
	comp=Z,6.7nm,0.8s						
CCUT	Cedar City	69.81	325	P	P	22 06 52.1	+1.8
SHPR	Sheep Range	70.04	323	IAmb	IAmb	22 06 55.0	
	comp=Z,5.2nm,0.9s						
DBIC	Dimbokro	70.11	75	P	P	22 06 51.5	-0.9
	comp=Z,3.7nm,0.9s,baz=260,slow=6.5,SNR=2.0						
TPNV	Topopah Spring	70.97	323	IAmb	IAmb	22 07 00.9	
	comp=Z,6.3nm,0.8s						
ISA	Isabella, Lake	71.37	321	IAmb	IAmb	22 07 03.1	
	comp=Z,6.0nm,0.8s						
AGMN	Agassiz Nation	71.55	343	IAmb	IAmb	22 07 01.2	
	comp=Z,5.1nm,0.9s						
PDAR	Pinedale Array	71.88	331	P	P	22 07 03.6	+0.8
	comp=Z,0.5nm,0.6s,baz=127,slow=7.4,SNR=4.5						
PDAR	Pinedale Array	71.88	331	P	P	22 07 02.7	-0.1
HWUT	Hardware Ranch	71.93	329	IAmb	IAmb	22 07 07.1	
	comp=Z,5.7nm,0.8s						
AHID	Auburn Hatcher	72.59	330	IAmb	IAmb	22 07 09.2	
	comp=Z,6.4nm,0.9s						
OMMB	Old Mammoth Mi	73.01	322	IAmb	IAmb	22 07 12.8	
	comp=Z,6.9nm,0.9s						
TPAW	Teton Pass	73.09	331	IAmb	IAmb	22 07 11.5	
	comp=Z,5.2nm,0.9s						
NVAR	Mina Array Bea	73.17	323	P	P	22 07 10.9	+0.3
	comp=Z,2.6nm,0.8s,baz=156,slow=6.7,SNR=10						
NVAR	Mina Array Bea	73.17	323	P	P	22 07 11.1	+0.5
ULM	Lac du Bonnet	73.33	344	P	P	22 07 10.6	-0.4
	comp=Z,1.8nm,0.7s,baz=142,slow=5.4,SNR=4.6						
KVN	Kaiserville	73.48	323	IAmb	IAmb	22 07 15.1	
	comp=Z,6.3nm,1.0s						
PAHR	Pah Rah Range	74.65	323	IAmb	IAmb	22 07 22.5	
	comp=Z,8.1nm,0.9s						
ORV	Oroville	75.76	322	IAmb	IAmb	22 07 28.6	
	comp=Z,8.9nm,1.1s						
VNDA	Vanda	78.01	190	P	P	22 07 39.8	+2.2
	comp=Z,0.9nm,0.9s,baz=90,slow=1.0,SNR=2.0						
SYO	Syowa Base	78.56	160	⇓*i*P	P	22 07 33.0	-7.7
SYO	Syowa Base	78.56	160	⇑*i*pP	P	22 07 39.0	-1.7
TORD	Torodi Ar. Bea	78.62	71	P	P	22 07 40.9	-1.0
	comp=Z,1.3nm,0.5s,baz=161,slow=23,SNR=12						
TORD	Torodi Ar. Bea	78.62	71	P	P	22 07 40.6	-1.3
MAW	Mawson	86.30	164	P	P	22 08 21.6	+0.5
	comp=Z,1.8nm,0.8s,baz=219,slow=6.5,SNR=1.7						
YKA	Yellowknife Ar	89.16	341	P	P	22 08 34.9	+0.2
	comp=Z,2.5nm,0.7s,baz=135,slow=5.3,SNR=14						
DLBC	Dease Lake	92.01	333	P	P	22 08 48.9	+0.7
	comp=Z,4.6nm,0.9s,baz=124,slow=3.6,SNR=2.7						
H11S2	WAKE ISLAND Hy	125.83	279	T	T	00 34 02.9	
	baz=102,slow=74,SNR=110						
H11S1	WAKE ISLAND Hy	125.84	279	T	T	00 34 01.1	
	baz=102,slow=74,SNR=42						
H11S3	WAKE ISLAND Hy	125.85	279	T	T	00 34 00.1	
	baz=102,slow=74,SNR=59						
H11N3	WAKE ISLAND Hy	125.88	280	T	T	00 34 06.3	
	baz=101,slow=74,SNR=32						
H11N2	WAKE ISLAND Hy	125.89	280	T	T	00 33 56.2	
	baz=101,slow=74,SNR=18						
H11N1	WAKE ISLAND Hy	125.89	280	T	T	00 33 55.1	
	baz=101,slow=74,SNR=12						
SEY	Seymchan	127.98	337	PKP	PKiKP	22 14 45.4	-0.2
	comp=Z,1.2nm,0.6s,baz=134,slow=2.5,SNR=5.4						
ASAR	Alice Springs	130.33	210	PKP	PKiKP	22 14 51.3	-0.5
	comp=Z,0.4nm,0.6s,baz=137,slow=2.0,SNR=5.2						
ASAR	Alice Springs	130.33	210		PKiKP	22 14 51.6	-0.1
WRA	Warramunga Arr	133.25	213	PKP	PKPdf	22 14 56.6	+0.2
	comp=Z,0.6nm,0.6s,baz=153,slow=1.8,SNR=5.4						
ZALV	Zalesovo Beam	141.33	23	PKP	PKPdf	22 15 10.6	+0.4
	comp=Z,1.0nm,0.6s,baz=266,slow=3.0,SNR=4.7						
MAKZ	Makanchi	145.27	33		PKPdf	22 15 17.8	+0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	145.44	33	PKPbc	PKPab	22 15 18.0	+0.1
	comp=Z,3.1nm,0.6s,baz=326,slow=4.1,SNR=16						
MKAR	Makanchi Array	145.44	33		PKPab	22 15 18.2	+0.3
KSH	Kashi	145.54	48	PKPbc	PKPab	22 15 19.4	+0.8
KSH				PP	PP	22 18 44.0	+5.4
KSH				SKS	SKSdf	22 22 27.0	-1.4
USRK	Ussuriysk Ar.	149.23	327	PKPbc	PKPbc	22 15 27.3	-1.1
	comp=Z,4.0nm,0.8s,baz=115,slow=0.4,SNR=6.8						
MJAR	Matsushiro Arr	149.68	309	PKPbc	PKPbc	22 15 30.0	+0.3
	comp=Z,3.8nm,0.7s,baz=110,slow=1.6,SNR=8.3						
MJAR	Matsushiro Arr	149.68	309		PKiKP	22 15 30.3	-0.4
SONM	Songino Array	152.13	4	PKPbc	PKPbc	22 15 35.0	-0.3
	comp=Z,2.0nm,0.7s,baz=337,slow=1.3,SNR=13						
SONM	Songino Array	152.13	4		PKPbc	22 15 34.7	-0.6

NNC 18 22:13:38.6±6.5, 43°.80N×83°.68E, h0^{km}, mb3.0, mpv2.7, 1C-5D, Error ellipse: s-maj=66.0km s-min=29.9km az=125.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye	3.08	263	⇑Pg	Pb	22 14 33.7	-0.7
	3.4nm,1.1s						
PDGK				⇓Lg	Lg	22 15 19.4	
	3.2nm,1.0s						
MK31	Makanchi Array	3.15	342	⇓Pn	Pn	22 14 30.7	+1.2
	1.2nm,0.6s,baz=324,slow=3.9,SNR=21						
MK31				⇓Lg	Lg	22 15 17.3	
	2.7nm,0.7s,baz=325,slow=2.8,SNR=10						
MAKZ	Makanchi	3.24	339	⇓Pn	Pn	22 14 30.1	-0.7
	4.0nm,0.8s						
MAKZ				⇓Lg	Lg	22 15 21.9	
	1.7nm,0.8s						

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*NIED **18** 22:23:00, 36°.90N×141°.50E, h5^{km}, Mw4.2 Best double couple: M₀2.12000×10^{15} NP1:φ$_s$249.00000°, δ76.00000°, λ-49.00000°. NP2:φ$_s$355.00000°, δ43.00000°, λ-159.00000°.*

*JMA **18** 22:23:12.9±0.1, 36°.92N×141°.43E, h33^{km}±1^{km}, M4.4*

JMA Felt II J1.

*NEIC **18** 22:23:16.3±2.0, 36°.80N±0°.02×141°.40E±0°.09, h41^{km}±7^{km}, mb4.4/9, Error ellipse: s-maj=10.2km s-min=2.4km az=77.0*

*IDC **18** 22:23:17.7±1.6, 36°.90N×141°.23E, h43^{km}±15^{km}, mb3.8/27, mb1 3.9/31, mb1mx3.9/48, mbtmp4.0/31, ML3.2/3, Error ellipse: s-maj=15.2km s-min=9.6km az=98.0*

ISC 18 22:23:13.2±1.4, 36°.88N±0°.04×141°.37E±0°.05, h15^{km}±8^{km}, n76, σ1^{s}53/86, mb4.1/30, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.51	296	P	Pg	22 23 23.6	+0.3
ONAJ				S	Sb	22 23 31.4	+0.2
JFK	Kawauchi	0.63	321	P	Pg	22 23 25.0	-0.5
JFK				S	Sg	22 23 33.5	-0.3
JFFD	Fukushimafurud	0.68	288	P	Pg	22 23 26.4	-0.1
JFFD				S	Sg	22 23 35.6	0.0
JHO	Hitachi	0.70	248	P	Pg	22 23 26.9	+0.1
JHO				S	Sb	22 23 37.5	+0.9
JFT	Otama	1.04	308	P	Pb	22 23 32.4	-0.6
JFT				S	Sb	22 23 46.1	-0.4
JMM	Marumori	1.09	335	P	Pb	22 23 31.7	-2.0
JMM				*e*S	Sb	22 23 45.4	-2.3
JFY	Yanaizu	1.43	292	P	Pn	22 23 38.8	+0.1
JFY				S	Sn	22 23 57.6	+0.3
JIO	Ouri	1.57	359	P	Pn	22 23 38.7	-1.8
JIO				S	Sn	22 23 57.2	-3.4
JOU	Okura	1.58	339	P	Pn	22 23 40.2	-0.6
MJAR	Matsushiro Arr	2.56	263	P	Pn	22 23 55.2	+0.9
	2.0nm,0.3s,baz=90,slow=14,SNR=112						
MJAR				S	Sb	22 24 28.4	-1.9
	4.0nm,0.3s,baz=83,slow=30,SNR=4.0						
MJAR	Matsushiro Arr	2.56	263		Pn	22 23 54.9	+0.6
MJAR					Sn	22 24 22.9	-2.3
MAJO	Matsushiro	2.57	263		Pn	22 23 55.8	+1.5
MAT	Matsushiro	2.57	263	P	Pn	22 23 55.5	+1.2
MAT				*e*S	Sb	22 24 30.2	-0.1
MJB9	Matsu-Tunnel	2.57	263		Pn	22 23 55.9	+1.6
MJB9				Sn	Sn	22 24 21.0	-4.3
INU	Inuyama	3.84	248		Pn	22 24 14.7	+2.9
JHJ2	Mitsune	3.97	199	Pn	Pn	22 24 14.4	+0.8
JHJ	Hachijo jima 2	3.97	200	P	Pn	22 24 14.8	+1.2
	31nm,0.3s,baz=282,slow=24,SNR=8.2						
JHJ				S	Sn	22 25 01.7	+1.8
	8.2nm,0.3s,baz=71,slow=23,SNR=1.6						
ERM	Erimo	5.31	15	Pn	Pn	22 24 32.9	+0.9
ASAJ	Asahikawa	7.29	7	P	Pn	22 25 01.2	+2.1
	baz=197,slow=12,SNR=1.0						
ASAJ				S	Sn	22 26 22.9	+1.4
	1.7nm,0.3s,baz=99,slow=29,SNR=1.8						
JKA	Kamikawa-asahi	7.29	7		Pn	22 25 01.2	+2.1
JKA					Sn	22 26 22.9	+1.4
JCJ	Chichijima	9.78	176	P	Pn	22 25 31.6	-1.8
	13nm,0.3s,baz=268,slow=17,SNR=10						
JCJ				S	Sn	22 27 16.5	-6.4
	5.0nm,0.3s,baz=109,slow=23,SNR=2.4						
USRK	Ussuriysk Ar.	10.21	319	P	Pn	22 25 43.4	+4.2
	baz=129,slow=14,SNR=6.2						
USRK	Ussuriysk Ar.	10.21	319		Pn	22 25 42.0	+2.8
KSRS	Korea Array	10.75	277	P	Pn	22 25 48.7	+2.1
	0.1nm,0.3s,baz=90,slow=14,SNR=1.3						
SEY	Seymchan	26.95	11	P	P	22 28 54.2	+0.5
	0.7nm,0.2s,baz=194,slow=23,SNR=2.8						
SONM	Songino Array	27.84	304	P	P	22 29 01.1	-1.0
	0.3nm,0.6s,baz=102,slow=9.1,SNR=2.2						
H11N2	WAKE ISLAND Hy	28.10	120	T	T	22 58 25.9	
	baz=313,slow=75,SNR=517						
H11N1	WAKE ISLAND Hy	28.11	121	T	T	22 58 28.8	
	baz=313,slow=75,SNR=30						
H11N3	WAKE ISLAND Hy	28.12	120	T	T	22 58 29.5	
	baz=313,slow=75,SNR=460						
WAKE	Wake Island	28.24	122	P	P	22 29 03.6	-2.0
H11S1	WAKE ISLAND Hy	28.80	123	T	T	22 59 17.1	
	baz=315,slow=76,SNR=246						
H11S3	WAKE ISLAND Hy	28.80	123	T	T	22 59 17.1	
	baz=315,slow=76,SNR=207						
H11S2	WAKE ISLAND Hy	28.82	123	T	T	22 59 18.0	
	baz=315,slow=76,SNR=185						
CMAR	Chiang Mai Arr	41.43	255	P	P	22 30 59.3	-0.1
	0.7nm,0.3s,baz=60,slow=5.5,SNR=1.8						
ZAA0	Zalesovo Array	41.99	313	P	P	22 31 02.7	-0.8
ZAA0				IAmb	IAmb	22 31 17.7	
	comp=Z,4.2nm,1.2s						
ZALV	Zalesovo Beam	41.99	313	P	P	22 31 03.8	+0.2
	comp=Z,1.3nm,0.4s,baz=92,slow=8.0,SNR=6.9						
ZALV	Zalesovo Beam	41.99	313	P	P	22 31 03.0	-0.6
NRIK	Noril'sk	43.39	335	P	P	22 31 15.8	+1.1
	comp=Z,0.4nm,0.3s,baz=110,slow=6.2,SNR=1.7						
MK31	Makanchi Array	44.17	302	P	P	22 31 20.4	-0.9
MKAR	Makanchi Array	44.17	302	P	P	22 31 21.6	+0.3
	comp=Z,1.5nm,0.8s,baz=88,slow=9.9,SNR=14						
MKAR	Makanchi Array	44.17	302	P	P	22 31 21.3	0.0
KURK	Kurchatov	46.00	308	P	P	22 31 36.0	+0.2
KURK				IAmb	IAmb	22 31 52.1	
	comp=Z,5.1nm,0.9s						
KURBB	Kurchatov Arra	46.07	308	P	P	22 31 36.3	0.0
	comp=Z,1.3nm,0.6s,baz=81,slow=8.1,SNR=15						
KDAK	Kodiak Island	47.23	42	P	P	22 31 46.7	+1.4
	comp=Z,9.4nm,0.6s,baz=324,slow=3.8,SNR=8.7						
IL31		49.64	32	P	P	22 32 03.8	+0.1
IL31				IAmb	IAmb	22 32 10.1	
	comp=Z,3.2nm,0.8s						
ILAR	Eielson Array	49.64	32	P	P	22 32 04.7	+0.9
	comp=Z,2.3nm,0.7s,baz=267,slow=6.2,SNR=11						
ILAR	Eielson Array	49.64	32	P	P	22 32 03.8	+0.1
BVAR	Borovoye Array	50.65	312	P	P	22 32 11.8	+0.1
	comp=Z,0.5nm,0.5s,baz=99,slow=6.6,SNR=4.3						
BVAR				PcP	PcP	22 33 28.2	-0.7
	comp=Z,0.5nm,0.6s,baz=90,slow=1.4,SNR=1.8						
PSI	Prapat	51.69	239	P	P	22 32 20.7	+0.7
	comp=Z,1.6nm,0.3s,baz=77,slow=16,SNR=3.7						
RPSI	Rantau Prapat	51.76	239	P	P	22 32 20.7	+0.3
INK	Inuvik	54.53	27	P	P	22 32 41.6	+1.5
	comp=Z,0.8nm,0.5s,baz=267,slow=7.9,SNR=4.8						
INK	Inuvik	54.53	27	IAmb	IAmb	22 32 46.9	
	comp=Z,5.3nm,1.2s						
WRA	Warramunga Arr	56.91	188	P	P	22 32 57.8	+0.2
	comp=Z,2.5nm,0.7s,baz=3.9,slow=7.3,SNR=32						
WRA				PcP	PcP	22 33 53.4	+0.4
	comp=Z,1.1nm,0.7s,baz=359,slow=4.0,SNR=2.5						
WRA	Warramunga Arr	56.91	188	P	P	22 32 56.8	-0.8
ABKAR	Akbulak array	58.01	310	P	P	22 33 04.9	-0.3
KIRV	Kirov	60.35	323	P	P	22 33 20.9	-0.3
	comp=Z,7.0nm,0.5s,baz=96,slow=4.1,SNR=2.0						
ASAR	Alice Springs	60.63	188	P	P	22 33 24.1	+0.6
	comp=Z,1.5nm,0.7s,baz=15,slow=6.6,SNR=14						
GEYT	Alibeck	63.88	299	P	P	22 33 46.2	+0.8
	comp=Z,2.5nm,0.8s,baz=77,slow=6.4,SNR=2.9						
ARCES	ARCESS Array B	64.13	339	P	P	22 33 46.3	-0.2
	comp=Z,2.2nm,0.9s,baz=54,slow=9.1,SNR=1.4						
STKA	Stephens Creek	68.40	180	P	P	22 34 14.7	+0.5
	comp=Z,0.7nm,0.5s,baz=344,slow=9.4,SNR=3.7						
FINES	FINESS Array B	68.93	332	P	P	22 34 17.0	-0.2
	comp=Z,1.0nm,0.8s,baz=54,slow=5.7,SNR=1.8						
KBZ	Khabaz	70.98	311	P	P	22 34 30.1	0.0
	comp=Z,1.6nm,0.8s,baz=204,slow=22,SNR=2.4						
NB2	NORSAR Subarra	74.31	337	P	P	22 34 49.9	+0.2
	comp=Z,0.4nm,0.6s,baz=31,slow=6.5						
NOA	NORSAR Array B	74.31	337	P	P	22 34 49.0	-0.7
	comp=Z,0.9nm,0.9s,baz=38,slow=5.8,SNR=2.9						
AKASG	Malin Array Be	74.40	322	P	P	22 34 49.8	-0.5
	comp=Z,1.2nm,0.4s,baz=46,slow=6.3,SNR=5.1						
AKASG	Malin Array Be	74.40	322	IAmb	IAmb	22 34 55.7	
	comp=Z,0.6nm,0.7s						
NVAR	Mina Array Bea	75.11	53	P	P	22 34 57.0	+2.1
	comp=Z,0.5nm,0.7s,baz=292,slow=4.8,SNR=2.5						
NVAR	Mina Array Bea	75.11	53	P	P	22 34 53.8	-1.2
PDAR	Pinedale Array	77.80	45	P	P	22 35 10.8	+0.7
	comp=Z,0.2nm,0.7s,baz=282,slow=4.5,SNR=1.9						
PDAR	Pinedale Array	77.80	45	P	P	22 35 09.3	-0.8
BRTR	Keskin Array B	78.93	312	P	P	22 35 17.1	+0.8
	comp=Z,0.4nm,0.6s,baz=52,slow=3.2,SNR=4.1						
GERES	GERESS Array B	82.82	328	P	P	22 35 37.4	+0.5
	comp=Z,0.5nm,0.5s,baz=27,slow=6.8,SNR=2.0						
TXAR	Lajitas Array	90.24	52	P	P	22 36 14.9	+1.3
	comp=Z,1.0nm,0.7s,baz=292,slow=4.8,SNR=3.0						
TORD	Torodi Ar. Bea	117.42	315	PKP	PKPdf	22 41 58.4	-0.4
	comp=Z,0.1nm,0.5s,baz=38,slow=2.6,SNR=1.2						
LPAZ	La Paz	146.80	60	PKPbc	PKPbc	22 42 56.0	0.0
	comp=Z,0.7nm,0.7s,baz=284,slow=4.2,SNR=1.6						
LPAZ	La Paz	146.80	60	PKPdf	PKPdf	22 42 53.5	-0.7

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*IDC **18** 22:26:30.3±6.7, 28°.43N×87°.21E, h86^{km}±64^{km}, mb3.0/5, mb1 3.2/8, mb1mx3.0/50, mbtmp3.4/8, ML3.4/3, Error ellipse: s-maj=45.7km s-min=20.8km az=54.0*

ISC 18 22:26:24.4±1.1, 28°.3N±0°.2×87°.2E±0°.2, h34^{km}, n8, σ0^{s}85/8, mb3.4/5, Xizang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.53	130	P	P	22 29 53.2	-0.6
	0.2nm,0.3s,baz=310,slow=11,SNR=7.4						
AAK	Ala-Archa	17.65	328	P	P	22 30 28.7	+0.2
	0.1nm,0.3s,baz=137,slow=18,SNR=2.1						
MKAR	Makanchi Array	18.88	349	P	P	22 30 41.7	-0.1
	0.1nm,0.3s,baz=176,slow=11,SNR=3.4						
KURBB	Kurchatov Arra	23.27	346	P	P	22 31 29.9	+1.1
	0.3nm,0.6s,baz=162,slow=9.6,SNR=3.8						
SONM	Songino Array	24.55	32	P	P	22 31 40.5	-0.6
	0.1nm,0.3s,baz=218,slow=11,SNR=2.2						
WRA	Warramunga Arr	66.12	131	P	P	22 37 09.2	+0.7
	0.5nm,0.8s,baz=325,slow=6.5,SNR=4.8						
ASAR	Alice Springs	68.49	134	P	P	22 37 24.5	+1.0
	0.4nm,0.4s,baz=312,slow=6.4,SNR=6.1						
TORD	Torodi Ar. Bea	80.01	280	P	P	22 38 30.3	-0.6
	0.3nm,0.7s,baz=56,slow=4.6,SNR=1.8						

PRU 18 22:37:12.5±0.0, 51°.46N×16°.15E, h0^{km}, Poland

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHVC	Chvalec	0.88	184	*e*PG	Pg	22 37 29.2	0.0
CHVC				*e*SG	Sg	22 37 40.2	-0.4
OSTC	Ostas	0.91	177	*e*PG	Pg	22 37 30.0	+0.2
OSTC				*e*SG	Sg	22 37 41.6	+0.1
DPC	Dobruska-Polom	1.12	174	*e*PG	Pg	22 37 33.0	-0.9
DPC				*e*SG	Sg	22 37 47.4	-0.9
PVCC	Panska Ves	1.37	228	*e*PG	Pg	22 37 37.0	-1.7
PVCC				*e*SG	Sg	22 37 56.5	+0.1
	comp=Z,3.5nm,0.3s						
BRG	Berggiesshubel	1.51	248	SG	Sg	22 38 00.1	-0.8
	1.1nm,0.4s						

IDC 18 22:38:01.7±14.0, 22°.82S×69°.01W, h0^{km}, mb3.8/1, mb1 3.8/1, mb1mx3.4/15, mbtmp3.8/1, Error ellipse: s-maj=896.9km s-min=119.8km az=4.0, Northern Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	77.89	70	P	P	22 50 01.9	0.0
	0.4nm,1.0s,baz=260,slow=4.2,SNR=4.8						
ZALV	Zalesovo Beam	143.18	26	PKP	PKPdf	22 57 37.0	-0.5
	1.8nm,0.7s,baz=302,slow=3.2,SNR=6.1						
MKAR	Makanchi Array	146.74	37	PKPbc	PKPbc	22 57 44.8	-0.8
	1.2nm,0.7s,baz=320,slow=2.2,SNR=15						

UCR 18 22:38:18.3±1.2, 10°.25N×84°.34W, h95^{km}±5^{km}, MD3.7, MW3.3, Costa Rica

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEDE	Laguna Cedeo	0.43	303	*e*P	Pn	22 38 34.0	+0.9
CEDE				*e*S	Sn	22 38 45.4	+1.1
JTS	Las Juntas de	0.60	274	*e*P	Pn	22 38 34.4	-0.1
JTS				*e*S	Sn	22 38 46.8	+0.3
LCR2	La Lucha 2	0.61	147	*e*P	Pn	22 38 34.5	-0.2
ACAL	Aguas Claras	0.78	299	*i* P	Pn	22 38 36.4	+0.3
ACAL				*i* S	Sn	22 38 49.4	-0.1
PTEN	Parque Tenorio	0.78	306	*i* P	Pn	22 38 36.5	+0.4
CUI	Cuipilapa	0.90	297	*i* P	Pn	22 38 37.7	+0.3
CUI				*e*S	Sn	22 38 52.5	+0.7
COLC	Colonia	0.94	296	*i* P	Pn	22 38 38.0	+0.2
COLC				*i* S	Sn	22 38 52.4	-0.1
PLVR	Palo Verde	1.00	276	*e*P	Pn	22 38 38.9	+0.3
PLVR				*e*S	Sn	22 38 54.3	+0.6
EDDO	Dominical	1.10	155	*e*P	Pn	22 38 40.0	+0.5
EDDO				*e*S	Sn	22 38 56.2	+0.8
ACON	Acoyapa	1.89	334	*e*P	Pn	22 38 49.3	0.0
BRU2	Volcan	2.18	132	*e*P	Pn	22 38 53.4	+0.2
BRU2				*e*S	Sn	22 39 19.9	0.0

BUC 18 22:39:23.7±0.7, 45°.63N×26°.41E, h140^{km}±4^{km}, ml2.9/11, 26C-18D, Error ellipse: s-maj=5.6km s-min=3.2km az=153.0, Romania

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BISRR	Bisoca	0.23	112	⇓P	Pn	22 39 43.3	+0.4
BISRR				⇑S	Sn	22 39 58.4	+1.0
BISRR	Bisoca	0.23	112	⇓P	Pn	22 39 43.3	+0.4
BISRR				⇑S	Sn	22 39 58.4	+1.0
PLOR	Plostina	0.28	38	⇑P	Pn	22 39 43.7	+0.7
PLOR				⇑S	Sn	22 39 58.3	+0.7
PLOR	Plostina	0.28	38	⇑P	Pn	22 39 43.7	+0.7
PLOR				⇑S	Sn	22 39 58.3	+0.7
VRI	Vrincioaia	0.32	44	⇓P	Pn	22 39 43.6	+0.5
VRI				⇓S	Sn	22 39 58.5	+0.6
VRI	Vrincioaia	0.32	44	⇓P	Pn	22 39 43.6	+0.5
VRI				⇓S	Sn	22 39 58.5	+0.6
MLR	Muntele Rosu	0.36	246	⇓P	Pn	22 39 43.8	+0.4
MLR				⇑S	Sn	22 39 58.8	+0.5
MLR	Muntele Rosu	0.36	246	⇓P	Pn	22 39 43.8	+0.4
MLR				⇑S	Sn	22 39 58.8	+0.5
ODBI	Odobesti	0.47	74	⇑S	Sn	22 39 59.9	+1.0
ODBI	Odobesti	0.47	74	⇑S	Sn	22 39 59.9	+1.0
TUDR		0.89	92	⇑S	Sn	22 40 03.8	+0.1
TUDR		0.89	92	⇑S	Sn	22 40 03.8	+0.1
TESR	Tescani	0.89	11	⇑P	Pn	22 39 47.1	+0.5
TESR				⇑S	Sn	22 40 04.0	-0.1
TESR	Tescani	0.89	11	⇑P	Pn	22 39 47.1	+0.5
TESR				⇑S	Sn	22 40 04.0	-0.1
SULR		0.96	187	⇓P	Pn	22 39 47.3	+0.2
SULR				⇓S	Sn	22 40 05.6	+0.7
SULR		0.96	187	⇓P	Pn	22 39 47.3	+0.2
SULR				⇓S	Sn	22 40 05.6	+0.7
VOIR		0.97	259	⇑P	Pn	22 39 47.5	+0.1
VOIR				⇓S	Sn	22 40 04.7	-0.6
VOIR		0.97	259	⇑P	Pn	22 39 47.5	+0.1
VOIR				⇓S	Sn	22 40 04.7	-0.6
BIR	Birlad	1.06	53	⇑S	Sn	22 40 07.3	+0.7
BIR	Birlad	1.06	53	⇑S	Sn	22 40 07.3	+0.7
ARR	Arges	1.28	259	⇑P	Pn	22 39 50.9	+0.7
ARR				⇑S	Sn	22 40 09.7	-0.7
ARR	Arges	1.28	259	⇑P	Pn	22 39 50.9	+0.7
ARR				⇑S	Sn	22 40 09.7	-0.7
CFR	Carcaliu	1.30	110	⇓S	Sn	22 40 09.7	-1.0
CFR	Carcaliu	1.30	110	⇓S	Sn	22 40 09.7	-1.0
MILM	Milestii Mici	2.10	52	⇓P	Pn	22 39 59.7	+0.3
MILM				⇑S	Sn	22 40 26.0	-0.8
MILM	Milestii Mici	2.10	52	⇓P	Pn	22 39 59.7	+0.3
MILM				⇑S	Sn	22 40 26.0	-0.8

IDC 18 23:04:01.4±4.1, 4°.99S×151°.96E, h0^{km}, mb3.6/4, mb1 3.7/4, mb1mx3.5/23, mbtmp3.6/4, Error ellipse: s-maj=142.8km s-min=31.9km az=109.0, New Britain region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.69	228	P	P	23 09 04.2	-0.7
	0.9nm,0.7s,baz=53,slow=10,SNR=5.8						
ASAR	Alice Springs	25.45	221	P	P	23 09 32.0	+0.7
	0.7nm,0.9s,baz=52,slow=9.2,SNR=5.7						
MKAR	Makanchi Array	79.92	319	P	P	23 16 13.1	+0.7
	0.2nm,0.6s,baz=101,slow=4.3,SNR=2.4						
ZALV	Zalesovo Beam	80.84	327	P	P	23 16 17.3	+0.1
	0.4nm,0.3s,baz=102,slow=6.6,SNR=1.9						
TORD	Torodi Ar. Bea	149.56	287	PKPbc	PKPbc	23 23 52.6	-1.4
	0.5nm,0.7s,baz=83,slow=2.9,SNR=4.1						

IDC 18 23:26:45.3±2.1, 16°.92S×175°.46W, h232^{km}±19^{km}, mb3.7/5, mb1 4.0/6, mb1mx3.4/35, mbtmp4.3/6, Error ellipse: s-maj=101.9km s-min=15.3km az=144.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.65	50	P	Pn	23 27 57.5	+1.3
	9.5nm,0.3s,baz=192,slow=2.0,SNR=5.9						
AFI				S	S	23 28 52.4	-0.1
	34nm,0.3s,baz=34,slow=22,SNR=14						
STKA	Stephens Creek	41.57	241	P	P	23 34 10.3	-0.3
	1.6nm,0.5s,baz=94,slow=9.2,SNR=5.1						
WRA	Warramunga Arr	47.58	258	P	P	23 34 57.7	-0.5
	2.2nm,0.5s,baz=96,slow=7.0,SNR=31						
ASAR	Alice Springs	47.77	253	P	P	23 34 59.8	+0.2
	20nm,0.5s,baz=88,slow=8.7,SNR=335						
ASAR				PcP	PcP	23 36 23.9	-0.9
	0.7nm,0.5s,baz=101,slow=4.4,SNR=4.1						
NVAR	Mina Array Bea	76.78	43	P	P	23 38 11.7	0.0
	0.6nm,0.7s,baz=217,slow=7.2,SNR=3.7						
ILAR	Eielson Array	84.32	12	P	P	23 38 50.4	-0.4
	0.7nm,0.6s,baz=222,slow=5.9,SNR=14						
BRTR	Keskin Array B	146.02	318	PKPbc	PKPbc	23 45 58.0	-0.3
	1.3nm,0.8s,baz=36,slow=1.4,SNR=8.9						
GERES	GERESS Array B	147.29	349	PKPbc	PKPbc	23 46 01.0	-0.5
	0.3nm,0.4s,baz=12,slow=5.0,SNR=3.5						

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*IDC **18** 23:29:35.4±1.4, 15°.42S×174°.89W, h257^{km}±17^{km}, mb3.5/8, mb1 3.8/9, mb1mx3.5/33, mbtmp4.1/9, Error ellipse: s-maj=48.6km s-min=14.5km az=143.0*

ISC 18 23:29:35.4±1.0, 15°.5S±0°.3×174°.8W±0°.2, h262^{km}, n15, σ0^{s}46/16, mb3.8/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.35	62	P	Pn	23 30 32.4	-0.2
	40nm,0.3s,baz=154,slow=1.6,SNR=11						
AFI				S	S	23 31 18.2	+0.2
	16nm,0.3s,baz=23,slow=19,SNR=2.3						
STKA	Stephens Creek	42.79	240	P	P	23 37 08.0	+0.1
	1.2nm,0.4s,baz=127,slow=18,SNR=3.7						
WRA	Warramunga Arr	48.47	257	P	P	23 37 52.3	0.0
	3.1nm,0.6s,baz=90,slow=6.9,SNR=22						
ASAR	Alice Springs	48.77	252	P	P	23 37 54.6	+0.1
	27nm,0.5s,baz=87,slow=8.0,SNR=165						
MJAR	Matsushiro Arr	68.12	321	P	P	23 40 07.2	-0.2
	0.7nm,0.3s,baz=157,slow=9.8,SNR=1.5						
PETK	Petropavlovsk-	72.30	343	P	P	23 40 32.6	+0.3
	4.2nm,0.7s,baz=132,slow=8.4,SNR=6.6						
NVAR	Mina Array Bea	75.33	43	P	P	23 40 51.0	+0.5
	0.3nm,0.6s,baz=212,slow=9.4,SNR=2.3						
ILAR	Eielson Array	82.81	12	P	P	23 41 29.6	-0.4
	0.4nm,0.3s,baz=215,slow=5.4,SNR=15						
PDAR	Pinedale Array	83.26	42	P	P	23 41 33.7	+0.5
	0.3nm,0.5s,baz=203,slow=3.9,SNR=3.1						
CMAR	Chiang Mai Arr	91.33	289	P	P	23 42 12.5	+0.4
	0.8nm,0.3s,baz=74,slow=3.3,SNR=5.7						
FINES	FINESS Array B	131.72	347	PKP	PKPdf	23 48 16.6	-0.2
	1.9nm,1.0s,baz=0.0,slow=3.8,SNR=4.9						
KMBO	Kilima Mbogo	144.24	245	PKP	PKPdf	23 48 41.5	0.0
	0.5nm,0.4s,baz=42,slow=8.7,SNR=3.5						
BRTR	Keskin Array B	145.34	320	PKPbc	PKPbc	23 48 43.2	+0.2
	1.6nm,0.6s,baz=79,slow=3.1,SNR=11						
KHC	Kasperske Hory	145.75	350	*e*PKP	PKPdf	23 48 41.6	-1.2
GERES	GERESS Array B	146.01	350	PKPbc	PKPbc	23 48 44.4	-0.2
	1.1nm,0.5s,baz=347,slow=4.0,SNR=5.3						

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*MEX **18** 23:41:58.3±0.6, 25°.46N×99°.58W, h5^{km}, MD4.2*

*NEIC **18** 23:41:59.5±4.0, 25°.33N±0°.04×99°.44W±0°.08, h35^{km}±9^{km}, Error ellipse: s-maj=11.2km s-min=4.2km az=109.0*

ISC 18 23:41:57.8±0.9, 25°.40N±0°.04×99°.58W±0°.06, h10^{km}, n25, σ1^{s}64/30, Northern Mexico

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LNIG	Linares	0.51	168	*e*P	Pb	23 42 08.4	-0.4
	baz=349,slow=18						
LNIG				*i* S	Sb	23 42 17.2	+0.9
LNIG	Linares	0.51	168		Pb	23 42 08.4	-0.4
LNIG					Sb	23 42 17.2	+0.9
MNIG	Monterrey	0.67	288	*e*P	Pg	23 42 10.3	-0.5
MNIG				*e*S	Sg	23 42 20.0	+0.3
KVTX	Kingsville	2.62	35	Pn	Pn	23 42 36.6	-3.6
833A	Chaparral WMA,	2.92	3	Pn	Pn	23 42 42.3	-2.0
833A					Sb	23 43 25.4	-0.4
735A	Kenedy	3.79	24	Pn	Pn	23 42 56.5	+0.2
JCT	Junction City	5.07	358	*i* P	Pn	23 43 11.7	-2.2
JCT	Junction City	5.07	358		Pn	23 43 11.7	-2.2
TXAR	Lajitas Array	5.34	318	Pn	Pn	23 43 16.4	-1.3
TX31	Lajitas Ar. Si	5.34	318	Pn	Pn	23 43 16.7	-1.1
TX32	Lajitas Array	5.34	318		Pn	23 43 16.8	-1.0
HKT	Hockley	5.62	35	Pn	Pn	23 43 20.6	-0.8
435B	Jarrell	5.65	18		Pn	23 43 20.3	-1.5
435B					Sn	23 44 27.7	+0.9
HPIG		5.68	287	*e*P	Pn	23 43 20.8	-1.6
HPIG		5.68	287		Pn	23 43 21.7	-0.7
HPIG		5.68	287		Pn	23 43 20.8	-1.6
MOIG	Morelia	5.88	195	Pn	Pn	23 43 24.9	-0.4
WHTX	Lake Whitney,	6.83	15	Pn	Pn	23 43 37.1	-0.9
ABTX	Abilene, Hawle	7.20	360		Pn	23 43 44.5	+1.3
MNTX	Cornudas Mount	8.09	322		Pn	23 43 54.8	-0.5
Z35A	Perchaven, San	8.16	14	Pn	Pn	23 43 56.8	+0.5
MSTX	Muleshoe	8.98	343		Pn	23 44 05.0	-2.7
AMTX	Amarillo	9.63	350	Pn	Pn	23 44 15.2	-1.3
X37A	Clayton	9.86	21	Pn	Pn	23 44 19.0	-0.6
PV09	Paradox Valley	15.36	331	P	P	23 45 43.9	+4.2

MAN 18 23:58:32.6, 9°.96N×124°.02E, h22^{km}, mb4.3, ML3.1, MS2.9, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TBP	Tagbilaran	0.31	211	*e*P	Pb	23 58 37.9	-1.6
TBP				*i* S	Sb	23 58 41.5	-2.7
LLP	Lapu-Lapu	0.36	351	⇓*e*P	Pb	23 58 40.4	+0.1
LLP				*i* S	Sb	23 58 46.7	+1.1
MSLP	Maasin	0.84	78	*e*P	Pb	23 58 48.6	+0.1
MSLP				*e*S	Sn	23 59 01.6	+0.8
SNPH	Sibulan	0.99	232	⇓*i*P	Pb	23 58 50.9	-0.2
SNPH				*i* S	Sn	23 59 04.7	+0.2
DCPH	Dipolog City	1.52	206	⇑*e*P	Sb	23 59 18.2	-0.6
GUIM	Jordan	1.56	295	*e*P	Pn	23 58 59.2	+0.2
GUIM				*e*S	Sb	23 59 19.6	-0.4
RCP	Roxas	2.03	322	⇑*e*P	Pb	23 59 09.1	+0.4
RCP				*e*S	Sb	23 59 34.7	+1.2
PAGZ	Pagadian	2.19	197	*e*P	Pn	23 59 07.4	-0.3
PAGZ				*e*S	Sb	23 59 36.4	-1.8
BUKP	Musuan	2.31	153	*e*P	Pn	23 59 04.9	-4.4
BUKP				*e*S	Sn	23 59 38.9	+1.8

*IDC **19** 00:26:15.3±1.5, 35.°07N×25.°61E, h0km, mb3.7/2, mb1 3.5/4, mb1mx3.3/29, mbtmp3.5/4, ML3.5/2, Error ellipse: s-maj=69.2km s-min=23.1km az=137.0*
*ISK **19** 00:26:17.9, 35.°59N×25.°24E, h19km, ML3.2/22*
*ATH **19** 00:26:17.4, 35.°52N×25.°26E, h40km±1km, ML3.3/12, Error ellipse: s-maj=1.5km s-min=0.7km az=148.0*
*NIC **19** 00:26:18.1±0.0, 35.°57N×25.°31E, h61km±6km, Ml3.7/3*
*THE **19** 00:26:19.1, 35.°54N×25.°24E, h27km±1km, ML3.1/34, Error ellipse: s-maj=1.6km s-min=0.4km az=170.0*
*DDA **19** 00:26:19.8, 35.°72N×25.°32E, h48km, ML3.0*
ISC 19 00:26:18.7±0.8, **35.°55N**±0.°02×**25.°25E**±0.°02, **h29**km±6km, **n188**, σ**1.s28**/255, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HRKL	**Herakleio**	**0.27**	**206**	P	**Pb**	**00 26 25.9**	**+0.2**
HRKL				S	**Sb**	**00 26 30.6**	**+0.2**
	6µm,0.5s						
HRKL	**Herakleio**	**0.27**	**206**	PG	**Pb**	**00 26 25.9**	**+0.2**
IACM	**Heraklion**	**0.29**	**210**	P	**Pb**	**00 26 25.9**	**0.0**
IACM				S	**Sb**	**00 26 30.7**	**-0.1**
	14µm,0.2s						
IACM	**Heraklion**	**0.29**	**210**	P	**Pb**	**00 26 26.0**	**0.0**
KSTL	**Kastelli Herak**	**0.29**	**210**	P	**Pn**	**00 26 26.9**	**0.0**
KSTL				S	**Sn**	**00 26 32.0**	**-0.2**
IDI	**Anoyia**	**0.39**	**228**	P	**Pb**	**00 26 27.3**	**-0.2**
IDI				S	**Sb**	**00 26 32.5**	**-1.0**
IDI	**Anoyia**	**0.39**	**228**	P	**Pb**	**00 26 27.3**	**-0.2**
IDI				S	**Sb**	**00 26 32.7**	**-0.8**
IDI				AML	AML	00 26 33.2	
	comp=N,9743µm,0.1s						
IDI				AML	AML	00 26 33.6	
	comp=E,14124µm,0.3s						
IDI	**Anoyia**	**0.39**	**228**	PG	**Pb**	**00 26 27.3**	**-0.2**
IDI				SG	**Sb**	**00 26 32.8**	**-0.7**
NPS	**Neapolis**	**0.42**	**134**	P	**Pb**	**00 26 27.3**	**-0.5**
NPS				S	**Sb**	**00 26 33.8**	**-0.3**
NPS	**Neapolis**	**0.42**	**134**	P	**Pb**	**00 26 27.4**	**-0.5**
NPS				S	**Sb**	**00 26 33.9**	**-0.3**
NPS				AML	AML	00 26 35.0	
	comp=E,7494µm,0.2s						
NPS				AML	AML	00 26 37.3	
	comp=N,5300µm,0.3s						
LAST	**Lasithi**	**0.44**	**154**	P	**Pb**	**00 26 27.9**	**-0.2**
LAST				S	**Sb**	**00 26 34.0**	**-0.6**
LAST	**Lasithi**	**0.44**	**154**	P	**Pb**	**00 26 28.0**	**-0.2**
LAST				S	**Sb**	**00 26 34.1**	**-0.5**
LAST				AML	AML	00 26 34.6	
	comp=E,13022µm,0.3s						
LAST				AML	AML	00 26 34.8	
	comp=N,11451µm,0.3s						
TMBK	**Timbaki Herakl**	**0.62**	**219**	P	**Pb**	**00 26 30.8**	**-0.3**
TMBK				S	**Sb**	**00 26 39.3**	**-0.2**
	comp=N,3µm,0.3s						
PRNS	**Prines Rethymn**	**0.64**	**253**	P	**Pn**	**00 26 32.0**	**+0.3**
PRNS				S	**Sn**	**00 26 41.0**	**+0.2**
SIVA	**Sivas**	**0.64**	**214**	P	**Pb**	**00 26 31.1**	**-0.4**
SIVA				S	**Sb**	**00 26 39.6**	**-0.5**
	comp=N,4µm,0.4s						
SIVA	**Sivas**	**0.64**	**214**	P	**Pb**	**00 26 31.1**	**-0.4**
SIVA				S	**Sb**	**00 26 39.5**	**-0.7**
SIVA				AML	AML	00 26 42.4	
	comp=N,5664µm,0.3s						
SIVA				AML	AML	00 26 43.0	
	comp=E,9694µm,0.5s						
FRMA	**Ierapetra Chan**	**0.67**	**143**	P	**Pn**	**00 26 32.6**	**+0.4**
FRMA				S	**Sn**	**00 26 42.4**	**+0.7**
	comp=E,660nm,0.3s						
STIA	**Sitia Lasithi**	**0.78**	**117**	P	**Pb**	**00 26 33.4**	**-0.3**
THR9	**Santorini-Faro**	**0.81**	**6**	P	**Pb**	**00 26 34.2**	**0.0**
THR9	**Santorini-Faro**	**0.81**	**6**	P	**Pb**	**00 26 34.2**	**0.0**
THR6	**Thira Island,**	**0.81**	**9**	P	**Pb**	**00 26 34.0**	**-0.3**
THR6	**Thira Island,**	**0.81**	**9**	P	**Pb**	**00 26 34.0**	**-0.3**
SAP1	**Santorini-Akro**	**0.81**	**9**	P	**Pb**	**00 26 34.0**	**-0.3**
SAP1				S	**Sb**	**00 26 45.8**	**+0.9**
	comp=E,4µm,0.3s						
SAP1	**Santorini-Akro**	**0.81**	**9**	P	**Pb**	**00 26 34.0**	**-0.3**
SAP1				S	**Sn**	**00 26 46.2**	**+0.9**
SANT	**Santorini**	**0.83**	**12**	P	**Pb**	**00 26 33.8**	**-0.9**
SANT				S	**Sb**	**00 26 45.6**	**0.0**
	comp=E,1µm,0.1s						
SANT	**Santorini**	**0.83**	**12**	P	**Pb**	**00 26 34.0**	**-0.7**
SANT				AML	AML	00 26 48.2	
	comp=N,1157µm,0.2s						
SANT				AML	AML	00 26 48.2	
	comp=E,2835µm,0.1s						
SANT	**Santorini**	**0.83**	**12**	PG	**Pb**	**00 26 34.3**	**-0.4**
SANT				SG	**Sb**	**00 26 45.6**	**0.0**
SANT	**Santorini**	**0.83**	**12**	*i* P	**Pb**	**00 26 34.0**	**-0.7**
SANT				*i* S	**Sb**	**00 26 38.2**	**-7.4**
THT1	**Athinios (Pele**	**0.84**	**10**	P	**Pn**	**00 26 34.1**	**-0.5**
THT1				S	**Sb**	**00 26 46.0**	**+0.2**
	comp=E,768nm,0.2s						
THT1	**Athinios (Pele**	**0.84**	**10**	P	**Pn**	**00 26 34.1**	**-0.5**
STAX	**Taxiarchis Har**	**0.85**	**9**	P	**Pn**	**00 26 34.5**	**-0.3**
STAX	**Taxiarchis Har**	**0.85**	**9**	P	**Pn**	**00 26 34.5**	**-0.3**
THR3	**Thira Island,**	**0.86**	**8**	P	**Pn**	**00 26 34.6**	**-0.3**
THR3	**Thira Island,**	**0.86**	**8**	P	**Pn**	**00 26 34.5**	**-0.3**
THR5	**Thira Island,**	**0.86**	**6**	P	**Pn**	**00 26 34.9**	**0.0**
THR5	**Thira Island,**	**0.86**	**6**	P	**Pn**	**00 26 34.9**	**0.0**
VAM	**Vamos**	**0.86**	**261**	P	**Pb**	**00 26 33.8**	**-1.4**
VAM				S	**Sb**	**00 26 44.8**	**-1.7**
	comp=E,2µm,0.2s						
VAM	**Vamos**	**0.86**	**261**	P	**Pb**	**00 26 33.5**	**-1.7**
VAM				AML	AML	00 26 46.9	
	comp=E,4638µm,0.3s						
VAM				AML	AML	00 26 47.2	
	comp=N,4593µm,0.2s						
SAP2K	**Karterados**	**0.87**	**11**	P	**Pn**	**00 26 34.7**	**-0.3**
SAP2K				S	**Sb**	**00 26 46.8**	**+0.2**
SAP2K	**Karterados**	**0.87**	**11**	P	**Pn**	**00 26 34.7**	**-0.3**
THR8	**Santorini-Mono**	**0.87**	**13**	P	**Pn**	**00 26 34.5**	**-0.5**
THR8	**Santorini-Mono**	**0.87**	**13**	P	**Pn**	**00 26 34.6**	**-0.4**
SFIR	**Foira Santorin**	**0.88**	**10**	P	**Pn**	**00 26 34.9**	**-0.2**
SFIR				S	**Sn**	**00 26 48.6**	**+1.7**
	comp=N,2µm,0.2s						
THR7	**Fira-Santorini**	**0.88**	**10**	P	**Pn**	**00 26 35.1**	**0.0**
THR7	**Fira-Santorini**	**0.88**	**10**	P	**Pn**	**00 26 35.1**	**0.0**
SAP3	**Santorini-Thir**	**0.88**	**5**	P	**Pn**	**00 26 35.1**	**-0.1**
SAP3				S	**Sb**	**00 26 47.9**	**+0.9**
SAP3	**Santorini-Thir**	**0.88**	**5**	P	**Pn**	**00 26 35.1**	**-0.1**
THT2	**Imerovigli**	**0.89**	**9**	P	**Pn**	**00 26 35.1**	**-0.2**
THT2				S	**Sb**	**00 26 47.9**	**+0.7**
THT2	**Imerovigli**	**0.89**	**9**	PG	**Pn**	**00 26 35.1**	**-0.2**
THT2				SG	**Sb**	**00 26 47.5**	**+0.3**
THR2	**Thira island,**	**0.90**	**10**	P	**Pn**	**00 26 35.0**	**-0.5**
THR2	**Thira island,**	**0.90**	**10**	P	**Pn**	**00 26 35.2**	**-0.2**
ANAF	**Anafi Island**	**0.91**	**28**	P	**Pn**	**00 26 35.5**	**0.0**
ANAF				S	**Sb**	**00 26 47.0**	**-0.7**
	comp=N,3µm,0.3s						
ANAF	**Anafi Island**	**0.91**	**28**	P	**Pn**	**00 26 35.5**	**0.0**
ANAF				S	**Sb**	**00 26 48.2**	**+0.5**
ANAF				AML	AML	00 26 50.8	
	comp=E,5413µm,0.2s						
ANAF				AML	AML	00 26 51.5	
	comp=N,6873µm,0.4s						
ZKR	**Zakros**	**0.91**	**119**	P	**Pn**	**00 26 35.5**	**0.0**
ZKR				S	**Sb**	**00 26 46.4**	**-1.3**
	comp=N,580nm,0.4s						
ZKR	**Zakros**	**0.91**	**119**	P	**Pn**	**00 26 35.6**	**0.0**
ZKR				S	**Sb**	**00 26 46.5**	**-1.1**
ZKR				AML	AML	00 26 48.6	
	comp=E,1531µm,0.6s						
ZKR				AML	AML	00 26 49.7	
	comp=N,742µm,0.3s						
ZKR	**Zakros**	**0.91**	**119**	PG	**Pn**	**00 26 35.7**	**+0.2**
ZKR	**Zakros**	**0.91**	**119**	P	**Pn**	**00 26 35.5**	**0.0**
ZKR				S	**Sb**	**00 26 46.9**	**-0.7**
CMBO	**Columbo, Santo**	**0.92**	**8**	P	**Pn**	**00 26 35.5**	**-0.2**
CMBO				S	**Sb**	**00 26 48.9**	**+0.8**
	comp=N,1µm,0.3s						
CMBO	**Columbo, Santo**	**0.92**	**8**	P	**Pn**	**00 26 35.6**	**-0.2**
CHAN	**Chania**	**0.98**	**268**	P	**Pn**	**00 26 35.6**	**-0.9**
CHAN				S	**Sb**	**00 26 47.9**	**-1.8**
	comp=N,368nm,0.4s						
IMMV	**Iera Moni Meta**	**1.03**	**265**	P	**Pn**	**00 26 36.7**	**-0.5**
IMMV				S	**Sn**	**00 26 48.9**	**-1.8**
	comp=N,1µm,0.2s						
IMMV	**Iera Moni Meta**	**1.03**	**265**	P	**Pn**	**00 26 36.7**	**-0.5**
IMMV				AML	AML	00 26 51.0	
	comp=N,2747µm,0.2s						
IMMV				AML	AML	00 26 52.3	
	comp=E,2664µm,0.3s						
IMMV	**Iera Moni Meta**	**1.03**	**265**	PG	**Pn**	**00 26 37.3**	**+0.1**
IOSP	**Ios island**	**1.17**	**2**	P	**Pn**	**00 26 39.2**	**+0.1**
IOSP				S	**Sn**	**00 26 54.2**	**+0.2**
	comp=E,1µm,0.3s						
IOSP	**Ios island**	**1.17**	**2**	P	**Pn**	**00 26 39.2**	**+0.1**
IOSP				AML	AML	00 26 55.4	
	comp=N,2292µm,0.2s						
IOSP				AML	AML	00 26 56.3	
	comp=E,2886µm,0.2s						
GVDS	**Gavdos**	**1.18**	**233**	P	**Pb**	**00 26 40.6**	**+0.1**
GVDS				S	**Sb**	**00 26 55.4**	**-0.1**
	comp=E,585nm,0.4s						
GVDS	**Gavdos**	**1.18**	**233**	PN	**Pb**	**00 26 41.0**	**+0.5**
GVD	**Gavdhos**	**1.19**	**233**	P	**Pb**	**00 26 40.4**	**-0.3**
GVD				S	**Sb**	**00 26 55.9**	**+0.3**
	comp=E,882nm,0.3s						
GVD	**Gavdhos**	**1.19**	**233**	P	**Pb**	**00 26 40.3**	**-0.3**
GVD				AML	AML	00 26 58.9	
	comp=N,1747µm,0.3s						
GVD				AML	AML	00 27 02.3	
	comp=E,1747µm,0.3s						
GVD	**Gavdhos**	**1.19**	**233**	PN	**Pb**	**00 26 40.6**	**0.0**
GVD				SN	**Sb**	**00 26 56.7**	**+1.1**
RODP	**Rodopos**	**1.21**	**271**	P	**Pn**	**00 26 39.7**	**+0.1**
RODP				S	**Sn**	**00 26 54.1**	**-1.0**
	comp=E,240nm,0.3s						
RODP	**Rodopos**	**1.21**	**271**	PN	**Pn**	**00 26 39.8**	**+0.1**
MHLO	**Agia Marina, M**	**1.32**	**329**	P	**Pn**	**00 26 41.4**	**+0.2**
MHLO				S	**Sn**	**00 26 58.1**	**+0.3**
	comp=E,2µm,0.3s						
MHLO	**Agia Marina, M**	**1.32**	**329**	P	**Pn**	**00 26 41.5**	**+0.3**
MHLA	**Plaka, Milos I**	**1.36**	**331**	P	**Pn**	**00 26 42.2**	**+0.4**
AMGA	**Amorgos Island**	**1.38**	**22**	P	**Pn**	**00 26 41.5**	**-0.5**
AMGA				S	**Sn**	**00 26 58.3**	**-1.0**
	comp=E,355nm,0.3s						
AMGA	**Amorgos Island**	**1.38**	**22**	P	**Pn**	**00 26 41.5**	**-0.5**
APE	**Apeiranthos**	**1.53**	**9**	P	**Pn**	**00 26 44.2**	**+0.2**
APE				S	**Sn**	**00 27 02.4**	**-0.6**
	comp=E,220nm,0.3s						
APE	**Apeiranthos**	**1.53**	**9**	P	**Pn**	**00 26 44.0**	**-0.1**
APE	**Apeiranthos**	**1.53**	**9**	PN	**Pn**	**00 26 44.3**	**+0.2**
APE	**Apeiranthos**	**1.53**	**9**	*i* P	**Pn**	**00 26 43.6**	**-0.5**
APE				*i* S	**Sn**	**00 27 02.2**	**-0.8**
APE	**Apeiranthos**	**1.53**	**9**	P	**Pn**	**00 26 43.8**	**-0.2**
APE				S	**Sn**	**00 27 02.2**	**-0.8**
KARP	**Karpathos**	**1.56**	**90**	P	**Pn**	**00 26 44.1**	**-0.5**
KARP				S	**Sn**	**00 27 02.7**	**-1.1**
	comp=E,862nm,0.5s						
KARP	**Karpathos**	**1.56**	**90**	P	**Pn**	**00 26 44.0**	**-0.5**
KARP				S	**Sn**	**00 27 02.9**	**-0.9**
KARP				AML	AML	00 27 03.9	
	comp=E,1629µm,0.3s						
KARP				AML	AML	00 27 04.5	
	comp=N,1767µm,0.4s						
KARP	**Karpathos**	**1.56**	**90**	PN	**Pn**	**00 26 45.0**	**+0.5**
KARP	**Karpathos**	**1.56**	**90**	P	**Pn**	**00 26 44.0**	**-0.5**
KARP				S	**Sn**	**00 27 02.8**	**-0.9**
KARP				AML	AML	00 27 03.4	
	comp=N,1.6nm,0.3s						
KARP				AML	AML	00 27 03.4	
	comp=N,1.6nm,0.3s						
KARP				AML	AML	00 27 04.1	
	comp=N,1.8nm,0.4s						
KARP				AML	AML	00 27 04.1	
	comp=N,1.8nm,0.4s						
ANKY	**Antikythira Is**	**1.61**	**282**	P	**Pn**	**00 26 44.7**	**-0.4**
ANKY				S	**Sn**	**00 27 04.9**	**-0.1**
	comp=N,262nm,0.4s						
ANKY	**Antikythira Is**	**1.61**	**282**	P	**Pn**	**00 26 44.8**	**-0.4**
SERI	**Serifos**	**1.72**	**339**	P	**Pn**	**00 26 46.8**	**+0.1**
SERI				S	**Sn**	**00 27 06.2**	**-1.4**
	comp=N,118nm,0.3s						
SERI	**Serifos**	**1.72**	**339**	P	**Pn**	**00 26 46.8**	**+0.1**
KOSK	**Kos Island**	**1.84**	**49**	P	**Pn**	**00 26 48.4**	**+0.1**
KOSK				S	**Sn**	**00 27 10.9**	**+0.3**
	comp=N,180nm,0.6s						
KOSK	**Kos Island**	**1.84**	**49**	PN	**Pn**	**00 26 48.9**	**+0.6**
KTHA	**Kythira Island**	**1.91**	**292**	P	**Pn**	**00 26 48.8**	**-0.4**
KTHA				S	**Sn**	**00 27 11.5**	**-0.8**
	comp=N,335nm,0.3s						
KTHR	**Kythira**	**1.95**	**292**	P	**Pn**	**00 26 49.4**	**-0.4**
KTHR				S	**Sn**	**00 27 11.6**	**-1.8**
	comp=N,282nm,0.3s						
TNSA	**Tinos**	**1.98**	**358**	P	**Pn**	**00 26 50.2**	**0.0**
MNVA	**Monemvasia**	**2.12**	**303**	P	**Pn**	**00 26 52.3**	**+0.2**
VLI	**Veliai**	**2.20**	**303**	P	**Pn**	**00 26 53.3**	**0.0**
VLI				S	**Sn**	**00 27 17.5**	**-2.0**
	comp=N,288nm,0.3s						
VLI	**Veliai**	**2.20**	**303**	P	**Pn**	**00 26 53.3**	**0.0**
DAT	**Datca**	**2.22**	**57**	PN	**Pn**	**00 26 54.6**	**+0.9**
BODT	**Bodrum**	**2.25**	**47**	PN	**Pn**	**00 26 54.4**	**+0.5**
YDRA	**Hydra**	**2.29**	**322**	P	**Pn**	**00 26 55.3**	**+0.7**
ARG	**Arkhangelos**	**2.43**	**73**	P	**Pn**	**00 26 57.3**	**+0.9**
ARG				S	**Sn**	**00 27 24.7**	**-0.5**
	comp=N,448nm,0.4s						
ARG	**Arkhangelos**	**2.43**	**73**	P	**Pn**	**00 26 57.1**	**+0.7**
ARG	**Arkhangelos**	**2.43**	**73**	PN	**Pn**	**00 26 57.5**	**+1.1**
ARG	**Arkhangelos**	**2.43**	**73**	P	**Pn**	**00 26 57.1**	**+0.7**
ARG				S	**Sn**	**00 27 24.6**	**-0.6**
KRND	**KRANIDI**	**2.49**	**318**	P	**Pn**	**00 26 58.0**	**+0.8**
KRND				S	**Sn**	**00 27 26.7**	**+0.2**
	comp=N,178nm,0.3s						
KRND	**KRANIDI**	**2.49**	**318**	P	**Pn**	**00 26 57.5**	**+0.3**
SMG	**Samos**	**2.50**	**30**	P	**Pn**	**00 26 57.5**	**0.0**
SMG	**Samos**	**2.50**	**30**	P	**Pn**	**00 26 57.4**	**0.0**
KARY	**Karystos**	**2.56**	**346**	P	**Pn**	**00 26 58.7**	**+0.5**
KARY	**Karystos**	**2.56**	**346**	P	**Pn**	**00 26 58.6**	**+0.4**
VLY	**Voula,Athens**	**2.57**	**333**	P	**Pn**	**00 26 59.3**	**+0.9**
VLY	**Voula,Athens**	**2.57**	**333**	P	**Pn**	**00 26 59.2**	**+0.9**
GCAM	**G?zelcaml?**	**2.67**	**36**	PN	**Pn**	**00 27 00.9**	**+1.1**
GCAM	**G?zelcaml?**	**2.67**	**36**	*i* P	**Pn**	**00 27 00.6**	**+0.8**
GCAM				*i* S	**Sn**	**00 27 29.8**	**-1.4**
ATHU	**Athens Univers**	**2.68**	**334**	P	**Pn**	**00 27 00.8**	**+0.9**
ATHU	**Athens Univers**	**2.68**	**334**	P	**Pn**	**00 27 00.9**	**+1.1**
PTL	**Penteli**	**2.73**	**336**	P	**Pn**	**00 27 01.4**	**+0.9**
PTL	**Penteli**	**2.73**	**336**	P	**Pn**	**00 27 01.4**	**+0.9**
DION	**Dionisos Attik**	**2.73**	**338**	P	**Pn**	**00 27 01.4**	**+0.8**
DION	**Dionisos Attik**	**2.73**	**338**	P	**Pn**	**00 27 01.5**	**+0.9**
DGB	**zmir**	**2.82**	**27**	*i* P	**Pn**	**00 27 01.4**	**-0.4**
DGB				*i* S	**Sn**	**00 27 31.8**	**-2.9**
CHOS	**Chios island**	**2.90**	**13**	P	**Pn**	**00 27 03.1**	**+0.1**
CHOS	**Chios island**	**2.90**	**13**	PN	**Pn**	**00 27 03.5**	**+0.5**
YER	**Yerkesik**	**2.92**	**56**	PN	**Pn**	**00 27 05.1**	**+1.9**
AYDN	**Tasoluk**	**2.98**	**44**	*i* P	**Pn**	**00 27 05.4**	**+1.3**
URLA	**Izmir**	**3.00**	**21**	PN	**Pn**	**00 27 05.2**	**+0.9**
URLA	**Izmir**	**3.00**	**21**	*i* P	**Pn**	**00 27 03.9**	**-0.5**
TURN	**Turunc**	**3.02**	**63**	PN	**Pn**	**00 27 02.1**	**-2.4**
TURN	**Turunc**	**3.02**	**63**	*i* P	**Pn**	**00 27 01.4**	**-3.1**
TURN				*i* S	**Sn**	**00 27 31.9**	**-7.7**
VILL	**Villia**	**3.03**	**330**	P	**Pn**	**00 27 05.9**	**+1.2**
DALY	**Dalyan (Mula)**	**3.03**	**64**	PN	**Pn**	**00 27 06.5**	**+1.8**
LOUT	**Loutraki**	**3.04**	**324**	P	**Pn**	**00 27 06.1**	**+1.4**
LOUT				S	**Sn**	**00 27 41.2**	**+1.0**
	comp=N,75nm,0.5s						
LOUT	**Loutraki**	**3.04**	**324**	P	**Pn**	**00 27 06.2**	**+1.4**
VIL2	**Platees**	**3.09**	**330**	P	**Pn**	**00 27 05.9**	**+0.4**
ITM	**Ithomi**	**3.13**	**302**	P	**Pn**	**00 27 08.2**	**+2.1**
ITM	**Ithomi**	**3.13**	**302**	P	**Pn**	**00 27 08.1**	**+2.1**
ITM	**Ithomi**	**3.13**	**302**	PN	**Pn**	**00 27 07.8**	**+1.7**
BLCB	**Balcova**	**3.17**	**26**	PN	**Pn**	**00 27 07.2**	**+0.6**
PROD	**Prodromos**	**3.29**	**326**	P	**Pn**	**00 27 09.5**	**+1.2**
FETY	**Fethiye**	**3.29**	**70**	PN	**Pn**	**00 27 10.2**	**+1.9**
KLV	**Kalavryta, Ach**	**3.51**	**316**	P	**Pn**	**00 27 12.6**	**+1.2**
KLV				S	**Sn**	**00 27 52.0**	**0.0**
	comp=N,68nm,0.7s						
KLV	**Kalavryta, Ach**	**3.51**	**316**	P	**Pn**	**00 27 12.7**	**+1.2**
TAVA	**DENIZLI_Tavas**	**3.52**	**56**	*i* P	**Pn**	**00 27 14.7**	**+3.2**
TAVA				*i* S	**Sn**	**00 27 55.5**	**+3.3**
KSL	**Kastellorizon**	**3.57**	**79**	P	**Pn**	**00 27 13.3**	**+1.2**
KSL				S	**Sn**	**00 27 52.8**	**-0.6**
	comp=N,62nm,0.5s						
KSL	**Kastellorizon**	**3.57**	**79**	P	**Pn**	**00 27 13.4**	**+1.2**
KSL	**Kastellorizon**	**3.57**	**79**	S	**Sn**	**00 27 52.7**	**-0.7**
LKR	**Lokris**	**3.57**	**331**	P	**Pn**	**00 27 13.7**	**+1.6**
LKR	**Lokris**	**3.57**	**331**	P	**Pn**	**00 27 13.8**	**+1.6**
AKAS	**Kas**	**3.60**	**78**	PN	**Pn**	**00 27 14.8**	**+2.1**
AKAS	**Kas**	**3.60**	**78**	*i* P	**Pn**	**00 27 13.4**	**+0.8**
AKAS				*i* S	**Sn**	**00 27 54.1**	**-0.2**
SIGR	**SIGRI**	**3.68**	**7**	P	**Pn**	**00 27 13.6**	**0.0**
ALIK	**Aliki, Aigiali**	**3.69**	**318**	P	**Pn**	**00 27 15.3**	**+1.6**
LAKA	**Lakka**	**3.75**	**317**	P	**Pn**	**00 27 15.0**	**+0.5**
KALE	**Kalithea**	**3.77**	**320**	P	**Pn**	**00 27 15.9**	**+1.1**
KALE	**Kalithea**	**3.77**	**320**	P	**Pn**	**00 27 16.0**	**+1.1**
PRK	**Paraskevi**	**3.77**	**12**	P	**Pn**	**00 27 16.1**	**+1.2**
TRIZ	**Trizonia**	**3.79**	**319**	P	**Pn**	**00 27 16.1**	**+1.1**
RLS	**Riolos of Patr**	**3.93**	**311**	P	**Pn**	**00 27 19.6**	**+2.6**
ELL	**Elmali**	**3.96**	**71**	PN	**Pn**	**00 27 19.6**	**+2.0**
NEO	**Neokhori**	**4.08**	**337**	P	**Pn**	**00 27 20.6**	**+1.5**
XOR	**Xorichti**	**4.14**	**337**	P	**Pn**	**00 27 21.3**	**+1.3**
AGG	**Agios Georgios**	**4.17**	**327**	P	**Pn**	**00 27 22.6**	**+2.3**
AGG	**Agios Georgios**	**4.17**	**327**	PN	**Pn**	**00 27 22.6**	**+2.3**
AGG	**Agios Georgios**	**4.17**	**327**	*i* P	**Pn**	**00 27 22.7**	**+2.3**
AGG				*i* S	**Sn**	**00 28 08.6**	**+0.5**
AKUM	**Antalya-Kumluc**	**4.21**	**78**	*i* P	**Pn**	**00 27 22.4**	**+1.5**
AKUM				*i* S	**Sn**	**00 28 04.7**	**-4.3**
AKUM				IAML		00 28 11.0	
	comp=E,22nm,0.4s						
BAYC	**CANAKKALE_Bayr**	**4.31**	**13**	*i* P	**Pn**	**00 27 21.6**	**-0.6**
EVR	**Evrytania**	**4.33**	**322**	P	**Pn**	**00 27 24.5**	**+1.8**
KORT	**Korkueli**	**4.37**	**69**	PN	**Pn**	**00 27 25.9**	**+2.7**
BRDR	**BURDUR-Merkez**	**4.42**	**60**	*i* P	**Pn**	**00 27 26.7**	**+2.8**
OUR	**Ouranopolis**	**4.88**	**349**	P	**Pn**	**00 27 31.1**	**+1.1**
LKD2	**Lefkada island**	**4.88**	**313**	P	**Pn**	**00 27 32.0**	**+1.8**
TSLK	**Tsoukalades, L**	**4.91**	**313**	P	**Pn**	**00 27 32.6**	**+2.1**
IGT	**Igoumenitsa**	**5.57**	**317**	P	**Pn**	**00 27 40.6**	**+1.0**
GAZI	**Gazipasa**	**5.78**	**81**	PN	**Pn**	**00 27 45.8**	**+3.3**
AKMS	**Akamas**	**5.82**	**93**	P	**Pn**	**00 27 42.0**	**-1.1**
AKMS				AML	AML	00 28 48.6	
	comp=E,0.1nm,0.2s						
KEK	**Kerkira**	**5.99**	**315**	P	**Pn**	**00 27 45.8**	**+0.4**
HDMB	**Hadim**	**6.02**	**74**	PN	**Pn**	**00 27 49.3**	**+3.4**
ALFC	**Alefka**	**6.02**	**92**	P	**Pn**	**00 27 45.0**	**-0.9**
ALFC				AML	AML	00 28 50.3	
	comp=E,0.1nm,0.2s						
ALFC				AML	AML	00 28 51.9	
	comp=E,0.1nm,0.5s						
NATA	**Nata**	**6.05**	**95**	P	**Pn**	**00 27 45.5**	**-0.7**
SZAC	**Souni**	**6.31**	**95**	P	**Pn**	**00 27 50.5**	**+0.7**
ASGA	**Asgata**	**6.60**	**94**	P	**Pn**	**00 27 52.9**	**-0.8**
CSS	**Mathiatis**	**6.64**	**93**	P	**Pn**	**00 27 54.0**	**-0.4**
MVOU	**Mavrovouni**	**6.88**	**92**	P	**Pn**	**00 27 57.4**	**-0.2**
BRTR	**Keskin Array B**	**7.85**	**55**	Pn	**Pn**	**00 28 14.9**	**+3.8**
	comp=E,0.1nm,0.3s,baz=236,slow=16,SNR=4.8						
AKASG	**Malin Array Be**	**15.41**	**10**	Pn	**P**	**00 29 58.3**	**+0.1**
	comp=E,1.6nm,0.3s,baz=201,slow=11,SNR=4.7						
TORD	**Torodi Ar. Bea**	**30.80**	**229**	P	**P**	**00 32 32.2**	**+0.3**
	comp=E,0.5nm,0.4s,baz=33,slow=9.1,SNR=12						
MKAR	**Makanchi Array**	**43.50**	**57**	P	**P**	**00 34 19.9**	**+0.6**
	comp=E,0.4nm,0.3s,baz=269,slow=8.5,SNR=11						

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*TAP **19** 00:27:54.0, 24.°51N×121.°88E, h12km, ML2.7, B*
*JMA **19** 00:27:54.4±0.1, 24.°48N×121.°92E, h16km, M2.3*
ISC 19 00:27:53.9±0.8, **24.°50N**±0.°02×**121.°92E**±0.°02, **h14**km±6km, **n58**, σ**0.s46**/107, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	**Suao**	**0.13**	**330**	P	**Pg**	**00 27 57.3**	**-0.1**
	baz=350						
TWC				S	**Sg**	**00 27 59.0**	**-0.8**
	baz=350						
ENA	**Nanau**	**0.18**	**248**	P	**Pg**	**00 27 58.2**	**+0.1**
	baz=234						
ENA				*e*S	**Sb**	**00 28 01.6**	**-0.9**
	baz=234						
EOS1	**EOS1**	**0.20**	**74**	P	**Pg**	**00 27 58.9**	**+0.6**
	baz=80						
EOS1				*e*S	**Sb**	**00 28 03.1**	**+0.2**
	baz=80						
ILA	**Ilan**	**0.31**	**330**	*e*P	**Pg**	**00 28 00.7**	**+0.3**
	baz=336						
ILA				*e*S	**Sb**	**00 28 05.7**	**-0.7**
	baz=336						
TWE	**Neicheng**	**0.32**	**314**	P	**Pg**	**00 28 00.8**	**+0.2**
	baz=319						
TWE				S	**Sg**	**00 28 04.9**	**-0.2**
	baz=319						
ENTT	**Nioudou**	**0.35**	**294**	P	**Pg**	**00 28 01.5**	**+0.3**
	baz=294						
ENTT				S	**Sg**	**00 28 06.2**	**+0.1**
	baz=294						
SLBB	**Yuanshan**	**0.37**	**315**	P	**Pg**	**00 28 00.9**	**-0.4**
	baz=317						
SLBB				*e*S	**Sg**	**00 28 06.2**	**-0.2**
	baz=317						
NTC	**Toucheng**	**0.37**	**347**	*e*P	**Pg**	**00 28 01.6**	**+0.2**
	baz=352						
NTC				*e*S	**Sb**	**00 28 07.6**	**-0.3**
	baz=352						
NDT	**Datong Townshi**	**0.39**	**286**	P	**Pb**	**00 28 02.2**	**-0.5**
	baz=285						
NDT				S	**Sg**	**00 28 07.1**	**+0.1**
	baz=285						
NACB	**Ninganchiao**	**0.44**	**223**	P	**Pg**	**00 28 02.8**	**+0.1**
	baz=217						
NACB				S	**Sg**	**00 28 08.9**	**+0.4**
	baz=217						
NWLT	**Wulai**	**0.47**	**306**	P	**Pb**	**00 28 03.8**	**-0.3**
	baz=307						
NWLT				S	**Sg**	**00 28 09.4**	**-0.3**
	baz=307						
TIPB	**Shuangxi**	**0.48**	**350**	P	**Pg**	**00 28 03.7**	**+0.2**
	baz=354						
TIPB				*e*S	**Sg**	**00 28 10.3**	**+0.3**
	baz=354						
ETLH	**Xiulin Townshi**	**0.49**	**235**	P	**Pg**	**00 28 03.9**	**+0.2**
	baz=230						
ETLH				*e*S	**Sb**	**00 28 11.4**	**-0.2**
	baz=230						
NNSB	**Datong**	**0.49**	**262**	*e*P	**Pg**	**00 28 03.9**	**+0.2**
	baz=259						
NNSB				*e*S	**Sg**	**00 28 10.7**	**+0.2**
	baz=259						
NNSH	**Datong**	**0.49**	**262**	P	**Pg**	**00 28 03.9**	**+0.1**
	baz=259						
NNSH				*e*S	**Sg**	**00 28 10.5**	**0.0**
	baz=259						
NNS	**Nan Shan**	**0.50**	**264**	P	**Pg**	**00 28 04.2**	**+0.3**
	baz=260						
NNS				*e*S	**Sb**	**00 28 10.9**	**-1.0**
	baz=260						
TWD	**Chiawan**	**0.51**	**216**	*e*P	**Pg**	**00 28 04.2**	**+0.2**
	baz=210						
TWD				*e*S	**Sb**	**00 28 11.3**	**-0.7**
	baz=210						
TWB1	**Santiao Chiao**	**0.52**	**7**	*e*P	**Pb**	**00 28 04.8**	**-0.1**
	baz=12						
TWB1				*e*S	**Sg**	**00 28 11.7**	**+0.7**
	baz=12						
YHNB	**Yeheng**	**0.53**	**289**	P	**Pb**	**00 28 04.8**	**-0.3**
	baz=289						
YHNB				*e*S	**Sg**	**00 28 11.2**	**-0.2**
	baz=289						
NSK	**Sanguang**	**0.54**	**289**	*e*P	**Pb**	**00 28 05.0**	**-0.3**
	baz=289						
NSK				S	**Sg**	**00 28 11.8**	**-0.2**
	baz=289						
TWA	**Mucha**	**0.57**	**328**	*e*P	**Pg**	**00 28 05.4**	**+0.2**
	baz=330						
TWA				*e*S	**Sb**	**00 28 13.8**	**-0.1**
	baz=330						
NWF	**Wu-fen Shan**	**0.59**	**347**	*e*P	**Pb**	**00 28 06.1**	**-0.1**
	baz=351						
NWF				S	**Sb**	**00 28 14.3**	**0.0**
	baz=351						
WFSB	**Wu-fen Shan**	**0.59**	**347**	P	**Pb**	**00 28 06.0**	**0.0**
	baz=351						
WFSB				S	**Sb**	**00 28 14.2**	**-0.1**
	baz=351						
NHDH	**Xindian Distri**	**0.59**	**322**	*e*P	**Pb**	**00 28 06.1**	**+0.1**
	baz=324						
NHDH				*e*S	**Sb**	**00 28 14.2**	**-0.1**
	baz=324						
TATO	**Taipei**	**0.62**	**321**	*e*P	**Pb**	**00 28 06.6**	**0.0**
	baz=323						
TATO				*e*S	**Sg**	**00 28 14.1**	**-0.2**
	baz=323						
WHF	**Hehuan Shan**	**0.69**	**240**	P	**Pb**	**00 28 07.8**	**-0.3**
	baz=236						
WHF				S	**Sg**	**00 28 16.7**	**0.0**
	baz=236						
WLTB	**Daxi**	**0.70**	**300**	*e*P	**Pg**	**00 28 07.7**	**+0.1**
	baz=300						
WLTB				*e*S	**Sb**	**00 28 18.3**	**+0.6**
	baz=300						

TWT	Tachien	0.72	251	*e*P	Pb	00 28 08.7	+0.3
	baz=248						
TWT				*e*S	Sb	00 28 18.8	+0.5
	baz=248						
YM01	YM01	0.72	334	*e*P	Pb	00 28 08.6	+0.2
	baz=336						
YM01				*e*S	Sb	00 28 18.8	+0.6
	baz=336						
YM10	YM10	0.73	334	*e*P	Pb	00 28 08.8	+0.1
	baz=335						
YM10				*e*S	Sb	00 28 19.5	+0.9
	baz=335						
TDCB	Techi	0.74	251	*e*P	Pb	00 28 08.7	0.0
	baz=248						
TDCB				*e*S	Sb	00 28 18.3	-0.3
	baz=248						
YM11	YM11	0.74	335	*e*P	Pb	00 28 08.8	+0.1
	baz=337						
YM11				*e*S	Sb	00 28 19.9	+1.2
	baz=337						
TWS1	Kuangyinshan	0.76	323	*e*P	Pb	00 28 08.8	-0.1
	baz=324						
ANP	Anpu	0.78	332	*e*P	Pb	00 28 09.8	+0.4
	baz=334						
CHGB	Renai	0.81	238	P	Pb	00 28 09.9	0.0
	baz=235						
CHGB				*e*S	Sb	00 28 20.9	+0.1
	baz=235						
ESL	Shilin	0.81	213	*e*P	Pb	00 28 09.9	0.0
	baz=209						
ESL				*e*S	Sb	00 28 20.8	+0.1
	baz=209						
TWY	Chenhua	0.83	339	*e*P	Pg	00 28 08.9	-1.2
	baz=342						
LIOB	Emei	0.84	280	*e*P	Pb	00 28 10.4	0.0
	baz=279						
LIOB				*e*S	Sb	00 28 22.0	+0.5
	baz=279						
OWD	Renai	0.87	232	*e*P	Pg	00 28 10.8	0.0
	baz=229						
OWD				*e*S	Sb	00 28 22.4	-0.1
	baz=229						
WHP	Taichung City	0.92	257	*e*P	Pn	00 28 12.2	-0.3
	baz=254						
WHP				*e*S	Sb	00 28 23.6	-0.2
	baz=254						
JYNG	Yonagunijimaku	0.93	92	P	Pb	00 28 11.9	0.0
JYNG				*e*S	Sb	00 28 23.6	-0.6
NHW	Xinwu Township	0.94	303	*e*S	Sn	00 28 25.2	-1.0
	baz=303						
YOJ	Yonaguni jima	0.99	92	S	Sb	00 28 25.5	-0.4
DPDB	Guoxing	1.02	243	*e*P	Pn	00 28 13.7	-0.2
	baz=241						
DPDB				*e*S	Sn	00 28 27.9	-0.2
	baz=241						
VWDT	VWDT	1.03	224	*e*P	Pg	00 28 13.8	+0.1
	baz=221						
VWDT				*e*S	Sn	00 28 28.8	+0.6
	baz=221						
SMLT	Sun Moon Lake	1.11	237	*e*P	Pg	00 28 15.7	+0.3
	baz=234						
EHY	Hungye	1.13	209	*e*P	Pg	00 28 15.7	0.0
	baz=206						
EHY				*e*S	Sn	00 28 31.8	+1.1
	baz=206						
SSLB	Suanglung	1.13	232	*e*P	Pg	00 28 15.7	-0.1
	baz=229						
SSLB				*e*S	Sg	00 28 30.1	-0.4
	baz=229						
TYC	Yuchr	1.14	239	*e*P	Pg	00 28 15.8	0.0
	baz=236						
PCYT	Pengchaiyu	1.14	7	*e*P	Pn	00 28 15.8	+0.3
	baz=9.0						
PCYT				*e*S	Sn	00 28 31.9	+1.0
	baz=9.0						
YULB	Yu-li	1.24	208	*e*P	Pg	00 28 17.9	+0.1
	baz=205						
YULB				*e*S	Sg	00 28 34.5	+0.6
	baz=205						
FULB	Fuli	1.41	204	*e*P	Pb	00 28 20.1	-0.1
	baz=202						
CHN5	Tsauling	1.45	232	*e*P	Pb	00 28 20.6	-0.2
	baz=230						
CHN5				*e*S	Sb	00 28 39.1	+0.1
	baz=230						
IRIF	Iriomote-Funau	1.66	95	P	Pn	00 28 22.3	-0.3
IRIF				*e*S	Sn	00 28 42.0	-1.7
CHN4	Tsaushan	1.67	227	*e*P	Pn	00 28 23.4	+0.6
	baz=225						
CHN4				*e*S	Sb	00 28 45.5	+0.2
	baz=225						
TPUB	Ta-pu	1.68	225	*e*P	Pn	00 28 22.4	-0.6
	baz=223						
TPUB				*e*S	Sb	00 28 45.1	-0.6
	baz=223						
TWK	Hsinying	1.79	227	*e*P	Pn	00 28 25.2	+0.6
	baz=225						
TWK				*e*S	Sn	00 28 47.8	+0.6
	baz=225						
JKRS	Kuro-shima	1.92	97	P	Pn	00 28 26.4	+0.1

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*BJI **19** 00:34:11.9±0.0, 4.°95S×153.°21E, h5^{km}, mB5.6/71, mb5.4/83, Ms5.6/93, Ms7 5.4/84*

*DJA **19** 00:34:14.5±0.3, 5°S±2°×15°3E±°, h10^{km}, M5.5/63, mB6.0/42, mb5.4/63, MLv5.7/1, Mw(mB)5.6/42, Mwp5.6/23*

*NEIC **19** 00:34:15.3, 5.°29S×152.°88E, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.52; $M_{\theta\theta}$-1.37; $M_{\phi\phi}$-0.15; $M_{r\theta}$2.44; $M_{\theta\phi}$1.14; $M_{\phi r}$0.03; Fault plane solution: $M_0$3.06000×10^{17} NP1:ϕ_s95.39000°, δ73.83000°, λ70.09000°. NP2:ϕ_s327.85000°, δ25.44000°, λ139.60000°. Principal axes: T 3.0262, Plg57.0000°, Azm339.0000°; N 0.0671, Plg19.0000°, Azm101.0000°; P -3.0934, Plg26.0000°, Azm201.0000°;*

*NEIC **19** 00:34:15.8±1.4, 5.°30S±0.°05×152.°91E±0.°07, h20^{km}±1^{km}, mb5.4/190, Ms_20 5.7/720, Mwb5.6/53, Mww5.8, Mwc5.7(GCMT) Error ellipse: s-maj=11.6km s-min=7.8km az=68.0*

*MOS **19** 00:34:16.4±1.1, 5.°22S×152.°74E, h28^{km}, mb5.8/36, MS5.4/26, Error ellipse: s-maj=11.1km s-min=5.8km az=109.1*

*NEIC **19** 00:34:18, 5.°38S×152.°84E, h26^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.71; $M_{\theta\theta}$-1.84; $M_{\phi\phi}$-0.88; $M_{r\theta}$4.83; $M_{\theta\phi}$0.33; $M_{\phi r}$0.51; Fault plane solution: $M_0$5.43000×10^{17} NP1:ϕ_s86.00000°, δ77.00000°, λ85.00000°. NP2:ϕ_s286.00000°, δ13.00000°, λ110.00000°. Principal axes: T 5.8310, Plg57.0000°, Azm350.0000°; N -0.9326, Plg4.0000°, Azm87.0000°; P -4.8985, Plg32.0000°, Azm180.0000°;*

*BGR **19** 00:34:18.4±0.0, 4.°52S×154.°43E, h33^{km}, Ms5.7*

*IDC **19** 00:34:19.6±1.0, 5.°35S×152.°73E, h46^{km}±8^{km}, mb4.8/25, mb1 4.9/28, mb1mx4.9/31, mbtmp5.0/28, ML3.4/2, MS5.2/29, Ms1 5.3/29, ms1mx5.1/36, Error ellipse: s-maj=8.5km s-min=7.0km az=73.0*

*NEIC **19** 00:34:19, 5.°59S×152.°89E, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.89; $M_{\theta\theta}$-2.88; $M_{\phi\phi}$-0.01; $M_{r\theta}$2.90; $M_{\theta\phi}$0.71; $M_{\phi r}$0.43; Fault plane solution: $M_0$4.17000×10^{17} NP1:ϕ_s88.00000°, δ68.00000°, λ78.00000°. NP2:ϕ_s297.00000°, δ25.00000°, λ117.00000°. Principal axes: T 4.2014, Plg65.0000°, Azm338.0000°; N -0.0570, Plg11.0000°, Azm93.0000°; P -4.1445, Plg22.0000°, Azm187.0000°;*

*GCMT **19** 00:34:19.8±0.1, 5.°59S±0.°01×152.°80E±0.°01, h24^{km}, MW5.7/149, Moment Tensor Solution. s146,c285; s149,c390; Duration: 1^{s}7 Moment tensor: Scale 10^{17} Nm; M_{rr}2.90±.04; $M_{\theta\theta}$-2.80±.03; $M_{\phi\phi}$-0.09±.03; $M_{r\theta}$2.75±.06; $M_{\theta\phi}$0.62±.02; $M_{\phi r}$-0.08±.04; Best double couple: $M_0$4.01100×10^{17} NP1:ϕ_s290.00000°, δ24.00000°, λ103.00000°. NP2:ϕ_s95.00000°, δ67.00000°, λ84.00000°. Principal axes: T 4.0170, Plg68.0000°, Azm354.0000°; N -0.0070, Plg5.0000°, Azm97.0000°; P -4.0040, Plg22.0000°, Azm189.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 19 00:34:17.2±0.4**, 5.°35S**±0.°03×**152.°87E**±0.°04**, h26**^{km}±2^{km}**, h27**^{km}**:pP-P, n1210, σ1^{s}51**/892**, mb5.4**/181**, MS5.7**/436**, 70C-24D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.33	321	P	Pn	00 34 40.8	+0.7
	8µm,0.3s,baz=141,slow=2.0,SNR=384						
KRVT				S	Sn	00 34 56.0	-0.9
	2µm,0.3s,baz=28,slow=16,SNR=4.6						
RABL	Rabaul	1.34	329		Pb	00 34 41.6	-0.1
RABL				Sn	Sn	00 34 56.8	-0.5
PMG	Port Moresby	6.95	234	P	Pn	00 35 59.0	+1.6
	8.4nm,0.3s,baz=56,slow=10.0,SNR=28						
PMG				S	Sn	00 37 16.4	+0.7
	29nm,0.3s,baz=13,slow=17,SNR=9.1						
PMG				LR	LR	00 37 58.1	
	comp=Z,5µm,19.7s,baz=48,slow=32						
PMG	Port Moresby	6.95	234		Pn	00 35 59.9	+2.5
HNR	Honiara	8.11	120	P	Pn	00 36 15.3	+2.0
	17nm,0.3s,baz=208,slow=17,SNR=1.6						
HNR				S	Sn	00 37 51.8	+7.6
	6.2nm,0.3s,baz=273,slow=17,SNR=1.3						
HNR				LR	LR	00 38 55.5	
	comp=Z,8µm,19.9s,baz=296,slow=34						
HNR	Honiara	8.11	120	P	Pb	00 36 27.0	-10
COEN	Coen	12.82	227	P	Pn	00 37 22.5	+4.5
	baz=13,SNR=5.7						
COEN	Coen	12.82	227		Pn	00 37 17.8	-0.1
GENI	Genyem	12.96	282	P	Pn	00 37 21.9	+2.1
	10µm9µm426nm,1.8s						
PATS	Pohnpei	13.27	24	P	Pn	00 37 23.1	-0.9
	baz=13,SNR=7.8						
PATS	Pohnpei	13.27	24		Pn	00 37 21.9	-2.0
SMPI	Sarmi	14.51	283	P	Pn	00 37 42.5	+1.5
	5µm160nm,1.2s						
MTSU	Mount Surprise	15.21	213	P	P	00 37 53.2	-1.9
	baz=15,SNR=26						
CTA	Charters Tower	16.00	203	P	Pn	00 38 00.9	+0.3
	0.4nm,0.3s,baz=23,slow=13,SNR=15						
CTA				LR	LR	00 43 12.1	
	comp=Z,13µm,21.3s,baz=28,slow=33						
CTA	Charters Tower	16.00	203	P	Pn	00 38 01.0	+0.3
BAKI	Biak	17.23	283	P	P	00 38 26.1	+8.5
QIS	Mount Isa	19.87	219	P	Pn	00 38 48.1	-0.1
	baz=20,SNR=37						
EIDS	Eidsvold	19.98	185	P	Pn	00 38 49.0	-0.6
	baz=20,SNR=20						
EIDS	Eidsvold	19.98	185	P	P	00 38 48.0	+0.2
EIDS				IAmb	IAmb	00 38 52.6	
	comp=Z,419nm,1.5s						
GUMO	Guam	20.42	337	P	P	00 38 53.4	+0.8
	comp=Z,275nm,1.0s,baz=133,slow=5.7,SNR=9.1						
GUMO				LR	LR	00 47 30.5	
	comp=Z,7µm,18.5s,baz=156,slow=39						
GUMO	Guam	20.42	337	P	P	00 38 50.4	-2.2
GUMO				pmax	pmax		
	comp=Z,2µm,1.5s						
GUMO	Guam	20.42	337	P	P	00 38 50.4	-2.2
FAKI	Fak Fak	20.70	276	P	P	00 38 55.2	-0.5
	comp=Z,6µmcomp=Z,4µmcomp=Z,153nm,1.4s						
FAKI	Fak Fak	20.70	276	P	P	00 38 55.7	0.0
FAKI				IAmb	IAmb	00 39 14.5	
	comp=Z,176nm,1.1s						
DZM	Mont Dzumac	21.19	143	*e*P	P	00 39 01.9	+0.9
	comp=Z,552nm,1.5s						
DZM				*e*LQ	LQ	00 43 12.4	
	comp=Z,16µm,28.1s						
DZM				*e*LR	LR	00 44 07.0	
	comp=Z,18µm,25.8s						
DZM	Mont Dzumac	21.19	143	P	P	00 39 01.6	+0.6
	comp=Z,52nm,1.2s,baz=306,slow=9.6,SNR=12						
DZM				S	S	00 42 57.9	+2.4
	comp=Z,17nm,0.8s,baz=340,slow=20,SNR=1.7						
DZM	Mont Dzumac	21.19	143	P	P	00 39 00.2	-0.8
DZM				IAmb	IAmb	00 39 11.0	
	comp=Z,138nm,0.9s						
RMQ	Roma	21.39	190	P	P	00 39 04.3	+1.4
	baz=22,SNR=42						
KDU	Kakadu	21.41	249	P	P	00 39 04.3	+1.0
	baz=22,SNR=55						
SAUI	Saumlaki	21.58	262	P	P	00 39 10.8	+5.7
SAUI	Saumlaki	21.58	262	P	P	00 39 02.4	-2.8
SIJI	Sorong	22.02	281	P	P	00 39 09.3	-0.5
	comp=Z,74nm,0.8s,baz=107,slow=9.9,SNR=34						
SIJI				S	S	00 43 10.5	-1.2
	comp=Z,7.2nm,0.5s,baz=45,slow=20,SNR=1.1						
SWI	Sorong	22.02	281	P	P	00 39 08.7	-1.2
	comp=Z,6µmcomp=Z,4µmcomp=Z,176nm,0.8s						
QLP	Quilpie	22.67	200	P	P	00 39 17.9	+1.2
	baz=23,SNR=5.0						
MTN	Manton Dam	22.70	249	P	P	00 39 18.3	+1.1
	baz=23,SNR=8.9						
MTN	Manton Dam	22.70	249	P	P	00 39 16.5	-0.6
MTN				IAmb	IAmb	00 39 28.6	
	comp=Z,68nm,0.8s						
BNDI	Bandanaira	22.89	271	P	P	00 39 36.4	+17
WB0	Warramunga Arr	23.00	230	P	P	00 39 20.0	-0.2
WR0	Warramunga Arr	23.00	229	P	P	00 39 19.8	-0.4
WB9	Warramunga Arr	23.02	230	P	P	00 39 21.2	+0.8
	baz=23						
WRAB	Tennant Creek	23.13	230	*d i*P	P	00 39 21.1	-0.4
WRAB				pmax	pmax		
	comp=Z,72nm,1.1s						
WRAB	Tennant Creek	23.13	230	P	P	00 39 21.1	-0.4
WB2	Warramunga Arr	23.13	230	P	P	00 39 21.7	+0.1
WRA	Warramunga Arr	23.14	230	P	P	00 39 20.9	-0.8
	comp=Z,43nm,1.0s,baz=54,slow=9.5,SNR=59						
WRA				S	S	00 43 29.4	-2.4
	comp=Z,43nm,1.2s,baz=56,slow=17,SNR=8.9						
WRA				LR	LR	00 48 14.9	
	comp=Z,8µm,20.9s,baz=55,slow=36						
WRA	Warramunga Arr	23.14	230	P	P	00 39 21.1	-0.6
AAI	Ambon	24.65	273	P	P	00 39 54.1	+18
ARMA	Armidale	24.97	183	P	P	00 39 40.1	+1.3
	baz=25,SNR=9.4						
ARMA	Armidale	24.97	183	P	P	00 39 38.5	-0.3
ARMA				IAmb	IAmb	00 39 54.9	
	comp=Z,108nm,1.3s						
ARMA				IAMs_20	IAMs_20	00 48 32.8	
	comp=Z,18µm,20.0s						
LBMI	Labuha	25.75	280	P	P	00 39 44.6	-1.4
	comp=Z,30µmcomp=Z,214nm,0.6s						
KNRA	Kununurra	25.80	245	P	P	00 39 47.9	+1.6
	baz=26,SNR=17						
KNRA	Kununurra	25.80	245	P	P	00 39 46.5	+0.1
ASAR	Alice Springs	25.80	223	P	P	00 39 46.5	+0.1
	comp=Z,32nm,0.9s,baz=59,slow=9.0,SNR=38						
ASAR				S	S	00 44 11.1	-3.3
	comp=Z,3.2nm,0.8s,baz=50,slow=10,SNR=0.8						
ASAR				LR	LR	00 49 24.9	
	comp=Z,7µm,21.2s,baz=38,slow=35						
ASAR	Alice Springs	25.80	223	P	P	00 39 45.7	-0.7
ASAR	Alice Springs	25.80	223	P	P	00 39 45.7	-0.7
TNTI	Ternate	26.18	283	P	P	00 39 52.2	+2.3
	comp=Z,2µmcomp=Z,3µmcomp=Z,109nm,1.5s						
TNTI	Ternate	26.18	283	P	P	00 39 50.2	+0.3
TNTI				IAmb	IAmb	00 39 59.3	
	comp=Z,208nm,1.4s						
CMSA	Cobar Meteorol	26.91	194	P	P	00 39 55.9	-0.4
	baz=27,SNR=18						
SANI	Sanana	27.02	276	P	P	00 39 56.7	-0.8
	comp=Z,3µmcomp=Z,2µmcomp=Z,81nm,1.0s						
STKA	Stephens Creek	28.43	200	P	P	00 40 09.3	-0.6
	baz=29,SNR=15						
STKA	Stephens Creek	28.43	200	P	P	00 40 08.2	-1.7
	comp=Z,17nm,0.9s,baz=0.2,slow=9.0,SNR=16						
STKA				S	S	00 44 51.1	-4.5
	comp=Z,2.2nm,0.7s,baz=110,slow=21,SNR=1.0						
STKA				ScP	ScP	00 47 01.6	+0.1
	comp=Z,2.7nm,0.9s,baz=45,slow=2.9,SNR=3.6						
STKA				LR	LR	00 52 05.0	
	comp=Z,9µm,18.7s,baz=19,slow=38						
MATI	Mati	29.23	294	*e*P	P	00 40 14.9	-2.3
KMSI	Cibinong	29.44	281	P	P	00 40 19.7	+0.6
	comp=Z,188nm,0.7s						
FITZ	Fitzroy Crossi	29.46	242	P	P	00 40 20.1	+0.9
	baz=30,SNR=30						
FITZ	Fitzroy Crossi	29.46	242	P	P	00 40 18.9	-0.3
	comp=Z,133nm,1.2s,baz=0.3,slow=5.0,SNR=31						
FITZ				S	S	00 45 07.8	-4.3
	comp=Z,7.8nm,0.9s,baz=9.5,slow=6.1,SNR=1.4						
FITZ				LR	LR	00 53 29.9	
	comp=Z,9µm,18.8s,baz=88,slow=39						
FITZ	Fitzroy Crossi	29.46	242	P	P	00 40 19.4	+0.2
FITZ				IAmb	IAmb	00 40 34.3	
	comp=Z,75nm,0.9s						
DAV	Davao City (W)	29.89	294	⇑*i*P	P	00 40 22.0	-1.1
CNB	Canberra Magne	30.00	186	P	P	00 40 24.6	+0.8
	baz=30,SNR=5.4						
CAN	Canberra	30.04	186	P	P	00 40 23.9	-0.3
CAN				pmax	pmax		
	comp=Z,44nm,1.2s						
CAN				MLR	MLR		
	comp=Z,7µm,19.0s						
CAN	Canberra	30.04	186	P	P	00 40 23.9	-0.3
CAN				IAmb	IAmb	00 40 27.1	
	comp=Z,44nm,1.2s						
KCP	Kidapawan	30.32	294	⇓*i*P	P	00 40 26.0	-0.9
LUWI	Luwuk	30.34	277	P	P	00 40 28.5	+1.4
	comp=Z,3µmcomp=Z,63nm,0.9s						
LUWI	Luwuk	30.34	277	P	P	00 40 25.6	-1.4
LUWI				IAmb	IAmb	00 40 29.8	
	comp=Z,92nm,1.1s						
SKMP	Bagumbayan, Su	30.63	292	*e*P	P	00 40 29.2	-0.4
WRKA	Warakurna	30.64	228	P	P	00 40 29.8	+0.2
	baz=31,SNR=16						
BUKP	Musuan	30.69	295	*e*P	P	00 40 29.9	-0.3
HTT	Hallett	30.81	203	P	P	00 40 30.9	-0.2
	baz=31,SNR=6.3						
CTBH	Cotabato--PC H	31.17	293	⇑*i*P	P	00 40 33.6	-0.7
MRSI	Marisa	31.42	280	P	P	00 40 42.0	+5.4
BBOO	Buckleboo	31.51	208	P	P	00 40 36.9	-0.3
BBOO				IAmb	IAmb	00 40 48.8	
	comp=Z,90nm,1.5s						
MSLP	Maasin	31.86	299	*e*P	P	00 40 40.2	-0.1
PAGZ	Pagadian	32.20	294	*e*P	P	00 40 43.9	+0.4
TOO	Toolangi	32.78	191	P	P	00 40 48.2	0.0
TOO				pmax	pmax		
	comp=Z,26nm,1.3s						
TOO				MLR	MLR		
	comp=Z,16µm,18.0s						
TOO	Toolangi	32.78	191	P	P	00 40 48.2	0.0
TOO				IAMs_20	IAMs_20	00 54 18.1	
	comp=Z,16µm,18.0s						
WBSI	Waikabubak, Su	33.45	261	P	P	00 40 54.6	+0.2
	comp=Z,2µmcomp=Z,113nm,0.8s						
JCJ	Chichijima	33.87	343	P	P	00 40 54.9	-2.9
	comp=Z,25nm,0.5s,baz=143,slow=18,SNR=6.8						
GUIM	Jordan	34.07	298	*e*P	P	00 40 59.2	-0.5
PVCP	Virac	34.16	304	*e*P	P	00 40 59.5	-1.0
FORT	Forrest	34.41	220	P	P	00 41 02.8	+0.3
	baz=35,SNR=6.8						
FORT	Forrest	34.41	220	P	P	00 41 02.6	0.0
PLAI	Plampang	34.98	262	P	P	00 41 09.6	+1.9
	comp=Z,757nmcomp=Z,42nm,0.9s						
OUZ	Omahuta	35.35	150	P	P	00 41 11.5	+0.9
OUZ				IAmb	IAmb	00 41 26.5	
	comp=Z,69nm,1.4s						
CUYO	Cuyo Island	35.55	297	*e*P	P	00 41 12.5	-0.1
MBWA	Marble Bar	35.76	241	IAMs_20	IAMs_20	00 57 39.4	
	comp=Z,10µm,18.0s						
PSAC2	Pilbara Seismi	35.76	240	IAMs_20	IAMs_20	00 57 41.5	
	comp=Z,14µm,18.0s						
PSAD1	Pilbara Seismi	35.78	240	IAMs_20	IAMs_20	00 57 41.0	
	comp=Z,14µm,19.0s						
PSAB2	Pilbara Seismi	35.79	240	IAMs_20	IAMs_20	00 57 42.3	
	comp=Z,14µm,18.0s						
PSAA3	Pilbara Seismi	35.81	240	IAMs_20	IAMs_20	00 57 33.7	
	comp=Z,15µm,20.0s						
PSAA2	Pilbara Seismi	35.81	240	IAMs_20	IAMs_20	00 57 42.7	
	comp=Z,14µm,19.0s						
PSA00	Pilbara Seismi	35.81	240	IAmb	IAmb	00 41 26.8	
	comp=Z,82nm,1.1s						
PSA00				IAMs_20	IAMs_20	00 57 41.8	
	comp=Z,14µm,19.0s						
PSAB3	Pilbara Seismi	35.81	240	IAMs_20	IAMs_20	00 57 41.8	
	comp=Z,14µm,18.0s						
PSAA1	Pilbara Seismi	35.82	240	IAMs_20	IAMs_20	00 57 42.1	
	comp=Z,14µm,19.0s						
PSAC1	Pilbara Seismi	35.83	240	IAMs_20	IAMs_20	00 57 42.3	
	comp=Z,14µm,18.0s						
PSAB1	Pilbara Seismi	35.83	240	IAMs_20	IAMs_20	00 57 42.8	
	comp=Z,14µm,18.0s						
PSAC3	Pilbara Seismi	35.85	240	IAMs_20	IAMs_20	00 57 43.7	
	comp=Z,16µm,19.0s						
PSAD3	Pilbara Seismi	35.90	240	IAMs_20	IAMs_20	00 57 36.0	
	comp=Z,14µm,20.0s						
LQP	Lukban	36.60	302	*e*P	P	00 41 21.2	-0.5
ENPP	El Nido	37.12	296	*e*P	P	00 41 25.9	0.0
LUBP	Lubang	37.52	301	*e*P	P	00 41 28.0	-1.3
BATP	Bataraza	37.68	292	*e*P	P	00 41 30.4	-0.3
SPMM	Sapulut	37.70	285	P	P	00 41 33.0	+2.0
KKM	Kota Kinabalu	38.30	287	P	P	00 41 35.1	-1.0
KKM				IAmb	IAmb	00 41 37.8	
	comp=Z,86nm,1.3s						
SMPP	San Manuel, Pa	38.35	304	*e*P	P	00 41 34.9	-1.5
JAGI	Jajag, Banyuwa	38.55	263	P	P	00 41 45.4	+7.3
JAGI	Jajag, Banyuwa	38.55	263	P	P	00 41 36.7	-1.4
JAGI				IAmb	IAmb	00 41 53.4	
	comp=Z,83nm,1.2s						
KMBL	Kambalda	38.91	225	P	P	00 41 41.6	+0.7
	baz=39,SNR=6.0						
MEEK	Meekatharra	38.93	233	P	P	00 41 41.4	+0.2
	baz=39,SNR=44						
SZP	Santa	39.27	306	P	P	00 41 43.7	-0.3
SZP				IAmb	IAmb	00 41 56.3	
	comp=Z,76nm,1.1s						
URZ	Urewera	39.48	149	P	P	00 41 46.0	+0.4
	comp=Z,7.0nm,0.9s,baz=38,slow=1.5,SNR=6.1						
URZ	Urewera	39.48	149	P	P	00 41 45.2	-0.3
JOW	Kunigami	39.87	325	P	P	00 41 48.6	-0.3
JOW				IAmb	IAmb	00 41 50.2	
	comp=Z,55nm,1.1s						
THZ	Tophouse	40.43	157	P	P	00 41 53.2	-0.3
FOZ	Fox Glacier	40.87	161	IAMs_20	IAMs_20	00 56 47.3	
	comp=Z,14µm,20.0s						
BFZ	Birch Farm	40.96	153	P	P	00 41 58.4	+0.6
LTZ	Lake Taylor	41.06	158	IAMs_20	IAMs_20	00 59 52.3	
	comp=Z,8µm,18.0s						
GIRL	Giralia	41.06	241	P	P	00 41 59.9	+1.0
	baz=41,SNR=4.2						
GIRL	Giralia	41.06	241	P	P	00 41 59.5	+0.6
KHZ	Kahutara	41.23	157	P	P	00 41 59.5	-0.4
KHZ				IAmb	IAmb	00 42 12.0	
	comp=Z,97nm,1.3s						
KHZ				IAMs_20	IAMs_20	00 59 22.9	
	comp=Z,8µm,19.0s						
SBUM	Sibu	41.33	280	P	P	00 42 00.6	-0.6
SBUM	Sibu	41.33	280	P	P	00 42 02.0	+0.8
RPZ	Rata Peaks	41.44	160	P	P	00 42 01.5	-0.2
	comp=Z,14nm,0.8s,baz=267,slow=8.0,SNR=8.1						
OXZ	Oxford	41.45	159	IAmb	IAmb	00 42 18.4	
	comp=Z,84nm,1.5s						
PCJI	Pacitan	41.48	264	P	P	00 42 04.3	+1.9
	comp=Z,1µmcomp=Z,82nm,1.4s						
LBZ	Lake Benmore	41.75	161	IAMs_20	IAMs_20	00 57 24.7	
	comp=Z,14µm,20.0s						
WKZ	Wanaka	41.79	163	P	P	00 42 04.1	-0.4
WKZ				IAmb	IAmb	00 42 10.9	
	comp=Z,74nm,1.3s						
KLBR	Kellerberrin	41.98	227	P	P	00 42 07.6	+1.3
	baz=42,SNR=6.0						
MLZ	Mavora Lakes	42.03	164	IAMs_20	IAMs_20	00 58 13.1	
	comp=Z,9µm,19.0s						
MORW	Morawa	42.06	232	P	P	00 42 07.3	+0.3
	baz=42,SNR=9.2						
MORW	Morawa	42.06	232	P	P	00 42 06.8	-0.2
MORW				IAmb	IAmb	00 42 18.1	
	comp=Z,126nm,1.4s						
BLDU	Ballidu	42.27	229	P	P	00 42 14.6	+5.9
	baz=42,SNR=8.2						
PYZ	Puysegur Point	42.39	166	IAMs_20	IAMs_20	00 59 38.9	
	comp=Z,7µm,18.0s						
ODZ	Otahua Downs	42.48	161	IAMs_20	IAMs_20	00 59 45.2	
	comp=Z,12µm,18.0s						
YHNB	Yeheng	42.77	316	IAmb	IAmb	00 42 15.5	
	comp=Z,158nm,1.3s						
TATO	Taipei	42.89	316	P	P	00 42 13.5	-0.3
TATO	Taipei	42.89	316	P	P	00 42 11.9	-1.8
KSM	Kuching	43.05	278	P	P	00 42 13.9	-1.3
KSM				IAmb	IAmb	00 42 16.1	
	comp=Z,116nm,1.4s						
KSM	Kuching	43.05	278	P	P	00 42 15.0	-0.2
NWAO	Narrogin (SRO)	43.06	226	P	P	00 42 19.1	+4.0
	comp=Z,25nm,1.2s,baz=58,slow=9.5,SNR=3.8						
NWAO				PP	PP	00 43 52.8	-2.5
	comp=Z,7.1nm,0.8s,baz=35,slow=9.4,SNR=3.0						
INU	Inuyama	43.14	341	P	P	00 42 13.2	-2.4
MUN	Mundaring	43.31	228	P	P	00 42 18.8	+1.7
	baz=44,SNR=3.9						
KPJI	Karang Pucung	43.70	265	P	P	00 42 19.9	-0.6
	comp=Z,1µmcomp=Z,52nm,1.5s						
MJAR	Matsushiro Arr	43.87	343	P	P	00 42 19.1	-2.4
	comp=Z,13nm,0.9s,baz=159,slow=9.4,SNR=13						
MJAR				PcP	PcP	00 44 07.1	-0.4

	comp=Z,8.5nm,0.7s,baz=169,slow=4.4,SNR=7.9					
MJAR			ScP	**ScP**	**00 47 59.0**	**+1.2**
	comp=Z,4.3nm,0.9s,baz=184,slow=5.6,SNR=6.0					
MJAR			LR	LR	00 58 39.6	
	comp=Z,4µm,21.8s,baz=180,slow=33					
MJAR	**Matsushiro Arr**	**43.87 343**	P	**P**	**00 42 19.9**	**-1.6**
MJAR				**PcP**	**00 44 07.6**	**+0.1**
MAJO	**Matsushiro**	**43.87 343**	P	**P**	**00 42 19.4**	**-2.1**
MAJO			IAmb	IAmb	00 42 19.7	
	comp=Z,60nm,1.4s					
MAJO				**PcP**	**00 44 08.1**	**+0.6**
MAT	**Matsushiro**	**43.87 343**	P	**P**	**00 42 18.6**	**-2.9**
MAT			S	**S**	**00 48 51.8**	**+0.6**
MJB9	**Matsu-Tunnel**	**43.88 343**	P	**P**	**00 42 19.5**	**-2.0**
MJB9			IAmb	IAmb	00 42 19.6	
	comp=Z,64nm,1.4s					
MJB9				**PcP**	**00 44 07.5**	**-0.1**
RKGY	**Rocky Gully**	**44.14 224**	P	**P**	**00 42 26.5**	**+2.8**
	baz=44,SNR=3.8					
CISI	**Cisompet, Garu**	**44.81 265**	P	**P**	**00 42 28.2**	**-1.2**
	comp=Z,3µmcomp=Z,125nm,1.5s					
QZH	**Quanzhou**	**44.92 314**	⇑*i*P	**P**	**00 42 30.3**	**+0.3**
QZH			S	**S**	**00 49 11.0**	**+4.3**
QZH			pmax	pmax		
	comp=Z,71nm,1.1s					
QZH			LR	LR		
	comp=Z,2µm,17.5s					
QZH			LR	LR		
	comp=Z,1µm,19.9s					
QZH			LR	LR		
	comp=Z,3µm,19.9s					
CNJI	**Cibinong**	**45.49 265**	P	**P**	**00 42 34.3**	**-0.5**
	comp=Z,3µmcomp=Z,173nm,1.2s					
SSE	**Sheshan**	**47.21 322**	P	**P**	**00 42 48.0**	**0.0**
SSE			S	**S**	**00 49 40.8**	**+1.3**
SSE			pmax	pmax		
	comp=Z,50nm,1.4s					
SSE			pmax	pmax		
	comp=Z,480nm,3.5s					
SSE			LR	LR		
	comp=Z,1µm,17.2s					
GZH	**Guangzhou**	**47.84 308**	P	**P**	**00 42 54.3**	**+1.3**
GZH			S	**S**	**00 49 55.0**	**+6.3**
GZH			LR	LR		
	comp=Z,2µm,17.9s					
GZH			LR	LR		
	comp=Z,4µm,20.5s					
TJN	**Taejon**	**47.88 332**	*c* *i*P	**P**	**00 42 52.8**	**-0.3**
MDSI	**Maura Dua**	**48.51 269**	P	**P**	**00 42 55.9**	**-2.5**
	comp=Z,676nmcomp=Z,26nm,1.1s					
KSRS	**Korea Array**	**48.51 333**	P	**P**	**00 42 57.0**	**-1.0**
	comp=Z,12nm,0.7s,baz=152,slow=8.0,SNR=35					
KSRS			PcP	**PcP**	**00 44 23.2**	**-0.5**
	comp=Z,4.3nm,0.7s,baz=155,slow=4.5,SNR=5.1					
KSRS			LR	LR	01 02 55.1	
	comp=Z,2µm,19.0s,baz=132,slow=35					
KSAR	**Wonju Array Be**	**48.52 333**	P	**P**	**00 42 56.9**	**-1.1**
KSAR					00 44 23.8	
KSAR	**Wonju Array Be**	**48.52 333**	P	**P**	**00 42 56.9**	**-1.1**
KSAR				**PcP**	**00 44 23.8**	**+0.1**
KS19	**Wonju Array Si**	**48.58 333**	P	**P**	**00 42 57.3**	**-1.2**
KS19			IAmb	IAmb	00 43 15.6	
	comp=Z,32nm,1.1s					
TPRI	**Tanjung Pinang**	**48.68 276**	P	**P**	**00 43 01.4**	**+1.7**
	comp=Z,83nm,0.4s					
QIZ	**Qiongzhong**	**48.80 301**	P	**P**	**00 42 58.8**	**-1.8**
QIZ			S	**S**	**00 50 05.3**	**+2.8**
QIZ			pmax	pmax		
	comp=Z,560nm,5.1s					
QIZ			LR	LR		
	comp=Z,1µm,18.6s					
QIZ			LR	LR		
	comp=Z,2µm,20.6s					
QIZ			LR	LR		
	comp=Z,3µm,22.6s					
INCN	**Inchon**	**49.12 332**	P	**P**	**00 43 02.5**	**-0.2**
INCN	**Inchon**	**49.12 332**	P	**P**	**00 43 01.9**	**-0.8**
INCN			pmax	pmax		
	comp=Z,134nm,1.0s					
INCN			MLR	MLR		
	comp=Z,4µm,18.0s					
INCN	**Inchon**	**49.12 332**	P	**P**	**00 43 01.9**	**-0.8**
NJ2	**Nanjing**	**49.31 321**	⇑*i*P	**P**	**00 43 04.8**	**+0.6**
NJ2			S	**S**	**00 50 11.1**	**+1.9**
NJ2			sS	**sS**	**00 50 23.0**	**+2.0**
NJ2			pmax	pmax		
	comp=Z,51nm,1.6s					
NJ2			pmax	pmax		
	comp=Z,1µm,4.9s					
NJ2			LR	LR		
	comp=Z,3µm,18.5s					
NJ2			LR	LR		
	comp=Z,3µm,16.6s					
NJ2			LR	LR		
	comp=Z,5µm,18.0s					
MYKOM	**Kota Tinggi**	**49.47 277**	P	**P**	**00 43 05.1**	**-0.7**
MYKOM			IAmb	IAmb	00 43 06.9	
	comp=Z,62nm,1.1s					
MYKOM	**Kota Tinggi**	**49.47 277**	P	**P**	**00 43 06.0**	**+0.2**
YUK	**Yuzh-Kuril'sk**	**49.56 353**	*c* *i*P	P	00 42 59.9	-5.9
YUK			*e*SS	SS	00 53 35.4	-9.3
YUK			pmax	pmax		
	comp=Z,154nm,0.4s					
YUK			pmax	pmax		
	comp=N,55nm,0.5s					
YUK			pmax	pmax		
	comp=E,93nm,0.5s					
ASAJ	**Asahikawa**	**50.10 350**	LR	LR	01 01 16.4	
	comp=E,3µm,21.9s,baz=158,slow=32					
KUR	**Kuril'sk**	**50.55 355**	*e*P	**P**	**00 43 15.0**	**+1.7**
KUR			S	S	00 50 36.9	+11
WHN	**Wuhan**	**51.29 316**	⇑P	**P**	**00 43 19.8**	**+0.6**
WHN			S	**S**	**00 50 33.0**	**-3.9**
WHN			pmax	pmax		
	comp=E,380nm,1.6s					
WHN			LR	LR		
	comp=E,2µm,14.7s					
WHN			LR	LR		
	comp=E,6µm,19.1s					
WHN			LR	LR		
	comp=E,10µm,23.8s					
SDSI	**Sungai Dareh**	**51.53 273**	P	**P**	**00 43 21.6**	**+0.2**
	comp=E,34nm,0.4s					
MSHR	**Mys Shultsa**	**51.62 340**	*c* *i*P	**P**	**00 43 20.9**	**-0.6**
BKNI	**Bangkinang**	**52.06 275**	P	**P**	**00 43 26.1**	**+0.8**
	comp=E,3µmcomp=E,85nm,1.0s					
PDSI	**Padang**	**52.49 273**	P	**P**	**00 43 26.1**	**-2.5**
	comp=E,4µmcomp=E,19nm,0.9s					
DL2	**Dalian**	**52.67 329**	P	**P**	**00 43 29.1**	**-0.3**
DL2			S	**S**	**00 50 56.1**	**+0.6**
DL2			pmax	pmax		
	comp=E,58nm,1.4s					
DL2			pmax	pmax		
	comp=E,740nm,5.1s					
DL2			LR	LR		
	comp=E,1µm,17.1s					
DL2			LR	LR		
	comp=E,1µm,16.3s					
DL2			LR	LR		
	comp=E,2µm,24.5s					
IPM	**Ipoh**	**52.69 280**	P	**P**	**00 43 30.0**	**0.0**
USA0B	**Ussuriysk Arra**	**52.78 341**	*c* *i*P	**P**	**00 43 29.6**	**-0.5**
USRK	**Ussuriysk Ar.**	**52.78 341**	P	**P**	**00 43 29.0**	**-1.1**
	comp=E,16nm,0.7s,baz=159,slow=6.9,SNR=49					
USRK			ScP	**ScP**	**00 48 36.2**	**+1.0**
	comp=E,6.0nm,1.1s,baz=167,slow=3.3,SNR=5.5					
USRK			LR	LR	01 05 56.2	
	comp=E,930nm,18.3s,baz=144,slow=36					
USRK	**Ussuriysk Ar.**	**52.78 341**	P	**P**	**00 43 29.1**	**-1.0**
USRK				**ScP**	**00 48 39.4**	**+4.1**
YSS	**Yuzh-Sakhalins**	**52.84 351**	α *i*P	**P**	**00 43 29.8**	**-0.6**
YSS			*e**SP	**pP**	**00 43 34.8**	**-3.1**
YSS			*e*		00 43 42.9	
YSS			*e*		00 44 39.9	
YSS			*e*S	**S**	**00 50 57.0**	**-0.5**
YSS			*e*PS	PKiKP	00 51 07.4	-11
YSS			*e*SS	**SS**	**00 54 37.6**	**+0.9**
YSS			pmax	pmax		
	comp=Z,50nm,0.8s					
YSS			MLR	MLR		
	comp=Z,2µm,16.0s					
YSS			MLR	MLR		
	comp=N,1µm,15.0s					
YSS	**Yuzh-Sakhalins**	**52.84 351**	P	**P**	**00 43 29.8**	**-0.6**
YSS			IAmb	IAmb	00 43 31.3	
	comp=Z,40nm,0.8s					
TIA	**Tai'an**	**53.19 324**	P	**P**	**00 43 32.8**	**-0.5**
TIA			pP	**sP**	**00 43 42.6**	**-0.6**
TIA			pmax	pmax		
	comp=Z,37nm,1.2s					
TIA			LR	LR		
	comp=Z,1µm,17.3s					
TIA			LR	LR		
	comp=Z,1µm,16.9s					
TIA			LR	LR		
	comp=Z,2µm,17.9s					
KULM	**Kulim**	**53.20 281**	P	**P**	**00 43 32.4**	**-1.3**
KULM			IAmb	IAmb	00 43 34.2	
	comp=Z,40nm,1.2s					
KULM	**Kulim**	**53.20 281**	P	**P**	**00 43 34.0**	**+0.2**
MDJ	**Mudanjiang**	**53.95 340**	P	**P**	**00 43 38.3**	**-0.4**
MDJ			PcS	**PcS**	**00 48 46.1**	**+3.2**
MDJ			ScS	ScS	00 53 19.5	-6.9
MDJ			pmax	pmax		
	comp=Z,65nm,1.6s					
MDJ			pmax	pmax		
	comp=Z,820nm,3.0s					
MDJ			LR	LR		
	comp=Z,780nm,16.7s					
MDJ			LR	LR		
	comp=Z,1µm,15.4s					
MDJ			LR	LR		
	comp=Z,2µm,25.1s					
MDJ	**Mudanjiang**	**53.95 340**	P	**P**	**00 43 37.6**	**-1.0**
SNY	**Shenyang**	**54.02 333**	⇑P	**P**	**00 43 38.4**	**-0.8**
SNY			S	**S**	**00 51 15.1**	**+1.4**
SNY			pmax	pmax		
	comp=Z,680nm,4.5s					
SNY			LR	LR		
	comp=Z,2µm,21.6s					
SNY			LR	LR		
	comp=Z,2µm,19.9s					
RPSI	**Rantau Prapat**	**54.47 277**	IAmb	IAmb	00 43 44.9	
	comp=Z,45nm,1.4s					
ENH	**Enshi**	**54.57 313**	P	**P**	**00 43 43.0**	**-0.5**
GYA	**Guiyang**	**54.78 308**	⇓*i*P	**P**	**00 43 46.3**	**+1.1**
GYA			pP	pwP	00 43 56.3	0.0
GYA			PP	**PP**	**00 45 50.8**	**+2.6**
GYA			S	**S**	**00 51 24.3**	**-0.5**
GYA			sS	sS	00 51 36.0	-0.9
GYA			SS	**SS**	**00 55 07.8**	**-0.6**
GYA			pmax	pmax		
	comp=Z,20nm,0.8s					
GYA			pmax	pmax		
	comp=Z,180nm,5.0s					
GYA			LR	LR		
	comp=Z,1µm,16.6s					
GYA			LR	LR		
	comp=Z,2µm,18.3s					
GYA			LR	LR		
	comp=Z,4µm,18.1s					
CN2	**Changchun**	**54.82 336**	⇑P	**P**	**00 43 43.8**	**-1.2**
CN2			*e*S	**S**	**00 51 23.8**	**-0.7**
CN2			pmax	pmax		
	comp=Z,40nm,1.4s					
CN2			pmax	pmax		
	comp=Z,510nm,3.0s					
CN2			LR	LR		
	comp=Z,2µm,16.0s					
CN2			LR	LR		
	comp=Z,1µm,16.0s					
CN2			LR	LR		
	comp=Z,2µm,18.0s					
SKR	**Severo-Kuril's**	**55.87 2**	*e*P	**P**	**00 43 50.4**	**-2.0**
SKR			*e*		00 44 05.6	
SKR			*e*S	S	00 51 47.7	+9.4
SKR			pmax	pmax		
	comp=Z,800nm,3.2s					
SKR			pmax	pmax		
	comp=Z,86nm,1.6s					
SKR			pmax	pmax		
	comp=Z,300nm,7.1s					
SKR			MLR	MLR		
	comp=Z,2µm,17.0s					
SKR			MLR	MLR		
	comp=Z,2µm,17.0s					
BJT	**Baijiatuau**	**56.37 327**	P	**P**	**00 43 55.6**	**-0.6**
BJT			pmax	pmax		
	comp=Z,34nm,1.3s					
BJT	**Baijiatuau**	**56.37 327**	P	**P**	**00 43 55.6**	**-0.6**
BJT			IAmb	IAmb	00 44 02.4	
	comp=Z,34nm,1.3s					
BJI	**Beijing**	**56.38 327**	P	**P**	**00 43 55.6**	**-0.7**
BJI			PcP	**PcP**	**00 44 53.5**	**+0.2**
BJI			ScP	**ScP**	**00 48 52.4**	**+1.3**
BJI			S	**S**	**00 51 48.6**	**+3.2**
BJI			pmax	pmax		
	comp=Z,36nm,2.0s					
BJI			LR	LR		
	comp=Z,2µm,18.6s					
BJI			LR	LR		
	comp=Z,2µm,21.4s					
BJI			LR	LR		
	comp=Z,2µm,22.1s					
TIY	**Taiyuan**	**57.00 322**	*e*P	**P**	**00 44 01.1**	**+0.3**
TIY			PP	**PP**	**00 46 10.6**	**+2.8**
TIY			S	**S**	**00 51 53.8**	**-0.1**
TIY			SS	**SS**	**00 55 43.8**	**+0.9**
TIY			pmax	pmax		
	comp=Z,88nm,1.5s					
TIY			pmax	pmax		
	comp=Z,600nm,4.6s					
TIY			LR	LR		
	comp=Z,1µm,16.6s					
TIY			LR	LR		
	comp=Z,2µm,17.0s					
TIY			LR	LR		
	comp=Z,3µm,19.0s					
XAN	**Xi'an**	**57.06 317**	P	**P**	**00 44 00.8**	**-0.5**
XAN			pP	pP	00 44 06.3	-2.2
XAN			S	**S**	**00 51 58.6**	**+3.8**
XAN			ScS	**ScS**	**00 53 47.4**	**-1.9**
XAN			pmax	pmax		
	comp=Z,65nm,1.0s					
XAN			pmax	pmax		
	comp=Z,750nm,4.1s					
XAN			LR	LR		
	comp=Z,2µm,21.1s					
XAN			LR	LR		
	comp=Z,2µm,20.1s					
XAN			LR	LR		
	comp=Z,3µm,21.2s					
XAN	**Xi'an**	**57.06 317**	P	**P**	**00 44 00.6**	**-0.8**
XAN			pmax	pmax		
	comp=Z,50nm,0.8s					
XAN	**Xi'an**	**57.06 317**	P	**P**	**00 44 00.6**	**-0.8**
XAN			IAmb	IAmb	00 44 02.5	
	comp=Z,50nm,0.8s					
MLSI	**Meulaboh, Aceh**	**57.20 279**	P	**P**	**00 44 01.6**	**-1.0**
	comp=Z,44nm,0.8s					
KLR	**Kul'dur**	**57.38 344**	LR	LR	01 06 55.8	
	comp=Z,1µm,21.6s,baz=170,slow=34					
KLR	**Kul'dur**	**57.38 344**	*c* *i*P	**P**	**00 44 02.7**	**-0.5**
KLR			pmax	pmax		
	comp=Z,104nm,1.4s					
PPT	**Papeete**	**57.50 107**	LR	LR	01 05 42.6	
	comp=Z,1µm,19.4s,baz=282,slow=33					
PPT2	**Papeete2**	**57.50 107**	*e*S	**S**	**00 52 00.8**	**-0.4**
	comp=Z,2µm,27.5s					
PPT2			*e*LQ	LQ	00 58 30.1	
	comp=Z,3µm,25.2s					
PPT2			*e*LR	LR	01 00 56.3	
	comp=Z,1µm,21.5s					
GRNR	**Gornyy**	**57.66 348**	⇑*i*P	**P**	**00 44 04.5**	**-0.7**
GRNR			pmax	pmax		
	comp=Z,20nm,1.1s					
GRNR			MLR	MLR		
	comp=Z,420nm,15.0s					
CM31	**Chiang Mai Arr**	**58.17 295**	P	**P**	**00 44 10.1**	**+0.7**
	SNR=23					
CM31	**Chiang Mai Arr**	**58.17 295**	P	**P**	**00 44 09.5**	**+0.2**
CMAR	**Chiang Mai Arr**	**58.17 295**	P	**P**	**00 44 10.0**	**+0.6**
	comp=Z,30nm,1.1s,baz=116,slow=5.1,SNR=75					
CMAR			LR	LR	01 10 15.4	
	comp=Z,760nm,18.2s,baz=114,slow=37					
CMAR			PKP2bc		01 14 05.7	
	comp=Z,0.7nm,0.3s,baz=296,slow=4.6,SNR=5.9					
CMAR	**Chiang Mai Arr**	**58.17 295**	P	**P**	**00 44 09.2**	**-0.2**
CMAR	**Chiang Mai Arr**	**58.17 295**	P	**P**	**00 44 09.2**	**-0.2**
TBI	**Tubuai**	**58.27 114**	*e*S	**S**	**00 52 09.8**	**-1.2**
TBI			*e*LQ	LQ	00 58 50.8	
	comp=Z,6µm,31.0s					
TBI			*e*LR	LR	01 01 19.7	
	comp=Z,4µm,26.2s,baz=286					
CHTO	**Chiang Mai**	**58.28 296**	P	**P**	**00 44 10.6**	**+0.4**
CHTO	**Chiang Mai**	**58.28 296**	P	**P**	**00 44 09.4**	**-0.8**
CHTO			pmax	pmax		
	comp=Z,126nm,1.5s					
CHTO			MLR	MLR		
	comp=Z,1µm,20.0s					
CHTO	**Chiang Mai**	**58.28 296**	P	**P**	**00 44 09.4**	**-0.8**
PET	**Petropavlovsk**	**58.35 4**	⇑*i*P	**P**	**00 44 09.7**	**-0.2**
PET			*e*S	**S**	**00 52 09.3**	**-1.6**
PET			*e*SS	**SS**	**00 56 04.4**	**+0.9**
PET			pmax	pmax		
	comp=Z,1µm,2.8s					
PET			pmax	pmax		
	comp=Z,120nm,0.9s					
PET			pmax	pmax		
	comp=Z,600nm,9.9s					
PET			MLR	MLR		
	comp=Z,2µm,18.0s					
PET	**Petropavlovsk**	**58.35 4**	P	**P**	**00 44 09.2**	**-0.7**
PETK	**Petropavlovsk-**	**58.38 3**	P	**P**	**00 44 10.3**	**+0.2**
	comp=Z,64nm,0.8s,baz=163,slow=6.2,SNR=47					
PETK	**Petropavlovsk-**	**58.38 3**	P	**P**	**00 44 09.6**	**-0.6**
PETK	**Petropavlovsk-**	**58.38 3**	P	**P**	**00 44 09.6**	**-0.6**
CD2	**Chengdu**	**59.14 311**	⇑P	**P**	**00 44 16.1**	**+0.1**
CD2			sP	pP	00 44 22.5	-0.7
CD2			S	**S**	**00 52 24.4**	**+2.3**
CD2			sS	pS	00 52 31.5	+0.5
CD2			SS	**SS**	**00 56 20.3**	**+3.5**
CD2			pmax	pmax		
	comp=Z,130nm,0.7s					
CD2			pmax	pmax		
	comp=Z,990nm,5.1s					
CD2			LR	LR		
	comp=Z,3µm,20.1s					
CD2			LR	LR		
	comp=Z,4µm,20.1s					
CD2			LR	LR		
	comp=Z,5µm,20.6s					
NKL	**Nikolayevsk**	**59.18 351**	*e*P	**P**	**00 44 16.9**	**+1.2**
NKL			pmax	pmax		
	comp=Z,59nm,1.8s					
NKL			pmax	pmax		
	comp=E,1.0nm,1.4s					
NKL			pmax	pmax		
	comp=N,7.0nm,0.6s					
HHC	**Hu-ho-hao-te**	**59.53 324**	*e*P	**P**	**00 44 18.6**	**+0.1**
HHC			sP	pwP	00 44 29.6	-0.2
HHC			S	**S**	**00 52 34.3**	**+7.4**
HHC			ScS	**ScS**	**00 54 08.9**	**+1.6**
HHC			pmax	pmax		
	comp=N,230nm,1.0s					
HHC			pmax	pmax		
	comp=N,3µm,5.9s					
HHC			LR	LR		
	comp=N,3µm,16.2s					
HHC			LR	LR		
	comp=N,930nm,16.3s					
HHC			LR	LR		
	comp=N,3µm,16.7s					
BTO	**Baotou**	**60.27 323**	*e*P	**P**	**00 44 23.0**	**-0.7**
BTO			S	**S**	**00 52 29.3**	**-7.2**
SMY	**Shemya**	**60.59 15**	IAMs_20	IAMs_20	01 07 58.8	
	comp=Z,7µm,20.0s					
HIA	**Hailar**	**61.55 336**	IAmb	IAmb	00 44 32.5	
	comp=Z,63nm,1.4s					
LZH	**Lanzhou**	**61.66 316**	⇑P	**P**	**00 44 34.3**	**+1.0**
LZH			pP	pP	00 44 39.8	-0.7
LZH			sP	sP	00 44 43.8	+0.5
LZH			S	**S**	**00 52 58.8**	**+4.3**
LZH			sS	sS	00 53 09.4	+2.6
LZH			pmax	pmax		
	comp=Z,81nm,1.3s					
LZH			pmax	pmax		
	comp=Z,450nm,6.0s					
LZH			LR	LR		
	comp=Z,2µm,19.0s					
LZH			LR	LR		
	comp=Z,2µm,19.0s					
LZH			LR	LR		
	comp=Z,2µm,17.3s					
PBA	**Port Blair**	**62.14 286**	*e*P	P	00 44 35.0	-1.6
DGPR	**DIGLIPUR**	**62.30 288**	*e*P	**P**	**00 44 34.5**	**-3.1**
DGPR			IAmb	IAmb	00 44 44.5	
	comp=Z,63nm,1.7s					
ZEA	**Zeya**	**62.68 343**	*e*P	**P**	**00 44 39.0**	**-0.5**
ZEA			*e*S	S	00 53 33.0	+27
ZEA			pmax	pmax		
	comp=N,110nm,1.4s					
ZEA			pmax	pmax		
	comp=E,37nm,1.4s					
ZEA			pmax	pmax		
	comp=Z,230nm,1.6s					
ZEA			pmax	pmax		
	comp=Z,600nm,11.0s					
ZEA			MLR	MLR		
	comp=N,1µm,18.0s					
ZEA			MLR	MLR		
	comp=Z,2µm,18.0s					
MA2	**Magadan**	**64.74 359**	LR	LR	01 14 57.3	
	comp=Z,773nm,18.3s,baz=134,slow=38					
MA2	**Magadan**	**64.74 359**	P	**P**	**00 44 52.4**	**-0.6**
MA2			pmax	pmax		
	comp=Z,125nm,1.2s					
MA2			MLR	MLR		
	comp=Z,3µm,20.0s					
MA2	**Magadan**	**64.74 359**	P	**P**	**00 44 52.4**	**-0.6**
KOHI	**KOHIMA**	**64.79 302**	⇑*i*P	**P**	**00 44 52.6**	**-1.6**
KOHI			IAmb	IAmb	00 45 00.2	
	comp=Z,63nm,1.0s					
GTA	**Gaotai**	**66.10 317**	⇑P	**P**	**00 45 03.1**	**+0.7**
GTA			pP	pP	00 45 07.8	-1.9
GTA			sP	sP	00 45 10.8	-1.6
GTA			S	**S**	**00 53 51.5**	**+2.1**
GTA			sS	pS	00 53 58.3	-0.3
GTA			SS	**SS**	**00 58 09.6**	**+4.1**
GTA			pmax	pmax		
	comp=Z,48nm,1.5s					
GTA			pmax	pmax		
	comp=Z,870nm,8.1s					
GTA			LR	LR		
	comp=Z,900nm,20.3s					
GTA			LR	LR		
	comp=Z,2µm,18.4s					
GTA			LR	LR		
	comp=Z,2µm,19.4s					
CIT	**Chita**	**66.22 335**	*e*P	**P**	**00 45 03.2**	**+0.4**
CIT			*e*		00 45 11.0	
CIT			*e*		00 45 18.4	
CIT			*e*		00 45 34.4	
CIT			pmax	pmax		
	comp=Z,245nm,2.0s					
NIKH	**Nikolski High**	**66.48 24**	P	**P**	**00 45 05.0**	**+0.7**
ULN	**Ulaanbaatar**	**66.49 328**	P	**P**	**00 45 05.3**	**+0.5**
ULN	**Ulaanbaatar**	**66.49 328**	P	**P**	**00 45 04.6**	**-0.1**
ULN			pmax	pmax		
	comp=Z,40nm,1.2s					
ULN	**Ulaanbaatar**	**66.49 328**	P	**P**	**00 45 04.6**	**-0.1**
ULN			IAmb	IAmb	00 45 09.4	
	comp=Z,40nm,1.2s					
TAOE	**Nuku Hiva Isla**	**66.49 97**	*e*LR	LR	01 04 50.9	
	comp=Z,1µm,20.6s					
SHL	**Shillong**	**66.64 301**	⇑*i*P	**P**	**00 45 06.2**	**0.0**
SHL			IAmb	IAmb	00 45 11.7	
	comp=Z,25nm,0.7s					
SONM	**Songino Array**	**66.82 328**	P	**P**	**00 45 07.1**	**+0.3**
	comp=Z,13nm,0.7s,baz=147,slow=5.8,SNR=90					
SONM			LR	LR	01 12 05.4	
	comp=Z,3µm,22.0s,baz=130,slow=34					
SONM			PKP2ab		01 13 42.5	
	comp=Z,1.5nm,1.0s,baz=228,slow=0.7,SNR=7.2					
SONM	**Songino Array**	**66.82 328**	P	**P**	**00 45 06.4**	**-0.4**
SONM			pmax	pmax		
	comp=Z,23nm,1.0s					
SONM	**Songino Array**	**66.82 328**	P	**P**	**00 45 06.3**	**-0.4**
SEY	**Seymchan**	**68.09 360**	*c* *e*P	**P**	**00 45 14.4**	**+0.1**
AKUT	**Akutan**	**68.59 25**	IAMs_20	IAMs_20	01 11 35.5	
	comp=Z,3µm,18.0s					
LSA	**Lhasa**	**68.60 305**	P	**P**	**00 45 19.5**	**+0.7**
SPIA	**Saint Paul Isl**	**69.14 20**	IAMs_20	IAMs_20	01 15 07.7	
	comp=Z,3µm,20.0s					
YAK	**Yakutsk**	**69.52 349**	LR	LR	01 12 47.8	
	comp=Z,897nm,21.5s,baz=162,slow=33					
YAK	**Yakutsk**	**69.52 349**	*c* *i*P	**P**	**00 45 23.0**	**-0.2**

YAK				*e**PP	**pwP**	**00 45 38.7**	**+4.3**
YAK				*e*		00 48 01.0	
YAK				*e*S	**S**	**00 54 27.5**	**-1.6**
YAK				*e*SS	**SS**	**00 59 03.2**	**+6.0**
YAK				pmax	pmax		
	comp=Z,110nm,1.3s						
YAK				pmax	pmax		
	comp=N,95nm,1.5s						
YAK				pmax	pmax		
	comp=E,50nm,1.5s						
YAK				pmax	pmax		
	comp=Z,158nm,3.1s						
YAK				pmax	pmax		
	comp=N,120nm,3.3s						
YAK				pmax	pmax		
	comp=E,103nm,3.4s						
YAK				smax	smax		
	comp=E,79nm,2.5s						
YAK				smax	smax		
	comp=N,71nm,2.5s						
YAK	**Yakutsk**	**69.52**	**349**	P	**P**	**00 45 22.5**	**-0.8**
YAK				IAmb	IAmb	00 45 32.3	
	comp=Z,30nm,0.8s						
GTK	**Tadong**	**69.98**	**301⇑**	*i*P	**P**	**00 45 27.2**	**+0.2**
GTK				IAmb	IAmb	00 45 36.3	
	comp=Z,53nm,1.2s						
ZAK	**Zakamensk**	**69.99**	**329**	*e*P	**P**	**00 45 26.2**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,65nm,1.6s						
ZAK				pmax	pmax		
	comp=Z,16nm,1.2s						
FALS	**False Pass**	**70.08**	**25**	IAMs_20	IAMs_20	01 11 48.9	
	comp=Z,4µm,20.0s						
BOD	**Bodaibo**	**70.32**	**339**	*e*P	**P**	**00 45 27.0**	**-1.3**
BOD				pmax	pmax		
	comp=Z,92nm,1.8s						
TLY	**Talaya**	**70.58**	**330**	P	**P**	**00 45 30.2**	**+0.1**
TLY	**Talaya**	**70.58**	**330*c***	*i*P	**P**	**00 45 30.1**	**+0.1**
TLY				*e*		00 45 43.7	
TLY				*e*		00 48 02.7	
TLY				*e*S	**S**	**00 54 43.2**	**+1.1**
TLY				*e*		00 55 30.8	
TLY				pmax	pmax		
	comp=Z,193nm,2.3s						
TLY				MLR	MLR		
	comp=Z,3µm,16.0s						
TLY	**Talaya**	**70.58**	**330**	P	**P**	**00 45 29.9**	**-0.2**
TLY				IAmb	IAmb	00 45 31.2	
	comp=Z,40nm,1.3s						
BWNR	**Bhubaneshwar**	**70.59**	**294⇑**	*i*P	**P**	**00 45 30.5**	**-0.2**
BWNR				IAmb	IAmb	00 45 43.4	
	comp=Z,42nm,1.3s						
IRK	**Irkutsk**	**70.61**	**331**	*e*P	**P**	**00 45 29.3**	**-0.9**
IRK				pmax	pmax		
	comp=Z,149nm,3.0s						
TAPN	**Taplejung**	**70.74**	**301⇑**	*i*P	**P**	**00 45 32.0**	**+0.1**
	comp=Z,478nm,1.5s						
ODAN	**Odare**	**70.88**	**301⇑**	*i*P	**P**	**00 45 32.7**	**+0.1**
	comp=Z,695nm,1.5s						
BOK	**Bokaro**	**71.37**	**297**	*e*P	**P**	**00 45 34.6**	**-0.8**
BOK				IAmb	IAmb	00 45 55.8	
	comp=Z,20nm,0.9s						
RAMN	**Ramite**	**71.58**	**301⇑**	*i*P	**P**	**00 45 36.6**	**-0.3**
	comp=Z,353nm,1.7s						
SDPT	**Sand Point**	**71.68**	**26**	IAMs_20	IAMs_20	01 13 22.0	
	comp=Z,5µm,20.0s						
CNBA	**Chernabura Isl**	**71.73**	**27**	IAMs_20	IAMs_20	01 12 36.5	
	comp=Z,5µm,20.0s						
MOY	**Mondy**	**71.91**	**329**	*e*P	**P**	**00 45 38.6**	**+0.4**
MOY				pmax	pmax		
	comp=Z,263nm,3.4s						
JIRN	**Jiri**	**72.12**	**301⇑**	*i*P	**P**	**00 45 40.1**	**-0.2**
VNDA	**Vanda**	**72.29**	**178**	P	**P**	**00 45 39.3**	**-0.6**
	comp=Z,5.4nm,1.0s,baz=334,slow=6.2,SNR=18						
VNDA				LR	LR	01 15 05.1	
	comp=Z,1µm,18.4s,baz=353,slow=34						
VNDA	**Vanda**	**72.29**	**178**	P	**P**	**00 45 40.4**	**+0.5**
VNDA				pmax	pmax		
	comp=Z,15nm,1.0s						
VNDA	**Vanda**	**72.29**	**178**	P	**P**	**00 45 40.4**	**+0.5**
GUN	**Gumba**	**72.46**	**301⇑**	*i*P	**P**	**00 45 42.4**	**+0.1**
	comp=Z,769nm,1.5s						
PKI	**Pulchoki**	**72.77**	**301⇑**	*i*P	**P**	**00 45 43.7**	**-0.4**
	comp=Z,569nm,1.6s						
PKIN	**Phulchoki**	**72.78**	**301⇑**	*i*P	**P**	**00 45 43.7**	**-0.4**
	comp=Z,421nm,1.6s						
KKN	**Kakani**	**72.94**	**301⇑**	*i*P	**P**	**00 45 44.7**	**-0.3**
DMN	**Daman**	**73.04**	**301⇑**	*i*P	**P**	**00 45 45.6**	**0.0**
PALK	**Pallekele**	**73.09**	**279**	P	**P**	**00 45 45.5**	**-0.4**
CHGN	**Chignik**	**73.18**	**26**	IAMs_20	IAMs_20	01 15 34.4	
	comp=Z,5µm,20.0s						
GKN	**Gorkha**	**73.54**	**301⇑**	*i*P	**P**	**00 45 48.3**	**-0.2**
	comp=Z,874nm,1.5s						
BILL	**Bilibino**	**73.82**	**5*c***	*i*P	**P**	**00 45 49.4**	**+0.3**
BILL				pmax	pmax		
	comp=Z,154nm,0.8s						
BILL	**Bilibino**	**73.82**	**5**	P	**P**	**00 45 48.9**	**-0.2**
GAMB	**Gambell**	**73.89**	**16**	IAmb	IAmb	00 45 51.4	
	comp=Z,58nm,1.2s						
GAMB				IAMs_20	IAMs_20	01 14 58.7	
	comp=Z,5µm,21.0s						
CHIR	**Chirikof Islan**	**74.14**	**27**	IAMs_20	IAMs_20	01 13 44.8	
	comp=Z,5µm,20.0s						
DANN	**Dangsing**	**74.38**	**301⇑**	*i*P	**P**	**00 45 53.0**	**-0.5**
	comp=Z,747nm,1.7s						
MDRS	**Chennai**	**74.39**	**285⇑**	*i*P	**P**	**00 45 53.4**	**-0.1**
SII	**Sitkinak Islan**	**75.22**	**27**	IAMs_20	IAMs_20	01 14 27.4	
	comp=Z,5µm,19.0s						
OHAK	**Old Harbor**	**76.00**	**27**	IAMs_20	IAMs_20	01 24 55.4	
	comp=Z,3µm,18.0s						
WMQ	**Urumqi**	**76.19**	**317**	*e*P	**P**	**00 46 04.1**	**+0.8**
WMQ				PP	**PP**	**00 49 00.1**	**+5.4**
WMQ				S	**S**	**00 55 47.4**	**+1.4**
WMQ				sS	sS	00 55 57.4	-1.2
WMQ				SS	**SS**	**01 00 43.8**	**+3.7**
WMQ				pmax	pmax		
	comp=Z,68nm,2.1s						
WMQ				pmax	pmax		
	comp=Z,690nm,3.9s						
WMQ				LR	LR		
	comp=Z,820nm,19.1s						
WMQ				LR	LR		
	comp=Z,1µm,21.1s						
WMQ				LR	LR		
	comp=Z,2µm,22.7s						
ANM	**Nome**	**76.27**	**17**	IAmb	IAmb	00 46 05.4	
	comp=Z,49nm,1.1s						
ANM				IAMs_20	IAMs_20	01 14 12.9	
	comp=Z,4µm,22.0s						
KDAK	**Kodiak Island**	**76.63**	**27**	IAMs_20	IAMs_20	01 15 52.7	
	comp=Z,4µm,20.0s						
HYB	**Hyderabad**	**76.73**	**289**	*i* P	**P**	**00 46 06.0**	**-0.9**
HYB	**Hyderabad**	**76.73**	**289⇑**	*i*P	**P**	**00 46 05.8**	**-1.1**
HYB				IAmb	IAmb	00 46 24.1	
	comp=Z,22nm,1.1s						
HYB				*e*S	**S**	**00 55 50.6**	**-2.3**
TRD	**Trivandrum**	**76.93**	**280**	*e*P	**P**	**00 46 08.2**	**+0.1**
SVW2	**Sparrevohn**	**77.30**	**23**	IAmb	IAmb	00 46 11.4	
	comp=Z,36nm,0.8s						
HOM	**Homer**	**78.07**	**25**	IAMs_20	IAMs_20	01 19 11.6	
	comp=Z,4µm,20.0s						
TIXI	**Tiksi**	**78.44**	**352*c***	*i*P	**P**	**00 46 14.3**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,29nm,1.2s						
TIXI	**Tiksi**	**78.44**	**352**	P	**P**	**00 46 14.3**	**-0.9**
TIXI				IAmb	IAmb	00 46 18.2	
	comp=Z,19nm,0.8s						
BRLK	**Bradley Lake**	**78.45**	**25**	P	**P**	**00 46 14.9**	**-0.7**
BRLK				IAmb	IAmb	00 46 16.6	
	comp=Z,30nm,0.8s						
BRLK				IAMs_20	IAMs_20	01 16 27.4	
	comp=Z,5µm,20.0s						
DGZ	**Jazzator, Alta**	**78.56**	**323*c***	*i*P	**P**	**00 46 16.8**	**+0.2**
DGZ				pmax	pmax		
	comp=Z,67nm,1.5s						
BHPL	**Bhopal**	**78.82**	**295⇑**	*i*P	**P**	**00 46 17.4**	**-1.1**
BHPL				IAmb	IAmb	00 46 25.9	
	comp=Z,31nm,1.1s						
SEW	**Seward**	**79.25**	**26**	IAmb	IAmb	00 46 22.4	
	comp=Z,40nm,1.0s						
SKT	**Skwentna**	**79.39**	**23**	IAMs_20	IAMs_20	01 20 31.9	
	comp=Z,4µm,19.0s						
SUA	**Susitna One**	**79.42**	**24**	IAMs_20	IAMs_20	01 17 44.4	
	comp=Z,3µm,20.0s						
RDOG	**Red Dog Mine**	**79.49**	**15**	IAMs_20	IAMs_20	01 19 52.2	
	comp=Z,3µm,20.0s						
RC01	**Rabbit Creek A**	**79.64**	**25**	IAmb	IAmb	00 46 22.0	
	comp=Z,34nm,0.9s						
RC01				IAMs_20	IAMs_20	01 16 49.1	
	comp=Z,4µm,21.0s						
DDI	**Dehra Dun**	**79.68**	**302⇑**	*i*P	**P**	**00 46 22.2**	**-0.8**
DDI				IAmb	IAmb	00 46 29.1	
	comp=Z,95nm,1.2s						
KAAM	**Kaadhehdhoo**	**79.96**	**271**	P	**P**	**00 46 25.7**	**+0.9**
	SNR=5.6						
KAAM	**Kaadhehdhoo**	**79.96**	**271**	P	**P**	**00 46 25.2**	**+0.4**
PMR	**Palmer**	**80.15**	**24**	IAmb	IAmb	00 46 25.7	
	comp=Z,29nm,0.9s						
PMR				IAMs_20	IAMs_20	01 18 19.6	
	comp=Z,3µm,20.0s						
MID	**Middleton Isla**	**80.28**	**27**	IAMs_20	IAMs_20	01 15 22.5	
	comp=Z,4µm,20.0s						
GHO	**Glory Hole Cre**	**80.33**	**24**	IAmb	IAmb	00 46 26.9	
	comp=Z,29nm,0.8s						
GHO				IAMs_20	IAMs_20	01 21 11.7	
	comp=Z,3µm,19.0s						
KNK	**Knik Glacier**	**80.34**	**25**	IAmb	IAmb	00 46 41.3	
	comp=Z,28nm,0.9s						
KTH	**Kantishna Hill**	**80.49**	**22**	IAmb	IAmb	00 46 26.0	
	comp=Z,25nm,1.0s						
SML	**Sawmill**	**80.59**	**24**	IAMs_20	IAMs_20	01 18 44.2	
	comp=Z,4µm,21.0s						
SMLA	**Simla**	**80.60**	**303⇑**	*i*P	**P**	**00 46 28.1**	**+0.2**
SMLA				IAmb	IAmb	00 46 42.7	
	comp=Z,48nm,0.8s						
GLI	**Glacier Island**	**80.64**	**25**	IAmb	IAmb	00 46 27.7	
	comp=Z,37nm,0.9s						
GLI				IAMs_20	IAMs_20	01 16 29.8	
	comp=Z,4µm,22.0s						
HIN	**Hinchinbrook I**	**80.67**	**26**	IAMs_20	IAMs_20	01 20 06.4	
	comp=Z,5µm,19.0s						
TRF	**Thorofare Moun**	**80.67**	**22**	IAMs_20	IAMs_20	01 18 56.8	
	comp=Z,4µm,20.0s						
MNCY	**Minicoy**	**80.75**	**279**	*e*P	**P**	**00 46 29.2**	**+0.1**
MNCY				IAmb	IAmb	00 46 34.2	
	comp=Z,60nm,1.0s						
BPAW	**Bear Paw Mtn.**	**80.77**	**22**	IAMs_20	IAMs_20	01 21 29.2	
	comp=Z,2µm,19.0s						
MK31	**Makanchi Array**	**80.78**	**319**	P	**P**	**00 46 28.6**	**0.0**
MK31				pmax	pmax		
	comp=Z,58nm,1.4s						
MK31	**Makanchi Array**	**80.78**	**319**	P	**P**	**00 46 28.6**	**0.0**
MK31				IAmb	IAmb	00 46 31.6	
	comp=Z,58nm,1.4s						
MKAR	**Makanchi Array**	**80.78**	**319**	P	**P**	**00 46 28.7**	**+0.1**
	comp=Z,9.1nm,0.7s,baz=101,slow=6.3,SNR=86						
MKAR				LR	LR	01 22 18.9	
	comp=Z,2µm,19.6s,baz=98,slow=36						
MKAR	**Makanchi Array**	**80.78**	**319**	P	**P**	**00 46 28.0**	**-0.6**
IMAR	**Indian Mountai**	**80.87**	**19**	P	**P**	**00 46 27.9**	**-0.7**
GOA	**Goa**	**80.91**	**287⇑**	*i*P	**P**	**00 46 26.6**	**-3.2**
MAKZ	**Makanchi**	**80.99**	**319**	P	**P**	**00 46 29.7**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,86nm,1.3s						
MAKZ				MLR	MLR		
	comp=Z,2µm,19.0s						
MAKZ	**Makanchi**	**80.99**	**319**	P	**P**	**00 46 29.7**	**0.0**
SCM	**Sheep Creek Mo**	**81.02**	**25**	IAmb	IAmb	00 46 45.7	
	comp=Z,45nm,1.1s						
RND	**Reindeer**	**81.20**	**23**	IAmb	IAmb	00 46 32.3	
	comp=Z,29nm,0.9s						
RND				IAMs_20	IAMs_20	01 20 24.6	
	comp=Z,4µm,20.0s						
POO	**Poona**	**81.33**	**290⇑**	*i*P	**P**	**00 46 30.9**	**-1.1**
MCK	**McKinley**	**81.34**	**22**	IAmb	IAmb	00 46 33.0	
	comp=Z,44nm,0.9s						
MCK				IAMs_20	IAMs_20	01 23 40.3	
	comp=Z,3µm,18.0s						
MLY	**Manley**	**81.36**	**21**	IAmb	IAmb	00 46 32.6	
	comp=Z,31nm,0.8s						
BWN	**Browne**	**81.37**	**22**	IAMs_20	IAMs_20	01 21 39.8	
	comp=Z,3µm,20.0s						
RAGM	**Ragged Mountai**	**81.47**	**26**	IAmb	IAmb	00 46 35.5	
	comp=Z,46nm,1.2s						
DHRM	**DHARAMSHALA**	**81.56**	**304⇑**	*i*P	**P**	**00 46 33.0**	**-0.3**
DHRM				IAmb	IAmb	00 46 45.5	
	comp=Z,54nm,0.8s						
DHRM				*e*S	**S**	**00 56 45.1**	**+0.9**
DHY	**Denali Highway**	**81.61**	**23**	IAmb	IAmb	00 46 35.2	
	comp=Z,27nm,0.8s						
DHY				IAMs_20	IAMs_20	01 22 08.5	
	comp=Z,3µm,20.0s						
ZAA0	**Zalesovo Array**	**81.64**	**326**	IAmb	IAmb	00 46 32.9	
	comp=Z,40nm,1.0s						
ZALV	**Zalesovo Beam**	**81.64**	**326**	P	**P**	**00 46 31.6**	**-1.4**
	comp=Z,12nm,0.6s,baz=113,slow=5.2,SNR=57						
ZALV				LR	LR	01 21 31.1	
	comp=Z,2µm,21.8s,baz=114,slow=35						
ZALV	**Zalesovo Beam**	**81.64**	**326**	*i* P	**P**	**00 46 32.2**	**-0.7**
ZALV				pmax	pmax		
	comp=Z,12nm,0.6s						
ZALV	**Zalesovo Beam**	**81.64**	**326**	P	**P**	**00 46 31.3**	**-1.6**
PDGK	**Podgornoye**	**81.69**	**315**	P	**P**	**00 46 32.8**	**-0.8**
NEA	**Nenana**	**81.72**	**22**	IAmb	IAmb	00 46 34.9	
	comp=Z,24nm,0.9s						
NEA				IAMs_20	IAMs_20	01 25 14.8	
	comp=Z,3µm,19.0s						
WRH	**Wood River Hil**	**82.04**	**22**	IAmb	IAmb	00 46 41.4	
	comp=Z,34nm,1.1s						
WRH				IAMs_20	IAMs_20	01 22 07.7	
	comp=Z,3µm,20.0s						
CCB	**Clear Creek Bu**	**82.23**	**22**	IAmb	IAmb	00 46 36.0	
	comp=Z,27nm,1.0s						
CCB				IAMs_20	IAMs_20	01 21 53.9	
	comp=Z,2µm,20.0s						
MDM	**Murphy Dome**	**82.23**	**22**	P	**P**	**00 46 34.6**	**-1.3**
MDM				IAmb	IAmb	00 46 35.3	
	comp=Z,28nm,1.3s						
CRQM	**Cirque**	**82.31**	**26**	IAmb	IAmb	00 46 39.5	
	comp=Z,27nm,0.8s						
CRQM				IAMs_20	IAMs_20	01 16 59.4	
	comp=Z,5µm,21.0s						
GLB	**Gilahina Butte**	**82.32**	**26**	IAmb	IAmb	00 46 38.0	
	comp=Z,28nm,0.8s						
GLB				IAMs_20	IAMs_20	01 18 43.0	
	comp=Z,3µm,20.0s						
PAX	**Paxson**	**82.32**	**24**	IAMs_20	IAMs_20	01 22 13.4	
	comp=Z,5µm,19.0s						
TCOL	**CIGO, UAF Yank**	**82.33**	**22**	P	**P**	**00 46 34.9**	**-1.3**
	baz=240						
COLA	**College**	**82.33**	**22**	P	**P**	**00 46 35.4**	**-0.9**
COLA				pmax	pmax		
	comp=Z,30nm,0.8s						
COLA				MLR	MLR		
	comp=Z,3µm,19.0s						
COLA	**College**	**82.33**	**22**	P	**P**	**00 46 35.4**	**-0.9**
COLA				IAmb	IAmb	00 46 37.8	
	comp=Z,30nm,0.8s						
COLA	**College**	**82.33**	**22**	IAMs_20	IAMs_20	01 24 44.4	
	comp=Z,3µm,19.0s						
VRDI	**Verde Repeater**	**82.38**	**26**	IAmb	IAmb	00 46 37.2	
	comp=Z,25nm,1.0s						
VRDI				IAMs_20	IAMs_20	01 18 31.6	
	comp=Z,5µm,20.0s						
HDA	**Harding Lake**	**82.43**	**22**	IAMs_20	IAMs_20	01 20 07.3	
	comp=Z,3µm,20.0s						
HDA	**Harding Lake**	**82.43**	**22**	P	**P**	**00 46 35.3**	**-1.6**
	baz=241						
TGL	**Tana Glacier**	**82.45**	**27**	IAmb	IAmb	00 46 39.9	
	comp=Z,26nm,1.1s						
TGL				IAMs_20	IAMs_20	01 16 51.8	
	comp=Z,4µm,22.0s						
POKR	**Poker Plat Res**	**82.61**	**22**	P	**P**	**00 46 36.0**	**-1.8**
	baz=240						
MCARA	**McCarthy VSAT**	**82.63**	**26**	IAmb	IAmb	00 46 52.0	
	comp=Z,30nm,0.8s						
MCARA				IAMs_20	IAMs_20	01 17 57.4	
	comp=Z,5µm,21.0s						
ILAR	**Eielson Array**	**82.64**	**22**	P	**P**	**00 46 36.2**	**-1.7**
	comp=Z,8.7nm,0.7s,baz=244,slow=5.0,SNR=83						
ILAR				LR	LR	01 22 15.9	
	comp=Z,2µm,19.2s,baz=246,slow=35						
ILAR	**Eielson Array**	**82.64**	**22**	P	**P**	**00 46 35.6**	**-2.3**
ILAR	**Eielson Array**	**82.64**	**22**	P	**P**	**00 46 35.6**	**-2.3**
COLD	**Coldfoot**	**82.75**	**19**	IAmb	IAmb	00 46 55.3	
	comp=Z,30nm,1.4s						
BALM	**Baldy**	**82.78**	**26**	IAmb	IAmb	00 46 40.4	
	comp=Z,21nm,0.8s						
BALM				IAMs_20	IAMs_20	01 17 25.3	
	comp=Z,4µm,22.0s						
RIDG	**Independent Ri**	**82.93**	**23**	IAmb	IAmb	00 46 40.7	
	comp=Z,51nm,1.1s						
RIDG				IAMs_20	IAMs_20	01 25 38.4	
	comp=Z,3µm,19.0s						
MENT	**Mentasta**	**83.02**	**24**	IAmb	IAmb	00 46 41.7	
	comp=Z,21nm,1.0s						
BARN	**Barnard Glacie**	**83.10**	**26**	IAmb	IAmb	00 46 42.5	
	comp=Z,20nm,0.7s						
CTGM	**Chitina Glacie**	**83.20**	**27**	IAmb	IAmb	00 46 58.4	
	comp=Z,29nm,1.0s						
CTGM				IAMs_20	IAMs_20	01 16 38.4	
	comp=Z,3µm,22.0s						
KSH	**Kashi**	**83.34**	**311**	P	**P**	**00 46 44.4**	**+2.1**
KSH				sP	sP	00 46 51.4	-1.1
KSH				S	**S**	**00 57 04.3**	**+2.4**
KSH				sS	pS	00 57 12.8	+1.1
KSH				SS	**SS**	**01 02 35.4**	**+7.8**
KSH				pmax	pmax		
	comp=Z,170nm,1.4s						
KSH				pmax	pmax		
	comp=Z,2µm,5.7s						
KSH				LR	LR		
	comp=Z,620nm,16.7s						
KSH				LR	LR		
	comp=Z,810nm,13.8s						
KSH				LR	LR		
	comp=Z,780nm,10.7s						
PCA	**Pinnacle**	**83.35**	**28**	IAMs_20	IAMs_20	01 18 16.4	
	comp=Z,4µm,20.0s						
SCRK	**Sand Creek**	**83.38**	**23**	IAmb	IAmb	00 46 44.5	
	comp=Z,43nm,1.4s						
SCRK				IAMs_20	IAMs_20	01 27 11.2	
	comp=Z,3µm,18.0s						
PRP	**Porcupine Dome**	**83.50**	**22**	IAMs_20	IAMs_20	01 20 04.5	
	comp=Z,3µm,21.0s						
TOLK	**Toolik Lake Re**	**83.71**	**18**	IAmb	IAmb	00 47 00.0	
	comp=Z,19nm,1.0s						
TOLK				IAMs_20	IAMs_20	01 18 48.9	
	comp=Z,3µm,22.0s						
TOLK	**Toolik Lake Re**	**83.71**	**18**	P	**P**	**00 46 43.7**	**+0.3**
	baz=238						
ULHL	**Ulahol**	**83.74**	**313**	P	**P**	**00 46 45.2**	**+0.8**
	SNR=26						
BCAR	**Beaver Creek A**	**83.87**	**25**	P	**P**	**00 46 43.5**	**-0.9**
FYU	**Fort Yukon**	**84.10**	**21**	IAmb	IAmb	00 47 01.9	
	comp=Z,36nm,1.4s						
FYU				IAMs_20	IAMs_20	01 26 22.2	
	comp=Z,3µm,19.0s						
KURK	**Kurchatov**	**84.24**	**322**	P	**P**	**00 46 46.3**	**-0.2**
KURK	**Kurchatov**	**84.24**	**322*c***	*i*P	**P**	**00 46 46.2**	**-0.2**
KURK				pmax	pmax		
	comp=Z,74nm,1.5s						
KURK	**Kurchatov**	**84.24**	**322**	P	**P**	**00 46 46.1**	**-0.4**
KURBB	**Kurchatov Arra**	**84.27**	**322**	P	**P**	**00 46 45.8**	**-0.8**
NIL	**Nilore**	**84.34**	**304**	P	**P**	**00 46 47.6**	**+0.2**
NIL	**Nilore**	**84.34**	**304**	P	**P**	**00 46 47.0**	**-0.4**
NIL				pmax	pmax		
	comp=Z,99nm,0.9s						
NIL				MLR	MLR		
	comp=Z,2µm,21.0s						
NIL	**Nilore**	**84.34**	**304**	P	**P**	**00 46 47.0**	**-0.4**
KZA	**Kyzart**	**84.42**	**313**	P	**P**	**00 46 49.5**	**+1.3**
	SNR=76						
QSPA	**South Pole Qui**	**84.62**	**180**	P	**P**	**00 46 50.1**	**+1.8**
SIT	**Sitka**	**84.70**	**31**	IAMs_20	IAMs_20	01 16 14.6	
	comp=Z,4µm,21.0s						
BMAR	**Burnt Mountain**	**84.73**	**20**	P	**P**	**00 46 48.4**	**-0.3**
KBK	**Karagaybulak**	**84.76**	**314**	P	**P**	**00 46 50.3**	**+0.7**
	SNR=22						
EGAK	**Eagle**	**84.83**	**23**	IAMs_20	IAMs_20	01 24 11.7	
	comp=Z,3µm,19.0s						
HYT	**Haines Junctio**	**84.89**	**27**	IAmb	IAmb	00 47 07.5	
	comp=Z,46nm,1.2s						
HYT				IAMs_20	IAMs_20	01 20 34.3	
	comp=Z,4µm,19.0s						
CHMS	**Chumysh**	**84.98**	**314**	P	**P**	**00 46 50.3**	**-0.2**
	SNR=47						
CHMS	**Chumysh**	**84.98**	**314**	*i* P	**P**	**00 46 49.8**	**-0.7**
CHMS				pmax	pmax		
	comp=Z,299nm,1.7s						
UCH	**Uchtor**	**84.99**	**313**	P	**P**	**00 46 52.2**	**+1.2**
	SNR=94						
AAK	**Ala-Archa**	**85.09**	**313**	P	**P**	**00 46 52.0**	**+0.8**
	SNR=37						
AAK	**Ala-Archa**	**85.09**	**313**	*i* P	**P**	**00 46 51.2**	**0.0**
	SNR=56						
AAK	**Ala-Archa**	**85.09**	**313**	P	**P**	**00 46 51.6**	**+0.4**
AAK	**Ala-Archa**	**85.09**	**313**	P	**P**	**00 46 51.0**	**-0.2**
AAK				pmax	pmax		
	comp=Z,33nm,1.1s						
AAK	**Ala-Archa**	**85.09**	**313**	P	**P**	**00 46 51.0**	**-0.2**
AAK				IAmb	IAmb	00 47 07.1	
	comp=Z,33nm,1.1s						
MAW	**Mawson**	**85.09**	**203**	P	**P**	**00 46 49.6**	**-0.8**
	comp=Z,4.4nm,0.7s,baz=27,slow=14,SNR=4.3						
MAW				LR	LR	01 21 43.1	
	comp=Z,2µm,21.2s,baz=84,slow=33						
MAW	**Mawson**	**85.09**	**203**	IAmb	IAmb	00 46 59.0	
	comp=Z,3.6nm,0.9s						
USP	**Ospenovka**	**85.21**	**314**	P	**P**	**00 46 52.1**	**+0.5**
	SNR=67						
DAWY	**Dawson**	**85.25**	**24**	IAmb	IAmb	00 46 54.9	
	comp=Z,46nm,1.4s						
DAWY				IAMs_20	IAMs_20	01 18 58.9	
	comp=Z,5µm,22.0s						
AML	**Almayashu**	**85.57**	**313**	P	**P**	**00 46 54.8**	**+1.0**
	SNR=113						
EKS2	**Erkin-Say**	**85.61**	**313**	P	**P**	**00 46 54.6**	**+0.9**
	SNR=65						
WHY	**Whitehorse**	**86.05**	**28**	IAMs_20	IAMs_20	01 19 24.7	
	comp=Z,4µm,21.0s						
NRIK	**Noril'sk**	**86.50**	**341**	P	**P**	**00 46 56.5**	**-0.8**
	comp=Z,17nm,0.6s,baz=122,slow=4.8,SNR=62						
NRIK				LR	LR	01 25 19.0	
	comp=Z,1µm,20.5s,baz=112,slow=35						
NRIK	**Noril'sk**	**86.50**	**341**	*i* P	**P**	**00 46 56.7**	**-0.6**
EPYK	**Eagle Plains**	**87.14**	**22**	IAmb	IAmb	00 47 17.2	
	comp=Z,43nm,1.1s						
EPYK				IAMs_20	IAMs_20	01 21 45.7	
	comp=Z,3µm,21.0s						
EPYK	**Eagle Plains**	**87.14**	**22**	P	**P**	**00 47 00.7**	**0.0**
	baz=250						
KBL	**Kabul**	**87.92**	**305**	P	**P**	**00 47 04.1**	**-1.2**
KBL	**Kabul**	**87.92**	**305**	P	**P**	**00 47 04.2**	**-1.2**
KBL				pmax	pmax		
	comp=Z,15nm,0.9s						
KBL				MLR	MLR		
	comp=Z,1µm,22.0s						
KBL	**Kabul**	**87.92**	**305**	P	**P**	**00 47 04.2**	**-1.1**
KBL				IAmb	IAmb	00 47 21.7	
	comp=Z,14nm,0.9s						
KK31	**Karatay Array**	**88.05**	**313**	P	**P**	**00 47 05.3**	**-0.2**
KK31	**Karatay Array**	**88.05**	**313**	P	**P**	**00 47 05.3**	**-0.2**
KKAR	**Karatay Array**	**88.05**	**313**	P	**P**	**00 47 04.5**	**-1.0**
KKAR	**Karatay Array**	**88.05**	**313**	P	**P**	**00 47 04.5**	**-1.0**
JCC	**Jacoby Creek,**	**88.25**	**49**	IAMs_20	IAMs_20	01 23 21.5	
	comp=Z,4µm,19.0s						
TAS	**Tashkent**	**88.68**	**312**	P	**P**	**00 47 08.2**	**-0.3**
TAS				pmax	pmax		
	comp=Z,50nm,0.9s						
TAS				MLR	MLR		
	comp=Z,1µm,22.0s						
TAS	**Tashkent**	**88.68**	**312**	P	**P**	**00 47 08.2**	**-0.3**
INK	**Inuvik**	**88.94**	**21**	IAMs_20	IAMs_20	01 22 06.1	
	comp=Z,4µm,22.0s						
HUMO	**Hull Mountain**	**89.30**	**47**	IAMs_20	IAMs_20	01 19 08.2	
	comp=Z,3µm,21.0s						
COR	**Corvallis**	**89.33**	**45**	IAMs_20	IAMs_20	01 22 44.6	
	comp=Z,4µm,20.0s						
WDC	**Whiskeytown Da**	**89.34**	**49**	IAMs_20	IAMs_20	01 21 07.3	
	comp=Z,4µm,20.0s						
NLWA	**Neilton Lookou**	**89.34**	**42**	IAMs_20	IAMs_20	01 18 47.9	
	comp=Z,3µm,22.0s						
YBH	**Yreka Blue Hor**	**89.37**	**48**	IAMs_20	IAMs_20	01 19 20.9	
	comp=Z,4µm,21.0s						
SAO	**San Andreas Ge**	**89.71**	**53**	IAMs_20	IAMs_20	01 24 19.5	
	comp=Z,3µm,19.0s						
BRVK	**Borovoye**	**89.78**	**323**	P	**P**	**00 47 12.5**	**-0.9**
BRVK	**Borovoye**	**89.78**	**323**	P	**P**	**00 47 12.3**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,30nm,1.0s						
BRVK	**Borovoye**	**89.78**	**323**	P	**P**	**00 47 12.3**	**-1.0**
BRVK				IAmb	IAmb	00 47 24.8	
	comp=Z,30nm,1.0s						
ORV	**Oroville**	**90.00**	**50**	IAMs_20	IAMs_20	01 21 05.0	
	comp=Z,3µm,20.0s						
H04A	**Detroit Lake**	**90.13**	**45**	IAMs_20	IAMs_20	01 19 56.9	
	comp=Z,3µm,21.0s						
PMPB	**Monarch Peak**	**90.17**	**54**	IAMs_20	IAMs_20	01 24 29.6	
	comp=Z,2µm,20.0s						

AFDM	Forest Hills D	90.34	51	P	P	00 47 16.1	-0.2
AFDM				IAMs_20	IAMs_20	01 21 43.0	
	comp=Z,3µm,20.0s						
D05A	Enumclaw	90.58	43	IAMs_20	IAMs_20	01 19 25.7	
	comp=Z,3µm,21.0s						
J05D	Fort Rock, OR	90.64	47	P	P	00 47 16.7	-1.2
	baz=263						
LON	Longmire	90.65	43	IAMs_20	IAMs_20	01 19 27.5	
	comp=Z,4µm,22.0s						
CMB	Columbia Colle	90.70	52	IAMs_20	IAMs_20	01 20 52.4	
	comp=Z,4µm,20.0s						
PINE	Pine Mountain	90.91	46	IAMs_20	IAMs_20	01 28 37.7	
	comp=Z,3µm,18.0s						
BEKR	Beckworth	90.91	50	IAmb	IAmb	00 47 17.9	
	comp=Z,6.7nm,0.5s						
RUBR	Rubicon Trail	90.98	51	IAMs_20	IAMs_20	01 21 34.0	
	comp=Z,4µm,20.0s						
LLLB	Lillooet	91.08	39	IAMs_20	IAMs_20	01 36 29.7	
	comp=Z,2µm,18.0s						
B06A	Marblemount	91.08	42	IAMs_20	IAMs_20	01 22 17.8	
	comp=Z,3µm,20.0s						
G06A	Carlson Farm,	91.29	45	IAMs_20	IAMs_20	01 20 31.6	
	comp=Z,3µm,20.0s						
VCNR	Virginia City	91.40	51	IAMs_20	IAMs_20	01 22 08.0	
	comp=Z,4µm,20.0s						
PNTR	Pine Nut	91.42	51	IAMs_20	IAMs_20	01 22 17.5	
	comp=Z,4µm,20.0s						
LTY	Liberty	91.48	43	IAMs_20	IAMs_20	01 20 05.6	
	comp=Z,3µm,22.0s						
PAHR	Pah Rah Range	91.64	50	IAMs_20	IAMs_20	01 22 37.4	
	comp=Z,4µm,20.0s						
MDPB	Devils Postpil	91.69	53	IAmb	IAmb	00 47 40.2	
	comp=Z,15nm,1.5s						
MDPB				IAMs_20	IAMs_20	01 21 53.7	
	comp=Z,3µm,20.0s						
YERR	Yerington	91.69	51	IAMs_20	IAMs_20	01 21 35.6	
	comp=Z,4µm,20.0s						
OSI	Osito Audit: C	91.69	56	IAMs_20	IAMs_20	01 25 23.1	
	comp=Z,2µm,19.0s						
OMMB	Old Mammoth Mi	91.75	53	IAMs_20	IAMs_20	01 22 25.3	
	comp=Z,3µm,20.0s						
I07A	Izee	91.97	46	IAmb	IAmb	00 47 29.8	
	comp=Z,14nm,1.3s						
I07A				IAMs_20	IAMs_20	01 24 30.8	
	comp=Z,2µm,19.0s						
ISA	Isabella, Lake	91.99	55	IAMs_20	IAMs_20	01 21 15.9	
	comp=Z,2µm,20.0s						
RYN	Ryan	92.21	52	IAMs_20	IAMs_20	01 22 32.6	
	comp=Z,4µm,20.0s						
EDW2	Edwards Air Fo	92.31	55	P	P	00 47 25.7	0.0
	baz=265						
NVAR	Mina Array Bea	92.37	52	P	P	00 47 25.4	-0.6
	comp=Z,3.1nm,0.7s,baz=254,slow=6.6,SNR=22						
NVAR				LR	LR	01 22 42.7	
	comp=Z,4µm,20.3s,baz=278,slow=31						
CWC	Cottonwood Cre	92.38	54	P	P	00 47 25.9	-0.1
	baz=265						
G08A	Pilot Rock	92.47	45	IAMs_20	IAMs_20	01 21 40.9	
	comp=Z,3µm,21.0s						
B08A	Colville Reser	92.49	42	IAMs_20	IAMs_20	01 23 33.1	
	comp=Z,2µm,20.0s						
C36M	Paulatuk	92.51	21	IAmb	IAmb	00 47 25.8	
	comp=Z,31nm,1.2s						
C36M				IAMs_20	IAMs_20	01 27 03.6	
	comp=Z,2µm,20.0s						
C36M	Paulatuk	92.51	21	P	P	00 47 24.8	-0.8
	baz=262						
KVN	Kaiserville	92.58	51	IAMs_20	IAMs_20	01 21 54.1	
	comp=Z,3µm,20.0s						
LRMC	Laurel Mtn Rad	92.62	55	P	P	00 47 27.4	+0.3
	baz=265						
D08A	Wollman Farm,	92.65	43	IAMs_20	IAMs_20	01 22 29.5	
	comp=Z,4µm,20.0s						
J08A	Circle Bar Ran	92.65	47	IAMs_20	IAMs_20	01 30 38.9	
	comp=Z,2µm,18.0s						
MPMC	Manual Prospec	92.82	54	P	P	00 47 28.3	+0.1
	baz=266						
109C	Camp Elliot, M	92.89	57	IAMs_20	IAMs_20	01 26 36.9	
	comp=Z,2µm,18.0s						
E09A	Wood Farm, Sta	93.14	44	IAmb	IAmb	00 47 30.7	
	comp=Z,8.3nm,0.9s						
C09A	Chrisman Ranch	93.15	42	IAMs_20	IAMs_20	01 25 59.6	
	comp=Z,3µm,18.0s						
BAR	Barrett	93.24	58	IAMs_20	IAMs_20	01 26 31.2	
	comp=Z,2µm,19.0s						
GSC	Goldstone, Bar	93.32	55	IAMs_20	IAMs_20	01 26 08.1	
	comp=Z,2µm,19.0s						
FURC	Furnace Creek,	93.36	54	P	P	00 47 30.6	+0.3
	baz=266						
MONP2	Monument Peak	93.46	57	P	P	00 47 32.4	+1.2
	baz=266						
PFO	Pinyon Flats O	93.48	57	IAMs_20	IAMs_20	01 30 12.7	
	comp=Z,2µm,18.0s						
XPFO	Pion Flat	93.49	57	IAMs_20	IAMs_20	01 30 03.7	
	comp=Z,2µm,18.0s						
HRA	Herat	93.50	304	P	P	00 47 31.0	-0.3
BMO	Blue Mountains	93.61	45	IAMs_20	IAMs_20	01 22 38.9	
	comp=Z,3µm,21.0s						
F10A	Beach Ranch, E	93.74	44	IAMs_20	IAMs_20	01 23 01.3	
	comp=Z,4µm,20.0s						
SHOC	Shoshone, Teco	93.79	54	P	P	00 47 32.8	+0.4
	baz=266						
TPNV	Topopah Spring	93.88	53	IAmb	IAmb	00 47 38.1	
	comp=Z,13nm,1.2s						
TPNV	Topopah Spring	93.88	53	P	P	00 47 33.2	+0.2
	baz=266						
BELC	Belle Mtn. Jos	93.89	56	P	P	00 47 32.8	-0.2
	baz=266						
NEW	Newport	93.95	42	LR	LR	01 22 37.5	
	comp=Z,2µm,21.9s,baz=274,slow=31						
NEW	Newport	93.95	42	IAMs_20	IAMs_20	01 24 18.8	
	comp=Z,3µm,20.0s						
NEW	Newport	93.95	42	P	P	00 47 31.9	-1.0
	baz=266						
GMRC	Granite Mounta	94.22	56	P	P	00 47 34.6	0.0
	baz=266						
BC3	Big Chuckawall	94.32	57	P	P	00 47 35.1	+0.1
	baz=266						
R11A	Troy Canyon, C	94.49	52	IAMs_20	IAMs_20	01 23 35.9	
	comp=Z,4µm,20.0s						
R11A	Troy Canyon, C	94.49	52	P	P	00 47 35.7	0.0
	baz=267						
SHPR	Sheep Range	94.73	54	IAmb	IAmb	00 47 54.7	
	comp=Z,16nm,1.5s						
ELK	Elko	94.89	50	IAMs_20	IAMs_20	01 24 43.1	
	comp=Z,3µm,20.0s						
Y12C	Blythe	95.10	57	IAMs_20	IAMs_20	01 28 39.5	
	comp=Z,2µm,18.0s						
WBK	Wadi Bani Khal	95.62	292	P	P	00 47 40.5	-0.6
	SNR=10.0						
SVE	Sverdlovsk	95.66	326	*de*P	P	00 47 39.1	-1.3
SVE				*e*S	SKSac	00 58 13.6	-1.2
SVE				*e*		01 05 30.7	
SVE				*e*		01 09 06.7	
SVE				pmax	pmax		
	comp=Z,72nm,1.9s						
SVE				MLR	MLR		
	comp=Z,2µm,20.0s						
PSUT	Pine Spring	95.86	52	P	P	00 47 40.8	-1.3
YKA	Yellowknife Ar	95.87	28	P	P	00 47 40.3	-0.9
	comp=Z,3.7nm,0.7s,baz=263,slow=4.4,SNR=54						
YKA				PKiKP	PKiKP	00 52 21.3	+1.0
	comp=Z,0.7nm,0.7s,baz=264,slow=1.3,SNR=6.4						
YKA				LR	LR	01 26 38.6	
	comp=Z,3µm,20.1s,baz=0.0,slow=33						
ABKAR	Akbulak array	95.92	319	P	P	00 47 39.8	-2.0
WSAR	Wadi Sarin	95.97	293	P	P	00 47 41.7	-0.9
	SNR=9.8						
WALA	Waterton Lakes	96.11	41	IAmb	IAmb	00 47 43.2	
	comp=Z,14nm,1.1s						
WALA				IAMs_20	IAMs_20	01 25 28.0	
	comp=Z,2µm,20.0s						
Y14A	Wickenburg	96.37	57	IAMs_20	IAMs_20	01 30 36.1	
	comp=Z,2µm,19.0s						
BIDO	Bidbid	96.44	293	P	P	00 47 44.3	-0.5
	SNR=13						
MHTO	MHTO	96.45	290	P	P	00 47 43.5	-1.3
	SNR=8.3						
214A	Organ Pipe Nat	96.46	59	IAMs_20	IAMs_20	01 31 01.6	
	comp=Z,2µm,18.0s						
SMDO	Samad	96.49	293	P	P	00 47 43.8	-1.3
DUG	Dugway, Tooele	96.72	50	IAMs_20	IAMs_20	01 24 17.6	
	comp=Z,3µm,20.0s						
SRIG	Santa Rosalia	96.77	63	IAMs_20	IAMs_20	01 26 11.0	
	comp=Z,3µm,19.0s						
DQM	DQM	96.80	289	P	P	00 47 45.2	-1.2
ARU	Arti	96.80	326*c*	*i*P	P	00 47 43.7	-1.9
ARU						00 51 37.8	
ARU				S	SKSac	00 58 20.3	-0.5
ARU				SP	SP	01 00 24.8	-1.3
ARU				PS	PS	01 00 35.2	+5.3
ARU				SS	SS	01 05 40.6	-0.6
ARU				pmax	pmax		
	comp=Z,65nm,1.9s						
ARU				MLR	MLR		
	comp=Z,3µm,20.0s						
ARU	Arti	96.80	326	P	P	00 47 43.9	-1.7
ARU				IAMs_20	IAMs_20	01 32 06.4	
	comp=Z,3µm,20.0s						
DLMT	Dillon	96.96	45	IAMs_20	IAMs_20	01 24 35.6	
	comp=Z,3µm,20.0s						
GEYT	Alibeck	97.00	307	P	P	00 47 45.8	-1.2
	comp=Z,4.0nm,0.9s,baz=98,slow=3.0,SNR=9.9						
GEYT				LR	LR	01 32 03.9	
	comp=Z,1µm,21.7s,baz=70,slow=36						
GEYT	Alibeck	97.00	307	P	P	00 47 46.8	-0.3
GYA0B	ALIBECK ARRAY	97.00	307	IAmb	IAmb	00 48 05.3	
	comp=Z,7.8nm,0.9s						
HOQ	Hoqain	97.20	293	P	P	00 47 47.3	-0.9
	SNR=9.0						
BSY	Bisya	97.26	292	P	P	00 47 47.1	-1.4
	SNR=5.2						
HWUT	Hardware Ranch	97.68	49	IAMs_20	IAMs_20	01 27 33.0	
	comp=Z,2µm,19.0s						
X16A	Lo Mia Camp, P	97.68	56	IAMs_20	IAMs_20	01 31 36.8	
	comp=Z,2µm,18.0s						
ARQ	Araqi	97.91	293	P	P	00 47 50.7	-0.7
	SNR=6.0						
SOHO	SOHO	97.93	294	P	P	00 47 50.2	-1.2
	SNR=6.4						
HSIG		97.97	62	IAMs_20	IAMs_20	01 25 54.7	
	comp=Z,3µm,19.0s						
FXWY	Fox Creek	98.08	47	IAMs_20	IAMs_20	01 24 47.4	
	comp=Z,3µm,22.0s						
TPAW	Teton Pass	98.14	47	IAMs_20	IAMs_20	01 24 36.4	
	comp=Z,4µm,22.0s						
IMW	Indian Meadow	98.14	47	IAMs_20	IAMs_20	01 24 39.0	
	comp=Z,2µm,21.0s						
TUC	Tucson	98.19	58	IAMs_20	IAMs_20	01 29 31.4	
	comp=Z,2µm,19.0s						
BANOM	Banah	98.21	295	*i* P	P	00 47 51.6	-1.1
	SNR=15						
BANOM	Banah	98.21	295	P	P	00 47 51.9	-0.8
	SNR=7.1						
UOSS	Minazif	98.26	294	P	P	00 47 51.1	-1.8
UOSS	Minazif	98.26	294	P	P	00 47 50.9	-2.0
UOSS	Minazif	98.26	294	P	P	00 47 52.0	-0.9
FLWY	Flagg Ranch	98.31	46	IAMs_20	IAMs_20	01 33 43.0	
	comp=Z,2µm,18.0s						
MSFE	Esma-Masafi	98.32	295	*i* Pdiff	P	00 47 52.1	-1.1
	SNR=5.9						
HATD	Hatta, Dubai	98.32	294	Pdiff	P	00 47 51.6	-1.6
SHME	Shamm	98.36	295	Pdiff	P	00 47 52.3	-1.1
EGMT	Eagleton	98.88	42	IAMs_20	IAMs_20	01 29 01.4	
	comp=Z,3µm,19.0s						
EGMT	Eagleton	98.88	42	P	P	00 47 54.6	-0.7
	baz=272						
X18A	Snowflake	98.92	56	IAMs_20	IAMs_20	01 35 32.9	
	comp=Z,2µm,18.0s						
W18A	Petrified Fore	99.10	55	IAMs_20	IAMs_20	01 33 28.1	
	comp=Z,2µm,19.0s						
PDAR	Pinedale Array	99.16	48	P	Pdif	00 47 55.6	-1.2
	comp=Z,0.6nm,0.7s,baz=251,slow=2.4,SNR=7.7						
PDAR				PP	PP	00 52 01.6	+2.1
	comp=Z,0.6nm,0.8s,baz=265,slow=2.5,SNR=4.1						
PDAR				LR	LR	01 29 45.6	
	comp=Z,4µm,18.5s,baz=277,slow=34						
PDAR	Pinedale Array	99.16	48	P	Pdif	00 47 55.5	-1.4
RLMT	Red Lodge	99.31	45	IAMs_20	IAMs_20	01 26 31.9	
	comp=Z,3µm,20.0s						
319A	Douglas	99.46	59	IAMs_20	IAMs_20	01 26 35.0	
	comp=Z,2µm,20.0s						
PV05	Paradox Valley	99.59	52	IAMs_20	IAMs_20	01 26 26.7	
	comp=Z,4µm,20.0s						
NVL	N'lazarevskaya	99.74	192	*e*P	Pdif	00 47 57.3	-1.3
NVL				*e*		00 52 01.6	
NVL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
PV13	Radium Mtn., P	99.81	52	IAMs_20	IAMs_20	01 26 50.8	
	comp=Z,4µm,20.0s						
O20A	White River Ci	100.22	50	IAMs_20	IAMs_20	01 27 24.3	
	comp=Z,3µm,20.0s						
121A	Cookes Peak, D	100.73	58	IAMs_20	IAMs_20	01 30 36.5	
	comp=Z,2µm,18.0s						
SMCO	Snowmass	101.23	51	IAMs_20	IAMs_20	01 28 37.2	
	comp=Z,3µm,19.0s						
S22A	4UR Ranch, Cre	101.40	53	IAMs_20	IAMs_20	01 27 42.7	
	comp=Z,3µm,21.0s						
K22A	Casper	101.40	48	IAMs_20	IAMs_20	01 28 33.0	
	comp=Z,3µm,20.0s						
Y22D	IRIS PASSCAL I	101.43	56	IAMs_20	IAMs_20	01 30 58.9	
	comp=Z,2µm,19.0s						
SNAA	Sanae	101.50	188	IAMs_20	IAMs_20	01 33 14.2	
	comp=Z,2µm,19.0s						
EPT	El Paso	101.82	59	IAMs_20	IAMs_20	01 32 06.6	
	comp=Z,2µm,18.0s						
N23A	Red Feather La	101.94	49	IAMs_20	IAMs_20	01 29 34.2	
	comp=Z,2µm,20.0s						
ISCO	Idaho Springs	102.25	51	IAMs_20	IAMs_20	01 30 49.2	
	comp=Z,2µm,20.0s						
PHWY	Pilot Hill	102.28	49	IAMs_20	IAMs_20	01 32 21.2	
	comp=Z,2µm,19.0s						
SDCO	Great Sand Dun	102.45	53	IAMs_20	IAMs_20	01 34 42.1	
	comp=Z,2µm,19.0s						
DGMT	Dagmar	102.56	42	IAMs_20	IAMs_20	01 30 10.0	
	comp=Z,2µm,20.0s						
HPIG		102.62	64	IAMs_20	IAMs_20	01 34 17.0	
	comp=Z,3µm,18.0s						
Q24A	Divide	102.66	51	IAMs_20	IAMs_20	01 29 06.5	
	comp=Z,3µm,20.0s						
MNTX	Cornudas Mount	102.78	59	IAMs_20	IAMs_20	01 32 38.0	
	comp=Z,2µm,18.0s						
PRGR	Permogore	102.84	332	*e*P	Pdif	00 48 08.9	-3.5
PRGR				pmax	pmax		
	comp=Z,28nm,1.0s						
FFC	Flin Flon	103.08	35	IAMs_20	IAMs_20	01 31 46.3	
	comp=Z,2µm,21.0s						
T25A	Trinidad	103.35	53	IAMs_20	IAMs_20	01 30 22.4	
	comp=Z,3µm,20.0s						
T25A	Trinidad	103.35	53	P	Pdif	00 48 14.5	-1.1
	baz=273						
KBS	Kingsbay	103.90	353	IAMs_20	IAMs_20	01 44 45.7	
	comp=Z,2µm,19.0s						
TXAR	Lajitas Array	104.33	61	PKiKP	PKiKP	00 52 36.1	-0.5
	comp=Z,0.3nm,0.8s,baz=260,slow=2.3,SNR=4.7						
KSCO	Kaye Shedlock'	104.61	51	IAMs_20	IAMs_20	01 28 47.8	
	comp=Z,4µm,22.0s						
MSTX	Muleshoe	104.88	56	IAMs_20	IAMs_20	01 32 48.6	
	comp=Z,2µm,18.0s						
TMCR	Tamitsa	105.45	336	*e*P	Pdif	00 48 22.0	-2.0
TMCR				pmax	pmax		
	comp=Z,22nm,1.0s						
MDND	Maddock	105.69	42	IAMs_20	IAMs_20	01 33 35.8	
	comp=Z,3µm,20.0s						
AMTX	Amarillo	105.71	55	IAMs_20	IAMs_20	01 31 49.2	
	comp=Z,2µm,20.0s						
APA	Apatity	105.87	340	⇓*i*P	Pdif	00 48 25.6	-0.2
APA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KLMR	Klimovskoe	105.89	332	*e*P	Pdif	00 48 20.5	-5.5
KLMR						00 58 59.9	
KLMR				PS	PS	01 02 03.2	-3.3
KLMR				SP	SP	01 02 03.6	+1.2
KLMR				pmax	pmax		
	comp=Z,56nm,1.7s						
KLMR	Klimovskoe	105.89	332	*e*Pdif	Pdif	00 48 20.5	-5.5
KLMR				AMP		00 48 26.6	
	comp=Z,56nm,1.7s						
KLMR				SKiKP	SKiKP	00 56 09.8	-2.3
KLMR				SKSac	SKSac	00 58 59.9	-4.4
KLMR				SKSac	SKSac	00 58 59.9	-4.4
KLMR				PS	PS	01 02 03.2	-3.3
KLMR				PS	PS	01 02 03.2	-3.3
KLMR				SP	SP	01 02 03.6	+1.2
KLMR				PKKPab	PKKPab	01 04 23.0	+4.8
KLMR				SKKPbc	SKKPbc	01 07 44.9	-0.8
KLMR				LQ	LQ	01 25 50.8	
KLMR				LQ	LQ	01 25 50.8	
KLMR				LR	LR	01 29 07.4	
KLMR				AMP		01 40 31.2	
	comp=Z,1µm,16.7s						
ABTX	Abilene, Hawle	107.59	58	IAMs_20	IAMs_20	01 40 42.6	
	comp=Z,2µm,18.0s						
ULM	Lac du Bonnet	107.62	39	IAMs_20	IAMs_20	01 33 25.6	
	comp=Z,2µm,20.0s						
R32A	Long Quarter,	107.72	51	IAMs_20	IAMs_20	01 32 07.6	
	comp=Z,3µm,20.0s						
BGNE	Belgrade	107.73	48	IAMs_20	IAMs_20	01 36 34.6	
	comp=Z,2µm,19.0s						
U32A	Winter Ranch,	107.74	54	IAMs_20	IAMs_20	01 38 26.3	
	comp=Z,2µm,19.0s						
AKH	Akhalkalaki	108.03	312	⇑P	PKiKP	00 52 42.8	-0.4
AGMN	Agassiz Nation	108.06	41	IAMs_20	IAMs_20	01 37 22.6	
	comp=Z,3µm,19.0s						
WMOK	Wichita Mounta	108.10	55	IAMs_20	IAMs_20	01 40 09.9	
	comp=Z,2µm,19.0s						
833A	Chaparral WMA,	108.13	62	IAMs_20	IAMs_20	01 35 17.9	
	comp=Z,3µm,19.0s						
N33A	J Bar K, Exete	108.36	49	IAMs_20	IAMs_20	01 32 19.8	
	comp=Z,3µm,20.0s						
MOS	Moscow	108.45	327	*e*P	Pdif	00 48 33.9	-3.6
MOS				*e*		00 53 06.0	
MOS				pmax	pmax		
	comp=Z,56nm,2.0s						
MOS				MLR	MLR		
	comp=E,2µm,20.0s						
MOS				MLR	MLR		
	comp=Z,2µm,20.0s						
MOS				MLR	MLR		
	comp=N,900nm,21.0s						
ECSD	EROS Data Cent	108.47	46	IAMs_20	IAMs_20	01 34 30.7	
	comp=Z,3µm,19.0s						
X34A	Smith Ranch, M	108.89	55	IAMs_20	IAMs_20	01 36 47.9	
	comp=Z,2µm,18.0s						
OBN	Obninsk	109.22	327	IAMs_20	IAMs_20	01 39 15.6	
	comp=Z,2µm,20.0s						
TLIG	Tlapa	109.28	73	IAMs_20	IAMs_20	01 37 16.4	
	comp=Z,2µm,18.0s						
735A	Kenedy	109.48	61	IAMs_20	IAMs_20	01 33 55.6	
	comp=Z,2µm,19.0s						
WHTX	Lake Whitney,	109.49	58	IAMs_20	IAMs_20	01 36 42.1	
	comp=Z,2µm,19.0s						
435B	Jarrell	109.50	59	IAMs_20	IAMs_20	01 31 50.0	
	comp=Z,3µm,20.0s						
KVTX	Kingsville	109.51	63	IAMs_20	IAMs_20	01 38 41.8	
	comp=Z,2µm,20.0s						
Z35A	Perchaven, San	109.52	57	IAMs_20	IAMs_20	01 35 52.6	
	comp=Z,2µm,20.0s						
T35A	Sooner Cattle	109.66	53	IAMs_20	IAMs_20	01 42 06.9	
	comp=Z,2µm,18.0s						
TUL1	Leonard	110.38	54	IAMs_20	IAMs_20	01 36 00.1	
	comp=Z,2µm,20.0s						
SPMN	Marine on St.	110.82	44	IAMs_20	IAMs_20	01 32 45.7	
	comp=Z,3µm,21.0s						
237A	Washetta, Mont	110.88	58	IAMs_20	IAMs_20	01 37 15.9	
	comp=Z,2µm,19.0s						
EYMN	Ely	110.99	40	IAMs_20	IAMs_20	01 39 45.9	
	comp=Z,3µm,19.0s						
SCIA	State Center	111.28	47	IAMs_20	IAMs_20	01 37 08.3	
	comp=Z,3µm,20.0s						
E38A	The Farm, Brul	111.31	42	IAMs_20	IAMs_20	01 34 32.6	
	comp=Z,3µm,21.0s						
U38A	Gravette	111.42	53	IAMs_20	IAMs_20	01 41 49.6	
	comp=Z,2µm,18.0s						
P38A	Dawn	111.51	50	IAMs_20	IAMs_20	01 34 18.7	
	comp=Z,3µm,20.0s						
FINES	FINESS Array B	111.57	336	Pdiff	Pdif	00 48 50.3	-1.0
	comp=Z,2.3nm,0.8s,baz=90,slow=8.2,SNR=7.4						
FINES				PKiKP	PKiKP	00 52 49.1	+0.1
	comp=Z,1.9nm,0.7s,baz=104,slow=8.0,SNR=4.0						
HHAR	Hobbs	111.80	53	IAMs_20	IAMs_20	01 42 10.7	
	comp=Z,2µm,18.0s						
NATX	Nacogdoches	111.88	58	IAMs_20	IAMs_20	01 38 16.3	
	comp=Z,3µm,19.0s						
W39A	Magazine	112.11	54	IAMs_20	IAMs_20	01 37 00.9	
	comp=Z,2µm,19.0s						
MIAR	Mount Ida	112.38	55	IAMs_20	IAMs_20	01 35 13.2	
	comp=Z,1µm,20.0s						
U40A	Yellville	112.65	53	IAMs_20	IAMs_20	01 43 20.2	
	comp=Z,2µm,18.0s						
U40A	Yellville	112.65	53	P	PKiKP	00 52 51.9	0.0
	baz=280						
L40A	Anamosa	112.69	47	IAMs_20	IAMs_20	01 39 26.9	
	comp=Z,2µm,19.0s						
WLAR	White Oak Lake	112.89	56	IAMs_20	IAMs_20	01 45 13.0	
	comp=Z,1µm,18.0s						
X40A	Basin Creek Fa	112.99	55	IAMs_20	IAMs_20	01 43 49.4	
	comp=Z,2µm,18.0s						
D41A	Chassel	113.14	41	IAMs_20	IAMs_20	01 44 20.0	
	comp=Z,2µm,20.0s						
JFWS	Jewell Farm	113.18	45	IAMs_20	IAMs_20	01 38 04.3	
	comp=Z,2µm,19.0s						
Z41A	Richland Creek	113.22	56	IAMs_20	IAMs_20	01 38 21.9	
	comp=Z,2µm,20.0s						
WHAR	Wooly Hollow	113.30	54	IAMs_20	IAMs_20	01 38 51.4	
	comp=Z,2µm,20.0s						
UALR	University of	113.34	54	IAMs_20	IAMs_20	01 40 43.4	
	comp=Z,2µm,18.0s						
W41B	Gary Mavity, V	113.35	54	IAMs_20	IAMs_20	01 39 11.1	
	comp=Z,2µm,19.0s						
CCM	Cathedral Cave	113.58	51	IAMs_20	IAMs_20	01 42 21.5	
	comp=Z,2µm,18.0s						
342A	Flagon Creek P	113.91	58	IAMs_20	IAMs_20	01 40 43.4	
	comp=Z,2µm,18.0s						
LCAR	Lake Charles	114.06	53	IAMs_20	IAMs_20	01 34 56.4	
	comp=Z,1µm,20.0s						
E43A	Lone Tree Farm	114.39	41	IAMs_20	IAMs_20	01 39 10.9	
	comp=Z,3µm,19.0s						
H43A	Windswept, Lux	114.47	43	IAMs_20	IAMs_20	01 34 48.6	
	comp=Z,3µm,21.0s						
143A	Socs Landing,	114.47	57	IAMs_20	IAMs_20	01 43 26.0	
	comp=Z,2µm,18.0s						
HDIL	Hopedale	114.47	48	IAMs_20	IAMs_20	01 43 56.1	
	comp=Z,3µm,18.0s						
P43A	Skaggs, Pawnee	114.53	49	IAMs_20	IAMs_20	01 37 44.5	
	comp=Z,2µm,20.0s						
HBAR	Harrisburg	114.55	53	IAMs_20	IAMs_20	01 46 58.9	
	comp=Z,2µm,19.0s						
K43A	Burlington	114.59	45	IAMs_20	IAMs_20	01 43 21.7	
	comp=Z,3µm,19.0s						
LPAR	Lepanto	114.83	53	IAMs_20	IAMs_20	01 41 47.2	
	comp=Z,2µm,19.0s						
AKASG	Malin Array Be	114.97	324	PKP	PKiKP	00 52 55.1	-0.8
	comp=Z,1.5nm,0.5s,baz=58,slow=2.4,SNR=11						
AKASG	Malin Array Be	114.97	324	*i* PKIKP	PKiKP	00 52 55.6	-0.3
AKASG	Malin Array Be	114.97	324		PKiKP	00 52 55.5	-0.3
AKBB	Malin Array Si	114.97	324	⇓*i*PKIKP	PKiKP	00 52 55.6	-0.2
GNAR	Gosnell	114.98	53	IAMs_20	IAMs_20	01 36 16.1	
	comp=Z,2µm,19.0s						
E44A	Grand Marais A	115.00	41	IAMs_20	IAMs_20	01 40 26.5	
	comp=Z,3µm,20.0s						
PARMO	Parma	115.04	52	IAMs_20	IAMs_20	01 36 34.6	
	comp=Z,3µm,20.0s						
PEBM	Pemiscott Bayo	115.07	53	IAMs_20	IAMs_20	01 36 48.5	
	comp=Z,2µm,20.0s						
Q44A	Meyer Farm, Va	115.09	49	IAMs_20	IAMs_20	01 39 19.3	
	comp=Z,3µm,20.0s						
S44A	Carbondale	115.19	51	IAMs_20	IAMs_20	01 34 11.3	
	comp=Z,3µm,22.0s						
MET	Memphis--Engin	115.22	54	IAMs_20	IAMs_20	01 39 07.6	
	comp=Z,1µm,20.0s						
344A	Westbrook Farm	115.24	58	IAMs_20	IAMs_20	01 45 13.3	
	comp=Z,2µm,18.0s						
HENM	Henderson Moun	115.25	52	IAMs_20	IAMs_20	01 37 11.1	
	comp=Z,3µm,20.0s						
VBMS	Vicksburg	115.29	57	IAMs_20	IAMs_20	01 41 29.8	
	comp=Z,2µm,20.0s						
LNXT	Lenox	115.37	53	IAMs_20	IAMs_20	01 36 16.4	
	comp=Z,3µm,20.0s						
HICK	Hickman	115.48	52	IAMs_20	IAMs_20	01 36 47.9	
	comp=Z,3µm,21.0s						
HALT	Halls	115.53	53	IAMs_20	IAMs_20	01 36 54.3	
	comp=Z,2µm,20.0s						
BR131	Keskin Array S	115.71	312	⇑*i*PKIKP	PKiKP	00 52 57.6	-0.2
BRTR	Keskin Array B	115.71	312	PKP	PKiKP	00 52 56.8	-1.1
	comp=Z,2.5nm,1.1s,baz=64,slow=2.9,SNR=11						
BRTR				PP	PP	00 53 59.9	-0.8
	comp=Z,0.8nm,0.7s,baz=101,slow=6.4,SNR=3.7						
BRTR				PKKPbc	PKKPbc	01 03 31.8	+0.6
	comp=Z,0.7nm,0.7s,baz=186,slow=2.6,SNR=6.2						
OXF	Oxford	115.77	54	IAMs_20	IAMs_20	01 41 41.8	
	comp=Z,2µm,18.0s						
W45A	Hickory Valley	115.81	54	IAMs_20	IAMs_20	01 40 38.9	
	comp=Z,2µm,19.0s						
T45A	Paducah	115.82	51	IAMs_20	IAMs_20	01 41 22.0	
	comp=Z,2µm,18.0s						
OLIL	Olney	115.82	49	IAMs_20	IAMs_20	01 39 51.5	
	comp=Z,2µm,20.0s						
SFIN	Lafayette	116.13	47	IAMs_20	IAMs_20	01 39 57.8	
	comp=Z,2µm,19.0s						
E46A	Sault Ste Mari	116.14	40	IAMs_20	IAMs_20	01 44 43.2	
	comp=Z,3µm,19.0s						
346A	Big Creek Wild	116.32	58	IAMs_20	IAMs_20	01 41 16.8	

	comp=Z,2µm,20.0s						
D47A	Chapleau	116.65	39	P	PKiKP	00 52 59.5	+0.2
	baz=293						
KIS	Kishinev	116.68	321	*e*	PP	00 54 04.0	-2.9
KIS				*e*L	L	01 34 50.0	
KIS				LRM	MLR	01 43 06.0	
	comp=Z,2µm,22.0s						
PLAL	Pickwick Lake	116.74	53	IAMs_20	IAMs_20	01 41 16.5	
	comp=Z,2µm,19.0s						
SUW	Suwalki	116.74	329	IAMs_20	IAMs_20	01 47 45.2	
	comp=Z,2µm,20.0s						
I47A	Gladwin	116.83	43	IAMs_20	IAMs_20	01 35 59.7	
	comp=Z,3µm,21.0s						
BLO	Bloomington	116.89	49	IAMs_20	IAMs_20	01 38 48.0	
	comp=Z,2µm,20.0s						
N47A	Urbana	117.01	47	IAMs_20	IAMs_20	01 41 57.9	
	comp=Z,3µm,19.0s						
T47A	Sharon Grove	117.03	51	IAMs_20	IAMs_20	01 35 15.8	
	comp=Z,2µm,22.0s						
MDUB	Mudurnu	117.30	313	IAMs_20	IAMs_20	01 47 07.1	
	comp=Z,2µm,21.0s						
WCI	Wyandotte Cave	117.32	50	IAMs_20	IAMs_20	01 39 13.7	
	comp=Z,2µm,20.0s						
D48A	Paudash Townsh	117.42	39	P	PKiKP	00 53 01.4	+0.7
	baz=294						
F48A	Evansville	117.43	40	P	PKPdf	00 53 00.5	-0.3
	baz=292						
NB2	NORSAR Subarra	117.44	340	PKPdf	PKiKP	00 53 00.4	0.0
	comp=Z,4.7nm,1.1s,baz=44,slow=1.9						
NOA	NORSAR Array B	117.44	340	PKP	PKPdf	00 53 00.3	-0.1
	comp=Z,1.4nm,0.7s,baz=45,slow=1.8,SNR=7.0						
E48A	Lockeyer	117.47	40	P	PKiKP	00 53 01.4	+0.5
	baz=293						
N48A	Decatur	117.50	46	P	PKiKP	00 53 01.1	+0.1
	baz=288						
L48A	N Adams	117.58	45	P	PKiKP	00 53 01.2	0.0
	baz=289						
X48A	Hartselle	117.69	54	IAMs_20	IAMs_20	01 38 46.6	
	comp=Z,2µm,20.0s						
CFR	Carcaliu	117.82	319	⇓P	PKiKP	00 53 01.7	+0.2
CFR	Carcaliu	117.82	319	⇓PKIKP	PKiKP	00 53 01.7	+0.2
F49A	Sandfield	117.83	40	P	PKiKP	00 53 02.0	+0.5
	baz=293						
CLTN	Cedars of Leba	117.86	52	IAMs_20	IAMs_20	01 43 54.9	
	comp=Z,2µm,18.0s						
TIRR	Tirgusor	117.90	318	IAMs_20	IAMs_20	01 47 29.6	
	comp=Z,3µm,21.0s						
J49A	Marlette	117.99	43	P	PKiKP	00 53 03.0	+1.0
	baz=291						
ORH	Orhaniye	117.99	314	P	PKiKP	00 53 10.3	+8.3
I49A	Point Hope	118.00	43	IAMs_20	IAMs_20	01 42 41.6	
	comp=Z,2µm,19.0s						
LRAL	Lakeview Retre	118.04	55	IAMs_20	IAMs_20	01 42 32.2	
	comp=Z,2µm,20.0s						
LRAL	Lakeview Retre	118.04	55	P	PKPdf	00 53 01.9	-0.4
	baz=283						
N49A	Columbus Grove	118.08	46	IAMs_20	IAMs_20	01 43 45.3	
	comp=Z,3µm,19.0s						
N49A	Columbus Grove	118.08	46	P	PKiKP	00 53 02.7	+0.6
	baz=289						
P49A	Miami Univ. Ec	118.13	48	P	PKPdf	00 53 02.2	0.0
	baz=288						
R49A	Shelbyville	118.16	49	IAMs_20	IAMs_20	01 45 23.5	
	comp=Z,2µm,19.0s						
U49A	Red Boiling Sp	118.18	51	IAMs_20	IAMs_20	01 52 14.3	
	comp=Z,2µm,19.0s						
O49A	Covington	118.21	47	IAMs_20	IAMs_20	01 42 32.6	
	comp=Z,2µm,20.0s						
O49A	Covington	118.21	47	P	PKiKP	00 53 02.6	+0.2
	baz=288						
SNET	Serv Nac Est T	118.34	77	IAMs_20	IAMs_20	01 35 05.6	
	comp=Z,1µm,20.0s						
BIZ	Bicaz	118.41	321	⇓P	PKiKP	00 53 03.2	+0.6
BURAR	Bucovina Array	118.66	322	⇑P	PKiKP	00 53 04.3	+1.0
BURAR	Bucovina Array	118.66	322	⇑PKIKP	PKiKP	00 53 04.3	+1.0
BURAR	Bucovina Array	118.66	322		PKiKP	00 53 03.5	+0.3
M50A	Fremont	118.74	45	IAMs_20	IAMs_20	01 42 19.5	
	comp=Z,3µm,20.0s						
T50A	Nancy	118.77	51	P	PKiKP	00 53 03.6	0.0
	baz=286						
FPAL	Fort Paine	118.81	53	IAMs_20	IAMs_20	01 42 17.4	
	comp=Z,2µm,19.0s						
Z50A	Ashland	118.87	55	P	PKPdf	00 53 03.9	0.0
	baz=284						
250A	Grady	118.87	56	IAMs_20	IAMs_20	01 41 02.3	
	comp=Z,2µm,20.0s						
TEIG	Tepich	118.89	70	IAMs_20	IAMs_20	01 55 26.0	
	comp=Z,1µm,18.0s						
S50A	Richmond	118.92	50	P	PKiKP	00 53 04.2	+0.3
	baz=287						
D51A	Lot 18 Range I	118.96	38	P	PKiKP	00 53 03.8	+0.1
	baz=296						
OZUR		118.96	321	⇑P	PKiKP	00 53 05.0	+1.2
KONO	Kongsberg	119.01	340	IAMs_20	IAMs_20	01 46 13.6	
	comp=Z,2µm,20.0s						
MLR	Muntele Rosu	119.11	320	⇓P	PKiKP	00 53 05.1	+0.9
MLR	Muntele Rosu	119.11	320	⇓PKIKP	PKiKP	00 53 05.1	+0.9
MLR	Muntele Rosu	119.11	320		PKPdf	00 53 03.5	-0.7
MLR				IAMs_20	IAMs_20	01 45 22.3	
	comp=Z,2µm,22.0s						
NEF	NEVSHA	119.11	317	P	PKiKP	00 53 04.4	+0.3
F51A	Arnstein	119.12	40	P	PKiKP	00 53 04.9	+0.9
	baz=295						
E51A	G1948 Merrick	119.13	39	P	PKiKP	00 53 04.4	+0.3
	baz=296						
ACSO	Alum Creek Sta	119.17	47	IAMs_20	IAMs_20	01 42 30.2	
	comp=Z,2µm,20.0s						
KWP	Kalwaria Pacla	119.20	325	IAMs_20	IAMs_20	01 44 08.0	
	comp=Z,2µm,22.0s						
Q51A	Peebles	119.30	48	IAMs_20	IAMs_20	01 42 33.6	
	comp=Z,2µm,20.0s						
PLCA	Paso Flores	119.31	143	PKP	PKPdf	00 53 04.6	-0.1
	comp=Z,1.7nm,0.8s,baz=263,slow=5.2,SNR=3.6						
PLCA				PKKPbc	PKKPbc	01 03 17.5	-0.9
	comp=Z,2.1nm,0.7s,baz=78,slow=5.2,SNR=6.5						
BOSA	Boshof	119.35	233	PKP	PKPdf	00 53 05.0	-0.2
	comp=Z,2.5nm,1.0s,baz=236,slow=7.3,SNR=2.1						
P51A	Williamsport	119.36	47	IAMs_20	IAMs_20	01 43 39.2	
	comp=Z,2µm,19.0s						
X51A	Calhoun	119.41	53	IAMs_20	IAMs_20	01 39 02.2	
	comp=Z,2µm,20.0s						
CPCT	Cooper Cave	119.44	52	IAMs_20	IAMs_20	01 43 22.9	
	comp=Z,2µm,19.0s						
Z51A	Franklin	119.47	55	IAMs_20	IAMs_20	01 46 40.8	
	comp=Z,2µm,18.0s						
LSQQ	Lebel-sur-Quev	119.48	35	P	PKiKP	00 53 04.8	+0.1
	baz=299						
V51A	Loudon	119.48	52	IAMs_20	IAMs_20	01 43 51.9	
	comp=Z,2µm,19.0s						
S51A	Beattyville	119.54	50	IAMs_20	IAMs_20	01 42 13.6	
	comp=Z,2µm,20.0s						
S51A	Beattyville	119.54	50	P	PKiKP	00 53 05.1	0.0
	baz=288						
F52A	Sundridge	119.55	39	P	PKiKP	00 53 05.1	+0.2
	baz=295						
VLDQ	Val d'Or	119.65	36		PKPdf	00 53 03.9	-1.0
H52A	Wyevale	119.67	41	P	PKiKP	00 53 05.9	+0.8
	baz=294						
VOIR		119.71	320	⇑P	PKPdf	00 53 04.9	-0.4
VOIR		119.71	320	⇑PKIKP	PKPdf	00 53 04.9	-0.4
E52A	Mattawa	119.75	39	P	PKiKP	00 53 05.7	+0.5
	baz=296						
MTUR	Matau	119.79	320	⇑P	PKiKP	00 53 05.9	+0.4
MTUR	Matau	119.79	320	⇑PKIKP	PKiKP	00 53 05.9	+0.4
N52A	McGinn’s Farm,	119.90	46	P	PKiKP	00 53 06.5	+0.8
	baz=291						
TKL	Tuckaleechee C	119.97	52	IAMs_20	IAMs_20	01 44 23.9	
	comp=Z,2µm,20.0s						
D53A	Lac Vacive, Po	119.99	38		PKPdf	00 53 05.5	-0.1
D53A	Lac Vacive, Po	119.99	38	P	PKiKP	00 53 05.9	+0.2
	baz=297						
152A	Waverly Hall	119.99	55	IAMs_20	IAMs_20	01 43 39.8	
	comp=Z,2µm,20.0s						
ARR	Arges	120.00	320	⇑P	PKiKP	00 53 07.0	+1.2
SZH	Strazhica	120.02	318	P	PKPdf	00 53 05.1	-0.7
O52A	Adamsville	120.04	46	IAMs_20	IAMs_20	01 50 31.1	
	comp=Z,2µm,18.0s						
COPA	Copaceanca	120.14	319	⇑P	PKiKP	00 53 06.4	+0.3
ELND	Elena	120.19	317	⇓P	PKiKP	00 53 06.5	+0.3
TGUH	Tegucigalpa,Un	120.23	77	IAMs_20	IAMs_20	01 39 45.7	
	comp=Z,1µm,18.0s						
Y52A	Lilburn	120.23	54	P	PKiKP	00 53 07.7	+1.1
	baz=285						
ALGO	Algonquin Park	120.28	39	P	PKiKP	00 53 06.6	+0.3
	baz=297						
G53A	Haliburton	120.28	40	P	PKiKP	00 53 06.9	+0.6
	baz=296						
E53A	Dumoine, Ponti	120.33	38	P	PKiKP	00 53 06.7	+0.2
	baz=297						
G54A	Lake Saint Pet	120.50	39	P	PKiKP	00 53 06.8	0.0
	baz=296						
N53A	Lisbon	120.51	45	P	PKiKP	00 53 07.2	+0.2
	baz=291						
T53A	Wise	120.54	50	P	PKPdf	00 53 07.1	0.0
	baz=288						
H53A	Bobcaygeon	120.55	40	P	PKiKP	00 53 07.3	+0.4
	baz=295						
DRGR		120.56	322	⇓P	PKiKP	00 53 06.9	0.0
DRGR		120.56	322	⇓PKIKP	PKiKP	00 53 06.9	0.0
P53A	Whipple	120.58	47	IAMs_20	IAMs_20	01 43 41.4	
	comp=Z,2µm,20.0s						
D54A	Lac Fusel, La	120.58	37	P	PKiKP	00 53 06.9	0.0
	baz=298						
E54A	Lac Daplat, Po	120.60	38	P	PKiKP	00 53 07.0	+0.1
	baz=298						
VLAD	Vladila	120.73	319	⇑P	PKPdf	00 53 06.9	-0.2
BG3	Lake Jocassee	120.82	52	IAMs_20	IAMs_20	01 40 33.4	
	comp=Z,2µm,20.0s						
GOGA	Godfrey	120.82	54	P	PKiKP	00 53 08.5	+0.8
	baz=285						
PLVB	Pleven	120.84	318	⇓P	PKiKP	00 53 07.7	+0.2
ALN	Alexandroupoli	120.84	315	PKIKP	PKPdf	00 53 06.8	-0.7
ALN	Alexandroupoli	120.84	315		PKPdf	00 53 06.8	-0.7
J54A	Appleton	121.06	42	IAMs_20	IAMs_20	01 41 49.4	
	comp=Z,3µm,20.0s						
O54A	Avella	121.06	46	IAMs_20	IAMs_20	01 45 10.0	
	comp=Z,3µm,20.0s						
O54A	Avella	121.06	46	P	PKiKP	00 53 08.7	+0.6
	baz=291						
M54A	Oil Creek Stat	121.07	44	P	PKiKP	00 53 08.5	+0.5
	baz=293						
Q54A	Coxs Mills	121.16	47	P	PKiKP	00 53 08.6	+0.3
	baz=290						
GZR	Gura Zlata	121.16	321	⇓P	PKPdf	00 53 08.0	0.0
GZR	Gura Zlata	121.16	321	⇓PKIKP	PKPdf	00 53 08.0	0.0
DELO	Deloro Mine	121.19	40	IAMs_20	IAMs_20	01 53 21.8	
	comp=Z,2µm,18.0s						
P54A	Burton	121.20	46	P	PKiKP	00 53 09.0	+0.7
	baz=291						
MEDO	Medina	121.22	42	IAMs_20	IAMs_20	01 41 53.9	
	comp=Z,2µm,20.0s						
SCHQ	Schefferville	121.25	26	PKP	PKPdf	00 53 07.0	-0.8
	comp=Z,3.3nm,0.8s,baz=289,slow=2.2,SNR=6.1						
E55A	Montcerf-Lytto	121.28	38	P	PKiKP	00 53 08.5	+0.2
	baz=299						
PLVO	Plevna	121.30	39	IAMs_20	IAMs_20	01 54 45.7	
	comp=Z,2µm,18.0s						
154A	Montrose	121.32	55	IAMs_20	IAMs_20	01 40 01.0	
	comp=Z,2µm,21.0s						
D55A	Sainte-Anne-du	121.35	37	P	PKiKP	00 53 08.9	+0.5
	baz=300						
V54A	Nebo	121.36	51	P	PKiKP	00 53 09.3	+0.5
	baz=288						
X54A	Belton	121.39	53	P	PKiKP	00 53 09.8	+1.0
	baz=287						
G55A	Calabogie	121.43	39	P	PKiKP	00 53 09.1	+0.5
	baz=297						
MPEP	Malo Peshtene	121.44	318	P	PKiKP	00 53 08.8	+0.1
H55A	Tweed	121.45	40	P	PKiKP	00 53 09.6	+1.0
	baz=297						
RZN	Rozhen	121.47	316	P	PKPdf	00 53 08.3	-0.6
PGB	Panagyurishte	121.49	317	P	PKPdf	00 53 08.6	-0.2
LSZ	Lusaka	121.50	249	PKIKP	PKiKP	00 53 10.0	+0.3
LSZ				MLR	MLR		
	comp=Z,700nm,20.0s						
LSZ	Lusaka	121.50	249		PKiKP	00 53 10.0	+0.3
HODGE	Hodges	121.57	53	IAMs_20	IAMs_20	01 40 36.3	
	comp=Z,2µm,20.0s						
OKC	Ostrava-Krasne	121.61	327	*e*PKP	PKiKP	00 53 10.7	+1.9
OKC				AMS	AMS	01 46 30.0	
	comp=Z,1µm,16.9s						
OKC	Ostrava-Krasne	121.61	327	*e*PKIKP	PKiKP	00 53 10.7	+1.9
OKC				MLR	MLR		
	comp=Z,1µm,16.9s						
MCWV	Mont Chateau	121.63	46	IAMs_20	IAMs_20	01 45 11.2	
	comp=Z,1µm,21.0s						
PSZ	Piszkesteto	121.67	325	IAMs_20	IAMs_20	01 51 42.4	
	comp=Z,1µm,20.0s						
Q55A	Buckhannon	121.70	47	P	PKiKP	00 53 09.5	+0.1
	baz=291						
D56A	ZEC Mazanza, M	121.77	36	P	PKiKP	00 53 09.6	+0.4
	baz=300						
BZS	Buzias	121.78	322	⇓P	PKPdf	00 53 09.2	+0.1
BZS	Buzias	121.78	322	⇓PKIKP	PKPdf	00 53 09.2	+0.1
O55A	Ligonier	121.81	45	P	PKiKP	00 53 10.0	+0.5
	baz=292						
U55A	TA2, Sparta	121.83	50	P	PKiKP	00 53 10.1	+0.3
	baz=289						
E56A	St. Veronique	121.85	37	P	PKiKP	00 53 09.4	0.0
	baz=300						
R55A	Marlinton	121.93	48	P	PKiKP	00 53 10.4	+0.5
	baz=291						
VYHS	Vyhne	121.97	326	*e*P	Pdif	00 49 38.9	+1.0
VYHS	Vyhne	121.97	326	*e*PDIFF	Pdif	00 49 38.9	+1.0
MORC	Moravsky Berou	121.97	328	⇓P	PKiKP	00 53 09.8	+0.3
MORC	Moravsky Berou	121.97	328	⇓PKIKP	PKiKP	00 53 09.8	+0.3
MORC	Moravsky Berou	121.97	328	*e*PKP	PKiKP	00 53 09.9	+0.3
MORC	Moravsky Berou	121.97	328	IAMs_20	IAMs_20	01 47 09.1	
	comp=Z,2µm,22.0s						
Y55A	Saluda	121.97	53	P	PKiKP	00 53 10.8	+0.8
	baz=287						
X55A	Gracelyn & Ava	122.00	52	P	PKiKP	00 53 10.6	+0.6
	baz=287						
H56A	Elgin	122.02	40	P	PKiKP	00 53 10.6	+0.9
	baz=297						
KMSC	Kings Mountain	122.03	52	P	PKiKP	00 53 10.4	+0.3
	baz=288						
BLA	Blacksburg	122.07	49	IAMs_20	IAMs_20	01 51 05.1	
	comp=Z,2µm,18.0s						
VTS	Vitosha	122.09	318	⇑P	PKPdf	00 53 10.0	0.0
VTS	Vitosha	122.09	318	P	PKPdf	00 53 09.5	-0.5
VTS	Vitosha	122.09	318	⇑PKIKP	PKPdf	00 53 10.0	0.0
M56A	Emporium	122.10	44	P	PKPdf	00 53 10.0	+0.1
	baz=294						
MDVR	Moldovita	122.11	321	⇓P	PKPdf	00 53 09.8	0.0
MMB	Musomiste	122.19	317	P	PKPdf	00 53 09.0	-1.1
KRLC	Kraliky	122.20	328	*e*PKPDF	PKiKP	00 53 10.3	+0.3
KRLC				AMS	AMS	01 53 10.0	
	comp=Z,2µm,16.9s						
KRLC	Kraliky	122.20	328	*e*PKIKP	PKiKP	00 53 10.3	+0.3
KRLC				MLR	MLR		
	comp=Z,2µm,16.9s						
RUE	Ruedersdorf	122.24	332	*e*PKPdf	PKiKP	00 53 10.3	+0.4
	baz=50,slow=1.9						
CHVC	Chvalec	122.28	329	*e*PKPDF	PKiKP	00 53 10.5	+0.3
CHVC				AMS	AMS	01 50 10.0	
	comp=Z,1µm,18.7s						
DPC	Dobruska-Polom	122.28	329	*e*PKPDF	PKiKP	00 53 10.9	+0.7
DPC				AMS	AMS	01 54 40.0	
	comp=Z,1µm,16.9s						
DPC	Dobruska-Polom	122.28	329	*e*PKIKP	PKiKP	00 53 10.9	+0.7
DPC				MLR	MLR		
	comp=Z,1µm,16.9s						
D57A	Chemin Vers le	122.29	36	P	PKiKP	00 53 10.5	+0.2
	baz=301						
O56A	Blue Knob Stat	122.31	45	P	PKiKP	00 53 11.0	+0.4
	baz=293						
UPC	Upice	122.35	329	AMS	AMS	01 50 10.0	
	comp=Z,1µm,18.3s						
JAVC	Velka Javorina	122.42	327	*e*PKP	PKiKP	00 53 12.0	+1.5
E57A	Chemin Saint G	122.45	37	P	PKiKP	00 53 10.9	+0.3
	baz=300						
X56A	White Oak	122.46	52	P	PKiKP	00 53 11.6	+0.7
	baz=288						
H57A	Richville	122.64	39	P	PKiKP	00 53 11.2	+0.2
	baz=298						
SSPA	Standing Stone	122.64	44		PKPdf	00 53 10.3	-0.6
I57A	Carthage	122.71	40	P	PKiKP	00 53 11.4	+0.2
	baz=298						
J57A	Williamstown	122.73	41	P	PKiKP	00 53 12.4	+1.2
	baz=297						
LATQ	La Tuque	122.74	35	IAMs_20	IAMs_20	01 47 37.4	
	comp=Z,1µm,21.0s						
VRAC	Vranov	122.75	327	⇑P	PKiKP	00 53 11.1	0.0
VRAC	Vranov	122.75	327	⇑PKIKP	PKiKP	00 53 11.1	0.0
VRAC	Vranov	122.75	327	*e*PKP	PKiKP	00 53 11.6	+0.5
BSEG	Bad Segeberg	122.82	335	*e*PKPdf	PKiKP	00 53 11.4	+0.4
	baz=50,slow=1.9						
D58A	Chemin du LacG	122.84	36	P	PKiKP	00 53 11.5	+0.2
	baz=302						
BIRD	Birdtown, Kers	122.86	52	IAMs_20	IAMs_20	01 56 36.5	
	comp=Z,2µm,19.0s						
M57A	Sunshine Farm,	122.88	43	P	PKiKP	00 53 12.1	+0.5
	baz=295						
E58A	La Victoria	122.99	37	P	PKiKP	00 53 12.0	+0.4
	baz=301						
O57A	Amberson	122.99	45	P	PKiKP	00 53 12.3	+0.4
	baz=294						
KRUC	Moravsky	122.99	327	*e*PKP	PKiKP	00 53 11.8	+0.2
P57A	Homestead Farm	123.01	46	IAMs_20	IAMs_20	01 45 47.6	
	comp=Z,2µm,20.0s						
LONY	Lake Ozonia	123.07	39	IAMs_20	IAMs_20	01 54 32.3	
	comp=Z,2µm,19.0s						
LONY	Lake Ozonia	123.07	39	P	PKiKP	00 53 12.2	+0.3
	baz=299						
PVCC	Panska Ves	123.07	330	*e*PKPDF	PKPdf	00 53 11.1	-0.4
PVCC				AMS	AMS	01 50 50.0	
	comp=Z,2µm,19.2s						
PVCC	Panska Ves	123.07	330	*e*PKIKP	PKPdf	00 53 11.1	-0.4
PVCC				MLR	MLR		
	comp=Z,2µm,19.2s						
VAY	Valandovo	123.09	317	*i* P	PKPdf	00 53 10.5	-1.3
G58A	Ormstown	123.14	38	P	PKPdf	00 53 11.4	-0.3
	baz=300						
BRG	Berggiesshubel	123.17	330	*e*PKP	PKiKP	00 53 12.1	+0.3
	comp=Z,70nm,1.8s						
BRG				PP	PP	00 54 42.0	-9.1
BRG				PS	SP	01 04 31.0	-13
BRG				SS	SKKSdf	01 10 26.0	-27
BRG	Berggiesshubel	123.17	330	*e*PKPdf	PKPdf	00 53 11.7	0.0
	baz=50,slow=1.9						
BRG	Berggiesshubel	123.17	330	*e*PKIKP	PKiKP	00 53 12.1	+0.3
BRG				pmax	pmax		
	comp=Z,71nm,1.8s						
BRG				MLR	MLR		
	comp=N,1µm,20.3s						
BRG				MLR	MLR		
	comp=E,832nm,17.2s						
BRG				MLR	MLR		
	comp=Z,2µm,15.4s						
J58A	Remsen	123.22	40	P	PKiKP	00 53 12.2	0.0
	baz=298						
I58A	Old Forge	123.26	40	P	PKPdf	00 53 12.1	0.0
	baz=298						
BINY	Binghamton	123.28	42	IAMs_20	IAMs_20	01 43 58.4	
	comp=Z,2µm,20.0s						
TREC	Trest	123.34	328	*e*PKPDF	PKiKP	00 53 12.4	+0.1
TREC				*e*pPKP	sPKPdf	00 53 22.4	-0.2
TREC				AMS	AMS	01 47 30.0	
	comp=Z,2µm,18.8s						
TREC	Trest	123.34	328	*e*PKIKP	PKiKP	00 53 12.4	+0.1
TREC				*e*		00 53 22.4	
TREC				MLR	MLR		
	comp=Z,2µm,18.8s						
CLL	Collm	123.36	331	*i* PKPdf	PKiKP	00 53 12.4	+0.2
	comp=Z,54nm,1.9s						
CLL				*i*		00 53 27.6	
CLL				*i* PP	PP	00 54 54.4	+2.1
CLL				*e*SKSac	SKSac	01 00 00.0	-12
CLL				*e*SKKSac	SKKSac	01 01 54.0	+4.0
CLL				*e*PS	PS	01 04 56.0	+6.2
CLL				*e*PPS	PPS	01 06 17.0	
CLL				*e*SS	SS	01 11 42.0	+5.4
CLL				*e*SSS	SSS	01 16 06.0	
CLL				LmV		01 51 00.0	
	comp=Z,2µm,20.0s						
CLL	Collm	123.36	331	*e*PKPdf	PKiKP	00 53 12.2	0.0
	baz=50,slow=1.9						
CLL				*e*PP	PP	00 54 52.1	-0.3
	baz=47,slow=7.0						
CLL	Collm	123.36	331	*i* PKIKP	PKiKP	00 53 12.4	+0.2
CLL				pmax	pmax		
	comp=Z,54nm,1.9s						
CLL				MLR	MLR		
	comp=Z,2µm,20.0s						
CLL	Collm	123.36	331	IAMs_20	IAMs_20	01 51 27.4	
	comp=Z,2µm,20.0s						
N58A	Sunbury	123.37	44	P	PKiKP	00 53 12.5	-0.1
	baz=295						
HDC	Heredia	123.39	82	IAMs_20	IAMs_20	01 41 50.0	
	comp=Z,1µm,18.0s						
PRU	Pruhonice	123.42	329	*e*PKPDF	PKiKP	00 53 12.6	+0.2
PRU				*e*SP	SP	01 04 43.1	-3.0
PRU				AMS	AMS	01 51 00.0	
	comp=Z,1µm,20.6s						
PRU	Pruhonice	123.42	329	*e*PKIKP	PKiKP	00 53 12.6	+0.2
PRU				*e*		01 04 43.1	
PRU				MLR	MLR		
	comp=Z,1µm,20.6s						
H58A	Gabriels	123.42	39	P	PKiKP	00 53 13.1	+0.5
	baz=299						
PRA	Prague	123.42	329	AMS	AMS	01 50 50.0	
	comp=Z,2µm,18.8s						
FBE	Freiberg	123.43	330	*e*PKPdf	PKiKP	00 53 12.5	+0.2
	baz=50,slow=1.9						
FBE				*e*PP	PP	00 54 53.9	+1.1
	baz=47,slow=7.0						
DIVS	Divibare	123.52	321	*e*P	PKPdf	00 53 11.9	-0.7
O58A	Lewisberry	123.53	45	P	PKiKP	00 53 13.2	+0.3
	baz=294						
SKO	Skopje	123.57	318	*i* P	PKPdf	00 53 12.4	-0.3
T58A	Grand View Acr	123.58	49	P	PKiKP	00 53 13.3	+0.2
	baz=291						
FRNY	Flat Rock	123.58	38	IAMs_20	IAMs_20	01 42 51.8	
	comp=Z,2µm,20.0s						
NCB	Newcomb	123.61	39	IAMs_20	IAMs_20	01 46 57.7	
	comp=Z,1µm,20.0s						
H59A	Cadyville	123.61	38	P	PKiKP	00 53 14.2	+1.3
	baz=300						
HLG	Helgoland	123.65	336	*e*PKPdf	PKiKP	00 53 13.1	+0.4
	baz=50,slow=1.9						
J59A	Piesco	123.67	40	P	PKiKP	00 53 13.4	+0.2
	baz=298						
G59A	Clarenceville	123.70	38	P	PKiKP	00 53 13.7	+0.6
	baz=301						
SDMD	Soldier’s Deli	123.87	45	IAMs_20	IAMs_20	01 47 18.4	
	comp=Z,2µm,20.0s						
ASSE	Asse, Remlinge	123.91	333	*e*PKPdf	PKiKP	00 53 13.4	+0.2
	baz=50,slow=1.9						
NRDL	Niedersach Rie	123.91	334	*e*PKPdf	PKiKP	00 53 13.6	+0.4
	baz=50,slow=1.9						
I59A	Olmsteadville	123.91	39	P	PKiKP	00 53 13.7	+0.2
	baz=299						
CONA	Conrad Observa	123.94	326	*e*PKiKP	PKiKP	00 53 13.9	+0.3
	comp=Z,23nm,1.7s,SNR=9.6						
CBN	Corbin Frederi	123.97	47	IAMs_20	IAMs_20	01 45 21.1	
	comp=Z,2µm,19.0s						
F60A	Warwick	123.98	36	P	PKiKP	00 53 14.2	+0.6
	baz=302						
BBLS	Lazići	124.01	321	*e*P	PKPdf	00 53 12.8	-0.8
NEUB	Neuenburg	124.01	332	*e*PKPdf	PKiKP	00 53 13.5	0.0
	baz=50,slow=1.9						
E60A	Ste Agathe de	124.06	36	P	PKiKP	00 53 14.3	+0.6
	baz=303						
D60A	Saint Jean D’O	124.06	35	P	PKiKP	00 53 13.9	+0.2
	baz=304						
RETH	Rethem/Aller,	124.07	334	*e*PKPdf	PKiKP	00 53 14.0	+0.4
	baz=50,slow=1.9						
RUDO	Rudo	124.15	320	*e*P	PKPdf	00 53 12.9	-0.9
HAPS	Han Pijesak,Bl	124.18	321	*e*P	PKiKP	00 53 15.8	+1.6
TANN	Tannenbergstha	124.19	330	*e*PKPdf	PKiKP	00 53 13.9	-0.1
	baz=50,slow=1.9						
CLZ	Clausthal	124.24	333	*e*PKPdf	PKiKP	00 53 14.2	+0.2
	baz=50,slow=1.9						
CLZ				*e*PP	PP	00 54 59.7	+1.4
	baz=47,slow=7.0						
I60A	Shoreham	124.26	39	P	PKiKP	00 53 14.7	+0.5
	baz=300						
GUNZ	Gunzen	124.29	330	*e*PKPdf	PKiKP	00 53 14.1	0.0
	baz=50,slow=1.9						
PLN	Plauen	124.30	331	*e*PKPdf	PKiKP	00 53 14.2	+0.1
	baz=50,slow=1.9						
NKC	Novy Kostel	124.32	330	*e*PKPDF	PKiKP	00 53 14.5	+0.3
NKC	Novy Kostel	124.32	330	*e*PKIKP	PKiKP	00 53 14.5	+0.3
WERN	Wernitzgruen	124.32	330	*e*PKPdf	PKiKP	00 53 14.3	+0.1
	baz=50,slow=1.9						
WERN				*e*PP	PP	00 55 00.2	+1.3
	baz=47,slow=7.0						
D61A	St Aubert, Com	124.32	34	P	PKPdf	00 53 13.6	-0.4
	baz=305						
U59A	Littleton	124.34	49	IAMs_20	IAMs_20	01 42 00.4	
	comp=Z,3µm,21.0s						
OHR	Ohrid	124.38	317	*i* P	PKPdf	00 53 13.9	-0.5
KHC	Kasperske Hory	124.44	329	*e*PKPDF	PKPdf	00 53 14.3	+0.1
KHC				*e*pPKP	sPKPdf	00 53 24.2	-0.6
KHC				*e*x	x	00 56 10.0	
KHC				*e*x	x	01 04 48.1	
KHC				AMS	AMS	02 00 30.0	
	comp=Z,1µm,18.0s						

KHC	Kasperske Hory	124.44	329c	iPKIKP	PKiKP	00 53 14.4	-0.1
KHC	Kasperske Hory	124.44	329		PKiKP	00 53 14.5	0.0
MOX	Moxa	124.46	331	ePKPdf	PKiKP	00 53 14.5	+0.1
	baz=50,slow=1.9						
MOX				ePP	PP	00 55 01.5	+1.8
	baz=47,slow=7.0						
MOX				eL	L	01 52 34.7	
	comp=Z,1µm,19.8s						
ARSA	Arzberg	124.51	326	ePKiKP	PKiKP	00 53 14.7	0.0
	comp=Z,10nm,1.6s						
F61A	St Evariste	124.54	36	P	PKiKP	00 53 14.8	+0.1
	baz=303						
GEC2	GERESS Array S	124.55	328	ePKPdf	PKPdf	00 53 14.5	0.0
	baz=50,slow=1.9						
GEC2	GERESS Array S	124.55	328	IAMs_20	IAMs_20	01 51 03.4	
	comp=Z,1µm,19.0s						
GERES	GERESS Array B	124.55	328	PKP	PKPdf	00 53 13.7	-0.8
	comp=Z,4.5nm,0.7s,baz=337,slow=6.5,SNR=13						
GERES	GERESS Array B	124.55	328	PKIKP	PKPdf	00 53 14.3	-0.2
GERES	GERESS Array B	124.55	328		PKPdf	00 53 14.3	-0.2
P60A	Greenville	124.55	44	P	PKiKP	00 53 14.9	0.0
	baz=295						
TRY	Troy	124.56	40		PKiKP	00 53 16.0	+1.2
E61A	Lac Etchemin	124.58	35	P	PKiKP	00 53 14.7	-0.1
	baz=304						
GTTG	Gottingen	124.63	333	ePKPdf	PKiKP	00 53 15.0	+0.3
	baz=50,slow=1.9						
MANZ	Manzenberg	124.64	330	ePKPdf	PKiKP	00 53 14.9	0.0
	baz=50,slow=1.9						
ROTZ	Rotzenmuhle	124.73	330	ePKPdf	PKiKP	00 53 15.0	0.0
	baz=50,slow=1.9						
WET	Wettzell	124.79	329	ePKPdf	PKiKP	00 53 15.3	+0.1
	baz=50,slow=1.9						
PDG	Podgorica	124.80	319	⇓P	PKPdf	00 53 14.9	-0.1
PDG	Podgorica	124.80	319	eP	PKPdf	00 53 14.5	-0.5
K61A	Williamstown	124.85	40	P	PKiKP	00 53 15.6	+0.1
	baz=299						
MOA	Molln	124.85	327	ePKiKP	PKPdf	00 53 15.1	+0.1
	comp=Z,8.5nm,1.8s						
I61A	Oroboro, Fairl	124.89	39	P	PKiKP	00 53 15.9	+0.4
	baz=301						
TIR	Tirane	124.90	318	IAMs_20	IAMs_20	01 49 53.9	
	comp=Z,2µm,22.0s						
LBNH	Lisbon	124.91	38	IAMs_20	IAMs_20	01 44 01.9	
	comp=Z,3µm,20.0s						
BLY	Banja Luka	124.93	323	⇓P	PKiKP	00 53 15.7	+0.2
BLY	Banja Luka	124.93	323	eP	PKiKP	00 53 15.4	-0.1
BLY	Banja Luka	124.93	323	IAMs_20	IAMs_20	01 51 31.9	
	comp=Z,2µm,20.0s						
HNH	Hanover	124.96	39	IAMs_20	IAMs_20	01 51 19.3	
	comp=Z,2µm,20.0s						
DRME	Dracevica, Mon	124.96	319	eP	PKPdf	00 53 14.9	-0.4
J61A	Chester	124.97	39	P	PKiKP	00 53 16.7	+1.1
	baz=300						
D62A	Allapoint, All	125.02	34		PKPdf	00 53 15.1	-0.2
D62A	Allapoint, All	125.02	34	P	PKiKP	00 53 15.7	0.0
	baz=306						
BRY	Bratogost	125.03	320	eP	PKPdf	00 53 14.9	-0.7
ZAG	Zagreb	125.05	324	eP	PKiKP	00 53 15.8	+0.1
IBBN	Ibbenburen	125.07	335	ePKPdf	PKiKP	00 53 15.7	+0.2
	baz=50,slow=1.9						
UBBA	Unterbreizbach	125.10	332	ePKPdf	PKiKP	00 53 15.8	+0.3
	baz=50,slow=1.9						
UBBA				ePP	PP	00 55 03.6	-0.3
	baz=47,slow=7.0						
SOKA	Soboth	125.12	326	ePKiKP	PKPdf	00 53 15.2	-0.4
	comp=Z,23nm,1.7s,SNR=16						
H62A	Milan	125.20	37	IAMs_20	IAMs_20	01 45 33.6	
	comp=Z,2µm,20.0s						
GRA1	Grafenberg Arr	125.27	330	IAMs_20	IAMs_20	01 53 23.1	
	comp=Z,2µm,20.0s						
GRF	Grafenberg Arr	125.27	330	ePKPdf	PKiKP	00 53 16.1	0.0
	baz=50,slow=1.9						
GRF				ePP	PP	00 55 07.2	+2.0
	baz=47,slow=7.0						
GRF				eL	L	01 53 13.7	
	comp=Z,2µm,19.7s						
GO04	Tololo Observa	125.27	133	PKPdf	PKPdf	00 53 15.2	-1.4
HCY	Herceg Novi	125.28	320	eP	PKPdf	00 53 15.5	-0.5
CRES	Cresnjev	125.36	325	eP	PKPdf	00 53 15.6	-0.4
I62A	Tamworth	125.46	38	IAMs_20	IAMs_20	01 43 48.7	
	comp=Z,2µm,20.0s						
FFD	Franklin Falls	125.47	39	IAMs_20	IAMs_20	01 45 55.9	
	comp=Z,2µm,20.0s						
OBKA	Obir	125.49	326	ePKiKP	PKiKP	00 53 16.7	0.0
	comp=Z,10nm,1.4s						
STON	Ston	125.58	320	eP	PKPdf	00 53 15.5	-1.0
BOJS	Bojanci	125.66	324	ePKPdf	PKPdf	00 53 16.2	-0.3
RJOB	Jochberg	125.71	328	ePKPdf	PKPdf	00 53 16.4	-0.3
	baz=50,slow=1.9						
E63A	Oxbow	125.76	34	P	PKiKP	00 53 17.4	+0.3
	baz=306						
LJU	Ljubljana	125.77	325	ePKPdf	PKPdf	00 53 15.5	-1.3
LJU	Ljubljana	125.77	325	eP	PKPdf	00 53 16.6	-0.2
F63A	Nahmakanta, Br	125.79	35	IAMs_20	IAMs_20	01 51 03.1	
	comp=Z,2µm,20.0s						
F63A	Nahmakanta, Br	125.79	35	P	PKiKP	00 53 17.8	+0.6
	baz=305						
KBA	Koelnbreinsper	125.82	327	ePKiKP	PKPdf	00 53 16.6	-0.5
	comp=Z,10nm,1.2s						
G63A	Kingsbury	125.82	36	P	PKiKP	00 53 18.0	+0.7
	baz=304						
I63A	Otisfield	125.83	38	P	PKiKP	00 53 17.6	+0.3
	baz=302						
PQI	Presque Isle	125.84	34	IAMs_20	IAMs_20	01 46 01.0	
	comp=Z,2µm,20.0s						
BUG	Bochum--Univer	125.90	334	ePKPdf	PKiKP	00 53 17.0	-0.2
	baz=50,slow=1.9						
MYKA	Terra Mystica	125.92	326	ePKiKP	PKPdf	00 53 17.1	0.0
	comp=Z,8.5nm,1.1s						
PKME	Peaks-Kenny Pk	125.93	36	P	PKiKP	00 53 17.6	+0.2
	baz=304						
K63A	Dunstable	125.95	40	P	PKiKP	00 53 18.9	+1.3
	baz=301						
CEY	Cerknica	126.00	325	eP	PKPdf	00 53 16.9	-0.4
CADS	Cadrg	126.11	326	i PKPdf	PKPdf	00 53 16.6	-0.8
F64A	Sherman	126.13	35	IAMs_20	IAMs_20	01 44 21.0	
	comp=Z,2µm,20.0s						
FUR	Furstenfeldbru	126.23	329	ePKPdf	PKiKP	00 53 17.9	-0.1
	baz=50,slow=1.9						
TNS	Taunus Mts	126.23	332	ePKPdf	PKiKP	00 53 17.9	-0.1
	baz=50,slow=1.9						
G64A	Maxfield	126.25	36	P	PKiKP	00 53 19.1	+0.9
	baz=305						
L63A	North Scituate	126.31	41	P	PKPdf	00 53 18.0	+0.1
	baz=300						
H64A	Troy	126.32	36	P	PKiKP	00 53 18.6	+0.3
	baz=304						
ABTA	Abfaltersbach	126.47	327	ePKiKP	PKPdf	00 53 18.0	-0.2
	comp=Z,30nm,1.8s,SNR=12						
I64A	Boothbay	126.47	37	P	PKiKP	00 53 19.1	+0.5
	baz=303						
WATA	Walderalm	126.61	328	ePKiKP	PKiKP	00 53 18.9	-0.1
	comp=Z,33nm,1.5s,SNR=6.8						
WTTA	Wattenberg	126.62	328	ePKiKP	PKiKP	00 53 19.1	0.0
	comp=Z,52nm,1.3s,SNR=15						
AHRW	Bad Neuenahr-A	126.63	333	ePKPdf	PKiKP	00 53 18.9	+0.1
	baz=50,slow=1.9						
STAL	STALIGIAL	126.66	326	IAMs_20	IAMs_20	01 49 52.5	
	comp=Z,2µm,21.0s						
MOTA	Moosalm	126.85	328	ePKiKP	PKPdf	00 53 19.1	+0.1
	comp=Z,41nm,1.9s,SNR=9.6						
SQTA	Sankt Quirin	126.87	328	ePKiKP	PKiKP	00 53 19.4	-0.1
	comp=Z,38nm,1.9s,SNR=12						
STU	Stuttgart	126.88	331	ePKPdf	PKPdf	00 53 19.0	+0.2
	baz=50,slow=1.9						
RETA	Reutte	126.94	329	ePKiKP	PKiKP	00 53 19.4	-0.2
	comp=Z,16nm,1.7s,SNR=5.3						
G65A	Princeton	126.96	35	IAMs_20	IAMs_20	01 46 30.2	
	comp=Z,2µm,21.0s						
MEM	Membach	127.05	334	x	PKPdf	00 53 19.7	+0.6
UBR	Ueberruh	127.15	329	ePKPdf	PKPdf	00 53 19.4	0.0
	baz=50,slow=1.9						
AZU	Azuero	127.18	84	eP	PKiKP	00 53 21.3	+0.4
FETA	Feichten	127.25	328	ePKiKP	PKiKP	00 53 20.4	+0.1
	comp=Z,31nm,1.8s,SNR=9.9						
EMMW	East Machias	127.31	35	IAMs_20	IAMs_20	01 46 10.5	
	comp=Z,2µm,20.0s						
MATE	Matera	127.34	318	⇑P	PKiKP	00 53 20.6	+0.2
CTI	Castel Tesino	127.37	327	IAMs_20	IAMs_20	01 55 13.3	
	comp=Z,2µm,19.0s						
GGN	Saint George	127.42	35	IAMs_20	IAMs_20	01 44 49.6	
	comp=Z,2µm,21.0s						
BCLA	Clavier	127.50	334	PKPdf	PKPdf	00 53 18.1	-1.8
BCLA				PKiKP	PKiKP	00 53 18.9	-1.6
DAVA	Damuels	127.52	329	ePKiKP	PKiKP	00 53 21.2	+0.4
	comp=Z,26nm,1.6s,SNR=6.3						
BFO	Black Forest	127.60	331	ePKPdf	PKPdf	00 53 20.1	-0.1
	baz=50,slow=1.9						
BFO	Black Forest	127.60	331	PKIKP	PKPdf	00 53 20.2	-0.1
BFO	Black Forest	127.60	331		PKPdf	00 53 20.2	-0.1
UCC	Uccle	127.61	335	IAMs_20	IAMs_20	01 52 04.7	
	comp=Z,2µm,21.0s						
BCIP	Isla Barro Col	127.62	83	eP	PKiKP	00 53 23.0	+1.3
NNA	Nana	127.66	109c	ePKIKP	PKiKP	00 53 22.2	+0.3
WLF	Walferdange	127.68	333	x	PKPdf	00 53 21.4	+1.1
WLF	Walferdange	127.68	333	ePKPdf	PKPdf	00 53 21.4	+1.1
	baz=50,slow=1.9						
WLF	Walferdange	127.68	333	IAMs_20	IAMs_20	01 52 52.5	
	comp=Z,2µm,20.0s						
TEOL	Teolo	127.78	326	IAMs_20	IAMs_20	01 50 27.2	
	comp=Z,2µm,22.0s						
BMRD	Maredsous	127.81	335	x	PKPdf	00 53 21.2	+0.7
TIP	Timpagrande	128.02	317	⇑P	PKiKP	00 53 22.4	+0.5
TIP	Timpagrande	128.02	317		PKPdf	00 53 21.6	+0.3
DOU	Dourbes	128.04	335	x	PKPdf	00 53 20.7	-0.3
LMN	Caledonia Moun	128.10	33	IAMs_20	IAMs_20	01 45 36.9	
	comp=Z,3µm,21.0s						
ECH	Echery	128.24	331	IAMs_20	IAMs_20	01 53 49.5	
	comp=Z,2µm,20.0s						
SALO	Salr	128.25	327	IAMs_20	IAMs_20	01 53 18.6	
	comp=Z,2µm,21.0s						
TUE	Stuetta	128.33	328	IAMs_20	IAMs_20	01 54 21.4	
	comp=Z,2µm,19.0s						
INTR	Introdacqua	128.42	321	IAMs_20	IAMs_20	01 56 28.7	
	comp=Z,1µm,21.0s						
PAOL	Paolisi	128.53	320	IAMs_20	IAMs_20	01 53 34.8	
	comp=Z,1µm,21.0s						
AQU	L'Aquila	128.54	322	eP	PKPdf	00 53 17.7	-4.6
AQU	L'Aquila	128.54	322	IAMs_20	IAMs_20	01 56 20.7	
	comp=Z,1µm,21.0s						
MURB	Monte Urbino	128.55	323	IAMs_20	IAMs_20	01 54 23.8	
	comp=Z,2µm,20.0s						
GO02	Mina Guanaco	128.80	128		PKPdf	00 53 22.8	-0.8
PRMA	PARMA	128.91	326	IAMs_20	IAMs_20	01 52 35.0	
	comp=Z,1µm,21.0s						
OSSC	Osservatorio P	129.14	324	IAMs_20	IAMs_20	01 55 54.5	
	comp=Z,1µm,19.0s						
VLC	Villacollemand	129.25	326	IAMs_20	IAMs_20	01 52 43.0	
	comp=Z,2µm,20.0s						
SENIN	Lac Senin/Sane	129.46	330	IAMs_20	IAMs_20	01 55 16.1	
	comp=Z,1µm,18.0s						
HAL	Halifax	129.53	33	IAMs_20	IAMs_20	01 45 49.0	
	comp=Z,3µm,21.0s						
TSUM	Tsumeb	129.67	240	IAMs_20	IAMs_20	01 48 23.4	
	comp=Z,2µm,20.0s						
GCUF	Volcan Galeras	129.72	93	eP	PKiKP	00 53 27.2	+0.5
GBN	Guysborough	130.13	31	IAMs_20	IAMs_20	01 50 22.6	
	comp=Z,2µm,20.0s						
POPC	Popayan, Colom	130.51	91	eP	PKPdf	00 53 27.0	0.0
SOTA	Rioblanco	130.54	92	eP	PKiKP	00 53 28.2	-0.1
BNI	Bardonecchia	130.67	329	IAMs_20	IAMs_20	01 55 08.3	
	comp=Z,2µm,20.0s						
PCON	Cinco Dias	130.77	92	eP	PKiKP	00 53 29.9	+1.1
YOTC	Yotoco, Valle	130.94	89	eP	PKPdf	00 53 25.8	-1.9
DBBC	Dabeiba	131.20	85	eP	PKiKP	00 53 29.5	+0.5
CBOC	Ciudad Bolivar	131.36	87	eP	PKiKP	00 53 29.1	-0.4
FLOC	Florencia	131.44	93	eP	PKiKP	00 53 29.2	-0.3
FLOC	Florencia	131.44	93		PKPdf	00 53 28.7	+0.1
GARC	Garzon, Huila	131.65	92	eP	PKiKP	00 53 29.8	-0.4
HELC	Santa Helena	131.85	86	eP	PKPdf	00 53 30.1	+0.4
ANIL	Santa Ana	131.91	89	eP	PKiKP	00 53 30.7	-0.1
GUY2C	Guyana, Caldas	131.98	88	eP	PKiKP	00 53 30.6	-0.5
RREF	El Recreo	131.99	88	eP	PKiKP	00 53 31.9	+0.6
TOLC	Tolima	132.00	89	eP	PKiKP	00 53 31.2	+0.2
ORTC	Ortega, Tolima	132.03	90	eP	PKPdf	00 53 29.8	+0.1
SJCC	San Jacinto, C	132.20	82	eP	PKiKP	00 53 31.6	+0.6
NORC	Norcasia	132.49	87	eP	PKPdf	00 53 30.6	0.0
PTBC	PUERTO BERRIO,	132.93	86	eP	PKPdf	00 53 31.1	-0.2
ROSC	El Rosal	133.00	88	PKP	PKiKP	00 53 33.1	0.0
	comp=Z,4.8nm,0.4s,baz=77,slow=2.6,SNR=12						
ROSC	El Rosal	133.00	88	eP	PKiKP	00 53 33.3	+0.2
SPBC	San Pablo de B	133.29	87	eP	PKPdf	00 53 32.2	+0.1
CHIC	Chingaza	133.58	89	eP	PKPdf	00 53 33.2	+0.1
BRRC	Barranca, Sant	133.68	85	eP	PKiKP	00 53 33.8	-0.2
CODC	Agustn Codazz	133.91	81	eP	PKPdf	00 53 33.3	+0.2
LPAZ	La Paz	134.10	119	PKP	PKiKP	00 53 35.6	+0.1
	comp=Z,7.7nm,0.6s,baz=332,slow=0.6,SNR=11						
LPAZ				SKPbc	SKPbc	00 57 01.3	-0.7
	comp=Z,0.9nm,0.7s,baz=180,slow=2.0,SNR=1.2						
LPAZ	La Paz	134.10	119	eP	PKiKP	00 53 35.4	-0.2
BARC	Barichara	134.19	86	eP	PKPdf	00 53 33.9	0.0
RUSC	La Rusia	134.28	87	eP	PKPdf	00 53 34.6	+0.1
PAMC	Pamplona, Colo	134.68	85	eP	PKiKP	00 53 36.0	-0.6
KEST	Kesra	134.85	317	PKP	PKiKP	00 53 35.7	-0.2
	comp=Z,7.2nm,1.1s,baz=145,slow=4.2,SNR=8.0						
SDDR	Presa de Saban	134.91	69	IAMs_20	IAMs_20	01 51 04.0	
	comp=Z,2µm,19.0s						
PTGC	Puerto Gaitan,	135.15	89	eP	PKPdf	00 53 35.8	+0.3
URIC	Uribia, Colomb	135.23	79	eP	PKPdf	00 53 21.6	-14
SC01	Santiago de lo	135.33	68	IAMs_20	IAMs_20	02 06 28.2	
	comp=Z,2µm,19.0s						
SDV	Santo Domingo	136.71	83	eP	PKPdf	00 53 39.2	+0.7
SDV	Santo Domingo	136.71	83	PKPdf	PKPdf	00 53 38.2	-0.4
CPUP	Villa Florida	137.01	139	PKP	PKiKP	00 53 40.2	-0.2
	comp=Z,3.2nm,0.8s,baz=308,slow=2.1,SNR=7.3						
CPUP	Villa Florida	137.01	139	PKIKP	PKPdf	00 53 38.6	0.0
CPUP	Villa Florida	137.01	139		PKPdf	00 53 38.5	0.0
UCM	Universidad Co	139.10	332	PP	PP	00 56 34.4	+0.4
PBRG	Braganca	139.40	336	ePKPdf	PKPdf	00 53 43.0	+0.4
PGAV	Gavieira, Arco	139.85	338	ePKPdf	PKPdf	00 53 41.9	-1.6
PGAV	Gavieira, Arco	139.85	338	ePP	PP	00 56 35.7	-2.8
PGAV	Gavieira, Arco	139.85	338	eLR	LR	01 44 18.7	
	comp=Z,1µm,20.0s						
SJG	San Juan	139.85	68	PKIKP	PKPdf	00 53 42.7	-1.2
SJG	San Juan	139.85	68		PKPdf	00 53 42.7	-1.2
GCPR	Guaynabo City	139.87	68		PKPdf	00 53 42.9	-1.1
CART	Cartagena	140.03	327	PKP	PKPdf	00 53 36.5	-7.2
CART	Cartagena	140.03	327	PP	PP	00 56 41.7	+1.8
MVO	Moncorvo	140.05	336	ePKPdf	PKPdf	00 53 43.3	-0.5
MVO	Moncorvo	140.05	336	ePP	PP	00 56 44.3	+4.5
MVO	Moncorvo	140.05	336	eLR	LR	01 48 11.9	
	comp=Z,852nm,18.0s						
PAB	San Pablo	140.22	332	PKIKP	PKPdf	00 53 43.6	-0.6
PAB	San Pablo	140.22	332		PKPdf	00 53 43.6	-0.6
PAB	San Pablo	140.22	332	IAMs_20	IAMs_20	02 03 44.4	
	comp=Z,1µm,21.0s						
PVRL	Vila Real	140.23	337	ePKPdf	PKPdf	00 53 39.3	-4.8
MTE	Manteigas	140.91	336	ePKPdf	PKPdf	00 53 44.5	-0.9
MTE	Manteigas	140.91	336	ePP	PP	00 56 53.5	+8.4
MTE	Manteigas	140.91	336	eLR	LR	01 48 15.7	
	comp=Z,930nm,18.0s						
CDVI	St. Croix	141.22	68		PKPdf	00 53 45.0	-1.4
SAML	Samuel	141.36	111	PKIKP	PKPdf	00 53 47.6	+0.7
SAML				MLR	MLR		
	comp=Z,700nm,18.0s						
SAML	Samuel	141.36	111		PKPdf	00 53 47.6	+0.7
COI	Coimbra	141.42	337	IAMs_20	IAMs_20	01 57 15.5	
	comp=Z,1µm,21.0s						
COI	Coimbra	141.42	337	ePKPdf	PKPdf	00 53 44.4	-1.8
PMRV	Marv??o	141.66	335	ePKPdf	PKPdf	00 53 43.7	-3.0
PMRV	Marv??o	141.66	335	ePP	PP	00 56 51.3	+1.7
PMRV	Marv??o	141.66	335	eLR	LR	01 49 08.8	
	comp=Z,1µm,18.0s						
PTOM	Tomar	141.92	336	ePKPdf	PKPdf	00 53 43.4	-3.8
PMTG	Montargil	142.31	336	ePKPdf	PKPdf	00 53 41.6	-6.3
EMAL	Malaga-Limoner	142.45	329	PKP	PKPdf	00 53 41.9	-6.2
EMAL	Malaga-Limoner	142.45	329	PP	PP	00 57 06.9	+12
TRCB	Terra Rica	142.53	139	eP	PKPdf	00 53 31.5	-17
SABA	Saba	142.66	68	IAMs_20	IAMs_20	02 07 53.3	
	comp=Z,1µm,20.0s						
SMRT	St. Maarten	142.70	67	IAMs_20	IAMs_20	02 07 41.4	
	comp=Z,1µm,21.0s						
LIJA	Lijar	142.82	331	PKP	PKPdf	00 53 45.2	-3.7
PMAFR	Mafra	142.84	337	ePKPdf	PKPdf	00 53 48.3	-0.5
LIS	Lisbon	142.99	336	ePKPdf	PKPdf	00 53 46.9	-2.2
LIS				AMS	AMS	02 07 18.7	
	comp=E,4µm,19.1s						
LIS	Lisbon	142.99	336	ePKIKP	PKPdf	00 53 46.8	-2.2
PBEJ	Beja	143.04	334	ePKPdf	PKPbc	00 53 45.7	-0.3
SKI	Saint Kitts	143.19	68	IAMs_20	IAMs_20	01 51 07.6	
	comp=Z,1µm,22.0s						
PNCL	Nicolau / Gran	143.25	335	ePKPdf	PKPbc	00 53 47.0	+0.5
MESJ	Messejana	143.35	335	ePKPdf	PKPbc	00 53 47.7	+0.9
MESJ				AMS	AMS	02 00 28.5	
	comp=Z,1µm,20.1s						
MESJ	Messejana	143.35	335	ePKIKP	PKPbc	00 53 47.6	+0.8
PCVE	Castro Verde	143.44	334	ePKPdf	PKPab	00 53 46.5	+0.4
PVAQ	Vaqueiros	143.49	334	IAMs_20	IAMs_20	02 01 31.9	
	comp=Z,2µm,20.0s						
PVAQ	Vaqueiros	143.49	334	ePKPdf	PKPbc	00 53 47.3	+0.1
PVAQ	Vaqueiros	143.49	334	ePP	PP	00 56 55.2	-5.5
PVAQ	Vaqueiros	143.49	334	eLR	LR	01 50 19.5	
	comp=Z,1µm,20.0s						
CEU	Ceuta	143.60	330	PKP	PKPab	00 53 46.3	-0.4
CEU	Ceuta	143.60	330	PP	PP	00 56 44.4	-17
PVLZ	Peæn de	143.60	328	PKP	PKPab	00 53 43.0	-3.8
PVLZ	Peæn de	143.60	328	PP	PP	00 56 37.1	-24
PBDV	Barranco-do-Ve	143.72	334	ePKPdf	PKPbc	00 53 47.9	0.0
PBDV	Barranco-do-Ve	143.72	334	ePP	PP	00 57 02.7	+0.6
PTEO	Sao Teotonio	143.81	335	ePKPdf	PKPbc	00 53 48.7	+0.6
MORF	Marmelete	143.98	335	ePKPdf	PKPbc	00 53 48.6	-0.2
MORF				AMS	AMS	02 00 39.6	
	comp=E,870nm,18.5s						
MORF	Marmelete	143.98	335	ePKIKP	PKPbc	00 53 48.5	-0.3
MORF	Marmelete	143.98	335	ePKPdf	PKPbc	00 53 48.7	-0.1
ANWB	Willy Bob	143.98	67	IAMs_20	IAMs_20	01 53 30.4	
	comp=Z,1µm,20.0s						
TAM	Tamanrasset	144.03	302	PKIKP	PKPbc	00 53 49.9	+0.4
TAM	Tamanrasset	144.03	302		PKPbc	00 53 49.9	+0.4
PFVI	Vila Bisbo	144.20	335	IAMs_20	IAMs_20	02 00 42.5	
	comp=Z,1µm,20.0s						
PFVI	Vila Bisbo	144.20	335	ePKPdf	PKPbc	00 53 49.7	+0.3
PCMB	Pacaembu	144.27	139	eP	PKPab	00 53 39.5	-10
SPB	Sao Paulo	145.08	146		PKPdf	00 53 53.8	+0.7
SPB	Sao Paulo	145.08	146	eP	PKPdf	00 53 53.8	+0.7
C2SB	Chapadao do Su	145.13	134	eP	PKPbc	00 53 35.6	-17
FDF	Fort de France	145.28	72	IAMs_20	IAMs_20	02 08 55.3	
	comp=Z,1µm,20.0s						
IFR	Ifrane	145.29	327	PKP	PKPbc	00 53 53.0	-0.2
IFR	Ifrane	145.29	327	PP	PP	00 56 48.5	-24
MDT	Midelt	145.53	325	P	PKPab	00 53 54.7	+0.6
	SNR=16						
H07N1	FLORES T-PHASE	145.62	5	ePKP	PKPab	00 53 55.2	+1.1
VAO	Valinhos	145.80	146	eP	PKPab	00 53 55.5	+0.2
RTC	Rabat Centre	145.85	329	P	PKPab	00 53 56.4	+1.3
	SNR=20						
H07S1	FLORES T-PHASE	145.92	6	ePKP	PKPab	00 53 56.3	+1.0
RCLB	Rio Claro- Sao	145.94	145	eP	PKPab	00 53 56.5	+0.6
ZHG	ZHG	146.16	328	P	PKiKP	00 53 58.0	-1.1
	SNR=21						
PARB	Paraibuna	146.25	148	eP	PKiKP	00 54 00.2	+0.7
ARF	Arif	146.30	323	P	PKPab	00 53 58.0	+0.9
	SNR=10						
BB19B	Bebedouro	146.39	142	eP	PKPdf	00 53 52.7	-2.8
TOSP	Speyside	146.44	78		PKPbc	00 53 57.1	0.0
SRBC	Serra Branca	146.45	1	ePKP	PKPab	00 53 58.0	+0.7
PGRA	Graciosa	146.46	1	ePKP	PKPdf	00 53 52.7	-2.4
GOLM	Goulmima	146.54	324	P	PKPab	00 53 59.0	+0.9
	SNR=13						
PTGA	Pitinga	146.66	99		PKPbc	00 53 57.1	-0.7
AVE	Averroes	146.68	329	P	PKPbc	00 53 57.5	+0.3
	SNR=6.7						
AVE	Averroes	146.68	329	PKP	PKPbc	00 53 56.9	-0.3
ROSA	Rosais	146.76	2	ePKP	PKPdf	00 53 55.8	+0.2
ADH	Angra Heroismo	146.84	0	ePKP	PKPbc	00 53 56.8	-0.7
PMAN	Manadas	146.85	1	ePKP	PKPab	00 53 58.6	-0.2
PICO	Pico	146.97	2	ePKP	PKiKP	00 54 01.1	+0.5
PCAN	Candelaria	147.01	2	ePKP	PKPbc	00 53 58.6	+0.6
TZRR	Tazzarine	147.57	324	P	PKPbc	00 53 60.0	0.0
	SNR=43						
SRHM	Skhour des Reh	147.58	329	P	PKPab	00 54 01.0	-1.0
	SNR=12						
PSET	Sete Cidades	147.65	358	ePKP	PKPbc	00 53 59.8	0.0
BART	Pico Bartolome	147.67	357	ePKP	PKPbc	00 53 59.2	-0.8
CMLA	Cha da Macela	147.70	358	ePKP	PKiKP	00 54 01.7	-0.3
ARAG	Araguaiana, MT	147.83	131	eP	PKPdf	00 53 46.0	-12
ZGR	Zagora	148.08	323	P	PKPbc	00 54 02.1	+0.8
	SNR=30						
OUZM	OUZ	148.16	325	P	PKPbc	00 54 02.1	+0.6
	SNR=25						
PSMN	Pico do Norte,	148.43	357	ePKP	PKPab	00 54 05.1	0.0
PSMA	Santa Maria	148.45	357	ePKP	PKPbc	00 54 00.5	-1.4
OUK	Oukaimeden	148.55	327	P	PKPbc	00 54 02.1	-0.7
	SNR=26						
IPMB	Ipameri, GO	148.85	139	eP	PKPdf	00 53 58.3	-1.4
TOA0	Torodi Ar. Sit	150.53	287	P	PKPbc	00 54 07.1	-0.7
	SNR=22						
TOA0	Torodi Ar. Sit	150.53	287		PKPdf	00 54 01.3	-1.1
TOA0				PKPbc	PKPbc	00 54 07.4	-0.3
TORD	Torodi Ar. Bea	150.53	287	PKP	PKPdf	00 54 01.6	-0.8
	comp=Z,9.0nm,1.1s,baz=17,slow=1.5,SNR=9.0						
TORD				PKPbc	PKPbc	00 54 06.8	-0.9
	comp=Z,29nm,0.9s,baz=64,slow=1.2,SNR=44						
TORD				PKPab	sPKPdf	00 54 12.3	-0.2
	comp=Z,32nm,0.7s,baz=63,slow=3.0,SNR=28						
TORD	Torodi Ar. Bea	150.53	287		PKPdf	00 54 00.2	-2.1
TORD				PKPbc	PKPbc	00 54 07.4	-0.3
TOC5	Torodi Ar. Sit	150.56	287	IAMs_20	IAMs_20	02 11 20.3	
	comp=Z,866nm,20.0s						
PMPST	Porto Santo, M	150.63	341	ePKPdf	PKPbc	00 54 07.8	+0.3
PMPST	Porto Santo, M	150.63	341	ePP	PP	00 57 32.8	-10
BDFB	Brasilia	150.63	136	PKP	PKPdf	00 54 03.1	+0.5
	comp=Z,21nm,0.7s,baz=196,slow=2.5,SNR=9.4						
BDFB				PKPbc	PKiKP	00 54 08.9	+0.1
	comp=Z,21nm,0.7s,baz=225,slow=3.6,SNR=20						
BDFB				PKPab	PKPab	00 54 14.9	0.0
	comp=Z,28nm,0.8s,baz=272,slow=5.8,SNR=12						
BDFB	Brasilia	150.63	136	PKPbc	PKiKP	00 54 08.7	-0.1
BDFB	Brasilia	150.63	136	IAMs_20	IAMs_20	01 54 34.1	
	comp=Z,1µm,21.0s						
PMPS	Porto Santo	150.65	341	ePKPdf	PKiKP	00 54 08.6	+0.4
PMOZ	Porto Moniz, M	151.13	342	eLR	LR	01 46 23.8	
	comp=Z,592nm,18.0s						
PMAR	Madeira	151.14	342	ePKPdf	PKPbc	00 54 06.7	-2.2
FUL	Funchal	151.20	342	ePKPdf	PKiKP	00 54 12.5	+3.1
SJMB	Sao Joao De Ma	152.38	150	eP	PKPab	00 54 26.1	+4.3
BSFB	Barra de Sao F	152.44	151	eP	PKPab	00 54 26.4	+4.3
JANB	Januaria	153.53	140	eP	PKiKP	00 54 17.9	+3.2
SMTB	Santa Maria do	155.20	125	eP	PKPdf	00 54 13.9	+4.7
KIC	Kosan Boka	157.70	274	eP	PKPdf	00 54 10.7	-1.8
	comp=Z,92nm,1.9s						
KIC	Kosan Boka	157.70	274	eP	PKPab	00 54 46.8	+1.9
	comp=Z,39nm,1.1s						
DBIC	Dimbokro	157.81	275	PKP	PKPdf	00 54 13.4	+0.8
	comp=Z,3.0nm,0.9s,baz=243,slow=6.8,SNR=4.3						
DBIC				PKPab	PKPab	00 54 45.6	+0.3
	comp=Z,8.8nm,1.0s,baz=94,slow=5.2,SNR=6.4						
DBIC	Dimbokro	157.81	275	PKP2	PKPab	00 54 45.6	+0.3
DBIC						01 54 13.4	
TIC	Toumodi	157.97	274	eP	PKPdf	00 54 09.2	-3.7
TIC	Toumodi	157.97	274	eP	PKPab	00 54 47.8	+1.7
LIC	Lamto	157.99	273	eP	PKPdf	00 54 12.0	-0.9
	comp=Z,75nm,1.9s						
LIC	Lamto	157.99	273	eP	PKPab	00 54 44.9	-1.3
	comp=Z,81nm,1.6s						

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*IDC **19** 00:37:08.6±0.6, 5.°23S×152.°93E, h0^{km}, mb4.8/18, mb1 4.9/19, mb1mx4.7/31, mbtmp4.8/19, ML3.7/1, MS5.0/1, Ms1 5.0/1, ms1mx4.2/31, Error ellipse: s-maj=18.9km s-min=14.5km az=87.0*

ISC 19 00:37:14.0±0.5**, 5.°26S**±0.°06×**152.°99E**±0.°09**, h37^{km}, n42, σ1.ˢ07**/47**, mb4.7**/18**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.35	315	Pn	Pn	00 37 35.8	-0.5
	2µm,0.3s,baz=9.7,slow=24,SNR=1.7						
KRVT				Sn	Sn	00 37 56.3	+3.3
	1µm,0.3s,baz=10,slow=23,SNR=2.1						
PMG	Port Moresby	7.10	234	Pn	Pn	00 38 56.8	+1.4
	5.8nm,0.3s,baz=9.5,slow=12,SNR=1.0						
PMG				Sn	Sn	00 40 14.5	-0.3
	10nm,0.3s,baz=327,slow=22,SNR=6.4						
CTA	Charters Tower	16.13	203	Pn	Pn	00 40 58.5	+0.4
	0.2nm,0.3s,baz=48,slow=15,SNR=2.4						
DZM	Mont Dzumac	21.19	143	P	P	00 41 57.7	+1.2
	20nm,0.6s,baz=176,slow=13,SNR=7.0						
SIJI	Sorong	22.12	281	P	P	00 42 06.5	0.0
	28nm,0.7s,baz=117,slow=8.9,SNR=6.7						
WRA	Warramunga Arr	23.28	230	P	P	00 42 19.0	+0.3
	37nm,1.0s,baz=55,slow=9.6,SNR=6.8						
ASAR	Alice Springs	25.94	223	P	P	00 42 42.1	-1.1
	14nm,0.8s,baz=58,slow=8.7,SNR=6.0						
ASAR				ScP	ScP	00 49 52.6	+4.3
	1.7nm,1.1s,baz=115,slow=4.4,SNR=2.6						
STKA	Stephens Creek	28.55	201	P	P	00 43 04.9	-1.5
	8.3nm,0.9s,baz=354,slow=9.6,SNR=2.9						
FITZ	Fitzroy Crossi	29.60	242	P	P	00 43 14.9	-1.0
	7.4nm,0.5s,baz=0.0,slow=7.1,SNR=1.7						
JNU	Nakatsue	43.56	333	LR	LR	01 02 16.8	
	comp=Z,2µm,18.4s,baz=162,slow=35						
MJAR	Matsushiro Arr	43.83	343	P	P	00 45 15.2	-1.4
	6.4nm,0.9s,baz=136,slow=8.3,SNR=2.8						

MJAR				PcP	**PcP**	**00 47 03.4**	**+0.7**
	3.9nm,0.7s,baz=147,slow=3.8,SNR=4.5						
KSRS	**Korea Array**	**48.49**	**333**	P	**P**	**00 45 53.2**	**0.0**
	6.5nm,0.8s,baz=148,slow=8.1,SNR=8.1						
USRK	**Ussuriysk Ar.**	**52.74**	**341**	P	**P**	**00 46 25.1**	**0.0**
	9.0nm,0.7s,baz=173,slow=6.7,SNR=12						
CMAR	**Chiang Mai Arr**	**58.24**	**295**	P	**P**	**00 47 05.2**	**-0.1**
	4.9nm,0.7s,baz=121,slow=5.5,SNR=6.1						
PETK	**Petropavlovsk-**	**58.29**	**3**	P	**P**	**00 47 05.4**	**+0.5**
	25nm,0.8s,baz=173,slow=7.8,SNR=11						
SONM	**Songino Array**	**66.81**	**328**	P	**P**	**00 48 01.8**	**-0.3**
	3.7nm,0.6s,baz=142,slow=4.3,SNR=5.2						
TAPN	**Taplejung**	**70.80**	**301**	*e*P	**P**	**00 48 27.4**	**-0.2**
ODAN	**Odare**	**70.94**	**301**	*e*P	**P**	**00 48 28.6**	**+0.2**
	87nm,1.0s						
RAMN	**Ramite**	**71.64**	**300**	*e*P	**P**	**00 48 32.6**	**0.0**
	13nm,0.7s						
JIRN	**Jiri**	**72.19**	**301**	*e*P	**P**	**00 48 36.2**	**+0.2**
GUN	**Gumba**	**72.52**	**301**	*e*P	**P**	**00 48 38.0**	**0.0**
	44nm,0.8s						
PKI	**Pulchoki**	**72.83**	**301**	*e*P	**P**	**00 48 39.5**	**-0.3**
PKIN	**Phulchoki**	**72.84**	**301**	*e*P	**P**	**00 48 39.0**	**-0.8**
KKN	**Kakani**	**73.00**	**301**	*e*P	**P**	**00 48 40.3**	**-0.4**
DMN	**Daman**	**73.10**	**301**	*e*P	**P**	**00 48 41.2**	**-0.1**
	152nm,1.3s						
GKN	**Gorkha**	**73.60**	**301**	*e*P	**P**	**00 48 43.9**	**-0.3**
DANN	**Dangsing**	**74.44**	**301**	*e*P	**P**	**00 48 48.4**	**-0.8**
MKAR	**Makanchi Array**	**80.79**	**319**	P	**P**	**00 49 23.9**	**-0.1**
	6.6nm,0.9s,baz=97,slow=4.9,SNR=5.7						
ZALV	**Zalesovo Beam**	**81.64**	**326**	P	**P**	**00 49 27.3**	**-0.9**
	14nm,0.7s,baz=110,slow=5.2,SNR=12						
ILAR	**Eielson Array**	**82.52**	**22**	P	**P**	**00 49 31.2**	**-1.4**
	4.1nm,0.7s,baz=243,slow=5.8,SNR=8.2						
NRIK	**Noril'sk**	**86.46**	**341**	P	**P**	**00 49 52.0**	**-0.4**
	7.6nm,0.6s,baz=94,slow=5.8,SNR=5.0						
NVAR	**Mina Array Bea**	**92.22**	**52**	P	**P**	**00 50 21.1**	**+0.5**
	1.4nm,0.7s,baz=252,slow=6.0,SNR=4.5						
YKA	**Yellowknife Ar**	**95.75**	**28**	P	**P**	**00 50 36.5**	**+0.6**
	1.8nm,0.8s,baz=265,slow=4.3,SNR=6.6						
AKASG	**Malin Array Be**	**114.98**	**324**	PKP	**PKiKP**	**00 55 50.6**	**-0.5**
	0.8nm,0.4s,baz=43,slow=2.9,SNR=4.9						
BRTR	**Keskin Array B**	**115.75**	**312**	PKP	**PKPdf**	**00 55 52.8**	**-0.4**
	1.0nm,0.7s,baz=108,slow=3.0,SNR=4.4						
NOA	**NORSAR Array B**	**117.41**	**340**	PKP	**PKiKP**	**00 55 55.8**	**+0.2**
	0.8nm,0.7s,baz=40,slow=1.9,SNR=4.0						
PLCA	**Paso Flores**	**119.30**	**143**	PKP	**PKiKP**	**00 56 00.7**	**+0.8**
	0.6nm,0.5s,baz=320,slow=5.5,SNR=3.1						
GERES	**GERESS Array B**	**124.54**	**328**	PKP	**PKiKP**	**00 56 10.2**	**+0.2**
	1.8nm,0.6s,baz=100,slow=3.1,SNR=4.2						
LPAZ	**La Paz**	**134.03**	**119**	PKP	**PKiKP**	**00 56 31.2**	**+0.6**
	2.9nm,0.6s,baz=268,slow=3.1,SNR=7.5						
CPUP	**Villa Florida**	**137.00**	**138**	PKP	**PKiKP**	**00 56 35.6**	**0.0**
	3.2nm,1.0s,baz=206,slow=1.1,SNR=3.7						
BDFB	**Brasilia**	**150.61**	**135**	PKPbc	**PKiKP**	**00 57 03.8**	**-0.2**
	16nm,0.9s,baz=317,slow=0.5,SNR=6.3						
BDFB				PKPab	**PKPab**	**00 57 11.2**	**+1.2**
	12nm,0.8s,baz=192,slow=4.0,SNR=4.4						
TORD	**Torodi Ar. Bea**	**150.62**	**287**	PKPbc	**PKPbc**	**00 57 02.5**	**-0.7**
	16nm,0.8s,baz=86,slow=1.6,SNR=11						
TORD				PKPab	**pPKPdf**	**00 57 07.6**	**-1.2**
	16nm,0.8s,baz=80,slow=2.1,SNR=15						

*KRNET **19** 00:40:01.5±0.1, 41°.18N×72°.51E, h13^{km}, mb2.9*
*ISU **19** 00:40:01.0, 41°.20N×72°.50E, h5^{km}*
*SOME **19** 00:40:02.2, 41°.12N×72°.57E, h15^{km}*
*KNET **19** 00:40:02.7±0.5, 41°.24N×72°.63E, h0^{km}, ml2.3, Error ellipse: s-maj=5.6km s-min=2.4km az=111.0*
*NNC **19** 00:40:04.2±1.7, 41°.25N×72°.58E, h0^{km}, mb3.4, mpv3.1, Error ellipse: s-maj=15.0km s-min=6.6km az=175.0*
ISC 19 00:40:02.3±1.1**, 41°.19N**±0°.03×**72°.56E**±0°.02**, h5**^{km}±10^{km}**, n56,** σ1^{s}.**51**/94**, 26C-20D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARSB	**Arslanbob**	**0.34**	**67**	⇑*i*P	**Pg**	**00 40 09.2**	**+0.2**
	baz=68						
ARSB				⇑*i*S	**Sg**	**00 40 14.3**	**+0.7**
	baz=68						
ARSB	**Arslanbob**	**0.34**	**67**	*e*P	**Pg**	**00 40 08.8**	**-0.2**
ARSB				*e*S	**Sg**	**00 40 14.8**	**+1.2**
ANR	**Andizhan**	**0.46**	**199**	*i* P	**Pg**	**00 40 10.7**	**-0.5**
ANR				*e*S	**Sg**	**00 40 17.9**	**+0.7**
ARK	**Arkit**	**0.75**	**324**	⇑*i*P	**Pg**	**00 40 15.7**	**-1.1**
	baz=27						
ARK				⇑*i*S	**Sg**	**00 40 25.5**	**-1.1**
	baz=27						
ARK	**Arkit**	**0.75**	**324**	*e*P	**Pg**	**00 40 15.9**	**-0.9**
ARK				*i* S	**Sg**	**00 40 26.8**	**+0.2**
AML	**Almayashu**	**1.27**	**42**	⇑*i*P	**Pn**	**00 40 26.2**	**-0.8**
	baz=43						
AML				⇑*i*S	**Sn**	**00 40 43.9**	**-0.7**
	baz=43						
AML	**Almayashu**	**1.27**	**42**	⇓P	**Pn**	**00 40 26.0**	**-1.0**
	9.4nm,0.2s,SNR=41						
AML				⇓S	**Sn**	**00 40 44.1**	**-0.5**
	48nm,0.3s						
ARLS	**Aral**	**1.48**	**63**	⇑*i*P	**Pn**	**00 40 29.8**	**0.0**
	baz=63						
ARLS				⇑*i*S	**Sg**	**00 40 50.7**	**+0.7**
	baz=63						
MRKS	**Merke**	**1.63**	**18**	*e*P	**Pb**	**00 40 33.4**	**+0.5**
	8.3nm,0.2s						
MRKS				*e*S	**Sg**	**00 40 56.0**	**+1.3**
	59nm,0.3s						
MRKS	**Merke**	**1.63**	**18**	P	**Pb**	**00 40 33.6**	**+0.7**
	8.3nm,0.2s						
MRKS				S	**Sg**	**00 40 57.4**	**+2.7**
	59nm,0.3s						
EKS2	**Erkin-Say**	**1.73**	**31**	⇓*i*P	**Pb**	**00 40 34.2**	**-0.4**
	baz=32						
EKS2				⇓*i*S	**Sg**	**00 40 57.5**	**-0.3**
	baz=32						
EKS2	**Erkin-Say**	**1.73**	**31**	⇑P	**Pb**	**00 40 34.2**	**-0.4**
	2.9nm,0.2s,SNR=12						
EKS2				⇓S	**Sg**	**00 40 59.0**	**+1.2**
	10nm,0.2s						
BTK	**Batken**	**1.74**	**230**	⇑*i*P	**Pn**	**00 40 32.9**	**-0.4**
	baz=29						
BTK				⇑*i*S	**Sn**	**00 40 56.3**	**+0.3**
	baz=29						
UCH	**Uchtor**	**1.79**	**54**	⇑*i*P	**Pb**	**00 40 35.8**	**-0.1**
	baz=54						
UCH				⇑*i*S	**Sg**	**00 41 00.4**	**+0.5**
	baz=54						
UCH	**Uchtor**	**1.79**	**54**	⇓P	**Pb**	**00 40 35.8**	**-0.1**
	9.9nm,0.1s,SNR=20						
UCH				⇑S	**Sg**	**00 41 01.6**	**+1.7**
	40nm,0.4s						
DZA	**Taraz**	**1.93**	**332**	*e*P	**Pb**	**00 40 38.0**	**0.0**
	21nm,0.1s						
DZA				*e*S	**Sb**	**00 41 03.7**	**+1.4**
	53nm,0.3s						
DZA	**Taraz**	**1.93**	**332**	Pg	**Pb**	**00 40 37.9**	**0.0**
	19nm,0.1s						
DZA				Lg	Lg	00 41 03.8	
	53nm,0.2s						
AAK	**Ala-Archa**	**2.04**	**44**	⇑*i*P	**Pb**	**00 40 39.7**	**-0.3**
	baz=45						
AAK				⇑*i*S	**Sg**	**00 41 07.1**	**-0.8**
	baz=45						
AAK	**Ala-Archa**	**2.04**	**44**	⇓P	**Pb**	**00 40 40.0**	**0.0**
	6.3nm,0.3s,SNR=9.8						
AAK				⇑S	**Sg**	**00 41 07.7**	**-0.2**
	20nm,0.4s						
AAK	**Ala-Archa**	**2.04**	**44**	⇓Pg	**Pb**	**00 40 40.0**	**0.0**
	4.1nm,0.5s						
AAK				⇑Lg	Lg	00 41 07.0	
	12nm,0.4s						
IUG	**Iuzhnay**	**2.12**	**298**	*e*P	**Pb**	**00 40 41.0**	**-0.3**
	1.8nm,0.2s						
IUG				*e*S	**Sb**	**00 41 08.8**	**+0.9**
	73nm,0.3s						
KZA	**Kyzart**	**2.20**	**65**	⇓*e*P	**Pb**	**00 40 42.3**	**-0.5**
	baz=66						
KZA				⇓*i*S	**Sb**	**00 41 11.7**	**+1.1**
	baz=66						
KZA	**Kyzart**	**2.20**	**65**	⇓P	**Pb**	**00 40 42.6**	**-0.2**
	9.4nm,0.2s,SNR=11						
FRU1	**Bishkek**	**2.23**	**43**	⇑*e*P	**Pb**	**00 40 42.3**	**-0.9**
	baz=43						
FRU1				⇑*i*S	**Sb**	**00 41 11.7**	**+0.5**
	baz=43						
KBK	**Karagaybulak**	**2.31**	**50**	⇑*e*P	**Pb**	**00 40 43.5**	**-1.0**
	baz=50						
KBK				⇑*i*S	**Sb**	**00 41 13.6**	**+0.3**
	baz=50						
KBK	**Karagaybulak**	**2.31**	**50**	⇓P	**Pb**	**00 40 44.5**	**0.0**
	4.3nm,0.1s,SNR=11						
KBK				⇑S	**Sg**	**00 41 16.7**	**+0.4**
	69nm,0.5s						
CHMS	**Chumysh**	**2.43**	**41**	⇓*i*P	**Pb**	**00 40 45.2**	**-1.4**
	baz=42						
CHMS				⇓*i*S	**Sb**	**00 41 16.3**	**-0.5**
	baz=42						
CHMS	**Chumysh**	**2.43**	**41**	⇓Pn	**Pb**	**00 40 46.8**	**+0.3**
	6.0nm,0.5s						
CHMS				⇑Lg	Lg	00 41 19.1	
	15nm,0.8s						
KK31	**Karatay Array**	**2.44**	**322**	⇓Pn	**Pb**	**00 40 46.4**	**-0.3**
	1.6nm,0.3s,baz=136,slow=15,SNR=33						
KK31				⇓Lg	Lg	00 41 18.4	
	4.9nm,0.3s,baz=135,slow=27						
USP	**Ospenovka**	**2.52**	**34**	⇑*e*P	**Pn**	**00 40 46.1**	**+2.1**
	baz=35						
USP				⇑*i*S	**Sb**	**00 41 18.5**	**-1.0**
	baz=35						
BRLS	**Boroldlay**	**2.73**	**313**	*e*P	**Pb**	**00 40 51.7**	**0.0**
	2.5nm,0.4s						
BRLS				*e*S	**Sb**	**00 41 27.1**	**+1.6**
	13nm,0.4s						
BRLS	**Boroldlay**	**2.73**	**313**	Pg	**Pb**	**00 40 49.8**	**-1.9**
	0.5nm,0.2s						
BRLS				Lg	Lg	00 41 24.9	
	1.9nm,0.4s						
ULHL	**Ulahol**	**2.95**	**68**	⇓*i*P	**Pn**	**00 40 52.4**	**+2.4**
	baz=68						
ULHL				⇓*i*S	**Sb**	**00 41 29.4**	**-2.5**
	baz=68						
KST	**Kastek**	**3.13**	**53**	*e*P	**Pb**	**00 40 59.7**	**+1.1**
	3.4nm,0.3s						
KST				*e*S	**Sg**	**00 41 41.2**	**-1.8**
	13nm,0.4s						
KST	**Kastek**	**3.13**	**53**	Pg	**Pb**	**00 40 59.7**	**+1.1**
	3.4nm,0.3s						
KST				Lg	Lg	00 41 41.2	
	13nm,0.4s						
DGS	**Degeres**	**3.14**	**48**	*e*P	**Pb**	**00 41 00.1**	**+1.4**
	2.5nm,0.4s						
DGS				*e*S	**Sg**	**00 41 41.8**	**-1.4**
	11nm,0.5s						
DGS	**Degeres**	**3.14**	**48**	Pg	**Pb**	**00 41 00.1**	**+1.4**
	2.5nm,0.4s						
DGS				Lg	Lg	00 41 42.2	
	11nm,0.5s						
MTBS	**Maitube**	**3.47**	**55**	*e*P	**Pb**	**00 41 05.9**	**+1.7**
	4.1nm,0.2s						
MTBS				*e*S	**Sg**	**00 41 51.8**	**-1.8**
	6.6nm,0.2s						
MTBS	**Maitube**	**3.47**	**55**	Pg	**Pb**	**00 41 05.9**	**+1.7**
	4.1nm,0.2s						
MTBS				Lg	Lg	00 41 51.8	
	6.6nm,0.2s						
IZV	**Izvestkoviy**	**3.53**	**57**	*e*P	**Pb**	**00 41 07.4**	**+2.0**
	3.4nm,0.6s						
IZV				*e*S	**Sg**	**00 41 54.2**	**-1.5**
	5.8nm,0.6s						
IZV	**Izvestkoviy**	**3.53**	**57**	Pg	**Pb**	**00 41 07.4**	**+2.0**
	3.4nm,0.6s						
IZV				Lg	Lg	00 41 54.2	
	5.8nm,0.6s						
TNSS	**Tian-Shan**	**3.75**	**59**	*e*P	**Pb**	**00 41 11.1**	**+1.9**
	1.9nm,0.4s						
TNSS				*e*S	**Sg**	**00 42 00.4**	**-2.3**
	4.3nm,0.6s						
TNSS	**Tian-Shan**	**3.75**	**59**	Pg	**Pb**	**00 41 11.0**	**+1.8**
	1.8nm,0.5s						
TNSS				Lg	Lg	00 42 00.4	
	4.3nm,0.6s						
MDOK	**Medeo**	**3.87**	**58**	*e*P	**Pb**	**00 41 12.5**	**+1.4**
	1.3nm,0.5s						
MDOK				*e*S	**Sg**	**00 42 03.4**	**-3.3**
	4.3nm,0.7s						
MDOK	**Medeo**	**3.87**	**58**	⇓Pg	**Pg**	**00 41 15.3**	**-1.2**
	4.2nm,1.1s						
MDOK				Lg	Lg	00 42 05.7	
	3.6nm,0.6s						
MDOK	**Medeo**	**3.87**	**58**	Pg	**Pb**	**00 41 12.5**	**+1.4**
	1.3nm,0.8s						
MDOK				Lg	Lg	00 42 03.1	
	4.3nm,0.7s						
KUU	**Kurty**	**3.88**	**45**	*e*P	**Pb**	**00 41 13.1**	**+1.8**
	0.7nm,0.2s						
KUU				*e*S	**Sg**	**00 42 04.0**	**-2.9**
	7.4nm,0.5s						
KUU	**Kurty**	**3.88**	**45**	Pg	**Pb**	**00 41 13.0**	**+1.8**
	0.7nm,0.3s						
KUU				Lg	Lg	00 42 04.0	
	7.4nm,0.5s						
KOTS	**Kotyrbulak**	**3.95**	**57**	*e*P	**Pb**	**00 41 15.0**	**+2.5**
	5.2nm,0.5s						
KOTS				*e*S	**Sg**	**00 42 07.5**	**-1.6**
	4.8nm,0.7s						
KOTS	**Kotyrbulak**	**3.95**	**57**	Pg	**Pb**	**00 41 15.0**	**+2.5**
	5.2nm,0.5s						
KOTS				Lg	Lg	00 42 07.5	
	4.8nm,0.7s						
KTBS	**Karatobe**	**3.96**	**49**	*e*P	**Pb**	**00 41 13.9**	**+1.4**
	0.5nm,0.3s						
KTBS				*e*S	**Sg**	**00 42 05.3**	**-4.0**
	13nm,0.5s						
KTBS	**Karatobe**	**3.96**	**49**	Pg	**Pb**	**00 41 13.7**	**+1.2**
	0.5nm,0.3s						
KTBS				Lg	Lg	00 42 05.3	
	13nm,0.5s						
BTLS	**Baital**	**4.00**	**15**	*e*P	**Pb**	**00 41 16.2**	**+3.1**
	0.3nm,0.1s						
BTLS				*e*S	**Sg**	**00 42 10.1**	**-0.5**
	6.0nm,0.3s						
BTLS	**Baital**	**4.00**	**15**	Pg	**Pb**	**00 41 16.2**	**+3.1**
	0.6nm,0.2s						
BTLS				Lg	Lg	00 42 10.1	
	6.0nm,0.4s						
CHKK	**Chushkaly**	**4.22**	**49**	*e*P	**Pb**	**00 41 19.2**	**+2.3**
	2.9nm,0.1s						
CHKK				*e*S	**Sg**	**00 42 14.3**	**-3.4**
	4.6nm,0.4s						
CHKK	**Chushkaly**	**4.22**	**49**	Pg	**Pb**	**00 41 18.4**	**+1.5**
	3.9nm,0.0s						
CHKK				Lg	Lg	00 42 13.7	
	4.6nm,0.4s						

IDC 19 00:50:37.3±4.7**, 1°.50S**×**136°.08E, h0**^{km}**, mb3.3**/2**, mb1 3.6**/3**, mb1mx3.4**/28**, mbtmp3.4**/3**, ML3.3**/1**, Error ellipse: s-maj=217.8km s-min=30.7km az=80.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.41**	**185**	P	Pn	00 54 52.7	-1.5
	0.1nm,0.3s,baz=7.3,slow=13,SNR=3.1						
ASAR	**Alice Springs**	**22.14**	**185**	P	P	00 55 35.6	+0.9
	1.3nm,0.7s,baz=11,slow=11,SNR=10						
MKAR	**Makanchi Array**	**67.24**	**323**	P	P	01 01 33.5	-0.2
	0.2nm,0.7s,baz=112,slow=7.1,SNR=2.2						

ROM 19 00:50:58.0±0.1**, 43°.422N**±0°.003×**12°.506E**±0°.005**, h6**^{km}±1^{km}**, ML1.0**/7**, 3C, Error ellipse: s-maj=0.4km s-min=0.1km az=67.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATFO	**Monte Foce - G**	**0.07**	**139**	P	Pg	00 50 60.0	+0.1
ATFO				S	Sg	00 51 01.4	+0.2
ATFO				AML	AML		
	comp=E,166µm,0.2s						
ATFO				AML	AML		
	comp=E,166µm,0.2s						
ATFO				AML	AML		
	comp=N,144µm,0.2s						
ATPI	**Pietralunga -**	**0.08**	**291**	P	Pg	00 51 00.2	+0.2
ATPI				S	Sg	00 51 01.8	+0.5
ATPI				AML	AML		
	comp=E,94µm,0.6s						
ATPI				AML	AML		
	comp=N,120µm,0.2s						
ATPI				AML	AML		
	comp=N,120µm,0.2s						
ATPI				AML	AML		
	comp=E,94µm,0.6s						
ATVO	**AVT- Monte Val**	**0.08**	**241**	⇑P	Pg	00 51 00.1	+0.2
ATVO				S	Sg	00 51 01.8	+0.4
ATVO				AML	AML		
	comp=E,212µm,0.2s						
ATVO				AML	AML		
	comp=N,168µm,0.3s						
ATVO				AML	AML		
	comp=E,212µm,0.2s						
PIEI	**Pieia**	**0.12**	**10**	⇑P	Pg	00 51 00.9	+0.4
PIEI				S	Sg	00 51 03.4	+1.1
PIEI				AML	AML		
	comp=E,220µm,0.3s						
PIEI				AML	AML		
	comp=N,185µm,0.3s						
MURB	**Monte Urbino**	**0.16**	**175**	⇑P	Pg	00 51 01.9	+0.6
MURB				AML	AML		
	comp=E,150µm,0.3s						
MURB				AML	AML		
	comp=N,112µm,1.0s						
NARO	**Abbazia di Nar**	**0.20**	**16**	P	Pg	00 51 02.3	+0.3
NARO				S	Sg	00 51 05.7	+1.1
NARO				AML	AML		
	comp=E,61µm,0.2s						
NARO				AML	AML		
	comp=N,40µm,0.7s						
NARO				AML	AML		
	comp=N,40µm,0.7s						
BADI	**Badiali**	**0.21**	**295**	P	Pg	00 51 02.8	+0.6
BADI				S	Sg	00 51 06.5	+1.5
BADI				AML	AML		
	comp=E,41µm,0.9s						
BADI				AML	AML		
	comp=N,47µm,0.9s						
BADI				AML	AML		
	comp=E,41µm,0.9s						
ATCC	**AVT- Casa Cast**	**0.26**	**158**	P	Pg	00 51 03.7	+0.7
ATCC				S	Sb	00 51 08.5	-1.1
ATCC				AML	AML		
	comp=E,87µm,0.6s						
ATCC				AML	AML		
	comp=N,73µm,0.1s						

*ANF **19** 00:54:15.7±1.0, 40°.40N×124°.73W, h0^{km}, ML2.1/5, ML2.9/9, Error ellipse: s-maj=8.4km s-min=5.4km az=90.0*
*NEIC **19** 00:54:17.5±1.9, 40°.31N±0°.03×124°.70W±0°.04, h10^{km}±2^{km}, Error ellipse: s-maj=5.7km s-min=4.3km az=88.0*
*NCEDC **19** 00:54:20.1±2.8, 40°.31N±0°.02×124°.50W±0°.02, h7^{km}±5^{km}, ML3.0/13, Error ellipse: s-maj=3.3km s-min=2.7km az=174.0*
ISC 19 00:54:15.5±1.7**, 40°.34N**±0°.03×**124°.66W**±0°.06**, h0**^{km}±12^{km}**, n79,** σ1^{s}.**25**/87**, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCTM	**Capetown**	**0.28**	**61**		**Pg**	**00 54 20.7**	**-0.2**
KCTM					**Sg**	**00 54 25.4**	**+0.9**
KSMM	**Slide Mountain**	**0.40**	**113**		**Pb**	**00 54 26.0**	**+0.4**
KMPM	**Mount Pierce**	**0.42**	**79**		**Pg**	**00 54 23.3**	**-0.2**
KMPM					**Sg**	**00 54 27.1**	**-1.8**
KCRM	**Chalk Rock**	**0.65**	**82**		**Pn**	**00 54 31.7**	**-0.3**
JCC	**Jacoby Creek,**	**0.68**	**45**		**Sg**	**00 54 32.6**	**-4.6**
JCC	**Jacoby Creek,**	**0.68**	**45**		**Pn**	**00 54 32.2**	**-0.1**
KMRM	**Mail Ridge**	**0.74**	**99**		**Pn**	**00 54 33.2**	**0.0**
KHMM	**Horse Mountain**	**0.88**	**53**		**Pn**	**00 54 36.1**	**+0.7**
KCSM	**Cold Springs**	**0.90**	**77**		**Pn**	**00 54 36.0**	**+0.4**
KBSM	**Bell Springs**	**0.92**	**117**		**Pn**	**00 54 36.1**	**+0.3**
KRPM	**Rodgers**	**0.95**	**30**		**Pn**	**00 54 35.9**	**-0.3**
KPPM	**Pickett Peak**	**0.99**	**89**		**Pn**	**00 54 37.7**	**+0.8**
KIPM	**Iron Peak**	**1.05**	**120**		**Pn**	**00 54 37.8**	**+0.2**
KCPM	**Cahto Peak**	**1.05**	**128**		**Pn**	**00 54 37.8**	**+0.1**
KHBM	**Hayfork Bally**	**1.14**	**73**		**Pn**	**00 54 39.4**	**+0.4**
KFPM	**Farley Peak**	**1.18**	**126**		**Pn**	**00 54 39.6**	**+0.2**
KBNM	**Bluenose Ridge**	**1.21**	**111**		**Pn**	**00 54 40.1**	**+0.3**
GTC	**Three Chop Rid**	**1.27**	**138**		**Pg**	**00 54 40.6**	**+0.8**
KOMM	**Orleans Mounta**	**1.31**	**44**		**Pg**	**00 54 42.1**	**+1.5**
KRMB	**Red Mountain**	**1.31**	**25**		**Pg**	**00 54 42.4**	**+1.8**
LBPM	**Beegum Peak**	**1.36**	**90**		**Pg**	**00 54 42.6**	**+1.1**
KRKM	**Rackout Spring**	**1.38**	**124**		**Pg**	**00 54 42.4**	**+0.6**
GNAM	**Navarro Ridge**	**1.39**	**145**		**Pb**	**00 54 42.3**	**-0.1**
O02D	**Mt. Diablo Mer**	**1.44**	**96**		**Pg**	**00 54 44.0**	**+0.9**
O02D	**Mt. Diablo Mer**	**1.44**	**96**	P	**Pg**	**00 54 43.9**	**+0.7**
	baz=276						
O02D				S	**Sg**	**00 55 03.8**	**+2.1**
	baz=276						
LGPM	**Granite Peak**	**1.50**	**67**		**Pb**	**00 54 44.4**	**0.0**
GHOM	**Hamilton Openi**	**1.56**	**146**		**Pb**	**00 54 44.6**	**-0.6**
GHMM	**Hull Mountain**	**1.57**	**122**		**Pb**	**00 54 45.1**	**-0.5**
GROM	**Round Mountain**	**1.58**	**105**		**Pb**	**00 54 45.4**	**-0.3**
KSXB	**Camp Six Broad**	**1.60**	**21**		**Pb**	**00 54 46.4**	**+0.3**
N02D	**Trinity Center**	**1.61**	**66**		**Pb**	**00 54 46.2**	**-0.1**
N02D	**Trinity Center**	**1.61**	**66**	P	**Pb**	**00 54 46.1**	**-0.1**
	baz=244,SNR=25						
N02D				S	**Sg**	**00 55 07.5**	**+0.1**
	baz=244						
GVV	**Valley View**	**1.62**	**110**		**Pn**	**00 54 44.6**	**-1.0**
WDC	**Whiskeytown Da**	**1.63**	**81**		**Pb**	**00 54 45.6**	**-0.9**
WDC	**Whiskeytown Da**	**1.63**	**81**	Pg	**Pg**	**00 54 47.8**	**+1.0**
GASB	**Alder Springs**	**1.64**	**114**		**Pb**	**00 54 46.0**	**-0.7**
LBKM	**Bonanza King**	**1.69**	**63**		**Pb**	**00 54 47.5**	**0.0**
M02C	**Callahan**	**1.72**	**52**		**Pb**	**00 54 47.9**	**-0.2**
M02C	**Callahan**	**1.72**	**52**	P	**Pb**	**00 54 47.8**	**-0.4**
	baz=230						
M02C				S	**Sb**	**00 55 09.5**	**-0.9**
	baz=230						
GGUM	**Gualala**	**1.73**	**148**		**Pn**	**00 54 46.9**	**-0.1**
GSNM	**Snow Mountain**	**1.80**	**141**		**Pn**	**00 54 48.0**	**+0.1**
HOPS	**Hopland Field**	**1.82**	**137**		**Pn**	**00 54 48.4**	**+0.4**
KTRM	**Thompson Ridge**	**1.84**	**31**		**Pb**	**00 54 49.9**	**-0.3**
GTSM	**Trough Springs**	**1.89**	**122**		**Pb**	**00 54 49.7**	**-1.2**
L02E	**Cave Junction**	**1.98**	**23**	Pb	**Pb**	**00 54 52.2**	**-0.3**
	baz=200,SNR=7.9						
L02E				S	**Sb**	**00 55 16.5**	**-1.2**
	baz=200						
GMKM	**Mount Konoctai**	**1.99**	**133**		**Pb**	**00 54 51.4**	**-1.3**
LAMM	**Antelope Mount**	**1.99**	**50**		**Pb**	**00 54 52.2**	**-0.6**
GACM	**Adobe Creek**	**2.02**	**136**		**Pn**	**00 54 51.2**	**+0.3**
GCVM	**Cloverdale**	**2.02**	**140**		**Pn**	**00 54 51.1**	**+0.2**
YBH	**Yreka Blue Hor**	**2.02**	**46**		**Pb**	**00 54 52.5**	**-0.7**
LSHM	**Sage Hen Hill**	**2.04**	**76**		**Pb**	**00 54 52.6**	**-1.0**
LGBM	**Gray Butte**	**2.12**	**61**		**Pb**	**00 54 54.5**	**-0.5**
M03C	**McCloud**	**2.14**	**63**		**Pb**	**00 54 54.6**	**-0.6**
O03E	**Paynes Creek**	**2.18**	**90**	P	**Pn**	**00 54 53.8**	**+0.6**
	baz=271						
LMPM	**Military Pass**	**2.21**	**58**		**Pb**	**00 54 56.1**	**-0.4**
LBFM	**Black Fox Moun**	**2.33**	**64**		**Pb**	**00 54 57.5**	**-1.0**
K02D	**Willamette Mer**	**2.47**	**17**	Pb	**Pb**	**00 55 00.0**	**-0.8**
	baz=195						
K02D				S	**Sn**	**00 55 27.9**	**0.0**
	baz=195						
LGMM	**Garner Mountai**	**2.48**	**59**		**Pb**	**00 54 59.4**	**-1.7**
ORV	**Oroville**	**2.55**	**107**		**Pn**	**00 54 59.1**	**+0.9**
L04D	**Klamath Falls**	**2.58**	**43**		**Pb**	**00 55 01.9**	**-0.8**
L04D	**Klamath Falls**	**2.58**	**43**	Pb	**Pb**	**00 55 02.0**	**-0.8**
	baz=222,SNR=20						
L04D				S	**Sb**	**00 55 32.2**	**-2.9**
	baz=222						
HUMO	**Hull Mountain**	**2.60**	**29**		**Pb**	**00 55 01.2**	**-1.8**
NOLM	**Olema**	**2.72**	**147**		**Pb**	**00 55 02.9**	**-2.0**
J01E	**Myrtle Point**	**2.87**	**11**	S	**Sn**	**00 55 37.7**	**0.0**
	baz=189						
K04D	**Chiloquin, OR**	**3.16**	**43**	S	**Sn**	**00 55 46.0**	**+1.0**
	baz=223						
AFDM	**Forest Hills D**	**3.17**	**115**		**Pn**	**00 55 08.3**	**+1.7**
BEKR	**Beckworth**	**3.33**	**97**	Pn	**Pn**	**00 55 10.8**	**+1.8**
I03D	**Drain, OR**	**3.49**	**16**	S	**Sn**	**00 55 53.2**	**+0.1**
	baz=195						
JFP	**Foothills Park**	**3.55**	**146**		**Pn**	**00 55 12.2**	**+0.4**
MOD	**Modoc Plateau**	**3.64**	**63**	Pn	**Pn**	**00 55 15.2**	**+2.0**
JBNB	**Ben Lomond Mou**	**3.76**	**148**		**Pn**	**00 55 15.2**	**+0.3**
VCNR	**Virginia City**	**4.00**	**104**	Pn	**Pn**	**00 55 19.8**	**+1.6**
PNTR	**Pine Nut**	**4.10**	**106**		**Pn**	**00 55 21.5**	**+1.9**
PAHR	**Pah Rah Range**	**4.10**	**97**		**Pn**	**00 55 20.4**	**+0.9**
SAO	**San Andreas Ge**	**4.37**	**144**	Pn	**Pn**	**00 55 24.2**	**+1.1**
YERR	**Yerington**	**4.39**	**106**		**Pn**	**00 55 26.6**	**+3.0**
PINE	**Pine Mountain**	**4.42**	**38**		**Pn**	**00 55 27.0**	**+2.9**
HAST	**Hastings Reser**	**4.64**	**147**		**Pn**	**00 55 27.2**	**+0.3**
BPIM	**Pinnacles**	**4.72**	**143**		**Pn**	**00 55 32.1**	**+4.1**

ANF 19 00:54:21.7±1.6**, 40°.61N**×**123°.40W, h16**^{km}±8^{km}**, Error ellipse: s-maj=16.3km s-min=5.9km az=87.0, Northern California**

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

O02D	Mt. Diablo Mer	0.64	132	P	Pg	00 54 34.4	+0.1
	baz=313						
N02D	Trinity Center	0.65	55	P	Pg	00 54 34.4	0.0
	baz=235						
M02C	Callahan	0.89	28	P	Pb	00 54 38.8	-0.1
	baz=208,SNR=23						
M02C				S	Sn	00 54 51.8	-0.5
	baz=208						
O03E	Paynes Creek	1.26	104	P	Pn	00 54 44.8	+0.1
	baz=285						
O03E				S	Sn	00 55 01.6	+0.1
	baz=285						
L04D	Klamath Falls	1.81	27	P	Pn	00 54 52.5	+0.1
	baz=207						

IDC 19 00:55:13.0±1.9**, 2°.36N×124°.10E, h0^{km}, mb3.5**/3**,**
mb1 3.7/3**, mb1mx3.4**/35**, mbtmp3.5**/3**, Error ellipse:**
s-maj=214.5km s-min=27.1km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	24.34	156	P	P	01 00 31.9	-0.9
	1.1nm,0.7s,baz=334,slow=11,SNR=7.2						
ASAR	Alice Springs	27.57	160	P	P	01 01 03.7	+1.6
	0.2nm,0.5s,baz=342,slow=8.0,SNR=1.9						
MKAR	Makanchi Array	57.22	327	P	P	01 05 01.8	-0.4
	0.2nm,0.4s,baz=123,slow=7.3,SNR=5.4						

SOME ***19*** *01:31:41.9, 41°.03N×72°.57E, h5^{km}*
IDC ***19*** *01:31:43.7±0.7, 41°.19N×72°.50E, h0^{km}, mb4.1/18,*
mb1 4.1/26, mb1mx3.9/68, mbtmp4.0/26, ML3.3/8, Error
ellipse: s-maj=13.0km s-min=7.8km az=145.0
ISU ***19*** *01:31:44.4, 41°.18N×72°.52E, h10^{km}*
KRNET ***19*** *01:31:45.5±0.1, 41°.20N×72°.54E, h16^{km}, mb4.5*
KNET ***19*** *01:31:45.5±0.5, 41°.23N×72°.58E, h6^{km}±2^{km}, ml4.1, Error*
ellipse: s-maj=5.8km s-min=3.2km az=117.0
NEIC ***19*** *01:31:46.4±1.8, 41°.21N±0°.06×72°.55E±0°.06, h17^{km}±5^{km},*
mb4.1/11, Error ellipse: s-maj=9.6km s-min=4.5km
az=145.0
MOS ***19*** *01:31:46.0±1.6, 41°.20N×72°.51E, h23^{km}, mb4.3/9, Error*
ellipse: s-maj=7.0km s-min=5.2km az=78.6
NNC ***19*** *01:31:46.3±0.8, 41°.23N×72°.57E, h0^{km}, mb4.7, mpv4.4,*
Error ellipse: s-maj=8.0km s-min=3.6km az=1.0
ISC 19 01:31:45.9±0.9**, 41°.22N**±0°.02×**72°.54E**±0°.01**, h16**^{km}±5^{km}**,**
n199, σ2.^{s}11/280**, mb4.1**/25**, 47C-35D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARSB	Arslanbob	0.35	72	⇓*i*P	Pg	01 31 52.5	-0.8
	baz=70						
ARSB				⇓*i*S	Sg	01 31 57.2	-1.1
	baz=70						
ARSB	Arslanbob	0.35	72		Pg	01 31 52.7	-0.6
ARSB				Sg	Sg	01 31 58.0	-0.4
ARSB	Arslanbob	0.35	72	*e*P	Pg	01 31 52.1	-1.2
ARSB				*e*S	Sg	01 31 57.8	-0.5
ANR	Andizhan	0.48	197	*e*P	Pg	01 31 54.1	-1.5
ANR				*e*S	Sg	01 32 01.2	-0.8
ARK	Arkit	0.73	323	⇓*i*P	Pg	01 31 59.3	-0.9
	baz=24						
ARK				⇓*i*S	Sg	01 32 09.2	-0.7
	baz=24						
ARK	Arkit	0.73	323	*i* P	Pg	01 31 59.0	-1.2
ARK				S	Sg	01 32 08.7	-1.2
FRG	Fergana	0.75	230	P	Pn	01 32 03.6	+1.8
FRG				S	Sn	01 32 13.9	+1.1
AML	Almayashu	1.26	43	⇓*i*P	Pn	01 32 09.3	+0.1
	baz=42						
AML				⇓*i*S	Sn	01 32 26.2	+0.2
	baz=42						
AML	Almayashu	1.26	43	P	Pn	01 32 09.3	+0.1
	573nm,0.4s,SNR=390						
AML				⇓S	Sg	01 32 27.1	+0.3
	3μm,0.5s						
ARLS	Aral	1.48	64	⇑*i*P	Pb	01 32 13.1	-0.1
	baz=63						
ARLS				⇑*i*S	Sg	01 32 33.5	-0.4
	baz=63						
MRKS	Merke	1.61	18	⇑*i*P	Pb	01 32 15.6	+0.2
	442nm,0.4s						
MRKS				*e*S	Sg	01 32 39.0	+1.1
	2μm,0.5s						
MRKS	Merke	1.61	18	P	Pb	01 32 15.4	+0.1
	442nm,0.4s						
MRKS				S	Sg	01 32 39.1	+1.1
	2μm,0.5s						
EKS2	Erkin-Say	1.71	32	⇓*i*P	Pb	01 32 17.4	+0.2
	baz=32						
EKS2				⇓*i*S	Sg	01 32 40.1	-1.1
	baz=32						
EKS2	Erkin-Say	1.71	32	P	Pb	01 32 17.3	+0.2
	276nm,0.5s,SNR=60						
EKS2				⇑S	Sg	01 32 42.0	+0.8
	683nm,0.6s						
BTK	Batken	1.75	229	⇑*i*P	Pb	01 32 16.9	-0.8
	baz=30						
BTK				⇑*i*S	Sb	01 32 40.2	+0.8
	baz=30						
BTK	Batken	1.75	229	*i* P	Pn	01 32 16.7	+1.1
BTK				*i* S	Sb	01 32 39.9	+0.5
UCH	Uchtor	1.79	55	⇓*i*P	Pb	01 32 19.0	+0.4
	baz=55						
UCH				⇓*i*S	Sg	01 32 42.5	-1.2
	baz=55						
UCH	Uchtor	1.79	55	⇓P	Pb	01 32 18.7	+0.1
	221nm,0.2s,SNR=730						
UCH				⇑S	Sg	01 32 44.8	+1.1
	2μm,0.6s						
DZA	Taraz	1.90	332	*e*P	Pb	01 32 21.1	+0.8
	942nm,0.1s						
DZA				*e*S	Sg	01 32 47.6	+0.4
	2μm,0.2s						
DZA	Taraz	1.90	332	Pg	Pb	01 32 20.3	0.0
	942nm,0.1s						
DZA				Lg	Lg	01 32 47.0	
	2μm,0.2s						
DZA	Taraz	1.90	332	*e*PN	Pb	01 32 21.1	+0.8
DZA				*e*S	Sg	01 32 47.6	+0.4
CHRV	Charvak	1.99	283	*e*P	Pb	01 32 20.8	-1.0
CHRV				S	Sg	01 32 49.7	-0.4
AAK	Ala-Archa	2.04	45	Pn	Pb	01 32 23.0	+0.4
	61nm,0.3s,baz=194,slow=5.4,SNR=559						
AAK				Lg	Lg	01 32 51.5	
	62nm,0.3s,baz=123,slow=19,SNR=20						
AAK	Ala-Archa	2.04	45	⇑*i*P	Pb	01 32 22.3	-0.3
	baz=45						
AAK				⇑*i*S	Sb	01 32 48.7	+0.9
	baz=45						
AAK	Ala-Archa	2.04	45	⇑P	Pb	01 32 23.0	+0.4
	223nm,0.4s,SNR=299						
AAK				⇓S	Sg	01 32 51.8	+0.3
	724nm,0.3s						
AAK	Ala-Archa	2.04	45	⇑Pg	Pb	01 32 22.9	+0.2
	140nm,0.5s						
AAK				⇑Lg	Lg	01 32 51.5	
	718nm,0.7s						
AAK	Ala-Archa	2.04	45	*c* *i*PN	Pb	01 32 22.8	+0.2
AAK				pmax	pmax		
	comp=Z,108nm,0.7s						
AAK	Ala-Archa	2.04	45		Pn	01 32 20.4	+0.7
IUG	Iuzhnay	2.10	297	*e*P	Pb	01 32 23.5	-0.2
	comp=Z,97nm,0.2s						
IUG				*e*S	Sg	01 32 52.1	-1.3
	comp=Z,4μm,0.3s						
IUG	Iuzhnay	2.10	297	*e*PN	Pb	01 32 23.5	-0.2
IUG				*e*S	Sg	01 32 52.2	-1.3
KZA	Kyzart	2.21	66	⇑*i*P	Pb	01 32 25.5	-0.1
	baz=66						
KZA				⇑*i*S	Sb	01 32 53.1	+0.2
	baz=66						
KZA	Kyzart	2.21	66	⇑P	Pb	01 32 25.6	-0.1
	comp=Z,261nm,0.3s,SNR=230						
KZA				⇓S	Sg	01 32 56.0	-0.9
	comp=Z,607nm,0.4s						
FRU1	Bishkek	2.23	44	⇑*i*P	Pb	01 32 25.2	-0.6
	baz=43						
FRU1				⇑*i*S	Sb	01 32 53.2	0.0
	baz=43						
FRU1	Bishkek	2.23	44	PN	Pn	01 32 23.4	+1.1
FRU1	Bishkek	2.23	44		Pn	01 32 23.4	+1.1
TGS	TashGRES	2.29	276	*e*P	Pg	01 32 30.0	+0.2
TGS				S	Sg	01 33 01.8	+2.4
KBK	Karagaybulak	2.30	50	⇑*i*P	Pb	01 32 26.6	-0.6
	baz=50						
KBK				⇑*i*S	Sb	01 32 55.4	0.0
	baz=50						
KBK	Karagaybulak	2.30	50	⇑P	Pb	01 32 27.2	0.0
	comp=Z,257nm,0.4s,SNR=372						
KBK				⇓S	Sg	01 32 59.6	-0.4
	comp=Z,2μm,0.5s						
KK31	Karatay Array	2.42	322	⇑Pn	Pb	01 32 27.5	-1.6
	comp=Z,104nm,0.3s,baz=135,slow=13,SNR=1812						
KK31				Lg	Lg	01 33 01.8	
	comp=Z,291nm,0.3s,baz=144,slow=26,SNR=9.0						
KK31	Karatay Array	2.42	322	PN	Pn	01 32 25.9	+1.1
KK31	Karatay Array	2.42	322		Pn	01 32 25.9	+1.1
KKAR	Karatay Array	2.42	322	PN	Pn	01 32 26.2	+1.4
KKAR	Karatay Array	2.42	322		Pn	01 32 26.1	+1.4
KKAR	Karatay Array	2.42	322		Pn	01 32 26.1	+1.3
CHMS	Chumysh	2.42	42	⇑*i*P	Pb	01 32 28.0	-1.1
	baz=42						
CHMS				⇑*i*S	Sb	01 32 58.2	-0.6
	baz=42						
CHMS	Chumysh	2.42	42	⇓P	Pb	01 32 27.8	-1.4
	comp=Z,312nm,0.4s,SNR=191						
CHMS				⇑S	Sg	01 33 01.7	-2.2
	comp=Z,396nm,0.4s						
CHMS	Chumysh	2.42	42	⇑Pn	Pb	01 32 28.2	-1.0
	comp=Z,372nm,0.6s						
CHMS				⇓Lg	Lg	01 33 02.0	
	comp=Z,313nm,0.6s						
CHMS	Chumysh	2.42	42	*i* PN	Pb	01 32 28.1	-1.1
CHMS				pmax	pmax		
	comp=Z,372nm,0.6s						
TAS	Tashkent	2.45	274	⇑*i*P	Pb	01 32 27.7	-1.9
	baz=74						
TAS				⇑*e*S	Sb	01 32 59.3	-0.2
	baz=74						
TAS	Tashkent	2.45	274	PN	Pn	01 32 26.3	+1.1
TAS	Tashkent	2.45	274		Pn	01 32 26.3	+1.1
TAS	Tashkent	2.45	274	*e*P	Pb	01 32 30.4	+0.8
TAS				S	Sg	01 33 02.2	-2.5
CHM	Chimkent	2.46	298	PN	Pb	01 32 28.1	-1.7
USP	Ospenovka	2.51	35	⇑*i*P	Pb	01 32 29.3	-1.4
	baz=34						
USP				⇑*i*S	Sb	01 33 00.0	-1.4
	baz=34						
USP	Ospenovka	2.51	35	P	Pb	01 32 29.5	-1.2
	comp=Z,224nm,0.5s,SNR=336						
USP				⇓S	Sb	01 33 03.2	+1.8
	comp=Z,958nm,0.4s						
BRLS	Borolday	2.71	313	*e*P	Pb	01 32 33.1	-0.9
	comp=Z,1.4nm,0.4s						
BRLS				*e*S	Sb	01 33 08.6	+1.6
	comp=Z,133nm,0.4s						
BRLS	Borolday	2.71	313	Pg	Pb	01 32 33.1	-0.9
	comp=Z,1.4nm,0.4s						
BRLS				Lg	Lg	01 33 08.6	
	comp=Z,133nm,0.4s						
BOOM	Boomskoye usch	2.84	62	⇓*i*P	Pn	01 32 33.4	+2.6
	baz=62						
BOOM				⇓*i*S	Sb	01 33 08.2	-2.7
	baz=62						
BOOM	Boomskoye usch	2.84	62	PN	Pn	01 32 31.9	+1.2
BOOM	Boomskoye usch	2.84	62		Pn	01 32 31.9	+1.2
ULHL	Ulahol	2.96	68	⇓*i*P	Pb	01 32 35.5	-2.8
	baz=68						
ULHL				⇓*i*S	Sb	01 33 11.2	-3.1
	baz=68						
ULHL	Ulahol	2.96	68	⇑P	Pb	01 32 35.6	-2.8
	comp=Z,23nm,0.3s,SNR=25						
KSH	Kashi	3.12	122	Pn	Pn	01 32 35.9	+1.3
KSH				Sn	Sn	01 33 13.1	+1.5
KST	Kastek	3.13	53	*e*P	Pb	01 32 42.4	+1.1
	comp=Z,235nm,0.7s						
KST				*e*S	Sg	01 33 24.0	-2.6
	comp=Z,613nm,0.7s						
KST	Kastek	3.13	53	Pg	Pb	01 32 42.4	+1.1
	comp=Z,235nm,0.7s						
KST				Lg	Lg	01 33 24.0	
	comp=Z,613nm,0.7s						
DGS	Degeres	3.14	49	*e*P	Pb	01 32 43.0	+1.6
	comp=Z,106nm,0.5s						
DGS				*e*S	Sg	01 33 24.9	-2.0
	comp=Z,482nm,0.5s						
DGS	Degeres	3.14	49	Pg	Pb	01 32 42.3	+0.9
	comp=Z,91nm,0.4s						
DGS				Lg	Lg	01 33 24.0	
	comp=Z,482nm,0.5s						
MTBS	Maitube	3.47	55	*e*P	Pb	01 32 47.6	+0.7
	comp=Z,49nm,0.4s						
MTBS				*e*S	Sg	01 33 33.5	-3.7
	comp=Z,172nm,0.4s						
MTBS	Maitube	3.47	55	Pg	Pb	01 32 48.2	+1.3
	comp=Z,49nm,0.4s						
MTBS				Lg	Lg	01 33 33.8	
	comp=Z,172nm,0.4s						
MTBS	Maitube	3.47	55	*e*PN	Pb	01 32 47.7	+0.7
MTBS				*e*S	Sg	01 33 33.5	-3.7
IZV	Izvestkoviy	3.53	58	*e*P	Pb	01 32 48.5	+0.3
	comp=Z,143nm,0.6s						
IZV				*e*S	Sb	01 33 34.7	+3.8
	comp=Z,246nm,0.7s						
IZV	Izvestkoviy	3.53	58	Pg	Pb	01 32 48.5	+0.3
	comp=Z,143nm,0.6s						
IZV				Lg	Lg	01 33 34.7	
	comp=Z,246nm,0.7s						
TNSS	Tian-Shan	3.75	59	*e*P	Pb	01 32 52.9	+0.9
	comp=Z,58nm,0.5s						
TNSS				*e*S	Sg	01 33 42.7	-3.7
	comp=Z,207nm,0.7s						
TNSS	Tian-Shan	3.75	59	Pg	Pb	01 32 54.2	+2.2
	comp=Z,58nm,0.5s						
TNSS				Lg	Lg	01 33 44.1	
	comp=Z,207nm,0.7s						
TNSS	Tian-Shan	3.75	59	*e*PN	Pb	01 32 52.9	+0.9
TNSS				*e*S	Sg	01 33 42.7	-3.7
AAA	Alma-Ata	3.81	57	*e*P	Pb	01 32 54.1	+1.3
	comp=Z,58nm,0.4s						
AAA				*e*S	Sg	01 33 45.4	-2.9
	comp=Z,192nm,0.6s						
AAA	Alma-Ata	3.81	57	Pg	Pb	01 32 54.4	+1.5
	comp=Z,58nm,0.4s						
AAA				Lg	Lg	01 33 45.4	
	comp=Z,192nm,0.6s						
AAA	Alma-Ata	3.81	57	*e*PN	Pn	01 32 47.9	+3.9
AAA				*e*S	Sg	01 33 47.0	-1.3
AAA				pmax	pmax		
	comp=Z,48nm,0.4s						
AAA				smax	smax		
	comp=N,149nm,0.6s						
KNDC	Almaty	3.85	57	⇓Pn	Pn	01 32 48.0	+3.5
	comp=N,26nm,0.5s						
KNDC				⇓Pg	Pg	01 32 58.0	-1.6
	comp=N,126nm,0.6s						
KNDC				⇓Lg	Lg	01 33 47.8	
	comp=N,228nm,0.7s						
KNDC	Almaty	3.85	57	PN	Pn	01 32 48.0	+3.5
MDOK	Medeo	3.87	58	*e*P	Pb	01 32 55.0	+1.0
	comp=N,91nm,0.7s						
MDOK				*e*S	Sb	01 33 45.4	+4.8
	comp=N,214nm,0.5s						
MDOK	Medeo	3.87	58	⇑Pn	Pn	01 32 48.3	+3.4
	comp=N,36nm,0.8s						
MDOK				⇑Pg	Pg	01 32 57.4	-2.7
	comp=N,101nm,0.6s						
MDOK				⇓Lg	Lg	01 33 46.7	
	comp=N,227nm,1.0s						
MDOK	Medeo	3.87	58	Pg	Pb	01 32 55.0	+1.0
	comp=N,91nm,0.7s						
MDOK				Lg	Lg	01 33 45.4	
	comp=N,214nm,0.5s						
MDOK	Medeo	3.87	58	*e*PN	Pb	01 32 55.0	+1.0
MDOK				*e*S	Sb	01 33 45.4	+4.8
KUU	Kurty	3.88	45	*e*P	Pb	01 32 55.2	+1.3
	comp=N,24nm,0.3s						
KUU				*e*S	Sg	01 33 45.8	-4.6
	comp=N,297nm,0.5s						
KUU	Kurty	3.88	45	*e*PN	Pb	01 32 55.2	+1.3
KUU				*e*S	Sg	01 33 45.8	-4.6
KOTS	Kotyrbulak	3.95	58	*e*P	Pb	01 32 57.3	+2.1
	comp=N,260nm,0.5s						
KOTS				*e*S	Sg	01 33 49.8	-2.9
	comp=N,227nm,0.5s						
KOTS	Kotyrbulak	3.95	58	Pg	Pb	01 32 57.3	+2.1
	comp=N,260nm,0.5s						
KOTS				Lg	Lg	01 33 49.8	
	comp=N,227nm,0.5s						
KTBS	Karatobe	3.95	49	*e*P	Pb	01 32 57.8	+2.6
	comp=N,32nm,0.4s						
KTBS				*e*S	Sg	01 33 50.3	-2.5
	comp=N,382nm,0.7s						
KTBS	Karatobe	3.95	49	Pg	Pb	01 32 57.8	+2.6
	comp=N,32nm,0.4s						
KTBS				Lg	Lg	01 33 50.3	
	comp=N,382nm,0.7s						
BTLS	Baital	3.98	16	*e*P	Pb	01 32 58.6	+3.0
	comp=N,25nm,0.6s						
BTLS				*e*S	Sg	01 33 52.0	-1.7
	comp=N,48nm,0.6s						
BTLS	Baital	3.98	16	*e*PN	Pb	01 32 58.6	+3.0
BTLS				*e*S	Sg	01 33 52.0	-1.7
ANVS	Anan'yevo	4.13	66	⇑*i*P	Pn	01 32 51.5	+3.0
	baz=66						
ANVS				⇑*i*S	Sn	01 33 39.0	+2.5
	baz=66						
CHKK	Chushkaly	4.21	50	*e*P	Pb	01 33 01.2	+1.6
	comp=N,31nm,0.5s						
CHKK				*e*S	Sg	01 33 56.7	-4.5
	comp=N,154nm,0.5s						
CHKK	Chushkaly	4.21	50	Pg	Pb	01 33 01.2	+1.6
	comp=N,31nm,0.5s						
CHKK				Lg	Lg	01 33 56.5	
	comp=N,154nm,0.5s						
CHKK	Chushkaly	4.21	50	*e*PN	Pb	01 33 01.2	+1.6
CHKK				*e*S	Sg	01 33 56.7	-4.5
SATY	Saty	4.73	65	*e*P	Pb	01 33 11.6	+3.0
	comp=N,48nm,0.8s						
SATY				*e*S	Sg	01 34 13.9	-4.0
	comp=N,103nm,0.8s						
SATY	Saty	4.73	65	Pg	Pb	01 33 11.6	+3.0
	comp=N,48nm,0.8s						
SATY				Lg	Lg	01 34 13.9	
	comp=N,103nm,0.8s						
SATY	Saty	4.73	65	*e*PN	Pb	01 33 11.6	+3.0
SATY				*e*S	Sg	01 34 13.9	-4.0
KURS	Kuram	4.75	60	*e*P	Pb	01 33 11.6	+2.8
	comp=N,28nm,0.6s						
KURS				*e*S	Sg	01 34 14.3	-4.1
	comp=N,78nm,0.6s						
ARXS	Arharly	4.91	51	*e*P	Pb	01 33 13.9	+2.3
	comp=N,24nm,0.5s						
ARXS				*e*S	Sg	01 34 18.8	-4.8
	comp=N,182nm,0.7s						
ARXS	Arharly	4.91	51	Pg	Pb	01 33 13.9	+2.3
	comp=N,24nm,0.5s						
ARXS				Lg	Lg	01 34 18.8	
	comp=N,182nm,0.7s						
KPKS	Kokpek	5.08	62	*e*P	Pb	01 33 17.5	+3.1
	comp=N,75nm,0.6s						
KPKS				*e*S	Sg	01 34 24.1	-4.8
	comp=N,153nm,0.5s						
KPKS	Kokpek	5.08	62	*e*PN	Pb	01 33 17.5	+3.1
KPKS				*e*S	Sg	01 34 24.1	-4.8
UZB	Uzynbulak	5.19	66	*e*P	Pb	01 33 20.2	+3.9
	comp=N,31nm,0.5s						
UZB				*e*S	Sg	01 34 28.6	-3.8
	comp=N,51nm,0.6s						
UZB	Uzynbulak	5.19	66	Pg	Pb	01 33 20.2	+3.9
	comp=N,31nm,0.5s						
UZB				Lg	Lg	01 34 28.6	
	comp=N,51nm,0.6s						
UZB	Uzynbulak	5.19	66	*e*PN	Pb	01 33 20.2	+3.9
UZB				*e*S	Sg	01 34 28.6	-3.8
SHLS	Shalkode	5.50	67	*e*P	Pg	01 33 30.5	-0.7
	comp=N,47nm,0.8s						
SHLS				*e*S	Sg	01 34 46.5	+4.2
	comp=N,75nm,0.8s						
SHLS	Shalkode	5.50	67	Pg	Pg	01 33 31.9	+0.7
	comp=N,47nm,0.8s						
SHLS				Lg	Lg	01 34 48.6	
	comp=N,75nm,0.8s						
PDGK	Podgornoye	5.57	65	Pg	Pb	01 33 26.1	+3.3
	comp=N,7.2nm,0.7s						
PDGK				Lg	Lg	01 34 38.8	
	comp=N,22nm,0.8s						
PDGK	Podgornoye	5.57	65	⇑Pn	Pn	01 33 10.9	+2.7
	comp=N,6.2nm,0.8s						
PDGK				⇓Pg	Pg	01 33 29.1	-3.5
	comp=N,31nm,0.9s						
PDGK				⇑Lg	Lg	01 34 42.7	
	comp=N,73nm,0.8s						
PDGK	Podgornoye	5.57	65	PN	Pn	01 33 10.6	+2.4
PDGK						01 33 28.8	
DJR	Jarkent	6.18	57	*e*P	Pb	01 33 37.9	+4.8
	comp=N,9.0nm,0.5s						
DJR				*e*S	Sg	01 34 58.1	-6.0
	comp=N,53nm,1.0s						
DJR	Jarkent	6.18	57	Pg	Pb	01 33 36.8	+3.7
	comp=N,4.2nm,0.6s						
DJR				Lg	Lg	01 34 57.5	
	comp=N,44nm,0.7s						
KAPS	Kapalarasan	6.43	48	*e*P	Pb	01 33 42.5	+5.2
	comp=N,4.4nm,0.5s						
KAPS				*e*S	Sg	01 35 06.5	-5.6
	comp=N,54nm,0.5s						
KBL	Kabul	7.21	204	PN	Pn	01 33 32.4	+1.5
KBL	Kabul	7.21	204		Pn	01 33 32.4	+1.5
CEP	Cherat	7.39	184	P	Pn	01 33 34.4	+1.1
CHCP	Chirah Chowk	7.56	175	P	Pn	01 33 36.5	+1.0
NIL	Nilore	7.57	175	P	Pn	01 33 36.9	+1.3
NIL	Nilore	7.57	175		Pn	01 33 36.9	+1.3
THW	Thamme Wali	8.43	185	P	Pn	01 33 46.3	-1.1
MAKZ	Makanchi	8.80	47	⇓Pn	Pn	01 33 54.7	+2.2
	comp=N,4.8nm,0.9s						
MAKZ				⇑Lg	Lg	01 36 26.0	
	comp=N,28nm,1.0s						
MAKZ	Makanchi	8.80	47	P	Pn	01 33 53.1	+0.7
MAKZ	Makanchi	8.80	47		Pn	01 33 53.1	+0.7
MK31	Makanchi Array	8.97	48	⇑Pn	Pn	01 33 56.7	+2.0
	comp=N,4.5nm,0.5s,baz=169,slow=19,SNR=2.5						
MK31				⇑Lg	Lg	01 36 28.1	
	comp=N,14nm,0.8s,baz=245,slow=28,SNR=4.0						
MK31	Makanchi Array	8.97	48	P	Pn	01 33 55.7	+1.0
MK31	Makanchi Array	8.97	48		Pn	01 33 54.8	+0.1
MKAR	Makanchi Array	8.97	48	Pn	Pn	01 33 57.2	+2.5
	comp=N,1.1nm,0.3s,baz=229,slow=14,SNR=56						
MKAR				Lg	Lg	01 36 31.6	
	comp=N,1.4nm,0.3s,baz=240,slow=26,SNR=6.4						
MKAR	Makanchi Array	8.97	48	P	Pn	01 33 55.2	+0.5
MKAR	Makanchi Array	8.97	48		Pn	01 33 55.2	+0.5
KURBB	Kurchatov Arra	10.29	22	Pn	Pn	01 34 12.9	+0.2
	comp=N,0.1nm,0.3s,baz=215,slow=12,SNR=18						
KURBB				Sn	Sn	01 36 04.8	-2.8
	comp=N,0.1nm,0.3s,baz=76,slow=30,SNR=4.9						
KURBB				Lg	Lg	01 37 11.2	
	comp=N,0.4nm,0.3s,baz=214,slow=28,SNR=5.5						
KURBB	Kurchatov Arra	10.29	22	⇑Pn	Pn	01 34 14.0	+1.3
	comp=N,4.6nm,0.5s						
KURBB				⇓Lg	Lg	01 37 10.1	
	comp=N,85nm,0.7s						
KURK	Kurchatov	10.40	22	⇓Pn	Pn	01 34 16.2	+2.0
	comp=N,2.8nm,0.9s						
KURK				⇓Lg	Lg	01 37 14.0	
	comp=N,112nm,1.1s						
KURK	Kurchatov	10.40	22	⇓*i*P	Pn	01 34 17.0	+2.8
KURK	Kurchatov	10.40	22		Pn	01 34 15.1	+0.9
HRA	Herat	10.62	233		Pn	01 34 17.4	-0.1
GEYT	Alibeck	11.61	258	Pn	Pn	01 34 30.0	-0.9
	comp=N,0.8nm,0.3s,baz=87,slow=8.8,SNR=3.5						
GEYT				Sn	Sn	01 36 35.9	-4.2
	comp=N,1.1nm,0.3s,baz=245,slow=39,SNR=1.9						
GEYT				Lg	Lg	01 37 56.7	
	baz=67,slow=42,SNR=1.5						
GEYT	Alibeck	11.61	258		Pn	01 34 29.8	-1.1
BVAR	Borovoye Array	11.90	354	Pn	Pn	01 34 35.3	+0.4
	comp=N,0.4nm,0.3s,baz=150,slow=12,SNR=9.4						
BVAR				Sn	Sn	01 36 41.6	-5.7
	comp=N,0.3nm,0.3s,baz=170,slow=18,SNR=1.9						
BVAR				Lg	Lg	01 38 00.3	
	comp=N,0.9nm,0.3s,baz=163,slow=29,SNR=3.8						
BRVK	Borovoye	11.95	353	⇑Pn	Pn	01 34 39.9	+4.4
	comp=N,5.1nm,0.6s						
BRVK				⇓Sn	Sn	01 36 54.6	+6.4
	comp=N,14nm,0.7s						
BRVK				⇑Lg	Lg	01 38 06.7	
	comp=N,57nm,1.2s						
BRVK	Borovoye	11.95	353	P	Pn	01 34 36.0	+0.6
BRVK	Borovoye	11.95	353		Pn	01 34 36.0	+0.6
ABKAR	Akbulak array	11.97	316		Pn	01 34 35.1	-0.6
DGZ	Jazzator, Alta	13.44	46	⇑*i*P	Pn	01 34 59.3	+3.3
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKTO	Aktyubinsk	13.67	317	Pn	Pn	01 34 58.7	-0.3
	comp=Z,0.3nm,0.3s,baz=128,slow=15,SNR=8.5						
AKTO				Sn	Sn	01 37 25.9	-4.5
	comp=Z,0.3nm,0.3s,baz=21,slow=15,SNR=1.5						

AKTO				Lg	Lg	01 38 57.9	
	comp=Z,0.2nm,0.3s,baz=355,slow=23,SNR=1.6						
ZAA0	Zalesovo Array	15.16	29		Pn	01 35 20.0	+0.7
ZAA0				IAmb	IAmb	01 35 28.1	
	comp=Z,3.7nm,0.7s						
ZALV	Zalesovo Beam	15.16	29	Pn	Pn	01 35 18.8	-0.4
	comp=Z,0.5nm,0.3s,baz=222,slow=12,SNR=4.2						
ZALV				Sn	Sn	01 38 08.3	+1.6
	comp=Z,0.5nm,0.3s,baz=228,slow=15,SNR=2.2						
ZALV				Lg	Lg	01 39 44.9	
	comp=Z,0.5nm,0.3s,baz=201,slow=19,SNR=3.5						
ZALV	Zalesovo Beam	15.16	29		Pn	01 35 19.5	+0.3
ARU	Arti	17.73	334	P	Pn	01 35 51.4	-0.5
	comp=Z,0.0nm,0.3s,baz=114,slow=3.8,SNR=5.0						
ARU				S	Sn	01 39 01.4	-7.7
	comp=Z,0.0nm,0.3s,baz=272,slow=23,SNR=1.6						
ARU				Lg	Lg	01 41 07.3	
	comp=Z,0.0nm,0.3s,baz=41,slow=21,SNR=1.4						
ARU	Arti	17.73	334	*d i*P	Pn	01 35 51.4	-0.5
ARU				S	Sn	01 39 09.1	+0.1
ARU				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ARU	Arti	17.73	334	P	Pn	01 35 52.0	+0.1
GNI	Garni	21.08	276	P	P	01 36 28.6	-1.0
	comp=Z,6.3nm,0.9s,baz=346,slow=3.4,SNR=6.1						
GNI	Garni	21.08	276	⇑*i*P	P	01 36 31.0	+1.4
GNI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GNI	Garni	21.08	276	P	P	01 36 28.4	-1.2
GNI				IAmb	IAmb	01 36 41.4	
	comp=Z,10nm,1.0s						
WSAR	Wadi Sarin	21.39	217	P	P	01 36 34.1	+1.3
	comp=Z,3.5nm,0.8s,baz=43,slow=10,SNR=4.6						
KBZ	Khabaz	21.96	286	P	P	01 36 40.4	+1.6
	comp=Z,1.6nm,0.8s,baz=190,slow=8.6,SNR=4.6						
KIV	Kislovodsk	22.10	287	*e*P	P	01 36 40.9	+0.5
KIV				pmax	pmax		
	comp=Z,13nm,0.9s						
KIRV	Kirov	22.70	328	P	P	01 36 46.6	+0.1
	comp=Z,6.4nm,0.6s,baz=291,slow=9.2,SNR=4.5						
ZAK	Zakamensk	23.17	56	*e*P	P	01 36 52.1	+0.5
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
VRH	Novokhopyorsk	23.39	306	*e*P	P	01 36 52.5	-1.2
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TLY	Talaya	23.68	53	⇓*i*P	P	01 36 59.2	+2.6
TLY				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	24.88	63	P	P	01 37 08.1	+0.1
	comp=Z,2.9nm,0.9s,baz=276,slow=10,SNR=15						
SONM	Songino Array	24.88	63	P	P	01 37 06.6	-1.4
VSR	Storozhevoye	24.97	305	*e*P	P	01 37 12.2	+3.8
VSR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ULN	Ulaanbaatar	25.33	63	⇑*i*P	P	01 37 11.6	-0.3
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ULN	Ulaanbaatar	25.33	63	P	P	01 37 11.6	-0.3
ULN				IAmb	IAmb	01 37 13.8	
	comp=Z,3.7nm,0.7s						
LPSR	Galich'ya Gora	25.40	308	*e*P	P	01 37 12.5	+0.2
LPSR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BR131	Keskin Array S	29.47	280	⇑*i*P	P	01 37 48.5	-0.7
BRTR	Keskin Array B	29.47	280	P	P	01 37 48.7	-0.5
	comp=Z,0.9nm,0.8s,baz=96,slow=9.9,SNR=8.3						
BRTR	Keskin Array B	29.47	280	P	P	01 37 49.3	+0.1
BRTR	Keskin Array B	29.47	280	P	P	01 37 49.3	+0.1
FINES	FINESS Array B	34.38	322	P	P	01 38 32.1	+0.3
	comp=Z,1.8nm,0.3s,baz=110,slow=9.2,SNR=25						
FINES	FINESS Array B	34.38	322	P	P	01 38 31.7	-0.1
ARCES	ARCESS Array B	37.32	335	P	P	01 38 57.0	+0.1
	comp=Z,3.5nm,0.5s,baz=105,slow=8.3,SNR=33						
ARCES	ARCESS Array B	37.32	335	P	P	01 38 57.4	+0.5
ARCES	ARCESS Array B	37.32	335	P	P	01 38 57.4	+0.5
TIXI	Tiksi	40.97	24	P	P	01 39 27.8	+0.4
	comp=Z,5.0nm,0.6s,baz=277,slow=6.2,SNR=14						
TIXI	Tiksi	40.97	24	P	P	01 39 28.0	+0.6
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TIXI	Tiksi	40.97	24	P	P	01 39 28.0	+0.6
GERES	GERESS Array B	41.35	301	P	P	01 39 31.0	0.0
	comp=Z,1.2nm,0.5s,baz=60,slow=5.3,SNR=5.4						
GERES	GERESS Array B	41.35	301	P	P	01 39 31.0	0.0
NB2	NORSAR Subarra	41.45	320	P	P	01 39 31.0	-0.5
	comp=Z,1.6nm,0.5s,baz=91,slow=8.6						
NOA	NORSAR Array B	41.45	320	P	P	01 39 31.1	-0.5
	comp=Z,1.6nm,0.5s,baz=91,slow=8.2,SNR=10						
KMBO	Kilima Mbogo	52.92	226	P	P	01 41 03.3	+1.6
	comp=Z,1.1nm,0.7s,baz=59,slow=12,SNR=4.0						
KMBO	Kilima Mbogo	52.92	226	P	P	01 41 01.4	-0.3
KMBO				IAmb	IAmb	01 41 06.9	
	comp=Z,2.6nm,0.8s						
RES	Resolute Bay	64.08	356	P	P	01 42 17.9	-0.5
	comp=Z,0.6nm,0.6s,baz=16,slow=5.8,SNR=3.5						
RES	Resolute Bay	64.08	356	P	P	01 42 18.8	+0.4
RES				pmax	pmax		
	comp=Z,1.0nm,1.1s						
RES	Resolute Bay	64.08	356	P	P	01 42 18.8	+0.4
TORD	Torodi Ar. Bea	67.08	268	P	P	01 42 37.1	-1.6
	comp=Z,1.1nm,0.7s,baz=49,slow=5.9,SNR=7.6						
TORD	Torodi Ar. Bea	67.08	268	P	P	01 42 37.5	-1.2
INK	Inuvik	69.06	10	P	P	01 42 50.2	-0.1
	comp=Z,2.3nm,0.6s,baz=0.6,slow=8.2,SNR=11						
INK	Inuvik	69.06	10	P	P	01 42 50.7	+0.4
INK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
INK	Inuvik	69.06	10	P	P	01 42 50.7	+0.4
INK				IAmb	IAmb	01 42 56.1	
	comp=Z,1.9nm,0.8s						
C36M	Paulatuk	69.07	6	P	P	01 42 49.9	-0.5
ILAR	Eielson Array	69.92	17	P	P	01 42 55.1	-0.6
	comp=Z,0.8nm,0.8s,baz=332,slow=4.8,SNR=12						
ILAR	Eielson Array	69.92	17	P	P	01 42 54.8	-0.9
DBIC	Dimbokro	76.16	267	P	P	01 43 35.1	+1.7
	comp=Z,2.6nm,0.8s,baz=14,slow=6.1,SNR=3.6						
YKA	Yellowknife Ar	76.48	3	P	P	01 43 34.0	-0.4
	comp=Z,1.6nm,0.6s,baz=353,slow=5.6,SNR=47						

*IDC **19** 01:36:45.9±3.5, 19°.96S×69°.30W, h85^{km}±32^{km}, mb3.1/4, mb1 3.5/5, mb1mx3.3/20, mbtmp3.5/5, Error ellipse: s-maj=44.5km s-min=26.6km az=88.0*

*GUC **19** 01:36:51.3±0.6, 19°.42S×69°.13W, h127^{km}±2^{km}, ML3.2*

ISC 19 01:36:51.9±0.9**, 19°.47S**±0°.03×**69°.19W**±0°.08**, h124**^{km}±6^{km}**, n20, σ1^s.12**/35**, mb3.3**/4**, 7C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO01	Chusmiza	0.20	181	⇓*i*P	Pn	01 37 09.2	-0.5
GO01				*i* S	Sn	01 37 23.0	0.0
PB11	IPOC Station P	0.53	236	⇑*i*P	Pn	01 37 10.5	-0.2
PB11				*i* S	Sn	01 37 25.0	+0.2
PB11				IAML		01 37 25.6	
	comp=E,2µm,0.2s						
PB08	IPOC Station P	0.67	177	⇑*i*P	Pn	01 37 11.9	0.0
PB08				*i* S	Sn	01 37 27.4	+0.3
PB08				IAML		01 37 29.5	
	comp=E,941nm,0.2s						
PSGC	Pisagua	0.89	261	⇑*i*P	Pn	01 37 12.9	-0.4
PSGC				*i* S	Sn	01 37 29.4	-0.2
PB16	IPOC Station P	1.16	345	⇓*i*P	Pn	01 37 16.3	-0.2
PB16				*i* S	Sn	01 37 35.1	0.0
PB12	IPOC Station P	1.37	308	⇑*i*P	Pn	01 37 17.5	-0.8
PB12				*i* S	Sn	01 37 37.3	-0.9
TA01	Diego Aracena	1.44	220	*e*P	Pn	01 37 18.8	-0.1
TA01				*i* S	Sn	01 37 39.8	+0.3
TA01				IAML		01 37 42.9	
	comp=E,208nm,0.3s						
PB01	IPOC Station P	1.59	190	⇑*i*P	Pn	01 37 20.9	+0.2
PB01				*i* S	Sn	01 37 43.5	+0.7
PB01				IAML		01 37 44.9	
	comp=E,362nm,0.5s						
PATCX	Punta Patache	1.62	214	⇓*i*P	Pn	01 37 21.2	+0.1
PATCX				*i* S	Sn	01 37 44.2	+0.9
PB02	IPOC Station P	1.96	200	*e*P	Pn	01 37 25.2	+0.1
PB02				*i* S	Sn	01 37 51.3	+0.7
PB02				IAML		01 37 58.5	
	comp=E,203nm,0.3s						
PB09	IPOC Station P	2.32	181	*e*P	Pn	01 37 30.3	+0.6
PB09				*i* S	Sn	01 37 59.3	+0.5
PB09				IAML		01 38 06.7	
	comp=E,64nm,0.1s						
PB07	IPOC Station P	2.34	196	⇑*e*P	Pn	01 37 30.3	+0.3
PB07				*i* S	Sn	01 37 59.9	+0.6
PB07				IAML		01 38 05.5	
	comp=E,93nm,0.4s						
PB03	IPOC Station P	2.62	192	*e*P	Pn	01 37 33.6	0.0
PB03				*i* S	Sn	01 38 03.5	-2.2
LVC	Limon Verde	3.14	175	⇑*e*P	Pn	01 37 41.9	+1.4
LVC				*i* S	Sn	01 38 13.6	-4.3
PB06	IPOC Station P	3.24	186	*e*P	Pn	01 37 41.7	0.0
PB06				*i* S	Sn	01 38 17.5	-2.6
LPAZ	La Paz	3.32	18	P	Pn	01 37 42.9	-0.2
	comp=E,4.1nm,0.3s,baz=206,slow=5.9,SNR=101						
LPAZ				S	Sn	01 38 22.8	+0.3
	baz=270,slow=19,SNR=1.5						
PLCA	Paso Flores	21.23	183	P	P	01 41 19.6	-8.4
	comp=E,1.2nm,0.6s,baz=235,slow=14,SNR=5.5						
TXAR	Lajitas Array	58.82	325	P	P	01 46 38.6	+1.0
	comp=E,0.1nm,0.4s,baz=129,slow=8.3,SNR=3.4						
TORD	Torodi Ar. Bea	76.93	71	P	P	01 48 31.2	0.0
	comp=E,0.2nm,0.4s,baz=254,slow=5.3,SNR=5.0						
YKA	Yellowknife Ar	89.19	341	P	P	01 49 32.8	-0.3
	comp=E,0.2nm,0.5s,baz=134,slow=5.7,SNR=4.7						

*NNC **19** 01:42:50.0±2.2, 36°.84N×70°.77E, h0^{km}, mb5.4, mpv5.4, Error ellipse: s-maj=23.1km s-min=12.0km az=154.0*

*BJI **19** 01:42:51.7±0.0, 36°.62N×71°.18E, h103^{km}, mB4.8/18, mb4.7/25*

*MOS **19** 01:42:51.6±1.1, 36°.43N×71°.16E, h132^{km}, mb4.6/31, Error ellipse: s-maj=5.9km s-min=4.2km az=100.6*

*NEIC **19** 01:42:52.7±1.2, 36°.48N±0°.05×71°.09E±0°.08, h135^{km}±4^{km}, mb4.5/46, Error ellipse: s-maj=9.0km s-min=6.9km az=104.0*

*IDC **19** 01:42:53.1±0.7, 36°.34N×71°.10E, h137^{km}±6^{km}, mb4.1/35, mb1 4.2/39, mb1mx4.1/58, mbtmp4.6/39, Error ellipse: s-maj=10.3km s-min=8.3km az=160.0*

ISC 19 01:42:52.0±0.4**, 36°.38N**±0°.03×**71°.16E**±0°.03**, h127**^{km}±4^{km}**, h128**^{km}**:pP-P, n350, σ1^s.90**/380**, mb4.5**/75**, 35C-33D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	2.52	224	P	Pn	01 43 33.9	+1.3
KBL				S	Sn	01 44 04.9	+1.1
KBL	Kabul	2.52	224	PN	Pn	01 43 33.9	+1.3
KBL						01 44 05.0	
KBL	Kabul	2.52	224		Pn	01 43 33.9	+1.3
KBL				Sn	Sn	01 44 05.0	+1.3
CEP	Cherat	2.62	166	P	Pn	01 43 36.3	+2.5
CEP				S	Sn	01 44 09.0	+3.0
CHCP	Chirah Chowk	3.22	147	P	Pn	01 43 44.0	+2.6
NIL	Nilore	3.22	147	P	Pn	01 43 44.1	+2.7
NIL				S	Sn	01 44 21.7	+2.1
NIL	Nilore	3.22	147	PN	Pn	01 43 44.1	+2.7
NIL	Nilore	3.22	147		Pn	01 43 44.1	+2.7
THW	Thamme Wali	3.61	172	P	Pn	01 43 48.3	+1.7
SARP	Sargodha	4.62	164	P	Pn	01 44 01.1	+1.1
KSH	Kashi	4.92	49	P	Pn	01 44 00.6	-3.5
KSH				S	Sn	01 44 51.8	-8.4
KSH				smax	smax		
	comp=N,16µm,0.8s						
KSH				smax	smax		
	comp=E,9µm,0.7s						
TAS	Tashkent	5.15	344	PN	Pn	01 44 06.3	-0.7
TAS	Tashkent	5.15	344		Pn	01 44 06.3	-0.7
THN	Thein Dam	5.45	135	*e*PG	Pn	01 44 12.5	+1.5
THN				*e*SG	Sn	01 45 11.0	-1.6
DHRM	DHARAMSHALA	5.92	133	*e*PG	Pn	01 44 18.8	+1.2
DHRM				*e*SG	Sn	01 45 23.4	-1.0
DHRM				IAML		01 45 26.1	
	comp=N,2µm,0.3s						
DHRM				IAML		01 45 26.8	
	comp=E,2µm,0.2s						
AML	Almayashu	6.07	18	P	Pn	01 44 19.6	-0.1
	SNR=1006						
UCH	Uchtor	6.39	23	P	Pn	01 44 24.0	-0.1
	SNR=195						
KZA	Kyzart	6.51	28	P	Pn	01 44 25.4	-0.3
	SNR=127						
EKS2	Erkin-Say	6.59	17	P	Pn	01 44 26.5	0.0
	SNR=164						
BHK	Bhakra	6.60	137	*e*x	Pn	01 44 27.4	+0.8
BHK				*e*x	x	01 44 27.4	
BHK				*e*x	x	01 45 40.6	
BHK				*e*x	x	01 45 40.6	
KK31	Karatay Array	6.73	356	⇓P	Pn	01 44 26.4	-1.9
	comp=E,78nm,0.4s,baz=181,slow=13,SNR=2173						
KK31				⇑S	Sn	01 45 38.0	-5.6
	comp=E,90nm,0.4s,baz=191,slow=20,SNR=10						
KK31	Karatay Array	6.73	356	*e*PN	Pn	01 44 27.9	-0.4
KK31	Karatay Array	6.73	356		Pn	01 44 27.6	-0.6
KKAR	Karatay Array	6.73	356	PN	Pn	01 44 27.6	-0.7
KKAR	Karatay Array	6.73	356		Pn	01 44 27.6	-0.7
KKAR	Karatay Array	6.73	356		Pn	01 44 27.8	-0.5
AAK	Ala-Archa	6.76	21	P	Pn	01 44 28.8	+0.1
	comp=E,93nm,0.3s,baz=160,slow=5.5,SNR=385						
AAK				S	Sn	01 45 41.2	-3.1
	comp=E,44nm,0.3s,baz=332,slow=22,SNR=22						
AAK	Ala-Archa	6.76	21	P	Pn	01 44 28.9	+0.1
	SNR=280						
AAK	Ala-Archa	6.76	21	*i* P	Pn	01 44 29.1	+0.3
	SNR=412						
AAK	Ala-Archa	6.76	21	⇓P	Pn	01 44 27.4	-1.3
	comp=E,92nm,0.3s						
AAK				⇓S	Sn	01 45 39.8	-4.6
	comp=E,354nm,0.9s						
AAK	Ala-Archa	6.76	21	P	Pn	01 44 28.9	+0.1
AAK	Ala-Archa	6.76	21	PN	Pn	01 44 27.8	-1.0
AAK	Ala-Archa	6.76	21		Pn	01 44 28.7	-0.1
AAK					Sn	01 45 41.1	-3.3
KBK	Karagaybulak	6.92	24	P	Pn	01 44 31.1	+0.2
	SNR=113						
FRU1	Bishkek	6.96	22	PN	Pn	01 44 31.4	+0.1
FRU1	Bishkek	6.96	22		Pn	01 44 31.4	+0.1
ULHL	Ulahol	7.05	32	P	Pn	01 44 32.6	-0.2
	SNR=43						
CHMS	Chumysh	7.16	22	P	Pn	01 44 34.0	-0.1
	SNR=79						
CHMS	Chumysh	7.16	22	⇓P	Pn	01 44 33.7	-0.4
	comp=E,144nm,0.5s						
CHMS				⇑S	Sn	01 45 51.4	-2.6
	comp=E,314nm,0.9s						
SMLA	Simla	7.24	135	*e*PG	Pn	01 44 35.2	0.0
SMLA				*e*SG	Sn	01 45 52.6	-3.4
SMLA				IAML		01 45 59.2	
	comp=N,562nm,0.4s						
SMLA				IAML		01 45 59.7	
	comp=E,404nm,0.2s						
USP	Ospenovka	7.34	19	P	Pn	01 44 36.4	-0.1
	SNR=49						
HRA	Herat	7.55	257		Pn	01 44 39.3	-0.2
AAA	Alma-Ata	8.13	31	*e*PN	Pn	01 44 48.9	+1.8
MDOK	Medeo	8.15	32	⇑P	Pn	01 44 47.5	0.0
	comp=E,101nm,0.7s						
MDOK				S	Sn	01 46 19.7	+1.8
KNDC	Almaty	8.16	31	⇑P	Pn	01 44 49.0	+1.5
	comp=E,239nm,0.6s						
KNDC				⇓S	Sn	01 46 19.6	+1.5
	comp=E,121nm,0.7s						
KNDC	Almaty	8.16	31	PN	Pn	01 44 49.0	+1.5
DDI	Dehra Dun	8.35	134	*e*x	Sn	01 46 18.5	-4.4
JOSI	Joshimath	9.10	127	*e*x	Pn	01 45 01.5	+1.0
JOSI				*e*x	x	01 45 03.1	
JOSI				*e*SG	Sn	01 46 35.2	-6.2
JOSI				*e*x	x	01 46 37.4	
JOSI				*e*x	x	01 46 38.1	
JOSI				IAML		01 46 47.2	
	comp=E,462nm,0.6s						
JOSI				IAML		01 46 47.2	
	comp=N,341nm,0.2s						
JOSI				IAML		01 46 47.4	
	comp=N,465nm,0.5s						
NDI	New Delhi	9.22	145	*e*PG	Pn	01 45 00.0	-1.9
NDI				*e*SG	Sn	01 46 30.0	-14
AYAN	Aya Nagar	9.35	146	*e*x	Pn	01 45 05.4	+1.8
AYAN				*e*x	x	01 46 40.4	
KUDL	Kundal	9.37	150	*e*PG	Pn	01 44 49.5	-14
KUDL				*e*x	x	01 44 49.5	
KUDL				*e*SG	Sn	01 46 26.2	-21
KUDL				*e*x	x	01 46 26.3	
PDGK	Podgornoye	9.44	40	⇓P	Pn	01 45 03.7	-1.2
	comp=N,70nm,0.7s						
PDGK				⇓S	Sn	01 46 50.1	+1.0
	comp=N,77nm,0.9s						
PDGK	Podgornoye	9.44	40	P	Pn	01 45 03.9	-0.9
SONA	Sohna	9.53	147	*e*S	Sn	01 46 44.6	-6.8
AJM	Ajmer	10.31	162	*e*x	Pn	01 45 16.0	-0.6
AJM				*i* x	x	01 47 00.0	
ASHT	Ashkhabad	10.32	282		Sn	01 47 09.1	-1.2
GEYT	Alibeck	10.53	282	P	Pn	01 45 17.1	-2.3
	comp=N,8.3nm,0.3s,baz=101,slow=9.6,SNR=84						
GEYT				S	Sn	01 47 10.2	-5.3
	comp=N,17nm,0.3s,baz=119,slow=15,SNR=12						
GEYT	Alibeck	10.53	282		Pn	01 45 17.0	-2.5
GYA0B	ALIBECK ARRAY	10.53	282	⇑P	Pn	01 45 16.7	-2.7
GYA0B				⇑S	Sn	01 47 09.9	-5.6
GYA0B	ALIBECK ARRAY	10.53	282		Pn	01 45 17.0	-2.4
MAKZ	Makanchi	13.18	34	⇓P	Pn	01 45 54.0	-0.2
	comp=N,18nm,0.6s						
MAKZ	Makanchi	13.18	34	P	Pn	01 45 52.4	-1.8
MAKZ	Makanchi	13.18	34		Pn	01 45 52.4	-1.8
MK31	Makanchi Array	13.31	35	⇑P	Pn	01 45 54.8	-1.1
	comp=N,18nm,0.6s,baz=216,slow=8.7,SNR=140						
MK31	Makanchi Array	13.31	35	*i* P	Pn	01 45 55.9	0.0
MK31	Makanchi Array	13.31	35		Pn	01 45 55.6	-0.3
MKAR	Makanchi Array	13.31	35	P	Pn	01 45 55.9	0.0
	comp=N,1.3nm,0.3s,baz=217,slow=13,SNR=73						
MKAR				S	Sn	01 48 23.2	+0.6
	baz=253,slow=20,SNR=1.5						
MKAR	Makanchi Array	13.31	35	P	Pn	01 45 53.7	-2.2
MKAR					Sn	01 48 22.3	-0.3
DANN	Dangsing	13.31	123	*e*P	Pn	01 45 54.3	-2.0
	comp=N,42nm,0.4s						
GKN	Gorkha	14.13	122	*e*P	Pn	01 46 04.4	-2.2
BHPL	Bhopal	14.17	156	*e*x	Pn	01 46 05.5	-1.5
BHPL				*e*x	x	01 48 33.8	
WMQ	Urumqi	14.66	54	P	Pn	01 46 12.4	-0.7
WMQ	Urumqi	14.66	54	P	Pn	01 46 12.4	-0.7
DMN	Daman	14.70	123	*e*P	Pn	01 46 13.0	-1.0
	comp=N,28nm,0.4s						
KKN	Kakani	14.70	122	*e*P	Pn	01 46 12.3	-1.7
	comp=N,46nm,0.4s						
PKIN	Phulchoki	14.92	122	*e*P	Pn	01 46 15.3	-1.4
	comp=N,22nm,0.4s						
PKI	Pulchoki	14.93	122	*e*P	Pn	01 46 15.4	-1.5
GUN	Gumba	15.04	120	*e*P	Pn	01 46 17.0	-1.4
	comp=N,47nm,0.6s						
KURBB	Kurchatov Arra	15.19	18	P	Pn	01 46 17.1	-2.6
	comp=N,1.0nm,0.3s,baz=213,slow=8.0,SNR=44						
KURBB				S	Sn	01 49 08.1	+0.3
	comp=N,0.0nm,0.3s,baz=245,slow=14,SNR=1.6						
KURBB	Kurchatov Arra	15.19	18	⇓P	Pn	01 46 20.1	+0.5
	comp=N,20nm,0.6s						
KURBB	Kurchatov Arra	15.19	18	P	Pn	01 46 15.7	-4.0
AB31	Akbulak array	15.25	331	P	Pn	01 46 19.0	-1.4
	comp=N,27nm,0.6s,baz=146,slow=11,SNR=626						
AB31				S	Sn	01 49 01.7	-7.6
	comp=N,67nm,0.8s,baz=151,slow=22,SNR=15						
ABKAR	Akbulak array	15.25	331		Pn	01 46 18.2	-2.2
KURK	Kurchatov	15.30	18	⇑P	Pn	01 46 20.9	-0.1
	comp=N,17nm,0.7s						
KURK	Kurchatov	15.30	18	⇑*i*P	Pn	01 46 18.5	-2.5
KURK				pmax	pmax		
	comp=Z,11nm,0.9s						
KURK	Kurchatov	15.30	18	P	Pn	01 46 17.9	-3.1
KURK				IAmb	IAmb	01 46 26.7	
	comp=Z,22nm,0.8s						
JIRN	Jiri	15.41	120	*e*P	Pn	01 46 22.3	-0.7
	comp=Z,67nm,0.3s						
RAMN	Ramite	16.14	121	*e*P	Pn	01 46 30.5	-1.4
	comp=Z,53nm,0.5s						
BANOM	Banah	16.43	235	*i* P	Pn	01 46 35.0	-0.1
	SNR=34						
BANOM	Banah	16.43	235	P	Pn	01 46 35.3	+0.2
	SNR=34						
SHME	Shamm	16.45	235	*i* P	Pn	01 46 35.2	-0.2
	SNR=26						
BVAR	Borovoye Array	16.65	358	P	Pn	01 46 35.8	-1.8
	comp=Z,5.1nm,0.3s,baz=178,slow=12,SNR=56						
BVAR				S	Sn	01 49 36.1	-6.7
	comp=Z,1.1nm,0.3s,baz=162,slow=24,SNR=4.4						
NGP	Nagpur	16.67	153	*e*x	Pn	01 46 34.7	-3.4
TAPN	Taplejung	16.68	118	*e*P	P	01 46 39.2	+0.6
	comp=Z,98nm,0.6s						
BRVK	Borovoye	16.69	358	⇑P	Pn	01 46 37.2	-0.9
	comp=Z,44nm,0.9s						
BRVK	Borovoye	16.69	358	P	Pn	01 46 37.1	-0.9
BRVK				pmax	pmax		
	comp=Z,62nm,1.1s						
BRVK	Borovoye	16.69	358	P	Pn	01 46 37.1	-0.9
BRVK				IAmb	IAmb	01 46 41.0	
	comp=Z,62nm,1.1s						
ODAN	Odare	16.75	120	*e*P	Pn	01 46 39.3	0.0
	comp=Z,45nm,0.5s						
MDH	Madha	16.86	233	P	P	01 46 40.0	-0.3
MSFE	Esma-Masafi	16.91	234	*i* P	P	01 46 40.7	-0.2
	SNR=7.1						
AKTO	Aktyubinsk	16.95	330	P	P	01 46 41.0	-0.1
	comp=Z,5.2nm,0.3s,baz=129,slow=13,SNR=100						
AKTO				S	Sn	01 49 40.3	-10
	comp=Z,1.3nm,0.3s,baz=17,slow=18,SNR=4.0						
AKTO	Aktyubinsk	16.95	330	P	P	01 46 41.0	-0.1
WSAR	Wadi Sarin	17.00	223	P	P	01 46 41.8	-0.2
	comp=Z,0.6nm,0.3s,baz=48,slow=2.7,SNR=7.4						
UMQ	Umm Al-Quwin	17.12	235	P	Pn	01 46 43.9	+0.4
UOSS	Minazif	17.17	233	*i* P	P	01 46 43.7	-0.1
	SNR=12						
UOSS	Minazif	17.17	233	P	Pn	01 46 44.2	0.0
UOSS	Minazif	17.17	233	P	P	01 46 43.5	-0.3
UOSS				IAmb	IAmb	01 46 51.5	
	comp=Z,18nm,0.7s						
HATD	Hatta, Dubai	17.30	232	*i* P	Pn	01 46 45.8	+0.1
	SNR=8.1						
HATD	Hatta, Dubai	17.30	232	P	Pn	01 46 46.3	+0.6
	SNR=8.0						
WBK	Wadi Bani Khal	17.32	221	P	Pn	01 46 49.1	+3.0
	SNR=15						
ASHO	Ashiyiah	17.45	232	*i* P	Pn	01 46 48.2	+0.7
	SNR=43						
ASHO	Ashiyiah	17.45	232	P	Pn	01 46 48.2	+0.7
	SNR=43						
NAZ	Nazwa, Dubai	17.49	234	P	Pn	01 46 48.3	+0.4
	SNR=10						
DGZ	Jazzator, Alta	17.80	37	*c i*P	Pn	01 46 51.2	-0.5
DGZ				pmax	pmax		
	comp=Z,33nm,0.7s						
JMDO	Jabal Madar	17.99	223	P	Pn	01 46 56.6	+2.6
	SNR=6.5						
LSA	Lhasa	18.02	106	P	P	01 46 54.1	+0.5
LSA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
LSA	Lhasa	18.02	106	P	P	01 46 54.1	+0.5
ALNE	Al Ain	18.09	231	*i* P	Pn	01 46 55.2	0.0
	SNR=15						
ARQ	Araqi	18.14	228	P	Pn	01 46 57.0	+1.1
	SNR=18						
BSY	Bisya	18.20	226	P	Pn	01 46 57.7	+1.2
	SNR=9.1						
AJN	Ajban	18.22	234	*i* P	Pn	01 46 56.1	-0.6
	SNR=10						
AJN	Ajban	18.22	234	P	Pn	01 46 56.2	-0.6
	SNR=9.1						
AKT	Akhty	18.91	293	*e*P	Pn	01 47 04.3	-0.5
AKT				*e*S	Sn	01 50 35.9	-1.4
AKT				pmax	pmax		
	comp=Z,24nm,0.5s						
AKT				smax	smax		
	comp=N,40nm,0.5s						
AKT				smax	smax		
	comp=E,27nm,0.6s						
MHTO	MHTO	19.18	220	P	Pn	01 47 09.7	+1.7
	SNR=5.9						
ZAA0	Zalesovo Array	19.97	24	P	P	01 47 14.2	+0.2
ZALV	Zalesovo Beam	19.97	24	P	P	01 47 14.2	+0.2
	comp=E,40nm,0.3s,baz=214,slow=10,SNR=98						
ZALV				S	S	01 50 50.7	-0.8
	comp=E,2.9nm,0.8s,baz=212,slow=16,SNR=2.3						
ZALV	Zalesovo Beam	19.97	24	P	P	01 47 14.1	+0.1
HYB	Hyderabad	19.99	159	*i* P	P	01 47 16.0	+1.4
	comp=E,100nm,1.4s						
HYB				*e*S	S	01 50 48.0	-4.6
HYB	Hyderabad	19.99	159	*e*x	P	01 47 16.3	+1.7
HYB				*e*x	x	01 50 47.2	
BTLR	Botlikh	20.20	296	⇑*i*P	Pn	01 47 18.6	-1.2
BTLR				pmax	pmax		
	comp=Z,20nm,0.9s						
GROC	Groznyy	20.60	297	*e*P	P	01 47 21.0	+0.1
GROC				*e**SP	pP	01 47 50.3	+5.9
GROC				*e*S	S	01 51 07.3	+3.1
GROC				*e**SS	sS	01 51 35.5	-9.4

GROC				pmax	pmax		
	comp=Z,42nm,1.1s						
GNI	Garni	21.05	288	P	P	01 47 27.6	+1.6
	comp=Z,34nm,1.0s,baz=100,slow=3.1,SNR=24						
GNI	Garni	21.05	288	i P	P	01 47 27.5	+1.6
	SNR=14						
GNI	Garni	21.05	288	⇓iP	P	01 47 28.9	+2.9
GNI				pmax	pmax		
	comp=Z,42nm,1.1s						
GNI	Garni	21.05	288	P	P	01 47 25.2	-0.8
GNI				IAmb	IAmb	01 47 29.6	
	comp=Z,38nm,0.9s						
TBLG	Delisi	21.16	293	P	P	01 47 26.6	-0.4
TBLG				pmax	pmax		
	comp=Z,23nm,0.7s						
TBLG	Delisi	21.16	293	P	P	01 47 26.6	-0.4
TBLG				IAmb	IAmb	01 47 29.5	
	comp=Z,23nm,0.7s						
SVE	Sverdlovsk	21.64	344	⇑eP	P	01 47 34.0	+2.1
SVE				eS	S	01 51 31.3	+7.8
SVE				pmax	pmax		
	comp=Z,35nm,0.8s						
ARU	Arti	21.79	341	P	P	01 47 34.3	+0.9
	comp=Z,4.7nm,0.4s,baz=155,slow=8.3,SNR=27						
ARU	Arti	21.79	341	d iP	P	01 47 34.2	+0.8
ARU						01 48 01.3	
ARU				S	S	01 51 30.7	+4.6
ARU				SS	SnSn	01 52 10.1	+5.8
ARU				pmax	pmax		
	comp=Z,44nm,1.1s						
ARU	Arti	21.79	341	P	P	01 47 32.8	-0.6
ARU				IAmb	IAmb	01 47 37.4	
	comp=Z,30nm,0.9s						
ZEI	Tsey	21.91	295	eP	P	01 47 35.4	+0.3
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
AKH	Akhalkalaki	22.07	292	⇓P	P	01 47 39.0	+2.3
AKH	Akhalkalaki	22.07	292	P	P	01 47 36.0	-0.7
AKH				pmax	pmax		
	comp=Z,32nm,1.1s						
AKH	Akhalkalaki	22.07	292	P	P	01 47 36.0	-0.7
AKH				IAmb	IAmb	01 47 41.5	
	comp=Z,32nm,1.1s						
NCK	Nalchik	22.23	297	⇓iP	P	01 47 38.5	+0.3
NCK				pmax	pmax		
	comp=Z,16nm,0.9s						
KBZ	Khabaz	22.77	298	P	P	01 47 43.3	-0.1
	comp=Z,5.6nm,0.9s,baz=119,slow=7.5,SNR=10.0						
KBZ				S	S	01 51 50.2	+7.7
	comp=Z,0.8nm,0.6s,baz=96,slow=22,SNR=0.8						
KBZ	Khabaz	22.77	298	⇑iP	P	01 47 43.8	+0.4
GTA	Gaotai	22.77	74	eP	P	01 47 44.9	+1.2
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GOF	Gofitskoye	22.92	301	⇑eP	P	01 47 46.1	+1.2
KIV	Kislovodsk	22.96	298	eP	P	01 47 44.5	-0.9
KIV				eS	S	01 51 47.5	+1.7
KIV				pmax	pmax		
	comp=Z,29nm,1.0s						
KIV	Kislovodsk	22.96	298	P	P	01 47 44.3	-1.1
KIV				IAmb	IAmb	01 47 56.7	
	comp=Z,8.9nm,0.6s						
WHFO	Wadi Hawf	23.96	224	P	P	01 47 54.5	-0.2
	SNR=14						
ABTO	Aybut	24.68	225	P	P	01 48 01.0	-0.2
	SNR=19						
RAYN	Ar Rayn	25.57	247	i P	P	01 48 09.2	-0.1
	SNR=29						
RAYN	Ar Rayn	25.57	247	P	P	01 48 09.0	-0.3
RAYN				pmax	pmax		
	comp=Z,16nm,0.5s						
RAYN	Ar Rayn	25.57	247	P	P	01 48 09.0	-0.3
VRH	Novokhopyorsk	25.68	314	eP	P	01 48 09.6	-0.3
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MOY	Mondy	26.10	45	eP	P	01 48 16.2	+2.4
MOY				pmax	pmax		
	comp=Z,263nm,1.2s						
KIRV	Kirov	26.40	334	P	P	01 48 17.3	+1.0
	comp=Z,9.5nm,0.5s,baz=119,slow=6.7,SNR=6.4						
ZAK	Zakamensk	26.97	49	eP	P	01 48 22.8	+1.2
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VSR	Storozhevoye	27.18	313	⇓iP	P	01 48 23.7	+0.4
VSR				pmax	pmax		
	comp=Z,23nm,0.9s						
TLY	Talaya	27.63	46	P	P	01 48 29.5	+2.2
	comp=Z,4.0nm,0.5s,baz=248,slow=5.4,SNR=6.3						
TLY	Talaya	27.63	46	ceP	P	01 48 30.6	+3.2
TLY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LPSR	Galich'ya Gora	27.83	316	eP	P	01 48 29.1	0.0
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
SONM	Songino Array	28.30	55	P	P	01 48 35.7	+2.2
	comp=Z,13nm,1.1s,baz=265,slow=8.9,SNR=30						
SONM	Songino Array	28.30	55	P	P	01 48 33.9	+0.4
SONM				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SONM	Songino Array	28.30	55	P	P	01 48 33.9	+0.4
ULN	Ulaanbaatar	28.74	55	⇓iP	P	01 48 39.2	+1.8
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ULN	Ulaanbaatar	28.74	55	P	P	01 48 37.7	+0.2
ULN				IAmb	IAmb	01 48 40.8	
	comp=Z,4.8nm,0.8s						
BZK	Bozkurt	29.18	292	⇓P	P	01 48 41.4	+0.2
KMI	Kunming	29.24	104	P	P	01 48 49.5	+7.3
KMI				pP	pP	01 49 09.8	-1.1
KMI				sP	sP	01 49 17.4	-8.7
KMI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,140nm,6.8s						
MMAI	Mount Meron Ar	29.49	274	P	P	01 48 45.2	+1.0
	comp=Z,0.9nm,0.7s,baz=82,slow=10,SNR=2.5						
MMAI				PcP	PcP	01 51 46.3	-0.2
	comp=Z,0.8nm,0.5s,baz=75,slow=6.1,SNR=7.0						
BR131	Keskin Array S	29.59	288	⇓iP	P	01 48 45.6	+0.5
BR131	Keskin Array S	29.59	288	P	P	01 48 44.2	-0.9
BRTR	Keskin Array B	29.59	288	P	P	01 48 46.2	+1.1
	comp=Z,1.4nm,0.6s,baz=102,slow=8.8,SNR=14						
BRTR	Keskin Array B	29.59	288	P	P	01 48 44.1	-1.1
PRGR	Permogore	29.93	336	eP	P	01 48 46.8	-0.8
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
OBN	Obninsk	30.11	319	P	P	01 48 49.3	0.0
	comp=Z,3.3nm,0.4s,baz=104,slow=23,SNR=4.4						
OBN	Obninsk	30.11	319	⇓iP	P	01 48 50.2	+0.9
OBN				i		01 49 57.5	
OBN				pmax	pmax		
	comp=Z,14nm,1.1s						
OBN	Obninsk	30.11	319	P	P	01 48 48.9	-0.3
CMAR	Chiang Mai Arr	30.28	119	P	P	01 48 52.3	+1.1
	comp=Z,1.0nm,0.3s,baz=295,slow=9.2,SNR=5.8						
CMAR	Chiang Mai Arr	30.28	119	P	P	01 48 52.1	+0.9
XAN	Xi'an	30.81	83	P	P	01 48 59.8	+4.0
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KLMR	Klimovskoe	31.65	331	eP	P	01 49 02.1	-0.6
KLMR				pmax	pmax		
	comp=Z,15nm,1.2s						
KLMR	Klimovskoe	31.65	331	eP	P	01 49 02.2	-0.5
KLMR				AMP		01 49 06.7	
	comp=Z,15nm,1.2s						
PBKT	Sadao Pong	32.98	119	P	P	01 49 15.7	+0.9
MILM	Milestii Mici	32.98	302	⇑P	P	01 49 15.4	+0.8
AKASG	Malin Array Be	33.12	309	P	P	01 49 15.9	+0.2
	comp=Z,11nm,0.5s,baz=80,slow=7.1,SNR=60						
AKASG	Malin Array Be	33.12	309	ceP	P	01 49 15.8	+0.1
AKASG				pmax	pmax		
	comp=Z,11nm,0.5s						
AKASG	Malin Array Be	33.12	309	P	P	01 49 15.3	-0.4
AKBB	Malin Array Si	33.12	309	d iP	P	01 49 16.1	+0.4
SORM	Soroca	33.38	304	⇓P	P	01 49 18.0	0.0
SORM	Soroca	33.38	304	⇓P	P	01 49 18.0	0.0
CFR	Carcaliu	33.41	299	⇓P	P	01 49 18.8	+0.5
CFR	Carcaliu	33.41	299	⇓P	P	01 49 18.8	+0.5
TMCR	Tamitsa	34.21	335	eP	P	01 49 25.4	+0.5
TMCR				pmax	pmax		
	comp=Z,15nm,0.9s						
NRIK	Noril'sk	34.22	10	P	P	01 49 25.2	+0.2
	comp=Z,11nm,0.8s,baz=190,slow=6.5,SNR=8.7						
PLOR	Plostina	34.45	300	⇑P	P	01 49 27.8	+0.4
PLOR	Plostina	34.45	300	⇑P	P	01 49 27.8	+0.4
TESR	Tescani	34.46	301	⇑P	P	01 49 28.3	+1.0
BIZ	Bicaz	34.84	302	⇑P	P	01 49 32.1	+1.5
MLR	Muntele Rosu	34.95	299	⇑P	P	01 49 33.0	+1.2
MLR	Muntele Rosu	34.95	299	⇑P	P	01 49 33.0	+1.2
MLR	Muntele Rosu	34.95	299	IAmb	IAmb	01 49 35.3	
	comp=Z,10nm,1.0s						
BURAR	Bucovina Array	35.46	303	⇑P	P	01 49 37.0	+1.0
BURAR	Bucovina Array	35.46	303	⇑P	P	01 49 37.0	+1.0
BURAR	Bucovina Array	35.46	303	P	P	01 49 35.7	-0.4
VOIR		35.58	299	⇑P	P	01 49 38.1	+1.0
VOIR		35.58	299	⇑P	P	01 49 38.1	+1.0
ARR	Arges	35.88	299	⇓P	P	01 49 40.5	+0.9
IZAR	Zarasai	35.88	317	eP	P	01 49 40.5	+1.1
ISAL	Salakas	35.91	317	eP	P	01 49 40.6	+1.0
WHN	Wuhan	36.27	86	P	P	01 49 48.0	+5.0
APE	Apeiranthos	36.31	285	⇑P	P	01 49 43.0	-0.4
APE	Apeiranthos	36.31	285	⇑P	P	01 49 43.0	-0.4
LVV	L'vov	36.34	307	eP	P	01 49 39.9	-3.5
VSU	Vasula	36.36	322	eP	P	01 49 43.3	-0.1
VSU	Vasula	36.36	322	⇑iP	P	01 49 44.4	+1.0
VSU				pmax	pmax		
	comp=Z,55nm,1.1s						
PABE	Paberze	37.09	316	eP	P	01 49 50.3	+0.6
VTS	Vitosha	37.10	295	⇓P	P	01 49 51.0	+0.8
VTS	Vitosha	37.10	295	⇓P	P	01 49 51.0	+0.8
DRGR		37.17	302	⇓P	P	01 49 51.9	+1.3
DRGR		37.17	302	⇓P	P	01 49 51.9	+1.3
SUW	Suwalki	37.29	314	eP	P	01 49 51.7	+0.3
SUW	Suwalki	37.29	314	eP	P	01 49 51.7	+0.3
FINES	FINESS Array B	37.66	326	P	P	01 49 54.9	+0.5
	comp=Z,4.9nm,0.4s,baz=121,slow=9.6,SNR=89						
FINES	FINESS Array B	37.66	326	P	P	01 49 53.4	-0.9
BZS	Buzias	37.98	300	⇓P	P	01 49 58.2	+0.9
BZS	Buzias	37.98	300	⇓P	P	01 49 58.2	+0.9
PBUR	Paburge	38.32	317	eP	P	01 50 00.4	+0.4
SLIT	Slitere, Latvi	38.43	319	e		01 48 51.7	
NIE	Niedzica	38.75	306	eP	P	01 50 05.8	+2.1
NIE	Niedzica	38.75	306	eP	P	01 50 05.8	+2.1
OJC	Ojcow	39.08	307	eP	P	01 50 07.5	+1.0
OJC	Ojcow	39.08	307	eP	P	01 50 07.5	+1.0
MORC	Moravsky Berou	40.54	307	⇓P	P	01 50 18.6	0.0
MORC	Moravsky Berou	40.54	307	⇓P	P	01 50 18.6	0.0
GKP	Gorka Klasztor	40.75	312	eP	P	01 50 21.3	+1.2
GKP	Gorka Klasztor	40.75	312	eP	P	01 50 21.3	+1.2
ARCES	ARCESS Array B	41.30	338	P	P	01 50 25.5	+1.0
	comp=Z,6.7nm,0.6s,baz=114,slow=7.5,SNR=48						
ARCES	ARCESS Array B	41.30	338	P	P	01 50 24.8	+0.3
ARCES	ARCESS Array B	41.30	338	P	P	01 50 24.8	+0.3
ARE0	ARCESS Array S	41.30	338	eP	P	01 50 25.4	+0.9
DPC	Dobruska-Polom	41.31	307	eP	P	01 50 26.3	+1.4
DPC	Dobruska-Polom	41.31	307	eP	P	01 50 26.3	+1.4
CHVC	Chvalec	41.47	308	eP	P	01 50 27.3	+1.1
UPC	Upice	41.50	308	eP	P	01 50 27.9	+1.5
UPC	Upice	41.50	308	eP	P	01 50 27.9	+1.5
CONA	Conrad Observa	41.75	304	eP	P	01 50 29.2	+0.6
	comp=Z,4.8nm,1.0s						
KTK1	Kautokeino	41.78	336	eP	P	01 50 28.9	+0.6
HAMF	Hammerfest	42.38	339	eP	P	01 50 34.5	+1.3
SOKA	Soboth	42.44	302	eP	P	01 50 34.6	+0.4
	comp=Z,1.5nm,0.6s						
BRG	Berggiesshubel	42.80	308	eP	P	01 50 37.9	+1.0
	comp=Z,11nm,1.1s						
BRG	Berggiesshubel	42.80	308	eP	P	01 50 37.9	+1.0
BRG				pmax	pmax		
	comp=Z,11nm,1.1s						
RUE	Ruedersdorf	42.84	311	e		01 48 50.0	
RGN	Rugen	43.09	314	e		01 48 50.2	
GERES	GERESS Array B	43.10	305	P	P	01 50 38.5	-1.0
	comp=Z,0.5nm,0.5s,baz=72,slow=5.7,SNR=3.3						
TRO	Tromso	43.43	336	eP	P	01 50 41.6	-0.1
KBA	Koelnbreinsper	43.54	303	P	P	01 50 43.2	0.0
	comp=Z,1.4nm,0.7s						
MOR8	Moi Rana	43.98	331	eP	P	01 50 46.2	0.0
YAK	Yakutsk	43.99	35	⇑iP	P	01 50 46.4	+0.2
YAK				pmax	pmax		
	comp=Z,12nm,0.9s						
STEI	Steigen	44.14	333	eP	P	01 50 48.1	+0.8
NC405	NORSAR Array S	44.32	323	P	P	01 50 48.6	-0.3
NC405				IAmb	IAmb	01 50 59.4	
	comp=Z,7.8nm,1.0s						
NB201	NORSAR Array S	44.52	323	eP	P	01 50 50.7	+0.2
NB201	NORSAR Array S	44.52	323	P	P	01 50 50.1	-0.4
NB2	NORSAR Subarra	44.55	323	P	P	01 50 50.6	-0.2
	comp=Z,8.1nm,0.6s,baz=94,slow=7.9						
NB2	NORSAR Subarra	44.55	323	P	P	01 50 50.6	-0.2
	baz=94,slow=7.9						
NOA	NORSAR Array B	44.55	323	P	P	01 50 50.6	-0.2
	comp=Z,12nm,0.7s,baz=96,slow=7.7,SNR=68						
KONS	Konsvik	44.58	331	eP	P	01 50 51.4	+0.6
NSS	Namsos	44.67	328	eP	P	01 50 51.7	+0.2
NBO00	NORSAR Array S	44.76	323	IAmb	IAmb	01 51 02.3	
	comp=Z,7.8nm,1.0s						
NC204	NORSAR Array S	44.79	323	P	P	01 50 52.5	-0.3
KSRS	Korea Array	44.79	71	P	P	01 50 53.5	+0.5
	comp=Z,0.9nm,0.4s,baz=269,slow=6.4,SNR=5.1						
LOF	Lofoten	44.81	333	eP	P	01 50 52.9	+0.2
MOTA	Moosalm	45.02	304	eP	P	01 50 54.2	-0.6
	comp=Z,2.9nm,0.8s						
KLR	Kul'dur	45.11	54	P	P	01 50 56.8	+1.5
	comp=Z,3.1nm,0.5s,baz=285,slow=8.4,SNR=12						
KLR	Kul'dur	45.11	54	⇑iP	P	01 50 56.1	+0.8
KLR				pmax	pmax		
	comp=Z,11nm,1.6s						
KONO	Kongsberg	45.26	321	eP	P	01 50 56.5	+0.2
DOMB	Dombas	45.66	324	eP	P	01 50 58.0	-1.6
HOMB	Homborsund	45.79	319	eP	P	01 51 01.1	+0.5
TIXI	Tiksi	45.83	22	P	P	01 51 01.3	+0.6
	comp=Z,6.4nm,0.3s,baz=273,slow=5.8,SNR=8.6						
TIXI				pP	pP	01 51 33.3	+2.4
	comp=Z,9.6nm,0.7s,baz=284,slow=5.1,SNR=3.5						
TIXI	Tiksi	45.83	22	⇓iP	P	01 51 01.6	+0.9
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TIXI	Tiksi	45.83	22	P	P	01 51 00.9	+0.2
TIXI				IAmb	IAmb	01 51 03.2	
	comp=Z,7.8nm,0.8s						
DAVA	Damuels	45.85	304	eP	P	01 51 01.1	-0.3
	comp=Z,3.4nm,0.4s						
SKAR	Skarslia	45.95	322	eP	P	01 51 02.1	+0.2
USRK	Ussuriysk Ar.	46.11	61	P	P	01 51 05.2	+1.9
	comp=Z,0.9nm,0.8s,baz=275,slow=6.2,SNR=3.0						
SNART	Snartemo	46.48	319	eP	P	01 51 06.6	+0.7
ODD1	Odda	46.77	321	eP	P	01 51 08.9	+0.7
BLS5	Blasjo	46.86	321	eP	P	01 51 10.3	+1.4
BER	Bergen	47.41	322	eP	P	01 51 13.8	+0.7
ASK	Askoy	47.48	322	eP	P	01 51 14.1	+0.5
SPA0	Spitsbergen Ar	47.64	347	eP	P	01 51 16.5	+1.8
KMBO	Kilima Mbogo	48.85	228	P	P	01 51 25.9	+0.8
	comp=Z,1.4nm,0.7s,baz=30,slow=14,SNR=2.8						
KEST	Kesra	49.20	289	P	P	01 51 27.0	-0.3
	comp=Z,1.5nm,0.5s,baz=283,slow=3.2,SNR=6.2						
YSS	Yuzh-Sakhalins	52.78	55	eP	P	01 51 56.2	+2.4
NOR	Nord	53.94	350	i P	P	01 52 04.3	+2.5
NOR	Nord	53.94	350	eP	P	01 52 04.3	+2.5
DAG	Danmarks Havn	54.88	344	i P	P	01 52 09.0	+0.4
DAG	Danmarks Havn	54.88	344	i P	P	01 52 09.0	+0.4
BILL	Bilibino	58.66	26	⇑iP	P	01 52 37.4	+2.0
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ABPO	Ambohimpanom	59.57	206	P	P	01 52 42.5	+0.1
ABPO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ABPO	Ambohimpanom	59.57	206	P	P	01 52 42.5	+0.1
ABPO				IAmb	IAmb	01 52 44.1	
	comp=Z,8.4nm,0.8s						
TOA0	Torodi Ar. Sit	65.85	269	P	P	01 53 22.0	-2.1
	SNR=13						
TOA0	Torodi Ar. Sit	65.85	269	P	P	01 53 22.1	-2.1
TOA0				IAmb	IAmb	01 53 23.9	
	comp=Z,4.5nm,0.5s						
TORD	Torodi Ar. Bea	65.85	269	P	P	01 53 21.9	-2.2
	comp=Z,4.4nm,0.5s,baz=50,slow=6.1,SNR=129						
TORD	Torodi Ar. Bea	65.85	269	P	P	01 53 21.6	-2.5
MATP	Matopo	69.41	223	i P	P	01 53 43.1	-3.3
MATP	Matopo	69.41	223	i P	P	01 53 43.1	-3.3
TOLK	Toolik Lake Re	71.00	15	P	P	01 53 55.0	-0.4
TOLK				IAmb	IAmb	01 53 58.7	
	comp=Z,4.8nm,0.6s						
IMAR	Indian Mountai	72.25	18	P	P	01 54 02.5	-0.4
BMAR	Burnt Mountain	73.03	14	P	P	01 54 08.8	+1.3
INK	Inuvik	74.00	9	P	P	01 54 13.1	+0.1
	comp=Z,4.5nm,0.7s,baz=335,slow=6.3,SNR=17						
INK				pP	pP	01 54 46.4	+0.3
	comp=Z,2.2nm,0.5s,baz=328,slow=6.5,SNR=3.6						
INK	Inuvik	74.00	9	IAmb	IAmb	01 54 16.7	
	comp=Z,6.6nm,0.9s						
COLA	College	74.55	16	⇑iP	P	01 54 18.6	+2.3
COLA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LBTB	Lobatse	74.68	222	i P	P	01 54 18.4	+0.7
LBTB	Lobatse	74.68	222	i P	P	01 54 18.4	+0.7
DBIC	Dimbokro	74.82	267	P	P	01 54 17.2	-1.5
	comp=Z,1.3nm,0.4s,baz=19,slow=6.5,SNR=8.3						
DBIC	Dimbokro	74.82	267	P	P	01 54 17.0	-1.8
ILAR	Eielson Array	74.86	16	P	P	01 54 19.4	+1.2
	comp=Z,2.6nm,0.9s,baz=321,slow=4.6,SNR=24						
ILAR				pP	pP	01 54 51.9	+0.6
	comp=Z,1.7nm,0.8s,baz=321,slow=5.3,SNR=6.3						
ILAR	Eielson Array	74.86	16	P	P	01 54 17.4	-0.8
KIC	Kosan Boka	74.91	267	ePKP2	P	01 54 17.6	-1.7
	comp=Z,2.1nm,0.4s						
KTH	Kantishna Hill	74.94	18	IAmb	IAmb	01 54 21.7	
	comp=Z,5.8nm,0.6s						
TIC	Toumodi	74.97	267	ePKP2	P	01 54 16.3	-3.3
LIC	Lamto	75.22	267	ePKP2	P	01 54 16.7	-4.3
	comp=Z,11nm,0.8s						
SCRK	Sand Creek	76.18	15	P	P	01 54 25.4	-0.4
SCRK				IAmb	IAmb	01 54 28.6	
	comp=Z,5.6nm,0.8s						
SCRK				pP	pP	01 55 00.0	+1.0
DHY	Denali Highway	76.20	17	P	P	01 54 25.5	-0.5
DHY				IAmb	IAmb	01 54 28.7	
	comp=Z,6.6nm,0.6s						
DHY					pP	01 54 59.6	+0.4
SML	Sawmill	77.06	18	IAmb	IAmb	01 54 33.9	
	comp=Z,18nm,1.2s						
BCAR	Beaver Creek A	77.44	15	P	P	01 54 32.5	-0.4
BOSA	Boshof	77.74	220	i P	P	01 54 34.5	-0.5
BOSA	Boshof	77.74	220	P	P	01 54 34.8	-0.2
	comp=Z,6.3nm,0.5s,baz=13,slow=4.0,SNR=24						
BOSA	Boshof	77.74	220	i P	P	01 54 34.5	-0.5
BOSA	Boshof	77.74	220	P	P	01 54 34.9	-0.1
BOSA				pmax	pmax		
	comp=Z,12nm,0.9s						
BOSA	Boshof	77.74	220	P	P	01 54 34.9	-0.1
BOSA				IAmb	IAmb	01 54 35.6	
	comp=Z,12nm,0.9s						
YKA	Yellowknife Ar	81.36	3	P	P	01 54 54.2	+0.2
	comp=Z,3.3nm,0.4s,baz=353,slow=5.1,SNR=102						
YKA				pP	pP	01 55 28.6	+1.2
	comp=Z,0.8nm,0.6s,baz=349,slow=5.0,SNR=1.9						
WRA	Warramunga Arr	81.82	122	P	P	01 54 56.2	-0.8
	comp=Z,1.6nm,0.4s,baz=324,slow=4.9,SNR=2.4						
WRA	Warramunga Arr	81.82	122	P	P	01 54 56.4	-0.6
WRA	Warramunga Arr	81.82	122	P	P	01 54 56.4	-0.6
SCHQ	Schefferville	82.26	337	P	P	01 54 58.9	0.0
	comp=Z,3.2nm,1.0s,baz=5.4,slow=8.9,SNR=4.0						
SCHQ	Schefferville	82.26	337	P	P	01 54 58.2	-0.7
ASAR	Alice Springs	84.08	125	P	P	01 55 07.8	-0.8
	comp=Z,3.1nm,0.6s,baz=310,slow=5.0,SNR=42						
ASAR	Alice Springs	84.08	125	P	P	01 55 08.2	-0.5
ASAR	Alice Springs	84.08	125	P	P	01 55 08.2	-0.5
PMG	Port Moresby	84.45	106	P	P	01 55 10.4	-0.3
	comp=Z,9.2nm,0.3s,baz=243,slow=16,SNR=2.4						
ULM	Lac du Bonnet	92.98	352	P	P	01 55 48.8	-1.9
	comp=Z,1.7nm,0.7s,baz=34,slow=3.6,SNR=3.5						
STKA	Stephens Creek	94.61	126	P	P	01 55 56.5	-1.8
	comp=Z,0.7nm,0.3s,baz=38,slow=13,SNR=2.9						
CPUP	Villa Florida	135.34	268	PKP	PKPdf	02 01 55.2	-1.6
	comp=Z,1.3nm,0.7s,baz=27,slow=2.9,SNR=5.4						
CPUP	Villa Florida	135.34	268	PKIKP	PKPdf	02 01 55.4	-1.5
CPUP	Villa Florida	135.34	268		PKPdf	02 01 55.4	-1.5
PLCA	Paso Flores	149.91	250	PKPbc	PKPbc	02 02 26.8	-0.4
	comp=Z,4.2nm,0.9s,baz=122,slow=6.3,SNR=7.3						

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*IDC **19** 02:12:07.0±2.0, 5°.39S×153°.15E, $h0^{km}$, mb3.7/4, mb1 3.9/4, mb1mx3.7/24, mbtmp3.7/4, Error ellipse: s-maj=42.8km s-min=23.9km az=82.0*

ISC 19 02:12:12.5±1.9**, 5°.3S**±0°.2×**153°.2E**±0°.3**, $h43^{km}$, n6,** σ**$0^{s}.99$**/8**,**
mb3.5/4**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.58	310	Pn	Pn	02 12 36.7	-1.3
	146nm,0.3s,baz=149,slow=2.4,SNR=47						
KRVT				Sn	Sn	02 12 58.2	+0.9
	334nm,0.3s,baz=92,slow=22,SNR=7.6						
WRA	Warramunga Arr	23.42	230	P	P	02 17 17.7	-0.4
	1.6nm,0.8s,baz=53,slow=10,SNR=7.3						
ASAR	Alice Springs	26.05	224	P	P	02 17 41.6	-0.5
	0.9nm,0.9s,baz=56,slow=8.9,SNR=5.8						
FITZ	Fitzroy Crossi	29.79	242	P	P	02 18 16.2	+0.7
	1.8nm,0.7s,baz=17,slow=2.8,SNR=2.2						
MKAR	Makanchi Array	81.01	319	P	P	02 24 24.0	+1.1
	0.4nm,0.8s,baz=88,slow=4.3,SNR=5.5						
TORD	Torodi Ar. Bea	150.88	287	PKPbc	PKPbc	02 32 01.1	-0.5
	0.4nm,0.7s,baz=74,slow=3.4,SNR=5.0						
TORD				PKPab	pPKPdf	02 32 08.2	-0.3
	1.3nm,0.8s,baz=72,slow=2.3,SNR=4.3						

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*NCEDC **19** 02:32:46.4±1.7, 40°.31N±0°.02×124°.53W±0°.04, $h7^{km}$±6^{km}, ML3.3/20, Error ellipse: s-maj=4.5km s-min=3.3km az=97.0*

*ANF **19** 02:32:47.5±1.5, 40°.50N×124°.45W, $h9^{km}$±19^{km}, ML3.0/11, Error ellipse: s-maj=19.6km s-min=7.6km az=35.0*

*IDC **19** 02:32:56.4±3.5, 40°.48N×123°.36W, $h0^{km}$, mb3.3/2, mb1 3.5/4, mb1mx3.3/28, mbtmp3.2/4, ML3.2/2, Error ellipse: s-maj=63.4km s-min=18.2km az=49.0*

ISC 19 02:32:45.3±1.6**, 40°.29N**±0°.03×**124°.66W**±0°.07**,**
$h17^{km}$±10^{km}**, n111,** σ**$0^{s}.73$**/115**, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	0.31	52		Pg	02 32 52.1	+0.1
KSMM	Slide Mountain	0.39	105		Pg	02 32 53.2	-0.1
KMPM	Mount Pierce	0.43	72		Pg	02 32 53.8	-0.3
KCRM	Chalk Rock	0.66	77		Pg	02 32 58.4	+0.1
JCC	Jacoby Creek,	0.72	42		Pg	02 32 59.2	-0.1
KMRM	Mail Ridge	0.73	95		Pg	02 32 59.7	+0.1
KBSM	Bell Springs	0.90	114		Pb	02 33 02.5	+0.1
KCSM	Cold Springs	0.91	74		Pb	02 33 02.7	0.0
KHMM	Horse Mountain	0.92	50		Pb	02 33 02.7	-0.2
KPPM	Pickett Peak	0.99	86		Pb	02 33 03.9	-0.3
KRPM	Rodgers	1.00	29		Pb	02 33 03.7	-0.4
KCPM	Cahto Peak	1.02	126		Pb	02 33 04.4	-0.2
KIPM	Iron Peak	1.02	117		Pb	02 33 04.3	-0.3
KFPM	Farley Peak	1.15	124		Pn	02 33 06.0	-0.7
KHBM	Hayfork Bally	1.16	71		Pb	02 33 06.0	-1.0
KBNM	Bluenose Ridge	1.19	109		Pn	02 33 06.8	-0.5
GTC	Three Chop Rid	1.23	136		Pn	02 33 07.2	-0.4
KOMM	Orleans Mounta	1.35	42		Pn	02 33 08.8	-0.7
KRMB	Red Mountain	1.36	25		Pn	02 33 09.1	-0.5
LBPM	Beegum Peak	1.36	88		Pn	02 33 09.1	-0.5
LGPM	Granite Peak	1.53	65		Pn	02 33 11.2	-0.7
GROM	Round Mountain	1.57	103		Pn	02 33 12.8	+0.3
GVV	Valley View	1.61	108		Pn	02 33 13.0	0.0
GASB	Alder Springs	1.62	112		Pn	02 33 13.1	-0.1
N02D	Trinity Center	1.64	65		Pn	02 33 12.9	-0.5
N02D	Trinity Center	1.64	65	P	Pn	02 33 12.7	-0.7
	baz=245,SNR=233						
N02D				S	Sn	02 33 32.3	-1.9
	baz=245						
WDC	Whiskeytown Da	1.64	79		Pn	02 33 13.0	-0.4
KSXB	Camp Six Broad	1.65	21		Pn	02 33 13.1	-0.5
LBKM	Bonanza King	1.71	62		Pn	02 33 14.3	-0.2
M02C	Callahan	1.76	51		Pn	02 33 14.8	-0.3
M02C	Callahan	1.76	51	P	Pn	02 33 14.5	-0.6
	baz=230,SNR=75						
M02C				S	Sn	02 33 35.6	-1.5
	baz=230						
HOPS	Hopland Field	1.78	136		Pn	02 33 14.9	-0.3
GTSM	Trough Springs	1.86	121		Pn	02 33 16.4	-0.1
GCK	Clark Valley	1.86	113		Pn	02 33 16.9	+0.5
KTRM	Thompson Ridge	1.89	30		Pn	02 33 16.5	-0.4
LTCM	Tuscan Springs	1.94	91		Pn	02 33 17.2	-0.2
LAMM	Antelope Mount	2.03	49		Pn	02 33 18.7	-0.2
L02E	Cave Junction	2.03	23		Pn	02 33 19.0	+0.2
L02E	Cave Junction	2.03	23	P	Pn	02 33 18.7	-0.1
	baz=201,SNR=12						
L02E				S	Sn	02 33 43.1	-0.6
	baz=201						
LCSM	College of the	2.06	56		Pn	02 33 17.8	-1.4
LSHM	Sage Hen Hill	2.06	75		Pn	02 33 18.9	-0.3

YBH	Yreka Blue Hor	2.06	45		Pn	02 33 19.0	-0.3
GSGM	Seigler Mounta	2.07	133		Pb	02 33 21.5	-0.9
GWKM	Walker Ridge	2.08	126		Pn	02 33 21.1	+1.6
LGBM	Gray Butte	2.15	60		Pn	02 33 21.1	+0.5
M03C	McCloud	2.17	62		Pn	02 33 20.8	+0.1
O03E	Paynes Creek	2.19	89		Pn	02 33 20.4	-0.5
O03E	Paynes Creek	2.19	89	P	Pn	02 33 20.3	-0.6
	baz=271,SNR=15						
LDBM	Digger Butte	2.20	85		Pn	02 33 20.6	-0.6
MNRC	McLaughlin Min	2.22	129		Pn	02 33 22.2	+0.9
LMPM	Military Pass	2.24	57		Pn	02 33 22.8	+1.0
NMTM	Middletown	2.26	130		Pn	02 33 22.7	+0.8
NHSM	Mount Saint He	2.27	135		Pn	02 33 22.0	-0.1
LHEM	Herd Peak	2.28	53		Pn	02 33 23.0	+0.6
B040	Montague	2.29	47		Pn	02 33 22.6	+0.3
LBFM	Black Fox Moun	2.35	62		Pn	02 33 24.2	+0.8
OSUM	Sutter Buttes	2.39	114		Pn	02 33 23.7	+0.1
MGL	Magalia	2.43	100		Pn	02 33 24.0	-0.2
LRDM	Redding Peak	2.45	85		Pn	02 33 25.1	+0.6
SUTB	Sutter Butte	2.45	115		Pn	02 33 24.6	+0.1
HATC	Hat Creek Radi	2.49	77		Pn	02 33 25.8	+0.6
LGMM	Garner Mountai	2.51	58		Pn	02 33 26.0	+0.5
K02D	Willamette Mer	2.52	17	P	Pn	02 33 25.3	-0.3
	baz=195						
K02D				S	Sn	02 33 54.6	-1.3
	baz=195						
ORV	Oroville	2.54	106		Pn	02 33 25.3	-0.4
ORV				Sn	Sn	02 33 55.2	-1.0
LTIM	Timbered Crate	2.57	69		Pn	02 33 26.4	+0.1
LBCM	Butte Creek Ri	2.58	77		Pn	02 33 26.4	0.0
M04C	Macdoel	2.60	54		Pn	02 33 27.1	+0.4
M04C	Macdoel	2.60	54	P	Pn	02 33 26.8	0.0
	baz=235						
LMHM	Little Mount H	2.62	59		Pn	02 33 27.2	+0.2
L04D	Klamath Falls	2.62	42		Pn	02 33 28.6	+1.6
L04D	Klamath Falls	2.62	42	P	Pn	02 33 28.5	+1.6
	baz=222,SNR=245						
L04D				Sb	Sn	02 34 00.3	+1.8
	baz=222						
HUMO	Hull Mountain	2.65	28		Pn	02 33 27.6	+0.3
NOLM	Olema	2.67	147		Pn	02 33 27.5	0.0
LASM	Arnica Sink	2.68	60		Pn	02 33 27.9	+0.1
FARB	Farallon Islan	2.89	153		Pn	02 33 30.9	+0.4
CPMM	Point Molate	2.92	142		Pn	02 33 30.9	0.0
J01E	Myrtle Point	2.92	11	S	Sn	02 34 04.5	-1.2
	baz=189						
BKS	Berkeley--Byer	3.06	141		Pn	02 33 33.2	+0.4
CVPM	Vollmer Peak	3.06	141		Pn	02 33 33.2	+0.3
AFDM	Forest Hills D	3.15	114		Pn	02 33 33.9	-0.2
K04D	Chiloquin, OR	3.20	42		Pn	02 33 36.0	+1.1
K04D	Chiloquin, OR	3.20	42	P	Pn	02 33 35.7	+0.8
	baz=223						
SAC	San Andreas	3.22	146		Pn	02 33 34.6	-0.4
BEKR	Beckworth	3.33	96		Pn	02 33 37.2	+0.5
JHPM	Huddart Park	3.38	146		Pn	02 33 37.5	+0.2
MOD	Modoc Plateau	3.67	62		Pn	02 33 41.3	-0.1
JUMM	Mount Umunhum	3.79	144		Pn	02 33 42.8	-0.3
JSTM	Santa Teresa H	3.80	143		Pn	02 33 42.7	-0.4
AMC	Almaden	3.82	144		Pn	02 33 42.7	-0.6
JRGM	Rodeo Gulch Ro	3.87	146		Pn	02 33 43.7	-0.3
I04A	Tendick Farm,	3.88	25	S	Sn	02 34 28.9	-0.6
	baz=205						
JTGM	Trout Gulch Ro	3.91	145		Pn	02 33 44.6	+0.1
J05D	Fort Rock, OR	3.94	39	P	Pn	02 33 46.3	+1.2
	baz=221,SNR=18						
VCNR	Virginia City	3.98	103		Pn	02 33 45.8	0.0
HSPM	Sheep	4.01	141		Pn	02 33 46.6	+0.6
PNTR	Pine Nut	4.08	105		Pn	02 33 47.7	+0.6
PAHR	Pah Rah Range	4.09	96		Pn	02 33 47.3	+0.1
YERR	Yerington	4.38	106		Pn	02 33 52.0	+0.8
WAKR	Walker	4.42	112		Pn	02 33 53.4	+1.6
PINE	Pine Mountain	4.47	37	Pn	Pn	02 33 53.2	+0.9
BJCM	Johnson Can.	4.53	144		Pn	02 33 52.3	-0.8
HAST	Hastings Reser	4.59	147		Pn	02 33 53.4	-0.6
H04A	Detroit Lake	4.76	22	Pn	Pn	02 33 56.4	+0.2
KVN	Kaiserville	5.21	102		Pn	02 34 02.6	0.0
NVAR	Mina Array Bea	5.26	109	Pn	Pn	02 34 05.4	+2.0
	0.6nm,0.3s,baz=289,slow=14,SNR=12						
NVAR				Lg	Lg	02 35 16.0	
	baz=193,slow=6.1,SNR=0.7						
NVAR	Mina Array Bea	5.26	109		Pn	02 34 03.9	+0.6
J08A	Circle Bar Ran	5.55	54	Pn	Pn	02 34 06.2	-0.9
ISA	Isabella, Lake	6.72	131		Pn	02 34 23.9	+0.7
TXAR	Lajitas Array	20.36	116	P	Pn	02 37 25.8	+2.7
	0.0nm,0.3s,baz=295,slow=11,SNR=3.1						
ULM	Lac du Bonnet	22.45	54	P	P	02 37 45.4	+2.2
	1.5nm,0.6s,baz=260,slow=6.1,SNR=3.2						
YKA	Yellowknife Ar	23.05	12	P	P	02 38 00.1	+11
	1.3nm,1.1s,baz=194,slow=12,SNR=6.0						

ATH ***19*** *02:55:40.6, 38°.38N×21°.99E, h13^{km}±1^{km}, ML2.9/11, Error ellipse: s-maj=1.5km s-min=0.7km az=139.0*

IASPEI ***19*** *02:55:41.0±0.8, 38°.39N±0°.01×21°.98E±0°.02, h9^{km}±4^{km}, Error ellipse: s-maj=2.2km s-min=2.1km az=126.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

THE ***19*** *02:55:41.5, 38°.39N×22°.00E, h6^{km}, ML2.8/32, Error ellipse: s-maj=0.7km s-min=0.4km az=296.0*

IDC ***19*** *02:55:42.4±1.7, 38°.21N×22°.19E, h0^{km}, mb3.4/2, mb1 3.3/5, mb1mx3.1/49, mbtmp3.2/5, ML3.1/3, Error ellipse: s-maj=30.9km s-min=21.1km az=96.0*

ISC 19 02:55:41.3±0.7**, 38°.38N**±0°.01×**21°.99E**±0°.01**, h9**^{km}±4^{km}**, n98,** σ**0^{s}.84**/156**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SERG	Sergoula	0.06	59	P	Pg	02 55 43.1	-0.1
SERG				S	Sg	02 55 44.5	-0.2
TRIZ	Trizonia	0.07	104	P	Pg	02 55 43.2	0.0
TRIZ				S	Sg	02 55 44.8	+0.1
TRIZ	Trizonia	0.07	104	P	Pg	02 55 43.2	0.0
TRIZ				S	Sg	02 55 44.8	+0.1
KALE	Kalithea	0.12	86	P	Pg	02 55 43.9	-0.1
KALE				S	Sg	02 55 46.3	+0.3
	17μm,0.3s						
KALE	Kalithea	0.12	86	P	Pg	02 55 43.9	-0.1
KALE				S	Sg	02 55 46.2	+0.2
KALE				AML	AML	02 55 46.7	
	comp=N,47432μm,0.3s						
KALE				AML	AML	02 55 48.9	
	comp=E,19007μm,0.4s						
LAKA	Lakka	0.14	184	P	Pg	02 55 43.5	-0.9
LAKA				S	Sg	02 55 46.1	-0.4
	comp=E,10μm,0.3s						
LAKA	Lakka	0.14	184	P	Pg	02 55 43.6	-0.9
LAKA				S	Sg	02 55 45.9	-0.7
LAKA				AML	AML	02 55 46.5	
	comp=E,14671μm,0.2s						
LAKA				AML	AML	02 55 46.5	
	comp=N,20066μm,0.3s						
ALIK	Aliki, Aigiali	0.15	142	P	Pg	02 55 45.0	+0.4
ALIK				S	Sg	02 55 47.9	+1.1
UPR	University Cam	0.19	239	P	Pg	02 55 45.5	+0.3
UPR				S	Sg	02 55 48.8	+1.0
ANX	Ano Chora	0.22	345	P	Pg	02 55 45.7	-0.1
ANX				S	Sg	02 55 49.4	+0.6
KLV	Kalavryta, Ach	0.36	160	P	Pg	02 55 48.0	-0.4
KLV				S	Sg	02 55 53.5	+0.3
	comp=N,2μm,0.5s						
KLV	Kalavryta, Ach	0.36	160	P	Pg	02 55 48.0	-0.4
KLV				S	Sg	02 55 53.5	+0.3
KLV				AML	AML	02 55 54.7	
	comp=E,2449μm,0.2s						
KLV				AML	AML	02 55 56.2	
	comp=N,2934μm,0.3s						
DLFA	Delphi	0.41	76	P	Pg	02 55 48.6	-0.7
DLFA				S	Sg	02 55 55.1	+0.4
DLFA				AML	AML	02 55 55.3	
	comp=N,3610μm,0.4s						
DLFA				AML	AML	02 55 58.1	
	comp=E,4273μm,0.5s						
PVO	Paravola	0.43	303	P	Pg	02 55 49.5	-0.2
PVO				S	Sb	02 55 57.0	-0.8
	comp=E,3μm,0.4s						
DRO	Drossia	0.48	207	P	Pg	02 55 50.5	-0.1
DRO				S	Sg	02 55 57.6	+0.6
	comp=E,5μm,0.3s						
RLS	Riolos of Patr	0.53	232	P	Pg	02 55 51.4	-0.1
RLS				S	Sb	02 55 59.6	-0.8
	comp=E,2μm,0.3s						
RLS	Riolos of Patr	0.53	232	P	Pg	02 55 51.3	-0.1
RLS				S	Sg	02 55 59.1	+0.8
RLS				AML	AML	02 56 01.3	
	comp=E,3452μm,0.2s						
RLS				AML	AML	02 56 02.8	
	comp=N,3207μm,0.4s						
EVR	Evrytania	0.55	345	P	Pg	02 55 51.5	-0.5
EVR				S	Sb	02 56 00.8	-0.5
	comp=N,3μm,0.6s						
EVR	Evrytania	0.55	345	P	Pg	02 55 51.4	-0.5
EVR				S	Sg	02 55 59.4	+0.1
EVR				AML	AML	02 56 03.4	
	comp=E,5964μm,0.5s						
EVR				AML	AML	02 56 03.5	
	comp=N,3430μm,0.4s						
MAKR	Makrakomi, Fth	0.64	10	P	Pg	02 55 53.2	-0.5
MAKR				S	Sb	02 56 04.1	+0.3
	comp=N,2μm,0.5s						
MAKR	Makrakomi, Fth	0.64	10	P	Pg	02 55 53.1	-0.6
MAKR				S	Sg	02 56 02.6	+0.5
MAKR				AML	AML	02 56 05.3	
	comp=E,4304μm,0.4s						
MAKR				AML	AML	02 56 06.8	
	comp=N,3776μm,0.5s						
AXAR	Agios Charalam	0.65	54	P	Pg	02 55 53.3	-0.5
AXAR				S	Sg	02 56 02.9	+0.5
AXAR				AML	AML	02 56 07.7	
	comp=N,6698μm,0.3s						
AXAR				AML	AML	02 56 09.7	
	comp=E,9430μm,0.4s						
AGG	Agios Georgios	0.69	22	P	Pg	02 55 53.4	-1.3
AGG				S	Sg	02 56 03.6	-0.1
	comp=E,785nm,0.5s						
AGG	Agios Georgios	0.69	22	P	Pg	02 55 53.3	-1.3
AGG				S	Sg	02 56 03.6	-0.1
AGG				AML	AML	02 56 05.4	
	comp=E,1383μm,0.5s						
AGG				AML	AML	02 56 09.5	
	comp=N,1804μm,0.5s						
PROD	Prodromos	0.73	99	P	Pg	02 55 54.8	-0.5
PROD				S	Sb	02 56 06.4	+0.2
PROD	Prodromos	0.73	99	P	Pg	02 55 54.8	-0.5
PROD				S	Sg	02 56 05.3	+0.5
PROD				AML	AML	02 56 09.8	
	comp=N,1422μm,0.3s						
PROD				AML	AML	02 56 13.6	
	comp=E,1123μm,0.3s						
VTN	Vitineika	0.79	234	P	Pg	02 55 56.6	+0.2
VTN				S	Sb	02 56 08.5	+0.6
LKR	Lokris	0.83	71	P	Pg	02 55 56.0	-1.3
LKR				S	Sg	02 56 08.5	+0.3
	comp=E,528nm,0.2s						
LKR	Lokris	0.83	71	P	Pg	02 55 56.1	-1.3
LKR				S	Sg	02 56 08.2	-0.1
LKR				AML	AML	02 56 12.5	
	comp=N,899μm,0.2s						
LKR				AML	AML	02 56 13.3	
	comp=E,1201μm,0.2s						
LTK	Loutraki	0.85	115	P	Pg	02 55 57.4	-0.2
LTK				S	Sb	02 56 09.6	-0.1
	comp=E,470nm,0.5s						
LOUT	Loutraki	0.87	117	P	Pg	02 55 57.8	-0.1
LOUT				S	Sb	02 56 10.6	+0.3
	comp=E,395nm,0.5s						
LOUT	Loutraki	0.87	117	P	Pg	02 55 57.9	-0.1
AMT	Artemida-Makis	0.88	195	P	Pg	02 55 57.6	-0.5
AMT				S	Sn	02 56 11.4	-1.4
	comp=E,2μm,0.4s						
KFL	Anninata	0.98	254	P	Pg	02 55 59.7	-0.5
KFL				S	Sn	02 56 14.8	-0.6
	comp=E,2μm,0.3s						
VIL2	Platees	1.02	99	P	Pn	02 56 01.4	-0.4
VLX	Vlachokerasia	1.06	163	P	Pg	02 56 00.2	-1.4
VLX				S	Sn	02 56 16.2	-1.1
	comp=E,1μm,0.5s						
VILL	Villia	1.06	101	P	Pg	02 56 01.1	-0.6
VILL				S	Sb	02 56 15.8	-0.1
EVGI	Lefkada island	1.07	283	P	Pb	02 56 00.9	-1.2
EVGI	Lefkada island	1.07	283	P	Pb	02 56 00.4	-1.6
KONA	Konidatara, Ke	1.12	273	P	Pb	02 56 01.9	-0.9
LKD2	Lefkada island	1.12	292	P	Pb	02 56 02.2	-0.7
LKD2				S	Sn	02 56 19.7	+0.9
	comp=E,630nm,0.7s						
LKD2	Lefkada island	1.12	292	P	Pb	02 56 02.2	-0.7
VLS	Valsamata	1.12	260	P	Pb	02 56 01.3	-1.6
VLS				S	Sn	02 56 19.2	+0.4
	comp=E,845nm,0.2s						
VLS	Valsamata	1.12	260	P	Pb	02 56 01.3	-1.6
FSK	Fiskardo	1.12	274	P	Pb	02 56 01.7	-1.2
FSK				S	Sn	02 56 19.9	+1.1
	comp=E,598nm,0.7s						
TSLK	Tsoukalades, L	1.14	293	P	Pb	02 56 02.5	-0.6
TSLK	Tsoukalades, L	1.14	293	P	Pb	02 56 02.5	-0.6
THL	Klokotos Trika	1.18	1	P	Pb	02 56 03.0	-0.9
THL				S	Sb	02 56 19.4	+0.1
	comp=E,370nm,0.6s						
THL	Klokotos Trika	1.18	1	P	Pb	02 56 03.0	-0.9
KEF1	Kardakata, Kep	1.20	265	P	Pn	02 56 03.1	-1.2
ITM	Ithomi	1.20	182	P	Pb	02 56 02.8	-1.4
ITM				S	Sn	02 56 21.6	+0.8
	comp=E,452nm,0.6s						
ITM	Ithomi	1.20	182	P	Pb	02 56 02.9	-1.3
KEF2	Argostoli. Kep	1.20	260	P	Pn	02 56 02.7	-1.6
KEF4	Livadi, Kephal	1.24	265	P	Pn	02 56 03.4	-1.4
MRKA	Markates	1.29	75	P	Pn	02 56 05.2	-0.4
MRKA	Markates	1.29	75	P	Pn	02 56 04.5	-1.1
KEF3	Kipouria, Keph	1.30	263	P	Pn	02 56 04.7	-1.0
DID	Didima	1.32	131	P	Pn	02 56 05.8	-0.1
DID				S	Sg	02 56 25.2	+1.6
	comp=E,380nm,0.4s						
NEO	Neokhori	1.33	46	P	Pn	02 56 05.7	-0.4
NEO				S	Sg	02 56 24.5	+0.3
	comp=E,220nm,0.5s						
NEO	Neokhori	1.33	46	P	Pn	02 56 05.8	-0.4
KRND	KRANIDI	1.35	137	P	Pn	02 56 06.2	-0.2
KRND				S	Sg	02 56 25.6	+0.8
	comp=E,415nm,0.4s						
KRND	KRANIDI	1.35	137	P	Pb	02 56 06.4	-0.4
XOR	Xorichti	1.36	43	P	Pn	02 56 05.8	-0.7
XOR				S	Sb	02 56 23.9	-0.5
	comp=E,212nm,0.6s						
XOR	Xorichti	1.36	43	P	Pn	02 56 05.7	-0.7
ATH	Athens Observa	1.42	106	P	Pn	02 56 07.2	-0.1
ATH				S	Sn	02 56 25.6	-0.5
	comp=E,322nm,0.9s						
ATHU	Athens Univers	1.47	106	P	Pn	02 56 07.7	-0.3
ATHU				S	Sb	02 56 27.4	-0.3
	comp=E,95nm,0.5s						
ATHU	Athens Univers	1.47	106	P	Pn	02 56 07.8	-0.3
PYL	PYLOS	1.50	188	P	Pn	02 56 08.1	-0.3
PYL				S	Sg	02 56 29.9	+0.5
	comp=E,285nm,0.5s						
PTL	Penteli	1.51	102	P	Pn	02 56 08.4	-0.2
PTL				S	Sg	02 56 29.6	-0.3
	comp=E,155nm,0.6s						
PTL	Penteli	1.51	102	P	Pn	02 56 08.5	-0.1
VLY	Voula,Athens	1.52	110	P	Pn	02 56 08.5	-0.1
VLY				S	Sn	02 56 28.3	-0.2
	comp=E,152nm,0.7s						
VLY	Voula,Athens	1.52	110	P	Pn	02 56 08.7	0.0
JAN	Janina	1.55	325	P	Pb	02 56 09.9	-0.3
DYR	Agios Nikonas	1.64	170	P	Pn	02 56 10.5	+0.2
DYR				S	Sb	02 56 32.5	0.0
	comp=E,70nm,0.7s						
LIT	Litokhoron	1.76	13	P	Pn	02 56 11.9	-0.1
LIT				S	Sb	02 56 35.3	-0.7
	comp=E,238nm,0.7s						
LIT	Litokhoron	1.76	13	P	Pb	02 56 12.9	-0.8
VLI	Veliai	1.82	155	P	Pn	02 56 12.7	-0.1
VLI				S	Sb	02 56 36.9	-0.9
	comp=E,195nm,0.8s						
VLI	Veliai	1.82	155	P	Pn	02 56 12.9	+0.1
KTHR	Kythira	2.27	159	P	Pb	02 56 20.9	-1.5
KTHA	Kythira Island	2.29	158	P	Pn	02 56 20.3	+1.1
GRG	Griva	2.59	7	P	Pn	02 56 23.3	-0.1
KNT	Kendrikon	2.86	14	P	Pn	02 56 27.6	+0.4
OHR	Ohrid	2.88	342	*i* Pn	Pg	02 56 35.3	-1.1
VAY	Valandovo	2.97	8	*i* Pn	Pn	02 56 31.1	+2.5
IDI	Anoyia	3.87	142	Pn	Pn	02 56 40.0	-1.0
	comp=E,0.5nm,0.3s,baz=320,slow=16,SNR=1.2						
IDI				Pg	Pb	02 56 49.8	+0.1
	comp=E,1.7nm,0.3s,baz=319,slow=15,SNR=6.2						
IDI				Sn	Sn	02 57 26.6	+0.1
	comp=E,1.6nm,0.3s,baz=25,slow=10.0,SNR=2.8						
DBRK	Dubrovnik	5.19	327	*e*Pn	Pn	02 56 59.4	+0.3
DBRK				Sn	Sn	02 57 59.7	+0.6
STON	Ston	5.55	325	*i* Pn	Pn	02 57 04.5	+0.5
STON				Sn	Sn	02 58 06.6	-1.3
MAKA	Makarska	6.18	324	*e*Pn	Pn	02 57 13.1	+0.3
MAKA				Sn	Sn	02 58 21.6	-1.9
RICI	Ricice	6.29	326	*e*Pn	Pn	02 57 14.7	+0.4
KIJV	Kijevo	7.02	325	*i* Pn	Pn	02 57 24.2	0.0
KIJV				Sn	Sn	02 58 45.6	+1.4
ZIRJ	Zirje	7.12	320	*e*Pn	Pn	02 57 25.4	-0.2
ZIRJ				Sn	Sn	02 58 44.6	-2.1
MORI	Morici	7.25	321	*e*Pn	Pn	02 57 28.1	+0.8
DUGI	Dugi Otok	7.66	319	*e*Pn	Pn	02 57 31.9	-1.1
MLR	Muntele Rosu	7.69	21	Pn	Pn	02 57 40.0	+6.4
	comp=E,0.2nm,0.3s,baz=216,slow=18,SNR=1.9						
UDBI	Udbina	7.72	325	*e*Pn	Pn	02 57 35.4	+1.6
BRTR	Keskin Array B	9.16	78	Pn	Pn	02 57 56.9	+3.1
	comp=E,0.1nm,0.3s,baz=273,slow=11,SNR=2.4						
TORD	Torodi Ar. Bea	30.93	221	P	P	03 02 00.9	+2.3
	comp=E,0.4nm,0.6s,baz=30,slow=7.9,SNR=2.5						
MKAR	Makanchi Array	44.21	59	P	P	03 03 50.7	0.0
	comp=E,0.2nm,0.5s,baz=275,slow=6.5,SNR=4.1						

IDC 19 02:55:60.0±2.1**, 11°.53S**×**166°.56E, h0**^{km}**, mb4.2**/7**, mb1 4.4**/7**, mb1mx3.9**/38**, mbtmp4.2**/7**, MS3.1**/3**, Ms1 3.1**/3**, ms1mx2.9**/28**, Error ellipse: s-maj=71.5km s-min=26.6km az=126.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.48	181	LR	LR	03 01 51.0	
	comp=Z,105nm,20.6s,baz=46,slow=34						
KRVT	Keravat (AS076	16.07	295	LR	LR	03 06 10.6	
	comp=Z,55nm,20.1s,baz=105,slow=38						
PMG	Port Moresby	19.19	274	LR	LR	03 06 02.0	
	comp=Z,69nm,21.9s,baz=130,slow=31						
STKA	Stephens Creek	30.65	225	P	P	03 02 17.4	+1.1
	2.5nm,0.8s,baz=38,slow=9.4,SNR=6.6						
WRA	Warramunga Arr	32.07	251	P	P	03 02 28.7	-0.3
	3.8nm,0.8s,baz=82,slow=8.9,SNR=17						
ASAR	Alice Springs	33.30	244	P	P	03 02 38.6	-1.0
	3.3nm,0.7s,baz=74,slow=9.4,SNR=31						
ASAR				PcP	PcP	03 05 21.2	-0.9
	0.5nm,0.8s,baz=54,slow=2.2,SNR=4.1						
CMAR	Chiang Mai Arr	73.03	293	P	P	03 07 33.5	+1.1
	1.1nm,0.3s,baz=113,slow=4.2,SNR=5.5						
SONM	Songino Array	79.53	324	P	P	03 08 08.9	0.0
	0.6nm,0.8s,baz=108,slow=4.7,SNR=3.0						
ILAR	Eielson Array	83.72	18	P	P	03 08 30.4	0.0
	0.5nm,0.9s,baz=226,slow=5.9,SNR=4.8						
MKAR	Makanchi Array	94.42	317	P	P	03 09 21.5	-0.5
	1.5nm,0.7s,baz=98,slow=5.9,SNR=18						

WEL 19 03:09:42.5, 39°S±1°×**17°5E**±°**, h91**^{km}±2^{km}**, M3.4**/33**, ML3.6**/31**, MLv3.4**/33**, Error ellipse: s-maj=0.0km s-min=0.0km az=152.2, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTVZ	Mangateitei	0.17	64	P	Pn	03 09 55.8	+0.1
PKVZ	Pokaka	0.18	19	P	Pn	03 09 55.7	0.0
TRVZ	Turoa	0.27	53	P	Pn	03 09 56.3	+0.1
DRZ	Dome Shelter	0.29	51	P	Pn	03 09 56.5	+0.1
FWVZ	Far West T-bar	0.30	47	P	Pn	03 09 56.5	+0.1
WHVZ	Whangaehu Hut	0.30	54	P	Pn	03 09 56.5	+0.1
TUVZ	Tukino	0.35	57	P	Pn	03 09 56.8	+0.2
WAZ	Wanganui	0.37	217	P	Pn	03 09 56.8	+0.3
WAZ				S	Sn	03 10 07.7	+0.8
MOVZ	Moawhango	0.38	82	P	Pn	03 09 56.6	0.0
MOVZ				S	Sn	03 10 07.0	-0.2
NGZ	Ngauruhoe	0.38	42	P	Pn	03 09 56.9	+0.1
TWVZ	Taurewa	0.41	19	P	Pn	03 09 56.8	-0.1
WTVZ	West Tongariro	0.42	36	P	Pn	03 09 57.1	+0.1
KRVZ	Karewarewa	0.47	38	P	Pn	03 09 57.2	0.0
KATZ	Kakaramea	0.59	34	P	Pn	03 09 58.4	+0.1
BHHZ	Black Hill Sta	0.61	93	P	Pn	03 09 58.2	-0.2
BHHZ				S	Sn	03 10 09.7	-0.6
RITZ	Rihia Road	0.66	44	P	Pn	03 09 59.3	+0.4
LREZ	Lake Rotokare	0.67	270	P	Pn	03 09 58.9	+0.1
RATZ	Rangitukua	0.71	34	P	Pn	03 09 59.3	0.0
TSZ	Takapari Road	0.80	139	P	Pn	03 10 00.6	+0.4
TSZ				S	Sn	03 10 14.1	+0.8
MHEZ	Mangahewa	0.83	297	P	Pn	03 10 00.8	+0.4
WATZ	Wairara	0.83	26	P	Pn	03 10 00.8	+0.3
WATZ				S	Sn	03 10 14.8	+0.9
PNHZ	Pukenui	0.85	123	P	Pn	03 10 00.8	+0.2
PNHZ				S	Sn	03 10 16.4	+2.1
HATZ	Hinemaiaia	0.85	49	P	Pn	03 10 00.6	-0.1
HATZ				S	Sn	03 10 13.9	-0.5
PREZ	Palmer Road	0.87	277	P	Pn	03 10 01.3	+0.4
PREZ				S	Sn	03 10 16.9	+2.3
KRHZ	Kereru	0.87	103	P	Pn	03 10 01.2	+0.3
KRHZ				S	Sn	03 10 15.5	+0.8
DREZ	Durham Road	0.87	288	P	Pn	03 10 01.2	+0.3
DREZ				S	Sn	03 10 15.4	+0.8
KWHZ	Kaweka Forest	0.89	88	P	Pn	03 10 01.8	+0.6
KWHZ				S	Sn	03 10 16.5	+1.3
WHTZ	Whakaora	0.96	34	P	Pn	03 10 02.7	+0.8
BKZ	Black Stump Fm	0.99	73	P	Pn	03 10 02.3	+0.1
BKZ				S	Sn	03 10 17.2	+0.1
HIZ	Hauiti	1.00	341	P	Pn	03 10 02.3	0.0
HIZ				S	Sn	03 10 17.5	+0.4
POWZ	Post Office Ro	1.01	158	P	Pn	03 10 02.6	+0.2
POWZ				S	Sn	03 10 16.8	-0.5
PKE	Pukeiti	1.03	285	P	Pn	03 10 02.6	0.0
PKE				S	Sn	03 10 18.2	+0.4
KUTZ	Kaahu Road	1.06	24	P	Pn	03 10 03.5	+0.5
NMEZ	Namu Road	1.08	272	P	Pn	03 10 03.0	-0.2
DVHZ	Dannevirke	1.09	141	P	Pn	03 10 03.0	-0.3
WPHZ	Waipukurau	1.09	124	P	Pn	03 10 04.0	+0.7
MRHZ	Matea Rd	1.09	55	P	Pn	03 10 03.1	-0.2
NBEZ	Newall Road No	1.10	280	P	Pn	03 10 03.6	+0.1
MCHZ	McNeill Hill	1.10	90	P	Pn	03 10 04.4	+0.9
TLZ	Tolley Road	1.15	11	P	Pn	03 10 04.1	0.0
PRWZ	Pori Road	1.22	154	P	Pn	03 10 05.3	+0.4
MRZ	Mangatainoka R	1.22	169	P	Pn	03 10 04.7	-0.2
NMHZ	Naumai	1.25	74	P	Pn	03 10 06.5	+1.3
KAHZ	Kahuranaki	1.28	106	P	Pn	03 10 06.5	+0.8
GRRZ	Galatos Road	1.29	31	P	Pn	03 10 06.5	+0.7
PRRZ	Plateau Road	1.30	43	P	Pn	03 10 06.1	+0.3
PRHZ	Porangahau	1.32	128	P	Pn	03 10 06.0	-0.1
HRRZ	Handcock Road	1.33	37	P	Pn	03 10 06.8	+0.6
ARHZ	Aropaoanui	1.35	82	P	Pn	03 10 07.2	+0.7
PXZ	Pawanui	1.35	115	P	Pn	03 10 06.8	+0.4
PXZ				P	Pn	03 10 06.8	+0.4
OGWZ	Otaki Gorge	1.36	183	P	Pn	03 10 06.6	0.0
ANWZ	Angora Road	1.36	138	P	Pn	03 10 07.1	+0.5
MTHZ	Maungataniwha	1.36	64	P	Pn	03 10 06.7	+0.1
HSRZ	Hossack Road	1.38	34	P	Pn	03 10 07.3	+0.5
TIWZ	Tintock	1.40	160	P	Pn	03 10 07.0	-0.1
CKHZ	Cape Kidnapper	1.41	99	P	Pn	03 10 07.2	+0.1
KIW	Kapiti Island	1.43	191	P	Pn	03 10 06.9	-0.5
BFZ	Birch Farm	1.43	149	P	Pn	03 10 07.4	-0.1
HOWZ	Holdsworth Sta	1.45	173	P	Pn	03 10 07.3	-0.4
HLRZ	Highlands Stat	1.47	35	P	Pn	03 10 09.1	+1.1
RRRZ	Republican Roa	1.48	41	P	Pn	03 10 08.2	+0.1
RAHZ	Arahi	1.51	70	P	Pn	03 10 08.8	+0.3
MUGZ	Murupara	1.53	50	P	Pn	03 10 08.4	-0.3
NGRZ	Ngongotaha	1.53	28	P	Pn	03 10 08.7	-0.1
TARZ	Mount Tarawera	1.56	39	P	Pn	03 10 09.6	+0.4
WHHZ	Waihua	1.57	77	P	Pn	03 10 09.6	+0.4
RTZ	Ruatahuna	1.58	58	P	Pn	03 10 09.2	-0.2
OMRZ	Omania	1.60	33	P	Pn	03 10 10.0	+0.4
CPWZ	Castlepoint	1.61	154	P	Pn	03 10 10.1	+0.4
MKRZ	Makatiti	1.62	36	P	Pn	03 10 10.6	+0.7
KARZ	Kaharoa	1.63	28	P	Pn	03 10 10.4	+0.5
CAW	Cannon Point	1.65	185	P	Pn	03 10 09.7	-0.6
DUWZ	D'Urville Isla	1.69	217	P	Pn	03 10 09.8	-0.9
KMRZ	Kaimai	1.69	18	P	Pn	03 10 11.3	+0.5
MTW	Mount Morrison	1.71	174	P	Pn	03 10 10.2	-0.8
TMWZ	Te Maipa	1.71	164	P	Pn	03 10 10.7	-0.4
TOZ	Tahuroa Road	1.74	6	P	Pn	03 10 11.4	0.0
SNGZ	Shannon Statio	1.75	68	P	Pn	03 10 11.9	+0.4
EDRZ	Edgecumbe	1.77	41	P	Pn	03 10 12.1	+0.2
MARZ	Manawahe	1.84	37	P	Pn	03 10 13.0	+0.4
WEL	Wellington	1.86	192	P	Pn	03 10 12.0	-1.0
URZ	Urewera	1.87	51	P	Pn	03 10 12.4	-0.7

TGRZ	**Tauranga**	**1.90**	**24**	P	Pn	03 10 13.9	+0.5
OPRZ	**Ohinepanea**	**1.90**	**32**	P	Pn	03 10 13.8	+0.3
TCW	**Tory Channel**	**1.91**	**203**	P	Pn	03 10 12.5	-1.0
PAWZ	**Paruwai Farm**	**1.92**	**176**	P	Pn	03 10 12.7	-1.0
RAGZ	**Rawiri**	**1.93**	**61**	P	Pn	03 10 13.7	-0.2
MSWZ	**Moikau Station**	**1.95**	**180**	P	Pn	03 10 13.1	-1.0
TRWZ	**Traveller**	**1.96**	**171**	P	Pn	03 10 13.4	-0.9
BHW	**Baring Head**	**1.97**	**189**	P	Pn	03 10 13.2	-1.1
MHGZ	**Mahia Peninsul**	**2.07**	**82**	P	Pn	03 10 15.4	-0.2
RIGZ	**Rimuhau**	**2.08**	**70**	P	Pn	03 10 15.7	-0.2
MWZ	**Matawai**	**2.09**	**58**	P	Pn	03 10 15.3	-0.7
PRGZ	**Paritu Road**	**2.10**	**76**	P	Pn	03 10 15.7	-0.4
PLWZ	**Palliser**	**2.11**	**180**	P	Pn	03 10 14.9	-1.3
TUWZ	**Tuamarina**	**2.21**	**207**	P	Pn	03 10 15.9	-1.6
TKGZ	**Te Karaka**	**2.25**	**64**	P	Pn	03 10 17.6	-0.5
NNZ	**Nelson**	**2.27**	**219**	P	Pn	03 10 16.8	-1.5
MKAZ	**Moumakai**	**2.35**	**358**	P	Pn	03 10 19.2	-0.2
RUGZ	**Raukumara Rang**	**2.40**	**52**	P	Pn	03 10 18.8	-1.4
CNGZ	**Carnagh Statio**	**2.49**	**68**	P	Pn	03 10 20.6	-0.6
BSWZ	**Blackbirch Sta**	**2.49**	**205**	P	Pn	03 10 19.6	-1.6
QRZ	**Quartz Range**	**2.50**	**236**	P	Pn	03 10 19.8	-1.6
HAZ	**Te Kaha**	**2.60**	**50**	P	Pn	03 10 21.0	-1.7
WIAZ	**Waiheke Island**	**2.67**	**358**	P	Pn	03 10 23.7	+0.2
PUZ	**Puketiti**	**2.71**	**60**	P	Pn	03 10 22.9	-1.4
KUZ	**Kuaotunu**	**2.73**	**8**	P	Pn	03 10 24.2	-0.3
THZ	**Tophouse**	**2.92**	**217**	P	Pn	03 10 25.2	-1.9
WMGZ	**Waiomatatini S**	**2.96**	**57**	P	Pn	03 10 26.0	-1.5
MXZ	**Matakaoa Point**	**3.04**	**52**	P	Pn	03 10 27.4	-1.2
KHZ	**Kahutara**	**3.23**	**203**	P	Pn	03 10 29.0	-2.1
DSZ	**Denniston Nort**	**3.49**	**228**	P	Pn	03 10 32.2	-2.4
GVZ	**Greta Valley S**	**3.89**	**205**	P	Pn	03 10 37.0	-3.0
LTZ	**Lake Taylor**	**4.02**	**213**	P	Pn	03 10 38.5	-3.3
AMCZ	**Amberley**	**4.20**	**207**	P	Pn	03 10 41.3	-2.9
INZ	**Inchbonnie**	**4.36**	**220**	P	Pn	03 10 43.9	-2.4
WVZ	**Waitaha Valley**	**4.97**	**222**	P	Pn	03 10 52.1	-2.6
LBZ	**Lake Benmore**	**6.21**	**216**	P	Pn	03 11 08.0	-3.6
ODZ	**Otahua Downs**	**6.55**	**210**	P	Pn	03 11 12.1	-4.0
CTZ	**Chatham Island**	**7.43**	**128**	P	Pn	03 11 26.2	-1.9
CTZ				S	Sn	03 12 43.2	-7.5

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*IDC **19** 03:35:38.1±11.0, 10°.71S×165°.94E, h156^{km}±118^{km}, mb3.3/4, mb1 3.5/5, mb1mx3.2/41, mbtmp3.8/5, ML4.1/1, Error ellipse: s-maj=86.5km s-min=29.7km az=157.0*

ISC 19 03:35:38.1±1.2, **10°.7S**±0°.1×**165°.9E**±0°.3, **h155^{km}, n6, σ1^{s}.41**/7, **mb3.6**/4, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.27**	**178**	P	**Pn**	**03 38 16.6**	**+1.8**
	1.2nm,0.3s,baz=320,slow=17,SNR=16						
DZM				S	**Sn**	**03 40 17.6**	**-2.0**
	0.2nm,0.3s,baz=38,slow=20,SNR=2.3						
WRA	**Warramunga Arr**	**31.76**	**249**	P	**P**	**03 41 47.4**	**-0.4**
	0.6nm,0.6s,baz=80,slow=9.2,SNR=2.8						
ASAR	**Alice Springs**	**33.09**	**243**	P	**P**	**03 41 59.8**	**+0.3**
	0.6nm,1.0s,baz=65,slow=9.7,SNR=7.0						
ILAR	**Eielson Array**	**83.17**	**18**	P	**P**	**03 47 46.0**	**-0.4**
	0.6nm,0.5s,baz=239,slow=5.1,SNR=16						
MKAR	**Makanchi Array**	**93.43**	**317**	P	**P**	**03 48 36.0**	**+0.1**
	0.2nm,0.5s,baz=100,slow=5.8,SNR=2.6						
ARCES	**ARCESS Array B**	**116.09**	**346**	PKP	**PKPdf**	**03 54 01.7**	**-0.5**
	3.4nm,0.9s,baz=64,slow=2.1,SNR=5.5						

IDC 19 04:03:44.0±17.0, **3°.92N**×**127°.51E, h0^{km}, mb3.9**/3, **mb1 4.0**/3, **mb1mx3.4**/40, **mbtmp3.9**/3, **Error ellipse: s-maj=290.4km s-min=195.8km az=157.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.64**	**164**	P	P	04 09 06.8	+0.2
	1.3nm,0.6s,baz=344,slow=9.7,SNR=7.0						
ASAR	**Alice Springs**	**28.12**	**167**	P	P	04 09 37.8	-0.2
	0.3nm,0.4s,baz=352,slow=7.9,SNR=6.0						
STKA	**Stephens Creek**	**38.04**	**160**	P	P	04 11 04.2	-0.1
	1.4nm,0.3s,baz=341,slow=7.9,SNR=4.5						

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*NEIC **19** 04:13:58.1±1.5, 5°.33S±0°.07×153°.0E±0°.1, h43^{km}±8^{km}, mb4.2/6, Error ellipse: s-maj=17.0km s-min=10.2km az=93.0*

*IDC **19** 04:14:01.2±2.0, 5°.31S×152°.85E, h62^{km}±16^{km}, mb3.9/12, mb1 4.1/13, mb1mx3.8/48, mbtmp4.2/13, MS3.2/2, Ms1 3.2/2, ms1mx2.7/31, Error ellipse: s-maj=22.8km s-min=11.7km az=92.0*

ISC 19 04:13:58.1±0.7, **5°.31S**±0°.06×**152°.98E**±0°.10, **h37^{km}, n31, σ1^{s}.15**/34, **mb4.1**/14, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.37**	**316**	P	**Pn**	**04 14 21.6**	**+0.8**
	533nm,0.3s,baz=352,slow=1.5,SNR=98						
KRVT				S	**Sn**	**04 14 39.8**	**+2.1**
	422nm,0.3s,baz=349,slow=20,SNR=16						
KRVT				LR	LR	04 14 48.1	
	comp=Z,505nm,18.2s,baz=4.1,slow=36						
RABL	**Rabaul**	**1.37**	**324**		**Pn**	**04 14 21.8**	**+1.1**
RABL				Sn	**Sn**	**04 14 38.3**	**+0.6**
PMG	**Port Moresby**	**7.06**	**234**	P	**Pn**	**04 15 41.2**	**+2.2**
	1.9nm,0.3s,baz=24,slow=6.1,SNR=5.1						
PMG				S	**Sn**	**04 16 58.5**	**+0.5**
	3.2nm,0.3s,baz=56,slow=14,SNR=7.1						
PMG	**Port Moresby**	**7.06**	**234**		**Pn**	**04 15 40.2**	**+1.2**
PMG					**Sn**	**04 16 57.1**	**-0.8**
DZM	**Mont Dzumac**	**21.16**	**143**	P	**P**	**04 18 42.8**	**+2.6**
	4.1nm,0.5s,baz=66,slow=23,SNR=2.1						
WB0	**Warramunga Arr**	**23.10**	**230**	P	**P**	**04 19 01.0**	**+0.1**
WR0	**Warramunga Arr**	**23.10**	**229**	P	**P**	**04 19 00.1**	**-0.8**
WR0				IAmb	IAmb	04 19 02.4	
	comp=Z,13nm,0.9s						
WRA	**Warramunga Arr**	**23.25**	**230**	P	**P**	**04 19 02.3**	**0.0**
	comp=Z,10nm,0.9s,baz=54,slow=9.9,SNR=26						
WRA				LR	LR	04 28 31.4	
	comp=Z,63nm,18.6s,baz=135,slow=38						
WRA	**Warramunga Arr**	**23.25**	**230**	P	**P**	**04 19 01.5**	**-0.9**
AS31	**Alice Springs**	**25.90**	**223**	P	**P**	**04 19 24.3**	**-2.5**
AS31				IAmb	IAmb	04 19 25.7	
	comp=Z,4.0nm,1.1s						
ASAR	**Alice Springs**	**25.90**	**223**	P	**P**	**04 19 24.8**	**-2.1**
STKA	**Stephens Creek**	**28.50**	**201**	P	**P**	**04 19 49.1**	**-0.9**
	comp=Z,1.1nm,0.3s,baz=18,slow=18,SNR=2.4						
STKA	**Stephens Creek**	**28.50**	**201**	P	**P**	**04 19 49.5**	**-0.6**
FITZ	**Fitzroy Crossi**	**29.57**	**242**	P	**P**	**04 19 59.1**	**-0.6**
	comp=Z,4.7nm,0.7s,baz=50,slow=7.5,SNR=6.7						
FITZ	**Fitzroy Crossi**	**29.57**	**242**	P	**P**	**04 19 59.2**	**-0.6**
FITZ				IAmb	IAmb	04 20 01.1	
	comp=Z,9.0nm,1.0s						
JNU	**Nakatsue**	**43.59**	**333**	P	**P**	**04 21 58.0**	**-0.9**
	comp=Z,7.1nm,0.7s,baz=15,slow=15,SNR=4.1						
KLR	**Kul'dur**	**57.38**	**344**	LR	LR	04 46 04.6	
	comp=Z,22nm,19.6s,baz=162,slow=34						
CMAR	**Chiang Mai Arr**	**58.25**	**295**	P	**P**	**04 23 49.7**	**+0.3**
	comp=Z,1.2nm,0.3s,baz=94,slow=4.2,SNR=6.3						
CMAR	**Chiang Mai Arr**	**58.25**	**295**	P	**P**	**04 23 50.2**	**+0.8**
VNDA	**Vanda**	**72.32**	**178**	P	**P**	**04 25 20.4**	**+1.0**
	comp=Z,1.2nm,0.7s,baz=336,slow=7.3,SNR=10						
MKAR	**Makanchi Array**	**80.82**	**319**	P	**P**	**04 26 08.4**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=113,slow=6.0,SNR=9.5						
MKAR	**Makanchi Array**	**80.82**	**319**	P	**P**	**04 26 07.9**	**-0.3**
ZALV	**Zalesovo Beam**	**81.67**	**326**	P	**P**	**04 26 11.7**	**-0.8**
	comp=Z,0.9nm,0.4s,baz=127,slow=9.4,SNR=5.8						
ZALV	**Zalesovo Beam**	**81.67**	**326**	P	**P**	**04 26 11.8**	**-0.6**
ILAR	**Eielson Array**	**82.56**	**22**	P	**P**	**04 26 16.3**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=252,slow=5.4,SNR=9.3						
ILAR	**Eielson Array**	**82.56**	**22**	P	**P**	**04 26 16.5**	**-0.4**
NRIK	**Noril'sk**	**86.50**	**341**	P	**P**	**04 26 36.0**	**-0.7**
	comp=Z,1.1nm,0.3s,baz=60,slow=4.6,SNR=1.9						
YKA	**Yellowknife Ar**	**95.79**	**28**	P	**P**	**04 27 20.0**	**-0.2**
	comp=Z,0.1nm,0.7s,baz=264,slow=4.7,SNR=2.2						
BDFB	**Brasilia**	**150.58**	**135**	PKPbc	**PKiKP**	**04 33 49.2**	**+1.3**
	comp=Z,3.5nm,0.9s,baz=154,slow=3.0,SNR=5.9						
TORD	**Torodi Ar. Bea**	**150.63**	**287**	PKPbc	**PKPbc**	**04 33 47.4**	**+0.1**
	comp=Z,3.3nm,0.8s,baz=61,slow=2.4,SNR=16						
TORD	**Torodi Ar. Bea**	**150.63**	**287**		**PKPbc**	**04 33 46.7**	**-0.6**

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*MAN **19** 04:33:53.0, 9°.92N×125°.21E, h17^{km}, mb5.1, ML4.0, MS4.1*

*NEIC **19** 04:33:58.5±1.2, 9°.99N±0°.06×125°.2E±0°.1, h72^{km}±6^{km}, mb4.5/33, Error ellipse: s-maj=17.0km s-min=1.2km az=60.0*

*IDC **19** 04:33:59.1±1.8, 10°.01N×125°.36E, h75^{km}±17^{km}, mb4.0/23, mb1 4.1/25, mb1mx4.0/37, mbtmp4.3/25, MS3.3/18, Ms1 3.4/18, ms1mx3.2/42, Error ellipse: s-maj=20.8km s-min=10.0km az=80.0*

*DJA **19** 04:34:05.7±1.5, 9°N±11°×12°5E±°, h76^{km}±11^{km}, M4.7/12, mb4.7/12, mB5.2/4, Mw(mB)4.7/4*

ISC 19 04:33:53.9±1.1, **9°.92N**±0°.03×**125°.21E**±0°.05, **h28^{km}**±8^{km}, **n120, σ1^{s}.71**/123, **mb4.4**/40, **MS3.4**/15, **2C-6D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.03**	**157**	*e*P	**Pb**	**04 34 14.6**	**+1.6**
BUTP				*e*S	Sn	04 34 36.5	+11
LLP	**Lapu-Lapu**	**1.29**	**288**	⇓*e*P	**Pn**	**04 34 15.2**	**-0.8**
LLP				*e*S	**Sb**	**04 34 34.7**	**+1.0**
TBP	**Tagbilaran**	**1.35**	**260**	*e*P	**Pn**	**04 34 16.6**	**-0.2**
TBP				*i* S	**Sb**	**04 34 35.0**	**-0.3**
CGP	**Cagayan de Oro**	**1.54**	**199**	⇓*e*P	**Pn**	**04 34 19.2**	**-0.2**
CGP				*e*S	**Sb**	**04 34 41.7**	**+0.8**
SNPH	**Sibulan**	**2.03**	**254**	⇓*i*P	**Pn**	**04 34 25.1**	**-1.2**
BUKP	**Musuan**	**2.03**	**184**	*e*P	**Pn**	**04 34 26.5**	**+0.2**
BUKP				*e*S	**Sb**	**04 34 57.0**	**+1.9**
DCPH	**Dipolog City**	**2.26**	**234**	⇑*e*P	**Pn**	**04 34 29.5**	**0.0**
CNP	**Catarman**	**2.63**	**348**	*e*P	**Pn**	**04 34 34.3**	**-0.2**
CNP				*e*S	**Sn**	**04 35 07.9**	**+2.4**
GUIM	**Jordan**	**2.67**	**285**	*e*P	**Pn**	**04 34 37.0**	**+1.9**
GUIM				*e*S	**Sn**	**04 35 06.9**	**+0.4**
PAGZ	**Pagadian**	**2.74**	**221**	*e*P	**Pn**	**04 34 35.8**	**-0.1**
PAGZ				*e*S	**Sb**	**04 35 13.4**	**-1.9**
DMPH	**Davao City--Mi**	**2.83**	**174**	⇓*i*P	**Pb**	**04 34 42.6**	**-1.2**
DMPH				*i* S	**Sb**	**04 35 18.9**	**+0.8**
CTBH	**Cotabato--PC H**	**2.84**	**200**	⇓*i*P	**Pn**	**04 34 38.9**	**+1.4**
DAV	**Davao City (W)**	**2.85**	**173**	P	**Pb**	**04 34 43.1**	**-1.0**
	51nm,0.3s,baz=101,slow=4.4,SNR=8.3						
DAV				S	**Sb**	**04 35 18.6**	**0.0**
	47nm,0.3s,baz=51,slow=21,SNR=5.4						
DAV				LR	LR	04 36 22.3	
	comp=Z,869nm,19.2s,baz=26,slow=49						
DAV	**Davao City (W)**	**2.85**	**173**		**Pb**	**04 34 42.1**	**-2.0**
DAV					**Sb**	**04 35 17.4**	**-1.2**
KCP	**Kidapawan**	**2.89**	**182**	⇓*e*P	**Pn**	**04 34 40.0**	**+1.8**
KCP				*i* S	Sb	04 35 33.9	+14
RCP	**Roxas**	**2.92**	**304**	⇑*e*P	**Pn**	**04 34 40.0**	**+1.5**
PVCP	**Virac**	**3.80**	**344**	*e*P	**Pb**	**04 34 55.9**	**-4.4**
PVCP				*e*S	**Sb**	**04 35 49.9**	**+4.1**
DDMP	**Don Marcelino,**	**3.82**	**172**	*e*P	**Pb**	**04 34 56.2**	**-4.5**
DDMP				*e*S	**Sb**	**04 35 42.4**	**-4.1**
SANI	**Sanana**	**11.91**	**176**	P	**Pn**	**04 36 45.7**	**+3.7**
	36nm,0.9s						
SIJI	**Sorong**	**12.30**	**150**	P	**Pn**	**04 36 50.4**	**+3.2**
	1.0nm,0.3s,baz=124,slow=10,SNR=5.3						
NLAI	**Namlea**	**13.21**	**172**	P	**Pn**	**04 37 02.1**	**+2.5**
	21nm,0.6s						
TTSI	**Tana Toraja**	**13.95**	**203**	P	**P**	**04 37 19.6**	**+2.0**
	54nm,0.9s						
FAKI	**Fak Fak**	**14.55**	**151**		**P**	**04 37 23.2**	**-1.1**
SPSI	**Sidrap Palu**	**14.82**	**202**	P	**P**	**04 37 27.0**	**-0.2**
	25nm,0.9s						
SBUM	**Sibu**	**14.89**	**241**		**P**	**04 37 26.3**	**-1.7**
BNSI	**Bone**	**15.11**	**200**	P	**P**	**04 37 31.1**	**+0.7**
	30nm,1.1s						
KAPI	**Kappang**	**15.80**	**200**	LR	LR	04 44 42.5	
	comp=Z,79nm,18.9s,baz=28,slow=40						
GUMO	**Guam**	**19.59**	**77**	LR	LR	04 45 24.6	
	comp=Z,38nm,18.7s,baz=156,slow=35						
JAGI	**Jajag, Banyuwa**	**21.33**	**211**	P	**P**	**04 38 45.0**	**+6.2**
	1μm40nm,1.1s						
JAGI	**Jajag, Banyuwa**	**21.33**	**211**	P	**P**	**04 38 40.6**	**+1.8**
JAGI				IAmb	IAmb	04 38 48.0	
	comp=Z,42nm,1.1s						
WOJI	**Wonogiri, Jawa**	**22.66**	**219**	P	**P**	**04 38 55.5**	**+2.4**
	comp=Z,3μmcomp=Z,22nm,1.3s						
WHN	**Wuhan**	**22.88**	**335**	P	**P**	**04 38 57.3**	**+2.0**
MTN	**Manton Dam**	**23.37**	**165**	P	**P**	**04 39 01.0**	**+0.7**
MTN				IAmb	IAmb	04 39 03.5	
	comp=Z,19nm,0.9s						
JCJ	**Chichijima**	**23.42**	**41**	LR	LR	04 47 23.5	
	comp=Z,49nm,19.4s,baz=216,slow=35						
KPJI	**Karang Pucung**	**23.59**	**224**	P	P	04 39 20.8	+18
JNU	**Nakatsue**	**23.68**	**12**	LR	LR	04 48 03.7	
	comp=Z,33nm,20.7s,baz=198,slow=36						
LEM	**Lembang**	**24.16**	**227**	LR	LR	04 51 07.0	
	comp=Z,73nm,18.8s,baz=40,slow=42						
RGRI	**Rengat**	**24.95**	**247**	P	**P**	**04 39 13.7**	**-1.4**
JHJ	**Hachijo jima 2**	**26.71**	**28**	LR	LR	04 47 46.0	
	comp=Z,121nm,20.9s,baz=254,slow=31						
CMAR	**Chiang Mai Arr**	**26.81**	**291**	P	**P**	**04 39 34.5**	**+2.5**
	comp=Z,3.0nm,0.5s,baz=104,slow=7.0,SNR=8.9						
CMAR				LR	LR	04 50 11.4	
	comp=Z,113nm,18.1s,baz=132,slow=36						
CMAR	**Chiang Mai Arr**	**26.81**	**291**	P	**P**	**04 39 32.5**	**+0.4**
KSRS	**Korea Array**	**27.52**	**5**	P	**P**	**04 39 38.2**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=187,slow=8.8,SNR=4.3						
KSRS				LR	LR	04 50 53.4	
	comp=Z,64nm,20.5s,baz=209,slow=37						
FITZ	**Fitzroy Crossi**	**27.84**	**179**	P	**P**	**04 39 41.5**	**+0.4**
	comp=Z,5.9nm,0.9s,baz=346,slow=5.6,SNR=4.8						
FITZ				LR	LR	04 51 32.6	
	comp=Z,15nm,18.8s,baz=86,slow=38						
FITZ	**Fitzroy Crossi**	**27.84**	**179**	P	**P**	**04 39 41.2**	**+0.1**
MJAR	**Matsushiro Arr**	**29.01**	**22**	LR	LR	04 49 52.0	
	comp=Z,68nm,20.4s,baz=215,slow=33						
COEN	**Coen**	**29.67**	**143**	P	**P**	**04 39 57.5**	**+0.1**
COEN				IAmb	IAmb	04 40 05.2	
	comp=Z,19nm,1.1s						
WRA	**Warramunga Arr**	**31.00**	**163**	P	**P**	**04 40 08.6**	**-0.6**
	comp=Z,2.4nm,0.8s,baz=341,slow=9.8,SNR=9.6						
WRA				PcP	**PcP**	**04 43 04.7**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=333,slow=3.0,SNR=4.7						
AS31	**Alice Springs**	**34.44**	**166**	P	**P**	**04 40 39.4**	**+0.1**
ASAR	**Alice Springs**	**34.44**	**166**	P	**P**	**04 40 40.0**	**+0.6**
	comp=Z,2.8nm,0.6s,baz=346,slow=6.9,SNR=26						
ASAR				PcP	**PcP**	**04 43 14.7**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=348,slow=2.6,SNR=5.6						
ASAR				LR	LR	04 54 55.2	
	comp=Z,62nm,18.1s,baz=358,slow=36						
ASAR	**Alice Springs**	**34.44**	**166**	P	**P**	**04 40 39.8**	**+0.5**
ASAR					**PcP**	**04 43 13.4**	**-1.1**
USRK	**Ussuriysk Ar.**	**34.66**	**9**	P	**P**	**04 40 40.3**	**-0.5**
	comp=Z,3.3nm,0.7s,baz=193,slow=9.3,SNR=12						
USRK	**Ussuriysk Ar.**	**34.66**	**9**	P	**P**	**04 40 40.0**	**-0.8**
GTA	**Gaotai**	**37.09**	**327**	*e*P	**P**	**04 41 04.3**	**+2.3**
GTA				pP	sP	04 41 21.4	+7.8
GTA				sP	pP	04 41 28.1	+18
ASAJ	**Asahikawa**	**37.26**	**21**	P	**P**	**04 41 03.9**	**+0.7**
	comp=Z,3.8nm,0.6s,baz=262,slow=15,SNR=2.1						
JKA	**Kamikawa-asahi**	**37.26**	**21**	P	**P**	**04 41 03.9**	**+0.7**
KLR	**Kul'dur**	**39.57**	**7**	P	**P**	**04 41 21.8**	**-0.7**
	comp=Z,1.3nm,0.5s,baz=183,slow=8.6,SNR=7.3						
SONM	**Songino Array**	**40.99**	**341**	P	**P**	**04 41 34.2**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=161,slow=8.7,SNR=9.9						
SONM	**Songino Array**	**40.99**	**341**	P	**P**	**04 41 34.1**	**-0.4**
H11N1	**WAKE ISLAND Hy**	**41.36**	**71**	T	T	05 25 04.7	
	baz=264,slow=74,SNR=18						
H11N2	**WAKE ISLAND Hy**	**41.36**	**71**	T	T	05 25 04.0	
	baz=264,slow=74,SNR=10						
H11N3	**WAKE ISLAND Hy**	**41.37**	**71**	T	T	05 25 00.6	
	baz=264,slow=74,SNR=13						
NWAO	**Narrogin (SRO)**	**43.28**	**190**	LR	LR	05 02 58.9	
	comp=Z,43nm,18.2s,baz=336,slow=40						
BBOO	**Buckleboo**	**43.73**	**167**	P	**P**	**04 41 57.2**	**+0.4**
STKA	**Stephens Creek**	**44.42**	**160**	P	**P**	**04 42 02.4**	**+0.1**
	comp=Z,4.7nm,0.5s,baz=338,slow=9.2,SNR=11						
STKA	**Stephens Creek**	**44.42**	**160**	P	**P**	**04 42 03.0**	**+0.6**
HYB	**Hyderabad**	**45.85**	**285**	*i* P	**P**	**04 42 15.0**	**+1.0**
HYB				*e*		04 42 22.0	
PETK	**Petropavlovsk-**	**50.39**	**25**	P	**P**	**04 42 46.7**	**-1.9**
	comp=Z,3.3nm,0.6s,baz=196,slow=6.2,SNR=4.9						
PETK	**Petropavlovsk-**	**50.39**	**25**	P	**P**	**04 42 46.9**	**-1.7**
DZM	**Mont Dzumac**	**51.44**	**129**	P	**P**	**04 42 56.7**	**-0.3**
MK31	**Makanchi Array**	**51.68**	**323**	P	**P**	**04 42 58.6**	**+0.2**
MK31				IAmb	IAmb	04 43 01.7	
	comp=Z,2.6nm,0.7s						
MKAR	**Makanchi Array**	**51.68**	**323**	P	**P**	**04 42 59.0**	**+0.6**
	comp=Z,2.9nm,0.6s,baz=122,slow=8.1,SNR=25						
MKAR				PcP	**PcP**	**04 44 11.4**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=111,slow=3.9,SNR=4.4						
MKAR	**Makanchi Array**	**51.68**	**323**	P	**P**	**04 42 57.9**	**-0.5**
MKAR					**PcP**	**04 44 11.9**	**+0.2**
MAKZ	**Makanchi**	**51.87**	**323**	P	**P**	**04 42 59.4**	**-0.5**
MAKZ				IAmb	IAmb	04 43 06.1	
	comp=Z,2.0nm,0.7s						
KSH	**Kashi**	**52.70**	**313**	P	P	04 43 11.1	+4.9
KSH				pP	sP	04 43 27.3	+9.2
KSH				PP	**PP**	**04 45 13.0**	**+7.4**
KSH				PcS	**PcS**	**04 48 17.0**	**+2.5**
KSH				S	**S**	**04 50 34.1**	**+1.6**
KSH	**Kashi**	**52.70**	**313**	SS	**SS**	**04 54 13.3**	**+2.1**
NIL	**Nilore**	**53.07**	**305**	P	**P**	**04 43 08.3**	**-0.6**
ZALV	**Zalesovo Beam**	**54.44**	**332**	P	**P**	**04 43 17.6**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=118,slow=8.3,SNR=1.6						
AAK	**Ala-Archa**	**54.84**	**316**	P	**P**	**04 43 20.6**	**-1.4**
KURK	**Kurchatov**	**55.77**	**326**	P	**P**	**04 43 27.7**	**-0.5**
KURK				IAmb	IAmb	04 43 35.4	
	comp=Z,5.0nm,1.0s						
KKAR	**Karatay Array**	**57.76**	**315**	P	**P**	**04 43 42.0**	**-0.5**
TIXI	**Tiksi**	**61.72**	**1**	P	**P**	**04 44 08.7**	**-0.5**
NRIK	**Noril'sk**	**64.10**	**346**	P	**P**	**04 44 24.1**	**-1.0**
	comp=Z,1.4nm,0.5s,baz=80,slow=4.7,SNR=2.4						
NRIK				LR	LR	05 13 23.6	
	comp=Z,51nm,21.1s,baz=144,slow=37						
GEYT	**Alibeck**	**65.92**	**307**	P	**P**	**04 44 37.1**	**-0.5**
	comp=Z,3.1nm,0.8s,baz=172,slow=1.0,SNR=4.0						
GEYT				LR	LR	05 15 34.6	
	comp=Z,30nm,18.6s,baz=300,slow=38						
GEYT	**Alibeck**	**65.92**	**307**	P	**P**	**04 44 36.8**	**-0.9**
ABKAR	**Akbulak array**	**66.46**	**320**	P	**P**	**04 44 40.4**	**-0.4**
BKZ	**Black Stump Fm**	**68.20**	**139**	P	**P**	**04 44 52.0**	**+0.1**
BPAW	**Bear Paw Mtn.**	**78.44**	**26**	P	**P**	**04 45 51.4**	**-0.5**
BPAW				IAmb	IAmb	04 45 55.4	
	comp=Z,5.2nm,0.8s						
MLY	**Manley**	**78.56**	**26**	P	**P**	**04 45 52.5**	**-0.1**
MLY				IAmb	IAmb	04 45 59.6	
	comp=Z,3.8nm,1.0s						
TOLK	**Toolik Lake Re**	**79.09**	**22**	P	**P**	**04 45 55.2**	**-0.2**
TOLK				IAmb	IAmb	04 45 58.7	
	comp=Z,5.2nm,0.9s						
MCK	**McKinley**	**79.34**	**27**	P	**P**	**04 45 56.1**	**-0.8**
MCK				IAmb	IAmb	04 46 04.0	
	comp=Z,6.7nm,1.0s						
HDA	**Harding Lake**	**80.20**	**26**	P	**P**	**04 45 60.0**	**-1.5**
HDA				IAmb	IAmb	04 46 01.9	
	comp=Z,3.0nm,0.6s						
IL31		**80.21**	**26**	P	**P**	**04 46 00.2**	**-1.2**
ILAR	**Eielson Array**	**80.21**	**26**	P	**P**	**04 46 00.1**	**-1.5**
	comp=Z,1.0nm,0.7s,baz=244,slow=4.6,SNR=16						
ILAR	**Eielson Array**	**80.21**	**26**	P	**P**	**04 46 00.4**	**-1.2**
BMAR	**Burnt Mountain**	**81.00**	**23**	P	**P**	**04 46 05.1**	**-0.7**
RIDG	**Independent Ri**	**81.16**	**27**	P	**P**	**04 46 06.3**	**-0.5**
RIDG				IAmb	IAmb	04 46 14.3	
	comp=Z,8.3nm,0.9s						
BCAR	**Beaver Creek A**	**82.60**	**27**	P	**P**	**04 46 13.7**	**-0.7**
BARN	**Barnard Glacie**	**82.92**	**29**	IAmb	IAmb	04 46 25.4	
	comp=Z,5.7nm,0.7s						
CTGM	**Chitina Glacie**	**83.08**	**29**	P	**P**	**04 46 16.6**	**-0.4**
CTGM				IAmb	IAmb	04 46 24.4	
	comp=Z,9.3nm,0.9s						
ARCES	**ARCESS Array B**	**84.16**	**340**	P	**P**	**04 46 21.6**	**-0.6**
	comp=Z,4.1nm,1.0s,baz=80,slow=7.5,SNR=7.3						
ARCES				LR	LR	05 26 08.2	
	comp=Z,30nm,18.3s,baz=260,slow=37						
ARCES	**ARCESS Array B**	**84.16**	**340**	P	**P**	**04 46 21.5**	**-0.7**
BRTR	**Keskin Array B**	**84.95**	**309**	P	**P**	**04 46 26.4**	**-0.6**
	comp=Z,1.6nm,0.7s,baz=99,slow=4.2,SNR=12						
BRTR				LR	LR	05 30 24.3	
	comp=Z,8.9nm,18.3s,baz=120,slow=40						
BRTR	**Keskin Array B**	**84.95**	**309**	P	**P**	**04 46 25.6**	**-1.3**
INK	**Inuvik**	**84.99**	**21**	IAmb	IAmb	04 46 29.0	
	comp=Z,7.2nm,1.1s						
FINES	**FINESS Array B**	**85.70**	**332**	P	**P**	**04 46 29.0**	**-1.0**
	comp=Z,5.2nm,1.0s,baz=66,slow=4.6,SNR=8.1						
FINES	**FINESS Array B**	**85.70**	**332**	P	**P**	**04 46 28.7**	**-1.3**
AKASG	**Malin Array Be**	**86.17**	**321**	P	**P**	**04 46 31.5**	**-1.1**
	comp=Z,2.5nm,0.9s,baz=62,slow=5.0,SNR=8.0						
AKASG	**Malin Array Be**	**86.17**	**321**	P	**P**	**04 46 31.0**	**-1.6**
KMBO	**Kilima Mbogo**	**88.18**	**269**	P	**P**	**04 46 43.7**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=48,slow=12,SNR=3.3						
BURAR	**Bucovina Array**	**89.41**	**318**	P	**P**	**04 46 46.9**	**-1.4**
BUR08	**Bucovina Ar. S**	**89.41**	**318**	IAmb	IAmb	04 46 53.1	
	comp=Z,2.0nm,0.8s						
VNDA	**Vanda**	**89.72**	**173**	P	**P**	**04 46 48.5**	**-0.3**
	comp=Z,3.2nm,1.0s,baz=278,slow=4.5,SNR=6.1						
NOA	**NORSAR Array B**	**92.61**	**334**	LR	LR	05 31 37.4	
	comp=Z,47nm,19.4s,baz=70,slow=37						
MORC	**Moravsky Berou**	**93.64**	**322**	P	**P**	**04 47 04.7**	**-3.1**
YKA	**Yellowknife Ar**	**94.50**	**24**	P	**P**	**04 47 10.8**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=300,slow=4.0,SNR=13						
TXAR	**Lajitas Array**	**118.84**	**49**	PKP	**PKPdf**	**04 52 40.4**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=199,slow=2.7,SNR=2.6						
TXAR	**Lajitas Array**	**118.84**	**49**		**PKPdf**	**04 52 37.9**	**-2.6**
TORD	**Torodi Ar. Bea**	**119.42**	**291**	PKP	**PKPdf**	**04 52 40.3**	**-1.4**
	comp=Z,0.4nm,0.7s,baz=114,slow=2.2,SNR=2.6						
PLCA	**Paso Flores**	**146.28**	**158**	PKPbc	**PKPbc**	**04 53 32.7**	**+0.4**
	comp=Z,6.4nm,0.7s,baz=261,slow=3.3,SNR=15						
PLCA	**Paso Flores**	**146.28**	**158**	PKPab	**PKPab**	**04 53 33.0**	**0.0**

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*ISK **19** 04:36:04.7, 37°.09N×31°.00E, h93^{km}±1^{km}, ML3.0/23*

*DDA **19** 04:36:05.6, 37°.13N×31°.03E, h80^{km}±1^{km}, ML2.6*

*NIC **19** 04:36:06.5±0.0, 36°.79N×31°.11E, h100^{km}±4^{km}, Ml3.1/4*

*HLW **19** 04:36:06.8, 36°.69N×30°.78E, h30^{km}±17^{km}, Md4.3*

ISC 19 04:36:04.3±1.2, **37°.07N**±0°.03×**31°.07E**±0°.03, **h100^{km}**±7^{km}, **n72, σ1^{s}.59**/101, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANTB	**Antalya**	**0.38**	**242**	PG	**Pn**	**04 36 18.5**	**-0.7**
KEPZ	**Antalya-Kepez**	**0.46**	**112**	*i* P	**Pn**	**04 36 20.0**	**+0.2**
KEPZ				*i* S	**Sn**	**04 36 30.8**	**-0.6**
KEPZ				IAML		04 36 31.0	
	comp=E,194nm,0.6s						
BCK	**Bucak**	**0.54**	**315**	PG	**Pn**	**04 36 20.1**	**-0.3**
BCK				SG	**Sn**	**04 36 31.9**	**-0.6**
KORT	**Korkueli**	**0.58**	**263**	PG	**Pn**	**04 36 20.9**	**+0.1**
KORT	**Korkueli**	**0.58**	**263**	*i* P	**Pn**	**04 36 20.9**	**+0.1**
KORT				*i* S	**Sn**	**04 36 34.3**	**+1.2**
KORT				IAML		04 36 36.0	
	comp=E,182nm,0.8s						
SEYD	**Seydisehir-KON**	**0.70**	**61**	PG	**Pn**	**04 36 23.1**	**+1.3**
SEYD				SG	**Sn**	**04 36 35.5**	**+0.6**
ISP	**Isparta**	**0.86**	**330**	PG	**Pn**	**04 36 23.5**	**+0.1**
ISP				SG	**Sn**	**04 36 37.2**	**-0.5**
ALAN	**Alanya-ANTALYA**	**0.93**	**123**	PG	**Pn**	**04 36 25.4**	**+1.5**
BAGO	**Egridir - ISPA**	**0.94**	**346**	*i* P	**Pn**	**04 36 24.5**	**+0.3**
BAGO				*i* S	**Sn**	**04 36 38.2**	**-0.8**
AKUM	**Antalya-Kumluc**	**0.95**	**218**	*i* P	**Pn**	**04 36 25.8**	**+1.7**
AKUM				*i* S	**Sn**	**04 36 43.0**	**+3.9**
ELL	**Elmali**	**0.99**	**251**	PG	**Pn**	**04 36 24.7**	**+0.1**
ELL	**Elmali**	**0.99**	**251**	P	**Pn**	**04 36 26.8**	**+2.2**
ELL				S	**Sn**	**04 36 42.8**	**+2.9**
BRDR	**BURDUR-Merkez**	**1.01**	**308**	*i* P	**Pn**	**04 36 23.9**	**-1.0**
BRDR				*i* S	**Sn**	**04 36 39.1**	**-1.4**
DOGA	**KONYA_Doganhis**	**1.13**	**25**	*i* P	**Pn**	**04 36 26.3**	**0.0**
HDMB	**Hadim**	**1.14**	**95**	PN	**Pn**	**04 36 28.0**	**+1.6**
BASM	**Basmaki-Afyon**	**1.17**	**316**	PN	**Pn**	**04 36 26.9**	**+0.2**
GOLH	**Golhisar**	**1.22**	**278**	*i* P	**Pn**	**04 36 29.5**	**+2.3**
GOLH				*i* S	**Sn**	**04 36 44.1**	**-0.4**
GOLH				IAML		04 36 49.0	
	comp=N,74nm,0.3s						
KMER	**Konya-Meram**	**1.24**	**56**	*i* P	**Pn**	**04 36 28.8**	**+1.3**
KMER				*i* S	**Sn**	**04 36 45.7**	**+0.6**
KMER				IAML		04 36 47.0	
	comp=N,75nm,0.7s						
GAZI	**Gazipasa**	**1.31**	**130**	PN	**Pn**	**04 36 29.0**	**+0.8**
GAZI	**Gazipasa**	**1.31**	**130**	*i* P	**Pn**	**04 36 29.2**	**+1.0**
GAZI				*i* S	**Sn**	**04 36 45.4**	**-0.9**
GAZI				IAML		04 36 52.0	
	comp=E,142nm,0.3s						
KONT	**Konya--Tatoy**	**1.34**	**49**	PN	**Pn**	**04 36 30.6**	**+1.9**
KONT	**Konya--Tatoy**	**1.34**	**49**	*i* P	**Pn**	**04 36 30.1**	**+1.4**
KONT				*i* S	**Sn**	**04 36 48.3**	**+1.2**
KZIL	**AFYON_Kizioren**	**1.39**	**328**	*i* P	**Pn**	**04 36 28.4**	**-0.9**
KZIL				*i* S	**Sn**	**04 36 48.0**	**-0.2**
AKAS	**Kas**	**1.45**	**235**	PN	**Pn**	**04 36 30.8**	**+0.8**
AKAS	**Kas**	**1.45**	**235**	*i* P	**Pn**	**04 36 32.4**	**+2.4**
AKAS				*i* S	**Sn**	**04 36 50.4**	**+0.9**
AKAS				IAML		04 36 55.0	
	comp=N,75nm,0.4s						
KSL	**Kastellorizon**	**1.51**	**233**	P	**Pn**	**04 36 31.7**	**+1.0**
KSL				S	**Sn**	**04 36 51.2**	**+0.6**
KSL				AML	AML	04 36 56.6	
	comp=N,0.1nm,0.4s						
KSL				AML	AML	04 36 56.6	
	comp=N,0.1nm,0.4s						
KSL				AML	AML	04 36 58.9	
	comp=N,0.1nm,0.6s						
KSL				AML	AML	04 36 58.9	
	comp=N,0.1nm,0.6s						

LADK	**Ladik-KONYA**	**1.52**	**42**	PN	**Pn**	**04 36 32.1**	**+1.2**
SHUT	**Suhut-Afyon**	**1.53**	**345**	PN	**Pn**	**04 36 31.6**	**+0.6**
ERMK	**Ermenek**	**1.54**	**106**	*i* P	**Pn**	**04 36 33.2**	**+2.0**
FETY	**Fethiye**	**1.65**	**255**	PN	**Pn**	**04 36 33.2**	**+0.8**
FETY	**Fethiye**	**1.65**	**255**	*i* P	**Pn**	**04 36 33.2**	**+0.8**
FETY				*i* S	**Sn**	**04 36 53.2**	**-0.6**
KDHN	**Kadinhani**	**1.67**	**30**	*i* P	**Pn**	**04 36 33.5**	**+0.8**
KDHN				*i* S	**Sn**	**04 36 54.2**	**0.0**
KRMN	**Karaman**	**1.76**	**86**	PN	**Pn**	**04 36 35.3**	**+1.5**
TAVA	**DENIZLI_Tavas**	**1.76**	**283**	*i* P	**Pn**	**04 36 34.5**	**+0.6**
TAVA				*i* S	**Sn**	**04 36 55.4**	**-1.1**
KHAL	**Karahalli**	**1.80**	**316**	*i* P	**Pn**	**04 36 34.0**	**-0.4**
BERE	**Bereket-Mersin**	**1.88**	**112**	PN	**Pn**	**04 36 37.4**	**+2.0**
TEKE	**Tekeli-Mersin**	**1.89**	**119**	PN	**Pn**	**04 36 37.1**	**+1.7**
KIZT	**Kizilcal**	**1.91**	**19**	PN	**Pn**	**04 36 36.5**	**+0.7**
DALY	**Dalyan (Mula)**	**1.95**	**263**	PN	**Pn**	**04 36 37.1**	**+0.9**
DALY	**Dalyan (Mula)**	**1.95**	**263**	*i* P	**Pn**	**04 36 36.2**	**0.0**
TURN	**Turunc**	**1.99**	**265**	PN	**Pn**	**04 36 41.0**	**+4.4**
TURN	**Turunc**	**1.99**	**265**	*i* P	**Pn**	**04 36 39.6**	**+3.0**
TURN				*i* S	**Sn**	**04 37 07.6**	**+6.3**
TURN				IAML		04 37 10.0	
	comp=N,58nm,0.5s						
TEVE	**Tevekalti-Mers**	**2.01**	**108**	PN	**Pn**	**04 36 39.8**	**+2.8**
CHBY	**Cihanbeyli**	**2.08**	**43**	PN	**Pn**	**04 36 39.5**	**+1.5**
GULN	**MERSIN_Gulnar**	**2.18**	**113**	*i* P	**Pn**	**04 36 41.4**	**+2.2**
GULN				*i* S	**Sn**	**04 37 07.4**	**+1.6**
YER	**Yerkesik**	**2.23**	**272**	PN	**Pn**	**04 36 41.4**	**+1.5**
ALFC	**Alefka**	**2.28**	**147**	P	**Pn**	**04 36 40.0**	**-0.6**
ALFC				S	**Sn**	**04 37 06.0**	**-2.2**
ALFC				AML	AML	04 37 09.0	
	comp=N,0.4nm,0.1s						
ALFC				AML	AML	04 37 09.0	
	comp=N,0.4nm,0.1s						
ALFC				AML	AML	04 37 16.1	
	comp=N,0.5nm,0.4s						
ALFC				AML	AML	04 37 16.1	
	comp=N,0.5nm,0.4s						
CIFT	**Cifteler, Eski**	**2.28**	**360**	PN	**Pn**	**04 36 41.6**	**+1.0**
AKMS	**Akamas**	**2.29**	**153**	P	**Pn**	**04 36 40.5**	**-0.2**
AKMS				S	**Sn**	**04 37 06.5**	**-2.1**
AKMS				AML	AML	04 37 08.7	
	comp=N,0.4nm,0.4s						
AKMS				AML	AML	04 37 08.7	
	comp=N,0.4nm,0.4s						
AKMS				AML	AML	04 37 09.0	
	comp=N,0.3nm,0.3s						
AKMS				AML	AML	04 37 09.0	
	comp=N,0.3nm,0.3s						
USAK	**Uak-Merkez**	**2.31**	**316**	*i* P	**Pn**	**04 36 41.6**	**+0.7**
GDZ	**Gediz**	**2.37**	**329**	*i* P	**Pn**	**04 36 41.2**	**-0.6**
GDZ				*i* S	**Sn**	**04 37 09.0**	**-1.5**
KULA	**Kula-Manisa**	**2.39**	**308**	PN	**Pn**	**04 36 42.9**	**+0.9**
AUSIV	**SIVRIHISAR**	**2.39**	**9**	PN	**Pn**	**04 36 43.8**	**+1.8**
LEF	**Lefka**	**2.44**	**142**	*i* P	**Pn**	**04 36 42.1**	**-0.6**
LEF				*i* S	**Sn**	**04 37 08.8**	**-3.2**
LEF				IAML		04 37 16.0	
	comp=E,34nm,0.4s						
KERG	**Konya-Eregli**	**2.46**	**81**	*i* P	**Pn**	**04 36 44.1**	**+1.1**
ARG	**Arkhangelos**	**2.52**	**251**	PN	**Pn**	**04 36 43.7**	**+0.1**
KIZK	**Mersin**	**2.54**	**103**	*i* P	**Pn**	**04 36 46.9**	**+3.0**
KIZK				*i* S	**Sn**	**04 37 15.4**	**+1.2**
KIZK				IAML		04 37 21.0	
	comp=E,26nm,0.4s						
NATA	**Nata**	**2.59**	**152**	P	**Pn**	**04 36 45.0**	**+0.4**
SIMA	**Simav-Kutahya**	**2.59**	**321**	PN	**Pn**	**04 36 45.5**	**+0.8**
AYDB	**Zeytinkoy-Aydi**	**2.67**	**290**	PN	**Pn**	**04 36 46.2**	**+0.4**
TVSB	**Tavsanli**	**2.69**	**332**	PN	**Pn**	**04 36 46.7**	**+0.8**
CSS	**Mathiatis**	**2.79**	**138**	P	**Pn**	**04 36 47.2**	**-0.1**
CSS				S	**Sn**	**04 37 18.3**	**-2.0**
DAT	**Datca**	**2.82**	**264**	PN	**Pn**	**04 36 48.5**	**+0.8**
ASGA	**Asgata**	**2.89**	**142**	S	**Sn**	**04 37 22.1**	**-0.5**
MVOU	**Mavrovouni**	**2.92**	**134**	P	**Pn**	**04 36 48.8**	**-0.2**
MVOU				S	**Sn**	**04 37 21.7**	**-1.6**
MVOU				AML	AML	04 37 23.1	
	comp=E,0.2nm,0.4s						
MVOU				AML	AML	04 37 23.1	
	comp=E,0.2nm,0.4s						
MVOU				AML	AML	04 37 25.1	
	comp=E,0.2nm,0.3s						
MVOU				AML	AML	04 37 25.1	
	comp=E,0.2nm,0.3s						
BODT	**Bodrum**	**3.01**	**271**	PN	**Pn**	**04 36 50.8**	**+0.7**
GCAM	**G?zelcaml?**	**3.12**	**283**	PN	**Pn**	**04 36 51.9**	**+0.4**
OSC2	**CSNet OBS 4**	**4.11**	**166**	P	**Pn**	**04 37 05.8**	**+0.9**
OSC2				S	**Sn**	**04 37 49.3**	**-2.7**
SUZ	**Suez**	**7.36**	**168**	P	**Pn**	**04 37 48.3**	**-0.9**
	baz=165						
GLL	**Jalalah**	**7.50**	**176**	P	**Pn**	**04 37 49.8**	**-1.2**
	baz=173						
SWA2		**9.12**	**213**	P	**Pn**	**04 38 11.1**	**-1.8**
	baz=213						
SWA2				S	Sn	04 39 41.5	-12
	baz=213						
HFRF	**Wahat Farafira**	**10.17**	**194**	P	**Pn**	**04 38 25.3**	**-2.0**
	baz=194						

IDC 19 04:42:20.3±2.2, 5°.83S×130°.36E, h0^{km}, mb4.1/1, mb1 3.8/4, mb1mx3.5/27, mbtmp3.7/4, ML3.5/3, Error ellipse: s-maj=99.7km s-min=27.4km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**13.04**	**200**	Pn	Pn	04 45 27.1	+0.2
	0.1nm,0.3s,baz=36,slow=11,SNR=8.7						
FITZ				Sn	Sn	04 47 37.2	-16
	0.2nm,0.3s,baz=79,slow=17,SNR=2.3						
WRA	**Warramunga Arr**	**14.56**	**165**	Pn	Pn	04 45 47.1	-0.5
	0.4nm,0.3s,baz=348,slow=13,SNR=5.0						
WRA				Sn	Sn	04 48 12.7	-17
	0.4nm,0.3s,baz=352,slow=24,SNR=6.4						
ASAR	**Alice Springs**	**18.06**	**169**	P	Pn	04 46 33.0	+0.2
	0.1nm,0.3s,baz=351,slow=9.7,SNR=5.1						
MKAR	**Makanchi Array**	**67.45**	**326**	P	P	04 53 17.9	0.0
	0.8nm,0.4s,baz=114,slow=8.1,SNR=17						

ROM 19 04:44:27.9±0.1, 42°.769N±0°.004×12°.516E±0°.004, h9^{km}, ML1.5/7, Error ellipse: s-maj=0.5km s-min=0.3km az=192.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOMA	**Monte Martano**	**0.05**	**48**	P	Pg	04 44 30.1	+0.2
MOMA				S	Sg	04 44 31.5	+0.2
CESX	**Cesi**	**0.17**	**163**	AML	AML		
	comp=N,214µm,1.3s						
CESX				AML	AML		
	comp=E,142µm,0.4s						
ARRO	**Arrone**	**0.26**	**136**	P	Pb	04 44 34.2	-0.7
ARRO				AML	AML		
	comp=E,91µm,0.2s						
ARRO				AML	AML		
	comp=N,107µm,0.3s						
ARRO				AML	AML		
	comp=N,107µm,0.3s						
ARRO				AML	AML		
	comp=E,91µm,0.2s						
ASSB	**Assisi San Ben**	**0.29**	**21**	P	Pb	04 44 34.6	-0.8
ASSB				S	Sb	04 44 39.5	-0.9
ASSB				AML	AML		
	comp=E,113µm,0.4s						
ASSB				AML	AML		
	comp=N,122µm,1.1s						
MGAB	**Montegabbione**	**0.33**	**296**	P	Pg	04 44 35.0	+0.5
MGAB				S	Sb	04 44 40.7	-0.7
MGAB				AML	AML		
	comp=E,240µm,1.1s						
MGAB				AML	AML		
	comp=N,208µm,0.4s						
MGAB				AML	AML		
	comp=N,207µm,1.3s						
MGAB				AML	AML		
	comp=E,240µm,1.1s						
MGAB				AML	AML		
	comp=E,223µm,1.1s						
CESI	**CESI - Serrava**	**0.37**	**50**	P	Pb	04 44 36.0	-0.7
CESI				S	Sb	04 44 42.1	-0.5
LNSS	**Leonessa**	**0.42**	**113**	P	Pg	04 44 36.4	+0.3
LNSS				S	Sb	04 44 43.5	-0.6
LNSS				AML	AML		
	comp=E,94µm,0.9s						
LNSS				AML	AML		
	comp=N,91µm,1.4s						
LNSS				AML	AML		
	comp=E,94µm,0.9s						
LNSS				AML	AML		
	comp=N,91µm,1.4s						
ATCC	**AVT- Casa Cast**	**0.43**	**12**	P	Pg	04 44 36.8	+0.5
ATCC				AML	AML		
	comp=E,71µm,1.5s						
ATCC				AML	AML		
	comp=N,73µm,1.0s						
ATCC				AML	AML		
	comp=N,73µm,1.0s						
ATCC				AML	AML		
	comp=E,71µm,1.5s						
ATTE	**AVT- Monte Tez**	**0.45**	**345**	P	Pg	04 44 37.1	+0.5
ATTE				S	Sb	04 44 44.0	-0.8
NRCA	**Norcia**	**0.45**	**81**	P	Pg	04 44 37.0	+0.4
NRCA				AML	AML		
	comp=E,68µm,0.4s						
NRCA				AML	AML		
	comp=N,56µm,0.1s						
SACS	**San Casciano d**	**0.45**	**280**	P	Pg	04 44 37.1	+0.3
SACS				S	Sb	04 44 44.5	-0.5
MURB	**Monte Urbino**	**0.49**	**1**	P	Pb	04 44 38.2	-0.6
MURB				AML	AML		
	comp=N,159µm,0.2s						
MURB				AML	AML		
	comp=E,168µm,0.2s						
SAMA	**S.Maria delle**	**0.99**	**177**	S	Sg	04 44 58.0	-1.7

IDC 19 04:56:44.2±46.0, 15°.58S×172°.06W, h0^{km}, mb4.2/3, mb1 4.4/3, mb1mx3.7/38, mbtmp4.2/3, Error ellipse: s-maj=904.0km s-min=202.4km az=79.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**45.07**	**240**	P	P	05 05 02.6	+0.4
	1.2nm,0.7s,baz=79,slow=10,SNR=3.2						
WRA	**Warramunga Arr**	**51.06**	**257**	P	P	05 05 47.6	-1.2
	0.9nm,0.3s,baz=97,slow=6.8,SNR=5.4						
ASAR	**Alice Springs**	**51.28**	**252**	P	P	05 05 50.9	+0.4
	4.3nm,0.6s,baz=88,slow=8.3,SNR=58						

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*IDC **19** 05:02:20.0±3.4, 22°.11S×69°.14W, h0^{km}, mb3.7/2, mb1 3.7/3, mb1mx3.5/16, mbtmp3.7/3, ML3.4/1, Error ellipse: s-maj=76.6km s-min=54.7km az=60.0*

*GUC **19** 05:02:37.7±0.7, 20°.93S×68°.95W, h110^{km}±4^{km}, ML3.5*

ISC 19 05:02:37.6±0.9, 20°.95S±0°.04×68°.97W±0°.09, h117^{km}±8^{km}, n18, σ0ˢ.82/32, 2C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	**IPOC Station P**	**0.49**	**259**	*e*P	**Pn**	**05 02 55.1**	**-0.2**
PB01				*i* S	**Sn**	**05 03 08.1**	**-0.5**
PB01				IAML		05 03 08.8	
	comp=E,1µm,0.1s						
PB08	**IPOC Station P**	**0.82**	**348**	*e*P	**Pn**	**05 02 58.2**	**-0.1**
PB08				*i* S	**Sn**	**05 03 13.3**	**-0.4**
PB08				IAML		05 03 14.3	
	comp=E,1µm,0.2s						
PB09	**IPOC Station P**	**0.88**	**197**	*e*P	**Pn**	**05 02 59.0**	**+0.6**
PB09				*i* S	**Sn**	**05 03 14.6**	**+0.5**
PB09				IAML		05 03 15.9	
	comp=N,1µm,0.6s						
PB02	**IPOC Station P**	**0.94**	**247**	*e*P	**Pn**	**05 02 59.4**	**+0.5**
PB02				*i* S	**Sn**	**05 03 15.3**	**+0.3**
PB02				IAML		05 03 16.8	
	comp=E,3µm,0.4s						
PATCX	**Punta Patache**	**1.11**	**276**	⇑*i*P	**Pn**	**05 03 01.1**	**+0.5**
PATCX				*i* S	**Sn**	**05 03 18.9**	**+0.8**
PATCX				IAML		05 03 21.1	
	comp=N,2µm,0.3s						
PB07	**IPOC Station P**	**1.15**	**228**	*e*P	**Pn**	**05 03 01.5**	**+0.4**
PB07				*i* S	**Sn**	**05 03 19.4**	**+0.4**
TA01	**Diego Aracena**	**1.20**	**289**	*e*P	**Pn**	**05 03 01.5**	**+0.1**
TA01				*i* S	**Sn**	**05 03 19.4**	**0.0**
TA01				IAML		05 03 21.7	
	comp=N,854nm,0.3s						
GO01	**Chusmiza**	**1.29**	**351**	*e*P	**Pn**	**05 03 03.2**	**+0.1**
GO01				*i* S	**Sn**	**05 03 22.6**	**+0.4**
PB03	**IPOC Station P**	**1.31**	**214**	*e*P	**Pn**	**05 03 03.4**	**+0.4**
PB03				*i* S	**Sn**	**05 03 22.4**	**+0.3**
PB11	**IPOC Station P**	**1.35**	**331**	*e*P	**Pn**	**05 03 03.3**	**0.0**
PB11				*i* S	**Sn**	**05 03 23.0**	**+0.2**
PSGC	**Pisagua**	**1.73**	**321**	⇑*i*P	**Pn**	**05 03 07.5**	**-0.2**
PSGC				*i* S	**Sn**	**05 03 30.3**	**-0.3**
PSGC				IAML		05 03 33.2	
	comp=E,352nm,0.3s						
PB04	**IPOC Station P**	**1.76**	**218**	*e*P	**Pn**	**05 03 09.0**	**+0.9**
PB04				*i* S	**Sn**	**05 03 30.7**	**-0.7**
PB06	**IPOC Station P**	**1.83**	**198**	*e*P	**Pn**	**05 03 09.8**	**+0.7**
PB06				*i* S	**Sn**	**05 03 33.5**	**+0.5**
PB05	**IPOC Station P**	**2.21**	**211**	*e*P	**Pn**	**05 03 14.2**	**+0.5**
PB05				*i* S	**Sn**	**05 03 38.6**	**-2.8**
LPAZ	**La Paz**	**4.71**	**10**	Pn	**Pn**	**05 03 48.5**	**+1.3**
	comp=E,0.6nm,0.3s,baz=207,slow=11,SNR=14						
BDFB	**Brasilia**	**20.58**	**79**	P	**P**	**05 07 06.4**	**-1.1**
	comp=E,1.2nm,0.3s,baz=236,slow=11,SNR=4.3						
TORD	**Torodi Ar. Bea**	**77.23**	**70**	P	**P**	**05 14 18.6**	**-0.7**
	comp=E,0.4nm,0.4s,baz=259,slow=4.9,SNR=12						
MKAR	**Makanchi Array**	**145.22**	**35**	PKPbc	**PKPdf**	**05 22 02.9**	**+1.4**
	comp=E,0.5nm,0.8s,baz=318,slow=1.6,SNR=4.0						

IDC 19 05:04:19.8±2.5, 4°.33S×153°.19E, h0^{km}, mb4.0/2, mb1 4.3/2, mb1mx3.6/23, mbtmp4.0/2, Error ellipse: s-maj=50.9km s-min=45.0km az=146.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.16**	**271**	Pn	Pn	05 04 43.3	+0.1
	60nm,0.3s,baz=38,slow=7.6,SNR=2.6						
KRVT				Sn	Sg	05 04 55.8	-1.3
	327nm,0.3s,baz=108,slow=22,SNR=21						
WRA	**Warramunga Arr**	**24.04**	**228**	P	P	05 09 36.5	-0.2
	4.3nm,0.7s,baz=52,slow=9.5,SNR=24						
ASAR	**Alice Springs**	**26.75**	**222**	P	P	05 10 01.6	+0.2
	0.8nm,0.5s,baz=57,slow=8.6,SNR=8.4						
TORD	**Torodi Ar. Bea**	**150.52**	**289**	PKPbc	PKPbc	05 24 14.3	-0.3
	0.3nm,0.3s,baz=96,slow=2.1,SNR=8.2						

IDC 19 05:20:32.3±18.0, 19°.37S×178°.20W, h654^{km}±163^{km}, mb3.1/4, mb1 3.2/5, mb1mx2.9/32, mbtmp4.3/5, Error ellipse: s-maj=165.9km s-min=90.7km az=97.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**14.62**	**257**	P	P	05 23 36.2	+1.0
	0.6nm,0.3s,baz=108,slow=20,SNR=3.0						
CTA	**Charters Tower**	**33.43**	**263**	P	P	05 26 20.8	+0.3
	1.6nm,0.3s,baz=72,slow=6.4,SNR=1.3						
STKA	**Stephens Creek**	**38.12**	**243**	P	P	05 26 58.8	+0.1
	0.7nm,0.3s,baz=57,slow=10.0,SNR=3.9						
WRA	**Warramunga Arr**	**44.58**	**261**	P	P	05 27 49.3	-0.1
	1.7nm,0.3s,baz=98,slow=7.7,SNR=26						
ASAR	**Alice Springs**	**44.61**	**256**	P	P	05 27 49.8	+0.2
	1.6nm,0.3s,baz=87,slow=8.2,SNR=29						
ASAR				PcP	PcP	05 29 17.0	-0.6
	0.2nm,0.5s,baz=100,slow=3.6,SNR=4.1						
BRTR	**Keskin Array B**	**145.94**	**313**	PKPbc	PKPbc	05 39 00.7	-0.5
	0.4nm,0.5s,baz=142,slow=4.7,SNR=3.7						

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*YARS **19** 05:29:22.4±0.0, 55°.32N×130°.18E, h15^{km}, mb0.0/10, ML4.0/1, Ms0.0/10*

*SKHL **19** 05:29:24.7±0.2, 55°.22N×130°.25E, h7^{km}±3^{km}, mb3.8/5*

ISC 19 05:29:22.5±1.3, 55°.38N±0°.04×130°.06E±0°.04, h15^{km}±12^{km}, n13, σ1ˢ.77/23, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BMKR	**Bomnak**	**0.97**	**227**	*e*Pn	**Pn**	**05 29 42.2**	**+0.7**
	196nm,0.2s						
BMKR				*e*Sg	**Sn**	**05 29 55.1**	**0.0**
	585nm,0.2s						
BMKR	**Bomnak**	**0.97**	**227**	*e*Pg	**Pn**	**05 29 42.2**	**+0.7**
BMKR				AMB	AMB	05 29 43.0	
	51nm,0.2s						
BMKR				Pg	**Pg**	**05 29 44.2**	**+2.9**
BMKR				*e*Sg	**Sn**	**05 29 55.0**	**0.0**
BMKR				A	A	05 29 59.8	
	320nm,0.3s						
BMKR				A	A	05 29 59.8	
	380nm,0.3s						
KROS	**Kirovskiy**	**2.02**	**243**	*e*Pg	**Pb**	**05 29 59.1**	**+0.2**
	35nm,0.3s						
KROS				*e*Sg	**Sb**	**05 30 24.3**	**+0.5**
	220nm,0.2s						
KROS	**Kirovskiy**	**2.02**	**243**	*e*Pn	**Pb**	**05 29 59.0**	**+0.1**
KROS				*e*Pg	**Pg**	**05 30 01.4**	**+0.1**
KROS				AMB	AMB	05 30 01.9	
	35nm,0.4s						
KROS				*e*Sn	**Sb**	**05 30 24.3**	**+0.5**
KROS				*e*Sg	**Sg**	**05 30 28.0**	**+0.5**
KROS				A	A	05 30 30.1	
	140nm,0.4s						
KROS				A	A	05 30 30.1	
	110nm,0.4s						
ZEA	**Zeya**	**2.32**	**226**	*e*Pg	**Pb**	**05 30 04.5**	**+0.5**
ZEA				*e*Sg	**Sg**	**05 30 35.0**	**-2.1**
ZEA				A	A	05 30 36.6	
	58nm,0.4s						
EKMR	**Ekimchan**	**2.87**	**143**	*e*Pg	**Pb**	**05 30 12.8**	**-0.6**
EKMR				AMB	AMB	05 30 16.0	
	11nm,0.5s						
EKMR				*e*Sg	**Sb**	**05 30 48.0**	**-0.4**
EKMR				A	A	05 30 50.0	
	30nm,0.8s						
TNDR	**Tynda**	**3.06**	**268**	*e*Sg	**Sg**	**05 31 01.2**	**+0.4**
	81nm,0.5s						
CLNS	**Chul'man**	**3.24**	**299**	*e*Sg	**Sg**	**05 31 07.5**	**+1.0**
	48nm,0.3s						
CGD	**Chagda**	**3.39**	**5**	*e*Pg	**Pb**	**05 30 25.1**	**+2.9**
	226nm,0.3s						
CGD				*e*Sg	**Sg**	**05 31 10.8**	**-0.5**
	372nm,0.2s						
YKLR	**Yuktali**	**4.87**	**288**	*e*Sg	**Sg**	**05 31 57.4**	**-1.4**
	21nm,0.5s						
TUP	**Tupik**	**5.91**	**265**	*e*Sg	**Sg**	**05 32 28.8**	**-3.2**
	21nm,1.0s						
TUP	**Tupik**	**5.91**	**265**	*e*Pn	Pn	05 30 55.7	+6.3
TUP				*e*Pg	**Pg**	**05 31 13.0**	**-2.5**
TUP				AMB	AMB	05 31 15.3	
	5.0nm,0.5s						
TBGR	**Tabaga**	**6.46**	**358**	*e*Sg	**Sg**	**05 32 45.7**	**-3.9**
	42nm,0.5s						

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*IDC **19** 05:29:27.4±1.0, 39°.27S×175°.15E, h164^{km}±11^{km}, mb3.9/3, mb1 4.1/4, mb1mx3.5/41, mbtmp4.4/4, MS3.7/1, Ms1 3.7/1, ms1mx2.8/25, Error ellipse: s-maj=25.5km s-min=16.7km az=152.0*

*WEL **19** 05:29:28.6, 39°S±2°×17°5E±°, h170^{km}±2^{km}, M3.9/56, MLv3.9/56, Error ellipse: s-maj=0.0km s-min=0.0km az=92.5*

ISC 19 05:29:28.0±0.7, 39°.23S±0°.04×174°.93E±0°.04, h177^{km}±5^{km}, n152, σ1ˢ.11/170, mb4.2/3, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PKVZ	**Pokaka**	**0.33**	**100**	P	**Pn**	**05 29 51.8**	**-0.1**
PKVZ				S	**Sn**	**05 30 08.6**	**-1.6**
TWVZ	**Taurewa**	**0.42**	**68**	P	**Pn**	**05 29 51.8**	**-0.4**
TWVZ				S	**Sn**	**05 30 08.8**	**-2.1**
MTVZ	**Mangateitei**	**0.44**	**110**	P	**Pn**	**05 29 52.3**	**0.0**
LREZ	**Lake Rotokare**	**0.47**	**241**	P	**Pn**	**05 29 52.7**	**+0.4**
LREZ				S	**Sn**	**05 30 10.9**	**-0.1**
TRVZ	**Turoa**	**0.48**	**98**	P	**Pn**	**05 29 52.6**	**0.0**
TRVZ				S	**Sn**	**05 30 09.8**	**-1.8**
FWVZ	**Far West T-bar**	**0.48**	**93**	P	**Pn**	**05 29 52.5**	**-0.1**
DRZ	**Dome Shelter**	**0.49**	**95**	P	**Pn**	**05 29 52.8**	**+0.1**
MHEZ	**Mangahewa**	**0.50**	**288**	P	**Pn**	**05 29 52.4**	**0.0**
WHVZ	**Whangaehu Hut**	**0.51**	**96**	P	**Pn**	**05 29 52.7**	**0.0**
NGZ	**Ngauruhoe**	**0.52**	**84**	P	**Pn**	**05 29 52.6**	**-0.1**
WAZ	**Wanganui**	**0.52**	**176**	P	**Pn**	**05 29 53.1**	**+0.7**
WAZ				S	**Sn**	**05 30 10.8**	**-0.8**
WTVZ	**West Tongariro**	**0.52**	**77**	P	**Pn**	**05 29 52.5**	**-0.2**
WTVZ				S	**Sn**	**05 30 09.2**	**-2.4**
TUVZ	**Tukino**	**0.56**	**94**	P	**Pn**	**05 29 53.0**	**+0.1**
KRVZ	**Karewarewa**	**0.57**	**76**	P	**Pn**	**05 29 52.6**	**-0.3**
DREZ	**Durham Road**	**0.57**	**274**	P	**Pn**	**05 29 52.7**	**0.0**
DREZ				S	**Sn**	**05 30 10.3**	**-1.4**
PREZ	**Palmer Road**	**0.61**	**260**	P	**Pn**	**05 29 53.2**	**+0.2**
PREZ				S	**Sn**	**05 30 11.4**	**-0.8**
KATZ	**Kakaramea**	**0.65**	**67**	P	**Pn**	**05 29 52.9**	**-0.4**
MOVZ	**Moawhango**	**0.66**	**106**	P	**Pn**	**05 29 53.1**	**-0.2**
MOVZ				S	**Sn**	**05 30 09.9**	**-2.8**
KHEZ	**Kahui Hut**	**0.72**	**265**	P	**Pn**	**05 29 53.6**	**+0.1**
KHEZ				S	**Sn**	**05 30 12.0**	**-1.2**
HIZ	**Hauiti**	**0.72**	**355**	P	**Pn**	**05 29 52.6**	**-0.9**
PKE	**Pukeiti**	**0.74**	**273**	P	**Pn**	**05 29 53.7**	**+0.1**
RATZ	**Rangitukua**	**0.75**	**61**	P	**Pn**	**05 29 53.3**	**-0.4**
RITZ	**Rihia Road**	**0.76**	**71**	P	**Pn**	**05 29 53.7**	**-0.1**
WATZ	**Wairara**	**0.81**	**50**	P	**Pn**	**05 29 54.0**	**-0.1**
NBEZ	**Newall Road No**	**0.83**	**267**	P	**Pn**	**05 29 54.4**	**+0.3**
NBEZ				S	**Sn**	**05 30 13.7**	**-0.6**
NMEZ	**Namu Road**	**0.84**	**257**	P	**Pn**	**05 29 54.6**	**+0.4**
NMEZ				S	**Sn**	**05 30 13.9**	**-0.5**
BHHZ	**Black Hill Sta**	**0.91**	**107**	P	**Pn**	**05 29 54.7**	**-0.1**
HATZ	**Hinemaiaia**	**0.96**	**70**	P	**Pn**	**05 29 54.5**	**-0.6**
OHWZ	**Ohakea**	**1.01**	**163**	P	**Pn**	**05 29 56.8**	**+1.4**
KUTZ	**Kaahu Road**	**1.02**	**43**	P	**Pn**	**05 29 55.4**	**-0.2**
TLZ	**Tolley Road**	**1.02**	**28**	P	**Pn**	**05 29 54.8**	**-0.8**
TSZ	**Takapari Road**	**1.14**	**136**	P	**Pn**	**05 29 57.3**	**+0.8**
KWHZ	**Kaweka Forest**	**1.17**	**100**	P	**Pn**	**05 29 57.4**	**+0.6**
KRHZ	**Kereru**	**1.19**	**111**	P	**Pn**	**05 29 57.3**	**+0.5**
PNHZ	**Pukenui**	**1.19**	**125**	P	**Pn**	**05 29 57.5**	**+0.6**
WPRZ	**Whakapapatarin**	**1.20**	**54**	P	**Pn**	**05 29 56.5**	**-0.5**
BKZ	**Black Stump Fm**	**1.21**	**87**	P	**Pn**	**05 29 56.9**	**-0.2**
MRHZ	**Matea Rd**	**1.22**	**71**	P	**Pn**	**05 29 56.5**	**-0.7**
GRRZ	**Galatos Road**	**1.27**	**47**	P	**Pn**	**05 29 57.4**	**-0.3**
POWZ	**Post Office Ro**	**1.32**	**151**	P	**Pn**	**05 29 58.7**	**+0.7**
HRRZ	**Handcock Road**	**1.35**	**52**	P	**Pn**	**05 29 58.1**	**-0.3**
PRRZ	**Plateau Road**	**1.35**	**58**	P	**Pn**	**05 29 57.3**	**-1.0**
HSRZ	**Hossack Road**	**1.38**	**48**	P	**Pn**	**05 29 58.2**	**-0.3**
MCHZ	**McNeill Hill**	**1.38**	**99**	P	**Pn**	**05 29 59.6**	**+1.1**
DVHZ	**Dannevirke**	**1.43**	**139**	P	**Pn**	**05 29 59.6**	**+0.6**
WPHZ	**Waipukurau**	**1.43**	**126**	P	**Pn**	**05 29 59.8**	**+0.8**
NMHZ	**Naumai**	**1.46**	**85**	P	**Pn**	**05 30 00.3**	**+1.0**
HLRZ	**Highlands Stat**	**1.48**	**49**	P	**Pn**	**05 30 00.4**	**+0.9**
MRZ	**Mangatainoka R**	**1.51**	**161**	P	**Pn**	**05 30 00.5**	**+0.7**
RRRZ	**Republican Roa**	**1.52**	**55**	P	**Pn**	**05 29 59.5**	**-0.5**
MTHZ	**Maungataniwha**	**1.53**	**76**	P	**Pn**	**05 29 59.7**	**-0.3**
PRWZ	**Pori Road**	**1.54**	**149**	P	**Pn**	**05 30 01.1**	**+1.1**
TOZ	**Tahuroa Road**	**1.56**	**17**	P	**Pn**	**05 29 59.6**	**-0.7**
TARZ	**Mount Tarawera**	**1.58**	**51**	P	**Pn**	**05 30 00.2**	**-0.3**
KARZ	**Kaharoa**	**1.59**	**41**	P	**Pn**	**05 30 00.1**	**-0.5**
OGWZ	**Otaki Gorge**	**1.59**	**174**	P	**Pn**	**05 30 01.5**	**+1.0**
OMRZ	**Omania**	**1.59**	**45**	P	**Pn**	**05 30 00.1**	**-0.5**
KMRZ	**Kaimai**	**1.59**	**30**	P	**Pn**	**05 30 00.5**	**-0.1**
ARHZ	**Aropaoanui**	**1.60**	**92**	P	**Pn**	**05 30 01.2**	**+0.6**
KAHZ	**Kahuranaki**	**1.60**	**111**	P	**Pn**	**05 30 01.5**	**+0.8**
MUGZ	**Murupara**	**1.62**	**63**	P	**Pn**	**05 30 00.1**	**-0.7**
MKRZ	**Makatiti**	**1.62**	**48**	P	**Pn**	**05 30 01.1**	**+0.1**
KIW	**Kapiti Island**	**1.63**	**181**	P	**Pn**	**05 30 01.5**	**+0.6**
PRHZ	**Porangahau**	**1.67**	**129**	P	**Pn**	**05 30 02.2**	**+0.9**
PXZ	**Pawanui**	**1.69**	**119**	P	**Pn**	**05 30 02.2**	**+0.7**
RAHZ	**Arahi**	**1.71**	**80**	P	**Pn**	**05 30 02.0**	**+0.3**
ANWZ	**Angora Road**	**1.71**	**136**	P	**Pn**	**05 30 02.7**	**+1.1**
TIWZ	**Tintock**	**1.71**	**155**	P	**Pn**	**05 30 02.5**	**+0.8**
RTZ	**Ruatahuna**	**1.71**	**70**	P	**Pn**	**05 30 01.3**	**-0.5**
CKHZ	**Cape Kidnapper**	**1.71**	**105**	P	**Pn**	**05 30 02.6**	**+0.9**
HOWZ	**Holdsworth Sta**	**1.72**	**165**	P	**Pn**	**05 30 02.5**	**+0.6**
DUWZ	**D'Urville Isla**	**1.75**	**206**	P	**Pn**	**05 30 02.5**	**+0.3**
BFZ	**Birch Farm**	**1.76**	**146**	P	**Pn**	**05 30 02.8**	**+0.6**
WHHZ	**Waihua**	**1.80**	**86**	P	**Pn**	**05 30 03.1**	**+0.5**
TGRZ	**Tauranga**	**1.83**	**35**	P	**Pn**	**05 30 02.6**	**-0.3**
CAW	**Cannon Point**	**1.88**	**177**	P	**Pn**	**05 30 04.2**	**+0.7**
OPRZ	**Ohinepanea**	**1.88**	**43**	P	**Pn**	**05 30 02.8**	**-0.7**
SNGZ	**Shannon Statio**	**1.93**	**77**	P	**Pn**	**05 30 04.2**	**+0.1**
CPWZ	**Castlepoint**	**1.94**	**150**	P	**Pn**	**05 30 05.3**	**+1.3**
URZ	**Urewera**	**1.96**	**61**	P	**Pn**	**05 30 03.2**	**-1.2**
	35nm,0.3s,baz=251,slow=7.7,SNR=241						
URZ				S	**Sn**	**05 30 27.8**	**-4.8**
	527nm,0.3s,baz=132,slow=21,SNR=48						
URZ	**Urewera**	**1.96**	**61**	P	**Pn**	**05 30 03.2**	**-1.2**
MTW	**Mount Morrison**	**1.97**	**167**	P	**Pn**	**05 30 04.9**	**+0.4**
TMWZ	**Te Maipa**	**2.01**	**159**	P	**Pn**	**05 30 05.4**	**+0.5**
TCW	**Tory Channel**	**2.04**	**194**	P	**Pn**	**05 30 05.7**	**+0.6**
WEL	**Wellington**	**2.05**	**183**	P	**Pn**	**05 30 05.9**	**+0.6**

RAGZ	Rawiri	2.07	70	P	Pn	05 30 05.3	-0.4
MKAZ	Moumakai	2.13	5	P	Pn	05 30 06.0	-0.3
KNZ	Kokohu	2.14	85	P	Pn	05 30 06.3	0.0
BHW	Baring Head	2.17	181	P	Pn	05 30 07.1	+0.4
AWAZ	Awhitu Peninsu	2.18	354	P	Pn	05 30 06.9	+0.1
PAWZ	Paruwai Farm	2.18	170	P	Pn	05 30 07.1	+0.3
MSWZ	Moikau Station	2.19	174	P	Pn	05 30 07.3	+0.3
MWZ	Matawai	2.22	67	P	Pn	05 30 06.5	-0.7
TRWZ	Traveller	2.24	165	P	Pn	05 30 07.8	+0.4
RIGZ	Rimuhau	2.27	77	P	Pn	05 30 07.7	-0.1
ETAZ	East Tamaki Re	2.28	360	P	Pn	05 30 07.8	-0.1
NNZ	Nelson	2.31	210	P	Pn	05 30 08.2	-0.1
MHGZ	Mahia Peninsul	2.31	89	P	Pn	05 30 08.7	+0.5
WTAZ	Waiatarua	2.31	353	P	Pn	05 30 05.6	-2.8
PRGZ	Paritu Road	2.32	83	P	Pn	05 30 08.4	+0.1
TUWZ	Tuamarina	2.32	199	P	Pn	05 30 08.8	+0.4
PLWZ	Palliser	2.35	174	P	Pn	05 30 08.8	+0.1
TKGZ	Te Karaka	2.41	72	P	Pn	05 30 09.3	-0.1
QRZ	Quartz Range	2.44	228	P	Pn	05 30 09.1	-0.6
WIAZ	Waiheke Island	2.44	4	P	Pn	05 30 09.6	-0.2
MBAZ	Motutapu North	2.46	359	P	Pn	05 30 09.9	-0.2
RVAZ	Riverhead Bore	2.48	353	P	Pn	05 30 10.2	0.0
RUGZ	Raukumara Rang	2.50	60	P	Pn	05 30 08.8	-1.8
KUZ	Kuaotunu	2.56	14	P	Pn	05 30 10.6	-0.6
KUZ				S	Sn	05 30 43.0	-1.7
CMWZ	Cape Campbell	2.57	192	P	Pn	05 30 12.4	+1.2
BSWZ	Blackbirch Sta	2.61	198	P	Pn	05 30 12.3	+0.6
ABAZ	Army Bay	2.63	358	P	Pn	05 30 12.2	+0.2
CNGZ	Carnagh Statio	2.66	75	P	Pn	05 30 12.3	-0.1
HAZ	Te Kaha	2.68	57	P	Pn	05 30 10.9	-1.6
PKGZ	Pakihiroa	2.81	62	P	Pn	05 30 13.3	-0.9
PUZ	Puketiti	2.85	67	P	Pn	05 30 13.7	-0.9
THZ	Tophouse	2.96	211	P	Pn	05 30 15.6	-0.4
GRZ	Great Barrier	3.01	8	P	Pn	05 30 16.4	-0.1
WMGZ	Waiomatatini S	3.07	64	P	Pn	05 30 16.2	-1.1
MXZ	Matakaoa Point	3.13	59	P	Pn	05 30 17.1	-0.9
WCZ	Waipu Caves	3.32	352	P	Pn	05 30 20.5	+0.1
KHZ	Kahutara	3.35	198	P	Pn	05 30 21.1	+0.4
DSZ	Denniston Nort	3.46	223	P	Pn	05 30 21.2	-1.0
GVZ	Greta Valley S	4.00	200	P	Pn	05 30 28.3	-0.5
LTZ	Lake Taylor	4.08	209	P	Pn	05 30 28.7	-1.2
OUZ	Omahuta	4.15	345	P	Pn	05 30 31.1	+0.2
AMCZ	Amberley	4.30	203	P	Pn	05 30 31.7	-1.0
INZ	Inchbonnie	4.38	216	P	Pn	05 30 32.2	-1.5
OXZ	Oxford	4.63	207	P	Pn	05 30 35.0	-2.0
OKCZ	Okains Bay	4.70	197	P	Pn	05 30 36.8	-1.1
MQZ	McQueen's Vall	4.79	200	P	Pn	05 30 37.1	-1.9
AKCZ	Akaroa Harbour	4.88	197	P	Pn	05 30 38.9	-1.3
WVZ	Waitaha Valley	4.97	218	P	Pn	05 30 39.4	-2.0
RPZ	Rata Peaks	5.34	212	P	Pn	05 30 45.1	-1.2
	16nm,0.3s,baz=96,slow=1.2,SNR=52						
RPZ				S	Sn	05 31 42.6	-5.2
	8.2nm,0.3s,baz=323,slow=22,SNR=11						
RPZ	Rata Peaks	5.34	212	P	Pn	05 30 45.1	-1.2
FOZ	Fox Glacier	5.77	220	P	Pn	05 30 49.6	-2.1
ODZ	Otahua Downs	6.62	207	P	Pn	05 31 01.5	-1.5
WKZ	Wanaka	7.11	216	P	Pn	05 31 07.6	-1.9
HHSZ	Highcliff Hill	7.38	204	P	Pn	05 31 12.3	-0.6
TUZ	Tuapeka	7.77	208	P	Pn	05 31 17.9	-0.2
MLZ	Mavora Lakes	7.94	217	P	Pn	05 31 18.9	-1.5
SYZ	Scrubby Hill	8.45	208	P	Pn	05 31 26.2	-0.7
RAO	Raoul Island	11.57	33	LR	LR	05 36 43.6	
	comp=Z,383nm,18.7s,baz=131,slow=38						
ASAR	Alice Springs	37.94	282	P	P	05 36 30.6	+2.1
	2.9nm,0.9s,baz=125,slow=7.8,SNR=22						
ASAR				PcP	PcP	05 38 40.5	-0.1
	0.3nm,0.6s,baz=119,slow=4.0,SNR=4.9						
WRA	Warramunga Arr	39.79	287	P	P	05 36 45.8	+1.9
	2.9nm,0.4s,baz=126,slow=8.2,SNR=4.3						
FITZ	Fitzroy Crossi	47.45	282	P	P	05 37 47.1	+2.2
	4.6nm,0.7s,baz=149,slow=5.9,SNR=14						
MKAR	Makanchi Array	118.84	308	PKP	PKiKP	05 47 55.9	+1.1
	0.1nm,0.3s,baz=96,slow=1.2,SNR=3.7						
ARCES	ARCESS Array B	145.57	342	PKPbc	PKiKP	05 48 45.0	-2.9
	2.8nm,0.8s,baz=65,slow=3.1,SNR=9.4						
DBIC	Dimbokro	147.58	180	PKPbc	PKPab	05 48 52.5	-1.7
	2.0nm,0.8s,baz=150,slow=6.2,SNR=4.3						
BRTR	Keskin Array B	150.27	283	PKPbc	PKiKP	05 48 58.0	-0.7
	0.5nm,0.7s,baz=163,slow=6.4,SNR=3.8						
BRTR				PKPab	PKPab	05 49 06.7	+1.8
	1.3nm,0.8s,baz=127,slow=4.8,SNR=7.9						
FINES	FINESS Array B	150.67	330	PKPbc	PKiKP	05 48 58.9	+0.3
	1.6nm,0.8s,baz=193,slow=31,SNR=3.4						
FINES				PKPab	PKPab	05 49 05.7	+0.1
	2.0nm,0.6s,baz=54,slow=3.8,SNR=9.5						
TORD	Torodi Ar. Bea	153.34	195	PKPbc	PKiKP	05 49 06.3	+0.7
	0.5nm,0.8s,baz=166,slow=4.9,SNR=2.2						
TORD				PKPab	PKPab	05 49 19.0	+1.0
	0.8nm,0.5s,baz=161,slow=4.3,SNR=9.0						

IDC 19 05:41:07.3±2.0**, 5°.83S**×**129°.30E, h330**^{km}±29^{km}**, mb3.1**/1**, mb1 3.5**/5**, mb1mx3.0**/41**, mbtmp4.1**/5**, Error ellipse: s-maj=48.5km s-min=12.6km az=78.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.30	22	P	Pn	05 42 30.9	+1.3
	2.3nm,0.3s,baz=190,slow=22,SNR=8.1						
SIJI				S	S	05 43 35.1	-0.9
	7.2nm,0.3s,baz=160,slow=23,SNR=15						
FITZ	Fitzroy Crossi	12.71	196	P	P	05 43 56.2	-1.6
	0.3nm,0.3s,baz=256,slow=23,SNR=2.1						
FITZ				S	S	05 46 14.9	-3.4
	1.0nm,0.3s,baz=73,slow=19,SNR=3.8						
WRA	Warramunga Arr	14.86	161	P	Pn	05 44 22.8	-0.5
	2.1nm,0.3s,baz=334,slow=12,SNR=6.7						
WRA				S	S	05 47 02.0	-0.5
	0.6nm,0.3s,baz=2.8,slow=36,SNR=2.5						
ASAR	Alice Springs	18.28	166	P	P	05 44 59.6	+1.2
	1.1nm,0.3s,baz=345,slow=11,SNR=72						
ASAR				S	S	05 48 10.6	+0.3
	0.2nm,0.3s,baz=344,slow=19,SNR=18						
MKAR	Makanchi Array	66.87	327	P	P	05 51 24.6	-0.1
	0.4nm,0.4s,baz=129,slow=5.7,SNR=6.5						

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*IDC **19** 06:12:32.4±1.5, 5°.32S×153°.17E, h0^{km}, mb3.6/5, mb1 3.9/5, mb1mx3.6/41, mbtmp3.6/5, Error ellipse: s-maj=32.6km s-min=24.5km az=88.0*

ISC 19 06:12:38.1±1.4**, 5°.4S**±0°.1×**153°.1E**±0°.2**, h37**^{km}**, n7, σ1^{s}21**/8**, mb3.6**/5**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.48	315	Pn	Pn	06 13 01.4	-0.7
	417nm,0.3s,baz=125,slow=1.8,SNR=109						
KRVT				Sn	Sn	06 13 20.9	+0.6
	342nm,0.3s,baz=146,slow=22,SNR=22						
KRVT				LR	LR	06 13 40.4	
	comp=Z,454nm,21.6s,baz=21,slow=45						
WRA	Warramunga Arr	23.30	230	P	P	06 17 42.4	-0.5
	0.5nm,0.6s,baz=54,slow=9.8,SNR=0.9						
ASAR	Alice Springs	25.94	224	P	P	06 18 08.8	+1.6
	0.8nm,0.9s,baz=61,slow=9.3,SNR=4.5						
FITZ	Fitzroy Crossi	29.65	242	P	P	06 18 40.0	-0.4
	1.4nm,0.7s,baz=73,slow=11,SNR=1.6						
MKAR	Makanchi Array	80.93	319	P	P	06 24 50.0	+1.3
	0.4nm,0.6s,baz=101,slow=7.1,SNR=4.4						
ILAR	Eielson Array	82.56	22	P	P	06 24 56.7	-0.2
	0.6nm,0.8s,baz=243,slow=5.2,SNR=3.5						
TORD	Torodi Ar. Bea	150.75	287	PKPbc	PKPbc	06 32 26.2	-1.3
	0.8nm,0.8s,baz=52,slow=1.5,SNR=3.6						

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*IDC **19** 06:13:24.3±1.0, 55°.93S×27°.12W, h0^{km}, mb4.2/4, mb1 4.4/4, mb1mx4.1/14, mbtmp4.2/4, Error ellipse: s-maj=38.9km s-min=28.4km az=72.0*

*NEIC **19** 06:13:36.2±2.6, 56°.5S±0°.2×27°.6W±0°.3, h119^{km}±9^{km}, mb4.5/14, Error ellipse: s-maj=28.1km s-min=14.4km az=46.0*

ISC 19 06:13:36.7±0.7**, 56°.2S**±0°.1×**27°.4W**±0°.2**, h112**^{km}**, n25, σ1^{s}46**/23**, mb4.4**/10**, 2C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	5.54	286	Pn	Pn	06 14 56.1	-0.7
VNA2	Neumayer--Watz	17.14	158	P	P	06 17 32.0	+3.1
	baz=315,slow=13						
SNAA	Sanae	18.69	156	P	Pn	06 17 47.7	+0.1
SNAA	Sanae	18.69	156	Pn	P	06 17 44.6	-1.4
SYO	Syowa Base	31.57	141	⇑*e*P	P	06 19 44.8	-3.2
SYO	Syowa Base	31.57	141	⇑*e*pP	pP	06 20 07.0	-4.9
CPUP	Villa Florida	36.80	312	P	P	06 20 33.3	-0.3
	2.4nm,0.8s,baz=140,slow=7.3,SNR=5.1						
LVC	Limon Verde	45.26	300	P	P	06 21 43.3	0.0
LVC				IAmb	IAmb	06 21 46.8	
	comp=Z,6.2nm,0.9s						
PB09	IPOC Station P	46.11	301	P	P	06 21 48.8	-1.0
PB09				IAmb	IAmb	06 21 55.3	
	comp=Z,5.2nm,0.9s						
VNDA	Vanda	46.47	183	P	P	06 21 54.5	+2.8
	comp=Z,1.1nm,0.6s,baz=189,slow=7.4,SNR=9.5						
PB07	IPOC Station P	46.48	300	P	P	06 21 51.9	-0.8
PB07				IAmb	IAmb	06 22 00.3	
	comp=Z,27nm,1.5s						
PB01	IPOC Station P	46.87	301	P	P	06 21 56.2	+0.6
PB01				IAmb	IAmb	06 21 57.0	
	comp=Z,6.1nm,0.6s						
GO01	Chusmiza	47.91	302	P	P	06 22 03.7	-0.4
GO01				IAmb	IAmb	06 22 05.8	
	comp=Z,7.7nm,0.8s						
PSGCX	Pisagua	48.41	301	P	P	06 22 08.1	+0.5
PSGCX				IAmb	IAmb	06 22 09.1	
	comp=Z,14nm,1.3s						
PB16	IPOC Station P	49.21	303	P	P	06 22 14.2	0.0
LPAZ	La Paz	50.35	305	P	P	06 22 23.9	+1.1
	comp=Z,3.4nm,0.5s,baz=118,slow=3.6,SNR=4.3						
LPAZ	La Paz	50.35	305	IAmb	IAmb	06 22 24.6	
	comp=Z,3.6nm,0.8s						
TOA0	Torodi Ar. Sit	73.19	30	P	P	06 24 55.9	+0.7
TORD	Torodi Ar. Bea	73.19	30	P	P	06 24 55.9	+0.7
	comp=Z,1.2nm,0.4s,baz=202,slow=6.3,SNR=12						
TORD	Torodi Ar. Bea	73.19	30	P	P	06 24 55.6	+0.4
BSWZ	Blackbirch Sta	80.86	196	P	P	06 25 37.9	0.0
HIZ	Hauiti	83.83	197	P	P	06 25 50.9	-2.4
YKA	Yellowknife Ar	136.18	318	PKP	PKiKP	06 32 46.1	+1.2
	comp=Z,0.2nm,0.4s,baz=131,slow=2.4,SNR=9.5						
ILAR	Eielson Array	150.10	312	PKPbc	PKiKP	06 33 13.9	+0.4
	comp=Z,1.0nm,0.7s,baz=138,slow=1.8,SNR=13						
SONM	Songino Array	150.84	87	PKPbc	PKiKP	06 33 16.0	+0.2
	comp=Z,0.3nm,0.5s,baz=184,slow=4.8,SNR=2.7						

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*IDC **19** 06:25:00.2±0.5, 0°.22N×129°.90E, h0^{km}, mb4.5/19, mb1 4.6/21, mb1mx4.5/32, mbtmp4.5/21, ML3.3/2, MS3.9/31, Ms1 3.9/31, ms1mx3.8/43, Error ellipse: s-maj=21.2km s-min=10.2km az=63.0*

*GCMT **19** 06:25:02.5±0.2, 0°.28N±0°.01×129°.87E±0°.02, h15^{km}±1^{km}, MW5.0/90, Moment Tensor Solution. s36,c46; s90,c126; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.12±.13; $M_{\theta\theta}$2.91±.09; $M_{\phi\phi}$-1.79±.11; $M_{r\theta}$1.38±.30; $M_{\theta\phi}$0.38±.08; $M_{\phi r}$2.67±.48; Best double couple: $M_0$3.92600×10^{16} NP1:ϕ_s121.00000°, δ41.00000°, λ-17.00000°. NP2: ϕ_s224.00000°, δ79.00000°, λ-129.00000°. Principal axes: T 3.6480, Plg24.0000°, Azm344.0000°; N 0.5560, Plg38.0000°, Azm234.0000°; P -4.2040, Plg42.0000°, Azm97.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **19** 06:25:04.3±0.3, 0°N±3°×13°0E±°, h66^{km}±3^{km}, M4.8/29, mb4.9/29, mB5.3/16, MLv4.9/13, Mw(mB)4.8/16*

*NEIC **19** 06:25:06.5±2.1, 0°.18N±0°.08×129°.93E±0°.07, h50^{km}±6^{km}, mb4.9/54, Error ellipse: s-maj=12.9km s-min=7.7km az=213.0*

ISC 19 06:25:05.6±0.3**, 0°.17N**±0°.04×**130°.00E**±0°.04**, h41**^{km}**, n162, σ1^{s}66**/158**, mb4.8**/42**, MS3.9**/29**, 1C-2D, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SWI	Sorong	1.62	129	P	Pn	06 25 31.2	-0.5
SWI				S	Sn	06 25 52.5	+1.2
SIJI	Sorong	1.63	129	Pn	Pn	06 25 32.5	+0.7
	217nm,0.3s,baz=323,slow=8.2,SNR=1373						
SIJI				LR	LR	06 25 52.2	
	comp=Z,1μm,18.6s,baz=152,slow=30						
SIJI				Sn	Sn	06 25 53.8	+2.2
	225nm,0.3s,baz=152,slow=22,SNR=17						
LBMI	Labuha	2.63	252	P	Pn	06 25 46.1	+0.6
LBMI				S	Sn	06 26 18.4	+2.2
TNTI	Ternate	2.71	283	P	Pn	06 25 45.9	-0.7
TNTI				S	Sn	06 26 19.1	+1.0
TNTI	Ternate	2.71	283		Pn	06 25 45.2	-1.3
MSAI	Masohi	3.65	197	P	Pn	06 26 02.3	+2.7
FAKI	Fak Fak	3.80	144	P	Pn	06 26 02.0	+0.3
FAKI				S	Sn	06 26 42.0	-3.1
FAKI	Fak Fak	3.80	144		Pn	06 26 02.2	+0.5
AAI	Ambon	4.23	205	P	Pn	06 26 09.1	+1.5
NLAI	Namlea	4.46	221	P	Pn	06 26 11.0	+0.3
RKPI	Ransiki, Papua	4.49	112	P	Pn	06 26 09.6	-1.6
SANI	Sanana	4.58	241	P	Pn	06 26 11.2	-1.2
BNDI	Bandanaira	4.66	181	P	Pn	06 26 14.9	+1.4
KMSI	Cibinong	6.04	274	P	Pn	06 26 32.0	-0.4
	1.0nm170nm,0.7s						
DDMP	Don Marcelino,	7.29	324	*e*P	Pn	06 26 49.7	0.0
LUWI	Luwuk	7.33	261	P	Pn	06 26 46.3	-3.9
	0.6nm158nm,1.8s						
LUWI	Luwuk	7.33	261	Pn	Pn	06 26 50.0	-0.2
MATI	Mati	7.70	331	*e*P	Pn	06 27 00.9	+5.6
MRSI	Marisa	8.07	272	P	Pn	06 27 02.4	+2.1
	1μm47nm,0.7s						
DAV	Davao City (W)	8.15	327	LR	LR	06 29 13.1	
	comp=Z,308nm,20.9s,baz=130,slow=31						
SKMP	Bagumbayan, Su	8.34	319	*e*P	Pn	06 27 00.9	-3.1
KCP	Kidapawan	8.38	324	⇓*e*P	Pn	06 27 02.7	-1.9
KCP				*e*S	Sn	06 28 38.3	+0.3
APSI	Ampana	8.42	263	P	Pn	06 27 05.0	-0.2
	988nm117nm,0.8s						
BUKP	Musuan	9.11	327	*e*P	Pn	06 27 12.2	-2.4
BUTP	Butuan	9.77	334	*e*P	Pn	06 27 22.1	-1.6
PAGZ	Pagadian	10.09	319	*e*P	Pn	06 27 23.5	-4.5
MPSI	Mapaga	10.11	271	P	Pn	06 27 27.1	-1.2
	886nm30nm,1.2s						
TTSI	Tana Toraja	10.67	253	P	Pn	06 27 36.2	+0.2
	48nm,1.1s						
SPSI	Sidrap Palu	11.02	248	P	Pn	06 27 42.0	+1.2
	1μm93nm,0.8s						
BKSI	Bulukumba	11.27	241	P	Pn	06 27 46.2	+2.0
	29nm,0.6s						
SOEI	Soe	11.39	210	Pn	Pn	06 27 44.2	-1.8
KAPI	Kappang	11.46	243	Pn	Pn	06 27 48.3	+1.5
	1.2nm,0.3s,baz=47,slow=3.2,SNR=5.4						
MTN	Manton Dam	12.97	175		Pn	06 28 06.4	-1.1
MTN					Sn	06 30 30.8	+0.2
PLAI	Plampang	15.11	233	P	Pn	06 28 37.3	+1.0
	2μm98nm,1.6s						
KNRA	Kununurra	15.79	184		Pn	06 28 43.9	-1.2
KNRA				IAmb	IAmb	06 28 53.0	
	comp=Z,78nm,1.1s						
TGY	Tagaytay City	16.50	327	LR	LR	06 35 35.2	
	comp=Z,345nm,20.3s,baz=178,slow=39						
SRBI	Singaraja	16.87	241	P	Pn	06 28 54.1	-4.8
	comp=Z,2μmcomp=Z,124nm,1.3s						
SBUM	Sibu	17.92	277	P	Pn	06 29 11.5	-0.4
JAGI	Jajag, Banyuwa	17.98	241	P	Pn	06 29 11.9	-0.7
	comp=Z,73nm,1.3s						
GMJI	Gumukmas	18.51	243	P	P	06 29 16.6	-2.0
	comp=Z,2μmcomp=Z,118nm,1.2s						
FITZ	Fitzroy Crossi	18.65	193	P	P	06 29 19.8	-0.3
	comp=Z,0.4nm,0.3s,baz=14,slow=15,SNR=10						
FITZ				LR	LR	06 36 53.4	
	comp=Z,351nm,21.8s,baz=24,slow=38						
FITZ	Fitzroy Crossi	18.65	193		Pn	06 29 21.3	+0.6
COEN	Coen	19.16	138	P	P	06 29 25.6	-0.1
PMG	Port Moresby	19.55	120	P	P	06 29 30.6	+0.6
	comp=Z,0.6nm,0.3s,baz=307,slow=5.8,SNR=11						
PMG				LR	LR	06 39 18.5	
	comp=Z,898nm,18.3s,baz=52,slow=44						
PMG	Port Moresby	19.55	120	P	P	06 29 30.5	+0.6
PMG				IAmb	IAmb	06 29 34.3	
	comp=Z,102nm,1.1s						
SZP	Santa	19.67	332	P	P	06 29 30.9	-0.3
KSM	Kuching	19.74	274	P	P	06 29 32.4	+0.3
KSM				IAmb	IAmb	06 29 47.9	
	comp=Z,62nm,1.4s						
GUMO	Guam	19.86	47	LR	LR	06 35 58.3	
	comp=Z,263nm,20.7s,baz=288,slow=33						
WB0	Warramunga Arr	20.27	168	P	P	06 29 38.3	+0.5
WB0				IAmb	IAmb	06 29 47.8	
	comp=Z,49nm,1.1s						
WRA	Warramunga Arr	20.43	168	P	P	06 29 40.1	+0.6
	comp=Z,17nm,0.9s,baz=344,slow=10,SNR=44						
WRA				LR	LR	06 39 60.0	
	comp=Z,840nm,18.2s,baz=345,slow=44						
WRA	Warramunga Arr	20.43	168	P	P	06 29 39.5	0.0
WB2	Warramunga Arr	20.43	168	P	P	06 29 40.1	+0.5
WR0	Warramunga Arr	20.49	168	P	P	06 29 41.0	+0.8
WR0				IAmb	IAmb	06 29 50.3	
	comp=Z,48nm,1.0s						
KRVT	Keravat (AS076	22.45	102	P	P	06 30 02.5	+1.2
	comp=Z,108nm,0.8s,baz=129,slow=4.8,SNR=7.0						
KRVT				LR	LR	06 38 42.0	
	comp=Z,400nm,19.6s,baz=296,slow=36						
LEM	Lembang	23.39	252	LR	LR	06 41 09.0	
	comp=Z,411nm,18.1s,baz=72,slow=42						
CISI	Cisompet, Garu	23.42	250	P	P	06 30 08.1	-3.2
	comp=Z,8μmcomp=Z,140nm,0.6s						
CISI	Cisompet, Garu	23.42	250	P	P	06 30 10.4	-0.9
PSA00	Pilbara Seismi	23.77	204	P	P	06 30 15.1	+0.6
PSA00				IAmb	IAmb	06 30 19.9	
	comp=Z,41nm,1.1s						
PSA00	Pilbara Seismi	23.77	204	P	P	06 30 12.9	-1.6
PSA00				IAmb	IAmb	06 30 25.3	
	comp=Z,39nm,1.2s						
AS31	Alice Springs	23.99	171	P	P	06 30 17.7	+1.1
ASAR	Alice Springs	23.99	171	P	P	06 30 18.1	+1.6
	comp=Z,36nm,0.9s,baz=345,slow=8.8,SNR=223						
ASAR				LR	LR	06 41 25.7	
	comp=Z,379nm,21.6s,baz=358,slow=41						
ASAR	Alice Springs	23.99	171	P	P	06 30 17.8	+1.2
DLV	T Lat	24.35	299	P	P	06 30 19.9	-0.3
SKJI	Sukabumi	24.45	253	P	P	06 30 17.7	-3.2
	comp=Z,102nm,0.8s						
TPUB	Ta-pu	24.73	339	P	P	06 30 22.0	-1.3
TPUB				IAmb	IAmb	06 30 29.1	
	comp=Z,39nm,1.2s						
CTA	Charters Tower	25.66	143	P	P	06 30 34.5	+2.7
	comp=Z,1.6nm,0.3s,baz=321,slow=11,SNR=6.2						
YHNB	Yeheng	25.75	342	P	P	06 30 30.9	-1.7
YHNB				IAmb	IAmb	06 30 37.3	
	comp=Z,42nm,1.2s						
KASI	Kota Agung	26.09	257	P	P	06 30 32.6	-3.1
	comp=Z,707nmcomp=Z,24nm,1.1s						
MDSI	Maura Dua	26.21	260	P	P	06 30 34.1	-2.7
	comp=Z,28nm,1.2s						
QZH	Quanzhou	26.99	337	*e*P	P	06 30 45.4	+1.7
QZH				S	S	06 35 19.5	+1.0
QIZ	Qiongzhong	27.25	315	P	P	06 30 46.6	+0.4
QIZ				pP	pP	06 30 57.3	0.0
QIZ				S	S	06 35 25.3	+2.5
QIZ				sS	sS	06 35 43.0	+1.6
JCJ	Chichijima	29.22	23	LR	LR	06 41 12.8	
	comp=Z,163nm,21.4s,baz=228,slow=33						
FORT	Forrest	30.83	183	P	P	06 31 17.1	-0.7
FORT				IAmb	IAmb	06 31 19.9	
	comp=Z,34nm,0.9s						
RPSI	Rantau Prapat	31.17	275	P	P	06 31 20.7	-0.3
PBKT	Sadao Pong	32.94	301	P	P	06 31 36.6	+0.2
SLVN	Son La	33.04	311	P	P	06 31 38.0	+0.6
BBOO	Buckleboo	33.29	171	P	P	06 31 39.6	+0.2
BBOO				IAmb	IAmb	06 31 54.4	
	comp=Z,21nm,1.2s						
NJ2	Nanjing	33.42	343	*e*P	P	06 31 43.4	+2.9
WHN	Wuhan	33.68	335	P	P	06 31 43.6	+0.9
STKA	Stephens Creek	33.71	162	P	P	06 31 44.0	+1.0
	comp=Z,14nm,0.8s,baz=338,slow=8.3,SNR=35						
GYA	Guiyang	34.48	321	P	P	06 31 52.8	+2.9
GYA				pP	sP	06 32 05.3	-0.8
GYA				PP	PP	06 33 09.8	+1.2
GYA				S	S	06 37 17.3	+1.4
GYA				sS	sS	06 37 38.5	+3.8
GYA				ScP	ScP	06 38 06.8	0.0
GYA	Guiyang	34.48	321	ScS	ScS	06 42 07.9	-1.9
CMAR	Chiang Mai Arr	35.51	303	P	P	06 31 59.0	+0.1
	comp=Z,1.9nm,0.5s,baz=125,slow=6.5,SNR=30						
CMAR	Chiang Mai Arr	35.51	303	P	P	06 31 59.5	+0.6
CM31	Chiang Mai Arr	35.51	303	P	P	06 32 00.6	+1.8
CHTO	Chiang Mai	35.67	303	P	P	06 32 01.1	+0.9
ENH	Enshi	35.74	329	P	P	06 31 59.8	-0.9
ARMA	Armidale	36.72	148	P	P	06 32 09.7	+0.6
MJAR	Matsushiro Arr	36.98	11	P	P	06 32 12.1	+0.9
	comp=Z,3.6nm,0.9s,baz=193,slow=9.3,SNR=4.5						
MJAR				LR	LR	06 45 30.8	
	comp=Z,229nm,21.9s,baz=245,slow=33						
KSRS	Korea Array	37.15	357	P	P	06 32 12.9	+0.4
	comp=Z,1.6nm,0.8s,baz=174,slow=13,SNR=5.7						
KSRS				LR	LR	06 46 32.2	
	comp=Z,206nm,20.8s,baz=173,slow=35						
XAN	Xi'an	39.07	332	P	P	06 32 28.1	-0.7
XAN				pP	pP	06 32 40.8	+0.6
XAN				S	S	06 38 28.3	+2.8
XAN				SS	SS	06 41 11.8	-7.4
XAN	Xi'an	39.07	332	ScS	ScS	06 42 37.5	+2.5
XAN	Xi'an	39.07	332	P	P	06 32 27.9	-0.9
XAN				IAmb	IAmb	06 32 33.0	
	comp=Z,28nm,1.3s						
CD2	Chengdu	39.43	323	P	P	06 32 33.0	+1.1
BJI	Beijing	41.64	344	P	P	06 32 53.3	+3.4
BJI				S	S	06 39 09.6	+6.0
DZM	Mont Dzumac	41.83	124	*e*LR	LR	06 44 23.4	
	comp=Z,333nm,22.0s						
DZM	Mont Dzumac	41.83	124	LR	LR	06 50 42.9	
	comp=Z,269nm,18.5s,baz=30,slow=37						
LZH	Lanzhou	43.22	329	*e*P	P	06 33 03.3	+0.2
LZH				pP	pP	06 33 16.8	+2.2
LZH				sP	sP	06 33 21.0	+1.6
USA0B	Ussuriysk Arra	43.88	2	P	P	06 33 06.3	-1.7
USRK	Ussuriysk Ar.	43.88	2	P	P	06 33 07.7	-0.3
	comp=Z,4.9nm,1.0s,baz=187,slow=8.0,SNR=5.4						
USRK				LR	LR	06 50 52.4	
	comp=Z,142nm,18.8s,baz=172,slow=35						
USRK	Ussuriysk Ar.	43.88	2	P	P	06 33 04.8	-3.2
LSA	Lhasa	47.24	312	P	P	06 33 36.4	+1.0
LSA				IAmb	IAmb	06 33 48.2	
	comp=Z,13nm,1.0s						
GTA	Gaotai	47.82	328	⇑P	P	06 33 38.6	-0.8
GTA				pP	pP	06 33 50.5	-0.5
GTA				sP	sP	06 33 55.0	-0.8
GTA				S	S	06 40 33.8	+0.2
GTA				sS	sS	06 40 51.8	-1.1
GTA	Gaotai	47.82	328	SS	SS	06 43 57.6	-5.1
ULN	Ulaanbaatar	51.52	340	P	P	06 34 07.4	-0.1
ULN				IAmb	IAmb	06 34 12.7	
	comp=Z,21nm,1.2s						
SONM	Songino Array	51.72	340	P	P	06 34 09.0	+0.1
	comp=Z,4.9nm,1.1s,baz=161,slow=7.1,SNR=14						
SONM				LR	LR	06 56 56.5	
	comp=Z,164nm,21.9s,baz=170,slow=37						
SONM	Songino Array	51.72	340	P	P	06 34 08.5	-0.4
HYB	Hyderabad	53.43	292	*i* P	P	06 34 21.0	-1.0
WMQ	Urumqi	57.50	325	*e*P	P	06 34 52.0	+1.1
WMQ				pP	sP	06 35 05.8	-1.7
WMQ	Urumqi	57.50	325	P	P	06 34 50.5	-0.4
PETK	Petropavlovsk-	57.58	19	P	P	06 34 51.8	+0.7
	comp=Z,8.0nm,1.0s,baz=210,slow=11,SNR=2.9						
MA2	Magadan	61.42	12	P	P	06 35 18.0	+0.5
MA2				IAmb	IAmb	06 35 23.2	
	comp=Z,9.3nm,1.1s						
MK31	Makanchi Array	62.33	325	IAmb	IAmb	06 35 28.9	
	comp=Z,20nm,1.3s						
MKAR	Makanchi Array	62.33	325	P	P	06 35 23.7	-0.2
	comp=Z,3.4nm,0.7s,baz=117,slow=8.6,SNR=27						
MKAR				LR	LR	07 05 03.9	
	comp=Z,98nm,18.5s,baz=114,slow=39						
MKAR	Makanchi Array	62.33	325	P	P	06 35 23.4	-0.5
MAKZ	Makanchi	62.52	325	P	P	06 35 25.2	0.0
KSH	Kashi	62.86	315	P	P	06 35 29.4	+1.7
KSH				sP	sP	06 35 47.3	+2.8
KSH				PcP	PcP	06 36 06.1	+0.3
KSH				S	S	06 43 53.1	-1.5
KSH				sS	sS	06 44 14.8	+0.3
KSH	Kashi	62.86	315	SS	SS	06 48 00.5	+0.1
BOOM	Boomskoye usch	64.15	318	P	P	06 35 36.8	+0.6
BOOM				IAmb	IAmb	06 35 45.0	
	comp=Z,13nm,1.2s						
AAK	Ala-Archa	65.18	318	P	P	06 35 43.2	+0.2
AAK				IAmb	IAmb	06 35 48.4	
	comp=Z,14nm,1.4s						
ZAA0	Zalesovo Array	65.23	332	P	P	06 35 41.2	-1.6
ZAA0				IAmb	IAmb	06 35 47.1	
	comp=Z,18nm,1.5s						
ZALV	Zalesovo Beam	65.23	332	P	P	06 35 41.8	-1.0
	comp=Z,1.0nm,0.5s,baz=96,slow=6.4,SNR=2.0						
ZALV				LR	LR	07 07 36.1	
	comp=Z,46nm,18.5s,baz=80,slow=39						
ARSB	Arslanbob	65.68	316	P	P	06 35 44.7	-1.5
ARSB				IAmb	IAmb	06 35 58.0	
	comp=Z,20nm,1.3s						
KBL	Kabul	66.28	308	P	P	06 35 49.9	-0.3
KBL				IAmb	IAmb	06 35 58.3	

```
       comp=Z,9.8nm,1.0s
KURK   Kurchatov          66.49 327  P      P       06 35 50.5 -0.4
KK31   Karatay Array      68.05 317  IAmb   IAmb    06 36 09.4
       comp=Z,14nm,1.2s
KKAR   Karatay Array      68.05 317  P      P       06 36 00.5 -0.6
KKAR   Karatay Array      68.05 317  IAmb   IAmb    06 36 09.4
       comp=Z,14nm,1.2s
TIXI   Tiksi              71.37 360  P      P       06 36 20.3 -0.6
HRA    Herat              71.66 306  P      P       06 36 22.3 -1.4
HRA                                  IAmb   IAmb    06 36 26.3
       comp=Z,16nm,1.5s
BRVK   Borovoye           72.14 327  P      P       06 36 25.4 -0.6
BRVK                                 IAmb   IAmb    06 36 31.1
       comp=Z,20nm,1.2s
NRIK   Noril'sk           74.66 346  P      P       06 36 40.5 +0.1
       comp=Z,6.4nm,1.0s,baz=118,slow=4.9,SNR=13
NRIK                                 LR     LR      07 12 01.2
       comp=Z,102nm,21.0s,baz=168,slow=38
GEYT   Alibeck            75.66 309  P      P       06 36 47.0 +0.1
       comp=Z,2.3nm,0.4s,baz=116,slow=3.4,SNR=9.0
GEYT                                 LR     LR      07 14 27.4
       comp=Z,18nm,18.5s,baz=155,slow=39
GEYT   Alibeck            75.66 309  P      P       06 36 47.0 +0.1
GYA0B  ALIBECK ARRAY      75.66 309  P      P       06 36 47.2 +0.3
GYA0B                                IAmb   IAmb    06 36 50.5
       comp=Z,16nm,1.1s
ABKAR  Akbulak array      76.96 321  P      P       06 36 53.4 -0.6
AKTO   Aktyubinsk         78.47 322  LR     LR      07 13 11.8
       comp=Z,15nm,20.6s,baz=106,slow=37
VNDA   Vanda              79.52 173  P      P       06 37 07.9 +0.4
       comp=Z,5.1nm,0.8s,baz=322,slow=4.4,SNR=14
VNDA                                 LR     LR      07 13 56.1
       comp=Z,189nm,18.3s,baz=338,slow=37
ARU    Arti               79.68 328  LR     LR      07 15 23.7
       comp=Z,90nm,18.2s,baz=135,slow=38
ARU    Arti               79.68 328  P      P       06 37 08.4 -0.4
PPT    Papeete            80.92 108  LR     LR      07 11 25.2
       comp=Z,105nm,18.8s,baz=206,slow=34
PPT2   Papeete2           80.92 108 eLR     LR      07 02 46.7
       comp=Z,121nm,23.5s
TBI    Tubuai             81.37 114 eLR     LR      07 02 53.2
       comp=Z,189nm,26.5s
MAW    Mawson             81.59 201  LR     LR      07 10 24.1
       comp=Z,84nm,21.5s,baz=75,slow=33
SML    Sawmill            85.91  28  P      P       06 37 42.8 +1.6
ILAR   Eielson Array      86.90  25  P      P       06 37 44.8 -1.1
       comp=Z,0.4nm,0.8s,baz=258,slow=4.3,SNR=3.4
ILAR                                 LR     LR      07 14 05.2
       comp=Z,57nm,19.9s,baz=278,slow=34
KBZ    Khabaz             87.79 314  LR     LR      07 21 33.3
       comp=Z,25nm,21.6s,baz=75,slow=39
TAOE   Nuku Hiva Isla     89.88  99 eLR     LR      07 06 37.7
       comp=Z,120nm,21.1s
KLMR   Klimovskoe         90.09 331 eP      P       06 37 56.6 -4.4
KLMR                                 AMP            06 38 04.5
       comp=Z,13nm,1.3s
QSPA   South Pole Qui     90.09 180  P      P       06 38 02.0 +0.9
SYO    Syowa Base         90.30 201⇓eP      P       06 38 00.6 -1.2
OBN    Obninsk            91.84 325  LR     LR      07 23 37.9
       comp=Z,20nm,18.0s,baz=181,slow=38
BRTR   Keskin Array B     94.80 310  P      P       06 38 22.9 -0.6
       comp=Z,0.7nm,0.8s,baz=134,slow=7.1,SNR=4.6
BRTR                                 LR     LR      07 28 55.0
       comp=Z,21nm,18.0s,baz=98,slow=40
ARCES  ARCESS Array B     94.90 340  LR     LR      07 28 25.3
       comp=Z,34nm,18.0s,baz=23,slow=40
FINES  FINESS Array B     96.50 332  LR     LR      07 26 12.2
       comp=Z,84nm,18.7s,baz=64,slow=38
AKASG  Malin Array Be     96.70 321  P      P       06 38 32.8 +1.1
       comp=Z,0.4nm,0.4s,baz=69,slow=3.1,SNR=7.5
AKASG                                LR     LR      07 26 09.4
       comp=Z,32nm,18.3s,baz=15,slow=38
YKA    Yellowknife Ar    101.33  25  P      Pdif    06 38 52.6 +0.5
       comp=Z,0.3nm,0.8s,baz=293,slow=4.4,SNR=2.5
TXAR   Lajitas Array     121.06  55  PKP    PKiKP   06 43 55.7 +0.9
       comp=Z,0.6nm,0.9s,baz=300,slow=2.7,SNR=4.4
PLCA   Paso Flores       135.51 158  PKP    PKiKP   06 44 24.9 +1.5
       comp=Z,1.6nm,1.0s,baz=248,slow=1.6,SNR=6.0
ATAH   Atahualpa         150.84 104  PKPbc  PKiKP   06 44 56.9 +0.9
       comp=Z,19nm,1.2s,baz=124,slow=3.5,SNR=4.3
NNA    Nana              150.88 115  PKPbc  PKiKP   06 44 55.4 -0.2
       comp=Z,22nm,0.9s,baz=249,slow=7.1,SNR=6.7
CPUP   Villa Florida     153.04 165  PKP    PKPdf   06 44 53.5 +1.3
       comp=Z,4.3nm,1.1s,baz=134,slow=2.0,SNR=3.7
CPUP                                 PKPbc  PKiKP   06 45 00.0 +0.3
       comp=Z,3.7nm,0.9s,baz=211,slow=1.5,SNR=7.9
CPUP                                 PKPab  PKPab   06 45 10.6 -0.2
       comp=Z,3.2nm,0.8s,baz=197,slow=6.2,SNR=5.0
```

WEL 19 06:25:15.5, 40°.7S±0°.6×**17°6E**±°**, h28**^{km}±1^{km}**, M3.0**/15, **ML3.3**/15, **MLv3.0**/15, **Error ellipse: s-maj=0.0km s-min=0.0km az=95.4, North Island**

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Code   Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op     ISC       h  m  s    ISC
TIWZ   Tintock            0.12 151   P      Pb      06 25 21.1 +0.3
TIWZ                                 S      Sb      06 25 25.2 +0.8
PRWZ   Pori Road          0.17  46   P      Pb      06 25 21.7 +0.5
PRWZ                                 S      Sb      06 25 26.3 +1.3
MRZ    Mangatainoka R     0.18 274   P      Pb      06 25 21.8 +0.5
MRZ                                  S      Sb      06 25 26.2 +1.0
POWZ   Post Office Ro     0.28 353   P      Pb      06 25 23.0 +0.4
HOWZ   Holdsworth Sta     0.32 225   P      Pb      06 25 23.7 +0.6
HOWZ                                 S      Sn      06 25 29.5 -0.6
BFZ    Birch Farm         0.33  92   P      Pb      06 25 23.5 +0.2
CPWZ   Castlepoint        0.38 129   P      Pn      06 25 24.8 -0.3
TMWZ   Te Maipa           0.44 172   P      Pb      06 25 25.4 +0.5
TMWZ                                 S      Sn      06 25 33.2 +0.2
DVHZ   Dannevirke         0.46  36   P      Pb      06 25 25.4 +0.2
OGWZ   Otaki Gorge        0.51 253   P      Pn      06 25 26.7 -0.3
OGWZ                                 S      Sn      06 25 34.4 -0.3
MTW    Mount Morrison     0.54 206   P      Pb      06 25 26.9 +0.4
ANWZ   Angora Road        0.55  67   P      Pb      06 25 26.9 +0.2
ANWZ                                 S      Sn      06 25 35.9 +0.2
OHWZ   Ohakea             0.60 321   P      Pn      06 25 28.9 +0.7
TSZ    Takapari Road      0.62  11   P      Pb      06 25 28.1 +0.1
TSZ                                  S      Sb      06 25 36.9 +0.5
KIW    Kapiti Island      0.71 254   P      Pn      06 25 30.1 +0.3
CAW    Cannon Point       0.71 232   P      Pn      06 25 29.7 -0.1
TRWZ   Traveller          0.73 187   P      Pb      06 25 29.6 -0.1
PRHZ   Porangahau         0.75  57   P      Pb      06 25 29.7 -0.3
PAWZ   Paruwai Farm       0.77 202   P      Pb      06 25 30.2 -0.1
WPHZ   Waipukurau         0.78  39   P      Pn      06 25 30.7 +0.1
PNHZ   Pukenui            0.81  22   P      Pn      06 25 31.2  0.0
MSWZ   Moikau Station     0.85 210   P      Pn      06 25 31.2 -0.5
MSWZ   Moikau Station     0.85 210   P      Pn      06 25 31.0 -0.7
PLWZ   Palliser           0.99 205   P      Pn      06 25 32.8 -0.8
PLWZ   Palliser           0.99 205   P      Pn      06 25 32.6 -1.0
PLWZ                                 S      Sn      06 25 45.9 -0.8
WEL    Wellington         1.00 232   P      Pb      06 25 35.9 +1.7
BHW    Baring Head        1.02 224   P      Pn      06 25 33.3 -0.7
BHW    Baring Head        1.02 224   P      Pn      06 25 33.4 -0.5
PXZ    Pawanui            1.03  52   P      Pn      06 25 33.4 -0.7
SNZO   South Karori       1.05 232   P      Pn      06 25 33.8 -0.6
KRHZ   Kereru             1.11  23   P      Pn      06 25 35.3  0.0
WAZ    Wanganui           1.11 325   P      Pb      06 25 37.2 +1.0
BHHZ   Black Hill Sta     1.20   9   P      Pn      06 25 37.0 +0.5
KAHZ   Kahuranaki         1.20  43   P      Pn      06 25 36.0 -0.4
MOVZ   Moawhango          1.27 358   P      Pn      06 25 38.1 +0.7
TCW    Tory Channel       1.28 245   P      Pn      06 25 37.4 -0.1
MTVZ   Mangateitei        1.31 348   P      Pb      06 25 39.8 +0.2
KWHZ   Kaweka Forest      1.33  21   P      Pn      06 25 38.4  0.0
TRVZ   Turoa              1.39 352   P      Pb      06 25 40.7 -0.2
WHVZ   Whangaehu Hut      1.40 353   P      Pb      06 25 40.9 -0.3
MCHZ   McNeill Hill       1.40  29   P      Pn      06 25 39.2 -0.1
TUVZ   Tukino             1.41 355   P      Pb      06 25 41.0 -0.3
PKVZ   Pokaka             1.43 345   P      Pb      06 25 41.3 -0.2
FWVZ   Far West T-bar     1.43 352   P      Pb      06 25 41.1 -0.6
DUWZ   D'Urville Isla     1.44 264   P      Pn      06 25 40.2 +0.4
NGZ    Ngauruhoe          1.50 354   P      Pb      06 25 42.2 -0.7
WTVZ   West Tongariro     1.56 354   P      Pb      06 25 42.8 -1.1
KRVZ   Karewarewa         1.58 355   P      Pb      06 25 43.2 -1.0
BKZ    Black Stump Fm     1.59  19   P      Pn      06 25 42.6 +0.7
BKZ    Black Stump Fm     1.59  19   P      Pn      06 25 41.7 -0.2
TUWZ   Tuamarina          1.60 241   P      Pb      06 25 44.1 -0.4
LREZ   Lake Rotokare      1.62 318   P      Pb      06 25 45.6 +0.8
TWVZ   Taurewa            1.63 350   P      Pb      06 25 43.7 -1.2
ARHZ   Aropaoanui         1.68  33   P      Pn      06 25 42.9 -0.1
RITZ   Rihia Road         1.69   1   P      Pn      06 25 44.3 +1.0
KATZ   Kakaramea          1.70 357   P      Pb      06 25 45.0 -1.1
BSWZ   Blackbirch Sta     1.79 234   P      Pn      06 25 43.8 -0.8
RATZ   Rangitukua         1.81 359   P      Pb      06 25 47.9  0.0
PREZ   Palmer Road        1.84 316   P      Pb      06 25 48.1 -0.4
NNZ    Nelson             1.92 253   P      Pn      06 25 46.5 +0.2
DREZ   Durham Road        1.93 320   P      Pb      06 25 50.0 -0.1
NMEZ   Namu Road          1.95 310   P      Pb      06 25 49.7 -0.6
KHEZ   Kahui Hut          1.95 314   P      Pb      06 25 50.0 -0.4
WATZ   Wairara            1.96 358   P      Pn      06 25 47.4 +0.5
PKE    Pukeiti            2.04 316   P      Pb      06 25 51.8 -0.1
NBEZ   Newall Road No     2.05 313   P      Pn      06 25 48.3 +0.2
HIZ    Hauiti             2.28 341   P      Pb      06 25 55.1 -0.9
THZ    Tophouse           2.45 243   P      Pn      06 25 54.5 +0.8
QRZ    Quartz Range       2.50 265   P      Pn      06 25 55.0 +0.7
MWZ    Matawai            2.69  30   P      Pn      06 25 55.1 -1.9
RUGZ   Raukumara Rang     3.07  29   P      Pn      06 26 00.6 -1.6
HAZ    Te Kaha            3.29  28   P      Pn      06 26 03.9 -1.2
LTZ    Lake Taylor        3.38 230   P      Pn      06 26 05.7 -0.8
OKCZ   Okains Bay         3.67 213   P      Pn      06 26 08.1 -2.3
AKCZ   Akaroa Harbour     3.85 213   P      Pn      06 26 12.2 -0.7
GRZ    Great Barrier      4.42 356   P      Pn      06 26 23.8 +3.0
CTZ    Chatham Island     6.40 121   P      Pn      06 26 47.2 -0.6
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*IDC **19** 06:32:53.8±1.0, 19°.99S×70°.71W, h0^{km}, mb4.0/6, mb1 4.2/8, mb1mx4.0/22, mbtmp4.1/8, ML4.0/2, MS3.2/8, Ms1 3.2/8, ms1mx3.0/27, Error ellipse: s-maj=28.2km s-min=15.5km az=64.0*

*NEIC **19** 06:32:55.3±1.9, 20°.10S±0°.03×70°.84W±0°.05, h13^{km}±4^{km}, mb4.0/6, Mwr3.9/15, ML4.2(GUC), Error ellipse: s-maj=7.0km s-min=3.9km az=101.0*

*NEIC **19** 06:32:56.6, 20°.13S×70°.70W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}4.36; $M_{\theta\theta}$-1.26; $M_{\phi\phi}$-3.10; $M_{r\theta}$3.98; $M_{\theta\phi}$2.20; $M_{\phi r}$-7.63; Fault plane solution: $M_0$9.70000×10^{14} NP1:ϕ_s320.34000°, δ13.92000°, λ78.90000°. NP2:ϕ_s151.77000°, δ76.35000°, λ92.73000°. Principal axes: T 9.6149, Plg59.0000°, Azm65.0000°; N 0.1596, Plg3.0000°, Azm331.0000°; P -9.7745, Plg31.0000°, Azm240.0000°;*

*GUC **19** 06:32:56.2±0.8, 20°.08S×70°.79W, h39^{km}±1^{km}, ML4.1*

ISC 19 06:32:53.0±2.0**, 20°.08S**±0°.03×**70°.89W**±0°.06**, h2**^{km}±12^{km}**, n54,** σ**1^{s}.33**/63**, mb4.0**/5**, MS3.1**/4**, 1C-1D, Near coast of northern Chile**

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Code   Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op     ISC       h  m  s    ISC
TA01   Diego Aracena      0.83 126  eP      Pb      06 33 10.5 +0.4
TA01                                iS      Sb      06 33 21.1 -0.5
TA01                                 IAML           06 33 24.3
       comp=E,26μm,0.3s
PSGC   Pisagua            0.87  57  eP      Pg      06 33 10.7 +1.0
PSGC                                iS      Sb      06 33 22.2 -0.7
PSGC                                 IAML           06 33 24.5
       comp=E,4μm,0.5s
PSGCX  Pisagua            0.87  57   Pg     Pg      06 33 10.8 +1.2
PSGCX                                Sg     Sb      06 33 22.3 -0.6
PATCX  Punta Patache      1.01 137⇓iP      Pb      06 33 13.9 +0.6
PATCX                               iS      Sb      06 33 26.4 -0.7
PATCX                                IAML           06 33 30.4
       comp=E,10μm,0.8s
PATCX  Punta Patache      1.01 137   Pg     Pb      06 33 13.9 +0.6
PB11   IPOC Station P     1.21  75  eP      Pb      06 33 16.2 -0.5
PB11                                iS      Sg      06 33 31.7 -0.1
PB11                                 IAML           06 33 36.0
       comp=N,9μm,0.2s
PB11   IPOC Station P     1.21  75          Pb      06 33 16.6 -0.1
PB02   IPOC Station P     1.55 143  eP      Pn      06 33 22.3 +0.6
PB02                                iS      Sb      06 33 42.3 -0.2
PB12   IPOC Station P     1.55  20  eP      Pn      06 33 22.3 +0.6
PB12   IPOC Station P     1.55  20   Pn     Pn      06 33 22.8 +1.1
PB12                                 Sn     Sb      06 33 43.5 +0.9
PB01   IPOC Station P     1.63 126  eP      Pn      06 33 23.1 +0.3
PB01                                iS      Sb      06 33 43.6 -1.3
PB01                                 IAML           06 33 49.7
       comp=N,5μm,0.3s
PB01   IPOC Station P     1.63 126          Pb      06 33 23.6 -0.2
PB01                                        Sb      06 33 43.5 -1.4
PB08   IPOC Station P     1.64  92  eP      Pn      06 33 23.4 +0.3
PB08                                iS      Sb      06 33 43.8 -1.6
PB08                                 IAML           06 33 47.6
       comp=N,3μm,0.2s
GO01   Chusmiza           1.65  76  eP      Pn      06 33 23.7 +0.3
GO01                                iS      Sb      06 33 44.7 -1.1
GO01   Chusmiza           1.65  76          Pb      06 33 23.9 -0.5
GO01                                        Sg      06 33 45.0 -1.1
PB07   IPOC Station P     1.89 150  eP      Pn      06 33 27.1 +0.7
PB07   IPOC Station P     1.89 150   Pn     Pn      06 33 27.3 +0.9
PB16   IPOC Station P     2.17  37  eP      Pn      06 33 32.0 +1.3
PB16                                iS      Sb      06 33 59.9 -1.1
PB16                                 IAML           06 34 05.1
       comp=N,1μm,0.7s
PB16   IPOC Station P     2.17  37   Pn     Pn      06 33 32.3 +1.6
PB09   IPOC Station P     2.30 138⇑iP      Pb      06 33 34.2 -1.2
PB09                                iS      Sb      06 34 02.4 -1.9
PB09                                 IAML           06 34 11.1
       comp=E,3μm,0.6s
PB09   IPOC Station P     2.30 138   Pn     Pn      06 33 34.0 +1.8
PB04   IPOC Station P     2.35 163          Pn      06 33 33.0 +0.3
PB04                                        Sn      06 33 59.9 -2.3
LVC    Limon Verde        3.12 144   Pn     Pn      06 33 45.8 +2.3
       comp=E,8.3nm,0.3s,baz=16,slow=7.5,SNR=67
LVC                                  Sn     Sn      06 34 23.7 +2.0
       comp=E,37nm,0.3s,baz=122,slow=21,SNR=6.9
LVC                                  Lg     Lg      06 34 30.2
       comp=E,88nm,0.3s,baz=81,slow=14,SNR=8.8
LVC                                  LR     LR      06 34 58.0
       comp=E,189nm,20.1s,baz=337,slow=40
LVC    Limon Verde        3.12 144          Pn      06 33 45.6 +2.0
PB15   IPOC Station P     3.38 157   Pn     Pn      06 33 47.6 +0.6
PB10   IPOC Station P     3.43 175   Pn     Pn      06 33 47.5  0.0
PB10                                        Sn      06 34 25.1 -3.7
PB14   IPOC Station P     4.55 174   Pn     Pn      06 34 02.6 -0.5
LPAZ   La Paz             4.59  35   Pn     Pb      06 34 11.5 -3.2
       comp=E,1.5nm,0.3s,baz=225,slow=7.5,SNR=29
LPAZ                                 LR     LR      06 36 00.4
       comp=E,210nm,18.6s,baz=258,slow=42
LPAZ   La Paz             4.59  35   Pn     Pb      06 34 10.9 -3.8
GO02   Mina Guanaco       5.20 167          Pn      06 34 12.7 +0.6
GO03   Copiap             7.51 176   Pn     Pn      06 34 44.4 +0.9
GO04   Tololo Observa    10.05 180   Pn     Pn      06 35 18.0 -0.6
SIV    San Ignacio       10.19  68   Pn     Pn      06 35 20.1 -0.2
       comp=E,2.4nm,0.3s,baz=268,slow=9.6,SNR=59
SIV                                  LR     LR      06 39 49.2
       comp=E,187nm,18.1s,baz=284,slow=42
CPUP   Villa Florida     13.93 119   LR     LR      06 42 09.1
       comp=E,50nm,19.2s,baz=280,slow=40
PLCA   Paso Flores       20.59 179   P      Pn      06 37 36.5 +1.0
       comp=E,2.5nm,0.8s,baz=21,slow=9.4,SNR=6.7
PLCA   Paso Flores       20.59 179   P      P       06 37 33.3 -0.1
PTGA   Pitinga           22.00  30   P      P       06 37 47.9 -0.7
       comp=E,3.0nm,0.4s,baz=213,slow=13,SNR=11
PTGA                                 LR     LR      06 47 09.2
       comp=E,61nm,20.8s,baz=54,slow=39
PTGA   Pitinga           22.00  30   P      P       06 37 47.8 -0.8
PTGA                                 IAmb   IAmb    06 37 53.1
       comp=Z,4.1nm,0.7s
BDFB   Brasilia          22.21  82   P      P       06 37 51.4 +0.3
       comp=Z,3.9nm,0.6s,baz=266,slow=15,SNR=5.4
BDFB                                 LR     LR      06 47 54.7
       comp=Z,92nm,18.8s,baz=271,slow=41
BDFB   Brasilia          22.21  82   IAmb   IAmb    06 37 55.6
       comp=Z,4.7nm,0.7s
RUSC   La Rusia          25.90 355   P      P       06 38 28.9 +1.9
RPN    Rapa Nui          35.81 251   LR     LR      06 48 53.7
       comp=Z,9.8nm,20.6s,baz=109,slow=27
TXAR   Lajitas Array     58.41 326   P      P       06 42 51.3 +1.0
       comp=Z,0.3nm,0.5s,baz=144,slow=8.8,SNR=3.6
TOA0   Torodi Ar. Sit    78.65  71   P      P       06 44 56.0 -1.1
TORD   Torodi Ar. Bea    78.65  71   P      P       06 44 56.1 -0.9
       comp=Z,4.5nm,0.8s,baz=251,slow=4.8,SNR=17
TORD   Torodi Ar. Bea    78.65  71   P      P       06 44 56.0 -1.0
BOSA   Boshof            85.75 119   LR     LR      07 18 28.1
       comp=Z,41nm,19.4s,baz=208,slow=32
YKA    Yellowknife Ar    89.24 341   P      P       06 45 50.7 +0.7
       comp=Z,1.1nm,0.7s,baz=138,slow=5.2,SNR=24
H11S2  WAKE ISLAND Hy125.84 279      T      T       09 11 21.8
       baz=102,slow=74,SNR=35
H11S1  WAKE ISLAND Hy125.85 279      T      T       09 11 32.1
       baz=102,slow=74,SNR=19
H11S3  WAKE ISLAND Hy125.86 279      T      T       09 11 26.7
       baz=102,slow=74,SNR=17
ZALV   Zalesovo Beam    141.42  23   PKP    PKPdf   06 52 26.6 +1.3
       comp=Z,0.8nm,0.4s,baz=260,slow=0.9,SNR=2.0
MKAR   Makanchi Array   145.52  33   PKPbc  PKPab   06 52 33.8 +0.7
       comp=Z,3.2nm,0.7s,baz=328,slow=3.4,SNR=31
SONM   Songino Array    152.22   4   PKPbc  PKiKP   06 52 51.1 +0.4
       comp=Z,0.9nm,0.7s,baz=324,slow=2.3,SNR=5.6
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*IDC **19** 06:37:53.6±1.3, 5°.47S×153°.21E, h0^{km}, mb3.8/8, mb1 4.1/8, mb1mx3.8/35, mbtmp3.8/8, Error ellipse: s-maj=36.0km s-min=22.4km az=119.0*

ISC 19 06:37:59.5±1.0**, 5°.47S**±0°.10×**153°.1E**±0°.1**, h37**^{km}**, n11,** σ**0^{s}.61**/12**, mb3.7**/8**, New Ireland region**

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Code   Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op     ISC       h  m  s    ISC
KRVT   Keravat (AS076     1.55 318   Pn     Pn      06 38 24.1 -0.5
       272nm,0.3s,baz=180,slow=1.0,SNR=90
KRVT                                 Sn     Sn      06 38 43.5 +0.1
       158nm,0.3s,baz=152,slow=22,SNR=11
PMG    Port Moresby       7.04 236   Sn     Sn      06 40 58.4 -0.5
       1.9nm,0.3s,baz=137,slow=23,SNR=2.9
WRA    Warramunga Arr    23.21 230   P      P       06 43 03.3 -0.1
       1.5nm,0.7s,baz=54,slow=10.0,SNR=7.5
ASAR   Alice Springs     25.84 224   P      P       06 43 28.3 +0.5
       1.2nm,0.9s,baz=54,slow=9.8,SNR=8.0
CMAR   Chiang Mai Arr    58.40 295   P      P       06 47 52.5 +0.7
       0.8nm,0.3s,baz=99,slow=5.6,SNR=1.5
PETK   Petropavlovsk-    58.49   3   P      P       06 47 51.8 +0.1
       4.3nm,0.7s,baz=179,slow=9.9,SNR=4.6
SONM   Songino Array     67.03 328   P      P       06 48 48.8 -0.1
       0.4nm,0.8s,baz=126,slow=3.9,SNR=2.2
MKAR   Makanchi Array    81.00 319   P      P       06 50 11.0 +0.5
       0.2nm,0.5s,baz=87,slow=4.9,SNR=2.8
ILAR   Eielson Array     82.68  22   P      P       06 50 17.6 -1.2
       0.7nm,0.8s,baz=236,slow=6.0,SNR=6.8
YKA    Yellowknife Ar    95.89  28   P      P       06 51 22.5 +0.5
       0.4nm,0.9s,baz=269,slow=4.4,SNR=5.8
TORD   Torodi Ar. Bea   150.76 287   PKPbc  PKPbc   06 57 49.0  0.0
       0.9nm,0.7s,baz=49,slow=3.2,SNR=3.8
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*SOME **19** 06:40:21.9, 40°.40N×74°.13E, h5^{km}*

*KRNET **19** 06:40:24.3±0.1, 40°.49N×74°.09E, h12^{km}, mb3.0*

*NNC **19** 06:40:27.7±2.1, 40°.66N×74°.08E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=16.8km s-min=8.0km az=168.0*

ISC 19 06:40:26.8±1.2**, 40°.60N**±0°.06×**74°.07E**±0°.03**, h10**^{km}**, n48,** σ**1^{s}.47**/74**, 27C-7D, Kyrgyzstan-Xinjiang border region**

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Code   Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op     ISC       h  m  s    ISC
ARSB   Arslanbob          1.09 312⇑iP      Pg      06 40 47.2 -0.6
       baz=15
ARSB                              ⇑iS      Sn      06 41 03.5 -0.1
       baz=15
ARLS   Aral               1.28   9⇑iP      Pb      06 40 50.9 -0.1
       baz=7.0
ARLS                              ⇑iS      Sn      06 41 09.8 +1.7
       baz=7.0
AML    Almayashu          1.56 350⇑iP      Pb      06 40 55.4 -0.5
       baz=50
AML                               ⇑iS      Sg      06 41 18.9 +2.0
       baz=50
AML    Almayashu          1.56 350   P      Pb      06 40 55.3 -0.6
       SNR=23
UCH    Uchtor             1.66  12⇓iP      Pb      06 40 57.4 -0.4
       baz=10.0
UCH                               ⇓iS      Sg      06 41 21.8 +1.5
       baz=10.0
UCH    Uchtor             1.66  12   P      Pb      06 40 57.4 -0.4
       SNR=62
NRN    Naryn              1.69  60⇑iP      Pn      06 40 56.3 -0.3
       baz=56
NRN                               ⇑iS      Sb      06 41 19.8 +0.4
       baz=56
KZA    Kyzart             1.73  31⇑iP      Pn      06 40 57.9 +0.7
       baz=28
KZA                               ⇑iS      Sg      06 41 23.4 +1.1
       baz=28
KZA    Kyzart             1.73  31   P      Pb      06 40 58.3 -0.5
       SNR=12
ARK    Arkit              1.99 308⇑iP      Pb      06 41 02.5 -0.6
       baz=10.0
ARK                               ⇑iS      Sg      06 41 29.8 -0.9
       baz=10.0
AAK    Ala-Archa          2.06   9⇑iP      Pb      06 41 04.2 -0.2
       baz=8.0
AAK                               ⇑iS      Sg      06 41 32.6 -0.5
       baz=8.0
AAK    Ala-Archa          2.06   9   P      Pg      06 41 05.5 -0.9
       SNR=13
EKS2   Erkin-Say          2.07 354⇑iP      Pb      06 41 03.7 -0.8
       baz=54
EKS2                              ⇑iS      Sg      06 41 33.1 -0.3
       baz=54
EKS2   Erkin-Say          2.07 354   P      Pb      06 41 04.8 +0.3
       SNR=34
MRKS   Merke              2.23 344  eP      Pb      06 41 07.4 +0.1
       8.3nm,0.3s
MRKS                                eS      Sg      06 41 38.9 +0.3
       8.2nm,0.5s
MRKS   Merke              2.23 344   Pg     Pb      06 41 07.4 +0.1
       8.0nm,0.2s
MRKS                                 Lg     Lg      06 41 38.9
       8.2nm,0.5s
ULHL   Ulahol             2.32  44⇑eP      Pn      06 41 06.7 +1.5
       baz=42
ULHL                              ⇑iS      Sb      06 41 38.2 +0.6
       baz=42
ULHL   Ulahol             2.32  44   P      Pb      06 41 08.5 -0.3
       SNR=15
BOOM   Boomskoye usch     2.36  36⇑iP      Pn      06 41 07.1 +1.4
       baz=34
BOOM                              ⇑iS      Sb      06 41 39.0 +0.4
       baz=34
CHMS   Chumysh            2.45  12⇑iP      Pb      06 41 09.8 -1.2
       baz=11
CHMS                              ⇑iS      Sb      06 41 42.4 +1.2
       baz=11
CHMS   Chumysh            2.45  12   P      Pg      06 41 12.7 -1.0
       SNR=7.1
CHMS   Chumysh            2.45  12 ⇓Pn      Pb      06 41 11.6 +0.6
       15nm,0.8s
CHMS                               ⇑Lg      Lg      06 41 44.9
       10.0nm,0.6s
BTK    Batken             2.54 259⇓iP      Pn      06 41 09.3 +1.2
       baz=61
BTK                               ⇓iS      Sb      06 41 41.9 -1.9
       baz=61
USP    Ospenovka          2.69   7   P      Pn      06 41 11.8 +1.7
       SNR=5.6
KDJ    Kajisay            2.80  56⇑eP      Pn      06 41 13.6 +1.8
       baz=54
KDJ                               ⇑iS      Sb      06 41 49.4 -2.0
       baz=54
KST    Kastek             2.82  30  eP      Pb      06 41 17.6 +0.3
       13nm,0.4s
KST                                 eS      Sg      06 41 55.9 -1.6
       23nm,0.5s
KST    Kastek             2.82  30   Pg     Pb      06 41 17.6 +0.3
       13nm,0.3s
KST                                  Lg     Lg      06 41 55.8
       23nm,0.5s
DGS    Degeres            2.93  25  eP      Pb      06 41 19.4 +0.2
       9.1nm,0.6s
DGS                                 eS      Sg      06 41 58.9 -2.0
       17nm,0.8s
DGS    Degeres            2.93  25   Pg     Pb      06 41 19.4 +0.2
       8.8nm,0.6s
DGS                                  Lg     Lg      06 41 58.9
       17nm,0.7s
IZV    Izvestkoviy        3.09  37  eP      Pb      06 41 22.5 +0.6
       5.0nm,0.4s
IZV                                 eS      Sg      06 42 04.3 -1.8
       18nm,0.5s
IZV    Izvestkoviy        3.09  37   Pg     Pb      06 41 22.5 +0.6
       5.0nm,0.4s
IZV                                  Lg     Lg      06 42 04.3
       18nm,0.5s
TNSS   Tian-Shan          3.25  41  eP      Pb      06 41 24.7 -0.1
       9.1nm,0.3s
TNSS                                eS      Sg      06 42 08.8 -2.4
       19nm,0.6s
TNSS   Tian-Shan          3.25  41   Pg     Pb      06 41 24.7 -0.1
       9.1nm,0.3s
TNSS                                 Lg     Lg      06 42 08.0
       15nm,0.6s
KRBS   Karabastau         3.32  21  eP      Pb      06 41 26.1 +0.4
       4.0nm,0.3s
KRBS                                eS      Sg      06 42 10.7 -2.6
       3.6nm,0.5s
KRBS   Karabastau         3.32  21   Pg     Pb      06 41 25.1 -0.7
       1.8nm,0.1s
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KRBS				Lg	Lg	06 42 08.6	
	1.2nm,0.2s						
MDOK	Medeo	3.40	40	eP	Pb	06 41 27.1	0.0
	4.6nm,0.4s						
MDOK				eS	Sg	06 42 12.2	-3.5
	7.9nm,0.6s						
IUG	Iuzhnay	3.41	298	eP	Pb	06 41 28.0	+0.7
	2.8nm,0.7s						
IUG				eS	Sg	06 42 14.2	-2.0
	15nm,0.4s						
IUG	Iuzhnay	3.41	298	Pg	Pb	06 41 28.8	+1.5
	2.8nm,0.7s						
IUG				Lg	Lg	06 42 15.1	
	10nm,0.5s						
KOTS	Kotyrbulak	3.48	40	eP	Pb	06 41 29.2	+0.7
	11nm,0.4s						
KOTS				eS	Sg	06 42 15.7	-2.8
	21nm,0.5s						
KOTS	Kotyrbulak	3.48	40	Pg	Pb	06 41 29.2	+0.7
	8.8nm,0.4s						
KOTS				Lg	Lg	06 42 15.7	
	9.1nm,0.6s						
KK31	Karatay Array	3.65	314	⇑Pg	Pb	06 41 32.2	+0.9
	2.3nm,0.6s,baz=135,slow=15,SNR=14						
KK31				⇓Lg	Lg	06 42 22.0	
	3.2nm,0.5s,baz=129,slow=28,SNR=9.3						
KTBS	Karatobe	3.67	31	eP	Pb	06 41 32.8	+1.1
	1.6nm,0.3s						
KTBS				eS	Sg	06 42 21.9	-2.7
	8.9nm,0.3s						
KTBS	Karatobe	3.67	31	Pg	Pb	06 41 32.8	+1.1
	1.6nm,0.3s						
KTBS				Lg	Lg	06 42 21.8	
	8.9nm,0.3s						
BRLS	Borolday	3.99	309	eP	Pb	06 41 38.4	+1.3
	0.9nm,0.2s						
BRLS				eS	Sg	06 42 31.6	-3.1
	4.6nm,0.6s						
BRLS	Borolday	3.99	309	Pg	Pb	06 41 38.4	+1.3
	0.9nm,0.2s						
BRLS				Lg	Lg	06 42 31.7	
	4.6nm,0.6s						
ARXS	Arharly	4.56	36	eP	Pb	06 41 48.8	+1.9
	1.9nm,0.5s						
ARXS				eS	Sg	06 42 49.3	-3.9
	6.1nm,0.4s						
ARXS	Arharly	4.56	36	Pg	Pb	06 41 48.3	+1.4
	1.0nm,0.2s						
ARXS				Lg	Lg	06 42 48.4	
	6.1nm,0.4s						
PDGK	Podgornoye	4.88	54	⇓Pg	Pb	06 41 56.5	+4.1
	1.2nm,0.6s						
PDGK				⇑Lg	Lg	06 43 04.2	
	7.9nm,0.8s						

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*IDC **19** 06:42:13.0±0.8, 20°.00S×70°.60W, h0km, mb3.9/7, mb1 4.3/9, mb1mx4.1/25, mbtmp4.0/9, ML3.9/2, MS3.1/7, Ms1 3.1/7, ms1mx3.0/27, Error ellipse: s-maj=28.9km s-min=14.4km az=62.0*

*NEIC **19** 06:42:14.3±3.0, 20°.15S±0°.04×70°.79W±0°.06, h10km±1km, mb4.2/7, ML3.8(GUC), Error ellipse: s-maj=10.4km s-min=4.3km az=118.0*

*GUC **19** 06:42:16.1±0.8, 20°.05S×70°.77W, h31km±3km, ML3.9*

ISC 19 06:42:13.0±1.9, **20°.06S**±0°.03×**70°.82W**±0°.06, **h3**km±11km, **n57**, σ**1s.07**/63, **mb4.0**/8, **MS3.4**/3, **5C-5D**, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA01	Diego Aracena	0.79	130	⇑iP	Pb	06 42 29.7	+0.3
TA01				i S	Sb	06 42 39.9	-0.5
TA01				IAML		06 42 43.3	
	comp=E,8μm,0.4s						
PSGC	Pisagua	0.81	55	⇓iP	Pb	06 42 29.9	+0.1
PSGC				i S	Sb	06 42 40.9	-0.2
PSGC				IAML		06 42 43.0	
	comp=N,5μm,0.4s						
PSGCX	Pisagua	0.81	55		Pb	06 42 29.9	+0.1
PATCX	Punta Patache	0.98	140	⇑iP	Pb	06 42 33.0	+0.2
PATCX				eS	Sb	06 42 46.3	+0.1
PATCX	Punta Patache	0.98	140	Pn	Pb	06 42 33.0	+0.2
PB11	IPOC Station P	1.14	75	⇓iP	Pg	06 42 35.3	+0.5
PB11				i S	Sb	06 42 50.0	-0.8
PB11				IAML		06 42 53.6	
	comp=E,7μm,0.6s						
PB11	IPOC Station P	1.14	75	Pn	Pn	06 42 35.6	-0.5
PB12	IPOC Station P	1.51	18	eP	Pn	06 42 41.6	+0.4
PB12				i S	Sg	06 43 02.4	+0.7
PB12				IAML		06 43 03.9	
	comp=N,3μm,0.5s						
PB12	IPOC Station P	1.51	18	Pn	Pb	06 42 42.0	+0.2
PB02	IPOC Station P	1.52	145	⇑iP	Pn	06 42 41.6	+0.3
PB02				i S	Sn	06 43 01.1	-0.6
PB02				IAML		06 43 14.2	
	comp=E,3μm,0.6s						
PB08	IPOC Station P	1.57	93	⇓iP	Pb	06 42 42.5	-0.5
PB08				i S	Sb	06 43 02.8	-0.6
PB08				IAML		06 43 07.6	
	comp=N,2μm,0.6s						
GO01	Chusmiza	1.58	76	⇓iP	Pb	06 42 43.0	-0.3
GO01				eS	Sg	06 43 03.6	-0.3
GO01	Chusmiza	1.58	76	Pn	Pb	06 42 43.1	-0.1
PB01	IPOC Station P	1.59	128	⇑iP	Pb	06 42 42.9	-0.2
PB01				i S	Sb	06 43 03.2	-0.5
PB01				IAML		06 43 08.2	
	comp=N,1μm,0.4s						
PB01	IPOC Station P	1.59	128	Pn	Pb	06 42 43.2	+0.1
AP01	Chacalluta	1.74	15	eP	Pb	06 42 45.8	+0.1
AP01				eS	Sn	06 43 06.7	-0.3
PB07	IPOC Station P	1.88	152	eP	Pn	06 42 46.7	+0.5
PB07				i S	Sn	06 43 10.6	+0.1
PB07				IAML		06 43 22.1	
	comp=E,3μm,0.9s						
PB07	IPOC Station P	1.88	152	Pn	Pn	06 42 46.9	+0.6
PB16	IPOC Station P	2.12	36	⇓iP	Pb	06 42 51.7	-0.8
PB16				i S	Sb	06 43 19.6	+0.1
PB16				IAML		06 43 22.6	
	comp=N,2μm,0.5s						
PB16	IPOC Station P	2.12	36	Pn	Pb	06 42 52.2	-0.3
PB09	IPOC Station P	2.27	140	⇑iP	Pn	06 42 53.3	+1.6
PB09				i S	Sb	06 43 22.4	-1.1
PB09				IAML		06 43 31.8	
	comp=E,721nm,0.5s						
PB09	IPOC Station P	2.27	140	Pn	Pb	06 42 53.5	-1.3
PB04	IPOC Station P	2.35	165	Pn	Pn	06 42 52.8	+0.1
LVC	Limon Verde	3.10	145	Pn	Pn	06 43 04.1	+0.9
	comp=E,6.5nm,0.3s,baz=337,slow=6.1,SNR=27						
LVC				Sn	Sn	06 43 41.7	+0.7
	comp=E,15nm,0.3s,baz=57,slow=19,SNR=6.8						
LVC				Lg	Lg	06 43 47.5	
	comp=E,14nm,0.3s,baz=184,slow=16,SNR=12						
LVC	Limon Verde	3.10	145		Pn	06 43 04.3	+1.1
PB15	IPOC Station P	3.38	158	Pn	Pn	06 43 06.5	-0.5
PB10	IPOC Station P	3.44	176		Pn	06 43 06.4	-1.3
LPAZ	La Paz	4.54	35	Pn	Pb	06 43 30.6	-3.2
	comp=E,2.6nm,0.3s,baz=238,slow=8.5,SNR=27						
LPAZ				LR	LR	06 44 55.0	
	comp=E,102nm,20.1s,baz=192,slow=37						
LPAZ	La Paz	4.54	35	Pn	Pb	06 43 29.0	-4.8
LPAZ	La Paz	4.54	35		Pb	06 43 30.8	-3.0
PB14	IPOC Station P	4.56	175	Pn	Pn	06 43 21.5	-1.8
GO02	Mina Guanaco	5.20	168		Pn	06 43 32.5	+0.3
GO02				Sn	Sn	06 44 30.5	-2.4
NNA	Nana	9.89	323	LR	LR	06 48 13.7	
	comp=E,58nm,20.6s,baz=156,slow=36						
SIV	San Ignacio	10.12	68	Pn	Pn	06 44 38.3	-1.1
	comp=E,2.0nm,0.3s,baz=265,slow=9.6,SNR=47						
SIV				LR	LR	06 48 57.6	
	comp=E,82nm,19.5s,baz=272,slow=41						
CPUP	Villa Florida	13.88	119	LR	LR	06 51 26.5	
	comp=E,51nm,19.6s,baz=244,slow=40						
PLCA	Paso Flores	20.61	179	P	P	06 46 55.0	+1.5
	comp=E,3.5nm,0.9s,baz=42,slow=8.7,SNR=7.6						
PLCA	Paso Flores	20.61	179	P	P	06 46 54.0	+0.5
PLCA				IAmb	IAmb	06 47 06.1	
	comp=Z,13nm,1.4s						
PTGA	Pitinga	21.95	30	P	P	06 47 06.6	-1.6
	comp=Z,3.7nm,0.5s,baz=203,slow=14,SNR=9.4						
PTGA				LR	LR	06 56 00.5	
	comp=Z,53nm,18.1s,baz=99,slow=38						
PTGA	Pitinga	21.95	30	IAmb	IAmb	06 47 23.9	
	comp=Z,13nm,1.4s						
FLOC	Florencia	22.02	347	P	P	06 47 10.1	+1.2
BDFB	Brasilia	22.14	82	P	P	06 47 12.9	+2.5
	comp=Z,1.9nm,0.7s,baz=279,slow=11,SNR=3.1						
RUSC	La Rusia	25.89	355	P	P	06 47 47.4	+0.5
SDV	Santo Domingo	28.77	0	LR	LR	07 00 59.4	
	comp=Z,92nm,18.3s,baz=248,slow=39						
TXAR	Lajitas Array	58.44	326	P	P	06 52 10.9	+0.4
	comp=Z,0.6nm,0.7s,baz=146,slow=9.0,SNR=7.5						
PDAR	Pinedale Array	71.98	331	P	P	06 53 39.2	+0.8
	comp=Z,0.4nm,0.8s,baz=129,slow=7.1,SNR=2.8						
NVAR	Mina Array Bea	73.27	323	P	P	06 53 47.0	+1.0
	comp=Z,1.1nm,0.9s,baz=151,slow=5.4,SNR=7.4						
ULM	Lac du Bonnet	73.42	344	LR	LR	07 31 11.1	
	comp=Z,40nm,18.4s,baz=329,slow=40						
YNE	Yellowstone No	73.94	332	P	P	06 53 51.6	+1.7
TOA0	Torodi Ar. Sit	78.58	71	P	P	06 54 15.6	-1.1
TOA0				IAmb	IAmb	06 54 16.1	
	comp=Z,6.1nm,0.9s						
TORD	Torodi Ar. Bea	78.58	71	P	P	06 54 15.1	-1.5
	comp=Z,3.5nm,0.7s,baz=255,slow=5.0,SNR=14						
TORD	Torodi Ar. Bea	78.58	71	P	P	06 54 15.2	-1.5
YKA	Yellowknife Ar	89.25	341	P	P	06 55 10.0	-0.1
	comp=Z,1.4nm,0.7s,baz=136,slow=5.2,SNR=34						
H11S2	WAKE ISLAND Hy	125.91	279	T	T	09 20 36.2	
	baz=101,slow=74,SNR=17						
H11S1	WAKE ISLAND Hy	125.92	279	T	T	09 20 45.2	
	baz=101,slow=74,SNR=8.7						
H11S3	WAKE ISLAND Hy	125.92	279	T	T	09 20 48.3	
	baz=101,slow=74,SNR=8.3						
MKAR	Makanchi Array	145.47	33	PKPbc	PKPab	07 01 52.9	0.0
	comp=Z,4.0nm,0.8s,baz=333,slow=3.5,SNR=28						
SONM	Songino Array	152.20	4	PKPbc	PKiKP	07 02 10.6	0.0
	comp=Z,1.0nm,0.9s,baz=293,slow=1.1,SNR=5.1						

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*NEIC **19** 06:44:57.3±2.4, 6°.6S±0°.1×128°.53E±0°.09, h256km±25km, mb4.2/3, Error ellipse: s-maj=19.8km s-min=8.7km az=144.0*

*DJA **19** 06:44:57.7±0.4, 7°S±3°×12°9E±°, h302km±7km, M4.1/11, mB4.7/5, mb4.3/6, MLv4.2/11, Mw(mB)4.0/5*

*IDC **19** 06:44:58.5±2.1, 6°.54S×128°.78E, h260km±23km, mb3.2/4, mb1 3.7/8, mb1mx3.4/41, mbtmp4.3/8, Error ellipse: s-maj=39.5km s-min=10.9km az=83.0*

ISC 19 06:44:58.8±0.7, **6°.56S**±0°.05×**128°.59E**±0°.08, **h300**km, **n29**, σ**2s.77**/35, **mb3.4**/4, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	2.41	33	P	Pn	06 45 48.3	-0.8
AAI	Ambon	2.88	352	P	Pn	06 45 52.7	-0.8
SAUI	Saumlaki	3.04	118	S	S	06 46 40.3	+0.4
MSAI	Masohi	3.21	6	P	Pn	06 45 57.0	+0.3
NLAI	Namlea	3.61	336	P	Pn	06 46 01.8	+0.9
FAKI	Fak Fak	5.14	45	P	Pn	06 46 16.4	-1.6
	0.2nm1μm36nm,0.8s						
FAKI	Fak Fak	5.14	45	Pn	Pn	06 46 16.2	-1.8
FAKI					S	06 47 18.2	-3.5
SANI	Sanana	5.17	330	P	Pn	06 46 17.8	-0.6
SOEI	Soe	5.33	233	P	Pn	06 46 17.7	-2.6
	0.9nm5μm144nm,1.0s						
SOEI	Soe	5.33	233		Pn	06 46 17.4	-3.0
SIJI	Sorong	6.25	25	P	Pn	06 46 30.1	-1.2
	7.8nm,0.3s,baz=227,slow=23,SNR=16						
SIJI				S	S	06 47 39.1	-6.7
	1.2nm,0.3s,baz=260,slow=24,SNR=2.0						
SWI	Sorong	6.25	25	P	Pn	06 46 30.3	-1.0
	0.2nm36nm,0.6s						
MTN	Manton Dam	6.73	158	Pn	Pn	06 46 35.6	-1.4
KNRA	Kununurra	9.07	179	Pn	Pn	06 47 04.4	-1.1
FITZ	Fitzroy Crossi	11.83	194	P	P	06 47 39.4	-1.5
	1.1nm,0.3s,baz=19,slow=8.2,SNR=26						
FITZ				S	S	06 49 45.2	-5.9
	1.2nm,0.3s,baz=306,slow=14,SNR=3.8						
WB0	Warramunga Arr	14.29	157		Pn	06 48 08.5	-0.5
WRA	Warramunga Arr	14.43	158	P	Pn	06 48 10.4	-0.2
	4.2nm,0.3s,baz=340,slow=11,SNR=107						
WRA				S	S	06 50 46.1	-2.2
	0.9nm,0.3s,baz=333,slow=22,SNR=7.0						
WRA	Warramunga Arr	14.43	158		Pn	06 48 10.0	-0.7
WB2	Warramunga Arr	14.44	158		Pn	06 48 10.2	-0.5
WB2					S	06 50 49.4	+1.0
WR0	Warramunga Arr	14.53	157		Pn	06 48 11.0	-0.7
COEN	Coen	16.12	118	Pn	Pn	06 48 31.6	+1.0
COEN				IAmb	IAmb	06 48 33.5	
	comp=Z,9.0nm,0.8s						
AS31	Alice Springs	17.76	164	P	Pn	06 48 48.7	-1.0
AS31				IAmb	IAmb	06 48 49.9	
	comp=Z,13nm,0.5s						
AS31					S	06 52 02.9	+8.2
ASAR	Alice Springs	17.77	164	P	Pn	06 48 49.2	-0.4
	comp=Z,5.5nm,0.3s,baz=343,slow=11,SNR=460						
ASAR				S	S	06 51 56.0	+1.2
	baz=343,slow=22,SNR=6.8						
ASAR	Alice Springs	17.77	164	P	Pn	06 48 48.5	-1.2
STKA	Stephens Creek	27.97	156	P	P	06 50 26.1	+3.6
	comp=Z,1.2nm,0.5s,baz=330,slow=9.3,SNR=5.5						
STKA	Stephens Creek	27.97	156	P	P	06 50 24.9	+2.4
STKA				IAmb	IAmb	06 50 41.6	
	comp=Z,1.9nm,1.5s						
USRK	Ussuriysk Ar.	50.61	3	P	P	06 53 31.2	+3.5
	comp=Z,0.8nm,0.4s,baz=196,slow=6.6,SNR=4.4						
SONM	Songino Array	57.59	342	P	P	06 54 21.2	+3.3
	comp=Z,0.5nm,0.6s,baz=150,slow=6.1,SNR=2.9						
MKAR	Makanchi Array	67.09	327	P	P	06 55 24.3	+3.8
	comp=Z,0.3nm,0.4s,baz=111,slow=7.8,SNR=4.3						

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*HLW **19** 06:55:55.7, 34°.77N×33°.14E, h30km±25km, Md3.9, Ml3.8*

*IDC **19** 06:55:56.0±1.3, 34°.52N×33°.15E, h0km, mb3.5/4, mb1 3.6/9, mb1mx3.4/36, mbtmp3.5/9, ML3.3/5, Error ellipse: s-maj=31.0km s-min=16.0km az=57.0*

*ISK **19** 06:55:56.8, 34°.51N×32°.99E, h8km, ML3.2/24*

*NIC **19** 06:55:57.2±0.0, 34°.49N×33°.05E, h5km±1km, Ml3.5/7*

*GII **19** 06:55:57.5±0.0, 34°.51N×33°.08E, h9km, MD2.6/8, Mm3.0/13*

ISC 19 06:55:56.7±1.3, **34°.49N**±0°.03×**33°.05E**±0°.03, **h8**km±9km, **n77**, σ**0s.95**/100, **mb3.5**/3, **1C-4D**, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SZAC	Souni	0.30	332	⇓iP	Pb	06 56 03.6	-0.7
SZAC				S	Sb	06 56 08.4	-1.1
SZAC				AML	AML	06 56 10.1	
	36nm,0.2s						
SZAC				AML	AML	06 56 10.1	
	36nm,0.2s						
SZAC				AML	AML	06 56 10.8	
	42nm,0.6s						
SZAC				AML	AML	06 56 10.8	
	42nm,0.6s						
ASGA	Asgata	0.33	29	⇓iP	Pb	06 56 04.3	-0.7
ASGA				S	Sb	06 56 10.6	+0.1
ASGA				AML	AML	06 56 11.4	
	32nm,0.7s						
ASGA				AML	AML	06 56 11.4	
	32nm,0.7s						
ASGA				AML	AML	06 56 11.6	
	25nm,0.6s						
ASGA				AML	AML	06 56 11.6	
	25nm,0.6s						
NATA	Nata	0.49	306	P	Pb	06 56 07.6	0.0
NATA				S	Sb	06 56 15.5	+0.5
NATA				AML	AML	06 56 23.8	
	12nm,0.7s						
NATA				AML	AML	06 56 23.8	
	12nm,0.7s						
NATA				AML	AML	06 56 24.4	
	10nm,0.8s						
NATA				AML	AML	06 56 24.4	
	10nm,0.8s						
CSS	Mathiatis	0.52	26	PG	Pb	06 56 07.6	-0.6
CSS				SG	Sb	06 56 15.5	-0.4
CSS	Mathiatis	0.52	26	Pg	Pg	06 56 06.6	-0.2
CSS	Mathiatis	0.52	26	⇓eP	Pg	06 56 06.9	+0.1
CSS				S	Sb	06 56 16.2	+0.2
AKIN	Akıncılar- Kıb	0.62	33	PG	Pb	06 56 09.3	-0.6
LEF	Lefka	0.64	348	PG	Pg	06 56 09.2	+0.1
LEF				SG	Sg	06 56 17.9	+0.5
MVOU	Mavrovouni	0.71	42	P	Pb	06 56 10.5	-0.9
MVOU				S	Sn	06 56 22.3	-1.9
MVOU				AML	AML	06 56 26.6	
	3.1nm,0.4s						
MVOU				AML	AML	06 56 26.6	
	3.1nm,0.4s						
MVOU				AML	AML	06 56 27.7	
	4.2nm,0.5s						
MVOU				AML	AML	06 56 27.7	
	4.2nm,0.5s						
ALFC	Alefka	0.76	331	P	Pg	06 56 10.9	-0.5
ALFC				S	Sn	06 56 24.5	-1.1
ALFC				AML	AML	06 56 28.1	
	11nm,0.4s						
ALFC				AML	AML	06 56 28.1	
	11nm,0.4s						
ALFC				AML	AML	06 56 29.9	
	9.2nm,0.5s						
ALFC				AML	AML	06 56 29.9	
	9.2nm,0.5s						
AKMS	Akamas	0.79	312	⇑eP	Pb	06 56 12.7	0.0
AKMS				S	Sn	06 56 26.0	-0.2
AKMS				AML	AML	06 56 32.1	
	4.4nm,0.5s						
AKMS				AML	AML	06 56 32.1	
	4.4nm,0.5s						
AKMS				AML	AML	06 56 40.8	
	2.7nm,0.7s						
AKMS				AML	AML	06 56 40.8	
	2.7nm,0.7s						
AKDN	Akdeniz- Kıbrı	0.81	355	PG	Pb	06 56 12.7	-0.3
AKDN				SG	Sb	06 56 23.9	-0.2
PARAL	Paralimni	0.95	58	⇓eP	Pn	06 56 17.0	+0.5
PARAL				S	Sn	06 56 31.5	+1.2
PARAL				AML	AML	06 56 34.1	
	3.6nm,0.6s						
PARAL				AML	AML	06 56 34.1	
	3.6nm,0.6s						
PARAL				AML	AML	06 56 37.4	
	3.2nm,0.5s						
PARAL				AML	AML	06 56 37.4	
	3.2nm,0.5s						
EREN	Erenkoy	1.38	41	PN	Pg	06 56 23.7	+0.4
OSC2	CSNet OBS 4	1.56	205	P	Pn	06 56 25.6	+0.9
OSC2				S	Sb	06 56 46.8	+1.1
TEKE	Tekeli-Mersin	1.65	2	PN	Pn	06 56 26.4	+0.4
AKK2	Akkuyu-Mersin	1.69	14	PN	Pb	06 56 27.3	-0.8
AKK1	Akkuyu-Mersin	1.69	14	PN	Pb	06 56 27.3	-0.9
TISA	Tisan-Mersin	1.74	17	PN	Pn	06 56 27.8	+0.5
OREN	Orenkoy-Mersin	1.74	11	PN	Pn	06 56 27.7	+0.4
YESI	Yesilovacik-Me	1.77	16	PN	Pb	06 56 28.5	-0.9
TEPK	Tepekoy-MERSIN	1.77	13	PN	Pn	06 56 27.9	+0.1
KARG	Kargicak-Mersi	1.79	17	PN	Pb	06 56 29.1	-0.7
IKL	Isikli	1.82	16	PN	Pb	06 56 29.6	-0.7
GAZI	Gazipasa	1.84	341	PN	Pn	06 56 29.2	+0.5
BERE	Bereket-Mersin	1.85	4	PN	Pb	06 56 30.0	-1.0
TEVE	Tevekalti-Mers	1.96	9	PN	Pn	06 56 31.1	+0.7
SILI	Silifke-Mersin	2.00	21	PN	Pb	06 56 32.3	-1.1
KEBE	Keben-Mersin	2.02	15	PN	Pb	06 56 32.5	-1.3
KIZK	Mersin	2.17	24	PN	Pb	06 56 34.7	-1.6
HNTI	Hanita	2.26	128	Sn	Sn	06 57 02.3	-0.2
MMA0B	Mount Meron ar	2.45	126	Pn	Pn	06 56 36.8	-0.3
MMA0B				Sn	Sn	06 57 06.9	-0.5
MMAI	Mount Meron Ar	2.45	126	Pn	Pn	06 56 36.8	-0.3
	9.4nm,0.3s,baz=312,slow=12,SNR=13						
MMAI				Sn	Sn	06 57 07.5	+0.1
	36nm,0.3s,baz=16,slow=6.3,SNR=15						
OFRI	\`Ofer	2.47	139	Sn	Sn	06 57 07.4	-0.3
BLGI	Bet Lehem HaGe	2.50	134	Sn	Sn	06 57 09.1	+0.6
HDMB	Hadim	2.51	350	PN	Pn	06 56 39.7	+1.6
KSDI	Kefar Szold	2.53	120	Pn	Pn	06 56 37.8	-0.3
KSDI				Sn	Sn	06 57 09.0	-0.1
NATI	Neve Ativ	2.55	118	Pn	Pn	06 56 38.0	-0.4
NATI				Sn	Sn	06 57 09.3	-0.3
MERS	Mersin	2.65	26	PN	Pn	06 56 41.3	+1.4
KRMN	Karaman	2.68	4	PN	Pn	06 56 41.4	+1.1
MMLI	Mount Malkishu	2.85	135	PN	Pn	06 56 44.5	+1.9
MMLI	Mount Malkishu	2.85	135	Pn	Pn	06 56 42.7	+0.1
MMLI				Sn	Sn	06 57 16.5	-0.7
QRNJ	Al-Qirein	3.02	135	Pn	Pn	06 56 44.6	-0.2
HMDT	Nahal Hemdat	3.05	136	Pn	Pn	06 56 45.8	+0.6
HMDT				Sn	Sn	06 57 21.8	-0.1
SEYD	Seydisehir-KON	3.07	342	PN	Pn	06 56 46.7	+1.0
YURE	YUREGIR	3.14	41	PN	Pn	06 56 47.5	+1.0
TAHT	Tahtakopru-Hat	3.17	53	PN	Pn	06 56 48.9	+1.9
KARA	Karaisali	3.21	30	PN	Pn	06 56 49.3	+1.9
KORT	Korkueli	3.33	319	PN	Pn	06 56 50.4	+1.1
YESY	Yesilyurt	3.33	9	PN	Pn	06 56 50.8	+1.5
CEYT	Ceyhan	3.33	40	PN	Pn	06 56 50.9	+1.7
KONT	Konya--Tatoy	3.49	351	PN	Pn	06 56 52.9	+1.5
CMRD	Camardi-Nigde	3.53	26	PN	Pn	06 56 53.8	+1.8
LADK	Ladik-KONYA	3.74	352	PN	Pn	06 56 56.3	+1.4
KZIT	Kziot	3.75	162	Pn	Pn	06 56 55.0	0.0
KZIT				Sn	Sn	06 57 38.9	-0.5
GHAJ	Ghor Haditha	3.82	146	Pn	Pn	06 56 56.1	+0.2
FETY	Fethiye	3.88	305	PN	Pn	06 56 57.1	+0.4
ASF	Jabal al Asfar	3.96	125	Pn	Pn	06 56 58.2	+0.2
	0.9nm,0.3s,baz=61,slow=13,SNR=3.0						
ASF				Lg	Lg	06 57 50.2	
	2.5nm,0.3s,baz=155,slow=22,SNR=6.7						
KARJ	KARJ	4.01	146	Pn	Pn	06 56 47.6	-11
PRNI	Paran	4.45	158	Pn	Pn	06 57 05.4	+0.9
KRMI	Paran Flat	4.59	162	Pn	Pn	06 57 07.1	+0.6
SUZ	Suez	4.64	182	P	Pn	06 57 07.8	+0.6
	baz=184						
KOT	Kottamia	4.67	193	P	Pn	06 57 08.1	+0.5
	baz=194						
KOT				AMP		06 58 00.0	
	baz=194						
KOT				S	Sn	06 58 00.8	-1.2
	baz=194						
HRFI	Mount Harif	4.75	159	Pn	Pn	06 57 09.3	+0.6
HRFI				Sn	Sn	06 58 04.2	+0.2
MBRI	Mt Berech	4.94	161	Pn	Pn	06 57 12.2	+0.8
MBRI				Sn	Sn	06 58 09.6	+0.7
HSAF	As Saff	5.02	195	P	Pn	06 57 12.6	+0.1
	baz=196						
GLL	Jalalah	5.03	193	P	Pn	06 57 12.8	+0.2
	baz=194						
HMYD	Mayadein	5.06	203	P	Pn	06 57 14.1	+1.2
	baz=203						
EIL	Elat	5.07	161	Pn	Pn	06 57 13.8	+0.7
	2.8nm,0.3s,baz=262,slow=2.7,SNR=31						
EIL				Sn	Sn	06 58 11.8	-0.1
	9.3nm,0.3s,baz=329,slow=12,SNR=25						
EIL	Elat	5.07	161	Pn	Pn	06 57 13.2	+0.1
EIL				Sn	Sn	06 58 11.8	-0.1
BRTR	Keskin Array B	5.24	5	Pn	Pn	06 57 18.1	+2.6
	0.5nm,0.3s,baz=187,slow=15,SNR=11						
HNAT	Natroun	5.27	204	P	Pn	06 57 16.1	+0.3
	baz=204						
HNAT				AMP		06 58 00.0	
	baz=204						
IDI	Anoyia	6.75	279	Pn	Pn	06 57 35.6	-0.7
	0.6nm,0.3s,baz=116,slow=23,SNR=1.9						
IDI				Sn	Sn	06 58 50.7	-2.7
	2.4nm,0.3s,baz=331,slow=22,SNR=9.6						
GERES	GERESS Array B	20.28	321	P	Pn	07 00 34.9	+0.1
	0.7nm,0.4s,baz=124,slow=7.1,SNR=4.6						
AKTO	Aktyubinsk	24.18	41	P	P	07 01 12.5	-1.0
	0.7nm,0.5s,baz=169,slow=20,SNR=3.9						
FINES	FINESS Array B	27.34	353	P	P	07 01 40.5	-1.4
	1.1nm,0.5s,baz=158,slow=11,SNR=6.3						
YKA	Yellowknife Ar	79.91	345	P	P	07 08 07.8	+2.1
	0.1nm,0.5s,baz=24,slow=5.6,SNR=2.0						

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*NNC **19** 07:12:45.5±2.0, 41°.70N×78°.45E, h0km, mb2.8, mpv2.8, Error ellipse: s-maj=14.5km s-min=6.5km az=174.0, Suspected Mining explosion.*

*KRNET **19** 07:12:51.5±0.1, 42°.32N×78°.10E, h30km, mb1.9*

ISC 19 07:12:50.7±1.5, **42°.11N**±0°.07×**78°.17E**±0°.05, **h0**km, **n10**, σ**2s.67**/17, **12C-2D**, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	0.41	25	⇑iP	Pg	07 12 59.0	+0.4
	baz=54						
PRZ				⇑iS	Sg	07 13 04.6	+0.6
	baz=54						
KDJ	Kajisay	0.73	272	⇑iP	Pg	07 13 05.2	+0.5
	baz=55						
KDJ				⇑iS	Sg	07 13 15.2	+1.0
	baz=55						
ANVS	Anan'yevo	0.77	331	⇑iP	Pg	07 13 03.3	-2.1
	baz=26						
ANVS				⇑iS	Sg	07 13 11.5	-3.9
	baz=26						
MDOK	Medeo	1.34	322	⇓P	Pb	07 13 17.8	+1.1
	0.6nm,0.2s						
MDOK				⇓S	Sn	07 13 42.2	+6.9

	1.5nm,0.4s						
PDGK	Podgornoye	1.56	38	⇑P	Pn	07 13 17.2	-2.7
	1.0nm,0.7s						
PDGK				⇑S	Sn	07 13 42.2	+1.3
	0.8nm,0.4s						
BOOM	Boomskoye usch	1.69	284	⇑*i*P	Pn	07 13 19.9	-1.8
	baz=77						
BOOM				⇑*i*S	Sn	07 13 40.5	-3.7
	baz=77						
NRN	Naryn	1.75	248	⇑*i*P	Pn	07 13 22.9	+0.2
	baz=41						
NRN				⇑*i*S	Sn	07 13 45.6	-0.3
	baz=41						
KTBS	Karatobe	1.94	326	Pg	Pg	07 13 29.7	+1.9
	3.4nm,0.2s						
KTBS				Lg	Lg	07 13 59.6	
	6.5nm,0.2s						
ARXS	Arharly	2.12	353	Pg	Pg	07 13 32.4	+1.1
	6.0nm,0.4s						
ARXS				Lg	Lg	07 14 05.0	
	4.5nm,0.3s						
KRBS	Karabastau	2.42	312	Pg	Pg	07 13 37.5	+0.4
	2.0nm,0.1s						
KRBS				Lg	Lg	07 14 13.1	
	2.7nm,0.2s						

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*NNC **19** 07:19:53.5±1.0, 50°.09N×78°.99E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=18.9km s-min=4.8km az=66.0, Suspected Mining explosion.*

*ASRS **19** 07:19:57.4±1.0, 51°N±4°×7°9E±°, h10^{km}, MLh3.4/6, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*

ISC 19 07:19:56.0±0.8, **50°.11N**±0°.05×**78°.81E**±0°.05, **h0**^{km}, **n17**, σ**1^s.92**/28, **7C-5D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	Kurchatov Arra	0.55	341	⇑P	Pg	07 20 05.5	-0.9
	29nm,0.4s						
KURBB				⇓S	Sb	07 20 14.5	-2.3
	268nm,0.6s						
KURK	Kurchatov	0.62	349	⇑P	Pg	07 20 06.9	-0.9
	22nm,0.8s						
KURK				⇑S	Sg	07 20 15.1	-0.8
	49nm,0.6s						
UKR	Ust'-Kan	3.90	75	P	Pn	07 20 57.1	0.0
UKR				S	Sn	07 21 42.7	-1.0
MAKZ	Makanchi	3.92	146	P	Pb	07 21 03.5	-2.4
MAKZ				S	Sb	07 21 52.7	-1.1
MAKZ	Makanchi	3.92	146	⇓Pg	Pb	07 21 03.5	-2.4
	1.7nm,0.4s						
MAKZ				⇑Lg	Lg	07 21 57.3	
	5.9nm,0.5s						
BRZS	Berezniki	3.95	271	Pg	Pb	07 21 04.9	-1.5
	7.7nm,0.3s						
BRZS				Lg	Lg	07 21 52.3	
	9.8nm,0.5s						
MK31	Makanchi Array	4.04	144	⇑Pn	Pn	07 20 58.0	-1.1
	0.3nm,0.2s,baz=328,slow=15,SNR=19						
MK31				⇓Pg	Pb	07 21 05.9	-2.2
	3.4nm,0.5s,baz=332,slow=15,SNR=10						
MK31				⇑Lg	Lg	07 21 59.6	
	4.1nm,0.4s,baz=323,slow=27,SNR=14						
MKAR	Makanchi Array	4.04	144	P	Pb	07 21 05.8	-2.3
MKAR				S	Sb	07 22 00.2	+2.7
KAPS	Kapalarasan	4.84	175	Pg	Pb	07 21 19.2	-2.4
	2.5nm,0.4s						
KAPS				Lg	Lg	07 22 23.1	
	6.1nm,0.4s						
TUNR	Tungur	4.84	86	P	Pn	07 21 11.2	+1.1
TUNR				S	Sn	07 22 09.2	+2.4
CHBI	Chibit, Altay	5.59	85	P	Pn	07 21 21.3	+0.9
CHBI				S	Sn	07 22 27.6	+2.3
AKAR	Aktash	5.66	84	P	Pn	07 21 22.3	+0.8
AKAR				S	Sn	07 22 30.0	+2.8
DJR	Jarkent	5.81	173	Pg	Pb	07 21 36.5	-1.8
	0.7nm,0.2s						
DJR				Lg	Lg	07 22 51.8	
	2.6nm,0.4s						
ULGR	Ulagan, Altay	5.88	81	P	Pn	07 21 25.3	+0.9
ULGR				S	Sn	07 22 34.4	+1.8
ARXS	Arharly	5.93	187	Pg	Pb	07 21 39.5	-0.8
	4.5nm,0.5s						
ARXS				Lg	Lg	07 22 56.9	
	9.4nm,0.4s						
BRVK	Borovoye	6.08	302	⇓Pg	Pb	07 21 46.4	+3.7
	1.0nm,0.4s						
BRVK				⇑Sn	Sn	07 22 37.8	+0.6
	2.5nm,0.5s						
BRVK				⇓Lg	Lg	07 23 09.8	
	2.3nm,0.6s						
KTBS	Karatobe	6.56	194	Pg	Pb	07 21 51.4	+0.5
	1.4nm,0.3s						
KTBS				Lg	Lg	07 23 17.0	
	20nm,0.6s						

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*KRNET **19** 07:28:27.5±0.1, 41°.27N×72°.53E, h12^{km}, mb2.1*

*SOME **19** 07:28:28.8, 41°.22N×72°.43E, h5^{km}*

*NNC **19** 07:28:31.6±1.2, 41°.34N×72°.41E, h0^{km}, mb2.3, mpv2.6, Error ellipse: s-maj=10.1km s-min=4.0km az=160.0*

ISC 19 07:28:26.1±1.7, **41°.16N**±0°.08×**72°.47E**±0°.03, **h9**^{km}±13^{km}, **n15**, σ**0^s.97**/27, **16C, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARSB	Arslanbob	0.42	67	⇑*i*P	Pg	07 28 34.2	-0.1
	baz=80						
ARSB				⇑*i*S	Sg	07 28 39.3	-0.6
	baz=80						
ARK	Arkit	0.74	329	⇑*i*P	Pg	07 28 40.3	-0.1
	baz=21						
ARK				⇑*i*S	Sg	07 28 50.0	-0.1
	baz=21						
AML	Almayashu	1.34	43	⇑*i*P	Pn	07 28 51.1	-0.2
	baz=45						
AML				⇑*i*S	Sb	07 29 08.1	-0.8
	baz=45						
ARLS	Aral	1.56	63	⇑*i*P	Pb	07 28 55.7	+0.5
	baz=65						
ARLS				⇑*i*S	Sg	07 29 16.2	0.0
	baz=65						
MRKS	Merke	1.68	19	*e*P	Pg	07 28 59.3	+1.0
	1.8nm,0.1s						
MRKS				*e*S	Sg	07 29 20.9	+0.7
	12nm,0.4s						
MRKS	Merke	1.68	19	P	Pg	07 28 59.3	+1.0
	1.6nm,0.1s						
MRKS				S	Sg	07 29 20.9	+0.7
	12nm,0.4s						
EKS2	Erkin-Say	1.79	33	⇑*i*P	Pb	07 28 58.8	-0.3
	baz=33						
EKS2				⇑*i*S	Sb	07 29 21.7	-0.1
	baz=33						
UCH	Uchtor	1.87	54	⇑*i*P	Pb	07 29 00.6	0.0
	baz=56						
UCH				⇑*i*S	Sb	07 29 24.6	+0.4
	baz=56						
IUG	Iuzhnay	2.08	299	*e*P	Pg	07 29 07.0	+1.1
	0.5nm,0.1s						
IUG				*e*S	Sg	07 29 34.1	+1.3
	16nm,0.2s						
IUG	Iuzhnay	2.08	299	Pg	Pg	07 29 07.2	+1.3
	0.6nm,0.1s						
IUG				Lg	Lg	07 29 34.3	
	16nm,0.2s						
KZA	Kyzart	2.28	65	⇑*i*P	Pb	07 29 07.0	-0.6
	baz=67						
KZA				⇑*i*S	Sb	07 29 36.6	+0.6
	baz=67						
KK31	Karatay Array	2.43	324	⇑Pn	Pb	07 29 10.8	+0.8
	0.2nm,0.2s,baz=136,slow=17,SNR=8.2						
KK31				⇑Lg	Lg	07 29 43.0	
	0.7nm,0.4s,baz=140,slow=27,SNR=3.2						
BRLS	Borolday	2.71	315	*e*P	Pg	07 29 16.6	-1.4
	0.2nm,0.1s						
BRLS				*e*S	Sg	07 29 50.3	-2.7
	2.4nm,0.2s						
BRLS	Borolday	2.71	315	Pg	Pg	07 29 16.6	-1.4
	0.8nm,0.2s						
BRLS				Lg	Lg	07 29 50.3	
	0.5nm,0.2s						
DGS	Degeres	3.22	49	*e*P	Pg	07 29 27.6	0.0
	0.8nm,0.3s						
DGS				*e*S	Sg	07 30 09.4	0.0
	2.0nm,0.7s						

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*IDC **19** 07:35:59.8±0.8, 1°.64N×96°.96E, h0^{km}, mb4.3/16, mb1 4.4/17, mb1mx4.1/48, mbtmp4.3/17, ML3.7/2, MS3.3/8, Ms1 3.4/8, ms1mx3.0/51, Error ellipse: s-maj=24.7km s-min=17.3km az=39.0*

*DJA **19** 07:36:04.9±0.5, 2°N±3°×9°7E±°, h46^{km}±37^{km}, M4.3/9, mB4.6/1, mb4.6/2, MLv4.2/9, Mw(mB)3.8/1*

*NEIC **19** 07:36:06.7±1.1, 1°.73N±0°.09×97°.1E±0°.1, h49^{km}±9^{km}, mb4.6/10, Error ellipse: s-maj=17.2km s-min=9.1km az=52.0*

ISC 19 07:36:04.0±0.5, **1°.74N**±0°.05×**97°.08E**±0°.06, **h28**^{km}, **n71**, σ**1^s.43**/74, **mb4.3**/21, **MS3.4**/5, **1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	Sinabang, Aceh	1.00	311	P	Pn	07 36 21.9	-0.2
TPTI		1.51	4	P	Pn	07 36 29.1	-0.1
KCSI	Kotacane, Aceh	1.90	21	P	Pb	07 36 36.2	-1.8
KCSI				S	Sb	07 36 59.4	-1.9
RPSI	Rantau Prapat	2.08	63		Pb	07 36 39.2	-1.8
RPSI	Rantau Prapat	2.08	63		Pb	07 36 38.9	-2.1
PSI	Prapat	2.12	60	Pn	Pn	07 36 38.9	+1.1
	5.3nm,0.3s,baz=254,slow=4.9,SNR=12						
PSI				LR	LR	07 37 16.1	
	comp=Z,238nm,21.9s,baz=298,slow=34						
PBSI	Pulau Batu	2.15	146	P	Pn	07 36 39.1	+1.1
MLSI	Meulaboh, Aceh	2.59	345	P	Pn	07 36 43.9	-0.2
MLSI				S	Sn	07 37 14.9	+0.1
LHMI	Lhok Sumawe	3.46	358	P	Pn	07 36 56.2	+0.1
LHMI	Lhok Sumawe	3.46	358	Pn	Pn	07 36 56.3	+0.1
SISI	Saibi	3.65	147	P	Pn	07 36 59.9	+1.2
BKNI	Bangkinang	4.21	110	Pn	Pn	07 37 08.7	+2.4
IPM	Ipoh	4.79	55		Pn	07 37 16.0	+1.7
KULM	Kulim	5.01	45		Pn	07 37 18.9	+1.5
PPSI	Pulau Pagai	5.35	147	P	Pn	07 37 22.7	+0.7
MNAI	Manna	8.44	136	Pn	Pn	07 38 04.9	+0.4
MNAI				Sn	Sn	07 39 35.1	-3.9
CMAR	Chiang Mai Arr	16.71	6	Pn	Pn	07 39 55.8	-0.5
	0.3nm,0.3s,baz=198,slow=9.0,SNR=9.4						
CMAR				LR	LR	07 46 49.3	
	comp=Z,137nm,19.4s,baz=206,slow=39						
PALK	Pallekele	17.22	289	LR	LR	07 46 49.0	
	comp=Z,93nm,18.3s,baz=108,slow=38						
QIZ	Qiongzhong	21.25	35	P	P	07 40 47.8	-0.3
QIZ				S	Sn	07 44 48.8	-2.0
KMI	Kunming	23.88	13	P	P	07 41 17.8	+2.2
H08S2	Diego Garcia H	26.24	249	T	T	08 08 52.1	
	baz=70,slow=75,SNR=3130						
H08S3	Diego Garcia H	26.24	249	T	T	08 08 52.1	
	baz=70,slow=75,SNR=2405						
H08S1	Diego Carcia H	26.25	249	T	T	08 08 52.1	
	baz=70,slow=75,SNR=545						
TAPN	Taplejung	27.00	341	*e*P	P	07 41 45.4	+1.4
	39nm,1.1s						
RAMN	Ramite	27.00	339	*e*P	P	07 41 46.1	+2.1
JIRN	Jiri	27.80	339	*e*P	P	07 41 52.5	+1.2
	20nm,0.7s						
GUN	Gumba	28.14	339	*e*P	P	07 41 55.7	+1.4
	18nm,0.6s						
DANN	Dangsing	29.36	336	*e*P	P	07 42 06.2	+1.1
	12nm,0.6s						
WHN	Wuhan	32.99	28	P	P	07 42 36.9	+0.2
XAN	Xi'an	33.99	18	P	P	07 42 45.3	-0.1
XAN				pP	sP	07 43 00.6	+3.7
XAN	Xi'an	33.99	18	P	P	07 42 45.2	-0.1
NJ2	Nanjing	36.47	32	*e*P	P	07 43 07.9	+1.2
GTA	Gaotai	37.57	3	⇓P	P	07 43 17.3	+1.1
GTA				pP	sP	07 43 32.6	+5.0
GTA				sP	pP	07 43 38.6	+14
HHC	Hu-ho-hao-te	41.08	17	*e*P	P	07 43 46.4	+1.0
BJI	Beijing	41.88	22	P	P	07 43 53.3	+1.4
KSH	Kashi	42.23	336	P	P	07 43 54.8	-0.1
KSH				sP	sP	07 44 17.9	+11
KSH				PcP	PcP	07 45 48.4	-0.3
KSH				S	S	07 50 09.8	-3.9
KSH				ScS	ScS	07 53 49.3	-6.1
WB0	Warramunga Arr	42.40	122	P	P	07 43 56.2	-0.2
WRA	Warramunga Arr	42.43	122	P	P	07 43 57.2	+0.5
	1.3nm,0.3s,baz=350,slow=32,SNR=4.8						
WRA				LR	LR	08 01 51.5	
	comp=Z,38nm,21.4s,baz=195,slow=36						
WB2	Warramunga Arr	42.44	122	P	P	07 43 56.9	+0.2
WB2				IAmb	IAmb	07 44 10.6	
	comp=Z,8.1nm,1.2s						
WR0	Warramunga Arr	42.60	122	P	P	07 43 57.4	-0.7
WR0				IAmb	IAmb	07 44 14.2	
	comp=Z,18nm,1.4s						
WMQ	Urumqi	42.72	350	*e*P	P	07 44 00.8	+2.1
ASAR	Alice Springs	43.82	127	P	P	07 44 08.2	+0.2
	comp=Z,1.0nm,0.8s,baz=299,slow=7.9,SNR=8.2						
ASAR				LR	LR	08 03 59.5	
	comp=Z,42nm,18.2s,baz=168,slow=38						
ASAR	Alice Springs	43.82	127	P	P	07 44 07.7	-0.2
AAK	Ala-Archa	45.46	337	P	P	07 44 22.6	+1.8
	comp=Z,1.3nm,0.5s,baz=132,slow=8.5,SNR=5.1						
KSRS	Korea Array	45.48	35	P	P	07 44 21.4	+0.5
	comp=Z,2.3nm,0.6s,baz=228,slow=9.4,SNR=10						
KSRS				LR	LR	08 03 50.4	
	comp=Z,47nm,20.0s,baz=200,slow=37						
SONM	Songino Array	46.62	9	P	P	07 44 30.9	+1.1
	comp=Z,4.8nm,0.5s,baz=189,slow=10.0,SNR=46						
SONM				PcP	PcP	07 46 04.4	+0.9
	comp=Z,0.9nm,0.5s,baz=151,slow=3.3,SNR=3.7						
SONM	Songino Array	46.62	9	P	P	07 44 31.1	+1.3
MK31	Makanchi Array	46.69	346	P	P	07 44 31.4	+1.1
MK31				IAmb	IAmb	07 44 32.2	
	comp=Z,8.7nm,0.8s						
MKAR	Makanchi Array	46.69	346	P	P	07 44 31.4	+1.1
	comp=Z,11nm,0.7s,baz=159,slow=8.0,SNR=81						
MKAR				PcP	PcP	07 46 04.4	+0.8
	comp=Z,0.5nm,0.7s,baz=121,slow=5.6,SNR=1.5						
MKAR				LR	LR	08 07 14.6	
	comp=Z,28nm,20.7s,baz=167,slow=40						
MAKZ	Makanchi	46.78	346	P	P	07 44 32.0	+1.0
MAKZ				IAmb	IAmb	07 44 33.2	
	comp=Z,8.4nm,0.8s						
KKAR	Karatay Array	47.52	334	P	P	07 44 37.7	+0.9
GEYT	Alibeck	50.72	320	P	P	07 45 01.8	+0.3
	comp=Z,1.9nm,0.6s,baz=131,slow=5.9,SNR=2.6						
MJAR	Matsushiro Arr	51.38	43	P	P	07 45 06.6	+0.2
	comp=Z,1.4nm,0.7s,baz=256,slow=24,SNR=4.3						
USA0B	Ussuriysk Arra	52.37	31	P	P	07 45 12.6	-1.0
USA0B				IAmb	IAmb	07 45 15.6	
	comp=Z,4.5nm,0.8s						
USRK	Ussuriysk Ar.	52.37	31	LR	LR	08 10 43.0	
	comp=Z,90nm,18.4s,baz=189,slow=40						
USRK	Ussuriysk Ar.	52.37	31	P	P	07 45 13.3	-0.4
ZAA0	Zalesovo Array	53.01	351	P	P	07 45 18.9	+0.7
ZALV	Zalesovo Beam	53.01	351	P	P	07 45 19.2	+1.1
	comp=Z,16nm,0.5s,baz=178,slow=7.2,SNR=63						
ZALV	Zalesovo Beam	53.01	351	P	P	07 45 18.9	+0.8
ABKAR	Akbulak array	56.98	332	P	P	07 45 47.1	+0.1
KBZ	Khabaz	63.58	319	P	P	07 46 32.6	+0.4
	comp=Z,2.6nm,1.0s,baz=221,slow=4.1,SNR=3.9						
NRIK	Noril'sk	67.78	356	P	P	07 46 58.5	-0.4
	comp=Z,1.6nm,0.3s,baz=161,slow=7.4,SNR=5.0						
BRTR	Keskin Array B	68.66	312	P	P	07 47 04.3	-0.8
	comp=Z,1.1nm,0.8s,baz=120,slow=7.2,SNR=6.0						
AKASG	Malin Array Be	74.75	322	P	P	07 47 41.1	-0.3
	comp=Z,0.5nm,0.5s,baz=88,slow=4.6,SNR=5.6						
FINES	FINESS Array B	79.46	332	P	P	07 48 08.1	+0.5
	comp=Z,16nm,1.3s,baz=108,slow=6.2,SNR=6.7						
FINES	FINESS Array B	79.46	332	P	P	07 48 07.0	-0.6
ARCES	ARCESS Array B	81.99	340	P	P	07 48 22.0	+1.0
	comp=Z,1.6nm,0.4s,baz=93,slow=5.0,SNR=32						
ARCES	ARCESS Array B	81.99	340	P	P	07 48 21.6	+0.6
ARE0	ARCESS Array S	81.99	340	P	P	07 48 21.7	+0.7
GERES	GERESS Array B	84.33	319	P	P	07 48 33.5	-0.2
	comp=Z,1.2nm,0.6s,baz=102,slow=5.7,SNR=5.0						
CPUP	Villa Florida	145.32	223	PKPbc	PKPbc	07 55 39.0	-0.8
	comp=Z,5.6nm,1.2s,baz=85,slow=2.8,SNR=6.4						

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*DDA **19** 07:47:46.3, 37°.59N×41°.88E, h7^{km}±3^{km}, ML2.0*

*ISK **19** 07:47:47.3, 37°.76N×41°.77E, h11^{km}, ML2.6/9*

ISC 19 07:47:47.2±1.2, **37°.62N**±0°.04×**41°.84E**±0°.03, **h10**^{km}±10^{km}, **n18**, σ**1^s.17**/26, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRTM	Siirt_Merkez	0.37	10	*i* P	Pg	07 47 53.7	-1.0
SIRN	Sırnak	0.47	105	*i* P	Pb	07 47 58.1	+0.6
SIRT	Sirnak	0.49	104	PG	Pn	07 47 59.4	-0.9
SVAN	Silvan-Diyarba	0.73	316	PG	Pg	07 47 59.4	-2.0
MARD	Mardin	0.90	250	*i* P	Pg	07 48 04.2	-0.3
MARD				IAML		07 48 23.0	
	comp=E,165nm,0.4s						
MARD				IAML		07 48 32.0	
	comp=N,135nm,0.5s						
MAZI	Mazidag	1.12	262	PN	Pb	07 48 08.3	-0.4
MAZI				SN	Sn	07 48 24.6	+0.1
MUSM	Mu-Merkez	1.13	347	*i* P	Pn	07 48 08.8	-0.3
MUSM				*i* S	Sn	07 48 24.9	+0.2
MUSM				IAML		07 48 29.0	
	comp=N,24nm,0.5s						
AKDM	Akdamar-Van	1.14	52	PN	Pn	07 48 08.9	-0.4
AKDM				SN	Sn	07 48 24.8	-0.3
GEVA	Gevas	1.18	54	*i* P	Pg	07 48 08.6	-1.4
GEVA				*i* S	Sn	07 48 27.7	+1.6
GEVA				IAML		07 48 31.0	
	comp=E,45nm,0.4s						
GEVA				IAML		07 48 32.0	
	comp=N,24nm,0.4s						
HANI	Diyarbakir_Han	1.39	305	*i* P	Pn	07 48 11.2	-1.5
HANI				*i* S	Sg	07 48 33.4	+1.6
BNGL	BINGOL	1.44	338	*i* P	Pg	07 48 14.8	+0.1
BNGL				*i* S	Sg	07 48 36.6	+3.1
CUKT	Cukurca	1.45	104	PN	Pn	07 48 13.5	-0.1
CUKT	Cukurca	1.45	104	*i* P	Pn	07 48 13.0	-0.6
CUKT				*i* S	Sn	07 48 33.1	+0.4
CUKT				IAML		07 48 36.0	
	comp=N,91nm,0.5s						
HAKT	HAKKARI	1.48	92	*i* P	Pn	07 48 13.5	-0.6
HAKT				*i* S	Sg	07 48 35.5	+0.6
HAKT				IAML		07 48 37.0	
	comp=E,26nm,0.4s						
HAKT				IAML		07 48 50.0	
	comp=N,14nm,0.4s						
BNGB	Bingl	1.65	327	PN	Pn	07 48 14.8	-1.4
SVRC	Sivrice-ELAZID	2.14	291	PN	Pn	07 48 22.5	-0.6
PTK	Pertek	2.31	304	PN	Pn	07 48 24.6	-0.8
URFA	Urfa	2.41	267	PN	Pn	07 48 27.3	+0.6

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*SOME **19** 07:49:58.6, 40°.97N×70°.42E, h5^{km}*

*KRNET **19** 07:50:04.2±0.1, 40°.96N×70°.33E, mb2.6*

ISC 19 07:50:05.9±1.8, **41°.28N**±0°.07×**70°.25E**±0°.04, **h7**^{km}±14^{km}, **n11**, σ**1^s.48**/21, **11C-5D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAS	Tashkent	0.72	274	⇑*i*P	Pg	07 50 20.3	+0.6
	baz=96						
TAS				⇑*i*S	Sb	07 50 32.0	+1.1
	baz=96						
IUG	Iuzhnay	0.89	350	*e*P	Pg	07 50 22.4	-0.5
	1.3nm,0.2s						
IUG				*e*S	Sn	07 50 39.5	+1.4
	23nm,0.3s						
ARK	Arkit	1.39	67	⇑*i*P	Pn	07 50 31.8	-0.1
	baz=56						
ARK				⇑*i*S	Sb	07 50 50.9	+0.6
	baz=56						
BRLS	Borolday	1.78	350	*e*P	Pn	07 50 33.8	-3.4
	1.4nm,0.2s						
BRLS				*e*S	Sn	07 50 58.9	-1.2
	4.1nm,0.2s						
KK31	Karatay Array	1.84	6	⇓Pn	Pn	07 50 38.8	+0.8
	0.6nm,0.4s,baz=188,slow=17,SNR=12						
KK31				⇑Lg	Lg	07 51 05.8	
	1.2nm,0.4s,baz=180,slow=27,SNR=6.4						
ARSB	Arslanbob	2.06	88	⇑*i*P	Pn	07 50 39.7	-1.4
	baz=79						
ARSB				⇑*i*S	Sn	07 51 05.1	-2.1
	baz=79						
MRKS	Merke	2.66	56	*e*P	Pn	07 50 49.5	+0.1
	5.3nm,0.3s						
MRKS				*e*S	Sn	07 51 24.5	+2.5
	3.0nm,0.3s						
AML	Almayashu	2.72	71	⇑*i*P	Pn	07 50 50.2	-0.2
	baz=64						
AML				⇑*i*S	Sn	07 51 23.8	0.0
	baz=64						
EKS2	Erkin-Say	2.98	61	⇓*i*P	Pn	07 50 54.7	+1.0
	baz=55						
EKS2				⇓*i*S	Sn	07 51 31.6	+1.9
	baz=55						
ARLS	Aral	3.11	78	⇓*e*P	Pn	07 50 55.6	0.0
	baz=72						
ARLS				⇓*i*S	Sn	07 51 31.8	-1.4
	baz=72						
UCH	Uchtor	3.33	72	⇑*i*P	Pn	07 50 58.6	-0.3
	baz=67						
UCH				⇑*i*S	Sn	07 51 38.4	-0.6
	baz=67						

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*ATH **19** 08:06:56.1, 36°.60N×26°.60E, h152^{km}±4^{km}, ML3.6/11, Error ellipse: s-maj=4.2km s-min=1.5km az=128.0*

*DDA **19** 08:06:57.0, 36°.60N×26°.63E, h122^{km}±13^{km}, MW3.4*

*ISK **19** 08:06:57.7, 36°.62N×26°.58E, h134^{km}±1^{km}, ML3.2/20*

*NIC **19** 08:06:57.7±0.0, 36°.60N×26°.61E, h135^{km}±2^{km}, Ml3.8/4*

*IDC **19** 08:06:57.2±1.4, 36°.58N×26°.67E, h145^{km}±16^{km}, mb3.5/4, mb1 3.3/8, mb1mx3.0/48, mbtmp3.8/8, MS2.7/1, Ms1 2.8/1, ms1mx2.1/40, Error ellipse: s-maj=25.1km s-min=15.0km az=145.0*

*THE **19** 08:06:58.9, 36°.57N×26°.58E, h165^{km}±2^{km}, ML3.4/21, Error ellipse: s-maj=2.9km s-min=0.9km az=192.0*

ISC 19 08:06:56.7±0.8, **36°.61N**±0°.03×**26°.61E**±0°.03, **h144**^{km}±6^{km}, **n135**, σ**1^s.32**/179, **mb3.6**/4, **4C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BODT	Bodrum	0.72	51	PG	Pn	08 07 19.4	+0.7
BODT				SG	Sn	08 07 35.0	-0.5
ANAF	Anafi Island	0.72	250	P	Pn	08 07 19.6	+0.9
ANAF				S	Sn	08 07 35.1	-0.4
	1µm,0.5s						
ANAF	Anafi Island	0.72	250	P	Pn	08 07 19.6	+0.9
DAT	Datca	0.79	81	PG	Pn	08 07 19.9	+0.6
DATC	Datca-Mugla	0.86	80	PG	Pn	08 07 20.5	+0.8
THR8	Santorini-Mono	0.94	258	P	Pn	08 07 21.0	+0.7
SANT	Santorini	0.96	256	P	Pn	08 07 21.2	+0.6
SANT				S	Sn	08 07 37.7	-1.1
	340nm,0.5s						
SANT	Santorini	0.96	256	P	Pn	08 07 21.2	+0.6
SANT	Santorini	0.96	256	PG	Pn	08 07 21.0	+0.4
SANT				SG	Sn	08 07 37.6	-1.2
SANT	Santorini	0.96	256	*i* P	Pn	08 07 21.2	+0.6
SANT				*i* S	Sn	08 07 38.2	-0.5
SAP2K	Karterados	0.96	258	P	Pn	08 07 21.5	+1.0
THR2	Thira island,	0.96	260	P	Pn	08 07 21.1	+0.5
THT2	Imerovigli	0.97	260	P	Pn	08 07 21.5	+0.8
THT2	Imerovigli	0.97	260	PG	Pn	08 07 21.1	+0.4
APE	Apeiranthos	0.98	298	P	Pn	08 07 21.4	+0.6
APE	Apeiranthos	0.98	298	P	Pn	08 07 21.4	+0.6
APE	Apeiranthos	0.98	298	PG	Pn	08 07 21.4	+0.6
APE	Apeiranthos	0.98	298	*i* P	Pn	08 07 21.3	+0.6
APE				*i* S	Sn	08 07 38.6	-0.6
APE	Apeiranthos	0.98	298	P	Pn	08 07 21.3	+0.6
THT1	Athinios (Pele	0.98	257	P	Pn	08 07 21.1	+0.4
STAX	Taxiarchis Har	1.00	258	P	Pn	08 07 21.6	+0.8
STAX				S	Sn	08 07 38.7	-0.5
THR3	Thira Island,	1.00	259	P	Pn	08 07 21.6	+0.8
SAP4	Santorini-Oia	1.01	262	P	Pn	08 07 21.9	+0.9
THR6	Thira Island,	1.01	256	P	Pn	08 07 21.8	+0.8
SAP1	Santorini-Akro	1.01	256	P	Pn	08 07 22.0	+1.0
THR5	Thira Island,	1.04	260	P	Pn	08 07 21.8	+0.6
THR9	Santorini-Faro	1.04	256	P	Pn	08 07 22.0	+0.8
IOSP	Ios island	1.07	276	P	Pn	08 07 22.1	+0.6
IOSP	Ios island	1.07	276	P	Pn	08 07 22.2	+0.6
SMG	Samos	1.11	9	P	Pn	08 07 22.0	+0.1
SMG	Samos	1.11	9	P	Pn	08 07 22.2	+0.3
KARP	Karpathos	1.15	157	P	Pn	08 07 22.8	+0.5
KARP				S	Sn	08 07 41.8	-0.1
	2µm,0.2s						
KARP	Karpathos	1.15	157	P	Pn	08 07 22.9	+0.5
KARP				S	Sn	08 07 41.8	-0.1
KARP				AML	AML	08 07 45.1	
	comp=N,5981µm,0.2s						
KARP				AML	AML	08 07 45.7	
	comp=E,3037µm,0.2s						
KARP	Karpathos	1.15	157	PN	Pn	08 07 22.9	+0.5
KARP	Karpathos	1.15	157	⇑P	Pn	08 07 22.9	+0.5
KARP				S	Sn	08 07 42.5	+0.6

KARP				AML	AML	08 07 44.7	
	comp=E,6.0nm,0.2s						
KARP				AML	AML	08 07 44.7	
	comp=E,6.0nm,0.2s						
KARP				AML	AML	08 07 45.2	
	comp=E,3.0nm,0.2s						
KARP				AML	AML	08 07 45.2	
	comp=E,3.0nm,0.2s						
GCAM	G?zelcaml?	1.19	24	*i* P	Pn	08 07 23.4	+0.8
MRSB	Marmaris-Mugla	1.28	85	PN	Pn	08 07 24.4	+0.9
ARG	Arkhangelos	1.28	108	P	Pn	08 07 24.5	+0.9
ARG				S	Sn	08 07 44.1	+0.1
	comp=E,782nm,0.6s						
ARG	Arkhangelos	1.28	108	P	Pn	08 07 24.6	+1.1
ARG				S	Sn	08 07 45.3	+1.3
ARG				AML	AML	08 07 45.5	
	comp=E,1824µm,0.6s						
ARG				AML	AML	08 07 45.8	
	comp=N,1318µm,0.5s						
ARG	Arkhangelos	1.28	108	⇑P	Pn	08 07 24.9	+1.3
ARG				S	Sn	08 07 45.0	+0.9
YER	Yerkesik	1.44	68	PN	Pn	08 07 26.4	+1.2
AYDN	Tasoluk	1.46	44	*i* P	Pn	08 07 26.2	+0.8
STIA	Sitia Lasithi	1.47	197	P	Pn	08 07 26.1	+0.6
STIA				S	Sn	08 07 46.2	-1.3
ZKR	Zakros	1.53	192	P	Pn	08 07 26.9	+0.8
ZKR				S	Sn	08 07 48.7	+0.1
	comp=N,192nm,0.3s						
ZKR	Zakros	1.53	192	P	Pn	08 07 27.0	+0.8
ZKR				AML	AML	08 07 50.6	
	comp=E,382µm,0.3s						
ZKR				AML	AML	08 07 53.1	
	comp=N,231µm,0.3s						
ZKR	Zakros	1.53	192	PN	Pn	08 07 27.0	+0.8
ZKR	Zakros	1.53	192	⇑P	Pn	08 07 27.0	+0.8
ZKR				S	Sn	08 07 49.3	+0.6
NPS	Neapolis	1.57	211	P	Pn	08 07 26.9	+0.3
NPS				S	Sn	08 07 48.8	-0.7
	comp=N,2µm,0.4s						
NPS	Neapolis	1.57	211	P	Pn	08 07 26.9	+0.3
NPS				S	Sn	08 07 48.7	-0.8
NPS				AML	AML	08 07 49.5	
	comp=E,3511µm,0.3s						
NPS				AML	AML	08 07 49.6	
	comp=N,2615µm,0.3s						
TURN	Turunc	1.62	80	PN	Pn	08 07 24.8	-2.3
TURN	Turunc	1.62	80	*i* P	Pn	08 07 24.7	-2.4
TURN				*i* S	Sn	08 07 44.5	-5.9
DALY	Dalyan (Mula)	1.65	82	PN	Pn	08 07 29.1	+1.7
AYDB	Zeytinkoy-Aydi	1.68	37	PN	Pn	08 07 28.6	+0.7
LAST	Lasithi	1.72	213	P	Pn	08 07 28.5	+0.2
LAST				S	Sn	08 07 51.4	-1.0
	comp=N,475nm,0.5s						
LAST	Lasithi	1.72	213	P	Pn	08 07 28.5	+0.2
LAST				S	Sn	08 07 52.3	-0.1
LAST				AML	AML	08 07 53.5	
	comp=N,1180µm,0.5s						
LAST				AML	AML	08 07 53.6	
	comp=E,695µm,0.3s						
URLA	Izmir	1.74	360	PN	Pn	08 07 29.2	+0.7
FRMA	Ierapetra Chan	1.75	204	P	Pn	08 07 29.3	+0.8
FRMA				S	Sn	08 07 52.5	-0.4
	comp=E,175nm,0.3s						
HRKL	Herakleio	1.79	224	P	Pn	08 07 29.6	+0.6
HRKL				S	Sn	08 07 52.6	-1.1
	comp=E,1µm,0.3s						
HRKL	Herakleio	1.79	224	PN	Pn	08 07 29.8	+0.8
SERI	Serifos	1.79	288	P	Pn	08 07 29.5	+0.5
SERI	Serifos	1.79	288	P	Pn	08 07 29.5	+0.5
IACM	Heraklion	1.81	224	P	Pn	08 07 29.4	+0.2
IACM				S	Sn	08 07 52.8	-1.3
KSTL	Kastelli Herak	1.81	224	P	Pn	08 07 29.3	+0.1
KSTL				S	Sn	08 07 51.5	-2.6
CHOS	Chios island	1.82	346	P	Pn	08 07 30.1	+0.6
CHOS	Chios island	1.82	346	P	Pn	08 07 30.0	+0.5
CHOS	Chios island	1.82	346	PN	Pn	08 07 29.9	+0.5
IDI	Anoyia	1.92	227	P	Pn	08 07 30.7	+0.1
IDI				S	Sn	08 07 54.4	-2.2
	comp=E,735nm,0.3s						
IDI	Anoyia	1.92	227	P	Pn	08 07 30.8	+0.2
	comp=E,28nm,0.3s,baz=35,slow=5.3,SNR=301						
IDI				S	Sn	08 07 54.6	-2.1
	comp=E,74nm,0.3s,baz=315,slow=20,SNR=17						
IDI	Anoyia	1.92	227	P	Pn	08 07 30.8	+0.2
IDI				S	Sn	08 07 55.3	-1.3
IDI				AML	AML	08 07 55.6	
	comp=E,1251µm,0.2s						
IDI				AML	AML	08 07 56.4	
	comp=N,1515µm,0.3s						
FETY	Fethiye	1.99	89	PN	Pn	08 07 32.4	+1.1
TAVA	DENIZLI_Tavas	2.03	65	*i* P	Pn	08 07 33.1	+1.2
SIVA	Sivas	2.16	223	P	Pn	08 07 33.3	-0.1
SIVA				S	Sn	08 08 01.3	-0.3
	comp=N,975nm,0.5s						
SIVA	Sivas	2.16	223	P	Pn	08 07 34.3	+0.9
SIVA				AML	AML	08 08 06.5	
	comp=N,1639µm,0.5s						
SIVA				AML	AML	08 08 07.7	
	comp=E,1702µm,0.4s						
VAM	Vamos	2.30	239	P	Pn	08 07 35.7	+0.7
VAM				AML	AML	08 08 05.5	
	comp=N,2728µm,0.2s						
VAM				AML	AML	08 08 05.7	
	comp=E,1838µm,0.2s						
IMMV	Iera Moni Meta	2.42	242	P	Pn	08 07 37.2	+0.7
IMMV				S	Sn	08 08 04.9	-2.3
	comp=E,700nm,0.3s						
IMMV	Iera Moni Meta	2.42	242	P	Pn	08 07 37.3	+0.7
IMMV				AML	AML	08 08 09.0	
	comp=N,1569µm,0.3s						
IMMV				AML	AML	08 08 11.4	
	comp=E,1218µm,0.2s						
IMMV	Iera Moni Meta	2.42	242	PN	Pn	08 07 38.1	+1.5
MANT	Manisa	2.43	39	*i* P	Pn	08 07 37.4	+0.5
KSL	Kastellorizon	2.44	100	P	Pn	08 07 37.9	+1.1
KSL				S	Sn	08 08 06.8	-0.8
	comp=E,352nm,0.4s						
KSL	Kastellorizon	2.44	100	P	Pn	08 07 37.8	+1.0
KSL				AML	AML	08 08 09.4	
	comp=E,1013µm,0.4s						
KSL				AML	AML	08 08 09.5	
	comp=N,393µm,0.4s						
KSL	Kastellorizon	2.44	100	⇑P	Pn	08 07 37.9	+1.1
KSL				AML	AML	08 08 09.2	
	comp=N,1.0nm,0.4s						
AKAS	Kas	2.44	98	PN	Pn	08 07 38.3	+1.3
AKAS	Kas	2.44	98	*i* P	Pn	08 07 38.0	+1.1
AKAS				*i* S	Sn	08 08 05.5	-2.4
RODP	Rodopos	2.54	246	P	Pn	08 07 38.7	+0.7
RODP				S	Sn	08 08 07.9	-1.9
	comp=N,158nm,0.3s						
RODP	Rodopos	2.54	246	PN	Pn	08 07 38.9	+0.9
VLY	Voula,Athens	2.57	300	P	Pn	08 07 39.4	+1.1
VLY	Voula,Athens	2.57	300	P	Pn	08 07 39.4	+1.1
ATHU	Athens Univers	2.63	302	P	Pn	08 07 40.2	+1.1
ATHU	Athens Univers	2.63	302	P	Pn	08 07 40.3	+1.2
ELL	Elmali	2.65	86	PN	Pn	08 07 40.9	+1.4
ELL	Elmali	2.65	86	P	Pn	08 07 41.2	+1.6
DEMR	Demre-Antalya	2.68	97	PN	Pn	08 07 40.4	+0.6
GVDS	Gavdos	2.71	230	PN	Pn	08 07 41.9	+1.8
GVD	Gavdhos	2.71	230	PN	Pn	08 07 41.6	+1.4
ANKY	Antikythira Is	2.78	255	P	Pn	08 07 41.4	+0.4
ANKY	Antikythira Is	2.78	255	P	Pn	08 07 41.2	+0.2
USAK	Uak-Merkez	2.84	42	*i* P	Pn	08 07 42.7	+0.9
DID	Didima	2.84	289	P	Pn	08 07 42.4	+0.6
DID	Didima	2.84	289	P	Pn	08 07 42.7	+0.8
KRND	KRANIDI	2.88	287	P	Pn	08 07 43.1	+0.9
KTHR	Kythira	2.93	264	P	Pn	08 07 44.1	+1.2
KTHR				S	Sn	08 08 16.4	-2.2
	comp=N,190nm,0.3s						
VLI	Veliai	2.96	273	P	Pn	08 07 42.9	-0.3
VLI				S	Sn	08 08 16.8	-2.4
	comp=N,158nm,0.3s						
VLI	Veliai	2.96	273	P	Pn	08 07 43.4	+0.1
VLI				AML	AML	08 08 19.1	
	comp=N,408µm,0.3s						
VLI				AML	AML	08 08 19.8	
	comp=E,211µm,0.3s						
BRDR	BURDUR-Merkez	2.96	68	*i* P	Pn	08 07 44.5	+1.1
AKUM	Antalya-Kumluc	3.02	94	*i* P	Pn	08 07 44.9	+0.8
AKUM				*i* S	Sn	08 08 21.5	+0.8
KORT	Korkueli	3.02	82	PN	Pn	08 07 46.1	+1.8
KORT	Korkueli	3.02	82	*i* P	Pn	08 07 46.8	+2.5
VIL2	Platees	3.10	302	P	Pn	08 07 45.8	+0.6
LTK	Loutraki	3.23	297	P	Pn	08 07 47.8	+1.1
LTK	Loutraki	3.23	297	P	Pn	08 07 47.8	+1.1
VLX	Vlachokerasia	3.47	284	P	Pn	08 07 50.7	+0.7
VLX				S	Sn	08 08 31.0	-0.2
	comp=E,78nm,0.5s						
ITM	Ithomi	3.80	280	P	Pn	08 07 55.2	+1.1
ITM				S	Sn	08 08 37.1	-1.6
	comp=E,78nm,0.2s						
ITM	Ithomi	3.80	280	P	Pn	08 07 55.3	+1.2
KLV	Kalavryta, Ach	3.83	293	P	Pn	08 07 55.8	+1.2
KLV				S	Sn	08 08 39.1	-0.5
KLV	Kalavryta, Ach	3.83	293	P	Pn	08 07 55.6	+1.0
PYL	PYLOS	3.92	276	P	Pn	08 07 55.4	-0.3
PYL				S	Sn	08 08 38.9	-2.6
	comp=E,45nm,0.3s						
KALE	Kalithea	3.97	298	P	Pn	08 07 58.8	+2.3
LAKA	Lakka	4.03	295	P	Pn	08 07 57.9	+0.7
DRO	Drossia	4.13	290	P	Pn	08 08 00.2	+1.7
KFL	Anninata	4.87	290	P	Pn	08 08 08.6	+0.3
KFL				S	Sn	08 09 02.8	-1.3
	comp=E,62nm,0.4s						
VLS	Valsamata	5.04	290	P	Pn	08 08 10.2	-0.3
EVGI	Lefkada island	5.13	295	P	Pn	08 08 11.9	+0.1
EVGI				S	Sn	08 09 08.7	-1.6
FSK	Fiskardo	5.15	293	P	Pn	08 08 11.5	-0.4
FSK				S	Sn	08 09 06.4	-4.2
	comp=E,35nm,0.3s						
LKD2	Lefkada island	5.20	296	P	Pn	08 08 13.3	+0.7
KEK	Kerkira	6.20	302	P	Pn	08 08 25.6	-0.3
BRTR	Keskin Array B	6.35	59	P	Pn	08 08 30.1	+2.0
	comp=E,0.2nm,0.3s,baz=226,slow=14,SNR=11						
MMAI	Mount Meron Ar	8.07	114	P	Pn	08 08 50.4	-0.7
	comp=E,6.7nm,0.3s,baz=295,slow=12,SNR=9.9						
MMAI				S	Sn	08 10 16.2	-4.7
	comp=E,3.6nm,0.3s,baz=306,slow=27,SNR=3.0						
ASF	Jabal al Asfar	9.58	115	P	Pn	08 09 10.3	-1.0
	comp=E,0.6nm,0.3s,baz=280,slow=6.3,SNR=2.7						
EIL	Elat	9.84	132	S	Sn	08 10 57.1	-6.4
	comp=E,2.2nm,0.3s,baz=270,slow=4.2,SNR=9.6						
AKASG	Malin Array Be	14.21	7	P	Pn	08 10 12.3	+1.1
	comp=E,1.2nm,0.3s,baz=197,slow=12,SNR=5.2						
FINES	FINESS Array B	24.86	359	P	P	08 12 05.8	+0.4
	comp=E,0.8nm,0.5s,baz=202,slow=2.1,SNR=8.0						
NOA	NORSAR Array B	26.33	343	LR	LR	08 25 22.3	
	comp=E,17nm,18.1s,baz=310,slow=42						
TORD	Torodi Ar. Bea	32.32	230	P	P	08 13 13.2	+0.9
	comp=E,1.2nm,0.4s,baz=34,slow=8.8,SNR=15						
MKAR	Makanchi Array	42.00	58	P	P	08 14 34.0	+0.4
	comp=E,0.6nm,0.5s,baz=283,slow=6.1,SNR=7.2						
MKAR				PcP	PcP	08 16 25.9	0.0
	comp=E,0.2nm,0.5s,baz=291,slow=4.0,SNR=1.9						
ZALV	Zalesovo Beam	43.15	47	P	P	08 14 41.9	-0.8
	comp=E,0.7nm,0.3s,baz=257,slow=7.8,SNR=2.8						

ANF ***19*** *08:28:29.6±0.6, 36°.64N×97°.67W, h1^{km}±5^{km}, ML3.8/10, Error ellipse: s-maj=3.4km s-min=2.9km az=131.0*

NEIC ***19*** *08:28:31.1±1.6, 36°.61N±0°.02×97°.65W±0°.02, h5^{km}±2^{km}, mb_Lg3.1/72, Error ellipse: s-maj=3.5km s-min=3.0km az=351.0*

ISC 19 08:28:30.5±1.4**, 36°.58N**±0°.03×**97°.67W**±0°.03**, h2**^{km}±12^{km}**, n55,** σ**0^{s}.82**/40**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.99	69	Pg	Pg	08 28 49.0	-0.4
T35A				Sg	Sg	08 29 01.8	-0.4
U32A	Winter Ranch,	1.09	260	Pg	Pb	08 28 51.2	-1.0
U32A				Sg	Sg	08 29 06.3	+0.6
OKCFA	Oklahoma City	1.17	171		Pb	08 28 53.3	-0.2
OKCFA				Sg	Sg	08 29 10.0	+1.9
OKCSW	OKLAHOMA CITY	1.18	171		Pn	08 28 53.4	-0.7
OKCSW				Sg	Sn	08 29 10.6	-0.2
FNO	Franklin	1.33	171		Pn	08 28 56.3	0.0
W35A	Tecumseh	1.56	155		Pn	08 28 59.6	+0.3
TUL1	Leonard	1.65	113		Pn	08 29 00.5	-0.1
TUL1				Sn	Sb	08 29 23.1	+0.1
TUL1				IAmb_Lg		08 29 25.9	
	comp=Z,120nm,0.8s						
TUL1	Leonard	1.65	113	P	Pn	08 29 00.6	-0.1
	baz=296						
TUL1				S	Sb	08 29 23.0	0.0
	baz=296						
X34A	Smith Ranch, M	1.98	184		Pb	08 29 06.7	-0.6
R32A	Long Quarter,	2.02	336	Pn	Pn	08 29 06.0	+0.3
R32A				Sn	Sb	08 29 31.9	-1.9
WMOK	Wichita Mounta	2.05	207		Pn	08 29 06.5	+0.5
WMOK				IAmb_Lg		08 29 37.2	
	comp=Z,83nm,0.9s						
WMOK	Wichita Mounta	2.05	207	P	Pn	08 29 06.5	+0.5
	baz=26						
WMOK				S	Sb	08 29 33.9	-0.5
	baz=26						
KSU1	Kansas State U	2.66	18	Pg	Pb	08 29 19.2	+0.4
	baz=199						
KSU1				Sb	Sb	08 29 52.1	+0.2
	baz=199						
CBKS	Cedar Bluff	2.77	324		Pn	08 29 16.5	+0.4
CBKS	Cedar Bluff	2.77	324	Pg	Pb	08 29 21.6	+0.7
	baz=142						
CBKS				Sb	Sb	08 29 54.7	-0.7
	baz=142						
HHAR	Hobbs	3.02	94		Pn	08 29 19.5	+0.1
Z35A	Perchaven, San	3.25	174	Pn	Pn	08 29 24.0	+1.3
W39A	Magazine	3.44	112	IAmb_Lg		08 30 26.0	
	comp=Z,38nm,0.8s						
W39A	Magazine	3.44	112	Sb	Sg	08 30 20.4	-0.6
	baz=296						
S39A	Bolivar	3.64	71	IAmb_Lg		08 30 29.3	
	comp=Z,40nm,0.8s						
AMTX	Amarillo	3.68	244		Pn	08 29 28.9	+0.4
AMTX	Amarillo	3.68	244	S	Sn	08 30 13.6	+1.1
	baz=61						
U40A	Yellville	3.88	92	IAmb_Lg		08 30 39.9	
	comp=Z,30nm,0.7s						
U40A	Yellville	3.88	92	S	Sn	08 30 16.7	-0.9
	baz=275						
MIAR	Mount Ida	3.90	120	Pn	Pn	08 29 33.1	+1.6
MIAR				IAmb_Lg		08 30 37.7	
	comp=Z,34nm,1.0s						
ABTX	Abilene, Hawle	4.27	203	Pb	Pb	08 29 45.7	-0.6
	baz=22						
MGMO	Mountain Grove	4.37	81	IAmb_Lg		08 30 49.0	
	comp=Z,41nm,0.8s						
X40A	Basin Creek Fa	4.46	116	Pn	Pn	08 29 39.4	+0.3
P38A	Dawn	4.46	46		Pn	08 29 40.8	+1.6
P38A				IAmb_Lg		08 30 49.7	
	comp=Z,29nm,0.7s						
FCAR	Ozark Folk Cen	4.53	97	Pn	Pn	08 29 41.1	+1.0
WHAR	Wooly Hollow	4.55	105		Pn	08 29 40.9	+0.5
WHAR				IAmb_Lg		08 30 53.9	
	comp=Z,33nm,1.0s						
N35A	Tabor	4.56	20	IAmb_Lg		08 31 06.3	
	comp=Z,48nm,0.8s						
WHTX	Lake Whitney,	4.58	178	Pn	Pn	08 29 41.1	+0.3
WHTX	Lake Whitney,	4.58	178	P	Pn	08 29 41.4	+0.6
	baz=358						
W41B	Gary Mavity, V	4.62	106	IAmb_Lg		08 30 58.7	
	comp=Z,28nm,0.7s						
R40A	Maddies Statio	4.62	67	IAmb_Lg		08 30 55.8	
	comp=Z,38nm,0.8s						
BGNE	Belgrade	4.84	356	P	Pn	08 29 43.4	-1.0
	baz=175						
LCAR	Lake Charles	5.28	94	IAmb_Lg		08 31 20.3	
	comp=Z,26nm,0.9s						
T42A	Van Buren	5.29	83	IAmb_Lg		08 31 21.1	
	comp=Z,21nm,0.8s						
CCM	Cathedral Cave	5.33	72	IAmb_Lg		08 31 25.8	
	comp=Z,49nm,0.7s						
N38A	Joes South For	5.45	38	IAmb_Lg		08 31 23.6	
	comp=Z,38nm,0.7s						
HBAR	Harrisburg	5.77	98	IAmb_Lg		08 31 46.5	
	comp=Z,36nm,0.7s						
PBMO	Poplar Bluff	5.82	86	IAmb_Lg		08 31 35.8	
	comp=Z,31nm,0.8s						
K31A	O'Neill	6.10	352	IAmb_Lg		08 31 51.4	
	comp=Z,48nm,0.8s						
SCIA	State Center	6.34	32	IAmb_Lg		08 31 53.9	
	comp=Z,35nm,0.8s						
N41A	Harden Midland	6.74	50	IAmb_Lg		08 32 06.4	
	comp=Z,38nm,0.7s						
W45A	Hickory Valley	7.03	99	IAmb_Lg		08 32 17.2	
	comp=Z,17nm,0.7s						
P43A	Skaggs, Pawnee	7.11	62	IAmb_Lg		08 32 22.4	
	comp=Z,37nm,0.8s						
K38A	Parkersburg	7.14	30	IAmb_Lg		08 32 36.9	
	comp=Z,36nm,1.2s						
ECSD	EROS Data Cent	7.20	6	IAmb_Lg		08 32 18.2	
	comp=Z,6.9nm,0.9s						
L40A	Anamosa	7.41	40	IAmb_Lg		08 32 29.5	
	comp=Z,23nm,0.9s						
L42A	Oliver, Polo	8.23	46	IAmb_Lg		08 33 03.7	
	comp=Z,23nm,0.8s						
JFWS	Jewell Farm	8.52	40	IAmb_Lg		08 33 06.8	
	comp=Z,23nm,1.1s						
RSSD	Black Hills	8.97	329	IAmb_Lg		08 33 22.2	
	comp=Z,12nm,1.1s						
K22A	Casper	9.14	314	IAmb_Lg		08 33 38.6	
	comp=Z,14nm,1.0s						

PGC 19 08:28:55.3±2.9**, 47°.49N**×**129°.13W, h10**^{km}**, MLSn3.0**/12**, Mw3.6**/12**, 301km Wsw of Tofino, Bc Off Coast Of Washington, Off coast of Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KEMF	NEPTUNE Canada	0.46	3	P	Pg	08 29 03.1	-1.1
GDR	Gold River	3.08	41	Pn	Pn	08 29 43.2	-0.7
BTB	Buttle Lake	3.11	49	Pn	Pn	08 29 43.8	-0.8
BTB				Sn	Sn	08 30 18.4	-3.5
MAYB	Maynard	3.19	23	Pn	Pn	08 29 44.8	-0.8
MGB	Mount Grey	3.33	61	Pn	Pn	08 29 46.1	-1.4
MGB				Sn	Sn	08 30 23.7	-3.4
PFB	Port Renfrew	3.33	69	Pn	Pn	08 29 45.8	-1.6
YOUB	Youbou, Lake C	3.55	65	Pn	Pn	08 29 49.2	-1.2
YOUB				Sn	Sn	08 30 28.8	-3.7
CBB	Campbell River	3.56	43	Pn	Pn	08 29 49.9	-0.7
B926	Mesachie Lake	3.60	66	Pn	Pn	08 29 50.2	-0.9
LZB	Mount Lazard	3.73	71	Pn	Pn	08 29 51.9	-1.1
NLLB	Nanaimo Lost L	3.84	61	Pn	Pn	08 29 54.0	-0.5
SHB	Sechelt	4.08	57	Pn	Pn	08 29 57.7	0.0
BIB	Bowen Island	4.33	62	Pn	Pn	08 30 01.0	-0.1
WPB	Watts Point	4.49	59	Pn	Pn	08 30 03.6	+0.3
BBB	Bella Bella	4.75	8	Pn	Pn	08 30 07.0	+0.2
LLLB	Lillooet	5.70	54	Pn	Pn	08 30 20.7	+0.8

NEIC ***19*** *08:54:30.4±1.3, 36°.093N±0°.008×97°.55W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=3.0km s-min=2.9km az=258.0*

TUL ***19*** *08:54:30±1.2, 36°.08N±0°.01×97°.55W±0°.02, h4^{km}±6^{km}, ML3.1, Error ellipse: s-maj=2.5km s-min=1.4km az=78.0*

ANF ***19*** *08:54:32.6±1.0, 36°.06N×97°.52W, h20^{km}±10^{km}, ML3.7/8, Error ellipse: s-maj=5.7km s-min=3.6km az=141.0*

ISC 19 08:54:29.7±1.2**, 36°.09N**±0°.02×**97°.58W**±0°.03**, h3**^{km}±11^{km}**, n34,** σ**1^{s}.28**/45**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.47	159		Pg	08 54 39.1	+0.5
OKCFA	Oklahoma City	0.68	171		Pg	08 54 43.4	+0.6
OKCSW	OKLAHOMA CITY	0.69	170		Pg	08 54 43.4	+0.5
FNO	Franklin	0.84	170		Pg	08 54 46.7	+0.9
W35A	Tecumseh	1.09	148		Pg	08 54 50.0	-0.7
W35A				Sg	Sg	08 55 04.5	-0.4
U32A	Winter Ranch,	1.19	285		Pg	08 54 52.6	+0.2
U32A				Sg	Sn	08 55 09.5	-0.5
T35A	Sooner Cattle	1.19	46	Pg	Pg	08 54 52.5	-0.1
T35A				Sg	Sg	08 55 08.5	+0.5
TUL1	Leonard	1.46	96	Pn	Pn	08 54 56.2	-0.8
TUL1					Sn	08 55 15.8	-0.9
TUL1	Leonard	1.46	96	P	Pn	08 54 56.1	-0.9
	baz=278						
TUL1				S	Sn	08 55 15.7	-0.9
	baz=278						
X34A	Smith Ranch, M	1.50	188		Pb	08 54 58.2	0.0
X34A				Sn	Sg	08 55 18.9	+1.1
WMOK	Wichita Mounta	1.67	216	Pn	Pn	08 55 00.3	+0.4
WMOK				Sn	Sb	08 55 22.5	0.0
WMOK	Wichita Mounta	1.67	216	P	Pn	08 55 00.1	+0.3
	baz=36						
WMOK				S	Sb	08 55 22.7	+0.2
	baz=36						
R32A	Long Quarter,	2.50	339	Pn	Pb	08 55 14.8	-0.5
U38A	Gravette	2.60	81		Pn	08 55 14.9	+2.2
Z35A	Perchaven, San	2.76	174	Pn	Pn	08 55 16.2	+1.3
HHAR	Hobbs	2.95	85		Pn	08 55 17.9	+0.4
KSU1	Kansas State U	3.10	14	Pb	Pb	08 55 27.5	+1.9
	baz=194						
KSU1				Sb	Sg	08 56 07.2	-2.3
	baz=194						
W39A	Magazine	3.21	105	Pn	Pn	08 55 21.8	+0.6
W39A	Magazine	3.21	105	P	Pn	08 55 21.8	+0.6
	baz=288						
CBKS	Cedar Bluff	3.22	328	Pn	Pn	08 55 23.1	+1.8
CBKS	Cedar Bluff	3.22	328	Pb	Pg	08 55 30.1	-1.3
	baz=146						
Z38A	Mt. Pleasant	3.54	142	Pn	Pn	08 55 27.5	+1.9
AMTX	Amarillo	3.56	251		Pn	08 55 27.3	+1.3
MIAR	Mount Ida	3.62	114		Pn	08 55 26.0	-0.6
MIAR	Mount Ida	3.62	114	P	Pn	08 55 27.8	+1.1
	baz=297						
ABTX	Abilene, Hawle	3.85	207		Pb	08 55 34.4	-4.0
WHTX	Lake Whitney,	4.09	179	P	Pn	08 55 34.4	+1.2
	baz=359						
WHTX				Sb	Sb	08 56 34.1	+1.9
	baz=359						
X40A	Basin Creek Fa	4.20	111	Pn	Pn	08 55 35.7	+1.1
WHAR	Wooly Hollow	4.38	99	Pn	Pn	08 55 37.2	+0.1
W41B	Gary Mavity, V	4.44	100		Pn	08 55 39.0	+1.0
W41B	Gary Mavity, V	4.44	100	P	Pn	08 55 38.7	+0.8
	baz=284						
W41B				S	Sn	08 56 29.0	-1.1
	baz=284						
MSTX	Muleshoe	4.76	245	Pn	Pn	08 55 43.2	+0.7
NATX	Nacogdoches	4.95	150	S	Sn	08 56 41.6	-1.2
	baz=332						
SDCO	Great Sand Dun	6.56	287		Pn	08 56 09.5	+2.1

MDD ***19*** *09:09:51.2±1.4, 36°.81N×9°.64W, h23^{km}±7^{km}, mbLg2.6/8, Error ellipse: s-maj=13.2km s-min=9.0km az=6.0, PRXIMO*

INMG ***19*** *09:09:51.1±1.3, 36°.76N×9°.65W, h22^{km}±4^{km}, MD2.3, ML1.9, Error ellipse: s-maj=6.0km s-min=4.6km az=45.0*

IGIL ***19*** *09:09:51.0, 36°.75N×9°.64W, h22^{km}, ML1.8*

CNRM ***19*** *09:09:51.6±1.4, 36°.48N×9°.33W, h25^{km}±17^{km}, Error ellipse: s-maj=20.3km s-min=7.4km az=110.0*

ISC 19 09:09:47.5±1.7**, 36°.67N**±0°.04×**9°.74W**±0°.07**, h32**^{km}±12^{km}**, n47,** σ**1^{s}.35**/79**, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	0.86	58	P	Pb	09 10 04.7	+0.7
	27nm,1.1s,SNR=11						
PFVI				S	Sb	09 10 14.2	-1.1
	23nm,0.1s,SNR=19						
PFVI	Vila Bisbo	0.86	58	P	Pn	09 10 06.6	+3.1
PFVI				S	Sb	09 10 15.5	+0.2
PFVI	Vila Bisbo	0.86	58	*e*P	Pb	09 10 04.7	+0.7
PFVI				*e*S	Sb	09 10 15.3	0.0
PFVI				A	A	09 10 16.4	
	28nm,0.4s						
MORF	Marmelete	1.08	54	*e*P	Pb	09 10 07.7	0.0
MORF				*e*S	Sb	09 10 20.1	-1.4
MORF				AML	AML	09 10 22.4	
	comp=N,28nm,0.4s						
MORF	Marmelete	1.08	54	P	Pb	09 10 07.8	+0.1
MORF				S	Sb	09 10 20.5	-0.9
	comp=N,19nm,0.2s						
MORF	Marmelete	1.08	54	*e*P	Pb	09 10 07.8	+0.1
MORF				*e*S	Sb	09 10 20.5	-0.9
MORF				A	A	09 10 21.5	
	comp=N,19nm,0.2s						
PTEO	Sao Teotonio	1.19	43	P	Pn	09 10 09.4	+1.4
PTEO				S	Sb	09 10 23.1	-1.5
	comp=N,3.1nm,0.2s						
PTEO	Sao Teotonio	1.19	43	*e*P	Pn	09 10 09.4	+1.4
PTEO				*e*S	Sb	09 10 23.1	-1.5
PTEO				A	A	09 10 24.3	
	comp=N,6.2nm,0.2s						
PBDV	Barranco-do-Ve	1.56	68	P	Pn	09 10 14.6	+1.6
PBDV				S	Sn	09 10 32.0	-0.1
	comp=N,5.0nm,0.3s						
PBDV	Barranco-do-Ve	1.56	68	*e*P	Pn	09 10 14.6	+1.6
PBDV				*e*S	Sn	09 10 32.0	-0.1
PBDV				A	A	09 10 39.2	
	comp=N,5.0nm,0.3s						
PCVE	Castro Verde	1.66	54	P	Pn	09 10 16.1	+1.6

PCVE				S	Sn	09 10 34.6	-0.1
	comp=N,7.9nm,0.5s						
PCVE	**Castro Verde**	1.66	54	*e*P	Pn	09 10 16.1	+1.6
PCVE				*e*S	Sn	09 10 34.6	-0.1
PCVE				A	A	09 10 36.6	
	comp=N,7.9nm,0.5s						
MESJ	**Messejana**	1.68	46	*e*P	Pn	09 10 15.9	+1.2
MESJ				*e*S	Sn	09 10 34.3	-0.8
MESJ				AML	AML	09 10 36.0	
	comp=N,6.6nm,0.2s						
MESJ	**Messejana**	1.68	46	P	Pn	09 10 15.9	+1.2
MESJ				S	Sn	09 10 34.3	-0.8
	comp=N,6.6nm,0.2s						
MESJ	**Messejana**	1.68	46	*e*Pn	Pn	09 10 15.9	+1.2
MESJ				*e*Sn	Sn	09 10 34.8	-0.4
MESJ				A	A	09 10 46.5	
	comp=N,3.7nm,0.2s						
PNCL	**Nicolau / Gran**	1.73	33	Pn	Pn	09 10 16.4	+1.0
PNCL				Sn	Sn	09 10 36.0	-0.4
	comp=N,4.1nm,0.2s						
PNCL	**Nicolau / Gran**	1.73	33	*e*Pn	Pn	09 10 16.4	+1.0
PNCL				*e*Sn	Sn	09 10 36.0	-0.4
PNCL				A	A	09 10 36.7	
	comp=N,4.1nm,0.2s						
PVAQ	**Vaqueiros**	1.77	65	Pn	Pn	09 10 17.5	+1.5
PVAQ				Sn	Sn	09 10 37.1	-0.4
	comp=N,8.3nm,1.5s						
PVAQ	**Vaqueiros**	1.77	65	P	Pn	09 10 18.3	+2.3
PVAQ				S	Sn	09 10 38.5	+1.1
PVAQ	**Vaqueiros**	1.77	65	*e*Pn	Pn	09 10 17.5	+1.5
PVAQ				*e*Sn	Sn	09 10 37.1	-0.4
PVAQ				A	A	09 10 42.8	
	comp=N,8.3nm,1.5s						
EGRO	**El Granado**	2.00	64	P	Pn	09 10 21.1	+2.1
	comp=N,0.6nm,0.2s,SNR=7.9						
EGRO				S	Sn	09 10 42.8	-0.2
	comp=N,7.1nm,0.1s,SNR=11						
PBEJ	**Beja**	2.01	47	Sn	Sn	09 10 42.7	-0.7
PBEJ	**Beja**	2.01	47	*e*Sn	Sn	09 10 42.7	-0.7
PMAFR	**Mafra**	2.31	9	P	Pn	09 10 24.6	+1.2
	comp=N,3.6nm,0.1s,SNR=7.9						
PMAFR				S	Sn	09 10 49.5	-1.2
	comp=N,19nm,0.1s,SNR=5.8						
PMAFR	**Mafra**	2.31	9	*e*Pn	Pn	09 10 24.6	+1.2
PMAFR				*e*Sn	Sn	09 10 50.1	-0.6
PMAFR				A	A	09 10 51.4	
	comp=N,18nm,0.2s						
PBAR	**Barrancos**	2.62	54	Sn	Sn	09 10 58.1	-0.3
PBAR	**Barrancos**	2.62	54	*e*Sn	Sn	09 10 58.1	-0.3
PMTG	**Montargil**	2.68	26	Pn	Pn	09 10 29.6	+1.2
PMTG				Sn	Sn	09 10 58.5	-1.2
	comp=N,2.3nm,0.1s						
PMTG	**Montargil**	2.68	26	*e*Pn	Pn	09 10 29.6	+1.2
PMTG				*e*Sn	Sn	09 10 58.5	-1.2
PMTG				A	A	09 11 00.6	
	comp=N,2.3nm,0.1s						
EMIN	**Mina Concepcio**	2.68	65	P	Pn	09 10 30.1	+1.6
	comp=N,0.1nm,0.2s,SNR=7.9						
EMIN				S	Sn	09 10 58.6	-1.3
	comp=N,2.1nm,0.1s,SNR=7.9						
PESTR	**Estremoz**	2.77	37	*e*Sn	Sn	09 11 01.0	-1.2
EBAD	**Badajoz**	3.00	45	P	Pn	09 10 33.4	+0.5
	comp=N,0.2nm,0.2s,SNR=7.9						
EBAD				S	Sn	09 11 05.9	-1.8
	comp=N,1.7nm,0.0s,SNR=7.9						
ESPR	**Espera**	3.12	85	S	Sn	09 11 10.5	-0.3
	comp=N,14nm,0.2s,SNR=7.9						
PMRV	**Marv??o**	3.32	33	Pn	Pn	09 10 38.9	+1.7
PMRV				Sn	Sn	09 11 14.3	-1.3
PMRV	**Marv??o**	3.32	33	*e*Pn	Pn	09 10 38.9	+1.7
PMRV				*e*Sn	Sn	09 11 14.3	-1.3
ECAB	**El Cabril**	3.71	67	S	Sn	09 11 22.9	-2.5
	comp=N,2.7nm,0.2s,SNR=7.9						
ZHG	**ZHG**	4.10	141	P	Pn	09 10 49.2	+1.1
ZHG				S	Sn	09 11 33.1	-1.9
EADA	**Adamuz**	4.37	68	S	Sn	09 11 39.3	-2.3
	comp=N,2.2nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	4.44	39	S	Sn	09 11 41.0	-2.4
	comp=N,0.7nm,0.1s,SNR=7.9						
CZD	**Col de Zad**	5.30	132	P	Pn	09 11 04.5	-0.2
CZD				S	Sn	09 12 02.9	-2.0
PGAV	**Gavieira, Arco**	5.41	12	Pn	Pn	09 11 06.8	+0.8
PGAV	**Gavieira, Arco**	5.41	12	*e*Pn	Pn	09 11 06.8	+0.8
MD31	**MD31**	5.58	131	P	Pn	09 11 09.3	+0.9
MD31				S	Sn	09 12 08.3	-3.3
OUK	**Oukaimeden**	5.67	164	P	Pn	09 11 11.2	+1.3
OUK				S	Sn	09 12 10.7	-3.3
MDT	**Midelt**	5.71	131	P	Pn	09 11 10.8	+0.6
MDT				S	Sn	09 12 10.4	-4.4
OUZM	**OUZ**	6.26	156	P	Pn	09 11 19.6	+1.8
OUZM				S	Sn	09 12 25.7	-2.6
TZRR	**Tazzarine**	6.82	148	P	Pn	09 11 27.7	+2.2
TZRR				S	Sn	09 12 42.2	+0.2

WEL 19 09:11:30.7,42°S±1°×17°4E±°,h44^{km}±2^{km},M4.0/99, ML4.1/25,MLv4.0/99,Error ellipse: s-maj=0.0km s-min=0.0km az=120.1,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	0.16	290	P	Pn	09 11 37.9	-0.3
BSWZ	**Blackbirch Sta**	0.41	282	P	Pn	09 11 40.9	+0.4
BSWZ				S	Sn	09 11 47.6	+0.1
TUWZ	**Tuamarina**	0.51	316	P	Pn	09 11 42.0	+0.2
BHW	**Baring Head**	0.52	41	P	Pn	09 11 42.6	+0.7
BHW				S	Sn	09 11 50.6	+0.8
WEL	**Wellington**	0.58	27	P	Pn	09 11 43.4	+0.7
TCW	**Tory Channel**	0.60	350	P	Pn	09 11 43.3	+0.3
TCW				S	Sn	09 11 51.2	-0.4
PLWZ	**Palliser**	0.67	70	P	Pn	09 11 44.7	+0.8
MSWZ	**Moikau Station**	0.74	59	P	Pn	09 11 45.8	+1.0
CAW	**Cannon Point**	0.85	35	P	Pn	09 11 47.4	+1.0
CAW				S	Sn	09 11 58.8	+1.2
PAWZ	**Paruwai Farm**	0.87	61	P	Pn	09 11 47.3	+0.7
KHZ	**Kahutara**	0.89	226	P	Pn	09 11 48.2	+1.3
NNZ	**Nelson**	0.97	307	P	Pn	09 11 48.8	+0.8
KIW	**Kapiti Island**	1.01	22	P	Pn	09 11 49.6	+1.1
TRWZ	**Traveller**	1.04	68	P	Pn	09 11 49.5	+0.6
MTW	**Mount Morrison**	1.04	52	P	Pn	09 11 49.5	+0.6
DUWZ	**D'Urville Isla**	1.07	340	P	Pn	09 11 50.4	+1.1
DUWZ				S	Sn	09 12 04.2	+1.2
THZ	**Tophouse**	1.13	272	P	Pn	09 11 51.2	+1.0
OGWZ	**Otaki Gorge**	1.14	30	P	Pn	09 11 51.3	+1.1
HOWZ	**Holdsworth Sta**	1.23	43	P	Pn	09 11 52.1	+0.6
TMWZ	**Te Maipa**	1.31	58	P	Pn	09 11 53.0	+0.4
MRZ	**Mangatainoka R**	1.44	38	P	Pn	09 11 55.1	+0.8
TIWZ	**Tintock**	1.51	48	P	Pn	09 11 55.7	+0.3
GVZ	**Greta Valley S**	1.55	221	P	Pn	09 11 56.9	+1.1
CPWZ	**Castlepoint**	1.61	57	P	Pn	09 11 57.2	+0.5
PRWZ	**Pori Road**	1.71	44	P	Pn	09 11 58.5	+0.4
QRZ	**Quartz Range**	1.72	304	P	Pn	09 12 00.2	+2.0
OHWZ	**Ohakea**	1.73	23	P	Pn	09 12 00.8	+2.4
POWZ	**Post Office Ro**	1.74	36	P	Pn	09 11 59.2	+0.7
BFZ	**Birch Farm**	1.78	52	P	Pn	09 11 58.8	-0.2
LTZ	**Lake Taylor**	1.87	238	P	Pn	09 12 01.3	+1.1
AMCZ	**Amberley**	1.89	223	P	Pn	09 12 01.2	+0.6
DSZ	**Denniston Nort**	1.95	271	P	Pn	09 12 03.1	+1.7
DVHZ	**Dannevirke**	2.00	42	P	Pn	09 12 02.0	-0.1
ANWZ	**Angora Road**	2.06	50	P	Pn	09 12 02.5	-0.3
TSZ	**Takapari Road**	2.10	34	P	Pn	09 12 03.9	+0.4
OKCZ	**Okains Bay**	2.16	207	P	Pn	09 12 04.6	+0.3
PRHZ	**Porangahau**	2.28	48	P	Pn	09 12 05.4	-0.4
MQZ	**McQueen's Vall**	2.30	214	P	Pn	09 12 05.8	-0.3
WPHZ	**Waipukurau**	2.32	42	P	Pn	09 12 06.4	0.0
OXZ	**Oxford**	2.32	228	P	Pn	09 12 06.4	-0.1
PNHZ	**Pukenui**	2.32	36	P	Pn	09 12 06.7	+0.2
LREZ	**Lake Rotokare**	2.34	360	P	Pn	09 12 10.7	+4.0
AKCZ	**Akaroa Harbour**	2.34	208	P	Pn	09 12 06.8	0.0
INZ	**Inchbonnie**	2.39	246	P	Pn	09 12 08.5	+1.2
NMEZ	**Namu Road**	2.42	350	P	Pn	09 12 12.8	+5.0
KHEZ	**Kahui Hut**	2.52	353	P	Pn	09 12 13.7	+4.4
MTVZ	**Mangateitei**	2.55	19	P	Pn	09 12 11.5	+1.9
PXZ	**Pawanui**	2.56	47	P	Pn	09 12 08.8	-1.0
NBEZ	**Newall Road No**	2.57	351	P	Pn	09 12 14.2	+4.4
MOVZ	**Moawhango**	2.60	24	P	Pn	09 12 11.4	+1.0
PKVZ	**Pokaka**	2.61	16	P	Pn	09 12 13.0	+2.5
DREZ	**Durham Road**	2.62	356	P	Pn	09 12 14.9	+4.4
KRHZ	**Kereru**	2.62	35	P	Pn	09 12 10.4	-0.1
PKE	**Pukeiti**	2.63	353	P	Pn	09 12 15.3	+4.7
BHHZ	**Black Hill Sta**	2.63	29	P	Pn	09 12 11.5	+0.7
TRVZ	**Turoa**	2.65	19	P	Pn	09 12 13.1	+2.0
DRZ	**Dome Shelter**	2.67	20	P	Pn	09 12 16.4	+4.9
WHVZ	**Whangaehu Hut**	2.67	20	P	Pn	09 12 13.5	+2.0
FWVZ	**Far West T-bar**	2.69	19	P	Pn	09 12 13.6	+1.9
TUVZ	**Tukino**	2.70	21	P	Pn	09 12 13.6	+1.7
KAHZ	**Kahuranaki**	2.74	44	P	Pn	09 12 11.5	-0.8
NGZ	**Ngauruhoe**	2.78	19	P	Pn	09 12 14.7	+1.9
KWHZ	**Kaweka Forest**	2.83	33	P	Pn	09 12 13.2	-0.2
WTVZ	**West Tongariro**	2.83	19	P	Pn	09 12 15.3	+1.7
TWVZ	**Taurewa**	2.84	16	P	Pn	09 12 15.4	+1.7
KRVZ	**Karewarewa**	2.86	20	P	Pn	09 12 15.8	+1.8
MCHZ	**McNeill Hill**	2.93	37	P	Pn	09 12 14.4	-0.4
KATZ	**Kakaramea**	2.99	20	P	Pn	09 12 17.7	+1.9
WVZ	**Waitaha Valley**	3.00	244	P	Pn	09 12 16.7	+0.9
RITZ	**Rihia Road**	3.03	22	P	Pn	09 12 17.7	+1.5
BKZ	**Black Stump Fm**	3.08	32	P	Pn	09 12 16.4	-0.4
RPZ	**Rata Peaks**	3.12	231	P	Pn	09 12 17.6	+0.1
HATZ	**Hinemaiaia**	3.18	24	P	Pn	09 12 18.5	+0.3
ARHZ	**Aropaoanui**	3.21	39	P	Pn	09 12 18.0	-0.6
WATZ	**Wairara**	3.25	19	P	Pn	09 12 21.6	+2.3
NMHZ	**Naumai**	3.26	35	P	Pn	09 12 19.1	-0.3
HIZ	**Hauiti**	3.30	6	P	Pn	09 12 22.7	+2.8
MRHZ	**Matea Rd**	3.34	28	P	Pn	09 12 20.2	-0.3
MTHZ	**Maungataniwha**	3.48	33	P	Pn	09 12 22.0	-0.4
RAHZ	**Arahi**	3.53	36	P	Pn	09 12 22.4	-0.7
TLZ	**Tolley Road**	3.58	14	P	Pn	09 12 25.7	+2.0
KNZ	**Kokohu**	3.73	43	P	Pn	09 12 24.1	-1.7
RTZ	**Ruatahuna**	3.74	33	P	Pn	09 12 25.2	-0.8
MUGZ	**Murupara**	3.78	29	P	Pn	09 12 26.4	-0.1
FOZ	**Fox Glacier**	3.81	241	P	Pn	09 12 27.7	+0.9
TARZ	**Mount Tarawera**	3.91	25	P	Pn	09 12 28.4	+0.1
RIGZ	**Rimuhau**	4.02	41	P	Pn	09 12 28.1	-1.6
LBZ	**Lake Benmore**	4.03	229	P	Pn	09 12 30.6	+0.6
URZ	**Urewera**	4.10	31	P	Pn	09 12 29.4	-1.4
TOZ	**Tahuroa Road**	4.15	12	P	Pn	09 12 33.9	+2.3
MARZ	**Manawahe**	4.19	25	P	Pn	09 12 32.8	+0.7
ODZ	**Otahua Downs**	4.25	219	P	Pn	09 12 32.5	-0.3
RUGZ	**Raukumara Rang**	4.58	34	P	Pn	09 12 35.9	-1.7
JCZ	**Jackson Bay**	4.71	239	P	Pn	09 12 39.3	0.0
MKAZ	**Moumakai**	4.73	7	P	Pn	09 12 41.6	+2.2
AWAZ	**Awhitu Peninsu**	4.74	2	P	Pn	09 12 41.9	+2.3
HAZ	**Te Kaha**	4.80	34	P	Pn	09 12 39.4	-1.1
ETAZ	**East Tamaki Re**	4.86	5	P	Pn	09 12 44.6	+3.3
HHSZ	**Highcliff Hill**	4.92	213	P	Pn	09 12 42.5	+0.3
WKZ	**Wanaka**	4.96	231	P	Pn	09 12 42.4	-0.3
WIAZ	**Waiheke Island**	5.03	7	P	Pn	09 12 48.5	+4.8
EAZ	**Earnscleugh**	5.05	226	P	Pn	09 12 44.0	+0.1
TUZ	**Tuapeka**	5.40	218	P	Pn	09 12 48.6	0.0
MLZ	**Mavora Lakes**	5.79	230	P	Pn	09 12 54.4	+0.2
SYZ	**Scrubby Hill**	6.06	217	P	Pn	09 12 58.2	+0.4
WHZ	**Wether Hill Ro**	6.21	227	P	Pn	09 13 00.2	+0.4
OUZ	**Omahuta**	6.60	354	P	Pn	09 13 11.2	+5.9
APZ	**The Paps**	6.82	220	P	Pn	09 13 08.6	+0.5
CTZ	**Chatham Island**	6.88	109	P	Pn	09 13 08.8	-0.1

MEX ***19*** *09:27:32.3±1.0, 14°.21N×92°.11W, h20^{km}±45^{km}, MD4.0*
GCG ***19*** *09:27:33.1±0.5, 14°.55N×91°.89W, h63^{km}±7^{km}, MD3.9*
SNET ***19*** *09:27:35.5±3.0, 14°.34N×91°.68W, h15^{km}±999^{km}, ML3.8*
UCR ***19*** *09:27:35.9±2.6, 14°.35N×91°.68W, h20^{km}±999^{km}, ML3.5, mb4.0(NEIC)*
ISC 19 09:27:31.0±1.5,14°.22N±0°.08×92°.12W±0°.06,h42^{km}±16^{km}, n36,σ1^{s}34/52,2D,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERG	**Entre ros, C**	0.58	67	⇓*e*P	Pn	09 27 43.8	+0.9
THIG		0.70	349	*e*P	Pn	09 27 44.3	-0.2
THIG				*i* S	Sn	09 27 52.2	-1.9
THIG		0.70	349		Pn	09 27 44.3	-0.2
THIG					Sn	09 27 52.2	-1.9
STG3	**Santiaguito 3,**	0.73	47	⇓*i*P	Pn	09 27 44.6	-0.4
FUG	**Fuego 3**	1.26	79	*e*P	Pn	09 27 52.1	-0.2
PCG	**Pacaya**	1.48	83	*e*P	Pn	09 27 55.8	+0.4
PCG				*e*S	Sn	09 28 13.0	-0.6
IXG	**Ixpaco**	1.63	91	*e*P	Pn	09 27 57.8	+0.4
NBG	**Las Nubes**	1.76	78	*e*P	Pn	09 28 00.6	+1.4
NBG				*e*S	Sn	09 28 22.7	+2.1
PCIG		1.82	325	*e*P	Pn	09 27 59.7	-0.1
PCIG				*i* S	Sn	09 28 21.1	-0.6
PCIG		1.82	325		Pn	09 27 59.7	-0.1
PCIG					Sn	09 28 21.1	-0.6
CCIG	**Comitan**	2.05	360	*e*P	Pn	09 28 03.9	+0.6
CCIG				*e*S	Sn	09 28 28.1	+0.4
CCIG	**Comitan**	2.05	360		Pn	09 28 04.3	+1.0
CCIG	**Comitan**	2.05	360		Pn	09 28 03.9	+0.6
CCIG					Sn	09 28 28.1	+0.4
SBLS	**San Blas**	2.45	98	*e*P	Pn	09 28 09.4	+0.7
SBLS				IAML		09 28 47.3	
	comp=Z,208nm,0.4s						
SBLS	**San Blas**	2.45	98	*e*P	Pn	09 28 09.4	+0.7
SBLS				IAML		09 28 47.3	
	comp=Z,208nm,0.4s						
CEVE	**Cerro Verde**	2.46	99	*e*P	Pn	09 28 09.7	+0.9
CEVE				*e*S	Sn	09 28 34.8	-2.9
CEVE				IAML		09 28 46.6	
	comp=Z,2μm,0.4s						
CEVE	**Cerro Verde**	2.46	99	*e*P	Pn	09 28 09.7	+0.9
CEVE				*e*S	Sn	09 28 34.8	-2.9
CEVE				IAML		09 28 46.6	
	comp=Z,2μm,0.4s						
UEES	**Universidad Ev**	2.84	100	*e*P	Pn	09 28 15.0	+1.1
UEES				*e*S	Sn	09 28 47.1	+0.1
UEES				IAML		09 29 00.9	
	comp=Z,212nm,0.3s						
UEES	**Universidad Ev**	2.84	100	*e*P	Pn	09 28 15.0	+1.1
UEES				*e*S	Sn	09 28 47.1	+0.1
UEES				IAML		09 29 00.9	
	comp=Z,212nm,0.3s						
SNET	**Serv Nac Est T**	2.85	100		Pn	09 28 14.8	+0.6
LOMA	**Loma Larga**	2.92	101	*e*P	Pn	09 28 15.6	+0.6
LOMA				*e*S	Sn	09 28 48.1	-1.0
LOMA				IAML		09 28 57.8	
	comp=Z,517nm,0.5s						
LOMA	**Loma Larga**	2.92	101	*e*P	Pn	09 28 15.6	+0.6
LOMA				*e*S	Sn	09 28 48.1	-1.0
LOMA				IAML		09 28 57.8	
	comp=Z,517nm,0.5s						
LFRS	**El Faro**	3.03	101	*e*P	Pn	09 28 17.5	+1.0
LFRS				IAML		09 29 02.3	
	comp=Z,963nm,0.6s						
JUCU	**Jucuar¡n**	3.88	104	*e*P	Pn	09 28 30.2	+2.0
JUCU				*e*S	Sn	09 29 10.5	-2.2
JUCU				IAML		09 29 31.7	
	comp=Z,116nm,0.4s						
JUCU	**Jucuar¡n**	3.88	104	*e*P	Pn	09 28 30.2	+2.0
JUCU				*e*S	Sn	09 29 10.5	-2.2
JUCU				IAML		09 29 31.7	
	comp=Z,116nm,0.4s						
CMIG	**Matias Romero**	3.91	317	*e*P	Pn	09 28 28.9	+0.4
CMIG				*i* S	Sn	09 29 13.6	+0.5
CMIG	**Matias Romero**	3.91	317		Pn	09 28 28.9	+0.4
CMIG					Sn	09 29 13.6	+0.5
LCND	**La Caada**	4.21	102	*e*P	Pn	09 28 35.0	+2.4
LCND				*e*S	Sn	09 29 20.3	-0.3
LCND				*e*S		09 29 21.6	
LCND				IAML		09 29 36.8	
	comp=Z,145nm,0.5s						
LCND	**La Caada**	4.21	102	*e*P	Pn	09 28 35.0	+2.4
LCND				*e*S	Sn	09 29 20.3	-0.3
LCND				*e*S		09 29 21.6	
LCND				IAML		09 29 36.8	
	comp=Z,145nm,0.5s						
CSGN	**Cosiguina Volc**	4.60	105	Pn	Pn	09 28 40.9	+2.7
TGUH	**Tegucigalpa,Un**	4.71	91	Pn	Pn	09 28 40.8	+1.1
TEIG	**Tepich**	7.01	31		Pn	09 29 10.3	-0.9
TLIG	**Tlapa**	7.04	299	Pn	Pn	09 29 14.6	+2.9
ESPN	**Las Esperanzas**	7.88	104	Pn	Pn	09 29 25.7	+2.6
JTS	**Las Juntas de**	8.02	118	Pn	Pn	09 29 29.4	+4.4
ALLY	**Alegheny Colle**	29.25	19		S	09 38 17.8	-1.2

NEIC ***19*** *09:33:56.5±0.2, 17°.9S±0°.1×175°.2W±0°.1, h216^{km}±10^{km}, mb4.1/13, Error ellipse: s-maj=19.2km s-min=14.9km az=85.0*
IDC ***19*** *09:33:59.1±2.3, 17°.83S×175°.24W, h239^{km}±25^{km}, mb3.5/7, mb1 3.7/8, mb1mx3.4/34, mbtmp4.1/8, Error ellipse: s-maj=37.1km s-min=16.7km az=126.0*
ISC 19 09:33:57.2±0.7,17°.9S±0°.1×175°.1W±0°.1,h228^{km},n26, σ1^{s}44/28,mb4.0/12,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	5.11	39	P	Pn	09 35 16.1	+2.2
	6.5nm,0.3s,baz=204,slow=5.0,SNR=7.9						
AFI				S	S	09 36 12.6	-1.8
	20nm,0.3s,baz=232,slow=21,SNR=16						
AFI	**Afiamalu**	5.11	39		Pn	09 35 13.1	-0.7
AFI					S	09 36 12.9	-1.5
URZ	**Urewera**	21.37	197	P	P	09 38 29.0	+2.1
	2.2nm,0.4s,baz=87,slow=8.3,SNR=5.7						
URZ				S	S	09 42 03.9	-5.1
	1.4nm,0.6s,baz=66,slow=20,SNR=1.1						
URZ	**Urewera**	21.37	197	P	P	09 38 29.1	+2.1
URZ				IAmb	IAmb	09 38 29.3	
	comp=Z,11nm,1.2s						
CTAO	**Charters Tower**	36.58	260	P	P	09 40 41.4	-0.4
COEN	**Coen**	40.28	269	P	P	09 41 12.2	-0.4
COEN				IAmb	IAmb	09 41 17.2	
	comp=Z,9.7nm,1.1s						
STKA	**Stephens Creek**	41.41	242	P	P	09 41 21.7	+0.1
	comp=Z,2.0nm,0.9s,baz=120,slow=2.3,SNR=3.9						
STKA	**Stephens Creek**	41.41	242	P	P	09 41 21.8	+0.2
BBOO	**Buckleboo**	46.18	242	P	P	09 41 59.5	0.0
WB0	**Warramunga Arr**	47.72	259	P	P	09 42 11.1	-0.5
WB0				IAmb	IAmb	09 42 11.6	
	comp=Z,3.4nm,0.7s						
WRAB	**Tennant Creek**	47.74	259	P	P	09 42 11.2	-0.6
WRA	**Warramunga Arr**	47.75	259	P	P	09 42 10.9	-0.9
	comp=Z,1.9nm,0.5s,baz=98,slow=6.9,SNR=13						
WRA	**Warramunga Arr**	47.75	259	P	P	09 42 11.8	0.0
AS31	**Alice Springs**	47.84	254	P	P	09 42 12.3	-0.2
AS31				IAmb	IAmb	09 42 13.3	
	comp=Z,3.4nm,0.5s						
ASAR	**Alice Springs**	47.84	254	P	P	09 42 12.2	-0.4
	comp=Z,8.9nm,0.7s,baz=88,slow=8.9,SNR=148						
ASAR	**Alice Springs**	47.84	254	P	P	09 42 12.3	-0.2
MJAR	**Matsushiro Arr**	69.87	321	P	P	09 44 44.0	+0.5
	comp=Z,1.7nm,0.7s,baz=125,slow=6.4,SNR=2.8						
QSPA	**South Pole Qui**	72.12	180	P	P	09 44 57.6	+0.8
QSPA				IAmb	IAmb	09 44 58.0	
	comp=Z,6.6nm,1.2s						
SBUM	**Sibu**	74.35	278	P	P	09 45 17.7	+7.2
SEY	**Seymchan**	84.55	346	P	P	09 46 04.5	+0.3
	comp=Z,0.4nm,0.4s,baz=134,slow=7.5,SNR=4.1						
CCB	**Clear Creek Bu**	84.95	11	P	P	09 46 06.6	+0.4
CCB				IAmb	IAmb	09 46 06.9	
	comp=Z,1.7nm,0.6s						
ILAR	**Eielson Array**	85.23	12	P	P	09 46 07.8	+0.1
	comp=Z,0.4nm,0.7s,baz=221,slow=5.0,SNR=7.4						
ILAR	**Eielson Array**	85.23	12	P	P	09 46 08.2	+0.5
DAWY	**Dawson**	86.27	15	P	P	09 46 13.8	+1.0
ARCES	**ARCESS Array B**	126.87	351	PKP	PKPdf	09 52 31.8	-1.4
	comp=Z,4.1nm,1.1s,baz=12,slow=0.8,SNR=5.5						
BRTR	**Keskin Array B**	147.01	317	PKPbc	PKPbc	09 53 13.6	+0.1
	comp=Z,0.7nm,0.5s,baz=151,slow=2.8,SNR=4.7						

NCEDC ***19*** *09:44:03.7±2.9, 40°.31N±0°.02×124°.48W±0°.04, h8^{km}±5^{km}, ML3.3/23, Error ellipse: s-maj=4.7km s-min=2.4km az=89.0*
ANF ***19*** *09:44:04.5±1.7, 40°.47N×124°.28W, h3^{km}±7^{km}, ML3.1/11, Error ellipse: s-maj=16.1km s-min=8.4km az=64.0*
ISC 19 09:44:02.7±1.5,40°.29N±0°.03×124°.60W±0°.07,h20^{km}±6^{km}, n104,σ1^{s}00/112,Near coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCTM	**Capetown**	0.28	46		Pb	09 44 08.8	-0.2
KSMM	**Slide Mountain**	0.34	107		Pg	09 44 09.8	-0.3
KMPM	**Mount Pierce**	0.39	70		Pg	09 44 10.4	-0.6
KMPM					Sb	09 44 16.4	-0.2
KCRM	**Chalk Rock**	0.61	76		Pg	09 44 14.9	0.0
KMRM	**Mail Ridge**	0.68	95		Pg	09 44 16.2	0.0
KMRM					Sn	09 44 27.3	-0.2
JCC	**Jacoby Creek,**	0.69	39		Pb	09 44 15.8	-0.2
JCC					Sg	09 44 25.6	+0.1
KBSM	**Bell Springs**	0.85	115		Pb	09 44 18.9	0.0
KCSM	**Cold Springs**	0.87	73		Pb	09 44 19.2	+0.1
KHMM	**Horse Mountain**	0.89	48		Pb	09 44 19.3	-0.2
KPPM	**Pickett Peak**	0.95	86		Pb	09 44 20.5	0.0
KRPM	**Rodgers**	0.98	26		Pb	09 44 20.3	-0.7
KIPM	**Iron Peak**	0.98	119		Pb	09 44 21.0	-0.1
KCPM	**Cahto Peak**	0.98	127		Pb	09 44 21.0	-0.2
KFPM	**Farley Peak**	1.11	125		Pb	09 44 22.4	-0.8
KHBM	**Hayfork Bally**	1.12	70		Pb	09 44 22.5	-1.0
KBNM	**Bluenose Ridge**	1.15	110		Pn	09 44 23.3	-0.5
GTC	**Three Chop Rid**	1.20	137		Pn	09 44 23.9	-0.5
KRKM	**Rackout Spring**	1.31	123		Pn	09 44 25.6	-0.3
LBPM	**Beegum Peak**	1.31	88		Pn	09 44 25.6	-0.4
GNAM	**Navarro Ridge**	1.32	145		Pn	09 44 25.5	-0.6
KOMM	**Orleans Mounta**	1.32	41		Pn	09 44 25.3	-0.8
KRMB	**Red Mountain**	1.34	23		Pn	09 44 25.6	-0.9
GHOM	**Hamilton Openi**	1.48	146		Pn	09 44 27.8	-0.6
LGPM	**Granite Peak**	1.49	64		Pn	09 44 27.8	-0.6
GHMM	**Hull Mountain**	1.51	121		Pn	09 44 28.2	-0.5
GROM	**Round Mountain**	1.52	103		Pn	09 44 29.5	+0.5
N02D	**Trinity Center**	1.60	64		Pn	09 44 29.4	-0.6
N02D	**Trinity Center**	1.60	64	P	Pn	09 44 29.3	-0.6
	baz=244,SNR=164						
WDC	**Whiskeytown Da**	1.60	79		Pn	09 44 29.2	-0.6
WDC	**Whiskeytown Da**	1.60	79		Pn	09 44 29.3	-0.5
KSXB	**Camp Six Broad**	1.64	19		Pn	09 44 29.7	-0.8
GGUM	**Gualala**	1.66	149		Pn	09 44 30.2	-0.6
LBKM	**Bonanza King**	1.67	61		Pn	09 44 30.8	-0.2
M02C	**Callahan**	1.73	50		Pn	09 44 31.3	-0.4
M02C	**Callahan**	1.73	50	P	Pn	09 44 31.1	-0.6
	baz=229,SNR=315						
M02C				S	Sn	09 44 51.0	-2.2
	baz=229						
GSNM	**Snow Mountain**	1.73	141		Pn	09 44 31.1	-0.6
GHLM	**Highland Sprin**	1.74	135		Pn	09 44 31.4	-0.5
HOPS	**Hopland Field**	1.75	137		Pn	09 44 31.3	-0.6
HOPS	**Hopland Field**	1.75	137		Pn	09 44 31.4	-0.5
GTSM	**Trough Springs**	1.82	122		Pn	09 44 32.4	-0.6
KTRM	**Thompson Ridge**	1.87	29		Pn	09 44 33.0	-0.7
LTCM	**Tuscan Springs**	1.90	92		Pn	09 44 33.7	-0.2
GPMM	**Pine Mountain**	1.92	138		Pn	09 44 34.1	-0.2
GACM	**Adobe Creek**	1.95	136		Pn	09 44 34.8	0.0
LAMM	**Antelope Mount**	2.00	48		Pn	09 44 35.2	-0.3
GSSM	**Skaggs Springs**	2.00	142		Pn	09 44 35.3	-0.1
LSHM	**Sage Hen Hill**	2.02	75		Pn	09 44 35.5	-0.1
L02E	**Cave Junction**	2.02	22		Pn	09 44 35.5	-0.2
L02E	**Cave Junction**	2.02	22	P	Pn	09 44 35.4	-0.2
	baz=200						
L02E				S	Sn	09 44 59.7	-0.6
	baz=200						
LCSM	**College of the**	2.02	55		Pn	09 44 35.9	+0.2
GDXM	**Geysers**	2.03	136		Pb	09 44 38.0	-1.0
YBH	**Yreka Blue Hor**	2.03	44	Pn	Pn	09 44 35.5	-0.4
FTR	**Fort Ross**	2.08	147		Pn	09 44 36.3	-0.2
LGBM	**Gray Butte**	2.11	59		Pn	09 44 37.5	+0.3
M03C	**McCloud**	2.12	61		Pn	09 44 37.5	+0.3
O03E	**Paynes Creek**	2.14	89		Pn	09 44 37.3	-0.1
O03E	**Paynes Creek**	2.14	89	P	Pn	09 44 36.5	-0.9
	baz=271,SNR=15						
LDBM	**Digger Butte**	2.15	85		Pn	09 44 37.9	+0.2
MNRC	**McLaughlin Min**	2.18	129		Pn	09 44 38.7	+0.8
LMPM	**Military Pass**	2.20	56		Pn	09 44 39.4	+1.0
LHEM	**Herd Peak**	2.25	53		Pn	09 44 39.7	+0.7
B040	**Montague**	2.26	46		Pn	09 44 39.3	+0.3
LBFM	**Black Fox Moun**	2.31	62		Pn	09 44 40.4	+0.5
LMEM	**Manzanita Entr**	2.33	83		Pn	09 44 41.4	+1.3
MGL	**Magalia**	2.38	100		Pn	09 44 40.4	-0.3
LRDM	**Redding Peak**	2.40	85		Pn	09 44 41.5	+0.5
LGMM	**Garner Mountai**	2.47	57		Pn	09 44 42.6	+0.6
ORV	**Oroville**	2.49	106		Pn	09 44 42.0	-0.2
ORV	**Oroville**	2.49	106		Pn	09 44 42.3	+0.1
ORV	**Oroville**	2.49	106		Pn	09 44 42.6	+0.5
K02D	**Willamette Mer**	2.51	16	P	Pn	09 44 42.5	+0.1
	baz=195,SNR=28						
K02D				S	Sn	09 45 11.2	-1.3
	baz=195						
LTIM	**Timbered Crate**	2.52	68		Pn	09 44 43.0	+0.2
LBCM	**Butte Creek Ri**	2.54	76		Pn	09 44 43.3	+0.4
L04D	**Klamath Falls**	2.59	41		Pn	09 44 45.1	+1.4
L04D	**Klamath Falls**	2.59	41	P	Pn	09 44 45.1	+1.4
	baz=221,SNR=281						
L04D				Sb	Sn	09 45 16.7	+2.0
	baz=221						
HUMO	**Hull Mountain**	2.63	27	Pn	Pn	09 44 44.1	0.0
LASM	**Arnica Sink**	2.64	59		Pn	09 44 44.5	+0.1
NOLM	**Olema**	2.65	147		Pn	09 44 44.2	0.0

J01E	Myrtle Point	2.92	10	S	Sn	09 45 21.0	-1.5
	baz=188						
AFDM	Forest Hills D	3.10	114		Pn	09 44 51.3	+0.7
K04D	Chiloquin, OR	3.17	42		Pn	09 44 52.5	+0.9
K04D	Chiloquin, OR	3.17	42	P	Pn	09 44 52.2	+0.6
	baz=222,SNR=14						
BEKR	Beckworth	3.28	96		Pn	09 44 54.0	+0.9
I03D	Drain, OR	3.54	15	Pg	Pb	09 45 07.2	+2.6
	baz=194						
I03D				S	Sn	09 45 37.6	-0.1
	baz=194						
MOD	Modoc Plateau	3.63	62		Pn	09 44 58.6	+0.8
I02D	Swisshome	3.86	8	S	Sn	09 45 45.9	+0.3
	baz=187						
I04A	Tendick Farm,	3.87	24	S	Sn	09 45 45.4	-0.6
	baz=204						
J05D	Fort Rock, OR	3.91	39	P	Pn	09 45 02.9	+1.0
	baz=220,SNR=11						
VCNR	Virginia City	3.94	103		Pn	09 45 03.7	+1.5
CMB	Columbia Colle	3.97	123		Pn	09 45 03.8	+1.2
PNTR	Pine Nut	4.04	106		Pn	09 45 06.2	+2.6
PAHR	Pah Rah Range	4.05	97		Pn	09 45 03.6	0.0
YERR	Yerington	4.33	106		Pn	09 45 09.3	+1.7
WAKR	Walker	4.38	112		Pn	09 45 11.1	+2.8
PINE	Pine Mountain	4.44	37		Pn	09 45 10.8	+1.7
WVOR	Wild Horse Val	4.97	62		Pn	09 45 15.9	-0.4
PMPB	Monarch Peak	5.04	142	Pn	Pn	09 45 17.8	+0.5
MDPB	Devils Postpil	5.05	120		Pn	09 45 19.2	+1.6
KVN	Kaiserville	5.16	102		Pn	09 45 20.0	+0.9
I07A	Izee	5.36	43	Pn	Pn	09 45 17.2	-4.5
J08A	Circle Bar Ran	5.51	54	Pn	Pn	09 45 23.9	+0.2
ISA	Isabella, Lake	6.68	132	Pn	Pn	09 45 42.4	+2.6
PFO	Pinyon Flats O	9.31	133	Pn	Pn	09 46 17.6	+1.7
XPFO	Pion Flat	9.32	133	Pn	Pn	09 46 17.7	+1.7

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*IDC **19** 09:57:06.6±1.8, 40°.34N×124°.48W, h0^{km}, mb3.3/4, mb1 3.6/9, mb1mx3.5/35, mbtmp3.3/9, ML3.4/5, MS3.0/8, Ms1 3.0/8, ms1mx2.9/18, Error ellipse: s-maj=23.3km s-min=12.4km az=82.0*

*NCEDC **19** 09:57:08.0±2.7, 40°.31N±0°.02×124°.51W±0°.02, h7^{km}±1^{km}, Mwr4.0/6, Error ellipse: s-maj=2.8km s-min=2.3km az=81.0*

*NEIC **19** 09:57:08.6, 40°.31N×124°.48W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$3.12; M$_{\theta\theta}$2.18; M$_{\phi\phi}$-5.30; M$_{r\theta}$5.16; M$_{\theta\phi}$-5.38; M$_{\phi r}$-6.08; Fault plane solution: M$_0$1.04000×10^{15} NP1:ϕ_s166.00000°, δ76.00000°, λ47.00000°. NP2:ϕ_s62.00000°, δ45.00000°, λ160.00000°. Principal axes: T 11.7078, Plg42.0000°, Azm35.0000°; N -2.5292, Plg42.0000°, Azm179.0000°; P -9.1786, Plg19.0000°, Azm287.0000°;*

*ANF **19** 09:57:08.7±0.8, 40°.41N×124°.28W, h0^{km}, ML3.5/13 Error ellipse: s-maj=11.4km s-min=5.0km az=78.0*

ISC 19 09:57:07.7±1.4, **40°.29N**±0°.03×**124°.61W**±0°.06, **h15**^{km}±7^{km}, **n186**, σ**1^{s}.09**/189, **mb3.1**/3, **MS2.9**/3, **Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCTM	Capetown	0.28	47		Pg	09 57 13.6	-0.1
KCTM					Sg	09 57 18.3	+0.4
KSMM	Slide Mountain	0.35	107		Pg	09 57 14.7	-0.2
KMPM	Mount Pierce	0.40	70		Pg	09 57 15.3	-0.5
KMPM					Sg	09 57 21.0	-0.3
KCRM	Chalk Rock	0.62	77		Pg	09 57 19.8	-0.1
JCC	Jacoby Creek,	0.69	39	Pg	Pg	09 57 20.7	-0.5
KMRM	Mail Ridge	0.69	95		Pg	09 57 20.9	-0.3
KMRM					Sb	09 57 31.4	+0.6
KBSM	Bell Springs	0.86	115		Pb	09 57 23.9	-0.5
KCSM	Cold Springs	0.87	73		Pb	09 57 24.1	-0.5
KHMM	Horse Mountain	0.89	48		Pb	09 57 24.1	-0.8
KHMM					Sg	09 57 36.9	+0.1
KPPM	Pickett Peak	0.95	86		Pb	09 57 25.5	-0.6
KRPM	Rodgers	0.98	27		Pb	09 57 25.3	-1.1
KIPM	Iron Peak	0.99	118		Pb	09 57 25.8	-0.8
KCPM	Cahto Peak	0.99	127		Pb	09 57 25.8	-0.8
KCPM					Sb	09 57 39.6	+0.2
KFPM	Farley Peak	1.11	125		Pb	09 57 27.4	-1.3
KHBM	Hayfork Bally	1.12	70		Pb	09 57 27.4	-1.5
KBNM	Bluenose Ridge	1.15	109		Pn	09 57 28.3	-1.1
GTC	Three Chop Rid	1.20	137		Pn	09 57 28.7	-1.2
KRKM	Rackout Spring	1.31	123		Pn	09 57 30.3	-1.3
LBPM	Beegum Peak	1.32	88		Pn	09 57 30.3	-1.4
GNAM	Navarro Ridge	1.32	145		Pn	09 57 30.5	-1.1
KOMM	Orleans Mounta	1.32	41		Pn	09 57 30.3	-1.4
KRMB	Red Mountain	1.34	23		Pn	09 57 30.5	-1.5
KRMB					Sn	09 57 47.4	-2.4
GHOM	Hamilton Openi	1.49	146		Pn	09 57 32.8	-1.2
LGPM	Granite Peak	1.49	65		Pn	09 57 32.7	-1.4
GHMM	Hull Mountain	1.51	121		Pn	09 57 33.0	-1.3
GROM	Round Mountain	1.53	103		Pn	09 57 34.3	-0.3
GVV	Valley View	1.57	108		Pn	09 57 33.9	-1.2
GASB	Alder Springs	1.58	113		Pn	09 57 34.1	-1.2
N02D	Trinity Center	1.60	64		Pn	09 57 34.3	-1.3
N02D	Trinity Center	1.60	64	P	Pn	09 57 34.2	-1.3
	baz=245,SNR=565						
WDC	Whiskeytown Da	1.60	79		Pn	09 57 34.0	-1.5
WDC	Whiskeytown Da	1.60	79		Pn	09 57 34.1	-1.4
KSXB	Camp Six Broad	1.64	19		Pn	09 57 34.7	-1.4
GGUM	Gualala	1.67	149		Pn	09 57 35.1	-1.3
LBKM	Bonanza King	1.68	61		Pn	09 57 35.4	-1.2
M02C	Callahan	1.73	50		Pn	09 57 36.1	-1.2
M02C	Callahan	1.73	50	P	Pn	09 57 36.1	-1.2
	baz=230,SNR=791						
M02C				S	Sn	09 57 56.4	-2.8
	baz=230						
GSNM	Snow Mountain	1.73	140		Pn	09 57 36.2	-1.1
GHLM	Highland Sprin	1.75	135		Pn	09 57 36.3	-1.2
HOPS	Hopland Field	1.75	137		Pn	09 57 36.5	-1.1
HOPS	Hopland Field	1.75	137		Pn	09 57 36.6	-0.9
GTSM	Trough Springs	1.82	122		Pn	09 57 37.5	-1.1
GCK	Clark Valley	1.83	113		Pn	09 57 38.1	-0.5
GDCM	Dry Creek	1.85	145		Pn	09 57 37.9	-1.0
KTRM	Thompson Ridge	1.87	29		Pn	09 57 38.0	-1.3
LTCM	Tuscan Springs	1.90	92		Pn	09 57 38.8	-0.8
GMKM	Mount Konoctai	1.92	132		Pn	09 57 39.2	-0.8
GPMM	Pine Mountain	1.93	138		Pn	09 57 39.5	-0.5
GACM	Adobe Creek	1.95	136		Pn	09 57 39.3	-1.0
GCVM	Cloverdale	1.95	140		Pn	09 57 39.2	-1.1
LAMM	Antelope Mount	2.00	48		Pn	09 57 40.2	-0.9
GSSM	Skaggs Springs	2.01	142		Pn	09 57 40.0	-1.0
L02E	Cave Junction	2.02	22		Pn	09 57 40.4	-0.8
L02E	Cave Junction	2.02	22	P	Pn	09 57 40.4	-0.8
	baz=201,SNR=19						
L02E				S	Sn	09 58 05.2	-0.9
	baz=201						
LSHM	Sage Hen Hill	2.02	75		Pn	09 57 40.4	-0.9
LCSM	College of the	2.02	55		Pn	09 57 40.9	-0.5
GFC	Funks Creek	2.03	117		Pn	09 57 41.4	+0.2
GDXM	Geysers	2.04	136		Pn	09 57 41.0	-0.5
YBH	Yreka Blue Hor	2.04	44	Pn	Pn	09 57 40.5	-1.0
	42nm,0.3s,baz=258,slow=11,SNR=364						
YBH				LR	LR	09 57 57.0	
	comp=Z,38nm,20.6s,baz=200,slow=26						
YBH				Sn	Sn	09 58 06.2	-0.5
	38nm,0.3s,baz=314,slow=22,SNR=10						
GSGM	Seigler Mounta	2.04	133		Pn	09 57 42.5	+1.0
GWKM	Walker Ridge	2.05	126		Pn	09 57 42.7	+1.0
FTR	Fort Ross	2.09	147		Pn	09 57 41.2	-1.0
GCRM	Castle Rock Sp	2.10	135		Pn	09 57 41.9	-0.5
LGBM	Gray Butte	2.12	59		Pn	09 57 42.4	-0.3
M03C	McCloud	2.13	62		Pn	09 57 42.5	-0.4
NMCNC	Mill Creek, So	2.14	142		Pn	09 57 41.8	-1.0
O03E	Paynes Creek	2.15	89		Pn	09 57 41.6	-1.4
O03E	Paynes Creek	2.15	89	P	Pn	09 57 41.6	-1.4
	baz=271,SNR=40						
O03E				S	Sn	09 58 06.9	-2.5
	baz=271						
LDBM	Digger Butte	2.16	85		Pn	09 57 42.1	-1.2
MNRC	McLaughlin Min	2.18	129		Pn	09 57 43.8	+0.3
LMPM	Military Pass	2.21	56		Pn	09 57 44.4	+0.4
NMTM	Middletown	2.23	131		Pn	09 57 43.3	-0.8
NHSM	Mount Saint He	2.24	136		Pn	09 57 43.7	-0.7
LHEM	Herd Peak	2.25	53		Pn	09 57 44.4	-0.2
B040	Montague	2.26	46		Pn	09 57 44.1	-0.4
MAC	Mark West Spri	2.27	139		Pn	09 57 44.8	+0.2
LBFM	Black Fox Moun	2.32	62		Pn	09 57 45.3	-0.2
LMEM	Manzanita Entr	2.33	83		Pn	09 57 46.3	+0.6
NSHM	Saint Helena R	2.35	138		Pn	09 57 44.8	-0.9
LCMM	Colby Mountain	2.37	92		Pn	09 57 45.4	-0.8
MGL	Magalia	2.39	100		Pn	09 57 45.5	-0.9
LRDM	Redding Peak	2.41	85		Pn	09 57 46.3	-0.4
SUTB	Sutter Butte	2.42	115		Pn	09 57 46.2	-0.5
NTYM	Taylor	2.42	141		Pn	09 57 46.2	-0.5
HATC	Hat Creek Radi	2.46	77		Pn	09 57 47.1	-0.1
NBPM	Berryessa Peak	2.47	130		Pn	09 57 47.2	-0.2
LGMM	Garner Mountai	2.48	57		Pn	09 57 47.5	-0.1
ORV	Oroville	2.50	106		Pn	09 57 46.7	-1.0
ORV	Oroville	2.50	106		Pn	09 57 46.8	-1.0
ORV	Oroville	2.50	106		Pn	09 57 46.8	-1.0
K02D	Willamette Mer	2.51	16	P	Pn	09 57 47.7	-0.4
	baz=195						
K02D				S	Sn	09 58 16.4	-2.0
	baz=195						
PAM	Palermo	2.52	108		Pn	09 57 47.0	-1.0
MCCM	Marconi Confer	2.52	147		Pn	09 57 47.3	-0.8
MCCM	Marconi Confer	2.52	147	Pn	Pn	09 57 47.0	-1.1
LTIM	Timbered Crate	2.53	68		Pn	09 57 47.9	-0.5
LBCM	Butte Creek Ri	2.54	76		Pn	09 57 47.9	-0.7
CVS	Carmenet Viney	2.56	139		Pn	09 57 48.0	-0.5
M04C	Macdoel	2.57	54		Pn	09 57 48.8	-0.1
M04C	Macdoel	2.57	54	P	Pn	09 57 48.7	-0.3
	baz=235,SNR=57						
M04C				S	Sn	09 58 16.7	-3.4
	baz=235						
LMHM	Little Mount H	2.58	59		Pn	09 57 48.9	-0.3
OHCM	Honcut	2.59	111		Pn	09 57 48.2	-0.8
NAPC	Atlas Peak	2.59	135		Pn	09 57 48.7	-0.5
L04D	Klamath Falls	2.60	41		Pn	09 57 50.2	+0.9
L04D	Klamath Falls	2.60	41	P	Pn	09 57 49.6	+0.4
	baz=222,SNR=304						
NPRM	Point Reyes	2.60	151		Pn	09 57 48.3	-0.8
HUMO	Hull Mountain	2.63	28		Pn	09 57 49.3	-0.4
HUMO	Hull Mountain	2.63	28		Pn	09 57 49.5	-0.1
LASM	Arnica Sink	2.64	59		Pn	09 57 49.3	-0.7
NOLM	Olema	2.65	147		Pn	09 57 48.9	-0.9
SNT	Sears Point	2.69	141		Pn	09 57 49.6	-0.8
J01E	Myrtle Point	2.92	10	P	Pn	09 57 54.9	+1.3
	baz=189						
CSPM	San Pablo Ridg	2.93	142		Pn	09 57 53.5	-0.3
VAK	Adit at Lawren	3.02	142		Pn	09 57 54.5	-0.5
AFDM	Forest Hills D	3.11	114		Pn	09 57 56.6	+0.4
K04D	Chiloquin, OR	3.17	42		Pn	09 57 57.3	+0.1
K04D	Chiloquin, OR	3.17	42	P	Pn	09 57 57.1	-0.1
	baz=223,SNR=25						
SAC	San Andreas	3.19	147		Pn	09 57 56.6	-0.7
CLCB	Lake Chabot	3.22	141		Pn	09 57 57.6	-0.2
BEKR	Beckworth	3.29	96		Pn	09 57 58.8	0.0
JFP	Foothills Park	3.48	146		Pn	09 58 00.2	-1.0
J04D	Umpqua Nationa	3.49	32	P	Pn	09 58 02.2	+0.5
	baz=212,SNR=15						
I03D	Drain, OR	3.54	15	P	Pn	09 58 02.7	+0.7
	baz=195						
MOD	Modoc Plateau	3.63	62		Pn	09 58 02.8	-0.7
RUBR	Rubicon Trail	3.65	108		Pn	09 58 04.6	+0.8
JBNB	Ben Lomond Mou	3.69	148		Pn	09 58 03.0	-1.2
I04A	Tendick Farm,	3.87	24	P	Pn	09 58 07.7	+1.1
	baz=205,SNR=6.5						
I04A				S	Sn	09 58 50.6	-1.2
	baz=205						
J05D	Fort Rock, OR	3.92	39	P	Pn	09 58 07.9	+0.5
	baz=220,SNR=22						
VCNR	Virginia City	3.94	103		Pn	09 58 07.5	-0.3
CMB	Columbia Colle	3.98	123		Pn	09 58 08.7	+0.6
JELB	Ellicott, Sant	4.00	146		Pn	09 58 07.7	-0.7
PNTR	Pine Nut	4.04	106		Pn	09 58 10.3	+1.0
PAHR	Pah Rah Range	4.05	97		Pn	09 58 08.8	-0.5
HMOM	Monterey	4.24	149		Pn	09 58 11.0	-0.8
SAO	San Andreas Ge	4.30	144	Pn	Pn	09 58 10.9	-1.7
YERR	Yerington	4.34	106		Pn	09 58 14.1	+0.8
BPCNC	Pine Canyon	4.38	147		Pn	09 58 12.6	-1.1
WAKR	Walker	4.38	112		Pn	09 58 14.8	+1.0
PINE	Pine Mountain	4.44	37		Pn	09 58 15.9	+1.2
BJCM	Johnson Can.	4.51	145		Pn	09 58 13.9	-1.5
HAST	Hastings Reser	4.57	147		Pn	09 58 15.1	-1.3
H04A	Detroit Lake	4.75	21		Pn	09 58 19.2	+0.5
WVOR	Wild Horse Val	4.98	63		Pn	09 58 21.1	-0.9
RYN	Ryan	4.99	107		Pn	09 58 23.2	+1.0
PMPB	Monarch Peak	5.05	142	Pn	Pn	09 58 22.7	-0.2
MDPB	Devils Postpil	5.06	120	Pn	Pn	09 58 25.7	+2.5
OMMB	Old Mammoth Mi	5.12	120		Pn	09 58 26.5	+2.3
KVN	Kaiserville	5.17	102		Pn	09 58 25.0	+0.3
NVAR	Mina Array Bea	5.22	109	Pn	Pn	09 58 26.6	+1.1
	1.3nm,0.3s,baz=243,slow=31,SNR=43						
NVAR				LR	LR	10 00 18.8	
	comp=Z,88nm,19.0s,baz=301,slow=37						
NVAR	Mina Array Bea	5.22	109		Pn	09 58 26.7	+1.2
NV11	Mina Array Sit	5.33	108		Pn	09 58 27.9	+1.0
I07A	Izee	5.36	43		Pn	09 58 28.6	+1.4
J08A	Circle Bar Ran	5.51	54		Pn	09 58 29.0	-0.3
PAGB	Antelope Grade	5.70	142	Pn	Pn	09 58 31.9	+0.1
G06A	Carlson Farm,	5.75	29	Pn	Pn	09 58 34.4	+1.9
ISA	Isabella, Lake	6.69	132		Pn	09 58 47.8	+2.3
ISA					Lg	10 00 49.9	
ISA	Isabella, Lake	6.69	132	P	Pn	09 58 47.4	+1.9
	baz=316						
ARVC	Arvin	6.89	137	P	Pn	09 58 49.5	+1.3
	baz=321						
BMO	Blue Mountains	7.06	47		Pn	09 58 52.4	+1.8
HAWA	Hanford	7.14	30	Pn	Pn	09 58 52.2	+0.7
ELK	Elko	7.15	83	Pn	Pn	09 58 53.3	+1.3
	0.1nm,0.3s,baz=274,slow=15,SNR=2.3						
ELK				LR	LR	10 01 46.3	
	comp=Z,116nm,19.7s,baz=266,slow=40						
MFID	Camas Ranch	7.26	62		Pn	09 58 53.9	+0.6
EDW2	Edwards Air Fo	7.53	134	P	Pn	09 58 58.5	+1.5
	baz=318						
LTY	Liberty	7.53	21	Pn	Pn	09 58 59.0	+2.1
F10A	Beach Ranch, E	7.84	41	Pn	Pn	09 59 01.1	0.0
GSC	Goldstone, Bar	7.93	126		Pn	09 59 04.8	+2.4
BFSC	Mount Baldy Ra	8.19	135	P	Pn	09 59 07.3	+1.2
	baz=320						
PFO	Pinyon Flats O	9.32	133	Pn	Pn	09 59 22.7	+1.1
	0.8nm,0.3s,baz=316,slow=11,SNR=14						
PFO				LR	LR	10 03 11.1	
	comp=Z,129nm,20.4s,baz=326,slow=39						
PFO	Pinyon Flats O	9.32	133		Pn	09 59 23.1	+1.5
PFO	Pinyon Flats O	9.32	133	P	Pn	09 59 22.4	+0.8
	baz=318						
XPFO	Pion Flat	9.32	133		Pn	09 59 22.9	+1.3
NEW	Newport	9.61	31	LR	LR	10 03 00.1	
	comp=Z,94nm,18.6s,baz=232,slow=37						
MONP2	Monument Peak	9.88	136	P	Pn	09 59 31.2	+1.8
	baz=321						
PDAR	Pinedale Array	11.55	73	Pn	Pn	09 59 56.0	+3.8
	0.0nm,0.3s,baz=286,slow=11,SNR=4.7						
ANMO	Albuquerque	15.33	105	Pn	Pn	10 00 44.7	+1.0
	0.1nm,0.3s,baz=331,slow=10,SNR=1.8						
ANMO				LR	LR	10 06 45.1	
	comp=Z,93nm,21.9s,baz=284,slow=38						
LPIG	La Paz	20.12	139	LR	LR	10 09 30.7	
	comp=Z,47nm,18.8s,baz=340,slow=37						
TXAR	Lajitas Array	20.32	116	P	P	10 01 44.3	+1.0
	1.2nm,0.9s,baz=290,slow=7.6,SNR=4.8						
TXAR				LR	LR	10 09 44.2	
	comp=Z,32nm,18.0s,baz=0.0,slow=37						
ULM	Lac du Bonnet	22.41	54	P	P	10 02 05.8	+0.3
	2.1nm,0.7s,baz=259,slow=4.4,SNR=5.5						
YKA	Yellowknife Ar	23.04	12	P	P	10 02 13.4	+1.4
	0.6nm,0.8s,baz=197,slow=12,SNR=5.8						
KDAK	Kodiak Island	25.07	324	LR	LR	10 09 57.0	
	comp=Z,65nm,21.0s,baz=102,slow=31						
ILAR	Eielson Array	27.71	340	P	P	10 02 56.3	+1.3
	0.3nm,0.9s,baz=137,slow=8.0,SNR=2.8						
H11N3	WAKE ISLAND Hy	61.29	272	T	T	11 14 07.0	
	baz=53,slow=76,SNR=39						
H11N2	WAKE ISLAND Hy	61.30	272	T	T	11 14 07.2	
	baz=53,slow=76,SNR=48						
H11N1	WAKE ISLAND Hy	61.31	272	T	T	11 14 08.3	
	baz=53,slow=76,SNR=40						
H11S1	WAKE ISLAND Hy	62.16	271	T	T	11 15 13.0	
	baz=54,slow=74,SNR=40						
H11S2	WAKE ISLAND Hy	62.17	271	T	T	11 15 11.2	
	baz=54,slow=74,SNR=16						
H11S3	WAKE ISLAND Hy	62.18	271	T	T	11 15 12.3	
	baz=54,slow=74,SNR=25						

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*KRNET **19** 10:02:25.6±0.1, 42°.39N×76°.34E, h10^{km}, mb1.7*

*NNC **19** 10:02:26.6±0.5, 42°.44N×76°.30E, h0^{km}, mb1.9, mpv2.6, Error ellipse: s-maj=4.2km s-min=1.2km az=159.0*

*SOME **19** 10:02:26.6, 42°.45N×76°.33E, h5^{km}*

ISC 19 10:02:25.1±1.0, **42°.38N**±0°.03×**76°.39E**±0°.03, **h12**^{km}±8^{km}, **n23**, σ**0^{s}.48**/45, **18C-10D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULHL	Ulahol	0.17	218	⇑*i*P	Pg	10 02 29.6	+0.5
	baz=8.0						
ULHL				⇑*i*S	Sg	10 02 31.7	-0.3
	baz=8.0						
BOOM	Boomskoye usch	0.35	288	⇑*i*P	Pg	10 02 31.5	-0.7
	baz=90						
BOOM				⇑*i*S	Sg	10 02 36.3	-0.6
	baz=90						
KDJ	Kajisay	0.64	113	⇑*i*P	Pb	10 02 38.6	+0.2
	baz=12						
KDJ				⇑*i*S	Sb	10 02 47.6	+0.2
	baz=12						
IZV	Izvestkoviy	0.68	14	*e*P	Pn	10 02 40.1	-0.7
IZV				*e*S	Sb	10 02 49.9	+1.4
KST	Kastek	0.73	335	*e*P	Pg	10 02 39.6	+0.2
	2.4nm,0.1s						
KST				*e*S	Sg	10 02 48.9	-0.1
	12nm,0.2s						
KST	Kastek	0.73	335	P	Pb	10 02 40.2	+0.2
	2.2nm,0.2s						
KST				S	Sg	10 02 48.9	-0.1
	12nm,0.2s						
MTBS	Maitube	0.75	2	*e*P	Pg	10 02 39.7	0.0
MTBS				*e*S	Sg	10 02 49.0	-0.5
TNSS	Tian-Shan	0.78	32	*e*P	Pb	10 02 41.0	+0.2
	1.1nm,0.1s						
TNSS				*e*S	Sb	10 02 51.2	-0.3
	7.4nm,0.2s						
KZA	Kyzart	0.90	251	⇑*e*P	Pg	10 02 42.2	-0.3
	baz=50						
KZA				⇑*i*S	Sg	10 02 53.6	-0.6
	baz=50						
MDOK	Medeo	0.92	32	⇑P	Pn	10 02 44.0	-0.1
	2.3nm,0.6s						
MDOK				⇓S	Sn	10 02 56.9	-0.5
	2.0nm,0.4s						
KNDC	Almaty	0.94	27	⇑P	Pn	10 02 44.3	0.0
	18nm,0.4s						
KNDC				⇑S	Sn	10 02 57.3	-0.4
	8.3nm,0.2s						
DGS	Degeres	0.97	333	*e*P	Pb	10 02 44.4	+0.4
	1.1nm,0.1s						
DGS				*e*S	Sg	10 02 56.7	+0.1
	8.3nm,0.2s						
DGS	Degeres	0.97	333	P	Pb	10 02 44.4	+0.4
	1.4nm,0.1s						
DGS				S	Sg	10 02 56.4	-0.1
	7.7nm,0.2s						
KBK	Karagaybulak	1.10	285	⇑*i*P	Pb	10 02 46.0	-0.2
	baz=85						
KBK				⇑*i*S	Sb	10 03 00.1	-0.5
	baz=85						
CHMS	Chumysh	1.35	298	⇓*i*P	Pb	10 02 51.0	+0.5
	baz=98						
CHMS				⇓*i*S	Sb	10 03 07.8	0.0
	baz=98						
CHMS	Chumysh	1.35	298	⇑P	Pb	10 02 50.9	+0.4
	0.7nm,0.3s						
CHMS				⇓S	Sb	10 03 07.7	-0.1
	1.9nm,0.5s						
UCH	Uchtor	1.40	264	⇓*i*P	Pb	10 02 51.7	+0.2
	baz=64						
UCH				⇓*i*S	Sb	10 03 09.2	-0.2
	baz=64						
AAK	Ala-Archa	1.42	281	⇓*i*P	Pb	10 02 51.9	+0.2
	baz=81						
AAK				⇓*i*S	Sn	10 03 09.6	-0.1
	baz=81						
AAK	Ala-Archa	1.42	281	⇓P	Pb	10 02 52.2	+0.5
	1.9nm,0.9s						
AAK				⇓S	Sn	10 03 10.2	+0.4
	1.0nm,0.3s						
SGDS	Sogindy	1.68	310	P	Pb	10 02 56.3	+0.3
	3.3nm,0.3s						
SGDS				S	Sb	10 03 17.4	+0.3
	2.9nm,0.2s						
EKS2	Erkin-Say	1.95	279	⇑*i*P	Pb	10 03 01.5	+0.8
	baz=79						
EKS2				⇑*i*S	Sb	10 03 25.7	+0.7
	baz=79						
AML	Almayashu	2.01	264	⇑*i*P	Pb	10 03 02.3	+0.4
	baz=63						
AML				⇑*i*S	Sb	10 03 28.0	+0.9
	baz=63						
MRKS	Merke	2.36	280	Pg	Pb	10 03 08.5	+0.8
	1.5nm,0.1s						
MRKS				Lg	Lg	10 03 39.3	
	7.7nm,0.3s						

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*IDC **19** 10:26:08.8±2.6, 6°.09N×127°.20E, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.4/46, mbtmp3.7/3, Error ellipse: s-maj=194.2km s-min=27.1km az=66.0*

*MAN **19** 10:26:24.6, 5°.96N×127°.00E, h36^{km}, mb4.8, ML3.7, MS3.6*

ISC 19 10:26:16.1±1.6, **6°.1N**±0°.2×**127°.6E**±0°.1, **h52**^{km}, **n7**, σ**1^{s}.98**/8, **mb3.5**/3, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	Mati	1.54	303	*e*P	Pn	10 26 45.0	+3.7
MATI				*e*S	Sn	10 27 01.4	+1.2
DDMP	Don Marcelino,	1.83	270	*e*P	Pn	10 26 46.9	+1.7
DDMP				*e*S	Sn	10 27 06.9	-0.4
SKMP	Bagumbayan, Su	3.03	278	*e*P	Pn	10 27 03.2	+1.7
SKMP				*e*S	Sn	10 27 33.5	-3.0
BUKP	Musuan	3.05	306	*e*P	Pn	10 27 07.6	+5.7
WRA	Warramunga Arr	26.72	166	P	P	10 31 50.9	+0.1
	1.9nm,0.3s,baz=345,slow=10,SNR=11						
ASAR	Alice Springs	30.22	168	P	P	10 32 22.1	+0.2
	0.2nm,0.4s,baz=345,slow=7.2,SNR=5.7						
MKAR	Makanchi Array	56.12	324	P	P	10 35 48.6	-1.7
	0.2nm,0.4s,baz=117,slow=8.4,SNR=5.1						

DDA 19 10:33:12.5, 38°.47N×29°.15E, h7^{km}±3^{km}, ML1.2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
USAK	Uak-Merkez	0.27	337	*i* P	Pg	10 33 18.4	+0.6
USAK				*i* S	Sg	10 33 21.5	+0.1
USAK				IAML		10 33 23.0	
	comp=N,51nm,1.0s						
USAK				IAML		10 33 24.0	
	comp=E,48nm,1.2s						
KHAL	Karahalli	0.28	110	*i* P	Pg	10 33 18.9	+0.7
KHAL				*i* S	Sg	10 33 22.4	+0.4
MANT	Manisa	0.47	273	*i* P	Pg	10 33 22.2	+0.7

ISK 19 10:33:32.5, 39°.64N×29°.47E, h1^{km}±1^{km}, ML1.9/7, **Suspected Mining explosion., Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TVSB	Tavsanli	0.19	183	PG	Pg	10 33 37.2	+1.1
CAVI	Cavuskoy	0.63	27	PG	Pg	10 33 45.2	+0.6
BORA	Eskisehir	0.79	72	PG	Pb	10 33 48.6	-0.5
MDNY	Mudanya-Bursa	0.86	328	PG	Pb	10 33 50.4	+0.2
YLV	Yalova	0.93	355	PG	Pb	10 33 51.5	0.0
SRCK	Saricakaya, Es	0.97	65	PG	Pb	10 33 52.1	-0.1
SRCK				SG	Sn	10 34 07.3	-0.5
ARMT	Armutlu	1.04	333	PG	Pb	10 33 53.4	+0.1
KCTX	Karacabey (Bur	1.06	307	PG	Pb	10 33 53.9	+0.2

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*IDC **19** 10:47:54.4±0.7, 8°.72S×157°.74E, h0^{km}, mb4.2/14, mb1 4.4/17, mb1mx4.3/35, mbtmp4.2/17, ML3.9/3, MS3.3/9, Ms1 3.3/9, ms1mx3.0/37, Error ellipse: s-maj=18.9km s-min=15.9km az=151.0*

*NEIC **19** 10:47:56.0±0.8, 8°.71S±0°.03×157°.81E±0°.08, h10^{km}±1^{km}, mb4.7/25, Error ellipse: s-maj=13.0km s-min=5.5km az=265.0*

ISC 19 10:47:59.6±0.5, **8°.71S**±0°.08×**157°.73E**±0°.07, **h35**^{km}, **n60**, σ**1^{s}.08**/53, **mb4.4**/25, **MS3.2**/5, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	2.31	108	Pn	Pn	10 48 32.2	-2.9
	91nm,0.3s,baz=210,slow=3.6,SNR=17						
HNR				Sn	Sn	10 49 04.9	+2.5
	536nm,0.3s,baz=8.1,slow=23,SNR=17						
HNR				LR	LR	10 49 25.2	
	comp=Z,534nm,18.1s,baz=140,slow=40						

HNR	**Honiara**	**2.31**	**108**		**Pn**	**10 48 32.8**	**-2.3**
HNR					**Sn**	**10 49 01.1**	**-1.3**
KRVT	**Keravat (AS076**	**7.15**	**307**	Pn	**Pn**	**10 49 38.7**	**-3.1**
	0.7nm,0.3s,baz=165,slow=20,SNR=1.8						
KRVT				LR	LR	10 51 30.7	
	comp=Z,44nm,20.6s,baz=128,slow=30						
KRVT				Lg	Lg	10 51 36.0	
	0.4nm,0.3s,baz=58,slow=19,SNR=2.1						
PMG	**Port Moresby**	**10.46**	**265**	LR	LR	10 54 17.7	
	comp=Z,223nm,21.1s,baz=139,slow=37						
COEN	**Coen**	**15.19**	**249**	Pn	**Pn**	**10 51 31.8**	**+0.2**
PATS	**Pohnpei**	**15.45**	**2**	Pn	**Pn**	**10 51 34.0**	**-1.1**
DZM	**Mont Dzumac**	**15.71**	**149**	LR	LR	10 56 39.4	
	comp=Z,108nm,19.1s,baz=202,slow=34						
CTA	**Charters Tower**	**15.85**	**223**	Pn	**Pn**	**10 51 40.6**	**+0.4**
	0.3nm,0.3s,baz=49,slow=11,SNR=1.8						
ARMA	**Armidale**	**22.34**	**194**	P	**P**	**10 52 54.6**	**0.0**
WR0	**Warramunga Arr**	**25.06**	**241**	P	**P**	**10 53 20.9**	**0.0**
WB0	**Warramunga Arr**	**25.11**	**242**	P	**P**	**10 53 21.6**	**+0.2**
WB0				IAmb	IAmb	10 53 32.3	
	comp=Z,12nm,1.2s						
WRAB	**Tennant Creek**	**25.21**	**241**	P	**P**	**10 53 22.5**	**+0.2**
WB2	**Warramunga Arr**	**25.21**	**241**	P	**P**	**10 53 22.6**	**+0.2**
WB2				IAmb	IAmb	10 53 38.2	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**25.23**	**241**	P	**P**	**10 53 22.4**	**0.0**
	comp=Z,3.8nm,0.6s,baz=67,slow=9.3,SNR=21						
WRA				PcP	**PcP**	**10 56 56.3**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=74,slow=2.8,SNR=4.1						
WRA				LR	LR	11 02 44.1	
	comp=Z,145nm,19.5s,baz=185,slow=35						
ASAR	**Alice Springs**	**27.22**	**234**	P	**P**	**10 53 39.5**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=68,slow=8.2,SNR=10						
ASAR				PcP	**PcP**	**10 57 00.7**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=80,slow=2.7,SNR=7.1						
ASAR				LR	LR	11 03 57.1	
	comp=Z,70nm,18.7s,baz=129,slow=35						
ASAR	**Alice Springs**	**27.22**	**234**	P	**P**	**10 53 40.1**	**-0.3**
STKA	**Stephens Creek**	**27.50**	**211**	P	**P**	**10 53 42.2**	**-0.6**
	comp=Z,2.0nm,0.8s,baz=53,slow=16,SNR=5.8						
STKA				LR	LR	11 03 15.8	
	comp=Z,59nm,18.5s,baz=47,slow=34						
STKA	**Stephens Creek**	**27.50**	**211**	P	**P**	**10 53 42.8**	**0.0**
H11S3	**WAKE ISLAND Hy**	**28.44**	**18**	T	T	11 22 31.4	
	baz=199,slow=76,SNR=32						
H11S2	**WAKE ISLAND Hy**	**28.44**	**18**	T	T	11 22 35.8	
	baz=199,slow=76,SNR=48						
H11S1	**WAKE ISLAND Hy**	**28.45**	**18**	T	T	11 22 40.5	
	baz=199,slow=76,SNR=19						
KNRA	**Kununurra**	**29.12**	**253**	P	**P**	**10 53 58.0**	**+0.6**
H11N1	**WAKE ISLAND Hy**	**29.65**	**18**	T	T	11 24 17.9	
	baz=195						
H11N3	**WAKE ISLAND Hy**	**29.66**	**18**	T	T	11 24 15.7	
	baz=195						
H11N2	**WAKE ISLAND Hy**	**29.67**	**18**	T	T	11 24 19.0	
	baz=195						
AFI	**Afiamalu**	**30.33**	**103**	LR	LR	11 04 41.4	
	comp=Z,35nm,20.3s,baz=172,slow=33						
TOO	**Toolangi**	**30.80**	**199**	P	**P**	**10 54 12.7**	**+0.7**
TOO				IAmb	IAmb	10 54 22.5	
	comp=Z,18nm,1.3s						
BBOO	**Buckleboo**	**31.26**	**217**	P	**P**	**10 54 15.3**	**-0.9**
BBOO				IAmb	IAmb	10 54 30.0	
	comp=Z,7.4nm,1.1s						
FITZ	**Fitzroy Crossi**	**32.53**	**250**	P	**P**	**10 54 27.9**	**+0.4**
	comp=Z,3.2nm,0.8s,baz=72,slow=8.0,SNR=7.4						
FITZ	**Fitzroy Crossi**	**32.53**	**250**	P	**P**	**10 54 27.8**	**+0.4**
FITZ				IAmb	IAmb	10 54 43.7	
	comp=Z,8.2nm,1.3s						
BKZ	**Black Stump Fm**	**34.69**	**154**	P	**P**	**10 54 45.8**	**-0.3**
BKZ				IAmb	IAmb	10 55 01.6	
	comp=Z,12nm,1.2s						
MJAR	**Matsushiro Arr**	**48.60**	**339**	P	**P**	**10 56 38.3**	**-1.6**
	comp=Z,0.9nm,0.6s,baz=123,slow=6.0,SNR=2.0						
MAJO	**Matsushiro**	**48.60**	**339**	P	**P**	**10 56 39.9**	**0.0**
MJB9	**Matsu-Tunnel**	**48.61**	**339**	P	**P**	**10 56 39.7**	**-0.2**
JNU	**Nakatsue**	**48.82**	**330**	P	**P**	**10 56 42.4**	**+0.8**
KSRS	**Korea Array**	**53.73**	**331**	P	**P**	**10 57 18.6**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=150,slow=7.1,SNR=5.0						
USRK	**Ussuriysk Ar.**	**57.59**	**338**	P	**P**	**10 57 46.4**	**+0.5**
	comp=Z,1.8nm,0.8s,baz=142,slow=11,SNR=4.4						
CMAR	**Chiang Mai Arr**	**63.96**	**295**	P	**P**	**10 58 31.1**	**+1.2**
	comp=Z,2.1nm,0.7s,baz=128,slow=5.1,SNR=11						
SONM	**Songino Array**	**72.24**	**326**	P	**P**	**10 59 22.4**	**+1.0**
	comp=Z,1.4nm,0.8s,baz=174,slow=4.3,SNR=5.8						
BILL	**Bilibino**	**76.80**	**3**	P	**P**	**10 59 47.7**	**+0.5**
BILL				IAmb	IAmb	10 59 48.9	
	comp=Z,7.4nm,0.8s						
ANM	**Nome**	**78.12**	**15**	P	**P**	**10 59 56.1**	**+1.3**
ANM				IAmb	IAmb	10 59 56.9	
	comp=Z,6.6nm,0.8s						
RC01	**Rabbit Creek A**	**80.75**	**23**	P	**P**	**11 00 09.9**	**+0.8**
RC01				IAmb	IAmb	11 00 19.3	
	comp=Z,13nm,1.2s						
PPLA	**Purkeypile**	**80.97**	**21**	P	**P**	**11 00 11.1**	**+0.6**
PPLA				IAmb	IAmb	11 00 26.0	
	comp=Z,12nm,1.3s						
QSPA	**South Pole Qui**	**81.28**	**180**	P	**P**	**11 00 12.4**	**+0.3**
KTH	**Kantishna Hill**	**81.84**	**21**	P	**P**	**11 00 15.1**	**+0.2**
KTH				IAmb	IAmb	11 00 15.5	
	comp=Z,9.5nm,0.7s						
CCB	**Clear Creek Bu**	**83.59**	**21**	P	**P**	**11 00 24.0**	**+0.1**
CCB				IAmb	IAmb	11 00 24.4	
	comp=Z,5.5nm,0.7s						
IL31		**83.98**	**21**	P	**P**	**11 00 25.7**	**-0.1**
ILAR	**Eielson Array**	**83.98**	**21**	P	**P**	**11 00 25.6**	**-0.4**
	comp=Z,2.7nm,0.4s,baz=256,slow=5.3,SNR=69						
ILAR	**Eielson Array**	**83.98**	**21**	P	**P**	**11 00 25.7**	**-0.2**
MKAR	**Makanchi Array**	**86.47**	**318**	P	**P**	**11 00 39.1**	**+0.3**
	comp=Z,1.1nm,0.5s,baz=96,slow=5.5,SNR=16						
MKAR	**Makanchi Array**	**86.47**	**318**		**P**	**11 00 39.7**	**+0.9**
EPYK	**Eagle Plains**	**88.44**	**22**	P	**P**	**11 00 49.3**	**+1.4**
EPYK				IAmb	IAmb	11 00 50.0	
	comp=Z,6.2nm,0.8s						
NVAR	**Mina Array Bea**	**90.66**	**51**	P	**P**	**11 01 00.8**	**+1.7**
	comp=Z,2.4nm,0.8s,baz=247,slow=6.7,SNR=20						
NVAR	**Mina Array Bea**	**90.66**	**51**	P	**P**	**11 01 01.2**	**+2.1**
PFO	**Pinyon Flats O**	**91.30**	**56**	LR	LR	11 35 08.2	
	comp=Z,23nm,19.2s,baz=250,slow=31						
YKA	**Yellowknife Ar**	**96.58**	**28**	P	**P**	**11 01 25.6**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=258,slow=4.5,SNR=7.6						
PDAR	**Pinedale Array**	**97.83**	**48**	P	Pdif	11 01 32.7	+0.7
	comp=Z,0.3nm,0.6s,baz=213,slow=4.9,SNR=4.2						
BDFB	**Brasilia**	**144.85**	**133**	PKP	**PKPab**	**11 07 33.1**	**0.0**
	comp=Z,12nm,0.7s,baz=204,slow=5.3,SNR=18						
BDFB	**Brasilia**	**144.85**	**133**		**PKPab**	**11 07 33.5**	**+0.3**
TORD	**Torodi Ar. Bea**	**156.06**	**283**	PKPbc	PKPdf	11 08 00.7	+9.4
	comp=Z,0.6nm,0.8s,baz=47,slow=2.6,SNR=3.3						
TORD				PKPab	**PKPab**	**11 08 17.5**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=72,slow=4.5,SNR=3.5						

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*NNC **19** 10:53:21.1±5.2,40°.89N×70°.23E,h0^{km},mb2.8,mpv2.9,*
Error ellipse: s-maj=40.6km s-min=27.3km az=45.0
SOME 19 10:53:19.5,40°.87N×70°.10E,h10^{km},2C,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**1.28**	**358**	eP	Pn	10 53 43.0	-0.6
	4.4nm,0.2s						
IUG				eS	Sb	10 54 00.4	+0.1
	57nm,0.4s						
IUG	**Iuzhnay**	**1.28**	**358**	P	Pg	10 53 46.1	+2.0
	4.4nm,0.2s						
IUG				S	Sn	10 54 04.4	+3.6
	57nm,0.4s						
BRLS	**Borolday**	**2.17**	**355**	eP	Pn	10 53 55.2	-0.5
	4.6nm,0.4s						
BRLS				eS	Sn	10 54 20.1	-2.6
	3.8nm,0.2s						
BRLS	**Borolday**	**2.17**	**355**	P	Pn	10 53 55.2	-0.5
	4.0nm,0.5s						
BRLS				S	Sn	10 54 19.3	-3.4
	1.9nm,0.3s						
KK31	**Karatay Array**	**2.26**	**8**	⇑Pg	Pb	10 54 00.2	-0.1
	1.2nm,0.5s,baz=195,slow=17,SNR=9.6						
KK31				⇑Lg	Lg	10 54 29.8	
	1.6nm,0.3s,baz=192,slow=28,SNR=7.3						
MRKS	**Merke**	**3.00**	**50**	eP	Pb	10 54 14.4	+1.4
	1.6nm,0.2s						
MRKS				eS	Sg	10 54 53.1	-2.7
	2.4nm,0.6s						
MRKS	**Merke**	**3.00**	**50**	Pg	Pg	10 54 15.1	-1.8
	1.6nm,0.2s						
MRKS				Lg	Lg	10 54 52.3	
	2.4nm,0.6s						

KRNET 19 10:53:21.5±0.1,39°.37N×71°.07E,mb2.6,8C-8D,
Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	**Batken**	**0.71**	**344**	⇓iP	Pg	10 53 35.7	+0.5
	baz=44						
BTK				⇓iS	Sb	10 53 46.2	-1.1
	baz=44						
TAS	**Tashkent**	**2.38**	**326**	⇓iP	Pn	10 53 59.9	-1.9
	baz=26						
TAS				⇓iS	Sn	10 54 28.1	-3.5
	baz=26						
ARSB	**Arslanbob**	**2.44**	**36**	⇑iP	Pn	10 54 00.7	-2.0
	baz=36						
ARSB				⇑iS	Sn	10 54 29.7	-3.6
	baz=36						
ARK	**Arkit**	**2.52**	**15**	⇑iP	Pn	10 54 01.9	-1.9
	baz=16						
ARK				⇑iS	Sn	10 54 31.2	-4.1
	baz=16						
AML	**Almayashu**	**3.40**	**35**	⇑iP	Pn	10 54 13.7	-2.5
	baz=35						
AML				⇑iS	Sn	10 54 52.4	-5.1
	baz=35						
ARLS	**Aral**	**3.51**	**44**	⇓iP	Pn	10 54 16.0	-1.5
	baz=44						
ARLS				⇓iS	Sn	10 54 55.2	-4.6
	baz=44						
UCH	**Uchtor**	**3.87**	**41**	⇓eP	Pn	10 54 21.4	-1.3
	baz=41						
UCH				⇓iS	Sn	10 55 04.6	-4.5
	baz=41						
EKS2	**Erkin-Say**	**3.88**	**31**	⇑iP	Pn	10 54 20.1	-2.3
	baz=31						
EKS2				⇑iS	Sn	10 55 03.4	-5.3
	baz=31						

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*IDC **19** 10:57:24.2±4.6,31°.86S×71°.52W,h0^{km},mb3.7/1,*
mb1 3.8/2,mb1mx3.6/17,mbtmp3.7/2,ML4.1/1,Error
ellipse: s-maj=456.1km s-min=67.2km az=168.0
*SJA **19** 10:57:35.5±0.8,28°.68S×71°.44W,h36^{km},ML3.5,MW3.6*
*GUC **19** 10:57:36.5±0.7,28°.59S×71°.18W,h38^{km}±4^{km},ML3.5*
ISC 19 10:57:34.2±3.1,**28°.57S**±0°.04×**71°.29W**±0°.08,**h2**^{km}±18^{km},
n17,σ**1^{s}.86**/27,**1C-3D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC05	**El Transito**	**0.93**	**107**	⇓iP	**Pb**	**10 57 52.2**	**-0.9**
AC05				i S	**Sg**	**10 58 02.8**	**-1.3**
AC05				IAML		10 58 03.0	
	comp=E,3µm,0.1s						
GO04	**Tololo Observa**	**1.66**	**165**	⇓iP	**Pn**	**10 58 04.1**	**-0.4**
GO04				i S	**Sn**	**10 58 25.4**	**-1.0**
CO01	**Juntas del Tor**	**1.75**	**144**	eP	**Pn**	**10 58 05.2**	**-0.6**
CO01				i S	**Sn**	**10 58 26.0**	**-2.8**
CO01				IAML		10 58 27.0	
	comp=E,956nm,0.4s						
CO03	**El Pedregal**	**2.32**	**167**	eP	**Pn**	**10 58 13.6**	**+0.1**
CO03				i S	**Sn**	**10 58 42.2**	**-0.5**
CO03				IAML		10 58 51.8	
	comp=E,398nm,0.4s						
CO03				IAML		10 58 55.7	
	comp=N,392nm,0.2s						
ACDV	**Cuesta del Vie**	**2.48**	**131**	i P	**Pn**	**10 58 16.7**	**+1.0**
ACDV				IAML		10 58 53.0	
	comp=Z,84nm,0.4s						
AC01	**Pan de Azucar**	**2.49**	**14**	eP	**Pn**	**10 58 15.2**	**-0.6**
AC01				eS	**Sn**	**10 58 46.3**	**-0.4**
AC01				IAML		10 58 57.1	
	comp=E,242nm,0.4s						
AC02	**Maricunga**	**2.58**	**48**	⇓iP	**Pn**	**10 58 17.2**	**-0.1**
AC02				i S	**Sn**	**10 58 48.5**	**-1.0**
AC02				IAML		10 58 55.7	
	comp=E,412nm,0.2s						
CO02	**Combarbal**	**2.64**	**175**	⇑iP	**Pn**	**10 58 17.9**	**0.0**
CO02				i S	**Sn**	**10 58 50.1**	**-0.4**
VCA	**Vinchina**	**2.71**	**94**	i P	**Pn**	**10 58 20.6**	**+1.6**
VCA				i S	**Sb**	**10 58 55.3**	**-2.1**
VCA				IAML		10 59 01.6	
	comp=Z,368nm,0.3s						
ACCO	**Cerro Coronel**	**2.79**	**137**	i P	**Pn**	**10 58 21.7**	**+1.5**
ACCO				IAML		10 59 03.5	
	comp=Z,162nm,0.2s						
CO04	**Los Peladeros**	**3.48**	**176**	eP	**Pn**	**10 58 29.4**	**-0.2**
CO04				i S	**Sn**	**10 59 11.9**	**+0.5**
RTLL	**Cerro Villicun**	**3.68**	**139**	i P	**Pn**	**10 58 33.4**	**+1.3**
RTLL				i S	**Sn**	**10 59 15.4**	**-0.8**
RTLL				IAML		10 59 35.9	
	comp=Z,86nm,0.6s						
RTCV	**Cerro Valdivia**	**4.05**	**145**	i P	**Pn**	**10 58 39.7**	**+2.4**
RTCV				IAML		10 59 35.6	
	comp=Z,40nm,0.3s						
CPUP	**Villa Florida**	**12.60**	**83**	Pn	**Pn**	**11 00 38.8**	**+4.4**
	comp=Z,0.2nm,0.3s,baz=258,slow=14,SNR=4.1						
TORD	**Torodi Ar. Bea**	**81.76**	**70**	P	**P**	**11 09 51.2**	**-3.7**
	comp=Z,0.5nm,0.8s,baz=235,slow=4.1,SNR=2.3						
ZALV	**Zalesovo Beam**	**149.21**	**28**	PKPbc	**PKPdf**	**11 17 20.9**	**+1.3**
	comp=Z,0.8nm,0.4s,baz=295,slow=4.2,SNR=5.0						
MKAR	**Makanchi Array**	**152.48**	**41**	PKPbc	**PKPdf**	**11 17 28.6**	**+3.5**
	comp=Z,0.3nm,0.4s,baz=286,slow=2.1,SNR=5.5						

IDC 19 11:05:54.4±22.0,**6°.04N**×**123°.41E,h262**^{km}±244^{km},
mb3.1/6,**mb1 3.2**/6,**mb1mx2.8**/57,**mbtmp3.7**/6,**Error**
ellipse: s-maj=66.9km s-min=29.5km az=76.0,
Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**27.97**	**158**	P	P	11 11 20.1	-1.1
	0.3nm,0.4s,baz=331,slow=10,SNR=1.6						
ASAR	**Alice Springs**	**31.25**	**161**	P	P	11 11 50.7	+0.5
	0.5nm,0.3s,baz=340,slow=6.5,SNR=14						
SONM	**Songino Array**	**44.11**	**344**	P	P	11 13 36.3	-0.9
	0.4nm,0.7s,baz=142,slow=7.3,SNR=2.3						
MKAR	**Makanchi Array**	**53.79**	**326**	P	P	11 14 50.9	+0.6
	0.6nm,0.6s,baz=123,slow=8.0,SNR=8.1						
YAK	**Yakutsk**	**56.06**	**4**	P	P	11 15 06.0	-0.1
	23nm,0.4s,baz=230,slow=4.4,SNR=4.5						
KURBB	**Kurchatov Arra**	**58.03**	**328**	P	P	11 15 20.1	-0.1
	0.6nm,0.5s,baz=123,slow=7.4,SNR=6.0						
AKTO	**Aktyubinsk**	**69.81**	**322**	P	P	11 16 36.0	-0.6
	0.4nm,0.4s,baz=102,slow=19,SNR=2.3						

RSNC 19 11:13:26.0±1.0,**3°.87N**×**71°.58W,h4**^{km}±6^{km},**ML3.4,Mw3.6,**
1C,Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTGC	**Puerto Gaitan,**	**0.65**	**300**	⇑iPg	Pg	11 13 36.4	-2.0
PTGC				eSg	Sg	11 13 46.0	-0.8
PTGC				i		11 14 02.6	
	comp=Z,1µm,0.5s						
GUVC	**San Jose del G**	**1.69**	**219**	eP	Pn	11 13 54.4	-1.9
GUVC				eS	Sn	11 14 17.5	-0.8
GUVC				i		11 14 22.5	
	comp=Z,414nm,0.3s						
VILC	**Villavicencio,**	**2.13**	**276**	eP	Pn	11 14 01.5	-1.0
VILC				eS	Sn	11 14 28.2	-1.2
CHIC	**Chingaza**	**2.28**	**289**	eP	Pn	11 14 03.7	-1.1
CHIC				eS	Sn	11 14 33.5	0.0
CHIC				i		11 14 41.6	
	comp=Z,327nm,0.6s						
RUSC	**La Rusia**	**2.51**	**323**	eP	Pn	11 14 07.5	-0.5
RUSC				eS	Sn	11 14 39.2	0.0
RUSC				i		11 14 55.5	
	comp=Z,137nm,0.6s						
TAMC	**Tame, Arauca**	**2.56**	**355**	eS	Sn	11 14 39.1	-0.8
MACC	**Macarena, Meta**	**2.84**	**233**	eP	Pn	11 14 13.2	+0.9
MACC				eS	Sb	11 14 50.7	-1.9
MACC				i		11 14 58.3	
	comp=Z,225nm,0.4s						
ROSC	**El Rosal**	**2.90**	**289**	eP	Pn	11 14 15.1	+1.8
ROSC				eS	Sg	11 14 57.7	-1.6
ROSC				i		11 15 14.5	
	comp=Z,113nm,1.1s						
SPBC	**San Pablo de B**	**3.05**	**305**	eP	Pn	11 14 13.3	-1.8
SPBC				eS	Sb	11 14 58.5	-0.1
SPBC				i		11 15 04.1	
	comp=Z,104nm,0.4s						
BARC	**Barichara**	**3.14**	**329**	eP	Pn	11 14 14.5	-2.0
BARC				eS	Sn	11 14 53.5	-1.1
PAMC	**Pamplona, Colo**	**3.62**	**342**	eS	Sn	11 14 29.7	-37
PAMC				i		11 14 39.6	
	comp=Z,50nm,0.5s						
ORTC	**Ortega, Tolima**	**3.66**	**271**	eP	Pn	11 14 22.5	-1.1
ORTC				eS	Sb	11 15 19.4	+3.2
ORTC				i		11 15 36.1	
	comp=Z,135nm,0.6s						
NORC	**Norcasia**	**3.69**	**297**	eP	Pn	11 14 22.1	-1.8
NORC				eS	Sb	11 15 19.8	+2.9
NORC				i		11 15 20.4	
	comp=Z,54nm,0.9s						
ANIL	**Santa Ana**	**3.87**	**279**	eP	Pn	11 14 24.0	-2.6
ANIL				eS	Sb	11 15 22.8	+0.5
ANIL				i		11 15 31.0	
	comp=Z,176nm,0.5s						
RREF	**El Recreo**	**3.90**	**285**	eP	Pn	11 14 25.3	-2.0
RREF				eS	Sb	11 15 24.7	+1.2
RREF				i		11 15 40.1	
	comp=Z,63nm,0.9s						
PTBC	**PUERTO BERRIO,**	**3.91**	**313**	eP	Pn	11 14 23.9	-2.9
PTBC				eS	Sb	11 15 24.8	+1.7
PTBC				i		11 15 27.9	
	comp=Z,40nm,0.8s						
GUY2C	**Guyana, Caldas**	**4.01**	**290**	eP	Pn	11 14 27.6	-1.0
GUY2C				eS	Sn	11 15 10.7	-5.7
GUY2C				i		11 15 31.5	
	comp=Z,39nm,0.8s						
GARC	**Garzon, Huila**	**4.26**	**247**	eS	Sb	11 15 33.7	+0.3
HELC	**Santa Helena**	**4.56**	**300**	eP	Pn	11 14 34.4	-1.8
HELC				eS	Sn	11 15 29.0	-0.9
HELC				i		11 15 51.3	
	comp=Z,17nm,0.6s						
YOTC	**Yotoco, Valle**	**4.76**	**271**	eP	Pn	11 14 36.3	-2.4
YOTC				eS	Sb	11 15 49.2	+1.3
YOTC				i		11 15 55.1	
	comp=Z,21nm,0.6s						
CBOC	**Ciudad Bolivar**	**4.84**	**294**	eP	Pn	11 14 37.7	-2.2
CBOC				i		11 16 00.0	
	comp=Z,26nm,0.8s						
ZARC	**Zaragoza, Cauc**	**4.86**	**318**	eP	Pn	11 14 39.9	0.0
ZARC				eS	Sn	11 15 35.0	-1.7
ZARC				i		11 15 58.2	
	comp=Z,25nm,0.5s						
PCON	**Cinco Dias**	**5.05**	**252**	eP	Pb	11 14 58.4	+3.0
PCON				eS	Sb	11 16 01.4	+4.6
PCON				i		11 16 10.8	
	comp=Z,90nm,0.5s						
SDV	**Santo Domingo**	**5.07**	**11**	eP	Pn	11 14 38.5	-4.5
SDV				eS	Sn	11 15 34.7	-7.4
SDV				i		11 15 44.3	
	comp=Z,35nm,0.5s						
SMLC	**San Martn de**	**5.49**	**333**	eP	Pn	11 14 44.5	-4.1
SMLC				eS	Sn	11 15 51.1	-1.2
SMLC				i		11 16 05.0	
	comp=Z,14nm,0.6s						
DBBC	**Dabeiba**	**5.57**	**304**	eP	Pn	11 14 49.3	-0.5
DBBC				eS	Sn	11 15 54.8	+0.4

LJU 19 11:19:12.0,45°.75N×14°.88E,h2^{km},ML0.4,1D,
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VISS	**Visnje**	**0.06**	**329**	⇓iPg	Pg	11 19 13.3	0.0
VISS				i Sg	Sg	11 19 14.3	+0.1
	comp=Z,17nm,0.1s						

BUC 19 11:21:15.3±0.6,**45°.16N**×**24°.95E,h1**^{km},**ml0.7**/1,**6C-8D,**
Error ellipse: s-maj=4.4km s-min=1.8km az=8.0,
Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTUR	**Matau**	**0.10**	**51**	⇓P	Pg	11 21 17.1	-0.2
MTUR	**Matau**	**0.10**	**51**	⇓P	Pg	11 21 17.1	-0.2
VOIR		**0.29**	**15**	⇑P	Pg	11 21 20.6	-0.2
VOIR				⇓S	Sg	11 21 24.8	+0.3
VOIR		**0.29**	**15**	⇑P	Pg	11 21 20.6	-0.2
VOIR				⇓S	Sg	11 21 24.8	+0.3
ARR	**Arges**	**0.30**	**313**	⇓P	Pg	11 21 21.3	+0.2
ARR				⇑S	Sg	11 21 25.6	+0.6
ARR	**Arges**	**0.30**	**313**	⇓P	Pg	11 21 21.3	+0.2
ARR				⇑S	Sg	11 21 25.6	+0.6
MLR	**Muntele Rosu**	**0.78**	**64**	⇑P	Pg	11 21 30.3	+0.1
MLR				⇓S	Sb	11 21 41.8	-1.0
MLR	**Muntele Rosu**	**0.78**	**64**	⇑P	Pg	11 21 30.3	+0.1
MLR				⇓S	Sb	11 21 41.8	-1.0

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*TUL **19** 11:23:14.2±1.0,36°.08N±0°.03×97°.55W±0°.05,h4^{km}±7^{km},*
ML3.1,Error ellipse: s-maj=5.7km s-min=2.7km az=61.0
*ANF **19** 11:23:14.2±1.1,36°.03N×97°.54W,h0^{km},ML3.5/6,Error*
ellipse: s-maj=18.0km s-min=3.8km az=166.0
ISC 19 11:23:14.7±0.9,**36°.08N**±0°.04×**97°.52W**±0°.03,**h10**^{km},**n35,**
σ**1^{s}.24**/40,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADOK	**Arcadia Dam**	**0.44**	**164**	Pg	**Pg**	**11 23 23.3**	**0.0**
OKCFA	**Oklahoma City**	**0.67**	**175**	Pg	**Pg**	**11 23 26.9**	**-0.7**
OKCSW	**OKLAHOMA CITY**	**0.68**	**174**		**Pg**	**11 23 27.1**	**-0.7**
FNO	**Franklin**	**0.83**	**173**		**Pg**	**11 23 30.4**	**-0.2**
W35A	**Tecumseh**	**1.06**	**150**		**Pg**	**11 23 34.3**	**-0.8**
T35A	**Sooner Cattle**	**1.16**	**44**		**Pb**	**11 23 36.7**	**-0.2**
U32A	**Winter Ranch,**	**1.24**	**284**		**Pn**	**11 23 37.0**	**-1.1**
TUL1	**Leonard**	**1.41**	**96**		**Pn**	**11 23 40.6**	**+0.2**
TUL1	**Leonard**	**1.41**	**96**	P	**Pn**	**11 23 40.4**	**-0.1**
	baz=278						
TUL1				S	**Sb**	**11 24 00.0**	**+0.9**
	baz=278						
X34A	**Smith Ranch, M**	**1.50**	**190**		**Pb**	**11 23 42.4**	**-0.2**
WMOK	**Wichita Mounta**	**1.69**	**218**		**Pn**	**11 23 44.2**	**0.0**
WMOK	**Wichita Mounta**	**1.69**	**218**	P	**Pn**	**11 23 44.3**	**0.0**
	baz=36						
WMOK				S	**Sb**	**11 24 06.9**	**-0.3**
	baz=36						
R32A	**Long Quarter,**	**2.52**	**338**		**Pn**	**11 23 55.4**	**-0.4**
U38A	**Gravette**	**2.56**	**81**		**Pn**	**11 23 57.5**	**+1.3**
Z35A	**Perchaven, San**	**2.75**	**175**	Pn	**Pn**	**11 23 58.6**	**-0.2**
HHAR	**Hobbs**	**2.90**	**85**		**Pn**	**11 24 01.8**	**+0.9**
W39A	**Magazine**	**3.17**	**105**		**Pn**	**11 24 05.8**	**+1.2**
W39A	**Magazine**	**3.17**	**105**	P	**Pn**	**11 24 06.0**	**+1.4**
	baz=287						
CBKS	**Cedar Bluff**	**3.25**	**328**		**Pn**	**11 24 06.7**	**+0.9**
Z38A	**Mt. Pleasant**	**3.50**	**143**		**Pn**	**11 24 10.1**	**+0.9**
MIAR	**Mount Ida**	**3.57**	**114**		**Pn**	**11 24 11.3**	**+1.2**
MIAR	**Mount Ida**	**3.57**	**114**	P	**Pn**	**11 24 11.8**	**+1.7**
	baz=297						
MIAR				S	**Sn**	**11 24 54.6**	**+2.3**
	baz=297						
AMTX	**Amarillo**	**3.60**	**252**		**Pn**	**11 24 11.5**	**+0.9**
AMTX	**Amarillo**	**3.60**	**252**	Sb	**Sb**	**11 25 04.8**	**+2.5**
	baz=69						
S39A	**Bolivar**	**3.73**	**63**		**Pn**	**11 24 12.9**	**+0.6**
U40A	**Yellville**	**3.78**	**84**		**Pn**	**11 24 14.2**	**+1.2**
ABTX	**Abilene, Hawle**	**3.87**	**208**		**Pn**	**11 24 14.3**	**+0.1**
X40A	**Basin Creek Fa**	**4.15**	**111**		**Pn**	**11 24 19.3**	**+1.2**
WHAR	**Wooly Hollow**	**4.33**	**99**		**Pn**	**11 24 21.2**	**+0.7**
FCAR	**Ozark Folk Cen**	**4.38**	**91**		**Pn**	**11 24 21.6**	**+0.4**
W41B	**Gary Mavity, V**	**4.39**	**100**	Pn	**Pn**	**11 24 23.0**	**+1.6**
W41B	**Gary Mavity, V**	**4.39**	**100**	P	**Pn**	**11 24 22.9**	**+1.6**
	baz=284						
W41B				S	**Sn**	**11 25 13.0**	**+0.5**
	baz=284						
W41B				Sb	**Sg**	**11 25 31.2**	**-4.3**
	baz=284						
R40A	**Maddies Statio**	**4.74**	**61**	Pn	**Pn**	**11 24 26.6**	**+0.5**
T25A	**Trinidad**	**5.64**	**283**	Pn	**Pn**	**11 24 39.1**	**+0.3**
SDCO	**Great Sand Dun**	**6.61**	**287**	Pn	**Pn**	**11 24 51.7**	**-0.4**

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*KRNET **19** 11:31:21.2±0.1,40°.42N×71°.33E,h19^{km},mb2.2*
*NNC **19** 11:31:45.6±4.8,41°.53N×71°.45E,h0^{km},mb2.5,mpv2.6,*
Error ellipse: s-maj=40.9km s-min=14.3km az=179.0
*SOME **19** 11:31:45.4,41°.53N×71°.50E,h5^{km}*
ISC 19 11:31:21.6±1.0,**40°.44N**±0°.04×**71°.30E**±0°.06,**h10**^{km},**n15,**
σ**0^{s}.70**/20,**12C-5D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	**Batken**	**0.53**	**224**	⇑iP	**Pg**	**11 31 31.8**	**-0.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=27						
BTK				⇑iS	Sg	11 31 39.2	+0.3
	baz=27						
ARK	Arkit	1.45	20	⇓iP	Pn	11 31 47.6	-0.4
	baz=20						
ARK				⇓iS	Sn	11 32 07.0	-0.2
	baz=20						
ARSB	Arslanbob	1.55	55	⇑iP	Pn	11 31 49.5	0.0
	baz=54						
ARSB				⇑iS	Sb	11 32 09.9	-0.5
	baz=54						
IUG	Iuzhnay	1.96	331	eP	Pg	11 32 08.6	+9.4
	1.4nm,0.3s						
IUG				eS	Sg	11 32 25.0	+0.5
	7.5nm,0.3s						
IUG	Iuzhnay	1.96	331	P	Pg	11 32 08.8	+10
	1.4nm,0.2s						
IUG				S	Sg	11 32 25.6	+1.1
	12nm,0.4s						
AML	Almayashu	2.47	46	⇓iP	Pn	11 32 02.2	-0.2
	baz=45						
AML				⇓iS	Sn	11 32 33.6	+0.7
	baz=45						
ARLS	Aral	2.69	57	⇑iP	Pn	11 32 06.2	+1.0
	baz=56						
ARLS				⇑iS	Sn	11 32 38.4	+0.5
	baz=56						
MRKS	Merke	2.72	31	eP	Pg	11 32 18.6	+4.8
	2.5nm,0.4s						
MRKS				eS	Sb	11 32 42.6	-1.3
	2.5nm,0.5s						
MRKS	Merke	2.72	31	P	Pg	11 32 18.6	+4.8
	2.5nm,0.4s						
MRKS				S	Sb	11 32 42.6	-1.3
	2.5nm,0.5s						
KK31	Karatay Array	2.73	348	⇑Pg	Pg	11 32 14.2	+0.3
	1.1nm,0.5s,baz=158,slow=14,SNR=8.4						
KK31				⇓Lg	Lg	11 32 41.7	
	2.3nm,0.5s,baz=155,slow=29,SNR=6.6						
BRLS	Borolday	2.81	338	eP	Pg	11 32 20.5	+5.0
	0.8nm,0.1s						
BRLS				eS	Sb	11 32 45.8	-0.7
	0.7nm,0.2s						
BRLS	Borolday	2.81	338	Pg	Pg	11 32 20.7	+5.2
	0.8nm,0.1s						
BRLS				Lg	Lg	11 32 46.2	
	0.7nm,0.2s						
EKS2	Erkin-Say	2.90	39	⇑eP	Pn	11 32 07.7	-0.3
	baz=39						
EKS2				⇑iS	Sn	11 32 43.1	+0.2
	baz=39						
UCH	Uchtor	3.01	53	⇑iP	Pn	11 32 09.7	-0.1
	baz=52						
UCH				⇑iS	Sn	11 32 46.6	+0.4
	baz=52						
MAKZ	Makanchi	10.02	47	⇑Lg	Lg	11 33 14.9	
	0.8nm,0.5s						

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*IDC **19** 11:34:03.6±0.6, 58°.46N×153°.22W, h0^{km}, mb3.9/16, mb1 4.1/19, mb1mx3.9/54, mbtmp3.9/19, ML4.1/3, MS3.2/9, Ms1 3.2/9, ms1mx2.9/63, Error ellipse: s-maj=15.8km s-min=7.0km az=61.0*

*AEIC **19** 11:34:10±1.4, 58°.17N±0°.03×152°.92W±0°.07, h50^{km}±7^{km}, ML3.8/140, Error ellipse: s-maj=5.3km s-min=4.5km az=105.0*

ISC 19 11:34:09.8±0.8**, 58°.19N**±0°.04×**152°.89W**±0°.04**, h55**^{km}±9^{km}**, n179, σ1^{s}.18**/191**, mb3.8**/16**, MS3.2**/7**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDAK	Kodiak Island	0.44	158	Pg	Pn	11 34 20.9	+0.2
	2μm,0.3s,baz=29,slow=5.5						
KDAK				Lg	Lg	11 34 29.0	
	1μm,0.3s,baz=266,slow=13,SNR=36						
KDAK				LR	LR	11 34 48.7	
	comp=Z,397nm,21.8s,baz=107,slow=60						
FOSS	Fourpeaked Sta	0.74	326		Pn	11 34 23.5	-0.8
KAHG	Katmai Hook Gl	0.93	290		Pn	11 34 26.2	-0.5
OHAK	Old Harbor	0.99	193		Pn	11 34 27.6	+0.1
OHAK	Old Harbor	0.99	193		Sn	11 34 40.9	+0.3
KAWH	Katmai	1.03	282		Pn	11 34 27.6	-0.4
KCG	Knife Ck. Glac	1.18	277		Pn	11 34 29.9	-0.2
AUJK	Augustine Jueg	1.20	347		Pn	11 34 30.6	+0.4
AUQ	Augustine Qik'	1.20	347		Pn	11 34 30.9	+0.6
AUQ					Sn	11 34 47.2	+1.6
KAHC	Katmai Hardscr	1.21	293		Pn	11 34 30.0	-0.5
AU22	Augustine Moun	1.21	349		Pn	11 34 30.5	+0.1
AU22					Sn	11 34 46.8	+1.1
AUP	Augustine Pinn	1.21	347		Pn	11 34 31.4	+0.9
AUW	Augustine West	1.22	346		Pn	11 34 31.1	+0.5
AUL	Augustine Lava	1.23	347		Pn	11 34 31.4	+0.7
AUL					Sn	11 34 48.5	+2.2
KABU	Katmai Buttres	1.27	275		Pn	11 34 31.4	+0.2
KABU					Sn	11 34 48.0	+0.7
ACHA	Angle Creek He	1.29	272		Pn	11 34 31.7	+0.1
KELA	Mount Kelaz	1.52	281		Pn	11 34 34.5	-0.2
CNPM	China Poot	1.59	32		Pn	11 34 36.2	+0.6
HOM	Homer	1.61	23		Pn	11 34 37.0	+1.2
HOM	Homer	1.61	23		Sn	11 34 57.7	+2.3
ILS	Iliamna Low So	1.78	357		Pn	11 34 38.6	+0.5
SII	Sitkinak Islan	1.78	204		Pn	11 34 38.5	+0.4
IVE	Iliamna Volcan	1.84	358		Pn	11 34 39.5	+0.6
PLK3	Peulik 3	1.87	256		Pn	11 34 39.9	+0.6
PLK3					Sn	11 35 01.9	+0.1
PLK2	Peulik 2	1.88	258		Pn	11 34 39.9	+0.5
ILW	Iliamna West	1.88	356		Pn	11 34 40.1	+0.4
ILW					Sn	11 35 03.3	+1.0
BRLK	Bradley Lake	1.89	32		Pn	11 34 40.0	+0.3
BRLK	Bradley Lake	1.89	32		Sn	11 35 01.9	-0.4
BRSE	Bradley Lake S	1.92	35		Pn	11 34 40.1	+0.1
PLK1	Peulik 1	2.02	261		Pn	11 34 42.0	+0.7
PLK5	Peulik 5	2.13	267		Pn	11 34 43.4	+0.6
PLBL	Peulik Blue Cr	2.15	259		Pn	11 34 43.9	+0.7
RED	Redoubt Volcan	2.24	2		Pn	11 34 44.7	+0.2
RED					Sn	11 35 12.6	+1.7
RSO	Redoubt South	2.28	2		Pn	11 34 46.2	+1.1
RDWB	Redoubt West	2.31	1		Pn	11 34 46.0	+0.5
RDN	Redoubt North	2.33	2		Pn	11 34 46.7	+0.9
RDJH	Redoubt Jeurge	2.41	1		Pn	11 34 47.6	+0.8
RDJH					Sn	11 35 17.6	+2.4
DFR	Drift River	2.41	2		Pn	11 34 47.6	+0.7
SEW	Seward	2.61	41		Pn	11 34 49.2	-0.2
SEW				Sn	Sn	11 35 17.2	-2.7
SLKM	Skilak Lake	2.70	29		Pn	11 34 50.4	-0.2
CAPN	Captain Cook N	2.74	18		Pn	11 34 52.7	+1.6
CHIR	Chirikof Islan	2.80	213		Pn	11 34 51.6	-0.4
CKL	Chakachamna La	3.03	5		Pn	11 34 55.9	+0.6
CKT	Bend	3.04	6		Pn	11 34 55.8	+0.3
SPCR	Spurr Chakacha	3.04	6		Pn	11 34 55.7	+0.3
SPBG	Spurr Blockage	3.09	5		Pn	11 34 56.8	+0.7
CGLM	Capps Glacier	3.16	8		Pn	11 34 57.4	+0.3
SVW2	Sparrevohn	3.22	336		Pn	11 34 57.8	0.0
FIS	Fire Island	3.26	23		Pn	11 34 58.5	+0.2
RC01	Rabbit Creek A	3.32	27		Pn	11 34 59.5	+0.3
RC01	Rabbit Creek A	3.32	27		Sn	11 35 36.4	-0.9
STLK	Strandline Lak	3.36	9		Pn	11 35 00.3	+0.5
SUA	Susitna One	3.46	17		Pn	11 35 01.5	+0.4
PWL	Port Wells	3.54	39		Pn	11 35 02.0	-0.2
CHGN	Chignik	3.55	240		Pn	11 35 02.6	+0.4
PMR	Palmer	3.91	27		Pn	11 35 06.8	-0.3
KNK	Knik Glacier	3.93	33		Pn	11 35 07.3	-0.2
VNHG	Veniaminof 1	3.94	243		Pn	11 35 07.8	+0.1
HIN	Hinchinbrook I	3.95	53		Pn	11 35 08.0	+0.2
GLI	Glacier Island	4.00	45		Pn	11 35 07.9	-0.5
VNFG	Fog Glacier, M	4.09	245		Pn	11 35 09.2	-0.6
GHO	Glory Hole Cre	4.11	27		Pn	11 35 09.9	-0.1
FID	Port Fidalgo	4.16	49		Pn	11 35 10.0	-0.7
SML	Sawmill	4.29	30		Pn	11 35 12.5	0.0
EYAK	Cordova Ski Ar	4.35	54	Pn	Pn	11 35 13.3	+0.1
VMT	TAPS Tl Valdez	4.40	46		Pn	11 35 13.9	0.0
SCM	Sheep Creek Mo	4.60	35		Pn	11 35 17.1	+0.3
PPLA	Purkeypile	4.74	4		Pn	11 35 19.4	+0.7
GOAT	Goat Mountain	4.81	57		Pn	11 35 20.0	+0.3
TT01	Tatalina	4.98	343		Pn	11 35 21.9	+0.1
SDPT	Sand Point	5.05	239		Pn	11 35 23.8	+1.0
HUR	Hurricane	5.07	17		Pn	11 35 23.4	+0.4
WAT6	Susitna Watana	5.09	28		Pn	11 35 23.2	-0.3
PS12	TAPS Pump St12	5.11	47		Pn	11 35 23.6	-0.1
WAT1	Susitna Watana	5.13	23		Pn	11 35 23.6	-0.3
WAT2	Susitna Watana	5.24	22		Pn	11 35 25.5	0.0
TRF	Thorofare Moun	5.43	12		Pn	11 35 28.3	+0.2
KTH	Kantishna Hill	5.47	9		Pn	11 35 29.6	+1.0
RND	Reindeer	5.60	19		Pn	11 35 29.6	-0.7
CRQM	Cirque	5.60	58		Pn	11 35 31.0	+0.5
DHY	Denali Highway	5.60	27		Pn	11 35 30.6	+0.1
GLB	Gilahina Butte	5.62	51		Pn	11 35 30.9	+0.2
VRDI	Verde Repeater	5.67	53		Pn	11 35 32.0	+0.5
CHUM	Lake Minchumin	5.72	3		Pn	11 35 32.4	+0.5
TGL	Tana Glacier	5.74	59		Pn	11 35 32.7	+0.3
MCK	McKinley	5.89	17		Pn	11 35 34.6	+0.3
MCARA	McCarthy VSAT	5.92	53		Pn	11 35 35.7	+0.9
BPAW	Bear Paw Mtn.	6.00	8		Pn	11 35 35.9	0.0
KIAG	Kiagna River	6.01	58		Pn	11 35 36.5	+0.3
PAX	Paxson	6.03	34		Pn	11 35 35.9	-0.4
BALM	Baldy	6.07	57		Pn	11 35 37.4	+0.6
PTPK	Patty Peak	6.08	56		Pn	11 35 37.2	+0.2
GRNC	Granite Creek	6.22	61		Pn	11 35 39.2	+0.1
BWN	Browne	6.23	14		Pn	11 35 39.0	+0.1
CHX	Chaix Hills	6.35	68		Pn	11 35 41.4	+0.7
BARN	Barnard Glacie	6.38	58		Pn	11 35 41.8	+0.6
CTGM	Chitina Glacie	6.50	60		Pn	11 35 43.4	+0.6
MENT	Mentasta	6.56	40		Pn	11 35 44.4	+0.8
WRH	Wood River Hil	6.71	18		Pn	11 35 44.8	-0.7
PCA	Pinnacle	6.78	68		Pn	11 35 47.4	+0.9
RIDG	Independent Ri	6.80	32		Pn	11 35 47.4	+0.5
HDA	Harding Lake	6.86	22		Pn	11 35 47.7	+0.1
CCB	Clear Creek Bu	6.92	18		Pn	11 35 47.6	-0.8
MLY	Manley	6.94	8		Pn	11 35 48.3	-0.4
YUK2	White River	7.04	54		Pn	11 35 50.8	+0.8
SSBA	Shishaldin	7.10	246		Pn	11 35 50.4	-0.5
TCOL	CIGO, UAF Yank	7.12	18		Pn	11 35 50.7	-0.4
COLA	College	7.13	18		Pn	11 35 50.9	-0.3
PNL	Peninsula	7.14	72		Pn	11 35 51.5	0.0
MDM	Murphy Dome	7.15	16		Pn	11 35 51.1	-0.4
YUK3	Moose Creek	7.20	55		Pn	11 35 53.1	+0.7
IL31		7.20	21		Pn	11 35 51.2	-1.0
ILAR	Eielson Array	7.20	21	Pn	Pn	11 35 50.8	-1.4
	1.5nm,0.3s,baz=210,slow=14,SNR=124						
ILAR				Sn	Sn	11 37 05.0	-7.5
	1.3nm,0.3s,baz=212,slow=22,SNR=4.5						
ILAR	Eielson Array	7.20	21		Pn	11 35 51.1	-1.1
SCRK	Sand Creek	7.23	33		Pn	11 35 52.7	-0.1
BC03		7.33	43		Pn	11 35 54.0	+0.2
BCAR	Beaver Creek A	7.33	43		Pn	11 35 54.1	+0.1
POKR	Poker Plat Res	7.42	18		Pn	11 35 53.8	-1.4
DHAK	Deception Hill	7.71	77	Pn	Pn	11 35 59.8	+0.5
DHAK					Sn	11 37 23.2	-1.9
IM03		7.83	357		Pn	11 36 00.7	-0.2
IMAR	Indian Mountai	7.83	357		Pn	11 36 01.1	+0.2
YUK4	Talbot Arm	7.85	60		Pn	11 36 02.4	+1.0
YUK7	Dusty Glacier	7.89	66		Pn	11 36 02.6	+0.7
AKUT	Akutan	8.25	246	Pn	Pn	11 36 07.3	+0.7
HYT	Haines Junctio	8.26	65		Pn	11 36 07.2	+0.4
EGAK	Eagle	8.66	35		Pn	11 36 11.7	-0.5
ANM	Nome	8.75	322		Pn	11 36 14.0	+0.6
UNV	Unalaska Valle	8.78	246		Pn	11 36 12.9	-0.9
DAWY	Dawson	8.78	42		Pn	11 36 14.2	+0.2
MSW	Makushin Switc	8.87	247		Pn	11 36 14.3	-0.8
FYU	Fort Yukon	9.12	20		Pn	11 36 17.3	-1.1
COLD	Coldfoot	9.16	7		Pn	11 36 18.9	0.0
SKAG	Skagway	9.20	75		Pn	11 36 20.6	+1.1
SKAG					Sn	11 38 01.0	-0.4
WHY	Whitehorse	9.50	67		Pn	11 36 24.4	+0.6
JIS	Juneau Island	9.76	82	Pn	Pn	11 36 28.0	+0.8
JIS					Sn	11 38 12.3	-2.9
BM03	Burnt Mountain	10.00	19		Pn	11 36 28.6	-1.9
BMAR	Burnt Mountain	10.01	19		Pn	11 36 29.0	-1.6
GAMB	Gambell	10.69	309		Pn	11 36 40.9	+1.0
DLBC	Dease Lake	12.01	79	Pn	Pn	11 36 59.7	+1.6
	0.7nm,0.3s,baz=255,slow=13,SNR=9.5						
DLBC				Sn	Sn	11 39 06.6	-3.7
	0.4nm,0.3s,baz=202,slow=19,SNR=2.4						
INK	Inuvik	13.30	32	Pn	Pn	11 37 13.8	-1.6
	0.2nm,0.3s,baz=226,slow=16,SNR=6.6						
INK				LR	LR	11 42 54.5	
	comp=Z,64nm,18.1s,baz=323,slow=40						
INK	Inuvik	13.30	32		Pn	11 37 15.6	+0.2
BBB	Bella Bella	15.32	102	LR	LR	11 42 23.1	
	comp=Z,88nm,18.6s,baz=13,slow=32						
C36M	Paulatuk	16.73	36	P	Pn	11 37 57.8	-2.2
YKA	Yellowknife Ar	19.22	61	P	Pn	11 38 30.1	-0.1
	1.3nm,0.3s,baz=271,slow=9.7,SNR=270						
YKA				PcP	PcP	11 42 50.0	+0.4
	0.0nm,0.3s,baz=269,slow=1.5,SNR=4.1						
BILL	Bilibino	20.51	315	P	P	11 38 42.4	-0.4
B08A	Colville Reser	22.12	102	P	P	11 39 02.7	+2.4
H04A	Detroit Lake	23.18	112	P	P	11 39 09.5	-1.9
NEW	Newport	23.33	100	P	P	11 39 14.3	+1.4
	2.7nm,0.9s,baz=305,slow=7.8,SNR=4.7						
NEW				LR	LR	11 47 15.1	
	comp=Z,77nm,18.6s,baz=274,slow=34						
NEW	Newport	23.33	100	P	P	11 39 13.3	+0.5
PINE	Pine Mountain	24.44	112	P	P	11 39 26.4	+3.2
WALA	Waterton Lakes	24.53	95	P	P	11 39 22.3	-1.7
I07A	Izee	24.94	110	P	P	11 39 27.3	-0.4
YBH	Yreka Blue Hor	25.15	118	P	P	11 39 33.6	+4.1
	4.2nm,0.9s,baz=297,slow=3.4,SNR=6.4						
YBH				LR	LR	11 46 41.1	
	comp=Z,56nm,20.6s,baz=306,slow=30						
YBH	Yreka Blue Hor	25.15	118	P	P	11 39 30.1	+0.5
MOD	Modoc Plateau	26.16	114	P	P	11 39 36.3	-2.5
SEY	Seymchan	26.60	303	P	P	11 39 41.5	-0.8
	0.5nm,0.6s,baz=139,slow=10,SNR=3.6						
RES	Resolute Bay	26.84	30	P	P	11 39 45.0	+0.6
	0.6nm,0.6s,baz=273,slow=12,SNR=4.5						
RES				LR	LR	11 52 47.8	
	comp=Z,63nm,18.5s,baz=255,slow=42						
RES	Resolute Bay	26.84	30	P	P	11 39 43.5	-0.9
PETK	Petropavlovsk-	27.81	281	P	P	11 39 51.8	-1.6
	3.2nm,1.0s,baz=65,slow=15,SNR=1.7						
PETK				LR	LR	11 51 30.0	
	comp=Z,20nm,19.0s,baz=60,slow=38						
MA2	Magadan	28.41	297	LR	LR	11 52 03.8	
	comp=Z,47nm,18.5s,baz=120,slow=38						
ELK	Elko	29.53	110	LR	LR	11 51 15.7	
	comp=Z,64nm,19.8s,baz=296,slow=35						
NVAR	Mina Array Bea	29.83	116	P	P	11 40 14.9	+3.2
	1.3nm,0.7s,baz=314,slow=9.8,SNR=12						
NVAR				PcP	PcP	11 43 15.4	+1.8
	0.2nm,0.6s,baz=252,slow=4.4,SNR=3.8						
PDAR	Pinedale Array	30.95	101	P	P	11 40 23.7	+2.1
	0.6nm,0.6s,baz=316,slow=4.2,SNR=8.6						
SRU	San Rafael Swe	33.14	106	P	P	11 40 42.7	+2.1
ULM	Lac du Bonnet	33.34	78	P	P	11 40 43.2	+1.1
	1.2nm,0.6s,baz=293,slow=8.8,SNR=3.4						
KLR	Kul'dur	43.26	292	P	P	11 42 04.3	-1.0
	0.7nm,0.4s,baz=16,slow=7.1,SNR=3.0						
U38A	Gravette	43.55	94	P	P	11 42 07.9	+0.1
SCHQ	Schefferville	44.53	55	P	P	11 42 16.3	+0.9
	2.3nm,0.6s,baz=320,slow=7.4,SNR=9.1						
JCT	Junction City	45.35	104	P	P	11 42 23.9	+1.5
R50A	Paris	47.49	84	P	P	11 42 39.3	+0.4
PLAL	Pickwick Lake	48.00	90	P	P	11 42 43.6	+0.8
TKL	Tuckaleechee C	49.76	85	LR	LR	12 05 55.1	
	comp=Z,55nm,19.3s,baz=290,slow=38						
SONM	Songino Array	55.91	307	P	P	11 43 42.2	+0.5
	0.7nm,0.6s,baz=35,slow=6.5,SNR=5.9						
FINES	FINESS Array B	60.70	1	P	P	11 44 14.2	-0.5
	1.1nm,0.5s,baz=11,slow=8.5,SNR=3.9						
MKAR	Makanchi Array	65.89	322	P	P	11 44 48.7	-0.6
	0.1nm,0.5s,baz=10,slow=3.1,SNR=2.1						
AKASG	Malin Array Be	71.46	359	P	P	11 45 23.1	-0.7
	0.6nm,0.4s,baz=4.3,slow=6.2,SNR=6.0						
GERES	GERESS Array B	72.76	9	P	P	11 45 32.2	+0.4
	0.3nm,0.3s,baz=0.0,slow=4.1,SNR=2.0						
CMAR	Chiang Mai Arr	83.67	295	P	P	11 46 32.3	-0.1
	0.5nm,0.4s,baz=30,slow=5.6,SNR=1.3						
BOSA	Boshof	150.41	3	PKPbc	PKPbc	11 53 53.7	-0.9
	2.9nm,1.0s,baz=11,slow=4.9,SNR=4.1						

IDC 19 11:45:50.4±5.4**, 16°.30S**×**176°.08W, h0**^{km}**, mb4.3**/3**, mb1 4.5**/3**, mb1mx3.6**/42**, mbtmp4.3**/3**, Error ellipse: s-maj=170.8km s-min=105.5km az=154.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.36	240	P	P	11 53 38.6	+0.3
	1.2nm,0.4s,baz=70,slow=12,SNR=6.0						
WRA	Warramunga Arr	47.13	258	P	P	11 54 24.4	-0.5
	0.8nm,0.6s,baz=95,slow=6.8,SNR=15						
ASAR	Alice Springs	47.38	253	P	P	11 54 26.5	-0.3
	11nm,0.6s,baz=88,slow=8.1,SNR=95						
ASAR				PcP	PcP	11 55 57.6	0.0
	0.4nm,0.5s,baz=96,slow=3.9,SNR=2.4						

KEA 19 11:47:28.3±0.0**, 38°.14N**×**124°.77E, h0**^{km}**, ML2.0**/1**, North Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HJU	Haeju	0.76	97	Pg	Pg	11 47 43.0	+0.1
PYAG	Pyongyang	1.20	40	Pg	Pg	11 47 51.0	-0.3
PYAG				Sg	Sg	11 48 07.0	+0.2
PYS	Pyongsong	1.40	37	Pg	Pn	11 47 55.1	0.0
PYS				Sg	Sb	11 48 13.7	0.0
SUJ	Sinuiju	1.97	354	Pg	Pb	11 48 05.2	+0.1
SUJ				Sg	Sb	11 48 30.3	+0.1
KGE	Kanggye	3.15	26	Sg	Sg	11 49 11.9	+2.5

IDC 19 11:51:24.1±3.2**, 3°.41S**×**132°.85E, h0**^{km}**, mb3.2**/2**, mb1 3.6**/4**, mb1mx3.3**/45**, mbtmp3.4**/4**, ML3.3**/2**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.5**/16**, Error ellipse: s-maj=135.5km s-min=30.8km az=79.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	16.21	205	Pn	Pn	11 55 13.4	0.0
	0.2nm,0.3s,baz=34,slow=12,SNR=7.3						
FITZ				Sn	Sn	11 58 01.7	-12
	0.1nm,0.3s,baz=56,slow=18,SNR=1.6						
FITZ				LR	LR	12 03 43.9	
	comp=Z,66nm,19.5s,baz=182,slow=46						
WRA	Warramunga Arr	16.49	175	Pn	Pn	11 55 15.8	-1.2
	0.1nm,0.3s,baz=354,slow=13,SNR=2.0						
ASAR	Alice Springs	20.16	177	P	P	11 56 00.8	+0.6
	0.5nm,0.6s,baz=0.9,slow=12,SNR=5.5						
MKAR	Makanchi Array	66.88	325	P	P	12 02 18.1	0.0
	0.3nm,0.8s,baz=141,slow=5.4,SNR=2.6						

MAN 19 11:53:35.0, 12°.60N×**119°.17E, h33**^{km}**, mb4.5, ML3.4, MS3.2, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUSP	Coron	1.17	121	eP	Pn	11 53 55.7	+0.6
BUSP				eS	Sn	11 54 07.6	-2.3
ENPP	El Nido	1.41	170	eP	Pn	11 53 58.2	-0.2
ENPP				eS	Sn	11 54 14.2	-1.6
LUBP	Lubang	1.54	43	eP	Pn	11 54 00.5	+0.3
LUBP				eS	Sn	11 54 18.7	-0.3
PGP	Puerto Galera	1.95	63	⇓eP	Pn	11 54 07.5	+1.5
PGP				eS	Sn	11 54 29.6	+0.3
CUYO	Cuyo Island	2.51	134	eP	Pn	11 54 13.9	+0.3

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*JSN **19** 11:55:50.5±0.9, 18°.88N×81°.84W, h49^{km}±999^{km}, MD4.5*

*IDC **19** 11:55:52.6±1.3, 18°.92N×81°.36W, h0^{km}, mb3.4/5, mb1 4.1/9, mb1mx3.7/47, mbtmp3.9/9, ML3.9/4, MS2.9/10, Ms1 2.9/10, ms1mx2.8/29, Error ellipse: s-maj=29.9km s-min=24.8km az=93.0*

*NEIC **19** 11:55:53.4±2.4, 18°.75N±0°.04×81°.36W±0°.02, h10^{km}±1^{km}, mb4.1/7, Error ellipse: s-maj=7.6km s-min=3.0km az=170.0*

*SSNC **19** 11:55:56.7±1.4, 18°.88N×81°.30W, h21^{km}±54^{km}, MD4.2, ML3.9, MW4.1*

ISC 19 11:55:52.6±0.6**, 18°.88N**±0°.06×**81°.33W**±0°.04**, h10**^{km}**, n57, σ2^{s}.43**/60**, mb3.3**/6**, MS2.9**/5**, 1C-3D, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSCY	Frank Sound, G	0.46	18		Pn	11 56 05.0	-0.3
CBCY	The Bluff, Cay	1.72	60		Pn	11 56 23.0	+0.4
MGV	Manicaragua	3.46	21	eP	Pn	11 56 47.0	+0.5
MGV				eS	Sn	11 57 25.4	-2.2
MGV				IAML		11 57 28.9	
	comp=E,199nm,0.3s						
MGV				IAML		11 57 29.0	
	comp=N,168nm,0.2s						
MCJ	Malvern	3.59	105	⇓iP	Pn	11 56 49.2	+0.7
MCJ				i S	Sn	11 57 33.5	+2.5
MTDJ	Mount Denham	3.66	100		Pn	11 56 49.8	+0.3
BBJ	Bamboo Saint A	3.89	97	⇓iP	Pn	11 56 53.0	+0.5
CCCC	Cccc	4.07	55	eP	Pb	11 57 00.8	-3.6
CCCC				eS	Sn	11 57 45.2	+2.4
PCJ	Portland Cotta	4.12	105	⇓iP	Pn	11 56 56.3	+0.6
SOR	Soroa	4.20	338	eP	Pn	11 56 57.8	+1.1
SOR				eS	Sn	11 57 43.4	-2.5
LMGC	Las Mercedes	4.25	73	eP	Pn	11 56 58.8	+1.3
LMGC				eS	Sn	11 57 43.9	-3.3
STH	Stony Hill	4.37	100	i P	Pn	11 56 59.7	+0.6
HOJ	Hope	4.44	101	i P	Pn	11 57 01.2	+1.1
GWJ	Greenwich	4.44	100	⇑iP	Pn	11 57 01.6	+1.4
RCC	Rio Carpintero	5.43	77	eP	Pn	11 57 13.5	-0.2
RCC				eS	Sn	11 58 12.2	-4.2
GTMO	Guantanamo	5.96	77	eP	Pn	11 57 22.6	+1.6
GTMO				eS	Sn	11 58 21.4	-8.1
GTBY	Guantanamo Bay	5.96	79	Pn	Pn	11 57 23.8	+2.7
MOAC	Moa	6.26	72	eP	Pn	11 57 27.3	+2.2
MOAC				eS	Sn	11 58 33.6	-3.1
TEIG	Tepich	6.68	283	Pn	Pn	11 57 30.3	-0.6
	comp=N,42nm,0.3s,baz=51,slow=0.0,SNR=55						
TEIG				Sn	Sn	11 58 40.5	-6.7
	comp=N,7.2nm,0.3s,baz=94,slow=0.0,SNR=2.3						
TEIG				LR	LR	12 00 02.9	
	comp=N,122nm,18.5s,baz=60,slow=38						
TEIG	Tepich	6.68	283		Pn	11 57 30.2	-0.7
MASC	Masc	6.82	78	eP	Pn	11 57 34.6	+1.8
MASC				eS	Sn	11 58 46.7	-3.8
061Z	Ochoppi	6.97	3	Pn	Pn	11 57 37.1	+2.4
LGNH	Logne	8.28	91	Pn	Pn	11 57 54.8	+1.9
JTS	Las Juntas de	9.23	203	Pn	Pn	11 58 08.4	+2.5
	comp=N,3.3nm,0.3s,baz=61,slow=13,SNR=14						
JTS				LR	LR	12 01 40.5	
	comp=N,91nm,18.1s,baz=106,slow=38						
JTS	Las Juntas de	9.23	203		Pn	11 58 05.7	-0.2
SDDR	Presa de Saban	9.51	88		Pn	11 58 11.2	+1.4
APG	El Apazote	9.55	248	Pn	Pn	11 58 11.5	+1.0
	comp=N,0.4nm,0.3s,baz=24,slow=10.0,SNR=5.3						
APG				Sn	Sn	11 59 52.0	-6.1
	comp=N,0.2nm,0.3s,baz=66,slow=20,SNR=1.5						
DR12	Loma Pena Alta	11.32	89	Pn	Pn	11 58 36.8	+2.2
URIC	Uribia, Colomb	11.49	127	Pn	Pn	11 58 37.6	+0.7
553A	Crawfordville	11.61	347	Pn	Pn	11 58 40.2	+1.8
TIGA	Tifton	12.67	351		Pn	11 58 57.1	+4.1
CMIG	Matias Romero	13.02	264	Sn	Sn	12 01 12.5	-10
	comp=N,0.1nm,0.3s,baz=61,slow=19,SNR=2.3						
CRPR	Cabo Rojo, PR	13.53	91	Pn	Pn	11 59 04.9	+0.2
SDV	Santo Domingo	14.36	132	Pn	Pn	11 59 16.0	-0.4
	comp=N,4.1nm,0.3s,baz=346,slow=19,SNR=35						
SDV				LR	LR	12 05 41.4	
	comp=N,55nm,19.6s,baz=196,slow=41						
SDV	Santo Domingo	14.36	132		Pn	11 59 16.3	-0.1
SJG	San Juan	14.42	91	LR	LR	12 03 37.8	
	comp=N,27nm,21.4s,baz=199,slow=32						
GOGA	Godfrey	14.60	353	Pn	Pn	11 59 22.1	+2.7
Z50A	Ashland	14.90	345	Pn	Pn	11 59 24.0	+0.6
Z50A				IAmb	IAmb	11 59 36.5	
	comp=Z,5.1nm,0.7s						
HODGE	Hodges	15.31	357	Pn	Pn	11 59 31.0	+2.1
JSC	Jenkinsville	15.34	0	Pn	Pn	11 59 30.9	+1.6
JSC				IAmb	IAmb	11 59 40.1	
	comp=Z,20nm,1.4s						
ROSC	El Rosal	15.54	153	LR	LR	12 05 08.7	
	comp=Z,66nm,22.0s,baz=130,slow=36						
TKL	Tuckaleechee C	16.85	353	Pn	Pn	11 59 48.4	-0.4
	comp=Z,0.5nm,0.3s,baz=163,slow=15,SNR=4.1						
TKL	Tuckaleechee C	16.85	353		P	11 59 49.8	-1.0
TKL				IAmb	IAmb	12 00 01.3	
	comp=Z,34nm,1.5s						
ZAIG	Zacatecas	20.22	285	P	Pn	12 00 31.6	+1.5
ZAIG				IAmb	IAmb	12 00 47.4	
	comp=Z,4.6nm,1.1s						
S39A	Bolivar	21.48	333	P	P	12 00 42.4	+1.0
S39A				IAmb	IAmb	12 00 55.9	
	comp=Z,14nm,1.5s						
TXAR	Lajitas Array	22.85	301	P	P	12 00 57.6	+1.3
	comp=Z,0.4nm,0.6s,baz=125,slow=7.8,SNR=2.7						
TXAR				LR	LR	12 12 55.6	
	comp=Z,10nm,19.2s,baz=0.0,slow=45						
TXAR	Lajitas Array	22.85	301	P	P	12 00 57.1	+0.7
P38A	Dawn	23.21	336	P	P	12 01 00.7	+0.9
SADO	Sadowa	25.88	4	LR	LR	12 12 10.8	

	comp=Z,38nm,19.7s,baz=206,slow=38						
ANMO	Albuquerque	27.42	311	LR	LR	12 15 18.8	
	comp=Z,35nm,18.2s,baz=180,slow=43						
LPIG	La Paz	27.43	286	LR	LR	12 13 22.8	
	comp=Z,39nm,19.2s,baz=53,slow=38						
PTGA	Pitinga	28.64	131	LR	LR	12 13 50.5	
	comp=Z,19nm,19.7s,baz=14,slow=38						
PDAR	Pinedale Array	33.70	321	P	P	12 02 34.1	-0.2
	comp=Z,0.3nm,0.7s,baz=154,slow=7.0,SNR=2.7						
YKA	Yellowknife Ar	49.28	340	P	P	12 04 42.1	+0.8
	comp=Z,0.2nm,0.7s,baz=132,slow=8.7,SNR=3.0						
ILAR	Eielson Array	62.71	334	P	P	12 06 20.1	+2.5
	comp=Z,0.1nm,0.5s,baz=97,slow=3.0,SNR=4.3						
ARCES	ARCESS Array B	78.19	20	P	P	12 07 53.5	+1.5
	comp=Z,3.4nm,0.9s,baz=269,slow=5.3,SNR=3.8						
WRA	Warramunga Arr	146.38	262	PKPbc	PKPab	12 15 35.5	-0.1
	comp=Z,0.5nm,0.6s,baz=87,slow=3.8,SNR=9.2						
ASAR	Alice Springs	146.87	255	PKPbc	PKPab	12 15 37.1	-0.3
	comp=Z,0.5nm,0.7s,baz=109,slow=4.3,SNR=3.1						

MEX 19 12:05:26.9±0.6, 15°.54N×95°.70W, h16^{km}±5^{km}, MD4.0, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.46	300	*e*P	Pg	12 05 34.2	-1.9
HUIG				*e*S	Sg	12 05 40.7	-1.6
HUIG	Huatulco	0.46	300		Pg	12 05 34.2	-1.9
HUIG					Sg	12 05 40.7	-1.6
PEIG	Puerto Escondi	1.47	288	*e*P	Pn	12 05 50.0	-2.7
PEIG				*i* S	Sn	12 06 06.7	-4.9
CMIG	Matias Romero	1.73	27	*e*P	Pn	12 05 52.7	-3.6
CMIG				*e*S	Sn	12 06 13.1	-4.9
CMIG	Matias Romero	1.73	27		Pn	12 05 52.7	-3.6
CMIG					Sn	12 06 13.1	-4.9
VHO	Vista Hermosa	1.82	327	*i* P	Pn	12 05 55.2	-2.5
VHO				*i* S	Sn	12 06 16.1	-4.4
YOIG	Yosondua	2.21	307	*i* P	Pn	12 06 00.1	-3.0
YOIG				*i* S	Sn	12 06 25.1	-5.0
TLIG	Tlapa	3.41	307	Pn	Pn	12 06 19.1	-0.4
CCIG	Comitan	3.50	77	Pn	Pn	12 06 18.9	-2.0

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*IDC **19** 12:12:46.1±3.8, 37°.72N×75°.88E, h117^{km}±33^{km}, mb3.3/9, mb1 3.3/15, mb1mx3.2/61, mbtmp3.6/15, MS4.2/2, Ms1 4.2/2, ms1mx3.0/38, Error ellipse: s-maj=29.3km s-min=19.3km az=14.0*

*NNC **19** 12:12:55.5±4.8, 38°.30N×74°.54E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=35.9km s-min=27.1km az=152.0*

ISC 19 12:12:48.7±0.7, 37°.85N±0°.06×75°.58E±0°.09, h150^{km}, n24, σ2^{s}.61/24, 4C-6D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	4.58	205	P	Pn	12 13 55.9	-0.8
AAK	Ala-Archa	4.86	350	P	Pn	12 13 59.7	-0.6
	0.8nm,0.3s,baz=148,slow=8.0,SNR=8.4						
AAK				S	Sn	12 14 51.9	-4.2
	1.5nm,0.3s,baz=325,slow=22,SNR=4.7						
AAK	Ala-Archa	4.86	350	⇓Pn	Pn	12 14 01.6	+1.3
	3.5nm,0.8s						
AAK				⇑Pg		12 14 12.3	
	3.4nm,0.5s						
AAK				⇓Sn	Sn	12 14 53.4	-2.8
	20nm,1.1s						
AAK				⇑Lg	Lg	12 15 13.1	
	13nm,0.9s						
CEP	Cherat	5.00	218	P	Pn	12 14 01.1	-1.2
CEP				S	Sn	12 14 54.0	-5.6
CHMS	Chumysh	5.18	353	⇓Pg	Pn	12 14 19.6	+15
	3.0nm,0.4s						
CHMS				⇓Lg	Lg	12 15 26.5	
	7.1nm,0.6s						
MDOK	Medeo	5.43	11	⇑Pn	Pn	12 14 15.8	+7.9
	8.7nm,0.4s						
MDOK				⇑Sn	Sn	12 15 19.1	+9.4
	8.6nm,0.6s						
MDOK				Lg	Lg	12 15 43.8	
	22nm,1.1s						
KK31	Karatay Array	6.52	325	⇓Pn	Pn	12 14 22.5	+0.3
	0.7nm,0.3s,baz=140,slow=15,SNR=7.6						
KK31				⇓Sn	Sn	12 15 30.2	-5.4
	2.5nm,0.5s,baz=148,slow=26,SNR=6.2						
MKAR	Makanchi Array	10.22	27	P	Pn	12 15 09.6	-2.0
	0.1nm,0.3s,baz=203,slow=13,SNR=6.2						
WMQ	Urumqi	10.94	53	*e*P	Pn	12 15 19.5	-1.6
KURBB	Kurchatov Arra	12.95	8	P	Pn	12 15 44.9	-2.1
	0.0nm,0.3s,baz=199,slow=11,SNR=4.8						
BVAR	Borovoye Array	15.60	348	P	P	12 16 21.2	-0.1
	0.2nm,0.3s,baz=149,slow=11,SNR=2.8						
ZALV	Zalesovo Beam	17.31	19	P	Pn	12 16 39.3	-1.8
	0.2nm,0.3s,baz=214,slow=12,SNR=3.1						
AKTO	Aktyubinsk	17.75	321	P	Pn	12 16 48.1	+1.7
	0.8nm,0.3s,baz=117,slow=9.9,SNR=16						
SONM	Songino Array	24.55	56	P	P	12 17 55.2	+0.6
	0.4nm,0.7s,baz=266,slow=12,SNR=3.0						
KIRV	Kirov	26.80	329	LR	LR	12 30 02.5	
	comp=Z,534nm,20.5s,baz=221,slow=38						
ASF	Jabal al Asfar	32.02	272	P	P	12 19 03.7	+2.7
	0.9nm,0.5s,baz=44,slow=5.3,SNR=1.4						
FINES	FINESS Array B	38.48	324	P	P	12 19 58.7	+2.9
	1.3nm,0.4s,baz=113,slow=9.3,SNR=10						
ARCES	ARCESS Array B	41.35	336	P	P	12 20 22.1	+2.7
	2.8nm,1.1s,baz=104,slow=6.7,SNR=1.2						
NOA	NORSAR Array B	45.54	322	P	P	12 20 55.6	+2.6
	0.4nm,0.4s,baz=112,slow=7.2,SNR=1.4						
JMIC	Jan Mayen	52.85	336	LR	LR	12 42 41.9	
	comp=Z,226nm,19.1s,baz=125,slow=34						
TORD	Torodi Ar. Bea	69.38	271	P	P	12 23 42.7	+2.2
	0.4nm,0.4s,baz=43,slow=6.2,SNR=6.1						
YKA	Yellowknife Ar	79.67	5	P	P	12 24 40.1	+1.0
	0.2nm,0.5s,baz=350,slow=5.3,SNR=6.9						
WRA	Warramunga Arr	79.68	125	P	P	12 24 39.6	-0.2
	0.3nm,0.8s,baz=330,slow=4.9,SNR=1.5						
ASAR	Alice Springs	82.11	128	P	P	12 24 52.3	-0.3
	0.1nm,0.3s,baz=318,slow=5.6,SNR=4.2						

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*INMG **19** 12:13:06.3±1.6, 41°.78N×3°.46E, h4^{km}±4^{km}, ML3.2, Error ellipse: s-maj=4.3km s-min=3.0km az=111.0*

*MRB **19** 12:13:06.5±0.3, 41°.81N×3°.43E, ML3.6/18, Error ellipse: s-maj=4.4km s-min=2.4km az=291.0*

*MDD **19** 12:13:06.7±0.3, 41°.81N×3°.48E, h11^{km}, mbLg3.9/19, Error ellipse: s-maj=3.5km s-min=2.4km az=145.0, PRXIMO*

MDD EMS: III INTENSIDAD MAXIMA.

*SFS **19** 12:13:06.0, 41°.70N×3°.40E, h11^{km}, ML3.8, COSTERO CATALANA*

*LDG **19** 12:13:07.5±0.1, 41°.84N×3°.43E, h8^{km}, Md3.6/3, Ml4.0/47, Error ellipse: s-maj=1.5km s-min=0.9km az=149.0*

*STR **19** 12:13:08.8±0.6, 42°N±4°×°±°, h25^{km}±3^{km}, mB5.6/1, mb3.8/2, MLv3.8/7, Mw(mB)5.1/1*

ISC 19 12:13:06.3±0.5, 41°.93N±0°.02×3°.42E±0°.01, h16^{km}±2^{km}, n238, σ1^{s}.75/420, 2C-5D, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCAS	Cassa de la Se	0.38	264	Pg	Pb	12 13 14.1	-0.6
CCAS				Lg	Lg	12 13 19.6	
	2μm,0.3s						
CCAS	Cassa de la Se	0.38	264	P	Pb	12 13 14.2	-0.6
CCAS				S	Sb	12 13 19.6	-0.7
	2μm,0.3s						
CBEU	Beuda	0.64	301	Pg	Pn	12 13 19.6	-1.2
CBEU				Lg	Lg	12 13 30.2	
	8μm,0.2s						
CBEU	Beuda	0.64	301	P	Pn	12 13 19.6	-1.2
CBEU				S	Sn	12 13 30.2	-0.5
	8μm,0.2s						
EJON	La Jonquera	0.65	323	⇓Pg	Pn	12 13 20.8	-0.2
	174nm,0.3s,SNR=18						
EJON				Lg	Lg	12 13 31.2	
	1μm,0.1s,SNR=31						
EJON	La Jonquera	0.65	323	⇓Pg	Pn	12 13 20.8	-0.2
SJAF	Saint Jean de	0.69	325	Pg	Pn	12 13 21.4	0.0
SJAF				Sg	Sn	12 13 32.4	+0.7
SJAF	Saint Jean de	0.69	325	⇓Pg	Pn	12 13 21.3	0.0
	45nm,0.1s,SNR=18						
SJAF				Lg	Lg	12 13 32.4	
	1μm,0.2s,SNR=7.9						
SJAF	Saint Jean de	0.69	325	⇓Pg	Pn	12 13 21.4	0.0
CFON	Fontmartina	0.75	258	⇑Pg	Pn	12 13 20.9	-1.3
	268nm,0.2s,SNR=18						
CFON				Lg	Lg	12 13 30.8	
	5μm,0.2s,SNR=6.9						
CFON	Fontmartina	0.75	258	P	Pb	12 13 20.5	-0.5
CFON				S	Sb	12 13 30.7	-0.3
	4μm,0.2s						
CBRU	Bruguera	0.99	292	Pg	Pn	12 13 25.9	+0.3
CBRU				Lg	Lg	12 13 40.3	
	670nm,0.2s						
CBRU	Bruguera	0.99	292	P	Pn	12 13 26.0	+0.3
CBRU				S	Sn	12 13 40.3	+1.0
	1μm,0.2s						
FESP	Espira	1.00	334	S	Sn	12 13 41.9	+2.5
	366nm,0.1s						
CORI	Orista	1.02	273	Pg	Pn	12 13 25.8	-0.1
CORI				Lg	Lg	12 13 39.6	
	2μm,0.2s						
CORI	Orista	1.02	273	P	Pn	12 13 25.9	-0.1
CORI				S	Sn	12 13 39.7	-0.3
	2μm,0.2s						
CLLI	Llivia	1.21	298	Pn	Pg	12 13 29.8	+0.2
	17nm,0.1s,SNR=528						
CLLI				Pg	Pb	12 13 30.5	+1.7
	160nm,0.2s,SNR=7.9						
CLLI				Sn	Sg	12 13 46.4	+1.1
	82nm,0.1s,SNR=7.9						
CLLI				Lg	Lg	12 13 47.5	
	606nm,0.1s,SNR=7.4						
CLLI	Llivia	1.21	298	P	Pg	12 13 29.5	-0.1
CLLI				S	Sg	12 13 46.7	+1.3
	709nm,0.2s						
FNEB	Nbias	1.38	316	Pn	Pg	12 13 32.0	-0.8
FNEB				Pg	Pb	12 13 34.2	+2.5
FNEB				Sn	Sg	12 13 50.6	-0.1
FNEB				Sg	Sb	12 13 54.0	+5.0
EMIR	Miracle	1.41	270	Pg	Pg	12 13 32.0	-1.4
	308nm,0.2s,SNR=7.9						
EMIR				Lg	Lg	12 13 52.0	
	716nm,0.2s,SNR=17						
ARBS	La Rabassa	1.48	291	P	Pg	12 13 33.7	-1.1
ARBS				S	Sg	12 13 55.4	+1.2
	1μm,0.4s						
CORG	Organya	1.59	282	Pn	Pb	12 13 34.9	-0.4
CORG				Sn	Sg	12 13 56.9	-0.7
CORG	Organya	1.59	282	P	Pb	12 13 34.9	-0.4
CORG				S	Sg	12 13 56.9	-0.7
MTLF	Montolieu	1.67	328	*e*Pn	Pb	12 13 35.7	-0.9
MTLF	Montolieu	1.67	328	*e*P	Pg	12 13 38.8	+0.4
MTLF				*e*Sn	Sb	12 13 58.7	+1.3
	423nm,0.3s						
MTLF	Montolieu	1.67	328	Pn	Pb	12 13 36.1	-0.6
MTLF				Pg	Pg	12 13 39.2	+0.8
MTLF				Sn	Sb	12 13 57.9	+0.4
MTLF				Sg	Sg	12 14 01.4	+1.3
MTLF	Montolieu	1.67	328	Pn	Pb	12 13 35.7	-0.9
MTLF				Sn	Sb	12 13 58.7	+1.3
	212nm,0.3s						
CEST	Esterri de Car	1.74	294	Pn	Pb	12 13 37.7	-0.2
CEST				Sn	Sb	12 14 01.0	+1.5
	503nm,0.3s						
CEST	Esterri de Car	1.74	294	P	Pb	12 13 37.7	-0.2
CEST				S	Sb	12 14 01.1	+1.5
	503nm,0.3s						
CSOR	Sort	1.75	286	Pn	Pb	12 13 37.9	-0.4
	59nm,0.2s,SNR=134						
CSOR				Pg	Pg	12 13 40.1	0.0
	45nm,0.1s,SNR=7.9						
CSOR				Lg	Lg	12 14 04.3	
	892nm,0.3s,SNR=9.0						
CSOR	Sort	1.75	286	P	Pb	12 13 37.8	-0.4
CSOR				S	Sg	12 14 01.4	-1.4
	759nm,0.3s						
EPOB	Poblet	1.84	253	Pn	Pb	12 13 37.5	-2.1
	52nm,0.3s,SNR=63						
EPOB				Pg	Pg	12 13 39.4	-2.3
	32nm,0.1s,SNR=7.9						
EPOB				Sn	Sn	12 13 59.9	-0.4
	35nm,0.1s,SNR=7.9						
EPOB				Lg	Lg	12 14 03.7	
	441nm,0.3s,SNR=5.6						
EPOB	Poblet	1.84	253	P	Pb	12 13 37.4	-2.2
EPOB				S	Sb	12 14 01.9	-0.6
	199nm,0.2s						
CAVN	Les Avellanes	1.99	270	Pn	Pb	12 13 40.1	-2.0
CAVN				Sn	Sb	12 14 06.3	-0.3
	478nm,0.3s						
CAVN	Les Avellanes	1.99	270	P	Pb	12 13 40.2	-2.0
CAVN				S	Sb	12 14 06.3	-0.3
	956nm,0.3s						
MLS	Moulis	2.00	302	Pn	Pb	12 13 41.8	-0.6
MLS				Pg	Pg	12 13 45.6	+0.9
MLS				Sg	Sg	12 14 12.8	+2.0
CTRE	Tremp	2.00	282	Pn	Pb	12 13 41.1	-1.3
CTRE				Sn	Sb	12 14 07.2	0.0
	230nm,0.2s						
CTRE	Tremp	2.00	282	P	Pb	12 13 41.1	-1.3
CTRE				S	Sb	12 14 07.2	0.0
	230nm,0.2s						
CARA	Val d’Aran	2.08	293	P	Pb	12 13 43.0	-0.7
CARA				S	Sb	12 14 09.5	+0.1
	532nm,0.3s						
MAHO	Mahon	2.13	162	Pn	Pn	12 13 38.8	-2.3
MAHO				Sn	Sn	12 14 01.2	-5.9
MAHO	Mahon	2.13	162	⇑*e*P	Pn	12 13 38.8	-2.3
MAHO				*e*S	Sn	12 14 01.2	-5.9
LASF	Ste Croix	2.17	8	*e*Pn	Pn	12 13 42.4	+0.6
LASF	Ste Croix	2.17	8	*e*Pg	Pg	12 13 49.3	+1.3
LASF				*e*Sn	Sn	12 14 10.4	+1.9
LASF				*e*Sg	Sg	12 14 17.5	+1.3
	200nm,0.2s						
LASF	Ste Croix	2.17	8	Pn	Pn	12 13 42.4	+0.6
LASF				Pg	Pg	12 13 49.3	+1.3
LASF				Sn	Sn	12 14 10.4	+1.9
LASF				Lg	Lg	12 14 17.5	
	100nm,0.2s						
ETOS	Mallorca	2.20	192	Pn	Pn	12 13 39.9	-2.3
	22nm,0.2s,SNR=110						
ETOS				Pg	Pb	12 13 43.7	-2.1
	11nm,0.1s,SNR=7.9						
ETOS				Sn	Sn	12 14 05.9	-3.3
	15nm,0.1s,SNR=10						
ASEAF	Site Antares,	2.21	66	Pn	Pn	12 13 41.1	-0.9
TRBF	Trabuc cave	2.22	10	Pn	Pn	12 13 43.5	+1.1
ARTF	Artigues	2.42	46	Pn	Pn	12 13 45.7	+0.5
ECHI	Chisagues Biel	2.50	288	Pn	Pb	12 13 48.4	-2.5
ECHI	Chisagues Biel	2.50	288	⇓Pn	Pb	12 13 48.4	-2.5
	10nm,0.1s,SNR=18						
ECHI				Pg	Pg	12 13 52.8	-1.4
	10nm,0.3s,SNR=7.9						
ECHI				Lg	Lg	12 14 25.9	
	251nm,0.3s,SNR=7.9						
ERTA	Horta de San J	2.51	248	Pn	Pn	12 13 46.5	0.0
	5.0nm,0.3s,SNR=18						
ERTA				Pg	Pb	12 13 49.7	-1.3
	28nm,0.3s,SNR=22						
ERTA				Sn	Sn	12 14 15.7	-1.0
	82nm,0.3s,SNR=5.2						
ERTA				Lg	Lg	12 14 25.4	
	85nm,0.1s,SNR=11						
ERTA	Horta de San J	2.51	248	S	Sn	12 14 16.9	+0.2
	124nm,0.4s						
EPF	Esparros	2.53	297	*e*Pn	Pn	12 13 48.1	+1.4
EPF	Esparros	2.53	297	*e*Pg	Pg	12 13 55.7	+0.9
EPF				*e*Sn	Sn	12 14 18.9	+1.7
EPF				*e*Sg	Sg	12 14 29.5	+1.9
	163nm,0.2s						
EPF	Esparros	2.53	297	Pn	Pn	12 13 48.1	+1.4
EPF				Pg	Pg	12 13 55.7	+0.9
EPF				Sn	Sn	12 14 18.9	+1.7
EPF				Lg	Lg	12 14 29.5	
	81nm,0.2s						
BSTF	la Bastide-des	2.55	39	Pn	Pn	12 13 47.9	+0.9
SMRF	Simiane la Rot	2.59	37	*e*Pn	Pn	12 13 48.4	+0.8
SMRF	Simiane la Rot	2.59	37	*e*Pg	Pg	12 13 56.6	+0.6
SMRF				*e*Sn	Sn	12 14 19.6	+0.8
SMRF				*e*Sg	Sg	12 14 30.3	+0.7
	96nm,0.3s						
SMRF	Simiane la Rot	2.59	37	Pn	Pn	12 13 48.4	+0.8
SMRF				Pg	Pg	12 13 56.6	+0.6
SMRF				Sn	Sn	12 14 19.6	+0.8
SMRF				Lg	Lg	12 14 30.3	
	96nm,0.3s						
CMAS	Mas de Barbera	2.62	244	Pn	Pn	12 13 47.0	-1.0
LMR	La Mourre	2.68	57	*e*Pn	Pn	12 13 48.8	0.0
LMR				*e*Sn	Sn	12 14 20.5	-0.4
	128nm,0.2s						
LMR	La Mourre	2.68	57	Pn	Pn	12 13 48.8	0.0
LMR				Sn	Sn	12 14 20.5	-0.4
	64nm,0.2s						
MLYF	Mely	2.69	39	Pn	Pb	12 13 50.6	-3.4
BLAF	les Blancs	2.80	43	Pn	Pn	12 13 51.4	+1.0
FRF	La Foret Royal	2.89	54	*e*Pn	Pn	12 13 51.8	+0.2
FRF				*e*Sn	Sn	12 14 27.1	+1.1
	102nm,0.2s						
FRF	La Foret Royal	2.89	54	Pn	Pn	12 13 51.8	+0.2
FRF				Sn	Sn	12 14 27.1	+1.1
	51nm,0.2s						
ESAC	San Caprasio	2.91	267	Pn	Pn	12 13 53.0	+1.0
	46nm,0.2s,SNR=32						
ESAC				Pg	Pg	12 14 00.7	-1.3
	164nm,0.2s,SNR=7.9						
ESAC				Sn	Sn	12 14 27.2	+0.6
	497nm,0.2s,SNR=4.6						
ESAC				Lg	Lg	12 14 37.0	
	1μm,0.3s,SNR=12						
MONQ	Montcuq	2.93	327	Pn	Pn	12 13 53.5	+1.3
MONQ				Pg	Pg	12 14 02.8	+0.3
OGDI	Digne	3.04	43	Pn	Pn	12 13 54.4	+0.7
VIVF	Saint-Julien-l	3.07	17	*e*Pn	Pn	12 13 54.8	+0.6
VIVF				*e*Sn	Sn	12 14 31.3	+0.7
VIVF				*e*Sg	Sg	12 14 45.8	+0.9
	118nm,0.2s						
VIVF	Saint-Julien-l	3.07	17	Pn	Pn	12 13 54.8	+0.6
VIVF				Sn	Sn	12 14 31.3	+0.7
VIVF				Lg	Lg	12 14 45.8	
	59nm,0.2s						
ETSF	Etsaut	3.10	290	*e*Pn	Pn	12 13 56.6	+2.0
ETSF	Etsaut	3.10	290	*e*Pg	Pg	12 14 05.4	-0.3
ETSF				*e*Sn	Sn	12 14 32.6	+1.3
ETSF				*e*Sg	Sg	12 14 47.1	+1.2
	361nm,0.4s						
ETSF	Etsaut	3.10	290	Pn	Pn	12 13 56.6	+2.0
ETSF				Pg	Pg	12 14 05.4	-0.3
ETSF				Sn	Sn	12 14 32.6	+1.3
ETSF				Lg	Lg	12 14 47.1	
	180nm,0.4s						
CAF	Calviac	3.16	342	*e*Pn	Pn	12 13 56.6	+1.2
CAF	Calviac	3.16	342	*e*P	Pb	12 14 00.0	-2.0
CAF	Calviac	3.16	342	*e*Pg	Pg	12 14 07.6	+0.8
CAF				*e*Sn	Sn	12 14 33.3	+0.6
CAF				*e*Sg	Sg	12 14 49.0	+1.3
	165nm,0.2s						
CAF	Calviac	3.16	342	Pn	Pn	12 13 56.6	+1.2
CAF				Pg	Pg	12 14 07.6	+0.8
CAF				Sn	Sn	12 14 33.3	+0.6
CAF				Lg	Lg	12 14 49.0	
	83nm,0.2s						
CALF	Calern	3.16	54	Pn	Pn	12 13 55.7	+0.3
ATE	Arette	3.26	292	Pn	Pn	12 13 59.4	+2.7
	0.7nm,0.3s,SNR=7.9						
ATE				Pg	Pg	12 14 06.7	-2.0
	9.4nm,0.3s,SNR=7.9						
ATE				Lg	Lg	12 14 51.7	
	176nm,0.3s,SNR=7.9						
EIBI	Ibiza	3.30	209	Pn	Pn	12 13 55.2	-2.0
	10nm,0.5s,SNR=14						
EIBI				Sn	Sn	12 14 30.4	-5.7
	14nm,0.4s,SNR=5.7						
LBL	Lubilhac	3.31	358	Pn	Pn	12 13 58.6	+1.1
EMOS	Mosqueruela	3.32	243	Pn	Pn	12 13 58.5	+0.7
	11nm,0.6s,SNR=19						
EMOS				Pg	Pb	12 14 05.3	+0.3
	4.5nm,0.2s,SNR=7.9						
EMOS				Sn	Sn	12 14 36.1	-0.9
	20nm,0.6s,SNR=5.7						
EMOS				Lg	Lg	12 14 51.1	
	116nm,0.6s,SNR=5.0						
EMOS	Mosqueruela	3.32	243	P	Pn	12 13 58.0	+0.2
EMOS				S	Sn	12 14 37.0	0.0
	59nm,0.5s						
OGAG	Argentiere	3.41	41	Pn	Pb	12 14 04.5	-1.8
SSB	Saint Sauveur	3.45	13	Pn	Pn	12 14 00.6	+1.2
MON	Monaco	3.46	57	Pn	Pn	12 14 00.1	+0.7
ESCA	l'Escarene	3.48	55	Pn	Pn	12 14 00.4	+0.6
ORIF	Oris-en-Rattie	3.49	30	*e*Pn	Pn	12 14 01.5	+1.5
ORIF				*e*Sn	Sn	12 14 41.2	+0.2
ORIF				*e*Sg	Sg	12 14 59.2	+0.9
	27nm,0.4s						
ORIF	Oris-en-Rattie	3.49	30	Pn	Pn	12 14 01.5	+1.5
ORIF	Oris-en-Rattie	3.49	30	Pn	Pn	12 14 01.5	+1.5
ORIF				Sn	Sn	12 14 41.2	+0.2
ORIF				Lg	Lg	12 14 59.2	
	13nm,0.4s						
ISO	Isola	3.49	48	Pn	Pn	12 14 00.8	+0.8
SBF	Sospel	3.53	55	*e*Pn	Pn	12 14 01.0	+0.5
SBF				*e*Sn	Sn	12 14 41.0	-1.0
	60nm,0.2s						
SBF	Sospel	3.53	55	Pn	Pn	12 14 01.0	+0.5
SBF				Sn	Sn	12 14 41.0	-1.0
	30nm,0.2s						
SURF	Saint Ours	3.56	43	Pn	Pn	12 14 02.7	+1.6
TURF	col de Turini	3.57	54	Pn	Pn	12 14 00.4	-0.7
LFF	La Frestale	3.59	328	*e*Pn	Pn	12 14 03.0	+1.8
LFF	La Frestale	3.59	328	*e*P	Pb	12 14 05.9	-3.4
LFF	La Frestale	3.59	328	*e*Pg	Pg	12 14 15.3	+0.3
LFF				*e*Sn	Sn	12 14 42.9	-0.4
LFF				*e*Sg	Sg	12 15 01.4	-0.1
	236nm,0.4s						
LFF	La Frestale	3.59	328	Pn	Pn	12 14 03.0	+1.8
LFF				Pg	Pg	12 14 15.3	+0.3
LFF				Sn	Sn	12 14 42.9	-0.4
LFF				Lg	Lg	12 15 01.4	
	118nm,0.4s						
EORO	Oroz-Betelu	3.63	287	Pn	Pn	12 14 03.9	+2.0
	6.3nm,0.3s,SNR=17						
EORO				Pg	Pg	12 14 14.6	-1.2
	0.8nm,0.2s,SNR=15						
EORO				Lg	Lg	12 15 02.9	
	182nm,0.3s,SNR=5.0						
SJPF	Ste Jean	3.63	291	*e*Pn	Pn	12 14 04.2	+2.4
SJPF	Ste Jean	3.63	291	*e*P	Pb	12 14 06.0	-4.1
SJPF	Ste Jean	3.63	291	*e*Pg	Pg	12 14 15.2	-0.6
SJPF				*e*Sn	Sn	12 14 44.4	+0.1
SJPF				*e*Sg	Sg	12 15 02.6	-0.2
	82nm,0.2s						
SJPF	Ste Jean	3.63	291	Pn	Pn	12 14 04.2	+2.4
SJPF				Pg	Pg	12 14 15.2	-0.6
SJPF				Sn	Sn	12 14 44.4	+0.1
SJPF				Lg	Lg	12 15 02.6	
	41nm,0.2s						
RJF	Les Rejaudoux	3.65	338	*e*Pn	Pn	12 14 03.1	+1.0
RJF	Les Rejaudoux	3.65	338	*e*P	Pb	12 14 07.0	-3.4
RJF	Les Rejaudoux	3.65	338	*e*Pg	Pg	12 14 16.5	+0.3
RJF				*e*Sn	Sn	12 14 45.9	+1.1
RJF				*e*Sg	Sg	12 15 04.7	+1.3
	103nm,0.2s						
RJF	Les Rejaudoux	3.65	338	Pn	Pn	12 14 03.1	+1.0
RJF				Pg	Pg	12 14 16.5	+0.3
RJF				Sn	Sn	12 14 45.9	+1.1
RJF				Lg	Lg	12 15 04.7	
	52nm,0.2s						
SAOF	Saorge	3.67	54	Pn	Pn	12 14 03.2	+0.7
MBDF	Montbardon	3.72	40	*e*Pn	Pn	12 14 05.0	+1.8
MBDF				*e*Sn	Sn	12 14 45.2	-1.5
MBDF				*e*Sg	Sg	12 15 05.2	-0.5
	28nm,0.5s						
MBDF	Montbardon	3.72	40	Pn	Pn	12 14 05.0	+1.8
MBDF				Sn	Sn	12 14 45.2	-1.5
MBDF				Lg	Lg	12 15 05.2	
	14nm,0.5s						
GRN	Grenoble	3.72	26	Pn	Pn	12 14 05.1	+1.9
TERF	Tercis-les-Bai	3.77	299	Pn	Pn	12 14 05.9	+2.3
EARA	Aranguren	3.80	285	Pn	Pn	12 14 06.7	+2.5
EARA	Aranguren	3.80	285	Pn	Pn	12 14 05.0	+0.8
	20nm,0.3s,SNR=5.7						
EARA				Lg	Lg	12 15 08.2	
	144nm,0.4s,SNR=6.6						
GDM	Grand'Maison	3.82	30	Pn	Pn	12 14 06.1	+1.6
PYM	Petit Puy Mans	3.84	356	Pn	Pn	12 14 06.2	+1.5
PYM				Pg	Pg	12 14 21.1	+1.4
PYM				Sg	Sg	12 15 11.1	+1.7
EALK	Alkurruntz	3.86	291	Pn	Pn	12 14 07.4	+2.4
EALK	Alkurruntz	3.86	291	Pn	Pn	12 14 07.4	+2.4
	12nm,0.3s,SNR=19						
EALK				Pg	Pg	12 14 18.3	-1.9
	17nm,0.3s,SNR=7.9						
EALK				Lg	Lg	12 15 09.5	
	214nm,0.5s,SNR=5.1						
OGSM	Saint Maurice	4.04	23	Pn	Pn	12 14 08.7	+1.3
AGO	Saint Agoulin	4.13	357	Pn	Pn	12 14 10.4	+1.6
PGF	Pioggiola	4.19	80	*e*Pn	Pn	12 14 07.9	-1.7

PGF				*e*Sn	**Sn**	**12 14 55.0**	**-3.3**
	88nm,0.2s						
PGF	**Pioggiola**	**4.19**	**80**	Pn	**Pn**	**12 14 07.9**	**-1.7**
PGF				Sn	**Sn**	**12 14 51.6**	**-6.8**
PGF	**Pioggiola**	**4.19**	**80**	Pn	**Pn**	**12 14 07.9**	**-1.7**
PGF				Sn	**Sn**	**12 14 55.0**	**-3.3**
	44nm,0.2s						
ETOR	**Torete**	**4.26**	**257**	Pn	**Pn**	**12 14 11.7**	**+1.1**
	24nm,0.3s,SNR=34						
ETOR				Pg	**Pb**	**12 14 22.6**	**+1.7**
	30nm,0.3s,SNR=13						
ETOR				Sn	**Sn**	**12 14 59.2**	**-0.8**
	65nm,0.2s,SNR=7.9						
ETOR				Lg	Lg	12 15 21.6	
	204nm,0.3s,SNR=5.0						
LPG	**La Plagne**	**4.31**	**33**	*e*Pn	**Pn**	**12 14 12.6**	**+1.1**
LPG	**La Plagne**	**4.31**	**33**	*e*P	Pb	12 14 16.4	-5.5
LPG				*e*Sn	**Sn**	**12 15 00.8**	**-0.8**
LPG				*e*Sg	**Sg**	**12 15 23.4**	**-1.4**
LPG	**La Plagne**	**4.31**	**33**	Pn	**Pn**	**12 14 12.6**	**+1.1**
LPG				Sn	**Sn**	**12 15 00.8**	**-0.8**
LPG				Lg	Lg	12 15 23.4	
LPL	**La Plagne**	**4.32**	**33**	*e*Pn	**Pn**	**12 14 12.7**	**+1.2**
LPL				*e*Sn	**Sn**	**12 15 01.3**	**-0.3**
LPL				*e*Sg	**Sg**	**12 15 24.5**	**-0.5**
	7.3nm,0.4s						
LPL	**La Plagne**	**4.32**	**33**	Pn	**Pn**	**12 14 12.7**	**+1.2**
LPL				Sn	**Sn**	**12 15 01.3**	**-0.3**
LPL				Lg	Lg	12 15 24.5	
	3.7nm,0.4s						
SMPL	**Sampolo**	**4.38**	**86**	Pn	**Pn**	**12 14 10.5**	**-1.6**
SMPL				Sn	**Sn**	**12 14 56.7**	**-6.1**
OG35	**Corcelles**	**4.40**	**20**	Pn	**Pn**	**12 14 13.7**	**+1.2**
RSL	**Roselend**	**4.42**	**31**	Pn	**Pn**	**12 14 14.5**	**+1.7**
TCF	**Toulx Ste Croi**	**4.45**	**349**	*e*Pn	**Pn**	**12 14 13.9**	**+0.8**
TCF	**Toulx Ste Croi**	**4.45**	**349**	*e*Pg	**Pg**	**12 14 31.2**	**-0.2**
TCF				*e*Sg	**Sg**	**12 15 29.5**	**+0.5**
	46nm,0.2s						
TCF	**Toulx Ste Croi**	**4.45**	**349**	Pn	**Pn**	**12 14 13.9**	**+0.8**
TCF				Pg	**Pg**	**12 14 31.2**	**-0.2**
TCF				Lg	Lg	12 15 29.5	
	23nm,0.2s						
BGF	**Bois d'Agland**	**4.65**	**355**	*e*Pn	**Pn**	**12 14 16.7**	**+0.9**
BGF	**Bois d'Agland**	**4.65**	**355**	*e*P	Pn	12 14 20.9	+5.1
BGF	**Bois d'Agland**	**4.65**	**355**	*e*Pg	**Pg**	**12 14 34.7**	**-0.6**
BGF				*e*Sn	**Sn**	**12 15 10.4**	**+0.9**
BGF				*e*Sg	**Sg**	**12 15 35.0**	**-0.5**
	184nm,0.4s						
BGF	**Bois d'Agland**	**4.65**	**355**	Pn	**Pn**	**12 14 16.7**	**+0.9**
BGF				Pg	**Pg**	**12 14 34.7**	**-0.6**
BGF				Sn	**Sn**	**12 15 10.4**	**+0.9**
BGF				Lg	Lg	12 15 35.0	
	92nm,0.4s						
SMF	**Signal de Mont**	**4.73**	**4**	*e*Pn	**Pn**	**12 14 18.0**	**+1.1**
SMF	**Signal de Mont**	**4.73**	**4**	*e*Pg	**Pg**	**12 14 36.0**	**-0.8**
SMF				*e*Sn	**Sn**	**12 15 11.3**	**-0.1**
SMF				*e*Sg	**Sg**	**12 15 37.5**	**-0.6**
	47nm,0.3s						
SMF	**Signal de Mont**	**4.73**	**4**	Pn	**Pn**	**12 14 18.0**	**+1.1**
SMF				Pg	**Pg**	**12 14 36.0**	**-0.8**
SMF				Sn	**Sn**	**12 15 11.3**	**-0.1**
SMF				Lg	Lg	12 15 37.5	
	23nm,0.3s						
AVF	**Avril sur Loir**	**4.87**	**359**	*e*Pn	**Pn**	**12 14 19.9**	**+1.1**
AVF	**Avril sur Loir**	**4.87**	**359**	*e*Pg	**Pg**	**12 14 38.3**	**-1.1**
AVF				*e*Sn	**Sn**	**12 15 14.5**	**-0.2**
AVF				*e*Sg	**Sg**	**12 15 42.2**	**-0.2**
	47nm,0.3s						
AVF	**Avril sur Loir**	**4.87**	**359**	Pn	**Pn**	**12 14 19.9**	**+1.1**
AVF				Pg	**Pg**	**12 14 38.3**	**-1.1**
AVF				Sn	**Sn**	**12 15 14.5**	**-0.2**
AVF				Lg	Lg	12 15 42.2	
	24nm,0.3s						
ETOB	**Tobarra**	**5.01**	**231**	Pn	**Pn**	**12 14 20.5**	**-0.4**
	4.8nm,0.4s,SNR=10						
ETOB				Sn	**Sn**	**12 15 14.5**	**-4.0**
	4.8nm,0.4s,SNR=6.5						
CHIF	**Chize**	**5.03**	**328**	Pn	**Pn**	**12 14 22.4**	**+1.4**
GIMEL	**St. Georges /**	**5.04**	**23**	Pn	**Pn**	**12 14 23.0**	**+1.7**
CABF	**La Chapelle**	**5.06**	**21**	*e*Pn	**Pn**	**12 14 22.5**	**+0.9**
CABF	**La Chapelle**	**5.06**	**21**	*e*Pg	**Pg**	**12 14 42.7**	**-0.5**
CABF				*e*Sn	**Sn**	**12 15 17.6**	**-2.1**
CABF				*e*Sg	**Sg**	**12 15 47.8**	**-0.9**
	74nm,0.7s						
CABF	**La Chapelle**	**5.06**	**21**	Pn	**Pn**	**12 14 22.5**	**+0.9**
CABF				Pg	**Pg**	**12 14 42.7**	**-0.5**
CABF				Sn	**Sn**	**12 15 17.6**	**-2.1**
CABF				Lg	Lg	12 15 47.8	
	37nm,0.7s						
SSF	**Saint Saulge**	**5.14**	**1**	*e*Pn	**Pn**	**12 14 23.3**	**+0.8**
SSF	**Saint Saulge**	**5.14**	**1**	*e*Pg	**Pg**	**12 14 43.7**	**-0.9**
SSF				*e*Sg	**Sg**	**12 15 50.7**	**-0.4**
	33nm,0.3s						
SSF	**Saint Saulge**	**5.14**	**1**	Pn	**Pn**	**12 14 23.3**	**+0.8**
SSF				Pg	**Pg**	**12 14 43.7**	**-0.9**
SSF				Lg	Lg	12 15 50.7	
	16nm,0.3s						
ELAN	**Lanestosa**	**5.22**	**287**	Pn	**Pn**	**12 14 25.3**	**+1.6**
	2.8nm,0.3s,SNR=11						
ELAN				Sn	**Sn**	**12 15 22.5**	**-1.1**
	3.5nm,0.3s,SNR=4.5						
MFF	**Saint Martin d**	**5.33**	**333**	*e*Pn	**Pn**	**12 14 26.8**	**+1.7**
MFF	**Saint Martin d**	**5.33**	**333**	*e*Pg	**Pg**	**12 14 47.4**	**-0.9**
MFF				*e*Sn	**Sn**	**12 15 26.0**	**-0.2**
MFF				*e*Sg	**Sg**	**12 15 56.3**	**-1.0**
	26nm,0.3s						
MFF	**Saint Martin d**	**5.33**	**333**	Pn	**Pn**	**12 14 26.9**	**+1.8**
MFF	**Saint Martin d**	**5.33**	**333**	Pn	**Pn**	**12 14 26.8**	**+1.7**
MFF				Pg	**Pg**	**12 14 47.4**	**-0.9**
MFF				Sn	**Sn**	**12 15 26.0**	**-0.2**
MFF				Lg	Lg	12 15 56.3	
	13nm,0.3s						
EMBD	**Embd, Matterta**	**5.34**	**35**	Pn	**Pn**	**12 14 28.2**	**+2.8**
LOR	**Lormes**	**5.35**	**3**	*e*Pn	**Pn**	**12 14 27.2**	**+1.7**
	baz=178						
LOR	**Lormes**	**5.35**	**3**	*e*Pg	**Pg**	**12 14 47.5**	**-1.2**
	baz=184						
LOR				*e*Sg	**Sg**	**12 15 58.0**	**0.0**
	23nm,0.3s,baz=183						
LOR	**Lormes**	**5.35**	**3**	Pn	**Pn**	**12 14 27.2**	**+1.7**
LOR	**Lormes**	**5.35**	**3**	Pn	**Pn**	**12 14 27.2**	**+1.7**
LOR				Pg	**Pg**	**12 14 47.5**	**-1.2**
LOR				Lg	Lg	12 15 58.0	
	11nm,0.3s						
HYF	**Humbligny**	**5.37**	**354**	*e*Pn	**Pn**	**12 14 26.7**	**+1.0**
HYF	**Humbligny**	**5.37**	**354**	*e*Pg	**Pg**	**12 14 48.4**	**-0.7**
HYF				*e*Sg	**Sg**	**12 15 58.1**	**-0.5**
HYF	**Humbligny**	**5.37**	**354**	Pn	**Pn**	**12 14 26.7**	**+1.0**
HYF				Pg	**Pg**	**12 14 48.4**	**-0.7**
HYF				Lg	Lg	12 15 58.1	
CHMF	**Charmoille**	**5.80**	**22**	Pn	**Pn**	**12 14 32.9**	**+1.2**
GUD	**Guadarrama**	**5.84**	**260**	Pn	**Pn**	**12 14 33.1**	**+0.7**
	7.9nm,0.4s,SNR=18						
GUD				Sn	**Sn**	**12 15 36.4**	**-2.7**
	3.9nm,0.4s,SNR=6.3						
GUD				Lg	Lg	12 16 08.4	
	21nm,0.6s,SNR=7.9						
LOMF	**Lomont**	**5.95**	**23**	Pn	**Pn**	**12 14 34.8**	**+1.1**
SESP	**Santiago Espad**	**5.95**	**232**	Pn	**Pn**	**12 14 34.0**	**+0.2**
	1.9nm,0.4s,SNR=7.9						
SESP				Sn	**Sn**	**12 15 38.6**	**-3.1**
	4.7nm,0.4s,SNR=7.9						
ESDC	**Sonseca Array**	**6.03**	**251**	Pn	**Pn**	**12 14 37.2**	**+2.3**
	2.8nm,0.3s,baz=68,slow=14,SNR=10						
ESDC				Lg	Lg	12 16 15.1	
	baz=64,slow=30,SNR=7.9						
PAB	**San Pablo**	**6.36**	**251**	Pn	**Pn**	**12 14 38.5**	**-0.9**
	0.3nm,0.3s,SNR=7.9						
PAB				Sn	**Sn**	**12 15 47.3**	**-4.3**
	0.3nm,0.3s,SNR=7.9						
PAB				Lg	Lg	12 16 25.0	
	19nm,0.7s,SNR=7.9						
HINF	**Hinteralfeld**	**6.38**	**21**	*e*Pn	**Pn**	**12 14 39.7**	**+0.1**
HINF	**Hinteralfeld**	**6.38**	**21**	*e*Pg	**Pg**	**12 15 06.0**	**-2.3**
HINF				*e*Sn	**Sn**	**12 15 50.6**	**-1.4**
HINF				*e*Sg	**Sg**	**12 16 28.7**	**-2.1**
	14nm,0.3s						
HINF	**Hinteralfeld**	**6.38**	**21**	Pn	**Pn**	**12 14 39.7**	**+0.1**
HINF				Pg	**Pg**	**12 15 06.0**	**-2.3**
HINF				Sn	**Sn**	**12 15 50.6**	**-1.4**
HINF				Lg	Lg	12 16 28.7	
	7.1nm,0.3s						
SFTF	**Sexfontaines**	**6.38**	**10**	*e*Pn	**Pn**	**12 14 40.4**	**+0.8**
SFTF	**Sexfontaines**	**6.38**	**10**	*e*Pg	**Pg**	**12 15 06.2**	**-2.2**
SFTF				*e*Sn	**Sn**	**12 15 50.7**	**-1.5**
SFTF				*e*Sg	**Sg**	**12 16 29.5**	**-1.5**
	38nm,0.4s						
SFTF	**Sexfontaines**	**6.38**	**10**	Pn	**Pn**	**12 14 40.4**	**+0.8**
SFTF				Pg	**Pg**	**12 15 06.2**	**-2.2**
SFTF				Sn	**Sn**	**12 15 50.7**	**-1.5**
SFTF				Lg	Lg	12 16 29.5	
	38nm,0.4s						
HAU	**Haudompre**	**6.43**	**18**	*e*Pn	**Pn**	**12 14 40.3**	**+0.1**
HAU	**Haudompre**	**6.43**	**18**	*e*Pg	**Pg**	**12 15 06.6**	**-2.6**
HAU				*e*Sn	**Sn**	**12 15 51.7**	**-1.5**
HAU				*e*Sg	**Sg**	**12 16 30.0**	**-2.4**
	14nm,0.3s						
HAU	**Haudompre**	**6.43**	**18**	Pn	**Pn**	**12 14 40.3**	**+0.1**
HAU				Pg	**Pg**	**12 15 06.6**	**-2.6**
HAU				Sn	**Sn**	**12 15 51.7**	**-1.5**
HAU				Lg	Lg	12 16 30.0	
	7.1nm,0.3s						
EARI	**Arriondas**	**6.51**	**285**	Pn	**Pn**	**12 14 43.2**	**+1.8**
	2.0nm,0.3s,SNR=9.8						
EARI				Sn	**Sn**	**12 15 53.0**	**-2.4**
	12nm,0.7s,SNR=4.7						
MEZF	**Maizieres J'vi**	**6.68**	**9**	*e*Pn	**Pn**	**12 14 44.9**	**+1.3**
MEZF	**Maizieres J'vi**	**6.68**	**9**	*e*Pg	**Pg**	**12 15 11.6**	**-2.4**
MEZF				*e*Sn	**Sn**	**12 15 57.7**	**-1.6**
MEZF				*e*Sg	**Sg**	**12 16 38.9**	**-1.5**
	50nm,0.5s,baz=198						
MEZF	**Maizieres J'vi**	**6.68**	**9**	Pn	**Pn**	**12 14 44.9**	**+1.3**
MEZF				Pg	**Pg**	**12 15 11.6**	**-2.4**
MEZF				Sn	**Sn**	**12 15 57.7**	**-1.6**
MEZF				Lg	Lg	12 16 38.9	
	50nm,0.5s						
PAGF	**Fort de Pagny**	**6.83**	**13**	*e*Pn	**Pn**	**12 14 46.5**	**+0.8**
PAGF	**Fort de Pagny**	**6.83**	**13**	*e*Pg	**Pg**	**12 15 14.1**	**-2.8**
	baz=192						
PAGF				*e*Sn	**Sn**	**12 16 00.2**	**-2.9**
PAGF				*e*Sg	**Sg**	**12 16 42.6**	**-2.6**
	28nm,0.4s,baz=196						
CDF	**Champ du Feu**	**7.04**	**21**	*e*Pn	**Pn**	**12 14 48.3**	**-0.4**
CDF				*e*Sn	**Sn**	**12 16 06.2**	**-2.1**
CDF				*e*Sg	**Sg**	**12 16 49.5**	**-2.5**
	6.5nm,0.3s						
CDF	**Champ du Feu**	**7.04**	**21**	Pn	**Pn**	**12 14 48.3**	**-0.4**
CDF				Sn	**Sn**	**12 16 06.2**	**-2.1**
CDF				Lg	Lg	12 16 49.5	
	3.2nm,0.3s						
LDF	**La Druitiere**	**7.12**	**341**	*e*Pn	**Pn**	**12 14 50.9**	**+1.2**
LDF	**La Druitiere**	**7.12**	**341**	*e*Pg	**Pg**	**12 15 20.4**	**-2.1**
LDF				*e*Sn	**Sn**	**12 16 09.2**	**-1.0**
LDF				*e*Sg	**Sg**	**12 16 52.5**	**-2.1**
	25nm,0.5s						
GRR	**Gorron**	**7.13**	**336**	*e*Pn	**Pn**	**12 14 51.1**	**+1.2**
GRR	**Gorron**	**7.13**	**336**	*e*Pg	**Pg**	**12 15 20.4**	**-2.3**
GRR				*e*Sn	**Sn**	**12 16 08.7**	**-1.9**
GRR				*e*Sg	**Sg**	**12 16 52.9**	**-2.1**
	18nm,0.3s						
GRR	**Gorron**	**7.13**	**336**	Pn	**Pn**	**12 14 51.1**	**+1.2**
GRR				Pg	**Pg**	**12 15 20.4**	**-2.3**
GRR				Sn	**Sn**	**12 16 08.7**	**-1.9**
GRR				Lg	Lg	12 16 52.9	
	8.8nm,0.3s						
EADA	**Adamuz**	**7.19**	**241**	Pn	**Pn**	**12 14 49.8**	**-0.9**
	0.6nm,0.2s,SNR=7.9						
EADA				Sn	**Sn**	**12 16 06.3**	**-5.7**
	1.0nm,0.2s,SNR=7.9						
EADA				Lg	Lg	12 16 52.6	
	6.4nm,0.7s,SNR=7.9						
FETA	**Feichten**	**7.30**	**43**	*e*Pn	Pn	12 14 56.3	+4.0
	0.6nm,0.2s						
FLN	**La Foliniere**	**7.37**	**339**	*e*Pn	**Pn**	**12 14 54.2**	**+1.1**
	baz=163						
FLN	**La Foliniere**	**7.37**	**339**	*e*Pg	**Pg**	**12 15 25.0**	**-2.2**
	baz=166						
FLN				*e*Sn	**Sn**	**12 16 14.6**	**-1.7**
FLN				*e*Sg	**Sg**	**12 17 01.0**	**-1.5**
	8.6nm,0.2s						
FLN	**La Foliniere**	**7.37**	**339**	Pn	**Pn**	**12 14 54.2**	**+1.1**
FLN				Pg	**Pg**	**12 15 25.0**	**-2.2**
FLN				Sn	**Sn**	**12 16 14.6**	**-1.7**
FLN				Lg	Lg	12 17 01.0	
	4.3nm,0.2s						
EPLA	**Plasencia**	**7.42**	**259**	Pn	**Pn**	**12 14 55.5**	**+1.5**
	1.5nm,0.2s,SNR=5.0						
EPLA				Lg	Lg	12 16 58.8	
	30nm,1.0s,SNR=7.9						
ECAL	**Calabor**	**7.57**	**274**	Pn	**Pn**	**12 14 56.7**	**+0.7**
	0.3nm,0.4s,SNR=5.8						
ECAL				Sn	**Sn**	**12 16 17.3**	**-4.2**
	3.0nm,0.3s,SNR=6.4						
ECAL				Lg	Lg	12 17 02.8	
	25nm,0.5s,SNR=5.5						
PBRG	**Braganca**	**7.58**	**272**	Pn	**Pn**	**12 14 57.7**	**+1.5**
PBRG	**Braganca**	**7.58**	**272**	*e*Pn	**Pn**	**12 14 57.7**	**+1.5**
QUIF	**Quistinic**	**7.59**	**324**	*e*Pn	**Pn**	**12 14 56.8**	**+0.6**
QUIF	**Quistinic**	**7.59**	**324**	*e*Pg		12 15 28.7	
QUIF				*e*Sn	**Sn**	**12 16 20.1**	**-1.8**
QUIF				*e*Sg		12 17 08.0	
	6.4nm,0.2s						
QUIF	**Quistinic**	**7.59**	**324**	Pn	**Pn**	**12 14 56.8**	**+0.6**
QUIF				Pg		12 15 28.7	
QUIF				Sn	**Sn**	**12 16 20.1**	**-1.8**
QUIF				Lg	Lg	12 17 08.0	
	3.2nm,0.2s						
SGMF	**Saint Gilles**	**7.61**	**328**	*e*Pn	**Pn**	**12 14 57.5**	**+1.1**
SGMF	**Saint Gilles**	**7.61**	**328**	*e*Pg		12 15 28.4	
SGMF				*e*Sn	**Sn**	**12 16 20.8**	**-1.4**
SGMF				*e*Sg		12 17 08.5	
	12nm,0.4s						
SGMF	**Saint Gilles**	**7.61**	**328**	Pn	**Pn**	**12 14 57.5**	**+1.1**
SGMF				Pg		12 15 28.4	
SGMF				Sn	**Sn**	**12 16 20.8**	**-1.4**
SGMF				Lg	Lg	12 17 08.5	
	6.2nm,0.4s						
RETA	**Reutte**	**7.63**	**41**	*e*Pn	**Pn**	**12 14 59.0**	**+2.1**
	3.8nm,0.3s						
SQTA	**Sankt Quirin**	**7.68**	**44**	*e*Pn	Pn	12 15 01.7	+4.2
	3.0nm,0.2s						
MOTA	**Moosalm**	**7.71**	**43**	*i* Pn	**Pn**	**12 15 00.9**	**+3.0**
	1.8nm,0.2s,SNR=4.4						
MVO	**Moncorvo**	**7.87**	**268**	Pn	**Pn**	**12 15 00.3**	**+0.2**
	2.4nm,0.7s,SNR=7.9						
MVO				Sn	**Sn**	**12 16 23.7**	**-5.2**
	9.6nm,0.6s,SNR=7.9						
MVO				Lg	Lg	12 17 18.8	
	15nm,0.4s,SNR=7.9						
MVO	**Moncorvo**	**7.87**	**268**	*e*Pn	**Pn**	**12 15 01.2**	**+1.1**
MVO				*e*Sn	**Sn**	**12 16 26.3**	**-2.6**
MVO				A	A	12 17 19.3	
	12nm,0.4s						
EPON	**Pontenova**	**7.92**	**284**	Pn	**Pn**	**12 15 01.3**	**+0.6**
	4.1nm,0.4s,SNR=7.9						
EPON				Sn	**Sn**	**12 16 25.5**	**-4.4**
	4.6nm,0.4s,SNR=7.9						
WTTA	**Wattenberg**	**7.93**	**45**	*e*Pn	Pn	12 15 04.6	+3.6
	6.3nm,0.3s,SNR=5.5						
WATA	**Walderalm**	**7.94**	**44**	*e*Pn	Pn	12 15 05.4	+4.2
	4.0nm,0.2s						
ROSF	**Rostrenen**	**7.96**	**326**	*e*Pn	**Pn**	**12 15 02.3**	**+1.0**
ROSF	**Rostrenen**	**7.96**	**326**	*e*P	**Pn**	**12 15 05.2**	**+3.9**
ROSF	**Rostrenen**	**7.96**	**326**	*e*Pg		12 15 35.8	
ROSF				*e*Sn	**Sn**	**12 16 28.9**	**-2.1**
ROSF				*e*Sg		12 17 19.3	
	15nm,0.5s						
ROSF	**Rostrenen**	**7.96**	**326**	Pn	**Pn**	**12 15 02.3**	**+1.0**
ROSF				Pg		12 15 35.8	
ROSF				Sn	**Sn**	**12 16 28.9**	**-2.1**
ROSF				Lg	Lg	12 17 19.3	
	7.4nm,0.5s						
ABTA	**Abfaltersbach**	**8.11**	**50**	*i* Pn	**Pn**	**12 15 05.7**	**+2.4**
	3.6nm,0.4s,SNR=5.0						
BAIF	**Baives**	**8.15**	**4**	*e*Pn	**Pn**	**12 15 05.0**	**+1.1**
BAIF	**Baives**	**8.15**	**4**	*e*Pg		12 15 37.9	
BAIF				*e*Sn	**Sn**	**12 16 33.2**	**-2.5**
BAIF				*e*Sg		12 17 25.0	
	4.3nm,0.3s						
BAIF	**Baives**	**8.15**	**4**	Pn	**Pn**	**12 15 05.0**	**+1.1**
BAIF				Pg		12 15 37.9	
BAIF				Sn	**Sn**	**12 16 33.2**	**-2.5**
BAIF				Lg	Lg	12 17 25.0	
	2.2nm,0.3s						
DOU	**Dourbes**	**8.21**	**5**	pPn	**Pn**	**12 15 07.1**	**+2.4**
DOU				Sn	**Sn**	**12 16 34.9**	**-2.2**
GIVF	**Givet**	**8.24**	**6**	*e*Pn	**Pn**	**12 15 05.4**	**+0.4**
GIVF	**Givet**	**8.24**	**6**	*e*Pg		12 15 41.0	
GIVF				*e*Sn	**Sn**	**12 16 35.5**	**-2.2**
GIVF				*e*Sg		12 17 27.3	
	5.4nm,0.3s						
GIVF	**Givet**	**8.24**	**6**	Pn	**Pn**	**12 15 05.4**	**+0.4**
GIVF				Pg		12 15 41.0	
GIVF				Sn	**Sn**	**12 16 35.5**	**-2.2**
GIVF				Lg	Lg	12 17 27.3	
	2.7nm,0.3s						
PCBR	**Castelo Branco**	**8.51**	**259**	Sn	**Sn**	**12 16 38.8**	**-5.7**
	2.2nm,0.6s						
PCBR	**Castelo Branco**	**8.51**	**259**	*e*Sn	**Sn**	**12 16 38.8**	**-5.7**
PCBR				A	A	12 17 50.0	
	4.5nm,0.6s						
PCAB	**Cabril**	**8.55**	**272**	Lg	Lg	12 17 39.2	
	3.0nm,0.5s						
PCAB	**Cabril**	**8.55**	**272**	*e*Sg		12 17 39.2	
PCAB				A	A	12 17 39.6	
	5.9nm,0.5s						
PMRV	**Marv??o**	**8.58**	**257**	Pn	**Pn**	**12 15 11.5**	**+1.7**
PMRV				Sn	**Sn**	**12 16 42.4**	**-3.9**
	6.2nm,0.6s						
PMRV	**Marv??o**	**8.58**	**257**	*e*Pn	**Pn**	**12 15 11.5**	**+1.7**
PMRV				*e*Sn	**Sn**	**12 16 42.4**	**-3.9**
PMRV				A	A	12 17 53.7	
	6.2nm,0.6s						

NIED ***19*** *12:19:00,24°.00N×122°.30E,h35^{km},Mw5.8 Best double couple: M$_0$6.48000×10^{17} NP1:ϕ_s66.00000°,δ85.00000°,λ70.00000°. NP2:ϕ_s323.00000°,δ21.00000°,λ166.00000°.*

IDC ***19*** *12:19:22.8±0.3,24°.20N×122°.45E,h0^{km},mb5.3/45, mb1 5.4/48,mb1mx5.4/49,mbtmp5.3/48,ML3.1/1,MS5.5/37, Ms1 5.5/37,ms1mx5.4/42,Error ellipse: s-maj=11.4km s-min=8.7km az=69.0*

BJI ***19*** *12:19:22.5±0.0,24°.05N×122°.42E,h10^{km},mB5.8/71, mb5.2/73,ML5.6/11,Ms5.9/92,Ms7 5.9/67*

MOS ***19*** *12:19:24.3±1.0,24°.16N×122°.38E,h21^{km},mb5.9/117, MS5.6/76,Error ellipse: s-maj=5.6km s-min=3.4km az=112.7*

NEIC ***19*** *12:19:24.8,24°.09N×122°.23E,h19^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.35; M$_{\theta\theta}$-2.30; M$_{\phi\phi}$0.95; M$_{r\theta}$2.19; M$_{\theta\phi}$0.98; M$_{\phi r}$1.15; Fault plane solution: M$_0$3.33000×10^{17} NP1:ϕ_s71.62000°, δ75.48000°,λ57.25000°. NP2:ϕ_s320.31000°,δ35.49000°, λ154.41000°. Principal axes: T 3.2967, Plg49.0000°, Azm306.0000°; N 0.0717, Plg32.0000°, Azm81.0000°; P -3.3684, Plg23.0000°, Azm186.0000°;*

JMA ***19*** *12:19:25.9±0.1,23°.94N×122°.28E,h21^{km}±3^{km},M6.0*

JMA Felt II J1.

BGR ***19*** *12:19:25.9±0.0,23°.92N×122°.36E,h33^{km},mb5.8,Ms6.0*

NEIC ***19*** *12:19:26.0±1.8,24°.11N±0°.05×122°.26E±0°.04,h20^{km}±1^{km}, mb5.7/324,Ms_20 5.6/569,Mwb5.6/58,Mww5.8, ML5.6(TAP),Mwc5.8(GCMT),Error ellipse: s-maj=9.8km s-min=5.2km az=152.0*

TAP ***19*** *12:19:26.1,24°.01N×122°.32E,h23^{km},ML5.8,D*

ASIES ***19*** *12:19:27.0,24°.05N×122°.27E,h19^{km},MW5.3*

GCMT ***19*** *12:19:28.0±0.1,23°.86N±0°.01×122°.18E±0°.01,h33^{km}, MW5.7/158,Moment Tensor Solution. s145,c292; s158,c385; Duration: 1^{s}8 Moment tensor: Scale 10^{17} Nm; M$_{rr}$2.93±.04; M$_{\theta\theta}$-3.79±.03; M$_{\phi\phi}$0.85±.04; M$_{r\theta}$2.92±.07; M$_{\theta\phi}$0.21±.03; M$_{\phi r}$1.49±.06; Best double couple: M$_0$4.75000×10^{17} NP1:ϕ_s296.00000°,δ29.00000°, λ131.00000°. NP2:ϕ_s71.00000°,δ69.00000°,λ70.00000°. Principal axes: T 4.5990, Plg61.0000°, Azm311.0000°; N 0.2950, Plg19.0000°, Azm79.0000°; P -4.9010, Plg21.0000°, Azm176.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***19*** *12:19:28,23°.88N×122°.17E,h30^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.51; M$_{\theta\theta}$-3.66; M$_{\phi\phi}$1.14; M$_{r\theta}$3.36; M$_{\theta\phi}$0.35; M$_{\phi r}$1.77; Fault plane solution: M$_0$5.00000×10^{17} NP1:ϕ_s68.00000°, δ73.00000°,λ67.00000°. NP2:ϕ_s303.00000°,δ28.00000°, λ141.00000°. Principal axes: T 4.8326, Plg56.0000°, Azm309.0000°; N 0.3267, Plg22.0000°, Azm75.0000°; P -5.1593, Plg24.0000°, Azm176.0000°;*

NEIC ***19*** *12:19:37,24°.09N×122°.26E,h12^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.66; M$_{\theta\theta}$-2.98; M$_{\phi\phi}$0.32; M$_{r\theta}$5.76; M$_{\theta\phi}$0.55; M$_{\phi r}$1.30; Fault plane solution: M$_0$6.57000×10^{17} NP1:ϕ_s80.00000°, δ78.00000°,λ80.00000°. NP2:ϕ_s299.00000°,δ16.00000°, λ128.00000°. Principal axes: T 6.5632, Plg56.0000°, Azm337.0000°; N 0.0169, Plg10.0000°, Azm82.0000°; P -6.5801, Plg32.0000°, Azm178.0000°;*

ISC 19 12:19:26.4±0.4,**23°.99N**±0°.02×**122°.32E**±0°.01,**h24**^{km}±2^{km}, **h25**^{km}**:pP-P,n1748,**σ**1**^{s}**57**/1763,**mb5.6**/372,**MS5.7**/376, **156C-92D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.59**	**343**	⇓P	**Pb**	**12 19 37.8**	**-0.3**
	baz=341						
EOS1				S	**Sb**	**12 19 46.8**	**+0.8**
	baz=341						
HWA	**Hwalien**	**0.66**	**269**	*e*P	**Pb**	**12 19 39.3**	**+0.1**
	baz=254						
HWA				S	**Sb**	**12 19 48.7**	**+0.8**
	baz=254						
ENLB	**Shoufeng**	**0.66**	**263**	P	**Pb**	**12 19 38.4**	**-0.9**
	baz=249						
ENLB				S	**Sb**	**12 19 48.1**	**-0.1**
	baz=249						
TWD	**Chiawan**	**0.67**	**278**	⇑*i*P	**Pb**	**12 19 39.0**	**-0.5**
	baz=276						
TWD				S	**Sb**	**12 19 48.2**	**-0.1**
	baz=276						
ENA	**Nanau**	**0.69**	**310**	⇓*i*P	**Pb**	**12 19 39.0**	**-0.8**
	baz=317						
NACB	**Ninganchiao**	**0.69**	**286**	⇑P	**Pb**	**12 19 39.4**	**-0.4**
	baz=269						
NACB				S	**Sb**	**12 19 49.4**	**+0.4**
	baz=269						
NACB	**Ninganchiao**	**0.69**	**286**		**Pb**	**12 19 39.4**	**-0.4**
JYNG	**Yonagunijimaku**	**0.73**	**51**	⇓P	**Pb**	**12 19 40.7**	**+0.2**
JYNG				*e*S	**Sn**	**12 19 51.2**	**-0.5**
TWC	**Suao**	**0.76**	**325**	⇓*i*P	**Pb**	**12 19 39.9**	**-1.0**
	baz=324						
TWC				*e*S	**Sb**	**12 19 49.8**	**-1.0**
	baz=324						
YOJ	**Yonaguni jima**	**0.79**	**53**	*e*P	**Pn**	**12 19 41.9**	**-0.1**
	baz=62						
YOJ				*e*S	**Sn**	**12 19 52.6**	**-0.4**
	baz=62						
YOJ	**Yonaguni jima**	**0.79**	**53**	⇓P	**Pn**	**12 19 41.7**	**-0.3**
YOJ				*e*S	**Sn**	**12 19 52.6**	**-0.4**
YOJ	**Yonaguni jima**	**0.79**	**53**		**Pn**	**12 19 42.2**	**+0.2**
YOJ				Sn	**Sn**	**12 19 53.2**	**+0.3**
ETLH	**Xiulin Townshi**	**0.80**	**286**	⇑P	**Pb**	**12 19 41.1**	**-0.6**
	baz=272						
ETLH				*e*S	**Sb**	**12 19 52.5**	**+0.4**
	baz=272						
ESL	**Shilin**	**0.83**	**258**	⇑*i*P	**Pb**	**12 19 41.0**	**-1.2**
	baz=247						
ESL				*e*S	**Sb**	**12 19 52.5**	**-0.5**
	baz=247						
EGFH	**Guangfu**	**0.88**	**249**	*e*P	**Pb**	**12 19 42.3**	**-0.6**
	baz=248						
EGFH				*e*S	**Sb**	**12 19 54.5**	**+0.1**
	baz=248						
ILA	**Ilan**	**0.94**	**326**	*e*P	**Pb**	**12 19 43.6**	**-0.4**
	baz=324						
ILA				S	**Sn**	**12 19 56.8**	**+0.1**
	baz=324						
TWE	**Neicheng**	**0.94**	**321**	⇓P	**Pb**	**12 19 43.6**	**-0.5**
	baz=327						
TWE				S	**Sb**	**12 19 56.5**	**+0.3**
	baz=327						
ENTT	**Nioudou**	**0.95**	**313**	⇓P	**Pb**	**12 19 43.8**	**-0.4**
	baz=323						
ENTT				S	**Sb**	**12 19 56.4**	**0.0**
	baz=323						
HGSD	**Ruisui**	**0.96**	**239**	⇓P	**Pb**	**12 19 43.2**	**-1.1**
	baz=239						
HGSD				S	**Sb**	**12 19 55.8**	**-0.8**
	baz=239						
NDT	**Datong Townshi**	**0.96**	**310**	⇑*i*P	**Pb**	**12 19 44.1**	**-0.3**
	baz=308						

NDT	baz=308			S	Sb	12 19 57.1	+0.4
NNSB	Datong baz=283	0.96	297	⇑P	Pb	12 19 43.9	-0.6
NNSB	baz=283			S	Sb	12 19 56.4	-0.5
NNSH	Datong baz=284	0.96	297	⇑*i*P	Pb	12 19 44.0	-0.5
NNSH	baz=284			*e*S	Sb	12 19 56.9	0.0
NTC	Toucheng baz=330	0.97	333	⇓P	Pn	12 19 44.2	-0.3
NTC	baz=330			*e*S	Sn	12 19 58.2	+0.6
WHF	Hehuan Shan baz=278	0.98	279	⇑*i*P	Pb	12 19 44.0	-1.0
WHF	baz=278			S	Sb	12 19 57.2	-0.4
SLBB	Yuanshan baz=328	0.99	321	⇓*i*P	Pn	12 19 43.8	-1.1
SLBB	baz=328			*e*S	Sb	12 19 57.5	0.0
EHY	Hungye baz=242	1.03	243	⇓*e*P	Pn	12 19 44.4	-1.0
EHY	baz=242			S	Sb	12 19 58.3	-0.5
OWD	Renai baz=267	1.05	268	⇑*e*P	Pn	12 19 44.9	-0.8
OWD	baz=267			*e*S	Sb	12 19 57.8	-1.6
CHGB	Renai baz=261	1.05	274	⇑P	Pn	12 19 45.2	-0.6
CHGB	baz=261			S	Sb	12 19 58.5	-1.0
TWB1	Santiao Chiao baz=329	1.06	343	⇑P	Pn	12 19 45.9	+0.1
TWB1	baz=329			S	Sb	12 19 59.5	0.0
TIPB	Shuangxi baz=333	1.08	335	⇑*i*P	Pn	12 19 46.0	-0.1
TIPB	baz=333			S	Sb	12 19 59.5	-0.7
TWT	Tachien baz=272	1.08	284	⇑*e*P	Pn	12 19 46.1	-0.1
TWT	baz=272			*e*S	Sn	12 20 01.3	+0.8
NWLT	Wulai baz=314	1.08	317	⇑P	Pn	12 19 46.3	+0.2
NWLT	baz=314			*e*S	Sn	12 20 01.0	+0.6
TDCB	Techi baz=273	1.10	284	⇑P	Pn	12 19 46.0	-0.3
TDCB	baz=273			*e*S	Sb	12 19 59.2	-1.5
YHNB	Yeheng baz=306	1.10	308	⇑P	Pn	12 19 46.2	-0.1
YHNB	baz=306			*e*S	Sb	12 20 00.5	-0.3
YHNB	Yeheng	1.10	308		Pn	12 19 46.2	-0.1
VWDT	VWDT baz=257	1.10	258	⇑P	Pn	12 19 45.9	-0.4
VWDT	baz=257			*e*S	Sb	12 19 59.4	-1.4
NSK	Sanguang baz=306	1.11	308	⇑*i*P	Pn	12 19 46.4	-0.2
NSK	baz=306			S	Sn	12 20 01.5	+0.3
TWF1	Yuli baz=236	1.13	236	⇓*i*P	Pn	12 19 46.0	-0.8
TWF1	baz=236			*e*S	Sn	12 19 59.7	-1.8
NWF	Wu-fen Shan baz=333	1.19	336	⇑*i*P	Pn	12 19 47.6	+0.1
NWF	baz=333			*e*S	Sb	12 20 03.5	+0.2
WFSB	Wu-fen Shan baz=333	1.19	336	⇑P	Pn	12 19 47.6	+0.1
WFSB	baz=333			S	Sb	12 20 03.7	+0.5
TWA	Mucha baz=324	1.20	326	⇑P	Pb	12 19 48.6	+0.1
TWA	baz=324			*e*S	Sb	12 20 04.5	+1.0
NHDH	Xindian Distri baz=336	1.21	323	⇑P	Pb	12 19 48.8	+0.1
FULB	Fuli baz=218	1.23	230	⇓*i*P	Pn	12 19 47.0	-1.1
FULB	baz=218			*e*S	Sn	12 20 02.9	-1.0
TATO	Taipei	1.24	323	P	Pb	12 19 48.8	-0.4
TATO	Taipei	1.24	323		Pb	12 19 49.2	0.0
CHKT	Chengkung baz=225	1.25	225	⇓P	Pn	12 19 47.0	-1.3
CHKT	baz=225			*e*S	Sn	12 20 02.2	-2.1
SSLB	Suanglung baz=250	1.27	261	⇑P	Pn	12 19 48.2	-0.5
SSLB	baz=250			S	Sn	12 20 03.4	-1.5
SSLB	Suanglung	1.27	261		Pn	12 19 48.5	-0.1
SSLB				Sn	Sn	12 20 03.7	-1.3
TAP1	Taipei baz=322	1.28	325	⇑*i*P	Pb	12 19 49.6	-0.2
TAP1	baz=322			S	Sb	12 20 06.1	+0.4
DPDB	Guoxing baz=262	1.28	272	⇑P	Pn	12 19 48.8	0.0
DPDB	baz=262			*e*S	Sn	12 20 04.7	-0.5
TAP	Taipei baz=322	1.28	325	⇑*e*P	Pn	12 19 48.7	-0.1
TAP	baz=322			*e*S	Sb	12 20 06.2	+0.2
WHP	Taichung City baz=271	1.29	283	⇑*i*P	Pn	12 19 49.3	+0.3
WHP	baz=271			*e*S	Sn	12 20 05.9	+0.3
WLTB	Daxi baz=309	1.30	312	⇑*i*P	Pb	12 19 50.0	-0.1
WLTB	baz=309			S	Sb	12 20 07.2	+0.8
SMLT	Sun Moon Lake baz=255	1.30	266	⇑*i*P	Pn	12 19 49.2	0.0
SMLT	baz=255			S	Sn	12 20 05.2	-0.7
IRIF	Iriomote-Funau	1.33	75	⇓P	Pb	12 19 50.5	-0.2
IRIF				S	Sb	12 20 09.5	+2.1
YM01	YM01 baz=344	1.34	330	⇑*i*P	Pn	12 19 49.8	+0.1
TYC	Yuchr baz=266	1.34	267	⇑P	Pn	12 19 49.6	0.0
TYC	baz=266			*e*S	Sn	12 20 06.6	-0.1
YUS	Yu-Shan baz=237	1.35	249	*e*P	Pn	12 19 50.1	-0.1
YM10	YM10 baz=344	1.35	329	⇑*i*P	Pn	12 19 49.9	0.0
YM11	YM11 baz=345	1.36	330	⇑P	Pn	12 19 49.9	0.0
HATJ	Hateruma jima	1.36	87	P	Pb	12 19 51.1	-0.1
YM05	YM05 baz=344	1.36	330	⇑*i*P	Pn	12 19 49.9	0.0
LIOB	Emei baz=297	1.36	299	⇑*i*P	Pb	12 19 50.9	-0.3
LIOB	baz=297			S	Sb	12 20 08.6	+0.4
YM04	YM04 baz=325	1.36	329	⇑P	Pn	12 19 50.0	+0.1
YM04	baz=325			*e*S	Sb	12 20 08.1	-0.2
NSTT	Nanjuang baz=284	1.36	298	⇑*i*P	Pb	12 19 50.9	-0.4
NSTT	baz=284			S	Sb	12 20 08.7	+0.4
YM08	YM08 baz=328	1.37	331	⇑P	Pn	12 19 49.9	-0.2
YM08	baz=328			*e*S	Sn	12 20 07.3	-0.1
WHYT	Xinyi Township baz=249	1.38	258	⇑P	Pn	12 19 50.3	+0.2
WHYT	baz=249			*e*S	Sn	12 20 07.8	+0.2
TWS1	Kuangyinshan baz=333	1.38	324	⇑P	Pn	12 19 50.9	+0.7
TWS1	baz=333			*e*S	Sb	12 20 09.4	+0.6
YM03	YM03 baz=326	1.38	329	⇑P	Pn	12 19 50.2	-0.1
YM03	baz=326			*e*S	Sb	12 20 08.9	-0.1
ANP	Anpu baz=327	1.40	329	⇑P	Pn	12 19 50.5	-0.1
NTST	Danshui baz=341	1.42	326	*e*P	Pb	12 19 51.5	-0.7
NCU	National Centr baz=310	1.42	314	*e*P	Pn	12 19 51.4	+0.6
NCU	baz=310			*e*S	Sb	12 20 10.5	+0.5
NCUH	Zhongli baz=310	1.42	314	⇑*e*P	Pn	12 19 51.4	+0.6
NCUH	baz=310			*e*S	Sb	12 20 11.0	+1.0
ELDTW	Lidau baz=236	1.44	237	⇓P	Pn	12 19 50.1	-1.0
ELDTW	baz=236			*e*S	Sn	12 20 08.0	-1.3
TWY	Chenhua baz=330	1.44	333	⇑P	Pn	12 19 51.4	+0.4
TWY	baz=330			*e*S	Sb	12 20 10.4	-0.1
SBCB	Hsinchu baz=301	1.46	304	⇑P	Pb	12 19 52.2	-0.6
SBCB	baz=301			S	Sb	12 20 11.8	+0.8
ALS	Alishan baz=251	1.47	251	⇓*e*P	Pn	12 19 52.2	+0.6
ALS	baz=251			*e*S	Sn	12 20 09.2	-1.1
WJS	Zhushan baz=263	1.47	264	⇑P	Pb	12 19 52.5	-0.5
WJS	baz=263			*e*S	Sb	12 20 12.5	+1.2
HSN	Hsinchu baz=302	1.48	304	P	Pn	12 19 52.1	+0.6
HSN	baz=302			S	Sb	12 20 11.7	+0.2
NSY	Sanyi baz=285	1.49	287	⇑*i*P	Pb	12 19 53.1	-0.3
NSY	baz=285			*e*S	Sb	12 20 12.3	+0.5
TWH	Lutao baz=212	1.49	212	⇓*i*P	Pn	12 19 50.9	-0.8
TWH	baz=212			S	Sn	12 20 08.6	-1.8
NMLH	Miaoli baz=289	1.50	292	⇑*e*P	Pb	12 19 53.4	-0.2
NMLH	baz=289			S	Sb	12 20 13.4	+1.2
WNT	Mingjian baz=265	1.50	266	*e*P	Pb	12 19 53.2	-0.5
WNT	baz=265			*e*S	Sb	12 20 12.8	+0.5
TCU	Taichung baz=275	1.51	276	⇑*i*P	Pb	12 19 53.6	-0.2
TCU	baz=275			S	Sb	12 20 13.5	+0.9
PTSB	Yuanli baz=285	1.55	288	*e*P	Pb	12 19 54.0	-0.3
PTSB	baz=285			*e*S	Sb	12 20 13.9	+0.3
CHN5	Tsauling baz=244	1.56	256	⇑P	Pn	12 19 53.6	+0.9
CHN5	baz=244			*e*S	Sn	12 20 13.0	+0.9
JKRS	Kuro-shima	1.56	80	⇓P	Pb	12 19 54.1	-0.5
WDJ	Dajia District baz=281	1.58	284	⇑*e*P	Pb	12 19 54.1	-0.8
WDJ	baz=281			*e*S	Sb	12 20 14.2	-0.2
WCHH	Zhanghua baz=272	1.61	274	⇑P	Pb	12 19 54.9	-0.6
WCHH	baz=272			*e*S	Sb	12 20 16.6	+1.1
TWGBT	Beinan baz=237	1.63	225	⇓P	Pn	12 19 52.5	-1.0
TWGBT	baz=237			*e*S	Sn	12 20 11.9	-1.9
TWG	Pinlang baz=236	1.63	225	⇓P	Pn	12 19 52.6	-1.0
TWG	Pinlang	1.63	225		Pn	12 19 52.9	-0.7
TTN	Taitung baz=221	1.63	222	*e*P	Pn	12 19 53.5	-0.1
WGK	Gukeng baz=259	1.64	260	*e*P	Pb	12 19 55.2	-0.8
WGK	baz=259			*e*S	Sb	12 20 15.7	-0.5
PCYT	Pengchaiyu baz=334	1.65	352	*e*P	Pn	12 19 53.0	-0.9
PCYT	baz=334			*e*S	Sn	12 20 14.9	+0.5
STYT	Tauyuan baz=230	1.65	241	*e*P	Pn	12 19 54.4	+0.4
STYT	baz=230			*e*S	Sn	12 20 14.4	-0.1
WDLH	Douliu baz=259	1.66	260	⇑*e*P	Pb	12 19 55.6	-0.7
WDLH	baz=259			*e*S	Sb	12 20 17.6	+0.8
TPUB	Ta-pu baz=246	1.69	247	⇓P	Pb	12 19 55.9	-1.1
TPUB	baz=246			S	Sn	12 20 16.5	+1.1
TPUB	Ta-pu	1.69	247		Pb	12 19 56.0	-1.0
TPUB				Sn	Sn	12 20 16.3	+0.9
JIJ	Ishigaki jima	1.71	77	⇓P	Pn	12 19 55.5	+0.9
JIJ				S	Sb	12 20 18.1	0.0
CHN4	Tsaushan baz=248	1.71	249	*e*P	Pn	12 19 56.0	+1.3
CHN4	baz=248			*e*S	Sb	12 20 17.7	-0.4
WTP	Ta-pu baz=245	1.73	245	⇓P	Pn	12 19 56.1	+1.0
WTP	baz=245			*e*S	Sb	12 20 18.4	-0.5
CHN2	Minshiung baz=255	1.75	255	*e*P	Pb	12 19 57.4	-0.5
CHN2	baz=255			*e*S	Sb	12 20 19.2	-0.2
RLNB	Erlin baz=266	1.80	267	⇑P	Pb	12 19 57.5	-1.2
RLNB	baz=266			S	Sb	12 20 20.4	-0.4
CHY	Chiayi baz=254	1.81	255	*e*P	Pb	12 19 58.1	-0.7
CHY	baz=254			*e*S	Sb	12 20 20.0	-0.9
SLGT	Liugui baz=227	1.83	238	⇓*e*P	Pn	12 19 57.3	+1.0
TWK	Hsinying baz=247	1.83	247	*e*P	Pn	12 19 57.8	+1.4
TWK	baz=247			*e*S	Sb	12 20 20.6	-1.1
CHN1	Nanshi baz=244	1.83	244	*e*P	Pn	12 19 57.8	+1.5
CHN1	baz=244			*e*S	Sb	12 20 21.2	-0.5
SGST	Jiashian baz=230	1.83	241	*e*P	Pn	12 19 56.7	+0.3
SGST	baz=230			*e*S	Sb	12 20 20.8	-1.0
SNST	Tainan City baz=246	1.84	246	*e*P	Pb	12 19 58.1	-1.3
SNST	baz=246			*e*S	Sb	12 20 21.7	-0.3
ECL	Taimali baz=223	1.87	223	*e*P	Pn	12 19 55.7	-1.2
ECL	baz=223			*e*S	Sn	12 20 18.1	-1.6
WTCT	Ta-ch'eng baz=265	1.87	267	*e*P	Pn	12 19 58.1	+1.2
WTCT	baz=265			*e*S	Sb	12 20 22.5	-0.4
JISG	Ishigakijimahi	1.91	71	⇓P	Pn	12 19 58.3	+0.9
JISG				*e*S	Sb	12 20 23.3	-0.7
WLGB	Puzi baz=254	1.92	255	*e*P	Pn	12 19 58.3	+0.7
WMLT	Mailiao baz=279	1.93	265	*e*P	Pb	12 19 59.5	-1.4
WMLT	baz=279			*e*S	Sb	12 20 24.1	-0.5
WSF	Szhu baz=259	1.95	260	*e*P	Pn	12 19 59.5	+1.4
WSF	baz=259			*e*S	Sb	12 20 24.3	-1.0
SSD	Sandimen baz=222	1.98	232	*e*P	Pn	12 19 58.9	+0.4
CHN3	Shinhua baz=243	2.01	244	*e*P	Pb	12 20 01.7	-0.6
CHN8	Yiju baz=252	2.04	252	*e*P	Pn	12 20 00.5	+1.3
CHN8	baz=252			S	Sn	12 20 25.8	+2.0
LAY	Lan-yu baz=210	2.06	200	*e*P	Pn	12 19 58.2	-1.4
LAY	baz=210			*e*S	Sn	12 20 22.2	-2.4
MASBT	Mashibuluo baz=221	2.07	229	⇓P	Pn	12 19 59.7	+0.1
TAW	Tawu baz=229	2.09	219	*e*P	Pn	12 19 59.4	-0.5
EAST	Anshuo baz=221	2.09	221	⇓*e*P	Pn	12 19 59.2	-0.9
TWM1	Shoushan baz=236	2.09	237	⇓*e*P	Pb	12 20 02.6	-1.1
SGLT	Jiouru baz=233	2.10	234	*e*P	Pb	12 20 03.0	-0.8
SCLT	Jiali baz=248	2.11	248	*e*P	Pn	12 20 01.9	+1.7
SCLT	baz=248			S	Sb	12 20 28.6	-1.2
TAI1	Yung-k'ang baz=244	2.14	244	*e*P	Pb	12 20 02.9	-1.6
TAI1	baz=244			*e*S	Sb	12 20 29.6	-1.0
SNJT	Kaohsiung City baz=237	2.20	236	⇓*e*P	Pb	12 20 04.2	-1.3
SNJT	baz=237			*e*S	Sb	12 20 32.7	+0.4
SSPT	Xinbi baz=221	2.20	227	*e*P	Pn	12 20 02.9	+1.4
SCZT	Fangliau baz=224	2.24	225	*e*P	Pn	12 20 02.3	+0.2
JTJ	Tarama	2.27	73	⇓P	Pn	12 20 03.8	+1.5
JTJ				S	Sb	12 20 33.1	-1.2
KAU	Kaohsiung baz=233	2.33	233	*e*P	Pn	12 20 05.3	+2.1
WLCH	Liuqiu baz=243	2.42	228	⇓P	Pb	12 20 07.9	-1.3
TWP	Hsiaoliuchiu baz=244	2.43	228	⇓*e*P	Pb	12 20 08.0	-1.5
HEN	Hengchun baz=217	2.45	217	*e*P	Pn	12 20 05.9	+1.0
TSEB	Hengchuen, Pin baz=214	2.46	213	*e*P	Pn	12 20 05.8	+0.9
TWKBT	Hengchun baz=216	2.47	215	⇓P	Pn	12 20 05.3	+0.2
TWKBT	baz=216			*e*S	Sn	12 20 35.5	+1.0
TWK1	Hengchun baz=215	2.47	215	⇓P	Pn	12 20 05.2	+0.1
WDGT	Dungji baz=242	2.55	254	*e*P	Pn	12 20 06.7	+0.5
WDGT	baz=242			*e*S	Sn	12 20 35.8	-0.6
PHUB	P'eng-hu baz=259	2.56	260	⇑P	Pn	12 20 07.0	+0.6
PHUB	baz=259			S	Sn	12 20 36.4	-0.4
PNG	Penghu baz=260	2.57	261	⇑P	Pn	12 20 06.9	+0.4
PNG	baz=260			S	Sn	12 20 38.0	+1.0
JIRB	Irabujima	2.73	72	P	Pn	12 20 10.2	+1.5
JIRB				*e*S	Sb	12 20 44.3	-3.3
VCHM	Qimei baz=254	2.76	254	*e*P	Pn	12 20 09.9	+0.7
VCHM	baz=254			*e*S	Sn	12 20 41.6	-0.2
PTTC	Pingtan baz=301	2.77	304	⇑*e*P	Pn	12 20 08.6	-0.7
VWUC	VWUC baz=290	2.80	292	⇑*e*P	Pn	12 20 09.3	-0.3
JIKM	Ikemajima	2.83	70	P	Pn	12 20 11.7	+1.7
JIKM				*e*S	Sn	12 20 46.3	+3.0
JMJ	Miyako jima 2 baz=74	2.83	72	*e*P	Pn	12 20 12.3	+2.2
JMJ2	Miyako jima3	2.84	74	⇑P	Pn	12 20 12.7	+2.4
JMJ2				*e*S	Sn	12 20 46.6	+2.9
JOGS	Gusukube	2.92	74	P	Pn	12 20 13.7	+2.4
JOGS				*e*S	Sn	12 20 48.6	+3.0
MATB	Ma-tsu baz=313	3.05	316	⇑*e*P	Pn	12 20 12.3	-0.8
PTMZ	Houxiangcun baz=287	3.10	290	⇑*e*P	Pn	12 20 13.6	-0.2
PTMZ	baz=287			*e*S	Sn	12 20 48.7	-1.4
LYJJ	Jianjiangzhen baz=316	3.45	318	⇑*e*P	Pn	12 20 17.8	-0.8
XPSS	Dashiqiu baz=335	3.51	327	⇑*e*P	Pn	12 20 19.0	-0.4
QZH	Quanzhou	3.53	286	⇑*i*Pn	Pn	12 20 19.3	-0.4
QZH				Sn	Sn	12 20 58.0	-2.7
QZH	comp=N,4μm,1.1s			smax	smax		
QZH	comp=E,3μm,0.4s			smax	smax		
QZH	comp=N,95μm,15.9s			LR	LR		
QZH	comp=E,102μm,14.7s			LR	LR		
QZH	comp=Z,122μm,12.6s			LR	LR		
KNM	Kinmen baz=276	3.58	278	⇑*e*P	Pn	12 20 21.8	+1.5
KNMB	Chin-men Tao baz=277	3.62	278	⇑*e*P	Pn	12 20 20.7	-0.3
KNMB	Chin-men Tao	3.62	278		Pn	12 20 20.2	-0.8
MHZQ	Yeshan baz=303	3.65	306	⇑*e*P	Pn	12 20 20.5	-0.9
AXDP	Jialang baz=282	4.07	284	⇑*e*P	Pn	12 20 26.9	-0.2
ZPLA	Ao Xicun baz=269	4.18	270	⇑*e*P	Pn	12 20 28.6	-0.1
ZZJH	Jiuhuzhen baz=276	4.31	277	*e*P	Pn	12 20 30.2	-0.3
SGCP	Mt. Cagua	5.72	183	*e*P	Pn	12 20 50.3	+0.4
JOW	Kunigami baz=65	6.08	61	*e*P	Pn	12 20 54.8	0.0
JOW	Kunigami 4.3nm,0.3s,baz=190,slow=16,SNR=37	6.08	61	Pn	Pn	12 20 55.0	+0.1
JOW	3.1nm,0.3s,baz=66,slow=19,SNR=1.2			Sn	Sn	12 22 03.1	-0.6
JOW	Kunigami	6.08	61		Pn	12 20 54.7	-0.2
VDOS	Pratas Island baz=240	6.12	239	⇓*e*P	Pn	12 20 57.5	+2.1
APYP	Conner	6.18	190	*e*P	Pn	12 20 57.3	+1.1
SIPP	Brgy, Tapao	6.28	196	⇑*i*P	Pn	12 20 59.3	+1.8
SZP	Santa	6.64	196		Pn	12 21 04.0	+1.6
PALP	Palanan	6.89	179	*e*P	Pn	12 21 07.1	+1.2
CAUP	Cauayan	7.02	184	*e*P	Pn	12 21 10.7	+2.9
SSE	Sheshan	7.15	352	Pn	Pn	12 21 08.8	-0.7
SSE				Sn	Sn	12 22 36.1	+6.1
SSE	comp=N,320nm,0.8s			smax	smax		
SSE	comp=E,440nm,0.9s			smax	smax		
SSE	Sheshan	7.15	352		Pn	12 21 08.0	-1.5
HKPS	Hong Kong Po S	7.72	259		Pn	12 21 16.8	-0.6
HKPS				Sn	Sn	12 22 41.1	-3.0
SMPP	San Manuel, Pa	7.95	191	*e*P	Pn	12 21 21.8	+1.4
BALP	Baler	8.23	185	*e*P	Pn	12 21 25.6	+1.2
MCO	Taipa Grande	8.28	259	P	Sn	12 22 47.0	-11
GZH	Guangzhou	8.29	266	P	Pn	12 21 21.0	-4.1
GZH				S	Sn	12 22 44.8	-13
GZH	comp=N,2μm,1.1s			smax	smax		
GZH	comp=E,2μm,1.0s			smax	smax		
SCZP	Santa Cruz	8.48	196	*e*P	Pn	12 21 29.4	+1.7
NJ2	Nanjing	8.60	340	*e*P	Pn	12 21 27.8	-1.5
NJ2				S	Sn	12 23 04.6	-1.0
NJ2	comp=Z,49nm,0.7s			pmax	pmax		
NJ2	comp=N,1μm,1.1s			smax	smax		
NJ2	comp=E,1μm,1.5s			smax	smax		
NJ2	comp=N,98μm,12.3s			LR	LR		
NJ2	comp=E,52μm,10.4s			LR	LR		
NJ2	comp=Z,118μm,12.3s			LR	LR		

POLP	**Polilio Island**	9.22	182	*e*P	Pn	12 21 40.0	+2.1
WHN	**Wuhan**	9.64	314	P	Pn	12 21 43.5	-0.1
WHN				S	Sn	12 23 32.3	+1.2
WHN				LR	LR		
	comp=N,107µm,11.4s						
WHN				LR	LR		
	comp=E,54µm,10.2s						
TGY	**Tagaytay City**	9.92	188	Pn	Pn	12 21 49.8	+2.2
	38nm,0.3s,baz=127,slow=4.2,SNR=11						
TGY				LR	LR	12 25 47.3	
	comp=Z,22µm,21.4s,baz=20,slow=38						
TGY	**Tagaytay City**	9.92	188	⇓*e*P	Pn	12 21 51.6	+4.0
LUBP	**Lubang**	10.38	191	*e*P	Pn	12 21 55.5	+1.5
PVCP	**Virac**	10.48	170	*e*P	Pn	12 21 55.8	+0.6
BOAC	**Boac**	10.48	183	*e*P	Pn	12 21 58.3	+3.1
PGP	**Puerto Galera**	10.51	187	⇓*e*P	Pn	12 21 56.4	+0.7
OTRP	**Odiongan**	11.57	181	*e*P	Pn	12 22 13.1	+3.1
CNP	**Catarman**	11.63	169	*e*P	Pn	12 22 14.6	+3.7
JNU	**Nakatsue**	11.80	38	Pn	Pn	12 22 16.3	+3.0
	1.0nm,0.3s,baz=200,slow=9.5,SNR=13						
JNU				LR	LR	12 27 07.0	
	comp=Z,21µm,19.5s,baz=214,slow=40						
JNU	**Nakatsue**	11.80	38		Pn	12 22 15.3	+2.0
BUSP	**Coron**	12.09	190	*e*P	Pn	12 22 18.6	+1.4
RCP	**Roxas**	12.37	178	⇑*e*P	Pn	12 22 24.9	+3.9
QIZ	**Qiongzhong**	12.62	249	P	Pn	12 22 27.3	+2.9
QIZ				S	Sn	12 24 44.5	+0.3
QIZ				pmax	pmax		
	comp=Z,26nm,1.7s						
QIZ				LR	LR		
	comp=N,22µm,19.6s						
QIZ				LR	LR		
	comp=E,16µm,16.9s						
QIZ				LR	LR		
	comp=Z,11µm,17.6s						
QIZ	**Qiongzhong**	12.62	249		Pn	12 22 26.6	+2.1
TIA	**Tai'an**	12.98	341	P	Pn	12 22 33.3	+3.9
TIA				pmax	pmax		
	comp=Z,20nm,1.2s						
TIA				pmax	pmax		
	comp=Z,3µm,10.0s						
TIA				LR	LR		
	comp=N,46µm,13.3s						
TIA				LR	LR		
	comp=E,24µm,13.9s						
TIA				LR	LR		
	comp=Z,77µm,12.9s						
ENPP	**El Nido**	13.01	193	*e*P	Pn	12 22 30.5	+0.7
ENH	**Enshi**	13.03	302		Pn	12 22 30.6	+0.6
OCLP	**Ormoc**	13.05	170	*e*P	Pn	12 22 34.7	+4.3
TJN	**Taejon**	13.09	18	*de*P	Pn	12 22 32.8	+2.0
CUYO	**Cuyo Island**	13.12	186	*e*P	Pn	12 22 33.9	+2.5
GUIM	**Jordan**	13.29	179	*e*P	Pn	12 22 36.6	+3.0
INCN	**Inchon**	13.95	14	P	Pn	12 22 45.4	+2.8
INCN	**Inchon**	13.95	14	P	Pn	12 22 45.1	+2.5
INCN	**Inchon**	13.95	14		Pn	12 22 45.1	+2.5
MSLP	**Maasin**	13.99	170	*e*P	Pn	12 22 46.4	+3.3
KSAR	**Wonju Array Be**	14.23	18	P	Pn	12 22 48.9	+2.4
KSAR	**Wonju Array Be**	14.23	18		Pn	12 22 48.9	+2.4
KSRS	**Korea Array**	14.26	18	Pn	Pn	12 22 48.8	+2.0
	2.4nm,0.3s,baz=202,slow=14,SNR=56						
KSRS				LR	LR	12 28 50.5	
	comp=Z,19µm,19.7s,baz=194,slow=40						
KSRS				ScP	ScP	12 31 35.0	-1.0
	0.1nm,0.3s,baz=213,slow=1.4,SNR=6.1						
KS19	**Wonju Array Si**	14.29	18		Pn	12 22 48.1	+1.0
TBP	**Tagbilaran**	14.29	174	*e*P	Pn	12 22 48.4	+1.1
GYA	**Guiyang**	14.38	283	⇑*i*P	Pn	12 22 49.4	+0.7
GYA				pP	P	12 22 57.9	+2.5
GYA				PP	PnPn	12 22 59.3	+2.6
GYA				S	Sn	12 25 25.8	-1.7
GYA				SS	S	12 25 49.9	+2.7
GYA				PcP	PcP	12 28 06.9	+2.5
GYA				pmax	pmax		
	comp=Z,70nm,1.0s						
GYA				pmax	pmax		
	comp=Z,2µm,7.6s						
GYA				LR	LR		
	comp=N,24µm,10.0s						
GYA				LR	LR		
	comp=E,35µm,14.9s						
GYA				LR	LR		
	comp=Z,47µm,15.5s						
DL2	**Dalian**	14.89	358	P	Pn	12 22 57.0	+1.7
DL2				S	Sn	12 25 47.3	+7.9
DL2				pmax	pmax		
	comp=Z,110nm,1.5s						
DL2				pmax	pmax		
	comp=Z,4µm,9.4s						
DL2				LR	LR		
	comp=N,35µm,13.9s						
DL2				LR	LR		
	comp=Z,47µm,13.5s						
BUTP	**Butuan**	15.26	168	*e*P	Pn	12 23 01.4	+0.9
XAN	**Xi'an**	15.40	314	P	Pn	12 23 02.3	+0.1
XAN				pP	P	12 23 07.3	+0.7
XAN				pmax	pmax		
	comp=Z,200nm,1.5s						
XAN				pmax	pmax		
	comp=Z,3µm,4.4s						
XAN				LR	LR		
	comp=N,16µm,11.6s						
XAN				LR	LR		
	comp=E,32µm,14.1s						
XAN				LR	LR		
	comp=Z,40µm,13.3s						
XAN	**Xi'an**	15.40	314	P	Pn	12 23 01.5	-0.7
XAN				pmax	pmax		
	comp=Z,192nm,1.0s						
XAN	**Xi'an**	15.40	314	P	Pn	12 23 01.5	-0.7
PAGZ	**Pagadian**	16.08	176	*e*P	Pn	12 23 11.2	+0.2
TIY	**Taiyuan**	16.09	331	*e*P	P	12 23 13.3	-0.9
TIY				PP	pwP	12 23 24.3	+0.3
TIY				S	Sn	12 26 08.4	-0.4
TIY				pmax	pmax		
	comp=Z,82nm,1.2s						
TIY				pmax	pmax		
	comp=Z,3µm,4.7s						
TIY				LR	LR		
	comp=Z,59µm,14.3s						
TIY				LR	LR		
	comp=Z,17µm,12.5s						
TIY				LR	LR		
	comp=Z,52µm,14.2s						
BUKP	**Musuan**	16.23	170	*e*P	P	12 23 15.5	-0.4
CTBH	**Cotabato--PC H**	16.77	173	⇑*e*P	P	12 23 22.1	+0.2
BJT	**Baijiatuau**	16.81	343	P	Pn	12 23 20.5	+0.4
BJT				pmax	pmax		
	comp=Z,180nm,1.3s						
BJT	**Baijiatuau**	16.81	343	P	Pn	12 23 20.5	+0.4
BJI	**Beijing**	16.82	344	P	P	12 23 21.4	-0.9
BJI				S	Sn	12 26 26.3	-0.2
BJI				pmax	pmax		
	comp=Z,48nm,1.7s						
BJI				LR	LR		
	comp=Z,31µm,12.9s						
BJI				LR	LR		
	comp=Z,7µm,14.3s						
BJI				LR	LR		
	comp=Z,15µm,17.3s						
INU	**Inuyama**	17.05	45	P	Pn	12 23 22.4	-0.7
KCP	**Kidapawan**	17.09	171	⇓*i*P	P	12 23 25.4	0.0
DAV	**Davao City (W)**	17.11	169	P	P	12 23 27.1	+1.5
	baz=37,slow=4.1,SNR=4.1						
DAV				LR	LR	12 30 01.0	
	comp=Z,16µm,20.1s,baz=7.5,slow=37						
DAV	**Davao City (W)**	17.11	169	⇓*i*P	Pn	12 23 23.9	-0.1
DAV	**Davao City (W)**	17.11	169	P	P	12 23 27.5	+1.9
DAV				P	P	12 23 27.5	+1.9
DAV	**Davao City (W)**	17.11	169	IAmb	IAmb	12 23 40.6	
	comp=Z,722nm,1.3s						
SLVN	**Son La**	17.20	265	P	P	12 23 26.1	-0.5
MATI	**Mati**	17.36	167	*e*P	P	12 23 28.1	-0.3
SKMP	**Bagumbayan, Su**	17.50	173	*e*P	P	12 23 30.3	+0.4
DLV	**T Lat**	17.78	230	P	P	12 23 35.4	+2.2
JHJ	**Hachijo jima 2**	17.82	55	P	Pn	12 23 32.3	-0.4
	comp=Z,9.6nm,0.3s,baz=94,slow=15,SNR=1.5						
SNY	**Shenyang**	17.82	3	⇑P	Pn	12 23 33.0	+0.3
SNY				S	Sn	12 26 51.3	+0.6
SNY				pmax	pmax		
	comp=Z,89nm,2.0s						
SNY				pmax	pmax		
	comp=Z,8µm,9.2s						
SNY				LR	LR		
	comp=Z,37µm,12.8s						
SNY				LR	LR		
	comp=Z,16µm,11.4s						
SNY				LR	LR		
	comp=Z,51µm,12.7s						
CD2	**Chengdu**	17.85	297	⇑P	Pn	12 23 33.0	-0.2
CD2				sP	sP	12 23 41.6	-0.7
CD2				S	Sn	12 26 52.8	+1.2
CD2				pmax	pmax		
	comp=Z,170nm,0.9s						
CD2				pmax	pmax		
	comp=Z,7µm,8.0s						
CD2				LR	LR		
	comp=Z,36µm,8.2s						
CD2				LR	LR		
	comp=Z,53µm,13.3s						
KMI	**Kunming**	17.85	278	P	P	12 23 36.8	+2.8
KMI				pP	sP	12 23 42.5	0.0
KMI				PP	PnPn	12 23 52.8	+8.4
KMI				S	Sn	12 26 50.6	-1.4
KMI				sS	S	12 27 02.1	+3.8
KMI				SS	SnSn	12 27 15.3	+10
KMI				pmax	pmax		
	comp=Z,80nm,1.3s						
KMI				pmax	pmax		
	comp=Z,3µm,4.0s						
KMI				LR	LR		
	comp=Z,52µm,15.3s						
KMI				LR	LR		
	comp=Z,41µm,10.8s						
KMI				LR	LR		
	comp=Z,44µm,12.8s						
KMI	**Kunming**	17.85	278	P	P	12 23 34.0	0.0
KMI				pmax	pmax		
	comp=Z,513nm,1.7s						
KMI	**Kunming**	17.85	278	P	P	12 23 34.0	0.0
UBPT	**Khong Chiam**	18.07	244	P	P	12 23 39.1	+2.9
JCJ	**Chichijima**	18.19	76	P	Pn	12 23 37.0	-0.4
	comp=Z,4.7nm,0.3s,baz=292,slow=9.5,SNR=7.9						
JCJ				LR	LR	12 29 49.7	
	comp=Z,7µm,21.6s,baz=250,slow=35						
MAJO	**Matsushiro**	18.54	44	P	P	12 23 39.7	-1.6
MAJO				pmax	pmax		
	comp=Z,143nm,1.9s						
MAJO	**Matsushiro**	18.54	44	P	P	12 23 39.7	-1.6
MAT	**Matsushiro**	18.54	44	P	P	12 23 41.3	0.0
MAT				S	S	12 27 11.2	-0.2
MJB9	**Matsu-Tunnel**	18.54	44	P	P	12 23 40.1	-1.1
MJAR	**Matsushiro Arr**	18.54	44	P	P	12 23 38.6	-2.7
	comp=Z,0.1nm,0.3s,baz=234,slow=9.6,SNR=13						
MJAR				LR	LR	12 31 18.3	
	comp=Z,5µm,21.4s,baz=230,slow=39						
MJAR				ScP	ScP	12 31 43.6	-0.9
	comp=Z,0.0nm,0.3s,baz=240,slow=2.5,SNR=4.6						
MJAR	**Matsushiro Arr**	18.54	44	P	P	12 23 39.5	-1.8
MJAR				pmax	pmax		
	comp=Z,20nm,1.1s						
MJAR	**Matsushiro Arr**	18.54	44	P	P	12 23 39.5	-1.8
KKM	**Kota Kinabalu**	18.78	199	P	Pn	12 23 45.1	+0.4
KKM				IAmb	IAmb	12 23 51.8	
	comp=Z,487nm,1.2s						
HHC	**Hu-ho-hao-te**	19.08	334	*e*P	Pn	12 23 49.3	+1.1
HHC				sP	pwP	12 23 56.8	-0.4
HHC				S	S	12 27 22.8	+0.5
HHC				sS	sS	12 27 30.8	-1.1
HHC				pmax	pmax		
	comp=Z,400nm,0.7s						
HHC				pmax	pmax		
	comp=Z,2µm,3.8s						
HHC				LR	LR		
	comp=Z,6µm,10.8s						
HHC				LR	LR		
	comp=Z,2µm,11.6s						
HHC				LR	LR		
	comp=Z,5µm,10.3s						
BTO	**Baotou**	19.53	331	*e*P	Pn	12 23 54.5	+0.9
CN2	**Changchun**	19.93	7	*e*P	P	12 23 55.8	-0.6
CN2				*e*pP	Pn	12 23 59.8	+1.6
CN2				*e*S	S	12 27 33.6	-5.9
CN2				pmax	pmax		
	comp=Z,70nm,1.0s						
CN2				pmax	pmax		
	comp=Z,1µm,7.0s						
CN2				LR	LR		
	comp=Z,42µm,13.0s						
CN2				LR	LR		
	comp=Z,9µm,13.0s						
CN2				LR	LR		
	comp=Z,44µm,13.0s						
MSHR	**Mys Shultsa**	19.94	19	*ce*P	P	12 23 56.2	-0.3
SPMM	**Sapulut**	19.98	197	P	Pn	12 24 02.0	+3.0
LZH	**Lanzhou**	19.99	311	⇑P	Pn	12 23 59.3	+0.1
LZH				pP	sP	12 24 06.4	+0.5
LZH				sP	pwP	12 24 11.1	+4.1
LZH				S	Sn	12 27 47.5	+4.0
LZH				pmax	pmax		
	comp=Z,220nm,1.4s						
LZH				pmax	pmax		
	comp=Z,4µm,7.8s						
LZH				LR	LR		
	comp=Z,26µm,15.7s						
LZH				LR	LR		
	comp=Z,32µm,16.8s						
LZH				LR	LR		
	comp=Z,34µm,17.3s						
VLA	**Vladivostok**	20.65	20	*ce*P	P	12 24 03.8	-0.5
VLA				pmax	pmax		
	comp=Z,31nm,1.0s						
VLA				MLR	MLR		
	comp=Z,17µm,16.0s						
PBKT	**Sadao Pong**	21.33	254	P	P	12 24 13.9	+2.2
MDJ	**Mudanjiang**	21.42	14	P	P	12 24 12.3	-0.2
MDJ				pmax	pmax		
	comp=Z,1µm,5.5s						
MDJ				LR	LR		
	comp=Z,13µm,13.5s						
MDJ				LR	LR		
	comp=Z,38µm,13.1s						
MDJ	**Mudanjiang**	21.42	14	P	P	12 24 10.9	-1.6
USA0B	**Ussuriysk Arra**	21.66	19	*ce*P	P	12 24 13.3	-1.9
USA0B	**Ussuriysk Arra**	21.66	19	P	P	12 24 13.2	-1.9
USRK	**Ussuriysk Ar.**	21.66	19	P	P	12 24 13.8	-1.3
	comp=Z,27nm,0.7s,baz=202,slow=10,SNR=86						
USRK				LR	LR	12 33 21.3	
	comp=Z,13µm,18.1s,baz=187,slow=39						
USRK	**Ussuriysk Ar.**	21.66	19	P	P	12 24 13.0	-2.1
USRK	**Ussuriysk Ar.**	21.66	19	P	P	12 24 13.0	-2.1
CHTO	**Chiang Mai**	22.36	261	P	P	12 24 23.5	+0.7
CHTO	**Chiang Mai**	22.36	261	P	P	12 24 23.6	+0.7
CHTO				pmax	pmax		
	comp=Z,178nm,1.2s						
CHTO				MLR	MLR		
	comp=Z,12µm,21.0s						
CHTO	**Chiang Mai**	22.36	261	P	P	12 24 23.6	+0.7
CM31	**Chiang Mai Arr**	22.46	260	P	P	12 24 26.2	+2.2
CM31				P	P	12 24 26.2	+2.2
CM31	**Chiang Mai Arr**	22.46	260	P	P	12 24 25.1	+1.0
CMAR	**Chiang Mai Arr**	22.46	260	P	P	12 24 25.9	+1.9
	comp=Z,47nm,1.0s,baz=63,slow=7.9,SNR=137						
CMAR				PcP	PcP	12 28 19.4	+1.4
	comp=Z,4.9nm,0.8s,baz=46,slow=1.1,SNR=6.7						
CMAR				LR	LR	12 34 02.8	
	comp=Z,10µm,18.0s,baz=75,slow=39						
CMAR	**Chiang Mai Arr**	22.46	260	P	P	12 24 24.9	+0.9
CMAR	**Chiang Mai Arr**	22.46	260	P	P	12 24 24.9	+0.9
KMSI	**Cibinong**	23.33	176	P	P	12 24 42.0	+9.1
MRSI	**Marisa**	23.37	181	P	P	12 24 33.3	0.0
	comp=Z,7µmcomp=Z,4µmcomp=Z,246nm,1.1s						
SBUM	**Sibu**	23.53	206	P	P	12 24 34.5	-0.5
TNTI	**Ternate**	23.59	167	P	P	12 24 36.3	+0.8
	comp=Z,6µmcomp=Z,11µmcomp=Z,723nm,1.1s						
TNTI	**Ternate**	23.59	167	P	P	12 24 35.2	-0.2
MPSI	**Mapaga**	23.63	186	P	P	12 24 33.6	-2.2
	comp=Z,7µmcomp=Z,3µmcomp=Z,202nm,0.9s						
GUMO	**Guam**	23.68	112	P	P	12 24 37.8	+1.4
	comp=Z,268nm,1.2s,baz=8.6,slow=8.3,SNR=4.4						
GUMO				LR	LR	12 33 31.7	
	comp=Z,8µm,19.0s,baz=292,slow=36						
GUMO	**Guam**	23.68	112	P	P	12 24 36.3	-0.1
GUMO				pmax	pmax		
	comp=Z,1µm,1.2s						
GUMO				MLR	MLR		
	comp=Z,10µm,19.0s						
GUMO	**Guam**	23.68	112	P	P	12 24 36.3	-0.1
TEY	**Ternei**	24.00	25	⇓*e*P	P	12 24 42.7	+3.6
TEY				pmax	pmax		
	comp=Z,20nm,1.0s						
TEY				pmax	pmax		
	comp=E,200nm,15.0s						
TEY				pmax	pmax		
	comp=N,500nm,17.0s						
TEY				pmax	pmax		
	comp=Z,700nm,18.0s						
LKP	**Lekhapani**	24.08	284	⇑*i*P	P	12 24 41.2	+1.1
GTA	**Gaotai**	24.46	314	⇑P	P	12 24 43.3	-0.4
GTA				pP	pP	12 24 47.0	-2.9
GTA				sP	sP	12 24 49.6	-3.0
GTA				PcP	PcP	12 28 23.0	+1.0
GTA				S	S	12 29 05.4	+2.9
GTA				sS	pS	12 29 10.6	+1.5
GTA				ScP	ScP	12 31 59.8	+0.5
GTA				pmax	pmax		
	comp=Z,72nm,2.0s						
GTA				pmax	pmax		
	comp=Z,2µm,7.6s						
GTA				LR	LR		
	comp=Z,7µm,15.9s						
GTA				LR	LR		
	comp=Z,20µm,15.2s						
GTA				LR	LR		
	comp=Z,22µm,15.6s						
APSI	**Ampana**	24.76	182	P	P	12 24 47.0	+0.7
	comp=Z,4µmcomp=Z,3µmcomp=Z,328nm,1.1s						
LUWI	**Luwuk**	24.88	179	P	P	12 24 46.9	-0.5
	comp=Z,7µmcomp=Z,7µmcomp=Z,422nm,1.8s						
LUWI	**Luwuk**	24.88	179	P	P	12 24 47.5	+0.1
ERM	**Erimo**	24.96	39	⇓*e*P	P	12 24 47.5	-0.4
ERM	**Erimo**	24.96	39	P	P	12 24 47.0	-0.9
LBMI	**Labuha**	24.99	168	P	P	12 24 48.7	+0.3
	comp=Z,17µmcomp=Z,1µm,1.0s						
KSM	**Kuching**	25.22	209	P	P	12 24 51.3	+0.7
KSM				IAmb	IAmb	12 24 58.6	
	comp=Z,205nm,1.2s						
HIA	**Hailar**	25.31	356	P	P	12 24 48.3	-2.8
HIA				pmax	pmax		
	comp=Z,204nm,1.7s						
HIA				MLR	MLR		
	comp=Z,14µm,18.0s						
HIA	**Hailar**	25.31	356	P	P	12 24 48.3	-2.8
HIA				IAmb	IAmb	12 24 51.7	
	comp=Z,204nm,1.7s						
HIA	**Hailar**	25.31	356	IAMs_20	IAMs_20	12 36 11.8	
	comp=Z,14µm,18.0s						
KOHI	**KOHIMA**	25.64	280	*e*x	P	12 24 50.0	-4.5
KOHI				IAmb	IAmb	12 25 07.2	
	comp=Z,60nm,0.8s						
BKB	**Balikpapan**	25.64	193	P	P	12 24 53.9	-0.4
ZIRO	**ZIRO**	25.86	284	*e*P	P	12 24 56.0	-0.4
ZIRO				IAmb	IAmb	12 25 13.5	
	comp=Z,156nm,1.1s						
ASAJ	**Asahikawa**	26.05	35	P	P	12 24 55.6	-2.2
	comp=Z,6.3nm,0.4s,baz=232,slow=10,SNR=24						
ASAJ				LR	LR	12 35 24.5	
	comp=Z,10µm,19.5s,baz=240,slow=37						
JKA	**Kamikawa-asahi**	26.05	35	P	P	12 24 55.6	-2.2
SANI	**Sanana**	26.12	172	P	P	12 24 57.4	-1.3
	comp=Z,7µmcomp=Z,4µmcomp=Z,103nm,0.9s						
SWI	**Sorong**	26.18	159	P	P	12 25 00.1	+0.9
	comp=Z,6µmcomp=Z,3µmcomp=Z,198nm,1.0s						
SIJI	**Sorong**	26.19	159	P	P	12 25 00.3	+1.0
	comp=Z,146nm,0.8s,baz=353,slow=5.7,SNR=14						
SIJI				LR	LR	12 34 08.0	
	comp=Z,5µm,19.1s,baz=351,slow=34						
KLR	**Kul'dur**	26.27	14	P	P	12 24 58.1	-1.6
	comp=Z,11nm,0.6s,baz=206,slow=4.2,SNR=38						
KLR				PcP	PcP	12 28 24.9	-0.8
	comp=Z,7.1nm,0.8s,baz=219,slow=2.8,SNR=6.2						
KLR				ScP	ScP	12 32 02.9	-1.1
	comp=Z,2.4nm,0.8s,baz=245,slow=7.0,SNR=3.8						
KLR				LR	LR	12 36 06.6	
	comp=Z,15µm,20.0s,baz=196,slow=39						
KLR	**Kul'dur**	26.27	14	⇑*e*P	P	12 24 58.8	-0.9
KLR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KLR				MLR	MLR		
	comp=Z,22µm,14.0s						
ULN	**Ulaanbaatar**	26.75	337	P	P	12 25 03.5	-0.8
ULN				P	P	12 25 03.5	-0.8
ULN	**Ulaanbaatar**	26.75	337	*c i*P	P	12 25 03.3	-0.9
ULN				pmax	pmax		
	comp=Z,241nm,1.0s						
ULN				MLR	MLR		
	comp=Z,34µm,16.0s						
ULN	**Ulaanbaatar**	26.75	337	P	P	12 25 03.4	-0.8
ULN				IAmb	IAmb	12 25 05.0	
	comp=Z,295nm,1.0s						
TEZP	**TEZPUR**	26.79	282	*e*P	P	12 25 04.0	-0.7
TEZP				*i* x	x	12 30 04.4	
SONM	**Songino Array**	26.96	336	P	P	12 25 05.4	-0.8
	comp=Z,270nm,0.8s,baz=149,slow=9.8,SNR=1104						
SONM				PcP	PcP	12 28 27.6	0.0
	comp=Z,8.2nm,0.9s,baz=156,slow=2.5,SNR=6.6						
SONM				ScP	ScP	12 32 05.2	-1.1
	comp=Z,15nm,1.2s,baz=166,slow=3.2,SNR=16						
SONM				LR	LR	12 36 58.4	
	comp=Z,32µm,18.4s,baz=151,slow=39						
SONM				P3KPbc		12 57 49.3	
	comp=Z,0.2nm,0.4s,baz=232,slow=1.6,SNR=3.7						
SONM	**Songino Array**	26.96	336	P	P	12 25 04.8	-1.3
SONM				pmax	pmax		
	comp=Z,280nm,0.9s						
SONM	**Songino Array**	26.96	336	P	P	12 25 04.8	-1.3
TTSI	**Tana Toraja**	26.98	186	P	P	12 25 07.2	+0.8
	comp=Z,4µmcomp=Z,1µmcomp=Z,122nm,0.9s						
NLAI	**Namlea**	27.46	170	P	P	12 25 13.8	+3.1
	comp=Z,4µmcomp=Z,323nm,0.8s						
SHL	**Shillong**	27.65	280	*e*x	P	12 25 16.4	+3.7
YUK	**Yuzh-Kuril'sk**	27.77	38	*i* P	P	12 25 10.1	-3.2
YUK				*e*PPP	PPP	12 26 04.1	
YUK				*e*S	S	12 29 53.5	-1.1
YUK				*e*SS	SnSn	12 31 06.2	-1.8
YUK				pmax	pmax		
	comp=Z,144nm,1.0s						
YUK				pmax	pmax		
	comp=N,5µm,13.6s						
YUK				pmax	pmax		
	comp=E,120nm,0.8s						
YUK				pmax	pmax		
	comp=Z,254nm,2.3s						
YUK				MLR	MLR		
	comp=Z,5µm,16.0s						
YUK				MLR	MLR		
	comp=N,5µm,15.0s						
YUK				MLR	MLR		
	comp=E,3µm,16.0s						
KBKI	**Kotabaru**	27.78	193	P	P	12 25 28.2	+15
SPSI	**Sidrap Palu**	27.89	185	P	P	12 25 25.5	+11
MSAI	**Masohi**	27.92	166	P	P	12 25 17.5	+2.7
	comp=E,2µmcomp=E,125nm,1.0s						
KULM	**Kulim**	27.94	232	P	P	12 25 15.5	+0.4
KULM	**Kulim**	27.94	232	P	P	12 25 17.0	+1.9
AAI	**Ambon**	28.09	167	P	P	12 25 17.8	+1.4
	comp=E,6µmcomp=E,4µmcomp=E,341nm,0.9s						
YSS	**Yuzh-Sakhalins**	28.16	30	⇑*i*P	P	12 25 17.6	+0.9
YSS				*e**SP	pP	12 25 21.5	-1.8
YSS				*e*		12 26 16.7	
YSS				*e*S	S	12 30 02.6	+2.0
YSS				pmax	pmax		
	comp=Z,30nm,1.2s						
YSS				MLR	MLR		
	comp=Z,8µm,15.0s						
YSS				MLR	MLR		
	comp=N,6µm,16.0s						
YSS	**Yuzh-Sakhalins**	28.16	30	P	P	12 25 17.4	+0.7
YSS				IAmb	IAmb	12 25 37.8	
	comp=Z,112nm,1.2s						
BRDH	**Bariadhala**	28.18	274	P	P	12 25 19.5	+2.4
	comp=Z,128nm,0.3s,baz=82,slow=15,SNR=4.5						
BRDH				LR	LR	12 37 31.5	
	comp=Z,9µm,18.2s,baz=111,slow=38						
IPM	**Ipoh**	28.24	230	P	P	12 25 17.7	-0.1
BNSI	**Bone**	28.30	185	P	P	12 25 20.0	+1.8
	comp=Z,2µmcomp=Z,68nm,1.1s						
LSA	**Lhasa**	28.34	288	P	P	12 25 19.9	+0.8
LSA				S	S	12 30 06.8	+2.1
LSA	**Lhasa**	28.34	288	P	P	12 25 20.1	+1.0
LSA	**Lhasa**	28.34	288	P	P	12 25 19.9	+0.8
LSA				pmax	pmax		
	comp=Z,52nm,0.9s						
LSA				MLR	MLR		
	comp=Z,20µm,18.0s						
LSA	**Lhasa**	28.34	288	P	P	12 25 19.9	+0.8

LSA				IAMs_20	IAMs_20	12 37 35.8	
	comp=Z,20µm,18.0s						
MYKOM	**Kota Tinggi**	**28.40**	**222**	P	**P**	**12 25 19.2**	**0.0**
FAKI	**Fak Fak**	**28.44**	**159**	P	**P**	**12 25 20.1**	**+0.6**
	comp=Z,4µmcomp=Z,3µmcomp=Z,222nm,0.8s						
FAKI	**Fak Fak**	**28.44**	**159**	P	**P**	**12 25 19.3**	**-0.2**
FAKI				IAmb	IAmb	12 25 26.2	
	comp=Z,161nm,0.7s						
TPRI	**Tanjung Pinang**	**28.69**	**220**	P	P	12 25 29.8	+8.1
CIT	**Chita**	**28.79**	**349**	*e*P	**P**	**12 25 20.5**	**-1.8**
CIT				*e*		12 25 25.3	
CIT				*e*		12 25 32.6	
CIT				*e*		12 26 07.5	
CIT				pmax	pmax		
	comp=Z,179nm,1.9s						
GRNR	**Gornyy**	**28.89**	**19**	⇓*i*P	**P**	**12 25 20.9**	**-2.3**
GRNR				*e*		12 26 25.5	
GRNR				*e*S	**S**	**12 30 12.1**	**+0.1**
GRNR				*e*SS	**SnSn**	**12 31 48.6**	**+14**
GRNR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GRNR				smax	smax		
	comp=E,2.0nm,0.9s						
GRNR				MLR	MLR		
	comp=Z,7µm,17.0s						
KAPI	**Kappang**	**28.93**	**185**	P	**P**	**12 25 24.6**	**+0.7**
	comp=Z,12nm,0.8s,baz=337,slow=6.0,SNR=6.7						
KAPI				LR	LR	12 37 11.8	
	comp=Z,4µm,21.6s,baz=8.0,slow=37						
BKSI	**Bulukumba**	**29.21**	**184**	P	P	12 25 43.9	+18
BNDI	**Bandanaira**	**29.28**	**164**	P	**P**	**12 25 27.8**	**+0.8**
	comp=Z,4µmcomp=Z,8µmcomp=Z,678nm,1.2s						
KUR	**Kuril'sk**	**29.64**	**38**	P	**P**	**12 25 26.1**	**-3.8**
KUR				S	**S**	**12 30 21.5**	**-2.4**
KUR				*e*SS	**SnSn**	**12 31 47.7**	**-5.7**
KUR				MLR	MLR		
	comp=Z,8µm,18.0s						
KUR				MLR	MLR		
	comp=E,2µm,16.0s						
KUR				MLR	MLR		
	comp=N,9µm,18.0s						
DGPR	**DIGLIPUR**	**29.80**	**254**	*e*P	**P**	**12 25 31.1**	**-0.5**
DGPR				IAmb	IAmb	12 26 03.4	
	comp=Z,35nm,0.4s						
ZEA	**Zeya**	**29.94**	**6**	*e*P	**P**	**12 25 30.8**	**-1.7**
ZEA				*e*		12 26 42.0	
ZEA				*e*S	**S**	**12 30 30.0**	**+1.5**
ZEA				pmax	pmax		
	comp=N,47nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,58nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,1µm,15.0s						
ZEA				pmax	pmax		
	comp=N,700nm,12.0s						
ZEA				pmax	pmax		
	comp=Z,2µm,12.0s						
ZEA				smax	smax		
	comp=E,2µm,17.0s						
ZEA				smax	smax		
	comp=Z,5µm,17.0s						
ZEA				smax	smax		
	comp=N,10µm,18.0s						
ZEA				MLR	MLR		
	comp=Z,22µm,15.0s						
ZEA				MLR	MLR		
	comp=E,8µm,14.0s						
ZEA				MLR	MLR		
	comp=N,18µm,15.0s						
ZAK	**Zakamensk**	**30.22**	**335**	*e*P	**P**	**12 25 33.9**	**-1.2**
ZAK				pmax	pmax		
	comp=Z,55nm,1.1s						
SMPI	**Sarmi**	**30.34**	**146**	P	**P**	**12 25 39.0**	**+2.6**
	comp=Z,90nm,1.5s						
GTK	**Tadong**	**30.52**	**283**	*e*P	**P**	**12 25 38.8**	**+0.7**
GTK				IAmb	IAmb	12 25 46.8	
PBA	**Port Blair**	**30.64**	**252**	*e*P	P	12 25 39.4	+0.3
PSI	**Prapat**	**30.90**	**231**	P	**P**	**12 25 42.3**	**+0.8**
PSI				pmax	pmax		
	comp=Z,60nm,0.9s						
PSI				MLR	MLR		
	comp=Z,4µm,20.0s						
RPSI	**Rantau Prapat**	**30.97**	**230**	P	**P**	**12 25 42.3**	**+0.3**
TYV	**Tymovskoe**	**31.11**	**25**	*e*P	**P**	**12 25 46.5**	**+3.7**
TYV				pmax	pmax		
	comp=Z,200nm,5.6s						
TYV				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TYV				MLR	MLR		
	comp=N,8µm,13.0s						
TYV				MLR	MLR		
	comp=Z,8µm,13.0s						
TLY	**Talaya**	**31.15**	**337**	P	**P**	**12 25 42.9**	**-0.3**
	comp=Z,120nm,0.7s,baz=168,slow=5.3,SNR=166						
TLY	**Talaya**	**31.15**	**337**	P	**P**	**12 25 42.1**	**-1.1**
TLY				P	**P**	**12 25 42.1**	**-1.1**
TLY	**Talaya**	**31.15**	**337**	*c i*P	**P**	**12 25 42.2**	**-1.1**
TLY				pmax	pmax		
	comp=Z,188nm,0.8s						
TLY	**Talaya**	**31.15**	**337**	P	**P**	**12 25 42.1**	**-1.1**
KCSI	**Kotacane, Aceh**	**31.23**	**233**	P	P	12 25 51.2	+6.9
BKNI	**Bangkinang**	**31.29**	**224**	P	P	12 25 52.9	+8.1
TAPN	**Taplejung**	**31.32**	**284**	*e*P	**P**	**12 25 46.5**	**+1.2**
	comp=Z,162nm,1.0s						
IRK	**Irkutsk**	**31.40**	**339**	*e*P	**P**	**12 25 44.2**	**-1.2**
IRK				*e*		12 26 55.4	
IRK				*e*		12 28 35.6	
IRK				*e*		12 36 18.2	
IRK				pmax	pmax		
	comp=Z,309nm,2.1s						
GENI	**Genyem**	**31.61**	**144**	P	P	12 25 54.0	+6.4
	comp=Z,3µmcomp=Z,103nm,1.2s						
ODAN	**Odare**	**31.62**	**283**	*e*P	**P**	**12 25 48.6**	**+0.7**
MLSI	**Meulaboh, Aceh**	**31.76**	**236**	P	P	12 25 56.3	+7.4
MOY	**Mondy**	**32.12**	**335**	*e*P	**P**	**12 25 50.8**	**-1.1**
MOY				pmax	pmax		
	comp=Z,218nm,1.5s						
GRJI	**Gresik**	**32.18**	**199**	P	**P**	**12 25 55.4**	**+2.9**
	comp=Z,46nm,0.7s						
NKL	**Nikolayevsk**	**32.27**	**21**	*e*P	**P**	**12 25 50.2**	**-2.7**
NKL				*e*		12 27 06.3	
NKL				pmax	pmax		
	comp=Z,9.0nm,1.1s						
NKL				pmax	pmax		
	comp=N,3.0nm,0.8s						
NKL				pmax	pmax		
	comp=E,1.0nm,0.9s						
NKL				pmax	pmax		
	comp=Z,71nm,3.6s						
RAMN	**Ramite**	**32.32**	**283**	*e*P	**P**	**12 25 55.0**	**+0.9**
	comp=Z,168nm,1.3s						
MMRI	**Maumere**	**32.42**	**180**	P	**P**	**12 25 56.1**	**+1.4**
	comp=Z,3µmcomp=Z,3µmcomp=Z,228nm,1.2s						
MMRI	**Maumere**	**32.42**	**180**	P	**P**	**12 25 54.2**	**-0.5**
PDSI	**Padang**	**32.61**	**224**	P	P	12 26 04.2	+7.8
JIRN	**Jiri**	**32.66**	**284**	*e*P	**P**	**12 25 57.8**	**+0.6**
KRJI	**Kerinci**	**32.91**	**221**	P	P	12 26 07.6	+8.5
PLAI	**Plampang**	**32.91**	**188**	P	**P**	**12 26 00.3**	**+1.3**
	comp=Z,3µmcomp=Z,1µmcomp=Z,96nm,1.1s						
GUN	**Gumba**	**32.92**	**285**	*e*P	**P**	**12 26 00.3**	**+0.8**
	comp=Z,93nm,0.8s						
SMRI	**Semarang**	**32.95**	**202**	P	P	12 26 08.1	+8.7
SMRI	**Semarang**	**32.95**	**202**		pP	12 26 06.2	+0.6
SAUI	**Saumlaki**	**32.96**	**163**	P	**P**	**12 26 00.7**	**+1.3**
	comp=Z,11µmcomp=Z,1µm,0.9s						
SAUI	**Saumlaki**	**32.96**	**163**	P	**P**	**12 25 59.7**	**+0.3**
DNP	**Denpasar**	**33.20**	**193**	P	**P**	**12 26 03.5**	**+2.1**
	comp=Z,22µmcomp=Z,702nm,1.5s						
GMJI	**Gumukmas**	**33.22**	**196**	P	**P**	**12 26 06.0**	**+4.4**
	comp=Z,1µmcomp=Z,53nm,1.3s						
JAGI	**Jajag, Banyuwa**	**33.23**	**195**	P	**P**	**12 26 02.5**	**+0.8**
BOK	**Bokaro**	**33.26**	**277**	*e*x	P	12 25 52.5	-10
BOK				IAmb	IAmb	12 26 07.3	
	comp=Z,26nm,0.9s						
PKI	**Pulchoki**	**33.35**	**284**	*e*P	**P**	**12 26 03.5**	**+0.3**
PKIN	**Phulchoki**	**33.36**	**284**	*e*P	**P**	**12 26 03.0**	**-0.2**
	comp=Z,57nm,1.0s						
MDSI	**Maura Dua**	**33.37**	**214**	P	**P**	**12 26 05.6**	**+2.6**
	comp=Z,2µmcomp=Z,83nm,1.1s						
PWJI	**Pagerwojo**	**33.43**	**199**	P	**P**	**12 26 04.6**	**+1.1**
	comp=Z,2µmcomp=Z,162nm,0.8s						
KKN	**Kakani**	**33.46**	**285**	*e*P	**P**	**12 26 04.4**	**+0.4**
	comp=Z,74nm,0.9s						
KSI	**Kapahiang**	**33.52**	**218**	P	P	12 26 11.9	+7.5
WOJI	**Wonogiri, Jawa**	**33.53**	**201**	P	**P**	**12 26 06.1**	**+1.8**
	comp=Z,3µmcomp=Z,235nm,1.2s						
WBSI	**Waikabubak, Su**	**33.54**	**185**	P	P	12 26 15.2	+11
DMN	**Daman**	**33.62**	**284**	*e*P	**P**	**12 26 05.9**	**+0.5**
	comp=Z,59nm,0.7s						
UGM	**Wanagama**	**33.73**	**201**	P	P	12 26 12.5	+6.3
	comp=Z,5µmcomp=Z,322nm,1.5s						
UGM	**Wanagama**	**33.73**	**201**	P	**P**	**12 26 07.1**	**+0.9**
SISI	**Saibi**	**33.80**	**225**	P	P	12 26 14.1	+7.3
LEM	**Lembang**	**33.82**	**207**	P	**P**	**12 26 11.3**	**+4.3**
	comp=Z,56nm,0.8s,baz=26,slow=9.9,SNR=4.5						
LWLI	**Liwa**	**33.88**	**214**	P	P	12 26 15.8	+8.2
MNAI	**Manna**	**33.91**	**216**	P	**P**	**12 26 08.4**	**+0.6**
DBJI	**Dramaga**	**33.95**	**209**	P	P	12 26 15.9	+7.9
BWNR	**Bhubaneshwar**	**33.96**	**271**	*e*P	**P**	**12 26 08.6**	**+0.5**
GKN	**Gorkha**	**34.02**	**285**	*e*P	**P**	**12 26 09.0**	**+0.2**
KASI	**Kota Agung**	**34.10**	**213**	P	**P**	**12 26 10.6**	**+1.3**
	comp=Z,2µmcomp=Z,1µmcomp=Z,81nm,0.9s						
PPSI	**Pulau Pagai**	**34.33**	**222**	P	P	12 26 22.6	+11
BOD	**Bodaibo**	**34.33**	**352**	*e*P	**P**	**12 26 07.8**	**-3.1**
BOD				pmax	pmax		
	comp=Z,19nm,0.9s						
CISI	**Cisompet, Garu**	**34.40**	**206**	P	P	12 26 18.4	+6.4
	comp=Z,4µmcomp=Z,215nm,1.2s						
CISI	**Cisompet, Garu**	**34.40**	**206**	P	**P**	**12 26 13.0**	**+1.0**
CNJI	**Cibinong**	**34.46**	**207**	P	P	12 26 25.8	+13
WMQ	**Urumqi**	**34.54**	**314**	*e*P	**P**	**12 26 13.9**	**+0.9**
WMQ				pP	pP	12 26 16.6	-2.8
WMQ				sP	pwP	12 26 23.3	-0.1
WMQ				PP	**PP**	**12 27 30.4**	**-1.0**
WMQ				S	**S**	**12 31 43.3**	**+2.7**
WMQ				sS	sS	12 31 53.6	+2.5
WMQ				PcS	**PcS**	**12 32 32.8**	**-1.2**
WMQ				pmax	pmax		
	comp=Z,57nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,750nm,3.7s						
WMQ				LR	LR		
	comp=Z,7µm,17.1s						
WMQ				LR	LR		
	comp=Z,5µm,16.1s						
WMQ				LR	LR		
	comp=Z,5µm,15.1s						
WMQ	**Urumqi**	**34.54**	**314**	P	**P**	**12 26 12.8**	**-0.2**
WMQ				pmax	pmax		
	comp=Z,386nm,1.9s						
WMQ				MLR	MLR		
	comp=Z,9µm,20.0s						
WMQ	**Urumqi**	**34.54**	**314**	P	**P**	**12 26 12.8**	**-0.2**
WMQ	**Urumqi**	**34.54**	**314**	IAMs_20	IAMs_20	12 41 30.1	
	comp=Z,9µm,20.0s						
DANN	**Dangsing**	**34.78**	**286**	*e*P	**P**	**12 26 16.1**	**+0.5**
	comp=Z,113nm,0.8s						
CHLP	**Challavanipeta**	**36.00**	**269**	*e*P	**P**	**12 26 26.9**	**+1.2**
CHLP				IAmb	IAmb	12 26 28.4	
	comp=Z,35nm,1.3s						
CHLP				*e*S	**S**	**12 32 01.7**	**-1.7**
CHLP				*e*ScP	**ScP**	**12 32 36.1**	**-0.9**
CHLP				IVMs_BB	IVMs_BB	12 43 17.2	
	comp=Z,786nm,17.7s						
SKR	**Severo-Kuril's**	**37.30**	**36**	*e*P	P	12 26 28.4	-8.0
SKR				*e*S	**S**	**12 32 21.8**	**-0.7**
SKR				pmax	pmax		
	comp=Z,500nm,4.2s						
SKR				pmax	pmax		
	comp=Z,200nm,11.9s						
SKR				MLR	MLR		
	comp=Z,2µm,16.0s						
SKR				MLR	MLR		
	comp=Z,2µm,16.0s						
DGZ	**Jazzator, Alta**	**37.38**	**322**	*ce*P	**P**	**12 26 37.0**	**-0.4**
DGZ				pmax	pmax		
	comp=Z,36nm,1.1s						
DGZ				MLR	MLR		
	comp=Z,19µm,17.0s						
MTN	**Manton Dam**	**37.60**	**166**	P	**P**	**12 26 38.7**	**-0.6**
ZSN	**Zaisan**	**37.84**	**318**	⇑*i*P	**P**	**12 26 40.3**	**-0.9**
	comp=Z,145nm,3.8s						
ZSN				*e*S	**S**	**12 32 35.4**	**+4.4**
ZSN				*e*LR	LR	12 43 01.2	
ZSN	**Zaisan**	**37.84**	**318**	*c i*P	**P**	**12 26 40.3**	**-0.9**
ZSN				*e*S	**S**	**12 32 35.3**	**+4.4**
ZSN				pmax	pmax		
	comp=Z,145nm,3.8s						
YAK	**Yakutsk**	**38.36**	**6**	P	**P**	**12 26 43.2**	**-2.0**
	comp=Z,12nm,0.4s,baz=187,slow=2.8,SNR=14						
YAK	**Yakutsk**	**38.36**	**6**	*c i*P	**P**	**12 26 42.7**	**-2.5**
YAK				*e**PP	**sP**	**12 26 53.1**	**-1.2**
YAK				*e*		12 28 12.3	
YAK				*e*		12 28 56.0	
YAK				*e*S	**S**	**12 32 34.2**	**-4.0**
YAK				*e*		12 36 46.2	
YAK				pmax	pmax		
	comp=Z,52nm,0.9s						
YAK				pmax	pmax		
	comp=N,34nm,1.1s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,266nm,3.8s						
YAK				pmax	pmax		
	comp=N,181nm,3.2s						
YAK				pmax	pmax		
	comp=E,127nm,3.8s						
YAK				smax	smax		
	comp=N,232nm,1.8s						
YAK				MLR	MLR		
	comp=Z,12µm,15.0s						
YAK				MLR	MLR		
	comp=N,10µm,14.0s						
YAK	**Yakutsk**	**38.36**	**6**	P	**P**	**12 26 42.3**	**-2.9**
PATS	**Pohnpei**	**38.49**	**110**	IAMs_20	IAMs_20	12 43 04.8	
	comp=Z,7µm,18.0s						
PVM	**Polavaram**	**38.58**	**268**	*e*P	**P**	**12 26 48.3**	**+0.7**
PVM				IAmb	IAmb	12 26 49.2	
	comp=Z,9.0nm,0.8s						
PVM				*e*S	**S**	**12 32 41.5**	**-1.1**
PVM				IVMs_BB	IVMs_BB	12 45 29.4	
	comp=Z,591nm,14.2s						
MK31	**Makanchi Array**	**39.20**	**316**	P	**P**	**12 26 52.1**	**-0.5**
MK31				pmax	pmax		
	comp=Z,203nm,1.6s						
MK31	**Makanchi Array**	**39.20**	**316**	P	**P**	**12 26 52.0**	**-0.5**
MK31				IAmb	IAmb	12 26 53.9	
	comp=Z,203nm,1.6s						
MKAR	**Makanchi Array**	**39.20**	**316**	P	**P**	**12 26 52.2**	**-0.4**
	comp=Z,63nm,0.8s,baz=104,slow=10,SNR=285						
MKAR				ScP	**ScP**	**12 32 48.2**	**-0.3**
	comp=Z,6.4nm,1.1s,baz=106,slow=4.3,SNR=6.7						
MKAR				ScS	**ScS**	**12 36 58.2**	**-1.8**
	comp=Z,1.8nm,1.1s,baz=96,slow=6.5,SNR=3.9						
MKAR				LR	LR	12 44 36.0	
	comp=Z,14µm,18.7s,baz=105,slow=39						
MKAR	**Makanchi Array**	**39.20**	**316**	*i* P	**P**	**12 26 52.2**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,65nm,0.8s						
MKAR	**Makanchi Array**	**39.20**	**316**	P	**P**	**12 26 51.1**	**-1.5**
MAKZ	**Makanchi**	**39.41**	**316**	P	**P**	**12 26 53.8**	**-0.5**
MAKZ	**Makanchi**	**39.41**	**316**	P	**P**	**12 26 53.5**	**-0.8**
MAKZ				IAmb	IAmb	12 26 55.7	
	comp=Z,336nm,1.6s						
PEA0B	**Petropavlovsk-**	**39.45**	**33**	IAMs_20	IAMs_20	12 43 59.7	
	comp=Z,7µm,19.0s						
PETK	**Petropavlovsk-**	**39.45**	**33**	P	**P**	**12 26 51.1**	**-3.5**
	comp=Z,1.8nm,0.6s,baz=195,slow=2.7,SNR=15						
PETK				LR	LR	12 44 02.0	
	comp=Z,7µm,18.8s,baz=225,slow=38						
MYLAV	**Mylavaram**	**39.63**	**268**	*e*P	**P**	**12 26 57.2**	**+0.8**
MYLAV				IAmb	IAmb	12 26 58.1	
	comp=Z,17nm,1.2s						
MYLAV				*e*S	**S**	**12 32 58.9**	**+0.5**
MYLAV				IVMs_BB	IVMs_BB	12 46 07.8	
	comp=Z,520nm,12.5s						
GGR	**Gangavaram**	**39.71**	**269**	*e*P	**P**	**12 26 57.6**	**+0.4**
GGR				IAmb	IAmb	12 26 58.5	
	comp=Z,21nm,1.1s						
GGR				*e*S	**S**	**12 32 59.5**	**-0.2**
GGR				IVMs_BB	IVMs_BB	12 45 52.8	
	comp=Z,676nm,14.5s						
PET	**Petropavlovsk**	**39.89**	**34**	*e*P	**P**	**12 26 57.1**	**-1.1**
PET				*e*S	**S**	**12 32 59.8**	**-1.7**
PET				pmax	pmax		
	comp=Z,500nm,12.7s						
PET				pmax	pmax		
	comp=Z,400nm,15.7s						
PET				MLR	MLR		
	comp=Z,4µm,19.0s						
PET				MLR	MLR		
	comp=Z,5µm,18.0s						
KNRA	**Kununurra**	**39.92**	**170**	P	**P**	**12 26 58.5**	**-0.2**
KNRA				IAmb	IAmb	12 27 00.2	
	comp=Z,138nm,1.1s						
NGP	**Nagpur**	**39.95**	**275**	*e*P	**P**	**12 26 59.3**	**+0.2**
SHLS	**Shalkode**	**39.99**	**309**	⇑*i*P	**P**	**12 26 57.1**	**-2.3**
	comp=Z,85nm,1.1s						
SHLS				*e*LR	LR	12 43 45.9	
SHLS	**Shalkode**	**39.99**	**309**	*c i*P	**P**	**12 26 57.0**	**-2.3**
SHLS				pmax	pmax		
	comp=Z,85nm,1.1s						
PDGK	**Podgornoye**	**40.02**	**310**	P	**P**	**12 27 00.0**	**+0.5**
RPR	**Rampur**	**40.27**	**271**	*e*P	**P**	**12 27 01.9**	**+0.2**
RPR				IAmb	IAmb	12 27 02.9	
	comp=Z,20nm,1.1s						
RPR				*e*S	**S**	**12 33 06.8**	**-1.1**
UZB	**Uzynbulak**	**40.30**	**309**	⇑*i*P	**P**	**12 27 02.2**	**+0.3**
	comp=Z,127nm,1.6s						
UZB				*e*LR	LR	12 46 36.7	
UZB	**Uzynbulak**	**40.30**	**309**	*c i*P	**P**	**12 27 02.2**	**+0.3**
UZB				pmax	pmax		
	comp=Z,127nm,1.6s						
SMLA	**Simla**	**40.44**	**290**	*e*P	**P**	**12 27 02.3**	**-0.7**
SMLA				IAmb	IAmb	12 27 07.7	
	comp=Z,71nm,0.9s						
ADKI	**Addanki**	**40.51**	**267**	*e*P	**P**	**12 27 04.8**	**+1.0**
ADKI				IAmb	IAmb	12 27 05.6	
	comp=Z,22nm,1.4s						
ADKI				*e*ScP	**ScP**	**12 32 52.5**	**-1.6**
ADKI				*e*S	**S**	**12 33 11.8**	**+0.2**
KPKS	**Kokpek**	**40.62**	**309**	⇑*i*P	**P**	**12 27 04.1**	**-0.4**
	comp=Z,233nm,2.0s						
KPKS				*e*LR	LR	12 46 27.1	
KPKS	**Kokpek**	**40.62**	**309**	*c i*P	**P**	**12 27 04.1**	**-0.4**
KPKS				pmax	pmax		
	comp=Z,233nm,2.0s						
MA2	**Magadan**	**40.78**	**22**	P	**P**	**12 27 02.5**	**-2.9**
	comp=Z,1.3nm,0.3s,baz=200,slow=11,SNR=3.5						
MA2				PcP	**PcP**	**12 29 06.4**	**+0.1**
	comp=Z,9.3nm,0.8s,baz=150,slow=3.7,SNR=3.9						
MA2	**Magadan**	**40.78**	**22**	⇑*e*P	**P**	**12 27 03.1**	**-2.3**
MA2				pmax	pmax		
	comp=Z,13nm,1.7s						
MA2				MLR	MLR		
	comp=Z,9µm,16.0s						
MA2	**Magadan**	**40.78**	**22**	P	**P**	**12 27 04.4**	**-1.0**
MA2				IAMs_20	IAMs_20	12 44 47.9	
	comp=Z,8µm,19.0s						
NJS	**Nagarjunasagar**	**40.90**	**268**	*e*P	**P**	**12 27 07.0**	**0.0**
NJS				IAmb	IAmb	12 27 08.3	
	comp=Z,19nm,1.3s						
NJS				*e*S	**S**	**12 33 16.2**	**-1.2**
NJS				IVMs_BB	IVMs_BB	12 46 44.8	
	comp=Z,545nm,15.9s						
ZAA0	**Zalesovo Array**	**40.98**	**327**	P	**P**	**12 27 05.4**	**-1.8**
ZAA0				IAmb	IAmb	12 27 07.1	
	comp=Z,145nm,0.9s						
ZALV	**Zalesovo Beam**	**40.98**	**327**	P	**P**	**12 27 05.8**	**-1.4**
	comp=Z,127nm,0.8s,baz=118,slow=8.3,SNR=147						
ZALV				ScP	**ScP**	**12 32 53.2**	**-2.0**
	comp=Z,2.6nm,0.8s,baz=149,slow=3.5,SNR=4.3						
ZALV				LR	LR	12 45 25.2	
	comp=Z,18µm,18.1s,baz=124,slow=38						
ZALV	**Zalesovo Beam**	**40.98**	**327**	P	**P**	**12 27 05.0**	**-2.2**
ZALV	**Zalesovo Beam**	**40.98**	**327**	P	**P**	**12 27 05.0**	**-2.2**
BHPL	**Bhopal**	**41.01**	**278**	*e*P	**P**	**12 27 07.2**	**-0.7**
BHPL				*i* x	x	12 28 49.6	
PMG	**Port Moresby**	**41.11**	**141**	*d i*P	**P**	**12 27 09.6**	**+0.9**
PMG				pmax	pmax		
	comp=Z,392nm,1.1s						
PMG				MLR	MLR		
	comp=Z,21µm,20.0s						
PMG	**Port Moresby**	**41.11**	**141**	P	**P**	**12 27 10.1**	**+1.4**
PMG				IAmb	IAmb	12 27 23.7	
	comp=Z,94nm,0.9s						
SRSP	**Sriramsagar**	**41.12**	**272**	*e*P	**P**	**12 27 09.0**	**+0.2**
SRSP				IAmb	IAmb	12 27 10.3	
	comp=Z,38nm,1.6s						
SRSP				*e*S	**S**	**12 33 18.1**	**-2.6**
SRSP				IVMs_BB	IVMs_BB	12 47 13.8	
	comp=Z,519nm,13.8s						
DHRM	**DHARAMSHALA**	**41.16**	**292**	*e*P	**P**	**12 27 08.7**	**-0.6**
DHRM				IAmb	IAmb	12 27 13.1	
	comp=Z,93nm,1.3s						
MDRS	**Chennai**	**41.20**	**262**	*e*P	**P**	**12 27 10.4**	**+0.9**
TDK	**Taldyqorghan**	**41.21**	**312**	*e*P	**P**	**12 27 09.6**	**+0.3**
TDK				*e*LR	LR	12 44 48.9	
	comp=Z,6µm,19.8s						
TDK	**Taldyqorghan**	**41.21**	**312**	*e*P	**P**	**12 27 09.5**	**+0.3**
TDK				MLR	MLR		
	comp=Z,6µm,20.0s						
HYB	**Hyderabad**	**41.34**	**269**	*i* P	**P**	**12 27 10.0**	**-0.6**
HYB	**Hyderabad**	**41.34**	**269**	*e*P	**P**	**12 27 11.2**	**+0.5**
HYBB	**Hyderabad (bro**	**41.34**	**269**	*e*P	**P**	**12 27 11.1**	**+0.4**
HYBB				IAmb	IAmb	12 27 11.8	
	comp=Z,23nm,1.3s						
HYBB				*e*ScP	**ScP**	**12 32 56.6**	**-0.8**
HYBB				⇑*e*S	**S**	**12 33 23.4**	**-0.6**
HYBB				IVMs_BB	IVMs_BB	12 46 54.2	
	comp=Z,468nm,16.2s						
SRLM	**Srisailam**	**41.42**	**267**	*e*P	**P**	**12 27 11.4**	**+0.1**
SRLM				IAmb	IAmb	12 27 13.1	
	comp=Z,77nm,2.3s						
SRLM				*e*S	**S**	**12 33 25.9**	**+0.7**
SRLM				IVMs_BB	IVMs_BB	12 49 13.7	
	comp=Z,533nm,12.9s						
SKHT	**Srikalahasti**	**41.45**	**264**	*e*P	**P**	**12 27 12.7**	**+1.2**
SKHT				IAmb	IAmb	12 27 15.9	
	comp=Z,13nm,0.8s						
SKHT				*e*S	**S**	**12 33 25.2**	**-0.4**
SKHT				IVMsBB		12 48 07.6	
	comp=Z,382nm,15.7s						
H11N1	**WAKE ISLAND Hy**	**41.46**	**87**	T	T	13 12 51.8	
	baz=283,slow=75,SNR=24						
H11N2	**WAKE ISLAND Hy**	**41.46**	**87**	T	T	13 12 52.8	
	baz=283,slow=75,SNR=23						
H11N3	**WAKE ISLAND Hy**	**41.48**	**87**	T	T	13 12 53.9	
	baz=283,slow=75,SNR=21						
H11S3	**WAKE ISLAND Hy**	**41.58**	**89**	T	T	13 13 16.8	
	baz=284,slow=75,SNR=19						
H11S1	**WAKE ISLAND Hy**	**41.59**	**89**	T	T	13 13 03.0	
	baz=284,slow=75,SNR=4.7						
H11S2	**WAKE ISLAND Hy**	**41.60**	**89**	T	T	13 13 17.6	
	baz=284,slow=75,SNR=14						
MDOK	**Medeo**	**41.71**	**309**	*i* P	**P**	**12 27 13.2**	**-0.3**
	comp=Z,1µm,3.6s						
MDOK				*e*S	S	12 33 40.7	+11
MDOK				*e*LR	LR	12 46 45.2	
	comp=Z,3µm,13.3s						
MDOK	**Medeo**	**41.71**	**309**	*i* P	**P**	**12 27 13.2**	**-0.3**
MDOK				pmax	pmax		
	comp=Z,1µm,3.6s						
MDOK				MLR	MLR		
	comp=Z,3µm,13.0s						
TNSS	**Tian-Shan**	**41.76**	**308**	⇑*i*P	**P**	**12 27 14.8**	**+0.6**
TNSS	**Tian-Shan**	**41.76**	**308**	⇑*i*P	**P**	**12 27 14.8**	**+0.6**
AAA	**Alma-Ata**	**41.82**	**309**	*e*P	**P**	**12 27 13.1**	**-1.3**
AAA				*e*LR	LR	12 46 51.1	
	comp=Z,3µm,14.7s						
AAA	**Alma-Ata**	**41.82**	**309**	*e*P	**P**	**12 27 13.0**	**-1.3**
AAA				MLR	MLR		
	comp=Z,3µm,15.0s						
SEM	**Semipalatinsk**	**41.83**	**320**	*e*P	**P**	**12 27 10.9**	**-3.7**
SEM	**Semipalatinsk**	**41.83**	**320**	*e*P	**P**	**12 27 10.8**	**-3.7**
KSH	**Kashi**	**41.88**	**303**	P	**P**	**12 27 18.0**	**+3.1**
KSH				sP	pwP	12 27 25.3	-0.1
KSH				PP	**PnPn**	**12 28 59.8**	**+2.8**
KSH				PcS	**PcS**	**12 33 04.8**	**+2.7**
KSH				S	**S**	**12 33 38.1**	**+6.3**
KSH				ScS	**ScS**	**12 37 19.1**	**+2.5**
KSH				pmax	pmax		
	comp=Z,130nm,1.2s						
KSH				pmax	pmax		
	comp=Z,2µm,5.4s						
KSH				LR	LR		
	comp=Z,3µm,10.0s						
KSH				LR	LR		
	comp=Z,5µm,16.0s						
KSH				LR	LR		
	comp=Z,6µm,14.0s						
FITZ	**Fitzroy Crossi**	**41.95**	**175**	P	**P**	**12 27 15.1**	**-0.4**
	comp=Z,30nm,1.1s,baz=15,slow=8.5,SNR=12						
FITZ	**Fitzroy Crossi**	**41.95**	**175**	P	**P**	**12 27 14.8**	**-0.6**

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ULHL  Ulahol           42.11 307    P         P          12 27 18.4 +1.5
      SNR=9.9
KZA   Kyzart           42.81 307    P         P          12 27 24.2 +1.4
      SNR=67
COEN  Coen             42.87 149    P         P          12 27 24.7 +1.7
COEN                                IAmb      IAmb       12 27 26.1
      comp=Z,228nm,0.9s
KURK  Kurchatov        42.91 320    P         P          12 27 22.1 -0.8
KURK                                P         P          12 27 22.1 -0.8
KURK                                P         P          12 27 22.1 -0.8
KURK  Kurchatov        42.91 320c iP          P          12 27 22.2 -0.8
KURK                                pmax      pmax
      comp=Z,272nm,1.7s
KURK                                MLR       MLR
      comp=Z,5µm,15.0s
KURK  Kurchatov        42.91 320    P         P          12 27 22.2 -0.8
KURK                                IAmb      IAmb       12 27 24.0
      comp=Z,291nm,1.4s
KURBB Kurchatov Arra   42.93 320    P         P          12 27 22.4 -0.7
      comp=Z,104nm,1.2s,baz=115,slow=7.3,SNR=180
KURBB                               PcP       PcP        12 29 13.6 +0.1
      comp=Z,2.6nm,0.3s,baz=98,slow=4.8,SNR=4.6
KURBB Kurchatov Arra   42.93 320    P         P          12 27 22.3 -0.8
KLRI  Killari          42.94 271   eP         P          12 27 24.1 +0.4
KLRI                                IAmb      IAmb       12 27 25.1
      comp=Z,92nm,1.4s
KLRI                               eS         S          12 33 46.1 -1.6
KLRI                                IVMs_BB   IVMs_BB    12 47 21.6
      comp=Z,928nm,16.2s
KBK   Karagaybulak     43.12 307    P         P          12 27 26.1 +1.0
      SNR=57
PALK  Pallekele        43.18 254    P         P          12 27 26.3 +0.6
      comp=Z,4.6nm,0.7s,baz=53,slow=9.2,SNR=3.2
PALK  Pallekele        43.18 254    P         P          12 27 26.9 +1.2
PALK  Pallekele        43.18 254    P         P          12 27 26.0 +0.3
PALK  Pallekele        43.18 254⇑eP           P          12 27 26.5 +0.8
PALK                                pmax      pmax
      comp=Z,24nm,1.2s
PALK                                MLR       MLR
      comp=Z,4µm,20.0s
PALK  Pallekele        43.18 254    IAmb      IAmb       12 27 34.9
      comp=Z,36nm,1.4s
PALK                                IAMs_20   IAMs_20    12 45 38.3
      comp=Z,4µm,20.0s
URV   Uravakonda       43.27 267   eP         P          12 27 26.8 +0.4
URV                                 IAmb      IAmb       12 27 29.8
      comp=Z,22nm,0.7s
URV                                eS         S          12 33 50.8 -1.8
URV                                 IVMs_BB   IVMs_BB    12 47 07.7
      comp=Z,987nm,15.0s
CHMS  Chumysh          43.33 308    P         P          12 27 27.6 +1.0
      SNR=46
CHMS  Chumysh          43.33 308  i P         P          12 27 27.1 +0.5
CHMS                                pmax      pmax
      comp=Z,128nm,1.1s
UCH   Uchtor           43.37 307    P         P          12 27 28.8 +1.4
      SNR=180
FRU1  Bishkek          43.38 308    P         P          12 27 28.1 +1.0
FRU1                                pmax      pmax
      comp=Z,77nm,0.9s
FRU1                                MLR       MLR
      comp=Z,12µm,18.0s
FRU1  Bishkek          43.38 308    P         P          12 27 28.1 +1.0
FRU1                                IAmb      IAmb       12 27 29.3
      comp=Z,77nm,0.9s
AAK   Ala-Archa        43.45 307    P         P          12 27 28.4 +0.7
      comp=Z,32nm,0.8s,baz=114,slow=5.5,SNR=70
AAK   Ala-Archa        43.45 307    P         P          12 27 28.4 +0.7
      SNR=32
AAK   Ala-Archa        43.45 307    P         P          12 27 28.4 +0.7
AAK   Ala-Archa        43.45 307    P         P          12 27 27.4 -0.4
AAK                                 P         P          12 27 27.4 -0.4
AAK                                 P         P          12 27 27.4 -0.4
AAK   Ala-Archa        43.45 307    P         P          12 27 28.0 +0.2
SGDS  Sogindy          43.50 309⇑iP           P          12 27 27.9  0.0
      comp=Z,91nm,2.4s
SGDS                               eS         S          12 33 56.4 +1.0
SGDS                               eLR        LR         12 47 47.3
USP   Ospenovka        43.56 308    P         P          12 27 29.3 +0.8
      SNR=30
NIL   Nilore           43.71 294    P         P          12 27 30.0 +0.2
NIL   Nilore           43.71 294    P         P          12 27 29.8  0.0
NIL                                 pmax      pmax
      comp=Z,78nm,1.1s
NIL                                 MLR       MLR
      comp=Z,6µm,18.0s
NIL   Nilore           43.71 294    P         P          12 27 29.8  0.0
NIL   Nilore           43.71 294    IAMs_20   IAMs_20    12 47 13.1
      comp=Z,6µm,18.0s
SEY   Seymchan         43.81  19⇑eP           P          12 27 28.9 -1.2
AML   Almayashu        43.96 306    P         P          12 27 33.2 +1.1
      SNR=100
EKS2  Erkin-Say        43.98 307    P         P          12 27 32.6 +0.7
      SNR=64
WB0   Warramunga Arr   45.05 164    P         P          12 27 40.7 +0.2
WB0                                 IAmb      IAmb       12 27 42.6
      comp=Z,134nm,0.9s
WRAB  Tennant Creek    45.20 164d iP          P          12 27 42.5 +0.8
WRAB                                pmax      pmax
      comp=Z,152nm,1.0s
WRAB                                MLR       MLR
      comp=Z,2µm,19.0s
WRAB  Tennant Creek    45.20 164    P         P          12 27 42.1 +0.5
WRAB                                IAmb      IAmb       12 27 43.9
      comp=Z,156nm,0.9s
WRA   Warramunga Arr   45.21 164    P         P          12 27 42.5 +0.8
      comp=Z,102nm,0.8s,baz=344,slow=9.0,SNR=178
WRA                                 ScP       ScP        12 33 12.9 +0.1
      comp=Z,1.7nm,0.9s,baz=343,slow=4.4,SNR=2.7
WRA                                 S         S          12 34 19.0 -1.4
      comp=Z,3.6nm,1.0s,baz=340,slow=14,SNR=12
WRA   Warramunga Arr   45.21 164    P         P          12 27 41.1 -0.6
WRA                                 pmax      pmax
      comp=Z,8.0nm,0.9s
WRA   Warramunga Arr   45.21 164    P         P          12 27 41.1 -0.6
WB2   Warramunga Arr   45.21 164    P         P          12 27 42.3 +0.6
PSAD1 Pilbara Seismi   45.23 183    P         P          12 27 41.2 -0.6
PSAD1                               IAmb      IAmb       12 27 42.7
      comp=Z,103nm,0.9s
WR0   Warramunga Arr   45.27 164    P         P          12 27 42.3 +0.1
WR0                                           S          12 34 21.0 -0.4
PSAC1 Pilbara Seismi   45.31 183    P         P          12 27 41.6 -0.9
PSAC1                               IAmb      IAmb       12 27 43.4
      comp=Z,118nm,0.9s
POO   Poona            45.33 273   ex         P          12 27 40.0 -2.8
PSAC2 Pilbara Seismi   45.34 183    P         P          12 27 42.2 -0.5
PSAC2                               IAmb      IAmb       12 27 43.5
      comp=Z,124nm,0.9s
PSAA2 Pilbara Seismi   45.34 183    P         P          12 27 42.2 -0.5
PSAA2                               IAmb      IAmb       12 27 43.5
      comp=Z,109nm,0.9s
PSA00 Pilbara Seismi   45.35 183    P         P          12 27 42.3 -0.4
PSA00                               IAmb      IAmb       12 27 43.6
      comp=Z,99nm,0.9s
PSA00 Pilbara Seismi   45.35 183    P         P          12 27 42.4 -0.4
PSA00                               IAmb      IAmb       12 27 43.9
      comp=Z,56nm,0.9s
DZA   Taraz            45.79 307   eP         P          12 27 45.7 -0.5
DZA   Taraz            45.79 307   eP         P          12 27 45.7 -0.5
TRD   Trivandrum       45.97 258   eP         P          12 27 47.2 -0.7
GOA   Goa              46.24 269   eP         P          12 27 50.2 +0.2
GOA                                 IAmb      IAmb       12 27 54.0
      comp=Z,40nm,1.2s
BRZS  Berezniki        46.28 317⇑iP           P          12 27 49.3 -0.7
      comp=Z,194nm,1.8s
BRZS                               eLR        LR         12 48 05.9
BRZS  Berezniki        46.28 317c iP          P          12 27 49.3 -0.7
BRZS                                pmax      pmax
      comp=Z,193nm,1.8s
KK31  Karatay Array    46.42 307  i P         P          12 27 51.7 +0.6
KK31  Karatay Array    46.42 307    P         P          12 27 50.8 -0.4
KK31                                IAmb      IAmb       12 27 53.1
      comp=Z,69nm,1.1s
KKAR  Karatay Array    46.42 307    P         P          12 27 51.2 +0.1
KKAR  Karatay Array    46.42 307    P         P          12 27 51.2 +0.1
KKAR  Karatay Array    46.42 307    P         P          12 27 50.9 -0.2
KKAR                                IAmb      IAmb       12 27 53.1
      comp=Z,69nm,1.1s
IUG   Iuzhnay          46.66 306⇑iP           P          12 27 53.6 +0.4
IUG                                eLR        LR         12 48 22.0
IUG   Iuzhnay          46.66 306c iP          P          12 27 53.6 +0.4
GIRL  Giralia          47.01 190    P         P          12 27 57.0 +1.1
TAS   Tashkent         47.14 305    P         P          12 27 58.3 +1.5
TAS                                 pmax      pmax
      comp=Z,104nm,0.7s
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TAS                                 MLR       MLR
      comp=Z,8µm,20.0s
TAS   Tashkent         47.14 305    P         P          12 27 58.3 +1.5
TAS                                 IAMs_20   IAMs_20    12 50 21.5
      comp=Z,8µm,20.0s
KBL   Kabul            47.19 296    P         P          12 27 57.3 -0.2
KBL                                 P         P          12 27 57.3 -0.2
KBL   Kabul            47.19 296    P         P          12 27 57.9 +0.4
KBL                                 pmax      pmax
      comp=Z,134nm,1.0s
KBL                                 MLR       MLR
      comp=Z,5µm,18.0s
KBL   Kabul            47.19 296    P         P          12 27 57.9 +0.4
KBL                                 IAmb      IAmb       12 28 01.8
      comp=Z,134nm,1.0s
KBL                                 IAMs_20   IAMs_20    12 51 35.3
      comp=Z,5µm,18.0s
TIXI  Tiksi            47.84   3c iP          P          12 27 59.1 -2.6
TIXI                                pmax      pmax
      comp=Z,128nm,1.7s
TIXI                                MLR       MLR
      comp=Z,23µm,16.0s
TIXI  Tiksi            47.84   3    P         P          12 27 59.3 -2.4
TIXI                                IAmb      IAmb       12 28 01.2
      comp=Z,65nm,1.0s
BHUJ  Bhuj             48.02 280⇑iP           P          12 28 03.7 -0.1
BRVK  Borovoye         48.55 321    P         P          12 28 06.2 -1.4
BRVK                                P         P          12 28 06.2 -1.4
BRVK  Borovoye         48.55 321    P         P          12 28 07.0 -0.6
BRVK  Borovoye         48.55 321    P         P          12 28 06.2 -1.4
BRVK                                IAmb      IAmb       12 28 08.0
      comp=Z,98nm,1.0s
BRVK  Borovoye         48.55 321    IAMs_20   IAMs_20    12 51 04.4
      comp=Z,5µm,19.0s
AS31  Alice Springs    48.68 166    P         P          12 28 10.6 +1.7
ASAR  Alice Springs    48.69 166    P         P          12 28 10.5 +1.6
      comp=Z,60nm,0.9s,baz=345,slow=6.7,SNR=314
ASAR                                ScP       ScP        12 33 27.9 +0.5
      comp=Z,3.3nm,1.0s,baz=350,slow=4.9,SNR=5.1
ASAR                                S         S          12 35 10.5 +0.5
      comp=Z,5.5nm,1.2s,baz=345,slow=18,SNR=8.4
ASAR                                LR        LR         12 48 44.1
      comp=Z,2µm,20.4s,baz=334,slow=36
ASAR                                PKPPKP               12 59 13.1
      comp=Z,0.7nm,0.9s,baz=116,slow=4.2,SNR=2.6
ASAR                                PKP2bc               12 59 29.1
      comp=Z,1.0nm,1.1s,baz=121,slow=2.3,SNR=4.1
ASAR  Alice Springs    48.69 166    P         P          12 28 11.0 +2.1
ASAR  Alice Springs    48.69 166    P         P          12 28 11.0 +2.1
NRIK  Noril'sk         49.86 345    P         P          12 28 15.4 -1.9
      comp=Z,43nm,1.0s,baz=126,slow=7.8,SNR=58
NRIK                                PcP       PcP        12 29 37.5  0.0
      comp=Z,36nm,0.9s,baz=136,slow=3.5,SNR=7.8
NRIK                                ScP       ScP        12 33 30.1 -1.7
      comp=Z,3.2nm,0.8s,baz=114,slow=2.4,SNR=4.0
NRIK                                LR        LR         12 51 22.5
      comp=Z,13µm,19.4s,baz=142,slow=39
BILL  Bilibino         51.52  19⇓eP           P          12 28 27.6 -2.2
BILL                               i                     12 29 42.8
BILL                               eS         S          12 35 51.1 +2.6
BILL                                pmax      pmax
      comp=Z,7.0nm,0.9s
BILL                                MLR       MLR
      comp=Z,11µm,18.0s
BILL  Bilibino         51.52  19    P         P          12 28 28.0 -1.9
HRA   Herat            52.80 296    P         P          12 28 39.6 -0.5
HRA                                 IAMs_20   IAMs_20    12 53 37.0
      comp=Z,6µm,19.0s
MORW  Morawa           53.09 187    P         P          12 28 41.5 -0.4
MORW                                IAmb      IAmb       12 28 53.9
      comp=Z,68nm,1.2s
ABKAR Akbulak array    54.32 314    P         P          12 28 50.6 -0.2
ABKAR Akbulak array    54.32 314    P         P          12 28 51.3 +0.5
ABKAR                               IAmb      IAmb       12 28 52.2
      comp=Z,163nm,0.9s
FORT  Forrest          54.73 174    P         P          12 28 55.0 +1.1
SVE   Sverdlovsk       54.82 324d iP          P          12 28 53.8 -0.5
SVE                                 pmax      pmax
      comp=Z,126nm,1.5s
SVE                                 MLR       MLR
      comp=Z,10µm,16.0s
ASHT  Ashkhabad        55.58 301    P         P          12 29 02.6 +2.5
ASHT                                pmax      pmax
      comp=Z,178nm,0.4s
ASHT                                MLR       MLR
      comp=Z,6µm,19.0s
ASHT  Ashkhabad        55.58 301    P         P          12 29 02.6 +2.5
ASHT                                IAMs_20   IAMs_20    12 56 53.8
      comp=Z,6µm,19.0s
GEYT  Alibeck          55.79 301    P         P          12 29 02.5 +0.8
      comp=Z,35nm,0.8s,baz=64,slow=3.4,SNR=51
GEYT                                LR        LR         12 57 60.0
      comp=Z,5µm,18.5s,baz=90,slow=42
GEYT  Alibeck          55.79 301    P         P          12 29 02.5 +0.8
GYA0B ALIBECK ARRAY    55.79 301    P         P          12 29 02.5 +0.8
GYA0B                               IAMs_20   IAMs_20    12 57 09.5
      comp=Z,6µm,20.0s
ARU   Arti             55.89 323    P         P          12 29 01.1 -0.9
      comp=Z,13nm,0.7s,baz=102,slow=5.4,SNR=54
ARU   Arti             55.89 323c iP          P          12 29 00.7 -1.3
ARU                                                      12 29 58.9
ARU                                                      12 31 02.4
ARU                                 PPP       PPP        12 32 19.1
ARU                                 S         S          12 36 48.2 +0.2
ARU                                 SS        SS         12 40 38.8 +5.2
ARU                                 pmax      pmax
      comp=Z,164nm,1.7s
ARU                                 MLR       MLR
      comp=Z,4µm,19.0s
ARU   Arti             55.89 323    P         P          12 29 00.6 -1.4
ARU                                 IAMs_20   IAMs_20    12 54 27.0
      comp=Z,5µm,21.0s
EIDS  Eidsvold         56.42 149    P         P          12 29 07.1 +1.0
EIDS                                IAmb      IAmb       12 29 20.4
      comp=Z,36nm,0.8s
NWAO  Narrogin (SRO)   56.80 185    P         P          12 29 09.1 +0.4
NWAO                                pmax      pmax
      comp=Z,70nm,1.1s
NWAO  Narrogin (SRO)   56.80 185    P         P          12 29 08.6 -0.1
NWAO                                IAmb      IAmb       12 29 21.4
      comp=Z,86nm,1.1s
NWAO  Narrogin (SRO)   56.80 185    P         P          12 29 09.1 +0.4
NWAO                                IAmb      IAmb       12 29 21.4
      comp=Z,70nm,1.1s
WBK   Wadi Bani Khal   57.75 282    P         P          12 29 16.5 +0.7
      SNR=13
WBK                                 P         P          12 29 16.5 +0.7
      SNR=13
WSAR  Wadi Sarin       57.89 283    P         P          12 29 17.3 +0.6
      SNR=12
BBOO  Buckleboo        57.98 166    P         P          12 29 18.6 +1.6
GAMB  Gambell          58.16  29    P         P          12 29 17.7 -0.1
GAMB                                IAMs_20   IAMs_20    12 56 33.6
      comp=Z,5µm,19.0s
BIDO  Bidbid           58.27 284    P         P          12 29 19.2 -0.2
BIDO                                P         P          12 29 19.2 -0.2
SMDO  Samad            58.46 283    P         P          12 29 20.8  0.0
      SNR=15
SMDO                                P         P          12 29 20.8  0.0
      SNR=15
SMDO                                P         P          12 29 20.8  0.0
      SNR=15
STKA  Stephens Creek   58.53 161    P         P          12 29 22.3 +1.4
      comp=Z,34nm,0.8s,baz=333,slow=7.8,SNR=52
STKA                                LR        LR         12 56 48.8
      comp=Z,2µm,19.3s,baz=335,slow=38
STKA                                PKP2bc               12 59 10.6
      comp=Z,1.8nm,1.0s,baz=153,slow=9.0,SNR=2.1
STKA  Stephens Creek   58.53 161    P         P          12 29 22.1 +1.2
STKA                                pmax      pmax
      comp=Z,13nm,0.8s
STKA                                MLR       MLR
      comp=Z,600nm,19.0s
STKA  Stephens Creek   58.53 161    P         P          12 29 22.1 +1.2
JMDO  Jabal Madar      58.59 282    P         P          12 29 21.7  0.0
      SNR=11
JMDO                                P         P          12 29 21.7  0.0
      SNR=11
HOQ   Hoqain           58.98 284    P         P          12 29 24.3  0.0
      SNR=18
HOQ                                 P         P          12 29 24.3  0.0
      SNR=18
HOQ                                 P         P          12 29 24.3  0.0
      SNR=18
MHTO  MHTO             59.08 281    P         P          12 29 23.9 -1.2
      SNR=13
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MHTO                                P         P          12 29 23.9 -1.2
      SNR=13
MHTO                                P         P          12 29 23.9 -1.2
      SNR=13
BSY   Bisya            59.30 283    P         P          12 29 26.4 -0.1
      SNR=12
BSY                                 P         P          12 29 26.4 -0.1
      SNR=12
BSY                                 P         P          12 29 26.4 -0.1
      SNR=12
BANOM Banah            59.30 287  i P         P          12 29 26.9 +0.4
      SNR=14
BANOM Banah            59.30 287    P         P          12 29 27.0 +0.4
      SNR=9.6
BANOM                               P         P          12 29 27.0 +0.4
      SNR=9.6
SHME  Shamm            59.41 287  i P         P          12 29 27.4 +0.1
      SNR=7.8
MDH   Madha            59.45 286    P         P          12 29 27.0 -0.6
MSFE  Esma-Masafi      59.56 286    P         P          12 29 28.6 +0.2
UOSS  Minazif          59.62 286    P         P          12 29 28.1 -0.7
UOSS  Minazif          59.62 286    P         P          12 29 26.9 -1.9
UOSS                                P         P          12 29 26.9 -1.9
UOSS                                P         P          12 29 26.9 -1.9
UOSS  Minazif          59.62 286    P         P          12 29 28.1 -0.7
HATD  Hatta, Dubai     59.71 286  i P         P          12 29 29.0 -0.5
      SNR=7.0
HATD  Hatta, Dubai     59.71 286    P         P          12 29 29.6 +0.2
      SNR=10.0
HATD                                P         P          12 29 29.6 +0.2
      SNR=10.0
ARQ   Araqi            59.74 284    P         P          12 29 29.8 +0.1
      SNR=12
ARQ                                 P         P          12 29 29.8 +0.1
      SNR=12
ARQ                                 P         P          12 29 29.8 +0.1
      SNR=12
ASHO  Ashiyiah         59.81 286  i P         P          12 29 30.1 -0.1
      SNR=21
ASHO  Ashiyiah         59.81 286    P         P          12 29 30.2 +0.1
      SNR=17
ASHO                                P         P          12 29 30.2 +0.1
      SNR=17
NAZ   Nazwa, Dubai     60.09 286  i P         P          12 29 32.2 +0.2
      SNR=5.8
ALNE  Al Ain           60.24 285  i P         P          12 29 33.0 -0.1
      SNR=10.0
AJN   Ajban            60.79 286  i P         P          12 29 37.0 +0.2
      SNR=7.0
AJN   Ajban            60.79 286    P         P          12 29 36.7 -0.1
      SNR=7.4
AJN                                 P         P          12 29 36.7 -0.1
      SNR=7.4
ARMA  Armidale         60.97 151    P         P          12 29 39.9 +2.1
ARMA                                IAmb      IAmb       12 29 51.5
      comp=Z,146nm,1.6s
ARMA                                IAMs_20   IAMs_20    12 53 56.3
      comp=Z,4µm,21.0s
KIRV  Kirov            60.98 325    P         P          12 29 36.5 -0.9
      comp=Z,40nm,0.5s,baz=79,slow=4.1,SNR=28
ANM   Nome             61.01  28    P         P          12 29 36.8 -0.8
ANM                                 pmax      pmax
      comp=Z,67nm,1.6s
ANM                                 MLR       MLR
      comp=Z,2µm,18.0s
ANM   Nome             61.01  28    P         P          12 29 36.8 -0.8
ANM                                 IAmb      IAmb       12 30 14.2
      comp=Z,67nm,1.6s
DZM   Mont Dzumac      62.74 133   eP         P          12 29 53.5 +3.6
      comp=Z,105nm,1.2s
DZM                                eS         S          12 38 16.0 -1.6
      comp=Z,6µm,27.6s
DZM                                eSS        SS         12 42 20.4 -2.6
      comp=Z,2µm,24.0s
DZM                                eLR        LR         12 48 19.2
      comp=Z,9µm,24.1s
DZM   Mont Dzumac      62.74 133              pP         12 29 55.9 -0.5
DZM                                 IAMs_20   IAMs_20    12 52 07.3
      comp=Z,4µm,22.0s
PRGR  Permogore        62.89 329   eP         P          12 29 48.0 -2.2
PRGR                                pmax      pmax
      comp=Z,38nm,0.6s
MAK   Makhachkala      63.23 307   eP         P          12 29 46.3 -6.6
MAK                                eS         S          12 38 14.2 -9.0
MAK                                eSSS       SSS        12 45 20.7
MAK                                 pmax      pmax
      comp=Z,163nm,1.0s
MAK                                 MLR       MLR
      comp=Z,3µm,16.0s
AKT   Akhty            63.30 306   eP         P          12 29 53.9 +0.4
AKT                                e                     12 30 30.5
AKT                                 pmax      pmax
      comp=Z,133nm,1.4s
RBK   Rabkut           63.50 278    P         P          12 29 54.8 -0.3
      SNR=20
RBK                                 P         P          12 29 54.8 -0.3
      SNR=20
WHFO  Wadi Hawf        63.77 279    P         P          12 29 55.9 -0.9
      SNR=9.5
WHFO                                P         P          12 29 55.9 -0.9
      SNR=9.5
CNBA  Chernabura Isl   63.97  39              pP         12 30 02.8 -1.3
CAN   Canberra         64.17 156    P         P          12 29 58.8 -0.3
CAN                                 pmax      pmax
      comp=Z,31nm,0.9s
CAN                                 MLR       MLR
      comp=Z,3µm,19.0s
CAN   Canberra         64.17 156    P         P          12 29 58.8 -0.3
CAN                                 IAmb      IAmb       12 30 24.0
      comp=Z,32nm,0.9s
CAN                                 IAMs_20   IAMs_20    12 59 24.1
      comp=Z,3µm,19.0s
ABTO  Aybut            64.37 278    P         P          12 30 00.2 -0.7
      SNR=16
ABTO                                P         P          12 30 00.2 -0.7
      SNR=16
GROC  Groznyy          64.43 308   eP         P          12 29 58.7 -2.1
GROC                               e                     12 30 33.2
GROC                               e                     12 32 20.7
GROC                               eS         S          12 38 36.6 -1.5
GROC                                pmax      pmax
      comp=Z,141nm,1.2s
TOO   Toolangi         65.00 160    P         P          12 30 06.6 +2.2
TOO                                 pmax      pmax
      comp=Z,54nm,1.0s
TOO   Toolangi         65.00 160    P         P          12 30 06.6 +2.2
TOO                                 IAmb      IAmb       12 30 18.1
      comp=Z,54nm,0.9s
TTA   Tatalina         65.16  30    P         P          12 30 05.3  0.0
TTA   Tatalina         65.16  30    P         P          12 30 05.3  0.0
TBLG  Delisi           65.46 307    P         P          12 30 08.1 +0.5
TBLG                                pmax      pmax
      comp=Z,133nm,1.6s
TBLG  Delisi           65.46 307    P         P          12 30 08.1 +0.5
TBLG                                IAmb      IAmb       12 30 08.8
      comp=Z,132nm,1.6s
SOCY  Socotra          65.48 273    P         P          12 30 06.2 -1.9
SOCY                                IAmb      IAmb       12 30 07.6
      comp=Z,53nm,1.2s
GNI   Garni            65.77 305    P         P          12 30 10.8 +1.0
      comp=Z,22nm,0.5s,baz=170,slow=2.2,SNR=13
GNI   Garni            65.77 305  i P         P          12 30 10.7 +1.0
      SNR=15
GNI   Garni            65.77 305    P         P          12 30 11.0 +1.3
GNI                                 pmax      pmax
      comp=Z,313nm,1.7s
GNI                                 MLR       MLR
      comp=Z,3µm,19.0s
GNI   Garni            65.77 305    P         P          12 30 11.0 +1.3
GNI   Garni            65.77 305    IAMs_20   IAMs_20    13 03 22.2
      comp=Z,3µm,19.0s
ZEI   Tsey             65.87 308   eP         P          12 30 06.8 -3.6
ZEI                                 pmax      pmax
      comp=Z,74nm,0.9s
KLMR  Klimovskoe       65.88 328   eP         P          12 30 06.4 -3.5
KLMR                               e                     12 32 32.1
KLMR                                PPP       PPP        12 34 16.8
KLMR                                S         S          12 38 54.4 -0.8
KLMR                                pmax      pmax
      comp=Z,191nm,1.8s
KLMR                                MLR       MLR
      comp=Z,9µm,16.0s
KLMR  Klimovskoe       65.88 328   eP         P          12 30 06.4 -3.5
KLMR                               eP         P          12 30 06.4 -3.5
KLMR                               eP         P          12 30 06.4 -3.5
KLMR                                AMP                  12 30 11.0
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      comp=Z,191nm,1.8s
KLMR                               ePP      PP       12 32 32.2 -2.5
KLMR                                PPP     PPP      12 34 16.8
KLMR                                S       S        12 38 54.5 -0.8
KLMR                                S       S        12 38 54.5 -0.8
KLMR                                SS      SS       12 43 25.6 +16
KLMR                                SS      SS       12 43 25.6 +16
KLMR                                LQ      LQ       12 52 59.4
KLMR                                LQ      LQ       12 52 59.4
KLMR                                LR      LR       12 55 31.2
KLMR                                AMP              13 01 56.1
      comp=Z,9µm,15.5s
IMAR  Indian Mountai     65.89  26  P       P        12 30 09.3 -0.6
VRH   Novokhopyorsk      65.91 317 eP       P        12 30 09.0 -1.2
VRH                                eS       S        12 38 50.2 -5.7
VRH                                 pmax    pmax
      comp=Z,140nm,0.8s
VRH                                 pmax    pmax
      comp=Z,170nm,1.0s
VRH                                 smax    smax
      comp=N,1µm,13.8s
VRH                                 MLR     MLR
      comp=Z,3µm,20.0s
NCK   Nalchik            65.96 309⇓iP       P        12 30 10.8 +0.1
NCK                                 pmax    pmax
      comp=Z,53nm,0.8s
NCK                                 MLR     MLR
      comp=Z,5µm,17.0s
GOF   Gofitskoye         66.06 310⇑eP       P        12 30 11.5 +0.2
GOF                                 pmax    pmax
      comp=Z,231nm,1.3s
TMCR  Tamitsa            66.22 332 eP       P        12 30 11.0 -0.9
TMCR                               eS       S        12 38 58.0 -1.2
TMCR                                pmax    pmax
      comp=Z,159nm,1.4s
KBZ   Khabaz             66.41 309  P       P        12 30 13.7 +0.2
      comp=Z,61nm,1.1s,baz=98,slow=4.1,SNR=66
KBZ                                 LR      LR       13 02 53.4
      comp=Z,4µm,19.6s,baz=68,slow=39
KBZ   Khabaz             66.41 309c iP      P        12 30 13.6  0.0
KBZ                                 pmax    pmax
      comp=Z,143nm,1.3s
AKH   Akhalkalaki        66.44 306 ⇓P       P        12 30 16.0 +1.9
AKH   Akhalkalaki        66.44 306  P       P        12 30 15.3 +1.2
AKH                                 pmax    pmax
      comp=Z,202nm,1.2s
AKH                                 MLR     MLR
      comp=Z,5µm,19.0s
AKH   Akhalkalaki        66.44 306  P       P        12 30 15.3 +1.2
AKH                                 IAMs_20 IAMs_20  13 03 55.9
      comp=Z,5µm,19.0s
KVAR  Kislovodsk Arr     66.51 309  P       P        12 30 15.4 +1.0
      comp=Z,32nm,1.0s,baz=270,slow=20,SNR=6.9
KIV   Kislovodsk         66.52 309 i P      P        12 30 14.8 +0.3
      SNR=16
KIV   Kislovodsk         66.52 309 eP       P        12 30 14.7 +0.3
KIV                                e                 12 32 41.0
KIV                                eS       S        12 39 05.8 +1.9
KIV                                eSS      SS       12 43 24.0 +3.3
KIV                                 pmax    pmax
      comp=Z,540nm,1.1s
KIV                                 pmax    pmax
      comp=Z,520nm,4.7s
KIV                                 MLR     MLR
      comp=Z,9µm,17.0s
KIV   Kislovodsk         66.52 309  P       P        12 30 14.4  0.0
KIV                                 IAMs_20 IAMs_20  13 02 32.7
      comp=Z,4µm,19.0s
SHA1  Shidzhatmaz        66.58 309c iP      P        12 30 15.3 +0.3
NEY   Neytrino           66.63 308ceP       P        12 30 15.9 +0.7
NEY                                 pmax    pmax
      comp=Z,12nm,0.8s
NEY                                 MLR     MLR
      comp=Z,1µm,17.0s
PPLA  Purkeypile         66.90  30  P       P        12 30 17.4 +0.8
PPLA                                IAmb    IAmb     12 31 18.3
      comp=Z,86nm,1.4s
COLD  Coldfoot           67.17  25  P       P        12 30 18.9 +0.9
TOLK  Toolik Lake Re     67.22  23  P       P        12 30 18.1 -0.2
TOLK                                IAmb    IAmb     12 30 47.9
      comp=Z,38nm,0.9s
TOLK                                IAMs_20 IAMs_20  13 01 48.7
      comp=Z,4µm,18.0s
TOLK  Toolik Lake Re     67.22  23  P       P        12 30 17.4 -1.0
      baz=278
MLY   Manley             67.25  27  P       P        12 30 18.7 +0.1
BPAW  Bear Paw Mtn.      67.27  28  P       P        12 30 18.7 -0.1
BPAW                                IAmb    IAmb     12 31 09.6
      comp=Z,69nm,1.4s
SKT   Skwentna           67.33  31  P       P        12 30 19.4 +0.2
SKT                                 IAmb    IAmb     12 30 38.5
      comp=Z,90nm,1.8s
SKT                                 IAMs_20 IAMs_20  12 59 32.4
      comp=Z,3µm,19.0s
KTH   Kantishna Hill     67.38  29  P       P        12 30 19.6 +0.1
VORR  Voronezh           67.38 318 eP       P        12 30 18.0 -1.6
VORR                                pmax    pmax
      comp=Z,500nm,1.4s
LPSR  Galich'ya Gora     67.39 319 eP       P        12 30 18.4 -1.2
LPSR                                pmax    pmax
      comp=Z,150nm,1.0s
LPSR                                pmax    pmax
      comp=Z,290nm,1.2s
VSR   Storozhevoye       67.49 317 eP       P        12 30 19.0 -1.3
VSR                                eS       S        12 39 13.1 -2.0
VSR                                 pmax    pmax
      comp=Z,170nm,1.4s
VSR                                 pmax    pmax
      comp=Z,410nm,1.8s
VSR                                 smax    smax
      comp=N,310nm,11.6s
VSR                                 MLR     MLR
      comp=Z,3µm,16.0s
MOS   Moscow             67.59 322 eP       P        12 30 15.5 -5.3
MOS                                e                 12 30 42.1
MOS                                eS       S        12 39 10.7 -5.4
MOS                                 pmax    pmax
      comp=Z,205nm,1.6s
MOS                                 pmax    pmax
      comp=Z,1µm,3.2s
MOS                                 MLR     MLR
      comp=Z,5µm,18.0s
MOS                                 MLR     MLR
      comp=N,2µm,17.0s
MOS                                 MLR     MLR
      comp=E,4µm,18.0s
APA   Apatity            67.67 335⇓iP       P        12 30 14.5 -6.6
APA                                 pmax    pmax
      comp=Z,26nm,0.9s
TRF   Thorofare Moun     67.67  29  P       P        12 30 21.9 +0.5
TRF                                 IAmb    IAmb     12 31 25.0
      comp=Z,48nm,1.2s
BATM  Batumi             67.72 307 ⇓P       P        12 30 22.8 +0.9
SUA   Susitna One        67.78  31  P       P        12 30 22.6 +0.5
SUA                                 IAmb    IAmb     12 30 44.8
      comp=Z,101nm,1.2s
BCA   Borcka             67.81 307 ⇓P       P        12 30 23.5 +0.9
BWN   Browne             67.92  28  P       P        12 30 22.0 -0.8
BWN                                 IAmb    IAmb     12 31 04.8
      comp=Z,51nm,1.0s
BRLK  Bradley Lake       68.00  33  P       P        12 30 21.6 -1.8
BRLK                                IAmb    IAmb     12 30 41.7
      comp=Z,46nm,1.0s
MCK   McKinley           68.23  29  P       P        12 30 24.2 -0.6
MCK                                 pmax    pmax
      comp=Z,49nm,1.1s
MCK                                 MLR     MLR
      comp=Z,2µm,19.0s
MCK   McKinley           68.23  29  P       P        12 30 24.2 -0.6
MCK                                 IAmb    IAmb     12 30 45.0
      comp=Z,49nm,1.1s
OBN   Obninsk            68.30 322c iP      P        12 30 24.0 -1.3
OBN                                 i                12 30 51.7
OBN                                 eS      S        12 39 24.9 +0.3
OBN                                 pmax    pmax
      comp=Z,220nm,1.7s
OBN                                 MLR     MLR
      comp=Z,5µm,19.0s
OBN   Obninsk            68.30 322  P       P        12 30 24.5 -0.8
MDM   Murphy Dome        68.31  27  P       P        12 30 25.2 -0.1
MDM                                 IAmb    IAmb     12 30 44.9
      comp=Z,47nm,1.0s
RND   Reindeer           68.32  29  P       P        12 30 24.4 -1.0
RND                                 pmax    pmax
      comp=Z,82nm,1.0s
RND                                 MLR     MLR
      comp=Z,2µm,21.0s
RND   Reindeer           68.32  29  P       P        12 30 24.4 -1.0
RND                                 IAmb    IAmb     12 30 44.5
      comp=Z,82nm,1.0s
RC01  Rabbit Creek A     68.33  32  P       P        12 30 25.4  0.0
RC01                                IAmb    IAmb     12 31 26.2
      comp=Z,55nm,1.4s
WRH   Wood River Hil     68.46  28  P       P        12 30 26.2 +0.1
TCOL  CIGO, UAF Yank     68.48  27  P       P        12 30 25.7 -0.6
      baz=281
COLA  College            68.49  27  P       P        12 30 26.5 +0.2
COLA                                pmax    pmax
      comp=Z,19nm,0.8s
COLA                                MLR     MLR
      comp=Z,2µm,18.0s
COLA  College            68.49  27  P       P        12 30 26.5 +0.2
COLA  College            68.49  27  IAMs_20 IAMs_20  13 02 57.4
      comp=Z,2µm,18.0s
PMR   Palmer             68.52  31  P       P        12 30 26.0 -0.6
PMR                                 pmax    pmax
      comp=Z,108nm,1.7s
PMR                                 MLR     MLR
      comp=Z,2µm,20.0s
PMR   Palmer             68.52  31  P       P        12 30 26.0 -0.6
PMR                                 IAmb    IAmb     12 30 53.9
      comp=Z,108nm,1.7s
CCB   Clear Creek Bu     68.55  28  P       P        12 30 26.2 -0.5
GHO   Glory Hole Cre     68.59  31  P       P        12 30 27.0 -0.1
GHO                                 IAmb    IAmb     12 31 02.6
      comp=Z,56nm,1.2s
POKR  Poker Plat Res     68.61  27  P       P        12 30 26.7 -0.5
      baz=281,SNR=16
SEW   Seward             68.65  33  P       P        12 30 27.6 +0.2
SEW                                 IAmb    IAmb     12 30 49.9
      comp=Z,58nm,1.0s
SOC   Sochi              68.70 309 eP       P        12 30 26.2 -1.8
SOC                                e                 12 32 56.6
SOC                                ePPP     PPP      12 34 37.8
SOC                                eS       S        12 39 30.5 +0.7
SOC                                 pmax    pmax
      comp=Z,100nm,1.1s
SOC                                 MLR     MLR
      comp=Z,4µm,18.0s
SML   Sawmill            68.86  31  P       P        12 30 28.1 -0.6
SML                                 IAmb    IAmb     12 30 47.6
      comp=Z,49nm,1.0s
KNK   Knik Glacier       68.88  31  P       P        12 30 28.5 -0.4
KNK                                 IAmb    IAmb     12 30 59.0
      comp=Z,60nm,1.2s
IL31                     68.91  27  P       P        12 30 28.4 -0.5
ILAR  Eielson Array      68.91  27  P       P        12 30 27.6 -1.4
      comp=Z,3.5nm,0.6s,baz=272,slow=5.9,SNR=45
ILAR                                PKP2bc           12 58 40.6
      comp=Z,1.3nm,1.0s,baz=75,slow=2.0,SNR=6.6
ILAR                                LR      LR       13 03 12.3
      comp=Z,2µm,18.3s,baz=300,slow=38
ILAR  Eielson Array      68.91  27  P       P        12 30 27.8 -1.2
ILAR  Eielson Array      68.91  27  P       P        12 30 27.8 -1.2
HDA   Harding Lake       68.96  28  P       P        12 30 26.9 -2.4
HDA   Harding Lake       68.96  28  P       P        12 30 27.7 -1.6
      baz=282,SNR=11
DHY   Denali Highway     69.04  29  P       P        12 30 29.0 -1.0
FYU   Fort Yukon         69.21  25  P       P        12 30 31.0 +0.2
FYU                                 IAmb    IAmb     12 31 29.0
      comp=Z,62nm,1.4s
BMAR  Burnt Mountain     69.28  24  P       P        12 30 31.4 +0.1
SCM   Sheep Creek Mo     69.32  30  P       P        12 30 31.7  0.0
SCM                                 pmax    pmax
      comp=Z,67nm,0.8s
SCM                                 MLR     MLR
      comp=Z,2µm,18.0s
SCM   Sheep Creek Mo     69.32  30  P       P        12 30 31.7  0.0
SCM                                 IAmb    IAmb     12 30 51.3
      comp=Z,67nm,0.8s
RAYN  Ar Rayn            69.40 287 i P      P        12 30 32.6 -0.1
      SNR=10
RAYN                               i P      P        12 30 32.7 -0.1
      SNR=50
RAYN  Ar Rayn            69.40 287  P       P        12 30 32.7 -0.1
RAYN                                pmax    pmax
      comp=Z,80nm,1.2s
RAYN  Ar Rayn            69.40 287  P       P        12 30 32.7 -0.1
RAYN                                IAmb    IAmb     12 30 34.2
      comp=Z,80nm,1.1s
KEV   Kevo               69.55 338  P       P        12 30 31.4 -1.4
KEV                                 pmax    pmax
      comp=Z,86nm,1.1s
KEV                                 MLR     MLR
      comp=Z,4µm,18.0s
KEV   Kevo               69.55 338  P       P        12 30 31.4 -1.4
KEV                                 IAmb    IAmb     12 30 33.2
      comp=Z,86nm,1.1s
KEV                                 IAMs_20 IAMs_20  13 05 38.5
      comp=Z,4µm,18.0s
GLI   Glacier Island     69.63  31  P       P        12 30 33.4 -0.1
GLI                                 IAmb    IAmb     12 31 08.2
      comp=Z,62nm,1.2s
SPA0  Spitsbergen Ar     69.90 348 eP       P        12 30 34.1 -0.8
SPA0  Spitsbergen Ar     69.90 348  P       P        12 30 34.4 -0.5
SPA0                                IAmb    IAmb     12 30 35.1
      comp=Z,122nm,1.1s
FID   Port Fidalgo       69.96  32  P       P        12 30 34.6 -0.9
FID                                 IAmb    IAmb     12 30 55.1
      comp=Z,92nm,1.2s
RIDG  Independent Ri     70.00  28  P       P        12 30 35.7 -0.1
RIDG                                IAmb    IAmb     12 31 11.7
      comp=Z,38nm,1.0s
ARCES ARCESS Array B     70.11 338  P       P        12 30 35.6 -0.7
      comp=Z,26nm,0.9s,baz=74,slow=8.9,SNR=25
ARCES                               LR      LR       13 06 14.9
      comp=Z,3µm,19.1s,slow=40
ARCES ARCESS Array B     70.11 338  P       P        12 30 35.5 -0.8
ARE0  ARCESS Array S     70.11 338 eP       P        12 30 36.0 -0.3
ARE0  ARCESS Array S     70.11 338  P       P        12 30 33.4 -2.9
SCRK  Sand Creek         70.32  28  P       P        12 30 37.5 -0.3
SCRK                                IAmb    IAmb     12 31 00.7
      comp=Z,56nm,1.4s
EYAK  Cordova Ski Ar     70.35  32  P       P        12 30 38.2 +0.3
EYAK                                IAmb    IAmb     12 30 40.3
      comp=Z,68nm,1.4s
EYAK                                IAMs_20 IAMs_20  13 06 02.3
      comp=Z,3µm,18.0s
HAMF  Hammerfest         70.41 340 eP       P        12 30 37.4 -0.7
KBS   Kingsbay           70.42 349 eP       P        12 30 37.2 -0.9
KBS   Kingsbay           70.42 349  P       P        12 30 36.8 -1.3
KBS                                 pmax    pmax
      comp=Z,46nm,1.1s
KBS                                 MLR     MLR
      comp=Z,8µm,19.0s
KBS   Kingsbay           70.42 349  P       P        12 30 36.8 -1.3
KBS                                 IAmb    IAmb     12 30 38.1
      comp=Z,46nm,1.1s
TAU   Tasmania Unive     70.44 161  P       P        12 30 39.7 +1.2
TAU                                 pmax    pmax
      comp=Z,357nm,1.5s
TAU   Tasmania Unive     70.44 161  P       P        12 30 39.7 +1.2
HSPB  Hornsund (broa     70.49 347 eP       P        12 30 37.6 -0.9
HSPB  Hornsund (broa     70.49 347 eP       P        12 30 37.6 -0.9
HSPB  Hornsund (broa     70.49 347 eP       P        12 30 37.6 -0.9
MENT  Mentasta           70.69  29  P       P        12 30 40.1  0.0
MENT                                IAmb    IAmb     12 31 07.0
      comp=Z,56nm,1.2s
RAGM  Ragged Mountai     70.91  32  IAMs_20 IAMs_20  13 01 50.1
      comp=Z,3µm,21.0s
KTK1  Kautokeino         71.03 338 eP       P        12 30 40.7 -1.2
GLB   Gilahina Butte     71.04  30  P       P        12 30 41.9 -0.3
GLB                                 IAmb    IAmb     12 31 04.9
      comp=Z,46nm,1.1s
VRDI  Verde Repeater     71.27  31  P       P        12 30 43.3 -0.4
EGAK  Eagle              71.29  27  P       P        12 30 42.9 -0.7
EGAK                                IAmb    IAmb     12 30 44.3
      comp=Z,105nm,1.9s
MCARA McCarthy VSAT      71.42  30  P       P        12 30 43.8 -0.6
MCARA                               IAmb    IAmb     12 31 16.5
      comp=Z,41nm,0.8s
BCAR  Beaver Creek A     71.51  29  P       P        12 30 44.8 -0.2
CRQM  Cirque             71.54  31  P       P        12 30 45.2 -0.2
CRQM                                IAmb    IAmb     12 31 13.4
      comp=Z,58nm,1.1s
CRQM                                IAMs_20 IAMs_20  13 01 40.3
      comp=Z,3µm,20.0s
TGL   Tana Glacier       71.69  31  P       P        12 30 46.5 +0.3
TGL                                 IAmb    IAmb     12 31 10.8
      comp=Z,44nm,1.1s
TGL                                 IAMs_20 IAMs_20  13 03 35.6
      comp=Z,3µm,20.0s
BALM  Baldy              71.84  31  P       P        12 30 47.4 +0.3
FIA1  FINESS Array S     72.14 330  P       P        12 30 48.4 -0.3
FIA1                                IAmb    IAmb     12 30 49.4
      comp=Z,222nm,1.6s
FINES FINESS Array B     72.14 330  P       P        12 30 47.4 -1.2
      comp=Z,20nm,0.8s,baz=53,slow=5.7,SNR=44
FINES                               LR      LR       13 05 48.6
      comp=Z,14µm,18.8s,baz=73,slow=39
FINES FINESS Array B     72.14 330 i P      P        12 30 48.2 -0.5
FINES                               pmax    pmax
      comp=Z,20nm,0.8s
FINES FINESS Array B     72.14 330  P       P        12 30 47.1 -1.6
BARN  Barnard Glacie     72.15  31  P       P        12 30 49.0  0.0
GAZ   Gaziantep          72.21 303  P       P        12 30 50.9 +1.2
DAWY  Dawson             72.24  27  P       P        12 30 49.1 -0.3
DAWY                                IAmb    IAmb     12 30 50.5
      comp=Z,130nm,1.9s
DAWY                                IAMs_20 IAMs_20  13 05 01.6
      comp=Z,3µm,19.0s
SIM   Simferopol'        72.24 312c iP      P        12 30 49.4 -0.3
SIM                                ePS      PnS      12 40 54.0 +11
SIM                                 pmax    pmax
      comp=Z,117nm,0.8s
TRO   Tromso             72.27 339 eP       P        12 30 47.7 -1.7
CTGM  Chitina Glacie     72.33  31  P       P        12 30 50.2 +0.1
CTGM                                IAmb    IAmb     12 31 21.1
      comp=Z,52nm,0.9s
DIKM  Dikmen             72.38 308 ⇓P       P        12 30 51.3 +0.8
EPYK  Eagle Plains       72.55  25  P       P        12 30 50.0 -1.1
EPYK                                IAmb    IAmb     12 31 09.9
      comp=Z,48nm,1.0s
EPYK                                IAMs_20 IAMs_20  13 08 03.7
      comp=Z,4µm,18.0s
EPYK  Eagle Plains       72.55  25  P       P        12 30 50.2 -0.9
      baz=290
NOR   Nord               72.64 354⇑iP       P        12 30 50.0 -1.4
      comp=Z,27nm,0.8s
NOR   Nord               72.64 354⇑iP       P        12 30 50.0 -1.4
NOR                                 pmax    pmax
      comp=Z,27nm,0.8s
NOR                                 MLR     MLR
      comp=Z,3µm,18.0s
VSU   Vasula             72.72 327 eP       P        12 30 51.1 -1.1
VSU   Vasula             72.72 327ceP       P        12 30 51.5 -0.7
VSU                                 pmax    pmax
      comp=Z,235nm,1.0s
VSU                                 MLR     MLR
      comp=Z,24µm,18.0s
INK   Inuvik             73.02  22  LR      LR       13 05 45.7
      comp=Z,2µm,18.9s,baz=276,slow=38
INK   Inuvik             73.02  22  P       P        12 30 52.6 -1.2
INK                                 pmax    pmax
      comp=Z,29nm,0.8s
INK                                 MLR     MLR
      comp=Z,3µm,20.0s
INK   Inuvik             73.02  22  P       P        12 30 52.5 -1.2
INK                                 IAMs_20 IAMs_20  13 06 18.8
      comp=Z,3µm,20.0s
BZK   Bozkurt            73.18 309 ⇓P       P        12 30 56.0 +0.7
MICGM Minsk              73.32 323⇓eP       P        12 30 56.0 +0.2
MICGM                               PM               12 30 57.0
      comp=Z,0.7nm,1.2s
MICGM                              eS       SKiKP    12 40 28.0 +2.3
MICGM                              eLQ      LQ       12 58 50.0
MICGM                              eLR      LR       13 04 32.0
MICGM                               LRM     MLR      13 07 28.0
      comp=Z,11nm,20.0s
MNK   Minsk              73.32 323 eP       P        12 30 56.0 +0.2
MNK                                eS       SKiKP    12 40 28.0 +2.3
MNK                                 pmax    pmax
      comp=Z,690nm,1.2s
MNK                                 MLR     MLR
      comp=Z,11µm,20.0s
DAMY  Dhamar             73.37 279  P       P        12 30 58.4 +1.2
      SNR=5.6
DAMY  Dhamar             73.37 279  P       P        12 30 58.9 +1.7
DAMY                                IAmb    IAmb     12 30 59.7
      comp=Z,65nm,1.1s
ILGA  Ilgaz              73.66 308  P       P        12 30 59.0 +0.6
AKASG Malin Array Be     73.71 319  P       P        12 30 57.4 -0.8
      comp=Z,49nm,0.8s,baz=60,slow=6.4,SNR=42
AKASG                               LR      LR       13 07 16.7
      comp=Z,2µm,19.4s,baz=80,slow=39
AKASG Malin Array Be     73.71 319  P       P        12 30 57.4 -0.8
AKASG                               pmax    pmax
      comp=Z,45nm,1.0s
AKASG Malin Array Be     73.71 319  IAmb    IAmb     12 30 58.8
      comp=Z,45nm,0.9s
AKBB  Malin Array Si     73.71 319c iP      P        12 30 56.9 -1.3
AKBB  Malin Array Si     73.71 319  P       P        12 30 57.4 -0.8
AKBB                                IAmb    IAmb     12 31 00.3
      comp=Z,63nm,0.8s
AKBB                                IAMs_20 IAMs_20  13 06 22.1
      comp=Z,3µm,20.0s
NACGM Naroch             73.80 323 eP       P        12 30 58.0 -0.7
NACGM                              ePcP     sP       12 31 08.0 +0.1
NACGM                              eS       SKiKP    12 40 26.0 -0.4
NACGM                              ePS      PnS      12 41 06.0 +3.2
NACGM                              eSS      SS       12 45 30.0 +18
NACGM                              eSSS     SSS      12 49 16.0
NACGM                              eLQ      LQ       12 55 08.0
NACGM                              eLR      LR       13 00 54.0
NACGM                               LRM     MLR      13 08 05.0
      comp=Z,12nm,16.0s
IZAR  Zarasai            73.82 324 eP       P        12 30 59.4 +0.6
ISAL  Salakas            73.94 324 eP       P        12 30 59.6 +0.1
BR131 Keskin Array S     74.12 307  P       P        12 31 00.8 -0.3
      SNR=88
BR131                               P       P        12 31 00.8 -0.3
      SNR=88
BR131 Keskin Array S     74.12 307c iP      P        12 31 00.7 -0.4
BR131 Keskin Array S     74.12 307  P       P        12 31 01.0 -0.1
BR131                               IAmb    IAmb     12 31 02.4
      comp=Z,150nm,1.1s
BRTR  Keskin Array B     74.12 307  P       P        12 31 00.8 -0.3
      comp=Z,69nm,0.9s,baz=103,slow=5.6,SNR=254
BRTR                                LR      LR       13 08 51.5
      comp=Z,1µm,19.7s,baz=60,slow=40
BRTR  Keskin Array B     74.12 307  P       P        12 30 59.7 -1.4
BRTR  Keskin Array B     74.12 307  P       P        12 30 59.7 -1.4
HYT   Haines Junctio     74.14  30  P       P        12 31 01.4 +0.7
STEI  Steigen            74.17 338 eP       P        12 30 59.1 -1.5
BHL   Bhannes            74.42 300 eP       P        12 31 02.8  0.0
SHBL  Chebaa             74.52 300 eP       P        12 31 03.9 +0.3
LOF   Lofoten            74.66 338 eP       P        12 31 02.0 -1.5
ANTO  Ankara             74.70 307 ⇓P       P        12 31 05.1 +0.8
ANTO  Ankara             74.70 307  P       P        12 31 04.3  0.0
ANTO                                pmax    pmax
      comp=Z,144nm,0.9s
ANTO                                MLR     MLR
      comp=Z,1µm,20.0s
ANTO  Ankara             74.70 307  P       P        12 31 04.3  0.0
BR231 Keskin MP Arra     74.72 307  P       P        12 31 05.1 +0.6
BR231                               IAmb    IAmb     12 31 05.9
      comp=Z,135nm,0.9s
PABE  Paberze            75.12 324 eP       P        12 31 06.3  0.0
KIS   Kishinev           75.14 315 eP       P        12 31 06.0 -0.6
      comp=Z,210nm,2.0s
KIS   Kishinev           75.14 315 ePP      PP       12 33 52.0 -2.6
KIS                                eS       S        12 40 40.0 -3.7
KIS   Kishinev           75.14 315 eP       P        12 31 06.0 -0.6
KIS                                e                 12 31 15.0
KIS                                e                 12 33 52.0
KIS                                eS       S        12 40 40.0 -3.7
KIS                                ePS      PnS      12 41 21.0 +0.5
KIS                                 pmax    pmax
      comp=Z,210nm,2.0s
KIS                                 pmax    pmax
      comp=Z,700nm,12.0s
KIS                                 MLR     MLR
      comp=Z,4µm,18.0s
MOR8  Moi Rana           75.21 336 eP       P        12 31 05.0 -1.6
SLIT  Slitere, Latvi     75.22 327 eP       P        12 31 05.8 -1.0
WHY   Whitehorse         75.40  30  P       P        12 31 08.6 +0.5
WHY                                 IAmb    IAmb     12 31 09.9
      comp=Z,126nm,1.6s
KONS  Konsvik            75.54 337 eP       P        12 31 07.7 -0.8
C36M  Paulatuk           75.64  20  P       P        12 31 07.7 -1.4
C36M                                IAmb    IAmb     12 31 09.2
      comp=Z,108nm,1.4s
C36M  Paulatuk           75.64  20  P       P        12 31 07.7 -1.4
      baz=300
MDUB  Mudurnu            75.66 308  P       P        12 31 09.7 -0.2
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MDUB				IAMs_20	IAMs_20	13 11 00.7	
	comp=Z,4µm,22.0s						
SKAG	**Skagway**	**75.66**	**31**	P	**P**	**12 31 09.7**	**+0.4**
SKAG				IAmb	IAmb	12 31 33.0	
	comp=Z,50nm,1.1s						
SKAG				IAMs_20	IAMs_20	13 03 52.5	
	comp=Z,2µm,20.0s						
LEOM	**Leova**	**75.69**	**315**	⇓P	**P**	**12 31 09.6**	**-0.1**
TLCR		**75.74**	**313**	⇑P	**P**	**12 31 09.9**	**-0.2**
JURR	**Jurilovca**	**75.84**	**313**	⇓P	**P**	**12 31 10.8**	**+0.2**
ATD	**Arta Tunnel**	**75.88**	**276**	P	**P**	**12 31 10.8**	**-0.7**
ATD				IAmb	IAmb	12 31 13.9	
	comp=Z,73nm,1.3s						
CSS	**Mathiatis**	**75.89**	**302**	P	**P**	**12 31 11.1**	**0.0**
PBUR	**Paburge**	**76.00**	**325**	*e*P	**P**	**12 31 11.3**	**0.0**
SUW	**Suwalki**	**76.08**	**323**	*e*P	**P**	**12 31 10.9**	**-1.0**
SUW	**Suwalki**	**76.08**	**323**	P	**P**	**12 31 11.5**	**-0.3**
SUW				pmax	pmax		
	comp=Z,276nm,1.0s						
SUW				MLR	MLR		
	comp=Z,7µm,19.0s						
SUW	**Suwalki**	**76.08**	**323**	P	**P**	**12 31 11.5**	**-0.3**
TOPG	**Topolog**	**76.14**	**313**	⇑P	**P**	**12 31 12.6**	**+0.2**
LEF	**Lefka**	**76.17**	**302**	⇓P	**P**	**12 31 13.3**	**+0.5**
CFR	**Carcaliu**	**76.20**	**313**	⇑P	**P**	**12 31 12.6**	**-0.1**
BESE	**Bessie Mountai**	**76.23**	**32**	P	**P**	**12 31 13.4**	**+0.7**
BESE				IAmb	IAmb	12 31 14.7	
	comp=Z,78nm,1.3s						
TIRR	**Tirgusor**	**76.26**	**313**	⇑P	**P**	**12 31 13.2**	**+0.1**
TIRR	**Tirgusor**	**76.26**	**313**	⇑P	**P**	**12 31 13.2**	**+0.1**
TIRR	**Tirgusor**	**76.26**	**313**	*i* P	**P**	**12 31 12.5**	**-0.6**
TIRR	**Tirgusor**	**76.26**	**313**	P	**P**	**12 31 12.2**	**-0.9**
TIRR				pmax	pmax		
	comp=Z,151nm,1.1s						
TIRR				MLR	MLR		
	comp=Z,8µm,20.0s						
TIRR	**Tirgusor**	**76.26**	**313**	P	**P**	**12 31 12.2**	**-0.9**
TIRR				IAmb	IAmb	12 31 14.0	
	comp=Z,151nm,1.1s						
OUZ	**Omahuta**	**76.33**	**139**	IAMs_20	IAMs_20	13 00 06.2	
	comp=Z,3µm,20.0s						
ORH	**Orhaniye**	**76.34**	**309**	P	P	12 31 31.5	+18
HARR	**Harsova**	**76.50**	**313**	⇑P	**P**	**12 31 14.5**	**+0.1**
JIS	**Juneau Island**	**76.58**	**32**	P	**P**	**12 31 14.7**	**+0.2**
JIS				IAmb	IAmb	12 31 16.7	
	comp=Z,54nm,1.0s						
SIT	**Sitka**	**76.61**	**33**	P	**P**	**12 31 16.6**	**+1.8**
SIT				pmax	pmax		
	comp=Z,150nm,1.2s						
SIT	**Sitka**	**76.61**	**33**	P	**P**	**12 31 16.6**	**+1.8**
SIT				IAmb	IAmb	12 32 07.4	
	comp=Z,150nm,1.2s						
PETR	**Petresti**	**76.61**	**314**	⇑P	**P**	**12 31 16.1**	**+1.1**
PSN	**Preselentsi**	**76.68**	**312**	*i* P	**P**	**12 31 15.8**	**+0.3**
TESR	**Tescani**	**76.71**	**315**	⇑P	**P**	**12 31 15.5**	**-0.1**
DAG	**Danmarks Havn**	**76.72**	**351**	⇑*i*P	**P**	**12 31 13.5**	**-1.6**
	comp=Z,33nm,0.9s						
DAG	**Danmarks Havn**	**76.72**	**351**	⇑*i*P	**P**	**12 31 13.5**	**-1.6**
DAG				pmax	pmax		
	comp=Z,33nm,0.9s						
ICOR	**Ion Corvin**	**76.79**	**312**	⇑P	**P**	**12 31 16.8**	**+0.8**
NSS	**Namsos**	**76.88**	**335**	*e*P	**P**	**12 31 15.0**	**-1.2**
VRI	**Vrincioaia**	**76.89**	**314**	⇓P	**P**	**12 31 17.2**	**+0.5**
GRER		**76.90**	**314**	⇑P	**P**	**12 31 18.8**	**+2.1**
BIZ	**Bicaz**	**76.91**	**316**	⇓P	**P**	**12 31 16.9**	**+0.2**
PLOR	**Plostina**	**76.94**	**314**	⇑P	**P**	**12 31 17.4**	**+0.4**
ISK	**Istanbul-Kandi**	**76.99**	**309**	P	**P**	**12 31 16.7**	**-0.5**
ISP	**Isparta**	**77.05**	**306**	P	**P**	**12 31 17.3**	**-0.5**
ISP				pmax	pmax		
	comp=Z,185nm,1.1s						
ISP	**Isparta**	**77.05**	**306**	P	**P**	**12 31 17.3**	**-0.5**
LVV	**L'vov**	**77.14**	**319**	*i* P	**P**	**12 31 16.6**	**-1.4**
LVV				*i*		12 34 12.5	
LVV				*e*PPP	PPP	12 36 01.8	
LVV				*e*S	**S**	**12 41 03.7**	**-2.0**
LVV				*e*PS	**PnS**	**12 41 35.0**	**-11**
LVV				pmax	pmax		
	comp=Z,100nm,1.4s						
LVV				MLR	MLR		
	comp=N,930nm,18.0s						
LVV				MLR	MLR		
	comp=E,2µm,18.0s						
LVV				MLR	MLR		
	comp=Z,2µm,18.0s						
BUR08	**Bucovina Ar. S**	**77.22**	**317**	P	**P**	**12 31 17.9**	**-0.8**
BURAR	**Bucovina Array**	**77.22**	**316**	⇓P	**P**	**12 31 18.9**	**+0.3**
BURAR	**Bucovina Array**	**77.22**	**316**	P	**P**	**12 31 17.8**	**-0.8**
ISR	**Istrita**	**77.28**	**314**	⇓P	**P**	**12 31 20.1**	**+1.2**
PRD	**Provadia**	**77.39**	**312**	*i* P	**P**	**12 31 19.7**	**+0.3**
MLR	**Muntele Rosu**	**77.53**	**314**	P	**P**	**12 31 20.2**	**-0.2**
	comp=Z,52nm,1.0s,baz=40,slow=4.2,SNR=6.0						
MLR	**Muntele Rosu**	**77.53**	**314**	⇑P	**P**	**12 31 21.2**	**+0.8**
MLR	**Muntele Rosu**	**77.53**	**314**	P	**P**	**12 31 20.2**	**-0.2**
MLR				pmax	pmax		
	comp=Z,86nm,1.1s						
MLR				MLR	MLR		
	comp=Z,4µm,20.0s						
MLR	**Muntele Rosu**	**77.53**	**314**	IAmb	IAmb	12 31 21.6	
	comp=Z,86nm,1.1s						
MLR				IAMs_20	IAMs_20	13 09 29.7	
	comp=Z,4µm,20.0s						
DOPR	**Dopca**	**77.72**	**315**	⇓P	**P**	**12 31 21.9**	**+0.5**
RAZG	**Razgrad**	**77.86**	**312**	⇑P	P	12 31 16.8	-5.3
ELL	**Elmali**	**77.88**	**305**	P	**P**	**12 31 22.4**	**-0.2**
ELL				pmax	pmax		
	comp=Z,473nm,1.0s						
ELL	**Elmali**	**77.88**	**305**	P	**P**	**12 31 22.4**	**-0.2**
ARCR	**ARCALIA**	**77.97**	**316**	⇓P	**P**	**12 31 23.6**	**+1.0**
KWP	**Kalwaria Pacla**	**78.01**	**319**	*e*P	**P**	**12 31 22.4**	**-0.4**
KWP	**Kalwaria Pacla**	**78.01**	**319**	*e*P	**P**	**12 31 22.4**	**-0.4**
KWP	**Kalwaria Pacla**	**78.01**	**319**	P	**P**	**12 31 22.2**	**-0.6**
VOIR		**78.14**	**314**	⇑P	**P**	**12 31 23.8**	**+0.1**
KULA	**Kula-Manisa**	**78.18**	**307**	P	**P**	**12 31 23.2**	**-0.9**
JMB	**Yambol**	**78.21**	**311**	*i* P	**P**	**12 31 24.1**	**0.0**
BEL	**Belsk**	**78.25**	**322**	*e*P	**P**	**12 31 24.0**	**-0.1**
BEL	**Belsk**	**78.25**	**322**	*e*P	**P**	**12 31 24.0**	**-0.1**
MANT	**Manisa**	**78.26**	**307**	P	**P**	**12 31 23.9**	**-0.8**
BMR	**Baia Mare**	**78.28**	**317**	⇑P	**P**	**12 31 27.0**	**+2.7**
EDRB	**Edirne**	**78.33**	**311**	P	**P**	**12 31 24.2**	**-0.5**
KSL	**Kastellorizon**	**78.34**	**304**	P	**P**	**12 31 23.4**	**-1.5**
SZH	**Strazhica**	**78.36**	**312**	*i* P	**P**	**12 31 24.5**	**-0.4**
ARR	**Arges**	**78.44**	**315**	⇓P	**P**	**12 31 25.8**	**+0.4**
HUMR	**Humele**	**78.53**	**314**	⇑P	**P**	**12 31 25.6**	**-0.2**
FETY	**Fethiye**	**78.54**	**305**	P	**P**	**12 31 24.8**	**-1.3**
DLBC	**Dease Lake**	**78.58**	**31**	P	**P**	**12 31 25.9**	**0.0**
DLBC				IAmb	IAmb	12 31 28.1	
	comp=Z,118nm,1.5s						
CJR	**Cluj-Napoca**	**78.59**	**316**	⇑P	**P**	**12 31 26.8**	**+0.7**
NC405	**NORSAR Array S**	**78.63**	**332**	P	**P**	**12 31 25.1**	**-1.0**
UZH	**Uzhgorod**	**78.65**	**318**	*e*P	**P**	**12 31 25.4**	**-0.9**
UZH				*e*		12 31 36.8	
UZH				*e*		12 34 27.0	
UZH				*e*S	**S**	**12 41 17.2**	**-4.7**
RES	**Resolute Bay**	**78.69**	**9**	P	**P**	**12 31 24.8**	**-1.3**
RES				pmax	pmax		
	comp=Z,70nm,1.6s						
RES				MLR	MLR		
	comp=Z,4µm,19.0s						
RES	**Resolute Bay**	**78.69**	**9**	P	**P**	**12 31 24.8**	**-1.3**
RES				IAmb	IAmb	12 31 26.3	
	comp=Z,70nm,1.6s						
RES				IAMs_20	IAMs_20	13 10 12.6	
	comp=Z,4µm,19.0s						
TRPA	**Tarpa**	**78.70**	**318**	⇑P	**P**	**12 31 27.0**	**+0.4**
NC303	**NORSAR Array S**	**78.72**	**333**	P	**P**	**12 31 25.8**	**-0.7**
NB201	**NORSAR Array S**	**78.84**	**332**	P	**P**	**12 31 26.1**	**-1.1**
NB2	**NORSAR Subarra**	**78.88**	**332**	P	**P**	**12 31 26.2**	**-1.3**
	comp=Z,204nm,1.7s,baz=58,slow=5.6						
NB2	**NORSAR Subarra**	**78.88**	**332**	P	**P**	**12 31 26.2**	**-1.3**
	baz=58,slow=5.6						
NOA	**NORSAR Array B**	**78.88**	**332**	P	**P**	**12 31 25.9**	**-1.5**
	comp=Z,21nm,0.9s,baz=58,slow=5.5,SNR=36						
NOA				LR	LR	13 10 01.2	
	comp=Z,11µm,18.2s,baz=65,slow=39						
NC602	**NORSAR Array S**	**78.89**	**332**	*e*P	**P**	**12 31 26.4**	**-1.1**
NC602	**NORSAR Array S**	**78.89**	**332**	P	**P**	**12 31 25.7**	**-1.8**
NC204	**NORSAR Array S**	**78.95**	**333**	P	**P**	**12 31 26.7**	**-1.2**
YER	**Yerkesik**	**78.96**	**306**	P	**P**	**12 31 27.9**	**-0.5**
LOT	**Lotru**	**78.97**	**315**	⇑P	**P**	**12 31 28.6**	**+0.3**
CRVS	**Cervenica-Dubn**	**79.05**	**319**	*e*P	**P**	**12 31 28.5**	**-0.1**
CRVS				pmax	pmax		
	comp=Z,428nm,2.2s						
CRVS	**Cervenica-Dubn**	**79.05**	**319**	*e*P	**P**	**12 31 28.5**	**-0.1**

CRVS				*e*S	**S**	**12 41 24.1**	**-2.1**
CRVS				*e*L	L	13 09 48.5	
DRGR		**79.12**	**316**	⇑P	**P**	**12 31 28.6**	**-0.5**
DRGR		**79.12**	**316**	*i* P	**P**	**12 31 28.8**	**-0.3**
NAO01	**NORSAR Array S**	**79.12**	**332**	P	**P**	**12 31 26.5**	**-2.2**
ALN	**Alexandroupoli**	**79.17**	**310**	P	**P**	**12 31 28.7**	**-0.7**
ALN				pmax	pmax		
	comp=Z,62nm,1.3s						
ALN				MLR	MLR		
	comp=Z,600nm,21.0s						
ALN	**Alexandroupoli**	**79.17**	**310**	P	**P**	**12 31 28.7**	**-0.7**
ALN				IAmb	IAmb	12 31 30.2	
	comp=Z,62nm,1.3s						
PLVB	**Pleven**	**79.20**	**313**	⇓P	**P**	**12 31 29.9**	**+0.3**
DOMB	**Dombas**	**79.26**	**334**	*e*P	**P**	**12 31 29.0**	**-0.6**
KDZ	**Kurdzhali**	**79.33**	**311**	*i* P	**P**	**12 31 30.1**	**-0.1**
DEV	**Deva**	**79.36**	**315**	⇑P	**P**	**12 31 31.5**	**+1.2**
RDO	**Rodhopi**	**79.43**	**310**	P	**P**	**12 31 30.0**	**-0.8**
TULEG	**Thule**	**79.47**	**3**	P	**P**	**12 31 28.0**	**-2.3**
TULEG				IAmb	IAmb	12 31 30.3	
	comp=Z,118nm,1.7s						
TULEG				IAMs_20	IAMs_20	13 07 06.0	
	comp=Z,3µm,20.0s						
OJC	**Ojcow**	**79.49**	**320**	*e*P	**P**	**12 31 30.4**	**-0.5**
OJC	**Ojcow**	**79.49**	**320**	P	**P**	**12 31 30.5**	**-0.5**
OJC				pmax	pmax		
	comp=Z,111nm,1.1s						
OJC	**Ojcow**	**79.49**	**320**	P	**P**	**12 31 30.5**	**-0.5**
OJC				IAmb	IAmb	12 31 32.2	
	comp=Z,111nm,1.1s						
NIE	**Niedzica**	**79.53**	**319**	*e*P	**P**	**12 31 31.5**	**+0.2**
NIE	**Niedzica**	**79.53**	**319**	*e*P	**P**	**12 31 31.5**	**+0.2**
QRZ	**Quartz Range**	**79.57**	**144**	IAMs_20	IAMs_20	13 06 00.0	
	comp=Z,2µm,19.0s						
MOL	**Molde**	**79.58**	**335**	*e*P	**P**	**12 31 31.0**	**-0.1**
GKP	**Gorka Klasztor**	**79.62**	**324**	*e*P	**P**	**12 31 32.3**	**+0.8**
GKP	**Gorka Klasztor**	**79.62**	**324**	*e*P	**P**	**12 31 32.3**	**+0.8**
GZR	**Gura Zlata**	**79.63**	**315**	⇓P	**P**	**12 31 32.0**	**0.0**
DAT	**Datca**	**79.63**	**306**	P	**P**	**12 31 30.8**	**-1.3**
PRK	**Paraskevi**	**79.64**	**308**	P	**P**	**12 31 32.5**	**+0.5**
SMTH	**Samothraki Isl**	**79.70**	**310**	P	**P**	**12 31 30.9**	**-1.4**
RZN	**Rozhen**	**79.80**	**311**	*i* P	**P**	**12 31 32.6**	**-0.4**
KECS	**Kecovo**	**79.81**	**319**	*e*P	**P**	**12 31 32.8**	**+0.1**
KECS				pmax	pmax		
	comp=Z,26nm,1.2s						
KECS	**Kecovo**	**79.81**	**319**	*e*P	**P**	**12 31 32.8**	**+0.1**
SMG	**Samos**	**79.81**	**307**	P	**P**	**12 31 32.2**	**-0.8**
PGB	**Panagyurishte**	**79.83**	**312**	*i* P	**P**	**12 31 33.0**	**-0.1**
CHOS	**Chios island**	**80.12**	**308**	P	**P**	**12 31 34.1**	**-0.6**
LANS	**Liptovska Anna**	**80.14**	**319**	*e*P	**P**	**12 31 35.3**	**+0.8**
LANS				pmax	pmax		
	comp=Z,15nm,1.1s						
LANS	**Liptovska Anna**	**80.14**	**319**	*e*P	**P**	**12 31 35.3**	**+0.8**
THAS	**Thassos island**	**80.21**	**310**	P	**P**	**12 31 33.4**	**-1.6**
BZS	**Buzias**	**80.29**	**316**	⇑P	**P**	**12 31 34.9**	**-0.4**
SKAR	**Skarslia**	**80.29**	**333**	*e*P	**P**	**12 31 31.7**	**-3.5**
NNZ	**Nelson**	**80.31**	**143**	P	**P**	**12 31 34.2**	**-1.1**
NNZ				IAmb	IAmb	12 31 48.8	
	comp=Z,41nm,0.6s						
KARP	**Karpathos**	**80.39**	**305**	P	**P**	**12 31 35.2**	**-1.0**
KARP	**Karpathos**	**80.39**	**305**	P	**P**	**12 31 36.2**	**+0.1**
PSZ	**Piszkesteto**	**80.40**	**318**	⇓P	**P**	**12 31 36.3**	**+0.2**
PSZ	**Piszkesteto**	**80.40**	**318**	P	**P**	**12 31 36.1**	**+0.1**
PSZ				pmax	pmax		
	comp=Z,98nm,1.3s						
PSZ				MLR	MLR		
	comp=Z,4µm,19.0s						
PSZ	**Piszkesteto**	**80.40**	**318**	P	**P**	**12 31 36.1**	**+0.1**
PSZ				IAmb	IAmb	12 31 37.3	
	comp=Z,98nm,1.3s						
PSZ				IAMs_20	IAMs_20	13 11 28.3	
	comp=Z,4µm,19.0s						
THZ	**Tophouse**	**80.43**	**144**	P	**P**	**12 31 36.9**	**+0.9**
THZ				IAmb	IAmb	12 31 49.3	
	comp=Z,33nm,0.7s						
VTS	**Vitosha**	**80.44**	**312**	⇑P	**P**	**12 31 37.1**	**+0.6**
VTS	**Vitosha**	**80.44**	**312**	*i* P	**P**	**12 31 36.5**	**0.0**
VTS	**Vitosha**	**80.44**	**312**	P	**P**	**12 31 36.4**	**0.0**
VTS				pmax	pmax		
	comp=Z,389nm,1.8s						
VTS				MLR	MLR		
	comp=Z,2µm,21.0s						
VTS	**Vitosha**	**80.44**	**312**	P	**P**	**12 31 36.4**	**0.0**
VTS				IAMs_20	IAMs_20	13 10 39.8	
	comp=Z,2µm,21.0s						
URZ	**Urewera**	**80.45**	**139**	P	**P**	**12 31 36.6**	**+0.4**
MMB	**Musomiste**	**80.51**	**311**	*i* P	**P**	**12 31 36.1**	**-0.6**
MDVR	**Moldovita**	**80.57**	**315**	⇑P	**P**	**12 31 37.1**	**+0.1**
OKC	**Ostrava-Krasne**	**80.62**	**320**	⇓*i*P	**P**	**12 31 37.2**	**+0.2**
OKC				*e*SKS	**SKSac**	**12 41 50.7**	**-3.1**
OKC				AMS	AMS	13 12 50.0	
	comp=Z,2µm,14.4s						
OKC	**Ostrava-Krasne**	**80.62**	**320**	⇓*i*P	**P**	**12 31 37.2**	**+0.2**
OKC				*e*S	**SKSac**	**12 41 50.7**	**-3.1**
OKC				MLR	MLR		
	comp=Z,2µm,14.4s						
BKZ	**Black Stump Fm**	**80.68**	**140**	P	**P**	**12 31 38.3**	**+0.8**
BKZ				IAMs_20	IAMs_20	13 03 30.4	
	comp=Z,3µm,21.0s						
VYHS	**Vyhne**	**80.80**	**319**	*e*P	**P**	**12 31 38.0**	**-0.1**
VYHS				pmax	pmax		
	comp=Z,127nm,1.2s						
VYHS	**Vyhne**	**80.80**	**319**	*e*P	**P**	**12 31 38.0**	**-0.1**
VYHS	**Vyhne**	**80.80**	**319**	*e*S	**S**	**12 41 49.7**	**+5.0**
VYHS				*e*L	L	13 12 07.6	
SRS	**Serrai**	**80.80**	**311**	P	**P**	**12 31 36.8**	**-1.4**
LTZ	**Lake Taylor**	**80.81**	**145**	P	**P**	**12 31 39.4**	**+1.4**
OUR	**Ouranopolis**	**80.84**	**310**	P	**P**	**12 31 37.4**	**-1.0**
AMGA	**Amorgos Island**	**80.84**	**306**	P	**P**	**12 31 35.9**	**-2.6**
KKB	**Krupnik**	**80.84**	**312**	*i* P	**P**	**12 31 37.8**	**-0.7**
RPZ	**Rata Peaks**	**80.85**	**146**	P	**P**	**12 31 38.5**	**+0.3**
RPZ				IAmb	IAmb	12 31 51.3	
	comp=Z,78nm,0.9s						
HYA	**Hoyanger**	**80.89**	**334**	*e*P	**P**	**12 31 37.5**	**-0.8**
MORC	**Moravsky Berou**	**80.99**	**321**	⇓P	**P**	**12 31 39.5**	**+0.3**
MORC	**Moravsky Berou**	**80.99**	**321**	P	**P**	**12 31 38.9**	**-0.2**
MORC				pmax	pmax		
	comp=Z,74nm,1.4s						
MORC	**Moravsky Berou**	**80.99**	**321**	*e*P	**P**	**12 31 38.5**	**-0.6**
MORC	**Moravsky Berou**	**80.99**	**321**	P	**P**	**12 31 38.9**	**-0.2**
MORC				IAmb	IAmb	12 31 40.5	
	comp=Z,74nm,1.4s						
MORC				IAMs_20	IAMs_20	13 12 56.7	
	comp=Z,3µm,18.0s						
APE	**Apeiranthos**	**81.02**	**306**	P	**P**	**12 31 37.2**	**-2.3**
APE	**Apeiranthos**	**81.02**	**306**	⇓P	**P**	**12 31 37.8**	**-1.7**
SOH	**Sokhos**	**81.08**	**311**	P	**P**	**12 31 38.6**	**-1.2**
SNZO	**South Karori**	**81.10**	**143**	IAMs_20	IAMs_20	13 08 18.4	
	comp=Z,2µm,18.0s						
ANAF	**Anafi Island**	**81.12**	**306**	P	**P**	**12 31 38.4**	**-1.6**
KHZ	**Kahutara**	**81.22**	**144**	P	**P**	**12 31 40.7**	**+0.6**
KHZ				IAmb	IAmb	12 31 52.6	
	comp=Z,40nm,0.8s						
KHZ				IAMs_20	IAMs_20	13 07 01.7	
	comp=Z,2µm,19.0s						
KSP	**Ksiaz**	**81.23**	**322**	*e*P	**P**	**12 31 40.1**	**-0.2**
KSP	**Ksiaz**	**81.23**	**322**	*e*P	**P**	**12 31 40.1**	**-0.2**
KNT	**Kendrikon**	**81.26**	**311**	P	**P**	**12 31 39.4**	**-1.3**
ZKR	**Zakros**	**81.27**	**304**	P	**P**	**12 31 39.9**	**-0.9**
KRLC	**Kraliky**	**81.30**	**321**	⇓AMS	AMS	13 12 40.0	
	comp=Z,3µm,14.7s						
JAVC	**Velka Javorina**	**81.33**	**320**	*e*P	**P**	**12 31 42.0**	**+1.1**
IOSP	**Ios island**	**81.33**	**306**	P	**P**	**12 31 38.9**	**-2.2**
SANT	**Santorini**	**81.35**	**306**	⇓P	**P**	**12 31 40.0**	**-1.3**
SANT	**Santorini**	**81.35**	**306**	P	**P**	**12 31 39.5**	**-1.7**
HORT	**Hortiatis**	**81.35**	**311**	P	**P**	**12 31 39.8**	**-1.4**
THR3	**Thira Island,**	**81.37**	**306**	P	**P**	**12 31 39.9**	**-1.4**
STAX	**Taxiarchis Har**	**81.38**	**306**	P	**P**	**12 31 39.4**	**-1.9**
AOS	**Alonnisos**	**81.38**	**309**	P	**P**	**12 31 39.6**	**-1.7**
THR6	**Thira Island,**	**81.40**	**306**	P	**P**	**12 31 39.9**	**-1.6**
OSTC	**Ostas**	**81.40**	**322**	⇓*i*P	**P**	**12 31 41.6**	**+0.3**
OSTC				*e*S	**S**	**12 41 49.2**	**-1.8**
OSTC				AMS	AMS	13 11 10.0	
	comp=Z,5µm,20.1s						
THR5	**Thira Island,**	**81.41**	**306**	P	**P**	**12 31 39.8**	**-1.7**
VAY	**Valandovo**	**81.42**	**311**	*i* P	**P**	**12 31 40.7**	**-0.8**
VAY	**Valandovo**	**81.42**	**311**	*i* P	**P**	**12 31 40.5**	**-1.0**
DPC	**Dobruska-Polom**	**81.44**	**321**	⇓*i*P	**P**	**12 31 41.9**	**+0.4**
DPC				*e*S	**S**	**12 41 49.7**	**-1.7**
DPC				AMS	AMS	13 11 20.0	
	comp=Z,4µm,17.2s						
DPC	**Dobruska-Polom**	**81.44**	**321**	⇓*i*P	**P**	**12 31 41.9**	**+0.4**
DPC				*e*S	**S**	**12 41 49.7**	**-1.7**

DPC				MLR	MLR		
	comp=Z,4µm,17.2s						
MSWZ	**Moikau Station**	**81.47**	**143**	P	**P**	**12 31 42.2**	**+0.7**
CHVC	**Chvalec**	**81.48**	**322**	⇓*i*P	**P**	**12 31 41.8**	**+0.1**
CHVC				AMS	AMS	13 11 00.0	
	comp=Z,6µm,18.7s						
BFZ	**Birch Farm**	**81.54**	**142**	P	**P**	**12 31 43.5**	**+1.6**
BFZ				IAmb	IAmb	12 31 54.3	
	comp=Z,105nm,0.8s						
BFZ				IAMs_20	IAMs_20	13 05 19.1	
	comp=Z,2µm,19.0s						
UPC	**Upice**	**81.54**	**322**	⇓*i*P	**P**	**12 31 42.3**	**+0.3**
UPC				AMS	AMS	13 11 20.0	
	comp=Z,6µm,21.4s						
UPC	**Upice**	**81.54**	**322**	⇓*i*P	**P**	**12 31 42.3**	**+0.3**
UPC				MLR	MLR		
	comp=Z,6µm,21.4s						
SMOL	**Smolenice**	**81.63**	**319**	*e*P	**P**	**12 31 42.9**	**+0.4**
SMOL				pmax	pmax		
	comp=Z,36nm,1.4s						
SMOL	**Smolenice**	**81.63**	**319**	*e*P	**P**	**12 31 42.9**	**+0.4**
NPS	**Neapolis**	**81.67**	**305**	P	**P**	**12 31 42.3**	**-0.7**
SKIA	**Skiathos**	**81.67**	**309**	P	**P**	**12 31 41.3**	**-1.6**
KULLO	**Kullorsuaq**	**81.67**	**360**	*i* P	**P**	**12 31 41.3**	**-0.9**
	comp=Z,81nm,1.0s						
KULLO	**Kullorsuaq**	**81.67**	**360**	*i* P	**P**	**12 31 41.3**	**-0.9**
KULLO				pmax	pmax		
	comp=Z,81nm,1.0s						
GRG	**Griva**	**81.69**	**311**	P	**P**	**12 31 41.6**	**-1.4**
SERI	**Serifos**	**81.75**	**307**	P	**P**	**12 31 40.8**	**-2.6**
VRAC	**Vranov**	**81.76**	**320**	P	**P**	**12 31 42.3**	**-0.8**
	comp=Z,24nm,0.8s,baz=66,slow=6.2,SNR=37						
VRAC	**Vranov**	**81.76**	**320**	⇓P	**P**	**12 31 43.9**	**+0.7**
VRAC	**Vranov**	**81.76**	**320**	*e*P	**P**	**12 31 42.8**	**-0.3**
MRKA	**Markates**	**81.77**	**309**	P	**P**	**12 31 41.0**	**-2.5**
MODS	**Modra-Piesok**	**81.78**	**319**	*e*P	**P**	**12 31 42.3**	**-1.0**
MODS				pmax	pmax		
	comp=Z,67nm,1.4s						
MODS	**Modra-Piesok**	**81.78**	**319**	*e*P	**P**	**12 31 42.3**	**-1.0**
MODS	**Modra-Piesok**	**81.78**	**319**	*e*S	S	12 41 45.8	-9.2
MODS				*e*L	L	13 09 39.5	
XOR	**Xorichti**	**81.79**	**309**	P	**P**	**12 31 41.5**	**-2.0**
NEO	**Neokhori**	**81.79**	**309**	P	**P**	**12 31 41.6**	**-1.9**
LAST	**Lasithi**	**81.81**	**305**	P	**P**	**12 31 43.2**	**-0.6**
RUE	**Ruedersdorf**	**81.84**	**324**	*e*P	**P**	**12 31 43.8**	**+0.3**
RUE	**Ruedersdorf**	**81.84**	**324**	*e*P	**P**	**12 31 43.0**	**-0.4**
	comp=Z,92nm,1.2s,baz=59,slow=5.0						
SKO	**Skopje**	**81.92**	**312**	*i* P	**P**	**12 31 43.8**	**-0.4**
ATHU	**Athens Univers**	**81.93**	**308**	P	**P**	**12 31 42.0**	**-2.3**
VLY	**Voula,Athens**	**81.97**	**308**	P	**P**	**12 31 41.8**	**-2.7**
DIVS	**Divibare**	**81.97**	**315**	*e*P	**P**	**12 31 43.9**	**-0.6**
LIT	**Litokhoron**	**81.98**	**310**	P	**P**	**12 31 42.8**	**-1.7**
LIT	**Litokhoron**	**81.98**	**310**	P	**P**	**12 31 42.8**	**-1.7**
LIT				pmax	pmax		
	comp=Z,46nm,0.9s						
LIT	**Litokhoron**	**81.98**	**310**	P	**P**	**12 31 42.8**	**-1.7**
LIT				IAmb	IAmb	12 31 43.9	
	comp=Z,46nm,0.9s						
KRUC	**Moravsky**	**81.99**	**320**	*e*P	**P**	**12 31 44.3**	**0.0**
TEKS	**Tekeris**	**82.08**	**315**	*e*P	**P**	**12 31 45.0**	**+0.1**
VILL	**Villia**	**82.19**	**308**	P	**P**	**12 31 42.4**	**-3.3**
IDI	**Anoyia**	**82.20**	**305**	P	**P**	**12 31 42.9**	**-2.9**
IDI	**Anoyia**	**82.20**	**305**	P	**P**	**12 31 44.7**	**-1.1**
	comp=Z,59nm,0.9s,baz=36,slow=9.0,SNR=39						
LKR	**Lokris**	**82.22**	**309**	P	**P**	**12 31 43.5**	**-2.2**
PVCC	**Panska Ves**	**82.34**	**322**	⇓AMS	AMS	13 13 10.0	
	comp=Z,8µm,17.5s						
SIVA	**Sivas**	**82.37**	**305**	P	**P**	**12 31 46.3**	**-0.3**
KZN	**Kozani**	**82.39**	**311**	P	**P**	**12 31 44.6**	**-2.1**
AXAR	**Agios Charalam**	**82.41**	**309**	P	**P**	**12 31 45.0**	**-1.8**
BBLS	**Lazići**	**82.46**	**315**	*e*P	**P**	**12 31 47.3**	**+0.3**
SCO	**Scoresbysund**	**82.46**	**349**	⇑*i*P	**P**	**12 31 45.8**	**-0.6**
	comp=Z,83nm,1.5s						
SCO	**Scoresbysund**	**82.46**	**349**	⇑*i*P	**P**	**12 31 45.8**	**-0.6**
SCO				pmax	pmax		
	comp=Z,83nm,1.5s						
SCO	**Scoresbysund**	**82.46**	**349**	P	**P**	**12 31 45.5**	**-0.8**
FNA	**Florina**	**82.46**	**311**	P	**P**	**12 31 45.1**	**-2.0**
FNA				pmax	pmax		
	comp=Z,117nm,1.6s						
FNA	**Florina**	**82.46**	**311**	P	**P**	**12 31 45.1**	**-2.0**
FNA				IAmb	IAmb	12 31 46.9	
	comp=Z,117nm,1.6s						
LTK	**Loutraki**	**82.50**	**308**	P	**P**	**12 31 43.9**	**-3.4**
BRG	**Berggiesshubel**	**82.53**	**323**	*i* P	**P**	**12 31 46.7**	**-0.5**
	comp=Z,143nm,2.1s						
BRG				PP	**PP**	**12 34 52.0**	**-4.1**
BRG				S	**S**	**12 42 11.0**	**+8.5**
BRG				SS	**SS**	**12 47 26.0**	**+2.8**
BRG	**Berggiesshubel**	**82.53**	**323**	*e*P	**P**	**12 31 46.6**	**-0.5**
	comp=Z,143nm,2.1s,baz=59,slow=5.0						
BRG	**Berggiesshubel**	**82.53**	**323**	*i* P	**P**	**12 31 46.7**	**-0.5**
BRG						12 34 52.0	
BRG				SS	SS	12 47 26.0	+2.8
BRG				pmax	pmax		
	comp=Z,143nm,2.1s						
BRG				MLR	MLR		
	comp=N,3µm,16.5s						
BRG				MLR	MLR		
	comp=E,5µm,15.6s						
BRG				MLR	MLR		
	comp=Z,9µm,15.8s						
THL	**Klokotos Trika**	**82.53**	**310**	P	**P**	**12 31 44.7**	**-2.7**
AGG	**Agios Georgios**	**82.54**	**309**	P	**P**	**12 31 44.4**	**-3.1**
AGG	**Agios Georgios**	**82.54**	**309**	P	**P**	**12 31 45.5**	**-2.0**
AGG				pmax	pmax		
	comp=Z,70nm,0.9s						
AGG	**Agios Georgios**	**82.54**	**309**	P	**P**	**12 31 45.5**	**-2.0**
AGG				IAmb	IAmb	12 31 49.2	
	comp=Z,70nm,0.9s						
PRU	**Pruhonice**	**82.62**	**322**	⇓*i*P	**P**	**12 31 47.8**	**+0.2**
PRU				*e*S	**S**	**12 42 02.0**	**-1.4**
PRU				AMS	AMS	13 13 20.0	
	comp=Z,4µm,16.4s						
PRU	**Pruhonice**	**82.62**	**322**	⇓*i*P	**P**	**12 31 47.8**	**+0.2**
PRU				*e*S	**S**	**12 42 02.0**	**-1.4**
PRU				MLR	MLR		
	comp=Z,4µm,16.4s						
KRND	**KRANIDI**	**82.63**	**308**	P	**P**	**12 31 44.6**	**-3.3**
PRA	**Prague**	**82.64**	**322**	⇓AMS	AMS	13 12 00.0	
	comp=Z,5µm,18.8s						
DSF	**Desfina**	**82.65**	**309**	P	**P**	**12 31 45.2**	**-2.9**
HAPS	**Han Pijesak,Bl**	**82.66**	**315**	*e*P	**P**	**12 31 50.0**	**+1.9**
VAM	**Vamos**	**82.67**	**305**	P	**P**	**12 31 47.0**	**-1.2**
OHR	**Ohrid**	**82.72**	**312**	*i* P	**P**	**12 31 46.8**	**-1.6**
YKA	**Yellowknife Ar**	**82.75**	**23**	P	**P**	**12 31 47.0**	**-1.0**
	comp=Z,18nm,0.7s,baz=312,slow=4.5,SNR=389						
YKA				PKKPbc	**PKKPbc**	**12 50 10.3**	**-2.9**
	comp=Z,0.4nm,0.9s,baz=133,slow=2.7,SNR=5.4						
YKA				PKPPKP		12 58 18.4	
	comp=Z,0.3nm,0.7s,baz=107,slow=3.4,SNR=4.2						
YKA				LR	LR	13 13 18.9	
	comp=Z,923nm,18.4s,baz=0.0,slow=39						
SUMG	**Summit**	**82.80**	**354**	*i* P	**P**	**12 31 47.9**	**-0.8**
SUMG	**Summit**	**82.80**	**354**	*i* P	**P**	**12 31 47.9**	**-0.8**
SUMG	**Summit**	**82.80**	**354**	P	**P**	**12 31 47.8**	**-0.8**
SUMG				IAmb	IAmb	12 31 48.6	
	comp=Z,47nm,0.9s						
IMMV	**Iera Moni Meta**	**82.81**	**306**	P	**P**	**12 31 48.3**	**-0.6**
KPRO	**Kipourio**	**82.82**	**310**	P	**P**	**12 31 46.6**	**-2.4**
CONA	**Conrad Observa**	**82.83**	**319**	*e*P	**P**	**12 31 49.1**	**+0.2**
	comp=Z,79nm,1.6s,SNR=19						
FBE	**Freiberg**	**82.83**	**323**	*e*P	**P**	**12 31 48.3**	**-0.4**
	comp=Z,121nm,1.5s,baz=59,slow=5.0						
CLL	**Collm**	**82.83**	**323**	⇑*i*P	**P**	**12 31 49.1**	**+0.4**
	comp=Z,73nm,1.5s						
CLL				*e*Plp		12 31 50.0	
	comp=Z,700nm,10.1s						
CLL				*i* (sP)	**pwP**	**12 32 00.0**	**+0.3**
CLL				*e*PP	**PP**	**12 35 00.0**	**+1.5**
	comp=Z,21nm,1.3s						
CLL				*e*SKSac	**SKSac**	**12 42 11.0**	**+2.3**
CLL				*e*SS	**SS**	**12 47 24.0**	**-3.6**
CLL				LmV		13 13 00.0	
	comp=Z,8µm,19.1s						
CLL	**Collm**	**82.83**	**323**	*e*P	**P**	**12 31 48.7**	**0.0**
	comp=Z,72nm,1.4s,baz=59,slow=5.0						
CLL	**Collm**	**82.83**	**323**	⇑*i*P	**P**	**12 31 49.1**	**+0.4**
CLL				pmax	pmax		
	comp=Z,73nm,1.5s						
CLL				MLR	MLR		
	comp=Z,8µm,19.1s						
BSEG	**Bad Segeberg**	**82.91**	**326**	*e*P	**P**	**12 31 48.4**	**-0.6**
	comp=Z,40nm,1.1s,baz=59,slow=5.0						

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KALE Kalithea         82.94 309  P        P        12 31 47.3 -2.3
EVR  Evrytania        82.95 309  P        P        12 31 47.6 -2.1
GVDS Gavdos           82.98 305  P        P        12 31 49.0 -0.8
GVD  Gavdhos          82.98 305  P        P        12 31 48.7 -1.1
SERG Sergoula         82.99 309  P        P        12 31 47.2 -2.6
ANX  Ano Chora        83.01 309  P        P        12 31 48.1 -1.9
VLI  Veliai           83.06 307  P        P        12 31 47.1 -3.1
KLV  Kalavryta, Ach   83.08 308  P        P        12 31 47.8 -2.5
EFP  Efpalio          83.09 309  P        P        12 31 48.5 -1.8
LAKA Lakka            83.12 309  P        P        12 31 48.2 -2.3
ANKY Antikythira Is   83.15 306  P        P        12 31 48.2 -2.4
PDG  Podgorica        83.19 313 ⇑P        P        12 31 50.7  0.0
PDG  Podgorica        83.19 313 eP        P        12 31 50.3 -0.4
PDG  Podgorica        83.19 313  IAMs_20  IAMs_20  13 12 45.3
     comp=Z,2µm,19.0s
KTHR Kythira          83.20 307  P        P        12 31 49.4 -1.5
TIR  Tirane           83.25 312 ⇑P        P        12 31 51.5 +0.4
TIR  Tirane           83.25 312  P        P        12 31 50.4 -0.7
TIR                              pmax     pmax
     comp=Z,516nm,2.0s
TIR  Tirane           83.25 312  P        P        12 31 50.4 -0.7
TIR                              IAMs_20  IAMs_20  13 13 32.3
     comp=Z,3µm,22.0s
PVO  Paravola         83.28 309  P        P        12 31 50.1 -1.2
KOGS Kog              83.28 318 i P       P        12 31 50.6 -0.6
DRME Dracevica, Mon   83.34 313 eP        P        12 31 51.0 -0.5
ARSA Arzberg          83.35 319 eP        P        12 31 51.7 +0.3
     comp=Z,40nm,1.5s,SNR=12
DRO  Drossia          83.43 309  P        P        12 31 50.8 -1.3
BRY  Bratogost        83.45 314 eP        P        12 31 51.3 -1.0
DYR  Agios Nikonas    83.48 307  P        P        12 31 50.5 -1.9
BLY  Banja Luka       83.49 316 ⇓P        P        12 31 52.7 +0.5
BLY  Banja Luka       83.49 316 eP        P        12 31 52.5 +0.3
BLY  Banja Luka       83.49 316  P        P        12 31 51.6 -0.6
NEUB Neuenburg        83.55 324 eP        P        12 31 51.7 -0.7
     comp=Z,100nm,1.3s,baz=59,slow=5.0
RLS  Riolos of Patr   83.56 309  P        P        12 31 51.7 -1.0
TANN Tannenbergstha   83.58 323 eP        P        12 31 51.9 -0.7
     comp=Z,163nm,1.7s,baz=59,slow=5.0
KHC  Kasperske Hory   83.58 321⇓iP        P        12 31 52.8 +0.1
KHC                             ex        x        12 32 03.0
KHC                             ex        x        12 42 02.7
KHC                              AMS      AMS      13 14 00.0
     comp=Z,5µm,15.7s
KHC  Kasperske Hory   83.58 321⇓iP        P        12 31 52.8 +0.1
KHC                             e                  12 32 03.0
KHC                             eS        S        12 42 02.7  -11
KHC                              MLR      MLR
     comp=Z,5µm,15.7s
KHC  Kasperske Hory   83.58 321  P        P        12 31 51.8 -0.9
ITM  Ithomi           83.60 308  P        P        12 31 51.2 -1.8
ITM  Ithomi           83.60 308  P        P        12 31 51.0 -2.0
AMT  Artemida-Makis   83.61 308  P        P        12 31 51.4 -1.6
GEC2 GERESS Array S   83.65 321 eP        P        12 31 52.4 -0.7
     comp=Z,76nm,1.2s,baz=59,slow=5.0
GEC2 GERESS Array S   83.65 321  P        P        12 31 51.6 -1.5
GEC2                             IAmb     IAmb     12 31 54.1
     comp=Z,62nm,1.1s
GERES GERESS Array B  83.65 321  P        P        12 31 52.9 -0.2
     comp=Z,20nm,0.8s,baz=57,slow=4.9,SNR=49
GERES                            LR       LR       13 13 18.6
     comp=Z,4µm,19.2s,baz=73,slow=39
GERES GERESS Array B  83.65 321  P        P        12 31 52.6 -0.5
GERES GERESS Array B  83.65 321  P        P        12 31 52.6 -0.5
ASSE Asse, Remlinge   83.67 325 eP        P        12 31 52.6 -0.3
     comp=Z,54nm,1.4s,baz=59,slow=5.0
GUNZ Gunzen           83.67 323 eP        P        12 31 52.5 -0.6
     comp=Z,76nm,1.3s,baz=59,slow=5.0
NKC  Novy Kostel      83.67 323 ⇓AMS      AMS      13 14 00.0
     comp=Z,7µm,15.6s
WERN Wernitzgruen     83.69 323 eP        P        12 31 52.6 -0.6
     comp=Z,64nm,1.3s,baz=59,slow=5.0
MGRS Mrkonjic Grad    83.70 316 eP        P        12 31 53.6 +0.2
PLN  Plauen           83.71 323 eP        P        12 31 52.5 -0.7
     comp=Z,64nm,1.4s,baz=59,slow=5.0
IGT  Igoumenitsa      83.72 310  P        P        12 31 51.5 -2.0
NRDL Niedersach Rie   83.77 325 eP        P        12 31 53.5 +0.1
     comp=Z,226nm,2.1s,baz=59,slow=5.0
TSLK Tsoukalades, L   83.80 310  P        P        12 31 52.2 -1.8
MOA  Molln            83.81 320 ePcP      P        12 31 54.4 +0.6
     comp=Z,48nm,0.9s,SNR=20
LKD2 Lefkada island   83.82 310  P        P        12 31 51.9 -2.2
PYL  PYLOS            83.86 308  P        P        12 31 51.9 -2.4
PERS Pernice          83.88 319 i P       P        12 31 53.5 -0.8
SOKA Soboth           83.92 319 eP        P        12 31 54.4 -0.1
     comp=Z,48nm,1.0s,SNR=27
MOX  Moxa             83.92 323 eP        P        12 31 53.7 -0.7
     comp=Z,51nm,1.3s,baz=59,slow=5.0
MOX                             eS        S        12 42 13.0 -3.7
     baz=67,slow=9.5
MOX                             eL        L        13 14 15.6
     comp=Z,7µm,18.0s
CLZ  Clausthal        83.98 325 eP        P        12 31 54.4 -0.2
     comp=Z,130nm,1.4s,baz=59,slow=5.0
WET  Wettzell         83.98 321 eP        P        12 31 54.3 -0.3
     comp=Z,97nm,1.6s,baz=59,slow=5.0
MANZ Manzenberg       83.99 322 eP        P        12 31 54.3 -0.4
     comp=Z,48nm,1.3s,baz=59,slow=5.0
STON Ston             84.01 314 eP        P        12 31 53.7 -1.2
KEK  Kerkira          84.01 311  P        P        12 31 52.9 -2.1
KFL  Anninata         84.02 309  P        P        12 31 53.5 -1.6
FSK  Fiskardo         84.03 309  P        P        12 31 53.2 -1.9
RETH Rethem/Aller,    84.03 326 eP        P        12 31 54.5 -0.3
     comp=Z,189nm,2.1s,baz=59,slow=5.0
ROTZ Rotzenmuhle      84.04 322 eP        P        12 31 54.6 -0.3
     comp=Z,97nm,1.4s,baz=59,slow=5.0
CRES Cresnjev         84.06 318 eP        P        12 31 55.0 -0.2
OBKA Obir             84.29 319 eP        P        12 31 56.0 -0.4
     comp=Z,38nm,0.9s,SNR=13
BOJS Bojanci          84.34 318 i P       P        12 31 56.2 -0.4
BOJS                            eS        S        12 42 19.4 -1.6
GTTG Gottingen        84.35 325 eP        P        12 31 56.1 -0.3
     comp=Z,146nm,1.7s,baz=59,slow=5.0
GTTG                            eS        S        12 42 20.9 +0.1
     baz=67,slow=9.5
LJU  Ljubljana        84.53 318 i P       P        12 31 57.1 -0.4
LJU  Ljubljana        84.53 318 eP        P        12 31 57.2 -0.3
GRA1 Grafenberg Arr   84.63 323  P        P        12 31 58.0  0.0
GRF  Grafenberg Arr   84.63 323 eP        P        12 31 57.6 -0.3
     comp=Z,96nm,1.1s,baz=59,slow=5.0
GRF                             ePP       PP       12 35 12.3 -1.0
     baz=59,slow=7.3
GRF                             eL        L        13 14 03.1
     comp=Z,6µm,19.7s
GRF  Grafenberg Arr   84.63 323  P        P        12 31 58.0  0.0
GRF                              pmax     pmax
     comp=Z,252nm,1.7s
UBBA Unterbreizbach   84.71 324 eP        P        12 31 57.8 -0.4
     comp=Z,177nm,1.9s,baz=59,slow=5.0
RJOB Jochberg         84.73 320 eP        P        12 31 57.9 -0.6
     comp=Z,56nm,1.2s,baz=59,slow=5.0
KBA  Koelnbreinsper   84.73 320 eP        P        12 31 58.1 -0.6
     comp=Z,30nm,1.1s,SNR=24
CEY  Cerknica         84.74 318 eP        P        12 31 58.2 -0.4
ABPO Ambohimpanom     84.74 247  P        P        12 31 59.7 +0.5
ABPO                             pmax     pmax
     comp=Z,42nm,1.0s
ABPO Ambohimpanom     84.74 247  P        P        12 31 59.7 +0.5
ABPO                             IAmb     IAmb     12 32 14.4
     comp=Z,42nm,1.0s
SCTE Santa Cesarea    84.77 312  P        P        12 31 58.1 -0.8
MYKA Terra Mystica    84.78 319 eP        P        12 31 58.1 -0.8
     comp=Z,19nm,1.0s,SNR=8.6
RIY  Rijeka           84.90 318 eP        P        12 31 58.8 -0.6
CADS Cadrg            84.92 319 i P       P        12 31 58.0 -1.6
IBBN Ibbenburen       85.09 326 eP        P        12 31 59.7 -0.5
     comp=Z,131nm,1.4s,baz=59,slow=5.0
TRI  Trieste          85.16 318  P        P        12 31 59.8 -0.9
TRI                              pmax     pmax
     comp=Z,102nm,1.5s
TRI  Trieste          85.16 318  P        P        12 31 59.8 -0.9
TRI                              IAmb     IAmb     12 32 00.9
     comp=Z,102nm,1.5s
TRI                              IAMs_20  IAMs_20  13 15 19.1
     comp=Z,3µm,20.0s
FUR  Furstenfeldbru   85.39 321 eP        P        12 32 01.5 -0.3
     comp=Z,281nm,1.4s,baz=59,slow=5.0
ABTA Abfaltersbach    85.39 320 eP        P        12 32 00.5 -1.4
     comp=Z,65nm,1.4s,SNR=14
STAL STALIGIAL        85.52 319  P        P        12 32 00.4 -2.1
STAL                             IAmb     IAmb     12 32 02.4
     comp=Z,93nm,1.2s
STAL                             IAMs_20  IAMs_20  13 14 17.6
     comp=Z,4µm,20.0s
WATA Walderalm        85.64 320 eP        P        12 32 02.6 -0.7
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     comp=Z,65nm,1.5s,SNR=9.3
WTTA Wattenberg       85.64 320 eP        P        12 32 02.6 -0.7
     comp=Z,79nm,1.3s,SNR=16
MATE Matera           85.70 313 ⇑P        P        12 32 03.1 -0.3
KIBK Kibwezi          85.71 266  P        P        12 32 05.0 +1.0
     SNR=16
SGRT San Giovanni R   85.82 314  P        P        12 32 02.9 -1.3
SGRT                             IAMs_20  IAMs_20  13 16 26.0
     comp=Z,3µm,21.0s
BUG  Bochum--Univer   85.82 325 eP        P        12 32 03.1 -0.7
     comp=Z,173nm,1.5s,baz=59,slow=5.0
LODK Lodwar           85.85 272  P        P        12 32 05.7 +0.9
     SNR=15
TNS  Taunus Mts       85.87 324 eP        P        12 32 03.7 -0.5
     comp=Z,77nm,1.6s,baz=59,slow=5.0
TNS                             eS        S        12 42 34.6 -1.5
     baz=67,slow=9.5
MOTA Moosalm          85.91 321 eP        P        12 32 03.6 -1.0
     comp=Z,44nm,1.3s,SNR=13
SQTA Sankt Quirin     85.92 320 i P       P        12 32 04.0 -0.6
     comp=Z,67nm,1.3s,SNR=13
KMBO Kilima Mbogo     85.95 267  P        P        12 32 06.4 +1.0
     comp=Z,30nm,1.0s,baz=47,slow=6.5,SNR=55
KMBO                             LR       LR       13 12 23.8
     comp=Z,772nm,18.7s,baz=86,slow=37
KMBO Kilima Mbogo     85.95 267 i P       P        12 32 06.3 +0.8
     SNR=14
KMBO Kilima Mbogo     85.95 267  P        P        12 32 06.2 +0.8
KMBO                             pmax     pmax
     comp=Z,57nm,1.1s
KMBO                             MLR      MLR
     comp=Z,1µm,18.0s
KMBO Kilima Mbogo     85.95 267  P        P        12 32 06.2 +0.8
KMBO                             IAmb     IAmb     12 32 08.2
     comp=Z,57nm,1.1s
RETA Reutte           86.04 321 eP        P        12 32 04.4 -0.7
     comp=Z,18nm,1.3s
STU  Stuttgart        86.25 322 eP        P        12 32 05.2 -0.8
     comp=Z,65nm,1.4s,baz=59,slow=5.0
CTI  Castel Tesino    86.26 319  P        P        12 32 04.4 -1.9
CTI                              pmax     pmax
     comp=Z,58nm,1.5s
CTI  Castel Tesino    86.26 319  P        P        12 32 04.3 -1.9
CTI                              IAmb     IAmb     12 32 06.4
     comp=Z,58nm,1.5s
CTI                              IAMs_20  IAMs_20  13 17 11.2
     comp=Z,2µm,19.0s
FETA Feichten         86.30 320 eP        P        12 32 05.9 -0.6
     comp=Z,44nm,1.2s,SNR=15
UBR  Ueberruh         86.31 321 eP        P        12 32 05.5 -0.9
     comp=Z,136nm,1.6s,baz=59,slow=5.0
TIP  Timpagrande      86.35 311 ⇓P        P        12 32 07.2 +0.3
TIP  Timpagrande      86.35 311  P        P        12 32 06.7 -0.2
AHRW Bad Neuenahr-A   86.42 325 eP        P        12 32 06.4 -0.4
     comp=Z,94nm,1.4s,baz=59,slow=5.0
AHRW                            eS        S        12 42 38.6 -2.7
     baz=67,slow=9.5
DAVA Damuels          86.65 321 ePcP      P        12 32 07.7 -0.5
     comp=Z,40nm,1.7s,SNR=9.0
LLLB Lillooet         86.68  35  P        P        12 32 08.9 +0.7
LLLB                             IAmb     IAmb     12 32 10.0
     comp=Z,138nm,1.5s
INTR Introdacqua      86.89 315  P        P        12 32 08.8 -0.6
INTR                             IAmb     IAmb     12 32 11.6
     comp=Z,69nm,1.1s
DAVOX Davos/Dischmat  86.92 320  P        P        12 32 08.6 -1.0
     comp=Z,15nm,0.8s,baz=53,slow=2.6,SNR=22
DAVOX                            PP       PP       12 35 31.3 -0.8
     comp=Z,6.0nm,0.9s,baz=65,slow=6.1,SNR=5.2
PGC  Sidney           86.92  37  P        P        12 32 09.2 -0.1
PGC                              IAmb     IAmb     12 32 11.2
     comp=Z,75nm,1.2s
PAOL Paolisi          86.94 314  P        P        12 32 08.4 -1.3
PAOL                             IAmb     IAmb     12 32 09.9
     comp=Z,71nm,1.7s
PAOL                             IAMs_20  IAMs_20  13 17 25.7
     comp=Z,3µm,19.0s
ILULI Ilulissat       86.95 358  P        P        12 32 07.3 -1.7
ILULI                            pmax     pmax
     comp=Z,226nm,1.7s
ILULI Ilulissat       86.95 358  P        P        12 32 07.3 -1.7
BFO  Black Forest     86.97 322 eP        P        12 32 08.6 -0.9
     comp=Z,125nm,1.8s,baz=59,slow=5.0
BFO  Black Forest     86.97 322  P        P        12 32 08.7 -0.9
BFO                              pmax     pmax
     comp=Z,120nm,1.8s
BFO  Black Forest     86.97 322  P        P        12 32 08.7 -0.9
BFO                              IAmb     IAmb     12 32 10.4
     comp=Z,120nm,1.8s
AQU  L'Aquila         87.05 315 eP        P        12 32 10.7 +0.5
AQU  L'Aquila         87.05 315  P        P        12 32 10.6 +0.5
AQU                              pmax     pmax
     comp=Z,178nm,1.2s
AQU                              MLR      MLR
     comp=Z,2µm,22.0s
AQU  L'Aquila         87.05 315  P        P        12 32 10.6 +0.5
AQU                              IAMs_20  IAMs_20  13 14 27.3
     comp=Z,2µm,22.0s
SALO Salr             87.16 319  P        P        12 32 10.4 -0.2
SALO                             IAmb     IAmb     12 32 11.2
     comp=Z,60nm,1.1s
A04D Lummi Island     87.30  37  P        P        12 32 11.3 +0.2
     baz=304
NLWA Neilton Lookou   87.38  38  P        P        12 32 11.0 -0.6
CEL  Celeste          87.38 311  P        P        12 32 11.7 -0.2
TUE  Stuetta          87.40 320  P        P        12 32 11.5 -0.5
TUE                              IAmb     IAmb     12 32 12.9
     comp=Z,138nm,1.7s
WLF  Walferdange      87.41 324 eP        P        12 32 11.3 -0.3
     comp=Z,204nm,1.5s,baz=59,slow=5.0
WLF  Walferdange      87.41 324  P        P        12 32 10.7 -1.0
WLF                              pmax     pmax
     comp=Z,153nm,1.3s
WLF                              MLR      MLR
     comp=Z,6µm,19.0s
WLF  Walferdange      87.41 324  P        P        12 32 10.7 -1.0
ZCCA Zocca            87.55 318  P        P        12 32 12.9 +0.4
ECH  Echery           87.68 323  P        P        12 32 12.0 -1.1
ECH  Echery           87.68 323  P        P        12 32 12.0 -1.1
ECH                              IAmb     IAmb     12 32 13.7
     comp=Z,67nm,1.5s
PRMA PARMA            87.73 319  IAMs_20  IAMs_20  13 15 59.2
     comp=Z,3µm,20.0s
D03D Eldon            87.74  38  P        P        12 32 14.7 +1.4
     baz=304,SNR=31
OSSC Osservatorio P   87.81 317  P        P        12 32 12.8 -0.9
OSSC                             IAmb     IAmb     12 32 14.2
     comp=Z,87nm,1.7s
B05A Bryant           87.89  37  P        P        12 32 14.5 +0.5
     baz=304,SNR=12
LATE Laterza          87.93 316  P        P        12 32 13.6 -0.8
E03A Lebam            88.02  39  P        P        12 32 15.0 +0.4
B06A Marblemount      88.08  37  P        P        12 32 14.8 -0.1
D04E Lakebay          88.12  38  P        P        12 32 15.9 +0.8
     baz=304
F03A Seaside          88.36  40  P        P        12 32 16.6 +0.3
EKA  Eskdalemuir Ar   88.37 332  P        P        12 32 15.3 -0.8
     comp=Z,5.8nm,0.7s,baz=38,slow=2.7,SNR=4.1
MSSA Maissana         88.45 319  IAMs_20  IAMs_20  13 16 33.3
     comp=Z,3µm,19.0s
D05A Enumclaw         88.56  38  P        P        12 32 18.0 +0.8
E04D Cinebar          88.58  39  P        P        12 32 18.1 +0.7
     baz=304,SNR=14
F04D Rainier, OR      88.59  39  P        P        12 32 18.1 +0.7
     baz=304
C06D Leavenworth      88.74  37  P        P        12 32 18.5 +0.4
     baz=305
VAE  Valguarnera      88.79 311  P        P        12 32 19.9 +1.4
     comp=Z,17nm,0.4s,baz=315,slow=15,SNR=4.9
LON  Longmire         88.91  38  P        P        12 32 19.5 +0.6
LON                              pmax     pmax
     comp=Z,49nm,1.1s
LON  Longmire         88.91  38  P        P        12 32 19.5 +0.6
LON                              IAmb     IAmb     12 32 20.7
     comp=Z,49nm,1.1s
G03D McMinnville, O   88.93  40  P        P        12 32 19.8 +0.8
     baz=304,SNR=5.7
F04A Amboy            89.02  39  P        P        12 32 20.4 +1.0
SFJD Kangerlussuaq    89.14 357 i P       P        12 32 18.0 -1.5
SFJD Kangerlussuaq    89.14 357  P        P        12 32 18.5 -1.0
SFJD                             pmax     pmax
     comp=Z,35nm,0.8s
SFJD Kangerlussuaq    89.14 357  P        P        12 32 18.5 -1.0
SFJD                             IAmb     IAmb     12 32 18.9
     comp=Z,35nm,0.8s
I02D Swisshome        89.19  41  P        P        12 32 21.4 +1.2
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     baz=303
COR  Corvallis        89.25  41  P        P        12 32 21.3 +0.8
COR                              pmax     pmax
     comp=Z,120nm,1.2s
COR  Corvallis        89.25  41  P        P        12 32 21.3 +0.8
LTY  Liberty          89.25  37  P        P        12 32 20.9 +0.3
LTY                              IAmb     IAmb     12 32 22.2
     comp=Z,79nm,1.2s
B08A Colville Reser   89.34  36  P        P        12 32 20.9  0.0
ANGG Ammassalik, Gr   89.37 352  P        P        12 32 18.1 -2.5
F05D White Salmon     89.60  39  P        P        12 32 23.2 +1.0
     baz=305
H04D Lebanon          89.62  40  P        P        12 32 23.3 +1.0
     baz=304,SNR=8.5
J01E Myrtle Point     89.66  42  P        P        12 32 23.2 +0.7
     baz=303
I03D Drain, OR        89.72  41  P        P        12 32 23.7 +1.0
     baz=304
BNI  Bardonecchia     89.74 320  P        P        12 32 22.1 -0.9
BNI                              pmax     pmax
     comp=Z,71nm,1.6s
BNI  Bardonecchia     89.74 320  P        P        12 32 22.1 -0.9
BNI                              IAmb     IAmb     12 32 23.7
     comp=Z,71nm,1.6s
H04A Detroit Lake     89.86  40  P        P        12 32 24.4 +1.0
H04A                             IAmb     IAmb     12 32 25.3
     comp=Z,76nm,1.3s
G05D Wamic, OR        90.05  39  P        P        12 32 25.0 +0.8
     baz=305,SNR=11
K02D Willamette Mer   90.07  42  P        P        12 32 25.1 +0.6
     baz=304,SNR=5.2
E07A Sunnyside        90.11  38  P        P        12 32 26.2 +1.6
I04A Tendick Farm,    90.22  41  P        P        12 32 25.7 +0.6
     baz=304,SNR=17
C09A Chrisman Ranch   90.24  36  P        P        12 32 26.1 +0.9
D08A Wollman Farm,    90.34  37  P        P        12 32 26.0 +0.5
D08A                             IAmb     IAmb     12 32 27.6
     comp=Z,69nm,1.0s
HAWA Hanford          90.39  38  P        P        12 32 27.0 +1.2
HAWA                             IAmb     IAmb     12 32 28.1
     comp=Z,87nm,1.1s
L02E Cave Junction    90.41  43  P        P        12 32 27.0 +1.0
     baz=304
G06A Carlson Farm,    90.44  39  P        P        12 32 27.3 +1.1
CLF  Chambon-Foret    90.45 324  P        P        12 32 26.1 +0.1
F07A Phinny Hill Vi   90.46  38  P        P        12 32 27.9 +1.7
F07A                             IAmb     IAmb     12 32 28.6
     comp=Z,86nm,1.1s
I05D Terrebonne, OR   90.55  40  P        P        12 32 27.4 +0.7
     baz=305,SNR=12
HUMO Hull Mountain    90.56  42  P        P        12 32 26.5 -0.2
NEW  Newport          90.57  35  P        P        12 32 27.6 +0.9
NEW                              pmax     pmax
     comp=Z,92nm,1.2s
NEW  Newport          90.57  35  P        P        12 32 27.6 +0.9
NEW                              IAmb     IAmb     12 32 28.6
     comp=Z,92nm,1.1s
NEW  Newport          90.57  35  P        P        12 32 27.0 +0.4
     baz=308
E08A Dider Farm, El   90.60  37  P        P        12 32 27.5 +0.8
E08A                             IAmb     IAmb     12 32 29.0
     comp=Z,84nm,1.2s
J04D Umpqua Nationa   90.72  41  P        P        12 32 28.2 +0.5
     baz=305,SNR=14
SSB  Saint Sauveur    90.84 321  P        P        12 32 27.5 -0.5
SSB                              pmax     pmax
     comp=Z,29nm,1.1s
SSB  Saint Sauveur    90.84 321  P        P        12 32 27.5 -0.5
SSB                              IAmb     IAmb     12 32 28.6
     comp=Z,29nm,1.1s
E09A Wood Farm, Sta   91.09  37  P        P        12 32 30.5 +1.4
PINE Pine Mountain    91.10  40  P        P        12 32 30.9 +1.4
L04D Klamath Falls    91.18  42  P        P        12 32 30.5 +0.8
     baz=304,SNR=15
YBH  Yreka Blue Hor   91.20  43  P        P        12 32 30.7 +0.9
YBH                              pmax     pmax
     comp=Z,31nm,1.2s
YBH  Yreka Blue Hor   91.20  43  P        P        12 32 30.7 +0.9
YBH                              IAmb     IAmb     12 32 32.0
     comp=Z,31nm,1.2s
J05D Fort Rock, OR    91.22  41  P        P        12 32 30.9 +1.0
     baz=305,SNR=24
K04D Chiloquin, OR    91.28  42  P        P        12 32 31.0 +0.8
     baz=305,SNR=5.5
M02C Callahan         91.30  43  P        P        12 32 31.2 +0.9
     baz=304,SNR=5.3
G08A Pilot Rock       91.37  38  P        P        12 32 31.8 +1.3
G08A                             IAmb     IAmb     12 32 32.9
     comp=Z,52nm,1.4s
N02D Trinity Center   91.62  43  P        P        12 32 32.7 +0.9
     baz=304
MBAR Mbarara          91.69 270  P        P        12 32 33.6 +1.0
MBAR                             pmax     pmax
     comp=Z,26nm,0.3s
MBAR                             MLR      MLR
     comp=Z,1µm,20.0s
MBAR Mbarara          91.69 270  P        P        12 32 33.6 +1.0
M04C Macdoel          91.71  42  P        P        12 32 32.6 +0.4
     baz=305,SNR=13
WALA Waterton Lakes   91.72  33  IAMs_20  IAMs_20  13 18 33.6
     comp=Z,2µm,19.0s
I07A Izee             91.78  39  P        P        12 32 33.0 +0.6
I07A                             IAmb     IAmb     12 32 34.9
     comp=Z,66nm,1.4s
F10A Beach Ranch, E   91.92  37  P        P        12 32 33.9 +0.8
F10A                             IAmb     IAmb     12 32 35.5
     comp=Z,99nm,1.8s
WDC  Whiskeytown Da   91.95  44  P        P        12 32 34.0 +0.8
WDC                              pmax     pmax
     comp=Z,33nm,1.4s
WDC  Whiskeytown Da   91.95  44  P        P        12 32 34.0 +0.8
WDC                              IAmb     IAmb     12 32 35.0
     comp=Z,33nm,1.4s
JTMT Jette            92.38  34  P        P        12 32 36.1 +0.9
JTMT                             IAmb     IAmb     12 32 37.1
     comp=Z,72nm,1.4s
BMO  Blue Mountains   92.57  38  P        P        12 32 36.7 +0.6
BMO                              pmax     pmax
     comp=Z,70nm,1.6s
BMO                              MLR      MLR
     comp=Z,900nm,20.0s
BMO  Blue Mountains   92.57  38  P        P        12 32 36.7 +0.6
BMO                              IAmb     IAmb     12 32 37.9
     comp=Z,70nm,1.6s
MOD  Modoc Plateau    92.58  42  P        P        12 32 36.9 +0.6
J08A Circle Bar Ran   92.81  40  P        P        12 32 38.5 +1.3
FFC  Flin Flon        92.89  24  P        P        12 32 36.7 -0.5
FFC                              pmax     pmax
     comp=Z,77nm,1.2s
FFC  Flin Flon        92.89  24  P        P        12 32 36.7 -0.5
FFC                              IAMs_20  IAMs_20  13 21 58.6
     comp=Z,2µm,18.0s
MSO  Missoula         93.15  35  P        P        12 32 39.1 +0.4
MSO                              IAmb     IAmb     12 32 40.1
     comp=Z,50nm,1.4s
MSO                              IAMs_20  IAMs_20  13 21 03.8
     comp=Z,2µm,19.0s
MSO  Missoula         93.15  35  P        P        12 32 38.7  0.0
     baz=311
KEST Kesra            93.18 311  P        P        12 32 39.2 +0.1
     comp=Z,23nm,0.9s,baz=345,slow=0.7,SNR=26
KEST                             LR       LR       13 21 50.8
     comp=Z,2µm,18.1s,baz=352,slow=40
KEST Kesra            93.18 311  P        P        12 32 39.3 +0.3
KEST                             IAmb     IAmb     12 32 40.4
     comp=Z,65nm,1.2s
KEST                             IAMs_20  IAMs_20  13 21 40.1
     comp=Z,2µm,18.0s
ORV  Oroville         93.19  44  P        P        12 32 38.7 -0.2
ORV                              pmax     pmax
     comp=Z,53nm,1.9s
ORV  Oroville         93.19  44  P        P        12 32 38.7 -0.2
ORV                              IAmb     IAmb     12 32 39.8
     comp=Z,53nm,1.9s
WVOR Wild Horse Val   93.26  40  P        P        12 32 40.3 +0.9
WVOR                             pmax     pmax
     comp=Z,63nm,1.6s
WVOR Wild Horse Val   93.26  40  P        P        12 32 40.3 +0.9
WVOR                             IAmb     IAmb     12 32 41.6
     comp=Z,63nm,1.6s
BEKR Beckworth        93.73  43  P        P        12 32 42.0 +0.4
BEKR                             IAmb     IAmb     12 32 55.8
     comp=Z,17nm,0.9s
AFDM Forest Hills D   93.87  44  P        P        12 32 42.5 +0.5
MAHO Mahon            94.17 317 i P       P        12 32 43.1 -0.3
MAHO                            i S       SKSac    12 43 16.8 -0.3
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MFID	Camas Ranch	94.29	38	P	P	12 32 44.9	+0.8
MFID				IAmb	IAmb	12 32 46.3	
	comp=Z,56nm,1.4s						
RUBR	Rubicon Trail	94.33	44	P	P	12 32 45.5	+1.0
RUBR				IAmb	IAmb	12 32 52.2	
	comp=Z,24nm,0.9s						
PAHR	Pah Rah Range	94.43	43	P	P	12 32 45.3	+0.5
EGMT	Eagleton	94.46	32	P	P	12 32 44.8	+0.1
EGMT				IAmb	IAmb	12 32 46.0	
	comp=Z,59nm,1.4s						
EGMT	Eagleton	94.46	32	P	P	12 32 44.2	-0.5
	baz=314						
VCNR	Virginia City	94.50	43	P	P	12 32 46.2	+0.9
LRM	Limekiln Ridge	94.59	35	P	P	12 32 46.2	+0.7
PNTR	Pine Nut	94.66	44	P	P	12 32 47.0	+1.0
PNTR				IAmb	IAmb	12 32 47.7	
	comp=Z,74nm,1.8s						
CMB	Columbia Colle	94.77	45	P	P	12 32 46.5	+0.2
CMB				pmax	pmax		
	comp=Z,11nm,0.9s						
CMB	Columbia Colle	94.77	45	P	P	12 32 46.5	+0.2
DLMT	Dillon	94.81	35	P	P	12 32 46.8	+0.3
DLMT				IAmb	IAmb	12 32 48.3	
	comp=Z,63nm,1.6s						
DLMT				IAMs_20	IAMs_20	13 21 19.1	
	comp=Z,2µm,19.0s						
YERR	Yerington	94.94	43	P	P	12 32 47.4	+0.2
YERR				IAmb	IAmb	12 32 48.9	
	comp=Z,37nm,1.6s						
MCMT	McKenzie Canyo	95.03	36	P	P	12 32 47.5	-0.1
WAKR	Walker	95.10	44	P	P	12 32 47.7	-0.3
PPT	Papeete	95.30	107	LR	LR	13 09 09.3	
	comp=Z,1µm,20.3s,baz=338,slow=31						
PPT2	Papeete2	95.31	107	*e*S	S	12 44 07.0	+3.2
	comp=Z,495nm,23.2s						
PPT2	Papeete2	95.31	107	*e*LR	LR	13 03 33.8	
	comp=Z,3µm,23.2s,baz=288						
RYN	Ryan	95.61	43	P	P	12 32 50.2	0.0
RYN				IAmb	IAmb	12 32 52.0	
	comp=Z,76nm,2.0s						
KVN	Kaiserville	95.62	43	P	P	12 32 49.6	-0.7
KVN				pmax	pmax		
	comp=Z,36nm,1.5s						
KVN				MLR	MLR		
	comp=Z,800nm,20.0s						
KVN	Kaiserville	95.62	43	P	P	12 32 49.6	-0.7
KVN				IAmb	IAmb	12 32 52.1	
	comp=Z,36nm,1.5s						
QLMT	Earthquake Lak	95.78	35	P	P	12 32 50.5	-0.5
MDPB	Devils Postpil	95.84	44	P	P	12 32 52.2	+0.7
NVAR	Mina Array Bea	95.86	43	P	P	12 32 52.0	+0.5
	comp=Z,5.0nm,0.7s,baz=297,slow=5.2,SNR=46						
NVAR	Mina Array Bea	95.86	43	P	P	12 32 51.6	+0.1
YHL	Hebgen Lake	95.90	35	P	P	12 32 52.2	+0.6
OMMB	Old Mammoth Mi	95.91	44	P	P	12 32 52.0	+0.2
NV11	Mina Array Sit	95.95	43	P	P	12 32 51.3	-0.5
MLAC	Mammoth, Mammo	96.00	44	P	P	12 32 52.8	+0.7
	baz=307						
YHH	Holmes Hill	96.12	35	P	P	12 32 52.0	-0.6
YMR	Madison River	96.14	35	P	P	12 32 53.0	+0.4
YNR	Norris Junctio	96.26	35	P	P	12 32 54.7	+1.5
ELK	Elko	96.31	40	P	P	12 32 53.8	+0.3
ELK				pmax	pmax		
	comp=Z,21nm,1.6s						
ELK	Elko	96.31	40	P	P	12 32 53.8	+0.3
YNE	Yellowstone No	96.41	34	P	P	12 32 53.5	-0.3
YPP	Pitchstone Pla	96.49	35	P	P	12 32 55.3	+0.9
LKWY	Lake	96.50	35	P	P	12 32 55.8	+1.5
LKWY				pmax	pmax		
	comp=Z,58nm,1.8s						
LKWY	Lake	96.50	35	P	P	12 32 55.8	+1.5
LKWY				IAmb	IAmb	12 32 57.5	
	comp=Z,58nm,1.8s						
LKWY				IAMs_20	IAMs_20	13 23 49.6	
	comp=Z,2µm,18.0s						
H17A	Grant Village	96.53	35	P	P	12 32 56.1	+1.7
H17A				IAmb	IAmb	12 32 57.9	
	comp=Z,32nm,1.5s						
H17A				IAMs_20	IAMs_20	13 14 52.4	
	comp=Z,2µm,21.0s						
H17A	Grant Village	96.53	35	P	P	12 32 55.1	+0.7
	baz=313						
SMMC	Simmler	96.60	47	P	P	12 32 54.6	-0.1
	baz=306						
IMW	Indian Meadow	96.67	36	P	P	12 32 53.1	-2.0
FLWY	Flagg Ranch	96.67	35	P	P	12 32 55.4	+0.4
FLWY				IAmb	IAmb	12 32 57.8	
	comp=Z,52nm,1.9s						
RLMT	Red Lodge	96.71	34	P	P	12 32 55.8	+0.6
RLMT	Red Lodge	96.71	34	P	P	12 32 55.5	+0.4
	baz=314						
DGMT	Dagmar	96.73	29	P	P	12 32 55.1	+0.2
DGMT				IAmb	IAmb	12 32 55.9	
	comp=Z,46nm,1.1s						
DGMT	Dagmar	96.73	29	P	P	12 32 55.0	0.0
	baz=318						
FXWY	Fox Creek	96.80	36	P	P	12 32 56.6	+0.9
VES	Vestal, Richgr	96.89	46	P	P	12 32 55.7	-0.2
	baz=306						
TPAW	Teton Pass	96.94	36	P	P	12 32 56.6	+0.3
PKM	Mcpherson Peak	96.96	47	P	P	12 32 56.2	-0.3
	baz=306						
REDW	Red Top Meadow	97.08	36	P	P	12 32 55.7	-1.3
LAO	LASA Array	97.10	31	P	P	12 32 56.0	-0.8
LAO				IAmb	IAmb	12 32 58.2	
	comp=Z,30nm,1.4s						
LAO				IAMs_20	IAMs_20	13 22 39.9	
	comp=Z,2µm,19.0s						
LAO	LASA Array	97.10	31	P	P	12 32 56.6	-0.2
	baz=316						
CWC	Cottonwood Cre	97.19	45	P	P	12 32 56.8	-0.7
	baz=307						
AHID	Auburn Hatcher	97.35	37	IAMs_20	IAMs_20	13 22 28.2	
	comp=Z,2µm,19.0s						
ISA	Isabella, Lake	97.40	46	P	P	12 32 57.0	-1.3
ISA				pmax	pmax		
	comp=Z,14nm,1.6s						
ISA	Isabella, Lake	97.40	46	P	P	12 32 57.0	-1.3
ISA	Isabella, Lake	97.40	46	P	P	12 32 57.8	-0.5
	baz=307						
BGU	Big Grassy Mou	97.48	39	P	P	12 32 57.5	-1.2
R11A	Troy Canyon, C	97.60	42	P	P	12 32 58.5	-0.8
R11A	Troy Canyon, C	97.60	42	P	Pdif	12 32 59.5	+0.2
	baz=309						
TBI	Tubuai	97.65	112	*e*PP	PP	12 36 56.2	-1.4
	comp=Z,119nm,31.8s						
TBI				*e*SKSac	SKSac	12 43 39.5	+3.8
	comp=Z,548nm,28.8s						
TBI				*e*S	ScS	12 44 24.8	+0.9
	comp=Z,1µm,27.0s						
TBI				*e*SP	SP	12 45 49.0	+2.6
	comp=Z,419nm,34.0s						
TBI				*e*SS	SS	12 51 06.6	+2.2
	comp=Z,634nm,25.5s						
TBI	Tubuai	97.65	112	*e*LR	LR	13 04 38.3	
	comp=Z,1µm,24.2s,baz=292						
MPMC	Manual Prospec	97.80	45	P	P	12 33 00.3	0.0
	baz=307						
HWUT	Hardware Ranch	97.87	38	P	P	12 32 59.9	-0.5
FURC	Furnace Creek,	97.96	44	P	Pdif	12 33 00.7	0.0
	baz=308						
LRMC	Laurel Mtn Rad	98.03	46	P	P	12 33 00.8	-0.4
	baz=307						
TPNV	Topopah Spring	98.06	44	P	Pdif	12 33 01.9	+0.5
TPNV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TPNV	Topopah Spring	98.06	44	P	Pdif	12 33 01.9	+0.5
TPNV	Topopah Spring	98.06	44	P	Pdif	12 33 01.7	+0.3
	baz=308						
DUG	Dugway, Tooele	98.08	39	P	P	12 33 00.9	-0.5
DUG				pmax	pmax		
	comp=Z,20nm,1.8s						
DUG	Dugway, Tooele	98.08	39	P	P	12 33 00.9	-0.5
DUG	Dugway, Tooele	98.08	39	P	Pdif	12 33 01.7	+0.3
	baz=311						
EDW2	Edwards Air Fo	98.18	46	P	Pdif	12 33 01.9	0.0
	baz=307						
BW06	Boulder Array	98.18	36	IAMs_20	IAMs_20	13 25 58.2	
	comp=Z,1µm,18.0s						
PDAR	Pinedale Array	98.18	36	P	P	12 33 01.1	-0.8
	comp=Z,1.3nm,1.0s,baz=318,slow=2.0,SNR=5.8						
PDAR				LR	LR	13 16 14.3	
	comp=Z,478nm,21.9s,baz=344,slow=35						
UCM	Universidad Co	98.42	321	*e*P	Pdif	12 33 10.8	+8.0
UCM	Universidad Co	98.42	321	*i* PP	PP	12 37 14.0	+12
PSUT	Pine Spring	98.54	41	P	P	12 33 03.0	-0.6
GSC	Goldstone, Bar	98.70	45	P	Pdif	12 33 04.3	+0.1
	baz=308						
ULM	Lac du Bonnet	98.72	24	P	P	12 33 02.6	-1.2
	comp=Z,3.9nm,0.8s,baz=323,slow=4.2,SNR=9.2						
ULM				LR	LR	13 22 29.9	
	comp=Z,2µm,18.8s,baz=338,slow=38						
ULM	Lac du Bonnet	98.72	24	P	P	12 33 02.0	-1.8
ULM				pmax	pmax		
	comp=Z,14nm,1.2s						
ULM	Lac du Bonnet	98.72	24	P	P	12 33 02.0	-1.8
ULM				IAMs_20	IAMs_20	13 22 19.7	
	comp=Z,2µm,19.0s						
CART	Cartagena	98.84	318	*e*P	Pdif	12 33 09.2	+4.6
CART	Cartagena	98.84	318	*i* PP	PP	12 37 08.2	+2.6
CART	Cartagena	98.84	318	IAMs_20	IAMs_20	13 25 04.6	
	comp=Z,2µm,18.0s						
MDND	Maddock	99.18	27	IAMs_20	IAMs_20	13 21 25.5	
	comp=Z,2µm,20.0s						
PAB	San Pablo	99.56	321	IAMs_20	IAMs_20	13 24 15.4	
	comp=Z,3µm,20.0s						
GMRC	Granite Mounta	99.76	45	P	Pdif	12 33 09.2	+0.2
	baz=308						
K22A	Casper	99.86	34	IAMs_20	IAMs_20	13 24 43.3	
	comp=Z,1µm,19.0s						
MVO	Moncorvo	99.95	324	*e*SKSac	SKSac	12 43 51.7	+4.6
MVO	Moncorvo	99.95	324	*e*LR	LR	13 09 41.6	
	comp=Z,3µm,20.0s						
PFO	Pinyon Flats O	99.96	46⇑	*i*P	Pdif	12 33 09.5	-0.4
PFO				pmax	pmax		
	comp=Z,14nm,1.4s						
PFO	Pinyon Flats O	99.96	46	P	Pdif	12 33 10.0	+0.1
	baz=308						
RSSD	Black Hills	100.03	32	IAMs_20	IAMs_20	13 23 20.6	
	comp=Z,2µm,20.0s						
RSSD	Black Hills	100.03	32	P	Pdif	12 33 09.5	-0.6
	baz=318						
PGAV	Gavieira, Arco	100.05	325	*e*LR	LR	13 12 53.6	
	comp=Z,4µm,18.0s						
RWWY	Rawlins	100.18	35	IAMs_20	IAMs_20	13 27 04.2	
	comp=Z,1µm,18.0s						
AGMN	Agassiz Nation	100.32	25	IAMs_20	IAMs_20	13 22 44.3	
	comp=Z,2µm,20.0s						
TAOE	Nuku Hiva Isla	100.39	95	*e*Sdif	Sdif	12 44 50.0	+2.7
	comp=Z,913nm,28.6s						
IRM	Iron Mountain	100.48	45	P	Pdif	12 33 12.4	+0.3
	baz=309						
MTE	Manteigas	100.76	323	*e*SKSac	SKSac	12 43 56.7	+5.6
MTE	Manteigas	100.76	323	*e*LR	LR	13 10 10.7	
	comp=Z,4µm,18.0s						
D32A	Dogwood Acres,	100.81	26	IAMs_20	IAMs_20	13 26 46.6	
	comp=Z,3µm,20.0s						
SCHQ	Schefferville	101.11	5	P	Pdif	12 33 12.8	-1.6
	comp=Z,3.7nm,0.9s,baz=2.6,slow=7.1,SNR=4.4						
SCHQ	Schefferville	101.11	5	IAMs_20	IAMs_20	13 25 40.5	
	comp=Z,3µm,20.0s						
PMRV	Marv??o	101.36	323	*e*SKSac	SKSac	12 43 52.4	-1.5
PMRV	Marv??o	101.36	323	*e*LR	LR	13 14 19.6	
	comp=Z,4µm,18.0s						
N23A	Red Feather La	101.42	35	IAMs_20	IAMs_20	13 25 31.9	
	comp=Z,1µm,18.0s						
EMAL	Malaga-Limoner	101.45	319	*i* P	Pdif	12 33 15.7	-0.6
EMAL	Malaga-Limoner	101.45	319	*i* PP	PP	12 37 26.3	+0.9
PV19	Morning Glory	101.55	39	IAMs_20	IAMs_20	13 28 44.0	
	comp=Z,1µm,20.0s						
PV16	Nyswonger Mesa	101.59	39	IAMs_20	IAMs_20	13 20 55.0	
	comp=Z,1µm,22.0s						
PV03	Paradox Valley	101.67	39	IAMs_20	IAMs_20	13 20 44.1	
	comp=Z,2µm,22.0s						
PMTG	Montargil	102.07	323	*e*SKSac	SKSac	12 44 04.6	+7.3
SUSD	Miller	102.14	29	IAMs_20	IAMs_20	13 25 17.1	
	comp=Z,2µm,18.0s						
ISCO	Idaho Springs	102.38	36	IAMs_20	IAMs_20	13 21 14.4	
	comp=Z,2µm,19.0s						
PVLZ	Peæn de	102.43	318	*e*P	Pdif	12 33 31.9	+11
PVLZ	Peæn de	102.43	318	*i* PP	PKiKP	12 37 38.5	-3.7
MVCO	Mesa Verde	102.59	39	IAMs_20	IAMs_20	13 24 23.4	
	comp=Z,1µm,21.0s						
CEU	Ceuta	102.60	319	*e*P	Pdif	12 33 17.8	-3.5
CEU	Ceuta	102.60	319	*i* PP	PKiKP	12 37 41.3	-1.1
SFS	San Fernando	102.71	320	IAMs_20	IAMs_20	13 25 07.0	
	comp=Z,3µm,20.0s						
MESJ	Messejana	102.93	322	*e*PP	PKiKP	12 37 36.3	-6.7
MESJ				AMS	AMS	13 27 30.8	
	comp=Z,5µm,19.2s						
PVAQ	Vaqueiros	102.95	321	IAMs_20	IAMs_20	13 28 08.1	
	comp=Z,2µm,20.0s						
PVAQ	Vaqueiros	102.95	321	*e*SKSac	SKSac	12 44 05.8	+4.3
PVAQ	Vaqueiros	102.95	321	*e*LR	LR	13 15 35.9	
	comp=Z,2µm,18.0s						
S22A	4UR Ranch, Cre	103.17	38	IAMs_20	IAMs_20	13 26 19.6	
	comp=Z,2µm,20.0s						
PBDV	Barranco-do-Ve	103.18	321	*e*SKSac	SKSac	12 44 06.5	+3.8
E38A	The Farm, Brul	103.34	23	IAMs_20	IAMs_20	13 28 23.2	
	comp=Z,2µm,18.0s						
MORF	Marmelete	103.55	322	*e*PP	PKiKP	12 37 40.8	-3.5
MORF				AMS	AMS	13 27 58.0	
	comp=Z,6µm,22.1s						
ECSD	EROS Data Cent	103.72	28	IAMs_20	IAMs_20	13 28 58.9	
	comp=Z,2µm,18.0s						
ECSD	EROS Data Cent	103.72	28	P	Pdif	12 33 25.7	-0.6
	baz=324						
VNDA	Vanda	103.95	172	PP	PKiKP	12 37 45.3	+1.7
	comp=Z,3.0nm,0.9s,baz=354,slow=7.1,SNR=5.4						
VNDA				PKKPbc	PKKPbc	12 49 17.6	-1.2
	comp=Z,1.9nm,1.0s,baz=188,slow=1.2,SNR=5.0						
D41A	Chassel	103.98	21	IAMs_20	IAMs_20	13 24 46.9	
	comp=Z,2µm,20.0s						
IFR	Ifrane	104.03	317	*e*P	Pdif	12 33 14.1	-14
IFR	Ifrane	104.03	317	*i* PP	PKiKP	12 37 47.3	+1.9
SPMN	Marine on St.	104.04	25	IAMs_20	IAMs_20	13 29 04.0	
	comp=Z,2µm,18.0s						
MDT	Midelt	104.17	316	PP	PKiKP	12 37 42.6	-3.0
	comp=Z,3.7nm,0.9s,baz=38,slow=7.3,SNR=3.8						
KSCO	Kaye Shedlock’	104.53	35	IAMs_20	IAMs_20	13 26 36.2	
	comp=Z,2µm,20.0s						
COWI	Conover	104.63	22	IAMs_20	IAMs_20	13 28 13.1	
	comp=Z,2µm,19.0s						
BGNE	Belgrade	104.89	30	IAMs_20	IAMs_20	13 24 10.2	
	comp=Z,2µm,20.0s						
E43A	Lone Tree Farm	105.10	21	IAMs_20	IAMs_20	13 28 59.3	
	comp=Z,2µm,19.0s						
E44A	Grand Marais A	105.22	20	IAMs_20	IAMs_20	13 25 08.4	
	comp=Z,2µm,19.0s						
F42A	Maple Grove Fa	105.27	22	IAMs_20	IAMs_20	13 25 28.9	
	comp=Z,1µm,20.0s						
ANMO	Albuquerque	105.34	40	IAMs_20	IAMs_20	13 31 12.5	
	comp=Z,1µm,18.0s						
AVE	Averroes	105.59	318	*e*P	Pdif	12 33 36.0	+1.2
AVE	Averroes	105.59	318	*i* PP	PKiKP	12 37 52.3	+4.3
Y22D	IRIS PASSCAL I	105.68	41	IAMs_20	IAMs_20	13 29 06.5	
	comp=Z,1µm,19.0s						
N33A	J Bar K, Exete	105.75	30	IAMs_20	IAMs_20	13 30 40.8	
	comp=Z,2µm,18.0s						
E46A	Sault Ste Mari	105.94	19	IAMs_20	IAMs_20	13 22 21.3	
	comp=Z,2µm,21.0s						
I40A	Norwalk	106.00	24	IAMs_20	IAMs_20	13 31 38.7	
	comp=Z,2µm,18.0s						
CBKS	Cedar Bluff	106.15	33	IAMs_20	IAMs_20	13 28 51.9	
	comp=Z,2µm,18.0s						
H43A	Windswept, Lux	106.52	22	IAMs_20	IAMs_20	13 28 35.2	
	comp=Z,2µm,18.0s						
SCIA	State Center	106.65	27	IAMs_20	IAMs_20	13 27 22.3	
	comp=Z,2µm,19.0s						
G45A	Suttons Bay	106.71	20	IAMs_20	IAMs_20	13 28 23.0	
	comp=Z,2µm,20.0s						
R32A	Long Quarter,	106.96	33	IAMs_20	IAMs_20	13 26 49.3	
	comp=Z,2µm,21.0s						
JFWS	Jewell Farm	106.98	24	IAMs_20	IAMs_20	13 26 47.6	
	comp=Z,2µm,21.0s						
GLMI	Grayling	107.23	20	IAMs_20	IAMs_20	13 25 10.7	
	comp=Z,2µm,22.0s						
L40A	Anamosa	107.33	26	IAMs_20	IAMs_20	13 31 56.9	
	comp=Z,2µm,18.0s						
I45A	Fountain	107.42	21	IAMs_20	IAMs_20	13 30 21.9	
	comp=Z,2µm,20.0s						
KSU1	Kansas State U	107.44	31	IAMs_20	IAMs_20	13 24 51.6	
	comp=Z,1µm,22.0s						
H48A	Harrisville	107.74	19	IAMs_20	IAMs_20	13 29 59.9	
	comp=Z,2µm,21.0s						
K43A	Burlington	107.87	23	IAMs_20	IAMs_20	13 28 49.0	
	comp=Z,2µm,19.0s						
J45A	Montague	107.90	22	IAMs_20	IAMs_20	13 24 11.7	
	comp=Z,2µm,21.0s						
L42A	Oliver, Polo	107.98	25	IAMs_20	IAMs_20	13 32 55.1	
	comp=Z,2µm,18.0s						
I47A	Gladwin	107.99	20	IAMs_20	IAMs_20	13 27 05.8	
	comp=Z,2µm,21.0s						
MSTX	Muleshoe	108.17	38	IAMs_20	IAMs_20	13 29 36.0	
	comp=Z,1µm,19.0s						
MNTX	Cornudas Mount	108.26	42	IAMs_20	IAMs_20	13 30 19.9	
	comp=Z,2µm,21.0s						
P38A	Dawn	108.41	28	IAMs_20	IAMs_20	13 30 15.9	
	comp=Z,2µm,18.0s						
L44A	Lake County Fo	108.48	23	IAMs_20	IAMs_20	13 30 45.1	
	comp=Z,2µm,18.0s						
I49A	Point Hope	108.58	19	IAMs_20	IAMs_20	13 30 09.2	
	comp=Z,2µm,18.0s						
J47A	Sunmer	108.59	21	IAMs_20	IAMs_20	13 27 02.9	
	comp=Z,2µm,19.0s						
BATG	Bathurst New B	108.67	6	IAMs_20	IAMs_20	13 25 49.5	
	comp=Z,2µm,20.0s						
J48A	Bridge Port	108.87	20	IAMs_20	IAMs_20	13 28 25.0	
	comp=Z,2µm,19.0s						
E61A	Lac Etchemin	108.96	9	P	PKiKP	12 37 53.4	-0.5
	baz=348						
M44A	Midewin, Midew	109.12	24	IAMs_20	IAMs_20	13 28 21.1	
	comp=Z,1µm,20.0s						
L46A	Eue Claire	109.20	22	IAMs_20	IAMs_20	13 30 16.0	
	comp=Z,2µm,18.0s						
T35A	Sooner Cattle	109.22	32	IAMs_20	IAMs_20	13 28 31.0	
	comp=Z,2µm,20.0s						
HDIL	Hopedale	109.37	25	IAMs_20	IAMs_20	13 28 22.9	
	comp=Z,2µm,20.0s						
SYO	Syowa Base	109.60	202⇑	*e*X	Pdif	12 33 50.2	-1.3
WMOK	Wichita Mounta	109.77	35	IAMs_20	IAMs_20	13 31 43.1	
	comp=Z,1µm,18.0s						
AAM	Ann Arbor	109.81	20	IAMs_20	IAMs_20	13 26 06.0	
	comp=Z,2µm,22.0s						
FRNY	Flat Rock	109.99	12	IAMs_20	IAMs_20	13 33 38.0	
	comp=Z,1µm,18.0s						
LONY	Lake Ozonia	110.00	13	IAMs_20	IAMs_20	13 29 43.2	
	comp=Z,2µm,19.0s						
O44A	Mansfield	110.03	25	IAMs_20	IAMs_20	13 32 47.5	
	comp=Z,2µm,18.0s						
P43A	Skaggs, Pawnee	110.06	26	IAMs_20	IAMs_20	13 28 37.4	
	comp=Z,2µm,20.0s						
S39A	Bolivar	110.09	29	IAMs_20	IAMs_20	13 31 24.7	
	comp=Z,2µm,18.0s						
G62A	West of Eustis	110.14	10	IAMs_20	IAMs_20	13 33 03.6	
	comp=Z,2µm,20.0s						
PKME	Peaks-Kenny Pk	110.27	9	IAMs_20	IAMs_20	13 26 32.1	
	comp=Z,2µm,22.0s						
TUL1	Leonard	110.37	32	IAMs_20	IAMs_20	13 28 45.5	
	comp=Z,1µm,20.0s						
N47A	Urbana	110.41	22	IAMs_20	IAMs_20	13 24 29.1	
	comp=Z,2µm,21.0s						
MEDO	Medina	110.50	16	IAMs_20	IAMs_20	13 32 30.7	
	comp=Z,2µm,19.0s						
U38A	Gravette	110.62	31	IAMs_20	IAMs_20	13 33 21.9	
	comp=Z,2µm,18.0s						
SLM	Saint Louis	110.63	27	IAMs_20	IAMs_20	13 33 48.6	
	comp=Z,2µm,18.0s						
CCM	Cathedral Cave	110.70	28	IAMs_20	IAMs_20	13 29 13.5	
	comp=Z,2µm,20.0s						
M50A	Fremont	110.82	20	IAMs_20	IAMs_20	13 30 05.6	
	comp=Z,2µm,19.0s						
J57A	Williamstown	110.85	14	IAMs_20	IAMs_20	13 29 34.9	
	comp=Z,2µm,20.0s						
Q44A	Meyer Farm, Va	110.90	26	IAMs_20	IAMs_20	13 31 25.5	
	comp=Z,2µm,19.0s						
WVL	Waterville	110.91	9	IAMs_20	IAMs_20	13 27 01.9	
	comp=Z,2µm,21.0s						
ABTX	Abilene, Hawle	110.92	37	IAMs_20	IAMs_20	13 30 43.6	
	comp=Z,2µm,20.0s						
HHAR	Hobbs	110.96	31	IAMs_20	IAMs_20	13 33 28.8	
	comp=Z,2µm,19.0s						
TXAR	Lajitas Array	110.97	42	PKiKP	PKiKP	12 37 58.5	+0.2
	comp=Z,1.4nm,0.8s,baz=236,slow=1.4,SNR=4.6						
P46A	Rosedale	110.98	24	IAMs_20	IAMs_20	13 33 38.3	
	comp=Z,2µm,18.0s						
MGMO	Mountain Grove	111.01	29	IAMs_20	IAMs_20	13 29 48.8	
	comp=Z,2µm,21.0s						
J58A	Remsen	111.06	14	IAMs_20	IAMs_20	13 30 10.3	
	comp=Z,2µm,19.0s						
ERPA	Erie	111.07	18	IAMs_20	IAMs_20	13 27 41.9	
	comp=Z,2µm,22.0s						
TOC2	Torodi Ar. Sit	111.23	296	IAMs_20	IAMs_20	13 30 47.2	
	comp=Z,1µm,21.0s						
TOC1	Torodi Ar. Sit	111.24	296	IAMs_20	IAMs_20	13 30 45.4	
	comp=Z,2µm,20.0s						
TOC3	Torodi Ar. Sit	111.24	296	IAMs_20	IAMs_20	13 30 47.5	
	comp=Z,1µm,21.0s						
TOA2	Torodi Ar. Sit	111.25	296	IAMs_20	IAMs_20	13 30 47.8	
	comp=Z,1µm,21.0s						
TOB3	Torodi Ar. Sit	111.25	296	IAMs_20	IAMs_20	13 30 47.8	
	comp=Z,1µm,21.0s						
TOA0	Torodi Ar. Sit	111.26	296	IAMs_20	IAMs_20	13 30 58.9	
	comp=Z,1µm,21.0s						
TOA1	Torodi Ar. Sit	111.26	296	IAMs_20	IAMs_20	13 30 47.9	
	comp=Z,1µm,21.0s						
TORD	Torodi Ar. Bea	111.26	296	PKiKP	PKiKP	12 37 58.6	-0.4
	comp=Z,2.4nm,0.8s,baz=22,slow=2.8,SNR=8.0						
TORD				PP	PP	12 38 30.6	-7.8
	comp=Z,2.8nm,0.9s,baz=42,slow=5.3,SNR=3.5						
TORD				PKKP	PKKPab	12 49 06.2	+0.7
	comp=Z,1.9nm,0.8s,baz=294,slow=3.5,SNR=7.6						
TORD	Torodi Ar. Bea	111.26	296		PKiKP	12 37 58.1	-1.0
TOA3	Torodi Ar. Sit	111.26	296	IAMs_20	IAMs_20	13 30 59.0	
	comp=Z,1µm,20.0s						
TOC7	Torodi Ar. Sit	111.26	296	IAMs_20	IAMs_20	13 30 59.0	
	comp=Z,1µm,21.0s						
TOB5	Torodi Ar. Sit	111.27	296	IAMs_20	IAMs_20	13 30 48.1	
	comp=Z,1µm,22.0s						
TOC4	Torodi Ar. Sit	111.27	296	IAMs_20	IAMs_20	13 30 48.2	
	comp=Z,1µm,21.0s						
TOB4	Torodi Ar. Sit	111.27	296	IAMs_20	IAMs_20	13 30 58.3	
	comp=Z,1µm,21.0s						
TOC5	Torodi Ar. Sit	111.28	296	IAMs_20	IAMs_20	13 30 58.6	
	comp=Z,2µm,21.0s						
HNH	Hanover	111.32	11	IAMs_20	IAMs_20	13 29 30.0	
	comp=Z,2µm,20.0s						
ACCN	Adirondack Com	111.37	12	IAMs_20	IAMs_20	13 30 15.4	
	comp=Z,2µm,20.0s						
OLIL	Olney	111.41	25	IAMs_20	IAMs_20	13 33 41.9	
	comp=Z,2µm,18.0s						
N51A	Ashland	111.47	20	IAMs_20	IAMs_20	13 32 26.8	
	comp=Z,2µm,20.0s						
O49A	Covington	111.49	22	IAMs_20	IAMs_20	13 26 07.6	
	comp=Z,2µm,22.0s						
HAL	Halifax	111.50	5	IAMs_20	IAMs_20	13 27 31.2	
	comp=Z,2µm,20.0s						
CMLA	Cha da Macela	111.54	333	IAMs_20	IAMs_20	13 26 25.6	
	comp=Z,2µm,22.0s						
K58A	Earlville	111.55	14	IAMs_20	IAMs_20	13 30 26.3	
	comp=Z,2µm,21.0s						
PMOZ	Porto Moniz, M	111.57	324	*e*LR	LR	13 18 45.9	
	comp=Z,1µm,18.0s						
BLO	Bloomington	111.62	24	IAMs_20	IAMs_20	13 32 25.3	
	comp=Z,2µm,20.0s						
T42A	Van Buren	111.63	28	IAMs_20	IAMs_20	13 30 38.1	
	comp=Z,2µm,19.0s						
Z35A	Perchaven, San	111.66	35	IAMs_20	IAMs_20	13 31 05.1	
	comp=Z,2µm,19.0s						
M54A	Oil Creek Stat	111.72	18	IAMs_20	IAMs_20	13 28 02.3	
	comp=Z,2µm,21.0s						
P48A	Milroy	111.76	23	IAMs_20	IAMs_20	13 31 44.0	
	comp=Z,2µm,18.0s						
S44A	Carbondale	111.84	27	IAMs_20	IAMs_20	13 34 04.5	
	comp=Z,2µm,18.0s						
ACSO	Alum Creek Sta	111.90	21	IAMs_20	IAMs_20	13 29 14.3	
	comp=Z,2µm,20.0s						
M55A	Ridgway	112.00	17	IAMs_20	IAMs_20	13 28 58.7	
	comp=Z,2µm,19.0s						
N53A	Lisbon	112.04	19	IAMs_20	IAMs_20	13 27 55.7	
	comp=Z,2µm,21.0s						
FCAR	Ozark Folk Cen	112.12	30	IAMs_20	IAMs_20	13 31 52.4	
	comp=Z,1µm,20.0s						
PBMO	Poplar Bluff	112.12	28	IAMs_20	IAMs_20	13 30 05.2	
	comp=Z,2µm,20.0s						
M56A	Emporium	112.14	17	IAMs_20	IAMs_20	13 29 20.3	
	comp=Z,2µm,19.0s						
USIN	University of	112.24	25	IAMs_20	IAMs_20	13 30 12.9	
	comp=Z,2µm,19.0s						
O52A	Adamsville	112.37	20	IAMs_20	IAMs_20	13 27 41.6	
	comp=Z,2µm,21.0s						
JCT	Junction City	112.44	39	IAMs_20	IAMs_20	13 31 45.1	
	comp=Z,1µm,21.0s						
PARMO	Parma	112.51	28	IAMs_20	IAMs_20	13 34 52.4	
	comp=Z,2µm,18.0s						
WCI	Wyandotte Cave	112.53	24	IAMs_20	IAMs_20	13 33 13.6	
	comp=Z,2µm,19.0s						
MIAR	Mount Ida	112.55	32	IAMs_20	IAMs_20	13 34 51.9	
	comp=Z,2µm,19.0s						
P51A	Williamsport	112.55	21	IAMs_20	IAMs_20	13 29 36.7	

	comp=Z,2μm,20.0s						
WHTX	Lake Whitney,	112.59	36	IAMs_20	IAMs_20	13 30 54.8	
	comp=Z,1μm,20.0s						
W41B	Gary Mavity, V	112.66	30	IAMs_20	IAMs_20	13 32 01.6	
	comp=Z,2μm,20.0s						
T45A	Paducah	112.67	27	IAMs_20	IAMs_20	13 34 44.4	
	comp=Z,2μm,18.0s						
QUA2	Belchertown	112.69	12	IAMs_20	IAMs_20	13 28 16.2	
	comp=Z,2μm,19.0s						
PENMO	Penman	112.74	28	IAMs_20	IAMs_20	13 34 41.6	
	comp=Z,2μm,20.0s						
PVMO	Portageville	112.75	28	IAMs_20	IAMs_20	13 29 42.6	
	comp=Z,2μm,20.0s						
O54A	Avella	112.75	19	IAMs_20	IAMs_20	13 28 05.5	
	comp=Z,2μm,20.0s						
Q51A	Peebles	112.87	21	IAMs_20	IAMs_20	13 30 29.1	
	comp=Z,2μm,21.0s						
Z38A	Mt. Pleasant	112.89	33	IAMs_20	IAMs_20	13 30 52.2	
	comp=Z,2μm,20.0s						
R49A	Shelbyville	112.89	23	IAMs_20	IAMs_20	13 32 39.9	
	comp=Z,2μm,18.0s						
PEBM	Pemiscott Bayo	112.93	28	IAMs_20	IAMs_20	13 30 10.6	
	comp=Z,2μm,22.0s						
X40A	Basin Creek Fa	112.94	31	IAMs_20	IAMs_20	13 31 50.4	
	comp=Z,2μm,19.0s						
KSCT	Kent School, K	113.00	13	IAMs_20	IAMs_20	13 31 32.6	
	comp=Z,2μm,20.0s						
SSPA	Standing Stone	113.02	17	IAMs_20	IAMs_20	13 29 57.4	
	comp=Z,2μm,20.0s						
LPAR	Lepanto	113.17	29	IAMs_20	IAMs_20	13 34 26.1	
	comp=Z,2μm,18.0s						
O56A	Blue Knob Stat	113.18	17	IAMs_20	IAMs_20	13 33 35.8	
	comp=Z,2μm,18.0s						
R50A	Paris	113.20	23	IAMs_20	IAMs_20	13 28 13.0	
	comp=Z,1μm,20.0s						
N59A	State Game Lan	113.27	15	IAMs_20	IAMs_20	13 31 51.1	
	comp=Z,2μm,20.0s						
T47A	Sharon Grove	113.31	25	IAMs_20	IAMs_20	13 30 46.2	
	comp=Z,2μm,20.0s						
HALT	Halls	113.33	28	IAMs_20	IAMs_20	13 35 07.0	
	comp=Z,2μm,19.0s						
435B	Jarrell	113.45	37	IAMs_20	IAMs_20	13 29 51.7	
	comp=Z,2μm,20.0s						
237A	Washetta, Mont	113.46	35	IAMs_20	IAMs_20	13 30 51.6	
	comp=Z,2μm,21.0s						
WLAR	White Oak Lake	113.47	32	IAMs_20	IAMs_20	13 31 53.3	
	comp=Z,2μm,19.0s						
PAL	Palisades	113.60	13	IAMs_20	IAMs_20	13 31 54.7	
	comp=Z,2μm,19.0s						
MET	Memphis--Engin	113.74	29	IAMs_20	IAMs_20	13 32 16.0	
	comp=Z,1μm,20.0s						
WVT	Waverly	113.76	26	IAMs_20	IAMs_20	13 35 23.4	
	comp=Z,2μm,19.0s						
QSPA	South Pole Qui	113.78	180	IAMs_20	IAMs_20	13 28 51.0	
	comp=Z,1μm,20.0s						
T49A	Edmonton	113.81	24	IAMs_20	IAMs_20	13 33 24.3	
	comp=Z,2μm,19.0s						
X43A	Marvell	113.82	30	IAMs_20	IAMs_20	13 31 44.4	
	comp=Z,2μm,20.0s						
R53A	Hurricane	113.96	21	IAMs_20	IAMs_20	13 36 11.8	
	comp=Z,2μm,18.0s						
Z41A	Richland Creek	113.97	32	IAMs_20	IAMs_20	13 32 07.5	
	comp=Z,2μm,20.0s						
S51A	Beattyville	114.03	22	IAMs_20	IAMs_20	13 26 51.0	
	comp=Z,2μm,22.0s						
W45A	Hickory Valley	114.03	28	IAMs_20	IAMs_20	13 35 39.7	
	comp=Z,2μm,19.0s						
U49A	Red Boiling Sp	114.24	25	IAMs_20	IAMs_20	13 34 28.7	
	comp=Z,2μm,19.0s						
NATX	Nacogdoches	114.25	34	IAMs_20	IAMs_20	13 31 47.3	
	comp=Z,2μm,19.0s						
833A	Chaparral WMA,	114.28	40	IAMs_20	IAMs_20	13 35 07.0	
	comp=Z,2μm,18.0s						
SDMD	Soldier's Deli	114.44	16	IAMs_20	IAMs_20	13 31 58.0	
	comp=Z,2μm,20.0s						
OXF	Oxford	114.48	29	IAMs_20	IAMs_20	13 32 30.7	
	comp=Z,1μm,19.0s						
V48A	Smith Brothers	114.51	26	IAMs_20	IAMs_20	13 31 24.0	
	comp=Z,2μm,18.0s						
R55A	Marlinton	114.58	19	IAMs_20	IAMs_20	13 34 45.0	
	comp=Z,2μm,20.0s						
PLAL	Pickwick Lake	114.65	27	IAMs_20	IAMs_20	13 36 07.1	
	comp=Z,2μm,19.0s						
T52A	Hallie	114.72	22	IAMs_20	IAMs_20	13 27 56.2	
	comp=Z,2μm,22.0s						
735A	Kenedy	114.80	39	IAMs_20	IAMs_20	13 30 45.6	
	comp=Z,1μm,20.0s						
HKT	Hockley	115.05	36	IAMs_20	IAMs_20	13 34 37.7	
	comp=Z,1μm,19.0s						
Q60A	Greensboro	115.07	16	IAMs_20	IAMs_20	13 33 06.8	
	comp=Z,2μm,19.0s						
SWET	Sewanee	115.32	25	IAMs_20	IAMs_20	13 32 05.4	
	comp=Z,2μm,18.0s						
X48A	Hartselle	115.53	27	IAMs_20	IAMs_20	13 37 38.4	
	comp=Z,2μm,19.0s						
V52A	Sevierville	115.64	23	IAMs_20	IAMs_20	13 34 52.7	
	comp=Z,2μm,20.0s						
U54A	Nelsons Funny	115.65	21	IAMs_20	IAMs_20	13 33 20.6	
	comp=Z,2μm,20.0s						
CPCT	Cooper Cave	115.65	24	IAMs_20	IAMs_20	13 29 26.1	
	comp=Z,2μm,21.0s						
342A	Flagon Creek P	115.73	33	IAMs_20	IAMs_20	13 34 07.4	
	comp=Z,2μm,19.0s						
FPAL	Fort Paine	116.03	25	IAMs_20	IAMs_20	13 36 21.4	
	comp=Z,2μm,18.0s						
X51A	Calhoun	116.31	25	IAMs_20	IAMs_20	13 34 26.5	
	comp=Z,2μm,21.0s						
Y49A	Blount Mountai	116.31	27	IAMs_20	IAMs_20	13 32 11.8	
	comp=Z,2μm,21.0s						
BG3	Lake Jocassee	116.64	23	IAMs_20	IAMs_20	13 35 52.1	
	comp=Z,1μm,20.0s						
Z50A	Ashland	117.03	26	IAMs_20	IAMs_20	13 32 34.0	
	comp=Z,2μm,21.0s						
Y52A	Lilburn	117.23	25	IAMs_20	IAMs_20	13 34 55.0	
	comp=Z,2μm,20.0s						
HODGE	Hodges	117.57	23	IAMs_20	IAMs_20	13 32 15.6	
	comp=Z,2μm,19.0s						
GOGA	Godfrey	117.86	24	IAMs_20	IAMs_20	13 30 42.5	
	comp=Z,2μm,22.0s						
250A	Grady	118.00	27	IAMs_20	IAMs_20	13 35 48.7	
	comp=Z,1μm,20.0s						
Z56A	Williston	118.70	23	IAMs_20	IAMs_20	13 32 15.6	
	comp=Z,2μm,21.0s						
154A	Montrose	118.71	24	IAMs_20	IAMs_20	13 37 32.0	
	comp=Z,2μm,20.0s						
352A	Blakely	118.99	27	IAMs_20	IAMs_20	13 33 43.8	
	comp=Z,2μm,20.0s						
NVL	N'lazarevskaya	119.18	201	*e*PKIKP	PKiKP	12 38 24.8	+12
NVL				*e*SS	SS	12 55 58.1	+5.5
DBIC	Dimbokro	120.16	294	PKP	PKPdf	12 38 15.9	-0.2
	comp=Z,6.8nm,0.8s,baz=90,slow=2.8,SNR=8.6						
KIC	Kosan Boka	120.23	293	*e*PKP1	PKPdf	12 38 15.5	-0.8
	comp=Z,62nm,1.4s						
TIC	Toumodi	120.31	294	*e*PKP1	PKPdf	12 38 15.8	-0.7
LIC	Lamto	120.54	293	*e*PKP1	PKPdf	12 38 16.3	-0.6
	comp=Z,53nm,1.1s						
656A	Willston	121.81	26	IAMs_20	IAMs_20	13 32 21.5	
	comp=Z,2μm,22.0s						
SNAA	Sanae	123.38	198	PKPdf	PKPdf	12 38 20.7	+0.1
VNA2	Neumayer--Watz	125.02	198	PKPdf	PKiKP	12 38 24.5	+0.3
CMIG	Matias Romero	125.36	45	PKP	PKPdf	12 38 26.0	0.0
	comp=Z,7.1nm,1.0s,baz=314,slow=2.1						
VNA1	Neumayer--Stat	125.41	198	PKPdf	PKPdf	12 38 23.4	-1.0
VNA3	Neumayer Olymp	125.48	197	PKPdf	PKPdf	12 38 24.8	+0.1
CCIG	Comitan	127.71	43	IAMs_20	IAMs_20	13 44 44.5	
	comp=Z,947nm,19.0s						
APG	El Apazote	129.72	43	PKP	PKPdf	12 38 34.3	-0.4
	comp=Z,3.7nm,0.7s,baz=300,slow=1.5,SNR=5.2						
GTBY	Guantanamo Bay	133.16	23	IAMs_20	IAMs_20	13 43 32.7	
	comp=Z,1μm,20.0s						
MTDJ	Mount Denham	133.79	27	IAMs_20	IAMs_20	13 45 35.7	
	comp=Z,2μm,20.0s						
ACON	Acoyapa	135.29	40		PKPdf	12 38 44.6	-0.3
JTS	Las Juntas de	136.75	41	PKP	PKPdf	12 38 47.3	-0.3
	comp=Z,6.0nm,0.8s,baz=308,slow=9.9,SNR=4.0						
JTS	Las Juntas de	136.75	41	IAMs_20	IAMs_20	13 51 45.5	
	comp=Z,891nm,20.0s						
SJG	San Juan	137.35	12	IAMs_20	IAMs_20	13 47 26.4	
	comp=Z,887nm,20.0s						
HDC	Heredia	137.47	40	IAMs_20	IAMs_20	13 51 37.8	
	comp=Z,846nm,20.0s						
SMRT	St. Maarten	137.89	8	IAMs_20	IAMs_20	13 43 51.3	
	comp=Z,1μm,20.0s						
SABA	Saba	138.29	8	IAMs_20	IAMs_20	13 48 13.0	
	comp=Z,928nm,20.0s						
SEUS	St. Eustatius	138.45	8	IAMs_20	IAMs_20	13 44 57.1	
	comp=Z,1μm,20.0s						
SKI	Saint Kitts	138.64	7	IAMs_20	IAMs_20	13 43 35.0	
	comp=Z,1μm,20.0s						
PMSA	Palmer Station	139.01	176	*e*P	PKiKP	12 38 52.2	-0.2
BCIP	Isla Barro Col	140.57	36	IAMs_20	IAMs_20	13 53 08.7	
	comp=Z,862nm,22.0s						
FDF	Fort de France	141.37	5	IAMs_20	IAMs_20	13 45 44.3	
	comp=Z,985nm,21.0s						
CODC	Agustn Codazz	142.93	26	*e*P	PKPdf	12 38 51.7	-7.2
SMLC	San Martn de	143.69	28	*e*P	PKPab	12 38 54.4	-2.5
UREC	San Jos de Ur	143.96	31	*e*P	PKPab	12 38 53.9	-4.0
DBBC	Dabeiba	144.27	33	*e*P	PKPab	12 38 58.8	-0.4
SOLC	Bahia Solano	144.33	35	*e*P	PKPab	12 38 58.8	-0.5
ZARC	Zaragoza, Cauc	144.50	30	*e*P	PKPab	12 38 58.3	-1.6
OCAC	Ocana	144.51	27	*e*P	PKPab	12 38 59.8	-0.3
SDV	Santo Domingo	144.96	23	PKP	PKPab	12 39 01.5	-0.3
	comp=Z,53nm,0.7s,baz=325,slow=1.6,SNR=60						
SDV	Santo Domingo	144.96	23		PKPab	12 39 01.4	-0.4
SDV	Santo Domingo	144.96	23	IAMs_20	IAMs_20	13 46 49.4	
	comp=Z,1μm,21.0s						
SDV	Santo Domingo	144.96	23	*e*P	PKPab	12 39 00.3	-1.5
HELC	Santa Helena	145.32	32	*e*P	PKPbc	12 39 01.5	-1.7
CBOC	Ciudad Bolivar	145.36	33	*e*P	PKPbc	12 39 02.3	-0.9
PCRV	Puerto La Cruz	145.37	12	PKPbc	PKPbc	12 39 01.4	-1.6
	comp=Z,19nm,0.4s,baz=15,slow=4.6,SNR=9.6						
PLCV	Puerto La Cruz	145.39	12		PKPbc	12 39 01.4	-1.6
PIZC	Pizarro, Choco	145.41	36	*e*P	PKPbc	12 39 02.0	-1.1
PTBC	PUERTO BERRIO,	145.52	30	*e*P	PKPdf	12 39 02.0	-1.4
PAMC	Pamplona, Colo	145.58	27	*e*P	PKPdf	12 39 04.0	-0.1
PLMC	San Jos del P	146.04	35	*e*P	PKPdf	12 39 03.7	-0.7
BARC	Barichara	146.05	28	*e*P	PKPbc	12 39 05.2	-0.2
NORC	Norcasia	146.18	32	*e*P	PKPdf	12 39 04.7	0.0
MALC	Bahia Malaga	146.22	37	*e*P	PKPab	12 39 06.4	+0.1
GUY2C	Guyana, Caldas	146.23	33	*e*P	PKPdf	12 39 05.5	+0.3
SPBC	San Pablo de B	146.48	31	*e*P	PKPdf	12 39 04.1	-1.1
RREF	El Recreo	146.52	33	*e*P	PKPdf	12 39 05.8	-0.1
GR1C	Gorgona, Isla	146.57	39	*e*P	PKPbc	12 39 06.5	-0.2
RUSC	La Rusia	146.72	29	*e*P	PKPdf	12 39 05.8	-0.2
TAMC	Tame, Arauca	146.77	26	*e*P	PKPdf	12 39 05.4	-0.2
YOTC	Yotoco, Valle	146.78	36	*e*P	PKPdf	12 39 05.4	-0.3
TOLC	Tolima	146.80	33	*e*P	PKPbc	12 39 07.2	-0.6
ANIL	Santa Ana	146.84	34	*e*P	PKPbc	12 39 07.3	-0.6
ROSC	El Rosal	147.07	32	PKPbc	PKPdf	12 39 06.6	+0.1
	comp=Z,52nm,0.7s,baz=85,slow=4.4,SNR=19						
ROSC	El Rosal	147.07	32	*e*P	PKPdf	12 39 05.4	-1.2
ROSC	El Rosal	147.07	32		PKPdf	12 39 06.8	+0.3
ROSC				IAMs_20	IAMs_20	13 51 40.5	
	comp=Z,1μm,21.0s						
ORTC	Ortega, Tolima	147.42	34	*e*P	PKPdf	12 39 06.7	0.0
CHIC	Chingaza	147.54	31	*e*P	PKPdf	12 39 07.9	+0.6
VILC	Villavicencio,	148.01	31	*e*P	PKPbc	12 39 10.9	+0.1
PCON	Cinco Dias	148.13	37	*e*P	PKPbc	12 39 11.5	-0.2
SOTA	Rioblanco	148.17	38	*e*P	PKPdf	12 39 08.5	0.0
CRUC	La Cruz	148.44	39	*e*P	PKPbc	12 39 12.2	0.0
GCUF	Volcan Galeras	148.49	40	*e*P	PKiKP	12 39 13.8	-0.3
GARC	Garzon, Huila	148.74	36	*e*P	PKPbc	12 39 12.7	-0.2
FLOC	Florencia	149.16	37	*e*P	PKPbc	12 39 13.5	-0.2
MACC	Macarena, Meta	149.64	33	*e*P	PKPbc	12 39 13.9	-1.0
GO09	Cerro Castillo	150.50	161		PKPbc	12 39 15.3	-0.5
MDP	Montagnes des	150.67	350	PKPbc	PKiKP	12 39 18.2	+0.2
	comp=Z,84nm,0.9s,baz=45,slow=2.1,SNR=10						
NBPV	Pedro Velho	152.30	305	*e*P	PKPdf	12 39 14.2	-0.2
RCBR	Riachuelo	152.35	307	PKPbc	PKiKP	12 39 21.5	-0.1
	comp=Z,50nm,0.9s,baz=16,slow=2.9,SNR=15						
RCBR	Riachuelo	152.35	307	PKIKP	PKiKP	12 39 21.6	+0.1
RCBR	Riachuelo	152.35	307	IAMs_20	IAMs_20	13 50 56.8	
	comp=Z,1μm,20.0s						
RCBR	Riachuelo	152.35	307	*e*P	PKPdf	12 39 14.4	0.0
NBCL	Cascavel-CE	152.88	313	*e*P	PKPdf	12 39 14.8	-0.4
NBPA	Parau_RN	153.17	309	*e*P	PKPdf	12 39 15.5	-0.1
NBMO	Morrinhos-CE	153.31	318	*e*P	PKPdf	12 39 15.5	-0.4
NBRF	Rio Formoso -	153.61	301	*e*P	PKPdf	12 39 16.2	0.0
ATAH	Atahualpa	154.01	53	PKP	PKPdf	12 39 18.9	+1.5
	comp=Z,6.7nm,0.8s,baz=280,slow=1.9,SNR=10						
ATAH				PKPbc	sPKPdf	12 39 27.0	+0.2
	comp=Z,22nm,1.0s,baz=16,slow=1.7,SNR=8.3						
NBPB	Pedra_Branca-C	154.72	314	*e*P	PKPdf	12 39 17.9	+0.1
NBPS	Pedro II - PI	155.01	319	*e*P	PKPdf	12 39 18.3	0.0
NBAN	Anadia - AL	155.10	301	*e*P	PKPdf	12 39 18.4	0.0
NBMA	Muriti-CE	155.46	309	*e*P	PKPdf	12 39 18.5	-0.3
NBTA	Tacaratu-PE	156.13	305	*e*P	PKPdf	12 39 19.8	+0.1
PTGA	Pitinga	156.78	6	PKP	PKPdf	12 39 21.3	+0.7
	comp=Z,12nm,1.0s,baz=340,slow=3.0,SNR=8.4						
PTGA				PKPab	PKPab	12 39 48.6	-1.2
	comp=Z,15nm,0.8s,baz=17,slow=5.2,SNR=8.8						
PTGA	Pitinga	156.78	6		PKPdf	12 39 21.1	+0.5
PTGA					PKPab	12 39 48.5	-1.4
PTGA				IAMs_20	IAMs_20	13 54 06.7	
	comp=Z,1μm,20.0s						
PTGA	Pitinga	156.78	6	*e*P	PKPdf	12 39 21.1	+0.5
NBLA	Lagarto - SE	157.09	301	*e*P	PKPdf	12 39 20.9	0.0
NNA	Nana	158.25	60	PKP	PKPdf	12 39 21.4	-0.9
	comp=Z,3.5nm,0.4s,baz=266,slow=13,SNR=1.7						
NNA				PKPab	PKPab	12 39 55.0	-1.4
	comp=Z,4.7nm,0.4s,baz=312,slow=12,SNR=1.9						
NNA	Nana	158.25	60	PKP2	PKPab	12 39 55.9	-0.5
NNA						13 39 21.7	
NNA	Nana	158.25	60		PKPdf	12 39 21.7	-0.7
NNA					PKPab	12 39 55.9	-0.5
NBPN	Ponto Novo - B	158.85	305	*e*P	PKPdf	12 39 23.1	0.0
PLCA	Paso Flores	160.11	150	PKPab	PKPab	12 40 05.4	+1.6
	comp=Z,7.1nm,1.1s,baz=239,slow=6.0,SNR=4.7						
PLCA	Paso Flores	160.11	150	PKP2	PKPab	12 40 06.5	+2.7
PLCA						13 39 24.1	
PLCA	Paso Flores	160.11	150	PKPdf	PKPdf	12 39 24.1	+0.2
PLCA					PKPab	12 40 06.5	+2.7
NBIT	Itapeh - BA	160.60	294	*e*P	PKPdf	12 39 25.1	+0.1
SMTB	Santa Maria do	162.13	326	*e*P	PKPdf	12 39 27.0	+0.3
BSFB	Barra de Sao F	163.51	285	*e*P	PKPdf	12 39 28.4	+0.5
SJMB	Sao Joao De Ma	163.76	286	*e*P	PKPdf	12 39 28.4	+0.3
SAML	Samuel	164.15	20	PKP2	PKPab	12 40 19.9	-2.0
SAML						13 39 28.8	
SAML	Samuel	164.15	20		PKPdf	12 39 28.8	+0.2
SAML				PKPab	PKPab	12 40 19.9	-2.0
SAML	Samuel	164.15	20	*e*P	PKPdf	12 39 29.0	+0.3
JANB	Januaria	164.59	303	*e*P	PKPdf	12 39 29.2	+0.2
TRQA	Tornquist	165.50	166	*e*P	PKPdf	12 39 30.5	+1.4
GO04	Tololo Observa	166.79	121		PKPdf	12 39 31.2	+0.5
CLDB	Colider	166.84	352	*e*P	PKPdf	12 39 31.1	+0.3
LPAZ	La Paz	167.56	54	PKP	PKPdf	12 39 33.1	+1.1
	comp=Z,21nm,1.0s,baz=23,slow=3.0,SNR=39						
LPAZ				PKPab	PKPab	12 40 37.0	-0.8
	comp=Z,5.9nm,0.9s,baz=344,slow=2.3,SNR=3.9						
LPAZ				PP	PP	12 44 26.8	+0.8
	comp=Z,2.3nm,1.0s,baz=263,slow=1.4,SNR=2.8						
LPAZ	La Paz	167.56	54	PKIKP	PKPdf	12 39 33.0	+0.9
LPAZ						12 40 36.4	
LPAZ	La Paz	167.56	54	PKPdf	PKPdf	12 39 33.0	+0.9
LPAZ					PKPab	12 40 36.4	-1.5
LPAZ	La Paz	167.56	54	*e*P	PKPdf	12 39 33.6	+1.6
BDFB	Brasilia	167.69	311	PKP	PKPdf	12 39 31.1	-0.4
	comp=Z,8.9nm,1.0s,baz=43,slow=3.6,SNR=6.6						
BDFB				PKPab	PKPab	12 40 37.5	-0.3
	comp=Z,9.4nm,0.9s,baz=43,slow=7.6,SNR=4.9						
BDFB				PP	PP	12 44 26.3	+0.4
	comp=Z,2.7nm,0.5s,baz=39,slow=12,SNR=2.0						
BDFB	Brasilia	167.69	311	PKP2	PKPab	12 40 37.1	-0.7
BDFB						13 39 31.7	
BDFB	Brasilia	167.69	311		PKPdf	12 39 31.7	+0.1
BDFB					PKPab	12 40 37.1	-0.7
PB11	IPOC Station P	168.11	72		PKPdf	12 39 33.0	+1.2
PB11				PKPab	PKPab	12 40 40.4	+0.7
GO01	Chusmiza	168.47	70		PKPdf	12 39 33.2	+0.7
PB01	IPOC Station P	168.70	77		PKPdf	12 39 32.9	+0.8
GO02	Mina Guanaco	169.09	99		PKPdf	12 39 33.2	+0.7
IPMB	Ipameri, GO	169.33	302	*e*P	PKPdf	12 39 33.0	+0.5
OGAUY	Aigu	169.37	193	*e*P	PKPdf	12 39 36.1	+4.1
LVC	Limon Verde	169.59	85	PKP	PKPdf	12 39 32.9	0.0
	comp=Z,4.9nm,0.9s,baz=215,slow=2.4,SNR=9.3						
LVC	Limon Verde	169.59	85	PKIKP	PKPdf	12 39 29.4	-3.6
LVC	Limon Verde	169.59	85		PKPdf	12 39 29.4	-3.6
LVC	Limon Verde	169.59	85	*e*P	PKPdf	12 39 35.5	+2.6
ARAG	Araguaiana, MT	170.09	325	*e*P	PKPdf	12 39 33.6	+0.7
VAO	Valinhos	170.12	274	*e*P	PKPdf	12 39 33.9	+1.1
RCLB	Rio Claro- Sao	170.54	277	*e*P	PKPdf	12 39 33.9	+0.8
SPB	Sao Paulo	170.61	270	*e*P	PKPdf	12 39 33.9	+0.9
BB19B	Bebedouro	171.06	287	*e*P	PKPdf	12 39 34.2	+0.8
SIV	San Ignacio	171.43	22	PKP	PKPdf	12 39 34.5	+0.9
	comp=Z,12nm,1.0s,baz=151,slow=2.5,SNR=33						
SIV				PKPab	PKPab	12 40 52.6	-1.5
	comp=Z,4.2nm,0.8s,baz=353,slow=4.6,SNR=3.8						
SIV				PP	PP	12 44 41.6	-2.0
	comp=Z,3.5nm,1.0s,baz=336,slow=6.8,SNR=5.1						
SALV	Santo Antonio	171.74	347	*e*P	PKPdf	12 39 34.3	+0.6
ITRB	Iturama	171.98	301	*e*P	PKPdf	12 39 34.6	+0.8
CPUP	Villa Florida	177.65	188	PKP	PKPdf	12 39 34.6	-0.7
	comp=Z,2.3nm,0.8s,baz=77,slow=7.3,SNR=3.6						
CPUP				PKPab	sPKPab	12 41 34.1	+3.4
	comp=Z,5.7nm,1.0s,baz=262,slow=2.6,SNR=3.3						
CPUP	Villa Florida	177.65	188	PKIKP	PKPdf	12 39 35.5	+0.2
CPUP	Villa Florida	177.65	188		PKPdf	12 39 35.5	+0.2

NDI 19 12:24:31.1±0.9**, 30°.63N×77°.86E, h5km, ML3.1, 1C,**
Northern India

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDI	Dehra Dun	0.35	152	*e*x	Pn	12 24 42.0	-1.0
DDI				*e*x	Sb	12 24 48.9	+3.1
DDI				IAML		12 24 50.1	
	comp=E,1μm,0.2s						
DDI				IAML		12 24 50.3	
	comp=N,1μm,0.1s						
DDI	Dehra Dun	0.35	152	⇑*i*x	Pn	12 24 42.1	-0.8
DDI				IAmb	IAmb	12 24 48.9	
	comp=Z,429nm,0.5s						
SMLA	Simla	0.78	310	*e*P	Pg	12 24 46.2	+0.2
SMLA				*e*S	Sg	12 24 56.2	+0.1
SMLA				IAML		12 24 56.9	
	comp=E,966nm,0.2s						
SMLA				IAML		12 24 57.1	
	comp=N,611nm,0.2s						
JOSI	Joshimath	1.46	93	*e*P	Pb	12 24 59.0	+0.1
JOSI				*e*P	Pg	12 24 59.5	+0.4
JOSI				*e*S	Sg	12 25 18.7	+0.6
JOSI				*e*S	Sn	12 25 18.8	+0.7
JOSI				IAML		12 25 19.4	
JOSI				IAML		12 25 20.6	
NDI	New Delhi	2.02	196	*e*P	Pn	12 25 06.0	+0.1
NDI				*e*S	Sn	12 25 32.0	+0.5
DHRM	DHARAMSHALA	2.09	321	*e*P	Pn	12 25 08.0	+1.0
DHRM				*e*S	Sn	12 25 34.2	+0.6
DHRM				IAML		12 25 41.0	
	comp=N,113nm,0.5s						
DHRM				IAML		12 25 41.7	
	comp=E,136nm,0.2s						
THN	Thein Dam	2.56	315	*e*x	Sb	12 25 50.0	+0.6
KUDL	Kundal	2.75	206	*e*P	Pn	12 25 03.4	-13
KUDL				*e*S	Sn	12 25 30.1	-19

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*JMA **19** 12:27:48.8±0.2, 23°.96N×122°.30E, h20km±4km, M3.1*
*TAP **19** 12:27:48.1, 23°.93N×122°.27E, h18km, ML3.2, D*
ISC 19 12:27:48.0±1.1**, 23°.94N**±0°.02×**122°.30E**±0°.02**, h16**km±8km**,**
n99, σ0s.47/143**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.62	346	*e*P	Pb	12 28 00.5	-0.1
	baz=348						
EOS1				*e*S	Sb	12 28 09.1	0.0
	baz=348						
ENLB	Shoufeng	0.64	267	*i* P	Pg	12 28 00.6	+0.1
	baz=267						
ENLB				*e*S	Sb	12 28 10.0	+0.6
	baz=267						
TWD	Chiawan	0.65	282	*e*P	Pb	12 28 01.2	+0.1
	baz=283						
TWD				*i* S	Sb	12 28 10.3	+0.3
	baz=283						
NACB	Ninganchiao	0.68	290	*i* P	Pb	12 28 01.5	0.0
	baz=291						
NACB				*e*S	Sb	12 28 11.6	+0.8
	baz=291						
ENA	Nanau	0.70	314	P	Pb	12 28 02.2	+0.4
	baz=316						
TWC	Suao	0.78	328	P	Pb	12 28 02.5	-0.7
	baz=331						
TWC				*e*S	Sg	12 28 11.8	-1.7
	baz=331						
JYNG	Yonagunijimaku	0.78	49	P	Pb	12 28 03.2	0.0
JYNG				*e*S	Sb	12 28 12.8	-0.8
ETLH	Xiulin Townshi	0.79	290	*i* P	Pb	12 28 03.4	-0.1
	baz=290						
ETLH				*i* S	Sb	12 28 14.6	+0.7
	baz=290						
ESL	Shilin	0.80	261	P	Pb	12 28 03.2	-0.4
	baz=261						
ESL				*i* S	Sg	12 28 14.6	+0.4
	baz=261						
YOJ	Yonaguni jima	0.83	52	P	Pg	12 28 04.8	+0.6
	baz=51						
YOJ				*e*S	Sn	12 28 17.5	+0.4
	baz=51						
YOJ	Yonaguni jima	0.83	52	P	Pg	12 28 04.3	+0.1
YOJ				S	Sb	12 28 14.5	-0.6
EGFH	Guangfu	0.84	251	*e*P	Pg	12 28 04.6	+0.2
	baz=251						
EGFH				*i* S	Sg	12 28 15.9	+0.4
	baz=251						
HGSD	Ruisui	0.92	241	P	Pb	12 28 05.3	-0.2
	baz=240						
HGSD				*e*S	Sb	12 28 17.4	-0.1
	baz=240						
ENTT	Nioudou	0.96	316	P	Pg	12 28 06.7	0.0
	baz=318						
ENTT				*e*S	Sn	12 28 20.1	-0.2
	baz=318						
NNSB	Datong	0.96	300	*i* P	Pb	12 28 06.4	0.0
	baz=301						
NNSB				*i* S	Sn	12 28 19.8	-0.7
	baz=301						
NNSH	Datong	0.96	300	*e*P	Pg	12 28 06.8	+0.1
	baz=301						
NNSH				*e*S	Sg	12 28 19.7	+0.3
	baz=301						
WHF	Hehuan Shan	0.96	282	*i* P	Pb	12 28 06.3	-0.3
	baz=283						
WHF				*e*S	Sb	12 28 19.0	-0.3
	baz=283						
NDT	Datong Townshi	0.97	313	*i* P	Pg	12 28 06.6	-0.2
	baz=314						
NDT				*e*S	Sb	12 28 19.0	-0.1
	baz=314						
NNS	Nan Shan	0.98	301	*e*P	Pg	12 28 06.8	-0.1
	baz=301						
NNS				*i* S	Sg	12 28 20.0	+0.2
	baz=301						
EHY	Hungye	0.99	244	*i* P	Pb	12 28 06.6	-0.2
	baz=243						
EHY				*e*S	Sb	12 28 19.9	+0.2
	baz=243						
NTC	Toucheng	1.00	335	*e*P	Pn	12 28 07.6	+0.2
	baz=336						
SLBB	Yuanshan	1.01	323	*e*P	Pb	12 28 06.5	-0.6
	baz=324						
OWD	Renai	1.02	271	P	Pb	12 28 07.2	-0.3
	baz=271						
OWD				*e*S	Sb	12 28 20.3	-0.5
	baz=271						
CHGB	Renai	1.03	277	*e*P	Pb	12 28 07.5	-0.1
	baz=277						
CHGB				*i* S	Sg	12 28 21.6	0.0
	baz=277						
TWT	Tachien	1.07	287	*e*P	Pn	12 28 08.6	0.0
	baz=287						
VWDT	VWDT	1.07	260	*e*P	Pb	12 28 08.2	-0.1
	baz=260						
VWDT				*e*S	Sb	12 28 22.3	+0.3
	baz=260						
TDCB	Techi	1.08	287	*e*P	Pn	12 28 08.6	-0.1
	baz=287						
TDCB				*e*S	Sb	12 28 22.7	+0.2
	baz=287						
TWF1	Yuli	1.09	237	*i* P	Pb	12 28 08.1	-0.4
	baz=236						
TWF1				*i* S	Sb	12 28 22.6	+0.2
	baz=236						
NWLT	Wulai	1.10	319	P	Pn	12 28 08.9	+0.1
	baz=320						
NWLT				*e*S	Sg	12 28 23.6	-0.2
	baz=320						
YHNB	Yeheng	1.11	311	*i* P	Pb	12 28 08.8	-0.1
	baz=312						
YHNB				*e*S	Sb	12 28 23.2	0.0
	baz=312						
TIPB	Shuangxi	1.11	337	*i* P	Pn	12 28 09.1	+0.1
	baz=338						
NSK	Sanguang	1.12	311	P	Pb	12 28 09.0	-0.1
	baz=312						

NSK				*e*S	Sn	12 28 23.9	-0.5
	baz=312						
FULB	**Fuli**	1.18	231	*e*P	Pb	12 28 10.4	+0.3
	baz=230						
CHKT	**Chengkung**	1.20	226	*e*P	Pn	12 28 10.1	-0.1
	baz=224						
NWF	**Wu-fen Shan**	1.22	337	*i* P	Pn	12 28 10.5	0.0
	baz=338						
NWF				*e*S	Sn	12 28 26.7	-0.1
	baz=338						
WFSB	**Wu-fen Shan**	1.22	337	P	Pn	12 28 10.4	0.0
	baz=338						
WFSB				*e*S	Sn	12 28 26.7	+0.1
	baz=338						
TWA	**Mucha**	1.22	328	*e*P	Pg	12 28 11.2	-0.3
	baz=329						
TWA				*e*S	Sg	12 28 27.7	+0.2
	baz=329						
NHDH	**Xindian Distri**	1.23	325	*i* S	Sn	12 28 27.2	+0.2
	baz=326						
SSLB	**Suanglung**	1.24	263	*e*P	Pn	12 28 10.5	-0.2
	baz=263						
SSLB				*i* S	Sb	12 28 26.6	-0.3
	baz=263						
DPDB	**Guoxing**	1.26	274	*i* P	Pn	12 28 10.7	-0.3
	baz=274						
TATO	**Taipei**	1.26	325	*e*P	Pb	12 28 11.7	+0.2
	baz=325						
TATO				*e*S	Sb	12 28 27.4	-0.2
	baz=325						
WHP	**Taichung City**	1.28	285	*e*P	Pg	12 28 12.5	-0.2
	baz=285						
SMLT	**Sun Moon Lake**	1.28	268	P	Pn	12 28 11.2	-0.2
	baz=267						
YUS	**Yu-Shan**	1.31	250	*e*P	Pn	12 28 12.1	-0.1
	baz=249						
YUS				*i* S	Sb	12 28 28.6	-0.8
	baz=249						
WLTB	**Daxi**	1.31	314	*e*P	Pb	12 28 12.6	+0.3
	baz=314						
TYC	**Yuchr**	1.32	269	*e*P	Pn	12 28 11.9	+0.1
	baz=268						
WHYT	**Xinyi Township**	1.34	260	*e*P	Pn	12 28 12.2	0.0
	baz=259						
WHYT				*e*S	Sn	12 28 29.1	-0.7
	baz=259						
LIOB	**Emei**	1.36	301	*e*P	Pb	12 28 13.6	+0.5
	baz=302						
NSTT	**Nanjuang**	1.37	300	*e*P	Pb	12 28 13.6	+0.4
	baz=301						
NSTT				*e*S	Sb	12 28 31.1	+0.6
	baz=301						
IRIF	**Iriomote-Funau**	1.37	73	P	Pb	12 28 13.7	+0.5
YM01	**YM01**	1.37	331	*e*P	Pb	12 28 12.9	-0.4
	baz=332						
YM01				*e*S	Sb	12 28 30.9	+0.3
	baz=332						
YM10	**YM10**	1.38	331	*i* P	Pn	12 28 12.8	0.0
	baz=332						
YM10				*e*S	Sb	12 28 30.9	0.0
	baz=332						
YM11	**YM11**	1.38	332	*e*P	Pn	12 28 13.1	+0.3
	baz=332						
YM11				*e*S	Sb	12 28 31.1	0.0
	baz=332						
YM05	**YM05**	1.39	331	*e*P	Pn	12 28 12.9	+0.1
	baz=332						
YM04	**YM04**	1.39	330	*e*P	Pn	12 28 12.9	+0.1
	baz=331						
ELDTW	**Lidau**	1.39	238	P	Pn	12 28 12.1	-0.9
	baz=237						
YM08	**YM08**	1.40	333	*e*P	Pn	12 28 13.1	+0.2
	baz=333						
TWS1	**Kuangyinshan**	1.40	325	*e*S	Sb	12 28 31.7	+0.2
	baz=326						
YM03	**YM03**	1.41	331	*e*P	Pb	12 28 13.7	-0.4
	baz=331						
YM03				*e*S	Sb	12 28 31.7	-0.1
	baz=331						
ANP	**Anpu**	1.43	330	*e*P	Pn	12 28 13.7	+0.4
	baz=331						
ALS	**Alishan**	1.43	253	*e*P	Pn	12 28 13.5	-0.1
	baz=252						
TWH	**Lutao**	1.44	212	*e*P	Pn	12 28 12.7	-0.8
	baz=209						
WJS	**Zhushan**	1.44	266	*e*P	Pb	12 28 14.7	+0.2
	baz=265						
TWQ1	**Liyutan**	1.45	286	*e*P	Pb	12 28 14.7	0.0
	baz=286						
TWY	**Chenhua**	1.47	335	*e*P	Pb	12 28 14.6	-0.4
	baz=335						
TWY				*e*S	Sb	12 28 33.1	-0.4
	baz=335						
CHN5	**Tsauling**	1.52	257	*e*P	Pb	12 28 15.6	-0.4
	baz=257						
TWGBT	**Beinan**	1.58	225	*e*P	Pn	12 28 15.4	-0.1
	baz=224						
TWGBT				*e*S	Sn	12 28 34.8	-0.8
	baz=224						
TWG	**Pinlang**	1.58	225	*e*P	Pn	12 28 15.5	0.0
	baz=224						
JKRS	**Kuro-shima**	1.59	79	P	Pn	12 28 16.4	+0.8
WDLH	**Douliu**	1.63	261	*e*P	Pb	12 28 17.6	-0.1
	baz=261						
TPUB	**Ta-pu**	1.66	248	*e*P	Pb	12 28 17.6	-0.6
	baz=247						
TPUB				*e*S	Sn	12 28 37.9	+0.4
	baz=247						
CHN4	**Tsaushan**	1.67	250	*e*P	Pb	12 28 18.7	+0.3
	baz=249						
PCYT	**Pengchaiyu**	1.69	353	*e*P	Pn	12 28 17.3	+0.4
	baz=354						
WTP	**Ta-pu**	1.69	246	*e*P	Pb	12 28 18.2	-0.6
	baz=245						
JIJ	**Ishigaki jima**	1.74	76	S	Sb	12 28 40.9	-0.3
RLNB	**Erlin**	1.77	269	*e*P	Pn	12 28 18.7	+0.7
	baz=268						
SLGT	**Liugui**	1.79	238	*e*P	Pn	12 28 19.2	+0.9
	baz=237						
CHN1	**Nanshi**	1.79	245	*e*P	Pb	12 28 20.0	-0.5
	baz=245						
TWK	**Hsinying**	1.79	248	*e*P	Pb	12 28 20.1	-0.4
	baz=247						
SGST	**Jiashian**	1.79	242	*e*P	Pn	12 28 18.7	+0.3
	baz=241						
SNST	**Tainan City**	1.80	247	*e*P	Pb	12 28 20.8	+0.1
	baz=246						
WSF	**Szhu**	1.92	261	*e*P	Pn	12 28 21.3	+1.2
	baz=261						
SSD	**Sandimen**	1.94	232	*e*P	Pn	12 28 21.4	+1.1
	baz=231						
JISG	**Ishigakijimahi**	1.95	70	*e*S	Sn	12 28 45.1	+0.5
MASBT	**Mashibuluo**	2.02	229	*e*P	Pn	12 28 22.2	+0.7
	baz=228						
EAST	**Anshuo**	2.05	221	*e*P	Pn	12 28 22.2	+0.3
	baz=220						
SCZT	**Fangliau**	2.20	225	*e*P	Pb	12 28 26.4	-1.0
	baz=224						
JTJ	**Tarama**	2.30	72	S	Sn	12 28 51.8	-1.6
TWKBT	**Hengchun**	2.42	215	*e*P	Pn	12 28 26.9	0.0
	baz=214						
TWK1	**Hengchun**	2.42	215	*e*P	Pn	12 28 27.7	+0.8
	baz=214						
WDGT	**Dungji**	2.51	255	*e*P	Pn	12 28 29.0	+0.8
	baz=254						
PHUB	**P'eng-hu**	2.53	261	*e*P	Pn	12 28 29.2	+0.7
	baz=260						
PHUB				*e*S	Sn	12 28 59.4	+0.4
	baz=260						
PNG	**Penghu**	2.54	262	P	Pn	12 28 29.0	+0.4
	baz=261						
PNG				*e*S	Sn	12 29 00.3	+1.1
	baz=261						
VCHM	**Qimei**	2.73	255	*e*P	Pn	12 28 30.8	-0.4
	baz=254						
PTTC	**Pingtan**	2.77	305	*e*P	Pn	12 28 32.0	+0.2
	baz=304						
VWUC	**VWUC**	2.80	292	*e*P	Pn	12 28 32.4	+0.3
	baz=292						
MATB	**Ma-tsu**	3.06	316	*e*P	Pn	12 28 36.4	+0.6
	baz=316						
PTMZ	**Houxiangcun**	3.09	291	*e*P	Pn	12 28 36.1	-0.1
	baz=291						
ZPLA	**Ao Xicun**	4.16	271	*e*P	Pn	12 28 51.1	+0.2
	baz=269						

*IDC **19** 12:50:44.2±2.9, 53°.71N×164°.02W, h0^{km}, mb3.8/11, mb1 3.9/14, mb1mx3.7/47, mbtmp3.8/14, ML3.3/3, MS4.4/1, Ms1 4.4/1, ms1mx3.4/49, Error ellipse: s-maj=67.1km s-min=18.0km az=166.0*

*AEIC **19** 12:50:45.6±1.2, 53°.30N±0°.09×163°.90W±0°.09, h26^{km}±3^{km}, ML3.2/33, mb3.3/1(NEIC), Error ellipse: s-maj=13.9km s-min=6.9km az=164.0*

ISC 19 12:50:45.0±2.6**, 53°.5N**±0°.1×**163°.79W**±0°.04**, h17**^{km}±12^{km}**, n63, σ1^{s}.34**/65**, mb3.8**/10**, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	**West Dahl East**	1.11	335		Pg	12 51 07.2	+0.9
WECS	**Westdahl Cape**	1.21	331		Pg	12 51 08.9	+0.6
AKSA	**Akutan Strait**	1.31	301		Pb	12 51 08.4	-0.7
AKSA					Sg	12 51 26.4	-1.0
AKSA	**Akutan Strait**	1.31	301		Pb	12 51 08.5	-0.7
AKSA					Sg	12 51 27.0	-0.3
SSBA	**Shishaldin**	1.32	351		Pg	12 51 10.5	+0.1
AKUT	**Akutan**	1.35	300	Pn	Pb	12 51 09.1	-0.7
AKUT					Sb	12 51 26.9	+0.1
AHB	**Akutan Harbor**	1.36	299		Pn	12 51 09.1	-0.2
FALS	**False Pass**	1.40	9		Pg	12 51 11.9	-0.1
AKBBA	**Akutan Broad B**	1.42	297		Pn	12 51 09.9	-0.1
AKBBA					Sb	12 51 28.7	0.0
HSB	**Akutan Spr's B**	1.45	300		Pn	12 51 10.5	+0.1
AKMO	**Akutan Morgan**	1.46	296		Pn	12 51 10.5	0.0
AKMO					Sb	12 51 29.7	-0.1
AKGG	**Akutan Green G**	1.49	300		Pn	12 51 11.0	-0.1
AKGG					Sb	12 51 31.1	+0.2
UNV	**Unalaska Valle**	1.66	284		Pn	12 51 12.5	-0.7
UNV	**Unalaska Valle**	1.66	284		Sn	12 51 33.2	-0.9
MNAT	**Makushin Natee**	1.77	285		Pn	12 51 14.5	-0.4
MNAT					Sn	12 51 36.5	-0.4
MSW	**Makushin Switc**	1.83	285		Pn	12 51 15.8	+0.1
MSW					Sn	12 51 38.0	-0.6
DT1	**Dutton Round H**	1.86	28		Pb	12 51 18.3	-0.2
HAG	**Hague Volcano**	2.15	30		Pb	12 51 23.3	-0.1
OKFG	**Magazine Ridge**	2.47	270		Pn	12 51 23.9	-0.5
OKTU	**Okmok Mt. Tuli**	2.55	270		Pn	12 51 24.9	-0.6
SDPT	**Sand Point**	2.70	45		Pb	12 51 30.2	-2.6
OKSP	**Okmok Steeple**	2.71	267		Pn	12 51 27.5	-0.2
CNBA	**Chernabura Isl**	2.81	60		Pn	12 51 30.4	+1.3
CHGN	**Chignik**	4.20	45	Pn	Pn	12 51 51.2	+3.0
CHIR	**Chirikof Islan**	5.29	60	Pn	Pn	12 52 05.2	+2.1
OHAK	**Old Harbor**	7.07	54	Pn	Pn	12 52 28.6	+1.2
KDAK	**Kodiak Island**	7.67	51	Pn	Pn	12 52 36.6	+0.8
	0.8nm,0.3s,baz=203,slow=4.4,SNR=26						
KDAK				Sn	Sn	12 53 58.0	-4.1
	0.4nm,0.3s,baz=22,slow=20,SNR=5.7						
KDAK	**Kodiak Island**	7.67	51		Pn	12 52 37.4	+1.6
SVW2	**Sparrevohn**	8.83	27	Pn	Pn	12 52 54.6	+2.9
CNPM	**China Poot**	9.21	44	Pn	Pn	12 52 59.2	+2.3
SEW	**Seward**	10.28	44	Pn	Pn	12 53 13.0	+1.5
SUA	**Susitna One**	10.63	36	Pn	Pn	12 53 18.0	+1.5
PPLA	**Purkeypile**	11.23	28	Pn	Pn	12 53 27.1	+2.4
KNK	**Knik Glacier**	11.44	40	Pn	Pn	12 53 28.6	+1.1
HIN	**Hinchinbrook I**	11.69	47	Pn	Pn	12 53 31.7	+0.9
SCM	**Sheep Creek Mo**	12.12	40	Pn	Pn	12 53 37.7	+0.8
MCK	**McKinley**	12.83	31	Pn	Pn	12 53 49.6	+3.2
DHY	**Denali Highway**	12.88	35	Pn	Pn	12 53 48.4	+1.1
GLB	**Gilahina Butte**	13.34	45	Pn	Pn	12 53 55.4	+2.0
TGL	**Tana Glacier**	13.47	49	Pn	Pn	12 53 56.5	+1.2
PAX	**Paxson**	13.50	38	Pn	Pn	12 53 56.2	+0.6
BALM	**Baldy**	13.80	48	Pn	Pn	12 54 01.5	+1.7
ILAR	**Eielson Array**	14.20	31	Pn	Pn	12 54 03.6	-1.4
	0.0nm,0.3s,baz=228,slow=13,SNR=2.1						
EGAK	**Eagle**	16.10	36	Pn	Pn	12 54 31.7	+1.4
EGAK				IAmb	IAmb	12 54 42.7	
	comp=Z,2.0nm,0.8s						
DLBC	**Dease Lake**	19.40	62	P	Pn	12 55 11.4	+0.2
	comp=Z,0.1nm,0.3s,baz=232,slow=19,SNR=2.5						
INK	**Inuvik**	20.58	32	P	P	12 55 22.4	-0.3
	comp=Z,0.8nm,0.5s,baz=226,slow=14,SNR=10.0						
PETK	**Petropavlovsk-**	22.84	285	P	P	12 55 47.8	+0.7
	comp=Z,1.3nm,0.5s,baz=89,slow=13,SNR=7.6						
SEY	**Seymchan**	24.48	310	P	P	12 56 01.7	-1.0
	comp=Z,0.4nm,0.4s,baz=72,slow=20,SNR=4.9						
YKA	**Yellowknife Ar**	26.95	51	P	P	12 56 27.3	+2.2
	comp=Z,0.8nm,0.8s,baz=269,slow=8.8,SNR=12						
H11N2	**WAKE ISLAND Hy**	40.53	225	T	T	13 41 58.8	
	baz=26,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy**	40.54	225	T	T	13 41 59.4	
	baz=26,slow=76,SNR=16						
H11N1	**WAKE ISLAND Hy**	40.55	225	T	T	13 42 00.2	
	baz=26,slow=76,SNR=17						
H11S1	**WAKE ISLAND Hy**	41.70	225	T	T	13 43 33.0	
	baz=23						
H11S2	**WAKE ISLAND Hy**	41.72	225	T	T	13 43 28.2	
	baz=23						
H11S3	**WAKE ISLAND Hy**	41.72	225	T	T	13 43 21.5	
	baz=23						
USRK	**Ussuriysk Ar.**	41.93	284	LR	LR	13 17 03.5	
	comp=Z,488nm,18.1s,baz=302,slow=38						
SPITS	**Spitsbergen Ar**	48.61	360	P	P	12 59 27.4	+0.4
	comp=Z,8.7nm,1.0s,baz=21,slow=4.8,SNR=8.6						
SONM	**Songino Array**	53.58	303	P	P	13 00 05.7	+0.8
	comp=Z,0.7nm,0.6s,baz=42,slow=6.7,SNR=2.4						
ARCES	**ARCESS Array B**	57.11	356	P	P	13 00 30.4	+0.5
	comp=Z,1.9nm,0.8s,baz=1.7,slow=6.6,SNR=5.7						
FINES	**FINESS Array B**	65.16	355	P	P	13 01 24.0	-0.4
	comp=Z,1.5nm,0.8s,baz=17,slow=10,SNR=2.1						
MKAR	**Makanchi Array**	65.42	316	P	P	13 01 26.3	-0.1
	comp=Z,0.3nm,0.3s,baz=59,slow=7.2,SNR=5.6						
AKASG	**Malin Array Be**	75.62	352	P	P	13 02 27.8	-0.7
	comp=Z,0.4nm,0.4s,baz=9.3,slow=5.8,SNR=1.9						
BRTR	**Keskin Array B**	85.96	347	P	P	13 03 24.6	+0.4
	comp=Z,0.4nm,0.7s,baz=274,slow=3.5,SNR=3.7						

NNC 19 12:56:47.9±4.7**, 37°.07N**×**70°.78E, h0**^{km}**, mb4.0, mpv3.6, 2C-3D, Error ellipse: s-maj=38.2km s-min=34.3km az=128.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	6.04	358	⇓Pn	Pn	12 58 19.0	+0.5
	2.3nm,0.3s,baz=179,slow=13,SNR=4.3						
KK31				⇑Sn	Sn	12 59 29.5	+1.3
	3.9nm,0.3s,baz=188,slow=25,SNR=7.6						
AAK	**Ala-Archa**	6.26	26	Pn	Pn	12 58 22.2	+0.5
	3.2nm,0.5s						
AAK				⇓Sn	Sn	12 59 36.1	+2.2
	16nm,0.6s						
CHMS	**Chumysh**	6.67	26	⇓Pn	Pn	12 58 26.1	-1.0
	1.9nm,0.5s						
CHMS				⇑Sn	Sn	12 59 43.7	-0.1
	5.9nm,0.5s						

*TIF **19** 13:01:06.8, 41°.37N×43°.86E, h9^{km}*

*DDA **19** 13:01:07.0, 41°.42N×43°.86E, h7^{km}±2^{km}, ML1.7*

*NORS **19** 13:01:07.7±0.0, 41°.39N×44°.07E, h7^{km}, MPVA3.3*

ISC 19 13:01:07.5±0.9**, 41°.37N**±0°.03×**43°.86E**±0°.02**, h10**^{km}±8^{km}**, n20, σ0^{s}.50**/38**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BGD	**Bogdanovka**	0.23	241	P	Pg	13 01 12.4	+0.2
BGD				S	Sg	13 01 15.9	+0.5
TRLG	**Trialeti**	0.24	47	P	Pg	13 01 12.5	0.0
TRLG				S	Sg	13 01 16.2	+0.2
AKH	**Akhalkalaki**	0.28	277	P	Pg	13 01 13.2	0.0
AKH				S	Sg	13 01 17.2	+0.2
KZRT	**Kazreti**	0.40	88	P	Pg	13 01 15.4	-0.1
KZRT				S	Sg	13 01 21.1	+0.2
KZRT	**Kazreti**	0.40	88	*e*Pg	Pg	13 01 15.4	-0.1
KZRT				*e*Sg	Sb	13 01 22.1	-1.1
KZRT	**Kazreti**	0.40	88	*i* P	Pg	13 01 15.3	-0.1
KZRT				*i* S	Sg	13 01 20.7	-0.1
EAK	**Akyaka**	0.71	196	*i* P	Pg	13 01 21.0	-0.3
EAK				*i* S	Sg	13 01 31.1	+0.4
EAK				IAML		13 01 32.0	
	comp=E,37nm,0.4s						
EAK				IAML		13 01 34.0	
	comp=N,44nm,0.5s						
TBLG	**Delisi**	0.75	61	P	Pg	13 01 22.1	+0.1
TBLG				S	Sb	13 01 32.8	-0.2
TBLG	**Delisi**	0.75	61	*e*Pg	Pg	13 01 22.1	+0.1
TBLG				*e*Sg	Sb	13 01 32.8	-0.2
BTNK	**Botanikuri**	0.77	66	P	Pg	13 01 22.3	0.0
EPOS	**Posof**	0.86	279	*i* P	Pg	13 01 23.9	-0.3
DGRG	**David-gareji**	1.14	86	P	Pg	13 01 29.4	0.0
DGRG				S	Sn	13 01 46.1	+0.8
DGRG	**David-gareji**	1.14	86	*e*Pg	Pg	13 01 29.4	0.0
DGRG				*e*Sg	Sn	13 01 46.1	+0.8
ZEI	**Tsey**	1.41	1	*e*Pg	Pb	13 01 33.8	-0.3
ZEI				*e*Sg	Sg	13 01 53.7	+0.7
LACR	**Lac**	1.49	12	*e*Pg	Pn	13 01 34.4	-0.1
LACR				*e*Sg	Sg	13 01 54.8	-0.6
DAGI	**Agillar**	1.50	259	*i* P	Pn	13 01 35.1	+0.4
DAGI				*i* S	Sg	13 01 55.3	-0.4
DAGI				IAML		13 01 59.0	
	comp=N,6.2nm,0.6s						
DAGI				IAML		13 01 59.0	
	comp=E,12nm,0.5s						
DIGR	**Digorskoe uzhe**	1.54	352	*e*Pg	Pb	13 01 36.0	-0.3
DIGR				*e*Sg	Sg	13 01 57.1	0.0
DBAD	**Bademkaya**	1.67	258	*i* P	Pb	13 01 37.8	-0.7
DBAD				*i* S	Sb	13 01 59.6	-0.1
DBAD				IAML		13 02 00.0	
	comp=E,8.6nm,0.4s						
DBAD				IAML		13 02 01.0	
	comp=N,15nm,0.2s						
NEY	**Neytrino**	2.06	336	*e*Pg	Pb	13 01 44.7	-0.3
NEY				*e*Sg	Sg	13 02 12.3	-1.3
SHA1	**Shidzhatmaz**	2.52	340	*e*Pn	Pb	13 01 53.0	-0.1
SHA1				*i* Sn	Sb	13 02 25.6	+1.2

*IDC **19** 13:07:17.0±0.8, 6°.84S×155°.31E, h0^{km}, mb3.9/10, mb1 4.1/13, mb1mx3.9/44, mbtmp3.9/13, ML1.8/1, Error ellipse: s-maj=18.9km s-min=15.2km az=36.0*

ISC 19 13:07:23.5±0.7**, 6°.87S**±0°.09×**155°.29E**±0°.08**, h50**^{km}**, n18, σ1^{s}.12**/17**, mb3.8**/10**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	4.13	308	Pn	Pn	13 08 23.5	-0.6
	5.8nm,0.3s,baz=52,slow=4.0,SNR=2.0						
KRVT				Sn	Sn	13 09 10.2	-0.9
	17nm,0.3s,baz=286,slow=12,SNR=5.7						
KRVT				Lg	Lg	13 09 27.7	
	24nm,0.3s,baz=87,slow=19,SNR=10						
HNR	**Honiara**	5.27	119	Pn	Pn	13 08 39.0	-0.7
	8.8nm,0.3s,baz=286,slow=15,SNR=2.5						
HNR				Lg	Lg	13 10 02.1	
	4.4nm,0.3s,baz=255,slow=2.7,SNR=4.5						
PMG	**Port Moresby**	8.43	252	Pn	Pn	13 09 20.7	-2.4
	0.6nm,0.3s,baz=92,slow=18,SNR=1.5						
PMG				Sn	Sn	13 10 58.3	+1.3
	0.9nm,0.3s,baz=324,slow=17,SNR=2.6						
WRA	**Warramunga Arr**	24.12	235	P	P	13 12 34.7	-0.3
	1.8nm,0.6s,baz=59,slow=9.3,SNR=17						
ASAR	**Alice Springs**	26.47	229	P	P	13 12 55.8	-0.5
	0.8nm,0.6s,baz=61,slow=9.1,SNR=17						
H11S3	**WAKE ISLAND Hy**	27.60	24	T	T	13 41 33.7	
	baz=204,slow=74						
H11S2	**WAKE ISLAND Hy**	27.61	24	T	T	13 41 38.6	
	baz=204						
H11S1	**WAKE ISLAND Hy**	27.62	24	T	T	13 41 24.4	
	baz=204,slow=74,SNR=12						
STKA	**Stephens Creek**	27.97	205	P	P	13 13 09.8	+0.3
	1.1nm,0.6s,baz=357,slow=16,SNR=4.0						
FITZ	**Fitzroy Crossi**	30.97	246	P	P	13 13 37.6	+1.3
	4.1nm,1.1s,baz=56,slow=15,SNR=2.8						
MJAR	**Matsushiro Arr**	46.06	341	P	P	13 15 41.2	-1.3
	0.5nm,0.3s,baz=163,slow=5.8,SNR=1.6						
CMAR	**Chiang Mai Arr**	60.99	295	P	P	13 17 34.1	+1.8
	1.7nm,0.7s,baz=117,slow=5.2,SNR=12						
SONM	**Songino Array**	69.39	327	P	P	13 18 26.1	-0.2
	0.3nm,0.3s,baz=132,slow=6.5,SNR=2.2						
ILAR	**Eielson Array**	83.16	21	P	P	13 19 44.4	+0.5
	0.4nm,0.4s,baz=246,slow=5.4,SNR=12						
MKAR	**Makanchi Array**	83.51	319	P	P	13 19 46.0	-0.2
	0.5nm,0.7s,baz=98,slow=5.8,SNR=6.3						
YKA	**Yellowknife Ar**	96.09	28	P	P	13 20 46.3	+0.9
	0.3nm,0.6s,baz=263,slow=4.9,SNR=4.2						
BDFB	**Brasilia**	147.86	134	PKPbc	PKiKP	13 27 05.6	-0.6
	2.4nm,0.5s,baz=162,slow=9.6,SNR=2.2						
TORD	**Torodi Ar. Bea**	153.27	286	PKPbc	PKiKP	13 27 17.5	+0.3
	0.4nm,0.4s,baz=79,slow=3.2,SNR=6.0						

*JMA **19** 13:07:46.7±0.1, 23°.98N×122°.27E, h22^{km}±2^{km}, M2.3*

*TAP **19** 13:07:46.7, 24°.00N×122°.30E, h26^{km}, ML2.9, D*

ISC 19 13:07:46.4±1.1**, 23°.96N**±0°.02×**122°.29E**±0°.02**, h23**^{km}±13^{km}**, n97, σ0^{s}.77**/169**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1**	0.61	346	P	Pb	13 07 58.0	-0.4
	baz=336						
EOS1				S	Sb	13 08 05.9	-0.5
	baz=336						
HWA	**Hwalien**	0.63	272	*e*S	Sb	13 08 07.7	+0.6
	baz=255						
ENLB	**Shoufeng**	0.64	265	*e*P	Pb	13 07 58.7	-0.1
	baz=251						
ENLB				S	Sb	13 08 07.8	+0.5
	baz=251						
TWD	**Chiawan**	0.65	281	P	Pb	13 07 59.2	+0.2
	baz=277						
TWD				S	Sb	13 08 08.2	+0.6
	baz=277						
NACB	**Ninganchiao**	0.67	289	P	Pb	13 07 59.6	+0.1
	baz=271						
NACB				S	Sb	13 08 08.6	+0.2
	baz=271						
ENA	**Nanau**	0.69	313	P	Pb	13 07 59.7	0.0
	baz=319						
ENA				S	Sn	13 08 09.7	-1.0
	baz=319						
TWC	**Suao**	0.76	328	P	Pb	13 08 00.1	-0.9
	baz=326						
TWC				S	Sb	13 08 09.3	-1.7
	baz=326						
JYNG	**Yonagunijimaku**	0.77	50	P	Pb	13 08 01.0	-0.1
JYNG				S	Sb	13 08 11.9	+0.8
ETLH	**Xiulin Townshi**	0.78	289	P	Pb	13 08 00.6	-0.7
	baz=274						
ETLH				S	Sb	13 08 12.0	+0.4
	baz=274						
ESL	**Shilin**	0.80	260	*i* P	Pb	13 08 00.9	-0.8
	baz=248						
ESL				*i* S	Sb	13 08 11.8	-0.2
	baz=248						
YOJ	**Yonaguni jima**	0.82	52	P	Pb	13 08 02.2	+0.2
	baz=61						
YOJ				S	Sb	13 08 12.7	0.0
	baz=61						
YOJ	**Yonaguni jima**	0.82	52	P	Pb	13 08 02.0	0.0
YOJ				*e*S	Sb	13 08 12.7	0.0
EGFH	**Guangfu**	0.84	250	*i* P	Pb	13 08 01.5	-0.9
	baz=248						
EGFH				*i* S	Sb	13 08 13.9	+0.6
	baz=248						
HGSD	**Ruisui**	0.92	240	P	Pb	13 08 02.8	-0.9
	baz=238						
HGSD				S	Sb	13 08 15.4	-0.2
	baz=238						
ENTT	**Nioudou**	0.95	316	*i* P	Pb	13 08 02.8	-1.4
	baz=312						
ENTT				S	Sn	13 08 16.4	-0.8
	baz=312						
TWE	**Neicheng**	0.95	323	*i* P	Pb	13 08 03.8	-0.3
	baz=327						
TWE				S	Sn	13 08 16.5	-0.7
	baz=327						
NNSB	**Datong**	0.95	299	P	Pb	13 08 04.2	-0.1
	baz=284						
NNSB				S	Sb	13 08 16.4	-0.2
	baz=284						
NNSH	**Datong**	0.95	300	*i* P	Pb	13 08 03.9	-0.4
	baz=286						
NNSH				*i* S	Sn	13 08 16.7	-0.8
	baz=286						
NDT	**Datong Townshi**	0.96	312	*i* P	Pb	13 08 03.9	-0.4
	baz=309						
NDT				*e*S	Sn	13 08 17.5	+0.1
	baz=309						
WHF	**Hehuan Shan**	0.96	281	*i* P	Pb	13 08 04.1	-0.5
	baz=266						
WHF				S	Sb	13 08 16.5	-0.5
	baz=266						
NNS	**Nan Shan**	0.97	300	P	Pb	13 08 03.7	-0.8
	baz=285						
NNS				S	Sn	13 08 17.6	-0.2
	baz=285						
NTC	**Toucheng**	0.99	335	P	Pn	13 08 05.2	+0.4

	baz=345						
NTC				*e*S	Sn	13 08 17.5	-0.6
	baz=345						
SLBB	Yuanshan	0.99	323	*i* P	Pb	13 08 04.1	-0.8
	baz=320						
SLBB				*e*S	Sn	13 08 17.5	-0.8
	baz=320						
EHY	Hungye	1.00	243	P	Pn	13 08 04.5	-0.5
	baz=255						
EHY				S	Sb	13 08 17.9	+0.2
	baz=255						
OWD	Renai	1.02	270	*i* P	Pn	13 08 04.9	-0.6
	baz=267						
OWD				*i* S	Sb	13 08 17.9	-0.7
	baz=267						
CHGB	Renai	1.03	276	P	Pn	13 08 05.2	-0.4
	baz=262						
CHGB				S	Sb	13 08 18.8	0.0
	baz=262						
TWT	Tachien	1.06	286	*e*S	Sn	13 08 20.1	-0.1
	baz=272						
VWDT	VWDT	1.07	259	*e*P	Pn	13 08 05.6	-0.4
	baz=257						
VWDT				S	Sb	13 08 20.0	+0.1
	baz=257						
TDCB	Techi	1.08	286	*e*P	Pn	13 08 05.1	-1.1
	baz=274						
TDCB				*e*S	Sb	13 08 19.9	-0.3
	baz=274						
TWB1	Santiao Chiao	1.08	345	*e*P	Pb	13 08 06.7	+0.3
	baz=342						
TWB1				*e*S	Sb	13 08 19.4	-0.7
	baz=342						
NWLT	Wulai	1.09	319	*i* P	Pb	13 08 06.4	-0.1
	baz=315						
NWLT				S	Sn	13 08 20.6	0.0
	baz=315						
TIPB	Shuangxi	1.09	337	P	Pb	13 08 06.8	+0.1
	baz=334						
TIPB				S	Sb	13 08 19.8	-0.7
	baz=334						
TWF1	Yuli	1.10	237	*i* P	Pn	13 08 05.9	-0.5
	baz=224						
TWF1				*i* S	Sb	13 08 20.3	-0.2
	baz=224						
YHNB	Yeheng	1.10	310	P	Pn	13 08 06.4	0.0
	baz=307						
YHNB				S	Sb	13 08 20.2	-0.4
	baz=307						
NSK	Sanguang	1.11	310	*i* P	Pn	13 08 06.7	0.0
	baz=307						
NSK				S	Sb	13 08 20.7	-0.3
	baz=307						
FULB	Fuli	1.19	231	*i* P	Pn	13 08 07.1	-0.5
	baz=217						
FULB				S	Sn	13 08 22.9	-0.2
	baz=217						
NWF	Wu-fen Shan	1.20	337	P	Pn	13 08 08.0	+0.1
	baz=334						
NWF				S	Sb	13 08 24.3	+0.6
	baz=334						
WFSB	Wu-fen Shan	1.20	337	P	Pb	13 08 08.4	0.0
	baz=334						
WFSB				S	Sb	13 08 24.6	+1.1
	baz=334						
CHKT	Chengkung	1.21	225	S	Sn	13 08 21.6	-2.0
	baz=214						
NHDH	Xindian Distri	1.22	325	*e*P	Pb	13 08 08.6	-0.2
	baz=336						
SSLB	Suanglung	1.24	262	P	Pn	13 08 08.3	0.0
	baz=251						
SSLB				S	Sn	13 08 23.8	-0.5
	baz=251						
DPDB	Guoxing	1.25	274	*i* P	Pn	13 08 08.7	+0.1
	baz=263						
DPDB				S	Sb	13 08 25.1	0.0
	baz=263						
WHP	Taichung City	1.27	285	*i* P	Pb	13 08 10.3	+0.6
	baz=272						
WHP				S	Sb	13 08 26.8	+1.1
	baz=272						
SMLT	Sun Moon Lake	1.28	267	P	Pn	13 08 09.5	+0.6
	baz=255						
TYC	Yuchr	1.32	268	P	Pn	13 08 09.5	+0.2
	baz=265						
TYC				S	Sn	13 08 25.6	-0.6
	baz=265						
WHYT	Xinyi Township	1.34	259	P	Pn	13 08 10.1	+0.3
	baz=246						
WHYT				S	Sb	13 08 27.6	-0.1
	baz=246						
LIOB	Emei	1.35	301	P	Pb	13 08 10.6	-0.5
	baz=286						
LIOB				S	Sb	13 08 28.4	+0.5
	baz=286						
YM01	YM01	1.35	331	*e*P	Pb	13 08 10.9	-0.1
	baz=345						
NSTT	Nanjuang	1.36	300	P	Pb	13 08 11.6	+0.6
	baz=285						
NSTT				S	Sb	13 08 28.5	+0.5
	baz=285						
IRIF	Iriomote-Funau	1.36	74	P	Pb	13 08 11.2	0.0
IRIF				*e*S	Sb	13 08 28.5	+0.3
YM10	YM10	1.36	331	*e*P	Pn	13 08 10.2	+0.1
	baz=345						
YM11	YM11	1.37	332	*e*P	Pb	13 08 10.8	-0.5
	baz=345						
YM08	YM08	1.38	332	*e*S	Sn	13 08 27.7	-0.2
	baz=329						
TWS1	Kuangyinshan	1.39	325	P	Pn	13 08 09.1	-1.2
	baz=323						
YM03	YM03	1.40	331	*e*S	Sb	13 08 28.8	-0.4
	baz=327						
ELDTW	Lidau	1.40	237	*i* P	Pn	13 08 10.0	-0.7
	baz=236						
ELDTW				*i* S	Sn	13 08 27.5	-0.9
	baz=236						
ANP	Anpu	1.41	330	P	Pb	13 08 12.5	+0.4
	baz=328						
ALS	Alishan	1.44	252	*i* P	Pn	13 08 12.2	+0.9
	baz=250						
ALS				S	Sn	13 08 30.3	+0.7
	baz=250						
WJS	Zhushan	1.44	265	P	Pb	13 08 12.3	-0.2
	baz=263						
WJS				*e*S	Sb	13 08 31.9	+1.4
	baz=263						
TWQ1	Liyutan	1.44	286	P	Pb	13 08 12.2	-0.3
	baz=282						
TWQ1				S	Sb	13 08 32.1	+1.6
	baz=282						
TWH	Lutao	1.45	211	P	Pn	13 08 10.1	-1.1
	baz=211						
TWH				S	Sn	13 08 28.9	-0.7
	baz=211						
TWY	Chenhua	1.46	334	*e*S	Sb	13 08 30.8	-0.1
	baz=331						
WNT	Mingjian	1.48	267	S	Sb	13 08 32.6	+1.1
	baz=265						
TCU	Taichung	1.49	278	S	Sb	13 08 32.8	+0.9
	baz=275						
CHN5	Tsauling	1.52	257	*i* P	Pb	13 08 14.0	0.0
	baz=245						
CHN5				S	Sb	13 08 33.9	+1.0
	baz=245						
WCHH	Zhanghua	1.59	275	*e*S	Sb	13 08 36.4	+1.6
	baz=272						
JKRS	Kuro-shima	1.59	80	*e*S	Sb	13 08 35.6	+0.8
TWGBT	Beinan	1.59	225	P	Pn	13 08 12.0	-1.2
	baz=236						
TWGBT				S	Sn	13 08 31.2	-1.8
	baz=236						
TWG	Pinlang	1.59	225	P	Pn	13 08 13.2	0.0
	baz=236						
TWG				S	Sn	13 08 31.2	-1.9
	baz=236						
WGK	Gukeng	1.61	261	S	Sb	13 08 35.8	+0.5
	baz=258						
STYT	Tauyuan	1.62	241	*e*P	Pn	13 08 14.3	+0.8
	baz=230						
STYT				*e*S	Sn	13 08 33.9	+0.1
	baz=230						
WDLH	Douliu	1.63	261	*e*P	Pb	13 08 16.9	+1.2
	baz=259						
WDLH				S	Sb	13 08 37.3	+1.4
	baz=259						
TPUB	Ta-pu	1.66	247	P	Pb	13 08 16.1	-0.2
	baz=246						
TPUB				S	Sb	13 08 37.4	+0.6
	baz=246						
CHN4	Tsaushan	1.67	249	*i* P	Pb	13 08 16.6	+0.1
	baz=248						
CHN4				*i* S	Sb	13 08 38.2	+1.1
	baz=248						
WTP	Ta-pu	1.70	246	*i* P	Pb	13 08 16.8	-0.1
	baz=244						
WTP				S	Sb	13 08 37.2	-0.7
	baz=244						
JIJ	Ishigaki jima	1.74	76	P	Pn	13 08 16.3	+1.2
JIJ				*e*S	Sb	13 08 38.3	-0.6
RLNB	Erlin	1.77	268	*e*S	Sb	13 08 38.7	-1.2
	baz=266						
SLGT	Liugui	1.79	238	P	Pb	13 08 17.8	-0.7
	baz=228						
SLGT				S	Sb	13 08 40.5	-0.1
	baz=228						
CHN1	Nanshi	1.79	245	*i* P	Pb	13 08 18.5	-0.1
	baz=244						
CHN1				*i* S	Sb	13 08 42.0	+1.4
	baz=244						
TWK	Hsinying	1.79	248	*i* P	Pn	13 08 17.5	+1.5
	baz=246						
TWK				*i* S	Sb	13 08 41.4	+0.8
	baz=246						
SGST	Jiashian	1.80	241	*e*S	Sn	13 08 39.2	+1.1
	baz=230						
SNST	Tainan City	1.81	246	*e*P	Pb	13 08 17.9	-0.8
	baz=245						
SNST				S	Sb	13 08 41.1	+0.2
	baz=245						
ECL	Taimali	1.83	223	*e*P	Pn	13 08 15.5	-0.9
	baz=223						
ECL				*e*S	Sn	13 08 36.9	-2.0
	baz=223						
WTCT	Ta-ch'eng	1.84	267	*e*S	Sb	13 08 42.9	+0.8
	baz=265						
WSF	Szhu	1.92	261	*e*S	Sb	13 08 44.8	+0.5
	baz=259						
JISG	Ishigakijimahi	1.94	71	P	Pn	13 08 18.5	+0.5
SSD	Sandimen	1.95	232	P	Pn	13 08 19.0	+0.9
	baz=225						
SSD				S	Sb	13 08 44.3	-0.7
	baz=225						
LAY	Lan-yu	2.03	200	*e*P	Pn	13 08 19.6	+0.3
	baz=209						
LAY				*e*S	Sn	13 08 42.7	-1.2
	baz=209						
MASBT	Mashibuluo	2.03	229	P	Pn	13 08 20.4	+1.2
	baz=223						
MASBT				S	Sn	13 08 45.0	+1.1
	baz=223						
EAST	Anshuo	2.06	221	*e*P	Pn	13 08 19.7	+0.1
	baz=221						
SCZT	Fangliau	2.21	225	*e*P	Pn	13 08 22.3	+0.7
	baz=219						
SCZT				*e*S	Sn	13 08 48.2	0.0
	baz=219						
WDGT	Dungji	2.51	254	*e*P	Pn	13 08 27.0	+1.2
	baz=242						
WDGT				*e*S	Sn	13 08 57.5	+1.7
	baz=242						
PHUB	P'eng-hu	2.53	260	P	Pn	13 08 26.8	+0.7
	baz=259						
PHUB				S	Sn	13 08 56.9	+0.7
	baz=259						
PNG	Penghu	2.54	262	*e*P	Pn	13 08 27.4	+1.2
	baz=260						
PNG				S	Sn	13 08 57.4	+1.0
	baz=260						
VCHM	Qimei	2.73	255	S	Sn	13 09 03.2	+2.0
	baz=253						
VWUC	VWUC	2.79	292	P	Pn	13 08 29.7	+0.1
	baz=288						
VWUC				*e*S	Sn	13 09 02.0	-0.6
	baz=288						
PTMZ	Houxiangcun	3.08	291	P	Pn	13 08 33.6	-0.1
	baz=287						
PTMZ				*e*S	Sn	13 09 09.2	-0.7
	baz=287						

IDC 19 13:18:11.7±1.5, 14°.23S×173°.77W, h0^{km}, mb3.4/3, mb1 3.7/3, mb1mx3.4/29, mbtmp3.4/3, Error ellipse: s-maj=115.7km s-min=24.1km az=163.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	1.96	81	Pn	Pn	13 18 46.4	+0.2
	68nm,0.3s,baz=209,slow=3.6,SNR=172						
AFI				Sn	Sn	13 19 05.8	-5.8
	74nm,0.3s,baz=40,slow=23,SNR=15						
H11S2	WAKE ISLAND Hy	37.78	329	T	T	14 06 05.1	
	baz=146,slow=76,SNR=4.7						
H11S3	WAKE ISLAND Hy	37.80	329	T	T	14 06 03.5	
	baz=146,slow=76,SNR=5.6						
H11S1	WAKE ISLAND Hy	37.80	329	T	T	14 06 04.7	
	baz=146,slow=76,SNR=4.9						
WRA	Warramunga Arr	49.77	256	P	P	13 27 07.0	+0.4
	0.6nm,1.0s,baz=90,slow=7.4,SNR=2.3						
ASAR	Alice Springs	50.14	251	P	P	13 27 08.8	-0.6
	0.2nm,0.5s,baz=90,slow=7.8,SNR=4.1						
NVAR	Mina Array Bea	73.70	42	P	P	13 29 47.8	-0.1
	0.2nm,0.5s,baz=212,slow=4.9,SNR=1.7						

NEIC 19 13:28:50.5±1.4, 19°.3S±0°.1×177°.5W±0°.1, h558^{km}±7^{km}, mb4.6/33, Error ellipse: s-maj=20.2km s-min=15.5km az=132.0

IDC 19 13:28:51.2±1.7, 19°.35S×177°.66W, h554^{km}±19^{km}, mb3.2/10, mb1 3.5/12, mb1mx3.3/27, mbtmp4.1/12, Error ellipse: s-maj=20.6km s-min=11.9km az=146.0

ISC 19 13:28:50.2±0.4, 19°.40S±0°.08×177°.45W±0°.08, h550^{km}, n68, σ1^{s}.49/77, mb4.4/23, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.58	291	P	P	13 30 19.8	+3.2
AFI	Afiamalu	7.71	46	P	P	13 30 45.8	+0.6
	12nm,0.3s,baz=145,slow=4.4,SNR=15						
AFI				S	S	13 32 17.1	-2.3
	14nm,0.3s,baz=7.4,slow=23,SNR=8.3						
AFI	Afiamalu	7.71	46	P	P	13 30 45.7	+0.5
AFI					S	13 32 17.3	-2.1
DZM	Mont Dzumac	15.29	257	P	P	13 32 05.4	+2.6
	1.2nm,0.3s,baz=134,slow=20,SNR=13						
DZM	Mont Dzumac	15.29	257	P	P	13 32 05.1	+2.3
DZM				IAmb	IAmb	13 32 29.2	
	comp=Z,52nm,1.6s						
OUZ	Omahuta	17.63	205	P	P	13 32 27.2	+2.7
OUZ				IAmb	IAmb	13 32 28.1	
	comp=Z,53nm,1.9s						
URZ	Urewera	19.38	193	P	P	13 32 39.4	-1.0
	comp=Z,0.4nm,0.3s,baz=11,slow=16,SNR=1.6						
URZ				S	S	13 35 40.4	-6.9
	comp=Z,0.3nm,0.3s,baz=58,slow=20,SNR=6.4						
URZ	Urewera	19.38	193	P	P	13 32 39.9	-0.5
URZ				IAmb	IAmb	13 33 24.8	
	comp=Z,13nm,1.2s						
BKZ	Black Stump Fm	20.38	194	P	P	13 32 49.0	-0.5
BKZ				IAmb	IAmb	13 32 50.4	
	comp=Z,15nm,1.5s						
SNZO	South Karori	22.84	195	P	P	13 33 12.0	+0.5
LTZ	Lake Taylor	24.87	198	P	P	13 33 28.2	-1.5
MQZ	McQueen's Vall	25.61	197	P	P	13 33 35.6	-0.5
MLZ	Mavora Lakes	28.52	202	P	P	13 34 02.3	+0.6
WHZ	Wether Hill Ro	29.04	201	P	P	13 34 07.2	+1.2
CAN	Canberra	33.55	235	P	P	13 34 45.2	+0.3
CAN				IAmb	IAmb	13 35 17.9	
	comp=Z,47nm,1.6s						
TOO	Toolangi	36.96	233	P	P	13 35 13.3	+0.1
TOO				IAmb	IAmb	13 35 14.3	
	comp=Z,11nm,0.7s						
COEN	Coen	38.04	272	P	P	13 35 22.2	0.0
COEN				IAmb	IAmb	13 35 23.3	
	comp=Z,10nm,0.8s						
STKA	Stephens Creek	38.73	243	P	P	13 35 28.1	+0.4
	comp=Z,2.0nm,0.3s,baz=72,slow=7.6,SNR=12						
STKA	Stephens Creek	38.73	243	P	P	13 35 27.5	-0.2
BBOO	Buckleboo	43.50	243	P	P	13 36 05.1	-0.3
BBOO				IAmb	IAmb	13 36 06.0	
	comp=Z,16nm,0.7s						
WR0	Warramunga Arr	45.08	261	P	P	13 36 16.8	-1.0
WR0				IAmb	IAmb	13 36 17.7	
	comp=Z,20nm,1.6s						
WB0	Warramunga Arr	45.24	261	P	P	13 36 18.1	-1.0
WRAB	Tennant Creek	45.26	261	P	P	13 36 18.1	-1.1
WRAB				IAmb	IAmb	13 36 43.3	
	comp=Z,7.4nm,0.5s						
WRA	Warramunga Arr	45.27	261	P	P	13 36 18.3	-0.9
	comp=Z,3.2nm,0.4s,baz=98,slow=8.1,SNR=107						
WRA				PcP	PcP	13 37 47.5	0.0
	comp=Z,1.2nm,0.5s,baz=94,slow=3.2,SNR=6.5						
WRA	Warramunga Arr	45.27	261	P	P	13 36 18.3	-0.9
WRA					PcP	13 37 46.8	-0.7
AS31	Alice Springs	45.28	256	P	P	13 36 18.7	-0.5
ASAR	Alice Springs	45.28	256	P	P	13 36 18.9	-0.3
	comp=Z,4.3nm,0.4s,baz=86,slow=8.2,SNR=84						
ASAR				PcP	PcP	13 37 47.2	-0.3
	comp=Z,2.5nm,0.7s,baz=104,slow=3.7,SNR=10						
ASAR				S	S	13 42 16.6	-3.4
	comp=Z,1.2nm,0.8s,baz=95,slow=15,SNR=12						
ASAR	Alice Springs	45.28	256	P	P	13 36 18.4	-0.9
ASAR					PcP	13 37 46.5	-1.0
MTN	Manton Dam	49.68	269	P	P	13 36 51.3	-1.0
MTN				IAmb	IAmb	13 37 57.4	
	comp=Z,44nm,1.6s						
FORT	Forrest	50.20	246	P	P	13 36 55.2	-0.8
FORT				IAmb	IAmb	13 36 55.8	
	comp=Z,22nm,0.7s						
SAUI	Saumlaki	50.89	276	P	P	13 37 00.0	-1.2
KNRA	Kununurra	51.25	265	P	P	13 37 02.9	-0.9
KNRA				IAmb	IAmb	13 38 10.4	
	comp=Z,60nm,1.8s						
FITZ	Fitzroy Crossi	53.69	261	P	P	13 37 20.9	-0.2
PSA00	Pilbara Seismi	58.42	256	P	P	13 37 52.7	-1.1
PSA00				IAmb	IAmb	13 37 53.9	
	comp=Z,15nm,0.8s						
PSA00	Pilbara Seismi	58.42	256	P	P	13 37 52.0	-1.9
PSA00				IAmb	IAmb	13 38 48.6	
	comp=Z,8.0nm,0.7s						
SBA	Scott Base	58.99	184	P	P	13 37 59.4	+2.7
VNDA	Vanda	59.04	185	P	P	13 37 58.7	+1.7
	comp=Z,0.7nm,0.6s,baz=339,slow=6.6,SNR=8.8						
VNDA	Vanda	59.04	185	P	P	13 37 57.7	+0.7
CASY	Casey	65.17	205	P	P	13 38 36.7	-0.2
CASY				IAmb	IAmb	13 39 01.6	
	comp=Z,13nm,1.1s						
JHJ2	Mitsune	66.27	322	P	P	13 38 43.8	-0.5
JAGI	Jajag, Banyuwa	66.91	269	P	P	13 38 47.4	-1.3
JAGI				IAmb	IAmb	13 40 20.9	
	comp=Z,41nm,1.1s						
QSPA	South Pole Qui	70.66	180	P	P	13 39 11.3	+0.8
QSPA				IAmb	IAmb	13 39 13.7	
	comp=Z,22nm,1.5s						
NVAR	Mina Array Bea	79.88	43	P	P	13 40 03.9	+1.6
	comp=Z,0.3nm,0.6s,baz=221,slow=8.1,SNR=2.2						
MAW	Mawson	82.76	200	P	P	13 40 16.5	+0.2
	comp=Z,2.6nm,0.6s,baz=146,slow=5.3,SNR=2.5						
TXAR	Lajitas Array	86.03	57	P	P	13 40 35.6	+2.4
	comp=Z,1.0nm,0.7s,baz=226,slow=3.3,SNR=5.1						
TXAR	Lajitas Array	86.03	57	P	P	13 40 32.8	-0.3
ILAR	Eielson Array	87.14	13	P	P	13 40 37.0	-0.5
	comp=Z,0.3nm,0.8s,baz=226,slow=5.1,SNR=6.5						
ILAR	Eielson Array	87.14	13	P	P	13 40 37.2	-0.2
PDAR	Pinedale Array	87.81	43	P	P	13 40 42.3	+0.9
	comp=Z,0.3nm,0.6s,baz=215,slow=4.1,SNR=3.9						
PDAR	Pinedale Array	87.81	43	P	P	13 40 41.9	+0.5
SNAA	Sanae	89.09	178	P	P	13 40 46.6	-0.1
VNA3	Neumayer Olymp	89.19	176	P	P	13 40 47.3	+0.1
GCMT	Greycliff	89.21	40	P	P	13 40 44.5	-3.2
VNA2	Neumayer--Watz	89.64	177	P	P	13 40 49.6	+0.4
	baz=179,slow=4.0						
CMAR	Chiang Mai Arr	90.23	289	P	P	13 40 54.5	+1.5
	comp=Z,1.3nm,0.7s,baz=122,slow=2.8,SNR=7.4						
CMAR	Chiang Mai Arr	90.23	289	P	P	13 40 53.9	+0.9
MKAR	Makanchi Array	110.82	314	PKiKP	PKiKP	13 46 19.6	-1.2
	comp=Z,0.4nm,0.5s,baz=81,slow=0.4,SNR=7.5						
ARCES	ARCESS Array B	127.94	350	PKP	PKPdf	13 46 53.0	0.0
	comp=Z,1.1nm,0.4s,baz=13,slow=1.2,SNR=14						
FINES	FINESS Array B	134.87	344	PKP	PKPdf	13 47 06.3	0.0
	comp=Z,0.8nm,0.5s,baz=5.7,slow=1.9,SNR=3.8						
BUR08	Bucovina Ar. S	146.34	332		PKPbc	13 47 29.3	-0.4
BURAR	Bucovina Array	146.35	332		PKPbc	13 47 29.7	0.0
BR131	Keskin Array S	146.47	314		PKPbc	13 47 29.8	-0.5
BRTR	Keskin Array B	146.47	314	PKPbc	PKPbc	13 47 29.9	-0.4
	comp=Z,1.8nm,0.5s,baz=129,slow=5.0,SNR=12						
BRTR	Keskin Array B	146.47	314		PKPbc	13 47 29.5	-0.8
CLL	Collm	147.11	348	*i* PKPbc	PKPbc	13 47 32.6	+1.1
	comp=Z,6.0nm,0.7s						
GERES	GERESS Array B	149.28	346	PKPbc	PKPbc	13 47 37.2	0.0
	comp=Z,2.2nm,0.7s,baz=29,slow=3.0,SNR=7.4						
GERES	GERESS Array B	149.28	346		PKPbc	13 47 36.9	-0.2
TORD	Torodi Ar. Bea	173.73	172	PKP	PKPdf	13 47 56.0	-1.5
	comp=Z,0.7nm,0.8s,baz=126,slow=2.0,SNR=3.6						
TORD				PKPab	PKPab	13 49 31.4	+0.3
	comp=Z,0.3nm,0.6s,baz=186,slow=5.7,SNR=1.4						

JMA 19 13:39:32.4±0.3, 25°.33N×124°.35E, h133^{km}±5^{km}, M2.1, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JISG	Ishigakijimahi	0.74	183	P	Pn	13 39 53.2	-0.2
JISG				S	Sn	13 40 09.9	+0.6
JTJ	Tarama	0.76	155	P	Pn	13 39 53.9	+0.4
JTJ				S	Sn	13 40 10.0	+0.5
JIRB	Irabujima	0.90	124	S	Sn	13 40 11.4	-0.1
JIKM	Ikemajima	0.91	116	*e*S	Sn	13 40 12.3	+0.6
JIJ	Ishigaki jima	0.98	191	P	Pn	13 39 55.7	+0.3
JIJ				S	Sn	13 40 12.8	-0.1
JMJ2	Miyako jima3	1.06	123	*e*S	Sn	13 40 15.1	+0.9
JOGS	Gusukube	1.11	120	S	Sn	13 40 15.5	+0.5
JKRS	Kuro-shima	1.13	196	P	Pn	13 39 57.0	+0.2
JKRS				*e*S	Sn	13 40 16.0	+0.6
IRIF	Iriomote-Funau	1.14	210	P	Pn	13 39 57.0	+0.1
IRIF				*e*S	Sn	13 40 15.5	0.0
HATJ	Hateruma jima	1.36	201	*e*S	Sn	13 40 20.1	+0.5
YOJ	Yonaguni jima	1.49	235	P	Pn	13 40 01.1	+0.5
YOJ				S	Sn	13 40 25.3	+3.2

TAP 19 13:39:59.8, 24°.90N×122°.50E, h37^{km}, ML2.2, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.48	283	*e*P	Pn	13 40 10.3	+0.3
	baz=283						
TWB1				*e*S	Sn	13 40 15.8	-1.5
	baz=283						
EOS1	EOS1	0.49	224	P	Pn	13 40 10.2	+0.1
	baz=224						
EOS1				S	Sn	13 40 18.2	+0.8
	baz=224						
TIPB	Shuangxi	0.62	277	*e*P	Pn	13 40 12.4	+0.1
	baz=277						
TIPB				S	Sn	13 40 20.0	-0.9
	baz=277						
NWF	Wu-fen Shan	0.68	285	P	Pn	13 40 13.4	+0.4
	baz=284						
NWF				S	Sn	13 40 23.8	+1.4
	baz=284						
TWE	Neicheng	0.78	257	*e*P	Pn	13 40 14.7	+0.5
	baz=256						
TWE				*e*S	Sn	13 40 25.3	+0.6
	baz=256						
ENA	Nanau	0.84	236	P	Pn	13 40 15.1	+0.1
	baz=236						
ENA				S	Sn	13 40 25.5	-0.7
	baz=236						
YM01	YM01	0.88	286	*e*P	Pn	13 40 16.9	+1.2
	baz=295						
YM01				*e*S	Sn	13 40 27.8	+0.5
	baz=295						
ENTT	Nioudou	0.89	253	P	Pn	13 40 16.1	+0.3
	baz=242						
ENTT				S	Sn	13 40 28.1	+0.6
	baz=242						
NWLT	Wulai	0.92	263	*e*P	Pn	13 40 16.1	-0.1
	baz=262						
NWLT				S	Sn	13 40 27.6	-0.5
	baz=262						
NDT	Datong Townshi	0.95	252	*e*P	Pn	13 40 17.8	+1.2
	baz=252						
NDT				S	Sn	13 40 30.0	+1.1
	baz=252						
YHNB	Yeheng	1.05	258	P	Pn	13 40 18.0	0.0
	baz=249						

YHNB	baz=249			S	Sn	13 40 31.7	+0.3
NACB	Ninganchiao baz=235	1.10	229	eP	Pn	13 40 18.9	+0.2
NACB	baz=235			S	Sn	13 40 33.6	+1.1
NNSB	Datong baz=245	1.12	246	eP	Pn	13 40 19.2	+0.1
NNSB	baz=245			S	Sn	13 40 33.0	-0.3
NNSH	Datong baz=246	1.12	246	eP	Pn	13 40 19.6	+0.6
NNSH	baz=246			S	Sn	13 40 33.4	+0.1
NNS	Nan Shan baz=246	1.12	246	eS	Sn	13 40 34.0	+0.6
ETLH	Xiulin Townshi baz=239	1.16	234	eP	Pn	13 40 20.1	+0.5
ETLH	baz=239			eS	Sn	13 40 36.6	+2.5

SOME ***19*** *13:53:09.8, 39°.47N×77°.38E, h5^{km}*
KRNET ***19*** *13:53:10.3±0.1, 39°.20N×77°.53E, mb3.4*
NNC ***19*** *13:53:12.7±1.4, 39°.57N×77°.31E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=9.6km s-min=8.0km az=167.0*
ISC 19 13:53:15.1±2.4**, 39°.4N**±0°.1×**77°.41E**±0°.05**, h10**^{km}**, n59, σ2ˢ.44**/89**, 34C-11D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDJ	Kajisay baz=55	2.73	356	⇑iP	Pn	13 53 59.0	-0.2
KDJ	baz=55			⇑iS	Sn	13 54 34.9	+2.5
ULHL	Ulahol baz=43	2.98	343	⇑iP	Pn	13 54 03.2	+0.6
ULHL	baz=43			⇑iS	Sn	13 54 41.1	+2.6
ULHL	Ulahol SNR=28	2.98	343	P	Pn	13 54 03.5	+0.9
KZA	Kyzart baz=30	3.14	329	⇑iP	Pn	13 54 05.3	+0.3
KZA	baz=30			⇑iS	Sn	13 54 45.0	+2.3
KZA	Kyzart SNR=9.0	3.14	329	P	Pn	13 54 06.4	+1.4
PRZ	Przheval'sk baz=11	3.17	13	⇓iP	Pn	13 54 05.1	-0.1
PRZ	baz=11			⇓iS	Sn	13 54 45.1	+2.0
BOOM	Boomskoye usch baz=40	3.28	341	⇑iP	Pn	13 54 06.7	0.0
BOOM	baz=40			⇑iS	Sn	13 54 48.3	+2.4
ANVS	Anan'yevo baz=2.0	3.38	3	⇑iP	Pn	13 54 08.0	-0.1
ANVS	baz=2.0			⇑iS	Sn	13 54 50.4	+2.0
ARLS	Aral baz=19	3.40	317	⇑iP	Pn	13 54 08.8	+0.5
ARLS	baz=19			⇑iS	Sn	13 54 51.6	+2.8
UCH	Uchtor baz=24	3.58	323	⇑iP	Pn	13 54 11.3	+0.2
UCH	baz=24			⇑iS	Sn	13 54 55.3	+1.7
UCH	Uchtor SNR=7.6	3.58	323	P	Pn	13 54 09.2	-1.9
TNSS	Tian-Shan 26nm,0.5s	3.65	355	eP	Pb	13 54 16.5	-3.4
TNSS	42nm,0.5s			eS	Sb	13 55 04.8	+0.4
TNSS	Tian-Shan 26nm,0.5s	3.65	355	Pg	Pb	13 54 16.5	-3.4
TNSS	42nm,0.5s			Lg	Lg	13 55 04.8	
IZV	Izvestkoviy 9.8nm,0.5s	3.68	351	eP	Pb	13 54 15.8	-4.5
IZV	29nm,0.5s			eS	Sb	13 55 03.2	-1.9
IZV	Izvestkoviy 9.8nm,0.5s	3.68	351	Pg	Pb	13 54 15.8	-4.5
IZV	29nm,0.5s			Lg	Lg	13 55 03.2	
SATY	Saty 11nm,0.6s	3.73	11	eP	Pb	13 54 16.9	-4.2
SATY	22nm,0.4s			eS	Sb	13 55 05.5	-1.0
SATY	Saty 11nm,0.6s	3.73	11	Pg	Pb	13 54 16.9	-4.2
SATY	22nm,0.4s			Lg	Lg	13 55 05.5	
KBK	Karagaybulak baz=31	3.75	331	⇑iP	Pn	13 54 13.7	+0.6
KBK	baz=31			⇑iS	Sn	13 54 59.5	+2.1
KBK	Karagaybulak SNR=7.5	3.75	331	P	Pb	13 54 17.7	-3.8
MDOK	Medeo 11nm,0.4s	3.77	356	eP	Pb	13 54 17.8	-4.0
MDOK	28nm,0.5s			eS	Sb	13 55 06.8	-0.8
MDOK	Medeo 12nm,0.5s	3.77	356	⇑Pg	Pb	13 54 19.9	-1.9
MDOK	18nm,0.6s			Lg	Lg	13 55 07.3	
MDOK	Medeo 11nm,0.4s	3.77	356	Pg	Pb	13 54 17.8	-4.0
MDOK	28nm,0.5s			Lg	Lg	13 55 06.8	
TKM2	Tokmak 2 baz=39	3.77	339	⇓iP	Pn	13 54 14.1	+0.6
TKM2	baz=39			⇓iS	Sn	13 55 00.2	+2.1
TKM2	Tokmak 2 SNR=7.5	3.77	339	P	Pb	13 54 16.7	-5.2
MTBS	Maitube 3.3nm,0.2s	3.80	349	eP	Pb	13 54 18.3	-3.9
MTBS	22nm,0.3s			eS	Sb	13 55 08.0	-0.4
MTBS	Maitube 3.3nm,0.2s	3.80	349	Pg	Pb	13 54 18.3	-3.9
MTBS	22nm,0.3s			Lg	Lg	13 55 08.0	
KST	Kastek 6.3nm,0.4s	3.80	344	eP	Pb	13 54 18.5	-3.8
KST	19nm,0.4s			eS	Sb	13 55 08.1	-0.4
KST	Kastek 6.3nm,0.4s	3.80	344	Pg	Pb	13 54 18.5	-3.8
KST	19nm,0.4s			Lg	Lg	13 55 08.1	
KNDC	Almaty 19nm,0.5s	3.83	355	⇑Pg	Pb	13 54 23.2	+0.5
KNDC	34nm,0.5s			⇑Lg	Lg	13 55 09.2	
KOTS	Kotyrbulak 28nm,0.3s	3.84	357	eP	Pb	13 54 19.1	-3.9
KOTS	105nm,0.6s			eS	Sb	13 55 09.3	-0.2
KOTS	Kotyrbulak 28nm,0.3s	3.84	357	Pg	Pb	13 54 19.0	-3.9
KOTS	105nm,0.6s			Lg	Lg	13 55 09.3	
ARSB	Arslanbob baz=3.0	3.89	301	⇑iP	Pn	13 54 14.9	-0.2
ARSB	baz=3.0			⇑iS	Sn	13 55 01.8	+0.9
AAK	Ala-Archa baz=27	3.92	327	⇑iP	Pn	13 54 15.9	+0.5
AAK	baz=27			⇑iS	Sn	13 55 03.3	+1.8
AAK	Ala-Archa SNR=8.1	3.92	327	P	Pb	13 54 20.6	-3.6
AAK	Ala-Archa 8.5nm,0.8s	3.92	327	⇓Pg	Pb	13 54 20.7	-3.6
AAK	35nm,0.8s			⇑Lg	Lg	13 55 09.9	
AML	Almayashu baz=16	3.93	315	⇓iP	Pn	13 54 15.9	+0.1
AML	baz=16			⇓iS	Sn	13 55 03.3	+1.2
AML	Almayashu SNR=10	3.93	315	P	Pn	13 54 17.5	+1.7
FRU1	Bishkek baz=30	4.00	329	⇑iP	Pn	13 54 16.9	+0.4
FRU1	baz=30			⇑iS	Sn	13 55 05.9	+2.4
DGS	Degeres 12nm,0.5s	4.03	343	eP	Pb	13 54 22.4	-3.9
DGS	38nm,0.6s			eS	Sb	13 55 14.8	-0.3
DGS	Degeres 12nm,0.5s	4.03	343	Pg	Pb	13 54 22.4	-3.9
DGS	38nm,0.6s			Lg	Lg	13 55 14.8	
SHLS	Shalkode 11nm,0.2s	4.06	22	eP	Pb	13 54 25.6	-1.1
SHLS	27nm,0.6s			eS	Sb	13 55 20.3	+4.5
SHLS	Shalkode 11nm,0.2s	4.06	22	Pg	Pb	13 54 25.6	-1.1
SHLS	27nm,0.6s			Lg	Lg	13 55 20.3	
CHMS	Chumysh baz=32	4.12	332	⇑iP	Pn	13 54 18.8	+0.7
CHMS	baz=32			⇑iS	Sn	13 55 08.0	+1.7
CHMS	Chumysh SNR=6.2	4.12	332	P	Sb	13 55 17.5	0.0
CHMS	Chumysh 5.1nm,0.7s	4.12	332	⇑Pg	Pb	13 54 24.2	-3.5
CHMS	8.8nm,0.5s			⇑Lg	Lg	13 55 17.5	
KPKS	Kokpek 8.8nm,0.4s	4.17	13	eP	Pb	13 54 24.6	-4.0
KPKS	24nm,0.5s			eS	Sb	13 55 18.9	-0.2
PDGK	Podgornoye 6.4nm,0.5s	4.22	21	⇓Pg	Pb	13 54 28.2	-1.3
PDGK	50nm,1.0s			⇑Lg	Lg	13 55 25.0	
EKS2	Erkin-Say baz=22	4.26	321	⇓iP	Pn	13 54 20.7	+0.5
EKS2	baz=22			⇓iS	Sn	13 55 11.5	+1.5
KTBS	Karatobe 11nm,0.6s	4.34	353	eP	Pb	13 54 28.9	-2.6
KTBS	29nm,0.5s			eS	Sb	13 55 25.9	+2.0
KTBS	Karatobe 11nm,0.6s	4.34	353	Pg	Pb	13 54 28.9	-2.6
KTBS	29nm,0.5s			Lg	Lg	13 55 25.9	
USP	Ospenovka baz=32	4.44	331	⇑iP	Pn	13 54 23.1	+0.6
USP	baz=32			⇑iS	Sn	13 55 16.0	+1.7
CHKK	Chushkaly 9.7nm,0.3s	4.46	356	eP	Pb	13 54 31.4	-2.1
CHKK	22nm,0.2s			eS	Sb	13 55 29.7	+2.4
CHKK	Chushkaly 9.7nm,0.3s	4.46	356	Pg	Pb	13 54 31.4	-2.1
CHKK	22nm,0.2s			Lg	Lg	13 55 29.7	
KRBS	Karabastau 6.2nm,0.4s	4.49	344	eP	Pb	13 54 31.3	-2.6
KRBS	11nm,1.0s			eS	Sb	13 55 30.1	+2.0
KRBS	Karabastau 6.2nm,0.4s	4.49	344	Pg	Pb	13 54 31.3	-2.6
KRBS	11nm,1.0s			Lg	Lg	13 55 30.1	
SGDS	Sogindy 4.5nm,0.4s	4.56	334	Pg	Pb	13 54 32.7	-2.5
SGDS	7.8nm,0.4s			Lg	Lg	13 55 32.1	
MRKS	Merke 7.9nm,0.5s	4.60	318	eP	Pb	13 54 33.3	-2.7
MRKS	9.8nm,0.4s			eS	Sb	13 55 33.7	+2.2
MRKS	Merke 7.9nm,0.5s	4.60	318	Pg	Pb	13 54 33.3	-2.7
MRKS	9.8nm,0.4s			Lg	Lg	13 55 33.7	
KK31	Karatay Array 0.5nm,0.4s,baz=126,slow=17,SNR=5.3	6.38	308	⇓Pg	Pb	13 55 06.1	-0.2
KK31	4.2nm,0.8s,baz=121,slow=27,SNR=3.7			⇑Lg	Lg	13 56 28.0	

NEIC ***19*** *13:53:43.9±1.4, 6°.9S±0°.1×155°.42E±0°.07, h8^{km}±5^{km}, mb4.2/8, Error ellipse: s-maj=17.4km s-min=8.3km az=204.0*
IDC ***19*** *13:53:43.0±1.2, 6°.91S×155°.36E, h0^{km}, mb3.6/7, mb1 3.8/9, mb1mx3.6/32, mbtmp3.6/9, ML2.5/2, MS3.2/2, Ms1 3.2/2, ms1mx2.8/34, Error ellipse: s-maj=32.1km s-min=22.5km az=123.0*
ISC 19 13:53:44.2±0.7**, 6°.90S**±0°.09×**155°.42E**±0°.08**, h10**^{km}**, n26, σ0ˢ.81**/23**, mb3.7**/11**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	4.21	310	Pn	Pn	13 54 47.0	-1.5
KRVT	Keravat (AS076 2.1nm,0.3s,baz=162,slow=4.7,SNR=10	4.24	307	Pn	Pn	13 54 49.8	+0.8
KRVT	5.2nm,0.3s,baz=48,slow=7.1,SNR=5.3			Sn	Sn	13 55 38.5	-0.1
HNR	Honiara comp=Z,168nm,18.7s,baz=316,slow=41	5.14	120	LR	LR	13 57 17.7	
HNR	Honiara	5.14	120	Pn	Pn	13 55 00.4	-0.9
PMG	Port Moresby 0.9nm,0.3s,baz=287,slow=19,SNR=2.2	8.55	252	Pn	Pn	13 55 49.1	+1.0
PMG	0.7nm,0.3s,baz=249,slow=17,SNR=1.6			Sn	Sn	13 57 23.3	-1.4
PMG	Port Moresby	8.55	252		Pn	13 55 48.5	+0.4
FAKI	Fak Fak	23.41	279	P	P	13 58 53.7	0.0
ARMA	Armidale	23.67	188	P	P	13 58 56.2	0.0
ARMA	comp=Z,19nm,1.5s			IAmb	IAmb	13 59 32.9	
WR0	Warramunga Arr	24.06	235	P	P	13 58 59.9	0.0
WR0	comp=Z,5.9nm,1.2s			IAmb	IAmb	13 59 04.6	
WB0	Warramunga Arr	24.09	236	P	P	13 59 00.1	-0.1
WRAB	Tennant Creek	24.20	236	P	P	13 59 01.6	+0.3
WRAB	comp=Z,11nm,1.4s			IAmb	IAmb	13 59 59.6	
WB2	Warramunga Arr	24.21	236	P	P	13 59 01.5	+0.2
WB2	comp=Z,6.4nm,1.2s			IAmb	IAmb	13 59 08.3	
WRA	Warramunga Arr comp=Z,0.7nm,0.6s,baz=59,slow=9.7,SNR=6.7	24.22	236	P	P	13 59 00.8	-0.6
WRA	Warramunga Arr	24.22	236	P	P	13 59 01.8	+0.4
ASAR	Alice Springs comp=Z,0.4nm,0.7s,baz=68,slow=7.3,SNR=3.0	26.55	229	P	P	13 59 21.9	-0.7
H11S3	WAKE ISLAND Hy baz=203,slow=74	27.57	24	T	T	14 28 03.1	
H11S2	WAKE ISLAND Hy baz=203,slow=74	27.58	24	T	T	14 28 02.1	
H11S1	WAKE ISLAND Hy baz=203	27.59	24	T	T	14 28 03.8	
STKA	Stephens Creek comp=Z,0.9nm,0.6s,baz=7.1,slow=16,SNR=1.6	28.00	206	P	P	13 59 36.4	+1.0
FITZ	Fitzroy Crossi comp=Z,66nm,18.9s,baz=302,slow=38	31.07	246	LR	LR	14 13 25.6	
SONM	Songino Array comp=Z,0.3nm,0.6s,baz=104,slow=6.1,SNR=2.5	69.48	327	P	P	14 04 53.5	+0.4
ILAR	Eielson Array comp=Z,0.4nm,0.8s,baz=242,slow=5.7,SNR=3.0	83.13	21	P	P	14 06 10.1	0.0
MKAR	Makanchi Array comp=Z,0.4nm,0.7s,baz=102,slow=5.9,SNR=2.8	83.61	319	P	P	14 06 12.8	-0.2
YKA	Yellowknife Ar comp=Z,0.5nm,1.0s,baz=264,slow=4.1,SNR=2.3	96.06	28	P	P	14 07 13.3	+1.6
TORD	Torodi Ar. Bea comp=Z,0.5nm,0.8s,baz=135,slow=2.4,SNR=2.5	153.40	286	PKPbc	PKPbc	14 13 43.6	-0.4
TORD	Torodi Ar. Bea	153.40	286	PKPdf	PKPdf	14 13 35.4	-1.0

IDC ***19*** *14:02:07.2±1.4, 13°.72N×93°.72E, h0^{km}, mb3.8/5, mb1 3.9/6, mb1mx3.5/43, mbtmp3.7/6, ML3.7/1, Error ellipse: s-maj=58.5km s-min=20.9km az=65.0*
NEIC ***19*** *14:02:13.3±1.4, 13°.9N±0°.1×94°.0E±0°.1, h34^{km}±6^{km}, mb4.4/6, Error ellipse: s-maj=19.2km s-min=15.9km az=59.0*
ISC 19 14:02:13.0±1.0**, 13°.9N**±0°.1×**94°.0E**±0°.1**, h35**^{km}**, n19, σ0ˢ.96**/19**, mb3.9**/7**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIMRM	Sittwe	6.32	351	Pn	Pn	14 03 43.5	-0.2
CMAR	Chiang Mai Arr 0.4nm,0.3s,baz=241,slow=16,SNR=6.6	6.60	46	Pn	Pn	14 03 48.0	+0.3
CMAR	0.6nm,0.3s,baz=240,slow=28,SNR=5.5			Sn	Sn	14 05 02.1	+0.3
CMAR	Chiang Mai Arr	6.60	46		Pn	14 03 47.1	-0.6
CHTO	Chiang Mai	6.85	43		Pn	14 03 50.4	-0.6
H08S3	Diego Garcia H baz=42,slow=75,SNR=3.7	30.18	226	T	T	14 39 28.8	
H08S2	Diego Garcia H baz=42,slow=75,SNR=4.5	30.19	226	T	T	14 39 27.6	
H08S1	Diego Carcia H baz=42,slow=75	30.20	226	T	T	14 39 37.1	
MKAR	Makanchi Array 0.4nm,0.5s,baz=151,slow=9.7,SNR=5.9	34.26	346	P	P	14 08 57.0	+1.4
MAKZ	Makanchi	34.35	345	P	P	14 08 57.0	+0.6
KURBB	Kurchatov Arra 0.3nm,0.4s,baz=159,slow=8.3,SNR=1.7	38.75	344	P	P	14 09 32.8	-1.1
KURK	Kurchatov	38.81	344	P	P	14 09 32.8	-1.6
FITZ	Fitzroy Crossi 3.1nm,1.1s,baz=343,slow=6.6,SNR=6.0	44.54	135	P	P	14 10 22.3	+0.7
FITZ	Fitzroy Crossi	44.54	135	P	P	14 10 22.3	+0.7
FITZ	comp=Z,12nm,1.5s			IAmb	IAmb	14 10 58.4	
ABKAR	Akbulak array	44.99	329	P	P	14 10 25.6	+0.7
WRA	Warramunga Arr comp=Z,0.9nm,0.8s,baz=304,slow=9.2,SNR=5.2	52.01	129	P	P	14 11 20.1	+0.8
WRA	comp=Z,0.6nm,0.5s,baz=322,slow=3.1,SNR=11			PcP	PcP	14 12 29.9	-1.5
WRA	Warramunga Arr	52.01	129	P	P	14 11 19.8	+0.4
WB2	Warramunga Arr	52.02	129	P	P	14 11 20.3	+0.9
WB2	comp=Z,10nm,1.4s			IAmb	IAmb	14 12 58.1	
AS31	Alice Springs	53.99	133	P	P	14 11 34.2	+0.3
AS31	comp=Z,1.8nm,1.2s			IAmb	IAmb	14 11 41.4	
ASAR	Alice Springs comp=Z,0.5nm,0.4s,baz=308,slow=7.2,SNR=18	53.99	133	P	P	14 11 34.6	+0.7
ASAR	comp=Z,0.3nm,0.6s,baz=312,slow=3.0,SNR=2.7			PcP	PcP	14 12 37.5	-1.4

IDC ***19*** *14:04:17.2±1.6, 0°.05N×124°.96E, h0^{km}, mb3.3/4, mb1 3.5/4, mb1mx3.3/44, mbtmp3.4/4, Error ellipse: s-maj=181.6km s-min=22.9km az=64.0*
DJA ***19*** *14:04:22.7±0.3, 0°S±3°×12°4E±°, h10^{km}, M4.2/8, mb5.0/4, mB5.8/3, MLv3.8/8, Mw(mB)5.3/3*
ISC 19 14:04:24.3±1.0**, 0°.34S**±0°.08×**124°.55E**±0°.05**, h35**^{km}**, n14, σ1ˢ.98**/16**, mb3.3**/5**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	1.07	328	P	Pn	14 04 42.6	-0.1
LUWI	Luwuk	1.91	248	P	Pn	14 04 54.5	+0.2
LUWI				S	Sn	14 05 18.1	+0.9
SANI	Sanana	2.23	140	P	Pn	14 04 59.7	+1.0
SANI				S	Sn	14 05 26.4	+1.3
MRSI	Marisa	2.73	287	P	Pn	14 05 07.8	+2.2
APSI	Ampana	2.96	259	P	Pn	14 05 09.3	+0.6
LBMI	Labuha	2.97	96	P	Pn	14 05 10.0	+1.1
MPSI	Mapaga	4.70	278	P	Pn	14 05 37.5	+4.8
MSAI	Masohi 0.0nm364nm7.2nm,0.6s	5.30	124	P	Pn	14 05 42.8	+1.8
TTSI	Tana Toraja 0.1nm18nm,0.7s	5.44	240	P	Pn	14 05 42.4	-0.5
WRA	Warramunga Arr 0.5nm,0.5s,baz=334,slow=11,SNR=10	21.72	154	P	P	14 09 11.6	-1.0
RGRI	Rengat 61μm258nm,0.4s	22.21	270	P	P	14 09 19.0	+1.0
ASAR	Alice Springs 0.8nm,0.8s,baz=336,slow=7.4,SNR=12	24.91	159	P	P	14 09 44.4	+0.2
MKAR	Makanchi Array 0.3nm,0.6s,baz=117,slow=8.0,SNR=2.9	59.72	328	P	P	14 14 23.3	-2.2
KURBB	Kurchatov Arra 0.1nm,0.3s,baz=128,slow=6.0,SNR=2.3	64.03	329	P	P	14 14 51.6	-2.8

DJA ***19*** *14:11:08.7±0.6, 7°S±4°×13°0E±°, h209^{km}±13^{km}, M4.1/8, mB4.7/3, mb3.9/4, MLv4.2/8, Mw(mB)3.9/3*
IDC ***19*** *14:11:08.2±2.8, 6°.58S×129°.85E, h135^{km}±30^{km}, mb3.7/4, mb1 3.6/7, mb1mx3.4/45, mbtmp4.0/7, Error ellipse: s-maj=54.0km s-min=17.6km az=86.0*
NEIC ***19*** *14:11:09.4±1.0, 6°.49S±0°.08×130°.0E±0°.1, h151^{km}±11^{km}, mb4.4/6, Error ellipse: s-maj=15.1km s-min=11.8km az=89.0*
ISC 19 14:11:08.5±0.6**, 6°.60S**±0°.06×**130°.05E**±0°.09**, h150**^{km}**, n34, σ2ˢ.09**/34**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.85	138	P	Pn	14 11 47.3	+5.4
SAUI	Saumlaki	1.85	138	Pn	Pn	14 11 46.0	+4.1
BNDI	Bandanaira	2.07	356	P	Pn	14 11 47.4	+2.9
MSAI	Masohi	3.42	341	P	Pn	14 12 03.6	+2.3
FAKI	Fak Fak	4.27	31	P	Pn	14 12 13.0	+0.7
FAKI	Fak Fak	4.27	31		Pn	14 12 12.5	+0.2
SIJI	Sorong 1.9nm,0.3s,baz=223,slow=23,SNR=31	5.82	12	P	Pn	14 12 32.9	-0.1
SIJI	6.4nm,0.3s,baz=185,slow=19,SNR=15			S	Sn	14 13 34.6	-4.4
SWI	Sorong 0.4nm1μm22nm,0.8s	5.83	12	P	Pn	14 12 33.0	0.0
SANI	Sanana 0.1nm9.1nm,0.9s	6.07	318	P	Pn	14 12 37.8	+1.6
MTN	Manton Dam	6.29	170		Pn	14 12 40.2	+1.0
SOEI	Soe	6.52	241	Pn	Pn	14 12 42.8	+0.4
KNRA	Kununurra	9.11	188		Pn	14 13 15.8	-0.8
FITZ	Fitzroy Crossi 0.4nm,0.3s,baz=26,slow=10,SNR=24	12.21	200	P	Pn	14 13 56.5	-1.0
FITZ	2.1nm,0.3s,baz=159,slow=20,SNR=9.1			S	Sn	14 16 01.3	-11
FITZ	Fitzroy Crossi	12.21	200		Pn	14 13 57.2	-0.3
WB0	Warramunga Arr	13.75	163		Pn	14 14 15.5	-1.8
WRAB	Tennant Creek	13.89	163	Pn	Pn	14 14 16.9	-2.2
WRA	Warramunga Arr 0.5nm,0.3s,baz=340,slow=13,SNR=26	13.90	163	P	Pn	14 14 17.5	-1.7
WRA	2.3nm,0.3s,baz=332,slow=23,SNR=11			S	Sn	14 16 44.3	-9.0
WRA	Warramunga Arr	13.90	163		Pn	14 14 16.8	-2.5
WB2	Warramunga Arr	13.90	163	Pn	Pn	14 14 17.5	-1.8
WR0	Warramunga Arr	13.98	162	Pn	Pn	14 14 19.1	-1.1
COEN	Coen	14.84	121	Pn	Pn	14 14 31.6	+0.6
AS31	Alice Springs	17.37	168	P	P	14 15 03.0	+2.0
AS31	comp=Z,1.0nm,0.7s			IAmb	IAmb	14 15 41.1	
ASAR	Alice Springs comp=Z,0.6nm,0.3s,baz=343,slow=9.3,SNR=58	17.37	168	P	P	14 15 03.3	+2.3
ASAR	comp=Z,0.3nm,0.3s,baz=352,slow=26,SNR=6.3			S	S	14 18 07.7	-6.6
ASAR	Alice Springs	17.37	168	P	P	14 15 02.7	+1.8
UGM	Wanagama	19.41	265	P	P	14 15 21.8	-1.5
STKA	Stephens Creek comp=Z,1.2nm,0.9s,baz=326,slow=12,SNR=1.9	27.36	158	P	P	14 16 41.4	+1.7
USRK	Ussuriysk Ar. comp=Z,0.9nm,0.5s,baz=178,slow=8.1,SNR=4.1	50.60	2	P	P	14 19 52.6	+0.7
SONM	Songino Array comp=Z,0.4nm,0.4s,baz=141,slow=5.0,SNR=2.4	58.08	341	P	P	14 20 46.8	+0.7
SONM	Songino Array	58.08	341	P	P	14 20 46.0	-0.2
MK31	Makanchi Array	67.92	327	P	P	14 21 51.5	+0.5
MK31	comp=Z,11nm,1.1s			IAmb	IAmb	14 23 03.4	
MKAR	Makanchi Array comp=Z,4.3nm,0.5s,baz=113,slow=8.1,SNR=7.7	67.92	327	P	P	14 21 51.8	+0.7
MKAR	Makanchi Array	67.92	327	P	P	14 21 51.4	+0.4
MAKZ	Makanchi	68.10	327	P	P	14 21 52.1	0.0
MAKZ	comp=Z,15nm,0.9s			IAmb	IAmb	14 22 25.3	
YAK	Yakutsk	68.43	360	P	P	14 21 54.1	+0.3

NNC ***19*** *14:15:38.6±1.8, 36°.73N×70°.46E, h0^{km}, mb5.6, mpv5.6, Error ellipse: s-maj=17.8km s-min=9.5km az=158.0*
MOS ***19*** *14:15:42.6±0.7, 36°.47N×70°.74E, h197^{km}, mb4.9/45, Error ellipse: s-maj=5.9km s-min=3.6km az=83.3*
BJI ***19*** *14:15:43.8±0.0, 36°.62N×70°.76E, h200^{km}, mB4.8/36, mb4.8/53*
NEIC ***19*** *14:15:44.7±1.4, 36°.45N±0°.06×70°.68E±0°.09, h207^{km}±5^{km}, mb4.7/154, Error ellipse: s-maj=11.2km s-min=8.6km az=66.0*
IDC ***19*** *14:15:45.2±0.7, 36°.39N×70°.71E, h211^{km}±6^{km}, mb4.1/35, mb1 4.2/38, mb1mx4.2/48, mbtmp4.7/38, Error ellipse: s-maj=8.9km s-min=6.6km az=11.0*
ISC 19 14:15:43.2±0.4**, 36°.45N**±0°.03×**70°.73E**±0°.03**, h193**^{km}±3^{km}**,**

$h193^{km}$:pP-P,n475,$\sigma 1^{s}53$/533,mb4.7/162,32C-27D,
Hindu Kush region

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Code  Station Name        Δ°   AZ°    Phase ID         Time     Res
                                    Op      ISC       h  m  s    ISC
KBL   Kabul              2.35 216   P       Pn       14 16 26.0 +0.8
KBL                                 S       Sn       14 16 57.3 -0.6
CEP   Cherat             2.79 159   P       Pn       14 16 31.8 +1.6
CEP                                 S       Sn       14 17 07.0 +0.1
CHCP  Chirah Chowk       3.48 143   P       Pn       14 16 40.2 +1.9
NIL   Nilore             3.48 143   P       Pn       14 16 40.5 +2.2
NIL   Nilore             3.48 143   PN      Pn       14 16 40.1 +1.8
NIL   Nilore             3.48 143           Pn       14 16 40.1 +1.8
SARP  Sargodha           4.80 160   P       Pn       14 16 55.4 +0.5
TAS   Tashkent           4.99 348   PN      Pn       14 16 57.9 +0.6
TAS   Tashkent           4.99 348           Pn       14 16 57.9 +0.6
JMU   Jammu              5.07 136  eP       Pn       14 16 55.0 -3.4
JMU                                eS       Sn       14 17 51.0 -6.5
KSH   Kashi              5.15  52   P       Pn       14 16 55.6 -3.9
KSH                                 S       Sn       14 17 49.8  -10
KSH                                 pmax    pmax
      comp=Z,950nm,0.5s
KSH                                 smax    smax
      comp=N,5µm,0.8s
KSH                                 smax    smax
      comp=E,4µm,0.7s
ARSB  Arslanbob          5.17  19   PN      Pn       14 16 59.2 -0.6
ARSB  Arslanbob          5.17  19   Pn      Pn       14 16 59.2 -0.6
IUG   Iuzhnay            5.71 355d iPN      Pn       14 17 07.0 +0.3
IUG                                eS       Sn       14 18 09.9 -2.7
THN   Thein Dam          5.75 133  i P      Pn       14 17 08.0 +0.9
THN                                eS       Sn       14 18 11.3 -2.0
AML   Almayashu          6.12  21   P       Pn       14 17 12.2 -0.1
      SNR=2400
DHRM  DHARAMSHALA        6.23 131  eP       Pn       14 17 13.8 +0.2
DHRM                               eS       Sn       14 18 22.9 -2.0
DHRM                                IAML             14 18 25.9
      comp=N,4µm,0.4s
DHRM                                IAML             14 18 28.4
      comp=E,2µm,0.3s
DZA   Taraz              6.45   4  ePN      Pn       14 17 16.4 +0.2
UCH   Uchtor             6.47  26   P       Pn       14 17 16.9 +0.1
      SNR=325
KZA   Kyzart             6.62  31   P       Pn       14 17 18.4 -0.4
      SNR=39
EKS2  Erkin-Say          6.63  20   P       Pn       14 17 18.8 +0.2
      SNR=221
KK31  Karatay Array      6.65 359 ⇑P        Pn       14 17 15.9 -2.8
      comp=E,110nm,0.3s,baz=188,slow=15,SNR=1476
KK31                                S       Sn       14 18 29.7 -4.7
      comp=E,276nm,0.6s,baz=187,slow=21,SNR=18
KK31  Karatay Array      6.65 359   PN      Pn       14 17 18.3 -0.4
KK31  Karatay Array      6.65 359           Pn       14 17 18.3 -0.4
KKAR  Karatay Array      6.65 359   PN      Pn       14 17 18.0 -0.7
KKAR  Karatay Array      6.65 359           Pn       14 17 18.0 -0.7
KKAR  Karatay Array      6.65 359           Pn       14 17 18.3 -0.4
AAK   Ala-Archa          6.83  24   P       Pn       14 17 21.7 +0.4
      comp=E,51nm,0.3s,baz=193,slow=7.9,SNR=917
AAK                                 S       Sn       14 18 37.1 -1.7
      comp=E,21nm,0.3s,baz=335,slow=20,SNR=27
AAK   Ala-Archa          6.83  24   P       Pn       14 17 21.5 +0.2
      SNR=114
AAK   Ala-Archa          6.83  24  i P      Pn       14 17 21.3 +0.1
      SNR=306
AAK   Ala-Archa          6.83  24 ⇓P        Pn       14 17 16.9 -4.3
      comp=E,184nm,0.5s
AAK                               ⇓S        Sn       14 18 36.7 -2.2
      comp=E,964nm,0.8s
AAK   Ala-Archa          6.83  24   P       Pn       14 17 21.3 +0.1
AAK   Ala-Archa          6.83  24d iPN      Pn       14 17 21.2  0.0
AAK                                 pmax    pmax
      comp=Z,258nm,0.6s
AAK   Ala-Archa          6.83  24           Pn       14 17 21.3 +0.1
KBK   Karagaybulak       7.00  26   P       Pn       14 17 23.9 +0.4
      SNR=107
FRU1  Bishkek            7.03  24   PN      Pn       14 17 24.2 +0.5
FRU1  Bishkek            7.03  24           Pn       14 17 24.2 +0.5
ULHL  Ulahol             7.19  35   P       Pn       14 17 25.6 -0.5
      SNR=134
CHMS  Chumysh            7.24  24   P       Pn       14 17 26.1 -0.3
      SNR=223
CHMS  Chumysh            7.24  24 ⇓P        Pn       14 17 24.1 -2.3
      comp=Z,280nm,0.6s
CHMS                              ⇓S        Sn       14 18 44.6 -3.7
      comp=Z,489nm,0.8s
USP   Ospenovka          7.40  22   P       Pn       14 17 28.1 -0.5
      SNR=48
SMLA  Simla              7.54 133  eP       Pn       14 17 30.3 -0.2
SMLA                               eS       Sn       14 18 51.7 -3.9
SMLA                                IAML             14 18 54.3
      comp=E,940nm,0.4s
SMLA                                IAML             14 18 54.4
      comp=N,2µm,0.5s
MTBS  Maitube            7.98  32⇓iPN       Pn       14 17 36.4 +0.2
TNSS  Tian-Shan          8.13  34⇓iPN       Pn       14 17 38.2 -0.3
TNSS                               eS       Sn       14 19 08.5 -1.7
AAA   Alma-Ata           8.26  33  ePN      Pn       14 17 40.7 +0.9
AAA                                 pmax    pmax
      comp=Z,241nm,0.7s
MDOK  Medeo              8.28  34 ⇑P        Pn       14 17 39.9 -0.2
      comp=Z,184nm,0.8s
MDOK                              ⇓S        Sn       14 19 11.5 -1.8
      comp=Z,166nm,1.5s
MDOK  Medeo              8.28  34  ePN      Pn       14 17 40.2  0.0
MDOK                               eS       Sn       14 19 11.9 -1.3
KNDC  Almaty             8.29  33 ⇓P        Pn       14 17 40.9 +0.7
      comp=Z,556nm,0.8s
KNDC                              ⇓S        Sn       14 19 11.7 -1.6
      comp=Z,610nm,1.3s
SATY  Saty               8.86  39d iPN      Pn       14 17 46.7 -1.0
SATY                                pmax    pmax
      comp=Z,14nm,0.8s
BTLS  Baital             8.94  15  ePN      Pn       14 17 47.8 -0.8
UZB   Uzynbulak          9.24  41c iP       Pn       14 17 52.5 -0.2
UZB                                 pmax    pmax
      comp=Z,18nm,0.8s
KPKS  Kokpek             9.29  39d iP       Pn       14 17 52.7 -0.6
KPKS                                pmax    pmax
      comp=Z,65nm,1.0s
JOSI  Joshimath          9.43 126  ex       Pn       14 17 55.5 +0.2
JOSI                                IAML             14 19 42.0
      comp=E,660nm,0.6s
JOSI                                IAML             14 19 43.7
      comp=N,943nm,0.7s
NDI   New Delhi          9.48 143  eP       Pn       14 17 54.5 -1.3
NDI                                eS       Sn       14 19 33.5 -8.3
SHLS  Shalkode           9.48  42  eP       Pn       14 17 57.9 +2.0
SHLS                                pmax    pmax
      comp=Z,10.0nm,0.6s
AYAN  Aya Nagar          9.61 144  eP       Pn       14 17 56.9 -0.5
AYAN                               eS       Sn       14 19 37.2 -7.6
KUDL  Kundal             9.61 148  eP       Pn       14 17 42.6  -15
KUDL                               eS       Sn       14 19 23.4  -21
PDGK  Podgornoye         9.62  42 ⇓P        Pn       14 17 56.4 -1.2
      comp=Z,25nm,0.8s
PDGK                              ⇑S        Sn       14 19 46.8 +1.9
      comp=Z,160nm,1.0s
SONA  Sohna              9.78 145  eS       Sn       14 19 41.0 -7.9
GEYT  Alibeck           10.17 282   P       Pn       14 18 03.5 -1.2
      comp=Z,1.3nm,0.3s,baz=90,slow=8.9,SNR=15
GEYT                                S       Sn       14 19 52.4 -5.8
      comp=Z,1.7nm,0.3s,baz=98,slow=11,SNR=1.6
GEYT  Alibeck           10.17 282           Pn       14 18 02.6 -2.1
GYA0B ALIBECK ARRAY     10.17 282 ⇑P        Pn       14 18 03.8 -0.9
GYA0B                             ⇑S        Sn       14 19 52.7 -5.5
GYA0B ALIBECK ARRAY     10.17 282           Pn       14 18 02.7 -2.0
MAKZ  Makanchi          13.32  36 ⇓P        P        14 18 48.5 +0.7
      comp=Z,175nm,0.8s
MAKZ  Makanchi          13.32  36   P       Pn       14 18 44.2 -0.6
MAKZ  Makanchi          13.32  36           Pn       14 18 44.2 -0.6
MK31  Makanchi Array    13.46  36 ⇑P        P        14 18 50.1 +0.7
      comp=Z,85nm,0.8s,baz=203,slow=11,SNR=633
MK31  Makanchi Array    13.46  36   P       Pn       14 18 46.1 -0.5
MK31  Makanchi Array    13.46  36           Pn       14 18 46.1 -0.5
MKAR  Makanchi Array    13.46  36   P       Pn       14 18 46.6  0.0
      comp=Z,1.6nm,0.3s,baz=225,slow=12,SNR=102
MKAR                                S       Sn       14 21 15.8 -0.7
      baz=238,slow=11,SNR=1.3
MKAR                                ScP     ScP      14 27 11.1 -2.1
      comp=Z,0.1nm,0.3s,baz=315,slow=0.9,SNR=4.7
MKAR  Makanchi Array    13.46  36  i P      Pn       14 18 45.7 -0.9
MKAR                                pmax    pmax
      comp=Z,78nm,0.8s
MKAR  Makanchi Array    13.46  36   Pn      Pn       14 18 46.1 -0.5
DANN  Dangsing          13.64 123  eP       Pn       14 18 48.3 -1.0
BHPL  Bhopal            14.38 154  eP       Pn       14 18 58.1 -0.2
BHPL                               i x      x        14 19 02.3
GKN   Gorkha            14.46 122  eP       Pn       14 18 59.2 -0.1
WMQ   Urumqi            14.90  55  eP       P        14 19 06.3 +0.9
WMQ                                 S       S        14 21 49.1 -1.6
WMQ                                 pmax    pmax
      comp=Z,31nm,1.1s
WMQ                                 pmax    pmax
      comp=Z,67nm,3.7s
WMQ                                 LR      LR
      comp=Z,180nm,29.1s
WMQ                                 LR      LR
      comp=Z,1µm,29.0s
WMQ                                 LR      LR
      comp=Z,100nm,28.9s
AB31  Akbulak array     15.02 332 ⇑P        P        14 19 06.9 +0.4
      comp=Z,15nm,0.3s,baz=143,slow=11,SNR=507
AB31                              ⇑S        S        14 21 52.2 -0.9
      comp=Z,19nm,0.9s
ABKAR Akbulak array     15.02 332   Pn      Pn       14 19 04.5 -1.3
DMN   Daman             15.03 122  eP       Pn       14 19 06.5 +0.1
      comp=Z,82nm,0.6s
KKN   Kakani            15.04 121  eP       Pn       14 19 06.6 +0.2
      comp=Z,130nm,0.5s
ZSN   Zaisan            15.19  39  eP       Pn       14 19 07.4 -0.4
KURBB Kurchatov Arra    15.24  19   P       Pn       14 19 07.1 -1.3
      comp=Z,1.3nm,0.3s,baz=210,slow=9.7,SNR=74
KURBB                               S       Sn       14 21 58.9 +0.1
      comp=Z,0.3nm,0.3s,baz=212,slow=17,SNR=5.6
KURBB Kurchatov Arra    15.24  19 ⇑P        P        14 19 10.5 +1.6
      comp=Z,32nm,0.6s
PKIN  Phulchoki         15.25 121  eP       Pn       14 19 09.0 -0.1
      comp=Z,84nm,0.4s
PKIN                               eS       S        14 21 47.5  -12
PKI   Pulchoki          15.27 121  eP       Pn       14 19 09.2 -0.1
      comp=Z,202nm,0.7s
KURK  Kurchatov         15.35  19 ⇑P        P        14 19 11.0 +0.9
      comp=Z,40nm,0.8s
KURK  Kurchatov         15.35  19   P       Pn       14 19 08.8 -0.9
KURK  Kurchatov         15.35  19deP        Pn       14 19 07.8 -1.9
KURK                                pmax    pmax
      comp=Z,52nm,1.0s
KURK  Kurchatov         15.35  19           Pn       14 19 07.8 -1.9
KURK                                IAmb    IAmb     14 19 12.6
      comp=Z,39nm,0.8s
KURK  Kurchatov         15.35  19           S        14 21 58.9 -1.5
GUN   Gumba             15.38 119  eP       Pn       14 19 10.7 -0.1
JBP   Jabalpur          15.47 146  eP       P        14 19 13.5 +1.7
JBP                                 AMB     AMB      14 19 18.0
      comp=Z,27nm,0.6s
JBP                                ex       x        14 21 51.3
JIRN  Jiri              15.75 119  eP       Pn       14 19 15.5 +0.2
BANOM Banah             16.18 234   P       P        14 19 19.6 -0.1
BANOM Banah             16.18 234   P       P        14 19 19.9 +0.2
      SNR=17
SHME  Shamm             16.20 234  i P      P        14 19 20.1 +0.3
      SNR=19
RAMN  Ramite            16.48 121  eP       Pn       14 19 24.1 +0.2
      comp=Z,81nm,0.5s
BVAR  Borovoye Array    16.57 359   P       Pn       14 19 24.5  0.0
      comp=Z,13nm,0.3s,baz=159,slow=10.0,SNR=295
BVAR                                S       S        14 22 22.0 -4.8
      comp=Z,0.6nm,0.3s,baz=174,slow=14,SNR=2.2
BRVK  Borovoye          16.61 359 ⇑P        Pn       14 19 27.4 +2.5
      comp=Z,47nm,0.6s
BRVK                              ⇑S        Sn       14 22 32.1 +0.7
      comp=Z,38nm,1.2s
BRVK  Borovoye          16.61 359   P       Pn       14 19 25.0 +0.1
BRVK  Borovoye          16.61 359c iP       Pn       14 19 25.0 +0.1
BRVK                                pmax    pmax
      comp=Z,106nm,1.3s
BRVK  Borovoye          16.61 359   P       Pn       14 19 24.6 -0.3
MDH   Madha             16.62 232   P       P        14 19 23.9 -0.5
MDH   Madha             16.62 232   P       Pn       14 19 27.0 +1.6
      SNR=13
MSFE  Esma-Masafi       16.67 233  i P      Pn       14 19 25.6 -0.3
      SNR=32
AKTO  Aktyubinsk        16.71 331   P       Pn       14 19 26.4 +0.1
      comp=Z,8.4nm,0.3s,baz=141,slow=9.9,SNR=403
AKTO  Aktyubinsk        16.71 331 ⇓P        Pn       14 19 27.4 +1.2
      comp=Z,172nm,0.8s
AKTO                              ⇑S        Sn       14 22 32.6 -1.4
      comp=Z,36nm,0.9s
WSAR  Wadi Sarin        16.82 222   P       Pn       14 19 28.6 +0.9
      comp=Z,4.4nm,0.3s,baz=78,slow=8.7,SNR=36
NGP   Nagpur            16.89 152  eP       Pn       14 19 29.0 +0.4
NGP                                ex       x        14 22 28.1
UOSS  Minazif           16.93 231  i P      Pn       14 19 28.6 -0.5
      SNR=11
UOSS  Minazif           16.93 231   P       P        14 19 26.6 -1.3
TAPN  Taplejung         17.02 117  eP       Pn       14 19 31.5 +1.1
      comp=Z,84nm,0.6s
HATD  Hatta, Dubai      17.06 231  i P      Pn       14 19 30.1 -0.5
      SNR=28
HATD  Hatta, Dubai      17.06 231   P       Pn       14 19 31.0 +0.3
      SNR=17
ODAN  Odare             17.09 119  eP       Pn       14 19 31.9 +0.8
      comp=Z,53nm,0.4s
WBK   Wadi Bani Khal    17.15 220   P       Pn       14 19 33.3 +1.6
      SNR=14
ASHO  Ashiyiah          17.21 231   P       Pn       14 19 31.9 -0.5
ASHO  Ashiyiah          17.21 231   P       Pn       14 19 32.2 -0.2
      SNR=63
NAZ   Nazwa, Dubai      17.25 233  i P      Pn       14 19 32.7 -0.1
      SNR=16
NAZ   Nazwa, Dubai      17.25 233   P       Pn       14 19 32.5 -0.3
      SNR=29
SMDO  Samad             17.28 223   P       Pn       14 19 33.3 +0.1
      SNR=9.1
HOQ   Hoqain            17.28 226   P       Pn       14 19 33.0 -0.2
      SNR=5.1
SOHO  SOHO              17.32 229   P       P        14 19 32.7 +0.6
      SNR=8.6
JMDO  Jabal Madar       17.80 221   P       Pn       14 19 39.4  0.0
      SNR=16
ALNE  Al Ain            17.86 230  i P      Pn       14 19 39.2 -0.8
      SNR=24
ARQ   Araqi             17.93 227   P       Pn       14 19 40.9 +0.1
      SNR=14
DGZ   Jazzator, Alta    17.95  37c iP       Pn       14 19 40.3 -0.7
AJN   Ajban             17.98 233  i P      P        14 19 40.2 +0.9
      SNR=12
AJN   Ajban             17.98 233   P       P        14 19 40.2 +0.9
      SNR=22
AJN                                 S       S        14 22 53.8 -1.7
BSY   Bisya             18.00 224   P       Pn       14 19 40.9 -0.8
      SNR=18
POO   Poona             18.06 170⇑ix        P        14 19 38.4 -1.9
      comp=Z,50nm,1.2s
POO                                ex       x        14 22 56.4
LSA   Lhasa             18.38 106   P       Pn       14 19 47.2 +0.7
MHTO  MHTO              19.01 219   P       Pn       14 19 52.6 -0.9
      SNR=18
ZAA0  Zalesovo Array    20.05  25   P       P        14 20 01.6 +0.2
ZALV  Zalesovo Beam     20.05  25   P       P        14 20 02.0 +0.7
      comp=Z,113nm,0.5s,baz=222,slow=11,SNR=452
ZALV                                S       S        14 23 31.2 -4.6
      comp=Z,9.0nm,0.7s,baz=219,slow=18,SNR=4.4
ZALV  Zalesovo Beam     20.05  25   P       P        14 20 01.5 +0.1
ZALV                                S       S        14 23 31.2 -4.6
ZALV  Zalesovo Beam     20.05  25   P       P        14 20 01.5 +0.1
HYB   Hyderabad         20.19 158  i P      P        14 20 04.0 +0.8
HYB                                eS       S        14 23 39.0 -0.1
GNI   Garni             20.70 288   P       P        14 20 11.0 +2.4
      comp=Z,16nm,0.9s,baz=222,slow=1.9,SNR=6.8
GNI   Garni             20.70 288   P       P        14 20 11.0 +2.4
GNI   Garni             20.70 288   IAmb    IAmb     14 20 17.7
      comp=Z,35nm,1.1s
SVE   Sverdlovsk        21.48 345  eP       P        14 20 17.1 +0.6
SVE                                 pmax    pmax
      comp=Z,80nm,1.3s
ZEI   Tsey              21.56 295  eP       P        14 20 18.8 +1.1
ZEI                                 pmax    pmax
      comp=Z,5.0nm,0.7s
ARU   Arti              21.61 341   P       P        14 20 18.4 +0.7
      comp=Z,17nm,0.7s,baz=161,slow=7.4,SNR=60
ARU   Arti              21.61 341c iP       P        14 20 17.7 -0.1
ARU                                 *PP     pP       14 20 50.6 -0.6
ARU                                 S       S        14 24 05.1 +1.2
ARU                                 pmax    pmax
      comp=Z,76nm,0.8s
ARU   Arti              21.61 341   P       P        14 20 17.9 +0.2
AKH   Akhalkalaki       21.71 292   P       P        14 20 19.0 -0.3
AKH                                 pmax    pmax
      comp=Z,20nm,1.1s
AKH   Akhalkalaki       21.71 292   P       P        14 20 19.0 -0.3
AKH                                 IAmb    IAmb     14 20 24.4
      comp=Z,20nm,1.1s
NCK   Nalchik           21.89 297⇓eP        P        14 20 21.5 +0.7
NCK                                 pmax    pmax
      comp=Z,12nm,0.8s
KBZ   Khabaz            22.43 297   P       P        14 20 26.4 +0.6
      comp=Z,4.4nm,0.8s,baz=106,slow=9.0,SNR=10
KBZ   Khabaz            22.43 297⇓eP        P        14 20 26.0 +0.2
KBZ                                 pmax    pmax
      comp=Z,7.0nm,0.9s
NEY   Neytrino          22.48 296⇓eP        P        14 20 28.7 +2.1
NEY                                 pmax    pmax
      comp=Z,7.0nm,2.0s
SHA1  Shidzhatmaz       22.60 297⇓eP        P        14 20 28.8 +1.1
KVAR  Kislovodsk Arr    22.61 298   P       P        14 20 27.5 -0.2
      comp=Z,3.0nm,0.5s,baz=85,slow=11,SNR=1.7
KIV   Kislovodsk        22.62 298  eP       P        14 20 29.7 +2.0
KIV                                 pmax    pmax
      comp=Z,31nm,1.0s
KIV                                 MLR     MLR
      comp=Z,131nm,14.0s
KIV   Kislovodsk        22.62 298   P       P        14 20 25.3 -2.3
GTA   Gaotai            23.09  74 ⇑P        P        14 20 33.8 +1.8
GTA                                 pP      pP       14 21 14.8 +6.4
GTA                                 sP      sP       14 21 37.1 +3.8
GTA                                 S       S        14 24 26.3 -2.2
GTA                                 SS      SnSn     14 25 34.1 +7.3
GTA                                 ScS     ScS      14 31 17.8 -2.9
GTA                                 pmax    pmax
      comp=Z,27nm,1.0s
GTA                                 pmax    pmax
      comp=Z,180nm,7.0s
WHFO  Wadi Hawf         23.77 224   P       P        14 20 38.5 +0.3
      SNR=6.5
ABTO  Aybut             24.49 224   P       P        14 20 47.7 +2.9
      SNR=8.8
RAYN  Ar Rayn           25.28 246  i P      P        14 20 52.5 +0.6
      SNR=14
RAYN  Ar Rayn           25.28 246   P       P        14 20 51.9  0.0
RAYN                                pmax    pmax
      comp=Z,13nm,0.9s
RAYN  Ar Rayn           25.28 246   P       P        14 20 51.9  0.0
RAYN                                IAmb    IAmb     14 20 58.3
      comp=Z,13nm,0.8s
VRH   Novokhopyorsk     25.39 315  eP       P        14 20 52.3 -0.2
VRH                                 pmax    pmax
      comp=Z,30nm,1.0s
KIRV  Kirov             26.19 334   P       P        14 21 00.7 +1.1
      comp=Z,20nm,0.5s,baz=125,slow=7.0,SNR=13
MOY   Mondy             26.30  45  eP       P        14 21 02.8 +1.9
MOY                                e                 14 21 46.9
MOY                                 pmax    pmax
      comp=Z,29nm,2.2s
LZH   Lanzhou           26.63  81  eP       P        14 21 06.5 +2.4
LZH                                 pP      pP       14 21 46.3 +1.8
LZH                                 sP      sP       14 22 05.8 -1.8
LZH                                 pmax    pmax
      comp=Z,23nm,1.0s
GAZ   Gaziantep         26.77 282   P       P        14 21 04.5 -0.7
GAZ                                 IAmb    IAmb     14 21 52.9
      comp=Z,15nm,1.3s
VSR   Storozhevoye      26.88 313d iP       P        14 21 06.3 +0.4
VSR                                 pmax    pmax
      comp=Z,34nm,0.9s
LPSR  Galich'ya Gora    27.54 316  eP       P        14 21 12.3 +0.6
LPSR                                pmax    pmax
      comp=Z,40nm,0.9s
TLY   Talaya            27.83  46   P       P        14 21 16.6 +2.2
      comp=Z,8.7nm,0.7s,baz=235,slow=11,SNR=8.8
CD2   Chengdu           27.95  92  eP       P        14 21 16.0 +0.3
CD2                                 pmax    pmax
      comp=Z,10.0nm,0.5s
SONM  Songino Array     28.54  55   P       P        14 21 22.5 +1.6
      comp=Z,12nm,0.8s,baz=256,slow=9.9,SNR=67
SONM                                pP      pP       14 22 05.8 +4.3
      comp=Z,3.6nm,0.9s,baz=254,slow=8.8,SNR=2.7
SONM  Songino Array     28.54  55   P       P        14 21 21.9 +1.0
SONM                                *PP     pP       14 22 05.8 +4.3
SONM                                pmax    pmax
      comp=Z,9.0nm,0.8s
SONM  Songino Array     28.54  55   P       P        14 21 21.9 +1.0
ULN   Ulaanbaatar       28.99  55c iP       P        14 21 26.2 +1.4
ULN                                 pmax    pmax
      comp=Z,12nm,0.8s
ULN   Ulaanbaatar       28.99  55   P       P        14 21 26.0 +1.2
ULN                                 IAmb    IAmb     14 21 27.2
      comp=Z,11nm,0.8s
BR131 Keskin Array S    29.24 288⇑eP        P        14 21 27.9 +0.8
BRTR  Keskin Array B    29.24 288   P       P        14 21 27.9 +0.7
      comp=Z,0.9nm,0.6s,baz=100,slow=9.9,SNR=6.1
BRTR                                pP      pP       14 22 10.2 +3.4
      comp=Z,2.3nm,0.9s,baz=109,slow=11,SNR=3.2
BRTR                                PcP     PcP      14 24 29.2 +0.1
      comp=Z,1.3nm,0.9s,baz=102,slow=3.8,SNR=3.0
BRTR  Keskin Array B    29.24 288   P       P        14 21 27.5 +0.3
MOS   Moscow            29.56 321  eP       P        14 21 29.4 -0.2
MOS                                e                 14 22 30.6
MOS                                 pmax    pmax
      comp=Z,78nm,1.1s
MOS                                 pmax    pmax
      comp=Z,100nm,1.1s
KMI   Kunming           29.60 103   P       P        14 21 34.1 +3.5
KMI                                 pP      pP       14 22 12.3 +0.9
KMI                                 sP      sP       14 22 31.3 -2.8
KMI                                 pmax    pmax
      comp=Z,12nm,0.6s
KMI                                 pmax    pmax
      comp=Z,160nm,5.3s
KMI                                 LR      LR
      comp=Z,110nm,5.8s
KMI                                 LR      LR
      comp=Z,130nm,5.4s
KMI                                 LR      LR
      comp=Z,78nm,5.6s
PRGR  Permogore         29.73 336  eP       P        14 21 30.9 -0.1
PRGR                                pmax    pmax
      comp=Z,26nm,0.8s
OBN   Obninsk           29.83 320   P       P        14 21 33.2 +1.2
      comp=Z,12nm,0.6s,baz=96,slow=21,SNR=9.2
OBN   Obninsk           29.83 320ceP        P        14 21 32.7 +0.7
OBN                                e*PP     pP       14 22 11.1 -0.5
OBN                                i                 14 22 40.9
OBN                                eS       S        14 26 15.9 +1.8
OBN                                 pmax    pmax
      comp=Z,48nm,0.7s
OBN   Obninsk           29.83 320   P       P        14 21 32.3 +0.3
CHTO  Chiang Mai        30.39 118   P       P        14 21 38.3 +1.0
CHTO                                pmax    pmax
      comp=Z,6.0nm,1.1s
CHTO  Chiang Mai        30.39 118   P       P        14 21 38.3 +1.0
PALK  Pallekele         30.44 160⇓iP        P        14 21 40.1 +2.3
PALK                                pmax    pmax
      comp=Z,11nm,0.9s
CM31  Chiang Mai Arr    30.62 118   P       P        14 21 40.3 +0.9
CMAR  Chiang Mai Arr    30.62 118   P       P        14 21 40.5 +1.1
      comp=Z,4.8nm,0.8s,baz=298,slow=8.1,SNR=33
CMAR                                pP      pP       14 22 21.6 +1.3
      comp=Z,1.5nm,0.8s,baz=301,slow=8.5,SNR=1.6
CMAR                                PcP     PcP      14 24 32.1 -0.7
      comp=Z,2.5nm,0.8s,baz=293,slow=5.2,SNR=5.2
CMAR                                ScP     ScP      14 27 55.2 -1.9
      comp=Z,1.1nm,0.8s,baz=305,slow=4.1,SNR=5.1
CMAR  Chiang Mai Arr    30.62 118   P       P        14 21 40.4 +1.0
CMAR  Chiang Mai Arr    30.62 118           PcP      14 24 32.9  0.0
CMAR                                        ScP      14 27 54.3 -2.8
XAN   Xi'an             31.15  83   P       P        14 21 45.3 +1.3
XAN                                 pP      pP       14 22 29.3 +4.5
XAN                                 pmax    pmax
      comp=Z,27nm,0.8s
KLMR  Klimovskoe        31.42 331  eP       P        14 21 43.8 -2.0
KLMR                                pmax    pmax
      comp=Z,45nm,1.1s
KLMR  Klimovskoe        31.42 331  eP       P        14 21 43.9 -1.9
KLMR                                AMP              14 21 47.3
      comp=Z,45nm,1.1s
HHC   Hu-ho-hao-te      31.99  69  eP       P        14 21 59.1 +7.9
GYA   Guiyang           32.08  98⇑iP        P        14 21 53.5 +1.3
GYA                                 pP      pP       14 22 34.0 +0.8
GYA                                 sP      sP       14 22 58.9 +3.0
GYA                                 PP      PP       14 23 08.5 -0.1
GYA                                 PcP     PcP      14 24 36.4 -0.5
GYA                                 S       S        14 26 47.5 -2.5
GYA                                 ScP     ScP      14 28 02.8 +0.8
GYA                                 SS      SnSn     14 28 54.0  -11
GYA                                 pmax    pmax
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	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,80nm,4.9s						
SLVN	Son La	32.53	108	P	P	14 21 57.0	+0.9
ELL	Elmali	32.60	283	P	P	14 21 56.1	-0.5
ELL				pmax	pmax		
	comp=Z,34nm,0.6s						
ELL	Elmali	32.60	283	P	P	14 21 56.1	-0.5
AKASG	Malin Array Be	32.80	309	P	P	14 21 58.6	+0.6
	comp=Z,12nm,0.6s,baz=81,slow=7.1,SNR=51						
AKASG				pP	pP	14 22 41.7	+3.7
	comp=Z,1.0nm,0.4s,baz=85,slow=7.2,SNR=1.9						
AKASG				PP	PnPn	14 23 14.9	+0.4
	comp=Z,0.7nm,0.3s,baz=89,slow=10,SNR=3.2						
AKASG	Malin Array Be	32.80	309	P	P	14 21 58.0	-0.1
AKBB	Malin Array Si	32.80	309	d iP	P	14 21 58.9	+0.8
AKBB	Malin Array Si	32.80	309	P	P	14 21 58.1	0.0
AKBB				IAmb	IAmb	14 21 59.4	
	comp=Z,14nm,0.7s						
PBKT	Sadao Pong	33.32	118	P	P	14 22 04.2	+1.3
TMCR	Tamitsa	34.00	335	eP	P	14 22 08.1	-0.1
TMCR				pmax	pmax		
	comp=Z,34nm,0.9s						
NRIK	Noril'sk	34.22	11	P	P	14 22 11.7	+1.7
	comp=Z,34nm,0.6s,baz=200,slow=5.7,SNR=73						
MLR	Muntele Rosu	34.61	299	P	P	14 22 14.4	+0.5
MLR				pmax	pmax		
	comp=Z,13nm,1.0s						
MLR	Muntele Rosu	34.61	299	P	P	14 22 14.4	+0.5
KARP	Karpathos	35.04	282	P	P	14 22 17.7	+0.2
KARP				IAmb	IAmb	14 22 19.9	
	comp=Z,28nm,1.0s						
BURAR	Bucovina Array	35.13	303	P	P	14 22 18.5	+0.3
BUR08	Bucovina Ar. S	35.14	303	P	P	14 22 18.1	-0.3
BOD	Bodaibo	35.53	39	eP	P	14 22 21.8	+0.4
BOD				pmax	pmax		
	comp=Z,21nm,0.9s						
IZAR	Zarasai	35.59	317	eP	P	14 22 22.6	+0.7
ISAL	Salakas	35.62	317	eP	P	14 22 23.2	+1.0
KAAM	Kaadhehdhoo	35.84	176	P	P	14 22 23.8	-0.6
LVV	L'vov	36.01	307	eP	P	14 22 26.1	+0.5
VSU	Vasula	36.09	322	eP	P	14 22 26.7	+0.6
VSU	Vasula	36.09	322	deP	P	14 22 26.9	+0.8
VSU				pmax	pmax		
	comp=Z,166nm,0.9s						
PABE	Paberze	36.80	316	eP	P	14 22 32.7	+0.5
TIA	Tai'an	37.09	76	P	P	14 22 36.9	+1.9
TIA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
FIA1	FINESS Array S	37.40	326	P	P	14 22 37.7	+0.5
FINES	FINESS Array B	37.40	326	P	P	14 22 38.0	+0.9
	comp=Z,26nm,0.7s,baz=108,slow=10,SNR=75						
FINES				PP	PP	14 24 02.2	-4.3
	comp=Z,4.0nm,0.8s,baz=110,slow=10,SNR=2.6						
FINES	FINESS Array B	37.40	326	P	P	14 22 37.7	+0.5
UBPT	Khong Chiam	37.41	115	P	P	14 22 38.7	+0.9
LVZ	Lovozero	37.42	338	deP	P	14 22 38.2	+0.9
LVZ				pmax	pmax		
	comp=Z,72nm,2.2s						
LVZ	Lovozero	37.42	338	P	P	14 22 38.1	+0.7
LVZ				IAmb	IAmb	14 22 39.0	
	comp=Z,23nm,0.8s						
PBUR	Paburge	38.03	317	eP	P	14 22 43.2	+0.7
SLIT	Slitere, Latvi	38.15	319	eP	P	14 22 43.5	+0.1
NJ2	Nanjing	39.70	82	eP	P	14 22 58.3	+1.6
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MORC	Moravsky Berou	40.22	307	P	P	14 23 01.1	+0.3
MORC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MORC	Moravsky Berou	40.22	307	P	P	14 23 01.1	+0.3
KEV	Kevo	40.77	338	P	P	14 23 05.9	+1.0
KEV				pmax	pmax		
	comp=Z,60nm,1.3s						
KEV	Kevo	40.77	338	P	P	14 23 05.9	+1.0
KEV				IAmb	IAmb	14 23 06.3	
	comp=Z,60nm,1.3s						
ARCES	ARCESS Array B	41.11	338	P	P	14 23 08.7	+1.0
	comp=Z,24nm,0.7s,baz=104,slow=7.7,SNR=58						
ARCES	ARCESS Array B	41.11	338	P	P	14 23 08.5	+0.8
ARE0	ARCESS Array S	41.11	338	eP	P	14 23 08.7	+0.9
ARE0	ARCESS Array S	41.11	338	P	P	14 23 08.6	+0.9
KTK1	Kautokeino	41.57	336	eP	P	14 23 12.5	+1.0
SOKA	Soboth	42.11	302	i P	P	14 23 17.1	+0.8
	comp=Z,6.2nm,0.7s						
HAMF	Hammerfest	42.19	339	eP	P	14 23 18.1	+1.6
TIP	Timpagrande	42.20	291	P	P	14 23 17.5	+0.4
ZEA	Zeya	42.26	47	eP	P	14 23 19.2	+1.9
ZEA				pmax	pmax		
	comp=Z,36nm,0.8s						
IPM	Ipoh	42.27	132	P	P	14 23 18.1	+0.3
PSI	Prapat	42.40	136	P	P	14 23 19.5	+0.5
	comp=Z,6.0nm,0.5s,baz=327,slow=9.9,SNR=8.6						
BRG	Berggiesshubel	42.48	308	eP	P	14 23 20.1	+0.9
	comp=Z,6.7nm,0.7s						
BRG	Berggiesshubel	42.48	308	eP	P	14 23 20.0	+0.9
BRG				pmax	pmax		
	comp=Z,7.0nm,0.7s						
RPSI	Rantau Prapat	42.49	136	P	P	14 23 19.2	-0.3
RPSI	Rantau Prapat	42.49	136	P	P	14 23 19.5	-0.1
MOA	Molln	42.50	304	i P	P	14 23 20.4	+1.0
	comp=Z,5.9nm,0.7s						
GERES	GERESS Array B	42.78	305	P	P	14 23 22.2	+0.5
	comp=Z,0.3nm,0.3s,baz=171,slow=9.3,SNR=4.6						
GERES				PP	PP	14 25 03.7	-1.1
	comp=Z,1.4nm,0.8s,baz=54,slow=6.8,SNR=3.7						
GERES				ScP	ScP	14 28 40.3	-1.5
	comp=Z,0.9nm,0.7s,baz=96,slow=6.7,SNR=4.4						
KBA	Koelnbreinsper	43.21	303	i P	P	14 23 26.1	+0.9
	comp=Z,2.4nm,0.6s						
TRO	Tromso	43.23	336	eP	P	14 23 25.4	+0.7
MOR8	Moi Rana	43.75	331	eP	P	14 23 29.0	-0.1
STAL	STALIGIAL	43.76	302	P	P	14 23 29.2	-0.2
STEI	Steigen	43.92	333	eP	P	14 23 30.9	+0.5
NC405	NORSAR Array S	44.05	323	P	P	14 23 31.5	0.0
NRCA	Norcia	44.08	297	P	P	14 23 31.6	-0.5
NC602	NORSAR Array S	44.10	323	P	P	14 23 31.4	-0.5
NC602				IAmb	IAmb	14 24 31.8	
	comp=Z,58nm,1.5s						
YAK	Yakutsk	44.13	35	c iP	P	14 23 32.4	+0.3
YAK				e*PP	pP	14 24 12.7	-2.1
YAK				e		14 25 11.6	
YAK				eS	S	14 29 48.6	-1.3
YAK				e*SS	sS	14 31 00.0	-4.8
YAK				pmax	pmax		
	comp=Z,53nm,0.7s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,59nm,2.8s						
YAK				pmax	pmax		
	comp=N,29nm,3.0s						
YAK				pmax	pmax		
	comp=E,63nm,3.0s						
YAK				smax	smax		
	comp=N,172nm,3.7s						
YAK				smax	smax		
	comp=E,86nm,3.5s						
YAK	Yakutsk	44.13	35	P	P	14 23 31.9	-0.2
NC303	NORSAR Array S	44.23	323	P	P	14 23 32.9	-0.1
NB201	NORSAR Array S	44.25	323	eP	P	14 23 33.4	+0.3
NB201	NORSAR Array S	44.25	323	P	P	14 23 33.0	-0.2
NB2	NORSAR Subarra	44.29	323	P	P	14 23 33.1	-0.4
	comp=Z,31nm,0.8s,baz=96,slow=7.9						
NB2	NORSAR Subarra	44.29	323	P	P	14 23 33.1	-0.4
	baz=96,slow=7.9						
NOA	NORSAR Array B	44.29	323	P	P	14 23 33.4	0.0
	comp=Z,19nm,0.8s,baz=96,slow=7.8,SNR=62						
NOA				PP	PP	14 25 19.4	-1.1
	comp=Z,4.4nm,1.0s,baz=95,slow=9.6,SNR=3.4						
WTTA	Wattenberg	44.34	303	i P	P	14 23 34.9	+0.6
	comp=Z,7.7nm,0.8s						
KONS	Konsvik	44.35	331	eP	P	14 23 34.6	+0.9
NSS	Namsos	44.42	328	eP	P	14 23 35.1	+0.8
NAO01	NORSAR Array S	44.43	323	P	P	14 23 34.6	+0.1
NAO01				IAmb	IAmb	14 25 17.5	
	comp=Z,52nm,1.4s						
NBO00	NORSAR Array S	44.50	323	P	P	14 23 34.7	-0.4
NBO00				IAmb	IAmb	14 24 24.4	
	comp=Z,65nm,1.5s						
CTI	Castel Tesino	44.52	302	P	P	14 23 35.7	+0.1
CTI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CTI	Castel Tesino	44.52	302	P	P	14 23 35.6	+0.1
NC204	NORSAR Array S	44.53	323	P	P	14 23 35.4	0.0
NC204				IAmb	IAmb	14 23 36.5	
	comp=Z,51nm,0.9s						
LOF	Lofoten	44.59	333	eP	P	14 23 35.7	0.0
MOTA	Moosalm	44.69	303	i P	P	14 23 37.1	+0.2
	comp=Z,5.4nm,0.8s						
SSLB	Suanglung	44.78	92	P	P	14 23 39.2	+1.4
SSLB				IAmb	IAmb	14 23 40.9	
	comp=Z,18nm,0.8s						
KONO	Kongsberg	44.98	321	eP	P	14 23 38.8	-0.1
KONO	Kongsberg	44.98	321	P	P	14 23 39.4	+0.5
KONO				pmax	pmax		
	comp=Z,52nm,1.5s						
KONO	Kongsberg	44.98	321	P	P	14 23 39.4	+0.5
KONO				IAmb	IAmb	14 24 24.3	
	comp=Z,52nm,1.5s						
FETA	Feichten	44.99	303	i P	P	14 23 38.9	-0.4
	comp=Z,3.2nm,0.6s						
KS19	Wonju Array Si	45.05	71	P	P	14 23 40.7	+0.9
KSAR	Wonju Array Be	45.08	71	P	P	14 23 40.8	+0.8
KSAR	Wonju Array Be	45.08	71	P	P	14 23 40.8	+0.8
KSRS	Korea Array	45.10	71	P	P	14 23 41.0	+0.9
	comp=Z,2.4nm,0.6s,baz=276,slow=7.0,SNR=15						
KSRS				PcP	PcP	14 25 17.4	+0.1
	comp=Z,2.4nm,0.9s,baz=298,slow=2.8,SNR=4.9						
BJO1	Bjornoya	45.25	343	eP	P	14 23 41.9	+1.1
TWG	Pinlang	45.34	93	P	P	14 23 44.3	+2.1
KLR	Kul'dur	45.35	54	c iP	P	14 23 42.6	+0.7
KLR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
DOMB	Dombas	45.41	324	eP	P	14 23 42.8	+0.6
DAVA	Damuels	45.52	304	i P	P	14 23 43.7	+0.2
	comp=Z,11nm,0.5s,SNR=5.2						
TIXI	Tiksi	45.90	22	c iP	P	14 23 46.5	+0.6
TIXI				pmax	pmax		
	comp=Z,65nm,0.8s						
TIXI	Tiksi	45.90	22	P	P	14 23 46.4	+0.5
YOJ	Yonaguni jima	46.13	90	P	P	14 23 49.1	+0.8
YOJ				pmax	pmax		
	comp=Z,117nm,1.1s						
YOJ	Yonaguni jima	46.13	90	P	P	14 23 49.1	+0.8
PDSI	Padang	46.32	137	P	P	14 23 52.8	+2.9
MSSA	Maissana	46.32	300	P	P	14 23 50.1	+0.4
USRK	Ussuriysk Ar.	46.38	61	P	P	14 23 50.7	+0.6
	comp=Z,1.5nm,0.5s,baz=294,slow=8.4,SNR=9.5						
USRK	Ussuriysk Ar.	46.38	61	P	P	14 23 50.2	+0.2
VLA	Vladivostok	46.55	62	deP	P	14 23 52.4	+1.0
VLA				pmax	pmax		
	comp=Z,12nm,1.2s						
HSPB	Hornsund (broa	47.13	345	eP	P	14 23 57.3	+1.9
SENIN	Lac Senin/Sane	47.43	303	P	P	14 23 57.9	-0.5
SPA0	Spitsbergen Ar	47.49	347	eP	P	14 24 00.1	+1.8
GRNR	Gornyy	48.11	51	⇑iP	P	14 24 04.4	+1.1
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GRNR				MLR	MLR		
	comp=Z,110nm,15.0s						
BNI	Bardonecchia	48.14	301	P	P	14 24 03.4	-0.4
BNI				pmax	pmax		
	comp=Z,19nm,1.5s						
BNI	Bardonecchia	48.14	301	P	P	14 24 03.4	-0.4
KBS	Kingsbay	48.61	347	P	P	14 24 07.1	+0.4
KBS				pmax	pmax		
	comp=Z,38nm,1.1s						
KBS	Kingsbay	48.61	347	P	P	14 24 07.1	+0.4
KBS				IAmb	IAmb	14 24 09.2	
	comp=Z,38nm,1.1s						
KMBO	Kilima Mbogo	48.63	227	P	P	14 24 08.0	0.0
	comp=Z,2.5nm,0.5s,baz=34,slow=14,SNR=7.5						
KMBO	Kilima Mbogo	48.63	227	P	P	14 24 08.0	0.0
KMBO	Kilima Mbogo	48.63	227	IAmb	IAmb	14 24 10.0	
	comp=Z,3.1nm,0.7s						
JNU	Nakatsue	48.82	75	P	P	14 24 10.0	+0.9
	comp=Z,6.6nm,0.7s,baz=355,slow=4.4,SNR=5.2						
JNU	Nakatsue	48.82	75	P	P	14 24 09.2	+0.1
KEST	Kesra	48.84	288	P	P	14 24 10.1	+0.8
	comp=Z,5.0nm,0.7s,baz=15,slow=9.2,SNR=6.2						
KEST	Kesra	48.84	288	P	P	14 24 10.0	+0.8
JOW	Kunigami	49.29	84	P	P	14 24 12.9	+0.2
	comp=Z,0.9nm,0.4s,baz=257,slow=29,SNR=4.4						
JOW	Kunigami	49.29	84	IAmb	IAmb	14 24 45.7	
	comp=Z,44nm,1.4s						
SSB	Saint Sauveur	49.55	302	P	P	14 24 14.7	+0.3
SSB				pmax	pmax		
	comp=Z,15nm,1.5s						
SSB	Saint Sauveur	49.55	302	P	P	14 24 14.7	+0.3
KSI	Kapahiang	49.76	136	P	P	14 24 24.9	+8.6
MBAR	Mbarara	52.30	234	⇑iP	P	14 24 36.5	+1.1
MBAR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MBAR	Mbarara	52.30	234	P	P	14 24 35.9	+0.5
YSS	Yuzh-Sakhalins	53.03	55	⇑eP	P	14 24 40.6	+0.5
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS	Yuzh-Sakhalins	53.03	55	P	P	14 24 40.8	+0.7
YSS				IAmb	IAmb	14 24 42.5	
	comp=Z,15nm,0.6s						
MJAR	Matsushiro Arr	53.18	68	P	P	14 24 40.9	-0.5
	comp=Z,2.8nm,0.7s,baz=284,slow=10,SNR=7.2						
MJAR				PcP	PcP	14 25 46.5	-0.4
	comp=Z,2.1nm,0.9s,baz=256,slow=5.0,SNR=4.2						
MJAR	Matsushiro Arr	53.18	68	IAmb	IAmb	14 24 46.4	
	comp=Z,5.1nm,1.4s						
ASAJ	Asahikawa	53.77	58	P	P	14 24 45.6	0.0
	comp=Z,2.6nm,0.6s,baz=288,slow=13,SNR=2.6						
JKA	Kamikawa-asahi	53.77	58	P	P	14 24 45.6	0.0
NOR	Nord	53.81	350	i P	P	14 24 45.8	+0.5
	comp=Z,6.7nm,0.9s						
NOR	Nord	53.81	350	i P	P	14 24 45.8	+0.5
NOR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MA2	Magadan	54.54	38	c iP	P	14 24 51.3	+0.4
MA2				pmax	pmax		
	comp=Z,17nm,1.1s						
MA2	Magadan	54.54	38	P	P	14 24 51.1	+0.3
MA2				IAmb	IAmb	14 24 52.5	
	comp=Z,13nm,1.0s						
SEY	Seymchan	54.58	34	⇑iP	P	14 24 52.2	+1.1
DAG	Danmarks Havn	54.72	344	i P	P	14 24 52.6	+0.7
	comp=Z,21nm,0.9s						
DAG	Danmarks Havn	54.72	344	i P	P	14 24 52.6	+0.7
DAG				pmax	pmax		
	comp=Z,21nm,0.9s						
MPSI	Mapaga	57.95	117	P	P	14 25 18.1	+2.5
BILL	Bilibino	58.75	26	ceP	P	14 25 21.7	+1.3
BILL				i		14 27 32.1	
BILL				pmax	pmax		
	comp=Z,31nm,0.8s						
BILL	Bilibino	58.75	26	P	P	14 25 21.4	+1.0
MRSI	Marisa	59.34	115	P	P	14 25 26.9	+1.7
APSI	Ampana	60.08	116	P	P	14 25 33.7	+3.5
PETK	Petropavlovsk-	60.16	44	P	P	14 25 29.9	-0.3
	comp=Z,1.9nm,0.6s,baz=258,slow=6.5,SNR=18						
PETK	Petropavlovsk-	60.16	44	P	P	14 25 30.0	-0.3
PETK	Petropavlovsk-	60.16	44	P	P	14 25 29.7	-0.5
SUMG	Summit	61.04	341	i P	P	14 25 37.4	+1.0
	comp=Z,28nm,0.7s						
SUMG	Summit	61.04	341	P	P	14 25 37.8	+1.4
SUMG				pmax	pmax		
	comp=Z,331nm,1.2s						
SUMG	Summit	61.04	341	P	P	14 25 37.8	+1.4
SANI	Sanana	64.02	114	P	P	14 25 56.4	0.0
TULEG	Thule	64.45	350	P	P	14 25 58.6	+0.2
TULEG				IAmb	IAmb	14 25 60.0	
	comp=Z,18nm,1.1s						
TOA0	Torodi Ar. Sit	65.50	268	P	P	14 26 04.8	-1.2
TOA0	Torodi Ar. Sit	65.50	268	P	P	14 26 04.3	-1.8
TORD	Torodi Ar. Bea	65.50	268	P	P	14 26 04.8	-1.2
	comp=Z,20nm,0.5s,baz=46,slow=5.9,SNR=118						
TORD	Torodi Ar. Bea	65.50	268	P	P	14 26 04.2	-1.8
SWI	Sorong	67.19	109	P	P	14 26 25.0	+8.3
RDOG	Red Dog Mine	68.38	19	P	P	14 26 23.6	+0.3
RDOG				IAmb	IAmb	14 26 25.5	
	comp=Z,11nm,1.0s						
GAMB	Gambell	68.64	25	P	P	14 26 25.4	+0.4
RES	Resolute Bay	68.73	356	P	P	14 26 25.8	+0.4
RES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
RES	Resolute Bay	68.73	356	P	P	14 26 25.8	+0.4
FAKI	Fak Fak	69.27	110	P	P	14 26 29.7	+0.1
FAKI				IAmb	IAmb	14 26 30.7	
	comp=Z,21nm,1.0s						
ANM	Nome	70.16	22	P	P	14 26 35.5	+1.1
ANM				pmax	pmax		
	comp=Z,13nm,0.8s						
ANM	Nome	70.16	22	P	P	14 26 35.5	+1.1
ANM				IAmb	IAmb	14 26 36.8	
	comp=Z,13nm,0.8s						
TOLK	Toolik Lake Re	71.03	15	P	P	14 26 40.3	+0.7
SAUI	Saumlaki	71.90	115	P	P	14 26 46.9	+1.4
COLD	Coldfoot	72.08	16	P	P	14 26 46.5	+0.7
COLD				IAmb	IAmb	14 26 47.7	
	comp=Z,17nm,1.2s						
IMAR	Indian Mountai	72.29	18	P	P	14 26 47.2	+0.1
BMAR	Burnt Mountain	73.04	13	P	P	14 26 52.8	+1.2
FYU	Fort Yukon	73.67	14	P	P	14 26 56.7	+1.6
MLY	Manley	73.79	17	P	P	14 26 56.4	+0.4
MLY				IAmb	IAmb	14 26 57.8	
	comp=Z,36nm,1.5s						
PSAD1	Pilbara Seismi	73.94	133	P	P	14 26 57.8	+0.4
PSAD1				IAmb	IAmb	14 26 58.1	
	comp=Z,14nm,1.1s						
C36M	Paulatuk	73.95	5	P	P	14 26 56.6	-0.1
INK	Inuvik	73.99	9	P	P	14 26 57.5	+0.6
INK				pmax	pmax		
	comp=Z,22nm,0.6s						
INK	Inuvik	73.99	9	P	P	14 26 57.5	+0.6
PSAB2	Pilbara Seismi	74.04	133	P	P	14 26 57.7	-0.2
PSAB2				IAmb	IAmb	14 27 44.5	
	comp=Z,14nm,1.1s						
MDM	Murphy Dome	74.43	16	P	P	14 27 00.2	+0.6
MDM				IAmb	IAmb	14 27 02.0	
	comp=Z,47nm,1.4s						
DBIC	Dimbokro	74.47	267	P	P	14 26 59.7	-1.0
	comp=Z,4.7nm,0.7s,baz=31,slow=5.5,SNR=11						
DBIC	Dimbokro	74.47	267	P	P	14 26 59.3	-1.4
BPAW	Bear Paw Mtn.	74.51	18	P	P	14 27 00.2	+0.1
BPAW				IAmb	IAmb	14 27 01.5	
	comp=Z,31nm,1.3s						
NEA	Nenana	74.56	17	P	P	14 26 59.7	-0.6
NEA				IAmb	IAmb	14 27 02.4	
	comp=Z,24nm,0.8s						
KIC	Kosan Boka	74.56	267	eP	P	14 27 00.5	-0.7
	comp=Z,12nm,0.7s						
COLA	College	74.58	16	P	P	14 27 00.4	-0.1
COLA				pmax	pmax		
	comp=Z,56nm,1.4s						
COLA	College	74.58	16	P	P	14 27 00.4	-0.1
TIC	Toumodi	74.62	267	eP	P	14 27 00.7	-0.9
	comp=Z,4.7nm,0.4s						
TSUM	Tsumeb	74.71	232	P	P	14 27 02.4	+0.4
CCB	Clear Creek Bu	74.79	16	P	P	14 27 01.4	-0.2
BWN	Browne	74.81	17	P	P	14 27 02.7	+0.9
LIC	Lamto	74.87	267	eP	P	14 27 02.1	-0.9
	comp=Z,28nm,0.8s						
WRH	Wood River Hil	74.88	16	P	P	14 27 02.0	-0.2
IL31		74.89	16	P	P	14 27 01.6	-0.6
IL31				IAmb	IAmb	14 27 03.3	
	comp=Z,20nm,1.2s						
ILAR	Eielson Array	74.89	16	P	P	14 27 02.4	+0.2
	comp=Z,8.0nm,0.9s,baz=294,slow=4.9,SNR=60						
ILAR				PP	PP	14 29 51.4	-0.3
	comp=Z,0.8nm,0.6s,baz=317,slow=8.0,SNR=6.2						
ILAR	Eielson Array	74.89	16	P	P	14 27 01.6	-0.6
KTH	Kantishna Hill	74.98	18	P	P	14 27 02.8	-0.1
KTH				IAmb	IAmb	14 27 04.3	
	comp=Z,23nm,1.0s						
FITZ	Fitzroy Crossi	75.04	126	P	P	14 27 03.5	-0.2
FITZ				IAmb	IAmb	14 27 10.6	
	comp=Z,19nm,1.5s						
MTN	Manton Dam	75.07	119	P	P	14 27 03.4	-0.5
MTN				IAmb	IAmb	14 29 00.7	
	comp=Z,25nm,1.4s						
ATKA	Atka Island	75.17	35	P	P	14 27 02.6	-1.4
HDA	Harding Lake	75.19	16	P	P	14 27 03.7	-0.2
PPLA	Purkeypile	75.20	19	P	P	14 27 04.2	-0.1
PPLA				IAmb	IAmb	14 28 49.5	
	comp=Z,25nm,1.4s						
TRF	Thorofare Moun	75.22	18	P	P	14 27 04.8	+0.4
MCK	McKinley	75.31	17	P	P	14 27 05.0	+0.3
MCK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MCK	McKinley	75.31	17	P	P	14 27 05.0	+0.3
MCK				IAmb	IAmb	14 27 06.5	
	comp=Z,8.2nm,0.6s						
EPYK	Eagle Plains	75.35	11	P	P	14 27 05.0	+0.1
EPYK				IAmb	IAmb	14 27 06.4	
	comp=Z,30nm,1.3s						
KNRA	Kununurra	75.39	122	P	P	14 27 05.8	+0.1
RND	Reindeer	75.61	17	P	P	14 27 06.4	-0.1
RND				pmax	pmax		
	comp=Z,39nm,1.5s						
RND	Reindeer	75.61	17	P	P	14 27 06.4	-0.1
RND				IAmb	IAmb	14 27 07.0	
	comp=Z,39nm,1.5s						
SVW2	Sparrevohn	75.73	21	P	P	14 27 08.0	+0.9
SVW2				IAmb	IAmb	14 27 10.0	
	comp=Z,20nm,1.5s						
EGAK	Eagle	76.05	13	P	P	14 27 09.2	+0.4
EGAK				IAmb	IAmb	14 27 10.5	
	comp=Z,24nm,1.4s						
SKT	Skwentna	76.14	19	P	P	14 27 09.2	-0.2
SCRK	Sand Creek	76.20	15	P	P	14 27 09.9	0.0
SCRK				IAmb	IAmb	14 27 11.7	
	comp=Z,41nm,1.4s						
RIDG	Independent Ri	76.23	15	P	P	14 27 09.7	-0.3
RIDG				IAmb	IAmb	14 27 12.2	
	comp=Z,8.4nm,0.5s						
DHY	Denali Highway	76.24	17	P	P	14 27 10.1	-0.1
DHY				IAmb	IAmb	14 27 11.2	
	comp=Z,13nm,0.7s						
PAX	Paxson	76.77	16	P	P	14 27 12.8	-0.2
PAX				pmax	pmax		
	comp=Z,47nm,1.4s						
PAX	Paxson	76.77	16	P	P	14 27 12.8	-0.2
SUA	Susitna One	76.77	19	P	P	14 27 12.9	-0.3
SUA				IAmb	IAmb	14 27 14.6	
	comp=Z,21nm,1.0s						
GHO	Glory Hole Cre	76.98	18	P	P	14 27 14.2	0.0
GHO				IAmb	IAmb	14 27 15.6	
	comp=Z,20nm,1.2s						
DAWY	Dawson	77.02	13	P	P	14 27 14.7	+0.3
DAWY				IAmb	IAmb	14 27 16.6	
	comp=Z,19nm,0.9s						
PMR	Palmer	77.08	18	P	P	14 27 14.6	0.0
PMR				pmax	pmax		
	comp=Z,13nm,1.0s						
PMR	Palmer	77.08	18	P	P	14 27 14.6	0.0
PMR				IAmb	IAmb	14 27 15.7	
	comp=Z,12nm,1.0s						
SML	Sawmill	77.10	18	P	P	14 27 14.8	-0.1
SCM	Sheep Creek Mo	77.32	17	P	P	14 27 16.2	+0.1
SCM				pmax	pmax		
	comp=Z,16nm,0.7s						
SCM	Sheep Creek Mo	77.32	17	P	P	14 27 16.2	+0.1
SCM				IAmb	IAmb	14 27 17.9	
	comp=Z,16nm,0.7s						
RC01	Rabbit Creek A	77.35	19	P	P	14 27 16.2	0.0
RC01				IAmb	IAmb	14 27 17.1	
	comp=Z,18nm,1.0s						
KNK	Knik Glacier	77.41	18	P	P	14 27 16.8	+0.3
KNK				IAmb	IAmb	14 27 18.1	
	comp=Z,29nm,1.0s						
BCAR	Beaver Creek A	77.47	15	P	P	14 27 17.4	+0.6
BOSA	Boshof	77.57	220	P	P	14 27 18.2	+0.3
	comp=Z,7.3nm,0.9s,baz=32,slow=5.9,SNR=7.4						
BOSA	Boshof	77.57	220	P	P	14 27 18.2	+0.3
BOSA				IAmb	IAmb	14 29 11.6	
	comp=Z,23nm,1.4s						
MORW	Morawa	77.85	140	P	P	14 27 18.9	-0.4
MORW				IAmb	IAmb	14 28 42.4	
	comp=Z,19nm,1.3s						
BRLK	Bradley Lake	78.16	20	P	P	14 27 20.4	-0.3
GLI	Glacier Island	78.20	18	P	P	14 27 20.6	-0.3
CNPM	China Poot	78.27	20	P	P	14 27 20.9	-0.4
SEW	Seward	78.27	19	P	P	14 27 21.0	-0.2
SEW				IAmb	IAmb	14 28 41.0	
	comp=Z,39nm,1.4s						
FID	Port Fidalgo	78.47	18	P	P	14 27 22.9	+0.6
FID				IAmb	IAmb	14 29 31.9	
	comp=Z,25nm,1.1s						
GLB	Gilahina Butte	78.48	16	P	P	14 27 23.2	+0.7
MCARA	McCarthy VSAT	78.71	16	P	P	14 27 24.5	+0.8
MCARA				IAmb	IAmb	14 27 46.5	
	comp=Z,23nm,1.2s						
VRDI	Verde Repeater	78.76	16	P	P	14 27 24.6	+0.4
VRDI				IAmb	IAmb	14 27 26.4	
	comp=Z,14nm,0.9s						

BALM	Baldy	79.17	16	P	P	14 27 27.0	+0.7
BALM				IAmb	IAmb	14 27 28.3	
	comp=Z,26nm,1.2s						
CRQM	Cirque	79.25	16	P	P	14 27 27.2	+0.3
CRQM				IAmb	IAmb	14 27 28.5	
	comp=Z,15nm,0.9s						
BARN	Barnard Glacie	79.30	15	P	P	14 27 27.6	+0.4
BARN				IAmb	IAmb	14 27 29.2	
	comp=Z,18nm,1.1s						
TGL	Tana Glacier	79.32	16	P	P	14 27 27.4	+0.3
TGL				IAmb	IAmb	14 27 29.9	
	comp=Z,18nm,1.0s						
KDAK	Kodiak Island	79.33	22	P	P	14 27 27.7	+0.7
KDAK				pmax	pmax		
	comp=Z,38nm,0.9s						
KDAK	Kodiak Island	79.33	22	P	P	14 27 27.7	+0.7
CNBA	Chernabura Isl	79.37	27	P	P	14 27 27.2	-0.1
CTGM	Chitina Glacie	79.45	15	P	P	14 27 28.9	+0.9
CTGM				IAmb	IAmb	14 27 30.0	
	comp=Z,18nm,1.0s						
OHAK	Old Harbor	79.57	23	P	P	14 27 29.1	+0.7
SII	Sitkinak Islan	79.84	23	P	P	14 27 30.8	+0.9
HYT	Haines Junctio	80.35	14	P	P	14 27 33.8	+1.1
HYT				IAmb	IAmb	14 27 35.3	
	comp=Z,16nm,0.9s						
PCA	Pinnacle	80.47	15	P	P	14 27 34.7	+1.4
PCA				IAmb	IAmb	14 27 35.8	
	comp=Z,17nm,0.9s						
WHY	Whitehorse	80.98	12	P	P	14 27 36.2	+0.2
WHY				IAmb	IAmb	14 27 37.1	
	comp=Z,8.0nm,0.7s						
YKA	Yellowknife Ar	81.30	3	P	P	14 27 37.9	+0.4
	comp=Z,4.7nm,0.4s,baz=351,slow=4.9,SNR=150						
YKA				pP	pP	14 28 27.7	+2.3
	comp=Z,2.6nm,0.8s,baz=353,slow=5.1,SNR=2.9						
YKA				PP	PP	14 30 44.6	-0.4
	comp=Z,1.8nm,1.0s,baz=356,slow=7.6,SNR=6.2						
YKA				PKKPbc	PKKPbc	14 46 08.6	-2.5
	comp=Z,0.2nm,0.6s,baz=157,slow=2.2,SNR=5.0						
SKAG	Skagway	82.03	13	P	P	14 27 41.1	-0.3
SKAG				IAmb	IAmb	14 27 43.6	
	comp=Z,14nm,0.8s						
SCHQ	Schefferville	82.06	337	P	P	14 27 41.6	0.0
	comp=Z,3.8nm,0.8s,baz=35,slow=6.6,SNR=9.8						
SCHQ	Schefferville	82.06	337	IAmb	IAmb	14 27 42.5	
	comp=Z,6.5nm,0.8s						
WB0	Warramunga Arr	82.07	122	P	P	14 27 40.9	-1.3
WB0				IAmb	IAmb	14 27 42.0	
	comp=Z,9.0nm,0.8s						
WRA	Warramunga Arr	82.15	122	P	P	14 27 41.7	-0.9
	comp=Z,10nm,0.7s,baz=322,slow=4.9,SNR=66						
WRA	Warramunga Arr	82.15	122	P	P	14 27 41.3	-1.3
WRAB	Tennant Creek	82.15	122	P	P	14 27 41.5	-1.1
WRAB				pmax	pmax		
	comp=Z,15nm,0.9s						
WRAB	Tennant Creek	82.15	122	P	P	14 27 41.5	-1.1
WRAB				IAmb	IAmb	14 27 42.5	
	comp=Z,15nm,0.9s						
WB2	Warramunga Arr	82.16	122	P	P	14 27 41.5	-1.1
WB2				IAmb	IAmb	14 27 42.6	
	comp=Z,16nm,0.9s						
WR0	Warramunga Arr	82.30	122	P	P	14 27 42.0	-1.3
WR0				IAmb	IAmb	14 27 43.1	
	comp=Z,8.6nm,0.8s						
DLBC	Dease Lake	83.88	11	P	P	14 27 50.9	-0.1
DLBC				IAmb	IAmb	14 27 53.0	
	comp=Z,8.6nm,0.8s						
FCC	Fort Churchill	84.30	352	P	P	14 27 53.1	+0.2
FCC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
FCC	Fort Churchill	84.30	352	P	P	14 27 53.1	+0.2
AS31	Alice Springs	84.41	125	P	P	14 27 52.9	-1.1
ASAR	Alice Springs	84.41	125	P	P	14 27 53.1	-1.0
	comp=Z,7.9nm,0.7s,baz=311,slow=5.1,SNR=161						
ASAR				S	S	14 37 52.1	-12
	comp=Z,0.4nm,0.7s,baz=318,slow=7.2,SNR=6.3						
ASAR	Alice Springs	84.41	125	P	P	14 27 52.9	-1.1
FFC	Flin Flon	88.97	356	P	P	14 28 15.5	-0.2
FFC				pmax	pmax		
	comp=Z,11nm,1.0s						
FFC	Flin Flon	88.97	356	P	P	14 28 15.5	-0.2
FFC				IAmb	IAmb	14 28 17.0	
	comp=Z,11nm,1.0s						
ULM	Lac du Bonnet	92.86	351	P	P	14 28 33.3	-0.5
	comp=Z,3.5nm,0.7s,baz=343,slow=4.2,SNR=8.2						
ULM	Lac du Bonnet	92.86	351	IAmb	IAmb	14 28 34.3	
	comp=Z,4.4nm,0.8s						
WALA	Waterton Lakes	94.77	3	P	P	14 28 42.4	-0.4
WALA				IAmb	IAmb	14 30 05.4	
	comp=Z,7.0nm,0.8s						
B08A	Colville Reser	95.09	7	P	P	14 28 44.1	0.0
B08A				IAmb	IAmb	14 28 45.4	
	comp=Z,3.9nm,0.9s						
PDAR	Pinedale Array	101.16	0	P	Pdif	14 29 12.3	+0.5
	comp=Z,0.2nm,0.6s,baz=42,slow=2.8,SNR=2.7						
SNAA	Sanae	119.27	200	PKPdf	PKiKP	14 34 09.2	+0.9
VNA2	Neumayer--Watz	120.27	202	PKPdf	PKPdf	14 34 09.9	-0.2
VNA1	Neumayer--Stat	120.42	202	PKPdf	PKiKP	14 34 11.8	+1.3
VNA3	Neumayer Olymp	121.08	202	PKPdf	PKPdf	14 34 11.2	-0.5
CPUP	Villa Florida	134.99	268	PKP	PKPdf	14 34 38.4	-1.0
	comp=Z,3.3nm,0.8s,baz=115,slow=0.9,SNR=8.4						
PLCA	Paso Flores	149.60	250	PKP	PKPdf	14 35 04.3	-0.6
	comp=Z,1.7nm,0.9s,baz=28,slow=2.4,SNR=2.2						
PLCA				PKPbc	PKPbc	14 35 10.1	+0.4
	comp=Z,10nm,0.9s,baz=168,slow=4.0,SNR=16						

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*NEIC **19** 14:27:52.0±0.9, 36°.30N±0°.09×137°.4E±0°.1, h276^{km}±8^{km}, mb4.0/5, Error ellipse: s-maj=17.2km s-min=12.5km az=65.0*

*JMA **19** 14:27:51.7±0.1, 36°.23N×137°.18E, h273^{km}±2^{km}, M2.7*

*IDC **19** 14:27:51.9±1.2, 36°.43N×137°.69E, h284^{km}±8^{km}, mb3.0/2, mb1 3.2/4, mb1mx2.7/41, mbtmp3.8/4, Error ellipse: s-maj=69.4km s-min=19.0km az=100.0*

ISC 19 14:27:51.6±0.9**, 36°.38N**±0°.08×**137°.30E**±0°.08**, h274**^{km}±7^{km}**, n31,** σ**1^{s}.72**/42**, mb4.0**/5**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNG	Nsakai	0.65	87	P	Pn	14 28 28.6	+0.8
JNG				S	S	14 28 57.4	+1.0
MJB9	Matsu-Tunnel	0.75	77	Pn	Pn	14 28 28.8	+0.8
MAJO	Matsushiro	0.75	77	Pn	Pn	14 28 28.8	+0.8
MAT	Matsushiro	0.75	77	P	Pn	14 28 28.8	+0.8
MAT				*e*S	S	14 28 57.8	+0.9
MAT	Matsushiro	0.75	77	P	Pn	14 28 28.8	+0.8
MAT				S	S	14 28 57.4	+0.5
MJAR	Matsushiro Arr	0.75	77	P	Pn	14 28 29.1	+1.1
	0.6nm,0.3s,baz=267,slow=5.3,SNR=34						
MJAR				S	S	14 28 58.1	+1.2
	baz=215,slow=1.5,SNR=2.0						
MJAR	Matsushiro Arr	0.75	77	Pn	Pn	14 28 28.8	+0.7
JYTA	Yamagatataniai	0.90	210	P	Pn	14 28 28.1	-0.6
JYTA				S	S	14 28 55.5	-2.6
INU	Inuyama	1.05	193	Pn	Pn	14 28 28.5	-1.0
JAG	Ashikaga	1.74	88	P	Pn	14 28 34.7	+0.8
JAG				*e*S	S	14 29 09.2	+1.7
JSD	Sado	1.83	25	P	Pn	14 28 36.2	+1.6
JWT	Wachi	1.89	235	P	Pn	14 28 34.0	-1.1
JKY	Yasaka	1.93	248	P	Pn	14 28 34.3	-1.2
JKY				*e*S	S	14 29 07.0	-3.3
JIE	Ise	2.04	194	P	Pn	14 28 35.8	-0.6
JKSM	Kasumi	2.28	251	P	Pn	14 28 37.4	-1.1
JWY	Kouya	2.56	213	P	Pn	14 28 40.2	-1.1
JTNC	Tanabenakahech	2.90	209	P	Pn	14 28 43.3	-1.3
JFK	Kawauchi	3.03	70	P	Pn	14 28 47.2	+1.3
JFK				S	S	14 29 28.7	-0.5
JMM	Marumori	3.17	61	P	Pn	14 28 48.9	+1.7
JMM				S	S	14 29 33.6	+2.1
JHJ	Hachijo jima 2	3.84	147	P	Pn	14 28 54.4	-0.3
	15nm,0.3s,baz=68,slow=11,SNR=1.6						
JHJ2	Mitsune	3.86	147	Pn	Pn	14 28 53.8	-1.1
ERM	Erimo	7.24	37	Pn	Pn	14 29 36.7	+1.3
ASAJ	Asahikawa	8.73	26	P	Pn	14 29 53.6	-0.2
	0.3nm,0.3s,baz=207,slow=14,SNR=6.4						
ASAJ				S	S	14 31 27.6	-5.4
	0.2nm,0.3s,baz=102,slow=28,SNR=1.3						
JKA	Kamikawa-asahi	8.73	26		Pn	14 29 53.6	-0.2
JKA					S	14 31 27.6	-5.4
WB0	Warramunga Arr	55.90	183	P	P	14 37 00.9	-0.5
WB0				IAmb	IAmb	14 38 03.4	
	comp=Z,6.9nm,1.2s						
WB2	Warramunga Arr	56.08	183	P	P	14 37 02.1	-0.6
WB2				IAmb	IAmb	14 39 03.5	
	comp=Z,5.0nm,0.8s						
WRA	Warramunga Arr	56.08	183	P	P	14 37 02.2	-0.4
	comp=Z,0.6nm,0.4s,baz=359,slow=7.5,SNR=20						
WRA	Warramunga Arr	56.08	183	P	P	14 37 02.3	-0.4
WR0	Warramunga Arr	56.09	183	P	P	14 37 02.3	-0.3
WR0				IAmb	IAmb	14 39 08.9	
	comp=Z,8.1nm,1.4s						
ASAR	Alice Springs	59.80	184	P	P	14 37 28.2	-0.1
	comp=Z,0.2nm,0.3s,baz=359,slow=6.0,SNR=16						
GEYT	Alibeck	61.23	298	P	P	14 37 38.9	+0.9

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*NORS **19** 14:31:40.2±0.0, 43°.23N×45°.94E, h11^{km}, MPVA3.7*

ISC 19 14:31:43.9±1.7**, 43°.13N**±0°.07×**45°.91E**±0°.04**, h18**^{km}±5^{km}**, n16,** σ**1^{s}.06**/32**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMGR	Komgaron	0.77	265	*e*Pg	Pb	14 31 57.6	-1.2
KMGR				*e*Sg	Sg	14 32 10.0	+0.8
XNZR	Khunzakh	0.83	135	*e*Pg	Pb	14 31 59.2	-0.6
XNZR				*e*Sg	Sn	14 32 13.2	+0.7
VLKR	Vladikavkaz	0.91	265	*e*Pg	Pb	14 31 59.9	-1.2
VLKR				*e*Sg	Sn	14 32 14.8	+0.4
BTKR	Batakoyurt	1.03	284	*e*Pg	Pb	14 32 02.2	-1.0
BTKR				*e*Sg	Sg	14 32 18.0	+0.6
GNBR	Gunib	1.07	133	*e*Pg	Pb	14 32 02.4	-1.5
GNBR				*e*Sg	Sg	14 32 20.4	+1.7
ARNR	Ardon	1.19	273	*e*Pg	Pn	14 32 04.4	-1.3
ARNR				*e*Sg	Sg	14 32 22.9	+0.3
LACR	Lac	1.22	256	*e*Pg	Pn	14 32 04.7	-1.5
LACR				*e*Sg	Sg	14 32 23.8	+0.2
GUDG	Gudauri	1.25	238	P	Pn	14 32 04.3	-2.3
GUDG				S	Sb	14 32 23.0	+0.2
PRTR	Priterechnaya	1.34	298	*e*Pg	Pn	14 32 06.4	-1.2
PRTR				*e*Sg	Sb	14 32 26.0	+0.8
KORR	Kora	1.35	269	*e*Pg	Pn	14 32 07.7	-0.1
KORR				*i* Sg	Sg	14 32 28.3	+0.7
ZEI	Tsey	1.52	258	*e*Pg	Pn	14 32 10.2	-0.1
ZEI				*e*Sg	Sb	14 32 31.5	+1.0
DIGR	Digorskoe uzhe	1.73	263	*e*Pg	Pn	14 32 13.2	+0.1
DIGR				*e*Sg	Sb	14 32 37.2	+0.7
ONI	Oni	1.89	254	P	Pn	14 32 16.2	+0.9
ONI				S	Sg	14 32 44.3	-0.4
ONI	Oni	1.89	254	*e*Pg	Pn	14 32 16.2	+0.9
ONI				*e*Sg	Sb	14 32 41.3	+0.2
NEY	Neytrino	2.34	274	*e*Pn	Pn	14 32 20.7	-0.8
NEY				*e*Sn	Sn	14 32 51.5	+1.7
SHA1	Shidzhatmaz	2.45	286	*e*Pn	Pn	14 32 22.6	-0.5
SHA1				*e*Sn	Sn	14 32 54.2	+1.5

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*BJI **19** 14:38:05.0±0.0, 6°.39S×130°.86E, h125^{km}, mB5.1/44, mb5.3/73*

*MOS **19** 14:38:07.9±0.9, 6°.01S×130°.63E, h118^{km}, mb5.4/43, Error ellipse: s-maj=8.6km s-min=5.0km az=110.0*

*GCMT **19** 14:38:08.7±0.2, 6°.02S±0°.02×130°.52E±0°.02, h124^{km}±2^{km}, MW5.0/95, Moment Tensor Solution. s33,c39; s95,c150; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.70±.12; M$_{\theta\theta}$-4.74±.13; M$_{\phi\phi}$3.05±.14; M$_{r\theta}$1.35±.10; M$_{\theta\phi}$1.39±.14; M$_{\phi r}$1.13±.10; Best double couple: M$_{0}$4.63400×10^{16} NP1:φ$_{s}$322.00000°, δ61.00000°, λ164.00000°. NP2: φ$_{s}$60.00000°, δ76.00000°, λ30.00000°. Principal axes: T 4.0930, Plg31.0000°, Azm284.0000°; N 1.0920, Plg57.0000°, Azm83.0000°; P -5.1750, Plg10.0000°, Azm188.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **19** 14:38:09.7±1.9, 6°.05S±0°.06×130°.64E±0°.07, h124^{km}±3^{km}, mb5.2/123 Error ellipse: s-maj=10.7km s-min=8.1km az=85.0*

*IDC **19** 14:38:09.9±1.2, 6°.07S×130°.61E, h121^{km}±10^{km}, mb4.7/35, mb1 4.7/37, mb1mx4.7/45, mbtmp5.1/37, MS3.7/14, Ms1 3.7/14, ms1mx3.5/37, Error ellipse: s-maj=10.6km s-min=7.1km az=75.0*

*DJA **19** 14:38:09.9±0.2, 6°S±2°×13°1E±°, h123^{km}±2^{km}, M5.2/90, mB5.6/52, mb5.4/90, MLv5.9/18, Mw(mB)5.1/52, Mwp5.2/4*

ISC 19 14:38:09.6±0.4**, 6°.06S**±0°.03×**130°.66E**±0°.04**, h124**^{km}±3^{km}**, h124**^{km}**:pP-P, n596,** σ**1^{s}.29**/638**, mb5.2**/156**, 33C-13D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.70	334	P	Pn	14 38 39.9	+0.3
SAUI	Saumlaki	2.02	162	P	Pn	14 38 43.3	-0.1
SAUI	Saumlaki	2.02	162	Pn	Pn	14 38 43.6	+0.1
MSAI	Masohi	3.20	327	P	Pn	14 38 59.2	+0.6
MSAI				S	Sn	14 39 38.0	+1.5
AAI	Ambon	3.40	314	P	Pn	14 39 02.4	+1.1
FAKI	Fak Fak	3.49	27	P	Pn	14 39 01.1	-1.4
FAKI				S	Sn	14 39 42.0	-1.5
FAKI	Fak Fak	3.49	27		Pn	14 39 01.6	-0.9
NLAI	Namlea	4.52	308	P	Pn	14 39 18.6	+2.4
SIJI	Sorong	5.19	7	P	Pn	14 39 23.9	-1.2
	562nm,0.3s,baz=187,slow=23,SNR=1954						
SIJI				S	Sn	14 40 17.8	-6.2
	703nm,0.3s,baz=93,slow=24,SNR=20						
SWI	Sorong	5.19	7	P	Pn	14 39 23.5	-1.7
	25nm3µm111µm7µm,0.7s						
RKPI	Ransiki, Papua	5.72	38	P	Pn	14 39 32.2	-0.1
	66nm30µm3µm,0.8s						
SANI	Sanana	6.13	310	P	Pn	14 39 38.1	+0.3
	2.0nm3µm7µm278nm,0.5s						
LBMI	Labuha	6.24	330	P	Pn	14 39 39.2	-0.1
	8.7nm10µm1µm,1.1s						
MTN	Manton Dam	6.76	176	P	Pn	14 39 43.8	-2.5
	baz=6.8,SNR=1000						
MTN	Manton Dam	6.76	176		Pn	14 39 43.8	-2.5
KDU	Kakadu	6.83	165	P	Pn	14 39 44.5	-2.7
	baz=6.8,SNR=1000						
BAKI	Biak	7.27	49	P	Pn	14 39 54.7	+1.5
	12nm29µm3µm,0.5s						
SOEI	Soe	7.32	239	P	Pn	14 39 54.1	+0.1
	8.4nm6µm655nm,1.1s						
SOEI	Soe	7.32	239		Pn	14 39 53.1	-0.9
TNTI	Ternate	7.54	334	P	Pn	14 39 56.9	+0.1
	0.9nm3µm267nm,0.9s						
TNTI	Ternate	7.54	334		Pn	14 39 56.2	-0.7
BBSI	Bau Bau	8.07	274	P	Pn	14 40 07.4	+3.4
	0.4nm951nm109nm,1.0s						
MMRI	Maumere	8.74	252	P	Pn	14 40 15.0	+1.9
	1.1nm3µm162nm,0.9s						
MMRI	Maumere	8.74	252		Pn	14 40 13.8	+0.7
SMPI	Sarmi	8.99	64	P	Pn	14 40 20.0	+3.6
LUWI	Luwuk	9.32	302	P	Pn	14 40 23.8	+3.0
	181nm,0.7s						
LUWI	Luwuk	9.32	302		Pn	14 40 21.9	+1.0
KMSI	Cibinong	9.37	314	P	Pn	14 40 21.7	+0.1
	552nm,0.6s						
KNRA	Kununurra	9.74	191	P	Pn	14 40 23.1	-3.5
	baz=9.7,SNR=1000						
KNRA	Kununurra	9.74	191		Pn	14 40 22.5	-4.1
GENI	Genyem	10.08	70	P	Pn	14 40 31.8	+0.6
	3µm189nm,0.8s						
APSI	Ampana	10.34	299	P	Pn	14 40 37.5	+2.8
	2µm198nm,1.1s						
BKSI	Bulukumba	10.51	273	P	Pn	14 40 39.4	+2.4
	2µm278nm,0.8s						
BNSI	Bone	10.64	278	P	Pn	14 40 42.3	+3.6
	2µm193nm,0.8s						
MRSI	Marisa	10.86	306	P	Pn	14 40 42.4	+0.8
	2µm191nm,0.7s						
KAPI	Kappang	10.91	275	P	Pn	14 40 43.1	+0.8
	4.4nm,0.3s,baz=65,slow=6.1,SNR=5.8						
SPSI	Sidrap Palu	11.05	280	P	Pn	14 40 46.6	+2.5
	2µm174nm,0.8s						
TTSI	Tana Toraja	11.21	285	P	Pn	14 40 50.6	+4.2
	2µm236nm,1.0s						
WBSI	Waikabubak, Su	11.72	252	P	Pn	14 40 56.7	+3.6
	203nm,1.0s						
MPSI	Mapaga	12.48	300	P	Pn	14 41 04.9	+1.9
	2µm162nm,0.9s						
FITZ	Fitzroy Crossi	12.93	202	P	Pn	14 41 03.3	-5.6
	baz=13						
FITZ	Fitzroy Crossi	12.93	202	P	Pn	14 41 03.5	-5.4
	62nm,0.3s,baz=38,slow=11,SNR=225						
FITZ				S	Sn	14 43 18.1	-13
	18nm,0.3s,baz=80,slow=18,SNR=6.3						
FITZ				LR	LR	14 47 30.0	
	comp=Z,274nm,19.6s,baz=15,slow=43						
FITZ	Fitzroy Crossi	12.93	202	Pn	Pn	14 41 02.6	-6.2
PLAI	Plampang	13.07	257	P	Pn	14 41 13.4	+2.7
	2µm127nm,0.8s						
DAV	Davao City (W)	13.99	339	P	P	14 41 25.7	-0.8
	22nm,0.3s,baz=84,slow=7.2,SNR=4.0						
DAV				S	S	14 44 11.4	+1.6
	32nm,0.3s,baz=218,slow=19,SNR=1.6						
DAV				LR	LR	14 46 57.2	
	comp=Z,391nm,21.6s,baz=112,slow=38						
WB0	Warramunga Arr	14.10	165	Pn	Pn	14 41 17.4	-6.6
KCP	Kidapawan	14.12	337	⇑*e*P	Pn	14 41 24.3	+0.1
WB7	Warramunga Arr	14.17	166	P	Pn	14 41 18.9	-5.9
	baz=14						
WRAB	Tennant Creek	14.25	166	P	Pn	14 41 19.3	-6.6
WRAB	Tennant Creek	14.25	166	Pn	Pn	14 41 19.3	-6.5
WRA	Warramunga Arr	14.26	166	P	Pn	14 41 20.3	-5.6
	12nm,0.3s,baz=348,slow=13,SNR=191						
WRA				S	Sn	14 43 45.3	-18
	14nm,0.3s,baz=346,slow=21,SNR=4.8						
WRA				LR	LR	14 47 32.6	
	comp=Z,476nm,20.9s,baz=345,slow=40						
WRA	Warramunga Arr	14.26	166	P	Pn	14 41 19.3	-6.7
WRA	Warramunga Arr	14.26	166	Pn	Pn	14 41 19.2	-6.7
WB2	Warramunga Arr	14.26	166	Pn	Pn	14 41 20.0	-6.0
WR0	Warramunga Arr	14.33	165	Pn	Pn	14 41 20.3	-6.5
BKB	Balikpapan	14.54	289	P	P	14 41 34.0	+1.4
	5µm424nm,1.4s						
BKB	Balikpapan	14.54	289	Pn	Pn	14 41 28.6	-0.8
SMKI	Samarinda	14.54	292	P	P	14 41 35.5	+2.9
COEN	Coen	14.60	123	P	Pn	14 41 27.8	-2.5
	baz=15,SNR=133						
COEN	Coen	14.60	123		Pn	14 41 27.9	-2.5
CTBH	Cotabato--PC H	14.66	334	⇑*i*P	P	14 41 34.0	+0.1
KBKI	Kotabaru	14.70	280	P	P	14 41 33.5	-0.9
	2µm184nm,0.8s						
BUKP	Musuan	14.93	338	*e*P	P	14 41 36.3	-0.6
SRBI	Singaraja	15.46	262	P	P	14 41 46.5	+3.6
	50nm,0.7s						
PAGZ	Pagadian	15.60	332	*e*P	Pn	14 41 43.0	+0.1
BUTP	Butuan	15.75	341	*e*P	P	14 41 45.4	-0.6
JAGI	Jajag, Banyuwa	16.55	261	P	P	14 41 56.1	+1.2
	110nm,0.9s						
JAGI	Jajag, Banyuwa	16.55	261	P	Pn	14 41 52.1	-2.4
JAGI				IAmb	IAmb	14 41 56.9	
	comp=Z,75nm,0.5s						
KMMI	Kalianget	16.62	266	P	P	14 41 59.5	+3.9
	comp=Z,6µmcomp=Z,756nm,0.8s						
PMG	Port Moresby	16.68	103	P	P	14 41 57.8	+1.4
	comp=Z,13nm,0.3s,baz=329,slow=4.1,SNR=28						
PMG				S	Sn	14 44 50.4	-12
	comp=Z,3.3nm,0.3s,baz=0.0,slow=20,SNR=2.3						
PMG	Port Moresby	16.68	103	P	P	14 41 57.0	+0.6
PMG				S	Sn	14 44 50.4	-12
PMG				pmax	pmax		
	comp=Z,182nm,1.0s						
PMG	Port Moresby	16.68	103	P	P	14 41 57.0	+0.6
PMG				IAmb	IAmb	14 42 09.1	
	comp=Z,182nm,0.9s						
QIS	Mount Isa	16.83	150	P	Pn	14 41 54.9	-3.0
	baz=17,SNR=92						
AS31	Alice Springs	17.79	170	P	P	14 42 07.2	-1.3
AS31				IAmb	IAmb	14 42 10.2	
	comp=Z,135nm,0.7s						
ASAR	Alice Springs	17.79	170	P	P	14 42 07.7	-0.8
	comp=Z,26nm,0.3s,baz=336,slow=8.5,SNR=597						
ASAR				S	S	14 45 08.6	-18
	comp=Z,3.1nm,0.3s,baz=352,slow=13,SNR=2.5						
ASAR				LR	LR	14 48 49.0	
	comp=Z,294nm,20.6s,baz=336,slow=36						
ASAR	Alice Springs	17.79	170	P	P	14 42 07.5	-1.0
AS03	Alice Springs	17.80	170	P	P	14 42 07.6	-1.0
	baz=18						
MTSU	Mount Surprise	17.94	133	P	Pn	14 42 11.4	+0.1
	baz=18,SNR=149						
OCLP	Ormoc	18.03	340	*e*P	Pn	14 42 14.2	+1.9
GRJI	Gresik	18.09	266	P	Pn	14 42 13.4	+0.3
	comp=Z,3µmcomp=Z,307nm,0.8s						
GUIM	Jordan	18.42	334	*e*P	Pn	14 42 16.5	-0.5
PSA00	Pilbara Seismi	18.64	213	P	P	14 42 16.9	-0.9
PSA00				IAmb	IAmb	14 42 19.8	
	comp=Z,124nm,0.7s						
PSA00	Pilbara Seismi	18.64	213	P	P	14 42 15.7	-2.1
PSA00				IAmb	IAmb	14 42 20.8	
	comp=Z,44nm,0.6s						
KKM	Kota Kinabalu	18.77	310	P	P	14 42 19.6	+0.1
PWJI	Pagerwojo	18.82	263	P	P	14 42 19.9	+0.1
	comp=Z,68nm,0.9s						
WRKA	Warakurna	19.01	187	P	P	14 42 21.4	-0.4
	baz=19,SNR=906						
RCP	Roxas	19.19	336	⇓*e*P	Pn	14 42 25.4	-0.7
CUYO	Cuyo Island	19.34	330	*e*P	Pn	14 42 27.4	-0.5
BATP	Bataraza	19.55	319	*e*P	Pn	14 42 29.5	-0.8
UWJI	Ujung Watu	19.60	268	P	Pn	14 42 38.4	+7.5
WOJI	Wonogiri, Jawa	19.67	264	P	Pn	14 42 33.0	+1.3
	comp=Z,41nm,0.7s						
UGM	Wanagama	20.07	264	P	P	14 42 32.4	-1.1
UGM				IAmb	IAmb	14 43 16.1	
	comp=Z,184nm,1.3s						
SMRI	Semarang	20.11	266	P	Pn	14 42 36.6	-0.3
	comp=Z,173nm,0.8s						
SMRI	Semarang	20.11	266	P	P	14 42 34.3	+0.4
SMRI				IAmb	IAmb	14 42 37.0	
	comp=Z,124nm,0.7s						
OTRP	Odiongan	20.21	335	*e*P	Pn	14 42 37.1	-0.9
SBUM	Sibu	20.26	294	P	P	14 42 35.5	+0.1
SBUM				IAmb	IAmb	14 42 37.4	
	comp=Z,101nm,0.9s						
SBUM	Sibu	20.26	294	P	P	14 42 36.0	+0.5
ENPP	El Nido	20.47	327	*e*P	P	14 42 38.8	+1.1
PVCP	Virac	20.57	342	*e*P	P	14 42 38.9	+0.2
CTA	Charters Tower	20.59	134	P	P	14 42 40.5	+1.6
	comp=Z,31nm,0.8s,baz=311,slow=13,SNR=25						
CTA				S	S	14 46 19.6	-2.9
	comp=Z,11nm,0.7s,baz=218,slow=19,SNR=1.7						
BUSP	Coron	20.74	330	*e*P	P	14 42 40.9	+0.4
BOAC	Boac	21.27	336	*e*P	P	14 42 48.1	+1.9
KRVT	Keravat (AS076	21.35	86	P	P	14 42 48.8	+1.6
	comp=Z,30nm,0.7s,baz=170,slow=3.7,SNR=11						
KSM	Kuching	21.66	290	P	P	14 42 48.9	-1.5
KSM				IAmb	IAmb	14 42 53.8	
	comp=Z,127nm,0.9s						
KSM	Kuching	21.66	290	P	P	14 42 51.0	+0.6
PGP	Puerto Galera	21.69	334	⇑*e*P	P	14 42 51.4	+0.7
LUBP	Lubang	22.21	332	*e*P	P	14 42 57.1	+0.9
TGY	Tagaytay City	22.23	334	P	P	14 42 55.8	-0.6
	comp=Z,264nm,0.4s,baz=255,slow=2.1,SNR=8.1						
TGY				LR	LR	14 52 50.5	
	comp=Z,60nm,19.3s,baz=248,slow=40						
POLP	Polilio Island	22.39	337	*e*P	P	14 42 57.0	-0.8
CISI	Cisompet, Garu	22.73	265	P	P	14 43 00.3	-1.1
	comp=Z,5µmcomp=Z,432nm,1.2s						
CISI	Cisompet, Garu	22.73	265	P	P	14 42 59.2	-2.2
GIRL	Giralia	22.88	222	P	P	14 43 02.9	+0.2
	baz=23,SNR=8.4						
GIRL	Giralia	22.88	222	P	P	14 43 02.6	0.0
LEM	Lembang	22.91	267	P	P	14 43 02.4	-0.9
	comp=Z,94nm,0.7s,baz=75,slow=8.8,SNR=12						
LEM				LR	LR	14 54 22.5	
	comp=Z,132nm,19.3s,baz=54,slow=43						
CNJI	Cibinong	23.41	266	P	P	14 43 06.5	-1.2
	comp=Z,10µmcomp=Z,1µm,1.2s						
BALP	Baler	23.45	338	*e*P	P	14 43 07.8	-0.2
MEEK	Meekatharra	23.47	208	P	P	14 43 07.8	-0.3
	baz=24,SNR=32						
CBJI	Citeko	23.67	268	P	P	14 43 10.6	+0.5
	comp=Z,351nm,0.8s						
SKJI	Sukabumi	23.97	266	P	P	14 43 12.7	-0.1
	comp=Z,3µmcomp=Z,251nm,0.9s						
SCZP	Santa Cruz	24.16	334	*e*P	P	14 43 11.8	-2.6
QLP	Quilpie	24.17	149	P	P	14 43 15.1	+0.7
	baz=24,SNR=37						
SMPP	San Manuel, Pa	24.18	336	*e*P	P	14 43 13.4	-1.2
CAUP	Cauayan	24.47	339	*e*P	P	14 43 18.0	+0.9
BOLP	Bolinao	24.70	335	*e*P	P	14 43 17.5	-1.8
FORT	Forrest	24.72	185	P	P	14 43 19.1	-0.2
	baz=25,SNR=54						
FORT	Forrest	24.72	185	P	P	14 43 19.2	-0.2
APYP	Conner	25.52	339	*e*P	P	14 43 25.5	-1.2
SZP	Santa	25.53	337	P	P	14 43 26.3	-0.6
SZP				IAmb	IAmb	14 44 15.3	
	comp=Z,62nm,0.9s						
SGCP	Mt. Cagua	25.60	341	*e*P	P	14 43 25.9	-1.5
KASI	Kota Agung	26.04	270	P	P	14 43 30.4	-1.1
	comp=Z,84nm,0.8s						
MDSI	Maura Dua	26.42	272	P	P	14 43 34.6	-0.3
	comp=Z,24nm,0.9s						

KMBL	Kambalda	26.49	197	P	P	14 43 35.4	0.0
	baz=26,SNR=88						
LWLI	Liwa	26.50	271	P	P	14 43 37.5	+1.7
	comp=Z,46nm,0.7s						
RMQ	Roma	26.66	142	P	P	14 43 37.4	+0.4
	baz=27,SNR=14						
MORW	Morawa	26.74	209	P	P	14 43 36.4	-1.2
	baz=27,SNR=3.3						
MORW	Morawa	26.74	209	P	P	14 43 36.9	-0.7
MORW				IAmb	IAmb	14 44 23.9	
	comp=Z,40nm,0.9s						
BBOO	Buckleboo	27.09	170	P	P	14 43 40.4	-0.4
	baz=27,SNR=75						
BBOO	Buckleboo	27.09	170	P	P	14 43 40.4	-0.4
EIDS	Eidsvold	27.40	137	P	P	14 43 43.1	-0.5
MNAI	Manna	27.64	272	P	P	14 43 44.5	-1.4
STKA	Stephens Creek	27.65	160	P	P	14 43 46.0	+0.2
	baz=28,SNR=134						
STKA	Stephens Creek	27.65	160	P	P	14 43 46.0	+0.2
	comp=Z,47nm,0.5s,baz=335,slow=8.9,SNR=191						
STKA				S	S	14 48 33.2	+15
	comp=Z,14nm,0.7s,baz=323,slow=12,SNR=2.3						
STKA				LR	LR	14 56 05.0	
	comp=Z,478nm,18.8s,baz=323,slow=39						
STKA	Stephens Creek	27.65	160	P	P	14 43 46.0	+0.2
BLDU	Ballidu	27.73	207	P	P	14 43 46.3	-0.2
	baz=28,SNR=24						
MYKOM	Kota Tinggi	27.88	285	P	P	14 43 46.2	-1.8
MYKOM				IAmb	IAmb	14 43 50.5	
	comp=Z,29nm,0.7s						
MYKOM	Kota Tinggi	27.88	285	P	P	14 43 48.0	-0.1
KSI	Kapahiang	28.07	274	P	P	14 43 51.9	+2.1
	comp=Z,4µmcomp=Z,31nm,0.7s						
KLBR	Kellerberrin	28.13	204	P	P	14 43 50.1	0.0
	baz=28,SNR=9.3						
HTT	Hallett	28.30	165	P	P	14 43 51.2	-0.4
	baz=28,SNR=59						
DLV	T Lat	28.39	309	P	P	14 43 52.4	-0.3
DLV				IAmb	IAmb	14 43 54.7	
	comp=Z,60nm,1.1s						
CMSA	Cobar Meteorol	29.00	153	P	P	14 43 58.3	+0.6
	baz=29,SNR=151						
MUN	Mundaring	29.11	206	P	P	14 43 58.6	-0.2
	baz=29,SNR=9.6						
HNR	Honiara	29.20	98	P	P	14 43 59.8	0.0
	comp=Z,31nm,0.7s,baz=243,slow=9.0,SNR=2.1						
KRJI	Kerinci	29.39	276	P	P	14 44 01.9	+0.4
	comp=Z,2µmcomp=Z,228nm,0.9s						
NWAO	Narrogin (SRO)	29.52	203	P	P	14 44 02.4	+0.1
	baz=30,SNR=19						
NWAO	Narrogin (SRO)	29.52	203	P	P	14 44 02.4	+0.1
	comp=Z,14nm,0.5s,baz=43,slow=8.1,SNR=26						
NWAO				LR	LR	14 56 45.8	
	comp=Z,280nm,20.5s,baz=352,slow=38						
NWAO	Narrogin (SRO)	29.52	203	P	P	14 44 02.3	0.0
NWAO				IAmb	IAmb	14 45 01.4	
	comp=Z,32nm,0.7s						
PDSI	Padang	30.56	278	P	P	14 44 11.6	-0.2
	comp=Z,19nm,0.4s						
TPUB	Ta-pu	30.78	342	P	P	14 44 12.1	-1.5
RKGY	Rocky Gully	31.10	202	P	P	14 44 17.8	+1.5
	baz=31,SNR=14						
SSLB	Suanglung	31.14	343	P	P	14 44 15.3	-1.4
YOJ	Yonaguni jima	31.24	346	P	P	14 44 16.9	-0.6
YOJ				pmax	pmax		
	comp=Z,147nm,1.1s						
YOJ	Yonaguni jima	31.24	346	P	P	14 44 16.9	-0.6
ARMA	Armidale	31.24	143	P	P	14 44 19.1	+1.4
	baz=31,SNR=10						
ARMA	Armidale	31.24	143	P	P	14 44 18.1	+0.3
IPM	Ipoh	31.39	289	P	P	14 44 17.3	-1.8
IPM				IAmb	IAmb	14 44 21.0	
	comp=Z,28nm,0.7s						
IPM	Ipoh	31.39	289	P	P	14 44 17.0	-2.1
SISI	Saibi	31.85	277	P	P	14 44 21.9	-1.2
	comp=Z,29nm,0.7s						
YHNB	Yeheng	31.85	344	P	P	14 44 22.0	-1.0
YHNB				IAmb	IAmb	14 45 34.1	
	comp=Z,55nm,1.5s						
KULM	Kulim	32.01	290	P	P	14 44 22.8	-1.7
KULM				IAmb	IAmb	14 44 26.9	
	comp=Z,30nm,0.7s						
KULM	Kulim	32.01	290	P	P	14 44 23.0	-1.5
ARPS	Mount Arapiles	32.23	163	P	P	14 44 27.1	+1.0
	baz=32,SNR=45						
QIZ	Qiongzhong	32.28	321	P	P	14 44 26.3	-0.5
QIZ				sP	sP	14 45 07.6	+0.9
QIZ				S	S	14 49 30.6	-0.8
QIZ				sS	sS	14 50 19.9	+4.2
QIZ				pmax	pmax		
	comp=Z,140nm,2.5s						
QIZ				LR	LR		
	comp=Z,160nm,10.2s						
YNG	Young	32.55	152	P	P	14 44 30.1	+1.1
	baz=33,SNR=64						
UBPT	Khong Chiam	32.75	311	P	P	14 44 30.5	-0.4
JOW	Kunigami	32.77	356	P	P	14 44 31.8	+0.8
	comp=Z,4.0nm,0.7s,baz=168,slow=13,SNR=10						
JOW	Kunigami	32.77	356	P	P	14 44 28.7	-2.3
JOW				IAmb	IAmb	14 44 33.7	
	comp=Z,27nm,0.8s						
RPSI	Rantau Prapat	32.86	284	P	P	14 44 29.3	-2.6
RPSI	Rantau Prapat	32.86	284	P	P	14 44 29.8	-2.2
RPSI					PcP	14 47 14.2	+0.1
PBSI	Pulau Batu	32.87	279	P	P	14 44 40.0	+8.0
PSI	Prapat	32.89	285	P	P	14 44 29.8	-2.6
	comp=Z,37nm,0.9s,baz=111,slow=4.9,SNR=36						
PSI				PcP	PcP	14 47 14.2	-0.1
	comp=Z,6.9nm,0.7s,baz=179,slow=7.2,SNR=3.5						
PSI	Prapat	32.89	285	P	P	14 44 29.3	-3.1
PSI						14 47 14.2	
PSI				pmax	pmax		
	comp=Z,96nm,0.9s						
MGCD	Mangrove Creek	33.03	148	P	P	14 44 35.1	+1.9
	baz=33,SNR=17						
CAN	Canberra	33.67	152	P	P	14 44 40.0	+1.2
CAN				pmax	pmax		
	comp=Z,68nm,0.8s						
CAN	Canberra	33.67	152	P	P	14 44 40.0	+1.2
CNB	Canberra Magne	33.83	152	P	P	14 44 41.5	+1.4
	baz=34,SNR=28						
TOO	Toolangi	34.16	159	P	P	14 44 44.7	+1.8
	baz=34,SNR=48						
TOO	Toolangi	34.16	159	P	P	14 44 44.7	+1.8
TOO				pmax	pmax		
	comp=Z,34nm,0.7s						
TOO	Toolangi	34.16	159	P	P	14 44 44.6	+1.8
TOO				IAmb	IAmb	14 44 45.7	
	comp=Z,34nm,0.7s						
KCSI	Kotacane, Aceh	34.19	285	P	P	14 44 43.3	-0.2
	comp=Z,31nm,0.9s						
TPTI		34.69	285	P	P	14 44 48.9	+1.1
	comp=Z,13nm,1.0s						
JCJ	Chichijima	34.79	18	P	P	14 44 47.3	-1.2
	comp=Z,16nm,0.4s,baz=289,slow=22,SNR=9.6						
JCJ				LR	LR	14 57 08.4	
	comp=Z,64nm,19.7s,baz=232,slow=33						
MILA	Mila	35.17	154	P	P	14 44 53.4	+1.7
	baz=35,SNR=11						
MLSI	Meulaboh, Aceh	35.71	286	P	P	14 44 54.6	-1.9
	comp=Z,216nm,0.8s						
PBKT	Sadao Pong	36.98	308	P	P	14 45 07.0	-0.3
PBKT				IAmb	IAmb	14 45 08.1	
	comp=Z,35nm,0.6s						
SLVN	Son La	37.82	317	P	P	14 45 14.5	+0.2
DZM	Mont Dzumac	38.05	118	P	P	14 45 17.7	+1.3
	comp=Z,11nm,0.8s,baz=315,slow=21,SNR=7.6						
DZM	Mont Dzumac	38.05	118	P	P	14 45 17.4	+1.1
JNU	Nakatsue	38.96	0	P	P	14 45 24.0	+0.4
	comp=Z,20nm,0.7s,baz=12,slow=3.0,SNR=14						
JNU	Nakatsue	38.96	0	P	P	14 45 24.1	+0.4
JNU				IAmb	IAmb	14 45 58.5	
	comp=Z,47nm,1.1s						
MOO	Moorlands	39.09	160	P	P	14 45 26.0	+1.4
	baz=39,SNR=11						
NJ2	Nanjing	39.53	344	⇓*i*P	P	14 45 30.0	+1.6
NJ2				pmax	pmax		
	comp=Z,37nm,0.6s						
TAU	Tasmania Unive	39.55	161	P	P	14 45 30.1	+1.7
TAU				pmax	pmax		
	comp=Z,99nm,1.5s						
TAU	Tasmania Unive	39.55	161	P	P	14 45 30.1	+1.7
TAU				IAmb	IAmb	14 45 33.0	
	comp=Z,99nm,1.5s						
WHN	Wuhan	39.61	338	P	P	14 45 28.8	-0.2
WHN				pmax	pmax		
	comp=Z,120nm,0.9s						
CM31	Chiang Mai Arr	39.65	309	P	P	14 45 30.1	+0.5
	SNR=42						
CM31				S	S	14 51 33.2	+9.3
CM31	Chiang Mai Arr	39.65	309	P	P	14 45 30.4	+0.8
CMAR	Chiang Mai Arr	39.65	309	P	P	14 45 30.4	+0.8
	comp=Z,58nm,0.7s,baz=139,slow=7.5,SNR=331						
CMAR				PcP	PcP	14 47 35.9	+1.6
	comp=Z,10.0nm,0.8s,baz=169,slow=2.9,SNR=9.1						
CMAR				LR	LR	15 05 31.3	
	comp=Z,84nm,18.3s,baz=140,slow=41						
CMAR	Chiang Mai Arr	39.65	309	P	P	14 45 29.9	+0.3
CMAR					PcP	14 47 35.4	+1.2
KWAJ	Kwajalein Atol	39.68	69	P	P	14 45 30.0	0.0
KWAJ				pmax	pmax		
	comp=Z,401nm,1.2s						
KWAJ	Kwajalein Atol	39.68	69	P	P	14 45 30.0	0.0
GYA	Guiyang	39.83	325	⇑*i*P	P	14 45 31.3	+0.2
GYA				pP	pwP	14 46 01.0	-0.7
GYA				sP	sP	14 46 15.6	+3.9
GYA				PP	PP	14 47 07.3	+2.1
GYA				PcP	PcP	14 47 36.1	+1.3
GYA				ScP	ScP	14 51 13.4	+0.9
GYA				S	S	14 51 22.3	-4.3
GYA				sS	sS	14 52 22.4	+11
GYA				ScS	ScS	14 55 24.0	-1.9
GYA				pmax	pmax		
	comp=Z,30nm,0.8s						
GYA				pmax	pmax		
	comp=Z,140nm,5.0s						
CHTO	Chiang Mai	39.85	309	P	P	14 45 31.5	+0.2
CHTO				pmax	pmax		
	comp=Z,116nm,0.9s						
CHTO	Chiang Mai	39.85	309	P	P	14 45 31.5	+0.2
KMI	Kunming	41.21	320	P	P	14 45 43.5	+0.9
KMI				pmax	pmax		
	comp=Z,32nm,0.8s						
KMI				pmax	pmax		
	comp=Z,86nm,4.4s						
KMI				LR	LR		
	comp=Z,140nm,5.3s						
KMI				LR	LR		
	comp=Z,130nm,5.8s						
KMI				LR	LR		
	comp=Z,150nm,5.8s						
INU	Inuyama	41.62	8	P	P	14 45 45.8	+0.3
TJN	Taejon	42.32	356	⇓*e*P	P	14 45 52.6	+1.4
MAJO	Matsushiro	42.96	9	P	P	14 45 55.1	-1.3
MAJO				pmax	pmax		
	comp=Z,23nm,0.9s						
MAJO	Matsushiro	42.96	9	P	P	14 45 55.1	-1.3
MAT	Matsushiro	42.96	9	P	P	14 45 56.1	-0.3
MJAR	Matsushiro Arr	42.96	9	P	P	14 45 56.0	-0.4
	comp=Z,10nm,0.8s,baz=185,slow=9.3,SNR=24						
MJAR				PcP	PcP	14 47 45.3	+0.5
	comp=Z,5.6nm,0.8s,baz=188,slow=5.1,SNR=2.8						
MJAR				LR	LR	15 02 32.4	
	comp=Z,101nm,20.3s,baz=145,slow=34						
MJAR	Matsushiro Arr	42.96	9	P	P	14 45 54.3	-2.1
MJB9	Matsu-Tunnel	42.96	9	P	P	14 45 55.6	-0.8
KSAR	Wonju Array Be	43.35	357	P	P	14 45 59.9	+0.4
KSAR						14 47 46.5	
KSAR	Wonju Array Be	43.35	357	P	P	14 45 59.9	+0.4
KSAR					PcP	14 47 46.5	+0.5
KSRS	Korea Array	43.36	357	P	P	14 46 00.7	+1.2
	comp=Z,7.0nm,0.6s,baz=172,slow=8.6,SNR=51						
KSRS				PcP	PcP	14 47 47.1	+1.1
	comp=Z,4.1nm,0.7s,baz=181,slow=3.1,SNR=8.4						
KSRS				LR	LR	15 04 23.1	
	comp=Z,64nm,20.3s,baz=180,slow=36						
KS19	Wonju Array Si	43.41	357	P	P	14 46 00.5	+0.5
INCN	Inchon	43.48	355	P	P	14 46 01.1	+0.6
INCN				pmax	pmax		
	comp=Z,19nm,0.6s						
INCN	Inchon	43.48	355	P	P	14 46 01.1	+0.6
INCN				IAmb	IAmb	14 46 03.4	
	comp=Z,19nm,0.6s						
TIA	Tai'an	43.92	344	P	P	14 46 04.3	+0.2
TIA				pmax	pmax		
	comp=Z,12nm,0.8s						
XAN	Xi'an	44.87	334	P	P	14 46 11.5	-0.3
XAN				pP	pwP	14 46 41.4	-1.9
XAN				PcP	PcP	14 47 52.4	+1.0
XAN				ScP	ScP	14 51 32.8	+0.3
XAN				pmax	pmax		
	comp=Z,51nm,0.8s						
XAN				LR	LR		
	comp=Z,130nm,23.9s						
XAN				LR	LR		
	comp=Z,93nm,21.7s						
XAN				LR	LR		
	comp=Z,150nm,21.7s						
CD2	Chengdu	44.87	327	P	P	14 46 11.5	-0.3
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
TIY	Taiyuan	46.74	340	*e*P	P	14 46 26.9	+0.5
TIY				S	S	14 53 06.0	-1.1
TIY				pmax	pmax		
	comp=Z,40nm,0.5s						
TIY				pmax	pmax		
	comp=Z,100nm,3.7s						
TIY				LR	LR		
	comp=Z,130nm,5.0s						
TIY				LR	LR		
	comp=Z,190nm,5.0s						
BRDH	Bariadhala	47.66	308	P	P	14 46 33.4	-0.4
	comp=Z,114nm,0.3s,baz=59,slow=6.7,SNR=5.8						
BJI	Beijing	47.77	345	P	P	14 46 34.5	+0.3
BJI				PcP	PcP	14 48 01.6	+0.2
BJI				pmax	pmax		
	comp=Z,51nm,0.7s						
LZH	Lanzhou	48.90	331	*e*P	P	14 46 44.0	+0.8
LZH				pP	pwP	14 47 14.4	+0.9
LZH				sP	sP	14 47 26.6	+1.5
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
LZH				pmax	pmax		
	comp=Z,89nm,4.3s						
VLA	Vladivostok	48.96	1	*c i*P	P	14 46 44.4	+1.1
VLA				*i* *PP	pP	14 47 10.0	-0.1
VLA				pmax	pmax		
	comp=Z,22nm,0.9s						
OUZ	Omahuta	48.98	132	P	P	14 46 46.0	+2.3
CN2	Changchun	49.85	355	*e*P	P	14 46 49.9	-0.1
CN2				pmax	pmax		
	comp=Z,30nm,0.6s						
HHC	Hu-ho-hao-te	49.86	341	*e*P	P	14 46 51.4	+1.0
HHC				pmax	pmax		
	comp=Z,250nm,1.0s						
HHC				pmax	pmax		
	comp=Z,1µm,5.0s						
USA0B	Ussuriysk Arra	50.04	1	*ce*P	P	14 46 52.1	+0.6
USA0B	Ussuriysk Arra	50.04	1	P	P	14 46 51.2	-0.3
USA0B				IAmb	IAmb	14 46 53.1	
	comp=Z,15nm,0.7s						
USRK	Ussuriysk Ar.	50.04	1	P	P	14 46 52.2	+0.8
	comp=Z,13nm,0.6s,baz=187,slow=7.3,SNR=55						
USRK	Ussuriysk Ar.	50.04	1	P	P	14 46 51.6	+0.2
MDJ	Mudanjiang	50.45	359	P	P	14 46 55.6	+1.0
MDJ				pmax	pmax		
	comp=Z,31nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,190nm,5.8s						
ASAJ	Asahikawa	51.09	11	P	P	14 47 00.4	+1.0
	comp=Z,9.8nm,0.6s,baz=230,slow=9.8,SNR=31						
ASAJ				LR	LR	15 08 46.2	
	comp=Z,42nm,18.4s,baz=204,slow=36						
JKA	Kamikawa-asahi	51.09	11	P	P	14 47 00.4	+1.0
WHZ	Wether Hill Ro	51.12	147	P	P	14 47 00.3	+0.6
WHZ				IAmb	IAmb	14 47 01.3	
	comp=Z,24nm,1.2s						
BWNR	Bhubaneshwar	51.27	302	*e*P	P	14 47 01.3	+0.2
LBZ	Lake Benmore	51.46	144	P	P	14 47 02.6	+0.3
PALK	Pallekele	51.57	284	P	P	14 47 02.3	-1.2
	comp=Z,15nm,0.6s,baz=96,slow=8.0,SNR=30						
PALK				PcP	PcP	14 48 17.2	+1.3
	comp=Z,11nm,0.8s,baz=88,slow=6.0,SNR=2.4						
PALK	Pallekele	51.57	284	*i* P	P	14 47 02.2	-1.4
	SNR=6.2						
PALK	Pallekele	51.57	284	*de*P	P	14 47 02.4	-1.2
PALK				pmax	pmax		
	comp=Z,17nm,0.8s						
PALK	Pallekele	51.57	284	P	P	14 47 02.2	-1.4
PALK				IAmb	IAmb	14 47 03.1	
	comp=Z,18nm,0.7s						
RPZ	Rata Peaks	51.58	143	P	P	14 47 02.4	-0.7
	comp=Z,6.3nm,0.9s,baz=347,slow=13,SNR=2.3						
RPZ	Rata Peaks	51.58	143	P	P	14 47 03.0	-0.1
LSA	Lhasa	51.98	315	P	P	14 47 07.8	+0.9
TUWZ	Tuamarina	52.16	139	P	P	14 47 07.3	-0.2
KHZ	Kahutara	52.40	141	P	P	14 47 09.7	+0.5
CMWZ	Cape Campbell	52.49	139	P	P	14 47 08.2	-1.7
MQZ	McQueen’s Vall	52.54	142	P	P	14 47 08.3	-1.9
BKZ	Black Stump Fm	52.80	136	P	P	14 47 12.6	+0.3
BOK	Bokaro	52.80	306	*e*P	P	14 47 12.9	+0.4
BOK				IAmb	IAmb	14 47 16.2	
	comp=Z,11nm,0.7s						
ODAN	Odare	53.15	310	⇑*i*P	P	14 47 15.3	+0.1
	comp=Z,94nm,0.6s						
TAPN	Taplejung	53.16	311	⇑*i*P	P	14 47 15.5	+0.1
	comp=Z,92nm,0.5s						
MXZ	Matakaoa Point	53.41	133	P	P	14 47 17.3	+0.5
GTA	Gaotai	53.48	330	⇑P	P	14 47 18.3	+1.0
GTA				pP	pP	14 47 46.5	+0.9
GTA				sP	sP	14 48 01.0	+2.1
GTA				PcP	PcP	14 48 23.8	+1.1
GTA				ScP	ScP	14 52 09.0	-0.2
GTA				S	S	14 54 41.4	+0.8
GTA				pmax	pmax		
	comp=Z,37nm,1.1s						
GTA				pmax	pmax		
	comp=Z,110nm,8.1s						
GTA				LR	LR		
	comp=Z,97nm,20.9s						
GTA				LR	LR		
	comp=Z,170nm,21.6s						
GTA				LR	LR		
	comp=Z,150nm,18.1s						
MDRS	Chennai	53.56	291	*e*P	P	14 47 18.4	+0.3
RAMN	Ramite	53.80	310	⇑*i*P	P	14 47 20.4	+0.4
	comp=Z,279nm,0.6s						
YSS	Yuzh-Sakhalins	53.86	10	⇑*e*P	P	14 47 20.3	+0.5
YSS				*e*		14 47 49.8	
YSS				pmax	pmax		
	comp=Z,20nm,0.5s						
YSS	Yuzh-Sakhalins	53.86	10	P	P	14 47 20.2	+0.5
YSS				IAmb	IAmb	14 47 21.4	
	comp=Z,19nm,0.6s						
JIRN	Jiri	54.47	310	⇑*i*P	P	14 47 25.1	0.0
	comp=Z,120nm,0.5s						
GUN	Gumba	54.84	310	⇑*i*P	P	14 47 27.7	0.0
	comp=Z,207nm,0.6s						
PKI	Pulchoki	55.02	310	⇑*i*P	P	14 47 28.6	-0.4
	comp=Z,43nm,0.5s						
PKIN	Phulchoki	55.04	310	⇑*i*P	P	14 47 28.5	-0.5
	comp=Z,52nm,0.8s						
KLR	Kul'dur	55.06	1	P	P	14 47 29.7	+1.3
	comp=Z,7.1nm,0.8s,baz=206,slow=4.3,SNR=26						
KLR				PcP	PcP	14 48 28.7	+0.3
	comp=Z,4.4nm,0.8s,baz=218,slow=4.2,SNR=4.3						
KLR	Kul'dur	55.06	1	*ce*P	P	14 47 29.1	+0.7
KLR				pmax	pmax		
	comp=Z,16nm,1.1s						
KKN	Kakani	55.23	310	⇑*i*P	P	14 47 30.2	-0.1
	comp=Z,86nm,0.7s						
DMN	Daman	55.27	310	⇑*i*P	P	14 47 30.7	0.0
	comp=Z,37nm,0.4s						
GKN	Gorkha	55.83	310	⇑*i*P	P	14 47 34.6	+0.1
	comp=Z,109nm,0.3s						
HYB	Hyderabad	56.50	295	*i* P	P	14 47 38.0	-1.3
HYB	Hyderabad	56.50	295	*e*P	P	14 47 38.5	-0.8
DANN	Dangsing	56.67	310	⇑*i*P	P	14 47 40.6	-0.1
GRNR	Gornyy	56.81	4	⇑*i*P	P	14 47 41.8	+0.9
GRNR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GRNR				MLR	MLR		
	comp=Z,80nm,19.0s						
NGP	Nagpur	57.39	300	*e*P	P	14 47 45.1	-0.4
NGP				IAmb	IAmb	14 47 46.4	
	comp=Z,55nm,0.7s						
ULN	Ulaanbaatar	57.58	341	P	P	14 47 47.6	+1.1
ULN	Ulaanbaatar	57.58	341	*c i*P	P	14 47 47.7	+1.1
ULN				pmax	pmax		
	comp=Z,45nm,0.7s						
ULN	Ulaanbaatar	57.58	341	P	P	14 47 47.5	+1.1
TYV	Tymovskoe	57.63	9	*e*P	P	14 47 48.1	+1.5
TYV				*e*S	S	14 55 38.2	+3.2
TYV				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TYV				pmax	pmax		
	comp=Z,400nm,6.2s						
TYV				smax	smax		
	comp=N,1µm,8.9s						
SONM	Songino Array	57.77	341	P	P	14 47 49.0	+1.2
	comp=N,18nm,0.7s,baz=161,slow=6.7,SNR=89						
SONM				PcP	PcP	14 48 39.9	+0.7
	comp=N,10nm,0.7s,baz=152,slow=4.5,SNR=6.8						
SONM				PKP2bc		15 17 42.6	
	comp=N,0.3nm,0.4s,baz=341,slow=3.1,SNR=4.4						
SONM	Songino Array	57.77	341	P	P	14 47 48.7	+0.9
DGAR	Diego Garcia	57.79	265	*de*P	P	14 47 49.0	+0.6
DGAR				pmax	pmax		
	comp=Z,157nm,1.2s						
DGAR	Diego Garcia	57.79	265	P	P	14 47 49.0	+0.6
KAAM	Kaadhehdhoo	57.93	274	P	P	14 47 49.4	0.0
BHPL	Bhopal	59.58	301	*e*P	P	14 47 59.4	-1.4
BHPL				IAmb	IAmb	14 48 02.1	
	comp=Z,26nm,0.7s						
ZEA	Zeya	59.64	358	*e*P	P	14 48 00.5	+0.1
ZEA				pmax	pmax		
	comp=N,21nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,31nm,0.8s						
ZAK	Zakamensk	61.00	340	*e*P	P	14 48 10.3	+0.4
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CASY	Casey	61.73	189	P	P	14 48 14.9	+0.4
CASY				IAmb	IAmb	14 50 07.1	
	comp=Z,25nm,1.2s						
TLY	Talaya	61.99	341	P	P	14 48 18.0	+1.5
	comp=Z,7.1nm,0.6s,baz=194,slow=6.3,SNR=11						
TLY				PcP	PcP	14 48 56.0	+0.1
	comp=Z,5.4nm,0.7s,baz=214,slow=3.6,SNR=5.0						
TLY	Talaya	61.99	341	P	P	14 48 18.0	+1.5
IRK	Irkutsk	62.28	342	*e*P	P	14 48 19.6	+1.2
IRK				*e*		14 48 47.8	
IRK				pmax	pmax		
	comp=Z,42nm,1.7s						
MOY	Mondy	62.86	340	*e*P	P	14 48 23.9	+1.5
MOY				pmax	pmax		
	comp=Z,56nm,2.2s						
WMQ	Urumqi	62.97	326	*e*P	P	14 48 24.8	+1.6
WMQ				pP	pwP	14 48 56.3	+1.1
WMQ				pmax	pmax		
	comp=Z,65nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,170nm,3.8s						
WMQ				LR	LR		
	comp=Z,610nm,28.9s						
WMQ				LR	LR		
	comp=Z,2µm,29.1s						
WMQ				LR	LR		
	comp=Z,77nm,29.0s						
SMLA	Simla	63.04	309	*e*P	P	14 48 23.1	-0.7
SMLA				IAmb	IAmb	14 48 26.6	
	comp=Z,69nm,0.8s						
SMLA				*e*S	S	14 56 41.4	-3.5
PEA0B	Petropavlovsk-	63.23	18	P	P	14 48 25.8	+1.2
PEA0B				pmax	pmax		
	comp=Z,46nm,1.3s						
PEA0B	Petropavlovsk-	63.23	18	P	P	14 48 25.8	+1.2
PEA0B				IAmb	IAmb	14 48 42.4	
	comp=Z,46nm,1.2s						
PETK	Petropavlovsk-	63.23	18	P	P	14 48 26.1	+1.5
	comp=Z,18nm,0.7s,baz=192,slow=4.5,SNR=46						
PETK	Petropavlovsk-	63.23	18	P	P	14 48 25.5	+0.9
DHRM	DHARAMSHALA	64.19	310	*e*P	P	14 48 31.7	0.0
DHRM				IAmb	IAmb	14 48 33.9	
	comp=Z,95nm,0.8s						
BOD	Bodaibo	65.08	350	*e*P	P	14 48 36.4	-0.2
BOD				pmax	pmax		
	comp=Z,18nm,0.9s						
DGZ	Jazzator, Alta	67.00	331	*c i*P	P	14 48 50.2	+1.0
DGZ				pmax	pmax		
	comp=Z,46nm,1.1s						
NIL	Nilore	67.11	310	P	P	14 48 50.1	-0.1
NIL				P	P	14 48 50.1	-0.1
NIL	Nilore	67.11	310	P	P	14 48 49.7	-0.4
NIL				pmax	pmax		
	comp=Z,20nm,0.7s						

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NIL   Nilore            67.11 310    P        P        14 48 49.7 -0.4
NIL                                  IAmb     IAmb     14 48 51.4
      comp=Z,20nm,0.7s
MA2   Magadan           67.35  11c iP         P        14 48 52.1 +1.0
MA2                                  pmax     pmax
      comp=Z,20nm,0.9s
MA2   Magadan           67.35  11    P        P        14 48 51.9 +0.8
MA2                                  IAmb     IAmb     14 48 53.3
      comp=Z,17nm,0.8s
PDGK  Podgornoye        67.46 322    P        P        14 48 52.1 -0.2
KSH   Kashi             67.78 317    P        P        14 48 55.9 +1.6
KSH                                  sP       sP       14 49 36.0 -1.5
KSH                                  PP       PP       14 51 28.8 +3.3
KSH                                  PcS               14 53 21.1
KSH                                  S        S        14 57 41.3 -1.3
KSH                                  SS       SS       15 02 07.0 +0.4
KSH                                  pmax     pmax
      comp=Z,42nm,0.7s
KSH                                  pmax     pmax
      comp=Z,250nm,5.2s
KSH                                  LR       LR
      comp=Z,140nm,12.7s
KSH                                  LR       LR
      comp=Z,240nm,14.4s
KSH                                  LR       LR
      comp=Z,89nm,15.8s
MK31  Makanchi Array    67.81 326    P        P        14 48 55.1 +0.9
MK31                                 pmax     pmax
      comp=Z,90nm,0.9s
MK31  Makanchi Array    67.81 326    P        P        14 48 55.1 +0.9
MKAR  Makanchi Array    67.81 326    P        P        14 48 55.4 +1.1
      comp=Z,93nm,0.4s,baz=118,slow=8.5,SNR=1221
MKAR                                 PcP      PcP      14 49 20.5 +0.4
      comp=Z,18nm,0.8s,baz=104,slow=5.1,SNR=5.1
MKAR                                 S        S        14 57 43.1 +0.6
      comp=Z,0.3nm,0.7s,baz=139,slow=11,SNR=3.6
MKAR  Makanchi Array    67.81 326    P        P        14 48 54.9 +0.7
YAK   Yakutsk           67.89 360   eP        P        14 48 55.0 +0.6
YAK                                 e*PP      PcP      14 49 21.1 +1.2
YAK                                 eS        S        14 57 42.9 +0.1
YAK                                 e*SS      pS       14 58 15.4 -1.7
YAK                                 e                  14 58 32.2
YAK                                  pmax     pmax
      comp=Z,62nm,0.7s
YAK                                  pmax     pmax
      comp=N,12nm,0.8s
YAK                                  pmax     pmax
      comp=E,3.0nm,0.7s
YAK                                  smax     smax
      comp=E,100nm,3.3s
YAK                                  smax     smax
      comp=N,106nm,3.0s
YAK   Yakutsk           67.89 360    P        P        14 48 54.8 +0.4
MAKZ  Makanchi          67.99 326    P        P        14 48 56.0 +0.6
MAKZ                                 pmax     pmax
      comp=Z,169nm,1.2s
MAKZ  Makanchi          67.99 326    P        P        14 48 56.0 +0.6
ULHL  Ulahol            68.93 320    P        P        14 49 02.6 +1.0
      SNR=18
KZA   Kyzart            69.49 319    P        P        14 49 07.0 +1.6
      SNR=60
KBK   Karagaybulak      69.97 320    P        P        14 49 09.3 +1.4
      SNR=12
UCH   Uchtor            70.05 319    P        P        14 49 09.9 +1.2
      SNR=92
FRU1  Bishkek           70.25 320    P        P        14 49 10.4 +0.9
FRU1                                 pmax     pmax
      comp=Z,29nm,1.0s
FRU1  Bishkek           70.25 320    P        P        14 49 10.4 +0.9
FRU1                                 IAmb     IAmb     14 49 11.7
      comp=Z,29nm,0.9s
AAK   Ala-Archa         70.25 319    P        P        14 49 11.0 +1.3
      comp=Z,19nm,0.4s,baz=103,slow=5.4,SNR=111
AAK   Ala-Archa         70.25 319    P        P        14 49 11.1 +1.5
      SNR=43
AAK   Ala-Archa         70.25 319  i P        P        14 49 10.7 +1.1
      SNR=6.5
AAK   Ala-Archa         70.25 319    P        P        14 49 10.8 +1.1
AAK   Ala-Archa         70.25 319c iP         P        14 49 10.9 +1.3
AAK                                  pmax     pmax
      comp=Z,65nm,1.0s
AAK   Ala-Archa         70.25 319    P        P        14 49 10.8 +1.2
AAK                                  IAmb     IAmb     14 49 12.2
      comp=Z,56nm,0.9s
CHMS  Chumysh           70.26 320    P        P        14 49 10.4 +0.9
      SNR=16
AML   Almayashu         70.54 319    P        P        14 49 13.4 +1.7
      SNR=14
USP   Ospenovka         70.55 320    P        P        14 49 12.4 +1.1
      SNR=78
KBL   Kabul             70.67 310    P        P        14 49 12.3  0.0
KBL                                  P        P        14 49 12.3  0.0
EKS2  Erkin-Say         70.73 319    P        P        14 49 14.1 +1.6
      SNR=75
SEY   Seymchan          70.76  10⇑iP          P        14 49 13.1 +1.0
ZAA0  Zalesovo Array    71.04 333    P        P        14 49 13.6 -0.3
ZAA0                                 IAmb     IAmb     14 49 14.9
      comp=Z,49nm,1.1s
ZALV  Zalesovo Beam     71.04 333    P        P        14 49 14.1 +0.2
      comp=Z,25nm,0.6s,baz=118,slow=5.0,SNR=69
ZALV                                 S        S        14 58 19.6 -0.4
      comp=Z,0.8nm,0.5s,baz=134,slow=4.3,SNR=4.1
ZALV  Zalesovo Beam     71.04 333    P        P        14 49 13.5 -0.4
KURBB Kurchatov Arra    72.06 328    P        P        14 49 20.1  0.0
KURK  Kurchatov         72.06 328    P        P        14 49 20.8 +0.7
KURK  Kurchatov         72.06 328c iP         P        14 49 20.6 +0.5
KURK                                 pmax     pmax
      comp=Z,62nm,1.0s
KURK  Kurchatov         72.06 328    P        P        14 49 20.7 +0.5
KURK                                 IAmb     IAmb     14 49 21.8
      comp=Z,64nm,1.1s
KK31  Karatay Array     73.07 318  i P        P        14 49 26.9 +0.6
KK31  Karatay Array     73.07 318    P        P        14 49 26.9 +0.6
KK31                                 IAmb     IAmb     14 49 28.2
      comp=Z,41nm,0.9s
KKAR  Karatay Array     73.07 318    P        P        14 49 26.6 +0.3
KKAR                                 pmax     pmax
      comp=Z,41nm,0.9s
KKAR  Karatay Array     73.07 318    P        P        14 49 26.7 +0.4
KKAR  Karatay Array     73.07 318    P        P        14 49 26.6 +0.3
KKAR                                 IAmb     IAmb     14 49 28.2
      comp=Z,41nm,0.9s
TAS   Tashkent          73.14 316    P        P        14 49 27.7 +0.9
TAS                                  pmax     pmax
      comp=Z,190nm,1.1s
TAS   Tashkent          73.14 316    P        P        14 49 27.6 +0.9
VNDA  Vanda             73.30 173    P        P        14 49 27.8 +0.7
      comp=Z,5.3nm,0.7s,baz=306,slow=5.7,SNR=20
VNDA                                 LR       LR       15 22 21.8
      comp=Z,92nm,18.4s,baz=272,slow=36
VNDA  Vanda             73.30 173    P        P        14 49 27.5 +0.5
RER   Riviere de l'E    73.79 250    P        P        14 49 31.7 +0.6
RER                                  IAmb     IAmb     14 49 36.4
      comp=Z,42nm,0.9s
SBA   Scott Base        74.18 173    P        P        14 49 34.1 +1.9
SBA                                  pmax     pmax
      comp=Z,29nm,1.5s
SBA   Scott Base        74.18 173    P        P        14 49 34.0 +1.9
WBK   Wadi Bani Khal    75.61 295    P        P        14 49 41.3 -0.2
      SNR=20
WBK                                  P        P        14 49 41.3 -0.2
      SNR=20
WSAR  Wadi Sarin        76.05 296    P        P        14 49 44.8 +0.8
      SNR=16
MAW   Mawson            76.06 201    P        P        14 49 44.2 +1.1
      baz=76,SNR=25
MAW   Mawson            76.06 201    P        P        14 49 43.8 +0.7
      comp=Z,12nm,0.6s,baz=70,slow=5.8,SNR=31
MHTO  MHTO              76.16 293    P        P        14 49 44.5 -0.1
      SNR=13
JMDO  Jabal Madar       76.33 295    P        P        14 49 46.6 +1.1
      SNR=12
JMDO                                 P        P        14 49 46.6 +1.1
      SNR=12
DQM   DQM               76.34 292    P        P        14 49 45.5 -0.1
SMDO  Samad             76.53 295    P        P        14 49 47.2 +0.4
SMDO                                 P        P        14 49 49.0 +2.2
      SNR=8.8
BIDO  Bidbid            76.56 296    P        P        14 49 47.5 +0.6
      SNR=20
BSY   Bisya             77.23 295    P        P        14 49 50.7 +0.1
      SNR=6.6
HOQ   Hoqain            77.31 296    P        P        14 49 51.3 +0.3
      SNR=16
TIXI  Tiksi             77.56 359deP          P        14 49 51.1 -0.2
TIXI                                 pmax     pmax
```

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      comp=Z,22nm,0.6s
TIXI  Tiksi             77.56 359    P        P        14 49 50.5 -0.9
TIXI                                 IAmb     IAmb     14 49 52.5
      comp=Z,26nm,0.6s
BRVK  Borovoye          77.69 328    P        P        14 49 52.5  0.0
BRVK  Borovoye          77.69 328    P        P        14 49 52.7 +0.2
BRVK                                 pmax     pmax
      comp=Z,41nm,0.9s
BRVK  Borovoye          77.69 328    P        P        14 49 52.7 +0.2
BRVK                                 IAmb     IAmb     14 49 54.0
      comp=Z,41nm,0.8s
SHAO  Shalim            77.75 290  i P        P        14 49 53.6  0.0
      SNR=13
ARQ   Araqi             77.96 295    P        P        14 49 55.3 +0.6
      SNR=5.4
ARQ                                  P        P        14 49 55.3 +0.6
      SNR=5.4
BILL  Bilibino          78.05  13⇓eP          P        14 49 54.7 +0.6
BILL                                e                  14 50 04.6
BILL                                eS        S        14 59 40.4 +2.7
BILL                                 pmax     pmax
      comp=Z,3.0nm,1.1s
BILL  Bilibino          78.05  13    P        P        14 49 54.8 +0.6
SOHO  SOHO              78.12 296    P        P        14 49 55.8 +0.3
      SNR=14
DMTO  DMTO              78.33 289    P        P        14 49 56.4 -0.4
SOCY  Socotra           78.34 284    P        P        14 49 56.2 -0.7
SOCY                                 IAmb     IAmb     14 49 57.7
      comp=Z,35nm,0.7s
MDH   Madha             78.57 297    P        P        14 49 57.1 -0.9
UOSS  Minazif           78.58 297  i P        P        14 49 58.0 -0.1
      SNR=11
UOSS  Minazif           78.58 297    P        P        14 49 57.4 -0.6
HATD  Hatta, Dubai      78.62 297  i P        P        14 49 58.7 +0.5
      SNR=8.3
HATD  Hatta, Dubai      78.62 297    P        P        14 49 59.0 +0.8
      SNR=8.5
ASHO  Ashiyiah          78.66 297  i P        P        14 49 58.8 +0.4
      SNR=13
ASHO  Ashiyiah          78.66 297    P        P        14 49 58.9 +0.4
      SNR=6.5
BANOM Banah             78.71 298  i P        P        14 49 59.7 +1.0
      SNR=40
BANOM Banah             78.71 298    P        P        14 49 59.6 +0.9
      SNR=10
MSFE  Esma-Masafi       78.71 297  i P        P        14 49 59.5 +0.8
      SNR=20
ALNE  Al Ain            78.80 296    P        P        14 49 59.8 +0.5
SHME  Shamm             78.87 298  i P        P        14 50 00.3 +0.7
      SNR=31
RBK   Rabkut            79.00 289    P        P        14 50 00.8 +0.4
      SNR=6.3
NAZ   Nazwa, Dubai      79.07 297    P        P        14 50 00.7  0.0
NAZ   Nazwa, Dubai      79.07 297    P        P        14 50 00.9 +0.2
      SNR=5.5
FAQ   Al Faqa, Dubai    79.08 297    P        P        14 50 01.1 +0.3
UNV   Unalaska Valle    79.36  32    P        P        14 50 02.4 +0.8
WHFO  Wadi Hawf         79.47 289    P        P        14 50 02.5 -0.5
      SNR=8.1
AJN   Ajban             79.59 296    P        P        14 50 03.6 +0.1
ABTO  Aybut             79.82 289    P        P        14 50 05.1 +0.1
      SNR=8.9
GEYT  Alibeck           80.11 310    P        P        14 50 06.9 +0.8
      comp=Z,15nm,0.8s,baz=151,slow=3.4,SNR=36
GEYT  Alibeck           80.11 310    P        P        14 50 06.6 +0.5
GYA0B ALIBECK ARRAY     80.11 310    P        P        14 50 06.8 +0.7
GYA0B                                IAmb     IAmb     14 50 08.0
      comp=Z,26nm,0.9s
NRIK  Noril'sk          80.81 346    P        P        14 50 09.9 +0.8
      comp=Z,36nm,0.9s,baz=126,slow=6.1,SNR=48
GAMB  Gambell           81.80  22    P        P        14 50 15.7 +1.3
OPO   Ambohidratompo    81.93 252    P        P        14 50 16.9 +0.6
      comp=Z,12nm,0.7s,baz=86,slow=4.6,SNR=18
ABKAR Akbulak array     82.18 321    P        P        14 50 16.6 -0.2
SDPT  Sand Point        83.18  32    P        P        14 50 22.1 +0.4
QSPA  South Pole Qui    83.91 180    P        P        14 50 25.6 +0.1
      comp=Z,15nm,0.8s,baz=252,slow=0.4,SNR=88
QSPA  South Pole Qui    83.91 180    P        P        14 50 25.5 -0.1
SVE   Sverdlovsk        84.31 329deP          P        14 50 28.1 +0.6
SVE                                  pmax     pmax
      comp=Z,96nm,1.2s
ANM   Nome              84.61  23    P        P        14 50 29.9 +1.1
ANM                                  pmax     pmax
      comp=Z,7.0nm,0.8s
ANM   Nome              84.61  23    P        P        14 50 29.9 +1.1
SYO   Syowa Base        84.78 201⇑eP          P        14 50 29.0 -0.6
SYO   Syowa Base        84.78 201⇑ePcP        PcP      14 50 31.6 -1.2
ARU   Arti              85.26 328c iP         P        14 50 31.6 -0.6
ARU                                  *PP      pP       14 51 01.6 -1.5
ARU                                                    14 53 48.8
ARU                                  S        S        15 00 44.2 -8.0
ARU                                  SS       SS       15 06 23.1 -6.3
ARU                                  pmax     pmax
      comp=Z,38nm,1.0s
ARU   Arti              85.26 328    P        P        14 50 31.8 -0.4
ARU                                  IAmb     IAmb     14 50 33.2
      comp=Z,49nm,1.1s
RDOG  Red Dog Mine      87.00  20    P        P        14 50 40.8 +0.2
RDOG                                 IAmb     IAmb     14 50 42.1
      comp=Z,13nm,0.8s
OHAK  Old Harbor        87.57  32    P        P        14 50 44.3 +0.8
TTA   Tatalina          87.86  26    P        P        14 50 45.6 +0.7
TTA   Tatalina          87.86  26    P        P        14 50 45.6 +0.7
DAMY  Dhamar            87.91 285    P        P        14 50 48.1 +1.7
RAYN  Ar Rayn           87.97 294  i P        P        14 50 46.6 +0.4
      SNR=53
RAYN  Ar Rayn           87.97 294    P        P        14 50 46.0 -0.2
RAYN                                 pmax     pmax
      comp=Z,55nm,1.0s
RAYN  Ar Rayn           87.97 294    P        P        14 50 46.0 -0.2
SKT   Skwentna          89.61  27    P        P        14 50 52.4 -0.6
IMAR  Indian Mountai    89.67  23    P        P        14 50 53.1 -0.1
SUA   Susitna One       89.86  28    P        P        14 50 54.1 -0.2
SUA                                  IAmb     IAmb     14 50 55.9
      comp=Z,16nm,0.8s
MLY   Manley            90.66  25    P        P        14 50 57.9  0.0
KNK   Knik Glacier      90.92  28    P        P        14 50 59.7 +0.5
KNK                                  IAmb     IAmb     14 51 00.4
      comp=Z,14nm,1.0s
SML   Sawmill           91.05  28    P        P        14 50 59.9  0.0
SML                                  IAmb     IAmb     14 51 00.7
      comp=Z,15nm,0.9s
RND   Reindeer          91.12  26    P        P        14 50 58.7 -1.4
RND                                  pmax     pmax
      comp=Z,15nm,0.7s
RND   Reindeer          91.12  26    P        P        14 50 58.7 -1.4
RND                                  IAmb     IAmb     14 51 00.4
      comp=Z,15nm,0.7s
MCK   McKinley          91.15  26    P        P        14 50 59.5 -0.7
MCK                                  pmax     pmax
      comp=Z,11nm,1.2s
MCK   McKinley          91.15  26    P        P        14 50 59.5 -0.7
COLD  Coldfoot          91.35  22    P        P        14 51 01.5 +0.5
COLD                                 IAmb     IAmb     14 52 23.4
      comp=Z,9.8nm,0.6s
WRH   Wood River Hil    91.66  25    P        P        14 51 01.5 -0.9
WRH                                  IAmb     IAmb     14 51 02.7
      comp=Z,9.0nm,0.8s
ZEI   Tsey              91.69 313   eP        P        14 51 02.6 -0.8
ZEI                                  pmax     pmax
      comp=Z,7.0nm,0.7s
DHY   Denali Highway    91.72  27    P        P        14 51 02.7 -0.3
CCB   Clear Creek Bu    91.81  25    P        P        14 51 02.3 -0.9
CCB                                  IAmb     IAmb     14 51 03.2
      comp=Z,13nm,0.8s
COLA  College           91.83  25    P        P        14 51 02.4 -0.8
COLA                                 pmax     pmax
      comp=Z,8.0nm,0.5s
COLA  College           91.83  25    P        P        14 51 02.4 -0.8
COLA                                 IAmb     IAmb     14 51 03.9
      comp=Z,7.9nm,0.5s
AKH   Akhalkalaki       91.84 311    P        P        14 51 04.7 +0.6
AKH                                  pmax     pmax
      comp=Z,10.0nm,1.0s
AKH   Akhalkalaki       91.84 311    P        P        14 51 04.7 +0.6
AKH                                  IAmb     IAmb     14 51 07.0
      comp=Z,10nm,1.0s
TOLK  Toolik Lake Re    91.88  21    P        P        14 51 03.7 +0.2
TOLK                                 IAmb     IAmb     14 51 05.0
      comp=Z,8.1nm,0.7s
TOLK  Toolik Lake Re    91.88  21    P        P        14 51 04.1 +0.6
      baz=258
NCK   Nalchik           92.00 313⇑eP          P        14 51 05.3 +0.7
NCK                                  pmax     pmax
      comp=Z,7.0nm,0.8s
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HDA   Harding Lake      92.13  26    P        P        14 51 03.5 -1.2
HDA                                  IAmb     IAmb     14 51 05.4
      comp=Z,7.0nm,0.7s
HDA   Harding Lake      92.13  26    P        P        14 51 04.1 -0.6
      baz=261
IL31                    92.22  25    P        P        14 51 03.8 -1.2
IL31                                 IAmb     IAmb     14 51 04.6
      comp=Z,6.6nm,0.7s
ILAR  Eielson Array     92.22  25    P        P        14 51 03.9 -1.2
      comp=Z,5.7nm,0.7s,baz=269,slow=4.3,SNR=79
ILAR                                 PKKPbc   PKKPdf   15 08 20.3 +0.3
      comp=Z,0.7nm,0.9s,baz=327,slow=0.7,SNR=7.0
ILAR  Eielson Array     92.22  25    P        P        14 51 03.3 -1.8
KBZ   Khabaz            92.53 314    P        P        14 51 07.2 +0.2
      comp=Z,3.1nm,0.7s,baz=141,slow=2.7,SNR=7.5
KBZ   Khabaz            92.53 314⇓eP          P        14 51 06.5 -0.4
KBZ                                  pmax     pmax
      comp=Z,7.0nm,1.8s
NEY   Neytrino          92.60 313⇓eP          P        14 51 04.6 -3.0
NEY                                  pmax     pmax
      comp=Z,1.0nm,1.0s
KIV   Kislovodsk        92.70 314    P        P        14 51 11.1 +3.2
KIV   Kislovodsk        92.70 314   eP        P        14 51 07.7 -0.2
KIV                                  pmax     pmax
      comp=Z,17nm,1.0s
PRGR  Permogore         92.92 332   eP        P        14 51 05.7 -2.6
PRGR                                 pmax     pmax
      comp=Z,17nm,0.9s
FYU   Fort Yukon        93.17  23    P        P        14 51 09.9 +0.5
FYU                                  IAmb     IAmb     14 51 10.8
      comp=Z,7.5nm,0.7s
KMBO  Kilima Mbogo      93.27 269    P        P        14 51 12.1 +0.6
      comp=Z,3.5nm,0.7s,baz=76,slow=5.8,SNR=8.5
KMBO  Kilima Mbogo      93.27 269    P        P        14 51 12.0 +0.6
KMBO  Kilima Mbogo      93.27 269    P        P        14 51 11.3 -0.1
KMBO                                 pmax     pmax
      comp=Z,41nm,0.9s
KMBO  Kilima Mbogo      93.27 269    P        P        14 51 11.3 -0.1
MENT  Mentasta          93.35  27    P        P        14 51 10.4 +0.1
BMAR  Burnt Mountain    93.53  23    P        P        14 51 12.0 +0.8
BCAR  Beaver Creek A    94.24  27    P        P        14 51 14.8 +0.3
CTGM  Chitina Glacie    94.28  29    P        P        14 51 17.5 +2.6
CTGM                                 IAmb     IAmb     14 52 07.1
      comp=Z,16nm,1.3s
EGAK  Eagle             94.66  25    P        P        14 51 16.3  0.0
EGAK                                 IAmb     IAmb     14 51 17.9
      comp=Z,8.3nm,0.8s
DAWY  Dawson            95.38  26    P        P        14 51 19.7  0.0
DAWY                                 IAmb     IAmb     14 51 21.8
      comp=Z,14nm,1.0s
VSR   Storozhevoye      95.61 321⇓eP          P        14 51 19.5 -1.4
VSR                                  pmax     pmax
      comp=Z,11nm,0.9s
KLMR  Klimovskoe        95.80 331   eP        P        14 51 18.4 -3.1
KLMR                                 pmax     pmax
      comp=Z,19nm,0.8s
KLMR  Klimovskoe        95.80 331   eP        P        14 51 18.5 -3.1
KLMR                                 AMP               14 51 20.7
      comp=Z,19nm,0.8s
ASF   Jabal al Asfar    96.37 302    P        P        14 51 25.6 +0.6
      comp=Z,5.6nm,0.7s,baz=170,slow=22,SNR=8.6
EPYK  Eagle Plains      96.56  24    P        P        14 51 24.8 -0.2
EPYK                                 IAmb     IAmb     14 51 26.6
      comp=Z,7.0nm,0.7s
EPYK  Eagle Plains      96.56  24    P        P        14 51 25.0 +0.1
      baz=270
SNAA  Sanae             96.73 193    P        P        14 51 26.5 +0.7
SNAA  Sanae             96.73 193    P        P        14 51 26.1 +0.3
      comp=Z,3.9nm,0.7s,baz=154,slow=3.7,SNR=14
SNAA  Sanae             96.73 193⇑eP          P        14 51 25.9 +0.1
SNAA  Sanae             96.73 193    IAmb     IAmb     14 54 52.6
      comp=Z,11nm,1.3s
OBN   Obninsk           97.27 325d iP         P        14 51 27.0 -1.3
OBN                                 e                  14 55 26.6
OBN                                  pmax     pmax
      comp=Z,17nm,0.7s
INK   Inuvik            97.74  22    P        P        14 51 29.4 -0.8
INK                                  pmax     pmax
      comp=Z,19nm,1.5s
INK   Inuvik            97.74  22    P        P        14 51 29.4 -0.8
EIL   Elat              97.92 299    P        Pdif     14 51 32.0 +0.1
      comp=Z,5.5nm,0.8s,baz=133,slow=3.8,SNR=3.6
VNA2  Neumayer--Watz    98.29 193    P        Pdif     14 51 32.9 +0.1
      baz=142,slow=3.1
APA   Apatity           98.34 337⇑iP          P        14 51 30.5 -2.4
APA                                i *PP      pP       14 51 57.0 -6.8
APA                                  pmax     pmax
      comp=Z,7.0nm,0.9s
APA                                  MLR      MLR
      comp=Z,200nm,13.0s
VNA3  Neumayer Olymp    98.54 192    P        Pdif     14 51 34.5 +0.7
BR131 Keskin Array S    99.23 309d iP         Pdif     14 51 36.8 -0.9
BR131 Keskin Array S    99.23 309    P        Pdif     14 51 36.7 -1.0
BRTR  Keskin Array B    99.23 309    P        Pdif     14 51 36.9 -0.9
      comp=Z,2.5nm,0.9s,baz=124,slow=4.7,SNR=11
BRTR  Keskin Array B    99.23 309    P        Pdif     14 51 36.3 -1.4
LSZ   Lusaka           100.36 253    P        Pdif     14 51 42.8 -0.5
      comp=Z,2.0nm,0.5s,baz=122,slow=4.7,SNR=5.5
ARCES ARCESS Array B   100.93 340    P        Pdif     14 51 43.9 -0.5
      comp=Z,4.8nm,0.8s,baz=79,slow=6.7,SNR=7.8
ARCES                                PKKPbc   PKKPbc   15 07 56.8 -2.5
      comp=Z,1.3nm,0.6s,baz=318,slow=1.6,SNR=4.7
LBTB  Lobatse          100.98 243    P        Pdif     14 51 45.4 -0.4
      comp=Z,5.5nm,0.7s,baz=145,slow=2.5,SNR=3.5
C36M  Paulatuk         101.00  20             Pdif     14 51 44.5 -0.2
C36M  Paulatuk         101.00  20    P        Pdif     14 51 44.9 +0.2
      baz=282
AKASG Malin Array Be   101.91 320    P        Pdif     14 51 47.4 -1.7
      comp=Z,0.7nm,0.5s,baz=68,slow=4.6,SNR=5.0
FINES FINESS Array B   102.25 332    P        Pdif     14 51 49.6 -0.9
      comp=Z,4.0nm,0.7s,baz=87,slow=4.2,SNR=12
BURAR Bucovina Array   104.85 318             Pdif     14 52 02.3 -0.2
BUR08 Bucovina Ar. S   104.86 318             Pdif     14 52 02.2 -0.3
YKA   Yellowknife Ar   106.62  26    Pdiff    Pdif     14 52 10.3 +0.5
      comp=Z,0.5nm,0.6s,baz=291,slow=4.2,SNR=10
YKA                                  PKiKP    PKiKP    14 56 19.8  0.0
      comp=Z,1.0nm,0.5s,baz=282,slow=1.4,SNR=18
YKA                                  PKKPbc   PKKPbc   15 07 39.1 -2.9
      comp=Z,1.8nm,0.8s,baz=111,slow=3.4,SNR=21
YKA                                  PKKP     PKKPdf   15 07 54.1 +0.5
      comp=Z,0.9nm,0.8s,baz=107,slow=5.2,SNR=3.6
CRVS  Cervenica-Dubn   107.13 319   eP        Pdif     14 52 12.8 +0.3
CRVS  Cervenica-Dubn   107.13 319   ePDIFF    Pdif     14 52 12.8 +0.3
NOA   NORSAR Array B   109.24 333    Pdiff    Pdif     14 52 20.7 -0.9
      comp=Z,1.8nm,0.8s,baz=68,slow=4.6,SNR=4.2
NOA                                  PKKPbc   PKKPbc   15 07 32.8 -1.0
      comp=Z,0.6nm,0.6s,baz=239,slow=3.7,SNR=2.2
NVAR  Mina Array Bea   110.19  51    PKKPbc   PKKPbc   15 07 30.5 +0.4
      comp=Z,0.7nm,0.6s,baz=119,slow=4.7,SNR=5.5
GERES GERESS Array B   112.12 321    PKiKP    PKiKP    14 56 30.8 +0.1
      comp=Z,2.3nm,0.6s,baz=58,slow=2.1,SNR=14
GERES GERESS Array B   112.12 321             PKiKP    14 56 30.3 -0.4
ABTA  Abfaltersbach    113.50 319  i PKiKP    PKiKP    14 56 33.0 -0.4
      comp=Z,5.9nm,0.6s
WTTA  Wattenberg       113.92 319  i PKiKP    PKiKP    14 56 34.4 +0.1
      comp=Z,10nm,0.4s
SQTA  Sankt Quirin     114.20 319  i PKiKP    PKiKP    14 56 35.9 +1.1
      comp=Z,3.9nm,0.5s
FETA  Feichten         114.58 319  i PKiKP    PKiKP    14 56 35.8 +0.3
      comp=Z,2.6nm,0.5s
DAVA  Damuels          115.04 320  i PKiKP    PKPdf    14 56 36.4  0.0
      comp=Z,6.5nm,0.5s
DAVOX Davos/Dischmat   115.21 319    PKP      PKPdf    14 56 37.2 +0.4
      comp=Z,3.2nm,0.4s,baz=256,slow=13,SNR=7.3
OSSC  Osservatorio P   115.29 316    PKiKP    PKiKP    14 56 36.6 -0.2
PDAR  Pinedale Array   115.76  45    PKP      PKiKP    14 56 38.3 +0.3
      comp=Z,0.6nm,0.6s,baz=209,slow=1.5,SNR=6.4
PDAR                                 PKKPbc   PKKPbc   15 07 10.4 -1.3
      comp=Z,1.0nm,0.7s,baz=112,slow=6.1,SNR=9.1
PDAR  Pinedale Array   115.76  45             PKKPbc   15 07 09.5 -2.1
O20A  White River Ci   117.46  48             PKiKP    14 56 42.3 +0.9
O20A  White River Ci   117.46  48    P        PKiKP    14 56 42.6 +1.2
      baz=286
MVCO  Mesa Verde       118.04  51    P        PKiKP    14 56 44.2 +1.6
      baz=285
EKA   Eskdalemuir Ar   118.65 332    PKP      PKiKP    14 56 43.3 +0.4
      comp=Z,1.6nm,0.6s,baz=5.2,slow=2.8,SNR=5.5
RSSD  Black Hills      119.12  42    PKIKP    PKPdf    14 56 44.1 -0.3
RSSD  Black Hills      119.12  42             PKPdf    14 56 44.1 -0.3
RSSD  Black Hills      119.12  42    P        PKPdf    14 56 44.4  0.0
      baz=292
S22A  4UR Ranch, Cre   119.18  50    P        PKiKP    14 56 46.6 +1.7
      baz=286
121A  Cookes Peak, D   119.72  56    P        PKiKP    14 56 47.6 +1.7
      baz=283
SDCO  Great Sand Dun   120.19  50    P        PKiKP    14 56 48.3 +1.4
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	baz=287						
ANMO	Albuquerque	120.22	53	P	PKiKP	14 56 48.3	+1.4
	baz=285						
T25A	Trinidad	121.20	50	P	PKiKP	14 56 50.2	+1.4
	baz=288						
ULM	Lac du Bonnet	121.30	33	PKP	PKPdf	14 56 47.5	-0.6
	comp=Z,3.0nm,0.7s,baz=9.9,slow=2.1,SNR=7.2						
ULM				PKKPbc	PKKPab	15 06 50.2	-0.6
	comp=Z,1.2nm,0.6s,baz=133,slow=2.1,SNR=3.1						
MNTX	Cornudas Mount	121.89	56		PKiKP	14 56 50.4	+0.4
MNTX	Cornudas Mount	121.89	56	P	PKiKP	14 56 51.0	+1.0
	baz=284						
TXAR	Lajitas Array	123.88	59	PKP	PKiKP	14 56 54.9	+0.8
	comp=Z,1.7nm,0.9s,baz=264,slow=3.8,SNR=5.1						
ECSD	EROS Data Cent	124.14	40		PKPdf	14 56 53.5	-0.3
ECSD	EROS Data Cent	124.14	40	P	PKiKP	14 56 54.3	+0.2
	baz=298						
EYMN	Ely	124.97	33	P	PKiKP	14 56 55.6	-0.1
	baz=306						
JCT	Junction City	126.83	56	PKIKP	PKPdf	14 56 59.3	-0.1
JCT	Junction City	126.83	56		PKPdf	14 56 59.3	-0.1
JCT	Junction City	126.83	56	P	PKiKP	14 57 00.4	+0.6
	baz=287						
S39A	Bolivar	129.16	45		PKPdf	14 57 03.2	-0.3
TOA0	Torodi Ar. Sit	129.27	282		PKPdf	14 57 03.3	-1.0
TORD	Torodi Ar. Bea	129.27	282	PKP	PKPdf	14 57 04.1	-0.2
	comp=Z,4.8nm,0.7s,baz=75,slow=2.1,SNR=22						
TORD				SKPbc	SKPab	15 00 13.8	0.0
	comp=Z,3.0nm,0.7s,baz=64,slow=4.1,SNR=6.9						
TORD	Torodi Ar. Bea	129.27	282		PKPdf	14 57 03.1	-1.3
SCHQ	Schefferville	129.36	13	PKP	PKiKP	14 57 04.3	+0.1
	comp=Z,1.2nm,0.6s,baz=333,slow=4.5,SNR=4.7						
PLCA	Paso Flores	129.53	159	PKP	PKiKP	14 57 05.4	+0.3
	comp=Z,3.1nm,0.6s,baz=272,slow=1.9,SNR=17						
PLCA				SKPbc	SKPbc	15 00 15.1	0.0
	comp=Z,4.0nm,0.8s,baz=236,slow=5.7,SNR=7.3						
PCBR	Castelo Branco	129.58	318	*e*PKPdf	PKiKP	14 57 05.9	+0.9
F45A	CMU Biological	129.60	32	P	PKiKP	14 57 05.2	+0.3
	baz=310						
PMRV	Marv??o	129.73	318	*e*PKPdf	PKiKP	14 57 05.9	+0.5
D47A	Chapleau	129.92	30	P	PKiKP	14 57 05.8	+0.2
	baz=314						
U40A	Yellville	130.09	47		PKPdf	14 57 04.8	-0.6
U40A	Yellville	130.09	47	P	PKiKP	14 57 06.3	+0.1
	baz=297						
E47A	Iron Bridge	130.25	30	P	PKiKP	14 57 06.3	+0.1
	baz=313						
CCM	Cathedral Cave	130.44	44	P	PKiKP	14 57 06.6	-0.3
	baz=299						
D48A	Paudash Townsh	130.47	29	P	PKiKP	14 57 06.5	-0.1
	baz=316						
MDT	Midelt	130.65	309	PKP	PKPdf	14 57 06.9	+0.2
	comp=Z,1.7nm,0.7s,baz=135,slow=4.3,SNR=3.4						
MDT				SKPbc	SKPbc	15 00 19.1	-0.2
	comp=Z,1.8nm,0.8s,baz=87,slow=2.7,SNR=3.7						
E48A	Lockeyer	130.78	30	P	PKiKP	14 57 07.2	-0.1
	baz=315						
T42A	Van Buren	131.04	45		PKiKP	14 57 08.0	-0.1
LSQQ	Lebel-sur-Quev	131.18	24	P	PKiKP	14 57 07.7	-0.3
	baz=322						
D50A	G1974 Best Tow	131.40	27	P	PKPdf	14 57 08.0	+0.4
	baz=318						
E51A	G1948 Merrick	132.03	28	P	PKiKP	14 57 10.0	+0.2
	baz=318						
D53A	Lac Vacive, Po	132.42	26	P	PKiKP	14 57 10.4	-0.1
	baz=320						
L48A	N Adams	132.60	36	P	PKiKP	14 57 11.1	0.0
	baz=309						
F52A	Sundridge	132.65	28	P	PKiKP	14 57 11.3	+0.2
	baz=318						
D54A	Lac Fusel, La	132.82	25	P	PKPdf	14 57 10.5	+0.3
	baz=322						
E53A	Dumoine, Ponti	132.98	27	P	PKiKP	14 57 11.5	-0.3
	baz=320						
ALGO	Algonquin Park	133.12	27	P	PKiKP	14 57 11.9	-0.1
	baz=319						
D55A	Sainte-Anne-du	133.42	25	P	PKiKP	14 57 12.2	-0.4
	baz=323						
KIC	Kosan Boka	135.67	273	*e*PKIKP	PKiKP	14 57 17.8	-0.3
	comp=Z,11nm,0.7s						
DBIC	Dimbokro	135.80	273	PKhKP	PKPpre	14 57 04.9	
	comp=Z,2.5nm,0.6s,baz=102,slow=3.6,SNR=5.0						
DBIC				PKP	PKiKP	14 57 18.0	-0.3
	comp=Z,4.3nm,0.6s,baz=314,slow=0.7,SNR=7.7						
DBIC				SKPbc	SKPbc	15 00 36.5	-0.6
	comp=Z,6.4nm,0.7s,baz=95,slow=5.0,SNR=9.2						
DBIC				SKPab	SKiKP	15 00 43.4	+0.2
	comp=Z,2.4nm,0.8s,baz=61,slow=3.5,SNR=3.6						
DBIC	Dimbokro	135.80	273		SKPbc	15 00 35.9	-1.2
LIC	Lamto	135.95	273	*e*PKIKP	PKiKP	14 57 18.3	-0.4
	comp=Z,13nm,0.4s						
TIC	Toumodi	135.96	273	*e*PKIKP	PKiKP	14 57 18.5	-0.2
	comp=Z,3.7nm,0.3s						
J59A	Piesco	136.65	27	P	PKiKP	14 57 19.6	+0.3
	baz=322						
GO02	Mina Guanaco	143.24	148		PKPbc	14 57 28.8	+1.1
ACON	Acoyapa	144.15	78		PKPdf	14 57 31.3	-0.5
JTS	Las Juntas de	144.51	81	PKIKP	PKPab	14 57 31.2	0.0
JTS	Las Juntas de	144.51	81		PKPab	14 57 31.2	0.0
PB04	IPOC Station P	145.20	145		PKPbc	14 57 33.1	-0.4
PB01	IPOC Station P	146.59	144		PKPab	14 57 38.8	-0.1
CPUP	Villa Florida	146.89	167	PKPbc	PKPbc	14 57 37.8	-0.4
	comp=Z,18nm,0.8s,baz=195,slow=1.4,SNR=34						
CPUP	Villa Florida	146.89	167	PKP2	PKPdf	14 57 37.2	+1.0
CPUP	Villa Florida	146.89	167	PKPbc	PKPdf	14 57 37.2	+1.0
NNA	Nana	147.30	123	PKP2	PKPab	14 57 41.2	-0.6
NNA	Nana	147.30	123	PKPab	PKPab	14 57 41.2	-0.6
PB11	IPOC Station P	147.47	143		PKPbc	14 57 41.1	+0.9
GO01	Chusmiza	147.82	143	PKPab	PKiKP	14 57 43.0	-0.5
LPAZ	La Paz	151.04	140	PKPbc	PKiKP	14 57 51.2	+0.9
	comp=Z,20nm,0.4s,baz=353,slow=3.0,SNR=109						
LPAZ	La Paz	151.04	140	PKIKP	PKiKP	14 57 50.8	+0.5
LPAZ	La Paz	151.04	140		PKiKP	14 57 50.8	+0.5
ROSC	El Rosal	155.10	92	PKPbc	PKPdf	14 57 59.5	+10
	comp=Z,10.0nm,0.6s,baz=41,slow=20,SNR=2.0						
BDFB	Brasilia	158.40	183	PKP	PKPdf	14 57 53.7	+0.3
	comp=Z,1.4nm,0.4s,baz=184,slow=9.7,SNR=3.1						
BDFB				PKPab	PKPab	14 58 28.0	-0.2
	comp=Z,1.6nm,0.4s,baz=119,slow=10,SNR=1.7						
SDV	Santo Domingo	158.70	81		PKPdf	14 57 52.7	-1.2

IDC ***19*** *14:55:26.5±0.7, 56°.14S×27°.44W, h93^{km}±6^{km}, mb4.2/7, mb1 4.3/8, mb1mx3.9/23, mbtmp4.5/8, Error ellipse: s-maj=26.6km s-min=13.6km az=68.0*

NEIC ***19*** *14:55:26.9±0.9, 56°.2S±0°.1×27°.5W±0°.2, h99^{km}±5^{km}, mb4.8/23, Error ellipse: s-maj=20.4km s-min=13.8km az=222.0*

ISC 19 14:55:27.6±0.5**, 56°.17S**±0°.09×**27°.6W**±0°.1**, h112**^{km}**, n61,** σ**1^{s}.23**/58**, mb4.7**/14**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	5.46	287	Pn	Pn	14 56 46.4	-0.2
VNA1	Neumayer--Stat	16.76	158	P	P	14 59 15.8	+0.3
VNA3	Neumayer Olymp	16.94	160	P	P	14 59 17.3	-0.3
VNA2	Neumayer--Watz	17.16	157	P	Pn	14 59 19.8	-0.2
	baz=314,slow=12						
EFI	East Falkland	18.44	271	P	Pn	14 59 35.1	-0.5
EFI				IAmb	IAmb	15 00 03.2	
	comp=Z,107nm,1.4s						
SNAA	Sanae	18.71	156	P	Pn	14 59 36.9	-1.8
SNAA	Sanae	18.71	156	P	P	14 59 36.8	-0.2
	comp=Z,4.8nm,0.3s,baz=303,slow=10.0,SNR=162						
SNAA	Sanae	18.71	156	P	P	14 59 36.8	-0.2
SNAA				IAmb	IAmb	14 59 37.7	
	comp=Z,36nm,0.6s						
PLCA	Paso Flores	31.83	281	P	P	15 01 42.4	+0.8
QSPA	South Pole Qui	34.08	180	P	P	15 02 02.1	+1.1
	comp=Z,4.8nm,0.3s,baz=32,slow=3.1,SNR=136						
QSPA	South Pole Qui	34.08	180	P	P	15 02 02.0	+1.0
QSPA				IAmb	IAmb	15 02 02.6	
	comp=Z,12nm,1.1s						
GO05	Huala	36.72	286	P	P	15 02 22.9	-0.8
GO05				IAmb	IAmb	15 02 50.2	
	comp=Z,22nm,1.4s						
CPUP	Villa Florida	36.74	312	P	P	15 02 24.5	+0.6
	comp=Z,3.5nm,0.7s,baz=156,slow=8.7,SNR=6.1						
CPUP				pP	pP	15 02 45.5	-3.0
	comp=Z,2.0nm,0.7s,baz=133,slow=9.6,SNR=2.8						
CPUP	Villa Florida	36.74	312	P	P	15 02 24.2	+0.3
CPUP				IAmb	IAmb	15 02 25.2	
	comp=Z,3.4nm,0.7s						
PEL	Peldehue	37.49	289	P	P	15 02 31.1	+0.8
ROC1	El Roble	37.79	289	P	P	15 02 33.5	+0.4
GO04	Tololo Observa	39.89	292	P	P	15 02 50.4	-0.2
GO04				IAmb	IAmb	15 02 54.1	
	comp=Z,20nm,1.2s						
MAW	Mawson	40.17	144	P	P	15 02 52.8	+0.7
	comp=Z,2.3nm,0.3s,baz=227,slow=7.2,SNR=19						
MAW	Mawson	40.17	144	IAmb	IAmb	15 02 53.6	
	comp=Z,2.1nm,1.2s						
GO02	Mina Guanaco	43.37	298	P	P	15 03 19.5	+0.4
LVC	Limon Verde	45.19	301	P	P	15 03 34.7	+1.0
LVC				IAmb	IAmb	15 03 37.4	
	comp=Z,11nm,0.6s						
PB10	IPOC Station P	45.23	298	P	P	15 03 33.9	+0.4
PB10				IAmb	IAmb	15 03 42.7	
	comp=Z,15nm,1.0s						
PB04	IPOC Station P	46.02	299	P	P	15 03 40.8	+0.8
PB04				IAmb	IAmb	15 03 54.4	
	comp=Z,18nm,1.1s						
VNDA	Vanda	46.44	183	P	P	15 03 43.9	+1.5
	comp=Z,1.7nm,0.6s,baz=180,slow=6.9,SNR=16						
VNDA				pP	pP	15 04 05.1	-2.4
	comp=Z,1.3nm,0.6s,baz=152,slow=1.5,SNR=4.0						
VNDA	Vanda	46.44	183	P	P	15 03 43.5	+1.2
PB01	IPOC Station P	46.80	301	P	P	15 03 46.9	+0.9
GO01	Chusmiza	47.84	302	P	P	15 03 55.6	+1.1
GO01				IAmb	IAmb	15 03 56.5	
	comp=Z,16nm,0.8s						
PB11	IPOC Station P	47.98	302	P	P	15 03 56.0	+0.8
PB11				IAmb	IAmb	15 03 57.7	
	comp=Z,10nm,0.7s						
H10S2	ASCENSION HYDR	48.17	17	T	T	15 56 44.0	
	baz=190						
H10S3	ASCENSION HYDR	48.18	17	T	T	15 56 42.8	
	baz=30						
H10N1	ASCENSION HYDR	49.29	17	T	T	15 57 26.9	
	baz=197						
H10N3	ASCENSION HYDR	49.29	17	T	T	15 58 08.8	
	baz=197,slow=74,SNR=8.6						
H10N2	ASCENSION HYDR	49.31	17	T	T	15 57 52.8	
	baz=197,slow=74,SNR=2.0						
LPAZ	La Paz	50.28	306	P	P	15 04 14.7	+1.4
	comp=Z,7.2nm,0.4s,baz=124,slow=5.0,SNR=27						
LPAZ	La Paz	50.28	306	P	P	15 04 14.3	+1.1
CASY	Casey	53.86	160	P	P	15 04 35.5	-2.9
SAML	Samuel	54.75	315	P	P	15 04 46.0	+0.5
DBIC	Dimbokro	65.36	25	P	P	15 05 58.3	+0.4
DBIC				IAmb	IAmb	15 06 14.8	
	comp=Z,8.2nm,1.4s						
MCQ	Macquarie Isla	69.56	184	P	P	15 06 26.0	+2.2
TOA0	Torodi Ar. Sit	73.26	30	P	P	15 06 47.6	+1.1
TORD	Torodi Ar. Bea	73.26	30	P	P	15 06 47.4	+1.0
	comp=Z,0.4nm,0.3s,baz=200,slow=6.7,SNR=6.8						
TORD				pP	pP	15 07 11.7	-2.3
	comp=Z,0.6nm,0.4s,baz=200,slow=6.8,SNR=2.9						
TORD	Torodi Ar. Bea	73.26	30	P	P	15 06 47.5	+1.1
ASAR	Alice Springs	98.93	163	P	Pdif	15 08 55.4	+0.1
	comp=Z,0.5nm,0.6s,baz=184,slow=3.8,SNR=12						
WRA	Warramunga Arr	102.65	163	P	Pdif	15 09 12.0	+0.1
	comp=Z,0.2nm,0.5s,baz=198,slow=4.5,SNR=2.1						
FINES	FINESS Array B	124.58	28	PKP	PKiKP	15 14 12.7	+0.2
	comp=Z,0.8nm,0.7s,baz=277,slow=3.6,SNR=1.3						
KSH	Kashi	128.79	75	PKP	PKiKP	15 14 24.1	+2.2
KSH				sPKP		15 15 01.9	
KSH				PP	PP	15 16 35.9	+6.1
KSH				PKS	PKSdf	15 17 59.5	+1.8
KSH	Kashi	128.79	75	SS	SS	15 33 41.3	+2.1
ARCES	ARCESS Array B	131.13	22	PKP	PKiKP	15 14 25.3	-0.1
	comp=Z,5.2nm,1.1s,baz=214,slow=6.3,SNR=2.2						
YKA	Yellowknife Ar	136.13	318	PKP	PKiKP	15 14 34.6	-1.1
	comp=Z,0.3nm,0.4s,baz=129,slow=2.5,SNR=12						
CD2	Chengdu	137.82	106	PKP	PKiKP	15 14 39.5	-0.8
INK	Inuvik	145.77	321		PKPab	15 14 52.4	-0.1
EPYK	Eagle Plains	146.38	317	PKPdf	PKPab	15 14 54.1	-0.9
BCAR	Beaver Creek A	147.41	310		PKiKP	15 14 57.6	-1.4
RIDG	Independent Ri	148.93	310		PKiKP	15 15 01.8	-0.3
BMAR	Burnt Mountain	149.64	317		PKiKP	15 15 03.5	+0.1
IL31		150.05	312		PKiKP	15 15 03.8	-0.4
ILAR	Eielson Array	150.05	312	PKPbc	PKiKP	15 15 04.0	-0.2
	comp=Z,4.1nm,0.9s,baz=129,slow=2.2,SNR=39						
ILAR				pPKPbc	pPKPbc	15 15 29.9	-3.3
	comp=Z,1.2nm,0.7s,baz=95,slow=1.4,SNR=3.8						
MCK	McKinley	150.69	309		PKiKP	15 15 06.1	+0.4
SONM	Songino Array	150.93	87	PKPbc	PKiKP	15 15 06.7	-0.1
	comp=Z,1.4nm,0.6s,baz=228,slow=3.4,SNR=10						
TOLK	Toolik Lake Re	151.64	319		PKiKP	15 15 08.0	+0.5
BPAW	Bear Paw Mtn.	151.66	309		PKiKP	15 15 07.8	+0.1

IDC ***19*** *14:56:42.3±0.5, 4°.12N×126°.62E, h0^{km}, mb4.3/27, mb1 4.3/28, mb1mx4.2/50, mbtmp4.2/28, ML3.9/1, MS3.4/4, Ms1 3.4/4, ms1mx3.0/41, Error ellipse: s-maj=23.3km s-min=10.5km az=72.0*

MAN ***19*** *14:56:46.1, 3°.58N×126°.24E, h79^{km}, mb5.3, ML4.2, MS4.4*

DJA ***19*** *14:56:48.9±0.6, 4°N±4°×12°7E±°, h42^{km}±6^{km}, M4.6/23, mb4.7/23, mB5.1/6, MLv4.6/12, Mw(mB)4.5/6*

NEIC ***19*** *14:56:49.4±2.0, 4°.13N±0°.07×126°.79E±0°.08, h59^{km}±7^{km}, mb4.7/47, Error ellipse: s-maj=12.2km s-min=8.9km az=55.0*

ISC 19 14:56:48.4±0.3**, 4°.13N**±0°.04×**126°.81E**±0°.06**, h45**^{km}**, n154,** σ**1^{s}.47**/149**, mb4.4**/44**, 5C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	2.25	331	*e*P	Pn	14 57 24.7	+1.6
DDMP				*e*S	Sn	14 57 55.0	+5.4
GSPH	General Santos	2.69	316	⇑*i*P	Pn	14 57 29.4	+0.1
MATI	Mati	2.85	349	*e*P	Pn	14 57 32.7	+1.3
MATI				*e*S	Sn	14 58 24.2	+20
DAV	Davao City (W)	3.17	337	Sn	Sn	14 58 15.8	+3.5
	23nm,0.3s,baz=330,slow=23,SNR=3.8						
SKMP	Bagumbayan, Su	3.27	317	*e*P	Pn	14 57 38.3	+1.0
SKMP				*e*S	Sn	14 58 17.1	+2.1
KCP	Kidapawan	3.33	329	⇑*i*P	Pn	14 57 43.0	+4.9
KCP				*i* S	Sn	14 58 26.1	+10
TNTI	Ternate	3.38	171	P	Pn	14 57 40.1	+1.4
TNTI	Ternate	3.38	171		Pn	14 57 38.2	-0.5
CTBH	Cotabato--PC H	3.99	320	⇑*i*P	Pn	14 57 48.4	+1.3
BUKP	Musuan	4.11	335	*e*P	Pn	14 57 52.6	+3.9
BUKP				*e*S	Sn	14 58 54.6	+19
KMSI	Cibinong	4.53	219	P	Pn	14 57 58.2	+3.8
CGP	Cagayan de Oro	4.78	334	⇑*e*P	Pn	14 58 05.8	+7.9
CGP				*e*S	Sn	14 59 08.3	+16
LBMI	Labuha	4.79	172	P	Pn	14 57 59.9	+1.9
BUTP	Butuan	4.95	346	*e*P	Pn	14 58 05.9	+5.6
BUTP				*e*S	Sn	14 59 14.0	+18
PAGZ	Pagadian	5.03	317	*e*P	Pn	14 58 01.3	+0.1
MRSI	Marisa	6.07	233	P	Pn	14 58 17.6	+2.0
	0.4nm1μm129nm,0.6s						
SANI	Sanana	6.20	188	P	Pn	14 58 16.0	-1.3
	0.2nm1μm50nm,0.7s						
LUWI	Luwuk	6.53	218	P	Pn	14 58 28.1	+6.1
	0.8nm3μm235nm,1.3s						
LUWI	Luwuk	6.53	218		Pn	14 58 26.3	+4.3
SWI	Sorong	6.66	138	P	Pn	14 58 24.4	+0.6
	0.1nm991nm28nm,0.8s						
SIJI	Sorong	6.67	138	Pn	Pn	14 58 24.9	+1.1
	2.2nm,0.3s,baz=144,slow=23,SNR=11						
SIJI				Sn	Sn	14 59 41.0	+2.3
	1.6nm,0.3s,baz=253,slow=19,SNR=1.6						
SIJI				LR	LR	15 01 13.0	
	comp=Z,185nm,20.0s,baz=298,slow=40						
APSI	Ampana	7.19	226	P	Pn	14 58 36.9	+5.9
	0.3nm776nm65nm,0.7s						
NLAI	Namlea	7.33	178	P	Pn	14 58 34.5	+1.6
	0.3nm73nm,0.6s						
MPSI	Mapaga	7.87	242	P	Pn	14 58 43.8	+3.5
	705nm13nm,0.7s						
FAKI	Fak Fak	8.87	142	Pn	Pn	14 58 55.5	+1.5
TTSI	Tana Toraja	9.98	225	P	Pn	14 59 15.2	+5.9
TGY	Tagaytay City	11.48	330	Pn	Pn	14 59 25.1	-4.7
	83nm,0.3s,baz=164,slow=16,SNR=4.2						
KAPI	Kappang	11.50	218	LR	LR	15 04 32.9	
	comp=Z,284nm,18.8s,baz=75,slow=41						
MMRI	Maumere	13.48	200	Pn	Pn	14 59 57.9	+0.8
SOEI	Soe	14.03	190	Pn	Pn	15 00 05.8	+1.1
SBUM	Sibu	14.66	264	Pn	Pn	15 00 13.0	-0.1
PLAI	Plampang	15.71	215	P	P	15 00 33.6	+3.5
KSM	Kuching	16.69	261	P	P	15 00 41.8	+0.7
MTN	Manton Dam	17.40	166	P	Pn	15 00 45.9	-2.1
	baz=17,SNR=22						
MTN	Manton Dam	17.40	166	Pn	Pn	15 00 45.7	-2.3
MTN				IAmb	IAmb	15 00 49.9	
	comp=Z,36nm,0.7s						
KDU	Kakadu	17.63	161	P	Pn	15 00 48.3	-2.6
	baz=18,SNR=15						
DLV	T Lat	19.72	294	P	P	15 01 14.2	-0.4
KNRA	Kununurra	19.78	174	P	P	15 01 15.1	+0.2
	baz=20,SNR=34						
KNRA	Kununurra	19.78	174	P	P	15 01 14.0	-0.9
KNRA				IAmb	IAmb	15 01 17.3	
	comp=Z,33nm,0.7s						
TPUB	Ta-pu	19.97	343	P	P	15 01 15.7	-1.4
SSLB	Suanglung	20.34	344	P	P	15 01 20.9	-0.2
YHNB	Yeheng	21.08	346	P	P	15 01 28.1	-0.9
YHNB				IAmb	IAmb	15 02 18.9	
	comp=Z,46nm,1.5s						
FITZ	Fitzroy Crossi	22.12	183	P	P	15 01 40.0	-0.1
	baz=22,SNR=11						
FITZ	Fitzroy Crossi	22.12	183	P	P	15 01 38.9	-1.3
	comp=Z,13nm,0.8s,baz=14,slow=6.4,SNR=28						
FITZ	Fitzroy Crossi	22.12	183	P	P	15 01 39.0	-1.1
FITZ				IAmb	IAmb	15 01 43.6	
	comp=Z,13nm,0.8s						
QIZ	Qiongzhong	22.22	313	P	P	15 01 40.8	-0.5
QIZ				S	S	15 05 42.5	-1.0
UBPT	Khong Chiam	23.74	299	P	P	15 01 55.9	-0.8
UBPT				IAmb	IAmb	15 01 56.6	
	comp=Z,18nm,1.1s						
WB0	Warramunga Arr	24.89	163	P	P	15 02 06.4	-0.8
WB0				IAmb	IAmb	15 02 08.9	
	comp=Z,46nm,0.9s						
WB9	Warramunga Arr	24.91	163	P	P	15 02 07.8	+0.4
	baz=25						
WRAB	Tennant Creek	25.04	163	P	P	15 02 08.5	0.0
WRAB				IAmb	IAmb	15 02 10.3	
	comp=Z,34nm,0.8s						
WRA	Warramunga Arr	25.04	163	P	P	15 02 08.1	-0.5
	comp=Z,25nm,0.8s,baz=343,slow=10,SNR=107						
WRA	Warramunga Arr	25.04	163	P	P	15 02 07.9	-0.7
WB2	Warramunga Arr	25.05	163	P	P	15 02 07.8	-0.8
WB2				IAmb	IAmb	15 02 10.5	
	comp=Z,43nm,0.8s						
WR0	Warramunga Arr	25.12	163	P	P	15 02 08.3	-0.9
WR0				IAmb	IAmb	15 02 11.1	
	comp=Z,26nm,0.8s						
MNAI	Manna	25.28	251	P	P	15 02 10.2	-0.6
PSA00	Pilbara Seismi	26.44	195	P	P	15 02 21.2	0.0
PSA00				IAmb	IAmb	15 02 23.7	
	comp=Z,38nm,1.2s						
PSA00	Pilbara Seismi	26.44	195	P	P	15 02 21.1	0.0
PSA00				IAmb	IAmb	15 02 23.8	
	comp=Z,14nm,1.0s						
KRVT	Keravat (AS076	26.55	108	LR	LR	15 11 12.6	
	comp=Z,122nm,18.3s,baz=156,slow=33						
PBKT	Sadao Pong	28.22	298	P	P	15 02 36.2	-0.9
AS31	Alice Springs	28.48	166	P	P	15 02 39.4	-0.1
ASAR	Alice Springs	28.48	166	P	P	15 02 39.6	+0.1
	comp=Z,2.1nm,0.6s,baz=345,slow=7.2,SNR=61						
ASAR	Alice Springs	28.48	166	P	P	15 02 39.2	-0.3
NJ2	Nanjing	28.76	346	*e*P	P	15 02 43.0	+1.1
WHN	Wuhan	28.78	337	P	P	15 02 52.6	+11
WRKA	Warakurna	29.03	177	P	P	15 02 44.8	+0.4
	baz=29,SNR=26						
JNU	Nakatsue	29.09	7	P	P	15 02 44.4	-0.4
JNU				IAmb	IAmb	15 03 32.3	
	comp=Z,48nm,1.5s						
GYA	Guiyang	29.41	321	*e*P	P	15 02 53.9	+6.1
GYA				pP	sP	15 03 04.3	-0.3
GYA				PP	PnPn	15 03 47.5	+4.3
GYA				S	S	15 07 38.4	-0.5
GYA				sS	sS	15 08 02.8	+3.8
LHMI	Lhok Sumawe	29.78	273	P	P	15 02 49.5	-1.6
CMAR	Chiang Mai Arr	30.74	300	P	P	15 02 59.6	0.0
	comp=Z,1.8nm,0.8s,baz=115,slow=7.0,SNR=15						
CMAR	Chiang Mai Arr	30.74	300	P	P	15 02 58.3	-1.3
CHTO	Chiang Mai	30.89	300	P	P	15 03 00.2	-0.7
KMI	Kunming	31.16	314	P	P	15 03 03.8	+0.3
KMI				pP	pwP	15 03 16.5	+1.4
KMI				sP	sP	15 03 22.8	+2.5
JHJ2	Mitsune	31.29	21	P	P	15 03 02.1	-2.1
PATS	Pohnpei	31.47	84	P	P	15 03 04.5	-1.6
MEEK	Meekatharra	31.60	194	P	P	15 03 07.6	+0.5
	baz=32,SNR=3.8						
INU	Inuyama	32.47	16	P	P	15 03 13.9	-0.6
INU				IAmb	IAmb	15 03 49.0	
	comp=Z,26nm,1.2s						
KSRS	Korea Array	33.18	2	P	P	15 03 19.9	-0.9
	comp=Z,2.0nm,0.8s,baz=182,slow=10.0,SNR=7.6						
KSRS				LR	LR	15 17 26.1	
	comp=Z,35nm,20.8s,baz=70,slow=38						
XAN	Xi'an	34.10	333	P	P	15 03 27.8	-1.1
XAN				pP	sP	15 04 00.4	+14
CD2	Chengdu	34.37	323	*e*P	P	15 03 30.0	-1.3
MORW	Morawa	34.59	197	P	P	15 03 33.0	-0.2
MORW				IAmb	IAmb	15 04 47.8	
	comp=Z,21nm,1.4s						
FORT	Forrest	34.73	178	P	P	15 03 34.0	-0.3
MUN	Mundaring	37.30	195	P	P	15 03 57.3	+1.0
	baz=37,SNR=3.7						
EIDS	Eidsvold	37.62	142	P	P	15 03 59.6	+0.6
EIDS				IAmb	IAmb	15 04 39.6	
	comp=Z,31nm,1.4s						
BBOO	Buckleboo	37.77	167	P	P	15 04 01.0	+0.8
	baz=38,SNR=12						
BBOO	Buckleboo	37.77	167	P	P	15 04 00.4	+0.1
NWAO	Narrogin (SRO)	37.96	193	P	P	15 04 02.0	+0.2
	comp=Z,11nm,0.8s,baz=18,slow=6.4,SNR=3.0						
NWAO	Narrogin (SRO)	37.96	193	P	P	15 04 02.0	+0.2
LZH	Lanzhou	38.20	329	*e*P	P	15 04 06.4	+2.3
LZH				pP	sP	15 04 20.8	-0.8
LZH				sP	pP	15 04 27.8	+12
STKA	Stephens Creek	38.48	160	P	P	15 04 07.2	+1.0
	baz=39,SNR=35						
STKA	Stephens Creek	38.48	160	P	P	15 04 07.1	+1.0
	comp=Z,22nm,0.8s,baz=334,slow=8.3,SNR=45						
STKA	Stephens Creek	38.48	160	IAmb	IAmb	15 04 08.1	
	comp=Z,5.6nm,0.8s						
HHC	Hu-ho-hao-te	39.05	342	*e*P	P	15 04 11.9	+0.9
HTT	Hallett	39.08	164	P	P	15 04 12.2	+0.9
	baz=39,SNR=3.3						
USA0B	Ussuriysk Arra	40.16	6	P	P	15 04 20.4	+0.3
USA0B				IAmb	IAmb	15 04 58.0	
	comp=Z,7.8nm,1.4s						
USRK	Ussuriysk Ar.	40.16	6	P	P	15 04 21.6	+1.5
	comp=Z,1.1nm,0.6s,baz=177,slow=6.6,SNR=5.3						
USRK	Ussuriysk Ar.	40.16	6	P	P	15 04 20.0	-0.1
ARMA	Armidale	41.76	147	P	P	15 04 34.8	+1.3
	baz=42,SNR=6.4						
ARMA	Armidale	41.76	147	P	P	15 04 34.1	+0.6
ARMA				IAmb	IAmb	15 04 36.1	
	comp=Z,13nm,0.8s						
ASAJ	Asahikawa	42.19	17	P	P	15 04 36.2	-0.5
	comp=Z,3.0nm,0.7s,baz=210,slow=9.0,SNR=4.8						
JKA	Kamikawa-asahi	42.19	17	P	P	15 04 36.2	-0.5
GTA	Gaotai	42.80	329	*e*P	P	15 04 41.9	-0.1
GTA				pP	sP	15 05 00.3	+0.8
GTA				sP	pP	15 05 09.3	+15
ARPS	Mount Arapiles	43.04	162	P	P	15 04 45.4	+1.7
	baz=43,SNR=9.2						
ODAN	Odare	43.91	305	*e*P	P	15 04 50.7	-0.5
	comp=Z,12nm,0.6s						
CAN	Canberra	44.43	154	P	P	15 04 57.2	+2.2
	baz=44						
CAN	Canberra	44.43	154	P	P	15 04 55.9	+0.8
RAMN	Ramite	44.59	305	*e*P	P	15 04 56.2	-0.5
JIRN	Jiri	45.20	306	*e*P	P	15 05 01.1	-0.6
GUN	Gumba	45.56	306	*e*P	P	15 05 03.6	-0.9
	comp=Z,13nm,0.8s						
SONM	Songino Array	46.95	341	P	P	15 05 15.7	+0.9
	comp=Z,0.5nm,0.5s,baz=159,slow=8.7,SNR=5.5						
SONM				PcP	PcP	15 06 47.1	+0.3
	comp=Z,0.8nm,0.8s,baz=182,slow=4.3,SNR=2.8						
DANN	Dangsing	47.45	305	*e*P	P	15 05 18.4	-0.9
	comp=Z,20nm,0.6s						
WMQ	Urumqi	52.44	325	*e*P	P	15 05 57.8	+1.1
WMQ				PP	PP	15 07 58.5	+2.7
PETK	Petropavlovsk-	55.03	22	P	P	15 06 15.7	+0.4
	comp=Z,5.0nm,1.0s,baz=225,slow=6.4,SNR=5.0						
PETK	Petropavlovsk-	55.03	22	P	P	15 06 15.3	0.0
MK31	Makanchi Array	57.27	325	P	P	15 06 30.2	-1.4
MK31				IAmb	IAmb	15 06 50.8	
	comp=Z,3.3nm,1.1s						
MKAR	Makanchi Array	57.27	325	P	P	15 06 31.0	-0.5
	comp=Z,2.1nm,0.6s,baz=129,slow=8.1,SNR=34						
MKAR	Makanchi Array	57.27	325	P	P	15 06 30.3	-1.3
NIL	Nilore	57.74	307	P	P	15 06 33.9	-1.2
NIL				IAmb	IAmb	15 06 57.6	
	comp=Z,6.1nm,1.1s						
YAK	Yakutsk	57.81	2	P	P	15 06 34.8	-0.1

KSH	Kashi	57.82	315	P	P	15 06 36.8	+1.2
KSH				pP	sP	15 06 53.0	-0.6
KSH				PP	PP	15 08 49.1	+4.9
KSH				PcS	PcS	15 11 27.1	-2.2
KSH				S	S	15 14 29.1	-3.0
KSH	Kashi	57.82	315	SS	SS	15 18 23.1	-0.2
AAK	Ala-Archa	60.12	318	P	P	15 06 52.0	+0.5
	comp=Z,0.3nm,0.3s,baz=76,slow=4.2,SNR=2.2						
ZAA0	Zalesovo Array	60.27	333	P	P	15 06 51.2	-0.9
ZALV	Zalesovo Beam	60.27	333	P	P	15 06 51.1	-1.0
	comp=Z,0.6nm,0.3s,baz=123,slow=7.3,SNR=4.9						
ZALV	Zalesovo Beam	60.27	333	P	P	15 06 50.7	-1.4
KURK	Kurchatov	61.45	327	P	P	15 06 59.3	-0.9
KURK				IAmb	IAmb	15 07 01.3	
	comp=Z,5.4nm,0.7s						
MQZ	McQueen's Vall	62.96	144	P	P	15 07 11.4	+1.0
BHW	Baring Head	62.98	141	P	P	15 07 11.3	+0.7
KKAR	Karatay Array	62.99	317	P	P	15 07 08.9	-1.9
BVAR	Borovoye Array	67.03	327	P	P	15 07 36.3	-0.5
	comp=Z,2.8nm,0.8s,baz=124,slow=8.0,SNR=18						
BRVK	Borovoye	67.10	327	P	P	15 07 36.9	-0.3
BRVK				IAmb	IAmb	15 07 38.6	
	comp=Z,5.0nm,0.9s						
TIXI	Tiksi	67.44	1	P	P	15 07 38.9	-0.1
WSAR	Wadi Sarin	68.34	293	P	P	15 07 43.1	-2.5
	comp=Z,1.3nm,0.6s,baz=128,slow=5.8,SNR=7.2						
NRIK	Noril'sk	70.06	346	P	P	15 07 56.0	+0.6
	comp=Z,2.3nm,0.5s,baz=130,slow=5.7,SNR=8.3						
GEYT	Alibeck	70.71	309	P	P	15 07 59.4	-0.6
	comp=Z,1.3nm,0.5s,baz=104,slow=6.1,SNR=2.8						
GEYT	Alibeck	70.71	309	P	P	15 07 57.7	-2.2
ABKAR	Akbulak array	71.89	321	P	P	15 08 05.1	-1.7
AKTO	Aktyubinsk	73.40	322	P	P	15 08 15.7	-0.1
	comp=Z,2.2nm,0.8s,baz=90,slow=9.2,SNR=8.2						
ARU	Arti	74.64	328	P	P	15 08 22.6	-0.3
	comp=Z,0.6nm,0.3s,baz=137,slow=3.3,SNR=3.9						
ARU	Arti	74.64	328	P	P	15 08 21.9	-1.0
ARU				IAmb	IAmb	15 08 45.7	
	comp=Z,8.9nm,1.3s						
KIRV	Kirov	79.92	329	P	P	15 08 52.9	+0.5
	comp=Z,8.5nm,0.8s,baz=249,slow=1.8,SNR=5.4						
MLY	Manley	83.08	25	P	P	15 09 10.1	+1.0
MLY				IAmb	IAmb	15 09 11.2	
	comp=Z,4.7nm,0.9s						
VNDA	Vanda	83.81	173	P	P	15 09 13.4	+0.9
	comp=Z,2.5nm,0.9s,baz=306,slow=5.5,SNR=7.9						
ILAR	Eielson Array	84.71	25	P	P	15 09 18.0	+0.7
	comp=Z,0.5nm,0.8s,baz=249,slow=7.2,SNR=6.6						
KLMR	Klimovskoe	85.10	331	*e*	P	15 09 18.5	-0.8
KLMR				AMP		15 09 20.3	
	comp=Z,30nm,1.1s						
BMAR	Burnt Mountain	85.68	23	P	P	15 09 23.8	+1.6
ARCES	ARCESS Array B	90.10	340	P	P	15 09 45.0	+1.7
	comp=Z,1.8nm,0.8s,baz=86,slow=5.1,SNR=4.6						
FINES	FINESS Array B	91.52	332	P	P	15 09 50.8	+0.8
	comp=Z,0.9nm,0.7s,baz=55,slow=12,SNR=1.8						
AKASG	Malin Array Be	91.63	321	P	P	15 09 49.5	-1.3
	comp=Z,0.3nm,0.3s,baz=66,slow=5.0,SNR=3.7						
AKASG	Malin Array Be	91.63	321	IAmb	IAmb	15 09 51.3	
	comp=Z,0.8nm,0.8s						
SYO	Syowa Base	92.83	201	⇑*e*P	P	15 09 54.2	-1.6
BURAR	Bucovina Array	94.76	318	P	P	15 10 04.8	-0.6
YKA	Yellowknife Ar	99.10	24	P	Pdif	15 10 25.2	+0.6
	comp=Z,0.1nm,0.6s,baz=301,slow=4.2,SNR=2.6						
TORD	Torodi Ar. Bea	122.87	288	PKP	PKPdf	15 15 40.4	-0.3
	comp=Z,0.7nm,0.7s,baz=32,slow=2.0,SNR=2.7						
PLCA	Paso Flores	140.35	159	PKP	PKiKP	15 16 14.2	-1.3
	comp=Z,1.1nm,0.7s,baz=55,slow=5.8,SNR=4.3						

NEIC ***19*** *15:31:16.1±1.0, 5°.9N±0°.2×123°.7E±0°.3, h553^{km}±14^{km}, mb4.0/9, Error ellipse: s-maj=46.1km s-min=6.5km az=54.0*

IDC ***19*** *15:31:16.9±3.4, 5°.67N×123°.30E, h551^{km}±48^{km}, mb2.7/5, mb1 2.9/5, mb1mx2.5/42, mbtmp3.8/5, Error ellipse: s-maj=124.6km s-min=11.5km az=66.0*

ISC 19 15:31:15.6±0.7, **6°.0N**±0°.1×**124°.0E**±0°.2, **h550**^{km}, **n24**, σ**1^{s}.37**/27, **mb3.6**/9, **1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKMP	Bagumbayan, Su	0.71	47	*e*P	P	15 32 18.3	-3.0
KCP	Kidapawan	1.44	48	⇓*i*P	P	15 32 22.8	-0.5
DDMP	Don Marcelino,	1.69	88	*e*P	P	15 32 20.5	-3.6
BUKP	Musuan	2.10	29	*e*P	P	15 32 23.9	-1.9
MATI	Mati	2.40	68	*e*P	P	15 32 25.1	-2.2
KKM	Kota Kinabalu	7.76	270	P	P	15 33 08.8	-2.3
FAKI	Fak Fak	12.11	137	P	P	15 33 56.3	+0.8
MTN	Manton Dam	20.05	159	P	P	15 35 12.0	-0.3
WB0	Warramunga Arr	27.60	159	P	P	15 36 18.3	-1.1
WB0				IAmb	IAmb	15 36 43.7	
	comp=Z,5.6nm,1.2s						
ENH	Enshi	27.72	332	P	P	15 36 20.5	+0.2
ENH				IAmb	IAmb	15 36 40.0	
	comp=Z,8.1nm,1.4s						
WRA	Warramunga Arr	27.74	159	P	P	15 36 20.3	-0.3
	comp=Z,0.7nm,0.6s,baz=332,slow=10,SNR=9.9						
WB2	Warramunga Arr	27.75	159	P	P	15 36 20.4	-0.3
AS31	Alice Springs	31.06	162	P	P	15 36 49.9	+0.6
ASAR	Alice Springs	31.06	162	P	P	15 36 50.0	+0.7
	comp=Z,0.7nm,0.5s,baz=344,slow=7.3,SNR=20						
ASAR				S	S	15 41 15.8	-0.4
	comp=Z,0.4nm,0.9s,baz=341,slow=11,SNR=5.5						
ASAR	Alice Springs	31.06	162	P	P	15 36 49.5	+0.2
STKA	Stephens Creek	41.26	157	P	P	15 38 14.2	+0.9
	comp=Z,1.1nm,0.6s,baz=350,slow=8.2,SNR=3.7						
SONM	Songino Array	44.29	343	P	P	15 38 38.4	+1.6
	comp=Z,0.2nm,0.3s,baz=132,slow=4.3,SNR=1.7						
MK31	Makanchi Array	54.13	326	P	P	15 39 50.0	+0.6
MKAR	Makanchi Array	54.13	326	P	P	15 39 50.1	+0.7
	comp=Z,0.7nm,0.4s,baz=120,slow=7.8,SNR=16						
MKAR				PcP	PcP	15 40 45.7	+0.3
	comp=Z,0.2nm,0.4s,baz=121,slow=4.5,SNR=2.8						
MKAR	Makanchi Array	54.13	326	P	P	15 39 49.7	+0.4
MKAR					PcP	15 40 45.2	-0.2
MAKZ	Makanchi	54.32	326	P	P	15 39 51.8	+1.1
MAKZ				IAmb	IAmb	15 41 01.2	
	comp=Z,3.7nm,0.7s						
KURK	Kurchatov	58.36	328	P	P	15 40 18.1	-0.2
KURK				IAmb	IAmb	15 40 24.3	
	comp=Z,9.8nm,1.9s						
KKAR	Karatay Array	59.71	317	P	P	15 40 27.6	0.0
ABKAR	Akbulak array	68.67	321	P	P	15 41 23.7	-0.6

NIED ***19*** *15:48:00, 39°.80N×141°.80E, h62^{km}, Mw4.1   Best double couple: M$_0$1.39000×10^{15} NP1:φ$_s$19.00000°, δ72.00000°, λ91.00000°.   NP2:φ$_s$195.00000°, δ18.00000°, λ87.00000°.*

JMA ***19*** *15:48:37.8, 39°.76N×141°.84E, h59^{km}±1^{km}, M3.9 Broadband fault plane solution: P waves.   NP1: φ$_s$178.00000°, δ26.00000°, λ70.00000°.   NP2:φ$_s$20.00000°, δ66.00000°, λ99.00000°.   Principal axes: T Plg68.0000°, Azm308.0000°; N Plg9.0000°, Azm196.0000°; P Plg20.0000°, Azm103.0000°;*

JMA Felt II J1.

IDC ***19*** *15:48:39.7±2.0, 39°.75N×141°.82E, h79^{km}±18^{km}, mb3.7/20, mb1 3.8/25, mb1mx3.7/51, mbtmp4.0/25, MS3.1/3, Ms1 3.1/3, ms1mx2.7/44 Error ellipse: s-maj=17.9km s-min=12.3km az=114.0*

NEIC ***19*** *15:48:40.1±1.4, 39°.72N±0°.08×141°.8E±0°.2, h85^{km}±7^{km}, mb4.5/20, Error ellipse: s-maj=17.9km s-min=10.0km az=114.0*

BJI ***19*** *15:48:42.3±0.0, 39°.50N×141°.34E, h122^{km}, mB4.9/22, mb4.4/25*

ISC 19 15:48:37.7±0.6, **39°.74N**±0°.03×**141°.79E**±0°.05, **h61**^{km}±5^{km}, **n100**, σ**2^{s}.03**/106, **mb4.3**/30, **3C-9D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	0.16	172	⇑P	Pn	15 48 47.2	+0.1
MIYJ				S	Sn	15 48 53.6	-0.3
JTH	Tanohata	0.21	16	⇑P	Pn	15 48 47.1	-0.3
JTH				S	Sn	15 48 53.7	-0.7
JKZ	Kuzumaki	0.43	305	⇓P	Pn	15 48 49.4	+0.2
JKZ				*e*S	Sn	15 48 57.3	-0.2
JOM	Ohasama	0.47	236	⇓P	Pn	15 48 49.7	+0.3
JOM				S	Sn	15 48 58.2	+0.2
JANG	Nango	0.67	342	⇓P	Pn	15 48 51.3	-0.4
JANG				S	Sn	15 49 01.0	-0.9
JMK	Ichinoseki	0.90	210	⇓P	Pn	15 48 54.8	+0.3
JMK				S	Sn	15 49 07.2	+0.3
JRG	Rokugo	0.96	250	⇓P	Pn	15 48 55.5	+0.3
JRG				*e*S	Sn	15 49 09.1	+0.9
JAH	Hinai	1.00	297	⇓P	Pn	15 48 56.0	+0.3
JAH				*e*S	Sn	15 49 10.3	+1.2
JTM	Tenmabayashi	1.19	332	⇓P	Pn	15 48 58.1	-0.1
JTM				S	Sn	15 49 13.2	-0.3
JIO	Ouri	1.33	195	⇑P	Pn	15 49 00.3	+0.2
JYK	Kaneyama	1.38	234	⇓P	Pn	15 49 01.4	+0.6
JYK				*e*S	Sn	15 49 19.4	+1.3
MAJO	Matsushiro	4.26	223		Pn	15 49 43.0	+3.0
MAT	Matsushiro	4.26	223	P	Pn	15 49 42.7	+2.6
MAT				*e*S	Sn	15 50 32.0	+3.5
MJAR	Matsushiro Arr	4.26	223	P	Pn	15 49 43.1	+3.1
	0.4nm,0.3s,baz=31,slow=15,SNR=21						
MJB9	Matsu-Tunnel	4.26	223		Pn	15 49 43.0	+2.9
ASAJ	Asahikawa	4.42	8	P	Pn	15 49 42.5	+0.4
	1.8nm,0.3s,baz=216,slow=10.0,SNR=32						
ASAJ				S	Sn	15 50 33.2	+1.0
	3.8nm,0.3s,baz=24,slow=20,SNR=1.9						
JKA	Kamikawa-asahi	4.42	8		Pn	15 49 42.5	+0.4
JKA					Sn	15 50 33.2	+1.0
INU	Inuyama	5.79	222	Pn	Pn	15 50 02.6	+1.5
JHJ	Hachijo jima 2	6.80	194	LR	LR	15 52 58.4	
	comp=Z,112nm,20.4s,baz=297,slow=38						
USA0B	Ussuriysk Arra	8.55	305		Pn	15 50 41.4	+2.6
USRK	Ussuriysk Ar.	8.55	305	P	Pn	15 50 40.0	+1.2
	baz=108,slow=14,SNR=15						
USRK	Ussuriysk Ar.	8.55	305		Pn	15 50 41.5	+2.7
MDJ	Mudanjiang	10.28	302	P	Pn	15 51 05.9	+3.6
MDJ				pmax	pmax		
	comp=Z,11nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,160nm,4.4s						
MDJ	Mudanjiang	10.28	302		Pn	15 51 04.8	+2.5
KSRS	Korea Array	11.09	263	P	Pn	15 51 18.0	+4.6
	0.4nm,0.3s,baz=69,slow=14,SNR=8.7						
KSRS				LR	LR	15 55 10.2	
	comp=Z,48nm,19.6s,baz=85,slow=35						
KLR	Kul'dur	11.88	326	P	Pn	15 51 27.5	+3.3
	0.1nm,0.3s,baz=137,slow=14,SNR=4.5						
JCJ	Chichijima	12.61	178	S	Sn	15 53 48.1	-5.0
	2.0nm,0.3s,baz=270,slow=20,SNR=1.3						
TIA	Tai'an	19.74	268	P	Pn	15 53 03.9	-0.5
TIA				pmax	pmax		
	comp=Z,13nm,0.9s						
NJ2	Nanjing	20.07	255	*e*P	P	15 53 00.9	-5.0
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
MA2	Magadan	20.65	13	P	P	15 53 11.9	-0.1
	5.9nm,0.6s,baz=196,slow=11,SNR=12						
MA2	Magadan	20.65	13	*de*P	P	15 53 12.2	+0.1
MA2				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MA2	Magadan	20.65	13	P	P	15 53 12.1	+0.1
HHC	Hu-ho-hao-te	23.03	283	*e*P	P	15 53 34.5	-3.2
HHC				pmax	pmax		
	comp=Z,74nm,0.7s						
HHC				pmax	pmax		
	comp=Z,260nm,3.9s						
YAK	Yakutsk	23.51	346	P	P	15 53 41.5	-0.4
	comp=Z,3.0nm,0.3s,baz=346,slow=5.0,SNR=7.2						
YAK	Yakutsk	23.51	346	IAmb	IAmb	15 53 42.0	
	comp=Z,9.6nm,0.6s						
SEY	Seymchan	24.09	12	P	P	15 53 47.4	+0.3
	comp=Z,11nm,1.1s,baz=198,slow=7.8,SNR=27						
WHN	Wuhan	24.17	256	P	P	15 53 57.8	+10
SONM	Songino Array	26.62	299	P	P	15 54 10.1	-0.3
	comp=Z,0.7nm,0.5s,baz=93,slow=7.7,SNR=5.4						
SONM	Songino Array	26.62	299	IAmb	IAmb	15 54 13.6	
	comp=Z,1.1nm,0.9s						
XAN	Xi'an	26.80	268	P	P	15 54 15.6	+3.5
XAN				pP	sP	15 54 43.3	+8.8
XAN				S	S	15 58 32.3	-12
XAN				sS	sS	15 58 58.4	-11
ENH	Enshi	27.97	260	P	P	15 54 19.4	-3.1
ENH				IAmb	IAmb	15 54 23.5	
	comp=Z,6.3nm,0.7s						
H11N2	WAKE ISLAND Hy	29.38	125	T	T	16 25 17.2	
	baz=318,slow=75,SNR=420						
H11N1	WAKE ISLAND Hy	29.38	125	T	T	16 25 17.9	
	baz=318,slow=75,SNR=312						
H11N3	WAKE ISLAND Hy	29.39	125	T	T	16 25 20.1	
	baz=318,slow=75,SNR=520						
H11S1	WAKE ISLAND Hy	30.17	127	T	T	16 26 14.8	
	baz=324						
H11S3	WAKE ISLAND Hy	30.17	127	T	T	16 26 19.6	
	baz=324						
H11S2	WAKE ISLAND Hy	30.19	127	T	T	16 26 13.1	
	baz=324						
CD2	Chengdu	32.06	266	*e*P	P	15 54 54.0	-4.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WMQ	Urumqi	39.95	294	*e*P	P	15 56 05.4	-0.6
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,110nm,4.7s						
WMQ				LR	LR		
	comp=Z,660nm,28.9s						
WMQ				LR	LR		
	comp=Z,690nm,29.0s						
WMQ				LR	LR		
	comp=Z,140nm,25.3s						
ZAA0	Zalesovo Array	40.36	310	P	P	15 56 08.8	-0.3
ZAA0				IAmb	IAmb	15 56 09.9	
	comp=Z,6.3nm,0.6s						
ZALV	Zalesovo Beam	40.36	310	P	P	15 56 09.3	+0.2
	comp=Z,6.9nm,0.5s,baz=93,slow=7.8,SNR=31						
ZALV	Zalesovo Beam	40.36	310	P	P	15 56 08.6	-0.5
SIJI	Sorong	41.55	196	LR	LR	16 13 52.3	
	comp=Z,77nm,18.5s,baz=318,slow=36						
CMAR	Chiang Mai Arr	42.52	253	P	P	15 56 28.4	+1.1
	comp=Z,0.5nm,0.5s,baz=52,slow=10,SNR=5.1						
MK31	Makanchi Array	42.98	300	P	P	15 56 30.5	-0.2
MKAR	Makanchi Array	42.98	300	P	P	15 56 30.8	0.0
	comp=Z,3.4nm,0.6s,baz=86,slow=9.8,SNR=46						
MKAR	Makanchi Array	42.98	300	P	P	15 56 30.5	-0.2
MAKZ	Makanchi	43.19	300	P	P	15 56 31.3	-1.1
MAKZ				IAmb	IAmb	15 56 33.3	
	comp=Z,5.0nm,0.7s						
TAPN	Taplejung	46.10	272	*e*P	P	15 56 57.5	+1.3
ILAR	Eielson Array	47.07	34	P	P	15 57 03.7	+0.8
	comp=Z,0.6nm,0.6s,baz=266,slow=6.3,SNR=13						
JIRN	Jiri	47.12	273	*e*P	P	15 57 05.7	+1.5
RAMN	Ramite	47.16	272	*e*P	P	15 57 04.9	+0.5
GUN	Gumba	47.24	273	*e*P	P	15 57 05.7	+0.6
	comp=Z,18nm,0.6s						
KKN	Kakani	47.76	274	*e*P	P	15 57 10.3	+1.3
	comp=Z,16nm,0.7s						
DMN	Daman	47.98	273	*e*P	P	15 57 11.7	+0.9
GKN	Gorkha	48.15	274	*e*P	P	15 57 12.2	+0.3
DANN	Dangsing	48.65	275	*e*P	P	15 57 16.6	+0.7
	comp=Z,29nm,0.6s						
BCAR	Beaver Creek A	49.51	36	P	P	15 57 23.1	+1.4
KSH	Kashi	49.62	292	P	P	15 57 26.8	+3.8
KSH				PP	PP	15 59 24.8	+7.2
KSH				PcS	PcS	16 02 42.8	+2.2
KSH				S	S	16 04 21.6	-5.3
KSH				SS	SS	16 07 51.4	-8.0
KSH				pmax	pmax		
	comp=Z,20nm,1.2s						
KSH				LR	LR		
	comp=Z,280nm,15.2s						
KSH				LR	LR		
	comp=Z,170nm,8.5s						
KSH				LR	LR		
	comp=Z,140nm,11.6s						
INK	Inuvik	51.85	28	P	P	15 57 40.1	+0.9
	comp=Z,0.9nm,0.6s,baz=311,slow=8.4,SNR=4.6						
INK	Inuvik	51.85	28	P	P	15 57 40.7	+1.5
INK				IAmb	IAmb	15 58 14.1	
	comp=Z,4.9nm,1.4s						
HYT	Haines Junctio	51.97	38	P	P	15 57 42.8	+2.5
HYT				IAmb	IAmb	15 58 08.5	
	comp=Z,8.4nm,1.2s						
KKAR	Karatay Array	52.06	298	P	P	15 57 40.8	-0.4
ABKAR	Akbulak array	56.45	309	P	P	15 58 12.6	-0.3
KNRA	Kununurra	56.45	195	P	P	15 58 13.3	+0.2
WB0	Warramunga Arr	59.60	188	P	P	15 58 34.7	-0.4
WR0	Warramunga Arr	59.77	188	P	P	15 58 35.9	-0.5
WR0				IAmb	IAmb	16 00 03.3	
	comp=Z,9.1nm,1.4s						
WB2	Warramunga Arr	59.77	188	P	P	15 58 35.8	-0.5
WRA	Warramunga Arr	59.77	188	P	P	15 58 35.7	-0.7
	comp=Z,1.3nm,0.7s,baz=2.9,slow=6.9,SNR=9.4						
WRA	Warramunga Arr	59.77	188	P	P	15 58 36.1	-0.2
RES	Resolute Bay	59.91	15	P	P	15 58 36.9	+0.2
	comp=Z,1.0nm,0.8s,baz=244,slow=2.7,SNR=4.9						
YKA	Yellowknife Ar	61.33	31	P	P	15 58 45.8	-0.8
	comp=Z,0.3nm,0.7s,baz=300,slow=6.0,SNR=4.3						
ARCES	ARCESS Array B	61.58	339	P	P	15 58 48.5	+0.4
	comp=Z,3.0nm,0.8s,baz=46,slow=10,SNR=6.8						
ARCES	ARCESS Array B	61.58	339	P	P	15 58 48.4	+0.3
ARE0	ARCESS Array S	61.58	339	P	P	15 58 48.4	+0.3
AS31	Alice Springs	63.50	188	P	P	15 59 01.0	-0.4
ASAR	Alice Springs	63.50	188	P	P	15 59 01.4	-0.1
	comp=Z,0.5nm,0.7s,baz=3.8,slow=7.7,SNR=9.2						
ASAR	Alice Springs	63.50	188	P	P	15 59 01.0	-0.5
FIA1	FINESS Array S	66.57	332	P	P	15 59 21.0	+0.2
FINES	FINESS Array B	66.57	332	P	P	15 59 20.9	0.0
	comp=Z,3.3nm,0.6s,baz=62,slow=8.9,SNR=9.3						
FINES	FINESS Array B	66.57	332	P	P	15 59 20.6	-0.3
SUMG	Summit	67.99	0	P	P	15 59 31.7	+1.5
SUMG				IAmb	IAmb	16 00 39.1	
	comp=Z,11nm,1.5s						
KBZ	Khabaz	69.38	310	P	P	15 59 39.3	+0.5
	comp=Z,3.7nm,0.9s,baz=50,slow=7.0,SNR=7.3						
NOA	NORSAR Array B	71.81	337	P	P	15 59 53.2	-0.2
	comp=Z,1.3nm,0.6s,baz=38,slow=6.1,SNR=5.1						
AKASG	Malin Array Be	72.35	322	P	P	15 59 56.4	-0.3
	comp=Z,1.3nm,0.4s,baz=46,slow=6.0,SNR=6.9						
PDAR	Pinedale Array	75.57	46	P	P	16 00 16.2	+0.2
	comp=Z,0.3nm,0.5s,baz=291,slow=7.7,SNR=2.6						
BUR08	Bucovina Ar. S	76.37	322	P	P	16 00 20.8	+0.5
BUR08				IAmb	IAmb	16 01 04.1	
	comp=Z,7.3nm,1.4s						
BURAR	Bucovina Array	76.38	321	P	P	16 00 20.4	+0.1
CLL	Collm	78.90	330	*e*P	P	16 00 35.0	+0.8
GERES	GERESS Array B	80.57	328	P	P	16 00 44.0	+0.6
	comp=Z,0.7nm,0.8s,baz=353,slow=9.5,SNR=4.0						

IDC ***19*** *15:49:30.8±1.3, 44°.42N×148°.27E, h0^{km}, mb3.7/5, mb1 3.8/5, mb1mx3.5/46, mbtmp3.7/5, Error ellipse: s-maj=37.6km s-min=29.6km az=140.0*

MOS ***19*** *15:49:36.7±1.1, 44°.38N×148°.22E, h61^{km}, mb4.2/5, Error ellipse: s-maj=11.2km s-min=9.2km az=50.9*

SKHL ***19*** *15:49:36.6±0.6, 44°.32N×148°.40E, h55^{km}±4^{km}, mb4.6/14*

NEIC ***19*** *15:49:39.8±0.8, 44°.5N±0°.1×148°.2E±0°.1, h68^{km}±8^{km}, mb4.3/13, Error ellipse: s-maj=18.2km s-min=13.8km az=165.0*

ISC 19 15:49:36.4±1.5, **44°.29N**±0°.06×**148°.35E**±0°.08, **h41**^{km}±13^{km}, **n63**, σ**1^{s}.38**/74, **mb3.9**/13, **1C-4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.00	340	*i* P	Pn	15 49 53.5	-0.5
KUR				AMB	AMB	15 49 53.9	
	870nm,0.4s						
KUR				*e*S	Sn	15 50 05.3	-1.5
KUR				A	A	15 50 08.0	
	3µm,0.4s						
KUR				A	A	15 50 08.0	
	1µm,0.4s						
KUR	Kuril'sk	1.00	340	*d i*PN	Pn	15 49 53.4	-0.5
KUR				*e*S	Sn	15 50 05.6	-1.2
KUR				pmax	pmax		
	comp=Z,874nm,0.2s						
KUR				pmax	pmax		
	comp=E,237nm,0.1s						
KUR				smax	smax		
	comp=N,3µm,0.2s						
KUR				smax	smax		
	comp=E,1µm,0.2s						
SHO	Shikotan	1.17	249	*e*P	Pn	15 49 56.2	-0.1
SHO				AMB	AMB	15 49 57.0	
	comp=E,270nm,0.4s						
SHO				*e*S	Sn	15 50 09.6	-1.4
SHO				A	A	15 50 14.0	
	comp=E,2µm,0.4s						
SHO				A	A	15 50 14.0	
	comp=E,2µm,0.4s						
SHO	Shikotan	1.17	249	*e*PN	Pn	15 49 56.2	-0.1
SHO				*e*S	Sn	15 50 09.2	-1.8
SHO				pmax	pmax		
	comp=E,96nm,0.3s						
SHO				pmax	pmax		
	comp=Z,191nm,0.3s						
SHO				pmax	pmax		
	comp=N,102nm,0.2s						
SHO				smax	smax		
	comp=E,1µm,0.4s						
SHO				smax	smax		
	comp=N,1µm,0.5s						
YUK	Yuzh-Kuril'sk	1.81	263	*e*P	Pn	15 50 05.5	+0.6
YUK				AMB	AMB	15 50 07.0	
	comp=N,570nm,0.3s						
YUK				*e*S	Sn	15 50 26.9	+0.2
YUK				A	A	15 50 29.0	
	comp=N,1µm,0.5s						
YUK				A	A	15 50 29.0	
	comp=N,1µm,0.5s						
YUK	Yuzh-Kuril'sk	1.81	263	*e*PN	Pn	15 50 05.6	+0.6
YUK				*e*S	Sn	15 50 27.3	+0.6
YUK				pmax	pmax		
	comp=Z,633nm,0.2s						
YUK				pmax	pmax		
	comp=E,213nm,0.1s						
YUK				pmax	pmax		
	comp=N,220nm,0.2s						
YUK				smax	smax		
	comp=E,1µm,0.4s						
YUK				smax	smax		
	comp=N,789nm,0.2s						
GRPR	Tuman	1.88	262	*e*P	Pn	15 50 06.9	+0.9
GRPR				AMB	AMB	15 50 12.0	
	comp=N,380nm,0.3s						
GRPR				*e*S	Sn	15 50 28.6	+0.2
GRPR				A	A	15 50 33.0	
	comp=N,2µm,0.5s						
GRPR				A	A	15 50 33.0	
	comp=N,990nm,0.5s						
GRPR	Tuman	1.88	262	*e*PN	Pn	15 50 06.9	+0.9
GRPR				*e*S	Sn	15 50 29.6	+1.2
GRPR				pmax	pmax		
	comp=Z,380nm,0.3s						
GRPR				pmax	pmax		
	comp=N,301nm,0.2s						
GRPR				pmax	pmax		
	comp=E,209nm,0.3s						
GRPR				smax	smax		
	comp=N,2µm,0.3s						
GRPR				smax	smax		
	comp=E,986nm,0.3s						
NMR	Nemuro--Hokkai	2.11	245	*e*P	Pn	15 50 09.1	0.0
NMR				*e*S	Sn	15 50 33.0	-1.1
NMR	Nemuro--Hokkai	2.11	245	*e*PN	Pn	15 50 09.2	+0.1
NMR				*e*S	Sn	15 50 32.9	-1.1
GLVR	Golovnino	2.11	256	*e*P	Pn	15 50 10.1	+0.9
GLVR				AMB	AMB	15 50 12.0	
	comp=E,190nm,0.3s						
GLVR				*e*S	Sn	15 50 35.0	+0.8
GLVR				A	A	15 50 36.0	
	comp=E,1µm,0.5s						
GLVR				A	A	15 50 36.0	
	comp=E,460nm,0.5s						
GLVR	Golovnino	2.11	256	*e*PN	Pn	15 50 10.1	+0.9
GLVR				*e*S	Sn	15 50 36.1	+1.9
GLVR				pmax	pmax		
	comp=N,52nm,0.2s						
GLVR				pmax	pmax		
	comp=Z,187nm,0.2s						
GLVR				smax	smax		
	comp=N,1µm,0.3s						
GLVR				smax	smax		
	comp=E,458nm,0.3s						
ERM	Erimo	4.43	241	*de*PN	Pn	15 50 44.7	+3.7
YSS	Yuzh-Sakhalins	4.74	306	*e*P	Pn	15 50 46.3	+1.1
YSS				AMB	AMB	15 50 46.5	
	comp=E,30nm,0.6s						
YSS				*e*S	Sn	15 51 39.1	+0.2
YSS				A	A	15 51 54.0	
	comp=E,20nm,0.7s						
YSS	Yuzh-Sakhalins	4.74	306	*e*PN	Pn	15 50 46.3	+1.1
YSS				*e*S	Sn	15 51 39.1	+0.2
YSS				pmax	pmax		
	comp=Z,30nm,0.6s						
YSS				smax	smax		
	comp=E,20nm,0.7s						
YSS	Yuzh-Sakhalins	4.74	306		Pn	15 50 46.0	+0.8

UGL	**Uglegorsk**	**6.45**	**320**	*e*P	**Pn**	**15 51 09.8**	**+1.2**
UGL				AMB	AMB	15 51 11.2	
	comp=E,20nm,0.6s						
TYV	**Tymovskoe**	**7.61**	**332**	*e*P	**Pn**	**15 51 27.0**	**+2.3**
TYV				AMB	AMB	15 51 28.3	
	comp=E,10.0nm,0.6s						
TYV				*e*S	**Sn**	**15 52 48.9**	**-0.6**
TYV				A	A	15 52 55.0	
	comp=E,4.0nm,1.0s						
TYV	**Tymovskoe**	**7.61**	**332**	*e*PN	**Pn**	**15 51 27.7**	**+3.0**
TYV				*e*S	**Sn**	**15 52 54.5**	**+5.0**
TYV				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TYV				smax	smax		
	comp=E,4.0nm,1.3s						
NKL	**Nikolayevsk**	**10.20**	**333**	*e*P	**Pn**	**15 52 01.0**	**+0.9**
PETK	**Petropavlovsk-**	**10.76**	**32**	Pn	**Pn**	**15 52 08.6**	**+0.9**
	comp=E,0.2nm,0.3s,baz=210,slow=16,SNR=1.7						
USA0B	**Ussuriysk Arra**	**11.74**	**275**	⇑*e*PN	**Pn**	**15 52 19.7**	**-1.4**
USA0B	**Ussuriysk Arra**	**11.74**	**275**	Pn	**Pn**	**15 52 19.9**	**-1.2**
USRK	**Ussuriysk Ar.**	**11.74**	**275**	PN	**Pn**	**15 52 21.0**	**-0.1**
USRK	**Ussuriysk Ar.**	**11.74**	**275**	Pn	**Pn**	**15 52 21.0**	**-0.1**
EKMR	**Ekimchan**	**13.41**	**316**	*e*P	**Pn**	**15 52 44.0**	**0.0**
EKMR				AMB	AMB	15 52 48.2	
	comp=E,6.0nm,0.8s						
BMKR	**Bomnak**	**16.35**	**316**	*e*P	**Pn**	**15 53 21.3**	**-1.4**
BMKR				AMB	AMB	15 53 25.6	
	comp=E,6.0nm,0.9s						
KROS	**Kirovskiy**	**17.16**	**314**	*e*P	**Pn**	**15 53 30.0**	**-2.9**
BILL	**Bilibino**	**25.60**	**16**	P	**P**	**15 54 59.9**	**-1.4**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.5s						
BILL	**Bilibino**	**25.60**	**16**	P	**P**	**15 54 59.9**	**-1.4**
H11N2	**WAKE ISLAND Hy**	**28.97**	**142**	T	T	16 26 20.9	
	baz=332,slow=76,SNR=5.6						
H11N1	**WAKE ISLAND Hy**	**28.98**	**142**	T	T	16 26 23.8	
	baz=332,slow=76,SNR=7.0						
H11N3	**WAKE ISLAND Hy**	**28.99**	**142**	T	T	16 26 21.9	
	baz=332,slow=76,SNR=9.1						
SONM	**Songino Array**	**29.06**	**292**	P	**P**	**15 55 31.6**	**-1.2**
	comp=Z,0.6nm,0.3s,baz=103,slow=8.2,SNR=3.1						
H11S1	**WAKE ISLAND Hy**	**29.96**	**143**	T	T	16 27 35.7	
	baz=334,slow=76,SNR=184						
H11S3	**WAKE ISLAND Hy**	**29.97**	**143**	T	T	16 27 32.1	
	baz=334,slow=76,SNR=17						
H11S2	**WAKE ISLAND Hy**	**29.98**	**143**	T	T	16 27 33.1	
	baz=334,slow=76,SNR=120						
NEA	**Nenana**	**39.60**	**37**	P	**P**	**15 57 03.1**	**-0.3**
WRH	**Wood River Hil**	**40.03**	**37**	P	**P**	**15 57 07.0**	**+0.1**
WRH				IAmb	IAmb	15 57 26.7	
	comp=Z,6.9nm,1.4s						
CCB	**Clear Creek Bu**	**40.15**	**37**	P	**P**	**15 57 08.3**	**+0.5**
CCB				IAmb	IAmb	15 57 25.6	
	comp=Z,4.4nm,1.4s						
DHY	**Denali Highway**	**40.40**	**39**	P	**P**	**15 57 10.2**	**0.0**
DHY				IAmb	IAmb	15 57 28.8	
	comp=Z,7.8nm,1.4s						
SCM	**Sheep Creek Mo**	**40.52**	**41**	P	**P**	**15 57 11.2**	**+0.1**
SCM				pmax	pmax		
	comp=Z,14nm,1.2s						
SCM	**Sheep Creek Mo**	**40.52**	**41**	P	**P**	**15 57 11.2**	**+0.1**
HDA	**Harding Lake**	**40.52**	**37**	P	**P**	**15 57 11.0**	**0.0**
HDA				IAmb	IAmb	15 57 23.3	
	comp=Z,5.7nm,1.3s						
IL31		**40.54**	**37**	P	**P**	**15 57 11.0**	**-0.1**
IL31				IAmb	IAmb	15 57 17.4	
	comp=Z,6.1nm,1.4s						
BCAR	**Beaver Creek A**	**42.93**	**39**	P	**P**	**15 57 31.3**	**+0.5**
SLVN	**Son La**	**43.14**	**253**	P	**P**	**15 57 33.2**	**+0.3**
CTGM	**Chitina Glacie**	**43.49**	**42**	P	**P**	**15 57 36.0**	**+0.5**
MKAR	**Makanchi Array**	**45.10**	**298**	P	**P**	**15 57 47.5**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=74,slow=8.7,SNR=4.6						
MKAR				PcP	**PcP**	**15 59 28.0**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=57,slow=4.5,SNR=4.0						
INK	**Inuvik**	**45.49**	**31**	P	**P**	**15 57 51.2**	**+0.1**
INK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
INK	**Inuvik**	**45.49**	**31**	P	**P**	**15 57 51.2**	**+0.1**
CMAR	**Chiang Mai Arr**	**48.51**	**254**	P	**P**	**15 58 15.8**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=51,slow=7.1,SNR=4.1						
BRVK	**Borovoye**	**49.87**	**309**	*e*P	**P**	**15 58 28.5**	**+3.2**
BRVK	**Borovoye**	**49.87**	**309**	⇓*e*P	**P**	**15 58 28.5**	**+3.2**
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
AAK	**Ala-Archa**	**51.90**	**296**	*e*P	**P**	**15 58 41.2**	**+0.3**
AAK	**Ala-Archa**	**51.90**	**296**	⇓*e*P	**P**	**15 58 41.2**	**+0.3**
KKAR	**Karatay Array**	**54.22**	**298**	P	**P**	**15 58 56.4**	**-1.4**
KKAR	**Karatay Array**	**54.22**	**298**	P	**P**	**15 58 56.4**	**-1.4**
YKA	**Yellowknife Ar**	**54.87**	**34**	P	**P**	**15 59 01.9**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=296,slow=6.0,SNR=9.9						
ABKAR	**Akbulak array**	**57.39**	**309**	P	**P**	**15 59 18.6**	**-1.8**
PDAR	**Pinedale Array**	**68.90**	**51**	P	**P**	**16 00 37.0**	**-0.1**
ASAR	**Alice Springs**	**68.91**	**194**	P	**P**	**16 00 38.1**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=13,slow=6.9,SNR=5.0						
CLL	**Collm**	**77.22**	**333**	*e*P	**P**	**16 01 25.0**	**-0.8**

BJI ***19*** *16:00:17.7±0.0, 27°.79S×176°.89W, h6^{km}, mB5.8/58, mb5.5/66, Ms5.4/76, Ms7 5.3/73*

IDC ***19*** *16:00:21.9±1.4, 27°.92S×177°.06W, h21^{km}±7^{km}, mb5.2/26, mb1 5.3/26, mb1mx5.3/26, mbtmp5.3/26, MS5.2/29, Ms1 5.2/29, ms1mx5.2/32, Error ellipse: s-maj=12.1km s-min=11.6km az=142.0*

MOS ***19*** *16:00:23.2±0.9, 27°.92S×177°.09W, h38^{km}, mb5.8/60, MS5.4/53, Error ellipse: s-maj=8.6km s-min=7.1km az=78.0*

NEIC ***19*** *16:00:23.2±1.6, 27°.88S±0°.03×177°.1W±0°.1, h31^{km}±3^{km}, mb5.6/288, Ms_20 5.6/643, Mwb5.6/44, Mww5.8, Mwc5.8(GCMT), Error ellipse: s-maj=13.6km s-min=3.3km az=104.0*

NEIC ***19*** *16:00:23.2, 27°.88S×177°.13W, h33^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.76; M$_{\theta\theta}$-0.17; M$_{\phi\phi}$-1.59; M$_{r\theta}$-0.48; M$_{\theta\phi}$0.67; M$_{\phi r}$2.61; Fault plane solution: M$_0$3.21000×10^{17} NP1:φ$_s$347.71000°, δ73.05000°, λ95.91000°. NP2:φ$_s$148.15000°, δ17.92000°, λ71.33000°. Principal axes: T 3.1838, Plg62.0000°, Azm266.0000°; N 0.0485, Plg6.0000°, Azm166.0000°; P -3.2323, Plg28.0000°, Azm73.0000°;*

NEIC ***19*** *16:00:27, 27°.98S×176°.71W, h35^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.44; M$_{\theta\theta}$1.30; M$_{\phi\phi}$-3.74; M$_{r\theta}$-1.24; M$_{\theta\phi}$-0.14; M$_{\phi r}$4.63; Fault plane solution: M$_0$5.81000×10^{17} NP1:φ$_s$345.00000°, δ75.00000°, λ77.00000°. NP2:φ$_s$207.00000°, δ20.00000°, λ130.00000°. Principal axes: T 5.2574, Plg58.0000°, Azm237.0000°; N 0.9878, Plg13.0000°, Azm349.0000°; P -6.2452, Plg28.0000°, Azm86.0000°;*

GCMT ***19*** *16:00:27.2±0.1, 27°.98S±0°.01×176°.69W±0°.01, h37^{km}, MW5.8/150, Moment Tensor Solution. s142, c277; s150, c396; Duration: 1^{s}9 Moment tensor: Scale 10^{17} Nm; M$_{rr}$2.63±.04; M$_{\theta\theta}$1.22±.04; M$_{\phi\phi}$-3.85±.04; M$_{r\theta}$-1.28±.05; M$_{\theta\phi}$-0.04±.03; M$_{\phi r}$4.50±.08; Best double couple: M$_0$5.73200×10^{17} NP1:φ$_s$204.00000°, δ21.00000°, λ127.00000°. NP2:φ$_s$345.00000°, δ74.00000°, λ77.00000°. Principal axes: T 5.2680, Plg59.0000°, Azm237.0000°; N 0.9290, Plg12.0000°, Azm349.0000°; P -6.1960, Plg27.0000°, Azm85.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***19*** *16:00:30, 27°.83S×177°.11W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$3.25; M$_{\theta\theta}$0.37; M$_{\phi\phi}$-3.62; M$_{r\theta}$-0.98; M$_{\theta\phi}$0.43; M$_{\phi r}$5.40; Fault plane solution: M$_0$6.49000×10^{17} NP1:φ$_s$350.00000°, δ74.00000°, λ88.00000°. NP2:φ$_s$179.00000°, δ16.00000°, λ98.00000°. Principal axes: T 6.2823, Plg61.0000°, Azm257.0000°; N 0.4034, Plg2.0000°, Azm351.0000°; P -6.6858, Plg29.0000°, Azm82.0000°;*

ISC 19 16:00:22.4±0.4**, 28°.08S**±0°.04×**176°.98W**±0°.04**, h29**^{km}±2^{km}**, h29**^{km}**:pP-P, n1393,** σ**1^{s}57**/1187**, mb5.6**/202**, MS5.6**/406**, 61C-34D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.43**	**215**	Pn	**Pb**	**16 00 49.5**	**+1.1**
	12µm,0.3s,baz=70,slow=1.8,SNR=235						
RAO				Sn	**Sb**	**16 01 08.8**	**+2.6**
	32µm,0.3s,baz=84,slow=19,SNR=9.7						
RAO				LR	LR	16 01 20.2	
	comp=Z,56µm,18.3s,baz=129,slow=38						
RIZ	**Raoul Island**	**1.43**	**215**	P	**Pb**	**16 00 49.3**	**+0.9**
RIZ				S	**Sb**	**16 01 09.0**	**+2.8**
GLKZ	**Green Lake**	**1.44**	**215**	P	**Pb**	**16 00 49.3**	**+0.8**
GLKZ				S	**Sn**	**16 01 05.3**	**+0.8**
MXZ	**Matakaoa Point**	**10.25**	**202**		Pn	16 02 42.7	-4.9
MXZ	**Matakaoa Point**	**10.25**	**202**	P	Pn	16 02 42.0	-5.5
MXZ				S	**Sn**	**16 04 36.8**	**-4.7**
WMGZ	**Waiomatatini S**	**10.45**	**201**	P	Pn	16 02 44.6	-5.7
WMGZ				S	**Sn**	**16 04 42.3**	**-4.1**
HAZ	**Te Kaha**	**10.60**	**203**	P	Pn	16 02 47.2	-5.1
HAZ				S	**Sn**	**16 04 45.8**	**-4.3**
PKGZ	**Pakihiroa**	**10.62**	**202**	P	Pn	16 02 47.1	-5.6
PKGZ				S	Sn	16 04 39.8	-11
OUZ	**Omahuta**	**10.72**	**226**		**Pn**	**16 02 54.0**	**0.0**
PUZ	**Puketiti**	**10.73**	**201**	P	Pn	16 02 47.5	-6.7
PUZ				S	**Sn**	**16 04 48.6**	**-4.8**
RUGZ	**Raukumara Rang**	**10.83**	**203**	P	Pn	16 02 51.0	-4.6
RUGZ				S	**Sn**	**16 04 52.4**	**-3.3**
NIUE	**Niue**	**11.05**	**37**	P	Pn	16 02 52.7	-5.9
	baz=11,SNR=10						
NIUE	**Niue**	**11.05**	**37**	Pn	Pn	16 02 52.2	-6.3
OPRZ	**Ohinepanea**	**11.14**	**207**	P	**Pn**	**16 02 57.4**	**-2.3**
OPRZ				S	**Sn**	**16 05 02.3**	**-1.1**
TKGZ	**Te Karaka**	**11.20**	**201**	P	Pn	16 02 54.3	-6.2
TKGZ				S	Sn	16 04 58.2	-6.4
MSVF	**Nonsavu**	**11.27**	**335**	*ce*P	Pn	16 03 05.5	+3.9
URZ	**Urewera**	**11.29**	**204**	Pn	Pn	16 02 56.3	-5.4
	2.5nm,0.3s,baz=270,slow=4.4,SNR=38						
URZ				Sn	**Sn**	**16 05 02.9**	**-4.0**
	34nm,0.3s,baz=20,slow=23,SNR=11						
URZ	**Urewera**	**11.29**	**204**		Pn	16 02 56.0	-5.8
URZ	**Urewera**	**11.29**	**204**	P	Pn	16 02 56.0	-5.8
URZ				S	**Sn**	**16 05 03.3**	**-3.6**
RAGZ	**Rawiri**	**11.39**	**203**	P	Pn	16 02 59.2	-4.1
RAGZ				S	**Sn**	**16 05 05.2**	**-4.3**
RIGZ	**Rimuhau**	**11.47**	**201**	P	Pn	16 02 58.8	-5.5
RIGZ				S	Sn	16 05 04.0	-7.4
MUGZ	**Murupara**	**11.61**	**205**	P	Pn	16 03 01.0	-5.2
MUGZ				S	Sn	16 05 07.9	-6.9
BKZ	**Black Stump Fm**	**12.32**	**204**		Pn	16 03 09.6	-6.3
HIZ	**Hauiti**	**12.44**	**211**		**Pn**	**16 03 14.7**	**-2.7**
NFK	**Norfolk Island**	**13.29**	**262**	P	**P**	**16 03 35.1**	**-3.4**
	baz=14,SNR=4.1						
BFZ	**Birch Farm**	**13.75**	**202**		Pn	16 03 25.1	-10
MSWZ	**Moikau Station**	**14.75**	**204**		Pn	16 03 42.2	-6.8
SNZO	**South Karori**	**14.85**	**205**		Pn	16 03 42.7	-7.7
BHW	**Baring Head**	**14.88**	**205**		Pn	16 03 42.4	-8.3
PLWZ	**Palliser**	**14.88**	**203**		Pn	16 03 42.6	-8.2
AFI	**Afiamalu**	**14.91**	**20**	Pn	Pn	16 03 43.9	-7.5
	15nm,0.3s,baz=38,slow=2.4,SNR=10						
AFI				Sn	Sn	16 06 20.4	-15
	22nm,0.3s,baz=200,slow=23,SNR=6.0						
AFI	**Afiamalu**	**14.91**	**20**	P	Pn	16 03 42.4	-8.9
AFI	**Afiamalu**	**14.91**	**20**	Pn	Pn	16 03 42.4	-8.9
TUWZ	**Tuamarina**	**15.25**	**207**	Pn	Pn	16 03 47.0	-8.6
NNZ	**Nelson**	**15.30**	**209**	Pn	Pn	16 03 49.2	-7.1
QRZ	**Quartz Range**	**15.36**	**211**	Pn	Pn	16 03 50.7	-6.4
CMWZ	**Cape Campbell**	**15.42**	**206**	Pn	**Pn**	**16 03 53.2**	**-4.6**
BSWZ	**Blackbirch Sta**	**15.52**	**206**		Pn	16 03 53.2	-5.9
THZ	**Tophouse**	**15.96**	**209**		Pn	16 03 57.5	-7.4
DZM	**Mont Dzumac**	**16.16**	**288**	*e*P	**P**	**16 04 13.5**	**+2.9**
	1µm,1.4s						
DZM				*e*LQ	LQ	16 07 21.5	
	15µm,25.6s						
DZM				*e*LR	LR	16 08 03.1	
	comp=Z,45µm,25.4s						
DZM	**Mont Dzumac**	**16.16**	**288**	Pn	**P**	**16 04 10.7**	**+0.1**
	0.9nm,0.3s,baz=118,slow=9.8,SNR=21						
DZM				LR	LR	16 09 17.5	
	comp=Z,20µm,18.9s,baz=128,slow=33						
DZM	**Mont Dzumac**	**16.16**	**288**	P	**P**	**16 04 11.8**	**+1.3**
DZM				IAmb	IAmb	16 04 30.4	
	comp=Z,977nm,1.5s						
KHZ	**Kahutara**	**16.25**	**206**	Pn	Pn	16 04 00.0	-8.5
LTZ	**Lake Taylor**	**17.06**	**208**		Pn	16 04 09.8	-9.0
RAR	**Rarotonga**	**17.06**	**70**	P	**Pn**	**16 04 13.3**	**-5.6**
	comp=Z,23nm,0.3s,baz=181,slow=2.5,SNR=11						
RAR				LR	LR	16 09 14.9	
	comp=Z,11µm,20.7s,baz=258,slow=31						
RAR	**Rarotonga**	**17.06**	**70**	P	**Pn**	**16 04 12.4**	**-6.5**
RAR				pmax	pmax		
	comp=Z,1µm,1.0s						
RAR	**Rarotonga**	**17.06**	**70**	Pn	**Pn**	**16 04 12.4**	**-6.5**
OXZ	**Oxford**	**17.61**	**207**	Pn	Pn	16 04 17.6	-7.9
MQZ	**McQueen's Vall**	**17.69**	**205**	Pn	Pn	16 04 16.8	-10
RPZ	**Rata Peaks**	**18.34**	**209**	P	**P**	**16 04 29.1**	**-5.3**
	comp=Z,5.4nm,0.3s,baz=355,slow=1.5,SNR=26						
RPZ				S	Sn	16 07 44.8	-14
	comp=Z,4.1nm,0.3s,baz=40,slow=23,SNR=8.3						
RPZ				LR	LR	16 11 46.9	
	comp=Z,11µm,20.3s,baz=32,slow=37						
RPZ	**Rata Peaks**	**18.34**	**209**	P	P	16 04 26.2	-8.2
FOZ	**Fox Glacier**	**18.73**	**211**	P	P	16 04 32.1	-6.6
LBZ	**Lake Benmore**	**19.25**	**209**	P	**P**	**16 04 39.0**	**-5.5**
ODZ	**Otahua Downs**	**19.59**	**207**	P	**P**	**16 04 44.1**	**-4.1**
WKZ	**Wanaka**	**20.10**	**210**	P	**P**	**16 04 49.5**	**-4.3**
MLZ	**Mavora Lakes**	**20.92**	**210**	P	**P**	**16 04 59.4**	**-3.2**
LHI	**Lord Howe Isla**	**21.06**	**255**	P	**P**	**16 05 09.6**	**+5.4**
	baz=22,SNR=19						
LHI	**Lord Howe Isla**	**21.06**	**255**		**P**	**16 05 06.3**	**+2.1**
WHZ	**Wether Hill Ro**	**21.41**	**210**	P	**P**	**16 05 04.3**	**-3.5**
TBI	**Tubuai**	**25.21**	**86**	*e*S	S	16 09 58.0	-11
	comp=Z,3µm,27.8s						
TBI				*e*LQ	LQ	16 10 42.9	
	comp=Z,4µm,29.5s						
TBI				*e*LR	LR	16 11 49.2	
	comp=Z,29µm,27.2s,baz=252						
TBI	**Tubuai**	**25.21**	**86**	*e*T	T	16 31 17.9	
	comp=Z,156nm,0.4s						
KNTN	**Kanton**	**25.66**	**12**	P	**P**	**16 05 47.6**	**-2.2**
PAE	**Paea**	**27.23**	**74**	*e*T	T	16 33 51.9	
	comp=Z,74nm,0.3s						
PPT2	**Papeete2**	**27.27**	**73**	*e*P	**P**	**16 06 01.4**	**-3.1**
	comp=Z,142nm,1.4s						
PPT2				*e*S	S	16 10 33.0	-9.2
	comp=Z,2µm,24.8s						
PPT2				*e*LQ	LQ	16 11 26.3	
	comp=Z,9µm,27.8s						
PPT2				*e*LR	LR	16 12 49.3	
	comp=Z,34µm,26.5s,baz=242						
PPT2	**Papeete2**	**27.27**	**73**	*e*T	T	16 33 56.2	
	comp=Z,35nm,0.3s						
PPT	**Papeete**	**27.28**	**73**	P	**P**	**16 06 04.3**	**-0.2**
	comp=Z,77nm,0.9s,baz=136,slow=4.1,SNR=4.0						
PPT				LR	LR	16 13 58.4	
	comp=Z,7µm,21.5s,baz=235,slow=30						
ARMA	**Armidale**	**27.44**	**257**	P	**P**	**16 06 08.8**	**+2.8**
	baz=28,SNR=11						
ARMA	**Armidale**	**27.44**	**257**	P	**P**	**16 06 04.9**	**-1.2**
ARMA				IAmb	IAmb	16 07 02.9	
	comp=Z,224nm,1.9s						
ARMA				IAMs_20	IAMs_20	16 14 59.7	
	comp=Z,18µm,21.0s						
TVO	**Taravao**	**27.46**	**74**	*e*P	**P**	**16 06 03.0**	**-3.2**
	comp=Z,81nm,1.4s						
TVO	**Taravao**	**27.46**	**74**	*e*T	T	16 34 09.2	
	comp=Z,15nm,0.4s						
TIAR	**Tiarei**	**27.48**	**74**	*e*P	**P**	**16 06 02.7**	**-3.6**
	comp=Z,53nm,0.8s						
TIAR	**Tiarei**	**27.48**	**74**	*e*T	T	16 34 11.3	
	comp=Z,9.7nm,0.3s						
MGCD	**Mangrove Creek**	**27.86**	**251**	P	**P**	**16 06 13.0**	**+3.4**
	baz=28,SNR=11						
HNR	**Honiara**	**28.56**	**306**	P	**P**	**16 06 15.2**	**-0.7**
	comp=Z,113nm,0.7s,baz=197,slow=4.8,SNR=11						
HNR				ScP	**ScP**	**16 13 07.0**	**+0.8**
	comp=Z,6.5nm,0.3s,baz=279,slow=21,SNR=3.9						
HNR				LR	LR	16 16 06.0	
	comp=Z,4µm,19.7s,baz=138,slow=33						
HNR	**Honiara**	**28.56**	**306**	P	**P**	**16 06 16.0**	**+0.1**
HNR	**Honiara**	**28.56**	**306**	P	**P**	**16 06 14.1**	**-1.8**
EIDS	**Eidsvold**	**28.61**	**268**	P	**P**	**16 06 18.7**	**+2.4**
	baz=29,SNR=13						
EIDS	**Eidsvold**	**28.61**	**268**	P	**P**	**16 06 16.9**	**+0.6**
CNB	**Canberra Magne**	**29.43**	**247**	P	**P**	**16 06 25.9**	**+2.3**
	baz=30,SNR=7.9						
CAN	**Canberra**	**29.73**	**247**	P	**P**	**16 06 27.5**	**+1.3**
CAN				pmax	pmax		
	comp=Z,57nm,1.0s						
CAN	**Canberra**	**29.73**	**247**	P	**P**	**16 06 27.5**	**+1.3**
CAN				IAMs_20	IAMs_20	16 16 21.1	
	comp=Z,11µm,20.0s						
MILA	**Mila**	**29.78**	**244**	P	**P**	**16 06 29.1**	**+2.4**
	baz=30,SNR=11						
VAH	**Vaihoa**	**30.04**	**71**	*e*P	**P**	**16 06 25.7**	**-3.3**
	comp=Z,259nm,1.2s						
VAH	**Vaihoa**	**30.04**	**71**	*e*T	T	16 37 23.6	
	comp=Z,84nm,0.2s						
YNG	**Young**	**30.16**	**249**	P	**P**	**16 06 33.1**	**+3.0**
	baz=31,SNR=5.5						
RMQ	**Roma**	**30.43**	**265**	P	**P**	**16 06 35.0**	**+2.4**
	baz=31,SNR=27						
MOO	**Moorlands**	**32.31**	**234**	P	**P**	**16 06 51.2**	**+2.3**
	baz=33,SNR=3.6						
CMSA	**Cobar Meteorol**	**32.47**	**255**	P	**P**	**16 06 51.3**	**+1.0**
	baz=33,SNR=21						
TOO	**Toolangi**	**32.74**	**243**	P	**P**	**16 06 53.5**	**+0.8**
	baz=33,SNR=11						
TOO	**Toolangi**	**32.74**	**243**	P	**P**	**16 06 53.0**	**+0.3**
TOO				pmax	pmax		
	comp=Z,62nm,1.2s						
TOO	**Toolangi**	**32.74**	**243**	P	**P**	**16 06 53.0**	**+0.3**
CTA	**Charters Tower**	**34.39**	**275**	P	**P**	**16 07 07.1**	**-0.2**
	comp=Z,104nm,1.1s,baz=96,slow=11,SNR=26						
CTA				LR	LR	16 19 21.7	
	comp=Z,12µm,20.4s,baz=108,slow=33						
CTAO	**Charters Tower**	**34.39**	**275**	IAMs_20	IAMs_20	16 19 09.9	
	comp=Z,12µm,20.0s						
QLP	**Quilpie**	**34.39**	**263**	P	**P**	**16 07 08.6**	**+1.5**
	baz=35,SNR=12						
ARPS	**Mount Arapiles**	**35.60**	**245**	P	**P**	**16 07 19.1**	**+1.6**
	baz=36,SNR=16						
STKA	**Stephens Creek**	**35.93**	**254**	P	**P**	**16 07 21.1**	**+0.8**
	baz=36,SNR=19						
STKA	**Stephens Creek**	**35.93**	**254**	P	**P**	**16 07 21.1**	**+0.8**
	comp=Z,22nm,1.1s,baz=99,slow=9.4,SNR=28						
STKA				ScP	**ScP**	**16 13 32.2**	**+1.0**
	comp=Z,18nm,1.2s,baz=314,slow=4.5,SNR=5.8						
STKA				LR	LR	16 20 01.9	
	comp=Z,10µm,21.3s,baz=89,slow=33						
STKA	**Stephens Creek**	**35.93**	**254**	IAmb	IAmb	16 07 22.9	
	comp=Z,28nm,1.4s						
MTSU	**Mount Surprise**	**36.81**	**277**	P	**P**	**16 07 29.9**	**+1.9**
	baz=37,SNR=27						
RABL	**Rabaul**	**37.76**	**303**	P	**P**	**16 07 33.1**	**-3.0**
KRVT	**Keravat (AS076**	**37.79**	**303**	P	**P**	**16 07 35.2**	**-1.1**
	comp=Z,48nm,0.6s,baz=270,slow=2.6,SNR=15						
HTT	**Hallett**	**38.05**	**251**	P	**P**	**16 07 38.5**	**+0.1**
	baz=38,SNR=16						
PMG	**Port Moresby**	**38.50**	**292**	P	**P**	**16 07 42.0**	**-0.2**
	comp=Z,38nm,1.1s,baz=74,slow=6.7,SNR=9.3						
PMG				PcP	**PcP**	**16 09 56.2**	**+1.2**
	comp=Z,35nm,0.9s,baz=53,slow=6.8,SNR=2.9						
PMG				ScP	**ScP**	**16 13 42.5**	**+1.5**
	comp=Z,27nm,1.1s,baz=38,slow=8.5,SNR=6.5						
PMG				LR	LR	16 20 47.2	
	comp=Z,4µm,21.6s,baz=115,slow=32						
PMG	**Port Moresby**	**38.50**	**292**	*c i*P	**P**	**16 07 42.2**	**-0.1**
PMG				pmax	pmax		
	comp=Z,365nm,1.7s						
PMG				MLR	MLR		
	comp=Z,25µm,18.0s						
PMG	**Port Moresby**	**38.50**	**292**	P	**P**	**16 07 41.6**	**-0.7**
PMG	**Port Moresby**	**38.50**	**292**	IAMs_20	IAMs_20	16 23 29.8	
	comp=Z,7µm,18.0s						
COEN	**Coen**	**39.57**	**282**	P	**P**	**16 07 52.7**	**+1.4**
	baz=40,SNR=15						
COEN	**Coen**	**39.57**	**282**	P	**P**	**16 07 50.8**	**-0.5**
COEN				IAMs_20	IAMs_20	16 21 50.6	
	comp=Z,8µm,20.0s						
TAOE	**Nuku Hiva Isla**	**39.60**	**68**	*e*S	S	16 13 44.6	-8.5
	comp=Z,2µm,26.0s						
TAOE				*e*LR	LR	16 18 29.8	
	comp=Z,16µm,26.0s,baz=241						
TAOE	**Nuku Hiva Isla**	**39.60**	**68**	*e*T	T	16 49 20.4	
	comp=Z,47nm,0.3s						
QIS	**Mount Isa**	**40.10**	**271**	P	**P**	**16 07 56.3**	**+0.6**
	baz=40,SNR=12						
BBOO	**Buckleboo**	**40.50**	**251**	P	**P**	**16 07 58.4**	**-0.4**
	baz=41,SNR=9.0						
BBOO	**Buckleboo**	**40.50**	**251**	P	**P**	**16 07 57.6**	**-1.3**
BBOO				IAmb	IAmb	16 07 59.7	
	comp=Z,161nm,1.4s						
BBOO				IAMs_20	IAMs_20	16 23 18.1	
	comp=Z,8µm,19.0s						
PATS	**Pohnpei**	**42.12**	**322**	P	**P**	**16 08 09.8**	**-2.4**
AS31	**Alice Springs**	**44.18**	**264**	P	**P**	**16 08 27.6**	**-1.4**
ASAR	**Alice Springs**	**44.18**	**264**	P	**P**	**16 08 28.5**	**-0.5**
	comp=Z,41nm,0.9s,baz=99,slow=6.4,SNR=197						
ASAR				ScP	**ScP**	**16 14 04.8**	**+1.3**
	comp=Z,8.2nm,0.9s,baz=106,slow=3.8,SNR=3.1						
ASAR				S	**S**	**16 14 57.4**	**-3.1**
	comp=Z,15nm,1.2s,baz=110,slow=14,SNR=7.6						
ASAR				ScS	**ScS**	**16 18 26.4**	**+0.6**
	comp=Z,1.5nm,1.0s,baz=104,slow=6.8,SNR=4.6						
ASAR				LR	LR	16 25 50.0	
	comp=Z,8µm,20.6s,baz=108,slow=35						
ASAR	**Alice Springs**	**44.18**	**264**	P	**P**	**16 08 27.5**	**-1.4**
WR0	**Warramunga Arr**	**44.77**	**269**	P	**P**	**16 08 32.8**	**-1.0**
WR0				IAmb	IAmb	16 08 34.9	
	comp=Z,277nm,1.8s						
WR9	**Warramunga Arr**	**44.80**	**269**	IAMs_20	IAMs_20	16 26 49.1	
	comp=Z,5µm,20.0s						
WR8	**Warramunga Arr**	**44.81**	**269**	IAMs_20	IAMs_20	16 26 48.8	
	comp=Z,5µm,18.0s						
WR7	**Warramunga Arr**	**44.83**	**269**	IAMs_20	IAMs_20	16 26 48.3	
	comp=Z,5µm,18.0s						
WR6	**Warramunga Arr**	**44.85**	**269**	IAMs_20	IAMs_20	16 26 50.9	
	comp=Z,5µm,18.0s						
WR3	**Warramunga Arr**	**44.91**	**269**	IAMs_20	IAMs_20	16 26 52.5	
	comp=Z,5µm,18.0s						
WC2	**Warramunga Arr**	**44.94**	**269**	IAMs_20	IAMs_20	16 26 52.2	
	comp=Z,5µm,18.0s						
WB1	**Warramunga Ar.**	**44.95**	**269**	IAMs_20	IAMs_20	16 26 54.3	
	comp=Z,5µm,18.0s						
WB2	**Warramunga Arr**	**44.95**	**269**	P	**P**	**16 08 33.4**	**-1.7**
WB2				IAMs_20	IAMs_20	16 26 52.4	
	comp=Z,5µm,18.0s						
WRAB	**Tennant Creek**	**44.95**	**269**	*c i*P	**P**	**16 08 34.5**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,207nm,1.7s						
WRAB				MLR	MLR		
	comp=Z,4µm,16.0s						
WB5	**Warramunga Arr**	**44.96**	**269**	IAMs_20	IAMs_20	16 26 53.6	
	comp=Z,4µm,18.0s						
WRA	**Warramunga Arr**	**44.96**	**269**	P	**P**	**16 08 34.5**	**-0.7**
	comp=Z,34nm,0.8s,baz=107,slow=7.7,SNR=105						
WRA				PcP	**PcP**	**16 10 16.2**	**0.0**
	comp=Z,38nm,0.9s,baz=112,slow=3.3,SNR=8.5						
WRA				ScP	**ScP**	**16 14 07.7**	**+1.0**
	comp=Z,6.4nm,0.9s,baz=104,slow=3.1,SNR=6.2						
WRA				S	**S**	**16 15 07.3**	**-4.6**
	comp=Z,7.0nm,1.0s,baz=109,slow=13,SNR=5.0						
WRA				LR	LR	16 27 04.4	
	comp=Z,4µm,18.3s,baz=125,slow=36						
WRA	**Warramunga Arr**	**44.96**	**269**	P	**P**	**16 08 33.4**	**-1.8**
WRA	**Warramunga Arr**	**44.96**	**269**	IAmb	IAmb	16 10 18.4	
	comp=Z,11nm,1.3s						
WC1	**Warramunga Arr**	**44.96**	**269**	IAMs_20	IAMs_20	16 26 53.8	
	comp=Z,5µm,19.0s						
WB0	**Warramunga Arr**	**44.97**	**270**	P	**P**	**16 08 33.6**	**-1.7**
FORT	**Forrest**	**47.54**	**253**	P	**P**	**16 08 53.9**	**-1.5**
	baz=48,SNR=18						
FORT	**Forrest**	**47.54**	**253**	P	**P**	**16 08 53.6**	**-1.8**
FORT				IAMs_20	IAMs_20	16 26 37.3	
	comp=Z,9µm,22.0s						
GENI	**Genyem**	**48.07**	**294**	P	**P**	**16 09 00.4**	**+0.8**
WRKA	**Warakurna**	**48.70**	**260**	P	**P**	**16 09 03.1**	**-1.4**
	baz=49,SNR=37						
KDU	**Kakadu**	**49.45**	**277**	P	**P**	**16 09 09.4**	**-0.8**
	baz=50,SNR=7.7						
SMPI	**Sarmi**	**49.60**	**294**	P	**P**	**16 09 12.5**	**+1.1**
SBA	**Scott Base**	**50.41**	**184**	P	**P**	**16 09 20.1**	**+3.5**
SBA				pmax	pmax		
	comp=Z,612nm,1.9s						
SBA	**Scott Base**	**50.41**	**184**	P	**P**	**16 09 20.1**	**+3.5**
VNDA	**Vanda**	**50.49**	**186**	P	**P**	**16 09 19.3**	**+2.1**
	comp=Z,18nm,1.1s,baz=359,slow=7.9,SNR=29						
VNDA				LR	LR	16 28 36.5	
	comp=Z,602nm,19.2s,baz=16,slow=34						
VNDA	**Vanda**	**50.49**	**186**	P	**P**	**16 09 19.3**	**+2.1**
VNDA				IAmb	IAmb	16 09 21.9	
	comp=Z,147nm,1.8s						
MTN	**Manton Dam**	**50.55**	**276**	P	**P**	**16 09 20.1**	**+1.5**
	baz=51,SNR=14						
MTN	**Manton Dam**	**50.55**	**276**	P	**P**	**16 09 16.9**	**-1.7**
MTN				IAmb	IAmb	16 10 38.3	
	comp=Z,59nm,0.8s						
KNRA	**Kununurra**	**51.47**	**272**	P	**P**	**16 09 24.9**	**-0.5**
	baz=52,SNR=13						
KNRA	**Kununurra**	**51.47**	**272**	P	**P**	**16 09 24.1**	**-1.4**

KNRA				IAMs_20	IAMs_20	16 29 34.5	
	comp=Z,6µm,20.0s						
KHLU	Kahalu`u	51.60	26	P	P	16 09 26.6	+0.2
PUH	Pauahi	51.66	27	P	P	16 09 26.4	-0.5
KKO	Keanakako`i	51.66	26	P	P	16 09 26.6	-0.3
MLH	Mauna Loa	51.70	26	P	P	16 09 28.3	+0.9
HMH	Humu'ula Sheep	51.76	26	P	P	16 09 28.8	+1.0
POHA	Pohakuloa	51.88	26	P	P	16 09 29.2	+0.5
HPAH	Hawaii Prepara	52.07	26	P	P	16 09 30.4	+0.5
HON	Honolulu	52.43	22	P	P	16 09 32.9	+0.6
HON				pmax	pmax		
	comp=Z,262nm,0.9s						
HON	Honolulu	52.43	22	P	P	16 09 32.9	+0.6
KEKH	Kekaha	52.49	20	P	P	16 09 32.5	-0.3
KIP	Kipapa	52.52	22	P	P	16 09 33.3	+0.3
KIP				pmax	pmax		
	comp=Z,211nm,0.9s						
KIP	Kipapa	52.52	22	P	P	16 09 33.3	+0.3
KHLH	Kahului Airpor	52.59	24	P	P	16 09 33.6	0.0
SAUI	Saumlaki	52.64	282	IAMs_20	IAMs_20	16 29 55.2	
	comp=Z,6µm,20.0s						
FITZ	Fitzroy Crossi	53.30	268	P	P	16 09 38.5	-0.5
	comp=Z,31nm,0.8s,baz=119,slow=7.6,SNR=29						
FITZ				LR	LR	16 32 28.4	
	comp=Z,987nm,18.2s,baz=93,slow=36						
FITZ	Fitzroy Crossi	53.30	268	IAMs_20	IAMs_20	16 31 43.7	
	comp=Z,5µm,20.0s						
FAKI	Fak Fak	54.42	288	P	P	16 09 47.1	-0.2
FAKI	Fak Fak	54.42	288	P	P	16 09 44.9	-2.4
NWAO	Narrogin (SRO)	56.07	248	P	P	16 09 57.8	-1.2
	comp=Z,14nm,1.0s,baz=133,slow=8.0,SNR=5.5						
NWAO	Narrogin (SRO)	56.07	248	P	P	16 09 57.5	-1.5
NWAO				IAmb	IAmb	16 09 58.7	
	comp=Z,90nm,1.6s						
NWAO				IAMs_20	IAMs_20	16 31 56.7	
	comp=Z,4µm,20.0s						
NWAO	Narrogin (SRO)	56.07	248	P	P	16 09 57.5	-1.5
NWAO				IAmb	IAmb	16 09 58.7	
	comp=Z,111nm,1.6s						
SIJI	Sorong	56.36	289	P	P	16 10 00.6	-0.7
	comp=Z,137nm,0.9s,baz=82,slow=5.8,SNR=37						
SWI	Sorong	56.37	289	P	P	16 10 01.4	+0.1
	comp=Z,3µmcomp=Z,2µmcomp=Z,210nm,0.7s						
MSAI	Masohi	57.01	285	P	P	16 10 18.5	+13
PSA00	Pilbara Seismi	57.16	261	P	P	16 10 04.8	-2.1
PSA00	Pilbara Seismi	57.16	261	P	P	16 10 03.6	-3.3
PSA00				IAmb	IAmb	16 10 12.1	
	comp=Z,30nm,0.9s						
AAI	Ambon	57.46	285	P	P	16 10 10.1	+1.1
CASY	Casey	57.60	207	P	P	16 10 08.8	-0.5
SOEI	Soe	57.95	276	P	P	16 10 15.2	+2.5
SOEI	Soe	57.95	276	IAMs_20	IAMs_20	16 33 35.1	
	comp=Z,6µm,21.0s						
MORW	Morawa	58.07	252	P	P	16 10 11.1	-2.1
MORW				IAmb	IAmb	16 10 13.1	
	comp=Z,132nm,1.7s						
MORW				IAMs_20	IAMs_20	16 32 50.3	
	comp=Z,6µm,22.0s						
NLAI	Namlea	58.62	284	P	P	16 10 17.8	+0.6
RPN	Rapa Nui	59.21	106	LR	LR	16 29 11.2	
	comp=Z,3µm,21.3s,baz=236,slow=29						
LBMI	Labuha	59.64	287	P	P	16 10 25.3	+1.0
SANI	Sanana	60.19	285	P	P	16 10 27.3	-0.7
MMRI	Maumere	60.24	276	P	P	16 10 26.2	-2.2
MMRI				IAMs_20	IAMs_20	16 37 14.8	
	comp=Z,3µm,19.0s						
TNTI	Ternate	60.51	288	P	P	16 10 32.1	+1.9
TNTI	Ternate	60.51	288	P	P	16 10 27.9	-2.4
TNTI				IAmb	IAmb	16 10 34.8	
	comp=Z,52nm,0.9s						
GIRL	Giralia	61.66	258	P	P	16 10 37.0	-0.9
QSPA	South Pole Qui	62.02	180	P	P	16 10 41.8	+1.9
	comp=Z,63nm,1.0s,baz=27,slow=1.3,SNR=90						
QSPA				LR	LR	16 34 00.7	
	comp=Z,1µm,20.1s,baz=31,slow=32						
QSPA	South Pole Qui	62.02	180	P	P	16 10 41.4	+1.5
KMSI	Cibinong	63.26	286	P	P	16 10 52.1	+3.4
LUWI	Luwuk	63.45	284	P	P	16 10 51.4	+1.4
LUWI	Luwuk	63.45	284	P	P	16 10 47.4	-2.6
BKSI	Bulukumba	63.64	278	P	P	16 10 51.4	+0.2
PLAI	Plampang	64.08	274	P	P	16 10 57.1	+2.9
BNSI	Bone	64.09	279	P	P	16 10 54.7	+0.5
KAPI	Kappang	64.11	279	P	P	16 10 53.7	-0.7
	comp=Z,12nm,0.9s,baz=112,slow=3.2,SNR=6.9						
KAPI				LR	LR	16 40 28.5	
	comp=Z,3µm,19.1s,baz=144,slow=38						
APSI	Ampana	64.49	283	P	P	16 10 57.1	+0.3
SPSI	Sidrap Palu	64.60	280	P	P	16 11 03.3	+5.8
DDMP	Don Marcelino,	64.84	292	eP	P	16 10 56.2	-2.9
MATI	Mati	64.88	293	eP	P	16 10 51.6	-7.7
MRSI	Marisa	64.95	285	P	P	16 11 03.4	+3.6
TTSI	Tana Toraja	65.00	280	P	P	16 11 00.4	+0.2
KCP	Kidapawan	65.86	293	⇑iP	P	16 11 04.4	-1.3
KCP				i S	pP	16 11 14.9	+0.9
SKMP	Bagumbayan, Su	66.03	292	eP	P	16 11 06.2	-0.6
BUKP	Musuan	66.38	294	eP	P	16 11 10.1	+1.0
BUTP	Butuan	66.56	295	eP	P	16 11 13.6	+3.4
MPSI	Mapaga	66.62	284	P	P	16 11 09.8	-0.8
CTBH	Cotabato--PC H	66.67	292	⇑eP	P	16 11 09.7	-1.1
JAGI	Jajag, Banyuwa	67.44	272	P	P	16 11 15.4	-0.4
JAGI	Jajag, Banyuwa	67.44	272	P	P	16 11 13.8	-2.0
JAGI				IAMs_20	IAMs_20	16 39 14.8	
	comp=Z,4µm,22.0s						
PAGZ	Pagadian	67.73	293	eP	P	16 11 16.6	-0.9
BKB	Balikpapan	68.42	281	IAMs_20	IAMs_20	16 43 20.1	
	comp=Z,3µm,19.0s						
GRJI	Gresik	69.62	273	P	P	16 11 30.5	+1.1
PWJI	Pagerwojo	69.71	272	P	P	16 11 30.6	+0.6
PCJI	Pacitan	70.19	271	P	P	16 11 33.3	+0.4
PVCP	Virac	70.44	298	eP	P	16 11 33.8	-0.6
WOJI	Wonogiri, Jawa	70.57	271	P	P	16 11 35.6	+0.3
UGM	Wanagama	70.89	271	IAMs_20	IAMs_20	16 41 30.4	
	comp=Z,4µm,21.0s						
SMRI	Semarang	71.36	272	IAMs_20	IAMs_20	16 41 52.6	
	comp=Z,3µm,22.0s						
OTRP	Odiongan	71.40	296	eP	P	16 11 42.3	+2.1
BOAC	Boac	72.17	296	eP	P	16 11 48.5	+3.7
BUSP	Coron	72.65	294	eP	P	16 11 49.0	+1.3
KKM	Kota Kinabalu	72.71	287	P	P	16 11 47.7	-0.5
ENPP	El Nido	72.83	293	eP	P	16 11 44.4	-4.4
BATP	Bataraza	72.84	290	eP	P	16 11 47.4	-1.5
CISI	Cisompet, Garu	73.45	270	P	P	16 11 52.0	-0.6
CISI	Cisompet, Garu	73.45	270	P	P	16 11 51.4	-1.3
CISI				IAMs_20	IAMs_20	16 44 07.5	
	comp=Z,3µm,21.0s						
LUBP	Lubang	73.60	296	eP	P	16 11 52.0	-1.3
BALP	Baler	73.71	298	eP	P	16 11 57.8	+3.9
PMSA	Palmer Station	74.01	156	LR	LR	16 38 37.6	
	comp=Z,894nm,19.4s,baz=307,slow=31						
CNJI	Cibinong	74.16	270	P	P	16 11 56.9	+0.2
SBUM	Sibu	74.31	281	P	P	16 11 57.0	-0.6
SBUM				IAmb	IAmb	16 12 01.3	
	comp=Z,110nm,1.3s						
SBUM	Sibu	74.31	281	P	P	16 11 58.0	+0.4
MAW	Mawson	74.78	200	P	P	16 12 01.0	+1.6
	comp=Z,88nm,1.0s,baz=125,slow=6.3,SNR=40						
MAW				LR	LR	16 43 43.1	
	comp=Z,2µm,19.7s,baz=114,slow=35						
MAW	Mawson	74.78	200	IAmb	IAmb	16 12 02.5	
	comp=Z,102nm,1.6s						
SKJI	Sukabumi	74.81	270	P	P	16 12 04.3	+3.8
DBJI	Dramaga	74.84	271	P	P	16 12 00.4	-0.3
APYP	Conner	75.21	300	eP	P	16 12 00.5	-2.1
KSM	Kuching	75.49	280	P	P	16 12 03.2	-1.2
KSM				IAmb	IAmb	16 12 05.5	
	comp=Z,142nm,1.3s						
SZP	Santa	75.63	299	P	P	16 12 04.1	-0.9
SZP				IAmb	IAmb	16 12 38.3	
	comp=Z,94nm,1.2s						
INU	Inuyama	76.58	323	P	P	16 12 09.4	-0.7
INU				IAmb	IAmb	16 12 16.8	
	comp=Z,66nm,0.8s						
MJAR	Matsushiro Arr	76.86	324	P	P	16 12 11.3	-0.3
	comp=Z,26nm,0.8s,baz=154,slow=5.6,SNR=38						
MJAR				LR	LR	16 39 41.2	
	comp=Z,562nm,21.1s,baz=140,slow=31						
MJAR	Matsushiro Arr	76.86	324	P	P	16 12 10.7	-1.0
MAJO	Matsushiro	76.86	324	P	P	16 12 10.7	-1.0
MAJO				pmax	pmax		
	comp=Z,94nm,0.7s						
MAJO				MLR	MLR		
	comp=Z,800nm,21.0s						
MAJO	Matsushiro	76.86	324	P	P	16 12 10.7	-1.0
MAT	Matsushiro	76.86	324	P	P	16 12 11.1	-0.6
MAT				S	S	16 21 55.2	-2.3
MJB9	Matsu-Tunnel	76.87	324	P	P	16 12 11.0	-0.8
KASI	Kota Agung	77.30	270	P	P	16 12 13.2	-1.5
	comp=Z,2µmcomp=Z,2µmcomp=Z,179nm,0.9s						
USHA	Ushuaia	77.33	146	LR	LR	16 41 46.6	
	comp=Z,1µm,18.1s,baz=242,slow=32						
LWLI	Liwa	77.92	271	P	P	16 12 17.5	-0.8
MDSI	Maura Dua	78.06	271	P	P	16 12 17.9	-1.0
	comp=Z,2µmcomp=Z,131nm,1.4s						
PMBI	Palembang	78.26	273	IAMs_20	IAMs_20	16 47 03.5	
	comp=Z,3µm,20.0s						
TWG	Pinlang	78.30	304	P	P	16 12 18.1	-1.9
TWG				IAmb	IAmb	16 12 38.5	
	comp=Z,94nm,0.9s						
TWG				IAMs_20	IAMs_20	16 42 40.4	
	comp=Z,4µm,21.0s						
JNU	Nakatsue	78.44	317	P	P	16 12 19.4	-1.1
JNU				IAmb	IAmb	16 12 40.1	
	comp=Z,140nm,1.4s						
ERM	Erimo	78.86	331	⇑eP	P	16 12 24.2	+1.6
ERM				pmax	pmax		
	comp=Z,104nm,1.3s						
TPUB	Ta-pu	78.91	304	P	P	16 12 21.9	-1.4
SSLB	Suanglung	78.97	304	P	P	16 12 22.2	-1.5
H06S1	SOCORRO T	79.00	62	T	T	17 39 28.1	
	SNR=34						
YUK	Yuzh-Kuril'sk	79.42	334	eP	P	16 12 25.3	-0.3
YUK				e		16 12 32.5	
YUK				e		16 15 22.2	
YUK				ePPP	PPP	16 17 13.0	
YUK				eS	S	16 22 22.3	-2.3
YUK				e		16 22 45.3	
YUK				eSS	SS	16 27 28.7	-4.4
YUK				eSSS	SSS	16 30 53.0	
YUK				pmax	pmax		
	comp=Z,162nm,1.2s						
YUK				pmax	pmax		
	comp=E,72nm,0.6s						
YUK				pmax	pmax		
	comp=N,88nm,0.8s						
YUK				pmax	pmax		
	comp=Z,232nm,1.4s						
YUK				MLR	MLR		
	comp=Z,868nm,18.0s						
SYO	Syowa Base	79.57	193	⇓iP	P	16 12 25.4	-0.8
SYO	Syowa Base	79.57	193	⇓iPcP	PcP	16 12 33.7	-0.4
SYO	Syowa Base	79.57	193	⇓ipP	pP	16 12 37.6	+3.1
ADK	Adak	79.62	0	P	P	16 12 26.8	+0.3
ADK				pmax	pmax		
	comp=Z,668nm,1.9s						
ADK	Adak	79.62	0	P	P	16 12 26.8	+0.3
KUR	Kuril'sk	79.68	336	eP	P	16 12 27.7	+0.7
KUR				e		16 12 33.8	
KUR				e		16 15 24.9	
KUR				eS	S	16 22 24.7	-2.5
KUR				eSS	SS	16 27 28.3	-8.6
KUR				eSSS	SSS	16 31 02.5	
KUR				MLR	MLR		
	comp=Z,2µm,18.0s						
KUR				MLR	MLR		
	comp=N,1µm,16.0s						
KSI	Kapahiang	79.84	271	P	P	16 12 27.5	-1.3
TPRI	Tanjung Pinang	80.28	276	P	P	16 12 32.3	+1.2
SNAA	Sanae	80.44	178	P	P	16 12 31.9	+0.8
SNAA	Sanae	80.44	178	P	P	16 12 31.5	+0.5
SNAA				pmax	pmax		
	comp=Z,55nm,1.0s						
SNAA	Sanae	80.44	178	P	P	16 12 31.5	+0.5
SNAA				IAmb	IAmb	16 12 60.0	
	comp=Z,55nm,1.0s						
VNA3	Neumayer Olymp	80.55	176	P	P	16 12 31.9	+0.3
VNA2	Neumayer--Watz	81.00	177	P	P	16 12 35.0	+1.1
	baz=187,slow=5.5						
VNA1	Neumayer--Stat	81.22	176	P	P	16 12 36.1	+1.1
NVL	N'lazarevskaya	81.23	183	⇓iP	P	16 12 33.9	-1.3
NVL				i S	S	16 22 42.5	-0.7
NVL				pmax	pmax		
	comp=Z,43nm,1.1s						
MYKOM	Kota Tinggi	81.29	277	P	P	16 12 35.2	-1.2
MYKOM				IAmb	IAmb	16 12 52.7	
	comp=Z,66nm,0.8s						
MYKOM				IAMs_20	IAMs_20	16 47 29.8	
	comp=Z,3µm,22.0s						
MYKOM	Kota Tinggi	81.29	277	P	P	16 12 37.0	+0.6
QZH	Quanzhou	81.38	304	⇑iP	P	16 12 36.8	+0.2
QZH				S	S	16 22 41.0	-5.0
QZH				pmax	pmax		
	comp=Z,370nm,7.4s						
QZH				LR	LR		
	comp=Z,530nm,17.5s						
QZH				LR	LR		
	comp=Z,650nm,19.9s						
QZH				LR	LR		
	comp=Z,800nm,20.4s						
KRJI	Kerinci	81.57	272	P	P	16 12 37.8	-0.3
SNCC	San Nicolas Is	81.79	46	P	P	16 12 39.6	+0.9
	baz=229						
SDSI	Sungai Dareh	82.14	273	P	P	16 12 52.4	+11
SCZ2	Santa Cruz Isl	82.21	45	P	P	16 12 41.8	+0.9
	baz=229						
SCI2	San Clemente I	82.24	46	P	P	16 12 42.5	+1.5
	baz=230						
SBC	Santa Barbara	82.46	45	P	P	16 12 43.8	+1.7
	baz=229						
PPSI	Pulau Pagai	82.54	271	P	P	16 12 45.1	+2.1
CIS	Catalina Islan	82.59	46	P	P	16 12 43.5	+0.6
	baz=230,SNR=5.7						
BLG	Laguna Peak, P	82.64	45	P	P	16 12 44.1	+1.0
	baz=229						
PKM	Mcpherson Peak	82.69	44	P	P	16 12 45.2	+1.6
	baz=229						
TJN	Taejon	82.77	318	⇓eP	P	16 12 44.4	+0.7
SMMC	Simmler	82.86	44	P	P	16 12 46.1	+1.9
	baz=228						
FMP	Fort Macarthur	82.87	46	P	P	16 12 45.4	+1.2
	baz=230						
SAO	San Andreas Ge	82.96	42	P	P	16 12 45.8	+1.1
SAO				pmax	pmax		
	comp=Z,58nm,1.4s						
SAO				MLR	MLR		
	comp=Z,4µm,22.0s						
SAO	San Andreas Ge	82.96	42	P	P	16 12 45.8	+1.1
SAO				IAmb	IAmb	16 13 11.0	
	comp=Z,58nm,1.4s						
PMPB	Monarch Peak	82.98	43	P	P	16 12 45.4	+0.5
PMPB				IAmb	IAmb	16 13 08.9	
	comp=Z,107nm,1.4s						
PDSI	Padang	83.00	273	P	P	16 12 44.0	-1.5
SRIG	Santa Rosalia	83.01	54	P	P	16 12 45.5	+0.4
YSS	Yuzh-Sakhalins	83.06	334	αeP	P	16 12 46.1	+1.2
YSS				e		16 12 54.7	
YSS				e*SP	pwP	16 13 01.3	+4.2
YSS				eS	S	16 23 03.8	+1.5
YSS				eSS	SS	16 28 28.1	+0.8
YSS				pmax	pmax		
	comp=Z,70nm,1.4s						
YSS				smax	smax		
	comp=N,20nm,1.1s						
YSS				smax	smax		
	comp=N,900nm,6.3s						
YSS	Yuzh-Sakhalins	83.06	334	P	P	16 12 45.6	+0.8
BKNI	Bangkinang	83.07	274	P	P	16 12 47.3	+1.5
BKNI	Bangkinang	83.07	274	P	P	16 12 44.6	-1.2
BKNI				IAMs_20	IAMs_20	16 51 03.0	
	comp=Z,3µm,20.0s						
MCCM	Marconi Confer	83.08	40	IAMs_20	IAMs_20	16 39 44.6	
	comp=Z,2µm,22.0s						
109C	Camp Elliot, M	83.11	47	P	P	16 12 46.6	+1.1
	baz=230						
KSRS	Korea Array	83.17	319	P	P	16 12 46.9	+1.1
	comp=Z,26nm,0.9s,baz=139,slow=5.3,SNR=24						
KSRS				LR	LR	16 47 02.4	
	comp=Z,252nm,20.8s,baz=136,slow=34						
OSI	Osito Audit: C	83.19	45	IAMs_20	IAMs_20	16 41 07.0	
	comp=Z,3µm,21.0s						
OSI	Osito Audit: C	83.19	45	P	P	16 12 47.3	+1.4
	baz=229						
KSAR	Wonju Array Be	83.19	319	P	P	16 12 45.2	-0.6
KSAR	Wonju Array Be	83.19	319	P	P	16 12 45.2	-0.6
HKPS	Hong Kong Po S	83.20	300	P	P	16 12 45.7	-0.5
HKPS				IAmb	IAmb	16 13 03.2	
	comp=Z,145nm,1.6s						
DECC	Green Verdugo	83.20	45	P	P	16 12 47.1	+1.1
	baz=230						
PASC	Pasadena Art C	83.24	46	P	P	16 12 46.3	+0.2
KS19	Wonju Array Si	83.24	319	P	P	16 12 45.4	-0.7
KS19				IAmb	IAmb	16 13 03.1	
	comp=Z,46nm,1.0s						
BAR	Barrett	83.25	48	P	P	16 12 46.7	+0.4
BAR				IAmb	IAmb	16 12 48.9	
	comp=Z,55nm,1.5s						
SSE	Sheshan	83.27	310	P	P	16 12 45.9	-0.5
SSE				S	S	16 23 03.8	-1.3
SSE				pmax	pmax		
	comp=Z,12nm,0.5s						
SSE				pmax	pmax		
	comp=Z,160nm,3.9s						
SSE				LR	LR		
	comp=Z,330nm,23.1s						
SSE				LR	LR		
	comp=Z,360nm,24.7s						
MWC	Mount Wilson	83.35	46	P	P	16 12 47.7	+0.7
MWC				pmax	pmax		
	comp=Z,32nm,1.1s						
MWC				MLR	MLR		
	comp=Z,3µm,21.0s						
MWC	Mount Wilson	83.35	46	P	P	16 12 47.7	+0.7
MWC				IAMs_20	IAMs_20	16 41 00.4	
	comp=Z,3µm,21.0s						
GO06	Curarrehue	83.42	131	P	P	16 12 48.4	+1.0
PLCA	Paso Flores	83.43	133	P	P	16 12 48.6	+1.2
	comp=Z,6.4nm,0.7s,baz=255,slow=5.5,SNR=27						
PLCA				LR	LR	16 41 04.5	
	comp=Z,1µm,21.7s,baz=280,slow=29						
PLCA	Paso Flores	83.43	133	P	P	16 12 48.3	+0.9
PLCA				IAmb	IAmb	16 13 09.2	
	comp=Z,37nm,1.1s						
ARVC	Arvin	83.45	44	P	P	16 12 48.5	+1.2
	baz=229						
MURC	Murrieta	83.50	47	P	P	16 12 48.6	+1.1
	baz=230,SNR=6.6						
PET	Petropavlovsk	83.51	345	eP	P	16 12 48.5	+1.5
PET				eS	S	16 23 05.8	-0.7
PET				eSS	SS	16 28 35.8	+2.2
PET				pmax	pmax		
	comp=Z,200nm,13.3s						
PET				MLR	MLR		
	comp=Z,800nm,20.0s						
MONP2	Monument Peak	83.55	48	P	P	16 12 49.2	+1.1
	baz=231,SNR=14						
HOPS	Hopland Field	83.56	39	P	P	16 12 49.3	+1.6
HOPS				IAmb	IAmb	16 12 50.6	
	comp=Z,60nm,1.1s						
HOPS				IAMs_20	IAMs_20	16 42 20.2	
	comp=Z,2µm,21.0s						
GDXM	Geysers	83.59	40	IAMs_20	IAMs_20	16 42 09.9	
	comp=Z,3µm,20.0s						
IKP	In-Ko-Pah, Jac	83.60	48	P	P	16 12 49.4	+1.2
	baz=231,SNR=14						
BFSC	Mount Baldy Ra	83.61	46	P	P	16 12 49.3	+1.0
	baz=230,SNR=12						
KCPM	Cahto Peak	83.76	39	P	P	16 12 49.4	+0.5
KCPM				IAmb	IAmb	16 12 52.3	
	comp=Z,47nm,1.0s						
VES	Vestal, Richgr	83.77	44	P	P	16 12 49.9	+1.1
	baz=229						
PEA0B	Petropavlovsk-	83.80	345	ceP	P	16 12 49.0	+0.4
PEA0B	Petropavlovsk-	83.80	345	P	P	16 12 48.1	-0.5
PETK	Petropavlovsk-	83.80	345	P	P	16 12 48.8	+0.2
	comp=Z,82nm,0.9s,baz=134,slow=5.8,SNR=52						
PETK				ScS	ScS	16 23 24.6	+2.5
	comp=Z,6.6nm,1.0s,baz=161,slow=6.3,SNR=3.6						
PETK				LR	LR	16 46 56.9	
	comp=Z,927nm,19.8s,baz=164,slow=33						
PETK	Petropavlovsk-	83.80	345	P	P	16 12 48.7	+0.1
EDW2	Edwards Air Fo	83.82	45	P	P	16 12 50.5	+1.3
	baz=230,SNR=23						
VOG	Valley Oaks Go	83.90	43	P	P	16 12 50.4	+0.9
	baz=229						
CNBA	Chernabura Isl	83.91	10	P	P	16 12 49.4	+0.3
CNBA				IAmb	IAmb	16 13 03.5	
	comp=Z,55nm,1.1s						
CNBA				IAMs_20	IAMs_20	16 41 13.7	
	comp=Z,3µm,22.0s						
PFO	Pinyon Flats O	83.98	47	⇓eP	P	16 12 51.3	+1.1
PFO				pmax	pmax		
	comp=Z,50nm,1.1s						
PFO	Pinyon Flats O	83.98	47	P	P	16 12 51.3	+1.1
	baz=231,SNR=14						
SWSC	Sam W. Stewart	83.99	48	P	P	16 12 51.4	+1.4
	baz=231,SNR=6.7						
SISI	Saibi	84.02	272	P	P	16 12 54.6	+3.9
ISA	Isabella, Lake	84.03	44	P	P	16 12 50.8	+0.5
ISA				pmax	pmax		
	comp=Z,57nm,1.2s						
ISA				MLR	MLR		
	comp=Z,3µm,22.0s						
ISA	Isabella, Lake	84.03	44	P	P	16 12 50.8	+0.5
ISA				IAmb	IAmb	16 12 53.1	
	comp=Z,57nm,1.1s						
ISA				IAMs_20	IAMs_20	16 40 48.1	
	comp=Z,3µm,22.0s						
ISA	Isabella, Lake	84.03	44	P	P	16 12 51.7	+1.4
	baz=229,SNR=27						
KMRM	Mail Ridge	84.06	38	IAMs_20	IAMs_20	16 40 50.1	
	comp=Z,3µm,22.0s						
BBRC	Big Bear Solar	84.10	46	P	P	16 12 52.2	+1.3
	baz=230						
TEY	Ternei	84.16	329	eP	P	16 12 50.9	+0.3
GZH	Guangzhou	84.26	300	P	P	16 12 50.3	-1.3
GZH				S	S	16 23 13.9	-1.4
GZH				pmax	pmax		
	comp=Z,440nm,4.9s						
LRMC	Laurel Mtn Rad	84.40	45	P	P	16 12 53.3	+1.1
	baz=230,SNR=18						
RRX	Edison Barstow	84.44	46	P	P	16 12 53.7	+1.4
	baz=230						
CMB	Columbia Colle	84.44	41	P	P	16 12 52.8	+0.5
CMB				pmax	pmax		
	comp=Z,47nm,1.2s						
CMB				MLR	MLR		
	comp=Z,3µm,21.0s						
CMB	Columbia Colle	84.44	41	P	P	16 12 52.8	+0.5
CMB				IAmb	IAmb	16 13 09.0	
	comp=Z,48nm,1.2s						
CMB				IAMs_20	IAMs_20	16 41 33.8	
	comp=Z,3µm,21.0s						
KHMM	Horse Mountain	84.51	38	P	P	16 12 53.7	+1.0
KHMM				IAmb	IAmb	16 13 16.8	
	comp=Z,60nm,1.1s						
BELC	Belle Mtn. Jos	84.52	47	P	P	16 12 54.3	+1.4
	baz=231,SNR=26						
BC3	Big Chuckawall	84.66	47	P	P	16 12 55.1	+1.5
	baz=231,SNR=15						
GLA	Glamis	84.69	48	P	P	16 12 54.8	+1.1
GLA				pmax	pmax		
	comp=Z,77nm,1.3s						
GLA				MLR	MLR		
	comp=Z,3µm,22.0s						
GLA	Glamis	84.69	48	P	P	16 12 54.8	+1.1
GLA				IAmb	IAmb	16 12 56.8	
	comp=Z,77nm,1.2s						
GLA	Glamis	84.69	48	P	P	16 12 55.4	+1.7
	baz=232,SNR=12						
AFDM	Forest Hills D	84.72	40	P	P	16 12 53.8	+0.2
AFDM				IAmb	IAmb	16 12 57.4	
	comp=Z,35nm,1.1s						
AFDM				IAMs_20	IAMs_20	16 42 14.0	
	comp=Z,2µm,21.0s						
CWC	Cottonwood Cre	84.77	44	P	P	16 12 55.5	+1.3
	baz=230						
QIZ	Qiongzhong	84.82	295	P	P	16 12 51.3	-3.3
QIZ				sP	pwP	16 13 07.3	+0.5
QIZ				S	S	16 23 18.6	-2.6
QIZ				SS	SS	16 28 58.0	+3.7
QIZ				pmax	pmax		
	comp=Z,280nm,3.9s						
QIZ				LR	LR		
	comp=Z,530nm,18.4s						
QIZ				LR	LR		
	comp=Z,660nm,28.4s						
ORV	Oroville	84.83	40	P	P	16 12 54.4	+0.2
ORV				pmax	pmax		
	comp=Z,41nm,1.1s						
ORV				MLR	MLR		
	comp=Z,1µm,21.0s						
ORV	Oroville	84.83	40	P	P	16 12 54.4	+0.2
ORV				IAmb	IAmb	16 13 17.8	
	comp=Z,41nm,1.1s						
HEC	Hector,Ludlow	84.83	46	P	P	16 12 55.6	+1.2
	baz=231,SNR=33						

GSC	Goldstone, Bar	84.83	45	P	P	16 12 55.8	+1.5
	baz=230						
KRMB	Red Mountain	84.87	37	P	P	16 12 55.2	+0.8
KRMB				IAmb	IAmb	16 13 11.7	
	comp=Z,81nm,1.4s						
MPMC	Manual Prospec	84.89	44	P	P	16 12 56.1	+1.3
	baz=230,SNR=55						
HSIG		84.93	53	P	P	16 12 55.3	+0.4
HSIG				IAmb	IAmb	16 12 57.1	
	comp=Z,79nm,1.1s						
MDPB	Devils Postpil	84.95	42	P	P	16 12 55.5	+0.4
WDC	Whiskeytown Da	84.95	38	P	P	16 12 55.3	+0.6
WDC				pmax	pmax		
	comp=Z,54nm,1.1s						
WDC				MLR	MLR		
	comp=Z,2µm,22.0s						
WDC	Whiskeytown Da	84.95	38	P	P	16 12 55.3	+0.6
WDC				IAmb	IAmb	16 12 57.4	
	comp=Z,54nm,1.1s						
WDC				IAMs_20	IAMs_20	16 41 42.0	
	comp=Z,2µm,22.0s						
MSHR	Mys Shultsa	84.99	324*ce*	P	P	16 12 55.9	+1.1
VLA	Vladivostok	85.00	325*ce*	P	P	16 12 55.4	+0.5
VLA				pmax	pmax		
	comp=Z,22nm,1.0s						
IPM	Ipoh	85.04	278	P	P	16 12 54.7	-1.2
IPM				IAmb	IAmb	16 12 59.9	
	comp=Z,68nm,1.2s						
IPM	Ipoh	85.04	278	P	P	16 12 56.0	+0.1
TIN	Tinemaha, Big	85.08	43	P	P	16 12 56.9	+1.3
	baz=229						
MLAC	Mammoth, Mammo	85.09	43	P	P	16 12 57.5	+1.7
	baz=229						
N02D	Trinity Center	85.14	38	P	P	16 12 57.4	+1.7
	baz=226,SNR=15						
IRM	Iron Mountain	85.17	47	P	P	16 12 57.6	+1.5
	baz=232,SNR=33						
GMRC	Granite Mounta	85.23	46	P	P	16 12 57.8	+1.3
	baz=231,SNR=19						
WAKR	Walker	85.31	42	P	P	16 12 57.6	+0.7
WAKR				IAmb	IAmb	16 13 17.1	
	comp=Z,85nm,1.4s						
PBSI	Pulau Batu	85.33	272	P	P	16 12 59.0	+1.7
Y12C	Blythe	85.33	48	P	P	16 12 57.2	+0.4
Y12C				IAmb	IAmb	16 12 59.8	
	comp=Z,43nm,1.2s						
Y12C				IAMs_20	IAMs_20	16 41 06.0	
	comp=Z,3µm,22.0s						
Y12C	Blythe	85.33	48	P	P	16 12 58.4	+1.6
	baz=232,SNR=5.4						
M02C	Callahan	85.35	38	P	P	16 12 58.7	+1.9
	baz=226,SNR=17						
214A	Organ Pipe Nat	85.38	50	P	P	16 12 57.4	+0.3
214A				IAmb	IAmb	16 13 00.1	
	comp=Z,40nm,1.1s						
214A				IAMs_20	IAMs_20	16 41 30.6	
	comp=Z,3µm,22.0s						
214A	Organ Pipe Nat	85.38	50	P	P	16 12 58.6	+1.5
	baz=233						
NJ2	Nanjing	85.43	310	*e*P	P	16 12 58.0	+0.7
NJ2				pP	pwP	16 13 08.0	-1.6
NJ2				SKS	SKSac	16 23 20.9	+0.5
NJ2				S	SKKSac	16 23 27.6	+0.4
NJ2				pmax	pmax		
	comp=Z,14nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,450nm,4.1s						
NJ2				LR	LR		
	comp=Z,740nm,24.6s						
NJ2				LR	LR		
	comp=Z,590nm,22.7s						
NJ2				LR	LR		
	comp=Z,1µm,24.5s						
TUQ	Turquoise Moun	85.47	46	P	P	16 12 59.2	+1.6
	baz=231						
L02E	Cave Junction	85.48	37	P	P	16 12 58.9	+1.5
	baz=226						
FURC	Furnace Creek,	85.54	45	P	P	16 12 59.0	+1.3
	baz=230,SNR=9.8						
SHOC	Shoshone, Teco	85.55	45	P	P	16 12 59.3	+1.4
	baz=231						
GRAC	Grapevine Rang	85.57	44	P	P	16 12 59.5	+1.6
	baz=230,SNR=8.8						
PNTR	Pine Nut	85.61	41	P	P	16 12 59.0	+0.7
YBH	Yreka Blue Hor	85.66	38	P	P	16 12 59.3	+0.9
YBH				pmax	pmax		
	comp=Z,31nm,1.1s						
YBH				MLR	MLR		
	comp=Z,1µm,21.0s						
YBH	Yreka Blue Hor	85.66	38	P	P	16 12 59.3	+0.9
YBH				IAmb	IAmb	16 13 02.1	
	comp=Z,31nm,1.1s						
BEKR	Beckworth	85.69	40	P	P	16 12 59.2	+0.6
BEKR				IAMs_20	IAMs_20	16 42 01.6	
	comp=Z,2µm,22.0s						
VCNR	Virginia City	85.71	41	P	P	16 12 59.5	+0.7
VCNR				IAmb	IAmb	16 13 16.3	
	comp=Z,36nm,1.0s						
USA0B	Ussuriysk Arra	85.73	326*c*	*i*P	P	16 12 59.0	+0.5
USA0B	Ussuriysk Arra	85.73	326	P	P	16 12 58.5	0.0
USRK	Ussuriysk Ar.	85.73	326	P	P	16 12 59.4	+0.9
	comp=Z,37nm,1.0s,baz=116,slow=4.4,SNR=58						
USRK				LR	LR	16 49 02.2	
	comp=Z,839nm,19.4s,baz=130,slow=34						
USRK	Ussuriysk Ar.	85.73	326	P	P	16 12 58.3	-0.2
YERR	Yerington	85.75	41	P	P	16 12 59.5	+0.5
YERR				IAmb	IAmb	16 13 02.2	
	comp=Z,32nm,0.9s						
KULM	Kulim	85.76	278	P	P	16 12 58.6	-0.8
KULM				IAMs_20	IAMs_20	16 55 51.0	
	comp=Z,2µm,19.0s						
KULM	Kulim	85.76	278	P	P	16 13 00.0	+0.6
K02D	Willamette Mer	85.83	36	P	P	16 13 00.9	+1.8
	baz=225,SNR=6.3						
NEE2	Needles Airpor	85.89	47	P	P	16 13 01.1	+1.5
	baz=232						
PDMCI	Parker Dam,Lak	85.92	48	P	P	16 13 01.3	+1.6
	baz=232,SNR=8.1						
RYN	Ryan	85.93	42	P	P	16 13 00.4	+0.6
RYN				IAmb	IAmb	16 13 03.8	
	comp=Z,39nm,1.1s						
NVAR	Mina Array Bea	85.93	42	P	P	16 13 00.9	+1.0
	comp=Z,41nm,0.9s,baz=222,slow=7.4,SNR=120						
NVAR				PKKPbc	PKKPbc	16 31 03.0	+1.4
	comp=Z,0.6nm,0.7s,baz=115,slow=2.0,SNR=3.5						
NVAR				PKPPKP	P'P'df	16 39 10.3	+6.3
	comp=Z,2.1nm,1.1s,baz=176,slow=1.0,SNR=7.4						
NVAR				LR	LR	16 42 57.8	
	comp=Z,4µm,21.6s,baz=214,slow=30						
NVAR	Mina Array Bea	85.93	42	P	P	16 13 00.2	+0.2
J01E	Myrtle Point	86.02	36	P	P	16 13 01.5	+1.5
	baz=225						
NV11	Mina Array Sit	86.02	42	P	P	16 13 00.6	+0.3
NV11				IAmb	IAmb	16 13 20.2	
	comp=Z,66nm,1.3s						
RPSI	Rantau Prapat	86.05	275	P	P	16 12 59.3	-1.5
RPSI				IAMs_20	IAMs_20	16 52 53.8	
	comp=Z,3µm,20.0s						
PSI	Prapat	86.10	275	P	P	16 12 59.3	-1.9
PSI				pmax	pmax		
	comp=Z,164nm,1.4s						
HUMO	Hull Mountain	86.14	37	P	P	16 13 01.1	+0.5
HUMO				IAmb	IAmb	16 13 24.8	
	comp=Z,41nm,1.1s						
PAHR	Pah Rah Range	86.14	41	P	P	16 13 00.5	-0.4
PAHR				IAmb	IAmb	16 13 20.6	
	comp=Z,41nm,1.2s						
M04C	Macdoel	86.17	38	P	P	16 13 01.9	+1.0
	baz=227,SNR=6.3						
L04D	Klamath Falls	86.21	37	P	P	16 13 02.1	+1.0
	baz=226,SNR=7.4						
TPNV	Topopah Spring	86.23	44	P	P	16 13 01.4	0.0
TPNV				pmax	pmax		
	comp=Z,82nm,1.3s						
TPNV				MLR	MLR		
	comp=Z,3µm,22.0s						
TPNV	Topopah Spring	86.23	44	P	P	16 13 01.4	0.0
TPNV				IAmb	IAmb	16 13 21.5	
	comp=Z,82nm,1.3s						
TPNV				IAMs_20	IAMs_20	16 42 33.4	
	comp=Z,3µm,22.0s						
TPNV	Topopah Spring	86.23	44	P	P	16 13 02.4	+1.0
	baz=231						
TYV	Tymovskoe	86.30	336	*e*P	P	16 13 02.3	+1.1
TYV				pmax	pmax		
	comp=Z,300nm,2.8s						
TYV				pmax	pmax		
	comp=Z,46nm,0.8s						
Y14A	Wickenburg	86.44	48	P	P	16 13 03.6	+1.2
Y14A				IAmb	IAmb	16 13 05.3	
	comp=Z,59nm,1.1s						
KVN	Kaiserville	86.46	42	P	P	16 13 02.6	+0.1
KVN				pmax	pmax		
	comp=Z,41nm,1.0s						
KVN				MLR	MLR		
	comp=Z,4µm,21.0s						
KVN	Kaiserville	86.46	42	P	P	16 13 02.6	+0.1
KVN				IAmb	IAmb	16 13 05.5	
	comp=Z,41nm,1.0s						
UBPT	Khong Chiam	86.49	289	P	P	16 13 01.1	-1.8
UBPT				IAmb	IAmb	16 13 24.1	
	comp=Z,40nm,1.0s						
W13A	Hualapai Mount	86.57	47	P	P	16 13 03.9	+0.7
W13A				IAmb	IAmb	16 13 06.2	
	comp=Z,32nm,1.1s						
W13A				IAMs_20	IAMs_20	16 42 04.9	
	comp=Z,3µm,22.0s						
SHPR	Sheep Range	86.63	45	P	P	16 13 04.2	+0.9
SHPR				IAmb	IAmb	16 13 24.6	
	comp=Z,42nm,1.2s						
SHPR				IAMs_20	IAMs_20	16 49 58.2	
	comp=Z,2µm,18.0s						
I03D	Drain, OR	86.69	36	P	P	16 13 04.8	+1.5
	baz=226						
I02D	Swisshome	86.72	35	P	P	16 13 04.3	+0.9
	baz=225						
PAYG	Puerto Ayora	86.77	89	P	P	16 13 05.2	+0.8
PAYG	Puerto Ayora	86.77	89	IAMs_20	IAMs_20	16 41 49.1	
	comp=Z,3µm,22.0s						
K04D	Chiloquin, OR	86.79	37	P	P	16 13 05.2	+1.3
	baz=227						
TUC	Tucson	86.97	51	P	P	16 13 06.1	+1.1
TUC				pmax	pmax		
	comp=Z,81nm,1.2s						
TUC				MLR	MLR		
	comp=Z,3µm,22.0s						
TUC	Tucson	86.97	51	P	P	16 13 06.1	+1.1
TUC	Tucson	86.97	51	IAMs_20	IAMs_20	16 42 29.8	
	comp=Z,3µm,22.0s						
TUC	Tucson	86.97	51	P	P	16 13 07.0	+2.0
	baz=234						
J04D	Umpqua Nationa	87.02	37	P	P	16 13 06.2	+1.0
	baz=226,SNR=11						
MOD	Modoc Plateau	87.09	39	P	P	16 13 05.2	-0.3
MOD				IAmb	IAmb	16 13 21.7	
	comp=Z,70nm,1.6s						
MDJ	Mudanjiang	87.23	325	P	P	16 13 06.9	+1.0
MDJ				pmax	pmax		
	comp=Z,41nm,1.0s						
MDJ				LR	LR		
	comp=Z,870nm,20.2s						
MDJ				LR	LR		
	comp=Z,460nm,20.2s						
MDJ				LR	LR		
	comp=Z,1µm,16.6s						
MDJ	Mudanjiang	87.23	325	P	P	16 13 05.9	+0.1
MDJ				IAmb	IAmb	16 13 08.8	
	comp=Z,48nm,0.9s						
I04A	Tendick Farm,	87.25	36	P	P	16 13 07.3	+1.3
	baz=226						
PEL	Peldehue	87.32	126	P	P	16 13 06.6	-0.3
PEL				pmax	pmax		
	comp=Z,37nm,1.0s						
PEL				MLR	MLR		
	comp=Z,2µm,22.0s						
PEL	Peldehue	87.32	126	P	P	16 13 06.6	-0.3
PEL				IAmb	IAmb	16 13 48.5	
	comp=Z,37nm,1.0s						
PEL				IAMs_20	IAMs_20	16 42 15.9	
	comp=Z,2µm,22.0s						
319A	Douglas	87.47	52	P	P	16 13 06.8	-0.7
319A				IAmb	IAmb	16 13 10.7	
	comp=Z,66nm,1.1s						
319A				IAMs_20	IAMs_20	16 50 04.3	
	comp=Z,2µm,18.0s						
J05D	Fort Rock, OR	87.52	37	P	P	16 13 08.9	+1.4
	baz=227,SNR=14						
R11A	Troy Canyon, C	87.52	44	P	P	16 13 07.4	-0.3
R11A				IAMs_20	IAMs_20	16 43 35.5	
	comp=Z,3µm,22.0s						
R11A	Troy Canyon, C	87.52	44	P	P	16 13 08.6	+0.9
	baz=231,SNR=18						
H04D	Lebanon	87.58	36	P	P	16 13 09.0	+1.5
	baz=226						
HPIG		87.61	58	P	P	16 13 08.3	-0.1
WHN	Wuhan	87.68	306	P	P	16 13 09.3	+1.0
WHN				S	S	16 23 52.3	+3.8
WHN				pmax	pmax		
	comp=Z,61nm,1.1s						
WHN				pmax	pmax		
	comp=Z,1µm,9.0s						
WHN				LR	LR		
	comp=Z,2µm,21.3s						
WHN				LR	LR		
	comp=Z,1µm,15.1s						
WHN				LR	LR		
	comp=Z,2µm,22.5s						
X16A	Lo Mia Camp, P	87.77	49	P	P	16 13 09.4	+0.4
X16A				IAmb	IAmb	16 13 12.2	
	comp=Z,49nm,1.1s						
G03D	McMinnville, O	87.80	35	P	P	16 13 10.1	+1.5
	baz=226						
TPTI		87.85	275	P	P	16 13 11.1	+1.5
DL2	Dalian	87.86	317	P	P	16 13 10.0	+1.0
DL2				S	S	16 23 49.3	-0.7
DL2				pmax	pmax		
	comp=Z,41nm,1.3s						
DL2				pmax	pmax		
	comp=Z,240nm,4.5s						
DL2				LR	LR		
	comp=Z,530nm,21.2s						
DL2				LR	LR		
	comp=Z,450nm,18.2s						
DL2				LR	LR		
	comp=Z,920nm,26.7s						
H04A	Detroit Lake	87.98	36	P	P	16 13 09.8	+0.3
H04A				IAmb	IAmb	16 13 25.5	
	comp=Z,56nm,1.5s						
PINE	Pine Mountain	88.02	37	P	P	16 13 10.4	+0.4
PINE				IAmb	IAmb	16 13 14.1	
	comp=Z,27nm,0.9s						
LCMT	Little Creek M	88.15	46	P	P	16 13 10.6	-0.1
I05D	Terrebonne, OR	88.18	36	P	P	16 13 11.8	+1.3
	baz=227,SNR=5.3						
WVOR	Wild Horse Val	88.37	39	P	P	16 13 11.8	+0.3
WVOR				pmax	pmax		
	comp=Z,28nm,1.2s						
WVOR				MLR	MLR		
	comp=Z,2µm,22.0s						
WVOR	Wild Horse Val	88.37	39	P	P	16 13 11.8	+0.3
WVOR				IAmb	IAmb	16 13 41.1	
	comp=Z,28nm,1.1s						
WVOR				IAMs_20	IAMs_20	16 43 31.4	
	comp=Z,2µm,22.0s						
CCUT	Cedar City	88.40	45	P	P	16 13 13.0	+1.0
U15A	North Rim	88.41	47	P	P	16 13 13.2	+1.1
U15A				IAmb	IAmb	16 13 15.2	
	comp=Z,57nm,1.1s						
U15A				IAMs_20	IAMs_20	16 43 47.4	
	comp=Z,3µm,21.0s						
KNB	Kanab	88.42	46	P	P	16 13 12.9	+0.9
KNB				pmax	pmax		
	comp=Z,107nm,1.4s						
KNB	Kanab	88.42	46	P	P	16 13 12.9	+0.9
WUAZ	Wupatki	88.46	48	P	P	16 13 13.1	+0.9
WUAZ	Wupatki	88.46	48	P	P	16 13 13.9	+1.7
	baz=234						
F04D	Rainier, OR	88.54	34	P	P	16 13 13.8	+1.8
	baz=226						
SNY	Shenyang	88.59	320	⇑P	P	16 13 11.6	-0.8
SNY				pmax	pmax		
	comp=Z,7.0nm,0.4s						
SNY				pmax	pmax		
	comp=Z,440nm,4.9s						
SNY				LR	LR		
	comp=Z,720nm,17.6s						
SNY				LR	LR		
	comp=Z,390nm,10.0s						
SNY				LR	LR		
	comp=Z,720nm,20.6s						
E03A	Lebam	88.59	34	P	P	16 13 13.9	+1.7
SZCU	Shurtz Canyon	88.60	46	P	P	16 13 14.2	+1.3
GRNR	Gornyy	88.63	333⇑	*i*P	P	16 13 13.9	+1.5
GRNR				*e*S	S	16 24 00.5	+3.7
GRNR				pmax	pmax		
	comp=Z,60nm,0.9s						
GRNR				smax	smax		
	comp=E,7.0nm,1.4s						
GRNR				MLR	MLR		
	comp=Z,490nm,18.0s						
PSUT	Pine Spring	88.70	44	P	P	16 13 13.6	+0.3
F04A	Amboy	88.73	35	P	P	16 13 13.6	+0.6
UNM	Universidad Na	88.73	67	IAMs_20	IAMs_20	16 42 45.3	
	comp=Z,3µm,22.0s						
GO04	Tololo Observa	88.80	124	IAMs_20	IAMs_20	16 43 15.1	
	comp=Z,2µm,21.0s						
G05D	Wamic, OR	88.81	36	P	P	16 13 14.5	+1.1
	baz=227						
X18A	Snowflake	88.83	49	P	P	16 13 14.6	+0.6
X18A				IAmb	IAmb	16 13 17.2	
	comp=Z,41nm,1.1s						
X18A				IAMs_20	IAMs_20	16 43 36.9	
	comp=Z,3µm,22.0s						
CN2	Changchun	88.84	322	*e*P	P	16 13 14.0	+0.4
CN2				*e*S	S	16 23 55.3	-3.8
CN2				pmax	pmax		
	comp=Z,60nm,1.3s						
CN2				pmax	pmax		
	comp=Z,280nm,3.0s						
CN2				LR	LR		
	comp=Z,460nm,21.0s						
CN2				LR	LR		
	comp=Z,480nm,21.0s						
CN2				LR	LR		
	comp=Z,820nm,22.0s						
I07A	Izee	88.98	37	P	P	16 13 14.2	-0.2
I07A				IAmb	IAmb	16 13 31.7	
	comp=Z,35nm,1.1s						
NLWA	Neilton Lookou	89.04	33	IAMs_20	IAMs_20	16 44 31.4	
	comp=Z,2µm,21.0s						
TIA	Tai'an	89.06	312	P	P	16 13 15.6	+0.8
TIA				SKS	SKSac	16 23 40.8	-1.7
TIA				S	S	16 23 59.3	-2.1
TIA				sS	sS	16 24 15.8	+0.3
TIA				pmax	pmax		
	comp=Z,61nm,1.4s						
TIA				pmax	pmax		
	comp=Z,440nm,4.7s						
TIA				LR	LR		
	comp=Z,410nm,23.0s						
TIA				LR	LR		
	comp=Z,500nm,26.5s						
TIA				LR	LR		
	comp=Z,1µm,25.7s						
J08A	Circle Bar Ran	89.06	38	P	P	16 13 15.2	+0.5
J08A				IAmb	IAmb	16 13 32.0	
	comp=Z,49nm,1.3s						
J08A				IAMs_20	IAMs_20	16 45 50.6	
	comp=Z,2µm,20.0s						
E04D	Cinebar	89.09	34	P	P	16 13 16.2	+1.6
	baz=226						
G06A	Carlson Farm,	89.16	36	P	P	16 13 15.6	+0.5
G06A				IAmb	IAmb	16 13 32.3	
	comp=Z,39nm,1.1s						
121A	Cookes Peak, D	89.17	52	P	P	16 13 16.4	+0.7
121A				IAmb	IAmb	16 13 34.3	
	comp=Z,40nm,1.2s						
121A				IAMs_20	IAMs_20	16 51 01.3	
	comp=Z,2µm,18.0s						
121A	Cookes Peak, D	89.17	52	P	P	16 13 17.4	+1.8
	baz=236						
ELK	Elko	89.23	42	P	P	16 13 15.9	+0.1
ELK				pmax	pmax		
	comp=Z,13nm,1.1s						
ELK				MLR	MLR		
	comp=Z,3µm,20.0s						
ELK	Elko	89.23	42	P	P	16 13 15.9	+0.1
W18A	Petrified Fore	89.31	49	P	P	16 13 17.2	+0.9
W18A	Petrified Fore	89.31	49	P	P	16 13 17.8	+1.6
	baz=235						
D04E	Lakebay	89.42	34	P	P	16 13 19.1	+2.9
	baz=226						
MTPU	Mount Pierson	89.44	46	P	P	16 13 18.1	+1.1
KLR	Kul'dur	89.49	329*c*	*i*P	P	16 13 17.1	+0.6
KLR				pmax	pmax		
	comp=Z,53nm,1.0s						
KLR				MLR	MLR		
	comp=Z,906nm,21.0s						
D03D	Eldon	89.51	33	P	P	16 13 18.4	+1.8
	baz=226						
LON	Longmire	89.60	34	P	P	16 13 17.4	+0.3
LON				pmax	pmax		
	comp=Z,19nm,1.0s						
LON				MLR	MLR		
	comp=Z,2µm,22.0s						
LON	Longmire	89.60	34	P	P	16 13 17.4	+0.3
TCRU	Three Creeks R	89.62	45	P	P	16 13 18.5	+0.8
EPT	El Paso	89.65	53	IAMs_20	IAMs_20	16 49 31.1	
	comp=Z,2µm,18.0s						
MSU	Marysvale	89.73	45	P	P	16 13 18.6	+0.4
MSU	Marysvale	89.73	45	P	P	16 13 18.6	+0.4
D05A	Enumclaw	89.81	34	P	P	16 13 18.2	+0.2
CNPM	China Poot	89.84	13	IAMs_20	IAMs_20	16 48 42.5	
	comp=Z,2µm,21.0s						
F07A	Phinny Hill Vi	89.97	36	P	P	16 13 19.5	+0.7
F07A				IAmb	IAmb	16 13 42.3	
	comp=Z,31nm,1.0s						
G08A	Pilot Rock	90.08	37	P	P	16 13 20.2	+0.7
G08A				IAmb	IAmb	16 13 22.8	
	comp=Z,48nm,1.0s						
BRLK	Bradley Lake	90.13	13	P	P	16 13 19.8	+0.5
BRLK				IAMs_20	IAMs_20	16 49 01.7	
	comp=Z,2µm,19.0s						
DUG	Dugway, Tooele	90.35	44	P	P	16 13 20.6	-0.3
DUG				pmax	pmax		
	comp=Z,31nm,1.6s						
DUG				MLR	MLR		
	comp=Z,3µm,22.0s						
DUG	Dugway, Tooele	90.35	44	P	P	16 13 20.6	-0.3
DUG				IAMs_20	IAMs_20	16 45 17.5	
	comp=Z,3µm,22.0s						
DUG	Dugway, Tooele	90.35	44	P	P	16 13 22.0	+1.1
	baz=233						
TX31	Lajitas Ar. Si	90.38	57	P	P	16 13 21.6	+0.3
TX31				IAmb	IAmb	16 13 24.0	
	comp=Z,58nm,1.2s						
TX32	Lajitas Array	90.38	57	P	P	16 13 21.5	+0.2
TX32				IAmb	IAmb	16 13 23.9	
	comp=Z,59nm,1.2s						
TXAR	Lajitas Array	90.38	57	P	P	16 13 22.4	+1.1
	comp=Z,25nm,1.1s,baz=212,slow=6.8,SNR=54						
TXAR				PKKPbc	PKKPbc	16 30 52.0	+2.0
	comp=Z,1.4nm,1.0s,baz=141,slow=4.5,SNR=3.9						
TXAR				LR	LR	16 45 03.4	
	comp=Z,900nm,21.9s,baz=0.0,slow=30						
TXAR	Lajitas Array	90.38	57	P	P	16 13 21.8	+0.5
TXAR	Lajitas Array	90.38	57	P	P	16 13 21.8	+0.5
MNTX	Cornudas Mount	90.41	54	P	P	16 13 21.5	+0.3
MNTX				IAmb	IAmb	16 13 23.7	
	comp=Z,39nm,1.2s						
MNTX	Cornudas Mount	90.41	54	P	P	16 13 22.4	+1.2
	baz=237						
RSO	Redoubt South	90.43	12	P	P	16 13 19.6	-1.2
E07A	Sunnyside	90.45	35	P	P	16 13 21.2	+0.2
E07A				IAmb	IAmb	16 13 24.2	
	comp=Z,44nm,0.8s						
E07A				IAMs_20	IAMs_20	16 44 51.4	
	comp=Z,2µm,22.0s						
B05A	Bryant	90.50	33	P	P	16 13 22.6	+1.4
	baz=226						
HAWA	Hanford	90.51	36	P	P	16 13 21.7	+0.4
HAWA				IAmb	IAmb	16 13 23.8	
	comp=Z,42nm,1.1s						
HAWA				IAMs_20	IAMs_20	16 44 17.9	
	comp=Z,2µm,22.0s						
LTY	Liberty	90.51	35	P	P	16 13 21.6	+0.2
LTY				IAmb	IAmb	16 14 10.7	
	comp=Z,38nm,1.4s						
A04D	Lummi Island	90.53	33	P	P	16 13 23.0	+1.7
	baz=226						
MFID	Camas Ranch	90.57	40	P	P	16 13 22.2	+0.4
MFID				IAmb	IAmb	16 13 38.9	
	comp=Z,39nm,1.1s						
Q16A	Castle Valley	90.60	45	P	P	16 13 22.4	+0.2
Y22D	IRIS PASSCAL I	90.63	51	IAMs_20	IAMs_20	16 44 57.9	
	comp=Z,2µm,22.0s						
Y22D	IRIS PASSCAL I	90.63	51	P	P	16 13 24.2	+1.8
	baz=236						

NLU	**North Lily Min**	**90.66**	**44**	P	**P**	**16 13 22.7**	**+0.2**
BGU	**Big Grassy Mou**	**90.66**	**43**	P	**P**	**16 13 22.8**	**+0.4**
BMO	**Blue Mountains**	**90.68**	**38**	P	**P**	**16 13 22.4**	**+0.1**
BMO				pmax	pmax		
	comp=Z,34nm,1.6s						
BMO				MLR	MLR		
	comp=Z,1µm,18.0s						
BMO	**Blue Mountains**	**90.68**	**38**	P	**P**	**16 13 22.4**	**+0.1**
SLVN	**Son La**	**90.79**	**294**	P	**P**	**16 13 23.2**	**-0.1**
SLVN				IAmb	IAmb	16 13 45.2	
	comp=Z,52nm,1.2s						
TMUT	**Trail Mountain**	**90.80**	**45**	P	**P**	**16 13 23.9**	**+0.6**
E08A	**Dider Farm, El**	**90.82**	**36**	P	**P**	**16 13 23.4**	**+0.7**
E08A				IAmb	IAmb	16 13 39.8	
	comp=Z,53nm,1.4s						
PBKT	**Sadao Pong**	**90.89**	**288**	P	**P**	**16 13 24.4**	**+0.7**
MPU	**Maple Canyon**	**90.97**	**44**	P	**P**	**16 13 23.2**	**-0.6**
B06A	**Marblemount**	**90.97**	**33**	P	**P**	**16 13 24.1**	**+0.7**
B06A				IAmb	IAmb	16 13 35.2	
	comp=Z,38nm,1.2s						
ENH	**Enshi**	**91.04**	**304**	P	**P**	**16 13 24.0**	**-0.3**
SRU	**San Rafael Swe**	**91.12**	**46**	P	**P**	**16 13 24.7**	**+0.1**
SRU				pmax	pmax		
	comp=Z,33nm,1.2s						
SRU	**San Rafael Swe**	**91.12**	**46**	P	**P**	**16 13 24.7**	**+0.1**
GYA	**Guiyang**	**91.18**	**299⇑**	*i*P	**P**	**16 13 25.8**	**+0.7**
GYA				pP	pwP	16 13 34.1	-3.3
GYA				PP	**PP**	**16 17 00.3**	**-2.3**
GYA				SKS	**SKSac**	**16 23 53.5**	**-2.1**
GYA				S	**SKKSac**	**16 24 14.6**	**+3.7**
GYA				sS	pS	16 24 30.4	-2.1
GYA				pmax	pmax		
	comp=Z,40nm,1.2s						
GYA				pmax	pmax		
	comp=Z,260nm,5.5s						
GYA				LR	LR		
	comp=Z,530nm,19.7s						
GYA				LR	LR		
	comp=Z,490nm,18.2s						
GYA				LR	LR		
	comp=Z,520nm,19.9s						
P17A	**Butcher Ranch,**	**91.20**	**45**	P	**P**	**16 13 24.9**	**0.0**
SPUT	**South Promonto**	**91.24**	**43**	P	**P**	**16 13 25.5**	**+0.4**
D08A	**Wollman Farm,**	**91.27**	**35**	P	**P**	**16 13 25.6**	**+0.7**
D08A				IAmb	IAmb	16 13 27.7	
	comp=Z,36nm,0.9s						
D08A				IAMs_20	IAMs_20	16 45 15.7	
	comp=Z,2µm,22.0s						
CTU	**Camp Tracy**	**91.30**	**44**	P	**P**	**16 13 26.0**	**+0.6**
MA2	**Magadan**	**91.30**	**344***c*	*i*P	**P**	**16 13 24.4**	**-0.3**
MA2				pmax	pmax		
	comp=Z,42nm,1.2s						
MA2	**Magadan**	**91.30**	**344**	P	**P**	**16 13 23.9**	**-0.8**
MA2				IAmb	IAmb	16 13 27.6	
	comp=Z,30nm,1.0s						
E09A	**Wood Farm, Sta**	**91.31**	**36**	P	**P**	**16 13 25.5**	**+0.5**
E09A				IAmb	IAmb	16 13 27.5	
	comp=Z,41nm,0.9s						
MVCO	**Mesa Verde**	**91.33**	**48**	P	**P**	**16 13 25.1**	**-0.6**
MVCO				IAmb	IAmb	16 13 56.1	
	comp=Z,25nm,1.1s						
MVCO	**Mesa Verde**	**91.33**	**48**	P	**P**	**16 13 26.6**	**+0.9**
	baz=235						
HVU	**Hansel Valley**	**91.33**	**42**	P	**P**	**16 13 25.9**	**+0.4**
HVU				pmax	pmax		
	comp=Z,61nm,1.3s						
HVU	**Hansel Valley**	**91.33**	**42**	P	**P**	**16 13 25.9**	**+0.4**
JLU	**Jordanelle**	**91.43**	**44**	P	**P**	**16 13 25.8**	**-0.3**
ANMO	**Albuquerque**	**91.43**	**51**	P	**P**	**16 13 26.7**	**+0.5**
ANMO				pmax	pmax		
	comp=Z,33nm,1.2s						
ANMO				MLR	MLR		
	comp=Z,3µm,22.0s						
ANMO	**Albuquerque**	**91.43**	**51**	P	**P**	**16 13 26.7**	**+0.5**
ANMO				IAmb	IAmb	16 13 28.7	
	comp=Z,33nm,1.1s						
ANMO	**Albuquerque**	**91.43**	**51**	IAMs_20	IAMs_20	16 45 26.0	
	comp=Z,3µm,22.0s						
ANMO	**Albuquerque**	**91.43**	**51**	P	**P**	**16 13 27.4**	**+1.2**
	baz=237						
PV05	**Paradox Valley**	**91.43**	**47**	P	**P**	**16 13 27.5**	**+1.4**
PV05				IAmb	IAmb	16 13 43.9	
	comp=Z,34nm,1.1s						
PV05				IAMs_20	IAMs_20	16 45 28.9	
	comp=Z,3µm,22.0s						
F10A	**Beach Ranch, E**	**91.44**	**37**	P	**P**	**16 13 25.6**	**-0.2**
RC01	**Rabbit Creek A**	**91.58**	**13**	P	**P**	**16 13 26.3**	**+0.4**
HIN	**Hinchinbrook I**	**91.62**	**15**	IAMs_20	IAMs_20	16 46 52.8	
	comp=Z,2µm,22.0s						
PV17	**East Wray Mesa**	**91.64**	**47**	P	**P**	**16 13 27.4**	**+0.3**
PV17				IAmb	IAmb	16 13 30.6	
	comp=Z,26nm,1.1s						
PV19	**Morning Glory**	**91.64**	**47**	P	**P**	**16 13 27.3**	**+0.2**
PV19				IAmb	IAmb	16 14 07.0	
	comp=Z,29nm,1.3s						
PV19				IAMs_20	IAMs_20	16 45 31.1	
	comp=Z,3µm,22.0s						
PV10	**Paradox Valley**	**91.64**	**47**	P	**P**	**16 13 27.1**	**0.0**
PV10				IAmb	IAmb	16 13 45.3	
	comp=Z,28nm,1.0s						
PV14	**Lion Creek, Pa**	**91.65**	**47**	P	**P**	**16 13 26.4**	**-0.8**
PV14				IAmb	IAmb	16 13 46.8	
	comp=Z,35nm,1.2s						
PV18	**Skein Mesa, Pa**	**91.65**	**47**	P	**P**	**16 13 27.3**	**+0.2**
PV18				IAmb	IAmb	16 13 30.6	
	comp=Z,23nm,1.1s						
PV18				IAMs_20	IAMs_20	16 45 53.4	
	comp=Z,3µm,22.0s						
PV09	**Paradox Valley**	**91.65**	**47**	P	**P**	**16 13 27.1**	**-0.2**
PV13	**Radium Mtn., P**	**91.66**	**47**	P	**P**	**16 13 27.4**	**+0.3**
PV13				IAmb	IAmb	16 13 31.3	
	comp=Z,27nm,1.1s						
PV13				IAMs_20	IAMs_20	16 45 42.6	
	comp=Z,3µm,21.0s						
PV20	**West Nyswonger**	**91.67**	**47**	P	**P**	**16 13 27.9**	**+0.7**
PV20				IAmb	IAmb	16 13 46.0	
	comp=Z,22nm,1.1s						
PV16	**Nyswonger Mesa**	**91.69**	**47**	P	**P**	**16 13 27.7**	**+0.4**
PV16				IAmb	IAmb	16 13 36.4	
	comp=Z,22nm,1.2s						
PV16				IAMs_20	IAMs_20	16 45 21.3	
	comp=Z,2µm,22.0s						
PV03	**Paradox Valley**	**91.70**	**47**	P	**P**	**16 13 27.0**	**-0.3**
PV03				IAmb	IAmb	16 13 57.0	
	comp=Z,27nm,1.3s						
PV03				IAMs_20	IAMs_20	16 45 42.6	
	comp=Z,3µm,22.0s						
PV23	**Carpenter Ridg**	**91.70**	**47**	P	**P**	**16 13 27.2**	**-0.2**
PV23				IAmb	IAmb	16 13 47.8	
	comp=Z,23nm,1.1s						
PV23				IAMs_20	IAMs_20	16 53 22.7	
	comp=Z,3µm,21.0s						
PV11	**David Mesa, Pa**	**91.71**	**47**	P	**P**	**16 13 27.6**	**+0.2**
PV11				IAmb	IAmb	16 13 53.1	
	comp=Z,19nm,0.9s						
SUA	**Susitna One**	**91.73**	**12**	P	**P**	**16 13 26.9**	**+0.2**
SUA				IAmb	IAmb	16 13 42.2	
	comp=Z,26nm,0.8s						
SUA				IAMs_20	IAMs_20	16 49 57.3	
	comp=Z,2µm,20.0s						
PV02	**Paradox Valley**	**91.74**	**47**	P	**P**	**16 13 27.9**	**+0.3**
PV02				IAmb	IAmb	16 13 44.6	
	comp=Z,31nm,1.2s						
PV02				IAMs_20	IAMs_20	16 44 27.8	
	comp=Z,2µm,20.0s						
TCUT	**Toone Canyon**	**91.76**	**43**	P	**P**	**16 13 27.7**	**+0.2**
PV12	**Saucer Basin,**	**91.76**	**47**	P	**P**	**16 13 28.0**	**+0.3**
PV22	**Blue Mesa, Par**	**91.90**	**47**	P	**P**	**16 13 28.2**	**0.0**
BJT	**Baijiatuau**	**91.90**	**315**	P	**P**	**16 13 27.9**	**0.0**
BJT				pmax	pmax		
	comp=Z,34nm,0.8s						
BJT				MLR	MLR		
	comp=Z,400nm,20.0s						
BJT	**Baijiatuau**	**91.90**	**315**	P	**P**	**16 13 27.9**	**0.0**
BJT				IAmb	IAmb	16 13 35.6	
	comp=Z,34nm,0.8s						
BJI	**Beijing**	**91.91**	**315**	P	**P**	**16 13 28.6**	**+0.7**
BJI				pP	**sP**	**16 13 36.5**	**-2.8**
BJI				sP	**pwP**	**16 13 41.5**	**+1.3**
BJI				SKS	**SKSac**	**16 23 55.8**	**-2.9**
BJI				S	**S**	**16 24 28.3**	**+0.9**
BJI				pmax	pmax		
	comp=Z,24nm,1.3s						
BJI				LR	LR		
	comp=Z,410nm,25.5s						
BJI				LR	LR		
	comp=Z,400nm,27.9s						
BJI				LR	LR		
	comp=Z,960nm,32.8s						
B08A	**Colville Reser**	**91.92**	**34**	P	**P**	**16 13 28.3**	**+0.4**
GLI	**Glacier Island**	**91.93**	**14**	P	**P**	**16 13 27.9**	**+0.3**
PV07	**Paradox Valley**	**91.93**	**47**	P	**P**	**16 13 28.4**	**0.0**
PV07				IAmb	IAmb	16 13 45.6	
	comp=Z,25nm,1.1s						
PV07				IAMs_20	IAMs_20	16 45 51.6	
	comp=Z,3µm,22.0s						
FID	**Port Fidalgo**	**91.95**	**14**	IAMs_20	IAMs_20	16 47 12.1	
	comp=Z,2µm,22.0s						
HWUT	**Hardware Ranch**	**91.95**	**43**	P	**P**	**16 13 28.8**	**+0.4**
HWUT				IAmb	IAmb	16 15 01.7	
	comp=Z,23nm,0.6s						
PV15	**Paradox Valley**	**91.98**	**47**	P	**P**	**16 13 28.9**	**+0.2**
PV15				IAmb	IAmb	16 13 31.5	
	comp=Z,17nm,0.9s						
RAGM	**Ragged Mountai**	**92.03**	**15**	IAMs_20	IAMs_20	16 47 11.7	
	comp=Z,2µm,21.0s						
C09A	**Chrisman Ranch**	**92.09**	**35**	P	**P**	**16 13 28.5**	**-0.1**
C09A				IAMs_20	IAMs_20	16 45 39.6	
	comp=Z,2µm,22.0s						
KNK	**Knik Glacier**	**92.13**	**13**	P	**P**	**16 13 28.8**	**+0.3**
KNK				IAmb	IAmb	16 13 44.5	
	comp=Z,36nm,1.0s						
KNK				IAMs_20	IAMs_20	16 50 23.0	
	comp=Z,2µm,22.0s						
WRAK	**Wrangell Islan**	**92.28**	**23**	P	**P**	**16 13 29.9**	**+0.7**
WRAK				IAmb	IAmb	16 13 44.0	
	comp=Z,45nm,1.1s						
GHO	**Glory Hole Cre**	**92.36**	**13**	P	**P**	**16 13 30.1**	**+0.5**
GO02	**Mina Guanaco**	**92.37**	**120**	P	**P**	**16 13 31.8**	**+0.8**
SML	**Sawmill**	**92.51**	**13**	IAMs_20	IAMs_20	16 50 31.1	
	comp=Z,1µm,19.0s						
RDMU	**Red Mountain**	**92.57**	**45**	P	**P**	**16 13 31.6**	**+0.3**
CRQM	**Cirque**	**92.72**	**16**	P	**P**	**16 13 32.0**	**+0.5**
CRQM				IAmb	IAmb	16 13 46.2	
	comp=Z,37nm,1.0s						
CRQM				IAMs_20	IAMs_20	16 46 25.3	
	comp=Z,2µm,22.0s						
S22A	**4UR Ranch, Cre**	**92.73**	**48**	P	**P**	**16 13 33.3**	**+1.1**
	baz=236						
SCM	**Sheep Creek Mo**	**92.74**	**14**	P	**P**	**16 13 31.8**	**+0.4**
SCM				pmax	pmax		
	comp=Z,40nm,1.2s						
SCM				MLR	MLR		
	comp=Z,1µm,20.0s						
SCM	**Sheep Creek Mo**	**92.74**	**14**	P	**P**	**16 13 31.8**	**+0.4**
SCM				IAmb	IAmb	16 13 39.4	
	comp=Z,40nm,1.2s						
ANM	**Nome**	**92.78**	**5**	P	**P**	**16 13 31.9**	**+0.5**
ANM				pmax	pmax		
	comp=Z,16nm,1.2s						
ANM				MLR	MLR		
	comp=Z,1µm,20.0s						
ANM	**Nome**	**92.78**	**5**	P	**P**	**16 13 31.9**	**+0.5**
TGL	**Tana Glacier**	**92.80**	**16**	P	**P**	**16 13 32.2**	**+0.5**
TGL				IAmb	IAmb	16 13 40.1	
	comp=Z,26nm,1.1s						
TGL				IAMs_20	IAMs_20	16 46 51.0	
	comp=Z,3µm,22.0s						
AHID	**Auburn Hatcher**	**92.92**	**42**	P	**P**	**16 13 33.4**	**+0.5**
AHID				IAMs_20	IAMs_20	16 46 45.2	
	comp=Z,3µm,22.0s						
NEW	**Newport**	**92.97**	**35**	IAMs_20	IAMs_20	16 46 06.1	
	comp=Z,2µm,22.0s						
NEW	**Newport**	**92.97**	**35**	P	**P**	**16 13 33.7**	**+0.9**
	baz=230						
TIY	**Taiyuan**	**93.00**	**311**	*e*P	**P**	**16 13 34.4**	**+1.3**
TIY				pP	**pwP**	**16 13 44.1**	**-1.4**
TIY				SKS	**SKSac**	**16 24 04.5**	**-0.6**
TIY				S	**S**	**16 24 33.6**	**-3.9**
TIY				sS	**sS**	**16 24 51.4**	**-0.3**
TIY				pmax	pmax		
	comp=Z,19nm,0.6s						
TIY				pmax	pmax		
	comp=Z,180nm,7.2s						
TIY				LR	LR		
	comp=Z,180nm,5.8s						
TIY				LR	LR		
	comp=Z,140nm,11.1s						
TIY				LR	LR		
	comp=Z,2µm,29.1s						
VRDI	**Verde Repeater**	**93.06**	**16**	P	**P**	**16 13 33.4**	**+0.4**
VRDI				IAmb	IAmb	16 13 48.4	
	comp=Z,44nm,1.4s						
VRDI				IAMs_20	IAMs_20	16 47 21.9	
	comp=Z,2µm,22.0s						
833A	**Chaparral WMA,**	**93.07**	**60**	P	**P**	**16 13 33.7**	**+0.1**
833A				IAmb	IAmb	16 13 35.5	
	comp=Z,39nm,1.2s						
833A				IAMs_20	IAMs_20	16 46 16.5	
	comp=Z,2µm,21.0s						
833A	**Chaparral WMA,**	**93.07**	**60**	P	**P**	**16 13 34.2**	**+0.5**
	baz=240						
MCMT	**McKenzie Canyo**	**93.13**	**40**	P	**P**	**16 13 34.0**	**+0.1**
O20A	**White River Ci**	**93.15**	**46**	P	**P**	**16 13 33.4**	**-0.6**
O20A				IAmb	IAmb	16 13 46.7	
	comp=Z,23nm,1.2s						
O20A	**White River Ci**	**93.15**	**46**	P	**P**	**16 13 34.5**	**+0.5**
	baz=236						
BALM	**Baldy**	**93.16**	**16**	P	**P**	**16 13 34.1**	**+0.7**
BALM				IAmb	IAmb	16 13 42.4	
	comp=Z,27nm,1.2s						
BALM				IAMs_20	IAMs_20	16 47 34.6	
	comp=Z,2µm,21.0s						
GLB	**Gilahina Butte**	**93.17**	**15**	P	**P**	**16 13 34.2**	**+0.9**
GLB				IAmb	IAmb	16 13 48.5	
	comp=Z,29nm,1.3s						
NNA	**Nana**	**93.19**	**105⇑**	*e*P	**P**	**16 13 34.3**	**-0.3**
NNA				pmax	pmax		
	comp=Z,15nm,1.0s						
MCARA	**McCarthy VSAT**	**93.30**	**16**	P	**P**	**16 13 34.3**	**+0.4**
MCARA				IAmb	IAmb	16 14 05.6	
	comp=Z,51nm,1.3s						
BARN	**Barnard Glacie**	**93.35**	**16**	P	**P**	**16 13 35.3**	**+1.0**
BARN				IAmb	IAmb	16 13 49.1	
	comp=Z,22nm,1.0s						
CTGM	**Chitina Glacie**	**93.35**	**17**	P	**P**	**16 13 35.3**	**+1.0**
CTGM				IAMs_20	IAMs_20	16 47 28.6	
	comp=Z,3µm,22.0s						
REDW	**Red Top Meadow**	**93.42**	**42**	P	**P**	**16 13 35.9**	**+0.7**
REDW				IAMs_20	IAMs_20	16 47 01.4	
	comp=Z,3µm,22.0s						
XAN	**Xi'an**	**93.43**	**307**	P	**P**	**16 13 36.3**	**+1.1**
XAN				pP	sP	16 13 44.0	-2.6
XAN				SKS	**SKSac**	**16 24 07.8**	**+0.1**
XAN				S	**ScS**	**16 24 45.4**	**+2.4**
XAN				pmax	pmax		
	comp=Z,22nm,1.1s						
XAN				pmax	pmax		
	comp=Z,390nm,7.1s						
XAN				LR	LR		
	comp=Z,700nm,20.8s						
XAN				LR	LR		
	comp=Z,650nm,22.6s						
XAN				LR	LR		
	comp=Z,1µm,22.5s						
XAN	**Xi'an**	**93.43**	**307**	P	**P**	**16 13 34.9**	**-0.3**
XAN				pmax	pmax		
	comp=Z,24nm,1.0s						
XAN				MLR	MLR		
	comp=Z,1µm,21.0s						
XAN	**Xi'an**	**93.43**	**307**	P	**P**	**16 13 34.9**	**-0.3**
XAN				IAmb	IAmb	16 13 41.7	
	comp=Z,24nm,1.0s						
TPAW	**Teton Pass**	**93.43**	**42**	P	**P**	**16 13 35.3**	**0.0**
TPAW				IAMs_20	IAMs_20	16 47 33.8	
	comp=Z,2µm,21.0s						
FXWY	**Fox Creek**	**93.47**	**42**	P	**P**	**16 13 36.0**	**+0.5**
FXWY				IAmb	IAmb	16 13 38.8	
	comp=Z,17nm,0.9s						
FXWY				IAMs_20	IAMs_20	16 47 47.9	
	comp=Z,2µm,21.0s						
MSTX	**Muleshoe**	**93.47**	**53**	P	**P**	**16 13 35.2**	**-0.3**
MSTX				IAmb	IAmb	16 13 37.2	
	comp=Z,42nm,1.1s						
MSTX	**Muleshoe**	**93.47**	**53**	P	**P**	**16 13 35.8**	**+0.3**
	baz=238						
CMAR	**Chiang Mai Arr**	**93.48**	**289**	P	**P**	**16 13 37.5**	**+1.7**
	comp=Z,6.7nm,0.8s,baz=142,slow=3.4,SNR=28						
CMAR				PKKPbc	**PKKPbc**	**16 30 43.3**	**+1.9**
	comp=Z,0.9nm,0.9s,baz=283,slow=4.7,SNR=5.3						
CMAR	**Chiang Mai Arr**	**93.48**	**289**	P	**P**	**16 13 35.6**	**-0.1**
PB15	**IPOC Station P**	**93.50**	**118**	IAMs_20	IAMs_20	16 45 19.8	
	comp=Z,2µm,22.0s						
SNOW	**Snow King Moun**	**93.53**	**42**	P	**P**	**16 13 35.6**	**-0.1**
SNOW				IAMs_20	IAMs_20	16 47 16.4	
	comp=Z,2µm,21.0s						
KMI	**Kunming**	**93.58**	**296**	P	**P**	**16 13 37.5**	**+1.2**
KMI				pP	pwP	16 13 46.3	-2.3
KMI				PP	**PP**	**16 17 20.9**	**-0.7**
KMI				SKS	**SKSac**	**16 24 10.4**	**+1.1**
KMI				S	**S**	**16 24 40.9**	**-2.6**
KMI				SS	**SS**	**16 31 00.0**	**-1.9**
KMI				pmax	pmax		
	comp=Z,23nm,0.9s						
KMI				pmax	pmax		
	comp=Z,300nm,4.9s						
KMI				LR	LR		
	comp=Z,340nm,19.9s						
KMI				LR	LR		
	comp=Z,510nm,19.5s						
KMI				LR	LR		
	comp=Z,890nm,22.4s						
DLMT	**Dillon**	**93.60**	**40**	P	**P**	**16 13 35.0**	**-0.9**
DLMT				IAmb	IAmb	16 14 36.5	
	comp=Z,28nm,1.3s						
SDCO	**Great Sand Dun**	**93.61**	**49**	P	**P**	**16 13 36.1**	**-0.2**
SDCO				IAMs_20	IAMs_20	16 46 33.4	
	comp=Z,2µm,21.0s						
SDCO	**Great Sand Dun**	**93.61**	**49**	P	**P**	**16 13 36.9**	**+0.7**
	baz=237						
KTH	**Kantishna Hill**	**93.62**	**11**	P	**P**	**16 13 34.9**	**-0.5**
KTH				IAMs_20	IAMs_20	16 51 20.4	
	comp=Z,2µm,21.0s						
TRF	**Thorofare Moun**	**93.64**	**12**	P	**P**	**16 13 35.3**	**-0.4**
TRF				IAmb	IAmb	16 13 43.7	
	comp=Z,20nm,0.8s						
CHTO	**Chiang Mai**	**93.65**	**289**	P	**P**	**16 13 36.2**	**-0.3**
CHTO				pmax	pmax		
	comp=Z,19nm,1.1s						
CHTO				MLR	MLR		
	comp=Z,1µm,21.0s						
CHTO	**Chiang Mai**	**93.65**	**289**	P	**P**	**16 13 36.2**	**-0.3**
IMW	**Indian Meadow**	**93.68**	**41**	P	**P**	**16 13 37.1**	**+0.6**
IMW				IAmb	IAmb	16 13 39.7	
	comp=Z,23nm,0.9s						
IMW				IAMs_20	IAMs_20	16 47 44.3	
	comp=Z,2µm,21.0s						
MSO	**Missoula**	**93.75**	**38**	P	**P**	**16 13 36.4**	**0.0**
MSO				IAMs_20	IAMs_20	16 46 42.7	
	comp=Z,2µm,22.0s						
MSO	**Missoula**	**93.75**	**38**	P	**P**	**16 13 37.8**	**+1.4**
	baz=232						
KVTX	**Kingsville**	**93.84**	**61**	IAMs_20	IAMs_20	16 56 31.9	
	comp=Z,2µm,18.0s						
BW06	**Boulder Array**	**93.84**	**43**	P	**P**	**16 13 37.0**	**-0.2**
BW06	**Boulder Array**	**93.84**	**43**	P	**P**	**16 13 36.9**	**-0.2**
	baz=235						
PD31	**Pinedale Array**	**93.84**	**43**	P	**P**	**16 13 36.3**	**-0.8**
PDAR	**Pinedale Array**	**93.84**	**43**	P	**P**	**16 13 37.5**	**+0.4**
	comp=Z,12nm,0.9s,baz=204,slow=2.9,SNR=59						
PDAR				PKKPbc	**PKKPbc**	**16 30 44.2**	**+2.4**
	comp=Z,0.9nm,0.9s,baz=92,slow=3.6,SNR=4.3						
PDAR				LR	LR	16 47 51.9	
	comp=Z,3µm,21.6s,baz=236,slow=30						
PDAR	**Pinedale Array**	**93.84**	**43**	P	**P**	**16 13 36.8**	**-0.3**
JCT	**Junction City**	**93.84**	**58**	P	**P**	**16 13 36.5**	**-0.7**
JCT				pmax	pmax		
	comp=Z,21nm,1.1s						
JCT				MLR	MLR		
	comp=Z,2µm,18.0s						
JCT	**Junction City**	**93.84**	**58**	P	**P**	**16 13 36.5**	**-0.7**
JCT				IAmb	IAmb	16 13 38.5	
	comp=Z,21nm,1.1s						
JCT				IAMs_20	IAMs_20	16 52 00.8	
	comp=Z,2µm,18.0s						
JCT	**Junction City**	**93.84**	**58**	P	**P**	**16 13 36.7**	**-0.5**
	baz=240						
DHY	**Denali Highway**	**93.85**	**13**	P	**P**	**16 13 36.8**	**+0.3**
RND	**Reindeer**	**93.86**	**12**	P	**P**	**16 13 36.7**	**+0.2**
RND				pmax	pmax		
	comp=Z,49nm,1.1s						
RND				MLR	MLR		
	comp=Z,2µm,20.0s						
RND	**Reindeer**	**93.86**	**12**	P	**P**	**16 13 36.7**	**+0.2**
RND				IAMs_20	IAMs_20	16 51 34.8	
	comp=Z,2µm,20.0s						
FLWY	**Flagg Ranch**	**93.93**	**41**	P	**P**	**16 13 38.4**	**+0.9**
FLWY				IAMs_20	IAMs_20	16 47 51.9	
	comp=Z,2µm,21.0s						
SEY	**Seymchan**	**93.93**	**346⇑**	*e*P	**P**	**16 13 36.8**	**+0.1**
QLMT	**Earthquake Lak**	**93.94**	**40**	P	**P**	**16 13 38.5**	**+0.9**
PB07	**IPOC Station P**	**93.97**	**117**	IAMs_20	IAMs_20	16 47 24.1	
	comp=Z,2µm,19.0s						
YPP	**Pitchstone Pla**	**93.98**	**41**	P	**P**	**16 13 38.9**	**+1.1**
T25A	**Trinidad**	**94.01**	**50**	P	**P**	**16 13 38.5**	**+0.4**
T25A				IAMs_20	IAMs_20	16 46 49.3	
	comp=Z,3µm,22.0s						
T25A	**Trinidad**	**94.01**	**50**	P	**P**	**16 13 38.8**	**+0.7**
	baz=238						
YHL	**Hebgen Lake**	**94.10**	**41**	P	**P**	**16 13 39.2**	**+0.9**
YMR	**Madison River**	**94.12**	**41**	P	**P**	**16 13 38.8**	**+0.4**
JTMT	**Jette**	**94.13**	**37**	IAMs_20	IAMs_20	16 49 52.6	
	comp=Z,2µm,18.0s						
MCK	**McKinley**	**94.15**	**12**	P	**P**	**16 13 37.7**	**-0.1**
MCK				pmax	pmax		
	comp=Z,33nm,1.2s						
MCK				MLR	MLR		
	comp=Z,2µm,21.0s						
MCK	**McKinley**	**94.15**	**12**	P	**P**	**16 13 37.7**	**-0.1**
MCK				IAmb	IAmb	16 14 05.6	
	comp=Z,34nm,1.2s						
MCK				IAMs_20	IAMs_20	16 51 33.3	
	comp=Z,2µm,21.0s						
H17A	**Grant Village**	**94.18**	**41**	P	**P**	**16 13 39.5**	**+0.8**
H17A	**Grant Village**	**94.18**	**41**	P	**P**	**16 13 40.4**	**+1.7**
	baz=234						
ATAH	**Atahualpa**	**94.20**	**100**	LR	LR	16 46 19.0	
	comp=Z,3µm,21.5s,baz=225,slow=29						
YHH	**Holmes Hill**	**94.25**	**41**	P	**P**	**16 13 39.7**	**+0.7**
LVC	**Limon Verde**	**94.26**	**118**	P	**P**	**16 13 40.4**	**+0.6**
LVC				pmax	pmax		
	comp=Z,21nm,1.3s						
LVC	**Limon Verde**	**94.26**	**118**	P	**P**	**16 13 40.4**	**+0.6**
SNET	**Serv Nac Est T**	**94.38**	**77**	IAMs_20	IAMs_20	16 45 01.0	
	comp=Z,2µm,22.0s						
LKWY	**Lake**	**94.38**	**41**	P	**P**	**16 13 39.8**	**+0.2**
LKWY				pmax	pmax		
	comp=Z,18nm,1.1s						
LKWY				MLR	MLR		
	comp=Z,3µm,22.0s						
LKWY	**Lake**	**94.38**	**41**	P	**P**	**16 13 39.8**	**+0.2**
PB09	**IPOC Station P**	**94.44**	**117**	IAMs_20	IAMs_20	16 47 31.6	
	comp=Z,2µm,19.0s						
BWN	**Browne**	**94.45**	**12**	P	**P**	**16 13 39.4**	**+0.3**
Q24A	**Divide**	**94.50**	**48**	P	**P**	**16 13 41.1**	**+0.7**
	baz=238						
735A	**Kenedy**	**94.54**	**60**	IAMs_20	IAMs_20	16 47 23.5	
	comp=Z,2µm,21.0s						
ISCO	**Idaho Springs**	**94.65**	**47**	IAMs_20	IAMs_20	16 47 42.7	
	comp=Z,2µm,21.0s						
ISCO	**Idaho Springs**	**94.65**	**47**	P	**P**	**16 13 41.4**	**+0.3**
	baz=237						
ZEA	**Zeya**	**94.67**	**330**	*e*P	**P**	**16 13 40.4**	**+0.1**
ZEA				*e*S	**S**	**16 24 54.0**	**+2.8**
ZEA				pmax	pmax		
	comp=N,29nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,36nm,1.2s						
ZEA				smax	smax		
	comp=E,400nm,10.0s						
AMTX	**Amarillo**	**94.72**	**53**	P	**P**	**16 13 41.5**	**+0.3**
AMTX				IAMs_20	IAMs_20	16 52 43.3	
	comp=Z,1µm,20.0s						
AMTX	**Amarillo**	**94.72**	**53**	P	**P**	**16 13 41.5**	**+0.3**
	baz=239						
YNE	**Yellowstone No**	**94.87**	**41**	P	**P**	**16 13 42.7**	**+0.9**
NEA	**Nenana**	**94.89**	**12**	IAMs_20	IAMs_20	16 52 08.4	
	comp=Z,2µm,20.0s						
PSGCX	**Pisagua**	**94.90**	**115**	IAMs_20	IAMs_20	16 46 42.0	
	comp=Z,2µm,21.0s						
RIDG	**Independent Ri**	**94.96**	**14**	P	**P**	**16 13 42.0**	**+0.5**
RIDG				IAmb	IAmb	16 13 56.2	
	comp=Z,28nm,1.2s						
RIDG				IAMs_20	IAMs_20	16 51 45.0	
	comp=Z,1µm,20.0s						
WRH	**Wood River Hil**	**94.98**	**12**	P	**P**	**16 13 41.5**	**0.0**
WRH				IAmb	IAmb	16 13 48.7	

	comp=Z,29nm,1.2s						
MLY	Manley	95.02	11	P	P	16 13 41.3	-0.5
N23A	Red Feather La	95.03	46	P	P	16 13 43.1	+0.4
N23A				IAMs_20	IAMs_20	16 47 10.7	
	comp=Z,2µm,22.0s						
N23A	Red Feather La	95.03	46	P	P	16 13 42.9	+0.2
	baz=237						
ABTX	Abilene, Hawle	95.04	56	P	P	16 13 42.6	-0.1
ABTX				IAmb	IAmb	16 13 44.2	
	comp=Z,23nm,1.1s						
ABTX				IAMs_20	IAMs_20	16 47 49.1	
	comp=Z,2µm,21.0s						
ABTX	Abilene, Hawle	95.04	56	P	P	16 13 42.5	-0.1
	baz=240						
BCAR	Beaver Creek A	95.05	15	P	P	16 13 41.9	0.0
WALA	Waterton Lakes	95.13	36	P	P	16 13 42.8	0.0
HDA	Harding Lake	95.14	13	P	P	16 13 42.3	+0.1
HDA	Harding Lake	95.14	13	P	P	16 13 42.9	+0.7
	baz=206						
CCB	Clear Creek Bu	95.19	12	P	P	16 13 42.2	-0.3
PB11	IPOC Station P	95.19	115	IAMs_20	IAMs_20	16 46 18.6	
	comp=Z,2µm,22.0s						
HHC	Hu-ho-hao-te	95.27	314	*e*P	P	16 13 44.4	+0.8
HHC				SKS	SKSac	16 24 17.4	0.0
HHC				S	S	16 24 57.3	0.0
HHC				LR	LR		
	comp=Z,4µm,18.1s						
HHC				LR	LR		
	comp=Z,2µm,18.7s						
HHC				LR	LR		
	comp=Z,5µm,17.8s						
SCRK	Sand Creek	95.35	14	P	P	16 13 43.5	+0.1
RLMT	Red Lodge	95.36	41	P	P	16 13 44.0	0.0
RLMT				IAMs_20	IAMs_20	16 48 59.8	
	comp=Z,2µm,20.0s						
RLMT	Red Lodge	95.36	41	P	P	16 13 44.1	+0.1
	baz=235						
TCOL	CIGO, UAF Yank	95.38	12	P	P	16 13 44.1	+0.8
	baz=206						
COLA	College	95.39	12	P	P	16 13 42.9	-0.4
COLA				pmax	pmax		
	comp=Z,40nm,1.4s						
COLA				MLR	MLR		
	comp=Z,2µm,20.0s						
COLA	College	95.39	12	P	P	16 13 42.9	-0.4
COLA				IAmb	IAmb	16 13 57.3	
	comp=Z,40nm,1.4s						
COLA	College	95.39	12	IAMs_20	IAMs_20	16 51 60.0	
	comp=Z,2µm,20.0s						
MDM	Murphy Dome	95.39	12	P	P	16 13 42.8	-0.6
IMAR	Indian Mountai	95.44	9	P	P	16 13 43.5	-0.1
IL31		95.47	12	P	P	16 13 43.3	-0.4
ILAR	Eielson Array	95.47	12	P	P	16 13 43.5	-0.2
	comp=Z,4.3nm,0.8s,baz=221,slow=5.4,SNR=32						
ILAR				PP	PP	16 17 41.5	+6.2
	comp=Z,4.2nm,1.0s,baz=229,slow=7.0,SNR=6.3						
ILAR				LR	LR	16 52 39.3	
	comp=Z,235nm,19.2s,baz=218,slow=33						
ILAR	Eielson Array	95.47	12	P	P	16 13 43.4	-0.4
CD2	Chengdu	95.61	302	P	P	16 13 46.9	+1.6
CD2				PP	PP	16 17 35.5	-1.6
CD2				SKS	SKSac	16 24 19.5	-0.1
CD2				S	S	16 25 01.0	+0.4
CD2				SS	SS	16 31 33.5	+3.2
CD2				pmax	pmax		
	comp=Z,40nm,0.6s						
CD2				pmax	pmax		
	comp=Z,270nm,4.5s						
CD2				LR	LR		
	comp=Z,950nm,22.1s						
CD2				LR	LR		
	comp=Z,1µm,24.0s						
CD2				LR	LR		
	comp=Z,1µm,23.0s						
K22A	Casper	95.63	44	P	P	16 13 45.3	+0.1
K22A				IAmb	IAmb	16 13 47.9	
	comp=Z,15nm,0.8s						
K22A	Casper	95.63	44	P	P	16 13 46.0	+0.7
	baz=237						
435B	Jarrell	95.65	58	IAMs_20	IAMs_20	16 52 22.8	
	comp=Z,2µm,19.0s						
POKR	Poker Plat Res	95.68	12	P	P	16 13 45.3	+0.5
	baz=206						
TGUH	Tegucigalpa,Un	96.24	77	IAMs_20	IAMs_20	16 46 23.3	
	comp=Z,2µm,22.0s						
WHTX	Lake Whitney,	96.34	57	IAMs_20	IAMs_20	16 48 19.7	
	comp=Z,2µm,22.0s						
PRP	Porcupine Dome	96.40	13	P	P	16 13 47.7	-0.4
RDOG	Red Dog Mine	96.41	5	P	P	16 13 48.1	+0.2
RDOG				IAMs_20	IAMs_20	16 54 25.5	
	comp=Z,2µm,22.0s						
DAWY	Dawson	96.47	16	P	P	16 13 49.1	+0.7
DAWY				IAMs_20	IAMs_20	16 49 22.0	
	comp=Z,2µm,22.0s						
JTS	Las Juntas de	96.54	82	*de*P	P	16 13 51.2	+1.3
JTS				pmax	pmax		
	comp=Z,15nm,1.3s						
HKT	Hockley	96.58	60	IAMs_20	IAMs_20	16 48 49.5	
	comp=Z,1µm,21.0s						
BILL	Bilibino	96.64	354	*ce*P	P	16 13 49.0	0.0
BILL				*e*		16 17 44.0	
BILL				*i* S	SKSac	16 24 23.0	-0.1
BILL				*i* SS	SS	16 31 44.9	+1.7
BILL				pmax	pmax		
	comp=Z,26nm,1.5s						
BILL				MLR	MLR		
	comp=Z,1µm,20.0s						
BILL	Bilibino	96.64	354	P	P	16 13 48.7	-0.3
BILL				IAmb	IAmb	16 13 55.0	
	comp=Z,39nm,1.6s						
EGAK	Eagle	96.67	15	P	P	16 13 49.5	+0.3
EGAK				IAmb	IAmb	16 14 04.2	
	comp=Z,21nm,1.3s						
WMOK	Wichita Mounta	96.71	54	P	P	16 13 50.7	+0.5
	baz=241						
EGMT	Eagleton	96.75	39	IAMs_20	IAMs_20	16 48 50.0	
	comp=Z,2µm,20.0s						
HDC	Heredia	97.14	83	IAMs_20	IAMs_20	16 47 01.7	
	comp=Z,2µm,22.0s						
X34A	Smith Ranch, M	97.32	55	IAMs_20	IAMs_20	16 49 32.5	
	comp=Z,2µm,21.0s						
U32A	Winter Ranch,	97.36	53	IAMs_20	IAMs_20	16 56 30.1	
	comp=Z,2µm,18.0s						
237A	Washetta, Mont	97.57	58	IAMs_20	IAMs_20	16 49 48.5	
	comp=Z,2µm,21.0s						
RSSD	Black Hills	97.94	44	P	P	16 13 55.0	-0.8
RSSD				pmax	pmax		
	comp=Z,28nm,1.0s						
RSSD				MLR	MLR		
	comp=Z,4µm,18.0s						
RSSD	Black Hills	97.94	44	P	P	16 13 55.0	-0.8
RSSD				IAmb	IAmb	16 13 58.3	
	comp=Z,28nm,0.9s						
RSSD	Black Hills	97.94	44	P	P	16 13 56.1	+0.4
	baz=239						
ESPN	Las Esperanzas	97.97	80	IAMs_20	IAMs_20	16 47 29.5	
	comp=Z,2µm,20.0s						
OKCFA	Oklahoma City	97.99	54	IAMs_20	IAMs_20	16 49 16.1	
	comp=Z,2µm,22.0s						
LAO	LASA Array	98.00	41	IAMs_20	IAMs_20	16 51 32.6	
	comp=Z,2µm,20.0s						
LZH	Lanzhou	98.06	307	*e*P	Pdif	16 13 57.6	+1.2
LZH				pP	pwP	16 14 08.3	-0.4
LZH				SKS	SKSac	16 24 29.3	-3.0
LZH				S	ScS	16 25 27.8	+6.0
LZH				SS	SS	16 32 04.3	-0.6
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				pmax	pmax		
	comp=Z,160nm,5.6s						
LZH				LR	LR		
	comp=Z,490nm,16.3s						
LZH				LR	LR		
	comp=Z,830nm,17.9s						
LZH				LR	LR		
	comp=Z,890nm,19.0s						
LPAZ	La Paz	98.26	113	P	Pdif	16 13 59.9	+1.5
	comp=Z,1.5nm,0.8s,baz=348,slow=6.2,SNR=4.6						
LPAZ				PKKPbc	PKKPbc	16 30 30.5	+1.5
	comp=Z,0.9nm,0.7s,baz=46,slow=8.2,SNR=3.9						
LPAZ				LR	LR	16 49 20.5	
	comp=Z,962nm,21.8s,baz=246,slow=30						
BMAR	Burnt Mountain	98.28	12	P	Pdif	16 13 57.0	+0.6
NATX	Nacogdoches	98.32	59	IAMs_20	IAMs_20	16 48 57.4	
	comp=Z,2µm,21.0s						
TOLK	Toolik Lake Re	98.53	10	P	Pdif	16 13 59.0	+1.4
	baz=204						
R32A	Long Quarter,	98.55	51	IAMs_20	IAMs_20	16 49 31.5	
	comp=Z,2µm,22.0s						
EPYK	Eagle Plains	99.02	15	P	Pdif	16 14 00.2	+0.4
EPYK	Eagle Plains	99.02	15	P	Pdif	16 14 01.0	+1.2
	baz=216						
T35A	Sooner Cattle	99.37	53	IAMs_20	IAMs_20	16 56 07.5	
	comp=Z,1µm,19.0s						
TUL1	Leonard	99.41	54	IAMs_20	IAMs_20	16 51 43.8	
	comp=Z,2µm,20.0s						
YAK	Yakutsk	99.45	337	*e*P	Pdif	16 14 00.9	-0.8
YAK				*e*		16 24 30.8	
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
342A	Flagon Creek P	99.92	60	IAMs_20	IAMs_20	16 50 44.8	
	comp=Z,1µm,22.0s						
DGMT	Dagmar	100.11	40	IAMs_20	IAMs_20	16 52 02.2	
	comp=Z,2µm,21.0s						
DGMT	Dagmar	100.11	40	P	Pdif	16 14 07.2	+2.1
	baz=239						
KSU1	Kansas State U	100.32	51	IAMs_20	IAMs_20	16 50 38.4	
	comp=Z,2µm,21.0s						
WLAR	White Oak Lake	100.36	57	IAMs_20	IAMs_20	16 51 28.3	
	comp=Z,2µm,20.0s						
Z41A	Richland Creek	100.40	58	IAMs_20	IAMs_20	16 58 32.3	
	comp=Z,1µm,18.0s						
MIAR	Mount Ida	100.40	56	IAMs_20	IAMs_20	16 50 15.2	
	comp=Z,2µm,22.0s						
N33A	J Bar K, Exete	100.51	49	IAMs_20	IAMs_20	16 50 34.1	
	comp=Z,2µm,22.0s						
U38A	Gravette	100.67	54	IAMs_20	IAMs_20	16 52 09.0	
	comp=Z,2µm,21.0s						
CPUP	Villa Florida	100.71	127	PKKPbc	PKKPbc	16 30 20.8	-0.7
	comp=Z,1.3nm,0.6s,baz=203,slow=7.3,SNR=3.1						
545A	Edgard	100.74	62	IAMs_20	IAMs_20	16 53 10.9	
	comp=Z,2µm,22.0s						
HHAR	Hobbs	100.92	55	IAMs_20	IAMs_20	16 56 31.7	
	comp=Z,1µm,19.0s						
X40A	Basin Creek Fa	100.92	57	IAMs_20	IAMs_20	16 52 14.1	
	comp=Z,1µm,20.0s						
143A	Socs Landing,	101.21	59	IAMs_20	IAMs_20	16 52 33.9	
	comp=Z,2µm,21.0s						
INK	Inuvik	101.31	15	P	Pdif	16 14 10.0	+0.1
INK				MLR	MLR		
	comp=Z,2µm,21.0s						
INK	Inuvik	101.31	15		Pdif	16 14 09.9	+0.1
INK				IAMs_20	IAMs_20	16 52 37.1	
	comp=Z,2µm,21.0s						
ULN	Ulaanbaatar	101.65	318	⇓*i*P	Pdif	16 14 12.0	-0.1
VBMS	Vicksburg	101.67	60	IAMs_20	IAMs_20	16 51 49.2	
	comp=Z,1µm,21.0s						
S39A	Bolivar	101.98	54	IAMs_20	IAMs_20	17 01 23.8	
	comp=Z,1µm,18.0s						
SONM	Songino Array	102.02	318	P	Pdif	16 14 12.6	-1.2
	comp=Z,1.3nm,1.0s,baz=119,slow=1.9,SNR=7.6						
SONM				PP	PP	16 18 29.4	+3.6
	comp=Z,2.5nm,1.0s,baz=125,slow=7.2,SNR=4.1						
SONM				PKKPbc	PKKPbc	16 30 19.4	+0.4
	comp=Z,1.3nm,0.8s,baz=260,slow=1.7,SNR=5.3						
346A	Big Creek Wild	102.12	61	IAMs_20	IAMs_20	16 53 38.3	
	comp=Z,2µm,22.0s						
X43A	Marvell	102.39	58	IAMs_20	IAMs_20	16 56 10.9	
	comp=Z,2µm,20.0s						
GTA	Gaotai	102.42	308	⇑P	Pdif	16 14 17.3	+1.6
GTA				pP	sPdif	16 14 27.8	+0.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,100nm,8.7s						
GTA				LR	LR		
	comp=Z,430nm,23.5s						
GTA				LR	LR		
	comp=Z,640nm,20.6s						
GTA				LR	LR		
	comp=Z,860nm,24.1s						
MDND	Maddock	102.48	42	IAMs_20	IAMs_20	16 52 49.2	
	comp=Z,2µm,22.0s						
P38A	Dawn	102.68	52	IAMs_20	IAMs_20	17 00 53.0	
	comp=Z,2µm,18.0s						
YKA	Yellowknife Ar	102.97	25	P	Pdif	16 14 17.2	-0.2
	comp=Z,0.8nm,0.8s,baz=230,slow=4.1,SNR=8.7						
YKA				PP	PP	16 18 25.7	-6.7
	comp=Z,1.9nm,1.0s,baz=228,slow=7.8,SNR=7.9						
YKA				PKKPbc	PKKPbc	16 30 14.9	-1.6
	comp=Z,1.4nm,0.8s,baz=49,slow=2.8,SNR=11						
YKA				PKPPKP	P'P'df	16 38 41.7	+11
	comp=Z,0.2nm,0.7s,baz=49,slow=2.3,SNR=3.7						
HBAR	Harrisburg	103.00	57	IAMs_20	IAMs_20	16 52 41.9	
	comp=Z,2µm,22.0s						
LPAR	Lepanto	103.28	57	IAMs_20	IAMs_20	16 52 48.5	
	comp=Z,2µm,21.0s						
T42A	Van Buren	103.30	55	IAMs_20	IAMs_20	16 52 29.9	
	comp=Z,2µm,22.0s						
ROSC	El Rosal	103.43	92	IAMs_20	IAMs_20	16 55 28.8	
	comp=Z,1µm,18.0s						
OXF	Oxford	103.48	58	IAMs_20	IAMs_20	16 53 55.1	
	comp=Z,2µm,21.0s						
CCM	Cathedral Cave	103.63	54	IAMs_20	IAMs_20	16 58 43.3	
	comp=Z,1µm,20.0s						
PEBM	Pemiscott Bayo	103.82	56	IAMs_20	IAMs_20	16 53 04.6	
	comp=Z,2µm,22.0s						
SCIA	State Center	103.88	50	IAMs_20	IAMs_20	16 52 27.5	
	comp=Z,2µm,21.0s						
W45A	Hickory Valley	103.92	58	IAMs_20	IAMs_20	16 59 33.5	
	comp=Z,1µm,19.0s						
PVMO	Portageville	104.06	56	IAMs_20	IAMs_20	16 54 04.1	
	comp=Z,2µm,21.0s						
SIV	San Ignacio	104.07	117	PKKPbc	PKKPbc	16 30 15.5	+4.0
	comp=Z,2.6nm,0.5s,baz=87,slow=1.7,SNR=4.7						
LNXT	Lenox	104.08	57	IAMs_20	IAMs_20	16 59 50.8	
	comp=Z,2µm,19.0s						
HALT	Halls	104.12	57	IAMs_20	IAMs_20	16 53 34.7	
	comp=Z,2µm,21.0s						
PENMO	Penman	104.13	56	IAMs_20	IAMs_20	16 54 06.9	
	comp=Z,2µm,21.0s						
GLAT	Glass	104.30	56	IAMs_20	IAMs_20	16 53 50.5	
	comp=Z,2µm,22.0s						
C36M	Paulatuk	104.40	17	IAMs_20	IAMs_20	16 53 15.8	
	comp=Z,1µm,22.0s						
C36M	Paulatuk	104.40	17	P	Pdif	16 14 24.9	+1.3
	baz=227						
SLM	Saint Louis	104.59	54	IAMs_20	IAMs_20	17 00 46.7	
	comp=Z,1µm,20.0s						
LRAL	Lakeview Retre	104.70	60	IAMs_20	IAMs_20	16 54 18.7	
	comp=Z,2µm,21.0s						
N41A	Harden Midland	105.00	52	IAMs_20	IAMs_20	17 04 09.4	
	comp=Z,2µm,18.0s						
ZAK	Zakamensk	105.00	319	*e*P	Pdif	16 14 29.8	+2.9
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
X48A	Hartselle	105.24	59	IAMs_20	IAMs_20	16 53 36.7	
	comp=Z,1µm,22.0s						
L40A	Anamosa	105.30	50	IAMs_20	IAMs_20	16 58 12.1	
	comp=Z,2µm,20.0s						
WVT	Waverly	105.32	57	IAMs_20	IAMs_20	16 54 31.6	
	comp=Z,2µm,20.0s						
P43A	Skaggs, Pawnee	105.50	53	IAMs_20	IAMs_20	17 02 50.9	
	comp=Z,1µm,18.0s						
Z50A	Ashland	105.62	60	IAMs_20	IAMs_20	16 54 11.9	
	comp=Z,2µm,22.0s						
ULM	Lac du Bonnet	105.74	41	PKKPbc	PKKPbc	16 30 15.6	+8.0
	comp=Z,1.3nm,0.5s,baz=86,slow=3.6,SNR=4.2						
V48A	Smith Brothers	105.92	58	IAMs_20	IAMs_20	16 59 18.5	
	comp=Z,1µm,19.0s						
HDIL	Hopedale	106.03	52	IAMs_20	IAMs_20	17 01 37.6	
	comp=Z,2µm,18.0s						
OLIL	Olney	106.16	55	IAMs_20	IAMs_20	16 53 21.4	
	comp=Z,2µm,22.0s						
USIN	University of	106.17	55	IAMs_20	IAMs_20	16 53 31.8	
	comp=Z,2µm,22.0s						
JFWS	Jewell Farm	106.30	50	IAMs_20	IAMs_20	16 58 43.5	
	comp=Z,1µm,20.0s						
SWET	Sewanee	106.38	59	IAMs_20	IAMs_20	17 00 21.9	
	comp=Z,2µm,18.0s						
CLTN	Cedars of Leba	106.42	58	IAMs_20	IAMs_20	17 04 57.8	
	comp=Z,1µm,18.0s						
O44A	Mansfield	106.45	53	IAMs_20	IAMs_20	17 02 04.9	
	comp=Z,1µm,20.0s						
W50A	Signal Mountai	106.84	59	IAMs_20	IAMs_20	16 55 59.2	
	comp=Z,2µm,22.0s						
U49A	Red Boiling Sp	107.00	57	IAMs_20	IAMs_20	16 55 13.0	
	comp=Z,2µm,21.0s						
P46A	Rosedale	107.14	54	IAMs_20	IAMs_20	16 56 41.3	
	comp=Z,1µm,20.0s						
M44A	Midewin, Midew	107.22	52	IAMs_20	IAMs_20	17 01 43.2	
	comp=Z,2µm,18.0s						
G40A	Rib Lake	107.25	48	IAMs_20	IAMs_20	16 56 42.2	
	comp=Z,2µm,20.0s						
Y52A	Lilburn	107.29	60	IAMs_20	IAMs_20	16 57 17.1	
	comp=Z,1µm,20.0s						
T49A	Edmonton	107.41	57	IAMs_20	IAMs_20	17 00 09.7	
	comp=Z,2µm,18.0s						
EYMN	Ely	107.45	45	IAMs_20	IAMs_20	16 56 18.1	
	comp=Z,2µm,21.0s						
BLO	Bloomington	107.46	55	IAMs_20	IAMs_20	16 55 10.9	
	comp=Z,2µm,22.0s						
SFIN	Lafayette	107.51	53	IAMs_20	IAMs_20	16 55 58.9	
	comp=Z,2µm,22.0s						
K43A	Burlington	107.52	51	IAMs_20	IAMs_20	16 55 48.9	
	comp=Z,2µm,21.0s						
CPCT	Cooper Cave	107.54	59	IAMs_20	IAMs_20	16 56 41.5	
	comp=Z,2µm,20.0s						
GOGA	Godfrey	107.57	61	IAMs_20	IAMs_20	16 56 19.8	
	comp=Z,2µm,22.0s						
L44A	Lake County Fo	107.61	51	IAMs_20	IAMs_20	16 55 41.4	
	comp=Z,2µm,21.0s						
255A	Hazlehurst	107.78	63	IAMs_20	IAMs_20	16 54 59.6	
	comp=Z,1µm,18.0s						
W52A	Murphy	107.85	59	IAMs_20	IAMs_20	16 56 02.9	
	comp=Z,2µm,22.0s						
R49A	Shelbyville	108.11	56	IAMs_20	IAMs_20	16 55 59.3	
	comp=Z,2µm,21.0s						
TKL	Tuckaleechee C	108.18	59	IAMs_20	IAMs_20	17 04 31.5	
	comp=Z,2µm,18.0s						
COWI	Conover	108.25	47	IAMs_20	IAMs_20	16 57 29.7	
	comp=Z,2µm,20.0s						
L46A	Eue Claire	108.67	52	IAMs_20	IAMs_20	17 03 12.5	
	comp=Z,2µm,18.0s						
TZTN	Tazewell	108.67	58	IAMs_20	IAMs_20	17 09 22.5	
	comp=Z,2µm,18.0s						
N47A	Urbana	108.68	53	IAMs_20	IAMs_20	16 57 16.0	
	comp=Z,2µm,21.0s						
R50A	Paris	108.73	56	IAMs_20	IAMs_20	16 57 00.6	
	comp=Z,2µm,20.0s						
F42A	Maple Grove Fa	108.78	48	IAMs_20	IAMs_20	16 55 43.7	
	comp=Z,2µm,21.0s						
HODGE	Hodges	108.81	61	IAMs_20	IAMs_20	16 56 43.5	
	comp=Z,1µm,22.0s						
S51A	Beattyville	109.04	57	IAMs_20	IAMs_20	16 55 44.0	
	comp=Z,2µm,20.0s						
J45A	Montague	109.11	50	IAMs_20	IAMs_20	17 03 47.0	
	comp=Z,2µm,18.0s						
Z56A	Williston	109.17	62	IAMs_20	IAMs_20	16 58 16.2	
	comp=Z,2µm,21.0s						
T52A	Hallie	109.30	58	IAMs_20	IAMs_20	16 57 29.0	
	comp=Z,2µm,21.0s						
O49A	Covington	109.40	54	IAMs_20	IAMs_20	17 04 16.2	
	comp=Z,2µm,18.0s						
I45A	Fountain	109.43	50	IAMs_20	IAMs_20	16 56 21.3	
	comp=Z,2µm,19.0s						
M48A	Edgerton	109.59	53	IAMs_20	IAMs_20	17 06 20.9	
	comp=Z,2µm,18.0s						
Q51A	Peebles	109.71	56	IAMs_20	IAMs_20	16 55 56.6	
	comp=Z,2µm,21.0s						
E43A	Lone Tree Farm	109.74	47	IAMs_20	IAMs_20	16 56 26.0	
	comp=Z,2µm,21.0s						
N49A	Columbus Grove	109.77	54	IAMs_20	IAMs_20	17 01 35.8	
	comp=Z,1µm,20.0s						
U54A	Nelsons Funny	109.97	59	IAMs_20	IAMs_20	17 01 36.8	
	comp=Z,1µm,19.0s						
FCC	Fort Churchill	110.04	33	IAMs_20	IAMs_20	17 14 50.9	
	comp=Z,2µm,22.0s						
Y57A	Sumter	110.18	62	IAMs_20	IAMs_20	16 57 57.8	
	comp=Z,2µm,21.0s						
V55A	Taylorsville	110.19	59	IAMs_20	IAMs_20	17 02 49.8	
	comp=Z,2µm,18.0s						
ACSO	Alum Creek Sta	110.39	55	IAMs_20	IAMs_20	16 56 37.4	
	comp=Z,2µm,22.0s						
E44A	Grand Marais A	110.52	47	IAMs_20	IAMs_20	16 56 37.7	
	comp=Z,2µm,22.0s						
AAM	Ann Arbor	110.61	52	IAMs_20	IAMs_20	16 57 16.9	
	comp=Z,2µm,21.0s						
M50A	Fremont	110.74	53	IAMs_20	IAMs_20	16 56 29.5	
	comp=Z,1µm,22.0s						
S54A	Dingess, Beckl	110.79	57	IAMs_20	IAMs_20	16 58 21.4	
	comp=Z,2µm,21.0s						
J48A	Bridge Port	110.85	51	IAMs_20	IAMs_20	16 58 40.1	
	comp=Z,2µm,20.0s						
U56A	King	111.00	59	IAMs_20	IAMs_20	17 07 32.1	
	comp=Z,2µm,18.0s						
N51A	Ashland	111.06	54	IAMs_20	IAMs_20	17 05 60.0	
	comp=Z,2µm,18.0s						
BLA	Blacksburg	111.26	58	IAMs_20	IAMs_20	17 05 47.9	
	comp=Z,2µm,18.0s						
Y59A	Loris	111.35	62	IAMs_20	IAMs_20	17 04 02.9	
	comp=Z,2µm,19.0s						
K50A	Casco	111.49	52	IAMs_20	IAMs_20	16 57 30.0	
	comp=Z,2µm,22.0s						
H48A	Harrisville	111.62	50	IAMs_20	IAMs_20	16 58 36.2	
	comp=Z,1µm,20.0s						
V58A	Windy Hill, Pi	111.78	60	IAMs_20	IAMs_20	16 58 24.9	
	comp=Z,2µm,21.0s						
R55A	Marlinton	111.84	57	IAMs_20	IAMs_20	16 58 18.1	
	comp=Z,2µm,21.0s						
Y60A	Bolivia	111.87	62	IAMs_20	IAMs_20	16 54 32.7	
	comp=Z,2µm,19.0s						
M52A	Chesterland	111.98	54	IAMs_20	IAMs_20	17 09 26.5	
	comp=Z,1µm,18.0s						
T57A	Hurt	112.07	59	IAMs_20	IAMs_20	17 06 50.4	
	comp=Z,1µm,18.0s						
N53A	Lisbon	112.12	55	IAMs_20	IAMs_20	17 06 41.3	
	comp=Z,2µm,18.0s						
WMQ	Urumqi	112.48	309	*e*PKP	PKiKP	16 18 55.0	-0.7
WMQ				LR	LR		
	comp=Z,220nm,21.7s						
WMQ				LR	LR		
	comp=Z,560nm,24.5s						
WMQ				LR	LR		
	comp=Z,1µm,27.3s						
S57A	Dark Hollow, R	112.54	58	IAMs_20	IAMs_20	16 59 04.8	
	comp=Z,2µm,21.0s						
N54A	Moraine State	112.78	55	IAMs_20	IAMs_20	16 59 05.7	
	comp=Z,2µm,22.0s						
SC01	Santiago de lo	112.84	79	IAMs_20	IAMs_20	16 56 15.5	
	comp=Z,1µm,21.0s						
ALLY	Alegheny Colle	112.88	54	IAMs_20	IAMs_20	17 00 36.2	
	comp=Z,1µm,21.0s						
U59A	Littleton	112.97	60	IAMs_20	IAMs_20	17 03 53.5	
	comp=Z,2µm,19.0s						
ERPA	Erie	113.14	53	IAMs_20	IAMs_20	17 10 49.9	
	comp=Z,1µm,18.0s						
S58A	Poland Farm, P	113.17	59	IAMs_20	IAMs_20	17 07 47.4	
	comp=Z,2µm,18.0s						
M54A	Oil Creek Stat	113.18	54	IAMs_20	IAMs_20	17 07 21.2	
	comp=Z,2µm,18.0s						
R58B	Mineral	113.41	58	IAMs_20	IAMs_20	17 10 10.9	
	comp=Z,1µm,18.0s						
P57A	Homestead Farm	113.78	57	IAMs_20	IAMs_20	17 04 07.3	
	comp=Z,2µm,18.0s						
M55A	Ridgway	113.82	54	IAMs_20	IAMs_20	17 08 07.0	
	comp=Z,2µm,19.0s						
CBN	Corbin Frederi	113.86	58	IAMs_20	IAMs_20	16 59 22.9	
	comp=Z,1µm,22.0s						
BDFB	Brasilia	114.20	125	PKKPbc	PKKPbc	16 29 46.1	+6.6
	comp=Z,4.2nm,0.6s,baz=75,slow=5.0,SNR=4.8						
BDFB	Brasilia	114.20	125	IAMs_20	IAMs_20	16 59 49.3	
	comp=Z,2µm,22.0s						
WVNY	West Valley, N	114.20	53	IAMs_20	IAMs_20	16 59 58.1	
	comp=Z,1µm,21.0s						
M56A	Emporium	114.24	55	IAMs_20	IAMs_20	17 00 21.3	
	comp=Z,2µm,21.0s						
DGZ	Jazzator, Alta	114.33	315	⇓*i*PKIKP	PKPdf	16 18 58.0	-1.2
J54A	Appleton	114.42	53	IAMs_20	IAMs_20	17 04 48.8	
	comp=Z,1µm,20.0s						
SADO	Sadowa	114.49	51	IAMs_20	IAMs_20	17 06 16.3	
	comp=Z,2µm,18.0s						
MEDO	Medina	114.52	53	IAMs_20	IAMs_20	17 04 47.4	
	comp=Z,1µm,20.0s						
SDMD	Soldier's Deli	114.62	57	IAMs_20	IAMs_20	17 00 11.7	
	comp=Z,1µm,21.0s						
RES	Resolute Bay	114.77	17	IAMs_20	IAMs_20	17 00 08.9	
	comp=Z,1µm,20.0s						
L56A	Greenwood	114.87	54	IAMs_20	IAMs_20	17 02 24.9	
	comp=Z,1µm,19.0s						
J55A	Hilton	115.00	53	IAMs_20	IAMs_20	17 05 13.1	
	comp=Z,2µm,19.0s						
MVL	Millersville	115.15	57	IAMs_20	IAMs_20	16 59 47.7	
	comp=Z,2µm,20.0s						
DELO	Deloro Mine	115.47	51	IAMs_20	IAMs_20	17 00 42.3	
	comp=Z,1µm,21.0s						
P60A	Greenville	115.63	57	IAMs_20	IAMs_20	17 05 31.3	
	comp=Z,2µm,19.0s						
J56A	Wolcott	115.68	53	IAMs_20	IAMs_20	17 05 33.0	
	comp=Z,1µm,20.0s						
PECO	Prince Edward	115.75	52	IAMs_20	IAMs_20	17 04 22.9	
	comp=Z,2µm,19.0s						

PLVO	Plevna	115.97	51	IAMs_20	IAMs_20	17 01 27.6	
	comp=Z,1µm,21.0s						
BINY	Binghamton	116.01	54	IAMs_20	IAMs_20	17 00 41.2	
	comp=Z,2µm,22.0s						
P61A	Hammonton	116.22	57	IAMs_20	IAMs_20	16 59 24.0	
	comp=Z,2µm,22.0s						
J57A	Williamstown	116.32	53	IAMs_20	IAMs_20	17 02 48.0	
	comp=Z,2µm,21.0s						
SJG	San Juan	116.33	83	IAMs_20	IAMs_20	16 58 15.1	
	comp=Z,1µm,22.0s						
K58A	Earlville	116.40	54	IAMs_20	IAMs_20	17 09 13.4	
	comp=Z,2µm,18.0s						
L59A	Walton	116.69	54	IAMs_20	IAMs_20	17 00 27.1	
	comp=Z,2µm,22.0s						
J58A	Remsen	116.81	53	IAMs_20	IAMs_20	17 14 00.0	
	comp=Z,1µm,18.0s						
ZAA0	Zalesovo Array	116.88	319		PKPdf	16 19 01.7	-2.1
ZALV	Zalesovo Beam	116.88	319	PKP	PKPdf	16 19 02.5	-1.3
	comp=Z,6.8nm,0.8s,baz=154,slow=1.7,SNR=17						
ZALV	Zalesovo Beam	116.88	319		PKPdf	16 19 01.3	-2.4
OPO	Ambohidratompo	116.94	228	PKP	PKPdf	16 19 04.9	-0.3
	comp=Z,5.4nm,0.7s,baz=170,slow=3.8,SNR=7.7						
MK31	Makanchi Array	116.95	311	PKIKP	PKPdf	16 19 03.1	-1.1
MK31	Makanchi Array	116.95	311		PKPdf	16 19 03.1	-1.1
MKAR	Makanchi Array	116.95	311	PKP	PKPdf	16 19 03.3	-0.9
	comp=Z,11nm,0.8s,baz=84,slow=1.7,SNR=38						
MKAR				PKKP	PKKPdf	16 29 54.0	-3.9
	comp=Z,0.9nm,0.9s,baz=266,slow=4.9,SNR=4.1						
MKAR	Makanchi Array	116.95	311		PKPdf	16 19 02.9	-1.2
MAKZ	Makanchi	117.16	311	PKIKP	PKPdf	16 19 01.1	-3.5
J59A	Piesco	117.39	53	IAMs_20	IAMs_20	17 05 48.3	
	comp=Z,1µm,20.0s						
SUR	Sutherland	117.54	197	PKP	PKPdf	16 19 05.7	-0.4
	comp=Z,9.6nm,0.8s,baz=97,slow=2.6,SNR=7.0						
NRIK	Noril'sk	117.88	336	PKP	PKPdf	16 19 04.7	-0.6
	comp=Z,7.8nm,0.8s,baz=96,slow=4.2,SNR=22						
PDGK	Podgornoye	118.10	306	PKIKP	PKPdf	16 19 05.3	-1.3
FRNY	Flat Rock	118.34	52	IAMs_20	IAMs_20	17 02 40.3	
	comp=Z,2µm,21.0s						
QUA2	Belchertown	118.65	55	IAMs_20	IAMs_20	17 08 19.1	
	comp=Z,2µm,19.0s						
SABA	Saba	118.69	84	IAMs_20	IAMs_20	17 00 00.9	
	comp=Z,1µm,22.0s						
VT1	Waterbury	118.81	53	IAMs_20	IAMs_20	17 17 08.9	
	comp=Z,1µm,18.0s						
SEUS	St. Eustatius	118.87	85	IAMs_20	IAMs_20	17 00 30.7	
	comp=Z,994nm,20.0s						
HNH	Hanover	119.01	53	IAMs_20	IAMs_20	17 01 33.3	
	comp=Z,1µm,20.0s						
LBNH	Lisbon	119.38	53	IAMs_20	IAMs_20	17 03 24.9	
	comp=Z,1µm,22.0s						
BOSA	Boshof	119.74	203	i	PKPdf	16 19 05.0	-5.3
	baz=270,slow=11						
BOSA				⇑iP	PKPdf	16 19 05.0	-5.3
BOSA	Boshof	119.74	203	PKP	PKPdf	16 19 11.1	+0.7
	comp=Z,16nm,1.0s,baz=88,slow=2.6,SNR=9.9						
BOSA	Boshof	119.74	203	i	PKPdf	16 19 05.0	-5.3
	baz=270,slow=11						
BOSA				⇑iP	PKPdf	16 19 05.0	-5.3
BOSA	Boshof	119.74	203		PKPdf	16 19 10.9	+0.5
KSH	Kashi	119.81	302	PKP	PKiKP	16 19 10.8	+0.7
KSH				PP	PP	16 20 39.1	+5.0
KSH				SKS	SKSdf	16 26 17.8	-2.4
KSH				SKKS	SKKSac	16 27 27.8	-4.0
KSH				AMB	AMB		
	comp=Z,200nm,10.3s						
KSH				LR	LR		
	comp=Z,500nm,14.6s						
KSH				LR	LR		
	comp=Z,920nm,20.9s						
KSH				LR	LR		
	comp=Z,980nm,20.1s						
H62A	Milan	119.98	53	IAMs_20	IAMs_20	17 03 29.9	
	comp=Z,1µm,20.0s						
KURK	Kurchatov	120.07	315	c iPKIKP	PKPdf	16 19 09.0	-1.0
KURBB	Kurchatov Arra	120.12	315	PKIKP	PKPdf	16 19 09.0	-1.0
ULHL	Ulahol	120.20	305	P	PKPdf	16 19 10.7	-0.1
	SNR=19						
I63A	Otisfield	120.29	53	IAMs_20	IAMs_20	17 18 01.1	
	comp=Z,1µm,18.0s						
KZA	Kyzart	120.89	304	P	PKPdf	16 19 12.5	+0.1
	SNR=15						
WVL	Waterville	121.03	53	IAMs_20	IAMs_20	17 20 13.7	
	comp=Z,1µm,18.0s						
TULEG	Thule	121.31	15		PKPdf	16 19 10.7	-0.9
TULEG				IAMs_20	IAMs_20	17 04 23.4	
	comp=Z,2µm,19.0s						
CHMS	Chumysh	121.42	305	P	PKPdf	16 19 12.7	-0.2
	SNR=10						
UCH	Uchtor	121.45	304	P	PKPdf	16 19 13.6	+0.1
	SNR=26						
AAK	Ala-Archa	121.54	305	P	PKPdf	16 19 13.3	-0.1
	SNR=5.2						
AAK	Ala-Archa	121.54	305	d iPKIKP	PKPdf	16 19 13.2	-0.1
USP	Ospenovka	121.65	306	P	PKPdf	16 19 13.2	-0.2
	SNR=14						
AML	Almayashu	122.03	304	P	PKPdf	16 19 14.4	-0.1
	SNR=31						
EKS2	Erkin-Say	122.07	305	P	PKPdf	16 19 14.2	-0.1
	SNR=15						
ARSB	Arslanbob	122.41	303	IAMs_20	IAMs_20	17 10 44.6	
	comp=Z,962nm,21.0s						
EMMW	East Machias	122.61	53	IAMs_20	IAMs_20	17 05 51.4	
	comp=Z,1µm,21.0s						
LBTB	Lobatse	122.91	205	PKP	PKPdf	16 19 16.2	-0.3
	comp=Z,3.4nm,0.8s,baz=145,slow=4.4,SNR=4.8						
SCHQ	Schefferville	123.92	41	PKP	PKPdf	16 19 16.9	-0.4
	comp=Z,5.7nm,0.9s,baz=346,slow=3.0,SNR=7.5						
SCHQ	Schefferville	123.92	41		PKPdf	16 19 17.3	0.0
KK31	Karatay Array	124.51	305	PKIKP	PKPdf	16 19 17.9	-0.9
KK31	Karatay Array	124.51	305		PKPdf	16 19 17.9	-0.9
KKAR	Karatay Array	124.51	305	PKIKP	PKPdf	16 19 17.9	-0.9
KKAR	Karatay Array	124.51	305		PKPdf	16 19 17.9	-0.9
LMN	Caledonia Moun	124.61	52		PKPdf	16 19 17.9	-0.9
KULLO	Kullorsuaq	124.65	16	i P	PKPdf	16 19 17.6	-0.5
KULLO	Kullorsuaq	124.65	16	i PKIKP	PKPdf	16 19 17.6	-0.5
BRVK	Borovoye	125.41	317	c iPKIKP	PKPdf	16 19 19.3	-0.9
NOR	Nord	125.84	4	i P	PKPdf	16 19 19.8	-0.5
NOR	Nord	125.84	4	i PKIKP	PKPdf	16 19 19.8	-0.5
MATP	Matopo	125.85	210	i P	PKPdf	16 19 12.6	-10
MATP	Matopo	125.85	210	i P	PKPdf	16 19 12.6	-10
GBN	Guysborough	126.87	53		PKPdf	16 19 22.6	-0.6
KBS	Kingsbay	128.91	358	epPKPdf	PKiKP	16 19 29.5	+2.6
SPA0	Spitsbergen Ar	129.45	356	ePKPdf	PKPdf	16 19 26.6	-0.7
WBK	Wadi Bani Khal	129.50	277	P	SKPbc	16 22 48.5	-0.3
MHTO	MHTO	129.86	275	P	PKPdf	16 19 29.9	+0.3
	SNR=9.5						
MHTO				P	PKPdf	16 19 29.9	+0.3
	SNR=9.5						
SOCY	Socotra	129.96	262	IAMs_20	IAMs_20	17 07 05.8	
	comp=Z,2µm,22.0s						
WSAR	Wadi Sarin	130.00	278	P	PKPdf	16 19 30.6	+0.8
	SNR=6.2						
WSAR	Wadi Sarin	130.00	278	P	SKPbc	16 22 50.3	-0.3
DAG	Danmarks Havn	130.15	6	i P	PKPdf	16 19 27.0	-1.5
DAG	Danmarks Havn	130.15	6	i PKIKP	PKPdf	16 19 27.0	-1.5
JMDO	Jabal Madar	130.19	276	P	PKPdf	16 19 30.9	+0.6
	SNR=6.3						
JMDO				P	PKPdf	16 19 30.9	+0.6
	SNR=6.3						
JMDO	Jabal Madar	130.19	276	P	SKPbc	16 22 50.1	-1.2
SUMG	Summit	130.24	15	i P	PKiKP	16 19 30.7	+0.5
SUMG	Summit	130.24	15	i PKIKP	PKiKP	16 19 30.7	+0.5
SMDO	Samad	130.45	277	P	PKPdf	16 19 30.3	-0.5
	SNR=11						
SMDO				P	PKPdf	16 19 30.3	-0.5
	SNR=11						
SMDO	Samad	130.45	277	P	SKPbc	16 22 52.4	+0.2
	SNR=8.9						
LSZ	Lusaka	130.48	213	PKP	PKPdf	16 19 32.5	+1.3
	comp=Z,4.5nm,0.7s,baz=53,slow=2.1,SNR=7.7						
LSZ				PP	PP	16 21 46.2	+1.8
	comp=Z,1.2nm,0.6s,baz=167,slow=6.0,SNR=4.0						
LSZ				SKPbc	SKPab	16 22 53.5	+0.9
	comp=Z,26nm,1.1s,baz=155,slow=2.9,SNR=13						
LSZ	Lusaka	130.48	213	PKIKP	PKiKP	16 19 33.1	+1.1
LSZ						16 21 46.2	
LSZ				MLR	MLR		
	comp=Z,1µm,21.0s						
LSZ	Lusaka	130.48	213		PKiKP	16 19 33.1	+1.1
LSZ	Lusaka	130.48	213		SKPab	16 22 53.8	+1.2
LSZ	Lusaka	130.48	213	IAMs_20	IAMs_20	17 09 05.9	
	comp=Z,1µm,21.0s						
BIDO	Bidbid	130.52	278	P	PKPdf	16 19 31.6	+0.8
	SNR=6.2						
BIDO				P	PKPdf	16 19 31.6	+0.8
	SNR=6.2						
SVE	Sverdlovsk	130.64	322	⇓iPKIKP	PKiKP	16 19 31.0	+0.1
SVE				pmax	pmax		
	comp=Z,20nm,1.1s						
SVE				MLR	MLR		
	comp=Z,976nm,22.0s						
HSPB	Hornsund (broa	130.64	356	ePKPdf	PKPdf	16 19 29.6	+0.1
TSUM	Tsumeb	130.93	198	PKP	PKPdf	16 19 32.4	+0.4
	comp=Z,4.2nm,0.6s,baz=191,slow=1.8,SNR=6.3						
TSUM				PP	PP	16 21 46.4	-0.4
	comp=Z,5.2nm,0.9s,baz=172,slow=8.4,SNR=4.6						
TSUM				SKPbc	SKPbc	16 22 55.1	+0.8
	comp=Z,15nm,1.0s,baz=176,slow=3.8,SNR=8.8						
TSUM	Tsumeb	130.93	198		SKPbc	16 22 55.8	+1.6
TSUM	Tsumeb	130.93	198		PKPdf	16 19 31.9	-0.1
TSUM	Tsumeb	130.93	198	IAMs_20	IAMs_20	17 17 37.8	
	comp=Z,1µm,20.0s						
BSY	Bisya	131.10	277	P	PKPdf	16 19 32.1	+0.1
	SNR=8.1						
BSY				P	PKPdf	16 19 32.1	+0.1
	SNR=8.1						
BSY	Bisya	131.10	277	P	SKPbc	16 22 54.7	+0.1
	SNR=7.5						
HOQ	Hoqain	131.25	278	P	PKPdf	16 19 31.6	-0.6
	SNR=7.4						
HOQ				P	PKPdf	16 19 31.6	-0.6
	SNR=7.4						
HOQ	Hoqain	131.25	278	P	SKPbc	16 22 55.2	+0.1
	SNR=11						
DMTO	DMTO	131.37	269	P	PKPdf	16 19 33.0	+0.4
DMTO				P	PKPdf	16 19 33.0	+0.4
ARU	Arti	131.84	322	d iPKIKP	PKPdf	16 19 32.6	+0.3
ARU				MLR	MLR		
	comp=Z,1µm,20.0s						
ARQ	Araqi	131.87	277	P	PKPdf	16 19 33.7	+0.3
	SNR=6.0						
ARQ				P	PKPdf	16 19 33.7	+0.3
	SNR=6.0						
ARQ	Araqi	131.87	277	P	SKPbc	16 22 57.7	+0.3
	SNR=6.6						
ABKAR	Akbulak array	132.04	312		PKPdf	16 19 32.9	0.0
SOHO	SOHO	132.10	278	P	PKPdf	16 19 33.7	-0.1
	SNR=15						
SOHO				P	PKPdf	16 19 33.7	-0.1
	SNR=15						
SOHO	SOHO	132.10	278	P	SKPbc	16 22 58.2	+0.1
	SNR=10						
WHFO	Wadi Hawf	132.49	269	P	PKPdf	16 19 35.0	+0.2
	SNR=5.2						
WHFO				P	PKPdf	16 19 35.0	+0.2
	SNR=5.2						
HATD	Hatta, Dubai	132.64	279	P	PKPdf	16 19 35.0	+0.2
	SNR=11						
HATD				P	PKPdf	16 19 35.0	+0.2
	SNR=11						
HATD	Hatta, Dubai	132.64	279	P	SKPbc	16 23 00.6	+0.6
ASHO	Ashiyiah	132.67	279	P	PKPdf	16 19 34.7	-0.2
	SNR=8.8						
ASHO				P	PKPdf	16 19 34.7	-0.2
	SNR=8.8						
ASHO	Ashiyiah	132.67	279	P	SKPbc	16 23 00.4	+0.2
	SNR=9.5						
ABTO	Aybut	132.69	268	P	PKPdf	16 19 34.8	-0.3
	SNR=5.3						
ABTO				P	PKPdf	16 19 34.8	-0.3
	SNR=5.3						
ASHT	Ashkhabad	133.13	297	IAMs_20	IAMs_20	17 20 36.6	
	comp=Z,901nm,22.0s						
AKTO	Aktyubinsk	133.16	314	PKIKP	PKPdf	16 19 35.0	0.0
GEYT	Alibeck	133.34	297	PKhKP	PKPpre	16 19 26.2	
	comp=Z,1.8nm,0.8s,baz=226,slow=8.1,SNR=5.0						
GEYT				PKP	PKiKP	16 19 37.4	+0.4
	comp=Z,11nm,0.9s,baz=248,slow=1.6,SNR=18						
GEYT				SKPbc	SKPbc	16 23 01.9	-0.1
	comp=Z,11nm,1.1s,baz=22,slow=1.6,SNR=12						
GEYT	Alibeck	133.34	297		SKPbc	16 23 03.0	+0.9
GYA0B	ALIBECK ARRAY	133.34	297		PKPdf	16 19 35.5	-0.3
GYA0B				IAMs_20	IAMs_20	17 22 33.0	
	comp=Z,1µm,20.0s						
HAMF	Hammerfest	135.82	350	ePKPdf	PKPdf	16 19 39.1	-0.2
KMBO	Kilima Mbogo	136.16	234	PKP	PKPdf	16 19 43.2	+1.1
	comp=Z,10nm,1.1s,baz=105,slow=7.1,SNR=6.0						
KMBO				SKPbc	SKPbc	16 23 13.2	+1.1
	comp=Z,12nm,1.1s,baz=125,slow=1.9,SNR=7.4						
KMBO	Kilima Mbogo	136.16	234		SKPbc	16 23 14.9	+2.8
KMBO	Kilima Mbogo	136.16	234	IAMs_20	IAMs_20	17 15 31.6	
	comp=Z,797nm,20.0s						
PRGR	Permogore	136.22	332	ePKIKP	PKPdf	16 19 33.9	-6.4
PRGR				pmax	pmax		
	comp=Z,15nm,0.8s						
APA	Apatity	136.46	344	⇓iPKIKP	PKiKP	16 19 45.1	+2.8
APA				pmax	pmax		
	comp=Z,11nm,1.0s						
APA				MLR	MLR		
	comp=Z,1µm,21.0s						
ARCES	ARCESS Array B	136.51	349	PKhKP	PKPpre	16 19 32.1	
	comp=Z,5.6nm,0.9s,baz=17,slow=5.1,SNR=11						
ARCES				PKP	PKPdf	16 19 40.8	0.0
	comp=Z,19nm,0.8s,baz=349,slow=0.9,SNR=14						
ARCES				SKPbc	SKPbc	16 23 10.8	-0.2
	comp=Z,14nm,1.1s,baz=55,slow=4.6,SNR=5.1						
ARE0	ARCESS Array S	136.51	349	ePKPdf	PKPdf	16 19 40.2	-0.5
KTK1	Kautokeino	137.35	349	ePKPdf	PKPdf	16 19 41.8	-0.5
TRO	Tromso	137.40	352	ePKPdf	PKPdf	16 19 42.1	-0.2
TMCR	Tamitsa	137.56	338	ePKIKP	PKPdf	16 19 39.2	-3.5
TMCR				pmax	pmax		
	comp=Z,52nm,1.4s						
KLMR	Klimovskoe	139.11	334	ePKPdf	PKPdf	16 19 35.1	-11
KLMR				AMP		16 19 54.6	
	comp=Z,74nm,1.2s						
KLMR				ePP	PP	16 22 30.1	-8.7
ATD	Arta Tunnel	139.29	254	IAMs_20	IAMs_20	17 16 18.4	
	comp=Z,831nm,20.0s						
H10S3	ASCENSION HYDR	139.41	153	T	T	18 56 39.3	
	SNR=134						
H10S2	ASCENSION HYDR	139.41	153	T	T	18 56 04.1	
	SNR=26						
LOF	Lofoten	139.43	354	ePKPdf	PKPdf	16 19 45.8	-0.2
STEI	Steigen	139.45	353	ePKPdf	PKPdf	16 19 47.2	+1.1
H10N3	ASCENSION HYDR	140.48	152	T	T	18 56 58.2	
	baz=203,slow=75,SNR=163						
H10N1	ASCENSION HYDR	140.48	152	T	T	18 57 28.8	
	baz=203,slow=75,SNR=132						
H10N2	ASCENSION HYDR	140.50	152	T	T	18 57 12.1	
	baz=203,slow=75,SNR=190						
MBAR	Mbarara	141.01	228	PKP	PKPdf	16 19 52.3	+1.4
	comp=Z,3.1nm,0.2s,baz=85,slow=3.4,SNR=5.9						
MBAR				SKPbc	SKPbc	16 23 27.2	+1.5
	comp=Z,4.6nm,0.2s,baz=81,slow=7.1,SNR=5.1						
KONS	Konsvik	141.06	354	ePKPdf	PKPdf	16 19 48.8	-0.3
MOR8	Moi Rana	141.24	353	epPKPdf	PKiKP	16 19 51.7	-0.5
MAK	Makhachkala	141.32	305	eP	Pdif	16 17 06.9	-1.5
MAK				e		16 22 53.3	
MAK				pmax	pmax		
	comp=Z,411nm,1.5s						
AKT	Akhty	141.33	302	ePKHKP	PKPpre	16 19 43.3	
AKT				pmax	pmax		
	comp=Z,29nm,0.8s						
MOS	Moscow	142.89	328	ePKHKP	PKPpre	16 19 47.4	
MOS				pmax	pmax		
	comp=Z,83nm,1.3s						
VRH	Novokhopyorsk	142.92	319	ePKIKP	PKPdf	16 19 49.8	-3.0
VRH				pmax	pmax		
	comp=Z,30nm,0.9s						
NSS	Namsos	143.09	354	ePKPdf	PKPdf	16 19 52.4	-0.4
FIA1	FINESS Array S	143.25	342		PKPbc	16 19 49.0	-1.2
FINES	FINESS Array B	143.25	342	PKhKP	PKPbc	16 19 49.4	-0.8
	comp=Z,19nm,0.7s,baz=59,slow=3.1,SNR=54						
FINES	FINESS Array B	143.25	342	PKHKP	PKPbc	16 19 48.7	-1.5
FINES	FINESS Array B	143.25	342		PKPbc	16 19 48.7	-1.5
OBN	Obninsk	143.74	328	⇑P	PKPab	16 19 51.3	+0.3
OBN	Obninsk	143.74	328	⇑iPKIKP	PKPab	16 19 50.9	-0.1
OBN				e		16 23 08.3	
OBN				eSS	SS	16 41 52.3	+4.7
OBN				pmax	pmax		
	comp=Z,95nm,0.7s						
OBN				MLR	MLR		
	comp=Z,586nm,21.0s						
LPSR	Galich'ya Gora	143.86	323	ePKIKP	PKPbc	16 19 52.1	-0.1
LPSR				pmax	pmax		
	comp=Z,50nm,0.8s						
ZEI	Tsey	143.97	305	i PKHKP	PKPpre	16 19 38.3	
ZEI				pmax	pmax		
	comp=Z,62nm,1.6s						
NCK	Nalchik	144.05	306	⇓ePKIKP	PKPbc	16 19 53.6	+0.4
NCK				MLR	MLR		
	comp=Z,674nm,24.0s						
GOF	Gofitskoye	144.08	309	⇑ePKIKP	PKPab	16 19 53.1	+0.4
GOF				pmax	pmax		
	comp=Z,64nm,0.8s						
VORR	Voronezh	144.14	321	ePKIKP	PKPbc	16 19 54.0	+0.9
VORR				pmax	pmax		
	comp=Z,250nm,1.6s						
VSR	Storozhevoye	144.37	320	c ePKIKP	PKPab	16 19 53.1	-0.4
KBZ	Khabaz	144.50	307	PKP	PKPab	16 19 54.0	-0.2
	comp=Z,31nm,1.1s,baz=58,slow=1.9,SNR=30						
KBZ	Khabaz	144.50	307	c iPKIKP	PKPab	16 19 54.4	+0.2
AKH	Akhalkalaki	144.50	303	IAMs_20	IAMs_20	17 30 47.9	
	comp=Z,738nm,20.0s						
TBLU	Trondheim	144.51	354	ePKPdf	PKPbc	16 19 54.6	+0.7
KIV	Kislovodsk	144.59	307	⇓P	PKPbc	16 19 55.5	+0.6
KIV	Kislovodsk	144.59	307	i PKIKP	PKPab	16 19 54.5	-0.3
KIV				pmax	pmax		
	comp=Z,184nm,1.0s						
NEY	Neytrino	144.72	306	d ePKIKP	PKPbc	16 19 56.1	+0.6
MOL	Molde	145.38	356	ePKPdf	PKPbc	16 19 56.6	-0.1
VSU	Vasula	145.44	338	eP	PKPbc	16 19 56.6	-0.4
VSU	Vasula	145.44	338	c iPKIKP	PKPbc	16 19 56.6	-0.4
DOMB	Dombas	145.80	355	ePKPab	PKPdf	16 19 57.7	+0.1
NC303	NORSAR Array S	146.38	353	PKPdf	PKPdf	16 19 59.3	+0.7
NC204	NORSAR Array S	146.40	353	PKPdf	PKPdf	16 19 59.1	+0.4
NC405	NORSAR Array S	146.45	352		PKPbc	16 20 00.3	+0.2
FOO	Floro	146.46	358	ePKPab	PKPbc	16 20 00.1	+0.1
NB201	NORSAR Array S	146.56	353		PKPbc	16 20 00.1	-0.4
NOA	NORSAR Array B	146.58	353	PKPbc	PKPdf	16 19 59.8	+0.8
	comp=Z,51nm,0.9s,baz=14,slow=4.5,SNR=74						
NBO00	NORSAR Array S	146.64	353		PKPbc	16 20 00.3	-0.4
SOC	Sochi	146.77	308	ePKIKP	PKPdf	16 19 59.9	+0.1
SOC				e		16 23 27.8	
SOC				ePPP	PPP	16 26 56.1	
SOC				pmax	pmax		
	comp=Z,78nm,1.0s						
SOC				MLR	MLR		
	comp=Z,726nm,21.0s						
NAO01	NORSAR Array S	146.81	353		PKPbc	16 20 00.8	-0.3
NC602	NORSAR Array S	146.84	352	ePKPbc	PKPdf	16 20 00.6	+1.3
NC602	NORSAR Array S	146.84	352		PKPdf	16 20 00.5	+1.2
HYA	Hoyanger	146.85	357	ePKPbc	PKPdf	16 20 00.4	+1.1
SUE	Sulen	147.00	358	ePKPbc	PKPbc	16 20 01.7	+0.1
SKAR	Skarslia	147.21	355	epPKPdf	PKPbc	16 20 02.5	+0.2
SLIT	Slitere, Latvi	147.50	341	eP	PKPbc	16 20 02.5	-0.6
ASK	Askoy	147.57	358	ePKPbc	PKPbc	16 20 02.5	-0.7
BER	Bergen	147.66	358	epPKPdf	PKPbc	16 20 03.7	+0.2
IZAR	Zarasai	147.70	335	eP	PKPbc	16 20 03.7	-0.1
OSL	Oslo	147.72	353	ePKPbc	PKPbc	16 20 03.0	-0.6
IDID	Didziasalis	147.85	334	eP	PKPbc	16 20 04.6	+0.5
ISAL	Salakas	147.88	335	eP	PKPbc	16 20 04.1	-0.1
MICGM	Minsk	147.99	332	⇑eP	PKPbc	16 20 04.0	-0.5
MICGM				PM		16 20 07.0	
	comp=Z,1.0nm,1.5s						
MNK	Minsk	147.99	332	ePKP2	PKPbc	16 20 04.0	-0.5
MNK				pmax	pmax		
	comp=Z,980nm,1.5s						
ODD1	Odda	148.08	357	epPKPdf	PKPbc	16 20 04.6	-0.1
KONO	Kongsberg	148.12	354	epPKPdf	PKPbc	16 20 04.8	0.0
KONO	Kongsberg	148.12	354	PKP2	PKPbc	16 20 04.4	-0.3
KONO	Kongsberg	148.12	354		PKPbc	16 20 04.3	-0.3
NACGM	Naroch	148.13	334	ePKP	PKPbc	16 20 04.0	-0.9
NACGM				eSKS	SKSdf	16 27 12.0	+4.2
NACGM				eSKKS		16 28 48.0	
NACGM				eLQ	LQ	17 08 20.0	
NACGM				eLR	LR	17 17 00.0	
BLS5	Blasjo	148.58	357	ePKPbc	PKPbc	16 20 05.3	-0.7
PABE	Paberze	148.71	337	eP	PKPbc	16 20 05.8	-0.6
KMY	Karmoy	148.84	358	ePKPbc	PKPbc	16 20 06.4	-0.2
PBUR	Paburge	148.96	339	eP	PKPbc	16 20 06.7	-0.3
STAV	Stavanger	149.10	357	ePKPbc	PKPbc	16 20 06.7	-0.6
LEWI	Lewis, Hebride	149.16	10	eP	PKPbc	16 20 06.6	-0.9
HOMB	Homborsund	149.58	354	ePKPbc	PKPbc	16 20 08.9	+0.4
SNART	Snartemo	149.61	356	ePKPbc	PKPbc	16 20 08.7	+0.2
AKASG	Malin Array Be	149.94	326	PKP	PKPdf	16 20 03.9	-0.8
	comp=Z,91nm,0.8s,baz=42,slow=3.3,SNR=52						
AKASG				PKPbc	PKPbc	16 20 09.1	-0.5
	comp=Z,118nm,0.9s,baz=43,slow=3.1,SNR=76						
AKBB	Malin Array Si	149.94	326	PKP2	PKPbc	16 20 08.9	-0.7
AKBB	Malin Array Si	149.94	326		PKPdf	16 20 03.8	-0.9
AKBB				PKPbc	PKPbc	16 20 08.9	-0.7
GAZ	Gaziantep	149.94	296		PKPbc	16 20 09.7	-0.5
GAZ				IAMs_20	IAMs_20	17 27 29.6	
	comp=Z,1µm,22.0s						
KAC	Achnashellach	150.01	9	eP	PKPbc	16 20 08.9	-0.7
SIM	Simferopol'	150.11	313	c iPKP2	PKPbc	16 20 10.4	+0.2
SIM				pmax	pmax		
	comp=Z,123nm,0.9s						
KPL	Plockton	150.12	9	eP	PKPbc	16 20 09.4	-0.3
SUW	Suwalki	150.17	336	ePKP	PKPbc	16 20 10.2	+0.2
SUW	Suwalki	150.17	336	ePKP2	PKPbc	16 20 10.2	+0.2
SUW	Suwalki	150.17	336		PKPbc	16 20 09.6	-0.5
DIKM	Dikmen	150.47	306	⇑P	PKPbc	16 20 10.5	-0.7
ASF	Jabal al Asfar	150.49	286	PKP	PKPdf	16 20 07.0	+0.7
	comp=Z,22nm,1.0s,baz=161,slow=2.6,SNR=3.8						
ASF				PKPbc	PKiKP	16 20 12.6	+0.2
	comp=Z,37nm,0.9s,baz=122,slow=0.2,SNR=40						
ASF	Jabal al Asfar	150.49	286	PKIKP	PKPdf	16 20 07.0	+0.7
GOET	G??ttrup	150.73	353	i P	PKPab	16 20 17.1	-1.2
	comp=Z,333nm,0.9s						
DRUM	Mains of Drumt	150.92	6	eP	PKPbc	16 20 11.3	-0.4
LAWE	Loch Awe, Argy	151.20	10	eP	PKPbc	16 20 12.0	-0.4
ELO	Logie Almond	151.22	8	eP	PKPbc	16 20 12.3	-0.2
INVG	Invergeldie, C	151.22	8	eP	PKPbc	16 20 11.6	-0.8
EDU	Dundee	151.22	7	eP	PKPbc	16 20 12.2	-0.3
HWQ	Hawqa	151.24	291	eP	PKPbc	16 20 13.5	+0.1
BZK	Bozkurt	151.27	307	⇑P	PKiKP	16 20 14.2	+0.6
RCY	Rachaya	151.37	289	eP	PKPbc	16 20 14.3	+0.6
EAB	Aberfoyle	151.42	9	eP	PKPbc	16 20 12.7	-0.2
SHBL	Chebaa	151.45	289	eP	PKPbc	16 20 14.3	+0.4
QRWL	Qaraoun	151.49	289	eP	PKiKP	16 20 14.9	+0.5
BHL	Bhannes	151.50	290	eP	PKPbc	16 20 14.3	+0.3
COP	Copenhagen	151.59	349	i P	PKPbc	16 20 13.4	+0.1
	comp=Z,77nm,0.8s						
COP	Copenhagen	151.59	349	i PKIKP	PKPbc	16 20 13.4	+0.1
COP				pmax	pmax		
	comp=Z,77nm,0.8s						
BSD	Bornholm Skovb	151.64	346	i P	PKPbc	16 20 13.5	+0.1
	comp=Z,49nm,0.8s						
BSD	Bornholm Skovb	151.64	346	i PKIKP	PKPbc	16 20 13.5	+0.1
BSD				pmax	pmax		
	comp=Z,49nm,0.8s						
MMAI	Mount Meron Ar	151.74	288	PKPbc	PKiKP	16 20 15.8	+0.8
	comp=Z,99nm,0.9s,baz=75,slow=3.6,SNR=46						
ILGA	Ilgaz	151.76	305		PKPbc	16 20 13.9	-0.6
EDI	Edinburgh	151.82	7	eP	PKPbc	16 20 13.6	-0.2
ESY	Stoneypath	151.89	7	eP	PKPbc	16 20 13.7	-0.4
SORM	Soroca	151.96	322	⇓P	PKPbc	16 20 14.0	-0.4
SORM	Soroca	151.96	322	⇓PKIKP	PKPbc	16 20 14.0	-0.4
EBL	Broad Law	151.98	7	eP	PKPbc	16 20 14.2	-0.1
EIL	Elat	152.03	281	PKPbc	PKPbc	16 20 15.8	+0.6
	comp=Z,68nm,1.0s,baz=157,slow=1.1,SNR=26						
BR131	Keskin Array S	152.19	303	PKIKP	PKPdf	16 20 07.7	-1.0
BR131						16 20 13.9	
BR131	Keskin Array S	152.19	303	PKPdf	PKPdf	16 20 07.7	-1.0
BR131					pPKPdf	16 20 13.9	-3.5
BRTR	Keskin Array B	152.19	303	PKP	PKPdf	16 20 08.6	-0.2
	comp=Z,1.4nm,0.9s,baz=333,slow=1.9,SNR=7.8						
BRTR				PKPbc	pPKPdf	16 20 14.9	-2.4
	comp=Z,21nm,0.8s,baz=144,slow=4.2,SNR=43						
BRTR	Keskin Array B	152.19	303		PKPdf	16 20 07.8	-1.0
BRTR				PKPbc	pPKPdf	16 20 14.7	-2.7
KIS	Kishinev	152.36	320	ePKP	PKPbc	16 20 15.0	-0.4
	comp=Z,180nm,1.5s						
KIS				LRM	MLR	17 34 24.0	
	comp=Z,2µm,22.0s						
KIS	Kishinev	152.36	320	ePKIKP	PKPbc	16 20 15.0	-0.4
KIS				e		16 20 28.0	
KIS				pmax	pmax		
	comp=Z,180nm,1.5s						
KIS				MLR	MLR		
	comp=Z,2µm,22.0s						
MILM	Milestii Mici	152.41	320	⇑P	PKiKP	16 20 16.6	+0.8
GAL1	Galloway	152.65	10	eP	PKPbc	16 20 15.5	-0.2
GKP	Gorka Klasztor	152.72	341	ePKP	PKPbc	16 20 16.4	+0.4
GKP	Gorka Klasztor	152.72	341	ePKIKP	PKPbc	16 20 16.4	+0.4
ANTO	Ankara	152.78	303	⇑P	PKPbc	16 20 13.6	-3.0
ANTO	Ankara	152.78	303	⇑PKIKP	PKPbc	16 20 13.6	-3.0
ANTO	Ankara	152.78	303		PKPbc	16 20 16.3	-0.3
ANTO	Ankara	152.78	303	IAMs_20	IAMs_20	17 31 21.9	
	comp=Z,881nm,21.0s						
BEL	Belsk	152.78	336	ePKP	PKiKP	16 20 17.1	+0.7
BEL	Belsk	152.78	336	ePKIKP	PKiKP	16 20 17.1	+0.7

LVV	L'vov	153.00	329	i PKIKP	PKPbc	16 20 16.2	-0.5
LVV				e		16 20 33.6	
LVV				e		16 24 06.4	
LVV				e		16 27 10.6	
LVV				ePPP	PPP	16 27 29.4	
LVV				eSSS	SSS	16 49 14.4	
LVV				MLR	MLR		
	comp=N,700nm,22.0s						
LVV				MLR	MLR		
	comp=E,700nm,22.0s						
LVV				MLR	MLR		
	comp=Z,1µm,22.0s						
EDMD	Edmundbyers	153.02	6	eP	PKPbc	16 20 14.3	-2.3
CSS	Mathiatis	153.33	293		PKPbc	16 20 17.5	-0.5
TLCR		153.34	317	⇑P	PKiKP	16 20 19.0	+1.3
TLCR		153.34	317	⇑PKIKP	PKiKP	16 20 19.0	+1.3
BSEG	Bad Segeberg	153.62	350	ePKPab	PKPab	16 20 31.0	+0.6
	baz=17,slow=4.3						
LEF	Lefka	153.67	293	⇑P	PKPbc	16 20 18.4	-0.2
HLG	Helgoland	153.67	354	ePKPab	PKPab	16 20 32.0	+1.3
	baz=17,slow=4.3						
KWP	Kalwaria Pacla	153.72	330	ePKP	PKiKP	16 20 19.9	+1.4
KWP	Kalwaria Pacla	153.72	330	PKIKP	PKPdf	16 20 10.4	-0.1
KWP	Kalwaria Pacla	153.72	330	PKPdf	PKPdf	16 20 10.4	-0.1
CFR	Carcaliu	153.75	317	⇓P	PKPbc	16 20 17.9	-0.5
CFR	Carcaliu	153.75	317	⇓PKIKP	PKPbc	16 20 17.9	-0.5
MDUB	Mudurnu	153.75	305	PKPdf	PKPdf	16 20 09.4	-1.6
MDUB					pPKPdf	16 20 18.2	-1.4
TOPG	Topolog	153.76	316	⇑P	PKiKP	16 20 19.6	+1.0
TESR	Tescani	153.86	321	⇓P	PKPab	16 20 30.7	-1.1
BIZ	Bicaz	153.90	322	⇓P	PKiKP	16 20 19.8	+0.9
BUR08	Bucovina Ar. S	153.93	324	PKPbc	PKiKP	16 20 19.5	+0.5
BURAR	Bucovina Array	153.94	324	⇑P	PKPbc	16 20 19.0	0.0
BURAR	Bucovina Array	153.94	324	⇑PKIKP	PKPbc	16 20 19.0	0.0
BURAR	Bucovina Array	153.94	324	PKPbc	PKiKP	16 20 19.9	+0.9
TIRR	Tirgusor	153.95	316	⇑P	PKiKP	16 20 20.9	+1.9
TIRR	Tirgusor	153.95	316	⇑PKIKP	PKiKP	16 20 20.9	+1.9
MFTR	Murfatlar	154.09	315	⇑P	PKiKP	16 20 21.5	+2.2
VRI	Vrincioaia	154.19	320	⇑P	PKPbc	16 20 18.2	-1.2
VRI	Vrincioaia	154.19	320	⇑PKIKP	PKPbc	16 20 18.2	-1.2
PLOR	Plostina	154.25	320	⇓P	PKPbc	16 20 19.8	+0.2
PLOR	Plostina	154.25	320	⇓PKIKP	PKPbc	16 20 19.8	+0.2
OJC	Ojcow	154.46	335	ePKP	PKiKP	16 20 21.4	+1.5
OJC	Ojcow	154.46	335	PKIKP	PKPdf	16 20 10.6	-0.9
OJC	Ojcow	154.46	335	PKPdf	PKPdf	16 20 10.6	-0.9
UZH	Uzhgorod	154.65	329	ePKIKP	PKPbc	16 20 19.1	-1.2
UZH				e		16 20 34.9	
ARCR	ARCALIA	154.73	324	⇑P	PKPbc	16 20 19.1	-1.4
CRVS	Cervenica-Dubn	154.81	331	ePKP2	PKPab	16 20 36.5	+0.7
CRVS	Cervenica-Dubn	154.81	331	ePKP	PKPab	16 20 36.5	+0.7
MLR	Muntele Rosu	154.86	320	⇑P	PKPbc	16 20 20.4	-0.6
MLR	Muntele Rosu	154.86	320	⇑PKIKP	PKPbc	16 20 20.4	-0.6
MLR	Muntele Rosu	154.86	320		PKPbc	16 20 20.1	-0.9
MLR				IAMs_20	IAMs_20	17 38 53.3	
	comp=Z,1µm,20.0s						
DOPR	Dopca	154.88	321	⇑P	PKiKP	16 20 21.9	+0.9
TRPA	Tarpa	154.90	328	⇑P	PKPdf	16 20 16.4	+4.3
RETH	Rethem/Aller,	154.92	351	ePKPab	PKPab	16 20 36.3	+0.3
	baz=17,slow=4.3						
ISP	Isparta	155.03	300	IAMs_20	IAMs_20	17 35 20.2	
	comp=Z,1µm,20.0s						
NRDL	Niedersach Rie	155.04	350	ePKPab	PKPab	16 20 37.1	+0.5
	baz=17,slow=4.3						
KSP	Ksiaz	155.14	340	ePKP	PKPdf	16 20 13.0	+0.6
KSP	Ksiaz	155.14	340	ePKIKP	PKPdf	16 20 13.0	+0.6
PRD	Provadia	155.22	314	P	PKPab	16 20 36.7	-1.0
ASSE	Asse, Remlinge	155.30	349	ePKPab	PKPab	16 20 38.6	+1.0
	baz=17,slow=4.3						
OKC	Ostrava-Krasne	155.38	336	ePKPAB	PKPab	16 20 38.3	+0.1
OKC				AMS	AMS	17 25 50.0	
	comp=Z,900nm,20.5s						
OKC	Ostrava-Krasne	155.38	336	ePKP2	PKPab	16 20 38.3	+0.1
OKC				MLR	MLR		
	comp=Z,900nm,20.5s						
VOIR		155.40	321	⇑P	PKPdf	16 20 18.9	+5.9
VOIR		155.40	321	⇑PKIKP	PKPdf	16 20 18.9	+5.9
OSTC	Ostas	155.41	340	ePKPAB	PKPab	16 20 38.7	+0.4
OSTC				AMS	AMS	17 28 50.0	
	comp=Z,900nm,21.1s						
CHVC	Chvalec	155.44	340	ePKPDF	PKPdf	16 20 00.1	-13
CHVC				ePKPAB	PKPab	16 20 39.4	+1.0
CHVC				AMS	AMS	17 37 00.0	
	comp=Z,1µm,20.9s						
LANS	Liptovska Anna	155.45	333	ePKP2	PKPab	16 20 39.8	+1.3
LANS	Liptovska Anna	155.45	333	ePKP	PKPab	16 20 39.8	+1.3
UPC	Upice	155.52	340	ePKPAB	PKPab	16 20 40.5	+1.8
UPC				AMS	AMS	17 29 20.0	
	comp=Z,1µm,21.4s						
UPC	Upice	155.52	340	ePKP2	PKPab	16 20 40.5	+1.8
UPC				MLR	MLR		
	comp=Z,1µm,21.4s						
KECS	Kecovo	155.55	331	ePKP2	PKPab	16 20 39.6	+0.6
KECS	Kecovo	155.55	331	ePKP	PKPab	16 20 39.6	+0.6
DPC	Dobruska-Polom	155.56	339	ePKPAB	PKPab	16 20 40.3	+1.3
DPC				AMS	AMS	17 34 20.0	
	comp=Z,800nm,17.4s						
DPC	Dobruska-Polom	155.56	339	ePKP2	PKPab	16 20 40.3	+1.3
DPC				MLR	MLR		
	comp=Z,800nm,17.4s						
CLL	Collm	155.61	345	ePKPdf	PKPdf	16 20 14.0	+1.0
	comp=Z,6.0nm,0.8s						
CLL				ePKPdif	sPKPdf	16 20 25.0	+0.5
	comp=Z,32nm,1.1s						
CLL				i PKPab	PKPab	16 20 40.9	+1.8
	comp=Z,43nm,1.1s						
CLL				eSS	SS	16 44 03.0	+3.8
CLL				L	L	17 30 00.0	
	comp=Z,1µm,21.6s						
CLL	Collm	155.61	345	ePKIKP	PKPdf	16 20 14.0	+1.0
CLL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CLL				pmax	pmax		
	comp=Z,43nm,1.1s						
CLL				MLR	MLR		
	comp=Z,1µm,21.6s						
CLL	Collm	155.61	345	PKPdf	PKPdf	16 20 13.0	0.0
CLZ	Clausthal	155.63	349	ePKPab	PKPab	16 20 40.0	+0.8
	baz=17,slow=4.3						
MORC	Moravsky Berou	155.65	337	⇓P	PKPdf	16 20 15.1	+1.9
MORC	Moravsky Berou	155.65	337	⇓PKIKP	PKPdf	16 20 15.1	+1.9
MORC	Moravsky Berou	155.65	337	ePKP	PKPdf	16 20 12.7	-0.5
MORC				e		16 20 39.7	
MORC	Moravsky Berou	155.65	337		PKPdf	16 20 12.5	-0.7
MORC				IAMs_20	IAMs_20	17 36 59.3	
	comp=Z,932nm,22.0s						
KRLC	Kraliky	155.65	338	AMS	AMS	17 32 10.0	
	comp=Z,1µm,21.1s						
ARR	Arges	155.67	321	⇓P	PKPdf	16 20 23.9	+10
MCH1	Michaelchurch	155.69	9	eP	PKPdf	16 20 20.2	+7.1
ELL	Elmali	155.77	298	PKIKP	PKPdf	16 20 13.2	-0.7
ELL				MLR	MLR		
	comp=Z,4µm,20.0s						
ELL	Elmali	155.77	298	PKPdf	PKPdf	16 20 13.2	-0.7
BRG	Berggiesshubel	155.78	343	ePKP	PKPdf	16 20 14.2	+1.0
	comp=Z,14nm,1.4s						
BRG				i		16 20 28.1	
	comp=Z,40nm,1.4s						
BRG				i		16 20 40.8	
	comp=Z,46nm,1.2s						
BRG				PP	PP	16 24 57.0	+41
BRG				SS	SS	16 43 57.0	-4.1
BRG	Berggiesshubel	155.78	343	ePKPab	PKPab	16 20 40.6	+0.8
	baz=17,slow=4.3						
BRG	Berggiesshubel	155.78	343	ePKIKP	PKPdf	16 20 14.2	+1.0
BRG				i		16 20 28.1	
BRG				SS	SS	16 43 57.0	-4.1
BRG				pmax	pmax		
	comp=Z,14nm,1.4s						
BRG				pmax	pmax		
	comp=Z,40nm,1.4s						
BRG				pmax	pmax		
	comp=Z,46nm,1.2s						
BRG				MLR	MLR		
	comp=N,607nm,19.2s						
BRG				MLR	MLR		
	comp=E,704nm,20.9s						
BRG				MLR	MLR		
	comp=Z,1µm,18.0s						
FBE	Freiberg	155.88	344	ePKPab	PKPab	16 20 40.7	+0.5
	baz=17,slow=4.3						
PVCC	Panska Ves	155.92	342	AMS	AMS	17 34 30.0	
	comp=Z,900nm,18.3s						
NEUB	Neuenburg	155.97	346	ePKPab	PKPab	16 20 40.9	+0.2
	baz=17,slow=4.3						
GTTG	Gottingen	155.99	349	ePKPab	PKPab	16 20 41.1	+0.4
	baz=17,slow=4.3						
VYHS	Vyhne	156.22	333	ePKP2	PKPab	16 20 42.3	+0.4
VYHS	Vyhne	156.22	333	ePKP	PKPab	16 20 42.3	+0.4
PSZ	Piszkesteto	156.24	331	⇑P	PKPab	16 20 42.8	+0.8
PSZ	Piszkesteto	156.24	331	⇑PKP2	PKPab	16 20 42.8	+0.8
PSZ	Piszkesteto	156.24	331		PKPab	16 20 41.9	-0.1
ELND	Elena	156.32	315	⇓P	PKPdf	16 20 23.5	+9.3
JAVC	Velka Javorina	156.37	335	ePKP	PKPdf	16 20 14.3	+0.1
JAVC				e		16 20 42.8	
VRAC	Vranov	156.37	337	⇑P	PKPdf	16 20 20.2	+6.1
VRAC	Vranov	156.37	337	⇑PKIKP	PKPdf	16 20 20.2	+6.1
VRAC	Vranov	156.37	337	ePKP	PKPdf	16 20 15.0	+0.9
VRAC				e		16 20 42.0	
PRU	Pruhonice	156.42	341	ePKPAB	PKPab	16 20 43.5	+0.9
PRU				AMS	AMS	17 25 20.0	
	comp=Z,1µm,25.2s						
PRU	Pruhonice	156.42	341	ePKP2	PKPab	16 20 43.5	+0.9
PRU				MLR	MLR		
	comp=Z,1µm,25.2s						
BUG	Bochum--Univer	156.45	353	ePKPab	PKPab	16 20 43.0	+0.4
	baz=17,slow=4.3						
MOX	Moxa	156.54	346	ePKPab	PKPab	16 20 43.3	+0.2
	baz=17,slow=4.3						
MOX				eL	L	17 34 30.3	
	comp=Z,779nm,22.0s						
TANN	Tannenbergstha	156.56	345	ePKPab	PKPab	16 20 43.8	+0.5
	baz=17,slow=4.3						
PLN	Plauen	156.57	345	ePKPab	PKPab	16 20 43.6	+0.4
	baz=17,slow=4.3						
GUNZ	Gunzen	156.64	345	ePKPab	PKPab	16 20 44.4	+0.8
	baz=17,slow=4.3						
SIRR	Siria	156.64	326	⇓P	PKPdf	16 20 26.4	+12
KRUC	Moravsky	156.65	337	ePKP	PKPdf	16 20 15.1	+0.6
KRUC				e		16 20 43.2	
UBBA	Unterbreizbach	156.68	349	ePKPab	PKPab	16 20 44.1	+0.6
	baz=17,slow=4.3						
WERN	Wernitzgruen	156.70	345	ePKPab	PKPab	16 20 44.3	+0.4
	baz=17,slow=4.3						
NKC	Novy Kostel	156.74	345	ePKPAB	PKPab	16 20 43.8	-0.2
NKC				AMS	AMS	17 31 40.0	
	comp=Z,1µm,22.3s						
NKC	Novy Kostel	156.74	345	ePKP2	PKPab	16 20 43.8	-0.2
NKC				MLR	MLR		
	comp=Z,1µm,22.3s						
SMOL	Smolenice	156.75	335	ePKP2	PKPab	16 20 45.2	+1.1
SMOL	Smolenice	156.75	335	ePKP	PKPab	16 20 45.2	+1.1
TREC	Trest	156.75	339	AMS	AMS	17 33 10.0	
	comp=Z,2µm,21.6s						
PLVB	Pleven	156.84	317	⇓P	PKPab	16 20 49.9	+5.2
PBCC	Pribram	156.84	342	ePKPAB	PKPab	16 20 45.1	+0.6
MODS	Modra-Piesok	156.92	335	ePKP2	PKPab	16 20 44.9	0.0
MODS	Modra-Piesok	156.92	335	ePKP	PKPab	16 20 44.9	0.0
LIC	Lamto	156.96	159	ePKIKP	PKPdf	16 20 17.2	+1.3
	comp=Z,44nm,1.2s						
MANZ	Manzenberg	157.05	345	ePKPab	PKPab	16 20 45.9	+0.5
	baz=17,slow=4.3						
ZST	Bratislava	157.13	335	ePKP2	PKPab	16 20 45.7	0.0
ZST	Bratislava	157.13	335	ePKP	PKPab	16 20 45.7	0.0
KIC	Kosan Boka	157.18	160	ePKIKP	PKPdf	16 20 17.6	+1.4
	comp=Z,18nm,1.1s						
ROTZ	Rotzenmuhle	157.23	344	ePKPab	PKPab	16 20 46.7	+0.6
	baz=17,slow=4.3						
TIC	Toumodi	157.36	159	ePKIKP	PKPdf	16 20 17.8	+1.3
MPEP	Malo Peshtene	157.39	318	P	PKPab	16 20 47.0	-0.1
DBIC	Dimbokro	157.44	159	PKP	PKPdf	16 20 17.0	+0.5
	comp=Z,5.8nm,1.0s,baz=206,slow=4.8,SNR=4.4						
DBIC	Dimbokro	157.44	159		PKPdf	16 20 15.3	-1.2
KHC	Kasperske Hory	157.46	342	ePKPDF	PKPdf	16 20 14.6	-1.0
KHC				epPKP	sPKPdf	16 20 30.5	+3.4
KHC				ePKPAB	PKPab	16 20 47.5	+0.3
KHC				AMS	AMS	17 30 30.0	
	comp=Z,2µm,23.2s						
KHC	Kasperske Hory	157.46	342	ePKIKP	PKPdf	16 20 14.6	-1.0
KHC				e		16 20 30.5	
KHC				MLR	MLR		
	comp=Z,2µm,23.2s						
KHC	Kasperske Hory	157.46	342		PKPdf	16 20 14.6	-1.0
KHC				PKPab	PKPab	16 20 47.6	+0.4
PLD	Plovdiv	157.49	314	P	PKPab	16 20 46.2	-1.3
TNS	Taunus Mts	157.50	351	ePKPab	PKPab	16 20 47.4	+0.1
	baz=17,slow=4.3						
GRA1	Grafenberg Arr	157.52	346		PKPab	16 20 47.8	+0.4
GRF	Grafenberg Arr	157.52	346	ePKPab	PKPab	16 20 47.7	+0.4
	baz=17,slow=4.3						
GRF				ePP	PP	16 24 24.3	-1.6
	baz=28,slow=5.0						
GRF				eL	L	17 32 44.6	
	comp=Z,944nm,21.0s						
GRF	Grafenberg Arr	157.52	346	PKP2	PKPab	16 20 47.8	+0.4
PGB	Panagyurishte	157.58	316	P	PKPab	16 20 47.5	-0.5
MDVR	Moldovita	157.63	323	⇓P	PKPdf	16 20 16.1	+0.2
WET	Wettzell	157.64	343	ePKPab	PKPab	16 20 48.5	+0.6
	baz=17,slow=4.3						
GEC2	GERESS Array S	157.69	341	PKPdf	PKPdf	16 20 15.5	-0.4
GERES	GERESS Array B	157.69	341	PKP	PKPdf	16 20 16.2	+0.3
	comp=Z,1.4nm,0.7s,baz=31,slow=3.1,SNR=7.2						
GERES				PKPab	PKPab	16 20 48.5	+0.3
	comp=Z,8.6nm,0.8s,baz=56,slow=3.4,SNR=5.2						
GERES	GERESS Array B	157.69	341		PKPdf	16 20 15.1	-0.8
GERES				PKPab	PKPab	16 20 49.3	+1.0
CONA	Conrad Observa	157.81	337	i PKPab	PKPab	16 20 50.2	+1.5
	comp=Z,61nm,1.0s,SNR=7.7						
VTS	Vitosha	158.12	317	⇓P	PKPdf	16 20 21.4	+4.7
VTS	Vitosha	158.12	317	i P	PKPab	16 20 50.5	+0.1
VTS	Vitosha	158.12	317	⇓PKIKP	PKPdf	16 20 21.4	+4.7
VTS	Vitosha	158.12	317		PKPab	16 20 50.8	+0.4
VTS				IAMs_20	IAMs_20	17 37 53.9	
	comp=Z,1µm,22.0s						
KARP	Karpathos	158.21	296		PKPab	16 20 50.6	-0.3
KARP				IAMs_20	IAMs_20	17 35 59.5	
	comp=Z,820nm,20.0s						
WLF	Walferdange	158.31	354	ePKPab	PKPab	16 20 51.9	+1.2
	baz=17,slow=4.3						
MMB	Musomiste	158.38	314	P	PKPab	16 20 51.4	-0.1
MOA	Molln	158.41	339	i PKPab	PKPab	16 20 52.7	+1.4
	comp=Z,46nm,1.2s,SNR=8.8						
ARSA	Arzberg	158.50	336	pPKPdf	pPKPdf	16 20 27.0	+1.6
	comp=Z,9.6nm,1.4s						
ARSA				i PKPab	PKPab	16 20 52.8	+1.0
	comp=Z,29nm,1.2s						
STU	Stuttgart	158.79	349	ePKPab	PKPab	16 20 53.3	+0.4
	baz=17,slow=4.3						
KOGS	Kog	158.91	334	ePKPab	PKPab	16 20 52.7	-0.8
FUR	Furstenfeldbru	158.94	344	ePKPab	PKPab	16 20 54.1	+0.6
	baz=17,slow=4.3						
RJOB	Jochberg	158.94	341	ePKPab	PKPab	16 20 54.3	+0.6
	baz=17,slow=4.3						
SOKA	Soboth	159.17	336	i PKPab	PKPab	16 20 55.0	+0.3
	comp=Z,59nm,1.2s,SNR=9.4						
PERS	Pernice	159.17	336	ePKPab	PKPab	16 20 54.4	-0.3
VAY	Valandovo	159.25	315	i P	PKPab	16 20 55.5	+0.3
SANT	Santorini	159.32	299		PKPab	16 20 54.7	-1.1
BFO	Black Forest	159.37	350	ePKPab	PKPab	16 20 55.4	0.0
	baz=17,slow=4.3						
OBKA	Obir	159.48	337	i sPKPdf	sPKPdf	16 20 29.7	0.0
	comp=Z,7.7nm,1.4s						
OBKA				i PKPab	PKPab	16 20 56.5	+0.4
	comp=Z,20nm,0.8s						
SKO	Skopje	159.57	318	i P	PKPab	16 20 57.9	+1.3
WATA	Walderalm	159.64	343	i PKPab	PKPab	16 20 58.1	+1.3
	comp=Z,58nm,1.2s,SNR=8.6						
UBR	Ueberruh	159.66	346	ePKPab	PKPab	16 20 56.6	-0.1
	baz=17,slow=4.3						
MYKA	Terra Mystica	159.68	339	i PKPab	PKPab	16 20 57.1	+0.2
	comp=Z,34nm,0.8s,SNR=8.0						
WTTA	Wattenberg	159.69	343	ePKPdf	PKPdf	16 20 18.7	+0.2
	comp=Z,5.0nm,1.0s						
WTTA				ePKPab	PKPab	16 20 57.7	+0.6
	comp=Z,62nm,1.3s,SNR=8.1						
RETA	Reutte	159.70	345	ePKPab	PKPab	16 20 58.2	+1.3
	comp=Z,33nm,1.2s,SNR=5.5						
MOTA	Moosalm	159.75	344	ePKPdf	PKPdf	16 20 20.5	+2.0
	comp=Z,6.6nm,0.9s						
MOTA				i PKPab	PKPab	16 20 58.4	+1.1
	comp=Z,55nm,1.4s						
SQTA	Sankt Quirin	159.84	344	i PKPab	PKPab	16 20 58.8	+1.1
	comp=Z,39nm,1.3s						
BLY	Banja Luka	159.88	330	IAMs_20	IAMs_20	17 42 00.7	
	comp=Z,977nm,21.0s						
LJU	Ljubljana	159.89	336	ePKPab	PKPab	16 20 58.0	+0.2
ABTA	Abfaltersbach	159.93	341	i PKPdf	PKPdf	16 20 17.8	-0.8
	comp=Z,7.9nm,1.0s						
ABTA				i PKPab	PKPab	16 20 58.2	+0.2
	comp=Z,41nm,1.1s						
IDI	Anoyia	160.07	297	PKP	PKPdf	16 20 19.6	+0.5
	comp=Z,7.5nm,0.9s,baz=47,slow=5.2,SNR=3.7						
IDI				PKPab	PKPab	16 20 60.0	+0.9
	comp=Z,11nm,0.7s,baz=40,slow=3.5,SNR=7.5						
DAVA	Damuels	160.09	346	epPKPdf	pPKPdf	16 20 28.8	+1.4
	comp=Z,4.3nm,0.7s						
DAVA				ePKPab	PKPab	16 20 59.9	+1.2
	comp=Z,26nm,1.1s						
FETA	Feichten	160.15	344	ePKPdf	PKPdf	16 20 19.8	+0.8
	comp=Z,4.2nm,0.9s						
FETA				i PKPab	PKPab	16 21 00.4	+1.4
	comp=Z,24nm,1.3s						
STAL	STALIGIAL	160.31	340		PKPab	16 20 58.5	-1.1
TRI	Trieste	160.45	337	PKP2	PKPab	16 20 58.9	-1.2
TRI	Trieste	160.45	337		PKPab	16 20 58.9	-1.2
OHR	Ohrid	160.47	316	i P	PKPab	16 21 01.5	+0.9
PDG	Podgorica	160.53	322		PKPab	16 20 59.4	-1.3
DAVOX	Davos/Dischmat	160.57	346	PKP	PKPdf	16 20 19.0	-0.4
	comp=Z,1.5nm,0.5s,baz=0.0,slow=8.1,SNR=3.0						
DAVOX				PKPab	PKPab	16 21 01.6	+0.7
	comp=Z,19nm,1.0s,baz=333,slow=1.6,SNR=8.3						
AGG	Agios Georgios	160.59	309	PKP2	PKPab	16 20 59.7	-1.5
AGG	Agios Georgios	160.59	309		PKPab	16 20 59.7	-1.5
CTI	Castel Tesino	160.81	341	PKP2	PKPab	16 21 00.8	-1.1
CTI	Castel Tesino	160.81	341		PKPab	16 21 00.8	-1.1
TUE	Stuetta	160.97	346		PKPab	16 21 02.7	0.0
TEOL	Teolo	161.43	341		PKPab	16 21 04.2	-0.3
SENIN	Lac Senin/Sane	161.44	351		PKPab	16 21 04.7	-0.1
ITM	Ithomi	161.69	305		PKPab	16 21 04.6	-1.5
PMOZ	Porto Moniz, M	161.95	70	eLR	LR	17 15 56.8	
MSSA	Maissana	162.98	344		PKPab	16 21 10.3	-1.0
OSSC	Osservatorio P	163.22	339		PKPab	16 21 11.7	-0.7
PGAV	Gavieira, Arco	163.37	31	ePKPab	PKPab	16 21 13.9	+0.7
PGAV	Gavieira, Arco	163.37	31	eSS	SS	16 45 40.4	+18
PGAV	Gavieira, Arco	163.37	31	eLR	LR	17 20 05.5	
	comp=Z,842nm,22.0s						
ACER	Acerenza	163.46	323		PKPab	16 21 12.9	-0.7
LATE	Laterza	163.84	336		PKPab	16 21 14.1	-1.0
TIP	Timpagrande	164.10	318	⇓P	PKPab	16 21 17.6	+1.1
TIP	Timpagrande	164.10	318		PKPab	16 21 16.3	-0.2
PVIS	Viseu	164.53	33	ePKPdf	PKPdf	16 20 24.9	+1.5
PVIS	Viseu	164.53	33	ePKPab	PKPab	16 21 18.8	+0.5
MVO	Moncorvo	164.56	30	ePKPdf	PKPdf	16 20 25.4	+2.0
MVO	Moncorvo	164.56	30	ePKPab	PKPab	16 21 17.8	-0.7
MVO	Moncorvo	164.56	30	eSS	SS	16 45 47.9	+14
MVO	Moncorvo	164.56	30	eLR	LR	17 20 53.4	
	comp=Z,881nm,22.0s						
COI	Coimbra	164.66	35	eSS	SS	16 45 49.2	+14
PCAS	Casmilo, Conde	164.73	36	eSS	SS	16 45 52.4	+16
MTE	Manteigas	164.94	33	ePKPab	PKPab	16 21 20.2	+0.1
MTE	Manteigas	164.94	33	eSS	SS	16 45 52.0	+14
MTE	Manteigas	164.94	33	eLR	LR	17 17 33.4	
	comp=Z,856nm,22.0s						
PMAFR	Mafra	165.09	40	eSS	SS	16 46 02.7	+23
TOA0	Torodi Ar. Sit	165.09	175		PKPdf	16 20 23.6	-1.0
TORD	Torodi Ar. Bea	165.09	175	PKP	PKPdf	16 20 24.1	-0.4
	comp=Z,10.0nm,1.0s,baz=286,slow=0.6,SNR=25						
TORD				PKPab	PKPab	16 21 22.9	+1.7
	comp=Z,15nm,0.9s,baz=187,slow=3.6,SNR=8.1						
TORD				PP	PP	16 25 11.8	+5.4
	comp=Z,3.3nm,1.1s,baz=176,slow=3.0,SNR=3.9						
TORD	Torodi Ar. Bea	165.09	175		PKPdf	16 20 23.7	-0.9
PCBR	Castelo Branco	165.40	34	ePKPdf	PKPdf	16 20 25.1	+1.0
PMTG	Montargil	165.59	38	ePKPdf	PKPdf	16 20 25.3	+1.0
PMTG	Montargil	165.59	38	ePKPab	PKPab	16 21 22.2	-0.8
PMTG	Montargil	165.59	38	eSS	SS	16 45 59.8	+15
PMRV	Marv??o	165.76	35	ePKPab	PKPab	16 21 24.3	+0.6
PMRV	Marv??o	165.76	35	eSS	SS	16 45 55.6	+8.8
PMRV	Marv??o	165.76	35	eLR	LR	17 17 57.1	
	comp=Z,874nm,22.0s						
PESTR	Estremoz	166.08	37	eSS	SS	16 46 04.9	+15
PNCL	Nicolau / Gran	166.09	41	ePKPdf	PKPdf	16 20 26.1	+1.4
PNCL	Nicolau / Gran	166.09	41	ePKPab	PKPab	16 21 24.4	-0.8
PNCL	Nicolau / Gran	166.09	41	eSS	SS	16 46 04.0	+14
PTEO	Sao Teotonio	166.35	43	ePKPab	PKPab	16 21 27.1	+0.7
MESJ	Messejana	166.46	41	ePKPdf	PKPdf	16 20 24.6	-0.4
MESJ				AMS	AMS	17 27 33.5	
	comp=Z,1µm,20.7s						
MESJ	Messejana	166.46	41	ePKIKP	PKPdf	16 20 24.6	-0.4
MESJ	Messejana	166.46	41	ePKPab	PKPab	16 21 27.1	+0.3
PBEJ	Beja	166.53	40	ePKPdf	PKPdf	16 20 28.1	+3.0
MORF	Marmelete	166.55	44	eSS	SS	16 46 13.4	+18
PCVE	Castro Verde	166.70	41	ePKPdf	PKPdf	16 20 28.1	+2.9
PCVE	Castro Verde	166.70	41	ePKPab	PKPab	16 21 28.9	+0.9
UCM	Universidad Co	166.75	21	PKP	PKPdf	16 20 15.7	-10
PBDV	Barranco-do-Ve	167.03	42	ePKPdf	PKPdf	16 20 25.5	0.0
PBDV	Barranco-do-Ve	167.03	42	eSS	SS	16 46 14.9	+15
PAB	San Pablo	167.03	26	PKIKP	PKPdf	16 20 26.6	+1.1
PAB	San Pablo	167.03	26		PKPdf	16 20 26.6	+1.1
PVAQ	Vaqueiros	167.04	41	eSS	SS	16 46 17.9	+18
PVAQ	Vaqueiros	167.04	41	eLR	LR	17 21 30.7	
	comp=Z,1µm,18.0s						
MAHO	Mahon	168.17	355	PKP	PKPdf	16 20 16.1	-10
MAHO				i SS	SS	16 46 11.2	+1.5
EMAL	Malaga-Limoner	169.30	34	PKP	PKPdf	16 20 22.8	-4.2
EMAL				i SS	SS	16 46 34.8	+13
CEU	Ceuta	169.44	40	PKP	PKPdf	16 20 37.9	+11
CEU				i SS	SS	16 46 37.4	+13
AVE	Averroes	169.62	57	PKP	PKPdf	16 20 37.0	+10
AVE				i SS	SS	16 46 41.0	+14
PVLZ	Peæn de	170.57	40	PKP	PKPdf	16 20 34.4	+6.7
PVLZ				i SS	SS	16 46 44.3	+9.1
KEST	Kesra	170.67	326	PKP	PKPdf	16 20 28.1	+0.2
	comp=Z,4.8nm,0.9s,baz=311,slow=4.7,SNR=6.1						
KEST				PKPab	PKPab	16 21 45.5	-0.1
	comp=Z,14nm,1.0s,baz=335,slow=4.5,SNR=6.8						
KEST	Kesra	170.67	326		PKPdf	16 20 27.8	-0.2
KEST					PKPab	16 21 45.4	-0.2
IFR	Ifrane	171.15	50	PKP	PKPdf	16 20 39.0	+11
IFR				i SS	SS	16 46 59.2	+17
MDT	Midelt	171.90	52	PKP	PKPdf	16 20 28.6	-0.1
	comp=Z,6.3nm,1.0s,baz=320,slow=1.8,SNR=8.8						
MDT				PKPab	PKPab	16 21 51.1	-0.2
	comp=Z,9.4nm,1.1s,baz=303,slow=2.3,SNR=4.2						

*ISK **19** 16:18:26.9, 38°.87N×43°.53E, h5km, ML3.7/23*

*DDA **19** 16:18:28.8, 38°.89N×43°.56E, h14km±1km, MW3.8*

ISC 19 16:18:28.8±1.1**, 38°.87N**±0°.02×**43°.59E**±0°.02**, h4km**±9km**,**
n60, $\sigma 1^{s}.62$/81**, 1C-2D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VMUR	Van-Muradiye	0.12	355	i P	Pg	16 18 30.1	-1.1
VMUR				i S	Sg	16 18 33.6	+0.8
VANB	Van	0.32	209	PG	Pg	16 18 35.7	+0.7
TVAN	Van	0.37	202	i P	Pg	16 18 35.4	-0.6
TVAN				i S	Sb	16 18 43.0	-1.3
TVAN				IAML		16 18 47.0	
	comp=E,6µm,0.7s						
TVAN				IAML		16 18 48.0	
	comp=N,7µm,0.7s						
CLDR	Caldiran	0.37	44	PG	Pg	16 18 36.1	0.0
CLDR				SG	Sb	16 18 42.8	-1.6
CLDR	Caldiran	0.37	44	i P	Pg	16 18 35.5	-0.6
CLDR				i S	Sb	16 18 42.8	-1.6
CLDR				IAML		16 18 49.0	
	comp=E,3µm,0.6s						
DYDN	Diyadin	0.67	7	i P	Pg	16 18 40.9	-0.9
DYDN				i S	Sg	16 18 48.9	-1.7
ADCV	BITLIS_Adilcev	0.68	265	i P	Pg	16 18 40.4	-1.4
ADCV				i S	Sg	16 18 51.2	+0.6
ADCV				IAML		16 18 52.0	
	comp=N,3µm,0.5s						
ADCV				IAML		16 19 01.0	
	comp=E,2µm,0.6s						
GEVA	Gevas	0.70	217	i P	Pg	16 18 40.4	-1.8
GEVA				i S	Sg	16 18 52.0	+0.8
GEVA				IAML		16 19 01.0	
	comp=N,1µm,0.6s						
GEVA				IAML		16 19 06.0	
	comp=E,1µm,1.3s						
AKDM	Akdamar-Van	0.72	221	PG	Pg	16 18 40.9	-1.8
AGRB	Hanur-Agry	0.84	327	PG	Pg	16 18 43.5	-1.4
AGRB				SG	Sg	16 18 56.0	+0.2
MLAZ	Malazgirt-MUS	0.85	289	PG	Pg	16 18 43.7	-1.4
BASK	Baskale_VAN	0.88	158	i P	Pg	16 18 44.6	-1.1
BASK				i S	Sb	16 18 58.2	-0.8
BASK				IAML		16 19 04.0	
	comp=N,977nm,0.8s						
BASK				IAML		16 19 11.0	
	comp=E,807nm,1.5s						
IGDI	IGDIR	1.06	21	i P	Pg	16 18 48.3	-0.9

IGDI				iS	Sn	16 19 05.3	-0.5
IGDI				IAML		16 19 09.0	
	comp=E,595nm,0.6s						
IGDI				IAML		16 19 11.0	
	comp=N,602nm,0.6s						
TASB	TASBURUN-IGDIR	1.22	24	PN	Pg	16 18 50.8	-1.4
BLIS	Bitlis-Merkez	1.24	249	iP	Pg	16 18 49.6	-3.0
BLIS				iS	Sg	16 19 08.2	-0.4
BLIS				IAML		16 19 09.0	
	comp=E,920nm,0.7s						
BLIS				IAML		16 19 10.0	
	comp=N,934nm,0.7s						
EKAR	Karacoban	1.24	288	iP	Pn	16 18 53.1	-0.1
EKAR				iS	Sn	16 19 14.4	+3.8
EKAR				IAML		16 19 19.0	
	comp=N,1μm,0.8s						
EKAR				IAML		16 19 23.0	
	comp=E,2μm,0.8s						
EATA	Eleskirt	1.30	320	iP	Pg	16 18 51.4	-2.4
EATA				iS	Sn	16 19 11.9	-0.2
EATA				IAML		16 19 24.0	
	comp=N,513nm,0.7s						
EATA				IAML		16 19 29.0	
	comp=E,594nm,0.8s						
HAKT	HAKKARI	1.32	176	iP	Pn	16 18 51.8	-2.4
HAKT				iS	Sn	16 19 15.7	+3.4
YOVA	Hakkari_Yksek	1.40	156	iP	Pn	16 18 54.5	-0.8
YOVA				iS	Sn	16 19 16.2	+1.9
YOVA				IAML		16 19 23.0	
	comp=N,458nm,0.9s						
YOVA				IAML		16 19 26.0	
	comp=E,529nm,1.2s						
GNI	Garni	1.56	35	PN	Pb	16 18 57.6	-0.7
SRTM	Siirt_Merkez	1.57	237	iP	Pn	16 18 57.4	-0.2
SRTM				iS	Sg	16 19 20.2	+0.8
SRTM				IAML		16 19 22.0	
	comp=E,1μm,1.1s						
SRTM				IAML		16 19 27.0	
	comp=N,1μm,1.0s						
CUKT	Cukurca	1.62	179	PN	Pn	16 18 57.6	-0.7
CUKT	Cukurca	1.62	179	iP	Pn	16 18 57.7	-0.6
CUKT				iS	Sg	16 19 25.3	+4.3
CUKT				IAML		16 19 32.0	
	comp=N,705nm,0.8s						
CUKT				IAML		16 19 32.0	
	comp=E,726nm,0.8s						
MUSM	Mu-Merkez	1.63	265	iP	Pn	16 18 56.4	-1.9
MUSM				iS	Sn	16 19 18.3	-1.5
SIRT	Sirnak	1.64	214	PN	Pn	16 18 57.8	-0.7
SIRN	Sırnak	1.66	214	iP	Pn	16 18 58.4	-0.4
SIRN				IAML		16 19 38.0	
	comp=E,729nm,1.7s						
SIRN				IAML		16 19 44.0	
	comp=N,656nm,1.2s						
VRTB	Varto-Mus	1.68	280	PN	Pn	16 18 57.7	-1.5
VRTB	Varto-Mus	1.68	280	iP	Pn	16 18 58.2	-0.9
VRTB				iS	Sg	16 19 24.7	+1.8
VRTB				IAML		16 19 35.0	
	comp=N,668nm,0.9s						
VRTB				IAML		16 19 39.0	
	comp=E,891nm,1.0s						
KOPR	Koprukoy-ERZUR	1.75	310	PN	Pn	16 18 59.3	-0.7
HOMI	Horasan	1.75	313	iP	Pn	16 18 59.9	-0.3
HOMI				iS	Sg	16 19 30.9	+5.9
HOMI				IAML		16 19 36.0	
	comp=E,564nm,1.0s						
HOMI				IAML		16 19 39.0	
	comp=N,749nm,0.9s						
EAK	Akyaka	1.81	1	iP	Pb	16 19 02.4	-0.2
EAK				iS	Sg	16 19 31.8	+4.8
EAK				IAML		16 19 38.0	
	comp=N,414nm,1.3s						
EAK				IAML		16 19 48.0	
	comp=E,335nm,1.7s						
BNGL	BINGOL	1.90	273	iP	Pn	16 19 02.1	-0.1
SENK	Senkaya-Erzuru	1.94	331	PN	Pn	16 19 02.2	-0.5
SVAN	Silvan-Diyarba	2.01	250	PN	Pn	16 19 02.7	-0.8
KARO	Karliova-Bingo	2.02	283	PN	Pn	16 19 02.5	-1.3
ECAT	Cat-ERZURUM	2.15	291	iP	Pn	16 19 05.8	+0.1
BNGB	Bingl	2.27	274	PN	Pn	16 19 06.2	-1.0
EMRE	Erzurum,Aziziy	2.33	301	iP	Pn	16 19 08.7	+0.6
EMRE				IAML		16 20 12.0	
	comp=N,227nm,1.2s						
EMRE				IAML		16 20 15.0	
	comp=E,327nm,1.2s						
BGD	Bogdanovka	2.39	0	P	Pg	16 19 14.1	-0.5
YEDI	Yedisu-Bingol	2.43	284	PN	Pn	16 19 08.7	-0.7
DDEM	Demirkent	2.46	326	iP	Pb	16 19 13.5	-0.2
DDEM				iS	Sg	16 19 59.7	+12
DDEM				IAML		16 20 16.0	
	comp=E,160nm,0.6s						
DDEM				IAML		16 20 22.0	
	comp=N,150nm,0.9s						
AKH	Akhalkalaki	2.54	358	P	Pg	16 19 16.3	-1.1
AKH	Akhalkalaki	2.54	358	PN	Pn	16 19 10.9	0.0
KZRT	Kazreti	2.59	14	P	Pb	16 19 16.4	+0.6
DYBB	Diyarbakir	2.86	252	PN	Pn	16 19 14.7	-0.5
BKRG	Bakuriani	2.88	359	P	Pg	16 19 24.6	+0.6
DGRG	David-gareji	2.92	27	P	Pg	16 19 23.1	-1.5
BCA	Borcka	2.98	330	⇑P	Pg	16 19 25.6	-0.3
BCA	Borcka	2.98	330	PN	Pn	16 19 16.3	-0.5
BAYT	Aydıntepe-Bayb	3.06	301	PN	Pn	16 19 18.4	+0.3
ERZN	Erzincan	3.08	285	PN	Pn	16 19 18.4	0.0
BATM	Batumi	3.09	333	P	Pg	16 19 27.1	-0.9
BATM	Batumi	3.09	333	⇓P	Pg	16 19 27.1	-0.9
BATM	Batumi	3.09	333	PN	Pn	16 19 18.4	+0.1
CHOM	Cayeli-Rize	3.10	317	PN	Pn	16 19 19.2	+0.6
PTK	Pertek	3.27	272	PN	Pn	16 19 21.2	+0.2
SVRC	Sivrice-ELAZID	3.39	263	PN	Pn	16 19 22.4	-0.2
TKB	Tkibuli	3.50	353	P	Pg	16 19 34.8	-1.1
KTUT	Trabzon	3.62	307	⇓P	Pg	16 19 40.5	+2.4
ONI	Oni	3.71	358	P	Pg	16 19 37.3	-2.7

RSNC 19 16:21:42.0±1.0**,3°.25N×76°.41W,h56^{km}**±8^{km}**,ML3.3, Mw3.5,4C-8D,Fault plane solution: NP1:**φ$_s$70.00000°**,** δ58.00000°**,**λ-22.00000°.**,Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOTC	Yotoco, Valle	0.73	5	⇓eP	Pn	16 21 55.5	-1.1
YOTC				eS	Sn	16 22 07.2	0.0
YOTC				i		16 22 08.3	
	comp=Z,2μm,0.3s						
POPC	Popayan, Colom	0.75	201	⇓eP	Pn	16 21 55.8	-1.1
POPC				eS	Sn	16 22 07.3	-0.6
POPC				i		16 22 08.5	
	comp=Z,734nm,0.2s						
PCON	Cinco Dias	0.92	179	eP	Pn	16 21 59.5	+0.1
PCON				eS	Sn	16 22 12.8	+0.8
PCON				i		16 22 14.8	
	comp=Z,2μm,0.6s						
SOTA	Rioblanco	1.12	190	⇓eP	Pn	16 22 01.5	-0.5
SOTA				eS	Sn	16 22 17.7	+0.9
SOTA				i		16 22 19.5	
	comp=Z,776nm,0.7s						
MALC	Bahia Malaga	1.20	309	⇑eP	Pn	16 22 02.6	+0.1
MALC				eS	Sn	16 22 17.7	-0.1
MALC				i		16 22 33.1	
	comp=Z,412nm,0.3s						
ORTC	Ortega, Tolima	1.33	61	⇓iP	Pn	16 22 04.1	-0.3
ORTC				eS	Sn	16 22 21.1	0.0
ORTC				i		16 22 25.4	
	comp=Z,637nm,0.4s						
GARC	Garzon, Huila	1.40	139	⇑iP	Pn	16 22 04.8	-0.6
GARC				eS	Sn	16 22 22.3	-0.7
GARC				i		16 22 28.4	
	comp=Z,362nm,0.2s						
ANIL	Santa Ana	1.59	39	⇓eP	Pn	16 22 07.2	-0.9
ANIL				eS	Sn	16 22 27.3	-0.4
PLMC	San Jos del P	1.65	4	⇓eP	Pn	16 22 08.2	-0.5
PLMC				eS	Sn	16 22 28.7	-0.2
CRUC	La Cruz	1.76	198	⇓eP	Pn	16 22 09.5	-0.9
CRUC				i		16 22 45.1	
	comp=Z,180nm,0.6s						
GR1C	Gorgona, Isla	1.77	262	eP	Pn	16 22 07.7	-2.6
GR1C				eS	Sn	16 22 29.5	-2.3
GR1C				i		16 22 34.3	
	comp=Z,93nm,0.4s						
FLOC	Florencia	1.82	155	⇑iP	Pn	16 22 10.3	-0.8
FLOC				eS	Sn	16 22 32.8	-0.2
FLOC				i		16 22 35.2	
	comp=Z,294nm,0.5s						
PIZC	Pizarro, Choco	1.95	331	eP	Pn	16 22 12.4	-0.3
PIZC				eS	Sn	16 22 38.4	+2.2
PIZC				i		16 22 48.2	
	comp=Z,146nm,0.7s						
RREF	El Recreo	1.95	33	eP	Pn	16 22 12.7	-0.6
RREF				i		16 22 50.8	
	comp=Z,100nm,0.6s						
GCUF	Volcan Galeras	2.22	205	eP	Pn	16 22 15.6	-1.3
GCUF				eS	Sn	16 22 42.1	-1.3
GCUF				i		16 22 47.4	
	comp=Z,114nm,0.3s						
GUY2C	Guyana, Caldas	2.22	28	⇓eP	Pn	16 22 15.6	-1.2
GUY2C				eS	Sn	16 22 42.9	-0.5
GUY2C				i		16 22 45.0	
	comp=Z,112nm,0.3s						
ROSC	El Rosal	2.61	53	eP	Pn	16 22 23.2	+1.0
ROSC				i		16 23 00.9	
	comp=Z,70nm,0.4s						
CBOC	Ciudad Bolivar	2.63	9	eP	Pn	16 22 22.3	+0.1
CBOC				eS	Sn	16 22 53.2	+0.3
CBOC				i		16 23 01.7	
	comp=Z,196nm,1.0s						
NORC	Norcasia	2.76	34	eP	Pn	16 22 23.4	-0.6
NORC				eS	Sn	16 22 57.9	+1.7
NORC				i		16 23 04.7	
	comp=Z,50nm,1.2s						
MACC	Macarena, Meta	2.78	113	⇑iP	Pn	16 22 23.2	-0.9
MACC				eS	Sn	16 22 54.5	-2.0
MACC				i		16 23 02.6	
	comp=Z,144nm,0.7s						
VILC	Villavicencio,	2.84	72	eP	Pn	16 22 26.4	+1.3
VILC				eS	Sn	16 23 00.5	+2.3
VILC				i		16 23 03.4	
	comp=Z,266nm,0.3s						
CHIC	Chingaza	3.00	63	eP	Pn	16 22 28.0	+0.5
CHIC				eS	Sn	16 23 02.2	-0.2
CHIC				i		16 23 04.9	
	comp=Z,91nm,0.5s						
HELC	Santa Helena	3.05	17	eP	Pn	16 22 27.9	-0.2
HELC				eS	Sn	16 23 02.6	-1.0
HELC				i		16 23 06.0	
	comp=Z,89nm,0.5s						
SPBC	San Pablo de B	3.33	44	eP	Pn	16 22 31.6	-0.2
SPBC				eS	Sn	16 23 11.7	+1.5
SPBC				i		16 23 29.7	
	comp=Z,20nm,0.9s						
DBBC	Dabeiba	3.75	3	eP	Pn	16 22 38.1	+0.6
DBBC				eS	Sn	16 23 22.1	+1.8
PTBC	PUERTO BERRIO,	3.80	31	eP	Pn	16 22 37.6	-0.6
PTBC				eS	Sn	16 23 19.8	-1.9
PTBC				i		16 23 21.9	
	comp=Z,46nm,0.7s						
PTAC	Punta Ardita,	4.12	340	eP	Pn	16 22 41.7	-0.7
PTAC				eS	Sn	16 23 26.5	-2.8
PTAC				i		16 23 30.6	
	comp=Z,189nm,0.2s						
RUSC	La Rusia	4.23	51	eP	Pn	16 22 44.4	0.0
RUSC				i		16 23 40.8	
	comp=Z,20nm,1.1s						
ZARC	Zaragoza, Cauc	4.49	20	eP	Pn	16 22 47.1	-0.4
ZARC				eS	Sn	16 23 38.0	-0.5
ZARC				i		16 23 39.5	
	comp=Z,47nm,0.7s						
UREC	San Jos de Ur	4.56	11	eP	Pn	16 22 48.8	+0.3
UREC				eS	Sn	16 23 41.0	+0.8
UREC				i		16 23 43.5	
	comp=Z,27nm,0.9s						
PAMC	Pamplona, Colo	5.49	42	eP	Pn	16 23 01.6	-0.1
PAMC				i		16 24 27.7	
	comp=Z,12nm,1.1s						
SMLC	San Martn de	5.98	23	eP	Pn	16 23 06.1	-1.9
SMLC				eS	Sn	16 24 09.8	-5.5
SMLC				i		16 24 12.7	
	comp=Z,12nm,0.4s						

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*DJA **19** 16:34:28.4±0.5,9°S±7°×11°1E±°,h49^{km}±40^{km},M4.7/17, mb4.7/5,MLv4.7/17*

*NEIC **19** 16:34:28.6±1.6,8°.91S±0°.07×110°.55E±0°.08,h93^{km}±5^{km}, mb4.5/30,Error ellipse: s-maj=12.4km s-min=8.7km az=61.0*

*KLM **19** 16:34:28.0,9°.15S×110°.62E,h85^{km},mb4.6*

*IDC **19** 16:34:30.6±1.7,8°.79S×110°.66E,h104^{km}±16^{km},mb4.0/14, mb1 4.0/17,mb1mx3.9/33,mbtmp4.3/17,MS4.2/2, Ms1 4.2/2,ms1mx3.6/37,Error ellipse: s-maj=22.1km s-min=10.4km az=44.0*

ISC 19 16:34:28.1±0.9**,8°.98S**±0°.06×**110°.59E**±0°.06**,h86**^{km}±7^{km}**, n117,**σ**1^{s}39**/120**,mb4.4**/24**,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	Pacitan	0.97	36	P	Pn	16 34 47.0	-0.2
PCJI				S	Sn	16 35 00.2	-1.3
UGM	Wanagama	1.07	356	P	Pn	16 34 49.1	+0.7
UGM				S	Sn	16 35 03.8	+0.2
UGM	Wanagama	1.07	356		Pn	16 34 49.0	+0.7
UGM				Sn	Sn	16 35 03.1	-0.5
WOJI	Wonogiri, Jawa	1.19	16	P	Pn	16 34 50.5	+0.8
WOJI				S	Sn	16 35 05.1	-0.9
PWJI	Pagerwojo	1.53	51	P	Pn	16 34 54.5	+0.4
PWJI				S	Sn	16 35 13.8	+0.1
SMRI	Semarang	1.93	355	P	Pn	16 35 00.5	+1.2
SMRI				S	Sn	16 35 26.3	+3.3
SMRI	Semarang	1.93	355		Pn	16 35 00.9	+1.6
UWJI	Ujung Watu	2.57	8	P	Pn	16 35 08.7	+0.9
GRJI	Gresik	2.78	42	P	Pn	16 35 12.0	+1.5
GMJI	Gumukmas	2.91	76	P	Pn	16 35 12.9	+0.6
CISI	Cisompet, Garu	3.10	297	P	Pn	16 35 15.0	+0.1
CISI	Cisompet, Garu	3.10	297		Pn	16 35 14.6	-0.3
JAGI	Jajag, Banyuwa	3.55	82	P	Pn	16 35 21.3	+0.3
JAGI	Jajag, Banyuwa	3.55	82		Pn	16 35 21.6	+0.6
LEM	Lembang	3.65	306	P	Pn	16 35 24.1	+1.6
	12nm,0.3s,baz=267,slow=17,SNR=7.2						
LEM				S	Sn	16 36 06.7	+2.2
	22nm,0.3s,baz=354,slow=24,SNR=6.5						
LEM	Lembang	3.65	306	P	Pn	16 35 24.2	+1.8
CNJI	Cibinong	3.81	296	P	Pn	16 35 25.4	+0.9
SKJI	Sukabumi	4.46	296	P	Pn	16 35 35.0	+1.7
DBJI	Dramaga	4.51	302	P	Pn	16 35 49.7	+16
DNP	Denpasar	4.57	87	P	Pn	16 35 34.8	-0.1
SRBI	Singaraja	4.65	79	P	Pn	16 35 36.9	+0.9
PLAI	Plampang	7.10	89	P	Pn	16 36 10.0	+0.7
	0.6nm120nm,0.5s						
MDSI	Maura Dua	7.78	305	P	Pn	16 36 20.3	+1.6
	0.0nm5.4nm,0.8s						
WBSI	Waikabubak, Su	8.71	95	P	Pn	16 36 30.3	-1.0
MNAI	Manna	8.87	301	P	Pn	16 36 33.9	+0.4
MNAI	Manna	8.87	301	Pn	Pn	16 36 33.1	-0.4
KAPI	Kappang	9.91	67	P	Pn	16 36 49.5	+1.9
	0.8nm,0.3s,baz=28,slow=14,SNR=2.2						
KSM	Kuching	10.39	358	P	Pn	16 36 59.0	+4.7
MYKOM	Kota Tinggi	12.64	328	P	P	16 37 30.0	-2.6
SOEI	Soe	13.51	94	Pn	Pn	16 37 34.5	-2.0
GIRL	Giralia	14.02	166	Pn	Pn	16 37 41.1	-1.7
PSA00	Pilbara Seismi	15.36	146	Pn	Pn	16 37 59.1	-1.0
PSA00				IAmb	IAmb	16 38 25.1	
	comp=Z,26nm,1.5s						
PSA00	Pilbara Seismi	15.36	146	Pn	Pn	16 37 59.1	-1.0
IPM	Ipoh	16.43	324	P	P	16 38 18.0	+3.2
FITZ	Fitzroy Crossi	17.19	123	P	P	16 38 24.0	+0.8
	comp=Z,0.5nm,0.3s,baz=292,slow=7.8,SNR=14						
FITZ				S	Sn	16 41 19.8	-14
	comp=Z,0.8nm,0.3s,baz=164,slow=20,SNR=12						
FITZ	Fitzroy Crossi	17.19	123		Pn	16 38 23.8	+1.0
FITZ				IAmb	IAmb	16 38 26.4	
	comp=Z,44nm,1.8s						
KULM	Kulim	17.30	325		Pn	16 38 22.3	-1.9
KULM	Kulim	17.30	325	P	Pn	16 38 24.0	-0.2
KNRA	Kununurra	18.95	112	P	P	16 38 43.7	+1.2
KNRA				IAmb	IAmb	16 38 52.7	
	comp=Z,58nm,1.9s						
MTN	Manton Dam	20.52	103	P	P	16 39 00.7	+1.1
MTN				IAmb	IAmb	16 39 05.4	
	comp=Z,16nm,1.1s						
WB0	Warramunga Arr	25.39	118	P	P	16 39 48.7	+1.1
WRA	Warramunga Arr	25.40	118	P	P	16 39 48.9	+1.1
	comp=Z,3.0nm,0.8s,baz=289,slow=11,SNR=46						
WRA	Warramunga Arr	25.40	118	P	P	16 39 48.7	+0.9
WB2	Warramunga Arr	25.41	118	P	P	16 39 48.6	+0.8
WB2				IAmb	IAmb	16 39 50.8	
	comp=Z,4.9nm,0.6s						
WR0	Warramunga Arr	25.59	118	P	P	16 39 50.5	+1.1
ASAR	Alice Springs	26.65	126	P	P	16 40 00.2	+1.2
	comp=Z,2.5nm,0.7s,baz=306,slow=9.6,SNR=66						
ASAR	Alice Springs	26.65	126	P	P	16 39 60.0	+1.0
AS31	Alice Springs	26.65	126	P	P	16 39 59.6	+0.6
PBKT	Sadao Pong	27.12	339	P	P	16 40 02.4	-0.7
PBKT				IAmb	IAmb	16 40 04.3	
	comp=Z,16nm,2.0s						
FORT	Forrest	27.12	145	P	P	16 40 04.4	+1.3
FORT				IAmb	IAmb	16 40 27.1	
	comp=Z,26nm,1.1s						
CMAR	Chiang Mai Arr	29.59	337	P	P	16 40 24.4	-0.7
	comp=Z,0.9nm,0.7s,baz=173,slow=8.4,SNR=13						
CMAR	Chiang Mai Arr	29.59	337	P	P	16 40 23.3	-1.8
CHTO	Chiang Mai	29.92	337	P	P	16 40 26.4	-1.6
COEN	Coen	32.29	102	P	P	16 40 49.5	+0.4
COEN				IAmb	IAmb	16 40 50.5	
	comp=Z,7.3nm,0.7s						
PMG	Port Moresby	36.09	94	LR	LR	16 57 39.1	
	comp=Z,214nm,21.3s,baz=230,slow=38						
STKA	Stephens Creek	36.68	133	P	P	16 41 28.6	+1.8
	comp=Z,2.5nm,0.6s,baz=314,slow=8.5,SNR=7.9						
STKA	Stephens Creek	36.68	133	P	P	16 41 28.5	+1.7
H08S2	Diego Garcia H	37.71	269	T	T	17 21 59.8	
	baz=97,slow=74,SNR=3.5						
H08S3	Diego Garcia H	37.72	269	T	T	17 21 49.9	
	baz=97,slow=74,SNR=8.8						
H08S1	Diego Carcia H	37.73	269	T	T	17 21 49.9	
	baz=97						
WHN	Wuhan	39.47	5	P	P	16 41 52.8	+2.8
NJ2	Nanjing	41.56	11	eP	P	16 42 07.8	+0.5
ODAN	Odare	42.15	328	eP	P	16 42 11.5	-1.0
	comp=Z,13nm,0.5s						
TAPN	Taplejung	42.38	329	eP	P	16 42 13.3	-1.2
	comp=Z,5.8nm,0.4s						
RAMN	Ramite	42.63	328	eP	P	16 42 15.5	-0.9
LSA	Lhasa	42.77	335	P	P	16 42 17.0	-0.7
LSA				IAmb	IAmb	16 42 19.1	
	comp=Z,6.3nm,1.0s						
XAN	Xi'an	42.82	358	P	P	16 42 15.8	-1.8
XAN				pP	pP	16 42 21.8	-16
XAN	Xi'an	42.82	358	P	P	16 42 15.7	-1.8
XAN				IAmb	IAmb	16 42 17.4	
	comp=Z,12nm,1.4s						
JIRN	Jiri	43.42	328	eP	P	16 42 21.8	-1.1
	comp=Z,15nm,0.5s						
PKI	Pulchoki	43.77	327	eP	P	16 42 23.7	-1.9
PKIN	Phulchoki	43.78	327	eP	P	16 42 24.3	-1.4
	comp=Z,3.4nm,0.4s						
GUN	Gumba	43.78	328	eP	P	16 42 24.9	-0.9
	comp=Z,17nm,0.4s						
DMN	Daman	43.96	327	eP	P	16 42 26.1	-1.0
	comp=Z,12nm,0.6s						
KKN	Kakani	44.01	327	eP	P	16 42 25.6	-1.9
GKN	Gorkha	44.52	327	eP	P	16 42 29.7	-1.8
	comp=Z,13nm,0.3s						
DANN	Dangsing	45.28	326	eP	P	16 42 35.9	-1.7
	comp=Z,14nm,0.4s						
JNU	Nakatsue	46.11	24	P	P	16 42 42.4	-1.4
KSAR	Wonju Array Be	48.94	18	P	P	16 43 05.9	+0.3
KSRS	Korea Array	48.96	18	P	P	16 43 06.0	+0.3
	comp=Z,4.3nm,0.8s,baz=198,slow=8.4,SNR=13						
KS19	Wonju Array Si	48.99	18	P	P	16 43 06.4	+0.4
GTA	Gaotai	49.18	349	eP	P	16 43 08.8	+1.2
GTA				pP	pP	16 43 12.8	-16
GTA				sP	sP	16 43 15.6	-23
HHC	Hu-ho-hao-te	49.59	1	eP	P	16 43 12.8	+2.1
MJAR	Matsushiro Arr	52.20	28	P	P	16 43 28.1	-2.0
	comp=Z,2.0nm,0.6s,baz=203,slow=7.2,SNR=5.3						
MJAR	Matsushiro Arr	52.20	28	P	P	16 43 27.8	-2.4
USA0B	Ussuriysk Arra	56.37	18	P	P	16 43 59.1	-1.2
USA0B				IAmb	IAmb	16 44 00.3	
	comp=Z,6.5nm,0.8s						
USRK	Ussuriysk Ar.	56.37	18	P	P	16 43 59.3	-1.0
	comp=Z,4.4nm,0.8s,baz=212,slow=6.3,SNR=15						
USRK	Ussuriysk Ar.	56.37	18	P	P	16 43 58.9	-1.4
WMQ	Urumqi	56.52	340	eP	P	16 44 03.0	+1.5
ULN	Ulaanbaatar	56.69	357	P	P	16 44 02.0	-0.6
SONM	Songino Array	56.69	357	P	P	16 44 02.2	-0.4
	comp=Z,8.3nm,0.7s,baz=176,slow=8.3,SNR=76						
KSH	Kashi	57.96	329	P	P	16 44 13.9	+2.1
KSH				sP	sP	16 44 48.6	+6.1
KSH				PP	PP	16 46 24.3	+3.1
KSH				S	S	16 52 05.8	+0.2
KSH				sS	sS	16 52 47.6	+4.5
KSH	Kashi	57.96	329	SS	SS	16 56 01.3	+3.1
KBL	Kabul	58.48	320	P	P	16 44 14.4	-1.2
ULHL	Ulahol	59.89	331	P	P	16 44 24.5	-0.7
	SNR=5.8						
KZA	Kyzart	60.24	330	P	P	16 44 27.8	-0.1
	SNR=6.4						
UCH	Uchtor	60.72	330	P	P	16 44 30.0	-1.2
	SNR=5.4						
KBK	Karagaybulak	60.83	331	P	P	16 44 31.6	+0.1
	SNR=11						
ARSB	Arslanbob	60.83	328	P	P	16 44 30.7	-0.9
MK31	Makanchi Array	61.00	338	P	P	16 44 31.6	-0.8
MK31				IAmb	IAmb	16 44 32.6	
	comp=Z,5.2nm,0.7s						
MKAR	Makanchi Array	61.00	338	P	P	16 44 31.8	-0.6
	comp=Z,7.4nm,0.5s,baz=150,slow=7.4,SNR=96						
MKAR	Makanchi Array	61.00	338	P	P	16 44 31.4	-1.0
AML	Almayashu	61.06	329	P	P	16 44 32.7	-0.7
	SNR=16						
FRU1	Bishkek	61.09	330	P	P	16 44 32.6	-0.6
EKS2	Erkin-Say	61.41	330	P	P	16 44 35.5	+0.1
	SNR=7.6						
USP	Ospenovka	61.50	331	P	P	16 44 35.3	-0.6
	SNR=5.8						
KKAR	Karatay Array	63.39	328	P	P	16 44 47.0	-1.5
ZAA0	Zalesovo Array	66.38	344	P	P	16 45 06.2	-1.3
ZAA0				IAmb	IAmb	16 45 07.3	
	comp=Z,5.9nm,0.8s						
ZALV	Zalesovo Beam	66.38	344	P	P	16 45 06.5	-1.0
	comp=Z,5.4nm,0.4s,baz=154,slow=4.9,SNR=27						
ZALV	Zalesovo Beam	66.38	344	P	P	16 45 06.2	-1.4
GEYT	Alibeck	67.61	317	P	P	16 45 15.9	+0.1
	comp=Z,1.8nm,0.5s,baz=178,slow=8.9,SNR=5.3						
GEYT	Alibeck	67.61	317	P	P	16 45 15.4	-0.5
GYA0B	ALIBECK ARRAY	67.61	317	P	P	16 45 15.4	-0.4
GYA0B				IAmb	IAmb	16 46 22.2	
	comp=Z,4.2nm,0.8s						
ABKAR	Akbulak array	72.95	328	P	P	16 45 47.5	-0.6
PETK	Petropavlovsk-	73.64	27	P	P	16 45 51.4	-0.7
	comp=Z,1.7nm,0.7s,baz=201,slow=4.0,SNR=11						
QSPA	South Pole Qui	81.02	180	P	P	16 46 35.2	+1.9
	comp=Z,1.3nm,1.0s,baz=225,slow=4.3,SNR=1.7						
TIXI	Tiksi	81.37	6	P	P	16 46 33.3	-1.5
BRTR	Keskin Array B	85.80	311	P	P	16 46 59.1	+0.8
	comp=Z,0.9nm,0.7s,baz=101,slow=5.2,SNR=5.8						
BRTR				LR	LR	17 30 40.3	
	comp=Z,230nm,20.1s,baz=106,slow=39						

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*NIED **19** 17:06:00,34°.10N×142°.30E,h5^{km},Mw4.5 Best double couple: M$_0$6.16000×10^{15} NP1:φ$_s$209.00000°,δ63.00000°, λ-84.00000°. NP2:φ$_s$17.00000°,δ27.00000°, λ-101.00000°.*

*IDC **19** 17:06:39.4±0.5,34°.07N×142°.21E,h0^{km},mb4.2/25, mb1 4.3/32,mb1mx4.2/43,mbtmp4.1/32,ML3.4/4,MS3.6/7, Ms1 3.6/7,ms1mx3.3/40,Error ellipse: s-maj=14.2km s-min=11.7km az=123.0*

*JMA **19** 17:06:41.9±0.4,34°.06N×142°.26E,h51^{km},M4.3*

*MOS **19** 17:06:42.3±1.0,34°.03N×142°.18E,h28^{km},mb4.5/17,Error ellipse: s-maj=11.3km s-min=6.5km az=109.5*

*NEIC **19** 17:06:44.5±1.4,34°.06N±0°.08×142°.2E±0°.1,h33^{km}±4^{km}, mb4.7/63,Error ellipse: s-maj=14.5km s-min=10.0km az=131.0*

ISC 19 17:06:39.9±2.2**,34°.08N**±0°.04×**142°.30E**±0°.05**,h4**^{km}±13^{km}**, n206,**σ**1^{s}52**/216**,mb4.6**/73**,18C-5D,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	1.23	298	P	Pb	17 07 02.8	-0.7
BSO3	Boso 3	1.65	297	P	Pn	17 07 09.3	0.0
BSO4	Boso 4	1.86	300	P	Pn	17 07 12.7	+0.3
KTR	Katsuura	1.95	304	P	Pn	17 07 13.5	-0.3
CHOJ	Chosi	2.01	324	P	Pn	17 07 13.9	-0.7
JKUC	kamogawauchiur	2.04	303	P	Pn	17 07 14.7	-0.3
JKUC				eS	Sn	17 07 39.3	-1.6
JMKN	Mikurajimanish	2.26	266	P	Pn	17 07 17.1	-0.9
JMKN				S	Sn	17 07 42.6	-3.6
JHJ2	Mitsune	2.28	246	P	Pn	17 07 17.9	-0.4
JHJ2				eS	Sn	17 07 44.4	-2.5

JHJ2	**Mitsune**	2.28	246		Pn	17 07 18.4	+0.1
JHJ	**Hachijo jima 2**	2.31	246	Pn	Pn	17 07 18.1	-0.5
	606nm,0.3s,baz=63,slow=21,SNR=104						
JHJ				Sn	Sn	17 07 45.0	-2.4
	344nm,0.3s,baz=244,slow=22,SNR=16						
JIM2	**Oshima 3**	2.46	286	P	Pn	17 07 19.3	-1.4
JAOM	**Aogashimamukai**	2.66	234	P	Pn	17 07 23.5	-0.1
JOD2	**Odawara 2**	2.90	295	P	Pn	17 07 25.5	-1.3
JOD2				S	Sn	17 07 59.1	-3.0
JIZS	**Izushimoda**	2.90	284	P	Pn	17 07 25.7	-1.1
JIZS				*e*S	Sn	17 07 59.3	-2.8
JAG	**Ashikaga**	3.30	316	P	Pn	17 07 31.7	-0.7
JRY	**Ryogami san**	3.39	306	P	Pn	17 07 33.1	-0.5
JYN	**Shimob**	3.40	296	P	Pn	17 07 33.3	-0.5
JYN				*e*S	Sn	17 08 12.5	-2.0
JFT	**Otama**	3.79	336	P	Pn	17 07 38.6	-0.4
JFT				S	Sn	17 08 19.9	-4.1
MJAR	**Matsushiro Arr**	4.15	307	Pn	Pn	17 07 43.3	-0.8
	2.3nm,0.3s,baz=320,slow=5.5,SNR=78						
MJAR				Sn	Sn	17 08 31.4	-1.6
	1.8nm,0.3s,baz=358,slow=39,SNR=3.6						
MJAR				LR	LR	17 09 14.9	
	comp=Z,458nm,19.8s,baz=130,slow=38						
MJAR	**Matsushiro Arr**	4.15	307		Pn	17 07 43.9	-0.2
MAJO	**Matsushiro**	4.15	307	P	Pn	17 07 44.5	+0.4
MAJO	**Matsushiro**	4.15	307		Pn	17 07 44.5	+0.4
MAT	**Matsushiro**	4.15	307	P	Pn	17 07 44.3	+0.2
MAT	**Matsushiro**	4.15	307	P	Pn	17 07 43.7	-0.4
MAT				S	Sn	17 08 31.0	-2.1
MJB9	**Matsu-Tunnel**	4.16	308		Pn	17 07 44.6	+0.4
INU	**Inuyama**	4.53	288		Pn	17 07 50.2	+1.0
JCJ	**Chichijima**	6.96	181	Pn	Pn	17 08 20.6	-2.0
	17nm,0.3s,baz=286,slow=22,SNR=38						
JCJ				Sn	Sn	17 09 35.8	-6.4
	48nm,0.3s,baz=303,slow=20,SNR=13						
JCJ				LR	LR	17 13 27.7	
	comp=Z,103nm,18.1s,baz=337,slow=59						
ERM	**Erimo**	7.96	5	⇑*i*P	Pn	17 08 33.3	-2.9
JNU	**Nakatsue**	9.57	267	Pn	Pn	17 08 57.1	-1.4
	0.5nm,0.3s,baz=126,slow=4.2,SNR=5.7						
JNU	**Nakatsue**	9.57	267		Pn	17 08 59.4	+0.9
NMR	**Nemuro--Hokkai**	9.66	15	*e*P	Pn	17 08 55.1	-4.5
GLVR	**Golovnino**	9.97	14	*e*P	Pn	17 09 00.0	-3.8
GLVR				pmax	pmax		
	comp=Z,51nm,0.5s						
ASAJ	**Asahikawa**	10.03	1	Pn	Pn	17 09 02.5	-2.2
	comp=Z,4.7nm,0.3s,baz=210,slow=10,SNR=74						
ASAJ				Sn	Sn	17 10 51.8	-5.8
	comp=Z,0.9nm,0.3s,baz=243,slow=32,SNR=5.6						
ASAJ				LR	LR	17 13 37.0	
	comp=Z,175nm,18.7s,baz=158,slow=42						
JKA	**Kamikawa-asahi**	10.03	1		Pn	17 09 02.5	-2.2
JKA					Sn	17 10 51.8	-5.8
GRPR	**Tuman**	10.26	14	*e*P	Pn	17 09 04.1	-3.8
GRPR				pmax	pmax		
	comp=Z,68nm,0.4s						
SHO	**Shikotan**	10.39	18	*e*P	Pn	17 09 05.6	-4.1
SHO				pmax	pmax		
	comp=Z,12nm,0.4s						
KUR	**Kuril'sk**	11.94	19	P	Pn	17 09 20.7	-10
KSRS	**Korea Array**	12.15	290	Pn	Pn	17 09 31.0	-2.8
	comp=Z,0.2nm,0.3s,baz=103,slow=14,SNR=2.4						
KSRS				LR	LR	17 15 17.1	
	comp=Z,344nm,18.2s,baz=98,slow=43						
YSS	**Yuzh-Sakhalins**	12.87	1	⇓*e*P	Pn	17 09 41.6	-1.9
YSS				*e*		17 12 00.6	
YSS				pmax	pmax		
	comp=Z,10.0nm,0.4s						
YSS				MLR	MLR		
	comp=Z,400nm,14.0s						
YSS				MLR	MLR		
	comp=N,400nm,15.0s						
YSS				MLR	MLR		
	comp=E,300nm,16.0s						
YSS	**Yuzh-Sakhalins**	12.87	1		Pn	17 09 41.9	-1.6
USRK	**Ussuriysk Ar.**	12.88	325	Pn	Pn	17 09 42.0	-1.7
	baz=143,slow=15,SNR=4.8						
USRK	**Ussuriysk Ar.**	12.88	325	P	Pn	17 09 42.7	-1.0
USRK	**Ussuriysk Ar.**	12.88	325		Pn	17 09 42.7	-1.0
TYV	**Tymovskoe**	16.78	1	*e*P	P	17 10 39.4	+1.5
TYV				pmax	pmax		
	comp=Z,6.0nm,1.3s						
TYV				pmax	pmax		
	comp=Z,500nm,5.4s						
KLR	**Kul'dur**	17.04	336	P	Pn	17 10 37.5	-1.5
	comp=Z,0.1nm,0.3s,baz=132,slow=15,SNR=3.7						
KLR				LR	LR	17 17 28.8	
	comp=Z,307nm,18.7s,baz=202,slow=38						
KLR	**Kul'dur**	17.04	336	⇑*e*P	Pn	17 10 38.5	-0.5
ZEA	**Zeya**	22.36	336	*e*P	P	17 11 39.0	+0.3
ZEA				pmax	pmax		
	comp=N,24nm,1.0s						
ZEA				pmax	pmax		
	comp=E,24nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,52nm,1.0s						
WHN	**Wuhan**	23.85	269	P	P	17 11 54.8	+0.6
H11N2	**WAKE ISLAND Hy**	26.09	117	T	T	17 39 38.9	
	baz=309,slow=75,SNR=6.2						
H11N1	**WAKE ISLAND Hy**	26.10	117	T	T	17 39 44.2	
	baz=309,slow=75,SNR=4.2						
H11N3	**WAKE ISLAND Hy**	26.11	117	T	T	17 39 40.7	
	baz=309,slow=75,SNR=6.0						
MA2	**Magadan**	26.11	10	P	P	17 12 14.7	0.0
	comp=Z,5.9nm,0.9s,baz=189,slow=8.0,SNR=8.3						
MA2	**Magadan**	26.11	10	⇑*i*P	P	17 12 15.5	+0.8
MA2				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MA2	**Magadan**	26.11	10	P	P	17 12 15.4	+0.8
H11S3	**WAKE ISLAND Hy**	26.71	119	T	T	17 40 37.9	
	baz=312,slow=76,SNR=5.0						
H11S1	**WAKE ISLAND Hy**	26.72	119	T	T	17 40 41.8	
	baz=312,slow=76,SNR=4.4						
H11S2	**WAKE ISLAND Hy**	26.73	119	T	T	17 40 28.9	
	baz=312,slow=76,SNR=5.0						
XAN	**Xi'an**	27.59	279	P	P	17 12 26.8	-1.4
XAN				pP	pwP	17 12 34.3	-2.5
XAN	**Xi'an**	27.59	279	P	P	17 12 27.2	-1.0
XAN				pmax	pmax		
	comp=Z,49nm,1.7s						
XAN	**Xi'an**	27.59	279	P	P	17 12 27.2	-1.0
XAN				IAmb	IAmb	17 12 30.2	
	comp=Z,50nm,1.7s						
ENH	**Enshi**	27.96	271	P	P	17 12 29.6	-2.0
ENH				IAmb	IAmb	17 12 32.9	
	comp=Z,9.5nm,0.8s						
YAK	**Yakutsk**	29.11	348	⇑*i*P	P	17 12 41.5	+0.1
YAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SEY	**Seymchan**	29.57	9	P	P	17 12 45.2	-0.3
	comp=Z,1.1nm,0.4s,baz=208,slow=8.5,SNR=9.8						
SEY	**Seymchan**	29.57	9	⇑*e*P	P	17 12 43.7	-1.7
ULN	**Ulaanbaatar**	29.68	308	⇑*e*P	P	17 12 48.3	+1.4
ULN				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ULN	**Ulaanbaatar**	29.68	308	P	P	17 12 47.1	+0.2
SONM	**Songino Array**	30.11	308	P	P	17 12 50.5	-0.1
	comp=Z,1.6nm,0.9s,baz=108,slow=9.7,SNR=10						
SONM				LR	LR	17 26 57.9	
	comp=Z,507nm,18.7s,baz=173,slow=41						
SONM	**Songino Array**	30.11	308	*e*P	P	17 12 52.1	+1.5
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BOD	**Bodaibo**	30.43	330	*e*P	P	17 12 58.7	+5.6
BOD				pmax	pmax		
	comp=Z,9.0nm,1.8s						
BILL	**Bilibino**	36.67	15	⇑*e*P	P	17 13 48.0	+0.6
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TIXI	**Tiksi**	38.31	353	P	P	17 14 00.7	-0.4
	comp=Z,1.0nm,0.6s,baz=140,slow=5.6,SNR=7.8						
TIXI	**Tiksi**	38.31	353	⇑*e*P	P	17 14 01.0	-0.1
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TIXI	**Tiksi**	38.31	353	P	P	17 14 01.4	+0.3
PBKT	**Sadao Pong**	40.90	255	P	P	17 14 23.1	-0.3
CHTO	**Chiang Mai**	41.37	260	P	P	17 14 26.7	-0.6
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CHTO	**Chiang Mai**	41.37	260	P	P	17 14 26.7	-0.6
CM31	**Chiang Mai Arr**	41.55	259	P	P	17 14 28.2	-0.5
CMAR	**Chiang Mai Arr**	41.55	259	P	P	17 14 27.9	-0.9
	comp=Z,1.8nm,0.8s,baz=48,slow=7.1,SNR=15						
CMAR				LR	LR	17 31 48.6	
	comp=Z,47nm,18.4s,baz=350,slow=36						
CMAR	**Chiang Mai Arr**	41.55	259	P	P	17 14 28.3	-0.4
CMAR	**Chiang Mai Arr**	41.55	259	P	P	17 14 28.3	-0.4
DGZ	**Jazzator, Alta**	42.75	309	⇓*e*P	P	17 14 39.4	+1.0
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ANM	**Nome**	43.77	30	P	P	17 14 48.3	+2.1
ANM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ANM	**Nome**	43.77	30	P	P	17 14 48.3	+2.1
ZALV	**Zalesovo Beam**	44.47	315	P	P	17 14 51.8	-0.2
	comp=Z,0.6nm,0.5s,baz=139,slow=6.8,SNR=1.9						
ZALV				PcP	PcP	17 16 35.7	+0.3
	comp=Z,1.1nm,0.6s,baz=91,slow=2.1,SNR=4.2						
NRIK	**Noril'sk**	46.26	336	⇓*e*P	P	17 15 07.9	+2.0
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
MK31	**Makanchi Array**	46.35	305	P	P	17 15 07.1	+0.1
MK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MK31	**Makanchi Array**	46.35	305	P	P	17 15 07.1	+0.1
MKAR	**Makanchi Array**	46.35	305	P	P	17 15 07.3	+0.4
	comp=Z,1.8nm,0.8s,baz=86,slow=9.5,SNR=18						
MKAR	**Makanchi Array**	46.35	305	P	P	17 15 07.0	0.0
TAPN	**Taplejung**	46.95	277	*e*P	P	17 15 11.6	-0.7
RAMN	**Ramite**	48.01	277	*e*P	P	17 15 20.3	-0.2
	comp=Z,11nm,0.5s						
JIRN	**Jiri**	48.08	278	*e*P	P	17 15 21.5	+0.3
	comp=Z,49nm,0.7s						
GUN	**Gumba**	48.24	279	*e*P	P	17 15 22.7	+0.3
	comp=Z,11nm,0.5s						
KURK	**Kurchatov**	48.36	310	⇑*e*P	P	17 15 23.8	+1.3
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PKI	**Pulchoki**	48.76	279	*e*P	P	17 15 26.2	-0.1
PKIN	**Phulchoki**	48.76	279	*e*P	P	17 15 25.9	-0.4
	comp=Z,4.7nm,0.5s						
KKN	**Kakani**	48.78	279	*e*P	P	17 15 26.2	-0.2
	comp=Z,12nm,0.7s						
KDAK	**Kodiak Island**	48.85	40	P	P	17 15 26.1	-0.1
	comp=Z,2.3nm,0.6s,baz=273,slow=4.7,SNR=4.3						
DMN	**Daman**	48.99	279	*e*P	P	17 15 28.0	-0.1
GKN	**Gorkha**	49.23	279	*e*P	P	17 15 29.9	+0.2
DANN	**Dangsing**	49.81	280	*e*P	P	17 15 34.6	+0.2
TOLK	**Toolik Lake Re**	50.79	26	P	P	17 15 40.4	-0.4
TOLK				IAmb	IAmb	17 15 43.4	
	comp=Z,5.6nm,0.7s						
SML	**Sawmill**	50.97	35	P	P	17 15 42.3	0.0
KNRA	**Kununurra**	51.13	197	P	P	17 15 43.8	-0.1
IL31		51.63	31	P	P	17 15 47.4	+0.3
IL31				IAmb	IAmb	17 16 21.9	
	comp=Z,17nm,1.9s						
ILAR	**Eielson Array**	51.63	31	P	P	17 15 47.5	+0.3
	comp=Z,1.3nm,0.7s,baz=264,slow=6.4,SNR=13						
KSH	**Kashi**	52.32	296	P	P	17 15 55.8	+2.9
KSH				pP	pwP	17 16 00.9	-0.6
KSH				PP	PP	17 17 55.9	+4.6
KSH				PcS	PcS	17 21 02.8	+0.3
KSH				S	S	17 23 20.5	+1.5
KSH				ScS	ScS	17 25 40.8	-3.1
AAK	**Ala-Archa**	52.57	301	⇑*e*P	P	17 15 55.3	+0.5
AAK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
BMAR	**Burnt Mountain**	52.59	28	P	P	17 15 55.9	+1.5
BRVK	**Borovoye**	53.18	314	⇑*e*P	P	17 16 00.9	+2.0
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.2s						
BCAR	**Beaver Creek A**	53.95	33	P	P	17 16 05.7	+1.3
WB0	**Warramunga Arr**	54.07	189	P	P	17 16 05.3	-0.3
WR0	**Warramunga Arr**	54.24	189	P	P	17 16 06.3	-0.6
WRAB	**Tennant Creek**	54.24	189	*c i*P	P	17 16 06.9	0.0
WRAB				pmax	pmax		
	comp=Z,15nm,1.0s						
WB2	**Warramunga Arr**	54.25	189	P	P	17 16 06.7	-0.2
WRA	**Warramunga Arr**	54.25	189	P	P	17 16 06.8	-0.2
	comp=Z,5.1nm,0.4s,baz=6.6,slow=7.6,SNR=50						
WRA	**Warramunga Arr**	54.25	189	P	P	17 16 05.9	-1.1
KKAR	**Karatay Array**	55.27	302	P	P	17 16 14.1	-0.2
KKAR	**Karatay Array**	55.27	302	P	P	17 16 14.1	-0.2
EPYK	**Eagle Plains**	55.75	29	P	P	17 16 17.8	+0.4
EPYK				IAmb	IAmb	17 17 16.6	
	comp=Z,6.8nm,0.6s						
INK	**Inuvik**	56.70	26	P	P	17 16 24.8	+0.8
	comp=Z,2.6nm,0.8s,baz=297,slow=8.4,SNR=7.2						
INK	**Inuvik**	56.70	26	P	P	17 16 24.7	+0.7
INK				IAmb	IAmb	17 17 20.8	
	comp=Z,21nm,2.0s						
AS31	**Alice Springs**	57.97	189	P	P	17 16 33.7	+0.1
ASAR	**Alice Springs**	57.98	189	P	P	17 16 33.6	0.0
	comp=Z,6.9nm,0.7s,baz=2.2,slow=6.2,SNR=65						
ASAR	**Alice Springs**	57.98	189	P	P	17 16 33.5	-0.2
ARU	**Arti**	59.07	320	⇑*e*P	P	17 16 42.2	+1.3
ARU				pmax	pmax		
	comp=Z,2.0nm,1.0s						
PSA00	**Pilbara Seismi**	59.33	204	P	P	17 16 43.7	+0.6
C36M	**Paulatuk**	59.82	24	P	P	17 16 46.5	+0.6
C36M				IAmb	IAmb	17 16 47.5	
	comp=Z,9.9nm,1.3s						
ABKAR	**Akbulak array**	60.42	312	P	P	17 16 50.4	+0.1
RES	**Resolute Bay**	65.28	14	P	P	17 17 22.7	+0.4
RES				pmax	pmax		
	comp=Z,7.0nm,1.0s						
RES	**Resolute Bay**	65.28	14	P	P	17 17 22.7	+0.4
RES				IAmb	IAmb	17 17 23.8	
	comp=Z,7.2nm,0.9s						
STKA	**Stephens Creek**	65.61	181	P	P	17 17 25.1	+0.2
	comp=Z,2.3nm,0.7s,baz=320,slow=7.0,SNR=5.3						
STKA	**Stephens Creek**	65.61	181	*e*P	P	17 17 26.2	+1.4
STKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FORT	**Forrest**	65.89	193	P	P	17 17 27.2	+0.5
YKA	**Yellowknife Ar**	66.01	30	P	P	17 17 27.4	+0.3
	comp=Z,1.4nm,0.9s,baz=294,slow=5.8,SNR=16						
BBOO	**Buckleboo**	66.79	186	P	P	17 17 33.2	+0.8
NWAO	**Narrogin (SRO)**	70.69	202	P	P	17 17 57.0	+0.2
NWAO				pmax	pmax		
	comp=Z,33nm,1.3s						
NWAO	**Narrogin (SRO)**	70.69	202	P	P	17 17 57.0	+0.2
VSR	**Storozhevoye**	71.64	320	⇑*e*P	P	17 18 02.3	-0.2
VSR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PINE	**Pine Mountain**	71.71	49	P	P	17 18 04.9	+1.6
PINE				IAmb	IAmb	17 18 06.1	
	comp=Z,8.4nm,0.9s						
FINES	**FINESS Array B**	71.77	333	P	P	17 18 03.0	0.0
	comp=Z,2.3nm,0.8s,baz=0.0,slow=6.5,SNR=4.9						
FINES	**FINESS Array B**	71.77	333	P	P	17 18 03.3	+0.3
FINES	**FINESS Array B**	71.77	333	P	P	17 18 03.3	+0.3
KBZ	**Khabaz**	73.39	312	P	P	17 18 14.7	+1.7
	comp=Z,1.6nm,0.8s,baz=22,slow=11,SNR=2.8						
KBZ	**Khabaz**	73.39	312	⇑*e*P	P	17 18 14.6	+1.6
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV	**Kislovodsk**	73.40	312	*e*P	P	17 18 13.6	+0.4
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SUMG	**Summit**	73.64	0	P	P	17 18 15.4	+0.9
SUMG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SUMG	**Summit**	73.64	0	P	P	17 18 15.4	+0.9
SUMG				IAmb	IAmb	17 18 16.2	
	comp=Z,4.9nm,0.7s						
BEKR	**Beckworth**	74.07	53	P	P	17 18 18.1	+0.7
LRM	**Limekiln Ridge**	75.76	44	P	P	17 18 28.5	+1.4
DLMT	**Dillon**	75.93	45	P	P	17 18 27.4	-0.6
DLMT				IAmb	IAmb	17 18 27.8	
	comp=Z,3.8nm,0.7s						
RYN	**Ryan**	75.93	53	P	P	17 18 28.1	-0.1
RYN				IAmb	IAmb	17 18 50.6	
	comp=Z,15nm,2.0s						
KVN	**Kaiserville**	75.99	52	P	P	17 18 29.4	+1.0
KVN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KVN	**Kaiserville**	75.99	52	P	P	17 18 29.4	+1.0
NVAR	**Mina Array Bea**	76.19	53	P	P	17 18 31.1	+1.5
	comp=Z,1.7nm,0.7s,baz=291,slow=6.1,SNR=11						
NVAR	**Mina Array Bea**	76.19	53	P	P	17 18 30.6	+0.9
ELK	**Elko**	76.91	50	P	P	17 18 35.0	+1.3
ELK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ELK	**Elko**	76.91	50	P	P	17 18 35.0	+1.3
QLMT	**Earthquake Lak**	76.92	45	P	P	17 18 34.7	+1.0
AKASG	**Malin Array Be**	77.08	323	P	P	17 18 33.6	-0.6
	comp=Z,0.7nm,0.4s,baz=46,slow=5.7,SNR=2.3						
AKBB	**Malin Array Si**	77.08	323	⇑*e*P	P	17 18 34.0	-0.2
NB2	**NORSAR Subarra**	77.19	338	P	P	17 18 34.7	0.0
	comp=Z,1.4nm,0.7s,baz=39,slow=5.9						
NOA	**NORSAR Array B**	77.19	338	P	P	17 18 34.6	0.0
	comp=Z,1.6nm,0.8s,baz=39,slow=5.7,SNR=4.5						
H17A	**Grant Village**	77.67	45	P	P	17 18 40.8	+2.9
H17A				IAmb	IAmb	17 18 42.2	
	comp=Z,11nm,1.2s						
LKWY	**Lake**	77.67	44	P	P	17 18 40.4	+2.5
LKWY				pmax	pmax		
	comp=Z,6.0nm,0.4s						
LKWY	**Lake**	77.67	44	P	P	17 18 40.4	+2.5
LKWY				IAmb	IAmb	17 19 15.8	
	comp=Z,6.4nm,0.4s						
IMW	**Indian Meadow**	77.74	45	P	P	17 18 40.5	+2.1
IMW				IAmb	IAmb	17 18 50.3	
	comp=Z,12nm,1.6s						
FLWY	**Flagg Ranch**	77.78	45	P	P	17 18 41.3	+2.8
FLWY				IAmb	IAmb	17 18 42.2	
	comp=Z,6.7nm,1.1s						
FXWY	**Fox Creek**	77.84	45	P	P	17 18 39.4	+0.5
FXWY				IAmb	IAmb	17 18 42.7	
	comp=Z,9.2nm,1.6s						
TPAW	**Teton Pass**	77.97	45	P	P	17 18 39.7	0.0
TPAW				IAmb	IAmb	17 20 58.1	
	comp=Z,12nm,1.6s						
PDAR	**Pinedale Array**	79.22	45	P	P	17 18 47.3	+0.8
	comp=Z,0.9nm,0.7s,baz=255,slow=2.5,SNR=7.1						
PDAR	**Pinedale Array**	79.22	45	P	P	17 18 46.2	-0.3
PFO	**Pinyon Flats O**	80.08	56	⇑*e*P	P	17 18 52.2	+1.0
PFO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LCMT	**Little Creek M**	80.30	52	P	P	17 18 53.6	+1.2
RDMU	**Red Mountain**	80.53	47	P	P	17 18 53.7	+0.1
U15A	**North Rim**	81.27	52	P	P	17 18 58.7	+1.0
U15A				IAmb	IAmb	17 20 55.6	
	comp=Z,14nm,1.9s						
BR131	**Keskin Array S**	81.36	312	*de*P	P	17 18 58.7	+0.7
BRTR	**Keskin Array B**	81.36	312	P	P	17 18 58.5	+0.5
	comp=Z,1.9nm,0.9s,baz=75,slow=2.5,SNR=7.3						
BRTR	**Keskin Array B**	81.36	312	*e*P	P	17 18 59.9	+1.9
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRTR	**Keskin Array B**	81.36	312	P	P	17 18 58.0	0.0
ULM	**Lac du Bonnet**	81.57	33	P	P	17 18 58.5	-0.2
	comp=Z,2.5nm,0.8s,baz=357,slow=6.5,SNR=3.3						
ULM	**Lac du Bonnet**	81.57	33	⇑*e*P	P	17 18 58.9	+0.2
ULM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ULM	**Lac du Bonnet**	81.57	33	P	P	17 18 58.1	-0.6
ULM				IAmb	IAmb	17 18 59.7	
	comp=Z,7.4nm,1.2s						
PV23	**Carpenter Ridg**	82.15	49	P	P	17 19 02.8	+0.4
PV23				IAmb	IAmb	17 19 04.7	
	comp=Z,11nm,1.1s						
PV14	**Lion Creek, Pa**	82.19	49	P	P	17 19 03.2	+0.6
PV14				IAmb	IAmb	17 19 05.9	
	comp=Z,5.1nm,0.8s						
PV04	**Paradox Valley**	82.25	49	P	P	17 19 03.2	+0.4
PV17	**East Wray Mesa**	82.29	49	P	P	17 19 04.2	+1.2
PV17				IAmb	IAmb	17 19 06.4	
	comp=Z,7.7nm,0.9s						
PV16	**Nyswonger Mesa**	82.30	49	P	P	17 19 04.1	+1.1
PV05	**Paradox Valley**	82.32	49	P	P	17 19 04.7	+1.5
PV05				IAmb	IAmb	17 19 42.7	
	comp=Z,6.9nm,0.9s						
PV11	**David Mesa, Pa**	82.33	49	P	P	17 19 03.3	+0.1
PV18	**Skein Mesa, Pa**	82.34	49	P	P	17 19 04.3	+1.1
PV18				IAmb	IAmb	17 19 06.6	
	comp=Z,8.2nm,1.0s						
PV12	**Saucer Basin,**	82.36	49	P	P	17 19 04.6	+1.2
PV03	**Paradox Valley**	82.37	49	P	P	17 19 04.4	+0.9
PV03				IAmb	IAmb	17 19 06.8	
	comp=Z,8.5nm,1.2s						
PV13	**Radium Mtn., P**	82.45	49	P	P	17 19 04.9	+1.0
N23A	**Red Feather La**	82.50	45		P	17 19 05.9	+1.7
N23A				IAmb	IAmb	17 19 06.8	
	comp=Z,9.6nm,0.9s						
SDCO	**Great Sand Dun**	84.76	47	P	P	17 19 16.4	+0.6
EYMN	**Ely**	85.23	33	P	P	17 19 16.8	-0.7
EYMN				IAmb	IAmb	17 19 18.7	
	comp=Z,12nm,1.2s						
KHC	**Kasperske Hory**	85.44	329	*e*P	P	17 19 20.5	+1.8
KHC				*e*x	x	17 19 30.5	
KHC	**Kasperske Hory**	85.44	329	⇓*e*P	P	17 19 19.3	+0.6
KHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GERES	**GERESS Array B**	85.61	329	P	P	17 19 19.2	-0.3
	comp=Z,0.6nm,0.6s,baz=46,slow=5.8,SNR=5.1						
G40A	**Rib Lake**	87.82	34	P	P	17 19 30.5	+0.1
G40A				IAmb	IAmb	17 19 33.6	
	comp=Z,6.6nm,0.8s						
SCHQ	**Schefferville**	87.97	16	P	P	17 19 30.3	-0.6
	comp=Z,2.6nm,0.7s,baz=339,slow=6.3,SNR=4.6						
E43A	**Lone Tree Farm**	88.42	32	P	P	17 19 32.5	-0.7
E43A				IAmb	IAmb	17 19 34.3	
	comp=Z,6.7nm,0.8s						
E46A	**Sault Ste Mari**	89.57	30	P	P	17 19 38.9	+0.3
TXAR	**Lajitas Array**	91.34	53	P	P	17 19 48.2	+0.9
	comp=Z,1.1nm,0.6s,baz=311,slow=3.8,SNR=7.1						
TORD	**Torodi Ar. Bea**	119.92	314	PKP	PKPdf	17 25 30.7	-1.5
	comp=Z,0.5nm,0.6s,baz=9.2,slow=3.7,SNR=2.5						

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*KRSC **19** 17:09:07.1±1.5, 48°.75N×156°.46E, h41^{km}±23^{km}, ML4.0*
*IDC **19** 17:09:09.4±4.4, 48°.80N×155°.17E, h65^{km}±42^{km}, mb3.4/5, mb1 3.8/8, mb1mx3.4/38, mbtmp3.8/8, ML4.2/2, Error ellipse: s-maj=62.1km s-min=18.2km az=143.0*
ISC 19 17:09:05.8±0.9**, 48°.56N**±0°.09×**155°.8E**±0°.1**, h35**^{km}**, n33, σ1**^{s}**.67**/43**, mb3.7**/5**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	2.13	5	*e*P	Pn	17 09 39.2	+0.3
SKR				*e*S	Sn	17 10 02.7	-1.5
ALID	**Alaid**	2.32	356	*e*P	Pn	17 09 43.9	+2.3
ALID				*e*S	Sn	17 10 08.8	-0.2
PAU	**Pauzhetka**	2.98	12	*e*P	Pn	17 09 52.8	+2.3
PAU				*e*S	Sn	17 10 24.4	-0.6
KDTR	**Khodutka, Kamc**	3.56	23	*e*P	Pn	17 09 59.1	+0.6
KDTR				*e*S	Sn	17 10 37.8	-1.5
ASAK	**Asacha**	4.05	18	*e*P	Pn	17 10 07.0	+1.6
ASAK				*e*S	Sn	17 10 51.5	-0.1
MTVR	**Mutnovka**	4.21	20	*e*P	Pn	17 10 08.6	+1.1
MTVR				*e*S	Sn	17 10 53.1	-2.4
RUS	**Russkaya**	4.24	23	*e*P	Pn	17 10 08.7	+0.8
RUS				*e*S	Sn	17 10 54.0	-2.1
GRL	**Gorelyy**	4.25	19	*e*P	Pn	17 10 08.9	+0.8
GRL				*e*S	Sn	17 10 53.9	-2.6
APC	**Apacha**	4.45	10	*e*S	Sn	17 11 00.9	-0.4
KRMR	**Karymshinskiy**	4.52	18	*e*P	Pn	17 10 13.1	+1.4
KRMR				*e*S	Sn	17 11 03.1	+0.1
PETK	**Petropavlovsk-**	4.71	14	P	Pn	17 10 16.4	+2.1
	1.5nm,0.3s,baz=184,slow=14,SNR=44						
PETK				S	Sn	17 11 20.8	+13
	0.3nm,0.3s,baz=164,slow=16,SNR=1.6						
DALK	**Dalny**	4.85	21	*e*P	Pn	17 10 16.6	+0.4
DALK				*e*S	Sn	17 11 08.5	-2.5
UGLR	**Uglovaya**	5.03	21	*e*P	Pn	17 10 20.2	+1.4
AVH	**Avacha**	5.06	20	*e*P	Pn	17 10 21.4	+2.2
AVH				*e*S	Sn	17 11 16.2	-0.2
KOK	**Koryaka**	5.06	20	*e*P	Pn	17 10 21.0	+1.8
KRER	**Koryakskii**	5.10	20	*e*P	Pn	17 10 21.0	+1.2
KRX	**Arik**	5.13	19	*e*P	Pn	17 10 21.7	+1.5
NLC	**Nalytchevo**	5.13	24	*e*S	Sn	17 11 14.5	-3.4
SPN	**Mys Shipunski**	5.27	29	*e*P	Pn	17 10 22.2	+0.3
MKZ	**Mys Kozlova**	7.04	29	*e*P	Pn	17 10 47.3	+1.0
MKZ				*e*S	Sn	17 12 03.0	-2.0
KZV	**Kizimen**	7.12	21	*e*P	Pn	17 10 48.6	+1.0
KZV				*e*S	Sn	17 12 04.6	-2.7
KMNR	**Kamenistaya**	7.70	19	*e*P	Pn	17 10 57.4	+2.0
KBTR	**Krutoberegovo**	8.77	27	*e*P	Pn	17 11 10.1	+0.1
ASAJ	**Asahikawa**	10.16	249	P	Pn	17 11 29.1	0.0
	1.1nm,0.3s,baz=75,slow=12,SNR=1.8						
MA2	**Magadan**	11.43	347	P	Pn	17 11 44.4	-1.9
	0.4nm,0.3s,baz=166,slow=11,SNR=7.4						
KSRS	**Korea Array**	23.10	252	P	P	17 14 06.5	-1.8
	1.0nm,0.6s,baz=54,slow=9.1,SNR=4.8						
H11S1	**WAKE ISLAND Hy**	31.25	160	T	T	17 48 32.2	
	baz=345,slow=76,SNR=44						
H11S3	**WAKE ISLAND Hy**	31.26	160	T	T	17 48 29.8	
	baz=345,slow=76,SNR=42						
H11S2	**WAKE ISLAND Hy**	31.27	160	T	T	17 48 30.4	
	baz=345,slow=76,SNR=45						
CMAR	**Chiang Mai Arr**	54.57	257	P	P	17 18 28.4	-2.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.6nm,0.7s,baz=32,slow=6.6,SNR=5.6						
PDAR	**Pinedale Array**	**62.21**	**56**	P	**P**	**17 19 25.8**	**+1.9**
	0.7nm,0.8s,baz=353,slow=3.6,SNR=3.9						
ASAR	**Alice Springs**	**74.53**	**201**	P	**P**	**17 20 40.8**	**+0.1**
	0.3nm,0.6s,baz=7.1,slow=3.7,SNR=2.3						
TXAR	**Lajitas Array**	**75.02**	**63**	P	**P**	**17 20 45.9**	**+2.0**
	1.3nm,0.7s,baz=284,slow=4.1,SNR=6.8						

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*IDC **19** 17:14:29.1±2.0, 34°.11N×142°.46E, h0^{km}, mb3.4/2, mb1 3.4/6, mb1mx3.2/37, mbtmp3.5/6, ML3.3/3, Error ellipse: s-maj=43.0km s-min=24.3km az=67.0*

ISC 19 17:14:31.7±1.2**, 34°.01N**±0°.08×**142°.4E**±0°.1**, h25**^{km}**, n6, σ2^{s}37**/9**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.38**	**249**	Pn	**Pn**	**17 15 09.7**	**+0.6**
	23nm,0.3s,baz=75,slow=22,SNR=6.6						
JHJ				Sn	**Sn**	**17 15 35.1**	**-2.4**
	29nm,0.3s,baz=59,slow=23,SNR=5.4						
MJAR	**Matsushiro Arr**	**4.27**	**307**	Pn	**Pn**	**17 15 35.6**	**+0.5**
	0.1nm,0.3s,baz=102,slow=13,SNR=1.9						
MJAR				Sn	**Sn**	**17 16 24.6**	**+0.3**
	0.1nm,0.3s,baz=302,slow=29,SNR=4.8						
JCJ	**Chichijima**	**6.90**	**182**	Pn	**Pn**	**17 16 11.8**	**+0.6**
	0.9nm,0.3s,baz=270,slow=20,SNR=1.4						
JCJ				Sn	**Sn**	**17 17 25.3**	**-3.6**
	3.7nm,0.3s,baz=295,slow=22,SNR=1.6						
ASAJ	**Asahikawa**	**10.09**	**1**	Pn	**Pn**	**17 16 53.0**	**-2.0**
	0.2nm,0.3s,baz=191,slow=19,SNR=1.7						
WRA	**Warramunga Arr**	**54.20**	**189**	P	**P**	**17 23 57.2**	**+2.0**
	0.2nm,0.3s,baz=6.7,slow=7.7,SNR=5.1						
ASAR	**Alice Springs**	**57.93**	**189**	P	**P**	**17 24 24.4**	**+2.5**
	0.4nm,0.8s,baz=5.4,slow=7.2,SNR=5.0						

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*IDC **19** 17:22:35.8±2.7, 33°.92N×142°.18E, h0^{km}, mb3.3/2, mb1 3.4/5, mb1mx3.2/38, mbtmp3.4/5, ML3.0/3, Error ellipse: s-maj=46.4km s-min=25.9km az=43.0*

*JMA **19** 17:22:39.3±0.5, 34°.13N×142°.08E, h37^{km}, M3.2*

ISC 19 17:22:36.5±1.3**, 34°.05N**±0°.05×**142°.35E**±0°.09**, h25**^{km}**, n18, σ1^{s}61**/26**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.29**	**298**	*e*S	**Sn**	**17 23 11.6**	**-2.9**
BSO3	**Boso 3**	**1.70**	**297**	P	**Pn**	**17 23 04.9**	**+0.7**
BSO4	**Boso 4**	**1.91**	**300**	P	**Pn**	**17 23 06.0**	**-1.3**
CHOJ	**Chosi**	**2.05**	**324**	P	**Pn**	**17 23 10.0**	**+0.6**
JKUC	**kamogawauchiur**	**2.09**	**302**	P	**Pn**	**17 23 10.6**	**+0.7**
JMKN	**Mikurajimanish**	**2.30**	**267**	P	**Pn**	**17 23 12.9**	**+0.1**
JMKN				*e*S	**Sn**	**17 23 38.1**	**-2.2**
JHJ2	**Mitsune**	**2.31**	**247**	P	**Pn**	**17 23 13.8**	**+0.8**
JHJ2				*e*S	**Sn**	**17 23 39.6**	**-1.1**
JHJ	**Hachijo jima 2**	**2.34**	**247**	Pn	**Pn**	**17 23 13.7**	**+0.4**
	24nm,0.3s,baz=118,slow=22,SNR=7.3						
JHJ				Sn	**Sn**	**17 23 40.0**	**-1.3**
	34nm,0.3s,baz=62,slow=21,SNR=2.1						
JIZS	**Izushimoda**	**2.95**	**284**	P	**Pn**	**17 23 21.6**	**-0.1**
JOD2	**Odawara 2**	**2.95**	**295**	P	**Pn**	**17 23 21.5**	**-0.2**
JAG	**Ashikaga**	**3.35**	**316**	P	**Pn**	**17 23 27.7**	**+0.4**
JAG				*e*S	**Sn**	**17 24 04.6**	**-1.7**
JRY	**Ryogami san**	**3.44**	**306**	P	**Pn**	**17 23 29.4**	**+0.9**
JYN	**Shimob**	**3.45**	**296**	P	**Pn**	**17 23 29.1**	**+0.4**
JYN				*e*S	**Sn**	**17 24 07.8**	**-1.0**
JFT	**Otama**	**3.83**	**335**	P	**Pn**	**17 23 34.3**	**+0.5**
JFT				*e*S	**Sn**	**17 24 15.3**	**-2.7**
MJAR	**Matsushiro Arr**	**4.20**	**307**	Pn	**Pn**	**17 23 40.5**	**+1.6**
	0.1nm,0.3s,baz=103,slow=13,SNR=2.1						
MJAR				Sn	**Sn**	**17 24 28.3**	**+1.1**
	0.1nm,0.3s,baz=226,slow=29,SNR=2.7						
JCJ	**Chichijima**	**6.94**	**181**	Pn	**Pn**	**17 24 16.0**	**-0.6**
	1.0nm,0.3s,baz=285,slow=20,SNR=1.2						
JCJ				Sn	**Sn**	**17 25 30.8**	**-3.9**
	3.4nm,0.3s,baz=300,slow=20,SNR=1.6						
WRA	**Warramunga Arr**	**54.23**	**189**	P	**P**	**17 32 02.2**	**+1.9**
	0.2nm,0.4s,baz=5.8,slow=7.6,SNR=6.4						
ASAR	**Alice Springs**	**57.96**	**189**	P	**P**	**17 32 29.1**	**+2.2**
	0.1nm,0.5s,baz=10,slow=7.9,SNR=4.4						

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*IDC **19** 17:31:19.8±1.3, 12°.81N×89°.03W, h0^{km}, mb4.1/9, mb1 4.3/12, mb1mx4.0/38, mbtmp4.0/12, ML3.2/3, Error ellipse: s-maj=42.3km s-min=18.7km az=47.0*

*SNET **19** 17:31:22.9±1.1, 12°.56N×89°.52W, h23^{km}±5^{km}, ML4.0*

*UCR **19** 17:31:23.1±1.2, 12°.57N×89°.48W, h15^{km}±10^{km}, ML3.9, mb4.6(NEIC)*

*NEIC **19** 17:31:24.6±1.7, 12°.50N±0°.09×89°.42W±0°.08, h50^{km}±9^{km}, Error ellipse: s-maj=14.3km s-min=8.6km az=213.0*

*INET **19** 17:31:26.4, 12°.83N×89°.32W, h0^{km}, ML3.5*

ISC 19 17:31:24.9±0.9**, 12°.57N**±0°.08×**89°.46W**±0°.06**, h47**^{km}**, n113, σ1^{s}06**/119**, mb4.5**/38**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.92**	**8**	*e*P	**Pn**	**17 31 40.4**	**-1.2**
LALI				*e*S	**Sn**	**17 31 52.3**	**-1.5**
LALI	**Alcalda de L**	**0.92**	**8**	*e*P	**Pn**	**17 31 40.4**	**-1.2**
LALI				*e*S	**Sn**	**17 31 52.3**	**-1.5**
LFRS	**El Faro**	**1.12**	**20**	*e*P	**Pn**	**17 31 43.8**	**-0.5**
SNET	**Serv Nac Est T**	**1.13**	**11**	*e*P	**Pn**	**17 31 43.3**	**-1.2**
SNET	**Serv Nac Est T**	**1.13**	**11**	*e*P	**Pn**	**17 31 43.3**	**-1.2**
SNET	**Serv Nac Est T**	**1.13**	**11**		**Pn**	**17 31 43.8**	**-0.7**
BOQS	**Boqueron**	**1.17**	**8**	*e*P	**Pn**	**17 31 45.0**	**-0.2**
LBRS	**Las Brisas**	**1.23**	**19**	*e*P	**Pn**	**17 31 45.4**	**-0.5**
CEVE	**Cerro Verde**	**1.26**	**353**	*e*P	**Pn**	**17 31 45.7**	**-0.7**
CEVE				*e*S	**Sn**	**17 32 03.5**	**+1.1**
CEVE				IAML		17 32 13.1	
	comp=Z,3µm,0.4s						
CEVE	**Cerro Verde**	**1.26**	**353**	*e*P	**Pn**	**17 31 45.7**	**-0.7**
CEVE				*e*S	**Sn**	**17 32 03.5**	**+1.1**
CEVE				IAML		17 32 13.1	
	comp=Z,3µm,0.4s						
SBLS	**San Blas**	**1.27**	**353**	*e*P	**Pn**	**17 31 45.8**	**-0.8**
SBLS	**San Blas**	**1.27**	**353**	*e*P	**Pn**	**17 31 45.8**	**-0.8**
COEB	**Comit de Eme**	**1.29**	**44**	*e*P	**Pn**	**17 31 45.8**	**-0.9**
COEB	**Comit de Eme**	**1.29**	**44**	*e*P	**Pn**	**17 31 45.8**	**-0.9**
SNJE	**San Jose**	**1.30**	**354**	*e*P	**Pn**	**17 31 46.1**	**-0.8**
SNJE	**San Jose**	**1.30**	**354**	*e*P	**Pn**	**17 31 46.1**	**-0.8**
RTR	**El Retiro**	**1.33**	**352**	*e*P	**Pn**	**17 31 46.8**	**-0.6**
RTR	**El Retiro**	**1.33**	**352**	*e*P	**Pn**	**17 31 46.8**	**-0.6**
JUCU	**Jucuar¡n**	**1.36**	**60**	*e*P	**Pn**	**17 31 47.0**	**-0.6**
JUCU	**Jucuar¡n**	**1.36**	**60**	*e*P	**Pn**	**17 31 47.0**	**-0.6**
PACA	**Pacayal**	**1.42**	**51**	*e*P	**Pn**	**17 31 48.1**	**-0.4**
PACA				*e*S	**Sn**	**17 32 08.7**	**+2.6**
PACA	**Pacayal**	**1.42**	**51**	*e*P	**Pn**	**17 31 48.1**	**-0.4**
PACA				*e*S	**Sn**	**17 32 08.7**	**+2.6**
BLLM	**Bellamira**	**1.47**	**54**	*e*P	**Pn**	**17 31 48.8**	**-0.3**
BLLM	**Bellamira**	**1.47**	**54**	*e*P	**Pn**	**17 31 48.8**	**-0.3**
CNCH	**Conchagua**	**1.73**	**66**	*e*P	**Pn**	**17 31 52.7**	**0.0**
CNCH				IAML		17 32 32.6	
	comp=Z,1µm,0.4s						
CNCH	**Conchagua**	**1.73**	**66**	*e*P	**Pn**	**17 31 52.7**	**0.0**
CNCH				IAML		17 32 32.6	
	comp=Z,1µm,0.4s						
CSGN	**Cosiguina Volc**	**1.90**	**77**		**Pn**	**17 31 55.4**	**+0.4**
TGUH	**Tegucigalpa,Un**	**2.59**	**55**		**Pn**	**17 32 04.6**	**0.0**
APG	**El Apazote**	**2.61**	**338**	Pn	**Pn**	**17 32 04.8**	**0.0**
	comp=Z,5.2nm,0.3s,baz=183,slow=9.1,SNR=8.7						
CCIG	**Comitan**	**4.51**	**325**		**Pn**	**17 32 32.2**	**+1.3**
JTS	**Las Juntas de**	**4.96**	**117**	Pn	**Pn**	**17 32 34.4**	**-2.6**
	comp=Z,0.8nm,0.3s,baz=24,slow=20,SNR=2.8						
ESPN	**Las Esperanzas**	**5.05**	**94**	Pn	**Pn**	**17 32 37.6**	**-0.6**
CMIG	**Matias Romero**	**6.91**	**311**	Pn	**Pn**	**17 33 04.5**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=105,slow=11,SNR=8.6						
TEIG	**Tepich**	**7.70**	**8**	Pn	**Pn**	**17 33 16.7**	**+2.2**
	comp=Z,1.3nm,0.3s,baz=141,slow=0.0,SNR=6.6						
TEIG	**Tepich**	**7.70**	**8**		**Pn**	**17 33 16.1**	**+1.6**
TIGA	**Tifton**	**19.54**	**15**	P	**Pn**	**17 35 50.0**	**-0.3**
TIGA				IAmb	IAmb	17 35 51.6	
	comp=Z,30nm,0.8s						
435B	**Jarrell**	**19.62**	**339**	P	**P**	**17 35 50.3**	**+0.8**
435B				IAmb	IAmb	17 35 50.9	
	comp=Z,24nm,0.7s						
JCT	**Junction City**	**20.23**	**333**	P	**P**	**17 35 56.5**	**+0.3**
152A	**Waverly Hall**	**20.47**	**11**	P	**P**	**17 35 59.5**	**+0.7**
152A				IAmb	IAmb	17 36 10.1	
	comp=Z,48nm,1.8s						
LRAL	**Lakeview Retre**	**20.50**	**6**	P	**P**	**17 36 00.4**	**+1.4**
WHTX	**Lake Whitney,**	**20.68**	**340**	P	**P**	**17 36 01.4**	**+0.3**
Z51A	**Franklin**	**21.02**	**10**	P	**P**	**17 36 06.5**	**+1.8**
TXAR	**Lajitas Array**	**21.28**	**324**	P	**P**	**17 36 09.8**	**+2.1**
	comp=Z,8.0nm,0.8s,baz=147,slow=11,SNR=53						
TXAR	**Lajitas Array**	**21.28**	**324**	P	**P**	**17 36 09.3**	**+1.6**
TX31	**Lajitas Ar. Si**	**21.28**	**324**	P	**P**	**17 36 09.3**	**+1.6**
TX32	**Lajitas Array**	**21.28**	**324**	P	**P**	**17 36 09.2**	**+1.6**
OXF	**Oxford**	**21.85**	**0**	P	**P**	**17 36 14.2**	**+0.7**
Z35A	**Perchaven, San**	**21.86**	**342**	P	**P**	**17 36 13.3**	**-0.4**
X48A	**Hartselle**	**21.90**	**5**	P	**P**	**17 36 14.5**	**+0.4**
X40A	**Basin Creek Fa**	**22.04**	**353**	P	**P**	**17 36 18.0**	**+2.5**
X40A				IAmb	IAmb	17 37 08.4	
	comp=Z,38nm,1.9s						
ABTX	**Abilene, Hawle**	**22.04**	**337**	P	**P**	**17 36 14.9**	**-0.7**
MIAR	**Mount Ida**	**22.20**	**351**	P	**P**	**17 36 17.8**	**+0.4**
MIAR				IAmb	IAmb	17 36 20.5	
	comp=Z,21nm,0.9s						
UALR	**University of**	**22.26**	**354**	P	**P**	**17 36 18.6**	**+0.6**
UALR				IAmb	IAmb	17 36 21.6	
	comp=Z,32nm,1.1s						
X37A	**Clayton**	**22.57**	**347**	P	**P**	**17 36 22.7**	**+1.3**
X37A				IAmb	IAmb	17 36 24.3	
	comp=Z,42nm,1.5s						
W41B	**Gary Mavity, V**	**22.65**	**354**	P	**P**	**17 36 23.2**	**+1.1**
WHAR	**Wooly Hollow**	**22.77**	**354**	P	**P**	**17 36 24.1**	**+0.7**
W39A	**Magazine**	**22.87**	**351**	P	**P**	**17 36 25.3**	**+0.9**
W39A				IAmb	IAmb	17 36 27.4	
	comp=Z,14nm,0.9s						
PAULI	**Pauline**	**23.21**	**16**	P	**P**	**17 36 28.3**	**+0.4**
PAULI				IAmb	IAmb	17 36 29.9	
	comp=Z,12nm,0.9s						
CPCT	**Cooper Cave**	**23.21**	**10**	P	**P**	**17 36 27.4**	**-0.5**
X34A	**Smith Ranch, M**	**23.22**	**342**	P	**P**	**17 36 27.5**	**-0.4**
X34A				IAmb	IAmb	17 36 29.4	
	comp=Z,20nm,0.8s						
PEBM	**Pemiscott Bayo**	**23.45**	**359**	P	**P**	**17 36 31.4**	**+1.3**
LCAR	**Lake Charles**	**23.45**	**357**	P	**P**	**17 36 30.0**	**-0.1**
LCAR				IAmb	IAmb	17 36 31.8	
	comp=Z,18nm,1.1s						
W35A	**Tecumseh**	**23.47**	**345**	P	**P**	**17 36 29.3**	**-1.1**
TKL	**Tuckaleechee C**	**23.56**	**12**	P	**P**	**17 36 30.0**	**-1.2**
	comp=Z,6.5nm,0.9s,baz=184,slow=13,SNR=4.7						
TKL	**Tuckaleechee C**	**23.56**	**12**	P	**P**	**17 36 30.8**	**-0.3**
WMOK	**Wichita Mounta**	**23.64**	**341**	P	**P**	**17 36 31.5**	**-0.5**
WMOK				IAmb	IAmb	17 36 32.7	
	comp=Z,13nm,0.9s						
U40A	**Yellville**	**23.88**	**353**	P	**P**	**17 36 34.7**	**+0.5**
MNTX	**Cornudas Mount**	**24.03**	**325**	P	**P**	**17 36 35.6**	**0.0**
U49A	**Red Boiling Sp**	**24.07**	**7**	P	**P**	**17 36 35.8**	**-0.1**
U49A				IAmb	IAmb	17 36 38.0	
	comp=Z,48nm,1.8s						
PBMO	**Poplar Bluff**	**24.12**	**358**	P	**P**	**17 36 36.7**	**+0.3**
U38A	**Gravette**	**24.18**	**350**	P	**P**	**17 36 36.5**	**-0.5**
STVI	**Saint Thomas**	**24.29**	**73**	P	**P**	**17 36 36.5**	**-1.6**
STVI				IAmb	IAmb	17 37 24.2	
	comp=Z,25nm,1.0s						
T42A	**Van Buren**	**24.40**	**357**	P	**P**	**17 36 39.7**	**+0.7**
T42A				IAmb	IAmb	17 36 41.2	
	comp=Z,11nm,0.8s						
T47A	**Sharon Grove**	**24.41**	**5**	P	**P**	**17 36 38.6**	**-0.4**
T47A				IAmb	IAmb	17 36 40.4	
	comp=Z,17nm,0.8s						
MSTX	**Muleshoe**	**24.52**	**333**	P	**P**	**17 36 39.7**	**-0.5**
MSTX				IAmb	IAmb	17 36 41.3	
	comp=Z,13nm,1.0s						
MGMO	**Mountain Grove**	**24.61**	**355**	P	**P**	**17 36 41.4**	**+0.5**
MGMO				IAmb	IAmb	17 36 43.6	
	comp=Z,16nm,0.9s						
U54A	**Nelsons Funny**	**24.82**	**15**	P	**P**	**17 36 43.4**	**+0.6**
U54A				IAmb	IAmb	17 36 45.4	
	comp=Z,13nm,0.8s						
AMTX	**Amarillo**	**24.83**	**336**	P	**P**	**17 36 43.1**	**+0.2**
AMTX				IAmb	IAmb	17 36 44.5	
	comp=Z,17nm,1.0s						
T35A	**Sooner Cattle**	**25.06**	**347**	P	**P**	**17 36 44.5**	**-0.4**
U32A	**Winter Ranch,**	**25.22**	**342**	P	**P**	**17 36 46.3**	**-0.1**
U32A				IAmb	IAmb	17 36 48.1	
	comp=Z,16nm,1.0s						
S39A	**Bolivar**	**25.26**	**353**	P	**P**	**17 36 46.4**	**-0.3**
S39A				IAmb	IAmb	17 36 47.5	
	comp=Z,6.9nm,0.6s						
CCM	**Cathedral Cave**	**25.43**	**357**	P	**P**	**17 36 48.1**	**-0.2**
CCM				IAmb	IAmb	17 36 51.1	
	comp=Z,14nm,1.1s						
WCI	**Wyandotte Cave**	**25.71**	**6**	P	**P**	**17 36 50.3**	**-0.5**
WCI				IAmb	IAmb	17 36 51.5	
	comp=Z,13nm,1.1s						
R40A	**Maddies Statio**	**25.74**	**355**	P	**P**	**17 36 50.7**	**-0.4**
Q44A	**Meyer Farm, Va**	**26.23**	**1**	P	**P**	**17 36 55.4**	**-0.1**
Q44A				IAmb	IAmb	17 36 56.2	
	comp=Z,15nm,0.7s						
PV12	**Saucer Basin,**	**30.89**	**330**	P	**P**	**17 37 37.8**	**+0.4**
PV12				IAmb	IAmb	17 37 39.5	
	comp=Z,6.0nm,0.8s						
I42A	**Draeger Farm,**	**31.21**	**1**	P	**P**	**17 37 39.5**	**-0.3**
G40A	**Rib Lake**	**32.59**	**359**	P	**P**	**17 37 51.9**	**-0.1**
G40A				IAmb	IAmb	17 37 52.8	
	comp=Z,12nm,1.2s						
SPMN	**Marine on St.**	**32.67**	**356**	P	**P**	**17 37 51.8**	**-0.8**
SPMN				IAmb	IAmb	17 37 52.7	
	comp=Z,7.2nm,0.7s						
COWI	**Conover**	**33.42**	**0**	P	**P**	**17 37 58.3**	**-0.9**
E43A	**Lone Tree Farm**	**33.76**	**3**	P	**P**	**17 38 01.2**	**-0.9**
E38A	**The Farm, Brul**	**33.97**	**357**	P	**P**	**17 38 03.1**	**-0.8**
E38A				IAmb	IAmb	17 38 03.7	
	comp=Z,6.0nm,0.8s						
D41A	**Chassel**	**34.39**	**1**	P	**P**	**17 38 06.5**	**-1.0**
D41A				IAmb	IAmb	17 38 07.3	
	comp=Z,8.4nm,0.8s						
PDAR	**Pinedale Array**	**34.77**	**334**	P	**P**	**17 38 13.7**	**+2.5**
	comp=Z,0.7nm,0.9s,baz=148,slow=4.3,SNR=3.1						
EYMN	**Ely**	**35.31**	**358**	P	**P**	**17 38 14.1**	**-1.4**
REDW	**Red Top Meadow**	**35.81**	**333**	P	**P**	**17 38 20.3**	**+0.2**
AGMN	**Agassiz Nation**	**36.02**	**353**	P	**P**	**17 38 20.4**	**-1.2**
MDND	**Maddock**	**36.18**	**348**	P	**P**	**17 38 22.6**	**-0.3**
NVAR	**Mina Array Bea**	**36.34**	**320**	P	**P**	**17 38 27.3**	**+2.6**
	comp=Z,2.5nm,0.8s,baz=132,slow=8.8,SNR=12						
NVAR	**Mina Array Bea**	**36.34**	**320**	P	**P**	**17 38 27.1**	**+2.4**
RLMT	**Red Lodge**	**36.58**	**336**	P	**P**	**17 38 27.9**	**+1.3**
RLMT				IAmb	IAmb	17 38 29.5	
	comp=Z,8.6nm,1.2s						
DGMT	**Dagmar**	**37.84**	**344**	P	**P**	**17 38 36.8**	**-0.2**
DGMT				IAmb	IAmb	17 38 43.3	
	comp=Z,12nm,0.8s						
MCMT	**McKenzie Canyo**	**37.85**	**333**	P	**P**	**17 38 37.1**	**-0.4**
ULM	**Lac du Bonnet**	**37.94**	**353**	P	**P**	**17 38 36.6**	**-1.3**
	comp=Z,2.0nm,0.5s,baz=170,slow=9.6,SNR=6.7						
ULM	**Lac du Bonnet**	**37.94**	**353**	P	**P**	**17 38 36.3**	**-1.5**
SIV	**San Ignacio**	**39.92**	**135**	P	**P**	**17 38 54.9**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=301,slow=11,SNR=3.8						
SCHQ	**Schefferville**	**45.75**	**18**	P	**P**	**17 39 39.8**	**-1.8**
	comp=Z,4.7nm,0.7s,baz=218,slow=7.3,SNR=8.2						
SCHQ	**Schefferville**	**45.75**	**18**	P	**P**	**17 39 40.2**	**-1.4**
SCHQ				IAmb	IAmb	17 39 40.9	
	comp=Z,6.2nm,0.8s						
YKA	**Yellowknife Ar**	**53.00**	**346**	P	**P**	**17 40 36.3**	**-0.4**
	comp=Z,2.7nm,0.9s,baz=143,slow=8.3,SNR=24						
ILAR	**Eielson Array**	**65.13**	**337**	P	**P**	**17 42 00.1**	**-0.6**
	comp=Z,1.0nm,1.0s,baz=108,slow=3.6,SNR=6.8						
BMAR	**Burnt Mountain**	**65.48**	**340**	P	**P**	**17 42 03.5**	**+0.5**
CMAR	**Chiang Mai Arr**	**148.08**	**345**	PKPbc	**PKPbc**	**17 51 07.0**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=341,slow=3.3,SNR=14						
CMAR	**Chiang Mai Arr**	**148.08**	**345**		**PKPbc**	**17 51 07.0**	**+0.6**

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*IDC **19** 17:32:40.4±1.7, 34°.15N×142°.17E, h0^{km}, mb3.5/3, mb1 3.6/7, mb1mx3.3/45, mbtmp3.6/7, ML3.6/3, Error ellipse: s-maj=33.1km s-min=21.3km az=76.0*

*JMA **19** 17:32:41.5±0.4, 34°.04N×142°.37E, h42^{km}, M3.3*

ISC 19 17:32:42.1±1.0**, 34°.05N**±0°.06×**142°.38E**±0°.08**, h25**^{km}**, n18, σ1^{s}68**/26**, mb3.6**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.30**	**298**	P	**Pn**	**17 33 03.8**	**-0.4**
BSO1				*e*S	**Sn**	**17 33 20.3**	**-0.3**
BSO3	**Boso 3**	**1.71**	**296**	P	**Pn**	**17 33 10.1**	**0.0**
JKUC	**kamogawauchiur**	**2.11**	**302**	P	**Pn**	**17 33 15.8**	**0.0**
JKUC				*e*S	**Sn**	**17 33 41.0**	**-0.2**
JMKN	**Mikurajimanish**	**2.32**	**267**	P	**Pn**	**17 33 18.1**	**-0.6**
JHJ2	**Mitsune**	**2.34**	**247**	P	**Pn**	**17 33 19.1**	**+0.2**
JHJ	**Hachijo jima 2**	**2.36**	**247**	Pn	**Pn**	**17 33 18.0**	**-1.2**
	32nm,0.3s,baz=93,slow=21,SNR=7.3						
JHJ				Sn	**Sn**	**17 33 46.1**	**-1.3**
	33nm,0.3s,baz=61,slow=23,SNR=1.6						
JOD2	**Odawara 2**	**2.97**	**295**	P	**Pn**	**17 33 27.4**	**-0.2**
JOD2				*e*S	**Sn**	**17 34 00.6**	**-1.9**
JIZS	**Izushimoda**	**2.97**	**284**	P	**Pn**	**17 33 26.7**	**-0.9**
JIZS				*e*S	**Sn**	**17 34 00.5**	**-1.9**
JAG	**Ashikaga**	**3.37**	**315**	P	**Pn**	**17 33 34.1**	**+1.0**
JRY	**Ryogami san**	**3.46**	**305**	P	**Pn**	**17 33 34.6**	**+0.2**
JYN	**Shimob**	**3.47**	**296**	S	**Sn**	**17 34 13.0**	**-1.9**
JFT	**Otama**	**3.83**	**335**	P	**Pn**	**17 33 39.6**	**+0.1**
JFT				S	**Sn**	**17 34 20.5**	**-3.3**
MJAR	**Matsushiro Arr**	**4.22**	**307**	Pn	**Pn**	**17 33 44.5**	**-0.4**
	0.1nm,0.3s,baz=144,slow=8.5,SNR=7.5						
MJAR				Sn	**Sn**	**17 34 32.9**	**-0.3**
	0.1nm,0.3s,baz=91,slow=35,SNR=3.9						
JCJ	**Chichijima**	**6.94**	**181**	Pn	**Pn**	**17 34 22.9**	**+0.7**
	1.6nm,0.3s,baz=322,slow=19,SNR=1.4						
JCJ				Sn	**Sn**	**17 35 36.5**	**-3.8**
	2.5nm,0.3s,baz=311,slow=21,SNR=1.6						
ASAJ	**Asahikawa**	**10.05**	**1**	Pn	**Pn**	**17 35 03.4**	**-1.4**
	0.6nm,0.3s,baz=240,slow=12,SNR=12						
ZALV	**Zalesovo Beam**	**44.53**	**315**	P	**P**	**17 40 51.3**	**-0.2**
	0.3nm,0.3s,baz=103,slow=12,SNR=2.0						
WRA	**Warramunga Arr**	**54.24**	**189**	P	**P**	**17 42 09.3**	**+3.4**
	0.6nm,0.9s,baz=5.3,slow=7.3,SNR=3.0						
ASAR	**Alice Springs**	**57.97**	**189**	P	**P**	**17 42 35.5**	**+2.9**
	0.3nm,0.8s,baz=12,slow=9.6,SNR=2.6						

IDC 19 17:32:56.0±2.4**, 16°.42S**×**73°.83W, h82**^{km}±22^{km}**, mb3.7**/3**, mb1 3.9**/7**, mb1mx3.5**/34**, mbtmp4.0**/7**, Error ellipse: s-maj=44.6km s-min=18.9km az=47.0, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**5.29**	**326**	P	Pn	17 34 12.4	-0.1
	12nm,0.3s,baz=100,slow=5.7,SNR=13						
NNA				S	Sn	17 35 15.3	+3.1
	18nm,0.3s,baz=176,slow=23,SNR=5.1						
LPAZ	**La Paz**	**5.47**	**89**	P	Pn	17 34 16.2	+0.7
	2.4nm,0.3s,baz=269,slow=13,SNR=22						
LVC	**Limon Verde**	**7.71**	**144**	P	Pn	17 34 47.0	+1.1
	1.4nm,0.3s,baz=321,slow=11,SNR=2.6						
LVC				S	Sn	17 36 11.4	-0.5
	3.3nm,0.3s,baz=112,slow=10,SNR=6.9						
SIV	**San Ignacio**	**12.26**	**90**	P	Pn	17 35 46.3	-1.3
	0.3nm,0.3s,baz=288,slow=12,SNR=6.2						
NEW	**Newport**	**75.06**	**332**	P	P	17 44 28.4	-0.5
	2.5nm,0.7s,baz=119,slow=13,SNR=2.6						
TORD	**Torodi Ar. Bea**	**80.20**	**73**	P	P	17 44 58.3	+0.2
	1.5nm,0.5s,baz=267,slow=5.0,SNR=10						
TORD				pP	PcP	17 45 10.9	+5.8
	0.8nm,0.8s,baz=252,slow=4.9,SNR=3.8						
YKA	**Yellowknife Ar**	**84.91**	**342**	P	P	17 45 21.8	+0.3
	0.2nm,0.6s,baz=138,slow=4.7,SNR=2.9						
YKA				pP	pP	17 45 34.2	-9.1
	0.2nm,0.6s,baz=139,slow=5.7,SNR=2.8						

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*TEH **19** 17:53:34.0, 36°.99N×55°.81E, h5^{km}, ML3.7*

*THR **19** 17:53:34.6±0.3, 36°.98N×55°.83E, h6^{km}±3^{km}, ML3.5*

ISC 19 17:53:34.3±0.7**, 37°.01N**±0°.03×**55°.80E**±0°.03**, h10**^{km}**, n66, σ2^{s}66**/70**, 1C-2D, Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMND	**Minoodasht**	**0.40**	**308**	*e*Pg	**Pg**	**17 53 42.5**	**+0.3**
IMND				*e*Sg	**Sg**	**17 53 48.4**	**+0.9**
SHRO	**Shahrood**	**1.03**	**171**	*e*Pg	**Pg**	**17 53 53.6**	**-0.6**
SHRO				*e*Sg	**Sb**	**17 54 07.7**	**-0.4**
SHRO	**Shahrood**	**1.03**	**171**	*e*Pg	**Pg**	**17 53 53.6**	**-0.6**
BJRD	**Bojnurd**	**1.45**	**61**	*e*Pg	**Pg**	**17 54 02.5**	**+0.3**
BJRD				*e*Sg	**Sg**	**17 54 22.8**	**+1.7**
BJRD	**Bojnurd**	**1.45**	**61**	*e*Pn	**Pg**	**17 54 02.5**	**+0.3**
IGLO	**Ghaloghah**	**1.66**	**253**	*e*		17 54 41.7	
IGLO				*e*Pn	**Pg**	**17 54 05.8**	**-0.4**
ISFR	**Sfrayin**	**1.76**	**88**	*e*		17 54 43.5	
ISFR				*e*Pn	**Pb**	**17 54 07.0**	**+0.1**
IANJ	**Anjilo**	**2.17**	**225**	*e*Pn	**Pb**	**17 54 13.9**	**+0.1**
IANJ				*e*		17 54 47.7	
IKRD	**Kardeh**	**2.19**	**95**	*e*Pn	Pg	17 54 24.1	+7.8
IKRD				*e*		17 55 24.1	
IEMG	**Emamgholi**	**2.31**	**79**	*e*Pn	**Pb**	**17 54 15.4**	**-0.9**
IEMG				*e*		17 54 51.6	
ISHM	**Shahmirzad**	**2.35**	**240**	*e*Pn	**Pb**	**17 54 16.6**	**-0.4**
ISHM				*e*		17 55 00.5	
IAKL	**Akhelmad**	**2.41**	**99**	*e*Pn	**Pb**	**17 54 16.1**	**-1.8**
IAKL				*e*		17 54 58.3	
IALA	**Alasht**	**2.58**	**250**	*e*Pn	**Pb**	**17 54 20.0**	**-0.9**
IPAY	**Payeh**	**2.63**	**101**	*e*Pn	**Pb**	**17 54 18.9**	**-2.7**
IPAY				*e*		17 55 06.8	
IFIR	**Firoozkooh**	**2.81**	**242**	*e*Pn	**Pb**	**17 54 23.2**	**-1.6**
IFIR				*e*		17 54 29.1	
ILAS	**Lasjerd**	**2.82**	**236**	*e*Pn	**Pb**	**17 54 23.0**	**-1.8**
ILAS				*e*		17 55 15.0	
IPRN	**Peran**	**2.89**	**256**	*e*Pn	**Pb**	**17 54 23.8**	**-2.2**
IMOG	**Moghan**	**2.99**	**107**	*e*Pn	**Pn**	**17 54 24.1**	**+2.1**
TNSJ	**Nastanj**	**3.11**	**168**	*e*Pn	**Pb**	**17 54 26.5**	**-3.3**
IDMV	**Damavand**	**3.36**	**246**	*e*Pn	**Pb**	**17 54 31.7**	**-2.5**
IDMV				*e*		17 55 42.2	
TABS	**Tabas**	**3.52**	**162**	*e*Pn	**Pn**	**17 54 31.4**	**+2.2**
TABS				*e*Sg	**Sg**	**17 55 29.3**	**+1.8**
TABS	**Tabas**	**3.52**	**162**	*e*Pn	**Pn**	**17 54 31.4**	**+2.2**
TKDS	**Koohdasht(Taba**	**3.56**	**162**	*e*Pn	**Pn**	**17 54 31.8**	**+2.1**
TKDS				*e*		17 55 49.0	
IVRN	**Varamin**	**3.87**	**240**	*e*Pn	**Pn**	**17 54 36.4**	**+2.5**
IVRN				*e*		17 54 50.9	
CHTH	**Charan**	**3.93**	**255**	*e*Pn	**Pn**	**17 54 37.8**	**+2.9**
CHTH	**Charan**	**3.93**	**255**	*e*Pn	**Pn**	**17 54 37.8**	**+2.9**
TPRV	**Parvadeh(Tabas**	**4.04**	**169**	*e*Pn	**Pn**	**17 54 38.8**	**+2.5**
ANAR	**Anarak**	**4.17**	**205**	*e*Pn	**Pn**	**17 54 39.9**	**+1.7**
QALM	**Alamut, Qazvin**	**4.18**	**264**	*e*Pn	**Pn**	**17 54 41.2**	**+2.8**
KRSH	**Karshahi**	**4.26**	**226**	*e*Pn	**Pn**	**17 54 41.7**	**+2.3**
IQOM	**Qom**	**4.41**	**242**	*e*Pn	**Pn**	**17 54 44.6**	**+3.1**
AFRZ	**Afriz**	**4.44**	**143**	*e*	Pg	17 55 07.2	+7.8
GHVR	**GHOM**	**4.45**	**237**	*e*Pn	**Pn**	**17 54 45.3**	**+3.3**
GHVR				IAML		17 56 08.6	
	comp=E,31nm,0.6s						
GHVR	**GHOM**	**4.45**	**237**	*e*Pn	**Pn**	**17 54 45.3**	**+3.3**
IGZV	**Ghazvin**	**4.53**	**264**	*e*Pn	**Pn**	**17 54 46.8**	**+3.6**
ITEG	**Tejag**	**4.77**	**149**	*e*Pn	**Pn**	**17 54 48.9**	**+2.5**
ITEG				*e*		17 54 49.7	
QAM	**Ghamsar**	**4.82**	**229**	*e*Pn	**Pn**	**17 54 48.7**	**+1.6**
IMON	**Monand**	**4.96**	**139**	*e*Pn	**Pn**	**17 54 52.4**	**+3.4**
IZEF	**Zefreh**	**5.00**	**216**	*e*Pn	**Pn**	**17 54 52.1**	**+2.5**
IRAZ	**Razeghan**	**5.01**	**253**	*e*Pn	**Pn**	**17 54 53.3**	**+3.5**
IKOO	**Kooshah**	**5.28**	**149**	*e*Pn	**Pn**	**17 54 55.6**	**+2.1**
ISAD	**Sadrabad**	**5.38**	**200**	*e*Pn	**Pn**	**17 54 56.2**	**+1.3**
IPIR	**Pirpir**	**5.91**	**224**	*e*Pn	**Pn**	**17 55 06.2**	**+4.0**
IRAM	**Ramesheh**	**5.91**	**210**	*e*Pn	**Pn**	**17 55 04.4**	**+2.3**
ALIB	**Äli-Bayra**	**6.09**	**301**	*e*Pn	**Pn**	**17 55 07.0**	**+2.7**
GLBA	**Clilabad**	**6.25**	**293**	*e*Pn	**Pn**	**17 55 04.5**	**-2.0**
GBS	**Qobustan**	**6.41**	**305**	*e*Pn	**Pn**	**17 55 12.6**	**+3.8**
SAAT	**Saatly**	**6.45**	**298**	*e*Pn	**Pn**	**17 55 11.6**	**+2.3**
NHDN	**Nehbandan**	**6.62**	**147**	*e*Pn	**Pn**	**17 55 14.1**	**+2.3**
PQL	**Pirkuli**	**6.77**	**306**	*e*Pn	**Pn**	**17 55 16.8**	**+3.0**
KDMR	**Kurdemir**	**6.84**	**302**	*e*Pn	**Pn**	**17 55 16.6**	**+2.0**
KLNJ	**Kolanjah**	**6.93**	**211**	*e*Pn	**Pn**	**17 55 20.0**	**+3.7**
BLQ	**Beylaqan**	**7.02**	**295**	*e*Pn	**Pn**	**17 55 16.3**	**-0.8**
IML	**Ismayilli**	**7.04**	**305**	*e*Pn	**Pn**	**17 55 19.7**	**+2.3**
QRD	**Qoradiz**	**7.11**	**293**	*e*Pn	**Pn**	**17 55 16.8**	**-1.5**
ZRD	**Zardab**	**7.14**	**300**	*e*Pn	**Pn**	**17 55 19.2**	**+0.5**
QUB	**Quba**	**7.24**	**309**	*e*Pn	**Pn**	**17 55 23.3**	**+3.1**
XNQ	**Khinaliq**	**7.26**	**307**	*e*Pn	**Pn**	**17 55 24.3**	**+3.7**
QBL	**Gabala**	**7.34**	**305**	*e*Pn	**Pn**	**17 55 23.8**	**+2.2**
QSAR	**Qusar**	**7.38**	**310**	*e*Pn	**Pn**	**17 55 26.3**	**+4.3**
BRDA	**Brd**	**7.49**	**298**	*e*Pn	**Pn**	**17 55 22.9**	**-0.6**
GANJ	**Ganja**	**8.24**	**299**	*e*Pn	**Pn**	**17 55 33.9**	**0.0**
ZKT	**Zaqatala**	**8.46**	**306**	*e*Pn	**Pn**	**17 55 39.9**	**+3.0**
GDB	**GEDABAY**	**8.67**	**298**	*e*Pn	**Pn**	**17 55 38.6**	**-1.3**
AB31	**Akbulak array**	**12.60**	**13**	P	**Pn**	**17 56 37.2**	**+3.7**
	comp=E,26nm,0.4s,baz=198,slow=13,SNR=6.8						
AB31				⇓S	**Sn**	**17 58 46.3**	**-7.5**
	comp=E,0.5nm,0.4s,baz=195,slow=28						
AKTO	**Aktyubinsk**	**13.51**	**6**	⇑P	**Pn**	**17 56 46.1**	**+0.1**
	comp=E,4.0nm,1.1s						
AKTO				⇓S	**Sn**	**17 59 08.9**	**-7.2**
	comp=E,4.0nm,1.2s						

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*NEIC **19** 18:08:01.1±1.4, 6°.2S±0°.1×154°.7E±0°.1, h85^{km}±9^{km}, mb4.4/10, Error ellipse: s-maj=20.6km s-min=11.8km az=49.0*

*IDC **19** 18:08:02.8±2.9, 6°.25S×154°.56E, h93^{km}±24^{km}, mb3.6/9, mb1 3.8/12, mb1mx3.6/34, mbtmp4.0/12, Error ellipse:*

s-maj=26.1km s-min=18.1km az=97.0

ISC 19 18:08:03.1±0.6**,6°.22S**±0°.07×**154°.65E**±0°.07**,h100**$^{\text{km}}$**,n34,** σ**1**$^{\text{s}}$**.77**/35**,mb4.0**/14**,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.19	309	Pn	Pn	18 08 49.6	-1.8
KRVT	Keravat (AS076	3.23	306	P	Pn	18 08 48.9	-3.0
	6.7nm,0.3s,baz=162,slow=0.9,SNR=15						
KRVT				S	Sn	18 09 35.1	+5.5
	34nm,0.3s,baz=153,slow=24,SNR=8.8						
HNR	Honiara	6.15	122	S	Sn	18 10 44.6	+4.2
	4.2nm,0.3s,baz=318,slow=20,SNR=5.0						
HNR	Honiara	6.15	122	Pn	Pn	18 09 28.9	-2.5
PMG	Port Moresby	8.07	246	P	Pn	18 09 57.5	0.0
	6.2nm,0.3s,baz=52,slow=8.9,SNR=28						
PMG				S	Sn	18 11 29.9	+2.7
	6.2nm,0.3s,baz=122,slow=23,SNR=6.4						
PMG	Port Moresby	8.07	246		Pn	18 09 57.2	-0.3
DZM	Mont Dzumac	19.45	145	P	P	18 12 23.0	+0.9
	0.5nm,0.3s,baz=94,slow=18,SNR=1.3						
WR0	Warramunga Arr	23.83	233	P	P	18 13 07.0	-0.2
WR0				IAmb	IAmb	18 13 08.5	
	comp=Z,9.2nm,0.8s						
WB0	Warramunga Arr	23.85	234	P	P	18 13 07.3	-0.1
WB0				IAmb	IAmb	18 13 08.0	
	comp=Z,14nm,1.2s						
WB2	Warramunga Arr	23.98	233	P	P	18 13 08.8	+0.3
WB2				IAmb	IAmb	18 13 09.8	
	comp=Z,8.5nm,0.7s						
WRA	Warramunga Arr	23.98	233	P	P	18 13 08.8	+0.2
	comp=Z,4.9nm,0.5s,baz=57,slow=9.7,SNR=69						
WRA	Warramunga Arr	23.98	233	P	P	18 13 08.7	+0.1
ARMA	Armidale	24.24	186	P	P	18 13 11.6	+0.7
ARMA				IAmb	IAmb	18 13 59.5	
	comp=Z,40nm,1.6s						
AS31	Alice Springs	26.44	227	P	P	18 13 29.9	-0.9
ASAR	Alice Springs	26.44	227	P	P	18 13 30.4	-0.4
	comp=Z,2.0nm,0.5s,baz=56,slow=9.4,SNR=58						
ASAR				PcP	PcP	18 16 53.1	-0.8
	comp=Z,0.4nm,0.7s,baz=67,slow=2.6,SNR=5.6						
ASAR	Alice Springs	26.44	227	P	P	18 13 30.2	-0.6
ASAR					PcP	18 16 53.5	-0.4
H11S3	WAKE ISLAND Hy	27.28	26	T	T	18 41 45.3	
	baz=206,slow=76,SNR=8.3						
H11S2	WAKE ISLAND Hy	27.28	26	T	T	18 41 45.5	
	baz=206,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	27.29	26	T	T	18 41 33.2	
	baz=206,slow=76,SNR=6.1						
STKA	Stephens Creek	28.30	204	P	P	18 13 46.5	-0.7
	comp=Z,1.5nm,0.6s,baz=10.0,slow=11,SNR=5.1						
STKA	Stephens Creek	28.30	204	P	P	18 13 46.6	-0.7
FITZ	Fitzroy Crossi	30.66	245	P	P	18 14 07.4	-0.9
	comp=Z,3.2nm,0.7s,baz=57,slow=11,SNR=8.7						
FITZ	Fitzroy Crossi	30.66	245	P	P	18 14 07.1	-1.3
BKZ	Black Stump Fm	38.28	152	P	P	18 15 14.1	+0.3
BKZ				IAmb	IAmb	18 15 31.1	
	comp=Z,10.0nm,1.2s						
MORW	Morawa	42.93	233	P	P	18 15 51.7	-0.6
KSRS	Korea Array	50.09	332	P	P	18 16 48.6	+0.6
	comp=Z,0.6nm,0.7s,baz=148,slow=7.1,SNR=2.4						
CMAR	Chiang Mai Arr	60.14	295	P	P	18 18 00.7	0.0
	comp=Z,0.7nm,0.7s,baz=128,slow=5.3,SNR=7.3						
CMAR	Chiang Mai Arr	60.14	295	P	P	18 18 00.9	+0.2
MKAR	Makanchi Array	82.59	319	P	P	18 20 16.8	+1.6
	comp=Z,0.4nm,0.6s,baz=95,slow=5.0,SNR=7.0						
MKAR	Makanchi Array	82.59	319	P	P	18 20 15.0	-0.3
ILAR	Eielson Array	82.78	22	P	P	18 20 17.8	+2.0
	comp=Z,0.2nm,0.5s,baz=246,slow=6.0,SNR=2.5						
NVAR	Mina Array Bea	91.51	52	P	P	18 20 59.5	+0.4
	comp=Z,0.2nm,0.4s,baz=250,slow=5.4,SNR=2.7						
TORD	Torodi Ar. Bea	152.48	287	PKPbc	PKPbc	18 27 46.7	-2.1
	comp=Z,0.2nm,0.3s,baz=116,slow=2.6,SNR=5.0						
TORD	Torodi Ar. Bea	152.48	287		PKPbc	18 27 46.3	-2.5

IDC 19 18:12:11.8±2.3**,7°.13S**×**129°.32E,h0**$^{\text{km}}$**,mb3.2**/1**, mb1 3.3**/4**,mb1mx3.2**/34**,mbtmp3.2**/4**,ML3.0**/3**,Error ellipse: s-maj=87.3km s-min=31.0km az=76.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.48	198	Pn	Pn	18 14 55.3	-1.8
	0.1nm,0.3s,baz=38,slow=17,SNR=0.9						
FITZ				Sn	Sn	18 16 53.5	-13
	0.2nm,0.3s,baz=235,slow=18,SNR=5.9						
WRA	Warramunga Arr	13.63	160	Pn	Pn	18 15 26.9	+0.3
	0.1nm,0.3s,baz=341,slow=8.2,SNR=1.8						
WRA				Sn	Sn	18 17 45.0	-14
	0.2nm,0.3s,baz=323,slow=27,SNR=5.6						
ASAR	Alice Springs	17.02	166	P	P	18 16 12.9	-0.5
	0.1nm,0.3s,baz=334,slow=8.3,SNR=1.5						
MKAR	Makanchi Array	67.97	327	P	P	18 23 12.8	+0.1
	0.1nm,0.5s,baz=117,slow=5.4,SNR=2.2						

*JMA **19** 18:16:18.8±0.3,23°.87N×122°.26E,h1$^{\text{km}}$±2$^{\text{km}}$,M2.4*
*TAP **19** 18:16:22.8,23°.95N×122°.32E,h47$^{\text{km}}$,ML2.7,D*
ISC 19 18:16:19.0±1.1**,23°.90N**±0°.02×**122°.33E**±0°.02**,h2**$^{\text{km}}$±10$^{\text{km}}$**, n75,** σ**0**$^{\text{s}}$**.78**/134**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENLB	Shoufeng	0.67	271	eS	Sn	18 16 45.2	-1.4
	baz=260						
HWA	Hwalien	0.67	277	i P	Pn	18 16 35.9	+0.4
	baz=265						
HWA				i S	Sn	18 16 45.5	-1.2
	baz=265						
EOS1	EOS1	0.68	344	P	Pn	18 16 35.0	-0.6
	baz=337						
EOS1				S	Sb	18 16 44.2	+0.9
	baz=337						
TWD	Chiawan	0.70	285	P	Pn	18 16 36.2	+0.2
	baz=282						
TWD				S	Sb	18 16 44.1	0.0
	baz=282						
NACB	Ninganchiao	0.73	292	eP	Pn	18 16 35.6	-0.8
	baz=281						
NACB				S	Sb	18 16 45.7	+0.7
	baz=281						
ENA	Nanau	0.76	314	i P	Pn	18 16 36.7	-0.1
	baz=318						
ENA				eS	Sb	18 16 46.4	+0.7
	baz=318						
JYNG	Yonagunijimaku	0.79	45	P	Pb	18 16 35.6	+0.2
JYNG				eS	Sb	18 16 47.2	+0.6
ESL	Shilin	0.83	264	eP	Pn	18 16 37.6	-0.1
	baz=254						
ESL				S	Sb	18 16 47.8	0.0
	baz=254						
TWC	Suao	0.83	328	P	Pn	18 16 37.6	-0.2
	baz=333						
TWC				eS	Sb	18 16 47.8	-0.2
	baz=333						
ETLH	Xiulin Townshi	0.84	292	P	Pn	18 16 38.1	+0.2
	baz=284						
ETLH				S	Sb	18 16 49.5	+1.4
	baz=284						
YOJ	Yonaguni jima	0.84	48	P	Pn	18 16 38.5	+0.6
	baz=50						
YOJ				eS	Sn	18 16 50.0	-0.8
	baz=50						
YOJ	Yonaguni jima	0.84	48	P	Pb	18 16 36.4	+0.1
YOJ				eS	Sn	18 16 48.9	-1.9
EGFH	Guangfu	0.86	255	eS	Sb	18 16 50.1	+1.4
	baz=245						
HGSD	Ruisui	0.93	244	P	Pn	18 16 39.0	-0.1
	baz=241						
HGSD				S	Sb	18 16 51.8	+1.2
	baz=241						
EHY	Hungye	1.00	247	eP	Pn	18 16 40.1	-0.1
	baz=257						
EHY				S	Sb	18 16 53.6	+0.7
	baz=257						
WHF	Hehuan Shan	1.01	284	eP	Pn	18 16 40.4	-0.2
	baz=282						
WHF				S	Sb	18 16 53.0	-0.4
	baz=282						
NNSB	Datong	1.02	302	P	Pn	18 16 40.6	+0.1
	baz=299						
NNSB				eS	Sb	18 16 53.6	+0.3
	baz=299						
NNSH	Datong	1.02	302	eP	Pb	18 16 39.7	+0.2
	baz=299						
NNSH				eS	Sg	18 16 52.5	+0.7
	baz=299						
ENTT	Nioudou	1.02	317	eP	Pn	18 16 40.8	+0.4
	baz=307						
TWE	Neicheng	1.02	324	eP	Pn	18 16 41.2	+0.8
	baz=323						
TWE				eS	Sn	18 16 54.5	-0.8
	baz=323						
NDT	Datong Townshi	1.03	313	eP	Pn	18 16 41.0	+0.5
	baz=312						
NDT				S	Sb	18 16 53.2	-0.3
	baz=312						
NNS	Nan Shan	1.03	302	P	Pn	18 16 41.0	+0.3
	baz=300						
NNS				S	Sb	18 16 53.9	+0.1
	baz=300						
OWD	Renai	1.06	273	P	Pb	18 16 40.2	0.0
	baz=271						
OWD				eS	Sb	18 16 54.5	-0.1
	baz=271						
CHGB	Renai	1.07	279	eP	Pn	18 16 41.5	+0.1
	baz=277						
CHGB				S	Sb	18 16 54.8	-0.3
	baz=277						
TWF1	Yuli	1.09	240	eP	Pn	18 16 41.7	+0.3
	baz=231						
TWF1				S	Sb	18 16 55.7	+0.2
	baz=231						
VWDT	VWDT	1.10	263	eP	Pn	18 16 41.9	+0.4
	baz=260						
VWDT				eS	Sg	18 16 54.9	+0.5
	baz=260						
TWT	Tachien	1.11	289	S	Sn	18 16 57.4	-0.6
	baz=286						
TDCB	Techi	1.13	289	eP	Pn	18 16 41.7	-0.3
	baz=286						
TDCB				eS	Sg	18 16 55.5	+0.1
	baz=286						
NWLT	Wulai	1.16	319	eP	Pn	18 16 42.6	+0.3
	baz=318						
NWLT				S	Sb	18 16 57.4	0.0
	baz=318						
YHNB	Yeheng	1.16	312	eP	Pg	18 16 41.4	0.0
	baz=310						
YHNB				S	Sg	18 16 56.8	+0.4
	baz=310						
TIPB	Shuangxi	1.17	337	eP	Pn	18 16 42.9	+0.5
	baz=336						
TIPB				S	Sg	18 16 56.5	-0.1
	baz=336						
FULB	Fuli	1.18	234	eP	Pn	18 16 43.7	+1.1
	baz=223						
FULB				eS	Sn	18 16 58.9	-0.4
	baz=223						
NSK	Sanguang	1.18	311	P	Pn	18 16 42.9	+0.2
	baz=310						
NSK				S	Sg	18 16 57.2	+0.2
	baz=310						
SSLB	Suanglung	1.27	265	P	Pn	18 16 44.4	+0.6
	baz=263						
SSLB				S	Sb	18 17 00.6	+0.1
	baz=263						
DPDB	Guoxing	1.29	276	P	Pn	18 16 44.8	+0.6
	baz=274						
DPDB				eS	Sg	18 17 00.6	-0.1
	baz=274						
SMLT	Sun Moon Lake	1.31	270	eP	Pb	18 16 45.4	+0.9
	baz=268						
SMLT				eS	Sg	18 17 00.7	-0.5
	baz=268						
TATO	Taipei	1.32	325	eP	Pb	18 16 45.0	+0.4
	baz=324						
TATO				eS	Sg	18 17 01.1	-0.4
	baz=324						
YUS	Yu-Shan	1.33	252	eS	Sg	18 17 02.0	+0.2
	baz=251						
IRIF	Iriomote-Funau	1.35	71	P	Pb	18 16 45.9	+0.8
IRIF				S	Sn	18 17 04.6	+1.2
TYC	Yuchr	1.35	271	eP	Pb	18 16 46.0	+0.9
	baz=269						
TYC				eS	Sg	18 17 02.1	-0.3
	baz=269						
HATJ	Hateruma jima	1.36	83	eS	Sn	18 17 04.8	+1.2
WHYT	Xinyi Township	1.37	262	eP	Pb	18 16 46.6	+1.2
	baz=252						
WHYT				eS	Sg	18 17 03.3	+0.2
	baz=252						
ELDTW	Lidau	1.40	240	P	Pn	18 16 45.5	-0.2
	baz=238						
ELDTW				S	Sg	18 17 02.2	-1.7
	baz=238						
LIOB	Emei	1.41	302	P	Pb	18 16 46.1	-0.1
	baz=293						
LIOB				S	Sg	18 17 04.4	-0.1
	baz=293						
NSTT	Nanjuang	1.42	301	P	Pb	18 16 46.9	+0.7
	baz=293						
NSTT				eS	Sg	18 17 04.2	-0.5
	baz=293						
TWH	Lutao	1.42	214	eP	Pb	18 16 46.1	-0.1
	baz=212						
TWH				S	Sg	18 17 03.2	-1.5
	baz=212						
YM01	YM01	1.43	331	eP	Pb	18 16 46.1	-0.3
	baz=343						
YM01				eS	Sg	18 17 03.2	-1.7
	baz=343						
YM10	YM10	1.44	331	eP	Pb	18 16 46.9	+0.3
	baz=343						
YM10				eS	Sg	18 17 03.5	-1.7
	baz=343						
YM11	YM11	1.44	331	eP	Pb	18 16 46.9	+0.2
	baz=342						
YM11				eS	Sg	18 17 03.8	-1.5
	baz=342						
YM05	YM05	1.44	331	eP	Pb	18 16 47.0	+0.3
	baz=343						
YM05				eS	Sg	18 17 03.8	-1.6
	baz=343						
YM04	YM04	1.45	330	eP	Pg	18 16 47.3	+0.5
	baz=342						
YM04				eS	Sg	18 17 04.1	-1.5
	baz=342						
ALS	Alishan	1.45	255	eP	Pb	18 16 47.7	+0.7
	baz=253						
ALS				S	Sg	18 17 05.2	-0.5
	baz=253						
YM08	YM08	1.45	332	eP	Pg	18 16 47.2	+0.3
	baz=343						
YM03	YM03	1.47	331	P	Pg	18 16 47.7	+0.5
	baz=342						
YM03				eS	Sg	18 17 04.4	-1.8
	baz=342						
WJS	Zhushan	1.47	267	S	Sn	18 17 07.3	+0.8
	baz=266						
WNT	Mingjian	1.51	270	S	Sg	18 17 08.4	+0.9
	baz=268						
CHN5	Tsauling	1.54	259	eP	Pg	18 16 49.1	+0.4
	baz=251						
CHN5				eS	Sn	18 17 08.3	-0.1
	baz=251						
JKRS	Kuro-shima	1.57	77	P	Pg	18 16 48.9	-0.2
JKRS				eS	Sg	18 17 11.1	+1.6
TWGBT	Beinan	1.57	227	eS	Sn	18 17 07.4	-1.6
	baz=237						
TWG	Pinlang	1.58	227	S	Sn	18 17 06.8	-2.3
	baz=237						
STYT	Tauyuan	1.62	244	eS	Sn	18 17 09.5	-0.7
	baz=236						
WDLH	Douliu	1.66	263	eS	Sb	18 17 11.8	+0.2
	baz=262						
TPUB	Ta-pu	1.67	250	P	Pg	18 16 50.9	-0.2
	baz=248						
TPUB				S	Sn	18 17 11.9	+0.5
	baz=248						
CHN4	Tsaushan	1.69	252	P	Pg	18 16 51.7	+0.3
	baz=250						
CHN4				S	Sn	18 17 12.2	+0.4
	baz=250						
WTP	Ta-pu	1.71	248	eP	Pg	18 16 51.7	-0.1
	baz=247						
WTP				eS	Sn	18 17 12.7	+0.4
	baz=247						
JIJ	Ishigaki jima	1.72	74	P	Pg	18 16 51.9	-0.1
JIJ				eS	Sb	18 17 12.9	-0.5
SLGT	Liugui	1.79	240	eP	Pb	18 16 52.8	+0.2
	baz=233						
SLGT				eS	Sn	18 17 14.5	+0.1
	baz=233						
SGST	Jiashian	1.80	244	eP	Pb	18 16 53.1	+0.3
	baz=234						
SGST				S	Sn	18 17 15.3	+0.7
	baz=234						
CHN1	Nanshi	1.80	247	P	Pg	18 16 53.2	-0.4
	baz=246						
CHN1				S	Sn	18 17 15.4	+0.8
	baz=246						
RLNB	Erlin	1.81	270	eS	Sb	18 17 15.9	0.0
	baz=281						
ECL	Taimali	1.81	225	eP	Pn	18 16 51.3	0.0
	baz=224						
ECL				S	Sn	18 17 12.4	-2.4
	baz=224						
SNST	Tainan City	1.81	249	eS	Sb	18 17 15.8	-0.4
	baz=248						
JISG	Ishigakijimahi	1.93	69	P	Pn	18 16 53.3	+0.4
JISG				eS	Sg	18 17 19.8	-1.4
SSD	Sandimen	1.94	234	P	Pb	18 16 54.2	-0.9
	baz=231						
SSD				eS	Sn	18 17 18.0	0.0
	baz=231						
JTJ	Tarama	2.29	71	eS	Sb	18 17 29.3	-0.5

*NEIC **19** 18:52:34.9±1.7,17°.5S±0°.1×172°.83W±0°.10,h8$^{\text{km}}$±2$^{\text{km}}$, mb4.8/31,Error ellipse: s-maj=17.7km s-min=11.9km az=206.0*
*IDC **19** 18:52:34.1±0.5,17°.36S×172°.79W,h0$^{\text{km}}$,mb4.3/21, mb1 4.5/21,mb1mx4.3/57,mbtmp4.3/21,MS3.6/7, Ms1 3.6/7,ms1mx3.2/46,Error ellipse: s-maj=21.4km s-min=14.0km az=126.0*
ISC 19 18:52:38.3±0.4**,17°.34S**±0°.08×**172°.7W**±0°.1**,h28**$^{\text{km}}$**,n128,** σ**1**$^{\text{s}}$**.11**/122**,mb4.6**/31**,MS3.7**/6**,1C-1D,Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	3.15	124		Pn	18 53 19.0	-7.0
AFI	Afiamalu	3.52	15	Pn	Pn	18 53 25.4	-5.8
	5.6nm,0.3s,baz=116,slow=24,SNR=1.4						
AFI				Sn	Sn	18 54 06.8	-5.3
	28nm,0.3s,baz=200,slow=21,SNR=5.8						
AFI				LR	LR	18 54 27.9	
	comp=Z,284nm,20.7s,baz=172,slow=32						
AFI	Afiamalu	3.52	15		Pn	18 53 25.9	-5.3
MSVF	Nonsavu	8.84	266	Pn	Pn	18 54 39.1	-5.3
DZM	Mont Dzumac	20.19	253	P	P	18 57 09.9	-1.1
	12nm,1.0s,baz=222,slow=3.6,SNR=3.2						
DZM	Mont Dzumac	20.19	253	P	P	18 57 11.1	+0.1
URZ	Urewera	22.68	201	P	P	18 57 36.6	-0.9
	20nm,0.5s,baz=24,slow=6.9,SNR=13						
RPZ	Rata Peaks	29.67	204	P	P	18 58 42.4	+0.7
	10nm,0.5s,baz=304,slow=5.1,SNR=12						
STKA	Stephens Creek	43.69	242	P	P	19 00 39.4	-1.6
	3.5nm,0.9s,baz=89,slow=13,SNR=4.3						
STKA				LR	LR	19 17 21.1	
	comp=Z,76nm,18.2s,baz=34,slow=34						
STKA	Stephens Creek	43.69	242	P	P	19 00 39.6	-1.4
WB0	Warramunga Arr	50.06	258	P	P	19 01 29.0	-2.0
WB0				IAmb	IAmb	19 01 56.1	
	comp=Z,19nm,1.6s						
WB2	Warramunga Arr	50.08	258	P	P	19 01 28.8	-2.3
WB2				IAmb	IAmb	19 03 21.2	
	comp=Z,36nm,2.0s						
WRA	Warramunga Arr	50.09	258	P	P	19 01 28.8	-2.5
	comp=Z,3.6nm,0.8s,baz=95,slow=7.9,SNR=30						
WRA				LR	LR	19 23 02.1	
	comp=Z,125nm,18.8s,baz=205,slow=37						
WRA	Warramunga Arr	50.09	258	P	P	19 01 27.9	-3.3
AS31	Alice Springs	50.18	253	P	P	19 01 30.4	-1.6
AS31				IAmb	IAmb	19 01 31.1	
	comp=Z,5.8nm,0.7s						
ASAR	Alice Springs	50.18	253	P	P	19 01 29.9	-2.1
	comp=Z,21nm,0.7s,baz=88,slow=8.7,SNR=204						
ASAR				PcP	PcP	19 02 52.1	+1.1
	comp=Z,3.4nm,0.8s,baz=94,slow=4.7,SNR=5.1						
ASAR	Alice Springs	50.18	253	P	P	19 01 29.7	-2.2
VNDA	Vanda	61.53	186	P	P	19 02 52.3	0.0
	comp=Z,1.8nm,1.0s,baz=4.6,slow=4.7,SNR=5.4						
QSPA	South Pole Qui	72.72	180	P	P	19 04 00.8	-2.8
QSPA				IAmb	IAmb	19 04 04.9	
	comp=Z,8.4nm,1.0s						
JKA	Kamikawa-asahi	73.53	328	P	P	19 04 09.2	+0.7
ASAJ	Asahikawa	73.53	328	P	P	19 04 09.2	+0.7
	comp=Z,4.4nm,0.8s,baz=205,slow=4.8,SNR=3.9						
PETK	Petropavlovsk-	74.67	342	P	P	19 04 15.4	+0.5
	comp=Z,4.9nm,0.7s,baz=127,slow=9.5,SNR=4.4						
PETK	Petropavlovsk-	74.67	342	P	P	19 04 15.6	+0.6
NVAR	Mina Array Bea	75.32	41	P	P	19 04 20.1	+0.8
	comp=Z,1.4nm,0.7s,baz=230,slow=9.9,SNR=5.2						
NVAR	Mina Array Bea	75.32	41	P	P	19 04 20.0	+0.6
NV11	Mina Array Sit	75.41	41	P	P	19 04 19.2	-0.6
YSS	Yuzh-Sakhalins	75.49	330	P	P	19 04 21.0	+1.2
KDAK	Kodiak Island	76.68	11	LR	LR	19 30 03.4	
	comp=Z,104nm,19.9s,baz=125,slow=29						
PINE	Pine Mountain	77.06	36	P	P	19 04 29.7	+0.6
PINE				IAmb	IAmb	19 05 05.5	
	comp=Z,12nm,1.4s						
KSRS	Korea Array	78.01	316	P	P	19 04 35.5	+1.2
	comp=Z,1.1nm,0.8s,baz=139,slow=6.1,SNR=7.4						
KSAR	Wonju Array Be	78.03	316	P	P	19 04 34.4	+0.1
PSUT	Pine Spring	78.24	43	P	P	19 04 36.5	+0.7
ELK	Elko	78.59	41	P	P	19 04 38.5	+0.7
	comp=Z,1.2nm,0.8s,baz=237,slow=2.3,SNR=6.3						
ELK	Elko	78.59	41	P	P	19 04 38.3	+0.5
ELK				IAmb	IAmb	19 05 39.2	
	comp=Z,10nm,1.8s						
USRK	Ussuriysk Ar.	79.33	323	LR	LR	19 35 09.3	
	comp=Z,38nm,20.5s,baz=68,slow=32						
TMUT	Trail Mountain	80.39	44	P	P	19 04 48.5	+0.9
MNTX	Cornudas Mount	80.84	53	P	P	19 04 50.8	+0.9
TX31	Lajitas Ar. Si	81.13	56	P	P	19 04 52.7	+1.1
TX32	Lajitas Array	81.13	56	P	P	19 04 51.8	+0.2
TXAR	Lajitas Array	81.13	56	P	P	19 04 52.6	+1.0
	comp=Z,2.0nm,1.1s,baz=206,slow=8.3,SNR=8.3						
TXAR	Lajitas Array	81.13	56	P	P	19 04 52.0	+0.4
ANMO	Albuquerque	81.53	49	P	P	19 04 54.1	+0.4
	comp=Z,1.0nm,0.6s,baz=166,slow=14,SNR=3.7						
ANMO	Albuquerque	81.53	49	P	P	19 04 54.0	+0.3
ANMO				IAmb	IAmb	19 07 04.5	
	comp=Z,16nm,1.9s						
MA2	Magadan	82.21	342	P	P	19 04 56.5	0.0
	comp=Z,0.7nm,0.3s,baz=132,slow=9.8,SNR=3.8						
MA2	Magadan	82.21	342	P	P	19 04 57.2	+0.8
MCK	McKinley	82.89	10	P	P	19 05 00.7	+0.7
MCK				IAmb	IAmb	19 05 01.6	
	comp=Z,6.7nm,0.8s						
WRH	Wood River Hil	83.72	10	P	P	19 05 04.5	+0.3
MLY	Manley	83.81	9	P	P	19 05 05.0	+0.4
MLY				IAmb	IAmb	19 05 05.5	
	comp=Z,6.4nm,1.2s						
HDA	Harding Lake	83.87	11	P	P	19 05 04.8	-0.1
CCB	Clear Creek Bu	83.93	10	P	P	19 05 05.2	0.0
CCB				IAmb	IAmb	19 05 06.4	
	comp=Z,7.1nm,1.0s						
COLA	College	84.13	10	P	P	19 05 05.5	-0.7
MDM	Murphy Dome	84.15	10	P	P	19 05 05.4	-1.0
IL31		84.21	11	P	P	19 05 05.9	-0.7
ILAR	Eielson Array	84.21	11	P	P	19 05 06.3	-0.3
	comp=Z,1.0nm,0.7s,baz=227,slow=5.6,SNR=11						
ILAR				LR	LR	19 34 46.4	
	comp=Z,26nm,20.9s,baz=187,slow=30						
ILAR	Eielson Array	84.21	11	P	P	19 05 05.6	-1.1
IMAR	Indian Mountai	84.29	8	P	P	19 05 08.0	+1.0
SEY	Seymchan	84.56	345	P	P	19 05 08.9	+0.5
	comp=Z,2.9nm,0.9s,baz=153,slow=5.8,SNR=12						
WHN	Wuhan	84.74	304	P	P	19 05 13.1	+3.0
DAWY	Dawson	85.12	14	P	P	19 05 12.3	+1.0
DAWY				IAmb	IAmb	19 05 13.3	
	comp=Z,6.5nm,1.0s						
PRP	Porcupine Dome	85.13	11	P	P	19 05 12.2	+0.8
PRP				IAmb	IAmb	19 05 12.7	
	comp=Z,9.4nm,1.1s						
BMAR	Burnt Mountain	87.02	10	P	P	19 05 22.1	+1.4
PLCA	Paso Flores	87.72	132	P	P	19 05 25.9	+1.1
	comp=Z,2.1nm,0.9s,baz=244,slow=12,SNR=2.9						
INK	Inuvik	89.98	14	P	P	19 05 34.9	+0.3
	comp=Z,1.3nm,0.8s,baz=210,slow=4.9,SNR=3.7						
INK	Inuvik	89.98	14	IAmb	IAmb	19 07 42.9	
	comp=Z,16nm,1.8s						
XAN	Xi'an	90.31	306	P	P	19 05 39.0	+2.0
XAN				pP	pwP	19 06 04.0	+14
SYO	Syowa Base	90.84	191	⇓ iX	P	19 05 34.0	-4.8

SYO	Syowa Base	90.84	191⇑	eX	P	19 05 44.6	+5.8
VNA3	Neumayer Olymp	90.87	175	P	P	19 05 39.1	+0.2
SNAA	Sanae	90.94	177	P	P	19 05 39.1	-0.3
VNA2	Neumayer--Watz	91.38	175	P	P	19 05 41.8	+0.5
	baz=206,slow=3.2						
PBKT	Sadao Pong	91.46	287	P	P	19 05 43.1	+0.5
PBKT				IAmb	IAmb	19 05 46.3	
	comp=Z,6.5nm,1.2s						
YKA	Yellowknife Ar	91.60	23	P	P	19 05 41.2	-1.0
	comp=Z,0.4nm,0.8s,baz=237,slow=3.1,SNR=6.3						
CMAR	Chiang Mai Arr	93.86	288	P	P	19 05 54.2	+0.5
	comp=Z,0.9nm,0.8s,baz=104,slow=2.4,SNR=7.3						
CMAR				LR	LR	19 43 50.0	
	comp=Z,14nm,21.9s,baz=65,slow=33						
CMAR	Chiang Mai Arr	93.86	288	P	P	19 05 56.1	+2.4
ULM	Lac du Bonnet	95.01	39	P	P	19 05 58.3	+0.1
MKAR	Makanchi Array	112.66	314	PKiKP	PKiKP	19 11 12.5	+0.3
	comp=Z,0.5nm,0.6s,baz=52,slow=2.0,SNR=7.4						
MKAR				PKKPbc	PKKPbc	19 22 00.7	-1.4
	comp=Z,0.5nm,0.9s,baz=191,slow=1.5,SNR=3.5						
MKAR	Makanchi Array	112.66	314		PKiKP	19 11 12.3	+0.1
KSH	Kashi	117.16	306	SS	SS	19 28 51.6	+12
RCBR	Riachuelo	131.51	115		PKiKP	19 11 50.5	+0.2
FINES	FINESS Array B	133.97	348	PKP	PKPdf	19 11 52.1	-0.3
	comp=Z,2.9nm,0.9s,baz=336,slow=8.4,SNR=4.2						
AKASG	Malin Array Be	142.38	337	PKhKP	PKPpre	19 12 03.8	
	comp=Z,0.3nm,0.4s,baz=41,slow=3.8,SNR=5.4						
KMBO	Kilima Mbogo	145.25	241	PKPbc	PKPdf	19 12 14.9	+0.2
	comp=Z,7.5nm,0.9s,baz=62,slow=3.9,SNR=15						
KMBO	Kilima Mbogo	145.25	241		PKPdf	19 12 15.7	+0.9
OJC	Ojcow	145.69	346		PKPab	19 12 15.3	+0.6
CLL	Collm	145.81	354	ePKPbc	PKPbc	19 12 15.0	+0.3
	comp=Z,13nm,1.0s						
OSTC	Ostas	146.10	350	ePKP	PKPab	19 12 17.4	+1.1
BRG	Berggiesshubel	146.13	352	ePKP	PKPbc	19 12 16.1	+0.4
	comp=Z,8.9nm,1.2s						
UPC	Upice	146.18	350	ePKP	PKPab	19 12 17.5	+0.9
DPC	Dobruska-Polom	146.28	350	ePKP	PKPab	19 12 18.0	+1.0
BURAR	Bucovina Array	146.41	338		PKPab	19 12 18.0	+0.3
OKC	Ostrava-Krasne	146.42	347	ePKP	PKPab	19 12 18.7	+1.2
CRVS	Cervenica-Dubn	146.48	343	ePKP	PKiKP	19 12 20.1	+0.3
MORC	Moravsky Berou	146.60	348	ePKP	PKPab	19 12 18.8	+0.5
MORC	Moravsky Berou	146.60	348		PKPab	19 12 18.6	+0.4
LANS	Liptovska Anna	146.77	345	ePKP	PKiKP	19 12 20.2	-0.2
PRU	Pruhonice	146.91	351	ePKP	PKPab	19 12 19.3	-0.1
VRAC	Vranov	147.23	349	ePKP	PKPab	19 12 20.3	-0.4
KRUC	Moravsky	147.51	349	ePKP	PKPab	19 12 21.3	-0.5
VYHS	Vyhne	147.53	346	ePKP	PKPab	19 12 21.4	-0.5
SMOL	Smolenice	147.83	347	ePKP	PKPab	19 12 23.3	+0.2
KHC	Kasperske Hory	147.88	352	ePKP	PKiKP	19 12 22.2	-0.5
KHC	Kasperske Hory	147.88	352		PKPbc	19 12 21.6	+0.8
MODS	Modra-Piesok	147.99	347	ePKP	PKPbc	19 12 22.3	+1.2
BRTR	Keskin Array B	148.07	320	PKPbc	PKPbc	19 12 22.2	+0.4
	comp=Z,2.0nm,0.9s,baz=119,slow=1.5,SNR=9.8						
GEC2	GERESS Array S	148.15	352		PKPbc	19 12 22.6	+1.0
GERES	GERESS Array B	148.15	352	PKPbc	PKiKP	19 12 23.0	-0.4
	comp=Z,2.9nm,0.8s,baz=28,slow=3.2,SNR=16						
GERES	GERESS Array B	148.15	352		PKPbc	19 12 22.4	+0.8
CONA	Conrad Observa	148.70	349	i pPKPbc	PKiKP	19 12 24.7	+0.2
	comp=Z,11nm,1.3s						
MOA	Molln	149.04	351	epPKPab	PKPab	19 12 28.9	+0.9
	comp=Z,7.4nm,1.4s						
BFO	Black Forest	149.08	359		PKiKP	19 12 25.7	+0.5
ARSA	Arzberg	149.41	349	ePKiKP	PKPbc	19 12 24.8	+0.1
	comp=Z,5.2nm,1.1s						
RETA	Reutte	149.80	355	epPKPbc	PKiKP	19 12 27.0	+0.3
	comp=Z,4.9nm,0.8s						
WATA	Walderalm	149.88	354	i pPKPbc	PKiKP	19 12 27.0	0.0
	comp=Z,8.8nm,1.2s						
MOTA	Moosalm	149.91	355	i pPKPbc	PKiKP	19 12 27.4	+0.3
	comp=Z,7.5nm,1.0s						
KBA	Koelnbreinsper	149.93	352	i pPKPbc	PKPbc	19 12 26.9	+0.7
	comp=Z,4.6nm,1.0s						
WTTA	Wattenberg	149.94	354	i pPKPbc	PKiKP	19 12 27.4	+0.2
	comp=Z,12nm,1.2s						
SQTA	Sankt Quirin	150.03	355	i pPKPbc	PKPbc	19 12 26.9	+0.5
	comp=Z,12nm,1.4s						
SOKA	Soboth	150.05	349	epPKPbc	PKPbc	19 12 27.0	+0.5
	comp=Z,7.8nm,1.2s						
DAVA	Damuels	150.06	356	i pPKPbc	PKiKP	19 12 28.0	+0.5
	comp=Z,11nm,1.2s						
FETA	Feichten	150.27	355	i pPKPbc	PKiKP	19 12 28.3	+0.5
	comp=Z,9.5nm,1.1s						
OBKA	Obir	150.30	350	i PKiKP	PKPbc	19 12 26.5	-0.5
	comp=Z,2.6nm,0.8s						
MYKA	Terra Mystica	150.32	351	ePKiKP	PKPbc	19 12 27.3	+0.2
	comp=Z,3.4nm,0.9s						
ABTA	Abfaltersbach	150.36	353	i pPKPbc	PKPbc	19 12 27.7	+0.5
	comp=Z,12nm,1.1s						
STAL	STALIGIAL	150.81	352		PKPbc	19 12 28.6	+0.4
CTI	Castel Tesino	151.15	354		PKiKP	19 12 29.9	+0.3
TOA0	Torodi Ar. Sit	173.17	127		PKPab	19 14 13.1	-0.4
TORD	Torodi Ar. Bea	173.17	127	PKP	PKPdf	19 12 45.1	-0.8
	comp=Z,1.1nm,1.0s,baz=202,slow=1.6,SNR=4.4						
TORD				PKPab	PKPab	19 14 12.3	-1.2
	comp=Z,2.0nm,0.9s,baz=253,slow=5.1,SNR=7.3						
TORD	Torodi Ar. Bea	173.17	127		PKPdf	19 12 44.4	-1.5
TORD				PKPab	PKPab	19 14 13.2	-0.2

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*NIED **19** 18:56:00, 45°.40N×142°.00E, h270^{km}, Mw3.9 Best double couple: $M_0$8.62000×10^{14} NP1:ϕ_s148.00000°, δ76.00000°, λ91.00000°. NP2:ϕ_s323.00000°, δ14.00000°, λ85.00000°.*

*JMA **19** 18:56:43.6±0.1, 45°.39N×142°.00E, h294^{km}±1^{km}, M3.5*

*IDC **19** 18:56:43.8±0.4, 45°.40N×141°.97E, h285^{km}±7^{km}, mb3.3/14, mb1 3.5/21, mb1mx3.3/59, mbtmp4.0/21, Error ellipse: s-maj=16.6km s-min=9.7km az=169.0*

*NEIC **19** 18:56:44.0±1.2, 45°.40N±0°.08×142°.0E±0°.1, h290^{km}±7^{km}, mb4.0/32, Error ellipse: s-maj=13.7km s-min=11.4km az=125.0*

*SKHL **19** 18:56:44.9±0.9, 45°.38N×141°.97E, h298^{km}±1^{km}, mb4.4/9, msh4.9/1*

ISC 19 18:56:43.9±0.5, **45°.34N**±0°.05×**142°.03E**±0°.05, **h290**^{km}±5^{km}, **n112**, σ**0^s.93**/129, **mb3.8**/25, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWK2	Keihoku	0.10	253	P	Pn	18 57 21.0	+0.2
JWK2				eS	S	18 57 49.8	-0.2
JRR	Rishiri	0.55	248	P	Pn	18 57 22.0	+0.5
JRR				eS	S	18 57 52.0	+0.7
JSE	Soyaes	0.55	134	P	Pn	18 57 21.9	+0.3
JSE				eS	S	18 57 51.1	-0.3
JRBN	Rebuntou	0.69	277	P	Pn	18 57 21.7	-0.2
JRBN				eS	S	18 57 51.1	-0.9
JSS	Shosan	0.95	188	P	Pn	18 57 23.6	+0.5
JSS				eS	S	18 57 55.0	+0.8
JYG	Yagishiri	1.01	205	P	Pn	18 57 23.6	+0.3
JYG				eS	S	18 57 55.0	+0.4
ASAJ	Asahikawa	1.29	162	P	Pn	18 57 25.0	+0.1
ASAJ				eS	S	18 57 58.0	+0.6
ASAJ	Asahikawa	1.29	162	P	Pn	18 57 25.4	+0.5
	4.6nm,0.3s,baz=349,slow=5.1,SNR=80						
ASAJ				S	S	18 57 57.0	-0.4
	2.0nm,0.3s,baz=119,slow=31,SNR=30						
JKA	Kamikawa-asahi	1.29	162		Pn	18 57 25.4	+0.5
JKA					S	18 57 57.0	-0.4
JKK2	Kamakawa 2	1.56	161	P	Pn	18 57 27.3	+0.7
JKK2				eS	S	18 58 01.0	+0.5
JHR	Hokuryu	1.62	188	P	Pn	18 57 27.5	+0.5
JMP	Maruseppu	1.64	144	P	Pn	18 57 27.5	+0.3
JMP				eS	S	18 58 02.3	+0.8
YSS	Yuzh-Sakhalins	1.69	17	eP	Pn	18 57 27.8	+0.5
YSS				AMB	AMB	18 57 28.0	
	90nm,0.3s						
YSS				eS	S	18 58 00.6	-1.2
YSS				A	A	18 58 02.7	
	23nm,0.6s						
YSS				A	A	18 58 02.7	
	60nm,0.6s						
YSS	Yuzh-Sakhalins	1.69	17		Pn	18 57 27.4	+0.1
KHLM	Kholmsk	1.71	0	eS	S	18 58 01.4	-0.7
KHLM				A	A	18 58 02.3	
	200nm,0.5s						
KHLM				A	A	18 58 02.3	
	210nm,0.5s						
JAB	Ashibetsu	1.84	176	P	Pn	18 57 28.9	+0.2
JTKR	Abashiri--Toko	1.92	135	P	Pn	18 57 29.7	+0.5
JTKR				eS	S	18 58 05.8	+0.6
JFR	Furan	2.22	169	P	Pn	18 57 31.7	0.0
JAR	Ashorobuto	2.40	148	P	Pn	18 57 33.8	+0.5
JAR				eS	S	18 58 13.5	+0.9
JEW	Eniwo	2.54	190	P	Pn	18 57 35.2	+0.6
JEW				eS	S	18 58 15.3	+0.4
JRA	Rausu	2.62	121	P	Pn	18 57 36.3	+1.1
JCH	Churui	2.89	160	P	Pn	18 57 36.4	-1.6
JAK	Akkeshi	3.03	140	eS	S	18 58 20.3	-3.2
AKK	Akkeshi	3.08	138	eP	Pn	18 57 41.0	+1.2
AKK				AMB	AMB	18 57 41.4	
	45nm,0.4s						
AKK				eS	S	18 58 21.5	-3.0
AKK				A	A	18 58 22.3	
	130nm,0.5s						
AKK				A	A	18 58 22.3	
	140nm,0.5s						
JNBK	Urakawa-nobuka	3.11	170	eS	S	18 58 22.8	-2.2
NMR	Nemuro--Hokkai	3.31	125	eP	Pn	18 57 43.3	+1.2
NMR				AMB	AMB	18 57 43.4	
	40nm,0.3s						
NMR				eS	S	18 58 26.0	-2.6
NMR				A	A	18 58 26.6	
	40nm,0.3s						
NMR				A	A	18 58 26.6	
	60nm,0.3s						
NEM2	Nemuro 2	3.32	125	eS	S	18 58 25.6	-3.2
ERM	Erimo	3.43	166	Pn	Pn	18 57 44.1	+0.6
JKB	Kayabe	3.53	192	P	Pn	18 57 43.3	-1.2
TEY	Ternei	3.85	267	i P	Pn	18 57 47.9	0.0
TEY				AMB	AMB	18 57 48.1	
	20nm,0.4s						
USA0B	Ussuriysk Arra	7.24	264		Pn	18 58 27.9	0.0
USRK	Ussuriysk Ar.	7.24	264	P	Pn	18 58 27.5	-0.5
	baz=68,slow=12,SNR=27						
USRK				S	S	18 59 51.9	-0.2
	baz=73,slow=26,SNR=5.4						
USRK	Ussuriysk Ar.	7.24	264		Pn	18 58 27.8	-0.2
KLR	Kul'dur	8.00	303	P	Pn	18 58 36.6	-0.6
	0.3nm,0.3s,baz=114,slow=14,SNR=9.4						
MDJ	Mudanjiang	8.85	270		Pn	18 58 48.0	+0.2
MJB9	Matsu-Tunnel	9.25	200		Pn	18 58 52.5	-0.5
MAJO	Matsushiro	9.26	200	Pn	Pn	18 58 52.4	-0.6
MJAR	Matsushiro Arr	9.26	199	P	Pn	18 58 51.8	-1.2
	0.1nm,0.3s,baz=20,slow=15,SNR=8.2						
MJAR	Matsushiro Arr	9.26	199		Pn	18 58 52.4	-0.6
PETK	Petropavlovsk-	12.83	47	P	P	18 59 38.4	+1.1
	0.4nm,0.3s,baz=227,slow=9.2,SNR=6.4						
PETK	Petropavlovsk-	12.83	47	P	P	18 59 38.3	+0.9
KSRS	Korea Array	13.19	238	P	P	18 59 41.5	0.0
	0.2nm,0.3s,baz=53,slow=9.4,SNR=6.6						
MA2	Magadan	15.19	17	P	Pn	19 00 04.2	-0.4
	0.2nm,0.3s,baz=192,slow=12,SNR=8.7						
MA2	Magadan	15.19	17	IAmb	IAmb	19 00 07.4	
	comp=Z,4.0nm,0.7s						
MA2	Magadan	15.19	17	P	P	19 00 03.8	+0.5
HIA	Hailar	15.61	293	P	P	19 00 06.7	-1.3
SEY	Seymchan	18.59	15	P	P	19 00 40.5	+0.5
	comp=Z,1.0nm,0.3s,baz=205,slow=7.6,SNR=46						
ULN	Ulaanbaatar	24.04	289	P	P	19 01 32.9	-0.2
SONM	Songino Array	24.48	289	P	P	19 01 37.3	+0.2
	comp=Z,2.2nm,0.4s,baz=84,slow=8.5,SNR=34						
SONM	Songino Array	24.48	289	P	P	19 01 37.0	-0.2
ZALV	Zalesovo Beam	37.10	305	P	P	19 03 25.7	-1.0
	comp=Z,0.7nm,0.3s,baz=85,slow=11,SNR=4.1						
ZALV	Zalesovo Beam	37.10	305	P	P	19 03 26.1	-0.6
IMAR	Indian Mountai	39.43	35	P	P	19 03 44.9	-1.0
MK31	Makanchi Array	40.60	294	P	P	19 03 55.2	-0.5
MKAR	Makanchi Array	40.60	294	P	P	19 03 55.6	-0.1
	comp=Z,1.7nm,0.6s,baz=79,slow=8.7,SNR=25						
MKAR	Makanchi Array	40.60	294	P	P	19 03 55.4	-0.3
KURK	Kurchatov	41.59	301	P	P	19 04 02.9	-0.7
KURK				IAmb	IAmb	19 04 03.3	
	comp=Z,2.7nm,0.6s						
CCB	Clear Creek Bu	42.02	37	P	P	19 04 06.4	-0.4
IL31		42.39	37	P	P	19 04 09.7	-0.1
IL31				IAmb	IAmb	19 05 37.7	
	comp=Z,12nm,1.6s						
ILAR	Eielson Array	42.39	37	P	P	19 04 09.8	-0.1
	comp=Z,1.2nm,0.6s,baz=278,slow=8.9,SNR=28						
ILAR	Eielson Array	42.39	37	P	P	19 04 09.5	-0.3
HDA	Harding Lake	42.42	38	P	P	19 04 09.0	-1.1
HDA				IAmb	IAmb	19 04 12.0	
	comp=Z,19nm,1.6s						
DHY	Denali Highway	42.45	40	P	P	19 04 09.7	-0.8
DHY				IAmb	IAmb	19 04 27.9	
	comp=Z,20nm,1.8s						
FYU	Fort Yukon	42.82	34	P	P	19 04 13.1	-0.1
PRP	Porcupine Dome	42.85	36	P	P	19 04 13.7	0.0
BMAR	Burnt Mountain	42.96	33	P	P	19 04 14.1	-0.3
SCRK	Sand Creek	43.77	38	P	P	19 04 19.9	-1.1
CHTO	Chiang Mai	44.35	248	P	P	19 04 26.2	+0.3
EGAK	Eagle	44.80	36	P	P	19 04 28.0	-0.9
EGAK				IAmb	IAmb	19 05 22.4	
	comp=Z,7.4nm,1.3s						
BCAR	Beaver Creek A	44.94	39	P	P	19 04 30.2	+0.1
BRVK	Borovoye	45.69	307	P	P	19 04 35.5	-0.5
TAPN	Taplejung	46.38	266	eP	P	19 04 42.7	+0.6
	comp=Z,5.4nm,0.4s						
INK	Inuvik	46.88	30	P	P	19 04 43.7	-1.3
	comp=Z,0.9nm,0.5s,baz=299,slow=12,SNR=5.8						
INK	Inuvik	46.88	30	P	P	19 04 44.3	-0.7
INK				IAmb	IAmb	19 05 08.4	
	comp=Z,15nm,1.8s						
JIRN	Jiri	47.26	268	eP	P	19 04 49.4	+0.4
	comp=Z,10nm,0.4s						
GUN	Gumba	47.33	268	eP	P	19 04 49.7	+0.2
	comp=Z,7.8nm,0.4s						
AAK	Ala-Archa	47.37	292	P	P	19 04 49.7	+0.3
RAMN	Ramite	47.41	267	eP	P	19 04 50.3	+0.3
	comp=Z,15nm,0.6s						
KKN	Kakani	47.83	269	eP	P	19 04 53.3	+0.2
PKI	Pulchoki	47.87	268	eP	P	19 04 53.5	-0.1
	comp=Z,4.0nm,0.5s						
PKIN	Phulchoki	47.87	268	eP	P	19 04 53.6	+0.1
	comp=Z,3.1nm,0.4s						
DMN	Daman	48.06	269	eP	P	19 04 55.4	+0.5
GKN	Gorkha	48.15	269	eP	P	19 04 55.6	+0.1
	comp=Z,9.3nm,0.5s						
DANN	Dangsing	48.56	270	eP	P	19 04 58.8	0.0
	comp=Z,14nm,0.5s						
KK31	Karatay Array	49.73	294	P	P	19 05 06.7	-0.3
KKAR	Karatay Array	49.73	294	P	P	19 05 06.5	-0.6
KKAR	Karatay Array	49.73	294	P	P	19 05 06.7	-0.3
KKAR				IAmb	IAmb	19 05 07.5	
	comp=Z,2.4nm,0.8s						
C36M	Paulatuk	49.77	28	P	P	19 05 06.3	-0.6
C36M				IAmb	IAmb	19 05 25.3	
	comp=Z,5.9nm,1.6s						
ABKAR	Akbulak array	53.19	306	P	P	19 05 32.0	-0.3
RES	Resolute Bay	54.46	16	P	P	19 05 40.0	-1.2
	comp=Z,1.0nm,0.6s,baz=281,slow=6.9,SNR=7.0						
RES	Resolute Bay	54.46	16	P	P	19 05 39.4	-1.7
RES				IAmb	IAmb	19 07 02.5	
	comp=Z,5.8nm,1.6s						
YKA	Yellowknife Ar	56.48	33	P	P	19 05 55.6	0.0
	comp=Z,0.9nm,0.8s,baz=304,slow=5.9,SNR=12						
GEYT	Alibeck	60.45	295	P	P	19 06 22.8	-0.6
	comp=Z,0.9nm,0.4s,baz=352,slow=6.0,SNR=4.2						
GEYT	Alibeck	60.45	295	P	P	19 06 22.7	-0.6
KBZ	Khabaz	65.97	308	P	P	19 06 59.9	+0.7
	comp=Z,1.6nm,0.9s,baz=137,slow=7.7,SNR=4.4						
FRB	Frobisher Bay	68.59	14	P	P	19 07 14.1	-1.1
	comp=Z,2.4nm,0.7s,baz=356,slow=7.1,SNR=8.1						
YERR	Yerington	68.85	56	P	P	19 07 18.9	+1.3
ASAR	Alice Springs	69.08	188	P	P	19 07 19.3	+0.6
	comp=Z,0.2nm,0.7s,baz=358,slow=6.6,SNR=1.7						
KVN	Kaiserville	69.47	55	P	P	19 07 22.9	+1.6
NVAR	Mina Array Bea	69.77	56	P	P	19 07 24.8	+1.7
	comp=Z,1.9nm,0.6s,baz=296,slow=5.8,SNR=12						
NVAR	Mina Array Bea	69.77	56	P	P	19 07 24.6	+1.4
HWUT	Hardware Ranch	71.36	49	P	P	19 07 33.1	+0.4
R11A	Troy Canyon, C	71.39	54	P	P	19 07 33.1	+0.2
R11A				IAmb	IAmb	19 07 44.3	
	comp=Z,6.1nm,1.7s						
PDAR	Pinedale Array	71.60	47	P	P	19 07 35.3	+1.2
	comp=Z,1.2nm,0.6s,baz=328,slow=3.2,SNR=2.4						
PDAR	Pinedale Array	71.60	47	P	P	19 07 34.6	+0.5
TPNV	Topopah Spring	71.97	56	P	P	19 07 37.4	+1.1
TPNV				IAmb	IAmb	19 07 38.4	
	comp=Z,3.2nm,0.8s						
CLL	Collm	74.15	330	eP	P	19 07 50.0	+1.5
PV14	Lion Creek, Pa	75.03	50	P	P	19 07 53.8	-0.3
PV22	Blue Mesa, Par	75.04	50	P	P	19 07 53.7	-0.5
PV22				IAmb	IAmb	19 07 56.0	
	comp=Z,4.5nm,0.8s						
TX31	Lajitas Ar. Si	84.71	53	P	P	19 08 47.2	+1.5
TX31				IAmb	IAmb	19 08 47.5	
	comp=Z,6.0nm,1.4s						
TX32	Lajitas Array	84.71	53	P	P	19 08 47.2	+1.5
TX32				IAmb	IAmb	19 08 47.5	
	comp=Z,4.6nm,1.2s						
TXAR	Lajitas Array	84.71	53	P	P	19 08 47.1	+1.4
	comp=Z,1.0nm,0.9s,baz=330,slow=4.8,SNR=4.7						

WEL 19 18:57:17.5±0.2, **41°S**±2°×**17°6E**±°, **h24**^{km}±1^{km}, **M3.5**/86, **ML3.9**/23, **MLv3.5**/86, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRWZ	Pori Road	0.13	53	P	Pn	18 57 24.0	-0.1
PRWZ				S	Sb	18 57 28.5	+2.8
TIWZ	Tintock	0.15	163	P	Pn	18 57 24.1	-0.3
TIWZ				S	Sb	18 57 28.6	+2.6
MRZ	Mangatainoka R	0.19	263	P	Pn	18 57 24.7	-0.3
MRZ				S	Sb	18 57 29.4	+2.6
POWZ	Post Office Ro	0.25	349	P	Pn	18 57 25.2	-0.5
BFZ	Birch Farm	0.32	98	P	Pn	18 57 25.9	-0.8
BFZ				S	Sn	18 57 31.7	-0.8
HOWZ	Holdsworth Sta	0.35	222	P	Pn	18 57 26.9	-0.3
HOWZ				S	Sn	18 57 33.2	-0.3
CPWZ	Castlepoint	0.39	134	P	Pn	18 57 27.6	0.0
DVHZ	Dannevirke	0.42	37	P	Pb	18 57 27.2	+0.7
TMWZ	Te Maipa	0.47	175	P	Pn	18 57 28.6	-0.3
TMWZ				S	Sn	18 57 36.8	+0.4
ANWZ	Angora Road	0.52	70	P	Pn	18 57 28.9	-0.5
ANWZ				S	Sn	18 57 37.3	-0.2
OGWZ	Otaki Gorge	0.53	250	P	Pn	18 57 29.7	+0.1
MTW	Mount Morrison	0.58	205	P	Pn	18 57 29.9	-0.3
OHWZ	Ohakea	0.58	317	P	Pn	18 57 31.2	+0.9
TSZ	Takapari Road	0.58	10	P	Pn	18 57 30.0	-0.4
PRHZ	Porangahau	0.72	59	P	Pb	18 57 31.6	+0.2
PRHZ				S	Sn	18 57 43.1	+0.7
KIW	Kapiti Island	0.73	252	P	Pn	18 57 32.9	+0.5
WPHZ	Waipukurau	0.74	39	P	Pn	18 57 32.5	+0.1
CAW	Cannon Point	0.75	231	P	Pn	18 57 32.8	+0.2
TRWZ	Traveller	0.77	188	P	Pb	18 57 32.4	+0.1
PNHZ	Pukenui	0.78	21	P	Pn	18 57 33.0	0.0
PAWZ	Paruwai Farm	0.81	202	P	Pb	18 57 32.9	0.0
MSWZ	Moikau Station	0.90	209	P	Pb	18 57 34.0	-0.4
PXZ	Pawanui	0.99	53	P	Pn	18 57 35.3	-0.6
PLWZ	Palliser	1.03	205	P	Pn	18 57 35.6	-0.8
WEL	Wellington	1.03	231	P	Pn	18 57 36.6	+0.1
BHW	Baring Head	1.06	223	P	Pn	18 57 36.4	-0.4
KRHZ	Kereru	1.07	23	P	Pn	18 57 37.0	0.0
WAZ	Wanganui	1.09	323	P	Pb	18 57 39.3	+1.6
BHHZ	Black Hill Sta	1.16	9	P	Pb	18 57 38.7	-0.2
KAHZ	Kahuranaki	1.16	44	P	Pn	18 57 37.9	-0.4
MOVZ	Moawhango	1.23	357	P	Pb	18 57 40.0	-0.1
MTVZ	Mangateitei	1.28	347	P	Pb	18 57 41.4	+0.4
KWHZ	Kaweka Forest	1.29	21	P	Pn	18 57 40.2	+0.1
TCW	Tory Channel	1.31	244	P	Pn	18 57 40.2	-0.1
TRVZ	Turoa	1.35	351	P	Pb	18 57 42.5	+0.2
MCHZ	McNeill Hill	1.36	29	P	Pn	18 57 41.0	0.0
WHVZ	Whangaehu Hut	1.36	352	P	Pb	18 57 42.8	+0.3
CKHZ	Cape Kidnapper	1.37	45	P	Pn	18 57 40.0	-1.0
TUVZ	Tukino	1.37	354	P	Pb	18 57 42.7	+0.1
DRZ	Dome Shelter	1.37	351	P	Pb	18 57 43.2	+0.4
FWVZ	Far West T-bar	1.40	351	P	Pb	18 57 43.0	0.0
PKVZ	Pokaka	1.40	344	P	Pb	18 57 43.3	+0.3
DUWZ	D'Urville Isla	1.46	263	P	Pn	18 57 42.7	+0.3
NGZ	Ngauruhoe	1.47	353	P	Pb	18 57 43.9	-0.3
WTVZ	West Tongariro	1.53	353	P	Pb	18 57 44.7	-0.6
KRVZ	Karewarewa	1.55	355	P	Pb	18 57 45.0	-0.5
BKZ	Black Stump Fm	1.55	19	P	Pn	18 57 43.4	-0.3
TWVZ	Taurewa	1.59	349	P	Pb	18 57 45.5	-0.9
LREZ	Lake Rotokare	1.61	317	P	Pb	18 57 47.5	+1.0
TUWZ	Tuamarina	1.63	240	P	Pn	18 57 44.1	-0.6
ARHZ	Aropaoanui	1.64	34	P	Pn	18 57 44.6	-0.1
CMWZ	Cape Campbell	1.65	227	P	Pn	18 57 45.9	+0.9
RITZ	Rihia Road	1.66	1	P	Pn	18 57 46.2	+1.1
KATZ	Kakaramea	1.66	356	P	Pb	18 57 48.0	+0.5
NMHZ	Naumai	1.71	26	P	Pn	18 57 46.4	+0.5
RATZ	Rangitukua	1.77	359	P	Pb	18 57 48.2	-1.1
PREZ	Palmer Road	1.82	315	P	Pb	18 57 51.0	+0.8
BSWZ	Blackbirch Sta	1.83	233	P	Pn	18 57 46.9	-0.5
MRHZ	Matea Rd	1.86	14	P	Pn	18 57 47.8	-0.1
DREZ	Durham Road	1.91	319	P	Pb	18 57 51.9	+0.2
WATZ	Wairara	1.93	358	P	Pn	18 57 49.3	+0.5
NMEZ	Namu Road	1.93	309	P	Pb	18 57 52.5	+0.4
KHEZ	Kahui Hut	1.94	313	P	Pb	18 57 51.5	-0.6
MTHZ	Maungataniwha	1.94	24	P	Pn	18 57 48.8	-0.2
NNZ	Nelson	1.95	252	P	Pn	18 57 49.2	+0.2
RAHZ	Arahi	1.97	30	P	Pn	18 57 49.1	-0.4
PKE	Pukeiti	2.02	315	P	Pb	18 57 53.8	+0.2
NBEZ	Newall Road No	2.04	312	P	Pb	18 57 54.1	+0.3
ALRZ	Allen Road	2.11	11	P	Pb	18 57 57.0	+2.0
KNZ	Kokohu	2.15	42	P	Pn	18 57 50.3	-1.5
MHGZ	Mahia Peninsul	2.18	48	P	Pn	18 57 50.6	-1.6
SNGZ	Shannon Statio	2.19	33	P	Pn	18 57 51.1	-1.3
MUGZ	Murupara	2.27	19	P	Pn	18 57 54.1	+0.5
TLZ	Tolley Road	2.31	354	P	Pb	18 57 57.9	-0.7
RIGZ	Rimuhau	2.44	38	P	Pn	18 57 54.3	-1.5
TARZ	Mount Tarawera	2.45	13	P	Pn	18 57 56.7	+0.6
KHZ	Kahutara	2.48	223	P	Pn	18 57 54.6	-1.7
THZ	Tophouse	2.48	242	P	Pn	18 57 55.7	-0.7
QRZ	Quartz Range	2.52	265	P	Pn	18 57 57.1	+0.2
TKGZ	Te Karaka	2.69	36	P	Pn	18 57 57.6	-1.6
RUGZ	Raukumara Rang	3.03	29	P	Pn	18 58 02.3	-1.7
GVZ	Greta Valley S	3.13	221	P	Pn	18 58 04.0	-1.3
DSZ	Denniston Nort	3.23	249	P	Pn	18 58 10.0	+3.2
PKGZ	Pakihiroa	3.25	33	P	Pn	18 58 05.5	-1.5
LTZ	Lake Taylor	3.42	230	P	Pn	18 58 08.5	-0.8
WMGZ	Waiomatatini S	3.46	36	P	Pn	18 58 08.0	-1.8
MXZ	Matakaoa Point	3.62	33	P	Pn	18 58 10.7	-1.4
OKCZ	Okains Bay	3.71	213	P	Pn	18 58 10.9	-2.4
MQZ	McQueen's Vall	3.87	217	P	Pn	18 58 13.6	-1.9
AKCZ	Akaroa Harbour	3.89	213	P	Pn	18 58 13.9	-1.9
CTZ	Chatham Island	6.41	121	P	Pn	18 58 49.2	-1.1

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*IDC **19** 19:03:12.1±2.2, 43°.46N×105°.30W, h0^{km}, mb1 3.6/3, mb1mx3.2/55, mbtmp3.3/3, ML3.3/3, Error ellipse: s-maj=45.6km s-min=9.1km az=153.0*

*NEIC **19** 19:03:13.5±1.1, 43°.75N±0°.04×105°.30W±0°.06, h0^{km}±2^{km}, ML3.1/54, Error ellipse: s-maj=8.2km s-min=6.2km az=124.0*

ISC 19 19:03:13.2±1.0, **43°.73N**±0°.05×**105°.31W**±0°.05, **h0**^{km}, **n39**, σ**1^s.08**/39, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	1.00	66		Pg	19 03 32.2	-0.1
K22A	Casper	1.40	220		Pg	19 03 38.9	-1.0
K22A				IAML		19 04 01.8	
	comp=E,416nm,0.3s						
PHWY	Pilot Hill	2.43	183		Pn	19 03 55.2	+0.9
PHWY				IAML		19 04 32.4	
	comp=E,72nm,0.3s						
RWWY	Rawlins	2.47	215		Pn	19 03 55.5	+0.6
RWWY				IAML		19 04 31.1	
	comp=E,108nm,0.9s						
N23A	Red Feather La	2.87	190		Pn	19 04 01.8	+1.4
N23A				IAML		19 04 45.7	
	comp=E,50nm,0.3s						
N23A				IAML		19 04 50.5	
	comp=N,73nm,0.4s						
LAO	LASA Array	3.03	348		Pn	19 04 01.9	-0.6
LAO				IAML		19 04 54.1	
	comp=N,81nm,0.3s						
RLMT	Red Lodge	3.16	298		Pn	19 04 04.4	0.0
RLMT				IAML		19 04 55.3	
	comp=N,50nm,0.4s						
RLMT				IAML		19 05 00.0	
	comp=N,41nm,0.3s						
PD31	Pinedale Array	3.25	254		Pn	19 04 06.1	+0.5
PDAR	Pinedale Array	3.25	254	Pn	Pn	19 04 06.8	+1.2
	comp=N,3.5nm,0.3s,baz=80,slow=15,SNR=43						
PDAR				Lg	Lg	19 04 52.0	
	comp=N,19nm,0.3s,baz=79,slow=32,SNR=18						
PDAR	Pinedale Array	3.25	254		Pn	19 04 06.0	+0.4
BW06	Boulder Array	3.25	254		Pn	19 04 06.0	+0.4
BW06				IAML		19 04 55.7	
	comp=N,45nm,0.3s						
YNE	Yellowstone No	3.60	292		Pn	19 04 10.5	+0.1
YMP	Mirror Lake Pl	3.63	288		Pn	19 04 10.8	-0.1
OGNE	Ogallala	3.69	138		Pn	19 04 11.7	+0.2
GCMT	Greycliff	3.73	305		Pn	19 04 12.6	+0.6

H17A	Grant Village	3.85	282		Pn	19 04 15.5	+1.6
FLWY	Flagg Ranch	3.91	277		Pn	19 04 15.2	+0.5
FLWY				IAML		19 05 30.5	
	comp=N,29nm,1.8s						
ISCO	Idaho Springs	3.93	183		Pn	19 04 16.2	+1.2
SNOW	Snow King Moun	3.96	268		Pn	19 04 15.7	+0.2
SNOW				IAML		19 05 34.3	
	comp=N,28nm,1.8s						
SNOW				IAML		19 05 59.4	
	comp=N,28nm,0.9s						
YPP	Pitchstone Pla	4.00	280		Pn	19 04 17.1	+1.1
REDW	Red Top Meadow	4.04	267		Pn	19 04 17.1	+0.6
REDW				IAML		19 05 32.5	
	comp=N,30nm,0.9s						
REDW				IAML		19 06 04.9	
	comp=N,20nm,3.5s						
IMW	Indian Meadow	4.08	274		Pn	19 04 18.6	+1.6
IMW				IAML		19 05 26.3	
	comp=N,20nm,0.5s						
TPAW	Teton Pass	4.10	269		Pn	19 04 17.4	+0.1
TPAW				IAML		19 05 43.6	
	comp=N,24nm,1.1s						
YHH	Holmes Hill	4.12	287		Pn	19 04 19.8	+2.2
FXWY	Fox Creek	4.15	271		Pn	19 04 19.2	+1.2
O20A	White River Ci	4.20	212		Pn	19 04 19.6	+0.9
O20A				IAML		19 06 12.6	
	comp=N,32nm,3.7s						
O20A				IAML		19 06 32.2	
	comp=E,26nm,3.5s						
AHID	Auburn Hatcher	4.34	259		Pn	19 04 21.9	+1.4
AHID				IAML		19 05 37.4	
	comp=N,24nm,1.4s						
AHID				IAML		19 05 44.5	
	comp=E,21nm,2.3s						
YHL	Hebgen Lake	4.36	287		Pn	19 04 21.1	+0.1
RDMU	Red Mountain	4.47	227		Pn	19 04 22.0	-0.3
DGMT	Dagmar	4.81	9		Pn	19 04 27.0	+0.2
HWUT	Hardware Ranch	5.08	247		Pn	19 04 30.7	+0.1
HWUT				IAML		19 05 55.4	
	comp=E,13nm,1.0s						
HWUT				IAML		19 06 05.5	
	comp=E,18nm,0.9s						
PV22	Blue Mesa, Par	5.81	208		Pn	19 04 42.6	+1.8
PV10	Paradox Valley	6.04	209	Pn	Pn	19 04 46.0	+2.1
PV17	East Wray Mesa	6.10	208		Pn	19 04 42.1	-2.7
PV18	Skein Mesa, Pa	6.11	208	Pn	Pn	19 04 45.5	+0.6
PV13	Radium Mtn., P	6.16	207	Pn	Pn	19 04 46.0	+0.3
PV05	Paradox Valley	6.33	208	Pn	Pn	19 04 46.7	-1.2
ULM	Lac du Bonnet	9.17	41	Pn	Pn	19 05 25.8	-0.8
	comp=E,0.9nm,0.3s,baz=232,slow=12,SNR=8.9						
ULM				Pg		19 05 59.4	
	comp=E,0.7nm,0.3s,baz=228,slow=13,SNR=5.1						
ULM				Lg	Lg	19 08 03.1	
	comp=E,0.3nm,0.3s,baz=342,slow=18,SNR=4.0						
YKA	Yellowknife Ar	19.57	347	P	P	19 07 43.3	+0.9
	comp=E,0.1nm,0.3s,baz=163,slow=13,SNR=3.1						

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*IDC **19** 19:04:30.4±1.2,34°.06N×142°.45E,h0^{km},mb3.5/4, mb1 3.6/8,mb1mx3.3/52,mbtmp3.6/8,ML3.7/3,Error ellipse: s-maj=34.6km s-min=19.5km az=102.0*

*JMA **19** 19:04:32.5±0.3,34°.04N×142°.38E,h61^{km},M3.3*

ISC 19 19:04:33.3±1.0,**34°.07N**±0°.05×**142°.33E**±0°.06,**h25**^{km},**n22**, σ**1^{s}14**/34,**mb3.4**/4,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	1.26	298	P	Pn	19 04 55.0	+0.2
BSO1				S	Sb	19 05 11.6	0.0
BSO2	Boso 2	1.47	298	S	Sb	19 05 17.5	-0.4
BSO3	Boso 3	1.67	297	P	Pn	19 05 01.3	+0.6
BSO3				S	Sb	19 05 22.6	-1.1
BSO4	Boso 4	1.88	300	P	Pn	19 05 04.7	+0.9
BSO4				S	Sb	19 05 28.5	-1.5
KTR	Katsuura	1.98	304	*e*S	Sn	19 05 30.4	+1.2
JKUC	kamogawauchiur	2.06	302	*e*S	Sn	19 05 31.7	+0.4
JMKN	Mikurajimanish	2.28	266	P	Pn	19 05 09.1	-0.2
JMKN				*e*S	Sn	19 05 34.6	-2.0
JHJ2	Mitsune	2.30	246	P	Pn	19 05 09.9	+0.3
JHJ2				*e*S	Sn	19 05 37.2	+0.1
JHJ	Hachijo jima 2	2.32	247	Pn	Pn	19 05 09.9	0.0
	43nm,0.3s,baz=289,slow=20,SNR=9.7						
JHJ				Sn	Sn	19 05 37.6	-0.1
	26nm,0.3s,baz=87,slow=23,SNR=7.8						
JIM2	Oshima 3	2.48	286	P	Pn	19 05 11.5	-0.6
JIM2				*e*S	Sn	19 05 39.6	-2.0
JOD2	Odawara 2	2.92	295	P	Pn	19 05 17.6	-0.6
JOD2				*e*S	Sn	19 05 52.2	-0.3
JAG	Ashikaga	3.33	316	P	Pn	19 05 23.8	+0.1
JAG				*e*S	Sn	19 06 01.2	-1.3
JRY	Ryogami san	3.42	306	P	Pn	19 05 25.8	+0.8
JRY				*e*S	Sn	19 06 06.8	+2.1
JYN	Shimob	3.42	296	P	Pn	19 05 25.6	+0.4
JYN				S	Sn	19 06 05.2	+0.2
JFT	Otama	3.80	335	P	Pn	19 05 30.7	+0.4
JFT				S	Sn	19 06 11.8	-2.5
MJAR	Matsushiro Arr	4.17	307	Pn	Pn	19 05 37.2	+1.8
	0.1nm,0.3s,baz=150,slow=13,SNR=10						
JCJ	Chichijima	6.95	181	Pn	Pn	19 06 12.1	-1.5
	1.8nm,0.3s,baz=0.0,slow=20,SNR=1.2						
ASAJ	Asahikawa	10.04	1	Pn	Pn	19 06 54.9	-1.0
	0.7nm,0.3s,baz=232,slow=9.7,SNR=11						
MA2	Magadan	26.12	10	P	P	19 10 06.1	+1.1
	0.8nm,0.2s,baz=169,slow=16,SNR=3.7						
ILAR	Eielson Array	51.62	31	P	P	19 13 37.5	+0.2
	0.1nm,0.6s,baz=258,slow=8.8,SNR=1.3						
WRA	Warramunga Arr	54.24	189	P	P	19 13 58.1	+1.0
	0.5nm,0.9s,baz=6.1,slow=7.6,SNR=2.5						
ASAR	Alice Springs	57.97	189	P	P	19 14 25.6	+1.9
	0.2nm,0.7s,baz=3.4,slow=7.1,SNR=4.2						

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*IDC **19** 19:12:57.7±1.5,34°.04N×142°.32E,h0^{km},mb3.1/3, mb1 3.5/7,mb1mx3.3/56,mbtmp3.5/7,ML3.9/3,MS2.8/1, Ms1 2.8/1,ms1mx2.1/24,Error ellipse: s-maj=30.1km s-min=22.5km az=90.0*

*JMA **19** 19:12:59.5±0.2,34°.05N×142°.37E,h59^{km},M3.4*

ISC 19 19:12:59.3±1.7,**34°.00N**±0°.06×**142°.4E**±0°.1,**h62**^{km}±48^{km}, **n24**,σ**1^{s}42**/34,**mb3.4**/3,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	1.35	299	P	Pn	19 13 21.8	+0.2
BSO1				S	Sn	19 13 38.1	-0.2
BSO3	Boso 3	1.76	298	P	Pn	19 13 28.0	+0.7
BSO3				S	Sn	19 13 49.2	+0.6
BSO4	Boso 4	1.98	301	P	Pn	19 13 31.5	+1.1
BSO4				*e*S	Sn	19 13 54.1	+0.1
KTR	Katsuura	2.07	304	*e*S	Sn	19 13 56.5	0.0
CHOJ	Chosi	2.12	324	P	Pn	19 13 32.5	0.0
JKUC	kamogawauchiur	2.16	303	P	Pn	19 13 33.4	+0.4
JKUC				*e*S	Sn	19 13 58.3	-0.3
JHJ2	Mitsune	2.34	248	P	Pn	19 13 36.7	+1.3
JMKN	Mikurajimanish	2.34	268	P	Pn	19 13 35.6	+0.1
JMKN				S	Sn	19 14 01.0	-2.2
JHJ	Hachijo jima 2	2.36	249	Pn	Pn	19 13 37.1	+1.4
	99nm,0.3s,baz=279,slow=21,SNR=18						
JHJ				Sn	Sn	19 14 02.0	-1.6
	33nm,0.3s,baz=71,slow=3.5,SNR=1.8						
JIM2	Oshima 3	2.56	287	P	Pn	19 13 38.2	-0.3
JIM2				*e*S	Sn	19 14 05.5	-3.1
JIZS	Izushimoda	3.01	285	P	Pn	19 13 45.1	+0.6
JOD2	Odawara 2	3.01	296	P	Pn	19 13 45.2	+0.5
JOD2				*e*S	Sn	19 14 18.9	-0.7
JAG	Ashikaga	3.42	316	P	Pn	19 13 50.5	+0.3
JAG				*e*S	Sn	19 14 27.2	-2.3
JRY	Ryogami san	3.51	306	P	Pn	19 13 52.2	+0.7
JRY				*e*S	Sn	19 14 32.3	+0.5
JYN	Shimob	3.52	296	S	Sn	19 14 30.9	-1.0
JFT	Otama	3.89	335	P	Pn	19 13 57.4	+0.7
JFT				S	Sn	19 14 38.1	-3.0
MJAR	Matsushiro Arr	4.27	308	Pn	Pn	19 14 03.0	+1.2
	0.1nm,0.3s,baz=100,slow=14,SNR=6.4						
MJAR				Sn	Sn	19 14 51.8	+1.4
	0.3nm,0.3s,baz=169,slow=30,SNR=6.5						
MAT	Matsushiro	4.27	308	P	Pn	19 14 03.9	+2.0
MAT				S	Sn	19 14 51.2	+0.8
JCJ	Chichijima	6.88	182	Pn	Pn	19 14 39.8	+2.2
	2.5nm,0.3s,baz=82,slow=23,SNR=5.4						
JCJ				Sn	Sn	19 15 52.0	-2.5
	3.7nm,0.3s,baz=285,slow=22,SNR=5.7						
ASAJ	Asahikawa	10.10	1	Pn	Pn	19 15 21.3	-0.3
	1.0nm,0.3s,baz=249,slow=9.3,SNR=13						
KLR	Kul'dur	17.15	336	LR	LR	19 24 36.4	
	comp=Z,29nm,18.6s,baz=64,slow=41						
MKAR	Makanchi Array	46.46	305	P	P	19 21 25.8	+5.7
	0.1nm,0.4s,baz=90,slow=9.8,SNR=1.5						
ILAR	Eielson Array	51.64	31	P	P	19 22 06.5	+7.2
	0.2nm,0.5s,baz=270,slow=6.3,SNR=1.4						
WRA	Warramunga Arr	54.19	189	P	P	19 22 24.9	+6.3
	0.2nm,0.6s,baz=5.9,slow=7.5,SNR=1.9						

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*IDC **19** 19:14:15.9±4.2,23°.34S×176°.01W,h0^{km},mb4.1/5, mb1 4.3/5,mb1mx3.8/49,mbtmp4.1/5,Error ellipse: s-maj=153.3km s-min=48.8km az=145.0*

*NEIC **19** 19:14:20.5±0.5,23°.8S±0°.2×175°.71W±0°.03,h46^{km}±10^{km}, mb4.3/10,Error ellipse: s-maj=26.4km s-min=3.8km az=178.0*

ISC 19 19:14:19.6±1.2,**23°.8S**±0°.2×**175°.8W**±0°.1,**h31**^{km},**n19**, σ**0^{s}75**/19,**mb4.2**/10,**Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	7.19	50	Pn	Pn	19 16 02.2	-0.4
MSVF	Nonsavu	8.38	315		Pn	19 16 19.2	+0.2
CTA	Charters Tower	35.36	268	P	P	19 21 12.8	+0.2
	2.6nm,0.3s,baz=96,slow=8.6,SNR=7.4						
STKA	Stephens Creek	38.36	248	P	P	19 21 37.9	-0.2
	0.9nm,0.5s,baz=122,slow=13,SNR=3.8						
STKA	Stephens Creek	38.36	248	P	P	19 21 37.8	-0.2
COEN	Coen	39.95	277	P	P	19 21 51.3	-0.2
COEN				IAmb	IAmb	19 22 09.0	
	comp=Z,6.0nm,1.1s						
BBOO	Buckleboo	43.05	247	P	P	19 22 17.5	+0.8
AS31	Alice Springs	45.88	260	P	P	19 22 39.0	-0.5
ASAR	Alice Springs	45.88	260	P	P	19 22 39.3	-0.1
	comp=Z,2.3nm,0.9s,baz=96,slow=7.1,SNR=36						
WR0	Warramunga Arr	46.10	265	P	P	19 22 40.5	-0.7
WR0				IAmb	IAmb	19 22 44.4	
	comp=Z,2.0nm,0.9s						
WB2	Warramunga Arr	46.27	265	P	P	19 22 41.6	-1.0
WB2				IAmb	IAmb	19 22 43.1	
	comp=Z,5.1nm,0.9s						
WB0	Warramunga Arr	46.28	265	P	P	19 22 41.5	-1.2
WB0				IAmb	IAmb	19 22 44.6	
	comp=Z,4.1nm,0.9s						
WRA	Warramunga Arr	46.29	265	P	P	19 22 41.0	-1.7
	comp=Z,1.1nm,0.4s,baz=101,slow=8.6,SNR=52						
WRA	Warramunga Arr	46.29	265	P	P	19 22 41.9	-0.8
KNRA	Kununurra	52.57	268	P	P	19 23 30.1	-0.6
FITZ	Fitzroy Crossi	54.70	264	P	P	19 23 45.9	-0.4
FITZ				IAmb	IAmb	19 23 50.2	
	comp=Z,4.8nm,1.1s						
CMAR	Chiang Mai Arr	93.16	289	P	P	19 27 31.6	+0.4
	comp=Z,0.6nm,0.8s,baz=133,slow=4.0,SNR=4.7						
AKASG	Malin Array Be	146.91	331	PKPbc	PKPdf	19 33 57.3	+0.6
	comp=Z,0.5nm,0.4s,baz=41,slow=4.3,SNR=5.1						
CLL	Collm	151.73	348	*e*PKPbc	PKiKP	19 34 12.0	+0.8

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*IDC **19** 19:16:14.1±1.1,33°.98N×142°.35E,h0^{km},mb3.6/4, mb1 3.8/7,mb1mx3.5/55,mbtmp3.7/7,ML3.5/3,Error ellipse: s-maj=29.5km s-min=22.1km az=87.0*

*JMA **19** 19:16:14.9±0.3,34°.06N×142°.37E,h39^{km},M3.8*

ISC 19 19:16:15.6±0.9,**34°.05N**±0°.05×**142°.41E**±0°.07,**h25**^{km},**n23**, σ**1^{s}91**/39,**mb3.6**/4,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	1.33	297	P	Pn	19 16 37.2	-0.9
BSO1				*e*S	Sn	19 16 53.5	-1.3
BSO3	Boso 3	1.74	296	P	Pn	19 16 43.2	-0.8
BSO3				*e*S	Sn	19 17 04.5	-0.8
BSO4	Boso 4	1.95	299	P	Pn	19 16 46.6	-0.5
BSO4				*e*S	Sn	19 17 10.0	-0.7
KTR	Katsuura	2.05	303	*e*S	Sn	19 17 12.2	-1.0
CHOJ	Chosi	2.09	323	P	Pn	19 16 48.4	-0.6
CHOJ				*e*S	Sn	19 17 12.3	-1.9
JKUC	kamogawauchiur	2.13	302	P	Pn	19 16 49.0	-0.7
JKUC				S	Sn	19 17 13.9	-1.5
JHJ2	Mitsune	2.36	247	P	Pn	19 16 52.3	-0.5
JHJ2				*e*S	Sn	19 17 18.9	-2.0
JHJ	Hachijo jima 2	2.38	248	Pn	Pn	19 16 52.8	-0.3
	96nm,0.3s,baz=203,slow=23,SNR=18						
JHJ				Sn	Sn	19 17 18.8	-2.7
	104nm,0.3s,baz=251,slow=23,SNR=9.0						
JOD2	Odawara 2	3.00	295	P	Pn	19 17 00.0	-1.5
JOD2				*e*S	Sn	19 17 34.1	-2.6
JAG	Ashikaga	3.39	315	P	Pn	19 17 06.0	-0.9
JRY	Ryogami san	3.48	305	P	Pn	19 17 07.6	-0.7
JRY				*e*S	Sn	19 17 47.2	-1.6
JYN	Shimob	3.50	296	P	Pn	19 17 07.5	-1.0
JYN				*e*S	Sn	19 17 46.9	-2.2
JFT	Otama	3.85	335	P	Pn	19 17 13.0	-0.3
JFT				S	Sn	19 17 53.9	-3.8
MJAR	Matsushiro Arr	4.24	307	Pn	Pn	19 17 18.3	-0.4
	0.3nm,0.3s,baz=232,slow=26,SNR=13						
MJAR				Sn	Sn	19 18 06.7	-0.7
	0.4nm,0.3s,baz=226,slow=30,SNR=4.2						
MAT	Matsushiro	4.24	307	P	Pn	19 17 18.2	-0.5
MAT				*e*S	Sn	19 18 06.5	-1.0
MAT	Matsushiro	4.24	307	P	Pn	19 17 18.7	0.0
MAT				S	Sn	19 18 06.5	-1.0
JCJ	Chichijima	6.93	182	Pn	Pn	19 17 55.6	-0.1
	2.8nm,0.3s,baz=290,slow=20,SNR=5.1						
JCJ				Sn	Sn	19 19 08.6	-5.1
	12nm,0.3s,baz=273,slow=22,SNR=8.6						
ASAJ	Asahikawa	10.05	1	Pn	Pn	19 18 36.7	-1.7
	0.5nm,0.3s,baz=237,slow=14,SNR=5.7						
ASAJ				Sn	Sn	19 20 25.5	-4.8
	0.3nm,0.3s,baz=36,slow=19,SNR=1.8						
MKAR	Makanchi Array	46.44	305	P	P	19 24 43.4	+3.1
	0.2nm,0.5s,baz=86,slow=11,SNR=4.1						
ILAR	Eielson Array	51.60	31	P	P	19 25 21.7	+2.2
	0.3nm,0.8s,baz=263,slow=7.0,SNR=2.4						
WRA	Warramunga Arr	54.24	189	P	P	19 25 40.9	+1.5
	0.8nm,0.5s,baz=6.8,slow=7.7,SNR=12						
ASAR	Alice Springs	57.96	189	P	P	19 26 07.8	+1.8
	0.7nm,0.5s,baz=1.0,slow=5.9,SNR=19						
LPAZ	La Paz	147.36	65	PKPbc	PKiKP	19 36 01.0	+0.3
	0.9nm,0.5s,baz=326,slow=6.3,SNR=4.2						

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*JMA **19** 19:23:49.9±0.2,23°.98N×122°.30E,h16^{km}±4^{km},M2.0*

*TAP **19** 19:23:50.3,23°.98N×122°.29E,h27^{km},ML2.5,D*

ISC 19 19:23:48.9±1.1,**23°.96N**±0°.02×**122°.25E**±0°.02,**h16**^{km}±9^{km}, **n63**,σ**0^{s}62**/106,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENLB	Shoufeng	0.60	265	*e*S	Sn	19 24 11.4	-0.6
	baz=252						
EOS1	EOS1	0.60	349	*e*P	Pn	19 24 01.7	-1.0
	baz=345						
EOS1				S	Sn	19 24 10.2	-1.8
	baz=345						
TWD	Chiawan	0.61	281	*i* P	Pn	19 24 02.3	-0.6
	baz=279						
TWD				*i* S	Sn	19 24 11.5	-0.9
	baz=279						
NACB	Ninganchiao	0.64	290	P	Pn	19 24 02.9	-0.3
	baz=275						
NACB				*e*S	Sn	19 24 11.5	-1.5
	baz=275						
ENA	Nanau	0.66	315	P	Pn	19 24 03.6	+0.1
	baz=320						
ENA				S	Sn	19 24 13.0	-0.6
	baz=320						
TWC	Suao	0.74	331	P	Pn	19 24 04.6	-0.1
	baz=333						
TWC				*e*S	Sn	19 24 14.2	-1.4
	baz=333						
ETLH	Xiulin Townshi	0.74	289	P	Pn	19 24 04.7	-0.1
	baz=276						
ETLH				S	Sn	19 24 15.8	0.0
	baz=276						
ESL	Shilin	0.76	259	*e*P	Pb	19 24 04.3	+0.6
	baz=249						
ESL				S	Sn	19 24 15.3	-0.9
	baz=249						
JYNG	Yonagunijimaku	0.80	52	P	Pb	19 24 04.2	-0.2
JYNG				S	Sb	19 24 13.9	-1.1
YOJ	Yonaguni jima	0.85	54	P	Pb	19 24 05.2	-0.1
YOJ				S	Sb	19 24 16.0	-0.6
HGSD	Ruisui	0.89	239	*e*S	Sg	19 24 18.1	+0.2
	baz=239						
NNSB	Datong	0.92	301	P	Pn	19 24 07.4	+0.2
	baz=286						
NNSB				S	Sn	19 24 20.4	+0.2
	baz=286						
NNSH	Datong	0.92	301	P	Pn	19 24 07.4	+0.2
	baz=287						
NNSH				*e*S	Sn	19 24 20.3	+0.1
	baz=287						
WHF	Hehuan Shan	0.92	282	P	Pn	19 24 07.6	+0.1
	baz=267						
WHF				S	Sn	19 24 20.7	+0.1
	baz=267						
ENTT	Nioudou	0.92	317	P	Pn	19 24 07.8	+0.7
	baz=314						
ENTT				S	Sn	19 24 21.5	+1.4
	baz=314						
TWE	Neicheng	0.93	325	P	Pn	19 24 08.2	+1.0
	baz=322						
TWE				S	Sn	19 24 20.5	+0.4
	baz=322						
NDT	Datong Townshi	0.93	314	P	Pn	19 24 08.0	+0.7
	baz=310						
NDT				S	Sn	19 24 20.0	-0.3
	baz=310						
NNS	Nan Shan	0.93	301	P	Pn	19 24 08.6	+1.2
	baz=286						
NNS				*i* S	Sn	19 24 21.0	+0.4
	baz=286						
EHY	Hungye	0.96	242	P	Pb	19 24 07.4	+0.2
	baz=242						
EHY				*i* S	Sg	19 24 20.4	+0.2
	baz=242						
SLBB	Yuanshan	0.97	325	P	Pn	19 24 07.6	-0.2
	baz=321						
SLBB				S	Sn	19 24 21.5	+0.2
	baz=321						
OWD	Renai	0.98	270	*e*P	Pg	19 24 07.8	-0.1
	baz=268						
OWD				*e*S	Sn	19 24 21.1	-0.7
	baz=268						
CHGB	Renai	0.99	276	P	Pn	19 24 08.6	+0.3
	baz=263						
CHGB				*e*S	Sn	19 24 22.6	+0.5
	baz=263						
VWDT	VWDT	1.04	259	P	Pg	19 24 08.9	0.0
	baz=258						
VWDT				S	Sn	19 24 23.2	+0.4
	baz=258						
NWLT	Wulai	1.06	320	P	Pg	19 24 09.7	+0.3
	baz=316						
NWLT				S	Sn	19 24 24.0	+0.4
	baz=316						
TWF1	Yuli	1.06	235	P	Pn	19 24 09.5	+0.3
	baz=224						
TWF1				S	Sg	19 24 23.5	+0.2
	baz=224						
YHNB	Yeheng	1.06	312	*e*P	Pg	19 24 09.7	+0.2
	baz=308						
YHNB				S	Sn	19 24 24.2	+0.4
	baz=308						
TIPB	Shuangxi	1.08	339	P	Pg	19 24 10.3	+0.6
	baz=335						
TIPB				S	Sn	19 24 24.2	+0.2
	baz=335						
NSK	Sanguang	1.08	311	*e*P	Pg	19 24 10.2	+0.4
	baz=308						
NSK				S	Sn	19 24 24.5	+0.4
	baz=308						
FULB	Fuli	1.16	229	*e*P	Pn	19 24 10.4	0.0
	baz=217						
FULB				*e*S	Sb	19 24 25.6	+0.2
	baz=217						
TWA	Mucha	1.18	329	S	Sg	19 24 27.7	+0.5
	baz=325						
NWF	Wu-fen Shan	1.19	339	*e*S	Sg	19 24 27.3	0.0
	baz=334						
SSLB	Suanglung	1.20	262	*e*P	Pb	19 24 11.4	+0.2
	baz=261						
SSLB				*e*S	Sb	19 24 26.4	-0.1
	baz=261						
DPDB	Guoxing	1.21	274	*e*P	Pb	19 24 11.6	+0.1
	baz=264						
DPDB				*e*S	Sg	19 24 27.4	-0.7
	baz=264						
WHP	Taichung City	1.23	285	*e*P	Pg	19 24 12.8	+0.1
	baz=272						
WHP				S	Sg	19 24 28.7	-0.1
	baz=272						
SMLT	Sun Moon Lake	1.24	267	*e*S	Sg	19 24 28.7	-0.3
	baz=265						
TYC	Yuchr	1.28	268	*e*P	Pg	19 24 13.1	-0.4
	baz=267						
WHYT	Xinyi Township	1.31	259	P	Pb	19 24 13.3	+0.3
	baz=258						
LIOB	Emei	1.32	301	*e*P	Pg	19 24 13.9	-0.4
	baz=287						
LIOB				*e*S	Sg	19 24 32.0	+0.6
	baz=287						
NSTT	Nanjuang	1.32	301	*e*S	Sg	19 24 31.7	+0.1
	baz=286						
YM01	YM01	1.33	332	*e*P	Pg	19 24 14.0	-0.6
	baz=344						
YM01				*e*S	Sg	19 24 31.5	-0.5
	baz=344						
YM10	YM10	1.34	332	*e*P	Pg	19 24 14.1	-0.7
	baz=344						
YM10				*e*S	Sg	19 24 31.6	-0.8
	baz=344						
YM05	YM05	1.35	333	*e*P	Pg	19 24 14.5	-0.4
	baz=344						
YM05				*e*S	Sg	19 24 32.8	+0.2
	baz=344						
YM04	YM04	1.35	331	*e*S	Sg	19 24 31.8	-0.8
	baz=327						
ELDTW	Lidau	1.37	236	*e*P	Pn	19 24 13.2	-0.2
	baz=236						
ELDTW				*e*S	Sn	19 24 30.0	-1.3
	baz=236						
YM03	YM03	1.38	332	*e*S	Sg	19 24 32.4	-1.0
	baz=327						
WJS	Zhushan	1.40	265	*e*S	Sg	19 24 34.7	+0.6
	baz=263						
IRIF	Iriomote-Funau	1.40	74	P	Pb	19 24 14.9	+0.2
IRIF				*e*S	Sn	19 24 32.8	+0.9
TWQ1	Liyutan	1.40	286	*e*S	Sg	19 24 34.4	+0.2
	baz=283						
TWH	Lutao	1.43	210	*e*S	Sn	19 24 31.0	-1.7
	baz=211						
CHN5	Tsauling	1.48	256	*e*P	Pb	19 24 16.2	+0.1
	baz=245						
CHN5				S	Sg	19 24 36.7	-0.2
	baz=245						
TWGBT	Beinan	1.57	224	*e*S	Sn	19 24 35.4	-0.6
	baz=236						
TWG	Pinlang	1.57	224	*e*S	Sn	19 24 35.7	-0.4
	baz=236						
TPUB	Ta-pu	1.62	246	*e*P	Pb	19 24 18.3	-0.2
	baz=246						
TPUB				*e*S	Sb	19 24 39.5	+0.7
	baz=246						
JKRS	Kuro-shima	1.63	80	P	Pn	19 24 17.6	+0.7
JKRS				*e*S	Sb	19 24 39.6	+0.7
CHN4	Tsaushan	1.64	249	P	Pb	19 24 19.1	+0.5
	baz=248						
CHN4				S	Sb	19 24 40.1	+1.0
	baz=248						
RLNB	Erlin	1.73	268	*e*S	Sg	19 24 44.1	-0.6
	baz=266						
TWK	Hsinying	1.76	247	*e*P	Pb	19 24 20.8	0.0
	baz=247						
TWK				*e*S	Sb	19 24 43.0	+0.4
	baz=247						
CHN1	Nanshi	1.76	244	S	Sg	19 24 44.5	-1.0
	baz=244						
SLGT	Liugui	1.76	237	*e*S	Sb	19 24 42.2	-0.4
	baz=229						
SGST	Jiashian	1.76	241	*e*S	Sb	19 24 43.5	+0.8
	baz=231						
SNST	Tainan City	1.77	246	*e*S	Sb	19 24 43.3	+0.4
	baz=246						
JIJ	Ishigaki jima	1.77	77	P	Pn	19 24 18.9	0.0
JIJ				*e*S	Sn	19 24 41.5	+0.4
JISG	Ishigakijimahi	1.98	71	P	Pn	19 24 22.0	+0.3
JISG				*e*S	Sn	19 24 46.8	+0.6

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*NEIC **19** 19:45:38.6±1.3,22°.9S±0°.2×178°.6W±0°.2,h526^{km}±16^{km},*

mb4.6/21, Error ellipse: s-maj=26.1km s-min=19.7km az=132.0

*IDC **19** 19:45:39.5±3.6, 22°.86S×178°.68W, h531^{km}±55^{km}, mb3.3/5, mb1 3.6/8, mb1mx3.1/42, mbtmp4.5/8, Error ellipse: s-maj=51.0km s-min=22.4km az=178.0*

ISC 19 19:45:40.3±0.9**, 22°.9S**±0°.1×**178°.7W**±0°.1**, h550**^{km}**, n37, σ0^{s}.95**/37**, mb4.5**/11**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	13.77	271	P	P	19 48 37.1	-0.2
	2.0nm,0.3s,baz=28,slow=22,SNR=9.7						
DZM	Mont Dzumac	13.77	271	P	P	19 48 36.7	-0.6
OUZ	Omahuta	13.96	207	P	P	19 48 38.6	-0.3
URZ	Urewera	15.68	192	P	P	19 48 57.3	+0.8
	2.2nm,0.3s,baz=264,slow=2.6,SNR=6.8						
URZ	Urewera	15.68	192	P	P	19 48 55.8	-0.7
URZ				IAmb	IAmb	19 48 59.0	
	comp=Z,17nm,1.4s						
BKZ	Black Stump Fm	16.68	193	P	P	19 49 06.3	+0.3
BKZ				IAmb	IAmb	19 49 28.7	
	comp=Z,26nm,1.4s						
RAR	Rarotonga	17.62	88	P	P	19 49 14.7	0.0
	comp=Z,9.4nm,0.3s,baz=158,slow=23,SNR=4.2						
BFZ	Birch Farm	18.19	192	P	P	19 49 20.0	+0.3
MSWZ	Moikau Station	19.11	194	P	P	19 49 28.9	+0.8
BHW	Baring Head	19.19	195	P	P	19 49 29.4	+0.6
PLWZ	Palliser	19.25	194	P	P	19 49 29.4	0.0
NNZ	Nelson	19.40	198	P	P	19 49 30.6	-0.1
TUWZ	Tuamarina	19.44	197	P	P	19 49 31.1	0.0
THZ	Tophouse	20.04	199	P	P	19 49 37.6	+1.0
THZ				IAmb	IAmb	19 49 54.8	
	comp=Z,16nm,1.1s						
KHZ	Kahutara	20.47	197	P	P	19 49 40.8	+0.4
KHZ				IAmb	IAmb	19 49 46.9	
	comp=Z,21nm,1.3s						
LTZ	Lake Taylor	21.16	199	P	P	19 49 46.7	0.0
LTZ				IAmb	IAmb	19 49 53.2	
	comp=Z,32nm,1.5s						
MLZ	Mavora Lakes	24.82	203	P	P	19 50 20.2	+0.9
WHZ	Wether Hill Ro	25.34	202	P	P	19 50 23.7	-0.1
WHZ				IAmb	IAmb	19 50 28.8	
	comp=Z,29nm,1.3s						
EIDS	Eidsvold	27.66	259	P	P	19 50 42.4	-2.1
EIDS				IAmb	IAmb	19 50 50.7	
	comp=Z,26nm,1.4s						
CTA	Charters Tower	32.69	268	P	P	19 51 28.8	+0.9
	comp=Z,12nm,0.3s,baz=94,slow=12,SNR=28						
MCQ	Macquarie Isla	35.70	202	P	P	19 51 52.9	+0.5
STKA	Stephens Creek	36.20	247	P	P	19 51 56.2	-0.9
	comp=Z,1.2nm,0.9s,baz=94,slow=13,SNR=1.8						
COEN	Coen	37.17	277	P	P	19 52 07.4	+2.1
COEN				IAmb	IAmb	19 52 34.2	
	comp=Z,11nm,1.1s						
BBOO	Buckleboo	40.93	246	P	P	19 52 33.6	-1.8
AS31	Alice Springs	43.39	259	P	P	19 52 54.5	-0.3
ASAR	Alice Springs	43.39	259	P	P	19 52 54.8	0.0
	comp=Z,1.0nm,0.4s,baz=94,slow=7.8,SNR=27						
ASAR	Alice Springs	43.39	259	P	P	19 52 54.5	-0.3
WR0	Warramunga Arr	43.49	265	P	P	19 52 55.6	-0.1
WB0	Warramunga Arr	43.67	265	P	P	19 52 57.1	0.0
WB2	Warramunga Arr	43.67	265	P	P	19 52 57.1	0.0
WRA	Warramunga Arr	43.68	265	P	P	19 52 57.5	+0.4
	comp=Z,2.1nm,0.4s,baz=94,slow=8.3,SNR=49						
WRA	Warramunga Arr	43.68	265	P	P	19 52 57.0	-0.1
RIM	Rim	47.89	30	P	P	19 53 28.6	-0.6
MTN	Manton Dam	48.60	273	P	P	19 53 36.0	+1.6
MTN				IAmb	IAmb	19 53 37.3	
	comp=Z,21nm,1.4s						
KNRA	Kununurra	49.91	268	P	P	19 53 46.1	+2.0
KNRA				IAmb	IAmb	19 54 13.5	
	comp=Z,24nm,1.4s						
FITZ	Fitzroy Crossi	52.11	264	P	P	19 54 01.7	+1.6
	comp=Z,0.9nm,0.4s,baz=114,slow=8.2,SNR=8.2						
FITZ	Fitzroy Crossi	52.11	264	P	P	19 54 01.5	+1.5

*IDC **19** 19:59:42.9±0.7, 49°.48S×117°.32E, h0^{km}, mb4.3/10, mb1 4.4/11, mb1mx4.3/31, mbtmp4.3/11, ML2.8/1, MS3.9/6, Ms1 3.9/6, ms1mx3.6/27, Error ellipse: s-maj=28.5km s-min=14.8km az=105.0*

*NEIC **19** 19:59:44.5±1.2, 49°.4S±0°.1×117°.3E±0°.2, h10^{km}±1^{km}, mb4.7/23, Error ellipse: s-maj=19.5km s-min=16.3km az=296.0*

ISC 19 19:59:44.6±0.4**, 49°.52S**±0°.07×**117°.4E**±0°.1**, h12**^{km}**, n84, σ1^{s}.24**/76**, mb4.6**/18**, MS3.9**/5**, 1D, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	14.80	350	T	T	20 18 22.1	
	baz=171,slow=73,SNR=146						
H01W1	Cape Leeuwin H	14.80	350	T	T	20 18 29.8	
	baz=171,slow=73,SNR=127						
H01W3	Cape Leeuwin H	14.82	350	T	T	20 18 21.9	
	baz=171,slow=73,SNR=186						
NWAO	Narrogin (SRO)	16.58	360	Pn	P	20 03 38.2	-1.1
	1.9nm,0.3s,baz=181,slow=10,SNR=18						
NWAO				LR	LR	20 08 20.7	
	comp=Z,647nm,21.4s,baz=158,slow=31						
NWAO	Narrogin (SRO)	16.58	360		Pn	20 03 36.1	-0.7
CASY	Casey	17.17	189	Pn	Pn	20 03 42.4	-1.7
CASY				IAmb	IAmb	20 03 53.6	
	comp=Z,60nm,1.6s						
BBOO	Buckleboo	21.74	47	P	P	20 04 38.3	+2.5
STKA	Stephens Creek	25.29	55	P	P	20 05 11.4	+0.6
	comp=Z,5.7nm,0.9s,baz=208,slow=9.6,SNR=9.0						
STKA				LR	LR	20 13 16.1	
	comp=Z,182nm,21.2s,baz=209,slow=32						
STKA	Stephens Creek	25.29	55	P	P	20 05 11.5	+0.6
ASAR	Alice Springs	28.89	33	P	P	20 05 43.0	-0.3
	comp=Z,1.8nm,0.8s,baz=197,slow=7.4,SNR=20						
ASAR				PcP	PcP	20 08 51.4	-1.0
	comp=Z,0.6nm,0.8s,baz=214,slow=2.3,SNR=5.1						
ASAR				LR	LR	20 16 04.4	
	comp=Z,317nm,19.5s,baz=192,slow=34						
ASAR	Alice Springs	28.89	33	P	P	20 05 42.8	-0.6
ASAR					PcP	20 08 50.9	-1.5
AS31	Alice Springs	28.89	33	P	P	20 05 43.0	-0.3
PAF	Port-aux-Franc	30.26	252	P	P	20 05 54.6	-0.6
FITZ	Fitzroy Crossi	32.05	15	P	P	20 06 11.5	+0.4
	baz=188,slow=8.5						
FITZ				LR	LR	20 18 11.3	
	comp=Z,256nm,19.9s,baz=182,slow=35						
FITZ	Fitzroy Crossi	32.05	15	P	P	20 06 11.1	-0.1
FITZ				IAmb	IAmb	20 06 28.4	
	comp=Z,22nm,1.6s						
MAW	Mawson	32.26	216	P	P	20 06 13.2	+0.7
	comp=Z,6.2nm,0.8s,baz=59,slow=11,SNR=5.4						
MAW	Mawson	32.26	216	P	P	20 06 13.8	+1.3
WRA	Warramunga Arr	32.49	31	P	P	20 06 14.3	-0.7
	comp=Z,2.3nm,0.8s,baz=201,slow=8.5,SNR=9.5						
WRA				PcP	PcP	20 09 00.8	-1.0
	comp=Z,0.6nm,0.8s,baz=196,slow=5.8,SNR=2.6						
WRA				LR	LR	20 18 19.7	
	comp=Z,196nm,19.7s,baz=250,slow=34						
WRA	Warramunga Arr	32.49	31	P	P	20 06 14.8	-0.2
WB2	Warramunga Arr	32.49	31	P	P	20 06 14.7	-0.3
WB0	Warramunga Arr	32.67	31	P	P	20 06 15.9	-0.7
WB0				IAmb	IAmb	20 06 46.3	
	comp=Z,23nm,1.6s						
VNDA	Vanda	32.71	164	P	P	20 06 16.7	+0.3
	comp=Z,2.4nm,0.7s,baz=302,slow=8.7,SNR=9.1						
VNDA	Vanda	32.71	164	P	P	20 06 17.0	+0.6
VNDA				IAmb	IAmb	20 06 25.0	
	comp=Z,8.0nm,1.1s						
QSPA	South Pole Qui	40.61	180	P	P	20 07 24.2	+0.2
	comp=Z,2.3nm,0.7s,baz=325,slow=2.2,SNR=9.5						
QSPA	South Pole Qui	40.61	180	P	P	20 07 24.1	+0.2
QSPA				IAmb	IAmb	20 07 47.8	
	comp=Z,19nm,1.6s						
SYO	Syowa Base	40.77	213	⇓eX	P	20 07 23.6	-1.4
URZ	Urewera	43.44	98	P	P	20 07 47.6	+0.4
	comp=Z,6.1nm,0.8s,baz=32,slow=8.2,SNR=3.9						
PMG	Port Moresby	47.07	42	LR	LR	20 27 30.9	
	comp=Z,143nm,18.2s,baz=234,slow=36						
SBUM	Sibu	51.95	353	P	P	20 08 52.5	-0.9
SBUM				IAmb	IAmb	20 08 55.0	
	comp=Z,8.1nm,0.9s						
SNAA	Sanae	51.99	200	P	P	20 08 54.3	+1.1
	comp=Z,1.6nm,0.7s,baz=188,slow=21,SNR=3.3						
SNAA	Sanae	51.99	200	P	P	20 08 54.2	+1.1
RPSI	Rantau Prapat	54.40	337	P	P	20 09 08.0	-3.4
RPSI				IAmb	IAmb	20 09 12.4	
	comp=Z,7.3nm,1.1s						
IPM	Ipoh	55.62	340	P	P	20 09 19.2	-1.1
IPM				IAmb	IAmb	20 09 28.5	
	comp=Z,8.2nm,0.8s						
H08S2	Diego Garcia H	56.07	303	T	T	21 09 46.4	
	baz=153,slow=76,SNR=4.7						
H08S3	Diego Garcia H	56.09	303	T	T	21 09 48.4	
	baz=151,slow=76,SNR=20						
CM31	Chiang Mai Arr	69.62	341	P	P	20 10 53.5	-0.1
CM31				IAmb	IAmb	20 11 02.3	
	comp=Z,8.3nm,0.9s						
CMAR	Chiang Mai Arr	69.62	341	P	P	20 10 53.5	-0.2
	comp=Z,4.3nm,0.8s,baz=189,slow=5.5,SNR=35						
CMAR	Chiang Mai Arr	69.62	341	P	P	20 10 53.2	-0.4
CHTO	Chiang Mai	69.96	341	P	P	20 10 55.6	-0.1
CHTO				IAmb	IAmb	20 11 04.4	
	comp=Z,14nm,1.8s						
KMI	Kunming	75.44	346	P	P	20 11 29.9	+1.5
LSZ	Lusaka	78.01	261	P	P	20 11 43.5	+0.3
LSZ				IAmb	IAmb	20 11 51.6	
	comp=Z,13nm,0.9s						
WHN	Wuhan	79.75	357	P	P	20 12 00.6	+8.5
ODAN	Odare	80.59	333	eP	P	20 11 56.2	-0.8
	comp=Z,17nm,1.1s						
RAMN	Ramite	80.91	332	eP	P	20 11 58.1	-0.6
	comp=Z,14nm,0.7s						
TAPN	Taplejung	80.95	334	eP	P	20 11 58.5	-0.6
	comp=Z,23nm,0.9s						
JIRN	Jiri	81.70	332	eP	P	20 12 02.4	-0.7
	comp=Z,107nm,1.6s						
PKI	Pulchoki	81.85	332	eP	P	20 12 02.9	-0.9
	comp=Z,26nm,1.3s						
PKIN	Phulchoki	81.86	332	eP	P	20 12 02.9	-0.9
DMN	Daman	81.98	331	eP	P	20 12 03.7	-0.7
GUN	Gumba	82.03	332	eP	P	20 12 04.4	-0.4
	comp=Z,72nm,1.2s						
KKN	Kakani	82.10	332	eP	P	20 12 04.2	-0.8
	comp=Z,59nm,1.6s						
LSA	Lhasa	82.25	337	P	P	20 12 05.7	-0.3
LSA				IAmb	IAmb	20 12 07.0	
	comp=Z,6.0nm,1.1s						
GKN	Gorkha	82.50	331	eP	P	20 12 06.2	-0.8
	comp=Z,29nm,1.1s						
DANN	Dangsing	83.10	331	eP	P	20 12 09.3	-1.0
	comp=Z,38nm,0.8s						
XAN	Xi'an	83.53	353	P	P	20 12 12.3	+0.3
XAN				pP	pwP	20 12 34.1	+15
XAN	Xi'an	83.53	353	P	P	20 12 11.9	-0.1
BJI	Beijing	89.19	359	P	P	20 12 33.6	-6.0
GTA	Gaotai	89.90	347	eP	P	20 12 42.8	-0.3
GTA				pP	pwP	20 12 51.0	+0.5
GTA				sP	sP	20 12 55.4	+8.7
KSH	Kashi	95.88	329	P	P	20 13 14.1	+3.4
KSH				pP	pwP	20 13 19.3	+1.2
KSH				PP	PP	20 17 09.6	+6.1
KSH	Kashi	95.88	329	S	S	20 24 29.8	+1.5
KSH	Kashi	95.88	329	sS	sS	20 24 38.5	+5.3
KSH	Kashi	95.88	329	SS	SS	20 31 04.8	+5.2
SONM	Songino Array	97.44	353	P	Pdif	20 13 17.6	-0.1
	comp=Z,0.4nm,0.9s,baz=145,slow=5.4,SNR=3.8						
TIXI	Tiksi	121.14	4		PKPdf	20 18 34.4	-1.3
GERES	GERESS Array B	132.14	300	PKP	PKPdf	20 18 56.4	-1.1
	comp=Z,0.4nm,0.7s,baz=327,slow=4.9,SNR=2.0						
ILAR	Eielson Array	135.51	37	PKP	PKPdf	20 19 02.4	-0.8
	comp=Z,0.3nm,0.7s,baz=256,slow=3.1,SNR=3.0						
Q16A	Castle Valley	144.22	88		PKPdf	20 19 19.3	-0.8
SRU	San Rafael Swe	144.75	89		PKPbc	20 19 20.2	+0.2
P17A	Butcher Ranch,	144.80	88		PKPdf	20 19 20.8	-0.3
JLU	Jordanelle	144.94	86		PKPdf	20 19 22.4	+1.0
C36M	Paulatuk	145.06	33		PKPbc	20 19 19.2	-0.6
PV03	Paradox Valley	145.37	91		PKPab	20 19 22.5	+0.3
HWUT	Hardware Ranch	145.38	84		PKPab	20 19 22.1	0.0
PV04	Paradox Valley	145.41	91		PKPab	20 19 22.5	+0.1
PV12	Saucer Basin,	145.43	91		PKPab	20 19 22.9	+0.4
PV07	Paradox Valley	145.60	91		PKPab	20 19 23.1	0.0
REDW	Red Top Meadow	146.69	82		PKPbc	20 19 25.7	-0.2
WALA	Waterton Lakes	147.09	71		PKPbc	20 19 27.3	+0.5
YNE	Yellowstone No	147.97	80		PKPdf	20 19 26.9	+0.6
YKA	Yellowknife Ar	149.12	45	PKPbc	PKPbc	20 19 31.4	-0.1
	comp=Z,2.2nm,0.7s,baz=270,slow=2.0,SNR=25						
EGMT	Eagleton	149.31	74		PKPbc	20 19 30.6	-2.0
RES	Resolute Bay	151.36	17	PKPbc	PKPbc	20 19 36.3	-0.2
	comp=Z,5.6nm,0.8s,baz=264,slow=2.6,SNR=42						
T49A	Edmonton	159.33	118		PKPab	20 20 19.2	-0.8
K43A	Burlington	160.99	101		PKPab	20 20 28.4	+1.2

ATH 19 20:12:46.6, 38°.19N×20°.47E, h14^{km}±1^{km}**, ML1.5**/1**, Error ellipse: s-maj=2.1km s-min=1.3km az=226.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARGA	Argostoli. Kep	0.02	146	P	Pg	20 12 49.0	-0.1
ARGA				S	Sg	20 12 50.7	+0.1
LXRA	Lixouri, Kepha	0.02	287	P	Pg	20 12 49.1	+0.1
LXRA				S	Sg	20 12 51.2	+0.5
KEF2	Argostoli. Kep	0.03	148	P	Pg	20 12 49.1	0.0
KEF2				S	Sg	20 12 50.7	-0.1
KEF4	Livadi, Kephal	0.07	334	P	Pg	20 12 49.4	-0.1
KEF4				S	Sg	20 12 51.3	0.0
KEF1	Kardakata, Kep	0.08	3	P	Pg	20 12 49.5	-0.1
KEF1				S	Sg	20 12 51.6	+0.1
KEF3	Kipouria, Keph	0.09	276	P	Pg	20 12 49.5	-0.1
KEF3				S	Sg	20 12 51.8	+0.1
VLS	Valsamata	0.10	99	P	Pg	20 12 49.6	-0.1
VLS				S	Sg	20 12 52.0	+0.1
VLS				AML	AML	20 12 52.1	
	comp=E,669µm,0.1s						
VLS				AML	AML	20 12 52.2	
	comp=N,542µm,0.1s						
KFL	Anninata	0.27	108	P	Pg	20 12 52.3	0.0
KFL				S	Sg	20 12 56.7	+0.6
FSK	Fiskardo	0.28	16	P	Pg	20 12 52.3	-0.1
FSK				S	Sg	20 12 56.6	+0.3

*LDG **19** 20:14:45.7±0.1, 44°.19N×11°.75E, h10^{km}, Ml2.6/18, Error ellipse: s-maj=3.7km s-min=2.2km az=45.0*

ROM 19 20:14:46.4±0.1**, 44°.084N**±0°.008×**11°.69E**±0°.01**, h29**^{km}±1^{km}**, ML2.5**/1**, 6C-7D, Error ellipse: s-maj=0.9km s-min=0.5km az=35.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMD	Lutirano	0.02	113	ePg	Pb	20 14 50.2	-1.2
LMD	Lutirano	0.02	113	P	Pb	20 14 50.2	-1.1
LMD				S	Sb	20 14 54.0	-0.7
LMD				AML	AML		
	comp=N,4740µm,0.9s						
LMD				AML	AML		
	comp=E,5300µm,0.3s						
SFI	Santa Sofia	0.21	147	⇑P	Pb	20 14 52.3	-0.5
SFI				S	Sb	20 14 57.1	+0.1
SFI				AML	AML		
	comp=E,4175µm,0.2s						
SFI				AML	AML		
	comp=E,4175µm,0.3s						
SFI				AML	AML		
	comp=N,2730µm,0.5s						
SFI				AML	AML		
	comp=E,4425µm,0.3s						
SFI				AML	AML		
	comp=N,2645µm,0.4s						
SFI				AML	AML		
	comp=E,4180µm,0.2s						
SFI				AML	AML		
	comp=N,2640µm,0.4s						
SFI				AML	AML		
	comp=E,4420µm,0.3s						
SFI				AML	AML		
	comp=N,2730µm,0.5s						
SEI	Scarperia	0.24	263	⇓P	Pb	20 14 52.7	-0.4
SEI				S	Sb	20 14 58.7	+1.1
SEI				AML	AML		
	comp=E,3475µm,0.5s						
SEI				AML	AML		
	comp=N,4995µm,0.2s						
FAEN	Faenza	0.25	34	P	Pb	20 14 53.0	-0.1
FAEN				S	Sb	20 14 59.1	+1.5
RUFI	Rufina	0.28	208	⇓P	Pb	20 14 53.4	-0.1
RUFI				S	Sb	20 14 58.9	+0.7
RUFI				AML	AML		
	comp=E,726µm,0.3s						
RUFI				AML	AML		
	comp=N,1038µm,0.6s						
RUFI				AML	AML		
	comp=E,724µm,0.3s						
RUFI				AML	AML		
	comp=N,1038µm,0.6s						
IMOL	Imola, Italy	0.28	8	P	Pb	20 14 53.5	0.0
IMOL				S	Sn	20 15 00.7	+0.9
ASQU	Asqua	0.30	166	P	Pb	20 14 53.5	-0.3
ASQU				S	Sn	20 15 00.3	0.0
ASQU				AML	AML		
	comp=E,1180µm,0.2s						
ASQU				AML	AML		
	comp=N,866µm,0.5s						
MTRZ	Monterenzio	0.33	332	⇑P	Pb	20 14 53.9	-0.4
MTRZ				AML	AML		
	comp=E,6075µm,0.4s						
MTRZ				AML	AML		
	comp=E,6220µm,0.4s						
MTRZ				AML	AML		
	comp=N,6740µm,0.3s						
MTRZ				AML	AML		
	comp=E,6070µm,0.4s						
MTRZ				AML	AML		
	comp=N,6855µm,0.3s						
FNVD	Fontana Vidola	0.41	282	⇓P	Pb	20 14 55.5	0.0
FNVD				S	Sn	20 15 03.2	0.0
FNVD				AML	AML		
	comp=E,2410µm,0.5s						
FNVD				AML	AML		
	comp=N,2020µm,0.3s						
MTCR	Monte La Croce	0.50	264	⇓P	Pb	20 14 57.0	+0.1
MTCR				AML	AML		
	comp=E,389µm,0.9s						
MTCR				AML	AML		
	comp=N,501µm,0.8s						
CRE	Caprese Michel	0.50	158	P	Pb	20 14 56.7	-0.2
CRE				AML	AML		
	comp=E,295µm,0.3s						
CRE				AML	AML		
	comp=E,296µm,0.3s						
CRE				AML	AML		
	comp=N,652µm,0.3s						
CMPO	Campotto Po	0.50	10	P	Pn	20 14 57.8	+0.2
CPGN	Carpegna, Ital	0.54	121	⇑P	Pb	20 14 57.5	0.0
CPGN				AML	AML		
	comp=N,315µm,0.3s						
CPGN				AML	AML		
	comp=E,345µm,0.4s						
BLLA	Bellaria	0.57	84	P	Pb	20 14 58.1	+0.2
RSM	Repubblica di	0.57	105	P	Pb	20 14 58.0	0.0
ZCCA	Zocca	0.58	298	P	Pn	20 14 59.4	+0.7
ZCCA				AML	AML		
	comp=E,259µm,0.5s						
ZCCA				AML	AML		
	comp=N,297µm,0.7s						
PARC	Parchiule	0.59	137	P	Pb	20 14 57.7	-0.6
PARC				AML	AML		
	comp=N,328µm,0.3s						
PARC				AML	AML		
	comp=E,242µm,1.3s						
SSP9	Sansepolcro	0.60	148	P	Pb	20 14 58.3	-0.1
SSP9				S	Sn	20 15 08.6	+0.9
OSSC	Osservatorio P	0.65	210	⇓P	Pn	20 14 59.6	0.0
OSSC				AML	AML		
	comp=E,295µm,1.4s						
OSSC				AML	AML		
	comp=N,290µm,0.8s						
POPM	Popiglio	0.67	267	⇓P	Pb	20 14 59.7	+0.1
POPM				AML	AML		
	comp=N,238µm,0.8s						
POPM				AML	AML		
	comp=E,234µm,0.7s						
POPM	Popiglio	0.67	267	P	Pn	20 14 59.9	0.0
POPM				S	Sn	20 15 10.7	+1.2
CSNT	Castellina Chi	0.68	205	AML	AML		
	comp=E,71µm,0.4s						
CSNT				AML	AML		
	comp=N,102µm,0.3s						
BADI	Badiali	0.70	145	⇓P	Pb	20 15 00.0	-0.1
BADI				AML	AML		
	comp=E,513µm,1.0s						
BADI				AML	AML		
	comp=N,302µm,0.8s						
BADI				AML	AML		
	comp=E,512µm,1.0s						
PE3	Peglio	0.70	123	P	Pb	20 14 60.0	-0.2
PE3				AML	AML		
	comp=E,1245µm,0.5s						
PE3				AML	AML		
	comp=N,1950µm,0.4s						
CAFI	Castiglion Fio	0.78	165	⇑P	Pb	20 15 01.9	+0.4
CAFI				AML	AML		
	comp=N,214µm,0.4s						
CAFI				AML	AML		
	comp=E,212µm,0.8s						
CAFI				AML	AML		
	comp=N,214µm,0.4s						
BDI	Bagni Di Lucca	0.79	269	P	Pn	20 15 01.3	-0.3
BDI				AML	AML		
	comp=E,222µm,0.4s						
BDI				AML	AML		
	comp=N,227µm,0.5s						
NARO	Abbazia di Nar	0.80	126	P	Pn	20 15 01.3	-0.4
NARO				AML	AML		
	comp=E,302µm,0.4s						
NARO				AML	AML		
	comp=N,401µm,0.4s						
ATPI	Pietralunga -	0.82	140	P	Pb	20 15 02.1	0.0
ATPI				AML	AML		
	comp=E,218µm,0.7s						
ATPI				AML	AML		
	comp=N,219µm,0.8s						
ATPI				AML	AML		
	comp=E,217µm,0.7s						
ATPI				AML	AML		
	comp=N,220µm,0.8s						
PESA	Pesaro	0.84	99	P	Pb	20 15 03.4	+0.9
PESA				AML	AML		
	comp=E,502µm,0.2s						
PESA				AML	AML		
	comp=N,436µm,0.3s						
ATMI	Monte Miggiano	0.86	150	P	Pb	20 15 03.5	+0.8
ATMI				AML	AML		
	comp=E,399µm,0.7s						
ATMI				AML	AML		
	comp=N,485µm,0.6s						
ATMI				AML	AML		
	comp=N,486µm,0.6s						
ATMI				AML	AML		
	comp=E,400µm,0.7s						
ATVO	AVT- Monte Val	0.87	143	⇑P	Pb	20 15 03.0	-0.1
ATVO				AML	AML		
	comp=E,620µm,0.6s						
ATVO				AML	AML		
	comp=N,336µm,0.3s						
ATVO				AML	AML		
	comp=E,620µm,0.6s						
MAIM	Mastiano	0.88	259	P	Pn	20 15 02.2	-0.5
MAIM				AML	AML		
	comp=N,131µm,0.5s						
MAIM				AML	AML		
	comp=E,86µm,1.0s						
MAIM	Mastiano	0.88	259	P	Pn	20 15 02.3	-0.5
MAIM				S	Sb	20 15 14.0	-0.5
FSSB	Fossombrone	0.88	116	P	Pn	20 15 03.0	+0.2
FSSB				AML	AML		
	comp=N,659µm,0.8s						
FSSB				AML	AML		
	comp=N,658µm,0.8s						
FSSB				AML	AML		
	comp=E,586µm,1.2s						
MPAG	Monte Paganucc	0.90	120	P	Pn	20 15 02.9	-0.3
MPAG				AML	AML		
	comp=E,342µm,0.9s						
MPAG				AML	AML		
	comp=N,333µm,0.6s						
MPAG				AML	AML		
	comp=E,342µm,0.9s						
PII	Pisa	0.92	247	P	Pn	20 15 02.8	-0.4
PII				AML	AML		
	comp=E,232µm,0.3s						
PII				AML	AML		
	comp=N,258µm,0.4s						
SARO	Sassorosso	0.93	277	P	Pb	20 15 03.8	-0.2
SARO				AML	AML		
	comp=N,114µm,0.5s						

SARO				AML	AML		
	comp=E,81µm,0.6s						
SARO	Sassorosso	0.93	277	P	Pb	20 15 03.9	-0.1
SARO				S	Sb	20 15 16.7	+0.6
FRON	Frontone	0.94	127	P	Pb	20 15 04.0	-0.1
FRON				AML	AML		
	comp=E,471µm,0.5s						
FRON				AML	AML		
	comp=N,544µm,0.6s						
ATFO	Monte Foce - G	0.96	138	P	Pb	20 15 04.6	+0.1
ATFO				AML	AML		
	comp=N,342µm,0.6s						
ATFO				AML	AML		
	comp=E,353µm,0.7s						
ERBM	Eremo	0.97	291	P	Pb	20 15 06.4	+1.6
ERBM				AML	AML		
	comp=E,109µm,0.7s						
ERBM				AML	AML		
	comp=N,100µm,1.0s						
ATTE	AVT- Monte Tez	1.01	151	P	Pb	20 15 05.4	+0.1
ATTE				AML	AML		
	comp=E,191µm,0.3s						
ATTE				AML	AML		
	comp=N,162µm,0.4s						
MURB	Monte Urbino	1.02	143	P	Pb	20 15 05.8	+0.3
MURB				AML	AML		
	comp=E,859µm,0.3s						
MURB				AML	AML		
	comp=N,975µm,0.3s						
MURB				AML	AML		
	comp=E,1024µm,0.3s						
MURB				AML	AML		
	comp=N,908µm,0.3s						
ARVD	Arcevia	1.08	122	P	Pb	20 15 06.5	0.0
ARVD				AML	AML		
	comp=E,146µm,1.0s						
ARVD				AML	AML		
	comp=N,130µm,0.4s						
EQUI	Equi	1.11	275	P	Pn	20 15 06.2	+0.3
EQUI				AML	AML		
	comp=E,89µm,0.8s						
EQUI				AML	AML		
	comp=N,84µm,0.9s						
EQUI				AML	AML		
	comp=E,89µm,0.8s						
EQUI				AML	AML		
	comp=N,84µm,0.9s						
EQUI	Equi	1.11	275	P	Pn	20 15 06.3	+0.4
MGAB	Montegabbione	1.21	165	P	Pn	20 15 08.0	+0.6
MGAB				AML	AML		
	comp=E,250µm,0.7s						
MGAB				AML	AML		
	comp=N,299µm,0.7s						
ASSB	Assisi San Ben	1.26	146	P	Pb	20 15 09.1	-0.4
ASSB				AML	AML		
	comp=E,107µm,0.4s						
ASSB				AML	AML		
	comp=N,101µm,0.3s						
TEOL	Teolo	1.28	359	P	Pn	20 15 07.9	-0.4
TEOL				AML	AML		
	comp=N,296µm,0.5s						
TEOL				AML	AML		
	comp=E,286µm,0.7s						
TEOL	Teolo	1.28	359	*e*Pg	Pn	20 15 07.9	-0.3
TEOL				*e*Sg	Sn	20 15 23.0	-1.4
CASP	Castiglione de	1.42	205	AML	AML		
	comp=E,36µm,1.2s						
CASP				AML	AML		
	comp=N,60µm,1.4s						
MOMA	Monte Martano	1.43	153	AML	AML		
	comp=E,145µm,1.4s						
MOMA				AML	AML		
	comp=N,140µm,1.5s						
DOSS	Dosso del Somm	1.83	349	*e*Pg	Pn	20 15 15.6	-0.5
DOSS				*e*Sg	Sb	20 15 42.3	+0.4
MAGA	Magasa	1.85	336	AML	AML		
	comp=N,132µm,0.4s						
MAGA				AML	AML		
	comp=E,161µm,0.6s						
VARN	Col Varnada, M	1.93	9	⇑*e*Pg	Pn	20 15 16.6	-0.7
CTI	Castel Tesino	1.96	359	AML	AML		
	comp=N,176µm,1.1s						
CTI				AML	AML		
	comp=E,114µm,0.2s						
SABO	M.te Sabotino	2.33	35	AML	AML		
	comp=E,94µm,0.2s						
SABO				AML	AML		
	comp=N,113µm,1.0s						
NVLJ	Novalja	2.33	77	*i* Pn	Pn	20 15 22.6	-0.1
NVLJ				Sn	Sn	20 15 50.0	-0.4
KOSI	Kohlern	2.39	355	AML	AML		
	comp=E,48µm,1.0s						
KOSI				AML	AML		
	comp=N,47µm,1.3s						
DUGI	Dugi Otok	2.43	91	*e*Pn	Pn	20 15 24.1	-0.1
DUGI				Sn	Sn	20 15 51.7	-1.2
PGF	Pioggiola	2.49	233	*e*Pn	Pn	20 15 25.2	+0.2
PGF				*e*Sn	Sn	20 15 54.7	+0.2
	comp=N,13nm,0.3s						
ABSI	Aberstueckl	2.66	355	AML	AML		
	comp=E,101µm,0.5s						
ABSI				AML	AML		
	comp=N,97µm,0.7s						
ABTA	Abfaltersbach	2.73	12	Pn	Pn	20 15 28.4	+0.1
	comp=N,0.5nm,0.2s						
ABTA				*i* Sn	Sn	20 16 00.7	+0.4
	comp=N,2.7nm,0.2s						
RISI	Rein	2.88	5	AML	AML		
	comp=N,70µm,0.4s						
RISI				AML	AML		
	comp=E,60µm,0.6s						
ZIRJ	Zirje	2.89	97	*e*Pn	Pn	20 15 30.5	0.0
ZIRJ				Sn	Sn	20 16 03.1	-1.1
MORI	Morici	2.91	93	*e*Pn	Pn	20 15 31.4	+0.8
MORI				Sn	Sn	20 16 04.3	-0.3
UDBI	Udbina	2.96	80	*e*Pn	Pn	20 15 32.6	+1.1
UDBI				Sn	Sn	20 16 05.6	-0.4
FETA	Feichten	3.01	347	*e*Pn	Pn	20 15 34.5	+2.2
	comp=E,1.8nm,0.3s						
FETA				*i* Sn	Sn	20 16 09.8	+2.4
	comp=E,1.5nm,0.4s						
SBF	Sospel	3.08	267	*e*Pn	Pn	20 15 33.4	+0.3
SBF				*e*Sn	Sn	20 16 07.6	-1.3
	comp=E,10.0nm,0.3s						
OZLJ	Ozalj	3.09	59	*e*Pn	Pn	20 15 32.9	-0.3
OZLJ				Sn	Sn	20 16 07.2	-1.9
SQTA	Sankt Quirin	3.15	354	*i* Pn	Pn	20 15 36.6	+2.5
	comp=E,7.1nm,0.3s,SNR=6.6						
SQTA				*i* Sn	Sn	20 16 15.1	+4.2
	comp=E,8.3nm,0.3s						
OBKA	Obir	3.16	39	*e*Pg	Pb	20 15 43.2	+1.4
	comp=E,3.7nm,0.3s						
OBKA				*i* Sg	Sb	20 16 29.2	+9.4
	comp=E,13nm,0.6s						
WTTA	Wattenberg	3.18	359	*i* Pn	Pn	20 15 36.4	+1.8
	comp=E,1.7nm,0.2s						
WTTA				*i* Sn	Sn	20 16 13.7	+2.1
	comp=E,7.5nm,0.5s						
WATA	Walderalm	3.25	359	*i* Pn	Pn	20 15 38.0	+2.4
	comp=E,2.0nm,0.2s,SNR=6.2						
WATA				*e*Sn	Sn	20 16 16.6	+3.3
	comp=E,3.2nm,0.2s						
MOTA	Moosalm	3.29	353	*i* Pn	Pn	20 15 38.3	+2.3
	comp=E,1.1nm,0.2s,SNR=5.3						
MOTA				*i* Sn	Sn	20 16 16.0	+1.8
	comp=E,2.8nm,0.3s						
SOKA	Soboth	3.50	41	*i* Pn	Pn	20 15 41.8	+2.9
	comp=E,0.4nm,0.2s						
SOKA				*i* Sn	Sn	20 16 19.2	-0.3
	comp=E,0.9nm,0.3s						
MBDF	Montbardon	3.58	282	*e*Pn	Pn	20 15 38.7	-1.4
MBDF	Montbardon	3.58	282	*e*P	Pn	20 15 42.9	+2.8
MBDF				*e*Sn	Sn	20 16 21.9	+0.5
	comp=E,2.2nm,0.4s						
FRF	La Foret Royal	3.69	264	*e*Pn	Pn	20 15 41.7	+0.4
FRF	La Foret Royal	3.69	264	*e*P	Pn	20 15 44.1	+2.8
FRF				*e*Sn	Sn	20 16 22.9	-0.9
	comp=E,3.4nm,0.3s						
LPG	La Plagne	3.79	294	*e*Pn	Pn	20 15 42.9	-0.1
LPG	La Plagne	3.79	294	*e*P	Pn	20 15 45.7	+2.7
LPG				*e*Sn	Sn	20 16 25.5	-1.2
	comp=E,1.7nm,0.3s						
LPL	La Plagne	3.81	294	*e*Pn	Pn	20 15 43.2	0.0
LPL	La Plagne	3.81	294	*e*P	Pn	20 15 46.0	+2.8
LPL				*e*Sn	Sn	20 16 25.1	-2.0
	comp=E,2.7nm,0.4s						
LMR	La Mourre	3.83	261	*e*Pn	Pn	20 15 42.8	-0.5
LMR	La Mourre	3.83	261	*e*P	Pn	20 15 45.7	+2.4
LMR				*e*Sn	Sn	20 16 26.8	-0.5
	comp=E,1.8nm,0.2s						
RICI	Ricice	3.99	97	*e*Pn	Pn	20 15 46.7	+1.2
RICI				Sn	Sn	20 16 29.1	-2.1
MOA	Molln	4.17	25	*i* Pn	Pn	20 15 48.7	+0.6
	comp=E,0.6nm,0.2s						
MOA				*i* Sn	Sn	20 16 35.3	-0.6
	comp=E,2.8nm,0.4s						
ORIF	Oris-en-Rattie	4.24	283	*e*Pn	Pn	20 15 48.3	-0.7
ORIF	Oris-en-Rattie	4.24	283	*e*P	Pn	20 15 52.0	+3.0
ORIF				*e*Sn	Sn	20 16 36.7	-0.8
SMRF	Simiane la Rot	4.41	271	*e*Pn	Pn	20 15 50.0	-1.3
CABF	La Chapelle	4.69	305	*e*Pn	Pn	20 15 56.2	+1.0
CONA	Conrad Observa	4.82	36	*i* Pn	Pn	20 15 58.1	+1.1
	comp=E,0.4nm,0.2s						
CONA				*e*Sn	Sn	20 16 52.2	+0.4
	comp=E,2.1nm,0.4s						
HINF	Hinteralfeld	5.03	320	*e*Pn	Pn	20 15 59.8	0.0
HINF				*e*Sn	Sn	20 16 51.0	-6.0
	comp=E,1.5nm,0.2s						
VIVF	Saint-Julien-l	5.08	281	*e*Pn	Pn	20 16 00.7	+0.2
VIVF	Saint-Julien-l	5.08	281	*e*P	Pn	20 16 04.8	+4.3
VIVF				*e*Sn	Sn	20 16 56.7	-1.5
	comp=E,0.3nm,0.2s						
CDF	Champ du Feu	5.30	326	*e*Pn	Pn	20 16 04.0	+0.4
CDF				*e*Sn	Sn	20 16 59.6	-4.1
	comp=E,1.4nm,0.3s						
HAU	Haudompre	5.40	318	*e*Pn	Pn	20 16 05.2	+0.2
HAU				*e*Sn	Sn	20 17 03.5	-2.6
	comp=E,5.3nm,0.4s						
LASF	Ste Croix	5.64	273	*e*Pn	Pn	20 16 08.3	+0.1
LASF	Ste Croix	5.64	273	*e*P	Pn	20 16 12.6	+4.4
LASF				*e*Sn	Sn	20 17 09.2	-2.8
	comp=E,0.1nm,0.2s						
SMF	Signal de Mont	6.09	298	*e*Pn	Pn	20 16 12.5	-1.9
SMF	Signal de Mont	6.09	298	*e*P	Pn	20 16 16.6	+2.2
SMF				*e*Sn	Sn	20 17 17.9	-5.2
	comp=E,0.8nm,0.2s						
LOR	Lormes	6.34	303	*e*Pn	Pn	20 16 19.1	+1.3
LOR				*e*Sn	Sn	20 17 26.0	-3.2
	comp=E,2.4nm,0.4s						
AVF	Avril sur Loir	6.46	298	*e*Pn	Pn	20 16 17.7	-1.7
AVF	Avril sur Loir	6.46	298	*e*P	Pn	20 16 22.5	+3.1
AVF				*e*Sn	Sn	20 17 26.8	-5.3
	comp=E,0.9nm,0.5s						
SSF	Saint Saulge	6.47	300	*e*Pn	Pn	20 16 20.9	+1.4
SSF				*e*Sn	Sn	20 17 28.2	-4.1
	comp=E,0.5nm,0.2s						
BGF	Bois d'Agland	6.71	295	*e*Pn	Pn	20 16 22.5	-0.3
BGF				*e*Sn	Sn	20 17 35.7	-2.5
	comp=E,1.8nm,0.3s						
MTLF	Montolieu	6.90	267	*e*Pn	Pn	20 16 25.4	-0.1
MTLF	Montolieu	6.90	267	*e*P	Pn	20 16 30.7	+5.2
RJF	Les Rejaudoux	7.35	283	*e*Pn	Pn	20 16 32.0	+0.3

*IDC **19** 20:15:29.6±1.0, 35.°94N×96.°55W, h0^{km}, mb3.5/1, mb1 3.9/7, mb1mx3.5/58, mbtmp3.6/7, ML3.5/6, Error ellipse: s-maj=16.2km s-min=12.3km az=163.0*

*ANF **19** 20:15:32.9±0.8, 35.°96N×96.°89W, h4^{km}±6^{km}, ML4.7/9, Error ellipse: s-maj=5.3km s-min=3.3km az=14.0*

*NEIC **19** 20:15:32.3, 35.°97N×96.°92W, h2^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.09; M$_{\theta\theta}$1.32; M$_{\phi\phi}$-1.41; M$_{r\theta}$-0.26; M$_{\theta\phi}$1.01; M$_{\phi r}$0.47; Fault plane solution: M$_0$1.78000×10^{14} NP1:ϕ_s116.02000°, δ82.30000°, λ-13.51000°. NP2:ϕ_s207.87000°, δ76.62000°, λ-172.08000°. Principal axes: T 1.6609, Plg4.0000°, Azm162.0000°; N 0.2228, Plg74.0000°, Azm267.0000°; P -1.8836, Plg15.0000°, Azm71.0000°;*

*TUL **19** 20:15:32±1.5, 35.°95N±0.°03×96.°92W±0.°03, h2^{km}±6^{km}, ML3.7, Mwr3.4/18(NEIC) Error ellipse: s-maj=5.3km s-min=2.2km az=141.0*

*NEIC **19** 20:15:32±1.6, 35.°99N±0.°03×96.°94W±0.°04, h2^{km}±8^{km}, Error ellipse: s-maj=5.9km s-min=2.4km az=135.0*

ISC 19 20:15:31.4±1.1**, 35.°99N**±0.°03×**96.°92W**±0.°03**, h3**^{km}±9^{km}**, n96,** σ**1^{s}26**/109**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK005	Luther M Schoo	0.41	213		Pg	20 15 39.6	+0.5
OK005				Sg	Sg	20 15 45.1	+0.7
ADOK	Arcadia Dam	0.50	227		Pg	20 15 41.6	+0.7
OK001	Jones High Sch	0.53	215	Pg	Pg	20 15 41.8	+0.3
OK001				Sg	Sg	20 15 49.0	+0.7
OK009	Oakdale Elemen	0.58	225		Pg	20 15 43.1	+0.6
OK009				Sg	Sg	20 15 50.9	+0.8
OKCFA	Oklahoma City	0.72	217		Pg	20 15 45.0	-0.2
OKCFA				Sg	Sg	20 15 55.1	+0.5
OKCSW	OKLAHOMA CITY	0.72	216		Pg	20 15 45.2	0.0
OKCSW				Sg	Sg	20 15 55.1	+0.5
FNO	Franklin	0.83	208		Pg	20 15 47.3	0.0
FNO				Sg	Sg	20 15 58.7	+0.6
W35A	Tecumseh	0.84	178		Pg	20 15 47.0	-0.4
W35A				Sg	Sg	20 15 58.3	-0.1
TUL1	Leonard	0.92	95		Pg	20 15 49.4	+0.4
TUL1				Sg	Sg	20 16 01.8	+1.0
TUL1	Leonard	0.92	95	P	Pg	20 15 49.5	+0.5
	baz=274						
TUL1				S	Sg	20 16 01.8	+1.0
	baz=274						
T35A	Sooner Cattle	0.98	19		Pb	20 15 51.6	+0.6
T35A				Sg	Sb	20 16 05.2	+1.0
X34A	Smith Ranch, M	1.58	209		Pn	20 16 00.5	+0.2
U32A	Winter Ranch,	1.73	283		Pn	20 16 03.5	+1.1
X37A	Clayton	1.89	137		Pn	20 16 05.5	+1.0
WMOK	Wichita Mounta	1.97	231		Pn	20 16 06.2	+0.5
WMOK	Wichita Mounta	1.97	231	P	Pn	20 16 06.5	+0.8
	baz=50						
WMOK				S	Sb	20 16 33.1	+0.2
	baz=50						
U38A	Gravette	2.10	77		Pn	20 16 08.8	+1.4
HHAR	Hobbs	2.43	82		Pn	20 16 13.1	+1.2
Z35A	Perchaven, San	2.67	186		Pn	20 16 15.9	+0.6
W39A	Magazine	2.67	106		Pn	20 16 16.4	+1.1
W39A	Magazine	2.67	106	P	Pn	20 16 16.5	+1.1
	baz=288						
W39A				S	Sn	20 16 50.3	+2.1
	baz=288						
R32A	Long Quarter,	2.81	330		Pn	20 16 18.7	+1.4
MIAR	Mount Ida	3.09	117		Pn	20 16 22.2	+1.1
MIAR	Mount Ida	3.09	117	P	Pn	20 16 22.6	+1.6
	baz=298						
MIAR				S	Sn	20 16 59.1	+0.6
	baz=298						
KSU1	Kansas State U	3.11	4	Pb	Pg	20 16 30.2	-0.8
	baz=185						
KSU1				Sb	Sg	20 17 11.5	+0.2
	baz=185						
Z38A	Mt. Pleasant	3.16	149		Pn	20 16 22.5	+0.5
U40A	Yellville	3.31	83		Pn	20 16 24.6	+0.5
S39A	Bolivar	3.34	59		Pn	20 16 26.2	+1.6
CBKS	Cedar Bluff	3.60	322		Pn	20 16 29.6	+1.5
CBKS	Cedar Bluff	3.60	322	Pb	Pb	20 16 38.4	+2.7
	baz=141						
CBKS				Sb	Sg	20 17 27.2	+0.2
	baz=141						
X40A	Basin Creek Fa	3.67	113		Pn	20 16 30.0	+1.1
WHAR	Wooly Hollow	3.83	99		Pn	20 16 32.2	+0.9
WLAR	White Oak Lake	3.88	125		Pn	20 16 32.5	+0.6
FCAR	Ozark Folk Cen	3.89	90	Pn	Pn	20 16 33.1	+1.0
W41B	Gary Mavity, V	3.89	101		Pn	20 16 32.8	+0.7
W41B	Gary Mavity, V	3.89	101	P	Pn	20 16 33.1	+1.0
	baz=283						
W41B				Sb	Sg	20 17 33.9	-2.5
	baz=283						
MGMO	Mountain Grove	3.92	71		Pn	20 16 33.1	+0.7
UALR	University of	3.93	107		Pn	20 16 32.8	+0.2
WHTX	Lake Whitney,	4.02	187	Pn	Pn	20 16 33.4	-0.4
AMTX	Amarillo	4.04	255		Pn	20 16 34.4	+0.1
AMTX	Amarillo	4.04	255	P	Pn	20 16 36.3	+2.0
	baz=73						
AMTX				Sb	Sg	20 17 37.6	-3.6
	baz=73						
ABTX	Abilene, Hawle	4.05	215		Pn	20 16 34.0	-0.2
237A	Washetta, Mont	4.09	167	Pn	Pn	20 16 34.6	-0.2
Z41A	Richland Creek	4.35	128	Pn	Pn	20 16 38.6	+0.2
Z41A	Richland Creek	4.35	128	S	Sn	20 17 29.4	-0.2
	baz=310						
P38A	Dawn	4.51	35		Pn	20 16 42.5	+1.9
NATX	Nacogdoches	4.62	155	Pn	Pn	20 16 41.8	-0.3
LCAR	Lake Charles	4.67	87		Pn	20 16 43.1	+0.4
N33A	J Bar K, Exete	4.76	355	Pn	Pn	20 16 44.1	+0.1
T42A	Van Buren	4.80	76		Pn	20 16 45.8	+1.2
CCM	Cathedral Cave	4.98	64	Pn	Pn	20 16 48.3	+1.2
HBAR	Harrisburg	5.11	93	Pn	Pn	20 16 49.7	+0.9
X43A	Marvell	5.15	105	Pn	Pn	20 16 50.1	+0.7
MSTX	Muleshoe	5.21	249		Pn	20 16 49.8	-0.5
435B	Jarrell	5.23	186	Pn	Pn	20 16 50.0	-0.4
PBMO	Poplar Bluff	5.29	80		Pn	20 16 50.6	-0.7
KSCO	Kaye Shedlock’	5.45	305		Pn	20 16 55.0	+1.4
BGNE	Belgrade	5.49	350		Pn	20 16 54.8	+0.8
BGNE	Belgrade	5.49	350	S	Sn	20 17 57.6	-0.2
	baz=170						
JCT	Junction City	6.01	205		Pn	20 16 59.9	-1.2
T25A	Trinidad	6.14	283		Pn	20 17 04.0	+0.8
OGNE	Ogallala	6.37	322		Pn	20 17 07.7	+1.5
S44A	Carbondale	6.38	72		Pn	20 17 06.5	+0.3
SCIA	State Center	6.57	25	Pn	Pn	20 17 10.4	+1.6
N41A	Harden Midland	6.70	44	Pn	Pn	20 17 11.8	+1.3
P43A	Skaggs, Pawnee	6.89	56	Pn	Pn	20 17 14.2	+0.9
Q44A	Meyer Farm, Va	6.92	63		Pn	20 17 13.8	+0.1
SDCO	Great Sand Dun	7.10	287		Pn	20 17 18.6	+2.2
Q24A	Divide	7.18	297	Pn	Pn	20 17 13.8	-3.8
PLAL	Pickwick Lake	7.28	95		Pn	20 17 19.0	+0.3
L40A	Anamosa	7.51	34		Pn	20 17 22.5	+0.8
HDIL	Hopedale	7.53	50	Pn	Pn	20 17 22.7	+0.7
OLIL	Olney	7.54	66	Pn	Pn	20 17 23.3	+1.2
ECSD	EROS Data Cent	7.73	2		Pn	20 17 24.9	0.0
ANMO	Albuquerque	7.85	265	Pn	Pn	20 17 27.5	+0.8
	0.3nm,0.3s,baz=76,slow=17,SNR=2.4						
ANMO				Pg	Pg	20 17 56.9	-4.9
	0.9nm,0.3s,baz=91,slow=18,SNR=14						
ANMO				Lg	Lg	20 19 40.6	
	3.6nm,0.3s,baz=339,slow=22,SNR=6.3						
ANMO	Albuquerque	7.85	265		Pb	20 17 50.6	+2.4
ISCO	Idaho Springs	7.85	302		Pn	20 17 28.8	+2.0
S22A	4UR Ranch, Cre	8.13	285		Pg	20 18 02.9	-4.3
L42A	Oliver, Polo	8.24	41		Pn	20 17 32.5	+0.8
MNTX	Cornudas Mount	8.24	241		Pn	20 17 31.5	-0.3
PHWY	Pilot Hill	8.53	311	Pn	Pn	20 17 36.0	0.0
N23A	Red Feather La	8.61	307		Pg	20 18 10.8	-5.4
JFWS	Jewell Farm	8.62	35		Pn	20 17 36.5	-0.5
TXAR	Lajitas Array	8.74	222	Pn	Pn	20 17 37.9	-0.9
	0.1nm,0.3s,baz=48,slow=12,SNR=2.6						
TXAR				Pg	Pg	20 18 11.8	-7.0
	1.6nm,0.3s,baz=45,slow=13,SNR=7.3						
TXAR				Lg	Lg	20 20 06.8	
	2.4nm,0.3s,baz=46,slow=21,SNR=4.1						
TXAR	Lajitas Array	8.74	222		Pn	20 17 37.5	-1.3
RSSD	Black Hills	9.78	328		Pn	20 17 53.5	+0.5
G40A	Rib Lake	10.57	27		Pn	20 18 03.3	-0.5
W52A	Murphy	10.62	91	Pn	Pn	20 18 02.6	-1.9
TKL	Tuckaleechee C	10.68	88	Pn	Pn	20 17 58.9	-6.4
	2.3nm,0.3s,baz=308,slow=19,SNR=7.7						
TKL				Lg	Lg	20 21 02.3	
	0.7nm,0.3s,baz=196,slow=23,SNR=4.0						
PDAR	Pinedale Array	11.88	309	Pn	Pn	20 18 23.1	+1.3
	0.1nm,0.3s,baz=122,slow=15,SNR=2.1						
PDAR				Pg		20 19 11.2	
	0.2nm,0.3s,baz=107,slow=19,SNR=6.2						
PDAR				Lg	Lg	20 21 48.6	
	0.7nm,0.3s,baz=107,slow=31,SNR=5.6						
AGMN	Agassiz Nation	12.32	3		Pn	20 18 24.6	-3.0
E43A	Lone Tree Farm	12.77	33		Pn	20 18 33.2	-0.5
ULM	Lac du Bonnet	14.27	3	Pn	Pn	20 18 48.9	-5.3
	0.4nm,0.3s,baz=184,slow=11,SNR=4.9						
ULM				Lg	Lg	20 22 52.8	
	0.4nm,0.3s,baz=292,slow=19,SNR=1.9						
SADO	Sadowa	16.11	52	Pn	Pn	20 19 11.0	-7.7
	0.3nm,0.3s,baz=249,slow=2.6,SNR=2.3						
SADO	Sadowa	16.11	52	Pn	Pn	20 19 16.7	-2.0
ILAR	Eielson Array	41.22	330	P	P	20 23 18.8	+1.7
	0.5nm,0.7s,baz=103,slow=7.5,SNR=8.4						

*BJI **19** 20:17:40.2±0.0, 60.°85S×25.°86W, h10^{km}, mB5.7/27, Ms5.5/25, Ms7 5.2/22*

*IDC **19** 20:17:42.0±0.3, 60.°61S×25.°59W, h0^{km}, mb5.3/25, mb1 5.4/25, mb1mx5.3/28, mbtmp5.3/25, MS4.9/23, Ms1 4.9/23, ms1mx4.8/27, Error ellipse: s-maj=17.4km s-min=10.6km az=52.0*

*NEIC **19** 20:17:43.5±2.2, 60.°73S±0.°08×25.°3W±0.°2, h10^{km}±1^{km}, mb5.7/90, Ms_20 5.2/173, Mwb5.4/12, Mww5.5, Mwc5.5(GCMT), Error ellipse: s-maj=16.4km s-min=11.6km az=225.0*

*NEIC **19** 20:17:43.3, 60.°69S×25.°68W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.60; M$_{\theta\theta}$0.48; M$_{\phi\phi}$0.12; M$_{r\theta}$1.39; M$_{\theta\phi}$0.75; M$_{\phi r}$0.77; Fault plane solution: M$_0$1.84000×10^{17} NP1:ϕ_s241.98000°, δ76.63000°, λ-82.01000°. NP2:ϕ_s30.73000°, δ15.54000°, λ-120.31000°. Principal axes: T 2.0190, Plg31.0000°, Azm325.0000°; N -0.4348, Plg8.0000°, Azm60.0000°; P -1.5843, Plg58.0000°, Azm163.0000°;*

*NEIC **19** 20:17:45, 60.°96S×25.°12W, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.70; M$_{\theta\theta}$1.40; M$_{\phi\phi}$0.31; M$_{r\theta}$0.86; M$_{\theta\phi}$0.76; M$_{\phi r}$-0.03; Fault plane solution: M$_0$1.94000×10^{17} NP1:ϕ_s255.00000°, δ58.00000°, λ-76.00000°. NP2:ϕ_s51.00000°, δ35.00000°, λ-110.00000°. Principal axes: T 1.9397, Plg12.0000°, Azm335.0000°; N 0.0080, Plg12.0000°, Azm68.0000°; P -1.9477, Plg73.0000°, Azm201.0000°;*

*GCMT **19** 20:17:46.5±0.1, 60.°96S±0.°01×24.°64W±0.°02, h12^{km}, MW5.5/153, Moment Tensor Solution. s111,c173; s153,c278; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-1.57±.02; M$_{\theta\theta}$1.21±.02; M$_{\phi\phi}$0.35±.02; M$_{r\theta}$0.82±.04; M$_{\theta\phi}$0.86±.02; M$_{\phi r}$0.18±.05; Best double couple: M$_0$1.86100×10^{17} NP1:ϕ_s48.00000°, δ33.00000°, λ-107.00000°. NP2:ϕ_s247.00000°, δ58.00000°, λ-79.00000°. Principal axes: T 1.9280, Plg13.0000°, Azm330.0000°; N -0.1360, Plg9.0000°, Azm62.0000°; P -1.7940, Plg74.0000°, Azm186.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **19** 20:17:47, 60.°96S×24.°81W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.75; M$_{\theta\theta}$1.36; M$_{\phi\phi}$0.40; M$_{r\theta}$0.84; M$_{\theta\phi}$0.89; M$_{\phi r}$0.46; Fault plane solution: M$_0$2.06000×10^{17} NP1:ϕ_s240.00000°, δ59.00000°, λ-89.00000°. NP2:ϕ_s58.00000°, δ31.00000°, λ-92.00000°. Principal axes: T 2.1299, Plg14.0000°, Azm329.0000°; N -0.1382, Plg1.0000°, Azm60.0000°; P -1.9917, Plg76.0000°, Azm153.0000°;*

ISC 19 20:17:44.7±0.2**, 60.°74S**±0.°05×**25.°54W**±0.°05**, h19**^{km}**, n566,** σ**1^{s}57**/522**, mb5.6**/65**, MS5.1**/119**, 2C-1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	8.74	313	Pn	Pn	20 19 52.8	+2.9
VNA1	Neumayer--Stat	12.16	152	P	Pn	20 20 34.2	-2.4
VNA3	Neumayer Olymp	12.30	155	P	Pn	20 20 35.5	-3.1
VNA2	Neumayer--Watz	12.56	152	P	Pn	20 20 38.7	-3.4
	baz=312,slow=15						
SNAA	Sanae	14.15	150	P	Pn	20 21 00.2	-3.6
SNAA	Sanae	14.15	150	Pn	Pn	20 21 00.6	-3.3
	53nm,0.3s,baz=310,slow=14,SNR=1050						
SNAA				Sn	Sn	20 23 25.8	-14
	41nm,0.3s,baz=339,slow=23,SNR=12						
SNAA				LR	LR	20 25 15.8	
	comp=Z,7µm,20.0s,baz=313,slow=32						
SNAA	Sanae	14.15	150	Pn	Pn	20 21 00.8	-3.0
PMSA	Palmer Station	17.88	240	P	P	20 21 54.7	+2.3
	7.6nm,0.3s,baz=67,slow=7.8,SNR=16						
PMSA				LR	LR	20 27 26.8	
	comp=Z,3µm,21.1s,baz=122,slow=33						
PMSA	Palmer Station	17.88	240	P	P	20 21 52.6	+0.1
PMSA	Palmer Station	17.88	240	*e*P	P	20 21 53.2	+0.8
EFI	East Falkland	20.04	282	P	Pn	20 22 17.4	-0.6
USHA	Ushuaia	23.27	265	P	P	20 22 54.0	+3.3
	114nm,1.1s,baz=117,slow=12,SNR=15						
USHA				LR	LR	20 30 11.1	
	comp=Z,2µm,18.3s,baz=104,slow=32						
SYO	Syowa Base	27.51	135	⇑*e*P	P	20 23 26.2	-3.2
SYO	Syowa Base	27.51	135	⇓*i*pP	P	20 23 28.0	-1.4
SYO	Syowa Base	27.51	135	⇑*i*P	P	20 23 30.4	+1.0
QSPA	South Pole Qui	29.50	180	P	P	20 23 49.4	+2.0
	179nm,1.0s,baz=205,slow=4.0,SNR=169						

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QSPA                                LR       LR       20 35 30.2
          comp=Z,4µm,18.5s,baz=192,slow=36
QSPA  South Pole Qui    29.50 180   P        P        20 23 49.0 +1.7
QSPA  South Pole Qui    29.50 180   IAMs_20  IAMs_20  20 35 00.4
          comp=Z,5µm,19.0s
PLCA  Paso Flores       33.89 285   P        P        20 24 24.1 -2.0
          comp=Z,8.5nm,0.7s,baz=172,slow=8.8,SNR=20
PLCA                                PcP      PcP      20 27 04.5 +0.3
          comp=Z,5.5nm,0.9s,baz=168,slow=10,SNR=2.8
PLCA                                LR       LR       20 36 42.5
          comp=Z,918nm,19.6s,baz=156,slow=34
PLCA  Paso Flores       33.89 285   P        P        20 24 25.5 -0.5
PLCA  Paso Flores       33.89 285  eP        P        20 24 25.8 -0.3
PLTB  Pedras Altas      34.35 315  eP        P        20 24 29.9 -0.1
GO06  Curarrehue        35.23 286   P        P        20 24 37.6  0.0
CNLB  Canela            35.69 320  eP        P        20 24 41.0 -0.7
MAW   Mawson            35.93 139   P        P        20 24 44.1 +0.9
          comp=Z,132nm,1.1s,baz=233,slow=8.8,SNR=47
MAW                                 PcP      PcP      20 27 10.8 +1.2
          comp=Z,7.6nm,0.8s,baz=274,slow=7.3,SNR=3.7
MAW                                 LR       LR       20 37 02.8
          comp=Z,3µm,21.9s,baz=248,slow=32
MAW   Mawson            35.93 139   P        P        20 24 44.0 +0.9
GO05  Huala             39.14 290   P        P        20 25 10.4 -0.4
GO05                                IAmb     IAmb     20 25 16.4
          comp=Z,113nm,0.8s
PARB  Paraibuna         39.90 331  eP        P        20 25 16.6 -0.6
SPB   Sao Paulo         40.11 328   P        P        20 25 18.3 -0.6
SPB   Sao Paulo         40.11 328  eP        P        20 25 18.1 -0.7
PEL   Peldehue          40.12 293   P        P        20 25 19.3 +0.3
PTGB  Pitanga           40.36 321  eP        P        20 25 19.7 -1.4
ROC1  El Roble          40.41 292   P        P        20 25 21.6 -0.1
VAO   Valinhos          40.55 329  eP        P        20 25 21.7 -1.0
CPUP  Villa Florida     40.62 313   P        P        20 25 22.1 -1.1
          comp=Z,46nm,0.9s,baz=158,slow=7.8,SNR=46
CPUP                                LR       LR       20 40 40.2
          comp=Z,1µm,21.8s,baz=163,slow=34
CPUP  Villa Florida     40.62 313   P        P        20 25 22.0 -1.1
CPUP                                IAmb     IAmb     20 25 23.5
          comp=Z,102nm,1.1s
FRTB  Fartura           40.92 325  eP        P        20 25 25.3 -0.4
SUR   Sutherland        41.31  68   P        P        20 25 28.3 -0.6
SUR                                 IAmb     IAmb     20 26 27.3
          comp=Z,212nm,2.0s
SBA   Scott Base        41.45 184   P        P        20 25 31.7 +2.3
SBA                                 IAmb     IAmb     20 25 34.1
          comp=Z,182nm,1.2s
SBA                                 IAMs_20  IAMs_20  20 42 09.0
          comp=Z,2µm,19.0s
VNDA  Vanda             41.91 182   P        P        20 25 35.9 +2.7
          comp=Z,87nm,1.0s,baz=187,slow=7.5,SNR=179
VNDA                                LR       LR       20 41 46.2
          comp=Z,1µm,21.1s,baz=171,slow=34
VNDA  Vanda             41.91 182   P        P        20 25 35.6 +2.4
VNDA                                IAmb     IAmb     20 25 37.2
          comp=Z,130nm,1.1s
BSCB  Bom Sucesso       41.95 333  eP        P        20 25 33.5 -0.7
TRCB  Terra Rica        42.34 321  eP        P        20 25 36.4 -0.9
GO04  Tololo Observa    42.69 295   P        P        20 25 39.8 -0.5
GO04                                IAmb     IAmb     20 25 45.2
          comp=Z,172nm,1.2s
GO04                                IAMs_20  IAMs_20  20 45 05.9
          comp=Z,2µm,20.0s
BSFB  Barra de Sao F    43.26 339  eP        P        20 25 43.7 -1.0
SJMB  Sao Joao De Ma    43.44 338  eP        P        20 25 45.0 -1.2
LCO   Las Campanas      43.64 296   P        P        20 25 47.9 -0.1
GO03  Copiap            44.66 297   P        P        20 25 55.2 -0.8
IPMB  Ipameri, GO       45.67 329  eP        P        20 26 03.0 -1.1
GO02  Mina Guanaco      46.51 300   P        P        20 26 10.3 -0.6
GO02                                IAmb     IAmb     20 26 15.1
          comp=Z,63nm,0.8s
BOSA  Boshof            46.53  70  iP        P        20 26 11.3 +0.5
BOSA  Boshof            46.53  70   P        P        20 26 10.0 -0.8
          comp=Z,27nm,0.9s,baz=200,slow=7.9,SNR=24
BOSA                                LR       LR       20 41 35.5
          comp=Z,898nm,19.1s,baz=201,slow=31
BOSA  Boshof            46.53  70  iP        P        20 26 11.3 +0.5
BOSA  Boshof            46.53  70   P        P        20 26 10.3 -0.5
BOSA                                IAmb     IAmb     20 26 11.8
          comp=Z,51nm,1.1s
SHEL  Horse Pasture     46.95  26   P        P        20 26 14.9 +0.9
JANB  Januaria          47.60 335  eP        P        20 26 17.4 -1.8
BDFB  Brasilia          47.87 330   P        P        20 26 20.6 -0.8
          comp=Z,35nm,0.8s,baz=140,slow=5.3,SNR=25
BDFB                                LR       LR       20 45 48.9
          comp=Z,1µm,19.4s,baz=147,slow=35
BDFB  Brasilia          47.87 330   P        P        20 26 19.7 -1.6
BDFB                                IAmb     IAmb     20 26 24.5
          comp=Z,40nm,0.8s
PB10  IPOC Station P    48.37 300   P        P        20 26 24.8 -0.2
PB10                                IAmb     IAmb     20 26 26.1
          comp=Z,165nm,1.6s
LVC   Limon Verde       48.47 302   LR       LR       20 46 16.6
          comp=Z,1µm,20.0s,baz=178,slow=35
LVC   Limon Verde       48.47 302   P        P        20 26 25.5 -0.8
LVC                                 IAmb     IAmb     20 26 31.0
          comp=Z,58nm,0.9s
LVC   Limon Verde       48.47 302  eP        P        20 26 24.9 -1.3
ARAG  Araguaiana, MT    48.80 325  eP        P        20 26 27.1 -1.3
CASY  Casey             49.20 158   P        P        20 26 31.9 +1.0
PB04  IPOC Station P    49.24 301   P        P        20 26 31.0 -0.9
PB04                                IAmb     IAmb     20 26 48.8
          comp=Z,157nm,1.2s
LBTB  Lobatse           49.76  68  iP        P        20 26 33.6 -2.2
LBTB  Lobatse           49.76  68  iP        P        20 26 33.6 -2.2
LBTB  Lobatse           49.76  68   P        P        20 26 35.0 -0.9
LBTB                                IAmb     IAmb     20 26 49.6
          comp=Z,54nm,0.9s
SALV  Santo Antonio     49.77 321  eP        P        20 26 34.8 -1.0
TSUM  Tsumeb            51.42  56   P        P        20 26 48.1 -0.3
TSUM  Tsumeb            51.42  56   IAMs_20  IAMs_20  20 44 02.8
          comp=Z,2µm,19.0s
H10S2 ASCENSION HYDR52.31  14   T        T        21 23 56.7
          baz=33,slow=74,SNR=36
H10S3 ASCENSION HYDR52.31  14   T        T        21 23 53.3
          baz=187,slow=74,SNR=43
H10N1 ASCENSION HYDR53.43  14   T        T        21 25 06.8
          baz=181,slow=72,SNR=12
H10N3 ASCENSION HYDR53.43  14   T        T        21 25 19.0
          baz=181,slow=72,SNR=44
H10N2 ASCENSION HYDR53.44  14   T        T        21 25 25.1
          baz=181,slow=72,SNR=38
LPAZ  La Paz            53.83 306   P        P        20 27 06.8  0.0
          comp=Z,22nm,0.6s,baz=146,slow=6.3,SNR=54
LPAZ                                LR       LR       20 50 03.0
          comp=Z,635nm,21.8s,baz=162,slow=36
LPAZ  La Paz            53.83 306   P        P        20 27 06.3 -0.5
LPAZ  La Paz            53.83 306  eP        P        20 27 06.8  0.0
SMTB  Santa Maria do    54.32 333  eP        P        20 27 09.0 -0.7
CLDB  Colider           54.54 323  eP        P        20 27 08.5 -2.8
MATP  Matopo            55.06  68  iP        P        20 27 11.2 -3.9
MATP  Matopo            55.06  68  iP        P        20 27 11.2 -3.9
RCBR  Riachuelo         55.34 347   P        P        20 27 16.4 -0.7
RCBR  Riachuelo         55.34 347  eP        P        20 27 17.1  0.0
SAML  Samuel            58.74 315   P        P        20 27 39.7 -1.4
SAML                                IAmb     IAmb     20 27 43.8
          comp=Z,65nm,0.8s
SAML  Samuel            58.74 315  eP        P        20 27 40.1 -1.0
LSZ   Lusaka            59.43  65   P        P        20 27 45.4 -0.7
LSZ                                 IAmb     IAmb     20 28 00.2
          comp=Z,38nm,0.8s
LSZ   Lusaka            59.43  65   IAMs_20  IAMs_20  20 50 34.0
          comp=Z,1µm,18.0s
NNA   Nana              61.30 299   P        P        20 27 59.5 +0.8
          comp=Z,41nm,1.0s,baz=124,slow=5.8,SNR=9.0
NNA   Nana              61.30 299   P        P        20 27 58.8  0.0
NNA                                 IAmb     IAmb     20 28 03.8
          comp=Z,69nm,1.1s
ABPO  Ambohimpanom      65.18  85   P        P        20 28 25.7 +1.1
PTGA  Pitinga           65.40 322   P        P        20 28 24.0 -1.8
          comp=Z,24nm,0.8s,baz=164,slow=8.7,SNR=21
PTGA  Pitinga           65.40 322   P        P        20 28 23.6 -2.2
PTGA                                IAMs_20  IAMs_20  20 54 24.6
          comp=Z,1µm,20.0s
PTGA  Pitinga           65.40 322  eP        P        20 28 24.2 -1.6
ATAH  Atahualpa         66.31 300   P        P        20 28 31.1 -1.0
          comp=Z,33nm,1.1s,baz=151,slow=5.7,SNR=11
RER   Riviere de l'E    67.54  93   P        P        20 28 40.1 +0.5
RER                                 IAmb     IAmb     20 28 41.8
          comp=Z,65nm,1.1s
LIC   Lamto             68.67  22  eP        P        20 28 47.2 +0.6
          comp=Z,131nm,0.8s
KIC   Kosan Boka        68.86  22  eP        P        20 28 48.4 +0.7
          comp=Z,124nm,1.0s
MDP   Montagnes des     68.98 331   P        P        20 28 46.7 -1.8
          comp=Z,38nm,0.8s,baz=178,slow=5.3,SNR=6.9
TIC   Toumodi           69.09  22  eP        P        20 28 49.8 +0.7
          comp=Z,122nm,0.9s
DBIC  Dimbokro          69.14  22   P        P        20 28 49.8 +0.4
          comp=Z,26nm,0.8s,baz=166,slow=6.9,SNR=16
DBIC                                LR       LR       20 51 58.0
          comp=Z,315nm,19.8s,baz=180,slow=30
DBIC  Dimbokro          69.14  22   P        P        20 28 49.9 +0.4
DBIC                                IAmb     IAmb     20 28 54.1
          comp=Z,42nm,0.9s
FLOC  Florencia         73.08 307   P        P        20 29 12.3 -1.1
WHZ   Wether Hill Ro    73.16 190   P        P        20 29 14.8 +1.3
WHZ                                 IAmb     IAmb     20 29 16.3
          comp=Z,83nm,1.0s
MBAR  Mbarara           73.63  60   P        P        20 29 18.7 +1.8
MBAR                                IAMs_20  IAMs_20  20 57 05.4
          comp=Z,1µm,19.0s
MLZ   Mavora Lakes      73.67 190   P        P        20 29 18.1 +1.5
MLZ                                 IAmb     IAmb     20 29 19.5
          comp=Z,133nm,1.2s
ODZ   Otahua Downs      73.75 192   P        P        20 29 19.5 +2.5
WKZ   Wanaka            74.12 191   P        P        20 29 20.4 +1.1
LBZ   Lake Benmore      74.45 192   P        P        20 29 21.8 +0.6
MQZ   McQueen's Vall    74.86 194   P        P        20 29 25.2 +1.7
MQZ                                 IAmb     IAmb     20 29 26.3
          comp=Z,116nm,1.2s
MQZ                                 IAMs_20  IAMs_20  20 58 38.9
          comp=Z,1µm,18.0s
RPZ   Rata Peaks        75.03 192   P        P        20 29 25.8 +1.3
RPZ                                 IAmb     IAmb     20 29 27.5
          comp=Z,102nm,1.1s
OXZ   Oxford            75.30 193   P        P        20 29 26.9 +0.8
OXZ                                 IAmb     IAmb     20 29 28.9
          comp=Z,122nm,1.2s
ROSC  El Rosal          75.55 309   P        P        20 29 31.3 +3.1
          comp=Z,8.6nm,0.3s,baz=107,slow=17,SNR=6.2
ROSC                                LR       LR       21 03 38.7
          comp=Z,424nm,21.6s,baz=148,slow=36
ROSC  El Rosal          75.55 309   P        P        20 29 27.7 -0.5
ROSC                                IAMs_20  IAMs_20  21 02 18.5
          comp=Z,1µm,22.0s
LTZ   Lake Taylor       75.81 193   P        P        20 29 30.3 +1.3
KMBO  Kilima Mbogo      76.02  66   P        P        20 29 33.9 +3.1
          comp=Z,2.8nm,0.9s,baz=212,slow=5.7,SNR=7.7
KMBO                                LR       LR       21 00 37.5
          comp=Z,769nm,18.1s,baz=204,slow=34
KMBO  Kilima Mbogo      76.02  66   P        P        20 29 32.5 +1.7
KMBO  Kilima Mbogo      76.02  66   IAMs_20  IAMs_20  21 00 25.6
          comp=Z,830nm,19.0s
KHZ   Kahutara          76.03 194   P        P        20 29 31.4 +1.2
KHZ                                 IAmb     IAmb     20 29 32.7
          comp=Z,122nm,1.3s
RUSC  La Rusia          76.05 311   P        P        20 29 29.7 -1.5
CMWZ  Cape Campbell     76.60 195   P        P        20 29 34.8 +1.4
PLWZ  Palliser          76.64 196   P        P        20 29 35.0 +1.2
BSWZ  Blackbirch Sta    76.67 195   P        P        20 29 35.8 +1.9
THZ   Tophouse          76.75 194   P        P        20 29 35.2 +0.9
TOA0  Torodi Ar. Sit    76.78  27   P        P        20 29 35.5 +0.8
TORD  Torodi Ar. Bea    76.78  27   P        P        20 29 35.6 +1.0
          comp=Z,19nm,0.5s,baz=197,slow=6.2,SNR=85
TORD                                LR       LR       20 58 28.8
          comp=Z,434nm,18.0s,baz=240,slow=32
TORD  Torodi Ar. Bea    76.78  27   P        P        20 29 35.1 +0.4
MSWZ  Moikau Station    76.79 196   P        P        20 29 35.9 +1.3
BHW   Baring Head       76.85 196   P        P        20 29 36.0 +1.1
TUWZ  Tuamarina         76.95 195   P        P        20 29 36.5 +1.1
SNZO  South Karori      76.97 196   P        P        20 29 36.2 +0.7
PCRV  Puerto La Cruz    77.14 320   P        P        20 29 37.2 +0.4
          comp=Z,79nm,1.0s,baz=177,slow=4.9,SNR=5.6
NNZ   Nelson            77.23 195   P        P        20 29 38.2 +1.2
PAYG  Puerto Ayora      77.31 292   P        P        20 29 36.7 -1.1
PAYG                                IAMs_20  IAMs_20  20 57 52.2
          comp=Z,771nm,20.0s
BFZ   Birch Farm        77.37 197   P        P        20 29 39.2 +1.3
QRZ   Quartz Range      77.72 194   P        P        20 29 39.5 -0.3
QRZ                                 IAmb     IAmb     20 29 40.6
          comp=Z,63nm,1.1s
SDV   Santo Domingo     77.93 314   P        P        20 29 41.0 -0.4
          comp=Z,19nm,0.8s,baz=191,slow=3.8,SNR=16
SDV                                 PP       PP       20 32 36.3 -1.3
          comp=Z,16nm,1.1s,baz=184,slow=8.9,SNR=5.0
SDV   Santo Domingo     77.93 314   P        P        20 29 40.5 -0.9
SDV                                 IAmb     IAmb     20 30 01.2
          comp=Z,39nm,1.0s
SDV   Santo Domingo     77.93 314   IAMs_20  IAMs_20  21 03 49.5
          comp=Z,2µm,21.0s
SDV   Santo Domingo     77.93 314  eP        P        20 29 41.3 -0.1
BKZ   Black Stump Fm    78.83 197   P        P        20 29 47.4 +1.4
BKZ                                 IAmb     IAmb     20 29 48.6
          comp=Z,72nm,1.1s
URZ   Urewera           79.62 198   LR       LR       21 04 13.5
          comp=Z,670nm,18.0s,baz=172,slow=35
URZ   Urewera           79.62 198   P        P        20 29 51.2 +0.9
URZ                                 IAmb     IAmb     20 29 53.2
          comp=Z,146nm,1.5s
HIZ   Hauiti            79.70 196   P        P        20 29 51.2 +0.5
HIZ                                 IAmb     IAmb     20 29 52.5
          comp=Z,172nm,1.3s
DLPL  La Plaine         81.02 325   IAMs_20  IAMs_20  21 09 38.5
          comp=Z,1µm,18.0s
TOO   Toolangi          81.77 173   P        P        20 30 01.9 +0.1
TOO                                 IAmb     IAmb     20 30 03.7
          comp=Z,64nm,1.1s
NWAO  Narrogin (SRO)    81.83 149   LR       LR       21 05 02.3
          comp=Z,568nm,18.2s,baz=226,slow=35
NWAO  Narrogin (SRO)    81.83 149   P        P        20 30 02.3 +0.1
NWAO                                IAmb     IAmb     20 30 02.8
          comp=Z,49nm,1.1s
NWAO  Narrogin (SRO)    81.83 149   P        P        20 30 02.0 -0.2
NWAO                                IAmb     IAmb     20 30 02.8
          comp=Z,40nm,1.1s
OUZ   Omahuta           83.11 196   P        P        20 30 09.4 +0.6
SKI   Saint Kitts       83.34 324   IAMs_20  IAMs_20  21 11 03.1
          comp=Z,679nm,20.0s
ANWB  Willy Bob         83.39 325   IAMs_20  IAMs_20  21 05 50.3
          comp=Z,613nm,20.0s
SEUS  St. Eustatius     83.57 324   IAMs_20  IAMs_20  21 09 18.9
          comp=Z,705nm,22.0s
SABA  Saba              83.76 324   IAMs_20  IAMs_20  21 09 21.8
          comp=Z,756nm,21.0s
CAN   Canberra          84.18 176   P        P        20 30 14.8 +0.4
CAN                                 IAmb     IAmb     20 30 16.8
          comp=Z,86nm,1.1s
JTS   Las Juntas de     84.75 302   P        P        20 30 18.0 +0.6
          comp=Z,8.8nm,0.7s,baz=346,slow=18,SNR=2.9
JTS   Las Juntas de     84.75 302   P        P        20 30 17.6 +0.2
TBI   Tubuai            84.76 230  eS        S        20 40 37.2 -7.0
          comp=Z,275nm,27.8s
TBI   Tubuai            84.76 230  eLR       LR       20 56 52.7
          comp=Z,226nm,26.2s
STVI  Saint Thomas      84.95 323   P        P        20 30 17.5 -0.7
STVI                                IAmb     IAmb     20 31 06.6
          comp=Z,57nm,1.4s
CUPR  Culebra, Puert    85.01 322   P        P        20 30 16.8 -1.7
CUPR                                IAmb     IAmb     20 30 22.3
          comp=Z,65nm,1.2s
SJG   San Juan          85.09 322   IAMs_20  IAMs_20  21 09 11.3
          comp=Z,626nm,20.0s
CBYP  Canovanas         85.15 322   P        P        20 30 19.0 -0.3
CBYP                                IAmb     IAmb     20 30 22.7
          comp=Z,34nm,1.2s
MORW  Morawa            85.18 147   P        P        20 30 19.5  0.0
MORW                                IAmb     IAmb     20 30 21.1
          comp=Z,116nm,1.9s
FURI  Furi              85.56  63   IAMs_20  IAMs_20  21 05 06.6
          comp=Z,1µm,20.0s
BBOO  Buckleboo         85.58 165   P        P        20 30 20.7 -0.7
FORT  Forrest           86.29 157   P        P        20 30 25.4 +0.5
FORT                                IAMs_20  IAMs_20  21 04 22.3
          comp=Z,1µm,20.0s
ACON  Acoyapa           86.36 302   P        P        20 30 25.9 +0.7
ACON                                IAmb     IAmb     20 30 30.0
          comp=Z,39nm,1.0s
DR12  Loma Pena Alta    86.74 319   P        P        20 30 26.5 -0.7
TAM   Tamanrasset       86.97  28   P        P        20 30 27.7 -0.6
STKA  Stephens Creek    87.12 169   P        P        20 30 29.7 +0.7
          comp=Z,32nm,0.9s,baz=168,slow=6.4,SNR=44
STKA                                LR       LR       21 08 02.6
          comp=Z,1µm,18.4s,baz=189,slow=35
STKA  Stephens Creek    87.12 169   P        P        20 30 28.7 -0.3
RAO   Raoul Island      87.53 204   LR       LR       21 02 31.6
          comp=Z,627nm,19.6s,baz=130,slow=31
SDDR  Presa de Saban    87.55 317   IAMs_20  IAMs_20  21 07 47.2
          comp=Z,888nm,22.0s
SC01  Santiago de lo    87.78 318   IAMs_20  IAMs_20  21 07 06.3
          comp=Z,1µm,20.0s
LHI   Lord Howe Isla    88.00 184   P        P        20 30 33.7 +0.5
MTDJ  Mount Denham      89.04 311   P        P        20 30 37.8 -0.4
TGUH  Tegucigalpa,Un    89.11 301   P        P        20 30 38.3 -0.3
TGUH                                IAmb     IAmb     20 30 42.3
          comp=Z,25nm,0.5s
ARMA  Armidale          89.15 178   P        P        20 30 39.9 +1.1
ARMA                                IAmb     IAmb     20 30 40.7
          comp=Z,72nm,1.3s
SNET  Serv Nac Est T    89.61 299   IAMs_20  IAMs_20  21 06 39.4
          comp=Z,845nm,22.0s
GTBY  Guantanamo Bay    89.73 314   IAMs_20  IAMs_20  21 11 16.2
          comp=Z,836nm,20.0s
ATD   Arta Tunnel       89.75  66   IAMs_20  IAMs_20  21 07 20.5
          comp=Z,654nm,19.0s
PPT2  Papeete2          90.04 232  eLR       LR       20 59 15.7
          comp=Z,364nm,23.0s
APG   El Apazote        91.31 299   P        P        20 30 49.0  0.0
          comp=Z,8.4nm,0.3s,baz=154,slow=11,SNR=4.6
DAMY  Dhamar            93.13  66   IAMs_20  IAMs_20  21 09 42.0
          comp=Z,839nm,19.0s
PSA00 Pilbara Seismi    93.32 148   P        P        20 30 57.6 -0.5
PSA00                               IAmb     IAmb     20 31 02.0
          comp=Z,32nm,0.9s
PSA00 Pilbara Seismi    93.32 148   P        P        20 30 57.0 -1.2
PSA00                               IAmb     IAmb     20 30 59.4
          comp=Z,42nm,1.2s
PSAB2 Pilbara Seismi    93.34 148   IAMs_20  IAMs_20  21 11 52.2
          comp=Z,980nm,20.0s
TAOE  Nuku Hiva Isla    93.96 244  eLR       LR       21 01 17.5
          comp=Z,387nm,21.5s
ASAR  Alice Springs     94.25 161   P        P        20 31 02.3 -0.2
          comp=Z,20nm,1.0s,baz=181,slow=4.1,SNR=113
ASAR                                PP       PP       20 34 47.5 -0.9
          comp=Z,9.7nm,1.1s,baz=189,slow=7.0,SNR=6.1
ASAR                                PKKPbc   PKKPbc   20 47 59.6 -0.3
          comp=Z,1.1nm,0.8s,baz=5.1,slow=1.8,SNR=8.4
ASAR  Alice Springs     94.25 161   P        P        20 31 01.7 -0.8
AS31  Alice Springs     94.25 161   P        P        20 31 01.9 -0.5
MDT   Midelt            94.78  18   P        P        20 31 04.6 +0.2
          comp=Z,3.5nm,1.1s,baz=250,slow=2.8,SNR=3.4
MDT                                 LR       LR       21 07 49.7
          comp=Z,894nm,20.9s,baz=200,slow=32
TEIG  Tepich            95.05 303   P        P        20 31 06.1 +0.2
          comp=Z,12nm,0.7s
TEIG  Tepich            95.05 303   P        P        20 31 06.9 +1.0
TEIG                                IAmb     IAmb     20 31 11.7
          comp=Z,19nm,0.7s
CMIG  Matias Romero     95.09 296   P        P        20 31 07.2 +1.1
          comp=Z,4.3nm,0.9s,baz=65,slow=2.2,SNR=6.2
SOCY  Socotra           95.47  75   IAMs_20  IAMs_20  21 14 51.5
          comp=Z,532nm,18.0s
DZM   Mont Dzumac       96.92 191  eLR       LR       21 02 33.2
          comp=Z,882nm,22.0s
WRA   Warramunga Arr    97.97 161   P        P        20 31 18.8 -0.6
          comp=Z,12nm,1.1s,baz=198,slow=4.2,SNR=34
WRA                                 PP       PP       20 35 17.5 +0.3
          comp=Z,3.9nm,1.0s,baz=192,slow=6.9,SNR=5.8
WRA                                 PKKP     PKKPdf   20 47 52.0 +1.1
          comp=Z,1.3nm,0.9s,baz=357,slow=2.9,SNR=6.9
WRA                                 LR       LR       21 12 50.2
          comp=Z,2µm,20.6s,baz=180,slow=34
WRA   Warramunga Arr    97.97 161   P        P        20 31 17.9 -1.5
WB2   Warramunga Arr    97.97 161   P        P        20 31 19.1 -0.3
WRAB  Tennant Creek     97.98 161   P        P        20 31 19.0 -0.4
WR0   Warramunga Arr    97.99 161   P        P        20 31 19.3 -0.1
FITZ  Fitzroy Crossi    98.08 152   P        Pdif     20 31 20.3 +0.5
          comp=Z,6.1nm,0.9s,baz=212,slow=8.2,SNR=6.6
FITZ  Fitzroy Crossi    98.08 152   P        P        20 31 18.0 -1.9
FITZ                                IAmb     IAmb     20 31 21.2
          comp=Z,14nm,1.1s
WB0   Warramunga Arr    98.15 161   P        P        20 31 19.5 -0.7
WB0                                 IAmb     IAmb     20 31 21.1
          comp=Z,28nm,1.2s
CTA   Charters Tower    99.19 172   LR       LR       21 15 34.9
          comp=Z,2µm,19.5s,baz=180,slow=35
CART  Cartagena        100.02  20   IAMs_20  IAMs_20  21 11 29.2
          comp=Z,478nm,20.0s
KEST  Kesra            100.28  28   PP       PP       20 35 37.6 +1.7
          comp=Z,2.9nm,1.0s,baz=181,slow=6.2,SNR=4.5
KEST  Kesra            100.28  28   IAMs_20  IAMs_20  21 14 52.0
          comp=Z,886nm,18.0s
RAYN  Ar Rayn          101.49  62   IAMs_20  IAMs_20  21 15 11.6
          comp=Z,677nm,19.0s
154A  Montrose         104.17 313   IAMs_20  IAMs_20  21 16 46.7
          comp=Z,1µm,22.0s
IDI   Anoyia           104.17  41   PP       PP       20 36 05.7 +0.6
          comp=Z,4.6nm,1.0s,baz=203,slow=7.5,SNR=2.9
250A  Grady            104.77 310   IAMs_20  IAMs_20  21 21 33.6
          comp=Z,726nm,19.0s
Z51A  Franklin         105.56 311   IAMs_20  IAMs_20  21 18 39.4
          comp=Z,986nm,22.0s
BG3   Lake Jocassee    106.25 314   IAMs_20  IAMs_20  21 17 38.8
          comp=Z,503nm,22.0s
W52A  Murphy           106.70 313   IAMs_20  IAMs_20  21 12 47.6
          comp=Z,700nm,18.0s
TKL   Tuckaleechee C   107.15 314   IAMs_20  IAMs_20  21 17 56.5
          comp=Z,930nm,22.0s
V52A  Sevierville      107.25 314   IAMs_20  IAMs_20  21 15 01.2
          comp=Z,872nm,21.0s
V51A  Loudon           107.48 313   IAMs_20  IAMs_20  21 26 51.4
          comp=Z,752nm,20.0s
UOSS  Minazif          107.53  70   IAMs_20  IAMs_20  21 20 17.8
          comp=Z,451nm,18.0s
AQU   L'Aquila         107.54  29   IAMs_20  IAMs_20  21 17 16.2
          comp=Z,575nm,20.0s
PLAL  Pickwick Lake    108.12 310   IAMs_20  IAMs_20  21 22 09.4
          comp=Z,969nm,22.0s
RPSI  Rantau Prapat    108.57 120   IAMs_20  IAMs_20  21 20 20.5
          comp=Z,744nm,18.0s
U49A  Red Boiling Sp   108.63 312   IAMs_20  IAMs_20  21 24 18.9
          comp=Z,566nm,20.0s
W45A  Hickory Valley   108.70 309   IAMs_20  IAMs_20  21 23 04.7
          comp=Z,698nm,20.0s
PDG   Podgorica        109.11  34   IAMs_20  IAMs_20  21 20 09.6
          comp=Z,421nm,20.0s
T47A  Sharon Grove     109.54 312   IAMs_20  IAMs_20  21 20 12.9
          comp=Z,489nm,22.0s
TXAR  Lajitas Array    109.65 295   PP       PP       20 36 48.1 +2.6
          comp=Z,1.6nm,1.1s,baz=144,slow=4.5,SNR=4.4
TXAR                                PKKPbc   PKKPbc   20 47 17.8 +2.0
          comp=Z,0.9nm,0.9s,baz=336,slow=2.7,SNR=6.3
TXAR  Lajitas Array    109.65 295            PKKPbc   20 47 18.2 +2.5
R50A  Paris            109.69 314   IAMs_20  IAMs_20  21 18 18.9
          comp=Z,774nm,22.0s
TEOL  Teolo            109.99  27   IAMs_20  IAMs_20  21 20 45.0
          comp=Z,720nm,21.0s
PENMO Penman           110.01 309   IAMs_20  IAMs_20  21 19 28.3
          comp=Z,778nm,21.0s
GAZ   Gaziantep        110.14  49   IAMs_20  IAMs_20  21 22 27.8
          comp=Z,563nm,20.0s
HENM  Henderson Moun   110.18 310   IAMs_20  IAMs_20  21 19 42.9
          comp=Z,727nm,21.0s
EMMW  East Machias     110.49 329   IAMs_20  IAMs_20  21 13 29.2
          comp=Z,792nm,19.0s
PBMO  Poplar Bluff     110.60 309   IAMs_20  IAMs_20  21 23 37.0
          comp=Z,882nm,20.0s
GGN   Saint George     110.72 330   IAMs_20  IAMs_20  21 13 22.2
          comp=Z,676nm,20.0s
IPM   Ipoh             111.06 121   IAMs_20  IAMs_20  21 27 56.7
          comp=Z,396nm,18.0s
STAL  STALIGIAL        111.07  27   IAMs_20  IAMs_20  21 15 39.6
          comp=Z,470nm,19.0s
BRTR  Keskin Array B   111.12  45   PP       PP       20 36 58.2 +2.2
          comp=Z,0.6nm,0.4s,baz=187,slow=8.7,SNR=4.3
BRTR                                PKKPab   PKKPab   20 47 23.2 +3.5
          comp=Z,0.7nm,0.8s,baz=66,slow=1.5,SNR=3.7
U40A  Yellville        111.17 307   IAMs_20  IAMs_20  21 22 29.1
          comp=Z,896nm,20.0s
J59A  Piesco           111.23 324   IAMs_20  IAMs_20  21 15 59.6
          comp=Z,489nm,20.0s
HHAR  Hobbs            111.53 306   IAMs_20  IAMs_20  21 20 31.8
          comp=Z,605nm,21.0s
KULM  Kulim            111.63 120   IAMs_20  IAMs_20  21 15 31.8
          comp=Z,395nm,20.0s
Q44A  Meyer Farm, Va   111.94 311   IAMs_20  IAMs_20  21 21 23.3
          comp=Z,891nm,22.0s
KSM   Kuching          112.00 131   IAMs_20  IAMs_20  21 14 34.5
          comp=Z,399nm,19.0s
MEDO  Medina           112.14 321   IAMs_20  IAMs_20  21 13 52.5
          comp=Z,548nm,21.0s
PECO  Prince Edward    112.40 322   IAMs_20  IAMs_20  21 18 08.1
          comp=Z,502nm,21.0s
PLVO  Plevna           113.43 323   IAMs_20  IAMs_20  21 16 34.3
          comp=Z,561nm,19.0s
GERES GERESS Array B 113.73  27   PP       PP       20 37 15.5 +0.9
          comp=Z,5.0nm,1.1s,baz=191,slow=6.5,SNR=12
GERES GERESS Array B 113.73  27            PP       20 37 13.2 -1.3
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GRF	Grafenberg Arr	114.00	25	*e*PP	PP	20 37 16.6	+0.3
	baz=199,slow=7.4						
FAKI	Fak Fak	114.22	156	IAMs_20	IAMs_20	21 21 32.4	
	comp=Z,557nm,20.0s						
P38A	Dawn	114.27	308	IAMs_20	IAMs_20	21 23 26.3	
	comp=Z,917nm,22.0s						
KSU1	Kansas State U	115.03	306	IAMs_20	IAMs_20	21 31 39.4	
	comp=Z,513nm,20.0s						
GNI	Garni	115.61	53	IAMs_20	IAMs_20	21 24 21.7	
	comp=Z,362nm,20.0s						
CLL	Collm	115.90	26	*e*PP	PP	20 37 33.0	+3.4
	comp=Z,152nm,3.1s						
CLL				*e*SKSac	SKSac	20 43 16.0	+3.2
CLL				*e*PS	PKKPdf	20 47 26.0	+5.1
CLL				L	L	21 21 00.0	
	comp=Z,300nm,20.9s						
CLL				LmV		21 21 00.0	
	comp=Z,300nm,20.9s						
CBKS	Cedar Bluff	116.05	303	IAMs_20	IAMs_20	21 23 15.8	
	comp=Z,384nm,20.0s						
TNTI	Ternate	116.68	149	IAMs_20	IAMs_20	21 34 56.6	
	comp=Z,740nm,19.0s						
X18A	Snowflake	116.87	293	IAMs_20	IAMs_20	21 18 11.4	
	comp=Z,429nm,21.0s						
SDCO	Great Sand Dun	117.58	298	P	PKiKP	20 36 30.1	+1.3
	baz=147						
KBZ	Khabaz	117.97	50	PKP	PKiKP	20 36 29.1	+0.2
	comp=Z,2.3nm,1.0s,baz=135,slow=2.9,SNR=3.2						
S22A	4UR Ranch, Cre	118.16	297		PKiKP	20 36 30.4	+0.4
S22A	4UR Ranch, Cre	118.16	297	P	PKiKP	20 36 31.0	+1.1
	baz=147						
COWI	Conover	118.27	315		PKPdf	20 36 29.4	0.0
HRA	Herat	118.29	70		PKPdf	20 36 29.0	-1.1
HRA				IAMs_20	IAMs_20	21 26 57.7	
	comp=Z,674nm,20.0s						
WUAZ	Wupatki	118.33	292	P	PKiKP	20 36 31.6	+1.4
	baz=146						
MONP2	Monument Peak	118.50	287	P	PKiKP	20 36 32.2	+1.6
	baz=146						
IRM	Iron Mountain	118.95	289	P	PKiKP	20 36 32.4	+1.2
	baz=146						
ECSD	EROS Data Cent	118.98	308		PKiKP	20 36 31.1	+0.1
ECSD	EROS Data Cent	118.98	308	IAMs_20	IAMs_20	21 29 21.8	
	comp=Z,782nm,22.0s						
ECSD	EROS Data Cent	118.98	308	P	PKiKP	20 36 33.5	+2.6
	baz=148						
W13A	Hualapai Mount	119.14	290		PKiKP	20 36 32.4	+0.6
BELC	Belle Mtn. Jos	119.21	288	P	PKiKP	20 36 33.5	+1.6
	baz=146						
ISCO	Idaho Springs	119.34	299		PKiKP	20 36 33.2	+1.0
ISCO	Idaho Springs	119.34	299	P	PKiKP	20 36 33.7	+1.5
	baz=146						
GEYT	Alibeck	119.36	64	PKP	PKiKP	20 36 32.5	+0.6
	comp=Z,1.0nm,0.6s,baz=100,slow=3.3,SNR=3.0						
GEYT				PKKPab	PKKPab	20 46 46.3	+1.9
	comp=Z,2.0nm,0.8s,baz=282,slow=6.8,SNR=5.5						
GEYT	Alibeck	119.36	64		PKPdf	20 36 31.0	-0.9
GEYT					PKKPab	20 46 47.7	+3.4
PV15	Paradox Valley	119.38	296	IAMs_20	IAMs_20	21 26 24.7	
	comp=Z,515nm,19.0s						
AKASG	Malin Array Be	119.47	37	PKP	PKPdf	20 36 30.8	-0.7
	comp=Z,2.7nm,0.8s,baz=244,slow=1.9,SNR=8.0						
AKASG				PKKPab	PKKPab	20 46 43.1	+0.6
	comp=Z,0.8nm,0.6s,baz=22,slow=4.1,SNR=4.5						
AKASG	Malin Array Be	119.47	37		PKPdf	20 36 30.2	-1.3
PV18	Skein Mesa, Pa	119.49	296	IAMs_20	IAMs_20	21 27 18.7	
	comp=Z,381nm,18.0s						
PV12	Saucer Basin,	119.50	296		PKiKP	20 36 32.7	+0.2
PV07	Paradox Valley	119.53	296	IAMs_20	IAMs_20	21 30 58.8	
	comp=Z,613nm,21.0s						
PV17	East Wray Mesa	119.54	296	IAMs_20	IAMs_20	21 12 15.0	
	comp=Z,776nm,20.0s						
PV20	West Nyswonger	119.59	296	IAMs_20	IAMs_20	21 17 48.4	
	comp=Z,534nm,18.0s						
PV22	Blue Mesa, Par	119.68	296		PKiKP	20 36 33.5	+0.7
SCHQ	Schefferville	119.79	334	PKP	PKiKP	20 36 32.2	0.0
	comp=Z,3.1nm,0.5s,baz=248,slow=1.7,SNR=17						
SCHQ	Schefferville	119.79	334		PKPdf	20 36 31.7	-0.4
KNB	Kanab	120.23	292		PKiKP	20 36 34.6	+0.8
N23A	Red Feather La	120.39	300	P	PKiKP	20 36 34.9	+0.8
	baz=146						
GSC	Goldstone, Bar	120.66	288	P	PKiKP	20 36 36.4	+1.7
	baz=145						
EYMN	Ely	120.68	314		PKPdf	20 36 33.8	-0.2
EYMN	Ely	120.68	314	P	PKPdf	20 36 34.0	0.0
	baz=149						
O20A	White River Ci	120.76	298		PKPdf	20 36 34.4	-0.3
O20A	White River Ci	120.76	298	P	PKiKP	20 36 35.5	+0.7
	baz=146						
SZCU	Shurtz Canyon	120.83	292		PKiKP	20 36 36.6	+1.6
EDW2	Edwards Air Fo	120.87	287	P	PKiKP	20 36 36.4	+1.4
	baz=145						
DLV	T Lat	120.88	125	IAMs_20	IAMs_20	21 27 14.1	
	comp=Z,360nm,18.0s						
SHPR	Sheep Range	120.88	290		PKiKP	20 36 36.2	+1.1
SRU	San Rafael Swe	120.92	295		PKiKP	20 36 35.1	0.0
LRMC	Laurel Mtn Rad	121.22	288	P	PKiKP	20 36 37.3	+1.6
	baz=145						
TMUT	Trail Mountain	121.37	295		PKiKP	20 36 37.1	+0.9
MPMC	Manual Prospec	121.60	288	P	PKiKP	20 36 38.1	+1.5
	baz=145						
RDMU	Red Mountain	121.69	297		PKPdf	20 36 36.5	0.0
ISA	Isabella, Lake	121.74	287		PKiKP	20 36 37.3	+0.6
ISA	Isabella, Lake	121.74	287	P	PKiKP	20 36 38.5	+1.8
	baz=145						
TPNV	Topopah Spring	121.75	290		PKiKP	20 36 38.1	+1.3
TPNV	Topopah Spring	121.75	290	P	PKiKP	20 36 38.6	+1.8
	baz=145						
PBKT	Sadao Pong	121.81	115		PKiKP	20 36 37.3	0.0
PSUT	Pine Spring	121.94	293		PKiKP	20 36 37.9	+0.7
K22A	Casper	122.08	301		PKPdf	20 36 36.9	-0.2
K22A	Casper	122.08	301	P	PKiKP	20 36 37.5	+0.3
	baz=145						
CWC	Cottonwood Cre	122.19	288	P	PKiKP	20 36 39.2	+1.5
	baz=145						
RSSD	Black Hills	122.25	303		PKPdf	20 36 37.3	-0.1
RSSD	Black Hills	122.25	303	P	PKiKP	20 36 37.8	+0.2
	baz=145						
NLU	North Lily Min	122.30	295		PKiKP	20 36 38.7	+0.9
AGMN	Agassiz Nation	122.54	312		PKPdf	20 36 37.2	-0.3
AGMN	Agassiz Nation	122.54	312	P	PKiKP	20 36 37.7	-0.1
	baz=147						
JLU	Jordanelle	122.55	296		PKiKP	20 36 39.2	+0.8
CM31	Chiang Mai Arr	122.56	112		PKiKP	20 36 38.7	-0.1
CMAR	Chiang Mai Arr	122.56	112	PKP	PKiKP	20 36 38.8	0.0
	comp=Z,7.4nm,0.9s,baz=232,slow=3.6,SNR=39						
CMAR				PKKPab	PKKPab	20 46 35.3	+2.2
	comp=Z,1.6nm,0.8s,baz=0.5,slow=4.0,SNR=7.0						
CMAR	Chiang Mai Arr	122.56	112		PKPdf	20 36 38.0	-0.5
CMAR					PKKPab	20 46 34.9	+1.8
R11A	Troy Canyon, C	122.58	291	P	PKiKP	20 36 39.7	+1.3
	baz=144						
UBPT	Khong Chiam	122.63	120		PKPdf	20 36 38.5	-0.2
DUG	Dugway, Tooele	122.82	294		PKiKP	20 36 39.2	+0.4
DUG	Dugway, Tooele	122.82	294	P	PKiKP	20 36 40.1	+1.3
	baz=144						
CHTO	Chiang Mai	122.87	112		PKPdf	20 36 38.7	-0.4
NIL	Nilore	122.89	79		PKPdf	20 36 38.8	0.0
TCUT	Toone Canyon	122.95	296		PKiKP	20 36 39.7	+0.5
HWUT	Hardware Ranch	123.41	296		PKiKP	20 36 40.0	+0.1
HWUT				IAMs_20	IAMs_20	21 31 08.4	
	comp=Z,430nm,20.0s						
PD31	Pinedale Array	123.47	299		PKPdf	20 36 39.3	-0.5
PDAR	Pinedale Array	123.47	299	PKP	PKPdf	20 36 39.7	-0.2
	comp=Z,2.1nm,0.7s,baz=135,slow=4.4,SNR=14						
PDAR				PKKPbc	PKKPbc	20 46 28.6	+1.4
	comp=Z,0.5nm,0.6s,baz=336,slow=3.3,SNR=4.8						
PDAR	Pinedale Array	123.47	299		PKPdf	20 36 39.4	-0.5
PDAR					PKKPbc	20 46 27.3	+0.1
BGU	Big Grassy Mou	123.51	295		PKiKP	20 36 41.0	+0.9
SPUT	South Promonto	123.56	295		PKiKP	20 36 41.0	+0.8
DANN	Dangsing	123.68	91	*e*P	PKPdf	20 36 40.0	-0.8
	comp=Z,60nm,0.9s						
DMN	Daman	123.73	93	*e*P	PKPdf	20 36 40.1	-0.8
	comp=Z,37nm,1.0s						
GKN	Gorkha	123.82	92	*e*P	PKPdf	20 36 40.1	-0.8
	comp=Z,44nm,0.9s						
PKIN	Phulchoki	123.84	93	*e*P	PKPdf	20 36 40.1	-1.0
	comp=Z,24nm,1.0s						
PKI	Pulchoki	123.84	93	*e*P	PKPdf	20 36 40.2	-1.0
	comp=Z,48nm,1.1s						
NVAR	Mina Array Bea	123.90	289	PKP	PKiKP	20 36 42.6	+1.5
	comp=Z,3.1nm,0.7s,baz=169,slow=3.2,SNR=6.0						
NVAR				PKKPab	PKKPab	20 46 28.9	+3.5
	comp=Z,0.3nm,0.5s,baz=287,slow=6.0,SNR=4.8						
NVAR	Mina Array Bea	123.90	289		PKiKP	20 36 41.4	+0.3
RAMN	Ramite	123.91	95	*e*P	PKPdf	20 36 40.8	-0.4
	comp=Z,81nm,1.0s						
KKN	Kakani	123.96	93	*e*P	PKPdf	20 36 40.3	-1.0
AHID	Auburn Hatcher	124.14	297		PKiKP	20 36 41.8	+0.4
ULM	Lac du Bonnet	124.17	313	PKP	PKPdf	20 36 40.4	-0.2
	comp=Z,7.3nm,0.8s,baz=49,slow=1.0,SNR=11						
ULM	Lac du Bonnet	124.17	313		PKPdf	20 36 40.2	-0.4
ODAN	Odare	124.22	96	*e*P	PKPdf	20 36 41.6	-0.2
	comp=Z,73nm,1.2s						
JIRN	Jiri	124.30	94	*e*P	PKPdf	20 36 41.6	-0.5
	comp=Z,87nm,1.0s						
HFS	Hagfors	124.30	23	PKP	PKPdf	20 36 39.7	-0.9
	comp=Z,3.1nm,0.8s,baz=187,slow=6.0,SNR=4.7						
ELK	Elko	124.36	293		PKiKP	20 36 42.5	+0.6
GUN	Gumba	124.36	94	*e*P	PKPdf	20 36 41.5	-0.7
	comp=Z,69nm,1.1s						
WAKR	Walker	124.49	288		PKiKP	20 36 44.2	+2.0
REDW	Red Top Meadow	124.52	298		PKiKP	20 36 42.8	+0.7
CMB	Columbia Colle	124.56	287		PKiKP	20 36 42.3	+0.1
TPAW	Teton Pass	124.66	298		PKPdf	20 36 42.0	-0.2
NB2	NORSAR Subarra	124.70	21	PKPdf	PKPdf	20 36 41.1	-0.2
	comp=Z,35nm,2.0s,baz=202,slow=1.9						
NB2	NORSAR Subarra	124.70	21	PKPdf	PKPdf	20 36 41.1	-0.2
	baz=202,slow=1.9						
NOA	NORSAR Array B	124.70	21	PKP	PKiKP	20 36 41.7	0.0
	comp=Z,2.7nm,0.8s,baz=186,slow=1.6,SNR=8.4						
YERR	Yerington	124.78	289		PKiKP	20 36 44.6	+1.8
TAPN	Taplejung	124.79	96	*e*P	PKPdf	20 36 42.6	-0.4
	comp=Z,31nm,1.1s						
FXWY	Fox Creek	124.81	298		PKiKP	20 36 43.2	+0.5
IMW	Indian Meadow	124.98	298		PKiKP	20 36 44.0	+0.8
FLWY	Flagg Ranch	125.03	299		PKiKP	20 36 44.1	+1.0
LAO	LASA Array	125.24	304		PKPdf	20 36 42.7	-0.2
RLMT	Red Lodge	125.25	300		PKiKP	20 36 43.7	+0.1
RLMT	Red Lodge	125.25	300	P	PKiKP	20 36 44.3	+0.8
	baz=143						
AFDM	Forest Hills D	125.56	287		PKiKP	20 36 45.0	+1.0
YHH	Holmes Hill	125.66	299		PKiKP	20 36 45.3	+0.8
YHL	Hebgen Lake	125.85	299	PKPdf	PKiKP	20 36 46.6	+1.8
DGMT	Dagmar	125.86	306		PKiKP	20 36 44.3	-0.1
DGMT	Dagmar	125.86	306	P	PKiKP	20 36 45.0	+0.6
	baz=144						
QLMT	Earthquake Lak	125.94	299		PKiKP	20 36 46.0	+1.0
GCMT	Greycliff	125.95	301		PKPpre	20 36 38.6	
ORV	Oroville	126.29	287		PKiKP	20 36 46.5	+1.0
MCMT	McKenzie Canyo	126.55	298		PKiKP	20 36 47.5	+1.4
MFID	Camas Ranch	126.75	295		PKiKP	20 36 47.1	+0.7
DLMT	Dillon	126.86	298	IAMs_20	IAMs_20	21 31 20.7	
	comp=Z,592nm,19.0s						
O03E	Paynes Creek	127.02	288	P	PKiKP	20 36 48.5	+1.4
	baz=142						
LRM	Limekiln Ridge	127.16	299		PKiKP	20 36 47.6	+0.3
TAS	Tashkent	127.17	70	IAMs_20	IAMs_20	21 33 48.7	
	comp=Z,372nm,18.0s						
WVOR	Wild Horse Val	127.24	292		PKiKP	20 36 48.9	+1.4
SLVN	Son La	127.30	115		PKiKP	20 36 48.0	-0.1
MOD	Modoc Plateau	127.59	290		PKiKP	20 36 49.0	+0.8
WDC	Whiskeytown Da	127.59	287		PKiKP	20 36 48.2	+0.2
EGMT	Eagleton	127.76	302		PKiKP	20 36 49.0	+0.7
EGMT	Eagleton	127.76	302	P	PKiKP	20 36 49.3	+1.0
	baz=142						
QIZ	Qiongzhong	127.82	123	PKP	PKiKP	20 36 49.5	+0.3
QIZ				PP	PP	20 38 50.8	+0.3
QIZ				SS	SS	20 56 05.4	+3.8
QIZ				LR	LR		
	comp=Z,200nm,23.0s						
QIZ				LR	LR		
	comp=Z,170nm,15.7s						
J08A	Circle Bar Ran	127.89	293		PKiKP	20 36 48.8	0.0
N02D	Trinity Center	127.98	288	P	PKiKP	20 36 50.4	+1.5
	baz=142						
FINES	FINESS Array B	128.12	29	PKP	PKPdf	20 36 47.7	-0.1
	comp=Z,14nm,0.8s,baz=165,slow=1.9,SNR=30						
FIA1	FINESS Array S	128.12	29		PKPdf	20 36 47.4	-0.3
M04C	Macdoel	128.21	289	P	PKiKP	20 36 50.5	+1.1
	baz=142						
FRB	Frobisher Bay	128.34	337	PKP	PKiKP	20 36 48.6	-0.1
	comp=Z,10nm,0.9s,baz=156,slow=3.3,SNR=9.9						
LSA	Lhasa	128.41	97		PKPdf	20 36 49.1	-0.9
BMO	Blue Mountains	128.53	295		PKiKP	20 36 50.5	+0.5
YBH	Yreka Blue Hor	128.57	288	PKP	PKiKP	20 36 50.8	+0.7
	comp=Z,1.4nm,0.9s,baz=109,slow=9.9,SNR=2.6						
YBH	Yreka Blue Hor	128.57	288		PKiKP	20 36 50.5	+0.4
MSO	Missoula	128.59	299		PKiKP	20 36 50.5	+0.5
MSO	Missoula	128.59	299	P	PKiKP	20 36 50.8	+0.8
	baz=141						
SFJD	Kangerlussuaq	128.76	348		PKiKP	20 36 49.9	+0.5
L04D	Klamath Falls	128.76	289	P	PKiKP	20 36 51.4	+0.9
	baz=141						
KSH	Kashi	128.89	77	PKP	PKiKP	20 36 51.1	+0.2
KSH				PP	PP	20 39 00.0	+2.0
KSH				PKS		20 40 24.5	
KSH				SS	SS	20 56 14.0	-1.8
KSH				AMB	AMB		
	comp=Z,250nm,4.4s						
KSH				LR	LR		
	comp=Z,240nm,10.8s						
KSH				LR	LR		
	comp=Z,270nm,10.8s						
KSH				LR	LR		
	comp=Z,360nm,17.6s						
I07A	Izee	128.93	292		PKiKP	20 36 51.7	+0.9
J05D	Fort Rock, OR	129.10	291	P	PKiKP	20 36 53.2	+2.0
	baz=141						
KK31	Karatay Array	129.12	70		PKPdf	20 36 50.0	-0.4
KKAR	Karatay Array	129.12	70		PKPdf	20 36 50.0	-0.4
KKAR	Karatay Array	129.12	70		PKPdf	20 36 49.4	-1.0
ABKAR	Akbulak array	129.25	58		PKPdf	20 36 50.0	-0.3
PINE	Pine Mountain	129.36	291		PKiKP	20 36 52.6	+0.9
F10A	Beach Ranch, E	129.37	296		PKiKP	20 36 51.3	-0.3
HUMO	Hull Mountain	129.37	289		PKiKP	20 36 52.3	+0.7
JTMT	Jette	129.45	299		PKiKP	20 36 52.1	+0.4
G08A	Pilot Rock	129.62	294		PKiKP	20 36 52.7	+0.6
AML	Almayashu	129.85	73	P	PKPdf	20 36 52.1	-0.2
	SNR=12						
I05D	Terrebonne, OR	129.96	291	P	PKiKP	20 36 54.2	+1.5
	baz=140						
I04A	Tendick Farm,	130.03	290	P	PKiKP	20 36 53.0	+0.1
	baz=140						
KMI	Kunming	130.06	112	PKP	PKiKP	20 36 53.8	0.0
KMI				LR	LR		
	comp=Z,260nm,13.7s						
KMI				LR	LR		
	comp=Z,130nm,9.0s						
KMI				LR	LR		
	comp=Z,280nm,16.4s						
EKS2	Erkin-Say	130.30	73	P	PKPdf	20 36 52.5	-0.3
	SNR=13						
WALA	Waterton Lakes	130.30	300		PKPdf	20 36 52.1	-0.5
UCH	Uchtor	130.31	74	P	PKPdf	20 36 53.3	+0.1
	SNR=11						
KZA	Kyzart	130.54	74	P	PKPdf	20 36 53.7	+0.1
	SNR=11						
E08A	Dider Farm, El	130.58	295		PKPdf	20 36 52.8	-0.2
AAK	Ala-Archa	130.62	73	P	PKPdf	20 36 53.8	+0.4
	SNR=8.8						
AAK	Ala-Archa	130.62	73		PKPdf	20 36 52.5	-0.9
KBK	Karagaybulak	130.84	74	P	PKPdf	20 36 54.1	+0.2
	SNR=6.2						
NEW	Newport	131.08	298	PKP	PKiKP	20 36 54.5	-0.4
	comp=Z,4.1nm,0.8s,baz=138,slow=4.1,SNR=6.3						
NEW	Newport	131.08	298		PKPdf	20 36 54.2	+0.3
NEW	Newport	131.08	298	P	PKiKP	20 36 55.3	+0.4
	baz=139						
USP	Ospenovka	131.10	73	P	PKPdf	20 36 53.7	-0.5
	SNR=7.2						
ULHL	Ulahol	131.14	75	P	PKPdf	20 36 54.8	+0.3
	SNR=5.2						
KLMR	Klimovskoe	131.15	36	*e*PKPdf	PKPdf	20 36 46.8	-6.8
KLMR				AMP		20 36 55.5	
	comp=Z,33nm,1.5s						
KLMR				PP	PP	20 38 55.8	-16
LON	Longmire	132.01	293		PKiKP	20 36 56.6	-0.2
B08A	Colville Reser	132.12	296		PKiKP	20 36 56.9	-0.1
KIRV	Kirov	132.47	43	PKP	PKiKP	20 36 57.3	+0.1
	comp=Z,6.8nm,0.8s,baz=238,slow=5.6,SNR=5.7						
GYA	Guiyang	132.99	115	*e*Pdif	Pdif	20 33 54.9	0.0
GYA				PKP	PKiKP	20 36 59.3	-0.2
GYA				PP	PP	20 39 23.3	-1.0
GYA				PKS		20 40 27.3	
GYA	Guiyang	132.99	115	SS	SS	20 57 09.8	+4.3
GYA				AMB	AMB		
	comp=Z,160nm,8.0s						
GYA				LR	LR		
	comp=N,280nm,18.6s						
GYA				LR	LR		
	comp=E,240nm,18.3s						
GYA				LR	LR		
	comp=Z,200nm,19.1s						
GYA	Guiyang	132.99	115	PKP	PKiKP	20 36 59.3	-0.2
GYA				PP	PP	20 39 23.3	-1.0
GYA				PKS	PKSdf	20 40 27.3	-7.7
GYA				SKKS		20 46 19.0	
GYA				SS	SS	20 57 09.8	+4.3
GYA				AMB	AMB		
	comp=Z,160nm,8.0s						
GYA				LR	LR		
	comp=Z,280nm,18.6s						
GYA				LR	LR		
	comp=Z,240nm,18.3s						
B05A	Bryant	133.28	294	P	PKiKP	20 36 59.7	+0.5
	baz=138						
SUMG	Summit	133.33	355	*i* P	PKiKP	20 36 59.0	-0.1
SUMG	Summit	133.33	355		PKiKP	20 36 58.8	-0.4
ARCES	ARCESS Array B	134.97	23	PKhKP	PKPpre	20 36 53.4	
	comp=Z,4.2nm,1.0s,baz=215,slow=1.5,SNR=4.6						
ARCES				PKP	PKPdf	20 36 59.4	-1.1
	comp=Z,5.6nm,0.8s,baz=193,slow=2.2,SNR=14						
ARCES				SKP		20 40 38.0	
	comp=Z,4.5nm,0.7s,baz=227,slow=2.0,SNR=11						
ARCES	ARCESS Array B	134.97	23		PKPdf	20 36 58.5	-2.0
CD2	Chengdu	135.45	109	PKP	PKPdf	20 37 03.0	+0.3
CD2				PP	PP	20 39 40.6	+0.6
CD2				AMB	AMB		
	comp=Z,230nm,5.3s						
CD2				LR	LR		
	comp=Z,320nm,12.7s						
CD2				LR	LR		
	comp=Z,240nm,14.7s						
CD2				LR	LR		
	comp=Z,360nm,13.2s						
QZH	Quanzhou	136.61	129	*e*PKP	PKiKP	20 37 05.9	-0.8
QZH				*e*PP	PP	20 39 50.8	+3.9
QZH				LR	LR		
	comp=Z,250nm,18.0s						
KULLO	Kullorsuaq	136.67	348	*i* P	PKPdf	20 37 04.3	+0.8
DAG	Danmarks Havn	137.33	2	*i* P	PKPdf	20 37 02.6	-2.1
MK31	Makanchi Array	137.41	75		PKPpre	20 36 57.1	
MKAR	Makanchi Array	137.41	75	PKhKP	PKPpre	20 36 57.3	
	comp=Z,1.5nm,0.8s,baz=241,slow=4.5,SNR=9.9						
MKAR				PKP	PKPdf	20 37 04.9	-1.0
	comp=Z,6.1nm,0.9s,baz=262,slow=2.9,SNR=16						
MKAR				SKPab	SKPab	20 40 52.9	+7.7
	comp=Z,0.7nm,0.6s,baz=226,slow=2.2,SNR=3.0						
MKAR	Makanchi Array	137.41	75		PKPpre	20 36 56.0	
MKAR					PKPdf	20 37 04.6	-1.2
ENH	Enshi	137.52	115		PKPdf	20 37 03.8	-2.8
WMQ	Urumqi	137.84	82	*e*PKP	PKiKP	20 37 07.9	-0.9
WMQ				LR	LR		
	comp=Z,720nm,29.0s						
KURK	Kurchatov	138.48	68		PKPpre	20 36 58.7	
LZH	Lanzhou	139.75	104	*e*PKP	PKPdf	20 37 08.0	-2.7
LZH				LR	LR		
	comp=Z,250nm,15.7s						
LZH				LR	LR		
	comp=Z,260nm,16.4s						
LZH				LR	LR		
	comp=Z,250nm,17.8s						
WHN	Wuhan	139.87	120	PKP	PKiKP	20 37 13.8	+0.6
YKA	Yellowknife Ar	140.15	314	PKhKP	PKPpre	20 37 01.8	
	comp=Z,0.8nm,0.7s,baz=135,slow=3.7,SNR=12						
YKA				PKP	PKPdf	20 37 09.8	-0.5
	comp=Z,5.1nm,0.6s,baz=128,slow=2.6,SNR=31						
YKA				PP	PP	20 40 03.8	-5.2
	comp=Z,3.6nm,1.0s,baz=127,slow=6.5,SNR=7.5						
YKA				SKPbc	SKiKP	20 40 49.5	+2.1
	comp=Z,1.6nm,0.8s,baz=127,slow=2.5,SNR=4.4						
GTA	Gaotai	140.44	97	*e*PKP	PKPdf	20 37 05.3	-6.5
GTA				PP	PP	20 40 04.4	-6.8
GTA				SKKS		20 46 54.4	
XAN	Xi'an	140.45	111	PKP	PKPdf	20 37 05.8	-6.0
XAN				LR	LR		
	comp=Z,160nm,18.1s						
XAN				LR	LR		
	comp=Z,150nm,14.7s						
XAN				LR	LR		
	comp=Z,250nm,17.2s						
XAN	Xi'an	140.45	111		PKPpre	20 37 03.8	
SPITS	Spitsbergen Ar	140.97	13	PKhKP	PKPpre	20 37 05.8	
	comp=Z,8.6nm,0.9s,baz=178,slow=5.8,SNR=6.6						
RES	Resolute Bay	142.53	336	PKhKP	PKPpre	20 37 10.9	
	comp=Z,12nm,0.9s,baz=138,slow=4.1,SNR=17						
NJ2	Nanjing	143.05	125	*e*PKP	PKPdf	20 37 17.0	+0.5
WRAK	Wrangell Islan	143.42	297		PKPdf	20 37 17.6	+1.4
ZAA0	Zalesovo Array	143.47	69		PKPab	20 37 12.6	-0.3
ZALV	Zalesovo Beam	143.47	69	PKhKP	PKPab	20 37 12.7	-0.1
	comp=Z,1.6nm,0.5s,baz=276,slow=5.4,SNR=9.0						
ZALV	Zalesovo Beam	143.47	69		PKPab	20 37 12.0	-0.8
DLBC	Dease Lake	143.65	301		PKPdf	20 37 16.0	-0.8
TIY	Taiyuan	145.08	112	*e*PKPbc	PKPab	20 37 19.5	0.0
TIY				PKPab	PKiKP	20 37 22.1	-1.7
TIY				PP	PP	20 40 42.3	+3.3
TIY				SS	SS	20 59 30.1	+2.2
TIY				AMB	AMB		
	comp=Z,68nm,3.5s						
TIY				LR	LR		
	comp=Z,71nm,4.2s						
TIY				LR	LR		
	comp=Z,200nm,18.4s						
JCJ	Chichijima	145.34	161	PKPbc	PKPbc	20 37 19.8	-0.7
	comp=Z,221nm,0.9s,baz=179,slow=3.2,SNR=14						
JIS	Juneau Island	145.42	298		PKiKP	20 37 21.8	-1.8
BESE	Bessie Mountai	145.80	298		PKPab	20 37 22.6	+1.1
TIA	Tai'an	145.92	119	PKPbc	PKPab	20 37 22.6	0.0
BTO	Baotou	146.28	106	*e*PKPbc	PKPdf	20 37 21.4	-0.5
SKAG	Skagway	146.49	299		PKPab	20 37 24.4	+0.4
WHY	Whitehorse	146.95	302		PKPbc	20 37 25.1	+0.6
C36M	Paulatuk	147.16	320		PKPbc	20 37 24.4	-0.2
C36M	Paulatuk	147.16	320	P	PKPbc	20 37 24.7	+0.1
	baz=116						
HHC	Hu-ho-hao-te	147.20	108	*e*PKPbc	PKPbc	20 37 26.3	+0.5
HYT	Haines Junctio	148.14	301		PKiKP	20 37 28.9	-0.5
JNU	Nakatsue	148.38	140	PKPbc	PKPbc	20 37 29.0	-0.1
	comp=Z,28nm,1.0s,baz=123,slow=3.8,SNR=6.2						
JNU	Nakatsue	148.38	140		PKPbc	20 37 29.8	+0.7
BJT	Baijiatuau	148.65	114		PKiKP	20 37 30.2	-0.7
BJI	Beijing	148.67	114	PKPbc	PKPdf	20 37 26.1	+0.3
BJI				pPKP	PKPbc	20 37 29.8	+0.3
CTGM	Chitina Glacie	149.84	299		PKiKP	20 37 33.5	+0.6
SONM	Songino Array	149.86	93	PKP	PKPdf	20 37 27.6	-0.1
	comp=Z,14nm,1.0s,baz=206,slow=1.2,SNR=20						
SONM				PKPbc	PKPbc	20 37 32.6	+0.1
	comp=Z,29nm,0.9s,baz=216,slow=2.6,SNR=99						
INK	Inuvik	149.88	315	PKP	PKPdf	20 37 25.5	-1.3
	comp=Z,3.5nm,1.1s,baz=172,slow=4.3,SNR=3.6						
INK				PKPbc	PKiKP	20 37 32.4	-0.2
	comp=Z,55nm,0.9s,baz=78,slow=2.8,SNR=72						
INK	Inuvik	149.88	315		PKPbc	20 37 31.9	+0.2
BARN	Barnard Glacie	150.02	299		PKiKP	20 37 34.1	+0.7
ULN	Ulaanbaatar	150.21	94		PKPdf	20 37 28.9	+0.7
EPYK	Eagle Plains	150.30	311		PKPbc	20 37 32.6	-0.2
EPYK	Eagle Plains	150.30	311	P	PKiKP	20 37 33.3	-0.3
	baz=112						
BALM	Baldy	150.31	299		PKiKP	20 37 33.6	-0.2
TGL	Tana Glacier	150.38	298		PKiKP	20 37 33.9	-0.1
DAWY	Dawson	150.41	305		PKPbc	20 37 33.4	+0.2
CRQM	Cirque	150.52	298		PKPdf	20 37 26.2	-2.1
MCARA	McCarthy VSAT	150.76	299		PKPdf	20 37 27.3	-1.1
VRDI	Verde Repeater	150.87	299		PKiKP	20 37 35.4	+0.2
VRDI				IAMs_20	IAMs_20	21 37 51.6	
	comp=Z,577nm,22.0s						
BCAR	Beaver Creek A	150.97	303	PKPdf	PKPdf	20 37 26.7	-2.1
BCAR				PKPbc	sPKPdf	20 37 36.0	+0.3
RAGM	Ragged Mountai	151.02	296		PKiKP	20 37 36.5	+1.3
GLB	Gilahina Butte	151.12	299		PKiKP	20 37 36.5	+1.1
KSAR	Wonju Array Be	151.28	132	PKPbc	PKiKP	20 37 36.4	-0.1
KSRS	Korea Array	151.31	132	PKP	PKPdf	20 37 29.6	-0.4
	comp=Z,2.7nm,1.1s,baz=211,slow=2.2,SNR=5.2						
KSRS				PKPbc	PKiKP	20 37 36.4	-0.2
	comp=Z,11nm,0.8s,baz=200,slow=2.4,SNR=28						
KSRS				PKPab	PKPab	20 37 44.9	+0.8
	comp=Z,40nm,1.0s,baz=196,slow=2.7,SNR=24						
KS19	Wonju Array Si	151.33	132		PKiKP	20 37 36.5	-0.1
EGAK	Eagle	151.40	306		PKiKP	20 37 35.9	+0.1
EYAK	Cordova Ski Ar	151.57	296		PKiKP	20 37 37.4	+1.1
MENT	Mentasta	151.72	302		PKPbc	20 37 36.3	+0.1
HIN	Hinchinbrook I	151.83	296		PKiKP	20 37 38.0	+1.1
NRIK	Noril'sk	151.97	44	PKP	PKPdf	20 37 27.6	-2.5
	comp=Z,1.6nm,0.8s,baz=306,slow=6.0,SNR=3.8						

NRIK				PKPbc	PKiKP	20 37 36.7	-0.2
	comp=Z,7.6nm,0.8s,baz=80,slow=0.3,SNR=13						
FID	Port Fidalgo	151.98	296		PKiKP	20 37 37.9	+0.7
INU	Inuyama	152.23	148		PKiKP	20 37 38.5	0.0
GLI	Glacier Island	152.31	296		PKPbc	20 37 36.7	-0.9
PAX	Paxson	152.47	301		PKPbc	20 37 37.7	-0.3
RIDG	Independent Ri	152.50	303		PKiKP	20 37 39.9	+1.7
SCM	Sheep Creek Mo	152.81	298		PKiKP	20 37 40.0	+1.0
KNK	Knik Glacier	153.13	297		PKiKP	20 37 40.7	+1.1
SML	Sawmill	153.24	298		PKiKP	20 37 41.0	+1.2
DHY	Denali Highway	153.31	301		PKiKP	20 37 40.9	+0.8
KDAK	Kodiak Island	153.38	287	PKPbc	PKiKP	20 37 40.8	+0.7
	comp=Z,19nm,0.7s,baz=148,slow=2.3,SNR=14						
KDAK	Kodiak Island	153.38	287		PKiKP	20 37 41.0	+0.9
PRP	Porcupine Dome	153.39	306		PKiKP	20 37 40.8	+0.6
GHO	Glory Hole Cre	153.48	297		PKiKP	20 37 41.5	+1.2
PMR	Palmer	153.50	297		PKPdf	20 37 34.2	+1.8
RC01	Rabbit Creek A	153.56	295		PKiKP	20 37 41.9	+1.5
FYU	Fort Yukon	153.59	309		PKiKP	20 37 41.8	+1.5
HDA	Harding Lake	153.61	304		PKPdf	20 37 29.6	-3.0
HDA					PKiKP	20 37 41.7	+1.2
HDA	Harding Lake	153.61	304	P	PKiKP	20 37 42.3	+1.9
	baz=109						
MAT	Matsushiro	153.66	149	PKP	PKiKP	20 37 41.9	+0.4
MJAR	Matsushiro Arr	153.66	149	PKP	PKPdf	20 37 33.6	0.0
	comp=Z,3.7nm,1.1s,baz=242,slow=4.4,SNR=6.4						
MJAR				PKPbc	PKiKP	20 37 41.8	+0.3
	comp=Z,13nm,1.0s,baz=198,slow=3.1,SNR=19						
MJAR				PKPab	PKPab	20 37 54.0	-0.1
	comp=Z,25nm,1.0s,baz=198,slow=5.8,SNR=12						
MJAR				PP	PP	20 41 27.8	-0.5
	comp=Z,2.6nm,1.1s,baz=204,slow=8.0,SNR=4.3						
MJAR	Matsushiro Arr	153.66	149	PKPdf	PKPdf	20 37 32.5	-1.1
MJAR				PKPbc	PKPbc	20 37 41.4	0.0
MJB9	Matsu-Tunnel	153.66	149		PKiKP	20 37 41.9	+0.4
ILAR	Eielson Array	153.70	304	PKP	PKPdf	20 37 28.9	-3.8
	comp=Z,4.4nm,1.2s,baz=336,slow=2.0,SNR=9.6						
ILAR				PKPbc	PKiKP	20 37 41.3	+0.7
	comp=Z,32nm,1.0s,baz=111,slow=0.3,SNR=34						
RND	Reindeer	154.06	301		PKiKP	20 37 42.7	+1.2
WRH	Wood River Hil	154.09	303		PKPdf	20 37 30.1	-3.1
COLA	College	154.12	304		PKPbc	20 37 40.8	-0.6
MCK	McKinley	154.20	301		PKPdf	20 37 30.0	-3.4
MDM	Murphy Dome	154.30	304		PKPdf	20 37 28.9	-4.6
NEA	Nenana	154.53	303		PKPdf	20 37 35.8	+1.9
BWN	Browne	154.57	302		PKiKP	20 37 43.3	+0.9
TRF	Thorofare Moun	154.68	300		PKiKP	20 37 46.3	+3.4
KTH	Kantishna Hill	154.98	300		PKiKP	20 37 44.2	+0.8
PPLA	Purkeypile	155.31	298		PKPdf	20 37 36.6	+1.4
MLY	Manley	155.34	304		PKPdf	20 37 32.7	-2.4
CHGN	Chignik	155.43	281		PKPab	20 38 02.6	+1.5
COLD	Coldfoot	155.65	309		PKPdf	20 37 34.0	-1.3
TOLK	Toolik Lake Re	155.67	313		PKPdf	20 37 32.0	-3.4
CN2	Changchun	155.76	121	*e*P	PKPab	20 38 03.0	+0.1
CN2	Changchun	155.76	121	*e*PKP	PKPdf	20 37 36.0	-0.2
IMAR	Indian Mountai	156.79	305		PKPdf	20 37 34.4	-2.5
HIA	Hailar	157.31	105	PKPdf	PKPdf	20 37 37.8	-0.3
HIA					PKPab	20 38 09.6	+0.1
MDJ	Mudanjiang	158.13	126	PKP	PKPdf	20 37 39.3	+0.1
MDJ	Mudanjiang	158.13	126		PKPdf	20 37 39.0	-0.2
MDJ					PKPab	20 38 12.8	-0.2
USA0B	Ussuriysk Arra	158.69	131		PKPab	20 38 15.4	-0.1
USA0B				IAMs_20	IAMs_20	21 50 21.3	
	comp=Z,357nm,20.0s						
USRK	Ussuriysk Ar.	158.69	131	PKP	PKPdf	20 37 40.5	+0.6
	comp=Z,0.8nm,0.6s,baz=231,slow=48,SNR=2.5						
USRK				PKPab	PKPab	20 38 15.5	0.0
	comp=Z,11nm,1.0s,baz=222,slow=5.1,SNR=17						
USRK	Ussuriysk Ar.	158.69	131		PKPdf	20 37 38.9	-1.0
USRK					PKPab	20 38 15.2	-0.3
RDOG	Red Dog Mine	160.56	310	PKPdf	PKPdf	20 37 37.1	-4.2
RDOG					PKPab	20 38 23.7	+0.7
YSS	Yuzh-Sakhalins	164.60	148	PKPdf	PKPdf	20 37 46.1	+0.3
YSS					PKPab	20 38 40.5	-0.7
TIXI	Tiksi	165.12	32	PKPab	PKPab	20 38 43.5	+0.6
	comp=Z,1.9nm,0.7s,baz=356,slow=4.3,SNR=5.8						
TIXI				PP	PP	20 42 36.5	+6.1
	comp=Z,1.1nm,0.3s,baz=324,slow=5.3,SNR=6.3						
TIXI	Tiksi	165.12	32		PKPab	20 38 43.9	+1.0
PETK	Petropavlovsk-	172.15	194	PKP	PKPdf	20 37 47.6	-3.2
	comp=Z,12nm,1.1s,baz=151,slow=3.4,SNR=5.1						
PETK				PKPab	PKPab	20 39 15.2	+0.8
	comp=Z,6.8nm,0.9s,baz=193,slow=5.8,SNR=4.3						
PETK	Petropavlovsk-	172.15	194		PKPdf	20 37 47.9	-2.8
PETK					PKPab	20 39 14.3	-0.1
SEY	Seymchan	177.59	23	PKP	PKPdf	20 37 50.2	-1.8
	comp=Z,2.4nm,0.9s,baz=176,slow=0.9,SNR=6.5						
SEY				PKPab	PKPab	20 39 38.0	-0.4
	comp=Z,1.6nm,0.8s,baz=76,slow=23,SNR=2.6						
SEY				PP	PP	20 43 35.7	+3.5
	comp=Z,1.0nm,0.6s,baz=360,slow=2.8,SNR=5.1						
MA2	Magadan	177.82	121	PKPab	PKPab	20 39 39.4	-0.2
	comp=Z,2.9nm,0.3s,baz=220,slow=5.2,SNR=12						
MA2				PP	PP	20 43 32.0	-1.7
	comp=Z,2.5nm,0.4s,baz=234,slow=5.3,SNR=15						
MA2	Magadan	177.82	121	PKPdf	PKPdf	20 37 50.6	-1.6
MA2					PKPab	20 39 38.3	-1.3
MA2					PP	20 43 31.2	-2.5

NIED ***19*** *20:22:00, 34°.10N×142°.20E, h5^{km}, Mw4.3 Best double couple: M$_0$3.49000×10^{15} NP1:φ$_s$170.00000°, δ70.00000°, λ-88.00000°. NP2:φ$_s$346.00000°, δ21.00000°, λ-94.00000°.*

IDC ***19*** *20:22:55.2±0.4, 34°.10N×142°.21E, h0^{km}, mb4.4/35, mb1 4.5/41, mb1mx4.4/65, mbtmp4.4/41, ML3.3/4, MS3.4/6, Ms1 3.4/6, ms1mx3.1/54, Error ellipse: s-maj=12.7km s-min=10.8km az=106.0*

JMA ***19*** *20:22:57.5±0.3, 34°.05N×142°.24E, h52^{km}, M4.3*

NEIC ***19*** *20:23:00.3±1.1, 34°.05N±0°.07×142°.12E±0°.10, h33^{km}±4^{km}, mb4.9/115, Error ellipse: s-maj=12.8km s-min=9.1km az=123.0*

ISC 19 20:22:55.2±3.3**, 34°.06N**±0°.06×**142°.20E**±0°.05**, h1**^{km}±19^{km}**, n234,** σ0^{s}.**94**/224**, mb4.8**/86**, MS3.5**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	1.17	301	P	Pn	20 23 18.3	0.0
BSO1				*e*S	Sb	20 23 33.5	+0.1
BSO3	Boso 3	1.58	298	P	Pn	20 23 24.6	+0.5
BSO3				*e*S	Sn	20 23 45.5	+0.4
BSO4	Boso 4	1.79	302	P	Pn	20 23 28.0	+0.7
BSO4				*e*S	Sn	20 23 49.3	-1.4
KTR	Katsuura	1.89	305	P	Pn	20 23 29.0	+0.3
KTR				*e*S	Sn	20 23 52.4	-0.8
CHOJ	Chosi	1.97	326	P	Pn	20 23 29.6	-0.2
CHOJ				*e*S	Sn	20 23 53.4	-1.8
JKUC	kamogawauchiur	1.98	304	P	Pn	20 23 30.2	+0.3
JKUC				*e*S	Sn	20 23 54.6	-0.8
JMKN	Mikurajimanish	2.17	266	P	Pn	20 23 32.4	-0.2
JMKN				*e*S	Sn	20 23 58.0	-2.2
JHJ2	Mitsune	2.20	245	P	Pn	20 23 33.5	+0.5
JHJ2	Mitsune	2.20	245		Pn	20 23 33.5	+0.5
JHJ	Hachijo jima 2	2.23	246	Pn	Pn	20 23 33.6	+0.3
	188nm,0.3s,baz=176,slow=23,SNR=59						
JHJ				Sn	Sn	20 23 58.5	-3.0
	201nm,0.3s,baz=67,slow=22,SNR=9.8						
JIM2	Oshima 3	2.38	287	P	Pn	20 23 34.7	-0.8
JIM2				*e*S	Sn	20 24 02.3	-3.0
JAOM	Aogashimamukai	2.59	233	P	Pn	20 23 38.3	0.0
JOD2	Odawara 2	2.83	296	P	Pn	20 23 41.0	-0.6
JOD2				*e*S	Sn	20 24 14.0	-2.4
JAG	Ashikaga	3.26	317	P	Pn	20 23 47.3	-0.2
JYN	Shimob	3.33	296	P	Pn	20 23 48.6	0.0
JYN				*e*S	Sn	20 24 27.9	-1.0
JRY	Ryogami san	3.33	307	P	Pn	20 23 48.8	+0.2
JRY				*e*S	Sn	20 24 28.0	-0.9
JFT	Otama	3.77	337	P	Pn	20 23 53.9	-0.6
JFT				S	Sn	20 24 35.2	-4.3
MJAR	Matsushiro Arr	4.09	308	Pn	Pn	20 23 59.2	+0.2
	0.8nm,0.3s,baz=113,slow=12,SNR=39						
MJAR				Sn	Sn	20 24 48.1	+0.5
	1.7nm,0.3s,baz=350,slow=28,SNR=5.8						
MJAR	Matsushiro Arr	4.09	308		Pn	20 23 59.0	0.0
MAJO	Matsushiro	4.10	308		Pn	20 23 59.8	+0.7
MAT	Matsushiro	4.10	308	P	Pn	20 23 59.6	+0.6
MAT				*e*S	Sn	20 24 46.5	-1.2
MAT	Matsushiro	4.10	308	P	Pn	20 23 59.7	+0.7
MAT				S	Sn	20 24 47.6	-0.1
MJB9	Matsu-Tunnel	4.10	308		Pn	20 24 00.0	+0.9
INU	Inuyama	4.46	288		Pn	20 24 05.5	+1.5
JCJ	Chichijima	6.95	180	Pn	Pn	20 24 37.5	-0.7
	8.6nm,0.3s,baz=306,slow=20,SNR=2.1						
JCJ				Sn	Sn	20 25 50.7	-7.2
	22nm,0.3s,baz=285,slow=21,SNR=5.7						
JNU	Nakatsue	9.49	267	Pn	Pn	20 25 14.5	+1.4
	0.4nm,0.3s,baz=141,slow=20,SNR=2.5						
ASAJ	Asahikawa	10.04	2	Pn	Pn	20 25 17.6	-3.1
	5.7nm,0.3s,baz=219,slow=11,SNR=66						
ASAJ				Sn	Sn	20 27 05.7	-8.3
	0.9nm,0.3s,baz=232,slow=31,SNR=2.4						
ASAJ				LR	LR	20 29 41.7	
	comp=Z,192nm,21.3s,baz=166,slow=41						
KSRS	Korea Array	12.08	290	Pn	Pn	20 25 49.4	+0.9
	0.2nm,0.3s,baz=168,slow=41,SNR=2.4						
KSRS				LR	LR	20 31 03.1	
	comp=Z,60nm,19.9s,baz=104,slow=40						
USRK	Ussuriysk Ar.	12.85	325	Pn	Pn	20 25 58.1	-0.8
	baz=157,slow=20,SNR=2.7						
USRK	Ussuriysk Ar.	12.85	325		Pn	20 25 58.3	-0.6
YSS	Yuzh-Sakhalins	12.88	2		Pn	20 25 56.5	-2.9
KLR	Kul'dur	17.02	336	Pn	Pn	20 26 52.7	-1.8
	0.1nm,0.3s,baz=124,slow=9.3,SNR=5.6						
SSLB	Suanglung	21.19	247	P	P	20 27 40.4	-1.9
PETK	Petropavlovsk-	22.01	25	P	P	20 27 49.9	-1.0
	8.2nm,1.0s,baz=286,slow=12,SNR=2.9						
PETK				LR	LR	20 37 48.6	
	comp=Z,102nm,19.4s,baz=240,slow=41						
PETK	Petropavlovsk-	22.01	25	P	P	20 27 50.5	-0.3
WHN	Wuhan	23.77	269	P	P	20 28 09.0	-0.3
MA2	Magadan	26.14	10	P	P	20 28 31.2	+0.5
	12nm,0.8s,baz=191,slow=8.4,SNR=14						
MA2	Magadan	26.14	10	P	P	20 28 30.9	+0.1
H11N2	WAKE ISLAND Hy	26.16	117	T	T	20 55 50.0	
	baz=309,slow=75,SNR=8.1						
H11N1	WAKE ISLAND Hy	26.16	117	T	T	20 55 56.7	
	baz=309,slow=75,SNR=4.3						
H11N3	WAKE ISLAND Hy	26.17	117	T	T	20 56 03.7	
	baz=309,slow=75,SNR=5.0						
H11S3	WAKE ISLAND Hy	26.78	119	T	T	20 56 51.1	
	baz=312,slow=75,SNR=5.0						
H11S1	WAKE ISLAND Hy	26.78	119	T	T	20 56 48.3	
	baz=312,slow=75,SNR=5.4						
H11S2	WAKE ISLAND Hy	26.80	119	T	T	20 56 55.5	
	baz=312,slow=75,SNR=3.2						
XAN	Xi'an	27.51	279	P	P	20 28 42.4	-1.0
XAN				pP		20 29 02.6	
XAN				S	S	20 33 03.3	-22
XAN	Xi'an	27.51	279	P	P	20 28 42.9	-0.5
XAN				IAmb	IAmb	20 28 45.4	
	comp=Z,57nm,1.7s						
ENH	Enshi	27.88	271	P	P	20 28 45.1	-1.6
YAK	Yakutsk	29.10	348	P	P	20 28 57.0	-0.1
	comp=Z,5.6nm,0.4s,baz=122,slow=1.2,SNR=6.2						
YAK	Yakutsk	29.10	348	P	P	20 28 57.1	-0.1
YAK				IAmb	IAmb	20 28 57.8	
	comp=Z,16nm,0.7s						
SEY	Seymchan	29.59	9	P	P	20 29 02.1	+0.6
	comp=Z,4.7nm,0.8s,baz=187,slow=6.2,SNR=23						
ULN	Ulaanbaatar	29.63	308	P	P	20 29 03.2	+1.0
SONM	Songino Array	30.05	308	P	P	20 29 06.9	+0.9
	comp=Z,1.3nm,0.8s,baz=106,slow=5.6,SNR=12						
SONM				LR	LR	20 43 31.7	
	comp=Z,198nm,18.5s,baz=110,slow=41						
SONM	Songino Array	30.05	308	P	P	20 29 06.4	+0.5
GTA	Gaotai	34.15	292	*e*P	P	20 29 42.0	0.0
GTA				pP		20 29 52.4	
GTA				sP		20 29 56.8	
TIXI	Tiksi	38.31	353	P	P	20 30 16.6	-0.4
	comp=Z,4.3nm,0.7s,baz=143,slow=6.3,SNR=25						
TIXI	Tiksi	38.31	353	P	P	20 30 16.8	-0.2
PBKT	Sadao Pong	40.82	255	P	P	20 30 37.7	-0.8
CHTO	Chiang Mai	41.29	260	P	P	20 30 41.3	-1.1
CMAR	Chiang Mai Arr	41.47	259	P	P	20 30 43.4	-0.6
	comp=Z,2.6nm,0.9s,baz=47,slow=6.8,SNR=14						
CMAR				LR	LR	20 48 41.2	
	comp=Z,31nm,19.7s,baz=215,slow=37						
CMAR	Chiang Mai Arr	41.47	259	P	P	20 30 42.8	-1.1
LSA	Lhasa	43.21	279	P	P	20 30 58.3	-0.2
ANM	Nome	43.82	30	P	P	20 31 02.9	+0.4
ZALV	Zalesovo Beam	44.42	315	P	P	20 31 07.3	-0.1
	comp=Z,0.8nm,0.5s,baz=93,slow=6.5,SNR=5.8						
ZALV				PcP	PcP	20 32 50.8	-0.4
	comp=Z,1.6nm,0.7s,baz=80,slow=2.9,SNR=4.4						
ZALV	Zalesovo Beam	44.42	315	P	P	20 31 07.1	-0.3
RDOG	Red Dog Mine	45.88	25	P	P	20 31 19.5	+0.6
NRIK	Noril'sk	46.23	336	P	P	20 31 21.8	+0.2
	comp=Z,3.9nm,1.0s,baz=116,slow=6.4,SNR=6.0						
NRIK				PcP	PcP	20 32 56.8	-0.3
	comp=Z,1.9nm,0.6s,baz=135,slow=3.8,SNR=2.2						
MK31	Makanchi Array	46.29	305	P	P	20 31 22.6	+0.2
MKAR	Makanchi Array	46.29	305	P	P	20 31 22.9	+0.5
	comp=Z,1.0nm,0.7s,baz=90,slow=9.1,SNR=16						
MKAR				LR	LR	20 52 24.3	
	comp=Z,78nm,18.5s,baz=138,slow=38						
MKAR	Makanchi Array	46.29	305	P	P	20 31 22.3	-0.1
ODAN	Odare	47.32	277	*e*P	P	20 31 29.8	-1.2
RAMN	Ramite	47.93	277	*e*P	P	20 31 35.6	-0.2
	comp=Z,15nm,0.6s						
JIRN	Jiri	48.00	278	*e*P	P	20 31 36.6	+0.1
	comp=Z,32nm,0.7s						
GUN	Gumba	48.16	279	*e*P	P	20 31 37.7	0.0
	comp=Z,18nm,0.6s						
KURK	Kurchatov	48.30	310	P	P	20 31 37.3	-0.7
KURK				IAmb	IAmb	20 31 50.5	
	comp=Z,8.6nm,0.7s						
PKI	Pulchoki	48.68	279	*e*P	P	20 31 41.1	-0.5
	comp=Z,11nm,0.8s						
PKIN	Phulchoki	48.69	279	*e*P	P	20 31 41.7	+0.1
KKN	Kakani	48.70	279	*e*P	P	20 31 42.2	+0.5
	comp=Z,16nm,0.8s						
IMAR	Indian Mountai	48.90	29	P	P	20 31 42.1	-0.3
DMN	Daman	48.91	279	*e*P	P	20 31 43.7	+0.4
GKN	Gorkha	49.15	279	*e*P	P	20 31 45.6	+0.6
	comp=Z,16nm,0.7s						
DANN	Dangsing	49.73	280	*e*P	P	20 31 49.7	0.0
	comp=Z,34nm,0.6s						
MLY	Manley	50.05	31	P	P	20 31 51.8	+0.6
NEA	Nenana	50.73	31	P	P	20 31 56.2	-0.1
NEA				IAmb	IAmb	20 31 57.9	
	comp=Z,17nm,1.3s						
TOLK	Toolik Lake Re	50.83	26	P	P	20 31 57.5	+0.4
TOLK				IAmb	IAmb	20 31 58.8	
	comp=Z,15nm,1.0s						
WRH	Wood River Hil	51.16	31	P	P	20 31 59.8	+0.3
WRH				IAmb	IAmb	20 33 49.6	
	comp=Z,20nm,1.9s						
IL31		51.68	31	P	P	20 32 02.6	-0.8
IL31				IAmb	IAmb	20 32 06.3	
	comp=Z,22nm,1.7s						
ILAR	Eielson Array	51.68	31	P	P	20 32 02.6	-0.9
	comp=Z,2.7nm,0.7s,baz=261,slow=5.8,SNR=35						
ILAR				PcP	PcP	20 33 15.6	-1.4
	comp=Z,0.4nm,0.5s,baz=281,slow=3.3,SNR=1.1						
ILAR	Eielson Array	51.68	31	P	P	20 32 02.5	-1.0
KSH	Kashi	52.25	296	P	P	20 32 13.0	+4.7
KSH				PP	PP	20 34 13.3	+6.8
KSH				PcS	PcS	20 37 20.6	+2.5
KSH				S	S	20 39 40.4	+6.1
KSH				ScS	ScS	20 42 01.9	+2.1
FYU	Fort Yukon	52.38	29	P	P	20 32 10.1	+1.5
SCRK	Sand Creek	52.96	32	P	P	20 32 12.4	-0.7
WB0	Warramunga Arr	54.04	189	P	P	20 32 20.8	-0.6
WB0				IAmb	IAmb	20 32 23.8	
	comp=Z,13nm,0.9s						
WR0	Warramunga Arr	54.22	189	P	P	20 32 23.0	+0.4
WR0				IAmb	IAmb	20 32 25.1	
	comp=Z,13nm,1.1s						
FITZ	Fitzroy Crossi	54.22	200	P	P	20 32 23.5	+0.9
	comp=Z,3.8nm,0.8s,baz=23,slow=12,SNR=2.8						
FITZ	Fitzroy Crossi	54.22	200	P	P	20 32 23.2	+0.5
FITZ				IAmb	IAmb	20 32 35.6	
	comp=Z,30nm,1.8s						
WB2	Warramunga Arr	54.22	189	P	P	20 32 22.5	-0.2
WB2				IAmb	IAmb	20 32 26.2	
	comp=Z,11nm,0.9s						
WRA	Warramunga Arr	54.22	189	P	P	20 32 22.7	0.0
	comp=Z,9.1nm,0.9s,baz=9.0,slow=7.6,SNR=14						
WRA				PcP	PcP	20 33 28.1	+1.0
	comp=Z,1.4nm,0.8s,baz=11,slow=4.6,SNR=1.7						
WRA	Warramunga Arr	54.22	189	P	P	20 32 22.6	0.0
KKAR	Karatay Array	55.21	302	P	P	20 32 30.1	+0.3
EPYK	Eagle Plains	55.80	29	P	P	20 32 34.4	+0.7
EPYK				IAmb	IAmb	20 32 35.3	
	comp=Z,9.7nm,0.8s						
NIL	Nilore	56.20	290	P	P	20 32 36.7	-0.3
INK	Inuvik	56.75	26	P	P	20 32 40.3	0.0
	comp=Z,3.3nm,0.7s,baz=306,slow=4.2,SNR=12						
INK	Inuvik	56.75	26	P	P	20 32 40.4	0.0
AS31	Alice Springs	57.95	189	P	P	20 32 49.3	-0.1
ASAR	Alice Springs	57.95	189	P	P	20 32 49.4	0.0
	comp=Z,5.4nm,0.8s,baz=3.2,slow=7.1,SNR=20						
ASAR				PcP	PcP	20 33 42.1	+0.5
	comp=Z,1.4nm,0.9s,baz=12,slow=4.7,SNR=1.7						
ASAR	Alice Springs	57.95	189	P	P	20 32 48.9	-0.5
ARU	Arti	59.02	320	P	P	20 32 56.1	-0.4
ARU				IAmb	IAmb	20 33 08.4	
	comp=Z,5.5nm,0.7s						
C36M	Paulatuk	59.86	24	P	P	20 33 01.6	-0.5
C36M				IAmb	IAmb	20 33 02.4	
	comp=Z,5.4nm,0.7s						
ABKAR	Akbulak array	60.37	312	P	P	20 33 05.1	-0.8
KIRV	Kirov	63.01	324	P	P	20 33 24.0	+0.5
	comp=Z,4.8nm,0.5s,baz=36,slow=14,SNR=2.9						
RES	Resolute Bay	65.31	14	P	P	20 33 38.2	-0.2
	comp=Z,7.9nm,0.8s,baz=313,slow=6.3,SNR=30						
RES	Resolute Bay	65.31	14	P	P	20 33 37.8	-0.6
RES				IAmb	IAmb	20 33 39.2	
	comp=Z,11nm,0.9s						
STKA	Stephens Creek	65.59	181	P	P	20 33 40.9	+0.3
	comp=Z,4.0nm,0.8s,baz=338,slow=9.3,SNR=3.6						
STKA	Stephens Creek	65.59	181	P	P	20 33 40.6	-0.1
YKA	Yellowknife Ar	66.06	30	P	P	20 33 42.6	-0.8
	comp=Z,2.9nm,0.9s,baz=293,slow=5.9,SNR=23						
DAG	Danmarks Havn	68.78	355	*i* P	P	20 34 00.0	-0.4
	comp=Z,6.2nm,1.0s						
YBH	Yreka Blue Hor	71.66	52	P	P	20 34 19.5	+0.7
	comp=Z,0.8nm,0.6s,baz=331,slow=3.3,SNR=4.0						
YBH	Yreka Blue Hor	71.66	52	P	P	20 34 19.4	+0.6
YBH				IAmb	IAmb	20 35 24.1	
	comp=Z,18nm,1.6s						
FINES	FINESS Array B	71.74	333	P	P	20 34 18.0	-0.7
	comp=Z,4.2nm,0.8s,baz=62,slow=5.4,SNR=9.0						
FINES	FINESS Array B	71.74	333	P	P	20 34 17.6	-1.2
PINE	Pine Mountain	71.78	49	P	P	20 34 20.5	+0.9
PINE				IAmb	IAmb	20 36 54.3	
	comp=Z,21nm,1.2s						
KBZ	Khabaz	73.34	312	P	P	20 34 28.8	+0.2
	comp=Z,2.8nm,0.9s,baz=70,slow=6.5,SNR=5.3						
SUMG	Summit	73.65	0	*i* P	P	20 34 31.3	+0.8
SUMG	Summit	73.65	0	P	P	20 34 30.4	-0.1
CMB	Columbia Colle	75.08	54	P	P	20 34 38.8	-0.2
CMB				IAmb	IAmb	20 36 44.6	
	comp=Z,12nm,1.2s						
MFID	Camas Ranch	75.15	48	P	P	20 34 39.2	-0.1
MFID				IAmb	IAmb	20 36 53.9	
	comp=Z,12nm,1.3s						
LRM	Limekiln Ridge	75.83	44	P	P	20 34 43.8	+0.4
FFC	Flin Flon	75.86	33	P	P	20 34 42.2	-0.9
NVAR	Mina Array Bea	76.26	53	P	P	20 34 46.3	+0.4
	comp=Z,2.5nm,0.7s,baz=294,slow=5.6,SNR=19						
NVAR	Mina Array Bea	76.26	53	P	P	20 34 46.0	0.0
FCC	Fort Churchill	76.37	26	P	P	20 34 45.4	-0.4
ELK	Elko	76.98	50	P	P	20 34 49.8	-0.3
QLMT	Earthquake Lak	76.98	44	P	P	20 34 49.3	-0.7
AKASG	Malin Array Be	77.04	323	P	P	20 34 49.4	-0.4
	comp=Z,3.1nm,0.7s,baz=47,slow=6.0,SNR=15						
HFS	Hagfors	77.06	336	P	P	20 34 49.3	-0.5
	comp=Z,2.8nm,0.7s,baz=70,slow=4.9,SNR=11						
NC204	NORSAR Array S	77.13	338	P	P	20 34 49.7	-0.5
NB2	NORSAR Subarra	77.17	338	P	P	20 34 50.4	-0.1
	comp=Z,2.0nm,0.7s,baz=40,slow=5.9						
NOA	NORSAR Array B	77.17	338	P	P	20 34 50.1	-0.3
	comp=Z,3.2nm,0.7s,baz=39,slow=5.8,SNR=12						
NBO00	NORSAR Array S	77.31	338	P	P	20 34 50.9	-0.3
H17A	Grant Village	77.73	44	P	P	20 34 56.7	+2.5
H17A				IAmb	IAmb	20 34 57.6	
	comp=Z,14nm,1.1s						
IMW	Indian Meadow	77.81	45	P	P	20 34 55.7	+1.0
IMW				IAmb	IAmb	20 36 47.8	
	comp=Z,9.8nm,0.8s						
FLWY	Flagg Ranch	77.84	45	P	P	20 34 56.3	+1.5
FLWY				IAmb	IAmb	20 36 47.8	
	comp=Z,12nm,0.8s						
FXWY	Fox Creek	77.91	45	P	P	20 34 55.9	+0.7
R11A	Troy Canyon, C	78.09	52	P	P	20 34 56.2	0.0
TPNV	Topopah Spring	78.43	53	P	P	20 34 58.4	+0.3
TPNV				IAmb	IAmb	20 36 39.4	
	comp=Z,14nm,1.2s						
DUG	Dugway, Tooele	78.81	49	P	P	20 35 00.4	+0.3
DUG				IAmb	IAmb	20 36 47.1	
	comp=Z,11nm,1.1s						
PSUT	Pine Spring	79.11	51	P	P	20 35 02.1	+0.2
PD31	Pinedale Array	79.29	45	P	P	20 35 02.6	-0.2
PDAR	Pinedale Array	79.29	45	P	P	20 35 02.6	-0.2
	comp=Z,0.8nm,0.6s,baz=272,slow=1.0,SNR=8.2						
PDAR	Pinedale Array	79.29	45	P	P	20 35 02.5	-0.3
FRB	Frobisher Bay	79.51	13	P	P	20 35 03.0	-0.3
	comp=Z,9.9nm,0.6s,baz=337,slow=6.3,SNR=29						
LCMT	Little Creek M	80.38	52	P	P	20 35 09.4	+0.7
MTPU	Mount Pierson	80.46	50	P	P	20 35 10.1	+0.7
P17A	Butcher Ranch,	80.53	49	P	P	20 35 10.1	+0.5
RDMU	Red Mountain	80.60	47	P	P	20 35 10.8	+0.8
KNB	Kanab	80.65	52	P	P	20 35 11.4	+1.2
SRU	San Rafael Swe	80.88	49	P	P	20 35 12.0	+0.6
W13A	Hualapai Mount	81.06	54	P	P	20 35 12.7	+0.2
K22A	Casper	81.13	44	P	P	20 35 13.0	+0.3
BR131	Keskin Array S	81.31	312	P	P	20 35 14.1	+0.4
BRTR	Keskin Array B	81.31	312	P	P	20 35 13.1	-0.5
	comp=Z,3.1nm,1.0s,baz=103,slow=3.9,SNR=11						
BRTR	Keskin Array B	81.31	312	P	P	20 35 14.0	+0.4
U15A	North Rim	81.34	52	P	P	20 35 14.7	+0.7
U15A				IAmb	IAmb	20 38 14.7	
	comp=Z,18nm,1.6s						
GLA	Glamis	81.60	56	P	P	20 35 15.0	-0.1
GLA				IAmb	IAmb	20 38 03.4	
	comp=Z,8.6nm,0.8s						
ULM	Lac du Bonnet	81.63	33	P	P	20 35 14.2	-0.6
	comp=Z,4.8nm,0.9s,baz=308,slow=6.5,SNR=5.8						
ULM	Lac du Bonnet	81.63	33	P	P	20 35 14.6	-0.3
O20A	White River Ci	81.67	47	P	P	20 35 16.0	+0.4
O20A				IAmb	IAmb	20 36 41.5	
	comp=Z,10.0nm,0.8s						
PV09	Paradox Valley	82.12	49	P	P	20 35 18.6	+0.5
PV23	Carpenter Ridg	82.22	49	P	P	20 35 19.0	+0.4
PV23				IAmb	IAmb	20 35 20.2	
	comp=Z,16nm,1.1s						
PV10	Paradox Valley	82.25	49	P	P	20 35 19.2	+0.5
PV14	Lion Creek, Pa	82.26	49	P	P	20 35 19.3	+0.5
PV14				IAmb	IAmb	20 35 20.2	
	comp=Z,13nm,1.0s						
PV22	Blue Mesa, Par	82.31	48	P	P	20 35 19.7	+0.7
PV22				IAmb	IAmb	20 36 34.5	
	comp=Z,9.9nm,1.3s						
PV20	West Nyswonger	82.32	49	P	P	20 35 19.7	+0.7
PV20				IAmb	IAmb	20 35 20.5	
	comp=Z,10nm,1.0s						
PV04	Paradox Valley	82.32	49	P	P	20 35 19.8	+0.7
PV04				IAmb	IAmb	20 36 33.9	
	comp=Z,12nm,1.3s						
PV19	Morning Glory	82.33	49	P	P	20 35 19.2	+0.1
PV19				IAmb	IAmb	20 35 20.1	
	comp=Z,7.0nm,0.7s						
PV17	East Wray Mesa	82.36	49	P	P	20 35 19.7	+0.4
PV17				IAmb	IAmb	20 35 20.8	
	comp=Z,18nm,1.1s						
PV16	Nyswonger Mesa	82.37	49	P	P	20 35 20.0	+0.7
PV16				IAmb	IAmb	20 35 21.9	
	comp=Z,19nm,1.5s						
RAYN	Ar Rayn	82.39	293	P	P	20 35 19.4	-0.1
RAYN				IAmb	IAmb	20 36 16.7	
	comp=Z,16nm,1.8s						
PV05	Paradox Valley	82.39	49	P	P	20 35 19.8	+0.3
PV05				IAmb	IAmb	20 35 20.5	
	comp=Z,8.9nm,0.7s						
PV11	David Mesa, Pa	82.40	49	P	P	20 35 20.2	+0.7
PV11				IAmb	IAmb	20 35 21.0	
	comp=Z,24nm,1.5s						
PV18	Skein Mesa, Pa	82.41	49	P	P	20 35 20.1	+0.5
PV18				IAmb	IAmb	20 35 20.9	
	comp=Z,16nm,1.1s						
PV12	Saucer Basin,	82.43	49	P	P	20 35 20.3	+0.7
PV12				IAmb	IAmb	20 36 39.4	
	comp=Z,9.8nm,0.8s						
PV03	Paradox Valley	82.44	49	P	P	20 35 20.3	+0.6
PV13	Radium Mtn., P	82.52	49	P	P	20 35 20.7	+0.6
PV13				IAmb	IAmb	20 35 21.0	
	comp=Z,6.9nm,0.8s						
PV02	Paradox Valley	82.54	49	P	P	20 35 20.9	+0.7
PV02				IAmb	IAmb	20 35 21.8	

	comp=Z,12nm,1.3s						
N23A	**Red Feather La**	**82.57**	**45**	P	**P**	**20 35 21.6**	**+1.2**
AGMN	**Agassiz Nation**	**83.01**	**35**	P	**P**	**20 35 20.8**	**-1.4**
D32A	**Dogwood Acres,**	**83.26**	**36**	P	**P**	**20 35 23.0**	**-0.5**
DPC	**Dobruska-Polom**	**83.31**	**328**	*e*P	**P**	**20 35 23.9**	**+0.1**
PSZ	**Piszkesteto**	**83.45**	**325**	P	**P**	**20 35 25.1**	**+0.5**
PSZ				IAmb	IAmb	20 37 33.3	
	comp=Z,16nm,1.3s						
VYHS	**Vyhne**	**83.53**	**326**	*e*P	**P**	**20 35 25.9**	**+1.0**
214A	**Organ Pipe Nat**	**83.62**	**56**	P	**P**	**20 35 25.7**	**0.0**
214A				IAmb	IAmb	20 35 26.9	
	comp=Z,7.6nm,1.1s						
VRAC	**Vranov**	**83.96**	**328**	P	**P**	**20 35 27.2**	**+0.1**
	comp=Z,4.4nm,0.8s,baz=39,slow=5.0,SNR=4.2						
CLL	**Collm**	**83.99**	**331**	*i* P	**P**	**20 35 27.4**	**+0.2**
	comp=Z,4.0nm,0.8s						
S22A	**4UR Ranch, Cre**	**84.01**	**48**	P	**P**	**20 35 29.0**	**+1.0**
MODS	**Modra-Piesok**	**84.34**	**327**	*e*P	**P**	**20 35 29.0**	**0.0**
PRU	**Pruhonice**	**84.35**	**329**	*e*P	**P**	**20 35 29.3**	**+0.3**
TUC	**Tucson**	**84.79**	**54**	P	**P**	**20 35 32.2**	**+0.5**
SDCO	**Great Sand Dun**	**84.83**	**47**	P	**P**	**20 35 32.8**	**+0.7**
EYMN	**Ely**	**85.28**	**33**	P	**P**	**20 35 33.4**	**-0.3**
EYMN				IAmb	IAmb	20 37 59.9	
	comp=Z,16nm,1.3s						
KHC	**Kasperske Hory**	**85.41**	**329**	*e*P	**P**	**20 35 33.7**	**-0.7**
KHC				*e*x	x	20 35 50.0	
KHC				*e*x	x	20 37 09.0	
KHC	**Kasperske Hory**	**85.41**	**329**	P	**P**	**20 35 34.5**	**+0.1**
KHC				IAmb	IAmb	20 37 19.2	
	comp=Z,13nm,1.9s						
K31A	**O'Neill**	**85.49**	**40**	P	**P**	**20 35 35.0**	**+0.1**
GEC2	**GERESS Array S**	**85.57**	**329**	P	**P**	**20 35 34.8**	**-0.5**
GERES	**GERESS Array B**	**85.57**	**329**	P	**P**	**20 35 35.0**	**-0.3**
	comp=Z,2.0nm,0.8s,baz=36,slow=5.0,SNR=12						
GERES	**GERESS Array B**	**85.57**	**329**	P	**P**	**20 35 35.0**	**-0.3**
ECSD	**EROS Data Cent**	**85.84**	**38**	P	**P**	**20 35 36.4**	**-0.3**
ECSD				IAmb	IAmb	20 36 37.3	
	comp=Z,11nm,1.2s						
ANMO	**Albuquerque**	**86.00**	**50**	P	**P**	**20 35 38.3**	**+0.4**
ANMO				IAmb	IAmb	20 37 38.4	
	comp=Z,8.8nm,1.4s						
121A	**Cookes Peak, D**	**86.65**	**53**	P	**P**	**20 35 41.8**	**+0.7**
121A				IAmb	IAmb	20 35 42.4	
	comp=Z,4.9nm,0.9s						
SPMN	**Marine on St.**	**86.68**	**35**	P	**P**	**20 35 40.8**	**+0.1**
SPMN				IAmb	IAmb	20 35 41.3	
	comp=Z,11nm,0.9s						
I37A	**Lemond, Waseca**	**87.27**	**37**	P	**P**	**20 35 43.8**	**+0.2**
COWI	**Conover**	**87.73**	**33**	P	**P**	**20 35 45.5**	**-0.3**
G40A	**Rib Lake**	**87.88**	**34**	P	**P**	**20 35 46.5**	**-0.1**
STAL	**STALIGIAL**	**87.98**	**328**	P	**P**	**20 35 46.8**	**-0.2**
SCHQ	**Schefferville**	**88.01**	**16**	P	**P**	**20 35 47.0**	**0.0**
	comp=Z,5.1nm,0.9s,baz=345,slow=6.5,SNR=6.5						
SCHQ	**Schefferville**	**88.01**	**16**	P	**P**	**20 35 47.0**	**0.0**
F42A	**Maple Grove Fa**	**88.44**	**33**	P	**P**	**20 35 49.3**	**0.0**
E43A	**Lone Tree Farm**	**88.47**	**32**	P	**P**	**20 35 49.1**	**-0.2**
E44A	**Grand Marais A**	**88.74**	**31**	P	**P**	**20 35 50.9**	**+0.3**
DAVOX	**Davos/Dischmat**	**88.80**	**329**	P	**P**	**20 35 51.1**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=32,slow=21,SNR=3.9						
SCIA	**State Center**	**88.90**	**38**	P	**P**	**20 35 51.9**	**+0.5**
AMTX	**Amarillo**	**89.03**	**48**		**P**	**20 35 52.8**	**+0.5**
E46A	**Sault Ste Mari**	**89.62**	**30**	P	**P**	**20 35 54.8**	**+0.1**
WMOK	**Wichita Mounta**	**90.88**	**46**	P	**P**	**20 36 00.7**	**-0.2**
WMOK				IAmb	IAmb	20 38 21.2	
	comp=Z,4.8nm,1.1s						
TX31	**Lajitas Ar. Si**	**91.41**	**53**	P	**P**	**20 36 03.9**	**+0.4**
TX31				IAmb	IAmb	20 36 15.6	
	comp=Z,4.2nm,1.1s						
TX32	**Lajitas Array**	**91.41**	**53**	P	**P**	**20 36 04.0**	**+0.4**
TX32				IAmb	IAmb	20 36 15.6	
	comp=Z,4.7nm,1.2s						
TXAR	**Lajitas Array**	**91.41**	**53**	P	**P**	**20 36 03.8**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=300,slow=3.2,SNR=21						
TXAR	**Lajitas Array**	**91.41**	**53**	P	**P**	**20 36 03.6**	**+0.1**
SAML	**Samuel**	**145.81**	**49**		**PKPdf**	**20 42 36.5**	**+0.1**
LPAZ	**La Paz**	**147.51**	**65**	PKPbc	**PKPbc**	**20 42 42.6**	**+0.1**
	comp=Z,8.0nm,0.7s,baz=346,slow=2.4,SNR=29						
PB01	**IPOC Station P**	**149.19**	**73**		**PKPab**	**20 42 51.4**	**+0.9**
LVC	**Limon Verde**	**150.45**	**75**	PKPbc	**PKiKP**	**20 42 50.2**	**-0.1**
	comp=Z,2.6nm,0.5s,baz=335,slow=2.0,SNR=2.6						
LVC	**Limon Verde**	**150.45**	**75**		**PKPbc**	**20 42 49.1**	**-0.4**
SIV	**San Ignacio**	**152.39**	**55**	PKP	**PKPdf**	**20 42 46.5**	**-0.4**
	comp=Z,1.7nm,1.0s,baz=157,slow=1.9,SNR=4.4						
SIV				PKPbc	**PKPbc**	**20 42 53.7**	**0.0**
	comp=Z,6.2nm,0.8s,baz=277,slow=1.6,SNR=20						

INET ***19*** *20:36:28.6, 12°.48N×87°.84W, h61^{km}, ML3.5*
UCR ***19*** *20:36:29.5±1.6, 12°.51N×87°.98W, h22^{km}±9^{km}, ML3.8*
SNET ***19*** *20:36:29.5±0.8, 12°.52N×87°.92W, h32^{km}±4^{km}, ML3.8*
ISC 19 20:36:29.4±3.2**, 12°.5N**±0°.2×**87°.92W**±0°.08**, h22**^{km}±10^{km}**,**
n22, σ**0**^{s}**40**/42**, 4D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**0.74**	**7**	⇓*i*P	**Pb**	**20 36 44.1**	**+0.4**
CNCH				*e*S	**Sn**	**20 36 55.6**	**+0.2**
CNCH				IAML		20 37 00.1	
	comp=Z,6μm,0.3s						
CNCH	**Conchagua**	**0.74**	**7**	⇓*i*P	**Pb**	**20 36 44.1**	**+0.4**
CNCH				*e*S	**Sn**	**20 36 55.6**	**+0.2**
CNCH				IAML		20 37 00.1	
	comp=Z,6μm,0.3s						
LCND	**La Caada**	**0.77**	**2**	⇓*i*P	**Pb**	**20 36 44.5**	**+0.3**
LCND				*e*S	**Sn**	**20 36 56.4**	**+0.4**
LCND				IAML		20 36 58.1	
	comp=Z,4μm,0.3s						
LCND	**La Caada**	**0.77**	**2**	⇓*i*P	**Pb**	**20 36 44.5**	**+0.3**
LCND				*e*S	**Sn**	**20 36 56.4**	**+0.4**
LCND				IAML		20 36 58.1	
	comp=Z,4μm,0.3s						
JUCU	**Jucuar¡n**	**0.78**	**336**	*e*P	**Pb**	**20 36 44.6**	**+0.2**
JUCU				*e*S	**Sn**	**20 36 56.3**	**0.0**
JUCU				IAML		20 36 59.2	
	comp=Z,3μm,0.4s						
JUCU	**Jucuar¡n**	**0.78**	**336**	*e*P	**Pb**	**20 36 44.6**	**+0.2**
JUCU				*e*S	**Sn**	**20 36 56.3**	**0.0**
JUCU				IAML		20 36 59.2	
	comp=Z,3μm,0.4s						
LCY	**Lacayo**	**0.96**	**338**	*e*P	**Pb**	**20 36 47.4**	**0.0**
LCY				*e*S	**Sn**	**20 37 00.6**	**0.0**
LCY	**Lacayo**	**0.96**	**338**	*e*P	**Pb**	**20 36 47.4**	**0.0**
LCY				*e*S	**Sn**	**20 37 00.6**	**0.0**
RANC	**El Ranchito**	**0.96**	**338**	*e*P	**Pb**	**20 36 47.6**	**+0.1**
RANC				*e*S	**Sn**	**20 37 01.7**	**+0.9**
RANC				IAML		20 37 03.5	
	comp=Z,3μm,0.2s						
RANC	**El Ranchito**	**0.96**	**338**	*e*P	**Pb**	**20 36 47.6**	**+0.1**
RANC				*e*S	**Sn**	**20 37 01.7**	**+0.9**
RANC				IAML		20 37 03.5	
	comp=Z,3μm,0.2s						
PACA	**Pacayal**	**1.01**	**337**	*e*P	**Pb**	**20 36 48.1**	**-0.2**
PACA				*e*S	**Sn**	**20 37 02.6**	**+0.7**
PACA	**Pacayal**	**1.01**	**337**	*e*P	**Pb**	**20 36 48.1**	**-0.2**
PACA				*e*S	**Sn**	**20 37 02.6**	**+0.7**
COEB	**Comit de Eme**	**1.13**	**328**	*e*P	**Pn**	**20 36 49.5**	**-0.5**
COEB				*e*S	**Sn**	**20 37 05.1**	**+0.3**
COEB	**Comit de Eme**	**1.13**	**328**	*e*P	**Pn**	**20 36 49.5**	**-0.5**
COEB				*e*S	**Sn**	**20 37 05.1**	**+0.3**
FAGO	**Alcalda de S**	**1.17**	**351**	*e*P	**Pn**	**20 36 49.6**	**-0.9**
FAGO				*e*S	**Sb**	**20 37 05.7**	**0.0**
FAGO	**Alcalda de S**	**1.17**	**351**	*e*P	**Pn**	**20 36 49.6**	**-0.9**
FAGO				*e*S	**Sb**	**20 37 05.7**	**0.0**
LFRS	**El Faro**	**1.55**	**314**	*e*P	**Pn**	**20 36 55.7**	**-0.1**
LFRS				*e*S	**Sn**	**20 37 15.7**	**+0.4**
LOMA	**Loma Larga**	**1.64**	**312**	*e*P	**Pn**	**20 36 56.9**	**-0.2**
LOMA				*e*S	**Sn**	**20 37 17.8**	**+0.2**
LOMA	**Loma Larga**	**1.64**	**312**	*e*P	**Pn**	**20 36 56.9**	**-0.2**
LOMA				*e*S	**Sn**	**20 37 17.8**	**+0.2**
BOQS	**Boqueron**	**1.78**	**312**	*e*P	**Pn**	**20 36 59.2**	**+0.1**
BOQS				*e*S	**Sb**	**20 37 23.0**	**-0.5**
CEVE	**Cerro Verde**	**2.10**	**308**	*e*P	**Pn**	**20 37 03.3**	**-0.1**
CEVE				IAML		20 37 40.6	
	comp=Z,394nm,0.3s						
CEVE	**Cerro Verde**	**2.10**	**308**	*e*P	**Pn**	**20 37 03.3**	**-0.1**
CEVE				IAML		20 37 40.6	
	comp=Z,394nm,0.3s						

NEIC ***19*** *20:41:56.1±2.1, 20°.7N±0°.1×146°.1E±0°.2, h33^{km}±5^{km}, mb4.2/2, Error ellipse: s-maj=25.8km s-min=13.1km az=53.0*
IDC ***19*** *20:41:57.5±6.3, 20°.81N×146°.20E, h36^{km}±52^{km}, mb3.6/10, mb1 3.8/12, mb1mx3.6/50, mbtmp3.8/12, ML3.3/2, MS4.2/2, Ms1 4.2/2, ms1mx2.9/42, Error ellipse: s-maj=32.3km s-min=16.4km az=99.0*
ISC 19 20:41:56.9±0.7**, 20°.79N**±0°.10×**146°.1E**±0°.2**, h34**^{km}**, n32,**
σ**1**^{s}**13**/25**, mb3.8**/13**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**7.24**	**331**	Pn	**Pn**	**20 43 40.7**	**+0.3**
	2.2nm,0.3s,baz=143,slow=19,SNR=1.9						
JCJ				Sn	**Sn**	**20 44 60.0**	**-1.4**
	5.0nm,0.3s,baz=282,slow=24,SNR=2.1						
MJAR	**Matsushiro Arr**	**17.15**	**338**	P	**P**	**20 45 55.2**	**-0.2**
	0.0nm,0.3s,baz=165,slow=10,SNR=2.1						
H11S3	**WAKE ISLAND Hy**	**19.50**	**93**	T	T	21 06 15.0	
	baz=280,slow=75,SNR=6.6						
H11S1	**WAKE ISLAND Hy**	**19.50**	**93**	T	T	21 06 16.2	
	baz=280,slow=75,SNR=4.2						
H11N1	**WAKE ISLAND Hy**	**19.51**	**90**	T	T	21 06 16.1	
	baz=276,slow=74,SNR=18						
H11N2	**WAKE ISLAND Hy**	**19.51**	**89**	T	T	21 06 17.5	
	baz=276,slow=74,SNR=11						
H11S2	**WAKE ISLAND Hy**	**19.51**	**93**	T	T	21 06 21.9	
	baz=280,slow=75,SNR=4.5						
H11N3	**WAKE ISLAND Hy**	**19.52**	**89**	T	T	21 06 17.8	
	baz=276,slow=74,SNR=23						
KSRS	**Korea Array**	**22.93**	**320**	P	**P**	**20 47 00.1**	**+2.1**
	2.9nm,0.9s,baz=146,slow=9.5,SNR=8.2						
USRK	**Ussuriysk Ar.**	**26.14**	**336**	P	**P**	**20 47 30.9**	**+3.1**
	1.1nm,0.8s,baz=128,slow=16,SNR=2.3						
WRA	**Warramunga Arr**	**42.10**	**197**	P	**P**	**20 49 46.3**	**+0.5**
	1.0nm,0.9s,baz=21,slow=8.3,SNR=6.8						
FITZ	**Fitzroy Crossi**	**43.56**	**209**	P	**P**	**20 49 58.1**	**+0.4**
	baz=41,slow=9.3						
ASAR	**Alice Springs**	**45.77**	**196**	P	**P**	**20 50 15.3**	**-0.1**
	0.2nm,0.7s,baz=18,slow=6.9,SNR=1.9						
ASAR	**Alice Springs**	**45.77**	**196**	P	**P**	**20 50 14.0**	**-1.4**
AFI	**Afiamalu**	**53.85**	**126**	LR	LR	21 09 58.4	
	comp=Z,354nm,21.0s,baz=184,slow=31						
ZALV	**Zalesovo Beam**	**56.62**	**322**	P	**P**	**20 51 36.4**	**0.0**
	0.7nm,0.4s,baz=97,slow=12,SNR=2.4						
MKAR	**Makanchi Array**	**57.33**	**313**	P	**P**	**20 51 42.7**	**+1.0**
	0.4nm,0.6s,baz=92,slow=7.4,SNR=5.1						
MKAR	**Makanchi Array**	**57.33**	**313**	P	**P**	**20 51 41.7**	**+0.1**
ILAR	**Eielson Array**	**61.60**	**27**	P	**P**	**20 52 09.8**	**-0.9**
	1.2nm,0.9s,baz=259,slow=5.3,SNR=6.5						
ILAR	**Eielson Array**	**61.60**	**27**	P	**P**	**20 52 09.6**	**-1.2**
KK31	**Karatay Array**	**65.77**	**309**	P	**P**	**20 52 37.4**	**-1.2**
KK31				IAmb	IAmb	20 52 46.3	
	comp=Z,1.9nm,0.8s						
KKAR	**Karatay Array**	**65.77**	**309**	P	**P**	**20 52 37.0**	**-1.6**
KKAR	**Karatay Array**	**65.77**	**309**	P	**P**	**20 52 37.6**	**-1.1**
KKAR				IAmb	IAmb	20 52 46.3	
	comp=Z,1.9nm,0.8s						
INK	**Inuvik**	**67.30**	**23**	P	**P**	**20 52 47.5**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=241,slow=5.6,SNR=3.1						
ABKAR	**Akbulak array**	**72.10**	**317**	P	**P**	**20 53 18.4**	**+0.5**
YKA	**Yellowknife Ar**	**75.96**	**28**	P	**P**	**20 53 40.0**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=288,slow=5.5,SNR=7.0						
ARCES	**ARCESS Array B**	**80.64**	**342**	LR	LR	21 39 58.7	
	comp=Z,78nm,18.1s,baz=194,slow=43						
NVAR	**Mina Array Bea**	**81.54**	**52**	P	**P**	**20 54 12.4**	**+0.8**
	comp=Z,1.6nm,0.9s,baz=265,slow=6.5,SNR=7.3						
NVAR	**Mina Array Bea**	**81.54**	**52**	P	**P**	**20 54 11.7**	**+0.1**
FINES	**FINESS Array B**	**85.16**	**335**	P	**P**	**20 54 29.1**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=77,slow=4.5,SNR=16						
LPAZ	**La Paz**	**147.25**	**88**	PKPbc	**PKPbc**	**21 01 39.0**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=356,slow=3.4,SNR=4.3						
LPAZ	**La Paz**	**147.25**	**88**		**PKPbc**	**21 01 38.6**	**+0.2**

KLM ***19*** *20:51:30.0, 8°.84S×108°.14E, h83^{km}, mb4.8*
DJA ***19*** *20:51:30.7±0.3, 9°S±3°×10°8E±°, h57^{km}±3^{km}, M5.1/48, mB5.5/31, mb5.2/48, MLv5.4/18, Mw(mB)5.0/31, Mwp5.5/3*
NEIC ***19*** *20:51:33.7±1.8, 8°.48S±0°.07×108°.32E±0°.06, h87^{km}±4^{km}, mb4.9/86, Error ellipse: s-maj=11.7km s-min=8.1km az=210.0*
IDC ***19*** *20:51:34.1±0.4, 8°.53S×108°.36E, h88^{km}±2^{km}, mb4.5/38, mb1 4.5/40, mb1mx4.4/56, mbtmp4.8/40, MS3.6/2, Ms1 3.7/2, ms1mx3.1/37, Error ellipse: s-maj=10.0km s-min=6.4km az=57.0*
ISC 19 20:51:33.6±0.3**, 8°.60S**±0°.04×**108°.28E**±0°.04**, h90**^{km}±2^{km}**,**
h90^{km}**:pP-P, n367,** σ**1**^{s}**43**/390**, mb4.8**/72**, 2D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CISI	**Cisompet, Garu**	**1.13**	**336**	P	**Pn**	**20 51 51.6**	**-3.4**
CISI				S	**Sn**	**20 52 08.7**	**-2.3**
CISI	**Cisompet, Garu**	**1.13**	**336**		**Pn**	**20 51 52.1**	**-2.9**
CNJI	**Cibinong**	**1.71**	**318**	P	**Pn**	**20 51 59.1**	**-3.0**
LEM	**Lembang**	**1.88**	**340**	P	**Pn**	**20 52 04.2**	**-0.3**
	1μm,0.3s,baz=128,slow=2.3,SNR=547						
LEM				S	**Sn**	**20 52 30.8**	**+2.9**
	587nm,0.3s,baz=338,slow=20,SNR=4.1						
LEM				LR	LR	20 52 46.2	
	comp=Z,2μm,19.2s,baz=88,slow=39						
LEM	**Lembang**	**1.88**	**340**	P	**Pn**	**20 52 03.7**	**-0.8**
SKJI	**Sukabumi**	**2.33**	**313**	P	**Pn**	**20 52 07.8**	**-2.4**
UGM	**Wanagama**	**2.33**	**73**	P	**Pn**	**20 52 08.7**	**-1.5**
UGM	**Wanagama**	**2.33**	**73**		**Pn**	**20 52 08.2**	**-2.0**
DBJI	**Dramaga**	**2.53**	**323**	P	**Pn**	**20 52 12.0**	**-1.0**
SMRI	**Semarang**	**2.64**	**54**	P	**Pn**	**20 52 15.2**	**+0.8**
SMRI	**Semarang**	**2.64**	**54**		**Pn**	**20 52 14.3**	**-0.1**
WOJI	**Wonogiri, Jawa**	**2.73**	**74**	P	**Pn**	**20 52 14.7**	**-0.8**
PCJI	**Pacitan**	**2.90**	**82**	P	**Pn**	**20 52 16.2**	**-1.6**
TNG	**Tangerang**	**2.90**	**326**	P	**Pn**	**20 52 17.6**	**-0.3**
GRJI	**Gresik**	**4.49**	**68**	P	**Pn**	**20 52 39.4**	**0.0**
KASI	**Kota Agung**	**4.84**	**309**	P	**Pn**	**20 52 42.6**	**-1.5**
GMJI	**Gumukmas**	**5.12**	**87**	P	**Pn**	**20 52 47.7**	**-0.3**
LWLI	**Liwa**	**5.50**	**310**	P	**Pn**	**20 52 51.9**	**-1.3**
MDSI	**Maura Dua**	**5.77**	**315**	P	**Pn**	**20 52 55.4**	**-1.4**
JAGI	**Jajag, Banyuwa**	**5.81**	**89**	P	**Pn**	**20 52 57.2**	**-0.2**
JAGI	**Jajag, Banyuwa**	**5.81**	**89**		**Pn**	**20 52 55.9**	**-1.5**
PMBI	**Palembang**	**6.63**	**328**	P	**Pn**	**20 53 09.7**	**+1.2**
	2.9nm9μm867nm,1.2s						
PMBI	**Palembang**	**6.63**	**328**		**Pn**	**20 53 09.2**	**+0.7**
MNAI	**Manna**	**6.76**	**308**	P	**Pn**	**20 53 08.4**	**-1.9**
	5.6nm32μm941nm,0.5s						
MNAI	**Manna**	**6.76**	**308**		**Pn**	**20 53 08.4**	**-1.9**
DNP	**Denpasar**	**6.86**	**91**	P	Pn	20 53 18.5	+6.9
SRBI	**Singaraja**	**6.88**	**86**	P	**Pn**	**20 53 10.9**	**-1.1**
KRJI	**Kerinci**	**9.37**	**313**	P	**Pn**	**20 53 43.0**	**-3.0**
	10μm764nm,1.0s						
PLAI	**Plampang**	**9.40**	**92**	P	**Pn**	**20 53 46.1**	**-0.1**
	3μm226nm,0.7s						
PPSI	**Pulau Pagai**	**10.06**	**305**	P	**Pn**	**20 53 50.9**	**-4.4**
	13μm975nm,0.8s						
TPRI	**Tanjung Pinang**	**10.17**	**338**	P	**Pn**	**20 53 59.2**	**+2.4**
KSM	**Kuching**	**10.21**	**12**		**Pn**	**20 53 57.2**	**-0.2**
KSM	**Kuching**	**10.21**	**12**	P	**Pn**	**20 53 59.0**	**+1.6**
PDSI	**Padang**	**10.90**	**314**	P	Pn	20 54 01.8	-5.0
	6μm160nm,0.5s						
MYKOM	**Kota Tinggi**	**11.22**	**337**		**Pn**	**20 54 09.7**	**-1.4**
MYKOM	**Kota Tinggi**	**11.22**	**337**	P	**Pn**	**20 54 11.0**	**-0.1**
BKNI	**Bangkinang**	**11.43**	**321**	P	**Pn**	**20 54 10.1**	**-3.8**
	2μm215nm,1.1s						
BKNI	**Bangkinang**	**11.43**	**321**	Pn	**Pn**	**20 54 10.6**	**-3.3**
SISI	**Saibi**	**11.66**	**308**	P	Pn	20 54 11.0	-6.0
	10μm353nm,0.7s						
SBUM	**Sibu**	**11.66**	**20**		**Pn**	**20 54 19.7**	**+2.7**
SBUM	**Sibu**	**11.66**	**20**	P	**Pn**	**20 54 20.0**	**+3.0**
KAPI	**Kappang**	**11.94**	**73**	P	**Pn**	**20 54 21.2**	**+0.4**
	2.7nm,0.3s,baz=252,slow=11,SNR=3.8						
KAPI				LR	LR	20 59 29.6	
	comp=Z,316nm,20.1s,baz=232,slow=40						
BKSI	**Bulukumba**	**12.20**	**75**	P	**Pn**	**20 54 25.1**	**+0.8**
	936nm75nm,1.2s						
SPSI	**Sidrap Palu**	**12.32**	**69**	P	**Pn**	**20 54 27.2**	**+1.3**
	668nm41nm,0.9s						
BNSI	**Bone**	**12.47**	**71**	P	**Pn**	**20 54 31.6**	**+3.7**
	1μm82nm,1.3s						
TTSI	**Tana Toraja**	**12.74**	**65**	P	**P**	**20 54 35.6**	**-3.5**
	671nm81nm,1.0s						
PBSI	**Pulau Batu**	**13.09**	**310**	P	Pn	20 54 29.6	-6.5
MMRI	**Maumere**	**13.81**	**91**	P	**Pn**	**20 54 46.4**	**+0.8**
	2μm207nm,0.8s						
MMRI	**Maumere**	**13.81**	**91**		**Pn**	**20 54 41.6**	**-4.0**
RPSI	**Rantau Prapat**	**14.59**	**320**		Pn	20 54 48.9	-6.8
MPSI	**Mapaga**	**14.59**	**53**	P	**P**	**20 54 57.8**	**-1.9**
	118nm,1.0s						
PSI	**Prapat**	**14.67**	**320**	P	Pn	20 54 49.0	-7.8
	1.8nm,0.3s,baz=159,slow=11,SNR=21						
PSI				S	**Sn**	**20 57 39.1**	**+0.5**
	0.6nm,0.3s,baz=40,slow=20,SNR=1.7						
IPM	**Ipoh**	**14.87**	**331**		**Pn**	**20 54 56.1**	**-3.1**
IPM	**Ipoh**	**14.87**	**331**	P	**Pn**	**20 54 58.0**	**-1.3**
GIRL	**Giralia**	**15.09**	**158**	P	**Pn**	**20 54 55.3**	**-6.8**
	baz=15,SNR=50						
GIRL	**Giralia**	**15.09**	**158**		**Pn**	**20 54 55.4**	**-6.7**
APSI	**Ampana**	**15.35**	**61**	P	**P**	**20 55 08.9**	**+0.8**
	1μm117nm,0.6s						
KULM	**Kulim**	**15.76**	**331**		**Pn**	**20 55 05.7**	**-4.8**
KULM	**Kulim**	**15.76**	**331**	P	**Pn**	**20 55 07.0**	**-3.5**
SOEI	**Soe**	**15.83**	**95**	P	**P**	**20 55 12.5**	**-1.1**
	2μm310nm,0.9s						
LUWI	**Luwuk**	**16.27**	**63**	P	**P**	**20 55 20.8**	**+2.5**
	2μm158nm,1.0s						
LUWI	**Luwuk**	**16.27**	**63**	P	**P**	**20 55 19.8**	**+1.5**
MRSI	**Marisa**	**16.33**	**57**	P	**P**	**20 55 18.6**	**-0.4**
	2μm267nm,1.0s						
KKM	**Kota Kinabalu**	**16.56**	**29**	P	**Pn**	**20 55 19.1**	**-1.6**
PSA00	**Pilbara Seismi**	**17.05**	**140**		**Pn**	**20 55 22.0**	**-4.4**
PSA00				IAmb	IAmb	20 55 23.2	
	comp=Z,92nm,0.9s						
PSA00	**Pilbara Seismi**	**17.05**	**140**	P	**Pn**	**20 55 22.0**	**-4.4**
MLSI	**Meulaboh, Aceh**	**17.42**	**317**	P	**Pn**	**20 55 34.8**	**+3.7**
LHMI	**Lhok Sumawe**	**17.79**	**320**	P	**P**	**20 55 29.2**	**-5.8**
LHMI				IAmb	IAmb	20 55 35.1	
	comp=Z,43nm,0.7s						
KMSI	**Cibinong**	**18.11**	**61**	P	**Pn**	**20 55 41.7**	**+2.3**
	comp=Z,1μmcomp=Z,132nm,1.0s						
SANI	**Sanana**	**18.79**	**71**	P	**P**	**20 55 45.7**	**-0.4**
	comp=Z,704nmcomp=Z,90nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.34**	**121**	P	**Pn**	**20 55 53.2**	**-0.8**
	comp=Z,1.4nm,0.3s,baz=304,slow=9.8,SNR=47						
FITZ				S	S	20 59 09.2	-17
	comp=Z,1.1nm,0.3s,baz=170,slow=23,SNR=3.2						
FITZ	**Fitzroy Crossi**	**19.34**	**121**	P	**P**	**20 55 52.7**	**+0.7**
NLAI	**Namlea**	**19.46**	**75**	P	**Pn**	**20 55 55.3**	**-0.2**
	comp=Z,1μmcomp=Z,135nm,0.6s						
AAI	**Ambon**	**20.39**	**77**	P	**P**	**20 56 03.6**	**+0.1**
	comp=Z,3μmcomp=Z,286nm,0.7s						
DLV	**T Lat**	**20.41**	**1**	P	**P**	**20 56 03.8**	**0.0**
DLV				IAmb	IAmb	20 56 29.8	
	comp=Z,48nm,1.0s						
LBMI	**Labuha**	**20.72**	**69**	P	**P**	**20 56 07.3**	**+0.3**
	comp=Z,2μmcomp=Z,194nm,0.9s						
TNTI	**Ternate**	**21.18**	**65**	P	**P**	**20 56 13.0**	**+1.0**
	comp=Z,1μmcomp=Z,112nm,0.9s						
TNTI	**Ternate**	**21.18**	**65**	P	**P**	**20 56 10.2**	**-1.8**
KNRA	**Kununurra**	**21.22**	**111**	P	**P**	**20 56 12.5**	**+0.1**
	baz=22,SNR=24						
KNRA	**Kununurra**	**21.22**	**111**	P	**P**	**20 56 11.8**	**-0.5**
KNRA				IAmb	IAmb	20 56 30.9	
	comp=Z,56nm,0.8s						
MORW	**Morawa**	**21.63**	**161**	P	**P**	**20 56 15.0**	**-1.6**
	baz=22,SNR=7.0						
MORW	**Morawa**	**21.63**	**161**	P	**P**	**20 56 15.6**	**-1.1**
MORW				IAmb	IAmb	20 56 33.3	
	comp=Z,118nm,1.6s						
SKMP	**Bagumbayan, Su**	**22.11**	**48**	*e*P	**P**	**20 56 22.2**	**+0.4**
PAGZ	**Pagadian**	**22.22**	**43**	*e*P	**P**	**20 56 27.3**	**+4.3**
CTBH	**Cotabato--PC H**	**22.37**	**46**	⇓*i*P	**P**	**20 56 26.4**	**+1.8**
KCP	**Kidapawan**	**22.83**	**48**	⇓*i*P	**P**	**20 56 31.1**	**+1.6**
KCP				*i* S	**pP**	**20 56 47.6**	**+0.1**
MTN	**Manton Dam**	**22.84**	**103**	P	**P**	**20 56 28.3**	**-1.3**
	baz=23,SNR=17						
MTN	**Manton Dam**	**22.84**	**103**	P	**P**	**20 56 29.5**	**-0.1**
MTN				IAmb	IAmb	20 56 31.5	
	comp=Z,43nm,0.7s						
BUKP	**Musuan**	**23.41**	**46**	*e*P	**P**	**20 56 35.9**	**+1.0**
MATI	**Mati**	**23.66**	**50**	*e*P	**P**	**20 56 38.1**	**+1.0**
UBPT	**Khong Chiam**	**23.89**	**353**	P	**P**	**20 56 38.5**	**-0.6**
KDU	**Kakadu**	**24.12**	**102**	P	**P**	**20 56 41.1**	**-0.1**
	baz=24,SNR=36						
SIJI	**Sorong**	**24.15**	**73**	P	**P**	**20 56 39.8**	**-1.8**
	comp=Z,34nm,0.7s,baz=284,slow=7.4,SNR=8.6						
FAKI	**Fak Fak**	**24.50**	**78**	P	**P**	**20 56 44.1**	**-0.6**
FAKI				IAmb	IAmb	20 56 46.2	
	comp=Z,32nm,0.8s						
BUTP	**Butuan**	**24.56**	**45**	*e*P	**P**	**20 56 46.0**	**+0.8**
MSLP	**Maasin**	**24.88**	**42**	*e*P	**P**	**20 56 46.5**	**-1.7**
WRKA	**Warakurna**	**25.13**	**133**	P	**P**	**20 56 51.0**	**+0.5**
	baz=25,SNR=10.0						
NWAO	**Narrogin (SRO)**	**25.59**	**162**	pP	pP	20 57 16.2	+2.1
	comp=Z,11nm,0.8s,baz=322,slow=11,SNR=3.1						
PBKT	**Sadao Pong**	**26.03**	**344**	P	**P**	**20 56 56.8**	**-1.8**
H01W3	**Cape Leeuwin H**	**26.71**	**169**	T	T	21 24 40.3	
	baz=341,slow=76,SNR=8.6						
H01W1	**Cape Leeuwin H**	**26.72**	**169**	T	T	21 24 41.2	
	baz=341,slow=76,SNR=6.9						
H01W2	**Cape Leeuwin H**	**26.72**	**169**	T	T	21 24 41.3	
	baz=341,slow=76,SNR=9.7						
SMPP	**San Manuel, Pa**	**27.49**	**27**	*e*P	**P**	**20 57 07.6**	**-4.1**
WB0	**Warramunga Arr**	**27.60**	**117**	P	**P**	**20 57 12.8**	**+0.1**
WB0				IAmb	IAmb	20 57 16.9	
	comp=Z,26nm,0.7s						
WRA	**Warramunga Arr**	**27.61**	**117**	P	**P**	**20 57 12.7**	**-0.2**
	comp=Z,17nm,0.9s,baz=289,slow=11,SNR=60						
WRA				pP	**pP**	**20 57 33.8**	**+1.6**
	comp=Z,26nm,0.9s,baz=289,slow=11,SNR=9.2						
WRA				PcP	**PcP**	**21 00 29.3**	**+0.9**
	comp=Z,3.5nm,0.6s,baz=295,slow=2.3,SNR=4.6						
WRA	**Warramunga Arr**	**27.61**	**117**	P	**P**	**20 57 12.4**	**-0.5**
WRAB	**Tennant Creek**	**27.62**	**117**	P	**P**	**20 57 13.1**	**+0.2**
WRAB				IAmb	IAmb	20 57 56.5	
	comp=Z,72nm,1.5s						
WB2	**Warramunga Arr**	**27.62**	**117**	P	**P**	**20 57 12.7**	**-0.3**
WB2				IAmb	IAmb	20 57 56.7	
	comp=Z,76nm,1.5s						
WR0	**Warramunga Arr**	**27.80**	**117**	P	**P**	**20 57 14.6**	**+0.1**
WR0				IAmb	IAmb	20 57 36.7	
	comp=Z,24nm,0.9s						
CM31	**Chiang Mai Arr**	**28.42**	**341**	P	**P**	**20 57 18.9**	**-1.0**
CMAR	**Chiang Mai Arr**	**28.42**	**341**	P	**P**	**20 57 20.4**	**+0.5**
	comp=Z,3.3nm,0.7s,baz=178,slow=8.5,SNR=25						
CMAR				PcP	**PcP**	**21 00 32.4**	**+2.0**
	comp=Z,2.2nm,0.8s,baz=205,slow=3.4,SNR=6.7						
CMAR				pPcP		21 00 54.3	
	comp=Z,1.3nm,0.7s,baz=187,slow=2.5,SNR=3.8						
CMAR				LR	LR	21 10 58.7	
	comp=Z,88nm,19.7s,baz=195,slow=41						
CMAR	**Chiang Mai Arr**	**28.42**	**341**	P	**P**	**20 57 19.1**	**-0.9**
CMAR					**PcP**	**21 00 31.8**	**+1.5**
SZP	**Santa**	**28.64**	**25**	P	**P**	**20 57 20.9**	**-0.9**
ASAR	**Alice Springs**	**28.74**	**124**	P	**P**	**20 57 22.6**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=303,slow=8.3,SNR=22						
ASAR				pP	**pwP**	**20 57 44.8**	**-2.2**
	comp=Z,9.3nm,0.8s,baz=302,slow=9.3,SNR=7.9						
ASAR				PcP	**PcP**	**21 00 32.5**	**+1.3**
	comp=Z,7.5nm,0.7s,baz=297,slow=2.0,SNR=14						
ASAR	**Alice Springs**	**28.74**	**124**	P	**P**	**20 57 21.1**	**-1.7**
AS31	**Alice Springs**	**28.74**	**124**	P	**P**	**20 57 22.4**	**-0.5**
CHTO	**Chiang Mai**	**28.75**	**341**	P	**P**	**20 57 23.3**	**+0.3**
PALK	**Pallekele**	**31.69**	**299**	P	**P**	**20 57 50.4**	**+1.4**
	comp=Z,3.3nm,0.6s,baz=123,slow=10						
PALK	**Pallekele**	**31.69**	**299**	P	**P**	**20 57 49.9**	**+0.9**
QIS	**Mount Isa**	**32.50**	**115**	P	**P**	**20 57 56.6**	**+0.6**
	baz=33,SNR=14						
SSLB	**Suanglung**	**34.49**	**21**	P	**P**	**20 58 13.0**	**-0.2**
SSLB				IAmb	IAmb	20 58 16.9	
	comp=Z,8.2nm,0.7s						
COEN	**Coen**	**34.61**	**102**	P	**P**	**20 58 14.7**	**+0.3**
	baz=35,SNR=8.3						
COEN	**Coen**	**34.61**	**102**	P	**P**	**20 58 14.3**	**-0.1**
BBOO	**Buckleboo**	**35.23**	**137**	P	**P**	**20 58 19.1**	**-0.4**
	baz=35,SNR=17						
BBOO	**Buckleboo**	**35.23**	**137**	P	**P**	**20 58 18.6**	**-0.9**
BBOO				IAmb	IAmb	20 58 20.0	
	comp=Z,18nm,0.7s						
H08S2	**Diego Garcia H**	**35.43**	**269**	T	T	21 36 03.8	
	baz=93,slow=76,SNR=12						
H08S3	**Diego Garcia H**	**35.44**	**269**	T	T	21 35 51.6	
	baz=93,slow=76,SNR=16						
H08S1	**Diego Carcia H**	**35.45**	**269**	T	T	21 36 02.3	
	baz=93,slow=76,SNR=6.6						
MTSU	**Mount Surprise**	**36.26**	**109**	P	**P**	**20 58 30.0**	**+1.4**
	baz=36,SNR=26						
HTT	**Hallett**	**37.54**	**136**	P	**P**	**20 58 39.1**	**-0.2**
	baz=38,SNR=7.3						
PMG	**Port Moresby**	**38.40**	**94**	P	**P**	**20 58 47.3**	**+0.6**
	comp=Z,10nm,0.4s,baz=205,slow=3.7,SNR=3.0						
CTA	**Charters Tower**	**38.43**	**111**	P	**P**	**20 58 48.2**	**+1.3**
	comp=Z,9.6nm,0.7s,baz=280,slow=8.6,SNR=8.2						
CTA				pP	**pP**	**20 59 09.0**	**+2.2**
	comp=Z,7.3nm,0.8s,baz=315,slow=9.8,SNR=3.0						
STKA	**Stephens Creek**	**38.64**	**132**	P	**P**	**20 58 49.1**	**+0.6**
	baz=39,SNR=31						
STKA	**Stephens Creek**	**38.64**	**132**	P	**P**	**20 58 49.1**	**+0.6**

	comp=Z,60nm,0.7s,baz=305,slow=8.3,SNR=172						
STKA				pP	pP	20 59 10.7	+2.3
	comp=Z,44nm,0.7s,baz=309,slow=8.8,SNR=8.3						
STKA				PcP	PcP	21 00 59.8	+0.7
	comp=Z,9.0nm,0.5s,baz=32,slow=3.3,SNR=3.6						
STKA	Stephens Creek	38.64	132	P	P	20 58 48.4	-0.1
STKA				IAmb	IAmb	20 58 49.9	
	comp=Z,12nm,0.7s						
ENH	Enshi	38.66	2	P	P	20 58 48.5	-0.2
HYB	Hyderabad	39.13	311	*i* P	P	20 58 53.0	+0.3
WHN	Wuhan	39.35	8	P	P	20 58 57.4	+3.1
ODAN	Odare	40.66	331	*e*P	P	20 59 05.0	-0.5
	comp=Z,42nm,0.6s						
TAPN	Taplejung	40.92	332	*e*P	P	20 59 08.1	+0.4
	comp=Z,24nm,0.7s						
RAMN	Ramite	41.12	330	*e*P	P	20 59 08.9	-0.4
	comp=Z,15nm,0.4s						
ARPS	Mount Arapiles	41.39	138	P	P	20 59 12.0	+0.8
	baz=42,SNR=7.6						
CMSA	Cobar Meteorol	41.59	129	P	P	20 59 14.0	+1.1
	baz=42,SNR=25						
JIRN	Jiri	41.91	330	*e*P	P	20 59 16.0	+0.1
	comp=Z,61nm,0.5s						
PKI	Pulchoki	42.23	329	*e*P	P	20 59 18.2	-0.2
PKIN	Phulchoki	42.24	329	*e*P	P	20 59 18.1	-0.4
GUN	Gumba	42.27	330	*e*P	P	20 59 18.1	-0.7
	comp=Z,54nm,0.6s						
XAN	Xi'an	42.41	1	P	P	20 59 24.9	+5.5
XAN				pP	sP	20 59 50.5	-0.3
XAN	Xi'an	42.41	1	P	P	20 59 17.8	-1.6
DMN	Daman	42.41	329	*e*P	P	20 59 20.0	+0.1
	comp=Z,27nm,0.6s						
KKN	Kakani	42.47	329	*e*P	P	20 59 20.1	-0.2
	comp=Z,21nm,0.6s						
GKN	Gorkha	42.97	329	*e*P	P	20 59 23.3	-1.0
	comp=Z,41nm,0.4s						
DANN	Dangsing	43.71	328	*e*P	P	20 59 29.9	-0.4
	comp=Z,82nm,0.5s						
YNG	Young	44.82	131	P	P	20 59 40.3	+1.4
	baz=45,SNR=9.2						
TIA	Tai'an	45.34	10	P	P	20 59 42.8	-0.1
CAN	Canberra	45.70	132	P	P	20 59 47.0	+1.1
JNU	Nakatsue	46.74	26	P	P	20 59 52.8	-1.1
	comp=Z,7.5nm,0.8s,baz=145,slow=1.5,SNR=4.0						
GTA	Gaotai	48.41	351	*e*P	P	21 00 09.1	+2.2
GTA				pP	pP	21 00 19.5	-8.4
GTA				sP	pwP	21 00 23.5	-7.4
GTA				PcP	PcP	21 01 33.3	+1.3
BJT	Baijiatuau	48.92	8	P	P	21 00 09.9	-0.7
BJT				IAmb	IAmb	21 00 12.0	
	comp=Z,11nm,0.9s						
KSAR	Wonju Array Be	49.34	21	P	P	21 00 13.3	-0.5
KSRS	Korea Array	49.37	21	P	P	21 00 14.2	+0.2
	comp=Z,2.5nm,0.8s,baz=206,slow=7.8,SNR=6.5						
KSRS				pP	pP	21 00 36.6	+0.9
	comp=Z,1.1nm,0.7s,baz=208,slow=8.8,SNR=2.6						
KSRS				PcP	PcP	21 01 37.5	+2.2
	comp=Z,1.8nm,0.8s,baz=194,slow=2.1,SNR=3.5						
HNR	Honiara	51.00	95	P	P	21 00 26.5	-0.4
	comp=Z,34nm,0.5s,baz=180,slow=8.1,SNR=5.0						
HNR	Honiara	51.00	95	P	P	21 00 24.9	-1.9
INU	Inuyama	51.45	30	P	P	21 00 28.0	-1.8
INU				IAmb	IAmb	21 00 29.9	
	comp=Z,16nm,0.9s						
MAJO	Matsushiro	52.98	30	P	P	21 00 38.9	-2.2
MAT	Matsushiro	52.98	30	P	P	21 00 39.1	-2.1
MJAR	Matsushiro Arr	52.98	30	P	P	21 00 39.3	-1.9
	comp=Z,12nm,0.7s,baz=207,slow=7.7,SNR=32						
MJAR				PcP	PcP	21 01 50.4	+1.6
	comp=Z,2.1nm,0.7s,baz=205,slow=4.5,SNR=4.2						
MJAR	Matsushiro Arr	52.98	30	P	P	21 00 40.4	-0.7
MJB9	Matsu-Tunnel	52.98	30	P	P	21 00 39.0	-2.1
NIL	Nilore	53.59	323	P	P	21 00 44.5	-1.2
SONM	Songino Array	56.21	358	P	P	21 01 04.8	+0.3
	comp=Z,4.5nm,0.4s,baz=175,slow=9.0,SNR=41						
SONM				PcP	PcP	21 02 01.9	+0.8
	comp=Z,2.5nm,0.6s,baz=175,slow=3.4,SNR=4.3						
SONM	Songino Array	56.21	358	P	P	21 01 04.4	0.0
ULN	Ulaanbaatar	56.23	359	P	P	21 01 04.4	-0.2
ULN				IAmb	IAmb	21 01 06.1	
	comp=Z,8.1nm,0.6s						
MDJ	Mudanjiang	56.36	18	P	P	21 01 03.9	-1.5
MDJ				IAmb	IAmb	21 01 05.7	
	comp=Z,6.8nm,0.8s						
KSH	Kashi	56.47	330	P	P	21 01 09.4	+3.0
KSH				pP	pP	21 01 29.5	+1.7
KSH				PcP	PcP	21 02 05.4	+3.1
KSH				PcS	PcS	21 06 02.6	-0.5
KSH				S	S	21 08 52.0	+1.1
KSH	Kashi	56.47	330	SS	SS	21 12 40.8	+1.1
KBL	Kabul	56.74	321	P	P	21 01 06.8	-1.7
KBL				IAmb	IAmb	21 01 09.4	
	comp=Z,9.2nm,0.6s						
USA0B	Ussuriysk Arra	56.77	20	P	P	21 01 07.4	-0.9
USA0B				IAmb	IAmb	21 01 31.4	
	comp=Z,10nm,1.0s						
USRK	Ussuriysk Ar.	56.77	20	P	P	21 01 07.7	-0.6
	comp=Z,5.2nm,0.7s,baz=204,slow=5.8,SNR=15						
USRK				pP	pP	21 01 30.3	+0.3
	comp=Z,4.0nm,0.7s,baz=204,slow=6.5,SNR=5.6						
USRK	Ussuriysk Ar.	56.77	20	P	P	21 01 07.0	-1.3
HIA	Hailar	58.49	9	P	P	21 01 17.1	-3.3
HIA				IAmb	IAmb	21 01 20.6	
	comp=Z,5.5nm,0.9s						
BOOM	Boomskoye usch	58.80	332	P	P	21 01 22.0	-0.8
ARSB	Arslanbob	59.32	330	P	P	21 01 26.1	-0.3
AAK	Ala-Archa	59.59	332	P	P	21 01 28.0	-0.2
AAK				IAmb	IAmb	21 01 52.2	
	comp=Z,7.5nm,1.1s						
FRU1	Bishkek	59.65	332	P	P	21 01 27.1	-1.4
MK31	Makanchi Array	59.81	340	P	P	21 01 28.6	-0.9
MK31				IAmb	IAmb	21 01 30.6	
	comp=Z,5.0nm,0.6s						
MKAR	Makanchi Array	59.81	340	P	P	21 01 30.0	+0.5
	comp=Z,6.8nm,0.5s,baz=153,slow=8.2,SNR=160						
MKAR				pP	pP	21 01 51.7	+0.6
	comp=Z,3.9nm,0.6s,baz=144,slow=8.0,SNR=4.1						
MKAR	Makanchi Array	59.81	340	P	P	21 01 28.3	-1.2
ABPO	Ambohimpanom	59.93	253	P	P	21 01 31.8	+0.7
ABPO				IAmb	IAmb	21 01 33.3	
	comp=Z,6.9nm,0.8s						
MAKZ	Makanchi	59.93	339	P	P	21 01 30.4	0.0
MAKZ				IAmb	IAmb	21 03 40.6	
	comp=Z,4.4nm,0.5s						
OPO	Ambohidratompo	59.96	254	P	P	21 01 32.5	+1.2
	comp=Z,5.2nm,0.7s,baz=55,slow=6.6,SNR=9.2						
OPO				pP	pP	21 01 54.5	+1.5
	comp=Z,3.8nm,0.7s,baz=69,slow=3.4,SNR=3.3						
UOSS	Minazif	60.69	305	P	P	21 01 34.5	-1.4
UOSS				IAmb	IAmb	21 02 06.9	
	comp=Z,13nm,0.9s						
ASAJ	Asahikawa	60.98	28	P	P	21 01 36.6	-0.8
	comp=Z,9.0nm,0.7s,baz=219,slow=8.0,SNR=12						
JKA	Kamikawa-asahi	60.98	28	P	P	21 01 36.6	-0.8
HRA	Herat	61.03	317	P	P	21 01 35.7	-2.6
HRA				IAmb	IAmb	21 01 38.4	
	comp=Z,9.7nm,1.2s						
KLR	Kul'dur	61.16	17	P	P	21 01 38.1	-0.5
	comp=Z,13nm,0.7s,baz=220,slow=4.6,SNR=48						
KLR				pP	pP	21 02 00.7	+0.3
	comp=Z,8.6nm,0.6s,baz=209,slow=4.7,SNR=7.1						
KK31	Karatay Array	61.87	329	P	P	21 01 42.3	-1.3
KKAR	Karatay Array	61.87	329	P	P	21 01 42.7	-0.9
KKAR				pP	pP	21 02 04.4	-0.9
KKAR	Karatay Array	61.87	329	P	P	21 01 42.5	-1.0
KKAR				pP	pP	21 02 03.9	-1.4
KKAR				IAmb	IAmb	21 02 08.3	
	comp=Z,8.7nm,1.5s						
YSS	Yuzh-Sakhalins	63.24	26	P	P	21 01 51.9	-0.6
KURK	Kurchatov	64.43	340	P	P	21 01 59.4	-0.8
KURK				pP	pP	21 02 21.0	-1.1
KURK				IAmb	IAmb	21 02 23.9	
	comp=Z,26nm,1.1s						
RPZ	Rata Peaks	64.51	134	P	P	21 02 01.3	+0.2
	comp=Z,8.4nm,0.8s,baz=205,slow=11,SNR=3.5						
ZAA0	Zalesovo Array	65.39	345	P	P	21 02 05.6	-0.8
ZALV	Zalesovo Beam	65.39	345	P	P	21 02 06.0	-0.4
	comp=Z,4.5nm,0.4s,baz=150,slow=6.1,SNR=22						
ZALV	Zalesovo Beam	65.39	345	P	P	21 02 05.2	-1.2
GEYT	Alibeck	65.79	318	P	P	21 02 09.8	+0.4
	comp=Z,6.8nm,0.4s,baz=139,slow=2.9,SNR=29						
GEYT				pP	pP	21 02 31.3	0.0
	comp=Z,8.0nm,0.7s,baz=150,slow=6.2,SNR=6.0						
GEYT	Alibeck	65.79	318	P	P	21 02 09.5	+0.1
GYA0B	ALIBECK ARRAY	65.79	318	P	P	21 02 09.1	-0.3
GYA0B				IAmb	IAmb	21 02 32.6	
	comp=Z,12nm,0.8s						
TUWZ	Tuamarina	66.15	131	P	P	21 02 11.8	+0.2
MAW	Mawson	66.22	197		P	21 02 05.9	-5.7
BKZ	Black Stump Fm	67.75	129	P	P	21 02 22.7	+0.8
URZ	Urewera	68.12	128	P	P	21 02 24.8	+0.6
	comp=Z,6.2nm,0.6s,baz=220,slow=4.6,SNR=5.0						
BRVK	Borovoye	69.39	337	P	P	21 02 31.8	+0.1
BRVK				IAmb	IAmb	21 02 55.3	
	comp=Z,16nm,1.0s						
KMBO	Kilima Mbogo	71.07	272	P	P	21 02 43.5	+0.4
	comp=Z,3.2nm,0.9s,baz=50,slow=9.5,SNR=8.0						
KMBO				pP	pP	21 03 07.0	+1.6
	comp=Z,5.2nm,1.0s,baz=116,slow=4.5,SNR=5.9						
KMBO	Kilima Mbogo	71.07	272	P	P	21 02 44.0	+0.9
ABKAR	Akbulak array	71.43	329	P	P	21 02 43.9	-0.3
YAK	Yakutsk	72.36	10	P	P	21 02 49.1	-0.3
	comp=Z,8.6nm,0.4s,baz=271,slow=1.7,SNR=14						
YAK				pP	pP	21 03 12.0	-0.2
	comp=Z,5.6nm,0.3s,baz=175,slow=2.3,SNR=1.5						
YAK	Yakutsk	72.36	10	P	P	21 02 48.8	-0.6
VNDA	Vanda	74.17	170	P	P	21 03 00.6	+0.6
	comp=Z,5.8nm,0.8s,baz=292,slow=6.5,SNR=18						
VNDA	Vanda	74.17	170	P	P	21 03 00.6	+0.6
PETK	Petropavlovsk-	74.38	28	P	P	21 03 01.2	-0.4
	comp=Z,10nm,0.8s,baz=186,slow=3.9,SNR=8.6						
PETK	Petropavlovsk-	74.38	28	P	P	21 03 00.6	-0.9
MA2	Magadan	75.92	21	P	P	21 03 09.9	-0.3
	comp=Z,5.9nm,0.6s,baz=236,slow=2.7,SNR=9.0						
MA2				pP	pP	21 03 33.2	+0.5
	comp=Z,4.3nm,0.4s,baz=201,slow=6.8,SNR=3.1						
MA2	Magadan	75.92	21	P	P	21 03 10.0	-0.3
MA2				IAmb	IAmb	21 03 11.7	
	comp=Z,10nm,0.8s						
GNI	Garni	75.97	315	P	P	21 03 10.7	-0.5
GNI				IAmb	IAmb	21 03 42.1	
	comp=Z,33nm,1.7s						
ARU	Arti	76.60	334	P	P	21 03 13.9	-0.3
ARU				IAmb	IAmb	21 03 38.1	
	comp=Z,25nm,1.0s						
AKH	Akhalkalaki	77.35	316	P	P	21 03 19.9	+0.9
MBAR	Mbarara	77.59	271	P	P	21 03 22.3	+1.5
MBAR					pP	21 03 45.3	+2.0
MBAR				IAmb	IAmb	21 03 46.1	
	comp=Z,19nm,1.1s						
LSZ	Lusaka	78.28	256	P	P	21 03 25.5	+0.9
KBZ	Khabaz	78.68	318	P	P	21 03 26.9	+1.0
	comp=Z,6.7nm,0.9s,baz=168,slow=6.6,SNR=14						
KBZ				pP	pP	21 03 49.9	+1.5
	comp=Z,6.9nm,0.8s,baz=131,slow=6.4,SNR=3.8						
SEY	Seymchan	78.89	19	P	P	21 03 27.2	+0.5
	comp=Z,4.6nm,0.5s,baz=205,slow=3.5,SNR=16						
SEY				pP	pP	21 03 49.9	+0.6
	comp=Z,6.7nm,0.8s,baz=213,slow=5.1,SNR=5.6						
KIV	Kislovodsk	78.91	318	P	P	21 03 26.7	-0.7
KIV				IAmb	IAmb	21 03 56.7	
	comp=Z,16nm,1.3s						
NRIK	Noril'sk	79.08	353	P	P	21 03 27.5	-0.1
	comp=Z,5.6nm,0.9s,baz=138,slow=4.7,SNR=12						
NRIK				pP	pP	21 03 50.8	+0.7
	comp=Z,5.4nm,0.9s,baz=194,slow=5.2,SNR=3.0						
BOSA	Boshof	79.84	242	P	P	21 03 33.4	+0.5
	comp=Z,3.4nm,1.0s,baz=256,slow=10,SNR=1.5						
GAZ	Gaziantep	80.39	310	P	P	21 03 36.1	+0.5
GAZ				pP	pP	21 03 58.8	+0.7
GAZ				IAmb	IAmb	21 04 00.1	
	comp=Z,10nm,0.8s						
TIXI	Tiksi	81.24	6	P	P	21 03 38.6	-0.6
	comp=Z,11nm,0.7s,baz=165,slow=2.6,SNR=74						
TIXI	Tiksi	81.24	6	P	P	21 03 38.2	-1.0
TIXI				IAmb	IAmb	21 03 41.1	
	comp=Z,12nm,0.8s						
QSPA	South Pole Qui	81.40	180	P	P	21 03 41.0	+0.6
	comp=Z,16nm,0.9s,baz=292,slow=1.5,SNR=6.2						
QSPA	South Pole Qui	81.40	180	P	P	21 03 40.7	+0.2
QSPA				IAmb	IAmb	21 03 41.6	
	comp=Z,15nm,0.8s						
CSS	Mathiatis	82.75	307	P	P	21 03 48.3	+0.3
CSS					pP	21 04 10.8	+0.3
CSS				IAmb	IAmb	21 04 12.8	
	comp=Z,20nm,0.9s						
BR131	Keskin Array S	83.83	312	P	P	21 03 53.5	-0.1
BR131				pP	pP	21 04 15.4	-0.9
BR131				IAmb	IAmb	21 04 17.6	
	comp=Z,11nm,0.9s						
BRTR	Keskin Array B	83.83	312	P	P	21 03 53.8	+0.2
	comp=Z,3.5nm,0.9s,baz=126,slow=6.3,SNR=15						
BRTR				pP	pP	21 04 16.8	+0.5
	comp=Z,6.5nm,0.8s,baz=139,slow=7.1,SNR=9.7						
BRTR	Keskin Array B	83.83	312	P	P	21 03 52.9	-0.7
BRTR					pP	21 04 16.3	+0.1
BILL	Bilibino	86.59	19	P	P	21 04 06.9	+0.4
MANT	Manisa	87.34	309	P	P	21 04 12.3	+1.1
KLMR	Klimovskoe	87.37	333	*e*P	P	21 04 08.1	-2.3
KLMR				AMP		21 04 11.8	
	comp=Z,28nm,0.9s						
KARP	Karpathos	87.79	306	P	P	21 04 14.3	+1.2
SNAA	Sanae	88.38	197	P	P	21 04 16.8	+1.5
SNAA	Sanae	88.38	197	P	P	21 04 16.6	+1.3
	comp=Z,13nm,1.2s,baz=147,slow=7.0,SNR=12						
SNAA	Sanae	88.38	197	P	P	21 04 16.1	+0.8
AKASG	Malin Array Be	89.73	321	P	P	21 04 20.7	-1.1
	comp=Z,1.0nm,0.7s,baz=88,slow=4.3,SNR=4.6						
AKASG				pP	pP	21 04 45.1	+0.4
	comp=Z,0.8nm,0.5s,baz=86,slow=4.7,SNR=2.8						
AKASG				PP	PP	21 07 53.1	-2.1
	comp=Z,0.2nm,0.3s,baz=88,slow=6.1,SNR=5.0						
AKASG	Malin Array Be	89.73	321	P	P	21 04 20.7	-1.1
AKASG					pP	21 04 44.7	+0.1
VNA2	Neumayer--Watz	90.03	197	P	P	21 04 24.6	+1.7
	baz=91,slow=3.2						
VNA1	Neumayer--Stat	90.41	197	P	P	21 04 26.3	+1.6
VNA3	Neumayer Olymp	90.53	197	P	P	21 04 24.9	-0.4
BURAR	Bucovina Array	91.64	318		P	21 04 31.2	+0.3
ARCES	ARCESS Array B	95.47	339	P	P	21 04 47.3	-0.6
	comp=Z,2.7nm,0.9s,baz=105,slow=4.9,SNR=8.2						
SPITS	Spitsbergen Ar	98.75	348	P	P	21 05 02.2	-0.4
	comp=Z,7.5nm,1.0s,baz=106,slow=8.8,SNR=6.1						
TORD	Torodi Ar. Bea	107.97	281	PKiKP	PKiKP	21 09 52.5	+0.6
	comp=Z,0.7nm,0.7s,baz=84,slow=2.3,SNR=3.0						
INK	Inuvik	108.16	20	PKiKP	PKiKP	21 09 51.0	+0.3
	comp=Z,0.6nm,0.7s,baz=173,slow=4.1,SNR=3.2						
RES	Resolute Bay	112.63	7	PKiKP	PKiKP	21 09 59.8	+0.9
	comp=Z,1.0nm,0.8s,baz=317,slow=2.2,SNR=6.5						
YKA	Yellowknife Ar	117.91	21	PKP	PKiKP	21 10 09.8	+0.4
	comp=Z,1.7nm,0.8s,baz=328,slow=1.5,SNR=24						
FRB	Frobisher Bay	124.90	358	PKP	PKPdf	21 10 22.9	+0.1
	comp=Z,2.0nm,0.8s,baz=348,slow=3.5,SNR=6.3						
PAHR	Pah Rah Range	127.47	46	PKPdf	PKiKP	21 10 30.1	+0.9
MSO	Missoula	127.65	36		PKiKP	21 10 30.2	+0.8
NVAR	Mina Array Bea	128.74	47	PKP	PKiKP	21 10 33.3	+1.4
	comp=Z,1.2nm,0.7s,baz=239,slow=1.2,SNR=9.5						
NVAR	Mina Array Bea	128.74	47		PKiKP	21 10 32.9	+1.0
EGMT	Eagleton	129.27	32		PKPpre	21 10 19.0	
EGMT				PKPdf	PKiKP	21 10 33.5	+1.0
ELK	Elko	129.90	43		PKiKP	21 10 35.8	+1.6
R11A	Troy Canyon, C	130.72	46		PKiKP	21 10 37.7	+1.8
PFO	Pinyon Flats O	131.92	52	PKP	PKiKP	21 10 39.6	+1.3
	comp=Z,0.8nm,0.4s,baz=127,slow=2.0,SNR=3.7						
PFO	Pinyon Flats O	131.92	52		PKiKP	21 10 39.1	+0.7
PDAR	Pinedale Array	132.50	38	PKP	PKiKP	21 10 40.0	+0.6
	comp=Z,0.7nm,0.7s,baz=26,slow=0.6,SNR=6.0						
PDAR				SKP		21 14 06.5	
	comp=Z,0.3nm,0.5s,baz=241,slow=1.5,SNR=3.7						
PDAR	Pinedale Array	132.50	38		PKPdf	21 10 38.6	+0.3
SCHQ	Schefferville	133.73	356	PKP	PKiKP	21 10 42.4	+1.2
	comp=Z,3.2nm,0.8s,baz=60,slow=2.9,SNR=5.0						
SCHQ				SKP		21 14 10.2	
	comp=Z,1.5nm,0.8s,baz=324,slow=7.8,SNR=2.5						
SCHQ	Schefferville	133.73	356		PKiKP	21 10 42.1	+0.9
SRU	San Rafael Swe	133.86	43		PKiKP	21 10 42.5	+0.3
ULM	Lac du Bonnet	133.88	21	PKP	PKiKP	21 10 42.1	+0.5
	comp=Z,1.8nm,0.6s,baz=275,slow=3.7,SNR=5.8						
ULM				SKP		21 14 10.2	
	comp=Z,3.7nm,0.9s,baz=309,slow=4.0,SNR=4.8						
RSSD	Black Hills	134.83	33		PKPdf	21 10 43.3	+0.7
PV13	Radium Mtn., P	135.50	43		PKiKP	21 10 46.2	+0.6
CPUP	Villa Florida	142.57	202	PKhKP	PKPpre	21 10 53.8	
	comp=Z,1.2nm,0.5s,baz=232,slow=2.0,SNR=5.0						
I47A	Gladwin	143.00	15		PKPpre	21 10 50.0	
I47A				PKPdf	PKPdf	21 10 54.8	-2.4
P38A	Dawn	143.46	29		PKPbc	21 10 56.5	+0.9
TX31	Lajitas Ar. Si	143.62	51		PKPbc	21 10 57.5	+0.9
TX32	Lajitas Array	143.62	51		PKPbc	21 10 57.3	+0.8
TXAR	Lajitas Array	143.62	51	PKP	PKPbc	21 10 57.6	+1.1
	comp=Z,1.7nm,0.7s,baz=275,slow=2.3,SNR=22						
TXAR	Lajitas Array	143.62	51		PKPbc	21 10 57.3	+0.8
WMOK	Wichita Mounta	144.05	40		PKPbc	21 10 58.2	+0.7
FNO	Franklin	144.56	38		PKPdf	21 11 00.3	+0.1
NCB	Newcomb	144.70	3		PKPbc	21 10 59.7	+0.5
X34A	Smith Ranch, M	144.74	39		PKPdf	21 11 01.4	+0.9
ABTX	Abilene, Hawle	144.79	43		PKPdf	21 11 01.2	+0.5
W35A	Tecumseh	144.95	37		PKPdf	21 11 01.2	+0.3
TUL1	Leonard	145.06	35		PKPdf	21 11 01.2	+0.2
MEDO	Medina	145.07	9		PKPdf	21 11 00.8	-0.1
S39A	Bolivar	145.07	31		PKPbc	21 11 00.2	-0.4
J57A	Williamstown	145.12	5		PKPdf	21 11 00.8	-0.1
J59A	Piesco	145.19	4		PKPdf	21 11 01.4	+0.4
P43A	Skaggs, Pawnee	145.23	24		PKPdf	21 11 01.3	+0.1
J58A	Remsen	145.24	5		PKPdf	21 11 01.2	0.0
ACCN	Adirondack Com	145.31	2		PKPab	21 11 01.6	+0.2
U38A	Gravette	145.46	33		PKPab	21 11 02.1	0.0
SFIN	Lafayette	145.52	21		PKPdf	21 11 01.8	+0.1
CCM	Cathedral Cave	145.79	28		PKPbc	21 11 03.0	+0.1
HHAR	Hobbs	145.82	33		PKPdf	21 11 02.6	+0.2
M50A	Fremont	145.83	15		PKPbc	21 11 03.0	+0.2
ERPA	Erie	145.83	11		PKPab	21 11 03.5	+0.1
JCT	Junction City	145.92	46		PKPbc	21 11 03.6	+0.1
Z35A	Perchaven, San	145.93	40		PKPab	21 11 04.5	+0.6
N49A	Columbus Grove	145.96	17		PKPab	21 11 03.8	0.0
M52A	Chesterland	146.10	13		PKPab	21 11 04.3	-0.1
U40A	Yellville	146.34	32		PKPdf	21 11 03.8	+0.5
BDFB	Brasilia	146.36	224	PKPbc	PKPab	21 11 06.9	+0.7
	comp=Z,18nm,0.6s,baz=115,slow=2.5,SNR=11						
BDFB	Brasilia	146.36	224		PKPab	21 11 06.4	+0.2
GO02	Mina Guanaco	146.38	183		PKPbc	21 11 05.6	+0.2
L59A	Walton	146.42	4		PKPbc	21 11 04.9	+0.2
QUA2	Belchertown	146.45	1		PKPab	21 11 05.5	-0.2
M54A	Oil Creek Stat	146.48	11		PKPbc	21 11 05.2	+0.4
OLIL	Olney	146.58	24		PKPbc	21 11 04.8	-0.3
O49A	Covington	146.59	18		PKPbc	21 11 05.4	+0.3
WHTX	Lake Whitney,	146.65	42		PKPbc	21 11 05.1	-0.5
M55A	Ridgway	146.68	10		PKPbc	21 11 06.0	+0.6
T42A	Van Buren	146.69	29		PKPdf	21 11 04.3	+0.6
W39A	Magazine	146.71	34		PKPbc	21 11 05.6	0.0
M56A	Emporium	146.75	9		PKPbc	21 11 06.0	+0.4
N53A	Lisbon	146.92	13		PKPbc	21 11 06.4	+0.3
ACSO	Alum Creek Sta	146.94	16		PKPbc	21 11 05.5	-0.7
KSCT	Kent School, K	146.97	2		PKPbc	21 11 06.8	+0.6
M57A	Sunshine Farm,	147.05	7		PKPbc	21 11 07.0	+0.6
FCAR	Ozark Folk Cen	147.07	31		PKPdf	21 11 05.0	+0.5
PBMO	Poplar Bluff	147.20	28		PKPbc	21 11 06.7	-0.3
MIAR	Mount Ida	147.30	35		PKPbc	21 11 07.4	+0.1
O52A	Adamsville	147.34	14		PKPbc	21 11 07.5	+0.2
LCAR	Lake Charles	147.42	30		PKPbc	21 11 06.8	-0.8
WHAR	Wooly Hollow	147.44	32		PKPbc	21 11 08.2	+0.5
ODNJ	Ogdensburg	147.55	4		PKPbc	21 11 08.1	+0.3
W41B	Gary Mavity, V	147.56	32		PKPbc	21 11 06.8	-1.2
N58A	Sunbury	147.59	7		PKPbc	21 11 08.0	+0.1
P51A	Williamsport	147.62	16		PKPdf	21 11 03.7	-1.6
SSPA	Standing Stone	147.63	9		PKPbc	21 11 08.4	+0.4
237A	Washetta, Mont	147.72	40		PKiKP	21 11 09.7	-0.8
O56A	Blue Knob Stat	147.88	10		PKPbc	21 11 09.2	+0.4
P53A	Whipple	148.05	14		PKPbc	21 11 09.8	+0.6
R49A	Shelbyville	148.05	20		PKPbc	21 11 09.3	+0.1
R50A	Paris	148.34	19		PKPbc	21 11 09.9	0.0
P57A	Homestead Farm	148.74	9		PKPbc	21 11 11.4	+0.5
LVC	Limon Verde	148.86	185	PKPbc	PKiKP	21 11 14.5	+0.9
	comp=Z,16nm,0.8s,baz=293,slow=2.1,SNR=6.7						
LVC	Limon Verde	148.86	185		PKiKP	21 11 14.3	+0.7
HKT	Hockley	149.00	44		PKPbc	21 11 10.7	-1.1
S51A	Beattyville	149.16	19		PKPbc	21 11 12.4	+0.3
PB04	IPOC Station P	149.22	183		PKiKP	21 11 14.0	-0.1
U49A	Red Boiling Sp	149.41	23		PKPbc	21 11 12.9	+0.1
OXF	Oxford	149.52	30		PKPbc	21 11 12.8	-0.2
TZTN	Tazewell	150.18	19		PKPbc	21 11 14.4	-0.2
PB01	IPOC Station P	150.46	184		PKiKP	21 11 17.0	+0.4
S58A	Poland Farm, P	150.55	10		PKiKP	21 11 16.5	+0.4
V51A	Loudon	150.57	21		PKPbc	21 11 15.7	+0.1
V52A	Sevierville	150.80	20		PKPbc	21 11 15.8	-0.3
CPCT	Cooper Cave	150.82	22		PKiKP	21 11 17.2	+0.4
TKL	Tuckaleechee C	150.90	20		PKiKP	21 11 17.3	+0.3
T59A	Double "B" Far	151.26	10		PKiKP	21 11 17.9	+0.3
W52A	Murphy	151.36	21		PKPbc	21 11 17.8	+0.3
PB11	IPOC Station P	151.74	184		PKPbc	21 11 19.2	+0.3
GO01	Chusmiza	151.80	185		PKiKP	21 11 20.4	+0.5
Y52A	Lilburn	152.41	23		PKiKP	21 11 20.6	+0.4
LPAZ	La Paz	155.02	188	PKP	PKPdf	21 11 19.3	+1.4
	comp=Z,0.8nm,0.5s,baz=243,slow=1.6,SNR=3.7						
LPAZ				PKPab	PKPab	21 11 43.4	+1.1
	comp=Z,2.8nm,0.6s,baz=173,slow=3.4,SNR=9.2						
CMIG	Matias Romero	155.92	67	PKP	PKPdf	21 11 19.3	+0.9
	comp=Z,1.8nm,0.7s,baz=327,slow=6.6,SNR=3.7						
CMIG				PKPab	PKPab	21 11 46.0	+0.4
	comp=Z,2.0nm,0.8s,baz=23,slow=5.7,SNR=2.6						

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*IDC **19** 20:57:56.6±0.8, 46°.94N×27°.35W, h0^{km}, mb3.8/13, mb1 3.9/13, mb1mx3.7/54, mbtmp3.8/13, MS4.1/3, Ms1 4.1/3, ms1mx3.1/60, Error ellipse: s-maj=31.9km s-min=14.9km az=25.0*

*NEIC **19** 20:57:57.8±2.4, 46°.8N±0°.1×27°.50W±0°.09, h10^{km}±1^{km}, mb4.8/21, Error ellipse: s-maj=24.5km s-min=7.3km az=199.0*

ISC 19 20:57:59.0±0.5**, 46°.8N**±0°.1×**27°.38W**±0°.08**, h19^{km}, n66,** σ1^{s}.**26**/60**, mb4.0**/19**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGAV	Gavieira, Arco	14.48	102	*e*P	Pn	21 01 21.0	-1.9
	43nm,1.2s						
PGAV				*e*LR	LR	21 05 49.2	
	612nm,20.0s						
PCAB	Cabril	14.75	103	*e*P	Pn	21 01 24.7	-1.9
	41nm,1.6s						
PVIS	Viseu	15.31	106	*e*P	Pn	21 01 31.1	-2.9
PMAFR	Mafra	15.37	114	*e*P	Pn	21 01 33.9	-0.9
PBRG	Braganca	15.58	101	*e*P	Pn	21 01 35.4	-2.1
	26nm,2.1s						
MVO	Moncorvo	15.67	104	*e*P	Pn	21 01 36.8	-1.9
	19nm,1.8s						
MVO				*e*LR	LR	21 05 31.9	
	422nm,18.0s						
MTE	Manteigas	15.70	107	Pn	Pn	21 01 36.3	-2.8
MTE	Manteigas	15.70	107	*e*P	Pn	21 01 36.8	-2.3
	25nm,2.4s						
MTE				*e*LR	LR	21 06 05.0	
	294nm,20.0s						
PMTG	Montargil	15.98	112	*e*P	Pn	21 01 41.9	-0.7
	22nm,2.1s						
PCBR	Castelo Branco	16.03	108	*e*P	Pn	21 01 41.0	-2.3
PMRV	Marv??o	16.31	110	*e*LR	LR	21 05 36.0	
	297nm,18.0s						
PNCL	Nicolau / Gran	16.35	115	*e*P	Pn	21 01 46.5	-0.9
	35nm,0.8s						
PTEO	Sao Teotonio	16.59	117	*e*P	Pn	21 01 51.1	+0.7
MESJ	Messejana	16.71	115	*e*P	Pn	21 01 52.2	+0.2
MORF	Marmelete	16.78	118	*e*P	Pn	21 01 53.0	0.0
PFVI	Vila Bisbo	16.79	118	Pn	Pn	21 01 53.5	+0.5
PFVI				IAmb	IAmb	21 02 22.5	
	comp=Z,38nm,1.1s						
PFVI	Vila Bisbo	16.79	118	*e*P	Pn	21 01 53.7	+0.7
	comp=Z,80nm,1.7s						
PCVE	Castro Verde	16.95	116	*e*P	Pn	21 01 55.0	0.0
	comp=Z,21nm,1.8s						
PBDV	Barranco-do-Ve	17.27	116	*e*P	P	21 02 00.2	-0.2
PVAQ	Vaqueiros	17.30	116	Pn	Pn	21 01 58.9	-0.4
PVAQ	Vaqueiros	17.30	116	*e*P	Pn	21 01 59.5	+0.2
PVAQ				*e*LR	LR	21 04 50.9	
	comp=Z,311nm,24.0s						
PAB	San Pablo	18.25	105	P	P	21 02 11.9	+0.6
MDT	Midelt	22.26	121	P	P	21 02 56.6	+1.6
	comp=Z,3.4nm,1.0s,baz=346,slow=10,SNR=5.6						
DAVOX	Davos/Dischmat	25.37	76	P	P	21 03 26.6	+1.7
	comp=Z,3.1nm,0.8s,baz=295,slow=13,SNR=6.6						
SCHQ	Schefferville	25.91	303	P	P	21 03 30.9	+1.2
	comp=Z,2.7nm,0.9s,baz=82,slow=12,SNR=4.0						
SCHQ	Schefferville	25.91	303	P	P	21 03 29.7	0.0
SCHQ				IAmb	IAmb	21 03 31.9	
	comp=Z,10.0nm,1.3s						
HFS	Hagfors	27.36	46	LR	LR	21 14 14.3	
	comp=Z,119nm,18.4s,baz=228,slow=36						
KEST	Kesra	29.48	99	P	P	21 04 01.9	+0.1
	comp=Z,2.4nm,0.8s,baz=285,slow=2.4,SNR=3.8						
KEST	Kesra	29.48	99	P	P	21 04 01.6	-0.3
KEST				IAmb	IAmb	21 04 11.2	
	comp=Z,5.0nm,1.1s						

FINES	FINESS Array B	33.53	44	P	P	21 04 39.6	+2.6
	comp=Z,2.7nm,0.9s,baz=258,slow=7.0,SNR=4.8						
FINES	FINESS Array B	33.53	44	P	P	21 04 38.7	+1.7
Q56A	Snyder Ridge,	38.13	278	P	P	21 05 15.2	-1.5
MCWV	Mont Chateau	38.28	279	P	P	21 05 16.7	-1.3
MCWV				IAmb	IAmb	21 05 20.8	
	comp=Z,17nm,0.7s						
O54A	Avella	38.40	280	P	P	21 05 19.1	+0.1
O54A				IAmb	IAmb	21 05 29.7	
	comp=Z,30nm,0.7s						
V58A	Windy Hill, Pi	39.74	273	P	P	21 05 30.3	+0.1
ACSO	Alum Creek Sta	40.13	281	P	P	21 05 33.7	+0.3
TOA0	Torodi Ar. Sit	41.46	134	P	P	21 05 46.1	+1.5
TORD	Torodi Ar. Bea	41.46	134	P	P	21 05 45.7	+1.1
	comp=Z,2.3nm,0.8s,baz=330,slow=7.6,SNR=13						
TORD				LR	LR	21 21 48.8	
	comp=Z,178nm,18.2s,baz=350,slow=34						
TORD	Torodi Ar. Bea	41.46	134	P	P	21 05 44.9	+0.2
PAULI	Pauline	42.12	274	P	P	21 05 49.4	-0.5
PAULI				IAmb	IAmb	21 05 56.5	
	comp=Z,46nm,0.7s						
BRTR	Keskin Array B	44.01	76	PcP	PcP	21 07 50.9	+0.3
	comp=Z,0.3nm,0.6s,baz=302,slow=3.2,SNR=1.6						
ULM	Lac du Bonnet	44.06	301	P	P	21 06 04.8	-0.6
	comp=Z,1.7nm,0.7s,baz=43,slow=9.0,SNR=4.4						
FFC	Flin Flon	45.77	309	P	P	21 06 19.6	+0.7
FFC				IAmb	IAmb	21 06 21.1	
	comp=Z,7.5nm,1.3s						
YKA	Yellowknife Ar	48.80	322	P	P	21 06 42.0	-0.4
	comp=Z,0.1nm,0.5s,baz=60,slow=7.3,SNR=5.1						
YKA				PcP	PcP	21 08 07.1	+0.2
	comp=Z,0.2nm,0.7s,baz=70,slow=3.5,SNR=3.7						
N23A	Red Feather La	54.76	295	P	P	21 07 29.4	+1.8
N23A				IAmb	IAmb	21 07 38.7	
	comp=Z,44nm,1.9s						
H10N2	ASCENSION HYDR	55.55	164	T	T	22 07 23.4	
	baz=350,slow=75,SNR=4.3						
H10N3	ASCENSION HYDR	55.56	164	T	T	22 07 23.2	
	baz=350,slow=75,SNR=4.2						
H10N1	ASCENSION HYDR	55.57	164	T	T	22 07 23.8	
	baz=350,slow=75,SNR=4.5						
PDAR	Pinedale Array	55.93	298	P	P	21 07 35.2	-0.7
	comp=Z,0.8nm,0.7s,baz=56,slow=7.4,SNR=7.5						
PDAR	Pinedale Array	55.93	298	P	P	21 07 34.5	-1.4
H10S3	ASCENSION HYDR	56.62	165	T	T	22 08 47.5	
	baz=231,slow=74,SNR=16						
H10S2	ASCENSION HYDR	56.63	165	T	T	22 08 46.2	
	baz=349,slow=74,SNR=8.5						
TMUT	Trail Mountain	58.97	296	P	P	21 07 56.8	-0.7
ILAR	Eielson Array	59.26	334	P	P	21 07 58.4	-0.4
	comp=Z,0.3nm,0.8s,baz=36,slow=6.2,SNR=4.3						
ILAR				PcP	PcP	21 08 46.5	-0.3
	comp=Z,0.6nm,1.1s,baz=46,slow=2.6,SNR=4.6						
TXAR	Lajitas Array	60.25	282	P	P	21 08 07.4	+1.3
	comp=Z,0.5nm,0.8s,baz=69,slow=6.3,SNR=5.4						
TXAR	Lajitas Array	60.25	282	P	P	21 08 07.1	+0.9
TIXI	Tiksi	60.69	8	P	P	21 08 08.4	+0.1
	comp=Z,1.0nm,0.8s,baz=2.9,slow=6.1,SNR=4.1						
PSUT	Pine Spring	61.07	297	P	P	21 08 11.5	-0.3
MKAR	Makanchi Array	68.36	44	P	P	21 08 57.2	-1.8
	comp=Z,0.2nm,0.4s,baz=316,slow=6.0,SNR=3.4						
MKAR	Makanchi Array	68.36	44	P	P	21 08 57.5	-1.4
SPB	Sao Paulo	72.34	199	P	P	21 09 21.5	-1.8
SONM	Songino Array	77.51	30	P	P	21 09 53.4	+0.1
	comp=Z,1.1nm,0.9s,baz=308,slow=5.5,SNR=4.0						
SONM	Songino Array	77.51	30	P	P	21 09 53.2	-0.1
USRK	Ussuriysk Ar.	87.60	15	LR	LR	21 50 42.7	
	comp=Z,279nm,19.1s,baz=129,slow=36						
WRA	Warramunga Arr	149.35	35	PKPbc	PKPbc	21 17 46.2	-0.5
	comp=Z,0.6nm,0.7s,baz=332,slow=2.6,SNR=6.0						
ASAR	Alice Springs	152.48	40	PKPbc	PKPbc	21 17 53.2	-0.7
	comp=Z,0.1nm,0.3s,baz=338,slow=2.0,SNR=5.0						

*DJA **19** 21:03:48.5±1.1, 8°S±5°×11°8E±°, h12^{km}±9^{km}, M3.3/6, MLv3.3/6*

*IDC **19** 21:03:51.9±2.0, 7°.97S×118°.44E, h0^{km}, mb3.2/2, mb1 3.4/4, mb1mx3.3/38, mbtmp3.3/4, ML3.4/2, Error ellipse: s-maj=49.0km s-min=24.9km az=71.0*

ISC 19 21:03:50.1±1.2**, 7°.90S**±0°.06×**117°.60E**±0°.07**, h35^{km}, n9, σ1^{s}.04**/10**, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	0.94	169	P	Pn	21 04 06.7	-0.1
PLAI				S	Sn	21 04 19.2	+0.2
SRBI	Singaraja	2.37	265	P	Pn	21 04 27.2	+0.7
WBSI	Waikabubak, Su	2.48	134	P	Pn	21 04 29.1	+1.1
JAGI	Jajag, Banyuwa	3.46	260	P	Pn	21 04 41.8	+0.3
KAPI	Kappang	3.58	37	Pn	Pn	21 04 43.9	+0.9
	7.2nm,0.3s,baz=199,slow=6.5,SNR=51						
KAPI				Sn	Sn	21 05 22.9	-1.2
	3.3nm,0.3s,baz=214,slow=22,SNR=1.9						
BKSI	Bulukumba	3.58	45	P	Pn	21 04 44.0	+0.8
WRA	Warramunga Arr	20.16	128	P	P	21 08 20.0	-1.6
	0.1nm,0.3s,baz=302,slow=12,SNR=2.5						
ASAR	Alice Springs	22.14	137	P	P	21 08 43.2	+0.3
	0.3nm,0.5s,baz=311,slow=8.9,SNR=5.9						
MKAR	Makanchi Array	62.85	333	P	P	21 14 22.5	+10
	0.3nm,0.5s,baz=154,slow=7.1,SNR=3.9						

JMA 19 21:05:33.3±0.1**, 36°.47N**×**140°.53E, h58^{km}**±1^{km}**, M3.5, 5C-4D Broadband fault plane solution: P waves. NP1:**ϕs191.00000°**,**δ31.00000°**,**λ85.00000°. **NP2:** ϕs17.00000°**,**δ59.00000°**,**λ93.00000°. **Principal axes:** T Plg76.0000°**,** Azm297.0000°**;** N Plg3.0000°**,** Azm196.0000°**;** P Plg14.0000°**,** Azm105.0000°**; Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHYU	Hitachinakayam	0.14	160	⇑P	Pn	21 05 42.3	+0.1
JHYU				S	Sn	21 05 48.8	+0.2
JHO	Hitachi	0.14	13	⇑P	Pn	21 05 42.2	-0.1
JHO				S	Sn	21 05 48.3	-0.4
JYT	Yasato	0.36	228	⇑P	Pn	21 05 43.8	+0.1
JYT				S	Sn	21 05 51.2	0.0
ONAJ	Iwakimizuishiy	0.67	19	⇑P	Pn	21 05 46.6	-0.5
ONAJ				S	Sn	21 05 56.3	-0.8
JAG	Ashikaga	0.87	267	⇓P	Pn	21 05 49.7	+0.1
JAG				S	Sn	21 06 01.2	-0.3
JFK	Kawauchi	0.94	17	⇑P	Pn	21 05 49.8	-0.7
JFK				S	Sn	21 06 01.9	-1.2
JFT	Otama	1.06	352	⇓P	Pn	21 05 52.1	+0.1
JFT				S	Sn	21 06 05.7	-0.2
JKT	Katashina	1.07	286	⇓P	Pn	21 05 52.5	+0.2
JKT				S	Sn	21 06 06.8	+0.4
JFY	Yanaizu	1.15	325	⇓P	Pn	21 05 53.5	+0.3
MAT	Matsushiro	1.87	273	P	Pn	21 06 03.9	+0.9
MAT				S	Sn	21 06 25.9	+0.3

*IDC **19** 21:15:22.0±1.1, 19°.95S×70°.71W, h0^{km}, mb3.7/4, mb1 3.8/6, mb1mx3.6/36, mbtmp3.7/6, ML3.2/2 Error ellipse: s-maj=38.8km s-min=14.9km az=61.0*

*GUC **19** 21:15:24.0±0.7, 20°.01S×70°.78W, h23^{km}±3^{km}, ML3.3*

ISC 19 21:15:22.7±1.6**, 19°.98S**±0°.03×**70°.75W**±0°.07**, h6^{km}**±9^{km}**, n24, σ1^{s}.12**/37**, mb3.7**/4**, 3C-6D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.71	57	⇑iP	Pb	21 15 37.4	-0.1
PSGC				iS	Sb	21 15 47.9	+0.4
TA01	Diego Aracena	0.79	137	⇓iP	Pg	21 15 38.1	+0.1
TA01				iS	Sb	21 15 49.1	-0.7
TA01				IAML		21 15 54.0	
	comp=E,3μm,0.5s						
PATCX	Punta Patache	1.01	146	⇓iP	Pg	21 15 41.5	-0.6
PATCX				iS	Sg	21 15 55.2	0.0
PATCX				IAML		21 15 58.5	
	comp=E,951nm,0.5s						
PB11	IPOC Station P	1.06	78	⇑iP	Pb	21 15 43.3	-0.2
PB11				iS	Sn	21 15 58.0	-1.3
PB11				IAML		21 16 02.7	
	comp=E,1μm,0.5s						
PB12	IPOC Station P	1.42	17	⇓iP	Pn	21 15 48.9	-0.3
PB12				iS	Sg	21 16 08.7	+0.3
PB12				IAML		21 16 12.6	
	comp=N,643nm,0.6s						
GO01	Chusmiza	1.50	78	⇑iP	Pb	21 15 50.9	-0.3
GO01				iS	Sg	21 16 11.6	+0.5
PB08	IPOC Station P	1.51	96	⇓iP	Pb	21 15 50.8	-0.7
PB08				iS	Sb	21 16 10.9	-0.1
PB08				IAML		21 16 17.8	
	comp=N,409nm,0.2s						
PB02	IPOC Station P	1.56	149	⇓iP	Pn	21 15 50.1	-0.9
PB02				iS	Sn	21 16 10.3	-1.2
PB02				IAML		21 16 14.7	
	comp=E,1μm,0.5s						
PB01	IPOC Station P	1.59	132	iP	Pn	21 15 50.9	-0.6
PB01				iS	Sn	21 16 11.7	-0.6
PB01				IAML		21 16 15.2	
	comp=E,533nm,0.3s						
PB07	IPOC Station P	1.92	155	IAML		21 16 30.4	
	comp=E,268nm,0.5s						
PB16	IPOC Station P	2.02	36	iP	Pb	21 15 59.6	-0.6
PB16				iS	Sg	21 16 26.8	-0.9
PB16				IAML		21 16 34.3	
	comp=E,235nm,0.4s						
PB09	IPOC Station P	2.29	142	⇓iP	Pn	21 16 02.4	+1.1
PB09				iS	Sb	21 16 32.0	-1.3
PB09				IAML		21 16 41.1	
	comp=E,351nm,0.5s						
LVC	Limon Verde	3.13	147	Pn	Pn	21 16 14.1	+1.1
	comp=E,4.4nm,0.3s,baz=346,slow=6.9,SNR=27						
LVC				Pg	Pb	21 16 18.8	-0.2
	comp=E,16nm,0.3s,baz=354,slow=11,SNR=23						
LVC				Sn	Sn	21 16 53.1	+2.3
	comp=E,9.8nm,0.3s,baz=288,slow=21,SNR=6.3						
LVC				Lg	Lg	21 17 01.1	
	comp=E,10nm,0.3s,baz=84,slow=15,SNR=8.7						
LVC	Limon Verde	3.13	147	eP	Pn	21 16 14.0	+1.1
LVC				iS	Sn	21 16 52.8	+2.1
LPAZ	La Paz	4.44	35	Pn	Pn	21 16 34.9	+3.7
	comp=E,0.2nm,0.3s,baz=303,slow=4.6,SNR=3.3						
SIV	San Ignacio	10.03	68	Pn	Pn	21 17 48.7	+1.3
	comp=E,0.2nm,0.3s,baz=273,slow=8.9,SNR=3.7						
PTGA	Pitinga	21.85	30	P	P	21 20 15.1	-1.1
	comp=E,1.3nm,0.3s,baz=309,slow=23,SNR=2.7						
TXAR	Lajitas Array	58.41	326	P	P	21 25 19.7	+0.4
	comp=E,0.4nm,0.8s,baz=153,slow=8.1,SNR=3.6						
TORD	Torodi Ar. Bea	78.49	71	P	P	21 27 24.2	-1.0
	comp=E,0.5nm,0.7s,baz=269,slow=6.1,SNR=3.1						
YKA	Yellowknife Ar	89.19	341	P	P	21 28 18.5	-0.4
	comp=E,0.3nm,0.6s,baz=135,slow=4.8,SNR=6.6						
ZALV	Zalesovo Beam	141.28	23	PKP	PKPdf	21 34 54.4	+0.4
	comp=E,0.3nm,0.4s,baz=343,slow=1.5,SNR=1.6						
MKAR	Makanchi Array	145.37	33	PKPbc	PKPab	21 35 01.8	+0.2
	comp=E,0.9nm,0.7s,baz=325,slow=4.5,SNR=12						
KLR	Kul'dur	145.70	334	PKPbc	PKPbc	21 35 01.9	-0.5
	comp=E,1.2nm,0.7s,baz=234,slow=1.0,SNR=5.1						
SONM	Songino Array	152.12	4	PKPbc	PKiKP	21 35 19.4	-0.2
	comp=E,0.5nm,0.7s,baz=359,slow=2.6,SNR=4.5						

*IDC **19** 21:34:40.8±0.6, 1°.20N×128°.08E, h0^{km}, mb4.2/17, mb1 4.3/20, mb1mx4.2/38, mbtmp4.2/20, ML4.2/3, MS3.6/6, Ms1 3.6/6, ms1mx3.2/54, Error ellipse: s-maj=21.8km s-min=12.3km az=76.0*

*NEIC **19** 21:34:41.0±2.2, 1°.19N±0°.07×128°.13E±0°.05, h9^{km}±5^{km}, mb4.6/37, Error ellipse: s-maj=10.8km s-min=6.7km az=167.0*

*DJA **19** 21:34:43.9±0.2, 1°N±2°×12°8E±°, h10^{km}, M4.5/17, mb4.7/17, mB5.1/6, MLv4.4/12, Mw(mB)4.4/6*

ISC 19 21:34:43.9±0.4**, 1°.17N**±0°.04×**128°.15E**±0°.05**, h23^{km}, n121, σ1^{s}.55**/121**, mb4.5**/36**, MS3.5**/5**, 1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.88	243	P	Pb	21 34 58.0	-2.4
TNTI				S	Sb	21 35 11.6	-0.1
TNTI	Ternate	0.88	243		Pb	21 34 58.0	-2.4
LBMI	Labuha	1.91	200	P	Pn	21 35 14.6	-0.4
LBMI				S	Sn	21 35 40.9	+2.6
SWI	Sorong	3.71	123	P	Pn	21 35 40.9	+1.1
SWI				S	Sn	21 36 26.2	+3.4
SIJI	Sorong	3.72	123	Pn	Pn	21 35 40.8	+0.9
	13nm,0.3s,baz=297,slow=11,SNR=27						
SIJI				Sn	Sn	21 36 23.2	+0.2
	baz=351,slow=22,SNR=1.2						
SANI	Sanana	3.86	214	P	Pn	21 35 41.4	-0.4
KMSI	Cibinong	4.21	262	P	Pn	21 35 48.9	+2.2
MSAI	Masohi	4.55	170	P	Pn	21 35 54.5	+3.1
AAI	Ambon	4.82	179	P	Pn	21 35 57.2	+2.1
AAI				S	Sn	21 36 53.6	+3.3
FAKI	Fak Fak	5.77	135	P	Pn	21 36 10.3	+2.2
	0.2nm40nm,0.6s						
FAKI	Fak Fak	5.77	135		Pn	21 36 08.1	-0.1
LUWI	Luwuk	5.81	248	P	Pn	21 36 09.8	+1.1
	0.8nm2μm81nm,0.8s						
LUWI	Luwuk	5.81	248	Pn	Pn	21 36 08.4	-0.2
MRSI	Marisa	6.25	264	P	Pn	21 36 20.7	+6.0
KCP	Kidapawan	6.55	332	⇓iP	Pn	21 36 22.1	+3.2
KCP				iS	Sn	21 36 54.0	-39
APSI	Ampana	6.82	252	P	Pn	21 36 24.9	+2.3
	0.3nm811nm61nm,0.4s						
MPSI	Mapaga	8.29	264	P	Pn	21 36 44.0	+1.2
	20nm,0.9s						
BBSI	Bau Bau	8.65	220	P	Pn	21 37 01.4	+14
I39PW	PALAU INFRASON	8.98	45	i		22 32 30.0	
	baz=225,slow=315,SNR=1.7						
TTSI	Tana Toraja	9.32	243	P	Pn	21 36 57.8	+0.9
	787nm66nm,0.6s						
BNSI	Bone	9.76	235	P	Pn	21 37 03.5	+0.6
	657nm34nm,0.6s						
SPSI	Sidrap Palu	9.80	239	P	Pn	21 37 05.8	+2.2
	2μm102nm,0.5s						
BKSI	Bulukumba	10.29	231	P	Pn	21 37 12.9	+2.7
	686nm29nm,0.8s						
KAPI	Kappang	10.40	234	Pn	Pn	21 37 12.5	+0.8
	3.3nm,0.3s,baz=77,slow=7.6,SNR=9.5						
KAPI				Sn	Sn	21 39 05.7	-1.9
	1.0nm,0.3s,baz=156,slow=22,SNR=6.1						
KAPI				LR	LR	21 41 22.4	
	comp=Z,197nm,18.1s,baz=62,slow=39						
SBUM	Sibu	15.97	275		P	21 38 30.8	+0.1
KNRA	Kununurra	16.75	178	Pn	Pn	21 38 36.7	-0.4
FITZ	Fitzroy Crossi	19.30	187	P	P	21 39 07.8	+0.4
	0.5nm,0.3s,baz=33,slow=8.4,SNR=11						
FITZ	Fitzroy Crossi	19.30	187	P	P	21 39 06.8	-0.6
GUMO	Guam	20.64	53	LR	LR	21 46 31.8	
	comp=Z,152nm,18.7s,baz=230,slow=34						
COEN	Coen	21.16	136	P	P	21 39 27.6	0.0
WB0	Warramunga Arr	21.69	164	P	P	21 39 32.9	-0.4
WB0				IAmb	IAmb	21 39 39.9	
	comp=Z,20nm,0.8s						
WRAB	Tennant Creek	21.84	164	P	P	21 39 33.3	-1.6
WRAB				IAmb	IAmb	21 39 41.4	
	comp=Z,19nm,0.8s						
WRA	Warramunga Arr	21.84	164	P	P	21 39 35.6	+0.7
	comp=Z,17nm,0.7s,baz=343,slow=11,SNR=94						
WRA	Warramunga Arr	21.84	164	P	P	21 39 33.4	-1.6
WB2	Warramunga Arr	21.84	164	P	P	21 39 33.4	-1.6
WB2				IAmb	IAmb	21 39 41.5	
	comp=Z,21nm,0.8s						
WR0	Warramunga Arr	21.91	164	P	P	21 39 34.1	-1.6
WR0				IAmb	IAmb	21 39 41.9	
	comp=Z,18nm,0.7s						
DLV	T Lat	22.25	300	P	P	21 39 38.2	-1.3
DLV				IAmb	IAmb	21 39 43.5	
	comp=Z,18nm,1.0s						
TWG	Pinlang	22.59	343	P	P	21 39 38.8	-4.2
TPUB	Ta-pu	23.18	342	P	P	21 39 47.1	-2.0
TPUB				IAmb	IAmb	21 39 53.4	
	comp=Z,18nm,0.9s						
SSLB	Suanglung	23.54	343	P	P	21 39 50.9	-1.8
SSLB				IAmb	IAmb	21 39 54.7	
	comp=Z,13nm,0.8s						
PSA00	Pilbara Seismi	24.01	199	P	P	21 39 56.9	-0.3
PSA00				IAmb	IAmb	21 40 01.9	
	comp=Z,16nm,0.8s						
YHNB	Yeheng	24.26	345	P	P	21 39 57.9	-1.6
YHNB				IAmb	IAmb	21 40 03.3	
	comp=Z,13nm,0.7s						
KRVT	Keravat (AS076	24.47	103	LR	LR	21 49 07.6	
	comp=Z,147nm,18.4s,baz=5.1,slow=35						
MDSI	Maura Dua	24.60	257	P	P	21 40 04.3	+1.7
	comp=Z,13nm,1.0s						
LWLI	Liwa	24.84	255	P	P	21 40 14.8	+10
AS31	Alice Springs	25.31	168	P	P	21 40 07.7	-1.3
ASAR	Alice Springs	25.31	168	P	P	21 40 09.8	+0.8
	comp=Z,3.7nm,0.6s,baz=348,slow=9.1,SNR=56						
ASAR	Alice Springs	25.31	168	P	P	21 40 07.7	-1.3
JOW	Kunigami	25.52	0	P	P	21 40 07.2	-3.6
UBPT	Khong Chiam	26.41	303	P	P	21 40 17.3	-1.8
RPSI	Rantau Prapat	29.25	273	P	P	21 40 43.8	-0.6
PSI	Prapat	29.25	274	P	P	21 40 43.8	-0.8
	comp=Z,3.8nm,0.8s,baz=74,slow=5.2,SNR=5.9						
PATS	Pohnpei	30.60	79	P	P	21 40 54.9	-1.6
PBKT	Sadao Pong	30.83	301	P	P	21 40 58.0	-0.4
FORT	Forrest	31.77	180	P	P	21 41 06.6	+0.1
NJ2	Nanjing	31.95	345	eP	P	21 41 10.8	+2.8
WHN	Wuhan	32.02	337	P	P	21 41 12.3	+3.6
GYA	Guiyang	32.55	322	eP	P	21 41 16.1	+2.5
CMAR	Chiang Mai Arr	33.41	303	P	P	21 41 21.8	+0.6
	comp=Z,1.9nm,1.0s,baz=117,slow=6.2,SNR=9.5						
CMAR	Chiang Mai Arr	33.41	303	P	P	21 41 20.2	-0.9
CHTO	Chiang Mai	33.58	303	P	P	21 41 22.5	0.0
CHTO				IAmb	IAmb	21 41 24.3	
	comp=Z,11nm,1.2s						
ENH	Enshi	33.94	330	P	P	21 41 25.4	-0.2
KMI	Kunming	34.19	316	P	P	21 41 25.7	-2.3
STKA	Stephens Creek	35.25	160	P	P	21 41 37.9	+1.1
	comp=Z,1.8nm,0.4s,baz=329,slow=6.3,SNR=5.5						
STKA	Stephens Creek	35.25	160	P	P	21 41 36.1	-0.8
KSRS	Korea Array	36.11	360	P	P	21 41 44.4	+0.3
	comp=Z,2.0nm,0.7s,baz=178,slow=9.5,SNR=6.2						
MAT	Matsushiro	36.41	14	P	P	21 41 46.6	-0.1
MJAR	Matsushiro Arr	36.41	14	P	P	21 41 46.2	-0.6
	comp=Z,1.6nm,0.6s,baz=182,slow=9.4,SNR=8.5						
MJAR	Matsushiro Arr	36.41	14	P	P	21 41 45.4	-1.3
XAN	Xi'an	37.33	333	P	P	21 41 55.8	+1.2
XAN				pP	sP	21 42 03.3	-1.2
CD2	Chengdu	37.54	324	eP	P	21 41 55.5	-1.0
ARMA	Armidale	38.56	146	P	P	21 42 03.9	-1.3
ARMA				IAmb	IAmb	21 42 09.0	
	comp=Z,15nm,1.3s						
BJI	Beijing	40.20	346	P	P	21 42 19.4	+0.9
LZH	Lanzhou	41.41	330	eP	P	21 42 31.3	+2.4
LZH				pP	pP	21 42 34.0	-1.9
LZH				sP	sP	21 42 36.6	-2.2
HHC	Hu-ho-hao-te	42.26	341	eP	P	21 42 36.9	+1.2
USRK	Ussuriysk Ar.	42.98	4	P	P	21 42 41.6	+0.3
	comp=Z,3.2nm,0.8s,baz=184,slow=5.2,SNR=9.2						
LSA	Lhasa	45.19	312	P	P	21 42 59.2	-0.7
GTA	Gaotai	46.01	329	eP	P	21 43 07.4	+1.6
GTA				pP	pP	21 43 12.8	-0.1
GTA				sP	sP	21 43 15.6	-0.1
TAPN	Taplejung	46.68	308	eP	P	21 43 09.9	-1.5
	comp=Z,29nm,0.8s						
ODAN	Odare	46.72	307	eP	P	21 43 12.3	+0.6
	comp=Z,24nm,0.8s						
RAMN	Ramite	47.39	306	eP	P	21 43 18.0	+1.1
	comp=Z,58nm,1.0s						
JIRN	Jiri	48.02	307	eP	P	21 43 22.8	+0.8
	comp=Z,64nm,0.8s						
GUN	Gumba	48.38	307	eP	P	21 43 25.5	+0.8
	comp=Z,55nm,0.7s						
PKI	Pulchoki	48.61	307	eP	P	21 43 26.7	+0.2
	comp=Z,37nm,1.1s						
PKIN	Phulchoki	48.62	307	eP	P	21 43 26.8	+0.3
	comp=Z,30nm,1.2s						
KKN	Kakani	48.81	307	eP	P	21 43 28.5	+0.6
	comp=Z,43nm,1.0s						
DMN	Daman	48.87	306	eP	P	21 43 28.8	+0.4
	comp=Z,44nm,0.9s						
GKN	Gorkha	49.41	307	eP	P	21 43 32.9	+0.5
	comp=Z,58nm,1.1s						
ULN	Ulaanbaatar	49.98	342	P	P	21 43 37.2	+0.8
ULN				IAmb	IAmb	21 43 38.7	
	comp=Z,15nm,1.4s						
SONM	Songino Array	50.16	341	P	P	21 43 39.0	+1.2
	comp=Z,1.8nm,0.5s,baz=152,slow=7.7,SNR=21						
SONM				PcP	PcP	21 44 58.0	+1.0
	comp=Z,0.2nm,0.3s,baz=134,slow=4.2,SNR=5.6						
SONM	Songino Array	50.16	341	P	P	21 43 37.9	+0.2
DANN	Dangsing	50.26	307	eP	P	21 43 39.6	+0.6
	comp=Z,91nm,0.7s						
HYB	Hyderabad	51.34	291	iP	P	21 43 47.0	0.0
WMQ	Urumqi	55.62	325	eP	P	21 44 19.3	+1.2
PETK	Petropavlovsk-	57.28	21	P	P	21 44 31.2	+1.6
	comp=Z,1.8nm,0.7s,baz=193,slow=5.2,SNR=4.3						
PETK	Petropavlovsk-	57.28	21	P	P	21 44 30.7	+1.1
MK31	Makanchi Array	60.45	325	IAmb	IAmb	21 44 56.9	
	comp=Z,3.1nm,0.8s						
MKAR	Makanchi Array	60.45	325	P	P	21 44 51.8	-0.1
	comp=Z,3.7nm,0.5s,baz=118,slow=8.5,SNR=60						
MKAR				LR	LR	22 13 30.2	
	comp=Z,75nm,18.0s,baz=14,slow=39						
MKAR	Makanchi Array	60.45	325	P	P	21 44 51.7	-0.2
MKAR				PcP	PcP	21 45 37.0	+0.5
NIL	Nilore	60.61	308	P	P	21 44 51.0	-2.2
NIL				IAmb	IAmb	21 44 55.4	
	comp=Z,7.1nm,1.1s						
KSH	Kashi	60.85	316	P	P	21 44 56.5	+1.7
KSH				PcP	PcP	21 45 41.4	+3.0
KSH				S	S	21 53 14.3	+2.9
KSH				ScS	ScS	21 54 46.1	+1.2
KSH	Kashi	60.85	316	SS	SS	21 57 15.6	+4.8
AAK	Ala-Archa	63.20	318	P	P	21 45 09.8	-0.7
	comp=Z,0.6nm,0.5s,baz=109,slow=5.5,SNR=4.8						
AAK	Ala-Archa	63.20	318	P	P	21 45 08.5	-2.0
ZALV	Zalesovo Beam	63.50	333	P	P	21 45 11.3	-0.8
	comp=Z,1.7nm,0.8s,baz=116,slow=10,SNR=6.0						
ZALV	Zalesovo Beam	63.50	333	P	P	21 45 11.1	-1.0
KURBB	Kurchatov Arra	64.65	328	PP	PP	21 47 42.8	+0.7
	comp=Z,0.3nm,0.7s,baz=122,slow=8.6,SNR=4.1						
KURK	Kurchatov	64.65	328	P	P	21 45 18.6	-1.2
KK31	Karatay Array	66.06	317	P	P	21 45 27.7	-1.4
KK31				IAmb	IAmb	21 45 39.7	
	comp=Z,3.8nm,1.1s						
KKAR	Karatay Array	66.06	317	P	P	21 45 28.2	-0.9
KKAR	Karatay Array	66.06	317	P	P	21 45 27.7	-1.4
KKAR				IAmb	IAmb	21 45 39.7	
	comp=Z,3.8nm,1.1s						
BRVK	Borovoye	70.30	327	P	P	21 45 54.3	-1.1
BRVK				IAmb	IAmb	21 45 56.6	
	comp=Z,5.2nm,1.0s						
TIXI	Tiksi	70.38	0	P	P	21 45 54.5	-1.1
TIXI				IAmb	IAmb	21 45 56.8	
	comp=Z,3.2nm,0.8s						
NRIK	Noril'sk	73.24	346	P	P	21 46 13.3	+0.5
	comp=Z,0.8nm,0.4s,baz=129,slow=6.5,SNR=1.3						
GEYT	Alibeck	73.60	309	P	P	21 46 15.9	+0.2
	comp=Z,1.5nm,0.7s,baz=177,slow=3.0,SNR=4.4						
ABKAR	Akbulak array	75.02	321	P	P	21 46 21.9	-1.7
VNDA	Vanda	80.72	173	P	P	21 46 54.6	-0.2
	comp=Z,0.6nm,0.7s,baz=328,slow=6.0,SNR=2.3						
ILAR	Eielson Array	86.80	25	P	P	21 47 26.1	0.0
	comp=Z,0.3nm,0.5s,baz=251,slow=5.6,SNR=2.7						
BMAR	Burnt Mountain	87.88	23	P	P	21 47 31.1	-0.3
MMAI	Mount Meron Ar	91.68	303	LR	LR	22 36 06.9	
	comp=Z,19nm,18.3s,baz=195,slow=40						
EIL	Elat	92.21	300	LR	LR	22 37 13.3	
	comp=Z,18nm,18.3s,baz=105,slow=41						

*IDC **19** 21:48:44.5±3.0, 38°.14N×73°.66E, h100^{km}±26^{km}, mb3.4/9, mb1 3.5/15, mb1mx3.3/50, mbtmp3.8/15, Error ellipse: s-maj=22.6km s-min=16.5km az=176.0*

*SOME **19** 21:48:46.8, 39°.12N×73°.12E, h10^{km}*

*BJI **19** 21:48:47.0±0.0, 38°.43N×73°.79E, h126^{km}, mB4.4/4, mb4.1/7*

*NNC **19** 21:48:50.5±5.7, 38°.73N×73°.87E, h0^{km}, mb4.3, mpv3.7, Error ellipse: s-maj=43.2km s-min=35.2km az=164.0*

ISC 19 21:48:45.4±0.5**, 38°.20N**±0°.04×**73°.77E**±0°.06**, h100^{km}, n58, σ2^{s}.41**/68**, mb3.7**/8**, 9C-6D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	2.16	52	P	Pn	21 49 19.1	-1.1
KSH				S	Sn	21 49 41.0	-5.8
AML	Almayashu	3.93	359	P	Pn	21 49 45.6	+1.6
	SNR=108						
KZA	Kyzart	4.03	16	P	Pn	21 49 47.1	+1.7
	SNR=28						
UCH	Uchtor	4.06	8	P	Pn	21 49 47.6	+1.7
	SNR=14						
EKS2	Erkin-Say	4.46	0	P	Pn	21 49 53.0	+2.2
	SNR=55						
ULHL	Ulahol	4.46	24	P	Pn	21 49 52.6	+1.7
	SNR=16						
AAK	Ala-Archa	4.47	7	P	Pn	21 49 53.0	+2.0
	2.7nm,0.3s,baz=131,slow=6.7,SNR=38						
AAK				S	Sn	21 50 42.8	+0.8
	4.4nm,0.3s,baz=350,slow=15,SNR=4.9						
AAK	Ala-Archa	4.47	7	P	Pn	21 49 53.0	+2.0
	SNR=13						

AAK	**Ala-Archa**	**4.47**	**7**	⇓Pn	**Pn**	**21 49 52.9**	**+1.9**
	6.3nm,0.6s						
AAK				⇑Sn	**Sn**	**21 50 41.7**	**-0.2**
	84nm,0.9s						
KBK	**Karagaybulak**	**4.54**	**11**	P	**Pn**	**21 49 54.2**	**+2.2**
	SNR=11						
CHCP	**Chirah Chowk**	**4.55**	**185**	P	Pn	21 49 58.7	+6.6
MRKS	**Merke**	**4.56**	**355**	*e*P	**Pn**	**21 49 54.1**	**+1.9**
	56nm,0.4s						
MRKS				*e*S	**Sn**	**21 50 42.3**	**-1.8**
	124nm,0.5s						
CEP	**Cherat**	**4.62**	**200**	P	Pn	21 49 58.8	+5.6
CHMS	**Chumysh**	**4.85**	**9**	P	**Pn**	**21 49 58.1**	**+2.0**
	SNR=6.3						
CHMS	**Chumysh**	**4.85**	**9**	⇑Pn	**Pn**	**21 49 57.6**	**+1.5**
	6.0nm,0.4s						
CHMS				⇑Pg		21 50 10.9	
	11nm,0.5s						
CHMS				⇑Sn	**Sn**	**21 50 50.3**	**-0.7**
	16nm,0.8s						
CHMS				⇓Lg	Lg	21 51 08.6	
	18nm,0.8s						
IUG	**Iuzhnay**	**4.87**	**325**	*e*P	**Pn**	**21 49 58.1**	**+1.7**
	5.8nm,0.4s						
IUG				*e*S	**Sn**	**21 50 49.2**	**-2.5**
	134nm,0.5s						
DZA	**Taraz**	**5.04**	**339**	*e*P	**Pn**	**21 50 00.6**	**+1.9**
	30nm,0.1s						
DZA				*e*S	**Sn**	**21 50 53.0**	**-2.6**
	198nm,0.6s						
USP	**Ospenovka**	**5.09**	**6**	P	**Pn**	**21 50 03.0**	**+3.6**
	SNR=8.2						
TNSS	**Tian-Shan**	**5.40**	**26**	*e*P	Pn	21 50 16.9	+13
	3.4nm,0.6s						
TNSS				*e*S	Sn	21 51 21.3	+16
	13nm,0.8s						
KK31	**Karatay Array**	**5.49**	**334**	⇑Pn	**Pn**	**21 50 06.0**	**+1.3**
	1.7nm,0.2s,baz=137,slow=13,SNR=50						
KK31				⇓Sn	**Sn**	**21 51 04.8**	**-1.7**
	40nm,0.5s,baz=134,slow=24,SNR=4.8						
MDOK	**Medeo**	**5.55**	**26**	⇓Pn	**Pn**	**21 50 07.3**	**+1.6**
	12nm,0.6s						
MDOK				⇑Lg	Lg	21 51 33.5	
	38nm,0.8s						
THN	**Thein Dam**	**5.97**	**164**	*e*P	Pn	21 50 17.0	+5.7
THN				*e*S	**Sn**	**21 51 19.0**	**+0.7**
DHRM	**DHARAMSHALA**	**6.29**	**160**	*e*P	**Pn**	**21 50 19.9**	**+4.0**
DHRM				*e*S	**Sn**	**21 51 27.5**	**+1.1**
DHRM				IAML		21 51 30.3	
	comp=E,289nm,0.4s						
DHRM				IAML		21 51 30.8	
	comp=N,278nm,0.2s						
SARP	**Sargodha**	**6.33**	**189**	P	**Pn**	**21 50 19.9**	**+3.7**
PDGK	**Podgornoye**	**6.71**	**38**	⇑Pn	**Pn**	**21 50 21.9**	**+0.5**
	comp=N,11nm,0.7s						
PDGK				⇑Lg	Lg	21 52 11.4	
	comp=N,15nm,0.8s						
BHK	**Bhakra**	**7.11**	**161**	*e*x	**Sn**	**21 51 51.0**	**+4.9**
SMLA	**Simla**	**7.59**	**157**	*e*P	**Pn**	**21 50 35.8**	**+2.5**
SMLA				*e*S	**Sn**	**21 51 54.8**	**-2.9**
SMLA				IAML		21 51 59.3	
	comp=E,442nm,0.8s						
JOSI	**Joshimath**	**9.00**	**146**	*e*P	**Pn**	**21 50 54.7**	**+1.9**
JOSI				*e*P		21 50 54.7	
JOSI				*e*S	**Sn**	**21 52 27.4**	**-5.0**
JOSI				*e*S		21 52 27.4	
NDI	**New Delhi**	**9.92**	**162**	*e*x	x	21 52 50.0	
NDI				*e*S	**Sn**	**21 52 55.5**	**+1.1**
KUDL	**Kundal**	**10.28**	**166**	*e*P	Pn	21 50 57.4	-13
KUDL				*e*S	Sn	21 52 46.0	-17
MKAR	**Makanchi Array**	**10.64**	**33**	P	**Pn**	**21 51 14.9**	**+0.2**
	comp=E,0.4nm,0.3s,baz=196,slow=13,SNR=42						
WMQ	**Urumqi**	**11.92**	**58**	*e*P	**Pn**	**21 51 34.9**	**+2.9**
GEYT	**Alibeck**	**12.34**	**274**	P	**Pn**	**21 51 36.2**	**-1.4**
	comp=E,0.7nm,0.3s,baz=116,slow=7.4,SNR=11						
GEYT				S	**Sn**	**21 53 48.0**	**-5.3**
	comp=E,1.3nm,0.3s,baz=111,slow=29,SNR=7.0						
KURBB	**Kurchatov Arra**	**12.87**	**14**	P	**Pn**	**21 51 41.8**	**-2.7**
	comp=E,0.1nm,0.3s,baz=199,slow=12,SNR=8.2						
DANN	**Dangsing**	**12.89**	**137**	*e*P	**Pn**	**21 51 44.7**	**-0.4**
	comp=E,23nm,0.3s						
GKN	**Gorkha**	**13.64**	**135**	*e*P	**Pn**	**21 51 55.2**	**+0.4**
	comp=E,103nm,0.4s						
KKN	**Kakani**	**14.17**	**134**	*e*P	**Pn**	**21 52 01.9**	**+0.2**
	comp=E,34nm,0.5s						
PKIN	**Phulchoki**	**14.39**	**134**	*e*P	**Pn**	**21 52 05.1**	**+0.4**
	comp=E,13nm,0.3s						
PKI	**Pulchoki**	**14.41**	**134**	*e*P	**Pn**	**21 52 05.1**	**+0.2**
GUN	**Gumba**	**14.42**	**132**	*e*P	**Pn**	**21 52 04.9**	**-0.2**
	comp=E,22nm,0.7s						
JIRN	**Jiri**	**14.79**	**132**	*e*P	**Pn**	**21 52 09.6**	**-0.2**
	comp=E,22nm,0.3s						
AB31	**Akbulak array**	**14.87**	**322**	Pn	**P**	**21 52 17.4**	**+3.8**
	comp=E,17nm,0.3s,baz=138,slow=13,SNR=32						
AB31				⇑Sn	**Sn**	**21 54 59.0**	**+4.7**
	comp=E,2.1nm,0.5s						
BVAR	**Borovoye Array**	**15.01**	**352**	P	**Pn**	**21 52 10.4**	**-1.6**
	comp=E,0.2nm,0.3s,baz=153,slow=13,SNR=5.7						
RAMN	**Ramite**	**15.56**	**132**	*e*P	**Pn**	**21 52 19.2**	**-0.3**
	comp=E,21nm,0.4s						
TAPN	**Taplejung**	**15.93**	**129**	*e*P	**Pn**	**21 52 24.4**	**+0.3**
ODAN	**Odare**	**16.10**	**131**	*e*P	**Pn**	**21 52 27.2**	**+1.1**
AKTO	**Aktyubinsk**	**16.59**	**323**	P	**Pn**	**21 52 30.8**	**-1.0**
	comp=E,0.5nm,0.3s,baz=110,slow=9.3,SNR=8.4						
AKTO				S	Sn	21 55 23.6	-12
	comp=E,0.1nm,0.3s,baz=329,slow=11,SNR=3.0						
AKTO	**Aktyubinsk**	**16.59**	**323**	⇓Pn	**P**	**21 52 38.8**	**+6.2**
	comp=E,4.5nm,1.1s						
AKTO				⇓Sn	**Sn**	**21 55 39.6**	**+3.9**
	comp=E,3.7nm,1.1s						
ZALV	**Zalesovo Beam**	**17.48**	**22**	P	**P**	**21 52 41.1**	**-1.2**
	comp=E,1.5nm,0.3s,baz=220,slow=10,SNR=22						
ARU	**Arti**	**20.86**	**336**	P	**P**	**21 53 17.5**	**-1.6**
	comp=E,0.6nm,0.5s,baz=136,slow=8.8,SNR=4.0						
SONM	**Songino Array**	**25.56**	**57**	P	**P**	**21 54 05.6**	**+0.6**
	comp=E,0.4nm,0.8s,baz=251,slow=9.2,SNR=5.2						
NRIK	**Noril'sk**	**32.08**	**9**	P	**P**	**21 55 02.5**	**+0.1**
	comp=E,1.2nm,0.3s,baz=189,slow=13,SNR=2.8						
FINES	**FINESS Array B**	**37.35**	**324**	P	**P**	**21 55 47.1**	**-0.8**
	comp=E,3.5nm,0.9s,baz=116,slow=9.2,SNR=7.8						
ARCES	**ARCESS Array B**	**40.45**	**336**	P	**P**	**21 56 12.7**	**-1.0**
	comp=E,0.8nm,0.6s,baz=114,slow=8.9,SNR=7.8						
NOA	**NORSAR Array B**	**44.38**	**322**	P	**P**	**21 56 44.5**	**-1.1**
	comp=E,0.3nm,0.4s,baz=92,slow=7.9,SNR=1.8						
TORD	**Torodi Ar. Bea**	**67.95**	**270**	P	**P**	**21 59 32.7**	**-1.2**
	comp=E,0.7nm,0.6s,baz=45,slow=5.3,SNR=9.1						
WRA	**Warramunga Arr**	**81.06**	**124**	P	**P**	**22 00 48.1**	**-1.5**
	comp=E,0.8nm,0.8s,baz=329,slow=5.7,SNR=6.6						
ASAR	**Alice Springs**	**83.46**	**127**	P	**P**	**22 01 01.0**	**-1.0**
	comp=E,0.2nm,0.7s,baz=336,slow=6.3,SNR=1.7						

NEIC ***19*** *21:58:02.5±2.2, 35.°01S±0.°05×111.°4W±0.°2, h10^{km}±1^{km}, mb4.6/51, Error ellipse: s-maj=23.8km s-min=7.7km az=272.0*

IDC ***19*** *21:58:02.2±0.6, 34.°91S×111.°37W, h0^{km}, mb4.3/10, mb1 4.5/10, mb1mx4.3/28, mbtmp4.2/10, MS4.2/16, Ms1 4.2/16, ms1mx4.1/27, Error ellipse: s-maj=24.7km s-min=19.7km az=46.0*

GCMT ***19*** *21:58:04.5±0.3, 35.°35S±0.°03×111.°36W±0.°02, h14^{km}±1^{km}, MW4.9/94, Moment Tensor Solution. s33,c39; s94,c120; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.44±.18; $M_{\theta\theta}$0.33±.12; $M_{\phi\phi}$2.12±.12; $M_{r\theta}$-1.12±.32; $M_{\theta\phi}$-1.14±.08; $M_{\phi r}$0.40±.23; Best double couple: $M_0$2.82700×10^{16} NP1:ϕ_s351.00000°,δ38.00000°,λ-62.00000°. NP2: ϕ_s137.00000°,δ57.00000°,λ-110.00000°. Principal axes: T 2.8170, Plg10.0000°, Azm241.0000°; N 0.0250, Plg17.0000°, Azm149.0000°; P -2.8370, Plg70.0000°, Azm360.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 21:58:02.1±0.5,**35.°0S**±0.°1×**111.°5W**±0.°1,**h10**^{km},**n109**, σ**1.s43**/84,**mb4.6**/28,**MS4.3**/18,**17C-4D,Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**8.03**	**14**	LR	LR	22 02 12.5	
	comp=Z,714nm,18.9s,baz=196,slow=32						
PTCN	**Pitcairn Islan**	**18.88**	**296**	P	**P**	**22 02 22.6**	**0.0**
GO06	**Curarrehue**	**31.97**	**110**	P	**P**	**22 04 26.5**	**-1.9**
GO06				IAmb	IAmb	22 04 31.8	
	comp=Z,6.3nm,0.9s						
PLCA	**Paso Flores**	**32.60**	**112**	P	**P**	**22 04 35.3**	**+1.4**
	comp=Z,3.7nm,0.9s,baz=278,slow=11,SNR=5.3						
PLCA				LR	LR	22 14 03.0	
	comp=Z,227nm,19.4s,baz=290,slow=30						
PLCA	**Paso Flores**	**32.60**	**112**	P	**P**	**22 04 32.0**	**-1.8**
PLCA				IAmb	IAmb	22 04 36.3	
	comp=Z,7.0nm,1.0s						
PLCA	**Paso Flores**	**32.60**	**112**		**P**	**22 04 32.5**	**-1.4**
TBI	**Tubuai**	**34.95**	**279**	*e*LR	LR	22 14 04.6	
	comp=Z,1µm,26.5s,baz=107						
TAOE	**Nuku Hiva Isla**	**36.94**	**308**	*e*LR	LR	22 15 09.8	
	comp=Z,404nm,26.0s						
GO02	**Mina Guanaco**	**37.31**	**86**	P	**P**	**22 05 15.0**	**0.0**
GO02				IAmb	IAmb	22 05 28.5	
	comp=Z,14nm,1.1s						
PPT2	**Papeete2**	**38.03**	**287**	*e*LR	LR	22 15 33.0	
	comp=Z,717nm,25.0s						
LVC	**Limon Verde**	**39.01**	**83**	P	**P**	**22 05 31.3**	**+2.0**
	comp=Z,3.3nm,0.7s,baz=232,slow=15,SNR=3.1						
LVC	**Limon Verde**	**39.01**	**83**	P	**P**	**22 05 28.6**	**-0.7**
LPAZ	**La Paz**	**42.89**	**76**	P	**P**	**22 06 03.6**	**+2.0**
	comp=Z,1.5nm,0.7s,baz=220,slow=4.7,SNR=5.7						
LPAZ				PcP	**PcP**	**22 07 53.6**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=243,slow=4.7,SNR=4.0						
LPAZ				LR	LR	22 20 22.8	
	comp=Z,166nm,19.3s,baz=220,slow=31						
RAR	**Rarotonga**	**44.36**	**275**	LR	LR	22 19 15.6	
	comp=Z,2µm,21.2s,baz=213,slow=29						
CPUP	**Villa Florida**	**46.88**	**95**	LR	LR	22 22 38.0	
	comp=Z,285nm,19.5s,baz=231,slow=32						
SIV	**San Ignacio**	**48.72**	**80**	P	**P**	**22 06 48.0**	**+0.9**
	comp=Z,2.6nm,0.8s,baz=257,slow=7.8,SNR=11						
ROSC	**El Rosal**	**52.81**	**49**	LR	LR	22 26 20.5	
	comp=Z,194nm,18.8s,baz=232,slow=32						
QSPA	**South Pole Qui**	**55.23**	**180**	P	**P**	**22 07 37.5**	**+2.4**
	comp=Z,3.0nm,0.8s,baz=170,slow=1.7,SNR=12						
QSPA	**South Pole Qui**	**55.23**	**180**	P	**P**	**22 07 34.3**	**-0.8**
QSPA				IAmb	IAmb	22 07 49.2	
	comp=Z,7.2nm,1.2s						
VNDA	**Vanda**	**55.44**	**195**	LR	LR	22 25 29.6	
	comp=Z,160nm,20.1s,baz=140,slow=30						
BDFB	**Brasilia**	**59.57**	**88**	LR	LR	22 31 23.0	
	comp=Z,321nm,18.0s,baz=242,slow=34						
VNA3	**Neumayer Olymp**	**60.95**	**159**	P	**P**	**22 08 17.0**	**+2.1**
VNA1	**Neumayer--Stat**	**61.61**	**158**	P	**P**	**22 08 21.4**	**+2.0**
VNA2	**Neumayer--Watz**	**61.76**	**159**	P	**P**	**22 08 22.4**	**+2.1**
	baz=249,slow=6.7						
SNAA	**Sanae**	**62.72**	**160**	P	**P**	**22 08 29.0**	**+2.1**
SNAA	**Sanae**	**62.72**	**160**	P	**P**	**22 08 27.6**	**+0.7**
SNAA				IAmb	IAmb	22 08 30.1	
	comp=Z,5.3nm,0.9s						
TXAR	**Lajitas Array**	**64.38**	**8**	P	**P**	**22 08 40.1**	**+1.8**
	comp=Z,0.9nm,0.8s,baz=167,slow=8.2,SNR=7.2						
TXAR	**Lajitas Array**	**64.38**	**8**	P	**P**	**22 08 39.3**	**+1.0**
JCT	**Junction City**	**66.03**	**11**	P	**P**	**22 08 50.2**	**+1.4**
MNTX	**Cornudas Mount**	**66.56**	**6**	P	**P**	**22 08 53.0**	**+0.7**
121A	**Cookes Peak, D**	**67.24**	**3**	P	**P**	**22 08 57.0**	**+0.2**
121A				IAmb	IAmb	22 09 00.1	
	comp=Z,4.5nm,0.9s						
X16A	**Lo Mia Camp, P**	**69.03**	**0**	P	**P**	**22 09 08.6**	**+0.6**
MSTX	**Muleshoe**	**69.06**	**8**	P	**P**	**22 09 08.3**	**+0.2**
X18A	**Snowflake**	**69.16**	**1**	P	**P**	**22 09 08.2**	**-0.5**
GSC	**Goldstone, Bar**	**70.09**	**355**	P	**P**	**22 09 14.9**	**+0.6**
GSC				IAmb	IAmb	22 09 18.3	
	comp=Z,5.6nm,0.9s						
U15A	**North Rim**	**71.04**	**359**	P	**P**	**22 09 21.2**	**+0.8**
U15A				IAmb	IAmb	22 09 24.1	
	comp=Z,5.1nm,0.9s						
SHPR	**Sheep Range**	**71.20**	**357**	P	**P**	**22 09 21.9**	**+0.7**
DZM	**Mont Dzumac**	**71.46**	**256**	*e*LR	LR	22 30 52.0	
	comp=Z,338nm,26.9s						
DZM	**Mont Dzumac**	**71.46**	**256**	LR	LR	22 32 48.0	
	comp=Z,220nm,21.6s,baz=189,slow=29						
TPNV	**Topopah Spring**	**71.69**	**356**	P	**P**	**22 09 25.6**	**+1.4**
TPNV				IAmb	IAmb	22 09 29.2	
	comp=Z,5.7nm,0.9s						
MVCO	**Mesa Verde**	**71.87**	**2**	P	**P**	**22 09 26.2**	**+0.8**
MVCO				IAmb	IAmb	22 09 30.1	
	comp=Z,5.8nm,0.8s						
HHAR	**Hobbs**	**72.75**	**15**	IAmb	IAmb	22 09 33.0	
	comp=Z,6.3nm,0.9s						
PV02	**Paradox Valley**	**72.86**	**2**	P	**P**	**22 09 30.6**	**-0.6**
PV02				IAmb	IAmb	22 09 49.9	
	comp=Z,3.3nm,0.6s						
PV14	**Lion Creek, Pa**	**73.01**	**2**	P	**P**	**22 09 32.5**	**+0.4**
PV14				IAmb	IAmb	22 09 35.4	
	comp=Z,5.8nm,0.9s						
R11A	**Troy Canyon, C**	**73.05**	**357**	P	**P**	**22 09 32.8**	**+0.5**
R11A				IAmb	IAmb	22 09 47.2	
	comp=Z,7.0nm,1.2s						
U40A	**Yellville**	**73.05**	**16**	IAmb	IAmb	22 09 34.5	
	comp=Z,5.9nm,0.9s						
NVAR	**Mina Array Bea**	**73.31**	**354**	P	**P**	**22 09 36.8**	**+2.9**
	comp=Z,3.0nm,0.8s,baz=191,slow=7.2,SNR=5.4						
NVAR				LR	LR	22 35 13.9	
	comp=Z,132nm,18.4s,baz=234,slow=30						
SRU	**San Rafael Swe**	**73.72**	**1**	P	**P**	**22 09 36.0**	**-0.2**
K22A	**Casper**	**77.38**	**4**	P	**P**	**22 09 56.8**	**-0.4**
PDAR	**Pinedale Array**	**77.39**	**1**	P	**P**	**22 09 58.4**	**+1.2**
	comp=Z,6.3nm,0.9s,baz=163,slow=5.5,SNR=37						
PDAR	**Pinedale Array**	**77.39**	**1**	P	**P**	**22 09 57.0**	**-0.2**
REDW	**Red Top Meadow**	**77.96**	**0**	IAmb	IAmb	22 10 16.5	
	comp=Z,9.5nm,1.4s						
FXWY	**Fox Creek**	**78.24**	**0**	IAmb	IAmb	22 10 16.3	
	comp=Z,5.0nm,1.1s						
IMW	**Indian Meadow**	**78.50**	**0**	IAmb	IAmb	22 10 06.2	
	comp=Z,6.3nm,0.9s						
PINE	**Pine Mountain**	**78.87**	**353**	IAmb	IAmb	22 10 10.4	
	comp=Z,7.0nm,0.8s						
RSSD	**Black Hills**	**79.01**	**5**	P	**P**	**22 10 05.6**	**-0.6**
RSSD				IAmb	IAmb	22 10 09.0	
	comp=Z,5.7nm,0.9s						
I07A	**Izee**	**79.02**	**354**	IAmb	IAmb	22 10 09.5	
	comp=Z,8.2nm,1.1s						
STKA	**Stephens Creek**	**84.47**	**235**	LR	LR	22 42 29.9	
	comp=Z,152nm,18.6s,baz=25,slow=32						
ULM	**Lac du Bonnet**	**85.97**	**10**	P	**P**	**22 10 42.4**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=208,slow=3.1,SNR=5.0						
ULM				LR	LR	22 43 28.6	
	comp=Z,84nm,20.1s,baz=236,slow=32						
FFC	**Flin Flon**	**89.71**	**5**	P	**P**	**22 10 59.2**	**-0.7**
H11S2	**WAKE ISLAND Hy**	**93.96**	**290**	T	T	23 55 41.1	
	baz=126,slow=76,SNR=9.2						
H11S1	**WAKE ISLAND Hy**	**93.97**	**290**	T	T	23 55 45.2	
	baz=126,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	**93.98**	**290**	T	T	23 55 44.8	
	baz=126,slow=76,SNR=9.1						
ASAR	**Alice Springs**	**94.94**	**237**	LR	LR	22 48 33.6	
	comp=Z,109nm,20.5s,baz=92,slow=32						
WRA	**Warramunga Arr**	**97.07**	**240**	LR	LR	22 51 40.7	
	comp=Z,104nm,18.8s,baz=145,slow=33						
YKA	**Yellowknife Ar**	**97.16**	**359**	P	Pdif	22 11 34.9	+0.9
	comp=Z,0.9nm,0.9s,baz=170,slow=5.0,SNR=8.0						
YKA				LR	LR	22 50 41.7	
	comp=Z,88nm,18.7s,baz=0.0,slow=32						
SCHQ	**Schefferville**	**97.31**	**24**	LR	LR	22 50 05.8	
	comp=Z,106nm,19.9s,baz=328,slow=32						
BZS	**Buzias**	**143.15**	**59**	⇑P	**PKPdf**	**22 17 32.8**	**-3.2**
TRPA	**Tarpa**	**143.69**	**54**	⇑P	**PKPdf**	**22 17 35.0**	**-1.8**
GZR	**Gura Zlata**	**143.96**	**59**	⇑P	PKPbc	22 17 35.3	-0.2
NRIK	**Noril'sk**	**144.00**	**349**	PKP	**PKPdf**	**22 17 36.5**	**-0.3**
	comp=Z,2.5nm,0.9s,baz=27,slow=2.3,SNR=3.7						
IDI	**Anoyia**	**144.52**	**77**	PKP	**PKPdf**	**22 17 38.7**	**-0.1**
	comp=Z,20nm,0.8s,baz=236,slow=4.5,SNR=15						
ARCR	**ARCALIA**	**144.99**	**56**	⇓P	**PKiKP**	**22 17 40.4**	**-2.7**
ARR	**Arges**	**145.27**	**59**	⇑P	**PKPdf**	**22 17 40.4**	**+0.6**
PLVB	**Pleven**	**145.27**	**63**	⇑P	**PKiKP**	**22 17 40.9**	**-2.8**
ENH	**Enshi**	**145.36**	**274**		**PKiKP**	**22 17 42.4**	**-2.0**
APE	**Apeiranthos**	**145.37**	**74**	⇑P	**PKPdf**	**22 17 39.7**	**-0.6**
BURAR	**Bucovina Array**	**145.53**	**55**	⇑P	**PKiKP**	**22 17 42.1**	**-2.2**
BURAR	**Bucovina Array**	**145.53**	**55**		**PKiKP**	**22 17 41.9**	**-2.4**
HUMR	**Humele**	**145.54**	**61**	⇑P	**PKPab**	**22 17 40.4**	**-0.2**
VOIR		**145.56**	**59**	⇑P	**PKiKP**	**22 17 41.6**	**-2.7**
COPA	**Copaceanca**	**145.71**	**61**	⇑P	**PKiKP**	**22 17 42.3**	**-2.3**
DOPR	**Dopca**	**145.77**	**58**	⇑P	**PKiKP**	**22 17 42.4**	**-2.3**
ELND	**Elena**	**146.18**	**63**	⇑P	**PKiKP**	**22 17 43.4**	**-2.2**
MLR	**Muntele Rosu**	**146.19**	**59**	⇓P	**PKPab**	**22 17 42.3**	**-0.9**
BIZ	**Bicaz**	**146.20**	**56**	⇑P	**PKiKP**	**22 17 43.7**	**-1.9**
XAN	**Xi'an**	**146.86**	**280**		**PKPab**	**22 17 45.3**	**-0.8**
GHRR		**147.17**	**58**	⇓P	**PKPab**	**22 17 46.0**	**-0.8**
SORM	**Soroca**	**147.56**	**54**	⇑P	**PKPbc**	**22 17 45.4**	**-0.8**
AKASG	**Malin Array Be**	**147.61**	**49**	PKPbc	**PKPbc**	**22 17 45.1**	**-1.1**
	comp=Z,1.0nm,0.6s,baz=272,slow=3.7,SNR=8.2						
HARR	**Harsova**	**147.64**	**60**	⇑P	**PKiKP**	**22 17 48.4**	**-0.1**
CFR	**Carcaliu**	**147.75**	**59**	⇓P	**PKPbc**	**22 17 46.7**	**-0.1**
TIRR	**Tirgusor**	**147.99**	**61**	⇑P	**PKPab**	**22 17 48.6**	**-1.6**
MILM	**Milestii Mici**	**148.04**	**56**	⇑P	**PKiKP**	**22 17 48.3**	**-1.0**
CMAR	**Chiang Mai Arr**	**148.41**	**247**	PKPbc	**PKPab**	**22 17 52.5**	**0.0**
	comp=Z,5.7nm,0.8s,baz=177,slow=2.2,SNR=42						
SONM	**Songino Array**	**149.15**	**306**	PKPbc	**PKiKP**	**22 17 51.0**	**-0.7**
	comp=Z,2.2nm,0.9s,baz=135,slow=2.2,SNR=16						
SONM	**Songino Array**	**149.15**	**306**		**PKiKP**	**22 17 51.2**	**-0.5**
TLY	**Talaya**	**149.86**	**315**	PKPbc	**PKiKP**	**22 17 53.6**	**+0.6**
	comp=Z,4.1nm,0.8s,baz=260,slow=4.8,SNR=3.1						
OBN	**Obninsk**	**150.15**	**38**	PKPbc	**PKiKP**	**22 17 52.3**	**-1.0**
	comp=Z,6.5nm,0.8s,baz=113,slow=4.0,SNR=4.1						
EIL	**Elat**	**151.22**	**91**	PKPbc	**PKiKP**	**22 17 56.9**	**+0.4**
	comp=Z,5.6nm,0.8s,baz=327,slow=5.1,SNR=4.5						
CSS	**Mathiatis**	**151.24**	**80**	PKPdf	**PKPdf**	**22 17 49.1**	**-0.8**
BRTR	**Keskin Array B**	**151.97**	**70**	PKPbc	**PKiKP**	**22 17 58.2**	**+0.3**
	comp=Z,1.5nm,0.9s,baz=159,slow=4.8,SNR=6.9						
BRTR	**Keskin Array B**	**151.97**	**70**		**PKiKP**	**22 17 57.8**	**0.0**
MMAI	**Mount Meron Ar**	**152.53**	**85**	PKPbc	**PKiKP**	**22 17 59.2**	**+0.1**
	comp=Z,1.5nm,0.7s,baz=302,slow=12,SNR=4.1						
ZALV	**Zalesovo Beam**	**157.85**	**334**	PKPab	**PKPab**	**22 18 32.8**	**+1.6**
	comp=Z,2.7nm,0.9s,baz=12,slow=4.9,SNR=6.4						
ZALV	**Zalesovo Beam**	**157.85**	**334**	PKPdf	**PKPdf**	**22 17 57.2**	**-1.1**
ZALV					**pPKPab**	**22 18 33.1**	**-0.4**
BVAR	**Borovoye Array**	**161.90**	**356**	PKPab	**PKPab**	**22 18 50.1**	**+1.3**
	comp=Z,0.5nm,0.6s,baz=248,slow=1.6,SNR=3.7						
KURBB	**Kurchatov Arra**	**162.75**	**338**	PKPab	**PKPab**	**22 18 54.7**	**+2.1**
	comp=Z,0.8nm,0.8s,baz=25,slow=3.5,SNR=8.0						
MKAR	**Makanchi Array**	**164.29**	**323**	PKPab	**PKPab**	**22 19 01.8**	**+2.1**
	comp=Z,0.4nm,0.9s,baz=95,slow=3.3,SNR=2.6						

IDC 19 22:16:50.3±5.9,**4.°73S**×**153.°67E**,**h115**^{km}±37^{km},**mb3.2**/3, **mb1 3.5**/4,**mb1mx3.1**/42,**mbtmp3.7**/4,**Error ellipse: s-maj=63.2km s-min=28.9km az=93.0,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.69**	**284**	P	Pn	22 17 19.6	-0.2
	19nm,0.3s,baz=81,slow=19,SNR=6.9						
KRVT				S	Sn	22 17 42.4	+0.2
	23nm,0.3s,baz=14,slow=21,SNR=14						
PMG	**Port Moresby**	**7.96**	**234**	P	Pn	22 18 43.1	-0.2
	3.1nm,0.3s,baz=56,slow=3.6,SNR=3.3						
WRA	**Warramunga Arr**	**24.15**	**230**	P	P	22 21 56.2	+0.3
	1.6nm,0.7s,baz=53,slow=9.7,SNR=18						
ASAR	**Alice Springs**	**26.80**	**223**	P	P	22 22 19.5	-0.3
	0.3nm,0.4s,baz=56,slow=8.8,SNR=7.2						
MKAR	**Makanchi Array**	**80.84**	**319**	P	P	22 28 51.9	+0.4
	0.3nm,0.8s,baz=88,slow=5.4,SNR=2.4						
TORD	**Torodi Ar. Bea**	**151.11**	**289**	PKPbc	PKPbc	22 36 30.4	-0.6
	0.4nm,0.8s,baz=105,slow=2.0,SNR=2.4						

SOME ***19*** *22:20:51.0, 41.°10N×72.°57E, h5^{km}*

ISU ***19*** *22:20:52.1, 41.°13N×72.°57E, h10^{km}*

KRNET ***19*** *22:20:52.4±0.1, 41.°21N×72.°48E, h14^{km}, mb3.2*

NNC ***19*** *22:20:57.9±3.4, 41.°43N×72.°59E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=36.7km s-min=13.8km az=174.0*

ISC 19 22:20:52.2±1.1,**41.°23N**±0.°03×**72.°49E**±0.°02,**h6**^{km}±11^{km}, **n52**,σ**2.s02**/91,**27C-10D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.38**	**75**	⇑*i*P	**Pg**	**22 20 59.8**	**+0.1**
	baz=73						
ARSB				⇑*i*S	**Sg**	**22 21 05.5**	**+0.8**
	baz=73						
ANR	**Andizhan**	**0.48**	**192**	*e*S	**Sb**	**22 21 08.7**	**-1.8**
NAM	**Namangan**	**0.67**	**250**	*e*P	**Pn**	**22 21 08.9**	**+0.6**
NAM				S	**Sn**	**22 21 18.2**	**-0.9**
ARK	**Arkit**	**0.69**	**325**	⇓*i*P	**Pg**	**22 21 05.8**	**+0.2**
	baz=27						
ARK				⇓*i*S	**Sg**	**22 21 14.9**	**+0.2**
	baz=27						
ARK	**Arkit**	**0.69**	**325**	*i* P	**Pb**	**22 21 06.4**	**-0.4**
ARK				*i* S	**Sb**	**22 21 16.8**	**+0.1**
FRG	**Fergana**	**0.73**	**228**	*e*P	**Pn**	**22 21 11.7**	**+2.6**
FRG				S	Sn	22 21 28.4	+7.9
AML	**Almayashu**	**1.27**	**44**	⇓*i*P	**Pn**	**22 21 16.5**	**-0.4**
	baz=44						
AML				⇓*i*S	**Sg**	**22 21 34.1**	**+0.8**
	baz=44						
AML	**Almayashu**	**1.27**	**44**	P	**Pn**	**22 21 16.5**	**-0.4**
	SNR=38						
ARLS	**Aral**	**1.51**	**65**	⇑*i*P	**Pb**	**22 21 20.8**	**0.0**
	baz=64						
ARLS				⇑*i*S	**Sg**	**22 21 42.0**	**+1.1**
	baz=64						
MRKS	**Merke**	**1.61**	**20**	*e*P	**Pg**	**22 21 23.2**	**0.0**
	25nm,0.4s						
MRKS				*e*S	**Sg**	**22 21 45.7**	**+1.7**
	162nm,0.5s						
EKS2	**Erkin-Say**	**1.72**	**33**	⇓*i*P	**Pb**	**22 21 24.5**	**+0.1**
	baz=33						
EKS2				⇓*i*S	**Sg**	**22 21 47.6**	**-0.1**
	baz=33						
EKS2	**Erkin-Say**	**1.72**	**33**	P	**Pb**	**22 21 24.8**	**+0.4**
	SNR=21						
BTK	**Batken**	**1.73**	**228**	⇑*i*P	**Pb**	**22 21 23.7**	**-0.7**
	baz=28						
BTK				⇑*i*S	**Sg**	**22 21 47.3**	**-0.5**
	baz=28						
BTK	**Batken**	**1.73**	**228**	*i* P	**Pb**	**22 21 24.0**	**-0.4**
BTK				S	**Sg**	**22 21 47.1**	**-0.7**
UCH	**Uchtor**	**1.81**	**56**	⇑*i*P	**Pb**	**22 21 26.5**	**+0.4**
	baz=56						
UCH				⇑*i*S	**Sg**	**22 21 51.0**	**+0.5**
	baz=56						
UCH	**Uchtor**	**1.81**	**56**	P	**Pg**	**22 21 27.3**	**+0.3**
	SNR=8.3						
DZA	**Taraz**	**1.88**	**333**	*e*P	**Pg**	**22 21 28.8**	**+0.6**
	33nm,0.3s						
DZA				*e*S	**Sg**	**22 21 54.4**	**+1.9**
	185nm,0.4s						
CHRV	**Charvak**	**1.96**	**283**	P	**Pg**	**22 21 29.9**	**+0.2**
CHRV				S	**Sg**	**22 21 56.9**	**+1.8**
AAK	**Ala-Archa**	**2.05**	**46**	⇑*i*P	**Pb**	**22 21 29.5**	**-0.5**
	baz=46						
AAK				⇑*i*S	**Sb**	**22 21 56.8**	**+1.0**
	baz=46						
AAK	**Ala-Archa**	**2.05**	**46**	P	**Pb**	**22 21 30.9**	**+0.9**
	SNR=20						
AAK	**Ala-Archa**	**2.05**	**46**	⇓Pg	**Pb**	**22 21 30.4**	**+0.4**
	7.0nm,0.4s						
AAK				⇑Lg	Lg	22 21 59.1	
	30nm,0.4s						
IUG	**Iuzhnay**	**2.06**	**297**	*e*P	**Pg**	**22 21 31.6**	**-0.2**
	4.4nm,0.4s						
IUG				*e*S	**Sg**	**22 21 59.4**	**+1.0**
	143nm,0.4s						
KZA	**Kyzart**	**2.23**	**67**	⇑*i*P	**Pb**	**22 21 32.5**	**-0.7**
	baz=66						
KZA				⇑*i*S	**Sb**	**22 22 01.2**	**-0.1**
	baz=66						
FRU1	**Bishkek**	**2.24**	**44**	⇑*i*P	**Pb**	**22 21 32.6**	**-0.6**
	baz=44						
FRU1				⇑*i*S	**Sb**	**22 22 01.8**	**+0.6**
	baz=44						
KBK	**Karagaybulak**	**2.32**	**51**	⇑*i*P	**Pb**	**22 21 33.5**	**-1.1**
	baz=51						
KBK				⇑*i*S	**Sb**	**22 22 03.7**	**+0.1**
	baz=51						
KBK	**Karagaybulak**	**2.32**	**51**	P	**Pb**	**22 21 35.4**	**+0.8**
	SNR=15						
KK31	**Karatay Array**	**2.38**	**323**	⇓Pn	**Pg**	**22 21 37.0**	**-0.9**
	4.2nm,0.3s,baz=133,slow=15,SNR=90						
KK31				⇑Lg	Lg	22 22 09.2	
	9.9nm,0.3s,baz=139,slow=26,SNR=7.1						
TAS	**Tashkent**	**2.41**	**273**	⇑*i*P	**Pb**	**22 21 34.2**	**-1.8**
	baz=74						
TAS				⇑*i*S	**Sb**	**22 22 05.0**	**-1.0**
	baz=74						
CHMS	**Chumysh**	**2.44**	**43**	⇓*i*P	**Pb**	**22 21 34.9**	**-1.6**
	baz=43						
CHMS				⇓*i*S	**Sb**	**22 22 06.3**	**-0.6**
	baz=43						
CHMS	**Chumysh**	**2.44**	**43**	P	**Pg**	**22 21 38.1**	**-0.9**
	SNR=11						
CHMS	**Chumysh**	**2.44**	**43**	⇑Pn	**Pb**	**22 21 37.7**	**+1.2**
	13nm,0.5s						
CHMS				⇑Lg	Lg	22 22 10.0	
	23nm,0.5s						
USP	**Ospenovka**	**2.52**	**35**	⇑*i*P	**Pb**	**22 21 36.2**	**-1.8**
	baz=35						
USP				⇑*i*S	**Sb**	**22 22 08.2**	**-1.1**
	baz=35						
USP	**Ospenovka**	**2.52**	**35**	P	**Pb**	**22 21 36.4**	**-1.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	SNR=18						
BRLS	**Borolday** 0.4nm,0.2s	**2.67**	**313**	*e*P	**Pb**	**22 21 41.4**	**+0.9**
BRLS	4.9nm,0.4s			*e*S	**Sg**	**22 22 16.3**	**-1.9**
BOOM	**Boomskoye usch** baz=63	**2.87**	**63**	⇑*i*P	**Pb**	**22 21 40.9**	**-3.0**
BOOM	baz=63			⇑*i*S	**Sb**	**22 22 16.5**	**-2.8**
KST	**Kastek** 6.4nm,0.4s	**3.15**	**54**	*e*P	**Pb**	**22 21 50.3**	**+1.5**
KST	29nm,0.4s			*e*S	**Sg**	**22 22 31.8**	**-1.7**
DGS	**Degeres** 6.5nm,0.6s	**3.16**	**49**	*e*P	**Pb**	**22 21 49.9**	**+1.1**
DGS	24nm,0.5s			*e*S	**Sb**	**22 22 30.8**	**+3.2**
KRBS	**Karabastau** 3.4nm,0.3s	**3.41**	**43**	*e*P	**Pb**	**22 21 54.4**	**+1.3**
KRBS	11nm,0.5s			*e*S	**Sg**	**22 22 39.0**	**-2.7**
MTBS	**Maitube** 4.2nm,0.2s	**3.49**	**56**	*e*P	**Pb**	**22 21 55.9**	**+1.5**
MTBS	16nm,0.4s			*e*S	**Sg**	**22 22 41.0**	**-3.2**
IZV	**Izvestkoviy** 4.5nm,0.5s	**3.56**	**58**	*e*P	**Pb**	**22 21 56.4**	**+0.7**
IZV	13nm,0.8s			*e*S	**Sb**	**22 22 41.2**	**+2.1**
TNSS	**Tian-Shan** 4.5nm,0.2s	**3.77**	**60**	*e*P	**Pb**	**22 22 00.9**	**+1.4**
TNSS	10nm,0.6s			*e*S	**Sb**	**22 22 48.9**	**+3.3**
KUU	**Kurty** 1.5nm,0.4s	**3.89**	**46**	*e*P	**Pb**	**22 22 03.9**	**+2.6**
KUU	18nm,0.5s			*e*S	**Sg**	**22 22 54.5**	**-2.8**
MDOK	**Medeo** 2.0nm,0.3s	**3.90**	**59**	*e*P	**Pb**	**22 22 03.0**	**+1.5**
MDOK	10nm,0.5s			*e*S	**Sb**	**22 22 52.6**	**+3.7**
MDOK	**Medeo** 4.5nm,0.5s	**3.90**	**59**	Pg	**Pb**	**22 22 04.1**	**+2.7**
MDOK	8.8nm,0.6s			⇑Lg	Lg	22 22 57.1	
KTBS	**Karatobe** 1.7nm,0.3s	**3.97**	**50**	*e*P	**Pb**	**22 22 05.3**	**+2.7**
KTBS	31nm,0.6s			*e*S	**Sg**	**22 22 56.8**	**-2.9**
KOTS	**Kotyrbulak** 13nm,0.5s	**3.97**	**58**	*e*P	**Pb**	**22 22 05.2**	**+2.4**
KOTS	23nm,0.8s			*e*S	**Sg**	**22 22 56.4**	**-3.4**
BTLS	**Baital** 0.9nm,0.2s	**3.98**	**16**	*e*P	**Pg**	**22 22 06.2**	**-2.2**
BTLS	12nm,0.4s			*e*S	**Sg**	**22 22 58.9**	**-1.1**
CHKK	**Chushkaly** 1.0nm,0.1s	**4.23**	**50**	*e*P	**Pb**	**22 22 09.8**	**+2.8**
CHKK	14nm,0.3s			*e*S	**Sg**	**22 23 05.0**	**-3.2**
SATY	**Saty** 2.5nm,0.4s	**4.76**	**65**	*e*P	**Pb**	**22 22 18.8**	**+2.6**
SATY	4.2nm,0.4s			*e*S	**Sg**	**22 23 19.9**	**-5.3**
ARXS	**Arharly** 1.9nm,0.4s	**4.93**	**51**	*e*P	**Pg**	**22 22 23.2**	**-3.5**
ARXS	8.8nm,0.5s			*e*S	**Sg**	**22 23 26.7**	**-3.9**
UZB	**Uzynbulak** 1.9nm,0.3s	**5.22**	**66**	*e*P	**Pb**	**22 22 27.7**	**+3.8**
UZB	3.3nm,0.6s			*e*S	**Sg**	**22 23 35.3**	**-4.4**
SHLS	**Shalkode** 1.6nm,0.2s	**5.52**	**67**	*e*P	**Pg**	**22 22 39.7**	**+1.6**
SHLS	5.3nm,0.6s			*e*S	**Sg**	**22 23 55.4**	**+5.8**

KRNET 19 22:20:56.9±0.1, 41°.24N×75°.62E, h14^{km}, mb2.0, 14C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	**Naryn** baz=56	**0.34**	**56**	⇑*i*P	Pg	22 21 03.0	-1.1
NRN	baz=56			⇑*i*S	Sg	22 21 08.3	-0.7
KZA	**Kyzart** baz=42	**0.88**	**342**	⇑*i*P	Pg	22 21 13.5	-0.6
KZA	baz=42			⇑*i*S	Sg	22 21 25.6	-0.1
KZA	**Kyzart** SNR=8.1	**0.88**	**342**	P	Pb	22 21 14.4	+0.2
ULHL	**Ulahol** baz=25	**1.10**	**25**	⇑*i*P	Pb	22 21 17.5	-0.5
ULHL	baz=25			⇑*i*S	Sg	22 21 32.7	0.0
ULHL	**Ulahol** SNR=32	**1.10**	**25**	P	Pb	22 21 17.9	-0.1
ARLS	**Aral** baz=3.0	**1.15**	**303**	⇑*i*P	Pb	22 21 18.5	-0.3
ARLS	baz=3.0			⇑*i*S	Sg	22 21 34.3	0.0
BOOM	**Boomskoye usch** baz=11	**1.27**	**11**	⇓*i*P	Pb	22 21 20.6	-0.1
BOOM	baz=11			⇓*i*S	Sg	22 21 38.1	+0.2
KDJ	**Kajisay** baz=53	**1.47**	**52**	⇑*i*P	Pb	22 21 24.2	+0.1
KDJ	baz=53			⇑*i*S	Sg	22 21 43.6	-0.6
KBK	**Karagaybulak** baz=41	**1.50**	**341**	⇑*i*P	Pb	22 21 24.8	+0.1
KBK	baz=41			⇑*i*S	Sg	22 21 45.2	-0.1
ANVS	**Anan'yevo** baz=44	**2.17**	**44**	⇑*i*P	Pb	22 21 35.1	-0.9
ANVS	baz=44			⇑*i*S	Sb	22 22 03.1	+0.3
PRZ	**Przheval'sk** baz=58	**2.42**	**58**	⇓*i*P	Pb	22 21 39.4	-0.9
PRZ	baz=58			⇓*i*S	Sb	22 22 09.9	-0.2

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*IASPEI **19** 22:38:02.8±0.9, 32°.99N±0°.03×80°.15W±0°.03, h13^{km}±5^{km}, Error ellipse: s-maj=4.7km s-min=3.5km az=131.3, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ANF **19** 22:38:02.8±0.1, 33°.00N×80°.16W, h13^{km}, ML3.8/53, Error ellipse: s-maj=0.9km s-min=0.7km az=155.0*

*NEIC **19** 22:38:02.8±0.9, 33°.00N±0°.02×80°.14W±0°.03, h10^{km}±5^{km}, Error ellipse: s-maj=4.7km s-min=1.8km az=129.0*

*SLM **19** 22:38:03.4±1.8, 32°.99N±0°.02×80°.17W±0°.03, h6^{km}±6^{km}, mb_Lg3.0/52(NEIC), Error ellipse: s-maj=4.2km s-min=3.0km az=126.0*

ISC 19 22:38:03.1±0.8, 33°.00N±0°.02×80°.16W±0°.02, h13^{km}±5^{km}, n117, σ0^{s}.77/133, South Carolina

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSU	**Charleston Sou**	**0.07**	**103**		**Pg**	**22 38 05.3**	**-0.4**
RGRS	**Roger Stewart**	**0.10**	**198**		**Pg**	**22 38 05.5**	**-0.5**
NHSC	**New Hope**	**0.10**	**351**		**Pg**	**22 38 06.2**	**+0.1**
NHSC					**Sg**	**22 38 07.8**	**-0.4**
NHSC	**New Hope** baz=176,SNR=556	**0.10**	**351**	P	**Pg**	**22 38 06.2**	**+0.1**
NHSC	baz=176			S	**Sg**	**22 38 08.1**	**-0.1**
158A	**Hollywood** baz=4.7	**0.27**	**186**	P	**Pg**	**22 38 08.5**	**-0.2**
158A	baz=4.7			S	**Sg**	**22 38 12.7**	**+0.3**
Z58A	**St. Stephen** baz=221,SNR=122	**0.44**	**41**	P	**Pg**	**22 38 12.0**	**+0.2**
Z58A	baz=221			S	**Sg**	**22 38 17.9**	**+0.2**
Z57A	**Bowman** baz=124,SNR=38	**0.54**	**303**	P	**Pg**	**22 38 13.9**	**+0.1**
Z57A	baz=124			S	**Sg**	**22 38 21.4**	**+0.4**
Z59A	**Georgetown, SC** baz=252	**0.78**	**72**	P	**Pg**	**22 38 17.7**	**-0.4**
Z59A	baz=252			S	**Sg**	**22 38 28.2**	**-0.1**
157A	**Early Branch** baz=66,SNR=18	**0.78**	**246**	P	**Pg**	**22 38 17.6**	**-0.5**
157A	baz=66			S	**Sg**	**22 38 27.8**	**-0.6**
Y58A	**Scranton**	**0.99**	**24**		**Pb**	**22 38 22.2**	**+0.1**
Y58A					**Sg**	**22 38 34.7**	**-0.4**
Y58A	**Scranton** baz=205,SNR=19	**0.99**	**24**	P	**Pg**	**22 38 21.7**	**-0.5**
Y58A	baz=205			S	**Sg**	**22 38 34.7**	**-0.4**
Y57A	**Sumter**	**1.03**	**349**		**Pb**	**22 38 22.7**	**-0.1**
Y57A					**Sb**	**22 38 36.6**	**+0.3**
Y57A	**Sumter** baz=170,SNR=14	**1.03**	**349**	P	**Pg**	**22 38 22.5**	**-0.4**
Y57A	baz=170			S	**Sb**	**22 38 36.4**	**+0.2**
Z56A	**Williston**	**1.06**	**288**		**Pg**	**22 38 23.2**	**-0.4**
Z56A					**Sb**	**22 38 37.8**	**+0.5**
Z56A	**Williston** baz=108,SNR=17	**1.06**	**288**	P	**Pg**	**22 38 23.2**	**-0.4**
Z56A	baz=108			S	**Sb**	**22 38 37.7**	**+0.5**
Y56A	**Pelion** baz=130,SNR=25	**1.24**	**310**	P	**Pn**	**22 38 26.0**	**-0.2**
Y56A	baz=130			S	**Sg**	**22 38 42.8**	**-0.3**
257A	**Skidaway Islan**	**1.26**	**216**	Pn	**Pn**	**22 38 26.0**	**-0.4**
257A					**Sg**	**22 38 43.2**	**-0.6**
Y59A	**Loris**	**1.46**	**47**		**Pn**	**22 38 29.1**	**0.0**
Y59A					**Sg**	**22 38 50.1**	**+0.1**
Y59A	**Loris** baz=228	**1.46**	**47**	Pb	**Pn**	**22 38 29.5**	**+0.4**
Y59A	baz=228			Sb	**Sg**	**22 38 49.4**	**-0.5**
X57A	**Johnson Farm,** baz=182,SNR=32	**1.46**	**2**	Pb	**Pb**	**22 38 30.2**	**+0.1**
X57A	baz=182			Sb	**Sg**	**22 38 49.5**	**-0.5**
JSC	**Jenkinsville**	**1.57**	**324**		**Pn**	**22 38 30.7**	**0.0**
X56A	**White Oak** baz=154,SNR=96	**1.65**	**334**	P	**Pn**	**22 38 31.5**	**-0.3**
BIRD	**Birdtown, Kers**	**1.66**	**351**		**Pn**	**22 38 31.7**	**-0.2**
BIRD					**Sb**	**22 38 54.8**	**+0.5**
X58A	**Rowland**	**1.69**	**24**		**Pn**	**22 38 32.3**	**-0.1**
X58A	**Rowland** baz=204,SNR=39	**1.69**	**24**	P	**Pn**	**22 38 32.2**	**-0.1**
X58A	baz=204			Sb	**Sb**	**22 38 56.4**	**+1.1**
Y55A	**Saluda** baz=124,SNR=78	**1.70**	**304**	P	**Pn**	**22 38 32.4**	**-0.1**
Y55A	baz=124			S	**Sn**	**22 38 54.6**	**+0.5**
Y60A	**Bolivia**	**1.91**	**58**	Pn	**Pn**	**22 38 35.4**	**+0.2**
Y60A	**Bolivia** baz=239	**1.91**	**58**	P	**Pn**	**22 38 35.2**	**0.0**
Y60A	baz=239			Sb	**Sb**	**22 39 02.7**	**+1.3**
X55A	**Gracelyn & Ava** baz=140,SNR=18	**1.91**	**320**	P	**Pn**	**22 38 35.2**	**-0.2**
X59A	**McDuffie Farm,** baz=220	**2.03**	**39**	P	**Pn**	**22 38 36.9**	**-0.1**
X59A	baz=220			Sb	**Sb**	**22 39 06.0**	**+0.9**
HODGE	**Hodges**	**2.14**	**306**		**Pn**	**22 38 38.4**	**-0.1**
W57A	**Gilead**	**2.15**	**4**		**Pn**	**22 38 38.8**	**+0.1**
W57A	**Gilead** baz=184,SNR=34	**2.15**	**4**	P	**Pn**	**22 38 38.7**	**+0.1**
W57A	baz=184			Sb	**Sb**	**22 39 09.8**	**+1.4**
W58A	**Raeford** baz=201	**2.15**	**21**	P	**Pn**	**22 38 38.4**	**-0.3**
W58A	baz=201			Sb	**Sb**	**22 39 10.3**	**+1.7**
W56A	**Indian Trail** baz=171,SNR=73	**2.15**	**351**	P	**Pn**	**22 38 38.7**	**0.0**
W56A	baz=171			Sb	**Sb**	**22 39 09.7**	**+1.0**
255A	**Hazlehurst**	**2.23**	**242**	Pn	**Pn**	**22 38 40.4**	**+0.6**
255A	comp=Z,78nm,0.7s			IAmb_Lg		22 39 13.9	
PAULI	**Pauline**	**2.28**	**323**		**Pn**	**22 38 40.2**	**-0.2**
KMSC	**Kings Mountain**	**2.35**	**336**		**Pn**	**22 38 41.7**	**+0.3**
KMSC	**Kings Mountain** baz=156	**2.35**	**336**	P	**Pn**	**22 38 41.3**	**0.0**
KMSC	baz=156			Sb	**Sb**	**22 39 15.1**	**+1.0**
X60A	**Albert Glenn T** baz=230	**2.40**	**49**	P	**Pn**	**22 38 41.9**	**-0.2**
X60A	baz=230			Sb	**Sb**	**22 39 16.9**	**+1.3**
X54A	**Belton** baz=130,SNR=43	**2.40**	**310**	P	**Pn**	**22 38 42.0**	**-0.1**
X54A	baz=130			S	**Sn**	**22 39 11.6**	**+0.1**
154A	**Montrose**	**2.51**	**262**	Pn	**Pn**	**22 38 43.8**	**+0.1**
W59A	**Clinton** baz=214	**2.58**	**33**	P	**Pn**	**22 38 44.4**	**-0.2**
W59A	baz=214			Sb	**Sb**	**22 39 22.9**	**+1.9**
W54A	**Cherokee Point** baz=141,SNR=20	**2.67**	**322**	P	**Pn**	**22 38 45.8**	**-0.1**
W54A	baz=141			S	**Sn**	**22 39 17.5**	**-0.7**
GOGA	**Godfrey**	**2.80**	**279**	Pn	**Pn**	**22 38 48.0**	**+0.3**
GOGA	**Godfrey** baz=98,SNR=26	**2.80**	**279**	P	**Pn**	**22 38 47.6**	**0.0**
V56A	**Mocksville** baz=174,SNR=28	**2.81**	**354**	P	**Pn**	**22 38 47.6**	**-0.2**
W60A	**Pink Hill** baz=225	**2.88**	**44**	Sb	**Sb**	**22 39 31.5**	**+2.0**
V57A	**Coltrane Farms** baz=186,SNR=22	**2.89**	**6**	P	**Pn**	**22 38 48.6**	**-0.3**
V57A	baz=186			S	**Sn**	**22 39 23.6**	**0.0**
V58A	**Windy Hill, Pi**	**2.91**	**17**		**Pn**	**22 38 48.6**	**-0.5**
V58A	comp=Z,47nm,0.8s			IAmb_Lg		22 39 38.9	
V58A	**Windy Hill, Pi** baz=198,SNR=5.9	**2.91**	**17**	P	**Pn**	**22 38 48.7**	**-0.5**
CNNC	**Cliffs of the**	**2.92**	**40**	Pn	**Pn**	**22 38 48.9**	**-0.2**
CNNC	**Cliffs of the** baz=221,SNR=19	**2.92**	**40**	P	**Pn**	**22 38 49.0**	**-0.2**
V55A	**Taylorsville**	**2.97**	**343**	Pn	**Pn**	**22 38 47.4**	**-2.6**
V55A	**Taylorsville** baz=163	**2.97**	**343**	P	**Pn**	**22 38 49.8**	**-0.2**
X53A	**Estanollee** baz=119	**3.02**	**301**	P	**Pn**	**22 38 50.4**	**-0.1**
BG3	**Lake Jocassee**	**3.04**	**312**	Pn	**Pn**	**22 38 51.6**	**+0.7**
V54A	**Nebo** baz=152	**3.14**	**332**	P	**Pn**	**22 38 52.1**	**-0.2**
V59A	**Middlesex** baz=210	**3.18**	**29**	P	**Pn**	**22 38 52.5**	**-0.3**
U56A	**King**	**3.34**	**357**		**Pn**	**22 38 51.4**	**-3.7**
Y52A	**Lilburn**	**3.38**	**286**	Pn	**Pn**	**22 38 54.2**	**-1.4**
V53A	**Saluda**	**3.45**	**321**	Pn	**Pn**	**22 38 57.5**	**+0.9**
U57A	**Blanch** baz=192,SNR=14	**3.49**	**11**	P	**Pn**	**22 38 56.5**	**-0.5**
U55A	**TA2, Sparta** baz=168	**3.57**	**348**	P	**Pn**	**22 38 58.3**	**+0.1**
U58A	**Oxford** baz=202	**3.63**	**21**	P	**Pn**	**22 38 58.5**	**-0.5**
W52A	**Murphy**	**3.76**	**305**	Pn	**Pn**	**22 39 00.9**	**+0.1**
U54A	**Nelsons Funny**	**3.77**	**339**	Pn	**Pn**	**22 39 02.1**	**+1.2**
U54A	comp=Z,43nm,0.7s			IAmb_Lg		22 40 12.5	
U54A	**Nelsons Funny** baz=158	**3.77**	**339**	P	**Pn**	**22 39 00.8**	**-0.2**
U59A	**Littleton**	**3.87**	**30**	Pn	**Pn**	**22 39 02.0**	**-0.3**
U59A	**Littleton** baz=211	**3.87**	**30**	P	**Pn**	**22 39 01.8**	**-0.5**
TKL	**Tuckaleechee C** comp=Z,26nm,0.8s	**4.00**	**313**	IAmb_Lg		22 40 16.5	
V52A	**Sevierville** comp=Z,33nm,0.8s	**4.01**	**316**	IAmb_Lg		22 40 17.3	
T56A	**Rocky Mt** baz=182	**4.02**	**1**	P	**Pn**	**22 39 04.5**	**+0.1**
T57A	**Hurt**	**4.05**	**10**	Pn	**Pn**	**22 39 04.4**	**-0.5**
T57A	comp=Z,31nm,1.0s			IAmb_Lg		22 40 12.9	
T57A	**Hurt** baz=191,SNR=12	**4.05**	**10**	P	**Pn**	**22 39 04.2**	**-0.6**
V61A	**Roper**	**4.06**	**46**	Pn	**Pn**	**22 39 05.0**	**+0.1**
V61A	**Roper** baz=228	**4.06**	**46**	P	**Pn**	**22 39 04.4**	**-0.5**
T58A	**Grand View Acr** baz=199	**4.15**	**18**	P	**Pn**	**22 39 05.5**	**-0.7**
656A	**Willston**	**4.16**	**210**	Pn	**Pn**	**22 39 06.3**	**+0.1**
656A	comp=Z,27nm,0.7s			IAmb_Lg		22 40 17.1	
T54A	**Tazewell** baz=164	**4.21**	**344**	P	**Pn**	**22 39 06.8**	**-0.3**
X51A	**Calhoun**	**4.21**	**293**	Pn	**Pn**	**22 39 08.5**	**+1.5**
X51A	comp=Z,30nm,0.8s			IAmb_Lg		22 40 22.0	
U60A	**Pendleton** baz=216	**4.25**	**35**	P	**Pn**	**22 39 07.2**	**-0.3**
CPCT	**Cooper Cave** comp=Z,23nm,1.0s	**4.36**	**305**	IAmb_Lg		22 40 24.8	
T59A	**Double "B" Far**	**4.50**	**28**	Pn	**Pn**	**22 39 10.4**	**-0.6**
T59A	comp=Z,27nm,0.8s			IAmb_Lg		22 40 34.8	
T59A	**Double "B" Far** baz=209	**4.50**	**28**	P	**Pn**	**22 39 10.2**	**-0.7**
TZTN	**Tazewell** comp=Z,34nm,0.8s	**4.50**	**323**	IAmb_Lg		22 40 25.6	
TZTN	**Tazewell** baz=141	**4.50**	**323**	P	**Pn**	**22 39 10.7**	**-0.3**
U61A	**Possum Corner** baz=224	**4.51**	**42**	P	**Pn**	**22 39 10.6**	**-0.6**
S56A	**Natural Bridge** baz=186	**4.69**	**6**	P	**Pn**	**22 39 13.4**	**-0.2**
S55A	**Lewisburg** baz=177	**4.77**	**357**	P	**Pn**	**22 39 14.9**	**+0.2**
S57A	**Dark Hollow, R**	**4.85**	**11**	Pn	**Pn**	**22 39 15.7**	**0.0**
S57A	comp=Z,32nm,1.0s			IAmb_Lg		22 40 48.7	
S57A	**Dark Hollow, R** baz=192	**4.85**	**11**	P	**Pn**	**22 39 15.3**	**-0.5**
S58A	**Poland Farm, P** comp=Z,24nm,0.7s	**4.91**	**20**	IAmb_Lg		22 40 42.1	
T60A	**Surry** baz=215	**4.99**	**33**	P	**Pn**	**22 39 17.5**	**-0.2**
T51A	**Gray** baz=141	**5.03**	**323**	P	**Pn**	**22 39 18.3**	**+0.1**
SWET	**Sewanee** comp=Z,28nm,0.8s	**5.27**	**296**	IAmb_Lg		22 40 54.9	
R58B	**Mineral**	**5.29**	**20**	Pn	**Pn**	**22 39 21.3**	**-0.4**
R58B					**Sn**	**22 40 18.6**	**-4.0**
R58B	comp=Z,21nm,0.8s			IAmb_Lg		22 41 00.8	
S51A	**Beattyville** comp=Z,29nm,0.7s	**5.41**	**330**	IAmb_Lg		22 41 04.2	
S51A	**Beattyville** baz=148	**5.41**	**330**	P	**Pn**	**22 39 23.2**	**-0.2**
R57A	**Stanardsville** baz=195,SNR=12	**5.45**	**14**	P	**Pn**	**22 39 23.4**	**-0.6**
S60A	**Water View** baz=212	**5.50**	**30**	P	**Pn**	**22 39 24.1**	**-0.5**
R58A	**Rapidan** baz=199	**5.57**	**18**	P	**Pn**	**22 39 25.2**	**-0.5**
R59A	**King George, V** baz=206	**5.75**	**25**	P	**Pn**	**22 39 27.6**	**-0.5**
U49A	**Red Boiling Sp** comp=Z,24nm,1.2s	**5.80**	**309**	IAmb_Lg		22 41 14.1	
X48A	**Hartselle** comp=Z,19nm,1.2s	**5.92**	**286**	IAmb_Lg		22 41 09.5	
T49A	**Edmonton** comp=Z,17nm,1.0s	**6.01**	**314**	IAmb_Lg		22 41 16.4	
Q56A	**Snyder Ridge,**	**6.08**	**7**	Pn	**Pn**	**22 39 32.7**	**+0.1**
Q56A	comp=Z,19nm,0.9s			IAmb_Lg		22 41 15.1	
Q57A	**Strasburg** baz=194,SNR=18	**6.18**	**13**	P	**Pn**	**22 39 33.6**	**-0.5**
Q51A	**Peebles** comp=Z,18nm,0.7s	**6.54**	**338**	IAmb_Lg		22 41 33.8	
MCWV	**Mont Chateau** comp=Z,17nm,1.3s	**6.65**	**2**	IAmb_Lg		22 41 44.6	
R49A	**Shelbyville** comp=Z,21nm,1.1s	**6.67**	**324**	IAmb_Lg		22 41 35.8	
P57A	**Homestead Farm** comp=Z,18nm,0.8s	**6.70**	**14**	IAmb_Lg		22 41 39.0	
SDMD	**Soldier’s Deli**	**6.93**	**22**	Pn	**Pn**	**22 39 43.9**	**-0.4**
N51A	**Ashland** comp=Z,17nm,1.1s	**8.10**	**348**	IAmb_Lg		22 42 19.9	
M54A	**Oil Creek Stat** comp=Z,14nm,1.1s	**8.50**	**3**	IAmb_Lg		22 42 36.7	
WVNY	**West Valley, N** comp=Z,11nm,1.1s	**9.47**	**7**	IAmb_Lg		22 42 59.0	
LONY	**Lake Ozonia** baz=202,SNR=7.1	**12.38**	**19**	P	**Pn**	**22 41 00.2**	**+1.1**

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*IDC **19** 22:44:26.5±0.8, 5°.36S×153°.31E, h0^{km}, mb4.0/15, mb1 4.1/16, mb1mx4.0/45, mbtmp4.0/16, ML2.5/1, MS3.4/3, Ms1 3.4/3, ms1mx2.9/27, Error ellipse: s-maj=23.0km s-min=15.5km az=102.0*

*NEIC **19** 22:44:30.6±1.9, 5°.51S±0°.07×153°.3E±0°.1, h35^{km}±2^{km}, mb4.2/8, Error ellipse: s-maj=17.7km s-min=11.2km az=82.0*

ISC 19 22:44:32.0±0.7, 5°.47S±0°.06×153°.2E±0°.1, h43^{km}, n38, σ1^{s}.20/40, mb4.0/19, MS3.3/3, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.66**	**320**	Pn	**Pn**	**22 44 57.7**	**-0.9**
RABL				Sn	**Sn**	**22 45 21.5**	**+2.8**
KRVT	**Keravat (AS076** 163nm,0.3s,baz=208,slow=0.2,SNR=68	**1.67**	**314**	Pn	**Pn**	**22 44 57.4**	**-1.3**
KRVT	628nm,0.3s,baz=43,slow=18,SNR=24			Sn	**Sn**	**22 45 20.5**	**+1.5**
KRVT	comp=Z,464nm,21.0s,baz=126,slow=44			LR	LR	22 45 38.9	
PMG	**Port Moresby** 4.8nm,0.3s,baz=12,slow=4.1,SNR=5.5	**7.17**	**237**	Pn	**Pn**	**22 46 15.8**	**+1.4**
PMG	4.6nm,0.3s,baz=31,slow=18,SNR=8.3			Sn	**Sn**	**22 47 33.8**	**-0.8**
PMG	**Port Moresby**	**7.17**	**237**		**Pn**	**22 46 16.1**	**+1.6**
PMG				Sn	**Sn**	**22 47 33.0**	**-1.6**
DZM	**Mont Dzumac** comp=Z,92nm,19.4s,baz=58,slow=35	**20.88**	**143**	LR	LR	22 56 34.6	
SIJI	**Sorong** 3.8nm,0.3s,baz=63,slow=18,SNR=2.0	**22.39**	**281**	P	**P**	**22 49 26.8**	**-0.2**
WB0	**Warramunga Arr**	**23.19**	**231**	P	**P**	**22 49 34.6**	**-0.6**
WB0	comp=Z,2.9nm,0.8s			IAmb	IAmb	22 49 43.5	
WRA	**Warramunga Arr** comp=Z,1.1nm,0.6s,baz=53,slow=9.8,SNR=9.4	**23.33**	**230**	P	**P**	**22 49 37.9**	**+1.3**
WRA	comp=Z,0.4nm,0.7s,baz=56,slow=2.5,SNR=2.1			PcP	**PcP**	**22 53 25.1**	**+2.2**
ASAR	**Alice Springs** comp=Z,0.5nm,0.4s,baz=55,slow=9.0,SNR=7.6	**25.95**	**224**	P	**P**	**22 50 02.3**	**+1.6**
ASAR	comp=Z,0.5nm,0.9s,baz=54,slow=4.7,SNR=3.0			PcP	**PcP**	**22 53 30.1**	**+1.4**
ASAR	**Alice Springs**	**25.95**	**224**	P	**P**	**22 49 59.2**	**-1.5**
KNRA	**Kununurra**	**26.07**	**245**	P	**P**	**22 49 59.6**	**-2.1**
KNRA	comp=Z,12nm,1.1s			IAmb	IAmb	22 50 15.1	
STKA	**Stephens Creek** comp=Z,1.0nm,0.5s,baz=26,slow=16,SNR=3.4	**28.44**	**201**	P	**P**	**22 50 24.5**	**+1.7**
STKA	comp=Z,73nm,18.9s,baz=22,slow=36			LR	LR	23 01 27.5	
STKA	**Stephens Creek**	**28.44**	**201**	P	**P**	**22 50 21.6**	**-1.3**
FITZ	**Fitzroy Crossi** comp=Z,1.3nm,0.6s,baz=49,slow=7.3,SNR=6.9	**29.72**	**243**	P	**P**	**22 50 35.0**	**+0.6**
FITZ	**Fitzroy Crossi**	**29.72**	**243**	P	**P**	**22 50 33.8**	**-0.6**
FITZ	comp=Z,4.4nm,1.1s			IAmb	IAmb	22 50 47.2	
BBOO	**Buckleboo**	**31.56**	**208**	P	**P**	**22 50 49.9**	**-0.6**
BBOO	comp=Z,2.9nm,0.9s			IAmb	IAmb	22 51 00.6	
JNU	**Nakatsue** comp=Z,5.7nm,1.0s,baz=98,slow=7.1,SNR=3.8	**43.85**	**333**	P	**P**	**22 52 34.4**	**+0.1**
JNU	**Nakatsue**	**43.85**	**333**	P	**P**	**22 52 32.7**	**-1.5**
MJAR	**Matsushiro Arr** comp=Z,54nm,20.3s,baz=105,slow=33	**44.10**	**343**	LR	LR	23 08 54.4	
JKA	**Kamikawa-asahi**	**50.28**	**350**	P	**P**	**22 53 24.6**	**+0.5**
ASAJ	**Asahikawa** comp=Z,2.0nm,0.5s,baz=231,slow=16,SNR=4.2	**50.28**	**350**	P	**P**	**22 53 24.6**	**+0.5**
USRK	**Ussuriysk Ar.** comp=Z,1.2nm,0.7s,baz=157,slow=8.1,SNR=5.3	**53.02**	**341**	P	**P**	**22 53 44.5**	**-0.1**
USRK	**Ussuriysk Ar.**	**53.02**	**341**	P	**P**	**22 53 43.4**	**-1.2**
KLR	**Kul'dur** comp=Z,1.6nm,0.8s,baz=123,slow=14,SNR=4.9	**57.61**	**343**	P	**P**	**22 54 17.6**	**+0.1**
CMAR	**Chiang Mai Arr** comp=Z,0.8nm,0.6s,baz=114,slow=6.6,SNR=5.8	**58.55**	**295**	P	**P**	**22 54 25.0**	**+0.3**
CMAR	**Chiang Mai Arr**	**58.55**	**295**	P	**P**	**22 54 23.9**	**-0.9**
SONM	**Songino Array** comp=Z,0.6nm,0.6s,baz=136,slow=5.8,SNR=4.8	**67.12**	**328**	P	**P**	**22 55 21.6**	**+0.2**
SONM	**Songino Array** comp=Z,0.7nm,0.7s	**67.12**	**328**	IAmb	IAmb	22 55 23.1	

SEY	Seymchan	68.22	360	P	P	22 55 28.0	+0.2
	comp=Z,1.1nm,0.4s,baz=112,slow=6.5,SNR=0.9						
MKAR	Makanchi Array	81.11	319	P	P	22 56 43.9	+1.0
	comp=Z,0.3nm,0.5s,baz=91,slow=9.1,SNR=7.2						
MKAR	Makanchi Array	81.11	319	P	P	22 56 43.0	0.0
ZAA0	Zalesovo Array	81.94	326	IAmb	IAmb	22 56 48.4	
	comp=Z,2.9nm,0.9s						
ZALV	Zalesovo Beam	81.94	326	P	P	22 56 47.1	-0.1
	comp=Z,2.5nm,0.7s,baz=105,slow=5.5,SNR=12						
ILAR	Eielson Array	82.62	22	P	P	22 56 50.7	+0.3
	comp=Z,0.5nm,0.8s,baz=259,slow=5.2,SNR=5.9						
ILAR	Eielson Array	82.62	22	P	P	22 56 50.5	0.0
BDFB	Brasilia	150.29	135	PKPbc	PKiKP	23 04 20.2	-0.4
	comp=Z,1.4nm,0.5s,baz=278,slow=3.9,SNR=4.2						
TORD	Torodi Ar. Bea	150.91	287	PKPbc	PKiKP	23 04 22.3	+0.5
	comp=Z,2.8nm,0.7s,baz=66,slow=2.5,SNR=20						
TORD	Torodi Ar. Bea	150.91	287	PKPdf	PKPdf	23 04 13.9	-1.5

*PRE **19** 22:49:13.9±1.1, 26°.45S×27°.43E, h2^{km}, ML2.8*
*EAF **19** 22:49:15.3±0.9, 26°.40S×27°.73E, h10^{km}, MD3.6*
*BUL **19** 22:49:17.8±1.0, 26°.46S×27°.85E, h10^{km}±30^{km}, MD3.7*
ISC 19 22:49:14.3±1.5**, 26°.35S**±0°.09×**27°.4E**±0°.1**, h5**^{km}**, n11, σ1^{s}86**/14**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	Lobatse	2.10	309	*i* P	Pg	22 49 54.6	+0.1
LBTB	Lobatse	2.10	309	*i* P	Pg	22 49 54.6	+0.1
BOSA	Boshof	2.95	220	*i* P	Pn	22 50 04.0	+2.1
BOSA	Boshof	2.95	220	*i* P	Pn	22 50 04.0	+2.1
MSNA	Messina	4.65	32	*e*P	Pn	22 50 26.3	+0.9
MSNA				*e*S	Sn	22 51 17.5	-2.3
MSNA				AML	AML	22 51 46.8	
	comp=Z,26nm,0.4s						
PKA	Prieska	5.27	230	*e*P	Pn	22 50 34.0	+0.2
PKA				*e*S	Sn	22 51 31.6	-3.4
PKA				AML	AML	22 52 06.8	
	comp=Z,12nm,0.5s						
UPI	Upington	5.82	248	*e*P	Pn	22 50 42.5	+1.2
UPI				*e*S	Sn	22 51 46.1	-2.4
UPI				AML	AML	22 52 22.7	
	comp=Z,30nm,0.5s						
MATP	Matopo	5.98	10	*i* P	Pn	22 50 43.1	-0.7
MATP	Matopo	5.98	10	*i* P	Pn	22 50 43.1	-0.7
TSUM	Tsumeb	11.51	306	*i* P	Pn	22 52 00.8	+1.3
TSUM				*i* S	Sn	22 53 59.7	-8.9
TSUM	Tsumeb	11.51	306	*i* P	Pn	22 52 00.8	+1.3
TSUM				*i* S	Sn	22 53 59.7	-8.9

*IDC **19** 23:18:27.3±2.4, 20°.57S×169°.39E, h22^{km}±6^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.6/26, mbtmp4.1/3, Error ellipse: s-maj=103.2km s-min=30.1km az=151.0*
ISC 19 23:18:33.3±2.2**, 20°.4S**±0°.6×**168°.9E**±0°.3**, h55**^{km}**, n7, σ2^{s}03**/8**, mb4.2**/5**, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	21.22	267	P	P	23 23 16.2	+1.6
	4.5nm,0.8s,baz=91,slow=12,SNR=1.8						
CTA				pP	pP	23 23 25.0	-0.2
	7.3nm,0.7s,baz=99,slow=12,SNR=3.3						
STKA	Stephens Creek	26.95	239	P	P	23 24 10.4	+0.7
	1.1nm,0.7s,baz=76,slow=10,SNR=3.6						
WRA	Warramunga Arr	32.38	265	pP	P	23 25 05.2	+7.2
	0.8nm,0.5s,baz=90,slow=8.4,SNR=3.7						
ASAR	Alice Springs	32.53	258	P	P	23 24 59.9	+0.6
	2.2nm,0.4s,baz=86,slow=9.0,SNR=38						
ASAR				pP	pP	23 25 07.5	-3.6
	7.1nm,0.8s,baz=86,slow=8.9,SNR=17						
FITZ	Fitzroy Crossi	40.79	266	pP	pP	23 26 18.6	-3.1
	4.7nm,1.0s,baz=119,slow=10,SNR=3.5						
ARCES	ARCESS Array B	126.08	345	PKP	PKPdf	23 37 28.1	-0.6
	1.7nm,0.9s,baz=29,slow=2.1,SNR=1.2						
GERES	GERESS Array B	145.32	331	PKPbc	PKPbc	23 38 04.0	-0.8
	0.4nm,0.5s,baz=24,slow=5.4,SNR=2.5						
GERES				pPKPbc	PKiKP	23 38 10.6	+1.7
	1.0nm,0.6s,baz=25,slow=4.4,SNR=5.3						

*IDC **19** 23:19:28.8±10.0, 36°.20N×142°.57E, h0^{km}, mb3.4/2, mb1 3.3/3, mb1mx3.1/33, mbtmp3.3/3, ML2.3/1, Error ellipse: s-maj=178.5km s-min=85.5km az=144.0*
*JMA **19** 23:19:29.9±0.2, 36°.20N×142°.59E, h29^{km}, M3.1*
ISC 19 23:19:31.5±1.7**, 36°.19N**±0°.06×**142°.5E**±0°.1**, h18**^{km}**, n15, σ0^{s}72**/24**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	1.53	276	P	Pn	23 19 57.6	-0.2
JHYU				*e*S	Sn	23 20 17.6	+0.4
JHO	Hitachi	1.59	286	P	Pn	23 19 57.9	-0.8
JHO				*e*S	Sn	23 20 18.4	-0.3
ONAJ	Iwakimizuishiy	1.62	305	P	Pn	23 19 58.4	-0.8
JFK	Kawauchi	1.73	313	P	Pn	23 19 59.8	-1.0
JFK				S	Sn	23 20 21.8	-0.7
BSO1	Boso 1	1.96	219	P	Pn	23 20 03.1	-0.2
BSO1				*e*S	Sb	23 20 28.7	-1.4
JFT	Otama	2.16	308	P	Pn	23 20 06.9	+0.3
JFT				S	Sn	23 20 33.7	+0.7
JAG	Ashikaga	2.44	276	P	Pn	23 20 10.4	-0.1
JAG				S	Sn	23 20 39.4	-0.5
JRY	Ryogami san	2.89	268	P	Pn	23 20 16.3	-0.4
JRY				*e*S	Sn	23 20 50.6	-0.4
JOD2	Odawara 2	2.90	252	P	Pn	23 20 16.8	0.0
JMK	Ichinoseki	2.93	341	P	Pn	23 20 16.7	-0.4
JMK				*e*S	Sn	23 20 50.6	-1.2
JOM	Ohasama	3.41	345	S	Sn	23 21 04.3	+0.7
MJAR	Matsushiro Arr	3.45	277	Pn	Pn	23 20 24.5	+0.1
	0.3nm,0.3s,baz=93,slow=14,SNR=9.1						
MAT	Matsushiro	3.46	277	P	Pn	23 20 25.3	+0.9
MAT				*e*S	Sn	23 21 05.7	+0.8
SONM	Songino Array	28.96	305	P	P	23 25 30.9	+1.0
	0.4nm,0.6s,baz=110,slow=9.7,SNR=3.0						
MKAR	Makanchi Array	45.28	303	P	P	23 27 48.2	+0.2
	0.3nm,0.7s,baz=81,slow=12,SNR=2.3						

*DJA **19** 23:21:04.6±1.1, 7°S±6°×12°0E±°, h611^{km}±16^{km}, M4.2/14, mB4.5/5, mb4.4/6, MLv4.3/14, MLv4.3/7, Mw(mB)3.7/5*
*IDC **19** 23:21:07.8±0.7, 7°.18S×120°.31E, h581^{km}±8^{km}, mb3.2/10, mb1 3.3/13, mb1mx3.1/35, mbtmp4.2/13, Error ellipse: s-maj=26.2km s-min=9.9km az=62.0*
ISC 19 23:21:07.7±0.6**, 7°.29S**±0°.08×**120°.3E**±0°.1**, h600**^{km}**, n38, σ2^{s}26**/43**, mb3.9**/9**, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKSI	Bulukumba	1.96	355	P	P	23 22 19.3	-2.6
KAPI	Kappang	2.32	347	P	P	23 22 21.6	-1.8
	11nm,0.3s,baz=148,slow=3.4,SNR=35						
KAPI				S	S	23 23 21.1	-3.8
	baz=178,slow=16,SNR=1.0						
MMRI	Maumere	2.35	125	P	P	23 22 19.7	-3.8
WBSI	Waikabubak, Su	2.50	201	P	P	23 22 21.5	-2.8
PLAI	Plampang	2.92	238	P	P	23 22 24.2	-2.2
BASI	Baing, Sumba	2.93	175	P	P	23 22 24.9	-1.5
SPSI	Sidrap Palu	3.34	351	P	P	23 22 28.7	-0.2
SOEI	Soe	4.63	122	P	P	23 22 35.6	-2.3
IGBI	Denpasar	5.32	253	P	P	23 22 40.6	-2.5
JAGI	Jajag, Banyuwa	6.20	259	P	P	23 22 47.2	-3.3
	0.2nm0.2nm37nm,1.6s						
APSI	Ampana	6.48	12	P	P	23 22 51.5	-1.5
	0.1nm794nm24nm,0.5s						
MPSI	Mapaga	7.58	357	P	P	23 23 01.8	-1.3
	0.2nm1µm60nm,0.8s						
SANI	Sanana	7.70	48	P	P	23 23 02.2	-2.0
	0.3nm0.3nm72nm,0.7s						
NLAI	Namlea	7.88	60	P	P	23 23 05.0	-0.9
	0.3nm0.3nm923nm54nm,0.6s						
MRSI	Marisa	7.88	12	P	P	23 23 03.9	-2.1
	0.3nm0.3nm92nm,0.8s						
FITZ	Fitzroy Crossi	11.94	155	P	P	23 23 46.1	+0.3
	0.6nm,0.3s,baz=341,slow=8.2,SNR=24						
FITZ				S	S	23 25 53.5	-2.2
	0.1nm,0.3s,baz=83,slow=18,SNR=1.6						
WRA	Warramunga Arr	18.54	134	P	P	23 24 49.9	+1.6
	0.7nm,0.3s,baz=313,slow=10,SNR=16						
ASAR	Alice Springs	20.88	143	P	P	23 25 11.3	+1.9
	0.8nm,0.4s,baz=317,slow=8.5,SNR=8.3						
ASAR				PcP	PcP	23 28 53.2	+2.2
	0.4nm,0.5s,baz=318,slow=1.5,SNR=5.0						
ASAR				ScP	ScP	23 31 32.6	+0.7
	0.2nm,0.7s,baz=333,slow=1.0,SNR=2.1						
PSI	Prapat	23.56	294	P	P	23 25 34.2	+0.7
	1.6nm,0.3s,baz=103,slow=9.7,SNR=5.3						
NWAO	Narrogin (SRO)	25.67	186	P	P	23 25 53.4	+1.7
	1.7nm,0.4s,baz=25,slow=7.1,SNR=6.0						
STKA	Stephens Creek	31.51	144	P	P	23 26 44.3	+2.0
	2.1nm,0.3s,baz=336,slow=8.9,SNR=7.5						
CMAR	Chiang Mai Arr	33.14	321	P	P	23 26 56.4	+0.2
	0.8nm,0.3s,baz=147,slow=5.4,SNR=2.4						
TAPN	Taplejung	46.69	319	*e*P	P	23 28 45.1	+0.8
RAMN	Ramite	47.16	318	*e*P	P	23 28 48.3	+0.5
	7.8nm,0.6s						
JIRN	Jiri	47.90	318	*e*P	P	23 28 54.1	+0.6
GUN	Gumba	48.27	318	*e*P	P	23 28 56.8	+0.6
PKI	Pulchoki	48.37	317	*e*P	P	23 28 57.0	+0.1
	4.1nm,0.4s						
PKIN	Phulchoki	48.38	317	*e*P	P	23 28 57.1	+0.2
	3.2nm,0.4s						
GKN	Gorkha	49.16	317	*e*P	P	23 29 03.0	+0.5
	6.4nm,0.3s						
DANN	Dangsing	49.98	317	*e*P	P	23 29 09.2	+0.5
	23nm,0.6s						
USRK	Ussuriysk Ar.	52.33	11	P	P	23 29 25.5	+0.6
	0.5nm,0.4s,baz=199,slow=6.8,SNR=4.6						
SONM	Songino Array	56.24	349	P	P	23 29 53.4	+1.0
	1.4nm,0.5s,baz=167,slow=8.6,SNR=12						
KSH	Kashi	62.02	322	P	P	23 30 32.8	+1.7
KSH				pP	pwP	23 32 30.8	+0.8
KSH				PP	PP	23 33 01.9	+3.7
KSH				PcS	PcS	23 35 01.5	-7.0
KSH				S	S	23 38 06.1	-4.3
KSH	Kashi	62.02	322	SS	SS	23 42 26.3	-2.0
MKAR	Makanchi Array	63.54	332	P	P	23 30 42.0	+1.5
	3.5nm,0.6s,baz=141,slow=7.4,SNR=49						
ZALV	Zalesovo Beam	67.92	338	P	P	23 31 07.8	+0.4
	3.4nm,0.4s,baz=139,slow=5.0,SNR=15						
GEYT	Alibeck	73.20	313	P	P	23 31 40.7	+1.7
	0.9nm,0.5s,baz=126,slow=7.5,SNR=3.7						
TORD	Torodi Ar. Bea	119.41	281	PKP	PKiKP	23 38 52.5	+1.5
	0.3nm,0.5s,baz=119,slow=1.8,SNR=4.5						

*IDC **19** 23:29:28.0±2.0, 1°.47N×91°.18E, h0^{km}, mb3.8/5, mb1 3.9/6, mb1mx3.6/34, mbtmp3.9/6, ML3.8/1, Error ellipse: s-maj=62.9km s-min=30.3km az=45.0*
ISC 19 23:29:29.5±1.4**, 1°.5N**±0°.3×**91°.2E**±0°.2**, h10**^{km}**, n7, σ0^{s}19**/7**, mb4.0**/5**, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	11.91	299	Pn	Pn	23 32 19.5	-0.1
	0.6nm,0.3s,baz=120,slow=11,SNR=4.4						
MKAR	Makanchi Array	45.81	352	P	P	23 37 51.5	0.0
	0.3nm,0.5s,baz=170,slow=7.6,SNR=5.1						
WRA	Warramunga Arr	47.38	119	P	P	23 38 04.3	-0.1
	0.4nm,0.8s,baz=294,slow=8.6,SNR=1.5						
SONM	Songino Array	48.04	14	P	P	23 38 09.1	-0.1
	1.0nm,0.4s,baz=193,slow=9.1,SNR=8.3						
ZALV	Zalesovo Beam	52.57	355	P	P	23 38 43.1	-0.1
	0.7nm,0.3s,baz=174,slow=7.2,SNR=3.0						
FINES	FINESS Array B	77.02	333	P	P	23 41 22.8	+0.3
	4.4nm,1.1s,baz=106,slow=4.9,SNR=5.5						
TXAR	Lajitas Array	146.25	24	PKPbc	PKPdf	23 49 10.2	0.0
	0.1nm,0.4s,baz=278,slow=2.6,SNR=3.5						

IDC 19 23:46:50.3±11.0**, 15°.79S**×**173°.83W, h75**^{km}±52^{km}**, mb3.3**/3**, mb1 3.6**/4**, mb1mx3.3**/28**, mbtmp3.6**/4**, ML3.9**/1**, Error ellipse: s-maj=551.8km s-min=29.2km az=150.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.73	47	P	Pn	23 47 32.0	0.0
	20nm,0.3s,baz=212,slow=2.6,SNR=12						
AFI				S	Sn	23 47 59.0	-4.9
	29nm,0.3s,baz=66,slow=21,SNR=7.9						
WRA	Warramunga Arr	49.35	257	P	P	23 55 32.2	-0.4
	1.0nm,1.2s,baz=113,slow=6.4,SNR=2.2						
ASAR	Alice Springs	49.60	252	P	P	23 55 34.5	0.0
	0.9nm,0.6s,baz=87,slow=7.9,SNR=10						
NVAR	Mina Array Bea	74.89	42	P	P	23 58 23.5	0.0
	0.3nm,0.6s,baz=237,slow=8.3,SNR=2.5						

*ATH **19** 23:47:46.8, 41°.56N×24°.06E, h22^{km}±1^{km}, ML2.4/11, Error ellipse: s-maj=2.5km s-min=0.9km az=185.0*
*THE **19** 23:47:47.3, 41°.55N×24°.08E, h6^{km}±1^{km}, ML2.3/9, Error ellipse: s-maj=1.6km s-min=0.7km az=178.0*
*BEO **19** 23:47:48.3±0.5, 41°.57N×23°.92E, h0^{km}, ML2.6/7*
ISC 19 23:47:47.1±0.9**, 41°.58N**±0°.02×**24°.05E**±0°.02**, h12**^{km}±8^{km}**, n54, σ1^{s}13**/87**, 9C-11D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVR	Nevrokopi	0.27	211	P	Pg	23 47 52.7	0.0
NVR				S	Sg	23 47 56.6	+0.2
	1µm,0.2s						
NVR	Nevrokopi	0.27	211	P	Pg	23 47 52.7	0.0
NVR				S	Sg	23 47 56.9	+0.5
NVR				AML	AML	23 47 57.2	
	comp=E,3181µm,0.2s						
NVR				AML	AML	23 47 57.7	
	comp=N,1772µm,0.2s						
SRS	Serrai	0.58	217	P	Pg	23 47 58.3	0.0
SRS				S	Sg	23 48 06.4	+0.5
	comp=N,548nm,0.2s						
SRS	Serrai	0.58	217	*e*Pg	Pg	23 47 58.3	0.0
SRS				*e*Sg	Sg	23 48 04.2	-1.7
SRS	Serrai	0.58	217	P	Pg	23 47 58.4	0.0
SRS				S	Sg	23 48 06.4	+0.5
SRS				AML	AML	23 48 07.8	
	comp=E,888µm,0.1s						
SRS				AML	AML	23 48 09.2	
	comp=N,816µm,0.2s						
KAVA	Kavala	0.68	149	P	Pg	23 47 59.6	-0.7
KAVA				S	Sg	23 48 09.3	0.0
	comp=N,240nm,0.2s						
KAVA	Kavala	0.68	149	P	Pg	23 47 59.7	-0.7
KAVA				S	Sg	23 48 09.2	0.0
KAVA				AML	AML	23 48 14.7	
	comp=E,406µm,0.2s						
KAVA				AML	AML	23 48 15.4	
	comp=N,548µm,0.2s						
KVLA	Kavala	0.69	158	P	Pg	23 48 00.6	+0.1
KVLA				S	Sg	23 48 09.6	0.0
KVLA				AML	AML	23 48 13.4	
	comp=N,628µm,0.2s						
KVLA				AML	AML	23 48 14.6	
	comp=E,769µm,0.3s						
SOH	Sokhos	0.92	215	P	Pg	23 48 04.5	-0.4
SOH				S	Sb	23 48 17.4	+0.1
	comp=E,225nm,0.4s						
SOH	Sokhos	0.92	215	P	Pg	23 48 04.5	-0.4
SOH				S	Sg	23 48 16.9	+0.1
SOH				AML	AML	23 48 20.9	
	comp=N,534µm,0.4s						
SOH				AML	AML	23 48 21.3	
	comp=E,348µm,0.3s						
KNT	Kendrikon	0.96	245	P	Pg	23 48 05.2	-0.4
KNT				S	Sb	23 48 19.0	+0.6
	comp=E,305nm,0.2s						
KNT	Kendrikon	0.96	245	P	Pg	23 48 05.3	-0.3
KNT				S	Sb	23 48 18.4	0.0
KNT				AML	AML	23 48 21.4	
	comp=E,636µm,0.3s						
KNT				AML	AML	23 48 21.5	
	comp=N,591µm,0.2s						
THAS	Thassos island	1.10	152	P	Pb	23 48 07.9	-0.1
THAS				S	Sb	23 48 22.1	-0.2
	comp=N,190nm,0.3s						
THAS	Thassos island	1.10	152	P	Pb	23 48 07.9	-0.1
THAS				S	Sb	23 48 21.7	-0.6
THAS				AML	AML	23 48 26.7	
	comp=N,480µm,0.3s						
THAS				AML	AML	23 48 27.4	
	comp=E,318µm,0.3s						
VTS	Vitosha	1.20	330	*e*Pg	Pb	23 48 08.5	-1.4
VTS				*e*Sg	Sb	23 48 24.4	-1.0
VTS	Vitosha	1.20	330	⇑P	Pb	23 48 08.3	-1.6
VTS				⇓S	Sn	23 48 27.3	+1.1
RDO	Rodhopi	1.20	111	P	Pn	23 48 09.1	-0.7
RDO				S	Sb	23 48 25.4	+0.1
	comp=E,165nm,0.2s						
RDO	Rodhopi	1.20	111	P	Pn	23 48 09.2	-0.5
RDO				S	Sb	23 48 25.4	+0.1
RDO				AML	AML	23 48 30.6	
	comp=E,381µm,0.2s						
RDO				AML	AML	23 48 30.8	
	comp=N,387µm,0.4s						
HORT	Hortiatis	1.22	216	P	Pn	23 48 10.0	0.0
HORT				S	Sg	23 48 26.4	+0.1
HORT				AML	AML	23 48 29.7	
	comp=E,200µm,0.4s						
HORT				AML	AML	23 48 32.0	
	comp=N,242µm,0.2s						
OUR	Ouranopolis	1.25	182	P	Pn	23 48 10.0	-0.4
OUR				S	Sn	23 48 27.3	+0.2
	comp=N,585nm,0.3s						
OUR	Ouranopolis	1.25	182	P	Pn	23 48 09.9	-0.4
OUR				S	Sn	23 48 27.2	+0.2
OUR				AML	AML	23 48 29.4	
	comp=E,1038µm,0.3s						
OUR				AML	AML	23 48 31.8	
	comp=N,1272µm,0.3s						
THE	Thessaloniki	1.25	221	P	Pn	23 48 10.3	-0.1
GRG	Griva	1.39	244	P	Pn	23 48 12.7	+0.3
GRG				S	Sg	23 48 32.3	+0.5
	comp=N,68nm,0.3s						
GRG	Griva	1.39	244	P	Pb	23 48 12.9	-0.1
GRG				S	Sg	23 48 32.3	+0.5
GRG				AML	AML	23 48 34.5	
	comp=N,136µm,0.4s						
GRG				AML	AML	23 48 36.6	
	comp=E,133µm,0.3s						
BOSS	Bosilegrad	1.48	309	*e*Pg	Pn	23 48 14.2	+0.5
BOSS				*e*Sg	Sn	23 48 33.0	0.0
SMTH	Samothraki Isl	1.58	134	P	Pn	23 48 14.9	-0.1
ALN	Alexandroupoli	1.66	114	P	Pn	23 48 16.5	+0.5
PLVB	Pleven	1.85	13	⇑P	Pb	23 48 21.6	+0.7
PLVB				⇑S	Sg	23 48 47.9	+1.2
LIA	Limnos Island	1.89	152	P	Pn	23 48 18.9	-0.3
ELND	Elena	1.91	45	⇑P	Pb	23 48 22.6	+0.6
ZAPS	Zavoj	1.99	329	*e*Pn	Pb	23 48 22.9	-0.4
ZAPS				*e*Sg	Sb	23 48 49.5	+1.5
BARS	Barje	2.07	307	*e*Pn	Pn	23 48 22.7	+1.0
BARS	Barje	2.07	307	*e*Pn	Pg	23 48 35.8	+9.1
BARS				*e*Sg	Sg	23 48 52.9	-0.6
BARS				*e*Sg	Sb	23 49 19.1	+29
FNA	Florina	2.17	249	*e*Pn	Pn	23 48 24.6	+1.5
FNA	Florina	2.17	249	P	Pn	23 48 23.9	+0.8
BLKB	Belogradchik	2.28	334	⇓S	Sg	23 48 59.8	-0.5
VLAD	Vladila	2.43	6	⇑S	Sg	23 49 05.7	+0.5
BAIL	Bailesti	2.49	348	⇓S	Sg	23 49 08.9	+1.7
ZAGS	Zajecar	2.60	330	*e*Pn	Pn	23 48 30.7	+1.7
ZAGS				*e*Sg	Sg	23 49 10.2	-0.4
BOVS	Bovan	2.68	321	*e*Pn	Pn	23 48 32.0	+1.9
BOVS				*e*Sg	Sg	23 49 12.1	-1.2
COPA	Copaceanca	2.69	18	⇓S	Sg	23 49 13.6	0.0
SELS	Selova	2.72	308	*e*Pn	Pn	23 48 31.0	+0.4
GRUS	Gruza	3.37	314	*e*Pn	Pn	23 48 41.4	+1.9
GRUS				*e*Sg	Sg	23 49 33.2	-2.0
SJES	Sjenica	3.45	300	*e*Pn	Pn	23 48 42.0	+1.2
IVAS	Ivanjica	3.50	306	*e*Sg	Pn	23 48 43.0	+1.6
IVAS	Ivanjica	3.50	306	*e*Pn	Sg	23 49 37.0	-2.5
MDVR	Moldovita	3.63	333	⇓P	Pn	23 48 42.2	-1.0
MDVR				⇑S	Sb	23 49 33.7	-1.4
PDG	Podgorica	3.67	285	⇓S	Pn	23 48 44.3	+0.6
ARR	Arges	3.81	6	⇓S	Sg	23 49 48.3	-1.1
DIVS	Divibare	3.90	312	*e*Pn	Pn	23 48 48.8	+1.8
GZR	Gura Zlata	3.92	347	⇓P	Pn	23 48 46.8	-0.4
GZR				⇑S	Sb	23 49 46.2	+2.5
VOIR		3.92	10	⇓P	Pn	23 48 50.5	+3.3
VOIR				⇑S	Sg	23 49 50.9	-2.2
MLR	Muntele Rosu	4.14	19	⇓S	Sg	23 49 59.1	-1.1
BZS	Buzias	4.40	337	⇓P	Pn	23 48 52.5	-1.3
BZS				⇑S	Sg	23 50 04.0	-4.4

*NEIC **20** 00:10:44.3±2.5, 5°.81S±0°.07×128°.8E±0°.2, h294^{km}±15^{km}, mb4.0/4, Error ellipse: s-maj=27.7km s-min=10.6km az=92.0*
*IDC **20** 00:10:44.0±2.7, 5°.69S×128°.84E, h287^{km}±39^{km}, mb2.7/1, mb1 3.4/5, mb1mx3.0/44, mbtmp4.0/5, Error ellipse: s-maj=62.5km s-min=16.3km az=86.0*
ISC 20 00:10:44.2±1.0**, 5°.79S**±0°.06×**128°.9E**±0°.1**, h300**^{km}**, n15, σ2^{s}89**/22**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.23	132	Pn	Pn	00 11 43.1	+0.9
SAUI				S	S	00 12 26.4	-2.3
FAKI	Fak Fak	4.40	50		Pn	00 11 55.9	+1.0
FAKI					S	00 12 50.2	-1.4
SIJI	Sorong	5.43	26	P	Pn	00 12 07.4	+0.6
	1.5nm,0.3s,baz=243,slow=23,SNR=2.1						
SIJI				S	S	00 13 10.2	-3.2
	6.7nm,0.3s,baz=232,slow=23,SNR=14						
MTN	Manton Dam	7.35	163		Pn	00 12 30.1	+0.3
MTN				S	S	00 13 49.1	-6.2
KNRA	Kununurra	9.82	181	Pn	Pn	00 12 59.3	-0.9
KNRA				S	S	00 14 47.9	-3.3
FITZ	Fitzroy Crossi	12.64	194	P	P	00 13 36.5	+1.3
	0.5nm,0.3s,baz=18,slow=12,SNR=9.8						
WB0	Warramunga Arr	14.88	159	P	Pn	00 14 01.6	+0.2
WRA	Warramunga Arr	15.03	160	P	Pn	00 14 02.9	-0.1
	1.8nm,0.3s,baz=336,slow=12,SNR=57						
WRA				S	S	00 16 54.5	+8.9
	0.2nm,0.3s,baz=342,slow=21,SNR=1.6						
WRA	Warramunga Arr	15.03	160	P	P	00 14 01.4	-0.3
WR0	Warramunga Arr	15.11	159	P	Pn	00 14 03.9	-0.2
WR0				IAmb	IAmb	00 14 04.6	
	comp=Z,5.8nm,1.0s						
COEN	Coen	16.23	121	P	Pn	00 14 16.8	-0.3
COEN				IAmb	IAmb	00 14 17.9	
	comp=Z,6.0nm,0.8s						
AS31	Alice Springs	18.41	165	P	P	00 14 40.1	+1.8
AS31				IAmb	IAmb	00 14 40.9	
	comp=Z,2.8nm,0.4s						
ASAR	Alice Springs	18.41	165	P	P	00 14 40.0	+1.7
	comp=Z,1.1nm,0.3s,baz=345,slow=11,SNR=56						
ASAR				S	S	00 17 52.2	-0.6
	comp=Z,0.2nm,0.3s,baz=346,slow=20,SNR=11						
ASAR	Alice Springs	18.41	165	P	P	00 14 39.5	+1.2
MKAR	Makanchi Array	66.62	327	P	P	00 21 03.3	+0.5
	comp=Z,0.2nm,0.4s,baz=114,slow=8.2,SNR=4.8						

*BER **20** 00:21:21.7±3.2, 80°.30N×0°.90W, h10^{km}, ML2.7, ML3.5(NAO), Confirmed Earthquake*
*IDC **20** 00:21:25.2±1.3, 79°.82N×0°.06W, h0^{km}, mb3.6/6, mb1 3.8/8, mb1mx3.5/45, mbtmp3.7/8, ML2.9/1, MS3.1/3, Ms1 3.2/3, ms1mx2.7/34, Error ellipse: s-maj=26.7km s-min=19.1km az=45.0*
*IEPN **20** 00:21:26.0, 80°.17N×1°.27E, h15^{km}*
ISC 20 00:21:24.8±0.9**, 79°.77N**±0°.09×**0°.65W**±0°.05**, h10**^{km}**, n40, σ2^{s}45**/59**, mb3.5**/6**, 3C-1D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	2.48	104	Pn	Pn	00 22 03.4	-1.8
KBS				Sn	Sn	00 22 31.3	-4.2
KBS	Kingsbay	2.48	104	⇑*i*P	Pn	00 22 03.2	-2.0
KBS				*e*S	Sn	00 22 31.7	-3.8
KBS				IAML		00 22 38.0	
	comp=Z,94nm,0.4s						
KBS	Kingsbay	2.48	104	⇑*i*P	Pn	00 22 03.2	-2.0
KBS				*i* S	Sn	00 22 29.9	-5.6
NOR	Nord	3.18	313	Pn	Pn	00 22 06.2	-8.6
NOR				Sn	Sn	00 22 35.0	-18
NOR	Nord	3.18	313	*i* P	Pn	00 22 05.7	-9.0
NOR				*e*S	Sn	00 22 35.5	-17
NOR	Nord	3.18	313	*e*P	Pn	00 22 05.8	-9.0
NOR				*e*S	Sn	00 22 35.5	-17
NOR				IAML		00 22 46.2	
	comp=Z,8.3nm,0.4s						
BRBB	Barentsburg B	3.31	113	Pn	Pn	00 22 16.7	+0.1
BRBB				Sn	Sn	00 22 55.3	-0.7
BRBB	Barentsburg B	3.31	113	Pn	Pn	00 22 16.7	+0.1
BRBB				Sn	Sn	00 22 55.3	-0.7
BRBA	Barentsburg A	3.34	113	Pn	Pn	00 22 17.2	+0.3
BRBA				Sn	Sn	00 22 56.0	-0.5
BRBA	Barentsburg A	3.34	113	Pn	Pn	00 22 17.2	+0.3
BRBA				Sn	Sn	00 22 56.0	-0.5
SPA0	Spitsbergen Ar	3.63	108	Pn	Pn	00 22 19.8	-1.1
	baz=322,slow=11						

SPA0				Sn	**Sn**	**00 23 01.0**	**-2.7**
	baz=326,slow=18						
SPA0	**Spitsbergen Ar**	**3.63**	**108**	Pn	**Pn**	**00 22 19.8**	**-1.1**
	baz=322,slow=11						
SPA0				Sn	**Sn**	**00 23 01.0**	**-2.7**
	baz=326,slow=18						
SPA0	**Spitsbergen Ar**	**3.63**	**108**	⇑*i*P	**Pn**	**00 22 20.0**	**-1.0**
SPA0				*i* S	**Sn**	**00 22 59.5**	**-4.2**
SPITS	**Spitsbergen Ar**	**3.63**	**108**	Pn	**Pn**	**00 22 19.9**	**-1.1**
	baz=323,slow=9.3,SNR=1774						
SPITS				Sn	**Sn**	**00 23 00.5**	**-3.2**
	baz=324,slow=14,SNR=29						
SPITS				LR	LR	00 23 47.2	
	comp=Z,92nm,18.4s,baz=130,slow=40						
HSPB	**Hornsund (broa**	**4.28**	**122**	Pn	**Pn**	**00 22 30.5**	**+0.7**
HSPB				Sn	**Sn**	**00 23 20.8**	**+1.3**
HSPB	**Hornsund (broa**	**4.28**	**122**	*e*P	**Pn**	**00 22 30.7**	**+1.0**
HSPB				*e*S	**Sn**	**00 23 20.0**	**+0.5**
HSPB				IAML		00 23 22.9	
	comp=Z,30nm,0.3s						
HSPB	**Hornsund (broa**	**4.28**	**122**	*e*P	**Pn**	**00 22 30.7**	**+1.0**
HSPB				*e*S	**Sn**	**00 23 19.8**	**+0.2**
DAG	**Danmarks Havn**	**4.73**	**240**	*i* P	**Pn**	**00 22 34.5**	**-1.4**
DAG				*i* S	**Sn**	**00 23 27.2**	**-3.5**
DAG	**Danmarks Havn**	**4.73**	**240**	*e*	**Pn**	**00 22 34.1**	**-1.9**
	baz=46,slow=16						
DAG				*i* P	**Pn**	**00 22 34.5**	**-1.4**
DAG				*i* S	**Sn**	**00 23 27.3**	**-3.5**
DAG				IAML		00 23 34.4	
	comp=Z,26nm,0.3s						
HOPEN	**Hopen**	**6.16**	**109**	Pn	**Pn**	**00 22 53.8**	**-1.7**
HOPEN				Sn	**Sn**	**00 24 01.2**	**-4.7**
HOPEN	**Hopen**	**6.16**	**109**	*e*P	**Pn**	**00 22 53.9**	**-1.7**
HOPEN				*e*S	**Sn**	**00 24 01.7**	**-4.3**
HOPEN				IAML		00 24 06.1	
	comp=Z,26nm,0.4s						
HOPEN	**Hopen**	**6.16**	**109**	*e*P	**Pn**	**00 22 53.9**	**-1.7**
HOPEN				*e*S	**Sn**	**00 24 00.6**	**-5.4**
BJO1	**Bjornoya**	**6.82**	**130**	Pn	**Pn**	**00 23 07.8**	**+3.2**
BJO1	**Bjornoya**	**6.82**	**130**	*e*P	**Pn**	**00 23 07.5**	**+2.8**
BJO1				*e*S	**Sn**	**00 24 23.2**	**+1.1**
DBG	**Daneborg**	**6.98**	**229**	*i* P	**Pn**	**00 23 06.2**	**-0.6**
DBG				*i* S	**Sn**	**00 24 21.2**	**-4.8**
DBG				IAML		00 24 26.1	
	comp=Z,17nm,0.4s						
ZFI2	**Zemlya Franca-**	**8.02**	**59**	⇓*i*P	Pn	00 23 14.3	-6.9
ZFI2				*i* S	Sn	00 24 34.5	-17
	comp=Z,14nm,0.5s						
JMIC	**Jan Mayen**	**9.04**	**197**	Pn	**Pn**	**00 23 38.3**	**+3.3**
SCO	**Scoresbysund**	**10.69**	**221**	*i* P	**Pn**	**00 23 59.2**	**+1.5**
SUMG	**Summit**	**11.27**	**251**	*i* P	Pn	00 24 02.6	-3.3
SUMG				*i* S	Sn	00 25 59.4	-12
SUMG				IAML		00 26 05.5	
	comp=Z,12nm,0.4s						
ARA0	**ARCESS Array S**	**12.19**	**133**	Pn	**Pn**	**00 24 18.5**	**+0.4**
ARA0				Sn	**Sn**	**00 26 31.9**	**-1.8**
	baz=360,slow=22						
ARA0	**ARCESS Array S**	**12.19**	**133**	Pn	**Pn**	**00 24 18.5**	**+0.4**
ARA0				Sn	**Sn**	**00 26 31.9**	**-1.8**
	baz=360,slow=22						
ARCES	**ARCESS Array B**	**12.19**	**133**	Pn	**Pn**	**00 24 19.8**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=348,slow=8.3,SNR=5.3						
ARCES				Sn	**Sn**	**00 26 30.6**	**-3.2**
	comp=Z,0.1nm,0.3s,baz=334,slow=26,SNR=1.7						
LSH	**Leshukonskoye**	**19.54**	**113**	*e*P	**P**	**00 25 51.9**	**-0.1**
LSH				*e*S	Sn	00 29 18.6	-14
NRIK	**Noril'sk**	**22.80**	**66**	P	**P**	**00 26 29.3**	**+2.2**
	comp=Z,3.4nm,0.6s,baz=350,slow=8.1,SNR=12						
GERES	**GERESS Array B**	**31.45**	**162**	P	**P**	**00 27 48.9**	**+2.9**
	comp=Z,0.2nm,0.3s,baz=8.9,slow=7.0,SNR=2.6						
ILAR	**Eielson Array**	**34.39**	**335**	P	**P**	**00 28 14.2**	**+2.9**
	comp=Z,0.3nm,0.6s,baz=5.2,slow=8.3,SNR=4.4						
ZALV	**Zalesovo Beam**	**36.68**	**81**	P	**P**	**00 28 30.7**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=353,slow=6.2,SNR=2.1						
ZALV				LR	LR	00 46 42.3	
	comp=Z,20nm,18.9s,baz=345,slow=42						
MKAR	**Makanchi Array**	**43.11**	**86**	P	**P**	**00 29 24.3**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=339,slow=7.5,SNR=13						
NVAR	**Mina Array Bea**	**57.05**	**304**	LR	LR	00 55 58.2	
	comp=Z,73nm,18.5s,baz=306,slow=36						
TORD	**Torodi Ar. Bea**	**66.65**	**178**	P	**P**	**00 32 16.5**	**+1.3**
	comp=Z,0.1nm,0.4s,baz=7.4,slow=5.1,SNR=4.4						

*SJA **20** 00:25:50.5±0.4, 19°.43S×71°.74W, h48^{km}±5^{km}, ML3.6, MW3.7*

*GUC **20** 00:26:03.9±0.8, 19°.97S×70°.86W, h40^{km}±2^{km}, ML3.2*

ISC 20 00:26:04.3±1.6, **19°.86S**±0°.05×**70°.93W**±0°.09, **h29**^{km}±17^{km}, **n16**, σ**2^{s}.76**/30, **1D**, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.80**	**71**	*e*P	**Pn**	**00 26 18.6**	**-1.2**
PSGC				*i* S	**Sn**	**00 26 29.5**	**-1.3**
TA01	**Diego Aracena**	**0.99**	**135**	*e*P	**Pn**	**00 26 20.1**	**-2.1**
TA01				*i* S	**Sn**	**00 26 32.4**	**-2.9**
TA01				IAML		00 26 34.5	
	comp=N,2µm,0.2s						
PATCX	**Punta Patache**	**1.20**	**143**	⇓*i*P	**Pn**	**00 26 23.4**	**-1.8**
PATCX				*i* S	**Sn**	**00 26 37.6**	**-2.9**
PATCX				IAML		00 26 40.2	
	comp=E,811nm,0.3s						
PB11	**IPOC Station P**	**1.20**	**85**	*e*P	**Pn**	**00 26 24.9**	**-0.4**
PB11				*i* S	**Sn**	**00 26 40.1**	**-0.6**
PB11				IAML		00 26 41.7	
	comp=N,1µm,0.3s						
PB12	**IPOC Station P**	**1.37**	**25**	*e*P	**Pb**	**00 26 29.0**	**-0.3**
PB12				*i* S	**Sb**	**00 26 48.1**	**+1.7**
PB12				IAML		00 26 55.7	
	comp=N,647nm,0.5s						
GO01	**Chusmiza**	**1.65**	**83**	*e*P	**Pn**	**00 26 32.2**	**+0.5**
GO01				*i* S	**Sn**	**00 26 53.5**	**+1.4**
PB08	**IPOC Station P**	**1.69**	**100**	*e*P	**Pn**	**00 26 32.0**	**-0.2**
PB08				*i* S	**Sn**	**00 26 53.7**	**+0.5**
PB08				IAML		00 26 55.8	
	comp=N,393nm,0.3s						
PB02	**IPOC Station P**	**1.74**	**146**	*e*P	**Pn**	**00 26 31.1**	**-1.6**
PB02				*i* S	**Sn**	**00 26 52.2**	**-1.7**
PB01	**IPOC Station P**	**1.79**	**131**	*e*P	**Pn**	**00 26 32.4**	**-0.9**
PB01				*i* S	**Sn**	**00 26 53.8**	**-1.3**
PB01				IAML		00 27 00.8	
	comp=N,653nm,0.8s						
PB09	**IPOC Station P**	**2.49**	**141**	*e*P	**Pn**	**00 26 42.6**	**-0.4**
PB09				*e*S	**Sb**	**00 27 20.9**	**+2.3**
PB09				IAML		00 27 24.8	
	comp=Z,278nm,0.6s						
PB04	**IPOC Station P**	**2.56**	**164**	*i* P	**Pn**	**00 26 41.6**	**-2.5**
PB04				*e*S	**Sn**	**00 27 19.5**	**+5.1**
PB05	**IPOC Station P**	**3.05**	**167**	*i* P	**Pn**	**00 26 47.8**	**-2.9**
PB05				*e*S	**Sn**	**00 27 30.1**	**+3.8**
PB05				IAML		00 27 48.8	
	comp=Z,55nm,0.7s						
PB06	**IPOC Station P**	**3.10**	**156**	*e*S	**Sn**	**00 27 34.1**	**+6.6**
PB06				IAML		00 27 43.7	
	comp=Z,132nm,0.7s						
LVC	**Limon Verde**	**3.32**	**146**	*i* P	**Pn**	**00 26 54.3**	**-0.3**
LVC				*e*S	**Sb**	**00 27 41.5**	**-1.3**
LVC				IAML		00 27 45.7	
	comp=Z,45nm,0.6s						
PB15	**IPOC Station P**	**3.59**	**158**	*e*P	**Pn**	**00 26 56.6**	**-1.6**
PB15				*e*S	**Sn**	**00 27 45.8**	**+6.0**
PB15				IAML		00 27 55.2	
	comp=Z,106nm,1.2s						
PB10	**IPOC Station P**	**3.65**	**175**	*i* P	**Pn**	**00 26 55.2**	**-3.6**
PB10				IAML		00 28 15.4	
	comp=Z,23nm,3.1s						

*RHSSO **20** 00:55:57.5±0.3, 43°.51N×17°.01E, h2^{km}, ML2.3/12*

*VIE **20** 00:55:58.0±0.7, 43°.53N×17°.33E, h14^{km}, mb2.4/5, ml2.1/8, ms3.4/1, Error ellipse: s-maj=5.9km s-min=3.9km az=99.0 70 km E of Split*

ISC 20 00:55:57.0±1.1, **43°.52N**±0°.02×**17°.09E**±0°.02, **h1**^{km}±10^{km}, **n38**, σ**1^{s}.46**/69, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAKA	**Makarska**	**0.23**	**192**	*i* Pg	**Pg**	**00 56 02.2**	**+0.8**
MAKA				Sg	**Sg**	**00 56 06.8**	**+2.4**
HVAR	**Hvar**	**0.58**	**234**	*e*Pg	**Pg**	**00 56 07.7**	**-0.3**
HVAR				Sg	**Sg**	**00 56 16.6**	**+1.2**
STON	**Ston**	**0.78**	**145**	*i* Pg	**Pg**	**00 56 11.3**	**-0.7**
STON				Sg	**Sb**	**00 56 24.0**	**-0.5**
STON	**Ston**	**0.78**	**145**	*e*Pg	**Pg**	**00 56 11.4**	**-0.6**
STON				*e*Sg	**Sb**	**00 56 24.1**	**-0.3**
MGRS	**Mrkonjic Grad**	**0.90**	**360**	*e*Pg	**Pg**	**00 56 14.0**	**-0.3**
MGRS				*e*Sg	**Sb**	**00 56 26.5**	**-1.4**
ZIRJ	**Zirje**	**1.06**	**278**	*e*Pg	**Pg**	**00 56 15.3**	**-2.0**
MORI	**Morici**	**1.06**	**290**	*e*Pg	**Pg**	**00 56 15.7**	**-1.6**
DBRK	**Dubrovnik**	**1.15**	**137**	*i* Pg	**Pb**	**00 56 17.9**	**-1.7**
DBRK				Sg	**Sn**	**00 56 36.5**	**0.0**
TREB	**Trebinje**	**1.22**	**130**	*e*Pg	**Pn**	**00 56 19.3**	**-1.9**
TREB				*e*Sg	**Sn**	**00 56 37.5**	**-0.8**
BRY	**Bratogost**	**1.23**	**120**	*e*Sg	**Sn**	**00 56 38.4**	**-0.2**
BLY	**Banja Luka**	**1.23**	**3**	*e*Pg	**Pn**	**00 56 19.7**	**-1.7**
BLY				*e*Sg	**Sb**	**00 56 36.2**	**-1.3**
UPM	**Unac-Piva**	**1.36**	**103**	*e*Pn	**Pg**	**00 56 23.8**	**+0.7**
UPM				*e*Sn	**Sg**	**00 56 43.0**	**+2.3**
UDBI	**Udbina**	**1.39**	**317**	*e*Pn	**Pn**	**00 56 22.3**	**-1.3**
UDBI				Sn	**Sg**	**00 56 41.8**	**+0.1**
HAPS	**Han Pijesak,Bl**	**1.46**	**66**	*e*Pn	**Pg**	**00 56 25.8**	**+0.8**
HAPS				*e*Sn	**Sg**	**00 56 46.3**	**+2.3**
HCY	**Herceg Novi**	**1.48**	**136**	*e*Sn	**Sg**	**00 56 46.5**	**+1.9**
DUGI	**Dugi Otok**	**1.55**	**289**	*i* Pn	**Pn**	**00 56 24.8**	**-0.8**
DUGI				Sn	**Sg**	**00 56 47.5**	**+0.9**
RUDO	**Rudo**	**1.66**	**86**	*e*Pn	**Pb**	**00 56 27.8**	**-0.6**
RUDO				*e*Sn	**Sg**	**00 56 51.5**	**+1.1**
BBLS	**Lazići**	**1.72**	**77**	*e*Pn	**Pb**	**00 56 29.0**	**-0.3**
BBLS				*e*Sn	**Sg**	**00 56 52.7**	**+0.6**
NVLJ	**Novalja**	**1.91**	**304**	*i* Pn	**Pb**	**00 56 31.5**	**-1.1**
NVLJ				Sg	**Sg**	**00 56 58.0**	**-0.4**
PDG	**Podgorica**	**1.93**	**124**	*e*Pn	**Pb**	**00 56 31.8**	**-1.0**
PDG				*e*Sn	**Sb**	**00 56 57.2**	**-0.1**
DRME	**Dracevica, Mon**	**2.03**	**130**	*e*Pn	**Pb**	**00 56 33.4**	**-1.3**
DRME				*e*Sn	**Sb**	**00 56 59.2**	**-1.3**
MOSL	**Moslavina**	**2.11**	**354**	*e*Pn	**Pn**	**00 56 32.9**	**-0.5**
DIVS	**Divibare**	**2.18**	**74**	*e*Pn	**Pb**	**00 56 35.9**	**-1.4**
DIVS				*e*Sn	**Sb**	**00 57 03.2**	**-1.6**
CRES	**Cresnjev**	**2.59**	**334**	*e*Pn	**Pn**	**00 56 40.0**	**0.0**
CRES				*e*Sn	**Sn**	**00 57 12.3**	**+0.3**
RIY	**Rijeka**	**2.60**	**315**	*e*Pn	**Pn**	**00 56 40.7**	**+0.6**
RIY				*e*Sn	**Sn**	**00 57 12.0**	**-0.3**
CEY	**Cerknica**	**2.92**	**320**	*e*Pn	**Pn**	**00 56 45.0**	**+0.4**
CEY				*e*Sn	**Sn**	**00 57 19.3**	**-1.1**
SOKA	**Soboth**	**3.48**	**336**	*i* Sn	**Sn**	**00 57 36.1**	**+2.0**
	0.5nm,0.1s						
OBKA	**Obir**	**3.49**	**330**	*i* Pn	**Pn**	**00 56 52.7**	**+0.2**
	1.6nm,0.4s						
OBKA				*i* Sn	**Sn**	**00 57 36.0**	**+1.5**
	0.9nm,0.2s						
ARSA	**Arzberg**	**3.90**	**344**	*i* Pn	**Pn**	**00 56 58.1**	**+0.2**
	2.2nm,0.3s						
ARSA				*i* Sn	**Sn**	**00 57 44.0**	**-0.3**
	0.8nm,0.5s						
KBA	**Koelnbreinsper**	**4.43**	**325**	*i* Pn	**Pn**	**00 57 05.7**	**+0.2**
	0.3nm,0.2s						
KBA				*i* Sn	**Sn**	**00 58 00.2**	**+2.4**
	0.7nm,0.3s						
CONA	**Conrad Observa**	**4.50**	**349**	*i* Pn	**Pn**	**00 57 06.2**	**0.0**
	0.3nm,0.2s						
CONA				*i* Sn	**Sn**	**00 57 58.7**	**-0.5**
	0.8nm,0.3s						
ABTA	**Abfaltersbach**	**4.57**	**317**	*i* Pn	**Pn**	**00 57 08.4**	**+1.1**
	0.4nm,0.3s						
ABTA				*i* Sn	**Sn**	**00 58 02.8**	**+1.7**
	0.6nm,0.2s						
MOA	**Molln**	**4.76**	**336**	*i* Pn	**Pn**	**00 57 11.0**	**+1.1**
	0.6nm,0.2s						
MOA				*i* Sn	**Sn**	**00 58 06.1**	**+0.3**
	0.9nm,0.3s						
WTTA	**Wattenberg**	**5.37**	**316**	*i* Pn	**Pn**	**00 57 19.5**	**+1.2**
	1.2nm,0.2s						
WTTA				*i* Sn	**Sn**	**00 58 23.7**	**+3.0**
	1.6nm,0.5s						
WATA	**Walderalm**	**5.44**	**316**	*i* Pn	**Pn**	**00 57 21.1**	**+1.8**
	1.5nm,0.3s						
WATA				*i* Sn	**Sn**	**00 58 25.7**	**+3.1**
	0.8nm,0.2s						
SQTA	**Sankt Quirin**	**5.56**	**314**	*i* Pn	**Pn**	**00 57 22.6**	**+1.8**
	0.3nm,0.2s						
SQTA				*i* Sn	**Sn**	**00 58 28.8**	**+3.4**
	1.1nm,0.4s						
MOTA	**Moosalm**	**5.69**	**314**	*i* Pn	**Pn**	**00 57 25.6**	**+2.8**
	0.5nm,0.2s						
MOTA				*i* Sn	**Sn**	**00 58 30.8**	**+2.1**
	0.8nm,0.4s						
FETA	**Feichten**	**5.69**	**310**	*i* Sn	**Sn**	**00 58 31.6**	**+2.8**
	0.4nm,0.3s						

*IGIL **20** 00:58:55.7, 36°.35N×8°.00W, h14^{km}, ML1.3*

*INMG **20** 00:58:55.7±1.6, 36°.25N×8°.04W, h28^{km}±17^{km}, ML1.6, Error ellipse: s-maj=9.6km s-min=5.1km az=35.0*

*MDD **20** 00:58:55.9±1.3, 36°.29N×8°.00W, h46^{km}±41^{km}, mb3.8/1, Error ellipse: s-maj=14.5km s-min=6.7km az=7.0, PRXIMO*

ISC 20 00:58:54.5±2.0, **36°.33N**±0°.08×**7°.94W**±0°.04, **h29**^{km}±13^{km}, **n37**, σ**1^{s}.07**/65, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBDV	**Barranco-do-Ve**	**0.91**	**0**	P	**Pb**	**00 59 12.3**	**+0.5**
PBDV				S	**Sn**	**00 59 24.9**	**+1.3**
	5.8nm,0.3s						
PBDV	**Barranco-do-Ve**	**0.91**	**0**	*e*P	**Pb**	**00 59 12.3**	**+0.5**
PBDV				*e*S	**Sn**	**00 59 24.9**	**+1.3**
PBDV				A	A	00 59 27.8	
	5.8nm,0.3s						
PFVI	**Vila Bisbo**	**1.08**	**319**	P	**Pn**	**00 59 13.5**	**-0.1**
	1.9nm,0.1s,SNR=6.7						
PFVI				S	**Sn**	**00 59 26.5**	**-1.0**
	8.7nm,0.1s,SNR=10						
PFVI	**Vila Bisbo**	**1.08**	**319**	*e*P	**Pn**	**00 59 13.5**	**-0.1**
PFVI				A	A	00 59 34.5	
	5.7nm,0.4s						
PVAQ	**Vaqueiros**	**1.09**	**9**	P	**Pn**	**00 59 14.6**	**+0.9**
PVAQ				S	**Sb**	**00 59 28.3**	**-0.2**
	5.9nm,0.1s						
PVAQ	**Vaqueiros**	**1.09**	**9**	*e*P	**Pn**	**00 59 14.6**	**+0.9**
PVAQ				*e*S	**Sb**	**00 59 28.3**	**-0.2**
PVAQ				A	A	00 59 33.3	
	5.9nm,0.1s						
MORF	**Marmelete**	**1.13**	**330**	*e*P	**Pn**	**00 59 14.7**	**+0.4**
MORF	**Marmelete**	**1.13**	**330**	P	**Pn**	**00 59 14.8**	**+0.4**
MORF				S	**Sb**	**00 59 29.6**	**-0.3**
	12nm,0.1s						
MORF	**Marmelete**	**1.13**	**330**	*e*P	**Pn**	**00 59 14.8**	**+0.4**
MORF				*e*S	**Sb**	**00 59 29.6**	**-0.3**
MORF				A	A	00 59 33.0	
	12nm,0.1s						
EGRO	**El Granado**	**1.26**	**17**	P	**Pn**	**00 59 17.0**	**+0.9**
	0.6nm,0.0s,SNR=7.9						
EGRO				S	**Sn**	**00 59 32.0**	**0.0**
	5.7nm,0.1s,SNR=7.9						
PCVE	**Castro Verde**	**1.30**	**356**	P	**Pn**	**00 59 17.8**	**+1.1**
PCVE				S	**Sb**	**00 59 33.7**	**-1.0**
	3.7nm,0.3s						
PCVE	**Castro Verde**	**1.30**	**356**	*e*P	**Pn**	**00 59 17.8**	**+1.1**
PCVE				*e*S	**Sb**	**00 59 33.7**	**-1.0**
PCVE				A	A	00 59 41.8	
	3.7nm,0.3s						
PTEO	**Sao Teotonio**	**1.37**	**333**	P	**Pn**	**00 59 18.5**	**+0.9**
PTEO				S	**Sb**	**00 59 35.4**	**-1.2**
	2.3nm,0.5s						
PTEO	**Sao Teotonio**	**1.37**	**333**	*e*P	**Pn**	**00 59 18.5**	**+0.9**
PTEO				*e*S	**Sb**	**00 59 35.4**	**-1.2**
PTEO				A	A	00 59 44.6	
	4.6nm,0.5s						
MESJ	**Messejana**	**1.53**	**352**	*e*P	**Pn**	**00 59 20.6**	**+0.9**
MESJ				*e*S	**Sn**	**00 59 38.6**	**-0.1**
MESJ				AML	AML	00 59 40.3	
	comp=N,3.0nm,0.1s						
MESJ	**Messejana**	**1.53**	**352**	P	**Pn**	**00 59 20.6**	**+0.9**
MESJ				S	**Sn**	**00 59 38.6**	**-0.1**
	comp=N,3.0nm,0.1s						
MESJ	**Messejana**	**1.53**	**352**	*e*P	**Pn**	**00 59 20.8**	**+1.0**
MESJ				*e*S	**Sb**	**00 59 39.1**	**-2.0**
MESJ				A	A	00 59 49.0	
	comp=N,4.3nm,0.2s						
EMIN	**Mina Concepcio**	**1.76**	**35**	P	**Pn**	**00 59 24.8**	**+1.9**
	comp=N,0.4nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**00 59 43.7**	**-0.7**
	comp=N,1.0nm,0.1s,SNR=7.9						
ESPR	**Espera**	**1.76**	**72**	S	**Sn**	**00 59 44.9**	**+0.5**
	comp=N,3.7nm,0.2s,SNR=7.9						
PNCL	**Nicolau / Gran**	**1.84**	**345**	Pn	**Pn**	**00 59 24.6**	**+0.5**
PNCL				Sn	**Sn**	**00 59 45.8**	**-0.6**
	comp=N,2.7nm,0.4s						
PNCL	**Nicolau / Gran**	**1.84**	**345**	*e*Pn	**Pn**	**00 59 24.6**	**+0.5**
PNCL				*e*Sn	**Sn**	**00 59 45.8**	**-0.6**
PNCL				A	A	00 59 56.2	
	comp=N,2.7nm,0.4s						
EBAD	**Badajoz**	**2.53**	**17**	P	**Pn**	**00 59 33.6**	**0.0**
	comp=N,0.2nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**01 00 03.3**	**-0.2**
	comp=N,1.6nm,0.1s,SNR=7.9						
PESTR	**Estremoz**	**2.55**	**6**	*e*Sn	**Sn**	**01 00 04.8**	**+0.9**
ECAB	**El Cabril**	**2.66**	**48**	P	**Pn**	**00 59 37.1**	**+1.6**
	comp=N,0.4nm,0.2s,SNR=7.9						
ECAB				S	**Sn**	**01 00 05.2**	**-1.5**
	comp=N,0.8nm,0.3s,SNR=5.8						
PMTG	**Montargil**	**2.75**	**355**	Pn	**Pn**	**00 59 37.2**	**+0.7**
PMTG				Sn	**Sn**	**01 00 08.7**	**0.0**
	comp=N,2.5nm,0.1s						
PMTG	**Montargil**	**2.75**	**355**	*e*Pn	**Pn**	**00 59 37.2**	**+0.7**
PMTG				*e*Sn	**Sn**	**01 00 08.7**	**0.0**
PMTG				A	A	01 00 09.4	
	comp=N,2.5nm,0.1s						
PMAFR	**Mafra**	**2.83**	**338**	S	**Sn**	**01 00 11.7**	**+0.9**
	comp=N,3.2nm,0.2s,SNR=7.9						
PMRV	**Marv??o**	**3.12**	**8**	Pn	**Pn**	**00 59 42.6**	**+0.8**
PMRV				Sn	**Sn**	**01 00 18.4**	**+0.3**
	comp=N,1.3nm,0.5s						
PMRV	**Marv??o**	**3.12**	**8**	*e*Pn	**Pn**	**00 59 42.6**	**+0.8**
PMRV				*e*Sn	**Sn**	**01 00 18.4**	**+0.3**
PMRV				A	A	01 00 35.2	
	comp=N,1.3nm,0.5s						
EADA	**Adamuz**	**3.25**	**55**	P	**Pn**	**00 59 44.6**	**+1.1**
	comp=N,0.4nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**01 00 21.2**	**0.0**
	comp=N,1.8nm,0.2s,SNR=7.9						
ELGU	**Los Guajares,**	**3.51**	**80**	S	**Sn**	**01 00 27.6**	**-0.1**
	comp=N,1.2nm,0.3s,SNR=7.9						
EPLA	**Plasencia**	**4.01**	**21**	S	**Sn**	**01 00 38.9**	**-1.0**
	comp=N,0.7nm,0.2s,SNR=7.9						
EQES	**Quesada**	**4.16**	**68**	P	**Pn**	**00 59 57.7**	**+1.6**
	comp=N,0.4nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**01 00 43.3**	**-0.5**
	comp=N,0.5nm,0.3s,SNR=7.9						
PAB	**San Pablo**	**4.29**	**40**	S	**Sn**	**01 00 43.6**	**-3.2**
	comp=N,0.4nm,0.3s,SNR=7.9						
SESP	**Santiago Espad**	**4.66**	**66**	P	**Pn**	**01 00 04.1**	**+1.1**
	comp=N,0.3nm,0.2s,SNR=7.9						
SESP				S	**Sn**	**01 00 55.2**	**-0.9**
	comp=N,0.4nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**5.58**	**64**	P	**Pn**	**01 00 15.7**	**+0.1**
	comp=N,0.2nm,0.2s,SNR=7.9						
ETOB				S	**Sn**	**01 01 15.9**	**-2.8**
	comp=N,0.1nm,0.2s,SNR=7.9						
ETOR	**Torete**	**6.43**	**44**	S	**Sn**	**01 01 37.0**	**-2.7**
	comp=N,0.4nm,0.2s,SNR=7.9						

*IDC **20** 01:08:54.0±2.1, 7°.51S×127°.95E, h0^{km}, mb3.6/2, mb1 3.8/4, mb1mx3.5/28, mbtmp3.6/4, ML3.9/2, MS3.4/1, Ms1 3.4/1, ms1mx2.5/28, Error ellipse: s-maj=253.0km s-min=29.5km az=65.0*

*DJA **20** 01:09:04.6±0.4, 7°S±3°×13°0E±°, h153^{km}±12^{km}, M4.3/6, mB4.9/2, mb4.1/5, MLv4.4/6, Mw(mB)4.2/2*

ISC 20 01:09:07.2±0.9, **7°.41S**±0°.07×**129°.71E**±0°.08, **h150**^{km}, **n10**, σ**2^{s}.59**/11, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.68**	**110**	P	**Pn**	**01 09 40.6**	**+1.9**
FAKI	**Fak Fak**	**5.12**	**30**	P	Pn	01 10 17.1	-5.2
FAKI				S	Sn	01 11 08.3	-13
SOEI	**Soe**	**5.87**	**246**	P	**Pn**	**01 10 33.6**	**+1.3**
	0.3nm41nm,1.0s						
SOEI				S	**Sn**	**01 11 39.2**	**+0.5**
	0.3nm41nm,1.0s						
SWI	**Sorong**	**6.68**	**13**	P	**Pn**	**01 10 41.5**	**-1.5**
WRA	**Warramunga Arr**	**13.25**	**161**	Pn	**Pn**	**01 12 09.8**	**+0.2**
	0.7nm,0.3s,baz=329,slow=13,SNR=9.6						
WRA				Sn	**Sn**	**01 14 31.3**	**-5.0**
	1.6nm,0.3s,baz=335,slow=22,SNR=10						
ASAR	**Alice Springs**	**16.66**	**166**	P	**Pn**	**01 12 55.5**	**+3.4**
	0.3nm,0.3s,baz=340,slow=9.3,SNR=9.5						
ASAR				S	**S**	**01 15 55.9**	**-1.5**
	0.5nm,0.3s,baz=350,slow=26,SNR=7.0						
TGY	**Tagaytay City**	**23.07**	**338**	LR	LR	01 25 58.0	
	comp=Z,98nm,18.2s,baz=50,slow=45						
MKAR	**Makanchi Array**	**68.41**	**327**	P	**P**	**01 19 52.7**	**0.0**
	0.6nm,0.5s,baz=121,slow=8.0,SNR=14						
KURBB	**Kurchatov Arra**	**72.70**	**329**	P	**P**	**01 20 18.2**	**-0.4**
	0.1nm,0.4s,baz=126,slow=5.1,SNR=3.5						
TORD	**Torodi Ar. Bea**	**128.60**	**281**	PKP	**PKiKP**	**01 28 00.8**	**+2.6**
	0.2nm,0.4s,baz=87,slow=2.1,SNR=4.6						

*JMA **20** 01:15:12.5±0.2, 35°.69N×140°.14E, h65^{km}±2^{km}, M2.7*

*IDC **20** 01:15:14.9±4.9, 35°.41N×139°.97E, h84^{km}±31^{km}, mb3.1/2, mb1 3.4/2, mb1mx2.9/32, mbtmp3.4/2, Error ellipse: s-maj=78.6km s-min=29.9km az=62.0*

ISC 20 01:15:12.9±1.1, **35°.59N**±0°.06×**140°.14E**±0°.06, **h71**^{km}±8^{km}, **n22**, σ**0^{s}.86**/21, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCN	**Nagara**	**0.18**	**163**	P	**Pn**	**01 15 23.6**	**0.0**
JCN				S	**Sn**	**01 15 32.3**	**+1.0**
JSMT	**Sammumatsuo**	**0.26**	**79**	P	**Pn**	**01 15 23.5**	**-0.4**
BSO3	**Boso 3**	**0.85**	**159**	P	**Pn**	**01 15 29.4**	**+0.1**
JOD2	**Odawara 2**	**0.92**	**249**	P	**Pn**	**01 15 30.1**	**-0.3**
JOD2				S	**Sn**	**01 15 42.7**	**-0.8**
JAG	**Ashikaga**	**1.00**	**327**	P	**Pn**	**01 15 30.2**	**-1.2**
JIM2	**Oshima 3**	**1.05**	**214**	S	**Sn**	**01 15 45.9**	**-0.4**
JRY	**Ryogami san**	**1.09**	**293**	P	**Pn**	**01 15 32.4**	**-0.2**
BSO1	**Boso 1**	**1.16**	**143**	P	**Pn**	**01 15 32.6**	**-0.4**
JYN	**Shimob**	**1.30**	**266**	P	**Pn**	**01 15 35.2**	**-0.1**
JIZS	**Izushimoda**	**1.35**	**230**	P	**Pn**	**01 15 35.8**	**-0.1**
JIZS				S	**Sn**	**01 15 52.8**	**-0.4**
JKT	**Katashina**	**1.37**	**329**	P	**Pn**	**01 15 35.5**	**-0.8**
MJAR	**Matsushiro Arr**	**1.83**	**302**	P	**Pn**	**01 15 42.6**	**+0.4**
	2.0nm,0.3s,baz=132,slow=13,SNR=34						
MJAR				S	**Sn**	**01 16 07.0**	**+2.5**
	0.7nm,0.3s,baz=67,slow=32,SNR=2.3						
MAT	**Matsushiro**	**1.83**	**302**	P	**Pn**	**01 15 42.5**	**+0.2**
MAT				*e*S	**Sn**	**01 16 03.5**	**-1.1**
H11N2	**WAKE ISLAND Hy**	**28.36**	**117**	T	T	01 50 35.7	
	baz=305						
H11N1	**WAKE ISLAND Hy**	**28.37**	**117**	T	T	01 50 43.9	
	baz=305						
H11N3	**WAKE ISLAND Hy**	**28.38**	**117**	T	T	01 50 45.7	
	baz=305						
H11S1	**WAKE ISLAND Hy**	**29.01**	**119**	T	T	01 51 03.1	
	baz=305						
H11S3	**WAKE ISLAND Hy**	**29.01**	**119**	T	T	01 51 01.1	
	baz=305						
H11S2	**WAKE ISLAND Hy**	**29.02**	**119**	T	T	01 51 06.3	
	baz=305						
MKAR	**Makanchi Array**	**44.02**	**303**	P	**P**	**01 23 13.4**	**0.0**
	0.2nm,0.6s,baz=90,slow=10,SNR=2.1						
KURBB	**Kurchatov Arra**	**46.09**	**309**	P	**P**	**01 23 30.2**	**+0.7**
	baz=84,slow=7.8						
WRA	**Warramunga Arr**	**55.50**	**187**	P	**P**	**01 24 40.4**	**-0.2**
	0.3nm,0.3s,baz=0.5,slow=7.5,SNR=1.0						

*IDC **20** 01:30:40.7±0.7, 9°.51S×107°.03E, h0^{km}, mb4.2/14, mb1 4.3/16, mb1mx4.1/36, mbtmp4.2/16, ML3.9/2, MS3.3/6, Ms1 3.3/6, ms1mx3.0/31, Error ellipse: s-maj=25.9km s-min=14.9km az=53.0*

*DJA **20** 01:30:47.2±0.7, 9°S±3°×10°7E±°, h35^{km}±8^{km}, M4.7/12, mB5.3/4, mb4.7/8, MLv4.7/12, Mw(mB)4.7/4*

ISC 20 01:30:44.8±2.8, **9°.40S**±0°.07×**107°.17E**±0°.07, **h24**^{km}±18^{km}, **n53**, σ**1^{s}.04**/55, **mb4.2**/14, **MS3.3**/5, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CISI	**Cisompet, Garu**	**1.94**	**19**	P	**Pn**	**01 31 15.8**	**-0.6**
CISI				S	**Sn**	**01 31 39.3**	**-0.8**
CNJI	**Cibinong**	**2.08**	**359**	P	**Pn**	**01 31 17.8**	**-0.5**
CNJI				S	**Sn**	**01 31 43.1**	**-0.4**
SKJI	**Sukabumi**	**2.46**	**346**	P	**Pn**	**01 31 23.9**	**+0.4**
SKJI				S	**Sn**	**01 31 53.6**	**+0.8**
LEM	**Lembang**	**2.60**	**10**	Pn	**Pn**	**01 31 26.7**	**+1.2**
	110nm,0.3s,baz=60,slow=5.4,SNR=34						
LEM				Sn	**Sb**	**01 32 00.3**	**-2.1**
	163nm,0.3s,baz=348,slow=23,SNR=18						
LEM	**Lembang**	**2.60**	**10**	P	**Pn**	**01 31 26.5**	**+1.0**
DBJI	**Dramaga**	**2.86**	**352**	P	**Pn**	**01 31 29.6**	**+0.5**
DBJI				S	**Sn**	**01 32 03.6**	**+0.8**

TNG	Tangerang	3.25	351	S	Sn	01 32 14.1	+1.7
UGM	Wanagama	3.63	66	P	Pn	01 31 39.1	-0.5
SMRI	Semarang	3.99	54	P	Pn	01 31 46.0	+1.4
WOJI	Wonogiri, Jawa	4.02	68	P	Pn	01 31 46.1	+1.1
PCJI	Pacitan	4.13	73	P	Pn	01 31 47.0	+0.5
KASI	Kota Agung	4.68	325	P	Pn	01 31 55.2	+1.1
LWLI	Liwa	5.34	324	P	Pn	01 32 05.4	+2.1
	1.3nm62nm,0.4s						
MDSI	Maura Dua	5.72	328	P	Pn	01 32 07.8	-0.5
	0.1nm18nm,0.8s						
GMJI	Gumukmas	6.30	80	P	Pn	01 32 17.6	+1.3
	0.3nm65nm,0.6s						
MNAI	Manna	6.53	320	P	Pn	01 32 20.7	+1.2
	0.8nm4μm124nm,1.1s						
JAGI	Jajag, Banyuwa	6.96	83	P	Pn	01 32 26.7	+1.4
	0.6nm2μm84nm,0.6s						
KAPI	Kappang	13.22	72	LR	LR	01 39 48.5	
	comp=Z,93nm,19.1s,baz=254,slow=41						
BBSI	Bau Bau	15.75	77	P	Pn	01 34 25.3	0.0
	334nm14nm,0.6s						
MPSI	Mapaga	15.94	53	P	Pn	01 34 28.0	+0.2
FITZ	Fitzroy Crossi	19.89	118	P	P	01 35 14.9	+0.1
	0.1nm,0.3s,baz=291,slow=7.7,SNR=5.5						
WRA	Warramunga Arr	28.24	115	P	P	01 36 35.5	-0.8
	0.6nm,0.7s,baz=287,slow=11,SNR=4.6						
CMAR	Chiang Mai Arr	28.85	344	P	P	01 36 41.7	0.0
	3.1nm,0.6s,baz=178,slow=9.3,SNR=12						
CMAR				LR	LR	01 49 41.8	
	comp=Z,40nm,18.6s,baz=165,slow=40						
ASAR	Alice Springs	29.21	122	P	P	01 36 45.7	+0.8
	0.9nm,0.8s,baz=298,slow=8.7,SNR=5.4						
ASAR				LR	LR	01 48 47.3	
	comp=Z,65nm,19.1s,baz=308,slow=37						
H08S2	Diego Garcia H	34.33	270	T	T	02 14 27.6	
	baz=93						
H08S3	Diego Garcia H	34.34	270	T	T	02 14 29.4	
	baz=93						
H08S1	Diego Carcia H	34.35	270	T	T	02 14 28.7	
	baz=93						
STKA	Stephens Creek	38.94	130	P	P	01 38 09.1	0.0
	2.7nm,0.7s,baz=294,slow=9.8,SNR=7.0						
STKA				LR	LR	01 54 39.0	
	comp=Z,47nm,20.7s,baz=223,slow=37						
ODAN	Odare	40.84	332	*e*P	P	01 38 26.0	+0.8
	10nm,0.5s						
TAPN	Taplejung	41.12	333	*e*P	P	01 38 28.5	+1.0
RAMN	Ramite	41.29	332	*e*P	P	01 38 30.0	+1.2
JIRN	Jiri	42.08	332	*e*P	P	01 38 36.2	+0.7
PKI	Pulchoki	42.38	331	*e*P	P	01 38 38.1	+0.3
GUN	Gumba	42.44	332	*e*P	P	01 38 39.0	+0.6
	23nm,0.7s						
DMN	Daman	42.55	330	*e*P	P	01 38 39.9	+0.7
KKN	Kakani	42.62	331	*e*P	P	01 38 40.4	+0.7
XAN	Xi'an	43.23	2	P	P	01 38 44.4	0.0
XAN				pP	sP	01 38 52.9	+0.1
DANN	Dangsing	43.83	330	*e*P	P	01 38 49.9	+0.3
	34nm,0.7s						
KSH	Kashi	56.63	331	P	P	01 40 28.8	+2.6
KSH				pP	pwP	01 40 41.8	+4.2
KSH				PcP	PcP	01 41 24.8	+2.4
KSH				S	S	01 48 16.1	-1.1
KSH				sS	sS	01 48 38.1	+11
SONM	Songino Array	56.99	359	P	P	01 40 28.8	+0.2
	1.5nm,0.7s,baz=175,slow=9.1,SNR=9.7						
USRK	Ussuriysk Ar.	57.90	21	P	P	01 40 35.4	+0.5
	0.8nm,0.7s,baz=216,slow=7.1,SNR=2.5						
MKAR	Makanchi Array	60.19	341	P	P	01 40 50.8	0.0
	3.2nm,0.6s,baz=142,slow=8.1,SNR=45						
MKAR				LR	LR	02 09 52.4	
	comp=Z,23nm,18.1s,baz=232,slow=39						
GEYT	Alibeck	65.67	319	P	P	01 41 27.3	-0.2
	1.3nm,0.5s,baz=224,slow=8.3,SNR=5.3						
ZALV	Zalesovo Beam	65.89	346	P	P	01 41 27.9	-0.6
	0.7nm,0.4s,baz=171,slow=7.3,SNR=2.7						
PETK	Petropavlovsk-	75.60	29	P	P	01 42 27.0	-0.6
	3.0nm,0.7s,baz=186,slow=4.2,SNR=4.4						
MATP	Matopo	76.23	251	P	P	01 42 29.8	-2.4
	1.8nm,0.8s,baz=104,slow=8.3,SNR=2.2						
KBZ	Khabaz	78.54	318	P	P	01 42 44.7	+0.4
	2.6nm,1.0s,baz=249,slow=8.6,SNR=5.9						
BRTR	Keskin Array B	83.55	312	P	P	01 43 11.2	-0.1
	1.5nm,0.9s,baz=134,slow=7.9,SNR=7.6						
BRTR				LR	LR	02 21 41.8	
	comp=Z,16nm,18.5s,baz=161,slow=37						
KLMR	Klimovskoe	87.59	333	*e*	P	01 43 29.9	-0.8
KLMR				AMP		01 43 38.8	
	comp=Z,42nm,2.4s						
ARCES	ARCESS Array B	95.84	340	P	P	01 44 08.4	-0.5
	comp=Z,2.7nm,1.0s,baz=93,slow=5.8,SNR=1.4						
YKA	Yellowknife Ar	119.04	21	PKP	PKPdf	01 49 30.7	-0.6
	comp=Z,0.2nm,0.5s,baz=338,slow=0.6,SNR=4.6						
TXAR	Lajitas Array	144.97	51	PKPbc	PKPbc	01 50 20.5	+0.3
	comp=Z,0.5nm,0.6s,baz=232,slow=1.0,SNR=6.3						
BDFB	Brasilia	145.03	225	PKP	PKPdf	01 50 21.4	+0.1
	comp=Z,3.0nm,0.6s,baz=108,slow=6.8,SNR=5.5						

IDC 20 01:49:41.7±6.0**, 19°.56S×176°.54W, h0^{km}, mb4.0**/2**, mb1 4.3**/2**, mb1mx3.7**/29**, mbtmp4.0**/2**, Error ellipse: s-maj=294.8km s-min=61.4km az=149.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	46.08	256	P	P	01 58 07.7	-0.2
	1.5nm,0.4s,baz=91,slow=7.7,SNR=26						
WRA	Warramunga Arr	46.10	261	P	P	01 58 08.0	0.0
	0.7nm,0.3s,baz=98,slow=7.8,SNR=20						
AKASG	Malin Array Be	142.83	333	PKP	PKPdf	02 09 14.5	-2.6
	0.5nm,0.5s,baz=36,slow=3.8,SNR=2.5						
BRTR	Keskin Array B	147.20	314	PKPbc	PKPbc	02 09 27.1	-0.3
	0.5nm,0.8s,baz=74,slow=7.7,SNR=1.8						

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*IDC **20** 02:06:05.6±0.7, 9°.52S×106°.96E, h0^{km}, mb4.1/13, mb1 4.3/14, mb1mx4.1/46, mbtmp4.2/14, ML4.5/1, MS3.3/9, Ms1 3.4/9, ms1mx3.0/45, Error ellipse: s-maj=28.4km s-min=14.5km az=58.0*

*DJA **20** 02:06:08.7±0.7, 9°S±6°×10°7E±°, h10^{km}, M4.8/13, mB5.2/2, mb4.8/8, MLv4.8/13, Mw(mB)4.5/2*

ISC 20 02:06:09.6±0.7**, 9°.48S**±0°.08×**107°.09E**±0°.07**, h22^{km}, n46, σ1s.11**/47**, mb4.1**/12**, MS3.5**/6**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	2.04	21	P	Pn	02 06 40.3	-2.4
CNJI	Cibinong	2.15	1	P	Pn	02 06 42.5	-1.8
SKJI	Sukabumi	2.51	348	P	Pn	02 06 48.9	-0.3
SKJI				S	Sn	02 07 18.9	-0.3
LEM	Lembang	2.69	11	Pn	Pn	02 06 51.4	-0.3
	77nm,0.3s,baz=61,slow=5.6,SNR=44						
LEM				Sn	Sn	02 07 25.1	+1.5
	65nm,0.3s,baz=336,slow=22,SNR=14						
LEM				LR	LR	02 08 24.6	
	comp=Z,472nm,19.2s,baz=86,slow=50						
LEM	Lembang	2.69	11	P	Pn	02 06 51.2	-0.5
DBJI	Dramaga	2.92	353	P	Pn	02 06 55.2	+0.3
UGM	Wanagama	3.74	66	P	Pn	02 07 04.5	-1.5
SMRI	Semarang	4.10	54	P	Pn	02 07 10.8	-0.3
WOJI	Wonogiri, Jawa	4.13	67	P	Pn	02 07 12.5	+1.1
PCJI	Pacitan	4.24	73	P	Pn	02 07 13.5	+0.6
LWLI	Liwa	5.35	326	P	Pn	02 07 34.2	+5.8
MDSI	Maura Dua	5.74	330	P	Pn	02 07 32.5	-1.1
	0.1nm16nm,0.7s						
GRJI	Gresik	5.91	65	P	Pn	02 07 35.0	-1.0
	0.9nm1μm67nm,0.5s						
GMJI	Gumukmas	6.39	80	P	Pn	02 07 42.5	-0.1
	1.4nm72nm,0.9s						
MNAI	Manna	6.53	321	P	Pn	02 07 43.5	-1.0
	0.8nm133nm,1.4s						
JAGI	Jajag, Banyuwa	7.05	82	P	Pn	02 07 51.6	0.0
	0.7nm2μm177nm,0.8s						
KAPI	Kappang	13.32	71	LR	LR	02 15 42.6	
	comp=Z,86nm,18.3s,baz=250,slow=43						
MPSI	Mapaga	16.05	53	P	Pn	02 09 53.3	-0.9
MPSI	Mapaga	16.05	53	P	Pn	02 09 53.7	-0.5
	18nm,1.0s						
FITZ	Fitzroy Crossi	19.94	117	P	P	02 10 39.6	-0.6
	2.5nm,1.0s,baz=264,slow=5.4,SNR=4.6						
FITZ				LR	LR	02 17 39.9	
	comp=Z,58nm,19.2s,baz=304,slow=35						
WRA	Warramunga Arr	28.29	115	P	P	02 12 03.7	+1.9
	0.5nm,0.3s,baz=286,slow=11,SNR=5.0						
CMAR	Chiang Mai Arr	28.90	344	P	P	02 12 05.4	-1.7
	1.2nm,0.4s,baz=173,slow=8.2,SNR=5.3						
CMAR				LR	LR	02 25 54.4	
	comp=Z,57nm,18.2s,baz=190,slow=41						
ASAR	Alice Springs	29.24	122	P	P	02 12 09.6	-0.7
	0.6nm,0.5s,baz=305,slow=8.7,SNR=5.2						
ASAR				LR	LR	02 25 17.9	
	comp=Z,48nm,18.9s,baz=320,slow=39						
STKA	Stephens Creek	38.96	130	P	P	02 13 33.4	-0.8
	2.9nm,0.8s,baz=310,slow=12,SNR=6.5						
STKA				LR	LR	02 30 01.8	
	comp=Z,69nm,19.2s,baz=208,slow=37						
ODAN	Odare	40.87	333	*e*P	P	02 13 50.9	+0.5
RAMN	Ramite	41.31	332	*e*P	P	02 13 54.8	+0.7
JIRN	Jiri	42.10	332	*e*P	P	02 14 00.9	+0.2
	15nm,0.6s						
GUN	Gumba	42.46	332	*e*P	P	02 14 03.7	+0.1
	12nm,0.6s						
DMN	Daman	42.58	331	*e*P	P	02 14 04.6	+0.2
	16nm,0.8s						
KKN	Kakani	42.64	331	*e*P	P	02 14 05.2	+0.3
XAN	Xi'an	43.31	2	P	P	02 14 09.3	-0.7
XAN				pP	pwP	02 14 23.0	+1.6
DANN	Dangsing	43.85	330	*e*P	P	02 14 14.7	-0.1
	28nm,0.8s						
GTA	Gaotai	49.10	353	*e*P	P	02 14 57.4	+1.7
GTA				pP	pP	02 15 01.3	+0.4
GTA				sP	sP	02 15 04.8	+1.9
KSH	Kashi	56.66	331	P	P	02 15 53.9	+2.5
KSH				pP	sP	02 15 58.8	-0.1
KSH				PcP	PcP	02 16 49.6	+2.0
KSH				PcS	PcS	02 20 49.3	+0.9
KSH				S	S	02 23 45.1	+2.4
SONM	Songino Array	57.06	359	P	P	02 15 53.9	-0.3
	2.6nm,0.7s,baz=174,slow=8.0,SNR=24						
MKAR	Makanchi Array	60.23	341	P	P	02 16 15.8	-0.3
	2.2nm,0.7s,baz=144,slow=8.0,SNR=29						
MKAR				LR	LR	02 44 16.0	
	comp=Z,36nm,19.7s,baz=128,slow=38						
GEYT	Alibeck	65.67	319	P	P	02 16 51.7	-0.8
	2.2nm,0.8s,baz=152,slow=6.6,SNR=5.4						
ZALV	Zalesovo Beam	65.94	346	P	P	02 16 52.5	-1.4
	0.7nm,0.4s,baz=130,slow=5.0,SNR=1.9						
PETK	Petropavlovsk-	75.71	29	P	P	02 17 54.5	+1.2
	5.8nm,0.9s,baz=236,slow=11,SNR=3.5						
KBZ	Khabaz	78.54	318	P	P	02 18 09.3	0.0
	3.6nm,0.8s,baz=227,slow=7.2,SNR=7.3						
QSPA	South Pole Qui	80.53	180	P	P	02 18 19.3	-0.7
	0.8nm,0.7s,baz=296,slow=1.4,SNR=6.9						
BRTR	Keskin Array B	83.53	312	P	P	02 18 35.9	-0.5
	1.1nm,0.8s,baz=130,slow=5.3,SNR=6.7						
MLR	Muntele Rosu	90.54	316	LR	LR	03 06 42.7	
	comp=Z,24nm,18.2s,baz=306,slow=40						
VAE	Valguarnera	97.80	307	LR	LR	03 03 17.4	
	comp=Z,13nm,21.2s,baz=356,slow=35						
BDFB	Brasilia	144.91	225	PKP	PKPdf	02 25 45.9	-0.4
	3.4nm,0.7s,baz=168,slow=4.7,SNR=3.2						
TXAR	Lajitas Array	145.09	51	PKPbc	PKPbc	02 25 45.0	-0.6
	0.4nm,0.9s,baz=300,slow=1.0,SNR=5.0						

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*NEIC **20** 02:10:05.0±1.4, 7°.77S±0°.07×117°.25E±0°.06, h306^{km}±5^{km}, mb4.2/19, Error ellipse: s-maj=10.7km s-min=8.3km az=142.0*

*IDC **20** 02:10:06.5±1.8, 7°.65S×117°.24E, h307^{km}±19^{km}, mb3.8/16, mb1 3.9/19, mb1mx3.7/46, mbtmp4.5/19, Error ellipse: s-maj=15.3km s-min=9.6km az=61.0*

*DJA **20** 02:10:06.2±0.2, 8°S±4°×11°7E±°, h291^{km}±3^{km}, M4.7/18, mB5.3/6, mb4.5/13, MLv4.7/18, Mw(mB)4.7/6*

ISC 20 02:10:04.9±0.4**, 7°.78S**±0°.05×**117°.26E**±0°.04**, h300^{km}, n95, σ1s.29**/99**, mb4.2**/23**, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	1.16	154	P	Pn	02 10 46.3	+0.2
PLAI				S	S	02 11 17.4	-1.5
SRBI	Singaraja	2.05	261	P	Pn	02 10 53.3	+1.2
DNP	Denpasar	2.21	246	P	Pn	02 10 55.1	+1.7
IGBI	Denpasar	2.33	244	P	Pn	02 10 55.4	+1.0
IGBI				S	S	02 11 33.2	-0.7
WBSI	Waikabubak, Su	2.81	131	P	Pn	02 10 57.8	-1.1
JAGI	Jajag, Banyuwa	3.15	257	P	Pn	02 11 03.1	+0.9
JAGI	Jajag, Banyuwa	3.15	257		Pn	02 11 02.7	+0.5
JAGI				S	S	02 11 46.9	-1.0
KMMI	Kalianget	3.34	282	P	Pn	02 11 07.2	+3.1
WSI	Waingapu	3.55	122	P	Pn	02 11 05.5	-0.8
KAPI	Kappang	3.70	42	P	Pn	02 11 07.9	0.0
	2.6nm,0.3s,baz=195,slow=10,SNR=5.6						
BKSI	Bulukumba	3.75	50	P	Pn	02 11 08.5	0.0
GMJI	Gumukmas	3.81	262	P	Pn	02 11 10.4	+1.3
BASI	Baing, Sumba	4.08	127	P	Pn	02 11 11.9	-0.1
BNSI	Bone	4.39	40	P	Pn	02 11 16.6	+1.0
KBKI	Kotabaru	4.58	346	P	Pn	02 11 19.1	+1.4
GRJI	Gresik	4.81	280	P	Pn	02 11 22.8	+2.4
MMRI	Maumere	5.00	100	P	Pn	02 11 22.4	-0.2
MMRI	Maumere	5.00	100	Pn	Pn	02 11 22.3	-0.2
MMRI				S	S	02 12 23.1	-1.8
PCJI	Pacitan	6.04	266	P	Pn	02 11 36.3	+1.6
	3.8nm14μm787nm,0.7s						
WOJI	Wonogiri, Jawa	6.28	269	P	Pn	02 11 39.4	+1.8
	0.8nm5μm152nm,0.4s						
UGM	Wanagama	6.67	268	P	Pn	02 11 43.3	+0.9
	1.0nm112nm,0.8s						
UGM	Wanagama	6.67	268		Pn	02 11 42.8	+0.3
UGM				S	S	02 12 59.9	-1.3
SOEI	Soe	7.20	106	P	Pn	02 11 49.1	+0.1
	1.4nm2μm94nm,0.7s						
SOEI	Soe	7.20	106		Pn	02 11 48.2	-0.7
SOEI				S	S	02 13 08.3	-4.8
SANI	Sanana	10.39	57	P	P	02 12 32.9	+1.8
TNG	Tangerang	10.65	278	P	P	02 12 46.0	+12
NLAI	Namlea	10.78	66	P	P	02 12 38.4	+3.0
SBUM	Sibu	11.33	333	P	Pn	02 12 40.6	+1.2
KSM	Kuching	11.51	323	P	Pn	02 12 41.8	+0.1
MSAI	Masohi	12.42	70	P	P	02 12 55.3	+1.6
	2μm27nm,0.5s						
FITZ	Fitzroy Crossi	13.11	142	P	P	02 13 04.5	+3.3
	2.7nm,0.3s,baz=346,slow=7.3,SNR=36						
FITZ	Fitzroy Crossi	13.11	142	P	Pn	02 13 01.3	+0.4
KNRA	Kununurra	13.73	126	P	Pn	02 13 08.6	+0.3
KNRA					S	02 15 39.1	-0.6
MTN	Manton Dam	14.55	111	P	P	02 13 17.1	0.0
MNAI	Manna	14.62	283	P	P	02 13 17.6	-0.4
SWI	Sorong	15.55	64	P	Pn	02 13 31.1	+1.1
	154nm,0.8s						
SIJI	Sorong	15.56	64	P	P	02 13 29.2	+0.9
	4.6nm,0.3s,baz=271,slow=7.4,SNR=23						
FAKI	Fak Fak	15.69	73	P	P	02 13 29.4	-0.3
FAKI				S	S	02 16 19.1	-0.6
WB0	Warramunga Arr	20.45	127	P	P	02 14 21.1	+0.5
WB0				IAmb	IAmb	02 14 23.4	
	comp=Z,7.7nm,0.7s						
WRA	Warramunga Arr	20.50	128	P	P	02 14 22.3	+1.2
	comp=Z,2.6nm,0.3s,baz=307,slow=8.3,SNR=11						
WRA	Warramunga Arr	20.50	128	P	P	02 14 21.5	+0.4
WB2	Warramunga Arr	20.51	128	P	P	02 14 21.7	+0.6
WB2				IAmb	IAmb	02 14 24.0	
	comp=Z,12nm,0.6s						
WR0	Warramunga Arr	20.67	128	P	P	02 14 22.7	0.0
RPSI	Rantau Prapat	21.04	299	P	P	02 14 26.0	-0.3
RPSI				IAmb	IAmb	02 14 28.1	
	comp=Z,8.7nm,0.7s						
PSI	Prapat	21.09	299	P	P	02 14 26.9	-0.1
	comp=Z,8.5nm,0.5s,baz=148,slow=7.0,SNR=12						
AS31	Alice Springs	22.46	137	P	P	02 14 39.5	+0.2
ASAR	Alice Springs	22.46	137	P	P	02 14 41.5	+2.3
	comp=Z,9.2nm,0.4s,baz=311,slow=9.0,SNR=89						
ASAR	Alice Springs	22.46	137	P	P	02 14 39.4	+0.1
COEN	Coen	26.17	106	P	P	02 15 12.7	0.0
BBOO	Buckleboo	30.41	148	P	P	02 15 49.3	-0.7
BBOO				IAmb	IAmb	02 15 51.4	
	comp=Z,8.1nm,1.1s						
CMAR	Chiang Mai Arr	31.72	325	P	P	02 16 03.2	+1.6
	comp=Z,2.6nm,0.5s,baz=151,slow=6.4,SNR=6.7						
CMAR	Chiang Mai Arr	31.72	325	P	P	02 16 01.0	-0.6
STKA	Stephens Creek	32.99	140	P	P	02 16 14.9	+2.4
	comp=Z,4.8nm,0.5s,baz=189,slow=17,SNR=8.6						
TAPN	Taplejung	45.14	322	*e*P	P	02 17 53.4	+0.6
RAMN	Ramite	45.55	320	*e*P	P	02 17 54.8	-1.2
	comp=Z,8.7nm,0.6s						
KSRS	Korea Array	46.09	12	P	P	02 18 00.3	+0.7
	comp=Z,2.1nm,0.7s,baz=187,slow=9.8,SNR=4.5						
JIRN	Jiri	46.31	321	*e*P	P	02 18 02.0	0.0
	comp=Z,16nm,0.4s						
GUN	Gumba	46.68	321	*e*P	P	02 18 05.1	+0.3
PKI	Pulchoki	46.74	320	*e*P	P	02 18 03.9	-1.4
	comp=Z,4.0nm,0.3s						
PKIN	Phulchoki	46.75	320	*e*P	P	02 18 03.7	-1.6
	comp=Z,12nm,0.5s						
DMN	Daman	46.96	320	*e*P	P	02 18 06.4	-0.5
GKN	Gorkha	47.53	320	*e*P	P	02 18 10.3	-0.8
MJAR	Matsushiro Arr	48.28	23	P	P	02 18 15.8	-0.7
	comp=Z,1.1nm,0.4s,baz=214,slow=9.6,SNR=5.3						
DANN	Dangsing	48.33	319	*e*P	P	02 18 16.8	-0.6
	comp=Z,26nm,0.6s						
GTA	Gaotai	49.66	342	*e*P	P	02 18 28.3	+1.3
USRK	Ussuriysk Ar.	53.42	13	P	P	02 18 54.9	+0.5
	comp=Z,4.0nm,0.4s,baz=195,slow=6.4,SNR=22						
USRK	Ussuriysk Ar.	53.42	13	P	P	02 18 54.0	-0.4
ULN	Ulaanbaatar	56.13	352	P	P	02 19 13.6	-0.3
SONM	Songino Array	56.20	351	P	P	02 19 14.5	+0.2
	comp=Z,8.2nm,0.8s,baz=168,slow=8.6,SNR=44						
SONM	Songino Array	56.20	351	P	P	02 19 13.4	-0.9
KBL	Kabul	62.02	316	P	P	02 19 52.7	-1.7
KBL				IAmb	IAmb	02 19 53.7	
	comp=Z,6.9nm,0.6s						
MK31	Makanchi Array	62.60	334	IAmb	IAmb	02 19 58.3	
	comp=Z,2.8nm,0.8s						
MKAR	Makanchi Array	62.60	334	P	P	02 19 57.5	-0.2
	comp=Z,2.0nm,0.3s,baz=144,slow=6.0,SNR=38						
AAK	Ala-Archa	63.51	326	P	P	02 20 03.6	-0.4
AAK				IAmb	IAmb	02 20 05.4	
	comp=Z,2.5nm,0.7s						
WSAR	Wadi Sarin	65.05	300	P	P	02 20 12.9	-1.2
	comp=Z,1.6nm,0.5s,baz=142,slow=7.8,SNR=2.1						
KKAR	Karatay Array	66.06	324	P	P	02 20 19.6	-0.5
KURK	Kurchatov	67.15	334	P	P	02 20 26.8	0.0
KURK				IAmb	IAmb	02 20 27.2	
	comp=Z,3.1nm,0.9s						
ZAA0	Zalesovo Array	67.30	340	IAmb	IAmb	02 20 27.3	
	comp=Z,5.2nm,0.7s						
ZALV	Zalesovo Beam	67.30	340	P	P	02 20 26.8	-0.9
	comp=Z,6.6nm,0.5s,baz=146,slow=5.0,SNR=22						
ZALV	Zalesovo Beam	67.30	340	P	P	02 20 26.6	-1.0
OPO	Ambohidratompo	68.72	253	P	P	02 20 39.3	+1.9
	comp=Z,3.1nm,0.5s,baz=78,slow=4.6,SNR=9.3						
PETK	Petropavlovsk-	69.67	25	P	P	02 20 43.3	+1.0
	comp=Z,3.4nm,0.9s,baz=224,slow=4.1,SNR=4.6						
PETK	Petropavlovsk-	69.67	25	P	P	02 20 42.0	-0.3
ABKAR	Akbulak array	75.58	325	P	P	02 21 16.4	-0.5
KMBO	Kilima Mbogo	79.94	270	P	P	02 21 42.2	+0.2
	comp=Z,1.8nm,0.6s,baz=80,slow=10.0,SNR=6.3						
KMBO	Kilima Mbogo	79.94	270	P	P	02 21 40.0	-2.1
QSPA	South Pole Qui	82.21	180	P	P	02 21 54.5	+1.8
	comp=Z,0.7nm,0.5s,baz=258,slow=0.7,SNR=5.0						
QSPA	South Pole Qui	82.21	180	P	P	02 21 52.9	+0.2
MATP	Matopo	86.17	250	P	P	02 22 11.6	-1.9
	comp=Z,4.7nm,0.5s,baz=133,slow=3.3,SNR=24						
MBAR	Mbarara	86.47	270	P	P	02 22 13.3	-1.8
YKA	Yellowknife Ar	113.78	24	PKiKP	PKiKP	02 28 06.2	-1.5
	comp=Z,0.2nm,0.4s,baz=299,slow=1.5,SNR=4.7						
TORD	Torodi Ar. Bea	116.54	281	PKP	PKPdf	02 28 13.9	-0.4
	comp=Z,0.5nm,0.5s,baz=71,slow=1.4,SNR=6.9						
TORD	Torodi Ar. Bea	116.54	281		PKPdf	02 28 12.2	-2.1
U49A	Red Boiling Sp	144.52	33		PKPab	02 29 04.6	-1.0
S51A	Beattyville	144.78	29		PKPbc	02 29 06.1	-0.3

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*NEIC **20** 02:21:27.8±1.5, 33°.21S±0°.06×70°.1W±0°.1, h106^{km}±5^{km}, Error ellipse: s-maj=16.9km s-min=8.4km az=97.0*

*SJA **20** 02:21:28.5±1.0, 33°.12S×70°.33W, h117^{km}±4^{km}, ML3.7, MW3.4*

*GUC **20** 02:21:29.6±0.8, 33°.15S×70°.35W, h107^{km}±2^{km}, ML4.3*

*IDC **20** 02:21:31.1±3.4, 32°.97S×70°.04W, h108^{km}±30^{km}, mb3.6/6, mb1 3.7/9, mb1mx3.6/29, mbtmp3.9/9, Error ellipse: s-maj=28.6km s-min=18.7km az=84.0*

ISC 20 02:21:29.7±0.5**, 33°.13S**±0°.03×**70°.35W**±0°.04**, h114^{km}**±3^{km}**, n70, σ1s.02**/89**, mb4.0**/9**, 3C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FCH	Farellones	0.20	167	*e*P	Pn	02 21 45.2	-0.9
FCH				*i* S	Sn	02 21 57.0	-1.3
FCH				IAML		02 21 59.0	
	comp=N,13μm,0.4s						
PEL	Peldehue	0.28	267	*e*P	Pn	02 21 45.4	-0.6
PEL				*i* S	Sn	02 21 57.8	-0.3
PEL				IAML		02 21 59.4	
	comp=E,22μm,0.5s						
PEL	Peldehue	0.28	267		Pn	02 21 45.1	-0.9
PEL				Sn	Sn	02 21 56.4	-1.8
PEL	Peldehue	0.28	267	*i* P	Pn	02 21 45.8	-0.2
PEL				*e*S	Sn	02 21 58.2	0.0
CLCH	Cerro Calan	0.31	211	*e*P	Pn	02 21 46.0	-0.1
CLCH				*i* S	Sn	02 21 58.3	-0.2
FSR	Penalolen	0.38	203	*e*P	Pn	02 21 47.4	+1.0
FSR				*i* S	Sn	02 21 59.8	+0.8
MT03	Universidad Ad	0.39	201	*e*P	Pn	02 21 46.2	-0.3
MT03				*i* S	Sn	02 21 58.8	-0.4
MT03				IAML		02 21 59.8	
	comp=E,48μm,0.2s						
VA03	San Esteban	0.40	335	*e*P	Pn	02 21 46.3	-0.3
VA03				*i* S	Sn	02 21 59.2	0.0
VA03				IAML		02 22 01.0	
	comp=E,44μm,0.2s						
ANTU	Antumapu	0.50	209	⇑*i*P	Pn	02 21 48.0	+0.9
ANTU				*i* S	Sn	02 22 00.9	+0.7
ANTU				IAML		02 22 02.1	
	comp=E,11μm,0.3s						
ROCH	El Roble	0.58	285	*e*P	Pn	02 21 47.9	+0.1
ROCH				*i* S	Sn	02 22 01.7	+0.3
ROCH				IAML		02 22 03.1	
	comp=N,21μm,0.3s						
ROC1	El Roble	0.58	285		Pn	02 21 47.3	-0.6
ROC1				Sn	Sn	02 22 01.7	+0.2
ROC1	El Roble	0.58	285	*i* P	Pn	02 21 48.0	+0.1
ROC1				*e*S	Sn	02 22 01.9	+0.4
MT02	Curacav	0.68	259	*e*P	Pn	02 21 48.4	+0.1
MT02				*i* S	Sn	02 22 02.5	+0.2
MT02				IAML		02 22 05.8	
	comp=E,3μm,0.3s						
LMEL	Las Melosas	0.73	171	*e*P	Pn	02 21 48.2	-0.7
LMEL				*i* S	Sn	02 22 03.3	0.0
LMEL				IAML		02 22 06.3	
	comp=N,4μm,0.3s						
MT01	Popeta	1.05	226	*e*P	Pn	02 21 51.5	-0.3
MT01				*i* S	Sn	02 22 08.1	-0.4
MT01				IAML		02 22 09.9	
	comp=N,2μm,0.3s						
UTNM	Universidad Te	1.27	80	*i* P	Pn	02 21 54.2	0.0
BO01	Tunca	1.40	206	*e*P	Pn	02 21 55.5	-0.1
BO01				*i* S	Sn	02 22 15.3	0.0
RTLS	Leoncito	1.59	34	*i* P	Pn	02 21 58.8	+0.5
RTLS				*e*S	Sn	02 22 21.3	+1.4
RTLS				IAML		02 22 23.4	
	comp=Z,962nm,0.4s						
RTCV	Cerro Valdivia	1.98	51	*i* P	Pn	02 22 02.5	-0.3
RTCV				*e*S	Sn	02 22 26.9	-1.0
CO02	Combarbal	2.00	344	⇑*i*P	Pn	02 22 03.2	+0.2
CO02				*i* S	Sn	02 22 28.4	0.0
LAMA	Las Malvinas	2.03	153	*i* P	Pn	02 22 03.5	+0.2
LAMA				*e*S	Sn	02 22 28.8	-0.2
ZON	Zonda	2.12	42	*i* P	Pn	02 22 04.1	-0.3
ZON				*e*S	Sn	02 22 30.6	-0.4
ZON				IAML		02 22 32.6	
	comp=Z,249nm,0.4s						
GO05	Huala	2.29	215		Pn	02 22 05.7	-0.9
GO05				Sn	Sn	02 22 32.6	-2.2
GO05	Huala	2.29	215	*i* P	Pn	02 22 06.1	-0.5
CO03	El Pedregal	2.30	353	⇑*i*P	Pn	02 22 07.7	+0.9
CO03				*i* S	Sn	02 22 35.8	+0.5
CO03				IAML		02 22 36.9	
	comp=N,2μm,0.3s						
RTLL	Cerro Villicun	2.39	42	*i* P	Pn	02 22 07.7	-0.3
RTLL				*e*S	Sn	02 22 36.6	-0.7
PUMA	Malargue	2.48	163	*i* P	Pn	02 22 09.5	+0.5
EDS3	Malargue	2.75	164	*i* P	Pn	02 22 12.9	+0.3
ACCO	Cerro Coronel	2.76	24	*i* P	Pn	02 22 13.3	+0.3
GO04	Tololo Observa	2.97	352		Pn	02 22 15.3	-0.4
GO04				Sn	Sn	02 22 50.6	-0.5
GO04	Tololo Observa	2.97	352	*i* P	Pn	02 22 15.3	-0.4
AROD	Rodeo	3.04	14	*i* P	Pn	02 22 17.5	+0.7
ACDV	Cuesta del Vie	3.13	20	*i* P	Pn	02 22 17.9	+0.1
GO03	Copiap	5.52	1		Pn	02 22 48.8	-0.9
GO03				Sn	Sn	02 23 51.2	-0.7
PLCA	Paso Flores	7.59	181	P	Pn	02 23 20.3	+2.7
	comp=N,0.2nm,0.3s,baz=14,slow=15,SNR=3.2						

PLCA	Paso Flores	7.59	181		Pn	02 23 14.4	-3.3
CPUP	Villa Florida	13.18	62	P	Pn	02 24 26.5	-5.9
	comp=N,0.1nm,0.3s,baz=221,slow=9.2,SNR=3.2						
CPUP	Villa Florida	13.18	62	P	Pn	02 24 26.8	-5.6
LPAZ	La Paz	16.89	7	P	Pn	02 25 19.1	-0.8
	comp=N,0.0nm,0.3s,baz=180,slow=4.0,SNR=3.1						
LPAZ	La Paz	16.89	7	P	Pn	02 25 18.5	-1.3
SIV	San Ignacio	19.02	28	P	P	02 25 42.1	-0.7
	comp=N,0.4nm,0.3s,baz=215,slow=8.9,SNR=12						
BDFB	Brasilia	26.68	55	P	P	02 26 57.4	-0.9
	comp=N,1.7nm,0.4s,baz=266,slow=15,SNR=3.9						
BDFB	Brasilia	26.68	55	P	P	02 26 57.4	-0.9
BDFB				IAmb	IAmb	02 26 58.7	
	comp=Z,4.9nm,1.1s						
SNAA	Sanae	51.86	158	P	P	02 30 29.3	+3.4
	comp=Z,0.8nm,0.4s,baz=205,slow=3.3,SNR=11						
SNAA	Sanae	51.86	158	P	P	02 30 25.6	-0.3
TX32	Lajitas Array	69.69	329	P	P	02 32 27.0	-0.1
TXAR	Lajitas Array	69.69	329	P	P	02 32 29.6	+2.4
	comp=Z,0.7nm,0.5s,baz=157,slow=9.1,SNR=17						
TXAR	Lajitas Array	69.69	329	P	P	02 32 26.8	-0.4
TX31	Lajitas Ar. Si	69.69	329	P	P	02 32 28.9	+1.7
WVT	Waverly	70.81	345	P	P	02 32 33.1	-0.6
WVT				IAmb	IAmb	02 32 35.7	
	comp=Z,8.1nm,0.7s						
FRNY	Flat Rock	77.65	358	P	P	02 33 11.4	-1.8
FRNY				IAmb	IAmb	02 33 13.2	
	comp=Z,6.8nm,0.9s						
ECSD	EROS Data Cent	80.17	341	P	P	02 33 26.9	-0.1
ECSD				IAmb	IAmb	02 33 29.1	
	comp=Z,2.8nm,0.8s						
TORD	Torodi Ar. Bea	82.58	69	P	P	02 33 41.0	+0.6
	comp=Z,0.8nm,1.0s,baz=275,slow=6.9,SNR=3.0						
TORD	Torodi Ar. Bea	82.58	69	P	P	02 33 39.7	-0.7
PDAR	Pinedale Array	83.64	332	P	P	02 33 47.4	+1.9
	comp=Z,0.4nm,0.6s,baz=132,slow=5.9,SNR=6.4						
PDAR	Pinedale Array	83.64	332	P	P	02 33 45.8	+0.2
NVAR	Mina Array Bea	83.99	324	P	P	02 33 50.4	+3.0
	comp=Z,1.4nm,0.7s,baz=157,slow=6.2,SNR=11						
NVAR	Mina Array Bea	83.99	324	P	P	02 33 47.2	-0.2
YHH	Holmes Hill	85.85	332	P	P	02 33 56.6	0.0
MCMT	McKenzie Canyo	86.67	331	P	P	02 33 59.8	-0.8
J08A	Circle Bar Ran	87.91	327	P	P	02 34 06.6	+0.2
WRA	Warramunga Arr	122.20	208	PKP	PKPdf	02 40 12.2	+0.5
	comp=Z,0.2nm,0.7s,baz=143,slow=1.6,SNR=1.6						
WRA	Warramunga Arr	122.20	208		PKPdf	02 40 10.9	-0.8
ARCES	ARCESS Array B	122.64	25	PKP	PKiKP	02 40 11.8	+0.7
	comp=Z,1.4nm,0.8s,baz=235,slow=4.3,SNR=1.3						
H11S2	WAKE ISLAND Hy	127.20	269	T	T	04 59 47.9	
	baz=118,slow=75,SNR=6.8						
H11S1	WAKE ISLAND Hy	127.21	269	T	T	04 59 51.6	
	baz=118,slow=75,SNR=6.0						
H11S3	WAKE ISLAND Hy	127.22	269	T	T	04 59 46.7	
	baz=118,slow=75,SNR=5.0						
ZALV	Zalesovo Beam	152.73	33	PKPbc	PKiKP	02 41 13.9	+1.2
	comp=Z,2.8nm,0.4s,baz=305,slow=3.5,SNR=13						
MKAR	Makanchi Array	155.13	49	PKPbc		02 41 18.6	
	comp=Z,0.2nm,0.6s,baz=318,slow=1.9,SNR=2.2						
MKAR	Makanchi Array	155.13	49			02 41 17.9	

IDC ***20*** *02:23:55.5±1.2, 44°.45N×148°.21E, h0^{km}, mb3.3/5, mb1 3.6/5, mb1mx3.4/39, mbtmp3.3/5, MS2.7/1, Ms1 2.7/1, ms1mx2.3/27, Error ellipse: s-maj=45.7km s-min=29.8km az=136.0*
MOS ***20*** *02:24:01.5±1.4, 44°.39N×148°.40E, h49^{km}, mb4.1/2, Error ellipse: s-maj=16.5km s-min=11.2km az=142.7*
SKHL ***20*** *02:24:02.7±0.3, 44°.41N×148°.35E, h50^{km}±4^{km}, mb4.1/4*
JMA ***20*** *02:24:03.0±0.3, 44°.08N×148°.03E, h0^{km}, M4.2*
ISC 20 02:24:00.6±2.9**, 44°.35N**±0°.07×**148°.42E**±0°.08**, h26**^{km}±20^{km}**, n47, σ1^{s}.78**/61**, mb3.4**/7**, 2C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.96	336	AMB	AMB	02 24 18.0	
	50nm,0.2s						
KUR				*i* P	Pn	02 24 18.4	-0.1
KUR				*i* S	Sb	02 24 29.7	-1.3
KUR				A	A	02 24 30.0	
	820nm,0.2s						
KUR				A	A	02 24 30.0	
	230nm,0.2s						
KUR	Kuril'sk	0.96	336	*d i*PN	Pn	02 24 18.4	-0.1
KUR				*i* S	Sb	02 24 29.7	-1.3
KUR				pmax	pmax		
	comp=Z,658nm,0.1s						
KUR				pmax	pmax		
	comp=E,220nm,0.2s						
KUR				smax	smax		
	comp=N,815nm,0.2s						
KUR				smax	smax		
	comp=E,2μm,0.2s						
SHO	Shikotan	1.25	248	*e*P	Pn	02 24 22.9	+0.6
SHO				AMB	AMB	02 24 24.0	
	comp=E,70nm,0.2s						
SHO				*e*S	Sn	02 24 36.8	-1.5
SHO				A	A	02 24 40.0	
	comp=E,670nm,0.3s						
SHO				A	A	02 24 40.0	
	comp=E,680nm,0.3s						
SHO	Shikotan	1.25	248	*e*PN	Pn	02 24 22.8	+0.5
SHO				*e*S	Sn	02 24 36.4	-1.9
SHO				pmax	pmax		
	comp=Z,67nm,0.2s						
SHO				smax	smax		
	comp=N,669nm,0.2s						
SHO				smax	smax		
	comp=E,684nm,0.2s						
YUK	Yuzh-Kuril'sk	1.87	261	*e*P	Pn	02 24 31.5	+0.6
YUK				AMB	AMB	02 24 34.0	
	comp=E,40nm,0.2s						
YUK				*e*S	Sn	02 24 52.5	-1.2
YUK				A	A	02 24 56.0	
	comp=E,740nm,0.4s						
YUK				A	A	02 24 56.0	
	comp=E,260nm,0.4s						
YUK	Yuzh-Kuril'sk	1.87	261	*e*PN	Pn	02 24 32.0	+1.1
YUK				*e*S	Sn	02 24 54.1	+0.4
YUK				pmax	pmax		
	comp=Z,293nm,0.2s						
YUK				pmax	pmax		
	comp=N,83nm,0.1s						
YUK				pmax	pmax		
	comp=E,47nm,0.1s						
YUK				smax	smax		
	comp=N,739nm,0.2s						
YUK				smax	smax		
	comp=E,263nm,0.1s						
GRPR	Tuman	1.94	260	*e*P	Pn	02 24 32.2	+0.3
GRPR				AMB	AMB	02 24 35.0	
	comp=E,50nm,0.2s						
GRPR				*e*S	Sn	02 24 54.1	-1.4
GRPR				A	A	02 24 59.0	
	comp=E,320nm,0.2s						
GRPR				A	A	02 24 59.0	
	comp=E,200nm,0.2s						
GRPR	Tuman	1.94	260	*e*PN	Pn	02 24 32.2	+0.3
GRPR				*e*S	Sn	02 24 54.1	-1.4
GRPR				pmax	pmax		
	comp=E,63nm,0.1s						
GRPR				pmax	pmax		
	comp=Z,166nm,0.1s						
GRPR				pmax	pmax		
	comp=N,51nm,0.2s						
GRPR				smax	smax		
	comp=N,641nm,0.2s						
GRPR				smax	smax		
	comp=E,397nm,0.2s						
NEM2	Nemuro 2	2.18	244	P	Pn	02 24 35.7	+0.6
NEM2				*e*S	Sn	02 24 59.5	-1.7
GLVR	Golovnino	2.18	255	*e*P	Pn	02 24 36.3	+1.1
GLVR				*e*S	Sn	02 25 01.7	+0.3
GLVR				A	A	02 25 07.0	
	comp=E,230nm,0.3s						
GLVR				A	A	02 25 07.0	
	comp=E,310nm,0.3s						
GLVR	Golovnino	2.18	255	*e*PN	Pn	02 24 36.3	+1.1
GLVR				*e*S	Sn	02 25 01.7	+0.3
GLVR				smax	smax		
	comp=N,897nm,0.3s						
GLVR				smax	smax		
	comp=E,617nm,0.2s						
NMR	Nemuro--Hokkai	2.18	244	*e*P	Pn	02 24 35.9	+0.7
NMR				*e*S	Sn	02 24 59.5	-1.9
NMR	Nemuro--Hokkai	2.18	244	*e*PN	Pn	02 24 35.9	+0.7
NMR				*e*S	Sn	02 24 59.5	-1.9
RUSJ	Misakicho	2.30	265	*e*PN	Pn	02 24 38.0	+1.2
RUSJ				*e*S	Sn	02 25 06.5	+2.3
JRA	Rausu	2.41	261	P	Pn	02 24 40.1	+1.7
JNSB	Nemuroshibetsu	2.53	258	P	Pn	02 24 41.8	+1.8
JKHN	Kushirohamanak	2.69	243	P	Pn	02 24 43.1	+1.0
JKHN				*e*S	Sn	02 25 12.7	-1.1
JNK	Nakash	2.78	255	P	Pn	02 24 45.0	+1.5
JNK				*e*S	Sn	02 25 16.2	0.0
JAK	Akkeshi	3.02	245	P	Pn	02 24 47.7	+0.9
JAK				*e*S	Sn	02 25 21.6	-0.6
JAR	Ashorobuto	3.53	254	P	Pn	02 24 56.1	+2.3
JOB	Onbets	3.63	248	P	Pn	02 24 56.9	+1.7
JOB				*e*S	Sn	02 25 36.8	-0.4
JCH	Churui	4.07	246	P	Pn	02 25 02.9	+1.7
JKK2	Kamakawa 2	4.12	265	P	Pn	02 25 05.4	+3.6
JSE	Soyaes	4.21	280	P	Pn	02 25 04.2	+1.1
ERM	Erimo	4.50	241	*de*PN	Pn	02 25 11.0	+3.9
JNBK	Urakawa-nobuka	4.63	245	P	Pn	02 25 10.5	+1.7
JNBK				*e*S	Sn	02 25 59.4	-2.3
JWK2	Keihoku	4.74	284	P	Pn	02 25 12.9	+2.5
JRBN	Rebuntou	5.34	284	P	Pn	02 25 21.1	+2.5
JKB	Kayabe	5.94	248	P	Pn	02 25 28.8	+1.9
JKB				*e*S	Sn	02 26 32.7	-1.4
KLR	Kul'dur	12.42	299	*e*P	Pn	02 26 54.5	-1.1
KLR	Kul'dur	12.42	299	⇑*e*PN	Pn	02 26 54.5	-1.1
MA2	Magadan	15.31	5	⇑*e*P	Pn	02 27 37.2	+2.4
KSRS	Korea Array	16.94	253	LR	LR	02 33 03.7	
	comp=E,25nm,19.7s,baz=248,slow=32						
BILL	Bilibino	25.53	16	*e*P	P	02 29 32.2	+5.5
BILL				*e*		02 30 07.4	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
H11N2	WAKE ISLAND Hy	28.98	142	T	T	03 00 49.5	
	baz=332,slow=76,SNR=57						
H11N1	WAKE ISLAND Hy	29.00	142	T	T	03 00 50.1	
	baz=332,slow=76,SNR=51						
H11N3	WAKE ISLAND Hy	29.00	142	T	T	03 00 43.4	
	baz=332,slow=76,SNR=68						
H11S1	WAKE ISLAND Hy	29.98	143	T	T	03 02 02.6	
	baz=334,slow=76,SNR=93						
H11S3	WAKE ISLAND Hy	29.98	143	T	T	03 01 57.5	
	baz=334,slow=76,SNR=72						
H11S2	WAKE ISLAND Hy	30.00	143	T	T	03 01 59.6	
	baz=334,slow=76,SNR=50						
ILAR	Eielson Array	40.46	37	P	P	02 31 35.7	-0.8
	comp=Z,0.2nm,0.5s,baz=254,slow=6.5,SNR=1.7						
MKAR	Makanchi Array	45.12	298	P	P	02 32 11.9	-2.7
	comp=Z,0.1nm,0.5s,baz=82,slow=6.6,SNR=2.0						
MKAR				PcP	PcP	02 33 52.9	-1.9
	comp=Z,0.1nm,0.4s,baz=69,slow=4.8,SNR=3.9						
YKA	Yellowknife Ar	54.79	34	P	P	02 33 26.3	-1.4
	comp=Z,0.2nm,0.6s,baz=298,slow=6.5,SNR=4.1						
WRA	Warramunga Arr	65.27	195	P	P	02 34 39.4	-0.6
	comp=Z,0.4nm,0.7s,baz=10,slow=6.3,SNR=2.7						
OBN	Obninsk	65.37	324	*e*P	P	02 34 42.7	+2.4
OBN	Obninsk	65.37	324	*e*P	P	02 34 42.7	+2.4
OBN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TXAR	Lajitas Array	81.55	57	P	P	02 36 15.4	-0.8
	comp=Z,0.2nm,0.5s,baz=308,slow=4.4,SNR=4.3						

IDC 20 02:26:37.9±3.9**, 22°.80S×175°.74W, h0**^{km}**, mb3.8**/5**, mb1 4.1**/5**, mb1mx3.8**/34**, mbtmp3.8**/5**, MS3.4**/5**, Ms1 3.4**/5**, ms1mx3.1**/30**, Error ellipse: s-maj=223.4km s-min=26.2km az=154.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	16.49	269	*e*LR	LR	02 34 44.5	
	comp=Z,172nm,21.4s						
TBI	Tubuai	24.18	96	*e*LR	LR	02 37 31.6	
	comp=Z,110nm,25.5s						
PPT2	Papeete2	25.08	83	*e*LR	LR	02 38 00.7	
	comp=Z,95nm,24.5s						
HNR	Honiara	26.81	296	LR	LR	02 42 09.0	
	comp=Z,66nm,18.9s,baz=135,slow=35						
ASAR	Alice Springs	46.08	259	P	P	02 35 04.3	+0.3
	0.3nm,0.3s,baz=93,slow=7.1,SNR=6.1						
ASAR				LR	LR	02 53 34.4	
	comp=Z,80nm,20.0s,baz=115,slow=35						
WRA	Warramunga Arr	46.40	264	P	P	02 35 05.5	-1.1
	0.6nm,0.3s,baz=106,slow=8.6,SNR=30						
FITZ	Fitzroy Crossi	54.83	263	LR	LR	02 59 03.2	
	comp=Z,52nm,18.7s,baz=144,slow=36						
KSRS	Korea Array	79.99	318	LR	LR	03 10 05.5	
	comp=Z,13nm,20.5s,baz=165,slow=33						
NVAR	Mina Array Bea	81.28	42	P	P	02 38 56.6	+0.2
	1.1nm,0.7s,baz=221,slow=9.5,SNR=9.9						
PDAR	Pinedale Array	89.21	42	P	P	02 39 34.7	-1.3
	0.3nm,0.8s,baz=216,slow=4.5,SNR=2.4						
ILAR	Eielson Array	90.10	12	P	P	02 39 38.4	-0.9
	0.4nm,1.0s,baz=205,slow=4.0,SNR=2.6						
CMAR	Chiang Mai Arr	92.85	289	LR	LR	03 18 41.2	
	comp=Z,12nm,21.4s,baz=80,slow=34						
AKASG	Malin Array Be	146.03	331	PKPbc	PKPab	02 46 20.0	0.0
	0.5nm,0.4s,baz=41,slow=4.7,SNR=4.5						
BRTR	Keskin Array B	149.93	311	PKPbc	PKiKP	02 46 31.3	-0.2
	0.4nm,0.8s,baz=88,slow=1.3,SNR=1.5						

IDC ***20*** *02:30:06.5±3.4, 4°.59N×96°.84E, h146^{km}±21^{km}, mb3.4/5, mb1 3.5/6, mb1mx3.2/47, mbtmp3.8/6, Error ellipse: s-maj=92.9km s-min=17.9km az=58.0*
DJA ***20*** *02:30:09.2±1.4, 5°N±8°×9°7E±1°0, h145^{km}±12^{km}, M3.3/6, MLv3.3/6*
ISC 20 02:30:07.9±0.9**, 4°.56N**±0°.08×**96°.90E**±0°.10**, h150**^{km}**, n9, σ2^{s}.00**/12**, mb3.5**/5**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSI	Meulaboh, Aceh	0.57	239	P	Pn	02 30 31.7	+2.1
MLSI				S	Sn	02 30 48.4	+2.3
LHMI	Lhok Sumawe	0.67	4	P	Pn	02 30 32.3	+2.1
LHMI				S	Sn	02 30 50.4	+3.2
SNSI	Sinabang, Aceh	2.21	195	P	Pn	02 30 46.2	+0.7
PSI	Prapat	2.67	131	P	Pn	02 30 52.8	+1.5
	2.9nm,0.3s,baz=313,slow=16,SNR=15						
PSI				S	Sn	02 31 26.2	+1.4
	4.7nm,0.3s,baz=55,slow=19,SNR=11						
SONM	Songino Array	43.88	9	P	P	02 37 58.5	-1.0
	0.4nm,0.5s,baz=193,slow=6.5,SNR=3.9						
MKAR	Makanchi Array	43.93	346	P	P	02 37 58.1	-1.7
	0.4nm,0.3s,baz=153,slow=9.4,SNR=12						
WRA	Warramunga Arr	44.12	125	P	P	02 38 01.0	-0.7
	0.3nm,0.3s,baz=304,slow=9.2,SNR=6.5						
ASAR	Alice Springs	45.70	130	P	P	02 38 13.9	-0.2
	0.6nm,0.5s,baz=299,slow=8.1,SNR=10						
ARCES	ARCESS Array B	79.29	340	P	P	02 41 54.8	-1.6
	5.4nm,1.1s,baz=98,slow=6.5,SNR=2.5						

INET ***20*** *02:34:10.6, 12°.68N×88°.64W, h21^{km}, ML3.8*
SNET ***20*** *02:34:10.9±0.9, 12°.71N×88°.66W, h32^{km}±2^{km}, ML3.8*
UCR ***20*** *02:34:11.0±0.9, 12°.71N×88°.66W, h31^{km}±2^{km}, ML3.8*
GCG ***20*** *02:34:14.1±3.4, 12°.78N×88°.68W, h79^{km}±999^{km}, MD4.2*
ISC 20 02:34:12.1±2.0**, 12°.75N**±0°.10×**88°.64W**±0°.03**, h30**^{km}±12^{km}**, n50, σ0^{s}.81**/81**, 4C-2D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALJI	Alcalda de J	0.58	7	*e*P	Pn	02 34 23.8	-0.5
ALJI				*e*S	Sn	02 34 32.6	-0.2
ALJI				IAML		02 34 34.2	
	comp=Z,6μm,0.2s						
ALJI	Alcalda de J	0.58	7	*e*P	Pn	02 34 23.8	-0.5
ALJI				*e*S	Sn	02 34 32.6	-0.2
ALJI				IAML		02 34 34.2	
	comp=Z,6μm,0.2s						
JUCU	Jucuar¡n	0.63	37	⇑*e*P	Pn	02 34 24.2	-0.8
JUCU				*e*S	Sn	02 34 34.1	-0.1
JUCU				IAML		02 34 35.5	
	comp=Z,7μm,0.2s						
JUCU	Jucuar¡n	0.63	37	⇑*e*P	Pn	02 34 24.2	-0.8
JUCU				*e*S	Sn	02 34 34.1	-0.1
JUCU				IAML		02 34 35.5	
	comp=Z,7μm,0.2s						
LCY	Lacayo	0.75	27	*e*P	Pn	02 34 26.3	-0.5
LCY	Lacayo	0.75	27	*e*P	Pn	02 34 26.3	-0.5
COEB	Comit de Eme	0.75	8	*e*P	Pn	02 34 26.2	-0.6
COEB				*e*S	Sb	02 34 37.8	+0.9
COEB	Comit de Eme	0.75	8	*e*P	Pn	02 34 26.2	-0.6
COEB				*e*S	Sb	02 34 37.8	+0.9
TECA	Tecapa	0.76	10	*e*P	Pn	02 34 26.2	-0.6
TECA	Tecapa	0.76	10	*e*P	Pn	02 34 26.2	-0.6
VSM	San Miguel	0.77	28	*e*P	Pb	02 34 26.9	-0.2
VSM	San Miguel	0.77	28	*e*P	Pb	02 34 26.9	-0.2
PACA	Pacayal	0.78	23	*e*P	Pn	02 34 26.6	-0.6
PACA				*e*S	Sb	02 34 38.8	+1.1
PACA	Pacayal	0.78	23	*e*P	Pn	02 34 26.6	-0.6
PACA				*e*S	Sb	02 34 38.8	+1.1
BLLM	Bellamira	0.79	29	*e*P	Pn	02 34 26.9	-0.4
BLLM				*e*S	Sb	02 34 39.1	+1.1
BLLM	Bellamira	0.79	29	*e*P	Pn	02 34 26.9	-0.4
BLLM				*e*S	Sb	02 34 39.1	+1.1
LCND	La Caada	0.92	53	⇑*e*P	Pn	02 34 27.6	-1.4
LCND				*e*S	Sb	02 34 41.4	0.0
LCND				IAML		02 34 45.7	
	comp=Z,3μm,0.3s						
LCND	La Caada	0.92	53	⇑*e*P	Pn	02 34 27.6	-1.4
LCND				*e*S	Sb	02 34 41.4	0.0
LCND				IAML		02 34 45.7	
	comp=Z,3μm,0.3s						
CNCH	Conchagua	0.94	56	*e*P	Pn	02 34 28.3	-1.1
CNCH				*e*S	Sb	02 34 42.8	+0.5
CNCH	Conchagua	0.94	56	*e*P	Pn	02 34 28.3	-1.1
CNCH				*e*S	Sb	02 34 42.8	+0.5
LFRS	El Faro	0.96	335	*e*P	Pn	02 34 28.6	-1.1
LALI	Alcalda de L	0.99	318	⇓*e*P	Pn	02 34 28.8	-1.1
LALI				*e*S	Sb	02 34 42.4	-1.0
LALI	Alcalda de L	0.99	318	⇓*e*P	Pn	02 34 28.8	-1.1
LALI				*e*S	Sb	02 34 42.4	-1.0
LOMA	Loma Larga	1.03	330	*e*P	Pn	02 34 29.5	-1.1
LOMA				*e*S	Sb	02 34 44.9	+0.1
LOMA	Loma Larga	1.03	330	*e*P	Pn	02 34 29.5	-1.1
LOMA				*e*S	Sb	02 34 44.9	+0.1
LBRS	Las Brisas	1.06	338	*e*P	Pn	02 34 30.5	-0.4
FAGO	Alcalda de S	1.08	29	*e*P	Pn	02 34 30.6	-0.5
FAGO				*e*S	Sb	02 34 46.3	+0.4
FAGO	Alcalda de S	1.08	29	*e*P	Pn	02 34 30.6	-0.5
FAGO				*e*S	Sb	02 34 46.3	+0.4
SNET	Serv Nac Est T	1.10	328	*e*P	Pn	02 34 30.1	-1.3
SNET				*e*S	Sb	02 34 45.6	-1.0
SNET				IAML		02 34 47.5	
	comp=Z,1μm,0.2s						
SNET	Serv Nac Est T	1.10	328	*e*P	Pn	02 34 30.1	-1.3
SNET				*e*S	Sb	02 34 45.6	-1.0
SNET				IAML		02 34 47.5	
	comp=Z,1μm,0.2s						
OPAM	Oficina de Pla	1.10	331	*e*P	Pn	02 34 30.7	-0.8
OPAM				*e*S	Sb	02 34 46.1	-0.6
OPAM				IAML		02 34 50.9	
	comp=Z,2μm,0.2s						
OPAM	Oficina de Pla	1.10	331	*e*P	Pn	02 34 30.7	-0.8
OPAM				*e*S	Sb	02 34 46.1	-0.6
OPAM				IAML		02 34 50.9	
	comp=Z,2μm,0.2s						
UEES	Universidad Ev	1.13	329	*e*P	Pn	02 34 31.1	-0.8
UEES	Universidad Ev	1.13	329	*e*P	Pn	02 34 31.1	-0.8
BOQS	Boqueron	1.16	328	*e*P	Pn	02 34 31.8	-0.7
BOQS				*e*S	Sb	02 34 48.1	-0.5
CEVE	Cerro Verde	1.44	318	*e*P	Pn	02 34 35.7	-0.7
CEVE				*e*S	Sb	02 34 55.8	-0.7
CEVE				IAML		02 35 03.0	
	comp=Z,2μm,0.3s						
CEVE	Cerro Verde	1.44	318	*e*P	Pn	02 34 35.7	-0.7
CEVE				*e*S	Sb	02 34 55.8	-0.7
CEVE				IAML		02 35 03.0	
	comp=Z,2μm,0.3s						
SBLS	San Blas	1.45	319	*e*P	Pn	02 34 36.0	-0.4
SBLS	San Blas	1.45	319	*e*P	Pn	02 34 36.0	-0.4
SNJE	San Jose	1.46	320	*e*P	Pn	02 34 35.9	-0.7
SNJE				*e*S	Sn	02 34 54.8	+0.1
SNJE	San Jose	1.46	320	*e*P	Pn	02 34 35.9	-0.7
SNJE				*e*S	Sn	02 34 54.8	+0.1
RTR	El Retiro	1.50	320	*e*P	Pn	02 34 36.9	-0.3
RTR	El Retiro	1.50	320	*e*P	Pn	02 34 36.9	-0.3
MTO3	Montecristo	1.79	337	*e*P	Pn	02 34 40.9	-0.2
MTO3	Montecristo	1.79	337	*e*P	Pn	02 34 40.9	-0.2
TGUH	Tegucigalpa,Un	1.86	45	*e*P	Pn	02 34 41.5	-0.5
TGUH	Tegucigalpa,Un	1.86	45	*e*P	Pn	02 34 41.5	-0.5
IXG	Ixpaco	2.25	309	*e*P	Pn	02 34 47.8	+0.3
FUG	Fuego 3	2.73	309	*e*P	Pn	02 34 55.5	+1.5
FUG				*e*S	Sn	02 35 27.9	+1.8
STG3	Santiaguito 3,	3.45	305	*e*P	Pn	02 35 05.4	+1.4
STG3				*e*S	Sn	02 35 45.6	+1.6

IDC 20 02:45:57.0±347.0**, 12°.80N×93°.57E, h0**^{km}**, Error ellipse: s-maj=241.7km s-min=154.9km az=137.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I52GB	DIEGO GARCIA I	29.00	227	*i*		05 43 00.0	
	baz=47,slow=322,SNR=2.3						
I34MN	SONGINO INFRAS	36.50	15	*i*		06 29 00.0	
	baz=200,slow=325,SNR=0.9						
I39PW	PALAU INFRASON	40.63	93	*i*		06 55 10.0	
	baz=283,slow=310,SNR=1.1						

IDC 20 03:00:17.8±4.4**, 14°.89S×168°.13E, h0**^{km}**, mb3.5**/2**, mb1 3.8**/2**, mb1mx3.4**/26**, mbtmp3.5**/2**, Error ellipse: s-maj=299.5km s-min=47.6km az=150.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.59	256	P	P	03 06 51.0	-0.3
	0.6nm,0.9s,baz=87,slow=9.9,SNR=2.8						
ASAR	Alice Springs	33.40	250	P	P	03 06 58.5	+0.2
	0.2nm,0.3s,baz=81,slow=9.2,SNR=7.1						
ARCES	ARCESS Array B	120.61	346	PKP	PKPdf	03 19 10.8	-0.3
	1.8nm,0.7s,baz=64,slow=2.8,SNR=9.9						

DDA ***20*** *03:28:22.2, 41°.52N×43°.63E, h10^{km}±2^{km}, ML2.7*
ISK ***20*** *03:28:22.1, 41°.51N×43°.66E, h10^{km}, ML3.1/16*
NORS ***20*** *03:28:22.9±0.0, 41°.61N×43°.60E, h2^{km}, MPVA3.7*
TIF ***20*** *03:28:22.1, 41°.49N×43°.65E, h16^{km}*
MOS ***20*** *03:28:23.1±1.8, 41°.41N×43°.63E, h10^{km}, mb3.5/3, Error ellipse: s-maj=6.3km s-min=4.0km az=81.4*
NSSP ***20*** *03:28:23.0, 41°.48N×43°.70E, h10^{km}, Ms3.0*
ISC 20 03:28:23.3±0.8**, 41°.49N**±0°.01×**43°.65E**±0°.01**, h9**^{km}±6^{km}**, n125, σ1^{s}.19**/206**, mb3.5**/3**, 13C-14D, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKH	Akhalkalaki	0.14	236	P	Pg	03 28 26.4	-0.1
AKH				S	Sg	03 28 28.8	+0.1
AKH	Akhalkalaki	0.14	236	PG	Pg	03 28 26.3	-0.1
AKH				SG	Sg	03 28 28.7	+0.1
AKH	Akhalkalaki	0.14	236	⇓PG	Pg	03 28 26.3	-0.1
BGD	Bogdanovka	0.23	190	P	Pg	03 28 28.2	+0.2
BGD				S	Sg	03 28 31.4	+0.3
BGD	Bogdanovka	0.23	190	⇓PG	Pg	03 28 28.1	+0.2
BGD				S	Sg	03 28 31.4	+0.3
BKRG	Bakuriani	0.29	341	P	Pg	03 28 28.9	-0.2
BKRG				S	Sg	03 28 33.3	+0.4
BKRG	Bakuriani	0.29	341	⇑PG	Pg	03 28 28.8	-0.2
TRLG	Trialeti	0.34	81	P	Pg	03 28 29.9	-0.2
TRLG				S	Sg	03 28 35.0	+0.3
TRLG	Trialeti	0.34	81	⇑PG	Pg	03 28 29.9	-0.2
KZRT	Kazreti	0.57	100	P	Pg	03 28 33.8	-0.5
KZRT				S	Sg	03 28 42.0	0.0
KZRT	Kazreti	0.57	100	*i* P	Pg	03 28 33.9	-0.5
KZRT				*i* S	Sg	03 28 40.6	-1.3
KZRT	Kazreti	0.57	100	⇑PG	Pg	03 28 33.8	-0.5
KZRT				S	Sg	03 28 41.9	0.0
EPOS	Posof	0.69	272	*i* P	Pg	03 28 36.3	-0.4
EPOS				*i* S	Sg	03 28 44.8	-0.9
EPOS				IAML		03 28 46.0	
	comp=E,267nm,0.2s						
EPOS				IAML		03 28 52.0	
	comp=N,512nm,0.4s						
STE	Stepanavan	0.73	132	⇑*i*P	Pg	03 28 34.0	-3.4
EAK	Akyaka	0.80	182	*i* P	Pg	03 28 38.0	-0.7
EAK				*i* S	Sg	03 28 48.5	-0.6
EAK				IAML		03 28 50.0	
	comp=E,717nm,0.4s						
EAK				IAML		03 28 55.0	
	comp=N,710nm,0.4s						
TBLG	Delisi	0.85	73	P	Pg	03 28 39.0	-0.7

TBLG				S	Sb	03 28 50.7	-1.2
TBLG	**Delisi**	0.85	73	PG	Pg	03 28 38.9	-0.7
TBLG				SG	Sb	03 28 50.7	-1.2
TBLG	**Delisi**	0.85	73	*i* P	Pg	03 28 39.0	-0.7
TBLG				*i* S	Sg	03 28 50.1	-0.7
TBLG				IAML		03 28 52.0	
	comp=E,203nm,0.2s						
TBLG	**Delisi**	0.85	73	⇑PG	Pg	03 28 39.0	-0.7
TBLG				S	Sb	03 28 50.6	-1.2
BTNK	**Botanikuri**	0.89	77	P	Pg	03 28 39.6	-0.7
BTNK				S	Sb	03 28 51.8	-1.0
BTNK	**Botanikuri**	0.89	77	*i* P	Pg	03 28 39.4	-0.9
BTNK				*i* S	Sg	03 28 51.5	-0.2
BTNK				IAML		03 28 53.0	
	comp=E,374nm,0.3s						
BTNK	**Botanikuri**	0.89	77	PG	Pg	03 28 39.5	-0.7
BTNK				S	Sb	03 28 51.8	-1.0
SEAG	**Tbilisi Sea**	0.91	72	P	Pg	03 28 40.1	-0.6
SEAG				S	Sb	03 28 52.8	-0.7
SEAG	**Tbilisi Sea**	0.91	72	PG	Pg	03 28 40.1	-0.6
SEAG				S	Sb	03 28 52.8	-0.7
TKB	**Tkibuli**	0.99	331	P	Pg	03 28 41.5	-0.8
TKB				S	Sb	03 28 55.2	-0.7
TKB	**Tkibuli**	0.99	331	⇑PG	Pg	03 28 41.5	-0.8
TKB				S	Sb	03 28 55.2	-0.7
ONI	**Oni**	1.11	353	P	Pg	03 28 43.6	-1.0
ONI				S	Sn	03 28 58.9	-1.8
ONI	**Oni**	1.11	353	PN	Pg	03 28 43.7	-0.9
ONI				SN	Sb	03 28 58.6	-0.8
ONI	**Oni**	1.11	353	⇓PG	Pg	03 28 43.6	-1.0
ONI				S	Sn	03 28 58.9	-1.8
ARUZ	**Aruch**	1.25	164	*i* P	Pn	03 28 46.6	-0.4
ARUZ				*i* S	Sn	03 29 04.0	-0.1
DGRG	**David-gareji**	1.30	91	P	Pb	03 28 47.3	-0.6
DGRG				S	Sg	03 29 05.9	+0.9
DGRG	**David-gareji**	1.30	91	*i* P	Pn	03 28 46.8	-0.9
DGRG				*i* S	Sg	03 29 05.5	+0.6
DGRG				IAML		03 29 06.0	
	comp=E,66nm,0.5s						
DGRG				IAML		03 29 08.0	
	comp=N,78nm,0.3s						
DGRG	**David-gareji**	1.30	91	⇑PG	Pb	03 28 47.3	-0.6
DGRG				S	Sg	03 29 05.9	+0.9
ZEI	**Tsey**	1.31	8	*i* Pg	Pb	03 28 47.5	-0.8
ZEI				*e*Sg	Sn	03 29 06.7	+0.9
ZEI	**Tsey**	1.31	8	⇓*i*PG	Pb	03 28 47.5	-0.8
ZEI				*e*S	Sn	03 29 06.7	+0.9
SENK	**Senkaya-Erzuru**	1.35	227	PN	Pn	03 28 48.0	-0.5
DAGI	**Agillar**	1.37	253	*i* P	Pn	03 28 48.4	-0.4
DAGI				*i* S	Sb	03 29 06.0	-0.9
DAGI				IAML		03 29 08.0	
	comp=E,275nm,0.3s						
DAGI				IAML		03 29 11.0	
	comp=N,209nm,1.0s						
METS	**Metsamor**	1.38	166	*i* P	Pb	03 28 49.1	-0.1
METS				*i* S	Sg	03 29 07.9	+0.4
VNNZ	**Vanand**	1.39	174	⇓*i*P	Pb	03 28 49.4	-0.1
VNNZ				⇓*i*S	Sg	03 29 08.7	+0.8
DIGR	**Digorskoe uzhe**	1.41	358	*e*Pg	Pb	03 28 49.2	-0.7
DIGR				*e*Sg	Sg	03 29 09.1	+0.4
DIGR	**Digorskoe uzhe**	1.41	358	*i* PG	Pb	03 28 49.3	-0.7
DIGR				*e*S	Sg	03 29 08.8	+0.1
KAPZ	**Kaputan**	1.41	145	⇑*i*P	Pb	03 28 50.0	+0.1
KAPZ				⇑*i*S	Sg	03 29 09.4	+0.7
LACR	**Lac**	1.42	20	*e*Pg	Pn	03 28 48.5	-1.0
LACR				*e*Sg	Sg	03 29 07.9	-1.1
LACR	**Lac**	1.42	20	*e*PG	Pn	03 28 48.5	-1.0
BATM	**Batumi**	1.47	275	PN	Pn	03 28 49.4	-0.6
BATM	**Batumi**	1.47	275	*i* P	Pn	03 28 47.5	-2.5
BATM				*i* S	Sn	03 29 07.9	-1.6
DBOC	**Borcka**	1.50	265	*i* P	Pn	03 28 50.1	-0.3
DBOC				*i* S	Sn	03 29 08.7	-1.5
DBOC				IAML		03 29 14.0	
	comp=E,302nm,0.5s						
BCA	**Borcka**	1.52	269	PN	Pn	03 28 50.4	-0.4
DBAD	**Bademkaya**	1.55	253	*i* P	Pb	03 28 51.4	-0.8
DBAD				*i* S	Sn	03 29 10.5	-1.0
DDEM	**Demirkent**	1.55	248	*i* P	Pb	03 28 51.4	-0.8
DDEM				*i* S	Sn	03 29 11.3	-0.3
TASB	**TASBURUN-IGDIR**	1.57	163	PN	Pn	03 28 51.1	-0.3
GNI	**Garni**	1.57	148	*e*P	Pb	03 28 52.9	+0.2
GNI				⇓*e*S	Sg	03 29 14.1	+0.3
GNI	**Garni**	1.57	148	PN	Pn	03 28 50.9	-0.7
KORR	**Kora**	1.63	11	*i* Pg	Pg	03 28 54.8	+0.3
KORR				*e*Sg	Sg	03 29 17.0	+1.4
KORR	**Kora**	1.63	11	⇑*i*PN	Pg	03 28 54.8	+0.3
KORR				*e*S	Sg	03 29 17.0	+1.4
IGDI	**IGDIR**	1.65	168	*i* P	Pn	03 28 52.8	+0.2
IGDI				*i* S	Sn	03 29 13.7	-0.2
IGDI				IAML		03 29 16.0	
	comp=E,129nm,0.5s						
IGDI				IAML		03 29 17.0	
	comp=N,94nm,0.3s						
NRKZ	**NAREK**	1.67	152	⇑*i*P	Pb	03 28 54.1	-0.2
NRKZ				⇓*i*S	Sg	03 29 17.0	0.0
VLKR	**Vladikavkaz**	1.73	26	*e*PN	Pg	03 28 56.4	-0.1
VLKR				*e*S	Sg	03 29 20.7	+1.7
ARNR	**Ardon**	1.75	15	*e*Pg	Pg	03 28 58.3	+1.3
ARNR				*e*Sg	Sg	03 29 22.1	+2.5
ARNR	**Ardon**	1.75	15	*e*PN	Pg	03 28 56.5	-0.4
ARNR				*e*S	Sg	03 29 20.8	+1.1
LSNR	**Lesken**	1.79	4	*e*Pg	Pg	03 28 57.2	-0.4
LSNR				*e*Sg	Sg	03 29 22.6	+1.7
LSNR	**Lesken**	1.79	4	*e*PN	Pg	03 28 56.9	-0.8
LSNR				*e*S	Sg	03 29 21.9	+1.0
KMGR	**Komgaron**	1.81	30	*e*Pg	Pg	03 28 57.4	-0.5
KMGR				*e*Sg	Sg	03 29 23.6	+2.2
KMGR	**Komgaron**	1.81	30	*e*PN	Pg	03 28 57.5	-0.5
KMGR				*e*S	Sg	03 29 23.0	+1.6
EATA	**Eleskirt**	1.85	209	*i* P	Pb	03 28 56.8	-0.6
EATA				*i* S	Sg	03 29 22.7	+0.1
DDFL	**Dedoflistskaro**	1.86	90	P	Pg	03 28 57.8	-1.1
DDFL				S	Sg	03 29 27.1	+4.1
DDFL	**Dedoflistskaro**	1.86	90	*i* P	Pg	03 28 57.8	-1.1
DDFL				*i* S	Sg	03 29 26.6	+3.7
DDFL	**Dedoflistskaro**	1.86	90	⇑PN	Pg	03 28 57.8	-1.1
DDFL				S	Sg	03 29 27.0	+4.1
NEY	**Neytrino**	1.89	339	*e*Pg	Pb	03 28 57.7	-0.4
NEY				*e*Sg	Sg	03 29 22.7	-1.3
NEY	**Neytrino**	1.89	339	*d i*PN	Pb	03 28 57.6	-0.4
NEY				pmax	pmax		
	comp=Z,35nm,0.5s						
STDR	**Stavd-Durt**	1.90	9	*e*Pg	Pg	03 29 00.3	+0.5
STDR				*e*Sg	Sg	03 29 26.9	+2.4
STDR	**Stavd-Durt**	1.90	9	*e*PN	Pg	03 29 00.3	+0.5
STDR				*e*S	Sg	03 29 26.9	+2.4
DYDN	**Diyadin**	1.94	179	*i* P	Pb	03 28 58.4	-0.6
DYDN				IAML		03 29 32.0	
	comp=E,53nm,0.8s						
HOMI	**Horasan**	1.96	223	*i* P	Pn	03 28 57.8	+0.8
HOMI				IAML		03 29 33.0	
	comp=E,61nm,0.6s						
HOMI				IAML		03 29 33.0	
	comp=N,60nm,0.5s						
LGD	**Lagodekhi**	1.97	79	P	Pb	03 28 58.2	-1.2
LGD				S	Sg	03 29 25.8	-0.9
LGD	**Lagodekhi**	1.97	79	PN	Pb	03 28 58.2	-1.2
AGRB	**Hanur-Agry**	1.98	195	PN	Pn	03 28 57.0	-0.1
BTKR	**Batakoyurt**	2.00	19	*e*Pg	Pg	03 29 01.7	+0.2
BTKR				*e*Sg	Sg	03 29 29.5	+2.1
BTKR	**Batakoyurt**	2.00	19	*e*PN	Pg	03 29 01.7	+0.2
BTKR				*e*S	Sg	03 29 29.5	+2.1
KOPR	**Koprukoy-ERZUR**	2.02	223	PN	Pn	03 28 58.1	+0.3
CHOM	**Cayeli-Rize**	2.21	261	PN	Pn	03 28 59.8	-0.4
AKDA	**Akdag**	2.22	232	*i* P	Pb	03 29 02.5	-1.2
CHAY	**Cayeli-Rize**	2.24	261	PN	Pn	03 29 00.4	-0.2
BTLR	**Botlikh**	2.25	58	*e*Pg	Pb	03 29 03.2	-0.9
BTLR				*e*Sg	Sg	03 29 33.2	-2.3
BTLR	**Botlikh**	2.25	58	*e*PN	Pb	03 29 03.2	-0.9
BTLR				*e*S	Sg	03 29 33.2	-2.3
KBZ	**Khabaz**	2.31	346	⇑*e*PN	Pb	03 29 04.6	-0.5
DOMR	**Dombai**	2.34	321	*e*PN	Pn	03 29 03.1	+0.9
DOMR				*e*S	Sb	03 29 34.5	-0.5
CLDR	**Caldiran**	2.35	175	PN	Pn	03 29 01.9	-0.4
CLDR	**Caldiran**	2.35	175	*i* P	Pb	03 29 05.5	-0.4
KRIK	**Erzurum-spir**	2.36	242	*i* P	Pg	03 29 07.3	-1.2
SHA1	**Shidzhatmaz**	2.37	342	*e*Pg	Pb	03 29 06.5	+0.3
SHA1				*e*Sg	Sg	03 29 37.8	-1.4
SHA1	**Shidzhatmaz**	2.37	342	*e*PN	Pb	03 29 06.5	+0.3
SHA1				*e*S	Sg	03 29 37.8	-1.4
MLAZ	**Malazgirt-MUS**	2.49	200	PN	Pn	03 29 03.7	-0.5
EMRE	**Erzurum,Aziziy**	2.50	235	*i* P	Pb	03 29 08.4	-0.1
EMRE				IAML		03 29 47.0	
	comp=N,48nm,0.7s						
EMRE				IAML		03 29 51.0	
	comp=E,44nm,0.5s						
XNZR	**Khunzakh**	2.51	64	*e*PN	Pb	03 29 07.4	-1.2
XNZR				*e*S	Sb	03 29 39.9	+0.2
KIV	**Kislovodsk**	2.57	344	PN	Pn	03 29 04.7	-0.5
KIV	**Kislovodsk**	2.57	344	*e*PN	Pg	03 29 10.2	-2.2
KIV				*e*S	Sb	03 29 40.0	-1.3
BEYR	**Belyy Ugol+**	2.60	347	*e*PN	Pn	03 29 04.7	-0.8
BEYR				*e*S	Sn	03 29 38.2	+1.0
GNBR	**Gunib**	2.63	69	*e*Pn	Pb	03 29 09.7	-0.9
GNBR				*e*Sn	Sg	03 29 44.8	-3.0
GNBR	**Gunib**	2.63	69	*de*PN	Pb	03 29 09.0	-1.7
ARXR	**Arkhyz**	2.72	321	*e*PN	Pn	03 29 08.4	+1.1
ARXR				*e*S	Sb	03 29 44.3	-1.3
ECAT	**Cat-ERZURUM**	2.77	228	*i* P	Pb	03 29 14.6	+1.4
KOPT	**Kop Dagi**	2.81	240	*i* P	Pg	03 29 15.5	-1.6
KOPT				*i* S	Sg	03 29 54.6	+1.1
KOPT				IAML		03 30 05.0	
	comp=N,35nm,1.0s						
KOPT				IAML		03 30 05.0	
	comp=E,24nm,0.7s						
BAYB	**BAYBURT**	2.85	246	*i* P	Pb	03 29 14.6	+0.1
BAYB				*i* S	Sb	03 29 51.1	+1.6
BAYB				IAML		03 29 55.0	
	comp=E,33nm,0.3s						
BAYB				IAML		03 29 56.0	
	comp=N,24nm,0.3s						
VRTB	**Varto-Mus**	2.87	217	PN	Pn	03 29 09.5	+0.2
VRTB	**Varto-Mus**	2.87	217	*i* P	Pn	03 29 07.9	-1.5
BAYT	**Aydıntepe-Bayb**	2.87	249	PN	Pn	03 29 09.3	-0.2
KARO	**Karliova-Bingo**	2.95	223	PN	Pn	03 29 10.8	+0.3
KTUT	**Trabzon**	2.97	262	PN	Pn	03 29 10.9	+0.3
MACK	**Trabzon**	2.98	261	*i* P	Pb	03 29 14.9	-1.6
MACK				*i* S	Sb	03 29 52.5	-0.5
MACK				IAML		03 29 56.0	
	comp=N,64nm,0.3s						
MACK				IAML		03 29 56.0	
	comp=E,38nm,0.2s						
URKR	**Urkarakh**	3.05	76	*e*PN	Pb	03 29 17.2	-0.7
URKR				*e*S	Sb	03 29 54.1	-1.2
AKT	**Akhty**	3.07	89	⇓*e*PN	Pn	03 29 14.1	+2.0
AKT				*e*S	Sb	03 29 54.4	-1.3
YEDI	**Yedisu-Bingol**	3.13	230	PN	Pn	03 29 13.3	+0.3
BNGL	**BINGOL**	3.17	218	*i* P	Pn	03 29 16.2	+2.6
MUSM	**Mu-Merkez**	3.21	211	*i* P	Pn	03 29 15.4	+1.3
MAK	**Makhachkala**	3.22	62	*e*PN	Pn	03 29 13.8	-0.2
MAK				*e*		03 29 21.4	
MAK				*e*		03 29 53.4	
MAK				*e*		03 30 09.0	
MAK				pmax	pmax		
	comp=Z,74nm,0.4s						
MAK				smax	smax		
	comp=E,116nm,1.4s						
MAK				smax	smax		
	comp=E,140nm,0.4s						
MAK				MLR	MLR		
	comp=Z,38nm,7.0s						
RPOR	**Krasnaya Polya**	3.33	313	*e*PN	Pn	03 29 18.2	+2.5
RPOR				*e*S	Sn	03 29 56.8	+1.3
KELT	**Kelkit**	3.59	250	*i* P	Pb	03 29 26.6	-0.5
KELT				*i* S	Sb	03 30 11.7	+0.8
KELT				IAML		03 30 15.0	
	comp=E,17nm,0.5s						
KELT				IAML		03 30 16.0	
	comp=N,15nm,0.8s						
SRTM	**Siirt_Merkez**	3.74	201	*i* P	Pg	03 29 35.1	+0.3
SUSE	**Susehri**	4.32	255	*i* P	Pb	03 29 34.7	-4.9
SUSE				*i* S	Sb	03 30 30.4	-1.5
SUSE				IAML		03 30 37.0	
	comp=N,11nm,0.6s						
SUSE				IAML		03 30 43.0	
	comp=E,8.0nm,1.0s						
ANN	**Anapa**	5.62	308	*e*P	Pb	03 29 54.5	-7.1
ANN				*e*S	Sb	03 31 06.6	-2.5
ANN				pmax	pmax		
	comp=Z,134nm,1.1s						
OBN	**Obninsk**	14.41	343	*e*P	Pn	03 31 47.3	0.0
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BRVK	**Borovoye**	21.32	48	⇓*e*P	P	03 33 12.9	+2.6
BRVK				pmax	pmax		
	comp=Z,6.0nm,2.4s						
AAK	**Ala-Archa**	22.87	77	⇓*e*P	P	03 33 28.4	+1.2
AAK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
KURK	**Kurchatov**	25.73	57	⇓*e*P	P	03 33 56.2	+2.3
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						

IDC 20 03:36:12.0±1.1**, 13°.64N×51°.03E, h0^{km}, mb3.9**/6**, mb1 4.2**/7**, mb1mx3.6**/53**, mbtmp4.0**/7**, ML4.5**/1**, MS3.0**/6**, Ms1 3.0**/6**, ms1mx2.8**/38**, Error ellipse: s-maj=41.1km s-min=23.6km az=168.0, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATD	**Arta Tunnel**	8.26	256	Pn	Pn	03 38 14.5	+1.3
	5.8nm,0.3s,baz=340,slow=2.8,SNR=14						
WSAR	**Wadi Sarin**	11.96	36	LR	LR	03 43 02.8	
	comp=Z,54nm,20.4s,baz=216,slow=34						
EIL	**Elat**	21.81	320	LR	LR	03 48 45.3	
	comp=Z,47nm,18.6s,baz=112,slow=34						
MMAI	**Mount Meron Ar**	23.98	326	LR	LR	03 50 18.3	
	comp=Z,22nm,20.8s,baz=165,slow=35						
BRTR	**Keskin Array B**	30.16	333	LR	LR	03 54 54.0	
	comp=Z,20nm,20.7s,baz=138,slow=37						
KBZ	**Khabaz**	30.79	348	LR	LR	03 57 23.6	
	comp=Z,118nm,18.7s,baz=141,slow=41						
MKAR	**Makanchi Array**	42.16	32	P	P	03 44 06.5	+0.2
	0.4nm,0.6s,baz=226,slow=8.3,SNR=4.1						
CMAR	**Chiang Mai Arr**	46.19	77	P	P	03 44 38.2	-0.8
	1.7nm,0.3s,baz=270,slow=8.9,SNR=7.2						
TORD	**Torodi Ar. Bea**	47.93	275	P	P	03 44 51.8	-0.9
	1.0nm,0.7s,baz=92,slow=7.9,SNR=6.2						
ZALV	**Zalesovo Beam**	48.19	26	P	P	03 44 54.4	+0.3
	0.5nm,0.3s,baz=226,slow=12,SNR=2.3						
NOA	**NORSAR Array B**	55.38	338	LR	LR	04 10 10.1	
	comp=Z,8.5nm,21.8s,baz=280,slow=37						
WRA	**Warramunga Arr**	88.45	111	P	P	03 49 07.5	+0.7
	0.8nm,0.7s,baz=299,slow=3.8,SNR=7.9						
ASAR	**Alice Springs**	89.02	115	P	P	03 49 09.2	-0.3
	0.4nm,0.5s,baz=286,slow=4.7,SNR=6.6						

*SJA **20** 03:38:21.7±0.8, 18°.62S×71°.27W, h28^{km}±34^{km}, ML4.4, MW4.3*

*IDC **20** 03:38:42.3±1.2, 19°.40S×70°.31W, h0^{km}, mb3.7/4, mb1 4.0/5, mb1mx3.7/26, mbtmp3.9/5, ML4.1/1, MS3.2/4, Ms1 3.1/4, ms1mx2.9/20, Error ellipse: s-maj=39.7km s-min=24.2km az=77.0*

*NEIC **20** 03:38:43.3, 19°.92S×70°.84W, h22^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.45; $M_{\theta\theta}$-0.08; $M_{\phi\phi}$-0.36; $M_{r\theta}$0.29; $M_{\theta\phi}$0.17; $M_{\phi r}$-0.94; Fault plane solution: $M_0$1.08000×10^{15} NP1:ϕ_s327.94000°, δ12.40000°, λ75.85000°. NP2:ϕ_s162.42000°, δ77.99000°, λ93.08000°. Principal axes: T 1.0873, Plg57.0000°, Azm76.0000°; N -0.0121, Plg3.0000°, Azm342.0000°; P -1.0752, Plg33.0000°, Azm250.0000°;*

*NEIC **20** 03:38:43.3±1.3, 19°.89S±0°.02×70°.83W±0°.05, h21^{km}±5^{km}, mb3.8/4, Mwr4.0/41, ML4.1(GUC) Error ellipse: s-maj=7.7km s-min=1.1km az=106.0*

*GUC **20** 03:38:44.1±0.8, 19°.88S×70°.85W, h43^{km}±2^{km}, ML4.1*

ISC 20 03:38:42.7±1.1**, 19°.80S**±0°.02×**70°.85W**±0°.05**, h22**^{km}±8^{km}**, n57, σ1^{s}.94**/73**, mb4.0**/4**, 8C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	0.71	73	*i* P	Pn	03 38 57.6	+0.1
PSGC				⇑*i*P	Pn	03 38 57.6	+0.1
PSGCX	**Pisagua**	0.71	73		Pn	03 38 57.0	-0.6
PSGCX					Sn	03 39 07.3	-0.5
TA01	**Diego Aracena**	0.98	141	⇓*i*P	Pb	03 39 00.9	-0.2
TA01				*i* S	Sb	03 39 13.9	+0.3
TA01				IAML		03 39 15.3	
	comp=E,7µm,0.5s						
PB11	**IPOC Station P**	1.12	88	⇓*i*P	Pb	03 39 04.1	+0.6
PB11				*i* S	Sn	03 39 19.1	+1.1
PB11				IAML		03 39 20.2	
	comp=N,8µm,0.2s						
PB11	**IPOC Station P**	1.12	88		Pb	03 39 03.5	0.0
PB11					Sn	03 39 19.4	+1.3
PATCX	**Punta Patache**	1.20	147	⇑*i*P	Pn	03 39 04.2	-0.1
PATCX				*i* S	Sn	03 39 19.1	-0.9
PATCX				IAML		03 39 26.0	
	comp=E,4µm,0.5s						
PATCX	**Punta Patache**	1.20	147		Pn	03 39 04.2	-0.1
PB12	**IPOC Station P**	1.28	23	⇑*i*P	Pb	03 39 07.4	+1.2
PB12				*i* S	Sb	03 39 25.1	+2.9
PB12	**IPOC Station P**	1.28	23		Pb	03 39 07.1	+0.9
PB12					Sb	03 39 25.6	+3.3
AP01	**Chacalluta**	1.50	19	*i* P	Pb	03 39 10.6	+0.7
AP01				*i* S	Sb	03 39 31.1	+2.6
AP01				IAML		03 39 37.8	
	comp=E,8µm,0.3s						
GO01	**Chusmiza**	1.56	85	*e*P	Pb	03 39 11.6	+0.4
GO01				*i* S	Sb	03 39 32.8	+2.1
GO01	**Chusmiza**	1.56	85		Pb	03 39 10.6	-0.6
PB08	**IPOC Station P**	1.63	102	⇑*i*P	Pb	03 39 11.9	-0.4
PB08				*i* S	Sb	03 39 33.5	+0.9
PB08				IAML		03 39 36.5	
	comp=N,2µm,0.3s						
PB02	**IPOC Station P**	1.75	150	⇑*i*P	Pn	03 39 12.0	+0.2
PB02				*i* S	Sn	03 39 34.1	+0.6
PB02				IAML		03 39 40.4	
	comp=E,6µm,0.4s						
PB01	**IPOC Station P**	1.77	134	⇑*i*P	Pn	03 39 12.9	+0.8
PB01				*i* S	Sn	03 39 34.9	+0.9
PB01				IAML		03 39 41.6	
	comp=E,5µm,0.4s						
PB01	**IPOC Station P**	1.77	134		Pn	03 39 12.3	+0.2
PB16	**IPOC Station P**	1.93	41	⇑*i*P	Pb	03 39 17.5	-0.1
PB16				*e*S	Sb	03 39 43.6	+2.1
PB16				IAML		03 39 46.8	
	comp=N,1µm,0.4s						
PB16	**IPOC Station P**	1.93	41		Pb	03 39 17.3	-0.3
PB07	**IPOC Station P**	2.11	155	*e*P	Pn	03 39 16.7	-0.2
PB07				*i* S	Sn	03 39 43.1	+0.5
PB07				IAML		03 39 56.9	
	comp=E,2µm,0.5s						
PB07	**IPOC Station P**	2.11	155	Pn	Pn	03 39 16.8	-0.2
PB03	**IPOC Station P**	2.46	156	*e*P	Pn	03 39 21.5	-0.1
PB03				*i* S	Sn	03 39 52.0	+1.0
PB03				IAML		03 40 05.0	
	comp=E,1µm,0.4s						
PB09	**IPOC Station P**	2.49	143	⇑*i*P	Pn	03 39 23.4	+1.4
PB09				*i* S	Sb	03 39 58.7	+1.6
PB09				IAML		03 40 05.1	
	comp=E,2µm,0.5s						
PB04	**IPOC Station P**	2.60	166		Pn	03 39 22.6	-0.9
PB04	**IPOC Station P**	2.60	166	*i* P	Pn	03 39 22.3	-1.3
PB04				*e*S	Sb	03 40 07.8	+7.5
PB05	**IPOC Station P**	3.09	169	*i* P	Pn	03 39 29.0	-1.3
PB05				*e*S	Sb	03 40 19.3	+4.8
PB05				IAML		03 40 30.7	
	comp=Z,316nm,0.4s						
PB06	**IPOC Station P**	3.12	158	*i* P	Pn	03 39 30.3	-0.5
PB06				*e*S	Sb	03 40 20.1	+4.7
PB06				IAML		03 40 27.6	
	comp=Z,680nm,0.5s						
LVC	**Limon Verde**	3.33	147	Pn	Pn	03 39 35.8	+2.0
	comp=Z,18nm,0.3s,baz=355,slow=7.3,SNR=78						
LVC				Sn	Sb	03 40 20.9	-0.5
	comp=Z,39nm,0.3s,baz=253,slow=22,SNR=8.6						
LVC				LR	LR	03 41 02.6	
	comp=Z,269nm,18.3s,baz=314,slow=41						
LVC	**Limon Verde**	3.33	147		Pn	03 39 33.3	-0.4
LVC	**Limon Verde**	3.33	147	*e*P	Pn	03 39 33.1	-0.6
LVC				*e*S	Sb	03 40 24.8	+3.4
LVC				IAML		03 40 33.7	
	comp=Z,303nm,0.7s						
PB15	**IPOC Station P**	3.62	160		Pn	03 39 37.7	0.0
PB15	**IPOC Station P**	3.62	160	*i* P	Pn	03 39 37.4	-0.3
PB15				*e*S	Sb	03 40 32.8	+3.0
PB15				IAML		03 40 41.6	
	comp=Z,739nm,0.5s						
PB10	**IPOC Station P**	3.70	176		Pn	03 39 36.8	-1.8
PB10	**IPOC Station P**	3.70	176	*i* P	Pn	03 39 36.8	-1.8
PB10				*e*S	Sb	03 40 33.8	+2.0
PB10				IAML		03 40 58.2	
	comp=Z,92nm,0.6s						
LPAZ	**La Paz**	4.35	37	Pn	Pb	03 39 53.5	-5.2
	comp=Z,2.7nm,0.3s,baz=217,slow=4.2,SNR=58						
LPAZ	**La Paz**	4.35	37		Pn	03 39 48.5	+0.4
GO02	**Mina Guanaco**	5.46	168		Pn	03 40 02.4	-0.6
SIV	**San Ignacio**	10.05	69	Pn	Pn	03 41 06.3	+0.5
	comp=Z,1.4nm,0.3s,baz=276,slow=9.0,SNR=16						
SIV				LR	LR	03 45 35.5	
	comp=Z,182nm,18.4s,baz=288,slow=44						
CPUP	**Villa Florida**	14.03	120	LR	LR	03 48 34.9	
	comp=Z,72nm,19.3s,baz=134,slow=43						
PLCA	**Paso Flores**	20.86	179	P	Pn	03 43 31.4	+5.7
	comp=Z,1.8nm,0.9s,baz=13,slow=13,SNR=3.6						
PLCA	**Paso Flores**	20.86	179	P	P	03 43 23.2	0.0
PLCA				IAmb	IAmb	03 43 41.5	
	comp=Z,1.7nm,0.8s						
PTGA	**Pitinga**	21.74	31	P	P	03 43 32.4	-0.4
	comp=Z,3.5nm,0.3s,baz=310,slow=23,SNR=17						
PTGA	**Pitinga**	21.74	31	P	P	03 43 32.4	-0.4
PTGA				IAmb	IAmb	03 43 45.2	
	comp=Z,5.4nm,0.8s						
BDFB	**Brasilia**	22.13	83	P	P	03 43 34.0	-3.1
	comp=Z,1.8nm,0.5s,baz=258,slow=10,SNR=4.8						
BDFB				LR	LR	03 53 53.0	
	comp=Z,62nm,20.9s,baz=252,slow=42						
BDFB	**Brasilia**	22.13	83	P	P	03 43 36.4	-0.7
BDFB				IAmb	IAmb	03 43 52.6	
	comp=Z,2.5nm,0.7s						
TORD	**Torodi Ar. Bea**	78.52	71	P	P	03 50 42.9	+0.1
	comp=Z,1.3nm,0.5s,baz=247,slow=5.0,SNR=11						
TORD	**Torodi Ar. Bea**	78.52	71	P	P	03 50 43.1	+0.3
YKA	**Yellowknife Ar**	89.00	341	P	P	03 51 36.9	+1.6
	comp=Z,0.3nm,0.7s,baz=132,slow=5.3,SNR=5.2						
H11S2	**WAKE ISLAND Hy**	125.84	279	T	T	06 17 07.4	
	baz=101,slow=74,SNR=75						
H11S1	**WAKE ISLAND Hy**	125.85	279	T	T	06 17 08.0	
	baz=101,slow=74,SNR=54						
H11S3	**WAKE ISLAND Hy**	125.86	279	T	T	06 17 08.7	
	baz=101,slow=74,SNR=57						
H11N3	**WAKE ISLAND Hy**	125.89	280	T	T	06 17 07.4	
	baz=100,slow=74,SNR=20						
H11N2	**WAKE ISLAND Hy**	125.90	280	T	T	06 17 08.8	
	baz=100,slow=74,SNR=19						
H11N1	**WAKE ISLAND Hy**	125.90	280	T	T	06 17 09.1	
	baz=100,slow=74,SNR=12						
ZALV	**Zalesovo Beam**	141.15	23	PKP	PKiKP	03 58 12.5	-1.4
	comp=Z,0.4nm,0.2s,baz=298,slow=3.1,SNR=1.5						
MKAR	**Makanchi Array**	145.27	33	PKP	PKiKP	03 58 20.3	-2.3
	comp=Z,0.9nm,0.7s,baz=322,slow=4.1,SNR=11						
MKAR	**Makanchi Array**	145.27	33		PKiKP	03 58 19.1	-3.5
SONM	**Songino Array**	151.95	4	PKPbc	PKiKP	03 58 38.6	+2.1
	comp=Z,0.4nm,0.6s,baz=348,slow=3.4,SNR=2.5						
SONM				PKPab	pPKPab	03 58 46.5	-5.3
	comp=Z,0.8nm,1.0s,baz=349,slow=2.2,SNR=3.7						

IDC 20 03:45:25.9±2.0**, 5°.42S×152°.50E, h0^{km}, mb3.5**/2**, mb1 3.8**/2**, mb1mx3.3**/36**, mbtmp3.5**/2**, Error ellipse: s-maj=41.7km s-min=19.6km az=95.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	1.20	337	Pn	Pb	03 45 49.6	+0.1
	251nm,0.3s,baz=155,slow=1.7,SNR=116						
KRVT				Sn	Sn	03 46 08.8	+1.9
	193nm,0.3s,baz=156,slow=23,SNR=24						
KRVT				LR	LR	03 46 12.4	
	comp=Z,87nm,18.0s,baz=79,slow=39						
WRA	**Warramunga Arr**	22.82	229	P	P	03 50 30.6	-0.1
	1.0nm,0.7s,baz=53,slow=9.7,SNR=7.8						
ASAR	**Alice Springs**	25.50	223	P	P	03 50 56.0	-0.2
	0.5nm,0.8s,baz=50,slow=9.8,SNR=7.8						
TORD	**Torodi Ar. Bea**	150.21	287	PKPbc	PKiKP	04 05 20.5	-0.4
	0.2nm,0.6s,baz=82,slow=2.7,SNR=2.2						
TORD				PKPab	PKPab	04 05 25.1	-1.0
	0.5nm,0.7s,baz=54,slow=2.5,SNR=3.1						

IDC 20 03:50:19.6±3.0**, 32°.81S×179°.31E, h0^{km}, mb3.3**/2**, mb1 3.6**/3**, mb1mx3.5**/32**, mbtmp3.4**/3**, ML3.4**/1**, Error ellipse: s-maj=65.9km s-min=35.1km az=94.0, South of**

Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.73**	**198**	Pn	Pn	03 51 44.0	-1.8
	1.1nm,0.3s,baz=262,slow=3.2,SNR=9.5						
URZ				Sn	Sn	03 52 55.7	+3.4
	0.4nm,0.3s,baz=78,slow=17,SNR=1.0						
ASAR	**Alice Springs**	**40.77**	**271**	P	P	03 58 03.1	+0.4
	0.2nm,0.5s,baz=117,slow=7.4,SNR=2.7						
WRA	**Warramunga Arr**	**41.98**	**276**	P	P	03 58 12.0	-0.6
	0.2nm,0.4s,baz=113,slow=8.1,SNR=5.2						
FINES	**FINESS Array B**	**146.53**	**337**	PKPbc	PKPbc	04 10 01.8	-0.3
	1.1nm,0.7s,baz=67,slow=4.7,SNR=4.3						

IDC 20 03:50:27.6±4.3**, 5°.35S**×**151°.95E, h0^{km}, mb3.3**/2**, mb1 3.6**/2**, mb1mx3.3**/38**, mbtmp3.4**/2**, Error ellipse: s-maj=158.8km s-min=17.5km az=108.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.04**	**4**	Pn	Pb	03 50 48.4	-0.1
	162nm,0.3s,baz=176,slow=1.4,SNR=51						
KRVT				Sn	Sn	03 51 06.4	+1.6
	113nm,0.3s,baz=143,slow=24,SNR=12						
WRA	**Warramunga Arr**	**22.45**	**228**	P	P	03 55 28.1	-0.3
	1.1nm,0.9s,baz=53,slow=9.6,SNR=5.0						
ASAR	**Alice Springs**	**25.17**	**222**	P	P	03 55 54.0	-1.0
	0.7nm,0.9s,baz=48,slow=10,SNR=5.6						
TORD	**Torodi Ar. Bea**	**149.66**	**287**	PKPbc	PKiKP	04 10 22.4	+0.9
	0.4nm,0.8s,baz=113,slow=1.9,SNR=2.1						

EAF ***20*** *03:59:09.9±1.1, 26°.43S×27°.85E, h10^{km}, MD3.4*
PRE ***20*** *03:59:10.2±0.9, 26°.36S×27°.27E, h2^{km}, ML3.0*
BUL ***20*** *03:59:13.1±0.6, 26°.43S×27°.85E, h10^{km}±11^{km}, MD3.5*
ISC 20 03:59:09.1±1.2**, 26°.36S**±0°.07×**27°.3E**±0°.1**, h10^{km}, n9, σ2ˢ.68**/16**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	**Lobatse**	**2.07**	**310**	*i* P	**Pg**	**03 59 50.5**	**+1.8**
LBTB	**Lobatse**	**2.07**	**310**	*i* P	**Pg**	**03 59 50.5**	**+1.8**
BOSA	**Boshof**	**2.91**	**219**	*i* P	**Pb**	**03 59 59.9**	**-1.3**
BOSA				*i* S	**Sb**	**04 00 35.2**	**-1.7**
BOSA	**Boshof**	**2.91**	**219**	*i* P	**Pb**	**03 59 59.9**	**-1.3**
BOSA				*i* S	**Sb**	**04 00 35.2**	**-1.7**
MSNA	**Messina**	**4.68**	**32**	*e*P	**Pn**	**04 00 22.4**	**+2.5**
MSNA				*e*S	**Sn**	**04 01 13.7**	**-0.6**
MSNA				AML	AML	04 01 36.9	
	comp=Z,50nm,0.4s						
PKA	**Prieska**	**5.23**	**230**	*e*P	**Pn**	**04 00 29.4**	**+2.0**
PKA				*e*S	**Sn**	**04 01 27.1**	**-0.7**
PKA				AML	AML	04 02 10.1	
	comp=Z,21nm,0.6s						
UPI	**Upington**	**5.77**	**248**	*e*P	**Pn**	**04 00 37.6**	**+2.7**
UPI				*e*S	**Sn**	**04 01 40.0**	**-1.2**
UPI				AML	AML	04 02 18.3	
	comp=Z,44nm,0.5s						
MATP	**Matopo**	**6.00**	**10**	*i* P	**Pn**	**04 00 38.9**	**+0.8**
MATP				*i* S	**Sn**	**04 01 41.6**	**-5.3**
MATP	**Matopo**	**6.00**	**10**	*i* P	**Pn**	**04 00 38.9**	**+0.8**
MATP				*i* S	**Sn**	**04 01 41.6**	**-5.3**

BJI ***20*** *04:00:19.9±0.0, 23°.40N×94°.33E, h60^{km}, mB4.7/14, mb4.4/23, Ms4.1/6, Ms7 4.0/3*
NDI ***20*** *04:00:20.3±2.9, 23°.33N×94°.38E, h109^{km}±37^{km}, mb4.7, mb4.5(NEIC)*
NEIC ***20*** *04:00:21.2±1.7, 23°.36N±0°.06×94°.44E±0°.07, h71^{km}±6^{km}, mb4.5/37, Error ellipse: s-maj=8.9km s-min=8.5km az=52.0*
IDC ***20*** *04:00:21.5±1.3, 23°.38N×94°.42E, h63^{km}±11^{km}, mb4.0/28, mb1 4.1/30, mb1mx4.0/44, mbtmp4.3/30, MS3.5/12, Ms1 3.5/12, ms1mx3.3/32, Error ellipse: s-maj=11.3km s-min=8.9km az=36.0*
ISC 20 04:00:20.2±0.7**, 23°.31N**±0°.04×**94°.33E**±0°.04**, h58^{km}**±6^{km}**, n157, σ1ˢ.98**/183**, mb4.4**/49**, MS3.4**/12**, 9C-6D, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAIH	**SAIHA**	**1.49**	**237**	*e*PG	**Pn**	**04 00 47.4**	**+2.6**
SAIH				*e*SG	**Sn**	**04 01 07.0**	**+3.8**
KOHI	**KOHIMA**	**2.40**	**355**	*e*PG	**Pn**	**04 00 58.7**	**+1.4**
KOHI				*e*SG	**Sn**	**04 01 27.4**	**+1.7**
BRDH	**Bariadhala**	**2.56**	**256**	P	**Pn**	**04 01 00.6**	**+1.4**
	30nm,0.3s,baz=108,slow=11,SNR=11						
BRDH				S	**Sn**	**04 01 33.1**	**+4.0**
	124nm,0.3s,baz=276,slow=22,SNR=8.2						
BELO	**BELONIA**	**2.65**	**269**	*e*PG	**Pn**	**04 01 01.7**	**+1.2**
BELO				*e*SG	**Sn**	**04 01 33.7**	**+2.2**
AGT	**Agartala**	**2.88**	**282**	*e*PG	**Pn**	**04 01 04.0**	**+0.3**
AGT				*e*SG	**Sn**	**04 01 37.9**	**+0.7**
SHL	**Shillong**	**3.16**	**316**	*e*PG	**Pn**	**04 01 08.8**	**+1.1**
SHL				*e*SG	**Sn**	**04 01 43.4**	**-0.9**
SIMRM	**Sittwe**	**3.44**	**203**	Pn	**Pn**	**04 01 14.1**	**+2.8**
SIMRM				Sn	**Sn**	**04 01 49.0**	**-1.8**
TEZP	**TEZPUR**	**3.57**	**337**	*e*PG	**Pn**	**04 01 14.0**	**+0.9**
TEZP				*e*SG	**Sn**	**04 01 52.9**	**-1.2**
GUWA	**GUWAHATI**	**3.74**	**321**	*e*PG	**Pn**	**04 01 14.9**	**-0.5**
GUWA				*e*SG	**Sn**	**04 01 56.4**	**-1.8**
MHMT	**Maesarieng**	**6.12**	**146**	P	**Pn**	**04 01 47.3**	**-0.8**
CM33	**Chiang Mai Arr**	**6.21**	**135**	P	**Pn**	**04 01 48.3**	**-1.0**
CM33				S	Sn	04 03 14.1	+15
CHTO	**Chiang Mai**	**6.21**	**135**		**Pn**	**04 01 49.2**	**-0.2**
CHTO				Sn	**Sn**	**04 02 59.2**	**+0.1**
CMMT	**Chiang Mai**	**6.22**	**135**	P	**Pn**	**04 01 47.8**	**-1.6**
CM34	**Chiang Mai Arr**	**6.32**	**134**	P	**Pn**	**04 01 50.3**	**-0.5**
CM35	**Chiang Mai Arr**	**6.45**	**135**	P	**Pn**	**04 01 50.8**	**-1.7**
CM31	**Chiang Mai Arr**	**6.48**	**137**	Pn	**Pn**	**04 01 52.7**	**-0.3**
CMAR	**Chiang Mai Arr**	**6.48**	**137**	P	**Pn**	**04 01 52.5**	**-0.4**
	1.6nm,0.3s,baz=316,slow=14,SNR=16						
CMAR				S	**Sn**	**04 03 11.9**	**+6.4**
	baz=321,slow=20,SNR=1.4						
CMAR	**Chiang Mai Arr**	**6.48**	**137**		**Pn**	**04 01 52.6**	**-0.4**
CMAR					**Sn**	**04 03 04.1**	**-1.4**
CM13	**Chiang Mai Arr**	**6.48**	**138**	P	**Pn**	**04 01 51.8**	**-1.2**
LAMP	**Lampang**	**6.88**	**133**	P	**Pn**	**04 01 56.6**	**-1.9**
LSA	**Lhasa**	**6.97**	**337**		**Pn**	**04 02 00.8**	**+0.7**
LSA					**Sn**	**04 03 17.9**	**-0.3**
TAPN	**Taplejung**	**7.21**	**305**	*e*Pn	**Pn**	**04 02 04.1**	**+0.8**
ODAN	**Odare**	**7.21**	**301**	*e*Pn	**Pn**	**04 02 03.1**	**-0.1**
ODAN				*e*Sn	**Sn**	**04 03 20.0**	**-3.9**
	587nm,0.6s						
PHRA	**Phrae**	**7.30**	**130**	P	**Pn**	**04 02 02.2**	**-2.1**
NANT	**Nan**	**7.45**	**126**	P	**Pn**	**04 02 04.2**	**-2.2**
BOK	**Bokaro**	**7.76**	**275**	*e*PG	**Pn**	**04 02 10.8**	**+0.2**
BOK				*e*SG	**Sn**	**04 03 32.9**	**-4.2**
KMI	**Kunming**	**7.88**	**75**	P	**Pn**	**04 02 16.1**	**+3.7**
KMI				sP		04 02 30.4	
KMI				pmax	pmax		
	comp=Z,27nm,1.0s						
KMI				LR	LR		
	comp=N,270nm,6.2s						
KMI				LR	LR		
	comp=E,450nm,7.7s						
KMI	**Kunming**	**7.88**	**75**	Pn	**Pn**	**04 02 11.7**	**-0.7**
RAMN	**Ramite**	**7.88**	**299**	*e*Pn	**Pn**	**04 02 11.9**	**-0.5**
RAMN				*e*Sn	**Sn**	**04 03 34.1**	**-6.3**
PHIT	**Phitsanulok**	**8.35**	**136**	P	**Pn**	**04 02 16.6**	**-2.0**
JIRN	**Jiri**	**8.53**	**302**	*e*Pn	**Pn**	**04 02 20.6**	**-0.8**
JIRN				*e*Sn	**Sn**	**04 03 51.0**	**-5.4**
	215nm,0.3s						
GUN	**Gumba**	**8.89**	**303**	*e*Pn	**Pn**	**04 02 25.7**	**-0.6**
GUN				*e*Sn	**Sn**	**04 04 00.0**	**-5.3**
	253nm,0.5s						
SLVN	**Son La**	**9.08**	**101**		**Pn**	**04 02 28.9**	**+0.3**
PKI	**Pulchoki**	**9.11**	**300**	*e*Pn	**Pn**	**04 02 29.2**	**-0.1**
PBKT	**Sadao Pong**	**9.16**	**136**	P	**Pn**	**04 02 28.5**	**-1.2**
PBKT	**Sadao Pong**	**9.16**	**136**		**Pn**	**04 02 29.0**	**-0.7**
KKN	**Kakani**	**9.31**	**300**	*e*Pn	**Pn**	**04 02 31.5**	**-0.4**
KKN				*e*Sn	**Sn**	**04 04 10.1**	**-5.1**
	99nm,0.5s						
DMN	**Daman**	**9.37**	**299**	*e*Pn	**Pn**	**04 02 32.1**	**-0.6**
GKN	**Gorkha**	**9.91**	**300**	*e*Pn	**Pn**	**04 02 38.8**	**-1.3**
GKN				*e*Sn	**Sn**	**04 04 23.7**	**-6.2**
	224nm,0.6s						
DANN	**Dangsing**	**10.76**	**300**	*e*Pn	**Pn**	**04 02 49.9**	**-1.9**
DANN				*e*Sn	**Sn**	**04 04 42.6**	**-8.3**
	93nm,0.6s						
LZH	**Lanzhou**	**15.16**	**31**	*e*P	**P**	**04 03 57.9**	**+3.0**
LZH				pP	pP	04 04 00.8	-6.7
LZH				sP	sP	04 04 03.6	-11
ENH	**Enshi**	**15.20**	**60**	P	**Pn**	**04 03 50.3**	**-1.0**
ENH				IAmb	IAmb	04 04 03.9	
	comp=Z,26nm,0.9s						
BHPL	**Bhopal**	**15.54**	**273**	*e*x	**Pn**	**04 03 52.8**	**-2.9**
BHPL				IAmb	IAmb	04 04 04.9	
	comp=Z,96nm,2.0s						
XAN	**Xi'an**	**16.66**	**47**	P	**P**	**04 04 11.4**	**0.0**
XAN				S	**S**	**04 07 19.9**	**-2.6**
XAN				pmax	pmax		
	comp=Z,18nm,1.3s						
XAN				pmax	pmax		
	comp=Z,83nm,3.1s						
XAN				LR	LR		
	comp=Z,150nm,9.2s						
XAN				LR	LR		
	comp=Z,86nm,11.4s						
XAN	**Xi'an**	**16.66**	**47**	P	**Pn**	**04 04 08.2**	**-1.6**
GTA	**Gaotai**	**16.71**	**15**	*e*P	**P**	**04 04 11.8**	**-0.2**
GTA				pP	pP	04 04 25.3	+0.7
GTA				sP	sP	04 04 29.8	-2.2
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WHN	**Wuhan**	**19.23**	**64**	P	**Pn**	**04 04 43.4**	**+2.3**
PALK	**Pallekele**	**20.64**	**222**	P	Pn	04 04 58.3	+0.4
	comp=Z,3.7nm,0.7s,baz=30,slow=9.5,SNR=4.3						
PALK				LR	LR	04 13 05.2	
	comp=Z,96nm,21.4s,baz=43,slow=37						
PALK	**Pallekele**	**20.64**	**222**	P	Pn	04 04 57.5	-0.5
PSI	**Prapat**	**20.87**	**167**	P	Pn	04 05 01.7	+1.0
	comp=Z,5.8nm,0.8s,baz=301,slow=5.0,SNR=6.9						
RPSI	**Rantau Prapat**	**20.98**	**167**	P	**P**	**04 04 59.8**	**+1.2**
NIL	**Nilore**	**21.16**	**304**	P	**P**	**04 05 01.4**	**+0.8**
NIL				IAmb	IAmb	04 05 04.2	
	comp=Z,19nm,0.9s						
KSH	**Kashi**	**22.43**	**320**	P	**P**	**04 05 17.3**	**+3.0**
KSH				pP	pP	04 05 28.3	+0.8
KSH				S	**S**	**04 09 14.3**	**-2.6**
KSH				sS	Sn	04 09 33.0	+0.1
KSH				SS	**SnSn**	**04 09 58.1**	**+8.6**
KSH				pmax	pmax		
	comp=Z,32nm,1.2s						
KSH				pmax	pmax		
	comp=Z,400nm,6.4s						
KSH				LR	LR		
	comp=Z,220nm,9.6s						
KSH				LR	LR		
	comp=Z,170nm,9.8s						
ULHL	**Ulahol**	**24.15**	**326**	P	**P**	**04 05 33.3**	**+2.2**
	SNR=12						
BOOM	**Boomskoye usch**	**24.48**	**326**	P	**P**	**04 05 34.3**	**+0.3**
KBL	**Kabul**	**24.73**	**303**	P	**P**	**04 05 35.4**	**-1.1**
KBL				IAmb	IAmb	04 05 49.0	
	comp=Z,8.5nm,0.8s						
UCH	**Uchtor**	**25.06**	**324**	P	**P**	**04 05 42.0**	**+2.4**
	SNR=8.2						
AAK	**Ala-Archa**	**25.35**	**324**	P	**P**	**04 05 44.3**	**+2.5**
	comp=Z,7.0nm,0.8s,baz=126,slow=6.5,SNR=16						
AAK				LR	LR	04 17 30.7	
	comp=Z,96nm,20.3s,baz=123,slow=41						
AAK	**Ala-Archa**	**25.35**	**324**	P	**P**	**04 05 44.9**	**+3.0**
	SNR=7.2						
AAK	**Ala-Archa**	**25.35**	**324**	P	**P**	**04 05 42.6**	**+0.7**
MK31	**Makanchi Array**	**25.36**	**340**	P	**P**	**04 05 40.6**	**-1.1**
MK31				IAmb	IAmb	04 05 44.2	
	comp=Z,15nm,0.7s						
MKAR	**Makanchi Array**	**25.36**	**340**	P	**P**	**04 05 43.2**	**+1.5**
	comp=Z,18nm,0.6s,baz=145,slow=9.8,SNR=243						
MKAR				PcP	**PcP**	**04 09 12.1**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=194,slow=2.4,SNR=3.7						
MKAR				ScP	**ScP**	**04 12 47.8**	**+0.4**
	comp=Z,0.2nm,0.7s,baz=182,slow=4.3,SNR=2.5						
MKAR				LR	LR	04 18 01.4	
	comp=Z,53nm,18.2s,baz=137,slow=42						
MKAR	**Makanchi Array**	**25.36**	**340**	P	**P**	**04 05 41.3**	**-0.4**
MKAR					**PcP**	**04 09 11.3**	**-1.7**
AML	**Almayashu**	**25.45**	**322**	P	**P**	**04 05 45.7**	**+2.7**
	SNR=7.9						
MAKZ	**Makanchi**	**25.46**	**340**	P	**P**	**04 05 43.3**	**+0.6**
MAKZ				IAmb	IAmb	04 05 48.8	
	comp=Z,9.2nm,0.8s						
EKS2	**Erkin-Say**	**25.75**	**323**	P	**P**	**04 05 48.5**	**+2.9**
	SNR=11						
SONM	**Songino Array**	**26.30**	**19**	P	**P**	**04 05 50.8**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=196,slow=10.0,SNR=9.4						
SONM				ScP	**ScP**	**04 12 50.7**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=217,slow=3.5,SNR=4.4						
SONM	**Songino Array**	**26.30**	**19**	P	**P**	**04 05 49.6**	**-0.8**
TLY	**Talaya**	**29.22**	**12**	LR	LR	04 18 09.5	
	comp=Z,40nm,19.5s,baz=186,slow=37						
KURBB	**Kurchatov Arra**	**29.91**	**340**	P	**P**	**04 06 23.8**	**+1.4**
	comp=Z,8.6nm,0.9s,baz=152,slow=8.1,SNR=29						
KURBB				PcP	**PcP**	**04 09 24.5**	**+0.6**
	comp=Z,1.7nm,0.9s,baz=173,slow=2.2,SNR=4.4						
KURBB				ScP	**ScP**	**04 13 00.5**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=196,slow=27,SNR=8.1						
KURK	**Kurchatov**	**29.96**	**340**	P	**P**	**04 06 23.3**	**+0.5**
KURK				IAmb	IAmb	04 06 24.8	
	comp=Z,9.4nm,0.8s						
KURK					**PcP**	**04 09 22.9**	**-1.2**
ZAA0	**Zalesovo Array**	**31.42**	**349**	IAmb	IAmb	04 06 37.6	
	comp=Z,5.4nm,0.8s						
ZALV	**Zalesovo Beam**	**31.42**	**349**	P	**P**	**04 06 36.6**	**+1.0**
	comp=Z,2.4nm,0.4s,baz=168,slow=7.6,SNR=16						
ZALV				LR	LR	04 19 04.9	
	comp=Z,16nm,18.7s,baz=46,slow=36						
ZALV	**Zalesovo Beam**	**31.42**	**349**	P	**P**	**04 06 36.1**	**+0.5**
GEYT	**Alibeck**	**34.17**	**304**	P	**P**	**04 07 02.8**	**+2.9**
	comp=Z,0.6nm,0.3s,baz=130,slow=5.8,SNR=1.5						
GEYT				LR	LR	04 24 07.3	
	comp=Z,84nm,21.6s,baz=35,slow=42						
GEYT	**Alibeck**	**34.17**	**304**	P	**P**	**04 07 01.3**	**+1.4**
BVAR	**Borovoye Array**	**34.80**	**335**	P	**P**	**04 07 05.7**	**+0.6**
	comp=Z,1.8nm,0.6s,baz=134,slow=11,SNR=8.8						
BVAR				PcP	**PcP**	**04 09 37.6**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=159,slow=4.5,SNR=3.8						
USRK	**Ussuriysk Ar.**	**37.17**	**47**	P	**P**	**04 07 24.5**	**-1.0**
	comp=Z,3.0nm,0.8s,baz=229,slow=10,SNR=4.6						
USRK	**Ussuriysk Ar.**	**37.17**	**47**	P	**P**	**04 07 24.0**	**-1.5**
ABKAR	**Akbulak array**	**37.41**	**322**	P	**P**	**04 07 28.4**	**+0.9**
AKTO	**Aktyubinsk**	**39.08**	**323**	P	**P**	**04 07 42.9**	**+1.4**
	comp=Z,5.7nm,0.7s,baz=122,slow=8.5,SNR=23						
MJAR	**Matsushiro Arr**	**39.92**	**60**	P	**P**	**04 07 48.1**	**-0.6**
	comp=Z,2.2nm,0.7s,baz=268,slow=8.8,SNR=4.1						
RAYN	**Ar Rayn**	**44.63**	**280**	P	**P**	**04 08 28.1**	**+0.9**
RAYN				IAmb	IAmb	04 08 31.6	
	comp=Z,4.2nm,0.8s						
AKH	**Akhalkalaki**	**45.89**	**306**	IAmb	IAmb	04 08 41.3	
	comp=Z,5.9nm,0.9s						
NRIK	**Noril'sk**	**46.22**	**357**	P	**P**	**04 08 39.5**	**+0.4**
	comp=Z,2.7nm,0.4s,baz=151,slow=8.1,SNR=6.5						
TIXI	**Tiksi**	**52.18**	**13**	P	**P**	**04 09 23.8**	**-0.7**
KLMR	**Klimovskoe**	**52.95**	**330**	*e*P	**P**	**04 09 29.4**	**-1.0**
KLMR				AMP		04 09 32.7	
	comp=Z,36nm,2.4s						
BRTR	**Keskin Array B**	**53.30**	**303**	P	**P**	**04 09 35.0**	**+1.4**
	comp=Z,1.2nm,0.8s,baz=129,slow=9.7,SNR=6.3						
BRTR				PcP	**PcP**	**04 10 40.7**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=54,slow=7.3,SNR=2.1						
BRTR				LR	LR	04 35 18.3	
	comp=Z,27nm,18.8s,baz=164,slow=39						
ELL	**Elmali**	**56.41**	**300**	P	**P**	**04 09 56.7**	**+0.6**
AKASG	**Malin Array Be**	**56.65**	**316**	P	**P**	**04 09 57.1**	**-0.2**
	comp=Z,2.5nm,0.7s,baz=80,slow=6.2,SNR=9.0						
AKASG				LR	LR	04 37 59.6	
	comp=Z,51nm,20.2s,baz=185,slow=40						
AKASG	**Malin Array Be**	**56.65**	**316**	P	**P**	**04 09 57.1**	**-0.2**
HARR	**Harsova**	**57.43**	**309**	⇑P	**P**	**04 10 04.6**	**+1.6**
WB0	**Warramunga Arr**	**57.97**	**134**	P	**P**	**04 10 06.4**	**-0.6**
WB0				IAmb	IAmb	04 10 09.9	
	comp=Z,6.0nm,0.9s						
WRA	**Warramunga Arr**	**58.06**	**135**	P	**P**	**04 10 08.0**	**+0.3**
	comp=Z,3.9nm,0.7s,baz=323,slow=7.4,SNR=38						
WRA	**Warramunga Arr**	**58.06**	**135**	P	**P**	**04 10 07.1**	**-0.6**
WR0	**Warramunga Arr**	**58.21**	**134**	P	**P**	**04 10 08.1**	**-0.6**
WR0				IAmb	IAmb	04 10 11.9	
	comp=Z,3.7nm,0.7s						
VRI	**Vrincioaia**	**58.25**	**311**	⇑P	**P**	**04 10 10.4**	**+1.7**
TESR	**Tescani**	**58.28**	**311**	⇑P	**P**	**04 10 09.9**	**+1.0**
PLOR	**Plostina**	**58.30**	**311**	⇑P	**P**	**04 10 11.3**	**+2.2**
BIZ	**Bicaz**	**58.65**	**312**	⇓P	**P**	**04 10 12.9**	**+1.4**
MLR	**Muntele Rosu**	**58.81**	**310**	⇓P	**P**	**04 10 14.9**	**+2.2**
BURAR	**Bucovina Array**	**59.23**	**313**	⇑P	**P**	**04 10 17.2**	**+1.5**
FINES	**FINESS Array B**	**59.42**	**329**	P	**P**	**04 10 17.1**	**+0.7**
	comp=Z,3.0nm,0.7s,baz=100,slow=6.9,SNR=8.1						
FINES				LR	LR	04 38 59.6	
	comp=Z,123nm,19.1s,baz=110,slow=39						
FINES	**FINESS Array B**	**59.42**	**329**	P	**P**	**04 10 16.8**	**+0.3**
VOIR		**59.44**	**310**	⇓P	**P**	**04 10 18.1**	**+1.0**
ARR	**Arges**	**59.74**	**310**	⇓P	**P**	**04 10 20.3**	**+1.3**
AS31	**Alice Springs**	**60.49**	**138**	P	**P**	**04 10 23.8**	**-0.6**
ASAR	**Alice Springs**	**60.49**	**138**	P	**P**	**04 10 24.8**	**+0.4**
	comp=Z,2.6nm,0.5s,baz=320,slow=6.8,SNR=30						
ASAR	**Alice Springs**	**60.49**	**138**	P	**P**	**04 10 23.5**	**-0.8**
KMBO	**Kilima Mbogo**	**60.54**	**255**	P	**P**	**04 10 26.9**	**+1.7**
	comp=Z,1.1nm,0.7s,baz=34,slow=14,SNR=4.0						
VTS	**Vitosha**	**60.97**	**307**	⇑P	**P**	**04 10 28.8**	**+1.2**
ARCES	**ARCESS Array B**	**60.98**	**338**	P	**P**	**04 10 27.6**	**+0.5**
	comp=Z,2.2nm,0.7s,baz=72,slow=9.1,SNR=5.4						
ARCES				PcP	**PcP**	**04 11 10.9**	**+1.0**
	comp=Z,2.9nm,0.8s,baz=91,slow=5.2,SNR=3.9						
ARCES	**ARCESS Array B**	**60.98**	**338**	P	**P**	**04 10 27.0**	**-0.1**
ARCES					**PcP**	**04 11 09.9**	**0.0**
TRPA	**Tarpa**	**61.01**	**313**	⇓P	**P**	**04 10 28.9**	**+1.3**
GZR	**Gura Zlata**	**61.04**	**310**	⇑P	**P**	**04 10 29.5**	**+1.5**
CRVS	**Cervenica-Dubn**	**61.68**	**314**	*e*P	**P**	**04 10 33.3**	**+1.1**
BZS	**Buzias**	**61.83**	**311**	⇓P	**P**	**04 10 34.3**	**+1.1**
MDVR	**Moldovita**	**61.84**	**310**	⇑P	**P**	**04 10 34.7**	**+1.3**
VYHS	**Vyhne**	**63.45**	**314**	*e*P	**P**	**04 10 46.3**	**+2.3**
VRAC	**Vranov**	**64.83**	**315**	⇑P	**P**	**04 10 54.5**	**+1.5**
ARSA	**Arzberg**	**65.82**	**313**	*i* P	**P**	**04 11 00.3**	**+0.9**
	comp=Z,4.8nm,1.1s						
MOA	**Molln**	**66.56**	**314**	*i* P	**P**	**04 11 04.1**	**-0.1**
	comp=Z,3.5nm,0.7s,SNR=4.2						
NB2	**NORSAR Subarra**	**66.58**	**328**	P	**P**	**04 11 04.3**	**+0.2**
	comp=Z,1.7nm,0.6s,baz=84,slow=6.5						
NOA	**NORSAR Array B**	**66.58**	**328**	P	**P**	**04 11 03.9**	**-0.2**
	comp=Z,2.9nm,0.7s,baz=85,slow=6.4,SNR=11						
GERES	**GERESS Array B**	**66.78**	**315**	P	**P**	**04 11 06.5**	**+0.9**
	comp=Z,2.9nm,0.7s,baz=72,slow=6.0,SNR=20						
GERES	**GERESS Array B**	**66.78**	**315**	P	**P**	**04 11 05.5**	**-0.2**
KBA	**Koelnbreinsper**	**67.31**	**313**	*i* P	**P**	**04 11 08.8**	**-0.4**
	comp=Z,3.1nm,1.0s						
STAL	**STALIGIAL**	**67.89**	**312**	IAmb	IAmb	04 11 13.4	
	comp=Z,5.7nm,0.8s						
ABTA	**Abfaltersbach**	**67.93**	**313**	*i* P	**P**	**04 11 12.7**	**-0.3**
	comp=Z,4.4nm,1.3s						
NRCA	**Norcia**	**68.29**	**309**	IAmb	IAmb	04 11 23.0	
	comp=Z,5.0nm,0.7s						
SQTA	**Sankt Quirin**	**68.72**	**313**	*i* P	**P**	**04 11 17.9**	**0.0**
	comp=Z,4.1nm,0.7s,SNR=4.1						
MOTA	**Moosalm**	**68.76**	**314**	*i* P	**P**	**04 11 18.3**	**+0.1**
	comp=Z,4.8nm,0.8s,SNR=5.1						
RETA	**Reutte**	**68.96**	**314**	*i* P	**P**	**04 11 19.3**	**-0.1**
	comp=Z,2.9nm,0.7s						
FETA	**Feichten**	**69.08**	**313**	*i* P	**P**	**04 11 19.5**	**-0.8**
	comp=Z,4.0nm,1.5s						
STKA	**Stephens Creek**	**71.10**	**139**	P	**P**	**04 11 32.2**	**-0.3**
	comp=Z,2.1nm,0.8s,baz=294,slow=7.8,SNR=4.1						
STKA	**Stephens Creek**	**71.10**	**139**	P	**P**	**04 11 31.6**	**-0.8**
KEST	**Kesra**	**72.89**	**302**	P	**P**	**04 11 44.2**	**+0.8**
	comp=Z,6.1nm,0.9s,baz=202,slow=1.2,SNR=6.8						
KEST	**Kesra**	**72.89**	**302**	IAmb	IAmb	04 11 45.8	
	comp=Z,8.4nm,1.0s						
LSZ	**Lusaka**	**75.18**	**246**	P	**P**	**04 11 57.6**	**+0.5**
BMAR	**Burnt Mountain**	**79.64**	**20**	P	**P**	**04 12 22.2**	**+1.1**
ILAR	**Eielson Array**	**80.45**	**22**	P	**P**	**04 12 24.0**	**-1.4**
	comp=Z,0.3nm,0.7s,baz=298,slow=5.0,SNR=6.0						
ILAR				LR	LR	04 51 27.8	
	comp=Z,62nm,19.2s,baz=233,slow=38						
ILAR	**Eielson Array**	**80.45**	**22**	P	**P**	**04 12 23.1**	**-2.4**
RES	**Resolute Bay**	**82.05**	**2**	P	**P**	**04 12 33.3**	**-0.4**
C36M	**Paulatuk**	**83.55**	**13**	P	**P**	**04 12 39.5**	**-2.1**
C36M				IAmb	IAmb	04 12 41.8	
	comp=Z,4.2nm,1.1s						
BOSA	**Boshof**	**84.19**	**236**	P	**P**	**04 12 47.0**	**+1.3**
	comp=Z,6.5nm,0.8s,baz=66,slow=1.9,SNR=6.9						
BOSA	**Boshof**	**84.19**	**236**	P	**P**	**04 12 46.1**	**+0.4**
TOA0	**Torodi Ar. Sit**	**87.26**	**283**	P	**P**	**04 13 00.7**	**-0.4**
TOA0				IAmb	IAmb	04 13 04.0	
	comp=Z,5.3nm,1.1s						
TORD	**Torodi Ar. Bea**	**87.26**	**283**	P	**P**	**04 13 02.4**	**+1.3**
	comp=Z,2.6nm,1.0s,baz=68,slow=4.0,SNR=10						
TORD				LR	LR	04 55 38.6	
	comp=Z,68nm,18.5s,baz=55,slow=38						
TORD	**Torodi Ar. Bea**	**87.26**	**283**	P	**P**	**04 12 59.4**	**-1.7**
YKA	**Yellowknife Ar**	**91.43**	**13**	P	**P**	**04 13 20.4**	**+0.6**
	comp=Z,0.3nm,0.8s,baz=328,slow=4.1,SNR=2.1						
DBIC	**Dimbokro**	**95.76**	**280**	LR	LR	05 03 59.1	
	comp=Z,27nm,18.4s,baz=100,slow=40						
TXAR	**Lajitas Array**	**124.86**	**19**	PKP	**PKiKP**	**04 19 15.1**	**+0.5**
	comp=Z,0.6nm,0.9s,baz=163,slow=0.9,SNR=3.9						
BDFB	**Brasilia**	**143.77**	**275**	PKP	**PKPdf**	**04 19 48.8**	**-0.9**
	comp=Z,1.7nm,0.7s,baz=29,slow=5.1,SNR=4.4						
ROSC	**El Rosal**	**149.90**	**337**	PKPbc	**PKiKP**	**04 20 07.3**	**+1.1**
	comp=Z,26nm,1.0s,baz=42,slow=1.6,SNR=7.4						
ROSC	**El Rosal**	**149.90**	**337**		**PKPbc**	**04 20 04.2**	**-1.1**
CPUP	**Villa Florida**	**154.12**	**257**	PKPbc	**PKiKP**	**04 20 14.2**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=143,slow=4.1,SNR=5.3						
CPUP				PKPab	**sPKPdf**	**04 20 28.9**	**-0.5**
	comp=Z,2.6nm,1.0s,baz=76,slow=4.2,SNR=3.8						
CPUP	**Villa Florida**	**154.12**	**257**		**PKPbc**	**04 20 13.9**	**-0.1**

UCR ***20*** *04:04:55.8±2.6, 12°.46N×87°.82W, h37^{km}±366^{km}, MD4.4, ML3.7*
INET ***20*** *04:04:56.4, 12°.47N×87°.76W, h59^{km}, ML4.1*
SNET ***20*** *04:04:57.1±0.9, 12°.54N×87°.86W, h51^{km}±13^{km}, ML3.7*
ISC 20 04:04:56.6±1.4**, 12°.48N**±0°.06×**87°.81W**±0°.05**, h46^{km}**±36^{km}**, n32, σ0ˢ.69**/59**, 2C-2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.79**	**359**	*e*P	**Pn**	**04 05 11.4**	**-0.1**
CNCH				*e*S	**Sn**	**04 05 22.7**	**+0.3**
CNCH	**Conchagua**	**0.79**	**359**	*e*P	**Pn**	**04 05 11.4**	**-0.1**
CNCH				*e*S	**Sn**	**04 05 22.7**	**+0.3**
LCND	**La Caada**	**0.83**	**355**	⇑*e*P	**Pn**	**04 05 11.8**	**-0.1**
LCND				*e*S	**Sn**	**04 05 23.1**	**0.0**
LCND				IAML		04 05 26.1	
	comp=Z,3µm,0.3s						
LCND	**La Caada**	**0.83**	**355**	⇑*e*P	**Pn**	**04 05 11.8**	**-0.1**
LCND				*e*S	**Sn**	**04 05 23.1**	**0.0**
LCND				IAML		04 05 26.1	
	comp=Z,3µm,0.3s						
JUCU	**Jucuar¡n**	**0.88**	**331**	*e*P	**Pn**	**04 05 11.9**	**-0.7**
JUCU				*e*S	**Sn**	**04 05 24.2**	**-0.1**
JUCU				IAML		04 05 26.0	
	comp=Z,3µm,0.2s						
JUCU	**Jucuar¡n**	**0.88**	**331**	*e*P	**Pn**	**04 05 11.9**	**-0.7**
JUCU				*e*S	**Sn**	**04 05 24.2**	**-0.1**
JUCU				IAML		04 05 26.0	
	comp=Z,3µm,0.2s						
BLLM	**Bellamira**	**1.04**	**337**	*e*P	**Pn**	**04 05 14.8**	**-0.1**
BLLM				*e*S	**Sn**	**04 05 28.7**	**+0.4**
BLLM	**Bellamira**	**1.04**	**337**	*e*P	**Pn**	**04 05 14.8**	**-0.1**
BLLM				*e*S	**Sn**	**04 05 28.7**	**+0.4**
VSM	**San Miguel**	**1.04**	**335**	*e*P	**Pn**	**04 05 15.5**	**+0.4**
VSM				*e*S	**Sn**	**04 05 29.5**	**+0.8**
VSM	**San Miguel**	**1.04**	**335**	*e*P	**Pn**	**04 05 15.5**	**+0.4**
VSM				*e*S	**Sn**	**04 05 29.5**	**+0.8**
LCY	**Lacayo**	**1.05**	**333**	*e*P	**Pn**	**04 05 15.0**	**0.0**
LCY	**Lacayo**	**1.05**	**333**	*e*P	**Pn**	**04 05 15.0**	**0.0**
PACA	**Pacayal**	**1.10**	**333**	*e*P	**Pn**	**04 05 15.6**	**-0.1**
PACA				*e*S	**Sn**	**04 05 29.9**	**+0.1**
PACA	**Pacayal**	**1.10**	**333**	*e*P	**Pn**	**04 05 15.6**	**-0.1**
PACA				*e*S	**Sn**	**04 05 29.9**	**+0.1**
ALJI	**Alcalda de J**	**1.12**	**319**	*e*P	**Pn**	**04 05 15.7**	**-0.2**
ALJI				*e*S	**Sn**	**04 05 29.3**	**-0.8**
ALJI				IAML		04 05 31.4	
	comp=Z,2µm,0.2s						
ALJI	**Alcalda de J**	**1.12**	**319**	*e*P	**Pn**	**04 05 15.7**	**-0.2**
ALJI				*e*S	**Sn**	**04 05 29.3**	**-0.8**
ALJI				IAML		04 05 31.4	
	comp=Z,2µm,0.2s						
TECA	**Tecapa**	**1.21**	**326**	*e*P	**Pn**	**04 05 16.9**	**-0.4**
TECA				*e*S	**Sn**	**04 05 33.0**	**+0.4**
TECA	**Tecapa**	**1.21**	**326**	*e*P	**Pn**	**04 05 16.9**	**-0.4**
TECA				*e*S	**Sn**	**04 05 33.0**	**+0.4**
COEB	**Comit de Eme**	**1.23**	**325**	*e*P	**Pn**	**04 05 17.0**	**-0.5**
COEB				*e*S	**Sn**	**04 05 33.0**	**0.0**
COEB				IAML		04 05 37.3	
	comp=Z,859nm,0.3s						
COEB	**Comit de Eme**	**1.23**	**325**	*e*P	**Pn**	**04 05 17.0**	**-0.5**
COEB				*e*S	**Sn**	**04 05 33.0**	**0.0**
COEB				IAML		04 05 37.3	
	comp=Z,859nm,0.3s						
FAGO	**Alcalda de S**	**1.24**	**347**	*e*P	**Pn**	**04 05 17.3**	**-0.2**

FAGO				*e*S	Sn	04 05 32.5	-0.6
FAGO	Alcalda de S	1.24	347	*e*P	Pn	04 05 17.3	-0.2
FAGO				*e*S	Sn	04 05 32.5	-0.6
TGUH	Tegucigalpa,Un	1.65	19⇓	*e*P	Pn	04 05 23.2	-0.1
TGUH				*e*S	Sn	04 05 43.2	-0.2
TGUH	Tegucigalpa,Un	1.65	19⇓	*e*P	Pn	04 05 23.2	-0.1
TGUH				*e*S	Sn	04 05 43.2	-0.2
LFRS	El Faro	1.66	313	*e*P	Pn	04 05 23.4	0.0
LFRS				*e*S	Sn	04 05 43.0	-0.6
LOMA	Loma Larga	1.76	311	*e*P	Pn	04 05 24.7	0.0
LOMA				*e*S	Sn	04 05 46.1	+0.1
LOMA				IAML		04 05 47.6	
	comp=Z,805nm,0.2s						
LOMA	Loma Larga	1.76	311	*e*P	Pn	04 05 24.7	0.0
LOMA				*e*S	Sn	04 05 46.1	+0.1
LOMA				IAML		04 05 47.6	
	comp=Z,805nm,0.2s						
BOQS	Boqueron	1.90	311	*e*P	Pn	04 05 27.3	+0.7
BOQS				*e*S	Sn	04 05 50.2	+0.8
SBLS	San Blas	2.22	308	*e*P	Pn	04 05 31.1	0.0
SBLS	San Blas	2.22	308	*e*P	Pn	04 05 31.1	0.0
NY14	Universidad de	2.88	129	*i* Pn	Pn	04 05 42.6	+2.5
GUAI	GUAI	3.15	134	*i* P	Pn	04 05 44.1	+0.4
GUAI				*i* Sn	Sn	04 06 16.7	-3.4

IDC 20 04:14:48.7±2.9, 5°.53S×153°.31E, h0^{km}, mb3.7/4, mb1 3.9/4, mb1mx3.6/20, mbtmp3.8/4, MS3.5/2, Ms1 3.6/2, ms1mx2.8/23, Error ellipse: s-maj=115.6km s-min=25.3km az=117.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.36	230	P	P	04 19 59.7	+0.6
	0.8nm,0.3s,baz=57,slow=10,SNR=14						
ASAR	Alice Springs	25.97	224	P	P	04 20 23.8	+0.5
	0.5nm,0.7s,baz=60,slow=8.4,SNR=6.0						
USRK	Ussuriysk Ar.	53.10	341	LR	LR	04 45 09.4	
	comp=Z,31nm,21.6s,baz=186,slow=34						
PETK	Petropavlovsk-	58.53	3	P	P	04 24 47.6	+0.8
	1.8nm,0.5s,baz=175,slow=8.0,SNR=8.2						
MKAR	Makanchi Array	81.20	319	P	P	04 27 06.0	-0.6
	0.3nm,0.6s,baz=113,slow=4.8,SNR=2.8						
NVAR	Mina Array Bea	92.13	52	LR	LR	05 05 24.8	
	comp=Z,33nm,18.1s,baz=133,slow=33						
TORD	Torodi Ar. Bea	151.01	287	PKPbc	PKPbc	04 34 44.0	-0.8
	0.6nm,0.7s,baz=76,slow=3.3,SNR=4.1						
TORD				PKPab	PKPab	04 34 50.7	-1.5
	1.0nm,0.8s,baz=63,slow=3.1,SNR=4.6						

WEL 20 04:41:48.7, 44°S±1°×172°.1E±0°.9, h10^{km}±1^{km}, ML4.2/7, MLv4.1/9, Error ellipse: s-maj=0.0km s-min=0.0km az=143.1, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OXZ	Oxford	0.26	344	P	Pb	04 41 55.6	+0.1
OXZ				S	Sb	04 41 59.7	-0.4
MQZ	McQueen's Vall	0.40	109	P	Pb	04 41 58.1	+0.2
MQZ				S	Sb	04 42 03.7	-0.3
AMCZ	Amberley	0.55	43	P	Pn	04 42 01.9	-0.7
AKCZ	Akaroa Harbour	0.63	118	P	Pb	04 42 02.6	+0.7
OKCZ	Okains Bay	0.69	103	P	Pn	04 42 03.8	-0.7
OKCZ				S	Sb	04 42 13.3	+1.0
RPZ	Rata Peaks	0.80	260	P	Pb	04 42 05.2	+0.5
LTZ	Lake Taylor	0.80	7	P	Pn	04 42 05.9	-0.2
GVZ	Greta Valley S	0.90	47	P	Pn	04 42 07.2	-0.2
INZ	Inchbonnie	0.99	329	P	Pn	04 42 08.6	0.0
WVZ	Waitaha Valley	1.14	296	P	Pn	04 42 11.0	+0.3
KHZ	Kahutara	1.55	42	P	Pn	04 42 16.2	-0.1
LBZ	Lake Benmore	1.62	240	P	Pn	04 42 17.6	+0.2
FOZ	Fox Glacier	1.69	271	P	Pb	04 42 20.1	+0.3
ODZ	Otahua Downs	1.81	216	P	Pn	04 42 19.7	-0.3
DSZ	Denniston Nort	1.85	352	P	Pn	04 42 21.1	+0.6
THZ	Tophouse	1.90	18	P	Pn	04 42 21.3	0.0
BSWZ	Blackbirch Sta	2.26	35	P	Pn	04 42 26.5	+0.4
JCZ	Jackson Bay	2.48	257	P	Pn	04 42 29.5	+0.4
TUWZ	Tuamarina	2.53	32	P	Pn	04 42 29.7	-0.1
NNZ	Nelson	2.53	22	P	Pn	04 42 30.5	+0.7
HHSZ	Highcliff Hill	2.55	205	P	Pn	04 42 31.3	+1.1
WKZ	Wanaka	2.57	240	P	Pn	04 42 30.2	-0.2
EAZ	Earnscleugh	2.62	230	P	Pn	04 42 30.9	-0.1
QRZ	Quartz Range	2.77	6	P	Pn	04 42 33.3	+0.3
TCW	Tory Channel	2.85	35	P	Pn	04 42 33.6	-0.6
BHW	Baring Head	2.96	44	P	Pn	04 42 34.9	-0.9
TUZ	Tuapeka	2.97	216	P	Pn	04 42 35.5	-0.4
PLWZ	Palliser	3.06	50	P	Pn	04 42 36.2	-0.9
DUWZ	D'Urville Isla	3.08	26	P	Pn	04 42 38.1	+0.7
MSWZ	Moikau Station	3.16	48	P	Pn	04 42 37.3	-1.2
MSZ	Milford Sound	3.22	249	P	Pn	04 42 38.5	-0.9
PAWZ	Paruwai Farm	3.28	49	P	Pn	04 42 38.8	-1.3
CAW	Cannon Point	3.29	42	P	Pn	04 42 39.6	-0.7
MLZ	Mavora Lakes	3.39	237	P	Pn	04 42 41.1	-0.6
KIW	Kapiti Island	3.41	38	P	Pn	04 42 41.3	-0.6
TRWZ	Traveller	3.41	52	P	Pn	04 42 41.0	-1.0
MTW	Mount Morrison	3.47	47	P	Pn	04 42 41.7	-1.1
OGWZ	Otaki Gorge	3.56	40	P	Pn	04 42 43.1	-0.9
SYZ	Scrubby Hill	3.64	215	P	Pn	04 42 45.3	+0.2
HOWZ	Holdsworth Sta	3.67	44	P	Pn	04 42 44.6	-1.0
WHZ	Wether Hill Ro	3.78	231	P	Pn	04 42 46.5	-0.5
MRZ	Mangatainoka R	3.88	42	P	Pn	04 42 47.2	-1.2
DCZ	Deep Cove	4.03	240	P	Pn	04 42 50.2	-0.2
BFZ	Birch Farm	4.21	48	P	Pn	04 42 52.0	-0.9
WAZ	Wanganui	4.38	30	P	Pn	04 42 57.2	+1.9
APZ	The Paps	4.38	221	P	Pn	04 42 54.6	-0.7
LREZ	Lake Rotokare	4.45	23	P	Pn	04 42 59.3	+3.1
PREZ	Palmer Road	4.50	20	P	Pn	04 42 59.6	+2.7
NBEZ	Newall Road No	4.50	17	P	Pn	04 42 58.8	+1.9
KHEZ	Kahui Hut	4.51	19	P	Pn	04 42 59.1	+2.0
TSZ	Takapari Road	4.53	40	P	Pn	04 42 56.5	-0.8
PKE	Pukeiti	4.60	18	P	Pn	04 43 00.5	+2.2
DREZ	Durham Road	4.65	20	P	Pn	04 43 01.2	+2.2
PRHZ	Porangahau	4.71	47	P	Pn	04 42 58.5	-1.3
PNHZ	Pukenui	4.76	41	P	Pn	04 42 59.2	-1.3
PKVZ	Pokaka	4.92	30	P	Pn	04 43 04.4	+1.7
MOVZ	Moawhango	4.97	34	P	Pn	04 43 04.2	+0.7
TRVZ	Turoa	4.99	32	P	Pn	04 43 04.4	+0.6
BHHZ	Black Hill Sta	5.04	37	P	Pn	04 43 03.2	-1.1
KRHZ	Kereru	5.05	40	P	Pn	04 43 03.0	-1.6
TUVZ	Tukino	5.05	33	P	Pn	04 43 05.2	+0.6
NGZ	Ngauruhoe	5.11	32	P	Pn	04 43 06.0	+0.5
TWVZ	Taurewa	5.14	30	P	Pn	04 43 06.7	+0.9
WTVZ	West Tongariro	5.16	31	P	Pn	04 43 06.8	+0.7
KWHZ	Kaweka Forest	5.25	39	P	Pn	04 43 06.4	-0.9
HIZ	Hauiti	5.46	23	P	Pn	04 43 11.5	+1.4
BKZ	Black Stump Fm	5.49	38	P	Pn	04 43 09.3	-1.3
TLZ	Tolley Road	5.84	27	P	Pn	04 43 16.7	+1.3
MTHZ	Maungataniwha	5.90	38	P	Pn	04 43 15.5	-0.7
URZ	Urewera	6.51	37	P	Pn	04 43 22.3	-2.3
RUGZ	Raukumara Rang	7.01	39	P	Pn	04 43 29.3	-2.1
WIAZ	Waiheke Island	7.15	20	P	Pn	04 43 34.5	+1.1
HAZ	Te Kaha	7.23	38	P	Pn	04 43 32.1	-2.2
PKGZ	Pakihiroa	7.25	40	P	Pn	04 43 33.0	-1.8

*NEIC **20** 04:44:39.8±0.9, 30°.85N±0°.05×105°.67W±0°.04, h15^{km}±5^{km}, mb_Lg2.9/32, ML3.2/22, Error ellipse: s-maj=7.3km s-min=4.6km az=153.0*

*MEX **20** 04:44:43.5±0.6, 30°.97N×105°.66W, h5^{km}, MD3.9*

ISC 20 04:44:39.3±1.0, 30°.97N±0°.04×105°.64W±0°.04, h10^{km}, n33, σ1^{s}.57/37, Texas-Mexico border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNTX	Cornudas Mount	0.76	17	*e*P	Pn	04 44 56.9	+0.9
MNTX				*i* S	Sn	04 45 07.8	+0.2
MNTX	Cornudas Mount	0.76	17		Pn	04 44 57.0	+0.9
MNTX					Sn	04 45 10.3	+2.7
MNTX				IAML		04 45 14.7	
	409nm,0.5s						
CGIG		2.10	254	*e*P	Pn	04 45 15.5	+0.7
CGIG				*i* S	Sn	04 45 42.0	+0.9
CGIG		2.10	254		Pn	04 45 15.5	+0.7
CGIG					Sn	04 45 42.0	+0.9
TXAR	Lajitas Array	2.36	133		Pn	04 45 17.4	-0.9
121A	Cookes Peak, D	2.40	311	*e*P	Pn	04 45 19.8	+1.0
121A				*i* S	Sn	04 45 48.6	+0.2
121A	Cookes Peak, D	2.40	311		Pn	04 45 19.8	+1.0
121A					Sn	04 45 48.6	+0.2
121A	Cookes Peak, D	2.40	311	IAML		04 45 59.9	
	comp=N,108nm,0.5s						
121A				IAML		04 46 01.2	
	comp=E,115nm,0.6s						
319A	Douglas	3.15	278		Pn	04 45 28.6	-0.5
319A				IAML		04 46 21.8	
	comp=E,134nm,0.4s						
Y22D	IRIS PASSCAL I	3.27	341	Pn	Pn	04 45 31.9	+1.0
Y22D				IAML		04 46 49.1	
	comp=E,91nm,0.9s						
NZIG	Nacozari, Sono	3.43	261	*i* P	Pn	04 45 34.2	+1.2
NZIG				*i* S	Sn	04 46 15.3	+1.6
MSTX	Muleshoe	3.85	38		Pn	04 45 40.3	+1.6
MSTX				IAmb_Lg		04 46 48.5	
	comp=Z,30nm,1.1s						
ANMO	Albuquerque	4.02	350		Pn	04 45 43.7	+2.5
HPIG		4.02	180	*i* P	Pn	04 45 43.6	+2.3
HPIG				*i* S	Sn	04 46 30.7	+2.1
HPIG		4.02	180		Pn	04 45 39.9	-1.4
HPIG				IAML		04 46 42.9	
	comp=E,64nm,0.7s						
HPIG				IAML		04 46 46.0	
	comp=N,32nm,0.5s						
HPIG		4.02	180		Sn	04 46 30.7	+2.1
TUC	Tucson	4.59	288		Pn	04 45 48.9	0.0
TUC				IAML		04 47 07.0	
	comp=N,12nm,0.8s						
TUC	Tucson	4.59	288	IAmb_Lg		04 47 06.3	
	comp=Z,11nm,0.8s						
TUC				IAML		04 47 07.0	
	comp=Z,11nm,0.8s						
TUC				IAML		04 47 08.8	
	comp=Z,8.2nm,0.8s						
JCT	Junction City	5.05	94	*i* P	Pn	04 45 58.3	+3.1
JCT				*e*S	Sn	04 46 55.4	+1.7
JCT	Junction City	5.05	94		Pn	04 45 55.4	+0.2
AMTX	Amarillo	5.12	39		Pn	04 45 57.9	+1.7
AMTX				IAmb_Lg		04 47 34.1	
	comp=Z,19nm,0.9s						
ABTX	Abilene, Hawle	5.36	71		Pn	04 45 59.5	+0.1
ABTX				IAmb_Lg		04 47 41.2	
	comp=Z,21nm,1.1s						
214A	Organ Pipe Nat	6.21	281	Pn	Pn	04 46 08.2	-2.8
T25A	Trinidad	6.23	9		Pg	04 46 37.5	-1.3
T25A				IAmb_Lg		04 48 07.5	
	comp=Z,18nm,1.1s						
WUAZ	Wupatki	6.60	315	Pn	Pn	04 46 14.8	-1.8
WUAZ					LR	04 48 09.6	
SDCO	Great Sand Dun	6.76	1		Pn	04 46 19.7	+0.8
WMOK	Wichita Mounta	6.88	55		Pn	04 46 20.3	0.0
Y14A	Wickenburg	6.89	297	Pn	Pn	04 46 20.2	-0.3
WHTX	Lake Whitney,	7.06	80		Pg	04 46 51.5	-3.1
735A	Kenedy	7.12	105	Pn	Pn	04 46 23.3	-0.3
Z35A	Perchaven, San	7.49	70	IAmb_Lg		04 48 49.0	
	comp=Z,11nm,0.8s						
U32A	Winter Ranch,	7.72	44	IAmb_Lg		04 49 08.2	
	comp=Z,18nm,1.1s						
XPFO	Pion Flat	9.53	289	IAmb_Lg		04 50 08.9	
	comp=Z,4.2nm,0.7s						

*TUL **20** 05:12:23.8±1.9, 36°.64N±0°.03×97°.67W±0°.05, h7^{km}±7^{km}, ML3.1, Error ellipse: s-maj=5.7km s-min=2.8km az=60.0*

*ANF **20** 05:12:25.5±0.8, 36°.61N×97°.75W, h24^{km}±8^{km}, ML4.0/9, Error ellipse: s-maj=6.5km s-min=3.6km az=68.0*

ISC 20 05:12:23.8±0.8, 36°.61N±0°.03×97°.70W±0°.03, h10^{km}, n31, σ1^{s}.14/36, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	1.00	164	Pg	Pg	05 12 43.0	+0.1
T35A	Sooner Cattle	1.00	72		Pg	05 12 42.3	-0.7
U32A	Winter Ranch,	1.07	258		Pg	05 12 44.6	+0.2
U32A				Sg	Sb	05 12 59.3	+0.8
OKCFA	Oklahoma City	1.21	170		Pn	05 12 46.8	0.0
OKCSW	OKLAHOMA CITY	1.23	170		Pn	05 12 47.0	0.0
FNO	Franklin	1.38	170		Pb	05 12 49.9	+0.3
W35A	Tecumseh	1.61	155		Pn	05 12 52.9	+0.6
TUL1	Leonard	1.70	114		Pn	05 12 54.2	+0.8
TUL1	Leonard	1.70	114	P	Pn	05 12 54.2	+0.8
	baz=296						
TUL1				S	Sb	05 13 16.7	+0.3
	baz=296						
R32A	Long Quarter,	1.98	336		Pb	05 12 59.5	-0.3
X34A	Smith Ranch, M	2.01	183		Pb	05 12 59.9	-0.6
WMOK	Wichita Mounta	2.07	205		Pn	05 12 60.0	+1.4
U38A	Gravette	2.68	93		Pn	05 13 08.1	+1.1
CBKS	Cedar Bluff	2.73	324	Pn	Pb	05 13 10.8	-1.9
CBKS	Cedar Bluff	2.73	324	Sb	Sb	05 13 48.4	+2.2
	baz=143						
HHAR	Hobbs	3.05	95		Pn	05 13 13.3	+1.2
Z35A	Perchaven, San	3.30	173	Pn	Pn	05 13 13.7	-1.7
W39A	Magazine	3.48	113		Pn	05 13 17.4	-0.6
W39A	Magazine	3.48	113	Pb	Pb	05 13 26.5	+1.0
	baz=295						
S39A	Bolivar	3.66	72	Pn	Pn	05 13 21.3	+0.8
AMTX	Amarillo	3.67	243	Pn	Pn	05 13 22.8	+2.2
AMTX	Amarillo	3.67	243	Sb	Sg	05 14 19.3	-2.3
	baz=61						
U40A	Yellville	3.92	92	Pn	Pn	05 13 24.9	+0.9
U40A	Yellville	3.92	92	P	Pn	05 13 24.8	+0.9
	baz=275						
U40A				S	Sn	05 14 10.3	+0.2
	baz=275						
MIAR	Mount Ida	3.95	120	Pn	Pn	05 13 25.2	+0.8
ABTX	Abilene, Hawle	4.29	202	Pn	Pn	05 13 30.1	+1.0
ABTX	Abilene, Hawle	4.29	202	Pb	Pb	05 13 39.3	0.0
	baz=22						
MGMO	Mountain Grove	4.39	81	Pn	Pn	05 13 32.0	+1.5
WHTX	Lake Whitney,	4.62	177	P	Pn	05 13 34.7	+1.1
	baz=358						
WHTX				S	Sn	05 14 27.6	+0.3
	baz=358						
BGNE	Belgrade	4.80	356	P	Pn	05 13 36.9	+0.7
	baz=175						
BGNE				S	Sn	05 14 31.0	-0.8
	baz=175						
Z41A	Richland Creek	5.24	128	S	Sn	05 14 40.8	-1.7
	baz=312						

*ISK **20** 05:34:50.1, 37°.56N×25°.66E, h20^{km}, ML2.7/9*

*ATH **20** 05:34:50.9, 37°.56N×25°.66E, h17^{km}±8^{km}, ML2.6/4, Error ellipse: s-maj=8.2km s-min=1.2km az=266.0*

*THE **20** 05:34:51.3, 37°.55N×25°.65E, h13^{km}±1^{km}, ML2.6/4, Error ellipse: s-maj=1.1km s-min=0.5km az=154.0*

*DDA **20** 05:34:52.4, 37°.65N×25°.67E, h6^{km}±4^{km}, ML2.0*

ISC 20 05:34:50.2±1.2, 37°.53N±0°.02×25°.61E±0°.03, h20^{km}±4^{km}, n37, σ1^{s}.23/54, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNSA	Tinos	0.35	272	P	Pn	05 34 58.9	-1.3
TNSA				S	Sn	05 35 04.4	-2.3
TNSA				AML	AML	05 35 04.5	
	comp=N,1318µm,0.1s						
TNSA				AML	AML	05 35 04.5	
	comp=E,2629µm,0.2s						
APE	Apeiranthos	0.46	188	P	Pn	05 35 00.8	-0.9
APE				S	Sn	05 35 08.2	-1.2
	comp=E,622nm,0.2s						
APE	Apeiranthos	0.46	188	P	Pn	05 35 00.8	-0.9
APE				S	Sn	05 35 08.5	-0.9
APE				AML	AML	05 35 12.1	
	comp=E,1090µm,0.2s						
APE				AML	AML	05 35 12.4	
	comp=N,1373µm,0.2s						
APE	Apeiranthos	0.46	188	PG	Pn	05 35 00.6	-1.1
AMGA	Amorgos Island	0.73	162	P	Pn	05 35 05.4	-0.1
AMGA				S	Sn	05 35 16.5	+0.5
	comp=N,908nm,0.2s						
AMGA	Amorgos Island	0.73	162	P	Pn	05 35 05.3	-0.1
AMGA				S	Sn	05 35 16.8	+0.8
AMGA				AML	AML	05 35 18.8	
	comp=E,2277µm,0.3s						
AMGA				AML	AML	05 35 20.0	
	comp=N,1549µm,0.1s						
IOSP	Ios island	0.84	198	P	Pn	05 35 08.2	+1.3
IOSP				S	Sn	05 35 20.6	+1.9
IOSP	Ios island	0.84	198	P	Pn	05 35 08.2	+1.3
CHOS	Chios island	0.93	22	P	Pn	05 35 07.8	-0.4
CHOS	Chios island	0.93	22	P	Pn	05 35 07.8	-0.4
CHOS	Chios island	0.93	22	PG	Pg	05 35 08.0	-0.3
CHOS				SG	Sg	05 35 20.2	-0.4
SERI	Serifos	0.97	248	P	Pg	05 35 09.9	+0.9
SERI				S	Sn	05 35 24.0	+2.1
	comp=N,478nm,0.2s						
SMG	Samos	0.99	79	P	Pn	05 35 08.7	-0.3
SMG				S	Sn	05 35 22.7	+0.2
	comp=N,348nm,0.3s						
SMG	Samos	0.99	79	P	Pn	05 35 08.7	-0.3
SMG				S	Sb	05 35 21.9	+0.5
SMG				AML	AML	05 35 23.1	
	comp=E,710µm,0.3s						
SMG				AML	AML	05 35 24.9	
	comp=N,707µm,0.2s						
KARY	Karystos	1.06	299	P	Pg	05 35 11.5	+0.8
THT2	Imerovigli	1.10	188	PN	Pg	05 35 11.6	+0.1
DGB	zmir	1.14	62	*i* P	Pn	05 35 10.3	-0.7
DGB				*i* S	Sb	05 35 24.5	-1.0
DGB				IAML		05 35 27.0	
	comp=E,84nm,0.3s						
DGB				IAML		05 35 28.0	
	comp=N,64nm,0.6s						
URLA	Izmir	1.14	43	PN	Pn	05 35 10.8	-0.3
URLA				SN	Sb	05 35 25.7	0.0
URLA	Izmir	1.14	43	*i* P	Pn	05 35 10.8	-0.3
URLA				*i* S	Sb	05 35 25.2	-0.5
URLA				IAML		05 35 28.0	
	comp=N,47nm,0.6s						
URLA				IAML		05 35 29.0	
	comp=E,35nm,0.3s						
SANT	Santorini	1.16	186	PN	Pg	05 35 12.5	-0.1
ANAF	Anafi Island	1.17	174	P	Pg	05 35 12.8	-0.1
ANAF				S	Sg	05 35 28.8	+0.5
ANAF	Anafi Island	1.17	174	P	Pg	05 35 13.2	+0.2
MHLA	Plaka, Milos I	1.23	231	P	Pg	05 35 14.8	+0.8
MHLO	Agia Marina, M	1.28	230	P	Pg	05 35 16.0	+1.2
GCAM	G?zelcaml?	1.30	82	*i* P	Pb	05 35 14.4	+0.5
GCAM				*i* S	Sb	05 35 31.1	+0.8
GCAM				IAML		05 35 36.0	
	comp=N,62nm,0.5s						
GCAM				IAML		05 35 37.0	
	comp=E,43nm,0.3s						
BODT	Bodrum	1.43	108	PN	Pb	05 35 15.8	-0.4
SIGR	SIGRI	1.69	6	PN	Pn	05 35 18.5	-0.2
DAT	Datca	1.76	116	PN	Pn	05 35 19.7	0.0
AYDN	Tasoluk	1.81	85	*i* P	Pg	05 35 24.1	-0.9
AYDN				*i* S	Sb	05 35 46.9	+2.0
AYDN				IAML		05 35 53.0	
	comp=E,30nm,0.5s						
AYDN				IAML		05 35 53.0	
	comp=N,21nm,0.7s						
ZEDA	zmir-Bergama	1.84	38	*i* P	Pn	05 35 20.7	0.0
AYDB	Zeytinkoy-Aydi	1.86	76	PN	Pn	05 35 21.3	+0.3
AYVA	Ayvalik	1.97	25	*i* P	Pg	05 35 28.9	+0.8
IDI	Anoyia	2.31	195	PN	Pb	05 35 28.6	-2.6
ZKR	Zakros	2.46	168	PN	Pn	05 35 30.8	+1.7
TURN	Turunc	2.48	104	PN	Pn	05 35 26.2	-3.2
MANT	Manisa	2.52	67	*i* P	Pb	05 35 36.2	+1.3
MANT				IAML		05 36 10.0	
	comp=E,7.5nm,0.7s						
MANT				IAML		05 36 11.0	
	comp=N,6.0nm,0.4s						
FETY	Fethiye	2.92	107	*i* P	Pb	05 35 38.9	-2.6
FETY				*i* S	Sn	05 36 13.1	+3.1

*IDC **20** 05:38:18.0±2.5, 7°.10S×129°.65E, h102^{km}±23^{km}, mb3.9/12, mb1 4.1/15, mb1mx3.9/46, mbtmp4.3/15, MS3.1/2, Ms1 3.1/2, ms1mx2.6/30, Error ellipse: s-maj=25.6km s-min=12.6km az=79.0*

*NEIC **20** 05:38:20.8±2.5, 7°.08S±0°.04×129°.70E±0°.06, h133^{km}±5^{km}, mb4.6/25, Error ellipse: s-maj=9.2km s-min=5.3km az=63.0*

*DJA **20** 05:38:20.1±0.2, 7°S±2°×13°0E±°, h172^{km}±5^{km}, M4.9/21, mb4.8/21, mB5.3/9, MLv5.0/13, Mw(mB)4.8/9*

ISC 20 05:38:22.0±0.4, 7°.23S±0°.04×129°.78E±0°.05, h150^{km}, n97, σ2^{s}.35/103, mb4.1/19, 3C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.68	117	P	Pn	05 38 53.6	+0.1
SAUI	Saumlaki	1.68	117		Pn	05 38 53.4	-0.1
SAUI				Sn	Sn	05 39 15.4	-2.2
BNDI	Bandanaira	2.69	3	P	Pn	05 39 06.2	+0.7
AAI	Ambon	3.86	336	P	Pn	05 39 18.5	-1.9
MSAI	Masohi	3.95	348	P	Pn	05 39 20.5	-1.1
NLAI	Namlea	4.78	326	P	Pn	05 39 31.4	-1.1
FAKI	Fak Fak	4.94	30	P	Pn	05 39 31.0	-3.6
FAKI	Fak Fak	4.94	30		Pn	05 39 30.9	-3.6
FAKI				Sn	Sn	05 40 24.6	-6.6
MTN	Manton Dam	5.74	167		Pn	05 39 45.1	-0.1
MTN				Sn	Sn	05 40 48.3	-2.0
SOEI	Soe	6.01	245	P	Pn	05 39 47.1	-1.8
	3.5nm6µm752nm,0.8s						
SOEI	Soe	6.01	245		Pn	05 39 46.9	-2.1
SOEI				Sn	Sn	05 40 53.3	-3.6
SANI	Sanana	6.39	323	P	Pn	05 39 52.5	-1.4
	0.6nm2µm179nm,0.7s						
SIJI	Sorong	6.49	13	P	Pn	05 39 51.0	-4.2
	8.6nm,0.3s,baz=146,slow=23,SNR=36						
SIJI				S	Sn	05 40 58.5	-10
	24nm,0.3s,baz=14,slow=19,SNR=17						
LBMI	Labuha	6.93	341	P	Pn	05 39 59.9	-1.3
	1.2nm7µm250nm,0.7s						
RKPI	Ransiki, Papua	7.17	38	P	Pn	05 40 01.5	-2.9
	3.6nm10µm253nm,0.7s						
TNTI	Ternate	8.31	343	P	Pn	05 40 18.2	-1.3
	123nm,0.8s						
TNTI	Ternate	8.31	343		Pn	05 40 15.3	-4.2
KNRA	Kununurra	8.46	187		Pn	05 40 19.5	-2.0
BAKI	Biak	8.70	47	P	Pn	05 40 24.0	-0.8
	218nm,1.0s						
BASI	Baing, Sumba	9.57	251	P	Pn	05 40 34.3	-2.1
	234nm,0.8s						
WSI	Waingapu	9.69	255	P	Pn	05 40 31.7	-6.3
BKSI	Bulukumba	9.79	281	P	Pn	05 40 38.6	-0.7
	28nm,0.9s						
WBSI	Waikabubak, Su	10.56	256	P	Pn	05 40 47.5	-2.0
	2µm236nm,0.7s						
MRSI	Marisa	10.95	314	P	Pn	05 40 54.6	0.0
	1µm76nm,1.2s						
FITZ	Fitzroy Crossi	11.53	200	P	Pn	05 40 59.6	-2.7
	3.9nm,0.3s,baz=32,slow=9.9,SNR=63						
FITZ				S	Sn	05 42 59.5	-10
	7.7nm,0.3s,baz=75,slow=22,SNR=11						
FITZ				LR	LR	05 45 56.2	
	comp=Z,35nm,18.4s,baz=122,slow=40						
FITZ	Fitzroy Crossi	11.53	200		Pn	05 41 00.1	-2.1
PLAI	Plampang	12.00	262	P	Pn	05 41 04.2	-4.1
	2µm135nm,0.8s						
WB0	Warramunga Arr	13.24	161		Pn	05 41 22.3	-2.1
WRAB	Tennant Creek	13.38	161		Pn	05 41 23.5	-2.7
WRA	Warramunga Arr	13.39	161	P	Pn	05 41 23.5	-2.8
	8.2nm,0.3s,baz=350,slow=11,SNR=68						
WRA				S	Sn	05 43 47.8	-6.8
	4.4nm,0.3s,baz=330,slow=22,SNR=10						
WRA				LR	LR	05 47 39.0	
	comp=Z,154nm,18.7s,baz=300,slow=41						
WRA	Warramunga Arr	13.39	161		Pn	05 41 22.3	-3.9
WB2	Warramunga Arr	13.39	161		Pn	05 41 23.7	-2.6
WR0	Warramunga Arr	13.47	160	P	Pn	05 41 24.9	-2.4
BKB	Balikpapan	14.15	294	Pn	Pn	05 41 32.1	-3.7
COEN	Coen	14.76	118	Pn	Pn	05 41 43.7	+0.2
KCP	Kidapawan	14.90	342⇑	*e*P	P	05 41 45.8	-1.5
JAGI	Jajag, Banyuwa	15.54	264	P	Pn	05 41 50.4	-2.8
	44nm,0.6s						
JAGI	Jajag, Banyuwa	15.54	264	Pn	Pn	05 41 50.4	-2.8
JAGI				IAmb	IAmb	05 41 52.7	
	comp=Z,24nm,0.8s						
GMJI	Gumukmas	16.23	265	P	Pn	05 41 59.1	-2.5
	comp=Z,27nm,1.0s						
AS31	Alice Springs	16.82	167	P	P	05 42 08.6	+0.2
ASAR	Alice Springs	16.82	167	P	P	05 42 08.4	0.0
	comp=Z,2.2nm,0.3s,baz=335,slow=9.4,SNR=118						
ASAR				S	S	05 45 08.0	-7.8
	comp=Z,0.7nm,0.3s,baz=331,slow=15,SNR=6.1						
ASAR	Alice Springs	16.82	167	P	P	05 42 08.8	+0.4
PSAD1	Pilbara Seismi	17.10	213	P	Pn	05 42 12.2	0.0
PSAD1				IAmb	IAmb	05 42 13.8	
	comp=Z,45nm,0.8s						
PSAC2	Pilbara Seismi	17.15	213	P	Pn	05 42 12.8	0.0
PSAC2				IAmb	IAmb	05 42 14.4	
	comp=Z,40nm,0.8s						
PSAB2	Pilbara Seismi	17.17	213	P	P	05 42 12.5	+0.3
PSAB2				IAmb	IAmb	05 42 14.5	

	comp=Z,49nm,0.8s						
PSAC1	Pilbara Seismi	17.18	213	P	Pn	05 42 13.6	+0.5
PSAA2	Pilbara Seismi	17.18	213	P	Pn	05 42 13.8	+0.6
PSA00	Pilbara Seismi	17.19	213	P	Pn	05 42 13.8	+0.6
PSA00	Pilbara Seismi	17.19	213	P	Pn	05 42 13.4	+0.2
PSA00				IAmb	IAmb	05 42 14.5	
	comp=Z,18nm,0.7s						
PCJI	Pacitan	18.46	266	P	P	05 42 23.2	-3.3
SBUM	Sibu	19.99	298	P	Pn	05 42 44.6	-1.8
SBUM				IAmb	IAmb	05 42 45.7	
	comp=Z,13nm,0.9s						
GIRL	Giralia	21.43	223	P	P	05 43 00.2	+1.9
FORT	Forrest	23.48	184	P	P	05 43 20.2	+2.1
FORT				IAmb	IAmb	05 43 21.7	
	comp=Z,22nm,0.6s						
MORW	Morawa	25.30	209	P	P	05 43 36.0	+1.4
MORW				IAmb	IAmb	05 43 40.3	
	comp=Z,29nm,1.2s						
BBOO	Buckleboo	26.11	168	P	P	05 43 44.1	+2.1
BBOO				IAmb	IAmb	05 43 47.8	
	comp=Z,11nm,1.1s						
STKA	Stephens Creek	26.88	157	P	P	05 43 51.3	+2.4
	comp=Z,3.8nm,0.7s,baz=316,slow=8.1,SNR=10						
STKA	Stephens Creek	26.88	157	P	P	05 43 51.5	+2.6
NWAO	Narrogin (SRO)	28.10	203	P	P	05 44 01.4	+1.7
NWAO				IAmb	IAmb	05 44 02.5	
	comp=Z,29nm,1.4s						
RPSI	Rantau Prapat	32.34	287	P	P	05 44 36.8	-0.5
RPSI				IAmb	IAmb	05 44 38.1	
	comp=Z,8.8nm,0.7s						
RPSI	Rantau Prapat	32.34	287	P	P	05 44 36.4	-0.9
PSI	Prapat	32.37	287	P	P	05 44 36.4	-1.3
	comp=Z,9.4nm,0.8s,baz=93,slow=5.5,SNR=9.8						
NJ2	Nanjing	40.43	346	eP	P	05 45 46.6	+0.9
MJAR	Matsushiro Arr	44.25	10	P	P	05 46 14.9	-1.7
	comp=Z,1.8nm,0.5s,baz=176,slow=8.4,SNR=2.4						
MJAR	Matsushiro Arr	44.25	10	P	P	05 46 15.0	-1.5
KSRS	Korea Array	44.48	358	P	P	05 46 19.2	+0.9
	comp=Z,0.9nm,0.5s,baz=170,slow=8.4,SNR=2.1						
LZH	Lanzhou	49.51	332	eP	P	05 47 01.5	+3.9
LZH				pP	pP	05 47 28.0	-2.8
LZH				sP	sP	05 47 40.4	-6.7
HHC	Hu-ho-hao-te	50.69	342	eP	P	05 47 09.3	+3.0
USRK	Ussuriysk Ar.	51.23	2	P	P	05 47 09.4	-0.7
	comp=Z,1.8nm,0.6s,baz=178,slow=7.9,SNR=6.9						
MDJ	Mudanjiang	51.60	360	P	P	05 47 12.8	-0.1
HIA	Hailar	56.94	352		S	05 55 33.1	-0.6
SONM	Songino Array	58.59	342	P	P	05 48 03.9	+0.7
	comp=Z,0.7nm,0.5s,baz=158,slow=6.0,SNR=6.6						
SONM	Songino Array	58.59	342	P	P	05 48 04.2	+1.1
CASY	Casey	60.45	189	P	P	05 48 17.5	+2.1
WMQ	Urumqi	63.47	327	eP	P	05 48 38.5	+2.4
PETK	Petropavlovsk-	64.61	18	P	P	05 48 44.0	+0.8
	comp=Z,4.8nm,0.8s,baz=189,slow=8.3,SNR=3.9						
PETK	Petropavlovsk-	64.61	18	P	P	05 48 43.3	+0.1
KSH	Kashi	68.04	318	P	P	05 49 09.4	+3.8
KSH				pP	pP	05 49 36.3	-5.0
KSH				PP	PP	05 51 42.6	+4.9
KSH				PcS		05 53 36.5	
KSH				S	S	05 57 57.4	+4.3
MK31	Makanchi Array	68.30	327	P	P	05 49 07.5	+0.6
MK31				IAmb	IAmb	05 49 25.4	
	comp=Z,3.0nm,0.9s						
MKAR	Makanchi Array	68.30	327	P	P	05 49 07.3	+0.4
	comp=Z,2.3nm,0.6s,baz=117,slow=8.3,SNR=9.7						
MKAR	Makanchi Array	68.30	327	P	P	05 49 07.1	+0.2
MAKZ	Makanchi	68.48	327	P	P	05 49 08.8	+0.8
MAKZ				IAmb	IAmb	05 49 09.5	
	comp=Z,4.2nm,1.2s						
VNDA	Vanda	72.25	173	P	P	05 49 32.4	+2.1
	comp=Z,1.0nm,0.9s,baz=311,slow=6.6,SNR=5.0						
VNDA	Vanda	72.25	173	P	P	05 49 32.6	+2.3
KURBB	Kurchatov Arra	72.59	329	P	P	05 49 33.3	+0.6
	comp=Z,2.3nm,0.5s,baz=126,slow=5.2,SNR=7.9						
SBA	Scott Base	73.14	172	P	P	05 49 39.1	+3.5
MAW	Mawson	74.66	201	P	P	05 49 47.1	+2.6
BVAR	Borovoye Array	78.14	328	P	P	05 50 04.4	0.0
	comp=Z,1.2nm,0.8s,baz=102,slow=6.7,SNR=4.5						
ABKAR	Akbulak array	82.55	322	P	P	05 50 27.9	-0.2
QSPA	South Pole Qui	82.75	180	P	P	05 50 30.7	+1.7
SYO	Syowa Base	83.37	201	⇑eP	P	05 50 32.4	+0.5
SYO	Syowa Base	83.37	201	⇑iPcP	PcP	05 50 37.0	+1.0
ILAR	Eielson Array	93.64	25	P	P	05 51 20.6	-0.4
	comp=Z,0.6nm,0.7s,baz=250,slow=4.7,SNR=7.8						
ILAR	Eielson Array	93.64	25	P	P	05 51 20.1	-0.9
BMAR	Burnt Mountain	94.94	23	P	P	05 51 28.3	+1.3
TORD	Torodi Ar. Bea	128.64	281	PKP	PKiKP	05 57 13.5	+0.5
	comp=Z,0.3nm,0.5s,baz=126,slow=2.9,SNR=2.4						
CPUP	Villa Florida	145.93	169	PKPbc	PKiKP	05 57 46.9	-1.1
	comp=Z,3.5nm,0.7s,baz=220,slow=2.3,SNR=9.0						
LPAZ	La Paz	150.67	143	PKPbc	PKiKP	05 58 00.8	+2.0
	comp=Z,1.8nm,0.4s,baz=290,slow=2.9,SNR=23						
LPAZ				PKPab	PKPab	05 58 07.5	+2.1
	comp=Z,1.2nm,0.5s,baz=202,slow=5.4,SNR=5.8						

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*IDC **20** 05:40:34.4±0.7, 36°.17N×82°.94E, h0^{km}, mb4.1/16, mb1 4.3/22, mb1mx4.1/65, mbtmp4.2/22, ML3.8/6, MS3.2/12, Ms1 3.2/12, ms1mx3.0/40, Error ellipse: s-maj=17.4km s-min=12.1km az=54.0*

*NEIC **20** 05:40:36.8±1.4, 36°.20N±0°.08×82°.90E±0°.10, h14^{km}±4^{km}, mb4.4/26, Error ellipse: s-maj=12.1km s-min=10.8km az=147.0*

*BJI **20** 05:40:36.8±0.0, 36°.25N×82°.82E, h9^{km}, mB4.6/11, mb4.3/21, ML4.5/9, Ms4.0/16, Ms7 3.8/13*

*MOS **20** 05:40:38.4±1.6, 36°.32N×82°.90E, h33^{km}, mb4.4/14, Error ellipse: s-maj=8.6km s-min=5.0km az=106.7*

*NNC **20** 05:40:39.2±2.3, 36°.62N×83°.32E, h0^{km}, mb4.7, mpv4.6, Error ellipse: s-maj=27.8km s-min=18.3km az=80.0*

ISC 20 05:40:40.5±0.5**, 36°.26N**±0°.06×**82°.84E**±0°.05**, h35**^{km}**, n139,** σ**1**^{s}**90**/135**, mb4.2**/36**, MS3.3**/12**, 12C-5D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	6.33	303	Pn	Pn	05 42 16.0	+4.7
KSH				Sn	Sn	05 43 32.8	+10
KSH				smax	smax		
	comp=N,2μm,1.1s						
KSH				smax	smax		
	comp=E,1μm,1.2s						
KSH				LR	LR		
	comp=N,2μm,11.8s						
KSH				LR	LR		
	comp=E,3μm,14.4s						
KSH				LR	LR		
	comp=Z,2μm,11.2s						
PDGK	Podgornoye	7.51	341	⇑Pn	Pn	05 42 26.9	-0.8
	34nm,1.1s						
PDGK				⇓Sn	Sn	05 43 53.1	+1.5
	69nm,0.8s						
PDGK	Podgornoye	7.51	341	P	Pn	05 42 26.8	-0.8
PDGK						05 43 53.1	
ULHL	Ulahol	7.87	321	P	Pn	05 42 35.6	+3.0
	SNR=10.0						
BOOM	Boomskoye usch	8.20	321	P	Pn	05 42 37.6	+0.5
BOOM	Boomskoye usch	8.20	321		Pn	05 42 37.5	+0.5
MDOK	Medeo	8.21	329	⇑Pn	Pn	05 42 38.1	+0.9
	30nm,0.8s						
MDOK				⇑Lg	Lg	05 44 56.4	
	124nm,1.0s						
KZA	Kyzart	8.27	317	P	Pn	05 42 43.1	+4.9
	SNR=16						
NIL	Nilore	8.29	254	P	Pn	05 42 36.7	-1.5
NIL	Nilore	8.29	254		Pn	05 42 36.7	-1.5
WMQ	Urumqi	8.41	25	eP	Pn	05 42 40.3	+0.4
WMQ				S	Sn	05 44 15.3	+1.6
WMQ				smax	smax		
	comp=N,26nm,1.1s						
WMQ				smax	smax		
	comp=E,26nm,1.1s						
WMQ	Urumqi	8.41	25	P	Pn	05 42 38.6	-1.3
WMQ	Urumqi	8.41	25		Pn	05 42 38.6	-1.3
UCH	Uchtor	8.78	315	P	Pn	05 42 47.6	+2.2
	SNR=23						
KBK	Karagaybulak	8.83	319	P	Pn	05 42 50.3	+4.5
	SNR=6.2						
AAK	Ala-Archa	9.06	317	Pn	Pn	05 42 49.5	+0.6
	0.7nm,0.3s,baz=136,slow=8.7,SNR=17						
AAK				Lg	Lg	05 45 24.8	
	0.9nm,0.3s,baz=302,slow=23,SNR=2.4						
AAK	Ala-Archa	9.06	317	P	Pn	05 42 53.3	+4.4
	SNR=10						
AAK	Ala-Archa	9.06	317	ceP	Pn	05 42 50.5	+1.6
AAK				pmax	pmax		
	comp=Z,19nm,1.3s						
AAK	Ala-Archa	9.06	317		Pn	05 42 48.2	-0.7
FRU1	Bishkek	9.11	318	P	Pn	05 42 51.1	+1.7
FRU1	Bishkek	9.11	318	Pn	Pn	05 42 51.1	+1.7
CHMS	Chumysh	9.17	320	P	Pn	05 42 55.5	+5.2
	SNR=7.7						
AML	Almayashu	9.20	312	P	Pn	05 42 51.4	+0.3
	SNR=23						
ARSB	Arslanbob	9.21	306	P	Pn	05 42 50.9	+0.1
ARSB	Arslanbob	9.21	306		Pn	05 42 50.9	+0.1
EKS2	Erkin-Say	9.48	315	P	Pn	05 42 55.8	+1.2
	SNR=16						
MK31	Makanchi Array	10.53	358	⇓Pn	Pn	05 43 06.9	-2.0
	comp=Z,2.0nm,0.3s,baz=181,slow=12,SNR=173						
MK31				⇓Sn	Sn	05 45 01.7	-3.8
	comp=Z,9.9nm,0.7s,baz=177,slow=22,SNR=4.6						
MK31	Makanchi Array	10.53	358	P	Pn	05 43 06.8	-2.0
MK31				e		05 45 01.6	
MK31	Makanchi Array	10.53	358		Pn	05 43 07.2	-1.7
MKAR	Makanchi Array	10.53	358	Pn	Pn	05 43 07.0	-1.8
	comp=Z,2.7nm,0.3s,baz=188,slow=12,SNR=52						
MKAR				Sn	Sn	05 45 05.2	-0.3
	comp=Z,1.3nm,0.3s,baz=190,slow=21,SNR=5.5						
MKAR				Lg	Lg	05 46 10.2	
	comp=Z,1.0nm,0.3s,baz=181,slow=23,SNR=3.5						
MKAR				LR	LR	05 47 57.0	
	comp=Z,50nm,19.7s,baz=150,slow=42						
MAKZ	Makanchi	10.56	357	⇓Pn	Pn	05 43 07.9	-1.3
	comp=Z,16nm,0.7s						
MAKZ				⇑Sn	Sn	05 45 03.7	-2.4
	comp=Z,20nm,1.1s						
MAKZ	Makanchi	10.56	357	P	Pn	05 43 07.9	-1.3
MAKZ						05 45 03.7	
MAKZ	Makanchi	10.56	357		Pn	05 43 07.8	-1.3
MAKZ				Sn	Sn	05 45 05.9	-0.3
KBL	Kabul	11.39	265	P	Pn	05 43 20.5	-0.3
KBL	Kabul	11.39	265		Pn	05 43 20.5	-0.3
KK31	Karatay Array	11.69	309	P	Pn	05 43 24.0	-0.7
KK31	Karatay Array	11.69	309		Pn	05 43 24.0	-0.7
KKAR	Karatay Array	11.69	309	P	Pn	05 43 25.9	+1.2
KKAR	Karatay Array	11.69	309		Pn	05 43 24.0	-0.7
KKAR	Karatay Array	11.69	309		Pn	05 43 25.9	+1.2
GTA	Gaotai	13.78	72	eP	P	05 43 59.1	-2.3
GTA				pP	Pn	05 44 03.0	+10
GTA				sP		05 44 05.8	
GTA				S	S	05 46 37.0	-10
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,110nm,6.0s						
GTA				LR	LR		
	comp=Z,190nm,13.7s						
GTA				LR	LR		
	comp=Z,250nm,15.6s						
GTA				LR	LR		
	comp=Z,200nm,15.2s						
DGZ	Jazzator, Alta	13.84	13	⇓iP	Pn	05 43 51.6	-2.6
DGZ				pmax	pmax		
	comp=Z,19nm,0.7s						
KURBB	Kurchatov Arra	14.69	349	Pn	Pn	05 44 02.7	-2.8
	comp=Z,0.1nm,0.3s,baz=172,slow=11,SNR=20						
KURBB				Lg	Lg	05 48 25.6	
	comp=Z,0.0nm,0.3s,baz=164,slow=31,SNR=5.0						
KURK	Kurchatov	14.76	349	ceP	Pn	05 44 03.4	-3.1
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KURK	Kurchatov	14.76	349		Pn	05 44 03.6	-2.9
BRDH	Bariadhala	15.54	148	LR	LR	05 51 30.2	
	comp=Z,80nm,18.0s,baz=337,slow=42						
HRA	Herat	16.91	270	Pn	Pn	05 44 32.7	-1.9
LZH	Lanzhou	16.96	84	eP	P	05 44 38.8	+2.0
LZH				pP	pP	05 44 43.4	-3.9
LZH				sP	sP	05 44 46.6	-5.9
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
ZAA0	Zalesovo Array	17.74	4		Pn	05 44 41.9	-2.6
ZALV	Zalesovo Beam	17.74	4	P	Pn	05 44 42.2	-2.2
	comp=Z,0.4nm,0.3s,baz=186,slow=12,SNR=9.3						
ZALV				S	Sn	05 47 58.6	-2.3
	comp=Z,0.5nm,0.3s,baz=179,slow=24,SNR=2.6						
ZALV	Zalesovo Beam	17.74	4		Pn	05 44 40.9	-3.5
BVAR	Borovoye Array	18.91	336	P	P	05 44 57.2	-0.7
	comp=Z,1.3nm,0.3s,baz=139,slow=12,SNR=27						
BRVK	Borovoye	18.97	336	ceP	P	05 44 59.2	+0.6
BRVK				pmax	pmax		
	comp=Z,32nm,1.0s						
BRVK	Borovoye	18.97	336	P	P	05 44 58.7	+0.1
BRVK				IAmb	IAmb	05 45 02.0	
	comp=Z,24nm,0.8s						
GEYT	Alibeck	19.78	282	P	P	05 45 05.6	-2.1
	comp=Z,0.4nm,0.3s,baz=75,slow=11,SNR=6.8						
GEYT				LR	LR	05 54 32.1	
	comp=Z,77nm,21.0s,baz=355,slow=42						
GEYT	Alibeck	19.78	282	P	P	05 45 07.4	-0.2
GYA0B	ALIBECK ARRAY	19.78	282	P	P	05 45 07.3	-0.3
MOY	Mondy	20.11	34	eP	P	05 45 12.4	+1.2
MOY				pmax	pmax		
	comp=Z,16nm,2.0s						
KMI	Kunming	20.36	118	P	Pn	05 45 21.9	+5.5
KMI				pP	pP	05 45 24.8	0.0
KMI				pmax	pmax		
	comp=Z,16nm,0.6s						
KMI				pmax	pmax		
	comp=Z,96nm,4.9s						
KMI				LR	LR		
	comp=Z,170nm,5.2s						
KMI				LR	LR		
	comp=Z,140nm,5.6s						
KMI				LR	LR		
	comp=Z,220nm,6.2s						
ZAK	Zakamensk	20.41	40	eP	P	05 45 15.2	+0.8
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONM	Songino Array	20.88	49	P	P	05 45 18.8	-0.7
	comp=Z,4.9nm,1.0s,baz=241,slow=12,SNR=20						
SONM	Songino Array	20.88	49	P	P	05 45 17.9	-1.6
ABKAR	Akbulak array	21.14	315	P	P	05 45 21.9	-0.3
ULN	Ulaanbaatar	21.30	49	ceP	P	05 45 24.6	+0.5
ULN				pmax	pmax		
	comp=Z,14nm,1.7s						
TLY	Talaya	21.37	37	LR	LR	05 54 33.9	
	comp=Z,51nm,18.9s,baz=222,slow=39						
TLY	Talaya	21.37	37	i P	P	05 45 26.1	+1.4
TLY				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TLY	Talaya	21.37	37	P	P	05 45 24.0	-0.7
XAN	Xi'an	21.42	88	P	P	05 45 24.5	-0.9
XAN				pP	pP	05 45 30.0	-6.1
XAN				S	S	05 49 24.5	+3.2
XAN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
XAN				LR	LR		
	comp=Z,140nm,9.2s						
XAN				LR	LR		
	comp=Z,140nm,13.6s						
XAN				LR	LR		
	comp=Z,160nm,11.9s						
XAN	Xi'an	21.42	88	P	P	05 45 23.0	-2.4
XAN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
XAN	Xi'an	21.42	88	P	P	05 45 23.0	-2.4
XAN				IAmb	IAmb	05 45 26.1	
	comp=Z,9.7nm,1.1s						
CHTO	Chiang Mai	22.44	137	P	P	05 45 34.4	-2.0
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CHTO	Chiang Mai	22.44	137	P	P	05 45 34.4	-2.0
CHTO				IAmb	IAmb	05 45 36.0	
	comp=Z,4.5nm,0.7s						
GYA	Guiyang	22.52	109	eP	P	05 45 43.6	+6.3
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CMAR	Chiang Mai Arr	22.73	137	P	P	05 45 37.3	-2.1
	comp=Z,1.0nm,0.3s,baz=323,slow=9.3,SNR=10						
CMAR				LR	LR	05 55 14.0	
	comp=Z,19nm,21.6s,baz=305,slow=39						
CMAR	Chiang Mai Arr	22.73	137	ceP	P	05 45 48.0	+8.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	Chiang Mai Arr	22.73	137	P	P	05 45 37.9	-1.5
AKTO	Aktyubinsk	22.80	316	P	P	05 45 40.0	0.0
	comp=Z,6.2nm,0.8s,baz=116,slow=7.4,SNR=16						
AKTO				LR	LR	05 54 56.9	
	comp=Z,50nm,18.4s,baz=126,slow=38						
HHC	Hu-ho-hao-te	22.87	70	eP	P	05 45 38.6	-2.3
HHC				pP	pP	05 45 48.3	-3.3
HHC				sP	sP	05 45 51.1	-5.5
HHC				S	S	05 49 44.6	-3.6
HHC				sS	Sn	05 49 57.3	-7.5
HHC				pmax	pmax		
	comp=Z,37nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,4.2s						
HHC				LR	LR		
	comp=Z,440nm,11.8s						
HHC				LR	LR		
	comp=Z,210nm,12.4s						
HHC				LR	LR		
	comp=Z,380nm,11.9s						
WSAR	Wadi Sarin	24.62	245	P	P	05 45 57.1	-0.6
	comp=Z,1.3nm,0.3s,baz=31,slow=5.9,SNR=1.8						
WSAR				LR	LR	05 57 33.6	
	comp=Z,91nm,19.8s,baz=74,slow=41						
ARU	Arti	25.98	329	P	P	05 46 09.8	+0.2
	comp=Z,3.6nm,0.7s,baz=154,slow=3.4,SNR=12						
ARU	Arti	25.98	329	ceP	P	05 46 11.7	+2.1
ARU				pmax	pmax		
	comp=Z,14nm,1.0s						
ARU	Arti	25.98	329	P	P	05 46 09.4	-0.2
ARU				IAmb	IAmb	05 46 14.3	
	comp=Z,10nm,0.8s						
WHN	Wuhan	26.84	93	P	P	05 46 10.6	-7.1
KIRV	Kirov	31.24	326	LR	LR	06 00 34.3	
	comp=Z,66nm,18.5s,baz=122,slow=38						
NEY	Neytrino	31.39	295	i P	P	05 46 57.4	-0.8
NEY				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KVAR	Kislovodsk Arr	31.41	297	LR	LR	06 00 25.7	
	comp=Z,78nm,21.5s,baz=277,slow=38						
KIV	Kislovodsk	31.41	297	eP	P	05 47 00.2	+2.0
KIV				pmax	pmax		
	comp=Z,20nm,1.0s						
KIV				MLR	MLR		
	comp=Z,147nm,15.0s						
CN2	Changchun	33.19	64	eP	P	05 47 16.4	+2.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NRIK	Noril'sk	33.23	3	P	P	05 47 14.4	+0.6
	comp=Z,3.4nm,0.9s,baz=165,slow=8.0,SNR=2.7						
KSRS	Korea Array	35.83	74	LR	LR	06 02 23.5	
	comp=Z,22nm,18.9s,baz=254,slow=37						
OBN	Obninsk	36.59	316	eP	P	05 47 44.8	+2.0
OBN				e		05 49 07.6	
OBN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BR131	Keskin Array S	38.54	290	i P	P	05 48 02.4	+2.6
BR131	Keskin Array S	38.54	290	P	P	05 47 58.4	-1.4
BR131				IAmb	IAmb	05 48 04.1	
	comp=Z,6.4nm,0.9s						
BRTR	Keskin Array B	38.54	290	P	P	05 47 59.5	-0.4
	comp=Z,4.8nm,1.0s,baz=98,slow=5.5,SNR=13						
BRTR	Keskin Array B	38.54	290	i P	P	05 48 01.0	+1.2
BRTR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRTR	Keskin Array B	38.54	290	P	P	05 47 59.0	-0.9
YAK	Yakutsk	38.74	33	i P	P	05 48 02.9	+2.0
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
AKASG	Malin Array Be	40.59	308	P	P	05 48 17.2	+0.7
	comp=Z,0.3nm,0.3s,baz=72,slow=7.9,SNR=5.3						
AKASG	Malin Array Be	40.59	308	i P	P	05 48 17.8	+1.3
AKASG	Malin Array Be	40.59	308	P	P	05 48 16.0	-0.5
AKBB	Malin Array Si	40.59	308	P	P	05 48 16.6	+0.1
AKBB				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AKBB	Malin Array Si	40.59	308	P	P	05 48 16.6	+0.1
TIXI	Tiksi	42.58	20	ceP	P	05 48 32.3	-0.2
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.7s						
FINES	FINESS Array B	43.17	324	P	P	05 48 39.1	+1.7
	comp=Z,2.1nm,0.8s,baz=107,slow=6.4,SNR=3.9						
FINES				LR	LR	06 06 42.0	
	comp=Z,90nm,18.1s,baz=0.0,slow=36						
MLR	Muntele Rosu	43.19	301	P	P	05 48 39.1	+1.1
	comp=Z,7.8nm,0.9s,baz=9.9,slow=3.9,SNR=7.9						
MLR	Muntele Rosu	43.19	301	P	P	05 48 40.2	+2.2
BURAR	Bucovina Array	43.41	304	P	P	05 48 40.7	+1.0
INU	Inuyama	43.46	75	P	P	05 48 39.3	-0.8
LVV	L'vov	43.96	307	eP	P	05 48 37.9	-6.1
SUW	Suwalki	44.25	313	P	P	05 48 46.7	+0.5
SUW				pmax	pmax		
	comp=Z,60nm,1.1s						
SUW	Suwalki	44.25	313	P	P	05 48 46.7	+0.5
ARCES	ARCESS Array B	45.20	335	P	P	05 48 54.7	+1.1
	comp=Z,2.4nm,0.7s,baz=98,slow=8.7,SNR=7.8						
MA2	Magadan	48.59	39	ceP	P	05 49 23.9	+3.7
MA2				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NOA	NORSAR Array B	50.32	323	LR	LR	06 12 05.0	
	comp=Z,36nm,21.7s,baz=105,slow=38						
BILL	Bilibino	54.52	27	eP	P	05 50 05.8	+1.4
BILL				e		05 51 09.8	
BILL				ePPP	PPP	05 53 17.9	
BILL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BILL	Bilibino	54.52	27	P	P	05 50 07.3	+2.9
BILL				IAmb	IAmb	05 50 08.5	
	comp=Z,5.2nm,0.9s						
BCLA	Clavier	55.65	311	pP	P	05 50 15.8	+3.0
IMAR	Indian Mountai	69.19	21	P	P	05 51 43.5	+0.4
COLD	Coldfoot	69.31	19	P	P	05 51 45.2	+1.4
COLD				IAmb	IAmb	05 51 48.1	
	comp=Z,3.1nm,1.0s						
BMAR	Burnt Mountain	70.60	18	P	P	05 51 51.8	0.0
MLY	Manley	70.76	21	P	P	05 51 53.1	+0.4
MLY				IAmb	IAmb	05 51 59.6	
	comp=Z,6.3nm,1.3s						
NEA	Nenana	71.58	21	P	P	05 51 57.9	+0.2
IL31		72.05	20	P	P	05 52 00.5	+0.1
IL31				IAmb	IAmb	05 52 03.3	
	comp=Z,6.0nm,1.2s						
ILAR	Eielson Array	72.05	20	P	P	05 52 00.1	-0.4
	comp=Z,2.4nm,1.0s,baz=309,slow=5.4,SNR=15						
ILAR	Eielson Array	72.05	20	P	P	05 52 00.5	0.0
ILAR	Eielson Array	72.05	20	P	P	05 52 00.5	0.0
INK	Inuvik	72.26	13	P	P	05 52 01.8	+0.2
INK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
INK	Inuvik	72.26	13	P	P	05 52 01.8	+0.2
INK				IAmb	IAmb	05 52 07.2	
	comp=Z,6.2nm,1.3s						
C36M	Paulatuk	72.85	10	P	P	05 52 04.5	-0.6
SCRK	Sand Creek	73.47	20	P	P	05 52 08.5	-0.6
SCRK				IAmb	IAmb	05 52 11.8	
	comp=Z,4.3nm,0.9s						
WRA	Warramunga Arr	74.12	130	P	P	05 52 12.0	-1.3
	comp=Z,4.7nm,0.8s,baz=324,slow=5.9,SNR=11						
WRA	Warramunga Arr	74.12	130	IAmb	IAmb	05 52 12.7	
	comp=Z,0.5nm,1.4s						
BCAR	Beaver Creek A	74.79	19	P	P	05 52 17.7	+1.0
TORD	Torodi Ar. Bea	75.27	276	P	P	05 52 19.2	-0.9
	comp=Z,1.5nm,0.8s,baz=44,slow=5.2,SNR=8.5						
TORD	Torodi Ar. Bea	75.27	276	IAmb	IAmb	05 52 23.4	
	comp=Z,1.5nm,0.9s						
ASAR	Alice Springs	76.67	133	P	P	05 52 26.2	-1.6
	comp=Z,2.0nm,0.8s,baz=324,slow=6.4,SNR=9.7						
ASAR	Alice Springs	76.67	133	P	P	05 52 27.1	-0.8
ASAR	Alice Springs	76.67	133	P	P	05 52 27.1	-0.8
YKA	Yellowknife Ar	80.58	8	P	P	05 52 48.5	-0.4
	comp=Z,2.1nm,0.9s,baz=344,slow=4.6,SNR=18						

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*ZUR **20** 05:46:25.4, 47°.06N×9°.50E, h7^{km}, MLh1.7/19, Error ellipse: s-maj=1.4km s-min=0.6km az=97.0*

*BGR **20** 05:46:25.2±0.7, 47°.01N×9°.53E, h10^{km}, ML1.8/7, Error ellipse: s-maj=5.6km s-min=3.3km az=173.0*

*VIE **20** 05:46:25.6±0.6, 47°.06N×9°.51E, h5^{km}±6^{km}, mb1.3/2, ml2.1/9, Error ellipse: s-maj=3.0km s-min=2.3km az=92.0 5 km E of Sargans*

*IASPEI **20** 05:46:25.2±0.8, 47°.05N±0°.02×9°.50E±0°.02, h9^{km}±5^{km}, Error ellipse: s-maj=3.3km s-min=2.6km az=150.2, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

STR ***20*** *05:46:26.4±1.2, 47°N±6°×1°0E±°, h24km±9km, MLv1.8/5*
LDG ***20*** *05:46:26.1±0.1, 47.°05N×9.°52E, h7km, Ml2.0/8, Error ellipse: s-maj=2.4km s-min=1.7km az=97.0*
ISC 20 05:46:25.2±0.8, **47.°05N**±0.°02×**9.°49E**±0.°02, **h10**km±4km, **n54**, σ**0.s76**/109, **4C-6D**, **Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLONS	Plons/SG	0.07	272	⇑Pg	Pg	05 46 27.9	+0.3
PLONS				⇑Pg	Pg	05 46 27.9	+0.3
	1.0nm,SNR=15						
PLONS				Sg	Sg	05 46 29.4	+0.2
PLONS	Plons/SG	0.07	272	ePg	Pg	05 46 27.9	+0.3
PLONS				eSg	Sg	05 46 29.4	+0.2
SBUB	Buchserberg Ma	0.11	339	⇓Pg	Pg	05 46 27.9	-0.2
	0.6nm,SNR=3.2						
SBUB				⇓Pg	Pg	05 46 27.9	-0.2
SBUB				Sg	Sg	05 46 29.4	-0.6
SBUA2	Buchs, Altendo	0.11	354	⇓Pg	Pg	05 46 27.8	-0.2
	2.5nm,SNR=16						
SBUA2				⇓Pg	Pg	05 46 27.8	-0.2
SBUA2				Sg	Sg	05 46 29.4	-0.6
SBUH	Buchs, Hochsch	0.13	355	Pg	Pg	05 46 28.1	-0.1
SBUH				Pg	Pg	05 46 28.1	-0.1
	1.1nm,SNR=2.0						
SBUH				Sg	Sg	05 46 30.2	-0.1
LIENZ	Kamor/St.Gall	0.25	0	Pg	Pg	05 46 30.3	-0.1
LIENZ				Pg	Pg	05 46 30.3	-0.1
	0.3nm,SNR=3.9						
SGT04	Schlatt-Haslen	0.32	342	Pg	Pg	05 46 32.1	+0.5
SGT04				Pg	Pg	05 46 32.1	+0.5
	0.2nm,SNR=1.7						
SGT04				Sg	Sg	05 46 36.7	+0.9
PANIX	Pigniu (Panix)	0.34	230	Pg	Pg	05 46 32.5	+0.4
PANIX				Pg	Pg	05 46 32.5	+0.4
	0.1nm,SNR=1.5						
PANIX				Sg	Sg	05 46 37.5	+0.9
SLTM2	Linthal, Matt	0.36	250	⇓Pg	Pg	05 46 33.0	+0.7
	0.4nm,SNR=3.8						
SLTM2				⇓Pg	Pg	05 46 33.0	+0.7
SLTM2				Sg	Sg	05 46 38.0	+0.9
DAVA	Damuels	0.36	48	Pg	Pg	05 46 32.3	-0.1
DAVA				Pg	Pg	05 46 32.3	-0.1
	0.2nm,SNR=4.1						
DAVA				Sg	Sg	05 46 37.5	+0.3
DAVA	Damuels	0.36	48	ePg	Pg	05 46 32.4	-0.1
DAVA				eSg	Sg	05 46 37.3	+0.1
DAVA	Damuels	0.36	48	ePg	Pg	05 46 32.3	-0.1
	11nm,0.1s,SNR=23						
DAVA				i Sg	Sg	05 46 37.3	+0.1
	18nm,0.2s						
DAVOX	Davos/Dischmat	0.38	135	Pg	Pg	05 46 33.2	+0.5
DAVOX				Pg	Pg	05 46 33.2	+0.5
	0.1nm,SNR=1.2						
DAVOX				Sg	Sg	05 46 38.9	+1.2
WILA	Wila	0.54	313	ePg	Pg	05 46 36.5	+0.7
WILA				eSg	Sg	05 46 44.3	+1.3
NALPS	Val Nalps	0.68	229	Pg	Pg	05 46 39.0	+0.6
NALPS				Pg	Pg	05 46 39.0	+0.6
	0.1nm,SNR=1.6						
STIEG	Stiegenhof Hun	0.73	309	Pg	Pg	05 46 39.8	+0.6
STIEG				Pg	Pg	05 46 39.8	+0.6
	1.7nm,SNR=2.1						
WALHA	Wallhausen, DE	0.75	341	ePg	Pg	05 46 40.3	+0.6
WALHA				eSg	Sb	05 46 50.6	-0.1
UBR	Ueberruh	0.76	33	ePg	Pb	05 46 40.3	-0.3
FUSIO	Fusio	0.82	224	⇑Pg	Pg	05 46 41.6	+0.6
FUSIO				⇑Pg	Pg	05 46 41.6	+0.6
	0.1nm,SNR=1.5						
FUSIO				Sg	Sg	05 46 52.6	+0.8
FETA	Feichten	0.85	91	i Pg	Pg	05 46 41.8	+0.2
	0.1nm,0.1s						
FETA				i Sg	Sb	05 46 53.2	-0.5
	0.7nm,0.2s						
EMING	Emmingen-Lipti	0.95	333	ePg	Pg	05 46 44.1	+0.5
EMING				eSg	Sb	05 46 57.1	+0.5
RETA	Reutte	0.97	63	i Pg	Pg	05 46 43.4	-0.5
	1.4nm,0.1s						
RETA				i Sg	Sn	05 46 58.3	-0.7
	5.3nm,0.1s						
SULZ	Cheisacher	1.05	298	ePg	Pg	05 46 45.9	+0.4
SULZ				eSg	Sb	05 47 00.5	+1.0
METMA	Mettma DE	1.07	309	eSg	Sb	05 47 00.9	+0.9
MOTA	Moosalm	1.14	74	Pg	Pg	05 46 47.1	0.0
	0.3nm,0.1s,SNR=8.4						
MOTA				eSg	Sn	05 47 03.9	+0.6
	5.6nm,0.2s,SNR=8.6						
SQTA	Sankt Quirin	1.19	81	Pg	Pg	05 46 47.9	-0.2
	4.7nm,0.2s,SNR=5.7						
SQTA				eSg	Sn	05 47 04.7	+0.4
	16nm,0.3s,SNR=5.9						
BALST	Balsthal	1.26	284	eSg	Sg	05 47 06.6	+0.9
KIZ	Kirchzarten	1.40	311	Pn	Pn	05 46 51.4	+0.5
KIZ				Sn	Sb	05 47 08.2	-1.2
WATA	Walderalm	1.45	78	i Pg	Pg	05 46 53.6	+0.5
	1.1nm,0.1s						
WATA				i Sg	Sg	05 47 13.1	+1.1
	1.8nm,0.1s						
WTTA	Wattenberg	1.48	81	i Pg	Pg	05 46 54.3	+0.7
	0.8nm,0.1s						
WTTA				i Sg	Sg	05 47 12.9	0.0
	2.9nm,0.2s						
BFO	Black Forest	1.50	329	eSg	Sb	05 47 13.4	+1.0
CHMF	Charmoille	1.95	277	Pn	Pn	05 46 59.2	+0.7
CHMF				Pg	Pg	05 47 02.5	0.0
CHMF				Sn	Sn	05 47 22.9	-0.1
CHMF				Sg	Sg	05 47 28.4	+0.6
HINF	Hinteralfeld	1.95	294	ePn	Pn	05 46 58.8	+0.4
HINF	Hinteralfeld	1.95	294	ePg	Pb	05 47 02.3	+1.4
HINF				eSg	Sg	05 47 27.6	-0.2
	1.6nm,0.2s						
ECH	Echery	1.96	307	Pn	Pn	05 46 58.6	0.0
ECH				Sn	Sn	05 47 21.8	-1.5
WLS	Welschbruch	1.99	314	Pn	Pn	05 46 59.4	+0.4
CDF	Champ du Feu	2.02	313	ePn	Pn	05 46 59.9	+0.4
CDF	Champ du Feu	2.02	313	ePg	Pg	05 47 04.0	0.0
CDF				eSn	Sn	05 47 24.2	-0.7
CDF				eSg	Sg	05 47 30.1	-0.2
	0.9nm,0.2s						
HAU	Haudompre	2.33	295	ePn	Pn	05 47 04.2	+0.5
HAU	Haudompre	2.33	295	ePg	Pb	05 47 09.2	+1.8
CABF	La Chapelle	2.38	261	ePn	Pn	05 47 04.4	0.0
CABF	La Chapelle	2.38	261	ePg	Pg	05 47 11.1	+0.3
CABF				eSn	Sn	05 47 32.7	-0.9
CABF				eSg	Sg	05 47 40.8	-0.7
	3.0nm,0.3s						
LPL	La Plagne	2.45	232	ePn	Pn	05 47 05.7	+0.2
LPL	La Plagne	2.45	232	ePg	Pg	05 47 12.4	+0.2
LPL				eSn	Sn	05 47 35.0	-0.6
LPL				eSg	Sg	05 47 43.7	-0.2
	0.6nm,0.3s						
LPG	La Plagne	2.45	232	ePn	Pn	05 47 06.0	+0.4
LPG	La Plagne	2.45	232	ePg	Pg	05 47 12.2	0.0
LPG				eSn	Sn	05 47 34.4	-1.3
LPG				eSg	Sg	05 47 43.7	-0.3
	1.0nm,0.3s						
MBDF	Montbardon	3.00	220	ePn	Pn	05 47 12.8	-0.2
MBDF	Montbardon	3.00	220	ePg	Pg	05 47 22.1	-0.6
MBDF				eSn	Sn	05 47 46.7	-2.3
MBDF				eSg	Sg	05 47 59.9	-1.6
	0.9nm,0.4s						
ORIF	Oris-en-Rattie	3.30	231	ePn	Pn	05 47 16.5	-0.5
ORIF	Oris-en-Rattie	3.30	231	ePg	Pg	05 47 27.9	-0.5
ORIF				eSn	Sn	05 47 55.6	-0.7
	0.8nm,0.3s						
MEZF	Maizieres J'vi	3.33	298	ePn	Pn	05 47 16.9	-0.4
MEZF	Maizieres J'vi	3.33	298	ePg	Pg	05 47 27.6	-1.4
	baz=115						
MEZF				eSn	Sn	05 47 55.0	-1.9
MEZF				eSg	Sg	05 48 11.1	-1.0
	4.1nm,0.4s,baz=123						
LASF	Ste Croix	4.95	235	ePn	Pn	05 47 38.8	-0.8
LASF	Ste Croix	4.95	235	ePg	Pg	05 47 57.0	-2.9

LDG ***20*** *05:47:13.6±0.1, 51.°65N×16.°22E, h1km, Ml4.3/15, Error ellipse: s-maj=3.8km s-min=2.4km az=177.0, Suspected Mining induced.*
IPEC ***20*** *05:47:14.5±0.3, 51.°62N×16.°21E, h0km, ML3.7/4, Error ellipse: s-maj=2.9km s-min=1.5km az=64.0*
DNK ***20*** *05:47:15.6±1.8, 51.°64N×16.°96E, h26km±60km, ML2.9, Hypocentre not reviewed by the ISC*
BGR ***20*** *05:47:16.6±0.4, 51.°53N×16.°14E, h1km, ML4.0/14, Error ellipse: s-maj=4.4km s-min=2.2km az=19.0*
IDC ***20*** *05:47:16.3±0.4, 51.°53N×16.°04E, h0km, mb4.0/12, mb1 4.1/20, mb1mx3.9/48, mbtmp4.0/20, ML3.6/7, MS2.7/2, Ms1 2.7/2, ms1mx2.2/48, Error ellipse: s-maj=8.8km s-min=5.0km az=100.0*
BNS ***20*** *05:47:17.9±0.7, 51.°82N×15.°99E, h10km, ML3.9*
NEIC ***20*** *05:47:17.1±1.6, 51.°55N±0.°06×16.°04E±0.°07, h10km±1km, mb4.0/10, ML3.8(PRU), ML4.0(VIE), Error ellipse: s-maj=10.3km s-min=7.4km az=192.0*
ISC 20 05:47:14.7±0.4, **51.°59N**±0.°03×**16.°18E**±0.°02, **h0**km, **n194**, σ**2.s10**/263, **mb4.0**/15, **13C-2D**, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.75	174	ePg	Pb	05 47 29.7	-1.0
KSP				eSg	Sb	05 47 39.9	-1.5
KSP	Ksiaz	0.75	174	ePg	Pb	05 47 29.7	-1.0
KSP				eSg	Sb	05 47 39.1	-2.3
CHVC	Chvalec	1.00	184	ePG	Pb	05 47 34.2	-0.8
CHVC				eSG	Sb	05 47 46.6	-2.2
	comp=Z,599nm,0.5s						
OSTC	Ostas	1.03	179	ePG	Pb	05 47 34.7	-0.8
OSTC				eSG	Sb	05 47 48.2	-1.4
	comp=Z,518nm,0.4s						
UPC	Upice	1.09	185	ePG	Pb	05 47 35.8	-0.6
UPC				eSG	Sb	05 47 49.0	-2.1
	comp=Z,937nm,0.3s						
DPC	Dobruska-Polom	1.24	176	ePg	Pb	05 47 38.4	-0.6
DPC				eSg	Sb	05 47 54.3	-1.4
DPC	Dobruska-Polom	1.24	176	ePG	Pb	05 47 38.3	-0.8
DPC				eSG	Sb	05 47 54.2	-1.4
	comp=Z,580nm,0.8s						
PVCC	Panska Ves	1.47	224	ePG	Pn	05 47 42.1	-0.3
PVCC				eSG	Sg	05 48 01.5	-0.3
	comp=Z,2µm,0.9s						
KRLC	Kraliky	1.56	166	ePG	Pb	05 47 44.1	-0.4
KRLC				eSG	Sn	05 48 04.8	0.0
	comp=Z,1µm,1.0s						
BRG	Berggiesshubel	1.57	244	PN	Pn	05 47 42.9	-1.0
BRG				PG	Pb	05 47 45.2	+0.5
BRG				SG	Sn	05 48 05.0	+0.1
	936nm,0.4s						
BRG	Berggiesshubel	1.57	244	ePn	Pn	05 47 43.4	-0.5
BRG				eSg	Sn	05 48 05.0	+0.1
PRA	Prague	1.88	217	ePN	Pn	05 47 47.8	-0.3
PRA				eSG	Sb	05 48 14.0	+0.1
	comp=Z,811nm,1.2s						
FBE	Freiberg	1.89	250	ePn	Pn	05 47 49.0	+0.7
FBE				eSg	Sn	05 48 14.9	+2.0
PRU	Pruhonice	1.91	214	ePN	Pn	05 47 48.3	-0.2
PRU				ePG	Pb	05 47 50.0	-0.4
PRU				eSG	Sn	05 48 14.1	+0.9
	comp=Z,790nm,1.1s						
CLL	Collm	2.00	263	ePn	Pn	05 47 50.1	+0.3
CLL				eSg	Sb	05 48 19.8	+2.2
CLL	Collm	2.00	263	i Pn	Pn	05 47 50.1	+0.3
	comp=Z,116nm,0.5s						
CLL				i Pg	Pb	05 47 54.9	+2.9
CLL				i		05 47 57.8	
CLL				i Sg	Sb	05 48 19.7	+2.2
	comp=Z,299nm,0.4s						
CLL	Collm	2.00	263		Pn	05 47 49.9	+0.1
MORC	Moravsky Berou	2.01	154	ePn	Pn	05 47 50.4	+0.5
MORC	Moravsky Berou	2.01	154	⇑P	Pn	05 47 50.1	+0.1
MORC				⇑S	Sg	05 48 18.5	-0.8
MORC	Moravsky Berou	2.01	154	ePn	Pn	05 47 50.0	+0.1
	baz=336						
MORC				eSg	Sg	05 48 17.9	-1.4
	comp=Z,440nm,1.1s,baz=336						
MORC	Moravsky Berou	2.01	154	ePN	Pn	05 47 50.0	+0.1
MORC				eSG	Sg	05 48 18.0	-1.4
MORC	Moravsky Berou	2.01	154		Pn	05 47 49.8	-0.2
OKC	Ostrava-Krasne	2.15	144	ePn	Pn	05 47 51.8	-0.1
OKC				eSg	Sg	05 48 23.8	-0.1
OKC	Ostrava-Krasne	2.15	144	ePN	Pn	05 47 52.2	+0.3
OKC				ePG	Pg	05 47 54.5	-1.5
OKC				eSG	Sg	05 48 23.8	-0.1
	comp=Z,869nm,0.8s						
VRAC	Vranov	2.30	173	Pn	Pn	05 47 54.5	+0.6
	comp=Z,11nm,0.3s,baz=328,slow=13,SNR=34						
VRAC				Pg	Pg	05 47 58.3	-0.4
	comp=Z,25nm,0.3s,baz=351,slow=16,SNR=25						
VRAC				Lg	Lg	05 48 25.9	
	comp=Z,16nm,0.3s,baz=271,slow=13,SNR=4.4						
VRAC				LR	LR	05 48 58.5	
	comp=Z,61nm,21.5s,baz=330,slow=45						
VRAC	Vranov	2.30	173	⇓P	Pn	05 47 54.4	+0.6
VRAC				⇑S	Sb	05 48 25.2	-0.8
VRAC	Vranov	2.30	173	ePn	Pn	05 47 54.1	+0.2
	baz=354						
VRAC				eSg	Sg	05 48 27.5	-1.0
	comp=Z,321nm,0.7s,baz=354						
VRAC	Vranov	2.30	173	ePN	Pn	05 47 54.2	+0.3
VRAC				eSG	Sg	05 48 27.5	-1.0
TREC	Trest	2.34	191	ePN	Pn	05 47 54.7	+0.3
TREC				ePG	Pb	05 47 58.2	+0.5
TREC				eSG	Sg	05 48 28.1	-1.7
	comp=Z,415nm,1.0s						
PBCC	Pribram	2.36	217	ePN	Pn	05 47 54.2	-0.5
PBCC				ePG	Pb	05 47 57.0	-1.0
PBCC				eSG	Sb	05 48 28.9	+1.2
KRUC	Moravsky	2.53	177	ePn	Pn	05 47 57.0	-0.1
	baz=358						
KRUC				eSg	Sg	05 48 34.8	-1.3
	comp=Z,282nm,0.9s,baz=358						
KRUC	Moravsky	2.53	177	ePN	Pn	05 47 57.0	-0.1
KRUC				eSG	Sg	05 48 34.8	-1.3
TANN	Tannenbergstha	2.62	245	ePn	Pn	05 47 58.3	-0.1
TANN				eSg	Sb	05 48 37.5	+2.1
OJC	Ojcow	2.67	119	ePn	Pn	05 47 58.6	-0.5
OJC	Ojcow	2.67	119	ePn	Pn	05 47 58.5	-0.5
OJC				ePg	Pg	05 48 07.6	+1.7
OJC				eSn	Sn	05 48 27.2	-4.8
OJC				eSg	Sg	05 48 42.6	+2.1
OJC	Ojcow	2.67	119		Pn	05 48 00.2	+1.2
NKC	Novy Kostel	2.72	242	ePN	Pn	05 47 59.8	+0.1
NKC				ePG	Pb	05 48 03.9	-0.4
NKC				eSG	Sb	05 48 40.0	+1.8
	comp=Z,1µm,1.0s						
JAVC	Velka Javorina	2.90	160	ePn	Pn	05 48 02.4	+0.3
	baz=342						
JAVC				eSg	Sg	05 48 45.6	-2.1
	comp=Z,462nm,1.5s,baz=342						
JAVC	Velka Javorina	2.90	160	ePN	Pn	05 48 02.5	+0.3
JAVC				eSG	Sg	05 48 45.7	-2.0
KHC	Kasperske Hory	2.97	215	ePN	Pn	05 48 03.2	+0.1
KHC				ePG	Pb	05 48 09.0	+0.5
KHC				eSN	Sn	05 48 37.0	-2.4
KHC				eSG	Sg	05 48 48.3	-1.8
	comp=Z,153nm,0.6s						
KHC	Kasperske Hory	2.97	215		Pn	05 48 03.1	-0.1
MOX	Moxa	3.02	254	ePn	Pn	05 48 03.9	0.0
MOX				eSg	Sb	05 48 50.6	+3.7
MANZ	Manzenberg	3.04	240	ePn	Pn	05 48 04.3	+0.3
ROTZ	Rotzenmuhle	3.11	236	ePn	Pn	05 48 05.1	0.0
GEC2	GERESS Array S	3.17	211	ePn	Pn	05 48 06.1	+0.1
GEC2	GERESS Array S	3.17	211	Pn	Pn	05 48 06.3	+0.3
GERES	GERESS Array B	3.17	211	Pn	Pn	05 48 06.0	+0.1
	comp=Z,11nm,0.3s,baz=32,slow=12,SNR=194						
GERES				Pg	Pb	05 48 12.8	+0.8
	comp=Z,19nm,0.3s,baz=29,slow=17,SNR=34						
GERES				Lg	Lg	05 48 54.6	
	comp=Z,28nm,0.3s,baz=49,slow=25,SNR=9.3						
SMOL	Smolenice	3.18	165	eSG	Sg	05 48 58.8	+1.9
SMOL				eLG	Lg	05 49 13.3	
LANS	Liptovska Anna	3.23	138	ePN	Pn	05 48 07.7	+1.1
LANS				e		05 48 17.1	
LANS				eLG	Lg	05 49 12.2	
WET	Wettzell	3.23	222	ePn	Pn	05 48 06.7	0.0
MODS	Modra-Piesok	3.30	167	ePN	Pn	05 48 07.8	+0.2
MODS				e		05 48 16.9	
MODS	Modra-Piesok	3.30	167	eSG	Sg	05 49 01.3	+0.7
MODS				eLG	Lg	05 49 09.9	
NIE	Niedzica	3.41	128	ePn	Pn	05 48 12.0	+2.8
NIE				ePg	Pg	05 48 21.0	+0.8
NIE				eSg	Sg	05 49 05.3	+0.9
ZST	Bratislava	3.45	170	ePN	Pn	05 48 10.5	+0.8
ZST				e		05 48 19.4	
ZST	Bratislava	3.45	170	eSG	Sg	05 49 04.9	-0.6
ZST				eLG	Lg	05 49 13.1	
VYHS	Vyhne	3.54	150	ePN	Pn	05 48 11.3	+0.3
VYHS				e		05 48 23.7	
VYHS	Vyhne	3.54	150	eSG	Sg	05 49 11.7	+3.3
BSD	Bornholm Skovb	3.61	348	i P	Pn	05 48 12.3	+0.4
BSD				eS	Sn	05 48 52.2	-3.0
BSD	Bornholm Skovb	3.61	348	i P		05 48 12.3	
BSD				eS		05 48 52.3	
BSD				IAML		05 48 56.1	
	comp=Z,16nm,0.4s						
CLZ	Clausthal	3.62	276	ePn	Pn	05 48 12.8	+0.8
CONA	Conrad Observa	3.67	183	i Pn	Pn	05 48 13.3	+0.5
	comp=Z,14nm,0.4s,SNR=25						
CONA				i Sg	Sg	05 49 10.0	-2.6
	comp=Z,50nm,0.3s						
CONA	Conrad Observa	3.67	183		Pn	05 48 13.3	+0.5
GRA1	Grafenberg Arr	3.68	241		Pn	05 48 12.7	-0.2
GRF	Grafenberg Arr	3.68	241	ePn	Pn	05 48 13.0	+0.1
GRF				eSg	Sg	05 49 12.2	-0.7
STHS	Stebnicka Huta	3.90	122	ePN	Pn	05 48 17.2	+1.3
STHS				e		05 48 30.7	
STHS	Stebnicka Huta	3.90	122	eSG	Sg	05 49 25.3	+5.4
STHS				eLG	Lg	05 49 39.7	
MOA	Molln	3.94	199	i Pn	Pn	05 48 16.7	+0.2
	comp=Z,23nm,0.3s,SNR=34						
MOA				i Sg	Sg	05 49 18.5	-2.8
	comp=Z,42nm,0.5s						
MOA	Molln	3.94	199		Pn	05 48 16.7	+0.2
KECS	Kecovo	4.17	137	ePN	Pn	05 48 20.2	+0.6
KECS				e		05 48 36.2	
KECS				eLG	Lg	05 49 34.9	
CRVS	Cervenica-Dubn	4.33	126	ePN	Pn	05 48 23.5	+1.7
CRVS				e		05 48 39.1	
CRVS				eLG	Lg	05 49 47.3	
ARSA	Arzberg	4.36	186	i Pn	Pn	05 48 23.5	+1.3
	comp=Z,5.9nm,0.3s,SNR=8.8						
ARSA				i Sg	Sg	05 49 31.3	-3.5
	comp=Z,168nm,0.7s						
ARSA	Arzberg	4.36	186		Pn	05 48 23.5	+1.3
PSZ	Piszkesteto	4.39	145	⇑P	Pn	05 48 24.0	+1.3
PSZ				⇑S	Sn	05 49 17.8	+3.2
PSZ	Piszkesteto	4.39	145		Pn	05 48 23.7	+1.0
KWP	Kalwaria Pacla	4.60	113		Pn	05 48 26.7	+1.3
KBA	Koelnbreinsper	4.88	203	i Pn	Pn	05 48 30.1	+0.6
	comp=Z,32nm,0.5s,SNR=25						
KBA				i Sg	Sg	05 49 46.1	-5.3
	comp=Z,62nm,0.5s						
KBA	Koelnbreinsper	4.88	203		Pn	05 48 30.1	+0.6
SUW	Suwalki	4.89	58	Pn	Pn	05 48 31.9	+2.4
SOKA	Soboth	4.97	189	i Pn	Pn	05 48 31.4	+0.8
	comp=Z,5.4nm,0.4s,SNR=5.9						
SOKA				i Sg	Sg	05 49 50.0	-4.3
	comp=Z,15nm,0.5s						
SOKA	Soboth	4.97	189		Pn	05 48 31.4	+0.8
OBKA	Obir	5.20	192	i Pn	Pn	05 48 34.1	+0.4
OBKA				i Sg	Sb	05 49 50.7	+1.3
	comp=Z,32nm,0.6s						
OBKA	Obir	5.20	192		Pn	05 48 34.1	+0.4
WATA	Walderalm	5.21	217	i Pn	Pn	05 48 34.7	+0.8
	comp=Z,30nm,0.7s,SNR=14						
WATA				i Sg	Sb	05 49 52.8	+3.0
	comp=Z,17nm,0.4s						
WATA	Walderalm	5.21	217		Pn	05 48 34.7	+0.8
MYKA	Terra Mystica	5.23	200	i Sg	Sg	05 49 57.1	-5.7
	comp=Z,50nm,0.6s						
WTTA	Wattenberg	5.24	216	i Pn	Pn	05 48 35.0	+0.5
	comp=Z,13nm,0.6s,SNR=12						
WTTA				i Sg	Sg	05 49 57.4	-5.7
	comp=Z,31nm,0.4s						
WTTA	Wattenberg	5.24	216		Pn	05 48 35.0	+0.5
STU	Stuttgart	5.30	241	Pn	Pn	05 48 35.2	+0.2
TRPA	Tarpa	5.38	128	⇑P	Pn	05 48 36.6	+0.5
MOTA	Moosalm	5.38	220	i Pn	Pn	05 48 36.1	-0.3
	comp=Z,9.1nm,0.4s,SNR=8.3						
MOTA				i Sg	Sb	05 50 00.9	+6.0
	comp=Z,63nm,0.8s						
MOTA	Moosalm	5.38	220		Pn	05 48 36.1	-0.3
ABTA	Abfaltersbach	5.41	208	i Pn	Pn	05 48 37.3	+0.7
	comp=Z,5.7nm,0.4s,SNR=19						
ABTA				i Sg	Sb	05 50 00.6	+5.1
	comp=Z,69nm,0.8s						
ABTA	Abfaltersbach	5.41	208		Pn	05 48 37.4	+0.7
RETA	Reutte	5.41	223	i Pn	Pn	05 48 36.4	-0.2
	comp=Z,5.1nm,0.3s,SNR=5.5						
RETA				i Sg	Sb	05 50 00.5	+4.9
	comp=Z,36nm,0.5s						
RETA	Reutte	5.41	223		Pn	05 48 36.5	-0.2
SQTA	Sankt Quirin	5.44	218	i Pn	Pn	05 48 38.0	+0.8
	comp=Z,13nm,0.4s,SNR=10.0						
SQTA				i Sg	Sb	05 50 01.9	+5.4
	comp=Z,33nm,0.5s						
SQTA	Sankt Quirin	5.44	218		Pn	05 48 38.0	+0.8
KOE	Koeppel	5.46	261	ePn	Pn	05 48 36.5	-0.8
HOBG	Hohbusch	5.58	267	ePn	Pn	05 48 38.6	-0.3
BGG	Burgeitz	5.76	260	ePn	Pn	05 48 40.9	-0.5
LAUG	Laupendahl	5.78	271	ePn	Pn	05 48 40.5	-1.1
FETA	Feichten	5.79	220	i Pn	Pn	05 48 42.8	+0.8
	comp=Z,6.1nm,0.6s						
FETA				i Sg	Sb	05 50 11.3	+4.6
	comp=Z,15nm,0.6s						
FETA	Feichten	5.79	220		Pn	05 48 42.9	+0.8
STAL	STALIGIAL	5.80	205		Pn	05 48 42.4	+0.4
DAVA	Damuels	5.95	226	i Pn	Pn	05 48 43.5	-0.7
	comp=Z,3.6nm,0.3s						
DAVA				i Sg	Sb	05 50 16.0	+4.9
	comp=Z,97nm,0.7s						
DAVA	Damuels	5.95	226		Pn	05 48 43.5	-0.7
STB	Steinbach	5.97	264	ePn	Pn	05 48 44.5	+0.3
STB				eSn	Sn	05 49 49.1	-4.1
	comp=Z,24nm,0.2s						
BFO	Black Forest	6.02	240		Pn	05 48 44.6	-0.4
HILG	Hillesheim	6.14	262	ePn	Pn	05 48 46.7	0.0
KLL	Kalltalsperre	6.28	265	ePn	Pn	05 48 47.8	-0.8
CTI	Castel Tesino	6.30	210		Pn	05 48 49.4	+0.5
DAVOX	Davos/Dischmat	6.34	223	Pn	Pn	05 48 49.3	-0.3
	comp=Z,1.8nm,0.3s,baz=48,slow=10,SNR=14						
DAVOX				Lg	Lg	05 50 36.4	
	comp=Z,3.1nm,0.3s,baz=26,slow=23,SNR=6.8						
DRGR		6.43	136	⇑P	Pn	05 48 51.5	+0.8
SIRR	Siria	6.43	144	⇑P	Pn	05 48 51.6	+0.9
CDF	Champ du Feu	6.56	244	ePn	Pn	05 48 50.2	-2.2
CDF				eSg	Sg	05 50 41.4	-3.8
	comp=Z,49nm,0.7s						
WLF	Walferdange	6.66	257	Pn	Pn	05 48 54.3	+0.6
ECH	Echery	6.73	243		Pn	05 48 55.2	+0.5
TUE	Stuetta	6.81	224	Pn	Pn	05 48 56.5	+0.5
BLY	Banja Luka	6.88	174	Pn	Pn	05 48 57.1	+0.4
TEOL	Teolo	6.91	207	Pn	Pn	05 48 57.3	0.0
BZS	Buzias	6.98	147	⇑P	Pn	05 48 59.8	+1.6
SALO	Salr	7.05	214		Pn	05 48 58.9	-0.2
BUR08	Bucovina Ar. S	7.07	120		Pn	05 49 01.1	+1.6
BURAR	Bucovina Array	7.09	121	⇓P	Pn	05 49 00.6	+0.8
BURAR	Bucovina Array	7.09	121		Pn	05 49 01.6	+1.8
HINF	Hinteralfeld	7.12	242	ePn	Pn	05 48 57.8	-2.4
HINF	Hinteralfeld	7.12	242	ePg	Pb	05 49 26.8	+7.5
HINF				eSg	Sg	05 50 59.0	-4.4
	comp=Z,118nm,0.9s						
NACGM	Naroch	7.18	58	e	Pb	05 49 15.0	-5.1
HAU	Haudompre	7.30	244	ePn	Pn	05 49 00.1	-2.5
HAU	Haudompre	7.30	244	ePg	Pb	05 49 29.8	+7.6
HAU				eSg	Sg	05 51 04.6	-4.4
	comp=Z,194nm,1.2s						
GIVF	Givet	7.34	263	ePn	Pn	05 49 00.6	-2.5
GIVF				eSg	Sg	05 51 03.8	-6.5
	comp=Z,80nm,0.9s						
PAGF	Fort de Pagny	7.38	250	ePn	Pn	05 49 01.7	-1.9
	baz=71						
PAGF				eSg	Sg	05 51 05.7	-5.8
	comp=Z,304nm,1.4s						
GZR	Gura Zlata	7.59	142	⇑P	Pn	05 49 07.8	+1.2
MICGM	Minsk	7.64	63	e	Pg	05 49 38.0	-2.9
BAIF	Baives	7.73	263	ePn	Pn	05 49 05.8	-2.7
BAIF				eSg	Sg	05 51 17.2	-5.7
	comp=Z,136nm,1.4s						
MDVR	Moldovita	7.75	149	⇑P	Pn	05 49 10.6	+1.8
MEZF	Maizieres J'vi	7.80	251	eSg	Sg	05 51 19.4	-5.6
	comp=Z,204nm,1.4s						
SFTF	Sexfontaines	7.95	249	ePn	Pn	05 49 08.0	-3.4
SFTF				eSg	Sg	05 51 24.7	-5.1
	comp=Z,18nm,0.6s						
HOMB	Homborsund	8.02	330	eP		05 49 10.7	
HOMB				i S		05 50 36.9	
AKASG	Malin Array Be	8.26	91	Pn	Pn	05 49 15.2	-0.5
	comp=Z,8.0nm,0.3s,baz=279,slow=12,SNR=9.3						
AKASG				Sn	Sn	05 50 45.9	-3.6
	comp=Z,3.6nm,0.3s,baz=268,slow=23,SNR=5.1						

AKASG				Lg	Lg	05 51 47.4	
	comp=Z,0.8nm,0.3s,baz=251,slow=14,SNR=1.6						
AKBB	Malin Array Si	8.26	91		Pn	05 49 15.6	0.0
CABF	La Chapelle	8.28	237	*e*Pn	Pn	05 49 13.4	-2.7
CABF	La Chapelle	8.28	237	*e*Pg	Pg	05 49 48.6	-4.7
CABF				*e*Sg	Sg	05 51 35.6	-4.9
	comp=Z,13nm,0.6s						
VOIR		8.52	133	⇑P	Pn	05 49 20.5	+1.2
MSSA	Maissana	8.54	214		Pn	05 49 20.1	+0.5
HFS	Hagfors	8.68	352	Pn	Pn	05 49 21.9	+0.5
	comp=Z,0.7nm,0.3s,baz=172,slow=14,SNR=16						
HFS				Sn	Sn	05 50 55.8	-4.0
	comp=Z,0.8nm,0.3s,baz=170,slow=19,SNR=1.9						
HFS				Lg	Lg	05 51 52.3	
	baz=181,slow=27,SNR=1.7						
LPL	La Plagne	8.72	230	*e*Pn	Pn	05 49 19.6	-2.6
LPG	La Plagne	8.73	229	*e*Pn	Pn	05 49 20.1	-2.3
MLR	Muntele Rosu	8.90	129	⇑P	Pn	05 49 24.7	+0.2
NRCA	Norcia	9.00	195		Pn	05 49 24.3	-1.7
LOR	Lormes	9.11	247	*e*Pn	Pn	05 49 25.3	-2.1
	baz=68						
LOR				*e*Sg	Sn	05 52 00.6	+50
	comp=Z,49nm,1.0s						
MBDF	Montbardon	9.30	226	*e*Pn	Pn	05 49 27.8	-2.3
SSF	Saint Saulge	9.43	246	*e*Pn	Pn	05 49 29.4	-2.3
SSF				*e*Sg	Sn	05 52 10.3	+52
	comp=Z,50nm,1.0s						
SMF	Signal de Mont	9.48	243	*e*Pn	Pn	05 49 29.9	-2.5
SMF				*e*Sg	Sn	05 52 13.3	+54
	comp=Z,48nm,0.9s						
AVF	Avril sur Loir	9.67	245	*e*Pn	Pn	05 49 32.0	-3.0
AVF				*e*Sg	Sn	05 52 18.2	+54
	comp=Z,46nm,1.0s						
SBF	Sospel	9.71	221	*e*Pn	Pn	05 49 33.1	-2.6
NOA	NORSAR Array B	9.86	346	Pn	Pn	05 49 36.5	-1.2
	comp=Z,0.1nm,0.3s,baz=193,slow=12,SNR=8.7						
NOA				Sn	Sn	05 51 23.2	-5.8
	comp=Z,0.1nm,0.3s,baz=244,slow=21,SNR=1.5						
NOA				Lg	Lg	05 52 28.5	
	comp=Z,0.1nm,0.3s,baz=329,slow=12,SNR=3.9						
BGF	Bois d'Agland	10.09	245	*e*Sg	Sn	05 52 33.8	+59
	comp=Z,61nm,1.0s						
PGF	Pioggiola	10.28	211	*e*Pn	Pn	05 49 41.1	-2.4
FRF	La Foret Royal	10.28	222	*e*Pn	Pn	05 49 40.9	-2.6
LMR	La Mourre	10.53	222	*e*Pn	Pn	05 49 44.3	-2.5
TCF	Toulx Ste Croi	10.60	245	*e*Sg	Sn	05 52 48.3	+61
	comp=Z,66nm,1.4s						
LASF	Ste Croix	11.17	233	*e*Pn	Pn	05 49 52.8	-2.8
FINES	FINESS Array B	11.28	25	Pn	Pn	05 49 56.9	0.0
	comp=Z,1.2nm,0.3s,baz=210,slow=11,SNR=34						
FINES				Sn	Sn	05 51 57.4	-6.0
	comp=Z,1.3nm,0.3s,baz=209,slow=20,SNR=6.7						
FINES				Lg	Lg	05 53 19.5	
	comp=Z,0.4nm,0.3s,baz=208,slow=23,SNR=2.7						
FIA1	FINESS Array S	11.28	25	Pn	Pn	05 49 57.2	+0.3
RJF	Les Rejaudoux	11.58	243	*e*Pn	Pn	05 49 57.5	-3.7
EKA	Eskdalemuir Ar	12.11	296	Pn	Pn	05 50 03.8	-4.6
	baz=108,slow=14,SNR=3.4						
KLMR	Klimovskoe	15.87	45	*e*Pn	Pn	05 50 54.0	-5.2
KLMR				*e*Pn	Pn	05 50 54.0	-5.2
KLMR				*e*Pn	Pn	05 50 54.0	-5.2
KLMR				AMP		05 51 01.7	
	comp=Z,36nm,1.8s						
KLMR				*e*Sn	Sn	05 53 42.4	-13
KLMR				*e*Sn	Sn	05 53 42.4	-13
ARCES	ARCESS Array B	18.54	10	Pn	P	05 51 30.4	-2.2
	comp=Z,0.9nm,0.3s,baz=192,slow=13,SNR=18						
ARCES	ARCESS Array B	18.54	10	P	P	05 51 30.9	-1.6
BORG	Borgarnes	23.32	319	LR	LR	06 01 22.6	
	comp=Z,50nm,18.2s,baz=33,slow=36						
ARU	Arti	25.07	62	P	P	05 52 41.2	+0.8
	comp=Z,1.0nm,0.3s,baz=254,slow=7.3,SNR=5.8						
ARU	Arti	25.07	62	P	P	05 52 41.3	+0.8
AKTO	Aktyubinsk	26.10	76	P	P	05 52 51.5	+1.6
	comp=Z,2.9nm,0.7s,baz=274,slow=12,SNR=5.7						
SPITS	Spitsbergen Ar	26.70	0	P	P	05 52 55.6	+0.5
	comp=Z,19nm,1.1s,baz=172,slow=12,SNR=4.5						
BVAR	Borovoye Array	32.52	66	P	P	05 53 49.3	+2.4
	comp=Z,1.6nm,0.5s,baz=290,slow=7.4,SNR=8.9						
KKAR	Karatay Array	37.01	81	P	P	05 54 27.8	+2.0
KURK	Kurchatov	38.12	66	P	P	05 54 36.3	+1.2
KURK				IAmb	IAmb	05 54 38.7	
	comp=Z,4.5nm,1.1s						
AAK	Ala-Archa	39.72	79	P	P	05 54 50.8	+2.0
AAK				IAmb	IAmb	05 54 54.0	
	comp=Z,5.8nm,1.1s						
TORD	Torodi Ar. Bea	40.09	202	P	P	05 54 52.7	+0.8
	comp=Z,1.8nm,0.8s,baz=11,slow=8.1,SNR=8.8						
TORD	Torodi Ar. Bea	40.09	202	P	P	05 54 50.8	-1.0
ZALV	Zalesovo Beam	40.12	59	P	P	05 54 54.0	+2.1
	comp=Z,0.6nm,0.3s,baz=309,slow=9.4,SNR=3.6						
ZALV	Zalesovo Beam	40.12	59	P	P	05 54 54.3	+2.5
MK31	Makanchi Array	42.15	69	P	P	05 55 09.8	+1.1
MK31				IAmb	IAmb	05 55 11.4	
	comp=Z,1.2nm,0.9s						
MKAR	Makanchi Array	42.15	69	P	P	05 55 10.8	+2.1
	comp=Z,0.4nm,0.4s,baz=301,slow=7.7,SNR=6.6						
SONM	Songino Array	54.84	56	P	P	05 56 49.4	+2.9
	comp=Z,1.2nm,0.9s,baz=294,slow=7.1,SNR=8.9						
SONM	Songino Array	54.84	56	P	P	05 56 48.6	+2.1
YKA	Yellowknife Ar	59.80	336	P	P	05 57 22.7	+1.6
	comp=Z,1.5nm,0.7s,baz=34,slow=6.5,SNR=32						
BCAR	Beaver Creek A	64.38	349	P	P	05 57 53.1	+1.2
EGMT	Eagleton	70.52	325	P	P	05 58 32.4	+1.3
CMAR	Chiang Mai Arr	71.31	84	P	P	05 58 38.2	+2.0
	comp=Z,1.0nm,0.3s,baz=316,slow=8.1,SNR=8.0						
IMW	Indian Meadow	74.46	323	P	P	05 58 55.3	+0.4
PDAR	Pinedale Array	74.90	322	P	P	05 58 59.0	+1.6
	comp=Z,0.5nm,0.8s,baz=45,slow=9.0,SNR=4.3						
BMO	Blue Mountains	75.88	328	P	P	05 59 04.2	+1.4
RDMU	Red Mountain	76.78	321	P	P	05 59 09.7	+1.5
TXAR	Lajitas Array	83.69	310	P	P	05 59 47.6	+2.2
	comp=Z,0.7nm,1.0s,baz=59,slow=4.8,SNR=5.1						

ROM 20 05:48:23.5±0.2**, 38°.82N**±0°.02×**14°.15E**±0°.02**, h28**km±2km**,**
ML2.2/1**, Error ellipse: s-maj=1.8km s-min=1.1km**
az=213.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IACL	Alicudi	0.33	150	P	Pb	05 48 31.2	0.0
IACL				S	Sb	05 48 36.6	+0.1
IACL				AML	AML		
	comp=E,812µm,1.3s						
IACL				AML	AML		
	comp=N,653µm,1.6s						
IFIL	Filicudi I Eol	0.42	127	P	Pn	05 48 33.5	-0.1
IFIL				S	Sb	05 48 38.6	0.0
USI	Ustica	0.76	262	P	Pb	05 48 38.3	+0.1
USI				S	Sn	05 48 48.8	-0.1
USI				AML	AML		
	comp=E,234µm,0.7s						
USI				AML	AML		
	comp=E,233µm,0.7s						
USI				AML	AML		
	comp=N,230µm,1.0s						
GIB	Gibilmanna	0.83	186	P	Pn	05 48 39.4	0.0
GIB				S	Sn	05 48 51.9	+1.2
MCPD	Capo d'Orlando	0.83	146	P	Pb	05 48 39.6	+0.2
MUCR	Ucria	0.96	143	P	Pb	05 48 41.6	-0.1
MUCR				AML	AML		
	comp=E,64µm,0.9s						
MUCR				AML	AML		
	comp=N,83µm,0.7s						
PETRA	Petralia Sopra	0.98	181	P	Pn	05 48 41.3	-0.3
PETRA				AML	AML		
	comp=N,80µm,0.6s						
PETRA				AML	AML		
	comp=N,80µm,0.6s						
PETRA				AML	AML		
	comp=E,119µm,0.5s						
NOV	Novara	1.11	135	P	Pb	05 48 43.8	-0.3
MCSR	Castroreale	1.15	131	P	Pn	05 48 44.0	+0.3
MCSR				AML	AML		
	comp=E,116µm,1.5s						
MCSR				AML	AML		
	comp=N,134µm,0.3s						
AIO	Antillo	1.20	134	P	Pb	05 48 45.2	-0.5

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*SNET **20** 05:53:07.0±1.0, 11°.99N×86°.58W, h185km±20km, ML3.4*
*INET **20** 05:53:08.8, 12°.08N×86°.38W, h161km, ML2.3*
*UCR **20** 05:53:11.7±4.1, 11°.77N×86°.58W, h20km±25km, MD3.9,*
ML3.1
ISC 20 05:53:07.8±2.3**, 11°.97N**±0°.10×**86°.39W**±0°.10**,**
h163km±21km**, n22,** σ**0ˢ.90**/34**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.97	319	*e*P	Pn	05 53 33.9	+0.2
MATN	Matagalpa	1.06	25	*e*P	Pn	05 53 34.2	-0.2
ACON	Acoyapa	1.19	90	*e*P	Pn	05 53 34.4	-1.0
CSGN	Cosiguina Volc	1.52	311	*e*P	Pn	05 53 39.4	+0.8
GPS3	Bodega del ICE	1.57	140	*i* P	Pn	05 53 39.5	+0.4
GPS3				*i* S	Sn	05 54 04.1	+0.7
LIM1	Limonal	1.68	138	*i* S	Sn	05 54 05.8	+0.4
CUI	Cuipilapa	1.77	137	*i* P	Pn	05 53 41.7	+0.4
ACAL	Aguas Claras	1.88	135	*i* P	Pn	05 53 42.8	+0.4
PLVR	Palo Verde	1.91	147	*e*P	Pn	05 53 43.0	+0.1
PLVR				*e*S	Sn	05 54 06.6	-3.3
CNCH	Conchagua	1.92	313	*e*P	Pn	05 53 42.5	-0.4
CNCH				*e*S	Sn	05 54 11.8	+1.7
CNCH	Conchagua	1.92	313	*e*P	Pn	05 53 42.5	-0.4
CNCH				*e*S	Sn	05 54 11.8	+1.7
LCND	La Caada	1.98	313	*e*P	Pn	05 53 42.9	-0.6
LCND				*e*S	Sn	05 54 10.8	-0.3
LCND				IAML		05 54 17.9	
	comp=Z,67nm,0.3s						
LCND	La Caada	1.98	313	*e*P	Pn	05 53 42.9	-0.6
LCND				*e*S	Sn	05 54 10.8	-0.3
LCND				IAML		05 54 17.9	
	comp=Z,67nm,0.3s						
JTS	Las Juntas de	2.18	140	*e*P	Pn	05 53 45.4	-0.4
JUCU	Jucuar¡n	2.22	305	*e*P	Pn	05 53 45.9	-0.4
JUCU				*e*S	Sn	05 54 16.0	-0.1
JUCU				IAML		05 54 20.2	
	comp=Z,410nm,0.4s						
JUCU	Jucuar¡n	2.22	305	*e*P	Pn	05 53 45.9	-0.4
JUCU				*e*S	Sn	05 54 16.0	-0.1
JUCU				IAML		05 54 20.2	
	comp=Z,410nm,0.4s						
TGUH	Tegucigalpa,Un	2.25	338	*e*P	Pn	05 53 46.7	0.0
TGUH	Tegucigalpa,Un	2.25	338	*e*P	Pn	05 53 46.7	0.0
TECA	Tecapa	2.56	307	*e*P	Pn	05 53 50.3	-0.2
TECA				*e*S	Sn	05 54 23.8	+0.2
TECA	Tecapa	2.56	307	*e*P	Pn	05 53 50.3	-0.2
TECA				*e*S	Sn	05 54 23.8	+0.2
SRA1	San Ramn	2.65	135	*e*P	Pn	05 53 52.5	+1.0
SRA1				*e*S	Sn	05 54 26.4	+1.1
LFRS	El Faro	3.08	303	*e*P	Pn	05 53 56.5	-0.4
LFRS				*e*S	Sn	05 54 34.3	-0.6

NNC 20 06:00:11.2±5.9**, 54°.14N**×**86°.36E, h0**km**, mb3.5, mpv3.2,**
5C-4D, Error ellipse: s-maj=59.9km s-min=38.3km
az=163.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	5.84	237	⇑Pn	Pn	06 01 38.0	-1.0
	2.3nm,0.5s						
KURK				⇑Sn	Sn	06 02 44.7	-2.0
	1.7nm,0.8s						
KURK				⇓Lg	Lg	06 03 19.7	
	3.1nm,1.0s						
KURBB	Kurchatov Arra	5.95	237	⇑Pn	Pn	06 01 41.6	+1.2
	0.8nm,0.2s						
KURBB				⇑Sn	Sn	06 02 52.0	+2.8
	1.8nm,0.5s						
KURBB				⇓Lg	Lg	06 03 25.6	
	3.1nm,0.6s						
MK31	Makanchi Array	7.80	201	⇓Pn	Pn	06 02 06.8	+0.9
	0.1nm,0.2s,baz=24,slow=13,SNR=32						
MK31				⇓Sn	Sn	06 03 34.5	-0.4
	0.4nm,0.7s,baz=25,slow=28,SNR=3.8						
MK31				⇑Lg	Lg	06 04 19.9	
	0.8nm,0.7s						

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*SJA **20** 06:38:04.0±0.5, 19°.84S×71°.44W, h24km±82km, ML3.6,*
MW3.7
*GUC **20** 06:38:13.0±0.7, 20°.07S×70°.80W, h30km±2km, ML3.4*
*IDC **20** 06:38:17.4±4.5, 20°.70S×69°.83W, h0km, mb3.8/1,*
mb1 3.7/2, mb1mx3.4/22, mbtmp3.6/2, ML3.2/1, Error
ellipse: s-maj=148.2km s-min=63.0km az=93.0
ISC 20 06:38:11.6±1.1**, 20°.08S**±0°.03×**70°.80W**±0°.06**, h10**km**, n23,**
σ**1ˢ.35**/40**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA01	Diego Aracena	0.76	130	*e*P	Pb	06 38 26.7	-0.2
TA01				*i* S	Sb	06 38 37.6	+0.4
TA01				IAML		06 38 41.4	
	comp=E,3µm,0.3s						
PSGC	Pisagua	0.79	53	*e*P	Pb	06 38 27.3	-0.3
PSGC				*i* S	Sb	06 38 38.3	-0.2
PATCX	Punta Patache	0.95	141	*i* P	Pn	06 38 30.2	-1.0
PATCX				*i* S	Sb	06 38 42.8	-0.2
PATCX				IAML		06 38 48.3	
	comp=E,1µm,0.5s						
PB11	IPOC Station P	1.12	74	*e*P	Pn	06 38 32.8	-0.7
PB11				*i* S	Sn	06 38 48.1	-1.0
PB11				IAML		06 38 52.5	
	comp=E,1µm,0.8s						
PB02	IPOC Station P	1.50	146	*e*P	Pb	06 38 38.9	-0.7
PB02				*i* S	Sg	06 38 59.0	-0.8
PB02				IAML		06 39 04.4	
	comp=E,2µm,0.5s						
PB12	IPOC Station P	1.52	17	*e*P	Pb	06 38 39.1	-0.9
PB12				*i* S	Sg	06 38 59.0	-1.7
PB08	IPOC Station P	1.55	93	*e*P	Pg	06 38 40.2	-1.1
PB08				*i* S	Sg	06 39 00.6	-0.8
PB01	IPOC Station P	1.56	128	*e*P	Pb	06 38 40.0	-0.7
PB01				*i* S	Sb	06 39 00.4	-0.1
PB01				IAML		06 39 03.8	
	comp=E,1µm,0.6s						
GO01	Chusmiza	1.56	75	*e*P	Pg	06 38 40.5	-1.1
GO01				*i* S	Sg	06 39 02.1	+0.1
PB07	IPOC Station P	1.85	153	*i* S	Sb	06 39 09.5	+0.6
PB16	IPOC Station P	2.12	35	*e*P	Pb	06 38 50.0	-0.5
PB16				*i* S	Sb	06 39 16.6	-0.5
PB16				IAML		06 39 24.6	
	comp=N,309nm,0.6s						
PB03	IPOC Station P	2.19	154	*e*P	Pn	06 38 48.5	+0.3
PB03				*i* S	Sg	06 39 20.7	-1.3
PB03				IAML		06 39 37.5	
	comp=E,272nm,0.8s						
PB09	IPOC Station P	2.24	140	*e*P	Pb	06 38 50.8	-1.7
PB09				*i* S	Sb	06 39 19.5	-0.8
PB09	IPOC Station P	2.24	140	*i* P	Pb	06 38 50.7	-1.7
PB09				*e*S	Sg	06 39 24.9	+1.1
PB09				IAML		06 39 28.4	
	comp=Z,458nm,0.7s						
PB04	IPOC Station P	2.32	165	*i* P	Pn	06 38 49.6	-0.6
PB04				*e*S	Sb	06 39 23.2	+0.6
PB05	IPOC Station P	2.82	169	*i* P	Pn	06 38 55.8	-1.1
PB05				*e*S	Sb	06 39 34.4	-2.4
PB05				IAML		06 39 51.0	
	comp=Z,80nm,1.0s						
PB06	IPOC Station P	2.85	157	*i* P	Pn	06 38 57.4	0.0
PB06				IAML		06 39 54.6	
	comp=Z,114nm,0.7s						
LVC	Limon Verde	3.07	145	*i* P	Pn	06 39 02.3	+1.7
LVC				*e*S	Sb	06 39 45.3	+1.0
LVC				IAML		06 39 51.5	
	comp=Z,71nm,0.6s						
PB15	IPOC Station P	3.35	159	*i* P	Pn	06 39 05.0	+0.7
PB15				*e*S	Sb	06 39 49.7	-2.5
PB15				IAML		06 40 11.5	
	comp=Z,158nm,0.3s						
PB10	IPOC Station P	3.43	176	*i* P	Pn	06 39 03.5	-1.7
LPAZ	La Paz	4.54	34	Pn	Pb	06 39 29.9	-1.9
	comp=Z,0.7nm,0.3s,baz=206,slow=4.3,SNR=12						
TORD	Torodi Ar. Bea	78.56	71	P	P	06 50 17.8	+3.9
	comp=Z,0.5nm,0.6s,baz=265,slow=5.2,SNR=4.3						
MKAR	Makanchi Array	145.47	33	PKPbc	PKiKP	06 57 56.8	+2.7
	comp=Z,0.5nm,0.6s,baz=329,slow=4.0,SNR=3.9						

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*NAO **20** 06:38:20.6±2.5, 77°.52N×7°.50E, ML2.5*
*BER **20** 06:38:24.4±2.0, 77°.63N×8°.42E, h10km, ML2.0,*
ML2.5(NAO), Confirmed Earthquake
*IEPN **20** 06:38:25.0, 77°.69N×8°.21E, h15km*
ISC 20 06:38:21.0±1.9**, 77°.59N**±0°.06×**7°.99E**±0°.06**, h17**km±10km**,**
n22, σ**1ˢ.52**/37**, 4C, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRBA	Barentsburg A	1.40	67	Pg	Pg	06 38 47.9	-0.1
BRBA				Lg	Lg	06 39 04.7	
BRBA	Barentsburg A	1.40	67	Pg	Pg	06 38 47.9	-0.1
BRBA				Sg	Sg	06 39 04.7	-1.5
BRBB	Barentsburg B	1.41	66	Pg	Pg	06 38 48.0	-0.2
BRBB				Lg	Lg	06 39 05.5	
BRBB	Barentsburg B	1.41	66	Pg	Pg	06 38 48.0	-0.2
BRBB				Sg	Sg	06 39 05.5	-1.0
KBS	Kingsbay	1.57	29	Pg	Pb	06 38 50.0	+0.5
KBS				Lg	Lg	06 39 08.7	
KBS	Kingsbay	1.57	29	*e*P	Pb	06 38 49.9	+0.5
KBS				*e*		06 39 02.4	
KBS				*e*S	Sb	06 39 08.6	-0.3
KBS				IAML		06 39 10.7	
	comp=Z,48nm,0.2s						
KBS	Kingsbay	1.57	29	⇑*i*P	Pb	06 38 50.0	+0.5
KBS				*i* S	Sb	06 39 08.5	-0.5
HSPB	Hornsund (broa	1.77	106	Pn	Pn	06 38 51.7	+0.9
HSPB	Hornsund (broa	1.77	106	*e*P	Pn	06 38 51.7	+0.9
HSPB				*e*S	Sn	06 39 12.4	-0.4
HSPB				IAML		06 39 14.2	
	comp=Z,4.6nm,0.3s						
HSPB	Hornsund (broa	1.77	106	⇑*i*P	Pn	06 38 51.6	+0.9
HSPB				*e*S	Sn	06 39 07.0	-5.8
SPA0	Spitsbergen Ar	1.86	67	Pn	Pb	06 38 55.3	+0.7
	baz=243,slow=16						
SPA0				Sn	Sb	06 39 18.1	+0.6
	baz=248,slow=28						
SPA0	Spitsbergen Ar	1.86	67	⇑*i*Pg	Pb	06 38 55.5	+0.9
SPA0				*e*Sg	Sb	06 39 17.9	+0.4
SPA0				IAML		06 39 20.9	
	comp=Z,86nm,1.1s						
SPA0	Spitsbergen Ar	1.86	67	⇑*i*P	Pb	06 38 55.5	+0.9
SPA0				*i* S	Sb	06 39 17.9	+0.4
HOPEN	Hopen	3.97	97	Pn	Pn	06 39 22.4	+1.4
HOPEN				Sn	Sn	06 40 07.1	+0.1
HOPEN	Hopen	3.97	97	*e*P	Pn	06 39 22.9	+1.9
HOPEN				*e*S	Sn	06 40 06.9	-0.1
HOPEN				IAML		06 40 11.3	
	comp=Z,8.7nm,0.7s						
HOPEN	Hopen	3.97	97	*e*P	Pn	06 39 22.3	+1.3
HOPEN				*e*S	Sn	06 40 06.9	-0.1
NOR	Nord	5.95	324	Pn	Pn	06 39 49.0	+0.9
NOR				Sn	Sn	06 40 54.4	-1.3
NOR				Lg	Lg	06 41 21.9	
NOR	Nord	5.95	324	Pn	Pn	06 39 49.0	+0.9
NOR				Sn	Sn	06 40 54.4	-1.3
DAG	Danmarks Havn	5.95	275	*i* P	Pn	06 39 48.3	+0.1
ZFI2	Zemlya Franca-	7.95	48	*e*P	Pn	06 40 18.9	+3.4
ZFI2				*e*S	Sn	06 41 42.0	-2.7
	comp=Z,2.9nm,2.4s						
ARA0	ARCESS Array S	9.43	140	Pn	Pn	06 40 36.2	+0.4
	baz=327,slow=12						
ARA0	ARCESS Array S	9.43	140	Pn	Pn	06 40 36.2	+0.4
	baz=327,slow=12						

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*IDC **20** 06:47:59.9±3.9, 28°.02S×177°.01W, h61km±35km, mb3.4/5,*
mb1 3.7/5, mb1mx3.5/36, mbtmp3.7/5, MS3.5/4, Ms1 3.5/4,
ms1mx3.1/15, Error ellipse: s-maj=40.1km s-min=28.3km
az=155.0
ISC 20 06:47:57.8±1.0**, 28°.4S**±0°.1×**176°.6W**±0°.2**, h35**km**, n18,**
σ**2ˢ.59**/11**, mb3.6**/5**, MS3.6**/5**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.44	231	P	Pn	06 48 22.9	+1.6
	881nm,0.3s,baz=9.7,slow=22,SNR=21						
RAO				S	Sn	06 48 42.3	+3.2
	3µm,0.3s,baz=7.6,slow=22,SNR=25						
URZ	Urewera	11.18	206	P	Pn	06 50 34.6	-0.4
	0.4nm,0.3s,baz=209,slow=21,SNR=1.8						
URZ				S	Sn	06 52 35.3	-3.4
	2.4nm,0.3s,baz=198,slow=22,SNR=9.2						
DZM	Mont Dzumac	16.54	288	*e*LR	LR	06 55 50.2	
	comp=Z,230nm,25.0s						
DZM	Mont Dzumac	16.54	288	LR	LR	06 56 07.1	
	comp=Z,114nm,19.4s,baz=86,slow=30						
RPZ	Rata Peaks	18.25	210	LR	LR	06 58 48.1	
	comp=Z,209nm,21.1s,baz=27,slow=35						
TBI	Tubuai	24.93	85	*e*LR	LR	06 59 20.8	
	comp=Z,180nm,26.5s						
PAE	Paea	27.02	73	*e*T	T	07 21 19.7	
	6.2nm,0.3s						
PPT2	Papeete2	27.05	73	*e*LR	LR	07 00 23.3	
	comp=Z,263nm,27.5s						
VAH	Vaihoa	29.83	70	*e*T	T	07 24 51.3	
	7.1nm,0.2s						
STKA	Stephens Creek	36.15	254	LR	LR	07 08 35.0	
	comp=Z,70nm,18.0s,baz=31,slow=34						
TAOE	Nuku Hiva Isla	39.41	68	*e*LR	LR	07 06 03.4	
	comp=Z,129nm,26.0s						
ASAR	Alice Springs	44.46	264	P	P	06 56 03.0	-2.8
	0.4nm,0.4s,baz=97,slow=7.1,SNR=7.0						
ASAR				LR	LR	07 13 12.8	
	comp=Z,80nm,19.1s,baz=111,slow=34						
WRA	Warramunga Arr	45.27	269	P	P	06 56 08.8	-3.4
	0.3nm,0.5s,baz=109,slow=6.3,SNR=6.7						
VNDA	Vanda	50.24	186	P	P	06 56 51.0	+1.1
	0.3nm,0.5s,baz=3.4,slow=17,SNR=3.1						
NVAR	Mina Array Bea	85.93	42	P	P	07 00 33.7	-0.7
	0.9nm,0.7s,baz=221,slow=9.0,SNR=9.0						
PDAR	Pinedale Array	93.83	43	P	P	07 01 11.4	-0.1
	0.3nm,0.7s,baz=133,slow=6.3,SNR=3.5						
FINES	FINESS Array B	143.61	342	PKP	PKPab	07 07 23.2	-1.6
	0.3nm,0.3s,baz=62,slow=4.5,SNR=3.9						
AKASG	Malin Array Be	150.34	326	PKPbc	PKPdf	07 07 41.9	+2.1
	1.5nm,0.6s,baz=41,slow=2.9,SNR=4.7						
AKASG				PKPab	PKiKP	07 07 47.8	+2.0
	0.5nm,0.4s,baz=42,slow=3.5,SNR=1.8						

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*IDC **20** 06:56:26.9±1.6, 4°.41S×146°.47E, h0km, mb4.1/4,*
mb1 4.5/7, mb1mx3.9/38, mbtmp4.3/7, ML4.1/3, Error
ellipse: s-maj=48.8km s-min=26.2km az=111.0
*NEIC **20** 06:56:42.1±0.8, 5°.18S±0°.09×147°.3E±0°.2, h158km±13km,*
mb4.3/12, Error ellipse: s-maj=29.3km s-min=12.5km
az=94.0
ISC 20 06:56:43.1±0.9**, 5°.24S**±0°.07×**147°.2E**±0°.2**, h150**km**, n23,**
σ**1ˢ.97**/24**, mb4.1**/5**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	3.18	2	Pn	Pn	06 57 31.5	-1.2
PMG	Port Moresby	4.14	181	Pn	Pn	06 57 44.3	-0.9
	53nm,0.3s,baz=18,slow=9.6,SNR=49						
PMG				Sn	Sn	06 58 29.5	-4.0
	27nm,0.3s,baz=269,slow=22,SNR=7.9						
PMG	Port Moresby	4.14	181		Pn	06 57 45.3	+0.1
COEN	Coen	9.54	204		Pn	06 58 57.7	+0.6
CTA	Charters Tower	14.79	184	Pn	P	07 00 08.0	+1.0
	0.5nm,0.3s,baz=1.1,slow=15,SNR=6.2						
MTN	Manton Dam	17.59	243	P	P	07 00 38.1	+0.1
WB0	Warramunga Arr	19.10	220	P	P	07 00 53.8	-0.7
WR0	Warramunga Arr	19.15	219	P	P	07 00 54.3	-0.6
WR0				IAmb	IAmb	07 00 55.0	
	comp=Z,10nm,0.9s						
WRAB	Tennant Creek	19.25	220	P	P	07 00 55.5	-0.6
WRAB				IAmb	IAmb	07 00 58.8	
	comp=Z,8.4nm,0.6s						
WB2	Warramunga Arr	19.25	219	P	P	07 00 55.6	-0.5
WB2				IAmb	IAmb	07 00 56.3	
	comp=Z,7.2nm,0.6s						
WRA	Warramunga Arr	19.26	220	P	P	07 00 54.3	-1.9
	comp=Z,2.0nm,0.3s,baz=37,slow=11,SNR=47						
WRA	Warramunga Arr	19.26	220	P	P	07 00 54.3	-1.9
EIDS	Eidsvold	20.35	170	P	P	07 01 08.8	+0.9
EIDS				IAmb	IAmb	07 01 24.1	
	comp=Z,14nm,1.1s						
KNRA	Kununurra	20.89	239	P	P	07 01 12.7	-1.0
KNRA				IAmb	IAmb	07 01 27.3	
	comp=Z,25nm,1.5s						
AS31	Alice Springs	22.37	214	P	P	07 01 28.4	-0.7
AS31				IAmb	IAmb	07 01 29.2	
	comp=Z,5.3nm,0.2s						
ASAR	Alice Springs	22.38	214	P	P	07 01 28.3	-0.8
	comp=Z,3.8nm,0.5s,baz=49,slow=8.4,SNR=75						
ASAR	Alice Springs	22.38	214	P	P	07 01 28.2	-0.9
FITZ	Fitzroy Crossi	24.67	237	P	P	07 01 49.1	-1.0
	comp=Z,7.0nm,0.4s,baz=50,slow=11,SNR=37						
FITZ	Fitzroy Crossi	24.67	237	P	P	07 01 49.8	-0.4
FITZ				IAmb	IAmb	07 01 51.8	

	comp=Z,6.6nm,0.6s						
STKA	Stephens Creek	27.02	191	P	P	07 02 17.9	+6.7
	comp=Z,1.1nm,0.4s,baz=6.9,slow=10,SNR=4.2						
PSAD1	Pilbara Seismi	31.06	236	P	P	07 02 46.4	-0.8
ILAR	Eielson Array	84.69	23	P	P	07 09 00.0	+0.2
	comp=Z,0.5nm,0.8s,baz=260,slow=5.0,SNR=5.0						
QSPA	South Pole Qui	84.72	180	P	P	07 08 58.7	-1.4

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*GUC **20** 07:06:06.9±0.6, 35°.47S×71°.53W, h100^{km}±3^{km}, ML3.8*
*SJA **20** 07:06:07.8±0.8, 35°.35S×71°.36W, h80^{km}±16^{km}, ML3.0, MW3.1*
ISC 20 07:06:06.2±1.4**, 35°.51S**±0°.04×**71°.54W**±0°.06**, h99**^{km}±11^{km}**, n28, σ0^{s}.62**/45**, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO05	Huala	0.59	327	*e*P	Pn	07 06 22.9	+0.2
GO05				*i* S	Sn	07 06 35.3	+0.4
GO05				IAML		07 06 36.1	
	comp=E,3µm,0.3s						
GO05	Huala	0.59	327	*i* P	Pn	07 06 23.1	+0.5
GO05				*e*S	Sn	07 06 34.5	-0.4
BO02	Sierra Bellavi	0.94	41	*e*P	Pn	07 06 26.0	-0.1
BO02				*i* S	Sn	07 06 41.0	+0.1
BO01	Tunca	1.17	19	*e*P	Pn	07 06 28.5	0.0
BO01				*i* S	Sn	07 06 44.2	-1.1
BI02	San Fabin de	1.17	170	*e*P	Pn	07 06 28.5	-0.1
BI02				*i* S	Sn	07 06 45.4	-0.1
MT01	Popeta	1.66	8	*e*P	Pn	07 06 34.6	+0.2
MT01				*i* S	Sn	07 06 54.8	-0.9
MT01				IAML		07 06 59.8	
	comp=E,1µm,0.2s						
PUMA	Malargue	1.70	90	*i* P	Pn	07 06 35.5	+0.6
BI03	Tigo	1.80	222	*e*P	Pn	07 06 36.5	+0.4
BI03				*i* S	Sn	07 06 58.5	-0.5
LMEL	Las Melosas	1.99	34	*e*P	Pn	07 06 39.7	+0.9
LMEL				*i* S	Sn	07 07 04.8	+1.2
LMEL				IAML		07 07 06.6	
	comp=E,902nm,0.4s						
LAMA	Las Malvinas	1.99	74	*i* P	Pn	07 06 39.1	+0.5
MORA	Malargue	2.07	85	*i* P	Pn	07 06 39.8	+0.1
MT03	Universidad Ad	2.18	23	*i* P	Pn	07 06 41.2	0.0
MT03				*i* S	Sn	07 07 07.6	-0.3
MT03				IAML		07 07 14.4	
	comp=N,760nm,0.2s						
CLCH	Cerro Calan	2.26	22	*e*P	Pn	07 06 42.6	+0.4
CLCH				*i* S	Sn	07 07 09.1	-0.7
MT02	Curacav	2.27	8	*e*P	Pn	07 06 42.4	+0.2
MT02				*i* S	Sn	07 07 09.1	-0.7
FCH	Farellones	2.41	26	*e*P	Pn	07 06 44.8	+0.5
FCH				*i* S	Sn	07 07 13.6	0.0
PEL	Peldehue	2.46	17	*e*P	Pn	07 06 44.7	-0.1
PEL				*i* S	Sn	07 07 13.5	-0.9
PEL				IAML		07 07 19.8	
	comp=N,398nm,0.6s						
PEL	Peldehue	2.46	17	*i* P	Pn	07 06 45.3	+0.5
ROC1	El Roble	2.56	10	*i* P	Pn	07 06 46.7	+0.3
ROC1				*e*S	Sn	07 07 18.8	+1.7
ROCH	El Roble	2.56	10	*e*P	Pn	07 06 46.7	+0.3
ROCH				*i* S	Sn	07 07 16.5	-0.7
ROCH				IAML		07 07 19.6	
	comp=E,791nm,0.3s						
VA03	San Esteban	2.85	17	*e*P	Pn	07 06 50.3	+0.2
VA03				*i* S	Sn	07 07 23.1	-0.8
VA03				IAML		07 07 27.4	
	comp=E,507nm,0.3s						
LC01	Cunco	3.40	184	*e*P	Pn	07 06 57.2	0.0
RTLS	Leoncito	4.14	27	*i* P	Pn	07 07 08.9	+1.3
RTLS				IAML		07 07 59.1	
	comp=Z,11nm,0.9s						
RTCV	Cerro Valdivia	4.41	35	*i* P	Pn	07 07 10.7	-0.3
RTCV				IAML		07 08 37.5	
	comp=Z,32nm,2.7s						
RTLL	Cerro Villicun	4.89	32	*i* P	Pn	07 07 17.2	-0.3
RTLL				IAML		07 08 15.2	
	comp=Z,26nm,0.8s						
ACCO	Cerro Coronel	5.33	24	*i* P	Pn	07 07 23.4	-0.2
ACCO				IAML		07 08 24.9	
	comp=Z,12nm,0.5s						
AROD	Rodeo	5.60	19	*i* P	Pn	07 07 28.4	+1.0
ACDV	Cuesta del Vie	5.70	22	*i* P	Pn	07 07 28.6	+0.1
ACDV				*e*S	Sn	07 08 32.3	-0.4
ACDV				IAML		07 09 05.4	
	comp=Z,12nm,4.7s						
MRA	San Martin	5.73	59	*i* P	Pn	07 07 28.7	-0.2
MRA				IAML		07 09 01.6	
	comp=Z,1.4nm,0.6s						

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*IDC **20** 07:07:49.4±0.8, 15°.64S×75°.21W, h0^{km}, mb4.1/11, mb1 4.1/15, mb1mx4.0/28, mbtmp4.0/15, ML3.4/4, MS3.5/13, Ms1 3.5/13, ms1mx3.3/30, Error ellipse: s-maj=26.9km s-min=13.2km az=56.0*
*ARE **20** 07:07:49±1.7, 15°.74S±0°.02×75°.23W±0°.07, h14^{km}±4^{km}, Error ellipse: s-maj=9.8km s-min=2.2km az=103.0*
*NEIC **20** 07:07:53.7±1.7, 15°.78S±0°.08×75°.29W±0°.09, h32^{km}±5^{km}, mb4.6/34, ML4.6(ARE), Error ellipse: s-maj=14.9km s-min=8.5km az=54.0*
ISC 20 07:07:52.8±0.5**, 15°.91S**±0°.06×**75°.38W**±0°.07**, h25**^{km}**, n102, σ2^{s}.17**/95**, mb4.5**/25**, MS3.6**/7**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	4.15	340	Pn	Pn	07 08 53.7	-1.1
	1.4nm,0.3s,baz=162,slow=9.6,SNR=4.7						
NNA				LR	LR	07 09 48.4	
	comp=Z,74nm,20.6s,baz=120,slow=30						
NNA				Lg	Lg	07 09 54.2	
	86nm,0.3s,baz=335,slow=21,SNR=8.1						
NNA	Nana	4.15	340		Pn	07 08 54.5	-0.2
NNA				Sn	Sn	07 09 37.3	-5.3
PB12	IPOC Station P	5.52	120	Pn	Pn	07 09 14.2	+0.6
PB16	IPOC Station P	6.11	114	Pn	Pn	07 09 23.5	+1.5
PSGCX	Pisagua	6.20	127	Pn	Pn	07 09 23.6	+0.7
PB11	IPOC Station P	6.66	126		Pn	07 09 30.3	+1.0
PATCX	Punta Patache	6.96	135	Pn	Pn	07 09 34.2	+0.9
GO01	Chusmiza	6.97	123		Pn	07 09 34.8	+0.9
LPAZ	La Paz	6.97	94	Pn	Pn	07 09 37.2	+3.2
	0.5nm,0.3s,baz=282,slow=6.9,SNR=24						
LPAZ				Sn	Sn	07 10 56.0	+3.2
	baz=172,slow=11,SNR=1.5						
LPAZ				LR	LR	07 12 21.1	
	comp=Z,392nm,20.8s,baz=278,slow=40						
LPAZ	La Paz	6.97	94	Pn	Pn	07 09 36.4	+2.4
PB01	IPOC Station P	7.57	133		Pn	07 09 42.5	+0.9
PB07	IPOC Station P	7.78	139	Pn	Pn	07 09 45.0	+0.4
PB04	IPOC Station P	8.07	143		Pn	07 09 49.0	+0.3
PB09	IPOC Station P	8.24	136	Pn	Pn	07 09 51.9	+0.8
PB10	IPOC Station P	8.82	150	Pn	Pn	07 09 59.3	+0.5
LVC	Limon Verde	9.04	139	Pn	Pn	07 10 04.0	+2.0
	1.6nm,0.3s,baz=313,slow=8.7,SNR=18						
LVC				Sn	Sn	07 11 38.5	-4.7
	0.3nm,0.3s,baz=47,slow=19,SNR=1.4						
LVC				Lg	Lg	07 12 42.1	
	0.3nm,0.3s,baz=133,slow=19,SNR=2.9						
LVC				LR	LR	07 13 21.3	
	comp=Z,168nm,20.0s,baz=304,slow=36						
LVC	Limon Verde	9.04	139		Pn	07 10 04.2	+2.1
PB15	IPOC Station P	9.14	143	Pn	Pn	07 10 04.0	+0.5
ATAH	Atahualpa	9.21	341	Pn	Pn	07 10 13.1	+8.5
	1.8nm,0.3s,baz=170,slow=0.5,SNR=9.7						
ATAH				Sn	Sn	07 11 51.7	+4.0
	0.8nm,0.3s,baz=97,slow=16,SNR=1.5						
ATAH				LR	LR	07 12 52.0	
	comp=Z,55nm,19.9s,baz=205,slow=34						
GO02	Mina Guanaco	10.68	150	Pn	Pn	07 10 25.4	+0.8
GO03	Copiap	12.56	159	Pn	Pn	07 10 51.0	+0.9
SIV	San Ignacio	13.76	92	Pn	Pn	07 11 04.3	-2.2
	0.1nm,0.3s,baz=278,slow=12,SNR=4.2						
SIV				Sn	Sn	07 13 40.8	+2.3
	0.1nm,0.3s,baz=58,slow=22,SNR=1.8						
SIV				LR	LR	07 16 54.7	
	comp=Z,293nm,19.4s,baz=286,slow=40						
SAML	Samuel	13.77	61		Pn	07 11 04.0	-2.6
FLOC	Florencia	17.39	359	*e*P	Pn	07 11 52.5	-1.4
PCON	Cinco Dias	18.15	357	*e*P	P	07 12 15.0	+11
ORTC	Ortega, Tolima	19.70	0	*e*P	Pn	07 12 28.0	+6.0
CPUP	Villa Florida	19.75	125	P	Pn	07 12 21.8	-0.7
	0.1nm,0.3s,baz=121,slow=17,SNR=3.1						
CPUP				LR	LR	07 19 47.9	
	comp=Z,69nm,21.8s,baz=264,slow=36						
CPUP	Villa Florida	19.75	125	P	P	07 12 20.8	-0.1
YOTC	Yotoco, Valle	19.79	357	*e*P	Pn	07 12 27.3	+4.1
VILC	Villavicencio,	19.96	5	*e*P	Pn	07 12 31.4	+6.2
ROSC	El Rosal	20.64	3	LR	LR	07 22 10.3	
	comp=Z,321nm,20.7s,baz=228,slow=42						
PLMC	San Jos del P	20.70	357	*e*P	P	07 12 32.4	+0.9
GUY2C	Guyana, Caldas	21.00	0	*e*P	P	07 12 44.6	+10
PTGA	Pitinga	21.41	47	P	P	07 12 35.2	-3.9
	2.1nm,0.7s,baz=318,slow=21,SNR=4.9						
PTGA				LR	LR	07 21 19.5	
	comp=Z,237nm,19.9s,baz=232,slow=38						
PTGA	Pitinga	21.41	47	P	P	07 12 37.5	-1.6
SPBC	San Pablo de B	21.46	4	*e*P	P	07 12 42.0	+2.3
CBOC	Ciudad Bolivar	21.64	358	*e*P	P	07 12 44.1	+2.5
RUSC	La Rusia	21.78	6	*e*P	P	07 12 42.0	-1.6
RUSC	La Rusia	21.78	6	P	P	07 12 39.9	-3.6
HELC	Santa Helena	21.96	360	*e*P	P	07 12 50.2	+4.9
PTBC	PUERTO BERRIO,	22.33	2	*e*P	P	07 12 39.8	-9.1
BARC	Barichara	22.46	6	*e*P	P	07 12 58.9	+8.3
ZARC	Zaragoza, Cauc	23.26	1	*e*P	P	07 13 04.5	+5.9
SMLC	San Martn de	24.59	3	*e*P	P	07 13 09.0	-2.1
SDV	Santo Domingo	25.08	11	P	P	07 13 14.0	-1.8
	3.4nm,0.7s,baz=223,slow=6.1,SNR=4.6						
SDV				LR	LR	07 23 50.0	
	comp=Z,159nm,19.1s,baz=224,slow=39						
PLCA	Paso Flores	25.08	171	P	P	07 13 17.3	+1.8
	1.2nm,0.6s,baz=6.5,slow=9.1,SNR=5.6						
PLCA	Paso Flores	25.08	171	P	P	07 13 15.8	+0.3
BDFB	Brasilia	26.33	93	P	P	07 13 25.9	-1.2
	1.8nm,0.7s,baz=144,slow=10,SNR=3.3						
BDFB				LR	LR	07 23 18.0	
	comp=Z,54nm,18.2s,baz=143,slow=36						
BDFB	Brasilia	26.33	93	P	P	07 13 24.0	-3.1
BDFB				IAmb	IAmb	07 13 26.6	
	comp=Z,12nm,1.5s						
JTS	Las Juntas de	27.71	339	LR	LR	07 23 50.5	
	comp=Z,118nm,20.3s,baz=230,slow=35						
CBCY	The Bluff, Cay	35.69	353	P	P	07 14 47.8	-1.5
BIRD	Birdtown, Kers	50.51	355	P	P	07 16 48.1	-0.9
BIRD				IAmb	IAmb	07 16 51.3	
	comp=Z,5.1nm,1.1s						
V52A	Sevierville	52.06	352	P	P	07 16 58.9	-1.6
V52A				IAmb	IAmb	07 16 59.9	
	comp=Z,7.6nm,1.0s						
WLAR	White Oak Lake	52.14	341	P	P	07 16 59.5	-1.7
WLAR				IAmb	IAmb	07 17 03.0	
	comp=Z,7.5nm,0.9s						
TXAR	Lajitas Array	52.63	329	P	P	07 17 03.9	-1.2
	comp=Z,0.7nm,0.7s,baz=146,slow=7.5,SNR=4.1						
TXAR	Lajitas Array	52.63	329	P	P	07 17 04.2	-0.9
TX31	Lajitas Ar. Si	52.63	329	P	P	07 17 04.2	-0.9
TX32	Lajitas Array	52.63	329	P	P	07 17 05.2	+0.1
TZTN	Tazewell	52.74	352	P	P	07 17 04.6	-1.0
T57A	Hurt	52.75	356	P	P	07 17 04.4	-1.3
WHAR	Wooly Hollow	53.39	343	P	P	07 17 09.6	-0.9
WHAR				IAmb	IAmb	07 17 20.4	
	comp=Z,9.6nm,1.4s						
R55A	Marlinton	54.09	355	P	P	07 17 14.9	-0.7
U40A	Yellville	54.55	343	P	P	07 17 18.3	-0.6
TUL1	Leonard	55.05	340	P	P	07 17 19.9	-2.6
TUL1				IAmb	IAmb	07 17 24.4	
	comp=Z,5.6nm,0.8s						
L59A	Walton	57.81	0	P	P	07 17 40.6	-1.5
SDCO	Great Sand Dun	60.42	333	P	P	07 17 57.4	-3.2
SDCO				IAmb	IAmb	07 18 10.4	
	comp=Z,6.1nm,1.5s						
ECSD	EROS Data Cent	62.46	343	P	P	07 18 13.0	-0.9
ECSD				IAmb	IAmb	07 18 15.4	
	comp=Z,4.1nm,0.9s						
SPMN	Marine on St.	62.87	346	P	P	07 18 15.4	-1.2
D41A	Chassel	63.79	350	P	P	07 18 22.7	0.0
D41A				IAmb	IAmb	07 18 24.2	
	comp=Z,6.8nm,0.9s						
EYMN	Ely	65.18	348	P	P	07 18 31.1	-0.7
EYMN				IAmb	IAmb	07 18 33.5	
	comp=Z,11nm,1.4s						
D32A	Dogwood Acres,	65.70	344	P	P	07 18 35.0	-0.1
DUG	Dugway, Tooele	65.79	329	P	P	07 18 35.9	-0.2
DUG				IAmb	IAmb	07 18 48.0	
	comp=Z,6.3nm,1.4s						
E28A	Huff	66.25	341	P	P	07 18 38.2	-0.5
HWUT	Hardware Ranch	66.29	331	P	P	07 18 40.1	+0.8
AGMN	Agassiz Nation	66.48	345	P	P	07 18 39.1	-1.1
AGMN				IAmb	IAmb	07 18 40.6	
	comp=Z,5.5nm,0.7s						
NVAR	Mina Array Bea	67.38	325	P	P	07 18 46.7	+0.3
	comp=Z,0.3nm,0.7s,baz=147,slow=6.7,SNR=4.3						
VNA2	Neumayer--Watz	67.92	161	P	P	07 18 50.3	+1.3
ULM	Lac du Bonnet	68.31	346	P	P	07 18 51.0	-0.6
	comp=Z,3.8nm,0.6s,baz=164,slow=5.2,SNR=11						
ULM	Lac du Bonnet	68.31	346	P	P	07 18 50.8	-0.9
ULM				IAmb	IAmb	07 18 51.7	
	comp=Z,4.8nm,0.8s						
YHL	Hebgen Lake	68.68	333	P	P	07 18 55.5	+1.0
GCMT	Greycliff	68.81	335	P	P	07 18 55.4	+0.4
SNAA	Sanae	69.52	161	P	P	07 19 01.6	+2.5
SNAA	Sanae	69.52	161	P	P	07 18 58.6	-0.5
SNAA				IAmb	IAmb	07 19 03.6	
	comp=Z,4.9nm,1.1s						
MFID	Camas Ranch	69.70	330	P	P	07 19 02.6	+2.0
MFID				IAmb	IAmb	07 19 18.9	
	comp=Z,4.4nm,1.1s						
SCHQ	Schefferville	70.84	5	P	P	07 19 06.2	-0.9
	comp=Z,1.6nm,0.8s,baz=259,slow=5.0,SNR=4.8						
SCHQ	Schefferville	70.84	5	P	P	07 19 06.9	-0.3
SCHQ				IAmb	IAmb	07 19 20.7	
	comp=Z,3.5nm,1.0s						
DBIC	Dimbokro	73.30	78	P	P	07 19 21.6	-1.2
	comp=Z,3.3nm,1.0s,baz=210,slow=9.1,SNR=4.1						
DBIC				LR	LR	07 50 24.1	
	comp=Z,80nm,18.9s,baz=214,slow=35						
QSPA	South Pole Qui	74.24	180	P	P	07 19 30.7	+3.1
QSPA				IAmb	IAmb	07 19 39.3	
	comp=Z,8.3nm,1.3s						
TORD	Torodi Ar. Bea	81.48	74	P	P	07 20 08.2	-0.4
	comp=Z,6.8nm,0.8s,baz=257,slow=4.8,SNR=35						
TORD				LR	LR	07 54 59.2	
	comp=Z,83nm,18.3s,baz=250,slow=35						
YKA	Yellowknife Ar	83.99	343	P	P	07 20 20.4	-0.2
	comp=Z,1.3nm,0.7s,baz=139,slow=6.0,SNR=30						
H11N3	WAKE ISLAND Hy	120.86	284	T	T	09 39 12.9	
	baz=97,slow=74,SNR=63						
H11N2	WAKE ISLAND Hy	120.87	284	T	T	09 39 17.4	
	baz=97,slow=74,SNR=70						
H11N1	WAKE ISLAND Hy	120.88	284	T	T	09 39 17.7	
	baz=97,slow=74,SNR=54						
H11S2	WAKE ISLAND Hy	120.89	282	T	T	09 39 15.9	
	baz=98,slow=75,SNR=18						
H11S1	WAKE ISLAND Hy	120.90	282	T	T	09 39 17.1	
	baz=98,slow=75,SNR=18						
H11S3	WAKE ISLAND Hy	120.91	282	T	T	09 39 19.6	
	baz=98,slow=75,SNR=21						
ASAR	Alice Springs	131.36	217	PKP	PKiKP	07 27 05.3	+0.4
	comp=Z,0.5nm,0.9s,baz=111,slow=1.6,SNR=3.5						
WRA	Warramunga Arr	133.93	220	PKP	PKiKP	07 27 10.5	+0.5
	comp=Z,0.7nm,0.7s,baz=133,slow=1.7,SNR=3.4						
ZALV	Zalesovo Beam	139.01	18	PKP	PKPdf	07 27 18.0	+0.9
	comp=Z,1.1nm,0.4s,baz=295,slow=3.1,SNR=7.4						
MKAR	Makanchi Array	144.04	26	PKP	PKPbc	07 27 24.3	0.0
	comp=Z,0.4nm,0.8s,baz=14,slow=3.0,SNR=3.4						
KSH	Kashi	145.67	41	PKPbc	PKPdf	07 27 29.3	-0.3
KSH				sPKP		07 27 43.3	
KSH				PP	PP	07 30 54.1	+3.8
KSH				PKS	PKSdf	07 31 03.9	-1.2
SONM	Songino Array	148.13	358	PKPbc	PKPdf	07 27 34.4	+1.0
	comp=Z,1.2nm,0.7s,baz=310,slow=1.3,SNR=7.8						

WEL 20 07:12:10.4, 40°S±4°×**17°4E**±°**, h208**^{km}±6^{km}**, M2.4**/20**, MLv2.4**/20**, Error ellipse: s-maj=0.0km s-min=0.0km az=77.5, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LREZ	Lake Rotokare	0.29	39	P	Pn	07 12 37.8	0.0
LREZ				S	S	07 12 57.4	-1.7
NMEZ	Namu Road	0.35	320	S	S	07 12 59.0	-0.4
NEZ	North Egmont	0.42	352	P	Pn	07 12 38.9	+0.6
NEZ				S	S	07 12 58.6	-1.4
WAZ	Wanganui	0.64	96	P	Pn	07 12 39.7	+0.7
WAZ				S	S	07 13 00.2	-0.9
PKVZ	Pokaka	0.99	67	P	Pn	07 12 40.6	-0.4
PKVZ				S	S	07 13 02.2	-2.4
MTVZ	Mangateitei	1.05	74	P	Pn	07 12 41.2	-0.1
MTVZ				S	S	07 13 02.6	-2.6
DUWZ	D'Urville Isla	1.13	190	P	Pn	07 12 42.6	+0.8
DUWZ				S	S	07 13 04.4	-1.9
TRVZ	Turoa	1.14	71	P	Pn	07 12 41.9	-0.2
FWVZ	Far West T-bar	1.16	69	P	Pn	07 12 42.0	-0.3
NGZ	Ngauruhoe	1.22	66	P	Pn	07 12 42.4	-0.3
TUVZ	Tukino	1.22	71	P	Pn	07 12 42.8	+0.1
WTVZ	West Tongariro	1.24	63	P	Pn	07 12 42.5	-0.3
MOVZ	Moawhango	1.26	78	P	Pn	07 12 42.6	-0.3
KRVZ	Karewarewa	1.29	63	P	Pn	07 12 42.9	-0.3
HIZ	Hauiti	1.29	25	P	Pn	07 12 41.9	-1.1
KIW	Kapiti Island	1.30	154	P	Pn	07 12 43.4	+0.3
OGWZ	Otaki Gorge	1.36	146	P	Pn	07 12 44.2	+0.6
KATZ	Kakaramea	1.38	60	P	Pn	07 12 43.9	0.0
POWZ	Post Office Ro	1.42	120	P	S	07 13 07.8	-2.2
TSZ	Takapari Road	1.43	106	P	Pn	07 12 44.4	+0.3
MRZ	Mangatainoka R	1.46	132	P	Pn	07 12 44.7	+0.4
BHHZ	Black Hill Sta	1.48	83	P	Pn	07 12 44.2	-0.4
TCW	Tory Channel	1.52	177	P	Pn	07 12 45.6	+0.7
TCW				S	S	07 13 09.8	-1.9
CAW	Cannon Point	1.58	154	P	Pn	07 12 45.9	+0.5
PNHZ	Pukenui	1.58	99	P	Pn	07 12 45.8	+0.3
HOWZ	Holdsworth Sta	1.59	140	P	Pn	07 12 45.9	+0.4
HOWZ	Holdsworth Sta	1.59	140	P	S	07 13 08.0	-4.7
PRWZ	Pori Road	1.63	123	P	Pn	07 12 46.6	+0.8
NNZ	Nelson	1.64	201	P	Pn	07 12 45.9	-0.1
DVHZ	Dannevirke	1.65	112	P	Pn	07 12 46.5	+0.4
QRZ	Quartz Range	1.69	227	P	Pn	07 12 45.5	-0.9
KRHZ	Kereru	1.70	89	P	Pn	07 12 46.8	+0.3
TIWZ	Tintock	1.71	130	P	Pn	07 12 47.3	+0.7
TIWZ	Tintock	1.71	130	P	S	07 13 10.0	-4.6
KWHZ	Kaweka Forest	1.76	82	P	Pn	07 12 47.7	+0.5
WPHZ	Waipukurau	1.79	103	P	S	07 13 15.0	-0.8
BKZ	Black Stump Fm	1.87	75	P	Pn	07 12 48.0	-0.3
BFZ	Birch Farm	1.88	123	P	Pn	07 12 48.6	+0.5
BFZ	Birch Farm	1.88	123	P	S	07 13 12.4	-4.9
MSWZ	Moikau Station	1.91	155	P	S	07 13 15.8	-2.3
ANWZ	Angora Road	1.93	114	P	Pn	07 12 49.6	+0.9
ANWZ	Angora Road	1.93	114	P	S	07 13 14.3	-4.0
TMWZ	Te Maipa	1.94	138	P	S	07 13 13.1	-5.3
PAWZ	Paruwai Farm	1.95	151	P	S	07 13 17.1	-1.6
CPWZ	Castlepoint	1.98	129	P	S	07 13 15.2	-3.9
PRHZ	Porangahau	1.98	108	P	Pn	07 12 50.0	+0.8
KAHZ	Kahuranaki	2.09	94	P	Pn	07 12 51.2	+0.8
ARHZ	Aropaoanui	2.23	80	P	Pn	07 12 52.4	+0.6
MTHZ	Maungataniwha	2.24	69	P	Pn	07 12 51.5	-0.5
CKHZ	Cape Kidnapper	2.25	90	P	Pn	07 12 52.8	+0.8
MUGZ	Murupara	2.36	60	P	Pn	07 12 52.3	-0.9
RTZ	Ruatahuna	2.43	65	P	Pn	07 12 53.4	-0.7
URZ	Urewera	2.70	59	P	Pn	07 12 55.7	-1.2
KNZ	Kokohu	2.80	77	P	Pn	07 12 57.9	-0.1
MHGZ	Mahia Peninsul	2.94	81	P	Pn	07 13 00.3	+0.6
MWZ	Matawai	2.94	64	P	Pn	07 12 58.8	-1.0
RIGZ	Rimuhau	2.96	72	P	Pn	07 12 59.7	-0.3
PRGZ	Paritu Road	2.98	76	P	Pn	07 13 00.1	-0.1
TKGZ	Te Karaka	3.12	68	P	Pn	07 13 01.6	-0.2
RUGZ	Raukumara Rang	3.23	59	P	Pn	07 13 01.5	-1.7
LTZ	Lake Taylor	3.41	204	P	Pn	07 13 04.8	-0.4
HAZ	Te Kaha	3.42	57	P	Pn	07 13 03.7	-1.7
PUZ	Puketiti	3.58	64	P	Pn	07 13 06.4	-0.9
WMGZ	Waiomatatini S	3.81	62	P	Pn	07 13 08.6	-1.4

ROM 20 07:38:02.0±0.1**, 43°.317N**±0°.004×**12°.607E**±0°.009**, h10**^{km}**, ML0.9**/5**, Error ellipse: s-maj=0.7km s-min=0.3km az=248.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATFO	Monte Foce - G	0.06	332	P	Pg	07 38 04.6	+0.4
ATFO				S	Sg	07 38 06.0	+0.1
ATFO				AML	AML		
	comp=N,144µm,0.2s						
ATFO				AML	AML		
	comp=E,129µm,0.4s						
MURB	Monte Urbino	0.08	228	P	Pg	07 38 04.8	+0.3
MURB				AML	AML		
	comp=E,394µm,0.2s						
MURB				AML	AML		
	comp=N,316µm,0.2s						
ATCC	AVT- Casa Cast	0.13	170	P	Pg	07 38 05.8	+0.6
ATCC				S	Sg	07 38 08.3	+0.9
ATCC				AML	AML		
	comp=E,75µm,0.7s						
ATCC				AML	AML		
	comp=N,89µm,0.2s						
ATVO	AVT- Monte Val	0.16	294	P	Pg	07 38 06.2	+0.5
ATVO				S	Sg	07 38 09.0	+0.9
ATVO				AML	AML		
	comp=N,45µm,0.4s						
ATVO				AML	AML		
	comp=E,45µm,1.6s						
PIEI	Pieia	0.23	347	P	Pb	07 38 07.7	-0.6
PIEI				AML	AML		
	comp=N,21µm,1.5s						
PIEI				AML	AML		
	comp=E,27µm,0.5s						
SNTG	Esanatoglia	0.25	104	P	Pg	07 38 07.8	+0.5
SNTG				S	Sb	07 38 12.0	-1.1
ARVD	Arcevia	0.30	53	P	Pg	07 38 08.9	+0.7

BUC 20 07:39:33.7±1.0**, 46°.92N**×**22°.73E, h8**^{km}±2^{km}**, ml0.9**/2**, 8C-4D, Error ellipse: s-maj=8.9km s-min=7.0km az=89.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRGR		0.13	185	⇓P	Pg	07 39 36.6	0.0
DRGR				⇑S	Sg	07 39 39.0	+0.4
DRGR		0.13	185	⇓P	Pg	07 39 36.6	0.0
DRGR				⇑S	Sg	07 39 39.0	+0.4
BZS	Buzias	1.51	211	⇓P	Pn	07 40 00.4	-0.6
BZS				⇑S	Sg	07 40 21.8	-0.5
BZS	Buzias	1.51	211	⇓P	Pn	07 40 00.4	-0.6
BZS				⇑S	Sg	07 40 21.8	-0.5
GZR	Gura Zlata	1.53	179	⇑P	Pb	07 40 02.0	-0.3
GZR				⇑S	Sb	07 40 22.0	+0.2
GZR	Gura Zlata	1.53	179	⇑P	Pb	07 40 02.0	-0.3
GZR				⇑S	Sb	07 40 22.0	+0.2

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*NEIC **20** 07:42:15.0±1.7, 8°.71S±0°.07×148°.09E±0°.08, h122^{km}±6^{km}, mb4.6/38, Error ellipse: s-maj=12.7km s-min=8.2km az=123.0*
*IDC **20** 07:42:14.5±0.6, 8°.66S×148°.13E, h120^{km}±4^{km}, mb3.9/14, mb1 4.1/17, mb1mx4.0/30, mbtmp4.3/17, MS3.3/4, Ms1 3.3/4, ms1mx2.7/36, Error ellipse: s-maj=18.0km s-min=10.1km az=113.0*
*BJI **20** 07:42:14.0±0.0, 8°.70S×148°.10E, h110^{km}, mB5.1/13, mb4.7/17*
*DJA **20** 07:42:17.0±0.6, 9°S±4°×14°8E±°, h132^{km}±5^{km}, M4.7/17, mb4.6/17, mB4.3/1, MLv4.7/3, Mw(mB)3.4/1*
ISC 20 07:42:13.3±0.4**, 8°.77S**±0°.05×**148°.19E**±0°.06**, h100**^{km}**, n86, σ1^{s}.79**/97**, mb4.5**/28**, 1C, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	1.20	238	P	Pn	07 42 38.7	+2.8
	66nm,0.3s,baz=54,slow=7.3,SNR=81						
PMG				LR	LR	07 43 01.1	
	comp=Z,22nm,21.5s,baz=342,slow=38						
PMG	Port Moresby	1.20	238		Pn	07 42 38.7	+2.8
PMG				Sn	Sn	07 42 56.1	+3.1
KRVT	Keravat (AS076	5.85	41	P	Pn	07 43 38.5	+0.9
	42nm,0.3s,baz=139,slow=1.0,SNR=6.4						
KRVT				S	Sn	07 44 45.1	+1.8
	72nm,0.3s,baz=183,slow=22,SNR=8.1						
RABL	Rabaul	6.02	41	Pn	Pn	07 43 42.3	+2.3
RABL				Sn	Sn	07 44 49.4	+1.8
MANU	Manus Island	6.73	353		Pn	07 43 51.5	+2.0
MANU				Sn	Sn	07 45 05.7	+0.9
COEN	Coen	7.12	223	Pn	Pn	07 43 56.5	+1.6
COEN				Sn	Sn	07 45 15.2	+0.9
CTA	Charters Tower	11.41	189	P	Pn	07 44 56.5	+3.4
	0.5nm,0.3s,baz=330,slow=12,SNR=1.8						
EIDS	Eidsvold	16.74	171	P	P	07 46 04.6	+2.2
EIDS				IAmb	IAmb	07 46 07.5	
	comp=Z,37nm,1.1s						
FAKI	Fak Fak	16.88	289		Pn	07 46 03.4	-0.2
FAKI				IAmb	IAmb	07 46 17.4	
	comp=Z,38nm,1.1s						
MTN	Manton Dam	17.23	255		Pn	07 46 07.4	-0.5

WB0	Warramunga Arr	17.25	229		P	07 46 07.4	-0.7
WB0				IAmb	IAmb	07 46 08.5	
	comp=Z,23nm,0.9s						
WR0	Warramunga Arr	17.26	228		P	07 46 06.5	-1.6
WR0				IAmb	IAmb	07 46 08.5	
	comp=Z,26nm,0.8s						
WRAB	Tennant Creek	17.39	229		P	07 46 08.9	-0.7
WRAB				IAmb	IAmb	07 46 13.5	
	comp=Z,25nm,0.7s						
WB2	Warramunga Arr	17.39	229		P	07 46 09.0	-0.6
WB2				IAmb	IAmb	07 46 13.7	
	comp=Z,25nm,0.6s						
WRA	Warramunga Arr	17.40	229	P	P	07 46 08.0	-1.7
	comp=Z,2.5nm,0.3s,baz=54,slow=11,SNR=8.8						
AS31	Alice Springs	20.16	221	P	P	07 46 40.2	+0.4
ASAR	Alice Springs	20.16	221	P	P	07 46 39.5	-0.3
	comp=Z,9.5nm,0.6s,baz=54,slow=9.5,SNR=113						
ASAR	Alice Springs	20.16	221	P	P	07 46 40.0	+0.1
KNRA	Kununurra	20.18	248	P	P	07 46 38.1	-1.9
KNRA				IAmb	IAmb	07 46 44.1	
	comp=Z,19nm,0.8s						
ARMA	Armidale	21.78	172	P	P	07 46 55.5	-1.6
ARMA				IAmb	IAmb	07 47 00.9	
	comp=Z,44nm,1.1s						
DZM	Mont Dzumac	21.98	129	LR	LR	07 54 58.3	
	comp=Z,106nm,18.4s,baz=54,slow=35						
SANI	Sanana	23.07	286	P	P	07 47 08.7	-1.8
	comp=Z,12nm,1.3s						
FITZ	Fitzroy Crossi	23.78	245	P	P	07 47 15.6	-1.3
	comp=Z,27nm,0.5s,baz=82,slow=7.1,SNR=115						
STKA	Stephens Creek	23.80	194	P	P	07 47 16.6	-0.3
	comp=Z,5.5nm,0.5s,baz=349,slow=8.9,SNR=15						
STKA				LR	LR	07 57 33.7	
	comp=Z,51nm,19.4s,baz=21,slow=38						
STKA	Stephens Creek	23.80	194	P	P	07 47 16.6	-0.3
BBOO	Buckleboo	26.43	203	P	P	07 47 39.0	-1.8
BBOO				IAmb	IAmb	07 47 58.0	
	comp=Z,23nm,1.4s						
CAN	Canberra	26.44	179	P	P	07 47 42.1	+1.2
CAN				IAmb	IAmb	07 47 42.8	
	comp=Z,10.0nm,0.7s						
KAPI	Kappang	28.47	276	LR	LR	08 00 24.9	
	comp=Z,22nm,19.2s,baz=78,slow=38						
TOO	Toolangi	28.78	184	P	P	07 48 03.0	+1.3
TOO				IAmb	IAmb	07 48 03.5	
	comp=Z,15nm,0.8s						
FORT	Forrest	28.85	218	P	P	07 48 02.1	-0.3
PSAD2	Pilbara Seismi	30.02	242	P	P	07 48 11.2	-1.7
PSAD2				IAmb	IAmb	07 48 11.8	
	comp=Z,12nm,1.1s						
PSAC2	Pilbara Seismi	30.05	242	P	P	07 48 11.8	-1.4
PSAC2				IAmb	IAmb	07 48 18.6	
	comp=Z,15nm,1.2s						
PSAD1	Pilbara Seismi	30.07	242	P	P	07 48 11.4	-2.0
PSAB2	Pilbara Seismi	30.08	242	P	P	07 48 13.1	-0.4
PSAB2				IAmb	IAmb	07 48 14.9	
	comp=Z,12nm,1.0s						
PSAC1	Pilbara Seismi	30.12	242	P	P	07 48 13.6	-0.2
PSAC1				IAmb	IAmb	07 48 32.1	
	comp=Z,7.7nm,0.9s						
TAU	Tasmania Unive	34.02	181	P	P	07 48 48.3	+0.7
MORW	Morawa	36.30	232	P	P	07 49 05.7	-1.7
BKZ	Black Stump Fm	39.48	145	P	P	07 49 34.5	+0.4
BKZ				IAmb	IAmb	07 49 38.1	
	comp=Z,22nm,1.5s						
TUWZ	Tuamarina	39.71	149	P	P	07 49 35.5	-0.3
BSWZ	Blackbirch Sta	39.89	150	P	P	07 49 36.8	-0.6
LTZ	Lake Taylor	39.93	152	P	P	07 49 39.2	+1.5
KHZ	Kahutara	40.25	151	P	P	07 49 40.6	+0.3
MQZ	McQueen's Vall	40.82	153	P	P	07 49 45.0	0.0
MJAR	Matsushiro Arr	46.03	349	P	P	07 50 25.2	-1.7
	comp=Z,1.8nm,0.8s,baz=169,slow=9.3,SNR=1.8						
MJAR				pP	pP	07 50 51.8	+1.2
	comp=Z,2.8nm,0.8s,baz=141,slow=8.1,SNR=3.5						
MJAR	Matsushiro Arr	46.03	349	P	P	07 50 26.3	-0.7
NJ2	Nanjing	49.32	327	*e*P	P	07 50 55.8	+3.4
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
KSRS	Korea Array	49.74	339	P	P	07 50 54.3	-1.2
	comp=Z,0.8nm,0.4s,baz=173,slow=11,SNR=4.2						
KSRS				pP	pP	07 51 20.9	+1.5
	comp=Z,5.4nm,0.8s,baz=157,slow=8.8,SNR=8.8						
USRK	Ussuriysk Ar.	54.72	346	P	P	07 51 31.6	-0.7
	comp=Z,1.6nm,0.9s,baz=187,slow=7.0,SNR=3.3						
USRK				pP	pP	07 51 58.3	+1.7
	comp=Z,2.3nm,0.7s,baz=202,slow=9.8,SNR=6.2						
USRK	Ussuriysk Ar.	54.72	346	P	P	07 51 30.6	-1.6
CMAR	Chiang Mai Arr	55.61	299	P	P	07 51 38.4	-0.8
	comp=Z,1.0nm,0.3s,baz=121,slow=5.1,SNR=5.5						
CMAR				pP	pP	07 52 06.2	+2.4
	comp=Z,1.1nm,0.3s,baz=318,slow=51,SNR=1.1						
CMAR	Chiang Mai Arr	55.61	299	P	P	07 51 38.2	-0.9
XAN	Xi'an	56.56	321	P	P	07 51 43.8	-1.9
CD2	Chengdu	58.04	315	*e*P	P	07 51 58.0	+1.8
HHC	Hu-ho-hao-te	59.79	328	*e*P	P	07 52 11.8	+3.6
HHC				pmax	pmax		
	comp=Z,68nm,1.0s						
HHC				pmax	pmax		
	comp=Z,260nm,5.4s						
PETK	Petropavlovsk-	62.17	6	pP	pP	07 52 52.3	+3.7
	comp=Z,7.9nm,0.9s,baz=176,slow=8.1,SNR=4.1						
SONM	Songino Array	67.38	331	P	P	07 52 56.6	-1.4
	comp=Z,0.4nm,0.6s,baz=144,slow=5.2,SNR=2.3						
SONM				pP	PcP	07 53 26.2	+1.4
	comp=Z,0.8nm,0.8s,baz=143,slow=5.4,SNR=4.4						
SONM	Songino Array	67.38	331	P	P	07 52 56.5	-1.4
VNDA	Vanda	69.10	177	P	P	07 53 08.4	+0.4
	comp=Z,9.3nm,1.0s,baz=328,slow=6.3,SNR=24						
VNDA	Vanda	69.10	177	P	P	07 53 08.6	+0.4
VNDA				IAmb	IAmb	07 53 09.4	
	comp=Z,9.2nm,0.9s						
SBA	Scott Base	69.73	176	P	P	07 53 09.8	-2.2
WMQ	Urumqi	75.64	319	*e*P	P	07 53 49.9	+2.2
WMQ				pmax	pmax		
	comp=Z,69nm,4.3s						
WMQ				LR	LR		
	comp=Z,450nm,28.9s						
WMQ				LR	LR		
	comp=Z,530nm,28.8s						
WMQ				LR	LR		
	comp=Z,110nm,29.2s						
MAW	Mawson	80.17	203	P	P	07 54 11.3	-0.8
	comp=Z,3.2nm,0.6s,baz=113,slow=8.5,SNR=2.5						
MAW	Mawson	80.17	203	P	P	07 54 12.0	-0.1
MKAR	Makanchi Array	80.37	320	P	P	07 54 12.4	-1.3
	comp=Z,0.4nm,0.5s,baz=98,slow=7.0,SNR=7.7						
MKAR				pP	pP	07 54 43.1	+3.5
	comp=Z,1.7nm,0.6s,baz=109,slow=6.2,SNR=9.5						
MKAR	Makanchi Array	80.37	320	P	P	07 54 11.4	-2.3
MAKZ	Makanchi	80.57	320	P	P	07 54 13.5	-1.3
ANM	Nome	80.93	18	P	P	07 54 13.6	-2.6
QSPA	South Pole Qui	81.22	180	P	P	07 54 17.6	-0.4
ZALV	Zalesovo Beam	81.97	328	P	P	07 54 18.6	-3.4
	comp=Z,1.2nm,0.6s,baz=44,slow=4.5,SNR=4.3						
ZALV				pP	pP	07 54 49.9	+1.9
	comp=Z,1.0nm,0.5s,baz=91,slow=8.9,SNR=2.1						
ZALV	Zalesovo Beam	81.97	328	P	P	07 54 18.3	-3.6
KSH	Kashi	82.09	312	P	P	07 54 25.5	+2.4
KSH				sP	sP	07 55 06.3	+6.5
KSH				PP	PP	07 57 36.8	+4.2
KSH				S	S	08 04 26.6	-3.3
KSH				pmax	pmax		
	comp=Z,13nm,0.7s						
KSH				pmax	pmax		
	comp=Z,400nm,6.3s						
KSH				LR	LR		
	comp=Z,150nm,10.4s						
KSH				LR	LR		
	comp=Z,110nm,12.1s						
KSH				LR	LR		
	comp=Z,130nm,11.4s						
SVW2	Sparrevohn	82.27	24	P	P	07 54 23.7	+0.3
PPLA	Purkeypile	84.59	23	P	P	07 54 34.4	-1.0
RC01	Rabbit Creek A	84.69	26	P	P	07 54 34.8	-0.9
RC01				IAmb	IAmb	07 54 40.7	
	comp=Z,13nm,1.3s						
ILAR	Eielson Array	87.55	23	P	P	07 54 47.5	-2.2
	comp=Z,1.6nm,0.7s,baz=252,slow=5.0,SNR=23						
ILAR				pP	pP	07 55 17.9	+1.8
	comp=Z,1.3nm,0.7s,baz=251,slow=4.8,SNR=5.7						
ILAR	Eielson Array	87.55	23	P	P	07 54 47.7	-2.0
SYO	Syowa Base	88.41	200⇑	*e*X	P	07 54 50.0	-3.8
BMAR	Burnt Mountain	89.54	21	P	P	07 54 59.2	+0.1
BBB	Bella Bella	93.01	38	LR	LR	08 35 15.6	
	comp=Z,30nm,18.7s,baz=182,slow=34						
NVAR	Mina Array Bea	98.12	52	P	P	07 55 37.6	-1.8
	comp=Z,0.4nm,0.8s,baz=242,slow=5.0,SNR=2.3						
LPAZ	La Paz	136.28	125	PKP	PKPdf	08 01 24.1	-0.8
	comp=Z,0.4nm,0.4s,baz=355,slow=12,SNR=3.9						
TORD	Torodi Ar. Bea	146.83	281	PKPbc	PKPdf	08 01 43.2	+0.2
	comp=Z,2.6nm,0.7s,baz=78,slow=2.9,SNR=14						
TORD				pPKPbc	pPKPab	08 02 16.7	+3.4
	comp=Z,3.1nm,0.7s,baz=68,slow=2.6,SNR=2.6						
BDFB	Brasilia	150.92	146	PKPbc	PKPbc	08 01 54.3	-1.2
	comp=Z,9.0nm,0.6s,baz=133,slow=0.9,SNR=14						
BDFB	Brasilia	150.92	146	PKPbc	PKPbc	08 01 54.8	-0.7
DBIC	Dimbokro	153.21	267	PKPbc	PKPbc	08 01 59.4	-1.3
	comp=Z,3.5nm,0.7s,baz=40,slow=3.9,SNR=6.5						
DBIC	Dimbokro	153.21	267		PKPbc	08 01 59.6	-1.0

IDC 20 08:10:25.7±9.9**, 4°.71S**×**153°.62E, h122**^{km}±67^{km}**, mb3.3**/2**, mb1 3.6**/3**, mb1mx3.1**/47**, mbtmp3.8**/3**, Error ellipse: s-maj=126.0km s-min=60.7km az=121.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.93	234	P	Pn	08 12 18.1	-0.1
	2.4nm,0.3s,baz=68,slow=12,SNR=5.6						
PMG				S	Sn	08 13 47.8	+1.4
	0.8nm,0.3s,baz=192,slow=20,SNR=1.8						
WRA	Warramunga Arr	24.12	229	P	P	08 15 30.4	+0.1
	1.3nm,0.6s,baz=53,slow=9.7,SNR=14						
ASAR	Alice Springs	26.77	223	P	P	08 15 54.0	-0.4
	0.4nm,0.3s,baz=56,slow=8.9,SNR=8.6						
TORD	Torodi Ar. Bea	151.06	289	PKPbc	PKPbc	08 30 05.5	0.0
	0.2nm,0.4s,baz=58,slow=2.8,SNR=1.9						

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*SNET **20** 08:11:29.8±1.1, 11°.40N×87°.78W, h13^{km}±102^{km}, ML3.4*

*UCR **20** 08:11:29.1±2.1, 11°.27N×87°.56W, h36^{km}±999^{km}, MD4.1, ML3.4*

*INET **20** 08:11:30.6, 11°.25N×87°.48W, h26^{km}, ML3.2*

ISC 20 08:11:27.9±1.6**, 11°.19N**±0°.09×**87°.64W**±0°.09**, h29**^{km}**, n29,** σ**0**^{s}**.77**/48**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	1.77	2	*e*P	Pn	08 11 57.7	+0.9
CNCH	Conchagua	2.08	355	*e*P	Pn	08 12 01.2	+0.2
CNCH				*e*S	Sn	08 12 26.4	+0.4
CNCH	Conchagua	2.08	355	*e*P	Pn	08 12 01.2	+0.2
CNCH				*e*S	Sn	08 12 26.4	+0.4
LCND	La Caada	2.12	353	*e*P	Pn	08 12 01.5	+0.1
LCND				*e*S	Sn	08 12 26.3	-0.5
LCND				IAML		08 12 30.4	
	comp=Z,602nm,0.4s						
LCND	La Caada	2.12	353	*e*P	Pn	08 12 01.5	+0.1
LCND				*e*S	Sn	08 12 26.3	-0.5
LCND				IAML		08 12 30.4	
	comp=Z,602nm,0.4s						
JUCU	Jucuar¡n	2.13	344	*e*P	Pn	08 12 01.1	-0.6
JUCU				*e*S	Sn	08 12 26.4	-0.9
JUCU				IAML		08 12 30.7	
	comp=Z,298nm,0.2s						
JUCU	Jucuar¡n	2.13	344	*e*P	Pn	08 12 01.1	-0.6
JUCU				*e*S	Sn	08 12 26.4	-0.9
JUCU				IAML		08 12 30.7	
	comp=Z,298nm,0.2s						
NY14	Universidad de	2.13	104	*i* P	Pn	08 12 01.8	+0.2
NY14				*i* S	Sn	08 12 26.3	-0.9
BUEV	Buena Vista	2.22	100	*i* P	Pn	08 12 03.0	0.0
GB1A	Borinquen Arri	2.23	99	*i* P	Pn	08 12 03.2	+0.2
ALJI	Alcalda de J	2.31	337	*e*P	Pn	08 12 04.5	+0.5
ALJI				*e*S	Sn	08 12 30.3	-1.2
ALJI	Alcalda de J	2.31	337	*e*P	Pn	08 12 04.5	+0.5
ALJI				*e*S	Sn	08 12 30.3	-1.2
PACA	Pacayal	2.36	344	*e*P	Pn	08 12 05.2	+0.4
PACA	Pacayal	2.36	344	*e*P	Pn	08 12 05.2	+0.4
PLVR	Palo Verde	2.40	110	*e*P	Pn	08 12 04.8	-0.7
PLVR				*e*S	Sn	08 12 32.0	-1.9
MATN	Matagalpa	2.40	44	*e*P	Pn	08 12 05.2	-0.3
COEB	Comit de Eme	2.45	339	*e*P	Pn	08 12 06.1	0.0
COEB				*e*S	Sn	08 12 35.3	+0.1
COEB				IAML		08 12 44.8	
	comp=Z,134nm,0.4s						
COEB	Comit de Eme	2.45	339	*e*P	Pn	08 12 06.1	0.0
COEB				*e*S	Sn	08 12 35.3	+0.1
COEB				IAML		08 12 44.8	
	comp=Z,134nm,0.4s						
CUI	Cuipilapa	2.49	102	*e*P	Pn	08 12 07.3	+0.7
CUI				*e*S	Sn	08 12 35.8	-0.2
FAGO	Alcalda de S	2.53	350	*e*P	Pn	08 12 07.7	+0.6
FAGO				*e*S	Sn	08 12 37.1	+0.1
FAGO	Alcalda de S	2.53	350	*e*P	Pn	08 12 07.7	+0.6
FAGO				*e*S	Sn	08 12 37.1	+0.1
JTS	Las Juntas de	2.79	109	*e*P	Pn	08 12 11.0	+0.3
JTS				*e*S	Sn	08 12 42.4	-0.9
LFRS	El Faro	2.79	330	*e*P	Pn	08 12 10.8	0.0
LFRS				*e*S	Sn	08 12 42.7	-0.8
TGUH	Tegucigalpa,Un	2.87	7	*e*P	Pn	08 12 12.6	+0.7
TGUH	Tegucigalpa,Un	2.87	7	*e*P	Pn	08 12 12.6	+0.7
LBRS	Las Brisas	2.88	332	*e*P	Pn	08 12 12.6	+0.6
LCR2	La Lucha 2	3.85	112	*e*P	Pn	08 12 27.1	+1.7
LCR2				*e*S	Sn	08 13 10.2	+0.3
EDLM	Las Mercedes	4.41	115	*e*P	Pn	08 12 34.8	+1.8
EDLM				*e*S	Sn	08 13 22.2	-1.4
EDBA	Buenos Aires	4.74	115	*e*P	Pn	08 12 38.7	+1.1

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*NIED **20** 08:16:00, 37°.60N×142°.00E, h11^{km}, Mw3.8 Best double couple: $M_0$5.06000×10^{14} NP1:ϕ_s323.00000°, δ57.00000°, λ-88.00000°. NP2:ϕ_s139.00000°, δ33.00000°, λ-93.00000°.*

*JMA **20** 08:16:10.3±0.1, 37°.61N×142°.00E, h28^{km}±2^{km}, M4.2*

JMA Felt I J1.

*NEIC **20** 08:16:12.8±2.3, 37°.54N±0°.03×142°.0E±0°.1, h38^{km}±7^{km}, mb4.1/10, Error ellipse: s-maj=14.4km s-min=2.9km az=101.0*

*IDC **20** 08:16:13.5±2.8, 37°.52N×141°.87E, h39^{km}±25^{km}, mb3.6/17, mb1 3.8/21, mb1mx3.7/45, mbtmp3.8/21, ML3.9/2, Error ellipse: s-maj=20.7km s-min=12.8km az=103.0*

ISC 20 08:16:08.7±1.6**, 37°.57N**±0°.04×**142°.02E**±0°.05**, h8**^{km}±9^{km}**, n72,** σ**1**^{s}**.33**/80**, mb3.9**/19**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.86	329	P	Pg	08 16 25.4	+0.2
JIKH				S	Sg	08 16 35.8	-0.6
JMST	Minamisoumatoc	0.91	280	P	Pg	08 16 26.5	+0.2
JMST				S	Sg	08 16 37.9	-0.2
JFK	Kawauchi	0.94	258	P	Pb	08 16 27.2	0.0
JFK				S	Sg	08 16 39.1	+0.3
JMM	Marumori	1.02	287	P	Pg	08 16 28.2	-0.1
JMM				S	Sg	08 16 40.6	-0.9
JIO	Ouri	1.03	329	P	Pg	08 16 28.1	-0.4
ONAJ	Iwakimizuishiy	1.08	245	P	Pg	08 16 29.3	-0.2
ONAJ				S	Sg	08 16 43.1	-0.4
JKMT	Kesennumamotoy	1.31	341	P	Pn	08 16 32.3	-1.0
JOU	Okura	1.33	307	P	Pn	08 16 33.3	-0.4
JOU				S	Sb	08 16 49.8	-1.5
JFT	Otama	1.34	268	P	Pn	08 16 34.0	+0.2
JFT				S	Sb	08 16 50.6	-0.9
JMK	Ichinoseki	1.52	336	P	Pn	08 16 35.6	-0.6
JYS	Shirataka	1.68	293	P	Pn	08 16 38.9	+0.5
JYS				S	Sn	08 16 59.9	-0.2
JFY	Yanaizu	1.85	266	P	Pn	08 16 41.7	+0.9
JFY				S	Sn	08 17 04.5	+0.1
JYK	Kaneyama	1.88	316	P	Pn	08 16 40.9	-0.2
JOM	Ohasama	1.98	343	P	Pn	08 16 42.3	-0.3
MJAR	Matsushiro Arr	3.22	253	Pn	Pn	08 17 00.3	+0.7
	0.5nm,0.3s,baz=78,slow=18,SNR=6.8						
MJAR				Sn	Sn	08 17 40.3	+2.1
	1.6nm,0.3s,baz=62,slow=21,SNR=6.3						
MJAR	Matsushiro Arr	3.22	253		Pn	08 17 02.5	+2.9
MAJO	Matsushiro	3.22	253		Pn	08 17 02.8	+3.1
MAT	Matsushiro	3.22	253	P	Pn	08 17 02.6	+3.0
MAT				S	Sb	08 17 42.7	-2.8
MJB9	Matsu-Tunnel	3.22	253		Pn	08 17 02.8	+3.1
ERM	Erimo	4.52	11	Pn	Pn	08 17 17.9	+0.4
INU	Inuyama	4.60	243	Pn	Pn	08 17 20.3	+1.7
JHJ2	Mitsune	4.80	203	Pn	Pn	08 17 22.3	+1.0
JHJ2				Sn	Sn	08 18 15.2	-1.9
JHJ	Hachijo jima 2	4.80	203	Pn	Pn	08 17 21.6	+0.2
	20nm,0.3s,baz=298,slow=21,SNR=2.0						
JHJ				Sn	Sn	08 18 15.0	-2.2
	77nm,0.3s,baz=243,slow=23,SNR=5.3						
ASAJ	Asahikawa	6.55	4	Pn	Pn	08 17 46.5	+1.1
	2.0nm,0.3s,baz=181,slow=23,SNR=10.0						
ASAJ				Sn	Sn	08 19 00.2	-0.1
	0.5nm,0.3s,baz=28,slow=33,SNR=1.2						
JKA	Kamikawa-asahi	6.55	4		Pn	08 17 46.5	+1.1
JKA					Sn	08 19 00.2	-0.1
USA0B	Ussuriysk Arra	10.07	314	Pn	Pn	08 18 35.2	+1.6
USRK	Ussuriysk Ar.	10.07	314	Pn	Pn	08 18 34.5	+0.8
	baz=116,slow=14,SNR=3.9						
MA2	Magadan	22.73	12	P	P	08 21 13.0	+2.1
	0.8nm,0.3s,baz=148,slow=22,SNR=1.6						
MA2	Magadan	22.73	12	P	P	08 21 13.4	+2.5
MA2				IAmb	IAmb	08 21 27.1	
	comp=Z,2.6nm,0.8s						
SEY	Seymchan	26.17	11	P	P	08 21 45.7	+2.3
	comp=Z,0.3nm,0.3s,baz=194,slow=8.1,SNR=4.4						
SONM	Songino Array	27.89	303	P	P	08 21 59.3	+0.2
	comp=Z,1.0nm,0.7s,baz=111,slow=9.1,SNR=7.1						
SONM	Songino Array	27.89	303	P	P	08 21 56.8	-2.4
H11N2	WAKE ISLAND Hy	28.02	122	T	T	08 51 25.9	
	baz=315,slow=75,SNR=716						
H11N1	WAKE ISLAND Hy	28.02	123	T	T	08 51 25.3	
	baz=315,slow=75,SNR=506						
H11N3	WAKE ISLAND Hy	28.03	122	T	T	08 51 27.3	
	baz=315,slow=75,SNR=509						
H11S1	WAKE ISLAND Hy	28.75	125	T	T	08 52 19.1	
	baz=317,slow=76,SNR=308						
H11S3	WAKE ISLAND Hy	28.75	125	T	T	08 52 19.9	
	baz=317,slow=76,SNR=260						
H11S2	WAKE ISLAND Hy	28.77	125	T	T	08 52 19.7	
	baz=317,slow=76,SNR=289						
ZAA0	Zalesovo Array	41.91	312	P	P	08 23 58.8	-0.7
ZAA0				IAmb	IAmb	08 24 07.9	
	comp=Z,1.9nm,0.6s						
ZALV	Zalesovo Beam	41.91	312	P	P	08 23 59.8	+0.3
	comp=Z,1.6nm,0.7s,baz=83,slow=6.5,SNR=5.5						
ZALV	Zalesovo Beam	41.91	312	P	P	08 23 59.3	-0.2
MK31	Makanchi Array	44.25	302	P	P	08 24 18.7	+0.2
MKAR	Makanchi Array	44.25	302	P	P	08 24 18.6	+0.1
	comp=Z,0.8nm,0.7s,baz=83,slow=9.8,SNR=11						
MKAR	Makanchi Array	44.25	302	P	P	08 24 18.3	-0.3
KURK	Kurchatov	45.98	308	P	P	08 24 31.5	-0.7
KDAK	Kodiak Island	46.38	42	P	P	08 24 35.7	+0.5
	comp=Z,12nm,1.0s,baz=190,slow=7.0,SNR=3.1						
ILAR	Eielson Array	48.78	33	P	P	08 24 56.2	+2.4
	comp=Z,0.4nm,0.6s,baz=266,slow=6.5,SNR=5.9						
BOOM	Boomskoye usch	49.69	298	P	P	08 25 02.8	+1.4
BOOM				IAmb	IAmb	08 25 17.4	
	comp=Z,3.5nm,1.1s						
BCAR	Beaver Creek A	51.18	35	P	P	08 25 13.7	+1.6
KKAR	Karatay Array	53.28	300	P	P	08 25 28.6	+0.6
INK	Inuvik	53.69	27	P	P	08 25 31.1	+0.6
	comp=Z,0.7nm,0.5s,baz=158,slow=9.7,SNR=2.1						
WB0	Warramunga Arr	57.48	189	P	P	08 25 57.3	-1.0
WR0	Warramunga Arr	57.65	188	P	P	08 25 58.0	-1.6
WRA	Warramunga Arr	57.66	189	P	P	08 25 58.7	-0.9
	comp=Z,0.4nm,0.3s,baz=174,slow=8.9,SNR=12						
WRA	Warramunga Arr	57.66	189	P	P	08 25 56.6	-3.0
ABKAR	Akbulak array	57.97	310	P	P	08 26 01.3	-0.3
ASAR	Alice Springs	61.39	188	P	P	08 26 25.9	+0.6
	comp=Z,1.7nm,0.8s,baz=11,slow=6.9,SNR=18						
RES	Resolute Bay	61.96	15	P	P	08 26 28.8	+0.2
	comp=Z,0.8nm,0.8s,baz=184,slow=11,SNR=2.6						
RES	Resolute Bay	61.96	15	P	P	08 26 28.6	0.0
RES				IAmb	IAmb	08 26 37.9	
	comp=Z,1.9nm,1.0s						
YKA	Yellowknife Ar	63.10	30	P	P	08 26 37.0	+0.6
	comp=Z,0.2nm,0.7s,baz=298,slow=5.3,SNR=3.2						
FINES	FINESS Array B	68.56	332	P	P	08 27 11.3	-0.2
	comp=Z,0.6nm,0.5s,baz=46,slow=8.2,SNR=3.6						
FINES	FINESS Array B	68.56	332	P	P	08 27 11.6	0.0
STKA	Stephens Creek	69.09	180	P	P	08 27 14.3	-0.8
	comp=Z,0.5nm,0.4s,baz=333,slow=23,SNR=2.9						
STKA	Stephens Creek	69.09	180	P	P	08 27 14.7	-0.4
AKASG	Malin Array Be	74.17	322	P	P	08 27 43.8	-1.8
	comp=Z,0.6nm,0.4s,baz=45,slow=6.0,SNR=3.2						
AKASG	Malin Array Be	74.17	322	P	P	08 27 45.0	-0.7
PDAR	Pinedale Array	76.94	46	P	P	08 28 03.3	+1.2
	comp=Z,0.2nm,0.6s,baz=329,slow=3.6,SNR=2.9						
PDAR	Pinedale Array	76.94	46	P	P	08 28 01.3	-0.7
CLL	Collm	80.87	330	*e*pP	pP	08 28 36.0	+11
TXAR	Lajitas Array	89.41	53	P	P	08 29 07.3	+0.9
	comp=Z,0.5nm,0.7s,baz=309,slow=3.9,SNR=5.4						
LPAZ	La Paz	146.00	60	PKPbc	PKPbc	08 35 50.1	-0.2
	comp=Z,1.2nm,0.5s,baz=356,slow=2.0,SNR=9.0						
LPAZ	La Paz	146.00	60		PKPdf	08 35 48.1	-1.4

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*IDC **20** 08:17:25.3±5.2, 20°.17S×178°.44W, h573^{km}±59^{km}, mb3.2/11, mb1 3.4/11, mb1mx3.1/38, mbtmp4.1/11, Error ellipse: s-maj=24.6km s-min=21.3km az=100.0*

ISC 20 08:17:27.6±0.8**, 20°.2S**±0°.2×**178°.5W**±0°.2**, h602**^{km}**, n14,** σ**0**^{s}**.95**/16**, mb3.6**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	33.05	264	P	P	08 23 15.1	-0.3
	2.3nm,0.4s,baz=251,slow=9.1,SNR=1.9						
ASAR	Alice Springs	44.14	256	P	P	08 24 44.2	-0.3
	2.9nm,0.8s,baz=99,slow=7.7,SNR=37						
ASAR				PcP	PcP	08 26 16.2	+0.2
	0.4nm,0.6s,baz=111,slow=3.8,SNR=4.5						
WRA	Warramunga Arr	44.18	262	P	P	08 24 44.5	-0.4
	1.2nm,0.6s,baz=98,slow=8.5,SNR=23						
WRA				PcP	PcP	08 26 17.6	+1.5
	0.7nm,0.7s,baz=360,slow=7.5,SNR=4.6						
SIJI	Sorong	52.70	285	P	P	08 25 48.4	+0.5
	3.8nm,0.3s,baz=103,slow=5.6,SNR=5.1						
VNDA	Vanda	58.20	185	P	P	08 26 24.7	-0.1
	1.1nm,0.5s,baz=39,slow=12,SNR=9.1						
YBH	Yreka Blue Hor	80.33	39	P	P	08 28 38.4	+1.1
	1.0nm,0.6s,baz=219,slow=15,SNR=2.0						
NVAR	Mina Array Bea	81.11	44	P	P	08 28 42.4	+0.8
	0.1nm,0.3s,baz=234,slow=7.7,SNR=2.6						
MAW	Mawson	81.71	200	P	P	08 28 44.2	+0.3
	1.3nm,0.4s,baz=352,slow=5.5,SNR=1.5						
SEY	Seymchan	85.95	347	P	P	08 29 04.8	+0.2
	1.3nm,0.6s,baz=157,slow=6.8,SNR=8.3						
ILAR	Eielson Array	88.10	13	P	P	08 29 14.0	-0.7
	0.4nm,0.4s,baz=228,slow=4.8,SNR=8.0						
PDAR	Pinedale Array	89.05	43	P	P	08 29 18.9	-1.1
	0.4nm,0.6s,baz=217,slow=3.7,SNR=4.3						
AKASG	Malin Array Be	142.50	331	PKP	PKPdf	08 35 50.6	-2.2
	5.6nm,1.1s,baz=46,slow=4.1,SNR=7.1						
BRTR	Keskin Array B	146.27	312	PKPbc	PKPbc	08 36 03.1	+0.9
	0.6nm,0.6s,baz=149,slow=9.9,SNR=2.0						
GERES	GERESS Array B	149.75	344	PKPbc	PKPbc	08 36 10.6	0.0
	1.2nm,0.9s,baz=324,slow=6.6,SNR=3.9						

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*AEIC **20** 09:06:13±1.8, 51°.45N±0°.10×179°.93W±0°.07, h5^{km}±4^{km}, ML3.9/25, mb4.2/69(NEIC), Error ellipse: s-maj=14.9km s-min=2.7km az=156.0*

*NEIC **20** 09:06:14.5±1.9, 51°.5N±0°.1×179°.88W±0°.07, h12^{km}±5^{km}, Error ellipse: s-maj=17.1km s-min=5.5km az=167.0*

*IDC **20** 09:06:16.3±3.9, 51°.61N×179°.99W, h28^{km}±26^{km}, mb3.8/18, mb1 4.0/20, mb1mx3.8/54, mbtmp4.0/20, ML3.4/2, MS2.9/1, Ms1 2.9/1, ms1mx2.3/39, Error ellipse: s-maj=23.2km s-min=11.8km az=167.0*

ISC 20 09:06:13.3±0.6**, 51°.4N**±0°.1×**179°.90W**±0°.04**, h10**^{km}**, n115,** σ**1**^{s}**.08**/104**, mb4.1**/39**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GALAA	Gareloi Lava P	0.78	65		Pg	09 06 28.7	+0.4
GAEA	Gareloi East	0.80	64		Pg	09 06 29.1	+0.4
TANO	Tanaga North	1.21	66		Pb	09 06 36.2	-0.1
TANO					Sn	09 06 53.0	+0.4
TASE	Tanaga Southea	1.23	70		Pb	09 06 36.3	-0.4
TAFP	Tanaga Falls P	1.28	68		Pn	09 06 36.9	-0.4
TAPA	Tanaga Point A	1.36	73		Pn	09 06 38.1	-0.2
KIMD	Kanaga Island	1.69	78		Pn	09 06 43.0	+0.1
KIMD					Sn	09 07 05.6	+0.9
KICM	Kanaga Island	1.75	73		Pn	09 06 44.1	+0.4
KIKV	Kanaga Island	1.76	74		Pn	09 06 44.1	+0.3
KIKV					Sb	09 07 07.7	0.0
KIWB	Kanaga Island	1.76	75		Pg	09 06 52.9	+5.8
ADK	Adak	2.05	76		Pn	09 06 48.0	+0.1
ADAG	Mount Adagdak	2.12	74		Pn	09 06 49.0	+0.2
GSTD	Great Sitkin T	2.42	74		Pn	09 06 53.2	+0.3
GSTD					Sb	09 07 26.8	+0.1
GSMY	Great Sitkin M	2.47	74		Pn	09 06 54.0	+0.4

GSTR	Great Sitkin T	2.48	73	Pn	Pn	09 06 54.5	+0.8
ATKA	Atka Island	3.62	75		Pn	09 07 10.5	+1.1
ATKA					Sn	09 07 53.1	+0.9
KOKL	Mount Kliuchef	3.64	74		Pn	09 07 10.6	+0.8
KOFP	Korovin Flat P	3.70	75		Pn	09 07 11.9	+1.4
SMY	Shemya	3.92	292		Pn	09 07 14.1	+0.6
SMY					Sn	09 08 02.1	+2.5
NIKH	Nikolski High	6.96	73	Pn	Pn	09 07 56.9	+1.6
SPIA	Saint Paul Isl	8.06	41	Pn	Pn	09 08 11.5	+1.3
UNV	Unalaska Valle	8.50	68	Pn	Pn	09 08 18.1	+1.8
GAMB	Gambell	13.12	16	Pn	Pn	09 09 21.0	+1.6
CHGN	Chignik	13.56	61	Pn	Pn	09 09 26.3	+0.8
PETK	Petropavlovsk-	13.81	286	Pn	Pn	09 09 29.7	+0.7
	0.2nm,0.3s,baz=101,slow=15,SNR=2.4						
CHIR	Chirikof Islan	15.03	64	Pn	Pn	09 09 45.5	+0.1
ANM	Nome	15.19	24	Pn	Pn	09 09 48.1	+0.5
OHAK	Old Harbor	16.50	59	Pn	Pn	09 10 02.7	-1.9
OHAK				IAmb	IAmb	09 10 21.1	
	comp=Z,34nm,1.3s						
SVW2	Sparrevohn	16.51	45		P	09 10 07.7	+0.3
KDAK	Kodiak Island	16.97	57	Pn	Pn	09 10 08.2	-2.4
	comp=Z,1.0nm,0.3s,baz=312,slow=5.1,SNR=25						
KDAK	Kodiak Island	16.97	57	Pn	Pn	09 10 09.5	-1.0
KDAK				IAmb	IAmb	09 10 11.7	
	comp=Z,18nm,1.3s						
CNPM	China Poot	18.03	52	Pn	Pn	09 10 22.0	-1.7
CNPM				IAmb	IAmb	09 10 36.9	
	comp=Z,35nm,1.3s						
BRLK	Bradley Lake	18.26	52		Pn	09 10 26.5	-0.1
BRLK				IAmb	IAmb	09 10 35.5	
	comp=Z,24nm,1.4s						
SUA	Susitna One	18.82	46	P	Pn	09 10 33.9	+0.5
SEW	Seward	19.04	51	P	P	09 10 35.6	+0.4
SEW				IAmb	IAmb	09 10 38.4	
	comp=Z,29nm,1.3s						
KTH	Kantishna Hill	19.52	40	P	Pn	09 10 41.8	-0.1
KTH				IAmb	IAmb	09 10 50.2	
	comp=Z,10nm,0.7s						
PMR	Palmer	19.59	47	P	Pn	09 10 43.3	+0.7
IMAR	Indian Mountai	19.69	32	P	P	09 10 42.0	-0.4
BPAW	Bear Paw Mtn.	19.74	39	P	Pn	09 10 44.2	-0.1
GHO	Glory Hole Cre	19.74	46	P	Pn	09 10 45.5	+1.1
TRF	Thorofare Moun	19.74	41	P	Pn	09 10 44.7	+0.2
TRF				IAmb	IAmb	09 10 47.7	
	comp=Z,9.2nm,1.1s						
KNK	Knik Glacier	19.85	48	P	P	09 10 43.3	-0.8
KNK				IAmb	IAmb	09 10 54.2	
	comp=Z,18nm,1.4s						
SML	Sawmill	20.02	47	P	P	09 10 46.5	+0.6
MLY	Manley	20.26	37	P	P	09 10 49.8	+1.2
RND	Reindeer	20.32	42	P	Pn	09 10 51.3	0.0
SCM	Sheep Creek Mo	20.48	47	P	P	09 10 51.0	-0.1
SCM				IAmb	IAmb	09 10 57.6	
	comp=Z,7.9nm,0.7s						
NEA	Nenana	20.69	39	P	P	09 10 54.1	+0.9
NEA				IAmb	IAmb	09 11 00.9	
	comp=Z,12nm,1.1s						
DHY	Denali Highway	20.83	43	P	P	09 10 56.1	+1.2
DHY				IAmb	IAmb	09 11 06.4	
	comp=Z,5.4nm,0.6s						
ILAR	Eielson Array	21.64	39	P	P	09 11 04.4	+1.1
	comp=Z,0.7nm,0.7s,baz=235,slow=9.3,SNR=6.5						
GLB	Gilahina Butte	22.03	49	P	P	09 11 08.8	+1.1
GLB				IAmb	IAmb	09 11 13.4	
	comp=Z,6.7nm,0.9s						
RIDG	Independent Ri	22.12	43	P	P	09 11 08.9	+0.3
VRDI	Verde Repeater	22.16	50	P	P	09 11 09.8	+0.6
VRDI				IAmb	IAmb	09 11 28.8	
	comp=Z,6.5nm,1.1s						
MCARA	McCarthy VSAT	22.39	49	P	P	09 11 13.5	+2.0
MCARA				IAmb	IAmb	09 11 32.0	
	comp=Z,7.6nm,0.8s						
SCRK	Sand Creek	22.56	42	P	P	09 11 12.3	-1.0
BARN	Barnard Glacie	23.00	50	P	P	09 11 17.1	-1.1
BARN				IAmb	IAmb	09 11 30.8	
	comp=Z,6.7nm,1.4s						
BCAR	Beaver Creek A	23.28	45	P	P	09 11 20.1	-0.8
EGAK	Eagle	23.96	41	P	P	09 11 27.4	+0.1
EGAK				IAmb	IAmb	09 11 36.2	
	comp=Z,3.2nm,0.8s						
DAWY	Dawson	24.54	43	P	P	09 11 33.3	+0.5
DAWY				IAmb	IAmb	09 11 35.2	
	comp=Z,5.4nm,1.5s						
JKA	Kamikawa-asahi	26.02	269	P	P	09 11 47.2	+1.0
ASAJ	Asahikawa	26.02	269	P	P	09 11 47.2	+1.0
	comp=Z,5.9nm,0.7s,baz=104,slow=12,SNR=5.8						
KLR	Kul'dur	30.50	285	P	P	09 12 25.1	-1.2
	comp=Z,1.6nm,0.6s,baz=76,slow=7.3,SNR=9.2						
USRK	Ussuriysk Ar.	32.60	276	P	P	09 12 44.1	-0.7
	comp=Z,1.6nm,0.8s,baz=60,slow=8.5,SNR=3.1						
MJAR	Matsushiro Arr	33.11	260	P	P	09 12 49.3	0.0
	comp=Z,1.2nm,0.8s,baz=60,slow=7.6,SNR=4.3						
H11N2	WAKE ISLAND Hy	33.30	203	T	T	09 48 06.5	
	baz=19,slow=75,SNR=85						
H11N3	WAKE ISLAND Hy	33.31	203	T	T	09 48 12.6	
	baz=19,slow=75,SNR=54						
H11N1	WAKE ISLAND Hy	33.32	203	T	T	09 48 07.9	
	baz=19,slow=75,SNR=62						
H11S1	WAKE ISLAND Hy	34.52	203	T	T	09 49 36.0	
	baz=20,slow=76,SNR=13						
H11S2	WAKE ISLAND Hy	34.54	203	T	T	09 49 39.8	
	baz=20,slow=76,SNR=32						
H11S3	WAKE ISLAND Hy	34.54	203	T	T	09 49 36.0	
	baz=20,slow=76,SNR=15						
YKA	Yellowknife Ar	35.69	46	P	P	09 13 10.2	-1.1
	comp=Z,0.4nm,0.6s,baz=275,slow=7.0,SNR=4.0						
YKA				ScP	ScP	09 19 22.5	-2.6
	comp=Z,0.5nm,0.8s,baz=297,slow=2.8,SNR=7.3						
YKA				LR	LR	09 27 15.2	
	comp=Z,20nm,21.6s,baz=0.0,slow=35						
KSRS	Korea Array	38.95	270	P	P	09 13 39.9	+0.7
	comp=Z,1.5nm,0.7s,baz=310,slow=39,SNR=2.7						
WVOR	Wild Horse Val	41.66	78	P	P	09 14 03.2	+1.4
BEKR	Beckworth	42.09	82	P	P	09 14 06.7	+1.3
PAHR	Pah Rah Range	42.79	81	P	P	09 14 11.8	+0.8
PAHR				IAmb	IAmb	09 14 14.9	
	comp=Z,3.3nm,1.0s						
PNTR	Pine Nut	43.02	82	P	P	09 14 14.5	+1.4
YERR	Yerington	43.31	82	P	P	09 14 16.8	+1.4
YERR				IAmb	IAmb	09 14 25.6	
	comp=Z,3.0nm,0.8s						
WAKR	Walker	43.48	83	P	P	09 14 18.6	+1.8
WAKR				IAmb	IAmb	09 14 19.0	
	comp=Z,2.0nm,0.6s						
MCMT	McKenzie Canyo	43.81	71	P	P	09 14 19.6	+0.1
RYN	Ryan	43.97	82	P	P	09 14 21.8	+1.2
RYN				IAmb	IAmb	09 14 25.1	
	comp=Z,3.5nm,0.9s						
KVN	Kaiserville	43.98	81	P	P	09 14 21.7	+1.0
NVAR	Mina Array Bea	44.23	82	P	P	09 14 24.1	+1.4
	comp=Z,1.8nm,0.8s,baz=297,slow=7.1,SNR=10						
NVAR	Mina Array Bea	44.23	82	P	P	09 14 23.9	+1.1
NV11	Mina Array Sit	44.32	82	P	P	09 14 24.3	+0.9
NV11				IAmb	IAmb	09 14 42.6	
	comp=Z,3.4nm,1.4s						
ELK	Elko	44.72	77	IAmb	IAmb	09 14 30.9	
	comp=Z,3.5nm,1.1s						
YHL	Hebgen Lake	44.79	70	P	P	09 14 31.3	+4.1
YHH	Holmes Hill	45.02	70	P	P	09 14 29.5	+0.4
R11A	Troy Canyon, C	45.96	80	IAmb	IAmb	09 14 40.6	
	comp=Z,2.5nm,1.0s						
SONM	Songino Array	46.00	296	P	P	09 14 35.8	-0.9
	comp=Z,0.9nm,0.5s,baz=66,slow=7.0,SNR=9.6						
SONM	Songino Array	46.00	296	P	P	09 14 36.0	-0.7
PDAR	Pinedale Array	46.95	72	P	P	09 14 44.1	-0.1
	comp=Z,3.7nm,0.6s,baz=320,slow=3.6,SNR=17						
PDAR	Pinedale Array	46.95	72	P	P	09 14 43.9	-0.3
U15A	North Rim	49.20	80	IAmb	IAmb	09 15 08.3	
	comp=Z,3.3nm,0.7s						
PV14	Lion Creek, Pa	49.96	76	IAmb	IAmb	09 15 15.0	
	comp=Z,4.0nm,0.7s						
PV22	Blue Mesa, Par	50.00	76	IAmb	IAmb	09 15 14.4	
	comp=Z,7.1nm,1.1s						
PV16	Nyswonger Mesa	50.07	76	IAmb	IAmb	09 15 11.6	
	comp=Z,4.3nm,0.7s						
PV18	Skein Mesa, Pa	50.11	76	P	P	09 15 09.1	+0.5
PV02	Paradox Valley	50.24	76	P	P	09 15 10.1	+0.5
S22A	4UR Ranch, Cre	51.69	75	P	P	09 15 21.9	+1.2
S22A				IAmb	IAmb	09 15 31.6	
	comp=Z,1.9nm,1.0s						
ZALV	Zalesovo Beam	53.49	313	P	P	09 15 33.1	-0.2
	comp=Z,0.5nm,0.3s,baz=2.3,slow=15,SNR=1.5						
MNTX	Cornudas Mount	56.62	80	IAmb	IAmb	09 16 02.3	
	comp=Z,2.4nm,0.9s						
ARCES	ARCESS Array B	57.92	350	P	P	09 16 03.1	-1.9
	comp=Z,2.7nm,0.8s,baz=45,slow=19,SNR=2.0						
TX31	Lajitas Ar. Si	59.33	80	IAmb	IAmb	09 16 18.7	
	comp=Z,2.7nm,1.1s						
TX32	Lajitas Array	59.33	80	IAmb	IAmb	09 16 18.7	
	comp=Z,3.0nm,1.2s						
TXAR	Lajitas Array	59.33	80	P	P	09 16 15.6	+0.1
	comp=Z,1.0nm,0.5s,baz=298,slow=5.5,SNR=12						
TXAR	Lajitas Array	59.33	80	P	P	09 16 15.7	+0.2
MK31	Makanchi Array	59.46	308	P	P	09 16 14.7	-1.4
MKAR	Makanchi Array	59.46	308	P	P	09 16 14.6	-1.4
	comp=Z,0.6nm,0.5s,baz=50,slow=5.8,SNR=10						
WRA	Warramunga Arr	81.58	223	P	P	09 18 30.7	-0.4
	comp=Z,1.5nm,0.7s,baz=31,slow=6.0,SNR=9.6						
FITZ	Fitzroy Crossi	83.95	231	P	P	09 18 44.0	+0.5
	comp=Z,1.5nm,0.5s,baz=33,slow=6.7,SNR=7.9						
FITZ	Fitzroy Crossi	83.95	231	IAmb	IAmb	09 18 47.2	
	comp=Z,14nm,1.5s						
ASAR	Alice Springs	85.06	222	P	P	09 18 49.5	+0.5
	comp=Z,1.1nm,0.7s,baz=23,slow=5.7,SNR=14						
STKA	Stephens Creek	89.60	212	P	P	09 19 11.1	+0.4
	comp=Z,1.1nm,0.6s,baz=325,slow=6.5,SNR=3.9						
TORD	Torodi Ar. Bea	115.68	358	PKP	PKiKP	09 24 55.0	-0.9
	comp=Z,0.3nm,0.7s,baz=338,slow=1.6,SNR=1.8						
MAW	Mawson	146.10	218	PKPbc	PKPdf	09 25 52.2	+1.2
	comp=Z,2.7nm,0.9s,baz=248,slow=21,SNR=1.4						
BOSA	Boshof	150.42	311	PKPbc	PKPbc	09 26 03.5	-1.3
	comp=Z,1.9nm,0.7s,baz=34,slow=5.9,SNR=3.6						

*IDC **20** 09:15:20.6±0.8,4°.89S×153°.85E,h95^{km}±5^{km},mb3.9/17, mb1 4.1/17,mb1mx3.9/43,mbtmp4.2/17,MS3.0/6, Ms1 3.0/6,ms1mx2.8/27,Error ellipse: s-maj=12.4km s-min=11.5km az=171.0*

*NEIC **20** 09:15:24.0±1.6,4°.85S±0°.06×153°.69E±0°.10,h119^{km}±7^{km}, mb4.5/18,Error ellipse: s-maj=15.3km s-min=7.3km az=64.0*

*DJA **20** 09:15:23.2±1.4,5°S±10°×15°4E±1°3,h111^{km}±7^{km}, M5.1/13,mb4.6/13,mB4.9/2,MLv5.4/2,Mw(mB)4.2/2*

ISC 20 09:15:21.8±0.6,**4°.87S**±0°.07×**153°.83E**±0°.09,**h100**^{km},**n49**, σ**1^{s}.10**/52,**mb4.3**/24,**1D,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.79	292	Pn	Pn	09 15 53.9	+2.2
RABL				Sn	Sn	09 16 14.9	+0.5
KRVT	Keravat (AS076	1.88	287	P	Pn	09 15 52.9	+0.1
	167nm,0.3s,baz=255,slow=0.5,SNR=26						
KRVT				S	Sn	09 16 15.6	-0.9
	515nm,0.3s,baz=5.5,slow=1.3,SNR=6.5						
KRVT				LR	LR	09 16 47.9	
	comp=Z,728nm,18.7s,baz=85,slow=46						
PMG	Port Moresby	8.00	235	P	Pn	09 17 17.1	+1.7
	16nm,0.3s,baz=69,slow=4.1,SNR=41						
PMG				S	Sn	09 18 43.9	-0.4
	5.1nm,0.3s,baz=350,slow=21,SNR=2.0						
PMG				LR	LR	09 20 34.6	
	comp=Z,128nm,18.0s,baz=22,slow=39						
PMG	Port Moresby	8.00	235		Pn	09 17 17.6	+2.2
COEN	Coen	13.85	229	Pn	Pn	09 18 35.6	+1.8
GUMO	Guam	20.38	334	LR	LR	09 28 43.8	
	comp=Z,15nm,18.4s,baz=94,slow=39						
EIDS	Eidsvold	20.55	187	P	P	09 19 53.0	+0.5
SIJI	Sorong	22.88	279	P	P	09 20 16.0	-1.1
	5.0nm,0.4s,baz=43,slow=6.1,SNR=6.0						
MTN	Manton Dam	23.76	249	P	P	09 20 24.7	-0.6
MTN				IAmb	IAmb	09 20 29.6	
	comp=Z,13nm,0.8s						
WR0	Warramunga Arr	24.03	230	P	P	09 20 27.6	-0.1
WR0				IAmb	IAmb	09 20 29.9	
	comp=Z,13nm,0.8s						
WB0	Warramunga Arr	24.03	230	P	P	09 20 27.9	+0.2
WB0				IAmb	IAmb	09 20 29.2	
	comp=Z,13nm,0.7s						
WRAB	Tennant Creek	24.16	230	P	P	09 20 29.1	+0.2
WRAB				IAmb	IAmb	09 20 30.5	
	comp=Z,15nm,0.7s						
WB2	Warramunga Arr	24.16	230	P	P	09 20 29.5	+0.6
WRA	Warramunga Arr	24.17	230	P	P	09 20 28.4	-0.5
	comp=Z,12nm,0.7s,baz=54,slow=9.8,SNR=74						
WRA				LR	LR	09 29 23.5	
	comp=Z,44nm,19.4s,baz=70,slow=35						
WRA	Warramunga Arr	24.17	230	P	P	09 20 28.6	-0.4
AS31	Alice Springs	26.80	224	P	P	09 20 52.3	-0.4
ASAR	Alice Springs	26.80	224	P	P	09 20 52.1	-0.6
	comp=Z,3.1nm,0.6s,baz=54,slow=8.8,SNR=46						
ASAR				pP	pP	09 21 13.5	-0.2
	comp=Z,1.4nm,0.6s,baz=57,slow=11,SNR=4.1						
ASAR				LR	LR	09 31 56.9	
	comp=Z,45nm,18.7s,baz=70,slow=37						
ASAR	Alice Springs	26.80	224	P	P	09 20 51.8	-0.9
KNRA	Kununurra	26.86	245	P	P	09 20 52.2	-1.1
KNRA				IAmb	IAmb	09 20 54.0	
	comp=Z,22nm,1.2s						
STKA	Stephens Creek	29.21	202	P	P	09 21 13.2	-0.9
	comp=Z,4.2nm,0.6s,baz=11,slow=10.0,SNR=9.0						
STKA				LR	LR	09 34 15.8	
	comp=Z,35nm,18.2s,baz=26,slow=39						
STKA	Stephens Creek	29.21	202	P	P	09 21 13.6	-0.5
FITZ	Fitzroy Crossi	30.52	242	P	P	09 21 25.2	-0.6
	comp=Z,7.1nm,0.6s,baz=66,slow=7.9,SNR=25						
FITZ				pP	pP	09 21 48.5	+0.8
	comp=Z,7.8nm,0.9s,baz=73,slow=7.1,SNR=3.9						
FITZ	Fitzroy Crossi	30.52	242	P	P	09 21 25.4	-0.5
FITZ				IAmb	IAmb	09 21 26.1	
	comp=Z,9.7nm,0.8s						
BBOO	Buckleboo	32.37	209	P	P	09 21 40.1	-1.8
BBOO				IAmb	IAmb	09 21 41.9	
	comp=Z,9.5nm,0.9s						
TOO	Toolangi	33.43	192	P	P	09 21 51.9	+0.8
TOO				IAmb	IAmb	09 22 03.7	
	comp=Z,5.2nm,1.0s						
FORT	Forrest	35.39	220	P	P	09 22 07.2	-0.9
TAU	Tasmania Unive	38.32	188	P	P	09 22 31.9	-0.8
MORW	Morawa	43.10	232	P	P	09 23 11.4	-0.9
KSRS	Korea Array	48.53	332	LR	LR	09 43 09.0	
	comp=Z,8.3nm,18.4s,baz=60,slow=34						
USRK	Ussuriysk Ar.	52.65	340	P	P	09 24 25.7	0.0
	comp=Z,1.2nm,0.7s,baz=192,slow=6.9,SNR=5.9						
USRK	Ussuriysk Ar.	52.65	340	P	P	09 24 25.6	-0.1
KLR	Kul'dur	57.21	343	P	P	09 24 57.5	-0.9
	comp=Z,0.4nm,0.4s,baz=205,slow=4.8,SNR=3.8						
PETK	Petropavlovsk-	57.85	3	P	P	09 25 03.3	+0.4
	comp=Z,2.8nm,0.8s,baz=158,slow=7.5,SNR=4.4						
CMAR	Chiang Mai Arr	58.83	295	P	P	09 25 11.0	+0.6
	comp=Z,0.8nm,0.3s,baz=115,slow=5.3,SNR=6.1						
MA2	Magadan	64.29	358	P	P	09 25 46.1	-0.2
	comp=Z,2.7nm,0.6s,baz=142,slow=7.9,SNR=7.9						
SONM	Songino Array	66.93	327	P	P	09 26 03.8	+0.1
	comp=Z,0.8nm,0.5s,baz=143,slow=6.4,SNR=5.6						
SONM	Songino Array	66.93	327	P	P	09 26 03.3	-0.4
SEY	Seymchan	67.62	359	P	P	09 26 08.4	+0.8
	comp=Z,0.2nm,0.3s,baz=186,slow=7.5,SNR=4.3						
IMAR	Indian Mountai	80.11	19	P	P	09 27 20.3	-0.1
MKAR	Makanchi Array	81.05	319	P	P	09 27 25.3	-0.5
	comp=Z,0.9nm,0.6s,baz=102,slow=5.1,SNR=7.1						
MKAR				pP	pP	09 27 49.4	-1.0
	comp=Z,1.4nm,1.0s,baz=90,slow=7.3,SNR=3.0						
MKAR	Makanchi Array	81.05	319	P	P	09 27 25.6	-0.3
ZALV	Zalesovo Beam	81.78	326	P	P	09 27 28.4	-1.1
	comp=Z,0.8nm,0.4s,baz=94,slow=6.5,SNR=3.7						
ILAR	Eielson Array	81.84	22	P	P	09 27 27.1	-2.5
	comp=Z,0.7nm,0.6s,baz=257,slow=5.4,SNR=5.4						
ILAR				pP	pP	09 27 52.5	-2.1
	comp=Z,1.1nm,0.9s,baz=254,slow=6.0,SNR=4.0						
AAK	Ala-Archa	85.46	313		pP	09 28 18.9	+5.4
MAW	Mawson	85.90	203	P	P	09 27 49.3	-0.9
	comp=Z,5.9nm,0.7s,baz=92,slow=7.7,SNR=8.3						
SYO	Syowa Base	93.94	199	⇓*i*P	P	09 28 28.6	+0.7
YKA	Yellowknife Ar	95.01	28	P	P	09 28 33.1	+0.2
	comp=Z,0.3nm,0.9s,baz=263,slow=4.3,SNR=3.2						
TORD	Torodi Ar. Bea	151.30	289	PKPbc	PKPdf	09 35 03.2	+4.5
	comp=Z,1.8nm,0.7s,baz=59,slow=2.5,SNR=12						
TORD				pPKPbc	pPKPbc	09 35 31.2	+0.5
	comp=Z,1.3nm,0.8s,baz=48,slow=2.1,SNR=3.0						
DBIC	Dimbokro	158.72	276	PKPab	PKPab	09 35 43.7	-1.2
	comp=Z,1.6nm,0.7s,baz=89,slow=3.6,SNR=3.6						

*NIED **20** 09:18:00,38°.50N×142°.00E,h53^{km},Mw3.9 Best double couple: M$_0$8.36000×10^{14} NP1:φ$_s$186.00000°,δ71.00000°, λ79.00000°. NP2:φ$_s$36.00000°,δ22.00000°,λ119.00000°.*

*IDC **20** 09:18:24.2±1.9,38°.53N×142°.15E,h52^{km}±18^{km},mb3.6/14, mb1 3.8/19,mb1mx3.7/46,mbtmp3.9/19,ML3.7/4,MS2.8/4, Ms1 2.9/4,ms1mx2.6/33,Error ellipse: s-maj=18.9km s-min=9.6km az=112.0*

*JMA **20** 09:18:24.2,38°.51N×142°.02E,h50^{km}±1^{km},M4.0*

JMA Felt II J1.

*NEIC **20** 09:18:25.1±1.5,38°.56N±0°.07×142°.11E±0°.09,h60^{km}±8^{km}, mb4.2/5,Error ellipse: s-maj=12.4km s-min=5.5km az=134.0*

ISC 20 09:18:23.6±1.4,**38°.52N**±0°.04×**142°.12E**±0°.09,**h44**^{km}±11^{km}, **n59**,σ**1^{s}.50**/67,**mb4.0**/16,**5C-3D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.55	248	⇑P	Pn	09 18 35.2	0.0
JIKH				S	Sn	09 18 43.0	-0.4
JKMT	Kesennumamotoy	0.58	300	⇑P	Pn	09 18 35.7	+0.2
JKMT				S	Sn	09 18 43.8	-0.2
JIO	Ouri	0.61	264	⇑P	Pn	09 18 35.8	0.0
JIO				S	Sn	09 18 43.8	-0.8
OFUJ	Ofunato	0.66	328	⇑P	Pn	09 18 37.0	+0.5
OFUJ				S	Sn	09 18 46.2	+0.4
JMK	Ichinoseki	0.82	302	⇑P	Pn	09 18 38.9	+0.2
JMK				S	Sn	09 18 49.6	-0.1
JOM	Ohasama	1.15	326	P	Pn	09 18 43.9	+0.8
JOM				S	Sn	09 18 58.5	+0.8
JOU	Okura	1.15	263	⇓P	Pn	09 18 43.1	-0.1
JOU				S	Sn	09 18 56.9	-0.9
JMM	Marumori	1.23	238	⇓P	Pn	09 18 43.8	-0.5
JMM				S	Sn	09 18 58.2	-1.6
JYK	Kaneyama	1.43	286	⇓P	Pn	09 18 47.2	+0.2
JYK				S	Sn	09 19 04.4	-0.2
JRG	Rokugo	1.45	307	P	Pn	09 18 47.7	+0.4
JRG				S	Sn	09 19 05.9	+0.8
JFK	Kawauchi	1.52	221	P	Pn	09 18 48.1	-0.2
JFK				S	Sn	09 19 05.4	-1.4
JYS	Shirataka	1.64	260	S	Sn	09 19 09.6	-0.2
ERM	Erimo	3.58	13	Pn	Pn	09 19 17.1	+0.6
MJAR	Matsushiro Arr	3.68	239	P	Pn	09 19 19.6	+1.6
	2.3nm,0.3s,baz=38,slow=14,SNR=111						
MJAR				S	Sn	09 20 03.7	+3.5
	0.4nm,0.3s,baz=93,slow=13,SNR=1.5						
MJAR				LR	LR	09 21 09.2	
	comp=Z,96nm,19.6s,baz=60,slow=45						
MJAR	Matsushiro Arr	3.68	239		Pn	09 19 20.0	+2.0
MAJO	Matsushiro	3.68	239		Pn	09 19 19.8	+1.8
MAT	Matsushiro	3.68	239	P	Pn	09 19 19.7	+1.7
MAT				S	Sn	09 20 05.0	+4.8
MJB9	Matsu-Tunnel	3.68	239		Pn	09 19 19.8	+1.8
INU	Inuyama	5.17	234		Pn	09 19 39.8	+1.5
ASAJ	Asahikawa	5.60	4	P	Pn	09 19 45.3	+1.0
	2.4nm,0.3s,baz=218,slow=10,SNR=10						
ASAJ				S	Sn	09 20 45.3	-1.9
	0.8nm,0.3s,baz=335,slow=18,SNR=1.5						
JKA	Kamikawa-asahi	5.60	4		Pn	09 19 45.3	+1.0
JKA					Sn	09 20 45.3	-1.9
JHJ	Hachijo jima 2	5.72	200	P	Pn	09 19 48.0	+2.1
	26nm,0.3s,baz=78,slow=22,SNR=1.5						
JHJ				S	Sn	09 20 48.4	-1.8
	22nm,0.3s,baz=66,slow=22,SNR=1.3						
USA0B	Ussuriysk Arra	9.49	310		Pn	09 20 38.5	+1.0
USRK	Ussuriysk Ar.	9.49	310	P	Pn	09 20 38.6	+1.1
	baz=112,slow=14,SNR=18						
JNU	Nakatsue	10.59	243	LR	LR	09 25 11.0	
	comp=Z,99nm,18.6s,baz=132,slow=38						
KSRS	Korea Array	11.25	269	P	Pn	09 21 04.0	+2.3
	0.3nm,0.3s,baz=75,slow=15,SNR=2.9						
KSRS				LR	LR	09 24 49.1	
	comp=Z,51nm,19.6s,baz=179,slow=34						
MA2	Magadan	21.78	12	P	P	09 23 11.7	+0.3
	2.6nm,0.6s,baz=205,slow=9.5,SNR=6.2						
WHN	Wuhan	24.16	259	P	P	09 23 31.8	-3.7
SEY	Seymchan	25.22	11	P	P	09 23 45.8	+0.8
	1.4nm,0.8s,baz=195,slow=5.9,SNR=7.9						
XAN	Xi'an	27.04	271	P	P	09 24 06.6	+4.8
XAN				pP	sP	09 24 17.8	-0.9
SONM	Songino Array	27.45	301	P	P	09 24 05.3	0.0
	0.4nm,0.5s,baz=112,slow=10,SNR=3.2						
H11N2	WAKE ISLAND Hy	28.48	124	T	T	09 54 30.5	
	baz=317,slow=75,SNR=105						
H11N1	WAKE ISLAND Hy	28.48	124	T	T	09 54 35.0	
	baz=317,slow=75,SNR=31						
H11N3	WAKE ISLAND Hy	28.49	124	T	T	09 54 48.4	
	baz=317,slow=75,SNR=74						
H11S1	WAKE ISLAND Hy	29.24	126	T	T	09 55 29.7	
	baz=318,slow=76,SNR=29						
H11S3	WAKE ISLAND Hy	29.24	126	T	T	09 55 29.9	
	baz=318,slow=76,SNR=41						
H11S2	WAKE ISLAND Hy	29.26	126	T	T	09 55 36.2	
	baz=318,slow=76,SNR=59						
ZALV	Zalesovo Beam	41.34	311	P	P	09 26 03.9	-0.9
	1.2nm,0.4s,baz=98,slow=8.3,SNR=5.2						
CMAR	Chiang Mai Arr	42.42	254	P	P	09 26 15.2	+1.2
	1.5nm,0.3s,baz=36,slow=12,SNR=4.4						
CMAR				LR	LR	09 45 45.2	
	comp=Z,9.6nm,18.6s,baz=185,slow=39						
MKAR	Makanchi Array	43.82	301	P	P	09 26 23.9	-1.2
	0.8nm,0.5s,baz=84,slow=9.1,SNR=9.6						
MKAR	Makanchi Array	43.82	301	P	P	09 26 23.4	-1.6
IMAR	Indian Mountai	45.09	31	P	P	09 26 35.9	+1.0
ILAR	Eielson Array	47.94	33	P	P	09 26 57.2	-0.1
	0.6nm,0.6s,baz=265,slow=6.4,SNR=12						
ILAR	Eielson Array	47.94	33	P	P	09 26 57.0	-0.3
SCRK	Sand Creek	49.26	34	P	P	09 27 08.2	+0.6
SCRK				IAmb	IAmb	09 27 23.7	
	comp=Z,4.3nm,1.5s						
AAK	Ala-Archa	50.28	297	P	P	09 27 15.7	0.0
AAK				IAmb	IAmb	09 27 30.3	
	comp=Z,2.3nm,1.3s						
ABKAR	Akbulak array	57.41	310	P	P	09 28 06.2	-1.2
WB0	Warramunga Arr	58.43	189	P	P	09 28 14.0	-0.8
WRA	Warramunga Arr	58.61	189	P	P	09 28 15.0	-1.1
	comp=Z,0.7nm,0.6s,baz=5.5,slow=7.1,SNR=9.4						
YKA	Yellowknife Ar	62.24	31	P	P	09 28 40.3	-0.1
	comp=Z,0.4nm,0.6s,baz=300,slow=5.8,SNR=7.5						
ASAR	Alice Springs	62.34	189	P	P	09 28 40.0	-1.5
	comp=Z,0.3nm,0.7s,baz=4.5,slow=4.4,SNR=4.2						
FINES	FINESS Array B	67.76	332	P	P	09 29 14.9	-1.3
	comp=Z,1.3nm,0.9s,baz=27,slow=6.5,SNR=1.5						
PDAR	Pinedale Array	76.23	46	P	P	09 30 08.2	+0.5
	comp=Z,1.0nm,0.6s,baz=267,slow=1.1,SNR=11						
PDAR	Pinedale Array	76.23	46	P	P	09 30 07.3	-0.3
SCHQ	Schefferville	83.75	16	P	P	09 30 47.5	-0.2
	comp=Z,1.3nm,0.8s,baz=270,slow=6.1,SNR=2.1						
SCHQ	Schefferville	83.75	16	IAmb	IAmb	09 30 48.2	
	comp=Z,2.3nm,0.9s						
TXAR	Lajitas Array	88.77	53	P	P	09 31 13.5	+0.5
	comp=Z,0.5nm,0.6s,baz=295,slow=3.1,SNR=8.6						
TXAR	Lajitas Array	88.77	53	P	P	09 31 13.1	+0.2
LPAZ	La Paz	145.45	59	PKPbc	PKPdf	09 37 57.6	-0.3
	comp=Z,1.0nm,0.5s,baz=30,slow=2.9,SNR=5.6						

*NNC **20** 09:26:43.3±0.2,42°.99N×70°.13E,h0^{km},mb3.5,mpv3.0, Error ellipse: s-maj=2.9km s-min=0.8km az=144.0*

*SOME **20** 09:26:43.2,42°.98N×70°.15E*

*KRNET **20** 09:26:45.0±0.1,42°.89N×69°.67E,mb2.6*

ISC 20 09:26:45.4±1.0,**42°.95N**±0°.03×**70°.24E**±0°.03,**h0**^{km},**n28**, σ**1^{s}.35**/48,**24C-10D,Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK07	Karatay Array	0.24	53	⇑P	Pg	09 26 49.0	-0.9
KK07				⇓S	Sg	09 26 53.1	0.0
KK08	Karatay Array	0.24	49	⇑P	Pg	09 26 48.9	-1.1
KK08				⇓S	Sg	09 26 52.8	-0.3
KK03	Karatay Array	0.24	51	⇑P	Pg	09 26 49.4	-0.8
KK03				⇓S	Sg	09 26 53.3	0.0
KK01	Karatay Array	0.25	51	⇓P	Pg	09 26 49.4	-0.8
KK01				⇑S	Sg	09 26 53.4	-0.1
KK02	Karatay Array	0.25	52	⇓P	Pg	09 26 49.5	-0.8
KK02				⇑S	Sg	09 26 53.4	-0.2
KK04	Karatay Array	0.25	50	⇑P	Pg	09 26 49.3	-1.0
KK04				⇑S	Sg	09 26 53.4	-0.2
KK31	Karatay Array	0.25	52	⇑P	Pg	09 26 49.2	-1.0
	1.2nm,0.2s,baz=248,slow=18,SNR=193						
KK31				⇑S	Sg	09 26 53.5	0.0
	3.4nm,0.2s						
KK06	Karatay Array	0.25	55	⇓P	Pg	09 26 49.5	-0.8
KK06				⇓S	Sg	09 26 53.7	0.0
KK09	Karatay Array	0.26	47	⇓P	Pg	09 26 49.2	-1.2
KK09				⇑S	Sg	09 26 53.4	-0.3
KK05	Karatay Array	0.27	51	⇑P	Pg	09 26 49.4	-1.1
KK05				⇑S	Sg	09 26 53.7	-0.3
BRLS	Borolday	0.31	285	⇑*e*P	Pg	09 26 50.8	-0.5
	baz=40						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BRLS	baz=40			⇑*e*S	**Sg**	**09 26 56.2**	**+0.9**
BRLS	**Borolday** 9.7nm,0.2s	**0.31**	**285**	P	**Pg**	**09 26 50.8**	**-0.5**
BRLS	5.1nm,0.3s			S	**Sg**	**09 26 56.2**	**+0.9**
IUG	**Iuzhnay** baz=60	**0.82**	**191**	*e*P	**Pg**	**09 26 59.7**	**-1.4**
IUG	baz=60			*e*S	**Sg**	**09 27 11.4**	**-0.2**
IUG	**Iuzhnay** 1.8nm,0.1s	**0.82**	**191**	P	**Pg**	**09 26 59.7**	**-1.4**
IUG	41nm,0.4s			S	**Sg**	**09 27 11.4**	**-0.2**
ARK	**Arkit** baz=22	**1.72**	**131**	⇑*i*P	**Pg**	**09 27 19.8**	**+1.5**
ARK	baz=22			⇑*i*S	**Sg**	**09 27 44.7**	**+4.1**
MRKS	**Merke** 2.3nm,0.2s	**2.20**	**94**	Pg	**Pb**	**09 27 26.0**	**-0.2**
MRKS	9.7nm,0.4s			Lg	Lg	09 27 56.3	
ARSB	**Arslanbob** baz=21	**2.60**	**128**	⇑*i*P	**Pb**	**09 27 32.0**	**-1.1**
ARSB	baz=21			⇑*i*S	**Sb**	**09 28 05.6**	**-0.1**
EKS2	**Erkin-Say** baz=93	**2.62**	**95**	⇑*i*P	**Pb**	**09 27 33.5**	**+0.2**
EKS2	baz=93			⇑*i*S	**Sg**	**09 28 08.4**	**-1.1**
USP	**Ospenovka** baz=82	**3.13**	**83**	⇑*i*P	**Pb**	**09 27 40.8**	**-1.2**
USP	baz=82			⇑*i*S	**Sb**	**09 28 20.6**	**-0.2**
ARLS	**Aral** baz=5.0	**3.21**	**108**	⇑*e*P	**Pb**	**09 27 41.3**	**-2.1**
ARLS	baz=5.0			⇑*i*S	**Sb**	**09 28 22.6**	**-0.6**
UCH	**Uchtor** baz=99	**3.24**	**101**	⇓*i*P	**Pb**	**09 27 41.8**	**-2.2**
UCH	baz=99			⇓*e*S	**Sb**	**09 28 23.4**	**-0.7**
SGDS	**Sogindy** 3.2nm,0.4s	**3.25**	**80**	Pg	**Pb**	**09 27 44.3**	**+0.3**
SGDS	4.1nm,0.1s			Lg	Lg	09 28 27.0	
KRBS	**Karabastau** 0.8nm,0.2s	**4.04**	**77**	Pg	**Pb**	**09 27 59.3**	**+1.9**
KRBS	1.6nm,0.3s			Lg	Lg	09 28 53.3	
DGS	**Degeres** 3.3nm,0.8s	**4.06**	**84**	Pg	**Pb**	**09 27 59.7**	**+1.9**
DGS	4.6nm,0.4s			Lg	Lg	09 28 53.6	
KST	**Kastek** 7.6nm,1.0s	**4.20**	**87**	Pg	**Pb**	**09 28 02.3**	**+2.1**
KST	6.7nm,0.6s			Lg	Lg	09 28 58.2	
KTBS	**Karatobe** 1.3nm,0.6s	**4.76**	**79**	Pg	**Pb**	**09 28 12.2**	**+2.5**
KTBS	4.9nm,0.5s			Lg	Lg	09 29 15.0	
TNSS	**Tian-Shan**	**4.92**	**87**	Pg	**Pb**	**09 28 15.2**	**+2.5**
TNSS	2.5nm,0.3s			Lg	Lg	09 29 20.6	
CHKK	**Chushkaly** 1.1nm,0.1s	**5.00**	**77**	Pg	**Pb**	**09 28 16.7**	**+2.9**
CHKK	7.8nm,0.2s			Lg	Lg	09 29 23.2	

*ISK **20** 09:33:22.9, 35.°83N×32.°88E, h24^{km}, ML3.1/31*
*DDA **20** 09:33:23.2, 35.°82N×32.°89E, h7^{km}±5^{km}, MW3.2*
*NIC **20** 09:33:25.5±0.0, 35.°70N×32.°88E, h27^{km}, Ml3.0/4*
*GII **20** 09:33:28.1±0.0, 35.°68N×33.°04E, h20^{km}, Mm2.7/3*
ISC 20 09:33:24.1±1.0**, 35.°83N**±0.°02×**32.°88E**±0.°02**, h22**^{km}±5^{km}**,**
n54, σ0.^{s}89/81**, 3C-1D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEKE	**Tekeli-Mersin**	**0.37**	**31**	PG	**Pb**	**09 33 32.4**	**+0.4**
TEKE				SG	**Sb**	**09 33 38.0**	**+0.7**
YORU	**Yoruktepe-Mers**	**0.54**	**53**	PG	**Pb**	**09 33 34.6**	**-0.4**
YORU				SG	**Sb**	**09 33 42.3**	**0.0**
BERE	**Bereket-Mersin**	**0.59**	**28**	PG	**Pb**	**09 33 35.2**	**-0.7**
BERE				SG	**Sb**	**09 33 43.5**	**-0.5**
OREN	**Orenkoy-Mersin**	**0.60**	**51**	PG	**Pb**	**09 33 35.6**	**-0.5**
GAZI	**Gazipasa**	**0.61**	**312**	PG	**Pb**	**09 33 36.1**	**-0.1**
GAZI				SG	**Sb**	**09 33 44.1**	**-0.3**
GAZI	**Gazipasa**	**0.61**	**312**	*i* P	**Pb**	**09 33 36.2**	**0.0**
GAZI	comp=N,868nm,0.4s			IAML		09 33 44.0	
GAZI				*i* S	**Sb**	**09 33 44.3**	**-0.2**
AKK1	**Akkuyu-Mersin**	**0.62**	**59**	PG	**Pb**	**09 33 35.9**	**-0.5**
AKK1				SG	**Sb**	**09 33 44.7**	**0.0**
AKK2	**Akkuyu-Mersin**	**0.62**	**60**	PG	**Pb**	**09 33 36.1**	**-0.3**
AKK2				SG	**Sb**	**09 33 45.2**	**+0.4**
AKKU	**Akkuyu-Mersin**	**0.64**	**59**	PG	**Pb**	**09 33 36.1**	**-0.5**
AKKU				SG	**Sb**	**09 33 45.5**	**+0.3**
GULN	**MERSIN_Gulnar**	**0.65**	**56**	*i* P	**Pb**	**09 33 36.5**	**-0.3**
GULN	comp=N,289nm,0.2s			IAML		09 33 45.0	
GULN				*i* S	**Sb**	**09 33 45.0**	**-0.4**
TEPK	**Tepekoy-MERSIN**	**0.67**	**54**	PG	**Pb**	**09 33 36.9**	**-0.3**
LEF	**Lefka**	**0.71**	**179**	PG	**Pb**	**09 33 37.8**	**0.0**
LEF				SG	**Sb**	**09 33 47.9**	**+0.8**
LEF	**Lefka**	**0.71**	**179**	*i* P	**Pb**	**09 33 38.0**	**+0.2**
LEF				*i* S	**Sb**	**09 33 47.5**	**+0.4**
ALFC	**Alefka**	**0.71**	**199**	⇑P	**Pb**	**09 33 37.6**	**-0.2**
ALFC	comp=N,3.6nm,0.2s			AML	AML	09 33 46.5	
ALFC	comp=N,3.6nm,0.2s			AML	AML	09 33 46.5	
ALFC	comp=N,4.0nm,0.2s			AML	AML	09 33 46.6	
ALFC	comp=N,4.0nm,0.2s			AML	AML	09 33 46.6	
ALFC				S	**Sb**	**09 33 46.6**	**-0.5**
YESI	**Yesilovacik-Me**	**0.72**	**59**	PG	**Pb**	**09 33 37.9**	**-0.1**
TISA	**Tisan-Mersin**	**0.73**	**63**	PG	**Pb**	**09 33 37.7**	**-0.5**
TEVE	**Tevekalti-Mers**	**0.76**	**37**	PG	**Pb**	**09 33 38.2**	**-0.5**
KARG	**Kargicak-Mersi**	**0.77**	**61**	PG	**Pb**	**09 33 38.9**	**0.0**
IKL	**Isikli**	**0.77**	**58**	PG	**Pb**	**09 33 38.4**	**-0.5**
ATHAL	**Athalassa**	**0.81**	**148**	P	**Pb**	**09 33 39.8**	**+0.3**
ATHAL				S	**Sb**	**09 33 50.1**	**+0.2**
ATHAL	comp=N,2.2nm,0.3s			AML	AML	09 33 51.1	
ATHAL	comp=N,2.2nm,0.3s			AML	AML	09 33 51.1	
ATHAL	comp=N,2.8nm,0.3s			AML	AML	09 33 54.3	
ATHAL	comp=N,2.8nm,0.3s			AML	AML	09 33 54.3	
ERMK	**Ermenek**	**0.81**	**2**	*i* P	**Pb**	**09 33 39.2**	**-0.5**
ERMK				*i* S	**Sb**	**09 33 49.9**	**-0.5**
ERMK	comp=N,114nm,0.5s			IAML		09 33 52.0	
KEBE	**Keben-Mersin**	**0.92**	**47**	PG	**Pb**	**09 33 40.8**	**-0.6**
AKMS	**Akamas**	**0.92**	**209**	P	**Pb**	**09 33 40.9**	**-0.6**
AKMS				S	**Sb**	**09 33 52.7**	**-0.6**
AKMS	comp=N,0.6nm,0.3s			AML	AML	09 33 59.6	
AKMS	comp=N,0.6nm,0.3s			AML	AML	09 33 59.6	
AKMS	comp=N,0.9nm,0.4s			AML	AML	09 33 59.9	
AKMS	comp=N,0.9nm,0.4s			AML	AML	09 33 59.9	
CSS	**Mathiatis**	**0.94**	**157**	PG	**Pb**	**09 33 40.7**	**-1.0**
CSS	**Mathiatis**	**0.94**	**157**	Pg	**Pb**	**09 33 40.8**	**-1.0**
CSS				Sg	**Sb**	**09 33 52.5**	**-1.3**
CSS	**Mathiatis**	**0.94**	**157**	⇓P	**Pb**	**09 33 40.8**	**-1.0**
CSS				S	**Sb**	**09 33 52.9**	**-0.9**
AKIN	**Akıncılar- Kıb**	**0.94**	**149**	PG	**Pb**	**09 33 40.2**	**-1.6**
SILI	**Silifke-Mersin**	**1.00**	**57**	PG	**Pn**	**09 33 42.0**	**-0.9**
MVOU	**Mavrovouni**	**1.02**	**143**	⇑P	**Pn**	**09 33 41.8**	**-1.3**
MVOU	comp=N,3.2nm,0.2s			AML	AML	09 33 54.3	
MVOU	comp=N,3.2nm,0.2s			AML	AML	09 33 54.3	
MVOU				S	**Sb**	**09 33 54.3**	**-1.7**
MVOU	comp=N,1.8nm,0.1s			AML	AML	09 33 54.4	
MVOU	comp=N,1.8nm,0.1s			AML	AML	09 33 54.4	
SZAC	**Souni**	**1.07**	**180**	⇑P	**Pn**	**09 33 43.2**	**-0.6**
ASGA	**Asgata**	**1.08**	**164**	P	**Pn**	**09 33 42.9**	**-1.2**
ASGA				S	**Sb**	**09 33 56.5**	**-1.4**
EREN	**Erenkoy**	**1.09**	**105**	PN	**Pn**	**09 33 43.9**	**-0.2**
EREN	**Erenkoy**	**1.09**	**105**	*i* P	**Pn**	**09 33 43.0**	**-1.1**
EREN				*i* S	**Sb**	**09 33 58.8**	**+0.6**
EREN	comp=E,75nm,0.4s			IAML		09 34 11.0	
HDMB	**Hadim**	**1.18**	**345**	PN	**Pn**	**09 33 44.5**	**-1.0**
KIZK	**Mersin**	**1.21**	**57**	PN	**Pn**	**09 33 45.2**	**-0.6**
PARAL	**Paralimni**	**1.26**	**131**	P	**Pn**	**09 33 45.8**	**-0.7**
KRMN	**Karaman**	**1.38**	**13**	PN	**Pn**	**09 33 46.7**	**-1.5**
KEPZ	**Antalya-Kepez**	**1.48**	**317**	*i* P	**Pn**	**09 33 49.9**	**+0.3**
KEPZ				*i* S	**Sn**	**09 34 08.4**	**+0.1**
KEPZ	comp=E,48nm,0.4s			IAML		09 34 10.0	
MERS	**Mersin**	**1.68**	**52**	PN	**Pn**	**09 33 51.6**	**-0.8**
SEYD	**Seydisehir-KON**	**1.78**	**332**	PN	**Pn**	**09 33 52.7**	**-1.1**
KERG	**Konya-Eregli**	**1.87**	**32**	*i* P	**Pn**	**09 33 56.3**	**+1.3**
KERG				*i* S	**Sn**	**09 34 20.5**	**+2.4**
KERG	comp=N,67nm,0.3s			IAML		09 34 21.0	
KONT	**Konya--Tatoy**	**2.15**	**349**	PN	**Pn**	**09 33 57.8**	**-1.0**
KORT	**Korkueli**	**2.35**	**301**	PN	**Pn**	**09 34 01.5**	**-0.1**
LADK	**Ladik-KONYA**	**2.40**	**350**	PN	**Pn**	**09 34 01.9**	**-0.4**
CMRD	**Camardi-Nigde**	**2.50**	**42**	PN	**Pn**	**09 34 03.1**	**-0.5**
CEYT	**Ceyhan**	**2.60**	**62**	PN	**Pn**	**09 34 04.5**	**-0.3**
TAHT	**Tahtakopru-Hat**	**2.73**	**78**	PN	**Pn**	**09 34 06.3**	**-0.4**
NATI	**Neve Ativ**	**3.48**	**137**	Pn	**Pn**	**09 34 18.6**	**+1.6**
NATI				Sn	**Sn**	**09 34 57.2**	**-0.3**
KSDI	**Kefar Szold**	**3.49**	**138**	Pn	**Pn**	**09 34 18.5**	**+1.4**
KSDI				Sn	**Sn**	**09 34 57.2**	**-0.6**
MMA0B	**Mount Meron ar**	**3.50**	**143**	Pn	**Pn**	**09 34 18.5**	**+1.2**
MMA0B				Sn	**Sn**	**09 34 57.7**	**-0.3**
OFRI	**`Ofer**	**3.64**	**151**	Pn	**Pn**	**09 34 20.8**	**+1.5**
MMLI	**Mount Malkishu**	**3.99**	**147**	Pn	**Pn**	**09 34 24.8**	**+0.8**
MMLI				Sn	**Sn**	**09 35 10.4**	**+0.4**
DSI	**Dead Sea**	**4.73**	**153**	Pn	**Pn**	**09 34 35.8**	**+1.6**
MBRI	**Mt Berech**	**6.26**	**164**	Pn	**Pn**	**09 34 58.0**	**+2.8**
MBRI				Sn	**Sn**	**09 36 07.0**	**+0.9**

*SOME **20** 09:48:23.2, 40.°92N×79.°90E, h15^{km}*
*NNC **20** 09:48:24.1±1.1, 40.°98N×79.°83E, h0^{km}, mb3.5, mpv3.2,*
Error ellipse: s-maj=7.0km s-min=5.7km az=150.0
ISC 20 09:48:23.9±3.3**, 41.°0N**±0.°1×**79.°81E**±0.°08**, h10**^{km}**, n24,**
σ1.^{s}57/35**, 2C-3D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode** 14nm,0.2s	**2.17**	**353**	⇓*i*P	**Pb**	**09 49 04.2**	**+0.9**
SHLS	14nm,0.2s			*e*S	**Sg**	**09 49 34.0**	**+0.4**
SHLS	**Shalkode** 15nm,0.2s	**2.17**	**353**	Pg	**Pb**	**09 49 04.2**	**+0.9**
SHLS	14nm,0.2s			Lg	Lg	09 49 34.0	
UZB	**Uzynbulak** 5.3nm,0.3s	**2.22**	**345**	⇓*e*P	**Pb**	**09 49 05.8**	**+1.5**
UZB	5.3nm,0.3s			⇑*i*S	**Sg**	**09 49 36.3**	**+1.0**
UZB	**Uzynbulak** 4.4nm,0.2s	**2.22**	**345**	Pg	**Pb**	**09 49 05.5**	**+1.3**
UZB	5.9nm,0.3s			Lg	Lg	09 49 36.3	
SATY	**Saty** 2.9nm,0.2s	**2.31**	**334**	*e*P	**Pb**	**09 49 07.1**	**+1.5**
SATY	6.6nm,0.3s			*e*S	**Sg**	**09 49 38.9**	**+0.9**
SATY	**Saty** 3.6nm,0.2s	**2.31**	**334**	Pg	**Pb**	**09 49 07.1**	**+1.5**
SATY	8.8nm,0.3s			Lg	Lg	09 49 38.9	
PDGK	**Podgornoye** 2.0nm,0.3s	**2.34**	**354**	Pg	**Pb**	**09 49 07.4**	**+1.1**
PDGK	3.9nm,0.3s			Lg	Lg	09 49 39.0	
PDGK	**Podgornoye** 1.4nm,0.5s	**2.34**	**354**	⇑Pg	**Pb**	**09 49 06.4**	**+0.2**
PDGK	2.1nm,0.3s			⇓Lg	Lg	09 49 39.8	
KTMS	**Ketmen** 0.8nm,0.1s	**2.48**	**9**	*e*P	**Pb**	**09 49 09.5**	**+0.9**
KTMS	5.3nm,0.1s			*e*S	**Sg**	**09 49 42.7**	**-0.8**
KTMS	**Ketmen** 0.8nm,0.1s	**2.48**	**9**	Pg	**Pb**	**09 49 09.5**	**+0.9**
KTMS	9.4nm,0.4s			Lg	Lg	09 49 42.7	
KPKS	**Kokpek** 17nm,0.1s	**2.60**	**342**	*e*P	**Pb**	**09 49 12.5**	**+1.9**
KPKS	3µm,0.4s			*e*S	**Sg**	**09 49 48.0**	**+0.5**
TNSS	**Tian-Shan** 3.6nm,0.4s	**2.95**	**315**	*e*P	**Pb**	**09 49 18.1**	**+1.4**
TNSS	3.9nm,0.6s			*e*S	**Sg**	**09 49 57.4**	**-1.2**
TNSS	**Tian-Shan** 4.5nm,0.4s	**2.95**	**315**	Pg	**Pb**	**09 49 17.8**	**+1.1**
TNSS	3.6nm,0.7s			Lg	Lg	09 49 57.4	
KOTS	**Kotyrbulak** 5.9nm,0.3s	**3.00**	**319**	*e*P	**Pb**	**09 49 19.1**	**+1.6**
KOTS	7.4nm,0.3s			*e*S	**Sg**	**09 49 59.3**	**-1.0**
KOTS	**Kotyrbulak** 6.7nm,0.4s	**3.00**	**319**	Pg	**Pb**	**09 49 19.1**	**+1.6**
KOTS	7.4nm,0.3s			Lg	Lg	09 49 59.3	
IZV	**Izvestkoviy** 1.3nm,0.2s	**3.13**	**312**	*e*P	**Pb**	**09 49 21.2**	**+1.5**
IZV	5.2nm,0.2s			*e*S	**Sg**	**09 50 03.1**	**-1.3**
IZV	**Izvestkoviy** 1.3nm,0.2s	**3.13**	**312**	Pg	**Pb**	**09 49 21.2**	**+1.5**
IZV	5.9nm,0.2s			Lg	Lg	09 50 03.4	
DJR	**Jarkent** 0.4nm,0.1s	**3.33**	**360**	*e*P	**Pb**	**09 49 24.4**	**+1.3**
DJR	1.9nm,0.4s			*e*S	**Sg**	**09 50 08.4**	**-2.4**
DJR	**Jarkent** 0.5nm,0.1s	**3.33**	**360**	Pg	**Pb**	**09 49 24.4**	**+1.3**
DJR	3.6nm,0.6s			Lg	Lg	09 50 08.9	
CHKK	**Chushkaly** 0.9nm,0.1s	**3.53**	**325**	*e*P	**Pb**	**09 49 29.0**	**+2.5**
CHKK	4.9nm,0.2s			*e*S	**Sg**	**09 50 16.4**	**-1.0**
CHKK	**Chushkaly** 0.9nm,0.1s	**3.53**	**325**	Pg	**Pb**	**09 49 29.0**	**+2.5**
CHKK	4.9nm,0.2s			Lg	Lg	09 50 16.5	
KRBS	**Karabastau** 0.8nm,0.3s	**4.08**	**313**	*e*P	**Pg**	**09 49 40.1**	**-1.9**
KRBS	0.8nm,0.3s			*e*S	**Sg**	**09 50 35.6**	**+0.8**
KRBS	**Karabastau** 0.8nm,0.3s	**4.08**	**313**	Pg	**Pg**	**09 49 40.1**	**-1.9**
KRBS	1.0nm,0.5s			Lg	Lg	09 50 35.6	
KAPS	**Kapalarasan** 0.8nm,0.2s	**4.30**	**356**	Pg	**Pb**	**09 49 43.1**	**+3.6**
KAPS	0.6nm,0.3s			Lg	Lg	09 50 40.2	

*DNK **20** 10:12:11.9±0.7, 71.°13N×9.°16W, h0^{km}±277^{km}, ML2.0,*
Hypocentre not reviewed by the ISC
*BER **20** 10:12:12.2±0.4, 71.°15N×8.°04W, h0^{km}±131^{km}, ML2.7,*
Confirmed Earthquake
ISC 20 10:12:11.5±2.2**, 71.°27N**±0.°06×**8.°1W**±0.°2**, h10**^{km}**, n5,**
σ0.^{s}97/9**, 3D, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNW	**Jan Mayen West**	**0.27**	**204**	*e*P	**Pg**	**10 12 17.1**	**+0.2**
JNW	comp=Z,1µm,0.1s			IAML		10 12 25.3	
JNE	**Jan Mayen East**	**0.29**	**193**	⇓*i*P	**Pg**	**10 12 17.1**	**-0.2**
JNE				*e*S	**Sg**	**10 12 20.5**	**-0.7**
JNE	comp=Z,4µm,0.1s			IAML		10 12 21.1	
JMIC	**Jan Mayen**	**0.32**	**205**	⇓*i*P	**Pg**	**10 12 17.7**	**-0.1**
JMIC				*e*S	**Sg**	**10 12 21.9**	**-0.1**
JMIC	comp=Z,410nm,0.3s			IAML		10 12 22.1	
JMI	**Jan Mayen**	**0.40**	**211**	⇓*i*P	**Pg**	**10 12 19.4**	**0.0**
JMI				*e*S	**Sg**	**10 12 24.9**	**+0.2**
JMI	comp=Z,416nm,0.1s			IAML		10 12 25.1	
DBG	**Daneborg**	**4.71**	**316**	*i* P		10 13 22.9	
DBG				*e*S		10 14 14.2	
DBG	comp=Z,0.8nm,0.3s			IAML		10 14 20.1	
DAG	**Danmarks Havn**	**6.24**	**337**	*i* P	**Pn**	**10 13 44.6**	**+1.2**
DAG				*e*S	**Sn**	**10 14 52.7**	**-1.9**
DAG	**Danmarks Havn** baz=148,slow=18	**6.24**	**337**	*e*		10 13 43.3	
DAG				*i* P		10 13 44.6	
DAG				*e*S		10 14 52.8	
DAG	comp=Z,0.7nm,0.3s			IAML		10 14 57.5	

IDC 20 10:13:36.3±4.4**, 4.°59S×153.°53E, h131**^{km}±33^{km}**, mb3.2**/3**,**
mb1 3.6/4**, mb1mx3.2**/38**, mbtmp3.8**/4**, Error ellipse:**
s-maj=64.3km s-min=22.0km az=117.0, New Ireland
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076** 31nm,0.3s,baz=135,slow=0.8,SNR=24	**1.53**	**281**	P	Pn	10 14 04.3	-0.4
KRVT	28nm,0.3s,baz=163,slow=1.2,SNR=5.4			S	Sn	10 14 26.6	+0.2
PMG	**Port Moresby** 6.1nm,0.3s,baz=24,slow=3.2,SNR=13	**7.93**	**233**	P	Pn	10 15 28.9	+0.1
PMG	1.1nm,0.3s,baz=261,slow=22,SNR=1.8			S	Sn	10 16 57.0	-0.1
WRA	**Warramunga Arr** 1.1nm,0.6s,baz=55,slow=10,SNR=1.6	**24.13**	**229**	P	P	10 18 41.0	+0.7
ASAR	**Alice Springs** 0.4nm,0.4s,baz=54,slow=8.9,SNR=16	**26.80**	**223**	P	P	10 19 04.2	-0.2
ILAR	**Eielson Array** 0.1nm,0.5s,baz=234,slow=4.8,SNR=1.3	**81.70**	**22**	P	P	10 25 39.9	0.0
TORD	**Torodi Ar. Bea** 0.2nm,0.5s,baz=86,slow=2.3,SNR=1.3	**150.93**	**289**	PKPbc	PKPbc	10 33 14.4	-0.3

*IASPEI **20** 10:19:40.9±1.0, 37.°10N±0.°03×36.°71E±0.°02, h5^{km}±8^{km},*
Error ellipse: s-maj=4.1km s-min=3.5km az=5.8, GT5
selection from ISC bulletin GT5 identified by Bondr and
McLaughlin (2009) selection criteria Bondr and
McLaughlin, A new ground truth data set for seismic
studies, <i>Seism. Res. Let.</i>, 80, 465-472,
2009
*ISK **20** 10:19:40.8, 37.°04N×36.°76E, h9^{km}, ML2.7/15*
*DDA **20** 10:19:40.4, 37.°10N×36.°71E, h4^{km}±1^{km}, ML2.8*
ISC 20 10:19:40.7±1.0**, 37.°10N**±0.°03×**36.°70E**±0.°02**, h5**^{km}±8^{km}**,**
n35, σ0.^{s}61/50**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMA	**Osmaniye**	**0.09**	**343**	*i* P	**Pg**	**10 19 42.6**	**-0.1**
KAMA	comp=N,7µm,0.1s			IAML		10 19 44.0	
KAMA	comp=E,6µm,0.1s			IAML		10 19 44.0	
KAMA				*i* S	**Sg**	**10 19 44.2**	**0.0**
HCB	**Kahramanmara**	**0.29**	**34**	*i* P	**Pg**	**10 19 45.5**	**-1.0**
AYKD	**Aykdinkavak**	**0.33**	**15**	*i* P	**Pg**	**10 19 46.9**	**-0.2**
AYKD				*i* S	**Sg**	**10 19 51.8**	**+0.4**
GAZ	**Gaziantep**	**0.41**	**80**	PG	**Pg**	**10 19 48.9**	**+0.2**
GAZ				SG	**Sg**	**10 19 54.7**	**+0.5**
KMRS	**Kahramanmaras**	**0.43**	**22**	PG	**Pg**	**10 19 49.2**	**+0.1**
KUZU	**Kuzuini**	**0.44**	**137**	*i* P	**Pg**	**10 19 49.5**	**+0.3**
KUZU				*i* S	**Sg**	**10 19 55.8**	**+0.7**
KUZU	comp=E,2µm,0.4s			IAML		10 19 56.0	
KUZU	comp=N,1µm,0.4s			IAML		10 19 56.0	
KHMN	**Narli-Kahraman**	**0.47**	**51**	PG	**Pb**	**10 19 50.7**	**-0.7**
ANDN	**Andirin**	**0.56**	**330**	*i* P	**Pg**	**10 19 51.5**	**+0.1**
ANDN				*i* S	**Sg**	**10 19 59.5**	**+0.9**
GZT	**Gaziantep**	**0.73**	**69**	*i* P	**Pb**	**10 19 56.4**	**+0.3**
GZT				*i* S	**Sb**	**10 20 05.6**	**-0.9**
CEYT	**Ceyhan**	**0.77**	**264**	PG	**Pb**	**10 19 56.8**	**+0.3**
TAHT	**Tahtakopru-Hat**	**0.83**	**210**	PG	**Pg**	**10 19 56.3**	**-0.4**
YURE	**YUREGIR**	**0.90**	**253**	PG	**Pb**	**10 19 58.9**	**+0.2**
YURE	**YUREGIR**	**0.90**	**253**	*i* P	**Pb**	**10 19 58.6**	**-0.1**
SAIM	**ADANA**	**1.00**	**331**	*i* P	**Pg**	**10 19 59.6**	**-0.4**
SAIM				*i* S	**Sb**	**10 20 13.7**	**-0.4**
SAIM	comp=N,206nm,0.3s			IAML		10 20 19.0	
SAIM	comp=E,359nm,0.3s			IAML		10 20 20.0	
AKO	**Adana**	**1.06**	**290**	*i* P	**Pb**	**10 20 01.5**	**0.0**
AKO				*i* S	**Sn**	**10 20 17.6**	**+0.3**
KRTD	**Karatas-Adana**	**1.15**	**244**	PN	**Pn**	**10 20 04.3**	**+1.0**
KRTS	**Karatas**	**1.19**	**244**	PN	**Pn**	**10 20 04.3**	**+0.4**
ELBS	**KAHRAMANMARAS**	**1.27**	**16**	*i* P	**Pn**	**10 20 05.0**	**-0.2**
ELBS				*i* S	**Sn**	**10 20 23.5**	**+0.9**
ELBS	comp=E,156nm,0.5s			IAML		10 20 27.0	
ELBS	comp=N,152nm,1.0s			IAML		10 20 27.0	
KARA	**Karaisali**	**1.32**	**277**	PN	**Pb**	**10 20 06.6**	**+0.6**
SARI	**SarD1z-Kayseri**	**1.32**	**350**	PN	**Pb**	**10 20 07.3**	**+1.2**
ATAB	**Bozova**	**1.32**	**73**	*i* P	**Pb**	**10 20 06.5**	**+0.4**
ATAB				*i* S	**Sn**	**10 20 23.7**	**-0.2**
ATAB	comp=E,155nm,0.6s			IAML		10 20 28.0	
YAHY	**KAYSERI_Yahyal**	**1.45**	**313**	*i* P	**Pg**	**10 20 09.8**	**+1.3**
CMRD	**Camardi-Nigde**	**1.47**	**293**	PN	**Pg**	**10 20 08.6**	**-0.3**
DED	**Mersin**	**1.53**	**265**	*i* P	**Pn**	**10 20 08.3**	**-0.3**
DED				*i* S	**Sg**	**10 20 30.0**	**+0.3**
AKCD	**Akcadag**	**1.54**	**39**	*i* P	**Pg**	**10 20 10.6**	**+0.4**
AKCD				*i* S	**Sg**	**10 20 29.6**	**-0.5**
AKCD	comp=E,158nm,0.4s			IAML		10 20 34.0	
AKCD	comp=N,170nm,0.4s			IAML		10 20 36.0	
SURC	**SANLIURFA_SURC**	**1.55**	**98**	*i* P	**Pn**	**10 20 08.4**	**-0.5**
SURC				*i* S	**Sb**	**10 20 29.5**	**-0.3**
SURC	comp=N,91nm,0.3s			IAML		10 20 33.0	
SURC	comp=E,94nm,0.4s			IAML		10 20 38.0	
DARE	**Darende-Malaty**	**1.59**	**23**	PN	**Pg**	**10 20 10.7**	**-0.6**
URFA	**Urfa**	**1.73**	**78**	PN	**Pn**	**10 20 11.3**	**-0.1**
MERS	**Mersin**	**1.76**	**263**	PN	**Pb**	**10 20 12.9**	**-0.5**
MALT	**Malatya**	**1.83**	**48**	PN	**Pn**	**10 20 13.4**	**+0.6**
SANL	**SANLIURFA_Merk**	**1.83**	**87**	*i* P	**Pn**	**10 20 11.9**	**-0.9**
SANL	comp=N,72nm,0.7s			IAML		10 20 42.0	
SANL	comp=E,84nm,0.4s			IAML		10 20 48.0	
BNN	**Bunyan**	**1.87**	**339**	PN	**Pb**	**10 20 14.9**	**-0.6**
HEKM	**Malatya_Hekimh**	**2.04**	**29**	*i* P	**Pb**	**10 20 18.4**	**+0.1**
HEKM				*i* S	**Sg**	**10 20 46.2**	**+0.1**
HEKM	comp=N,60nm,0.5s			IAML		10 20 51.0	
HEKM	comp=E,57nm,0.5s			IAML		10 20 54.0	
KERG	**Konya-Eregli**	**2.08**	**279**	*i* P	**Pb**	**10 20 17.6**	**-1.3**
KERG				*i* S	**Sg**	**10 20 46.3**	**-1.2**
SVRC	**Sivrice-ELAZID**	**2.43**	**58**	PN	**Pn**	**10 20 21.9**	**+0.7**

*IDC **20** 10:24:01.6±2.2, 30.°28N×114.°20W, h0^{km}, mb3.8/1,*
mb1 3.4/6, mb1mx3.3/54, mbtmp3.0/6, ML3.4/4, MS3.1/12,
Ms1 3.2/12, ms1mx3.0/49, Error ellipse: s-maj=34.8km
s-min=11.8km az=30.0
*ECX **20** 10:24:03.2±0.6, 30.°46N×114.°05W, h18^{km}±6^{km}, MD3.8,*
ML4.0
*NEIC **20** 10:24:05.1±2.4, 30.°34N±0.°06×114.°21W±0.°06, h27^{km}±9^{km},*
Error ellipse: s-maj=10.1km s-min=5.5km az=214.0
*MEX **20** 10:24:05.5±0.5, 30.°29N×114.°24W, h7^{km}±9^{km}, MD4.0*
ISC 20 10:24:02.3±1.6**, 30.°33N**±0.°05×**114.°23W**±0.°04**, h3**^{km}±11^{km}**,**
n67, σ1.^{s}28/75**, MS3.2**/5**, 3D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BAHB	**Baha de los**	**0.70**	**124**	*e*P	**Sn**	**10 24 29.4**	**-0.9**
SFX	**San Felipe**	**0.88**	**323**	⇓*e*P	**Pg**	**10 24 18.4**	**-0.8**

SFX				eS	Sb	10 24 31.4	-1.1
SPX	San Pedro Mart	1.27	304	eP	Pn	10 24 25.7	-1.6
SPX				eS	Sn	10 24 43.8	-1.4
SPX	San Pedro Mart	1.27	304	i P	Pn	10 24 25.6	-1.7
SPX	San Pedro Mart	1.27	304		Pn	10 24 25.6	-1.7
SPIG	San Pedro Mart	1.28	304	eP	Pg	10 24 26.7	-0.2
SPIG	San Pedro Mart	1.28	304	eP	Pg	10 24 27.0	+0.2
SPIG				i S	Sg	10 24 43.5	+0.1
SPIG	San Pedro Mart	1.28	304		Pg	10 24 27.0	+0.2
SPIG					Sg	10 24 43.5	+0.1
ECBX	El Chinero	1.34	328	eP	Pn	10 24 25.4	-2.5
PIX	Pinacate	1.39	28	⇓eP	Pn	10 24 23.9	-4.7
SQX	San Quintin	1.44	280	eP	Pg	10 24 29.8	-0.1
SQX				⇓e		10 25 03.4	
SQX				IAML		10 25 03.4	
	comp=E,2μm,0.6s						
VTX	Valle De La Tr	1.70	309	eP	Pn	10 24 32.5	-0.5
214A	Organ Pipe Nat	2.02	37		Pn	10 24 37.7	+0.3
ESJX	Sierra Juarez	2.23	319	eP	Pn	10 24 39.0	-1.2
GLA	Glamis	2.76	350		Pn	10 24 46.7	-0.8
CBX	Cerro Bola	2.87	314	eP	Pn	10 24 49.0	0.0
CBX				IAML		10 25 52.0	
	comp=E,567nm,1.3s						
CBX	Cerro Bola	2.87	314	i P	Pn	10 24 49.4	+0.4
CBX				i S	Sn	10 25 22.9	-1.2
CBX	Cerro Bola	2.87	314		Pn	10 24 49.4	+0.4
CBX					Sn	10 25 22.9	-1.2
TJIG	Tijuana	2.96	316	i P	Pn	10 24 50.8	+0.6
TJIG				i S	Sn	10 25 25.9	-0.3
TJIG	Tijuana	2.96	316		Pn	10 24 50.8	+0.6
TJIG					Sn	10 25 25.9	-0.3
BAR	Barrett	3.13	319		Pn	10 24 52.8	+0.2
HSIG		3.14	114	i P	Pn	10 24 52.8	+0.1
HSIG				i S	Sn	10 25 29.4	-1.2
HSIG		3.14	114		Pn	10 24 52.8	+0.1
HSIG					Sn	10 25 29.4	-1.2
HSIG		3.14	114	Pn	Pn	10 24 53.9	+1.3
Y12C	Blythe	3.42	356		Pn	10 24 55.7	-0.8
SRIG	Santa Rosalia	3.47	149	i P	Pn	10 24 56.2	-1.0
SRIG				i S	Sn	10 25 36.7	-2.1
SRIG	Santa Rosalia	3.47	149		Pn	10 24 56.2	-1.0
SRIG					Sn	10 25 36.7	-2.1
109C	Camp Elliot, M	3.54	317		Pn	10 24 59.3	+1.2
TUC	Tucson	3.55	55		Pn	10 24 56.5	-1.8
Y14A	Wickenburg	3.74	16		Pn	10 24 59.5	-1.5
XPFO	Pion Flat	3.78	331	Pn	Pn	10 25 01.6	+0.1
PFO	Pinyon Flats O	3.78	330	Pn	Pn	10 25 01.2	-0.4
	comp=E,0.4nm,0.3s,baz=153,slow=12,SNR=7.5						
PFO				Lg	Lg	10 26 04.2	
	comp=E,2.7nm,0.3s,baz=40,slow=6.8,SNR=6.0						
PFO				LR	LR	10 26 35.0	
	comp=E,391nm,18.0s,baz=192,slow=40						
PFO	Pinyon Flats O	3.78	330		Pn	10 25 01.6	+0.1
GUYB	Guaymas	3.81	129	i P	Pn	10 25 01.9	+0.1
GUYB				i S	Sn	10 25 45.6	-1.5
NZIG	Nacozari, Sono	4.04	88	i P	Pn	10 25 05.7	+0.5
NZIG				i S	Sn	10 25 52.8	-0.4
319A	Douglas	4.38	75		Pn	10 25 09.3	-0.5
X16A	Lo Mia Camp, P	4.71	29		Pn	10 25 13.1	-1.3
CGIG		5.40	88	eP	Pn	10 25 23.9	-0.1
CGIG				i S	Sn	10 26 25.6	-1.1
CGIG		5.40	88		Pn	10 25 23.9	-0.1
CGIG					Sn	10 26 25.6	-1.1
GSC	Goldstone, Bar	5.41	337	Pn	Pn	10 25 25.1	+1.2
X18A	Snowflake	5.53	40	Pn	Pn	10 25 24.2	-1.5
WUAZ	Wupatki	5.70	24		Pn	10 25 27.4	-0.6
121A	Cookes Peak, D	5.93	67		Pn	10 25 29.6	-1.6
W18A	Petrified Fore	6.09	37	Pn	Pn	10 25 32.5	-0.9
SHPR	Sheep Range	6.21	353	Pn	Pn	10 25 36.3	+1.3
U15A	North Rim	6.29	14		Pn	10 25 36.6	+0.4
KNB	Kanab	6.77	10		Pn	10 25 43.6	+0.9
LPIG	La Paz	7.12	150	LR	LR	10 28 26.4	
	comp=E,164nm,20.2s,baz=338,slow=38						
MNTX	Cornudas Mount	7.71	78	Pn	Pn	10 25 55.5	-0.1
MTPU	Mount Pierson	7.88	12	Pn	Pn	10 25 58.6	+0.5
ANMO	Albuquerque	8.01	53	Pn	Pn	10 25 58.9	-0.8
	comp=E,0.1nm,0.3s,baz=232,slow=17,SNR=3.9						
ANMO				Lg	Lg	10 28 18.1	
	comp=E,0.2nm,0.3s,baz=11,slow=21,SNR=4.4						
ANMO				LR	LR	10 28 21.1	
	comp=E,36nm,21.6s,baz=267,slow=32						
NVAR	Mina Array Bea	8.75	338	Pn	Pn	10 26 10.8	+0.9
	baz=119,slow=26,SNR=1.3						
NVAR				LR	LR	10 29 43.6	
	comp=E,100nm,18.3s,baz=206,slow=39						
PV09	Paradox Valley	9.17	26	Pn	Pn	10 26 15.6	-0.2
TX31	Lajitas Ar. Si	9.23	94		Pn	10 26 17.4	+1.0
TX32	Lajitas Array	9.23	94		Pn	10 26 17.4	+1.0
TXAR	Lajitas Array	9.23	94	Pn	Pn	10 26 16.4	0.0
	comp=E,0.1nm,0.3s,baz=271,slow=12,SNR=10						
TXAR				Lg	Lg	10 28 52.6	
	comp=E,0.1nm,0.3s,baz=272,slow=27,SNR=3.1						
TXAR				LR	LR	10 30 05.7	
	comp=E,146nm,18.9s,baz=0.0,slow=40						
TXAR	Lajitas Array	9.23	94		Pn	10 26 15.3	-1.1
ELK	Elko	10.42	356	LR	LR	10 30 37.1	
	comp=E,90nm,19.9s,baz=182,slow=38						
PDAR	Pinedale Array	12.96	16	Pn	Pn	10 27 11.2	+3.6
	comp=E,0.1nm,0.3s,baz=193,slow=6.5,SNR=2.5						
YBH	Yreka Blue Hor	13.28	331	LR	LR	10 31 10.9	
	comp=E,74nm,21.1s,baz=212,slow=32						
CMIG	Matias Romero	22.03	122	LR	LR	10 37 38.6	
	comp=E,91nm,19.0s,baz=312,slow=37						
BBB	Bella Bella	24.12	339	LR	LR	10 38 43.3	
	comp=E,112nm,21.9s,baz=142,slow=36						
TKL	Tuckaleechee C	26.03	70	LR	LR	10 40 01.6	
	comp=E,42nm,20.9s,baz=244,slow=37						
APG	El Apazote	26.63	120	LR	LR	10 41 30.3	
	comp=E,56nm,18.4s,baz=262,slow=40						
JTS	Las Juntas de	33.76	120	LR	LR	10 45 30.6	
	comp=E,42nm,18.3s,baz=36,slow=38						
ILAR	Eielson Array	40.01	339	P	P	10 31 39.6	+1.6
	comp=E,1.5nm,0.8s,baz=151,slow=7.7,SNR=16						
IMAR	Indian Mountai	42.99	338	P	P	10 32 04.8	+2.3

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*NEIC **20** 10:30:05.4±2.3, 4°.7S±0°.3×153°.81E±0°.06, h122^{km}±25^{km}, mb4.1/6, Error ellipse: s-maj=39.3km s-min=6.9km az=187.0*

*IDC **20** 10:30:07.7±3.3, 4°.69S×153°.50E, h134^{km}±22^{km}, mb3.5/8, mb1 3.8/9, mb1mx3.4/55, mbtmp4.0/9, MS3.1/4, Ms1 3.1/4, ms1mx2.7/31, Error ellipse: s-maj=45.2km s-min=15.3km az=110.0*

ISC 20 10:30:04.0±1.0, 4°.82S±0°.09×153°.9E±0°.1, h100^{km}, n21, σ1^{s}.83/20, mb3.9/11, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.79	290	Pn	Pn	10 30 34.9	+1.0
RABL				Sn	Sn	10 30 59.5	+2.7
KRVT	Keravat (AS076	1.89	286	P	Pn	10 30 35.5	+0.3
	81nm,0.3s,baz=120,slow=1.2,SNR=59						
KRVT				S	Sn	10 30 58.1	-0.8
	102nm,0.3s,baz=18,slow=21,SNR=4.2						
HNR	Honiara	7.59	127	Pn	Pn	10 31 54.4	+2.5
PMG	Port Moresby	8.05	235	P	Pn	10 32 00.5	+2.2
	18nm,0.3s,baz=52,slow=7.8,SNR=20						
PMG				S	Sn	10 33 26.3	-1.4
	3.3nm,0.3s,baz=351,slow=23,SNR=1.6						
PMG				LR	LR	10 35 16.8	
	comp=Z,50nm,18.8s,baz=328,slow=39						
PMG	Port Moresby	8.05	235		Pn	10 32 00.4	+2.1
COEN	Coen	13.90	228	Pn	Pn	10 33 16.7	-0.1
WR0	Warramunga Arr	24.08	230	P	P	10 35 11.0	+0.6
WR0				IAmb	IAmb	10 35 11.6	
	comp=Z,4.1nm,0.8s						
WB0	Warramunga Arr	24.08	230	P	P	10 35 10.8	+0.4
WB0				IAmb	IAmb	10 35 11.5	
	comp=Z,5.0nm,0.7s						
WB2	Warramunga Arr	24.22	230	P	P	10 35 11.8	+0.2
WB2				IAmb	IAmb	10 35 12.1	
	comp=Z,5.5nm,0.9s						
WRA	Warramunga Arr	24.23	230	P	P	10 35 11.6	-0.1
	comp=Z,4.9nm,0.7s,baz=53,slow=9.8,SNR=50						
WRA				LR	LR	10 44 44.5	
	comp=Z,33nm,18.9s,baz=85,slow=36						
ASAR	Alice Springs	26.85	224	P	P	10 35 35.0	-0.5
	comp=Z,1.7nm,0.9s,baz=55,slow=9.0,SNR=22						
KNRA	Kununurra	26.91	245	P	P	10 35 33.5	-2.4
STKA	Stephens Creek	29.27	202	P	P	10 35 56.1	-0.7
	comp=Z,1.0nm,0.5s,baz=49,slow=17,SNR=3.4						
FITZ	Fitzroy Crossi	30.57	242	P	P	10 36 06.2	-2.3
	comp=Z,3.3nm,0.7s,baz=64,slow=6.0,SNR=9.3						
FITZ	Fitzroy Crossi	30.57	242	IAmb	IAmb	10 36 07.9	
	comp=Z,3.4nm,0.8s						
KAPI	Kappang	33.97	268	LR	LR	10 51 43.2	
	comp=Z,21nm,19.0s,baz=105,slow=38						
MA2	Magadan	64.24	358	P	P	10 40 28.7	+0.6
	comp=Z,1.5nm,0.5s,baz=145,slow=11,SNR=5.3						
MKAR	Makanchi Array	81.03	319	P	P	10 42 04.1	-3.9
	comp=Z,0.2nm,0.7s,baz=144,slow=5.3,SNR=2.2						
ILAR	Eielson Array	81.78	22	P	P	10 42 10.6	-0.9
	comp=Z,0.3nm,0.8s,baz=216,slow=4.5,SNR=2.3						
ILAR				LR	LR	11 15 02.0	
	comp=Z,38nm,19.9s,baz=122,slow=33						
KURBB	Kurchatov Arra	84.46	322	P	P	10 42 24.1	-1.5
	comp=Z,0.3nm,0.2s,baz=93,slow=4.1,SNR=3.2						
TORD	Torodi Ar. Bea	151.31	289	PKPbc	PKPdf	10 49 45.5	+4.6
	comp=Z,1.1nm,0.8s,baz=66,slow=3.6,SNR=6.5						

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*NIC **20** 10:31:25.9±0.0, 35°.02N×27°.29E, h0^{km}±1^{km}, Ml2.7/2*

*ATH **20** 10:31:26.3, 35°.06N×27°.37E, h22^{km}±2^{km}, ML2.9/5, Error ellipse: s-maj=6.0km s-min=2.0km az=318.0*

*ISK **20** 10:31:27.6, 35°.12N×27°.26E, h9^{km}, ML3.1/13*

*DDA **20** 10:31:28.4, 35°.17N×27°.51E, h12^{km}±3^{km}, ML2.3*

*THE **20** 10:31:29.6, 35°.17N×27°.15E, h0^{km}±1^{km}, ML2.5/3, Error ellipse: s-maj=4.2km s-min=0.9km az=134.0*

ISC 20 10:31:28.5±1.2, 35°.11N±0°.04×27°.25E±0°.03, h15^{km}±9^{km}, n50, σ1^{s}.12/74, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	0.44	350	P	Pg	10 31 37.3	-0.1
KARP				S	Sb	10 31 44.0	-0.5
	1μm,0.1s						
KARP	Karpathos	0.44	350	P	Pg	10 31 37.2	-0.1
KARP				S	Sb	10 31 44.5	0.0
KARP				AML	AML	10 31 46.5	
	comp=N,2839μm,0.1s						
KARP				AML	AML	10 31 46.8	
	comp=E,2742μm,0.2s						
KARP	Karpathos	0.44	350	PG	Pg	10 31 36.8	-0.6
KARP				SG	Sg	10 31 43.1	-0.3
KARP	Karpathos	0.44	350	P	Pg	10 31 37.1	-0.3
KARP				S	Sb	10 31 45.1	+0.6
KARP				AML	AML	10 31 46.1	
	comp=E,2.8nm,0.1s						
KARP				AML	AML	10 31 46.1	
	comp=E,2.8nm,0.1s						
KARP				AML	AML	10 31 46.3	
	comp=E,2.7nm,0.2s						
KARP				AML	AML	10 31 46.3	
	comp=E,2.7nm,0.2s						
ZKR	Zakros	0.85	270	P	Pg	10 31 44.1	-0.9
ZKR				S	Sb	10 31 57.4	+1.2
	comp=E,665nm,0.4s						
ZKR	Zakros	0.85	270	P	Pg	10 31 43.9	-1.1
ZKR				S	Sb	10 31 57.7	+1.5
ZKR				AML	AML	10 32 01.3	
	comp=N,576μm,0.3s						
ZKR				AML	AML	10 32 02.2	
	comp=E,2122μm,0.5s						
ZKR	Zakros	0.85	270	PG	Pg	10 31 44.3	-0.7
ZKR				SG	Sb	10 31 57.0	+0.8
ZKR	Zakros	0.85	270	P	Pg	10 31 43.9	-1.1
ZKR				S	Sn	10 31 57.9	-0.3
ZKR				AML	AML	10 31 59.8	
	comp=E,0.6nm,0.3s						
ZKR				AML	AML	10 31 59.8	
	comp=E,0.6nm,0.3s						
ZKR				AML	AML	10 32 01.6	
	comp=E,2.1nm,0.5s						
ZKR				AML	AML	10 32 01.6	
	comp=E,2.1nm,0.5s						
STIA	Sitia Lasithi	0.96	276	P	Pg	10 31 46.6	-0.5
STIA				S	Sb	10 32 00.4	+1.1
FRMA	Ierapetra Chan	1.25	266	P	Pn	10 31 50.3	-1.2
FRMA				S	Sb	10 32 06.3	-1.4
	comp=E,105nm,0.4s						
ARG	Arkhangelos	1.31	33	P	Pg	10 31 53.9	+0.1
ARG	Arkhangelos	1.31	33	PN	Pb	10 31 52.6	-0.3
ARG	Arkhangelos	1.31	33	P	Pg	10 31 53.9	+0.1
ARG				S	Sg	10 32 13.6	+2.7
NPS	Neapolis	1.35	277	P	Pn	10 31 52.9	0.0
NPS	Neapolis	1.35	277	P	Pb	10 31 53.4	-0.2
NPS				S	Sg	10 32 12.6	+0.4
NPS				AML	AML	10 32 17.5	
	comp=N,509μm,0.6s						
NPS				AML	AML	10 32 22.1	
	comp=E,623μm,0.4s						
LAST	Lasithi	1.46	272	P	Pb	10 31 55.1	-0.3
LAST	Lasithi	1.46	272	P	Pb	10 31 55.1	-0.3
LAST				S	Sg	10 32 16.1	+0.6
LAST				AML	AML	10 32 22.7	
	comp=E,264μm,0.5s						
LAST				AML	AML	10 32 22.9	
	comp=N,327μm,0.6s						
NISR	Nisiros	1.50	356	P	Pn	10 31 54.5	-0.4
DAT	Datca	1.63	9	PN	Pn	10 31 56.8	-0.1
DAT	Datca	1.63	9	i P	Pn	10 31 56.8	-0.1
DAT				i S	Sb	10 32 18.5	-0.4
DAT				IAML		10 32 24.0	
	comp=N,35nm,0.4s						
DAT				IAML		10 32 28.0	
	comp=E,34nm,0.4s						
ANAF	Anafi Island	1.73	316	P	Pn	10 31 58.0	-0.1
ANAF				AML	AML	10 32 24.1	
	comp=N,1338μm,0.4s						
ANAF				AML	AML	10 32 31.1	
	comp=E,1342μm,0.5s						
IDI	Anoyia	1.94	276	P	Pn	10 32 02.1	+1.1
IDI	Anoyia	1.94	276	PN	Pn	10 32 02.3	+1.2
DALY	Dalyan (Mula)	2.04	33	PN	Pn	10 32 03.2	+0.8
DALY	Dalyan (Mula)	2.04	33	i P	Pn	10 32 03.4	+1.0
DALY				i S	Sg	10 32 33.5	-0.8
DALY				IAML		10 32 43.0	
	comp=N,27nm,0.4s						
TURN	Turunc	2.07	32	PN	Pn	10 32 00.6	-2.1
TURN	Turunc	2.07	32	i P	Pn	10 32 00.9	-1.8
TURN				i S	Sn	10 32 25.7	-2.5
TURN				IAML		10 32 35.0	
	comp=E,40nm,0.5s						
TURN				IAML		10 32 38.0	
	comp=N,34nm,0.4s						
FETY	Fethiye	2.13	44	PN	Pn	10 32 03.9	+0.4
FETY	Fethiye	2.13	44	i P	Pn	10 32 03.8	+0.3
FETY				i S	Sg	10 32 37.6	+0.6
KSL	Kastellorizon	2.16	61	P	Pn	10 32 04.4	+0.4
KSL				S	Sb	10 32 33.5	-0.5
AKAS	Kas	2.22	59	PN	Pn	10 32 05.3	+0.4
AKAS	Kas	2.22	59	i P	Pn	10 32 04.9	0.0
AKAS				i S	Sn	10 32 31.0	-1.1
AKAS				IAML		10 32 37.0	
	comp=N,19nm,0.6s						
APE	Apeiranthos	2.40	325	PN	Pn	10 32 07.3	0.0
APE	Apeiranthos	2.40	325	P	Pn	10 32 07.8	+0.5
AYDN	Tasoluk	2.59	11	i P	Pn	10 32 11.5	+1.5
AYDN				i S	Sn	10 32 39.7	-1.5
AYDN				IAML		10 32 50.0	
	comp=N,14nm,0.6s						
AYDN				IAML		10 33 00.0	
	comp=E,16nm,0.4s						
GVDS	Gavdos	2.61	265	PN	Pn	10 32 11.4	+1.2
GVD	Gavdhos	2.61	265	PN	Pn	10 32 11.4	+1.2
IMMV	Iera Moni Meta	2.70	278	PN	Pn	10 32 12.4	+1.0
ELL	Elmali	2.70	52	PN	Pn	10 32 12.5	+0.9
TAVA	DENIZLI_Tavas	2.70	29	i P	Pn	10 32 12.3	+0.8
TAVA				i S	Sn	10 32 44.9	+0.8
TAVA				IAML		10 32 57.0	
	comp=E,19nm,0.4s						
TAVA				IAML		10 33 03.0	
	comp=N,19nm,0.8s						
GOLH	Golhisar	2.83	41	i P	Pn	10 32 14.5	+1.2
GOLH				i S	Sn	10 32 47.9	+0.8
GOLH				IAML		10 33 05.0	
	comp=N,17nm,0.6s						
RODP	Rodopos	2.89	280	PN	Pn	10 32 15.1	+1.0
KORT	Korkueli	3.14	52	PN	Pn	10 32 18.9	+1.3
KORT	Korkueli	3.14	52	i P	Pn	10 32 20.0	+2.5
KORT				i S	Sn	10 32 57.9	+3.1
KORT				IAML		10 33 01.0	
	comp=E,20nm,0.5s						
KORT				IAML		10 33 02.0	
	comp=N,9.4nm,1.3s						
KHAL	Karahalli	3.71	28	i P	Pn	10 32 25.8	+0.3
KHAL				i S	Sn	10 33 06.3	-2.7
KHAL				IAML		10 33 09.0	
	comp=E,8.1nm,0.8s						
AKMS	Akamas	4.17	90	P	Pn	10 32 30.6	-1.1
ALFC	Alefka	4.38	88	P	Pn	10 32 33.6	-0.9
OSC2	CSNet OBS 4	4.63	115	S	Sn	10 33 32.4	+1.0
SZAC	Souni	4.64	93	P	Pn	10 32 37.3	-0.8
ASGA	Asgata	4.94	92	P	Pn	10 32 41.3	-0.8

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*UCR **20** 10:34:26.4±1.4, 8°.71N×83°.45W, h10^{km}±4^{km}*

*UPA **20** 10:34:26.5±1.6, 8°.80N×83°.38W, h4^{km}±6^{km}, MW3.6*

ISC 20 10:34:27.6±0.9, 8°.81N±0°.03×83°.38W±0°.03, h13^{km}±7^{km}, n26, σ1^{s}.09/45, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDPN	Palmar Norte	0.17	333	eP	Pg	10 34 31.9	+0.2
EDPN				eS	Sg	10 34 36.7	+2.2
PTJ1	Puerto Jimnez	0.28	164	eP	Pg	10 34 31.6	-1.8
PTJ1				eS	Sg	10 34 37.3	0.0
PTJ1	Puerto Jimnez	0.28	164	eP	Pg	10 34 31.9	-1.5
PTJ1				eS	Sg	10 34 37.3	0.0
EDBA	Buenos Aires	0.37	16	eP	Pb	10 34 35.7	-0.4
EDBA				eS	Sb	10 34 43.3	+1.6
EDSV	San Vito	0.40	88	eP	Pb	10 34 36.4	-0.2
EDSV				eS	Sb	10 34 44.6	+1.9
EDLM	Las Mercedes	0.51	336	eP	Pg	10 34 37.2	-0.6
EDLM				eS	Sb	10 34 46.4	+0.5
MLIR3	Monte Lirio, C	0.55	91	eP	Pb	10 34 38.8	-0.4
MLIR3				eS	Sb	10 34 47.3	+0.4
EDDO	Dominical	0.65	313	eP	Pg	10 34 39.6	-0.8
EDDO				eS	Sg	10 34 48.8	-0.3
BRU2	Volcan	0.68	91	i P	Pg	10 34 40.4	-0.5
BRU2				eS	Sb	10 34 51.8	+1.0
BRU2	Volcan	0.68	91	eP	Pg	10 34 40.4	-0.5
BRU2				eS	Sb	10 34 51.7	+1.0
SBAR3	San Bartolo, C	0.69	135	eP	Pn	10 34 44.2	+1.2
SBAR3				eS	Sn	10 34 56.5	+2.9
BCO2	Palmira	0.84	96	eP	Pg	10 34 43.0	-1.0
BCO2				eS	Sn	10 34 57.4	-0.3
PTAR3	Potrerillos Ar	0.88	97	eP	Pg	10 34 43.8	-0.8
PTAR3				eS	Sn	10 34 58.3	-0.2
CNI2	El Empalme, Bo	1.09	56	eP	Pg	10 34 46.5	-2.0
CNI2				i S	Sg	10 35 01.2	-1.6
CHIR3	Chiriqui UPA,	1.11	111	eP	Pb	10 34 48.4	-0.4
CHIR3				eS	Sg	10 35 02.8	-0.8
LCR2	La Lucha 2	1.12	327	eP	Pg	10 34 47.1	-2.0
LCR2				eS	Sg	10 35 03.1	-0.6
HDC	Heredia	1.39	329	eP	Pn	10 34 52.7	-0.1
HDC				i S	Sb	10 35 10.3	-1.0
HDC	Heredia	1.39	329	eP	Pn	10 34 52.7	-0.1
HDC				eS	Sn	10 35 11.8	+0.6
SRA1	San Ramn	1.67	320	eP	Pn	10 34 56.3	-0.4
CEDE	Laguna Cedeo	2.12	322	eP	Pn	10 35 03.6	+0.8
JTS	Las Juntas de	2.14	314	eP	Pn	10 35 03.6	+0.5
JTS				i S	Sn	10 35 30.2	+0.6
JTS	Las Juntas de	2.14	314	eP	Pn	10 35 03.7	+0.7
GMAL	Guarumal, Vera	2.36	116	eP	Pn	10 35 06.3	+0.3
PLVR	Palo Verde	2.48	308	eP	Pn	10 35 07.8	0.0
CUI	Cuipilapa	2.55	316	eP	Pn	10 35 09.6	+0.9
CACAO	El Cacao, Vera	2.88	120	eS	Sn	10 35 48.2	+0.4

IDC 20 10:35:24.2±2.0, 9°.62S×109°.48W, h0^{km}, mb3.7/4, mb1 4.0/4, mb1mx3.7/36, mbtmp3.7/4, MS3.5/8, Ms1 3.5/8, ms1mx3.4/20, Error ellipse: s-maj=77.2km s-min=29.5km az=46.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	Rapa Nui	17.42	180	LR	LR	10 44 15.7	
	comp=Z,83nm,20.2s,baz=26,slow=30						
CMIG	Matias Romero	30.21	29	LR	LR	10 50 39.8	
	comp=Z,110nm,22.0s,baz=196,slow=30						
TXAR	Lajitas Array	39.13	8	LR	LR	10 55 40.4	
	comp=Z,22nm,21.3s,baz=0.0,slow=31						
PPT2	Papeete2	39.70	254	eS	S	10 48 53.5	-10
	134nm,29.8s						
PPT2				eLR	LR	10 53 51.3	
	comp=Z,138nm,25.2s						
TBI	Tubuai	40.54	245	eLR	LR	10 54 14.5	
	comp=Z,149nm,30.2s						
LPAZ	La Paz	40.78	104	P	P	10 43 07.9	-0.4
	1.6nm,0.7s,baz=307,slow=6.1,SNR=6.0						
LPAZ				LR	LR	10 57 18.8	
	comp=Z,56nm,18.2s,baz=252,slow=32						
PLCA	Paso Flores	46.30	139	LR	LR	10 58 32.5	
	comp=Z,101nm,19.3s,baz=329,slow=30						
NVAR	Mina Array Bea	48.50	351	LR	LR	10 59 45.2	
	comp=Z,80nm,20.6s,baz=212,slow=30						
CPUP	Villa Florida	51.96	116	P	P	10 44 35.6	+0.2
	1.4nm,0.7s,baz=264,slow=6.0,SNR=3.2						
CPUP				LR	LR	11 03 11.9	
	comp=Z,75nm,18.4s,baz=248,slow=32						
PDAR	Pinedale Array	52.13	360	P	P	10 44 34.7	-1.9
	0.2nm,0.6s,baz=185,slow=10,SNR=3.6						
YKA	Yellowknife Ar	72.00	358	P	P	10 46 51.1	+1.6
	0.5nm,0.8s,baz=167,slow=5.8,SNR=5.7						
H11S2	WAKE ISLAND Hy	87.22	289	T	T	12 25 18.6	
	baz=100,slow=75,SNR=123						
H11S1	WAKE ISLAND Hy	87.23	289	T	T	12 25 16.1	
	baz=100,slow=75,SNR=134						
H11S3	WAKE ISLAND Hy	87.24	289	T	T	12 25 14.6	
	baz=100,slow=75,SNR=134						
H11N3	WAKE ISLAND Hy	87.26	290	T	T	12 25 20.2	
	baz=100,slow=74,SNR=29						
H11N2	WAKE ISLAND Hy	87.28	290	T	T	12 25 21.2	
	baz=100,slow=74,SNR=34						
H11N1	WAKE ISLAND Hy	87.28	290	T	T	12 25 21.1	
	baz=100,slow=74,SNR=23						
PETK	Petropavlovsk-	99.30	322	LR	LR	11 24 23.9	
	comp=Z,30nm,21.5s,baz=62,slow=30						
CMAR	Chiang Mai Arr	151.09	291	PKPbc	PKPbc	10 55 19.5	-0.8
	0.6nm,0.3s,baz=64,slow=2.1,SNR=1.5						

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*IDC **20** 10:35:49.4±2.2, 6°.90S×122°.05W, h0^{km}, mb4.1/9, mb1 4.4/9, mb1mx4.1/42, mbtmp4.1/9, Error ellipse: s-maj=66.1km s-min=51.9km az=93.0*

ISC 20 10:35:51.3±1.9, 6°.9S±0°.3×122°.0W±0°.5, h10^{km}, n15, σ0^{s}.54/12, mb4.5/9, South Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TXAR	Lajitas Array	40.07	25	P	P	10 43 27.0	-0.1
	0.9nm,1.0s,baz=201,slow=13,SNR=6.2						
NVAR	Mina Array Bea	45.19	4	P	P	10 44 09.7	+0.9
	1.3nm,0.7s,baz=189,slow=11,SNR=14						
PDAR	Pinedale Array	50.67	12	P	P	10 44 51.4	+0.2
	0.4nm,0.6s,baz=170,slow=6.0,SNR=3.6						
ULM	Lac du Bonnet	61.22	19	P	P	10 46 05.8	-0.5
	2.5nm,0.6s,baz=234,slow=5.7,SNR=7.1						
DLBC	Dease Lake	65.41	355	P	P	10 46 34.3	+0.3
	3.6nm,0.9s,baz=204,slow=8.4,SNR=3.9						
YKA	Yellowknife Ar	69.38	4	P	P	10 46 59.0	-0.1
	3.0nm,0.7s,baz=179,slow=6.4,SNR=55						
ILAR	Eielson Array	73.81	349	P	P	10 47 24.8	-0.9
	0.8nm,0.9s,baz=178,slow=5.1,SNR=8.3						
H11S2	WAKE ISLAND Hy	74.67	291	T	T	12 08 52.2	
	baz=109,slow=74,SNR=6.9						
H11S1	WAKE ISLAND Hy	74.68	291	T	T	12 08 51.8	
H11S3	WAKE ISLAND Hy	74.69	291	T	T	12 08 54.0	
	baz=100,slow=74,SNR=3.9						
INK	Inuvik	75.43	356	P	P	10 47 34.8	-0.2
	7.1nm,1.1s,baz=178,slow=3.5,SNR=9.4						
SCHQ	Schefferville	76.61	29	P	P	10 47 42.2	+0.1
	4.5nm,0.8s,baz=253,slow=5.3,SNR=11						
TORD	Torodi Ar. Bea	124.27	79	PKP	PKPdf	10 54 51.4	-0.2
	0.7nm,0.8s,baz=328,slow=5.1,SNR=2.6						
MKAR	Makanchi Array	135.09	336	PKP	PKPdf	10 55 11.2	0.0
	0.3nm,0.6s,baz=27,slow=2.0,SNR=4.1						
BRTR	Keskin Array B	140.62	30	PKP	PKPdf	10 55 22.5	+0.7
	0.7nm,0.5s,baz=330,slow=2.0,SNR=3.1						

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*NIED **20** 10:35:00, 33°.10N×138°.90E, h17^{km}, Mw3.6 Best double couple: $M_0 2.96000\times10^{14}$ NP1: ϕ_s290.00000°, δ89.00000°, λ167.00000°. NP2: ϕ_s20.00000°, δ77.00000°, λ1.00000°.*

JMA 20 10:35:53.0, 33°.12N×138°.93E, h35^{km}, M3.6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHCJ	Hachijojimakas	0.73	94	P	Pn	10 36 06.7	-0.1

JHCJ				S	Sn	10 36 16.2	-0.5
JHJ2	Mitsune	0.74	90	P	Pn	10 36 07.2	+0.2
JHJ2				S	Sn	10 36 17.3	+0.2
JMKN	Mikurajimanish	0.95	35	P	Pn	10 36 10.4	+0.6
JKO	Kozu shima	1.08	9	P	Pn	10 36 12.4	+0.8
JKO				eS	Sn	10 36 26.3	+1.0
TK02	Tokai 2	1.28	310	P	Pn	10 36 15.2	+1.0
TK02				S	Sn	10 36 32.3	+2.3
TK01	Tokai 1	1.29	300	P	Pn	10 36 15.2	+0.9
TK01				S	Sn	10 36 31.7	+1.5
TK03	Tokai 3	1.32	323	P	Pn	10 36 16.0	+1.2
TK03				S	Sn	10 36 33.1	+2.0
TTO4	TONANKAI O.B.S	1.46	308	P	Pn	10 36 17.5	+0.9
TTO4				S	Sn	10 36 35.7	+1.3
TTO3	TONANKAI O.B.S	1.48	300	P	Pn	10 36 18.2	+1.2
TTO3				S	Sn	10 36 37.6	+2.6
TTO5	TONANKAI O.B.S	1.52	318	P	Pn	10 36 18.3	+0.8
TTO5				S	Sn	10 36 37.4	+1.5
TK04	Tokai 4	1.54	325	P	Pn	10 36 19.1	+1.3
TK04				S	Sn	10 36 38.4	+1.9
JIZS	Izushimoda	1.59	358	P	Pn	10 36 20.7	+2.0
JIZS				S	Sn	10 36 41.0	+2.9
TTO2	TONANKAI O.B.S	1.71	292	P	Pn	10 36 21.5	+1.5
TTO2				S	Sn	10 36 43.4	+3.0
TTO1	TONANKAI O.B.S	1.86	286	P	Pn	10 36 23.6	+1.5
TTO1				S	Sn	10 36 46.5	+2.2
SHZ3	Shizuoka 3	2.03	343	P	Pn	10 36 25.8	+1.0
JIE	Ise	2.25	305	P	Pn	10 36 28.6	+0.9
JIE				S	Sn	10 36 54.7	+0.6

IDC 20 10:52:43.0±8.2**, 6°.31S**×**128°.36E, h319**^{km}±92^{km}**, mb3.1**/2**, mb1 3.2**/5**, mb1mx2.9**/47**, mbtmp3.9**/5**, Error ellipse: s-maj=64.4km s-min=30.3km az=55.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.01	193	P	Pn	10 55 23.4	-1.9
	0.2nm,0.3s,baz=25,slow=9.4,SNR=6.1						
FITZ				S	S	10 57 41.0	+1.7
	0.1nm,0.3s,baz=307,slow=7.7,SNR=1.6						
WRA	Warramunga Arr	14.74	157	P	P	10 55 56.9	+0.6
	0.8nm,0.3s,baz=336,slow=11,SNR=28						
WRA				S	S	10 58 32.8	-4.0
	0.1nm,0.3s,baz=335,slow=20,SNR=2.5						
ASAR	Alice Springs	18.06	163	P	P	10 56 33.0	+0.7
	1.1nm,0.3s,baz=345,slow=11,SNR=112						
STKA	Stephens Creek	28.29	156	P	P	10 58 07.6	-0.3
	0.8nm,0.5s,baz=324,slow=15,SNR=2.8						
MKAR	Makanchi Array	66.77	327	P	P	11 03 00.7	0.0
	0.3nm,0.4s,baz=122,slow=8.6,SNR=6.5						

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*IDC **20** 11:06:55.1±2.7, 19°.47S×71°.02W, h0^{km}, mb3.7/3, mb1 3.9/4, mb1mx3.6/31, mbtmp3.8/4, ML3.6/1, MS2.2/1, Ms1 2.3/1, ms1mx2.1/37, Error ellipse: s-maj=80.1km s-min=45.5km az=178.0*
*SJA **20** 11:06:56.8±0.5, 19°.51S×71°.02W, h18^{km}±4^{km}, ML3.6, MW3.8*
*GUC **20** 11:06:59.0±0.5, 19°.43S×71°.03W, h42^{km}±2^{km}, ML3.7*
ISC 20 11:06:56.8±3.4**, 19°.38S**±0°.04×**71°.05W**±0°.08**, h11**^{km}±21^{km}**, n30,** σ**0**^{s}**.84**/44**, mb3.8**/3**, 4C-4D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.90	104	⇑iP	Pb	11 07 14.7	+0.2
PSGC				i S	Sb	11 07 26.6	+0.1
PSGC				IAML		11 07 28.2	
	comp=N,3μm,0.3s						
PSGCX	Pisagua	0.90	104	i P	Pb	11 07 13.8	-0.8
PSGCX				i Sg	Sb	11 07 25.7	-0.9
PSGCX				IAML		11 07 28.1	
	comp=Z,2μm,0.4s						
PB12	IPOC Station P	1.02	42	⇑iP	Pn	11 07 17.7	+0.5
PB12				i S	Sn	11 07 31.9	+0.2
PB12	IPOC Station P	1.02	42	i P	Pn	11 07 17.7	+0.5
PB12				IAML		11 07 34.9	
	comp=Z,825nm,0.7s						
PB11	IPOC Station P	1.36	106	eP	Pn	11 07 22.4	+0.4
PB11				eS	Sb	11 07 40.2	+0.1
PB11				IAML		11 07 43.0	
	comp=N,4μm,0.3s						
PB11	IPOC Station P	1.36	106	i P	Pn	11 07 21.6	-0.5
PB11				IAML		11 07 43.6	
	comp=Z,2μm,0.4s						
TA01	Diego Aracena	1.43	146	⇓iP	Pn	11 07 22.8	-0.1
TA01				i S	Sn	11 07 40.9	-0.9
PATCX	Punta Patache	1.66	150	⇓iP	Pn	11 07 25.9	-0.2
PATCX				i S	Sn	11 07 47.1	-0.4
PATCX				IAML		11 07 58.2	
	comp=E,979nm,0.4s						
GO01	Chusmiza	1.77	100	⇑iP	Pb	11 07 29.3	-0.4
GO01				i S	Sb	11 07 52.4	+0.3
GO01				IAML		11 07 55.7	
	comp=N,2μm,0.2s						
PB16	IPOC Station P	1.79	55	⇑iP	Pb	11 07 30.1	+0.1
PB16				i S	Sb	11 07 54.0	+1.3
PB16	IPOC Station P	1.79	55	i P	Pb	11 07 30.5	+0.5
PB16				IAML		11 07 58.8	
	comp=Z,903nm,0.6s						
PB08	IPOC Station P	1.94	113	i P	Pn	11 07 31.4	+1.2
PB08				i S	Sb	11 07 56.0	-0.8
PB08				IAML		11 08 00.1	
	comp=N,1μm,0.4s						
PB08	IPOC Station P	1.94	113	i P	Pn	11 07 30.4	+0.3
PB08				i Sg	Sb	11 07 57.6	+0.8
PB08				IAML		11 07 58.6	
	comp=Z,567nm,0.4s						
PB01	IPOC Station P	2.21	139	⇓iP	Pn	11 07 34.0	+0.4
PB01				i S	Sn	11 08 00.6	-0.4
PB01				IAML		11 08 10.7	
	comp=N,520nm,0.6s						
PB02	IPOC Station P	2.21	151	⇓iP	Pn	11 07 33.7	0.0
PB02				i S	Sn	11 08 01.0	-0.2
PB07	IPOC Station P	2.58	155	eP	Pn	11 07 38.4	-0.4
PB07				i S	Sb	11 08 15.7	+0.7
PB07	IPOC Station P	2.58	155	i P	Pn	11 07 38.5	-0.2
PB07				IAML		11 08 26.1	
	comp=Z,245nm,0.4s						
PB09	IPOC Station P	2.94	145	eP	Pn	11 07 44.9	+1.1
PB09				i S	Sb	11 08 28.4	+2.9
PB09	IPOC Station P	2.94	145	i P	Pn	11 07 44.0	+0.2
PB09				IAML		11 08 34.8	
	comp=Z,380nm,0.7s						
PB04	IPOC Station P	3.06	164	i P	Pn	11 07 45.2	-0.1
PB05	IPOC Station P	3.55	167	i P	Pn	11 07 52.5	+0.5
PB05				IAML		11 09 14.9	
	comp=Z,82nm,0.5s						
PB06	IPOC Station P	3.59	158	i P	Pn	11 07 53.1	+0.4
PB06				IAML		11 09 02.5	
	comp=Z,111nm,0.4s						
LVC	Limon Verde	3.78	149	Sn	Sn	11 08 39.9	-0.4
	baz=307,slow=20						
LVC				Lg	Lg	11 08 55.9	
	comp=Z,14nm,0.3s,baz=72,slow=20,SNR=2.2						
LVC	Limon Verde	3.78	149	i P	Pn	11 07 56.0	+0.4
LVC				IAML		11 09 06.6	
	comp=Z,48nm,0.8s						
LPAZ	La Paz	4.14	43	Pn	Pb	11 08 08.1	-2.1
	comp=Z,0.8nm,0.3s,baz=229,slow=8.5,SNR=17						
LPAZ				LR	LR	11 09 03.2	
	comp=Z,30nm,19.2s,baz=252,slow=31						
SIV	San Ignacio	10.08	72	Pn	Pn	11 09 23.2	+1.4
	comp=Z,0.5nm,0.3s,baz=259,slow=12,SNR=8.7						
PTGA	Pitinga	21.48	32	P	P	11 11 45.5	-0.2
	comp=Z,1.2nm,0.3s,baz=95,slow=23,SNR=2.0						
TORD	Torodi Ar. Bea	78.56	72	P	P	11 18 58.0	-1.1
	comp=Z,0.3nm,0.4s,baz=264,slow=4.3,SNR=2.2						
YKA	Yellowknife Ar	88.54	341	P	P	11 19 49.9	+0.7
	comp=Z,0.5nm,0.8s,baz=140,slow=5.3,SNR=8.6						
MKAR	Makanchi Array	145.01	33	PKPbc	PKPab	11 26 33.9	+0.2
	comp=Z,0.2nm,0.5s,baz=305,slow=3.0,SNR=2.4						

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*IDC **20** 11:10:10.7±0.8, 7°.97S×74°.60W, h156^{km}±8^{km}, mb3.1/7, mb1 3.4/12, mb1mx3.3/38, mbtmp3.7/12, Error ellipse: s-maj=13.4km s-min=12.0km az=53.0*
ISC 20 11:10:10.6±0.6**, 7°.93S**±0°.08×**74°.55W**±0°.08**, h151**^{km}**, n14,** σ**1**^{s}**.07**/19**, mb3.2**/7**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	Atahualpa	3.89	281	P	Pn	11 11 10.5	+0.5
	21nm,0.3s,baz=84,slow=2.7,SNR=199						
ATAH				S	Sn	11 11 55.3	-0.6
	24nm,0.3s,baz=38,slow=23,SNR=9.2						
NNA	Nana	4.62	209	P	Pn	11 11 20.2	+1.0
	1.3nm,0.3s,baz=10,slow=1.8,SNR=1.4						
NNA				S	Sn	11 12 10.5	-2.1
	11nm,0.3s,baz=201,slow=21,SNR=15						
LPAZ	La Paz	10.41	144	P	Pn	11 12 37.6	+1.0
	0.3nm,0.3s,baz=312,slow=6.5,SNR=3.1						
SIV	San Ignacio	15.42	123	P	P	11 13 41.0	-0.5
	0.8nm,0.3s,baz=299,slow=11,SNR=8.9						
PTGA	Pitinga	16.19	65	P	P	11 13 50.9	+0.8
	1.0nm,0.3s,baz=236,slow=14,SNR=5.6						
PLCA	Paso Flores	32.86	174	P	P	11 16 30.7	+0.5
	0.8nm,0.5s,baz=359,slow=10,SNR=4.0						
TXAR	Lajitas Array	46.46	324	P	P	11 18 24.0	+1.3
	0.1nm,0.6s,baz=141,slow=5.8,SNR=1.8						
PDAR	Pinedale Array	59.69	331	P	P	11 19 57.4	-2.0
	0.2nm,0.6s,baz=168,slow=4.6,SNR=1.7						
NVAR	Mina Array Bea	61.50	322	P	P	11 20 12.0	+0.1
	0.1nm,0.5s,baz=138,slow=5.6,SNR=1.6						
NVAR				pP	pP	11 20 48.2	+0.6
	0.2nm,0.6s,baz=116,slow=6.1,SNR=1.8						
DBIC	Dimbokro	70.99	80	P	P	11 21 11.4	-1.1
	1.5nm,0.4s,baz=220,slow=9.3,SNR=4.3						
YKA	Yellowknife Ar	76.66	342	P	P	11 21 44.4	-0.1
	0.2nm,0.5s,baz=142,slow=6.3,SNR=3.8						
YKA				pP	pP	11 22 22.0	+0.2
	0.3nm,0.6s,baz=139,slow=6.2,SNR=6.2						
TORD	Torodi Ar. Bea	78.55	75	P	P	11 21 54.9	-1.2
	1.9nm,1.1s,baz=274,slow=5.9,SNR=4.7						
ASAR	Alice Springs	138.06	221	PKP	PKPdf	11 29 18.2	-0.2
	0.2nm,0.4s,baz=123,slow=2.2,SNR=4.8						
WRA	Warramunga Arr	140.31	225	PKP	PKPdf	11 29 22.5	-0.1
	0.7nm,0.7s,baz=128,slow=1.9,SNR=6.1						
WRA				pPKP	pPKPdf	11 30 03.8	+1.1
	0.3nm,0.5s,baz=135,slow=2.2,SNR=4.6						

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*TEH **20** 11:13:21.5, 36°.95N×50°.49E, h17^{km}, ML3.6*
*THR **20** 11:13:22.5±0.3, 36°.94N×50°.51E, h31^{km}±3^{km}, ML3.5*
ISC 20 11:13:21.3±0.9**, 36°.99N**±0°.03×**50°.49E**±0°.03**, h10**^{km}**, n50,** σ**1**^{s}**.53**/53**, 2C-1D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QALM	Alamut, Qazvin	0.57	167	ePg	Pb	11 13 32.9	-0.7
QALM				eSg	Sg	11 13 39.4	-0.7
IGZV	Ghazvin	0.65	200	ePg	Pb	11 13 34.1	-0.7
IGZV				eSg	Sg	11 13 41.9	-0.4
IGZV				e		11 13 42.5	
CHTH	Charan	1.20	155	ePg	Pb	11 13 43.8	-0.4
CHTH				IAML		11 13 59.1	
	comp=N,356nm,0.3s						
CHTH	Charan	1.20	155	ePg	Pb	11 13 43.8	-0.4
IMHD	Mahdasht	1.31	174	ePg	Pb	11 13 45.8	-0.3
IMHD				e		11 14 03.4	
QABG	Abgarm-Qazvin	1.48	210	ePg	Pn	11 13 47.3	-0.8
QABG				e		11 14 07.8	
ZNJK	Zanjan	1.49	258	ePg	Pg	11 13 49.6	-0.2
ZNJK				eSg	Sg	11 14 09.4	+0.3
ZNJK				IAML		11 14 10.0	
	comp=E,737nm,0.4s						
ZNJK				IAML		11 14 10.8	
	comp=N,1μm,0.5s						
ZNJK	Zanjan	1.49	258	ePg	Pg	11 13 49.6	-0.2
IRAZ	Razeghan	1.65	196	ePn	Pn	11 13 50.4	-0.1
IPRN	Peran	1.66	116	ePn	Pn	11 13 51.2	+0.6
IHSB	Hasanabad	1.68	158	ePg	Pb	11 13 52.1	-0.2
IDMV	Damavand	1.88	138	ePn	Pb	11 13 56.0	+0.1
IDMV				e		11 14 23.4	
ASTR	Astara	2.06	320	ePn	Pn	11 13 57.0	+1.0
IALA	Alasht	2.08	115	ePn	Pb	11 13 58.0	-1.2
LKRN	Lenkeran, Azer	2.19	322	ePn	Pn	11 13 58.2	+0.6
IQOM	Qom	2.20	168	ePn	Pn	11 13 58.7	+0.6
IQOM				e		11 14 01.0	
IFIR	Firoozkooh	2.27	126	ePn	Pb	11 14 02.1	-0.4
IFIR				e		11 14 34.9	
LRK	Lerik	2.37	315	ePn	Pn	11 14 00.5	+0.1
ISRB	Sarab	2.40	291	e		11 14 12.9	
ISRB				ePn	Pb	11 14 03.3	-1.4
HAGD	Aghdareh	2.43	207	ePn	Pn	11 14 02.1	+0.9
ASAO	Ashtian	2.47	189	ePn	Pn	11 14 02.4	+0.6
ASAO	Ashtian	2.47	189	ePn	Pn	11 14 02.4	+0.6
HSRG	Sareghieh	2.50	226	ePn	Pn	11 14 03.4	+1.1
HSRG				e		11 14 40.9	
ISHM	Shahmirzad	2.55	117	e		11 14 45.0	
ISHM				ePn	Pn	11 14 05.0	+2.0
ILAS	Lasjerd	2.56	128	ePn	Pb	11 14 05.5	-2.0
GHVR	GHOM	2.59	165	ePn	Pn	11 14 03.6	+0.3
GHVR	GHOM	2.59	165	ePn	Pn	11 14 03.6	+0.3
YRD	Yardimli	2.62	318	ePn	Pn	11 14 04.3	+0.5
IGLO	Ghaloghah	2.73	99	ePn	Pn	11 14 06.7	+1.4
IHRS	Heris	3.04	297	ePn	Pn	11 14 12.0	+2.3
IHRS				e		11 14 35.4	
IANJ	Anjilo	3.16	118	ePn	Pn	11 14 13.5	+2.2
HSAM	Samen	3.17	210	ePn	Pn	11 14 13.1	+1.6
HSAM				e		11 15 01.1	
KRSH	Karshahi	3.30	156	ePn	Pn	11 14 14.4	+1.2
BDRS	Dareh Seyedi	3.31	204	ePn	Pn	11 14 15.8	+2.5
QAM	Ghamsar	3.32	166	ePn	Pn	11 14 14.5	+1.1
BMDN	Meydan	3.58	203	ePn	Pn	11 14 19.8	+2.7
IKLH	Kolahrood	3.77	166	ePn	Pn	11 14 21.3	+1.6
IKMR	Kamar-syah	3.87	207	ePn	Pn	11 14 24.0	+3.1
PQL	Pirkuli	4.07	339	ePn	Pn	11 14 25.9	+2.2
IKFM	Kafar-mosalman	4.08	213	ePn	Pn	11 14 26.2	+2.5
SIZA	Siyzn	4.26	344	ePn	Pn	11 14 27.6	+1.3
IPIR	Pirpir	4.31	176	ePn	Pn	11 14 29.7	+2.5
XNQ	Khinaliq	4.56	337	ePn	Pn	11 14 33.4	+2.9
ANAR	Anarak	4.63	144	ePn	Pn	11 14 33.3	+1.9
QUB	Quba	4.68	340	ePn	Pn	11 14 31.7	-0.4
IGAR	Gharneh	4.75	164	ePn	Pn	11 14 34.7	+1.5
QSAR	Qusar	4.84	340	ePn	Pn	11 14 36.6	+2.5
SEKA	Sheki	4.93	330	ePn	Pn	11 14 36.6	+1.2
ZKT	Zaqatala	5.52	329	ePn	Pn	11 14 46.8	+3.3
AB31	Akbulak array	14.05	26	⇓Pn	Pn	11 16 34.6	-5.7
	comp=N,0.1nm,0.3s,baz=27,slow=12						
AB31				⇑Pg	P	11 16 46.8	-1.4
	comp=N,0.3nm,0.3s,baz=33,slow=16						
AB31				⇑Lg	Lg	11 17 58.9	
	comp=N,3.8nm,0.5s,baz=19,slow=22						

IDC 20 11:30:30.4±4.6**, 4°.60S**×**153°.47E, h136**^{km}±29^{km}**, mb3.3**/3**, mb1 3.6**/4**, mb1mx3.2**/36**, mbtmp3.8**/4**, Error ellipse: s-maj=66.1km s-min=27.8km az=113.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.47	281	P	Pn	11 30 57.7	-0.9
	18nm,0.3s,baz=101,slow=1.2,SNR=17						
KRVT				S	Sn	11 31 20.5	+0.3
	20nm,0.3s,baz=31,slow=19,SNR=3.3						
PMG	Port Moresby	7.88	232	P	Pn	11 32 23.5	+1.3
	4.4nm,0.3s,baz=60,slow=7.6,SNR=11						
PMG				S	Sn	11 33 49.6	-0.3
	0.9nm,0.3s,baz=324,slow=17,SNR=1.5						
WRA	Warramunga Arr	24.08	229	P	P	11 35 34.2	+0.8
	1.0nm,0.6s,baz=53,slow=9.7,SNR=12						
ASAR	Alice Springs	26.75	223	P	P	11 35 57.0	-0.6
	0.5nm,0.7s,baz=55,slow=9.0,SNR=8.7						
FITZ	Fitzroy Crossi	30.34	242	P	P	11 36 28.7	-0.7
	0.9nm,0.5s,baz=53,slow=7.8,SNR=1.9						
TORD	Torodi Ar. Bea	150.88	289	PKPbc	PKPbc	11 50 08.0	0.0
	0.3nm,0.5s,baz=94,slow=1.9,SNR=1.5						

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*KRAR **20** 11:31:01.5±0.1, 53°.71N×87°.86E, M2.1, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
NNC 20 11:31:11.8±6.7**, 53°.66N**×**87°.60E, h0**^{km}**, mb3.5, mpv3.2, 4C-5D, Error ellipse: s-maj=62.4km s-min=45.7km az=162.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	6.26	245	⇓Pn	Pn	11 32 46.1	+0.7
	2.0nm,0.6s						
KURK				⇑Sn	Sn	11 34 01.2	+3.7
	1.2nm,0.7s						
KURK				⇓Lg	Lg	11 34 35.0	
	2.9nm,0.9s						
KURBB	Kurchatov Arra	6.36	245	⇓Pn	Pn	11 32 46.1	-0.6
	1.4nm,0.4s						
KURBB				⇑Sn	Sn	11 33 57.6	-2.3
	2.3nm,0.6s						
KURBB				⇑Lg	Lg	11 34 34.7	
	4.5nm,0.7s						
MK31	Makanchi Array	7.67	208	⇑Pn	Pn	11 33 05.8	+1.0
	0.2nm,0.4s,baz=30,slow=15,SNR=4.1						
MK31				⇓Sn	Sn	11 34 33.3	+1.0
	0.5nm,0.6s,baz=202,slow=29,SNR=3.1						
MK31				⇓Lg	Lg	11 35 15.4	
	1.2nm,0.6s						

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*IDC **20** 12:12:35.8±2.6, 7°.20S×129°.41E, h96^{km}±28^{km}, mb3.7/7, mb1 3.9/11, mb1mx3.6/48, mbtmp4.1/11, MS3.0/1, Ms1 3.0/1, ms1mx2.4/23, Error ellipse: s-maj=43.0km s-min=16.6km az=77.0*
*DJA **20** 12:12:36.0±0.3, 7°S±3°×12°9E±°, h292^{km}±8^{km}, M4.4/12, mB5.2/6, mb4.1/6, MLv4.4/12, Mw(mB)4.6/6*
*NEIC **20** 12:12:38.1±2.9, 7°.15S±0°.08×129°.50E±0°.09, h128^{km}±6^{km}, mb4.5/17, Error ellipse: s-maj=12.4km s-min=12.0km az=121.0*
ISC 20 12:12:38.6±0.6**, 7°.11S**±0°.05×**129°.49E**±0°.06**, h139**^{km}**, n53,** σ**2**^{s}**.12**/50**, mb3.8**/8**, 1C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.99	116	P	Pn	12 13 24.1	+11
SAUI	Saumlaki	1.99	116		Pn	12 13 11.7	-1.3
BNDI	Bandanaira	2.60	9	P	Pn	12 13 25.2	+4.7
AAI	Ambon	3.64	339	P	Pn	12 13 35.4	+1.6
MSAI	Masohi	3.78	351	P	Pn	12 13 38.4	+2.7
FAKI	Fak Fak	4.99	34	P	Pn	12 13 51.1	-0.6
FAKI	Fak Fak	4.99	34		Pn	12 13 50.5	-1.2
SOEI	Soe	5.80	243	P	Pn	12 14 03.5	+0.8
	0.7nm1μm37nm,0.6s						
SOEI	Soe	5.80	243		Pn	12 14 02.3	-0.4
SOEI				Sn	Sn	12 15 05.1	-3.2
MTN	Manton Dam	5.92	164		Pn	12 14 03.2	-1.1
SANI	Sanana	6.12	325	P	Pn	12 14 03.9	-3.0
	0.1nm12nm,1.1s						
SIJI	Sorong	6.45	16	P	Pn	12 14 10.3	-1.0
	6.6nm,0.3s,baz=261,slow=22,SNR=24						
SIJI				S	Sn	12 15 19.4	-4.3
	6.2nm,0.3s,baz=239,slow=22,SNR=10						
LBMI	Labuha	6.73	343	P	Pn	12 14 11.1	-3.9
	0.2nm31nm,0.9s						
RKPI	Ransiki, Papua	7.26	40	P	Pn	12 14 20.4	-1.8
	1.3nm7μm61nm,0.8s						
KNRA	Kununurra	8.54	185		Pn	12 14 37.7	-1.7
PCI	Palu	11.43	302	P	Pn	12 15 08.1	-10
	15μm542nm,0.7s						
FITZ	Fitzroy Crossi	11.55	199	P	Pn	12 15 15.8	-3.6
	2.0nm,0.3s,baz=22,slow=11,SNR=94						
FITZ				S	Sn	12 17 14.7	-12
	8.4nm,0.3s,baz=329,slow=20,SNR=11						
FITZ	Fitzroy Crossi	11.55	199		Pn	12 15 16.4	-3.0
WB0	Warramunga Arr	13.45	160		Pn	12 15 40.4	-3.7
WRAB	Tennant Creek	13.59	160	Pn	Pn	12 15 42.3	-3.6
WRA	Warramunga Arr	13.60	160	P	Pn	12 15 42.1	-3.9
	1.0nm,0.3s,baz=337,slow=14,SNR=71						
WRA				S	Sn	12 18 04.4	-12
	4.3nm,0.3s,baz=334,slow=23,SNR=10						
WRA	Warramunga Arr	13.60	160		Pn	12 15 43.2	-2.8
WB2	Warramunga Arr	13.60	160	Pn	Pn	12 15 42.3	-3.7
WR0	Warramunga Arr	13.68	160		Pn	12 15 43.6	-3.4
COEN	Coen	15.07	118	Pn	Pn	12 16 03.7	-0.9
AS31	Alice Springs	17.00	166		P	12 16 27.3	-0.5
ASAR	Alice Springs	17.00	166	P	P	12 16 26.8	-1.0
	1.0nm,0.3s,baz=344,slow=14,SNR=80						
ASAR				S	S	12 19 23.1	-15
	0.5nm,0.3s,baz=341,slow=19,SNR=6.8						
ASAR	Alice Springs	17.00	166		P	12 16 26.6	-1.2
PSAD1	Pilbara Seismi	17.05	212		P	12 16 28.3	+0.1
PSAD1				IAmb	IAmb	12 16 30.8	
	comp=Z,11nm,0.7s						
PSAB2	Pilbara Seismi	17.11	212		P	12 16 28.5	-0.5
PSAB2				IAmb	IAmb	12 16 31.8	
	comp=Z,15nm,0.5s						
PSAC1	Pilbara Seismi	17.12	212		Pn	12 16 29.7	+0.1
PSAC1				IAmb	IAmb	12 16 31.7	
	comp=Z,13nm,0.6s						
PSAA2	Pilbara Seismi	17.13	212		Pn	12 16 30.4	+0.8
PSAA2				IAmb	IAmb	12 16 31.7	
	comp=Z,15nm,0.6s						
PSA00	Pilbara Seismi	17.14	212		Pn	12 16 30.4	+0.6
PSAA3	Pilbara Seismi	17.14	212		P	12 16 29.2	-0.1
PSAA3				IAmb	IAmb	12 16 32.1	
	comp=Z,17nm,0.6s						
PSAA1	Pilbara Seismi	17.14	212		P	12 16 29.5	+0.2
PSAB1	Pilbara Seismi	17.14	212		P	12 16 29.8	+0.5
PSAB1				IAmb	IAmb	12 16 32.2	
	comp=Z,17nm,0.6s						
PSAB3	Pilbara Seismi	17.15	212		Pn	12 16 30.3	+0.3
PSAC3	Pilbara Seismi	17.18	212		Pn	12 16 30.9	+0.5
PSAC3				IAmb	IAmb	12 16 32.6	
	comp=Z,14nm,0.7s						
FORT	Forrest	23.59	183	P	P	12 17 38.3	+1.5
BBOO	Buckleboo	26.29	167	P	P	12 18 02.3	+1.1
BBOO				IAmb	IAmb	12 18 03.0	
	comp=Z,24nm,1.5s						
STKA	Stephens Creek	27.11	157	P	P	12 18 10.2	+1.6
	comp=Z,1.8nm,0.5s,baz=326,slow=8.6,SNR=8.4						
STKA	Stephens Creek	27.11	157	P	P	12 18 09.8	+1.2
CMAR	Chiang Mai Arr	39.42	311	P	P	12 19 57.2	+2.0
	comp=Z,0.8nm,0.5s,baz=141,slow=7.2,SNR=7.5						
KSRS	Korea Array	44.35	358	LR	LR	12 40 04.2	
	comp=Z,16nm,18.9s,baz=228,slow=37						
SONM	Songino Array	58.39	342	P	P	12 22 21.6	+2.1
	comp=Z,0.4nm,0.5s,baz=166,slow=6.7,SNR=5.7						
SONM	Songino Array	58.39	342	IAmb	IAmb	12 22 23.7	
	comp=Z,0.6nm,1.0s						
MK31	Makanchi Array	68.04	327	P	P	12 23 23.5	+0.4
MKAR	Makanchi Array	68.04	327	P	P	12 23 26.0	+2.9
	comp=Z,2.2nm,0.4s,baz=124,slow=7.9,SNR=37						
MKAR	Makanchi Array	68.04	327	P	P	12 23 22.9	-0.2
ZALV	Zalesovo Beam	71.46	334	P	P	12 23 44.9	+1.2
	comp=Z,0.9nm,0.6s,baz=112,slow=4.7,SNR=3.9						
KURBB	Kurchatov Arra	72.34	329	P	P	12 23 50.7	+1.6
	comp=Z,1.0nm,0.6s,baz=126,slow=5.1,SNR=12						
BVAR	Borovoye Array	77.89	328	P	P	12 24 23.0	+2.1
	comp=Z,0.4nm,0.5s,baz=122,slow=4.2,SNR=3.6						
SYO	Syowa Base	83.38	201	⇑eP	P	12 24 51.6	+1.7

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*NEIC **20** 12:13:39.7±2.0, 17°.9N±0°.3×68°.71W±0°.06, h164^{km}±11^{km}, Error ellipse: s-maj=38.3km s-min=7.1km az=184.0*
*RSPR **20** 12:13:41.4, 18°.07N×68°.66W, h157^{km}±1^{km}, MD3.5/15*
*OSPL **20** 12:13:42.0±1.0, 17°.56N×68°.78W, h130^{km}±21^{km}, ML3.3*
ISC 20 12:13:41.3±1.6**, 18°.0N**±0°.1×**68°.71W**±0°.04**, h151**^{km}±10^{km}**, n60,** σ**0**^{s}**.68**/83**, 13C-5D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.59	32	i P	Pn	12 14 03.5	+0.3
PCDR				eS	Sn	12 14 20.3	+0.3
PCDR				IAML		12 14 21.8	
	comp=Z,599nm,0.3s						
PCDR	Punta Cana, DR	0.59	32	⇑eP	Pn	12 14 03.2	0.0
PCDR				eS	Sn	12 14 20.4	+0.4
PCDR	Punta Cana, DR	0.59	32	⇑eP	Pn	12 14 03.5	+0.3
PCDR	Punta Cana, DR	0.59	32		Pn	12 14 03.5	+0.3
PCDR					Sn	12 14 20.4	+0.4
DR12	Loma Pena Alta	1.00	320		Pn	12 14 05.6	-0.6
SDD	Santo Domingo	1.22	291	i P	Pn	12 14 08.2	0.0
SDD				eS	Sn	12 14 27.6	-1.1
SDD				IAML		12 14 34.5	
	comp=Z,62nm,0.5s						
SDD	Santo Domingo	1.22	291		Sn	12 14 26.9	-1.7
IDE	Isla Desecheo	1.23	72	eS	Sn	12 14 28.8	-0.1
IDE	Isla Desecheo	1.23	72	⇑eP	Pn	12 14 08.0	-0.3
IDE	Isla Desecheo	1.23	72		Pn	12 14 08.0	-0.3
IDE					Sn	12 14 28.8	-0.1
MPR	Mayaguez	1.51	82		Pn	12 14 08.3	-2.7
CRPR	Cabo Rojo, PR	1.52	90	⇓eP	Pn	12 14 11.2	0.0
CRPR	Cabo Rojo, PR	1.52	90	eS	Sn	12 14 33.6	-0.4
CRPR	Cabo Rojo, PR	1.52	90		Pn	12 14 11.2	0.0
CRPR					Sn	12 14 33.6	-0.4
LSP	Las Mesas	1.55	84	⇑eP	Pn	12 14 10.6	-0.9
LSP	Las Mesas	1.55	84	eS	Sn	12 14 34.8	+0.1
LSP	Las Mesas	1.55	84		Pn	12 14 10.6	-0.9
LSP					Sn	12 14 34.8	+0.1

AGPR	Aguadilla, PR	1.59	73	iP	Pn	12 14 12.2	+0.4
AGPR				eS	Sn	12 14 35.3	0.0
AGPR				IAML		12 14 39.4	
	comp=Z,350nm,0.3s						
AGPR	Aguadilla, PR	1.59	73	⇑eP	Pn	12 14 12.3	+0.4
AGPR	Aguadilla, PR	1.59	73		Pn	12 14 12.3	+0.4
AGPR					Sn	12 14 35.5	+0.2
MLPR	Magueyes Islan	1.59	91	⇑eP	Pn	12 14 12.1	+0.2
MLPR	Magueyes Islan	1.59	91	eS	Sn	12 14 35.8	+0.6
MLPR	Magueyes Islan	1.59	91		Pn	12 14 12.1	+0.2
MLPR					Sn	12 14 35.8	+0.6
BANI	BANI	1.61	284		Pn	12 14 13.0	+0.8
BANI				Sn	Sn	12 14 36.5	+0.6
GBPR	Guanica, Bosqu	1.74	91	⇑eP	Pn	12 14 13.7	+0.1
GBPR	Guanica, Bosqu	1.74	91	eS	Sn	12 14 39.1	+0.8
GBPR	Guanica, Bosqu	1.74	91		Pn	12 14 13.7	+0.1
GBPR					Sn	12 14 39.1	+0.8
AOPR	Arecibo Observ	1.89	80	⇑eP	Pn	12 14 15.0	-0.2
AOPR	Arecibo Observ	1.89	80	⇓eP	Pn	12 14 15.1	-0.2
AOPR				eS	Sn	12 14 41.6	+0.3
AOPR	Arecibo Observ	1.89	80	eS	Sn	12 14 40.8	-0.5
AOPR	Arecibo Observ	1.89	80		Pn	12 14 15.1	-0.2
AOPR					Sn	12 14 40.8	-0.5
OBIP	Obispado Ponce	2.00	89	⇓eP	Pn	12 14 15.6	-0.9
OBIP	Obispado Ponce	2.00	89	eS	Sn	12 14 43.9	+0.3
OBIP	Obispado Ponce	2.00	89		Pn	12 14 15.6	-0.9
OBIP					Sn	12 14 43.9	+0.3
ICMP	Isla Caja de M	2.08	93	⇑eP	Pn	12 14 17.5	0.0
ICMP	Isla Caja de M	2.08	93	eS	Sn	12 14 45.7	+0.5
ICMP	Isla Caja de M	2.08	93		Pn	12 14 17.5	0.0
ICMP					Sn	12 14 45.7	+0.5
EMPR	Esperanza - Ma	2.12	77	⇑eP	Pn	12 14 17.4	-0.5
EMPR	Esperanza - Ma	2.12	77	eS	Sn	12 14 46.6	+0.6
EMPR	Esperanza - Ma	2.12	77		Pn	12 14 17.4	-0.5
EMPR					Sn	12 14 46.6	+0.6
SC01	Santiago de lo	2.37	307	iP	Pn	12 14 22.2	+1.3
SC01				eS	Sn	12 14 51.8	+0.4
SJG	San Juan	2.44	87		Pn	12 14 21.0	-0.7
IGPR	InterUniversit	2.48	91	⇑eP	Pn	12 14 22.0	-0.1
IGPR	InterUniversit	2.48	91	eS	Sn	12 14 54.3	+0.6
IGPR	InterUniversit	2.48	91		Pn	12 14 22.1	-0.1
GCPR	Guaynabo City	2.52	83	⇓eP	Pn	12 14 21.8	-0.9
GCPR	Guaynabo City	2.52	83	eS	Sn	12 14 54.4	-0.1
GCPR	Guaynabo City	2.52	83		Pn	12 14 21.8	-0.9
GCPR					Sn	12 14 54.4	-0.1
PDPR	Patillas Dam,	2.56	90		Pn	12 14 22.8	-0.3
SDDR	Presa de Saban	2.63	292	iP	Pn	12 14 24.8	+0.7
SDDR				eS	Sn	12 14 54.7	-2.4
SDDR				IAML		12 15 05.3	
	comp=Z,62nm,0.3s						
SDDR	Presa de Saban	2.63	292		Pn	12 14 24.9	+0.7
MTP	Monte Pirata	3.01	88	⇑eP	Pn	12 14 28.7	-0.1
MTP	Monte Pirata	3.01	88	eS	Sn	12 15 05.7	+0.2
MTP	Monte Pirata	3.01	88		Pn	12 14 28.7	-0.1
MTP					Sn	12 15 05.7	+0.2
CUPR	Culebra, Puert	3.27	84	⇓eP	Pn	12 14 31.3	-0.9
CUPR	Culebra, Puert	3.27	84	eS	Sn	12 15 11.3	-0.3
CUPR	Culebra, Puert	3.27	84		Pn	12 14 31.3	-0.9
CUPR					Sn	12 15 11.3	-0.3
STVI	Saint Thomas	3.59	84	⇑eP	Pn	12 14 36.5	+0.3
STVI	Saint Thomas	3.59	84	eS	Sn	12 15 18.9	+0.1
STVI	Saint Thomas	3.59	84		Pn	12 14 36.5	+0.3
STVI					Sn	12 15 18.9	+0.1

DJA 20 12:40:01.0±0.5, 2°N±4°×12°2E±°, h10km, M3.9/8, mB4.6/1, mb4.1/2, MLv3.8/8, Mw(mB)3.8/1, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	1.06	189	P	Pg	12 40 19.5	-1.9
MRSI				S	Sn	12 40 36.2	-0.5
KMSI	Cibinong	2.11	117	P	Pn	12 40 35.9	-0.4
KMSI				S	Sb	12 41 04.2	-1.3
APSI	Ampana	2.47	191	P	Pn	12 40 41.7	+0.4
APSI				S	Sn	12 41 12.5	+1.0
MPSI	Mapaga	2.50	242	P	Pn	12 40 42.4	+0.6
MPSI				S	Sn	12 41 13.0	+0.7
LUWI	Luwuk	2.64	165	P	Pn	12 40 43.2	-0.5
LUWI				S	Sn	12 41 16.5	+0.7
TTSI	Tana Toraja	5.08	207	P	Pn	12 41 17.0	-0.3
	0.1nm533nm25nm,0.6s						
SANI	Sanana	5.27	132	P	Pn	12 41 20.4	+0.5

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*IDC **20** 12:43:49.0±0.7, 4.°32S×151.°95E, h154km±7km, mb3.5/3, mb1 3.7/4, mb1mx3.2/39, mbtmp4.0/4, Error ellipse: s-maj=24.8km s-min=6.7km az=86.0*

*NEIC **20** 12:43:49.1±0.8, 4.°1S±0.°2×151.°8E±0.°3, h160km±13km, mb4.2/10, Error ellipse: s-maj=54.2km s-min=16.7km az=121.0*

ISC 20 12:43:48.7±1.0, 4.°2S±0.°2×151.°9E±0.°3, h161km±10km, n19, σ1.ˢ24/22, mb4.2/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	0.20	127	P	Pn	12 44 10.8	+0.6
	105nm,0.3s,baz=261,slow=19,SNR=102						
KRVT				S	Sn	12 44 25.2	-1.5
	33nm,0.3s,baz=197,slow=20,SNR=8.2						
RABL	Rabaul	0.29	91		Pn	12 44 11.0	+0.5
PMG	Port Moresby	6.98	222	P	Pn	12 45 29.7	+1.2
	1.5nm,0.3s,baz=32,slow=19,SNR=2.5						
PMG				S	Sn	12 46 46.8	-0.2
	2.3nm,0.3s,baz=101,slow=16,SNR=5.1						
PMG	Port Moresby	6.98	222		Pn	12 45 29.4	+0.9
COEN	Coen	12.95	221	Pn	Pn	12 46 47.8	+0.8
MTN	Manton Dam	22.22	246	P	P	12 48 32.1	-0.2
WB0	Warramunga Arr	23.02	226	P	P	12 48 40.8	+0.9
WB0				IAmb	IAmb	12 48 41.3	
	comp=Z,4.4nm,0.5s						
WR0	Warramunga Arr	23.04	226	P	P	12 48 40.6	+0.6
WR0				IAmb	IAmb	12 48 41.8	
	comp=Z,14nm,1.3s						
WRAB	Tennant Creek	23.16	226	P	P	12 48 42.0	+0.9
WB2	Warramunga Arr	23.17	226	P	P	12 48 42.3	+1.2
WB2				IAmb	IAmb	12 48 42.6	
	comp=Z,4.8nm,0.6s						
WRA	Warramunga Arr	23.18	226	P	P	12 48 42.3	+1.0
	comp=Z,3.5nm,0.5s,baz=53,slow=9.6,SNR=56						
WRA				PcP	PcP	12 52 24.7	-0.1
	comp=Z,0.6nm,1.0s,baz=37,slow=1.8,SNR=2.5						
WRA				S	S	12 52 36.9	-4.0
	comp=Z,0.7nm,0.8s,baz=45,slow=15,SNR=4.8						
WRA	Warramunga Arr	23.18	226	P	P	12 48 41.4	+0.2
KNRA	Kununurra	25.43	242	P	P	12 49 02.0	+0.3
AS31	Alice Springs	25.99	220	P	P	12 49 07.2	+0.4
ASAR	Alice Springs	26.00	220	P	P	12 49 06.8	0.0
	comp=Z,0.3nm,0.4s,baz=51,slow=9.1,SNR=15						
FITZ	Fitzroy Crossi	29.15	240	P	P	12 49 35.6	+0.7
	comp=Z,0.8nm,0.3s,baz=58,slow=7.0,SNR=16						
FITZ	Fitzroy Crossi	29.15	240	IAmb	IAmb	12 49 40.1	
	comp=Z,7.1nm,1.3s						
MAJO	Matsushiro	42.48	344	P	P	12 51 28.0	-0.1
MAJO				IAmb	IAmb	12 51 36.1	
	comp=Z,8.3nm,1.1s						
TORD	Torodi Ar. Bea	149.23	289	PKPbc	PKPbc	13 03 19.8	+0.4
	comp=Z,0.9nm,0.4s,baz=64,slow=2.6,SNR=9.4						

ISC 20 12:48:44.4±1.1, 49.°64N±0.°05×17.°03E±0.°05, h8km, n5, σ0.ˢ27/9, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORC	Moravsky Berou	0.36	68	ePG	Pg	12 48 51.2	-0.3
MORC				eSG	Sg	12 48 56.3	+0.1
VRAC	Vranov	0.44	221	ePG	Pg	12 48 53.0	0.0
VRAC				eSG	Sg	12 48 59.1	+0.3
KRUC	Moravsky	0.72	216	ePG	Pg	12 48 58.0	-0.2
KRUC				eSG	Sg	12 49 07.2	-0.4
JAVC	Velka Javorina	0.89	152	ePG	Pn	12 49 03.5	+0.2
KSP	Ksiaz	1.29	339	ePg	Pn	12 49 08.8	0.0
KSP				eSg	Sn	12 49 26.5	+0.2

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*SJA **20** 12:57:14.6±0.7, 35.°46S×73.°46W, h32km±221km, ML4.1, MW4.1*

*IDC **20** 12:57:24.3±1.2, 34.°74S×72.°45W, h0km, mb3.7/5, mb1 4.0/7, mb1mx3.9/23, mbtmp3.7/7, ML4.1/2, MS3.1/3, Ms1 3.1/3, ms1mx2.8/25, Error ellipse: s-maj=46.1km s-min=27.7km az=91.0*

*GUC **20** 12:57:27.7±0.7, 34.°74S×72.°42W, h30km±4km, ML4.1*

*NEIC **20** 12:57:28.8±1.6, 34.°72S±0.°07×72.°3W±0.°1, h30km±9km, Error ellipse: s-maj=17.4km s-min=10.2km az=90.0*

ISC 20 12:57:27.2±1.2, 34.°73S±0.°04×72.°45W±0.°06, h19km±3km, n35, σ1.ˢ37/44, mb3.8/5, 4C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	Huala	0.51	123	⇑iP	Pg	12 57 37.5	0.0
GO05				iS	Sg	12 57 44.2	-0.3
GO05				IAML		12 57 44.7	
	comp=N,25µm,0.2s						
GO05	Huala	0.51	123		Pg	12 57 37.7	+0.1
GO05					Sg	12 57 44.6	+0.1
BO01	Tunca	1.17	74	⇓iP	Pn	12 57 48.1	-0.5
BO01				iS	Sb	12 58 02.9	-0.9
MT01	Popeta	1.31	49	⇑iP	Pn	12 57 50.3	-0.2
MT01				iS	Sn	12 58 07.6	0.0
BO02	Sierra Bellavi	1.37	93	⇓iP	Pn	12 57 51.2	-0.2
BO02				iS	Sn	12 58 09.3	+0.2
BO02				IAML		12 58 11.0	
	comp=E,9µm,0.3s						
MT02	Curacav	1.83	37	eP	Pn	12 57 57.5	-0.1
MT02				iS	Sb	12 58 22.4	-0.1
CCHI	Chillan	1.89	171	⇑iP	Pn	12 57 59.4	+0.8
CCHI				iS	Sb	12 58 23.7	-0.7
CCHI				IAML		12 58 28.4	
	comp=E,6µm,0.5s						
MT03	Universidad Ad	2.02	53	eP	Pn	12 58 02.5	+2.1
MT03				iS	Sb	12 58 29.1	+0.7
LMEL	Las Melosas	2.06	65	⇓iP	Pb	12 58 03.1	-0.9
LMEL				iS	Sb	12 58 29.3	0.0
LMEL				IAML		12 58 36.2	
	comp=N,1µm,0.3s						
ROC1	El Roble	2.12	35		Pn	12 58 02.4	+0.6
BI02	San Fabin de	2.15	154	⇑iP	Pn	12 58 02.8	+0.6
BI02				iS	Sn	12 58 30.3	+1.8
BI02				IAML		12 58 34.3	
	comp=N,1µm,0.3s						
PEL	Peldehue	2.16	43		Pn	12 58 03.8	+1.6
RTLS	Leoncito	3.94	43	iP	Pn	12 58 30.1	+3.2
RTLS				IAML		12 59 36.9	
	comp=Z,100nm,0.7s						
RTCV	Cerro Valdivia	4.34	50	iP	Pn	12 58 35.1	+2.8
GO04	Tololo Observa	4.75	17		Pn	12 58 38.3	+0.2
GO04	Tololo Observa	4.75	17	iP	Pn	12 58 38.7	+0.6
RTLL	Cerro Villicun	4.76	46	⇓iP	Pn	12 58 40.1	+2.2
RTLL				iS	Sb	12 59 43.7	-3.2
RTLL				IAML		12 59 51.4	
	comp=Z,67nm,0.8s						
RTLL				IAML		12 59 51.9	
	comp=Z,68nm,0.8s						
GO06	Curarrehue	4.91	171		Pn	12 58 40.5	+0.4
ACCO	Cerro Coronel	5.02	36	iP	Pn	12 58 43.5	+1.7
AROD	Rodeo	5.20	30	iP	Pn	12 58 47.0	+2.7
ACDV	Cuesta del Vie	5.34	33	iP	Pn	12 58 48.1	+2.0
ACDV				IAML		13 00 21.2	
	comp=Z,31nm,0.7s						
PLCA	Paso Flores	6.18	166	Pn	Pn	12 58 58.6	+1.2
	comp=Z,1.5nm,0.3s,baz=0.1,slow=12,SNR=38						
PLCA				Lg	Lg	13 00 29.6	
	baz=291,slow=21,SNR=1.4						
PLCA				LR	LR	13 01 17.4	
	comp=Z,187nm,19.6s,baz=3.5,slow=38						
PLCA	Paso Flores	6.18	166		Pn	12 58 58.4	+0.9
GO03	Copiap	7.36	16	Pn	Pn	12 59 13.7	-0.1
LVC	Limon Verde	12.47	15	LR	LR	13 04 49.6	
	comp=Z,31nm,18.5s,baz=198,slow=36						
PB07	IPOC Station P	13.15	11	Pn	Pn	13 00 31.0	-2.1
LPAZ	La Paz	18.77	13	P	Pn	13 01 46.8	+0.4
	comp=Z,0.2nm,0.3s,baz=152,slow=7.8,SNR=5.1						
SIV	San Ignacio	21.27	32	P	P	13 02 12.1	-0.4
	comp=Z,1.7nm,0.7s,baz=235,slow=8.2,SNR=11						
ATAH	Atahualpa	28.00	347	LR	LR	13 12 59.5	
	comp=Z,65nm,19.8s,baz=258,slow=33						
TXAR	Lajitas Array	70.21	331	P	P	13 08 39.8	+0.9
	comp=Z,0.4nm,0.6s,baz=150,slow=8.6,SNR=7.6						
PDAR	Pinedale Array	84.26	333	P	P	13 09 57.7	+0.1
	comp=Z,0.1nm,0.3s,baz=116,slow=6.2,SNR=2.0						
NVAR	Mina Array Bea	84.29	326	P	P	13 09 59.0	+1.1
	comp=Z,0.5nm,0.8s,baz=171,slow=5.4,SNR=3.8						
ULM	Lac du Bonnet	87.11	345	P	P	13 10 10.3	-1.0
	comp=Z,1.2nm,0.7s,baz=134,slow=4.5,SNR=3.6						
WRA	Warramunga Arr	119.96	209	PKP	PKPdf	13 16 15.5	-1.5
	comp=Z,0.5nm,0.9s,baz=180,slow=1.3,SNR=4.7						
MKAR	Makanchi Array	157.49	50	PKPab	PKPab	13 17 53.7	0.0
	comp=Z,0.2nm,0.6s,baz=298,slow=6.0,SNR=2.6						

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*NNC **20** 13:03:13.1±5.5, 40.°78N×70.°70E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=40.1km s-min=20.3km az=16.0*

*SOME **20** 13:03:13.8, 40.°93N×70.°75E, h10km*

*KRNET **20** 13:03:14.6±0.1, 40.°83N×70.°37E, mb2.5*

ISC 20 13:03:14.3±1.2, 40.°89N±0.°04×70.°70E±0.°04, h14km±11km, n17, σ2.ˢ49/31, 10C-8D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	0.83	174	⇑iP	Pg	13 03 30.7	+0.2
	baz=56						
BTK				⇑iS	Sg	13 03 42.0	+0.6
	baz=56						
ARK	Arkit	1.32	46	⇑iP	Pg	13 03 42.3	+2.5
	baz=51						
ARK				⇑iS	Sn	13 04 02.7	+6.8
	baz=51						
IUG	Iuzhnay	1.36	339	eP	Pn	13 03 37.9	-1.1
	9.5nm,0.1s						
IUG				eS	Sb	13 03 55.4	-1.5
	98nm,0.3s						
IUG	Iuzhnay	1.36	339	P	Pg	13 03 41.1	+0.7
	9.5nm,0.1s						
IUG				S	Sg	13 04 01.4	+3.2
	95nm,0.3s						
ARSB	Arslanbob	1.78	75	⇓iP	Pg	13 03 49.1	+0.6
	baz=75						
ARSB				⇓iS	Sg	13 04 15.2	+3.5
	baz=75						
KK31	Karatay Array	2.22	356	⇑Pn	Pb	13 03 54.1	-0.2
	0.6nm,0.2s,baz=177,slow=14,SNR=29						
KK31				⇑Sn	Sg	13 04 22.9	-2.8
	1.6nm,0.2s,baz=182,slow=32						
BRLS	Borolday	2.24	344	eP	Pn	13 03 50.6	-0.4
	8.1nm,0.1s						
BRLS				eS	Sn	13 04 17.4	-1.1
	11nm,0.2s						
BRLS	Borolday	2.24	344	Pg	Pn	13 03 50.6	-0.4
	0.8nm,0.2s						
BRLS				Lg	Lg	13 04 17.4	
	11nm,0.2s						
AML	Almayashu	2.57	60	⇓iP	Pb	13 04 00.0	-0.5
	baz=61						
AML				⇓iS	Sg	13 04 34.5	-2.5
	baz=61						
MRKS	Merke	2.65	45	eP	Pb	13 04 01.6	-0.1
	5.6nm,0.2s						
MRKS				eS	Sg	13 04 36.2	-3.3
	4.9nm,0.3s						
MRKS	Merke	2.65	45	Pg	Pb	13 04 01.6	-0.1
	5.6nm,0.2s						
MRKS				Lg	Lg	13 04 36.4	
	4.9nm,0.3s						
ARLS	Aral	2.90	69	⇓iP	Pb	13 04 05.0	-0.9
	baz=69						
ARLS				⇓iS	Sb	13 04 42.2	+0.9
	baz=69						
EKS2	Erkin-Say	2.91	51	⇓eP	Pb	13 04 04.9	-1.2
	baz=53						
EKS2				⇓iS	Sb	13 04 41.9	+0.4
	baz=53						
UCH	Uchtor	3.16	64	⇑eP	Pb	13 04 08.6	-2.0
	baz=64						
UCH				⇑eS	Sb	13 04 48.8	-0.4
	baz=64						
KZA	Kyzart	3.62	69	⇑iP	Pb	13 04 14.8	-3.6
	baz=70						
KZA				⇑iS	Sb	13 04 59.6	-2.7
	baz=70						
DGS	Degeres	4.45	56	eP	Pb	13 04 34.2	+1.9
	0.8nm,0.4s						
DGS				eS	Sg	13 05 32.1	-5.1
	1.7nm,0.4s						
DGS	Degeres	4.45	56	Pg	Pb	13 04 34.2	+1.9
	0.8nm,0.4s						
DGS				Lg	Lg	13 05 32.1	
	1.7nm,0.5s						

IDC 20 13:26:10.6±4.8, 24.°01N×93.°48E, h242km±35km, mb2.9/5, mb1 3.1/6, mb1mx2.8/48, mbtmp3.5/6, Error ellipse: s-maj=172.3km s-min=14.1km az=61.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.51	136	P	Pn	13 27 57.9	+0.1
	0.6nm,0.3s,baz=317,slow=15,SNR=6.2						
MKAR	Makanchi Array	24.44	341	P	P	13 31 06.8	-0.6
	0.5nm,0.4s,baz=138,slow=8.1,SNR=8.2						
KURBB	Kurchatov Arra	28.99	340	P	P	13 31 47.5	-0.3
	0.2nm,0.5s,baz=150,slow=8.7,SNR=1.7						
ZALV	Zalesovo Beam	30.60	350	P	P	13 32 03.1	+1.3
	0.4nm,0.3s,baz=163,slow=9.2,SNR=2.0						
WRA	Warramunga Arr	59.10	134	P	P	13 35 45.5	-0.5
	0.2nm,0.4s,baz=320,slow=7.7,SNR=14						
ASAR	Alice Springs	61.52	137	P	P	13 36 02.9	+0.5
	0.4nm,0.7s,baz=320,slow=6.7,SNR=7.4						

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*IDC **20** 13:37:42.2±0.7, 29.°06N×139.°49E, h417km±9km, mb3.0/11, mb1 3.1/17, mb1mx3.0/60, mbtmp3.9/17, Error ellipse: s-maj=20.4km s-min=12.0km az=68.0*

*JMA **20** 13:37:42.5±0.1, 29.°26N×139.°88E, h433km, M3.8*

ISC 20 13:37:42.8±0.6, 29.°18N±0.°06×139.°66E±0.°10, h423km, n32, σ1.ˢ34/40, mb3.3/10, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.05	132	P	P	13 38 48.3	+0.2
CBIJ				eS	S	13 39 40.3	-0.9
JCJ	Chichijima	3.05	132	P	P	13 38 48.4	+0.3
	18nm,0.3s,baz=303,slow=23,SNR=26						
JCJ				S	S	13 39 40.1	-1.0
	91nm,0.3s,baz=288,slow=20,SNR=20						
JHH2	Haha-jima-NKT2	3.38	138	P	P	13 38 51.0	+0.2
JHH2				eS	S	13 39 45.5	-0.5
JHJ	Hachijo jima 2	3.93	2	P	P	13 38 56.8	+1.4
	18nm,0.3s,baz=252,slow=20,SNR=8.6						
JHJ				S	S	13 39 54.5	-0.1
	20nm,0.3s,baz=98,slow=14,SNR=2.0						
BSO3	Boso 3	5.65	7	eS	S	13 40 24.4	-0.6
JHU	Hanno	6.66	357	P	P	13 39 22.8	-0.5
JHU				eS	S	13 40 41.4	-3.7
JRY	Ryogami san	6.84	355	P	P	13 39 25.7	+0.3
JYT	Yasato	7.04	4	eS	S	13 40 50.5	-2.2
JAG	Ashikaga	7.22	359	P	P	13 39 28.8	-0.7
JAG				eS	S	13 40 52.3	-4.2
MJAR	Matsushiro Arr	7.44	351	P	P	13 39 31.5	-0.3
	0.2nm,0.3s,baz=165,slow=10,SNR=8.8						
JHO	Hitachi	7.45	6	P	P	13 39 32.5	+0.6
JHO				eS	S	13 40 58.7	-2.3
JNU	Nakatsue	8.49	300	P	P	13 39 43.8	+0.5
	0.4nm,0.3s,baz=190,slow=12,SNR=2.6						
ASAJ	Asahikawa	15.09	8	P	P	13 40 58.0	+2.7
	0.5nm,0.3s,baz=222,slow=15,SNR=6.4						
USRK	Ussuriysk Ar.	16.19	340	P	P	13 41 08.3	+1.3
	baz=142,slow=10,SNR=15						
KLR	Kul'dur	20.91	345	P	P	13 41 54.9	+1.0
	0.3nm,0.3s,baz=70,slow=3.5,SNR=3.8						
SONM	Songino Array	31.67	315	P	P	13 43 29.4	0.0
	0.5nm,0.7s,baz=110,slow=10,SNR=2.7						
SEY	Seymchan	34.76	10	P	P	13 43 57.3	+2.0
	0.3nm,0.3s,baz=162,slow=19,SNR=2.7						
TAPN	Taplejung	45.48	281	eP	P	13 45 22.2	-0.7
	2.5nm,0.3s						
ODAN	Odare	45.89	280	eP	P	13 45 25.7	-0.2
	4.5nm,0.4s						
RAMN	Ramite	46.55	281	eP	P	13 45 31.0	0.0
JIRN	Jiri	46.71	282	eP	P	13 45 32.2	-0.2
	14nm,0.4s						
GUN	Gumba	46.91	282	eP	P	13 45 33.5	-0.4
MKAR	Makanchi Array	47.43	308	P	P	13 45 36.2	-1.0
	0.2nm,0.3s,baz=87,slow=9.9,SNR=6.9						
MKAR				PcP	pP	13 46 59.3	+0.4
	0.2nm,0.6s,baz=72,slow=4.7,SNR=2.9						
DMN	Daman	47.65	282	eP	P	13 45 38.8	-0.6
	4.2nm,0.4s						
DANN	Dangsing	48.60	283	eP	P	13 45 46.4	-0.2
	7.5nm,0.5s						
WRA	Warramunga Arr	49.11	187	P	P	13 45 49.2	-0.8
	1.5nm,0.3s,baz=4.5,slow=7.5,SNR=2.5						
KURBB	Kurchatov Arra	49.99	313	P	P	13 45 55.5	-0.8
	1.2nm,0.5s,baz=92,slow=8.2,SNR=20						
BVAR	Borovoye Array	55.00	316	P	P	13 46 32.1	-0.3
	1.0nm,0.4s,baz=79,slow=6.8,SNR=6.8						
ILAR	Eielson Array	56.97	29	P	P	13 46 47.0	+1.0
	0.2nm,0.4s,baz=256,slow=5.7,SNR=4.9						
INK	Inuvik	62.07	25	P	P	13 47 21.1	+0.9
	0.4nm,0.5s,baz=322,slow=3.8,SNR=5.0						
ARCES	ARCESS Array B	70.84	340	P	P	13 48 15.3	+0.4
	2.0nm,0.8s,baz=64,slow=8.5,SNR=7.6						
FINES	FINESS Array B	75.09	333	P	P	13 48 39.5	-0.1
	0.9nm,0.5s,baz=76,slow=5.9,SNR=11						

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*IDC **20** 13:41:02.3±2.1, 5.°24S×131.°75E, h0km, mb3.6/2, mb1 4.2/6, mb1mx3.8/41, mbtmp4.0/6, ML4.3/4, MS3.0/4, Ms1 3.0/4, ms1mx2.7/35, Error ellipse: s-maj=104.3km s-min=23.5km az=83.0*

*DJA **20** 13:41:08.6±1.1, 5°S±2°×13°2E±°, h31km±15km, M4.5/12, mB5.3/3, mb4.6/6, MLv4.5/12, Mw(mB)4.7/3*

ISC 20 13:41:09.2±1.0, 5.°12S±0.°05×132.°02E±0.°07, h50km, n23, σ1.ˢ15/22, MS3.3/3, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	2.19	286	P	Pn	13 41 44.1	+1.0
BNDI				S	Sn	13 42 10.7	+1.7
FAKI	Fak Fak	2.20	6	P	Pn	13 41 44.4	+1.1
FAKI				S	Sn	13 42 09.9	+0.6
SAUI	Saumlaki	2.93	194	P	Pn	13 41 52.6	-0.8
SAUI				S	Sn	13 42 27.8	+0.4
MSAI	Masohi	3.55	300	P	Pn	13 42 01.7	-0.1
AAI	Ambon	4.07	290	P	Pn	13 42 09.6	+0.7
RKPI	Ransiki, Papua	4.18	31	P	Pn	13 42 10.9	+0.4
RKPI				S	Sn	13 42 59.6	+1.4
SIJI	Sorong	4.29	350	Pn	Pn	13 42 11.7	-0.3
	16nm,0.3s,baz=143,slow=15,SNR=84						
SIJI				Sn	Sn	13 42 57.2	-3.6
	27nm,0.3s,baz=253,slow=23,SNR=16						
SWI	Sorong	4.29	350	P	Pn	13 42 12.7	+0.6
NLAI	Namlea	5.25	291	P	Pn	13 42 25.7	+0.6
	0.5nm5µm40nm,0.5s						
LBMI	Labuha	6.34	314	P	Pn	13 42 40.7	+0.6
	0.2nm46nm,0.9s						
SANI	Sanana	6.75	297	P	Pn	13 42 45.9	+0.2
	0.1nm771nm15nm,0.5s						
WAMI	Wamena	6.79	80	P	Pn	13 42 47.3	+1.1
	0.4nm53nm,0.8s						
SOEI	Soe	8.96	239	P	Pn	13 43 16.4	+0.3
	31nm,0.7s						
APSI	Ampana	11.16	292	P	Pn	13 43 46.3	+0.1
FITZ	Fitzroy Crossi	14.33	205	Pn	Pn	13 44 23.8	-5.5
	1.3nm,0.3s,baz=30,slow=7.8,SNR=39						
FITZ				Sn	Sn	13 46 50.4	-16
	3.1nm,0.3s,baz=111,slow=12,SNR=11						
WRA	Warramunga Arr	14.91	171	Pn	Pn	13 44 31.9	-5.1
	1.4nm,0.3s,baz=354,slow=13,SNR=48						
WRA				Sn	Sn	13 47 06.9	-14
	1.5nm,0.3s,baz=335,slow=24,SNR=7.2						
ASAR	Alice Springs	18.53	175	P	P	13 45 20.6	-1.1
	0.7nm,0.3s,baz=356,slow=14,SNR=24						
ASAR				S	Sn	13 48 36.9	-12
	0.6nm,0.3s,baz=3.6,slow=27,SNR=7.5						
KRVT	Keravat (AS076	19.96	89	LR	LR	13 53 35.2	
	comp=Z,58nm,19.0s,baz=314,slow=37						
LEM	Lembang	24.32	265	LR	LR	13 55 57.6	
	comp=Z,14nm,21.6s,baz=43,slow=37						
MKAR	Makanchi Array	67.79	326	P	P	13 52 01.7	-0.2
	0.2nm,0.4s,baz=115,slow=7.5,SNR=7.2						
AAK	Ala-Archa	70.44	319	LR	LR	14 25 34.5	
	comp=Z,21nm,21.7s,baz=120,slow=38						
ZALV	Zalesovo Beam	70.82	333	P	P	13 52 20.0	-0.4
	0.4nm,0.4s,baz=111,slow=7.9,SNR=1.9						
WSAR	Wadi Sarin	76.87	295	LR	LR	14 29 47.9	
	comp=Z,14nm,20.5s,baz=200,slow=38						

IDC 20 13:53:30.6±2.1,6°.68S×130°.04E,h0^{km},mb4.1/1, mb1 3.6/3,mb1mx3.4/30,mbtmp3.5/3,ML3.4/2,MS3.2/2, Ms1 3.2/2,ms1mx2.6/26,Error ellipse: s-maj=126.3km s-min=30.7km az=69.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.83**	**163**	Pn	Pn	13 56 47.5	-0.5
	0.2nm,0.3s,baz=342,slow=10,SNR=11						
WRA				Sn	Sn	13 59 08.9	-13
	0.5nm,0.3s,baz=333,slow=22,SNR=11						
ASAR	**Alice Springs**	**17.29**	**168**	P	Pn	13 57 34.0	+0.4
	0.1nm,0.3s,baz=342,slow=9.7,SNR=8.7						
ASAR				S	Sn	14 00 32.1	-15
	0.1nm,0.3s,baz=347,slow=25,SNR=2.4						
MJAR	**Matsushiro Arr**	**43.67**	**10**	LR	LR	14 18 34.5	
	comp=Z,29nm,21.9s,baz=155,slow=34						
PETK	**Petropavlovsk-**	**64.01**	**18**	LR	LR	14 31 03.6	
	comp=Z,22nm,20.1s,baz=67,slow=35						
MKAR	**Makanchi Array**	**67.98**	**327**	P	P	14 04 31.6	0.0
	0.8nm,0.4s,baz=118,slow=7.9,SNR=16						

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*MDD **20** 13:55:35.6±4.5,32°.31N×7°.53W,h0^{km},mb3.8/1,Error ellipse: s-maj=91.6km s-min=39.3km az=92.0,PRXIMO SIN SOLUCIN*

*CNRM **20** 13:55:35.1±0.8,32°.12N×7°.84W,h0^{km},Error ellipse: s-maj=7.5km s-min=5.9km az=43.0*

ISC 20 13:55:33.1±1.1,32°.24N±0°.03×7°.69W±0°.05,h11^{km}±9^{km}, n18,σ1^{s}.60/27,Morocco

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRHM	**Skhour des Reh**	**0.29**	**323**	P	**Pg**	**13 55 38.8**	**-0.3**
SRHM				S	**Sg**	**13 55 42.5**	**-0.5**
OUK	**Oukaimeden**	**1.04**	**188**	P	**Pn**	**13 55 55.1**	**+1.1**
OUK				S	**Sb**	**13 56 08.1**	**+1.0**
OUZM	**OUZ**	**1.55**	**149**	P	**Pg**	**13 56 02.3**	**-0.5**
OUZM				S	**Sg**	**13 56 23.4**	**+0.4**
TTIG	**Tnine Tigouga,**	**1.81**	**201**	P	**Pn**	**13 56 03.8**	**-0.5**
TTIG				S	**Sn**	**13 56 27.3**	**+0.1**
TZRR	**Tazzarine**	**2.32**	**128**	P	**Pb**	**13 56 15.2**	**+0.1**
TZRR				S	**Sg**	**13 56 46.8**	**-1.0**
MD31	**MD31**	**2.55**	**75**	P	**Pb**	**13 56 18.6**	**-0.4**
MD31				S	**Sg**	**13 56 56.0**	**+0.7**
PFVI	**Vila Bisbo**	**4.97**	**349**	Pn	**Pn**	**13 56 49.6**	**+2.0**
	0.5nm,0.1s,SNR=4.0						
PFVI	**Vila Bisbo**	**4.97**	**349**	*e*Pn	**Pn**	**13 56 50.1**	**+2.4**
MORF	**Marmelete**	**5.12**	**351**	Pn	**Pn**	**13 56 51.5**	**+1.8**
MORF	**Marmelete**	**5.12**	**351**	*e*Pn	**Pn**	**13 56 51.5**	**+1.8**
PVAQ	**Vaqueiros**	**5.15**	**360**	Sn	**Sn**	**13 57 47.9**	**-1.7**
	2.0nm,0.6s						
PVAQ	**Vaqueiros**	**5.15**	**360**	*e*Sn	**Sn**	**13 57 47.9**	**-1.7**
PVAQ				A	A	13 58 11.9	
	2.0nm,0.6s						
EGRO	**El Granado**	**5.28**	**2**	Pn	**Pn**	**13 56 53.9**	**+1.9**
	1.5nm,0.3s,SNR=7.9						
PCVE	**Castro Verde**	**5.39**	**357**	Pn	**Pn**	**13 56 55.5**	**+2.1**
PCVE				Sn	**Sn**	**13 57 53.9**	**-1.5**
	1.3nm,0.3s						
PCVE	**Castro Verde**	**5.39**	**357**	*e*Pn	**Pn**	**13 56 55.5**	**+2.1**
PCVE				*e*Sn	**Sn**	**13 57 53.9**	**-1.5**
PCVE				A	A	13 57 56.2	
	1.3nm,0.3s						
EMIN	**Mina Concepcio**	**5.58**	**8**	Pn	**Pn**	**13 56 57.3**	**+1.3**
	0.7nm,0.2s,SNR=7.9						
EMIN				Sn	**Sn**	**13 57 57.5**	**-2.6**
	0.2nm,0.1s,SNR=7.9						
PNCL	**Nicolau / Gran**	**5.90**	**354**	Sn	**Sn**	**13 58 06.2**	**-1.7**
PNCL	**Nicolau / Gran**	**5.90**	**354**	*e*Sn	**Sn**	**13 58 06.2**	**-1.7**

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*IDC **20** 14:14:19.5±0.7,31°.48N×73°.77E,h0^{km},mb4.1/17, mb1 4.1/21,mb1mx3.9/61,mbtmp4.0/21,ML3.4/4,MS3.0/4, Ms1 3.1/4,ms1mx2.6/44,Error ellipse: s-maj=19.1km s-min=14.4km az=35.0*

*NEIC **20** 14:14:25.9±1.6,31°.57N±0°.09×73°.8E±0°.1,h46^{km}±6^{km}, mb4.3/16,Error ellipse: s-maj=14.3km s-min=12.2km az=81.0*

*NDI **20** 14:14:25.3±2.6,31°.72N×73°.61E,h41^{km}±999^{km},ML4.1, mb4.3(NEIC)*

ISC 20 14:14:24.9±0.5,31°.56N±0°.05×73°.76E±0°.05,h35^{km},n80, σ1^{s}.66/83,mb4.1/25,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMU	**Jammu**	**1.51**	**40**	*e*x	**Pn**	**14 14 46.0**	**-3.3**
JMU				*e*S	**Sn**	**14 15 06.0**	**-1.7**
THN	**Thein Dam**	**1.88**	**62**	*e*P	**Pn**	**14 14 56.5**	**+2.1**
THN				*e*x	x	14 15 20.0	
NIL	**Nilore**	**2.13**	**349**		**Pn**	**14 15 00.1**	**+2.1**
DHRM	**DHARAMSHALA**	**2.27**	**72**	*e*P	**Pn**	**14 15 02.1**	**+2.1**
DHRM				*i* x	x	14 15 05.5	
DHRM				*e*x	x	14 15 15.3	
DHRM				*e*S	**Sn**	**14 15 28.5**	**+1.6**
DHRM				*i* x	x	14 15 42.8	
DHRM				IAML		14 15 47.1	
	comp=N,17µm,1.0s						
DHRM				IAML		14 15 47.9	
	comp=E,5µm,0.4s						
BHK	**Bhakra**	**2.27**	**93**	*e*x	**Pn**	**14 15 00.4**	**+0.5**
BHK				*e*S	**Sn**	**14 15 29.2**	**+2.4**
SMLA	**Simla**	**2.95**	**97**	*e*P	**Pn**	**14 15 11.3**	**+2.2**
SMLA				*e*S	**Sn**	**14 15 44.8**	**+1.5**
SMLA				IAML		14 15 46.4	
	comp=N,692nm,0.2s						
SMLA				IAML		14 15 46.6	
	comp=E,600nm,0.1s						
NDI	**New Delhi**	**4.14**	**133**	*e*P	**Pn**	**14 15 25.5**	**-0.2**
NDI				*e*S	**Sn**	**14 16 11.0**	**-1.9**
KUDL	**Kundal**	**4.15**	**144**	*e*P	Pn	14 15 12.5	-13
KUDL				*e*S	Sn	14 15 57.0	-16
AYAN	**Aya Nagar**	**4.23**	**136**	*e*x	**Pn**	**14 15 27.7**	**+0.8**
SONA	**Sohna**	**4.38**	**138**	*e*x	**Sn**	**14 16 15.6**	**-3.1**
KBL	**Kabul**	**4.95**	**308**		**Pn**	**14 15 39.0**	**+2.0**
JOSI	**Joshimath**	**5.07**	**100**	*e*S	**Sn**	**14 16 35.7**	**-0.5**
JOSI				IAML		14 17 13.9	
	comp=N,404nm,0.6s						
JOSI				IAML		14 17 14.4	
	comp=E,219nm,0.2s						
AJM	**Ajmer**	**5.12**	**171**	*i* x	Pn	14 15 47.0	+7.9
AJM				*i* x	x	14 17 06.0	
JASL	**Jaisalmer**	**5.25**	**209**	*e*P	**Pn**	**14 15 40.4**	**-0.4**
KSH	**Kashi**	**8.14**	**12**	P	**Pn**	**14 16 18.9**	**-1.8**
KSH				S	Sn	14 17 38.3	-13
BHPL	**Bhopal**	**8.90**	**158**	*e*x	**Pn**	**14 16 31.8**	**+0.8**
BHPL				*e*P	**Pn**	**14 16 34.9**	**+3.9**
BHPL				*e*S	**Sn**	**14 18 06.7**	**-3.4**
BHPL				IAML		14 18 07.0	
	comp=E,62nm,0.1s						
BHPL				IAML		14 18 07.4	
	comp=N,44nm,0.0s						
DANN	**Dangsing**	**9.24**	**108**	*e*P	**Pn**	**14 16 35.3**	**-0.7**
	comp=N,31nm,0.2s						
GKN	**Gorkha**	**10.09**	**108**	*e*P	**Pn**	**14 16 46.3**	**-1.2**
	comp=N,28nm,0.2s						
KKN	**Kakani**	**10.70**	**108**	*e*P	**Pn**	**14 16 54.5**	**-1.3**
PKIN	**Phulchoki**	**10.88**	**108**	*e*P	**Pn**	**14 16 56.7**	**-1.6**
	comp=N,8.3nm,0.2s						
PKI	**Pulchoki**	**10.89**	**108**	*e*P	**Pn**	**14 16 56.7**	**-1.9**
	comp=N,12nm,0.3s						
AAK	**Ala-Archa**	**11.07**	**3**	Pn	**Pn**	**14 17 02.0**	**+1.1**
	comp=N,0.3nm,0.3s,baz=171,slow=7.8,SNR=7.6						
AAK				Sn	**Sn**	**14 18 57.8**	**-5.7**
	comp=N,0.8nm,0.3s,baz=126,slow=14,SNR=1.6						
AAK	**Ala-Archa**	**11.07**	**3**		**Pn**	**14 17 03.4**	**+2.6**
GUN	**Gumba**	**11.14**	**106**	*e*P	**Pn**	**14 17 00.1**	**-1.9**
JIRN	**Jiri**	**11.49**	**107**	*e*P	**Pn**	**14 17 05.0**	**-1.8**
KK31	**Karatay Array**	**11.81**	**348**		**Pn**	**14 17 10.7**	**-0.1**
KKAR	**Karatay Array**	**11.81**	**348**		**Pn**	**14 17 10.3**	**-0.5**
KKAR	**Karatay Array**	**11.81**	**348**		**Pn**	**14 17 10.7**	**-0.1**
RAMN	**Ramite**	**12.11**	**109**	*e*P	**Pn**	**14 17 12.7**	**-2.5**
	comp=N,20nm,0.2s						
ODAN	**Odare**	**12.79**	**108**	*e*P	**Pn**	**14 17 22.4**	**-2.0**
TAPN	**Taplejung**	**12.86**	**106**	*e*P	**Pn**	**14 17 23.0**	**-2.4**
GEYT	**Alibeck**	**14.34**	**301**	LR	LR	14 24 17.6	
	comp=N,63nm,18.2s,baz=90,slow=42						
HYB	**Hyderabad**	**14.74**	**162**	*i* P	**Pn**	**14 17 50.5**	**-0.3**
HYB				*e*		14 20 18.0	
HYB				*e*S	**Sn**	**14 20 35.0**	**+2.0**
WSAR	**Wadi Sarin**	**15.77**	**242**	Pn	**Pn**	**14 18 02.8**	**-1.6**
	comp=N,0.2nm,0.3s,baz=127,slow=5.1,SNR=1.6						
WSAR				Sn	Sn	14 20 41.2	-17
	comp=N,0.1nm,0.3s,baz=121,slow=18,SNR=1.9						
WMQ	**Urumqi**	**16.45**	**38**	*e*P	**P**	**14 18 14.3**	**-1.1**
WMQ				pmax	pmax		
	comp=N,160nm,7.9s						
WMQ				LR	LR		
	comp=N,650nm,29.2s						
WMQ				LR	LR		
	comp=N,1µm,29.2s						
MAKZ	**Makanchi**	**16.49**	**20**		**Pn**	**14 18 12.0**	**-1.5**
MK31	**Makanchi Array**	**16.57**	**21**		**Pn**	**14 18 14.7**	**+0.2**
MKAR	**Makanchi Array**	**16.57**	**21**	Pn	**Pn**	**14 18 12.6**	**-1.8**
	comp=N,0.2nm,0.3s,baz=203,slow=14,SNR=4.7						
MKAR				Sn	Sn	14 21 04.0	-13
	comp=N,0.1nm,0.3s,baz=204,slow=17,SNR=2.4						
MKAR	**Makanchi Array**	**16.57**	**21**		**Pn**	**14 18 14.3**	**-0.1**
KURBB	**Kurchatov Arra**	**19.38**	**9**	P	**P**	**14 18 47.0**	**-0.4**
	comp=N,0.1nm,0.3s,baz=200,slow=10,SNR=9.9						
KURK	**Kurchatov**	**19.48**	**9**	P	**P**	**14 18 48.4**	**-0.2**
ABKAR	**Akbulak array**	**20.51**	**333**	P	**P**	**14 18 59.9**	**0.0**
BVAR	**Borovoye Array**	**21.59**	**354**	P	**P**	**14 19 11.3**	**-0.2**
	comp=N,4.2nm,0.5s,baz=158,slow=9.5,SNR=29						
BRVK	**Borovoye**	**21.63**	**354**	P	**P**	**14 19 12.2**	**+0.3**
BRVK				IAmb	IAmb	14 19 13.2	
	comp=Z,7.0nm,0.7s						
AKTO	**Aktyubinsk**	**22.20**	**333**	P	**P**	**14 19 18.4**	**+0.3**
	comp=Z,3.5nm,0.6s,baz=141,slow=10,SNR=12						
GTA	**Gaotai**	**22.56**	**62**	*e*P	**P**	**14 19 24.4**	**+2.2**
GTA				pP	sP	14 19 36.8	+0.8
GTA				sP	pP	14 19 42.3	+11
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZALV	**Zalesovo Beam**	**23.75**	**16**	P	**P**	**14 19 33.4**	**-0.3**
	comp=Z,1.3nm,0.4s,baz=193,slow=11,SNR=4.8						
ZALV				LR	LR	14 29 50.1	
	comp=Z,37nm,18.6s,baz=58,slow=39						
CHTO	**Chiang Mai**	**26.01**	**113**	P	**P**	**14 19 52.1**	**-2.6**
CHTO				IAmb	IAmb	14 19 55.0	
	comp=Z,2.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**26.21**	**114**	P	**P**	**14 19 56.4**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=296,slow=9.7,SNR=9.4						
CMAR				LR	LR	14 30 48.0	
	comp=Z,18nm,18.6s,baz=285,slow=38						
XAN	**Xi'an**	**29.57**	**76**	P	**P**	**14 20 30.3**	**+3.8**
XAN				pP	pP	14 20 37.5	+0.9
XAN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SONM	**Songino Array**	**29.63**	**47**	P	**P**	**14 20 28.6**	**+1.7**
	comp=Z,0.6nm,0.5s,baz=248,slow=9.6,SNR=4.8						
BRTR	**Keskin Array B**	**33.39**	**295**	P	**P**	**14 21 01.6**	**+1.5**
	comp=Z,2.2nm,0.7s,baz=118,slow=9.0,SNR=11						
AKASG	**Malin Array Be**	**37.92**	**313**	P	**P**	**14 21 39.5**	**+0.8**
	comp=Z,0.9nm,0.5s,baz=87,slow=7.5,SNR=6.4						
AKASG	**Malin Array Be**	**37.92**	**313**	IAmb	IAmb	14 21 40.9	
	comp=Z,1.8nm,1.4s						
BURAR	**Bucovina Array**	**40.01**	**308**	P	**P**	**14 21 57.7**	**+1.4**
IDI	**Anoyia**	**40.63**	**289**	P	**P**	**14 22 02.1**	**+0.5**
	comp=Z,2.9nm,0.5s,baz=81,slow=13,SNR=1.5						
FINES	**FINESS Array B**	**42.87**	**329**	P	**P**	**14 22 19.3**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=123,slow=8.8,SNR=9.4						
FINES	**FINESS Array B**	**42.87**	**329**	P	**P**	**14 22 19.4**	**0.0**
KSRS	**Korea Array**	**44.51**	**67**	LR	LR	14 43 32.1	
	comp=Z,24nm,18.4s,baz=185,slow=39						
ARCES	**ARCESS Array B**	**46.57**	**339**	P	**P**	**14 22 49.0**	**+0.1**
	comp=Z,0.9nm,0.4s,baz=112,slow=8.3,SNR=12						
ARCES	**ARCESS Array B**	**46.57**	**339**	P	**P**	**14 22 49.4**	**+0.6**
GERES	**GERESS Array B**	**47.74**	**309**	P	**P**	**14 22 58.5**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=79,slow=7.1,SNR=7.7						
NB2	**NORSAR Subarra**	**49.72**	**326**	P	**P**	**14 23 13.1**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**49.72**	**326**	P	**P**	**14 23 12.7**	**-0.6**
	comp=Z,1.1nm,0.5s,baz=97,slow=7.6,SNR=5.4						
NC204	**NORSAR Array S**	**49.97**	**326**	P	**P**	**14 23 15.4**	**+0.2**
SENIN	**Lac Senin/Sane**	**52.28**	**307**	P	**P**	**14 23 33.4**	**+0.4**
KEST	**Kesra**	**52.93**	**293**	P	**P**	**14 23 38.5**	**+0.7**
	comp=Z,2.3nm,0.5s,baz=84,slow=8.5,SNR=4.6						
KEST	**Kesra**	**52.93**	**293**	P	**P**	**14 23 39.5**	**+1.6**
KEST				IAmb	IAmb	14 23 39.5	
	comp=Z,3.0nm,0.7s						
TOA0	**Torodi Ar. Sit**	**68.05**	**272**	P	**P**	**14 25 20.9**	**-0.4**
TOA0				IAmb	IAmb	14 25 21.5	
	comp=Z,2.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**68.05**	**272**	P	**P**	**14 25 20.6**	**-0.6**
	comp=Z,3.3nm,0.8s,baz=53,slow=5.6,SNR=16						
TORD	**Torodi Ar. Bea**	**68.05**	**272**	P	**P**	**14 25 20.8**	**-0.5**
TOLK	**Toolik Lake Re**	**75.10**	**15**	P	**P**	**14 26 01.5**	**-1.4**
TOLK				IAmb	IAmb	14 26 18.3	
	comp=Z,4.5nm,1.4s						
IMAR	**Indian Mountai**	**76.16**	**18**	P	**P**	**14 26 08.4**	**-0.5**
WRA	**Warramunga Arr**	**77.41**	**123**	P	**P**	**14 26 16.2**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=316,slow=6.7,SNR=9.6						
WRAB	**Tennant Creek**	**77.42**	**123**	P	**P**	**14 26 16.6**	**-0.1**
WB2	**Warramunga Arr**	**77.42**	**123**	P	**P**	**14 26 16.5**	**-0.2**
WB2				IAmb	IAmb	14 26 27.3	
	comp=Z,5.9nm,1.0s						
WR0	**Warramunga Arr**	**77.57**	**123**	P	**P**	**14 26 17.1**	**-0.4**
WR0				IAmb	IAmb	14 26 19.6	
	comp=Z,7.1nm,1.2s						
ASAR	**Alice Springs**	**79.53**	**126**	P	**P**	**14 26 28.4**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=342,slow=8.9,SNR=6.5						
YKA	**Yellowknife Ar**	**86.04**	**4**	P	**P**	**14 27 00.8**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=348,slow=4.6,SNR=17						
HNR	**Honiara**	**91.65**	**100**	LR	LR	15 10 52.4	
	comp=Z,516nm,19.4s,baz=37,slow=37						

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*IDC **20** 14:20:34.8±0.9,1°.22N×128°.08E,h0^{km},mb3.8/7, mb1 3.9/9,mb1mx3.7/42,mbtmp3.8/9,ML3.4/2,MS2.9/3, Ms1 2.9/3,ms1mx2.5/35,Error ellipse: s-maj=38.9km s-min=15.4km az=64.0*

*DJA **20** 14:20:36.7±0.3,1°N±2°×12°8E±°,h10^{km},M3.9/11, MLv3.9/11*

*NEIC **20** 14:20:37.2±1.7,1°.13N±0°.10×128°.02E±0°.09,h19^{km}±6^{km}, mb4.3/11,Error ellipse: s-maj=14.7km s-min=12.5km az=207.0*

ISC 20 14:20:38.1±0.6,1°.14N±0°.06×128°.05E±0°.05,h23^{km},n47, σ1^{s}.09/46,mb4.1/12,1D,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.77**	**242**	P	**Pb**	**14 20 51.9**	**-1.0**
TNTI				S	**Sb**	**14 21 03.6**	**+0.7**
TNTI	**Ternate**	**0.77**	**242**		**Pb**	**14 20 51.8**	**-1.0**
LBMI	**Labuha**	**1.84**	**197**	P	**Pn**	**14 21 09.1**	**+0.7**
SANI	**Sanana**	**3.77**	**213**	P	**Pn**	**14 21 35.2**	**+0.3**
SWI	**Sorong**	**3.78**	**122**	P	**Pn**	**14 21 35.8**	**+0.8**
SIJI	**Sorong**	**3.79**	**122**	Pn	**Pn**	**14 21 35.0**	**-0.1**
	4.4nm,0.3s,baz=334,slow=20,SNR=14						
SIJI				Sn	**Sn**	**14 22 19.6**	**+0.7**
	0.6nm,0.3s,baz=235,slow=6.8,SNR=1.6						
KMSI	**Cibinong**	**4.10**	**262**	P	**Pn**	**14 21 39.4**	**-0.1**
NLAI	**Namlea**	**4.45**	**192**	P	**Pn**	**14 21 44.8**	**+0.6**
MSAI	**Masohi**	**4.54**	**169**	P	**Pn**	**14 21 45.9**	**+0.4**
AAI	**Ambon**	**4.79**	**178**	P	**Pn**	**14 21 48.9**	**-0.1**
FAKI	**Fak Fak**	**5.82**	**134**	Pn	**Pn**	**14 22 03.6**	**+0.5**
KCP	**Kidapawan**	**6.54**	**333**	⇓*e*P	**Pn**	**14 22 15.2**	**+2.2**
KCP				*i* S	Sn	14 22 45.6	-41
KAPI	**Kappang**	**10.29**	**234**	LR	LR	14 27 02.9	
	comp=Z,64nm,18.9s,baz=4.5,slow=37						
TGY	**Tagaytay City**	**14.68**	**332**	LR	LR	14 29 18.8	
	comp=Z,40nm,20.9s,baz=58,slow=36						
FITZ	**Fitzroy Crossi**	**19.26**	**187**	P	**P**	**14 25 00.5**	**-0.7**
	0.1nm,0.3s,baz=32,slow=15,SNR=2.1						
GUMO	**Guam**	**20.74**	**53**	LR	LR	14 32 25.2	
	comp=Z,47nm,18.4s,baz=280,slow=34						
WB0	**Warramunga Arr**	**21.69**	**164**	P	**P**	**14 25 27.1**	**-0.5**
WB0				IAmb	IAmb	14 25 31.5	
	comp=Z,6.0nm,0.8s						
WRAB	**Tennant Creek**	**21.83**	**164**	P	**P**	**14 25 26.6**	**-2.5**
WRAB				IAmb	IAmb	14 25 33.5	
	comp=Z,12nm,1.1s						
WRA	**Warramunga Arr**	**21.84**	**164**	P	**P**	**14 25 29.5**	**+0.3**
	comp=Z,6.0nm,0.7s,baz=344,slow=11,SNR=42						
WRA	**Warramunga Arr**	**21.84**	**164**		**P**	**14 25 24.8**	**-4.3**
WB2	**Warramunga Arr**	**21.84**	**164**	P	**P**	**14 25 28.1**	**-1.1**
WB2				IAmb	IAmb	14 25 33.6	
	comp=Z,12nm,1.1s						
WR0	**Warramunga Arr**	**21.91**	**163**	P	**P**	**14 25 29.2**	**-0.7**
WR0				IAmb	IAmb	14 25 31.5	
	comp=Z,7.4nm,0.8s						
TPUB	**Ta-pu**	**23.18**	**342**	P	**P**	**14 25 43.4**	**0.0**
AS31	**Alice Springs**	**25.30**	**167**	P	**P**	**14 26 03.8**	**+0.6**
ASAR	**Alice Springs**	**25.30**	**167**	P	**P**	**14 26 05.0**	**+1.8**
	comp=Z,1.1nm,0.5s,baz=347,slow=9.6,SNR=32						
ASAR	**Alice Springs**	**25.30**	**167**	P	**P**	**14 26 03.5**	**+0.3**
CMAR	**Chiang Mai Arr**	**33.34**	**303**	P	**P**	**14 27 15.1**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=126,slow=9.9,SNR=4.3						
KSRS	**Korea Array**	**36.14**	**360**	P	**P**	**14 27 37.7**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=179,slow=9.2,SNR=1.8						
TAPN	**Taplejung**	**46.62**	**308**	*e*P	**P**	**14 29 05.9**	**+0.7**
ODAN	**Odare**	**46.65**	**307**	*e*P	**P**	**14 29 05.8**	**+0.4**
RAMN	**Ramite**	**47.33**	**307**	*e*P	**P**	**14 29 11.5**	**+0.8**
	comp=Z,23nm,0.9s						
JIRN	**Jiri**	**47.96**	**307**	*e*P	**P**	**14 29 16.7**	**+0.9**
	comp=Z,26nm,0.9s						
GUN	**Gumba**	**48.32**	**307**	*e*P	**P**	**14 29 19.4**	**+0.9**
	comp=Z,32nm,0.8s						
PKI	**Pulchoki**	**48.55**	**307**	*e*P	**P**	**14 29 20.6**	**+0.3**
PKIN	**Phulchoki**	**48.56**	**307**	*e*P	**P**	**14 29 20.4**	**+0.1**
KKN	**Kakani**	**48.74**	**307**	*e*P	**P**	**14 29 22.4**	**+0.8**
DMN	**Daman**	**48.81**	**307**	*e*P	**P**	**14 29 23.1**	**+0.9**
	comp=Z,20nm,0.9s						
GKN	**Gorkha**	**49.35**	**307**	*e*P	**P**	**14 29 27.0**	**+0.8**
SONM	**Songino Array**	**50.16**	**341**	P	**P**	**14 29 32.3**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=150,slow=8.9,SNR=4.7						
SONM	**Songino Array**	**50.16**	**341**	P	**P**	**14 29 30.6**	**-1.3**
DANN	**Dangsing**	**50.20**	**307**	*e*P	**P**	**14 29 33.4**	**+0.6**
	comp=Z,41nm,0.8s						
HYB	**Hyderabad**	**51.25**	**291**	*i* P	**P**	**14 29 41.0**	**+0.4**
YAK	**Yakutsk**	**60.76**	**1**	P	**P**	**14 30 47.7**	**0.0**
KURBB	**Kurchatov Arra**	**64.62**	**328**	P	**P**	**14 31 13.0**	**-0.7**
	comp=Z,1.6nm,0.6s,baz=126,slow=6.0,SNR=17						
KURK	**Kurchatov**	**64.62**	**328**	P	**P**	**14 31 12.8**	**-1.0**
KURK				IAmb	IAmb	14 32 32.0	
	comp=Z,4.2nm,0.8s						
KKAR	**Karatay Array**	**66.02**	**317**	P	**P**	**14 31 22.6**	**-0.5**
BVAR	**Borovoye Array**	**70.20**	**327**	P	**P**	**14 31 49.2**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=115,slow=7.2,SNR=3.6						

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*NNC **20** 14:27:33.9±5.8,42°.74N×85°.18E,h0^{km},mb3.6,mpv3.2, Error ellipse: s-maj=47.3km s-min=26.7km az=141.0*

*SOME **20** 14:27:44.8,42°.97N×84°.68E,h20^{km}*

ISC 20 14:27:33.6±2.7,42°.7N±0°.1×85°.06E±0°.10,h10^{km},n15, σ2^{s}.65/24,4C-3D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDGK	**Podgornoye**	**4.13**	**281**	Pg	**Pg**	**14 28 54.6**	**+1.9**
	3.4nm,0.4s						
PDGK				Lg	Lg	14 29 45.4	
	15nm,0.5s						
PDGK	**Podgornoye**	**4.13**	**281**	⇓Pn	**Pn**	**14 28 35.1**	**-1.9**
	0.5nm,0.3s						
PDGK				⇑Pg	**Pg**	**14 28 51.5**	**-1.3**
	3.9nm,0.4s						
PDGK				⇓Lg	Lg	14 29 45.8	
	19nm,0.5s						
DJR	**Jarkent**	**4.16**	**295**	*e*P	**Pg**	**14 28 54.7**	**+1.3**
	1.5nm,0.3s						
DJR				*e*S	**Sg**	**14 29 45.4**	**-1.9**
	9.0nm,0.3s						
DJR	**Jarkent**	**4.16**	**295**	Pg	**Pg**	**14 28 54.7**	**+1.3**
	1.5nm,0.3s						
DJR				Lg	Lg	14 29 45.6	
	11nm,0.5s						
MK31	**Makanchi Array**	**4.54**	**335**	Pn	**Pn**	**14 28 39.5**	**-2.9**
	0.2nm,0.2s,baz=149,slow=14,SNR=24						
MK31				⇑Pg	**Pg**	**14 28 59.4**	**-1.1**
	1.8nm,0.5s						
MK31				Lg	Lg	14 29 56.8	
	4.8nm,0.5s,baz=145,slow=30,SNR=7.3						
MAKZ	**Makanchi**	**4.65**	**333**	⇑Pn	**Pn**	**14 28 40.5**	**-3.4**
	0.5nm,0.3s						
MAKZ				⇓Pg	**Pg**	**14 29 00.0**	**-2.6**
	1.7nm,0.5s						
MAKZ				⇑Lg	Lg	14 29 58.5	
	5.5nm,0.5s						
KPKS	**Kokpek**	**4.73**	**281**	*e*P	**Pg**	**14 29 04.8**	**+0.5**
	5.9nm,0.1s						
KPKS				*e*S	**Sg**	**14 30 02.6**	**-2.9**
	37nm,0.4s						
ZSN	**Zaisan**	**4.74**	**358**	*e*P	**Pg**	**14 29 07.0**	**+2.5**
	5.1nm,0.1s						
ZSN				*e*S	**Sg**	**14 30 06.3**	**+0.5**
	16nm,0.8s						
ZSN	**Zaisan**	**4.74**	**358**	Pg	**Pg**	**14 29 07.0**	**+2.5**
	4.3nm,0.5s						
ZSN				Lg	Lg	14 30 06.4	
	13nm,0.8s						
KAPS	**Kapalarasan**	**4.85**	**304**	*e*P	**Pg**	**14 29 08.2**	**+1.6**
	2.4nm,0.2s						
KAPS				*e*S	**Sg**	**14 30 08.5**	**-0.9**
	7.0nm,0.3s						
KAPS	**Kapalarasan**	**4.85**	**304**	Pg	**Pg**	**14 29 08.2**	**+1.6**
	2.4nm,0.5s						
KAPS				Lg	Lg	14 30 08.5	
	9.4nm,0.6s						
SATY	**Saty**	**4.90**	**276**	*e*P	**Pg**	**14 29 07.4**	**-0.1**
	3.9nm,0.3s						
SATY				*e*S	**Sb**	**14 30 07.2**	**+8.5**
	16nm,0.4s						
SATY	**Saty**	**4.90**	**276**	Pg	**Pg**	**14 29 07.4**	**-0.1**
	3.5nm,0.6s						
SATY				Lg	Lg	14 30 07.5	
	16nm,0.4s						
ARXS	**Arharly**	**5.48**	**288**	*e*P	**Pg**	**14 29 19.2**	**+0.7**
	2.8nm,0.5s						
ARXS				*e*S	**Sg**	**14 30 27.4**	**-2.0**
	10nm,0.4s						
ARXS	**Arharly**	**5.48**	**288**	Pg	**Pg**	**14 29 19.2**	**+0.7**
	3.3nm,0.7s						
ARXS				Lg	Lg	14 30 27.4	
	12nm,0.3s						

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*ANF **20** 14:39:17.7±0.3,35°.82N×97°.24W,h0^{km},ML4.0/8,Error ellipse: s-maj=5.5km s-min=2.6km az=171.0*

*TUL **20** 14:39:17.8±0.8,35°.89N±0°.02×97°.28W±0°.03,h5^{km}±1^{km}, ML3.3,Error ellipse: s-maj=4.0km s-min=2.9km az=251.0*

*NEIC **20** 14:39:17.9±1.3,35°.92N±0°.02×97°.25W±0°.02,h5^{km}±2^{km}, Error ellipse: s-maj=3.2km s-min=3.0km az=285.0*

ISC 20 14:39:17.6±0.8,35°.91N±0°.03×97°.23W±0°.03,h4^{km},n37, σ1^{s}.13/42,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK005	**Luther M Schoo**	**0.25**	**172**		**Pg**	**14 39 23.2**	**+0.7**
ADOK	**Arcadia Dam**	**0.28**	**204**		**Pg**	**14 39 23.2**	**+0.2**
OK001	**Jones High Sch**	**0.35**	**188**	Pg	**Pg**	**14 39 24.6**	**+0.3**
OKCFA	**Oklahoma City**	**0.52**	**200**		**Pg**	**14 39 27.7**	**+0.1**
OKCFA				Sg	**Sg**	**14 39 34.8**	**+0.5**
OKCSW	**OKLAHOMA CITY**	**0.53**	**198**		**Pg**	**14 39 27.9**	**+0.1**
FNO	**Franklin**	**0.66**	**192**		**Pg**	**14 39 30.6**	**+0.3**
FNO				Sg	**Sb**	**14 39 39.8**	**-1.5**
W35A	**Tecumseh**	**0.81**	**159**		**Pg**	**14 39 33.0**	**-0.1**
W35A				Sg	**Sg**	**14 39 44.1**	**+0.5**
T35A	**Sooner Cattle**	**1.16**	**30**		**Pg**	**14 39 40.2**	**+0.2**
TUL1	**Leonard**	**1.17**	**89**		**Pg**	**14 39 39.8**	**-0.2**
TUL1	**Leonard**	**1.17**	**89**	P	**Pg**	**14 39 39.8**	**-0.2**
	baz=270						
TUL1				S	**Sb**	**14 39 56.5**	**+0.6**
	baz=270						
X34A	**Smith Ranch, M**	**1.39**	**201**		**Pn**	**14 39 43.5**	**-0.3**
U32A	**Winter Ranch,**	**1.51**	**289**		**Pn**	**14 39 44.9**	**-0.5**
WMOK	**Wichita Mounta**	**1.72**	**228**		**Pn**	**14 39 48.1**	**-0.3**
X37A	**Clayton**	**2.01**	**130**		**Pb**	**14 39 53.7**	**-1.1**
U38A	**Gravette**	**2.37**	**76**	Pn	**Pn**	**14 39 58.3**	**+1.1**
Z35A	**Perchaven, San**	**2.57**	**180**		**Pn**	**14 40 00.6**	**+0.6**
W39A	**Magazine**	**2.90**	**103**		**Pn**	**14 40 05.6**	**+1.1**
W39A	**Magazine**	**2.90**	**103**	P	**Pn**	**14 40 05.7**	**+1.2**
	baz=285						
MIAR	**Mount Ida**	**3.29**	**113**		**Pn**	**14 40 11.4**	**+1.5**
CBKS	**Cedar Bluff**	**3.52**	**326**	Sb	**Sg**	**14 41 09.0**	**-1.8**
	baz=145						
U40A	**Yellville**	**3.57**	**81**		**Pn**	**14 40 14.9**	**+1.1**
S39A	**Bolivar**	**3.61**	**59**		**Pn**	**14 40 15.6**	**+1.3**
AMTX	**Amarillo**	**3.77**	**256**	Pb	**Pb**	**14 40 23.4**	**-1.5**
	baz=73						
AMTX				Sb	**Sb**	**14 41 14.2**	**+3.3**
	baz=73						
ABTX	**Abilene, Hawle**	**3.83**	**212**	Pb	**Pb**	**14 40 24.7**	**-1.1**
	baz=30						
X40A	**Basin Creek Fa**	**3.87**	**110**	Pn	**Pn**	**14 40 19.3**	**+1.4**
WHTX	**Lake Whitney,**	**3.91**	**183**	Pn	**Pn**	**14 40 19.3**	**+0.9**
WHTX	**Lake Whitney,**	**3.91**	**183**	Pb	**Pb**	**14 40 25.8**	**-1.3**
	baz=2.4						
WHAR	**Wooly Hollow**	**4.08**	**97**		**Pn**	**14 40 21.9**	**+1.2**
W41B	**Gary Mavity, V**	**4.13**	**99**		**Pn**	**14 40 22.5**	**+1.1**

W41B	Gary Mavity, V	4.13	99	P	Pn	14 40 22.7	+1.3
	baz=282						
Z41A	Richland Creek	4.51	125	P	Pn	14 40 24.2	-2.5
	baz=307						
R40A	Maddies Statio	4.63	58	Pn	Pn	14 40 28.7	+0.3
T25A	Trinidad	5.91	284		Pn	14 40 46.0	-0.1
SDCO	Great Sand Dun	6.88	288	Pn	Pn	14 41 00.4	+0.9
SDCO	Great Sand Dun	6.88	288	P	Pn	14 41 00.5	+0.9
	baz=103						
ISCO	Idaho Springs	7.68	303	Pn	Pn	14 41 11.6	+1.0
ECSD	EROS Data Cent	7.83	3	Pn	Pn	14 41 12.7	+0.4

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*DJA **20** 14:57:43.2±0.7, 5°S±7°×15°4E±°, h104^{km}±5^{km}, M4.7/14, mb4.6/14, mB5.4/5, MLv4.7/3, Mw(mB)4.8/5*

*IDC **20** 14:57:45.3±3.0, 4°.90S×153°.94E, h103^{km}±22^{km}, mb3.9/14, mb1 4.0/16, mb1mx3.8/44, mbtmp4.2/16, MS2.8/1, Ms1 2.8/1, ms1mx2.4/32, Error ellipse: s-maj=30.4km s-min=15.0km az=106.0*

*NEIC **20** 14:57:48.1±1.8, 4°.90S±0°.08×153°.8E±0°.1, h126^{km}±6^{km}, mb4.3/16, Error ellipse: s-maj=17.2km s-min=11.1km az=89.0*

ISC 20 14:57:45.6±0.7, **4°.90S**±0°.07×**153°.92E**±0°.09, **h105**^{km}, **n59**, σ**1^s.12**/61, **mb4.2**/26, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.88	292		Pn	14 58 16.1	-0.7
RABL				Sn	Sn	14 58 44.8	+4.0
KRVT	Keravat (AS076	1.97	287	P	Pn	14 58 17.4	-0.6
	62nm,0.3s,baz=189,slow=0.7,SNR=117						
KRVT				S	Sn	14 58 40.2	-2.5
	90nm,0.3s,baz=196,slow=19,SNR=5.0						
KRVT				LR	LR	14 59 12.8	
	comp=Z,347nm,18.2s,baz=91,slow=44						
PMG	Port Moresby	8.06	236	P	Pn	14 59 42.0	+2.1
	11nm,0.3s,baz=56,slow=9.0,SNR=26						
PMG				S	Sn	15 01 09.4	-0.1
	2.9nm,0.3s,baz=39,slow=6.5,SNR=2.0						
PMG				LR	LR	15 02 48.6	
	comp=Z,71nm,19.9s,baz=73,slow=38						
PMG	Port Moresby	8.06	236		Pn	14 59 42.0	+2.1
CTA	Charters Tower	16.84	206	P	Pn	15 01 33.4	-1.7
	0.2nm,0.3s,baz=49,slow=20,SNR=2.5						
SAUI	Saumlaki	22.68	261	P	P	15 02 38.6	+0.1
	109nm,1.5s						
SIJI	Sorong	22.97	279	P	P	15 02 40.9	-0.5
	5.7nm,0.5s,baz=41,slow=15,SNR=5.7						
SWI	Sorong	22.97	279	P	P	15 02 41.3	-0.1
	13nm,0.7s						
MTN	Manton Dam	23.84	249	P	P	15 02 47.6	-1.7
MTN				IAmb	IAmb	15 02 53.9	
	comp=Z,11nm,0.8s						
WR0	Warramunga Arr	24.08	230	P	P	15 02 52.0	+0.5
WR0				IAmb	IAmb	15 02 54.0	
	comp=Z,7.8nm,0.8s						
WB0	Warramunga Arr	24.08	230	P	P	15 02 52.4	+0.9
WB0				IAmb	IAmb	15 02 53.5	
	comp=Z,11nm,0.8s						
WRAB	Tennant Creek	24.21	230	P	P	15 02 52.8	+0.1
WRAB				IAmb	IAmb	15 02 54.7	
	comp=Z,12nm,0.8s						
WB2	Warramunga Arr	24.21	230	P	P	15 02 53.1	+0.4
WB2				IAmb	IAmb	15 02 54.5	
	comp=Z,9.3nm,0.7s						
WRA	Warramunga Arr	24.22	230	P	P	15 02 53.1	+0.3
	comp=Z,12nm,0.8s,baz=54,slow=9.8,SNR=54						
WRA				PcP	PcP	15 06 31.2	+0.5
	comp=Z,0.8nm,0.9s,baz=41,slow=1.8,SNR=2.9						
WRA	Warramunga Arr	24.22	230	P	P	15 02 52.6	-0.2
WRA					PcP	15 06 27.0	-3.7
H11S3	WAKE ISLAND Hy	26.43	28	T	T	15 31 51.2	
	baz=208,slow=76,SNR=5.1						
H11S2	WAKE ISLAND Hy	26.44	28	T	T	15 31 51.2	
	baz=208,slow=76,SNR=4.6						
H11S1	WAKE ISLAND Hy	26.45	28	T	T	15 31 50.7	
	baz=208,slow=76,SNR=2.7						
AS31	Alice Springs	26.84	224	P	P	15 03 16.2	-0.3
ASAR	Alice Springs	26.84	224	P	P	15 03 16.8	+0.3
	comp=Z,4.1nm,0.8s,baz=54,slow=8.7,SNR=56						
ASAR	Alice Springs	26.84	224	P	P	15 03 16.0	-0.5
STKA	Stephens Creek	29.22	202	P	P	15 03 37.6	+0.2
	comp=Z,4.3nm,0.9s,baz=4.3,slow=9.5,SNR=6.5						
STKA	Stephens Creek	29.22	202	P	P	15 03 37.7	+0.2
FITZ	Fitzroy Crossi	30.59	242	P	P	15 03 49.6	-0.2
LUWI	Luwuk	31.33	276	P	P	15 03 55.8	-0.5
	comp=Z,1µmcomp=Z,33nm,1.2s						
MMRI	Maumere	31.67	262	P	P	15 03 58.3	-1.0
	comp=Z,18nm,1.2s						
BASI	Baing, Sumba	33.45	259	P	P	15 04 15.8	+0.9
MORW	Morawa	43.15	232	P	P	15 05 35.8	-0.2
PETK	Petropavlovsk-	57.88	3	P	P	15 07 27.9	+1.6
	comp=Z,2.0nm,0.8s,baz=141,slow=8.2,SNR=6.5						
CMAR	Chiang Mai Arr	58.92	295	P	P	15 07 34.3	0.0
	comp=Z,0.6nm,0.3s,baz=113,slow=5.0,SNR=9.5						
MA2	Magadan	64.32	358	P	P	15 08 10.9	+1.2
SONM	Songino Array	67.00	327	P	P	15 08 28.1	+0.8
	comp=Z,1.2nm,0.6s,baz=142,slow=5.8,SNR=9.6						
SONM	Songino Array	67.00	327	P	P	15 08 27.9	+0.5
TAPN	Taplejung	71.41	301	*e*P	P	15 08 56.0	+0.8
	comp=Z,27nm,1.0s						
ODAN	Odare	71.55	300	*e*P	P	15 08 56.8	+0.8
	comp=Z,36nm,0.7s						
RAMN	Ramite	72.25	300	*e*P	P	15 09 00.8	+0.6
	comp=Z,13nm,0.9s						
JIRN	Jiri	72.79	301	*e*P	P	15 09 04.4	+0.8
	comp=Z,19nm,0.7s						
GUN	Gumba	73.12	301	*e*P	P	15 09 06.0	+0.5
	comp=Z,29nm,0.7s						
BILL	Bilibino	73.29	5	P	P	15 09 06.2	+1.1
BILL				IAmb	IAmb	15 09 07.5	
	comp=Z,3.8nm,0.9s						
PKI	Pulchoki	73.44	300	*e*P	P	15 09 07.7	+0.4
	comp=Z,7.8nm,0.6s						
PKIN	Phulchoki	73.45	300	*e*P	P	15 09 07.7	+0.4
KKN	Kakani	73.60	301	*e*P	P	15 09 08.7	+0.5
	comp=Z,20nm,0.7s						
DMN	Daman	73.71	300	*e*P	P	15 09 09.6	+0.8
	comp=Z,25nm,0.8s						
GKN	Gorkha	74.21	301	*e*P	P	15 09 12.3	+0.7
DANN	Dangsing	75.04	301	*e*P	P	15 09 16.5	-0.1
	comp=Z,15nm,0.8s						
IMAR	Indian Mountai	80.11	19	P	P	15 09 44.9	+1.4
MK31	Makanchi Array	81.13	319	P	P	15 09 49.0	-0.5
MKAR	Makanchi Array	81.13	319	P	P	15 09 49.7	+0.2
	comp=Z,0.8nm,0.5s,baz=95,slow=7.4,SNR=11						
MKAR	Makanchi Array	81.13	319	P	P	15 09 48.8	-0.7
MAKZ	Makanchi	81.34	319	P	P	15 09 49.8	-0.8
MAKZ				IAmb	IAmb	15 09 52.0	
	comp=Z,4.3nm,1.1s						
ILAR	Eielson Array	81.83	22	P	P	15 09 51.6	-1.2
	comp=Z,0.8nm,0.8s,baz=241,slow=5.0,SNR=12						
ZALV	Zalesovo Beam	81.85	326	P	P	15 09 52.8	-0.3
	comp=Z,1.5nm,0.6s,baz=122,slow=7.1,SNR=5.9						
KURK	Kurchatov	84.53	322	P	P	15 10 06.8	-0.1
KURK				IAmb	IAmb	15 10 07.9	
	comp=Z,3.7nm,1.0s						
KURBB	Kurchatov Arra	84.56	322	P	P	15 10 07.0	-0.1
	comp=Z,1.5nm,0.9s,baz=109,slow=3.8,SNR=15						
AAK	Ala-Archa	85.54	313	P	P	15 10 12.3	-0.1
	comp=Z,1.3nm,0.7s,baz=133,slow=9.3,SNR=6.2						
NRIK	Noril'sk	86.42	341	P	P	15 10 15.2	-0.6
	comp=Z,1.3nm,0.6s,baz=152,slow=6.9,SNR=6.1						
YKA	Yellowknife Ar	94.99	28	P	P	15 10 55.5	-0.6
	comp=Z,0.5nm,1.0s,baz=268,slow=4.3,SNR=4.7						
TORD	Torodi Ar. Bea	151.39	289	PKPbc	PKPbc	15 17 27.6	-0.6
	comp=Z,2.2nm,0.6s,baz=64,slow=2.5,SNR=11						
TORD	Torodi Ar. Bea	151.39	289		PKiKP	15 17 28.7	0.0

GCMT 20 15:01:25.0±0.4, **35°.25S**±0°.02×**110°.95W**±0°.02, **h21**^{km}±2^{km}, **MW4.9**/83, **Moment Tensor Solution. s18,c18; s83,c104; Duration: 0 Moment tensor: Scale** 10^{16} **Nm;** M_{rr}-0.20±.15; $M_{\theta\theta}$-1.35±.11; $M_{\phi\phi}$1.56±.13; $M_{r\theta}$-1.10±.25; $M_{\theta\phi}$-1.61±.08; $M_{\phi r}$-1.06±.25; **Best double couple:** $M_0$2.63000×10^{16} **NP1:**ϕ_s115.00000°, δ59.00000°, λ-168.00000°. **NP2:**ϕ_s19.00000°, δ80.00000°, λ-31.00000°. **Principal axes:** T 2.4020, Plg14.0000°, Azm71.0000°; N 0.4620, Plg58.0000°, Azm183.0000°; P -2.8570, Plg29.0000°, Azm333.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBI	Tubuai	35.41	279	*e*LR	LR	15 17 39.0	
	comp=Z,347nm,27.0s						
PPT2	Papeete2	38.51	287	*e*LR	LR	15 18 55.6	
	comp=Z,178nm,28.5s						
DZM	Mont Dzumac	71.80	256	*e*LR	LR	15 34 18.5	
	comp=Z,182nm,23.4s						

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*IDC **20** 15:32:37.3±2.6, 7°.61S×128°.18E, h154^{km}±30^{km}, mb3.6/6, mb1 3.8/10, mb1mx3.5/47, mbtmp4.2/10, MS3.2/2, Ms1 3.2/2, ms1mx2.6/30 Error ellipse: s-maj=46.0km s-min=19.3km az=88.0*

*NEIC **20** 15:32:38.3±3.0, 7°.54S±0°.08×128°.34E±0°.08, h167^{km}±9^{km}, mb4.2/14, Error ellipse: s-maj=11.7km s-min=11.1km az=138.0*

ISC 20 15:32:36.7±0.5, **7°.66S**±0°.05×**128°.40E**±0°.06, **h151**^{km}, **n52**, σ**2^s.29**/57, **mb4.0**/8, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.89	97	Pn	Pn	15 33 27.2	+4.5
SAUI					Sn	15 33 58.1	-0.2
SOEI	Soe	4.58	243		Pn	15 33 46.6	+1.8
MTN	Manton Dam	5.81	153		Pn	15 34 04.8	+3.9
FAKI	Fak Fak	6.07	39		Pn	15 34 05.7	+1.4
FAKI					Sn	15 35 12.1	-0.9
MMRI	Maumere	6.17	261	Pn	Pn	15 34 06.6	+0.8
SIJI	Sorong	7.32	23	P	Pn	15 34 22.4	+1.3
	2.2nm,0.3s,baz=242,slow=23,SNR=12						
SIJI				S	Sn	15 35 39.0	-4.1
	0.5nm,0.3s,baz=292,slow=11,SNR=1.5						
KNRA	Kununurra	7.98	177		Pn	15 34 32.2	+2.4
KNRA				Sn	Sn	15 35 57.4	-1.4
FITZ	Fitzroy Crossi	10.72	194	P	Pn	15 35 06.0	-0.3
	2.0nm,0.3s,baz=34,slow=10,SNR=50						
FITZ				S	Sn	15 36 57.5	-7.4
	1.5nm,0.3s,baz=88,slow=18,SNR=4.4						
FITZ	Fitzroy Crossi	10.72	194		Pn	15 35 05.9	-0.3
FITZ					Sn	15 36 59.2	-5.7
WB0	Warramunga Arr	13.37	155		Pn	15 35 41.3	+0.6
WRAB	Tennant Creek	13.50	155		Pn	15 35 44.0	+1.8
WRA	Warramunga Arr	13.50	155	P	Pn	15 35 43.7	+1.3
	0.9nm,0.3s,baz=322,slow=14,SNR=56						
WRA				S	Sn	15 38 05.5	-6.5
	3.0nm,0.3s,baz=329,slow=23,SNR=12						
WRA	Warramunga Arr	13.50	155	P	Pn	15 35 43.0	+0.7
WRA					Sn	15 38 03.0	-9.0
WB2	Warramunga Arr	13.51	155		Pn	15 35 43.2	+0.8
WR0	Warramunga Arr	13.60	155		Pn	15 35 44.5	+0.9
JAGI	Jajag, Banyuwa	14.13	266	Pn	Pn	15 35 51.3	+1.0
COEN	Coen	15.80	115		P	15 36 13.1	+1.3
COEN				IAmb	IAmb	15 36 30.8	
	comp=Z,20nm,1.5s						
PSA00	Pilbara Seismi	16.11	210		Pn	15 36 16.6	+1.8
PSA00	Pilbara Seismi	16.11	210	P	P	15 36 17.6	+2.4
PSA00				IAmb	IAmb	15 36 18.3	
	comp=Z,5.0nm,0.8s						
AS31	Alice Springs	16.77	162	P	Pn	15 36 26.2	+3.4
AS31				IAmb	IAmb	15 36 27.6	
	comp=Z,6.1nm,0.5s						
ASAR	Alice Springs	16.77	162	P	Pn	15 36 26.0	+3.2
	comp=Z,1.6nm,0.3s,baz=342,slow=10,SNR=287						
ASAR				S	S	15 39 24.8	-4.6
	comp=Z,0.6nm,0.3s,baz=324,slow=17,SNR=3.7						
ASAR	Alice Springs	16.77	162	P	Pn	15 36 26.2	+3.3
ASAR					S	15 39 24.3	-5.1
KKM	Kota Kinabalu	18.25	318	P	P	15 36 38.3	-0.5
SBUM	Sibu	19.01	301	P	Pn	15 36 48.5	-0.9
SBUM				IAmb	IAmb	15 36 49.8	
	comp=Z,9.3nm,1.2s						
KSM	Kuching	20.20	296	P	P	15 37 01.0	+1.2
KSM				IAmb	IAmb	15 37 06.0	
	comp=Z,11nm,0.9s						
KRVT	Keravat (AS076	23.73	83	LR	LR	15 49 46.0	
	comp=Z,62nm,18.9s,baz=123,slow=43						
PMBI	Palembang	23.98	280	P	P	15 37 39.4	+1.9
CMAR	Chiang Mai Arr	38.96	312	P	P	15 39 47.6	-0.7
	comp=Z,0.9nm,0.7s,baz=142,slow=6.8,SNR=6.4						
HHC	Hu-ho-hao-te	50.69	344	*e*P	P	15 41 24.4	+3.5
ODAN	Odare	52.50	312	*e*P	P	15 41 33.6	-1.2
	comp=Z,6.2nm,0.6s						
ASAJ	Asahikawa	53.11	13	LR	LR	16 02 32.1	
	comp=Z,23nm,21.0s,baz=164,slow=34						
RAMN	Ramite	53.13	312	*e*P	P	15 41 38.5	-0.9
	comp=Z,10nm,0.6s						
JIRN	Jiri	53.84	312	*e*P	P	15 41 43.3	-1.4
GUN	Gumba	54.20	312	*e*P	P	15 41 46.1	-1.2
PKI	Pulchoki	54.36	312	*e*P	P	15 41 46.5	-1.9
PKIN	Phulchoki	54.37	312	*e*P	P	15 41 46.5	-1.9
	comp=Z,2.5nm,0.5s						
GKN	Gorkha	55.17	312	*e*P	P	15 41 51.9	-2.1
SONM	Songino Array	58.58	343	P	P	15 42 17.6	-0.1
	comp=Z,0.6nm,0.7s,baz=162,slow=5.0,SNR=5.0						
SONM	Songino Array	58.58	343	P	P	15 42 18.4	+0.8
WMQ	Urumqi	63.09	328	*e*P	P	15 42 48.8	+0.7
NIL	Nilore	66.45	312	P	P	15 43 06.8	-3.3
MK31	Makanchi Array	67.91	328	P	P	15 43 18.5	-0.5
MKAR	Makanchi Array	67.91	328	P	P	15 43 17.9	-1.1
	comp=Z,0.5nm,0.5s,baz=119,slow=7.8,SNR=9.4						
ZAA0	Zalesovo Array	71.48	335	P	P	15 43 38.4	-2.2
ZAA0				IAmb	IAmb	15 43 40.0	
	comp=Z,3.2nm,0.8s						
ZALV	Zalesovo Beam	71.48	335	P	P	15 43 39.5	-1.1
	comp=Z,2.0nm,0.6s,baz=141,slow=4.8,SNR=8.9						
ZALV	Zalesovo Beam	71.48	335	P	P	15 43 39.1	-1.5
KURBB	Kurchatov Arra	72.25	329	P	P	15 43 44.9	-0.4
	comp=Z,3.4nm,0.7s,baz=130,slow=5.0,SNR=47						
KURK	Kurchatov	72.26	329	P	P	15 43 44.4	-0.9
KURK				IAmb	IAmb	15 43 45.6	
	comp=Z,4.3nm,0.8s						
BVAR	Borovoye Array	77.78	328	P	P	15 44 16.1	-0.9
	comp=Z,1.2nm,0.6s,baz=138,slow=7.6,SNR=8.9						
ABKAR	Akbulak array	82.04	322	P	P	15 44 38.8	-1.2
QSPA	South Pole Qui	82.33	180	P	P	15 44 42.9	+1.6
TORD	Torodi Ar. Bea	127.37	281	PKP	PKPdf	15 51 24.2	-0.3
	comp=Z,0.3nm,0.4s,baz=84,slow=3.3,SNR=2.4						

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*IDC **20** 15:41:08.1±2.9, 6°.70S×129°.81E, h139^{km}±37^{km}, mb3.8/1, mb1 3.7/5, mb1mx3.2/53, mbtmp4.1/5, Error ellipse: s-maj=68.2km s-min=20.7km az=89.0*

*NEIC **20** 15:41:09.1±2.7, 6°.57S±0°.07×129°.8E±0°.1, h151^{km}±11^{km}, mb4.2/13, Error ellipse: s-maj=14.7km s-min=10.4km az=91.0*

ISC 20 15:41:08.6±0.7, **6°.65S**±0°.06×**129°.86E**±0°.09, **h146**^{km}, **n31**, σ**2^s.04**/34, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.95	133		Pn	15 41 47.0	+4.1
FAKI	Fak Fak	4.40	33		Pn	15 42 15.2	+1.1
SIJI	Sorong	5.91	14	P	Pn	15 42 34.8	+0.6
	4.9nm,0.3s,baz=209,slow=5.2,SNR=3.9						
SIJI				S	Sn	15 43 37.5	-3.5
	14nm,0.3s,baz=237,slow=23,SNR=16						
MTN	Manton Dam	6.28	169		Pn	15 42 40.1	+1.0
MTN				Sn	Sn	15 43 47.2	-2.7
SOEI	Soe	6.34	240		Pn	15 42 41.9	+1.9
KNRA	Kununurra	9.04	187		Pn	15 43 15.4	-0.5
FITZ	Fitzroy Crossi	12.10	200	P	Pn	15 43 54.9	-1.5
	0.7nm,0.3s,baz=21,slow=13,SNR=23						
FITZ				S	Sn	15 45 58.4	-12
	0.5nm,0.3s,baz=356,slow=13,SNR=2.3						
FITZ	Fitzroy Crossi	12.10	200		Pn	15 43 55.7	-0.7
WB0	Warramunga Arr	13.76	162	Pn	Pn	15 44 15.3	-2.4
WRAB	Tennant Creek	13.90	162	Pn	Pn	15 44 17.6	-1.9
WRA	Warramunga Arr	13.91	162	P	Pn	15 44 17.3	-2.4
	0.9nm,0.3s,baz=347,slow=12,SNR=17						
WRA				S	Sn	15 46 43.3	-10
	1.4nm,0.3s,baz=347,slow=22,SNR=7.9						
WRA	Warramunga Arr	13.91	162		Pn	15 44 18.2	-1.4
WRA					Sn	15 46 43.2	-11
WR0	Warramunga Arr	13.99	161	Pn	Pn	15 44 19.0	-1.6
COEN	Coen	14.97	120	P	P	15 44 36.2	+1.3
COEN				IAmb	IAmb	15 44 39.5	
	comp=Z,11nm,1.1s						
JAGI	Jajag, Banyuwa	15.68	262	P	P	15 44 41.8	-1.0
AS31	Alice Springs	17.36	167	P	Pn	15 45 02.4	+0.3
ASAR	Alice Springs	17.36	167	P	Pn	15 45 02.6	+0.5
	comp=Z,0.7nm,0.3s,baz=346,slow=9.3,SNR=22						
ASAR				S	S	15 48 07.9	-6.8
	comp=Z,0.1nm,0.3s,baz=349,slow=18,SNR=2.5						
ASAR	Alice Springs	17.36	167	P	Pn	15 45 02.4	+0.3
PSAC2	Pilbara Seismi	17.68	212	P	P	15 45 05.1	+0.3
PSAC2				IAmb	IAmb	15 45 11.1	
	comp=Z,19nm,1.1s						
PSAB2	Pilbara Seismi	17.70	212	P	Pn	15 45 05.7	-0.4
PSAB2				IAmb	IAmb	15 45 23.4	
	comp=Z,18nm,1.2s						
PSAA2	Pilbara Seismi	17.71	212	P	Pn	15 45 05.7	-0.5
PSAA2				IAmb	IAmb	15 45 21.6	
	comp=Z,12nm,1.0s						
PSA00	Pilbara Seismi	17.72	212	P	P	15 45 05.2	0.0
PSA00				IAmb	IAmb	15 45 22.7	
	comp=Z,26nm,1.4s						
PSAC3	Pilbara Seismi	17.77	212	P	Pn	15 45 06.4	-0.5
PSAC3				IAmb	IAmb	15 45 22.8	
	comp=Z,41nm,1.6s						
BBOO	Buckleboo	26.66	168	P	P	15 46 36.6	+2.7
STKA	Stephens Creek	27.39	158	P	P	15 46 40.5	+0.1
CAN	Canberra	33.52	151	P	P	15 47 36.4	+1.9
MK31	Makanchi Array	67.86	327	P	P	15 51 51.9	+0.7
MKAR	Makanchi Array	67.86	327	P	P	15 51 51.5	+0.3
	comp=Z,1.2nm,0.5s,baz=118,slow=7.7,SNR=25						
MKAR	Makanchi Array	67.86	327	P	P	15 51 51.3	+0.2
MAKZ	Makanchi	68.04	327	P	P	15 51 52.8	+0.5
MAKZ				IAmb	IAmb	15 51 53.0	
	comp=Z,0.7nm,0.5s						
KKAR	Karatay Array	72.99	319	P	P	15 52 21.2	-1.2

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*IDC **20** 15:41:58.8±5.7, 35°.70N×71°.66E, h0^{km}, mb3.9/6, mb1 3.7/11, mb1mx3.5/70, mbtmp3.7/11, ML3.4/5, Error ellipse: s-maj=91.5km s-min=29.5km az=154.0*

*NEIC **20** 15:42:19.6±2.7, 36°.81N±0°.08×70°.6E±0°.2, h93^{km}±8^{km}, mb4.3/2, Error ellipse: s-maj=18.8km s-min=10.3km az=103.0*

*NNC **20** 15:42:19.0±3.1, 36°.80N×71°.04E, h131^{km}±45^{km}, mb3.0, mpv3.6, Error ellipse: s-maj=31.7km s-min=24.9km az=135.0*

ISC 20 15:42:15.7±0.8, **36°.51N**±0°.06×**71°.53E**±0°.08, **h114**^{km}, **n40**, σ**2^s.16**/41, **mb4.0**/7, **3C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.83	227		Pn	15 42 58.2	-1.5
KSH	Kashi	4.62	48	Pn	Pn	15 43 22.3	-1.1
KSH				Sn	Sn	15 44 09.5	-6.6
ARSB	Arslanbob	4.94	13	Pn	Pn	15 43 27.3	-0.5
THN	Thein Dam	5.34	138	*e*x	x	15 44 08.5	
THN				*e*x	Sn	15 44 33.0	-0.4
DHRM	DHARAMSHALA	5.80	136	*e*P	Pn	15 43 40.1	+0.6
DHRM				*e*x	x	15 44 44.3	
DHRM				IAML		15 44 48.5	
	comp=E,87nm,0.3s						
DHRM				IAML		15 44 49.7	
	comp=N,75nm,0.1s						
AAK	Ala-Archa	6.53	20	Pn	Pn	15 43 51.2	+1.8
	comp=N,1.6nm,0.3s,baz=187,slow=6.6,SNR=32						
AAK				Sn	Sn	15 45 02.6	+0.1
	comp=N,0.1nm,0.3s,baz=324,slow=21,SNR=1.2						
AAK	Ala-Archa	6.53	20	⇓P	Pn	15 43 51.0	+1.7
	comp=N,3.1nm,0.5s						
AAK				⇓S	Sn	15 45 03.7	+1.2
	comp=N,3.8nm,0.6s						
KK31	Karatay Array	6.63	354	⇓P	Pn	15 43 49.9	-0.6
	comp=N,1.3nm,0.3s,baz=173,slow=13,SNR=64						
KK31				⇑S	Sn	15 45 01.1	-3.6
	comp=N,1.9nm,0.4s,baz=182,slow=24,SNR=3.3						
KK31	Karatay Array	6.63	354		Pn	15 43 49.9	-0.6
KKAR	Karatay Array	6.63	354		Pn	15 43 49.7	-0.9
KKAR	Karatay Array	6.63	354		Pn	15 43 49.9	-0.6
SMLA	Simla	7.13	137	*e*P	Pn	15 43 56.7	-0.6
SMLA				*e*x	x	15 45 13.9	
SMLA				IAML		15 45 19.3	
	comp=E,37nm,0.1s						
SMLA				IAML		15 45 20.0	
	comp=N,22nm,0.1s						
GEYT	Alibeck	10.79	282	Pn	Pn	15 44 39.1	-7.8
	comp=N,0.4nm,0.3s,baz=108,slow=14,SNR=1.7						
GEYT				Sn	Sn	15 46 31.9	-14
	comp=N,1.1nm,0.3s,baz=88,slow=16,SNR=5.6						
GEYT	Alibeck	10.79	282		Pn	15 44 38.9	-8.0
GEYT					Sn	15 46 31.6	-14
GYA0B	ALIBECK ARRAY	10.79	282	Pn	Pn	15 44 39.7	-7.2
GYA0B					Sn	15 46 31.7	-14
MAKZ	Makanchi	12.90	34	Pn	P	15 45 23.4	+2.4
MK31	Makanchi Array	13.04	35	Pn	P	15 45 25.7	+3.2
MKAR	Makanchi Array	13.04	35	Pn	Pn	15 45 14.3	-2.1
	comp=N,0.1nm,0.3s,baz=213,slow=10,SNR=2.4						
DANN	Dangsing	13.14	125	*e*P	Pn	15 45 16.7	-1.5
	comp=N,7.8nm,0.3s						
GKN	Gorkha	13.95	124	*e*P	Pn	15 45 27.2	-1.4
	comp=N,6.3nm,0.2s						
DMN	Daman	14.52	124	*e*P	Pn	15 45 34.9	-1.1
KKN	Kakani	14.52	123	*e*P	Pn	15 45 34.7	-1.2
PKIN	Phulchoki	14.74	123	*e*P	Pn	15 45 37.3	-1.4
PKI	Pulchoki	14.75	123	*e*P	Pn	15 45 38.2	-0.7
GUN	Gumba	14.86	121	*e*P	Pn	15 45 40.0	-0.3
JIRN	Jiri	15.23	121	*e*P	Pn	15 45 44.4	-0.6
	comp=N,12nm,0.4s						
AB31	Akbulak array	15.28	330	⇑P	Pn	15 45 41.7	-3.5
	comp=N,0.2nm,0.2s						
ABKAR	Akbulak array	15.28	330	Pn	Pn	15 45 41.9	-3.2
TAPN	Taplejung	16.48	119	*e*P	Pn	15 46 01.1	+0.7
BVAR	Borovoye Array	16.53	358	Pn	Pn	15 45 57.7	-2.9
	comp=N,0.1nm,0.3s,baz=179,slow=14,SNR=1.8						
AKTO	Aktyubinsk	16.99	329	Pn	Pn	15 46 04.1	-2.1
	comp=N,0.2nm,0.3s,baz=115,slow=16,SNR=2.5						
AKTO	Aktyubinsk	16.99	329	⇑P	Pn	15 46 03.4	-2.7
	comp=N,2.3nm,0.8s						
ZALV	Zalesovo Beam	19.73	24	P	P	15 46 37.2	+1.1
	comp=N,0.5nm,0.3s,baz=209,slow=11,SNR=2.0						
ARU	Arti	21.76	340	P	P	15 47 01.3	+3.4
	comp=N,0.5nm,0.2s,baz=145,slow=16,SNR=3.3						
ILGA	Ilgaz	29.67	290	P	P	15 48 09.6	-1.2
ILGA				IAmb	IAmb	15 48 31.6	
	comp=Z,29nm,0.7s						
FINES	FINESS Array B	37.71	326	P	P	15 49 21.9	+2.1
	comp=Z,2.2nm,1.0s,baz=122,slow=9.3,SNR=4.4						
ARCES	ARCESS Array B	41.30	337	P	P	15 49 51.7	+2.3
	comp=Z,3.2nm,1.0s,baz=113,slow=8.8,SNR=11						
ARE0	ARCESS Array S	41.30	337	P	P	15 49 51.7	+2.2
ARE0				IAmb	IAmb	15 50 05.5	
	comp=Z,1.7nm,1.5s						
HFS	Hagfors	43.32	322	P	P	15 50 07.8	+1.8
	comp=Z,2.3nm,0.9s,baz=93,slow=14,SNR=1.4						
NOA	NORSAR Array B	44.63	323	P	P	15 50 17.8	+1.4
	comp=Z,1.4nm,0.7s,baz=96,slow=7.7,SNR=3.9						

MAN 20 15:46:40.7, 4°.90N×124°.47E, h18^{km}, mb5.1, ML4.0, MS4.1, 2C-1D, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	1.27	22	⇑*i*P	Pb	15 47 04.1	-0.1
GSPH				*i* S	Sg	15 47 21.3	-0.6
SKMP	Bagumbayan, Su	1.61	3	*e*P	Pn	15 47 08.3	+0.1
SKMP				*e*S	Sn	15 47 28.7	+0.2
DDMP	Don Marcelino,	1.72	46	*e*P	Pn	15 47 10.1	+0.4
DDMP				*e*S	Sn	15 47 31.9	+0.6
KCP	Kidapawan	2.18	16	⇑*e*P	Pn	15 47 15.3	-0.9
KCP				*i* S	Sn	15 47 44.6	+1.8
CTBH	Cotabato--PC H	2.31	355	⇓*i*P	Pn	15 47 19.2	+1.2
CTBH				*i* S	Sn	15 47 46.4	+0.5
BUKP	Musuan	3.02	11	*e*P	Pn	15 47 29.6	+2.0
BUKP				*e*S	Sn	15 48 05.9	+2.5
PAGZ	Pagadian	3.12	340	*e*P	Pn	15 47 29.8	+0.8
PAGZ				*e*S	Sn	15 48 05.4	-0.5
GUIM	Jordan	5.99	342	*e*P	Pn	15 47 57.1	-11

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*DDA **20** 15:59:19.1, 37°.25N×42°.60E, h4^{km}±2^{km}, ML2.4*

*ISK **20** 15:59:19.7, 37°.30N×42°.60E, h9^{km}, ML2.6/13*

*ISN **20** 15:59:21.0±1.1, 37°.32N×42°.59E, h15^{km}, ML2.4*

ISC 20 15:59:20.8±1.0, **37°.33N**±0°.04×**42°.58E**±0°.03, **h13**^{km}±8^{km}, **n22**, σ**1^s.20**/30, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRT	Sirnak	0.20	326	PG	Pg	15 59 24.8	-0.6
SIRT				SG	Sg	15 59 29.2	+0.6

SIRN	Sırnak	0.21	320	*i* P	Pg	15 59 24.8	-0.8
SIRN				*i* S	Sg	15 59 29.8	+1.0
SIRN	comp=E,902nm,0.8s			IAML		15 59 37.0	
CUKT	Cukurca	0.82	96	PG	Pb	15 59 36.0	-1.1
SRTM	Siirt_Merkez	0.84	322	*i* P	Pn	15 59 37.9	-0.6
SRTM				*i* S	Sg	15 59 46.4	-1.7
SRTM	comp=N,59nm,0.7s			IAML		16 00 03.0	
HAKT	HAKKARI	0.92	76	*i* P	Pg	15 59 37.3	-1.4
MSL	Mosul baz=336	1.02	155	*e*Pg	Pb	15 59 39.0	-1.4
MSL				*e*Sg	Sn	15 59 54.0	-1.1
MSL	comp=N,124nm,0.6s			AML	AML	15 59 58.9	
MSL	comp=E,86nm,0.8s			AML	AML	16 00 00.6	
AKDM	Akdamar-Van	1.04	17	PG	Pg	15 59 40.4	-0.6
GEVA	Gevas	1.05	21	*i* P	Pg	15 59 40.2	-0.8
GURO	Guroymak-BITLI	1.29	340	PN	Pg	15 59 45.2	-0.5
SVAN	Silvan-Diyarba	1.37	307	PN	Pb	15 59 46.1	-0.2
YOVA	Hakkari_Yksek	1.38	79	*i* P	Pg	15 59 48.1	+0.7
YOVA				*i* S	Sg	16 00 09.3	+3.9
MARD	Mardin	1.44	270	*i* P	Pg	15 59 48.5	0.0
MARD				*i* S	Sg	16 00 09.0	+1.8
MARD	comp=E,148nm,0.6s			IAML		16 00 12.0	
MUSM	Mu-Merkez	1.63	329	*i* P	Pb	15 59 50.6	-0.2
MUSM				*i* S	Sg	16 00 14.1	+0.9
MAZI	Mazidag	1.71	275	PN	Pn	15 59 50.5	+0.1
VRTB	Varto-Mus	2.03	334	PN	Pn	15 59 54.9	0.0
DYBB	Diyarbakir	2.04	288	PN	Pn	15 59 55.6	+0.7
HANI	Diyarbakir_Han	2.04	303	*i* P	Pg	15 59 59.9	0.0
HANI				*i* S	Sg	16 00 27.4	+1.0
BNGB	Bingl	2.23	318	PN	Pn	15 59 58.2	+0.5
AGRB	Hanur-Agry	2.26	8	PN	Pn	15 59 58.9	+0.8
SVRC	Sivrice-ELAZID	2.80	293	PN	Pn	16 00 06.5	+1.1
PTK	Pertek	2.96	303	PN	Pn	16 00 08.6	+0.9
URFA	Urfa	3.00	273	PN	Pn	16 00 08.8	+0.7

AEIC ***20*** *16:21:08.8±1.6,59°.34N±0°.04×136°.58W±0°.04,h7*^{km}*±2*^{km}*, ML3.0/21,ML3.1(OTT),Error ellipse: s-maj=6.1km s-min=3.0km az=195.0*

NEIC ***20*** *16:21:08.6±1.4,59°.32N±0°.03×136°.58W±0°.04,h9*^{km}*±6*^{km}*, Error ellipse: s-maj=5.0km s-min=2.7km az=186.0*

PGC ***20*** *16:21:09.5±0.0,59°.36N×136°.57W,h1*^{km}*,ML3.1/10,81km west of Haines, Ak Southeastern Alaska*

ISC 20 16:21:08.2±1.3,**59°.33N**±0°.03×**136°.55W**±0°.02,**h4**^{km}±11^{km}, **n62,**σ**1**^{s}**.22**/77,**Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKAG	Skagway	0.64	78		Pg	16 21 21.1	+0.7
SKAG				Sg	Sg	16 21 29.3	+0.7
DHAK	Deception Hill	0.89	255		Pg	16 21 25.4	+0.2
DHAK	Deception Hill	0.89	255		Sg	16 21 37.2	+0.5
BESE	Bessie Mountai	1.16	130	P	Pg	16 21 30.6	+0.3
BESE				S	Sg	16 21 46.4	+1.1
BESE	Bessie Mountai	1.16	130		Pg	16 21 30.2	-0.2
BESE	Bessie Mountai	1.16	130		Sb	16 21 46.8	+0.6
YUK7	Dusty Glacier	1.44	327	Pn	Pn	16 21 34.4	-0.8
YUK7	Dusty Glacier	1.44	327		Pn	16 21 34.5	-0.8
PNL	Peninsula	1.49	284	Pn	Pn	16 21 35.2	-0.5
PNL				Sg	Sn	16 21 54.4	-1.2
PNL	Peninsula	1.49	284		Pn	16 21 35.2	-0.5
PNL					Sn	16 21 54.5	-1.2
JIS	Juneau Island	1.55	132		Sb	16 21 58.0	+0.8
JIS	Juneau Island	1.55	132		Pn	16 21 36.0	-0.4
HYT	Haines Junctio	1.57	343		Pn	16 21 35.9	-1.0
WHY	Whitehorse	1.57	31	Pn	Pn	16 21 37.1	+0.2
WHY				Sg	Sn	16 21 57.7	-0.1
WHY	Whitehorse	1.57	31		Pn	16 21 37.1	+0.2
WHY				Sn	Sn	16 21 57.5	-0.3
YKU2	Yakutat	1.61	278	Pn	Pn	16 21 34.5	-2.8
YUK6	Outpost Mounta	1.85	331	Pn	Pn	16 21 41.9	+0.9
YUK6				Sg	Sb	16 22 05.9	-0.4
YUK5	Granite Creek	1.92	341	Pn	Pn	16 21 41.9	+0.1
YUK5				Sg	Sb	16 22 08.7	+0.6
YUK5	Granite Creek	1.92	341		Pn	16 21 41.8	+0.1
PCA	Pinnacle	2.03	294	Pn	Pn	16 21 43.9	+0.7
PCA				Sg	Sb	16 22 11.2	0.0
PCA	Pinnacle	2.03	294		Pn	16 21 43.8	+0.6
PCA	Pinnacle	2.03	294		Sb	16 22 11.0	-0.2
YUK4	Talbot Arm	2.27	334	Sg	Sg	16 22 21.5	+0.4
SIT	Sitka	2.37	164		Pn	16 21 47.3	-0.5
CHX	Chaix Hills	2.43	290		Pn	16 21 50.0	+1.4
CTGM	Chitina Glacie	2.90	306	Pn	Pn	16 21 55.5	+0.4
CTGM				Sn	Sn	16 22 30.6	0.0
CTGM				Sg	Sb	16 22 37.7	+1.4
CTGM	Chitina Glacie	2.90	306		Pn	16 21 54.8	-0.4
GRNC	Granite Creek	2.96	300	Pn	Pn	16 21 57.0	+0.8
GRNC				Sn	Sn	16 22 31.6	-0.7
GRNC	Granite Creek	2.96	300		Pn	16 21 56.3	+0.2
BARN	Barnard Glacie	3.08	306		Pn	16 21 57.8	+0.1
YUK3	Moose Creek	3.12	323	Sg	Sb	16 22 45.5	+2.8
YUK2	White River	3.25	321	Pn	Pn	16 22 01.0	+1.0
YUK2				Sg	Sb	16 22 48.9	+2.6
KIAG	Kiagna River	3.32	301	Pn	Pn	16 22 01.9	+1.0
KIAG				Sn	Sn	16 22 41.1	+0.3
BALM	Baldy	3.36	303	Pn	Pn	16 22 02.5	+1.0
BALM	Baldy	3.36	303		Pn	16 22 01.7	+0.2
YUK1	Sand Pete Hill	3.44	327	Pn	Pn	16 22 02.8	+0.2
TGL	Tana Glacier	3.46	297	Pn	Pn	16 22 03.9	+1.0
PTPK	Patty Peak	3.48	305	Pn	Pn	16 22 03.5	+0.2
DLBC	Dease Lake	3.50	102	Pn	Pn	16 22 04.0	+0.6
DLBC				Sg	Sg	16 22 58.0	-2.5
DLBC	Dease Lake	3.50	102		Pn	16 22 03.8	+0.4
CRQM	Cirque	3.60	296		Pn	16 22 04.1	-0.8
WRAK	Wrangell Islan	3.68	141		Pn	16 22 04.3	-1.5
MCARA	McCarthy VSAT	3.82	305		Pn	16 22 09.3	+1.6
VRDI	Verde Repeater	3.93	302		Pn	16 22 09.4	0.0
GLB	Gilahina Butte	4.18	304		Pn	16 22 10.0	-2.7
RAGM	Ragged Mountai	4.23	288	Pn	Pn	16 22 14.4	+1.0
CRAG	Craig	4.29	153	Pn	Pn	16 22 12.1	-2.1
BC03		4.52	328		Pn	16 22 18.5	+1.2
BCAR	Beaver Creek A	4.52	328		Pn	16 22 17.2	-0.1
DAWY	Dawson	4.94	345	Sg	Sg	16 23 41.6	-5.0
DAWY	Dawson	4.94	345		Pn	16 22 23.2	+0.1
MENT	Mentasta	5.01	319	Pn	Pn	16 22 23.0	-1.1
HIN	Hinchinbrook I	5.13	286	Pn	Pn	16 22 26.5	+0.8
FID	Port Fidalgo	5.18	290	Pn	Pn	16 22 27.9	+1.6
SCRK	Sand Creek	5.85	326		Pn	16 22 35.6	-0.1
SCM	Sheep Creek Mo	5.87	300	Pn	Pn	16 22 36.0	+0.1
EGAK	Eagle	5.88	340		Pn	16 22 35.3	-0.6
RIDG	Independent Ri	5.94	322	Pn	Pn	16 22 36.1	-0.7
KNK	Knik Glacier	6.26	295	Pn	Pn	16 22 42.6	+1.3
SML	Sawmill	6.32	298	Pn	Pn	16 22 44.1	+2.1
DHY	Denali Highway	6.43	310	Pn	Pn	16 22 43.3	-0.5
GHO	Glory Hole Cre	6.57	297	Pn	Pn	16 22 46.3	+0.7

JMA ***20*** *16:47:22.7,23°.21N×120°.88E,h0*^{km}*,M3.6*

ASIES ***20*** *16:47:23.8,23°.20N×120°.96E,h17*^{km}*,MW3.3*

TAP ***20*** *16:47:23.9,23°.19N×120°.93E,h6*^{km}*,ML3.9,C*

IASPEI ***20*** *16:47:24.6±0.8,23°.20N±0°.01×120°.93E±0°.01,h8*^{km}*±6*^{km}*, mb3.1/3,Error ellipse: s-maj=2.0km s-min=1.7km az=108.6,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

IDC ***20*** *16:47:24.2±1.6,22°.72N×120°.62E,h0*^{km}*,mb3.2/3, mb1 3.5/4,mb1mx3.3/36,mbtmp3.3/4,ML3.3/1,Error ellipse: s-maj=75.9km s-min=27.7km az=68.0*

NEIC ***20*** *16:47:24.3±1.8,23°.19N±0°.02×120°.93E±0°.03,h7*^{km}*±9*^{km}*, Error ellipse: s-maj=4.5km s-min=1.6km az=63.0*

ISC 20 16:47:24.5±0.8,**23°.20N**±0°.01×**120°.93E**±0°.01,**h8**^{km}±6^{km}, **n143,**σ**0**^{s}**.91**/238,**mb3.1**/3,**31C-4D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELDTW	Lidau baz=92	0.08	96	⇑*i*P	Pg	16 47 26.7	0.0
ELDTW	baz=92			S	Sg	16 47 28.3	+0.1
STYT	Tauyuan baz=258	0.16	258	⇑*i*P	Pg	16 47 27.6	-0.3
STYT	baz=258			S	Sg	16 47 29.8	-0.4
YUS	Yu-Shan baz=15	0.29	4	⇑*i*P	Pg	16 47 30.3	-0.2
YUS	baz=15			S	Sg	16 47 34.7	+0.3
TPUB	Ta-pu baz=302	0.29	291	⇑*i*P	Pb	16 47 30.6	-1.4
TPUB	baz=302			S	Sg	16 47 35.1	+0.9
TPUB	Ta-pu	0.29	291		Pg	16 47 29.8	-0.5
TPUB				Sg	Sg	16 47 34.9	+0.6
WTP	Ta-pu baz=275	0.29	280	⇑*i*P	Pg	16 47 30.6	+0.2
WTP	baz=275			S	Sg	16 47 34.9	+0.7
SLGT	Liugui baz=228	0.33	232	⇑*i*P	Pg	16 47 31.1	+0.1
SLGT	baz=228			S	Sg	16 47 35.7	+0.3
FULB	Fuli baz=80	0.34	90	⇑*i*P	Pb	16 47 32.0	-0.9
FULB	baz=80			*e*S	Sb	16 47 37.0	-1.4
SGST	Jiashian baz=250	0.34	250	⇑*i*P	Pg	16 47 30.5	-0.7
SGST	baz=250			*e*S	Sg	16 47 35.5	-0.1
CHN4	Tsaushan baz=307	0.34	296	⇑*i*P	Pb	16 47 31.8	-1.1
CHN4	baz=307			S	Sb	16 47 37.0	-1.6
CHN1	Nanshi baz=269	0.37	268	⇑*i*P	Pb	16 47 32.4	-1.0
CHN1	baz=269			S	Sb	16 47 38.1	-1.2
TWF1	Yuli baz=65	0.37	66	⇑*i*P	Pg	16 47 32.0	+0.1
TWF1	baz=65			S	Sg	16 47 36.6	-0.1
SNST	Tainan City baz=274	0.40	273	⇑*i*P	Pb	16 47 33.1	-0.8
SNST	baz=274			*e*S	Sb	16 47 39.5	-0.6
TWG	Pinlang baz=155	0.40	160	⇓*i*P	Pg	16 47 32.3	0.0
TWG	baz=155			S	Sg	16 47 37.7	+0.2
TWG	Pinlang	0.40	160		Pg	16 47 31.8	-0.5
TWG				Sg	Sg	16 47 37.4	-0.2
TWGBT	Beinan baz=155	0.40	160	⇓P	Pg	16 47 32.3	-0.1
TWGBT	baz=155			S	Sg	16 47 37.5	-0.2
TWK	Hsinying baz=281	0.41	280	⇑*i*P	Pb	16 47 33.1	-1.0
TWK	baz=281			S	Sb	16 47 39.5	-1.0
CHKT	Chengkung baz=102	0.41	104	⇑P	Pb	16 47 34.0	-0.2
CHKT	baz=102			*e*S	Sb	16 47 40.8	+0.2
CHN5	Tsauling baz=342	0.46	330	P	Pb	16 47 33.9	-1.1
CHN5	baz=342			S	Sg	16 47 40.3	+0.7
EHY	Hungye baz=58	0.47	50	⇑*i*P	Pg	16 47 33.6	-0.1
EHY	baz=58			*e*S	Sg	16 47 39.2	-0.8
TTN	Taitung baz=148	0.49	155	*e*P	Pb	16 47 34.9	-0.4
TTN	baz=148			S	Sb	16 47 41.7	-1.0
WHYT	Xinyi Township baz=3.0	0.50	352	⇑P	Pg	16 47 34.4	+0.2
WHYT	baz=3.0			*e*S	Sg	16 47 41.4	+0.6
SSD	Sandimen baz=210	0.53	211	⇑*i*P	Pg	16 47 34.2	-0.5
SSD	baz=210			S	Sg	16 47 40.5	-1.1
CHN3	Shinhua baz=257	0.53	257	⇑*i*P	Pn	16 47 36.8	-1.6
CHN3	baz=257			S	Sn	16 47 46.3	-1.3
HGSD	Ruisui baz=51	0.54	57	⇑P	Pb	16 47 35.5	-0.8
HGSD	baz=51			*e*S	Sb	16 47 44.0	-0.2
CHY	Chiayi baz=305	0.55	303	*e*P	Pb	16 47 36.1	-0.4
CHY	baz=305			S	Sb	16 47 45.0	+0.5
VWDT	VWDT baz=19	0.59	19	⇑P	Pg	16 47 35.3	-0.5
VWDT	baz=19			*e*S	Sb	16 47 44.5	-1.1
SSLB	Suanglung baz=3.0	0.59	2	⇑P	Pg	16 47 35.2	-0.7
SSLB	baz=3.0			S	Sg	16 47 44.1	+0.4
SSLB	Suanglung	0.59	2		Pg	16 47 34.9	-1.0
SSLB				Sg	Sg	16 47 44.0	+0.4
WGK	Gukeng baz=327	0.59	325	⇓P	Pb	16 47 37.3	+0.2
WGK	baz=327			S	Sb	16 47 46.6	+0.9
TWM1	Shoushan baz=220	0.60	231	P	Pb	16 47 37.4	+0.2
TWM1	baz=220			*e*S	Sb	16 47 47.0	+1.1
ECL	Taimali baz=177	0.60	178	⇑*i*P	Pg	16 47 35.5	-0.6
ECL	baz=177			*e*S	Sg	16 47 43.5	-0.4
WDLH	Douliu baz=325	0.61	324	*e*P	Pb	16 47 37.6	+0.2
WDLH	baz=325			*e*S	Sb	16 47 47.5	+1.4
SGLT	Jiouru baz=215	0.62	221	P	Pb	16 47 37.4	-0.2
WLGB	Puzi baz=297	0.64	296	*e*P	Pb	16 47 38.0	0.0
WLGB	baz=297			*e*S	Sn	16 47 48.5	-1.9
MASBT	Mashibuluo baz=210	0.64	205	⇑P	Pg	16 47 36.3	-0.6
MASBT	baz=210			S	Sg	16 47 45.2	-0.2
WJS	Zhushan baz=352	0.65	344	*e*P	Pb	16 47 38.3	+0.1
WJS	baz=352			*e*S	Sb	16 47 48.0	+0.7
EGFH	Guangfu baz=51	0.66	44	*e*P	Pg	16 47 36.9	-0.2
EGFH	baz=51			S	Sg	16 47 45.7	0.0
TAI1	Yung-k'ang baz=273	0.66	256	*e*P	Pn	16 47 39.3	-0.9
CHN8	Yiju baz=283	0.68	283	P	Pb	16 47 38.5	-0.1
CHN8	baz=283			S	Sn	16 47 49.5	-1.7
SCLT	Jiali baz=268	0.68	268	*e*P	Pb	16 47 38.8	+0.2
SCLT	baz=268			*e*S	Sn	16 47 50.3	-0.9
SMLT	Sun Moon Lake baz=6.0	0.68	358	⇑*i*P	Pg	16 47 37.6	-0.1
SMLT	baz=6.0			*e*S	Sb	16 47 48.2	-0.2
TWH	Lutao baz=135	0.70	134	*e*P	Pb	16 47 38.5	-0.5
TWH	baz=135			*e*S	Sb	16 47 49.2	+0.4
SNJT	Kaohsiung City baz=231	0.70	231	*e*P	Pn	16 47 40.6	-0.1
TYC	Yuchr baz=3.0	0.71	355	⇑*i*P	Pb	16 47 38.2	-0.9
TYC	baz=3.0			*e*S	Sb	16 47 49.9	+0.9
WNT	Mingjian baz=344	0.71	342	⇑P	Pb	16 47 39.4	+0.2
WNT	baz=344			*e*S	Sb	16 47 50.3	+1.1
ESL	Shilin baz=45	0.77	37	*e*P	Pg	16 47 38.7	-0.6
ESL	baz=45			*e*S	Sg	16 47 49.5	+0.1
WSF	Szhu baz=305	0.78	304	*e*P	Pb	16 47 40.0	-0.4
WSF	baz=305			S	Sb	16 47 52.2	+1.0
SSPT	Xinbi baz=207	0.79	205	⇑*i*P	Pb	16 47 39.6	-0.8
SSPT	baz=207			*e*S	Sb	16 47 51.8	+0.5
OWD	Renai baz=17	0.79	17	*e*P	Pg	16 47 38.5	-1.2
EAST	Anshuo baz=185	0.81	185	⇑P	Pg	16 47 39.6	-0.6
EAST	baz=185			S	Sg	16 47 50.6	-0.2
WSSB	Gushan baz=226	0.83	228	⇑*e*P	Pn	16 47 43.8	+1.3
WSSB	baz=226			*e*S	Sn	16 47 56.1	+1.2
DPDB	Guoxing baz=10.0	0.83	360	⇑*i*P	Pg	16 47 40.3	-0.2
DPDB	baz=10.0			S	Sb	16 47 53.4	+0.7
TAW	Tawu baz=182	0.84	182	*e*P	Pg	16 47 40.1	-0.5
TAW	baz=182			*e*S	Sg	16 47 50.6	-0.9
KAU	Kaohsiung baz=239	0.85	222	*e*P	Pn	16 47 43.0	+0.2
RLNB	Erlin baz=325	0.86	323	*e*P	Pb	16 47 41.4	-0.4
RLNB	baz=325			*e*S	Sn	16 47 54.6	-1.2
SCZT	Fangliau baz=200	0.87	199	*e*P	Pg	16 47 40.6	-0.6
SCZT	baz=200			*e*S	Sn	16 47 55.5	-0.4
WMLT	Mailiao baz=315	0.89	313	*e*P	Pb	16 47 41.8	-0.4
WMLT	baz=315			*e*S	Sn	16 47 55.5	-0.8
CHGB	Renai baz=7.0	0.89	15	⇑P	Pg	16 47 40.6	-1.0
CHGB	baz=7.0			S	Sb	16 47 53.8	-0.7
WTCT	Ta-ch'eng baz=320	0.89	318	*e*P	Pb	16 47 42.0	-0.3
WTCT	baz=320			*e*S	Sb	16 47 54.9	+0.6
ENLB	Shoufeng baz=29	0.94	41	*e*P	Pg	16 47 41.6	-0.9
ENLB	baz=29			*e*S	Sn	16 47 56.5	-1.1
WCHH	Zhanghua baz=341	0.94	339	*e*P	Pb	16 47 42.8	-0.3
WCHH	baz=341			*e*S	Sn	16 47 57.2	-0.6
TCU	Taichung baz=349	0.97	346	*e*P	Pn	16 47 44.1	-0.5
TCU	baz=349			*e*S	Sn	16 47 57.9	-0.7
WLCH	Liuqiu baz=197	0.98	211	*e*P	Pn	16 47 46.2	+1.6
WLCH	baz=197			*e*S	Sn	16 48 03.4	+4.7
WHF	Hehuan Shan baz=18	0.99	18	*e*P	Pg	16 47 42.7	-0.9
HWA	Hwalien baz=28	0.99	39	*e*P	Pn	16 47 44.1	-0.6
HWA	baz=28			*e*S	Sn	16 47 58.7	-0.4
TWP	Hsiaoliuchiu baz=210	0.99	212	*e*P	Pn	16 47 46.6	+1.8
TWD	Chiawan baz=35	1.07	35	*e*P	Pb	16 47 44.9	-0.5
TWD	baz=35			*e*S	Sb	16 47 59.8	+0.3
TDCB	Techi baz=6.0	1.07	11	*e*P	Pg	16 47 43.7	-1.5
TDCB	baz=6.0			*e*S	Sb	16 47 59.6	-0.1
TWT	Tachien baz=5.0	1.07	12	*e*P	Pg	16 47 44.6	-0.6
WHP	Taichung City baz=11	1.07	1	*e*P	Pn	16 47 45.5	-0.5
WHP	baz=11			*e*S	Sn	16 48 01.4	+0.2
ETLH	Xiulin Townshi baz=38	1.13	27	*e*P	Pg	16 47 45.5	-0.7
ETLH	baz=38			*e*S	Sn	16 48 02.0	-0.4
NACB	Ninganchiao baz=32	1.15	32	P	Pg	16 47 45.4	-1.2
NACB	baz=32			S	Sb	16 48 01.6	-0.2
NACB	Ninganchiao	1.15	32		Pg	16 47 45.0	-1.6
WDGT	Dungji baz=272	1.17	273	⇓P	Pg	16 47 46.1	-0.8
WDGT	baz=272			*e*S	Sb	16 48 02.0	-0.3
WDJ	Dajia District baz=339	1.18	347	*e*P	Pn	16 47 47.8	+0.5
WDJ	baz=339			*e*S	Sn	16 48 04.7	+1.1
HEN	Hengchun baz=188	1.20	188	*e*P	Pn	16 47 48.0	+0.4
NSY	Sanyi baz=356	1.22	353	P	Pn	16 47 48.8	+0.8
NSY	baz=356			*e*S	Sn	16 48 06.5	+1.7
TWK1	Hengchun baz=175	1.25	185	P	Pn	16 47 49.0	+0.7
TWK1	baz=175			*e*S	Sn	16 48 07.4	+1.9
TWKBT	Hengchun baz=201	1.26	185	P	Pn	16 47 48.4	0.0
TWKBT	baz=201			*e*S	Sn	16 48 07.5	+2.1
PTSB	Yuanli baz=354	1.26	351	*e*P	Pg	16 47 49.1	+0.4
PTSB	baz=354			*e*S	Sn	16 48 07.3	+1.7
PHUB	P'eng-hu baz=284	1.28	284	*e*P	Pn	16 47 47.7	-1.1
PHUB	baz=284			*e*S	Sg	16 48 04.4	-1.5
NNSB	Datong baz=13	1.29	19	*e*P	Pn	16 47 47.7	-1.4
NNSB	baz=13			*e*S	Sn	16 48 07.1	+0.4
NNSH	Datong baz=18	1.29	19	*e*P	Pn	16 47 48.1	-1.0
NNS	Nan Shan baz=13	1.30	18	*e*P	Pn	16 47 48.2	-1.0
NNS	baz=13			*e*S	Sn	16 48 06.8	-0.1
PNG	Penghu baz=286	1.31	287	P	Pn	16 47 48.1	-1.1
PNG	baz=286			*e*S	Sb	16 48 05.9	-0.6
NMLH	Miaoli baz=357	1.34	355	P	Pg	16 47 50.5	+0.2
NMLH	baz=357			*e*S	Sn	16 48 09.4	+1.8
VCHM	Qimei baz=269	1.38	271	*e*P	Pn	16 47 49.2	-0.8
VCHM	baz=269			*e*S	Sb	16 48 07.4	-1.0
NSTT	Nanjuang baz=353	1.43	3	*e*P	Pg	16 47 52.2	+0.3
NSTT	baz=353			S	Sg	16 48 11.5	+1.0
ENA	Nanau baz=32	1.43	31	*e*P	Pn	16 47 50.2	-0.7
ENA	baz=32			*e*S	Sg	16 48 10.8	+0.1
LIOB	Emei baz=353	1.44	3	*e*P	Pg	16 47 52.0	-0.2
LIOB	baz=353			*e*S	Sg	16 48 11.4	+0.5
NDT	Datong Townshi baz=30	1.50	21	*e*P	Pb	16 47 52.0	-0.6
NDT	baz=30			*e*S	Sg	16 48 13.8	+1.1
YHNB	Yeheng baz=28	1.52	16	*e*P	Pb	16 47 52.5	-0.6
YHNB	baz=28			*e*S	Sg	16 48 13.3	-0.2

YHNB	**Yeheng**	**1.52**	**16**		**Pn**	**16 47 51.8**	**-0.3**
NSK	**Sanguang**	**1.52**	**15**	*e*P	**Pb**	**16 47 52.3**	**-0.8**
	baz=28						
NSK				*e*S	**Sg**	**16 48 13.8**	**+0.2**
	baz=28						
ENTT	**Nioudou**	**1.55**	**22**	*e*P	**Pg**	**16 47 53.6**	**-0.7**
	baz=31						
ENTT				*e*S	**Sg**	**16 48 14.7**	**+0.3**
	baz=31						
SBCB	**Hsinchu**	**1.59**	**2**	*e*P	**Pg**	**16 47 55.1**	**+0.1**
	baz=345						
TWC	**Suao**	**1.64**	**31**	P	**Pb**	**16 47 55.0**	**-0.1**
	baz=32						
TWC				S	**Sb**	**16 48 16.1**	**+0.2**
	baz=32						
NWLT	**Wulai**	**1.66**	**18**	*e*P	**Pb**	**16 47 55.2**	**-0.2**
	baz=17						
TWE	**Neicheng**	**1.66**	**24**	*e*P	**Pb**	**16 47 55.3**	**-0.1**
	baz=35						
TWE				*e*S	**Sg**	**16 48 17.9**	**0.0**
	baz=35						
WLTB	**Daxi**	**1.67**	**10**	*e*P	**Pg**	**16 47 56.7**	**+0.1**
	baz=12						
WLTB				*e*S	**Sg**	**16 48 19.8**	**+1.5**
	baz=12						
SLBB	**Yuanshan**	**1.68**	**23**	*e*P	**Pb**	**16 47 55.0**	**-0.8**
	baz=33						
SLBB				*e*S	**Sg**	**16 48 18.0**	**-0.5**
	baz=33						
ILA	**Ilan**	**1.73**	**26**	*e*P	**Pb**	**16 47 55.9**	**-0.7**
	baz=38						
EOS1	**EOS1**	**1.74**	**39**	*e*P	**Pb**	**16 47 56.2**	**-0.5**
	baz=55						
NCUH	**Zhongli**	**1.78**	**8**	*e*P	**Pb**	**16 47 57.3**	**-0.1**
	baz=10.0						
NCU	**National Centr**	**1.78**	**8**	*e*P	**Pg**	**16 47 58.3**	**-0.3**
	baz=10.0						
NHDH	**Xindian Distri**	**1.84**	**17**	*e*P	**Pg**	**16 47 59.4**	**-0.4**
	baz=28						
NHDH				*e*S	**Sg**	**16 48 23.4**	**-0.4**
	baz=28						
TATO	**Taipei**	**1.84**	**16**		**Pb**	**16 47 58.0**	**-0.5**
NTC	**Toucheng**	**1.84**	**26**	*e*P	**Pb**	**16 47 58.6**	**+0.1**
	baz=41						
TWA	**Mucha**	**1.87**	**19**	*e*P	**Pg**	**16 47 59.8**	**-0.6**
	baz=17						
TIPB	**Shuangxi**	**1.95**	**25**	*e*P	**Pb**	**16 47 59.8**	**-0.5**
	baz=38						
TWS1	**Kuangyinshan**	**1.95**	**13**	*e*P	**Pb**	**16 47 59.6**	**-0.6**
	baz=14						
NWF	**Wu-fen Shan**	**2.02**	**23**	*e*P	**Pb**	**16 48 01.6**	**0.0**
	baz=39						
WFSB	**Wu-fen Shan**	**2.02**	**23**	*e*P	**Pb**	**16 48 01.5**	**-0.1**
	baz=38						
YM01	**YM01**	**2.03**	**17**	*e*P	**Pb**	**16 48 01.7**	**0.0**
	baz=14						
YM10	**YM10**	**2.03**	**16**	*e*P	**Pb**	**16 48 00.5**	**-1.3**
	baz=15						
YM11	**YM11**	**2.05**	**17**	*e*P	**Pb**	**16 48 01.5**	**-0.6**
	baz=15						
YM03	**YM03**	**2.05**	**16**	*e*P	**Pb**	**16 48 01.7**	**-0.4**
	baz=15						
ANP	**Anpu**	**2.05**	**15**	*e*P	**Pb**	**16 48 01.8**	**-0.4**
	baz=14						
YM08	**YM08**	**2.07**	**17**	*e*P	**Pb**	**16 48 02.9**	**+0.5**
	baz=15						
YOJ	**Yonaguni jima**	**2.29**	**56**	P	**Pn**	**16 48 02.8**	**+0.2**
YOJ				*e*S	**Sn**	**16 48 31.0**	**+0.1**
PTMZ	**Houxiangcun**	**2.47**	**318**	*e*P	**Pn**	**16 48 05.2**	**+0.1**
	baz=320						
PTTC	**Pingtan**	**2.52**	**335**	*e*P	**Pn**	**16 48 06.6**	**+0.8**
	baz=338						
KNM	**Kinmen**	**2.59**	**298**	*e*P	**Pn**	**16 48 08.1**	**+1.4**
	baz=297						
KNMB	**Chin-men Tao**	**2.65**	**299**	*e*P	**Pn**	**16 48 07.2**	**-0.3**
	baz=299						
KNMB	**Chin-men Tao**	**2.65**	**299**	Pn	**Pg**	**16 48 14.7**	**-0.6**
QZH	**Quanzhou**	**2.75**	**310**	*e*Pn	**Pn**	**16 48 08.3**	**-0.7**
QZH				Sn	**Sn**	**16 48 41.3**	**-1.2**
HATJ	**Hateruma jima**	**2.77**	**71**	P	**Pn**	**16 48 10.1**	**+0.8**
HATJ				*e*S	**Sn**	**16 48 43.0**	**0.0**
IRIF	**Iriomote-Funau**	**2.81**	**66**	P	**Pn**	**16 48 11.0**	**+1.3**
IRIF				*e*S	**Sb**	**16 48 46.5**	**-3.0**
ZPLA	**Ao Xicun**	**3.01**	**285**	*e*P	**Pn**	**16 48 13.2**	**+0.7**
	baz=286						
JKRS	**Kuro-shima**	**3.01**	**69**	P	**Pn**	**16 48 14.0**	**+1.5**
MATB	**Ma-tsu**	**3.07**	**343**	*e*P	**Pn**	**16 48 13.7**	**+0.3**
	baz=346						
JIJ	**Ishigaki jima**	**3.17**	**68**	P	**Pn**	**16 48 14.8**	**+0.1**
JIJ				*e*S	**Sn**	**16 48 53.3**	**+0.6**
AXDP	**Jialang**	**3.19**	**303**	*e*P	**Pn**	**16 48 14.5**	**-0.6**
	baz=303						
ZZJH	**Jiuhuzhen**	**3.27**	**293**	*e*P	**Pn**	**16 48 16.3**	**+0.1**
	baz=293						
MHZQ	**Yeshan**	**3.37**	**330**	*e*P	**Pn**	**16 48 17.6**	**+0.1**
	baz=332						
JISG	**Ishigakijimahi**	**3.39**	**65**	P	**Pn**	**16 48 17.8**	**0.0**
JISG				S	**Sn**	**16 48 56.9**	**-1.3**
LYJJ	**Jianjiangzhen**	**3.50**	**343**	*e*P	**Pn**	**16 48 19.8**	**+0.5**
	baz=345						
XPSS	**Dashiqiu**	**3.78**	**350**	*e*P	**Pn**	**16 48 23.7**	**+0.6**
	baz=354						
KSRS	**Korea Array**	**15.43**	**21**	Pn	**P**	**16 51 10.1**	**+2.9**
	0.1nm,0.3s,baz=200,slow=12,SNR=1.7						
MKAR	**Makanchi Array**	**38.89**	**317**	P	**P**	**16 54 52.6**	**+2.1**
	0.3nm,0.7s,baz=115,slow=9.7,SNR=3.3						
WRA	**Warramunga Arr**	**44.83**	**162**	P	**P**	**16 55 36.1**	**-3.2**
	0.4nm,0.7s,baz=342,slow=8.6,SNR=2.3						
ASAR	**Alice Springs**	**48.26**	**164**	P	**P**	**16 56 05.0**	**-1.2**
	0.1nm,0.6s,baz=342,slow=6.9,SNR=6.6						

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*IDC **20** 16:52:10.6±1.5, 3°.34N×125°.69E, h0^{km}, mb3.4/4, mb1 3.7/5, mb1mx3.5/35, mbtmp3.5/5, ML3.8/1, Error ellipse: s-maj=69.0km s-min=23.5km az=62.0*

*MAN **20** 16:52:16.9, 3°.56N×126°.25E, h28^{km}, mb4.9, ML3.8, MS3.8*

*NEIC **20** 16:52:19.7±1.9, 3°.49N±0°.04×126°.2E±0°.1, h79^{km}±10^{km}, mb4.3/16, Error ellipse: s-maj=16.8km s-min=2.8km az=73.0*

*DJA **20** 16:52:21.0±0.4, 3°N±4°×12°6E±°, h10^{km}, M4.3/11, mB5.0/4, mb4.8/2, MLv4.0/11, Mw(mB)4.3/4*

ISC 20 16:52:17.7±0.6, **3°.49N**±0°.04×**126°.21E**±0°.07, **h53**^{km}, **n46**, σ**1ˢ61**/54, **mb4.1**/9, **2C-2D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**2.64**	**349**	*e*P	**Pn**	**16 52 57.6**	**-0.2**
DDMP				*e*S	**Sn**	**16 53 24.0**	**-4.7**
GSPH	**General Santos**	**2.87**	**334**	⇑*i*P	**Pn**	**16 52 59.8**	**-1.2**
GSPH				*i* S	**Sn**	**16 53 34.1**	**-0.4**
TNTI	**Ternate**	**2.94**	**157**	P	**Pn**	**16 53 02.9**	**+1.0**
TNTI				S	**Sn**	**16 53 33.2**	**-2.8**
TNTI	**Ternate**	**2.94**	**157**		**Pn**	**16 53 03.3**	**+1.3**
MATI	**Mati**	**3.43**	**1**	*e*P	**Pn**	**16 53 08.9**	**+0.2**
SKMP	**Bagumbayan, Su**	**3.44**	**331**	*e*P	**Pn**	**16 53 10.1**	**+1.3**
SKMP				*e*S	**Sn**	**16 53 48.3**	**+0.1**
DMPH	**Davao City--Mi**	**3.63**	**349**	⇑*e*P	**Pn**	**16 53 12.8**	**+1.3**
DMPH				*e*S	**Sn**	**16 53 53.9**	**+0.8**
KMSI	**Cibinong**	**3.66**	**218**	P	**Pn**	**16 53 13.0**	**+1.2**
KMSI				S	**Sn**	**16 53 53.0**	**-0.7**
KCP	**Kidapawan**	**3.67**	**342**	⇓*i*P	**Pn**	**16 53 15.6**	**+3.6**
KCP				*i* S	Sn	16 54 06.4	+12
CTBH	**Cotabato--PC H**	**4.19**	**332**	⇓*i*P	**Pn**	**16 53 22.4**	**+3.3**
GTOI	**Gorontalo**	**4.28**	**228**	P	**Pn**	**16 53 21.9**	**+1.6**
LBMI	**Labuha**	**4.30**	**163**	P	**Pn**	**16 53 20.3**	**-0.3**
BUKP	**Musuan**	**4.50**	**345**	*e*P	**Pn**	**16 53 24.1**	**+0.6**
BUKP				*e*S	**Sn**	**16 54 15.8**	**+1.2**
MRSI	**Marisa**	**5.21**	**235**	P	**Pn**	**16 53 34.6**	**+1.5**
BUTP	**Butuan**	**5.47**	**354**	*e*P	**Pn**	**16 53 37.3**	**+0.6**
SANI	**Sanana**	**5.51**	**182**	P	**Pn**	**16 53 37.0**	**-0.2**
LUWI	**Luwuk**	**5.67**	**217**	P	**Pn**	**16 53 40.6**	**+1.2**
	0.3nm1µm87nm,1.2s						
LUWI	**Luwuk**	**5.67**	**217**	Pn	**Pn**	**16 53 42.5**	**+3.1**
APSI	**Ampana**	**6.32**	**226**	P	**Pn**	**16 53 49.9**	**+1.6**
	0.2nm539nm54nm,0.5s						
SIJI	**Sorong**	**6.66**	**131**	Pn	**Pn**	**16 53 54.8**	**+1.8**
	1.6nm,0.3s,baz=288,slow=23,SNR=9.0						
SIJI				Sn	**Sn**	**16 55 10.4**	**+2.9**
	baz=343,slow=19,SNR=1.3						
NLAI	**Namlea**	**6.75**	**172**	P	**Pn**	**16 53 53.7**	**-0.5**
FAKI	**Fak Fak**	**8.77**	**136**	Pn	**Pn**	**16 54 23.9**	**+1.9**
KKM	**Kota Kinabalu**	**10.28**	**285**	Pn	**Pn**	**16 54 44.9**	**+2.2**
MTN	**Manton Dam**	**16.95**	**163**	Pn	**Pn**	**16 56 09.4**	**-1.9**
MTN				IAmb	IAmb	16 56 48.1	
	comp=Z,20nm,1.2s						
KNRA	**Kununurra**	**19.21**	**173**	P	**P**	**16 56 37.1**	**-0.4**
KNRA				IAmb	IAmb	16 56 53.5	
	comp=Z,27nm,1.4s						
TPUB	**Ta-pu**	**20.42**	**345**	P	**P**	**16 56 51.0**	**+0.5**
TPUB				IAmb	IAmb	16 57 14.7	
	comp=Z,96nm,1.6s						
FITZ	**Fitzroy Crossi**	**21.46**	**181**	P	**P**	**16 57 00.9**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=17,slow=11,SNR=2.0						
FITZ	**Fitzroy Crossi**	**21.46**	**181**	P	**P**	**16 57 01.2**	**-0.6**
FITZ				IAmb	IAmb	16 57 15.2	
	comp=Z,11nm,1.5s						
JOW	**Kunigami**	**23.29**	**5**	P	**P**	**16 57 19.6**	**-1.4**
JOW				IAmb	IAmb	16 57 47.8	
	comp=Z,60nm,1.1s						
WB0	**Warramunga Arr**	**24.47**	**161**	P	**P**	**16 57 30.9**	**-1.0**
WRAB	**Tennant Creek**	**24.61**	**161**	P	**P**	**16 57 33.4**	**+0.1**
WRAB				IAmb	IAmb	16 58 06.3	
	comp=Z,5.8nm,0.7s						
WRA	**Warramunga Arr**	**24.62**	**161**	P	**P**	**16 57 32.2**	**-1.1**
	comp=Z,0.9nm,0.3s,baz=338,slow=10,SNR=20						
WRA	**Warramunga Arr**	**24.62**	**161**	P	**P**	**16 57 33.5**	**+0.2**
WB2	**Warramunga Arr**	**24.62**	**161**	P	**P**	**16 57 32.4**	**-0.9**
WR0	**Warramunga Arr**	**24.70**	**161**	P	**P**	**16 57 31.7**	**-2.3**
WR0				IAmb	IAmb	16 57 41.4	
	comp=Z,10nm,1.4s						
AS31	**Alice Springs**	**28.02**	**165**	P	**P**	**16 58 04.8**	**+0.8**
ASAR	**Alice Springs**	**28.02**	**165**	P	**P**	**16 58 03.4**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=338,slow=7.3,SNR=12						
ASAR	**Alice Springs**	**28.02**	**165**	P	**P**	**16 58 05.4**	**+1.4**
NWAO	**Narrogin (SRO)**	**37.21**	**193**	P	**P**	**16 59 23.9**	**-0.1**
NWAO	**Narrogin (SRO)**	**37.21**	**193**	P	**P**	**16 59 23.9**	**-0.1**
NWAO				IAmb	IAmb	16 59 27.6	
	comp=Z,40nm,1.4s						
MKAR	**Makanchi Array**	**57.45**	**326**	P	**P**	**17 02 00.1**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=112,slow=7.5,SNR=6.3						
MKAR	**Makanchi Array**	**57.45**	**326**	P	**P**	**17 01 59.7**	**-1.5**
KURK	**Kurchatov**	**61.66**	**328**	P	**P**	**17 02 29.3**	**-0.8**
KURK				IAmb	IAmb	17 02 56.0	
	comp=Z,1.8nm,1.1s						
TIXI	**Tiksi**	**68.08**	**1**	P	**P**	**17 03 11.2**	**-0.2**
TIXI				IAmb	IAmb	17 03 28.0	
	comp=Z,3.4nm,1.4s						
ABKAR	**Akbulak array**	**72.01**	**321**	P	**P**	**17 03 34.2**	**-1.7**
SPIA	**Saint Paul Isl**	**72.96**	**31**	P	**P**	**17 03 40.5**	**-0.9**

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*ISK **20** 16:54:25.8, 35°.87N×36°.31E, h14^{km}, ML3.1/25*

*DDA **20** 16:54:28.7, 36°.05N×36°.25E, h14^{km}, ML3.0*

*GRAL **20** 16:54:29.0±0.8, 35°.92N×36°.21E, h18^{km}±10^{km}, MD3.6*

*NIC **20** 16:54:29.6±0.0, 35°.87N×36°.27E, h29^{km}±2^{km}, Ml3.2/5*

ISC 20 16:54:27.0±1.0, **35°.93N**±0°.03×**36°.28E**±0°.03, **h17**^{km}±7^{km}, **n61**, σ**1ˢ03**/80, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YAYL	**Yayladag**	**0.17**	**307**	*i* P	**Pg**	**16 54 32.2**	**+0.7**
YAYL				*i* S	**Sg**	**16 54 35.0**	**+0.4**
YAYL				IAML		16 54 36.0	
	comp=N,8µm,0.2s						
TAHT	**Tahtakopru-Hat**	**0.45**	**350**	PG	**Pb**	**16 54 36.7**	**+0.1**
TAHT				SG	**Sb**	**16 54 43.7**	**+0.7**
KRTD	**Karatas-Adana**	**0.96**	**314**	PG	**Pn**	**16 54 46.3**	**+0.5**
KRTS	**Karatas**	**0.97**	**312**	PG	**Pn**	**16 54 46.1**	**+0.2**
KRTS				SG	**Sn**	**16 55 00.5**	**+1.2**
YURE	**YUREGIR**	**1.03**	**330**	PN	**Pn**	**16 54 47.9**	**+1.1**
YURE	**YUREGIR**	**1.03**	**330**	*i* P	**Pn**	**16 54 48.1**	**+1.3**
KUZU	**Kuzuini**	**1.06**	**37**	*i* P	**Pn**	**16 54 47.3**	**+0.1**
KUZU				*i* S	**Sb**	**16 55 01.3**	**+0.8**
KUZU				IAML		16 55 04.0	
	comp=E,2µm,0.2s						
CEYT	**Ceyhan**	**1.16**	**338**	PN	**Pn**	**16 54 49.3**	**+0.8**
KAMA	**Osmaniye**	**1.29**	**14**	*i* P	**Pg**	**16 54 51.5**	**-0.5**
GAZ	**Gaziantep**	**1.45**	**31**	PN	**Pn**	**16 54 52.9**	**+0.3**
GAZ	**Gaziantep**	**1.45**	**31**	P	**Pb**	**16 54 53.2**	**-0.4**
GAZ				S	**Sg**	**16 55 13.7**	**-0.2**
GAZ				AML	AML	16 55 15.1	
	comp=E,0.8nm,0.4s						
GAZ				AML	AML	16 55 15.1	
	comp=E,0.8nm,0.4s						
AYKD	**Aykdinkavak**	**1.54**	**16**	*i* P	**Pn**	**16 54 50.8**	**-3.0**
AYKD				*i* S	**Sb**	**16 55 15.0**	**+0.6**
DED	**Mersin**	**1.58**	**311**	*i* P	**Pb**	**16 54 55.4**	**-0.4**
DED				*i* S	**Sg**	**16 55 16.4**	**-1.5**
DED				IAML		16 55 18.0	
	comp=E,136nm,0.3s						
ANDN	**Andirin**	**1.65**	**2**	*i* P	**Pn**	**16 54 56.0**	**+0.7**
ANDN				*i* S	**Sb**	**16 55 17.8**	**+0.2**
KMRS	**Kahramanmaras**	**1.65**	**17**	PN	**Pn**	**16 54 55.8**	**+0.5**
KARA	**Karaisali**	**1.65**	**324**	PN	**Pn**	**16 54 55.3**	**0.0**
HWQ	**Hawqa**	**1.67**	**190**	*e*P	**Pn**	**16 54 56.4**	**+0.7**
HWQ				*e*S	**Sn**	**16 55 16.4**	**-0.4**
MERS	**Mersin**	**1.70**	**304**	PN	**Pn**	**16 54 56.8**	**+0.8**
EREN	**Erenkoy**	**1.76**	**258**	PN	**Pn**	**16 54 56.4**	**-0.4**
GULE	**Gulek**	**1.81**	**319**	*i* P	**Pg**	**16 55 00.4**	**-1.4**
GULE				*i* S	**Sg**	**16 55 23.5**	**-2.0**
GULE				IAML		16 55 27.0	
	comp=E,178nm,0.5s						
KIZK	**Mersin**	**1.81**	**288**	PN	**Pb**	**16 54 58.7**	**-1.0**
KIZK	**Mersin**	**1.81**	**288**	*i* P	**Pb**	**16 54 59.0**	**-0.7**
KIZK				*i* S	**Sb**	**16 55 22.1**	**-0.1**
SILI	**Silifke-Mersin**	**1.96**	**284**	PN	**Pb**	**16 55 00.9**	**-1.3**
CMRD	**Camardi-Nigde**	**2.02**	**329**	PN	**Pb**	**16 55 01.9**	**-1.4**
PARAL	**Paralimni**	**2.05**	**244**	P	**Pn**	**16 55 01.2**	**+0.5**
PARAL				S	**Sn**	**16 55 26.9**	**+0.9**
PARAL				AML	AML	16 55 27.1	
	comp=E,0.5nm,0.4s						
PARAL				AML	AML	16 55 27.1	
	comp=E,0.5nm,0.4s						
PARAL				AML	AML	16 55 30.4	
	comp=E,0.4nm,0.6s						
PARAL				AML	AML	16 55 30.4	
	comp=E,0.4nm,0.6s						
BHL	**Bhannes**	**2.09**	**194**	*e*P	**Pn**	**16 55 01.8**	**+0.5**
BHL				*e*S	**Sn**	**16 55 26.3**	**-0.7**
SURC	**SANLIURFA_SURC**	**2.11**	**63**	*i* P	**Pb**	**16 55 04.5**	**-0.3**
IKL	**Isikli**	**2.12**	**279**	PN	**Pn**	**16 55 02.3**	**+0.6**
KEBE	**Keben-Mersin**	**2.14**	**285**	PN	**Pn**	**16 55 03.3**	**+1.3**
BEYL	**Beirut**	**2.15**	**198**	*e*P	**Pn**	**16 55 02.8**	**+0.6**
AKKU	**Akkuyu-Mersin**	**2.22**	**277**	PN	**Pn**	**16 55 03.5**	**+0.4**
GULN	**MERSIN_Gulnar**	**2.23**	**277**	*i* P	**Pn**	**16 55 04.4**	**+1.2**
KERG	**Konya-Eregli**	**2.28**	**311**	*i* P	**Pb**	**16 55 06.6**	**-1.2**
KERG				*i* S	**Sb**	**16 55 35.8**	**+0.1**
YAHY	**KAYSERI_Yahyal**	**2.28**	**342**	*i* P	**Pb**	**16 55 06.2**	**-1.6**
DQRL	**Deir Qamar**	**2.29**	**195**	*e*P	**Pn**	**16 55 04.6**	**+0.4**
DQRL				*e*S	**Sn**	**16 55 31.1**	**-1.0**
MVOU	**Mavrovouni**	**2.35**	**248**	P	**Pn**	**16 55 05.0**	**+0.2**
MVOU				S	**Sn**	**16 55 34.2**	**+1.0**
QRWL	**Qaraoun**	**2.43**	**192**	*e*P	**Pn**	**16 55 06.7**	**+0.7**
RCY	**Rachaya**	**2.46**	**189**	*e*P	**Pn**	**16 55 07.2**	**+0.7**
SARI	**SarD1z-Kayseri**	**2.48**	**3**	PN	**Pn**	**16 55 08.5**	**+1.7**
BERE	**Bereket-Mersin**	**2.51**	**280**	PN	**Pn**	**16 55 08.1**	**+0.9**
URFA	**Urfa**	**2.54**	**53**	PN	**Pn**	**16 55 08.3**	**+0.7**
TEKE	**Tekeli-Mersin**	**2.57**	**276**	PN	**Pn**	**16 55 08.8**	**+0.9**
TEKE				SN	**Sn**	**16 55 40.4**	**+1.5**
CSS	**Mathiatis**	**2.59**	**249**	PN	**Pn**	**16 55 08.8**	**+0.6**
CSS	**Mathiatis**	**2.59**	**249**	P	**Pn**	**16 55 09.1**	**+0.8**
SHBL	**Chebaa**	**2.61**	**190**	*e*P	**Pn**	**16 55 09.5**	**+0.8**
ASGA	**Asgata**	**2.73**	**246**	P	**Pn**	**16 55 11.1**	**+1.0**
ASGA				S	**Sn**	**16 55 44.1**	**+1.4**
ASGA				AML	AML	16 55 44.6	
	comp=E,0.2nm,0.8s						
ASGA				AML	AML	16 55 44.6	
	comp=E,0.2nm,0.8s						
ASGA				AML	AML	16 55 44.7	
	comp=E,0.2nm,0.6s						
ASGA				AML	AML	16 55 44.7	
	comp=E,0.2nm,0.6s						
KSDI	**Kefar Szold**	**2.78**	**191**	P	**Pn**	**16 55 11.8**	**+1.1**
KSDI				AML	AML	16 55 57.9	
	comp=E,0.2nm,0.8s						
KSDI				AML	AML	16 56 03.4	
	comp=E,0.2nm,0.5s						
DARE	**Darende-Malaty**	**2.81**	**20**	PN	**Pn**	**16 55 13.0**	**+1.8**
MALT	**Malatya**	**2.93**	**35**	PN	**Pn**	**16 55 13.7**	**+0.7**
SZAC	**Souni**	**3.02**	**248**	P	**Pn**	**16 55 14.9**	**+0.9**
SZAC				AML	AML	16 55 51.5	
	comp=E,0.3nm,0.6s						
ALFC	**Alefka**	**3.10**	**257**	P	**Pn**	**16 55 16.9**	**+1.7**
GAZI	**Gazipasa**	**3.23**	**277**	PN	**Pn**	**16 55 18.0**	**+1.1**
GAZI	**Gazipasa**	**3.23**	**277**	*i* P	**Pn**	**16 55 18.4**	**+1.5**
NATA	**Nata**	**3.24**	**250**	P	**Pn**	**16 55 18.7**	**+1.6**
AKMS	**Akamas**	**3.35**	**255**	P	**Pn**	**16 55 20.4**	**+1.8**
SVRC	**Sivrice-ELAZID**	**3.44**	**44**	PN	**Pn**	**16 55 20.8**	**+0.8**
MMLI	**Mount Malkishu**	**3.56**	**192**	PN	**Pn**	**16 55 21.0**	**-0.5**
MAZI	**Mazidag**	**3.68**	**64**	PN	**Pn**	**16 55 23.8**	**+0.5**
PTK	**Pertek**	**3.86**	**39**	PN	**Pn**	**16 55 26.9**	**+1.1**
OSC2	**CSNet OBS 4**	**4.37**	**230**	P	**Pn**	**16 55 33.8**	**+1.2**
OSC2				S	**Sn**	**16 56 23.8**	**+0.7**
AMAZ	**Amatzia**	**4.53**	**195**	P	**Pn**	**16 55 36.2**	**+1.3**

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*IDC **20** 17:01:17.0±0.3, 5°.12S×152°.80E, h0^{km}, mb5.2/28, mb1 5.2/30, mb1mx5.2/36, mbtmp5.1/30, ML4.4/2, MS4.8/27, Ms1 4.8/27, ms1mx4.8/33, Error ellipse: s-maj=13.2km s-min=10.3km az=77.0*

*MOS **20** 17:01:20.1±1.0, 5°.08S×152°.79E, h30^{km}, mb5.6/23, MS4.9/7, Error ellipse: s-maj=7.9km s-min=5.3km az=102.9*

*NEIC **20** 17:01:21.7±1.5, 5°.17S±0°.06×152°.81E±0°.07, h35^{km}±1^{km}, mb5.4/220, Mww5.4, Error ellipse: s-maj=12.2km s-min=8.8km az=234.0*

*GCMT **20** 17:01:23.7±0.1, 5°.33S±0°.01×152°.86E±0°.01, h23^{km}, MW5.4/122, Moment Tensor Solution. s122,c219; s121,c221; Duration: 1ˢ2 Moment tensor: Scale 10^{17} Nm; M_{rr}1.08±.03; $M_{\theta\theta}$-1.08±.02; $M_{\phi\phi}$0.00±.02; $M_{r\theta}$0.93±.03; $M_{\theta\phi}$-0.58±.01; $M_{\phi r}$-0.14±.03; Best double couple: $M_0$1.54500×10^{17} NP1:ϕ_s225.00000°, δ32.00000°, λ53.00000°. NP2:ϕ_s87.00000°, δ65.00000°, λ111.00000°. Principal axes: T 1.5050, Plg64.0000°, Azm31.0000°; N 0.0740, Plg19.0000°, Azm257.0000°; P -1.5850, Plg17.0000°, Azm161.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **20** 17:01:23.0±0.0, 4°.85S×153°.02E, h56^{km}, mB5.4/59, mb5.3/76, Ms5.2/65, Ms7 4.9/64*

*DJA **20** 17:01:23.8±0.4, 5°S±2°×15°3E±°, h54^{km}±4^{km}, M5.3/87, mb5.4/87, mB5.7/43, MLv5.9/3, Mw(mB)5.2/43, Mwp5.4/12*

*NEIC **20** 17:01:25, 5°.24S×152°.91E, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.35; $M_{\theta\theta}$-0.98; $M_{\phi\phi}$-0.37; $M_{r\theta}$1.07; $M_{\theta\phi}$-0.50; $M_{\phi r}$0.38; Fault plane solution: $M_0$1.73000×10^{17} NP1:ϕ_s67.00000°, δ66.00000°, λ95.00000°. NP2:ϕ_s236.00000°, δ25.00000°, λ80.00000°. Principal axes: T 1.7813, Plg69.0000°, Azm346.0000°; N -0.0997, Plg4.0000°, Azm245.0000°; P -1.6816, Plg20.0000°, Azm153.0000°;*

ISC 20 17:01:24.0±0.4, **5°.20S**±0°.04×**152°.86E**±0°.04, **h53**^{km}±3^{km}, **h52**^{km}**:pP-P**, **n1269**, σ**1ˢ12**/1310, **mb5.4**/227, **MS4.8**/57, **32C-17D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.22**	**317**	Pg	**Pn**	**17 01 43.5**	**-1.3**
	7µm,0.3s,baz=186,slow=1.2,SNR=5817						
KRVT				Lg	Lg	17 01 59.7	
	9µm,0.3s,baz=281,slow=17,SNR=6.7						
RABL	**Rabaul**	**1.22**	**325**		**Pn**	**17 01 43.6**	**-1.2**
MANU	**Manus Island**	**6.32**	**300**		**Pn**	**17 02 53.0**	**-1.7**
PMG	**Port Moresby**	**7.03**	**233**	Pn	**Pn**	**17 03 04.9**	**+0.5**
	23nm,0.3s,baz=49,slow=5.4,SNR=100						
PMG				Sn	**Sn**	**17 04 22.9**	**-0.1**
	24nm,0.3s,baz=340,slow=20,SNR=7.8						
PMG	**Port Moresby**	**7.03**	**233**		**Pn**	**17 03 04.5**	**0.0**
HNR	**Honiara**	**8.19**	**121**	Pn	**Pn**	**17 03 19.9**	**-0.4**
	9.4nm,0.3s,baz=208,slow=19,SNR=7.6						
HNR				Sn	**Sn**	**17 04 56.2**	**+4.7**
	11nm,0.3s,baz=18,slow=19,SNR=4.0						
HNR				LR	LR	17 06 59.1	
	comp=Z,9µm,18.7s,baz=306,slow=41						
HNR	**Honiara**	**8.19**	**121**	P	**Pn**	**17 03 22.0**	**+1.7**
HNR	**Honiara**	**8.19**	**121**	P	**Pn**	**17 03 20.9**	**+0.6**
HNR						17 04 56.2	
HNR	**Honiara**	**8.19**	**121**		**Pn**	**17 03 20.9**	**+0.6**
COEN	**Coen**	**12.91**	**227**	P	**Pn**	**17 04 23.7**	**-1.2**
	baz=13,SNR=9.7						
COEN	**Coen**	**12.91**	**227**		**Pn**	**17 04 24.2**	**-0.8**
GENI	**Genyem**	**12.93**	**281**	P	**Pn**	**17 04 26.0**	**+0.9**
	4µm6µm212nm,1.2s						
PATS	**Pohnpei**	**13.14**	**25**	P	**Pn**	**17 04 25.9**	**-2.1**
	baz=13,SNR=12						
PATS	**Pohnpei**	**13.14**	**25**		**Pn**	**17 04 25.7**	**-2.3**
MTSU	**Mount Surprise**	**15.33**	**212**	P	**Pn**	**17 04 56.9**	**-0.2**
	baz=16,SNR=7.5						
CTA	**Charters Tower**	**16.13**	**203**	Pn	**Pn**	**17 05 07.4**	**-0.1**
	0.6nm,0.3s,baz=38,slow=15,SNR=3.7						
CTA				LR	LR	17 11 20.4	
	comp=Z,5µm,18.6s,baz=27,slow=37						
BAKI	**Biak**	**17.19**	**283**	P	**P**	**17 05 21.3**	**-0.4**
	199µm93nm,0.7s						
QIS	**Mount Isa**	**19.97**	**219**	P	**P**	**17 05 52.6**	**+0.5**
	baz=20,SNR=65						
EIDS	**Eidsvold**	**20.13**	**185**	P	**P**	**17 05 54.0**	**+0.3**
	baz=20,SNR=14						
EIDS	**Eidsvold**	**20.13**	**185**	P	**P**	**17 05 53.9**	**+0.2**
EIDS				IAmb	IAmb	17 06 07.9	
	comp=Z,212nm,1.6s						
GUMO	**Guam**	**20.29**	**337**	P	**P**	**17 05 56.4**	**+0.9**
	comp=Z,617nm,1.1s,baz=169,slow=15,SNR=8.8						
GUMO				LR	LR	17 14 28.4	
	comp=Z,2µm,18.4s,baz=148,slow=39						
GUMO	**Guam**	**20.29**	**337**	P	**P**	**17 05 56.2**	**+0.7**
GUMO				pmax	pmax		
	comp=Z,590nm,1.0s						
GUMO	**Guam**	**20.29**	**337**	P	**P**	**17 05 56.2**	**+0.7**
FAKI	**Fak Fak**	**20.68**	**275**	P	**P**	**17 06 00.0**	**+0.1**
	comp=Z,2µmcomp=Z,2µmcomp=Z,94nm,0.7s						
FAKI	**Fak Fak**	**20.68**	**275**	P	**P**	**17 05 59.6**	**-0.3**
TARA	**Tarawa**	**21.07**	**73**	P	**P**	**17 06 04.3**	**+0.3**
DZM	**Mont Dzumac**	**21.31**	**143**	*e*P	**P**	**17 06 05.9**	**-0.8**
	comp=Z,355nm,0.9s						
DZM				*e*LR	LR	17 11 04.6	
	comp=Z,4µm,21.2s						
DZM	**Mont Dzumac**	**21.31**	**143**	P	**P**	**17 06 07.4**	**+0.7**
	comp=Z,159nm,0.9s,baz=314,slow=7.3,SNR=48						
DZM				S	Sn	17 10 06.1	-4.4
	comp=Z,23nm,1.1s,baz=123,slow=22,SNR=5.9						
DZM	**Mont Dzumac**	**21.31**	**143**	P	**P**	**17 06 07.3**	**+0.6**
DZM				IAmb	IAmb	17 06 13.1	
	comp=Z,143nm,0.8s						
KDU	**Kakadu**	**21.46**	**248**	P	**P**	**17 06 06.6**	**-1.6**
	baz=22,SNR=8.1						
RMQ	**Roma**	**21.52**	**190**	P	**P**	**17 06 08.9**	**+0.1**
	baz=22,SNR=22						
SAUI	**Saumlaki**	**21.59**	**261**	P	**P**	**17 06 11.0**	**+1.3**
	comp=Z,368nm,1.1s						
SIJI	**Sorong**	**21.98**	**281**	P	**P**	**17 06 13.4**	**-0.5**
	comp=Z,71nm,0.8s,baz=84,slow=7.1,SNR=36						
SWI	**Sorong**	**21.99**	**281**	P	**P**	**17 06 13.5**	**-0.4**
	comp=Z,2µmcomp=Z,214nm,0.7s						
MTN	**Manton Dam**	**22.75**	**249**	P	**P**	**17 06 21.2**	**-0.8**
	baz=23,SNR=26						
QLP	**Quilpie**	**22.80**	**200**	P	**P**	**17 06 22.0**	**-0.4**
	baz=23,SNR=9.2						
BNDI	**Bandanaira**	**22.88**	**271**	P	**P**	**17 06 23.4**	**0.0**
	comp=Z,2µmcomp=Z,3µmcomp=Z,238nm,1.5s						
WB0	**Warramunga Arr**	**23.08**	**230**	P	**P**	**17 06 24.3**	**-1.1**
WR0	**Warramunga Arr**	**23.09**	**229**	P	**P**	**17 06 23.5**	**-1.9**
WRAB	**Tennant Creek**	**23.21**	**229**	*ce*P	**P**	**17 06 24.9**	**-1.8**
WRAB				pmax	pmax		
	comp=Z,252nm,1.7s						
WRAB	**Tennant Creek**	**23.21**	**229**	P	**P**	**17 06 25.8**	**-0.9**
WB2	**Warramunga Arr**	**23.22**	**229**	P	**P**	**17 06 25.9**	**-0.9**
WRA	**Warramunga Arr**	**23.23**	**229**	P	**P**	**17 06 25.7**	**-1.2**
	comp=Z,88nm,0.8s,baz=55,slow=9.8,SNR=139						
WRA				S	**S**	**17 10 35.1**	**0.0**
	comp=Z,12nm,1.1s,baz=54,slow=17,SNR=3.3						
WRA				LR	LR	17 15 43.0	
	comp=Z,2µm,20.6s,baz=55,slow=37						
WRA	**Warramunga Arr**	**23.23**	**229**	*i* P	**P**	**17 06 23.0**	**-3.8**
WRA				pmax	pmax		
	comp=Z,88nm,0.8s						
WRA	**Warramunga Arr**	**23.23**	**229**	P	**P**	**17 06 25.2**	**-1.6**
MSAI	**Masohi**	**23.93**	**273**	P	**P**	**17 06 34.3**	**+0.8**
AAI	**Ambon**	**24.64**	**272**	P	**P**	**17 06 40.8**	**+0.9**
	comp=Z,854nmcomp=Z,62nm,0.7s						
ARMA	**Armidale**	**25.11**	**183**	P	**P**	**17 06 45.5**	**+1.3**
	baz=25,SNR=6.9						
ARMA	**Armidale**	**25.11**	**183**	P	**P**	**17 06 44.7**	**+0.5**
LBMI	**Labuha**	**25.72**	**279**	P	**P**	**17 06 49.7**	**-0.1**
	comp=Z,2µmcomp=Z,236nm,1.0s						
NLAI	**Namlea**	**25.76**	**273**	P	**P**	**17 06 49.8**	**-0.3**
	comp=Z,681nmcomp=Z,34nm,0.7s						
KNRA	**Kununurra**	**25.85**	**244**	P	**P**	**17 06 50.2**	**-0.7**
	baz=26,SNR=104						

KNRA	Kununurra	25.85	244	P	P	17 06 50.6	-0.3
AS31	Alice Springs	25.89	223	P	P	17 06 50.9	-0.4
ASAR	Alice Springs	25.90	223	P	P	17 06 51.0	-0.4
	comp=Z,35nm,0.8s,baz=55,slow=9.3,SNR=377						
ASAR				PcP	PcP	17 10 19.9	+0.5
	comp=Z,8.2nm,0.9s,baz=48,slow=3.3,SNR=4.3						
ASAR				S	S	17 11 24.6	+6.7
	comp=Z,3.9nm,0.9s,baz=47,slow=17,SNR=1.8						
ASAR				LR	LR	17 16 32.1	
	comp=Z,2µm,20.8s,baz=38,slow=35						
ASAR	Alice Springs	25.90	223	P	P	17 06 50.6	-0.7
ASAR						17 10 19.9	
ASAR				S	S	17 11 24.6	+6.7
ASAR	Alice Springs	25.90	223	P	P	17 06 50.6	-0.7
TNTI	Ternate	26.14	282	P	P	17 06 54.3	+0.7
	comp=Z,757nmcomp=Z,53nm,1.1s						
TNTI	Ternate	26.14	282	P	P	17 06 52.5	-1.1
SANI	Sanana	27.00	276	P	P	17 07 01.9	+0.6
	comp=Z,1µmcomp=Z,78nm,0.9s						
CMSA	Cobar Meteorol	27.05	194	P	P	17 07 00.7	-0.8
	baz=27,SNR=36						
MGCD	Mangrove Creek	27.91	183	P	P	17 07 10.2	+0.9
	baz=28,SNR=5.1						
STKA	Stephens Creek	28.56	200	P	P	17 07 14.3	-0.8
	baz=29,SNR=13						
STKA	Stephens Creek	28.56	200	P	P	17 07 14.2	-0.8
	comp=Z,14nm,0.8s,baz=32,slow=13,SNR=20						
STKA				LR	LR	17 19 21.8	
	comp=Z,4µm,18.1s,baz=13,slow=38						
STKA	Stephens Creek	28.56	200	P	P	17 07 14.2	-0.8
STKA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
STKA	Stephens Creek	28.56	200	P	P	17 07 14.2	-0.8
SOEI	Soe	28.70	259	P	P	17 07 16.0	-0.6
	comp=Z,2µmcomp=Z,65nm,0.9s						
SOEI	Soe	28.70	259	P	P	17 07 16.2	-0.4
KMSI	Cibinong	29.41	280	P	P	17 07 22.0	-0.8
	comp=Z,164nm,0.7s						
FITZ	Fitzroy Crossi	29.52	242	P	P	17 07 22.7	-1.0
	baz=30,SNR=70						
FITZ	Fitzroy Crossi	29.52	242	P	P	17 07 22.8	-1.0
	comp=Z,62nm,0.8s,baz=50,slow=7.6,SNR=105						
FITZ				LR	LR	17 19 38.9	
	comp=Z,780nm,18.3s,baz=72,slow=37						
FITZ	Fitzroy Crossi	29.52	242	P	P	17 07 22.7	-1.0
FITZ				IAmb	IAmb	17 07 42.7	
	comp=Z,98nm,0.9s						
KCP	Kidapawan	30.25	293	⇑iP	P	17 07 30.2	-0.1
LUWI	Luwuk	30.32	277	P	P	17 07 30.9	0.0
	comp=Z,1µmcomp=Z,99nm,0.9s						
GTOI	Gorontalo	30.37	280	P	P	17 07 33.3	+2.0
	comp=Z,0.1nm,0.8s						
MMRI	Maumere	30.58	262	P	P	17 07 32.2	-1.0
	comp=Z,981nmcomp=Z,94nm,0.8s						
MMRI	Maumere	30.58	262	P	P	17 07 31.6	-1.6
MMRI				IAmb	IAmb	17 07 33.3	
	comp=Z,82nm,1.0s						
BUKP	Musuan	30.62	295	eP	P	17 07 32.1	-1.5
WRKA	Warakurna	30.73	228	P	P	17 07 33.6	-0.8
	baz=31,SNR=12						
HTT	Hallett	30.94	203	P	P	17 07 35.4	-0.7
	baz=31,SNR=11						
CTBH	Cotabato--PC H	31.11	293	⇓iP	P	17 07 34.4	-3.4
MRSI	Marisa	31.39	279	P	P	17 07 38.7	-1.6
	comp=Z,31nm,0.8s						
APSI	Ampana	31.45	277	P	P	17 07 41.3	+0.5
	comp=Z,52nm,1.1s						
BBOO	Buckleboo	31.63	208	P	P	17 07 41.8	-0.4
	baz=32,SNR=4.9						
BBOO	Buckleboo	31.63	208	P	P	17 07 41.4	-0.8
BBOO				IAmb	IAmb	17 07 53.1	
	comp=Z,109nm,1.8s						
BASI	Baing, Sumba	32.36	259	P	P	17 07 49.3	+0.5
	comp=Z,2µmcomp=Z,130nm,0.9s						
WSI	Waingapu	32.58	260	P	P	17 07 50.6	-0.2
	comp=Z,5µmcomp=Z,385nm,0.8s						
BKSI	Bulukumba	32.60	268	P	P	17 07 53.2	+2.3
	comp=Z,318nmcomp=Z,16nm,0.9s						
TOO	Toolangi	32.91	191	P	P	17 07 53.3	-0.1
	baz=33,SNR=4.0						
TOO	Toolangi	32.91	191	P	P	17 07 53.4	0.0
TOO				pmax	pmax		
	comp=Z,59nm,1.7s						
TOO	Toolangi	32.91	191	P	P	17 07 53.4	0.0
KAPI	Kappang	32.98	269	P	P	17 07 53.3	-0.9
	comp=Z,8.2nm,0.7s,baz=95,slow=12,SNR=5.2						
ARPS	Mount Arapiles	33.00	196	P	P	17 07 54.1	-0.1
	baz=33,SNR=9.5						
SPSI	Sidrap Palu	33.01	271	P	P	17 07 55.0	+0.5
	comp=Z,17nm,0.9s						
TTSI	Tana Toraja	33.02	272	P	P	17 07 55.1	+0.5
	comp=Z,27nm,1.5s						
MPSI	Mapaga	33.38	279	P	P	17 07 55.6	-2.1
	comp=Z,461nmcomp=Z,30nm,0.8s						
WBSI	Waikabubak, Su	33.47	260	P	P	17 07 57.6	-1.0
	comp=Z,2µmcomp=Z,178nm,0.8s						
JCJ	Chichijima	33.73	343	LR	LR	17 19 04.4	
	comp=Z,426nm,20.7s,baz=98,slow=32						
FORT	Forrest	34.52	220	P	P	17 08 07.3	-0.1
PLAI	Plampang	35.00	262	P	P	17 08 09.6	-2.2
	comp=Z,45nm,0.9s						
OUZ	Omahuta	35.48	150	P	P	17 08 15.4	-0.2
OUZ				IAmb	IAmb	17 08 40.6	
	comp=Z,86nm,1.4s						
PSA00	Pilbara Seismi	35.88	240	P	P	17 08 19.3	0.0
PSA00	Pilbara Seismi	35.88	240	P	P	17 08 18.1	-1.2
PSA00				IAmb	IAmb	17 08 19.6	
	comp=Z,107nm,1.2s						
MOO	Moorlands	37.42	187	P	P	17 08 33.5	+1.4
	baz=38,SNR=3.1						
KKM	Kota Kinabalu	38.25	287	P	P	17 08 38.6	-1.0
JAGI	Jajag, Banyuwa	38.56	263	P	P	17 08 42.1	0.0
	comp=Z,51nm,0.9s						
JAGI	Jajag, Banyuwa	38.56	263	P	P	17 08 40.7	-1.4
JAGI				IAmb	IAmb	17 08 43.0	
	comp=Z,91nm,1.3s						
KMBL	Kambalda	39.01	224	P	P	17 08 45.8	+0.2
	baz=39,SNR=5.1						
MEEK	Meekatharra	39.01	233	P	P	17 08 45.1	-0.7
	baz=39,SNR=32						
URZ	Urewera	39.61	150	P	P	17 08 51.6	+1.1
	comp=Z,31nm,0.9s,baz=21,slow=7.3,SNR=9.9						
URZ				LR	LR	17 22 52.7	
	comp=Z,936nm,18.8s,baz=342,slow=33						
URZ	Urewera	39.61	150	P	P	17 08 51.6	+1.1
URZ				IAmb	IAmb	17 09 09.8	
	comp=Z,63nm,1.1s						
BKZ	Black Stump Fm	40.01	151	P	P	17 08 53.6	-0.3
THZ	Tophouse	40.56	157	P	P	17 08 59.2	+0.7
THZ				IAmb	IAmb	17 09 18.3	
	comp=Z,67nm,1.0s						
TUWZ	Tuamarina	40.70	155	P	P	17 09 00.6	+1.1
PWJI	Pagerwojo	40.87	264	P	P	17 09 00.8	-0.5
	comp=Z,45nm,0.8s						
GIRL	Giralia	41.13	241	P	P	17 09 04.6	+1.3
	baz=41,SNR=4.8						
LTZ	Lake Taylor	41.19	158	P	P	17 09 04.6	+1.0
LTZ				IAmb	IAmb	17 09 15.9	
	comp=Z,151nm,1.6s						
SBUM	Sibu	41.30	280	P	P	17 09 04.1	-0.8
SBUM	Sibu	41.30	280	P	P	17 09 05.0	+0.1
PCJI	Pacitan	41.49	264	P	P	17 09 06.1	-0.3
RPZ	Rata Peaks	41.58	160	P	P	17 09 07.3	+0.6
	comp=Z,40nm,0.9s,baz=316,slow=3.6,SNR=14						
RPZ				LR	LR	17 25 56.5	
	comp=Z,6µm,18.1s,baz=332,slow=36						
RPZ	Rata Peaks	41.58	160	P	P	17 09 07.2	+0.6
RPZ				IAmb	IAmb	17 09 18.8	
	comp=Z,91nm,1.1s						
OXZ	Oxford	41.58	159	P	P	17 09 07.5	+0.8
KLBR	Kellerberrin	42.08	227	P	P	17 09 10.6	-0.4
	baz=42,SNR=5.5						
MORW	Morawa	42.14	231	P	P	17 09 11.0	-0.6
	baz=42,SNR=9.0						
MORW	Morawa	42.14	231	P	P	17 09 11.1	-0.4
MORW				IAmb	IAmb	17 09 11.7	
	comp=Z,63nm,1.1s						
MLZ	Mavora Lakes	42.16	164	P	P	17 09 12.1	+0.6
MLZ				IAmb	IAmb	17 09 35.0	
	comp=Z,90nm,1.2s						
NACB	Ninganchiao	42.20	315	P	P	17 09 11.6	-0.4
NACB				IAmb	IAmb	17 09 16.2	
	comp=Z,78nm,1.1s						
SMRI	Semarang	42.21	265	P	P	17 09 13.2	+0.9
	comp=Z,63nm,1.1s						
BLDU	Ballidu	42.36	229	P	P	17 09 12.8	-0.5
	baz=42,SNR=6.5						
KSM	Kuching	43.02	278	P	P	17 09 17.9	-1.0
KSM	Kuching	43.02	278	P	P	17 09 18.0	-0.9
NWAO	Narrogin (SRO)	43.15	226	P	P	17 09 19.4	-0.3
	comp=Z,9.8nm,0.8s,baz=94,slow=12,SNR=2.0						
NWAO	Narrogin (SRO)	43.15	226	P	P	17 09 19.4	-0.3
NWAO				pmax	pmax		
	comp=Z,127nm,1.8s						
NWAO	Narrogin (SRO)	43.15	226	IAmb	IAmb	17 10 26.4	
	comp=Z,127nm,1.8s						
MUN	Mundaring	43.41	228	P	P	17 09 21.7	0.0
	baz=44,SNR=5.3						
JNU	Nakatsue	43.45	333	P	P	17 09 21.3	-0.7
MJAR	Matsushiro Arr	43.73	343	P	P	17 09 21.5	-2.7
	comp=Z,10.0nm,1.0s,baz=152,slow=8.2,SNR=11						
MJAR				PcP	PcP	17 11 10.9	+0.5
	comp=Z,19nm,1.0s,baz=144,slow=3.5,SNR=8.9						
MJAR				LR	LR	17 25 38.4	
	comp=Z,1µm,21.6s,baz=200,slow=34						
MJAR	Matsushiro Arr	43.73	343	P	P	17 09 21.6	-2.7
MJAR					PcP	17 11 10.8	+0.3
MAJO	Matsushiro	43.73	343	P	P	17 09 22.6	-1.7
MAJO				pmax	pmax		
	comp=Z,39nm,1.3s						
MAJO	Matsushiro	43.73	343	P	P	17 09 22.6	-1.7
MAT	Matsushiro	43.73	343	P	P	17 09 21.7	-2.5
MAT				eS	S	17 16 04.6	+14
MJB9	Matsu-Tunnel	43.74	343	P	P	17 09 22.6	-1.7
MJB9					PcP	17 11 10.3	-0.1
RKGY	Rocky Gully	44.23	224	P	P	17 09 29.0	+0.6
	baz=44,SNR=7.2						
CISI	Cisompet, Garu	44.81	265	P	P	17 09 32.0	-1.3
	comp=Z,2µmcomp=Z,180nm,0.9s						
CISI	Cisompet, Garu	44.81	265	P	P	17 09 31.3	-2.1
CNJI	Cibinong	45.49	265	P	P	17 09 40.6	+2.0
	comp=Z,2µmcomp=Z,216nm,1.0s						
SSE	Sheshan	47.09	322	P	P	17 09 51.3	+0.4
SSE				pmax	pmax		
	comp=Z,21nm,1.2s						
SSE				pmax	pmax		
	comp=Z,210nm,3.9s						
SSE				LR	LR		
	comp=Z,530nm,16.5s						
SSE				LR	LR		
	comp=Z,560nm,16.7s						
DLV	T Lat	47.30	291	P	P	17 09 52.8	-0.2
TJN	Taejon	47.76	332	ceP	P	17 09 55.2	-0.8
KASI	Kota Agung	48.14	267	P	P	17 09 59.4	0.0
	comp=Z,50nm,0.9s						
KSRS	Korea Array	48.38	333	P	P	17 10 00.3	-0.4
	comp=Z,15nm,0.9s,baz=151,slow=8.9,SNR=29						
KSRS				PcP	PcP	17 11 27.4	+0.8
	comp=Z,4.7nm,0.8s,baz=158,slow=3.5,SNR=5.3						
KSRS				LR	LR	17 29 34.4	
	comp=Z,569nm,18.8s,baz=101,slow=35						
KSAR	Wonju Array Be	48.39	333	P	P	17 10 00.0	-0.8
KSAR	Wonju Array Be	48.39	333	P	P	17 10 00.0	-0.8
MDSI	Maura Dua	48.50	269	P	P	17 10 00.2	-2.0
	comp=Z,42nm,1.0s						
RAR	Rarotonga	48.56	114	LR	LR	17 27 28.2	
	comp=Z,838nm,21.4s,baz=282,slow=32						
LWLI	Liwa	48.60	268	P	P	17 10 02.3	-0.7
	comp=Z,32µmcomp=Z,47nm,0.9s						
TPRI	Tanjung Pinang	48.66	276	P	P	17 10 03.5	+0.2
	comp=Z,2µmcomp=Z,35nm,0.6s						
QIZ	Qiongzhong	48.72	301	P	P	17 10 02.4	-1.4
QIZ				sP	pwP	17 10 21.8	+0.9
QIZ				S	S	17 17 06.8	+3.8
QIZ				pmax	pmax		
	comp=Z,29nm,1.4s						
QIZ				LR	LR		
	comp=Z,590nm,24.1s						
QIZ				LR	LR		
	comp=Z,800nm,22.6s						
QIZ				LR	LR		
	comp=Z,1µm,23.9s						
INCN	Inchon	48.99	332	P	P	17 10 05.6	0.0
INCN				pmax	pmax		
	comp=Z,114nm,1.0s						
INCN	Inchon	48.99	332	P	P	17 10 05.5	0.0
NJ2	Nanjing	49.19	321	eP	P	17 10 07.8	+0.7
NJ2				pmax	pmax		
	comp=Z,25nm,0.6s						
NJ2				LR	LR		
	comp=Z,1µm,19.9s						
NJ2				LR	LR		
	comp=Z,770nm,19.4s						
NJ2				LR	LR		
	comp=Z,2µm,22.2s						
YUK	Yuzh-Kuril'sk	49.41	353	eP	P	17 10 09.6	+1.1
YUK				eS	S	17 17 27.3	+16
YUK				pmax	pmax		
	comp=Z,182nm,1.1s						
MYKOM	Kota Tinggi	49.45	277	P	P	17 10 08.3	-1.1
MYKOM				IAmb	IAmb	17 10 09.8	
	comp=Z,52nm,1.2s						
MYKOM	Kota Tinggi	49.45	277	P	P	17 10 09.0	-0.4
WHN	Wuhan	51.19	316	⇑P	P	17 10 22.3	+0.1
WHN				pmax	pmax		
	comp=Z,62nm,1.1s						
WHN				LR	LR		
	comp=Z,2µm,12.9s						
WHN				LR	LR		
	comp=Z,1µm,5.5s						
WHN				LR	LR		
	comp=Z,3µm,24.9s						
KRJI	Kerinci	51.38	271	P	P	17 10 23.0	-1.1
	comp=Z,2µmcomp=Z,209nm,0.9s						
MSHR	Mys Shultsa	51.48	340	i P	P	17 10 23.8	-0.4
SDSI	Sungai Dareh	51.52	273	P	P	17 10 23.8	-1.2
	comp=Z,68nm,0.9s						
TEY	Ternei	52.09	345	⇓eP	P	17 10 27.9	-0.8
TEY				pmax	pmax		
	comp=Z,20nm,1.0s						
TEY				pmax	pmax		
	comp=N,10.0nm,1.0s						
PDSI	Padang	52.48	273	P	P	17 10 29.9	-2.3
	comp=N,24nm,0.7s						
DL2	Dalian	52.55	329	P	P	17 10 36.6	+4.4
DL2				S	S	17 17 57.8	+2.5
DL2				pmax	pmax		
	comp=N,28nm,0.9s						
DL2				pmax	pmax		
	comp=N,450nm,7.8s						
DL2				LR	LR		
	comp=N,700nm,21.4s						
DL2				LR	LR		
	comp=N,380nm,21.4s						
DL2				LR	LR		
	comp=N,740nm,25.2s						
USA0B	Ussuriysk Arra	52.65	341	c iP	P	17 10 32.5	-0.3
USA0B	Ussuriysk Arra	52.65	341	P	P	17 10 32.2	-0.6
USA0B				IAmb	IAmb	17 10 33.6	
	comp=Z,52nm,1.1s						
USRK	Ussuriysk Ar.	52.65	341	P	P	17 10 32.2	-0.6
	comp=Z,30nm,0.9s,baz=172,slow=8.9,SNR=40						
USRK				PcP	PcP	17 11 43.8	+1.6
	comp=Z,16nm,1.1s,baz=131,slow=4.4,SNR=1.8						
USRK				LR	LR	17 33 12.2	
	comp=Z,314nm,18.1s,baz=142,slow=36						
USRK	Ussuriysk Ar.	52.65	341	P	P	17 10 32.1	-0.7
IPM	Ipoh	52.66	280	P	P	17 10 32.0	-1.5
YSS	Yuzh-Sakhalins	52.70	351	⇓eP	P	17 10 32.3	-0.9
YSS				e		17 11 41.6	
YSS				eS	S	17 17 55.4	-1.7
YSS				ePS	PKiKP	17 18 19.7	-1.5
YSS				eSS	ScS	17 20 22.3	+4.1
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
YSS				pmax	pmax		
	comp=N,10.0nm,0.9s						
YSS				pmax	pmax		
	comp=E,10.0nm,0.9s						
YSS				pmax	pmax		
	comp=Z,100nm,13.0s						
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
YSS				MLR	MLR		
	comp=N,400nm,17.0s						
YSS	Yuzh-Sakhalins	52.70	351	P	P	17 10 32.2	-0.9
YSS				IAmb	IAmb	17 10 34.6	
	comp=Z,44nm,1.0s						
TIA	Tai'an	53.07	324	P	P	17 10 35.5	-0.7
TIA				S	S	17 18 00.4	-2.2
TIA				sS	sS	17 18 28.6	+3.1
TIA				pmax	pmax		
	comp=Z,23nm,0.8s						
TIA				pmax	pmax		
	comp=Z,270nm,2.9s						
TIA				LR	LR		
	comp=Z,370nm,14.2s						
TIA				LR	LR		
	comp=Z,530nm,10.8s						
TIA				LR	LR		
	comp=Z,240nm,17.1s						
KULM	Kulim	53.17	281	P	P	17 10 36.0	-1.3
SISI	Saibi	53.80	272	P	P	17 10 42.2	+0.2
	comp=Z,34nm,1.7s						
MDJ	Mudanjiang	53.81	340	P	P	17 10 40.8	-0.6
MDJ				pP	pP	17 10 55.3	0.0
MDJ				sP	sP	17 11 00.3	-0.8
MDJ				PcP	PcP	17 11 44.5	-2.2
MDJ				PP	PP	17 12 42.5	-0.6
MDJ				ScP	ScP	17 15 38.3	-2.1
MDJ				PcS	PcS	17 15 43.9	-1.9
MDJ				S	S	17 18 15.4	+3.0
MDJ				sS	sS	17 18 35.3	-0.8
MDJ				ScS	ScS	17 20 25.3	-1.0
MDJ				pmax	pmax		
	comp=Z,42nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,460nm,4.7s						
MDJ				LR	LR		
	comp=Z,630nm,19.2s						
MDJ				LR	LR		
	comp=Z,300nm,16.4s						
MDJ				LR	LR		
	comp=Z,680nm,28.5s						
MDJ	Mudanjiang	53.81	340	P	P	17 10 40.6	-0.8
MDJ				IAmb	IAmb	17 10 42.1	
	comp=Z,46nm,1.1s						
RPSI	Rantau Prapat	54.45	277	P	P	17 10 44.6	-2.0
RPSI	Rantau Prapat	54.45	277		P'P'bc	17 41 15.4	-0.4
PSI	Prapat	54.46	277	PKP2bc		17 41 15.4	
	comp=Z,14nm,1.1s,baz=240,slow=7.0,SNR=6.0						
PSI	Prapat	54.46	277	P	P	17 10 44.6	-2.3
PSI				pmax	pmax		
	comp=Z,16nm,1.0s						
ENH	Enshi	54.47	313	P	P	17 10 46.1	-0.5
GYA	Guiyang	54.69	308	⇓iP	P	17 10 49.0	+0.7
GYA				pP	pP	17 11 03.8	+1.7
GYA				PP	PP	17 12 49.6	-1.8
GYA				ScP	ScP	17 15 44.0	-0.8
GYA				S	S	17 18 24.3	-0.7
GYA				SS	SS	17 22 06.3	-2.5
GYA				pmax	pmax		
	comp=Z,20nm,1.1s						
GYA				pmax	pmax		
	comp=Z,240nm,4.7s						
GYA				LR	LR		
	comp=Z,710nm,16.1s						
GYA				LR	LR		
	comp=Z,920nm,17.4s						
GYA				LR	LR		
	comp=Z,1µm,18.0s						
CN2	Changchun	54.69	336	eP	P	17 10 47.3	-0.5
CN2				epP	pP	17 11 00.5	-1.2
CN2				PcP	PcP	17 11 50.3	+0.3
CN2				eS	S	17 18 22.1	-2.1
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,600nm,18.0s						
CN2				LR	LR		
	comp=Z,500nm,18.0s						
CN2				LR	LR		
	comp=Z,1µm,17.0s						
SLVN	Son La	54.75	301	P	P	17 10 49.2	+0.4
KIP	Kipapa	54.93	59	P	P	17 10 49.8	-0.2
KIP				pmax	pmax		
	comp=Z,92nm,0.9s						
KIP	Kipapa	54.93	59	P	P	17 10 49.8	-0.2
OPA	Opana	55.04	59	P	P	17 10 51.2	+0.4
OPA				pmax	pmax		
	comp=Z,256nm,0.9s						
OPA	Opana	55.04	59	P	P	17 10 51.2	+0.4
GSI	Gunungsitoli	55.60	275	P	P	17 10 52.9	-2.0
PBKT	Sadao Pong	55.67	294	P	P	17 10 54.9	-0.5
SKR	Severo-Kuril's	55.73	3	ceP	P	17 10 55.2	+0.1
KHLU	Kahalu`u	56.10	62	P	P	17 10 57.0	-1.5
KHLH	Kahului Airpor	56.10	61	P	P	17 10 58.1	-0.2
HLK	Haleakala	56.21	61	P	P	17 10 60.0	+0.5
KHU	Kahuku	56.23	63	P	P	17 10 58.8	-0.8
KHU				pmax	pmax		
	comp=Z,191nm,0.9s						
KHU	Kahuku	56.23	63	P	P	17 10 58.8	-0.8
BJI	Beijing	56.26	327	P	P	17 10 58.4	-0.7
BJI				sP	pwP	17 11 16.4	+0.9
BJI				PcP	PcP	17 11 56.8	+0.6
BJI				pmax	pmax		
	comp=Z,13nm,2.3s						
BJI				LR	LR		
	comp=Z,420nm,24.5s						
BJI				LR	LR		
	comp=Z,540nm,20.1s						
BJI				LR	LR		
	comp=Z,540nm,22.6s						
AIN	Ainahou	56.41	63	P	P	17 11 00.1	-0.7
HMH	Humu'ula Sheep	56.47	63	P	P	17 11 00.7	-0.6
POHA	Pohakuloa	56.48	62	P	P	17 11 01.7	+0.3
TYV	Tymovskoe	56.53	352	eP	P	17 11 00.9	0.0
TYV				eS	S	17 18 52.0	+3.5
TYV				pmax	pmax		
	comp=Z,600nm,6.2s						
TYV				pmax	pmax		
	comp=Z,34nm,1.6s						
TYV				smax	smax		
	comp=E,500nm,7.6s						
LHMI	Lhok Sumawe	56.79	280	P	P	17 11 05.5	+2.1
	comp=E,67nm,1.0s						
LHMI	Lhok Sumawe	56.79	280	P	P	17 11 02.0	-1.5
LHMI				IAmb	IAmb	17 11 18.0	
	comp=Z,49nm,0.9s						
TIY	Taiyuan	56.88	322	eP	P	17 11 04.3	+0.6
TIY				pmax	pmax		
	comp=Z,16nm,0.6s						
TIY				pmax	pmax		
	comp=Z,250nm,5.4s						
XAN	Xi'an	56.95	317	P	P	17 11 03.8	-0.5
XAN				pP	pwP	17 11 21.3	+0.8
XAN				S	S	17 18 54.9	+0.1
XAN				pmax	pmax		
	comp=Z,40nm,1.0s						
XAN				pmax	pmax		
	comp=Z,230nm,7.5s						
XAN				LR	LR		
	comp=Z,850nm,20.6s						
XAN				LR	LR		
	comp=Z,820nm,19.5s						
XAN				LR	LR		
	comp=Z,1µm,20.5s						
XAN	Xi'an	56.95	317	P	P	17 11 03.6	-0.7
XAN				pmax	pmax		
	comp=Z,37nm,1.0s						
XAN	Xi'an	56.95	317	P	P	17 11 03.6	-0.7
XAN				IAmb	IAmb	17 11 04.9	
	comp=Z,37nm,1.0s						
KLR	Kul'dur	57.24	344	c iP	P	17 11 05.6	-0.4
KLR				pmax	pmax		
	comp=Z,92nm,1.2s						
KMI	Kunming	57.26	304	P	P	17 11 07.6	+0.8
KMI				pP	pP	17 11 21.1	+0.4
KMI				sP	sP	17 11 26.6	+0.1
KMI				S	S	17 19 00.8	+1.3
KMI				sS	sS	17 19 24.9	+0.7
KMI				SS	SS	17 22 49.3	-0.3
KMI				pmax	pmax		
	comp=Z,27nm,1.1s						
KMI				pmax	pmax		
	comp=Z,400nm,4.4s						
KMI				LR	LR		
	comp=Z,690nm,18.5s						
KMI				LR	LR		
	comp=Z,660nm,16.5s						
KMI				LR	LR		
	comp=Z,710nm,21.9s						
GRNR	Gornyy	57.52	348	⇑iP	P	17 11 07.4	-0.5
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.1s						

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PPT   Papeete          57.55 107  LR      LR      17 34 36.5
      comp=Z,398nm,18.0s,baz=318,slow=35
PPT2  Papeete2         57.55 107 eS       S       17 18 58.6  -4.6
      comp=Z,251nm,25.2s
PPT2                             eLQ      LQ      17 25 19.2
      comp=Z,1µm,26.8s
PPT2                             eLR      LR      17 27 50.0
      comp=Z,449nm,23.8s
PAE   Paea             57.55 108 eP       P       17 11 09.1 +0.4
      comp=Z,26nm,1.6s
TIAR  Tiarei           57.77 107 eP       P       17 11 11.2 +0.9
      comp=Z,36nm,1.1s
CM31  Chiang Mai Arr   58.10 295  P       P       17 11 13.2 +0.6
      SNR=35
CM31  Chiang Mai Arr   58.10 295  P       P       17 11 13.0 +0.4
CMAR  Chiang Mai Arr   58.10 295  P       P       17 11 13.1 +0.4
      comp=Z,38nm,0.9s,baz=110,slow=5.2,SNR=225
CMAR                              LR      LR      17 35 46.3
      comp=Z,420nm,20.1s,baz=116,slow=36
CMAR                              PKPPKP          17 40 55.1
      comp=Z,3.0nm,0.9s,baz=279,slow=4.0,SNR=15
CMAR                              PKP2bc          17 41 07.5
      comp=Z,7.1nm,0.9s,baz=286,slow=3.6,SNR=17
CMAR  Chiang Mai Arr   58.10 295  P       P       17 11 12.7 +0.1
PET   Petropavlovsk    58.21   4  P       P       17 11 12.3  -0.3
PET                               pmax    pmax
      comp=Z,93nm,1.1s
PET   Petropavlovsk    58.21   4  P       P       17 11 12.3  -0.3
CHTO  Chiang Mai       58.21 296  P       P       17 11 13.2  -0.2
CHTO                              pmax    pmax
      comp=Z,61nm,1.2s
CHTO  Chiang Mai       58.21 296  P       P       17 11 13.2  -0.2
CHTO                              IAmb    IAmb    17 11 14.8
      comp=Z,61nm,1.2s
PEA0B Petropavlovsk-   58.23   3  P       P       17 11 13.0 +0.1
PEA0B                             pmax    pmax
      comp=Z,216nm,1.2s
PEA0B Petropavlovsk-   58.23   3  P       P       17 11 13.0 +0.1
PETK  Petropavlovsk-   58.23   3  P       P       17 11 12.9 +0.1
      comp=Z,93nm,1.0s,baz=159,slow=6.2,SNR=44
PETK                              LR      LR      17 32 35.7
      comp=Z,606nm,21.8s,baz=227,slow=32
PETK  Petropavlovsk-   58.23   3  P       P       17 11 13.0 +0.1
PETK  Petropavlovsk-   58.23   3  P       P       17 11 13.0 +0.1
TBI   Tubuai           58.34 114 eS       S       17 19 07.5  -5.8
      comp=Z,291nm,32.0s
TBI                              eLQ      LQ      17 25 46.8
      comp=Z,2µm,33.5s
TBI                              eLR      LR      17 28 05.0
      comp=Z,1µm,26.5s
PMOR  Pomariorio Ree   58.98 104 eP       P       17 11 19.4 +0.6
      comp=Z,301nm,1.1s
CD2   Chengdu          59.04 311 ⇑P       P       17 11 19.0   0.0
CD2                               pP      pP      17 11 31.3  -1.6
CD2                               sP      pwP     17 11 37.3 +2.2
CD2                               SS      SS      17 23 19.6 +2.4
CD2                               pmax    pmax
      comp=Z,80nm,0.7s
CD2                               pmax    pmax
      comp=Z,270nm,6.1s
CD2                               LR      LR
      comp=Z,1µm,13.5s
CD2                               LR      LR
      comp=Z,2µm,16.9s
CD2                               LR      LR
      comp=Z,1µm,15.9s
VAH   Vaihoa           59.25 105 eP       P       17 11 20.9 +0.3
      comp=Z,156nm,1.0s
BTO   Baotou           60.16 323 eP       P       17 11 26.9 +0.3
HIA   Hailar           61.42 336  P       P       17 11 34.3  -0.6
HIA                               pmax    pmax
      comp=Z,24nm,1.1s
HIA   Hailar           61.42 336  P       P       17 11 34.3  -0.6
HIA                               IAmb    IAmb    17 11 35.8
      comp=Z,24nm,1.1s
LZH   Lanzhou          61.56 316 eP       P       17 11 36.9 +0.7
LZH                               pP      pP      17 11 49.8  -0.4
LZH                               pmax    pmax
      comp=Z,62nm,1.2s
LZH                               pmax    pmax
      comp=Z,340nm,4.9s
LZH                               LR      LR
      comp=Z,660nm,16.0s
LZH                               LR      LR
      comp=Z,820nm,14.0s
LZH                               LR      LR
      comp=Z,930nm,16.3s
ZEA   Zeya             62.54 343 eP       P       17 11 41.6  -0.7
ZEA                              e                17 20 34.0
ZEA                               pmax    pmax
      comp=N,47nm,1.0s
ZEA                               pmax    pmax
      comp=Z,58nm,1.0s
ZEA                               MLR     MLR
      comp=E,400nm,16.0s
ZEA                               MLR     MLR
      comp=Z,600nm,16.0s
ZEA                               MLR     MLR
      comp=N,400nm,18.0s
MA2   Magadan          64.59 359  P       P       17 11 55.2  -0.5
MA2                               pmax    pmax
      comp=Z,109nm,1.2s
MA2   Magadan          64.59 359  P       P       17 11 55.2  -0.5
KOHI  KOHIMA           64.71 301 eP       P       17 11 56.3  -1.0
KOHI                              IAmb    IAmb    17 12 06.4
      comp=Z,46nm,1.0s
GTA   Gaotai           65.99 317 ⇑P       P       17 12 05.9 +0.6
GTA                               pP      pP      17 12 17.8  -1.5
GTA                               sP      pwP     17 12 23.1 +1.2
GTA                               S       S       17 20 51.1 +1.7
GTA                               sS      sS      17 21 13.9 +1.3
GTA                               SS      SS      17 25 05.8 +0.1
GTA                               pmax    pmax
      comp=Z,26nm,1.1s
GTA                               pmax    pmax
      comp=Z,250nm,8.1s
GTA                               LR      LR
      comp=Z,380nm,20.6s
GTA                               LR      LR
      comp=Z,730nm,20.3s
GTA                               LR      LR
      comp=Z,830nm,20.0s
CIT   Chita            66.08 335 eP       P       17 12 05.5  -0.1
CIT                              e                17 12 21.7
CIT                              e                17 12 34.7
CIT                               pmax    pmax
      comp=Z,85nm,1.3s
TEZP  TEZPUR           66.12 302 eP       P       17 12 05.7  -0.5
TEZP                              IAmb    IAmb    17 12 08.9
      comp=Z,26nm,0.9s
ULN   Ulaanbaatar      66.37 328  P       P       17 12 07.9 +0.3
ULN                               pmax    pmax
      comp=Z,36nm,1.1s
ULN   Ulaanbaatar      66.37 328  P       P       17 12 07.8 +0.3
ULN                               IAmb    IAmb    17 12 38.8
      comp=Z,36nm,1.1s
TAOE  Nuku Hiva Isla   66.52  97 eLR      LR      17 32 02.8
      comp=Z,654nm,20.7s
SHL   Shillong         66.56 301 eP       P       17 12 09.1  -0.2
SHL                               IAmb    IAmb    17 12 12.2
      comp=Z,40nm,1.0s
SONM  Songino Array    66.69 328  P       P       17 12 09.9 +0.3
      comp=Z,9.9nm,0.8s,baz=147,slow=5.7,SNR=56
SONM                              LR      LR      17 39 45.7
      comp=Z,700nm,21.2s,baz=140,slow=35
SONM                              PKP2bc          17 40 42.8
      comp=Z,4.5nm,1.0s,baz=309,slow=2.2,SNR=16
SONM  Songino Array    66.69 328  P       P       17 12 09.2  -0.4
SONM                              pmax    pmax
      comp=Z,40nm,1.4s
SONM  Songino Array    66.69 328  P       P       17 12 09.2  -0.4
SEY   Seymchan         67.94 360⇑iP       P       17 12 16.9  -0.1
LSA   Lhasa            68.51 305  P       P       17 12 20.5  -1.4
LSA                               pmax    pmax
      comp=Z,20nm,0.9s
LSA   Lhasa            68.51 305  P       P       17 12 20.5  -1.4
YAK   Yakutsk          69.38 349c iP      P       17 12 25.1  -0.9
YAK                              e*PP     pP      17 12 40.5 +0.2
YAK                              e                17 12 54.7
YAK                              e                17 15 04.5
YAK                              eS       S       17 21 27.8  -1.0
YAK                              e*SS     pS      17 21 50.5 +3.5
YAK                              e                17 22 26.1
YAK                              eSS      SS      17 25 55.0  -1.9
YAK                               pmax    pmax
      comp=Z,54nm,1.2s
YAK                               pmax    pmax
      comp=N,36nm,1.5s
YAK                               pmax    pmax
      comp=Z,185nm,4.3s
YAK                               pmax    pmax
      comp=N,81nm,5.1s
YAK                               pmax    pmax
      comp=E,148nm,5.1s
YAK                               smax    smax
      comp=N,220nm,4.8s
YAK                               smax    smax
      comp=E,115nm,3.9s
YAK   Yakutsk          69.38 349  P       P       17 12 25.5  -0.5
YAK                               IAmb    IAmb    17 12 27.2
      comp=Z,70nm,1.2s
ZAK   Zakamensk        69.86 329 eP       P       17 12 29.2  -0.2
ZAK                               pmax    pmax
      comp=Z,36nm,1.2s
GTK   Tadong           69.90 301 eP       P       17 12 30.1   0.0
GTK                               IAmb    IAmb    17 12 33.5
      comp=Z,40nm,1.1s
BOD   Bodaibo          70.19 339 eP       P       17 12 29.9  -1.2
BOD                               pmax    pmax
      comp=Z,36nm,1.3s
TLY   Talaya           70.45 330 eP       P       17 12 32.5  -0.4
TLY                              e                17 12 49.1
TLY                              ePPP     PPP     17 16 51.8
TLY                              eS       S       17 21 48.9 +7.0
TLY                               pmax    pmax
      comp=Z,47nm,1.0s
TLY                               MLR     MLR
      comp=Z,1µm,17.0s
TLY   Talaya           70.45 330  P       P       17 12 33.1 +0.2
IRK   Irkutsk          70.49 331 eP       P       17 12 31.7  -1.3
IRK                               pmax    pmax
      comp=Z,48nm,2.5s
TAPN  Taplejung        70.66 301 eP       P       17 12 36.0 +1.0
      comp=Z,131nm,1.0s
ODAN  Odare            70.80 301 eP       P       17 12 35.7  -0.1
      comp=Z,116nm,0.8s
BOK   Bokaro           71.30 297 eP       P       17 12 39.4 +0.8
BOK                               IAmb    IAmb    17 12 42.1
      comp=Z,24nm,0.9s
RAMN  Ramite           71.50 301 eP       P       17 12 39.7  -0.3
      comp=Z,67nm,1.0s
MOY   Mondy            71.79 329 eP       P       17 12 41.4 +0.3
MOY                               pmax    pmax
      comp=Z,76nm,1.8s
JIRN  Jiri             72.05 301 eP       P       17 12 43.3  -0.2
      comp=Z,144nm,1.0s
GUN   Gumba            72.38 301 eP       P       17 12 45.3  -0.1
      comp=Z,211nm,1.0s
VNDA  Vanda            72.43 178  P       P       17 12 45.1 +0.8
      comp=Z,9.7nm,0.9s,baz=318,slow=5.8,SNR=31
VNDA                              LR      LR      17 42 14.0
      comp=Z,437nm,18.6s,baz=358,slow=34
VNDA  Vanda            72.43 178  P       P       17 12 45.1 +0.8
VNDA                              pmax    pmax
      comp=Z,19nm,1.1s
VNDA  Vanda            72.43 178  P       P       17 12 45.1 +0.8
PKI   Pulchoki         72.69 301 eP       P       17 12 46.7  -0.5
      comp=Z,163nm,1.1s
PKIN  Phulchoki        72.70 301 eP       P       17 12 46.8  -0.4
      comp=Z,121nm,1.2s
KKN   Kakani           72.86 301 eP       P       17 12 47.9  -0.2
      comp=Z,124nm,1.0s
DMN   Daman            72.96 301 eP       P       17 12 48.7   0.0
      comp=Z,271nm,1.0s
SBA   Scott Base       72.97 177  P       P       17 12 49.2 +1.6
SBA                               pmax    pmax
      comp=Z,40nm,1.3s
SBA   Scott Base       72.97 177  P       P       17 12 49.2 +1.6
SBA                               IAmb    IAmb    17 13 16.6
      comp=Z,40nm,1.2s
PALK  Pallekele        73.06 279 i P      P       17 12 47.6  -1.7
PALK                              pmax    pmax
      comp=Z,31nm,1.3s
PALK  Pallekele        73.06 279  P       P       17 12 47.5  -1.9
GKN   Gorkha           73.46 301 eP       P       17 12 51.2  -0.4
      comp=Z,265nm,1.0s
BILL  Bilibino         73.68   5 eP       P       17 12 51.9 +0.1
BILL                             e                17 13 06.4
BILL                             e                17 15 36.7
BILL                             ePPP     PPP     17 17 22.8
BILL                             eS       S       17 22 22.2 +3.9
BILL                             eSS      SS      17 27 07.6 +4.9
BILL                             eSSS     SSS     17 30 20.8
BILL                              pmax    pmax
      comp=Z,212nm,0.9s
BILL                              MLR     MLR
      comp=Z,951nm,19.0s
GAMB  Gambell          73.75  16  P       P       17 12 52.6 +0.3
GAMB                              IAmb    IAmb    17 12 54.0
      comp=Z,72nm,1.2s
DANN  Dangsing         74.30 301 eP       P       17 12 56.1  -0.6
      comp=Z,142nm,0.9s
SII   Sitkinak Islan   75.10  27  P       P       17 13 00.0  -0.3
OHAK  Old Harbor       75.88  27  P       P       17 13 04.3  -0.3
OHAK                              IAmb    IAmb    17 13 05.6
      comp=Z,62nm,1.0s
WMQ   Urumqi           76.08 317 eP       P       17 13 06.8 +0.5
WMQ                               sP      sP      17 13 29.1 +3.0
WMQ                               pmax    pmax
      comp=Z,19nm,1.7s
WMQ                               pmax    pmax
      comp=Z,190nm,3.6s
WMQ                               LR      LR
      comp=Z,810nm,28.1s
WMQ                               LR      LR
      comp=Z,780nm,28.5s
WMQ                               LR      LR
      comp=Z,620nm,28.5s
WMQ   Urumqi           76.08 317  P       P       17 13 06.8 +0.5
WMQ                               pmax    pmax
      comp=Z,43nm,1.2s
WMQ   Urumqi           76.08 317  P       P       17 13 06.8 +0.5
WMQ                               IAmb    IAmb    17 13 08.4
      comp=Z,43nm,1.2s
ANM   Nome             76.14  17  P       P       17 13 06.0  -0.1
ANM                               pmax    pmax
      comp=Z,116nm,1.6s
ANM   Nome             76.14  17  P       P       17 13 06.0  -0.1
ANM                               IAmb    IAmb    17 13 08.0
      comp=Z,116nm,1.6s
KDAK  Kodiak Island    76.51  27  P       P       17 13 08.2  -0.1
KDAK                              pmax    pmax
      comp=Z,38nm,1.0s
KDAK  Kodiak Island    76.51  27  P       P       17 13 08.2  -0.1
KDAK                              IAmb    IAmb    17 13 09.2
      comp=Z,38nm,1.0s
HYB   Hyderabad        76.68 289 i P      P       17 13 09.0  -1.2
SVW2  Sparrevohn       77.17  23  P       P       17 13 12.6 +0.6
SVW2                              IAmb    IAmb    17 13 13.3
      comp=Z,28nm,0.9s
RSO   Redoubt South    77.93  24  P       P       17 13 15.7  -0.8
CNPM  China Poot       78.05  26  P       P       17 13 16.7  -0.2
TTA   Tatalina         78.12  21  P       P       17 13 17.5 +0.2
TTA   Tatalina         78.12  21  P       P       17 13 17.5 +0.2
TIXI  Tiksi            78.30 352ceP       P       17 13 17.4  -0.6
TIXI                              pmax    pmax
      comp=Z,31nm,1.3s
TIXI  Tiksi            78.30 352  P       P       17 13 17.3  -0.7
BRLK  Bradley Lake     78.33  25  P       P       17 13 17.9  -0.6
BRLK                              IAmb    IAmb    17 13 19.2
      comp=Z,56nm,1.0s
DGZ   Jazzator, Alta   78.44 323c iP      P       17 13 19.8 +0.3
DGZ                               pmax    pmax
      comp=Z,59nm,1.0s
BHPL  Bhopal           78.75 295 eP       P       17 13 22.0 +0.4
BHPL                              IAmb    IAmb    17 13 34.7
      comp=Z,22nm,1.0s
SEW   Seward           79.12  26  P       P       17 13 22.0  -0.7
SEW                               IAmb    IAmb    17 13 23.7
      comp=Z,42nm,0.9s
SKT   Skwentna         79.26  23  P       P       17 13 21.4  -2.2
SUA   Susitna One      79.30  24  P       P       17 13 22.7  -1.2
SUA                               IAmb    IAmb    17 13 23.9
      comp=Z,39nm,0.8s
RDOG  Red Dog Mine     79.35  15  P       P       17 13 24.7 +0.8
RC01  Rabbit Creek A   79.51  25  P       P       17 13 24.3  -0.6
RC01                              IAmb    IAmb    17 13 25.7
      comp=Z,57nm,1.0s
PPLA  Purkeypile       79.52  22  P       P       17 13 24.4  -0.7
PPLA                              IAmb    IAmb    17 13 25.8
      comp=Z,95nm,1.7s
KAAM  Kaadhehdhoo      79.95 271  P       P       17 13 26.2  -2.1
NDI   New Delhi        79.98 300 eP       P       17 13 26.5  -1.7
PMR   Palmer           80.02  24  P       P       17 13 27.0  -0.6
PMR                               pmax    pmax
      comp=Z,38nm,1.0s
PMR   Palmer           80.02  24  P       P       17 13 27.0  -0.6
PMR                               IAmb    IAmb    17 13 28.2
      comp=Z,38nm,1.0s
GHO   Glory Hole Cre   80.20  24  P       P       17 13 28.1  -0.7
GHO                               IAmb    IAmb    17 13 29.4
      comp=Z,36nm,0.8s
KNK   Knik Glacier     80.21  25  P       P       17 13 28.4  -0.4
KNK                               IAmb    IAmb    17 13 29.9
      comp=Z,60nm,1.2s
KTH   Kantishna Hill   80.36  22  P       P       17 13 28.3  -1.2
KTH                               IAmb    IAmb    17 13 29.6
      comp=Z,32nm,0.9s
SML   Sawmill          80.46  24  P       P       17 13 29.7  -0.4
SMLA  Simla            80.52 303 eP       P       17 13 31.0   0.0
SMLA                              IAmb    IAmb    17 13 48.4
      comp=Z,52nm,1.2s
GLI   Glacier Island   80.52  25  P       P       17 13 29.8  -0.6
GLI                               IAmb    IAmb    17 13 31.2
      comp=Z,62nm,1.0s
HIN   Hinchinbrook I   80.54  26  P       P       17 13 29.9  -0.6
HIN                               IAmb    IAmb    17 13 31.5
      comp=Z,40nm,0.9s
TRF   Thorofare Moun   80.54  22  P       P       17 13 29.2  -1.4
BPAW  Bear Paw Mtn.    80.64  22  P       P       17 13 29.7  -1.2
MK31  Makanchi Array   80.67 319  P       P       17 13 31.6 +0.1
MK31                              pmax    pmax
      comp=Z,40nm,1.4s
MK31  Makanchi Array   80.67 319  P       P       17 13 31.6 +0.1
MK31                              IAmb    IAmb    17 13 33.2
      comp=Z,40nm,1.4s
MKAR  Makanchi Array   80.67 319  P       P       17 13 31.6 +0.1
      comp=Z,16nm,0.9s,baz=102,slow=5.6,SNR=72
MKAR                              PKKPbc  PKKPbc  17 32 12.1  -1.1
      comp=Z,1.9nm,0.9s,baz=282,slow=2.4,SNR=13
MKAR                              PKPPKP  P'P'df  17 40 17.1 +2.0
      comp=Z,2.5nm,1.0s,baz=318,slow=1.6,SNR=10.0
MKAR                              LR      LR      17 48 58.9
      comp=Z,544nm,19.8s,baz=90,slow=36
FID   Port Fidalgo     80.72  26  P       P       17 13 30.2  -1.2
FID                               IAmb    IAmb    17 13 32.2
      comp=Z,39nm,1.0s
IMAR  Indian Mountai   80.74  19  P       P       17 13 31.4   0.0
MAKZ  Makanchi         80.88 319  P       P       17 13 32.5  -0.1
MAKZ                              pmax    pmax
      comp=Z,69nm,1.4s
MAKZ  Makanchi         80.88 319  P       P       17 13 32.5  -0.1
MAKZ                              IAmb    IAmb    17 13 34.3
      comp=Z,69nm,1.4s
SCM   Sheep Creek Mo   80.89  25  P       P       17 13 32.2  -0.2
SCM                               pmax    pmax
      comp=Z,64nm,1.1s
SCM   Sheep Creek Mo   80.89  25  P       P       17 13 32.2  -0.2
SCM                               IAmb    IAmb    17 13 33.6
      comp=Z,64nm,1.1s
RND   Reindeer         81.07  23  P       P       17 13 32.3  -1.1
RND                               pmax    pmax
      comp=Z,46nm,0.9s
RND   Reindeer         81.07  23  P       P       17 13 32.2  -1.1
RND                               IAmb    IAmb    17 13 33.6
      comp=Z,46nm,0.9s
MCK   McKinley         81.21  22  P       P       17 13 32.9  -1.1
MCK                               pmax    pmax
      comp=Z,96nm,1.0s
MCK   McKinley         81.21  22  P       P       17 13 32.9  -1.1
MLY   Manley           81.23  21  P       P       17 13 33.8  -0.4
MLY                               IAmb    IAmb    17 13 34.6
      comp=Z,34nm,0.9s
BWN   Browne           81.24  22  P       P       17 13 33.3  -0.8
RAGM  Ragged Mountai   81.34  26  P       P       17 13 34.5  -0.3
RAGM                              IAmb    IAmb    17 13 36.2
      comp=Z,43nm,1.1s
DHRM  DHARAMSHALA      81.47 304 eP       P       17 13 35.8  -0.6
DHRM                              IAmb    IAmb    17 13 38.7
      comp=Z,71nm,0.8s
DHY   Denali Highway   81.48  23  P       P       17 13 35.0  -0.6
DHY                               IAmb    IAmb    17 13 36.5
      comp=Z,29nm,0.9s
ZAA0  Zalesovo Array   81.52 326  P       P       17 13 34.9  -0.9
ZAA0                              IAmb    IAmb    17 13 36.2
      comp=Z,40nm,0.9s
ZALV  Zalesovo Beam    81.52 326  P       P       17 13 35.1  -0.7
      comp=Z,30nm,0.7s,baz=111,slow=5.5,SNR=112
ZALV                              PKKPbc  PKKPbc  17 32 10.8  -0.8
      comp=Z,0.6nm,0.5s,baz=288,slow=0.9,SNR=3.7
ZALV                              LR      LR      17 50 00.6
      comp=Z,475nm,20.8s,baz=126,slow=36
ZALV  Zalesovo Beam    81.52 326  P       P       17 13 35.0  -0.8
ZALV  Zalesovo Beam    81.52 326  P       P       17 13 35.0  -0.8
PDGK  Podgornoye       81.58 315  P       P       17 13 35.4  -1.2
WRH   Wood River Hil   81.91  22  P       P       17 13 36.5  -1.2
WRH                               IAmb    IAmb    17 13 37.8
      comp=Z,47nm,1.2s
CCB   Clear Creek Bu   82.10  22  P       P       17 13 37.0  -1.6
CCB                               IAmb    IAmb    17 13 38.0
      comp=Z,25nm,1.0s
MDM   Murphy Dome      82.10  22  P       P       17 13 37.5  -1.2
MDM                               IAmb    IAmb    17 13 38.9
      comp=Z,35nm,1.2s
CRQM  Cirque           82.19  26  P       P       17 13 39.3  -0.2
CRQM                              IAmb    IAmb    17 13 40.7
      comp=Z,50nm,1.0s
GLB   Gilahina Butte   82.19  26  P       P       17 13 39.0  -0.3
GLB                               IAmb    IAmb    17 13 40.5
      comp=Z,50nm,0.9s
PAX   Paxson           82.19  24  P       P       17 13 38.6  -0.7
PAX                               pmax    pmax
      comp=Z,21nm,1.2s
PAX   Paxson           82.19  24  P       P       17 13 38.6  -0.7
TCOL  CIGO, UAF Yank   82.19  22  P       P       17 13 38.0  -1.1
      baz=240,SNR=8.1
COLA  College          82.20  22  P       P       17 13 38.1  -1.0
COLA                              pmax    pmax
      comp=Z,44nm,0.9s
COLA  College          82.20  22  P       P       17 13 38.0  -1.0
COLA                              IAmb    IAmb    17 13 39.2
      comp=Z,44nm,0.8s
VRDI  Verde Repeater   82.25  26  P       P       17 13 39.6  -0.2
VRDI                              IAmb    IAmb    17 13 40.9
      comp=Z,34nm,0.9s
HDA   Harding Lake     82.31  22  P       P       17 13 38.4  -1.3
HDA   Harding Lake     82.31  22  P       P       17 13 38.5  -1.2
      baz=241,SNR=11
TGL   Tana Glacier     82.33  27  P       P       17 13 39.2  -0.9
TGL                               IAmb    IAmb    17 13 41.3
      comp=Z,32nm,1.0s
POKR  Poker Plat Res   82.47  22  P       P       17 13 39.2  -1.4
      baz=240,SNR=6.4
IL31                   82.51  22  P       P       17 13 38.8  -1.9
IL31                              IAmb    IAmb    17 13 40.6
      comp=Z,29nm,1.1s
ILAR  Eielson Array    82.51  22  P       P       17 13 39.2  -1.5
      comp=Z,16nm,0.9s,baz=254,slow=5.1,SNR=98
ILAR  Eielson Array    82.51  22  P       P       17 13 39.0  -1.8
ILAR  Eielson Array    82.51  22  P       P       17 13 39.0  -1.8
MCARA McCarthy VSAT    82.51  26  P       P       17 13 40.3  -0.6
MCARA                             IAmb    IAmb    17 13 54.1
      comp=Z,44nm,0.9s
COLD  Coldfoot         82.61  19  P       P       17 13 41.3   0.0
BALM  Baldy            82.66  26  P       P       17 13 41.6  -0.2
BALM                              IAmb    IAmb    17 13 43.0
      comp=Z,29nm,1.0s
RIDG  Independent Ri   82.80  23  P       P       17 13 41.9  -0.5
RIDG                              IAmb    IAmb    17 13 43.4
      comp=Z,91nm,1.5s
MENT  Mentasta         82.89  24  P       P       17 13 42.7  -0.2
BARN  Barnard Glacie   82.97  26  P       P       17 13 43.8 +0.2
BARN                              IAmb    IAmb    17 13 45.0
      comp=Z,37nm,1.0s
CTGM  Chitina Glacie   83.08  27  P       P       17 13 44.1 +0.1
CTGM                              IAmb    IAmb    17 13 45.5
      comp=Z,51nm,1.0s
PCA   Pinnacle         83.22  28  P       P       17 13 44.7   0.0
PCA                               IAmb    IAmb    17 13 45.5
      comp=Z,27nm,1.0s
KSH   Kashi            83.24 311  P       P       17 13 47.1 +1.8
KSH                               sP      sP      17 14 05.3   0.0
KSH                               PP      PP      17 17 01.8 +4.4
KSH                               S       S       17 24 03.0 +1.0
KSH                               sS      sS      17 24 25.4  -0.2
KSH                               SS      SS      17 29 32.8 +5.0
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KSH				pmax	pmax		
	comp=Z,180nm,1.4s						
KSH				pmax	pmax		
	comp=Z,620nm,5.5s						
KSH				LR	LR		
	comp=Z,310nm,10.3s						
KSH				LR	LR		
	comp=Z,330nm,11.4s						
KSH				LR	LR		
	comp=Z,380nm,15.5s						
SCRK	Sand Creek	83.25	23	P	P	17 13 44.1	-0.7
SCRK				IAmb	IAmb	17 13 45.2	
	comp=Z,23nm,1.0s						
TOLK	Toolik Lake Re	83.58	18	P	P	17 13 46.6	+0.4
TOLK				IAmb	IAmb	17 13 48.2	
	comp=Z,34nm,1.1s						
TOLK	Toolik Lake Re	83.58	18	P	P	17 13 46.7	+0.4
	baz=238						
ULHL	Ulahol	83.64	313	P	P	17 13 48.9	+1.4
	SNR=7.8						
BCAR	Beaver Creek A	83.75	25	P	P	17 13 47.0	-0.2
FYU	Fort Yukon	83.97	21	P	P	17 13 47.0	-1.3
KURK	Kurchatov	84.12	322	*c i*P	P	17 13 49.1	-0.3
KURK				pmax	pmax		
	comp=Z,72nm,1.0s						
KURK	Kurchatov	84.12	322	P	P	17 13 48.8	-0.5
NIL	Nilore	84.25	304	P	P	17 13 50.4	-0.1
NIL				pmax	pmax		
	comp=Z,161nm,0.7s						
NIL	Nilore	84.25	304	P	P	17 13 50.4	-0.1
KZA	Kyzart	84.32	313	P	P	17 13 52.6	+1.5
	SNR=74						
BMAR	Burnt Mountain	84.60	20	P	P	17 13 51.8	+0.3
KBK	Karagaybulak	84.66	314	P	P	17 13 53.1	+0.5
	SNR=28						
EGAK	Eagle	84.70	23	P	P	17 13 52.2	+0.2
EGAK				IAmb	IAmb	17 13 57.2	
	comp=Z,21nm,0.9s						
HYT	Haines Junctio	84.76	27	P	P	17 13 53.1	+0.5
HYT				IAmb	IAmb	17 13 54.5	
	comp=Z,43nm,1.0s						
QSPA	South Pole Qui	84.76	180	P	P	17 13 52.8	+0.3
	comp=Z,48nm,0.9s,baz=350,slow=1.5,SNR=89						
QSPA	South Pole Qui	84.76	180	P	P	17 13 52.9	+0.3
CHMS	Chumysh	84.87	314	P	P	17 13 54.0	+0.6
	SNR=25						
UCH	Uchtor	84.89	313	P	P	17 13 55.3	+1.2
	SNR=62						
FRU1	Bishkek	84.92	314	P	P	17 13 53.6	-0.1
FRU1				pmax	pmax		
	comp=Z,118nm,1.6s						
FRU1	Bishkek	84.92	314	P	P	17 13 53.6	-0.1
AAK	Ala-Archa	84.98	313	P	P	17 13 54.9	+0.8
	SNR=28						
AAK	Ala-Archa	84.98	313	P	P	17 13 54.7	+0.5
AAK				pmax	pmax		
	comp=Z,157nm,1.8s						
AAK	Ala-Archa	84.98	313	P	P	17 13 54.7	+0.5
USP	Ospenovka	85.11	314	P	P	17 13 55.3	+0.7
	SNR=51						
DAWY	Dawson	85.13	24	P	P	17 13 54.7	+0.4
DAWY				IAmb	IAmb	17 14 34.3	
	comp=Z,36nm,1.3s						
MAW	Mawson	85.22	203	P	P	17 13 55.2	+0.6
	baz=85,SNR=7.7						
MAW	Mawson	85.22	203	P	P	17 13 53.9	-0.7
	comp=Z,21nm,0.9s,baz=85,slow=6.6,SNR=12						
MAW				LR	LR	17 49 43.5	
	comp=Z,657nm,20.0s,baz=69,slow=34						
MAW	Mawson	85.22	203	P	P	17 13 55.0	+0.4
MAW				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MAW	Mawson	85.22	203	P	P	17 13 55.0	+0.4
AML	Almayashu	85.47	313	P	P	17 13 58.0	+1.1
	SNR=86						
EKS2	Erkin-Say	85.51	313	P	P	17 13 57.7	+1.0
	SNR=40						
BHUJ	Bhuj	85.81	294	*e*P	P	17 13 59.0	+0.5
BHUJ				IAmb	IAmb	17 14 00.6	
	comp=Z,88nm,1.1s						
ARSB	Arslanbob	85.84	312	P	P	17 13 59.2	+0.8
ARSB				pmax	pmax		
	comp=Z,253nm,1.5s						
ARSB	Arslanbob	85.84	312	P	P	17 13 59.2	+0.8
WHY	Whitehorse	85.92	28	P	P	17 13 58.5	+0.1
WHY				IAmb	IAmb	17 13 59.3	
	comp=Z,23nm,1.4s						
WRAK	Wrangell Islan	85.97	33	P	P	17 13 58.7	+0.3
WRAK				IAmb	IAmb	17 13 59.6	
	comp=Z,37nm,1.3s						
NRIK	Noril'sk	86.36	341	P	P	17 13 59.7	-0.4
	comp=Z,27nm,0.8s,baz=110,slow=4.8,SNR=39						
NRIK				LR	LR	17 51 47.3	
	comp=Z,424nm,20.9s,baz=102,slow=35						
EPYK	Eagle Plains	87.01	22	P	P	17 14 03.6	+0.2
EPYK	Eagle Plains	87.01	22	P	P	17 14 03.7	+0.2
	baz=250						
KBL	Kabul	87.84	305	P	P	17 14 07.2	-1.2
KBL				pmax	pmax		
	comp=Z,24nm,0.8s						
KBL	Kabul	87.84	305	P	P	17 14 07.2	-1.2
KBL				IAmb	IAmb	17 14 08.4	
	comp=Z,24nm,0.8s						
KK31	Karatay Array	87.95	313	P	P	17 14 08.3	-0.2
KK31				pmax	pmax		
	comp=Z,25nm,1.0s						
KK31	Karatay Array	87.95	313	P	P	17 14 08.3	-0.2
KK31				IAmb	IAmb	17 14 11.9	
	comp=Z,25nm,1.0s						
KKAR	Karatay Array	87.95	313	P	P	17 14 08.3	-0.2
KKAR				pmax	pmax		
	comp=Z,25nm,1.0s						
KKAR	Karatay Array	87.95	313	P	P	17 14 08.3	-0.2
KKAR	Karatay Array	87.95	313	P	P	17 14 08.2	-0.2
KKAR				IAmb	IAmb	17 14 11.9	
	comp=Z,25nm,1.0s						
J01E	Myrtle Point	88.58	47	P	P	17 14 12.3	+0.9
	baz=262						
I02D	Swisshome	88.78	46	P	P	17 14 12.6	+0.3
	baz=262						
INK	Inuvik	88.81	21	P	P	17 14 11.3	-0.6
INK				pmax	pmax		
	comp=Z,58nm,1.2s						
INK	Inuvik	88.81	21	P	P	17 14 11.2	-0.6
O02D	Mt. Diablo Mer	89.01	50	P	P	17 14 13.8	+0.2
	baz=262,SNR=6.8						
I03D	Drain, OR	89.08	46	P	P	17 14 14.2	+0.5
	baz=262						
M02C	Callahan	89.12	48	P	P	17 14 14.1	0.0
	baz=262						
HUMO	Hull Mountain	89.21	47	P	P	17 14 14.3	-0.1
YBH	Yreka Blue Hor	89.28	48	P	P	17 14 16.0	+1.2
YBH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
YBH	Yreka Blue Hor	89.28	48	P	P	17 14 16.0	+1.2
E03A	Lebam	89.33	43	P	P	17 14 15.7	+0.9
G03D	McMinnville, O	89.35	45	P	P	17 14 14.8	-0.1
	baz=262						
H04D	Lebanon	89.62	45	P	P	17 14 16.2	-0.1
	baz=262						
L04D	Klamath Falls	89.64	48	P	P	17 14 16.3	-0.3
	baz=263						
BRVK	Borovoye	89.67	323	P	P	17 14 15.3	-1.0
BRVK				pmax	pmax		
	comp=Z,40nm,1.2s						
BRVK	Borovoye	89.67	323	P	P	17 14 15.3	-1.0
BRVK				IAmb	IAmb	17 14 16.7	
	comp=Z,40nm,1.1s						
I04A	Tendick Farm,	89.76	46	P	P	17 14 17.1	0.0
	baz=263						
D03D	Eldon	89.79	42	P	P	17 14 17.2	+0.2
	baz=262						
J04D	Umpqua Nationa	89.91	47	P	P	17 14 17.9	0.0
	baz=263						
ORV	Oroville	89.92	50	P	P	17 14 17.3	-0.5
ORV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ORV	Oroville	89.92	50	P	P	17 14 17.3	-0.5
M04C	Macdoel	89.93	48	P	P	17 14 18.1	+0.1
	baz=263						
E04D	Cinebar	90.01	43	P	P	17 14 18.1	+0.1
	baz=263						
H04A	Detroit Lake	90.03	45	P	P	17 14 17.4	-0.9
A04D	Lummi Island	90.20	41	P	P	17 14 19.6	+0.7
	baz=262						
AFDM	Forest Hills D	90.26	51	P	P	17 14 18.9	-0.5
B05A	Bryant	90.55	42	P	P	17 14 21.1	+0.6
	baz=263						
J05D	Fort Rock, OR	90.55	47	P	P	17 14 21.0	+0.1
	baz=264,SNR=12						
I05D	Terrebonne, OR	90.59	46	P	P	17 14 20.6	-0.3
	baz=263						
CMB	Columbia Colle	90.61	52	P	P	17 14 19.7	-1.4
CMB				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CMB	Columbia Colle	90.61	52	P	P	17 14 19.7	-1.4
SMMC	Simmler	90.64	55	P	P	17 14 21.2	-0.2
	baz=264						
F05D	White Salmon	90.69	44	P	P	17 14 21.3	0.0
	baz=263						
G05D	Wamic, OR	90.72	45	P	P	17 14 21.8	+0.4
	baz=263						
PKM	Mcpherson Peak	90.75	55	P	P	17 14 22.1	0.0
	baz=264						
SCZ2	Santa Cruz Isl	90.81	56	P	P	17 14 22.4	+0.3
	baz=264						
PINE	Pine Mountain	90.82	46	P	P	17 14 21.9	-0.2
PINE				IAmb	IAmb	17 14 23.9	
	comp=Z,24nm,1.1s						
MOD	Modoc Plateau	91.08	48	P	P	17 14 22.1	-1.3
MOD				IAmb	IAmb	17 14 27.1	
	comp=Z,18nm,1.4s						
LTY	Liberty	91.38	43	P	P	17 14 23.3	-1.2
LTY				IAmb	IAmb	17 14 27.6	
	comp=Z,23nm,1.8s						
ARVC	Arvin	91.58	55	P	P	17 14 25.5	-0.1
	baz=265						
MDPB	Devils Postpil	91.60	53	P	P	17 14 25.7	-0.3
MDPB				IAmb	IAmb	17 14 27.7	
	comp=Z,15nm,1.1s						
OMMB	Old Mammoth Mi	91.67	53	P	P	17 14 26.4	0.0
I07A	Izee	91.88	46	P	P	17 14 26.2	-0.7
I07A				IAmb	IAmb	17 14 27.9	
	comp=Z,14nm,1.0s						
ISA	Isabella, Lake	91.91	55	P	P	17 14 26.6	-0.7
ISA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ISA	Isabella, Lake	91.91	55	P	P	17 14 26.6	-0.7
ISA	Isabella, Lake	91.91	55	P	P	17 14 27.2	-0.1
	baz=265,SNR=7.0						
HAWA	Hanford	92.08	44	P	P	17 14 27.3	-0.4
HAWA				IAmb	IAmb	17 14 29.1	
	comp=Z,15nm,0.9s						
RYN	Ryan	92.13	52	P	P	17 14 28.2	-0.1
RYN				IAmb	IAmb	17 14 29.9	
	comp=Z,10nm,0.9s						
MWC	Mount Wilson	92.13	56	P	P	17 14 27.5	-0.9
MWC				pmax	pmax		
	comp=Z,42nm,1.1s						
MWC	Mount Wilson	92.13	56	P	P	17 14 27.5	-0.9
TIN	Tinemaha, Big	92.23	53	P	P	17 14 28.5	-0.2
	baz=265						
EDW2	Edwards Air Fo	92.24	55	P	P	17 14 29.0	+0.2
	baz=265,SNR=12						
NVAR	Mina Array Bea	92.28	52	P	P	17 14 29.4	+0.3
	comp=Z,11nm,0.8s,baz=258,slow=5.8,SNR=32						
NVAR				LR	LR	17 49 43.8	
	comp=Z,2µm,20.2s,baz=252,slow=32						
NVAR	Mina Array Bea	92.28	52	P	P	17 14 28.6	-0.5
CWC	Cottonwood Cre	92.30	54	P	P	17 14 29.2	0.0
	baz=265						
WVOR	Wild Horse Val	92.37	48	P	P	17 14 28.8	-0.5
WVOR				pmax	pmax		
	comp=Z,14nm,1.3s						
WVOR	Wild Horse Val	92.37	48	P	P	17 14 28.8	-0.5
WVOR				IAmb	IAmb	17 15 30.8	
	comp=Z,14nm,1.2s						
G08A	Pilot Rock	92.38	45	P	P	17 14 28.6	-0.7
G08A				IAmb	IAmb	17 14 29.9	
	comp=Z,19nm,1.2s						
C36M	Paulatuk	92.38	21	P	P	17 14 27.8	-0.7
C36M	Paulatuk	92.38	21	P	P	17 14 29.2	+0.7
	baz=262						
B08A	Colville Reser	92.39	42	P	P	17 14 28.4	-0.7
NV11	Mina Array Sit	92.40	52	P	P	17 14 29.1	-0.5
NV11				IAmb	IAmb	17 14 30.7	
	comp=Z,14nm,0.9s						
E08A	Dider Farm, El	92.41	44	P	P	17 14 28.8	-0.4
E08A				IAmb	IAmb	17 14 30.7	
	comp=Z,24nm,1.2s						
BFSC	Mount Baldy Ra	92.46	56	P	P	17 14 29.8	-0.1
	baz=266						
LRMC	Laurel Mtn Rad	92.54	55	P	P	17 14 30.3	+0.1
	baz=266,SNR=12						
D08A	Wollman Farm,	92.55	43	P	P	17 14 29.4	-0.5
D08A				IAmb	IAmb	17 14 31.2	
	comp=Z,13nm,1.0s						
J08A	Circle Bar Ran	92.56	47	P	P	17 14 29.7	-0.4
J08A				IAmb	IAmb	17 14 31.4	
	comp=Z,11nm,0.8s						
MPMC	Manual Prospec	92.74	54	P	P	17 14 31.1	-0.1
	baz=266,SNR=16						
GRAC	Grapevine Rang	92.91	53	P	P	17 14 32.1	+0.3
	baz=266						
E09A	Wood Farm, Sta	93.04	44	P	P	17 14 31.7	-0.4
E09A				IAmb	IAmb	17 14 33.4	
	comp=Z,23nm,1.0s						
GSC	Goldstone, Bar	93.24	55	P	P	17 14 33.0	-0.4
GSC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GSC	Goldstone, Bar	93.24	55	P	P	17 14 33.0	-0.4
GSC	Goldstone, Bar	93.24	55	P	P	17 14 33.4	0.0
	baz=266,SNR=7.0						
FURC	Furnace Creek,	93.28	54	P	P	17 14 33.4	0.0
	baz=266						
SYO	Syowa Base	93.31	199	⇑*i*P	P	17 14 32.6	-0.3
MONP2	Monument Peak	93.39	57	P	P	17 14 34.3	0.0
	baz=266,SNR=8.1						
PFO	Pinyon Flats O	93.41	57	P	P	17 14 35.1	+0.8
	comp=Z,8.8nm,1.0s,baz=279,slow=6.2,SNR=7.2						
PFO	Pinyon Flats O	93.41	57	P	P	17 14 34.2	-0.1
	baz=266,SNR=5.5						
HRA	Herat	93.41	304	P	P	17 14 33.4	-1.0
BMO	Blue Mountains	93.51	45	P	P	17 14 33.5	-0.9
BMO				pmax	pmax		
	comp=Z,14nm,1.0s						
BMO	Blue Mountains	93.51	45	P	P	17 14 33.5	-0.9
BMO				IAmb	IAmb	17 14 35.0	
	comp=Z,14nm,0.9s						
HEC	Hector,Ludlow	93.59	56	P	P	17 14 34.9	-0.2
	baz=266,SNR=5.3						
IKP	In-Ko-Pah, Jac	93.64	58	P	P	17 14 35.0	-0.3
	baz=266						
F10A	Beach Ranch, E	93.64	44	P	P	17 14 34.1	-0.9
F10A				IAmb	IAmb	17 14 35.9	
	comp=Z,18nm,0.9s						
SHOC	Shoshone, Teco	93.71	54	P	P	17 14 35.4	0.0
	baz=266,SNR=5.5						
TPNV	Topopah Spring	93.80	53	P	P	17 14 35.7	-0.4
TPNV				pmax	pmax		
	comp=Z,20nm,1.1s						
TPNV	Topopah Spring	93.80	53	P	P	17 14 35.7	-0.4
TPNV				IAmb	IAmb	17 14 37.3	
	comp=Z,20nm,1.1s						
BELC	Belle Mtn. Jos	93.82	56	P	P	17 14 36.3	+0.2
	baz=266,SNR=9.2						
NEW	Newport	93.85	42	P	P	17 14 35.3	-0.6
NEW				pmax	pmax		
	comp=Z,15nm,1.0s						
NEW	Newport	93.85	42	P	P	17 14 35.3	-0.6
NEW				IAmb	IAmb	17 14 36.9	
	comp=Z,15nm,1.0s						
SWSC	Sam W. Stewart	93.92	57	P	P	17 14 36.7	+0.3
	baz=266						
TUQ	Turquoise Moun	93.97	55	P	P	17 14 36.5	-0.3
	baz=266,SNR=12						
GMRC	Granite Mounta	94.15	56	P	P	17 14 37.7	+0.1
	baz=267,SNR=9.9						
BC3	Big Chuckawall	94.25	57	P	P	17 14 38.2	+0.1
	baz=267,SNR=7.7						
R11A	Troy Canyon, C	94.41	52	P	P	17 14 38.5	-0.3
R11A	Troy Canyon, C	94.41	52	P	P	17 14 38.6	-0.3
	baz=267,SNR=10.0						
MFID	Camas Ranch	94.49	47	P	P	17 14 38.3	-0.8
IRM	Iron Mountain	94.53	56	P	P	17 14 39.3	-0.1
	baz=267,SNR=9.4						
SHPR	Sheep Range	94.65	54	P	P	17 14 40.2	+0.2
SHPR				IAmb	IAmb	17 14 41.6	
	comp=Z,11nm,1.0s						
ELK	Elko	94.80	50	P	P	17 14 39.8	-0.9
ELK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ELK	Elko	94.80	50	P	P	17 14 39.8	-0.9
Y12C	Blythe	95.03	57	P	P	17 14 41.7	+0.1
Y12C				IAmb	IAmb	17 15 31.8	
	comp=Z,33nm,1.8s						
Y12C	Blythe	95.03	57	P	P	17 14 41.9	+0.3
	baz=267						
PDMCI	Parker Dam,Lak	95.37	56	P	P	17 14 43.3	+0.2
	baz=268						
SVE	Sverdlovsk	95.54	327	*e*P	P	17 14 41.9	-1.4
SVE				pmax	pmax		
	comp=Z,30nm,1.4s						
SVE				MLR	MLR		
	comp=Z,1µm,20.0s						
WBK	Wadi Bani Khal	95.56	292	P	P	17 14 44.3	+0.1
	SNR=6.4						
WBK				P	P	17 14 44.3	+0.1
	SNR=6.4						
W13A	Hualapai Mount	95.62	55	P	P	17 14 44.8	+0.3
YKA	Yellowknife Ar	95.75	28	P	P	17 14 44.3	+0.2
	comp=Z,4.3nm,0.8s,baz=267,slow=4.4,SNR=32						
YKA				PKiKP	PKiKP	17 19 23.9	+0.6
	comp=Z,0.8nm,0.8s,baz=264,slow=1.3,SNR=6.0						
YKA				PKKPbc	PKKPbc	17 31 33.4	-3.1
	comp=Z,0.8nm,0.9s,baz=94,slow=3.1,SNR=8.9						
YKA				LR	LR	17 51 58.1	
	comp=Z,1µm,21.9s,baz=0.0,slow=32						
PSUT	Pine Spring	95.78	52	P	P	17 14 44.8	-0.3
ABKAR	Akbulak array	95.81	319	P	P	17 14 42.8	-1.9
WSAR	Wadi Sarin	95.91	293	P	P	17 14 45.7	-0.1
	SNR=8.0						
MSO	Missoula	95.95	44	P	P	17 14 46.3	+0.7
	baz=269						
WALA	Waterton Lakes	96.01	41	P	P	17 14 45.5	-0.4
WALA				IAmb	IAmb	17 14 47.0	
	comp=Z,20nm,0.9s						
CCUT	Cedar City	96.13	53	P	P	17 14 46.3	-0.5
LCMT	Little Creek M	96.21	53	P	P	17 14 47.1	+0.1
BIDO	Bidbid	96.38	293	P	P	17 14 47.9	0.0
	SNR=8.0						
214A	Organ Pipe Nat	96.39	59	P	P	17 14 48.2	+0.4
	baz=268						
KNB	Kanab	96.55	53	P	P	17 14 48.0	-0.6
KNB				pmax	pmax		
	comp=Z,11nm,1.0s						
KNB	Kanab	96.55	53	P	P	17 14 48.0	-0.6
ARU	Arti	96.68	326	*ce*P	P	17 14 46.9	-1.6
ARU				pmax	pmax		
	comp=Z,28nm,1.0s						
ARU	Arti	96.68	326	P	P	17 14 46.6	-1.9
GEYT	Alibeck	96.91	307	P	P	17 14 49.7	-0.3
	comp=Z,5.7nm,1.0s,baz=101,slow=1.5,SNR=10						
GEYT				LR	LR	17 59 03.6	
	comp=Z,292nm,21.3s,baz=110,slow=36						
GEYT	Alibeck	96.91	307	P	P	17 14 49.1	-0.9
U15A	North Rim	96.96	54	P	P	17 14 50.4	-0.3
PKCU	Pink Cliffs	96.96	53	P	P	17 14 49.6	-1.1
AKTO	Aktyubinsk	97.07	320	P	P	17 14 48.1	-2.3
MTPU	Mount Pierson	97.08	52	P	Pdif	17 14 51.7	+0.4
HOQ	Hoqain	97.13	293	P	P	17 14 51.0	-0.4
	SNR=5.8						
WUAZ	Wupatki	97.68	55	P	P	17 14 53.7	-0.1
TMUT	Trail Mountain	97.86	51	P	P	17 14 54.4	-0.2
YHB	Horse Butte	97.86	46	P	P	17 14 54.4	0.0
YHL	Hebgen Lake	97.86	46	P	P	17 14 53.8	-0.7
SOHO	SOHO	97.87	294	P	P	17 14 53.9	-0.8
	SNR=9.1						
SOHO				P	P	17 14 53.9	-0.8
	SNR=9.1						
FXWY	Fox Creek	97.99	47	P	P	17 14 54.5	-0.6
YHH	Holmes Hill	98.10	46	P	P	17 14 54.4	-1.2
TUC	Tucson	98.12	58	P	P	17 14 55.2	-0.5
	baz=269						
UOSS	Minazif	98.20	294	P	P	17 14 55.2	-0.9
UOSS				P	P	17 14 55.2	-0.9
UOSS	Minazif	98.20	294	P	P	17 14 54.5	-1.6
UOSS				IAmb	IAmb	17 14 55.7	
	comp=Z,13nm,1.0s						
H17A	Grant Village	98.30	46	P	P	17 14 56.5	0.0
	baz=271						
ASHO	Ashiyiah	98.32	294	P	P	17 14 55.7	-1.0
X18A	Snowflake	98.84	56	P	P	17 14 57.9	-1.1
BW06	Boulder Array	99.07	48	P	Pdif	17 14 58.8	-1.2
BW06	Boulder Array	99.07	48	P	Pdif	17 14 59.6	-0.4
	baz=271						
PD31	Pinedale Array	99.07	48	P	Pdif	17 14 58.6	-1.3
PDAR	Pinedale Array	99.07	48	P	Pdif	17 14 58.6	-1.3
	comp=Z,3.0nm,1.0s,baz=243,slow=1.7,SNR=13						
PDAR				PP	PP	17 19 01.5	-1.2
	comp=Z,1.0nm,0.9s,baz=256,slow=3.6,SNR=3.4						
PDAR				LR	LR	17 56 38.1	
	comp=Z,1µm,18.6s,baz=249,slow=34						
RDMU	Red Mountain	99.11	50	P	Pdif	17 14 59.5	-0.6
RLMT	Red Lodge	99.22	45	P	Pdif	17 14 60.0	-0.5
RLMT				IAmb	IAmb	17 17 17.9	
	comp=Z,18nm,1.8s						
RLMT	Red Lodge	99.22	45	P	Pdif	17 15 00.3	-0.2
	baz=272						
LAO	LASA Array	101.25	44	P	Pdif	17 15 08.8	-0.5
	baz=274						
S22A	4UR Ranch, Cre	101.31	53	P	Pdif	17 15 10.0	-0.1
	baz=272						
ANMO	Albuquerque	101.71	56	P	Pdif	17 15 11.9	+0.1
	comp=Z,0.8nm,0.3s,baz=236,slow=4.0,SNR=6.9						
N23A	Red Feather La	101.85	49	P	Pdif	17 15 11.8	-0.6
	baz=274						
SDCO	Great Sand Dun	102.37	53	P	Pdif	17 15 14.4	-0.4
	baz=273						
PRGR	Permogore	102.71	332	*e*P	Pdif	17 15 12.9	-2.4
PRGR				pmax	pmax		
	comp=Z,31nm,1.0s						
VNA3	Neumayer Olymp	102.83	186	Pdiff	Pdif	17 15 21.9	+6.1
RSSD	Black Hills	103.01	46	P	Pdif	17 15 17.0	-0.4
	baz=276						
TXAR	Lajitas Array	104.27	61	PKiKP	PKiKP	17 19 40.4	+0.6
	comp=Z,1.8nm,0.9s,baz=264,slow=2.7,SNR=7.5						
TXAR				PKKPbc	PKKPbc	17 31 12.4	+1.2
	comp=Z,0.4nm,0.8s,baz=116,slow=6.1,SNR=3.9						
TXAR	Lajitas Array	104.27	61		PKiKP	17 19 39.1	-0.8
TMCR	Tamitsa	105.32	336	*e*P	Pdif	17 15 24.9	-1.9
TMCR				pmax	pmax		
	comp=Z,20nm,0.7s						
KLMR	Klimovskoe	105.77	332	*e*P	Pdif	17 15 24.6	-4.3
KLMR				*e*		17 19 55.9	
KLMR				pmax	pmax		
	comp=Z,20nm,1.1s						
KLMR				MLR	MLR		
	comp=Z,885nm,16.0s						
KLMR	Klimovskoe	105.77	332	*e*Pdif	Pdif	17 15 24.6	-4.3
KLMR				AMP		17 15 27.8	
	comp=Z,20nm,1.1s						
KLMR				*e*PP	PP	17 19 55.9	+4.0
KLMR				LR	LR	17 56 52.5	
KLMR				AMP		18 05 44.9	
	comp=Z,885nm,16.1s						
ARCES	ARCESS Array B	107.27	343	Pdiff	Pdif	17 15 38.8	+3.3
	comp=Z,2.6nm,1.0s,baz=84,slow=8.3,SNR=3.8						
ARCES				PKiKP	PKiKP	17 19 45.5	+1.5
	comp=Z,1.6nm,0.7s,baz=46,slow=2.6,SNR=6.5						
OBN	Obninsk	109.10	327	*e*P	Pdif	17 15 41.3	-2.5
OBN				*e*PPP	PPP	17 22 29.9	
OBN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
OBN				MLR	MLR		
	comp=Z,458nm,19.0s						
SOC	Sochi	110.26	315	*i* PKIKP	PKiKP	17 19 46.5	-3.9
SOC				*e*		17 20 22.6	
SOC				*e*PS	PS	17 29 54.7	-1.1
SOC				*e*SSS	SSS	17 39 49.3	
SOC				MLR	MLR		
	comp=Z,301nm,18.0s						
FINES	FINESS Array B	111.44	336	Pdiff	Pdif	17 15 52.5	-1.6
	comp=Z,3.0nm,0.8s,baz=36,slow=3.5,SNR=7.3						
FINES				PKiKP	PKiKP	17 19 52.4	+0.3
	comp=Z,4.6nm,0.9s,baz=166,slow=8.8,SNR=4.3						
W39A	Magazine	112.03	54	P	PKiKP	17 19 54.1	+0.1
	baz=280						
U40A	Yellville	112.57	53	P	PKiKP	17 19 54.7	-0.4
	baz=281						
W41B	Gary Mavity, V	113.27	54	P	PKiKP	17 19 56.1	-0.3
	baz=281						
AKASG	Malin Array Be	114.85	324	PKiKP	PKiKP	17 19 58.7	-0.2
	comp=Z,4.3nm,0.7s,baz=60,slow=2.4,SNR=17						
AKASG				PKKPbc	PKKPbc	17 30 36.6	-1.1
	comp=Z,1.0nm,0.6s,baz=261,slow=3.3,SNR=7.8						
AKASG	Malin Array Be	114.85	324	*i* PKIKP	PKiKP	17 19 58.4	-0.5
AKASG	Malin Array Be	114.85	324		PKiKP	17 19 58.4	-0.5

F45A	CMU Biological	115.49	41	P	PKiKP	17 20 00.3	0.0
	baz=290						
BR131	Keskin Array S	115.61	312	PKIKP	PKiKP	17 20 00.1	-0.8
BR131	Keskin Array S	115.61	312		PKiKP	17 20 00.1	-0.8
BRTR	Keskin Array B	115.61	312	PKP	PKiKP	17 20 00.7	-0.3
	comp=Z,2.8nm,0.9s,baz=108,slow=2.4,SNR=11						
BRTR				PP	PP	17 21 05.0	+1.4
	comp=Z,2.9nm,1.0s,baz=81,slow=7.6,SNR=4.1						
BRTR				PKKPbc	PKKPbc	17 30 35.8	+0.8
	comp=Z,2.5nm,0.8s,baz=225,slow=3.3,SNR=12						
BRTR	Keskin Array B	115.61	312	PKIKP	PKiKP	17 20 00.2	-0.8
BRTR	Keskin Array B	115.61	312		PKKPbc	17 30 35.3	+0.4
BRTR	Keskin Array B	115.61	312		PKiKP	17 20 00.2	-0.8
OXF	Oxford	115.69	54	PKIKP	PKPdf	17 20 00.1	-0.9
OXF	Oxford	115.69	54		PKPdf	17 20 00.1	-0.9
OXF	Oxford	115.69	54	P	PKPdf	17 20 01.0	0.0
	baz=282						
D46A	Sault St. Mari	116.01	40	P	PKPdf	17 20 00.9	-0.4
	baz=292						
SFIN	Lafayette	116.04	47	P	PKPdf	17 20 01.4	-0.1
	baz=286						
D47A	Chapleau	116.54	39	P	PKiKP	17 20 02.7	+0.3
	baz=293						
WVT	Waverly	116.59	52	PKIKP	PKPdf	17 20 01.5	-1.2
WVT	Waverly	116.59	52		PKPdf	17 20 01.5	-1.2
WVT	Waverly	116.59	52	P	PKPdf	17 20 02.6	-0.1
	baz=284						
E47A	Iron Bridge	116.66	40	P	PKPdf	17 20 02.3	-0.2
	baz=292						
G47A	Hillman	116.76	41	P	PKPdf	17 20 02.8	0.0
	baz=291						
J47A	Sunmer	116.78	44	P	PKPdf	17 20 02.7	-0.1
	baz=290						
K47A	Vermontville	116.84	44	P	PKPdf	17 20 02.7	-0.3
	baz=289						
N47A	Urbana	116.92	47		PKiKP	17 20 03.9	+0.7
N47A	Urbana	116.92	47	P	PKPdf	17 20 03.1	-0.1
	baz=288						
L47A	Sherwood	116.93	45	P	PKPdf	17 20 03.1	-0.1
	baz=289						
T47A	Sharon Grove	116.94	51		PKiKP	17 20 03.5	+0.1
CSS	Mathiatis	117.04	307		PKPdf	17 20 03.5	-0.1
WCI	Wyandotte Cave	117.24	50	P	PKiKP	17 20 04.0	+0.1
	baz=286						
D48A	Paudash Townsh	117.31	39	P	PKiKP	17 20 03.9	+0.1
	baz=294						
NB2	NORSAR Subarra	117.31	340	PKPdf	PKPdf	17 20 02.9	-0.5
	comp=Z,8.8nm,1.2s,baz=44,slow=1.9						
NB2	NORSAR Subarra	117.31	340	PKPdf	PKPdf	17 20 02.9	-0.5
	baz=44,slow=1.9						
NOA	NORSAR Array B	117.31	340	PKP	PKPdf	17 20 03.4	0.0
	comp=Z,2.9nm,0.8s,baz=44,slow=1.9,SNR=6.1						
F48A	Evansville	117.32	40	P	PKPdf	17 20 03.8	0.0
	baz=293						
E48A	Lockeyer	117.36	40	P	PKPdf	17 20 03.7	-0.2
	baz=293						
N48A	Decatur	117.40	46	P	PKiKP	17 20 04.2	0.0
	baz=288						
K48A	Perry	117.41	44	P	PKiKP	17 20 04.2	+0.1
	baz=290						
Q48A	North Vernon	117.46	49	P	PKPdf	17 20 04.2	-0.1
	baz=287						
J48A	Bridge Port	117.47	43	P	PKiKP	17 20 04.7	+0.5
	baz=290						
V48A	Smith Brothers	117.47	52		PKPdf	17 20 03.7	-0.8
L48A	N Adams	117.48	45	P	PKPdf	17 20 04.2	-0.1
	baz=289						
O48A	Farmland	117.50	47	P	PKPdf	17 20 04.2	-0.2
	baz=288						
P48A	Milroy	117.54	48	P	PKPdf	17 20 04.3	-0.2
	baz=287						
X48A	Hartselle	117.61	54		PKPdf	17 20 04.1	-0.6
F49A	Sandfield	117.72	40	P	PKiKP	17 20 04.7	0.0
	baz=293						
CLTN	Cedars of Leba	117.77	52		PKPdf	17 20 04.1	-0.9
L49A	Milan	117.89	45	P	PKiKP	17 20 05.1	0.0
	baz=290						
I49A	Point Hope	117.90	42	P	PKPdf	17 20 04.9	-0.1
	baz=292						
M49A	Liberty Center	117.96	45	P	PKiKP	17 20 05.6	+0.4
	baz=289						
LRAL	Lakeview Retre	117.97	55		PKPdf	17 20 04.7	-0.8
LRAL	Lakeview Retre	117.97	55	P	PKPdf	17 20 05.4	-0.1
	baz=283						
N49A	Columbus Grove	117.99	46		PKiKP	17 20 05.5	+0.2
N49A	Columbus Grove	117.99	46	P	PKPdf	17 20 05.2	-0.1
	baz=289						
P49A	Miami Univ. Ec	118.04	48	P	PKiKP	17 20 05.6	+0.1
	baz=288						
Q49A	Aurora	118.06	48	P	PKiKP	17 20 05.5	0.0
	baz=288						
U49A	Red Boiling Sp	118.09	51		PKiKP	17 20 06.1	+0.4
O49A	Covington	118.11	47		PKPdf	17 20 04.7	-0.9
O49A	Covington	118.11	47	P	PKPdf	17 20 05.5	-0.1
	baz=288						
S49A	Springfield	118.12	50	P	PKiKP	17 20 05.7	+0.1
	baz=287						
T49A	Edmonton	118.12	51		PKiKP	17 20 05.8	+0.1
T49A	Edmonton	118.12	51	P	PKPdf	17 20 05.4	-0.2
	baz=286						
BIZ	Bicaz	118.29	321	⇓P	PKiKP	17 20 06.8	+1.0
PLOR	Plostina	118.40	320	⇓P	PKiKP	17 20 18.6	+13
D50A	G1974 Best Tow	118.53	38	P	PKPdf	17 20 06.1	0.0
	baz=296						
BUR08	Bucovina Ar. S	118.54	322		PKiKP	17 20 07.5	+1.1
BURAR	Bucovina Array	118.55	322	⇓P	PKiKP	17 20 08.0	+1.7
BURAR	Bucovina Array	118.55	322	⇓PKIKP	PKiKP	17 20 08.0	+1.7
BURAR	Bucovina Array	118.55	322		PKPdf	17 20 06.2	0.0
L50A	Kingsville	118.58	44	P	PKPdf	17 20 06.2	-0.2
	baz=291						
M50A	Fremont	118.64	45	P	PKiKP	17 20 06.6	+0.1
	baz=290						
MATQ	Matagami	118.65	35	P	PKiKP	17 20 06.5	+0.2
	baz=299						
O50A	Cable	118.65	47	P	PKPdf	17 20 06.6	0.0
	baz=289						
T50A	Nancy	118.68	50	P	PKPdf	17 20 06.6	-0.2
	baz=286						
P50A	Jamestown	118.69	47	P	PKPdf	17 20 06.4	-0.3
	baz=289						
R50A	Paris	118.70	49		PKPdf	17 20 06.3	-0.5
R50A	Paris	118.70	49	P	PKPdf	17 20 06.6	-0.1
	baz=288						
FPAL	Fort Paine	118.73	53		PKPdf	17 20 06.0	-1.0
N50A	Nevada	118.78	46	P	PKPdf	17 20 06.6	-0.2
	baz=290						
Q50A	Georgetown	118.79	48	P	PKPdf	17 20 06.8	-0.1
	baz=288						
Z50A	Ashland	118.79	55		PKPdf	17 20 06.6	-0.5
Z50A	Ashland	118.79	55	P	PKPdf	17 20 06.6	-0.5
	baz=284						
250A	Grady	118.80	56		PKPdf	17 20 05.5	-1.6
W50A	Signal Mountai	118.80	53		PKPdf	17 20 06.5	-0.6
S50A	Richmond	118.83	50	P	PKPdf	17 20 06.7	-0.3
	baz=287						
TEIG	Tepich	118.84	70	PKP	PKiKP	17 20 08.2	+0.7
	comp=Z,12nm,0.9s,baz=64,slow=0.0						
D51A	Lot 18 Range I	118.85	38	P	PKiKP	17 20 06.8	0.0
	baz=296						
MLR	Muntele Rosu	119.00	320	PKIKP	PKPdf	17 20 05.9	-1.4
MLR	Muntele Rosu	119.00	320		PKPdf	17 20 05.8	-1.4
F51A	Arnstein	119.01	39	P	PKPdf	17 20 07.1	0.0
	baz=295						
E51A	G1948 Merrick	119.02	39	P	PKiKP	17 20 07.4	+0.2
	baz=296						
KWP	Kalwaria Pacla	119.08	325	*e*PKP	PKiKP	17 20 08.0	+0.8
KWP	Kalwaria Pacla	119.08	325	PKIKP	PKPdf	17 20 06.0	-1.2
KWP	Kalwaria Pacla	119.08	325		PKPdf	17 20 06.0	-1.2
ACSO	Alum Creek Sta	119.08	46		PKPdf	17 20 07.0	-0.4
DOPR	Dopca	119.15	321	⇑P	PKiKP	17 20 07.9	+0.4
I51A	Listowel	119.15	42	P	PKiKP	17 20 07.8	+0.3
	baz=293						
Q51A	Peebles	119.21	48		PKPdf	17 20 07.3	-0.4
Q51A	Peebles	119.21	48	P	PKiKP	17 20 07.9	+0.1
	baz=289						
R51A	Hillsboro	119.26	49	P	PKPdf	17 20 07.8	0.0
	baz=288						
P51A	Williamsport	119.27	47		PKPdf	17 20 07.3	-0.5
P51A	Williamsport	119.27	47	P	PKiKP	17 20 08.1	+0.3
	baz=289						
M51A	Elyria	119.27	45	P	PKPdf	17 20 07.7	-0.1
	baz=291						
N51A	Ashland	119.28	46		PKPdf	17 20 06.7	-1.1
N51A	Ashland	119.28	46	P	PKiKP	17 20 07.9	0.0
	baz=290						
X51A	Calhoun	119.33	53	P	PKPdf	17 20 08.1	0.0
	baz=285						
CPCT	Cooper Cave	119.36	52		PKiKP	17 20 08.8	+0.7
LSQQ	Lebel-sur-Quev	119.36	35	P	PKiKP	17 20 08.0	+0.3
	baz=299						
T51A	Gray	119.38	50	P	PKPdf	17 20 07.9	-0.2
	baz=287						
Z51A	Franklin	119.39	55		PKiKP	17 20 08.4	+0.2
V51A	Loudon	119.40	52		PKPdf	17 20 07.2	-0.9
PLCA	Paso Flores	119.42	143	PKP	PKiKP	17 20 08.3	+0.1
	comp=Z,5.7nm,0.9s,baz=229,slow=3.9,SNR=6.5						
BOSA	Boshof	119.43	233	PKP	PKPdf	17 20 08.5	-0.1
	comp=Z,1.9nm,0.7s,baz=90,slow=6.1,SNR=2.1						
F52A	Sundridge	119.44	39	P	PKiKP	17 20 08.1	+0.1
	baz=296						
S51A	Beattyville	119.45	49		PKPdf	17 20 07.5	-0.7
VLDQ	Val d'Or	119.54	36		PKPdf	17 20 06.9	-1.1
VOIR		119.59	320	⇑P	PKiKP	17 20 10.3	+1.9
VOIR		119.59	320	⇑PKIKP	PKiKP	17 20 10.3	+1.9
E52A	Mattawa	119.65	39	P	PKPdf	17 20 08.3	0.0
	baz=296						
J52A	Paris	119.74	42	P	PKPdf	17 20 08.6	0.0
	baz=293						
M52A	Chesterland	119.78	45	P	PKiKP	17 20 08.9	+0.1
	baz=292						
N52A	McGinn’s Farm,	119.81	45	P	PKPdf	17 20 08.9	0.0
	baz=291						
TZTN	Tazewell	119.81	51		PKiKP	17 20 09.9	+0.9
TZTN	Tazewell	119.81	51	P	PKiKP	17 20 09.2	+0.2
	baz=287						
D53A	Lac Vacive, Po	119.88	37		PKPdf	17 20 08.1	-0.6
TKL	Tuckaleechee C	119.89	52	PKP	PKiKP	17 20 09.4	+0.2
	comp=Z,16nm,1.0s,baz=166,slow=4.6,SNR=12						
TKL	Tuckaleechee C	119.89	52	PKIKP	PKPdf	17 20 08.7	-0.4
TKL	Tuckaleechee C	119.89	52		PKPdf	17 20 08.7	-0.4
P52A	Corning	119.90	47	P	PKiKP	17 20 09.1	0.0
	baz=290						
152A	Waverly Hall	119.92	55		PKPdf	17 20 08.9	-0.4
W52A	Murphy	119.93	52		PKPdf	17 20 08.2	-1.0
O52A	Adamsville	119.95	46		PKPdf	17 20 08.7	-0.4
O52A	Adamsville	119.95	46	P	PKiKP	17 20 09.3	+0.1
	baz=290						
R52A	Catlettsburg	119.95	48	P	PKiKP	17 20 09.3	+0.1
	baz=289						
V52A	Sevierville	119.98	51		PKiKP	17 20 09.8	+0.5
SADO	Sadowa	120.00	40	PKP	PKiKP	17 20 09.3	+0.2
	comp=Z,5.9nm,0.7s,baz=302,slow=1.1,SNR=3.9						
Q52A	Bidwell	120.02	48	P	PKPdf	17 20 09.2	-0.1
	baz=290						
T52A	Hallie	120.07	50		PKiKP	17 20 10.2	+0.7
ELND	Elena	120.08	317	⇓P	PKiKP	17 20 09.4	0.0
Y52A	Lilburn	120.15	54		PKPdf	17 20 09.7	0.0
Y52A	Lilburn	120.15	54	P	PKiKP	17 20 09.9	+0.1
	baz=285						
ALGO	Algonquin Park	120.17	39	P	PKPdf	17 20 09.3	0.0
	baz=297						
G53A	Haliburton	120.18	40	P	PKiKP	17 20 09.6	+0.1
	baz=296						
M53A	WI Miller and	120.29	44	P	PKiKP	17 20 10.2	+0.4
	baz=292						
O53A	New Philadelph	120.35	46	P	PKiKP	17 20 10.0	+0.1
	baz=291						
L53A	Girard	120.39	44	P	PKPdf	17 20 09.7	-0.2
	baz=293						
OJC	Ojcow	120.39	327	*e*PKP	PKiKP	17 20 10.4	+0.7
OJC	Ojcow	120.39	327	*e*PKIKP	PKiKP	17 20 10.4	+0.7
OJC	Ojcow	120.39	327		PKPdf	17 20 08.9	-0.7
G54A	Lake Saint Pet	120.40	39	P	PKPdf	17 20 09.8	0.0
	baz=296						
N53A	Lisbon	120.41	45		PKPdf	17 20 08.5	-1.5
N53A	Lisbon	120.41	45	P	PKPdf	17 20 09.8	-0.1
	baz=292						
H53A	Bobcaygeon	120.44	40	P	PKPdf	17 20 09.6	-0.3
	baz=296						
T53A	Wise	120.45	50	P	PKPdf	17 20 10.0	-0.3
	baz=288						
R53A	Hurricane	120.46	48	P	PKiKP	17 20 10.5	+0.3
	baz=289						
D54A	Lac Fusel, La	120.47	37	P	PKiKP	17 20 10.2	+0.3
	baz=299						
P53A	Whipple	120.49	47		PKiKP	17 20 10.3	+0.1
P53A	Whipple	120.49	47	P	PKiKP	17 20 10.6	+0.3
	baz=290						
ERPA	Erie	120.51	43	P	PKPdf	17 20 10.1	0.0
	baz=293						
NIE	Niedzica	120.54	326	*e*PKP	PKiKP	17 20 11.5	+1.4
NIE	Niedzica	120.54	326	*e*PKIKP	PKiKP	17 20 11.5	+1.4
X53A	Estanollee	120.58	53	P	PKPdf	17 20 10.2	-0.3
	baz=286						
Q53A	Leroy	120.60	48	P	PKPdf	17 20 10.2	-0.2
	baz=290						
PLVB	Pleven	120.73	318	⇓P	PKiKP	17 20 11.1	+0.5
BG3	Lake Jocassee	120.74	52		PKPdf	17 20 09.9	-0.9
GOGA	Godfrey	120.75	54	PKIKP	PKiKP	17 20 11.1	+0.2
GOGA	Godfrey	120.75	54		PKiKP	17 20 11.1	+0.2
L54A	Sinclairville	120.92	43	P	PKPdf	17 20 10.8	-0.1
	baz=294						
N54A	Moraine State	120.95	45		PKiKP	17 20 12.1	+0.9
N54A	Moraine State	120.95	45	P	PKPdf	17 20 10.9	-0.1
	baz=292						
J54A	Appleton	120.95	42	P	PKiKP	17 20 11.2	+0.2
	baz=295						
O54A	Avella	120.97	46		PKPdf	17 20 10.3	-0.8
O54A	Avella	120.97	46	P	PKiKP	17 20 11.5	+0.3
	baz=292						
M54A	Oil Creek Stat	120.97	44		PKPdf	17 20 10.5	-0.5
M54A	Oil Creek Stat	120.97	44	P	PKiKP	17 20 11.1	0.0
	baz=293						
GZR	Gura Zlata	121.05	321	⇓P	PKiKP	17 20 11.3	+0.1
GZR	Gura Zlata	121.05	321	⇓PKIKP	PKiKP	17 20 11.3	+0.1
Q54A	Coxs Mills	121.07	47		PKPdf	17 20 10.4	-0.9
Q54A	Coxs Mills	121.07	47	P	PKPdf	17 20 11.3	0.0
	baz=291						
P54A	Burton	121.10	46	P	PKPdf	17 20 11.3	0.0
	baz=291						
S54A	Dingess, Beckl	121.12	49		PKPdf	17 20 11.2	-0.3
S54A	Dingess, Beckl	121.12	49	P	PKPdf	17 20 11.5	+0.1
	baz=290						
SCHQ	Schefferville	121.12	26	PKP	PKiKP	17 20 11.4	+0.4
	comp=Z,2.3nm,0.7s,baz=116,slow=2.5,SNR=5.3						
SCHQ	Schefferville	121.12	26		PKPdf	17 20 10.6	-0.3
LANS	Liptovska Anna	121.14	326	*e*PKIKP	PKPdf	17 20 10.5	-0.7
LANS	Liptovska Anna	121.14	326	*e*PKP	PKPdf	17 20 10.5	-0.7
U54A	Nelsons Funny	121.14	50	P	PKPdf	17 20 11.3	-0.2
	baz=288						
TIGA	Tifton	121.14	56		PKiKP	17 20 12.3	+0.5
TIGA	Tifton	121.14	56	P	PKPdf	17 20 11.6	0.0
	baz=284						
T54A	Tazewell	121.16	50	P	PKPdf	17 20 11.5	-0.1
	baz=289						
I55A	Frankford	121.18	40	P	PKPdf	17 20 11.3	+0.1
	baz=296						
R54A	Victor	121.23	48	P	PKiKP	17 20 11.8	0.0
	baz=290						
D55A	Sainte-Anne-du	121.24	37	P	PKiKP	17 20 11.5	0.0
	baz=300						
V54A	Nebo	121.28	51	P	PKiKP	17 20 12.0	+0.1
	baz=288						
F55A	Otter Lake	121.28	38	P	PKiKP	17 20 11.7	+0.1
	baz=298						
W54A	Cherokee Point	121.30	52	P	PKPdf	17 20 11.8	0.0
	baz=287						
X54A	Belton	121.31	53	P	PKiKP	17 20 12.3	+0.3
	baz=287						
G55A	Calabogie	121.33	39	P	PKiKP	17 20 11.7	0.0
	baz=298						
WVNY	West Valley, N	121.33	43		PKPdf	17 20 11.6	-0.1
H55A	Tweed	121.35	40	P	PKiKP	17 20 12.1	+0.3
	baz=297						
HODGE	Hodges	121.49	53		PKiKP	17 20 12.5	+0.1
OKC	Ostrava-Krasne	121.49	327	*e*PKPDF	PKiKP	17 20 12.7	+0.8
OKC	Ostrava-Krasne	121.49	327	*e*PKIKP	PKiKP	17 20 12.7	+0.8
J55A	Hilton	121.50	42	P	PKiKP	17 20 12.5	+0.4
	baz=296						
MCWV	Mont Chateau	121.54	46	P	PKPdf	17 20 12.2	0.0
	baz=292						
L55A	Hinsdale	121.54	43	P	PKPdf	17 20 12.2	+0.1
	baz=294						
PSZ	Piszkesteto	121.55	325	PKIKP	PKPdf	17 20 11.9	-0.2
PSZ	Piszkesteto	121.55	325		PKPdf	17 20 11.8	-0.2
K55A	Perry	121.56	42	P	PKPdf	17 20 12.1	-0.1
	baz=295						
M55A	Ridgway	121.61	44		PKPdf	17 20 12.2	-0.1
M55A	Ridgway	121.61	44	P	PKPdf	17 20 12.3	-0.1
	baz=294						
P55A	Reedsville	121.61	46	P	PKiKP	17 20 12.5	0.0
	baz=292						
Q55A	Buckhannon	121.61	47	P	PKPdf	17 20 12.2	-0.2
	baz=291						
D56A	ZEC Mazanza, M	121.65	36	P	PKPdf	17 20 12.2	+0.1
	baz=300						
BZS	Buzias	121.67	322	⇓P	PKiKP	17 20 12.6	+0.3
BZS	Buzias	121.67	322	⇓PKIKP	PKiKP	17 20 12.6	+0.3
PAULI	Pauline	121.67	52		PKiKP	17 20 13.5	+0.8
O55A	Ligonier	121.72	45	P	PKPdf	17 20 12.4	-0.1
	baz=293						
N55A	Marion Center	121.72	45	P	PKiKP	17 20 12.7	0.0
	baz=293						
S55A	Lewisburg	121.73	48	P	PKPdf	17 20 12.6	0.0
	baz=290						
T55A	Pulaski	121.74	49	P	PKPdf	17 20 12.4	-0.3
	baz=290						
U55A	TA2, Sparta	121.74	50	P	PKPdf	17 20 12.3	-0.4
	baz=289						
E56A	St. Veronique	121.74	37	P	PKiKP	17 20 12.6	+0.2
	baz=300						
V55A	Taylorsville	121.82	51		PKiKP	17 20 13.2	+0.2
V55A	Taylorsville	121.82	51	P	PKPdf	17 20 12.5	-0.3
	baz=288						
R55A	Marlinton	121.83	48		PKiKP	17 20 13.2	+0.2
R55A	Marlinton	121.83	48	P	PKPdf	17 20 12.6	-0.3
	baz=291						
MORC	Moravsky Berou	121.85	328	⇑P	PKiKP	17 20 13.2	+0.5
MORC	Moravsky Berou	121.85	328	⇑PKIKP	PKiKP	17 20 13.2	+0.5
MORC	Moravsky Berou	121.85	328	*e*PKP	PKiKP	17 20 13.1	+0.5
MORC	Moravsky Berou	121.85	328		PKiKP	17 20 12.9	+0.3
KSP	Ksiaz	121.88	329	*e*PKP	PKiKP	17 20 13.2	+0.6
KSP	Ksiaz	121.88	329	*e*PKIKP	PKiKP	17 20 13.2	+0.6
Y55A	Saluda	121.89	53	P	PKiKP	17 20 13.4	+0.2
	baz=287						
X55A	Gracelyn & Ava	121.91	52	P	PKiKP	17 20 13.8	+0.6
	baz=287						
H56A	Elgin	121.92	40	P	PKPdf	17 20 12.5	-0.2
	baz=298						
KMSC	Kings Mountain	121.95	52		PKiKP	17 20 13.3	+0.1
KMSC	Kings Mountain	121.95	52	P	PKiKP	17 20 13.7	+0.5
	baz=288						
VTS	Vitosha	121.98	318	⇑P	PKiKP	17 20 18.4	+5.1
VTS	Vitosha	121.98	318	⇑PKIKP	PKiKP	17 20 18.4	+5.1
VTS	Vitosha	121.98	318		PKPdf	17 20 12.4	-0.7
BLA	Blacksburg	121.98	49	PKIKP	PKPdf	17 20 12.8	-0.3
BLA	Blacksburg	121.98	49		PKPdf	17 20 12.8	-0.3
M56A	Emporium	122.00	44		PKPdf	17 20 12.3	-0.7
M56A	Emporium	122.00	44	P	PKiKP	17 20 13.7	+0.5
	baz=294						
MDVR	Moldovita	122.00	321	⇓P	PKiKP	17 20 13.3	+0.2
KRLC	Kraliky	122.08	328	*e*PKPDF	PKiKP	17 20 13.5	+0.4
KRLC				*e*x	x	17 20 29.5	
KRLC	Kraliky	122.08	328	*e*PKIKP	PKiKP	17 20 13.5	+0.4
OSTC	Ostas	122.09	329	*e*PKPDF	PKiKP	17 20 13.8	+0.7
N56A	West Decatur	122.15	44	P	PKiKP	17 20 13.7	+0.2
	baz=294						
L56A	Greenwood	122.15	43		PKiKP	17 20 14.0	+0.5
L56A	Greenwood	122.15	43	P	PKiKP	17 20 13.8	+0.3
	baz=295						
CHVC	Chvalec	122.16	329	*e*PKPDF	PKiKP	17 20 13.6	+0.4
CHVC				*e*x	x	17 20 20.9	
DPC	Dobruska-Polom	122.16	329	*e*PKPDF	PKiKP	17 20 13.8	+0.5
DPC	Dobruska-Polom	122.16	329	*e*PKIKP	PKiKP	17 20 13.8	+0.5
D57A	Chemin Vers le	122.18	36	P	PKiKP	17 20 13.8	+0.5
	baz=301						
O56A	Blue Knob Stat	122.22	45		PKPdf	17 20 13.4	-0.1
O56A	Blue Knob Stat	122.22	45	P	PKiKP	17 20 13.8	+0.1
	baz=293						
Q56A	Snyder Ridge,	122.24	47		PKPdf	17 20 13.1	-0.5
Q56A	Snyder Ridge,	122.24	47	P	PKiKP	17 20 13.9	+0.2
	baz=292						
JAVC	Velka Javorina	122.29	327	*e*PKP	PKiKP	17 20 14.9	+1.3
R56A	Bull Pasture M	122.32	47	P	PKiKP	17 20 14.0	0.0
	baz=291						
P56A	Dayton Farm, R	122.32	46	P	PKiKP	17 20 13.8	0.0
	baz=292						
T56A	Rocky Mt	122.33	49	P	PKPdf	17 20 13.8	0.0
	baz=290						
E57A	Chemin Saint G	122.34	37	P	PKiKP	17 20 13.7	0.0
	baz=301						
X56A	White Oak	122.38	52	P	PKPdf	17 20 14.0	0.0
	baz=288						
V56A	Mocksville	122.39	51	P	PKiKP	17 20 14.0	0.0
	baz=289						
S56A	Natural Bridge	122.46	48	P	PKiKP	17 20 14.4	+0.2
	baz=291						
G57A	Newington	122.48	38	P	PKiKP	17 20 14.2	+0.2
	baz=299						
H57A	Richville	122.53	39	P	PKiKP	17 20 14.6	+0.6
	baz=298						
W56A	Indian Trail	122.53	51	P	PKiKP	17 20 14.4	0.0
	baz=289						
SSPA	Standing Stone	122.55	44		PKiKP	17 20 14.5	+0.3
SSPA	Standing Stone	122.55	44	P	PKiKP	17 20 14.2	0.0
	baz=294						
JTS	Las Juntas de	122.55	81	PKP	PKiKP	17 20 15.0	0.0
	comp=Z,19nm,1.0s,baz=338,slow=3.2,SNR=4.8						
JTS	Las Juntas de	122.55	81	PKIKP	PKPdf	17 20 14.9	+0.1
JTS	Las Juntas de	122.55	81		PKPdf	17 20 14.9	+0.1
K57A	Scipio Center	122.59	42	P	PKPdf	17 20 14.2	+0.1
	baz=296						
I57A	Carthage	122.60	40	P	PKiKP	17 20 14.3	0.0
	baz=298						
VRAC	Vranov	122.62	328	⇑P	PKiKP	17 20 14.5	+0.4
VRAC	Vranov	122.62	328	⇑PKIKP	PKiKP	17 20 14.5	+0.4
VRAC	Vranov	122.62	328	*e*PKP	PKiKP	17 20 14.4	+0.2
J57A	Williamstown	122.63	41	P	PKPdf	17 20 14.2	+0.1
	baz=297						
L57A	Andrews Acres	122.69	42	P	PKiKP	17 20 14.5	-0.1
	baz=296						
BSEG	Bad Segeberg	122.69	335	*e*PKPdf	PKiKP	17 20 14.4	+0.4
	baz=49,slow=1.9						
D58A	Chemin du LacG	122.73	36	P	PKiKP	17 20 14.5	+0.1
	baz=302						
M57A	Sunshine Farm,	122.78	43		PKiKP	17 20 15.4	+0.7
M57A	Sunshine Farm,	122.78	43	P	PKPdf	17 20 14.6	+0.1
	baz=295						
Q57A	Strasburg	122.80	46	P	PKPdf	17 20 14.7	+0.1
	baz=293						
KRUC	Moravsky	122.87	327	*e*PKP	PKiKP	17 20 14.9	+0.3
E58A	La Victoria	122.88	36	P	PKiKP	17 20 14.6	-0.1
	baz=301						
S57A	Dark Hollow, R	122.88	48		PKiKP	17 20 15.0	0.0
S57A	Dark Hollow, R	122.88	48	P	PKiKP	17 20 15.1	+0.1
	baz=291						
O57A	Amberson	122.89	45	P	PKPdf	17 20 14.8	0.0
	baz=294						
V57A	Coltrane Farms	122.91	50	P	PKiKP	17 20 15.1	0.0
	baz=290						
P57A	Homestead Farm	122.92	46		PKiKP	17 20 15.1	+0.1
P57A	Homestead Farm	122.92	46	P	PKPdf	17 20 14.6	-0.2
	baz=293						
T57A	Hurt	122.93	49		PKPdf	17 20 14.7	-0.2
T57A	Hurt	122.93	49	P	PKiKP	17 20 15.2	+0.1
	baz=291						
157A	Early Branch	122.94	54	P	PKPdf	17 20 15.1	+0.1
	baz=287						
PVCC	Panska Ves	122.95	330	*e*PKPDF	PKiKP	17 20 15.8	+1.1
PVCC	Panska Ves	122.95	330	*e*PKIKP	PKiKP	17 20 15.8	+1.1
VAY	Valandovo	122.98	317	*i* P	PKPdf	17 20 14.2	-0.6
W57A	Gilead	122.99	51		PKPdf	17 20 15.2	+0.2
W57A	Gilead	122.99	51	P	PKPdf	17 20 15.2	+0.2
	baz=289						
Z57A	Bowman	123.00	53	P	PKiKP	17 20 15.6	+0.3
	baz=287						
R57A	Stanardsville	123.00	47	P	PKiKP	17 20 15.2	0.0
	baz=292						
G58A	Ormstown	123.03	38	P	PKiKP	17 20 15.0	0.0
	baz=300						
BRG	Berggiesshubel	123.05	330	*i* PKP	PKiKP	17 20 15.3	+0.4
	comp=Z,21nm,1.0s						
BRG	Berggiesshubel	123.05	330	*e*PKPdf	PKiKP	17 20 15.1	+0.1
	baz=49,slow=1.9						
BRG	Berggiesshubel	123.05	330	*i* PKIKP	PKiKP	17 20 15.3	+0.4
BRG				pmax	pmax		
	comp=Z,21nm,1.0s						
U57A	Blanch	123.06	49	P	PKiKP	17 20 15.6	+0.2
	baz=290						
J58A	Remsen	123.11	40		PKPdf	17 20 15.0	-0.1
J58A	Remsen	123.11	40	P	PKiKP	17 20 15.8	+0.4
	baz=298						
K58A	Earlville	123.15	41	P	PKiKP	17 20 15.8	+0.4
	baz=297						
I58A	Old Forge	123.16	40	P	PKiKP	17 20 15.4	0.0
	baz=298						
BINY	Binghamton	123.18	42	P	PKiKP	17 20 15.9	+0.4
	baz=296						

TREC	Trest	123.22	328	ePKPDF	PKiKP	17 20 16.4	+1.0
TREC	Trest	123.22	328	ePKIKP	PKiKP	17 20 16.4	+1.0
M58A	Price’s Panora	123.22	43	P	PKPdf	17 20 15.4	0.0
	baz=296						
CLL	Collm	123.23	331	i PKPdf	PKiKP	17 20 16.3	+1.0
	comp=Z,15nm,0.8s						
CLL				i		17 20 32.2	
CLL				ePP	PP	17 22 08.0	+13
CLL				ePS	PS	17 31 54.0	+1.4
CLL				ePPS	PPS	17 33 18.0	
CLL				eSS	SS	17 39 00.0	+24
CLL				LmH		18 15 00.0	
	comp=Z,400nm,21.2s						
CLL				LmV		18 18 00.0	
	comp=Z,500nm,19.9s						
CLL	Collm	123.23	331	ePKPdf	PKiKP	17 20 16.2	+0.9
	baz=49,slow=1.9						
CLL	Collm	123.23	331	i PKIKP	PKiKP	17 20 16.3	+1.0
CLL				pmax	pmax		
	comp=Z,15nm,0.8s						
CLL				MLR	MLR		
	comp=Z,400nm,21.2s						
CLL	Collm	123.23	331		PKiKP	17 20 16.1	+0.9
N58A	Sunbury	123.27	44		PKiKP	17 20 15.8	+0.1
N58A	Sunbury	123.27	44	P	PKiKP	17 20 15.9	+0.2
	baz=295						
PRU	Pruhonice	123.29	329	ePKPDF	PKiKP	17 20 15.5	+0.1
PRU	Pruhonice	123.29	329	ePKIKP	PKiKP	17 20 15.5	+0.1
FBE	Freiberg	123.31	331	ePKPdf	PKiKP	17 20 15.7	+0.3
	baz=49,slow=1.9						
H58A	Gabriels	123.31	39	P	PKiKP	17 20 16.0	+0.3
	baz=300						
L58A	Harry Jones Me	123.34	42	P	PKiKP	17 20 16.1	+0.3
	baz=297						
Q58A	Fox Den Farm,	123.36	46	P	PKiKP	17 20 15.8	-0.1
	baz=293						
D59A	Saint-Raymond	123.38	35	P	PKiKP	17 20 16.1	+0.4
	baz=303						
R58A	Rapidan	123.38	47	P	PKiKP	17 20 16.4	+0.4
	baz=292						
P58A	Pank, Wackersv	123.42	45	P	PKiKP	17 20 16.5	+0.5
	baz=294						
O58A	Lewisberry	123.43	45	P	PKiKP	17 20 16.3	+0.2
	baz=294						
V58A	Windy Hill, Pi	123.45	50		PKPdf	17 20 15.6	-0.3
V58A	Windy Hill, Pi	123.45	50	P	PKiKP	17 20 16.2	+0.1
	baz=290						
SKO	Skopje	123.46	318	i P	PKiKP	17 20 16.2	+0.2
T58A	Grand View Acr	123.49	49	P	PKiKP	17 20 16.5	+0.3
	baz=291						
H59A	Cadyville	123.50	38	P	PKPdf	17 20 15.9	+0.1
	baz=300						
PAGS	Pennsylvania G	123.53	44		PKPdf	17 20 15.8	-0.1
LIT	Litokhoron	123.55	315	PKIKP	PKPdf	17 20 15.2	-0.9
LIT	Litokhoron	123.55	315		PKPdf	17 20 15.2	-0.9
J59A	Piesco	123.57	40		PKPdf	17 20 15.5	-0.5
J59A	Piesco	123.57	40	P	PKiKP	17 20 16.6	+0.4
	baz=299						
G59A	Clarenceville	123.60	38	P	PKiKP	17 20 16.4	+0.3
	baz=301						
R58B	Mineral	123.60	47		PKPdf	17 20 15.5	-0.6
R58B	Mineral	123.60	47	P	PKiKP	17 20 16.7	+0.3
	baz=292						
S58A	Poland Farm, P	123.60	48		PKiKP	17 20 16.9	+0.5
S58A	Poland Farm, P	123.60	48	P	PKiKP	17 20 16.7	+0.3
	baz=292						
W58A	Raeford	123.62	51	P	PKiKP	17 20 17.0	+0.5
	baz=290						
K59A	Cooperstown	123.67	41	P	PKiKP	17 20 16.8	+0.4
	baz=298						
U58A	Oxford	123.67	49	P	PKiKP	17 20 17.0	+0.4
	baz=291						
ROC1	El Roble	123.69	136		PKPdf	17 20 13.9	-3.0
Z58A	St. Stephen	123.70	53	P	PKPdf	17 20 16.3	-0.1
	baz=288						
DWPF	Disney Wildern	123.76	60	P	PKiKP	17 20 17.1	+0.1
	baz=284						
PBCC	Pribram	123.76	329	ePKPDF	PKiKP	17 20 16.4	0.0
ASSE	Asse, Remlinge	123.78	333	ePKPdf	PKiKP	17 20 16.5	+0.3
	baz=49,slow=1.9						
SDMD	Soldier’s Deli	123.78	45		PKiKP	17 20 16.8	+0.1
NRDL	Niedersach Rie	123.78	334	ePKPdf	PKiKP	17 20 16.8	+0.6
	baz=49,slow=1.9						
I59A	Olmsteadville	123.81	39	P	PKiKP	17 20 17.0	+0.3
	baz=299						
L59A	Walton	123.81	42	P	PKiKP	17 20 17.0	+0.2
	baz=297						
CONA	Conrad Observa	123.81	326	i PKiKP	PKiKP	17 20 16.8	+0.1
	comp=Z,15nm,1.3s,SNR=5.2						
PEL	Peldehue	123.82	136	PKIKP	PKPdf	17 20 16.2	-0.6
PEL	Peldehue	123.82	136		PKPdf	17 20 16.2	-0.6
M59A	Waymart	123.84	42	P	PKiKP	17 20 16.8	0.0
	baz=297						
O59A	Robesonia	123.86	44	P	PKiKP	17 20 17.1	+0.2
	baz=295						
F60A	Warwick	123.87	36	P	PKiKP	17 20 16.9	+0.2
	baz=302						
MVL	Millersville	123.88	44		PKPdf	17 20 16.6	0.0
NEUB	Neuenburg	123.88	332	ePKPdf	PKiKP	17 20 16.7	+0.1
	baz=49,slow=1.9						
N59A	State Game Lan	123.89	43		PKiKP	17 20 17.3	+0.4
N59A	State Game Lan	123.89	43	P	PKiKP	17 20 17.1	+0.2
	baz=296						
RETH	Rethem/Aller,	123.94	334	ePKPdf	PKiKP	17 20 16.9	+0.3
	baz=49,slow=1.9						
E60A	Ste Agathe de	123.95	36	P	PKiKP	17 20 17.1	+0.2
	baz=303						
D60A	Saint Jean D’O	123.95	35	P	PKiKP	17 20 17.2	+0.4
	baz=304						
P59A	Jarrettsville	123.98	45	P	PKiKP	17 20 17.4	+0.3
	baz=295						
FNA	Florina	124.03	317	PKIKP	PKPdf	17 20 15.9	-1.1
FNA	Florina	124.03	317		PKPdf	17 20 15.9	-1.1
R59A	King George, V	124.06	47	P	PKiKP	17 20 17.7	+0.4
	baz=293						
TANN	Tannenbergstha	124.07	331	ePKPdf	PKiKP	17 20 17.1	0.0
	baz=49,slow=1.9						
AGG	Agios Georgios	124.10	314	PKIKP	PKPdf	17 20 16.4	-0.7
AGG	Agios Georgios	124.10	314		PKPdf	17 20 16.4	-0.7
S59A	Mechanicsville	124.10	47	P	PKiKP	17 20 17.8	+0.4
	baz=293						
CLZ	Clausthal	124.11	333	ePKPdf	PKiKP	17 20 17.5	+0.4
	baz=49,slow=1.9						
V59A	Middlesex	124.13	50	P	PKiKP	17 20 17.8	+0.2
	baz=291						
I60A	Shoreham	124.15	39	P	PKiKP	17 20 17.8	+0.5
	baz=300						
H60A	Morristown	124.16	38	P	PKiKP	17 20 17.8	+0.5
	baz=301						
GUNZ	Gunzen	124.16	331	ePKPdf	PKiKP	17 20 17.4	+0.1
	baz=49,slow=1.9						
PLN	Plauen	124.17	331	ePKPdf	PKiKP	17 20 17.2	0.0
	baz=49,slow=1.9						
NKC	Novy Kostel	124.19	330	ePKPDF	PKiKP	17 20 18.0	+0.7
NKC	Novy Kostel	124.19	330	ePKIKP	PKiKP	17 20 18.0	+0.7
WERN	Wernitzgruen	124.19	330	ePKPdf	PKiKP	17 20 17.5	+0.3
	baz=49,slow=1.9						
D61A	St Aubert, Com	124.20	34	P	PKiKP	17 20 17.3	0.0
	baz=305						
T59A	Double "B" Far	124.21	48		PKPdf	17 20 16.4	-0.9
T59A	Double "B" Far	124.21	48	P	PKiKP	17 20 17.7	0.0
	baz=292						
Y59A	Loris	124.23	52	P	PKiKP	17 20 17.9	+0.1
	baz=289						
U59A	Littleton	124.26	49	P	PKiKP	17 20 18.1	+0.4
	baz=292						
X59A	McDuffie Farm,	124.26	51	P	PKiKP	17 20 18.2	+0.4
	baz=290						
OHR	Ohrid	124.27	317	i P	PKiKP	17 20 17.6	-0.1
KHC	Kasperske Hory	124.31	329	ePKPDF	PKiKP	17 20 17.7	+0.1
KHC				ex	x	17 20 37.0	
KHC	Kasperske Hory	124.31	329	ePKIKP	PKiKP	17 20 17.7	+0.1
KHC	Kasperske Hory	124.31	329		PKPdf	17 20 17.3	0.0
MOX	Moxa	124.33	331	ePKPdf	PKiKP	17 20 17.5	0.0
	baz=49,slow=1.9						
J60A	Lant Hill Farm	124.36	40	P	PKiKP	17 20 18.1	+0.4
	baz=300						
N60A	Cedar Hill Far	124.37	43	P	PKiKP	17 20 18.2	+0.4
	baz=296						
ARSA	Arzberg	124.39	326	ePKiKP	PKPdf	17 20 17.6	+0.1
	comp=Z,6.8nm,0.9s						
O60A	Telford	124.40	44	P	PKiKP	17 20 18.5	+0.6
	baz=296						
GEC2	GERESS Array S	124.43	328	ePKPdf	PKPdf	17 20 17.7	+0.1
	baz=49,slow=1.9						
GEC2	GERESS Array S	124.43	328		PKPdf	17 20 17.1	-0.5
GERES	GERESS Array B	124.43	328	PKP	PKiKP	17 20 18.1	+0.3
	comp=Z,11nm,0.9s,baz=69,slow=1.9,SNR=50						
GERES				PKKPbc	PKKPbc	17 30 01.9	-0.5
	comp=Z,0.2nm,0.3s,baz=191,slow=2.7,SNR=5.4						
GERES	GERESS Array B	124.43	328	PKIKP	PKPdf	17 20 17.2	-0.3
GERES	GERESS Array B	124.43	328		PKPdf	17 20 17.2	-0.3
F61A	St Evariste	124.43	36	P	PKiKP	17 20 18.8	+1.0
	baz=303						
L60A	Shokan	124.44	41	P	PKiKP	17 20 18.5	+0.5
	baz=298						
P60A	Greenville	124.46	44		PKPdf	17 20 17.6	-0.1
P60A	Greenville	124.46	44	P	PKiKP	17 20 18.6	+0.5
	baz=295						
E61A	Lac Etchemin	124.47	35	P	PKiKP	17 20 18.5	+0.6
	baz=304						
GTTG	Gottingen	124.50	333	ePKPdf	PKiKP	17 20 18.0	+0.2
	baz=49,slow=1.9						
MANZ	Manzenberg	124.52	330	ePKPdf	PKiKP	17 20 18.0	+0.1
	baz=49,slow=1.9						
PSUB	Penn St. - Bra	124.54	44		PKPdf	17 20 17.2	-0.7
ODNJ	Ogdensburg	124.61	43		PKPdf	17 20 17.2	-0.8
ROTZ	Rotzenmuhle	124.61	330	ePKPdf	PKiKP	17 20 18.1	0.0
	baz=49,slow=1.9						
H61A	Lyndonville	124.64	38	P	PKiKP	17 20 19.1	+0.8
	baz=302						
WET	Wettzell	124.67	329	ePKPdf	PKiKP	17 20 18.3	+0.1
	baz=49,slow=1.9						
PDG	Podgorica	124.69	319	⇓P	PKPdf	17 20 18.1	0.0
PDG	Podgorica	124.69	319		PKPdf	17 20 17.6	-0.4
MOA	Molln	124.73	327	i PKiKP	PKPdf	17 20 18.2	+0.1
	comp=Z,4.7nm,0.8s						
X60A	Albert Glenn T	124.74	51	P	PKiKP	17 20 19.3	+0.5
	baz=290						
K61A	Williamstown	124.74	40	P	PKiKP	17 20 18.9	+0.3
	baz=299						
T60A	Surry	124.75	48	P	PKiKP	17 20 18.9	+0.2
	baz=293						
L61A	Hillsdale 1, H	124.79	41	P	PKiKP	17 20 19.2	+0.5
	baz=299						
LBNH	Lisbon	124.80	38	P	PKiKP	17 20 19.7	+1.1
	baz=302						
BLY	Banja Luka	124.81	323	⇑P	PKiKP	17 20 19.3	+0.7
GROS	Grobnik	124.86	325	ePKPdf	PKPdf	17 20 18.6	+0.1
J61A	Chester	124.86	39	P	PKiKP	17 20 19.2	+0.4
	baz=300						
D62A	Allapoint, All	124.91	34	P	PKiKP	17 20 19.1	+0.4
	baz=306						
IBBN	Ibbenburen	124.93	335	ePKPdf	PKiKP	17 20 18.8	+0.2
	baz=49,slow=1.9						
UBBA	Unterbreizbach	124.97	332	ePKPdf	PKiKP	17 20 18.9	+0.3
	baz=49,slow=1.9						
SOKA	Soboth	125.00	326	i PKiKP	PKPdf	17 20 18.7	0.0
	comp=Z,16nm,1.1s,SNR=10						
M61A	Granite Spring	125.06	42	P	PKiKP	17 20 19.7	+0.5
	baz=298						
H62A	Milan	125.09	37	P	PKiKP	17 20 19.7	+0.5
	baz=302						
PAL	Palisades	125.11	42	P	PKiKP	17 20 19.9	+0.6
	baz=298						
G62A	West of Eustis	125.11	36	P	PKiKP	17 20 19.6	+0.4
	baz=303						
GRF	Grafenberg Arr	125.14	330	ePKPdf	PKiKP	17 20 19.1	0.0
	baz=49,slow=1.9						
L61B	Northampton	125.23	40	P	PKiKP	17 20 19.9	+0.4
	baz=300						
U61A	Possum Corner	125.27	49	P	PKiKP	17 20 20.0	+0.3
	baz=292						
W61A	Ground Anchor	125.29	50	P	PKiKP	17 20 20.0	+0.1
	baz=291						
I62A	Tamworth	125.35	38	P	PKiKP	17 20 20.2	+0.5
	baz=302						
OBKA	Obir	125.37	326	ePKiKP	PKPdf	17 20 19.3	-0.1
	comp=Z,8.3nm,1.2s						
GO04	Tololo Observa	125.37	133		PKPdf	17 20 19.6	-0.5
J62A	Henniker	125.39	39	P	PKiKP	17 20 20.2	+0.4
	baz=301						
D63A	Stockholm	125.45	33	P	PKiKP	17 20 19.8	0.0
	baz=307						
BOJS	Bojanci	125.54	324	ePKPdf	PKiKP	17 20 20.2	+0.2
RJOB	Jochberg	125.58	328	ePKPdf	PKPdf	17 20 19.5	-0.3
	baz=49,slow=1.9						
E63A	Oxbow	125.64	34	P	PKiKP	17 20 20.4	+0.2
	baz=306						
F63A	Nahmakanta, Br	125.68	35	P	PKiKP	17 20 20.9	+0.6
	baz=305						
KBA	Koelnbreinsper	125.69	327	i PKiKP	PKPdf	17 20 19.8	-0.4
	comp=Z,16nm,1.1s,SNR=7.9						
G63A	Kingsbury	125.71	36	P	PKiKP	17 20 21.0	+0.6
	baz=304						
H63A	New Sharon	125.72	37	P	PKiKP	17 20 20.8	+0.5
	baz=304						
MYKA	Terra Mystica	125.80	326	i PKiKP	PKPdf	17 20 19.9	-0.3
	comp=Z,12nm,1.4s						
K63A	Dunstable	125.84	40	P	PKiKP	17 20 21.2	+0.5
	baz=301						
E64A	Bridgewater	125.98	34	P	PKiKP	17 20 21.3	+0.4
	baz=307						
F64A	Sherman	126.01	35	P	PKiKP	17 20 21.1	+0.2
	baz=306						
VOJS	Vojsko	126.02	326	ePKPdf	PKPdf	17 20 20.6	0.0
TNS	Taunus Mts	126.11	332	ePKPdf	PKiKP	17 20 21.0	-0.1
	baz=49,slow=1.9						
FUR	Furstenfeldbru	126.11	329	ePKPdf	PKiKP	17 20 20.9	-0.2
	baz=49,slow=1.9						
H64A	Troy	126.21	36	P	PKiKP	17 20 21.6	+0.2
	baz=304						
L63A	North Scituate	126.21	40	P	PKiKP	17 20 21.9	+0.4
	baz=300						
SCTE	Santa Cesarea	126.33	317		PKPdf	17 20 19.5	-1.8
ABTA	Abfaltersbach	126.35	327	i PKiKP	PKPdf	17 20 20.7	-0.6
	comp=Z,22nm,1.1s,SNR=7.7						
I64A	Boothbay	126.36	37	P	PKiKP	17 20 22.0	+0.3
	baz=304						
BATG	Bathurst New B	126.41	32		PKPdf	17 20 21.1	-0.2
WATA	Walderalm	126.48	328	i PKiKP	PKiKP	17 20 21.9	-0.2
	comp=Z,22nm,1.0s,SNR=6.7						
WTTA	Wattenberg	126.50	328	i PKiKP	PKiKP	17 20 22.0	-0.2
	comp=Z,40nm,1.0s,SNR=12						
AHRW	Bad Neuenahr-A	126.50	333	ePKPdf	PKiKP	17 20 22.0	+0.2
	baz=49,slow=1.9						
STAL	STALIGIAL	126.54	326		PKPdf	17 20 20.8	-0.8
MOTA	Moosalm	126.72	328	i PKiKP	PKPdf	17 20 22.1	0.0
	comp=Z,31nm,1.0s,SNR=10						
SQTA	Sankt Quirin	126.75	328	i PKiKP	PKPdf	17 20 22.2	+0.1
	comp=Z,29nm,1.0s,SNR=8.1						
STU	Stuttgart	126.75	331	ePKPdf	PKiKP	17 20 22.3	-0.1
	baz=49,slow=1.9						
STU	Stuttgart	126.75	331	PKIKP	PKPdf	17 20 21.4	-0.5
STU	Stuttgart	126.75	331		PKPdf	17 20 21.4	-0.5
RETA	Reutte	126.81	329	i PKiKP	PKiKP	17 20 22.4	-0.2
	comp=Z,9.0nm,0.8s						
CBCY	The Bluff, Cay	126.86	69		PKPdf	17 20 23.1	+0.3
UBR	Ueberruh	127.02	329	ePKPdf	PKPdf	17 20 22.5	0.0
	baz=49,slow=1.9						
FETA	Feichten	127.13	328	i PKiKP	PKiKP	17 20 23.1	-0.2
	comp=Z,31nm,1.0s,SNR=13						
GO03	Copiap	127.15	130		PKPdf	17 20 22.2	-1.2
CTI	Castel Tesino	127.25	327	PKIKP	PKPdf	17 20 23.0	-0.1
CTI	Castel Tesino	127.25	327		PKPdf	17 20 23.0	-0.1
SGRT	San Giovanni R	127.28	320		PKPdf	17 20 22.4	-0.8
DAVA	Damuels	127.40	329	i PKiKP	PKiKP	17 20 23.7	-0.2
	comp=Z,16nm,0.9s						
ATAH	Atahualpa	127.41	103	PKP	PKiKP	17 20 27.1	+2.0
	comp=Z,44nm,0.9s,baz=289,slow=2.3,SNR=19						
BFO	Black Forest	127.47	331	ePKPdf	PKPdf	17 20 23.3	-0.1
	baz=49,slow=1.9						
BFO	Black Forest	127.47	331	PKIKP	PKPdf	17 20 23.2	-0.1
BFO	Black Forest	127.47	331		PKPdf	17 20 23.2	-0.1
WLF	Walferdange	127.55	333	ePKPdf	PKiKP	17 20 24.6	+0.7
	baz=49,slow=1.9						
WLF	Walferdange	127.55	333	PKIKP	PKiKP	17 20 24.0	+0.1
WLF	Walferdange	127.55	333		PKiKP	17 20 24.0	+0.1
NNA	Nana	127.71	109	PKP	PKiKP	17 20 26.3	+1.0
	comp=Z,46nm,1.0s,baz=272,slow=5.4,SNR=13						
NNA	Nana	127.71	109	PKIKP	PKPdf	17 20 25.0	+0.3
NNA	Nana	127.71	109		PKPdf	17 20 25.0	+0.3
TIP	Timpagrande	127.91	317	⇑P	PKiKP	17 20 25.8	+0.7
TIP	Timpagrande	127.91	317		PKPdf	17 20 24.3	-0.2
ECH	Echery	128.11	331	PKIKP	PKPdf	17 20 24.4	-0.1
ECH	Echery	128.11	331		PKPdf	17 20 24.4	-0.1
TUE	Stuetta	128.21	328		PKPdf	17 20 25.0	0.0
INTR	Introdacqua	128.30	321		PKPdf	17 20 24.6	-0.6
NRCA	Norcia	128.33	323		PKPdf	17 20 24.5	-0.7
MURB	Monte Urbino	128.43	323		PKPdf	17 20 24.5	-0.9
ZCCA	Zocca	128.67	325		PKPdf	17 20 25.2	-0.5
GO02	Mina Guanaco	128.89	128		PKPdf	17 20 26.5	-0.6
CMBC	Cumbal	129.23	93	⇓eP	PKiKP	17 20 33.0	+4.1
LATE	Laterza	129.24	323		PKPdf	17 20 26.5	-0.3
SENIN	Lac Senin/Sane	129.33	330		PKPdf	17 20 26.3	-0.8
PTAC	Punta Ardita,	129.61	85	eP	PKiKP	17 20 35.7	+6.6
PTAC				eP	pPKPdf	17 20 41.0	-2.2
CASP	Castiglione de	129.69	324		PKPdf	17 20 27.2	-0.4
POPC	Popayan, Colom	130.52	91	⇑eP	PKPdf	17 20 29.4	-0.9
BNI	Bardonecchia	130.54	329	PKIKP	PKPdf	17 20 28.7	-0.7
BNI	Bardonecchia	130.54	329		PKPdf	17 20 28.7	-0.7
SOTA	Rioblanco	130.55	92	eP	PKiKP	17 20 33.0	+1.4
LVC	Limon Verde	130.69	126	PKP	PKiKP	17 20 32.3	+0.8
	comp=Z,11nm,0.9s,baz=209,slow=1.3,SNR=7.9						
LVC				SKPbc	SKPab	17 23 55.9	+5.6
	comp=Z,3.6nm,0.8s,baz=265,slow=3.4,SNR=9.6						
PCON	Cinco Dias	130.78	91	eP	PKiKP	17 20 33.0	+0.8
YOTC	Yotoco, Valle	130.95	89	eP	PKPdf	17 20 29.4	-1.6
CBOC	Ciudad Bolivar	131.36	87	eP	PKiKP	17 20 34.8	+2.0
CBOC				⇑eP	PKiKP	17 20 34.8	+2.0
FLOC	Florencia	131.45	92	eP	PKPdf	17 20 32.1	+0.2
GO01	Chusmiza	131.82	122		PKPdf	17 20 32.1	-0.9
HELC	Santa Helena	131.85	86	eP	PKPdf	17 20 32.1	-0.9
GUY2C	Guyana, Caldas	131.98	88	⇑eP	PKiKP	17 20 35.7	+1.2
RREF	El Recreo	131.99	88	eP	PKiKP	17 20 34.8	+0.1
ORTC	Ortega, Tolima	132.04	89	⇑eP	PKPdf	17 20 32.1	-0.9
SJCC	San Jacinto, C	132.18	81	eP	PKiKP	17 20 33.9	-0.4
ZARC	Zaragoza, Cauc	132.54	85	eP	PKPdf	17 20 33.9	0.0
ROSC	El Rosal	133.01	88	PKP	PKiKP	17 20 36.4	0.0
	comp=Z,14nm,0.5s,baz=74,slow=4.2,SNR=9.9						
ROSC	El Rosal	133.01	88	eP	PKPdf	17 20 35.7	+0.4
ROSC	El Rosal	133.01	88		PKPdf	17 20 34.5	-0.7
ARGC	Ariguani, Magd	133.10	81	eP	PKPdf	17 20 33.0	-1.9
SPBC	San Pablo de B	133.28	87	eP	PKPdf	17 20 34.8	-0.6
MACC	Macarena, Meta	133.30	92	eP	PKPdf	17 20 34.8	-0.6
BRRC	Barranca, Sant	133.67	85	eP	PKPdf	17 20 33.0	-3.0
LPAZ	La Paz	134.18	119	PKhKP	PKPpre	17 20 25.3	
	comp=Z,1.6nm,0.8s,baz=65,slow=2.1,SNR=4.4						
LPAZ				PKP	PKiKP	17 20 39.3	+0.3
	comp=Z,17nm,1.0s,baz=305,slow=1.0,SNR=29						
LPAZ				SKPbc	SKiKP	17 24 08.8	-2.1
	comp=Z,3.9nm,0.9s,baz=135,slow=11,SNR=6.4						
LPAZ	La Paz	134.18	119	PKHKP	PKPpre	17 20 25.3	
LPAZ						17 20 38.3	
LPAZ	La Paz	134.18	119	eP	PKiKP	17 20 38.9	0.0
RUSC	La Rusia	134.28	87		PKPdf	17 20 37.5	-0.3
PAMC	Pamplona, Colo	134.68	85	eP	PKiKP	17 20 39.3	-0.7
KEST	Kesra	134.74	317	PKP	PKiKP	17 20 38.5	-0.4
	comp=Z,12nm,0.9s,baz=307,slow=3.4,SNR=12						
KEST	Kesra	134.74	317		PKPdf	17 20 37.6	+0.1
ITQB	Itaqui	135.25	143	eP	PKiKP	17 20 41.2	+1.1
SDV	Santo Domingo	136.70	83	PKhKP	PKPpre	17 20 33.0	
	comp=Z,5.6nm,0.9s,baz=277,slow=9.9,SNR=5.5						
SDV				PKP	PKiKP	17 20 42.8	-0.8
	comp=Z,80nm,0.8s,baz=265,slow=1.3,SNR=54						
SDV	Santo Domingo	136.70	83		PKPdf	17 20 42.3	+0.5
SDV	Santo Domingo	136.70	83	eP	PKiKP	17 20 43.0	-0.7
CPUP	Villa Florida	137.12	138	PKhKP	PKPpre	17 20 30.3	
	comp=Z,4.5nm,1.0s,baz=231,slow=5.8,SNR=6.8						
CPUP				PKP	PKiKP	17 20 43.9	-0.1
	comp=Z,18nm,0.9s,baz=264,slow=1.8,SNR=20						
CPUP	Villa Florida	137.12	138	PKHKP	PKPpre	17 20 30.8	
CPUP						17 20 43.9	
CPUP	Villa Florida	137.12	138		PKPpre	17 20 30.8	
CPUP	Villa Florida	137.12	138	eP	PKiKP	17 20 44.5	+0.6
CRPR	Cabo Rojo, PR	138.94	69		PKPdf	17 20 44.5	-1.1
MLPR	Magueyes Islan	139.01	69		PKPdf	17 20 45.3	-0.4
AOPR	Arecibo Observ	139.19	68		PKPdf	17 20 46.4	+0.2
OBIP	Obispado Ponce	139.40	68		PKPdf	17 20 45.6	-0.9
PGAV	Gavieira, Arco	139.71	338	ePKP	PKiKP	17 20 47.9	-1.0
SJG	San Juan	139.80	68	PKP	PKPdf	17 20 47.9	+0.7
	comp=Z,37nm,0.9s,baz=70,slow=0.9,SNR=10.0						
SJG	San Juan	139.80	68	PKIKP	PKPdf	17 20 46.8	-0.4
SJG	San Juan	139.80	68		PKPdf	17 20 46.8	-0.4
ESDC	Sonseca Array	139.81	332	PKhKP	PKPpre	17 20 40.8	
	comp=Z,0.9nm,0.4s,baz=32,slow=3.3,SNR=2.2						
ESDC				PKP	PKiKP	17 20 48.0	-1.2
	comp=Z,2.4nm,0.6s,baz=7.6,slow=3.9,SNR=6.6						
GCPR	Guaynabo City	139.82	68		PKPdf	17 20 46.8	-0.4
MVO	Moncorvo	139.92	336	ePKPdf	PKPdf	17 20 41.6	-5.3
MVO	Moncorvo	139.92	336	ePKP	PKiKP	17 20 50.5	+1.2
PDPR	Patillas Dam,	139.94	68		PKPdf	17 20 47.7	+0.3
PVRL	Vila Real	140.10	337	ePKP	PKiKP	17 20 50.4	+0.7
SIV	San Ignacio	140.36	123	PKhKP	PKPpre	17 20 40.5	
	comp=Z,3.6nm,0.9s,baz=315,slow=6.6,SNR=6.2						
SIV				PKP	PKPdf	17 20 48.8	+0.5
	comp=Z,13nm,1.1s,baz=239,slow=3.7,SNR=10						
PVIS	Viseu	140.65	337	ePKP	PKiKP	17 20 51.6	+0.8
MTE	Manteigas	140.78	336		PKPpre	17 20 41.7	
MTE	Manteigas	140.78	336	ePKPdf	PKPdf	17 20 43.8	-4.7
MTE	Manteigas	140.78	336	ePKP	PKiKP	17 20 51.8	+0.7
STVI	Saint Thomas	140.85	67		PKPdf	17 20 49.8	+0.7
CDVI	St. Croix	141.17	68		PKPdf	17 20 49.6	-0.1
PCBR	Castelo Branco	141.22	336	ePKP	PKPdf	17 20 50.1	+0.9
SAML	Samuel	141.42	111	PKHKP	PKPpre	17 20 43.5	
SAML	Samuel	141.42	111		PKPpre	17 20 43.5	
SAML	Samuel	141.42	111	eP	PKiKP	17 20 52.5	-0.5
PCAS	Casmilo, Conde	141.45	337	ePKP	PKiKP	17 20 53.3	+0.9
PMRV	Marv??o	141.53	335	ePKPdf	PKPdf	17 20 44.6	-5.2
PTOM	Tomar	141.79	336	ePKP	PKiKP	17 20 53.0	-0.1
PMTG	Montargil	142.18	336	ePKPdf	PKPdf	17 20 46.2	-4.7
PCRV	Puerto La Cruz	142.53	80	PKhKP	PKPpre	17 20 45.8	
	comp=Z,16nm,0.9s,baz=252,slow=8.0,SNR=3.1						
PLCV	Puerto La Cruz	142.58	80		PKPpre	17 20 45.8	
LIJA	Lijar	142.69	331	i P	PKPdf	17 20 48.0	-4.0
PBEJ	Beja	142.91	334	ePKPdf	PKPdf	17 20 49.6	-2.7
PBEJ	Beja	142.91	334	ePKP	PKiKP	17 20 59.2	+3.7
PNCL	Nicolau / Gran	143.12	335	ePKPdf	PKPbc	17 20 49.9	+0.3
MESJ	Messejana	143.22	335	ePKPdf	PKPbc	17 20 50.4	+0.6
MESJ				AMS	AMS	18 36 40.4	
	comp=Z,588nm,18.0s						
MESJ	Messejana	143.22	335	ePKIKP	PKPbc	17 20 50.4	+0.6
MESJ	Messejana	143.22	335	ePKPdf	PKPbc	17 20 50.0	+0.2
PALE	Palemas	143.25	327	P	PKPbc	17 20 50.0	-0.1
	SNR=14						
PCVE	Castro Verde	143.31	334	ePKP	PKiKP	17 20 58.2	+1.9
PVAQ	Vaqueiros	143.36	334	ePKPdf	PKPbc	17 20 50.7	+0.4
PVAQ	Vaqueiros	143.36	334	ePKP	PKiKP	17 21 00.3	+3.9
PBDV	Barranco-do-Ve	143.59	334	ePKPdf	PKPbc	17 20 51.9	+0.9
PBDV	Barranco-do-Ve	143.59	334	ePKP	PKiKP	17 20 58.6	+1.7
PTEO	Sao Teotonio	143.68	335	ePKPdf	PKPbc	17 20 52.1	+0.9
AKLM	AKL	143.74	327	P	PKPbc	17 20 51.3	-0.2
	SNR=6.3						
MORF	Marmelete	143.85	335	ePKPdf	PKPbc	17 20 51.7	-0.1
MORF				AMS	AMS	18 27 18.0	
	comp=E,502nm,22.6s						
MORF	Marmelete	143.85	335	ePKIKP	PKPbc	17 20 51.6	-0.2
MORF	Marmelete	143.85	335	ePKP	PKiKP	17 20 58.0	+0.5
TAM	Tamanrasset	143.94	302	PKIKP	PKPbc	17 20 52.8	+0.2
TAM	Tamanrasset	143.94	302		PKPbc	17 20 52.8	+0.2
CHEFC	Chefchaouen	144.07	329	P	PKPbc	17 20 53.0	+0.4
	SNR=9.0						
PFVI	Vila Bisbo	144.07	335	ePKPdf	PKPbc	17 20 53.2	+0.8
PFVI	Vila Bisbo	144.07	335	ePKP	PKiKP	17 20 58.8	+0.9
PCMB	Pacaembu	144.38	139	eP	PKiKP	17 20 57.6	-1.3
RSA	Sarsar	144.49	329	P	PKPbc	17 20 54.0	+0.2
	SNR=20						
SICH	Sidi Chahed	144.83	328	P	PKPdf	17 20 56.2	+0.4
	SNR=17						
LCRM	LCR	144.90	327	P	PKPdf	17 20 57.0	+0.9
	SNR=12						
SPB	Sao Paulo	145.20	146		PKPdf	17 20 56.9	+0.2
SPB	Sao Paulo	145.20	146	eP	PKPdf	17 20 57.5	+0.8
C2SB	Chapadao do Su	145.24	134	eP	PKPdf	17 20 57.8	+1.0
FDF	Fort de France	145.24	72	PKIKP	PKPab	17 20 56.9	+0.1
FDF	Fort de France	145.24	72		PKPab	17 20 56.9	+0.1
MDT	Midelt	145.41	325	P	PKPab	17 20 57.7	+0.6
	SNR=57						
SVB	Belmont	145.42	74		PKPdf	17 20 56.0	-1.2
H07N1	FLORES T-PHASE	145.48	5	ePKP	PKPab	17 20 58.6	+1.6
CZD	Col de Zad	145.49	326	P	PKPab	17 20 59.0	+1.4
	SNR=84						
RTC	Rabat Centre	145.72	329	P	PKiKP	17 20 60.0	-1.4
	SNR=9.9						
H07S1	FLORES T-PHASE	145.78	6	ePKP	PKiKP	17 21 00.1	-1.3
VAO	Valinhos	145.92	146	eP	PKPab	17 20 60.0	+0.8
SRBC	Serra Branca	146.31	1	ePKP	PKPab	17 21 00.8	+0.7
PGRA	Graciosa	146.32	1	ePKP	PKPdf	17 20 57.2	-1.0
ITRB	Iturama	146.32	138	eP	PKPab	17 21 01.2	+0.5
PARB	Paraibuna	146.38	148	eP	PKPab	17 21 01.3	+0.4
GOLM	Goulmima	146.42	324	P	PKPab	17 21 02.0	+1.0
	SNR=7.5						
TOSP	Speyside	146.42	77		PKPbc	17 21 00.6	+0.3
ROSA	Rosais	146.62	2	ePKP	PKPbc	17 21 00.2	-0.1

PSCM	Serra do Cume	146.65	360	ePKP	PKPab	17 21 01.4	-0.1
PTGA	Pitinga	146.69	99	PKPbc	PKPdf	17 21 00.3	+0.8
	comp=E,26nm,0.7s,baz=251,slow=3.3,SNR=48						
PTGA	Pitinga	146.69	99		PKPbc	17 21 00.6	-0.6
PTGA	Pitinga	146.69	99	eP	PKPbc	17 21 01.7	+0.5
PCED	Cedros	146.70	2	ePKP	PKPdf	17 20 58.8	0.0
ADH	Angra Heroismo	146.70	0	ePKP	PKPab	17 21 01.8	+0.2
PMAN	Manadas	146.71	1	ePKP	PKPbc	17 21 00.9	+0.4
HOR	Horta	146.80	2	ePKP	PKPab	17 21 02.6	+0.6
PICO	Pico	146.83	2	ePKP	PKiKP	17 21 03.2	-0.4
PCAN	Candelaria	146.87	2	ePKP	PKPdf	17 20 59.2	+0.1
CLDB	Colider	147.31	119	eP	PKPbc	17 21 02.4	-0.5
PSET	Sete Cidades	147.50	358	ePKP	PKiKP	17 21 05.0	0.0
PCALD	Caldeiras da R	147.52	358	ePKP	PKPdf	17 21 00.2	0.0
BART	Pico Bartolome	147.53	357	ePKP	PKPdf	17 21 01.3	+1.0
CMLA	Cha da Macela	147.56	358	ePKP	PKPdf	17 21 00.2	-0.1
PDA	Ponta Delgada	147.58	358	ePKP	PKPbc	17 21 01.9	-1.0
ARAG	Araguaiana, MT	147.93	131	eP	PKPbc	17 21 04.2	-0.4
OUZM	OUZ	148.04	326	P	PKPab	17 21 10.0	+2.7
	SNR=5.1						
PSMN	Pico do Norte,	148.29	357	ePKP	PKiKP	17 21 06.3	-0.3
PSMA	Santa Maria	148.30	357	ePKP	PKiKP	17 21 06.0	-0.6
BSCB	Bom Sucesso	148.74	147	eP	PKPbc	17 21 05.5	-1.1
IPMB	Ipameri, GO	148.97	138	eP	PKPbc	17 21 05.9	-1.4
TOA0	Torodi Ar. Sit	150.49	288	P	PKPdf	17 21 05.7	+0.1
	SNR=24						
TOA0	Torodi Ar. Sit	150.49	288		PKPdf	17 21 04.8	-0.8
TORD	Torodi Ar. Bea	150.49	288	PKPbc	PKPbc	17 21 11.1	+0.1
	comp=E,78nm,0.9s,baz=77,slow=1.4,SNR=35						
TORD	Torodi Ar. Bea	150.49	288		PKPdf	17 21 04.4	-1.2
TORD				PKPbc	PKPbc	17 21 09.8	-1.1
PMPST	Porto Santo, M	150.49	341	ePKP	PKiKP	17 21 12.7	+1.5
PMPS	Porto Santo	150.51	341	ePKP	PKiKP	17 21 12.0	+0.8
BDFB	Brasilia	150.74	135	PKP	PKPdf	17 21 08.5	+2.4
	comp=E,104nm,0.8s,baz=204,slow=2.0,SNR=64						
BDFB				PKPbc	PKiKP	17 21 12.7	+0.4
	comp=E,14nm,0.8s,baz=202,slow=3.6,SNR=7.0						
BDFB	Brasilia	150.74	135	PKIKP	PKPbc	17 21 10.3	-1.4
BDFB	Brasilia	150.74	135		PKPbc	17 21 10.3	-1.4
PMOZ	Porto Moniz, M	150.99	343	ePKP	PKiKP	17 21 13.3	+0.9
PMAR	Madeira	151.00	342	ePKP	PKiKP	17 21 13.4	+0.9
SJMB	Sao Joao De Ma	152.51	150	eP	PKPdf	17 21 11.6	+3.0
BSFB	Barra de Sao F	152.56	151	eP	PKPdf	17 21 11.8	+3.1
JANB	Januaria	153.64	140	eP	PKPdf	17 21 13.3	+2.9
KIC	Kosan Boka	157.69	274	ePKIKP	PKPdf	17 21 15.7	-0.1
	comp=E,19nm,1.1s						
KIC	Kosan Boka	157.69	274	ePKP2	PKPab	17 21 49.0	+0.7
	comp=E,27nm,0.9s						
DBIC	Dimbokro	157.79	275	PKP	PKPdf	17 21 15.4	-0.4
	comp=E,4.4nm,0.9s,baz=47,slow=4.5,SNR=3.6						
DBIC				PKPab	PKPab	17 21 49.4	+0.7
	comp=E,7.8nm,0.7s,baz=76,slow=5.3,SNR=6.4						
TIC	Toumodi	157.95	275	ePKIKP	PKPdf	17 21 15.4	-0.7
	comp=E,2.2nm,0.3s						
TIC	Toumodi	157.95	275	ePKP2	PKPab	17 21 48.6	-0.9
LIC	Lamto	157.97	274	ePKIKP	PKPdf	17 21 15.4	-0.7
	comp=E,31nm,1.3s						
LIC	Lamto	157.97	274	ePKP2	PKPab	17 21 47.8	-1.7
	comp=E,59nm,1.4s						
RCBR	Riachuelo	165.98	141	PKPab	PKPab	17 22 25.3	+0.9
	comp=E,19nm,1.0s,baz=202,slow=5.7,SNR=5.0						
RCBR	Riachuelo	165.98	141	eP	PKPdf	17 21 27.9	+3.6

*GCG **20** 17:04:31.1±0.6, 12.°78N×88.°84W, h88^{km}±105^{km}, MD4.6*
*SNET **20** 17:04:46.9±1.2, 13.°38N×89.°95W, h63^{km}±15^{km}, ML5.0*
*NEIC **20** 17:04:47.4±2.4, 13.°42N±0.°06×89.°86W±0.°05, h65^{km}±6^{km}, Error ellipse: s-maj=10.3km s-min=6.3km az=214.0*
*UCR **20** 17:04:47.9±1.5, 13.°42N×89.°92W, h56^{km}±14^{km}, ML4.8, mb4.8(NEIC)*
*IDC **20** 17:04:48.6±0.7, 13.°70N×89.°47W, h66^{km}±5^{km}, mb4.0/13, mb1 4.2/15, mb1mx3.9/38, mbtmp4.3/15, MS3.6/17, Ms1 3.6/17, ms1mx3.5/40, Error ellipse: s-maj=20.1km s-min=6.7km az=50.0*
*INET **20** 17:04:48.4, 13.°36N×89.°89W, h24^{km}, ML5.4*
*GCMT **20** 17:04:49.0±0.5, 13.°60N±0.°03×89.°97W±0.°03, h12^{km}, MW5.2/72, Moment Tensor Solution. s22,c24; s72,c88; Duration: 1^{s}1 Moment tensor: Scale 10^{16}Nm; M_{rr}0.50±.13; $M_{\theta\theta}$-0.53±.12; $M_{\phi\phi}$0.02±.13; $M_{r\theta}$6.54±.25; $M_{\theta\phi}$0.04±.10; $M_{\phi r}$-3.27±.34; Best double couple: $M_0$7.33000×10^{16} NP1:ϕ_s257.00000°, δ2.00000°, λ50.00000°. NP2:ϕ_s117.00000°, δ88.00000°, λ92.00000°. Principal axes: T 7.3550, Plg47.0000°, Azm28.0000°; N -0.0490, Plg2.0000°, Azm296.0000°; P -7.3050, Plg43.0000°, Azm205.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MEX **20** 17:04:50.9±0.7, 13.°74N×89.°82W, h20^{km}±14^{km}, MD4.2*
ISC 20 17:04:47.7±0.5**, 13.°46N**±0.°05×**89.°88W**±0.°03**, h65**^{km}±3^{km}**, h66**^{km}**:pP-P, n214, σ1^{s}26**/263**, mb4.7**/47**, 2C-11D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEVE	Cerro Verde	0.45	34⇓	eP	Pn	17 05 00.0	+0.1
CEVE				eS	Sn	17 05 09.8	+1.1
CEVE	Cerro Verde	0.45	34⇓	eP	Pn	17 05 00.0	+0.1
CEVE				eS	Sn	17 05 09.8	+1.1
SBLS	San Blas	0.46	34⇓	iP	Pn	17 05 00.0	+0.1
SBLS	San Blas	0.46	34⇓	iP	Pn	17 05 00.0	+0.1
SNJE	San Jose	0.49	33⇓	iP	Pn	17 05 00.4	+0.2
SNJE	San Jose	0.49	33⇓	iP	Pn	17 05 00.4	+0.2
BOQS	Boqueron	0.65	65⇓	iP	Pn	17 05 02.3	+0.4
SNET	Serv Nac Est T	0.68	70	eP	Pn	17 05 02.2	+0.2
SNET				IAML		17 05 16.5	
	comp=Z,35µm,0.4s						
SNET	Serv Nac Est T	0.68	70	eP	Pn	17 05 02.2	+0.2
SNET				IAML		17 05 16.5	
	comp=Z,35µm,0.4s						
SNET	Serv Nac Est T	0.68	70		Pn	17 05 02.0	0.0
UTEC	Universidad Te	0.71	70	eP	Pn	17 05 03.0	+0.6
UTEC				IAML		17 05 22.9	
	comp=Z,57µm,0.8s						
UTEC	Universidad Te	0.71	70	eP	Pn	17 05 03.0	+0.6
UTEC				IAML		17 05 22.9	
	comp=Z,57µm,0.8s						
OPAM	Oficina de Pla	0.71	69	eP	Pn	17 05 03.1	+0.6
OPAM				eS	Sn	17 05 15.4	+2.0
OPAM				eS		17 05 15.5	
OPAM				IAML		17 05 20.1	
	comp=Z,42µm,0.4s						
OPAM	Oficina de Pla	0.71	69	eP	Pn	17 05 03.1	+0.6
OPAM				eS	Sn	17 05 15.4	+2.0
OPAM				eS		17 05 15.5	
OPAM				IAML		17 05 20.1	
	comp=Z,42µm,0.4s						
UESS	Universidad de	0.71	68	eP	Pn	17 05 03.2	+0.7
UESS				IAML		17 05 17.3	
	comp=Z,69µm,0.6s						
UESS	Universidad de	0.71	68	eP	Pn	17 05 03.2	+0.7
UESS				IAML		17 05 17.3	
	comp=Z,69µm,0.6s						
LOMA	Loma Larga	0.72	75	eP	Pn	17 05 03.1	+0.6
LOMA				eS	Sn	17 05 14.4	+0.8
LOMA	Loma Larga	0.72	75	eP	Pn	17 05 03.1	+0.6
LOMA				eS	Sn	17 05 14.4	+0.8
CUSC	Alcaldia de Cu	0.74	68	eP	Pn	17 05 03.2	+0.5
CUSC				eS	Sn	17 05 15.7	+1.9
CUSC				eS		17 05 16.0	
CUSC	Alcaldia de Cu	0.74	68	eP	Pn	17 05 03.2	+0.5
CUSC				eS	Sn	17 05 15.7	+1.9
UDBS	Universidad Do	0.76	70	eP	Pn	17 05 03.7	+0.7
UDBS				eS	Sn	17 05 16.4	+2.2
UDBS	Universidad Do	0.76	70	eP	Pn	17 05 03.7	+0.7
UDBS				eS	Sn	17 05 16.4	+2.2
AEIL	Aeropuerto Ilo	0.78	72⇓	eP	Pn	17 05 04.3	+1.0
AEIL				eS	Sn	17 05 17.3	+2.5
AEIL	Aeropuerto Ilo	0.78	72⇓	eP	Pn	17 05 04.3	+1.0
AEIL				eS	Sn	17 05 17.3	+2.5
LFU	La Fuente	0.80	69⇑	iP	Pn	17 05 04.7	+1.1
LFU	La Fuente	0.80	69⇑	iP	Pn	17 05 04.7	+1.1
LFRS	El Faro	0.82	78⇓	iP	Pn	17 05 03.7	-0.1
LBRS	Las Brisas	0.86	71⇓	iP	Pn	17 05 05.0	+0.7
IXG	Ixpaco	0.90	323	eP	Pn	17 05 05.1	+0.3
MTO3	Montecristo	1.07	28	eP	Pn	17 05 07.7	+0.6
MTO3	Montecristo	1.07	28	eP	Pn	17 05 07.7	+0.6
LLGN	La Laguna	1.15	52	eP	Pn	17 05 08.6	+0.6
LLGN				eS	Sn	17 05 25.4	+2.2
LLGN				IAML		17 05 27.6	
	comp=Z,15µm,0.8s						
LLGN	La Laguna	1.15	52	eP	Pn	17 05 08.6	+0.6
LLGN				eS	Sn	17 05 25.4	+2.2
LLGN				IAML		17 05 27.6	
	comp=Z,15µm,0.8s						
PCG	Pacaya	1.17	323	eP	Pn	17 05 09.5	+1.2
NBG	Las Nubes	1.21	338	eP	Pn	17 05 10.9	+1.9
COEB	Comit de Eme	1.32	88	eP	Pn	17 05 10.8	+0.6
COEB				eS	Sn	17 05 28.3	+1.3
COEB				IAML		17 05 34.2	
	comp=Z,20µm,0.5s						
COEB	Comit de Eme	1.32	88	eP	Pn	17 05 10.8	+0.6
COEB				eS	Sn	17 05 28.3	+1.3
COEB				IAML		17 05 34.2	
	comp=Z,20µm,0.5s						
FUG	Fuego 3	1.36	317	eP	Pn	17 05 11.7	+0.9
PACA	Pacayal	1.52	89	eP	Pn	17 05 14.0	+1.2
PACA				eS	Sn	17 05 33.0	+1.2
PACA	Pacayal	1.52	89	eP	Pn	17 05 14.0	+1.2
PACA				eS	Sn	17 05 33.0	+1.2
LCY	Lacayo	1.55	91	i P	Pn	17 05 14.6	+1.4
LCY	Lacayo	1.55	91	i P	Pn	17 05 14.6	+1.4
JUCU	Jucuar¡n	1.60	97	eP	Pn	17 05 14.2	+0.3
JUCU				eS	Sn	17 05 34.5	+0.7
JUCU				IAML		17 05 42.1	
	comp=Z,18µm,0.7s						
JUCU	Jucuar¡n	1.60	97	eP	Pn	17 05 14.2	+0.3
JUCU				eS	Sn	17 05 34.5	+0.7
JUCU				IAML		17 05 42.1	
	comp=Z,18µm,0.7s						
APG	El Apazote	1.64	340	P	Pn	17 05 15.4	+0.8
	comp=Z,92nm,0.3s,baz=172,slow=11,SNR=147						
APG				S	Sn	17 05 35.8	+0.9
	comp=Z,162nm,0.3s,baz=17,slow=11,SNR=8.6						
FAGO	Alcalda de S	1.75	82	eP	Pn	17 05 16.3	+0.5
FAGO				IAML		17 05 42.9	
	comp=Z,2µm,0.3s						
FAGO	Alcalda de S	1.75	82	eP	Pn	17 05 16.3	+0.5
FAGO				IAML		17 05 42.9	
	comp=Z,2µm,0.3s						
ERG	Entre ros, C	1.91	301	eP	Pn	17 05 19.1	+1.1
ERG				eS	Sn	17 05 56.1	+15
LCND	La Caada	1.95	94	eP	Pn	17 05 25.9	+7.4
LCND				eS	Sn	17 05 43.7	+1.7
LCND				IAML		17 05 49.0	
	comp=Z,16µm,0.4s						
LCND	La Caada	1.95	94	eP	Pn	17 05 25.9	+7.4
LCND				eS	Sn	17 05 43.7	+1.7
LCND				IAML		17 05 49.0	
	comp=Z,16µm,0.4s						
CNCH	Conchagua	2.00	95	eP	Pn	17 05 20.0	+0.7
CNCH				eS	Sn	17 05 45.9	+2.4
CNCH	Conchagua	2.00	95	eP	Pn	17 05 20.0	+0.7
CNCH				eS	Sn	17 05 45.9	+2.4
STG3	Santiaguito 3,	2.06	308	eP	Pn	17 05 21.3	+1.1
CSGN	Cosiguina Volc	2.31	102		Pn	17 05 23.9	+0.4
TGUH	Tegucigalpa,Un	2.61	76	eP	Pn	17 05 28.0	+0.5
TGUH				i S	Sn	17 05 57.0	-1.3
TGUH	Tegucigalpa,Un	2.61	76		Pn	17 05 28.1	+0.5
TGUH	Tegucigalpa,Un	2.61	76		Sn	17 05 57.0	-1.3
THIG		2.72	302	i P	Pn	17 05 30.3	+1.3
THIG				i S	Sn	17 06 01.3	+0.4
THIG		2.72	302		Pn	17 05 30.3	+1.3
THIG					Sn	17 06 01.3	+0.4
CCIG	Comitan	3.56	323		Pn	17 05 40.7	+0.1
PCIG		3.93	305	eP	Pn	17 05 46.6	+1.1
PCIG				i S	Sn	17 06 29.4	-1.0
PCIG		3.93	305		Pn	17 05 46.6	+1.1
PCIG					Sn	17 06 29.4	-1.0
ACON	Acoyapa	4.83	107		Pn	17 05 55.1	-2.8
GPS3	Bodega del ICE	5.17	121	eP	Pn	17 06 04.6	+2.0
LIM1	Limonal	5.29	121	eP	Pn	17 06 05.5	+1.2
CUI	Cuipilapa	5.39	121	eP	Pn	17 06 07.4	+1.8
PTEN	Parque Tenorio	5.51	119	eP	Pn	17 06 08.1	+0.8
ACAL	Aguas Claras	5.51	120	eP	Pn	17 06 08.4	+1.1
ESPN	Las Esperanzas	5.59	102		Pn	17 06 08.6	+0.4
JTS	Las Juntas de	5.76	123	P	Pn	17 06 11.9	+1.3
	comp=Z,36nm,0.3s,baz=15,slow=18,SNR=71						
JTS				S	Sn	17 07 13.4	-2.0
	comp=Z,6.0nm,0.3s,baz=343,slow=19,SNR=0.9						
CEDE	Laguna Cedeo	5.86	120	eP	Pn	17 06 14.4	+2.3
FORC	Fortuna	5.90	120	eP	Pn	17 06 13.2	+0.7
CMIG	Matias Romero	6.03	307	P	Pn	17 06 16.1	+1.9
	comp=Z,7.6nm,0.3s,baz=106,slow=9.8,SNR=53						
CMIG				S	Sn	17 07 25.1	+3.2
	comp=Z,11nm,0.3s,baz=223,slow=23,SNR=8.1						
HDC	Heredia	6.61	121		Pn	17 06 22.6	+0.2
TEIG	Tepich	6.91	13	P	Pn	17 06 28.7	+2.5
	comp=Z,39nm,0.3s,SNR=86						
TEIG				LR	LR	17 09 28.8	
	comp=Z,2µm,21.1s,baz=74,slow=42						
TLIG	Tlapa	9.31	297		Pn	17 07 00.5	+1.1
FSCY	Frank Sound, G	10.18	54		Pn	17 07 12.7	+1.7
PAYG	Puerto Ayora	14.04	182		Pn	17 08 01.7	-1.8
ZAIG	Zacatecas	15.19	309		Pn	17 08 18.4	-0.3
GUY2C	Guyana, Caldas	16.49	118	eP	P	17 08 37.0	0.0
DWPF	Disney Wildern	16.57	27	P	P	17 08 38.4	+1.0
POPC	Popayan, Colom	16.98	129	eP	P	17 08 43.0	+0.8
656A	Willston	17.24	22	P	P	17 08 46.3	+1.5
656A				IAmb	IAmb	17 08 48.2	
	comp=Z,81nm,1.2s						
833A	Chaparral WMA,	17.24	331	P	P	17 08 46.1	+1.3
SOTA	Rioblanco	17.29	129	eP	P	17 08 48.6	+2.7
PCON	Cinco Dias	17.32	129	eP	P	17 08 48.5	+2.1
451A	Vernon	17.50	12	P	P	17 08 50.2	+2.6
451A				IAmb	IAmb	17 08 52.0	
	comp=Z,133nm,1.3s						
ROSC	El Rosal	17.58	118	P	P	17 08 49.9	+0.8
	comp=Z,2.6nm,0.3s,baz=53,slow=20,SNR=1.9						
ROSC				LR	LR	17 15 40.2	
	comp=Z,112nm,19.6s,baz=134,slow=38						
344A	Westbrook Farm	17.93	358	P	Pn	17 08 55.3	+2.8
342A	Flagon Creek P	17.98	353		Pn	17 08 55.2	+2.1
342A				IAmb	IAmb	17 09 03.8	
	comp=Z,94nm,1.0s						
RUSC	La Rusia	18.18	113	P	P	17 08 55.6	-0.1
CHIC	Chingaza	18.19	117	eP	P	17 08 54.4	-1.4
FLOC	Florencia	18.37	129	eP	Pn	17 08 59.5	+1.4
FLOC	Florencia	18.37	129	P	Pn	17 08 59.9	+1.8
VBMS	Vicksburg	18.69	358	P	Pn	17 09 02.2	+0.5
TIGA	Tifton	18.81	17	P	P	17 09 02.3	+0.3
TIGA				IAmb	IAmb	17 09 07.1	
	comp=Z,104nm,1.4s						
237A	Washetta, Mont	19.24	345	P	P	17 09 07.9	+1.2
237A				IAmb	IAmb	17 09 10.1	
	comp=Z,91nm,1.4s						
JCT	Junction City	19.26	333	P	P	17 09 08.1	+1.1
SDV	Santo Domingo	19.42	102	P	P	17 09 07.5	-1.6
	comp=Z,1.3nm,0.3s,baz=277,slow=5.9,SNR=13						
SDV				S	S	17 12 41.6	-3.9
	comp=Z,0.3nm,0.3s,baz=282,slow=20,SNR=1.4						
SDV				LR	LR	17 18 15.9	
	comp=Z,64nm,20.0s,baz=239,slow=42						
SDV	Santo Domingo	19.42	102	P	P	17 09 07.6	-1.4
LRAL	Lakeview Retre	19.67	7	P	Pn	17 09 12.6	-0.7
152A	Waverly Hall	19.70	13	P	Pn	17 09 13.2	-0.5
WHTX	Lake Whitney,	19.71	341	P	P	17 09 12.7	+0.8
WHTX				IAmb	IAmb	17 09 14.8	
	comp=Z,48nm,0.8s						
Z41A	Richland Creek	19.89	353	P	Pn	17 09 16.4	+0.5
Z50A	Ashland	20.04	10	P	Pn	17 09 17.4	-0.3
Z51A	Franklin	20.23	11	P	Pn	17 09 19.8	-0.2
TXAR	Lajitas Array	20.32	323	P	Pn	17 09 21.9	+0.7
	comp=Z,2.9nm,0.6s,baz=146,slow=9.7,SNR=27						
TXAR				PcP	PcP	17 13 30.9	+1.2
	comp=Z,0.4nm,0.5s,baz=146,slow=3.8,SNR=5.5						
TXAR				ScP	ScP	17 17 02.5	+1.8
	comp=Z,1.2nm,1.0s,baz=126,slow=6.4,SNR=6.1						
TXAR				LR	LR	17 18 46.2	
	comp=Z,100nm,18.0s,baz=0.0,slow=41						
TXAR	Lajitas Array	20.32	323	P	P	17 09 20.6	+2.0
TX31	Lajitas Ar. Si	20.32	323	P	P	17 09 20.1	+1.4
TX32	Lajitas Array	20.32	323	P	P	17 09 20.2	+1.6
Y49A	Blount Mountai	20.56	8	P	P	17 09 22.2	+1.2
GOGA	Godfrey	20.71	15	P	P	17 09 23.2	+0.5
OXF	Oxford	20.97	1	P	P	17 09 25.6	+0.2
X48A	Hartselle	21.06	7	P	P	17 09 28.0	+1.6
X48A				IAmb	IAmb	17 09 46.1	
	comp=Z,60nm,1.5s						
ABTX	Abilene, Hawle	21.07	337	P	P	17 09 26.3	-0.2
ABTX				IAmb	IAmb	17 09 47.7	
	comp=Z,35nm,1.4s						
MIAR	Mount Ida	21.26	352	P	P	17 09 29.2	+0.6
MIAR				IAmb	IAmb	17 09 49.8	
	comp=Z,39nm,1.4s						
UALR	University of	21.34	354	P	P	17 09 27.8	-1.7
UALR				IAmb	IAmb	17 09 50.2	
	comp=Z,62nm,1.2s						
FPAL	Fort Paine	21.35	10	P	P	17 09 30.4	+0.8
FPAL				IAmb	IAmb	17 09 49.5	
	comp=Z,37nm,1.3s						
X51A	Calhoun	21.51	11	P	P	17 09 31.5	+0.3
X51A				IAmb	IAmb	17 09 51.3	
	comp=Z,52nm,1.1s						
X37A	Clayton	21.62	348	P	P	17 09 31.7	-0.7
X37A				IAmb	IAmb	17 10 01.6	
	comp=Z,66nm,1.5s						
W41B	Gary Mavity, V	21.73	355	P	P	17 09 34.7	+1.2
W41B				IAmb	IAmb	17 09 55.6	
	comp=Z,32nm,1.3s						
WHAR	Wooly Hollow	21.85	355	P	P	17 09 36.0	+1.2
WHAR				IAmb	IAmb	17 09 57.8	
	comp=Z,62nm,1.6s						
W39A	Magazine	21.93	351	P	P	17 09 36.6	+0.9
SWET	Sewanee	21.96	9	P	P	17 09 35.5	-0.6
SWET				IAmb	IAmb	17 09 56.4	
	comp=Z,47nm,1.2s						
X34A	Smith Ranch, M	22.25	342	P	P	17 09 39.3	+0.1
X34A				IAmb	IAmb	17 09 42.0	
	comp=Z,34nm,1.1s						
V48A	Smith Brothers	22.36	7	P	P	17 09 40.7	+0.3
V48A				IAmb	IAmb	17 09 59.6	
	comp=Z,46nm,1.4s						
FCAR	Ozark Folk Cen	22.43	355	P	P	17 09 38.6	-2.5
W35A	Tecumseh	22.51	345	P	P	17 09 41.8	-0.2
LCAR	Lake Charles	22.55	357	P	P	17 09 43.1	+0.8
LCAR				IAmb	IAmb	17 10 00.1	
	comp=Z,35nm,1.3s						
WVT	Waverly	22.65	4	P	P	17 09 43.4	-0.1
WVT				IAmb	IAmb	17 10 01.6	
	comp=Z,51nm,1.4s						
WMOK	Wichita Mounta	22.67	341	P	P	17 09 42.7	-1.0
GLAT	Glass	22.73	1	P	P	17 09 44.3	+0.1
FNO	Franklin	22.74	344	P	P	17 09 45.1	+0.6
BIRD	Birdtown, Kers	22.76	20	P	P	17 09 44.2	-0.3
BIRD				IAmb	IAmb	17 09 54.7	
	comp=Z,44nm,1.6s						
CLTN	Cedars of Leba	22.77	7	P	P	17 09 44.5	-0.2
CLTN				IAmb	IAmb	17 10 06.8	
	comp=Z,52nm,1.6s						
TKL	Tuckaleechee C	22.78	13	P	P	17 09 45.2	+0.3
	comp=Z,5.5nm,0.8s,baz=177,slow=5.9,SNR=4.3						
TKL				LR	LR	17 19 08.9	
	comp=Z,496nm,21.1s,baz=204,slow=38						
TKL	Tuckaleechee C	22.78	13	P	P	17 09 45.0	+0.2
TKL				IAmb	IAmb	17 10 06.9	
	comp=Z,34nm,1.1s						
MNTX	Cornudas Mount	23.07	324	P	P	17 09 48.6	+0.8
MNTX				IAmb	IAmb	17 10 25.4	
	comp=Z,40nm,2.0s						
PBMO	Poplar Bluff	23.23	359	P	P	17 09 48.7	-0.6
PBMO				IAmb	IAmb	17 10 06.6	
	comp=Z,42nm,1.4s						
U38A	Gravette	23.24	351	P	P	17 09 49.3	-0.1
U38A				IAmb	IAmb	17 10 26.8	
	comp=Z,46nm,1.8s						
U49A	Red Boiling Sp	23.25	8	P	P	17 09 49.2	-0.3
U49A				IAmb	IAmb	17 10 11.7	
	comp=Z,61nm,1.6s						
SJG	San Juan	23.30	75	LR	LR	17 17 16.0	
	comp=Z,43nm,20.1s,baz=265,slow=33						
ATAH	Atahualpa	23.42	150	P	P	17 09 53.9	+2.2
	comp=Z,23nm,0.8s,baz=40,slow=4.4,SNR=13						
ATAH				LR	LR	17 17 53.7	
	comp=Z,182nm,20.8s,baz=336,slow=34						
T42A	Van Buren	23.50	358	P	P	17 09 52.1	+0.4
T47A	Sharon Grove	23.57	6	P	P	17 09 52.2	-0.2
MGMO	Mountain Grove	23.70	355	P	P	17 09 52.1	-1.4
MGMO				IAmb	IAmb	17 10 18.6	
	comp=Z,35nm,1.4s						
AMTX	Amarillo	23.86	335	P	P	17 09 54.5	-0.6
T49A	Edmonton	23.87	9	P	P	17 09 54.5	-0.6
T49A				IAmb	IAmb	17 10 18.8	
	comp=Z,47nm,1.5s						
T35A	Sooner Cattle	24.11	347	P	P	17 09 56.3	-0.9
T35A				IAmb	IAmb	17 10 29.9	
	comp=Z,22nm,1.1s						
V58A	Windy Hill, Pi	24.27	22	P	P	17 09 58.0	-0.7
V58A					pP	17 10 14.7	0.0
V58A				IAmb	IAmb	17 10 16.0	
	comp=Z,33nm,1.1s						
S39A	Bolivar	24.33	353	P	P	17 09 59.2	-0.1
S39A					pP	17 10 14.6	-0.5
USIN	University of	24.49	4	P	P	17 10 00.8	+0.1
USIN					pP	17 10 16.5	-0.1
CCM	Cathedral Cave	24.53	357	P	P	17 10 00.9	-0.2
CCM				IAmb	IAmb	17 10 17.8	
	comp=Z,22nm,1.1s						
OLIL	Olney	25.23	3	P	P	17 10 07.4	-0.1
OLIL					pP	17 10 24.0	+0.7
Q44A	Meyer Farm, Va	25.36	2	P	P	17 10 09.2	+0.6
Q44A					pP	17 10 24.6	+0.1
R32A	Long Quarter,	26.07	344	P	P	17 10 15.3	+0.2
R32A					pP	17 10 29.9	-0.9
ANMO	Albuquerque	26.12	328	LR	LR	17 23 45.7	
	comp=Z,57nm,19.1s,baz=138,slow=44						
P46A	Rosedale	26.17	5	P	P	17 10 16.1	+0.1
P46A					pP	17 10 32.1	+0.2
O44A	Mansfield	26.62	2	P	P	17 10 20.4	+0.4
O44A					pP	17 10 35.1	-0.9
O44A				IAmb	IAmb	17 10 37.6	
	comp=Z,28nm,0.8s						
CBKS	Cedar Bluff	26.72	343	pP	pP	17 10 36.5	-0.3
T25A	Trinidad	26.92	334	pP	pP	17 10 39.3	+0.3
SFIN	Lafayette	26.93	5		pP	17 10 37.9	-0.9
N41A	Harden Midland	27.16	358	P	P	17 10 24.8	-0.1
N41A					pP	17 10 40.3	-0.6
NNA	Nana	28.39	152	LR	LR	17 21 13.1	
	comp=Z,27nm,18.8s,baz=324,slow=35						
K43A	Burlington	29.18	2		pP	17 10 57.9	-0.9
I42A	Draeger Farm,	30.34	1	P	P	17 10 53.2	+0.1
I42A				pP	pP	17 11 07.5	-1.8
W13A	Hualapai Mount	30.56	319	P	P	17 10 56.1	+0.7
ECSD	EROS Data Cent	30.72	350	P	P	17 10 55.5	-1.0
ECSD				IAmb	IAmb	17 11 34.9	
	comp=Z,28nm,1.9s						
H43A	Windswept, Lux	30.96	3	P	P	17 10 57.9	-0.6
H43A					pP	17 11 13.3	-1.4
PFO	Pinyon Flats O	31.40	314	LR	LR	17 25 04.1	
	comp=Z,81nm,21.8s,baz=132,slow=39						
G45A	Suttons Bay	31.68	6	P	P	17 11 04.4	-0.5
G45A					pP	17 11 20.1	-1.0
G40A	Rib Lake	31.71	360		pP	17 11 20.1	-1.2
TMUT	Trail Mountain	31.89	328		pP	17 11 20.5	-2.5
SADO	Sadowa	32.53	14	LR	LR	17 25 00.3	
	comp=Z,361nm,19.9s,baz=175,slow=38						
COWI	Conover	32.55	1	P	P	17 11 10.1	-2.4
COWI					pP	17 11 27.5	-1.2
COWI				IAmb	IAmb	17 11 29.9	
	comp=Z,16nm,1.3s						
GSC	Goldstone, Bar	32.59	317	P	P	17 11 09.6	-3.5
GSC					pP	17 11 27.9	-1.1
GSC				IAmb	IAmb	17 11 30.6	
	comp=Z,4.9nm,0.6s						
E43A	Lone Tree Farm	32.91	4	P	P	17 11 14.1	-1.5
E43A					pP	17 11 31.3	-0.5
E38A	The Farm, Brul	33.08	358	P	P	17 11 15.1	-2.0
E38A					pP	17 11 32.8	-0.5
D41A	Chassel	33.52	2	P	P	17 11 19.0	-2.0
D41A					pP	17 11 37.1	0.0
D41A				IAmb	IAmb	17 11 37.9	
	comp=Z,17nm,1.0s						
PDAR	Pinedale Array	33.79	334	P	P	17 11 25.2	+1.5
	comp=Z,0.2nm,0.4s,baz=156,slow=8.9,SNR=2.6						
PDAR				PcP	PcP	17 14 02.5	+0.8
	comp=Z,0.3nm,0.5s,baz=121,slow=3.5,SNR=3.1						
PDAR				ScP	ScP	17 17 42.5	+1.6
	comp=Z,1.7nm,1.0s,baz=126,slow=4.6,SNR=6.6						
PDAR				LR	LR	17 29 14.0	
	comp=Z,135nm,18.1s,baz=163,slow=43						
EYMN	Ely	34.41	358	P	P	17 11 27.4	-1.3
EYMN					pP	17 11 43.9	-1.0
EYMN				IAmb	IAmb	17 11 45.5	
	comp=Z,7.9nm,0.9s						
SAML	Samuel	34.62	129	P	P	17 11 29.8	-1.0
SAML				IAmb	IAmb	17 11 32.0	
	comp=Z,10nm,0.8s						

AGMN	Agassiz Nation	35.09	353	P	P	17 11 32.9	-1.6
AGMN				IAmb	IAmb	17 12 12.1	
	comp=Z,9.9nm,0.7s						
NVAR	Mina Array Bea	35.40	320	P	P	17 11 40.4	+2.8
	comp=Z,2.9nm,0.6s,baz=132,slow=8.5,SNR=12						
NVAR				PcP	PcP	17 14 07.2	+0.8
	comp=Z,0.8nm,0.6s,baz=149,slow=4.3,SNR=3.7						
NVAR				ScP	ScP	17 17 48.2	+1.5
	comp=Z,1.4nm,0.9s,baz=120,slow=5.3,SNR=4.0						
NVAR				LR	LR	17 27 50.2	
	comp=Z,127nm,18.6s,baz=200,slow=39						
NVAR	Mina Array Bea	35.40	320	P	P	17 11 40.0	+2.4
LPAZ	La Paz	36.55	143	P	P	17 11 48.7	+0.7
	comp=Z,3.8nm,0.7s,baz=342,slow=5.9,SNR=16						
LPAZ				LR	LR	17 27 30.5	
	comp=Z,104nm,20.5s,baz=330,slow=37						
LPAZ	La Paz	36.55	143	P	P	17 11 45.4	-2.7
MCMT	McKenzie Canyo	36.88	332	P	P	17 11 51.5	+1.3
ULM	Lac du Bonnet	37.02	354	P	P	17 11 49.0	-1.9
	comp=Z,3.4nm,0.5s,baz=178,slow=12,SNR=8.1						
ULM				pP	pP	17 12 05.9	-1.3
	comp=Z,11nm,0.9s,baz=182,slow=8.4,SNR=9.6						
ULM				LR	LR	17 29 22.6	
	comp=Z,159nm,20.2s,baz=143,slow=40						
PB11	IPOC Station P	38.55	148	P	P	17 12 05.2	+0.9
PB11				IAmb	IAmb	17 12 06.3	
	comp=Z,20nm,1.0s						
GO01	Chusmiza	38.71	148	P	P	17 12 07.1	+1.1
F10A	Beach Ranch, E	39.79	330	P	P	17 12 14.3	-0.1
SIV	San Ignacio	40.84	135	P	P	17 12 23.5	+0.2
	comp=Z,4.7nm,0.7s,baz=316,slow=7.1,SNR=24						
SIV				pP	pP	17 12 40.1	+0.5
	comp=Z,5.6nm,0.9s,baz=331,slow=11,SNR=6.1						
LVC	Limon Verde	41.32	150	P	P	17 12 29.3	+1.8
	comp=Z,2.4nm,0.7s,baz=308,slow=7.0,SNR=3.9						
LVC	Limon Verde	41.32	150	IAmb	IAmb	17 12 30.3	
	comp=Z,8.9nm,1.0s						
FFC	Flin Flon	42.25	350	P	P	17 12 34.2	-0.1
FFC					pP	17 12 50.6	-0.2
GO02	Mina Guanaco	43.18	153	P	P	17 12 43.1	+0.5
SCHQ	Schefferville	45.05	19	P	P	17 12 54.9	-2.0
	comp=Z,3.2nm,0.4s,baz=223,slow=5.8,SNR=12						
SCHQ				pP	pP	17 13 11.2	-2.5
	comp=Z,4.3nm,0.6s,baz=233,slow=11,SNR=4.9						
SCHQ				LR	LR	17 33 50.6	
	comp=Z,151nm,19.8s,baz=211,slow=39						
SCHQ	Schefferville	45.05	19	P	P	17 12 54.8	-2.0
SCHQ					pP	17 13 12.4	-1.2
SCHQ				IAmb	IAmb	17 13 13.0	
	comp=Z,22nm,1.4s						
CPUP	Villa Florida	50.66	141	P	P	17 13 39.9	-0.7
	comp=Z,7.4nm,1.0s,baz=332,slow=9.4,SNR=6.9						
CPUP	Villa Florida	50.66	141	P	P	17 13 39.6	-1.0
CPUP				IAmb	IAmb	17 13 41.1	
	comp=Z,13nm,1.1s						
YKA	Yellowknife Ar	52.04	346	P	P	17 13 48.9	-1.5
	comp=Z,0.8nm,0.5s,baz=143,slow=8.4,SNR=17						
YKA				pP	pP	17 14 07.0	-0.4
	comp=Z,4.4nm,1.0s,baz=143,slow=8.4,SNR=12						
DLBC	Dease Lake	54.00	335	P	P	17 14 05.2	+0.2
PLCA	Paso Flores	56.81	163	P	P	17 14 25.9	+0.5
	comp=Z,6.0nm,1.1s,baz=12,slow=9.0,SNR=4.4						
DBIC	Dimbokro	83.66	85	LR	LR	17 50 02.4	
	comp=Z,72nm,21.8s,baz=216,slow=33						
ARCES	ARCESS Array B	86.00	19	P	P	17 17 18.4	-2.2
	comp=Z,2.2nm,0.9s,baz=284,slow=6.1,SNR=4.3						
SONM	Songino Array	117.28	348	PKP	PKPdf	17 23 26.5	+0.5
	comp=Z,0.2nm,0.7s,baz=32,slow=1.2,SNR=2.0						
MKAR	Makanchi Array	119.62	6	PKP	PKPdf	17 23 28.5	-1.9
	comp=Z,0.2nm,0.5s,baz=338,slow=2.4,SNR=4.4						
KSH	Kashi	125.68	13	PKP	PKiKP	17 23 43.8	+1.1
KSH				sPKP		17 23 59.1	
KSH				PP	PP	17 25 42.3	+8.9
KSH				PKS	PKSdf	17 27 19.8	+0.7
KSH				SKKS		17 32 29.4	
WRA	Warramunga Arr	137.25	255	PKP	PKPdf	17 24 04.2	-0.3
	comp=Z,1.2nm,0.9s,baz=89,slow=2.7,SNR=8.0						
WRA				pPKP	pPKPdf	17 24 24.5	+1.1
	comp=Z,1.4nm,0.9s,baz=90,slow=3.0,SNR=3.8						
ASAR	Alice Springs	137.41	250	PKhKP	PKPpre	17 23 53.7	
	comp=Z,0.6nm,1.0s,baz=81,slow=3.2,SNR=2.7						
ASAR				PKP	PKPdf	17 24 05.5	+0.8
	comp=Z,0.9nm,1.0s,baz=110,slow=2.9,SNR=3.1						
ASAR				SKPab	SKiKP	17 27 36.5	-0.7
	comp=Z,0.8nm,0.9s,baz=60,slow=3.8,SNR=4.8						
CMAR	Chiang Mai Arr	147.12	344	PKPbc	PKPdf	17 24 23.8	+1.7
	comp=Z,1.6nm,0.6s,baz=329,slow=2.6,SNR=15						
CMAR	Chiang Mai Arr	147.12	344		PKPdf	17 24 22.1	0.0
PBKT	Sadao Pong	148.30	340		PKPdf	17 24 23.5	-0.5

ANF ***20*** *17:07:08.5±2.0, 40°.32N×125°.02W, h2km±7km, ML3.3/8, Error ellipse: s-maj=21.1km s-min=10.4km az=99.0*

NCEDC ***20*** *17:07:20.8±2.5, 40°.298N±0°.005×124°.50W±0°.05, h4km±7km, ML3.2/20, Error ellipse: s-maj=5.4km s-min=0.7km az=85.0*

NEIC ***20*** *17:07:21.4±1.8, 40°.27N±0°.03×124°.48W±0°.07, h23km±9km, Error ellipse: s-maj=7.8km s-min=4.2km az=76.0*

ISC 20 17:07:19.5±1.5**, 40°.26N**±0°.03×**124°.62W**±0°.08**, h25**km**, n64, σ1.s39**/66**, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCTM	Capetown	0.31	45		Pb	17 07 26.3	-0.3
KCTM					Sb	17 07 30.6	-0.9
KSMM	Slide Mountain	0.35	102		Pb	17 07 27.0	-0.3
KMPM	Mount Pierce	0.42	67		Pb	17 07 28.0	-0.4
KMPM					Sb	17 07 33.4	-1.1
KCRM	Chalk Rock	0.64	75		Pb	17 07 32.7	+0.6
KMRM	Mail Ridge	0.70	93	Pg	Pb	17 07 32.4	-0.7
JCC	Jacoby Creek,	0.72	39		Pb	17 07 33.9	+0.6
JCC	Jacoby Creek,	0.72	39	Pg	Pb	17 07 32.8	-0.5
KBSM	Bell Springs	0.86	113		Pb	17 07 31.5	-4.3
KBSM					Pn	17 07 37.0	+0.9
KHMM	Horse Mountain	0.92	48	Pg	Pb	17 07 37.0	+0.1
KPPM	Pickett Peak	0.97	84		Pn	17 07 33.2	-4.5
KCPM	Cahto Peak	0.98	125		Pn	17 07 33.0	-4.9
KCPM				Pg	Pb	17 07 38.3	+0.4
KIPM	Iron Peak	0.99	117		Pn	17 07 33.4	-4.4
KRPM	Rodgers	1.01	27		Pn	17 07 33.0	-5.2
KRPM					Pb	17 07 38.4	+0.1
KFPM	Farley Peak	1.11	123		Pn	17 07 35.0	-4.5
KFPM					Pb	17 07 40.6	+0.6
KHBM	Hayfork Bally	1.14	69		Pn	17 07 34.8	-5.3
KHBM					Pb	17 07 40.4	-0.3
KBNM	Bluenose Ridge	1.16	108		Pn	17 07 36.0	-4.2
KBNM					Pb	17 07 41.7	+0.8
GTC	Three Chop Rid	1.19	136		Pn	17 07 36.2	-4.3
GTC					Pb	17 07 41.8	+0.5
GNAM	Navarro Ridge	1.31	144		Pn	17 07 37.8	-4.3
GNAM					Pb	17 07 43.5	+0.1
GNAM					Sn	17 07 55.0	-3.8
KOMM	Orleans Mounta	1.35	41		Pn	17 07 43.2	+0.3
KRMB	Red Mountain	1.37	23	Pn	Pn	17 07 43.4	+0.2
O02D	Mt. Diablo Mer	1.41	93		Pn	17 07 39.1	-4.5
O02D					Pb	17 07 44.7	-0.4
O02D	Mt. Diablo Mer	1.41	93	P	Pn	17 07 39.3	-4.3
	baz=276,SNR=39						
O02D				S	Sn	17 08 02.6	+1.2
	baz=276						
GHOM	Hamilton Openi	1.47	145		Pn	17 07 45.7	+1.2
GHMM	Hull Mountain	1.51	120		Pn	17 07 46.2	+1.1
LGPM	Granite Peak	1.51	64		Pn	17 07 45.9	+0.8
GROM	Round Mountain	1.54	102		Pb	17 07 47.3	0.0
GVV	Valley View	1.57	107		Pn	17 07 47.0	+1.1
GASB	Alder Springs	1.58	112		Pn	17 07 47.0	+0.9
WDC	Whiskeytown Da	1.62	78	Pn	Pn	17 07 47.4	+0.9
N02D	Trinity Center	1.63	63		Pn	17 07 47.5	+0.9
N02D	Trinity Center	1.63	63	P	Pn	17 07 41.5	-5.1
	baz=244,SNR=72						
N02D				S	Sn	17 08 06.4	-0.4
	baz=244						
GGUM	Gualala	1.65	148		Pn	17 07 48.3	+1.4
KSXB	Camp Six Broad	1.67	20		Pn	17 07 47.5	+0.3
GSNM	Snow Mountain	1.72	140		Pn	17 07 49.4	+1.5
GHLM	Highland Sprin	1.74	134		Pn	17 07 49.4	+1.2
HOPS	Hopland Field	1.74	136	Pn	Pn	17 07 49.5	+1.4
M02C	Callahan	1.76	49		Pn	17 07 49.2	+0.8
M02C	Callahan	1.76	49	P	Pn	17 07 43.2	-5.2
	baz=229,SNR=185						
M02C				S	Sn	17 08 10.0	0.0
	baz=229						
GTSM	Trough Springs	1.82	121		Pb	17 07 51.9	-0.3
GDCM	Dry Creek	1.83	144		Pn	17 07 51.1	+1.6
KTRM	Thompson Ridge	1.90	29		Pn	17 07 51.2	+0.7
GACM	Adobe Creek	1.94	135		Pn	17 07 52.4	+1.5
GDXM	Geysers	2.02	135	Pn	Pn	17 07 54.3	+2.2
LAMM	Antelope Mount	2.03	48		Pn	17 07 53.1	+0.9
LSHM	Sage Hen Hill	2.04	74		Pn	17 07 53.8	+1.5
YBH	Yreka Blue Hor	2.06	44		Pn	17 07 53.8	+1.1
LGBM	Gray Butte	2.14	59		Pn	17 07 56.1	+2.3
LBFM	Black Fox Moun	2.34	61		Pn	17 07 58.7	+2.1
SUTB	Sutter Butte	2.42	114		Pn	17 07 54.0	-3.5
ORV	Oroville	2.50	105		Pn	17 07 59.4	+0.8
K02D	Willamette Mer	2.54	16	Sb	Sn	17 08 29.3	0.0
	baz=195						
M04C	Macdoel	2.60	53	Pg	Pn	17 08 02.3	+2.3
	baz=234						
L04D	Klamath Falls	2.62	41		Pn	17 08 03.0	+2.6
L04D	Klamath Falls	2.62	41	Pg	Pn	17 08 02.4	+2.0
	baz=221						
L04D				Sb	Sb	17 08 35.3	-2.4
	baz=221						
HUMO	Hull Mountain	2.66	28		Pn	17 08 02.3	+1.5
AFDM	Forest Hills D	3.11	114		Pn	17 08 09.0	+2.0
K04D	Chiloquin, OR	3.20	41	Pb	Pn	17 08 09.3	+1.0
	baz=222						
MOD	Modoc Plateau	3.66	62		Pn	17 08 15.8	+1.2
J05D	Fort Rock, OR	3.94	39	Pb	Pn	17 08 20.8	+2.3
	baz=220						
PNTR	Pine Nut	4.05	105		Pn	17 08 22.3	+2.3
PAHR	Pah Rah Range	4.06	96		Pn	17 08 21.7	+1.6
SAO	San Andreas Ge	4.29	143	Pn	Pn	17 08 23.4	+0.3
PINE	Pine Mountain	4.47	37		Pn	17 08 26.7	+0.8
KVN	Kaiserville	5.18	101	Pn	Pn	17 08 37.2	+1.7

IDC ***20*** *17:07:40.4±0.9, 5°.30S×153°.04E, h0km, mb4.2/14, mb1 4.3/14, mb1mx4.2/35, mbtmp4.2/14, MS4.4/1, Ms1 4.4/1, ms1mx3.7/30, Error ellipse: s-maj=21.1km s-min=13.7km az=70.0*

NEIC ***20*** *17:07:49.3±1.2, 5°.18S±0°.04×152°.7E±0°.1, h60km±7km, mb4.5/18, Error ellipse: s-maj=19.7km s-min=5.3km az=99.0*

ISC 20 17:07:47.3±0.7**, 5°.20S**±0°.07×**152°.9E**±0°.1**, h43**km**, n43, σ1.s11**/43**, mb4.4**/23**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.22	316	Pg	Pn	17 08 08.3	+0.4
	558nm,0.3s,baz=232,slow=2.2,SNR=56						
KRVT				Lg	Lg	17 08 25.4	
	1μm,0.3s,baz=60,slow=18,SNR=37						
RABL	Rabaul	1.22	325	Pn	Pn	17 08 08.5	+0.5
PMG	Port Moresby	7.04	233	Pn	Pn	17 09 29.2	+1.4
	5.6nm,0.3s,baz=62,slow=9.0,SNR=7.5						
PMG				Sn	Sn	17 10 49.4	+2.7
	5.1nm,0.3s,baz=132,slow=15,SNR=1.3						
PMG	Port Moresby	7.04	233		Pn	17 09 29.0	+1.1
DZM	Mont Dzumac	21.31	143	P	P	17 12 30.2	-0.4
	3.4nm,0.8s,baz=51,slow=22,SNR=1.1						
SIJI	Sorong	21.99	281	P	P	17 12 38.4	+0.4
	3.9nm,0.5s,baz=206,slow=23,SNR=6.1						
MTN	Manton Dam	22.76	249	P	P	17 12 43.4	-2.7
MTN				IAmb	IAmb	17 12 55.3	
	comp=Z,20nm,1.1s						
WB0	Warramunga Arr	23.09	230	P	P	17 12 49.8	+0.2
WB0				IAmb	IAmb	17 12 50.7	
	comp=Z,12nm,0.8s						
WR0	Warramunga Arr	23.10	229	P	P	17 12 49.4	-0.2
WR0				IAmb	IAmb	17 12 50.7	
	comp=Z,14nm,0.9s						
WRAB	Tennant Creek	23.23	229	P	P	17 12 49.5	-1.3
WRAB				IAmb	IAmb	17 12 51.9	
	comp=Z,20nm,0.9s						
WB2	Warramunga Arr	23.23	229	P	P	17 12 50.2	-0.7
WB2				IAmb	IAmb	17 12 52.0	
	comp=Z,18nm,1.0s						
WRA	Warramunga Arr	23.24	229	P	P	17 12 49.9	-1.1
	comp=Z,11nm,0.7s,baz=54,slow=9.8,SNR=8.9						
WRA	Warramunga Arr	23.24	229	P	P	17 12 49.9	-1.1
KNRA	Kununurra	25.86	244	P	P	17 13 15.1	0.0
AS31	Alice Springs	25.91	223	P	P	17 13 15.3	-0.2
ASAR	Alice Springs	25.91	223	P	P	17 13 15.2	-0.4
	comp=Z,4.9nm,0.7s,baz=57,slow=9.4,SNR=12						
ASAR	Alice Springs	25.91	223	P	P	17 13 14.9	-0.6
STKA	Stephens Creek	28.57	200	P	P	17 13 37.7	-1.6
	comp=Z,1.9nm,0.6s,baz=30,slow=15,SNR=1.8						
STKA	Stephens Creek	28.57	200	P	P	17 13 39.1	-0.2
FITZ	Fitzroy Crossi	29.53	242	P	P	17 13 47.0	-0.9
	comp=Z,6.0nm,0.6s,baz=78,slow=6.0,SNR=9.7						
FITZ	Fitzroy Crossi	29.53	242	P	P	17 13 47.3	-0.7
MMRI	Maumere	30.60	262	P	P	17 13 56.7	-0.8
MMRI				IAmb	IAmb	17 14 16.8	
	comp=Z,18nm,1.1s						
JNU	Nakatsue	43.44	333	P	P	17 15 46.8	+0.5
	comp=Z,9.8nm,1.0s,baz=51,slow=3.7,SNR=4.6						
JNU	Nakatsue	43.44	333	P	P	17 15 46.1	-0.1
JNU				IAmb	IAmb	17 15 59.8	
	comp=Z,11nm,1.0s						
CISI	Cisompet, Garu	44.82	265	P	P	17 15 56.4	-1.3
PSI	Prapat	54.47	277	LR	LR	17 42 46.6	
	comp=Z,374nm,20.9s,baz=139,slow=38						
COCO	West Island	55.74	259	P	P	17 17 18.7	-1.5
CMAR	Chiang Mai Arr	58.11	295	P	P	17 17 36.4	-0.6
	comp=Z,0.7nm,0.6s,baz=122,slow=5.4,SNR=4.3						
CMAR	Chiang Mai Arr	58.11	295	P	P	17 17 35.3	-1.6
PETK	Petropavlovsk-	58.23	3	P	P	17 17 37.7	+0.6
	comp=Z,1.9nm,0.8s,baz=166,slow=6.7,SNR=1.6						
PETK	Petropavlovsk-	58.23	3	P	P	17 17 37.8	+0.7
SONM	Songino Array	66.69	328	P	P	17 18 35.2	+1.3
	comp=Z,0.5nm,0.6s,baz=144,slow=5.9,SNR=3.2						
BILL	Bilibino	73.67	5	P	P	17 19 16.9	+0.8
BILL				IAmb	IAmb	17 19 18.8	
	comp=Z,4.8nm,0.7s						
SUA	Susitna One	79.29	24	P	P	17 19 48.1	0.0
SUA				IAmb	IAmb	17 19 48.4	
	comp=Z,4.2nm,0.9s						
MKAR	Makanchi Array	80.67	319	P	P	17 19 56.2	+0.4
	comp=Z,0.5nm,0.8s,baz=106,slow=5.9,SNR=4.1						
MLY	Manley	81.22	21	P	P	17 19 58.7	+0.3
ZALV	Zalesovo Beam	81.52	326	P	P	17 20 00.4	+0.2
	comp=Z,1.0nm,0.5s,baz=122,slow=5.2,SNR=2.2						
ILAR	Eielson Array	82.50	22	P	P	17 20 03.2	-1.9
	comp=Z,0.5nm,0.6s,baz=252,slow=4.5,SNR=5.7						
QSPA	South Pole Qui	84.77	180	P	P	17 20 17.2	+0.3
	comp=Z,2.3nm,0.6s,baz=310,slow=0.9,SNR=11						
QSPA	South Pole Qui	84.77	180	P	P	17 20 17.2	+0.3
NRIK	Noril'sk	86.36	341	P	P	17 20 25.1	+0.7
	comp=Z,1.2nm,0.4s,baz=112,slow=5.4,SNR=2.4						
TORD	Torodi Ar. Bea	150.50	288	PKPbc	PKPbc	17 27 35.4	0.0
	comp=Z,1.6nm,0.5s,baz=77,slow=2.2,SNR=8.4						
TORD	Torodi Ar. Bea	150.50	288		PKPdf	17 27 32.6	+2.6

GCG ***20*** *17:12:42.1±0.5, 12°.99N×89°.78W, h16km±8km, MD4.3*

INET ***20*** *17:12:46.2, 13°.50N×90°.04W, h15km, ML4.6*

NEIC ***20*** *17:12:48.7±2.0, 13°.39N±0°.07×89°.87W±0°.07, h63km±10km, Error ellipse: s-maj=11.7km s-min=7.3km az=222.0*

UCR ***20*** *17:12:48.3±1.7, 13°.42N×89°.92W, h58km±14km, ML4.4, mb4.2(NEIC)*

SNET ***20*** *17:12:48.1±1.1, 13°.41N×89°.92W, h57km±9km, ML4.5*

IDC ***20*** *17:12:50.2±1.6, 13°.93N×89°.25W, h66km±17km, mb3.5/5, mb1 3.9/7, mb1mx3.5/42, mbtmp3.9/7, Error ellipse: s-maj=58.6km s-min=12.9km az=44.0*

ISC 20 17:12:48.8±0.9**, 13°.42N**±0°.06×**89°.87W**±0°.04**, h67**km±7km**, n77, σ1.s11**/96**, mb3.9**/8**, 2C-6D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEVE	Cerro Verde	0.47	31⇓	*e*P	Pn	17 13 00.6	-0.8
CEVE				*e*S	Sn	17 13 10.6	+0.1
CEVE				IAML		17 13 12.2	
	comp=Z,31μm,0.6s						
CEVE	Cerro Verde	0.47	31⇓	*e*P	Pn	17 13 00.6	-0.8
CEVE				*e*S	Sn	17 13 10.6	+0.1
CEVE				IAML		17 13 12.2	
	comp=Z,31μm,0.6s						
SBLS	San Blas	0.48	30⇓	*i*P	Pn	17 13 00.7	-0.8
SBLS	San Blas	0.48	30⇓	*i*P	Pn	17 13 00.7	-0.8
BOQS	Boqueron	0.65	61⇓	*i*P	Pn	17 13 02.9	-0.4
SNET	Serv Nac Est T	0.68	67	*e*P	Pn	17 13 02.9	-0.4
SNET				*e*S	Sn	17 13 14.5	+0.5
SNET				IAML		17 13 16.7	
	comp=Z,11μm,0.3s						
SNET	Serv Nac Est T	0.68	67	*e*P	Pn	17 13 02.9	-0.4
SNET				*e*S	Sn	17 13 14.5	+0.5
SNET				IAML		17 13 16.7	
	comp=Z,11μm,0.3s						
SNET	Serv Nac Est T	0.68	67		Pn	17 13 01.6	-1.7
UEES	Universidad Ev	0.68	64	*e*P	Pn	17 13 03.1	-0.3
UEES	Universidad Ev	0.68	64	*e*P	Pn	17 13 03.1	-0.3
LOMA	Loma Larga	0.71	72	*e*P	Pn	17 13 03.2	-0.6
LOMA				*e*S	Sn	17 13 16.2	+1.3
LOMA	Loma Larga	0.71	72	*e*P	Pn	17 13 03.2	-0.6
LOMA				*e*S	Sn	17 13 16.2	+1.3
CUSC	Alcaldia de Cu	0.74	66	*e*P	Pn	17 13 04.0	0.0
CUSC				*e*S	Sn	17 13 16.3	+1.0
CUSC	Alcaldia de Cu	0.74	66	*e*P	Pn	17 13 04.0	0.0
CUSC				*e*S	Sn	17 13 16.3	+1.0
LFRS	El Faro	0.81	76⇓	*i*P	Pn	17 13 04.4	-0.5
LBRS	Las Brisas	0.86	69	*e*P	Pn	17 13 05.5	0.0
IXG	Ixpaco	0.93	323	*e*P	Pn	17 13 05.8	-0.6
MTO3	Montecristo	1.09	27⇑	*i*P	Pn	17 13 08.2	-0.3
MTO3				*e*S	Sn	17 13 23.8	+0.6
MTO3	Montecristo	1.09	27⇑	*i*P	Pn	17 13 08.2	-0.3
MTO3				*e*S	Sn	17 13 23.8	+0.6
PCG	Pacaya	1.20	324	*e*P	Pn	17 13 10.2	+0.2
NBG	Las Nubes	1.25	338	*e*P	Pn	17 13 11.5	+0.9
COEB	Comit de Eme	1.31	87	*e*P	Pn	17 13 11.3	+0.1
COEB				*e*S	Sn	17 13 28.7	+0.7
COEB	Comit de Eme	1.31	87	*e*P	Pn	17 13 11.3	+0.1
COEB				*e*S	Sn	17 13 28.7	+0.7
FUG	Fuego 3	1.39	317	*e*P	Pn	17 13 12.4	0.0
PACA	Pacayal	1.51	88	*e*P	Pn	17 13 14.3	+0.5
PACA	Pacayal	1.51	88	*e*P	Pn	17 13 14.3	+0.5
LCY	Lacayo	1.53	90	*e*P	Pn	17 13 14.8	+0.5
LCY	Lacayo	1.53	90	*e*P	Pn	17 13 14.8	+0.5
JUCU	Jucuar¡n	1.59	96	*e*P	Pn	17 13 14.7	-0.2
JUCU				*e*S	Sn	17 13 35.1	+0.5
JUCU				IAML		17 13 42.6	
	comp=Z,3μm,0.4s						
JUCU	Jucuar¡n	1.59	96	*e*P	Pn	17 13 14.7	-0.2
JUCU				*e*S	Sn	17 13 35.1	+0.5
JUCU				IAML		17 13 42.6	
	comp=Z,3μm,0.4s						
MRL	Marmol	1.66	6	*e*P	Pn	17 13 16.9	+0.9
APG	El Apazote	1.68	340	P	Pn	17 13 16.3	0.0
	comp=Z,32nm,0.3s,baz=180,slow=7.1,SNR=23						
APG				S	Sn	17 13 36.2	-0.8
	comp=Z,40nm,0.3s,baz=338,slow=12,SNR=9.9						
ERG	Entre ros, C	1.94	302	*e*P	Pn	17 13 19.7	+0.2
ERG				*e*S	Sn	17 13 47.0	+4.1
CNCH	Conchagua	1.99	94	*e*P	Pn	17 13 20.7	+0.4
CNCH				IAML		17 13 53.5	
	comp=Z,8μm,0.4s						
CNCH	Conchagua	1.99	94	*e*P	Pn	17 13 20.7	+0.4
CNCH				IAML		17 13 53.5	
	comp=Z,8μm,0.4s						
STG3	Santiaguito 3,	2.09	308	*e*P	Pn	17 13 21.9	+0.2
CSGN	Cosiguina Volc	2.29	101		Pn	17 13 25.3	+0.9
TGUH	Tegucigalpa,Un	2.60	76		Pn	17 13 27.0	-1.7
THIG		2.75	303		Pn	17 13 30.6	0.0
THIG					Sn	17 14 01.0	-1.7
MOMN	Momotombo	3.40	107	*e*P	Pn	17 13 40.5	+1.0
MOMN	Momotombo	3.40	107	*e*P	Pn	17 13 40.5	+1.0
COPN	Copaltepe	3.43	111	*e*P	Pn	17 13 39.9	+0.1
COPN	Copaltepe	3.43	111	*e*P	Pn	17 13 39.9	+0.1
CCIG	Comitan	3.59	323		Pn	17 13 43.6	+1.4
PCIG		3.96	305		Pn	17 13 47.2	+0.2
PCIG					Sn	17 14 30.9	-1.3
ACON	Acoyapa	4.80	107		Pn	17 13 58.6	-0.1
GBS3	Finca Las Img	5.05	121	*e*P	Pn	17 14 03.8	+1.7
NY14	Universidad de	5.06	123	*e*P	Pn	17 14 03.9	+1.8
LAPC	Finca la Perla	5.08	121	*e*P	Pn	17 14 03.3	+0.9
BUAI	Buenos Aires	5.11	119	*e*P	Pn	17 14 04.0	+1.2
GUAI	GUAI	5.29	126	*e*P	Pn	17 14 06.7	+1.3
CUI	Cuipilapa	5.36	120	*e*P	Pn	17 14 04.0	-2.3
ESPN	Las Esperanzas	5.57	102	Pn	Pn	17 14 09.2	+0.1
JTS	Las Juntas de	5.73	122	P	Pn	17 14 11.1	-0.3
	comp=Z,6.9nm,0.3s,baz=9.6,slow=19,SNR=11						
JTS				S	Sn	17 15 14.1	-1.7
	baz=195,slow=20,SNR=0.9						
JTS	Las Juntas de	5.73	122		Pn	17 14 11.4	0.0
CEDE	Laguna Cedeo	5.84	119	*e*P	Pn	17 14 13.5	+0.6
CMIG	Matias Romero	6.06	308	P	Pn	17 14 17.0	+1.1
	comp=Z,3.4nm,0.3s,baz=101,slow=9.0,SNR=30						
CMIG				S	Sn	17 15 23.8	0.0
	comp=Z,7.2nm,0.3s,baz=67,slow=20,SNR=6.0						
TEIG	Tepich	6.94	12		Pn	17 14 29.3	+1.5
TLIG	Tlapa	9.34	297		Pn	17 15 00.2	-0.6
VBMS	Vicksburg	18.72	358	Pn	Pn	17 17 05.2	+2.2
SDV	Santo Domingo	19.40	101	P	P	17 17 07.1	-2.7
	comp=Z,0.5nm,0.3s,baz=254,slow=6.1,SNR=4.7						
WHTX	Lake Whitney,	19.75	341	P	P	17 17 14.0	+0.8
WHTX				IAmb	IAmb	17 17 14.6	
	comp=Z,16nm,0.7s						
TX32	Lajitas Array	20.36	323	P	Pn	17 17 22.9	+0.3
TXAR	Lajitas Array	20.36	323	P	Pn	17 17 22.9	+0.4
	comp=Z,1.6nm,0.7s,baz=143,slow=11,SNR=17						
TXAR				PcP	PcP	17 21 31.4	+0.7
	comp=Z,0.2nm,0.5s,baz=129,slow=3.6,SNR=3.5						
TXAR	Lajitas Array	20.36	323	P	P	17 17 21.5	+1.5
TX31	Lajitas Ar. Si	20.36	323	P	P	17 17 22.1	+2.1
MIAR	Mount Ida	21.30	352	P	P	17 17 30.6	+0.7
MIAR				IAmb	IAmb	17 17 40.3	
	comp=Z,5.4nm,0.8s						
V48A	Smith Brothers	22.39	7	P	P	17 17 42.9	+1.2
V48A				IAmb	IAmb	17 17 44.0	
	comp=Z,8.2nm,0.7s						
WMOK	Wichita Mounta	22.70	341	P	P	17 17 44.2	-0.8
WMOK				IAmb	IAmb	17 17 45.4	
	comp=Z,3.8nm,0.9s						
FNO	Franklin	22.78	344	P	P	17 17 46.1	+0.3
S39A	Bolivar	24.36	353	P	P	17 18 00.9	+0.3
S39A				IAmb	IAmb	17 18 16.7	
	comp=Z,22nm,1.8s						
PECO	Prince Edward	32.35	18	P	P	17 19 11.5	-0.2
NVAR	Mina Array Bea	35.43	320	P	P	17 19 41.4	+2.6
	comp=Z,0.9nm,0.6s,baz=139,slow=9.3,SNR=7.6						
ULM	Lac du Bonnet	37.05	354	P	P	17 19 49.7	-2.5
	comp=Z,1.3nm,0.5s,baz=186,slow=10,SNR=3.9						
SIV	San Ignacio	40.80	135	P	P	17 20 23.8	-0.1
	comp=Z,1.1nm,0.5s,baz=312,slow=11,SNR=5.9						
SMTB	Santa Maria do	47.46	116	*e*P	P	17 21 15.8	-1.4
YKA	Yellowknife Ar	52.08	346	P	P	17 21 49.8	-1.8
	comp=Z,0.4nm,0.5s,baz=137,slow=7.5,SNR=7.9						

IDC 20 17:24:43.1±10.0**, 31°.53S**×**179°.52W, h304**km±111km**, mb2.9**/2**, mb1 3.1**/3**, mb1mx3.0**/29**, mbtmp3.6**/3**, Error ellipse: s-maj=112.0km s-min=50.3km az=0.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	7.26	201	P	Pn	17 26 28.2	+0.6
	0.3nm,0.3s,baz=334,slow=17,SNR=1.4						
URZ				S	S	17 27 51.6	-0.5
	0.4nm,0.3s,baz=139,slow=18,SNR=2.3						
ASAR	Alice Springs	41.76	269	P	P	17 32 03.6	+0.1
	0.2nm,0.4s,baz=106,slow=7.6,SNR=6.3						
WRA	Warramunga Arr	42.85	274	P	P	17 32 12.1	-0.3
	0.4nm,0.3s,baz=111,slow=8.1,SNR=11						
FINES	FINESS Array B	145.73	338	PKPbc	PKPdf	17 43 44.8	+0.1
	4.6nm,0.9s,baz=70,slow=4.6,SNR=3.4						

NEIC ***20*** *17:40:29.6±1.5, 6°.46S±0°.09×129°.06E±0°.09, h197km±11km, mb4.1/4, Error ellipse: s-maj=13.2km s-min=12.4km az=191.0*

DJA ***20*** *17:40:29.8±0.4, 6°S±3°×12°9E±°, h255km±5km, M4.2/12, mB5.3/2, mb4.0/7, MLv4.2/12, Mw(mB)4.7/2*

IDC ***20*** *17:40:29.5±2.3, 6°.41S×129°.04E, h194km±25km, mb3.4/4, mb1 3.7/8, mb1mx3.3/42, mbtmp4.1/8, Error ellipse: s-maj=41.1km s-min=17.3km az=94.0*

ISC 20 17:40:29.4±0.6**, 6°.58S**±0°.05×**129°.15E**±0°.06**, h200**km**, n40, σ2.s53**/48**, mb3.6**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	2.18	20	P	Pn	17 41 12.2	+2.3
BNDI				S	Sn	17 41 47.6	+6.2
SAUI	Saumlaki	2.55	123	P	Pn	17 41 17.9	+4.1
SAUI				S	Sn	17 41 54.8	+6.3
SAUI	Saumlaki	2.55	123	Pn	Pn	17 41 16.2	+2.4
SAUI				Sn	Sn	17 41 50.9	+2.4
AAI	Ambon	3.03	342	P	Pn	17 41 21.3	+1.8

MSAI	Masohi	3.22	356	P	Pn	17 41 24.0	+2.2
NLAI	Namlea	3.90	328	P	Pn	17 41 32.7	+2.7
FAKI	Fak Fak	4.78	40	P	Pn	17 41 40.0	-1.0
FAKI	Fak Fak	4.78	40		Pn	17 41 39.9	-1.2
FAKI				Sn	Sn	17 42 30.7	-6.7
SANI	Sanana	5.50	325	P	Pn	17 41 51.5	+1.3
	0.1nm11nm,0.5s						
SOEI	Soe	5.77	237	P	Pn	17 41 57.3	+3.5
	0.6nm12nm,0.7s						
SOEI	Soe	5.77	237	Pn	Pn	17 41 53.7	-0.1
SIJI	Sorong	6.06	20	P	Pn	17 41 55.9	-1.6
	12nm,0.3s,baz=193,slow=23,SNR=56						
SIJI				S	Sn	17 42 59.4	-7.9
	13nm,0.3s,baz=276,slow=24,SNR=29						
SWI	Sorong	6.06	20	P	Pn	17 41 56.1	-1.4
LBMI	Labuha	6.13	344	P	Pn	17 41 59.3	+0.9
MTN	Manton Dam	6.52	163		Pn	17 42 05.4	+2.0
MTN					Sn	17 43 16.5	-1.5
RKPI	Ransiki, Papua	7.11	45	P	Pn	17 42 08.5	-2.6
	1.5nm9μm121nm,0.5s						
TNTI	Ternate	7.52	346	P	Pn	17 42 16.9	+0.4
TNTI	Ternate	7.52	346		Pn	17 42 16.6	+0.1
KNRA	Kununurra	9.04	182	Pn	Pn	17 42 38.8	+2.6
FITZ	Fitzroy Crossi	11.95	196	P	P	17 43 15.8	-2.7
	1.5nm,0.3s,baz=29,slow=11,SNR=41						
FITZ				S	Sn	17 45 22.3	-4.6
	0.5nm,0.3s,baz=73,slow=16,SNR=3.2						
FITZ	Fitzroy Crossi	11.95	196	Pn	Pn	17 43 15.6	+1.9
WB0	Warramunga Arr	14.06	159	Pn	P	17 43 42.6	+0.6
WRAB	Tennant Creek	14.20	160	P	P	17 43 43.1	-0.4
WRA	Warramunga Arr	14.20	160	P	P	17 43 43.3	-0.3
	0.5nm,0.3s,baz=335,slow=12,SNR=17						
WRA				S	S	17 46 15.9	-4.2
	0.2nm,0.3s,baz=348,slow=18,SNR=1.7						
WRA	Warramunga Arr	14.20	160	P	P	17 43 43.2	-0.4
WB2	Warramunga Arr	14.21	160	P	P	17 43 43.1	-0.5
WR0	Warramunga Arr	14.29	159	Pn	Pn	17 43 42.4	-0.6
JAGI	Jajag, Banyuwa	14.98	262	P	P	17 43 51.7	-0.6
COEN	Coen	15.62	119		Pn	17 44 01.7	+2.4
COEN				IAmb	IAmb	17 44 03.3	
	comp=Z,8.4nm,0.8s						
AS31	Alice Springs	17.59	165	P	Pn	17 44 23.7	+1.0
AS31				IAmb	IAmb	17 44 27.7	
	comp=Z,6.2nm,0.5s						
ASAR	Alice Springs	17.59	165	P	Pn	17 44 24.4	+1.7
	comp=Z,2.9nm,0.3s,baz=341,slow=9.9,SNR=121						
ASAR				S	S	17 47 33.4	+0.1
	comp=Z,0.1nm,0.3s,baz=180,slow=26,SNR=4.6						
ASAR	Alice Springs	17.59	165	P	Pn	17 44 23.7	+1.0
PMG	Port Moresby	18.05	100	P	Pn	17 44 31.6	+3.4
	comp=Z,0.5nm,0.3s,baz=216,slow=1.9,SNR=6.3						
SONM	Songino Array	57.78	342	P	P	17 49 59.5	-0.3
	comp=Z,0.6nm,0.7s,baz=147,slow=6.4,SNR=4.5						
SONM	Songino Array	57.78	342	P	P	17 49 59.7	-0.1
PETK	Petropavlovsk-	64.20	19	P	P	17 50 41.9	-0.7
	comp=Z,0.8nm,0.5s,baz=246,slow=6.1,SNR=1.5						
MK31	Makanchi Array	67.42	327	P	P	17 51 02.8	-0.6
MK31				IAmb	IAmb	17 51 32.4	
	comp=Z,1.5nm,1.1s						
MKAR	Makanchi Array	67.42	327	P	P	17 51 02.9	-0.6
	comp=Z,0.5nm,0.6s,baz=125,slow=7.9,SNR=8.4						
MKAR	Makanchi Array	67.42	327	P	P	17 51 02.6	-0.8
SEY	Seymchan	71.56	11	P	P	17 51 28.0	-0.3
	comp=Z,1.5nm,0.5s,baz=72,slow=22,SNR=14						

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*IDC **20** 17:43:35.2±1.4, 26°.42N×128°.84E, h0^{km}, mb3.7/3, mb1 3.9/4, mb1mx3.4/47, mbtmp3.7/4, ML3.0/1, Error ellipse: s-maj=46.5km s-min=17.7km az=62.0*

*JMA **20** 17:43:38.0±0.1, 26°.55N×128°.98E, h39^{km}±3^{km}, M2.8*

ISC 20 17:43:35.8±1.5**, 26°.53N**±0°.04×**129°.02E**±0°.03**, h12**^{km}±10^{km}**, n19,** σ**1^{s}.12**/33**, mb3.6**/3**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYRO	Yoronjima	0.71	314	P	Pn	17 43 50.9	-0.7
JYRO				*e*S	Sn	17 44 00.3	-2.1
JOW	Kunigami	0.73	294	P	Pn	17 43 51.3	-0.6
JOW				*e*S	Sb	17 44 00.7	+0.3
JOW	Kunigami	0.73	294	Pn	Pn	17 43 51.4	-0.5
	32nm,0.3s,baz=109,slow=15,SNR=122						
JOW				Sn	Sg	17 43 59.0	-0.7
	27nm,0.3s,baz=83,slow=21,SNR=9.4						
JNTH	Nagotoyohara	0.89	269	P	Pb	17 43 53.5	+0.3
JNTH				S	Sb	17 44 05.3	+0.2
JOKE	Okinoerabujima	0.92	334	P	Pn	17 43 54.4	-0.1
JOKE				*e*S	Sb	17 44 05.8	0.0
JIH	Iheya	1.07	298	P	Pg	17 43 56.4	0.0
JIH				*e*S	Sg	17 44 09.6	-0.7
JJT3	Tamagusuku3	1.17	251	P	Pb	17 43 58.2	+0.2
JJT3				*e*S	Sb	17 44 13.3	+0.1
JTK	Tokunoshima	1.25	357	P	Pn	17 43 59.1	0.0
JTK				*e*S	Sb	17 44 13.9	-1.5
JAGN	Aguni-jima	1.59	272	P	Pn	17 44 04.1	+0.3
JAGN				*e*S	Sn	17 44 23.2	-1.0
JAMN	Amaminishikomi	1.71	5	P	Pn	17 44 05.9	+0.5
JAMN				*e*S	Sn	17 44 26.6	-0.6
JAM	Amami Oshima	1.94	15	P	Pn	17 44 08.8	+0.2
JAM				S	Sn	17 44 31.5	-1.4
JZK	Kikaishima	1.97	25	P	Pn	17 44 08.5	-0.5
JKE	Kume jima 2	2.01	265	P	Pn	17 44 09.2	-0.4
JKE				*e*S	Sn	17 44 33.7	-0.9
JMZ	Minamidaito 2	2.10	109	P	Pn	17 44 10.9	+0.1
JMZ				S	Sn	17 44 33.8	-3.0
JKDJ	Kitadaitoujima	2.13	105	P	Pn	17 44 11.5	+0.4
JKDJ				S	Sn	17 44 35.7	-1.7
JNU	Nakatsue	6.76	13	Pn	Pn	17 45 17.1	+2.1
	0.3nm,0.3s,baz=210,slow=6.6,SNR=17						
SONM	Songino Array	27.69	326	P	P	17 49 26.1	+2.3
	1.2nm,1.0s,baz=136,slow=8.3,SNR=6.7						
WRA	Warramunga Arr	46.48	173	P	P	17 52 03.4	+0.5
	0.9nm,0.7s,baz=354,slow=8.6,SNR=5.6						
ASAR	Alice Springs	50.13	174	P	P	17 52 31.4	+0.3
	0.6nm,0.8s,baz=7.8,slow=10,SNR=4.9						

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*INET **20** 17:44:11.7, 13°.56N×90°.01W, h133^{km}, ML3.8*

*GCG **20** 17:44:13.4±0.7, 13°.32N×89°.93W, h19^{km}±7^{km}, MD4.0*

*SNET **20** 17:44:14.3±1.1, 13°.41N×89°.93W, h55^{km}±10^{km}, ML4.2*

*UCR **20** 17:44:14.5±1.3, 13°.42N×89°.93W, h56^{km}±11^{km}, ML4.2*

ISC 20 17:44:11.3±1.8**, 13°.32N**±0°.07×**89°.90W**±0°.04**, h3**^{km}±13^{km}**, n35,** σ**0^{s}.42**/50**, 2C-6D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEVE	Cerro Verde	0.57	28	⇓*i*P	Pn	17 44 26.8	+0.2
CEVE				*e*S	Sn	17 44 36.8	+0.2
CEVE				AML	AML	17 44 38.0	
	comp=Z,21μm,0.4s						
CEVE	Cerro Verde	0.57	28	⇓*i*P	Pn	17 44 26.8	+0.2
CEVE				*e*S	Sn	17 44 36.8	+0.2
CEVE				AML	AML	17 44 38.0	
	comp=Z,21μm,0.4s						
SBLS	San Blas	0.58	27	⇓*i*P	Pn	17 44 26.9	+0.1
SBLS	San Blas	0.58	27	⇓*i*P	Pn	17 44 26.9	+0.1
LALI	Alcalda de L	0.58	73	*e*S	Sn	17 44 36.0	-0.6
LALI	Alcalda de L	0.58	73	*e*S	Sn	17 44 36.0	-0.6
SNJE	San Jose	0.61	27	⇓*i*P	Pn	17 44 27.2	+0.1
SNJE	San Jose	0.61	27	⇓*i*P	Pn	17 44 27.2	+0.1
BOQS	Boqueron	0.73	55	*e*P	Pn	17 44 29.0	+0.3
BOQS				*e*S	Sn	17 44 40.8	+0.3
SNET	Serv Nac Est T	0.74	60	*e*P	Pn	17 44 29.1	+0.3
SNET				*e*S	Sn	17 44 40.3	-0.3
SNET				AML	AML	17 44 41.9	
	comp=Z,6μm,0.3s						
SNET	Serv Nac Est T	0.74	60	*e*P	Pn	17 44 29.1	+0.3
SNET				*e*S	Sn	17 44 40.3	-0.3
SNET				AML	AML	17 44 41.9	
	comp=Z,6μm,0.3s						
LOMA	Loma Larga	0.78	65	*e*P	Pn	17 44 29.7	+0.4
LOMA				*e*S	Sn	17 44 41.6	+0.1
LOMA	Loma Larga	0.78	65	*e*P	Pn	17 44 29.7	+0.4
LOMA				*e*S	Sn	17 44 41.6	+0.1
CUSC	Alcaldia de Cu	0.81	60	*e*P	Pn	17 44 30.3	+0.6
CUSC				*e*S	Sn	17 44 42.4	+0.2
CUSC				IAML		17 44 43.9	
	comp=Z,9μm,0.2s						
CUSC	Alcaldia de Cu	0.81	60	*e*P	Pn	17 44 30.3	+0.6
CUSC				*e*S	Sn	17 44 42.4	+0.2
CUSC				IAML		17 44 43.9	
	comp=Z,9μm,0.2s						
AEIL	Aeropuerto Ilo	0.85	64	*e*S	Sn	17 44 43.7	+0.6
AEIL				AML	AML	17 44 46.0	
	comp=Z,7μm,0.3s						
AEIL	Aeropuerto Ilo	0.85	64	*e*S	Sn	17 44 43.7	+0.6
AEIL				AML	AML	17 44 46.0	
	comp=Z,7μm,0.3s						
LFRS	El Faro	0.87	70	*e*P	Pn	17 44 30.8	+0.3
LBRS	Las Brisas	0.93	63	*e*P	Pn	17 44 31.7	+0.3
MTO3	Montecristo	1.19	26	⇑*i*P	Pb	17 44 34.5	-0.2
MTO3				*e*S	Sb	17 44 50.0	-0.6
MTO3	Montecristo	1.19	26	⇑*i*P	Pb	17 44 34.5	-0.2
MTO3				*e*S	Sb	17 44 50.0	-0.6
PCG	Pacaya	1.27	327	*e*P	Pg	17 44 36.0	+0.2
NBG	Las Nubes	1.33	341	*e*P	Pn	17 44 37.9	+0.7
NBG				*e*S	Sn	17 44 56.5	+0.9
COEB	Comit de Eme	1.34	82	*e*P	Pn	17 44 37.5	+0.4
COEB				*e*S	Sb	17 44 54.6	-0.2
COEB				*e*S		17 44 54.8	
COEB				IAML		17 44 55.8	
	comp=Z,1μm,0.4s						
COEB	Comit de Eme	1.34	82	*e*P	Pn	17 44 37.5	+0.4
COEB				*e*S	Sb	17 44 54.6	-0.2
COEB				*e*S		17 44 54.8	
COEB				IAML		17 44 55.8	
	comp=Z,1μm,0.4s						
FUG	Fuego 3	1.45	321	*e*P	Pn	17 44 38.3	-0.3
PACA	Pacayal	1.54	84	*e*P	Pg	17 44 40.8	-0.1
PACA				IAML		17 45 03.7	
	comp=Z,5μm,0.1s						
PACA	Pacayal	1.54	84	*e*P	Pg	17 44 40.8	-0.1
PACA				IAML		17 45 03.7	
	comp=Z,5μm,0.1s						
MRL	Marmol	1.76	7	*e*P	Pn	17 44 43.5	+0.5
LCND	La Caada	1.95	90	*e*P	Pn	17 44 45.8	+0.4
LCND				AML	AML	17 45 15.3	
	comp=Z,1μm,0.7s						
LCND	La Caada	1.95	90	*e*P	Pn	17 44 45.8	+0.4
LCND				AML	AML	17 45 15.3	
	comp=Z,1μm,0.7s						
ERG	Entre ros, C	1.97	305	*e*P	Pn	17 44 46.0	+0.4
ERG				*e*S	Sn	17 45 10.1	-0.7
CNCH	Conchagua	2.01	91	*e*P	Pn	17 44 46.6	+0.4
CNCH				IAML		17 45 17.3	
	comp=Z,3μm,0.2s						
CNCH	Conchagua	2.01	91	*e*P	Pn	17 44 46.6	+0.4
CNCH				IAML		17 45 17.3	
	comp=Z,3μm,0.2s						
STG3	Santiaguito 3,	2.13	311	*e*P	Pn	17 44 48.3	+0.3

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*IDC **20** 17:55:46.6±0.5, 11°.75N×86°.86W, h0^{km}, mb4.6/23, mb1 4.7/26, mb1mx4.5/49, mbtmp4.6/26, ML3.7/2, MS4.6/24, Ms1 4.6/24, ms1mx4.5/38, Error ellipse: s-maj=24.0km s-min=9.4km az=58.0*

*UCR **20** 17:55:47.8±5.1, 11°.45N×87°.35W, h0^{km}±13^{km}, ML4.5, MW5.2, mb5.0(NEIC)*

*INET **20** 17:55:48.9, 11°.41N×87°.31W, h3^{km}, ML5.2*

*SNET **20** 17:55:50.9±4.0, 11°.60N×87°.16W, h10^{km}, ML4.7*

*GCMT **20** 17:55:51.3±0.2, 11°.36N±0°.02×87°.38W±0°.01, h18^{km}, MW5.2/123, Moment Tensor Solution. s80,c99; s123,c180; Duration: 1^{s}.0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.61±.02; $M_{\theta\theta}$0.01±.01; $M_{\phi\phi}$0.60±.02; $M_{r\theta}$0.31±.04; $M_{\theta\phi}$-0.28±.01; $M_{\phi r}$-0.28±.04; Best double couple: $M_0$0.79100×10^{17} NP1:ϕ_s175.00000°, δ33.00000°, λ-63.00000°. NP2:ϕ_s323.00000°, δ61.00000°, λ-106.00000°. Principal axes: T 0.8200, Plg15.0000°, Azm65.0000°; N -0.0570, Plg14.0000°, Azm331.0000°; P -0.7630, Plg69.0000°, Azm199.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **20** 17:55:52.3±2.2, 11°.55N±0°.06×87°.14W±0°.07, h47^{km}±4^{km}, mb5.0/312 Error ellipse: s-maj=10.7km s-min=6.7km az=57.0*

*BJI **20** 17:55:53.0±0.0, 11°.60N×87°.20W, h37^{km}, mB5.3/2, Ms5.4/4, Ms7 5.1/5*

ISC 20 17:55:48.1±1.0**, 11°.51N**±0°.04×**87°.22W**±0°.04**, h12**^{km}±5^{km}**, n804,** σ**1^{s}.31**/806**, mb5.0**/150**, MS4.7**/29**, 1D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COPN	Copaltepe	0.91	42	*e*P	Pn	17 56 08.5	+1.8
COPN	Copaltepe	0.91	42	*e*P	Pn	17 56 08.5	+1.8
MOMN	Momotombo	1.12	36	*e*P	Pg	17 56 11.1	+1.4
MOMN	Momotombo	1.12	36	*e*P	Pg	17 56 11.1	+1.4
CSGN	Cosiguina Volc	1.50	347		Pg	17 56 17.1	+0.1
CNCH	Conchagua	1.86	341	*e*P	Pn	17 56 20.7	+0.8
CNCH				*e*S	Sg	17 56 49.2	+1.2
CNCH				IAML		17 56 51.1	
	comp=Z,13μm,0.2s						
CNCH	Conchagua	1.86	341	*e*P	Pn	17 56 20.7	+0.8
CNCH				*e*S	Sg	17 56 49.2	+1.2
CNCH				IAML		17 56 51.1	
	comp=Z,13μm,0.2s						
MATN	Matagalpa	1.90	42	*e*P	Pb	17 56 21.9	-0.9
LCND	La Caada	1.91	340	*e*P	Pn	17 56 21.3	+0.8
LCND				IAML		17 56 54.5	
	comp=Z,4μm,0.1s						
LCND	La Caada	1.91	340	*e*P	Pn	17 56 21.3	+0.8
LCND				IAML		17 56 54.5	
	comp=Z,4μm,0.1s						
JUCU	Jucuar¡n	2.01	330	*e*P	Pn	17 56 22.6	+0.7
JUCU	Jucuar¡n	2.01	330	*e*P	Pn	17 56 22.6	+0.7
ACON	Acoyapa	2.06	77	*e*P	Pn	17 56 23.3	+0.8
ACON	Acoyapa	2.06	77		Pn	17 56 23.2	+0.7
PLVR	Palo Verde	2.17	122	*e*P	Pn	17 56 25.0	+0.8
BLLM	Bellamira	2.17	333	*e*P	Pn	17 56 24.8	+0.7
BLLM	Bellamira	2.17	333	*e*P	Pn	17 56 24.8	+0.7
CUI	Cuipilapa	2.19	112	*e*P	Pb	17 56 26.7	-1.0
CUI				*e*S	Sb	17 56 53.4	-1.3
PACA	Pacayal	2.23	331	*e*P	Pn	17 56 26.1	+1.1
PACA	Pacayal	2.23	331	*e*P	Pn	17 56 26.1	+1.1
FAGO	Alcalda de S	2.34	338	*e*P	Pn	17 56 27.8	+1.3
FAGO	Alcalda de S	2.34	338	*e*P	Pn	17 56 27.8	+1.3
JTS	Las Juntas de	2.53	118	Pn	Pn	17 56 29.9	+0.9
	comp=Z,26nm,0.3s,baz=8.8,slow=18,SNR=39						
JTS				Sn	Sn	17 57 00.7	+0.8
	comp=Z,229nm,0.3s,baz=360,slow=19,SNR=8.5						
JTS	Las Juntas de	2.53	118	*e*P	Pn	17 56 30.2	+1.1
JTS	Las Juntas de	2.53	118		Pn	17 56 30.2	+1.1
TGUH	Tegucigalpa,Un	2.54	359		Pn	17 56 31.0	+1.8
ARE1	Arenal 1	2.67	113	*e*P	Pn	17 56 32.4	+1.5
ARE1				*e*S	Sb	17 57 08.3	-0.2
CEDE	Laguna Cedeo	2.67	112	*e*P	Pn	17 56 33.2	+2.2
CEDE				*e*S	Sb	17 57 08.6	-0.1
LFRS	El Faro	2.77	320	*e*P	Pn	17 56 33.0	+0.5
ESPN	Las Esperanzas	2.94	76	*e*P	Pn	17 56 36.2	+1.6
ESPN	Las Esperanzas	2.94	76		Pn	17 56 36.1	+1.5
SRA1	San Ramn	3.04	117	*e*P	Pb	17 56 39.3	-2.9
CEVE	Cerro Verde	3.29	315	IAML		17 57 33.4	
	comp=Z,2μm,0.5s						
CEVE	Cerro Verde	3.29	315	IAML		17 57 33.4	
	comp=Z,2μm,0.5s						
HDC	Heredia	3.40	116	*e*P	Pb	17 56 45.3	-3.1
HDC	Heredia	3.40	116		Pn	17 56 40.7	-0.4
SJS	Escuela Geolog	3.48	116	*e*P	Pb	17 56 47.4	-2.3
LCR2	La Lucha 2	3.62	119	*e*P	Pn	17 56 46.6	+2.5
LCR2				*e*S	Sn	17 57 26.8	-0.1
EDDO	Dominical	3.99	124	*e*P	Pn	17 56 51.3	+2.2
EDPN	Palmar Norte	4.48	124	*e*P	Pn	17 56 58.7	+2.8
EDBA	Buenos Aires	4.53	121	*e*P	Pn	17 56 59.0	+2.5
APG	El Apazote	4.70	318	Pn	Pn	17 57 00.8	+1.8
	baz=148,slow=11						
PTJ1	Puerto Jimnez	4.86	127	*e*P	Pn	17 57 04.1	+3.1
EDSV	San Vito	4.96	122	*e*P	Pn	17 57 06.1	+3.5
BRU2	Volcan	5.21	121	*e*P	Pn	17 57 09.4	+3.4
ICCO	Coco Island	5.93	178	*e*P	Pn	17 57 14.5	-1.2
CCIG	Comitan	6.73	315		Pn	17 57 29.2	+2.3
BCIP	Isla Barro Col	7.63	107		Pn	17 57 41.6	+2.5
TEIG	Tepich	8.73	353	Pn	Pn	17 58 01.0	+6.8
	comp=Z,1.1nm,0.3s,baz=283,slow=0.0,SNR=6.9						
TEIG				LR	LR	18 01 43.0	
	comp=Z,4μm,21.7s,baz=254,slow=42						
CMIG	Matias Romero	9.27	308	Pn	Pn	17 58 03.8	+2.1
	comp=Z,4.8nm,0.3s,baz=112,slow=9.7,SNR=25						
FSCY	Frank Sound, G	9.70	36		Pn	17 58 10.1	+2.6
MTDJ	Mount Denham	11.50	53		Pn	17 58 35.8	+3.5
DBBC	Dabeiba	11.74	111	*e*P	Pn	17 58 41.1	+5.4
SJCC	San Jacinto, C	11.94	97	*e*P	Pn	17 58 40.1	+1.7
CBOC	Ciudad Bolivar	12.41	116	*e*P	Pn	17 58 50.1	+5.2
PAYG	Puerto Ayora	12.48	194		Pn	17 58 48.4	+2.8
TLIG	Tlapa	12.52	300		Pn	17 58 49.3	+3.0
ZARC	Zaragoza, Cauc	12.83	107	*e*P	P	17 58 57.6	-3.8
YOTC	Yotoco, Valle	13.11	124	*e*P	Pn	17 58 51.8	-2.6
GUY2C	Guyana, Caldas	13.28	117	*e*P	Pn	17 59 00.2	+3.2
RREF	El Recreo	13.45	118	*e*P	Pn	17 59 03.4	+3.9
PTBC	PUERTO BERRIO,	13.53	110	*e*P	Pn	17 59 03.4	+3.3
POPC	Popayan, Colom	13.73	130	*e*P	Pn	17 59 07.1	+4.1
SOTA	Rioblanco	14.05	131	*e*P	Pn	17 59 10.9	+3.3
OCAC	Ocana	14.07	102	*e*P	P	17 59 15.1	-0.3
PCON	Cinco Dias	14.08	130	*e*P	Pn	17 59 11.4	+3.3
ROSC	El Rosal	14.38	116	Pn	Pn	17 59 11.1	-0.9
	baz=92,slow=23,SNR=0.9						
ROSC	El Rosal	14.38	116	Pn	Pn	17 59 13.8	+1.8
CHIC	Chingaza	14.99	116	*e*P	P	17 59 26.8	+0.9
RUSC	La Rusia	15.04	111	*e*P	P	17 59 25.7	-0.8
RUSC	La Rusia	15.04	111		Pn	17 59 23.0	+1.9
FLOC	Florencia	15.13	130		P	17 59 24.9	-2.1
SDV	Santo Domingo	16.53	98	Pn	Pn	17 59 37.2	-3.0
	comp=Z,0.4nm,0.3s,baz=319,slow=18,SNR=1.6						
SDV	Santo Domingo	16.53	98		Pn	17 59 40.5	+0.3
SDV				IAmb	IAmb	17 59 45.7	
	comp=Z,94nm,1.2s						
SDV	Santo Domingo	16.53	98	*e*P	Pn	17 59 40.3	+0.1
SDV				*e*S	S	18 02 52.7	-3.0
DWPF	Disney Wildern	17.39	17	P	P	17 59 51.4	-0.5
	baz=199						
ZAIG	Zacatecas	18.43	309	P	Pn	18 00 04.8	+0.9
553A	Crawfordville	18.77	8	P	Pn	18 00 08.5	+0.9
553A				IAmb	IAmb	18 00 17.0	
	comp=Z,55nm,0.8s						
BAUV	El Baul	19.04	96	*e*P	Pn	18 00 16.9	+5.8
451A	Vernon	19.07	4	P	Pn	18 00 12.0	+0.8
451A				IAmb	IAmb	18 00 22.5	
	comp=Z,116nm,1.2s						
441A	DeRidder	19.93	345	P	Pn	18 00 21.8	+0.2
HKT	Hockley	20.03	338	P	Pn	18 00 22.1	-0.5
HKT				IAmb	IAmb	18 00 38.4	
	comp=Z,96nm,1.4s						
344A	Westbrook Farm	20.11	351	P	P	18 00 21.8	-0.1
344A				IAmb	IAmb	18 00 42.0	
	comp=Z,64nm,0.9s						
TIGA	Tifton	20.12	9	P	P	18 00 21.9	0.0
TIGA	Tifton	20.12	9	P	Pn	18 00 23.6	-0.2
	baz=190,SNR=6.1						
833A	Chaparral WMA,	20.25	328	P	P	18 00 23.6	+0.3
833A	Chaparral WMA,	20.25	328	P	P	18 00 24.4	+1.1
	baz=143,SNR=14						
342A	Flagon Creek P	20.33	347	P	P	18 00 24.1	-0.1
342A				IAmb	IAmb	18 00 27.6	
	comp=Z,82nm,0.9s						
250A	Grady	20.39	2	P	Pn	18 00 26.9	-0.1
250A				IAmb	IAmb	18 00 44.0	
	comp=Z,74nm,1.1s						
ATAH	Atahualpa	20.49	154	P	Pn	18 00 29.8	+1.1
	comp=Z,34nm,1.1s,baz=330,slow=7.8,SNR=14						
ATAH				LR	LR	18 07 23.7	
	comp=Z,3μm,19.3s,baz=342,slow=34						
255A	Hazlehurst	20.79	11	P	P	18 00 29.9	+0.7
255A				IAmb	IAmb	18 00 50.4	
	comp=Z,134nm,1.2s						
VBMS	Vicksburg	20.84	352	P	P	18 00 30.9	+1.2
VBMS				IAmb	IAmb	18 00 44.3	
	comp=Z,61nm,0.9s						
VBMS	Vicksburg	20.84	352	P	Pn	18 00 31.1	-1.1
	baz=171						
152A	Waverly Hall	21.19	6	P	P	18 00 33.9	+0.4
NATX	Nacogdoches	21.30	342	P	P	18 00 35.3	+0.7
NATX				IAmb	IAmb	18 00 49.3	
	comp=Z,82nm,0.9s						
NATX	Nacogdoches	21.30	342	P	P	18 00 36.1	+1.4
	baz=159						
154A	Montrose	21.35	10	P	P	18 00 35.7	+0.5
SJG	San Juan	21.39	70	P	P	18 00 34.9	-0.9
	comp=Z,13nm,0.7s,baz=300,slow=20,SNR=1.3						
SJG				LR	LR	18 08 44.0	
	comp=Z,378nm,20.4s,baz=238,slow=37						
SJG	San Juan	21.39	70	P	P	18 00 34.6	-1.2
SJG				IAmb	IAmb	18 00 57.2	
	comp=Z,52nm,1.2s						
LRAL	Lakeview Retre	21.43	1	P	P	18 00 37.4	+1.3
LRAL				IAmb	IAmb	18 00 40.8	
	comp=Z,48nm,0.9s						
LRAL	Lakeview Retre	21.43	1	P	P	18 00 37.4	+1.3
	baz=180,SNR=19						
435B	Jarrell	21.45	335	P	P	18 00 37.3	+0.9
	baz=151						
PDPR	Patillas Dam,	21.48	70	P	P	18 00 40.8	+4.0
PDPR				IAmb	IAmb	18 00 57.3	
	comp=Z,58nm,1.1s						
Z50A	Ashland	21.68	3	P	P	18 00 39.8	+1.0
Z50A				IAmb	IAmb	18 00 43.0	
	comp=Z,54nm,1.1s						
Z50A	Ashland	21.68	3	P	P	18 00 40.0	+1.2
	baz=183,SNR=5.1						
Z51A	Franklin	21.79	5	P	P	18 00 40.8	+0.8
Z51A				IAmb	IAmb	18 00 44.4	
	comp=Z,88nm,1.2s						
157A	Early Branch	21.84	14	P	P	18 00 42.1	+1.7
	baz=196						
237A	Washetta, Mont	21.88	340	P	P	18 00 42.0	+1.0
237A				IAmb	IAmb	18 00 57.6	
	comp=Z,63nm,1.0s						
MTP	Monte Pirata	21.94	70	P	P	18 00 42.1	+0.4
MTP				IAmb	IAmb	18 01 02.4	
	comp=Z,50nm,1.1s						
GOGA	Godfrey	22.07	8	P	P	18 00 43.4	+0.4
GOGA				IAmb	IAmb	18 01 01.4	
	comp=Z,64nm,1.1s						
JCT	Junction City	22.20	330	P	P	18 00 43.8	-0.6
JCT				IAmb	IAmb	18 00 55.3	
	comp=Z,58nm,1.2s						
PCRV	Puerto La Cruz	22.22	91	P	P	18 00 45.9	+1.1
	comp=Z,26nm,0.6s,baz=109,slow=2.3,SNR=8.6						
Z41A	Richland Creek	22.25	348	P	P	18 00 44.1	-0.8
Z41A				IAmb	IAmb	18 01 08.0	
	comp=Z,47nm,0.8s						
Z41A	Richland Creek	22.25	348	P	P	18 00 45.9	+1.0
	baz=165						
Y49A	Blount Mountai	22.26	2	P	P	18 00 45.8	+0.8
Y49A				IAmb	IAmb	18 00 56.4	
	comp=Z,38nm,0.8s						
PLCV	Puerto La Cruz	22.27	91	P	P	18 00 45.9	+0.6
Y52A	Lilburn	22.44	7	P	P	18 00 48.8	+1.8
Y52A				IAmb	IAmb	18 00 50.8	
	comp=Z,66nm,1.1s						
Y52A	Lilburn	22.44	7	P	P	18 00 47.4	+0.4
	baz=188,SNR=11						
NHSC	New Hope	22.45	16	P	P	18 00 47.3	+0.3
	baz=198						
WHTX	Lake Whitney,	22.47	337	P	P	18 00 46.8	-0.4
WHTX				IAmb	IAmb	18 01 11.2	
	comp=Z,52nm,0.9s						
WHTX	Lake Whitney,	22.47	337	P	P	18 00 46.9	-0.4
	baz=153,SNR=11						
Z57A	Bowman	22.50	14	P	P	18 00 46.9	-0.6
	baz=197						
STVI	Saint Thomas	22.55	70	P	P	18 00 48.3	0.0
STVI				IAmb	IAmb	18 00 56.9	
	comp=Z,58nm,0.9s						
WLAR	White Oak Lake	22.73	347	P	P	18 00 49.0	-1.0
WLAR				IAmb	IAmb	18 01 13.8	
	comp=Z,56nm,1.0s						
Z58A	St. Stephen	22.77	16	P	P	18 00 50.9	+0.5
	baz=199						
Z38A	Mt. Pleasant	22.79	343	P	P	18 00 51.5	+0.8
Z59A	Georgetown, SC	22.83	17	P	P	18 00 51.4	+0.4
	baz=200						
X48A	Hartselle	22.84	0	P	P	18 00 50.4	-0.8
Y55A	Saluda	22.86	12	P	P	18 00 51.2	-0.2
	baz=193,SNR=7.9						
FPAL	Fort Paine	22.98	3	P	P	18 00 52.9	+0.3
FPAL				IAmb	IAmb	18 01 09.8	
	comp=Z,52nm,1.4s						
OXF	Oxford	22.99	355	P	P	18 00 52.2	-0.4
OXF	Oxford	22.99	355	P	P	18 00 52.3	-0.4
	baz=174,SNR=13						
X51A	Calhoun	23.06	5	P	P	18 00 54.0	+0.5
X51A				IAmb	IAmb	18 01 12.9	
	comp=Z,43nm,1.1s						
X51A	Calhoun	23.06	5	P	P	18 00 53.3	-0.1
	baz=186						
HODGE	Hodges	23.07	11	P	P	18 00 54.3	+0.7
HODGE				IAmb	IAmb	18 00 56.0	
	comp=Z,45nm,1.2s						
HPIG		23.17	314	P	P	18 00 55.9	+1.0

X53A	Estanollee	23.17	8	P	P	18 00 55.3	+0.7
	baz=190,SNR=5.1						
JSC	Jenkinsville	23.32	13	P	P	18 00 57.3	+1.2
Y58A	Scranton	23.34	16	P	P	18 00 56.4	0.0
	baz=199						
X54A	Belton	23.36	10	P	P	18 00 56.0	-0.5
	baz=192						
PLAL	Pickwick Lake	23.39	358	P	P	18 00 55.9	-0.8
X55A	Gracelyn & Ava	23.42	12	P	P	18 00 56.7	-0.4
	baz=194						
X40A	Basin Creek Fa	23.44	348	P	P	18 00 56.8	-0.5
X40A	Basin Creek Fa	23.44	348	P	P	18 00 57.0	-0.3
	baz=166,SNR=6.8						
TX31	Lajitas Ar. Si	23.45	322	P	P	18 00 57.7	+0.2
TX31				IAmb	IAmb	18 01 14.1	
	comp=Z,36nm,0.8s						
TX32	Lajitas Array	23.45	322	P	P	18 00 57.7	+0.1
TX32				IAmb	IAmb	18 01 14.1	
	comp=Z,36nm,0.8s						
TXAR	Lajitas Array	23.45	322	P	P	18 00 58.5	+1.0
	comp=Z,9.8nm,0.9s,baz=134,slow=9.5,SNR=63						
TXAR				ScP	ScP	18 08 26.0	+4.0
	comp=Z,1.1nm,0.7s,baz=152,slow=5.8,SNR=6.9						
TXAR	Lajitas Array	23.45	322	P	P	18 00 57.5	-0.1
X56A	White Oak	23.57	13	P	P	18 00 58.0	-0.5
	baz=195,SNR=7.1						
Z35A	Perchaven, San	23.59	339	P	P	18 00 58.5	-0.3
Z35A				IAmb	IAmb	18 01 17.7	
	comp=Z,50nm,0.8s						
UALR	University of	23.63	349	P	P	18 00 58.3	-0.9
UALR				IAmb	IAmb	18 01 00.2	
	comp=Z,64nm,1.2s						
SWET	Sewanee	23.63	3	P	P	18 00 59.1	-0.2
SWET				IAmb	IAmb	18 01 01.6	
	comp=Z,78nm,1.3s						
W50A	Signal Mountai	23.65	4	P	P	18 00 59.0	-0.4
W50A				IAmb	IAmb	18 01 12.2	
	comp=Z,35nm,0.7s						
MIAR	Mount Ida	23.66	347	P	P	18 00 58.8	-0.6
MIAR				IAmb	IAmb	18 01 08.8	
	comp=Z,34nm,0.8s						
W52A	Murphy	23.67	7	P	P	18 00 59.9	+0.2
W52A				IAmb	IAmb	18 01 11.2	
	comp=Z,38nm,1.0s						
PAULI	Pauline	23.73	11	P	P	18 00 59.9	-0.3
BIRD	Birdtown, Kers	23.84	14	P	P	18 01 01.6	+0.4
W54A	Cherokee Point	23.92	10	P	P	18 01 01.5	-0.5
	baz=192,SNR=10						
ABTX	Abilene, Hawle	23.92	333	P	P	18 01 01.2	-0.9
ABTX				IAmb	IAmb	18 01 25.6	
	comp=Z,29nm,0.8s						
ABTX	Abilene, Hawle	23.92	333	P	P	18 01 01.7	-0.3
	baz=149						
CPCT	Cooper Cave	23.96	5	P	P	18 01 02.5	+0.1
CPCT				IAmb	IAmb	18 01 20.9	
	comp=Z,43nm,1.0s						
SABA	Saba	23.98	72	eP	P	18 00 54.8	-7.9
H06E1	SOCORRO T-PHAS	23.98	290	T	T	18 25 55.6	
	SNR=254						
W41B	Gary Mavity, V	24.00	350	P	P	18 01 01.3	-1.4
W41B				IAmb	IAmb	18 01 04.3	
	comp=Z,58nm,1.3s						
W41B	Gary Mavity, V	24.00	350	P	P	18 01 02.1	-0.6
	baz=168,SNR=16						
X58A	Rowland	24.04	16	P	P	18 01 02.1	-1.0
	baz=199						
WHAR	Wooly Hollow	24.12	350	P	P	18 01 02.8	-1.1
WHAR				IAmb	IAmb	18 01 12.2	
	comp=Z,96nm,1.5s						
V48A	Smith Brothers	24.13	1	P	P	18 01 02.7	-1.2
V48A				IAmb	IAmb	18 01 15.5	
	comp=Z,28nm,0.9s						
KMSC	Kings Mountain	24.13	12	P	P	18 01 03.3	-0.6
KMSC	Kings Mountain	24.13	12	P	P	18 01 03.4	-0.5
	baz=194						
X37A	Clayton	24.15	343	P	P	18 01 04.5	+0.4
SEUS	St. Eustatius	24.20	73	eP	P	18 01 06.8	+2.1
TKL	Tuckaleechee C	24.25	7	P	P	18 01 02.7	-2.4
	comp=Z,12nm,0.5s,baz=261,slow=13,SNR=4.0						
TKL				LR	LR	18 10 15.4	
	comp=Z,920nm,21.4s,baz=239,slow=36						
TKL	Tuckaleechee C	24.25	7	P	P	18 01 01.7	-3.3
TKL				IAmb	IAmb	18 01 15.8	
	comp=Z,59nm,1.1s						
X59A	McDuffie Farm,	24.27	18	P	P	18 01 03.9	-1.3
	baz=201						
W56A	Indian Trail	24.29	13	P	P	18 01 05.9	+0.6
	baz=196						
W39A	Magazine	24.33	347	P	P	18 01 05.4	-0.4
W39A				IAmb	IAmb	18 01 15.3	
	comp=Z,29nm,1.0s						
W39A	Magazine	24.33	347	P	P	18 01 05.2	-0.5
	baz=164,SNR=9.4						
V51A	Loudon	24.33	6	P	P	18 01 04.3	-1.5
V51A				IAmb	IAmb	18 01 23.9	
	comp=Z,84nm,1.4s						
SKI	Saint Kitts	24.39	73	eP	P	18 01 06.8	+0.2
W57A	Gilead	24.44	14	P	P	18 01 06.3	-0.4
W57A	Gilead	24.44	14	P	P	18 01 07.0	+0.2
	baz=197						
V52A	Sevierville	24.45	7	P	P	18 01 07.0	+0.1
X60A	Albert Glenn T	24.46	19	P	P	18 01 07.5	+0.5
	baz=202						
CLTN	Cedars of Leba	24.49	2	P	P	18 01 06.2	-1.0
CLTN				IAmb	IAmb	18 01 09.5	
	comp=Z,50nm,1.1s						
W58A	Raeford	24.51	16	P	P	18 01 08.0	+0.5
	baz=199						
WVT	Waverly	24.52	359	P	P	18 01 05.9	-1.6
WVT	Waverly	24.52	359	P	P	18 01 07.7	+0.2
	baz=178						
V54A	Nebo	24.63	10	P	P	18 01 09.2	+0.6
	baz=192,SNR=6.7						
FCAR	Ozark Folk Cen	24.68	350	P	P	18 01 07.7	-1.3
LCAR	Lake Charles	24.71	352	P	P	18 01 07.9	-1.3
V55A	Taylorsville	24.84	12	P	P	18 01 09.7	-0.8
V55A	Taylorsville	24.84	12	P	P	18 01 11.5	+1.1
	baz=194						
U49A	Red Boiling Sp	24.93	3	P	P	18 01 09.6	-1.7
U49A				IAmb	IAmb	18 01 14.0	
	comp=Z,52nm,1.1s						
X34A	Smith Ranch, M	24.94	339	P	P	18 01 10.6	-0.7
V56A	Mocksville	24.95	13	P	P	18 01 12.5	+1.1
	baz=196						
HICK	Hickman	24.99	356	P	P	18 01 11.4	-0.3
GRGR	Grenville	25.03	86	eP	P	18 01 08.8	-3.6
W35A	Tecumseh	25.12	341	P	P	18 01 12.5	-0.5
TZTN	Tazewell	25.15	7	P	P	18 01 12.2	-1.0
TZTN				IAmb	IAmb	18 01 17.5	
	comp=Z,45nm,1.3s						
TZTN	Tazewell	25.15	7	P	P	18 01 12.7	-0.5
	baz=188						
PARMO	Parma	25.15	355	P	P	18 01 11.6	-1.5
V57A	Coltrane Farms	25.19	14	P	P	18 01 13.7	+0.2
	baz=197,SNR=6.1						
U40A	Yellville	25.26	349	P	P	18 01 13.2	-1.0
U40A				IAmb	IAmb	18 01 23.6	
	comp=Z,32nm,0.9s						
U40A	Yellville	25.26	349	P	P	18 01 13.7	-0.5
	baz=167,SNR=22						
V58A	Windy Hill, Pi	25.27	16	P	P	18 01 13.9	-0.3
V58A				IAmb	IAmb	18 01 32.6	
	comp=Z,36nm,0.8s						
V58A	Windy Hill, Pi	25.27	16	P	P	18 01 15.3	+1.0
	baz=199,SNR=13						
PBMO	Poplar Bluff	25.33	354	P	P	18 01 13.5	-1.3
PBMO				IAmb	IAmb	18 01 23.8	
	comp=Z,60nm,1.1s						
W61A	Ground Anchor	25.33	20	P	P	18 01 14.2	-0.6
	baz=204						
T47A	Sharon Grove	25.37	0	P	P	18 01 14.1	-1.1
T47A				IAmb	IAmb	18 01 17.5	
	comp=Z,40nm,0.8s						
U54A	Nelsons Funny	25.38	10	P	P	18 01 15.4	0.0
U54A				IAmb	IAmb	18 01 30.5	
	comp=Z,26nm,0.6s						
U54A	Nelsons Funny	25.38	10	P	P	18 01 15.6	+0.2
	baz=192						
FNO	Franklin	25.39	340	P	P	18 01 14.4	-0.9
HHAR	Hobbs	25.41	347	P	P	18 01 14.1	-1.5
WMOK	Wichita Mounta	25.41	337	P	P	18 01 14.4	-1.2
WMOK				IAmb	IAmb	18 01 24.7	
	comp=Z,72nm,1.2s						
SVB	Belmont	25.42	83	eP	P	18 01 20.7	+4.8
V59A	Middlesex	25.49	17	P	P	18 01 16.5	+0.2
	baz=201						
U56A	King	25.49	13	P	P	18 01 16.4	0.0
U56A				IAmb	IAmb	18 01 20.3	
	comp=Z,88nm,1.5s						
U56A	King	25.49	13	P	P	18 01 16.5	+0.2
	baz=196						
T50A	Nancy	25.50	4	P	P	18 01 16.5	+0.2
	baz=185						
U55A	TA2, Sparta	25.50	12	P	P	18 01 16.2	-0.3
	baz=194						
TUL1	Leonard	25.51	344	P	P	18 01 15.0	-1.4
TUL1	Leonard	25.51	344	P	P	18 01 15.8	-0.6
	baz=160,SNR=16						
NNA	Nana	25.51	156	P	P	18 01 18.0	+1.3
	comp=Z,13nm,0.9s,baz=320,slow=7.5,SNR=4.2						
NNA				LR	LR	18 10 11.1	
	comp=Z,908nm,18.2s,baz=325,slow=34						
NNA	Nana	25.51	156	P	P	18 01 15.2	-1.5
NNA				IAmb	IAmb	18 01 37.1	
	comp=Z,44nm,1.2s						
T51A	Gray	25.52	6	P	P	18 01 16.0	-0.5
	baz=187						
T49A	Edmonton	25.54	3	P	P	18 01 15.5	-1.2
T49A				IAmb	IAmb	18 01 20.5	
	comp=Z,55nm,1.3s						
T49A	Edmonton	25.54	3	P	P	18 01 15.8	-0.9
	baz=184,SNR=11						
T42A	Van Buren	25.65	353	P	P	18 01 16.2	-1.5
T42A				IAmb	IAmb	18 01 26.5	
	comp=Z,29nm,0.9s						
U38A	Gravette	25.66	347	P	P	18 01 16.5	-1.3
U38A				IAmb	IAmb	18 01 27.0	
	comp=Z,38nm,1.1s						
T53A	Wise	25.72	9	P	P	18 01 18.3	-0.1
	baz=190						
T52A	Hallie	25.78	8	P	P	18 01 18.8	-0.1
	baz=189						
U57A	Blanch	25.82	15	P	P	18 01 18.8	-0.4
	baz=198,SNR=7.4						
T54A	Tazewell	25.95	10	P	P	18 01 20.2	-0.3
	baz=192						
U58A	Oxford	25.99	16	P	P	18 01 20.7	-0.1
	baz=200						
V62A	Hyde County Ai	26.04	21	P	P	18 01 21.3	+0.1
	baz=206						
T55A	Pulaski	26.15	12	P	P	18 01 21.2	-1.1
	baz=194						
U59A	Littleton	26.16	17	P	P	18 01 24.1	+1.7
U59A	Littleton	26.16	17	P	P	18 01 22.2	-0.2
	baz=201						
MNTX	Cornudas Mount	26.17	323	P	P	18 01 21.7	-0.9
MNTX	Cornudas Mount	26.17	323	P	P	18 01 22.2	-0.3
	baz=136,SNR=8.5						
S50A	Richmond	26.18	5	P	P	18 01 22.3	-0.3
	baz=186						
T56A	Rocky Mt	26.23	13	P	P	18 01 22.7	-0.3
	baz=196						
S49A	Springfield	26.23	3	P	P	18 01 22.3	-0.6
	baz=184						
S51A	Beattyville	26.23	7	P	P	18 01 22.1	-0.8
S51A				IAmb	IAmb	18 01 35.6	
	comp=Z,18nm,0.6s						
S51A	Beattyville	26.23	7	P	P	18 01 22.9	-0.1
	baz=188						
T57A	Hurt	26.38	14	P	P	18 01 25.2	+0.9
T57A				IAmb	IAmb	18 01 37.6	
	comp=Z,31nm,0.7s						
T57A	Hurt	26.38	14	P	P	18 01 23.2	-1.1
	baz=198,SNR=7.3						
U60A	Pendleton	26.46	18	P	P	18 01 25.0	-0.1
	baz=202						
MSTX	Muleshoe	26.49	330	P	P	18 01 24.3	-1.3
MSTX	Muleshoe	26.49	330	P	P	18 01 24.2	-1.4
	baz=144,SNR=8.3						
T58A	Grand View Acr	26.51	16	P	P	18 01 25.3	-0.2
	baz=199						
WCI	Wyandotte Cave	26.62	2	P	P	18 01 25.0	-1.6
WCI				IAmb	IAmb	18 01 37.7	
	comp=Z,21nm,0.7s						
WCI	Wyandotte Cave	26.62	2	P	P	18 01 25.5	-1.0
	baz=182						
S39A	Bolivar	26.64	349	P	P	18 01 25.5	-1.2
S39A				IAmb	IAmb	18 01 34.5	
	comp=Z,29nm,0.8s						
T35A	Sooner Cattle	26.65	343	P	P	18 01 26.1	-0.7
T35A				IAmb	IAmb	18 01 36.1	
	comp=Z,25nm,1.0s						
CCM	Cathedral Cave	26.68	353	P	P	18 01 25.1	-2.0
CCM				IAmb	IAmb	18 01 27.8	
	comp=Z,45nm,1.1s						
CCM	Cathedral Cave	26.68	353	P	P	18 01 25.5	-1.6
	baz=171						
S54A	Dingess, Beckl	26.71	10	P	P	18 01 26.5	-0.9
	baz=193						
AMTX	Amarillo	26.73	333	P	P	18 01 26.3	-1.4
AMTX				IAmb	IAmb	18 01 48.1	
	comp=Z,37nm,0.9s						
AMTX	Amarillo	26.73	333	P	P	18 01 26.7	-1.0
	baz=147						
R49A	Shelbyville	26.74	4	P	P	18 01 26.3	-1.2
R49A	Shelbyville	26.74	4	P	P	18 01 26.8	-0.7
	baz=184						
R50A	Paris	26.79	5	P	P	18 01 26.5	-1.5
R50A	Paris	26.79	5	P	P	18 01 27.4	-0.6
	baz=186						
T59A	Double "B" Far	26.81	17	P	P	18 01 29.1	+0.9
T59A				IAmb	IAmb	18 01 44.8	
	comp=Z,62nm,1.5s						
T59A	Double "B" Far	26.81	17	P	P	18 01 27.5	-0.7
	baz=201						
S55A	Lewisburg	26.84	12	P	P	18 01 28.2	-0.3
	baz=194						
R51A	Hillsboro	26.88	6	P	P	18 01 28.2	-0.6
	baz=188						
S56A	Natural Bridge	26.95	13	P	P	18 01 28.2	-1.3
	baz=196						
U32A	Winter Ranch,	26.95	339	P	P	18 01 29.3	-0.3
R53A	Hurricane	27.13	9	P	P	18 01 29.7	-1.4
	baz=191						
R54A	Victor	27.14	11	P	P	18 01 30.4	-0.9
	baz=193						
S57A	Dark Hollow, R	27.18	14	P	P	18 01 31.7	+0.2
S57A				IAmb	IAmb	18 01 42.4	
	comp=Z,21nm,0.7s						
S57A	Dark Hollow, R	27.18	14	P	P	18 01 32.0	+0.5
	baz=198						
S58A	Poland Farm, P	27.27	16	P	P	18 01 32.7	+0.4
	baz=200						
Q48A	North Vernon	27.34	3	P	P	18 01 32.9	-0.1
	baz=183						
Q50A	Georgetown	27.38	6	P	P	18 01 33.6	+0.3
	baz=187						
R55A	Marlinton	27.41	12	P	P	18 01 33.6	0.0
R55A	Marlinton	27.41	12	P	P	18 01 33.7	0.0
	baz=195						
Q49A	Aurora	27.46	4	P	P	18 01 34.3	+0.2
	baz=185						
S59A	Mechanicsville	27.62	17	P	P	18 01 35.4	-0.1
	baz=201						
Q51A	Peebles	27.62	7	P	P	18 01 35.1	-0.4
Q51A	Peebles	27.62	7	P	P	18 01 35.0	-0.5
	baz=188,SNR=13						
R58B	Mineral	27.64	16	P	P	18 01 37.0	+1.3
R58B	Mineral	27.64	16	P	P	18 01 35.7	0.0
	baz=200						
R56A	Bull Pasture M	27.69	13	P	P	18 01 36.1	0.0
	baz=196,SNR=5.3						
Q52A	Bidwell	27.70	8	P	P	18 01 35.6	-0.5
	baz=190						
Q53A	Leroy	27.71	10	P	P	18 01 36.2	-0.1
	baz=192						
S60A	Water View	27.76	18	P	P	18 01 36.1	-0.6
	baz=202						
R57A	Stanardsville	27.79	15	P	P	18 01 36.1	-0.9
	baz=198,SNR=6.4						
P48A	Milroy	27.89	3	P	P	18 01 36.6	-1.2
P48A	Milroy	27.89	3	P	P	18 01 37.5	-0.4
	baz=184						
R58A	Rapidan	27.93	16	P	P	18 01 37.8	-0.4
	baz=199						
Q54A	Coxs Mills	27.95	11	P	P	18 01 38.5	0.0
Q54A				IAmb	IAmb	18 01 47.7	
	comp=Z,24nm,1.1s						
Q54A	Coxs Mills	27.95	11	P	P	18 01 37.7	-0.7
	baz=193						
P49A	Miami Univ. Ec	28.00	4	P	P	18 01 38.5	-0.4
	baz=185						
R59A	King George, V	28.08	17	P	P	18 01 39.5	-0.1
	baz=201						
Q55A	Buckhannon	28.11	12	P	P	18 01 39.0	-0.9
	baz=195						
P51A	Williamsport	28.11	7	P	P	18 01 39.2	-0.6
P51A	Williamsport	28.11	7	P	P	18 01 39.1	-0.7
	baz=188						
P50A	Jamestown	28.15	6	P	P	18 01 39.9	-0.4
	baz=187						
121A	Cookes Peak, D	28.20	321	P	P	18 01 40.2	-0.8
	baz=133						
Q56A	Snyder Ridge,	28.34	13	P	P	18 01 41.9	0.0
Q56A	Snyder Ridge,	28.34	13	P	P	18 01 41.4	-0.5
	baz=197						
P53A	Whipple	28.34	10	P	P	18 01 42.0	0.0
P53A				IAmb	IAmb	18 01 44.3	
	comp=Z,56nm,1.1s						
P53A	Whipple	28.34	10	P	P	18 01 41.4	-0.6
	baz=192,SNR=10						
P52A	Corning	28.38	8	P	P	18 01 42.1	-0.1
	baz=190						
319A	Douglas	28.40	318	P	P	18 01 43.4	+0.7
319A				IAmb	IAmb	18 01 58.6	
	comp=Z,38nm,1.5s						
Q57A	Strasburg	28.52	14	P	P	18 01 43.5	0.0
	baz=198						
P38A	Dawn	28.56	350	P	P	18 01 42.3	-1.5
P38A				IAmb	IAmb	18 01 52.0	
	comp=Z,31nm,0.7s						
Q58A	Fox Den Farm,	28.61	16	P	P	18 01 43.7	-0.6
	baz=200						
P54A	Burton	28.62	11	P	P	18 01 44.3	-0.1
	baz=194						
P55A	Reedsville	28.65	12	P	P	18 01 44.2	-0.5
	baz=195						
O49A	Covington	28.68	5	P	P	18 01 43.7	-1.3
O49A				IAmb	IAmb	18 01 53.7	
	comp=Z,22nm,1.0s						
O49A	Covington	28.68	5	P	P	18 01 43.7	-1.3
	baz=186						
O48A	Farmland	28.70	3	P	P	18 01 44.1	-1.0
	baz=184						
O50A	Cable	28.70	6	P	P	18 01 44.4	-0.8
	baz=187,SNR=15						
R61A	Willards	28.75	20	P	P	18 01 44.8	-0.7
	baz=205						
SFIN	Lafayette	28.76	0	P	P	18 01 44.0	-1.6
SFIN				IAmb	IAmb	18 01 53.1	
	comp=Z,37nm,1.4s						
SFIN	Lafayette	28.76	0	P	P	18 01 44.3	-1.3
	baz=180						
MCWV	Mont Chateau	28.79	12	P	P	18 01 44.3	-1.6
	baz=195						
O51A	Pataskala	28.82	7	P	P	18 01 45.6	-0.6
	baz=189,SNR=5.2						
ACSO	Alum Creek Sta	28.86	7	P	P	18 01 45.9	-0.6
ACSO				IAmb	IAmb	18 01 55.7	
	comp=Z,26nm,0.6s						
P56A	Dayton Farm, R	28.86	14	P	P	18 01 45.4	-1.2
	baz=197						
O52A	Adamsville	28.89	9	P	P	18 01 46.2	-0.6
O52A				IAmb	IAmb	18 01 56.1	
	comp=Z,24nm,0.6s						
O52A	Adamsville	28.89	9	P	P	18 01 46.3	-0.5
	baz=191,SNR=5.5						
HDIL	Hopedale	28.99	357	P	P	18 01 46.8	-0.9
HDIL				IAmb	IAmb	18 01 56.5	
	comp=Z,38nm,0.8s						
P57A	Homestead Farm	29.04	15	P	P	18 01 49.3	+1.1
P57A				IAmb	IAmb	18 01 51.1	
	comp=Z,38nm,1.1s						
P57A	Homestead Farm	29.04	15	P	P	18 01 46.9	-1.2
	baz=199,SNR=7.6						
O53A	New Philadelph	29.12	9	P	P	18 01 48.0	-0.8
	baz=192,SNR=8.7						
ANMO	Albuquerque	29.16	326	P	P	18 01 50.0	+0.5
	comp=Z,0.6nm,0.4s,baz=137,slow=15,SNR=2.2						
ANMO	Albuquerque	29.16	326	P	P	18 01 50.1	+0.5
O54A	Avella	29.20	11	P	P	18 01 49.3	-0.3
	baz=194						
P58A	Pank, Wackersv	29.23	16	P	P	18 01 49.7	-0.1
	baz=200						
N41A	Harden Midland	29.26	354	P	P	18 01 48.1	-2.0
N41A				IAmb	IAmb	18 01 58.4	
	comp=Z,39nm,1.2s						
SDMD	Soldier's Deli	29.28	17	P	P	18 01 49.8	-0.5
N47A	Urbana	29.29	2	P	P	18 01 49.3	-1.0
	baz=183						
N48A	Decatur	29.30	3	P	P	18 01 49.6	-0.8
	baz=184						
N50A	Nevada	29.37	6	P	P	18 01 50.7	-0.4
	baz=188						
N49A	Columbus Grove	29.42	5	P	P	18 01 50.5	-1.0
N49A	Columbus Grove	29.42	5	P	P	18 01 50.5	-1.0
	baz=186,SNR=11						
O55A	Ligonier	29.43	12	P	P	18 01 50.3	-1.3
	baz=196						
P59A	Jarrettsville	29.58	17	P	P	18 01 52.3	-0.7
	baz=202						
N52A	McGinn's Farm,	29.60	9	P	P	18 01 52.3	-0.8
	baz=191						
N51A	Ashland	29.61	7	P	P	18 01 53.2	0.0
	baz=190						
O56A	Blue Knob Stat	29.65	13	P	P	18 01 53.3	-0.3
	baz=197						
PTGA	Pitinga	29.68	112	P	P	18 01 52.4	-1.7
	comp=Z,5.0nm,0.8s,baz=304,slow=15,SNR=4.1						
PTGA				LR	LR	18 14 33.3	
	comp=Z,1µm,19.8s,baz=294,slow=38						
PTGA	Pitinga	29.68	112	P	P	18 01 53.6	-0.5
PTGA	Pitinga	29.68	112	eP	P	18 01 54.3	+0.2
N53A	Lisbon	29.72	10	P	P	18 01 53.3	-0.9
N53A				IAmb	IAmb	18 02 03.4	
	comp=Z,27nm,0.6s						
N53A	Lisbon	29.72	10	P	P	18 01 53.9	-0.3
	baz=192,SNR=6.4						
M44A	Midewin, Midew	29.78	359	P	P	18 01 53.2	-1.4
M44A				IAmb	IAmb	18 02 02.3	
	comp=Z,32nm,1.1s						
O57A	Amberson	29.82	15	P	P	18 01 54.5	-0.5
	baz=199,SNR=7.9						
T25A	Trinidad	29.84	332	P	P	18 01 56.6	+1.1
T25A				IAmb	IAmb	18 02 05.1	
	comp=Z,28nm,1.4s						
T25A	Trinidad	29.84	332	P	P	18 01 54.6	-0.9
	baz=144						
O58A	Lewisberry	29.93	16	P	P	18 01 55.0	-1.0
	baz=200						
MVL	Millersville	29.97	17	P	P	18 01 58.1	+1.8
M49A	Liberty Center	29.99	5	P	P	18 01 55.3	-1.2
	baz=186,SNR=7.7						
P60A	Greenville	30.00	18	P	P	18 01 56.1	-0.6
	baz=203						
M50A	Fremont	30.01	6	P	P	18 01 56.7	0.0
M50A				IAmb	IAmb	18 01 59.1	
	comp=Z,25nm,0.8s						
M50A	Fremont	30.01	6	P	P	18 01 55.7	-0.9
	baz=188						
N54A	Moraine State	30.02	11	P	P	18 01 55.8	-1.1
N54A				IAmb	IAmb	18 02 05.7	
	comp=Z,33nm,1.2s						
N54A	Moraine State	30.02	11	P	P	18 01 55.9	-0.9
	baz=194						
M51A	Elyria	30.04	8	P	P	18 01 56.2	-0.7
	baz=190						
N55A	Marion Center	30.05	13	P	P	18 01 56.6	-0.5
	baz=196						
PAGS	Pennsylvania G	30.08	16	P	P	18 01 57.5	+0.2
SSPA	Standing Stone	30.16	14	P	P	18 01 57.1	-0.9
SSPA				IAmb	IAmb	18 01 59.6	
	comp=Z,30nm,1.0s						
SSPA	Standing Stone	30.16	14	P	P	18 01 57.3	-0.7
	baz=198						
O59A	Robesonia	30.30	17	P	P	18 01 58.9	-0.5
	baz=202,SNR=7.2						
N56A	West Decatur	30.33	13	P	P	18 01 59.0	-0.7
	baz=197,SNR=5.2						
M52A	Chesterland	30.36	9	P	P	18 01 59.4	-0.4
	baz=191						
M53A	WI Miller and	30.37	10	P	P	18 01 59.0	-0.9
	baz=193,SNR=8.1						
L46A	Eue Claire	30.40	1	P	P	18 01 57.6	-2.6
L46A	Eue Claire	30.40	1	P	P	18 01 59.0	-1.2
	baz=182						
L47A	Sherwood	30.41	3	P	P	18 01 59.1	-1.1
	baz=184						
L48A	N Adams	30.42	4	P	P	18 01 59.5	-0.8
	baz=185						

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L42A  Oliver, Polo      30.46 356  P     P     18 01 58.6 -2.0
L42A                               IAmb  IAmb  18 02 09.1
      comp=Z,37nm,1.0s
N33A  J Bar K, Exete    30.48 345  P     P     18 01 59.9 -1.1
O60A  Telford           30.54  18  P     P     18 02 00.1 -1.2
      baz=203
L44A  Lake County Fo    30.56 359  P     P     18 02 00.5 -1.1
      baz=178
M54A  Oil Creek Stat    30.61  11  P     P     18 02 02.3 +0.2
M54A                               IAmb  IAmb  18 02 10.8
      comp=Z,34nm,1.1s
M54A  Oil Creek Stat    30.61  11  P     P     18 02 00.9 -1.2
      baz=194
L49A  Milan             30.64   5  P     P     18 02 01.0 -1.3
      baz=186,SNR=5.9
L40A  Anamosa           30.64 354  P     P     18 02 00.7 -1.6
L40A                               IAmb  IAmb  18 02 11.3
      comp=Z,38nm,1.0s
N58A  Sunbury           30.65  16  P     P     18 02 01.9 -0.5
N58A                               IAmb  IAmb  18 02 04.6
      comp=Z,46nm,1.2s
N58A  Sunbury           30.65  16  P     P     18 02 01.1 -1.3
      baz=200,SNR=5.1
ALLY  Alegheny Colle    30.66  10  P     P     18 02 01.6 -0.9
ALLY                               IAmb  IAmb  18 02 04.1
      comp=Z,60nm,1.4s
L50A  Kingsville        30.66   6  P     P     18 02 01.4 -1.1
      baz=188
SCIA  State Center      30.74 351  P     P     18 02 02.0 -1.1
M55A  Ridgway           30.76  12  P     P     18 02 03.1 -0.2
M55A  Ridgway           30.76  12  P     P     18 02 02.6 -0.7
      baz=196
LUPA  Lehigh Univers    30.81  18  P     P     18 02 04.1 +0.3
SDCO  Great Sand Dun    30.84 331  P     P     18 02 04.6 +0.1
SDCO  Great Sand Dun    30.84 331  P     P     18 02 03.5 -1.0
      baz=143
M56A  Emporium          30.90  13  P     P     18 02 04.1 -0.5
M56A                               IAmb  IAmb  18 02 06.4
      comp=Z,44nm,1.1s
M56A  Emporium          30.90  13  P     P     18 02 04.4 -0.2
      baz=197,SNR=6.2
L53A  Girard            30.94  10  P     P     18 02 04.6 -0.4
      baz=193,SNR=7.1
N59A  State Game Lan    30.98  17  P     P     18 02 06.2 +0.8
N59A                               IAmb  IAmb  18 02 19.1
      comp=Z,29nm,0.9s
N59A  State Game Lan    30.98  17  P     P     18 02 04.5 -0.8
      baz=202,SNR=5.9
M57A  Sunshine Farm,    31.01  15  P     P     18 02 05.8 +0.2
M57A  Sunshine Farm,    31.01  15  P     P     18 02 03.8 -1.8
      baz=199,SNR=10.0
K46A  Dorr              31.09   2  P     P     18 02 04.4 -1.8
      baz=183
K47A  Vermontville      31.11   3  P     P     18 02 04.5 -2.0
      baz=184,SNR=9.8
N60A  Cedar Hill Far    31.14  18  P     P     18 02 06.2 -0.5
      baz=203
ERPA  Erie              31.14  10  P     P     18 02 06.3 -0.4
ERPA  Erie              31.14  10  P     P     18 02 06.2 -0.6
      baz=194
W18A  Petrified Fore    31.16 323  P     P     18 02 05.9 -1.2
W18A  Petrified Fore    31.16 323  P     P     18 02 06.3 -0.8
      baz=134
M58A  Price's Panora    31.22  16  P     P     18 02 06.9 -0.5
      baz=200
K48A  Perry             31.30   4  P     P     18 02 07.2 -0.8
      baz=186,SNR=7.5
K49A  Clarkson          31.33   5  P     P     18 02 07.1 -1.3
      baz=187
SAML  Samuel            31.37 129  P     P     18 02 08.7 -0.3
SAML  Samuel            31.37 129  eP    P     18 02 09.1 +0.1
SAML                               eS    S     18 07 18.5 +2.1
L54A  Sinclairville     31.38  11  P     P     18 02 07.9 -0.9
      baz=195
JFWS  Jewell Farm       31.40 356  P     P     18 02 07.6 -1.4
JFWS                               IAmb  IAmb  18 02 17.6
      comp=Z,27nm,1.1s
S22A  4UR Ranch, Cre    31.49 329  P     P     18 02 10.3 +0.1
L55A  Hinsdale          31.51  13  P     P     18 02 09.1 -0.9
      baz=196
PAL   Palisades         31.64  19  P     P     18 02 10.3 -0.7
      baz=205
M59A  Waymart           31.66  17  P     P     18 02 10.6 -0.7
      baz=202,SNR=7.0
L56A  Greenwood         31.66  14  P     P     18 02 10.8 -0.5
L56A  Greenwood         31.66  14  P     P     18 02 10.3 -1.0
      baz=198,SNR=5.1
K52A  Tillsonburg       31.67   9  P     P     18 02 10.9 -0.4
      baz=192
J47A  Sunmer            31.68   3  P     P     18 02 10.5 -1.0
J47A                               IAmb  IAmb  18 02 21.4
      comp=Z,34nm,0.9s
J47A  Sunmer            31.68   3  P     P     18 02 10.4 -1.0
      baz=184
WVNY  West Valley, N    31.69  12  P     P     18 02 11.2 -0.4
M60A  Port Jervis       31.70  18  P     P     18 02 10.5 -1.2
      baz=204
L57A  Andrews Acres     31.70  15  P     P     18 02 10.9 -0.8
      baz=199,SNR=5.4
X16A  Lo Mia Camp, P    31.74 320  P     P     18 02 12.6 +0.3
J46A  Howard City       31.75   2  P     P     18 02 11.1 -1.0
      baz=183
J48A  Bridge Port       31.82   5  P     P     18 02 11.2 -1.4
J48A                               IAmb  IAmb  18 02 14.3
      comp=Z,38nm,1.1s
J48A  Bridge Port       31.82   5  P     P     18 02 11.8 -0.8
      baz=186
K54A  Basiliko Farm,    31.87  12  P     P     18 02 12.5 -0.6
      baz=196
J49A  Marlette          31.93   6  P     P     18 02 13.0 -0.7
      baz=187
MVCO  Mesa Verde        31.95 327  P     P     18 02 13.9 -0.3
MVCO                               IAmb  IAmb  18 02 31.5
      comp=Z,16nm,0.9s
M61A  Granite Spring    31.95  19  P     P     18 02 12.7 -1.2
      baz=205
L58A  Harry Jones Me    32.01  16  P     P     18 02 13.2 -1.1
      baz=201,SNR=5.4
OGNE  Ogallala          32.09 339  P     P     18 02 16.0 +0.7
OGNE  Ogallala          32.09 339  P     P     18 02 14.9 -0.3
      baz=152
K55A  Perry             32.11  13  P     P     18 02 14.6 -0.6
      baz=197
BINY  Binghamton        32.12  16  P     P     18 02 14.8 -0.5
BINY  Binghamton        32.12  16  P     P     18 02 14.6 -0.7
      baz=201
J52A  Paris             32.16   9  P     P     18 02 15.1 -0.6
      baz=192
K56A  Middlesex         32.25  14  P     P     18 02 16.0 -0.5
      baz=198,SNR=6.6
I42A  Draeger Farm,     32.30 358  P     P     18 02 15.3 -1.6
L59A  Walton            32.37  17  P     P     18 02 17.9 +0.4
L59A  Walton            32.37  17  P     P     18 02 16.7 -0.9
      baz=202,SNR=5.1
I40A  Norwalk           32.40 355  P     P     18 02 16.0 -1.8
I40A                               IAmb  IAmb  18 02 26.0
      comp=Z,28nm,0.9s
WUAZ  Wupatki           32.41 321  P     P     18 02 16.9 -1.3
I45A  Fountain          32.42   1  P     P     18 02 16.9 -1.0
      baz=182
L60A  Shokan            32.43  18  P     P     18 02 17.0 -1.1
      baz=204
K57A  Scipio Center     32.48  15  P     P     18 02 17.6 -0.9
      baz=200
I47A  Gladwin           32.48   4  P     P     18 02 17.0 -1.4
I47A  Gladwin           32.48   4  P     P     18 02 17.7 -0.7
      baz=185
J54A  Appleton          32.52  12  P     P     18 02 17.8 -0.9
      baz=196
I49A  Point Hope        32.54   6  P     P     18 02 17.8 -1.2
      baz=188
ISCO  Idaho Springs     32.55 333  P     P     18 02 19.4 -0.2
I51A  Listowel          32.62   8  P     P     18 02 18.7 -1.0
      baz=191,SNR=8.0
M63A  Gales Ferry       32.63  21  P     P     18 02 18.4 -1.3
      baz=208
J55A  Hilton            32.68  13  P     P     18 02 19.0 -1.2
      baz=197
I48A  Sherman Twp       32.71   5  P     P     18 02 19.8 -0.6
      baz=186
K58A  Earlville         32.73  16  P     P     18 02 20.2 -0.5
K58A  Earlville         32.73  16  P     P     18 02 20.0 -0.7
      baz=201,SNR=5.2
PV15  Paradox Valley    32.78 328  P     P     18 02 18.9 -2.6
PV02  Paradox Valley    32.82 328  P     P     18 02 22.6 +0.8
L61A  Hillsdale 1, H    32.82  19  P     P     18 02 21.3 -0.2
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      baz=205
PV13  Radium Mtn., P    32.82 328  P     P     18 02 21.6 -0.2
PV13                               IAmb  IAmb  18 02 39.7
      comp=Z,13nm,0.7s
H43A  Windswept, Lux    32.85 359  P     P     18 02 20.1 -1.6
H43A                               IAmb  IAmb  18 02 29.4
      comp=Z,26nm,1.0s
I53A  Kortright Cn E    32.87  10  P     P     18 02 21.6 -0.2
      baz=194
J56A  Wolcott           32.91  14  P     P     18 02 19.9 -2.3
J56A  Wolcott           32.91  14  P     P     18 02 21.4 -0.7
      baz=199
PV03  Paradox Valley    32.91 328  P     P     18 02 23.2 +0.6
PV03                               IAmb  IAmb  18 02 37.0
      comp=Z,19nm,0.7s
PV05  Paradox Valley    32.91 327  P     P     18 02 22.4 -0.2
PV05                               IAmb  IAmb  18 02 34.9
      comp=Z,14nm,0.8s
PV12  Saucer Basin,     32.93 328  P     P     18 02 23.4 +0.6
PV18  Skein Mesa, Pa    32.94 328  P     P     18 02 22.9 +0.2
PV18                               IAmb  IAmb  18 02 37.9
      comp=Z,20nm,0.6s
PV07  Paradox Valley    32.94 328  P     P     18 02 22.1 -0.7
PV07                               IAmb  IAmb  18 02 33.2
      comp=Z,21nm,1.2s
PV11  David Mesa, Pa    32.95 328  P     P     18 02 23.4 +0.4
K59A  Cooperstown       32.96  17  P     P     18 02 22.2 -0.5
      baz=202,SNR=5.7
PV17  East Wray Mesa    32.99 328  P     P     18 02 23.4 +0.2
PV16  Nyswonger Mesa    32.99 328  P     P     18 02 23.6 +0.4
PV16                               IAmb  IAmb  18 02 39.4
      comp=Z,16nm,0.7s
I52A  Shelburne         33.01   9  P     P     18 02 22.7 -0.4
      baz=193
PV19  Morning Glory     33.02 328  P     P     18 02 23.7 +0.1
PV20  West Nyswonger    33.04 328  P     P     18 02 23.6  0.0
PV20                               IAmb  IAmb  18 02 45.1
      comp=Z,16nm,0.8s
PV04  Paradox Valley    33.04 328  P     P     18 02 23.9 +0.2
PV04                               IAmb  IAmb  18 02 45.9
      comp=Z,18nm,0.8s
H47A  Mio               33.08   4  P     P     18 02 22.8 -0.9
      baz=185
PV22  Blue Mesa, Par    33.09 328  P     P     18 02 24.3 +0.2
PV14  Lion Creek, Pa    33.09 328  P     P     18 02 24.1 -0.1
PV14                               IAmb  IAmb  18 02 38.4
      comp=Z,14nm,0.7s
PV10  Paradox Valley    33.10 328  P     P     18 02 23.6 -0.7
ECSD  EROS Data Cent    33.12 347  P     P     18 02 22.1 -2.0
PV23  Carpenter Ridg    33.14 328  P     P     18 02 25.0 +0.3
PV23                               IAmb  IAmb  18 02 46.7
      comp=Z,20nm,0.8s
GLA   Glamis            33.17 315  P     P     18 02 27.0 +2.2
PV09  Paradox Valley    33.24 328  P     P     18 02 26.1 +0.5
J57A  Williamstown      33.24  15  P     P     18 02 24.9 -0.2
J57A  Williamstown      33.24  15  P     P     18 02 24.4 -0.8
      baz=200,SNR=5.8
H48A  Harrisville       33.25   5  P     P     18 02 23.9 -1.2
H48A  Harrisville       33.25   5  P     P     18 02 24.0 -1.2
      baz=187,SNR=7.0
TRY   Troy              33.27  18  P     P     18 02 26.0 +0.7
L61B  Northampton       33.34  20  P     P     18 02 25.7 -0.2
      baz=206
K61A  Williamstown      33.34  19  P     P     18 02 25.5 -0.5
      baz=205
J58A  Remsen            33.38  16  P     P     18 02 26.1 -0.3
J58A  Remsen            33.38  16  P     P     18 02 25.4 -0.9
      baz=201
G45A  Suttons Bay       33.45   2  P     P     18 02 24.3 -2.6
G45A  Suttons Bay       33.45   2  P     P     18 02 25.1 -1.8
      baz=183,SNR=7.4
LPAZ  La Paz            33.45 145  P     P     18 02 28.5 +0.6
      comp=Z,3.6nm,0.8s,baz=331,slow=9.3,SNR=11
LPAZ                               LR    LR    18 16 15.8
      comp=Z,1μm,18.2s,baz=320,slow=37
LPAZ  La Paz            33.45 145  eP    P     18 02 28.4 +0.4
LPAZ                               eS    S     18 07 53.0 +3.1
L64A  Middleborough     33.53  22  P     P     18 02 26.6 -1.0
      baz=210
U15A  North Rim         33.57 322  P     P     18 02 32.6 +4.2
H52A  Wyevale           33.62   9  P     P     18 02 27.4 -0.9
      baz=193
I55A  Frankford         33.62  12  P     P     18 02 27.8 -0.6
      baz=197
G47A  Hillman           33.67   4  P     P     18 02 27.8 -1.1
      baz=186
K62A  Royalston         33.67  20  P     P     18 02 28.6 -0.3
      baz=207
J59A  Piesco            33.70  17  P     P     18 02 28.8 -0.3
J59A  Piesco            33.70  17  P     P     18 02 28.0 -1.1
      baz=203,SNR=5.1
W13A  Hualapai Mount    33.73 318  P     P     18 02 30.7 +0.9
G40A  Rib Lake          33.74 356  P     P     18 02 27.6 -1.9
G40A                               IAmb  IAmb  18 02 37.7
      comp=Z,30nm,1.1s
I58A  Old Forge         33.77  16  P     P     18 02 29.1 -0.8
      baz=202,SNR=6.0
H53A  Bobcaygeon        33.78  11  P     P     18 02 28.6 -1.2
      baz=195,SNR=8.2
J60A  Lant Hill Farm    33.81  18  P     P     18 02 29.9 -0.2
      baz=205
I57A  Carthage          33.82  15  P     P     18 02 29.5 -0.7
      baz=200
SADO  Sadowa            33.87  10  P     P     18 02 29.6 -0.9
      comp=Z,12nm,0.7s,baz=248,slow=5.9,SNR=8.4
SADO  Sadowa            33.87  10  P     P     18 02 29.2 -1.3
SPMN  Marine on St.     33.94 353  P     P     18 02 28.5 -2.7
SPMN  Marine on St.     33.94 353  P     P     18 02 29.1 -2.1
      baz=170,SNR=9.7
O20A  White River Ci    34.04 331  P     P     18 02 33.0 +0.6
O20A  White River Ci    34.04 331  P     P     18 02 31.8 -0.5
      baz=141,SNR=9.4
H55A  Tweed             34.04  13  P     P     18 02 32.1  0.0
      baz=198
F45A  CMU Biological    34.09   2  P     P     18 02 31.1 -1.4
      baz=183
J61A  Chester           34.18  19  P     P     18 02 32.5 -0.8
      baz=206
I59A  Olmsteadville     34.18  17  P     P     18 02 32.4 -0.9
      baz=204
MONP2 Monument Peak     34.21 313  P     P     18 02 32.6 -1.4
      baz=122
PKCU  Pink Cliffs       34.26 323  P     P     18 02 36.8 +2.3
KNB   Kanab             34.28 322  P     P     18 02 32.4 -2.0
H56A  Elgin             34.29  14  P     P     18 02 33.1 -1.1
      baz=199,SNR=6.0
G53A  Haliburton        34.30  11  P     P     18 02 33.2 -1.1
      baz=195,SNR=6.3
SUSD  Miller            34.34 345  P     P     18 02 33.4 -1.3
SUSD  Miller            34.34 345  P     P     18 02 32.8 -1.9
      baz=159,SNR=6.2
H57A  Richville         34.38  15  P     P     18 02 33.4 -1.6
      baz=201
I60A  Shoreham          34.40  18  P     P     18 02 34.1 -1.1
      baz=204
F49A  Sandfield         34.42   6  P     P     18 02 34.0 -1.4
      baz=189,SNR=5.5
SRU   San Rafael Swe    34.43 327  P     P     18 02 35.9 +0.2
F48A  Evansville        34.43   6  P     P     18 02 34.2 -1.2
      baz=188
COWI  Conover           34.52 358  P     P     18 02 33.4 -2.8
COWI                               IAmb  IAmb  18 02 44.2
      comp=Z,20nm,0.8s
PLVO  Plevna            34.53  13  P     P     18 02 35.7 -0.6
LCMT  Little Creek M    34.53 322  P     P     18 02 38.3 +1.7
MTPU  Mount Pierson     34.59 324  P     P     18 02 38.8 +1.4
J63A  Strafford         34.62  21  P     P     18 02 36.2 -0.8
      baz=208
PFO   Pinyon Flats O    34.62 314  LR    LR    18 17 43.5
      comp=Z,1μm,20.7s,baz=135,slow=38
Q16A  Castle Valley     34.64 326  P     P     18 02 38.2 +0.6
H58A  Gabriels          34.66  17  P     P     18 02 36.3 -1.2
      baz=203,SNR=7.3
G54A  Lake Saint Pet    34.67  11  P     P     18 02 36.6 -0.9
      baz=196,SNR=7.0
E43A  Lone Tree Farm    34.75   0  P     P     18 02 36.4 -1.9
P17A  Butcher Ranch,    34.80 327  P     P     18 02 39.0  0.0
G55A  Calabogie         34.81  13  P     P     18 02 37.7 -1.0
      baz=198,SNR=8.7
I61A  Oroboro, Fairl    34.81  19  P     P     18 02 38.0 -0.8
      baz=206
F52A  Sundridge         34.83  10  P     P     18 02 38.4 -0.5
      baz=194,SNR=6.7
F51A  Arnstein          34.87   9  P     P     18 02 38.2 -1.0
      baz=192
MSU   Marysvale         34.91 325  P     P     18 02 40.1 +0.2
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TMUT  Trail Mountain    34.93 327  P     P     18 02 39.4 -0.9
CCUT  Cedar City        34.95 322  P     P     18 02 37.8 -2.6
E47A  Iron Bridge       34.99   5  P     P     18 02 38.6 -1.7
      baz=187,SNR=18
H59A  Cadyville         35.01  17  P     P     18 02 38.6 -1.9
      baz=203
E44A  Grand Marais A    35.02   2  P     P     18 02 39.0 -1.4
E44A  Grand Marais A    35.02   2  P     P     18 02 39.2 -1.3
      baz=182
RDMU  Red Mountain      35.02 330  P     P     18 02 39.7 -1.2
I62A  Tamworth          35.05  20  P     P     18 02 39.8 -1.0
      baz=208
G57A  Newington         35.09  15  P     P     18 02 39.1 -1.9
      baz=201
E48A  Lockeyer          35.12   6  P     P     18 02 39.2 -2.2
      baz=188,SNR=13
E38A  The Farm, Brul    35.18 355  P     P     18 02 39.8 -2.0
ALGO  Algonquin Park    35.21  11  P     P     18 02 40.8 -1.3
      baz=196,SNR=5.8
FRNY  Flat Rock         35.21  17  P     P     18 02 42.2  0.0
K22A  Casper            35.29 335  P     P     18 02 42.0 -1.1
K22A                               IAmb  IAmb  18 02 52.5
      comp=Z,30nm,1.4s
D46A  Sault St. Mari    35.37   4  P     P     18 02 42.4 -1.1
      baz=185,SNR=5.4
G58A  Ormstown          35.37  16  P     P     18 02 41.8 -1.7
      baz=202
E52A  Mattawa           35.42  10  P     P     18 02 42.7 -1.3
      baz=194,SNR=5.9
F55A  Otter Lake        35.45  13  P     P     18 02 42.9 -1.2
      baz=198
D41A  Chassel           35.46 358  P     P     18 02 41.8 -2.5
D41A                               IAmb  IAmb  18 02 51.3
      comp=Z,22nm,1.0s
E51A  G1948 Merrick     35.52   9  P     P     18 02 43.3 -1.5
      baz=193,SNR=11
RSSD  Black Hills       35.59 339  P     P     18 02 46.1 +0.4
D47A  Chapleau          35.60   5  P     P     18 02 43.6 -1.9
      baz=187,SNR=8.3
MPU   Maple Canyon      35.67 327  P     P     18 02 46.7 +0.3
E53A  Dumoine, Ponti    35.69  11  P     P     18 02 44.5 -1.8
      baz=196
GO01  Chusmiza          35.70 150  P     P     18 02 47.4 +0.1
GO01                               IAmb  IAmb  18 03 06.0
      comp=Z,14nm,0.9s
H62A  Milan             35.73  20  P     P     18 02 44.7 -2.0
      baz=208
G60A  Masonville        35.82  18  P     P     18 02 45.9 -1.6
      baz=205
E54A  Lac Daplat, Po    35.84  12  P     P     18 02 45.6 -1.9
      baz=197,SNR=8.7
D48A  Paudash Townsh    35.84   6  P     P     18 02 45.9 -1.7
      baz=189,SNR=11
PSUT  Pine Spring       35.90 323  P     P     18 02 49.3 +0.8
D49A  Beulah Townshi    35.99   7  P     P     18 02 47.4 -1.5
      baz=190
JLU   Jordanelle        36.00 328  P     P     18 02 49.7 +0.3
D51A  Lot 18 Range I    36.08   9  P     P     18 02 47.8 -1.9
      baz=193,SNR=6.0
D50A  G1974 Best Tow    36.09   9  P     P     18 02 48.6 -1.1
      baz=192,SNR=6.7
E55A  Montcerf-Lytto    36.10  13  P     P     18 02 49.2 -0.6
      baz=199
CTU   Camp Tracy        36.22 328  P     P     18 02 51.1  0.0
TRQ   Mont Tremblant    36.24  15  P     P     18 02 50.7 -0.3
D53A  Lac Vacive, Po    36.36  11  P     P     18 02 51.2 -0.8
D53A  Lac Vacive, Po    36.36  11  P     P     18 02 51.3 -0.7
      baz=196,SNR=11
TPNV  Topopah Spring    36.37 319  P     P     18 02 53.8 +1.3
E56A  St. Veronique     36.42  14  P     P     18 02 52.4 -0.2
      baz=200
DUG   Dugway, Tooele    36.44 326  P     P     18 02 52.1 -0.9
DUG                                IAmb  IAmb  18 03 16.1
      comp=Z,16nm,1.2s
D32A  Dogwood Acres,    36.47 349  P     P     18 02 50.3 -2.6
EYMN  Ely               36.50 355  P     P     18 02 49.4 -3.9
EYMN                               IAmb  IAmb  18 03 07.4
      comp=Z,12nm,0.8s
G62A  West of Eustis    36.51  20  P     P     18 02 53.5 +0.2
G62A  West of Eustis    36.51  20  P     P     18 02 53.0 -0.3
      baz=208
E57A  Chemin Saint G    36.52  15  P     P     18 02 53.5 +0.1
      baz=202
D54A  Lac Fusel, La     36.63  12  P     P     18 02 53.9 -0.5
      baz=197,SNR=12
SNCC  San Nicolas Is    36.64 311  P     P     18 02 54.0 -0.6
      baz=119
MPMC  Manual Prospec    36.67 317  P     P     18 02 53.9 -1.2
      baz=124
BW06  Boulder Array     36.71 332  P     P     18 02 53.9 -1.5
BW06  Boulder Array     36.71 332  P     P     18 02 54.5 -0.8
      baz=141
PD31  Pinedale Array    36.71 332  P     P     18 02 54.5 -0.8
PDAR  Pinedale Array    36.71 332  P     P     18 02 55.0 -0.3
      comp=Z,3.8nm,0.5s,baz=130,slow=9.8,SNR=25
PDAR                               ScP   ScP   18 09 06.6 +1.9
      comp=Z,2.2nm,0.9s,baz=131,slow=4.5,SNR=10.0
PDAR                               LR    LR    18 19 51.3
      comp=Z,650nm,19.6s,baz=134,slow=39
PDAR  Pinedale Array    36.71 332  P     P     18 02 54.8 -0.6
E58A  La Victoria       36.71  16  P     P     18 02 54.5 -0.5
      baz=203
PB01  IPOC Station P    36.74 152  P     P     18 02 56.1 +0.5
PB01                               IAmb  IAmb  18 02 58.1
      comp=Z,15nm,1.1s
D55A  Sainte-Anne-du    36.76  13  P     P     18 02 54.4 -1.0
      baz=199,SNR=17
HWUT  Hardware Ranch    36.80 329  P     P     18 02 56.2 +0.2
R11A  Troy Canyon, C    36.81 321  P     P     18 02 56.2  0.0
H65A  Eastbrook         36.87  23  P     P     18 02 55.4 -1.0
      baz=212
D56A  ZEC Mazanza, M    36.96  14  P     P     18 02 56.5 -0.6
      baz=200
SPUT  South Promonto    37.03 328  P     P     18 02 58.0  0.0
BGU   Big Grassy Mou    37.07 327  P     P     18 02 58.5 +0.2
D57A  Chemin Vers le    37.15  15  P     P     18 02 58.3 -0.4
      baz=202
AGMN  Agassiz Nation    37.38 350  P     P     18 02 59.0 -1.8
VLDQ  Val d'Or          37.40  11  P     P     18 02 59.3 -1.5
VLDQ                               IAmb  IAmb  18 03 01.0
      comp=Z,26nm,1.2s
F63A  Nahmakanta, Br    37.42  21  P     P     18 03 00.9 -0.2
      baz=210
AHID  Auburn Hatcher    37.43 331  P     P     18 03 00.5 -1.0
AHID                               IAmb  IAmb  18 03 24.1
      comp=Z,24nm,0.8s
D58A  Chemin du LacG    37.48  16  P     P     18 03 01.5 -0.1
      baz=203
SIV   San Ignacio       37.63 136  P     P     18 03 03.6 +0.4
      comp=Z,32nm,0.5s,baz=316,slow=8.1,SNR=92
PKM   Mcpherson Peak    37.66 314  P     P     18 03 02.7 -0.7
      baz=120
MDND  Maddock           37.69 346  P     P     18 03 02.1 -1.3
MDND  Maddock           37.69 346  P     P     18 03 02.6 -0.7
      baz=160,SNR=8.9
REDW  Red Top Meadow    37.77 331  P     P     18 03 04.2 -0.1
LATQ  La Tuque          37.77  16  P     P     18 03 03.1 -0.9
LATQ                               IAmb  IAmb  18 03 04.5
      comp=Z,21nm,1.3s
LATQ  La Tuque          37.77  16  P     P     18 03 04.1  0.0
      baz=203
SNOW  Snow King Moun    37.80 332  P     P     18 03 03.4 -1.3
F64A  Sherman           37.83  22  P     P     18 03 04.4 -0.1
      baz=211
D60A  Saint Jean D'O    37.89  18  P     P     18 03 04.3 -0.7
      baz=206
TPAW  Teton Pass        37.91 332  P     P     18 03 04.3 -1.3
TPAW                               IAmb  IAmb  18 03 20.3
      comp=Z,15nm,0.8s
FXWY  Fox Creek         38.06 332  P     P     18 03 05.1 -1.7
ELK   Elko              38.16 325  P     P     18 03 08.5 +0.8
E63A  Oxbow             38.28  21  P     P     18 03 07.5 -0.8
      baz=210
CLDB  Colider           38.33 124  eP    P     18 03 07.7 -1.5
LVC   Limon Verde       38.36 152  P     P     18 03 11.5 +1.9
      comp=Z,7.7nm,0.7s,baz=308,slow=5.6,SNR=9.0
LVC                                LR    LR    18 18 45.5
      comp=Z,861nm,19.1s,baz=320,slow=36
LVC   Limon Verde       38.36 152  P     P     18 03 11.4 +1.7
LVC                                IAmb  IAmb  18 03 12.9
      comp=Z,23nm,1.1s
LVC   Limon Verde       38.36 152  eP    P     18 03 10.2 +0.5
D61A  St Aubert, Com    38.37  19  P     P     18 03 07.6 -1.5
      baz=207
LSQQ  Lebel-sur-Quev    38.40  11  P     P     18 03 08.2 -1.0
      baz=196
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RLMT	Red Lodge	38.45	335	P	P	18 03 09.5	-0.6
RLMT	Red Lodge	38.45	335	P	P	18 03 09.3	-0.8
	baz=144						
NV11	Mina Array Sit	38.47	320	P	P	18 03 10.5	+0.3
OMMB	Old Mammoth Mi	38.55	318	P	P	18 03 10.9	-0.2
NVAR	Mina Array Bea	38.56	319	P	P	18 03 12.8	+1.7
	comp=Z,1.4nm,0.7s,baz=127,slow=7.1,SNR=11						
NVAR				PcP	PcP	18 05 25.1	+1.4
	comp=Z,5.5nm,0.9s,baz=137,slow=3.6,SNR=9.6						
NVAR				ScP	ScP	18 09 15.3	+3.5
	comp=Z,0.9nm,0.7s,baz=130,slow=5.4,SNR=4.8						
NVAR				LR	LR	18 22 58.6	
	comp=Z,1µm,18.0s,baz=144,slow=42						
NVAR	Mina Array Bea	38.56	319	P	P	18 03 10.6	-0.5
MDPB	Devils Postpil	38.61	318	P	P	18 03 10.3	-1.2
D62A	Allapoint, All	38.64	20	P	P	18 03 10.8	-0.5
	baz=209						
KVN	Kaiserville	38.80	320	P	P	18 03 13.9	+0.9
YMR	Madison River	38.83	333	P	P	18 03 10.4	-2.8
YHH	Holmes Hill	38.87	333	P	P	18 03 14.6	+0.9
MATQ	Matagami	38.95	10	P	P	18 03 12.5	-1.4
	baz=195,SNR=16						
YHB	Horse Butte	39.00	333	P	P	18 03 13.6	-1.0
YHL	Hebgen Lake	39.07	333	P	P	18 03 16.5	+1.2
QLMT	Earthquake Lak	39.16	332	P	P	18 03 15.9	-0.1
ULM	Lac du Bonnet	39.28	351	P	P	18 03 14.5	-2.2
	comp=Z,27nm,1.1s,baz=172,slow=8.5,SNR=27						
ULM				ScP	ScP	18 09 13.9	0.0
	comp=Z,4.2nm,0.9s,baz=134,slow=4.5,SNR=5.4						
ULM				LR	LR	18 22 09.5	
	comp=Z,420nm,18.8s,baz=152,slow=40						
ULM	Lac du Bonnet	39.28	351	P	P	18 03 14.3	-2.4
ULM				IAmb	IAmb	18 03 24.3	
	comp=Z,33nm,0.9s						
WAKR	Walker	39.33	319	P	P	18 03 19.1	+1.6
DGMT	Dagmar	39.48	342	P	P	18 03 17.4	-1.1
MCMT	McKenzie Canyo	39.82	331	P	P	18 03 22.5	+1.0
DLMT	Dillon	40.10	332	P	P	18 03 23.8	0.0
DLMT				IAmb	IAmb	18 03 33.7	
	comp=Z,19nm,1.1s						
MFID	Camas Ranch	40.29	327	P	P	18 03 24.7	-0.6
MFID				IAmb	IAmb	18 03 52.3	
	comp=Z,15nm,0.8s						
GO02	Mina Guanaco	40.30	155	P	P	18 03 26.7	+0.9
GO02				IAmb	IAmb	18 03 28.5	
	comp=Z,24nm,0.9s						
WVOR	Wild Horse Val	41.20	324	P	P	18 03 31.5	-1.3
SALV	Santo Antonio	41.41	130	*e*P	P	18 03 34.6	-0.1
J08A	Circle Bar Ran	41.69	325	P	P	18 03 36.1	-0.8
MSO	Missoula	41.82	332	P	P	18 03 37.4	-0.5
MSO				IAmb	IAmb	18 03 46.9	
	comp=Z,28nm,1.4s						
MOD	Modoc Plateau	41.85	322	P	P	18 03 36.6	-1.7
BMO	Blue Mountains	42.05	328	P	P	18 03 38.5	-1.3
M04C	Macdoel	42.71	321	P	P	18 03 43.8	-1.4
	baz=125						
F10A	Beach Ranch, E	42.78	329	P	P	18 03 43.6	-2.1
YBH	Yreka Blue Hor	43.22	321	LR	LR	18 24 49.1	
	comp=Z,1µm,19.0s,baz=142,slow=40						
WALA	Waterton Lakes	43.51	335	P	P	18 03 50.8	-0.8
E09A	Wood Farm, Sta	43.61	329	P	P	18 03 52.1	-0.1
RPN	Rapa Nui	43.99	209	LR	LR	18 17 15.3	
	comp=Z,1µm,19.7s,baz=48,slow=29						
ARAG	Araguaiana, MT	44.27	127	*e*P	P	18 03 57.6	-0.3
SMTB	Santa Maria do	44.30	116	*e*P	P	18 03 57.8	-0.5
D08A	Wollman Farm,	44.37	329	P	P	18 03 57.3	-1.1
E07A	Sunnyside	44.52	328	P	P	18 03 59.2	-0.4
E07A				IAmb	IAmb	18 04 20.7	
	comp=Z,27nm,0.8s						
H04A	Detroit Lake	44.61	324	P	P	18 04 00.8	+0.4
FFC	Flin Flon	44.66	348	P	P	18 03 59.0	-1.6
FFC				IAmb	IAmb	18 04 09.2	
	comp=Z,25nm,1.2s						
H04D	Lebanon	44.83	324	P	P	18 04 00.4	-1.7
	baz=126						
C2SB	Chapadao do Su	45.33	131	*e*P	P	18 04 05.8	-0.5
SCHQ	Schefferville	46.12	16	P	P	18 04 10.1	-2.0
	comp=Z,7.1nm,0.7s,baz=214,slow=6.2,SNR=16						
SCHQ				LR	LR	18 23 29.0	
	comp=Z,2µm,20.9s,baz=202,slow=36						
SCHQ	Schefferville	46.12	16	P	P	18 04 09.9	-2.2
SCHQ				IAmb	IAmb	18 04 19.7	
	comp=Z,29nm,1.2s						
BDFB	Brasilia	47.26	124	P	P	18 04 20.1	-1.6
	comp=Z,20nm,0.5s,baz=292,slow=8.4,SNR=22						
BDFB				LR	LR	18 24 45.9	
	comp=Z,1µm,20.3s,baz=286,slow=37						
BDFB	Brasilia	47.26	124	P	P	18 04 21.2	-0.6
CPUP	Villa Florida	47.53	143	P	P	18 04 22.7	-0.8
	comp=Z,6.6nm,1.0s,baz=331,slow=9.6,SNR=8.5						
CPUP				LR	LR	18 25 42.2	
	comp=Z,577nm,18.4s,slow=38						
CPUP	Villa Florida	47.53	143	P	P	18 04 22.6	-0.8
CPUP				IAmb	IAmb	18 04 26.4	
	comp=Z,14nm,1.2s						
CPUP	Villa Florida	47.53	143	*e*P	P	18 04 23.4	-0.2
TRCB	Terra Rica	48.06	135	*e*P	P	18 04 27.5	-0.3
LLLB	Lillooet	48.21	331	P	P	18 04 25.8	-2.8
LLLB				IAmb	IAmb	18 04 38.1	
	comp=Z,13nm,0.9s						
PCMB	Pacaembu	48.26	133	*e*P	P	18 04 29.3	0.0
PCMB				*e*S	S	18 11 32.4	+3.3
IPMB	Ipameri, GO	48.39	127	*e*P	P	18 04 29.9	-0.5
IPMB				*e*S	S	18 11 34.0	+2.9
GO05	Huala	48.48	163	P	P	18 04 31.0	+0.2
PTGB	Pitanga	49.73	137	*e*P	P	18 04 41.1	+0.5
BB19B	Bebedouro	49.93	130	*e*P	P	18 04 41.3	-0.9
JANB	Januaria	50.03	121	*e*P	P	18 04 42.1	-0.9
FRTB	Fartura	50.57	133	*e*P	P	18 04 47.9	+1.0
ITAB	Concordia	51.40	139	*e*P	P	18 04 53.0	0.0
VAO	Valinhos	52.25	131	*e*P	P	18 04 59.2	-0.4
BSCB	Bom Sucesso	52.76	128	*e*P	P	18 05 03.2	-0.2
FRB	Frobisher Bay	53.81	10	LR	LR	18 29 40.2	
	comp=Z,1µm,18.1s,baz=193,slow=38						
RCBR	Riachuelo	53.88	106	P	P	18 05 10.8	-1.0
	comp=Z,10nm,0.9s,baz=290,slow=9.2,SNR=2.8						
RCBR	Riachuelo	53.88	106	P	P	18 05 10.5	-1.3
RCBR				IAmb	IAmb	18 05 15.2	
	comp=Z,21nm,1.1s						
RCBR	Riachuelo	53.88	106	*e*P	P	18 05 11.0	-0.8
PLCA	Paso Flores	54.22	164	P	P	18 05 14.2	+0.4
	comp=Z,17nm,0.9s,baz=6.4,slow=8.4,SNR=17						
PLCA				LR	LR	18 23 33.3	
	comp=Z,298nm,18.6s,baz=12,slow=31						
PLCA	Paso Flores	54.22	164	P	P	18 05 14.1	+0.3
SJMB	Sao Joao De Ma	54.42	123	*e*P	P	18 05 15.0	-0.6
YKA	Yellowknife Ar	54.58	345	P	P	18 05 14.7	-1.3
	comp=Z,2.1nm,0.5s,baz=138,slow=8.0,SNR=46						
YKA				PcP	PcP	18 06 19.6	+0.6
	comp=Z,2.0nm,0.9s,baz=143,slow=4.7,SNR=5.2						
YKA				ScP	ScP	18 10 17.4	0.0
	comp=Z,2.5nm,1.0s,baz=144,slow=4.9,SNR=10						
YKA				LR	LR	18 30 58.2	
	comp=Z,546nm,19.4s,baz=0.0,slow=39						
YKA				PKPPKP		18 35 30.1	
	comp=Z,0.2nm,0.8s,baz=316,slow=1.7,SNR=2.6						
TAOE	Nuku Hiva Isla	56.38	251	*e*S	S	18 13 21.8	+0.9
	comp=Z,304nm,25.5s						
TAOE	Nuku Hiva Isla	56.38	251	*e*T	T	19 06 14.4	
	comp=Z,40nm,0.2s						
DLBC	Dease Lake	56.85	335	P	P	18 05 32.9	+0.3
DLBC				IAmb	IAmb	18 05 42.6	
	comp=Z,9.6nm,1.1s						
C36M	Paulatuk	62.38	346	P	P	18 06 09.0	-1.3
	baz=138						
RES	Resolute Bay	63.31	358	P	P	18 06 14.1	-2.3
DAWY	Dawson	63.75	337	P	P	18 06 18.9	-0.7
EPYK	Eagle Plains	64.03	340	P	P	18 06 20.3	-1.1
EPYK				IAmb	IAmb	18 06 30.8	
	comp=Z,26nm,1.4s						
EPYK	Eagle Plains	64.03	340	P	P	18 06 19.8	-1.6
	baz=124						
INK	Inuvik	64.17	343	P	P	18 06 20.7	-1.5
INK				IAmb	IAmb	18 06 30.9	
	comp=Z,19nm,1.2s						
BCAR	Beaver Creek A	64.20	336	P	P	18 06 20.5	-2.1
SCRK	Sand Creek	65.49	336	P	P	18 06 29.9	-1.2
PMOR	Pomariorio Ree	65.61	248	*e*T	T	19 17 43.4	
	comp=Z,7.6nm,0.3s						
RIDG	Independent Ri	65.74	336	P	P	18 06 31.5	-1.1
RIDG				IAmb	IAmb	18 06 48.2	
	comp=Z,9.6nm,1.0s						
HDA	Harding Lake	66.85	336	P	P	18 06 39.6	-0.1
HDA				IAmb	IAmb	18 06 48.4	
	comp=Z,10nm,1.0s						
HDA	Harding Lake	66.85	336	P	P	18 06 37.9	-1.8
	baz=113						
IL31		66.97	336	P	P	18 06 38.8	-1.5
IL31				IAmb	IAmb	18 06 48.6	
	comp=Z,14nm,1.3s						
ILAR	Eielson Array	66.97	336	P	P	18 06 39.5	-0.9
	comp=Z,1.7nm,0.6s,baz=121,slow=4.7,SNR=17						
ILAR	Eielson Array	66.97	336	P	P	18 06 39.2	-1.2
FYU	Fort Yukon	67.09	338	P	P	18 06 41.2	+0.1
FYU				IAmb	IAmb	18 06 49.0	
	comp=Z,17nm,1.3s						
BMAR	Burnt Mountain	67.24	339	P	P	18 06 41.2	-1.0
RND	Reindeer	67.26	335	P	P	18 06 42.2	-0.2
CCB	Clear Creek Bu	67.29	336	P	P	18 06 40.6	-1.8
POKR	Poker Plat Res	67.32	337	P	P	18 06 40.8	-1.8
	baz=113						
WRH	Wood River Hil	67.33	336	P	P	18 06 40.3	-2.4
MCK	McKinley	67.41	335	P	P	18 06 41.4	-1.9
MCK				IAmb	IAmb	18 06 54.0	
	comp=Z,24nm,1.4s						
TRF	Thorofare Moun	67.88	334	P	P	18 06 44.3	-2.1
TRF				IAmb	IAmb	18 06 53.3	
	comp=Z,16nm,1.2s						
PPT	Papeete	68.01	246	LR	LR	18 29 14.0	
	comp=Z,636nm,18.4s,baz=8.0,slow=29						
PPT2	Papeete2	68.02	246	*e*S	S	18 15 47.2	-0.4
	comp=Z,174nm,25.0s						
PPT2	Papeete2	68.02	246	*e*LR	LR	18 27 13.3	
	comp=Z,792nm,24.0s,baz=66						
BPAW	Bear Paw Mtn.	68.39	335	P	P	18 06 48.2	-1.2
BPAW				IAmb	IAmb	18 06 57.4	
	comp=Z,11nm,1.1s						
MLY	Manley	68.59	336	P	P	18 06 49.5	-1.2
COLD	Coldfoot	69.15	338	P	P	18 06 52.1	-2.0
TOLK	Toolik Lake Re	69.45	340	P	P	18 06 54.4	-1.6
	baz=112						
TBI	Tubuai	70.03	240	*e*S	S	18 16 09.8	-1.2
	comp=Z,184nm,24.8s						
TBI	Tubuai	70.03	240	*e*LR	LR	18 28 21.9	
	comp=Z,695nm,24.5s,baz=62						
TBI	Tubuai	70.03	240	*e*T	T	19 23 10.1	
	comp=Z,7.4nm,0.3s						
RAR	Rarotonga	78.29	245	LR	LR	18 33 59.1	
	comp=Z,568nm,18.8s,baz=81,slow=29						
SPITS	Spitsbergen Ar	81.58	12	P	P	18 08 04.4	-1.0
	comp=Z,2.4nm,0.6s,baz=233,slow=0.4,SNR=8.9						
NOA	NORSAR Array B	84.08	29	LR	LR	18 43 08.9	
	comp=Z,264nm,20.1s,baz=265,slow=34						
BILL	Bilibino	85.48	339	P	P	18 08 24.8	-0.7
BILL				IAmb	IAmb	18 08 34.0	
	comp=Z,11nm,0.9s						
HFS	Hagfors	85.49	30	P	P	18 08 23.5	-2.2
	comp=Z,2.0nm,0.7s,baz=239,slow=4.5,SNR=4.4						
ARCES	ARCESS Array B	87.00	19	P	P	18 08 31.7	-1.3
	comp=Z,1.8nm,0.9s,baz=290,slow=5.4,SNR=1.1						
ARCES	ARCESS Array B	87.00	19	P	P	18 08 31.9	-1.1
AFI	Afiamalu	87.54	255	LR	LR	18 41 15.6	
	comp=Z,360nm,18.5s,baz=70,slow=31						
FINES	FINESS Array B	90.72	26	P	P	18 08 49.9	-0.8
	comp=Z,4.6nm,0.9s,baz=281,slow=10,SNR=3.5						
TIXI	Tiksi	93.61	349	P	P	18 09 01.4	-2.5
SYO	Syowa Base	113.36	162	⇓*i*Pdiff	Pdif	18 10 34.0	+1.9
ZALV	Zalesovo Beam	114.45	5	PKiKP	PKiKP	18 14 27.6	-0.4
	comp=Z,1.1nm,0.5s,baz=263,slow=3.2,SNR=6.1						
KURBB	Kurchatov Arra	116.89	10	PKKPbc	PKKPbc	18 24 57.8	-2.5
	comp=Z,0.7nm,0.9s,baz=183,slow=3.6,SNR=5.6						
SONM	Songino Array	119.69	349	PKP	PKPdf	18 14 38.2	-0.3
	comp=Z,1.1nm,0.5s,baz=310,slow=1.1,SNR=16						
SONM				PKKPbc	PKKPbc	18 24 48.0	-2.3
	comp=Z,0.6nm,0.9s,baz=180,slow=3.3,SNR=4.5						
SONM	Songino Array	119.69	349		PKPdf	18 14 37.8	-0.6
SONM					PKKPbc	18 24 48.0	-2.3
GEYT	Alibeck	121.08	32	PKP	PKPdf	18 14 40.5	-0.8
	comp=Z,1.9nm,0.6s,baz=282,slow=1.4,SNR=5.0						
GEYT	Alibeck	121.08	32		PKPdf	18 14 39.7	-1.6
KSRS	Korea Array	121.19	328	PKP	PKiKP	18 14 42.0	+0.5
	comp=Z,2.5nm,0.6s,baz=25,slow=3.4,SNR=3.9						
MKAR	Makanchi Array	121.21	8	PKP	PKPdf	18 14 40.9	-0.4
	comp=Z,0.4nm,0.6s,baz=5.7,slow=2.9,SNR=1.9						
MKAR	Makanchi Array	121.21	8		PKPdf	18 14 40.2	-1.1
AAK	Ala-Archa	123.57	16	PKP	PKPdf	18 14 45.4	-0.7
	comp=Z,0.9nm,0.5s,baz=18,slow=9.6,SNR=2.2						
AAK	Ala-Archa	123.57	16		PKiKP	18 14 46.2	-0.2
WMQ	Urumqi	124.75	4	*e*PKP	PKPdf	18 14 48.1	-0.1
WMQ				LR	LR		
	comp=Z,760nm,29.1s						
WMQ				LR	LR		
	comp=Z,370nm,25.9s						
HHC	Hu-ho-hao-te	125.09	343	*e*PKP	PKiKP	18 14 49.9	+0.6
HHC				PP	PP	18 16 42.1	+5.4
HHC				SS	SS	18 33 28.8	-3.4
HHC				AMB	AMB		
	comp=Z,160nm,8.8s						
HHC				LR	LR		
	comp=Z,210nm,20.2s						
HHC				LR	LR		
	comp=Z,440nm,19.7s						
KSH	Kashi	126.89	16	PKP	PKiKP	18 14 53.4	+0.4
KSH				sPKP		18 15 07.3	
KSH				PP	PP	18 16 52.8	+4.2
KSH				SKKS		18 23 40.4	
KSH				LR	LR		
	comp=Z,200nm,11.5s						
KSH				LR	LR		
	comp=Z,370nm,17.3s						
GTA	Gaotai	128.93	353	*e*PKP	PKPdf	18 14 56.0	-0.4
GTA				sPKP		18 15 10.9	
GTA				PP	PP	18 17 06.0	+4.1
GTA				SS	SS	18 34 18.5	-1.3
GTA				AMB	AMB		
	comp=Z,130nm,8.6s						
GTA				LR	LR		
	comp=Z,1µm,20.6s						
UOSS	Minazif	129.16	44		PKPdf	18 14 57.0	-0.1
NJ2	Nanjing	130.01	331	*e*PKP	PKPdf	18 14 58.3	-0.2
LZH	Lanzhou	131.53	348	*e*PKP	PKiKP	18 15 03.8	+1.4
LZH				sPKP		18 15 18.8	
WSAR	Wadi Sarin	131.94	44	SKPab	SKPbc	18 18 27.1	-1.4
	comp=Z,2.9nm,0.7s,baz=254,slow=5.0,SNR=4.3						
XAN	Xi'an	132.18	342	PKP	PKPdf	18 15 03.1	+0.5
XAN				PP	PP	18 17 27.8	+4.7
WHN	Wuhan	133.33	334	PKP	PKiKP	18 15 07.3	+1.3
ENH	Enshi	135.46	339		PKPdf	18 15 08.7	-0.2
ASAR	Alice Springs	139.12	247	PKhKP	PKPpre	18 15 07.5	
	comp=Z,1.9nm,0.9s,baz=112,slow=2.9,SNR=9.4						
ASAR				PKP	PKPdf	18 15 15.5	-0.3
	comp=Z,2.9nm,0.8s,baz=108,slow=3.3,SNR=11						
ASAR				SKPab	SKPab	18 18 58.6	-2.1
	comp=Z,1.7nm,0.9s,baz=96,slow=2.7,SNR=7.6						
ASAR	Alice Springs	139.12	247		PKPpre	18 15 07.5	
ASAR					SKPab	18 18 57.4	-3.3
WB0	Warramunga Arr	139.18	253		PKPdf	18 15 16.3	+0.4
WB2	Warramunga Arr	139.21	253		PKPdf	18 15 16.1	+0.2
WRAB	Tennant Creek	139.21	253		PKPdf	18 15 16.6	+0.7
WRA	Warramunga Arr	139.22	253	PKhKP	PKPpre	18 15 07.5	
	comp=Z,0.5nm,0.6s,baz=103,slow=2.7,SNR=7.8						
WRA				PKP	PKPdf	18 15 16.3	+0.3
	comp=Z,7.3nm,1.1s,baz=92,slow=1.6,SNR=20						
WRA				SKPab	SKPab	18 18 58.7	-2.5
	comp=Z,1.0nm,0.7s,baz=95,slow=3.2,SNR=5.7						
WRA	Warramunga Arr	139.22	253		PKPdf	18 15 16.4	+0.4
WRA					SKiKP	18 18 57.1	+2.7
FITZ	Fitzroy Crossi	147.60	254		PKPbc	18 15 33.4	+0.1
HYB	Hyderabad	148.01	26	*i* PKP	PKPdf	18 15 32.0	+0.5
SOEI	Soe	149.01	270		PKPdf	18 15 34.1	+0.8
CHTO	Chiang Mai	149.27	349		PKPdf	18 15 33.4	0.0
CM31	Chiang Mai Arr	149.61	348		PKPdf	18 15 34.0	0.0
CMAR	Chiang Mai Arr	149.61	348	PKPbc	PKPbc	18 15 36.8	-1.8
	comp=Z,13nm,1.0s,baz=323,slow=2.8,SNR=37						
CMAR	Chiang Mai Arr	149.61	348		PKPdf	18 15 34.2	+0.2
KKM	Kota Kinabalu	150.89	306		PKPdf	18 15 36.2	-0.1
PBKT	Sadao Pong	150.95	344		PKPdf	18 15 36.6	+0.5
DLV	T Lat	151.97	326		PKiKP	18 15 44.7	-0.1
KSM	Kuching	158.32	305		PKPab	18 16 21.0	+0.5

NEIC ***20*** *17:58:09.6±2.6, 11°.3N±0°.1×87°.5W±0°.1, h15km±6km, mb4.6/16, Error ellipse: s-maj=20.8km s-min=9.1km az=51.0*

IDC ***20*** *17:58:09.8±1.3, 11°.76N×87°.09W, h0km, mb4.2/4, mb1 4.4/5, mb1mx3.9/52, mbtmp4.2/5, MS4.5/2, Ms1 4.5/2, ms1mx3.9/33, Error ellipse: s-maj=67.2km s-min=21.2km az=50.0*

INET ***20*** *17:58:12.1, 11°.38N×87°.33W, h11km, ML4.3*

ISC 20 17:58:13.9±0.7**, 11°.5N**±0°.1×**87°.3W**±0°.1**, h37**km**, n39, σ1^{s}56**/39**, mb4.5**/14**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	1.53	352	Pn	Pn	17 58 40.0	+1.2
ACON	Acoyapa	2.17	76	Pn	Pn	17 58 47.5	0.0
TGUH	Tegucigalpa,Un	2.59	1	Pn	Pn	17 58 54.1	+0.7
JTS	Las Juntas de	2.60	116	Pn	Pn	17 58 54.2	+0.8
	baz=202,slow=16,SNR=0.4						
JTS				Sn	Sn	17 59 24.2	+0.3
	41nm,0.3s,baz=31,slow=20,SNR=1.5						
JTS	Las Juntas de	2.60	116		Pn	17 58 52.7	-0.7
TXAR	Lajitas Array	23.42	322	P	P	18 03 17.3	-2.6
TX31	Lajitas Ar. Si	23.42	322	P	P	18 03 16.5	-3.4
TX32	Lajitas Array	23.42	322	P	P	18 03 16.8	-3.2
TX32				IAmb	IAmb	18 03 29.7	
	comp=Z,9.0nm,0.7s						
X37A	Clayton	24.17	344	P	P	18 03 28.2	+1.4
CLTN	Cedars of Leba	24.55	2	P	P	18 03 30.7	+0.5
CLTN				IAmb	IAmb	18 03 32.9	
	comp=Z,12nm,0.9s						
X34A	Smith Ranch, M	24.95	339	P	P	18 03 33.0	-0.9
LPIG	La Paz	25.19	303	LR	LR	18 13 16.5	
	comp=Z,1µm,21.3s,baz=106,slow=36						
S39A	Bolivar	26.68	349	P	P	18 03 48.7	-0.7
S39A				IAmb	IAmb	18 03 57.0	
	comp=Z,9.6nm,0.7s						
PV17	East Wray Mesa	32.98	328	P	P	18 04 47.8	+2.2
PV17				IAmb	IAmb	18 04 53.6	
	comp=Z,5.2nm,0.7s						
SADO	Sadowa	33.94	10	P	P	18 04 51.4	-2.1
	comp=Z,3.3nm,0.4s,baz=209,slow=1.2,SNR=3.6						
COWI	Conover	34.56	358	P	P	18 04 57.4	-1.6
COWI				IAmb	IAmb	18 05 21.9	
	comp=Z,9.1nm,1.1s						
BW06	Boulder Array	36.70	332	P	P	18 05 17.1	-0.6
BW06				IAmb	IAmb	18 05 27.5	
	comp=Z,8.2nm,1.2s						
PD31	Pinedale Array	36.70	332	P	P	18 05 17.1	-0.6
PDAR	Pinedale Array	36.70	332	P	P	18 05 17.9	+0.2
PDAR	Pinedale Array	36.70	332	PcP	P	18 05 18.2	+0.5
	comp=Z,2.2nm,0.7s,baz=138,slow=5.1,SNR=5.8						
HWUT	Hardware Ranch	36.79	329	P	P	18 05 18.3	0.0
BGU	Big Grassy Mou	37.05	327	P	P	18 05 20.3	-0.3
ISA	Isabella, Lake	37.09	316	P	P	18 05 20.7	-0.2
AGMN	Agassiz Nation	37.42	351	P	P	18 05 21.7	-1.6
AGMN				IAmb	IAmb	18 05 23.8	
	comp=Z,19nm,1.4s						
AHID	Auburn Hatcher	37.43	331	P	P	18 05 21.0	-2.8
AHID				IAmb	IAmb	18 05 24.1	
	comp=Z,25nm,1.4s						
BDFB	Brasilia	47.32	124	P	P	18 06 45.0	+0.5
	comp=Z,3.8nm,0.5s,baz=294,slow=8.8,SNR=3.9						
YKA	Yellowknife Ar	54.60	345	P	P	18 07 38.3	-0.1
	comp=Z,0.6nm,0.5s,baz=140,slow=7.2,SNR=5.8						
YKA				ScP	ScP	18 12 41.0	+4.2
	comp=Z,0.1nm,0.5s,baz=140,slow=5.1,SNR=3.9						
INK	Inuvik	64.19	343	P	P	18 08 45.2	+0.7
INK				IAmb	IAmb	18 08 53.0	
	comp=Z,10nm,1.3s						
ILAR	Eielson Array	66.98	336	P	P	18 09 02.9	+0.2
	comp=Z,1.3nm,1.0s,baz=177,slow=4.8,SNR=4.0						
TORD	Torodi Ar. Bea	86.51	77	LR	LR	18 46 55.0	
	comp=Z,301nm,20.1s,baz=255,slow=34						
KURBB	Kurchatov Arra	116.97	10	PKP	PKiKP	18 16 56.7	+1.9
	comp=Z,0.3nm,0.6s,baz=345,slow=2.9,SNR=1.9						
SONM	Songino Array	119.73	349	PKP	PKiKP	18 17 01.8	+1.4
	comp=Z,0.2nm,0.4s,baz=248,slow=0.8,SNR=5.3						
MKAR	Makanchi Array	121.28	8	PKP	PKPdf	18 17 02.7	-0.6
	comp=Z,0.1nm,0.4s,baz=319,slow=2.8,SNR=1.2						
ASAR	Alice Springs	139.00	247	PKP	PKPdf	18 17 38.5	+1.1
	comp=Z,0.6nm,0.8s,baz=101,slow=2.0,SNR=3.4						
ASAR	Alice Springs	139.00	247		PKPdf	18 17 38.0	+0.6
WRA	Warramunga Arr	139.10	253	PKP	PKiKP	18 17 39.6	-0.3
	comp=Z,0.9nm,0.8s,baz=94,slow=1.7,SNR=3.8						
WRA	Warramunga Arr	139.10	253		PKPdf	18 17 36.3	-1.4
CMAR	Chiang Mai Arr	149.64	348	PKPbc	PKiKP	18 18 02.1	+0.5
	comp=Z,1.6nm,0.8s,baz=316,slow=2.7,SNR=6.1						
CMAR	Chiang Mai Arr	149.64	348		PKiKP	18 18 01.8	+0.2

UPP ***20*** *18:01:20.3±0.1, 67°.07N×20°.92E, h0km, ML2.0, Explosion*

HEL ***20*** *18:01:21.0±0.0, 67°.08N×20°.90E, h0km, ML1.6, ML2.0(UPP), Explosion*

IDC ***20*** *18:01:21.3±0.9, 67°.06N×21°.19E, h0km, mb1 3.5/5, mb1mx3.1/56, mbtmp3.5/5, ML2.1/5, Error ellipse: s-maj=17.8km s-min=7.9km az=104.0*

NAO ***20*** *18:01:21.9±0.8, 67°.06N×21°.41E, ML2.3*

BER ***20*** *18:01:23.0±2.9, 67°.01N×21°.02E, h0km, ML1.5, Suspected explosion*

ISC 20 18:01:19.7±0.7**, 67°.07N**±0°.02×**20°.97E**±0°.02**, h0**km**, n54, σ1^{s}14**/77**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.17	289	P	Pg	18 01 23.3	+0.5
DUNU				S	Sg	18 01 25.1	+0.2
DUNU	Dundret	0.17	289	*i* P	Pg	18 01 23.3	+0.5
DUNU				*i* S	Sg	18 01 25.1	+0.2
MASU	Masugnsbyn	0.56	45	P	Pg	18 01 31.2	+0.8
MASU	Masugnsbyn	0.56	45	*i* P	Pg	18 01 31.2	+0.8
ERTU	Ertsjaerv	0.71	136	P	Pg	18 01 33.8	+0.6
ERTU	Ertsjaerv	0.71	136	*i* P	Pg	18 01 33.8	+0.6
PAJU	Pajala	0.84	92	P	Pg	18 01 36.2	+0.4
PAJU	Pajala	0.84	92	*i* P	Pg	18 01 36.2	+0.4
HARU	Harads	0.91	180	P	Pg	18 01 37.3	+0.2
HARU	Harads	0.91	180	*e*P	Pg	18 01 37.3	+0.2
LANU	Lannavaara	1.06	21	P	Pg	18 01 39.6	-0.4
LANU	Lannavaara	1.06	21	*e*P	Pg	18 01 40.1	+0.1
LANU				*e*S	Sg	18 01 54.3	+0.5
KALU	Kalix	1.55	141	P	Pb	18 01 48.8	-0.3
KALU	Kalix	1.55	141	*e*P	Pb	18 01 48.8	-0.3
SJUU	Sjulsmark	1.59	170	P	Pn	18 01 49.5	+0.5
SJUU	Sjulsmark	1.59	170	*e*P	Pn	18 01 49.5	+0.5
TOF	Tornio	1.67	125	*e*P	Pb	18 01 51.1	-0.1
TOF				*e*S	Sg	18 02 13.4	+0.2
HEF	Hetta	1.69	36	Pn	Pn	18 01 50.7	+0.2
HEF	Hetta	1.69	36	Pn	Pn	18 01 50.7	+0.2
HEF	Hetta	1.69	36	*e*P	Pn	18 01 51.0	+0.5
HEF				*e*S	Sg	18 02 14.0	0.0
HEF				MSG		18 02 16.6	
	comp=Z,3.7nm,0.1s						
LILU	Lilltraesk	1.85	195	P	Pb	18 01 53.6	-0.6
LILU	Lilltraesk	1.85	195	*e*P	Pb	18 01 53.6	-0.6
KIF	Kilpisjarvi	1.95	358	Pn	Pb	18 01 55.8	-0.2
KIF				Sn	Sg	18 02 22.2	+0.1
KIF	Kilpisjarvi	1.95	358	Pn	Pb	18 01 55.8	-0.2
KIF				Sn	Sg	18 02 22.2	+0.1
KIF	Kilpisjarvi	1.95	358	*e*P	Pb	18 01 56.0	0.0
KIF				*e*S	Sb	18 02 20.7	-0.1
RNF	Rovaniemi	2.05	101	*e*P	Pb	18 01 57.2	-0.5
RNF				*e*S	Sb	18 02 23.3	-0.4
KTK1	Kautokeino	2.13	23	Pn	Pb	18 01 59.1	0.0
KTK1				Sn	Sb	18 02 25.7	-0.3
KTK1	Kautokeino	2.13	23	*e*P	Pb	18 01 59.1	0.0
KTK1				*e*S	Sb	18 02 25.8	-0.3
KTK1				IAML		18 02 46.8	
	comp=Z,7.8nm,0.4s						
SGF	Sodankyl	2.19	78	*e*P	Pb	18 01 59.2	-0.9
SGF				*e*S	Sb	18 02 27.0	-0.9
STEI	Steigen	2.37	294	*e*P	Pn	18 02 01.0	+1.3
STEI				IAML		18 02 18.9	
	comp=Z,3.6nm,0.2s						
STEI				*e*S	Sn	18 02 31.2	+1.8
BURU	Burvik	2.50	176	P	Pn	18 02 03.3	+1.8
BURU	Burvik	2.50	176	*e*P	Pn	18 02 03.3	+1.8
SVAU	Svanoeiden	2.65	193	P	Pn	18 02 05.0	+1.4
SVAU	Svanoeiden	2.65	193	*e*P	Pn	18 02 05.0	+1.4
ARA0	ARCESS Array S	3.00	32	Pn	Pn	18 02 09.7	+1.3
	baz=207,slow=14						
ARA0				Sn	Sn	18 02 46.9	+1.9
	baz=209,slow=28						
ARA0	ARCESS Array S	3.00	32	Pn	Pn	18 02 09.7	+1.3
	baz=207,slow=14						
ARA0				Sn	Sn	18 02 46.9	+1.9
	baz=209,slow=28						
ARCES	ARCESS Array B	3.00	32	Pn	Pn	18 02 09.4	+1.0
	comp=Z,0.3nm,0.3s,baz=205,slow=14,SNR=23						
ARCES				Sn	Sn	18 02 46.4	+1.4
	comp=Z,0.7nm,0.3s,baz=214,slow=24,SNR=2.4						
ARE0	ARCESS Array S	3.00	32	*e*P	Pn	18 02 09.5	+1.1

ARE0				eS	Sn	18 02 45.7	+0.7
UMAU	Umeaa	3.20	182	P	Pn	18 02 12.5	+1.4
UMAU	Umeaa	3.20	182	eP	Pn	18 02 12.5	+1.4
KEV	Kevo	3.50	37	Pn	Pn	18 02 15.6	+0.3
KEV				Sn	Sn	18 02 57.6	+0.2
KEV	Kevo	3.50	37	Pn	Pn	18 02 15.6	+0.3
KEV				Sn	Sn	18 02 57.6	+0.2
FIA0	FINESS Array S	6.07	156	Pn	Pn	18 02 52.9	+2.4
	baz=346,slow=14						
FIA0				Sn	Sn	18 04 00.4	-0.1
	baz=343,slow=28						
FIA0	FINESS Array S	6.07	156	Pn	Pn	18 02 52.9	+2.4
	baz=346,slow=14						
FINES	FINESS Array B	6.07	156	Pn	Pn	18 02 52.3	+1.8
	comp=Z,0.1nm,0.3s,baz=347,slow=12,SNR=6.5						
FINES				Sn	Sn	18 04 00.8	+0.2
	comp=Z,0.2nm,0.3s,baz=341,slow=21,SNR=2.1						
NOA	NORSAR Array B	7.40	220	Pn	Pn	18 03 09.0	+0.1
	comp=Z,0.0nm,0.3s,baz=32,slow=17,SNR=2.7						
NRA0	NORESS Array S	7.58	218	Pn	Pn	18 03 13.0	+1.6
	baz=30,slow=12						
NRA0	NORESS Array S	7.58	218	Pn	Pn	18 03 13.0	+1.6
	baz=30,slow=12						
HFS	Hagfors	7.67	208	Pn	Pn	18 03 13.6	+1.0
	baz=21,slow=16						
HFS	Hagfors	7.67	208	Pn	Pn	18 03 13.0	+0.5
	comp=Z,0.1nm,0.3s,baz=65,slow=21,SNR=1.5						
HFS				Sn	Sn	18 04 38.0	-2.0
	comp=Z,0.1nm,0.3s,baz=29,slow=27,SNR=2.0						
HFS	Hagfors	7.67	208	Pn	Pn	18 03 13.6	+1.0
	baz=21,slow=16						
SPA0	Spitsbergen Ar	11.25	355	Pn	Pn	18 04 01.4	0.0
	baz=157,slow=14						
SPA0	Spitsbergen Ar	11.25	355	Pn	Pn	18 04 01.4	0.0
	baz=157,slow=14						
SPITS	Spitsbergen Ar	11.25	355	Pn	Pn	18 04 01.4	0.0
	baz=181,slow=16,SNR=2.0						
SPITS				Sn	Sn	18 06 02.3	-5.3
	baz=180,slow=15,SNR=2.3						

IDC ***20*** *18:19:12.9±1.6,26°.97N×143°.73E,h0^{km},mb3.5/5, mb1 3.8/6,mb1mx3.5/39,mbtmp3.6/6,ML3.1/1,Error ellipse: s-maj=31.4km s-min=28.0km az=100.0*
JMA ***20*** *18:19:17.8,27°.13N×143°.26E,h108^{km}±4^{km},M3.5*
NEIC ***20*** *18:19:19.4±1.0,27°.2N±0°.2×143°.45E±0°.07,h29^{km}±9^{km}, mb4.4/3,Error ellipse: s-maj=24.2km s-min=6.6km az=164.0*
ISC 20 18:19:19.1±1.1**,27°.20N**±0°.09×**143°.5E**±0°.1**,h35**^{km}**,n23, σ1^{s}.48**/27**,mb3.8**/8**,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	1.20	266	P	Pn	18 19 38.7	-0.7
CBIJ				eS	Sn	18 19 54.2	-0.2
JCJ	Chichijima	1.20	266	Pn	Pn	18 19 38.8	-0.6
	12nm,0.3s,baz=336,slow=23,SNR=21						
JCJ				Sn	Sn	18 19 53.5	-0.9
	67nm,0.3s,baz=275,slow=23,SNR=5.8						
JHH2	Haha-jima-NKT2	1.33	245	P	Pn	18 19 39.9	-1.3
JHH2				eS	Sn	18 19 56.8	-0.8
BSO3	Boso 3	8.01	342	P	Pn	18 21 12.9	+0.1
JOD2	Odawara 2	8.89	336	P	Pn	18 21 24.6	-0.5
JHU	Hanno	9.36	338	P	Pn	18 21 31.0	-0.5
JHO	Hitachi	9.72	346	P	Pn	18 21 34.9	-1.5
JHO				eS	Sn	18 23 19.7	-4.6
JAG	Ashikaga	9.83	340	P	Pn	18 21 37.6	-0.4
MJAR	Matsushiro Arr	10.35	335	Pn	Pn	18 21 45.6	+0.4
	0.1nm,0.3s,baz=151,slow=11,SNR=8.4						
MJAR	Matsushiro Arr	10.35	335		Pn	18 21 45.4	+0.3
MAJO	Matsushiro	10.36	335		Pn	18 21 45.8	+0.6
MJB9	Matsu-Tunnel	10.36	335		Pn	18 21 45.9	+0.7
KLR	Kul'dur	23.81	341	P	P	18 24 30.8	+2.2
	1.6nm,0.5s,baz=146,slow=23,SNR=7.4						
SONM	Songino Array	35.48	316	P	P	18 26 14.2	+1.9
	0.5nm,0.9s,baz=103,slow=10,SNR=3.2						
TIXI	Tiksi	45.24	354	P	P	18 27 34.0	+1.4
TIXI				IAmb	IAmb	18 28 29.7	
	comp=Z,8.7nm,1.8s						
WRA	Warramunga Arr	47.70	192	P	P	18 27 50.1	-2.3
	comp=Z,0.6nm,0.8s,baz=11,slow=8.6,SNR=2.6						
MK31	Makanchi Array	51.33	310	P	P	18 28 21.0	+1.0
MK31				IAmb	IAmb	18 29 15.3	
	comp=Z,7.7nm,2.0s						
MKAR	Makanchi Array	51.33	310	P	P	18 28 21.4	+1.4
	comp=Z,0.4nm,0.6s,baz=96,slow=6.9,SNR=4.7						
MKAR	Makanchi Array	51.33	310	P	P	18 28 21.2	+1.2
KURK	Kurchatov	53.77	314	P	P	18 28 38.7	+0.8
KURK				IAmb	IAmb	18 29 11.1	
	comp=Z,8.3nm,1.7s						
KURBB	Kurchatov Arra	53.83	314	P	P	18 28 39.2	+0.9
	baz=91,slow=8.2						
ILAR	Eielson Array	57.05	29	P	P	18 29 00.2	-1.1
	comp=Z,0.2nm,0.7s,baz=278,slow=6.3,SNR=2.2						
KKAR	Karatay Array	59.99	306	P	P	18 29 23.2	+1.0

VAO ***20*** *18:41:21.6±0.3,23°.99S×69°.39W,h10^{km},mb5.4*
NEIC ***20*** *18:41:31.7,24°.03S×68°.96W,h98^{km},Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.02; M$_{\theta\theta}$1.67; M$_{\phi\phi}$2.35; M$_{r\theta}$2.31; M$_{\theta\phi}$-3.31; M$_{\phi r}$0.91; Fault plane solution: M$_0$5.42000×10^{16} NP1:φ$_s$164.33000°, δ46.81000°,λ-48.02000°. NP2:φ$_s$291.59000°,δ57.18000°, λ-125.47000°. Principal axes: T 5.4260, Plg6.0000°, Azm46.0000°; N -0.0172, Plg29.0000°, Azm313.0000°; P -5.4088, Plg60.0000°, Azm146.0000°;*
NEIC ***20*** *18:41:31.8±2.3,24°.03S±0°.05×69°.06W±0°.08,h93^{km}±2^{km}, mb5.4/317,Mwr5.1/32,Mww5.1,ML5.4(GUC) Error ellipse: s-maj=10.4km s-min=7.2km az=97.0*
SJA ***20*** *18:41:32.3±1.0,24°.04S×69°.18W,h70^{km},ML4.9,MW4.9*
MOS ***20*** *18:41:32.3±1.1,23°.80S×68°.95W,h99^{km},mb5.4/27,Error ellipse: s-maj=12.4km s-min=8.1km az=109.2*
IDC ***20*** *18:41:33.3±0.5,23°.96S×69°.04W,h100^{km}±4^{km},mb4.7/16, mb1 4.8/19,mb1mx4.8/24,mbtmp5.0/19,MS4.0/6, Ms1 4.0/6,ms1mx3.7/25,Error ellipse: s-maj=13.5km s-min=11.2km az=65.0*
GUC ***20*** *18:41:33.0±0.6,24°.03S×69°.25W,h96^{km}±5^{km},ML5.4*
BJI ***20*** *18:41:34.0±0.0,24°.10S×69°.20W,h97^{km},mB5.5/12*
NEIC ***20*** *18:41:34,24°.03S×69°.40W,h90^{km},Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.22; M$_{\theta\theta}$0.40; M$_{\phi\phi}$2.82; M$_{r\theta}$2.20; M$_{\theta\phi}$-3.68; M$_{\phi r}$0.41; Fault plane solution: M$_0$5.27000×10^{16} NP1:φ$_s$293.00000°, δ62.00000°,λ-133.00000°. NP2:φ$_s$176.00000°, δ50.00000°,λ-38.00000°. Principal axes: T 5.5926, Plg7.0000°, Azm52.0000°; N -0.7233, Plg37.0000°, Azm317.0000°; P -4.8694, Plg52.0000°, Azm151.0000°;*
GCMT ***20*** *18:41:37.8±0.2,23°.94S±0°.01×69°.23W±0°.02,h119^{km}±2^{km}, MW5.1/100,Moment Tensor Solution. s39,c45; s100,c135; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.97±.16; M$_{\theta\theta}$1.24±.23; M$_{\phi\phi}$2.74±.27; M$_{r\theta}$2.36±.12; M$_{\theta\phi}$-5.05±.17; M$_{\phi r}$0.74±.18; Best double couple: M$_0$6.54200×10^{16} NP1:φ$_s$172.00000°,δ52.00000°, λ-38.00000°. NP2:φ$_s$288.00000°,δ61.00000°, λ-136.00000°. Principal axes: T 7.1850, Plg5.0000°, Azm48.0000°; N -1.2770, Plg39.0000°, Azm314.0000°; P -5.8980, Plg51.0000°, Azm144.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 20 18:41:32.0±0.3**,24°.01S**±0°.03×**69°.20W**±0°.04**,h96**^{km}±2^{km}**, h96**^{km}**:pP-P,n1127,σ1^{s}.29**/984**,mb5.4**/175**,8C-13D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB15	IPOC Station P	0.83	343	⇓iP	Pn	18 41 51.9	+1.3
PB15				i S	Sn	18 42 05.8	+1.3
PB15	IPOC Station P	0.83	343	Pn	Pn	18 41 51.9	+1.3
PB15	IPOC Station P	0.83	343	eP	Pn	18 41 51.9	+1.3
GO02	Mina Guanaco	1.20	197	⇑iP	Pn	18 41 55.5	+0.7
GO02				i S	Sn	18 42 12.7	+0.8
GO02				IAML		18 42 14.7	
	comp=E,78μm,0.4s						
GO02	Mina Guanaco	1.20	197		Pn	18 41 55.5	+0.7
PB14	IPOC Station P	1.26	240	⇑iP	Pn	18 41 55.9	+0.5
PB14				i S	Sn	18 42 13.4	+0.4
PB14	IPOC Station P	1.26	240	Pn	Pn	18 41 55.9	+0.5
PB14	IPOC Station P	1.26	240	eP	Pn	18 41 56.0	+0.5
PB14				eS	Sn	18 42 13.2	+0.2
PB14				IAML		18 42 15.1	
	comp=Z,21μm,0.4s						
PB10	IPOC Station P	1.33	291	⇓iP	Pn	18 41 56.8	+0.8
PB10				i S	Sn	18 42 14.2	+0.1
PB10				IAML		18 42 17.3	
	comp=N,43μm,0.5s						
PB10	IPOC Station P	1.33	291		Pn	18 41 56.6	+0.6
PB06	IPOC Station P	1.34	345	⇓iP	Pn	18 41 57.6	+1.3
PB06				⇑eS	Sn	18 42 15.8	+1.3
PB06				IAML		18 42 17.7	
	comp=N,154μm,0.7s						
PB06	IPOC Station P	1.34	345	⇓eP	Pn	18 41 57.7	+1.3
PB06				IAML		18 42 18.4	
	comp=Z,52μm,0.5s						
LVC	Limon Verde	1.42	11	eP	Pn	18 41 58.8	+1.3
LVC				i S	Sn	18 42 17.9	+1.4
LVC	Limon Verde	1.42	11	P	Pn	18 41 58.8	+1.3
LVC	Limon Verde	1.42	11		Pn	18 41 58.8	+1.3
LVC	Limon Verde	1.42	11	eP	Pn	18 41 58.8	+1.3
LVC				eS	Sn	18 42 17.6	+1.0
LVC				IAML		18 42 19.4	
	comp=Z,27μm,0.8s						
PB05	IPOC Station P	1.47	321	⇓iP	Pn	18 41 58.9	+1.1
PB05				i S	Sn	18 42 18.0	+0.6
PB05				IAML		18 42 21.1	
	comp=N,49μm,0.5s						
PB05	IPOC Station P	1.47	321	eP	Pn	18 41 58.9	+1.1
PB05				eS	Sn	18 42 18.3	+1.0
PB05				IAML		18 42 21.9	
	comp=Z,27μm,0.8s						
PB04	IPOC Station P	1.88	332	⇓iP	Pn	18 42 03.5	+0.4
PB04				i S	Sn	18 42 25.4	-1.3
PB04				IAML		18 42 41.2	
	comp=N,27μm,0.4s						
PB04	IPOC Station P	1.88	332		Pn	18 42 03.4	+0.3
PB04	IPOC Station P	1.88	332	eP	Pn	18 42 03.5	+0.4
PB03	IPOC Station P	2.02	345	⇑iP	Pn	18 42 05.4	+0.6
PB03				i S	Sn	18 42 29.6	-0.2
PB03				IAML		18 42 30.6	
	comp=E,29μm,0.3s						
PB03	IPOC Station P	2.02	345	eP	Pn	18 42 05.5	+0.6
PB03				IAML		18 42 34.3	
	comp=Z,20μm,0.3s						
PB09	IPOC Station P	2.20	359	⇑iP	Pn	18 42 08.8	+1.6
PB09				i S	Sn	18 42 36.7	+2.5
PB09				IAML		18 42 39.0	
	comp=N,35μm,0.8s						
PB09	IPOC Station P	2.20	359	Pn	Pn	18 42 08.6	+1.3
PB09	IPOC Station P	2.20	359	eP	Pn	18 42 08.9	+1.6
PB09				IAML		18 42 45.5	
	comp=Z,23μm,0.6s						
PB07	IPOC Station P	2.36	344	⇑iP	Pn	18 42 09.6	+0.3
PB07				i S	Sn	18 42 34.7	-3.2
PB07				IAML		18 42 52.7	
	comp=E,21μm,0.7s						
PB07	IPOC Station P	2.36	344	Pn	Pn	18 42 09.6	+0.3
PB07	IPOC Station P	2.36	344	eP	Pn	18 42 09.9	+0.6
PB07				IAML		18 42 44.3	
	comp=Z,16μm,0.7s						
PB01	IPOC Station P	2.96	355		Pn	18 42 17.4	+0.1
PB01	IPOC Station P	2.96	355	eS	Sn	18 42 44.1	-8.0
PB01				IAML		18 42 45.4	
	comp=Z,14μm,0.5s						
PATCX	Punta Patache	3.29	344	⇑iP	Pn	18 42 20.8	-0.9
PATCX	Punta Patache	3.29	344	Pn	Pn	18 42 21.1	-0.6
SLA	San Lorenzo	3.45	103	⇓eP	Pn	18 42 28.1	+4.3
SLA				IAML		18 43 16.8	
	comp=Z,552nm,1.3s						
GO03	Copiap	3.69	194	eP	Pn	18 42 25.7	-1.3
GO03	Copiap	3.69	194		Pn	18 42 25.6	-1.3
AZAP	Zapla	3.79	94	eP	Pn	18 42 31.1	+2.6
AZAP				eS	Sn	18 43 13.6	+1.4
AZAP				IAML		18 43 28.6	
	comp=Z,599nm,3.4s						
YJA	Yavi	3.86	63	eP	Pn	18 42 32.5	+2.9
YJA				IAML		18 43 28.7	
	comp=Z,276nm,1.5s						
PB11	IPOC Station P	4.25	354		Pn	18 42 33.5	-1.2
GO01	Chusmiza	4.32	0		Pn	18 42 35.3	-0.6
PSGCX	Pisagua	4.47	349	Pn	Pn	18 42 35.5	-2.2
LCO	Las Campanas	5.16	195	P	Pn	18 42 44.4	-2.7
LCO	Las Campanas	5.16	195	Pn	Pn	18 42 44.4	-2.7
CYA	Choya	5.37	146	eP	Pn	18 42 50.7	+0.9
CYA				IAML		18 44 21.5	
	comp=Z,183nm,0.7s						
PB12	IPOC Station P	5.47	349	Pn	Pn	18 42 48.7	-2.6
AGUA	GUANDACOL	5.49	173	eP	Pn	18 42 52.4	+0.8
AGUA				IAML		18 44 03.8	
	comp=Z,192nm,0.6s						
PB16	IPOC Station P	5.65	357	Pn	Pn	18 42 53.6	-0.6
ACDV	Cuesta del Vie	6.14	179	⇓eP	Pn	18 43 00.5	+0.2
ACDV				IAML		18 44 52.1	
	comp=Z,630nm,1.5s						
AROD	Rodeo	6.14	182	⇓eP	Pn	18 43 00.9	+0.4
AROD				IAML		18 44 40.1	
	comp=Z,280nm,0.6s						
GO04	Tololo Observa	6.30	193		Pn	18 42 59.2	-3.4
ACCO	Cerro Coronel	6.55	179	eP	Pn	18 43 06.0	-0.1
ACCO				IAML		18 44 27.3	
	comp=Z,490nm,2.2s						
LPAZ	La Paz	7.75	8	P	Pn	18 43 23.0	+0.3
	comp=Z,44nm,0.3s,baz=177,slow=7.1,SNR=283						
LPAZ	La Paz	7.75	8	P	Pn	18 43 22.2	-0.5
LPAZ	La Paz	7.75	8		Pn	18 43 22.7	0.0
LPAZ	La Paz	7.75	8	Pn	Pn	18 43 22.2	-0.5
RTLS	Leoncito	7.76	181	eP	Pn	18 43 21.2	-1.4
RTLS				IAML		18 45 26.9	
	comp=Z,143nm,0.6s						
RTCV	Cerro Valdivia	7.85	176	eP	Pn	18 43 22.2	-1.3
RTCV				IAML		18 45 30.2	
	comp=Z,199nm,0.7s						
ROC1	El Roble	9.08	190		Pn	18 43 34.5	-5.9
PEL	Peldehue	9.20	188	P	Pn	18 43 36.8	-5.0
PEL	Peldehue	9.20	188		Pn	18 43 36.8	-5.0
CPUP	Villa Florida	11.00	105	P	Pn	18 44 05.5	-0.9
	comp=Z,0.7nm,0.3s,baz=286,slow=11,SNR=14						
CPUP	Villa Florida	11.00	105	P	Pn	18 44 04.4	-2.0
CPUP	Villa Florida	11.00	105		Pn	18 44 04.4	-2.0
CPUP	Villa Florida	11.00	105	eP	Pn	18 44 01.8	-4.6
GO05	Huala	11.22	192	Pn	Pn	18 44 01.9	-7.4
ITQB	Itaqui	12.56	119	eP	Pn	18 44 23.1	-4.2
AQDB	Aquidauana	12.99	77	eP	Pn	18 44 28.8	-4.2
NNA	Nana	13.98	327	i P	Pn	18 44 45.8	-0.3
SALV	Santo Antonio	15.04	60	eP	Pn	18 44 55.5	-4.0
TRCB	Terra Rica	15.26	89	eP	Pn	18 44 59.2	-3.2
TRQA	Tornquist	15.30	158	eP	Pn	18 44 59.4	-3.3
CPSB	Cacapava Do Su	15.40	118	eP	Pn	18 45 00.8	-3.2
PTGB	Pitanga	15.64	96	eP	Pn	18 45 05.6	-1.5
GO06	Curarrehue	15.65	187		Pn	18 45 04.8	-2.3
GO06				IAmb	IAmb	18 45 43.7	
	comp=Z,133nm,0.8s						
ITAB	Concordia	15.73	105	eP	Pn	18 45 05.2	-3.0
PLTB	Pedras Altas	15.80	123	eP	Pn	18 45 06.0	-3.0
SAML	Samuel	16.04	22	P	Pn	18 45 08.5	-3.7
SAML				pmax	pmax		
	comp=Z,99nm,0.7s						
SAML	Samuel	16.04	22		Pn	18 45 08.4	-3.7
SAML	Samuel	16.04	22	eP	Pn	18 45 08.7	-3.5
C2SB	Chapadao do Su	16.11	74	eP	Pn	18 45 11.7	-1.3
PCMB	Pacaembu	16.72	85	eP	Pn	18 45 18.7	-1.8
PLCA	Paso Flores	16.72	184	P	P	18 45 20.9	-0.1
	comp=Z,1.3nm,0.3s,baz=9.9,slow=10,SNR=21						
PLCA				LR	LR	18 52 23.6	
	comp=Z,388nm,18.7s,baz=39,slow=39						
PLCA	Paso Flores	16.72	184	P	Pn	18 45 18.5	-1.9
PLCA				pmax	pmax		
	comp=Z,310nm,1.8s						
PLCA	Paso Flores	16.72	184	Pn	Pn	18 45 18.5	-1.9
PLCA				IAmb	IAmb	18 45 55.4	
	comp=Z,310nm,1.8s						
PLCA	Paso Flores	16.72	184	eP	Pn	18 45 16.6	-3.8
CNLB	Canela	17.23	112	eP	Pn	18 45 24.3	-2.5
FRTB	Fartura	18.00	92	eP	P	18 45 34.2	-1.2
ITRB	Iturama	18.01	80	eP	P	18 45 34.6	-0.9
CLDB	Colider	18.26	47	eP	P	18 45 35.3	-3.0
ARAG	Araguaiana, MT	18.31	66	eP	P	18 45 37.3	-1.5
BB19B	Bebedouro	19.32	85	eP	P	18 45 48.5	-1.3
GO07	Milladeo Hill,	19.41	190	P	P	18 45 49.4	-1.1
SPB	Sao Paulo	19.93	93	P	P	18 45 55.3	-1.0
SPB	Sao Paulo	19.93	93	eP	P	18 45 55.7	-0.6
VAO	Valinhos	20.42	92	eP	P	18 46 00.5	-1.2
IPMB	Ipameri, GO	20.48	77	eP	P	18 46 02.1	-0.4
BDFB	Brasilia	21.58	71	P	P	18 46 14.1	-0.2
	comp=Z,254nm,0.9s,baz=252,slow=9.7,SNR=120						
BDFB				LR	LR	18 55 55.6	
	comp=Z,516nm,18.5s,baz=279,slow=40						
BDFB	Brasilia	21.58	71	P	P	18 46 11.7	-2.6
BDFB				pmax	pmax		
	comp=Z,213nm,0.8s						
BDFB	Brasilia	21.58	71	P	P	18 46 11.7	-2.6
BDFB				IAmb	IAmb	18 46 15.4	
	comp=Z,213nm,0.8s						
PARB	Paraibuna	21.61	93	eP	P	18 46 14.0	-0.4
ESAR	Angra dos Reis	22.72	93	eP	P	18 46 24.3	-1.8
BSCB	Bom Sucesso	22.76	87	eP	P	18 46 26.1	-0.5
PTGA	Pitinga	24.81	22	P	P	18 46 45.3	-0.1
PTGA	Pitinga	24.81	22	eP	P	18 46 45.4	+0.1
JANB	Januaria	25.06	74	eP	P	18 46 46.4	-1.3
SMTB	Santa Maria do	25.57	58	eP	P	18 46 51.1	-1.1
FLOC	Florencia	26.20	345	eP	P	18 46 58.9	+1.0
FLOC	Florencia	26.20	345	P	P	18 46 58.9	+1.0
MACC	Macarena, Meta	26.39	350	eP	P	18 47 14.4	+15
SJMB	Sao Joao De Ma	26.60	84	eP	P	18 47 02.3	+0.7
GARC	Garzon, Huila	26.75	346	eP	P	18 47 04.8	+1.6
BSFB	Barra de Sao F	26.87	84	eP	P	18 47 04.1	+0.1
SOTA	Rioblanco	26.96	344	eP	P	18 47 08.3	+2.9
PCON	Cinco Dias	27.10	344	eP	P	18 47 11.4	+4.8
ORTC	Ortega, Tolima	28.37	347	eP	P	18 47 18.6	+1.3
YOTC	Yotoco, Valle	28.68	345	eP	P	18 47 22.8	+2.6
CHIC	Chingaza	28.80	351	eP	P	18 47 21.8	+0.2
EFI	East Falkland	28.92	166	eP	P	18 47 20.8	-1.1
EFI	East Falkland	28.92	166	P	P	18 47 21.1	-0.8
ROSC	El Rosal	29.10	349	P	P	18 47 26.1	+1.8
	comp=Z,9.2nm,0.3s,baz=143,slow=20,SNR=1.6						
ROSC				LR	LR	18 59 16.3	
	comp=Z,288nm,18.0s,baz=118,slow=36						
RREF	El Recreo	29.35	347	eP	P	18 47 29.6	+2.9
RUSC	La Rusia	29.96	352	eP	P	18 47 32.2	+0.3
RUSC	La Rusia	29.96	352	P	P	18 47 32.1	+0.2
CBOC	Ciudad Bolivar	30.42	347	eP	P	18 47 36.7	+1.0
HELC	Santa Helena	30.64	348	eP	P	18 47 37.8	-0.1
PTBC	PUERTO BERRIO,	30.79	350	eP	P	18 47 37.3	-1.5
PAMC	Pamplona, Colo	31.34	353	eP	P	18 47 44.6	+0.4
ZARC	Zaragoza, Cauc	31.79	349	eP	P	18 47 42.6	-5.0
UREC	San Jos de Ur	32.16	348	eP	P	18 47 50.0	-0.8
SDV	Santo Domingo	32.72	357	P	P	18 47 54.2	-1.7
SDV	Santo Domingo	32.72	357	eP	P	18 47 54.9	-1.1
SMLC	San Martn de	32.95	351	eP	P	18 47 54.9	-2.8
SJCC	San Jacinto, C	34.20	349	eP	P	18 48 05.0	-3.6
NBMO	Morrinhos-CE	34.87	58	eP	P	18 48 13.2	-1.2
NBLI	Livramento-PB	35.05	67	eP	P	18 48 17.0	+0.9
TOSP	Speyside	36.10	15	P	P	18 48 24.6	-0.2
RCBR	Riachuelo	36.75	66	P	P	18 48 29.6	-1.0
RCBR				pmax	pmax		
	comp=Z,70nm,0.8s						
RCBR	Riachuelo	36.75	66	P	P	18 48 29.6	-1.0
RCBR	Riachuelo	36.75	66	eP	P	18 48 29.8	-0.8
SVB	Belmont	37.86	13	P	P	18 48 39.3	-0.4
HOPE	Hope Point	38.84	150	P	P	18 48 48.3	+0.8
HOPE				pmax	pmax		
	comp=Z,228nm,0.8s						
HOPE	Hope Point	38.84	150	P	P	18 48 48.3	+0.8
PMSA	Palmer Station	40.90	177	LR	LR	19 05 28.1	
	comp=Z,192nm,20.4s,baz=330,slow=35						
MLPR	Magueyes Islan	41.77	3	P	P	18 49 10.4	-1.7
CRPR	Cabo Rojo, PR	41.81	3	P	P	18 49 10.6	-1.8
OBIP	Obispado Ponce	41.87	4	P	P	18 49 10.2	-2.7
PDPR	Patillas Dam,	41.89	5	P	P	18 49 11.1	-1.9
SJG	San Juan	41.97	4	P	P	18 49 11.4	-2.3
SJG				pmax	pmax		
	comp=Z,87nm,0.8s						
SJG	San Juan	41.97	4	P	P	18 49 11.4	-2.3
MTP	Monte Pirata	42.00	5	P	P	18 49 11.5	-2.5
ANWB	Willy Bob	42.05	11	P	P	18 49 11.5	-2.9
AOPR	Arecibo Observ	42.16	3	P	P	18 49 13.4	-1.9
AOPR				IAmb	IAmb	18 49 37.8	
	comp=Z,89nm,0.9s						
GCPR	Guaynabo City	42.17	4	P	P	18 49 12.8	-2.5
GCPR				IAmb	IAmb	18 49 37.4	
	comp=Z,58nm,0.8s						
CUPR	Culebra, Puert	42.23	6	P	P	18 49 13.1	-2.7
DR12	Loma Pena Alta	42.54	360	P	P	18 49 16.2	-2.2
SDDR	Presa de Saban	42.78	357	P	P	18 49 18.5	-1.8
TEIG	Tepich	47.73	336	P	P	18 49 59.0	-0.4
TEIG					pP	18 50 23.0	+0.2
TEIG				IAmb	IAmb	18 50 24.5	
	comp=Z,54nm,0.9s						
TLIG	Tlapa	50.28	323	pP	pP	18 50 44.8	+2.1
DWPF	Disney Wildern	53.14	346	pP	pP	18 51 03.7	-0.2
	baz=166						
553A	Crawfordville	55.84	344		pP	18 51 23.2	-0.4
ZAIG	Zacatecas	56.68	323	P	P	18 51 07.8	+1.7
ZAIG					pP	18 51 32.0	+2.0
TIGA	Tifton	56.83	345	pP	pP	18 51 30.4	-0.2
	baz=164						
255A	Hazlehurst	57.05	347		pP	18 51 31.2	-1.0
352A	Blakely	57.19	344		pP	18 51 32.6	-0.6
158A	Hollywood	57.39	349	pP	pP	18 51 35.3	+0.6
	baz=168						
157A	Early Branch	57.48	348	pP	pP	18 51 35.6	+0.2
	baz=167						
CSU	Charleston Sou	57.62	349		pP	18 51 34.4	-1.8
Z59A	Georgetown, SC	57.73	350	pP	pP	18 51 37.6	+0.5
	baz=169						
NHSC	New Hope	57.75	349	pP	pP	18 51 34.5	-2.8
NHSC	New Hope	57.75	349	pP	pP	18 51 38.3	+1.0
	baz=168						
VNA3	Neumayer Olymp	57.80	161	P	P	18 51 13.3	+0.3
Z58A	St. Stephen	57.91	350	pP	pP	18 51 39.0	+0.7
	baz=168						
250A	Grady	58.01	343	P	P	18 51 14.7	-0.2
250A					pP	18 51 37.7	-1.4
VNA1	Neumayer--Stat	58.03	160	P	P	18 51 15.2	+0.6
Z57A	Bowman	58.03	349	pP	pP	18 51 39.6	+0.4
	baz=167						
152A	Waverly Hall	58.27	345	P	P	18 51 16.1	-0.6
152A					pP	18 51 39.7	-1.1
152A				IAmb	IAmb	18 51 42.5	
	comp=Z,49nm,1.1s						
Y60A	Bolivia	58.33	351	P	P	18 51 16.6	-0.4
Y60A					pP	18 51 40.1	-1.1
Y60A	Bolivia	58.33	351	pP	pP	18 51 41.8	+0.5
	baz=170						
VNA2	Neumayer--Watz	58.39	160	P	P	18 51 17.4	+0.3
	baz=287,slow=8.2						
346A	Big Creek Wild	58.40	340	pP	pP	18 51 39.6	-2.2
Y59A	Loris	58.41	351	pP	pP	18 51 38.9	-2.9
Y58A	Scranton	58.45	350	pP	pP	18 51 39.4	-2.7
Y58A	Scranton	58.45	350	pP	pP	18 51 42.9	+0.8
	baz=169						
Y57A	Sumter	58.68	349	pP	pP	18 51 43.9	+0.1
Y57A	Sumter	58.68	349	pP	pP	18 51 44.1	+0.4
	baz=168						
GOGA	Godfrey	58.70	346		pP	18 51 42.6	-1.3
X60A	Albert Glenn T	58.86	352	pP	pP	18 51 45.1	+0.2
	baz=170						
Y55A	Saluda	58.87	348	pP	pP	18 51 45.4	+0.3
	baz=166						
344A	Westbrook Farm	58.87	339	pP	pP	18 51 45.6	+0.5
X59A	McDuffie Farm,	58.94	351	pP	pP	18 51 46.0	+0.5
	baz=170						
Z51A	Franklin	59.00	344		pP	18 51 44.2	-1.8
SACV	Santiago Islan	59.03	54	pP	pP	18 51 43.3	-3.5
X58A	Rowland	59.03	350	P	P	18 51 22.0	+0.2
X58A					pP	18 51 45.4	-0.8
X58A	Rowland	59.03	350	pP	pP	18 51 46.3	+0.2
	baz=169						
JSC	Jenkinsville	59.09	348	P	P	18 51 22.4	+0.1
JSC					pP	18 51 46.9	+0.2
441A	DeRidder	59.10	336	pP	pP	18 51 45.2	-1.6
Z50A	Ashland	59.13	344	P	P	18 51 22.3	-0.3
Z50A				pP	pP	18 51 46.1	-0.8
Z50A				IAmb	IAmb	18 51 48.6	
	comp=Z,35nm,0.8s						
LRAL	Lakeview Retre	59.21	343	P	P	18 51 22.8	-0.3
LRAL				pP	pP	18 51 46.9	-0.5
LRAL				IAmb	IAmb	18 51 48.3	
	comp=Z,60nm,1.6s						
LRAL	Lakeview Retre	59.21	343	pP	pP	18 51 47.2	-0.2
	baz=161						
HODGE	Hodges	59.23	347	P	P	18 51 23.6	+0.3
HODGE					pP	18 51 46.2	-1.4
X56A	White Oak	59.25	349	pP	pP	18 51 48.1	+0.4
	baz=167						
Y52A	Lilburn	59.26	346	P	P	18 51 23.2	-0.3
Y52A					pP	18 51 47.6	-0.3

Y52A			IAmb	IAmb	18 51 49.5	
	comp=Z,51nm,1.2s					
Y52A	**Lilburn**	**59.26 346**	pP	pP	18 51 47.5	-0.3
	baz=164					
W60A	**Pink Hill**	**59.29 352**	pP	pP	18 51 48.9	+0.9
	baz=171					
BIRD	**Birdtown, Kers**	**59.30 349**	P	**P**	**18 51 23.6**	**-0.2**
BIRD			pP	**pP**	**18 51 48.9**	**+0.8**
W61A	**Ground Anchor**	**59.32 353**	pP	pP	18 51 49.0	+0.8
	baz=172					
X55A	**Gracelyn & Ava**	**59.34 348**	pP	pP	18 51 48.6	+0.2
	baz=167					
342A	**Flagon Creek P**	**59.35 337**	P	**P**	**18 51 25.5**	**+1.4**
342A				**pP**	**18 51 46.4**	**-2.1**
146A	**Union**	**59.43 341**	pP	pP	18 51 48.9	-0.1
HKT	**Hockley**	**59.43 333**	pP	pP	18 51 49.0	+0.1
W58A	**Raeford**	**59.47 350**	pP	pP	18 51 50.2	+0.9
	baz=169					
W59A	**Clinton**	**59.50 351**	pP	pP	18 51 50.2	+0.8
	baz=170					
VBMS	**Vicksburg**	**59.51 339**	pP	pP	18 51 49.7	+0.2
VBMS	**Vicksburg**	**59.51 339**	pP	pP	18 51 49.8	+0.3
	baz=157					
X54A	**Belton**	**59.56 347**	pP	pP	18 51 50.4	+0.4
	baz=166					
833A	**Chaparral WMA,**	**59.61 329**	P	**P**	**18 51 25.9**	**-0.1**
833A				**pP**	**18 51 51.2**	**+0.9**
833A	**Chaparral WMA,**	**59.61 329**	pP	pP	18 51 51.2	+0.9
	baz=148					
Z47A	**Carrollton**	**59.66 342**	pP	pP	18 51 50.3	-0.3
X53A	**Estanollee**	**59.71 347**	pP	pP	18 51 51.3	+0.3
	baz=165					
PAULI	**Pauline**	**59.72 348**	P	**P**	**18 51 26.4**	**-0.2**
PAULI				**pP**	**18 51 51.1**	**+0.1**
W57A	**Gilead**	**59.72 350**	P	**P**	**18 51 27.3**	**+0.7**
W57A				**pP**	**18 51 51.1**	**+0.2**
W57A			IAmb	IAmb	18 51 52.7	
	comp=Z,36nm,0.8s					
W57A	**Gilead**	**59.72 350**	pP	pP	18 51 51.4	+0.5
	baz=168					
W56A	**Indian Trail**	**59.80 349**	pP	pP	18 51 52.0	+0.4
	baz=168					
Y49A	**Blount Mountai**	**59.83 343**	P	**P**	**18 51 27.3**	**-0.2**
Y49A				**pP**	**18 51 50.5**	**-1.2**
Y49A			IAmb	IAmb	18 51 53.4	
	comp=Z,53nm,1.5s					
V61A	**Roper**	**59.88 353**	pP	pP	18 51 52.7	+0.7
	baz=172					
KMSC	**Kings Mountain**	**59.94 349**	P	**P**	**18 51 28.2**	**0.0**
KMSC	**Kings Mountain**	**59.94 349**	pP	pP	18 51 53.0	+0.4
	baz=167					
SNAA	**Sanae**	**60.01 160**	P	**P**	**18 51 28.6**	**+0.2**
SNAA	**Sanae**	**60.01 160**	P	**P**	**18 51 28.2**	**-0.1**
SNAA			pmax	pmax		
	comp=Z,106nm,0.8s					
SNAA	**Sanae**	**60.01 160**	P	**P**	**18 51 28.2**	**-0.1**
W54A	**Cherokee Point**	**60.05 348**	pP	pP	18 51 53.7	+0.4
	baz=166					
V59A	**Middlesex**	**60.06 352**	pP	pP	18 51 53.7	+0.4
	baz=170					
BG3	**Lake Jocassee**	**60.11 347**	P	**P**	**18 51 28.9**	**-0.4**
BG3			IAmb	IAmb	18 51 55.4	
	comp=Z,58nm,1.6s					
X51A	**Calhoun**	**60.12 345**	P	**P**	**18 51 29.7**	**+0.3**
X51A				**pP**	**18 51 52.6**	**-1.2**
X51A	**Calhoun**	**60.12 345**	pP	pP	18 51 53.8	0.0
	baz=163					
V58A	**Windy Hill, Pi**	**60.21 351**	P	**P**	**18 51 30.0**	**+0.1**
V58A				**pP**	**18 51 54.5**	**+0.1**
V58A	**Windy Hill, Pi**	**60.21 351**	pP	pP	18 51 55.0	+0.6
	baz=169					
FPAL	**Fort Paine**	**60.28 344**	P	**P**	**18 51 29.5**	**-1.0**
FPAL				**pP**	**18 51 53.3**	**-1.5**
FPAL			IAmb	IAmb	18 51 56.4	
	comp=Z,51nm,1.2s					
U61A	**Possum Corner**	**60.40 353**	P	**P**	**18 51 30.6**	**-0.7**
U61A				**pP**	**18 51 55.3**	**-0.3**
U61A	**Possum Corner**	**60.40 353**	pP	pP	18 51 56.3	+0.6
	baz=172					
V57A	**Coltrane Farms**	**60.40 350**	pP	pP	18 51 55.9	+0.2
	baz=169					
W52A	**Murphy**	**60.41 346**	P	**P**	**18 51 31.1**	**-0.4**
W52A				**pP**	**18 51 55.1**	**-0.7**
W52A			IAmb	IAmb	18 51 57.9	
	comp=Z,37nm,0.9s					
V56A	**Mocksville**	**60.45 349**	pP	pP	18 51 56.7	+0.7
	baz=168					
X48A	**Hartselle**	**60.56 343**	P	**P**	**18 51 31.6**	**-0.8**
NATX	**Nacogdoches**	**60.56 335**		pP	18 51 56.7	-0.2
NATX	**Nacogdoches**	**60.56 335**	pP	pP	18 51 57.8	+0.9
	baz=153					
U59A	**Littleton**	**60.58 352**	P	**P**	**18 51 31.8**	**-0.7**
U59A				**pP**	**18 51 57.4**	**+0.5**
U59A			IAmb	IAmb	18 51 58.9	
	comp=Z,27nm,0.8s					
U59A	**Littleton**	**60.58 352**	pP	pP	18 51 57.6	+0.7
	baz=171					
V55A	**Taylorsville**	**60.61 349**	P	**P**	**18 51 33.5**	**+0.8**
V55A			pP	**pP**	**18 51 55.8**	**-1.4**
V55A	**Taylorsville**	**60.61 349**	pP	pP	18 51 57.6	+0.5
	baz=167					
U60A	**Pendleton**	**60.62 353**	pP	pP	18 51 57.8	+0.6
	baz=171					
V54A	**Nebo**	**60.67 348**	pP	pP	18 51 57.8	+0.2
	baz=166					
Y45A	**Yeager Farm, C**	**60.72 341**	P	**P**	**18 51 33.3**	**-0.2**
Y45A			pP	**pP**	**18 51 57.0**	**-0.9**
U58A	**Oxford**	**60.72 351**	pP	pP	18 51 58.6	+0.7
	baz=170					
V53A	**Saluda**	**60.73 347**	P	**P**	**18 51 33.6**	**0.0**
V53A			pP	**pP**	**18 51 57.2**	**-0.9**
V53A			IAmb	IAmb	18 51 59.4	
	comp=Z,89nm,1.6s					
W50A	**Signal Mountai**	**60.83 345**	P	**P**	**18 51 33.9**	**-0.4**
W50A			pP	**pP**	**18 51 57.2**	**-1.6**
U57A	**Blanch**	**60.87 351**	pP	pP	18 51 59.3	+0.4
	baz=169					
CPCT	**Cooper Cave**	**60.89 346**	P	**P**	**18 51 34.6**	**0.0**
CPCT			IAmb	IAmb	18 52 00.9	
	comp=Z,49nm,1.1s					
435B	**Jarrell**	**60.90 332**		pP	18 51 59.9	+0.8
435B	**Jarrell**	**60.90 332**	pP	pP	18 51 59.5	+0.4
	baz=150					
TKL	**Tuckaleechee C**	**60.92 346**	LR	LR	19 18 39.5	
	comp=Z,85nm,19.5s,baz=166,slow=36					
TKL	**Tuckaleechee C**	**60.92 346**	P	**P**	**18 51 34.6**	**-0.2**
TKL			pP	**pP**	**18 51 57.8**	**-1.5**
TKL			IAmb	IAmb	18 52 01.0	
	comp=Z,49nm,0.9s					
U56A	**King**	**60.95 350**		pP	18 51 58.5	-1.0
U56A	**King**	**60.95 350**	pP	pP	18 51 59.8	+0.3
	baz=168					
SWET	**Sewanee**	**61.00 344**	P	**P**	**18 51 35.2**	**-0.2**
SWET			pP	**pP**	**18 51 59.1**	**-0.6**
V52A	**Sevierville**	**61.06 347**	P	**P**	**18 51 35.4**	**-0.3**
V52A				**pP**	**18 51 58.5**	**-1.8**
T59A	**Double "B" Far**	**61.16 352**	P	**P**	**18 51 35.6**	**-0.8**
T59A				**pP**	**18 52 00.2**	**-0.6**
T59A			IAmb	IAmb	18 52 02.8	
	comp=Z,38nm,1.1s					
T59A	**Double "B" Far**	**61.16 352**	pP	pP	18 52 01.3	+0.5
	baz=171					
V51A	**Loudon**	**61.19 346**	P	**P**	**18 51 35.8**	**-0.9**
V51A				**pP**	**18 51 57.4**	**-3.7**
V51A			IAmb	IAmb	18 52 02.9	
	comp=Z,31nm,0.9s					
U55A	**TA2, Sparta**	**61.21 349**	pP	pP	18 52 01.8	+0.5
	baz=167					
237A	**Washetta, Mont**	**61.23 334**	P	**P**	**18 51 37.3**	**+0.4**
237A				**pP**	**18 52 02.0**	**+0.6**
Z41A	**Richland Creek**	**61.23 338**	pP	pP	18 52 02.2	+0.9
	baz=155					
T60A	**Surry**	**61.23 353**	pP	pP	18 52 01.5	+0.2
	baz=172					
T58A	**Grand View Acr**	**61.26 351**	pP	pP	18 52 02.2	+0.7
	baz=170					
OXF	**Oxford**	**61.28 341**	P	**P**	**18 51 36.2**	**-1.0**
OXF				**pP**	**18 52 00.2**	**-1.5**
OXF	**Oxford**	**61.28 341**	pP	pP	18 52 01.0	-0.7
	baz=159					
PLAL	**Pickwick Lake**	**61.34 342**	P	**P**	**18 51 36.6**	**-1.1**
PLAL				**pP**	**18 52 01.2**	**-0.9**
PLAL			IAmb	IAmb	18 52 03.2	
	comp=Z,61nm,1.3s					
U54A	**Nelsons Funny**	**61.37 348**	P	**P**	**18 51 38.5**	**+0.6**
U54A			pP	**pP**	**18 52 02.1**	**-0.3**
U54A			IAmb	IAmb	18 52 03.8	
	comp=Z,47nm,0.8s					
T57A	**Hurt**	**61.41 351**	P	**P**	**18 51 38.1**	**0.0**
T57A				**pP**	**18 52 00.3**	**-2.3**
T57A			IAmb	IAmb	18 52 04.5	
	comp=Z,41nm,0.8s					
T57A	**Hurt**	**61.41 351**	pP	pP	18 52 02.9	+0.3
	baz=169					
T56A	**Rocky Mt**	**61.56 350**	pP	pP	18 52 04.2	+0.5
	baz=168					
JCT	**Junction City**	**61.62 330**	P	**P**	**18 51 40.3**	**+0.6**
JCT			*PP	**pP**	**18 52 04.4**	**+0.3**
JCT			pmax	pmax		
	comp=Z,113nm,0.8s					
JCT	**Junction City**	**61.62 330**	P	**P**	**18 51 40.3**	**+0.6**
JCT			pP	**pP**	**18 52 04.4**	**+0.3**
HPIG		**61.69 323**	P	**P**	**18 51 41.0**	**+0.6**
HPIG				**pP**	**18 52 05.3**	**+0.4**
HPIG			IAmb	IAmb	18 52 07.4	
	comp=Z,31nm,0.8s					
V48A	**Smith Brothers**	**61.72 344**	P	**P**	**18 51 39.4**	**-0.8**
V48A			pP	**pP**	**18 52 03.2**	**-1.4**
WLAR	**White Oak Lake**	**61.73 337**	P	**P**	**18 51 40.8**	**+0.5**
WLAR				**pP**	**18 52 04.5**	**-0.3**
TZTN	**Tazewell**	**61.73 347**	P	**P**	**18 51 39.9**	**-0.3**
TZTN				**pP**	**18 52 02.9**	**-1.9**
TZTN			IAmb	IAmb	18 52 06.5	
	comp=Z,27nm,1.0s					
TZTN	**Tazewell**	**61.73 347**	pP	pP	18 52 04.5	-0.3
	baz=165					
T55A	**Pulaski**	**61.77 350**	pP	pP	18 52 05.7	+0.6
	baz=168					
S60A	**Water View**	**61.78 353**	pP	pP	18 52 04.6	-0.5
	baz=172					
BLA	**Blacksburg**	**61.80 350**	P	**P**	**18 51 40.6**	**-0.2**
BLA			*PP	**pP**	**18 52 05.8**	**+0.5**
BLA			pmax	pmax		
	comp=Z,186nm,1.9s					
BLA	**Blacksburg**	**61.80 350**	P	**P**	**18 51 40.6**	**-0.2**
BLA				**pP**	**18 52 05.8**	**+0.5**
W45A	**Hickory Valley**	**61.82 341**	P	**P**	**18 51 40.7**	**-0.2**
W45A				**pP**	**18 52 04.7**	**-0.6**
T54A	**Tazewell**	**61.85 349**	pP	pP	18 52 05.9	+0.2
	baz=167					
S58A	**Poland Farm, P**	**61.85 352**		pP	18 52 05.6	0.0
S58A	**Poland Farm, P**	**61.85 352**	pP	pP	18 52 05.9	+0.3
	baz=171					
WHTX	**Lake Whitney,**	**61.89 333**	P	**P**	**18 51 42.1**	**+0.7**
WHTX				**pP**	**18 52 04.4**	**-1.4**
WHTX	**Lake Whitney,**	**61.89 333**	pP	pP	18 52 06.6	+0.8
	baz=150					
S59A	**Mechanicsville**	**61.91 353**	pP	pP	18 52 06.6	+0.7
	baz=171					
CLTN	**Cedars of Leba**	**61.93 344**	P	**P**	**18 51 41.3**	**-0.3**
CLTN			pP	**pP**	**18 52 04.6**	**-1.4**
CLTN			IAmb	IAmb	18 52 07.8	
	comp=Z,46nm,0.8s					
T53A	**Wise**	**61.95 348**	pP	pP	18 52 06.3	0.0
	baz=166					
Z38A	**Mt. Pleasant**	**62.02 336**		pP	18 52 06.2	-0.6
S57A	**Dark Hollow, R**	**62.12 351**		pP	18 52 07.5	+0.1
S57A	**Dark Hollow, R**	**62.12 351**	pP	pP	18 52 07.8	+0.4
	baz=170					
S56A	**Natural Bridge**	**62.13 351**	pP	pP	18 52 08.2	+0.7
	baz=169					
T52A	**Hallie**	**62.16 348**	pP	pP	18 52 07.5	-0.2
	baz=166					
R58B	**Mineral**	**62.18 352**	P	**P**	**18 51 42.5**	**-0.7**
R58B				**pP**	**18 52 05.0**	**-2.7**
R58B			IAmb	IAmb	18 52 09.9	
	comp=Z,39nm,0.9s					
R58B	**Mineral**	**62.18 352**	pP	pP	18 52 08.5	+0.8
	baz=171					
U49A	**Red Boiling Sp**	**62.20 345**	P	**P**	**18 51 42.7**	**-0.7**
U49A				**pP**	**18 52 06.5**	**-1.4**
U49A			IAmb	IAmb	18 52 08.9	
	comp=Z,28nm,0.8s					
T51A	**Gray**	**62.22 347**	pP	pP	18 52 07.9	-0.2
	baz=165					
R59A	**King George, V**	**62.32 353**	pP	pP	18 52 09.4	+0.8
	baz=172					
WVT	**Waverly**	**62.35 343**	P	**P**	**18 51 43.8**	**-0.6**
WVT			pP	**pP**	**18 52 07.9**	**-1.0**
WVT			IAmb	IAmb	18 52 10.1	
	comp=Z,58nm,0.9s					
WVT	**Waverly**	**62.35 343**	pP	pP	18 52 08.1	-0.8
	baz=161					
X40A	**Basin Creek Fa**	**62.35 338**	P	**P**	**18 51 44.4**	**-0.1**
X40A	**Basin Creek Fa**	**62.35 338**	pP	pP	18 52 08.8	-0.2
	baz=155					
S55A	**Lewisburg**	**62.36 350**	pP	pP	18 52 09.6	+0.6
	baz=168					
UALR	**University of**	**62.45 339**	P	**P**	**18 51 45.3**	**+0.2**
UALR				**pP**	**18 52 09.5**	**-0.1**
UALR			IAmb	IAmb	18 52 10.8	
	comp=Z,71nm,1.4s					
T50A	**Nancy**	**62.47 346**	pP	pP	18 52 09.3	-0.4
	baz=164					
S54A	**Dingess, Beckl**	**62.52 349**	P	**P**	**18 51 45.2**	**-0.4**
S54A				**pP**	**18 52 09.3**	**-0.9**
S54A	**Dingess, Beckl**	**62.52 349**	pP	pP	18 52 09.6	-0.6
	baz=167					
R58A	**Rapidan**	**62.53 352**	pP	pP	18 52 11.0	+1.0
	baz=171					
TX32	**Lajitas Array**	**62.54 326**	P	**P**	**18 51 46.9**	**+1.0**
TX32			pP	**pP**	**18 52 10.5**	**+0.1**
TXAR	**Lajitas Array**	**62.54 326**	P	**P**	**18 51 47.0**	**+1.0**
	comp=Z,3.1nm,0.8s,baz=146,slow=8.1,SNR=28					
TXAR			pP	**pP**	**18 52 11.5**	**+1.1**
	comp=Z,12nm,0.7s,baz=152,slow=8.5,SNR=26					
TXAR			PKP2bc		19 20 56.8	
	comp=Z,0.7nm,0.9s,baz=270,slow=0.8,SNR=4.1					
TXAR	**Lajitas Array**	**62.54 326**	P	**P**	**18 51 46.5**	**+0.6**
TXAR			pP	**pP**	**18 52 10.8**	**+0.4**
TX31	**Lajitas Ar. Si**	**62.54 326**	P	**P**	**18 51 46.9**	**+1.0**
TX31			pP	**pP**	**18 52 10.1**	**-0.3**
R57A	**Stanardsville**	**62.59 352**	pP	pP	18 52 11.5	+0.9
	baz=170					
MIAR	**Mount Ida**	**62.66 337**	P	**P**	**18 51 46.9**	**+0.4**
MIAR			pP	**pP**	**18 52 10.8**	**-0.2**
MIAR			IAmb	IAmb	18 52 12.5	
	comp=Z,32nm,0.8s					
T49A	**Edmonton**	**62.70 345**	P	**P**	**18 51 46.5**	**-0.2**
T49A			pP	**pP**	**18 52 09.7**	**-1.6**
T49A			IAmb	IAmb	18 52 12.9	
	comp=Z,50nm,0.8s					
T49A	**Edmonton**	**62.70 345**	pP	pP	18 52 10.8	-0.5
	baz=163					
S52A	**Salyersville**	**62.73 348**	pP	pP	18 52 10.9	-0.7
	baz=166					
W41B	**Gary Mavity, V**	**62.78 339**	P	**P**	**18 51 45.4**	**-1.8**
W41B				**pP**	**18 52 11.4**	**-0.4**
W41B			IAmb	IAmb	18 52 13.2	
	comp=Z,58nm,1.6s					
W41B	**Gary Mavity, V**	**62.78 339**	pP	pP	18 52 11.6	-0.2
	baz=156					
S51A	**Beattyville**	**62.80 347**	P	**P**	**18 51 46.4**	**-0.9**
S51A				**pP**	**18 52 11.5**	**-0.4**
S51A			IAmb	IAmb	18 52 12.8	
	comp=Z,68nm,1.6s					
S51A	**Beattyville**	**62.80 347**	pP	pP	18 52 11.4	-0.5
	baz=165					
R55A	**Marlinton**	**62.80 350**	P	**P**	**18 51 47.5**	**0.0**
R55A				**pP**	**18 52 13.0**	**+0.9**
R55A			IAmb	IAmb	18 52 15.3	
	comp=Z,67nm,1.2s					
R55A	**Marlinton**	**62.80 350**	pP	pP	18 52 12.8	+0.7
	baz=169					
Q61A	**Milford**	**62.82 355**	pP	pP	18 52 12.9	+0.9
	baz=174					
R54A	**Victor**	**62.84 350**	pP	pP	18 52 12.7	+0.4
	baz=168					
WHAR	**Wooly Hollow**	**62.90 339**	P	**P**	**18 51 48.0**	**-0.1**
WHAR				**pP**	**18 52 11.6**	**-1.1**
WHAR			IAmb	IAmb	18 52 13.8	
	comp=Z,96nm,1.7s					
PEBM	**Pemiscott Bayo**	**62.91 341**		pP	18 52 13.1	+0.5
Z35A	**Perchaven, San**	**62.97 334**	P	**P**	**18 51 49.5**	**+0.9**
Z35A				**pP**	**18 52 12.2**	**-0.9**
T47A	**Sharon Grove**	**62.97 344**	P	**P**	**18 51 48.2**	**-0.3**
T47A			pP	**pP**	**18 52 12.2**	**-0.9**
S50A	**Richmond**	**63.00 347**	pP	pP	18 52 13.0	-0.3
	baz=164					
Q58A	**Fox Den Farm,**	**63.12 353**	pP	pP	18 52 14.6	+0.6
	baz=171					
PVMO	**Portageville**	**63.14 342**	pP	pP	18 52 13.1	-1.0
PENMO	**Penman**	**63.15 342**	pP	pP	18 52 14.0	-0.2
R53A	**Hurricane**	**63.15 349**		pP	18 52 14.3	0.0
R53A	**Hurricane**	**63.15 349**	pP	pP	18 52 14.1	-0.2
	baz=167					
LCAR	**Lake Charles**	**63.25 340**	P	**P**	**18 51 50.0**	**-0.4**
LCAR				**pP**	**18 52 13.8**	**-1.1**
LCAR			IAmb	IAmb	18 52 16.6	
	comp=Z,32nm,1.0s					
R52A	**Catlettsburg**	**63.28 348**	pP	pP	18 52 14.9	-0.3
	baz=166					
S49A	**Springfield**	**63.30 346**	pP	pP	18 52 14.7	-0.5
	baz=163					
Q57A	**Strasburg**	**63.30 352**	pP	pP	18 52 15.1	-0.1
	baz=170					
W39A	**Magazine**	**63.32 338**	P	**P**	**18 51 51.6**	**+0.7**
W39A			pP	**pP**	**18 52 16.3**	**+0.8**
W39A			IAmb	IAmb	18 52 17.4	
	comp=Z,33nm,0.8s					
W39A	**Magazine**	**63.32 338**	pP	pP	18 52 16.0	+0.5
	baz=155					
X37A	**Clayton**	**63.35 336**	P	**P**	**18 51 51.4**	**+0.3**
X37A				**pP**	**18 52 16.1**	**+0.4**
X37A			IAmb	IAmb	18 52 17.5	
	comp=Z,45nm,0.8s					
ABTX	**Abilene, Hawle**	**63.37 331**	P	**P**	**18 51 51.2**	**-0.1**
ABTX				**pP**	**18 52 15.9**	**+0.1**
ABTX			IAmb	IAmb	18 52 17.5	
	comp=Z,50nm,0.8s					
ABTX	**Abilene, Hawle**	**63.37 331**	pP	pP	18 52 16.2	+0.4
	baz=149					
PARMO	**Parma**	**63.38 342**	P	**P**	**18 51 50.3**	**-0.9**
PARMO				**pP**	**18 52 16.5**	**+0.7**
T45A	**Paducah**	**63.41 343**	P	**P**	**18 51 51.2**	**-0.2**
Q56A	**Snyder Ridge,**	**63.41 351**	P	**P**	**18 51 50.8**	**-0.6**
Q56A				**pP**	**18 52 16.0**	**0.0**
Q56A			IAmb	IAmb	18 52 18.6	
	comp=Z,60nm,0.9s					
Q56A	**Snyder Ridge,**	**63.41 351**	pP	pP	18 52 16.8	+0.8
	baz=170					
R51A	**Hillsboro**	**63.43 347**	pP	pP	18 52 15.8	-0.3
	baz=165					
Q55A	**Buckhannon**	**63.49 351**	pP	pP	18 52 17.6	+0.9
	baz=169					
R50A	**Paris**	**63.57 347**		pP	18 52 16.1	-0.9
R50A	**Paris**	**63.57 347**	pP	pP	18 52 16.5	-0.5
	baz=164					
Q53A	**Leroy**	**63.59 349**	pP	pP	18 52 17.1	-0.1
	baz=167					
Q54A	**Coxs Mills**	**63.60 350**		pP	18 52 16.2	-1.1
Q54A	**Coxs Mills**	**63.60 350**	pP	pP	18 52 17.0	-0.2
	baz=168					
P58A	**Pank, Wackersv**	**63.62 353**	pP	pP	18 52 16.6	-0.7
	baz=172					
P59A	**Jarrettsville**	**63.65 354**	pP	pP	18 52 17.1	-0.4
	baz=172					
PBMO	**Poplar Bluff**	**63.69 341**	P	**P**	**18 51 53.3**	**0.0**
PBMO				**pP**	**18 52 17.6**	**-0.2**
P57A	**Homestead Farm**	**63.70 352**		pP	18 52 18.2	+0.3
P57A	**Homestead Farm**	**63.70 352**	pP	pP	18 52 18.6	+0.8
	baz=171					
R49A	**Shelbyville**	**63.76 346**	P	**P**	**18 51 52.4**	**-1.3**
R49A			pP	**pP**	**18 52 17.6**	**-0.7**
R49A			IAmb	IAmb	18 52 29.4	
	comp=Z,69nm,1.4s					
P56A	**Dayton Farm, R**	**63.82 352**	pP	pP	18 52 19.7	+1.0
	baz=170					
Q52A	**Bidwell**	**63.82 349**	pP	pP	18 52 18.6	-0.1
	baz=166					
WCI	**Wyandotte Cave**	**63.95 345**	P	**P**	**18 51 53.2**	**-1.8**
WCI				**pP**	**18 52 18.9**	**-0.7**
WCI			IAmb	IAmb	18 52 20.7	
	comp=Z,49nm,0.8s					
WCI	**Wyandotte Cave**	**63.95 345**	pP	pP	18 52 18.9	-0.7
	baz=162					
MVL	**Millersville**	**64.02 354**		pP	18 52 20.7	+0.7
Q50A	**Georgetown**	**64.04 347**	pP	pP	18 52 19.6	-0.6
	baz=165					
U40A	**Yellville**	**64.06 339**	P	**P**	**18 51 55.9**	**+0.2**
U40A				**pP**	**18 52 19.6**	**-0.8**
U40A			IAmb	IAmb	18 52 22.8	
	comp=Z,32nm,0.8s					
U40A	**Yellville**	**64.06 339**	pP	pP	18 52 20.1	-0.2
	baz=156					
Q51A	**Peebles**	**64.09 348**	P	**P**	**18 51 55.2**	**-0.6**
Q51A				**pP**	**18 52 19.2**	**-1.3**
Q51A	**Peebles**	**64.09 348**	pP	pP	18 52 20.2	-0.2
	baz=165					
MCWV	**Mont Chateau**	**64.11 351**	P	**P**	**18 51 55.1**	**-0.9**
MCWV				**pP**	**18 52 18.6**	**-2.0**
MCWV	**Mont Chateau**	**64.11 351**	pP	pP	18 52 20.7	+0.1
	baz=169					
T42A	**Van Buren**	**64.12 341**	P	**P**	**18 51 54.6**	**-1.5**
T42A				**pP**	**18 52 20.0**	**-0.7**
P54A	**Burton**	**64.15 350**	pP	pP	18 52 20.3	-0.6
	baz=168					
P53A	**Whipple**	**64.18 350**	P	**P**	**18 51 54.7**	**-1.7**
P53A				**pP**	**18 52 20.6**	**-0.5**
P53A			IAmb	IAmb	18 52 25.7	
	comp=Z,41nm,0.7s					
P53A	**Whipple**	**64.18 350**	pP	pP	18 52 20.9	-0.1
	baz=167					
O58A	**Lewisberry**	**64.20 353**	pP	pP	18 52 21.7	+0.5
	baz=172					
O60A	**Telford**	**64.25 355**	pP	pP	18 52 22.1	+0.6
	baz=174					
X34A	**Smith Ranch, M**	**64.31 334**	P	**P**	**18 51 57.6**	**+0.2**
X34A				**pP**	**18 52 22.2**	**+0.1**
O59A	**Robesonia**	**64.32 354**	pP	pP	18 52 22.5	+0.6
	baz=173					
HHAR	**Hobbs**	**64.36 338**	P	**P**	**18 51 57.3**	**-0.4**
HHAR				**pP**	**18 52 22.0**	**-0.3**
HHAR			IAmb	IAmb	18 52 23.7	
	comp=Z,100nm,1.6s					
O57A	**Amberson**	**64.37 353**	pP	pP	18 52 22.7	+0.4
	baz=171					
Q49A	**Aurora**	**64.38 346**	pP	pP	18 52 21.4	-1.0
	baz=164					
W35A	**Tecumseh**	**64.42 335**		pP	18 52 22.0	-0.7
P52A	**Corning**	**64.45 349**	pP	pP	18 52 22.4	-0.5
	baz=167					
P51A	**Williamsport**	**64.47 348**	P	**P**	**18 51 58.0**	**-0.3**
P51A				**pP**	**18 52 22.6**	**-0.4**
P51A			IAmb	IAmb	18 52 23.9	
	comp=Z,86nm,1.4s					
P51A	**Williamsport**	**64.47 348**	pP	pP	18 52 22.3	-0.7
	baz=166					
Q48A	**North Vernon**	**64.49 346**	pP	pP	18 52 22.3	-0.8
	baz=163					
O56A	**Blue Knob Stat**	**64.54 352**	P	**P**	**18 51 59.3**	**+0.5**
O56A				**pP**	**18 52 23.4**	**0.0**
O56A			IAmb	IAmb	18 52 25.8	
	comp=Z,37nm,0.9s					
O56A	**Blue Knob Stat**	**64.54 352**	pP	pP	18 52 23.9	+0.4
	baz=170					
O55A	**Ligonier**	**64.57 351**	pP	pP	18 52 24.3	+0.6
	baz=170					
MGMO	**Mountain Grove**	**64.60 340**	P	**P**	**18 51 59.0**	**-0.3**
MGMO				**pP**	**18 52 23.8**	**-0.1**
MGMO			IAmb	IAmb	18 52 25.9	
	comp=Z,44nm,1.1s					
NVL	**N'lazarevskaya**	**64.60 159**⇑	*i*P	**P**	**18 51 58.6**	**-0.2**
NVL			*e*S	**S**	**19 00 32.7**	**+2.0**
NVL			pmax	pmax		
	comp=Z,187nm,1.0s					
N61A	**South Mountain**	**64.60 356**	pP	pP	18 52 24.1	+0.2
	baz=175					
U38A	**Gravette**	**64.65 338**	P	**P**	**18 51 59.8**	**+0.2**
U38A				**pP**	**18 52 23.2**	**-1.1**
U38A			IAmb	IAmb	18 52 25.4	
	comp=Z,138nm,2.0s					
TUL1	**Leonard**	**64.68 336**	P	**P**	**18 52 00.3**	**+0.6**
TUL1			pP	**pP**	**18 52 24.7**	**+0.2**
TUL1			IAmb	IAmb	18 52 25.7	
	comp=Z,57nm,0.8s					
O54A	**Avella**	**64.70 351**		pP	18 52 22.6	-1.9
FNO	**Franklin**	**64.72 335**		pP	18 52 23.9	-0.8
P50A	**Jamestown**	**64.74 348**	pP	pP	18 52 24.4	-0.4
	baz=165					
N60A	**Cedar Hill Far**	**64.78 355**	pP	pP	18 52 25.6	+0.6
	baz=174					
SSPA	**Standing Stone**	**64.82 353**	pP	pP	18 52 26.0	+0.8
	baz=171					
WMOK	**Wichita Mounta**	**64.82 333**	P	**P**	**18 51 60.0**	**-0.7**

WMOK					**pP**	**18 52 24.7**	**-0.6**
PAL	Palisades	64.83	356	pP	pP	18 52 25.3	-0.1
	baz=175						
P49A	Miami Univ. Ec	64.85	347	pP	pP	18 52 25.2	-0.3
	baz=164						
O52A	Adamsville	64.87	349		pP	18 52 22.7	-2.9
O52A	Adamsville	64.87	349	pP	pP	18 52 25.5	-0.1
	baz=167						
OLIL	Olney	64.88	344		pP	18 52 24.3	-1.4
N59A	State Game Lan	64.88	355		pP	18 52 26.6	+0.8
N59A	State Game Lan	64.88	355	pP	pP	18 52 26.5	+0.7
	baz=173						
N58A	Sunbury	64.89	354		pP	18 52 23.6	-2.1
N58A	Sunbury	64.89	354	pP	pP	18 52 26.5	+0.8
	baz=172						
O53A	New Philadelph	64.90	350	pP	pP	18 52 26.0	+0.3
	baz=168						
BLO	Bloomington	64.91	345		pP	18 52 25.7	-0.2
P48A	Milroy	64.93	346	P	**P**	**18 52 00.6**	**-0.7**
P48A					**pP**	**18 52 25.0**	**-1.0**
P48A	Milroy	64.93	346	pP	pP	18 52 25.3	-0.7
	baz=163						
O51A	Pataskala	65.03	349	pP	pP	18 52 26.4	-0.3
	baz=166						
N55A	Marion Center	65.09	352	pP	pP	18 52 28.0	+0.9
	baz=170						
CCM	Cathedral Cave	65.11	341	P	**P**	**18 52 02.2**	**-0.3**
CCM				*PP	**pP**	**18 52 25.9**	**-1.3**
CCM				pmax	pmax		
	comp=Z,43nm,0.8s						
CCM	Cathedral Cave	65.11	341	P	**P**	**18 52 02.2**	**-0.3**
CCM				pP	**pP**	**18 52 25.9**	**-1.3**
CCM				IAmb	IAmb	18 52 28.9	
	comp=Z,43nm,0.8s						
CCM	Cathedral Cave	65.11	341	pP	pP	18 52 26.9	-0.4
	baz=158						
M63A	Gales Ferry	65.13	358	pP	pP	18 52 27.2	-0.1
	baz=177						
N56A	West Decatur	65.14	352	pP	pP	18 52 28.0	+0.6
	baz=171						
ACSO	Alum Creek Sta	65.19	348	P	**P**	**18 52 02.2**	**-0.7**
ACSO					**pP**	**18 52 26.6**	**-1.1**
ACSO				IAmb	IAmb	18 52 32.0	
	comp=Z,37nm,0.7s						
M62A	Hamden	65.21	357	pP	pP	18 52 27.8	0.0
	baz=176						
O50A	Cable	65.22	348	pP	pP	18 52 27.7	-0.2
	baz=165						
Q44A	Meyer Farm, Va	65.28	343		pP	18 52 26.2	-2.0
MNTX	Cornudas Mount	65.31	326	P	**P**	**18 52 03.2**	**-0.8**
MNTX				pP	**pP**	**18 52 28.5**	**-0.1**
MNTX				IAmb	IAmb	18 52 30.0	
	comp=Z,34nm,0.8s						
N53A	Lisbon	65.38	350		pP	18 52 26.6	-2.4
N53A	Lisbon	65.38	350	pP	pP	18 52 29.3	+0.3
	baz=168						
M58A	Price's Panora	65.39	354	pP	pP	18 52 30.1	+1.1
	baz=172						
O49A	Covington	65.40	347		pP	18 52 26.1	-3.0
O49A	Covington	65.40	347	pP	pP	18 52 28.6	-0.5
	baz=165						
N54A	Moraine State	65.41	351		pP	18 52 28.1	-1.0
N54A	Moraine State	65.41	351	pP	pP	18 52 29.9	+0.8
	baz=169						
M57A	Sunshine Farm,	65.43	353		pP	18 52 28.8	-0.4
M57A	Sunshine Farm,	65.43	353	pP	pP	18 52 29.6	+0.4
	baz=172						
S39A	Bolivar	65.43	339	P	**P**	**18 52 04.4**	**-0.2**
S39A				pP	**pP**	**18 52 28.9**	**-0.4**
M59A	Waymart	65.47	355	pP	pP	18 52 30.2	+0.6
	baz=174						
N52A	McGinn's Farm,	65.53	350	pP	pP	18 52 30.0	+0.1
	baz=167						
L63A	North Scituate	65.58	358	pP	pP	18 52 29.5	-0.7
	baz=177						
BRYW	Bryant College	65.63	358		pP	18 52 28.7	-1.9
O48A	Farmland	65.64	347	pP	pP	18 52 30.0	-0.7
	baz=164						
R40A	Maddies Statio	65.64	340	P	**P**	**18 52 05.8**	**-0.1**
R40A				IAmb	IAmb	18 52 32.5	
	comp=Z,69nm,1.0s						
M56A	Emporium	65.69	353	P	**P**	**18 52 06.5**	**+0.3**
M56A					**pP**	**18 52 29.7**	**-1.2**
M56A				IAmb	IAmb	18 52 32.8	
	comp=Z,44nm,0.9s						
M56A	Emporium	65.69	353	pP	pP	18 52 31.3	+0.4
	baz=171						
N50A	Nevada	65.74	348	pP	pP	18 52 30.8	-0.4
	baz=166						
M55A	Ridgway	65.74	352	P	**P**	**18 52 06.0**	**-0.6**
M55A					**pP**	**18 52 31.2**	**-0.1**
M55A				IAmb	IAmb	18 52 33.1	
	comp=Z,41nm,0.8s						
M55A	Ridgway	65.74	352	pP	pP	18 52 31.8	+0.5
	baz=170						
N51A	Ashland	65.74	349	pP	pP	18 52 30.8	-0.5
	baz=167						
L60A	Shokan	65.83	356	pP	pP	18 52 31.0	-0.9
	baz=175						
T35A	Sooner Cattle	65.84	336	P	**P**	**18 52 06.7**	**-0.5**
T35A					**pP**	**18 52 31.6**	**-0.4**
T35A				IAmb	IAmb	18 52 33.5	
	comp=Z,45nm,1.0s						
M54A	Oil Creek Stat	65.90	351	P	**P**	**18 52 07.3**	**-0.3**
M54A					**pP**	**18 52 30.3**	**-2.0**
M54A				IAmb	IAmb	18 52 33.9	
	comp=Z,42nm,0.9s						
M54A	Oil Creek Stat	65.90	351	pP	pP	18 52 32.5	+0.2
	baz=169						
MSTX	Muleshoe	65.91	330	P	**P**	**18 52 08.6**	**+0.7**
MSTX					**pP**	**18 52 33.1**	**+0.5**
MSTX	Muleshoe	65.91	330	pP	pP	18 52 32.7	+0.2
	baz=146						
M53A	WI Miller and	65.98	351	pP	pP	18 52 32.9	+0.1
	baz=168						
L61A	Hillsdale 1, H	65.99	356	pP	pP	18 52 32.8	-0.1
	baz=175						
L58A	Harry Jones Me	66.01	355	pP	pP	18 52 33.8	+0.7
	baz=173						
L57A	Andrews Acres	66.06	354	pP	pP	18 52 34.0	+0.7
	baz=172						
N49A	Columbus Grove	66.08	348	P	**P**	**18 52 08.4**	**-0.3**
N49A					**pP**	**18 52 32.1**	**-1.4**
N49A				IAmb	IAmb	18 52 35.1	
	comp=Z,61nm,1.0s						
N49A	Columbus Grove	66.08	348	pP	pP	18 52 32.8	-0.7
	baz=165						
L59A	Walton	66.08	355	P	**P**	**18 52 09.1**	**+0.3**
L59A					**pP**	**18 52 34.7**	**+1.0**
L59A				IAmb	IAmb	18 52 36.0	
	comp=Z,73nm,1.1s						
L59A	Walton	66.08	355	pP	pP	18 52 34.3	+0.6
	baz=174						
P43A	Skaggs, Pawnee	66.10	343		pP	18 52 32.4	-1.1
M51A	Elyria	66.11	349	pP	pP	18 52 33.2	-0.5
	baz=167						
BINY	Binghamton	66.17	354	pP	pP	18 52 34.5	+0.3
	baz=173						
AMTX	Amarillo	66.18	331	pP	pP	18 52 34.1	-0.1
	baz=147						
M52A	Chesterland	66.18	350		pP	18 52 32.7	-1.4
M52A	Chesterland	66.18	350	pP	pP	18 52 33.7	-0.4
	baz=168						
SFIN	Lafayette	66.19	345	P	**P**	**18 52 08.3**	**-1.1**
SFIN					**pP**	**18 52 32.9**	**-1.3**
SFIN				IAmb	IAmb	18 52 39.5	
	comp=Z,26nm,0.7s						
SFIN	Lafayette	66.19	345	pP	pP	18 52 34.2	0.0
	baz=162						
N48A	Decatur	66.19	347	pP	pP	18 52 33.6	-0.6
	baz=164						
QSPA	South Pole Qui	66.19	180	P	**P**	**18 52 10.4**	**+1.0**
	comp=Z,101nm,0.6s,baz=175,slow=0.6,SNR=753						
QSPA	South Pole Qui	66.19	180	P	**P**	**18 52 09.7**	**+0.3**
L61B	Northampton	66.20	357	pP	pP	18 52 33.6	-0.7
	baz=176						
HRV	Adam Dziewonsk	66.22	358		pP	18 52 32.0	-2.3
HRV	Adam Dziewonsk	66.22	358	pP	pP	18 52 33.8	-0.6
	baz=177						
L56A	Greenwood	66.26	353	P	**P**	**18 52 09.3**	**-0.6**
L56A					**pP**	**18 52 35.4**	**+0.8**
L56A				IAmb	IAmb	18 52 36.6	
	comp=Z,33nm,0.8s						
L56A	Greenwood	66.26	353	pP	pP	18 52 35.2	+0.5
	baz=171						
HSIG		66.28	320	P	**P**	**18 52 10.0**	**-0.2**
HSIG					**pP**	**18 52 35.3**	**+0.4**
HSIG				IAmb	IAmb	18 52 37.9	
	comp=Z,55nm,1.2s						
U32A	Winter Ranch,	66.33	334	P	**P**	**18 52 10.7**	**+0.2**
M50A	Fremont	66.33	349		pP	18 52 34.5	-0.6
M50A	Fremont	66.33	349	pP	pP	18 52 34.4	-0.7
	baz=166						
N47A	Urbana	66.35	346	P	**P**	**18 52 09.6**	**-0.9**
N47A					**pP**	**18 52 32.9**	**-2.3**
N47A				IAmb	IAmb	18 52 40.6	
	comp=Z,34nm,0.6s						
N47A	Urbana	66.35	346	pP	pP	18 52 34.3	-0.9
	baz=163						
L55A	Hinsdale	66.41	353	pP	pP	18 52 36.4	+0.8
	baz=171						
L53A	Girard	66.42	351	pP	pP	18 52 35.8	+0.2
	baz=169						
K60A	Five Rivers En	66.43	356	pP	pP	18 52 35.7	-0.1
	baz=175						
K61A	Williamstown	66.45	357	pP	pP	18 52 36.3	+0.4
	baz=176						
TRY	Troy	66.53	356		pP	18 52 36.3	-0.1
ERPA	Erie	66.54	351	P	**P**	**18 52 10.6**	**-1.0**
ERPA					**pP**	**18 52 35.5**	**-0.9**
ERPA	Erie	66.54	351	pP	pP	18 52 36.8	+0.4
	baz=169						
L54A	Sinclairville	66.57	352	pP	pP	18 52 37.0	+0.4
	baz=170						
M49A	Liberty Center	66.58	348	pP	pP	18 52 36.7	+0.1
	baz=165						
WVNY	West Valley, N	66.65	352	P	**P**	**18 52 12.1**	**-0.3**
WVNY					**pP**	**18 52 36.8**	**-0.3**
WVNY				IAmb	IAmb	18 52 39.1	
	comp=Z,70nm,0.9s						
K59A	Cooperstown	66.65	355	pP	pP	18 52 38.3	+1.1
	baz=174						
K58A	Earlville	66.70	355	P	**P**	**18 52 13.6**	**+0.9**
K58A					**pP**	**18 52 35.6**	**-1.9**
K58A				IAmb	IAmb	18 52 39.7	
	comp=Z,39nm,0.8s						
K58A	Earlville	66.70	355	pP	pP	18 52 38.2	+0.6
	baz=173						
M48A	Edgerton	66.73	347	P	**P**	**18 52 12.7**	**-0.1**
M48A					**pP**	**18 52 36.5**	**-1.1**
M48A				IAmb	IAmb	18 52 38.2	
	comp=Z,82nm,1.6s						
M48A	Edgerton	66.73	347	pP	pP	18 52 37.4	-0.3
	baz=164						
K57A	Scipio Center	66.75	354	pP	pP	18 52 38.4	+0.6
	baz=172						
K56A	Middlesex	66.79	353	pP	pP	18 52 38.1	+0.1
	baz=172						
M47A	Cromwell	66.80	347	pP	pP	18 52 37.6	-0.5
	baz=164						
K54A	Basiliko Farm,	66.86	352	pP	pP	18 52 39.1	+0.7
	baz=170						
HDIL	Hopedale	66.90	343	P	**P**	**18 52 13.3**	**-0.6**
HDIL					**pP**	**18 52 37.7**	**-1.0**
HDIL				IAmb	IAmb	18 52 39.7	
	comp=Z,44nm,0.8s						
K55A	Perry	66.90	353	pP	pP	18 52 39.1	+0.3
	baz=171						
L50A	Kingsville	66.91	349	pP	pP	18 52 38.6	-0.2
	baz=166						
J62A	Henniker	66.94	358	pP	pP	18 52 39.7	+0.6
	baz=177						
J63A	Strafford	66.97	359	pP	pP	18 52 40.0	+0.8
	baz=178						
J60A	Lant Hill Farm	67.03	357	pP	pP	18 52 40.7	+1.1
	baz=176						
J61A	Chester	67.09	357	pP	pP	18 52 41.4	+1.4
	baz=176						
319A	Douglas	67.11	323	P	**P**	**18 52 17.3**	**+1.7**
319A				pP	**pP**	**18 52 41.8**	**+1.4**
L48A	N Adams	67.12	348	pP	pP	18 52 40.9	+0.8
	baz=165						
L49A	Milan	67.15	348	pP	pP	18 52 40.1	-0.2
	baz=165						
ACCN	Adirondack Com	67.18	356		pP	18 52 40.0	-0.5
121A	Cookes Peak, D	67.21	325	P	**P**	**18 52 18.1**	**+1.7**
121A					**PcP**	**18 52 43.2**	**-0.4**
121A				IAmb	IAmb	18 52 44.2	
	comp=Z,37nm,0.8s						
121A	Cookes Peak, D	67.21	325	pP	pP	18 52 42.7	+1.6
	baz=142						
P38A	Dawn	67.26	340	P	**P**	**18 52 16.0**	**-0.2**
P38A				pP	**pP**	**18 52 40.4**	**-0.6**
P38A				IAmb	IAmb	18 52 42.3	
	comp=Z,39nm,0.8s						
J58A	Remsen	67.27	355	pP	pP	18 52 41.6	+0.5
	baz=174						
K52A	Tillsonburg	67.30	351	pP	pP	18 52 41.0	-0.2
	baz=168						
L47A	Sherwood	67.30	347	pP	pP	18 52 40.5	-0.7
	baz=164						
J59A	Piesco	67.31	356		pP	18 52 41.7	+0.2
J59A	Piesco	67.31	356	pP	pP	18 52 42.1	+0.6
	baz=174						
J56A	Wolcott	67.32	354	pP	pP	18 52 41.9	+0.6
	baz=172						
K51A	Iona Station	67.36	350	pP	pP	18 52 41.6	0.0
	baz=168						
M44A	Midewin, Midew	67.37	345	pP	pP	18 52 39.3	-2.4
J57A	Williamstown	67.37	355	P	**P**	**18 52 17.7**	**+0.8**
J57A					**pP**	**18 52 40.1**	**-1.7**
J57A				IAmb	IAmb	18 52 43.6	
	comp=Z,60nm,1.2s						
J57A	Williamstown	67.37	355	pP	pP	18 52 42.1	+0.3
	baz=173						
J55A	Hilton	67.41	353	pP	pP	18 52 42.3	+0.5
	baz=171						
HNH	Hanover	67.44	358		pP	18 52 44.2	+2.0
N41A	Harden Midland	67.46	342	P	**P**	**18 52 16.9**	**-0.6**
N41A					**pP**	**18 52 41.6**	**-0.6**
N41A				IAmb	IAmb	18 52 43.6	
	comp=Z,76nm,0.9s						
J54A	Appleton	67.51	353	pP	pP	18 52 43.4	+0.9
	baz=170						
L46A	Eue Claire	67.57	346	P	**P**	**18 52 17.1**	**-0.9**
L46A					**pP**	**18 52 41.7**	**-1.3**
L46A				IAmb	IAmb	18 52 43.7	
	comp=Z,32nm,0.7s						
L46A	Eue Claire	67.57	346	pP	pP	18 52 41.8	-1.1
	baz=163						
I58A	Old Forge	67.57	355	pP	pP	18 52 43.8	+0.7
	baz=174						
I62A	Tamworth	67.58	358	pP	pP	18 52 44.2	+1.2
	baz=178						
K50A	Casco	67.59	349	P	**P**	**18 52 17.8**	**-0.4**
K50A				pP	**pP**	**18 52 41.7**	**-1.4**
K50A				IAmb	IAmb	18 52 43.7	
	comp=Z,46nm,0.9s						
K50A	Casco	67.59	349	pP	pP	18 52 42.5	-0.5
	baz=166						
I59A	Olmsteadville	67.61	356	pP	pP	18 52 43.9	+0.6
	baz=175						
I60A	Shoreham	67.62	357	pP	pP	18 52 44.2	+0.9
	baz=176						
I61A	Oroboro, Fairl	67.66	358	pP	pP	18 52 43.4	-0.2
	baz=177						
J52A	Paris	67.72	351	pP	pP	18 52 43.9	0.0
	baz=169						
I63A	Otisfield	67.73	359	pP	pP	18 52 43.9	-0.1
	baz=178						
NCB	Newcomb	67.80	356		**PcP**	**18 52 44.0**	**-1.5**
I57A	Carthage	67.87	355	pP	pP	18 52 45.8	+0.8
	baz=173						
K48A	Perry	67.89	348	pP	pP	18 52 44.6	-0.3
	baz=165						
K47A	Vermontville	67.93	347	pP	pP	18 52 44.8	-0.4
	baz=164						
LBNH	Lisbon	67.96	358		pP	18 52 45.1	-0.3
LBNH	Lisbon	67.96	358	pP	pP	18 52 45.8	+0.4
	baz=177						
R32A	Long Quarter,	67.99	335	P	**P**	**18 52 21.3**	**+0.4**
R32A				pP	**PcP**	**18 52 46.5**	**-0.1**
R32A				IAmb	IAmb	18 52 47.5	
	comp=Z,54nm,0.8s						
L44A	Lake County Fo	68.09	345		pP	18 52 45.0	-1.3
L44A	Lake County Fo	68.09	345	pP	pP	18 52 45.9	-0.3
	baz=161						
K46A	Dorr	68.10	347	pP	pP	18 52 45.9	-0.4
	baz=164						
N38A	Joes South For	68.23	341	P	**P**	**18 52 22.0**	**-0.3**
H58A	Gabriels	68.24	356	pP	pP	18 52 48.1	+0.8
	baz=175						
J49A	Marlette	68.25	349	pP	pP	18 52 46.8	-0.5
	baz=166						
H61A	Lyndonville	68.25	358	pP	pP	18 52 47.2	-0.1
	baz=177						
H62A	Milan	68.27	358	pP	pP	18 52 46.6	-0.8
	baz=178						
J48A	Bridge Port	68.30	349	P	**P**	**18 52 21.8**	**-0.9**
J48A					**PcP**	**18 52 45.7**	**-1.9**
J48A				IAmb	IAmb	18 52 48.3	
	comp=Z,111nm,1.4s						
J48A	Bridge Port	68.30	349	pP	pP	18 52 47.6	0.0
	baz=166						
H60A	Morristown	68.31	357	pP	pP	18 52 47.8	+0.1
	baz=176						
H64A	Troy	68.31	360	pP	pP	18 52 47.1	-0.6
	baz=180						
I55A	Frankford	68.33	353	pP	pP	18 52 47.8	+0.1
	baz=171						
H63A	New Sharon	68.34	359	pP	pP	18 52 48.3	+0.5
	baz=179						
I51A	Listowel	68.34	351	pP	pP	18 52 48.0	+0.2
	baz=168						
L42A	Oliver, Polo	68.36	344	P	**P**	**18 52 22.4**	**-0.6**
L42A					**PcP**	**18 52 47.1**	**-0.8**
L42A				IAmb	IAmb	18 52 48.6	
	comp=Z,24nm,0.7s						
H57A	Richville	68.37	355	pP	pP	18 52 48.8	+0.7
	baz=174						
H65A	Eastbrook	68.38	1	pP	pP	18 52 46.6	-1.4
	baz=181						
J47A	Sunmer	68.44	348	P	**P**	**18 52 22.4**	**-1.2**
J47A					**PcP**	**18 52 47.3**	**-0.9**
J47A				IAmb	IAmb	18 52 49.1	
	comp=Z,83nm,1.2s						
J47A	Sunmer	68.44	348	pP	pP	18 52 48.2	-0.2
	baz=164						
H59A	Cadyville	68.44	357	pP	pP	18 52 49.5	+1.0
	baz=175						
ANMO	Albuquerque	68.45	328	*e*P	**P**	**18 52 25.5**	**+1.4**
ANMO	Albuquerque	68.45	328	P	**P**	**18 52 25.1**	**+1.0**
ANMO				pP	**pP**	**18 52 49.9**	**+1.0**
ANMO				IAmb	IAmb	18 52 51.8	
	comp=Z,45nm,0.8s						
ANMO	Albuquerque	68.45	328	pP	pP	18 52 50.6	+1.7
	baz=143						
LONY	Lake Ozonia	68.47	356	P	**P**	**18 52 22.9**	**-0.9**
I52A	Shelburne	68.48	352	pP	pP	18 52 49.4	+0.7
	baz=169						
HAL	Halifax	68.50	4		pP	18 52 45.9	-2.9
H56A	Elgin	68.57	355	pP	pP	18 52 50.4	+1.1
	baz=173						
H55A	Tweed	68.61	354	pP	pP	18 52 50.2	+0.7
	baz=172						
DELO	Deloro Mine	68.62	354		pP	18 52 49.5	0.0
FRNY	Flat Rock	68.62	357	P	**P**	**18 52 24.1**	**-0.5**
FRNY					**PcP**	**18 52 48.7**	**-0.3**
FRNY				IAmb	IAmb	18 52 51.9	
	comp=Z,82nm,1.1s						
TUC	Tucson	68.65	323	P	**P**	**18 52 26.5**	**+1.3**
TUC				*PP	**pP**	**18 52 51.2**	**+1.1**
TUC				pmax	pmax		
	comp=Z,42nm,1.0s						
TUC	Tucson	68.65	323	P	**P**	**18 52 26.5**	**+1.3**
TUC					**pP**	**18 52 51.2**	**+1.1**
TUC				IAmb	IAmb	18 52 53.1	
	comp=Z,42nm,0.9s						
TUC	Tucson	68.65	323	pP	pP	18 52 51.8	+1.7
	baz=139						
K43A	Burlington	68.69	345	P	**P**	**18 52 24.9**	**-0.2**
K43A					**PcP**	**18 52 48.9**	**-0.4**
K43A				IAmb	IAmb	18 52 51.4	
	comp=Z,67nm,0.9s						
J46A	Howard City	68.71	347	pP	pP	18 52 50.3	+0.2
	baz=164						
CBKS	Cedar Bluff	68.73	335	pP	pP	18 52 51.2	+0.8
	baz=150						
I49A	Point Hope	68.76	349	pP	pP	18 52 49.9	-0.5
	baz=166						
H53A	Bobcaygeon	68.78	353	pP	pP	18 52 51.2	+0.6
	baz=171						
G63A	Kingsbury	68.79	360	pP	pP	18 52 50.1	-0.5
	baz=179						
L40A	Anamosa	68.82	343	P	**P**	**18 52 25.6**	**-0.3**
L40A				pP	**PcP**	**18 52 49.6**	**-0.2**
G60A	Masonville	68.83	358	pP	pP	18 52 51.4	+0.4
	baz=177						
G59A	Clarenceville	68.85	357	pP	pP	18 52 51.5	+0.5
	baz=176						
G65A	Princeton	68.89	1	pP	pP	18 52 52.2	+1.0
	baz=181						
G62A	West of Eustis	68.90	359	P	**P**	**18 52 27.9**	**+1.6**
G62A					**PcP**	**18 52 49.3**	**-0.9**
G62A	West of Eustis	68.90	359	pP	pP	18 52 52.8	+1.4
	baz=178						
G64A	Maxfield	68.93	0	pP	pP	18 52 52.8	+1.3
	baz=180						
PKME	Peaks-Kenny Pk	68.94	360	P	**P**	**18 52 27.8**	**+1.3**
PKME					**PcP**	**18 52 49.9**	**-0.3**
PKME				IAmb	IAmb	18 52 54.4	
	comp=Z,94nm,1.0s						
G58A	Ormstown	68.96	356	pP	pP	18 52 52.7	+0.9
	baz=175						
G57A	Newington	68.98	356	pP	pP	18 52 52.9	+1.0
	baz=174						
G61A	St-Isidore-de-	68.99	358	pP	pP	18 52 53.1	+1.2
	baz=178						
H52A	Wyevale	69.01	352	pP	pP	18 52 52.1	+0.2
	baz=169						
SADO	Sadowa	69.04	352	P	**P**	**18 52 24.9**	**-2.3**
SADO					**PcP**	**18 52 50.0**	**-0.7**
PLVO	Plevna	69.09	354		pP	18 52 51.0	-1.5
I47A	Gladwin	69.13	348	P	**P**	**18 52 27.2**	**-0.6**
I47A					**PcP**	**18 52 50.2**	**-0.9**
I47A				IAmb	IAmb	18 52 53.3	
	comp=Z,73nm,1.4s						
I47A	Gladwin	69.13	348	pP	pP	18 52 51.9	-0.9
	baz=165						
I48A	Sherman Twp	69.15	349	pP	pP	18 52 51.8	-1.1
	baz=166						
I46A	Reed City	69.24	348	pP	pP	18 52 52.5	-1.0
	baz=164						
SCIA	State Center	69.25	341	P	**P**	**18 52 27.6**	**-1.0**
SCIA					**PcP**	**18 52 52.4**	**+0.7**
SCIA				IAmb	IAmb	18 52 55.4	
	comp=Z,92nm,1.1s						
G55A	Calabogie	69.27	354	pP	pP	18 52 53.8	+0.1
	baz=172						
T25A	Trinidad	69.28	330	P	**P**	**18 52 29.6**	**+0.4**
T25A					**pP**	**18 52 55.1**	**+1.1**
T25A	Trinidad	69.28	330	pP	pP	18 52 55.5	+1.5
	baz=146						
G53A	Haliburton	69.33	353	pP	pP	18 52 54.3	+0.3
	baz=171						
JFWS	Jewell Farm	69.36	344	P	**P**	**18 52 28.5**	**-0.7**
JFWS					**pP**	**18 52 53.8**	**-0.4**
LIC	Lamto	69.36	73	*e*P	**P**	**18 52 29.6**	**-0.3**
	comp=Z,74nm,0.9s						
LIC	Lamto	69.36	73	P	**P**	**18 52 29.6**	**-0.3**
F63A	Nahmakanta, Br	69.38	0	pP	pP	18 52 54.8	+0.5
	baz=180						
214A	Organ Pipe Nat	69.53	321	P	**P**	**18 52 32.8**	**+2.2**
214A					**pP**	**18 52 55.3**	**-0.2**
214A				IAmb	IAmb	18 52 58.9	
	comp=Z,58nm,1.0s						
214A	Organ Pipe Nat	69.53	321	pP	pP	18 52 57.3	+1.8
	baz=138						
F64A	Sherman	69.54	1	P	**P**	**18 52 31.1**	**+0.8**
F64A					**PcP**	**18 52 53.7**	**+1.0**
F64A				IAmb	IAmb	18 52 57.7	
	comp=Z,87nm,1.1s						
F64A	Sherman	69.54	1	pP	pP	18 52 54.4	-0.9
	baz=181						
G54A	Lake Saint Pet	69.55	353	pP	pP	18 52 55.9	+0.6
	baz=171						
TIC	Toumodi	69.57	73	*e*P	**P**	**18 52 31.0**	**-0.2**
TIC	Toumodi	69.57	73	P	**P**	**18 52 31.0**	**-0.2**
TIC	Toumodi	69.57	73	P	**P**	**18 52 31.0**	**-0.2**
H48A	Harrisville	69.58	349	pP	pP	18 52 54.7	-0.9
	baz=166						
F58A	St-Lin Laurent	69.67	357	pP	pP	18 52 56.6	+0.6
	baz=175						
F61A	St Evariste	69.67	359	pP	pP	18 52 56.6	+0.5
	baz=178						
KIC	Kosan Boka	69.68	73	*e*P	**P**	**18 52 31.8**	**-0.1**
	comp=Z,64nm,0.7s						
KIC	Kosan Boka	69.68	73	P	**P**	**18 52 31.8**	**-0.1**

F60A	Warwick	69.69	358	pP	pP	18 52 56.5	+0.3
	baz=177						
DBIC	Dimbokro	69.72	73	P	P	18 52 32.2	+0.1
	comp=Z,37nm,0.8s,baz=217,slow=6.2,SNR=49						
DBIC				LR	LR	19 22 35.8	
	comp=Z,136nm,19.4s,baz=228,slow=35						
DBIC	Dimbokro	69.72	73	P	P	18 52 32.0	-0.2
DBIC				pmax	pmax		
	comp=Z,41nm,0.9s						
DBIC	Dimbokro	69.72	73	P	P	18 52 31.9	-0.2
DBIC				IAmb	IAmb	18 52 33.1	
	comp=Z,41nm,0.8s						
F55A	Otter Lake	69.81	355	pP	pP	18 52 57.2	+0.2
	baz=173						
X18A	Snowflake	69.90	325	P	P	18 52 32.8	-0.2
X18A					pP	18 52 58.6	+0.7
I42A	Draeger Farm,	69.94	345	P	P	18 52 33.0	+0.2
I42A				pP	pP	18 52 57.4	-0.4
I42A				IAmb	IAmb	18 52 59.5	
	comp=Z,60nm,0.7s						
KSCO	Kaye Shedlock’	70.06	333	P	P	18 52 34.1	+0.2
KSCO					pP	18 53 00.1	+1.3
KSCO	Kaye Shedlock’	70.06	333	pP	pP	18 53 00.1	+1.3
	baz=148						
TRQ	Mont Tremblant	70.06	356	P	P	18 52 34.2	+0.7
TRQ					pP	18 52 57.5	-1.1
E60A	Ste Agathe de	70.07	358	pP	pP	18 52 58.3	-0.3
	baz=178						
F52A	Sundridge	70.08	352	pP	pP	18 52 59.0	+0.4
	baz=170						
ALGO	Algonquin Park	70.09	353	pP	pP	18 52 59.5	+0.9
	baz=171						
E63A	Oxbow	70.10	1	pP	pP	18 52 57.9	-0.8
	baz=180						
E64A	Bridgewater	70.10	1	pP	pP	18 52 58.1	-0.7
	baz=181						
E61A	Lac Etchemin	70.11	359	pP	pP	18 52 59.2	+0.3
	baz=178						
G47A	Hillman	70.13	349	pP	pP	18 52 59.6	+0.7
	baz=166						
E58A	La Victoria	70.14	357	pP	pP	18 52 59.6	+0.6
	baz=176						
E59A	St. Maurice	70.22	358	pP	pP	18 53 00.2	+0.7
	baz=177						
E57A	Chemin Saint G	70.23	356	pP	pP	18 52 59.9	+0.3
	baz=175						
H43A	Windswept, Lux	70.23	346	P	P	18 52 34.1	-0.4
H43A					pP	18 52 59.4	-0.1
H43A				IAmb	IAmb	18 53 01.1	
	comp=Z,41nm,0.8s						
W18A	Petrified Fore	70.24	326	P	P	18 52 37.1	+2.0
W18A					pP	18 53 00.8	+0.8
W18A				IAmb	IAmb	18 53 03.1	
	comp=Z,68nm,1.1s						
W18A	Petrified Fore	70.24	326	pP	pP	18 53 01.7	+1.7
	baz=141						
SDCO	Great Sand Dun	70.27	330	P	P	18 52 36.9	+1.6
SDCO				pP	pP	18 53 01.0	+0.7
SDCO				IAmb	IAmb	18 53 03.1	
	comp=Z,54nm,1.0s						
F51A	Arnstein	70.28	352	pP	pP	18 53 00.5	+0.6
	baz=169						
G45A	Suttons Bay	70.34	348		pP	18 52 59.5	-0.7
G45A	Suttons Bay	70.34	348	pP	pP	18 53 00.2	0.0
	baz=164						
I40A	Norwalk	70.37	344	P	P	18 52 34.8	-0.6
I40A					pP	18 52 59.1	-1.4
I40A				IAmb	IAmb	18 53 01.5	
	comp=Z,29nm,0.8s						
E55A	Montcerf-Lytto	70.40	355	pP	pP	18 53 01.3	+0.6
	baz=173						
BGNE	Belgrade	70.41	337	P	P	18 52 36.5	+0.8
BGNE					pP	18 53 01.5	+0.7
BGNE	Belgrade	70.41	337	pP	pP	18 53 01.2	+0.5
	baz=152						
F49A	Sandfield	70.41	350	pP	pP	18 53 00.8	+0.2
	baz=167						
E56A	St. Veronique	70.42	356	pP	pP	18 53 01.9	+1.2
	baz=174						
G46A	Petoskey	70.45	348	pP	pP	18 53 01.1	+0.2
	baz=165						
E52A	Mattawa	70.48	353	pP	pP	18 53 01.1	+0.1
	baz=171						
F48A	Evansville	70.56	350	pP	pP	18 53 01.2	-0.4
	baz=167						
D60A	Saint Jean D’O	70.60	359	pP	pP	18 53 02.4	+0.6
	baz=178						
X16A	Lo Mia Camp, P	70.60	324	P	P	18 52 39.1	+1.7
X16A					pP	18 53 03.6	+1.3
X16A				IAmb	IAmb	18 53 06.2	
	comp=Z,52nm,1.0s						
D63A	Stockholm	70.72	1	pP	pP	18 53 02.1	-0.4
	baz=181						
D62A	Allapoint, All	70.75	0	P	P	18 52 38.8	+1.1
D62A					pP	18 53 00.6	-2.2
D62A				IAmb	IAmb	18 53 05.6	
	comp=Z,62nm,0.8s						
D62A	Allapoint, All	70.75	0	pP	pP	18 53 02.3	-0.5
	baz=180						
D57A	Chemin Vers le	70.82	357	pP	pP	18 53 03.1	-0.1
	baz=175						
E51A	G1948 Merrick	70.82	352	pP	pP	18 53 03.3	+0.1
	baz=170						
D58A	Chemin du LacG	70.85	357	pP	pP	18 53 03.2	-0.1
	baz=176						
D61A	St Aubert, Com	70.88	359	pP	pP	18 53 03.5	0.0
	baz=179						
S22A	4UR Ranch, Cre	70.88	329	P	P	18 52 40.6	+1.6
S22A				pP	pP	18 53 04.6	+0.6
D56A	ZEC Mazanza, M	70.90	356	pP	pP	18 53 04.1	+0.4
	baz=174						
D55A	Sainte-Anne-du	70.92	355	pP	pP	18 53 04.0	+0.2
	baz=174						
F45A	CMU Biological	70.93	348	pP	pP	18 53 03.5	-0.3
	baz=164						
BATG	Bathurst New B	71.01	2	P	P	18 52 40.1	+0.9
BATG					pP	18 53 01.8	-2.5
BATG				IAmb	IAmb	18 53 06.6	
	comp=Z,49nm,1.1s						
Y14A	Wickenburg	71.10	323	P	P	18 52 41.1	+0.9
Y14A					pP	18 53 07.0	+1.8
Q24A	Divide	71.11	331	P	P	18 52 42.2	+1.7
Q24A				IAmb	IAmb	18 53 08.1	
	comp=Z,50nm,0.8s						
LATQ	La Tuque	71.13	357	P	P	18 52 39.9	0.0
LATQ	La Tuque	71.13	357	pP	pP	18 53 05.2	+0.1
	baz=176						
E48A	Lockeyer	71.13	351	pP	pP	18 53 05.1	0.0
	baz=167						
D54A	Lac Fusel, La	71.14	355	pP	pP	18 53 04.7	-0.5
	baz=173						
D53A	Lac Vacive, Po	71.17	354	P	P	18 52 40.5	+0.3
D53A				IAmb	IAmb	18 53 06.9	
	comp=Z,70nm,0.9s						
I37A	Lemond, Waseca	71.23	342	P	P	18 52 40.9	+0.2
MVCO	Mesa Verde	71.25	328	P	P	18 52 41.3	0.0
MVCO				pP	pP	18 53 07.4	+1.2
MVCO				IAmb	IAmb	18 53 09.1	
	comp=Z,53nm,0.8s						
E47A	Iron Bridge	71.28	350	pP	pP	18 53 06.0	0.0
	baz=166						
D51A	Lot 18 Range I	71.36	353	pP	pP	18 53 06.8	+0.5
	baz=170						
E46A	Sault Ste Mari	71.37	349	P	P	18 52 41.4	0.0
E46A					pP	18 53 05.2	-1.3
E46A				IAmb	IAmb	18 53 11.9	
	comp=Z,34nm,0.8s						
WUAZ	Wupatki	71.40	325	P	P	18 52 44.1	+2.0
WUAZ					pP	18 53 08.8	+1.7
WUAZ				IAmb	IAmb	18 53 11.0	
	comp=Z,70nm,0.9s						
OGNE	Ogallala	71.46	334		pP	18 53 08.3	+1.0
OGNE	Ogallala	71.46	334	pP	pP	18 53 08.2	+0.9
	baz=148						
GLA	Glamis	71.49	321	P	P	18 52 43.2	+0.7
GLA				*PP	pP	18 53 05.9	-1.6
GLA				pmax	pmax		
	comp=Z,23nm,1.0s						
GLA	Glamis	71.49	321	P	P	18 52 43.2	+0.7
GLA					pP	18 53 05.9	-1.6
GLA	Glamis	71.49	321	pP	pP	18 53 08.6	+1.1
	baz=136						
D50A	G1974 Best Tow	71.49	352	pP	pP	18 53 07.6	+0.4
	baz=170						
G40A	Rib Lake	71.55	345	P	P	18 52 40.8	-1.8
G40A				pP	pP	18 53 07.1	-0.5
G40A				IAmb	IAmb	18 53 08.9	
	comp=Z,69nm,1.8s						
K31A	O'Neill	71.69	337	P	P	18 52 43.3	-0.1
D48A	Paudash Townsh	71.76	351	pP	pP	18 53 08.8	0.0
	baz=168						
Y12C	Blythe	71.82	321	P	P	18 52 46.0	+1.6
Y12C					pP	18 53 10.2	+0.8
Y12C				IAmb	IAmb	18 53 13.3	
	comp=Z,43nm,0.9s						
Y12C	Blythe	71.82	321	pP	pP	18 53 11.5	+2.1
	baz=137						
D46A	Sault St. Mari	71.83	349	pP	pP	18 53 09.0	-0.2
	baz=166						
D47A	Chapleau	71.84	350	pP	pP	18 53 09.2	-0.1
	baz=166						
E43A	Lone Tree Farm	71.88	347	P	P	18 52 43.8	-0.7
E44A	Grand Marais A	71.91	348	pP	pP	18 53 10.2	+0.5
	baz=164						
IKP	In-Ko-Pah, Jac	71.95	320	pP	pP	18 53 11.8	+1.4
	baz=135						
ECSD	EROS Data Cent	71.95	339	P	P	18 52 44.8	-0.3
ECSD				pP	pP	18 53 09.4	-0.7
ECSD				IAmb	IAmb	18 53 11.6	
	comp=Z,39nm,0.8s						
SWSC	Sam W. Stewart	71.98	320	pP	pP	18 53 11.9	+1.4
	baz=136						
ISCO	Idaho Springs	72.00	331	P	P	18 52 46.1	+0.4
ISCO					pP	18 53 11.8	+1.0
PDMCI	Parker Dam,Lak	72.01	322	pP	pP	18 53 12.1	+1.5
	baz=137						
PV01	Paradox Valley	72.02	328	P	P	18 52 47.4	+1.6
COWI	Conover	72.08	346	P	P	18 52 46.0	+0.2
COWI					pP	18 53 10.9	0.0
PV15	Paradox Valley	72.14	328	P	P	18 52 47.5	+1.0
PV15					pP	18 53 13.7	+2.1
PV15				IAmb	IAmb	18 53 14.9	
	comp=Z,60nm,1.1s						
PV02	Paradox Valley	72.16	328	P	P	18 52 45.0	-1.6
PV02					pP	18 53 12.4	+0.7
PV02				IAmb	IAmb	18 53 14.6	
	comp=Z,55nm,1.4s						
PV13	Radium Mtn., P	72.16	328	P	P	18 52 47.8	+1.1
PV13					pP	18 53 12.7	+1.0
PV13				IAmb	IAmb	18 53 14.6	
	comp=Z,36nm,0.9s						
VLDQ	Val d'Or	72.17	354	P	P	18 52 46.0	-0.1
VLDQ					pP	18 53 11.2	-0.1
VLDQ				IAmb	IAmb	18 53 13.1	
	comp=Z,44nm,0.9s						
SPMN	Marine on St.	72.18	343	P	P	18 52 45.9	-0.4
SPMN					pP	18 53 10.4	-1.0
SPMN				IAmb	IAmb	18 53 12.9	
	comp=Z,69nm,0.9s						
SPMN	Marine on St.	72.18	343	pP	pP	18 53 11.3	-0.1
	baz=157						
PV05	Paradox Valley	72.23	328	P	P	18 52 47.2	+0.1
PV05					pP	18 53 12.7	+0.6
PV05				IAmb	IAmb	18 53 14.8	
	comp=Z,38nm,0.9s						
PV03	Paradox Valley	72.25	328	P	P	18 52 47.5	+0.4
PV03					pP	18 53 10.4	-1.8
PV18	Skein Mesa, Pa	72.27	328	P	P	18 52 47.5	+0.2
PV18					pP	18 53 13.5	+1.2
PV12	Saucer Basin,	72.27	328	P	P	18 52 48.8	+1.5
PV12					pP	18 53 10.9	-1.4
BC3	Big Chuckawall	72.28	321	pP	pP	18 53 14.4	+2.0
	baz=136						
PV11	David Mesa, Pa	72.29	328	P	P	18 52 48.3	+0.9
PV11					pP	18 53 11.2	-1.3
PV07	Paradox Valley	72.30	328		pP	18 53 12.4	0.0
BAR	Barrett	72.31	319	P	P	18 52 49.0	+1.6
BAR				pP	pP	18 53 14.1	+1.6
MONP2	Monument Peak	72.31	320	pP	pP	18 53 14.5	+1.8
	baz=135						
PV17	East Wray Mesa	72.32	328		pP	18 53 13.6	+0.9
PV16	Nyswonger Mesa	72.32	328		pP	18 53 14.2	+1.6
PV19	Morning Glory	72.36	328	P	P	18 52 47.6	-0.2
PV19					pP	18 53 13.7	+0.9
PV20	West Nyswonger	72.37	328	P	P	18 52 48.6	+0.7
PV20					pP	18 53 14.3	+1.3
PV04	Paradox Valley	72.38	328		pP	18 53 14.7	+1.7
PV14	Lion Creek, Pa	72.42	328	P	P	18 52 49.1	+0.9
PV14					pP	18 53 14.9	+1.6
PV10	Paradox Valley	72.43	328		pP	18 53 14.2	+0.9
PV22	Blue Mesa, Par	72.44	328	P	P	18 52 50.0	+1.7
W13A	Hualapai Mount	72.45	323	P	P	18 52 49.8	+1.4
W13A					pP	18 53 15.7	+2.2
IRM	Iron Mountain	72.47	321	pP	pP	18 53 15.2	+1.8
	baz=136						
PV23	Carpenter Ridg	72.48	328	P	P	18 52 49.2	+0.6
PV23					pP	18 53 14.2	+0.6
PV09	Paradox Valley	72.58	328	P	P	18 52 50.3	+1.1
U15A	North Rim	72.58	325	P	P	18 52 51.0	+1.8
U15A				IAmb	IAmb	18 53 17.9	
	comp=Z,44nm,1.1s						
PFO	Pinyon Flats O	72.84	320	*i* P	P	18 52 51.2	+0.5
PFO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PFO	Pinyon Flats O	72.84	320	pP	pP	18 53 18.0	+2.2
	baz=135						
BELC	Belle Mtn. Jos	72.85	321	pP	pP	18 53 17.6	+1.8
	baz=136						
D41A	Chassel	72.87	346	P	P	18 52 50.8	+0.5
N23A	Red Feather La	73.04	332	P	P	18 52 52.5	+0.6
N23A					pP	18 53 17.6	+0.6
N23A	Red Feather La	73.04	332	pP	pP	18 53 18.6	+1.6
	baz=145						
LSQQ	Lebel-sur-Quev	73.06	355	pP	pP	18 53 17.7	+1.0
	baz=172						
E38A	The Farm, Brul	73.14	344	P	P	18 52 51.9	-0.1
E38A					pP	18 53 16.2	-0.9
E38A				IAmb	IAmb	18 53 18.8	
	comp=Z,52nm,1.0s						
PHWY	Pilot Hill	73.17	332	P	P	18 52 52.6	-0.1
PHWY					pP	18 53 17.5	-0.3
GMRC	Granite Mounta	73.22	321	pP	pP	18 53 19.9	+1.9
	baz=136						
MURC	Murrieta	73.26	320	pP	pP	18 53 19.8	+1.6
	baz=135						
KNB	Kanab	73.30	325	P	P	18 52 55.5	+2.2
KNB				*PP	pP	18 53 20.8	+2.3
KNB				pmax	pmax		
	comp=Z,106nm,1.2s						
KNB	Kanab	73.30	325	P	P	18 52 55.5	+2.2
KNB				pP	pP	18 53 20.8	+2.3
SBA	Scott Base	73.32	191	P	P	18 52 54.2	+1.5
SBA				pmax	pmax		
	comp=Z,31nm,1.1s						
SBA	Scott Base	73.32	191	P	P	18 52 54.2	+1.5
PKCU	Pink Cliffs	73.35	325	P	P	18 52 53.6	-0.2
PKCU					pP	18 53 20.8	+1.8
SUSD	Miller	73.36	338	P	P	18 52 53.6	+0.3
SUSD					pP	18 53 17.9	-0.6
SUSD				IAmb	IAmb	18 53 20.6	
	comp=Z,60nm,0.8s						
SUSD	Miller	73.36	338	pP	pP	18 53 18.8	+0.3
	baz=152						
O20A	White River Ci	73.45	330	P	P	18 52 53.7	-0.5
O20A					pP	18 53 20.3	+0.9
O20A				IAmb	IAmb	18 53 22.2	
	comp=Z,67nm,0.8s						
O20A	White River Ci	73.45	330	pP	pP	18 53 21.0	+1.6
	baz=143						
LCMT	Little Creek M	73.52	325	P	P	18 52 55.2	+0.6
LCMT					pP	18 53 21.8	+2.0
HEC	Hector,Ludlow	73.63	321	pP	pP	18 53 22.5	+2.2
	baz=136						
DRLN	Deer Lake	73.68	8		pP	18 53 20.7	+0.4
SRU	San Rafael Swe	73.73	328	P	P	18 52 57.0	+1.1
SRU				pP	pP	18 53 22.5	+1.5
MTPU	Mount Pierson	73.74	326	P	P	18 52 57.8	+1.6
MTPU					pP	18 53 22.5	+1.2
MATQ	Matagami	73.82	354	pP	pP	18 53 21.5	+0.4
	baz=172						
TUQ	Turquoise Moun	73.83	322	pP	pP	18 53 23.5	+1.9
	baz=136						
SZCU	Shurtz Canyon	73.87	325	P	P	18 52 57.0	+0.2
SZCU					pP	18 53 23.8	+1.9
Q16A	Castle Valley	73.90	327	P	P	18 52 58.7	+1.8
Q16A					pP	18 53 23.8	+1.8
CCUT	Cedar City	73.98	325	P	P	18 52 59.6	+2.2
CCUT				pP	pP	18 53 25.2	+2.6
BFSC	Mount Baldy Ra	73.99	320	pP	pP	18 53 24.2	+1.7
	baz=135						
MSU	Marysvale	74.10	326	P	P	18 53 00.0	+2.0
MSU				*PP	pP	18 53 25.3	+2.1
MSU	Marysvale	74.10	326	P	P	18 53 00.0	+2.0
MSU				pP	pP	18 53 25.3	+2.1
P17A	Butcher Ranch,	74.12	328	P	P	18 52 59.4	+1.3
P17A					pP	18 53 24.9	+1.7
SHPR	Sheep Range	74.18	323	P	P	18 53 00.1	+1.5
SHPR					pP	18 53 25.6	+1.9
TMUT	Trail Mountain	74.21	327	P	P	18 52 59.8	+1.0
TMUT					pP	18 53 25.8	+1.8
MWC	Mount Wilson	74.21	320	P	P	18 52 59.9	+1.1
MWC				*PP	pP	18 53 25.7	+1.8
MWC				pmax	pmax		
	comp=Z,58nm,1.5s						
MWC	Mount Wilson	74.21	320	P	P	18 52 59.9	+1.1
MWC					pP	18 53 25.7	+1.8
MWC				IAmb	IAmb	18 53 26.9	
	comp=Z,58nm,1.5s						
RWWY	Rawlins	74.24	331		pP	18 53 24.4	+0.4
GSC	Goldstone, Bar	74.24	321	P	P	18 53 00.0	+1.2
GSC				pmax	pmax		
	comp=Z,46nm,1.4s						
GSC	Goldstone, Bar	74.24	321	P	P	18 52 60.0	+1.2
GSC	Goldstone, Bar	74.24	321	pP	pP	18 53 26.1	+2.1
	baz=135						
PASC	Pasadena Art C	74.25	319		pP	18 53 26.0	+2.0
SYO	Syowa Base	74.26	159	⇓*e*P	P	18 52 56.0	-2.3
SYO	Syowa Base	74.26	159	⇓*i*PcP	PcP	18 53 11.0	-1.7
TCRU	Three Creeks R	74.31	326	P	P	18 52 59.4	+0.1
VNDA	Vanda	74.34	190	P	P	18 53 00.6	+1.8
	comp=Z,14nm,0.8s,baz=126,slow=6.4,SNR=44						
VNDA	Vanda	74.34	190	P	P	18 53 00.1	+1.4
VNDA				pmax	pmax		
	comp=Z,14nm,0.8s						
VNDA	Vanda	74.34	190	P	P	18 53 00.1	+1.4
SHOC	Shoshone, Teco	74.36	322	pP	pP	18 53 26.5	+1.9
	baz=136						
EYMN	Ely	74.37	345	P	P	18 52 59.0	-0.1
EYMN					pP	18 53 23.9	-0.5
EYMN				IAmb	IAmb	18 53 26.0	
	comp=Z,38nm,0.8s						
DECC	Green Verdugo	74.40	319	pP	pP	18 53 26.8	+2.0
	baz=134						
RDMU	Red Mountain	74.42	329	P	P	18 53 01.5	+1.6
RDMU					pP	18 53 26.5	+1.4
SNCC	San Nicolas Is	74.42	318	pP	pP	18 53 26.3	+1.3
	baz=133						
EDW2	Edwards Air Fo	74.63	320	pP	pP	18 53 27.8	+1.5
	baz=134						
K22A	Casper	74.73	332	P	P	18 53 02.3	+0.8
K22A					pP	18 53 27.6	+0.8
K22A	Casper	74.73	332	pP	pP	18 53 27.7	+0.9
	baz=145						
BLG	Laguna Peak, P	74.73	319	pP	pP	18 53 28.1	+1.3
	baz=134						
LRMC	Laurel Mtn Rad	74.87	321	pP	pP	18 53 29.4	+1.7
	baz=135						
OSI	Osito Audit: C	74.88	319	pP	pP	18 53 28.8	+1.1
	baz=134						
RSSD	Black Hills	74.93	335	P	P	18 53 03.2	+0.4
RSSD				pP	pP	18 53 29.0	+1.0
RSSD	Black Hills	74.93	335	pP	pP	18 53 29.3	+1.3
	baz=147						
MPU	Maple Canyon	74.97	328	P	P	18 53 03.3	+0.2
MPU					pP	18 53 30.3	+2.0
PSUT	Pine Spring	74.98	325	P	P	18 53 05.0	+1.8
SCZ2	Santa Cruz Isl	75.00	318	pP	pP	18 53 29.8	+1.5
	baz=133						
FURC	Furnace Creek,	75.10	322	pP	pP	18 53 30.9	+2.1
	baz=136						
TPNV	Topopah Spring	75.11	323	P	P	18 53 06.1	+2.3
TPNV				*PP	pP	18 53 31.8	+2.7
TPNV				pmax	pmax		
	comp=Z,37nm,0.9s						
TPNV	Topopah Spring	75.11	323	P	P	18 53 06.1	+2.3
TPNV				pP	pP	18 53 31.8	+2.7
TPNV				IAmb	IAmb	18 53 32.6	
	comp=Z,37nm,0.8s						
D32A	Dogwood Acres,	75.13	341	P	P	18 53 04.2	+0.7
D32A					pP	18 53 29.3	+0.6
NLU	North Lily Min	75.14	327	P	P	18 53 04.7	+0.6
NLU					pP	18 53 31.2	+2.0
MPMC	Manual Prospec	75.17	321	pP	pP	18 53 31.1	+1.6
	baz=135						
ARVC	Arvin	75.30	320	pP	pP	18 53 31.8	+1.8
	baz=134						
JLU	Jordanelle	75.33	328	P	P	18 53 07.0	+1.8
JLU					pP	18 53 32.3	+1.9
ISA	Isabella, Lake	75.46	320	P	P	18 53 07.9	+2.1
ISA					pP	18 53 33.2	+2.2
ISA	Isabella, Lake	75.46	320	pP	pP	18 53 32.8	+1.8
	baz=134						
CTU	Camp Tracy	75.55	328	P	P	18 53 07.7	+1.4
DUG	Dugway, Tooele	75.69	327	P	P	18 53 08.5	+1.4
DUG				*PP	pP	18 53 34.4	+2.1
DUG				pmax	pmax		
	comp=Z,33nm,1.0s						
DUG	Dugway, Tooele	75.69	327	P	P	18 53 08.5	+1.4
DUG					pP	18 53 34.4	+2.1
PKM	Mcpherson Peak	75.72	319	pP	pP	18 53 34.5	+1.8
	baz=133						
R11A	Troy Canyon, C	75.76	324	P	P	18 53 09.4	+1.8
R11A				pP	pP	18 53 35.0	+2.2
R11A	Troy Canyon, C	75.76	324	pP	pP	18 53 34.8	+2.0
	baz=137						
GRAC	Grapevine Rang	75.76	322	pP	pP	18 53 34.6	+1.9
	baz=135						
CWC	Cottonwood Cre	75.78	321	pP	pP	18 53 35.1	+2.1
	baz=135						
E28A	Huff	75.81	338	P	P	18 53 08.7	+1.2
E28A				pP	pP	18 53 33.9	+1.1
AGMN	Agassiz Nation	75.84	342		pP	18 53 33.0	+0.2
SMMC	Simmler	76.12	319	pP	pP	18 53 36.7	+1.9
	baz=133						
BW06	Boulder Array	76.14	331		pP	18 53 35.7	+0.6
BW06	Boulder Array	76.14	331	pP	pP	18 53 36.0	+0.9
	baz=142						
PD31	Pinedale Array	76.14	331	P	P	18 53 10.4	+0.8
PD31					pP	18 53 35.8	+0.8
PDAR	Pinedale Array	76.14	331	P	P	18 53 10.6	+0.8
	comp=Z,1.3nm,0.6s,baz=132,slow=7.2,SNR=12						
PDAR				pP	pP	18 53 36.2	+1.2
	comp=Z,2.9nm,0.6s,baz=136,slow=8.0,SNR=7.0						
PDAR	Pinedale Array	76.14	331	P	P	18 53 09.9	+0.2
PDAR					pP	18 53 36.0	+1.0
HWUT	Hardware Ranch	76.17	329	P	P	18 53 10.8	+0.9
HWUT				pP	pP	18 53 36.4	+1.3
HWUT				IAmb	IAmb	18 53 38.9	
	comp=Z,36nm,0.8s						
TIN	Tinemaha, Big	76.29	322	pP	pP	18 53 37.4	+1.6
	baz=135						
BGU	Big Grassy Mou	76.36	327	P	P	18 53 11.8	+0.9
BGU					pP	18 53 37.4	+1.2
SPUT	South Promonto	76.36	328	P	P	18 53 11.7	+0.8
SPUT				pP	pP	18 53 37.8	+1.6
MDND	Maddock	76.57	339	P	P	18 53 12.8	+1.1
MDND					pP	18 53 38.4	+1.4
MDND	Maddock	76.57	339	pP	pP	18 53 38.2	+1.2
	baz=152						
AHID	Auburn Hatcher	76.85	330	P	P	18 53 14.9	+1.3
AHID					pP	18 53 40.3	+1.3
AHID				IAmb	IAmb	18 53 41.4	
	comp=Z,50nm,0.8s						
HVU	Hansel Valley	76.88	328		pP	18 53 40.4	+1.2
MLAC	Mammoth, Mammo	77.04	322	pP	pP	18 53 42.1	+1.9
	baz=134						
OMMB	Old Mammoth Mi	77.12	322	P	P	18 53 17.0	+1.6
OMMB					pP	18 53 42.5	+1.8
OMMB				IAmb	IAmb	18 53 43.6	
	comp=Z,38nm,1.0s						
MDPB	Devils Postpil	77.18	321		pP	18 53 42.9	+1.9
REDW	Red Top Meadow	77.20	330	P	P	18 53 16.5	+0.8
REDW				pP	pP	18 53 42.4	+1.4
SNOW	Snow King Moun	77.23	330	P	P	18 53 17.1	+1.2
SNOW					pP	18 53 42.5	+1.3
SNOW				IAmb	IAmb	18 53 43.9	
	comp=Z,37nm,0.8s						
NVAR	Mina Array Bea	77.30	323	P	P	18 53 17.8	+1.4
	comp=Z,1.7nm,0.6s,baz=144,slow=6.3,SNR=2.0						
NVAR				pP	pP	18 53 43.8	+2.1
	comp=Z,13nm,0.9s,baz=151,slow=6.6,SNR=16						
NVAR	Mina Array Bea	77.30	323	P	P	18 53 17.1	+0.8
NVAR					pP	18 53 43.4	+1.7
ELK	Elko	77.33	326	P	P	18 53 16.9	+0.4

ELK				pP	pP	18 53 43.0	+1.2
TPAW	Teton Pass	77.34	330	P	P	18 53 16.8	+0.3
TPAW					pP	18 53 42.3	+0.4
FXWY	Fox Creek	77.49	330	P	P	18 53 18.2	+0.9
FXWY					pP	18 53 44.0	+1.4
SUR	Sutherland	77.56	120	P	P	18 53 17.9	-0.2
RYN	Ryan	77.56	323		pP	18 53 44.4	+1.4
ULM	Lac du Bonnet	77.62	343	P	P	18 53 17.6	+0.1
	comp=Z,5.4nm,0.6s,baz=157,slow=5.7,SNR=16						
ULM	Lac du Bonnet	77.62	343	i P	P	18 53 17.3	-0.2
ULM	Lac du Bonnet	77.62	343	P	P	18 53 17.5	0.0
ULM				pP	pP	18 53 43.1	+0.2
ULM				IAmb	IAmb	18 53 44.2	
	comp=Z,47nm,0.7s						
KVN	Kaiserville	77.63	323	P	P	18 53 18.7	+0.6
KVN				pP	pP	18 53 45.0	+1.6
FLWY	Flagg Ranch	77.69	331	P	P	18 53 20.4	+2.1
FLWY					pP	18 53 45.4	+1.6
FLWY				IAmb	IAmb	18 53 46.9	
	comp=Z,65nm,0.9s						
H17A	Grant Village	77.88	331		pP	18 53 46.8	+1.9
H17A	Grant Village	77.88	331	pP	pP	18 53 46.6	+1.7
	baz=142						
RLMT	Red Lodge	77.89	332	P	P	18 53 20.2	+0.7
RLMT				pP	pP	18 53 46.5	+1.7
RLMT				IAmb	IAmb	18 53 48.8	
	comp=Z,82nm,1.6s						
LAO	LASA Array	77.92	335	pP	pP	18 53 46.0	+1.2
	baz=146						
WAKR	Walker	77.99	322	P	P	18 53 22.1	+1.9
WAKR					pP	18 53 47.5	+2.1
YNE	Yellowstone No	78.12	332	P	P	18 53 21.7	+0.9
YNE					pP	18 53 47.8	+1.6
CMB	Columbia Colle	78.20	321		pP	18 53 47.9	+1.4
YERR	Yerington	78.21	322	P	P	18 53 22.8	+1.4
YERR					pP	18 53 48.7	+2.0
YMR	Madison River	78.27	331	P	P	18 53 23.7	+2.1
YMR					pP	18 53 49.5	+2.5
YHH	Holmes Hill	78.31	331	P	P	18 53 23.9	+2.0
YHH				pP	pP	18 53 49.8	+2.5
YHB	Horse Butte	78.44	331	P	P	18 53 24.2	+1.7
YHB					pP	18 53 49.7	+1.8
TOA0	Torodi Ar. Sit	78.46	70	P	P	18 53 22.7	-0.3
TOA0				pP	pP	18 53 49.0	+0.4
TORD	Torodi Ar. Bea	78.46	70	P	P	18 53 22.8	-0.1
	comp=Z,56nm,0.7s,baz=254,slow=5.0,SNR=302						
TORD				pP	pP	18 53 48.8	+0.2
	comp=Z,78nm,0.7s,baz=256,slow=5.2,SNR=14						
TORD				S	S	19 03 10.3	-1.4
	comp=Z,1.9nm,1.0s,baz=265,slow=8.5,SNR=5.0						
TORD	Torodi Ar. Bea	78.46	70	P	P	18 53 21.9	-1.1
TORD					pP	18 53 48.6	0.0
PNTR	Pine Nut	78.48	322	P	P	18 53 25.2	+2.4
PNTR				pP	pP	18 53 49.9	+1.7
PNTR				IAmb	IAmb	18 53 51.5	
	comp=Z,50nm,0.9s						
YHL	Hebgen Lake	78.51	331	P	P	18 53 25.1	+2.1
YHL					pP	18 53 50.4	+2.0
SCHQ	Schefferville	78.54	1	P	P	18 53 22.9	+0.4
	comp=Z,2.6nm,0.7s,baz=182,slow=7.9,SNR=4.4						
SCHQ	Schefferville	78.54	1	P	P	18 53 23.1	+0.6
SCHQ				pP	pP	18 53 48.3	+0.3
SCHQ				IAmb	IAmb	18 53 49.6	
	comp=Z,82nm,1.2s						
QLMT	Earthquake Lak	78.61	331	P	P	18 53 23.6	+0.2
QLMT					pP	18 53 51.1	+2.3
VCNR	Virginia City	78.66	322		pP	18 53 50.9	+1.7
DGMT	Dagmar	78.66	337	P	P	18 53 24.6	+1.2
DGMT					pP	18 53 50.3	+1.5
DGMT				IAmb	IAmb	18 53 52.2	
	comp=Z,81nm,0.9s						
PAHR	Pah Rah Range	78.80	323	P	P	18 53 26.3	+1.8
PAHR				IAmb	IAmb	18 53 53.1	
	comp=Z,61nm,0.9s						
AFDM	Forest Hills D	79.16	321	P	P	18 53 27.6	+1.2
AFDM					pP	18 53 52.5	+0.8
MCMT	McKenzie Canyo	79.24	330	P	P	18 53 28.7	+1.8
MCMT				pP	pP	18 53 54.3	+1.9
DLMT	Dillon	79.54	330	P	P	18 53 30.5	+2.1
DLMT					pP	18 53 55.5	+1.7
TSUM	Tsumeb	79.59	106	P	P	18 53 29.3	0.0
TSUM				IAmb	IAmb	18 53 31.0	
	comp=Z,38nm,0.9s						
TSUM					pP	18 53 55.9	+0.6
MFID	Camas Ranch	79.60	327	P	P	18 53 30.5	+1.8
MFID					pP	18 53 55.8	+1.6
MFID				IAmb	IAmb	18 53 57.1	
	comp=Z,80nm,1.6s						
LRM	Limekiln Ridge	79.83	331	P	P	18 53 30.3	+0.3
ORV	Oroville	79.88	322	P	P	18 53 31.3	+1.1
ORV				pmax	pmax		
	comp=Z,54nm,1.1s						
ORV	Oroville	79.88	322	P	P	18 53 31.3	+1.1
ORV				IAmb	IAmb	18 53 58.6	
	comp=Z,54nm,1.1s						
MOD	Modoc Plateau	80.82	324	P	P	18 53 36.1	+0.7
O02D	Mt. Diablo Mer	81.03	321	pP	pP	18 54 03.2	+1.3
	baz=132						
WDC	Whiskeytown Da	81.16	322	P	P	18 53 36.9	-0.1
WDC					pP	18 54 02.5	0.0
MSO	Missoula	81.26	331		pP	18 54 04.7	+1.6
MSO	Missoula	81.26	331	pP	pP	18 54 04.5	+1.4
	baz=139						
BMO	Blue Mountains	81.37	328	P	P	18 53 38.4	+0.2
BMO				pmax	pmax		
	comp=Z,31nm,1.1s						
BMO	Blue Mountains	81.37	328	P	P	18 53 38.4	+0.2
N02D	Trinity Center	81.51	322	pP	pP	18 54 05.7	+1.2
	baz=132						
M04C	Macdoel	81.58	323	pP	pP	18 54 06.0	+1.1
	baz=133						
M02C	Callahan	81.88	322	pP	pP	18 54 07.1	+0.7
	baz=132						
I07A	Izee	81.92	326	P	P	18 53 42.6	+1.5
MAW	Mawson	82.02	163	P	P	18 53 41.8	+0.6
	comp=Z,86nm,0.8s,baz=202,slow=5.6,SNR=73						
MAW	Mawson	82.02	163	P	P	18 53 41.4	+0.2
MAW				pmax	pmax		
	comp=Z,26nm,1.0s						
MAW	Mawson	82.02	163	P	P	18 53 41.4	+0.2
YBH	Yreka Blue Hor	82.02	323		pP	18 54 07.3	+0.1
K04D	Chiloquin, OR	82.10	324	pP	pP	18 54 08.8	+1.1
	baz=133						
JTMT	Jette	82.11	331	P	P	18 53 43.2	+1.2
JTMT					pP	18 54 08.4	+0.8
L04D	Klamath Falls	82.12	323	pP	pP	18 54 08.5	+0.7
	baz=132						
F10A	Beach Ranch, E	82.15	328	P	P	18 53 42.9	+0.7
F10A					pP	18 54 09.1	+1.3
J05D	Fort Rock, OR	82.27	324	pP	pP	18 54 09.7	+1.1
	baz=133						
PINE	Pine Mountain	82.47	325	P	P	18 53 45.9	+1.8
PINE				pP	pP	18 54 11.4	+1.7
PINE				IAmb	IAmb	18 54 12.6	
	comp=Z,42nm,0.9s						
G08A	Pilot Rock	82.50	327	P	P	18 53 44.8	+0.7
G08A					pP	18 54 11.0	+1.3
G08A				IAmb	IAmb	18 54 12.1	
	comp=Z,74nm,1.9s						
BOSA	Boshof	82.52	118	i P	P	18 53 43.0	-1.7
BOSA	Boshof	82.52	118	P	P	18 53 44.5	-0.2
	comp=Z,24nm,0.8s,baz=246,slow=3.8,SNR=35						
BOSA	Boshof	82.52	118	i P	P	18 53 43.0	-1.7
BOSA	Boshof	82.52	118	P	P	18 53 44.2	-0.5
BOSA				IAmb	IAmb	18 53 45.6	
	comp=Z,37nm,0.9s						
BOSA					pP	18 54 11.0	+0.1
J04D	Umpqua Nationa	82.71	324	pP	pP	18 54 12.0	+1.0
	baz=133						
WALA	Waterton Lakes	82.95	332	P	P	18 53 47.2	+0.9
WALA				IAmb	IAmb	18 54 14.2	
	comp=Z,40nm,0.8s						
I05D	Terrebonne, OR	83.05	325	pP	pP	18 54 13.7	+1.2
	baz=133						
K02D	Willamette Mer	83.19	323	pP	pP	18 54 14.8	+1.5
	baz=131						
I04A	Tendick Farm,	83.25	324	pP	pP	18 54 14.2	+0.6
	baz=132						
G06A	Carlson Farm,	83.31	326		pP	18 54 15.4	+1.5
FFC	Flin Flon	83.31	342		pP	18 54 13.8	+0.2
HAWA	Hanford	83.57	328	P	P	18 53 49.8	+0.4
HAWA					pP	18 54 16.4	+1.3
J01E	Myrtle Point	83.65	323	pP	pP	18 54 16.9	+1.3
	baz=131						
G05D	Wamic, OR	83.66	326	pP	pP	18 54 17.1	+1.4
	baz=133						
I03D	Drain, OR	83.69	324	pP	pP	18 54 17.1	+1.4
	baz=132						
H04A	Detroit Lake	83.73	325	P	P	18 53 50.9	+0.6
H04A					pP	18 54 16.5	+0.4
D08A	Wollman Farm,	83.74	328	P	P	18 53 50.8	+0.5
D08A					pP	18 54 16.8	+0.9
D08A				IAmb	IAmb	18 54 18.4	
	comp=Z,85nm,1.9s						
NEW	Newport	83.77	330	P	P	18 53 50.8	+0.3
NEW					pP	18 54 16.5	+0.4
PBDV	Barranco-do-Ve	83.86	45	eP	P	18 53 53.0	+1.9
PBDV				epP	pP	18 54 18.7	+1.7
H04D	Lebanon	83.91	325	pP	pP	18 54 17.5	+0.6
	baz=132						
C09A	Chrisman Ranch	83.97	329	P	P	18 53 51.7	+0.3
C09A					pP	18 54 17.8	+0.7
C09A				IAmb	IAmb	18 54 19.3	
	comp=Z,34nm,0.9s						
PNCL	Nicolau / Gran	83.99	44	epP	pP	18 54 19.2	+1.5
PCVE	Castro Verde	84.02	44	eP	P	18 53 53.5	+1.6
	comp=Z,22nm,2.4s						
PCVE				epP	pP	18 54 19.7	+1.9
MESJ	Messejana	84.03	44	eP	P	18 53 53.1	+1.2
	comp=Z,26nm,1.7s						
MESJ				epP	pP	18 54 19.5	+1.7
PVAQ	Vaqueiros	84.09	45	eP	P	18 53 53.9	+1.6
	comp=Z,32nm,1.7s						
LBTB	Lobatse	84.22	115	i P	P	18 53 53.8	+0.3
LBTB	Lobatse	84.22	115	i P	P	18 53 53.8	+0.3
LBTB	Lobatse	84.22	115	P	P	18 53 52.7	-0.8
LBTB				*PP	pP	18 54 19.3	-0.4
LBTB				pmax	pmax		
	comp=Z,49nm,1.0s						
LBTB	Lobatse	84.22	115	P	P	18 53 52.7	-0.8
LBTB				IAmb	IAmb	18 53 54.6	
	comp=Z,48nm,0.9s						
LBTB					pP	18 54 19.3	-0.4
I02D	Swisshome	84.23	324	pP	pP	18 54 19.6	+1.1
	baz=131						
PBEJ	Beja	84.36	44	eP	P	18 53 55.9	+2.2
	comp=Z,23nm,1.0s						
PBEJ				epP	pP	18 54 21.0	+1.4
LTY	Liberty	84.73	328	P	P	18 53 56.1	+0.8
LTY					pP	18 54 21.5	+0.3
PMTG	Montargil	84.76	43	eP	P	18 53 57.0	+1.4
	comp=Z,29nm,2.0s						
PMTG				epP	pP	18 54 22.8	+1.3
B08A	Colville Reser	84.86	329	P	P	18 53 56.5	+0.6
B08A					pP	18 54 22.2	+0.4
PTOM	Tomar	84.97	43	eP	P	18 53 58.0	+1.4
	comp=Z,30nm,1.9s						
PTOM				epP	pP	18 54 24.1	+1.5
FCC	Fort Churchill	85.01	347	P	P	18 53 57.0	+0.7
FCC				pmax	pmax		
	comp=Z,34nm,0.7s						
FCC	Fort Churchill	85.01	347	P	P	18 53 57.0	+0.7
FCC				IAmb	IAmb	18 54 23.8	
	comp=Z,34nm,0.7s						
PCAS	Casmilo, Conde	85.17	42	eP	P	18 53 58.9	+1.2
	comp=Z,24nm,1.3s						
PCAS				epP	pP	18 54 25.7	+2.1
PMRV	Marv??o	85.49	43	eP	P	18 54 00.0	+0.7
	comp=Z,12nm,2.1s						
PMRV				epP	pP	18 54 26.4	+1.1
PCBR	Castelo Branco	85.68	43	eP	P	18 54 01.0	+0.8
PCBR				epP	pP	18 54 27.3	+1.2
PVIS	Viseu	85.94	42	eP	P	18 54 03.7	+2.2
MTE	Manteigas	85.97	42	P	P	18 54 02.4	+0.8
MTE					pP	18 54 26.7	-1.0
MTE	Manteigas	85.97	42	eP	P	18 54 02.6	+0.9
	comp=Z,18nm,1.7s						
MTE				epP	pP	18 54 28.8	+1.1
D03D	Eldon	86.12	327	pP	pP	18 54 28.8	+0.9
	baz=132						
B05A	Bryant	86.12	328	pP	pP	18 54 28.7	+0.8
	baz=133						
A04D	Lummi Island	86.73	328	pP	pP	18 54 31.8	+0.9
	baz=132						
PAB	San Pablo	87.48	44	P	P	18 54 09.5	+0.4
PAB				*PP	pP	18 54 34.8	-0.4
PAB				pmax	pmax		
	comp=Z,20nm,1.2s						
PAB	San Pablo	87.48	44	P	P	18 54 09.5	+0.4
PAB					pP	18 54 34.8	-0.4
LLLB	Lillooet	87.62	330	P	P	18 54 09.4	0.0
LLLB					pP	18 54 35.6	+0.3
ESDC	Sonseca Array	87.80	45	P	P	18 54 11.3	+0.7
	comp=Z,1.7nm,0.7s,baz=242,slow=5.5,SNR=2.2						
ESDC	Sonseca Array	87.80	45	P	P	18 54 11.0	+0.4
MATP	Matopo	88.55	112	i P	P	18 54 12.8	-2.0
MATP	Matopo	88.55	112	i P	P	18 54 12.8	-2.0
LSZ	Lusaka	90.44	107	P	P	18 54 24.8	+1.2
LSZ				pmax	pmax		
	comp=Z,41nm,1.5s						
LSZ	Lusaka	90.44	107	P	P	18 54 24.8	+1.2
LSZ				IAmb	IAmb	18 54 27.5	
	comp=Z,40nm,1.4s						
YKA	Yellowknife Ar	93.45	341	P	P	18 54 36.6	+0.3
	comp=Z,8.5nm,0.8s,baz=139,slow=4.9,SNR=89						
YKA				pP	pP	18 55 02.8	+0.5
	comp=Z,22nm,0.7s,baz=137,slow=4.8,SNR=32						
YKA				PKKPbc	PKKPdf	19 11 42.5	-1.3
	comp=Z,0.2nm,0.5s,baz=336,slow=2.5,SNR=3.9						
KEST	Kesra	95.02	53	P	P	18 54 45.8	+1.6
	comp=Z,2.8nm,0.8s,baz=264,slow=9.7,SNR=3.5						
FETA	Feichten	100.70	43	i pP	pP	18 55 37.2	+1.2
	comp=Z,2.0nm,0.8s						
SQTA	Sankt Quirin	101.08	43	i sP	pP	18 55 38.7	+1.0
	comp=Z,8.0nm,1.0s						
WTTA	Wattenberg	101.37	43	i sP	pP	18 55 40.2	+1.2
	comp=Z,6.5nm,0.7s						
FINES	FINESS Array B	113.28	31	PKKPbc	PKKPbc	19 10 43.2	-2.2
	comp=Z,1.8nm,0.8s,baz=80,slow=3.4,SNR=4.8						
AKASG	Malin Array Be	113.42	43	PKiKP	PKiKP	18 59 57.7	-0.8
	comp=Z,1.1nm,0.6s,baz=264,slow=2.8,SNR=6.3						
AKASG				PKKPbc	PKKPbc	19 10 43.4	-1.2
	comp=Z,0.8nm,0.6s,baz=66,slow=4.0,SNR=5.2						
AKASG	Malin Array Be	113.42	43		PKiKP	18 59 57.3	-1.2
AKASG				pPKiKP	pPKiKP	19 00 24.9	-0.8
ARCES	ARCESS Array B	113.90	23	PKKPbc	PKKPbc	19 10 40.5	-3.0
	comp=Z,11nm,1.2s,baz=72,slow=3.3,SNR=14						
BR131	Keskin Array S	114.48	56	i PKIKP	PKPdf	18 59 59.5	-1.6
BRTR	Keskin Array B	114.48	56	PKiKP	PKPdf	19 00 00.3	-0.8
	comp=Z,1.4nm,0.7s,baz=175,slow=1.8,SNR=7.8						
BRTR	Keskin Array B	114.48	56	pPKiKP	pPKiKP	19 00 28.2	-0.1
OBN	Obninsk	118.29	39	ePKIKP	PKPdf	19 00 06.7	-1.0
OBN				ePP	PP	19 01 24.9	-0.3
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
LPSR	Galich'ya Gora	119.62	42	ePKIKP	PKPdf	19 00 09.4	-1.0
LPSR				e		19 00 36.2	
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VRH	Novokhopyorsk	121.33	43	ePKIKP	PKPdf	19 00 12.3	-1.4
VRH				e		19 00 38.8	
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIV	Kislovodsk	121.74	52	i PKIKP	PKPdf	19 00 14.3	-0.6
KIV				pmax	pmax		
	comp=Z,30nm,1.1s						
KIV				MLR	MLR		
	comp=Z,2µm,22.0s						
KBZ	Khabaz	121.88	52	PKP	PKiKP	19 00 15.8	+0.6
	comp=Z,8.3nm,0.9s,baz=62,slow=4.0,SNR=8.5						
KBZ	Khabaz	121.88	52	i PKIKP	PKiKP	19 00 16.0	+0.8
NCK	Nalchik	122.37	53	i PKIKP	PKPdf	19 00 14.9	-1.1
CTA	Charters Tower	124.19	221	PKP	PKiKP	19 00 20.8	+0.2
	comp=Z,4.8nm,0.7s,baz=254,slow=3.5,SNR=2.7						
BILL	Bilibino	124.74	338	ePKIKP	PKiKP	19 00 20.3	+0.2
BILL				e		19 02 08.6	
BILL				ePPP	PPP	19 04 46.5	
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ASAR	Alice Springs	127.57	207	PKP	PKPdf	19 00 26.7	0.0
	comp=Z,15nm,0.7s,baz=135,slow=1.7,SNR=74						
ASAR				pPKP	pPKPdf	19 00 54.0	+0.1
	comp=Z,5.7nm,0.7s,baz=144,slow=2.2,SNR=6.2						
ASAR	Alice Springs	127.57	207	PKIKP	PKPdf	19 00 26.5	-0.2
ASAR						19 00 53.6	
ASAR	Alice Springs	127.57	207		PKPdf	19 00 26.4	-0.2
ASAR					pPKPdf	19 00 53.6	-0.2
ARU	Arti	130.36	35	PKP	PKiKP	19 00 32.3	+0.7
	comp=Z,2.7nm,0.5s,baz=310,slow=3.2,SNR=9.0						
ARU				pPKP	pPKPdf	19 00 59.7	+1.6
	comp=Z,3.8nm,0.6s,baz=262,slow=3.3,SNR=9.4						
ARU	Arti	130.36	35	i PKIKP	PKPdf	19 00 30.6	-0.2
ARU	Arti	130.36	35		PKiKP	19 00 31.6	-0.1
ARU					pPKPdf	19 00 59.1	+1.0
WB2	Warramunga Arr	130.65	210		PKPdf	19 00 33.0	+0.4
WRA	Warramunga Arr	130.66	210	PKP	PKPdf	19 00 32.9	+0.3
	comp=Z,16nm,0.9s,baz=153,slow=1.7,SNR=76						
WRA	Warramunga Arr	130.66	210	PKIKP	PKPdf	19 00 32.8	+0.2
WRAB	Tennant Creek	130.66	210	i PKIKP	PKPdf	19 00 32.4	-0.2
WRAB	Tennant Creek	130.66	210		PKPdf	19 00 32.6	-0.1
TIXI	Tiksi	131.23	352	PKP	PKPdf	19 00 31.6	-0.4
	comp=Z,4.0nm,0.8s,baz=36,slow=3.5,SNR=6.3						
TIXI	Tiksi	131.23	352	i PKIKP	PKPdf	19 00 31.5	-0.6
TIXI	Tiksi	131.23	352		PKPdf	19 00 32.1	+0.1
PMG	Port Moresby	131.37	231	PKP	PKiKP	19 00 35.5	+0.5
	comp=Z,11nm,0.9s,baz=115,slow=2.2,SNR=4.7						
PMG	Port Moresby	131.37	231	i PKIKP	PKPdf	19 00 32.0	-2.1
PMG	Port Moresby	131.37	231		PKPdf	19 00 34.3	+0.2
AKTO	Aktyubinsk	131.67	43	PKP	PKPdf	19 00 33.5	0.0
	comp=Z,5.6nm,1.0s,baz=150,slow=1.9,SNR=5.4						
SEY	Seymchan	132.27	336	i PKIKP	PKPdf	19 00 34.1	-0.2
ABKAR	Akbulak array	133.15	44		PKPdf	19 00 36.8	+0.5
ABKAR				pPKPdf	pPKPdf	19 01 04.4	+0.8
GEYT	Alibeck	133.32	60	PKP	PKiKP	19 00 38.3	0.0
	comp=Z,1.6nm,0.8s,baz=341,slow=3.1,SNR=2.6						
GEYT	Alibeck	133.32	60		PKPdf	19 00 37.8	+0.7
PETK	Petropavlovsk-	134.39	322	PKP	PKiKP	19 00 39.7	-0.3
	comp=Z,1.2nm,0.5s,baz=117,slow=2.5,SNR=8.0						
PETK	Petropavlovsk-	134.39	322	PKIKP	PKiKP	19 00 39.4	-0.6
PETK	Petropavlovsk-	134.39	322		PKiKP	19 00 39.4	-0.6
MA2	Magadan	134.83	333	PKP	PKPdf	19 00 39.8	+0.6
	comp=Z,1.9nm,0.5s,baz=41,slow=7.6,SNR=2.7						
MA2	Magadan	134.83	333	i PKIKP	PKPdf	19 00 37.3	-1.9
FITZ	Fitzroy Crossi	135.71	200	PKP	PKPdf	19 00 42.9	+0.8
	comp=Z,9.4nm,0.7s,baz=186,slow=6.3,SNR=16						
FITZ	Fitzroy Crossi	135.71	200		PKPdf	19 00 42.8	+0.6
HRA	Herat	136.72	65		PKPdf	19 00 43.4	-0.4
HRA				pPKPdf	pPKPdf	19 01 10.6	-0.5
BVAR	Borovoye Array	137.99	36	PKP	PKPdf	19 00 45.9	+0.6
	comp=Z,7.2nm,0.9s,baz=271,slow=3.1,SNR=6.5						
YAK	Yakutsk	139.88	346	PKP	PKPdf	19 00 48.9	+0.5
	comp=Z,4.3nm,0.3s,baz=14,slow=1.1,SNR=6.6						
YAK	Yakutsk	139.88	346	PKIKP	PKPdf	19 00 48.7	+0.3
YAK	Yakutsk	139.88	346		PKPdf	19 00 48.7	+0.3
KURK	Kurchatov	143.55	35	i PKIKP	PKPbc	19 00 52.8	-0.1
KURK	Kurchatov	143.55	35		PKPbc	19 00 54.0	+1.0
KURBB	Kurchatov Arra	143.56	35	PKP	PKPbc	19 00 53.3	+0.3
	comp=Z,8.2nm,0.7s,baz=307,slow=3.5,SNR=19						
ARSB	Arslanbob	144.12	52	PKIKP	PKPdf	19 00 56.4	-0.5
ARSB	Arslanbob	144.12	52		PKPdf	19 00 56.4	-0.5
EKS2	Erkin-Say	144.27	50	P	PKPdf	19 00 57.2	+0.1
	SNR=7.7						
ZAA0	Zalesovo Array	144.32	26		PKPbc	19 00 55.9	+0.7
ZAA0				pPKPdf	pPKPdf	19 01 22.8	-1.1
ZALV	Zalesovo Beam	144.32	26	PKP	PKPbc	19 00 55.9	+0.7
	comp=Z,42nm,0.8s,baz=295,slow=4.3,SNR=68						
ZALV	Zalesovo Beam	144.32	26	PKIKP	PKPbc	19 00 55.9	+0.8
ZALV						19 01 23.5	
ZALV	Zalesovo Beam	144.32	26		PKPbc	19 00 55.9	+0.7
ZALV				pPKPdf	pPKPdf	19 01 23.5	-0.3
AML	Almayashu	144.38	50	P	PKPdf	19 00 57.7	0.0
	SNR=12						
USP	Ospenovka	144.56	48	P	PKPdf	19 00 57.5	+0.1
	SNR=8.3						
AAK	Ala-Archa	144.78	49	PKP	PKPdf	19 00 58.8	+0.8
	comp=Z,51nm,0.9s,baz=217,slow=2.4,SNR=30						
AAK	Ala-Archa	144.78	49	P	PKPdf	19 00 58.8	+0.8
	SNR=23						
AAK	Ala-Archa	144.78	49	i PKIKP	PKPdf	19 00 58.3	+0.3
AAK	Ala-Archa	144.78	49		PKPdf	19 00 58.6	+0.6
FRU1	Bishkek	144.81	49	PKIKP	PKPdf	19 00 58.7	+0.8
FRU1						19 01 26.0	
FRU1	Bishkek	144.81	49		PKPdf	19 00 58.7	+0.8
FRU1				pPKPdf	pPKPdf	19 01 25.9	+0.8
CHMS	Chumysh	144.83	49	P	PKPdf	19 00 58.5	+0.6
	SNR=22						
UCH	Uchtor	144.93	50	P	PKPdf	19 00 59.8	+1.1
	SNR=32						
KBK	Karagaybulak	145.08	49	P	PKPdf	19 00 59.6	+1.1
	SNR=31						
KZA	Kyzart	145.49	50	P	PKPab	19 01 01.4	+1.2
	SNR=19						
MMRI	Maumere	145.68	200		PKPdf	19 01 00.5	+0.3
YSS	Yuzh-Sakhalins	145.72	320	ePKP2	PKPab	19 01 00.8	+0.6
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				MLR	MLR		
	comp=Z,300nm,19.0s						
YSS	Yuzh-Sakhalins	145.72	320		PKPab	19 01 00.6	+0.4
YSS				pPKPab	pPKPbc	19 01 27.3	+0.9
NIL	Nilore	145.89	65	PKP2	PKPbc	19 01 00.8	0.0
NIL	Nilore	145.89	65		PKPbc	19 01 00.8	0.0
NIL				pPKPab	pPKPdf	19 01 27.5	+0.2
FAKI	Fak Fak	146.06	221		PKPbc	19 01 02.1	+0.3
ULHL	Ulahol	146.12	49	P	PKPab	19 01 02.7	+0.5
	SNR=6.4						
BOD	Bodaibo	146.14	357	ePKP2	PKPdf	19 00 59.8	+0.2
BOD				pmax	pmax		
	comp=Z,28nm,1.8s						
GUMO	Guam	146.21	258	PKPbc	PKPbc	19 01 02.6	+0.4
	comp=Z,101nm,0.7s,baz=141,slow=22,SNR=4.6						
PALK	Pallekele	146.70	115	PKPbc	PKPdf	19 01 02.7	+0.8
	comp=Z,27nm,0.9s,baz=236,slow=2.0,SNR=15						
PALK	Pallekele	146.70	115	PKP2	PKPbc	19 01 03.3	-0.5
PALK	Pallekele	146.70	115		PKPbc	19 01 03.2	-0.5
GRNR	Gornyy	146.73	330	⇓i PKP2	PKPbc	19 01 01.9	-0.8
GRNR				pmax	pmax		
	comp=Z,20nm,0.8s						
KSH	Kashi	146.84	54	PKPbc	PKPbc	19 01 03.1	-0.4
KSH				pPKP	pPKPbc	19 01 30.6	+0.1
KSH				PP	PP	19 04 33.8	+5.3
KSH				PKS		19 04 41.4	
KSH				SS	SS	19 23 24.6	+3.6
KSH				AMB	AMB		
	comp=Z,250nm,4.3s						
KSH				LR	LR		
	comp=Z,400nm,10.1s						
KSH				LR	LR		
	comp=Z,690nm,15.3s						
KSH				LR	LR		
	comp=Z,380nm,14.2s						
JKA	Kamikawa-asahi	147.19	316		PKPbc	19 01 03.9	-0.2
ASAJ	Asahikawa	147.19	316	PKPbc	PKPbc	19 01 03.9	-0.2
	comp=Z,25nm,0.9s,baz=266,slow=6.9,SNR=11						
JAGI	Jajag, Banyuwa	147.55	186		PKPbc	19 01 06.4	+0.4
MKAR	Makanchi Array	147.79	38	PKPbc	PKPdf	19 01 03.8	+1.0
	comp=Z,42nm,0.9s,baz=320,slow=2.4,SNR=42						
MKAR	Makanchi Array	147.79	38	PKIKP	PKPdf	19 01 03.5	+0.7
MKAR	Makanchi Array	147.79	38		PKPdf	19 01 03.5	+0.7
ZEA	Zeya	147.83	342	ePKIKP	PKPdf	19 01 03.0	+0.5
ZEA				e		19 01 33.4	
ZEA				pmax	pmax		
	comp=Z,43nm,1.2s						
SIJI	Sorong	148.27	222	PKPbc	PKPbc	19 01 08.8	+0.8
	comp=Z,73nm,0.8s,baz=54,slow=2.3,SNR=45						
CISI	Cisompet, Garu	148.49	174		PKPbc	19 01 08.1	-0.5
DGZ	Jazzator, Alta	148.52	30	i PKP2	PKPbc	19 01 08.2	+0.5
HYB	Hyderabad	149.18	96	i PKP	PKPdf	19 01 06.0	+0.1
HYB				e		19 01 10.5	
HYB				epPKP	pPKPbc	19 01 37.5	+0.1
LEM	Lembang	149.20	174	PKPbc	PKiKP	19 01 11.6	-0.1
	comp=Z,109nm,0.7s,baz=344,slow=1.6,SNR=26						
KAPI	Kappang	149.86	198	PKPbc	PKiKP	19 01 12.9	0.0
	comp=Z,31nm,0.8s,baz=258,slow=5.0,SNR=11						
KLR	Kul'dur	149.93	332	PKP	PKPdf	19 01 06.5	+0.4
	comp=Z,22nm,1.3s,baz=15,slow=6.2,SNR=4.0						
KLR				PKPbc	PKiKP	19 01 11.7	-0.2
	comp=Z,8.8nm,0.6s,baz=25,slow=3.1,SNR=22						
KLR	Kul'dur	149.93	332	i PKIKP	PKPdf	19 01 04.0	-2.1
TEY	Ternei	150.35	321	⇓i PKIKP	PKiKP	19 01 12.8	-0.1
TEY				pmax	pmax		
	comp=Z,40nm,0.8s						
MOY	Mondy	151.38	13	ePKIKP	PKiKP	19 01 15.9	+0.9
MOY				pmax	pmax		
	comp=Z,56nm,1.7s						
TLY	Talaya	151.83	9	PKPbc	PKiKP	19 01 16.9	+1.1
	comp=Z,8.8nm,0.5s,baz=18,slow=1.7,SNR=5.9						
TLY	Talaya	151.83	9	ePKIKP	PKPdf	19 01 10.2	+1.2
TLY				pmax	pmax		
	comp=Z,20nm,1.2s						
TLY	Talaya	151.83	9		PKPdf	19 01 09.0	0.0
TLY				PKPbc	PKiKP	19 01 16.4	+0.5

WMQ	Urumqi	152.62	38	*e*PKPbc	PKPdf	19 01 10.5	0.0
WMQ				LR	LR		
	comp=Z,450nm,29.2s						
WMQ				LR	LR		
	comp=Z,710nm,29.0s						
WMQ				LR	LR		
	comp=Z,130nm,19.1s						
MJAR	Matsushiro Arr	153.33	304	PKPbc	PKiKP	19 01 19.9	+0.5
	comp=Z,6.4nm,0.8s,baz=91,slow=1.2,SNR=11						
MJAR	Matsushiro Arr	153.33	304		PKPbc	19 01 19.4	+0.1
MAT	Matsushiro	153.33	304	PKP	PKiKP	19 01 19.8	+0.4
USRK	Ussuriysk Ar.	153.43	324	PKP	PKPdf	19 01 12.4	+0.9
	comp=Z,3.3nm,0.9s,baz=28,slow=3.4,SNR=6.3						
USRK				PKPbc	PKiKP	19 01 20.0	+0.7
	comp=Z,5.7nm,0.9s,baz=33,slow=2.5,SNR=7.3						
USRK				PKPab	PKPab	19 01 31.1	-0.6
	comp=Z,3.5nm,0.7s,baz=40,slow=3.5,SNR=4.7						
USRK	Ussuriysk Ar.	153.43	324		PKPdf	19 01 12.2	+0.7
USRK					PKiKP	19 01 19.8	+0.5
USRK					PKPab	19 01 30.9	-0.8
MDJ	Mudanjiang	154.35	328	PKPbc	PKPdf	19 01 13.3	+0.5
RPSI	Rantau Prapat	155.90	150		PKPab	19 01 43.5	+0.6
RPSI	Rantau Prapat	155.90	150		PKPab	19 01 43.3	+0.3
SONM	Songino Array	155.97	7	PKP	PKPdf	19 01 16.1	+1.0
	comp=Z,4.7nm,0.9s,baz=348,slow=1.1,SNR=14						
SONM				PKPab	PKPab	19 01 43.9	+1.4
	comp=Z,9.3nm,0.8s,baz=322,slow=3.0,SNR=17						
SONM	Songino Array	155.97	7	PKIKP	PKPdf	19 01 15.7	+0.6
SONM						19 01 43.3	
SONM	Songino Array	155.97	7		PKPdf	19 01 15.7	+0.6
SONM					PKPab	19 01 43.3	+0.7
PSI	Prapat	156.00	150	PKPab	PKPab	19 01 43.3	-0.2
	comp=Z,20nm,0.9s,baz=223,slow=4.0,SNR=9.1						
PSI	Prapat	156.00	150	PKP2	PKPab	19 01 43.6	+0.1
ULN	Ulaanbaatar	156.01	6	PKP2	PKPab	19 01 43.6	+0.9
ULN						20 01 16.2	
ULN	Ulaanbaatar	156.01	6		PKPdf	19 01 16.2	+1.0
ULN					PKPab	19 01 43.6	+0.9
CN2	Changchun	156.88	332	*e*PKP	PKPdf	19 01 16.3	+0.1
CN2				PP	PP	19 05 29.6	+5.0
SBUM	Sibu	158.52	184	PKPdf	PKPdf	19 01 18.7	-0.4
SBUM					PKPab	19 01 54.6	+0.5
KSRS	Korea Array	160.13	316	PKP	PKPdf	19 01 21.4	+1.2
	comp=Z,10nm,1.1s,baz=70,slow=1.9,SNR=12						
KSRS				PKPab	PKPab	19 02 02.2	+1.5
	comp=Z,5.0nm,0.9s,baz=66,slow=4.3,SNR=5.4						
KSAR	Wonju Array Be	160.17	316	PKIKP	PKPdf	19 01 20.6	+0.3
KSAR						19 01 48.1	
KSAR	Wonju Array Be	160.17	316		PKPdf	19 01 20.6	+0.3
KSAR				pPKPdf	pPKPdf	19 01 48.0	+0.4
LSA	Lhasa	161.58	68		PKPdf	19 01 23.5	+0.8
LSA				pPKPdf	pPKPdf	19 01 49.9	-0.3
GTA	Gaotai	162.05	29	*e*PKP	PKPdf	19 01 23.5	+1.0
GTA				pPKP	pPKPdf	19 01 51.0	+1.1
GTA				sPKP		19 02 02.0	
GTA				PKPab	PKPab	19 02 09.9	+0.7
GTA				PP	PP	19 05 59.3	+6.5
GTA				AMB	AMB		
	comp=Z,92nm,8.1s						
GTA				LR	LR		
	comp=Z,130nm,18.7s						
GTA				LR	LR		
	comp=Z,160nm,20.0s						
GTA				LR	LR		
	comp=Z,190nm,20.6s						
HHC	Hu-ho-hao-te	163.19	358	*e*PKP	PKPdf	19 01 22.1	-1.4
HHC				LR	LR		
	comp=Z,1μm,20.8s						
HHC				LR	LR		
	comp=Z,740nm,20.8s						
HHC				LR	LR		
	comp=Z,1μm,20.9s						
LZH	Lanzhou	166.55	25	*e*PKP	PKPdf	19 01 24.9	-1.8
LZH				LR	LR		
	comp=Z,500nm,16.3s						
LZH				LR	LR		
	comp=Z,450nm,15.2s						
LZH				LR	LR		
	comp=Z,560nm,17.3s						
TIA	Tai'an	166.67	337	PKP	PKPdf	19 01 27.6	+1.1
TIA				LR	LR		
	comp=Z,520nm,15.7s						
TIA				LR	LR		
	comp=Z,580nm,19.9s						
TIA				LR	LR		
	comp=Z,1μm,26.3s						
CMAR	Chiang Mai Arr	167.65	114	PKP	PKPdf	19 01 28.1	+0.4
	comp=Z,3.3nm,1.0s,baz=272,slow=2.0,SNR=12						
CMAR				PKPab	PKPab	19 02 34.0	-0.5
	comp=Z,3.8nm,0.9s,baz=246,slow=5.0,SNR=10						
CMAR				PP	PP	19 06 22.7	-0.5
	comp=Z,0.6nm,0.5s,baz=253,slow=5.8,SNR=6.5						
CMAR	Chiang Mai Arr	167.65	114		PKPdf	19 01 27.7	0.0
CMAR				pPKPdf	pPKPdf	19 01 55.1	-0.1
CMAR					PKPab	19 02 33.8	-0.6
CHTO	Chiang Mai	167.81	113	PKIKP	PKPdf	19 01 27.6	-0.2
CHTO						19 01 54.9	
CHTO						19 02 33.8	
CHTO	Chiang Mai	167.81	113		PKPdf	19 01 27.6	-0.2
CHTO				pPKPdf	pPKPdf	19 01 54.9	-0.4
CHTO					PKPab	19 02 33.8	-1.4
PBKT	Sadao Pong	168.18	127	PKPdf	PKPdf	19 01 27.6	-0.5
PBKT				pPKPdf	pPKPdf	19 01 55.9	+0.4
PBKT					PKPab	19 02 36.7	+0.1
NJ2	Nanjing	169.29	320	*e*PKP	PKPdf	19 01 29.1	+0.7
XAN	Xi'an	169.87	9	PKP	PKPdf	19 01 29.5	+0.7
XAN				LR	LR		
	comp=Z,270nm,16.3s						
XAN				LR	LR		
	comp=Z,260nm,14.1s						
XAN				LR	LR		
	comp=Z,190nm,15.2s						
KMI	Kunming	172.58	80	PKP	PKPdf	19 01 30.9	+0.2
ENH	Enshi	173.65	10		PKPdf	19 01 30.9	+0.2
GYA	Guiyang	175.53	56	PKP	PKPdf	19 01 30.4	-1.1
GYA				pPKP	pPKPdf	19 01 58.9	-0.1
GYA				PKPab	PKPab	19 03 09.4	+0.1
GYA				PKS	PKSdf	19 05 01.0	-2.9
GYA				PP	PP	19 07 02.4	+0.4
GYA				AMB	AMB		
	comp=Z,140nm,8.6s						

NIED ***20*** *18:42:00, 35°.70N×140°.90E, h35^{km}, Mw4.0 Best double couple: M$_0$1.15000×10^{15} NP1:φ$_s$175.00000°, δ81.00000°, λ-89.00000°. NP2:φ$_s$352.00000°, δ9.00000°, λ-93.00000°.*

IDC ***20*** *18:42:44.2±1.1, 35°.67N×140°.79E, h0^{km}, mb3.7/7, mb1 3.9/11, mb1mx3.6/59, mbtmp3.9/11, ML3.5/3, MS2.9/2, Ms1 2.9/2, ms1mx2.5/58, Error ellipse: s-maj=24.6km s-min=19.5km az=103.0*

JMA ***20*** *18:42:48.6±0.1, 35°.67N×140°.78E, h43^{km}±1^{km}, M3.4*

JMA Felt I J1.

NEIC ***20*** *18:42:48.6±1.4, 35°.66N±0°.04×140°.9E±0°.1, h37^{km}±10^{km}, mb4.5/6, Error ellipse: s-maj=13.5km s-min=2.7km az=65.0*

ISC 20 18:42:49.1±0.7**, 35°.66N**±0°.05×**140°.82E**±0°.07**, h36**^{km}±1^{km}**, n41,** σ**0^{s}91**/40**, mb3.8**/10**, 3C-3D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.05	35	⇑P	Pn	18 42 55.3	+0.2
CHOJ				S	Sn	18 43 00.7	+1.6
JSMT	Sammumatsuo	0.31	266	⇓P	Pn	18 42 56.9	-0.3
JSMT				S	Sn	18 43 03.7	+0.1
JIHU	Itakohorinouch	0.39	321	⇓P	Pn	18 42 58.1	+0.1
JIHU				S	Sn	18 43 05.3	+0.7
JCN	Nagara	0.56	245	⇑P	Pn	18 43 00.6	-0.1
JYT	Yasato	0.76	318	⇑P	Pn	18 43 02.4	-0.9
JYT				S	Sn	18 43 12.4	-1.2
BSO4	Boso 4	0.78	211	⇓P	Pn	18 43 03.7	+0.2
BSO3	Boso 3	0.90	197	P	Pn	18 43 05.5	+0.6
JHO	Hitachi	0.97	348	P	Pn	18 43 06.0	-0.2
MJAR	Matsushiro Arr	2.29	293	Pn	Pn	18 43 24.4	0.0
	1.7nm,0.3s,baz=98,slow=14,SNR=53						
MJAR				LR	LR	18 44 30.5	
	comp=Z,223nm,19.4s,baz=95,slow=48						
MJAR	Matsushiro Arr	2.29	293		Pn	18 43 23.9	-0.5
MAJO	Matsushiro	2.29	293		Pn	18 43 24.8	+0.3
MJB9	Matsu-Tunnel	2.30	293		Pn	18 43 24.6	+0.2
JHJ2	Mitsune	2.68	198	Pn	Pn	18 43 29.1	-0.5
JHJ	Hachijo jima 2	2.68	199	Pn	Pn	18 43 29.8	+0.1
	34nm,0.3s,baz=334,slow=15,SNR=11						
JHJ				Sn	Sn	18 44 01.1	+0.2
	43nm,0.3s,baz=64,slow=23,SNR=4.3						
JHJ				LR	LR	18 44 16.9	
	comp=Z,228nm,19.8s,baz=306,slow=35						
INU	Inuyama	3.12	265		Pn	18 43 35.8	+0.1
ASAJ	Asahikawa	8.55	9	Pn	Pn	18 44 49.0	-1.3
	1.2nm,0.3s,baz=236,slow=11,SNR=11						
JKA	Kamikawa-asahi	8.55	9		Pn	18 44 49.0	-1.3
JCJ	Chichijima	8.62	172	Pn	Pn	18 44 49.9	-1.4
	12nm,0.3s,baz=277,slow=20,SNR=4.9						
USRK	Ussuriysk Ar.	10.89	324	Pn	Pn	18 45 25.1	+2.7
	baz=119,slow=17,SNR=2.8						
H11N2	WAKE ISLAND Hy	27.89	118	T	T	19 17 49.2	
	baz=310,slow=75,SNR=14						
H11N1	WAKE ISLAND Hy	27.90	118	T	T	19 17 50.3	
	baz=310,slow=75,SNR=8.9						
H11N3	WAKE ISLAND Hy	27.91	118	T	T	19 17 52.9	
	baz=310,slow=75,SNR=13						
SONM	Songino Array	28.18	306	P	P	18 48 39.2	+0.9
	0.6nm,0.9s,baz=115,slow=13,SNR=4.1						
SONM	Songino Array	28.18	306	P	P	18 48 38.9	+0.6
H11S1	WAKE ISLAND Hy	28.55	120	T	T	19 18 32.3	
	baz=312,slow=75,SNR=13						
H11S3	WAKE ISLAND Hy	28.55	120	T	T	19 18 31.0	
	baz=312,slow=75,SNR=9.1						
H11S2	WAKE ISLAND Hy	28.57	120	T	T	19 18 37.2	
	baz=312,slow=75,SNR=6.2						
LUWI	Luwuk	40.22	209	P	P	18 50 20.8	-1.5
ZAA0	Zalesovo Array	42.50	313	P	P	18 50 39.8	-0.9
ZAA0				IAmb	IAmb	18 50 53.0	
	comp=Z,3.5nm,1.2s						
ZALV	Zalesovo Beam	42.50	313	P	P	18 50 40.3	-0.3
	comp=Z,0.4nm,0.4s,baz=94,slow=5.9,SNR=4.7						
MK31	Makanchi Array	44.46	303	P	P	18 50 55.9	-0.7
MKAR	Makanchi Array	44.46	303	P	P	18 50 55.9	-0.8
	comp=Z,0.6nm,0.6s,baz=82,slow=11,SNR=8.6						
MKAR	Makanchi Array	44.46	303	P	P	18 50 55.6	-1.0
KURK	Kurchatov	46.41	309	P	P	18 51 11.6	-0.3
KURK				IAmb	IAmb	18 51 12.4	
	comp=Z,4.1nm,0.9s						
KURBB	Kurchatov Arra	46.48	309	P	P	18 51 11.5	-1.0
	comp=Z,2.2nm,1.0s,baz=83,slow=8.3,SNR=3.4						
ILAR	Eielson Array	50.91	32	P	P	18 51 47.2	+0.9
	comp=Z,1.0nm,0.8s,baz=270,slow=6.5,SNR=12						
ILAR	Eielson Array	50.91	32	P	P	18 51 46.3	0.0
ABKAR	Akbulak array	58.46	311	P	P	18 52 40.4	-0.9
YKA	Yellowknife Ar	65.23	30	P	P	18 53 27.4	+0.8
	comp=Z,0.6nm,0.8s,baz=301,slow=6.6,SNR=4.9						
F04A	Amboy	69.58	48	P	P	18 53 53.6	-0.8
F04A				IAmb	IAmb	18 54 22.7	
	comp=Z,31nm,1.1s						
NOA	NORSAR Array B	75.26	337	P	P	18 54 28.0	0.0
	comp=Z,0.5nm,0.6s,baz=52,slow=5.3,SNR=2.2						

IDC ***20*** *18:44:11.0±0.3, 5°.15S×152°.79E, h0^{km}, mb5.2/44, mb1 5.2/46, mb1mx5.2/52, mbtmp5.2/46, ML3.6/2, MS5.0/32, Ms1 5.1/32, ms1mx4.9/42, Error ellipse: s-maj=11.8km s-min=8.3km az=72.0*

MOS ***20*** *18:44:14.5±1.1, 5°.16S×152°.79E, h35^{km}, mb5.7/15, MS5.3/43, Error ellipse: s-maj=7.6km s-min=5.3km az=105.5*

NEIC ***20*** *18:44:14.6±1.5, 5°.25S±0°.07×152°.79E±0°.07, h26^{km}±2^{km}, mb5.6/193, Ms_20 5.5/596, Mww5.6, Mwc5.6(GCMT), Error ellipse: s-maj=10.6km s-min=9.3km az=214.0*

BJI ***20*** *18:44:15.2±0.0, 4°.91S×153°.08E, h43^{km}, mB5.5/63, mb5.3/75, Ms5.4/77, Ms7 5.1/71*

NEIC ***20*** *18:44:18, 5°.34S×152°.85E, h30^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.94; M$_{\theta\theta}$-1.54; M$_{\phi\phi}$-0.39; M$_{r\theta}$2.85; M$_{\theta\phi}$-0.35; M$_{\phi r}$0.65; Fault plane solution: M$_0$3.44000×10^{17} NP1:φ$_s$77.00000°, δ74.00000°, λ91.00000°. NP2:φ$_s$253.00000°, δ16.00000°, λ86.00000°. Principal axes: T 3.5737, Plg61.0000°, Azm348.0000°; N -0.2957, Plg1.0000°, Azm256.0000°; P -3.2780, Plg29.0000°, Azm166.0000°;*

GCMT ***20*** *18:44:18.6±0.1, 5°.45S±0°.01×152°.84E±0°.01, h27^{km}, MW5.6/129, Moment Tensor Solution. s128, c229; s129, c247; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.93±.04; M$_{\theta\theta}$-1.92±.02; M$_{\phi\phi}$-0.01±.02; M$_{r\theta}$2.03±.06; M$_{\theta\phi}$-0.44±.02; M$_{\phi r}$0.10±.06; Best double couple: M$_0$2.83300×10^{17} NP1:φ$_s$250.00000°, δ23.00000°, λ77.00000°. NP2:φ$_s$85.00000°, δ68.00000°, λ95.00000°. Principal axes: T 2.8050, Plg67.0000°, Azm4.0000°; N 0.0540, Plg5.0000°, Azm263.0000°; P -2.8620, Plg23.0000°, Azm170.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***20*** *18:44:19.2±0.4, 5°S±2°×15°3E±°, h60^{km}±3^{km}, M5.4/88, mb5.5/88, mB5.8/64, MLv5.8/4, Mw(mB)5.4/64, Mwp5.5/14*

NEIC ***20*** *18:44:19, 5°.49S×152°.89E, h29^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.87; M$_{\theta\theta}$-1.93; M$_{\phi\phi}$0.07; M$_{r\theta}$1.86; M$_{\theta\phi}$-0.50; M$_{\phi r}$0.37; Fault plane solution: M$_0$2.73000×10^{17} NP1:φ$_s$78.00000°, δ67.00000°, λ91.00000°. NP2:φ$_s$255.00000°, δ23.00000°, λ87.00000°. Principal axes: T 2.6371, Plg68.0000°, Azm350.0000°; N 0.1795, Plg1.0000°, Azm258.0000°; P -2.8166, Plg22.0000°, Azm167.0000°;*

ISC 20 18:44:17.2±0.4**, 5°.23S**±0°.04×**152°.80E**±0°.04**, h46**^{km}±3^{km}**, h46**^{km}**:pP-P, n1249,** σ**1^{s}35**/1064**, mb5.5**/230**, MS5.5**/370**, 61C-10D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.19	320	Pg	Pn	18 44 38.4	+0.9
	baz=2.2,slow=7.9						
RABL	Rabaul	1.20	328		Pn	18 44 38.0	+0.3
MANU	Manus Island	6.27	300		Pn	18 45 47.8	+0.5
PMG	Port Moresby	6.96	233	Pn	Pn	18 45 57.0	+0.3
	14nm,0.3s,baz=44,slow=8.8,SNR=156						
PMG				Sn	Sn	18 47 15.8	+1.1
	113nm,0.3s,baz=137,slow=21,SNR=16						
PMG	Port Moresby	6.96	233		Pn	18 45 56.6	-0.2
HNR	Honiara	8.23	121	Pn	Pn	18 46 16.3	+2.1
	6.1nm,0.3s,baz=239,slow=1.3,SNR=36						
HNR				LR	LR	18 49 53.8	
	comp=Z,13μm,18.0s,baz=305,slow=41						
HNR	Honiara	8.23	121	P	Pn	18 46 16.0	+1.8
HNR	Honiara	8.23	121	P	Pn	18 46 14.0	-0.2
HNR	Honiara	8.23	121		Pn	18 46 14.0	-0.2
COEN	Coen	12.85	227	P	Pn	18 47 14.7	-2.7
	baz=13,SNR=14						
COEN	Coen	12.85	227		Pn	18 47 16.4	-1.0
GENI	Genyem	12.87	281	P	Pn	18 47 19.5	+1.9
	9μm7μm303nm,1.6s						
PATS	Pohnpei	13.19	25	P	Pn	18 47 20.1	-1.9
	baz=13,SNR=4.0						
PATS	Pohnpei	13.19	25		Pn	18 47 20.3	-1.7
MTSU	Mount Surprise	15.27	212	P	Pn	18 47 49.9	0.0
	baz=15,SNR=19						
CTA	Charters Tower	16.09	203	Pn	Pn	18 48 01.4	+1.0
	0.8nm,0.3s,baz=24,slow=14,SNR=16						
CTA				LR	LR	18 54 13.0	
	comp=Z,8μm,18.3s,baz=28,slow=37						
BAKI	Biak	17.13	283	P	P	18 48 14.7	0.0
	194nm,1.6s						
RKPI	Ransiki, Papua	18.95	281	P	P	18 48 34.5	-0.2
	7μm228nm,0.9s						
QIS	Mount Isa	19.91	219	P	Pn	18 48 46.2	-1.0
	baz=20,SNR=75						
EIDS	Eidsvold	20.10	185	P	P	18 48 47.8	+0.6
	baz=20,SNR=33						
EIDS	Eidsvold	20.10	185	P	P	18 48 46.2	-1.0
EIDS				IAmb	IAmb	18 48 59.5	
	comp=Z,206nm,0.9s						
GUMO	Guam	20.28	337	P	P	18 48 49.3	+0.1
	comp=Z,368nm,1.1s,baz=196,slow=9.3,SNR=7.8						
GUMO				LR	LR	18 57 24.2	
	comp=Z,3μm,18.2s,baz=148,slow=39						
GUMO	Guam	20.28	337	P	Pn	18 48 50.5	-1.0
GUMO				pmax	pmax		
	comp=Z,988nm,1.4s						
GUMO				MLR	MLR		
	comp=Z,3μm,20.0s						
GUMO	Guam	20.28	337	P	Pn	18 48 50.5	-1.0
FAKI	Fak Fak	20.62	276	P	Pn	18 48 54.1	-1.5
	comp=Z,3μmcomp=Z,2μmcomp=Z,136nm,1.1s						
FAKI	Fak Fak	20.62	276	P	P	18 48 51.9	-1.1
TARA	Tarawa	21.14	73	P	P	18 48 58.2	-0.4
TARA				IAmb	IAmb	18 49 02.1	
	comp=Z,313nm,1.1s						
DZM	Mont Dzumac	21.33	143	*e*P	P	18 49 00.9	+0.3
	comp=Z,937nm,1.4s						
DZM				*e*S	S	18 52 51.3	-4.0
	comp=Z,6μm,22.4s						
DZM				*e*LR	LR	18 54 05.6	
	comp=Z,10μm,23.9s						
DZM	Mont Dzumac	21.33	143	P	P	18 49 01.2	+0.6
	comp=Z,156nm,1.1s,baz=327,slow=8.7,SNR=21						
DZM				S	S	18 52 59.2	+3.9
	comp=Z,16nm,1.1s,baz=126,slow=19,SNR=2.1						
DZM				LR	LR	18 56 28.5	
	comp=Z,5μm,20.5s,baz=319,slow=34						
DZM	Mont Dzumac	21.33	143	P	P	18 48 59.0	-1.7
KDU	Kakadu	21.39	248	P	P	18 49 00.8	-0.4
	baz=21,SNR=3.7						
RMQ	Roma	21.49	190	P	P	18 49 02.7	+0.5
	baz=22,SNR=42						
SAUI	Saumlaki	21.52	262	P	P	18 49 03.6	+0.9
	comp=Z,5μmcomp=Z,7μmcomp=Z,436nm,1.3s						
SAUI	Saumlaki	21.52	262	P	P	18 49 01.5	-1.2
SIJI	Sorong	21.92	281	P	P	18 49 07.3	+0.3
	comp=Z,75nm,0.8s,baz=67,slow=7.9,SNR=31						
MTN	Manton Dam	22.68	249	P	P	18 49 14.3	-0.7
	baz=23,SNR=18						
MTN	Manton Dam	22.68	249	P	P	18 49 13.8	-1.3
MTN				IAmb	IAmb	18 49 36.3	
	comp=Z,406nm,1.3s						
QLP	Quilpie	22.76	200	P	P	18 49 15.5	-0.3
	baz=23,SNR=36						
BNDI	Bandanaira	22.82	271	P	P	18 49 17.6	+1.1
	comp=Z,3μmcomp=Z,21μmcomp=Z,390nm,1.2s						
WB0	Warramunga Arr	23.02	229	P	P	18 49 17.6	-1.0
WR0	Warramunga Arr	23.02	229	P	P	18 49 17.8	-0.8
WRAB	Tennant Creek	23.15	229	*c i*P	P	18 49 20.5	+0.6
WRAB	Tennant Creek	23.15	229	P	P	18 49 18.9	-1.0
WB2	Warramunga Arr	23.15	229	P	P	18 49 19.1	-0.8
WRA	Warramunga Arr	23.16	229	P	P	18 49 19.6	-0.4
	comp=Z,33nm,0.9s,baz=53,slow=9.7,SNR=94						
WRA				S	S	18 53 28.6	+0.1
	comp=Z,58nm,1.2s,baz=55,slow=18,SNR=7.9						
WRA				LR	LR	18 58 14.4	
	comp=Z,5μm,21.3s,baz=55,slow=36						
WRA	Warramunga Arr	23.16	229	P	P	18 49 18.0	-2.0
MSAI	Masohi	23.87	274	P	P	18 49 27.2	+0.4
	comp=Z,393nmcomp=Z,21nm,0.7s						
AAI	Ambon	24.57	273	P	P	18 49 33.6	+0.4
	comp=Z,1μmcomp=Z,72nm,0.7s						
ARMA	Armidale	25.08	182	P	P	18 49 38.7	+0.9
	baz=25,SNR=13						
ARMA	Armidale	25.08	182	P	P	18 49 37.9	+0.1
ARMA				IAmb	IAmb	18 49 50.6	
	comp=Z,169nm,1.1s						
ARMA				IAMs_20	IAMs_20	18 58 54.5	
	comp=Z,12μm,20.0s						
LBMI	Labuha	25.66	279	P	P	18 49 43.6	+0.5
	comp=Z,693μmcomp=Z,9μmcomp=Z,257nm,1.1s						
NLAI	Namlea	25.70	273	P	P	18 49 43.9	+0.5
	comp=Z,879nmcomp=Z,64nm,1.1s						
KNRA	Kununurra	25.78	244	P	P	18 49 44.2	0.0
	baz=26,SNR=41						
KNRA	Kununurra	25.78	244	P	P	18 49 43.5	-0.6
AS31	Alice Springs	25.83	223	P	P	18 49 43.9	-0.7
ASAR	Alice Springs	25.84	223	P	P	18 49 44.8	+0.1
	comp=Z,48nm,0.8s,baz=58,slow=7.2,SNR=94						
ASAR				LR	LR	18 59 24.3	
	comp=Z,4μm,21.1s,baz=38,slow=35						
ASAR	Alice Springs	25.84	223	P	P	18 49 44.4	-0.2
ASAR	Alice Springs	25.84	223	P	P	18 49 44.4	-0.2
TNTI	Ternate	26.09	282	P	P	18 49 47.7	+0.8
	comp=Z,1μmcomp=Z,81nm,1.6s						
TNTI	Ternate	26.09	282	P	P	18 49 46.2	-0.7
TNTI				IAmb	IAmb	18 49 56.3	
	comp=Z,137nm,1.3s						
SANI	Sanana	26.93	276	P	P	18 49 57.1	+2.5
	comp=Z,1μmcomp=Z,132nm,0.9s						
CMSA	Cobar Meteorol	27.01	193	P	P	18 49 54.4	-0.7
	baz=27,SNR=54						
MSVF	Nonsavu	27.65	119	P	P	18 50 01.5	+0.5
MSVF				pmax	pmax		
	comp=Z,211nm,2.0s						
MSVF				MLR	MLR		
	comp=Z,7μm,19.0s						
MSVF	Nonsavu	27.65	119	P	P	18 50 01.5	+0.5
MSVF				IAmb	IAmb	18 50 29.1	
	comp=Z,211nm,1.9s						
MGCD	Mangrove Creek	27.89	183	P	P	18 50 04.0	+1.1
	baz=28,SNR=6.6						
STKA	Stephens Creek	28.52	200	P	P	18 50 07.8	-0.8
	baz=29,SNR=13						
STKA	Stephens Creek	28.52	200	P	P	18 50 07.8	-0.8
	comp=Z,25nm,0.9s,baz=26,slow=12,SNR=26						
STKA				LR	LR	19 02 14.5	
	comp=Z,6μm,18.2s,baz=16,slow=38						
STKA	Stephens Creek	28.52	200	P	P	18 50 06.6	-1.9
STKA				pmax	pmax		
	comp=Z,18nm,1.0s						
STKA				MLR	MLR		
	comp=Z,1μm,18.0s						
STKA	Stephens Creek	28.52	200	P	P	18 50 06.6	-1.9
SOEI	Soe	28.63	259	P	P	18 50 10.0	+0.1
	comp=Z,3μmcomp=Z,171nm,1.1s						
SOEI	Soe	28.63	259	P	P	18 50 08.4	-1.5
MATI	Mati	29.11	294	*e*P	P	18 50 17.6	+3.6
YNG	Young	29.21	187	P	P	18 50 15.1	+0.3
	baz=29,SNR=6.2						
KMSI	Cibinong	29.35	280	P	P	18 50 17.7	+1.6
	comp=Z,2μmcomp=Z,223nm,0.7s						
FITZ	Fitzroy Crossi	29.45	242	P	P	18 50 16.6	-0.4
	baz=30,SNR=57						
FITZ	Fitzroy Crossi	29.45	242	P	P	18 50 16.6	-0.4
	comp=Z,59nm,0.8s,baz=58,slow=7.0,SNR=79						
FITZ				S	S	18 55 10.7	+2.4
	comp=Z,17nm,0.9s,baz=70,slow=17,SNR=3.7						
FITZ	Fitzroy Crossi	29.45	242	P	P	18 50 15.6	-1.4
FITZ				IAmb	IAmb	18 50 35.5	
	comp=Z,142nm,0.8s						
DAV	Davao City (W)	29.78	294	LR	LR	19 01 45.9	
	comp=Z,3μm,19.0s,baz=102,slow=36						
CNB	Canberra Magne	30.11	186	P	P	18 50 23.6	+0.9
	baz=30,SNR=11						
CAN	Canberra	30.15	186	P	P	18 50 22.3	-0.8
CAN				pmax	pmax		
	comp=Z,119nm,1.2s						
CAN				MLR	MLR		
	comp=Z,4μm,20.0s						
CAN	Canberra	30.15	186	P	P	18 50 22.3	-0.8
CAN				IAmb	IAmb	18 50 35.4	
	comp=Z,119nm,1.2s						
KCP	Kidapawan	30.20	293	⇑*i*P	P	18 50 24.0	+0.2
LUWI	Luwuk	30.26	277	P	P	18 50 24.9	+0.7
	comp=Z,1μmcomp=Z,90nm,1.0s						
GTOI	Gorontalo	30.31	280	P	P	18 50 26.4	+1.7
	comp=Z,0.1nm,0.8s						
MMRI	Maumere	30.52	262	P	P	18 50 26.1	-0.4
	comp=Z,2μmcomp=Z,143nm,1.0s						
MMRI	Maumere	30.52	262	P	P	18 50 23.4	-3.1
MMRI				IAmb	IAmb	18 51 19.6	
	comp=Z,136nm,1.0s						
SKMP	Bagumbayan, Su	30.52	292	*e*P	P	18 50 25.4	-1.0
BUTP	Butuan	30.54	297	*e*P	P	18 50 40.8	+14
BUKP	Musuan	30.57	295	*e*P	P	18 50 26.7	-0.3
WRKA	Warakurna	30.67	228	P	P	18 50 27.7	0.0
	baz=31,SNR=9.5						
HTT	Hallett	30.89	203	P	P	18 50 29.3	-0.4
	baz=31,SNR=21						
CTBH	Cotabato--PC H	31.06	293	⇑*e*P	P	18 50 31.0	-0.2
CGP	Cagayan de Oro	31.14	296	*e*P	P	18 50 35.5	+3.5
MRSI	Marisa	31.33	280	P	P	18 50 43.6	+10
APSI	Ampana	31.39	277	P	P	18 50 34.2	0.0
	comp=Z,610nmcomp=Z,64nm,1.2s						
BBOO	Buckleboo	31.58	208	P	P	18 50 33.4	-2.2
	baz=32,SNR=9.2						
BBOO	Buckleboo	31.58	208	P	P	18 50 34.9	-0.8
BBOO				IAmb	IAmb	18 50 46.8	
	comp=Z,139nm,1.2s						
MSLP	Maasin	31.73	299	*e*P	P	18 50 37.0	-0.2
MILA	Mila	31.85	186	P	P	18 50 38.5	+0.5
	baz=32,SNR=3.2						
PAGZ	Pagadian	32.09	294	*e*P	P	18 50 40.8	+0.5
BASI	Baing, Sumba	32.29	259	P	P	18 50 42.1	0.0
	comp=Z,3μmcomp=Z,214nm,1.2s						
OCLP	Ormoc	32.38	300	*e*P	P	18 50 39.3	-3.6
WSI	Waingapu	32.51	260	P	P	18 50 44.0	0.0
	comp=Z,7μmcomp=Z,727nm,1.2s						
BKSI	Bulukumba	32.53	268	P	P	18 50 44.6	+0.4

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            comp=Z,28nm,1.2s
BNSI  Bone              32.58 270  P        P        18 50 45.4 +0.7
            comp=Z,38nm,1.3s
TOO   Toolangi          32.88 191  P        P        18 50 47.6 +0.6
            baz=33,SNR=5.5
TOO   Toolangi          32.88 191  P        P        18 50 46.9  -0.1
TOO                                pmax     pmax
            comp=Z,120nm,1.5s
TOO                                MLR      MLR
            comp=Z,11µm,18.0s
TOO   Toolangi          32.88 191  P        P        18 50 46.9  -0.1
TOO                                IAmb     IAmb     18 50 59.2
            comp=Z,120nm,1.5s
TOO                                IAMs_20  IAMs_20  19 04 18.9
            comp=Z,11µm,18.0s
KAPI  Kappang           32.91 269  P        P        18 50 46.3  -1.2
            comp=Z,7.8nm,0.6s,baz=108,slow=4.6,SNR=5.0
KAPI                               LR       LR       19 06 04.8
            comp=Z,1µm,21.8s,baz=97,slow=40
TTSI  Tana Toraja       32.96 272  P        P        18 50 48.3 +0.3
            comp=Z,738nmcomp=Z,22nm,1.8s
ARPS  Mount Arapiles    32.96 196  P        P        18 50 47.8 +0.1
            baz=33,SNR=12
MPSI  Mapaga            33.31 279  P        P        18 50 49.4  -1.7
            comp=Z,503nmcomp=Z,40nm,1.3s
WBSI  Waikabubak, Su    33.40 260  P        P        18 50 51.5  -0.4
            comp=Z,2µmcomp=Z,244nm,0.9s
JCJ   Chichijima        33.73 343  LR       LR       19 03 08.9
            comp=Z,3µm,22.0s,baz=128,slow=34
GUIM  Jordan            33.95 298 eP        P        18 50 55.9  -0.6
FORT  Forrest           34.46 220  P        P        18 51 01.0 +0.3
            baz=34,SNR=6.9
FORT  Forrest           34.46 220  P        P        18 50 59.8  -1.0
PLAI  Plampang          34.93 262  P        P        18 51 03.2  -1.9
            comp=Z,69nm,0.8s
OUZ   Omahuta           35.49 150  P        P        18 51 09.4  -0.2
OUZ                                IAmb     IAmb     18 51 29.4
            comp=Z,82nm,1.1s
PSA00 Pilbara Seismi    35.81 240  P        P        18 51 10.8  -1.8
RAO   Raoul Island      36.58 134  P        P        18 51 20.3 +1.3
            comp=Z,489nm,0.3s,baz=107,slow=19,SNR=2.0
RAO   Raoul Island      36.58 134  P        P        18 51 18.7  -0.4
RAO                                pmax     pmax
            comp=Z,1µm,0.5s
RAO   Raoul Island      36.58 134  P        P        18 51 18.7  -0.4
BUSP  Coron             36.66 298 eP        P        18 51 20.3 +0.4
TGY   Tagaytay City     36.98 302  LR       LR       19 04 22.5
            comp=Z,2µm,21.4s,baz=108,slow=33
ENPP  El Nido           37.00 296 eP        P        18 51 23.0 +0.2
MOO   Moorlands         37.39 187  P        P        18 51 27.3 +1.6
            baz=38,SNR=5.6
BATP  Bataraza          37.57 292 eP        P        18 51 26.7  -0.9
CAUP  Cauayan           37.71 306 eP        P        18 51 24.5  -4.2
TAU   Tasmania Unive    37.84 187  P        P        18 51 27.7  -1.8
TAU                                pmax     pmax
            comp=Z,209nm,1.3s
TAU                                MLR      MLR
            comp=Z,3µm,20.0s
TAU   Tasmania Unive    37.84 187  P        P        18 51 27.7  -1.8
TAU                                IAmb     IAmb     18 51 42.5
            comp=Z,208nm,1.2s
KKM   Kota Kinabalu     38.20 287  P        P        18 51 31.5  -1.5
KKM                                IAmb     IAmb     18 51 34.6
            comp=Z,79nm,1.2s
JAGI  Jajag, Banyuwa    38.49 263  P        P        18 51 44.3 +8.9
JAGI  Jajag, Banyuwa    38.49 263  P        P        18 51 33.5  -2.0
JAGI                               IAmb     IAmb     18 52 01.3
            comp=Z,118nm,1.3s
APYP  Conner            38.68 307 eP        P        18 51 35.8  -1.1
MEEK  Meekatharra       38.94 233  P        P        18 51 38.8  -0.3
            baz=39,SNR=38
URZ   Urewera           39.62 149  P        P        18 51 45.9 +1.3
            comp=Z,10nm,0.6s,baz=45,slow=6.0,SNR=6.8
URZ                                LR       LR       19 06 23.1
            comp=Z,2µm,18.2s,baz=334,slow=34
URZ   Urewera           39.62 149  P        P        18 51 44.2  -0.3
THZ   Tophouse          40.56 157  P        P        18 51 49.3  -3.0
THZ                                IAmb     IAmb     18 52 10.0
            comp=Z,66nm,0.8s
TUWZ  Tuamarina         40.70 155  P        P        18 51 54.1 +0.7
FOZ   Fox Glacier       41.00 161  IAMs_20  IAMs_20  19 07 10.0
            comp=Z,8µm,19.0s
GIRL  Giralia           41.06 241  P        P        18 51 57.8 +1.2
            baz=41,SNR=5.5
GIRL  Giralia           41.06 241  P        P        18 51 56.9 +0.3
LTZ   Lake Taylor       41.20 158  P        P        18 51 58.2 +0.7
LTZ                                IAmb     IAmb     18 52 11.1
            comp=Z,277nm,1.5s
SBUM  Sibu              41.24 280  P        P        18 51 58.0  -0.3
SBUM  Sibu              41.24 280  P        P        18 51 59.0 +0.7
KHZ   Kahutara          41.37 157  P        P        18 51 58.3  -0.6
KHZ                                IAmb     IAmb     18 52 17.6
            comp=Z,123nm,1.2s
KHZ                                IAMs_20  IAMs_20  19 08 57.8
            comp=Z,6µm,20.0s
PLWZ  Palliser          41.38 154  P        P        18 51 59.1 +0.1
PCJI  Pacitan           41.42 264  P        P        18 51 59.8   0.0
            comp=Z,134nm,1.0s
RPZ   Rata Peaks        41.58 160  P        P        18 52 01.0 +0.4
            comp=Z,48nm,0.8s,baz=57,slow=3.6,SNR=18
RPZ                                LR       LR       19 07 52.6
            comp=Z,8µm,20.1s,baz=324,slow=34
RPZ   Rata Peaks        41.58 160  P        P        18 51 60.0  -0.7
RPZ                                IAmb     IAmb     18 52 19.0
            comp=Z,96nm,0.9s
OXZ   Oxford            41.58 159  P        P        18 52 00.3  -0.4
LBZ   Lake Benmore      41.89 161  P        P        18 52 03.2 +0.1
LBZ                                IAMs_20  IAMs_20  19 07 16.4
            comp=Z,8µm,20.0s
DCZ   Deep Cove         41.99 165  P        P        18 52 04.4 +0.5
KLBR  Kellerberrin      42.01 227  P        P        18 52 03.9  -0.4
            baz=42,SNR=9.3
MORW  Morawa            42.08 231  P        P        18 52 04.8  -0.1
            baz=42,SNR=11
MORW  Morawa            42.08 231  P        P        18 52 04.6  -0.3
MORW                               IAmb     IAmb     18 52 17.1
            comp=Z,166nm,1.1s
MQZ   McQueen’s Vall    42.13 158  P        P        18 52 05.7 +0.5
MQZ                                IAmb     IAmb     18 52 18.4
            comp=Z,369nm,1.6s
SMRI  Semarang          42.14 265  P        P        18 52 04.3  -1.4
            comp=Z,61nm,1.1s
MLZ   Mavora Lakes      42.16 164  IAMs_20  IAMs_20  19 07 55.6
            comp=Z,5µm,20.0s
BLDU  Ballidu           42.30 229  P        P        18 52 05.2  -1.5
            baz=42,SNR=6.3
WHZ   Wether Hill Ro    42.60 164  P        P        18 52 08.0  -0.9
ODZ   Otahua Downs      42.62 161  P        P        18 52 08.6  -0.5
ODZ                                IAMs_20  IAMs_20  19 09 57.9
            comp=Z,7µm,20.0s
KSM   Kuching           42.96 278  P        P        18 52 11.0  -1.3
KSM                                IAmb     IAmb     18 52 25.1
            comp=Z,130nm,1.6s
KSM   Kuching           42.96 278  P        P        18 52 12.0  -0.3
INU   Inuyama           43.00 341  P        P        18 52 10.6  -1.6
NWAO  Narrogin (SRO)    43.09 226  P        P        18 52 14.2 +1.1
            comp=Z,6.5nm,0.6s,baz=62,slow=19,SNR=2.1
NWAO                               LR       LR       19 10 14.1
            comp=Z,4µm,21.1s,baz=56,slow=36
NWAO  Narrogin (SRO)    43.09 226  P        P        18 52 11.7  -1.4
NWAO                               pmax     pmax
            comp=Z,83nm,1.4s
NWAO                               MLR      MLR
            comp=Z,4µm,21.0s
NWAO  Narrogin (SRO)    43.09 226  P        P        18 52 11.7  -1.4
JNU   Nakatsue          43.44 333  P        P        18 52 15.6  -0.2
            comp=Z,115nm,0.8s,baz=73,slow=5.0
JNU   Nakatsue          43.44 333  P        P        18 52 15.7  -0.2
JNU                                IAmb     IAmb     18 52 16.9
            comp=Z,182nm,0.9s
MJAR  Matsushiro Arr    43.73 343  P        P        18 52 15.9  -2.3
            comp=Z,9.4nm,0.9s,baz=141,slow=7.8,SNR=14
MJAR                               PcP      PcP      18 54 04.5   0.0
            comp=Z,11nm,1.0s,baz=168,slow=3.8,SNR=6.1
MJAR                               LR       LR       19 08 34.5
            comp=Z,2µm,21.9s,baz=185,slow=34
MJAR  Matsushiro Arr    43.73 343  P        P        18 52 15.3  -2.9
MJAR                                        PcP      18 54 04.2  -0.3
MAJO  Matsushiro        43.74 343  P        P        18 52 15.5  -2.7
MAJO                               pmax     pmax
            comp=Z,35nm,1.1s
MAJO                               MLR      MLR
            comp=Z,3µm,20.0s
MAJO  Matsushiro        43.74 343  P        P        18 52 15.5  -2.7
MAT   Matsushiro        43.74 343  P        P        18 52 15.6  -2.6
MAT                               eS        S        18 58 55.8  +10
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MJB9  Matsu-Tunnel      43.74 343  P        P        18 52 16.5  -1.8
CISI  Cisompet, Garu    44.74 265  P        P        18 52 25.9  -0.8
            comp=Z,2µmcomp=Z,267nm,0.8s
CISI  Cisompet, Garu    44.74 265  P        P        18 52 25.0  -1.8
LEM   Lembang           44.94 266  P        P        18 52 28.3  -0.1
            comp=Z,25nm,0.4s,baz=14,slow=15,SNR=9.2
LEM                                LR       LR       19 13 45.0
            comp=Z,773nm,21.8s,baz=76,slow=40
LEM   Lembang           44.94 266  P        P        18 52 28.7 +0.3
            comp=Z,33nm,0.9s
CNJI  Cibinong          45.42 265  P        P        18 52 32.3 +0.3
            comp=Z,3µmcomp=Z,338nm,1.0s
DBJI  Dramaga           45.81 266  P        P        18 52 52.3  +17
SSE   Sheshan           47.07 322  P        P        18 52 45.8 +1.1
SSE                                S        S        18 59 38.6 +5.0
SSE                                sS       sS       18 59 57.1 +3.6
SSE                                pmax     pmax
            comp=Z,21nm,0.9s
SSE                                pmax     pmax
            comp=Z,190nm,3.4s
SSE                                LR       LR
            comp=Z,520nm,14.9s
DLV   T  Lat            47.25 291  P        P        18 52 46.2  -0.4
DLV                                IAmb     IAmb     18 52 47.5
            comp=Z,67nm,0.9s
TJN   Taejon            47.75 332ceP        P        18 52 49.1  -0.7
KASI  Kota Agung        48.08 267  P        P        18 52 51.3  -1.5
KSRS  Korea Array       48.38 333  P        P        18 52 54.6   0.0
            comp=Z,12nm,0.8s,baz=149,slow=8.4,SNR=25
KSRS                               LR       LR       19 12 20.6
            comp=Z,805nm,18.9s,baz=98,slow=35
KSAR  Wonju Array Be    48.38 333  P        P        18 52 54.0  -0.7
KSAR  Wonju Array Be    48.38 333  P        P        18 52 54.0  -0.7
LWLI  Liwa              48.53 268  P        P        18 52 56.2  -0.3
            comp=Z,8µmcomp=Z,51nm,0.9s
TPRI  Tanjung Pinang    48.59 276  P        P        18 52 57.4 +0.6
            comp=Z,1µmcomp=Z,68nm,1.6s
QIZ   Qiongzhong        48.68 301  P        P        18 52 56.9  -0.5
QIZ                                pP       pP       18 53 08.3  -0.9
QIZ                                pmax     pmax
            comp=Z,44nm,1.8s
QIZ                                pmax     pmax
            comp=Z,400nm,2.6s
QIZ                                LR       LR
            comp=Z,900nm,16.9s
QIZ                                LR       LR
            comp=Z,1µm,20.0s
QIZ                                LR       LR
            comp=Z,2µm,22.6s
QIZ   Qiongzhong        48.68 301  P        P        18 52 58.5 +1.2
QIZ                                IAmb     IAmb     18 52 59.4
            comp=Z,90nm,1.3s
INCN  Inchon            48.98 332  P        P        18 52 59.9 +0.5
INCN                               pmax     pmax
            comp=Z,483nm,1.8s
INCN  Inchon            48.98 332  P        P        18 52 59.9 +0.5
NJ2   Nanjing           49.17 321 eP        P        18 53 02.3 +1.4
NJ2                                pP       pwP      18 53 13.3  -3.6
NJ2                                sP       sP       18 53 18.8 +1.5
NJ2                                S        S        19 00 08.3 +5.0
NJ2                                sS       sS       19 00 25.5 +2.3
NJ2                                pmax     pmax
            comp=Z,13nm,0.7s
NJ2                                pmax     pmax
            comp=Z,130nm,3.8s
NJ2                                LR       LR
            comp=Z,2µm,16.9s
NJ2                                LR       LR
            comp=Z,1µm,17.6s
NJ2                                LR       LR
            comp=Z,3µm,18.4s
MYKOM Kota Tinggi       49.38 277  P        P        18 53 01.5  -1.4
MYKOM                              IAmb     IAmb     18 53 03.8
            comp=Z,72nm,1.2s
MYKOM Kota Tinggi       49.38 277  P        P        18 53 03.0 +0.1
YUK   Yuzh-Kuril'sk     49.43 353 eP        P        18 53 14.2  +12
YUK                                PPP      PPP      18 55 51.3
YUK                               eS        S        19 00 13.0 +6.5
YUK                               eSS       SS       19 03 37.0  -2.1
YUK                                SSS      SSS      19 04 54.1
YUK                                pmax     pmax
            comp=Z,270nm,1.1s
JKA   Kamikawa-asahi    49.97 350  P        P        18 53 06.9 +0.2
ASAJ  Asahikawa         49.97 350  P        P        18 53 06.9 +0.2
            comp=Z,45nm,0.7s,baz=176,slow=5.0,SNR=7.7
ASAJ                               LR       LR       19 11 11.7
            comp=Z,1µm,21.8s,baz=155,slow=32
WHN   Wuhan             51.16 316 ⇑P        P        18 53 16.6 +0.6
WHN                                S        S        19 00 36.9 +5.9
WHN                                pmax     pmax
            comp=Z,130nm,1.3s
WHN                                LR       LR
            comp=Z,5µm,15.2s
WHN                                LR       LR
            comp=Z,990nm,10.8s
WHN                                LR       LR
            comp=Z,6µm,22.2s
KRJI  Kerinci           51.31 271  P        P        18 53 16.8  -0.8
            comp=Z,2µmcomp=Z,179nm,1.0s
SDSI  Sungai Dareh      51.45 273  P        P        18 53 17.7  -0.8
            comp=Z,993nmcomp=Z,74nm,1.1s
MSHR  Mys Shultsa       51.48 340 i P       P        18 53 18.2   0.0
BKNI  Bangkinang        51.98 274  P        P        18 53 22.0  -0.4
            comp=Z,2µmcomp=Z,105nm,0.8s
BKNI  Bangkinang        51.98 274  P        P        18 53 21.1  -1.3
BKNI                               IAmb     IAmb     18 53 22.6
            comp=Z,130nm,1.1s
TEY   Ternei            52.10 345 eP        P        18 53 17.7  -5.0
PDSI  Padang            52.42 273  P        P        18 53 23.9  -1.8
            comp=Z,517nmcomp=Z,43nm,0.7s
DL2   Dalian            52.53 329  P        P        18 53 26.0  -0.1
DL2                                S        S        19 00 50.0 +0.3
DL2                                pmax     pmax
            comp=Z,53nm,1.1s
DL2                                pmax     pmax
            comp=Z,620nm,11.0s
DL2                                LR       LR
            comp=Z,880nm,19.7s
DL2                                LR       LR
            comp=Z,410nm,23.4s
DL2                                LR       LR
            comp=Z,1µm,19.1s
IPM   Ipoh              52.60 280  P        P        18 53 25.5  -1.6
IPM   Ipoh              52.60 280  P        P        18 53 26.0  -1.0
USA0B Ussuriysk Arra    52.65 341d iP       P        18 53 25.5  -1.3
USA0B Ussuriysk Arra    52.65 341  P        P        18 53 26.4  -0.4
USA0B                              IAmb     IAmb     18 53 28.1
            comp=Z,256nm,1.9s
USRK  Ussuriysk Ar.     52.65 341  P        P        18 53 26.5  -0.3
            comp=Z,18nm,0.8s,baz=168,slow=8.2,SNR=32
USRK                               LR       LR       19 15 49.4
            comp=Z,414nm,18.1s,baz=141,slow=36
USRK  Ussuriysk Ar.     52.65 341  P        P        18 53 26.1  -0.7
USRK  Ussuriysk Ar.     52.65 341  P        P        18 53 26.1  -0.7
YSS   Yuzh-Sakhalins    52.71 351⇑iP        P        18 53 26.7  -0.5
YSS                               ePPP      PPP      18 56 32.7
YSS                               eS        S        19 00 52.1 +0.3
YSS                                pmax     pmax
            comp=Z,30nm,1.1s
YSS                                pmax     pmax
            comp=Z,300nm,9.3s
YSS                                MLR      MLR
            comp=Z,800nm,18.0s
YSS                                MLR      MLR
            comp=N,500nm,17.0s
YSS                                MLR      MLR
            comp=E,300nm,19.0s
YSS   Yuzh-Sakhalins    52.71 351  P        P        18 53 26.2  -1.0
KULM  Kulim             53.11 281  P        P        18 53 29.0  -1.8
KULM  Kulim             53.11 281  P        P        18 53 30.0  -0.8
SISI  Saibi             53.74 272  P        P        18 53 34.8  -0.6
            comp=E,716nmcomp=E,62nm,0.9s
MDJ   Mudanjiang        53.81 340  P        P        18 53 35.1  -0.3
MDJ                                pP       pwP      18 53 48.0  -2.2
MDJ                                sP       sP       18 53 54.1 +1.5
MDJ                                PcP      PcP      18 54 38.6  -2.1
MDJ                                ScP      ScP      18 58 30.6  -4.6
MDJ                                PcS      PcS      18 58 37.5  -2.3
MDJ                                ScS      ScS      19 03 18.9  -2.1
MDJ                                pmax     pmax
            comp=E,44nm,1.2s
MDJ                                pmax     pmax
            comp=E,240nm,3.8s
MDJ                                LR       LR
            comp=E,630nm,15.7s
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MDJ                                LR       LR
            comp=E,710nm,15.7s
MDJ                                LR       LR
            comp=E,1µm,18.5s
MDJ   Mudanjiang        53.81 340  P        P        18 53 35.1  -0.3
MDJ                                IAmb     IAmb     18 53 36.7
            comp=Z,169nm,1.8s
SNY   Shenyang          53.88 333 ⇓P        P        18 53 35.8  -0.1
SNY                                S        S        19 01 13.9 +6.1
SNY                                pmax     pmax
            comp=Z,510nm,5.3s
SNY                                LR       LR
            comp=Z,820nm,15.7s
SNY                                LR       LR
            comp=Z,2µm,18.6s
SNY                                LR       LR
            comp=Z,2µm,20.6s
RPSI  Rantau Prapat     54.39 277  P        P        18 53 38.2  -1.9
RPSI                               IAmb     IAmb     18 53 46.5
            comp=Z,71nm,1.5s
RPSI  Rantau Prapat     54.39 277  P        P        18 53 38.8  -1.3
PSI   Prapat            54.40 277  P        P        18 53 38.8  -1.6
            comp=Z,16nm,1.1s,baz=141,slow=3.7,SNR=12
PSI   Prapat            54.40 277  P        P        18 53 38.8  -1.6
PSI                                pmax     pmax
            comp=Z,71nm,1.5s
PSI                                MLR      MLR
            comp=Z,800nm,21.0s
ENH   Enshi             54.44 313  P        P        18 53 39.6  -0.7
GYA   Guiyang           54.65 308⇑iP        P        18 53 42.8 +0.8
GYA                                pP       pwP      18 53 56.3  -1.1
GYA                                PcP      PcP      18 54 49.3 +4.8
GYA                                PP       PP       18 55 44.1  -0.8
GYA                                ScP      ScP      18 58 39.3  -0.1
GYA                                pmax     pmax
            comp=Z,30nm,1.1s
GYA                                pmax     pmax
            comp=Z,380nm,4.9s
GYA                                LR       LR
            comp=Z,700nm,16.6s
GYA                                LR       LR
            comp=Z,2µm,19.4s
GYA                                LR       LR
            comp=Z,2µm,20.8s
CN2   Changchun         54.68 336 eP        P        18 53 41.5  -0.2
CN2                               epP       pwP      18 53 54.3  -2.1
CN2                               esP       sP       18 53 59.6 +0.6
CN2                                PcP      PcP      18 54 44.5 +0.4
CN2                               eS        S        19 01 17.5  -1.2
CN2                                pmax     pmax
            comp=Z,30nm,1.3s
CN2                                pmax     pmax
            comp=Z,200nm,3.0s
CN2                                LR       LR
            comp=Z,1µm,16.0s
CN2                                LR       LR
            comp=Z,900nm,16.0s
CN2                                LR       LR
            comp=Z,1µm,17.0s
SLVN  Son La            54.71 301  P        P        18 53 42.6 +0.2
KIP   Kipapa            55.00  59  P        P        18 53 43.3  -1.1
KIP                                pmax     pmax
            comp=Z,569nm,1.8s
KIP   Kipapa            55.00  59  P        P        18 53 43.3  -1.1
GSI   Gunungsitoli      55.53 275  P        P        18 53 46.8  -1.7
GSI                                IAmb     IAmb     18 54 07.3
            comp=Z,59nm,0.8s
PBKT  Sadao Pong        55.62 294  P        P        18 53 49.4 +0.4
BJT   Baijiatuau        56.23 327  P        P        18 53 52.7  -0.2
BJT                                pmax     pmax
            comp=Z,45nm,1.4s
BJT                                MLR      MLR
            comp=Z,2µm,22.0s
BJT   Baijiatuau        56.23 327  P        P        18 53 52.7  -0.2
BJI   Beijing           56.24 327  P        P        18 53 52.8  -0.2
BJI                                PcP      PcP      18 54 51.3 +1.1
BJI                                S        S        19 01 44.6 +5.0
BJI                                pmax     pmax
            comp=Z,23nm,2.3s
BJI                                pmax     pmax
            comp=Z,380nm,3.9s
BJI                                LR       LR
            comp=Z,970nm,19.6s
BJI                                LR       LR
            comp=Z,810nm,19.1s
BJI                                LR       LR
            comp=Z,1µm,23.5s
KHU   Kahuku            56.29  63  P        P        18 53 54.3 +0.3
KHU                                pmax     pmax
            comp=Z,137nm,1.1s
KHU   Kahuku            56.29  63  P        P        18 53 54.3 +0.3
TYV   Tymovskoe         56.54 352 eP        P        18 53 55.2 +0.3
TYV                               eS        S        19 01 44.8 +1.6
TYV                                pmax     pmax
            comp=Z,46nm,1.7s
TYV                                pmax     pmax
            comp=Z,600nm,7.0s
TYV                                smax     smax
            comp=E,1µm,8.0s
LHMI  Lhok Sumawe       56.73 280  P        P        18 53 57.2 +0.2
            comp=E,2µmcomp=E,104nm,0.9s
LHMI  Lhok Sumawe       56.73 280  P        P        18 53 56.1  -0.8
LHMI                               IAmb     IAmb     18 54 29.8
            comp=Z,100nm,1.0s
TIY   Taiyuan           56.86 322 eP        P        18 53 58.0 +0.5
XAN   Xi'an             56.92 317  P        P        18 53 57.9  -0.2
XAN                                pP       sP       18 54 15.8 +0.8
XAN                                ScP      ScP      18 58 49.5 +0.3
XAN                                S        S        19 01 47.5  -1.5
XAN                                pmax     pmax
            comp=Z,55nm,0.8s
XAN                                pmax     pmax
            comp=Z,430nm,3.6s
XAN                                LR       LR
            comp=Z,1µm,21.6s
XAN                                LR       LR
            comp=Z,1µm,21.6s
XAN                                LR       LR
            comp=Z,2µm,20.6s
XAN   Xi'an             56.92 317  P        P        18 53 57.7  -0.3
XAN                                pmax     pmax
            comp=Z,207nm,1.7s
XAN                                MLR      MLR
            comp=Z,2µm,20.0s
XAN   Xi'an             56.92 317  P        P        18 53 57.7  -0.3
MLSI  Meulaboh, Aceh    57.11 278  P        P        18 53 59.1  -0.6
            comp=Z,122nm,1.1s
KMI   Kunming           57.22 304  P        P        18 54 01.4 +0.9
KMI                                pP       pwP      18 54 15.5  -0.5
KMI                                PP       PP       18 56 06.8  -1.2
KMI                                S        S        19 01 50.5  -3.0
KMI                                sS       sS       19 02 15.4 +0.1
KMI                                SS       SS       19 05 38.8  -4.6
KMI                                pmax     pmax
            comp=Z,48nm,1.5s
KMI                                pmax     pmax
            comp=Z,450nm,3.7s
KMI                                LR       LR
            comp=Z,1µm,19.6s
KMI                                LR       LR
            comp=Z,1µm,23.7s
KMI                                LR       LR
            comp=Z,1µm,22.5s
KMI   Kunming           57.22 304  P        P        18 54 01.6 +1.1
KMI                                pmax     pmax
            comp=Z,96nm,1.4s
KMI                                MLR      MLR
            comp=Z,1µm,18.0s
KMI   Kunming           57.22 304  P        P        18 54 01.6 +1.1
KMI                                IAmb     IAmb     18 54 03.0
            comp=Z,96nm,1.4s
KLR   Kul'dur           57.25 344  P        P        18 53 59.9   0.0
            comp=Z,47nm,1.2s,baz=146,slow=6.6,SNR=54
KLR   Kul'dur           57.25 344c iP       P        18 54 00.0   0.0
KLR                                pmax     pmax
            comp=Z,140nm,1.5s
GRNR  Gornyy            57.53 348⇑iP        P        18 54 01.7  -0.2
GRNR                               pmax     pmax
            comp=Z,10.0nm,1.3s
GRNR                               MLR      MLR
            comp=Z,340nm,20.0s
PPT   Papeete           57.60 107  LR       LR       19 15 45.4
            comp=Z,700nm,19.5s,baz=308,slow=33
PPT2  Papeete2          57.60 107 eS        S        19 01 57.0  -1.5
            comp=Z,376nm,26.0s
PPT2                              eLQ       LQ       19 08 29.7
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      comp=Z,4µm,29.0s
PPT2                                eLR       LR       19 10 55.0
      comp=Z,584nm,21.5s
CM31  Chiang Mai Arr    58.05 295   P         P        18 54 07.1 +0.9
      SNR=40
CM31                                P         P        18 54 07.7 +1.5
CM31  Chiang Mai Arr    58.05 295   P         P        18 54 06.9 +0.7
CM31                                IAmb      IAmb     18 54 08.5
      comp=Z,85nm,1.1s
CMAR  Chiang Mai Arr    58.05 295   P         P        18 54 07.1 +0.8
      comp=Z,38nm,1.0s,baz=110,slow=5.3,SNR=190
CMAR                                LR        LR       19 18 51.3
      comp=Z,676nm,20.1s,baz=116,slow=36
CMAR                                PKP2bc             19 24 00.8
      comp=Z,5.8nm,1.1s,baz=271,slow=3.2,SNR=13
CMAR  Chiang Mai Arr    58.05 295  iP         P        18 54 07.0 +0.8
CMAR                                pmax      pmax
      comp=Z,40nm,1.0s
CMAR  Chiang Mai Arr    58.05 295   P         P        18 54 06.3 +0.1
CHTO  Chiang Mai        58.16 296   P         P        18 54 07.4 +0.3
CHTO  Chiang Mai        58.16 296   P         P        18 54 07.3 +0.3
CHTO                                pmax      pmax
      comp=Z,95nm,1.3s
CHTO                                MLR       MLR
      comp=Z,800nm,19.0s
CHTO  Chiang Mai        58.16 296   P         P        18 54 07.3 +0.3
CHTO                                IAmb      IAmb     18 54 08.9
      comp=Z,95nm,1.2s
PET   Petropavlovsk     58.24   4   P         P        18 54 06.0 -0.8
PET                                 pmax      pmax
      comp=Z,87nm,1.1s
PET   Petropavlovsk     58.24   4   P         P        18 54 06.0 -0.8
PET                                 IAmb      IAmb     18 54 07.6
      comp=Z,87nm,1.1s
PEA0B Petropavlovsk-    58.26   3c iP         P        18 54 07.6 +0.6
PEA0B Petropavlovsk-    58.26   3   P         P        18 54 07.0 -0.1
PETK  Petropavlovsk-    58.26   3   P         P        18 54 07.4 +0.4
      comp=Z,60nm,1.1s,baz=151,slow=6.4,SNR=35
PETK                                LR        LR       19 15 32.2
      comp=Z,1µm,21.8s,baz=209,slow=32
PETK  Petropavlovsk-    58.26   3   P         P        18 54 07.2 +0.2
PETK  Petropavlovsk-    58.26   3   P         P        18 54 07.2 +0.2
TBI   Tubuai            58.39 114  eS         S        19 02 07.9 -0.6
      comp=Z,856nm,28.8s
TBI                                eLQ        LQ       19 08 47.7
      comp=Z,3µm,33.2s
TBI                                eLR        LR       19 11 16.7
      comp=Z,3µm,26.5s
CD2   Chengdu           59.01 311  ⇑P         P        18 54 13.3 +0.6
CD2                                 pP        sP       18 54 28.3 -1.4
CD2                                 sP        pwP      18 54 34.3 +5.9
CD2                                 S         S        19 02 19.3 +2.9
CD2                                 pmax      pmax
      comp=Z,110nm,0.6s
CD2                                 pmax      pmax
      comp=Z,570nm,5.7s
CD2                                 LR        LR
      comp=Z,2µm,20.6s
CD2                                 LR        LR
      comp=Z,3µm,23.5s
CD2                                 LR        LR
      comp=Z,3µm,20.6s
PMOR  Pomariorio Ree    59.04 104  eP         P        18 54 14.1 +1.0
      comp=Z,147nm,1.0s
VAH   Vaihoa            59.31 105  eP         P        18 54 15.6 +0.6
      comp=Z,70nm,0.9s
HHC   Hu-ho-hao-te      59.39 324  eP         P        18 54 14.5 -0.7
HHC                                 pP        pP       18 54 27.4 -0.2
HHC                                 sP        sP       18 54 33.3 +0.6
HHC                                 S         S        19 02 17.3 -3.7
HHC                                 sS        sS       19 02 38.1 -3.6
HHC                                 pmax      pmax
      comp=Z,1µm,5.7s
HHC                                 LR        LR
      comp=Z,3µm,17.3s
HHC                                 LR        LR
      comp=Z,2µm,16.7s
HHC                                 LR        LR
      comp=Z,3µm,16.6s
BTO   Baotou            60.14 323  eP         P        18 54 20.6 +0.2
BTO                                 S         S        19 02 20.6  -10
HIA   Hailar            61.42 336   P         P        18 54 28.0 -0.8
HIA                                 pmax      pmax
      comp=Z,18nm,1.0s
HIA                                 MLR       MLR
      comp=Z,1µm,19.0s
HIA   Hailar            61.42 336   P         P        18 54 28.0 -0.8
LZH   Lanzhou           61.53 316  ⇑P         P        18 54 31.4 +1.4
LZH                                 pmax      pmax
      comp=Z,42nm,1.1s
LZH                                 pmax      pmax
      comp=Z,250nm,4.3s
LZH                                 LR        LR
      comp=Z,1µm,15.2s
LZH                                 LR        LR
      comp=Z,1µm,17.3s
LZH                                 LR        LR
      comp=Z,1µm,18.5s
ZEA   Zeya              62.55 343  eP         P        18 54 35.8 -0.5
ZEA                                 pmax      pmax
      comp=E,24nm,1.0s
ZEA                                 pmax      pmax
      comp=N,58nm,1.2s
ZEA                                 pmax      pmax
      comp=Z,78nm,1.2s
MA2   Magadan           64.62 359   P         P        18 54 49.8  0.0
      comp=Z,28nm,0.7s,baz=167,slow=7.2,SNR=31
MA2   Magadan           64.62 359c iP         P        18 54 49.6 -0.2
MA2                                 pmax      pmax
      comp=Z,239nm,2.5s
MA2   Magadan           64.62 359   P         P        18 54 49.4 -0.5
KOHI  KOHIMA            64.67 302  eP         P        18 54 50.1 -1.0
KOHI                                IAmb      IAmb     18 55 02.7
      comp=Z,54nm,0.6s
BRDH  Bariadhala        65.85 298   P         P        18 54 59.6 +1.1
      comp=Z,83nm,0.3s,baz=77,slow=11,SNR=6.9
GTA   Gaotai            65.96 317  ⇑P         P        18 55 00.0 +0.9
GTA                                 pP        pP       18 55 10.3 -1.3
GTA                                 sP        sP       18 55 15.1 -1.5
GTA                                 S         S        19 03 44.8 +1.1
GTA                                 sS        sS       19 04 00.3 -3.7
GTA                                 SS        SS       19 08 00.3 +0.6
GTA                                 pmax      pmax
      comp=Z,36nm,1.2s
GTA                                 pmax      pmax
      comp=Z,380nm,8.1s
GTA                                 LR        LR
      comp=Z,710nm,20.9s
GTA                                 LR        LR
      comp=Z,1µm,19.4s
GTA                                 LR        LR
      comp=Z,1µm,19.4s
CIT   Chita             66.08 335  eP         P        18 55 00.1 +0.6
CIT                                e                   18 55 14.9
CIT                                e                   18 55 31.1
CIT                                 pmax      pmax
      comp=Z,134nm,1.7s
ULN   Ulaanbaatar       66.35 328   P         P        18 55 02.3 +0.8
ULN   Ulaanbaatar       66.35 328   P         P        18 55 01.9 +0.4
ULN                                 pmax      pmax
      comp=Z,48nm,1.3s
ULN                                 MLR       MLR
      comp=Z,1µm,21.0s
ULN   Ulaanbaatar       66.35 328   P         P        18 55 01.9 +0.4
ULN                                 IAmb      IAmb     18 55 03.2
      comp=Z,48nm,1.3s
SHL   Shillong          66.52 301  eP         P        18 55 03.0  0.0
SHL                                 IAmb      IAmb     18 55 19.9
      comp=Z,144nm,0.2s
SONM  Songino Array     66.68 328   P         P        18 55 04.1 +0.6
      comp=Z,20nm,1.1s,baz=144,slow=4.1,SNR=66
SONM                                LR        LR       19 22 30.6
      comp=Z,1µm,20.8s,baz=135,slow=34
SONM                                PKP2bc             19 23 37.7
      comp=Z,0.6nm,0.8s,baz=286,slow=1.4,SNR=5.2
SONM  Songino Array     66.68 328   P         P        18 55 03.7 +0.1
SONM                                pmax      pmax
      comp=Z,44nm,1.4s
SONM  Songino Array     66.68 328   P         P        18 55 03.7 +0.1
SEY   Seymchan          67.97 360⇑iP          P        18 55 11.4 +0.2
LSA   Lhasa             68.47 305   P         P        18 55 16.4 +0.7
LSA   Lhasa             68.47 305   P         P        18 55 16.3 +0.7
LSA                                 pmax      pmax
      comp=Z,53nm,1.1s
LSA                                 MLR       MLR
      comp=Z,1µm,22.0s
LSA   Lhasa             68.47 305   P         P        18 55 16.3 +0.7
LSA                                 IAmb      IAmb     18 55 33.2
      comp=Z,53nm,1.1s
YAK   Yakutsk           69.39 349   P         P        18 55 20.3 +0.3
      comp=Z,4.9nm,0.5s,baz=162,slow=0.4,SNR=34
YAK   Yakutsk           69.39 349c iP         P        18 55 19.5 -0.5
YAK                                e*PP       pP       18 55 33.9 +1.1
YAK                                e                   18 55 40.3
YAK                                e                   18 57 51.1
YAK                                eS         S        19 04 23.3 -0.2
YAK                                e*SS       SKiKP    19 04 56.5 -9.1
YAK                                eSS        SS       19 08 50.4 -1.1
YAK                                eSSS       SSS      19 12 00.2
YAK                                 pmax      pmax
      comp=Z,73nm,1.4s
YAK                                 pmax      pmax
      comp=N,49nm,1.5s
YAK                                 pmax      pmax
      comp=E,8.0nm,0.9s
YAK                                 pmax      pmax
      comp=Z,180nm,4.7s
YAK                                 pmax      pmax
      comp=N,51nm,1.8s
YAK                                 pmax      pmax
      comp=E,115nm,3.8s
YAK                                 smax      smax
      comp=N,185nm,5.3s
YAK                                 smax      smax
      comp=E,114nm,5.2s
YAK   Yakutsk           69.39 349   P         P        18 55 19.8 -0.2
YAK                                 IAmb      IAmb     18 55 21.7
      comp=Z,120nm,1.3s
ZAK   Zakamensk         69.85 329  eP         P        18 55 23.0 -0.3
ZAK                                 pmax      pmax
      comp=Z,45nm,1.4s
ZAK                                 pmax      pmax
      comp=Z,8.0nm,1.0s
GTK   Tadong            69.85 301  eP         P        18 55 24.4 +0.5
GTK                                 IAmb      IAmb     18 55 30.9
      comp=Z,22nm,0.7s
BOD   Bodaibo           70.18 339  eP         P        18 55 23.8 -1.2
BOD                                 pmax      pmax
      comp=Z,51nm,1.9s
TLY   Talaya            70.44 330   P         P        18 55 27.1 +0.3
TLY   Talaya            70.44 330c iP         P        18 55 27.0 +0.2
TLY                                e                   18 55 39.5
TLY                                eS         S        19 04 41.9 +5.5
TLY                                 pmax      pmax
      comp=Z,110nm,1.9s
TLY                                 MLR       MLR
      comp=Z,2µm,15.0s
BWNR  Bhubaneshwar      70.47 294  eP         P        18 55 27.5 -0.1
BWNR                                IAmb      IAmb     18 55 43.6
      comp=Z,31nm,0.8s
IRK   Irkutsk           70.47 331  eP         P        18 55 25.6 -1.4
IRK                                 pmax      pmax
      comp=Z,72nm,2.8s
TAPN  Taplejung         70.62 301  eP         P        18 55 29.0 +0.2
      comp=Z,222nm,1.2s
ODAN  Odare             70.75 301  eP         P        18 55 29.8 +0.3
      comp=Z,91nm,0.7s
BOK   Bokaro            71.25 297  eP         P        18 55 32.5 +0.2
BOK                                 IAmb      IAmb     18 55 35.3
      comp=Z,20nm,0.8s
RAMN  Ramite            71.46 301  eP         P        18 55 34.0 +0.2
SDPT  Sand Point        71.60  26   IAMs_20   IAMs_20  19 22 59.3
      comp=Z,3µm,20.0s
CHLP  Challavanipeta    71.69 291  eP         P        18 55 35.4 +0.4
CHLP                                IAmb      IAmb     18 55 37.9
      comp=Z,33nm,1.2s
MOY   Mondy             71.77 329  eP         P        18 55 35.8 +0.8
MOY                                 pmax      pmax
      comp=Z,157nm,2.1s
JIRN  Jiri              72.00 301  eP         P        18 55 37.5 +0.3
      comp=Z,162nm,0.9s
GUN   Gumba             72.33 301  eP         P        18 55 39.5 +0.3
      comp=Z,370nm,1.2s
VNDA  Vanda             72.41 178   P         P        18 55 39.0 +0.8
      comp=Z,7.9nm,1.0s,baz=321,slow=4.5,SNR=4.4
VNDA  Vanda             72.41 178   P         P        18 55 38.7 +0.5
VNDA                                pmax      pmax
      comp=Z,34nm,1.2s
VNDA  Vanda             72.41 178   P         P        18 55 38.7 +0.5
PKI   Pulchoki          72.64 301  eP         P        18 55 40.9 -0.1
      comp=Z,306nm,1.3s
PKIN  Phulchoki         72.66 301  eP         P        18 55 40.9 -0.1
      comp=Z,212nm,1.3s
KKN   Kakani            72.81 301  eP         P        18 55 42.0 +0.2
      comp=Z,65nm,0.7s
DMN   Daman             72.91 301  eP         P        18 55 42.8 +0.3
      comp=Z,337nm,1.1s
PALK  Pallekele         73.00 279   P         P        18 55 42.7 -0.3
      comp=Z,5.4nm,0.7s,baz=98,slow=2.3,SNR=5.5
CHGN  Chignik           73.11  26   IAMs_20   IAMs_20  19 24 32.1
      comp=Z,2µm,19.0s
GKN   Gorkha            73.42 301  eP         P        18 55 45.4 +0.1
      comp=Z,422nm,1.2s
PVM   Polavaram         73.71 290  eP         P        18 55 46.7 -0.3
PVM                                 IAmb      IAmb     18 55 48.9
      comp=Z,16nm,1.1s
BILL  Bilibino          73.71   5  eP         P        18 55 46.6 +0.6
BILL                               e                   18 56 02.1
BILL                               e                   18 58 30.7
BILL                               ePPP       PPP      19 00 14.8
BILL                                pmax      pmax
      comp=Z,192nm,0.9s
BILL                                MLR       MLR
      comp=Z,2µm,19.0s
BILL  Bilibino          73.71   5   P         P        18 55 47.0 +1.0
GAMB  Gambell           73.79  16   P         P        18 55 47.0 +0.5
DANN  Dangsing          74.26 301  eP         P        18 55 50.1 -0.3
      comp=Z,196nm,1.0s
MYLAV Mylavaram         74.55 289  eP         P        18 55 51.9  0.0
MYLAV                               IAmb      IAmb     18 55 53.4
      comp=Z,58nm,1.8s
SKHT  Srikalahasti      74.92 286  eP         P        18 55 53.9 -0.2
SKHT                                IAmb      IAmb     18 55 55.3
      comp=Z,35nm,1.5s
ADKI  Addanki           75.02 288  eP         P        18 55 54.6  0.0
ADKI                                IAmb      IAmb     18 55 56.0
      comp=Z,34nm,1.3s
SII   Sitkinak Islan    75.15  27   P         P        18 55 53.4 -1.2
SII                                 IAmb      IAmb     18 55 56.8
      comp=Z,86nm,0.9s
SII                                 IAMs_20   IAMs_20  19 24 23.1
      comp=Z,3µm,19.0s
GGR   Gangavaram        75.15 290  eP         P        18 55 55.2 -0.3
GGR                                 IAmb      IAmb     18 55 56.4
      comp=Z,78nm,1.8s
NJS   Nagarjunasagar    75.77 288  eP         P        18 55 58.4 -0.5
NJS                                 IAmb      IAmb     18 55 59.9
      comp=Z,46nm,1.5s
OHAK  Old Harbor        75.93  27   P         P        18 55 58.3 -0.7
OHAK                                IAmb      IAmb     18 55 59.8
      comp=Z,34nm,0.8s
OHAK                                IAMs_20   IAMs_20  19 23 21.8
      comp=Z,2µm,18.0s
WMQ   Urumqi            76.05 317  eP         P        18 56 00.9 +0.8
WMQ                                 sP        sP       18 56 16.3 -1.5
WMQ                                 PP        PP       18 58 53.8 +2.4
WMQ                                 pmax      pmax
      comp=Z,45nm,1.9s
WMQ                                 pmax      pmax
      comp=Z,300nm,3.9s
WMQ                                 LR        LR
      comp=Z,400nm,17.1s
WMQ                                 LR        LR
      comp=Z,440nm,22.9s
WMQ                                 LR        LR
      comp=Z,1µm,26.7s
WMQ   Urumqi            76.05 317   P         P        18 56 00.7 +0.6
WMQ                                 pmax      pmax
      comp=Z,209nm,1.6s
WMQ                                 MLR       MLR
      comp=Z,1µm,21.0s
WMQ   Urumqi            76.05 317   P         P        18 56 00.7 +0.6
SRLM  Srisailam         76.08 288  eP         P        18 56 00.2 -0.6
SRLM                                IAmb      IAmb     18 56 01.6
      comp=Z,24nm,1.1s
ANM   Nome              76.18  17   P         P        18 56 00.8 +0.5
ANM                                 pmax      pmax
      comp=Z,217nm,1.7s
ANM                                 MLR       MLR
      comp=Z,2µm,22.0s
ANM   Nome              76.18  17   P         P        18 56 00.8 +0.5
ANM                                 IAMs_20   IAMs_20  19 24 19.2
      comp=Z,2µm,22.0s
RPR   Rampur            76.19 291  eP         P        18 56 00.8 -0.5
RPR                                 IAmb      IAmb     18 56 02.2
      comp=Z,74nm,1.7s
KDAK  Kodiak Island     76.56  27   IAMs_20   IAMs_20  19 23 43.4
      comp=Z,3µm,21.0s
HYB   Hyderabad         76.63 289  i P        P        18 56 03.0 -0.9
HYB   Hyderabad         76.63 289  eP         P        18 56 03.3 -0.5
HYB                                 IAmb      IAmb     18 56 14.5
      comp=Z,16nm,0.5s
HYBB  Hyderabad (bro    76.63 289  eP         P        18 56 03.5 -0.3
HYBB                                IAmb      IAmb     18 56 04.5
      comp=Z,76nm,1.8s
NGP   Nagpur            76.83 293  eP         P        18 56 04.4 -0.6
NGP                                i x        x        18 56 16.0
SRSP  Sriramsagar       77.08 291  eP         P        18 56 05.8 -0.6
SRSP                                IAmb      IAmb     18 56 07.0
      comp=Z,74nm,1.6s
SVW2  Sparrevohn        77.22  23   P         P        18 56 07.0 +0.7
SVW2                                IAmb      IAmb     18 56 09.1
      comp=Z,43nm,1.0s
URV   Uravakonda        77.45 286  eP         P        18 56 08.1 -0.5
URV                                 IAmb      IAmb     18 56 09.6
      comp=Z,45nm,1.1s
RSO   Redoubt South     77.98  24   P         P        18 56 10.2 -0.5
HOM   Homer             78.00  25   IAMs_20   IAMs_20  19 24 36.3
      comp=Z,2µm,22.0s
CNPM  China Poot        78.10  26   P         P        18 56 11.4 +0.2
CNPM                                IAMs_20   IAMs_20  19 24 38.1
      comp=Z,4µm,22.0s
TIXI  Tiksi             78.31 352   P         P        18 56 11.6 -0.5
      comp=Z,4.9nm,0.4s,baz=142,slow=6.5,SNR=39
TIXI  Tiksi             78.31 352c iP         P        18 56 11.6 -0.5
TIXI                                pmax      pmax
      comp=Z,58nm,1.6s
TIXI  Tiksi             78.31 352   P         P        18 56 11.3 -0.8
TIXI                                IAmb      IAmb     18 56 14.4
      comp=Z,84nm,1.6s
BRLK  Bradley Lake      78.38  25   P         P        18 56 12.3 -0.4
BRLK                                IAmb      IAmb     18 56 13.4
      comp=Z,37nm,0.9s
BRLK                                IAMs_20   IAMs_20  19 24 24.0
      comp=Z,3µm,22.0s
KLRI  Killari           78.57 290  eP         P        18 56 13.8 -0.9
KLRI                                IAmb      IAmb     18 56 14.5
      comp=Z,30nm,1.4s
BHPL  Bhopal            78.70 295  eP         P        18 56 14.2 -1.2
BHPL                                IAmb      IAmb     18 56 29.7
      comp=Z,26nm,0.8s
SEW   Seward            79.17  26   P         P        18 56 16.9 -0.1
SEW                                 IAmb      IAmb     18 56 36.9
      comp=Z,39nm,0.9s
RDOG  Red Dog Mine      79.39  15   P         P        18 56 19.2 +1.1
RDOG                                IAMs_20   IAMs_20  19 28 08.0
      comp=Z,2µm,20.0s
DDI   Dehra Dun         79.56 302  eP         P        18 56 21.4 +1.4
RC01  Rabbit Creek A    79.56  25   P         P        18 56 18.9 -0.2
RC01                                IAMs_20   IAMs_20  19 27 07.7
      comp=Z,2µm,21.0s
PPLA  Purkeypile        79.56  22   P         P        18 56 19.1 -0.3
PPLA                                IAmb      IAmb     18 56 20.7
      comp=Z,154nm,1.7s
KAAM  Kaadhehdhoo       79.89 271   P         P        18 56 21.2 -0.8
NDI   New Delhi         79.94 300  ex         P        18 56 20.5 -1.4
PMR   Palmer            80.07  24   P         P        18 56 21.4 -0.5
PMR                                 pmax      pmax
      comp=Z,257nm,2.0s
PMR   Palmer            80.07  24   P         P        18 56 21.4 -0.5
GHO   Glory Hole Cre    80.25  24   P         P        18 56 22.8 -0.2
GHO                                 IAmb      IAmb     18 56 53.6
      comp=Z,44nm,1.0s
GHO                                 IAMs_20   IAMs_20  19 28 50.9
      comp=Z,1µm,18.0s
KNK   Knik Glacier      80.26  25   P         P        18 56 23.0  0.0
KNK                                 IAmb      IAmb     18 56 54.5
      comp=Z,54nm,1.1s
KTH   Kantishna Hill    80.41  22   P         P        18 56 22.9 -0.9
KTH                                 IAMs_20   IAMs_20  19 30 01.0
      comp=Z,2µm,20.0s
SMLA  Simla             80.48 303  eP         P        18 56 25.3 +0.5
SML   Sawmill           80.51  24   P         P        18 56 24.5 +0.1
SML                                 IAmb      IAmb     18 56 50.0
      comp=Z,65nm,0.8s
SML                                 IAMs_20   IAMs_20  19 29 00.8
      comp=Z,2µm,20.0s
GLI   Glacier Island    80.57  25   P         P        18 56 24.9 +0.2
GLI                                 IAMs_20   IAMs_20  19 26 26.4
      comp=Z,3µm,22.0s
TRF   Thorofare Moun    80.59  22   P         P        18 56 24.0 -0.9
HIN   Hinchinbrook I    80.59  26   P         P        18 56 24.9 +0.1
HIN                                 IAmb      IAmb     18 56 25.8
      comp=Z,54nm,1.0s
HIN                                 IAMs_20   IAMs_20  19 28 16.1
      comp=Z,2µm,20.0s
MK31  Makanchi Array    80.64 319   P         P        18 56 25.6 +0.2
MK31                                pmax      pmax
      comp=Z,68nm,1.4s
MK31  Makanchi Array    80.64 319   P         P        18 56 25.6 +0.2
MK31                                IAmb      IAmb     18 56 27.6
      comp=Z,68nm,1.4s
MKAR  Makanchi Array    80.64 319   P         P        18 56 25.8 +0.4
      comp=Z,22nm,1.1s,baz=102,slow=5.1,SNR=81
MKAR                                PKKPbc    PKKPbc   19 15 06.5 -0.8
      comp=Z,0.5nm,0.7s,baz=274,slow=2.0,SNR=6.2
MKAR                                LR        LR       19 31 53.6
      comp=Z,1µm,19.9s,baz=95,slow=36
MKAR  Makanchi Array    80.64 319   P         P        18 56 25.3 -0.1
MKAR  Makanchi Array    80.64 319   P         P        18 56 25.3 -0.1
BPAW  Bear Paw Mtn.     80.68  22   P         P        18 56 24.4 -0.8
BPAW                                IAmb      IAmb     18 56 26.4
      comp=Z,125nm,1.8s
FID   Port Fidalgo      80.77  26   P         P        18 56 25.4 -0.3
FID                                 IAmb      IAmb     18 56 28.4
      comp=Z,195nm,1.8s
FID                                 IAMs_20   IAMs_20  19 26 05.1
      comp=Z,2µm,21.0s
IMAR  Indian Mountai    80.78  19   P         P        18 56 25.8 +0.1
GOA   Goa               80.81 287  eP         P        18 56 26.4 -0.4
GOA                                 IAmb      IAmb     18 56 28.7
      comp=Z,21nm,0.6s
MAKZ  Makanchi          80.85 319   P         P        18 56 26.5  0.0
MAKZ                                pmax      pmax
      comp=Z,152nm,1.6s
MAKZ                                MLR       MLR
      comp=Z,1µm,20.0s
MAKZ  Makanchi          80.85 319   P         P        18 56 26.5  0.0
MAKZ                                IAmb      IAmb     18 56 28.6
      comp=Z,152nm,1.6s
SCM   Sheep Creek Mo    80.94  25   P         P        18 56 26.7  0.0
SCM                                 pmax      pmax
      comp=Z,312nm,2.0s
SCM                                 MLR       MLR
      comp=Z,4µm,22.0s
SCM   Sheep Creek Mo    80.94  25   P         P        18 56 26.7  0.0
EYAK  Cordova Ski Ar    80.99  26   P         P        18 56 27.2 +0.3
EYAK                                IAmb      IAmb     18 56 29.8
      comp=Z,96nm,1.6s
RND   Reindeer          81.12  23   P         P        18 56 26.9 -0.7
RND                                 pmax      pmax
      comp=Z,49nm,1.0s
RND   Reindeer          81.12  23   P         P        18 56 26.9 -0.7
RND                                 IAmb      IAmb     18 56 27.8
      comp=Z,48nm,1.0s
POO   Poona             81.22 290  eP         P        18 56 28.0 -1.1
MCK   McKinley          81.25  23   P         P        18 56 27.6 -0.7
MCK                                 pmax      pmax
      comp=Z,108nm,1.0s
MCK                                 MLR       MLR
      comp=Z,1µm,18.0s
MCK   McKinley          81.25  23   P         P        18 56 27.6 -0.7
MCK                                 IAmb      IAmb     18 56 47.4
      comp=Z,108nm,1.0s
MLY   Manley            81.28  21   P         P        18 56 28.4  0.0
BWN   Browne            81.28  22   P         P        18 56 28.1 -0.3
BWN                                 IAMs_20   IAMs_20  19 31 35.9
      comp=Z,2µm,20.0s
RAGM  Ragged Mountai    81.39  26   P         P        18 56 29.9 +0.8
RAGM                                IAmb      IAmb     18 56 31.1
      comp=Z,191nm,1.8s
DHRM  DHARAMSHALA       81.43 304  eP         P        18 56 29.5 -0.6
DHRM                                IAmb      IAmb     18 56 38.8
      comp=Z,74nm,0.6s
ZAA0  Zalesovo Array    81.50 326   P         P        18 56 28.9 -0.8
ZAA0                                IAmb      IAmb     18 56 30.0
      comp=Z,41nm,0.9s
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ZALV	**Zalesovo Beam**	**81.50**	**326**	P	**P**	**18 56 29.3**	**-0.4**
	comp=Z,25nm,0.7s,baz=112,slow=5.5,SNR=120						
ZALV				LR	LR	19 33 05.0	
	comp=Z,707nm,20.5s,baz=124,slow=36						
ZALV	**Zalesovo Beam**	**81.50**	**326**	P	**P**	**18 56 29.2**	**-0.5**
ZALV	**Zalesovo Beam**	**81.50**	**326**	P	**P**	**18 56 29.2**	**-0.5**
DHY	**Denali Highway**	**81.53**	**23**	P	**P**	**18 56 29.6**	**-0.3**
DHY				IAmb	IAmb	18 56 30.7	
	comp=Z,47nm,1.2s						
PDGK	**Podgornoye**	**81.55**	**315**	P	**P**	**18 56 30.0**	**-0.4**
NEA	**Nenana**	**81.64**	**22**	IAMs_20	IAMs_20	19 28 47.9	
	comp=Z,2µm,21.0s						
WRH	**Wood River Hil**	**81.95**	**22**	P	**P**	**18 56 30.7**	**-1.1**
WRH				IAmb	IAmb	18 56 32.8	
	comp=Z,168nm,1.7s						
WRH				IAMs_20	IAMs_20	19 32 03.9	
	comp=Z,2µm,21.0s						
CCB	**Clear Creek Bu**	**82.15**	**22**	P	**P**	**18 56 31.8**	**-1.1**
CCB				IAmb	IAmb	18 56 33.7	
	comp=Z,187nm,1.8s						
MDM	**Murphy Dome**	**82.15**	**22**	P	**P**	**18 56 31.9**	**-1.1**
MDM				IAmb	IAmb	18 56 33.8	
	comp=Z,92nm,1.5s						
CRQM	**Cirque**	**82.24**	**26**	P	**P**	**18 56 33.9**	**+0.2**
CRQM				IAmb	IAmb	18 57 07.7	
	comp=Z,63nm,1.1s						
CRQM				IAMs_20	IAMs_20	19 26 55.1	
	comp=Z,3µm,21.0s						
TCOL	**CIGO, UAF Yank**	**82.24**	**22**	P	**P**	**18 56 32.7**	**-0.7**
	baz=240						
PAX	**Paxson**	**82.24**	**24**	P	**P**	**18 56 33.5**	**-0.1**
PAX				pmax	pmax		
	comp=Z,18nm,0.9s						
PAX				MLR	MLR		
	comp=Z,2µm,20.0s						
PAX	**Paxson**	**82.24**	**24**	P	**P**	**18 56 33.5**	**-0.1**
PAX				IAMs_20	IAMs_20	19 29 24.6	
	comp=Z,2µm,20.0s						
GLB	**Gilahina Butte**	**82.24**	**26**	P	**P**	**18 56 33.7**	**+0.2**
GLB				IAmb	IAmb	18 56 34.7	
	comp=Z,52nm,1.0s						
GLB				IAMs_20	IAMs_20	19 28 28.6	
	comp=Z,2µm,20.0s						
COLA	**College**	**82.25**	**22**	P	**P**	**18 56 32.4**	**-1.0**
COLA				pmax	pmax		
	comp=Z,353nm,2.0s						
COLA				MLR	MLR		
	comp=Z,2µm,19.0s						
COLA	**College**	**82.25**	**22**	P	**P**	**18 56 32.4**	**-1.0**
COLA	**College**	**82.25**	**22**	IAMs_20	IAMs_20	19 34 40.5	
	comp=Z,2µm,19.0s						
VRDI	**Verde Repeater**	**82.30**	**26**	P	**P**	**18 56 34.3**	**+0.3**
VRDI				IAmb	IAmb	18 56 54.2	
	comp=Z,64nm,1.1s						
VRDI				IAMs_20	IAMs_20	19 27 23.3	
	comp=Z,3µm,21.0s						
HDA	**Harding Lake**	**82.35**	**22**	P	**P**	**18 56 33.2**	**-0.8**
HDA				IAmb	IAmb	18 56 35.0	
	comp=Z,99nm,1.7s						
HDA	**Harding Lake**	**82.35**	**22**	P	**P**	**18 56 33.4**	**-0.6**
	baz=241						
TGL	**Tana Glacier**	**82.38**	**27**	P	**P**	**18 56 34.5**	**+0.1**
TGL				IAmb	IAmb	18 56 37.5	
	comp=Z,115nm,1.7s						
TGL				IAMs_20	IAMs_20	19 26 48.2	
	comp=Z,3µm,22.0s						
POKR	**Poker Plat Res**	**82.52**	**22**	P	**P**	**18 56 33.9**	**-1.0**
	baz=240						
IL31		**82.55**	**22**	P	**P**	**18 56 33.8**	**-1.1**
IL31				IAmb	IAmb	18 56 53.1	
	comp=Z,35nm,0.9s						
ILAR	**Eielson Array**	**82.55**	**22**	P	**P**	**18 56 34.0**	**-1.1**
	comp=Z,16nm,0.9s,baz=254,slow=5.1,SNR=90						
ILAR				PKKPbc	**PKKPbc**	**19 15 08.7**	**+5.0**
	comp=Z,0.3nm,0.7s,baz=126,slow=1.2,SNR=4.1						
ILAR				LR	LR	19 32 23.4	
	comp=Z,1µm,19.0s,baz=236,slow=35						
ILAR	**Eielson Array**	**82.55**	**22**	P	**P**	**18 56 33.7**	**-1.3**
ILAR	**Eielson Array**	**82.55**	**22**	P	**P**	**18 56 33.7**	**-1.3**
MCARA	**McCarthy VSAT**	**82.56**	**26**	P	**P**	**18 56 35.9**	**+0.8**
MCARA				IAmb	IAmb	18 57 07.0	
	comp=Z,50nm,0.9s						
MCARA				IAMs_20	IAMs_20	19 27 44.0	
	comp=Z,2µm,21.0s						
COLD	**Coldfoot**	**82.66**	**19**	P	**P**	**18 56 35.9**	**+0.3**
BALM	**Baldy**	**82.71**	**26**	IAMs_20	IAMs_20	19 27 11.0	
	comp=Z,3µm,22.0s						
RIDG	**Independent Ri**	**82.85**	**23**	P	**P**	**18 56 36.5**	**-0.2**
RIDG				IAMs_20	IAMs_20	19 36 46.6	
	comp=Z,2µm,18.0s						
BARN	**Barnard Glacie**	**83.02**	**26**	P	**P**	**18 56 38.5**	**+0.7**
BARN				IAmb	IAmb	18 57 09.2	
	comp=Z,32nm,0.9s						
CTGM	**Chitina Glacie**	**83.13**	**27**	IAMs_20	IAMs_20	19 27 20.1	
	comp=Z,2µm,22.0s						
KSH	**Kashi**	**83.21**	**311**	P	**P**	**18 56 41.8**	**+2.6**
KSH				pP	sP	18 56 54.8	-2.2
KSH				PP	**PP**	**18 59 54.5**	**+3.4**
KSH				SKS	**S**	**19 06 54.8**	**-1.5**
KSH				S	**SKSac**	**19 06 56.8**	**-1.1**
KSH				pmax	pmax		
	comp=Z,190nm,1.4s						
KSH				pmax	pmax		
	comp=Z,1µm,5.8s						
KSH				LR	LR		
	comp=Z,510nm,10.5s						
KSH				LR	LR		
	comp=Z,480nm,10.5s						
KSH				LR	LR		
	comp=Z,280nm,12.2s						
PCA	**Pinnacle**	**83.28**	**28**	IAMs_20	IAMs_20	19 28 12.1	
	comp=Z,2µm,20.0s						
SCRK	**Sand Creek**	**83.30**	**23**	P	**P**	**18 56 39.2**	**+0.1**
SCRK				IAmb	IAmb	18 56 41.9	
	comp=Z,128nm,1.8s						
PRP	**Porcupine Dome**	**83.42**	**22**	IAMs_20	IAMs_20	19 29 51.6	
	comp=Z,2µm,20.0s						
ULHL	**Ulahol**	**83.61**	**313**	P	**P**	**18 56 42.3**	**+1.1**
	SNR=5.1						
TOLK	**Toolik Lake Re**	**83.62**	**18**	P	**P**	**18 56 41.3**	**+0.8**
TOLK				IAMs_20	IAMs_20	19 28 33.8	
	comp=Z,2µm,22.0s						
TOLK	**Toolik Lake Re**	**83.62**	**18**	P	**P**	**18 56 41.4**	**+0.8**
	baz=238						
BCAR	**Beaver Creek A**	**83.79**	**25**	P	**P**	**18 56 41.5**	**0.0**
DHAK	**Deception Hill**	**83.87**	**29**	IAMs_20	IAMs_20	19 27 50.7	
	comp=Z,3µm,21.0s						
KURK	**Kurchatov**	**84.10**	**322**	P	**P**	**18 56 42.6**	**-0.7**
KURK	**Kurchatov**	**84.10**	**322**	P	**P**	**18 56 43.2**	**0.0**
KURBB	**Kurchatov Arra**	**84.13**	**322**	P	**P**	**18 56 43.5**	**+0.1**
	comp=Z,23nm,1.1s,baz=105,slow=4.1,SNR=84						
NIL	**Nilore**	**84.21**	**304**	P	**P**	**18 56 44.8**	**+0.5**
NIL				pmax	pmax		
	comp=Z,834nm,1.9s						
NIL	**Nilore**	**84.21**	**304**	P	**P**	**18 56 44.8**	**+0.5**
KZA	**Kyzart**	**84.29**	**313**	P	**P**	**18 56 46.7**	**+1.7**
	SNR=104						
KBK	**Karagaybulak**	**84.63**	**314**	P	**P**	**18 56 47.1**	**+0.7**
	SNR=42						
SIT	**Sitka**	**84.64**	**31**	IAMs_20	IAMs_20	19 29 37.2	
	comp=Z,3µm,19.0s						
BMAR	**Burnt Mountain**	**84.64**	**20**	P	**P**	**18 56 46.7**	**+0.9**
QSPA	**South Pole Qui**	**84.74**	**180**	P	**P**	**18 56 47.5**	**+1.0**
	comp=Z,20nm,1.0s,baz=13,slow=1.5,SNR=7.0						
QSPA	**South Pole Qui**	**84.74**	**180**	P	**P**	**18 56 46.8**	**+0.3**
QSPA				IAmb	IAmb	18 56 59.5	
	comp=Z,60nm,0.8s						
EGAK	**Eagle**	**84.75**	**23**	P	**P**	**18 56 46.3**	**0.0**
EGAK				IAMs_20	IAMs_20	19 36 51.8	
	comp=Z,2µm,18.0s						
HYT	**Haines Junctio**	**84.81**	**27**	P	**P**	**18 56 47.9**	**+1.0**
HYT				IAMs_20	IAMs_20	19 29 00.7	
	comp=Z,2µm,21.0s						
CHMS	**Chumysh**	**84.84**	**314**	P	**P**	**18 56 48.1**	**+0.8**
	SNR=60						
UCH	**Uchtor**	**84.86**	**313**	P	**P**	**18 56 49.5**	**+1.6**
	SNR=95						
FRU1	**Bishkek**	**84.89**	**314**	P	**P**	**18 56 48.6**	**+1.0**
FRU1				pmax	pmax		
	comp=Z,154nm,1.4s						
FRU1	**Bishkek**	**84.89**	**314**	P	**P**	**18 56 48.6**	**+1.0**
AAK	**Ala-Archa**	**84.95**	**313**	P	**P**	**18 56 49.1**	**+1.1**
	comp=Z,17nm,0.7s,baz=108,slow=4.4,SNR=71						
AAK	**Ala-Archa**	**84.95**	**313**	P	**P**	**18 56 49.2**	**+1.1**
	SNR=40						
AAK	**Ala-Archa**	**84.95**	**313**	P	**P**	**18 56 48.9**	**+0.9**
AAK				pmax	pmax		
	comp=Z,137nm,1.5s						
AAK				MLR	MLR		
	comp=Z,1µm,20.0s						
AAK	**Ala-Archa**	**84.95**	**313**	P	**P**	**18 56 48.9**	**+0.9**
USP	**Ospenovka**	**85.08**	**314**	P	**P**	**18 56 49.4**	**+0.9**
	SNR=86						
DAWY	**Dawson**	**85.17**	**24**	P	**P**	**18 56 49.1**	**+0.6**
DAWY				IAmb	IAmb	18 56 51.2	
	comp=Z,104nm,1.6s						
DAWY				IAMs_20	IAMs_20	19 29 07.1	
	comp=Z,3µm,22.0s						
MAW	**Mawson**	**85.18**	**203**	P	**P**	**18 56 49.5**	**+1.2**
	comp=Z,11nm,0.9s,baz=74,slow=6.5,SNR=3.6						
MAW				LR	LR	19 31 33.8	
	comp=Z,1µm,21.5s,baz=79,slow=33						
MAW	**Mawson**	**85.18**	**203**	P	**P**	**18 56 49.6**	**+1.2**
SKAG	**Skagway**	**85.39**	**29**	P	**P**	**18 56 50.2**	**+0.7**
SKAG				IAmb	IAmb	18 56 53.3	
	comp=Z,59nm,1.4s						
SKAG				IAMs_20	IAMs_20	19 29 07.9	
	comp=Z,3µm,20.0s						
AML	**Almayashu**	**85.43**	**313**	P	**P**	**18 56 52.3**	**+1.5**
	SNR=134						
EKS2	**Erkin-Say**	**85.48**	**313**	P	**P**	**18 56 51.9**	**+1.3**
	SNR=77						
BHUJ	**Bhuj**	**85.76**	**294**	*e*P	**P**	**18 56 52.2**	**0.0**
BHUJ				IAmb	IAmb	18 57 05.9	
	comp=Z,610nm,2.1s						
ARSB	**Arslanbob**	**85.80**	**312**	P	**P**	**18 56 52.8**	**+0.5**
ARSB				pmax	pmax		
	comp=Z,1µm,2.0s						
ARSB	**Arslanbob**	**85.80**	**312**	P	**P**	**18 56 52.8**	**+0.5**
WHY	**Whitehorse**	**85.97**	**28**	P	**P**	**18 56 53.1**	**+0.4**
WHY				IAmb	IAmb	18 56 55.3	
	comp=Z,88nm,1.6s						
WHY				IAMs_20	IAMs_20	19 29 32.4	
	comp=Z,2µm,20.0s						
NRIK	**Noril'sk**	**86.36**	**341**	P	**P**	**18 56 54.2**	**0.0**
	comp=Z,28nm,0.5s,baz=111,slow=5.1,SNR=62						
NRIK				LR	LR	19 35 03.7	
	comp=Z,561nm,20.3s,baz=110,slow=35						
EPYK	**Eagle Plains**	**87.06**	**22**	P	**P**	**18 56 58.2**	**+0.4**
EPYK				IAMs_20	IAMs_20	19 31 01.8	
	comp=Z,2µm,21.0s						
EPYK	**Eagle Plains**	**87.06**	**22**	P	**P**	**18 56 58.5**	**+0.8**
	baz=250						
DLBC	**Dease Lake**	**87.75**	**31**	P	**P**	**18 57 02.2**	**+0.9**
DLBC				IAmb	IAmb	18 57 40.9	
	comp=Z,48nm,1.4s						
KBL	**Kabul**	**87.80**	**305**	P	**P**	**18 57 01.4**	**-0.9**
KBL				pmax	pmax		
	comp=Z,21nm,0.8s						
KBL				MLR	MLR		
	comp=Z,800nm,22.0s						
KBL	**Kabul**	**87.80**	**305**	P	**P**	**18 57 01.4**	**-0.9**
KBL				IAmb	IAmb	18 57 02.6	
	comp=Z,21nm,0.8s						
KK31	**Karatay Array**	**87.92**	**313**	P	**P**	**18 57 02.2**	**-0.2**
KK31				pmax	pmax		
	comp=Z,60nm,1.3s						
KK31	**Karatay Array**	**87.92**	**313**	P	**P**	**18 57 02.2**	**-0.2**
KK31				IAmb	IAmb	18 57 04.6	
	comp=Z,60nm,1.2s						
KKAR	**Karatay Array**	**87.92**	**313**	P	**P**	**18 57 02.3**	**-0.1**
KKAR	**Karatay Array**	**87.92**	**313**	P	**P**	**18 57 02.3**	**-0.1**
KKAR	**Karatay Array**	**87.92**	**313**	P	**P**	**18 57 02.5**	**+0.1**
KKAR				IAmb	IAmb	18 57 04.6	
	comp=Z,60nm,1.2s						
TAS	**Tashkent**	**88.54**	**312**	P	**P**	**18 57 06.0**	**+0.6**
TAS				pmax	pmax		
	comp=Z,77nm,1.0s						
TAS	**Tashkent**	**88.54**	**312**	P	**P**	**18 57 06.0**	**+0.6**
INK	**Inuvik**	**88.85**	**21**	P	**P**	**18 57 05.8**	**-0.3**
	comp=Z,31nm,1.1s,baz=262,slow=5.2,SNR=10.0						
INK	**Inuvik**	**88.85**	**21**	P	**P**	**18 57 06.1**	**0.0**
INK				pmax	pmax		
	comp=Z,166nm,1.6s						
INK				MLR	MLR		
	comp=Z,2µm,22.0s						
INK	**Inuvik**	**88.85**	**21**	P	**P**	**18 57 06.1**	**0.0**
INK				IAMs_20	IAMs_20	19 32 47.3	
	comp=Z,2µm,22.0s						
HUMO	**Hull Mountain**	**89.28**	**47**	IAMs_20	IAMs_20	19 30 08.8	
	comp=Z,2µm,20.0s						
COR	**Corvallis**	**89.30**	**45**	IAMs_20	IAMs_20	19 32 43.2	
	comp=Z,2µm,19.0s						
YBH	**Yreka Blue Hor**	**89.34**	**48**	IAMs_20	IAMs_20	19 31 47.6	
	comp=Z,2µm,20.0s						
BVAR	**Borovoye Array**	**89.58**	**323**	P	**P**	**18 57 09.4**	**-0.5**
	comp=Z,17nm,0.6s,baz=104,slow=5.6,SNR=135						
BRVK	**Borovoye**	**89.64**	**323**	P	**P**	**18 57 08.8**	**-1.4**
BRVK	**Borovoye**	**89.64**	**323**	P	**P**	**18 57 09.7**	**-0.6**
BRVK				IAmb	IAmb	18 57 11.2	
	comp=Z,107nm,1.6s						
J04D	**Umpqua Nationa**	**89.97**	**47**	P	**P**	**18 57 12.6**	**+0.3**
	baz=263						
ORV	**Oroville**	**89.98**	**50**	IAMs_20	IAMs_20	19 31 03.7	
	comp=Z,2µm,20.0s						
H04A	**Detroit Lake**	**90.10**	**45**	P	**P**	**18 57 12.1**	**-0.5**
H04A				IAmb	IAmb	18 57 13.5	
	comp=Z,47nm,1.7s						
H04A				IAMs_20	IAMs_20	19 29 31.5	
	comp=Z,2µm,22.0s						
D05A	**Enumclaw**	**90.55**	**43**	IAMs_20	IAMs_20	19 36 53.2	
	comp=Z,2µm,18.0s						
J05D	**Fort Rock, OR**	**90.61**	**47**	P	**P**	**18 57 16.0**	**+0.8**
	baz=263						
LON	**Longmire**	**90.61**	**43**	IAMs_20	IAMs_20	19 29 24.0	
	comp=Z,2µm,22.0s						
CMB	**Columbia Colle**	**90.68**	**52**	P	**P**	**18 57 15.2**	**-0.3**
CMB				pmax	pmax		
	comp=Z,11nm,1.4s						
CMB				MLR	MLR		
	comp=Z,3µm,21.0s						
CMB	**Columbia Colle**	**90.68**	**52**	P	**P**	**18 57 15.2**	**-0.3**
SMMC	**Simmler**	**90.71**	**55**	P	**P**	**18 57 16.7**	**+1.0**
	baz=264						
G05D	**Wamic, OR**	**90.78**	**45**	P	**P**	**18 57 16.6**	**+0.8**
	baz=263						
PKM	**Mcpherson Peak**	**90.82**	**55**	P	**P**	**18 57 17.3**	**+0.9**
	baz=264						
PINE	**Pine Mountain**	**90.88**	**46**	P	**P**	**18 57 15.8**	**-0.7**
PINE				IAMs_20	IAMs_20	19 32 37.3	
	comp=Z,2µm,21.0s						
RUBR	**Rubicon Trail**	**90.97**	**51**	IAMs_20	IAMs_20	19 30 59.8	
	comp=Z,3µm,20.0s						
MOD	**Modoc Plateau**	**91.15**	**48**	P	**P**	**18 57 17.4**	**-0.3**
VCNR	**Virginia City**	**91.38**	**51**	IAMs_20	IAMs_20	19 31 45.7	
	comp=Z,3µm,20.0s						
PNTR	**Pine Nut**	**91.40**	**51**	P	**P**	**18 57 19.9**	**+0.9**
PNTR				IAMs_20	IAMs_20	19 31 35.3	
	comp=Z,2µm,20.0s						
LTY	**Liberty**	**91.45**	**43**	IAMs_20	IAMs_20	19 29 52.1	
	comp=Z,2µm,22.0s						
WAKR	**Walker**	**91.47**	**52**	IAMs_20	IAMs_20	19 31 05.1	
	comp=Z,3µm,21.0s						
PAHR	**Pah Rah Range**	**91.62**	**50**	IAMs_20	IAMs_20	19 32 45.2	
	comp=Z,3µm,20.0s						
YERR	**Yerington**	**91.67**	**51**	IAMs_20	IAMs_20	19 33 22.4	
	comp=Z,2µm,20.0s						
MDPB	**Devils Postpil**	**91.67**	**53**	P	**P**	**18 57 20.3**	**-0.1**
OSI	**Osito Audit: C**	**91.68**	**56**	IAMs_20	IAMs_20	19 37 56.0	
	comp=Z,1µm,19.0s						
OMMB	**Old Mammoth Mi**	**91.73**	**53**	P	**P**	**18 57 21.2**	**+0.5**
OMMB				IAMs_20	IAMs_20	19 30 20.1	
	comp=Z,3µm,21.0s						
I07A	**Izee**	**91.94**	**46**	P	**P**	**18 57 21.4**	**+0.1**
I07A				IAMs_20	IAMs_20	19 34 20.4	
	comp=Z,2µm,18.0s						
ISA	**Isabella, Lake**	**91.98**	**55**	P	**P**	**18 57 21.6**	**0.0**
	baz=265						
HAWA	**Hanford**	**92.14**	**44**	P	**P**	**18 57 22.0**	**0.0**
HAWA				IAmb	IAmb	18 57 23.5	
	comp=Z,25nm,1.4s						
RYN	**Ryan**	**92.19**	**52**	P	**P**	**18 57 23.1**	**+0.4**
RYN				IAMs_20	IAMs_20	19 31 40.4	
	comp=Z,3µm,20.0s						
MWC	**Mount Wilson**	**92.20**	**56**	P	**P**	**18 57 23.4**	**+0.6**
MWC				pmax	pmax		
	comp=Z,22nm,1.0s						
MWC				MLR	MLR		
	comp=Z,1µm,20.0s						
MWC	**Mount Wilson**	**92.20**	**56**	P	**P**	**18 57 23.4**	**+0.6**
MWC				IAmb	IAmb	18 57 24.6	
	comp=Z,22nm,0.9s						
MWC				IAMs_20	IAMs_20	19 35 35.6	
	comp=Z,1µm,20.0s						
TIN	**Tinemaha, Big**	**92.29**	**53**	P	**P**	**18 57 23.7**	**+0.6**
	baz=265						
EDW2	**Edwards Air Fo**	**92.31**	**55**	P	**P**	**18 57 23.9**	**+0.8**
	baz=265						
PNT	**Penticton**	**92.35**	**41**	P	**P**	**18 57 20.0**	**-2.9**
PNT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PNT				MLR	MLR		
	comp=Z,2µm,20.0s						
NVAR	**Mina Array Bea**	**92.35**	**52**	P	**P**	**18 57 24.0**	**+0.5**
	comp=Z,4.6nm,0.7s,baz=253,slow=6.5,SNR=21						
NVAR				LR	LR	19 32 40.7	
	comp=Z,2µm,20.3s,baz=277,slow=32						
NVAR	**Mina Array Bea**	**92.35**	**52**	P	**P**	**18 57 23.4**	**0.0**
CWC	**Cottonwood Cre**	**92.36**	**54**	P	**P**	**18 57 23.9**	**+0.4**
	baz=265						
C36M	**Paulatuk**	**92.43**	**21**	P	**P**	**18 57 22.6**	**-0.2**
C36M				IAmb	IAmb	18 57 23.4	
	comp=Z,32nm,1.1s						
C36M				IAMs_20	IAMs_20	19 35 41.7	
	comp=Z,1µm,20.0s						
C36M	**Paulatuk**	**92.43**	**21**	P	**P**	**18 57 22.6**	**-0.2**
	baz=262						
WVOR	**Wild Horse Val**	**92.43**	**48**	P	**P**	**18 57 23.2**	**-0.4**
WVOR				pmax	pmax		
	comp=Z,15nm,1.3s						
WVOR				MLR	MLR		
	comp=Z,3µm,20.0s						
WVOR	**Wild Horse Val**	**92.43**	**48**	P	**P**	**18 57 23.2**	**-0.4**
G08A	**Pilot Rock**	**92.44**	**45**	P	**P**	**18 57 23.6**	**0.0**
G08A				IAMs_20	IAMs_20	19 31 58.4	
	comp=Z,2µm,21.0s						
NV11	**Mina Array Sit**	**92.47**	**52**	P	**P**	**18 57 23.6**	**-0.3**
NV11				IAmb	IAmb	18 57 25.5	
	comp=Z,54nm,1.9s						
NV11				IAMs_20	IAMs_20	19 32 48.5	
	comp=Z,2µm,20.0s						
BFSC	**Mount Baldy Ra**	**92.53**	**56**	P	**P**	**18 57 24.4**	**+0.2**
	baz=265						
KVN	**Kaiserville**	**92.56**	**51**	P	**P**	**18 57 24.5**	**+0.2**
KVN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KVN				MLR	MLR		
	comp=Z,2µm,20.0s						
KVN	**Kaiserville**	**92.56**	**51**	P	**P**	**18 57 24.5**	**+0.2**
KVN				IAMs_20	IAMs_20	19 32 02.9	
	comp=Z,2µm,20.0s						
LRMC	**Laurel Mtn Rad**	**92.61**	**55**	P	**P**	**18 57 25.6**	**+1.0**
	baz=265						
D08A	**Wollman Farm,**	**92.61**	**43**	IAMs_20	IAMs_20	19 33 18.0	
	comp=Z,2µm,20.0s						
J08A	**Circle Bar Ran**	**92.62**	**47**	IAMs_20	IAMs_20	19 34 06.4	
	comp=Z,1µm,20.0s						
MPMC	**Manual Prospec**	**92.81**	**54**	P	**P**	**18 57 26.1**	**+0.5**
	baz=266						
E09A	**Wood Farm, Sta**	**93.10**	**44**	P	**P**	**18 57 26.4**	**0.0**
E09A				IAmb	IAmb	18 57 27.7	
	comp=Z,18nm,1.1s						
C09A	**Chrisman Ranch**	**93.11**	**42**	IAMs_20	IAMs_20	19 32 42.1	
	comp=Z,2µm,20.0s						
SYO	**Syowa Base**	**93.27**	**199**⇓	*e*P	**P**	**18 57 28.6**	**+1.9**
SYO	**Syowa Base**	**93.27**	**199**⇑	*e*pP	pP	18 57 34.0	-5.1
GSC	**Goldstone, Bar**	**93.31**	**55**	P	**P**	**18 57 28.2**	**+0.4**
GSC				pmax	pmax		
	comp=Z,23nm,1.7s						
GSC	**Goldstone, Bar**	**93.31**	**55**	P	**P**	**18 57 28.2**	**+0.4**
GSC	**Goldstone, Bar**	**93.31**	**55**	P	**P**	**18 57 28.3**	**+0.6**
	baz=266						
FURC	**Furnace Creek,**	**93.34**	**54**	P	**P**	**18 57 28.7**	**+1.0**
	baz=266						
HRA	**Herat**	**93.37**	**304**	P	**P**	**18 57 27.8**	**-0.4**
HRA				IAmb	IAmb	18 57 29.1	
	comp=Z,42nm,1.1s						
MONP2	**Monument Peak**	**93.46**	**57**	P	**P**	**18 57 29.8**	**+1.1**
	baz=266						
PFO	**Pinyon Flats O**	**93.48**	**57**	P	**P**	**18 57 29.5**	**+0.9**
	baz=266						
BMO	**Blue Mountains**	**93.57**	**45**	P	**P**	**18 57 28.3**	**-0.5**
BMO				pmax	pmax		
	comp=Z,46nm,1.9s						
BMO				MLR	MLR		
	comp=Z,2µm,21.0s						
BMO	**Blue Mountains**	**93.57**	**45**	P	**P**	**18 57 28.3**	**-0.5**
BMO				IAmb	IAmb	18 57 57.7	
	comp=Z,46nm,1.9s						
BMO				IAMs_20	IAMs_20	19 32 26.5	
	comp=Z,2µm,21.0s						
HEC	**Hector,Ludlow**	**93.66**	**56**	P	**P**	**18 57 30.0**	**+0.6**
	baz=266						
F10A	**Beach Ranch, E**	**93.70**	**44**	P	**P**	**18 57 28.8**	**-0.6**
F10A				IAMs_20	IAMs_20	19 32 37.8	
	comp=Z,2µm,20.0s						
IKP	**In-Ko-Pah, Jac**	**93.71**	**58**	P	**P**	**18 57 30.8**	**+1.2**
	baz=266						
SHOC	**Shoshone, Teco**	**93.78**	**54**	P	**P**	**18 57 30.3**	**+0.5**
	baz=266						
TPNV	**Topopah Spring**	**93.87**	**53**	P	**P**	**18 57 30.4**	**0.0**
TPNV				pmax	pmax		
	comp=Z,14nm,1.2s						
TPNV	**Topopah Spring**	**93.87**	**53**	P	**P**	**18 57 30.4**	**0.0**
BELC	**Belle Mtn. Jos**	**93.89**	**56**	P	**P**	**18 57 31.1**	**+0.6**
	baz=266						
NEW	**Newport**	**93.91**	**42**	P	**P**	**18 57 29.9**	**-0.3**
NEW				pmax	pmax		
	comp=Z,12nm,1.1s						
NEW				MLR	MLR		
	comp=Z,1µm,20.0s						
NEW	**Newport**	**93.91**	**42**	P	**P**	**18 57 29.9**	**-0.3**
NEW	**Newport**	**93.91**	**42**	IAMs_20	IAMs_20	19 34 06.2	
	comp=Z,1µm,20.0s						
SWSC	**Sam W. Stewart**	**93.99**	**57**	P	**P**	**18 57 31.9**	**+1.1**
	baz=266						
TUQ	**Turquoise Moun**	**94.04**	**55**	P	**P**	**18 57 31.5**	**+0.3**
	baz=266						
GMRC	**Granite Mounta**	**94.21**	**56**	P	**P**	**18 57 32.5**	**+0.5**
	baz=267						
BC3	**Big Chuckawall**	**94.32**	**57**	P	**P**	**18 57 34.0**	**+1.5**
	baz=267						
R11A	**Troy Canyon, C**	**94.48**	**52**	P	**P**	**18 57 33.2**	**0.0**
R11A				IAMs_20	IAMs_20	19 34 04.7	
	comp=Z,2µm,20.0s						
R11A	**Troy Canyon, C**	**94.48**	**52**	P	**P**	**18 57 33.6**	**+0.4**
	baz=267						
IRM	**Iron Mountain**	**94.60**	**56**	P	**P**	**18 57 35.0**	**+1.3**
	baz=267						
SHPR	**Sheep Range**	**94.72**	**54**	P	**P**	**18 57 34.4**	**+0.1**
SHPR				IAmb	IAmb	18 57 36.5	
	comp=Z,36nm,1.7s						
SHPR				IAMs_20	IAMs_20	19 36 19.2	
	comp=Z,1µm,19.0s						
GLA	**Glamis**	**94.81**	**57**	P	**P**	**18 57 36.0**	**+1.3**
	baz=267						
ELK	**Elko**	**94.86**	**50**	P	**P**	**18 57 34.8**	**-0.2**
ELK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ELK				MLR	MLR		
	comp=Z,2µm,20.0s						
ELK	**Elko**	**94.86**	**50**	P	**P**	**18 57 34.8**	**-0.2**
ELK				IAMs_20	IAMs_20	19 33 48.9	
	comp=Z,2µm,20.0s						
WBK	**Wadi Bani Khal**	**95.51**	**292**	P	**P**	**18 57 37.7**	**-0.3**
	SNR=11						
SVE	**Sverdlovsk**	**95.52**	**327**⇓	*e*P	**P**	**18 57 36.4**	**-0.9**
SVE				pmax	pmax		
	comp=Z,50nm,1.8s						
SVE				MLR	MLR		
	comp=Z,1µm,20.0s						
W13A	**Hualapai Mount**	**95.69**	**55**	P	**P**	**18 57 39.1**	**+0.3**
ABKAR	**Akbulak array**	**95.78**	**319**	P	**P**	**18 57 36.7**	**-1.9**
JTMT	**Jette**	**95.80**	**43**	IAMs_20	IAMs_20	19 34 56.1	
	comp=Z,2µm,20.0s						
YKA	**Yellowknife Ar**	**95.80**	**28**	P	**P**	**18 57 38.9**	**+0.5**
	comp=Z,2.8nm,0.7s,baz=266,slow=4.4,SNR=28						
YKA				PKiKP	**PKiKP**	**19 02 18.0**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=240,slow=1.0,SNR=3.8						
YKA				PKKPbc	**PKKPbc**	**19 14 28.2**	**-2.3**
	comp=Z,0.2nm,0.7s,baz=94,slow=3.2,SNR=4.1						
YKA				LR	LR	19 35 05.8	
	comp=Z,2µm,21.6s,baz=0.0,slow=32						
WSAR	**Wadi Sarin**	**95.86**	**293**	P	**P**	**18 57 39.2**	**-0.4**
	SNR=10.0						
WALA	**Waterton Lakes**	**96.07**	**41**	P	**P**	**18 57 40.4**	**+0.3**
WALA				IAMs_20	IAMs_20	19 37 00.2	
	comp=Z,2µm,19.0s						
LCMT	**Little Creek M**	**96.28**	**53**	P	**P**	**18 57 40.1**	**-1.2**

BIDO	**Bidbid**	**96.33**	**293**	P	**P**	**18 57 41.1**	**-0.6**
	SNR=13						
MHTO	**MHTO**	**96.34**	**290**	P	**P**	**18 57 40.6**	**-1.2**
	SNR=7.0						
SMDO	**Samad**	**96.38**	**293**	P	**P**	**18 57 42.0**	**-0.1**
	SNR=5.4						
KNB	**Kanab**	**96.61**	**53**	P	**P**	**18 57 42.8**	**-0.1**
KNB				pmax	pmax		
	comp=Z,21nm,1.5s						
KNB	**Kanab**	**96.61**	**53**	P	**P**	**18 57 42.8**	**-0.1**
ARU	**Arti**	**96.67**	**326**	P	**P**	**18 57 41.1**	**-1.3**
	comp=Z,5.1nm,0.8s,baz=75,slow=2.0,SNR=20						
ARU	**Arti**	**96.67**	**326**	*ce*P	**P**	**18 57 40.8**	**-1.7**
ARU				pmax	pmax		
	comp=Z,47nm,1.5s						
ARU	**Arti**	**96.67**	**326**	P	**P**	**18 57 41.0**	**-1.4**
ARU				IAmb	IAmb	18 57 42.3	
	comp=Z,32nm,1.1s						
DUG	**Dugway, Tooele**	**96.69**	**50**	IAMs_20	IAMs_20	19 38 28.3	
	comp=Z,2µm,19.0s						
GEYT	**Alibeck**	**96.87**	**307**	P	**P**	**18 57 43.8**	**-0.1**
	comp=Z,4.3nm,0.8s,baz=202,slow=1.6,SNR=14						
GEYT	**Alibeck**	**96.87**	**307**	P	**P**	**18 57 43.3**	**-0.7**
GYA0B	**ALIBECK ARRAY**	**96.87**	**307**	P	**P**	**18 57 43.8**	**-0.1**
GYA0B				IAmb	IAmb	18 57 44.8	
	comp=Z,16nm,1.2s						
DLMT	**Dillon**	**96.92**	**45**	IAMs_20	IAMs_20	19 34 34.1	
	comp=Z,2µm,21.0s						
U15A	**North Rim**	**97.02**	**54**	P	Pdif	18 57 45.9	+0.8
AKTO	**Aktyubinsk**	**97.04**	**320**	P	**P**	**18 57 43.0**	**-1.4**
	comp=Z,3.0nm,0.9s,baz=92,slow=5.0,SNR=9.0						
AKTO				LR	LR	19 43 08.5	
	comp=Z,681nm,18.7s,baz=95,slow=36						
AKTO	**Aktyubinsk**	**97.04**	**320**	P	**P**	**18 57 43.0**	**-1.4**
HOQ	**Hoqain**	**97.08**	**293**	P	**P**	**18 57 45.2**	**0.0**
	SNR=12						
MTPU	**Mount Pierson**	**97.14**	**52**	P	Pdif	18 57 46.9	+1.3
BSY	**Bisya**	**97.15**	**292**	P	**P**	**18 57 45.4**	**-0.1**
	SNR=5.0						
HWUT	**Hardware Ranch**	**97.66**	**49**	IAMs_20	IAMs_20	19 37 39.7	
	comp=Z,2µm,19.0s						
X16A	**Lo Mia Camp, P**	**97.68**	**56**	IAMs_20	IAMs_20	19 41 35.7	
	comp=Z,1µm,18.0s						
ARQ	**Araqi**	**97.80**	**293**	P	Pdif	18 57 48.5	+0.1
	SNR=5.9						
SOHO	**SOHO**	**97.82**	**294**	P	**P**	**18 57 48.3**	**-0.1**
	SNR=7.3						
HSIG		**97.97**	**62**	IAMs_20	IAMs_20	19 35 54.8	
	comp=Z,2µm,19.0s						
FXWY	**Fox Creek**	**98.05**	**47**	IAMs_20	IAMs_20	19 34 55.0	
	comp=Z,2µm,21.0s						
TPAW	**Teton Pass**	**98.11**	**47**	IAMs_20	IAMs_20	19 35 47.4	
	comp=Z,2µm,20.0s						
UOSS	**Minazif**	**98.15**	**294**	P	**P**	**18 57 48.5**	**-1.4**
UOSS				IAmb	IAmb	18 57 49.9	
	comp=Z,20nm,1.1s						
TUC	**Tucson**	**98.19**	**58**	IAMs_20	IAMs_20	19 39 39.3	
	comp=Z,1µm,18.0s						
ASHO	**Ashiyiah**	**98.27**	**294**	P	Pdif	18 57 51.0	+0.4
	SNR=5.7						
EGMT	**Eagleton**	**98.84**	**42**	IAMs_20	IAMs_20	19 35 50.7	
	comp=Z,2µm,20.0s						
PDAR	**Pinedale Array**	**99.14**	**48**	P	**Pdif**	**18 57 53.1**	**-1.1**
	comp=Z,1.1nm,0.7s,baz=222,slow=2.0,SNR=5.0						
PDAR				LR	LR	19 39 34.8	
	comp=Z,2µm,18.6s,baz=272,slow=34						
RLMT	**Red Lodge**	**99.28**	**45**	IAMs_20	IAMs_20	19 35 36.4	
	comp=Z,2µm,20.0s						
PV05	**Paradox Valley**	**99.58**	**52**	IAMs_20	IAMs_20	19 37 34.5	
	comp=Z,2µm,21.0s						
PV18	**Skein Mesa, Pa**	**99.72**	**52**	IAMs_20	IAMs_20	19 38 05.6	
	comp=Z,2µm,20.0s						
PV03	**Paradox Valley**	**99.77**	**52**	IAMs_20	IAMs_20	19 36 06.9	
	comp=Z,2µm,20.0s						
PV02	**Paradox Valley**	**99.86**	**52**	IAMs_20	IAMs_20	19 42 20.3	
	comp=Z,2µm,21.0s						
O20A	**White River Ci**	**100.20**	**50**	IAMs_20	IAMs_20	19 37 34.0	
	comp=Z,2µm,20.0s						
121A	**Cookes Peak, D**	**100.73**	**58**	IAMs_20	IAMs_20	19 35 52.5	
	comp=Z,1µm,21.0s						
RES	**Resolute Bay**	**100.82**	**14**	P	**Pdif**	**18 58 00.6**	**-0.1**
RES				MLR	MLR		
	comp=Z,700nm,20.0s						
RES	**Resolute Bay**	**100.82**	**14**		**Pdif**	**18 58 00.6**	**-0.1**
LAO	**LASA Array**	**101.32**	**44**	IAMs_20	IAMs_20	19 39 21.1	
	comp=Z,2µm,20.0s						
K22A	**Casper**	**101.38**	**48**	IAMs_20	IAMs_20	19 38 51.0	
	comp=Z,2µm,19.0s						
S22A	**4UR Ranch, Cre**	**101.38**	**53**	IAMs_20	IAMs_20	19 37 09.5	
	comp=Z,2µm,21.0s						
Y22D	**IRIS PASSCAL I**	**101.42**	**56**	IAMs_20	IAMs_20	19 40 19.9	
	comp=Z,1µm,20.0s						
SNAA	**Sanae**	**101.61**	**188**	P	**Pdif**	**18 58 16.0**	**+12**
EPT	**El Paso**	**101.82**	**59**	IAMs_20	IAMs_20	19 40 44.6	
	comp=Z,1µm,18.0s						
N23A	**Red Feather La**	**101.91**	**49**	IAMs_20	IAMs_20	19 41 52.4	
	comp=Z,1µm,19.0s						
ISCO	**Idaho Springs**	**102.23**	**51**	IAMs_20	IAMs_20	19 37 38.8	
	comp=Z,2µm,21.0s						
SDCO	**Great Sand Dun**	**102.43**	**53**	IAMs_20	IAMs_20	19 37 55.4	
	comp=Z,2µm,21.0s						
DGMT	**Dagmar**	**102.52**	**42**	IAMs_20	IAMs_20	19 47 14.7	
	comp=Z,1µm,18.0s						
Q24A	**Divide**	**102.64**	**51**	IAMs_20	IAMs_20	19 38 33.7	
	comp=Z,2µm,20.0s						
PRGR	**Permogore**	**102.70**	**332**	*e*P	**Pdif**	**18 58 06.0**	**-3.3**
PRGR				pmax	pmax		
	comp=Z,30nm,0.9s						
MNTX	**Cornudas Mount**	**102.78**	**59**	IAMs_20	IAMs_20	19 41 08.0	
	comp=Z,1µm,18.0s						
VNA3	**Neumayer Olymp**	**102.80**	**186**	P	**Pdif**	**18 58 20.6**	**+11**
T25A	**Trinidad**	**103.33**	**53**	IAMs_20	IAMs_20	19 41 09.3	
	comp=Z,1µm,20.0s						
TXAR	**Lajitas Array**	**104.34**	**61**	PKiKP	**PKiKP**	**19 02 35.0**	**+0.9**
	comp=Z,1.5nm,1.1s,baz=242,slow=2.7,SNR=7.1						
KSCO	**Kaye Shedlock’**	**104.60**	**51**	IAMs_20	IAMs_20	19 38 45.5	
	comp=Z,2µm,22.0s						
OGNE	**Ogallala**	**104.86**	**49**	IAMs_20	IAMs_20	19 44 23.4	
	comp=Z,1µm,19.0s						
TMCR	**Tamitsa**	**105.31**	**336**	*e*P	**Pdif**	**18 58 18.7**	**-2.2**
TMCR				pmax	pmax		
	comp=Z,24nm,0.7s						
MDND	**Maddock**	**105.65**	**42**	IAMs_20	IAMs_20	19 40 48.6	
	comp=Z,1µm,20.0s						
AMTX	**Amarillo**	**105.70**	**55**	IAMs_20	IAMs_20	19 42 19.1	
	comp=Z,1µm,18.0s						
KLMR	**Klimovskoe**	**105.76**	**332**	*e*P	**Pdif**	**18 58 19.4**	**-3.5**
KLMR				pmax	pmax		
	comp=Z,40nm,1.4s						
KLMR	**Klimovskoe**	**105.76**	**332**	*e*Pdif	**Pdif**	**18 58 19.4**	**-3.5**
KLMR				AMP		18 58 23.5	
	comp=Z,40nm,1.4s						
KLMR				LR	LR	19 39 47.6	
D32A	**Dogwood Acres,**	**107.50**	**42**	IAMs_20	IAMs_20	19 42 05.7	
	comp=Z,2µm,20.0s						
ABTX	**Abilene, Hawle**	**107.58**	**58**	IAMs_20	IAMs_20	19 43 45.1	
	comp=Z,1µm,20.0s						
JCT	**Junction City**	**107.63**	**60**	IAMs_20	IAMs_20	19 39 57.4	
	comp=Z,2µm,20.0s						
R32A	**Long Quarter,**	**107.71**	**51**	IAMs_20	IAMs_20	19 42 15.8	
	comp=Z,2µm,20.0s						
BGNE	**Belgrade**	**107.71**	**48**	IAMs_20	IAMs_20	19 40 37.7	
	comp=Z,1µm,20.0s						
WMOK	**Wichita Mounta**	**108.09**	**55**	IAMs_20	IAMs_20	19 45 04.4	
	comp=Z,1µm,20.0s						
MOS	**Moscow**	**108.31**	**327**	*e*P	**Pdif**	**18 58 31.7**	**-2.7**
MOS				*e*		19 03 03.0	
MOS				MLR	MLR		
	comp=Z,1µm,21.0s						
MOS				MLR	MLR		
	comp=E,800nm,20.0s						
N33A	**J Bar K, Exete**	**108.34**	**49**	IAMs_20	IAMs_20	19 46 42.3	
	comp=Z,2µm,19.0s						
ECSD	**EROS Data Cent**	**108.43**	**46**	IAMs_20	IAMs_20	19 45 05.6	
	comp=Z,2µm,19.0s						
UNM	**Universidad Na**	**108.71**	**71**	IAMs_20	IAMs_20	19 40 50.8	
	comp=Z,1µm,21.0s						
OKCFA	**Oklahoma City**	**109.09**	**54**	IAMs_20	IAMs_20	19 45 02.8	
	comp=Z,1µm,18.0s						
TLIG	**Tlapa**	**109.32**	**73**	IAMs_20	IAMs_20	19 41 53.9	
	comp=Z,1µm,19.0s						
735A	**Kenedy**	**109.49**	**61**	IAMs_20	IAMs_20	19 44 25.7	
	comp=Z,2µm,20.0s						
WHTX	**Lake Whitney,**	**109.49**	**58**	IAMs_20	IAMs_20	19 46 50.6	
	comp=Z,2µm,18.0s						
435B	**Jarrell**	**109.50**	**59**	IAMs_20	IAMs_20	19 41 58.1	
	comp=Z,1µm,20.0s						
KVTX	**Kingsville**	**109.52**	**63**	IAMs_20	IAMs_20	19 46 11.6	
	comp=Z,2µm,18.0s						
T35A	**Sooner Cattle**	**109.64**	**53**	IAMs_20	IAMs_20	19 45 14.2	
	comp=Z,989nm,20.0s						
N35A	**Tabor**	**109.67**	**49**	IAMs_20	IAMs_20	19 46 36.5	
	comp=Z,1µm,19.0s						
SOC	**Sochi**	**110.23**	**315**	*i* PKIKP	**PKiKP**	**19 02 41.0**	**-3.4**
SOC				*e*PPP	PPP	19 05 41.0	
SOC				*e*PS	PS	19 12 39.3	-10
SOC				*e*SS	SS	19 18 48.0	+5.4
SOC				MLR	MLR		
	comp=Z,460nm,15.0s						
TUL1	**Leonard**	**110.36**	**54**	IAMs_20	IAMs_20	19 50 56.4	
	comp=Z,1µm,19.0s						
SPMN	**Marine on St.**	**110.78**	**44**	IAMs_20	IAMs_20	19 45 14.5	
	comp=Z,2µm,20.0s						
237A	**Washetta, Mont**	**110.88**	**58**	IAMs_20	IAMs_20	19 47 05.4	
	comp=Z,1µm,20.0s						
X37A	**Clayton**	**110.90**	**55**	IAMs_20	IAMs_20	19 43 49.6	
	comp=Z,1µm,21.0s						
EYMN	**Ely**	**110.94**	**40**	IAMs_20	IAMs_20	19 50 01.5	
	comp=Z,1µm,19.0s						
SCIA	**State Center**	**111.25**	**47**	IAMs_20	IAMs_20	19 47 35.3	
	comp=Z,2µm,20.0s						
E38A	**The Farm, Brul**	**111.27**	**42**	IAMs_20	IAMs_20	19 44 50.3	
	comp=Z,2µm,21.0s						
U38A	**Gravette**	**111.41**	**53**	IAMs_20	IAMs_20	19 45 08.9	
	comp=Z,950nm,20.0s						
K38A	**Parkersburg**	**111.41**	**46**	IAMs_20	IAMs_20	19 43 36.4	
	comp=Z,1µm,21.0s						
FINES	**FINESS Array B**	**111.43**	**336**	Pdiff	**Pdif**	**18 58 47.2**	**-0.9**
	comp=Z,2.3nm,0.5s,baz=57,slow=4.5,SNR=15						
FINES				PKiKP	**PKiKP**	**19 02 47.0**	**+0.9**
	comp=Z,5.7nm,1.0s,baz=104,slow=5.9,SNR=2.6						
FINES	**FINESS Array B**	**111.43**	**336**	P	**Pdif**	**18 58 47.5**	**-0.7**
FINES	**FINESS Array B**	**111.43**	**336**		**Pdif**	**18 58 47.5**	**-0.7**
P38A	**Dawn**	**111.49**	**49**	IAMs_20	IAMs_20	19 44 05.8	
	comp=Z,2µm,20.0s						
NATX	**Nacogdoches**	**111.88**	**58**	IAMs_20	IAMs_20	19 48 24.8	
	comp=Z,2µm,18.0s						
W39A	**Magazine**	**112.09**	**54**	IAMs_20	IAMs_20	19 47 10.2	
	comp=Z,1µm,19.0s						
MIAR	**Mount Ida**	**112.37**	**55**	IAMs_20	IAMs_20	20 00 15.6	
	comp=Z,1µm,18.0s						
U40A	**Yellville**	**112.64**	**53**	P	**PKiKP**	**19 02 49.7**	**+0.4**
	baz=281						
L40A	**Anamosa**	**112.66**	**46**	IAMs_20	IAMs_20	19 47 43.6	
	comp=Z,1µm,20.0s						
R40A	**Maddies Statio**	**112.72**	**51**	IAMs_20	IAMs_20	19 47 07.5	
	comp=Z,1µm,19.0s						
WLAR	**White Oak Lake**	**112.89**	**56**	IAMs_20	IAMs_20	19 49 38.4	
	comp=Z,901nm,19.0s						
X40A	**Basin Creek Fa**	**112.98**	**55**	IAMs_20	IAMs_20	19 53 20.8	
	comp=Z,891nm,18.0s						
D41A	**Chassel**	**113.10**	**41**	IAMs_20	IAMs_20	19 56 36.7	
	comp=Z,1µm,18.0s						
JFWS	**Jewell Farm**	**113.14**	**45**	IAMs_20	IAMs_20	19 48 11.2	
	comp=Z,2µm,19.0s						
Z41A	**Richland Creek**	**113.21**	**56**	IAMs_20	IAMs_20	19 49 35.0	
	comp=Z,994nm,19.0s						
UALR	**University of**	**113.33**	**54**	IAMs_20	IAMs_20	19 47 56.0	
	comp=Z,1µm,20.0s						
W41B	**Gary Mavity, V**	**113.34**	**54**	IAMs_20	IAMs_20	19 48 53.1	
	comp=Z,1µm,18.0s						
CCM	**Cathedral Cave**	**113.56**	**51**	IAMs_20	IAMs_20	19 47 03.7	
	comp=Z,1µm,20.0s						
F42A	**Maple Grove Fa**	**113.79**	**42**	IAMs_20	IAMs_20	19 47 56.0	
	comp=Z,2µm,20.0s						
L42A	**Oliver, Polo**	**113.80**	**46**	IAMs_20	IAMs_20	19 48 11.6	
	comp=Z,1µm,20.0s						
342A	**Flagon Creek P**	**113.91**	**58**	IAMs_20	IAMs_20	19 51 59.6	
	comp=Z,1µm,18.0s						
CCAR	**Cane Creek**	**113.95**	**55**	IAMs_20	IAMs_20	19 51 54.4	
	comp=Z,1µm,21.0s						
LCAR	**Lake Charles**	**114.04**	**53**	IAMs_20	IAMs_20	19 53 41.6	
	comp=Z,911nm,19.0s						
E43A	**Lone Tree Farm**	**114.34**	**41**	IAMs_20	IAMs_20	19 51 32.6	
	comp=Z,2µm,19.0s						
H43A	**Windswept, Lux**	**114.43**	**43**	IAMs_20	IAMs_20	19 46 21.0	
	comp=Z,1µm,20.0s						
HDIL	**Hopedale**	**114.44**	**48**	IAMs_20	IAMs_20	19 48 26.8	
	comp=Z,2µm,19.0s						
143A	**Socs Landing,**	**114.46**	**57**	IAMs_20	IAMs_20	19 49 02.2	
	comp=Z,2µm,19.0s						
P43A	**Skaggs, Pawnee**	**114.50**	**49**	IAMs_20	IAMs_20	19 51 48.5	
	comp=Z,916nm,19.0s						
K43A	**Burlington**	**114.56**	**45**	IAMs_20	IAMs_20	19 49 48.6	
	comp=Z,2µm,19.0s						
X43A	**Marvell**	**114.56**	**54**	IAMs_20	IAMs_20	19 48 52.6	
	comp=Z,896nm,20.0s						
LPAR	**Lepanto**	**114.81**	**53**	IAMs_20	IAMs_20	19 52 32.2	
	comp=Z,1µm,19.0s						
AKASG	**Malin Array Be**	**114.83**	**324**	PKiKP	**PKiKP**	**19 02 52.9**	**-0.1**
	comp=Z,3.4nm,0.6s,baz=52,slow=2.7,SNR=13						
AKASG				PP	**PP**	**19 03 52.1**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=60,slow=7.4,SNR=5.5						
AKASG				PKKPab	**PKKPab**	**19 13 42.9**	**+6.7**
	comp=Z,1.7nm,0.6s,baz=263,slow=4.4,SNR=8.1						
E44A	**Grand Marais A**	**114.96**	**41**	IAMs_20	IAMs_20	19 59 43.9	
	comp=Z,1µm,18.0s						
PARMO	**Parma**	**115.02**	**52**	IAMs_20	IAMs_20	19 47 02.5	
	comp=Z,2µm,20.0s						
PEBM	**Pemiscott Bayo**	**115.06**	**53**	IAMs_20	IAMs_20	19 46 35.5	
	comp=Z,1µm,20.0s						
Q44A	**Meyer Farm, Va**	**115.06**	**49**	IAMs_20	IAMs_20	19 49 27.5	
	comp=Z,2µm,20.0s						
M44A	**Midewin, Midew**	**115.13**	**47**	IAMs_20	IAMs_20	19 50 14.0	
	comp=Z,2µm,19.0s						
O44A	**Mansfield**	**115.16**	**48**	IAMs_20	IAMs_20	19 45 43.8	
	comp=Z,2µm,21.0s						
HENM	**Henderson Moun**	**115.23**	**52**	IAMs_20	IAMs_20	19 46 58.0	
	comp=Z,2µm,20.0s						
344A	**Westbrook Farm**	**115.24**	**58**	IAMs_20	IAMs_20	19 49 23.8	
	comp=Z,1µm,19.0s						
LNXT	**Lenox**	**115.35**	**52**	IAMs_20	IAMs_20	19 48 24.3	
	comp=Z,2µm,20.0s						
HALT	**Halls**	**115.51**	**53**	IAMs_20	IAMs_20	19 46 29.6	
	comp=Z,1µm,21.0s						
F45A	**CMU Biological**	**115.55**	**41**	P	**PKPdf**	**19 02 55.2**	**+0.7**
	baz=290						
BRTR	**Keskin Array B**	**115.58**	**312**	PKP	**PKiKP**	**19 02 54.5**	**-0.5**
	comp=Z,1.6nm,0.9s,baz=105,slow=2.8,SNR=5.4						
BRTR				PKKPbc	**PKKPbc**	**19 13 30.6**	**+1.6**
	comp=Z,1.1nm,0.8s,baz=199,slow=6.5,SNR=5.9						
Y45A	**Yeager Farm, C**	**115.78**	**55**	IAMs_20	IAMs_20	19 47 23.8	
	comp=Z,1µm,20.0s						
OLIL	**Olney**	**115.80**	**49**	IAMs_20	IAMs_20	19 49 58.0	
	comp=Z,2µm,20.0s						
T45A	**Paducah**	**115.81**	**51**	IAMs_20	IAMs_20	19 47 03.2	
	comp=Z,988nm,20.0s						
E46A	**Sault Ste Mari**	**116.09**	**40**		**PKPdf**	**19 02 55.5**	**0.0**
E46A				IAMs_20	IAMs_20	19 54 57.8	
	comp=Z,2µm,19.0s						
SFIN	**Lafayette**	**116.11**	**47**	IAMs_20	IAMs_20	19 50 05.8	
	comp=Z,2µm,20.0s						
L46A	**Eue Claire**	**116.20**	**45**	IAMs_20	IAMs_20	19 49 46.2	
	comp=Z,1µm,20.0s						
P46A	**Rosedale**	**116.24**	**48**	IAMs_20	IAMs_20	19 48 39.3	
	comp=Z,2µm,20.0s						
346A	**Big Creek Wild**	**116.32**	**58**	IAMs_20	IAMs_20	19 52 38.3	
	comp=Z,1µm,19.0s						
SORM	**Soroca**	**116.39**	**322**	⇑P	**PKPdf**	**19 02 55.0**	**-1.0**
SORM	**Soroca**	**116.39**	**322**	⇑PKIKP	**PKPdf**	**19 02 55.0**	**-1.0**
D47A	**Chapleau**	**116.60**	**39**	P	**PKiKP**	**19 02 57.4**	**+0.9**
	baz=293						
E47A	**Iron Bridge**	**116.72**	**40**	P	**PKiKP**	**19 02 57.0**	**+0.2**
	baz=292						
PLAL	**Pickwick Lake**	**116.72**	**53**	IAMs_20	IAMs_20	19 51 31.8	
	comp=Z,1µm,18.0s						
I47A	**Gladwin**	**116.79**	**43**	IAMs_20	IAMs_20	19 47 52.5	
	comp=Z,1µm,20.0s						
BLO	**Bloomington**	**116.87**	**49**	IAMs_20	IAMs_20	19 46 49.1	
	comp=Z,2µm,22.0s						
N47A	**Urbana**	**116.98**	**46**	IAMs_20	IAMs_20	19 50 25.8	
	comp=Z,2µm,20.0s						
T47A	**Sharon Grove**	**117.01**	**51**		**PKPdf**	**19 02 55.9**	**-1.7**
T47A				IAMs_20	IAMs_20	19 46 56.0	
	comp=Z,1µm,20.0s						
Z47A	**Carrollton**	**117.12**	**55**	IAMs_20	IAMs_20	19 51 00.4	
	comp=Z,1µm,20.0s						
TLCR		**117.23**	**319**	⇑P	**PKiKP**	**19 02 58.5**	**+0.8**
TLCR		**117.23**	**319**	⇑PKIKP	**PKiKP**	**19 02 58.5**	**+0.8**
WCI	**Wyandotte Cave**	**117.30**	**49**	IAMs_20	IAMs_20	19 51 03.7	
	comp=Z,2µm,20.0s						
NB2	**NORSAR Subarra**	**117.31**	**340**	PKPdf	**PKPdf**	**19 02 57.4**	**-0.1**
	comp=Z,4.7nm,1.1s,baz=44,slow=1.9						
NOA	**NORSAR Array B**	**117.31**	**340**	PKP	**PKiKP**	**19 02 58.4**	**+0.9**
	comp=Z,1.7nm,1.0s,baz=53,slow=2.2,SNR=2.9						
D48A	**Paudash Townsh**	**117.37**	**39**	P	**PKiKP**	**19 02 58.7**	**+0.7**
	baz=294						
E48A	**Lockeyer**	**117.42**	**40**	P	**PKiKP**	**19 02 58.6**	**+0.5**
	baz=293						
M48A	**Edgerton**	**117.49**	**46**	IAMs_20	IAMs_20	19 51 02.3	
	comp=Z,2µm,19.0s						
GIUM	**Giurgiulesti**	**117.52**	**319**	⇑P	**PKPdf**	**19 02 55.6**	**-2.7**
V48A	**Smith Brothers**	**117.54**	**52**	IAMs_20	IAMs_20	19 49 48.3	
	comp=Z,2µm,20.0s						
L48A	**N Adams**	**117.54**	**45**	P	**PKiKP**	**19 02 59.4**	**+0.9**
	baz=289						
X48A	**Hartselle**	**117.67**	**54**	IAMs_20	IAMs_20	19 48 34.9	
	comp=Z,923nm,19.0s						
CFR	**Carcaliu**	**117.68**	**319**	⇓P	**PKiKP**	**19 02 59.2**	**+0.5**
CFR	**Carcaliu**	**117.68**	**319**	⇓PKIKP	**PKiKP**	**19 02 59.2**	**+0.6**
GHRR		**117.81**	**320**	⇓P	**PKPdf**	**19 02 57.9**	**-1.0**
CLTN	**Cedars of Leba**	**117.84**	**52**		**PKPdf**	**19 02 58.9**	**-0.3**
CLTN				IAMs_20	IAMs_20	19 50 25.1	
	comp=Z,1µm,20.0s						
I49A	**Point Hope**	**117.96**	**42**	IAMs_20	IAMs_20	19 56 39.3	
	comp=Z,2µm,18.0s						
LRAL	**Lakeview Retre**	**118.03**	**55**	IAMs_20	IAMs_20	19 50 13.6	
	comp=Z,1µm,20.0s						
LRAL	**Lakeview Retre**	**118.03**	**55**	P	**PKiKP**	**19 03 00.5**	**+0.8**
	baz=283						
N49A	**Columbus Grove**	**118.05**	**46**		**PKPdf**	**19 02 58.8**	**-0.7**
N49A	**Columbus Grove**	**118.05**	**46**	P	**PKiKP**	**19 03 00.4**	**+0.9**
	baz=289						
R49A	**Shelbyville**	**118.13**	**49**	IAMs_20	IAMs_20	19 55 32.6	
	comp=Z,1µm,18.0s						
U49A	**Red Boiling Sp**	**118.16**	**51**		**PKiKP**	**19 02 59.9**	**+0.1**
U49A				IAMs_20	IAMs_20	19 46 23.5	
	comp=Z,1µm,22.0s						
O49A	**Covington**	**118.18**	**47**	IAMs_20	IAMs_20	19 51 11.6	
	comp=Z,1µm,19.0s						
LVV	**L'vov**	**118.22**	**325**	*e*PKIKP	PKPdf	19 02 48.7	-11
LVV				MLR	MLR		
	comp=Z,400nm,22.0s						
LVV				MLR	MLR		
	comp=E,400nm,23.0s						
LVV				MLR	MLR		
	comp=N,200nm,20.0s						
BIZ	**Bicaz**	**118.27**	**321**	⇑P	**PKiKP**	**19 03 00.9**	**+1.1**
SNET	**Serv Nac Est T**	**118.38**	**77**	IAMs_20	IAMs_20	19 44 24.2	
	comp=Z,1µm,20.0s						
BISRR	**Bisoca**	**118.46**	**320**	⇑P	**PKiKP**	**19 03 00.6**	**+0.4**
BUR08	**Bucovina Ar. S**	**118.52**	**322**		**PKiKP**	**19 03 00.7**	**+0.3**
BURAR	**Bucovina Array**	**118.52**	**322**	⇑P	**PKiKP**	**19 03 01.4**	**+1.0**
BURAR	**Bucovina Array**	**118.52**	**322**	⇑PKIKP	**PKiKP**	**19 03 01.4**	**+1.0**
BURAR	**Bucovina Array**	**118.52**	**322**		**PKiKP**	**19 03 00.7**	**+0.4**
D50A	**G1974 Best Tow**	**118.59**	**38**	P	**PKiKP**	**19 03 01.3**	**+0.9**
	baz=296						
M50A	**Fremont**	**118.70**	**45**	IAMs_20	IAMs_20	19 52 09.4	
	comp=Z,2µm,20.0s						
R50A	**Paris**	**118.77**	**49**	IAMs_20	IAMs_20	19 54 57.5	
	comp=Z,1µm,19.0s						
FPAL	**Fort Paine**	**118.80**	**53**	IAMs_20	IAMs_20	19 52 27.7	
	comp=Z,1µm,19.0s						
Z50A	**Ashland**	**118.86**	**55**		**PKPdf**	**19 03 01.1**	**-0.2**
Z50A				IAMs_20	IAMs_20	19 57 19.5	
	comp=Z,880nm,18.0s						
Z50A	**Ashland**	**118.86**	**55**	P	**PKiKP**	**19 03 02.1**	**+0.7**
	baz=284						
250A	**Grady**	**118.87**	**56**	IAMs_20	IAMs_20	19 50 50.8	
	comp=Z,1µm,20.0s						
W50A	**Signal Mountai**	**118.87**	**53**		**PKiKP**	**19 03 01.5**	**+0.2**
S50A	**Richmond**	**118.89**	**50**	P	**PKiKP**	**19 03 02.6**	**+1.3**
	baz=287						
MLR	**Muntele Rosu**	**118.97**	**320**	⇑P	**PKiKP**	**19 03 02.4**	**+1.0**
MLR	**Muntele Rosu**	**118.97**	**320**	⇑PKIKP	**PKiKP**	**19 03 02.4**	**+1.0**
MLR	**Muntele Rosu**	**118.97**	**320**		**PKiKP**	**19 03 01.6**	**+0.2**
KWP	**Kalwaria Pacla**	**119.06**	**325**	PKIKP	**PKiKP**	**19 03 02.1**	**+0.8**
KWP	**Kalwaria Pacla**	**119.06**	**325**		**PKiKP**	**19 03 02.1**	**+0.8**
F51A	**Arnstein**	**119.07**	**39**	P	**PKiKP**	**19 03 02.0**	**+0.6**
	baz=295						
E51A	**G1948 Merrick**	**119.08**	**39**	P	**PKiKP**	**19 03 02.4**	**+1.0**
	baz=296						
DOPR	**Dopca**	**119.13**	**321**	⇑P	**PKiKP**	**19 03 02.8**	**+1.3**
ACSO	**Alum Creek Sta**	**119.14**	**46**		**PKiKP**	**19 03 02.9**	**+1.3**
ACSO				IAMs_20	IAMs_20	19 52 49.1	
	comp=Z,1µm,19.0s						
Q51A	**Peebles**	**119.27**	**48**	IAMs_20	IAMs_20	19 52 40.6	
	comp=Z,2µm,19.0s						
P51A	**Williamsport**	**119.33**	**47**	IAMs_20	IAMs_20	19 49 53.3	
	comp=Z,1µm,20.0s						
BOSA	**Boshof**	**119.37**	**233**	PKP	**PKiKP**	**19 03 02.9**	**+0.3**
	comp=Z,2.4nm,1.0s,baz=85,slow=18,SNR=1.6						
X51A	**Calhoun**	**119.40**	**53**	IAMs_20	IAMs_20	19 48 38.5	
	comp=Z,2µm,21.0s						
LSQQ	**Lebel-sur-Quev**	**119.42**	**35**	P	**PKiKP**	**19 03 02.3**	**+0.4**
	baz=299						
CPCT	**Cooper Cave**	**119.43**	**52**	IAMs_20	IAMs_20	19 51 23.2	
	comp=Z,1µm,20.0s						
PLCA	**Paso Flores**	**119.44**	**143**	PKP	**PKiKP**	**19 03 02.5**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=342,slow=6.2,SNR=3.9						
PLCA	**Paso Flores**	**119.44**	**143**	PKIKP	**PKPdf**	**19 03 02.3**	**0.0**
PLCA	**Paso Flores**	**119.44**	**143**		**PKPdf**	**19 03 02.3**	**0.0**
Z51A	**Franklin**	**119.45**	**55**	IAMs_20	IAMs_20	19 56 22.2	
	comp=Z,884nm,20.0s						
V51A	**Loudon**	**119.46**	**52**	IAMs_20	IAMs_20	19 59 51.1	
	comp=Z,964nm,18.0s						
F52A	**Sundridge**	**119.50**	**39**	P	**PKiKP**	**19 03 03.0**	**+0.8**
	baz=296						
S51A	**Beattyville**	**119.52**	**49**	IAMs_20	IAMs_20	19 52 12.3	
	comp=Z,1µm,20.0s						
VOIR		**119.57**	**320**	⇑P	**PKiKP**	**19 03 08.0**	**+5.6**
VOIR		**119.57**	**320**	⇑PKIKP	**PKiKP**	**19 03 08.0**	**+5.5**
VLDQ	**Val d'Or**	**119.60**	**36**	IAMs_20	IAMs_20	19 51 46.5	
	comp=Z,2µm,20.0s						
MATP	**Matopo**	**119.66**	**243**	PKP	**PKiKP**	**19 03 05.0**	**+1.5**
	comp=Z,2.3nm,0.6s,baz=184,slow=2.1,SNR=7.0						
E52A	**Mattawa**	**119.71**	**39**	P	**PKiKP**	**19 03 02.9**	**+0.3**
	baz=296						
UZH	**Uzhgorod**	**119.79**	**324**	*e*PKIKP	**PKiKP**	**19 03 08.9**	**+6.3**
UZH				*e*		19 03 17.5	
TRPA	**Tarpa**	**119.89**	**324**	⇑P	**PKPdf**	**19 03 02.1**	**-0.7**
D53A	**Lac Vacive, Po**	**119.94**	**37**		**PKPdf**	**19 03 01.5**	**-1.5**
D53A				IAMs_20	IAMs_20	19 59 12.2	
	comp=Z,1µm,19.0s						
D53A	**Lac Vacive, Po**	**119.94**	**37**	P	**PKiKP**	**19 03 03.8**	**+0.7**
	baz=298						
TKL	**Tuckaleechee C**	**119.95**	**52**	PKIKP	**PKPdf**	**19 03 03.4**	**0.0**
TKL	**Tuckaleechee C**	**119.95**	**52**		**PKPdf**	**19 03 03.4**	**0.0**
152A	**Waverly Hall**	**119.98**	**55**	IAMs_20	IAMs_20	19 51 42.2	
	comp=Z,960nm,20.0s						
HUMR	**Humele**	**120.00**	**319**	⇓P	**PKiKP**	**19 03 03.4**	**+0.2**
COPA	**Copaceanca**	**120.00**	**319**	⇑P	**PKiKP**	**19 03 03.2**	**0.0**
O52A	**Adamsville**	**120.01**	**46**	IAMs_20	IAMs_20	19 52 20.0	
	comp=Z,1µm,20.0s						
V52A	**Sevierville**	**120.04**	**51**	IAMs_20	IAMs_20	19 51 37.4	
	comp=Z,1µm,20.0s						
ELND	**Elena**	**120.05**	**317**	⇑P	**PKiKP**	**19 03 04.0**	**+0.7**
SADO	**Sadowa**	**120.06**	**40**	IAMs_20	IAMs_20	19 50 22.7	
	comp=Z,1µm,20.0s						
T52A	**Hallie**	**120.14**	**50**	IAMs_20	IAMs_20	19 52 24.8	
	comp=Z,2µm,19.0s						
Y52A	**Lilburn**	**120.21**	**54**	IAMs_20	IAMs_20	19 49 28.2	
	comp=Z,1µm,20.0s						
Y52A	**Lilburn**	**120.21**	**54**	P	**PKiKP**	**19 03 05.5**	**+1.6**
	baz=285						
ALGO	**Algonquin Park**	**120.23**	**39**	P	**PKiKP**	**19 03 03.9**	**+0.3**
	baz=297						
G53A	**Haliburton**	**120.24**	**40**	P	**PKiKP**	**19 03 04.6**	**+0.9**
	baz=296						
TGUH	**Tegucigalpa,Un**	**120.27**	**77**	IAMs_20	IAMs_20	19 50 05.3	
	comp=Z,850nm,19.0s						
E53A	**Dumoine, Ponti**	**120.28**	**38**	P	**PKiKP**	**19 03 04.0**	**+0.3**
	baz=297						
M53A	**WI Miller and**	**120.36**	**44**	P	**PKiKP**	**19 03 04.7**	**+0.6**
	baz=292						
OJC	**Ojcow**	**120.37**	**327**	PKIKP	**PKPdf**	**19 03 03.5**	**-0.2**
OJC	**Ojcow**	**120.37**	**327**	PKPdf	**PKPdf**	**19 03 03.5**	**-0.2**
DRGR		**120.42**	**322**	⇑P	**PKPdf**	**19 03 03.4**	**-0.6**
DRGR		**120.42**	**322**	⇑PKIKP	**PKPdf**	**19 03 03.4**	**-0.6**
G54A	**Lake Saint Pet**	**120.46**	**39**	P	**PKiKP**	**19 03 04.4**	**+0.3**
	baz=296						
N53A	**Lisbon**	**120.47**	**45**		**PKiKP**	**19 03 04.6**	**+0.4**
N53A	**Lisbon**	**120.47**	**45**	P	**PKiKP**	**19 03 05.0**	**+0.7**
	baz=292						
H53A	**Bobcaygeon**	**120.50**	**40**	P	**PKiKP**	**19 03 05.1**	**+0.9**
	baz=296						
NIE	**Niedzica**	**120.52**	**326**	*e*PKP	**PKiKP**	**19 03 04.7**	**+0.6**
NIE	**Niedzica**	**120.52**	**326**	*e*PKIKP	**PKiKP**	**19 03 04.7**	**+0.6**
E54A	**Lac Daplat, Po**	**120.55**	**38**	P	**PKPdf**	**19 03 04.1**	**0.0**
	baz=298						
P53A	**Whipple**	**120.55**	**47**	IAMs_20	IAMs_20	19 53 40.4	

	comp=Z,1µm,21.0s						
V53A	Saluda	120.70	51	IAMs_20	IAMs_20	19 52 17.9	
	comp=Z,1µm,20.0s						
PLVB	Pleven	120.71	318	⇑P	PKiKP	19 03 05.3	+0.7
BG3	Lake Jocassee	120.80	52	IAMs_20	IAMs_20	19 50 51.7	
	comp=Z,788nm,19.0s						
GOGA	Godfrey	120.81	54	IAMs_20	IAMs_20	19 51 59.1	
	comp=Z,1µm,21.0s						
L54A	Sinclairville	120.98	43	P	PKPdf	19 03 05.0	-0.1
	baz=294						
N54A	Moraine State	121.01	45	P	PKiKP	19 03 06.1	+0.7
	baz=292						
GZR	Gura Zlata	121.03	321	⇑P	PKiKP	19 03 05.4	+0.1
GZR	Gura Zlata	121.03	321	⇑PKIKP	PKiKP	19 03 05.4	+0.1
O54A	Avella	121.03	46	P	PKiKP	19 03 06.0	+0.6
	baz=292						
LANS	Liptovska Anna	121.12	326	*e*PKIKP	PKiKP	19 03 07.1	+1.8
LANS	Liptovska Anna	121.12	326	*e*PKP	PKiKP	19 03 07.1	+1.8
LANS				*e*		19 03 07.3	
Q54A	Coxs Mills	121.13	47		PKiKP	19 03 05.8	+0.2
Q54A				IAMs_20	IAMs_20	19 57 03.8	
	comp=Z,1µm,20.0s						
Q54A	Coxs Mills	121.13	47	P	PKiKP	19 03 05.9	+0.3
	baz=290						
DELO	Deloro Mine	121.15	40	IAMs_20	IAMs_20	19 50 24.5	
	comp=Z,1µm,20.0s						
SCHQ	Schefferville	121.17	26	PKP	PKPdf	19 03 05.1	0.0
	comp=Z,2.4nm,0.7s,baz=22,slow=2.7,SNR=3.8						
SCHQ	Schefferville	121.17	26		PKPdf	19 03 03.8	-1.3
S54A	Dingess, Beckl	121.18	49	IAMs_20	IAMs_20	19 49 51.3	
	comp=Z,1µm,20.0s						
PLVO	Plevna	121.26	39		PKiKP	19 03 06.5	+0.8
PLVO				IAMs_20	IAMs_20	19 49 54.3	
	comp=Z,1µm,21.0s						
D55A	Sainte-Anne-du	121.30	37	P	PKiKP	19 03 06.2	+0.5
	baz=300						
SIRR	Siria	121.31	322	⇑P	PKPdf	19 03 03.4	-2.2
154A	Montrose	121.31	55	IAMs_20	IAMs_20	19 50 10.4	
	comp=Z,1µm,21.0s						
W54A	Cherokee Point	121.36	52	P	PKiKP	19 03 07.5	+1.3
	baz=287						
X54A	Belton	121.37	53	P	PKiKP	19 03 07.5	+1.3
	baz=287						
G55A	Calabogie	121.38	39	P	PKiKP	19 03 06.3	+0.4
	baz=298						
H55A	Tweed	121.41	40	P	PKiKP	19 03 06.4	+0.5
	baz=297						
LSZ	Lusaka	121.48	249	PKP	PKiKP	19 03 07.8	+0.7
	comp=Z,1.5nm,0.5s,baz=78,slow=1.6,SNR=5.0						
LSZ	Lusaka	121.48	249	PKIKP	PKiKP	19 03 08.0	+0.9
LSZ	Lusaka	121.48	249		PKiKP	19 03 08.0	+0.9
PSZ	Piszkesteto	121.53	325	⇑P	PKPdf	19 03 06.1	0.0
PSZ	Piszkesteto	121.53	325	⇑PKIKP	PKPdf	19 03 06.1	0.0
PSZ	Piszkesteto	121.53	325		PKiKP	19 03 06.4	+0.2
PSZ				IAMs_20	IAMs_20	20 01 26.7	
	comp=Z,1µm,19.0s						
HODGE	Hodges	121.55	53	IAMs_20	IAMs_20	19 51 04.6	
	comp=Z,1µm,20.0s						
J55A	Hilton	121.56	41	P	PKiKP	19 03 07.1	+0.8
	baz=296						
L55A	Hinsdale	121.60	43	P	PKiKP	19 03 07.2	+0.7
	baz=294						
MCWV	Mont Chateau	121.60	46	IAMs_20	IAMs_20	19 55 17.2	
	comp=Z,791nm,19.0s						
MCWV	Mont Chateau	121.60	46	P	PKiKP	19 03 07.8	+1.3
	baz=292						
K55A	Perry	121.62	42	P	PKiKP	19 03 07.1	+0.7
	baz=295						
BZS	Buzias	121.64	322	⇑P	PKiKP	19 03 06.5	+0.1
BZS	Buzias	121.64	322	⇑PKIKP	PKiKP	19 03 06.5	+0.1
Q55A	Buckhannon	121.67	47	P	PKiKP	19 03 07.8	+1.0
	baz=291						
D56A	ZEC Mazanza, M	121.71	36	P	PKiKP	19 03 06.5	0.0
	baz=300						
PAULI	Pauline	121.73	52	IAMs_20	IAMs_20	19 52 09.2	
	comp=Z,1µm,20.0s						
O55A	Ligonier	121.78	45	P	PKiKP	19 03 07.9	+1.0
	baz=292						
E56A	St. Veronique	121.80	37	P	PKiKP	19 03 07.2	+0.5
	baz=300						
MORC	Moravsky Berou	121.83	328	⇓P	PKiKP	19 03 08.0	+1.3
MORC	Moravsky Berou	121.83	328	⇓PKIKP	PKiKP	19 03 08.0	+1.3
MORC	Moravsky Berou	121.83	328	*e*PKP	PKiKP	19 03 07.5	+0.8
MORC	Moravsky Berou	121.83	328		PKiKP	19 03 07.5	+0.8
KSP	Ksiaz	121.87	329	*e*PKP	PKiKP	19 03 07.3	+0.6
KSP	Ksiaz	121.87	329	*e*PKIKP	PKiKP	19 03 07.3	+0.6
V55A	Taylorsville	121.88	51	P	PKiKP	19 03 08.4	+1.2
	baz=288						
R55A	Marlinton	121.90	48	P	PKiKP	19 03 08.1	+0.8
	baz=291						
VTS	Vitosha	121.95	318	⇑P	PKiKP	19 03 07.4	+0.1
VTS	Vitosha	121.95	318	*e*P	PKPdf	19 03 07.2	0.0
VTS	Vitosha	121.95	318	⇑PKIKP	PKiKP	19 03 07.4	+0.1
VTS	Vitosha	121.95	318		PKPdf	19 03 07.2	0.0
Y55A	Saluda	121.96	53	P	PKiKP	19 03 08.9	+1.5
	baz=287						
MDVR	Moldovita	121.98	321	⇑P	PKiKP	19 03 07.4	+0.2
H56A	Elgin	121.98	40	P	PKiKP	19 03 07.6	+0.5
	baz=298						
X55A	Gracelyn & Ava	121.98	52	P	PKiKP	19 03 08.8	+1.4
	baz=287						
255A	Hazlehurst	122.01	56	IAMs_20	IAMs_20	19 54 29.9	
	comp=Z,979nm,20.0s						
KMSC	Kings Mountain	122.01	52	IAMs_20	IAMs_20	19 50 12.6	
	comp=Z,2µm,21.0s						
KMSC	Kings Mountain	122.01	52	P	PKiKP	19 03 09.0	+1.6
	baz=288						
BLA	Blacksburg	122.05	49	IAMs_20	IAMs_20	19 49 15.2	
	comp=Z,1µm,22.0s						
MMB	Musomiste	122.05	317	*e*P	PKPdf	19 03 06.0	-1.2
M56A	Emporium	122.06	44		PKPdf	19 03 07.3	+0.1
M56A	Emporium	122.06	44	P	PKiKP	19 03 08.3	+0.9
	baz=294						
KRLC	Kraliky	122.06	328	*e*PKPDF	PKiKP	19 03 08.4	+1.2
KRLC				*e*x	x	19 03 20.3	
KRLC	Kraliky	122.06	328	*e*PKIKP	PKiKP	19 03 08.4	+1.2
KRLC				*e*		19 03 20.3	
OSTC	Ostas	122.08	329	*e*PKPDF	PKiKP	19 03 08.0	+0.9
OSTC				*e*x	x	19 03 21.5	
CHVC	Chvalec	122.14	329	*e*PKPDF	PKiKP	19 03 08.6	+1.3
DPC	Dobruska-Polom	122.14	329	*e*PKPDF	PKiKP	19 03 07.9	+0.6
DPC				*e*x	x	19 03 21.0	
DPC	Dobruska-Polom	122.14	329	*e*PKIKP	PKiKP	19 03 07.9	+0.6
DPC				*e*		19 03 21.0	
UPC	Upice	122.21	329	*e*PKPDF	PKiKP	19 03 07.7	+0.3
UPC				*e*x	x	19 03 20.8	
UPC	Upice	122.21	329	*e*PKIKP	PKiKP	19 03 07.7	+0.3
UPC				*e*		19 03 20.8	
L56A	Greenwood	122.22	43	IAMs_20	IAMs_20	19 50 50.0	
	comp=Z,2µm,21.0s						
L56A	Greenwood	122.22	43	P	PKiKP	19 03 08.3	+0.6
	baz=295						
D57A	Chemin Vers le	122.24	36	P	PKiKP	19 03 08.7	+1.1
	baz=301						
JAVC	Velka Javorina	122.28	327	*e*PKP	PKiKP	19 03 09.2	+1.6
U56A	King	122.36	50	IAMs_20	IAMs_20	19 50 41.7	
	comp=Z,2µm,20.0s						
R56A	Bull Pasture M	122.38	47	P	PKiKP	19 03 09.3	+1.1
	baz=291						
P56A	Dayton Farm, R	122.38	46	P	PKiKP	19 03 08.5	+0.4
	baz=292						
E57A	Chemin Saint G	122.40	37	P	PKiKP	19 03 08.4	+0.5
	baz=301						
T56A	Rocky Mt	122.40	49	P	PKiKP	19 03 09.4	+1.2
	baz=290						
X56A	White Oak	122.45	52	P	PKiKP	19 03 09.9	+1.6
	baz=288						
Z56A	Williston	122.52	54	IAMs_20	IAMs_20	19 51 26.3	
	comp=Z,2µm,21.0s						
656A	Willston	122.59	58	IAMs_20	IAMs_20	19 52 05.6	
	comp=Z,1µm,20.0s						
VRAC	Vranov	122.61	327	⇑P	PKiKP	19 03 09.3	+1.1
VRAC	Vranov	122.61	327	⇑PKIKP	PKiKP	19 03 09.3	+1.1
VRAC	Vranov	122.61	327	*e*PKP	PKiKP	19 03 08.9	+0.7
SSPA	Standing Stone	122.61	44		PKiKP	19 03 09.3	+0.8
SSPA	Standing Stone	122.61	44	P	PKiKP	19 03 09.5	+1.0
	baz=294						
JTS	Las Juntas de	122.62	81	IAMs_20	IAMs_20	19 48 40.7	
	comp=Z,736nm,18.0s						
K57A	Scipio Center	122.65	42	P	PKiKP	19 03 09.2	+0.7
	baz=296						
I57A	Carthage	122.66	40	P	PKiKP	19 03 09.3	+0.8
	baz=298						
BSEG	Bad Segeberg	122.68	335	*e*PKPdf	PKiKP	19 03 08.7	+0.6
	baz=49,slow=1.9						
J57A	Williamstown	122.69	41	IAMs_20	IAMs_20	19 50 48.4	
	comp=Z,2µm,22.0s						
L57A	Andrews Acres	122.75	42	P	PKiKP	19 03 08.9	+0.2
	baz=296						
D58A	Chemin du LacG	122.78	36	P	PKiKP	19 03 08.7	0.0
	baz=302						
M57A	Sunshine Farm,	122.84	43	P	PKiKP	19 03 09.6	+0.7
	baz=295						
KRUC	Moravsky	122.86	327	*e*PKP	PKiKP	19 03 09.2	+0.5
PVCC	Panska Ves	122.93	330	*e*PKPDF	PKiKP	19 03 09.8	+1.0
PVCC	Panska Ves	122.93	330	*e*PKIKP	PKiKP	19 03 09.8	+1.0
VAY	Valandovo	122.95	317	*i* P	PKPdf	19 03 08.6	-0.3
O57A	Amberson	122.96	45	P	PKiKP	19 03 10.2	+1.0
	baz=294						
V57A	Coltrane Farms	122.98	50	P	PKiKP	19 03 10.4	+1.1
	baz=290						
P57A	Homestead Farm	122.98	46	IAMs_20	IAMs_20	19 56 03.6	
	comp=Z,1µm,20.0s						
P57A	Homestead Farm	122.98	46	P	PKiKP	19 03 10.4	+1.2
	baz=293						
T57A	Hurt	122.99	49	IAMs_20	IAMs_20	19 49 54.3	
	comp=Z,2µm,21.0s						
LONY	Lake Ozonia	123.02	39	IAMs_20	IAMs_20	19 51 37.9	
	comp=Z,1µm,21.0s						
BRG	Berggiesshubel	123.03	330	*i* PKP	PKiKP	19 03 09.6	+0.6
	comp=Z,46nm,1.5s						
BRG				*i*		19 03 22.5	
	comp=Z,72nm,1.8s						
BRG	Berggiesshubel	123.03	330	*e*PKPdf	PKiKP	19 03 09.1	+0.2
	baz=49,slow=1.9						
BRG	Berggiesshubel	123.03	330	*i* PKIKP	PKiKP	19 03 09.6	+0.6
BRG				*i*		19 03 22.5	
BRG				pmax	pmax		
	comp=Z,46nm,1.5s						
BRG				pmax	pmax		
	comp=Z,72nm,1.8s						
BRG				MLR	MLR		
	comp=N,871nm,17.5s						
BRG				MLR	MLR		
	comp=E,481nm,19.8s						
BRG				MLR	MLR		
	comp=Z,1µm,18.2s						
W57A	Gilead	123.05	51	P	PKiKP	19 03 10.4	+0.9
	baz=289						
R57A	Stanardsville	123.06	47	P	PKiKP	19 03 09.8	+0.4
	baz=292						
G58A	Ormstown	123.09	38	P	PKiKP	19 03 09.7	+0.5
	baz=300						
Y57A	Sumter	123.10	53	IAMs_20	IAMs_20	19 59 04.4	
	comp=Z,1µm,19.0s						
U57A	Blanch	123.13	49	P	PKiKP	19 03 10.5	+0.9
	baz=290						
J58A	Remsen	123.17	40	P	PKiKP	19 03 09.9	+0.4
	baz=298						
257A	Skidaway Islan	123.18	55	IAMs_20	IAMs_20	19 51 04.9	
	comp=Z,1µm,22.0s						
TREC	Trest	123.20	328	*e*PKPDF	PKiKP	19 03 09.9	+0.5
TREC	Trest	123.20	328	*e*PKIKP	PKiKP	19 03 09.9	+0.5
CLL	Collm	123.22	331	*i* PKPdf	PKiKP	19 03 10.2	+0.9
	comp=Z,18nm,1.0s						
CLL				*i*		19 03 22.8	
	comp=Z,16nm,0.9s						
CLL				*e*PS	PS	19 14 39.0	-7.4
CLL				*e*PPS	PPS	19 16 11.0	
CLL				*e*SS	SS	19 21 42.0	+11
CLL				*e*SSS	SSS	19 26 30.0	
CLL				LmV		20 01 00.0	
	comp=Z,700nm,20.8s						
CLL	Collm	123.22	331	*e*PKPdf	PKiKP	19 03 10.3	+0.9
	baz=49,slow=1.9						
CLL	Collm	123.22	331	*i* PKIKP	PKiKP	19 03 10.2	+0.9
CLL				pmax	pmax		
	comp=Z,18nm,1.0s						
CLL				MLR	MLR		
	comp=Z,700nm,20.8s						
PRU	Pruhonice	123.28	329	*e*PKPDF	PKiKP	19 03 09.6	+0.1
PRU				*e*x	x	19 03 22.5	
PRU	Pruhonice	123.28	329	*e*PKIKP	PKiKP	19 03 09.6	+0.1
PRU				*e*		19 03 22.5	
FBE	Freiberg	123.29	331	*e*PKPdf	PKiKP	19 03 10.0	+0.5
	baz=49,slow=1.9						
N58A	Sunbury	123.34	44	P	PKiKP	19 03 10.2	+0.3
	baz=295						
H58A	Gabriels	123.37	39	P	PKiKP	19 03 10.5	+0.6
	baz=299						
Q58A	Fox Den Farm,	123.43	46	P	PKiKP	19 03 11.1	+1.0
	baz=293						
SKO	Skopje	123.43	318	*i* P	PKiKP	19 03 10.5	+0.4
HDC	Heredia	123.45	82	IAMs_20	IAMs_20	19 48 48.7	
	comp=Z,766nm,19.0s						
V58A	Windy Hill, Pi	123.52	50	IAMs_20	IAMs_20	19 51 36.2	
	comp=Z,2µm,20.0s						
LIT	Litokhoron	123.52	315	PKIKP	PKPdf	19 03 09.7	-0.4
LIT	Litokhoron	123.52	315		PKPdf	19 03 09.7	-0.4
FRNY	Flat Rock	123.53	38	IAMs_20	IAMs_20	19 52 51.4	
	comp=Z,1µm,21.0s						
NHSC	New Hope	123.54	54	IAMs_20	IAMs_20	19 52 07.3	
	comp=Z,1µm,21.0s						
NCB	Newcomb	123.56	39	IAMs_20	IAMs_20	19 53 53.3	
	comp=Z,934nm,20.0s						
J59A	Piesco	123.63	40	IAMs_20	IAMs_20	19 55 04.1	
	comp=Z,1µm,19.0s						
J59A	Piesco	123.63	40	P	PKiKP	19 03 11.2	+0.8
	baz=299						
W58A	Raeford	123.68	51	P	PKiKP	19 03 12.0	+1.3
	baz=289						
Y58A	Scranton	123.70	52	IAMs_20	IAMs_20	20 05 50.5	
	comp=Z,976nm,18.0s						
K59A	Cooperstown	123.73	41	P	PKiKP	19 03 11.8	+1.2
	baz=298						
U58A	Oxford	123.74	49	P	PKiKP	19 03 11.9	+1.1
	baz=291						
Z58A	St. Stephen	123.76	53	P	PKiKP	19 03 12.2	+1.3
	baz=288						
ASSE	Asse, Remlinge	123.77	333	*e*PKPdf	PKiKP	19 03 10.7	+0.4
	baz=49,slow=1.9						
NRDL	Niedersach Rie	123.77	334	*e*PKPdf	PKiKP	19 03 10.8	+0.5
	baz=49,slow=1.9						
CONA	Conrad Observa	123.80	326	*i* PKiKP	PKiKP	19 03 11.0	+0.3
	comp=Z,24nm,1.6s,SNR=7.3						
DWPF	Disney Wildern	123.83	60	IAMs_20	IAMs_20	19 52 36.4	
	comp=Z,879nm,21.0s						
SDMD	Soldier’s Deli	123.84	45	IAMs_20	IAMs_20	19 57 05.3	
	comp=Z,884nm,20.0s						
I59A	Olmsteadville	123.87	39	P	PKiKP	19 03 11.8	+1.0
	baz=299						
NEUB	Neuenburg	123.87	332	*e*PKPdf	PKiKP	19 03 10.7	+0.1
	baz=49,slow=1.9						
M59A	Waymart	123.90	42	P	PKiKP	19 03 11.9	+0.9
	baz=297						
F60A	Warwick	123.93	36	P	PKiKP	19 03 11.3	+0.4
	baz=302						
RETH	Rethem/Aller,	123.93	334	*e*PKPdf	PKiKP	19 03 11.0	+0.4
	baz=49,slow=1.9						
N59A	State Game Lan	123.95	43	P	PKiKP	19 03 12.1	+0.9
	baz=296						
FNA	Florina	124.00	317	PKIKP	PKPdf	19 03 10.7	-0.3
FNA	Florina	124.00	317		PKPdf	19 03 10.7	-0.3
D60A	Saint Jean D’O	124.01	35	P	PKiKP	19 03 11.1	+0.1
	baz=304						
E60A	Ste Agathe de	124.01	36	P	PKiKP	19 03 11.7	+0.7
	baz=303						
TANN	Tannenbergstha	124.05	330	*e*PKPdf	PKiKP	19 03 11.3	+0.2
	baz=49,slow=1.9						
AGG	Agios Georgios	124.07	314	PKIKP	PKPdf	19 03 10.9	-0.3
AGG	Agios Georgios	124.07	314		PKPdf	19 03 10.9	-0.3
CLZ	Clausthal	124.10	333	*e*PKPdf	PKiKP	19 03 11.6	+0.5
	baz=49,slow=1.9						
GUNZ	Gunzen	124.15	330	*e*PKPdf	PKiKP	19 03 11.6	+0.3
	baz=49,slow=1.9						
PLN	Plauen	124.16	331	*e*PKPdf	PKiKP	19 03 11.4	+0.1
	baz=49,slow=1.9						
NKC	Novy Kostel	124.18	330	*e*PKPDF	PKiKP	19 03 11.7	+0.4
NKC				*e*x	x	19 03 24.1	
NKC	Novy Kostel	124.18	330	*e*PKIKP	PKiKP	19 03 11.7	+0.4
NKC				*e*		19 03 24.1	
WERN	Wernitzgruen	124.18	330	*e*PKPdf	PKiKP	19 03 11.7	+0.4
	baz=49,slow=1.9						
I60A	Shoreham	124.21	39	P	PKiKP	19 03 12.4	+0.9
	baz=300						
OHR	Ohrid	124.25	317	*i* P	PKiKP	19 03 12.0	+0.3
T59A	Double "B" Far	124.27	48	P	PKiKP	19 03 13.0	+1.2
	baz=292						
KHC	Kasperske Hory	124.30	329	*e*PKPDF	PKiKP	19 03 11.8	+0.2
KHC				*e*pPKP	pPKPdf	19 03 19.7	-4.8
KHC				*e*x	x	19 03 25.0	
KHC	Kasperske Hory	124.30	329	PKIKP	PKiKP	19 03 11.9	+0.3
KHC	Kasperske Hory	124.30	329		PKiKP	19 03 11.9	+0.3
Y59A	Loris	124.30	52	IAMs_20	IAMs_20	19 56 22.2	
	comp=Z,949nm,20.0s						
MOX	Moxa	124.32	331	*e*PKPdf	PKiKP	19 03 11.6	+0.1
	baz=49,slow=1.9						
U59A	Littleton	124.32	49	IAMs_20	IAMs_20	19 51 05.5	
	comp=Z,2µm,20.0s						
ARSA	Arzberg	124.38	326	*i* PKiKP	PKPdf	19 03 10.9	-0.6
	comp=Z,6.7nm,0.9s						
GEC2	GERESS Array S	124.41	328	*e*PKPdf	PKiKP	19 03 11.8	-0.1
	baz=49,slow=1.9						
GEC2	GERESS Array S	124.41	328		PKiKP	19 03 12.0	+0.1
GERES	GERESS Array B	124.41	328	PKP	PKiKP	19 03 12.4	+0.5
	comp=Z,6.6nm,0.8s,baz=70,slow=1.6,SNR=36						
GERES	GERESS Array B	124.41	328	PKIKP	PKiKP	19 03 12.1	+0.2
GERES	GERESS Array B	124.41	328		PKiKP	19 03 12.1	+0.2
GTTG	Gottingen	124.49	333	*e*PKPdf	PKiKP	19 03 12.3	+0.4
	baz=49,slow=1.9						
MANZ	Manzenberg	124.50	330	*e*PKPdf	PKiKP	19 03 12.3	+0.3
	baz=49,slow=1.9						
E61A	Lac Etchemin	124.53	35	P	PKiKP	19 03 13.5	+1.3
	baz=304						
ROTZ	Rotzenmuhle	124.60	330	*e*PKPdf	PKPdf	19 03 12.0	+0.2
	baz=49,slow=1.9						
CNNC	Cliffs of the	124.64	50	IAMs_20	IAMs_20	19 55 15.1	
	comp=Z,1µm,20.0s						
WET	Wettzell	124.65	329	*e*PKPdf	PKiKP	19 03 12.5	+0.2
	baz=49,slow=1.9						
PDG	Podgorica	124.66	319	⇑P	PKiKP	19 03 12.4	0.0
PDG	Podgorica	124.66	319		PKPdf	19 03 12.2	+0.1
MOA	Molln	124.71	327	*i* PKiKP	PKiKP	19 03 13.1	+0.6
	comp=Z,9.6nm,1.2s						
TIR	Tirane	124.77	318	⇑P	PKPdf	19 03 12.2	-0.2
TIR	Tirane	124.77	318	⇑PKIKP	PKPdf	19 03 12.2	-0.2
TIR	Tirane	124.77	318	IAMs_20	IAMs_20	20 00 00.1	
	comp=Z,952nm,22.0s						
BLY	Banja Luka	124.79	323	⇑P	PKiKP	19 03 13.7	+1.1
BLY	Banja Luka	124.79	323		PKiKP	19 03 13.1	+0.4
K61A	Williamstown	124.80	40	P	PKiKP	19 03 14.2	+1.4
	baz=299						
Y60A	Bolivia	124.81	52	IAMs_20	IAMs_20	19 51 15.7	
	comp=Z,1µm,21.0s						
LBNH	Lisbon	124.86	38	IAMs_20	IAMs_20	19 53 50.4	
	comp=Z,2µm,20.0s						
HNH	Hanover	124.91	39	IAMs_20	IAMs_20	19 55 40.9	
	comp=Z,2µm,20.0s						
IBBN	Ibbenburen	124.93	335	*e*PKPdf	PKiKP	19 03 13.1	+0.4
	baz=49,slow=1.9						
V60A	Jim Taylor Roa	124.93	50	IAMs_20	IAMs_20	20 00 16.7	
	comp=Z,1µm,19.0s						
PERS	Pernice	124.96	326	*i* PKPdf	PKPdf	19 03 12.7	+0.1
D62A	Allapoint, All	124.96	34	IAMs_20	IAMs_20	19 58 23.8	
	comp=Z,2µm,20.0s						
D62A	Allapoint, All	124.96	34	P	PKiKP	19 03 13.5	+0.6
	baz=306						
UBBA	Unterbreizbach	124.97	332	*e*PKPdf	PKiKP	19 03 13.0	+0.4
	baz=49,slow=1.9						
SOKA	Soboth	124.98	326	*i* PKiKP	PKPdf	19 03 12.9	+0.2
	comp=Z,28nm,1.6s,SNR=16						
GRF	Grafenberg Arr	125.13	330	*e*PKPdf	PKiKP	19 03 13.2	0.0
	baz=49,slow=1.9						
CRES	Cresnjev	125.22	325	*i* PKPdf	PKiKP	19 03 13.6	+0.1
OBKA	Obir	125.35	326	*i* PKiKP	PKPdf	19 03 13.7	+0.2
	comp=Z,10nm,1.2s						
GO04	Tololo Observa	125.41	133		PKPdf	19 03 13.1	-1.2
V61A	Roper	125.44	49	IAMs_20	IAMs_20	19 57 35.2	
	comp=Z,1µm,19.0s						
K62A	Royalston	125.47	40	IAMs_20	IAMs_20	19 56 08.8	
	comp=Z,1µm,20.0s						
BOJS	Bojanci	125.52	324	*i* PKPdf	PKiKP	19 03 14.4	+0.3
RJOB	Jochberg	125.57	328	*e*PKPdf	PKPdf	19 03 13.6	-0.2
	baz=49,slow=1.9						
KBA	Koelnbreinsper	125.68	327	*i* PKiKP	PKPdf	19 03 14.1	-0.1
	comp=Z,16nm,1.2s,SNR=6.6						
F63A	Nahmakanta, Br	125.73	35	IAMs_20	IAMs_20	19 57 47.3	
	comp=Z,1µm,21.0s						
BUG	Bochum--Univer	125.76	334	*e*PKPdf	PKiKP	19 03 14.7	+0.3
	baz=49,slow=1.9						
I63A	Otisfield	125.78	38	IAMs_20	IAMs_20	19 53 48.8	
	comp=Z,1µm,20.0s						
PQI	Presque Isle	125.78	34	IAMs_20	IAMs_20	19 55 02.4	
	comp=Z,1µm,21.0s						
MYKA	Terra Mystica	125.78	326	*i* PKiKP	PKiKP	19 03 14.6	-0.1
	comp=Z,8.8nm,1.0s						
HRV	Adam Dziewonsk	125.98	40	IAMs_20	IAMs_20	20 05 13.3	
	comp=Z,1µm,18.0s						
F64A	Sherman	126.07	35	IAMs_20	IAMs_20	19 54 07.2	
	comp=Z,1µm,21.0s						
FUR	Furstenfeldbru	126.09	329	*e*PKPdf	PKiKP	19 03 15.2	0.0
	baz=49,slow=1.9						
TNS	Taunus Mts	126.10	332	*e*PKPdf	PKiKP	19 03 15.2	+0.1
	baz=49,slow=1.9						
TRQA	Tornquist	126.17	146	*e*P	PKiKP	19 03 16.4	+0.7
WES	Weston	126.19	40	IAMs_20	IAMs_20	19 56 58.9	
	comp=Z,1µm,19.0s						
TRI	Trieste	126.26	325	IAMs_20	IAMs_20	20 01 51.9	
	comp=Z,998nm,21.0s						
ABTA	Abfaltersbach	126.33	327	*i* PKiKP	PKPdf	19 03 15.1	-0.2
	comp=Z,33nm,1.5s,SNR=12						
WATA	Walderalm	126.47	328	*i* PKiKP	PKPdf	19 03 15.9	+0.2
	comp=Z,35nm,1.4s,SNR=10						
WTTA	Wattenberg	126.48	328	*i* PKiKP	PKiKP	19 03 16.2	0.0
	comp=Z,64nm,1.6s,SNR=16						
AHRW	Bad Neuenahr-A	126.49	333	*e*PKPdf	PKiKP	19 03 16.1	+0.2
	baz=49,slow=1.9						
STAL	STALIGIAL	126.52	326		PKiKP	19 03 16.0	-0.1
MOTA	Moosalm	126.71	328	*i* PKiKP	PKPdf	19 03 16.3	+0.2
	comp=Z,36nm,1.3s,SNR=8.7						
SQTA	Sankt Quirin	126.73	328	*i* PKiKP	PKiKP	19 03 16.8	+0.2
	comp=Z,35nm,1.4s,SNR=9.1						
STU	Stuttgart	126.74	331	*e*PKPdf	PKiKP	19 03 16.4	0.0
	baz=49,slow=1.9						
STU	Stuttgart	126.74	331	PKIKP	PKiKP	19 03 16.4	0.0
STU	Stuttgart	126.74	331		PKiKP	19 03 16.4	0.0
RETA	Reutte	126.80	329	*i* PKiKP	PKiKP	19 03 16.5	-0.1
	comp=Z,12nm,1.1s						
G65A	Princeton	126.91	35	IAMs_20	IAMs_20	19 59 19.4	
	comp=Z,1µm,20.0s						
UBR	Ueberruh	127.01	329	*e*PKPdf	PKPdf	19 03 16.7	+0.2
	baz=49,slow=1.9						
FETA	Feichten	127.11	328	*i* PKiKP	PKiKP	19 03 17.6	+0.1
	comp=Z,35nm,1.2s,SNR=14						
MATE	Matera	127.20	319	⇑P	PKiKP	19 03 18.2	+0.7
CTI	Castel Tesino	127.23	327	PKIKP	PKPdf	19 03 17.4	+0.3
CTI	Castel Tesino	127.23	327		PKPdf	19 03 17.4	+0.3
EMMW	East Machias	127.26	35	IAMs_20	IAMs_20	19 56 17.7	
	comp=Z,1µm,20.0s						
SGRT	San Giovanni R	127.26	320		PKiKP	19 03 17.6	-0.2
DAVA	Damuels	127.38	329	*i* PKiKP	PKiKP	19 03 17.9	-0.1
	comp=Z,22nm,1.0s						
BFO	Black Forest	127.46	331	*e*PKPdf	PKPdf	19 03 17.6	+0.2
	baz=49,slow=1.9						
BFO	Black Forest	127.46	331	PKIKP	PKPdf	19 03 17.4	0.0
BFO	Black Forest	127.46	331		PKPdf	19 03 17.4	0.0
WLF	Walferdange	127.54	333	*e*PKPdf	PKiKP	19 03 18.7	+0.7
	baz=49,slow=1.9						
WLF	Walferdange	127.54	333	PKIKP	PKiKP	19 03 18.4	+0.4
WLF	Walferdange	127.54	333		PKiKP	19 03 18.4	+0.4
TEOL	Teolo	127.65	326	IAMs_20	IAMs_20	20 04 43.5	
	comp=Z,749nm,20.0s						
TIP	Timpagrande	127.89	317	⇑P	PKiKP	19 03 20.2	+1.1
TIP	Timpagrande	127.89	317		PKPdf	19 03 18.7	+0.1
ECH	Echery	128.10	331	PKIKP	PKiKP	19 03 19.3	+0.1
ECH	Echery	128.10	331		PKiKP	19 03 19.3	+0.1
TUE	Stuetta	128.19	328		PKiKP	19 03 19.6	-0.1
TUE				IAMs_20	IAMs_20	20 00 25.8	
	comp=Z,1µm,21.0s						
INTR	Introdacqua	128.28	321		PKPdf	19 03 18.8	-0.4
NRCA	Norcia	128.30	323		PKPdf	19 03 18.6	-0.6
PAOL	Paolisi	128.39	320		PKPdf	19 03 19.1	-0.3
AQU	L'Aquila	128.40	322	PKIKP	PKiKP	19 03 20.1	+0.1
AQU				MLR	MLR		
	comp=Z,700nm,19.0s						
AQU	L'Aquila	128.40	322		PKiKP	19 03 20.1	+0.1
AQU				IAMs_20	IAMs_20	20 05 46.8	
	comp=Z,737nm,19.0s						
MURB	Monte Urbino	128.41	323		PKPdf	19 03 19.6	+0.2
ZCCA	Zocca	128.66	325		PKiKP	19 03 21.1	+0.6
GO02	Mina Guanaco	128.93	128		PKiKP	19 03 22.9	+1.0
OSSC	Osservatorio P	129.00	324		PKPdf	19 03 20.2	-0.3
OSSC				IAMs_20	IAMs_20	20 05 20.6	
	comp=Z,759nm,19.0s						
LATE	Laterza	129.22	323		PKPdf	19 03 20.8	-0.2
SENIN	Lac Senin/Sane	129.32	330		PKiKP	19 03 21.7	-0.2
MSSA	Maissana	129.49	326		PKPdf	19 03 21.7	+0.3
CASP	Castiglione de	129.67	324		PKPdf	19 03 21.2	-0.5
PTAC	Punta Ardita,	129.67	85	⇑*e*P	PKiKP	19 03 28.0	+4.7

CLF	Chambon-Foret	130.47	334		PKiKP	19 03 24.1	+0.2
BNI	Bardonecchia	130.53	329	PKIKP	PKPdf	19 03 23.4	-0.1
BNI	Bardonecchia	130.53	329		PKPdf	19 03 23.4	-0.1
POPC	Popayan, Colom	130.58	91	eP	PKiKP	19 03 26.7	+1.2
LVC	Limon Verde	130.73	126	eP	PKiKP	19 03 25.6	0.0
PCON	Cinco Dias	130.84	91	⇑eP	PKiKP	19 03 26.3	0.0
PB01	IPOC Station P	130.99	124		PKPdf	19 03 24.0	-1.0
CLTB	Caltabellotta	131.09	317		PKPdf	19 03 24.7	0.0
DBBC	Dabeiba	131.26	85	eP	PKPdf	19 03 26.0	+0.4
SSB	Saint Sauveur	131.45	330	PKIKP	PKPdf	19 03 25.1	0.0
SSB	Saint Sauveur	131.45	330		PKPdf	19 03 25.1	0.0
FLOC	Florencia	131.52	92		PKiKP	19 03 27.2	+0.2
GO01	Chusmiza	131.86	122		PKPdf	19 03 27.0	-0.1
GUY2C	Guyana, Caldas	132.05	88	eP	PKPdf	19 03 27.3	-0.3
RREF	El Recreo	132.05	88	eP	PKPdf	19 03 28.3	+0.5
ORTC	Ortega, Tolima	132.10	89	eP	PKiKP	19 03 28.0	-0.3
SJCC	San Jacinto, C	132.25	81	⇑eP	PKiKP	19 03 37.2	+8.7
NORC	Norcasia	132.56	87	eP	PKPdf	19 03 28.3	+0.3
ROSC	El Rosal	133.07	88	PKP	PKiKP	19 03 30.6	-0.1
	comp=Z,17nm,0.3s,baz=99,slow=3.4,SNR=9.4						
ROSC				SKPbc	SKPab	19 06 59.2	+3.6
	comp=Z,8.1nm,0.3s,baz=172,slow=4.8,SNR=4.1						
ROSC	El Rosal	133.07	88	eP	PKPdf	19 03 29.6	+0.2
ROSC	El Rosal	133.07	88		PKPdf	19 03 29.8	+0.3
LPAZ	La Paz	134.22	119	PKP	PKiKP	19 03 33.7	+0.5
	comp=Z,3.8nm,0.6s,baz=198,slow=2.3,SNR=13						
LPAZ				SKPbc	SKPab	19 07 03.1	+2.4
	comp=Z,25nm,1.3s,baz=107,slow=12,SNR=9.4						
LPAZ	La Paz	134.22	119	PKIKP	PKiKP	19 03 33.3	+0.2
LPAZ	La Paz	134.22	119		PKiKP	19 03 33.3	+0.2
LPAZ	La Paz	134.22	119	eP	PKiKP	19 03 32.6	-0.6
RUSC	La Rusia	134.34	87	eP	PKPdf	19 03 31.0	-1.0
RUSC	La Rusia	134.34	87		PKPdf	19 03 30.0	-2.0
KEST	Kesra	134.71	317	PKP	PKPdf	19 03 31.6	0.0
	comp=Z,9.9nm,1.0s,baz=249,slow=2.8,SNR=7.1						
KEST	Kesra	134.71	317		PKPdf	19 03 31.4	-0.2
SDDR	Presa de Saban	134.93	68		PKPdf	19 03 31.7	-0.6
SDDR				IAMs_20	IAMs_20	19 59 36.2	
	comp=Z,759nm,19.0s						
URIC	Uribia, Colomb	135.28	79		PKPdf	19 03 31.3	-1.7
SDV	Santo Domingo	136.77	83		PKPdf	19 03 35.2	-0.9
SDV	Santo Domingo	136.77	83	eP	PKPdf	19 03 35.9	-0.2
CPUP	Villa Florida	137.15	139	PKP	PKPdf	19 03 36.8	+0.6
	comp=Z,3.8nm,0.7s,baz=257,slow=2.3,SNR=6.9						
OBIP	Obispado Ponce	139.47	68		PKPdf	19 03 39.6	-1.1
PGAV	Gavieira, Arco	139.71	338	eLR	LR	20 01 00.2	
	comp=Z,685nm,22.0s						
ESDC	Sonseca Array	139.80	332	PKP	PKiKP	19 03 42.2	-1.0
	comp=Z,0.8nm,0.3s,baz=16,slow=1.9,SNR=3.7						
ESDC	Sonseca Array	139.80	332		PKPdf	19 03 40.3	-0.5
SJG	San Juan	139.87	68	PKIKP	PKPdf	19 03 41.4	0.0
SJG				MLR	MLR		
	comp=Z,600nm,20.0s						
SJG	San Juan	139.87	68		PKPdf	19 03 41.4	0.0
CART	Cartagena	139.89	327	IAMs_20	IAMs_20	20 08 54.4	
	comp=Z,671nm,19.0s						
MVO	Moncorvo	139.91	336	ePKPdf	PKiKP	19 03 42.8	-0.6
MVO	Moncorvo	139.91	336	eLR	LR	19 57 20.4	
	comp=Z,607nm,20.0s						
PDPR	Patillas Dam,	140.01	68		PKPdf	19 03 41.0	-0.7
PAB	San Pablo	140.08	332	PKIKP	PKPdf	19 03 41.0	-0.4
PAB	San Pablo	140.08	332		PKPdf	19 03 41.0	-0.4
SESP	Santiago Espad	140.31	329	P	PKiKP	19 03 43.3	-1.1
	SNR=5.4						
MTP	Monte Pirata	140.43	68		PKPdf	19 03 41.6	-0.8
MTE	Manteigas	140.77	336		PKPdf	19 03 41.3	-1.3
MTE	Manteigas	140.77	336	ePKPdf	PKPdf	19 03 42.1	-0.5
MTE	Manteigas	140.77	336	eLR	LR	19 58 36.4	
	comp=Z,453nm,20.0s						
STVI	Saint Thomas	140.92	67		PKPdf	19 03 43.4	+0.1
PCBR	Castelo Branco	141.22	335	ePKPdf	PKPdf	19 03 41.8	-1.5
SAML	Samuel	141.47	111	PKIKP	PKPdf	19 03 44.1	-0.3
SAML				MLR	MLR		
	comp=Z,400nm,19.0s						
SAML	Samuel	141.47	111		PKPdf	19 03 44.1	-0.3
SAML	Samuel	141.47	111	eP	PKPdf	19 03 44.4	-0.1
PMRV	Marv??o	141.53	335	ePKPdf	PKiKP	19 03 45.4	-1.3
PMRV	Marv??o	141.53	335	eLR	LR	20 00 33.3	
	comp=Z,596nm,20.0s						
PTGB	Pitanga	141.65	142	eP	PKPdf	19 03 45.3	+0.7
PTOM	Tomar	141.78	336	ePKPdf	PKiKP	19 03 46.2	-1.0
PMTG	Montargil	142.18	336	ePKPdf	PKPdf	19 03 46.5	+1.5
TRCB	Terra Rica	142.67	139	eP	PKPdf	19 03 46.6	+0.2
LIJA	Lijar	142.68	331	i P	PKPdf	19 03 41.5	-4.6
SMRT	St. Maarten	142.72	67		PKPdf	19 03 45.1	-1.4
SMRT				IAMs_20	IAMs_20	20 00 02.5	
	comp=Z,753nm,22.0s						
PBEJ	Beja	142.90	334	ePKPdf	PKPdf	19 03 44.3	-2.0
PNCL	Nicolau / Gran	143.11	335	ePKPdf	PKPbc	19 03 44.3	+0.7
PCVE	Castro Verde	143.31	334	ePKPdf	PKPdf	19 03 45.8	-1.3
PVAQ	Vaqueiros	143.36	334	IAMs_20	IAMs_20	20 10 47.7	
	comp=Z,996nm,20.0s						
PVAQ	Vaqueiros	143.36	334	eLR	LR	20 01 21.2	
	comp=Z,768nm,20.0s						
PBDV	Barranco-do-Ve	143.58	334	ePKPdf	PKiKP	19 03 49.9	-1.1
PTEO	Sao Teotonio	143.67	335	ePKPdf	PKiKP	19 03 49.9	-1.2
TAM	Tamanrasset	143.90	302	PKIKP	PKPbc	19 03 47.2	+0.7
TAM	Tamanrasset	143.90	302		PKPbc	19 03 47.2	+0.7
ANWB	Willy Bob	144.00	67	IAMs_20	IAMs_20	20 02 17.6	
	comp=Z,1µm,22.0s						
CHEFC	Chefchaouen	144.06	329	P	PKPdf	19 03 48.0	-0.6
	SNR=7.1						
PFVI	Vila Bisbo	144.06	335	ePKPdf	PKPdf	19 03 47.7	-0.7
FRTB	Fartura	144.18	143	eP	PKPbc	19 03 47.6	+0.4
PCMB	Pacaembu	144.41	139	eP	PKPdf	19 03 49.5	0.0
RSA	Sarsar	144.48	329	P	PKPdf	19 03 49.0	-0.3
	SNR=21						
SICH	Sidi Chahed	144.81	328	P	PKPdf	19 03 51.0	+1.1
	SNR=8.9						
SALV	Santo Antonio	144.85	127	eP	PKPdf	19 03 51.0	+0.7
LCRM	LCR	144.88	327	P	PKPdf	19 03 51.1	+1.0
	SNR=13						
SPB	Sao Paulo	145.22	146		PKPbc	19 03 49.2	-1.2
SPB	Sao Paulo	145.22	146	eP	PKPdf	19 03 51.6	+0.8
C2SB	Chapadao do Su	145.27	134	eP	PKPdf	19 03 51.8	+0.8
FDF	Fort de France	145.31	72	PKIKP	PKPbc	19 03 50.0	-1.0
FDF				MLR	MLR		
	comp=Z,700nm,19.0s						
FDF	Fort de France	145.31	72		PKPbc	19 03 50.0	-1.0
FDF				IAMs_20	IAMs_20	20 18 50.6	
	comp=Z,731nm,19.0s						
CZD	Col de Zad	145.47	326	P	PKPab	19 03 53.2	+1.6
	SNR=107						
SVB	Belmont	145.49	74		PKPdf	19 03 50.4	-1.1
RTC	Rabat Centre	145.71	329	P	PKiKP	19 03 54.0	-1.4
	SNR=16						
VAO	Valinhos	145.94	146	eP	PKPab	19 03 53.3	-0.1
PARB	Paraibuna	146.39	148	eP	PKPdf	19 03 53.5	+0.6
GOLM	Goulmima	146.40	324	P	PKiKP	19 03 56.0	-1.0
	SNR=6.5						
TOSP	Speyside	146.49	77		PKPbc	19 03 54.4	-0.2
BB19B	Bebedouro	146.53	142	eP	PKPbc	19 03 54.3	-0.3
AVE	Averroes	146.54	329	P	PKPab	19 03 55.9	+0.6
	SNR=11						
PTGA	Pitinga	146.75	99		PKPbc	19 03 55.0	-0.5
PTGA	Pitinga	146.75	99	eP	PKPbc	19 03 54.9	-0.5
CLDB	Colider	147.35	119	eP	PKPdf	19 03 55.3	+0.6
TZRR	Tazzarine	147.43	324	P	PKPbc	19 03 56.1	-0.9
	SNR=31						
ZGR	Zagora	147.94	323	P	PKPbc	19 03 57.0	-1.4
	SNR=42						
ARAG	Araguaiana, MT	147.97	131	eP	PKPdf	19 03 57.1	+1.5
OUK	Oukaimeden	148.41	327	P	PKPbc	19 03 59.0	-0.9
	SNR=31						
BSCB	Bom Sucesso	148.75	147	eP	PKPdf	19 03 58.3	+1.4
IPMB	Ipameri, GO	148.99	139	eP	PKPdf	19 03 59.3	+2.0
TOA0	Torodi Ar. Sit	150.43	287	P	PKPbc	19 04 05.3	+0.4
	SNR=19						
TOA0	Torodi Ar. Sit	150.43	287		PKPbc	19 04 03.6	-1.3
TORD	Torodi Ar. Bea	150.43	287	PKP	PKPdf	19 03 59.6	0.0
	comp=Z,13nm,1.2s,baz=331,slow=0.7,SNR=12						
TORD				PKPbc	PKPbc	19 04 04.8	-0.1
	comp=Z,40nm,0.8s,baz=94,slow=2.2,SNR=90						
TORD	Torodi Ar. Bea	150.43	287		PKPdf	19 03 58.8	-0.8
TORD					PKPbc	19 04 04.3	-0.6
PMPST	Porto Santo, M	150.49	341	ePKPbc	PKiKP	19 04 06.1	+0.8
PMPS	Porto Santo	150.51	341	ePKPdf	PKPdf	19 03 54.4	-4.8
BDFB	Brasilia	150.77	136	PKPbc	PKPbc	19 04 06.1	+0.3
	comp=Z,62nm,1.1s,baz=183,slow=2.5,SNR=16						
BDFB				PKPab	PKPab	19 04 14.1	+1.3
	comp=Z,43nm,0.9s,baz=125,slow=4.8,SNR=8.6						
BDFB	Brasilia	150.77	136	PKIKP	PKPbc	19 04 05.0	-0.8
BDFB	Brasilia	150.77	136		PKPbc	19 04 05.0	-0.8
PMOZ	Porto Moniz, M	151.00	342	ePKPab	PKPab	19 04 09.9	-3.4
PMAR	Madeira	151.00	342	ePKPbc	PKiKP	19 04 07.9	+1.3
KIC	Kosan Boka	157.62	274	ePKP1	PKPab	19 04 43.1	+1.0
	comp=Z,44nm,1.0s						
KIC	Kosan Boka	157.62	274		PKPab	19 04 43.1	+1.0
DBIC	Dimbokro	157.72	275	PKP	PKPdf	19 04 10.1	+0.2
	comp=Z,4.1nm,1.1s,baz=220,slow=1.5,SNR=4.0						
DBIC				PKPab	PKPab	19 04 42.3	-0.2
	comp=Z,9.2nm,0.7s,baz=65,slow=4.9,SNR=9.7						
DBIC				PP	PP	19 08 20.8	-1.4
	comp=Z,5.7nm,1.2s,baz=42,slow=1.7,SNR=4.0						
TIC	Toumodi	157.89	275	ePKP1	PKPab	19 04 43.2	0.0
TIC	Toumodi	157.89	275	PKP2	PKPab	19 04 43.2	0.0
TIC	Toumodi	157.89	275		PKPab	19 04 43.2	0.0
LIC	Lamto	157.91	274	ePKP1	PKPab	19 04 44.1	+0.8
	comp=Z,130nm,1.6s						
LIC	Lamto	157.91	274		PKPab	19 04 44.1	+0.8

IDC ***20*** *18:58:21.7±5.9, 0°.17N×123°.30E, h135^{km}±57^{km}, mb3.4/8, mb1 3.6/10, mb1mx3.3/52, mbtmp3.8/10, Error ellipse: s-maj=50.2km s-min=15.1km az=56.0*

NEIC ***20*** *18:58:23.6±1.1, 0°.04N±0°.09×123°.2E±0°.1, h154^{km}±8^{km}, mb4.4/16, Error ellipse: s-maj=18.7km s-min=13.5km az=95.0*

DJA ***20*** *18:58:24.8±0.3, 0°S±2°×12°3E±°, h146^{km}±5^{km}, M4.3/17, mB5.0/1, mb4.4/7, MLv4.2/17, Mw(mB)4.3/1*

ISC 20 18:58:24.6±0.6**, 0°.02S**±0°.05×**123°.05E**±0°.05**, h162^{km}, n51, σ1^{s}.78**/59**, mb4.1**/16**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	1.05	195	P	Pn	18 58 49.5	-1.5
LUWI				S	Sn	18 59 08.1	-3.2
LUWI	Luwuk	1.05	195		Pn	18 58 49.7	-1.3
KMSI	Cibinong	1.10	58	P	Pn	18 58 52.6	+1.2
MRSI	Marisa	1.21	294	P	Pn	18 58 50.8	-1.6
MRSI				S	Sn	18 59 10.4	-3.2
APSI	Ampana	1.66	238	P	Pn	18 58 55.1	-1.6
APSI				S	Sn	18 59 18.4	-3.0
MPSI	Mapaga	3.17	276	P	Pn	18 59 13.8	-0.8
PCI	Palu	3.33	255	P	Pn	18 59 15.5	-1.1
SANI	Sanana	3.56	124	P	Pn	18 59 17.6	-2.0
TNTI	Ternate	4.39	80	P	Pn	18 59 31.1	+0.8
TNTI	Ternate	4.39	80	Pn	Pn	18 59 22.3	-8.0
TTSI	Tana Toraja	4.41	227	P	Pn	18 59 30.4	-0.1
LBMI	Labuha	4.49	98	P	Pn	18 59 31.7	+0.1
SPSI	Sidrap Palu	5.11	220	P	Pn	18 59 38.7	-1.0
	0.2nm20nm,0.6s						
SPSI				S	Sn	19 00 36.3	-2.1
	0.2nm20nm,0.6s						
NLAI	Namlea	5.16	128	P	Pn	18 59 40.6	+0.2
	0.6nm2µm45nm,0.6s						
NLAI				S	Sn	19 00 40.5	+0.9
	0.6nm2µm45nm,0.6s						
BNSI	Bone	5.25	214	P	Pn	18 59 40.7	-0.9
	0.4nm25nm,0.6s						
BNSI				S	Sn	19 00 40.3	-1.5
	0.4nm25nm,0.6s						
KAPI	Kappang	5.95	214	P	Pn	18 59 51.2	+0.4
	1.9nm,0.3s,baz=317,slow=2.7,SNR=4.9						
KAPI				S	Sn	19 01 01.8	+3.3
	1.6nm,0.3s,baz=160,slow=17,SNR=1.4						
BKB	Balikpapan	6.27	259	P	Pn	18 59 53.7	-1.4
	0.3nm45nm,0.6s						
AAI	Ambon	6.30	125	P	Pn	18 59 56.1	+0.6
KKM	Kota Kinabalu	9.10	312	Pn	Pn	19 00 33.5	+0.8
FAKI	Fak Fak	9.64	107	Pn	Pn	19 00 37.0	-2.7
FITZ	Fitzroy Crossi	18.14	172	P	P	19 02 25.4	+0.7
	0.6nm,0.3s,baz=356,slow=9.8,SNR=8.6						
FITZ	Fitzroy Crossi	18.14	172	P	P	19 02 24.9	+0.1
FITZ				IAmb	IAmb	19 03 07.8	
	comp=Z,27nm,1.9s						
WB0	Warramunga Arr	22.55	151	P	P	19 03 10.6	-0.8
WB0				IAmb	IAmb	19 03 31.5	
	comp=Z,14nm,1.4s						
WRAB	Tennant Creek	22.68	151	P	P	19 03 12.7	+0.2
WRAB				IAmb	IAmb	19 03 19.2	
	comp=Z,45nm,2.0s						
WRA	Warramunga Arr	22.68	151	P	P	19 03 12.7	+0.2
	comp=Z,1.5nm,0.7s,baz=328,slow=11,SNR=11						
WRA	Warramunga Arr	22.68	151	P	P	19 03 12.8	+0.2
WB2	Warramunga Arr	22.68	151	P	P	19 03 11.8	-0.8
WR0	Warramunga Arr	22.79	151	P	P	19 03 12.9	-0.6
WR0				IAmb	IAmb	19 03 22.4	
	comp=Z,22nm,1.6s						
AS31	Alice Springs	25.76	157	P	P	19 03 41.0	+0.5
ASAR	Alice Springs	25.76	157	P	P	19 03 41.0	+0.5
	comp=Z,0.7nm,0.7s,baz=341,slow=13,SNR=9.4						
MORW	Morawa	29.65	192	P	P	19 04 14.6	-0.4
MORW				IAmb	IAmb	19 04 14.9	
	comp=Z,34nm,1.4s						
CMAR	Chiang Mai Arr	29.97	309	P	P	19 04 20.1	+2.0
	comp=Z,0.7nm,0.6s,baz=137,slow=7.0,SNR=6.3						
NWAO	Narrogin (SRO)	33.19	189	P	P	19 04 46.3	+0.4
BBOO	Buckleboo	34.84	161	P	P	19 05 00.7	+0.4
STKA	Stephens Creek	36.22	153	P	P	19 05 12.5	+0.5
	comp=Z,3.1nm,1.0s,baz=312,slow=12,SNR=3.6						
STKA	Stephens Creek	36.22	153	P	P	19 05 11.8	-0.2
SONM	Songino Array	49.82	345	P	P	19 06 58.9	-2.2
	comp=Z,0.3nm,0.5s,baz=175,slow=6.8,SNR=1.8						
KSH	Kashi	58.23	318	P	P	19 08 06.9	+4.7
KSH				pP	pP	19 08 43.9	+3.9
KSH				PP	PP	19 10 19.5	+6.4
KSH				S	S	19 15 53.6	+2.0
KSH				sS	sS	19 16 59.4	+5.3
MK31	Makanchi Array	58.66	328	P	P	19 08 05.0	0.0
MK31				IAmb	IAmb	19 08 16.3	
	comp=Z,4.7nm,1.6s						
MKAR	Makanchi Array	58.66	328	P	P	19 08 04.5	-0.5
	comp=Z,0.4nm,0.5s,baz=125,slow=8.8,SNR=9.1						
MKAR	Makanchi Array	58.66	328	P	P	19 08 05.3	+0.4
MAKZ	Makanchi	58.83	328	P	P	19 08 06.2	0.0
MAKZ				IAmb	IAmb	19 08 54.7	
	comp=Z,5.1nm,1.6s						
KURK	Kurchatov	63.02	330	P	P	19 08 34.2	-0.1
KURK				IAmb	IAmb	19 09 07.5	
	comp=Z,12nm,1.8s						
TOLK	Toolik Lake Re	89.06	21	P	P	19 11 00.3	-0.8
TOLK				IAmb	IAmb	19 11 00.7	
	comp=Z,4.9nm,0.6s						
NEA	Nenana	89.10	26	P	P	19 11 00.2	-1.1
ILAR	Eielson Array	90.05	25	P	P	19 11 05.0	-0.7
	comp=Z,0.4nm,0.6s,baz=290,slow=3.5,SNR=5.7						
ILAR	Eielson Array	90.05	25	P	P	19 11 05.0	-0.7
BMAR	Burnt Mountain	90.93	23	P	P	19 11 07.5	-2.3
INK	Inuvik	94.97	21	P	P	19 11 25.8	-2.5
	comp=Z,0.6nm,0.4s,baz=139,slow=19,SNR=1.9						
TORD	Torodi Ar. Bea	120.46	285	PKP	PKPdf	19 16 57.1	-0.8
	comp=Z,0.5nm,0.6s,baz=74,slow=2.1,SNR=3.6						
TORD	Torodi Ar. Bea	120.46	285		PKPdf	19 16 56.0	-2.0

DDA 20 19:01:12.3, 38°.94N×27°.60E, h7^{km}±2^{km}, ML1.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	Akhisar	0.18	111	i P	Pg	19 01 16.9	+0.9
AKHS				i S	Sg	19 01 19.3	+0.8
ZEDA	zmir-Bergama	0.40	273	i P	Pg	19 01 20.8	+0.6
ZEDA				i S	Sg	19 01 26.7	+1.2
STEP	BALIKESIR_Sava	0.44	12	i P	Pb	19 01 22.5	0.0
STEP				i S	Sg	19 01 27.6	+0.9
STEP				IAML		19 01 28.0	
	comp=N,43nm,0.5s						
STEP				IAML		19 01 29.0	
	comp=E,72nm,0.3s						
MANT	Manisa	0.88	121	i P	Pn	19 01 30.8	-0.5
MANT				i S	Sb	19 01 41.5	-0.6
DURS	Dursunbey	0.95	46	i P	Pn	19 01 32.5	+0.3
DGB	zmir	1.05	212	i P	Pb	19 01 32.9	+0.1
DGB				i S	Sb	19 01 47.4	+0.7
DGB				IAML		19 01 57.0	
	comp=E,18nm,1.6s						
BAYC	CANAKKALE_Bayr	1.14	315	i P	Pn	19 01 35.5	+0.8
BAYC				i S	Sn	19 01 50.5	-0.1

IDC ***20*** *19:05:45.7±1.4, 5°.27S×153°.12E, h0^{km}, mb3.6/6, mb1 3.8/7, mb1mx3.6/38, mbtmp3.6/7, ML1.7/1, Error ellipse: s-maj=27.0km s-min=16.7km az=62.0*

ISC 20 19:05:52.5±1.4**, 5°.2S**±0°.1×**152°.9E**±0°.2**, h43^{km}, n9, σ1^{s}.13**/10**, mb3.4**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.23	316	Pg	Pn	19 06 13.2	-0.1
	554nm,0.3s,baz=190,slow=1.6,SNR=593						
KRVT				Lg	Lg	19 06 31.2	
	506nm,0.3s,baz=189,slow=19,SNR=48						
PMG	Port Moresby	7.05	233	Pn	Pn	19 07 34.4	+1.1
	0.8nm,0.3s,baz=29,slow=14,SNR=2.4						
PMG				Sn	Sn	19 08 50.8	-1.5
	0.9nm,0.3s,baz=338,slow=5.3,SNR=3.0						
WRA	Warramunga Arr	23.25	229	P	P	19 10 56.1	-0.3
	1.1nm,0.7s,baz=55,slow=9.9,SNR=8.7						
ASAR	Alice Springs	25.92	223	P	P	19 11 20.4	-0.5
	1.1nm,0.8s,baz=54,slow=10.0,SNR=7.6						
FITZ	Fitzroy Crossi	29.55	242	P	P	19 11 52.7	-0.7
	1.8nm,0.8s,baz=72,slow=11,SNR=2.6						
CMAR	Chiang Mai Arr	58.12	295	P	P	19 15 43.3	+1.1
	0.2nm,0.4s,baz=96,slow=4.5,SNR=2.3						
MKAR	Makanchi Array	80.68	319	P	P	19 18 02.5	+1.3
	0.2nm,0.5s,baz=96,slow=8.7,SNR=4.3						
ILAR	Eielson Array	82.49	22	P	P	19 18 08.9	-1.4
	0.3nm,0.8s,baz=240,slow=7.2,SNR=2.3						
TORD	Torodi Ar. Bea	150.51	288	PKPbc	PKiKP	19 25 41.5	+0.1
	0.9nm,0.9s,baz=56,slow=3.6,SNR=3.0						

IDC ***20*** *19:09:52.1±2.6, 43°.24N×105°.23W, h0^{km}, mb1 3.6/2, mb1mx3.2/35, mbtmp3.4/2, ML3.2/2, Error ellipse: s-maj=52.6km s-min=11.0km az=155.0*

NEIC ***20*** *19:09:54.5±2.9, 43°.50N±0°.06×105°.2W±0°.1, h0^{km}±2^{km}, ML3.4/56, Error ellipse: s-maj=12.9km s-min=9.6km az=78.0*

ISC 20 19:09:53.1±0.9**, 43°.50N**±0°.05×**105°.17W**±0°.04**, h0^{km}, n55, σ1^{s}.89**/54**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.03	52	Pg	Pg	19 10 12.0	-0.9
K22A	Casper	1.30	230	Pg	Pg	19 10 17.9	-0.1
PHWY	Pilot Hill	2.20	186		Pn	19 10 33.0	+1.8
PHWY				IAML		19 11 07.3	
	116nm,0.8s						
RWWY	Rawlins	2.35	220		Pn	19 10 34.5	+1.3
RWWY				IAML		19 11 12.5	
	228nm,0.6s						
N23A	Red Feather La	2.66	193		Pn	19 10 39.6	+2.1
N23A				IAML		19 11 22.5	
	comp=E,91nm,0.8s						
N23A				IAML		19 11 25.3	
	comp=N,138nm,0.8s						
LAO	LASA Array	3.28	347		Pn	19 10 47.8	+2.1
BW06	Boulder Array	3.29	259		Pn	19 10 46.4	+0.3
BW06				IAML		19 11 37.2	
	comp=N,59nm,0.7s						
PD31	Pinedale Array	3.29	259		Pn	19 10 46.8	+0.7
PDAR	Pinedale Array	3.29	259	Pn	Pn	19 10 47.1	+1.0
	comp=N,2.6nm,0.3s,baz=81,slow=16,SNR=35						
PDAR				Lg	Lg	19 11 32.4	
	comp=N,4.8nm,0.3s,baz=85,slow=32,SNR=4.0						
PDAR	Pinedale Array	3.29	259		Pn	19 10 47.5	+1.4
RLMT	Red Lodge	3.36	300		Pn	19 10 46.8	-0.2
RLMT				IAML		19 11 46.6	
	comp=N,68nm,0.5s						
RLMT				IAML		19 11 53.8	
	comp=N,49nm,0.9s						
OGNE	Ogallala	3.46	137		Pn	19 10 49.6	+1.4
ISCO	Idaho Springs	3.71	185		Pn	19 10 54.5	+2.6
YNE	Yellowstone No	3.79	295		Pn	19 10 53.6	+0.6
H17A	Grant Village	4.00	285		Pb	19 11 02.6	-2.1
H17A				IAML		19 12 01.8	
	comp=E,50nm,0.9s						
H17A				IAML		19 12 02.1	
	comp=N,55nm,1.1s						
FLWY	Flagg Ranch	4.04	280		Pn	19 10 59.1	+2.6
FLWY				IAML		19 12 07.4	
	comp=N,40nm,1.0s						
SNOW	Snow King Moun	4.06	271		Pn	19 11 00.1	+3.4
SNOW				IAML		19 12 12.3	
	comp=N,45nm,1.1s						
SNOW				IAML		19 12 16.2	
	comp=N,70nm,1.0s						
O20A	White River Ci	4.07	215		Pn	19 10 58.3	+1.5
O20A				IAML		19 12 14.5	
	comp=E,44nm,0.7s						
O20A				IAML		19 12 18.7	
	comp=N,49nm,1.9s						
REDW	Red Top Meadow	4.14	270		Pn	19 10 60.0	+2.2
REDW				IAML		19 12 20.8	
	comp=N,59nm,1.5s						
REDW				IAML		19 12 24.9	
	comp=N,69nm,1.5s						
YNR	Norris Junctio	4.15	289		Pn	19 11 00.5	+2.6
IMW	Indian Meadow	4.20	277		Pn	19 10 57.0	-1.6
IMW				IAML		19 12 15.4	
	comp=N,38nm,0.8s						
IMW				IAML		19 12 22.9	
	comp=N,33nm,0.9s						
FXWY	Fox Creek	4.26	274		Pn	19 11 00.7	+1.4
YHH	Holmes Hill	4.29	289		Pb	19 11 10.2	+0.8
RDMU	Red Mountain	4.39	230		Pn	19 11 01.1	-0.1
AHID	Auburn Hatcher	4.40	262		Pn	19 11 04.2	+2.9
AHID				IAML		19 12 17.4	
	comp=N,56nm,1.1s						
AHID				IAML		19 12 38.0	
	comp=E,36nm,1.1s						
YHB	Horse Butte	4.51	288		Pn	19 11 03.1	+0.2
YHL	Hebgen Lake	4.53	289		Pb	19 11 14.3	+0.7
QLMT	Earthquake Lak	4.70	289	Pn	Pn	19 11 05.1	-0.3
KSCO	Kaye Shedlock’	4.88	156		Pn	19 11 07.9	+0.1
DGMT	Dagmar	5.02	7	Pn	Pn	19 11 12.2	+2.5
HWUT	Hardware Ranch	5.09	250		Pn	19 11 11.7	+1.0
HWUT				IAML		19 12 48.2	
	comp=E,27nm,1.4s						
HWUT				IAML		19 12 59.6	
	comp=E,27nm,1.3s						
TCUT	Toone Canyon	5.20	245		Pn	19 11 14.7	+2.4
PV22	Blue Mesa, Par	5.66	210		Pg	19 11 38.4	-3.1
MCMT	McKenzie Canyo	5.68	286		Pn	19 11 22.1	+3.2
PV07	Paradox Valley	5.70	209	Pn	Pn	19 11 19.6	+0.5
SDCO	Great Sand Dun	5.75	183		Pn	19 11 18.1	-1.8
P17A	Butcher Ranch,	5.80	228		Pg	19 11 41.7	-2.5
SPUT	South Promonto	5.81	250		Pn	19 11 22.3	+1.6
PV23	Carpenter Ridg	5.82	211		Pg	19 11 41.7	-2.9
PV09	Paradox Valley	5.82	212		Pn	19 11 23.8	+2.8
PV12	Saucer Basin,	5.86	209		Pn	19 11 23.4	+2.0
PV20	West Nyswonger	5.90	210	Pn	Pn	19 11 20.5	-1.4
PV11	David Mesa, Pa	5.90	210		Pn	19 11 24.8	+2.9
PV16	Nyswonger Mesa	5.91	210		Pn	19 11 22.7	+0.7
PV02	Paradox Valley	5.94	208		Pn	19 11 21.8	-0.6
SRU	San Rafael Swe	5.95	224		Pn	19 11 24.7	+2.1
PV13	Radium Mtn., P	6.01	209	Pn	Pn	19 11 24.3	+0.9
TMUT	Trail Mountain	6.18	229		Pn	19 11 29.4	+3.6
ECSD	EROS Data Cent	6.22	85		Pg	19 11 49.9	-2.3
T25A	Trinidad	6.38	175		Pn	19 11 29.9	+1.4
Q16A	Castle Valley	6.43	227		Pn	19 11 29.8	+0.5
DUG	Dugway, Tooele	6.59	243		Pn	19 11 32.2	+0.8
ULM	Lac du Bonnet	9.28	40	Pn	Pn	19 12 08.4	+0.4
	comp=E,0.4nm,0.3s,baz=229,slow=15,SNR=3.0						
ULM				Lg	Lg	19 14 41.9	
	comp=E,0.3nm,0.3s,baz=320,slow=19,SNR=3.0						
I56US	NEWPORT INFRAS	9.60	304	i		20 12 00.0	
	baz=115,slow=320,SNR=8.2						
YERR	Yerington	11.51	252		Pn	19 12 38.5	-0.2

NNC ***20*** *19:26:21.1±6.3, 36°.96N×70°.79E, h190^{km}±86^{km}, mb2.5, mpv3.5, Error ellipse: s-maj=64.2km s-min=53.0km az=2.0*

ISC 20 19:26:16.5±1.3**, 36°.7N**±0°.1×**71°.0E**±0°.1**, h188^{km}, n12, σ1^{s}.19**/14**, 4C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.45	357	⇑P	Pn	19 27 50.6	+1.3
	1.1nm,0.2s,baz=182,slow=12,SNR=91						
KK31				⇑S	Sn	19 29 00.0	-2.8
	11nm,0.6s,baz=190,slow=27,SNR=4.1						
AAK	Ala-Archa	6.56	23	⇑P	Pn	19 27 52.1	+1.1
	2.5nm,0.6s						
AAK				⇓S	Sn	19 29 05.9	+0.1
	3.7nm,0.5s						
DANN	Dangsing	13.60	124	eP	Pn	19 29 21.6	-0.6
	2.8nm,0.3s						
AB31	Akbulak array	14.93	331	⇑P	Pn	19 29 37.4	-0.8
	0.2nm,0.3s						

DMN	Daman	14.98	123	*e*P	P	19 29 40.0	-0.3
	4.4nm,0.4s						
PKIN	Phulchoki	15.20	122	*e*P	P	19 29 42.4	-0.3
	7.4nm,0.4s						
PKI	Pulchoki	15.21	122	*e*P	P	19 29 42.8	-0.1
GUN	Gumba	15.32	120	*e*P	Pn	19 29 43.1	-0.4
	5.1nm,0.3s						
JIRN	Jiri	15.69	121	*e*P	Pn	19 29 47.3	-0.7
RAMN	Ramite	16.42	122	*e*P	Pn	19 29 57.2	+0.5
AKTO	Aktyubinsk	16.63	330	⇓P	P	19 29 59.5	+1.6
	0.8nm,0.5s						
TAPN	Taplejung	16.94	118	*e*P	Pn	19 30 02.8	-0.2

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*IDC **20** 19:36:55.0±3.7, 36°.49N×71°.06E, h41^{km}±31^{km}, mb3.7/13, mb1 3.9/19, mb1mx3.6/49, mbtmp4.0/19, ML4.0/6, Error ellipse: s-maj=26.2km s-min=18.2km az=178.0*
*NNC **20** 19:36:57.2±3.8, 37°.03N×70°.51E, h0^{km}, mb4.5, mpv4.3, Error ellipse: s-maj=39.1km s-min=19.4km az=153.0*
*NEIC **20** 19:37:01.2±1.3, 36°.84N±0°.03×71°.1E±0°.1, h81^{km}±11^{km}, mb4.2/9, Error ellipse: s-maj=15.7km s-min=4.5km az=87.0*
ISC 20 19:37:00.7±0.5**, 36°.78N**±0°.05×**71°.19E**±0°.06**, h88**^{km}**, n80, σ2^{s}.21**/86**, mb3.9**/17**, 4C-8D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	2.84	219		Pn	19 37 44.3	+0.2
CEP	Cherat	3.01	168	P	Pn	19 37 47.6	+1.2
CEP				S	Sn	19 38 27.0	+5.4
CHCP	Chirah Chowk	3.55	151	P	Pn	19 37 55.6	+2.0
NIL	Nilore	3.55	151	Pn	Pn	19 37 55.6	+2.0
AML	Almayashu	5.69	19	P	Pn	19 38 24.1	+1.2
	SNR=106						
THN	Thein Dam	5.72	138	*e*PG	Pn	19 38 24.0	+0.9
THN				*e*x	x	19 39 50.5	
UCH	Uchtor	6.02	24	P	Pn	19 38 29.6	+2.1
	SNR=15						
KZA	Kyzart	6.15	29	P	Pn	19 38 31.2	+1.9
	SNR=15						
DHRM	DHARAMSHALA	6.18	135	*e*PG	Pn	19 38 30.0	+0.4
DHRM				*e*SG	Sn	19 39 36.7	-2.3
DHRM				IAML		19 39 41.3	
	comp=N,393nm,0.2s						
DHRM				IAML		19 39 41.4	
	comp=E,330nm,0.3s						
EKS2	Erkin-Say	6.20	18	P	Pn	19 38 31.6	+1.8
	SNR=37						
KK31	Karatay Array	6.34	356	⇑Pn	Pn	19 38 31.2	-0.3
	comp=E,5.9nm,0.3s,baz=177,slow=12,SNR=94						
KK31				⇓Sn	Sn	19 39 40.6	-1.7
	comp=E,26nm,0.7s,baz=184,slow=32,SNR=7.3						
KK31	Karatay Array	6.34	356		Pn	19 38 31.2	-0.3
KKAR	Karatay Array	6.34	356		Pn	19 38 31.2	-0.3
AAK	Ala-Archa	6.38	23	P	Pn	19 38 34.2	+2.0
	comp=E,5.5nm,0.3s,baz=178,slow=6.1,SNR=100						
AAK				S	Sn	19 39 47.1	+3.5
	comp=E,2.0nm,0.3s,baz=138,slow=22,SNR=7.1						
AAK	Ala-Archa	6.38	23	P	Pn	19 38 34.4	+2.2
	SNR=28						
AAK	Ala-Archa	6.38	23	⇓Pn	Pn	19 38 33.7	+1.5
	comp=E,12nm,0.4s						
AAK				⇑Sn	Sn	19 39 46.1	+2.5
	comp=E,27nm,1.1s						
AAK	Ala-Archa	6.38	23		Pn	19 38 33.1	+0.9
KBK	Karagaybulak	6.54	25	P	Pn	19 38 36.7	+2.3
	SNR=11						
FRU1	Bishkek	6.58	23		Pn	19 38 37.1	+2.4
ULHL	Ulahol	6.71	34	P	Pn	19 38 39.3	+2.6
	SNR=7.2						
CHMS	Chumysh	6.79	23	P	Pn	19 38 39.0	+1.4
	SNR=37						
CHMS	Chumysh	6.79	23	⇑Pn	Pn	19 38 38.8	+1.1
	comp=E,40nm,0.6s						
CHMS				⇓Sn	Sn	19 39 55.5	+2.2
	comp=E,12nm,0.7s						
BHK	Bhakra	6.89	139	*e*x	Sn	19 39 55.2	-0.7
USP	Ospenovka	6.96	20	P	Pn	19 38 40.9	+1.0
	SNR=13						
SMLA	Simla	7.51	137	*e*PG	Pn	19 38 46.9	-0.6
SMLA				*e*SG	Sn	19 40 07.2	-3.9
SMLA				IAML		19 40 09.5	
	comp=N,76nm,0.3s						
SMLA				IAML		19 40 09.9	
	comp=E,76nm,0.7s						
MDOK	Medeo	7.80	33	⇑P	Pn	19 38 52.4	+0.9
	comp=E,6.0nm,0.7s						
PDGK	Podgornoye	9.12	42	⇓P	Pn	19 39 10.4	+0.9
	comp=E,3.8nm,0.6s						
JOSI	Joshimath	9.34	129	*e*PG	Pn	19 39 11.4	-1.2
JOSI				*e*SG	Sn	19 40 51.0	-4.9
JOSI				IAML		19 40 55.7	
	comp=E,54nm,0.5s						
JOSI				IAML		19 40 58.2	
	comp=N,46nm,0.4s						
GEYT	Alibeck	10.47	280	P	Pn	19 39 21.8	-6.0
	comp=N,1.2nm,0.3s,baz=115,slow=8.3,SNR=23						
GEYT				S	Sn	19 41 11.3	-12
	comp=N,1.4nm,0.3s,baz=28,slow=22,SNR=4.8						
GYA0B	ALIBECK ARRAY	10.47	280	⇓P	Pn	19 39 21.2	-6.6
GYA0B				⇓S	Sn	19 41 10.9	-12
GYA0B	ALIBECK ARRAY	10.47	280	Pn	Pn	19 39 22.2	-5.6
MAKZ	Makanchi	12.84	35		Pn	19 39 59.3	-0.5
MK31	Makanchi Array	12.98	36		Pn	19 40 01.2	-0.4
MKAR	Makanchi Array	12.98	36	P	Pn	19 40 01.7	+0.2
	comp=N,0.1nm,0.3s,baz=226,slow=13,SNR=17						
MKAR	Makanchi Array	12.98	36		Pn	19 40 00.7	-0.9
DANN	Dangsing	13.52	125	*e*P	Pn	19 40 06.4	-2.7
	comp=N,7.7nm,0.3s						
GKN	Gorkha	14.33	124	*e*P	Pn	19 40 17.1	-2.4
	comp=N,31nm,0.4s						
KURBB	Kurchatov Arra	14.81	19	P	Pn	19 40 25.2	-0.1
	comp=N,0.2nm,0.3s,baz=209,slow=10,SNR=4.3						
KKN	Kakani	14.90	123	*e*P	Pn	19 40 23.4	-3.5
	comp=N,12nm,0.5s						
AB31	Akbulak array	14.91	330	⇓P	Pn	19 40 22.8	-3.8
	comp=N,0.9nm,0.4s						
ABKAR	Akbulak array	14.91	330	P	Pn	19 40 22.7	-4.0
KURK	Kurchatov	14.92	19	P	Pn	19 40 26.0	-0.7
PKIN	Phulchoki	15.12	123	*e*P	Pn	19 40 27.8	-1.9
	comp=N,11nm,0.4s						
PKI	Pulchoki	15.13	123	*e*P	Pn	19 40 27.3	-2.6
	comp=N,14nm,0.6s						
GUN	Gumba	15.23	121	*e*P	Pn	19 40 28.1	-3.1
	comp=N,6.7nm,0.3s						
JIRN	Jiri	15.60	121	*e*P	Pn	19 40 32.1	-3.8
	comp=N,26nm,0.4s						
BVAR	Borovoye Array	16.25	358	P	Pn	19 40 42.4	-1.1
	comp=N,1.9nm,0.3s,baz=166,slow=13,SNR=15						
RAMN	Ramite	16.34	122	*e*P	Pn	19 40 43.2	-1.8
	comp=N,7.1nm,0.3s						
AKTO	Aktyubinsk	16.61	329	P	Pn	19 40 45.8	-2.2
	comp=N,2.6nm,0.3s,baz=137,slow=9.4,SNR=37						
AKTO				S	Sn	19 43 41.9	-10
	comp=N,0.1nm,0.3s,baz=164,slow=18,SNR=2.5						
AKTO	Aktyubinsk	16.61	329	⇓P	Pn	19 40 47.9	0.0
	comp=N,9.1nm,0.5s						
TAPN	Taplejung	16.85	119	*e*P	Pn	19 40 49.8	-1.5
	comp=N,4.9nm,0.3s						
ZAA0	Zalesovo Array	19.60	25	P	P	19 41 21.8	+0.2
ZAA0				IAmb	IAmb	19 41 22.6	
	comp=Z,6.4nm,0.5s						
ZALV	Zalesovo Beam	19.60	25	P	P	19 41 22.1	+0.5
	comp=Z,2.0nm,0.3s,baz=217,slow=11,SNR=25						
ARU	Arti	21.42	341	P	P	19 41 41.4	+0.2
	comp=Z,1.4nm,0.4s,baz=145,slow=7.0,SNR=9.9						
ARU	Arti	21.42	341	P	P	19 41 41.4	+0.2
ARU				IAmb	IAmb	19 41 42.1	
	comp=Z,4.7nm,0.5s						
KBZ	Khabaz	22.61	297	P	P	19 41 57.9	+4.0
	comp=Z,1.5nm,0.6s,baz=245,slow=3.4,SNR=6.4						
SONM	Songino Array	28.05	56	P	P	19 42 45.0	+1.3
	comp=Z,0.7nm,0.7s,baz=260,slow=9.1,SNR=6.9						
BRTR	Keskin Array B	29.49	287	P	P	19 42 56.1	-0.5
	comp=Z,0.5nm,0.6s,baz=96,slow=10,SNR=3.1						
AKASG	Malin Array Be	32.89	308	P	P	19 43 26.4	+0.3
	comp=Z,0.7nm,0.4s,baz=81,slow=6.9,SNR=4.5						
MLR	Muntele Rosu	34.78	299	P	P	19 43 43.8	+1.0
MLR				IAmb	IAmb	19 44 12.5	
	comp=Z,2.0nm,0.7s						
BURAR	Bucovina Array	35.26	303	P	P	19 43 48.0	+1.2
FINES	FINESS Array B	37.34	326	P	P	19 44 04.8	+0.7
	comp=Z,1.8nm,0.7s,baz=120,slow=6.8,SNR=5.1						
ARCES	ARCESS Array B	40.94	337	P	P	19 44 35.2	+1.1
	comp=Z,2.0nm,0.5s,baz=115,slow=8.9,SNR=20						
ARCES	ARCESS Array B	40.94	337	P	P	19 44 35.4	+1.3
ARE0	ARCESS Array S	40.94	337	P	P	19 44 35.5	+1.3
NC303	NORSAR Array S	44.19	323	P	P	19 45 01.4	+0.9
NB201	NORSAR Array S	44.21	323	P	P	19 45 00.9	+0.2
NB2	NORSAR Subarra	44.25	323	P	P	19 45 01.2	+0.2
	comp=Z,0.9nm,0.5s,baz=96,slow=7.9						
NOA	NORSAR Array B	44.25	323	P	P	19 45 01.1	0.0
	comp=Z,1.1nm,0.5s,baz=96,slow=7.8,SNR=5.3						
NBO00	NORSAR Array S	44.46	323	P	P	19 45 02.8	+0.1
NC204	NORSAR Array S	44.49	323	P	P	19 45 03.1	+0.2
TIXI	Tiksi	45.46	22	P	P	19 45 11.6	+1.2
TIXI				IAmb	IAmb	19 45 12.3	
	comp=Z,3.1nm,0.8s						
TORD	Torodi Ar. Bea	65.88	269	P	P	19 47 35.4	-1.9
	comp=Z,0.3nm,0.3s,baz=51,slow=5.7,SNR=5.7						
INK	Inuvik	73.60	9	P	P	19 48 25.4	+1.6
	comp=Z,1.1nm,0.6s,baz=308,slow=5.9,SNR=5.2						
INK	Inuvik	73.60	9	P	P	19 48 25.5	+1.6
PPLA	Purkeypile	74.77	19	P	P	19 48 32.0	+1.0
PPLA				IAmb	IAmb	19 48 32.0	
	comp=Z,9.9nm,1.3s						
YKA	Yellowknife Ar	80.96	3	P	P	19 49 06.2	+1.2
	comp=Z,1.2nm,0.7s,baz=352,slow=5.1,SNR=25						
WRA	Warramunga Arr	82.01	122	P	P	19 49 10.5	-0.7
	comp=Z,0.4nm,1.0s,baz=328,slow=5.1,SNR=1.7						
ASAR	Alice Springs	84.29	125	P	P	19 49 22.1	-0.8
	comp=Z,0.3nm,0.8s,baz=323,slow=5.7,SNR=2.0						
ULM	Lac du Bonnet	92.59	352	P	P	19 50 02.1	-0.1
	comp=Z,1.4nm,0.8s,baz=360,slow=9.4,SNR=3.7						

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*IDC **20** 20:12:08.8±0.8, 35°.63N×26°.54E, h0^{km}, mb4.0/9, mb1 3.9/13, mb1mx3.7/48, mbtmp3.8/13, ML3.6/4, Error ellipse: s-maj=23.3km s-min=10.6km az=164.0*
*NIC **20** 20:12:09.4±0.0, 35°.45N×26°.42E, h11^{km}±2^{km}, Ml3.6/3*
*ISK **20** 20:12:10.1, 35°.63N×26°.49E, h16^{km}, ML3.7/29*
*ATH **20** 20:12:10.5, 35°.58N×26°.54E, h38^{km}±2^{km}, ML3.6/15, Error ellipse: s-maj=2.3km s-min=0.9km az=156.0*
*THE **20** 20:12:11.5, 35°.59N×26°.49E, h7^{km}±1^{km}, ML3.6/12, Error ellipse: s-maj=1.4km s-min=0.4km az=151.0*
*HLW **20** 20:12:12.7, 35°.61N×26°.74E, h10^{km}±9^{km}, Md4.1*
*DDA **20** 20:12:13.0, 35°.86N×26°.64E, h20^{km}±1^{km}, ML3.5*
ISC 20 20:12:10.9±0.9**, 35°.61N**±0°.02×**26°.49E**±0°.02**, h16**^{km}±7^{km}**, n156, σ1^{s}.25**/194**, mb3.8**/9**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STIA	Sitia Lasithi	0.52	219	P	Pg	20 12 21.5	+0.2
STIA				S	Sb	20 12 29.6	+0.5
ZKR	Zakros	0.54	205	P	Pg	20 12 21.9	+0.2
ZKR				S	Sb	20 12 29.8	+0.1
	4µm,0.5s						
ZKR	Zakros	0.54	205	P	Pg	20 12 21.9	+0.2
ZKR				S	Sb	20 12 30.5	+0.8
ZKR				AML	AML	20 12 31.4	
	comp=N,5190µm,0.5s						
ZKR				AML	AML	20 12 36.9	
	comp=E,11555µm,0.5s						
ZKR	Zakros	0.54	205	PG	Pg	20 12 21.8	+0.1
ZKR				SG	Sb	20 12 29.8	+0.1
KARP	Karpathos	0.55	96	P	Pg	20 12 21.5	-0.2
KARP				S	Sb	20 12 30.8	+0.9
	comp=E,7µm,0.5s						
KARP	Karpathos	0.55	96	P	Pg	20 12 21.6	-0.2
KARP				S	Sg	20 12 29.3	+0.2
KARP				AML	AML	20 12 31.1	
	comp=E,15569µm,0.5s						
KARP				AML	AML	20 12 34.3	
	comp=N,13130µm,0.5s						
KARP	Karpathos	0.55	96	PG	Pg	20 12 21.7	-0.1
KARP				SG	Sg	20 12 29.7	+0.6
KARP	Karpathos	0.55	96	P	Pg	20 12 21.7	-0.1
KARP				S	Sb	20 12 30.5	+0.7
KARP				AML	AML	20 12 30.7	
	comp=N,15nm,0.5s						
KARP				AML	AML	20 12 30.7	
	comp=N,15nm,0.5s						
KARP				AML	AML	20 12 33.7	
	comp=N,13nm,0.5s						
KARP				AML	AML	20 12 33.7	
	comp=N,13nm,0.5s						
NPS	Neapolis	0.80	245	P	Pg	20 12 26.7	+0.2
NPS				S	Sb	20 12 38.4	+1.3
	comp=N,21µm,0.3s						
NPS	Neapolis	0.80	245	P	Pg	20 12 26.9	+0.4
NPS				S	Sb	20 12 38.2	+1.2
NPS				AML	AML	20 12 40.0	
	comp=E,31654µm,0.3s						
NPS				AML	AML	20 12 40.4	
	comp=N,19865µm,0.3s						
FRMA	Ierapetra Chan	0.86	227	P	Pg	20 12 26.2	-1.4
FRMA				S	Sg	20 12 37.7	-1.2
	comp=N,2µm,0.5s						
LAST	Lasithi	0.94	242	P	Pg	20 12 29.1	-0.1
LAST				S	Sb	20 12 42.9	+1.6
	comp=N,3µm,0.5s						
LAST	Lasithi	0.94	242	P	Pg	20 12 29.3	+0.1
LAST				S	Sg	20 12 42.0	+0.4
LAST				AML	AML	20 12 44.6	
	comp=E,13852µm,0.7s						
LAST				AML	AML	20 12 45.1	
	comp=N,9942µm,0.3s						
ANAF	Anafi Island	0.95	322	P	Pg	20 12 29.4	+0.1
ANAF				S	Sb	20 12 43.2	+1.9
	comp=N,15µm,0.2s						
ANAF	Anafi Island	0.95	322	P	Pg	20 12 30.1	+0.9
ANAF				S	Sg	20 12 42.9	+1.1
ANAF				AML	AML	20 12 45.3	
	comp=E,34755µm,0.3s						
ANAF				AML	AML	20 12 46.7	
	comp=N,27325µm,0.2s						
SANT	Santorini	1.13	312	P	Pg	20 12 32.8	0.0
SANT	Santorini	1.13	312	PN	Pg	20 12 31.8	-1.0
THR8	Santorini-Mono	1.14	314	P	Pg	20 12 32.8	-0.2
THR8	Santorini-Mono	1.14	314	P	Pg	20 12 32.8	-0.2
THT1	Athinios (Pele	1.16	312	P	Pg	20 12 32.7	-0.6
THT1	Athinios (Pele	1.16	312	P	Pg	20 12 32.4	-0.8
THR6	Thira Island,	1.16	310	P	Pg	20 12 33.1	-0.2
THR6	Thira Island,	1.16	310	P	Pg	20 12 32.6	-0.7
SAP1	Santorini-Akro	1.16	310	P	Pg	20 12 31.9	-1.5
HRKL	Herakleio	1.18	256	P	Pg	20 12 32.7	-0.9
HRKL				S	Sb	20 12 49.4	+1.5
	comp=N,4µm,0.5s						
HRKL	Herakleio	1.18	256	PN	Pg	20 12 32.6	-1.0
STAX	Taxiarchis Har	1.18	312	P	Pg	20 12 33.3	-0.5
STAX	Taxiarchis Har	1.18	312	P	Pg	20 12 33.2	-0.5
THR7	Fira-Santorini	1.18	313	P	Pg	20 12 33.1	-0.7
THR9	Santorini-Faro	1.19	309	P	Pg	20 12 33.5	-0.3
THR9	Santorini-Faro	1.19	309	P	Pg	20 12 33.5	-0.3
THR3	Thira Island,	1.19	312	P	Pg	20 12 33.5	-0.4
THR3	Thira Island,	1.19	312	P	Pg	20 12 33.5	-0.4
THR2	Thira island,	1.20	315	P	Pg	20 12 32.9	-1.2
THT2	Imerovigli	1.20	314	PN	Pg	20 12 33.0	-1.0
IACM	Heraklion	1.20	256	P	Pg	20 12 33.1	-0.9
KSTL	Kastelli Herak	1.20	256	P	Pg	20 12 31.0	-3.1
KSTL				S	Sg	20 12 45.2	-4.6
KOSK	Kos Island	1.20	19	P	Pb	20 12 32.6	-0.8
KOSK				S	Sg	20 12 50.4	+0.5
	comp=N,2µm,0.5s						
KOSK	Kos Island	1.20	19	PN	Pb	20 12 32.9	-0.5
THR5	Thira Island,	1.23	311	P	Pb	20 12 33.8	0.0
THR5	Thira Island,	1.23	311	P	Pb	20 12 33.6	-0.2
CMBO	Columbo, Santo	1.23	315	P	Pb	20 12 33.0	-0.9
SAP3	Santorini-Thir	1.24	312	P	Pn	20 12 33.5	-0.2
AMGA	Amorgos Island	1.31	338	P	Pn	20 12 34.5	-0.2
AMGA				S	Sb	20 12 52.6	+0.8
	comp=N,2µm,0.4s						
AMGA	Amorgos Island	1.31	338	P	Pn	20 12 34.5	-0.2
AMGA				S	Sb	20 12 51.1	-0.7
AMGA				AML	AML	20 12 58.1	
	comp=N,4549µm,0.5s						
AMGA				AML	AML	20 13 00.8	
	comp=E,2745µm,0.2s						
IDI	Anoyia	1.35	257	P	Pn	20 12 34.8	-0.4
IDI				S	Sb	20 12 53.1	+0.2
	comp=E,2µm,0.3s						
IDI	Anoyia	1.35	257	Pg	Pn	20 12 35.1	0.0
	comp=E,17nm,0.3s,baz=28,slow=8.4,SNR=148						
IDI				Lg	Lg	20 12 53.1	
	comp=E,68nm,0.3s,baz=262,slow=14,SNR=13						
IDI	Anoyia	1.35	257	P	Pn	20 12 34.8	-0.4
IDI				S	Sb	20 12 52.0	-0.9
IDI				AML	AML	20 12 57.2	
	comp=E,4124µm,0.3s						
IDI				AML	AML	20 12 59.1	
	comp=N,2808µm,0.3s						
IDI	Anoyia	1.35	257	PN	Pn	20 12 35.2	0.0
DAT	Datca	1.42	38	PN	Pn	20 12 36.0	-0.2
DAT	Datca	1.42	38	*i* P	Pn	20 12 35.5	-0.7
DAT				*i* S	Sb	20 12 50.2	-4.8
ARG	Arkhangelos	1.46	65	P	Pn	20 12 37.1	+0.5
ARG				S	Sn	20 12 57.0	+1.6
	comp=N,2µm,0.5s						
ARG	Arkhangelos	1.46	65	P	Pn	20 12 36.9	+0.4
ARG				S	Sn	20 12 53.7	-1.7
ARG				AML	AML	20 13 01.7	
	comp=N,3827µm,0.5s						
ARG				AML	AML	20 13 03.1	
	comp=E,4642µm,0.6s						
ARG	Arkhangelos	1.46	65	P	Pn	20 12 37.0	+0.4
ARG				S	Sg	20 12 58.9	+1.0
IOSP	Ios island	1.48	319	P	Pn	20 12 37.6	+0.7
IOSP	Ios island	1.48	319	P	Pn	20 12 37.6	+0.7
IOSP				S	Sn	20 12 55.5	-0.4
IOSP				AML	AML	20 13 01.8	
	comp=E,1998µm,0.4s						
IOSP				AML	AML	20 13 05.7	
	comp=N,2369µm,0.6s						
DATC	Datca-Mugla	1.48	39	PN	Pn	20 12 37.1	+0.1
SIVA	Sivas	1.50	247	P	Pn	20 12 38.1	+0.9
SIVA				S	Sn	20 12 57.0	+0.6
	comp=N,3µm,0.4s						
SIVA	Sivas	1.50	247	P	Pn	20 12 38.1	+0.9
SIVA				S	Sn	20 12 56.2	-0.2
SIVA				AML	AML	20 13 02.8	
	comp=E,5683µm,0.5s						
SIVA				AML	AML	20 13 06.9	
	comp=N,4671µm,0.6s						
BODT	Bodrum	1.59	24	PN	Pn	20 12 38.3	-0.2
APE	Apeiranthos	1.65	332	P	Pn	20 12 39.5	+0.2
APE	Apeiranthos	1.65	332	P	Pn	20 12 39.6	+0.3
APE				S	Sn	20 12 59.6	-0.7
APE				AML	AML	20 13 01.9	
	comp=N,1281µm,0.1s						
APE				AML	AML	20 13 07.0	
	comp=E,772µm,0.2s						
APE	Apeiranthos	1.65	332	PN	Pn	20 12 39.2	-0.1
APE	Apeiranthos	1.65	332	P	Pn	20 12 39.5	+0.2
MRSB	Marmaris-Mugla	1.77	51	PN	Pn	20 12 40.4	-0.5
VAM	Vamos	1.88	264	P	Pn	20 12 42.0	-0.5
VAM	Vamos	1.88	264	P	Pn	20 12 41.8	-0.7
VAM				AML	AML	20 13 15.4	
	comp=N,1987µm,0.4s						
VAM				AML	AML	20 13 16.4	
	comp=E,1358µm,0.3s						
IMMV	Iera Moni Meta	2.06	267	P	Pn	20 12 45.1	+0.2
IMMV	Iera Moni Meta	2.06	267	P	Pn	20 12 45.1	+0.2
IMMV				AML	AML	20 13 22.6	
	comp=E,1252µm,0.5s						
IMMV				AML	AML	20 13 33.9	
	comp=N,1287µm,0.5s						
IMMV	Iera Moni Meta	2.06	267	PN	Pn	20 12 44.8	0.0
YER	Yerkesik	2.10	43	PN	Pn	20 12 45.9	+0.4
SMG	Samos	2.11	7	P	Pn	20 12 46.0	+0.3
SMG	Samos	2.11	7	P	Pn	20 12 46.0	+0.3
SMG				AML	AML	20 13 24.8	
	comp=E,1106µm,0.5s						
SMG				AML	AML	20 13 25.8	
	comp=N,967µm,0.4s						
GVD	Gavdhos	2.12	249	P	Pn	20 12 44.9	-0.8
GVD	Gavdhos	2.12	249	PN	Pn	20 12 46.2	+0.5
TURN	Turunc	2.12	53	PN	Pn	20 12 41.8	-3.9
TURN	Turunc	2.12	53	*i* P	Pn	20 12 41.6	-4.1
TURN				*i* S	Sn	20 13 03.9	-7.9
DALY	Dalyan (Mula)	2.12	55	PN	Pn	20 12 45.5	-0.2
DALY	Dalyan (Mula)	2.12	55	*i* P	Pn	20 12 46.9	+1.1
DALY				*i* S	Sn	20 13 13.4	+1.7
GCAM	G?zelcaml?	2.17	16	PN	Pn	20 12 45.9	-0.5
GCAM	G?zelcaml?	2.17	16	*i* P	Pn	20 12 49.6	+3.2
RODP	Rodopos	2.23	270	PN	Pn	20 12 47.4	+0.1
SERI	Serifos	2.24	314	P	Pn	20 12 47.3	-0.1
SERI				AML	AML	20 13 25.2	
	comp=N,302µm,0.6s						
SERI				AML	AML	20 13 32.4	
	comp=E,287µm,0.4s						
KNDR	Palaiochora Ch	2.32	262	PN	Pn	20 12 49.2	+0.7
FETY	Fethiye	2.33	63	PN	Pn	20 12 48.7	0.0
FETY	Fethiye	2.33	63	*i* P	Pn	20 12 49.8	+1.1
FETY				*i* S	Sn	20 13 18.1	+1.0
DGB	zmir	2.46	7	*i* P	Pn	20 12 51.8	+1.4
DGB				*i* S	Sn	20 13 19.9	-0.2
KSL	Kastellorizon	2.57	77	P	Pn	20 12 52.1	+0.3
KSL	Kastellorizon	2.57	77	P	Pn	20 12 53.3	+1.5
KSL				S	Sn	20 13 25.6	+2.8
KSL				AML	AML	20 13 32.6	
	comp=E,0.3nm,0.5s						
KSL				AML	AML	20 13 32.6	
	comp=E,0.3nm,0.5s						
KSL				AML	AML	20 13 51.6	
	comp=E,0.3nm,1.6s						
KSL				AML	AML	20 13 51.6	
	comp=E,0.3nm,1.6s						
AYDB	Zeytinkoy-Aydi	2.59	25	PN	Pn	20 12 52.0	-0.3
AKAS	Kas	2.60	75	PN	Pn	20 12 52.3	-0.2
AKAS	Kas	2.60	75	*i* P	Pn	20 12 53.9	+1.4
ANKY	Antikythira Is	2.61	277	P	Pn	20 12 51.3	-1.2
TAVA	DENIZLI_Tavas	2.69	46	*i* P	Pn	20 12 56.5	+2.8
TAVA				*i* S	Sn	20 13 20.9	-5.1
URLA	Izmir	2.75	2	PN	Pn	20 12 54.5	+0.1
URLA	Izmir	2.75	2	*i* P	Pn	20 12 54.6	+0.3
CHOS	Chios island	2.79	353	P	Pn	20 12 55.1	0.0
CHOS	Chios island	2.79	353	PN	Pn	20 12 55.1	0.0
BLCB	Balcova	2.80	9	PN	Pn	20 12 55.2	+0.1
KARY	Karystos	2.93	326	P	Pn	20 12 57.7	+0.9
GOLH	Golhisar	2.96	56	*i* P	Pn	20 12 59.5	+2.1
GOLH				*i* S	Sn	20 13 36.2	+3.6
GOLH				IAML		20 13 52.0	
	comp=N,294nm,0.6s						
ELL	Elmali	2.99	67	PN	Pn	20 12 58.0	+0.2
ELL	Elmali	2.99	67	P	Pn	20 12 59.5	+1.7
VLI	Veliai	3.08	292	P	Pn	20 12 59.9	+0.9
AKUM	Antalya-Kumluc	3.20	76	*i* P	Pn	20 13 02.1	+1.5
DID	Didima	3.23	307	P	Pn	20 13 02.7	+1.6
KULA	Kula-Manisa	3.38	30	PN	Pn	20 13 03.6	+0.5
ZEDA	zmir-Bergama	3.38	8	*i* P	Pn	20 13 03.2	+0.1
KORT	Korkueli	3.41	65	PN	Pn	20 13 03.8	+0.2
KORT	Korkueli	3.41	65	*i* P	Pn	20 13 06.6	+3.0
BRDR	BURDUR-Merkez	3.54	53	*i* P	Pn	20 13 07.5	+2.1
DYR	Agios Nikonas	3.56	290	P	Pn	20 13 07.1	+1.6
SIGR	SIGRI	3.63	352	P	Pn	20 13 06.5	0.0
SIGR	SIGRI	3.63	352	PN	Pn	20 13 06.5	0.0
PRK	Paraskevi	3.63	357	P	Pn	20 13 07.2	+0.6
KHAL	Karahalli	3.65	40	*i* P	Pn	20 13 08.9	+2.0
VIL2	Platees	3.66	316	P	Pn	20 13 08.3	+1.3
LTK	Loutraki	3.71	311	P	Pn	20 13 09.4	+1.7
VLX	Vlachokerasia	3.75	299	P	Pn	20 13 10.1	+1.8
SIMA	Simav-Kutahya	3.99	29	PN	Pn	20 13 12.2	+0.6
ITM	Ithomi	4.00	294	P	Pn	20 13 13.6	+1.9
AOS	Alonnisos	4.12	330	P	Pn	20 13 12.9	-0.3
EZN	Ezine	4.21	358	PN	Pn	20 13 14.9	+0.4
BOZC	Bozcaada	4.24	355	PN	Pn	20 13 14.9	0.0
SLUM	Salum	4.25	195	P	Pn	20 13 16.1	+1.2
	baz=198						
KLV	Kalavryta, Ach	4.25	306	P	Pn	20 13 16.8	+1.7
LIA	Limnos Island	4.41	347	P	Pn	20 13 17.7	+0.5
DRO	Drossia	4.50	303	P	Pn	20 13 20.2	+1.8
TVSB	Tavsanli	4.50	31	PN	Pn	20 13 18.9	+0.3
SEYD	Seydisehir-KON	4.66	66	PN	Pn	20 13 21.4	+0.6
ANX	Ano Chora	4.71	311	P	Pn	20 13 23.2	+1.7
AGG	Agios Georgios	4.75	317	PN	Pn	20 13 22.1	+0.1
GAZI	Gazipasa	4.77	81	PN	Pn	20 13 21.9	-0.2
AKMS	Akamas	4.81	95	P	Pn	20 13 23.3	+0.5
AKMS				AML	AML	20 14 18.8	
	comp=N,0.4nm,0.3s						
AKMS				AML	AML	20 14 21.7	
	comp=N,0.6nm,0.7s						
ALFC	Alefka	5.01	93	P	Pn	20 13 25.6	+0.1
NATA	Nata	5.04	98	P	Pn	20 13 25.8	-0.1
SZAC	Souni	5.30	97	P	Pn	20 13 29.1	-0.4
ASGA	Asgata	5.59	97	P	Pn	20 13 34.5	+1.1
CSS	Mathiatis	5.63	95	P	Pn	20 13 35.2	+1.2
SWA2		6.41	188	P	Pn	20 13 45.7	+1.0
	baz=191						
SWA2				S	Sn	20 14 53.8	-3.8

	baz=191						
BRTR	Keskin Array B	7.00	52	Pn	Pn	20 13 54.5	+1.5
	comp=N,0.4nm,0.3s,baz=216,slow=14,SNR=13						
BRTR				Sn	Sn	20 15 11.9	-0.4
	comp=N,0.1nm,0.3s,baz=220,slow=22,SNR=2.0						
GLL	Jalalah	7.45	142	P	Pn	20 13 58.3	-0.7
	baz=143						
MMAI	Mount Meron Ar	7.81	107	Pn	Pn	20 14 02.8	-1.2
	comp=N,0.7nm,0.3s,baz=310,slow=12,SNR=9.1						
MMAI				Sn	Sn	20 15 26.6	-5.6
	comp=N,0.8nm,0.3s,baz=308,slow=24,SNR=2.3						
SUZ	Suez	7.85	135	P	Pn	20 14 03.5	-1.0
	baz=136						
HFRF	Wahat Farafira	8.58	169	P	Pn	20 14 14.9	+0.4
	baz=170						
EIL	Elat	9.27	127	Pn	Pn	20 14 23.3	-0.7
	comp=N,0.4nm,0.3s,baz=321,slow=3.0,SNR=9.9						
EIL				Sn	Sn	20 16 00.3	-7.6
	comp=N,1.0nm,0.3s,baz=0.3,slow=9.7,SNR=5.0						
GERES	GERESS Array B	16.24	328	Pn	Pn	20 15 59.2	+0.8
	comp=N,0.2nm,0.3s,baz=137,slow=13,SNR=2.1						
GEYT	Alibeck	25.38	75	P	P	20 17 37.7	+0.2
	comp=N,3.0nm,0.6s,baz=294,slow=11,SNR=7.1						
FINES	FINESS Array B	25.86	360	P	P	20 17 41.3	-0.2
	comp=N,3.7nm,1.0s,baz=170,slow=9.5,SNR=2.0						
AKTO	Aktyubinsk	27.14	47	P	P	20 17 52.6	-0.7
	comp=N,0.7nm,0.4s,baz=260,slow=6.8,SNR=3.8						
EKA	Eskdalemuir Ar	28.32	323	P	P	20 18 04.4	+0.7
	comp=N,0.3nm,0.4s,baz=116,slow=9.4,SNR=3.6						
TORD	Torodi Ar. Bea	31.62	231	P	P	20 18 33.5	+0.3
	comp=N,0.2nm,0.5s,baz=36,slow=9.1,SNR=2.4						
MKAR	Makanchi Array	42.62	57	P	P	20 20 06.6	+0.2
	comp=N,2.1nm,0.5s,baz=271,slow=8.2,SNR=51						
MKAR				PcP	PcP	20 21 58.4	0.0
	comp=N,0.3nm,0.7s,baz=281,slow=2.8,SNR=2.2						
ZALV	Zalesovo Beam	43.91	47	P	P	20 20 16.1	-0.5
	comp=N,2.0nm,0.5s,baz=267,slow=9.4,SNR=11						
SONM	Songino Array	58.36	51	P	P	20 22 05.6	+0.1
	comp=N,0.4nm,0.4s,baz=283,slow=7.3,SNR=7.9						
CMAR	Chiang Mai Arr	65.44	84	P	P	20 22 53.5	+0.1
	comp=N,0.5nm,0.7s,baz=278,slow=7.2,SNR=5.7						

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*GUC **20** 20:27:31.6±0.6, 29°.35S×70°.20W, h104^{km}±4^{km}, ML3.8*
*IDC **20** 20:27:31.3±3.3, 29°.32S×70°.16W, h92^{km}±23^{km}, mb3.6/1, mb1 3.5/3, mb1mx3.2/40, mbtmp3.8/3, Error ellipse: s-maj=58.2km s-min=13.7km az=79.0*
*NEIC **20** 20:27:32.4±0.7, 29°.34S±0°.07×70°.1W±0°.1, h101^{km}±4^{km}, mb4.4/3, ML3.8(GUC), Error ellipse: s-maj=17.8km s-min=9.4km az=77.0*
*SJA **20** 20:27:33.7±0.8, 29°.25S×70°.07W, h50^{km}, ML3.5, MW3.5*
ISC 20 20:27:32.5±0.8**, 29°.32S**±0°.04×**70°.12W**±0°.04**, h108**^{km}±7^{km}**, n37, σ0ˢ.94**/50**, mb3.7**/3**, 3C-2D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AROD	Rodeo	1.01	146	*i* P	Pn	20 27 53.7	-0.3
AROD				*e*S	Sn	20 28 09.3	-0.8
GO04	Tololo Observa	1.03	215⇓	*i*P	Pn	20 27 53.8	-0.3
GO04				*i* S	Sn	20 28 09.8	-0.6
GO04	Tololo Observa	1.03	215		Pn	20 27 54.0	-0.1
GO04	Tololo Observa	1.03	215	*i* P	Pn	20 27 54.2	0.0
GO04				*e*S	Sn	20 28 10.4	0.0
ACDV	Cuesta del Vie	1.21	134	*i* P	Pn	20 27 55.8	-0.3
ACDV				*e*S	Sn	20 28 13.4	-0.3
ACDV				IAML		20 28 15.1	
	comp=Z,213nm,0.3s						
AGUA	GUANDACOL	1.43	97	*i* P	Pn	20 27 58.8	+0.4
AGUA				*e*S	Sn	20 28 18.0	-0.1
AGUA				IAML		20 28 19.8	
	comp=Z,722nm,0.4s						
ACCO	Cerro Coronel	1.56	144	*i* P	Pn	20 28 00.5	+0.3
ACCO				*e*S	Sn	20 28 21.3	+0.1
CO03	El Pedregal	1.59	198⇑	*e*P	Pn	20 27 60.0	-0.4
CO03				*i* S	Sn	20 28 21.3	-0.2
CO03				IAML		20 28 22.5	
	comp=E,2µm,0.5s						
GO03	Copiap	1.73	357⇓	*e*P	Pn	20 28 02.4	+0.3
GO03				*i* S	Sn	20 28 25.4	+0.8
GO03	Copiap	1.73	357		Pn	20 28 02.8	+0.8
VCA	Vinchina	1.78	71⇑	*i*P	Pn	20 28 03.8	+1.1
VCA				*i* S	Sn	20 28 26.8	+1.0
VCA	Vinchina	1.78	71	*i* P	Pn	20 28 03.9	+1.1
VCA				IAML		20 28 31.0	
	comp=Z,456nm,0.4s						
CO02	Combarbal	2.02	202⇑	*i*P	Pn	20 28 05.3	-0.5
CO02				*i* S	Sn	20 28 30.6	-0.6
CO02				IAML		20 28 31.9	
	comp=N,1µm,0.2s						
RTLL	Cerro Villicun	2.45	145	*i* S	Sn	20 28 39.9	-1.1
RTLL				IAML		20 28 42.7	
	comp=N,345nm,0.6s						
RTLL	Cerro Villicun	2.45	145	*i* P	Pn	20 28 11.1	-0.2
RTLL				IAML		20 28 52.5	
	comp=Z,944nm,0.9s						
ZON	Zonda	2.54	151	*i* P	Pn	20 28 12.4	-0.1
RTLS	Leoncito	2.57	164	*i* P	Pn	20 28 13.7	+0.7
RTLS				IAML		20 28 46.7	
	comp=Z,112nm,0.5s						
CFA	Coronel Fontan	2.79	145	P	Pn	20 28 15.3	-0.5
	comp=Z,11nm,0.3s,baz=322,slow=14,SNR=48						
CFA				S	Sn	20 28 48.0	-1.1
	comp=Z,19nm,0.3s,baz=315,slow=12,SNR=10						
RTCV	Cerro Valdivia	2.87	152	*i* P	Pn	20 28 17.4	+0.6
VA03	San Esteban	3.45	186	*e*P	Pn	20 28 24.1	-0.4
VA03				*i* S	Sn	20 29 04.4	-0.3
ROC1	El Roble	3.72	192	Pn	Pn	20 28 28.1	-0.2
PEL	Peldehue	3.84	187	Pn	Pn	20 28 29.1	-0.6
CYA	Choya	3.89	78	*i* P	Pn	20 28 28.9	-1.5
CYA				IAML		20 29 15.0	
	comp=Z,68nm,0.8s						
GO02	Mina Guanaco	4.17	7		Pn	20 28 34.0	-0.5
PB14	IPOC Station P	4.69	357	Pn	Pn	20 28 40.0	-1.4
MRA	San Martin	4.88	130	*i* P	Pn	20 28 42.4	-1.4
MRA				IAML		20 29 38.7	
	comp=Z,46nm,0.5s						
PB10	IPOC Station P	5.80	356	Pn	Pn	20 28 55.4	-0.8
LVC	Limon Verde	6.77	10	P	Pn	20 29 07.6	-2.1
	comp=Z,0.7nm,0.3s,baz=182,slow=9.7,SNR=2.2						
LVC				S	Sn	20 30 25.0	-0.6
	comp=Z,1.1nm,0.3s,baz=244,slow=18,SNR=1.7						
PB01	IPOC Station P	8.27	4	Pn	Pn	20 29 25.9	-3.8
QSPA	South Pole Qui	60.90	180	P	P	20 37 34.1	+0.5
QSPA				IAmb	IAmb	20 37 45.8	
	comp=Z,0.9nm,1.1s						
MVL	Millersville	69.21	355	P	P	20 38 27.9	+0.5
MVL				IAmb	IAmb	20 38 29.1	
	comp=Z,5.8nm,0.8s						
TORD	Torodi Ar. Bea	81.06	70	P	P	20 39 36.3	+0.3
	comp=Z,0.8nm,0.7s,baz=249,slow=4.7,SNR=4.1						
WRA	Warramunga Arr	125.63	209	PKP	PKPdf	20 46 22.1	+0.1
	comp=Z,0.4nm,0.4s,baz=154,slow=1.8,SNR=9.7						
ZALV	Zalesovo Beam	149.38	29	PKPbc	PKPbc	20 47 09.3	+0.9
	comp=Z,2.5nm,0.5s,baz=311,slow=3.7,SNR=12						
ZALV	Zalesovo Beam	149.38	29		PKPbc	20 47 09.1	+0.6
MKAR	Makanchi Array	152.35	43	PKPbc	PKPbc	20 47 16.2	+0.6
	comp=Z,0.5nm,0.5s,baz=312,slow=2.0,SNR=9.7						
MKAR	Makanchi Array	152.35	43		PKPbc	20 47 16.1	+0.4

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*IDC **20** 20:31:18.8±1.2, 9°.77N×40°.58W, h0^{km}, mb3.9/4, mb1 4.0/4, mb1mx3.6/41, mbtmp3.9/4, Error ellipse: s-maj=45.9km s-min=26.3km az=146.0*
*NEIC **20** 20:31:20.3±2.2, 9°.6N±0°.2×40°.48W±0°.07, h10^{km}±1^{km}, mb4.6/7, Error ellipse: s-maj=31.1km s-min=11.9km az=180.0*
ISC 20 20:31:20.5±1.0**, 9°.6N**±0°.2×**40°.5W**±0°.2**, h10**^{km}**, n16, σ0ˢ.76**/12**, mb4.2**/8**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H05S1	Guadeloupe/Mar	20.44	286	T	T	20 56 56.2	
	SNR=3.8						
PTGA	Pitinga	21.91	243	P	P	20 36 13.3	-0.9
PTGA				IAmb	IAmb	20 36 17.1	
	comp=Z,25nm,1.3s						
SAML	Samuel	29.13	231	P	P	20 37 21.6	-0.3
SAML				IAmb	IAmb	20 37 24.3	
	comp=Z,10nm,1.5s						
H10N3	ASCENSION HYDR	31.16	123	T	T	21 10 21.8	
	baz=303,slow=75,SNR=51						
H10N2	ASCENSION HYDR	31.17	123	T	T	21 10 35.5	
	baz=303,slow=75,SNR=43						
H10N1	ASCENSION HYDR	31.18	123	T	T	21 10 26.7	
	baz=303,slow=75,SNR=64						
SIV	San Ignacio	32.56	219	P	P	20 37 53.1	+0.9
	comp=Z,0.7nm,0.6s,baz=87,slow=9.1,SNR=3.6						
LPAZ	La Paz	37.52	227	P	P	20 38 36.1	+0.4
	comp=Z,1.8nm,0.9s,baz=36,slow=6.6,SNR=5.1						
LPAZ	La Paz	37.52	227	P	P	20 38 35.6	-0.1
TORD	Torodi Ar. Bea	41.50	81	P	P	20 39 08.3	0.0
	comp=Z,2.2nm,0.8s,baz=276,slow=8.0,SNR=12						
TORD	Torodi Ar. Bea	41.50	81	P	P	20 39 07.9	-0.4
HODGE	Hodges	45.39	309	P	P	20 39 40.1	+0.7
HODGE				IAmb	IAmb	20 39 43.4	
	comp=Z,5.1nm,0.7s						
T49A	Edmonton	48.95	311	P	P	20 40 06.6	-0.6
YKA	Yellowknife Ar	74.21	332	P	P	20 42 56.3	-1.1
	comp=Z,0.4nm,0.8s,baz=104,slow=6.0,SNR=4.4						
WVOR	Wild Horse Val	74.84	311	P	P	20 43 02.4	+0.8
WVOR				IAmb	IAmb	20 43 10.3	
	comp=Z,7.5nm,0.7s						
BCAR	Beaver Creek A	86.59	333	P	P	20 44 04.8	+0.8

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*NEIC **20** 20:44:38.4±1.6, 14°.1S±0°.1×167°.3E±0°.2, h219^{km}±10^{km}, mb4.4/9, Error ellipse: s-maj=25.9km s-min=13.0km az=124.0*
*IDC **20** 20:44:40.4±5.6, 14°.18S×167°.18E, h229^{km}±58^{km}, mb3.6/9, mb1 3.7/10, mb1mx3.5/35, mbtmp4.1/10, Error ellipse: s-maj=47.8km s-min=24.5km az=158.0*
ISC 20 20:44:41.6±0.9**, 14°.22S**±0°.08×**167°.3E**±0°.2**, h250**^{km}**, n26, σ0ˢ.95**/27**, mb4.0**/12**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.85	186	P	Pn	20 46 33.7	+0.7
	0.4nm,0.3s,baz=102,slow=22,SNR=0.9						
DZM				S	S	20 48 01.6	-1.3
	0.2nm,0.3s,baz=292,slow=19,SNR=1.2						
DZM	Mont Dzumac	7.85	186		Pn	20 46 32.6	-0.4
STKA	Stephens Creek	29.36	229	P	P	20 50 22.3	+0.6
	3.1nm,0.7s,baz=60,slow=9.2,SNR=8.9						
STKA	Stephens Creek	29.36	229	P	P	20 50 22.2	+0.6
WRA	Warramunga Arr	32.00	255	P	P	20 50 43.5	-1.4
	2.3nm,0.6s,baz=86,slow=9.4,SNR=30						
AS31	Alice Springs	32.90	248	P	P	20 50 51.5	-1.3
ASAR	Alice Springs	32.90	248	P	P	20 50 51.5	-1.2
	1.6nm,0.4s,baz=76,slow=9.5,SNR=37						
ASAR	Alice Springs	32.90	248	P	P	20 50 51.4	-1.4
WAKE	Wake Island	33.30	359	P	P	20 50 54.4	-1.6
BBOO	Buckleboo	33.93	232	P	P	20 51 01.6	+0.2
BBOO				IAmb	IAmb	20 51 14.7	
	comp=Z,24nm,1.1s						
GUMO	Guam	35.46	320	P	P	20 51 13.7	-0.9
FORT	Forrest	39.60	239	P	P	20 51 48.9	-0.2
FORT				IAmb	IAmb	20 52 12.5	
	comp=Z,28nm,1.0s						
FITZ	Fitzroy Crossi	40.16	259	P	P	20 51 54.1	+0.2
	comp=Z,2.5nm,1.0s,baz=81,slow=7.7,SNR=2.1						
FITZ	Fitzroy Crossi	40.16	259	P	P	20 51 53.9	0.0
FITZ				IAmb	IAmb	20 51 54.5	
	comp=Z,2.2nm,1.1s						
NWAO	Narrogin (SRO)	49.05	239	P	P	20 53 03.2	-0.5
NWAO				IAmb	IAmb	20 53 27.7	
	comp=Z,21nm,1.1s						
CMAR	Chiang Mai Arr	74.79	294	P	P	20 55 56.5	+1.6
	comp=Z,0.7nm,0.6s,baz=116,slow=4.7,SNR=5.9						
QSPA	South Pole Qui	75.80	180	P	P	20 56 00.6	+0.6
SONM	Songino Array	82.12	324	P	P	20 56 35.2	+0.8
	comp=Z,0.4nm,0.4s,baz=132,slow=5.3,SNR=8.5						
SONM	Songino Array	82.12	324	P	P	20 56 35.4	+1.0
ILAR	Eielson Array	86.03	18	P	P	20 56 53.0	-0.6
	comp=Z,0.6nm,0.8s,baz=237,slow=6.2,SNR=6.3						
ILAR	Eielson Array	86.03	18	P	P	20 56 53.1	-0.4
MKAR	Makanchi Array	96.87	316	P	P	20 57 45.5	+1.1
	comp=Z,0.7nm,0.6s,baz=93,slow=6.6,SNR=12						
ZALV	Zalesovo Beam	97.01	324	P	P	20 57 44.8	0.0
	comp=Z,0.5nm,0.5s,baz=108,slow=4.8,SNR=3.7						
ZALV	Zalesovo Beam	97.01	324	P	P	20 57 44.3	-0.4
ARCES	ARCESS Array B	119.78	345	PKP	PKiKP	21 03 01.8	+0.4
	comp=Z,3.0nm,0.9s,baz=82,slow=2.6,SNR=7.6						
KEST	Kesra	150.85	321	PKPbc	PKiKP	21 04 06.6	+1.1
	comp=Z,3.8nm,0.7s,baz=329,slow=0.8,SNR=5.5						

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*IDC **20** 20:48:59.7±1.1, 5°.51S×152°.96E, h0^{km}, mb3.8/9, mb1 4.0/10, mb1mx3.8/40, mbtmp3.8/10, ML1.9/1, MS2.9/2, Ms1 2.9/2, ms1mx2.6/50, Error ellipse: s-maj=23.5km s-min=14.9km az=77.0*
ISC 20 20:49:06.3±1.2**, 5°.4S**±0°.1×**152°.7E**±0°.2**, h37**^{km}**, n13, σ0ˢ.60**/13**, mb3.8**/9**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.27	328	Pg	Pn	20 49 27.8	+0.2
	424nm,0.3s,baz=164,slow=5.9,SNR=88						
KRVT				Lg	Lg	20 49 48.2	
	429nm,0.3s,baz=312,slow=23,SNR=15						
PMG	Port Moresby	6.79	234	Pn	Pn	20 50 44.1	+0.7
	1.4nm,0.3s,baz=49,slow=9.3,SNR=4.9						
PMG				Sn	Sn	20 51 58.9	-0.6
	5.0nm,0.3s,baz=71,slow=23,SNR=9.4						
PMG				LR	LR	20 53 42.2	
	comp=Z,34nm,18.9s,baz=40,slow=41						
WRA	Warramunga Arr	22.98	229	P	P	20 54 07.4	-0.5
	1.6nm,0.8s,baz=51,slow=10,SNR=20						
ASAR	Alice Springs	25.65	223	P	P	20 54 32.2	-0.6
	1.2nm,0.8s,baz=53,slow=8.8,SNR=9.0						
STKA	Stephens Creek	28.32	200	LR	LR	21 06 26.2	
	comp=Z,55nm,18.2s,baz=201,slow=37						
FITZ	Fitzroy Crossi	29.29	242	P	P	20 55 05.8	+0.3
	2.2nm,0.8s,baz=67,slow=7.4,SNR=6.7						
CMAR	Chiang Mai Arr	58.04	296	P	P	20 58 56.4	+0.3
	0.4nm,0.5s,baz=101,slow=4.9,SNR=4.2						
SONM	Songino Array	66.77	328	P	P	20 59 54.2	+0.1
	0.2nm,0.4s,baz=150,slow=4.6,SNR=4.6						
MKAR	Makanchi Array	80.71	319	P	P	21 01 15.3	-0.4
	0.7nm,0.9s,baz=103,slow=5.5,SNR=6.9						
ZALV	Zalesovo Beam	81.59	326	P	P	21 01 20.6	+0.4
	0.5nm,0.4s,baz=119,slow=5.3,SNR=2.7						
ILAR	Eielson Array	82.75	22	P	P	21 01 25.1	-1.0
	0.6nm,0.7s,baz=248,slow=5.7,SNR=5.9						
YKA	Yellowknife Ar	96.00	28	P	P	21 02 30.2	+0.9
	0.3nm,0.7s,baz=277,slow=4.9,SNR=2.5						
TORD	Torodi Ar. Bea	150.39	287	PKPbc	PKPbc	21 08 54.8	-0.1
	0.2nm,0.3s,baz=82,slow=2.2,SNR=1.8						

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*IPEC **20** 20:49:36.8±0.2, 49°.82N×18°.58E, h0^{km}, ML2.5/3, Error ellipse: s-maj=1.7km s-min=1.1km az=163.0*
ISC 20 20:49:36.7±0.8**, 49°.82N**±0°.03×**18°.55E**±0°.02**, h0**^{km}**, n31, σ0ˢ.57**/57**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.26	275	*e*PG	Pg	20 49 42.6	+0.9
OKC				*e*SG	Sg	20 49 46.6	+1.5
	comp=Z,340nm,0.6s						
MORC	Moravsky Berou	0.66	267	*e*Pg	Pg	20 49 49.5	+0.3
	baz=86						
MORC				*e*Sg	Sg	20 49 57.7	0.0
	99nm,0.5s,baz=86						
MORC	Moravsky Berou	0.66	267	*e*PG	Pg	20 49 49.6	+0.3
MORC				*e*SG	Sg	20 49 57.7	0.0
LANS	Liptovska Anna	0.90	138	*e*PG	Pg	20 49 54.1	+0.3
LANS				*e*SG	Sb	20 50 07.5	-0.1
OJC	Ojcow	0.90	63	*e*Pg	Pg	20 49 53.7	-0.3
OJC				*e*Sg	Sg	20 50 05.9	+0.2
JAVC	Velka Javorina	1.12	211	*e*Pg	Pb	20 49 58.6	-0.3
	baz=31						
JAVC	Velka Javorina	1.12	211	*e*PG	Pb	20 49 58.7	-0.2
KRLC	Kraliky	1.17	283	*e*PG	Pg	20 49 58.0	-1.1
KRLC				*e*SG	Sb	20 50 15.2	-0.4
	comp=Z,78nm,0.5s						
NIE	Niedzica	1.21	109	*e*Pg	Pg	20 49 59.9	+0.1
NIE				*e*Sg	Sb	20 50 16.7	+0.2
VRAC	Vranov	1.37	249	*e*Pg	Pg	20 50 02.7	-0.3
	baz=68						
VRAC				*e*Sg	Sg	20 50 20.3	-0.4
	60nm,0.5s,baz=68						
VRAC	Vranov	1.37	249	*e*PG	Pg	20 50 02.7	-0.3
VRAC				*e*SG	Sg	20 50 20.4	-0.3
DPC	Dobruska-Polom	1.53	291	*e*PG	Pn	20 50 04.7	-0.6
DPC				*e*SG	Sn	20 50 26.4	+0.4
	comp=Z,47nm,0.6s						
KRUC	Moravsky	1.60	243	*e*Pg	Pn	20 50 06.2	0.0
	baz=61						
KRUC				*e*Sg	Sb	20 50 27.4	-0.3
	53nm,0.6s,baz=61						
KRUC	Moravsky	1.60	243	*e*PG	Pn	20 50 06.2	0.0
KRUC				*e*SG	Sb	20 50 27.4	-0.3
OSTC	Ostas	1.67	297	*e*PG	Pn	20 50 07.3	0.0
OSTC				*e*SG	Sg	20 50 30.6	+0.1
	comp=Z,63nm,0.7s						
UPC	Upice	1.77	294	*e*PG	Pn	20 50 09.0	+0.4
UPC				*e*SG	Sb	20 50 33.2	+0.3
	comp=Z,35nm,0.5s						
KSP	Ksiaz	1.77	306	*e*Pb	Pn	20 50 07.8	-0.8
KSP				*e*Pg	Pb	20 50 10.1	0.0
KSP				*e*Sg	Sg	20 50 33.5	-0.2
CHVC	Chvalec	1.78	297	*e*PG	Pn	20 50 08.5	-0.2
CHVC				*e*SG	Sg	20 50 34.4	+0.5
	comp=Z,44nm,0.8s						
TREC	Trest	2.06	257	*e*PG	Pb	20 50 14.4	-0.6
TREC				*e*SG	Sg	20 50 41.8	-1.1
	comp=Z,24nm,0.4s						
CONA	Conrad Observa	2.59	224	*i* Pn	Pn	20 50 19.1	-0.8
	5.3nm,0.5s						
PRU	Pruhonice	2.60	275	*e*PG	Pb	20 50 23.2	-0.9
PRU				*e*SG	Sg	20 51 00.0	-0.1
	comp=Z,14nm,0.6s						
PVCC	Panska Ves	2.66	287	*e*PG	Pb	20 50 25.9	+0.8
PVCC				*e*SG	Sg	20 51 02.2	+0.2
	comp=Z,31nm,0.5s						
PRA	Prague	2.67	277	*e*PG	Pb	20 50 26.1	+0.7
PRA				*e*SG	Sg	20 51 02.9	+0.4
	comp=Z,33nm,0.6s						
PBCC	Pribram	2.96	269	*e*PG	Pb	20 50 30.3	+0.1
BRG	Berggiesshubel	3.14	291	PG	Pb	20 50 33.5	+0.2
BRG				SG	Sg	20 51 17.0	-0.4
	18nm,0.7s						
KHC	Kasperske Hory	3.31	260	*e*PN	Pn	20 50 29.3	-0.5
KHC				*e*PG	Pb	20 50 36.8	+0.4
KHC				*e*SG	Sg	20 51 22.9	-0.2
	comp=Z,15nm,0.6s						
MOA	Molln	3.45	237	*i* Pn	Pn	20 50 30.9	-0.8
	0.6nm,0.2s						
MOA				*i* Pg	Pb	20 50 39.9	+1.3
	4.2nm,0.5s						
MOA				*e*Sg	Sb	20 51 22.0	+1.0
	10nm,0.6s						
CLL	Collm	3.84	295	*i* Sg	Sg	20 51 39.7	-0.3
NKC	Novy Kostel	3.96	278	*e*SG	Sg	20 51 42.6	-1.2
	comp=Z,9.2nm,0.5s						
KBA	Koelnbreinsper	4.42	234	*e*Pn	Pn	20 50 45.4	+0.3
	1.2nm,0.3s						
MOTA	Moosalm	5.53	246	*e*Sg	Sg	20 52 34.5	+0.4
	7.8nm,0.6s						

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*IDC **20** 20:59:02.8±1.2, 38°.40N×133°.54E, h459^{km}±17^{km}, mb2.3/3, mb1 2.5/7, mb1mx2.4/58, mbtmp3.2/7, Error ellipse: s-maj=28.2km s-min=21.0km az=54.0*
*JMA **20** 20:59:03.7±0.4, 38°.31N×133°.85E, h464^{km}, M3.6*
ISC 20 20:59:02.6±0.9**, 38°.4N**±0°.1×**133°.5E**±0°.1**, h448**^{km}**, n11, σ1ˢ.07**/11**, mb2.9**/4**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWT	Wachi	3.48	154	P	P	21 00 14.4	+1.1
MJAR	Matsushiro Arr	4.18	115	P	P	21 00 20.2	+0.9
	0.1nm,0.3s,baz=305,slow=9.8,SNR=6.2						
KSRS	Korea Array	4.52	259	P	P	21 00 23.3	+1.0
	0.3nm,0.3s,baz=73,slow=8.8,SNR=8.4						
JFT	Otama	5.47	97	P	P	21 00 31.8	+0.3
JMM	Marumori	5.77	93	P	P	21 00 34.5	+0.1
USRK	Ussuriysk Ar.	5.88	349	P	P	21 00 37.0	+1.6
	baz=172,slow=10.0,SNR=29						
ASAJ	Asahikawa	8.90	47	P	P	21 01 07.3	-0.2
	0.4nm,0.3s,baz=229,slow=19,SNR=1.0						
SONM	Songino Array	21.81	304	P	P	21 03 21.3	+0.7
	0.2nm,0.5s,baz=99,slow=8.9,SNR=1.7						
MKAR	Makanchi Array	38.03	300	P	P	21 05 39.3	-1.6
	0.2nm,0.5s,baz=97,slow=7.8,SNR=2.8						
WRA	Warramunga Arr	58.06	179	P	P	21 08 10.9	-0.7
	0.3nm,1.0s,baz=351,slow=7.4,SNR=1.0						
FINES	FINESS Array B	64.55	329	P	P	21 08 53.5	-0.4
	7.3nm,1.2s,baz=69,slow=8.1,SNR=4.9						

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*IDC **20** 21:07:13.5±1.0, 31°.53N×49°.53E, h0^{km}, mb4.0/20, mb1 4.1/24, mb1mx3.9/63, mbtmp4.0/24, ML3.9/5, Error ellipse: s-maj=21.9km s-min=13.3km az=176.0*
*TEH **20** 21:07:15.4, 31°.58N×49°.65E, h8^{km}, ML4.2*
*THR **20** 21:07:17.1±0.3, 31°.56N×49°.54E, h17^{km}±4^{km}, ML4.1*
*NEIC **20** 21:07:18.2±1.4, 31°.42N±0°.06×49°.51E±0°.07, h40^{km}±7^{km}, Error ellipse: s-maj=9.5km s-min=6.8km az=225.0*
*OMAN **20** 21:07:24.2±0.7, 30°.72N×49°.56E, h16^{km}, ms2.4/1, Error ellipse: s-maj=29.8km s-min=8.7km az=313.0*
ISC 20 21:07:16.2±0.4**, 31°.37N**±0°.04×**49°.51E**±0°.04**, h25**^{km}**, n205, σ1ˢ.51**/217**, mb4.2**/41**, 21C, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AHWZ	Ahwaz	0.74	267	*e*Pg	Pn	21 07 33.6	+2.6
SHGR	Shooshtar-Gavs	0.95	321	*e*Pg	Pn	21 07 32.9	-1.1
SHGR	Shooshtar-Gavs	0.95	321	*e*Pg	Pn	21 07 32.9	-1.1
JHBN	Jahan bin	1.31	49	*e*Pg	Pn	21 07 36.0	-3.2
ROKH	ROKH	1.62	53	*e*Pn	Pn	21 07 41.5	-1.9
IPIR	Pirpir	1.76	42	*e*Pg	Pn	21 07 43.6	-1.8
IPIR				*e*		21 08 11.2	
KLNJ	Kolanjah	1.82	101	*e*Pn	Pb	21 07 48.8	-0.3
KLNJ				*e*		21 08 24.3	
IKMR	Kamar-syah	2.34	336	*e*Pn	Pn	21 07 54.0	+0.9
IKMR				*e*		21 08 32.2	
BMDN	Meydan	2.37	346	*e*Pn	Pn	21 07 53.7	+0.1
BMDN				*e*		21 08 33.5	
IGAR	Gharneh	2.39	64	*e*Pn	Pn	21 07 55.0	+1.0
IRAM	Ramesheh	2.49	79	*e*Pn	Pn	21 07 55.9	+0.6
IKAZ	Kazeroun	2.56	128	*e*Pn	Pn	21 07 59.2	+2.8
IKAZ				*e*		21 08 44.9	
IKFM	Kafar-mosalman	2.57	327	*e*Pn	Pn	21 07 57.2	+1.0
IKFM				*e*		21 08 54.4	
IKLH	Kolahrood	2.62	41	*e*Pn	Pn	21 07 57.7	+0.6
IKLH				*e*		21 08 35.9	
BDRS	Dareh Seyedi	2.63	349	*e*Pn	Pn	21 07 57.6	+0.3
IDOB	Doab	2.66	335	*e*Pn	Pn	21 07 58.4	+0.7
IDOB				*e*		21 08 47.7	
IZEF	Zefreh	2.83	57	*e*Pn	Pn	21 08 00.8	+0.7
HSAM	Samen	2.94	345	*e*Pn	Pn	21 08 02.4	+0.9
HSAM				*e*		21 08 51.5	
AHBU	AHRAM	2.94	148	*e*Pn	Pb	21 08 06.9	-1.0
ASAO	Ashtian	3.20	8	*e*Pn	Pn	21 08 06.3	+1.2
ASAO				*e*Sg	Sb	21 08 51.2	+0.1
ASAO				IAML		21 08 56.4	
	comp=E,433nm,0.9s						
ASAO	Ashtian	3.20	8	*e*Pn	Pn	21 08 06.3	+1.2
IKOM	Komasi	3.26	329	*e*Pn	Pn	21 08 07.0	+1.1
IKOM				*e*		21 09 11.8	
KRSH	Karshahi	3.41	40	*e*Pn	Pn	21 08 08.7	+0.8
KRSH				*e*		21 09 18.7	
GHVR	GHOM	3.45	25	*e*Pn	Pn	21 08 09.4	+1.0
GHVR	GHOM	3.45	25	*e*Pn	Pn	21 08 09.4	+1.0
HAGD	Aghdareh	3.46	355	*e*Pn	Pn	21 08 09.2	+0.6
KCHF	Cheshme Sefid,	3.56	325	*e*Pn	Pn	21 08 10.2	+0.1
KCHF				*e*		21 09 26.4	
ISAD	Sadrabad	3.60	80	*e*Pn	Pn	21 08 12.4	+1.7
KER	Kermanshah	3.61	327	*e*Pn	Pn	21 08 12.2	+1.5
IALM	Almabolaq	3.66	342	*e*Pn	Pn	21 08 12.1	+0.6
ISRV	Sarvestan	3.69	122	*e*Pn	Pn	21 08 15.6	+3.6
IQOM	Qom	3.70	20	*e*Pn	Pn	21 08 12.5	+0.5
IQOM				*e*		21 09 24.1	
IGHG	Ghaleghazi	3.85	321	*e*Pn	Pn	21 08 14.8	+0.7
IGHG				*e*		21 09 28.0	
IVIS	Veis	3.86	325	*e*Pn	Pn	21 08 14.8	+0.7
IVIS				*e*		21 09 35.5	
HSRG	Sareghieh	4.00	345	*e*Pn	Pn	21 08 16.7	+0.6
ANAR	Anarak	4.01	62	*e*Pn	Pn	21 08 17.4	+1.3
IRAZ	Razeghan	4.04	5	*e*Pn	Pn	21 08 17.1	+0.5
IVRN	Varamin	4.07	27	*e*Pn	Pn	21 08 17.5	+0.6
IVRN				*e*		21 08 29.9	
ILIN	Lien	4.13	330	*e*Pn	Pn	21 08 18.9	+0.9
ILIN				*e*		21 09 14.1	
IDHR	Dehrash	4.23	323	*e*Pn	Pn	21 08 19.9	+0.6
IDHR				*e*		21 09 12.6	
ICHK	Chekchek	4.26	77	*e*Pn	Pn	21 08 20.7	+1.0
IHSB	Hasanabad	4.32	20	*e*Pn	Pn	21 08 20.7	+0.3
QABG	Abgarm-Qazvin	4.33	1	*e*Pn	Pn	21 08 20.1	-0.5
IMHD	Mahdasht	4.41	12	*e*Pn	Pn	21 08 22.2	+0.5
IDMV	Damavand	4.70	26	*e*Pn	Pn	21 08 25.6	-0.1

ILAS	Lasjerd	4.93	35	*e*Pn	Pn	21 08 29.1	+0.1
IGZV	Ghazvin	5.04	7	*e*Pn	Pn	21 08 31.0	+0.6
IFIR	Firoozkooh	5.05	32	*e*Pn	Pn	21 08 30.9	+0.3
QALM	Alamut, Qazvin	5.14	10	*e*Pn	Pn	21 08 32.7	+1.0
IPRN	Peran	5.40	25	*e*Pn	Pn	21 08 36.3	+1.0
ISHM	Shahmirzad	5.43	34	*e*Pn	Pn	21 08 36.8	+0.9
IALA	Alasht	5.45	29	*e*Pn	Pn	21 08 37.2	+1.2
IANJ	Anjilo	5.50	41	*e*Pn	Pn	21 08 37.7	+1.0
KHGB	Koh Gabri	6.07	98	*e*Pn	Pn	21 08 46.9	+2.3
MAHB	Mahabad	6.24	331	*e*Pn	Pn	21 08 47.3	+0.5
IGLO	Ghaloghah	6.25	34	*e*Pn	Pn	21 08 48.1	+1.1
TPRV	Parvadeh(Tabas	6.30	73	*e*Pn	Pn	21 08 48.1	+0.4
NGRK	Negar Kerman	6.46	104	*e*Pn	Pn	21 08 52.9	+2.8
TNSJ	Nastanj	6.52	65	*e*Pn	Pn	21 08 50.9	+0.3
TKDS	Koohdasht(Taba	6.81	69	*e*Pn	Pn	21 08 55.3	+0.7
TABS	Tabas	6.82	69	*e*Pn	Pn	21 08 57.5	+2.8
TABS	Tabas	6.82	69	*e*Pn	Pn	21 08 57.5	+2.8
SLWR	Sila	7.53	165	*e*Pn	Pn	21 09 08.4	+4.1
SHME	Shamm	7.87	131	*e*Pn	Pn	21 09 09.2	0.0
BANOM	Banah	8.06	131	P	Pn	21 09 13.0	+1.2
	SNR=16						
BANOM				S	Sn	21 10 43.3	+1.1
BANOM	Banah	8.06	131	*e*Pn	Pn	21 09 12.5	+0.7
IKOO	Kooshah	8.14	80	*e*Pn	Pn	21 09 14.0	+1.0
AJN	Ajban	8.33	143	*e*Pn	Pn	21 09 18.7	+3.3
MSFE	Esma-Masafi	8.38	134	*e*Pn	Pn	21 09 17.1	+1.0
MDH	Madha	8.51	134	P	Pn	21 09 18.7	+0.9
MDH				S	Sn	21 10 52.2	-0.8
	SNR=6.9						
MDH	Madha	8.51	134	*e*Pn	Pn	21 09 18.9	+1.1
MZWR	Madinat Zayed	8.51	152	*e*Pn	Pn	21 09 20.5	+2.6
RAYN	Ar Rayn	8.59	205		Pn	21 09 20.7	+1.7
RAYN				Sn	Sn	21 10 57.0	+1.8
UOSS	Minazif	8.71	136	*e*Pn	Pn	21 09 21.9	+1.3
UOSS	Minazif	8.71	136		Pn	21 09 22.2	+1.6
UOSS					Sn	21 10 58.3	+0.3
ASHO	Ashiyiah	8.82	137	P	Pn	21 09 25.0	+2.8
	SNR=5.6						
ASHO				S	Sn	21 11 01.0	+0.1
	SNR=9.9						
ASHO	Ashiyiah	8.82	137	*e*Pn	Pn	21 09 22.5	+0.3
IKRD	Kardeh	9.21	52	*e*Pn	Pn	21 09 37.9	+10
SOHO	SOHO	9.52	137	P	Pn	21 09 33.3	+1.6
SOHO	SOHO	9.52	137	*e*Pn	Pn	21 09 31.5	-0.2
GEYT	Alibeck	9.64	45	Pn	Pn	21 09 34.7	+1.3
	comp=E,1.1nm,0.3s,baz=243,slow=13,SNR=25						
GEYT				Sn	Sn	21 11 19.5	-1.5
	comp=E,0.1nm,0.3s,baz=253,slow=28,SNR=2.0						
GEYT	Alibeck	9.64	45		Pn	21 09 34.5	+1.1
GYA0B	ALIBECK ARRAY	9.64	45		Pn	21 09 35.0	+1.6
UMZA	Um Al Zommool	9.98	148	*e*Pn	Pn	21 09 39.6	+1.5
ARQ	Araqi	10.14	140	P	Pn	21 09 42.2	+1.9
	SNR=9.3						
ARQ				S	Sn	21 11 33.2	0.0
HOQ	Hoqain	10.40	136	P	Pn	21 09 46.2	+2.4
HOQ				S	Sn	21 11 37.5	-2.0
ASF	Jabal al Asfar	10.77	278	Pn	Pn	21 09 49.5	+0.6
	comp=E,0.9nm,0.3s,baz=50,slow=13,SNR=7.1						
ASF				Sn	Sn	21 11 45.5	-3.0
	comp=E,0.4nm,0.3s,baz=349,slow=19,SNR=1.7						
BSY	Bisya	10.99	140	P	Pn	21 09 53.6	+1.8
	SNR=12						
BSY				S	Sn	21 11 50.3	-3.7
HRA	Herat	11.12	71	Pn	Pn	21 09 54.5	+0.6
SMDO	Samad	11.23	135	S	Sn	21 11 58.1	-2.0
WSAR	Wadi Sarin	11.46	133	Pn	Pn	21 09 59.6	+1.3
	comp=E,0.7nm,0.3s,baz=271,slow=6.4,SNR=12						
WSAR				Sn	Sn	21 12 01.2	-4.3
	comp=E,0.5nm,0.3s,baz=80,slow=13,SNR=2.0						
GAZ	Gaziantep	11.70	303	Pn	Pn	21 10 02.2	+0.6
MMAI	Mount Meron Ar	12.06	282	Pn	Pn	21 10 07.0	+0.4
	comp=E,0.5nm,0.3s,baz=95,slow=14,SNR=2.3						
EIL	Elat	12.67	266	Pn	Pn	21 10 15.1	+0.3
	comp=E,0.8nm,0.3s,baz=84,slow=9.2,SNR=6.2						
MHTO	MHTO	12.82	142	S	Sn	21 12 35.5	-3.4
KIV	Kislovodsk	13.67	339	Pn	Pn	21 10 28.4	-0.1
WHFO	Wadi Hawf	13.94	163	P	Pn	21 10 33.3	+1.1
	SNR=11						
ABTO	Aybut	14.37	165	P	Pn	21 10 38.1	0.0
ABTO				S	Sn	21 13 13.0	-3.9
DMTO	DMTO	14.46	159	P	Pn	21 10 39.9	+0.6
	SNR=6.8						
DMTO				S	Sn	21 13 13.3	-5.6
BR131	Keskin Array S	15.36	307		Pn	21 10 52.0	+0.7
BR131				IAmb	IAmb	21 11 04.2	
	comp=Z,8.6nm,1.3s						
BRTR	Keskin Array B	15.36	307	Pn	P	21 10 56.4	+0.5
	comp=Z,0.2nm,0.3s,baz=127,slow=12,SNR=15						
BRTR	Keskin Array B	15.36	307		Pn	21 10 52.6	+1.2
BZK	Bozkurt	16.30	315	⇑P	Pn	21 11 01.0	-2.3
KBL	Kabul	16.70	74	P	Pn	21 11 08.8	+0.2
ELL	Elmali	17.10	294	P	Pn	21 11 13.8	+0.2
DAMY	Dhamar	17.36	197	Pn	Pn	21 11 17.4	+0.2
MDUB	Mudurnu	17.36	307		Pn	21 11 15.5	-1.4
KARP	Karpathos	19.10	289	P	P	21 11 37.3	+0.2
ABKAR	Akbulak array	19.52	21		P	21 11 40.6	-1.0
SOCY	Socotra	19.53	167	P	P	21 11 38.9	-3.1
SOCY				IAmb	IAmb	21 11 44.5	
	comp=Z,9.0nm,1.0s						
AKTO	Aktyubinsk	20.08	16	P	P	21 11 46.8	-0.9
	comp=Z,0.6nm,0.3s,baz=199,slow=6.9,SNR=10.0						
NIL	Nilore	20.14	77	P	P	21 11 49.4	+0.8
NIL				IAmb	IAmb	21 11 54.9	
	comp=Z,8.3nm,0.8s						
KK31	Karatay Array	20.36	49		P	21 11 50.7	-0.1
KKAR	Karatay Array	20.36	49		P	21 11 50.7	-0.1
KKAR	Karatay Array	20.36	49	P	P	21 11 50.2	-0.6
ATD	Arta Tunnel	20.68	199	P	P	21 11 54.9	+0.4
ATD				IAmb	IAmb	21 12 05.0	
	comp=Z,9.9nm,1.0s						
IDI	Anoyia	20.92	287	P	Pn	21 11 59.5	-0.2
	comp=Z,22nm,0.9s,baz=108,slow=9.4,SNR=9.3						
ALN	Alexandroupoli	21.15	303	P	P	21 11 59.9	+0.6
ALN				IAmb	IAmb	21 12 05.3	
	comp=Z,10nm,1.0s						
ARSB	Arslanbob	21.30	56	P	P	21 12 01.7	+0.6
ARSB				IAmb	IAmb	21 12 04.7	
	comp=Z,10nm,0.9s						
TOPG	Topolog	21.32	315	⇑P	P	21 12 01.6	+0.4
HARR	Harsova	21.50	314	⇑P	P	21 12 03.9	+0.9
CFR	Carcaliu	21.63	316	⇑P	P	21 12 04.6	+0.2
ISR	Istrita	22.57	314	⇑P	P	21 12 12.9	-1.7
AAK	Ala-Archa	22.82	53	P	P	21 12 18.0	+0.6
	comp=Z,0.4nm,0.4s,baz=198,slow=6.4,SNR=9.8						
AAK	Ala-Archa	22.82	53	P	P	21 12 18.8	+1.4
AAK				IAmb	IAmb	21 12 28.4	
	comp=Z,10nm,1.4s						
PLOR	Plostina	22.87	316	⇑P	P	21 12 18.0	+0.2
KSH	Kashi	22.98	62	P	P	21 12 18.0	-1.1
KSH				pP	pP	21 12 21.8	-4.4
KSH				PcP	PcP	21 16 09.1	+0.6
KSH				S	S	21 16 21.3	-6.8
KSH				sS	pS	21 16 28.5	-7.7
KSH				SS	SnSn	21 17 06.8	+6.1
MLR	Muntele Rosu	23.12	314	P	P	21 12 23.4	+3.0
	comp=Z,3.3nm,0.7s,baz=153,slow=11,SNR=5.3						
MLR	Muntele Rosu	23.12	314	⇑P	P	21 12 22.7	+2.3
MLR	Muntele Rosu	23.12	314	P	P	21 12 20.4	0.0
MLR				IAmb	IAmb	21 12 24.8	
	comp=Z,6.0nm,1.0s						
TESR	Tescani	23.22	317	⇑P	P	21 12 21.4	+0.2
SORM	Soroca	23.22	322	⇑P	P	21 12 23.0	+1.7
AGG	Agios Georgios	23.43	297	P	P	21 12 23.8	+0.4
AGG				IAmb	IAmb	21 12 30.6	
	comp=Z,11nm,1.2s						
ITM	Ithomi	23.47	292	P	P	21 12 23.9	0.0
LIT	Litokhoron	23.53	299	P	P	21 12 25.1	+0.7
LIT				IAmb	IAmb	21 12 28.3	
	comp=Z,3.6nm,0.8s						
VOIR		23.64	313	⇑P	P	21 12 26.6	+1.1
DOPR	Dopca	23.69	315	⇑P	P	21 12 26.9	+1.0
VTS	Vitosha	23.70	306	⇑P	P	21 12 26.8	+0.6
ARR	Arges	23.87	313	⇑P	P	21 12 28.5	+0.8
AKASG	Malin Array Be	24.50	328	P	P	21 12 32.8	-0.5
	comp=Z,2.3nm,0.6s,baz=133,slow=9.3,SNR=15						
AKASG	Malin Array Be	24.50	328	IAmb	IAmb	21 12 36.6	
	comp=Z,0.9nm,0.7s						
AKBB	Malin Array Si	24.50	328	P	P	21 12 32.5	-0.8
FNA	Florina	24.52	300	P	P	21 12 33.9	+0.2
BURAR	Bucovina Array	24.64	318	⇑P	P	21 12 36.3	+1.5
BURAR	Bucovina Array	24.64	318	P	P	21 12 34.5	-0.2
GZR	Gura Zlata	25.06	312	⇑P	P	21 12 39.8	+1.3
MDVR	Moldovita	25.51	310	⇑P	P	21 12 43.6	+1.0
DRGR		25.71	314	⇑P	P	21 12 46.1	+1.6
ARU	Arti	25.84	12	P	P	21 12 45.8	+0.4
	comp=Z,0.8nm,0.5s,baz=215,slow=7.6,SNR=6.6						
ARU	Arti	25.84	12	P	P	21 12 45.4	0.0
ARU				IAmb	IAmb	21 12 51.6	
	comp=Z,6.4nm,1.1s						
BZS	Buzias	25.89	311	⇑P	P	21 12 47.5	+1.5
SIRR	Siria	26.14	313	⇑P	P	21 12 50.4	+2.2
BRVK	Borovoye	26.40	29	P	P	21 12 51.1	+0.6
BVAR	Borovoye Array	26.42	29	P	P	21 12 51.1	+0.4
	comp=Z,1.7nm,0.6s,baz=226,slow=8.1,SNR=9.2						
TRPA	Tarpa	26.45	317	⇑P	P	21 12 52.9	+1.9
SCTE	Santa Cesarea	26.55	298	P	P	21 12 51.4	-0.6
TIP	Timpagrande	27.74	295	⇑P	P	21 13 04.1	+1.3
TIP	Timpagrande	27.74	295	P	P	21 13 03.8	+1.0
TIP				IAmb	IAmb	21 13 15.1	
	comp=Z,5.0nm,1.0s						
KURBB	Kurchatov Arra	28.86	40	P	P	21 13 12.9	+0.3
	comp=Z,1.1nm,0.9s,baz=242,slow=9.4,SNR=8.6						
KURK	Kurchatov	28.96	40	P	P	21 13 12.9	-0.6
KURK	Kurchatov	28.96	40	IAmb	IAmb	21 13 18.2	
	comp=Z,2.0nm,0.9s						
SUW	Suwalki	29.47	328	P	P	21 13 17.9	0.0
MK31	Makanchi Array	29.48	49	P	P	21 13 18.4	+0.2
MKAR	Makanchi Array	29.48	49	P	P	21 13 18.4	+0.2
	comp=Z,0.9nm,0.6s,baz=255,slow=8.9,SNR=12						
MKAR	Makanchi Array	29.48	49	P	P	21 13 16.5	-1.7
MOA	Molln	31.41	312	*i* P	P	21 13 36.1	+0.9
	comp=Z,1.1nm,0.5s						
KBA	Koelnbreinsper	31.77	310	*i* P	P	21 13 39.6	+1.0
	comp=Z,4.2nm,0.6s						
GERES	GERESS Array B	32.10	313	P	P	21 13 41.4	+0.1
	comp=Z,0.3nm,0.5s,baz=119,slow=10,SNR=3.1						
ABTA	Abfaltersbach	32.23	309	*i* P	P	21 13 43.7	+1.2
	comp=Z,1.3nm,0.5s						
CTI	Castel Tesino	32.64	308		P	21 13 46.6	+0.5
CTI				IAmb	IAmb	21 13 47.4	
	comp=Z,2.6nm,0.9s						
WTTA	Wattenberg	32.95	310	*i* P	P	21 13 48.9	0.0
	comp=Z,3.7nm,0.5s						
SQTA	Sankt Quirin	33.22	310	*i* P	P	21 13 51.4	+0.2
	comp=Z,6.7nm,0.6s						
MOTA	Moosalm	33.32	310	*i* P	P	21 13 51.9	-0.2
	comp=Z,4.0nm,0.8s						
FETA	Feichten	33.49	309	*i* P	P	21 13 53.9	+0.4
	comp=Z,2.7nm,0.6s						
RETA	Reutte	33.58	310	*i* P	P	21 13 54.3	0.0
	comp=Z,1.3nm,0.4s						
FIA1	FINESS Array S	33.76	340	P	P	21 13 55.3	-0.2
FINES	FINESS Array B	33.76	340	P	P	21 13 54.9	-0.6
	comp=Z,4.4nm,0.6s,baz=145,slow=9.2,SNR=30						
ZALV	Zalesovo Beam	33.86	38	P	P	21 13 56.3	-0.2
	comp=Z,1.4nm,0.6s,baz=251,slow=9.2,SNR=6.1						
ZALV	Zalesovo Beam	33.86	38	P	P	21 13 55.6	-0.8
DAVA	Damuels	34.11	309	*i* P	P	21 13 58.7	-0.3
	comp=Z,5.8nm,0.5s						
SENIN	Lac Senin/Sane	35.66	307	P	P	21 14 11.8	-0.7
SENIN				IAmb	IAmb	21 14 13.3	
	comp=Z,7.0nm,1.3s						
BNI	Bardonecchia	35.90	305	P	P	21 14 14.7	+0.2
BNI				IAmb	IAmb	21 14 19.9	
	comp=Z,5.2nm,1.1s						
NC405	NORSAR Array S	38.64	332	P	P	21 14 37.0	-0.3
NB201	NORSAR Array S	38.78	331	P	P	21 14 37.7	-0.8
NOA	NORSAR Array B	38.81	331	P	P	21 14 38.0	-0.8
	comp=Z,0.6nm,0.9s,baz=109,slow=9.4,SNR=3.8						
NC303	NORSAR Array S	38.84	332	P	P	21 14 39.3	+0.3
NC303				IAmb	IAmb	21 14 55.9	
	comp=Z,2.8nm,0.8s						
NC204	NORSAR Array S	39.12	331	P	P	21 14 39.8	-1.5
ARCES	ARCESS Array B	40.56	347	P	P	21 14 52.9	-0.2
	comp=Z,4.2nm,1.1s,baz=152,slow=11,SNR=8.5						
GTA	Gaotai	41.34	64	*e*P	P	21 15 01.3	+1.1
GTA				pP	pP	21 15 07.3	-0.6
GTA				sP	sP	21 15 10.3	-0.7
NRIK	Noril'sk	43.67	18	P	P	21 15 18.4	-0.1
	comp=Z,2.0nm,0.5s,baz=229,slow=9.3,SNR=5.1						
CHTO	Chiang Mai	46.14	94	P	P	21 15 40.0	+1.2
CHTO				IAmb	IAmb	21 15 43.7	
	comp=Z,3.6nm,1.1s						
CMAR	Chiang Mai Arr	46.29	94	P	P	21 15 40.9	+0.9
	comp=Z,1.5nm,0.7s,baz=294,slow=8.2,SNR=16						
TOA0	Torodi Ar. Sit	47.42	259	P	P	21 15 50.9	+2.1
TORD	Torodi Ar. Bea	47.42	259	P	P	21 15 50.8	+1.9
	comp=Z,3.6nm,0.8s,baz=55,slow=8.4,SNR=27						
TORD	Torodi Ar. Bea	47.42	259	P	P	21 15 49.8	+0.9
PBKT	Sadao Pong	48.86	95	P	P	21 16 00.5	+0.6
SPITS	Spitsbergen Ar	49.11	351	P	P	21 16 01.3	+0.2
	comp=Z,0.9nm,0.3s,baz=144,slow=10.0,SNR=39						
XAN	Xi'an	49.45	70	P	P	21 16 04.9	+0.5
XAN				pP	pP	21 16 12.1	-0.1
KSRS	Korea Array	63.23	61	P	P	21 17 42.6	0.0
	comp=Z,2.0nm,0.8s,baz=282,slow=6.3,SNR=4.9						
SCHQ	Schefferville	78.29	328	P	P	21 19 14.1	+0.2
	comp=Z,2.2nm,0.5s,baz=40,slow=5.5,SNR=7.0						
SCHQ	Schefferville	78.29	328	IAmb	IAmb	21 19 14.6	
	comp=Z,3.7nm,0.9s						
TOLK	Toolik Lake Re	79.29	7	P	P	21 19 19.9	+0.8
TOLK				IAmb	IAmb	21 19 25.5	
	comp=Z,2.5nm,0.8s						
C36M	Paulatuk	79.47	358	P	P	21 19 19.9	-0.1
C36M				IAmb	IAmb	21 19 22.8	
	comp=Z,2.3nm,0.9s						
ILAR	Eielson Array	83.32	7	P	P	21 19 40.2	-0.3
	comp=Z,0.5nm,0.8s,baz=326,slow=4.5,SNR=5.6						
YKA	Yellowknife Ar	85.59	353	P	P	21 19 52.0	0.0
	comp=Z,1.1nm,0.7s,baz=18,slow=5.1,SNR=15						

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*IDC **20** 21:15:07.1±0.3, 5.°13S×152.°82E, h0^{km}, mb5.4/46, mb1 5.4/47, mb1mx5.4/56, mbtmp5.4/47, ML4.4/1, MS5.3/36, Ms1 5.3/36, ms1mx5.1/50, Error ellipse: s-maj=12.8km s-min=9.2km az=81.0*

*BJI **20** 21:15:07.8±0.0, 4.°91S×153.°17E, h21^{km}, mB5.7/65, mb5.6/80, Ms5.6/89, Ms7 5.4/84*

*NEIC **20** 21:15:10.7±1.6, 5.°19S±0.°06×152.°83E±0.°05, h27^{km}±1^{km}, mb5.7/337, Ms_20 5.7/743, Mwb5.6/41, Mww5.8, Mwc5.8(GCMT), Error ellipse: s-maj=10.4km s-min=9.1km az=182.0*

*MOS **20** 21:15:10.8±1.1, 4.°97S×152.°82E, h30^{km}, mb5.9/33, MS5.5/54, Error ellipse: s-maj=7.8km s-min=5.3km az=107.5*

*NEIC **20** 21:15:11.4, 5.°17S×152.°73E, h25^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.62; M$_{\theta\theta}$-2.33; M$_{\phi\phi}$-0.29; M$_{r\theta}$2.09; M$_{\theta\phi}$-0.11; M$_{\phi r}$-0.32; Fault plane solution: M$_0$3.27000×10^{17} NP1:ϕ_s261.54000°, δ25.23000°, λ78.54000°. NP2:ϕ_s94.16000°, δ65.31000°, λ95.35000°. Principal axes: T 3.4177, Plg69.0000°, Azm15.0000°; N -0.3253, Plg5.0000°, Azm272.0000°; P -3.0925, Plg20.0000°, Azm180.0000°;*

*DJA **20** 21:15:12.9±0.5, 5°S±2°×15°3E±°, h38^{km}±5^{km}, M5.5/84, mb5.6/84, mB5.9/65, MLv6.1/3, Mw(mB)5.5/65, Mwp5.6/28*

*GCMT **20** 21:15:14.7±0.1, 5.°44S±0.°01×152.°81E±0.°01, h29^{km}, MW5.7/145, Moment Tensor Solution. s145, c287; s143, c384; Duration: 1^{s}8 Moment tensor: Scale 10^{17} Nm; M$_{rr}$3.21±.04; M$_{\theta\theta}$-3.32±.03; M$_{\phi\phi}$0.11±.03; M$_{r\theta}$3.66±.08; M$_{\theta\phi}$-0.46±.03; M$_{\phi r}$0.13±.06; Best double couple: M$_0$4.92700×10^{17} NP1:ϕ_s258.00000°, δ21.00000°, λ82.00000°. NP2:ϕ_s87.00000°, δ69.00000°, λ93.00000°. Principal axes: T 4.8510, Plg66.0000°, Azm2.0000°; N 0.1530, Plg3.0000°, Azm266.0000°; P -5.0040, Plg24.0000°, Azm174.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **20** 21:15:14, 5.°17S×152.°63E, h30^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.59; M$_{\theta\theta}$-2.61; M$_{\phi\phi}$0.01; M$_{r\theta}$4.65; M$_{\theta\phi}$-0.03; M$_{\phi r}$1.02; Fault plane solution: M$_0$5.43000×10^{17} NP1:ϕ_s79.00000°, δ76.00000°, λ85.00000°. NP2:ϕ_s279.00000°, δ15.00000°, λ109.00000°. Principal axes: T 5.4601, Plg59.0000°, Azm342.0000°; N -0.0703, Plg5.0000°, Azm80.0000°; P -5.3897, Plg31.0000°, Azm173.0000°;*

*NEIC **20** 21:15:15, 5.°47S×152.°86E, h30^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$3.13; M$_{\theta\theta}$-3.42; M$_{\phi\phi}$0.29; M$_{r\theta}$3.42; M$_{\theta\phi}$-0.50; M$_{\phi r}$0.52; Fault plane solution: M$_0$4.80000×10^{17} NP1:ϕ_s82.00000°, δ68.00000°, λ89.00000°. NP2:ϕ_s264.00000°, δ22.00000°, λ92.00000°. Principal axes: T 4.6096, Plg67.0000°, Azm350.0000°; N 0.3530, Plg1.0000°, Azm82.0000°; P -4.9626, Plg23.0000°, Azm172.0000°;*

ISC 20 21:15:11.5±0.4, **5.°19S**±0.°03×**152.°87E**±0.°03, **h32^{km}**±2^{km}, **h32^{km}:pP-P, n1625,** σ1^{s}35/1345, **mb5.7**/290, **MS5.7**/468, **103C-7D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.21	316	Pg	Pb	21 15 34.0	0.0
	9µm,0.3s,baz=154,slow=1.5,SNR=1940						
RABL	Rabaul	1.22	325		Pb	21 15 34.2	+0.2
MANU	Manus Island	6.32	299	Pn	Pn	21 16 45.3	+2.8
PMG	Port Moresby	7.04	233	Pn	Pn	21 16 54.3	+1.8
	22nm,0.3s,baz=55,slow=7.3,SNR=56						
PMG				Sn	Sn	21 18 12.1	+0.6
	39nm,0.3s,baz=124,slow=14,SNR=9.5						
PMG	Port Moresby	7.04	233	*ce*P	Pn	21 16 54.6	+2.2
PMG				pmax	pmax		
	comp=Z,643nm,0.7s						
PMG	Port Moresby	7.04	233		Pn	21 16 51.5	-0.9
HNR	Honiara	8.19	121	Pn	Pn	21 17 14.5	+6.3
	comp=Z,9.8nm,0.3s,baz=126,slow=13,SNR=5.3						
HNR				Sn	Sn	21 18 44.3	+4.6
	baz=169,slow=19,SNR=1.5						
HNR				LR	LR	21 20 50.1	
	comp=Z,22µm,19.0s,baz=302,slow=42						
HNR	Honiara	8.19	121	P	Pn	21 17 14.0	+5.8
HNR	Honiara	8.19	121		Pn	21 17 08.9	+0.7
COEN	Coen	12.92	227	P	Pn	21 18 16.2	+3.1
	baz=13,SNR=4.3						
COEN	Coen	12.92	227		Pn	21 18 13.9	+0.8
GENI	Genyem	12.93	281	P	Pn	21 18 13.8	+0.6
	comp=Z,12µmcomp=Z,10µmcomp=Z,437nm,1.6s						
PATS	Pohnpei	13.13	25	P	Pn	21 18 16.6	+0.7
	baz=13,SNR=12						
PATS	Pohnpei	13.13	25		Pn	21 18 16.5	+0.6
MTSU	Mount Surprise	15.34	212	P	Pn	21 18 46.6	+0.7
	baz=16,SNR=64						
CTA	Charters Tower	16.14	203	Pn	P	21 18 57.9	-1.3
	comp=Z,0.9nm,0.3s,baz=27,slow=10,SNR=7.8						
CTA				Sn	Sn	21 21 57.0	+2.6
	comp=Z,0.4nm,0.3s,baz=121,slow=5.9,SNR=1.4						
CTA				LR	LR	21 25 10.4	
	comp=Z,13µm,18.5s,baz=30,slow=37						
BAKI	Biak	17.19	283	P	Pn	21 19 07.9	-1.6
	comp=Z,6µmcomp=Z,211nm,1.0s						
RKPI	Ransiki, Papua	19.01	280	P	P	21 19 30.7	-0.2
	comp=Z,6µmcomp=Z,218nm,0.8s						
QIS	Mount Isa	19.98	219	P	Pn	21 19 42.5	-0.9
	baz=20,SNR=35						
EIDS	Eidsvold	20.14	185	P	P	21 19 44.0	+1.0
	baz=20,SNR=12						
EIDS	Eidsvold	20.14	185	P	P	21 19 44.0	+1.0
EIDS				IAmb	IAmb	21 19 47.9	
	comp=Z,334nm,1.4s						
KWAJ	Kwajalein Atol	20.23	47	P	P	21 19 44.7	+0.5
KWAJ				pmax	pmax		
	comp=Z,389nm,0.8s						
KWAJ				MLR	MLR		
	comp=Z,22µm,18.0s						
KWAJ	Kwajalein Atol	20.23	47	P	P	21 19 44.7	+0.5
KWAJ				IAmb	IAmb	21 20 43.4	
	comp=Z,389nm,0.8s						
GUMO	Guam	20.28	337	P	P	21 19 45.1	+0.4
	comp=Z,1µm,1.1s,baz=173,slow=9.0,SNR=17						
GUMO				LR	LR	21 28 19.5	
	comp=Z,6µm,18.2s,baz=146,slow=39						
GUMO	Guam	20.28	337	P	Pn	21 19 47.0	+0.2
GUMO				pmax	pmax		
	comp=Z,1µm,1.0s						
GUMO				MLR	MLR		
	comp=Z,6µm,20.0s						
GUMO	Guam	20.28	337		Pn	21 19 47.0	+0.2
FAKI	Fak Fak	20.69	275	P	P	21 19 47.5	-1.7
	comp=Z,7µmcomp=Z,3µmcomp=Z,182nm,1.0s						
FAKI	Fak Fak	20.69	275	P	P	21 19 47.5	-1.7
FAKI				IAmb	IAmb	21 19 56.9	
	comp=Z,214nm,1.1s						
TARA	Tarawa	21.07	73	P	P	21 19 53.9	+0.6
TARA					Sn	21 23 51.3	-2.2
DZM	Mont Dzumac	21.32	143	*e*P	P	21 19 56.3	+0.3
	comp=Z,578nm,1.1s						
DZM				*e*LQ	LQ	21 24 16.7	
	comp=Z,14µm,25.4s						
DZM				*e*LR	LR	21 25 12.5	
	comp=Z,19µm,24.6s						
DZM	Mont Dzumac	21.32	143	P	P	21 19 57.1	+1.2
	comp=Z,82nm,1.0s,baz=224,slow=7.0,SNR=17						
DZM				S	Sn	21 23 56.0	-3.4
	comp=Z,15nm,1.1s,baz=107,slow=19,SNR=2.1						
DZM	Mont Dzumac	21.32	143	P	P	21 19 57.3	+1.4
DZM				IAmb	IAmb	21 20 20.2	
	comp=Z,245nm,1.0s						
KDU	Kakadu	21.46	248	P	P	21 19 56.8	-0.7
	baz=22,SNR=174						
RMQ	Roma	21.54	190	P	P	21 19 59.2	+1.1
	baz=22,SNR=6.6						
SAUI	Saumlaki	21.60	261	P	P	21 19 56.5	-2.5
	comp=Z,8µmcomp=Z,6µmcomp=Z,249nm,1.2s						
SAUI	Saumlaki	21.60	261	P	P	21 19 57.9	-1.1
SAUI				IAmb	IAmb	21 20 06.6	
	comp=Z,605nm,1.3s						
SIJI	Sorong	21.99	281	P	P	21 20 03.4	+0.2
	comp=Z,136nm,0.8s,baz=65,slow=7.2,SNR=34						
MTN	Manton Dam	22.75	249	P	P	21 20 11.7	+0.3
	baz=23,SNR=21						
MTN	Manton Dam	22.75	249	P	P	21 20 10.4	-1.0
MTN				IAmb	IAmb	21 20 40.6	
	comp=Z,328nm,1.3s						
QLP	Quilpie	22.81	200	P	P	21 20 13.7	+1.9
	baz=23,SNR=4.0						
BNDI	Bandanaira	22.89	271	P	P	21 20 17.8	+5.0
WB0	Warramunga Arr	23.09	230	P	P	21 20 14.5	-0.3
WR0	Warramunga Arr	23.09	229	P	P	21 20 14.6	-0.3
WRAB	Tennant Creek	23.22	229	*ce*P	P	21 20 16.5	+0.4
WRAB				pmax	pmax		
	comp=Z,123nm,1.3s						
WRAB	Tennant Creek	23.22	229	P	P	21 20 15.3	-0.8
WB2	Warramunga Arr	23.23	229	P	P	21 20 15.8	-0.3
WRA	Warramunga Arr	23.24	229	P	P	21 20 16.5	+0.2
	comp=Z,77nm,1.1s,baz=52,slow=9.6,SNR=85						
WRA				S	S	21 24 25.1	-1.4
	comp=Z,22nm,1.1s,baz=54,slow=16,SNR=7.0						
WRA				LR	LR	21 29 12.0	
	comp=Z,7µm,21.3s,baz=55,slow=36						
WRA	Warramunga Arr	23.24	229	*i* P	P	21 20 15.3	-1.0
WRA				pmax	pmax		
	comp=Z,77nm,1.1s						
WRA	Warramunga Arr	23.24	229	P	P	21 20 15.2	-1.1
AAI	Ambon	24.64	272	P	P	21 20 28.5	-1.0
	comp=Z,6µmcomp=Z,2µmcomp=Z,89nm,1.0s						
ARMA	Armidale	25.12	183	P	P	21 20 33.5	-0.2
	baz=25,SNR=4.5						
ARMA	Armidale	25.12	183	P	P	21 20 33.8	0.0
ARMA				IAmb	IAmb	21 20 47.2	
	comp=Z,223nm,1.6s						
ARMA				IAMs_20	IAMs_20	21 29 42.7	
	comp=Z,22µm,20.0s						
LBMI	Labuha	25.73	279	P	P	21 20 39.5	+0.1
	comp=Z,4µmcomp=Z,428nm,1.0s						
NLAI	Namlea	25.77	273	P	P	21 20 45.8	+6.1
KNRA	Kununurra	25.86	244	P	P	21 20 40.2	-0.3
	baz=26,SNR=42						
KNRA	Kununurra	25.86	244	IAmb	IAmb	21 21 07.2	
	comp=Z,318nm,1.1s						
ASAR	Alice Springs	25.91	223	P	P	21 20 41.2	+0.3
	comp=Z,34nm,1.1s,baz=60,slow=8.7,SNR=69						
ASAR				S	S	21 25 10.1	+0.9
	comp=Z,7.8nm,1.2s,baz=52,slow=18,SNR=2.1						
ASAR				LR	LR	21 30 22.1	
	comp=Z,7µm,21.2s,baz=38,slow=35						
ASAR	Alice Springs	25.91	223	P	P	21 20 40.5	-0.5
TNTI	Ternate	26.15	282	P	P	21 20 43.9	+0.7
	comp=Z,2µmcomp=Z,1µmcomp=Z,109nm,1.1s						
TNTI	Ternate	26.15	282	P	P	21 20 42.5	-0.7
TNTI				IAmb	IAmb	21 21 16.7	
	comp=Z,120nm,1.0s						
FUNA	Funafuti	26.35	99	P	P	21 20 44.2	-0.8
FUNA				IAmb	IAmb	21 20 45.7	
	comp=Z,314nm,1.2s						
LHI	Lord Howe Isla	26.83	168	P	P	21 20 49.2	+0.1
LHI				IAmb	IAmb	21 21 44.7	
	comp=Z,184nm,1.2s						
SANI	Sanana	27.00	276	P	P	21 20 51.4	+0.5
	comp=Z,3µmcomp=Z,2µmcomp=Z,92nm,1.0s						
CMSA	Cobar Meteorol	27.06	194	P	P	21 20 50.5	-0.7
	baz=27,SNR=31						

MSVF	Nonsavu	27.60	119	P	P	21 20 57.0	+0.7
MSVF				pmax	pmax		
	comp=Z,59nm,1.2s						
MSVF				MLR	MLR		
	comp=Z,11µm,20.0s						
MSVF	Nonsavu	27.60	119	P	P	21 20 57.0	+0.7
STKA	Stephens Creek	28.57	200	P	P	21 21 03.9	-0.8
	baz=29,SNR=11						
STKA	Stephens Creek	28.57	200	P	P	21 21 04.3	-0.4
	comp=Z,10nm,0.8s,baz=29,slow=12,SNR=17						
STKA				LR	LR	21 33 12.1	
	comp=Z,11µm,18.3s,baz=14,slow=38						
STKA	Stephens Creek	28.57	200	P	P	21 21 03.5	-1.2
STKA				pmax	pmax		
	comp=Z,14nm,1.2s						
STKA				MLR	MLR		
	comp=Z,2µm,19.0s						
STKA	Stephens Creek	28.57	200	P	P	21 21 03.5	-1.2
SOEI	Soe	28.70	259	P	P	21 21 07.6	+1.3
	comp=Z,3µmcomp=Z,2µmcomp=Z,66nm,0.7s						
SOEI	Soe	28.70	259	P	P	21 21 05.4	-0.9
SOEI				IAmb	IAmb	21 21 48.2	
	comp=Z,237nm,1.3s						
KMSI	Cibinong	29.41	280	P	P	21 21 14.5	+2.1
	comp=Z,182nm,0.8s						
FITZ	Fitzroy Crossi	29.53	242	P	P	21 21 12.8	-0.6
	baz=30,SNR=46						
FITZ	Fitzroy Crossi	29.53	242	P	P	21 21 12.9	-0.5
	comp=Z,55nm,0.8s,baz=58,slow=7.3,SNR=97						
FITZ				S	S	21 26 04.5	-1.8
	comp=Z,16nm,1.0s,baz=48,slow=22,SNR=4.9						
FITZ	Fitzroy Crossi	29.53	242	IAmb	IAmb	21 21 42.2	
	comp=Z,98nm,0.8s						
DAV	Davao City (W)	29.83	294	LR	LR	21 32 42.1	
	comp=Z,5µm,18.9s,baz=98,slow=35						
CNB	Canberra Magne	30.15	186	P	P	21 21 18.9	+0.1
	baz=30,SNR=4.7						
CAN	Canberra	30.19	186	P	P	21 21 19.2	+0.1
CAN				pmax	pmax		
	comp=Z,126nm,1.7s						
CAN				MLR	MLR		
	comp=Z,8µm,20.0s						
CAN	Canberra	30.19	186	P	P	21 21 19.2	+0.1
CAN				IAmb	IAmb	21 21 31.9	
	comp=Z,126nm,1.7s						
KCP	Kidapawan	30.25	293	⇓iP	P	21 21 20.9	+1.0
LUWI	Luwuk	30.32	277	P	P	21 21 19.5	-1.0
	comp=Z,112nm,1.1s						
LUWI	Luwuk	30.32	277	P	P	21 21 18.7	-1.8
LUWI				IAmb	IAmb	21 21 40.9	
	comp=Z,209nm,1.3s						
SKMP	Bagumbayan, Su	30.57	292	eP	P	21 21 22.5	-0.1
BUTP	Butuan	30.59	297	eP	P	21 21 18.4	-4.4
MMRI	Maumere	30.59	262	P	P	21 21 22.6	-0.2
	comp=Z,2µmcomp=Z,89nm,0.8s						
MMRI	Maumere	30.59	262	IAmb	IAmb	21 22 06.3	
	comp=Z,198nm,1.4s						
BUKP	Musuan	30.62	295	eP	P	21 21 22.9	-0.3
WRKA	Warakurna	30.74	228	P	P	21 21 23.7	-0.4
	baz=31,SNR=38						
HTT	Hallett	30.95	203	P	P	21 21 25.5	-0.3
	baz=31,SNR=5.7						
CTBH	Cotabato--PC H	31.11	293	⇑iP	P	21 21 27.1	-0.2
MRSI	Marisa	31.39	279	P	P	21 21 29.1	-0.8
	comp=Z,2µmcomp=Z,28nm,0.4s						
APSI	Ampana	31.45	277	P	P	21 21 29.6	-0.9
	comp=Z,2µmcomp=Z,819nmcomp=Z,85nm,1.1s						
BBOO	Buckleboo	31.64	208	P	P	21 21 29.0	-2.9
BBOO				IAmb	IAmb	21 22 23.9	
	comp=Z,70nm,1.2s						
MSLP	Maasin	31.78	299	eP	P	21 21 32.2	-1.1
PAGZ	Pagadian	32.14	294	eP	P	21 21 36.9	+0.5
BASI	Baing, Sumba	32.37	259	P	P	21 21 38.3	-0.2
	comp=Z,2µmcomp=Z,194nm,1.1s						
WSI	Waingapu	32.59	260	P	P	21 21 40.2	-0.2
	comp=Z,6µmcomp=Z,507nm,1.0s						
BKSI	Bulukumba	32.60	268	P	P	21 21 52.1	+12
TOO	Toolangi	32.92	191	P	P	21 21 43.9	+0.8
	baz=33,SNR=4.7						
TOO	Toolangi	32.92	191	P	P	21 21 43.0	-0.1
TOO				pmax	pmax		
	comp=Z,125nm,1.7s						
TOO				MLR	MLR		
	comp=Z,18µm,18.0s						
TOO	Toolangi	32.92	191	P	P	21 21 43.0	-0.1
TOO				IAmb	IAmb	21 21 56.7	
	comp=Z,125nm,1.7s						
TOO				IAMs_20	IAMs_20	21 35 15.6	
	comp=Z,18µm,18.0s						
KAPI	Kappang	32.98	269	LR	LR	21 37 57.8	
	comp=Z,2µm,19.4s,baz=96,slow=42						
SPSI	Sidrap Palu	33.01	271	P	P	21 21 45.7	+1.6
	comp=Z,691nmcomp=Z,38nm,1.3s						
ARPS	Mount Arapiles	33.02	196	P	P	21 21 44.0	+0.1
	baz=33,SNR=4.9						
MPSI	Mapaga	33.38	278	P	P	21 21 45.4	-1.9
	comp=Z,45nm,0.9s						
WBSI	Waikabubak, Su	33.47	260	P	P	21 21 49.2	+1.0
	comp=Z,2µmcomp=Z,190nm,0.9s						
JCJ	Chichijima	33.72	343	LR	LR	21 36 07.1	
	comp=Z,845nm,18.4s,baz=151,slow=37						
GUIM	Jordan	33.99	298	eP	P	21 21 52.2	-0.5
FORT	Forrest	34.53	220	P	P	21 21 57.8	+0.7
	baz=35,SNR=7.2						
FORT	Forrest	34.53	220	P	P	21 21 57.6	+0.5
PLAI	Plampang	35.00	262	P	P	21 22 00.0	-1.4
	comp=Z,677nmcomp=Z,46nm,0.6s						
OUZ	Omahuta	35.49	150	P	P	21 22 05.9	+0.6
OUZ				IAmb	IAmb	21 22 39.0	
	comp=Z,74nm,1.3s						
AFI	Afiamalu	35.88	107	P	P	21 22 08.9	-0.2
AFI				pmax	pmax		
	comp=Z,339nm,1.8s						
AFI	Afiamalu	35.88	107	P	P	21 22 08.9	-0.2
PSA00	Pilbara Seismi	35.89	240	P	P	21 22 09.3	+0.3
PSA00	Pilbara Seismi	35.89	240	IAmb	IAmb	21 22 27.9	
	comp=Z,135nm,1.2s						
TGY	Tagaytay City	37.03	302	LR	LR	21 35 18.5	
	comp=Z,4µm,21.4s,baz=123,slow=33						
ENPP	El Nido	37.05	296	eP	P	21 22 18.2	-0.7
BALP	Baler	37.31	304	eP	P	21 22 20.3	-0.8
MOO	Moorlands	37.44	187	P	P	21 22 22.4	+0.5
	baz=38,SNR=4.2						
BATP	Bataraza	37.62	292	eP	P	21 22 23.6	-0.2
KKM	Kota Kinabalu	38.26	287	P	P	21 22 28.1	-1.2
KKM				IAmb	IAmb	21 22 34.7	
	comp=Z,70nm,1.0s						
SMPP	San Manuel, Pa	38.26	304	eP	P	21 22 27.6	-1.6
JAGI	Jajag, Banyuwa	38.56	263	P	P	21 22 29.5	-2.3
APYP	Conner	38.71	307	eP	P	21 22 32.1	-0.8
NIUE	Niue	38.80	114	P	P	21 22 33.1	-0.5
MEEK	Meekatharra	39.02	233	P	P	21 22 35.2	-0.3
	baz=39,SNR=20						
URZ	Urewera	39.62	150	P	P	21 22 41.5	+1.3
	comp=Z,28nm,1.0s,baz=5.2,slow=7.4,SNR=4.7						
URZ	Urewera	39.62	150	P	P	21 22 40.2	0.0
MXZ	Matakaoa Point	39.71	148	P	P	21 22 41.2	+0.1
MXZ				IAmb	IAmb	21 22 59.9	
	comp=Z,265nm,1.6s						
JOW	Kunigami	39.75	324	P	P	21 22 41.2	-0.3
	comp=Z,18nm,0.9s,baz=163,slow=13,SNR=7.6						
JOW	Kunigami	39.75	324	IAmb	IAmb	21 22 43.6	
	comp=Z,129nm,1.0s						
BKZ	Black Stump Fm	40.01	151	P	P	21 22 44.2	+0.6
BSWZ	Blackbirch Sta	40.92	156	P	P	21 22 51.4	+0.4
FOZ	Fox Glacier	41.01	161	P	P	21 22 51.5	-0.2
FOZ				IAMs_20	IAMs_20	21 38 06.5	
	comp=Z,15µm,20.0s						
BHW	Baring Head	41.08	155	P	P	21 22 52.0	-0.3
CMWZ	Cape Campbell	41.08	156	P	P	21 22 52.0	-0.3
GIRL	Giralia	41.13	241	P	P	21 22 53.0	0.0
	baz=41,SNR=8.5						
GIRL	Giralia	41.13	241	P	P	21 22 52.4	-0.6
LTZ	Lake Taylor	41.20	158	P	P	21 22 55.0	+1.6
LTZ				IAmb	IAmb	21 23 07.5	
	comp=Z,239nm,1.7s						
LTZ				IAMs_20	IAMs_20	21 42 21.6	
	comp=Z,7µm,18.0s						
MSWZ	Moikau Station	41.25	154	P	P	21 22 52.9	-0.8
SBUM	Sibu	41.31	280	P	P	21 22 55.0	+0.4
KHZ	Kahutara	41.37	157	P	P	21 22 55.5	+0.9
KHZ				IAmb	IAmb	21 23 18.6	
	comp=Z,265nm,1.8s						
KHZ				IAMs_20	IAMs_20	21 40 04.2	
	comp=Z,10µm,19.0s						
YOJ	Yonaguni jima	41.40	317	P	P	21 22 53.6	-1.5
YOJ				pmax	pmax		
	comp=Z,913nm,1.6s						
YOJ				MLR	MLR		
	comp=Z,5µm,20.0s						
YOJ	Yonaguni jima	41.40	317	P	P	21 22 53.6	-1.5
PCJI	Pacitan	41.50	264	P	P	21 22 56.4	+0.3
	comp=Z,140nm,0.9s						
RPZ	Rata Peaks	41.58	160	P	P	21 22 57.6	+1.2
	comp=Z,37nm,1.0s,baz=20,slow=6.2,SNR=9.0						
RPZ				LR	LR	21 39 37.6	
	comp=Z,18µm,18.5s,baz=330,slow=35						
RPZ	Rata Peaks	41.58	160	P	P	21 22 56.1	-0.4
RPZ				IAmb	IAmb	21 23 36.4	
	comp=Z,76nm,0.9s						
OXZ	Oxford	41.59	159	P	P	21 22 57.1	+0.7
TWG	Pinlang	41.72	313	P	P	21 22 57.3	-0.5
LBZ	Lake Benmore	41.90	161	P	P	21 22 59.0	+0.1
LBZ				IAMs_20	IAMs_20	21 38 24.9	
	comp=Z,14µm,20.0s						
WKZ	Wanaka	41.94	163	P	P	21 22 58.5	-0.8
WKZ				IAmb	IAmb	21 23 42.4	
	comp=Z,368nm,1.9s						
DCZ	Deep Cove	42.01	165	P	P	21 22 58.9	-0.9
KLBR	Kellerberrin	42.09	227	P	P	21 23 01.0	+0.3
	baz=42,SNR=7.9						
MQZ	McQueen's Vall	42.14	159	P	P	21 23 01.8	+0.9
MQZ				IAmb	IAmb	21 23 03.2	
	comp=Z,282nm,1.6s						
MORW	Morawa	42.15	231	P	P	21 23 01.0	-0.3
	baz=42,SNR=20						
MORW	Morawa	42.15	231	P	P	21 23 01.1	-0.3
MORW				IAmb	IAmb	21 23 12.7	
	comp=Z,117nm,1.1s						
MLZ	Mavora Lakes	42.17	164	P	P	21 23 02.5	+1.3
MLZ				IAMs_20	IAMs_20	21 39 02.6	
	comp=Z,9µm,19.0s						
NACB	Ninganchiao	42.19	315	P	P	21 23 01.4	-0.2
NACB				IAmb	IAmb	21 23 07.1	
	comp=Z,115nm,1.0s						
SMRI	Semarang	42.21	265	P	P	21 23 01.6	-0.4
TPUB	Ta-pu	42.34	313	P	P	21 23 02.3	-0.6
TPUB				IAmb	IAmb	21 23 10.5	
	comp=Z,157nm,1.3s						
BLDU	Ballidu	42.37	229	P	P	21 23 03.8	+0.7
	baz=42,SNR=11						
SSLB	Suanglung	42.40	314	P	P	21 23 02.7	-0.7
PYZ	Puysegur Point	42.54	166	P	P	21 23 03.8	-0.4
PYZ				IAmb	IAmb	21 23 28.6	
	comp=Z,108nm,1.2s						
WHZ	Wether Hill Ro	42.61	164	P	P	21 23 05.1	+0.4
ODZ	Otahua Downs	42.63	161	P	P	21 23 04.3	-0.6
ODZ				IAmb	IAmb	21 23 46.6	
	comp=Z,191nm,2.0s						
ODZ				IAMs_20	IAMs_20	21 41 03.4	
	comp=Z,12µm,19.0s						
YHNB	Yeheng	42.66	315	P	P	21 23 04.7	-0.9
YHNB				IAmb	IAmb	21 23 07.3	
	comp=Z,280nm,1.3s						
TATO	Taipei	42.78	316	P	P	21 23 05.2	-1.1
TATO				IAmb	IAmb	21 23 07.9	
	comp=Z,318nm,1.2s						
TATO	Taipei	42.78	316	IAMs_20	IAMs_20	21 37 51.2	
	comp=Z,8µm,20.0s						
KSM	Kuching	43.02	278	P	P	21 23 06.4	-2.2
KSM	Kuching	43.02	278	P	P	21 23 08.0	-0.6
JOHN	Johnston Islan	43.09	59	P	P	21 23 08.8	-0.2
NWAO	Narrogin (SRO)	43.16	226	P	P	21 23 09.5	+0.1
	baz=43,SNR=4.5						
NWAO	Narrogin (SRO)	43.16	226	LR	LR	21 41 22.0	
	comp=Z,7µm,20.9s,baz=55,slow=36						
NWAO	Narrogin (SRO)	43.16	226	P	P	21 23 10.3	+0.9
NWAO				pmax	pmax		
	comp=Z,144nm,1.8s						
NWAO				MLR	MLR		
	comp=Z,6µm,20.0s						
NWAO	Narrogin (SRO)	43.16	226	P	P	21 23 10.3	+0.9
MUN	Mundaring	43.42	228	P	P	21 23 12.4	+0.9
	baz=44,SNR=4.5						
JNU	Nakatsue	43.44	333	P	P	21 23 11.6	-0.1
	comp=Z,356nm,0.9s,baz=121,slow=3.2,SNR=85						
JNU				LR	LR	21 39 48.3	
	comp=Z,1µm,20.6s,baz=153,slow=34						
MJAR	Matsushiro Arr	43.72	343	P	P	21 23 11.9	-2.0
	comp=Z,30nm,0.9s,baz=164,slow=8.4,SNR=36						
MJAR				PcP	PcP	21 25 00.3	-0.2
	comp=Z,34nm,0.9s,baz=159,slow=3.7,SNR=12						
MJAR				ScP	ScP	21 28 52.8	+2.8
	comp=Z,9.2nm,1.0s,baz=152,slow=5.0,SNR=6.7						
MJAR				LR	LR	21 39 29.8	
	comp=Z,4µm,21.8s,baz=180,slow=34						
MJAR	Matsushiro Arr	43.72	343	P	P	21 23 10.9	-3.0
MJAR					ScP	21 28 54.5	+4.5
MAJO	Matsushiro	43.73	343	P	P	21 23 11.7	-2.2
MAJO				pmax	pmax		
	comp=Z,50nm,1.0s						
MAJO				MLR	MLR		
	comp=Z,4µm,22.0s						
MAJO	Matsushiro	43.73	343	P	P	21 23 11.7	-2.2
MAT	Matsushiro	43.73	343	P	P	21 23 11.8	-2.1
MAT				S	S	21 29 40.2	-1.9
MIDW	Midway	43.89	39	P	P	21 23 15.0	-0.3
MIDW				IAmb	IAmb	21 23 19.4	
	comp=Z,114nm,0.9s						
KNMB	Chin-men Tao	44.67	313	P	P	21 23 20.9	-0.7
QZH	Quanzhou	44.81	314	P	P	21 23 25.5	+2.8
QZH				S	S	21 30 06.1	+7.9
QZH				LR	LR		
	comp=Z,2µm,16.5s						
QZH				LR	LR		
	comp=Z,3µm,18.9s						
QZH				LR	LR		
	comp=Z,3µm,19.8s						
CISI	Cisompet, Garu	44.82	265	P	P	21 23 22.0	-1.1
	comp=Z,2µmcomp=Z,166nm,1.6s						
CISI	Cisompet, Garu	44.82	265	P	P	21 23 20.5	-2.5
CISI				IAmb	IAmb	21 23 32.7	
	comp=Z,193nm,1.1s						
LEM	Lembang	45.02	266	LR	LR	21 47 48.9	
	comp=Z,1µm,18.0s,baz=78,slow=44						
CNJI	Cibinong	45.50	265	P	P	21 23 27.5	-0.9
	comp=Z,3µmcomp=Z,336nm,1.2s						
SKJI	Sukabumi	46.07	265	P	P	21 23 35.2	+2.3
	comp=Z,2µmcomp=Z,164nm,1.1s						
HKPS	Hong Kong Po S	46.70	307	P	P	21 23 36.7	-1.1
XMIS	Christmas Isla	47.03	261	P	P	21 23 38.9	-1.5
XMIS				IAmb	IAmb	21 24 03.6	
	comp=Z,140nm,1.2s						
SSE	Sheshan	47.09	322	P	P	21 23 40.4	-0.2
SSE				S	S	21 30 30.4	-0.4
SSE				pmax	pmax		
	comp=Z,36nm,1.3s						
SSE				pmax	pmax		
	comp=Z,240nm,4.3s						
SSE				LR	LR		
	comp=Z,1µm,19.6s						
SSE	Sheshan	47.09	322	P	P	21 23 40.2	-0.4
SSE				IAmb	IAmb	21 23 42.3	
	comp=Z,208nm,1.6s						
GZH	Guangzhou	47.75	308	P	P	21 23 46.9	+1.1
TJN	Taejon	47.75	332	ceP	P	21 23 45.5	-0.1
ERM	Erimo	47.81	350	P	P	21 23 45.4	-0.6
ERM				pmax	pmax		
	comp=Z,66nm,0.9s						
ERM				MLR	MLR		
	comp=Z,4µm,20.0s						
ERM	Erimo	47.81	350	P	P	21 23 45.4	-0.6
ERM				IAmb	IAmb	21 23 49.8	
	comp=Z,66nm,0.8s						
KASI	Kota Agung	48.15	267	P	P	21 23 47.1	-2.0
	comp=Z,874nmcomp=Z,107nm,1.0s						
KSRS	Korea Array	48.38	333	P	P	21 23 50.9	+0.4
	comp=Z,36nm,0.9s,baz=150,slow=8.8,SNR=66						
KSRS				LR	LR	21 43 16.1	
	comp=Z,2µm,19.1s,baz=141,slow=35						
KSAR	Wonju Array Be	48.38	333	P	P	21 23 49.7	-0.8
KSAR	Wonju Array Be	48.38	333	P	P	21 23 49.7	-0.8
KS19	Wonju Array Si	48.44	333	P	P	21 23 50.5	-0.5
KS19				IAmb	IAmb	21 23 51.3	
	comp=Z,84nm,1.1s						
MDSI	Maura Dua	48.51	269	P	P	21 23 50.1	-1.8
	comp=Z,678nmcomp=Z,70nm,1.2s						
LWLI	Liwa	48.60	268	P	P	21 23 51.9	-0.9
	comp=Z,78nm,1.0s						
TPRI	Tanjung Pinang	48.66	276	P	P	21 23 53.1	0.0
	comp=Z,6µmcomp=Z,87nm,1.2s						
QIZ	Qiongzhong	48.72	301	P	P	21 23 52.3	-1.2
QIZ				pmax	pmax		
	comp=Z,33nm,1.4s						
QIZ				LR	LR		
	comp=Z,1µm,19.0s						
QIZ				LR	LR		
	comp=Z,2µm,21.8s						
QIZ				LR	LR		
	comp=Z,3µm,22.6s						
QIZ	Qiongzhong	48.72	301	P	P	21 23 52.5	-1.0
QIZ				IAmb	IAmb	21 23 55.5	
	comp=Z,54nm,1.1s						
INCN	Inchon	48.99	332	P	P	21 23 55.8	+0.6
INCN				pmax	pmax		
	comp=Z,254nm,0.9s						
INCN	Inchon	48.99	332	P	P	21 23 55.8	+0.6
NJ2	Nanjing	49.19	321	eP	P	21 23 57.3	+0.5
NJ2				sP	sP	21 24 09.8	+0.4
NJ2				S	S	21 31 00.6	+0.1
NJ2				pmax	pmax		
	comp=Z,27nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,630nm,4.4s						
NJ2				LR	LR		
	comp=Z,3µm,19.1s						
NJ2				LR	LR		
	comp=Z,2µm,17.3s						
NJ2				LR	LR		
	comp=Z,5µm,18.9s						
YUK	Yuzh-Kuril'sk	49.41	353	eP	P	21 23 56.8	-1.4
YUK				eS	S	21 31 02.6	-0.5
YUK				pmax	pmax		
	comp=Z,317nm,1.0s						
YUK				pmax	pmax		
	comp=N,245nm,1.1s						
YUK				pmax	pmax		
	comp=E,189nm,1.0s						
MYKOM	Kota Tinggi	49.45	277	IAmb	IAmb	21 23 59.9	
	comp=Z,78nm,1.1s						
MYKOM	Kota Tinggi	49.45	277	P	P	21 23 59.0	-0.2
MNAI	Manna	49.73	269	P	P	21 24 00.0	-1.3
ASAJ	Asahikawa	49.95	350	P	P	21 24 02.9	+0.5
	comp=Z,140nm,0.8s,baz=228,slow=13,SNR=62						
KUR	Kuril'sk	50.40	355	c iP	P	21 24 06.5	+0.8
KUR						21 25 57.4	
KUR				eS	S	21 31 19.2	+2.3
KUR				e		21 33 58.2	
KUR				pmax	pmax		
	comp=Z,215nm,1.0s						
KUR				MLR	MLR		
	comp=Z,2µm,15.0s						
KUR				MLR	MLR		
	comp=N,2µm,14.0s						
WHN	Wuhan	51.18	316	⇑P	P	21 24 12.5	+0.5
WHN				S	S	21 31 34.4	+6.1
WHN				pmax	pmax		
	comp=N,120nm,1.0s						
WHN				LR	LR		
	comp=N,4µm,14.6s						
WHN				LR	LR		
	comp=N,11µm,23.2s						
WHN				LR	LR		
	comp=N,11µm,22.6s						
KRJI	Kerinci	51.38	271	P	P	21 24 13.0	-0.9
	comp=N,2µmcomp=N,267nm,1.0s						
MSHR	Mys Shultsa	51.48	340	c iP	P	21 24 13.1	-0.8
SDSI	Sungai Dareh	51.52	273	P	P	21 24 13.7	-1.1
	comp=N,94nm,1.2s						
BKNI	Bangkinang	52.05	274	P	P	21 24 18.5	-0.2
	comp=N,2µmcomp=N,1µmcomp=N,126nm,1.4s						
BKNI	Bangkinang	52.05	274	P	P	21 24 17.4	-1.3
BKNI				IAmb	IAmb	21 24 18.7	
	comp=Z,154nm,1.1s						
TEY	Ternei	52.08	345	⇓eP	P	21 24 17.7	-0.7
TEY				pmax	pmax		
	comp=N,30nm,1.1s						
TEY				pmax	pmax		
	comp=Z,50nm,1.0s						
TEY				MLR	MLR		
	comp=Z,100nm,18.0s						
PDSI	Padang	52.48	273	P	P	21 24 19.8	-2.2
	comp=Z,533nmcomp=Z,28nm,0.9s						
DL2	Dalian	52.54	329	P	P	21 24 22.3	+0.4
DL2				S	S	21 31 50.8	+4.1
DL2				pmax	pmax		
	comp=Z,100nm,1.0s						
DL2				pmax	pmax		
	comp=Z,640nm,8.6s						
DL2				LR	LR		
	comp=Z,1µm,22.3s						
DL2				LR	LR		
	comp=Z,1µm,16.7s						
DL2				LR	LR		
	comp=Z,2µm,21.2s						
USA0B	Ussuriysk Arra	52.64	341	i P	P	21 24 22.1	-0.5
USA0B	Ussuriysk Arra	52.64	341	IAmb	IAmb	21 24 23.9	
	comp=Z,99nm,1.0s						
USRK	Ussuriysk Ar.	52.64	341	P	P	21 24 22.6	0.0
	comp=Z,58nm,0.9s,baz=169,slow=8.4,SNR=80						
USRK				ScP	ScP	21 29 30.5	+3.0
	comp=Z,5.3nm,1.0s,baz=297,slow=1.0,SNR=6.7						
USRK				LR	LR	21 47 03.1	
	comp=Z,877nm,18.1s,baz=141,slow=36						
USRK	Ussuriysk Ar.	52.64	341	P	P	21 24 21.5	-1.1
USRK	Ussuriysk Ar.	52.64	341	P	P	21 24 21.5	-1.1
IPM	Ipoh	52.66	280	P	P	21 24 22.0	-1.3
YSS	Yuzh-Sakhalins	52.69	351	P	P	21 24 22.9	+0.1
YSS				pmax	pmax		
	comp=Z,90nm,0.9s						
YSS				MLR	MLR		
	comp=Z,4µm,21.0s						
YSS	Yuzh-Sakhalins	52.69	351	P	P	21 24 22.9	+0.1
YSS				IAmb	IAmb	21 24 24.0	
	comp=Z,90nm,0.9s						
TIA	Tai'an	53.07	324	P	P	21 24 25.3	-0.6
TIA				pP	sP	21 24 37.9	-0.7
TIA				pmax	pmax		
	comp=Z,56nm,1.3s						
TIA				pmax	pmax		
	comp=Z,440nm,4.5s						
TIA				LR	LR		
	comp=Z,1µm,14.2s						
TIA				LR	LR		
	comp=Z,1µm,16.4s						
TIA				LR	LR		
	comp=Z,1µm,13.5s						
KULM	Kulim	53.17	281	P	P	21 24 26.0	-1.1
MDJ	Mudanjiang	53.81	340	P	P	21 24 30.5	-0.7
MDJ				pP	pP	21 24 38.5	-1.9
MDJ				sP	sP	21 24 41.8	-2.1
MDJ				PcP	PcP	21 25 32.8	-3.9
MDJ				PP	PP	21 26 32.3	-0.3
MDJ				ScP	ScP	21 29 29.8	-2.8
MDJ				PcS	PcS	21 29 32.4	-3.4
MDJ				S	S	21 32 10.4	+6.6
MDJ				ScS	ScS	21 34 18.0	-0.3
MDJ				pmax	pmax		
	comp=Z,96nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,810nm,12.7s						
MDJ				LR	LR		
	comp=Z,2µm,18.5s						
MDJ				LR	LR		
	comp=Z,660nm,19.9s						
MDJ				LR	LR		
	comp=Z,2µm,22.8s						
MDJ	Mudanjiang	53.81	340	IAmb	IAmb	21 24 32.5	
	comp=Z,97nm,1.1s						
SISI	Saibi	53.81	272	P	P	21 24 30.3	-1.5
	comp=Z,912nmcomp=Z,56nm,1.0s						
SNY	Shenyang	53.88	333	⇑P	P	21 24 31.5	-0.2
SNY				S	S	21 32 03.4	-1.4
SNY				pmax	pmax		
	comp=Z,610nm,4.7s						
SNY				LR	LR		
	comp=Z,2µm,16.7s						
SNY				LR	LR		
	comp=Z,3µm,19.6s						
SNY				LR	LR		
	comp=Z,4µm,20.1s						
RPSI	Rantau Prapat	54.45	277	P	P	21 24 34.1	-2.3
PSI	Prapat	54.47	277	LR	LR	21 50 42.3	
	comp=Z,1µm,21.4s,baz=130,slow=39						
PSI	Prapat	54.47	277	P	P	21 24 34.1	-2.6
PSI				pmax	pmax		
	comp=Z,37nm,1.0s						
PSI				MLR	MLR		

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       comp=Z,1µm,21.0s
CN2    Changchun        54.68 336 eP        P         21 24 37.0 -0.5
CN2                               PcP       PcP       21 25 39.9 -0.2
CN2                               eS        S         21 32 13.8 -1.8
CN2                               SS        SS        21 35 57.1 -2.0
CN2                               pmax      pmax
       comp=Z,50nm,1.3s
CN2                               pmax      pmax
       comp=Z,700nm,8.0s
CN2                               LR        LR
       comp=Z,2µm,17.0s
CN2                               LR        LR
       comp=Z,1µm,17.0s
CN2                               LR        LR
       comp=Z,2µm,17.0s
GYA    Guiyang          54.68 308 ⇑iP       P         21 24 38.4 +0.3
GYA                               sP        sP        21 24 52.3 +1.5
GYA                               ScP       ScP       21 29 38.4 +1.4
GYA                               S         S         21 32 12.3 -4.2
GYA                               sS        pS        21 32 26.0 -1.2
GYA                               pmax      pmax
       comp=Z,50nm,1.1s
GYA                               pmax      pmax
       comp=Z,510nm,5.7s
GYA                               LR        LR
       comp=Z,1µm,18.3s
GYA                               LR        LR
       comp=Z,2µm,21.7s
GYA                               LR        LR
       comp=Z,4µm,21.4s
SLVN   Son La           54.75 301 IAmb      IAmb      21 24 40.8
       comp=Z,48nm,1.1s
KIP    Kipapa           54.92  59 P         P         21 24 41.3 +1.6
KIP                               pmax      pmax
       comp=Z,129nm,0.9s
KIP    Kipapa           54.92  59 P         P         21 24 41.3 +1.6
OPA    Opana            55.03  59 P         P         21 24 42.4 +1.9
OPA                               pmax      pmax
       comp=Z,365nm,0.9s
OPA    Opana            55.03  59 P         P         21 24 42.4 +1.9
GSI    Gunungsitoli     55.60 275 IAMs_20   IAMs_20   21 49 48.4
       comp=Z,8µm,21.0s
PBKT   Sadao Pong       55.67 294 P         P         21 24 45.5 +0.4
SKR    Severo-Kuril’s   55.72   3 i P       P         21 24 43.1 -1.8
KHLH   Kahului Airpor   56.09  61 P         P         21 24 49.4 +1.3
HUH    Hualalai         56.17  62 P         P         21 24 49.3 +0.2
HUH                               IAmb      IAmb      21 25 02.7
       comp=Z,130nm,1.0s
HLK    Haleakala        56.20  61 P         P         21 24 49.7 +0.5
KHU    Kahuku           56.22  63 P         P         21 24 48.7 -0.6
KHU                               pmax      pmax
       comp=Z,202nm,0.9s
KHU    Kahuku           56.22  63 P         P         21 24 48.7 -0.6
BJT    Baijiatuau       56.24 326 IAmb      IAmb      21 24 51.7
       comp=Z,56nm,1.3s
BJI    Beijing          56.25 327 P         P         21 24 48.8 -0.1
BJI                               pP        pP        21 24 53.9 -4.1
BJI                               PcP       PcP       21 25 47.3 +1.1
BJI                               SS        SS        21 36 26.3 +2.3
BJI                               pmax      pmax
       comp=Z,35nm,2.3s
BJI                               LR        LR
       comp=Z,1µm,24.9s
BJI                               LR        LR
       comp=Z,1µm,23.9s
BJI                               LR        LR
       comp=Z,2µm,29.4s
MWH    Moku‘aweowe      56.31  63 P         P         21 24 50.9 +0.5
AIN    Ainahou          56.40  63 P         P         21 24 50.7 +0.2
HPAH   Hawaii Prepara   56.42  62 IAmb      IAmb      21 24 52.4
       comp=Z,86nm,0.8s
POHA   Pohakuloa        56.47  62 P         P         21 24 52.6 +1.5
MLH    Mauna Loa        56.51  63 P         P         21 24 51.5 +0.1
MLH                               IAmb      IAmb      21 25 05.7
       comp=Z,116nm,1.0s
HLP    Hilina Pali      56.51  63 P         P         21 24 51.1 -0.1
TYV    Tymovskoe        56.52 352 eP        P         21 24 51.2 +0.6
TYV                               e                   21 32 42.7
TYV                               pmax      pmax
       comp=Z,86nm,1.1s
TYV                               pmax      pmax
       comp=Z,600nm,5.2s
LHMI   Lhok Sumawe      56.79 280 P         P         21 24 52.9 -0.4
       comp=Z,92nm,1.1s
TIY    Taiyuan          56.87 322 eP        P         21 24 53.9 +0.4
TIY                               pP        pP        21 25 03.3 +0.7
TIY                               sP        sP        21 25 06.5 +0.2
TIY                               S         S         21 32 45.4 +0.1
TIY                               sS        sS        21 32 58.3 -2.4
TIY                               pmax      pmax
       comp=Z,33nm,0.9s
TIY                               pmax      pmax
       comp=Z,520nm,5.5s
TIY                               LR        LR
       comp=Z,1µm,14.5s
TIY                               LR        LR
       comp=Z,2µm,20.1s
TIY                               LR        LR
       comp=Z,3µm,19.6s
XAN    Xi'an            56.95 317 P         P         21 24 53.8 -0.3
XAN                               pP        pP        21 25 02.6 -0.6
XAN                               S         S         21 32 52.1 +5.8
XAN                               ScS       ScS       21 34 36.3 -5.1
XAN                               pmax      pmax
       comp=Z,94nm,1.2s
XAN                               pmax      pmax
       comp=Z,700nm,5.1s
XAN                               LR        LR
       comp=Z,2µm,20.2s
XAN                               LR        LR
       comp=Z,3µm,20.6s
XAN                               LR        LR
       comp=Z,4µm,19.6s
XAN    Xi'an            56.95 317 P         P         21 24 53.0 -1.1
XAN                               pmax      pmax
       comp=Z,70nm,0.8s
XAN                               MLR       MLR
       comp=Z,4µm,21.0s
XAN    Xi'an            56.95 317 P         P         21 24 53.0 -1.1
XAN                               IAmb      IAmb      21 24 54.5
       comp=Z,70nm,0.8s
MLSI   Meulaboh, Aceh   57.17 278 P         P         21 24 54.3 -1.7
       comp=Z,161nm,1.2s
KLR    Kul'dur          57.24 344 P         P         21 24 55.8 +0.1
       comp=Z,87nm,1.1s,baz=157,slow=5.4,SNR=106
KLR                               LR        LR        21 47 35.6
       comp=Z,1µm,21.8s,baz=170,slow=34
KLR    Kul'dur          57.24 344 c iP      P         21 24 56.0 +0.3
KLR                               pmax      pmax
       comp=Z,138nm,1.2s
KMI    Kunming          57.26 304 P         P         21 24 57.6 +0.9
KMI                               sP        sP        21 25 08.5 -1.0
KMI                               PP        PP        21 27 05.3 +1.2
KMI                               S         S         21 32 48.4 -2.6
KMI                               pmax      pmax
       comp=Z,76nm,1.3s
KMI                               pmax      pmax
       comp=Z,690nm,4.2s
KMI                               LR        LR
       comp=Z,2µm,21.1s
KMI                               LR        LR
       comp=Z,2µm,23.1s
KMI                               LR        LR
       comp=Z,3µm,22.6s
KMI    Kunming          57.26 304 IAmb      IAmb      21 24 59.0
       comp=Z,116nm,1.2s
GRNR   Gornyy           57.51 348 ⇑iP       P         21 24 57.7  0.0
GRNR                              eS        S         21 32 55.3 +2.3
GRNR                              pmax      pmax
       comp=Z,30nm,1.0s
GRNR                              smax      smax
       comp=N,3.0nm,1.0s
GRNR                              MLR       MLR
       comp=Z,420nm,19.0s
PPT    Papeete          57.55 107 LR        LR        21 46 42.0
       comp=Z,1µm,19.8s,baz=278,slow=33
PPT2   Papeete2         57.55 107 eS        S         21 32 52.9 -1.9
       comp=Z,2µm,26.0s
PPT2                              eLQ       LQ        21 39 34.9
       comp=Z,4µm,26.0s
PPT2                              eLR       LR        21 42 04.2
       comp=Z,1µm,21.8s
CM31   Chiang Mai Arr   58.10 295 P         P         21 25 03.3 +0.8
       SNR=56
CMAR   Chiang Mai Arr   58.10 295 P         P         21 25 03.1 +0.7
       comp=Z,82nm,0.9s,baz=110,slow=5.3,SNR=260
CMAR                              ScP       ScP       21 29 54.3 +2.2
       comp=Z,2.8nm,1.0s,baz=121,slow=2.5,SNR=5.8
CMAR                              LR        LR        21 49 47.4
       comp=Z,1µm,20.0s,baz=116,slow=36
CMAR                              PKPPKP              21 54 45.7
       comp=Z,1.4nm,0.6s,baz=281,slow=4.7,SNR=6.7
CMAR   Chiang Mai Arr   58.10 295 P         P         21 25 02.2 -0.2
CMAR                                        ScP       21 29 54.9 +2.8
PET    Petropavlovsk    58.20   4 P         P         21 25 03.1 +0.7
PET                               pmax      pmax
       comp=Z,143nm,1.0s
PET                               MLR       MLR
       comp=Z,2µm,19.0s
PET    Petropavlovsk    58.20   4 P         P         21 25 03.1 +0.7
CHTO   Chiang Mai       58.21 296 P         P         21 25 03.4 +0.2
CHTO                              P         P         21 25 03.4 +0.2
CHTO   Chiang Mai       58.21 296 P         P         21 25 03.7 +0.5
CHTO                              pmax      pmax
       comp=Z,120nm,1.2s
CHTO                              MLR       MLR
       comp=Z,2µm,20.0s
CHTO   Chiang Mai       58.21 296 P         P         21 25 03.7 +0.5
CHTO                              IAmb      IAmb      21 25 05.0
       comp=Z,120nm,1.1s
PEA0B  Petropavlovsk-   58.23   3 P         P         21 25 03.5 +0.9
PEA0B                             pmax      pmax
       comp=Z,424nm,1.3s
PEA0B                             MLR       MLR
       comp=Z,4µm,22.0s
PEA0B  Petropavlovsk-   58.23   3 P         P         21 25 03.5 +0.9
PETK   Petropavlovsk-   58.23   3 P         P         21 25 03.3 +0.7
       comp=Z,150nm,1.1s,baz=145,slow=5.4,SNR=68
PETK                              LR        LR        21 46 27.4
       comp=Z,3µm,21.8s,baz=203,slow=32
PETK   Petropavlovsk-   58.23   3 P         P         21 25 02.7 +0.1
PETK   Petropavlovsk-   58.23   3 P         P         21 25 02.7 +0.1
TBI    Tubuai           58.34 114 eS        S         21 33 04.4 -0.4
       comp=Z,1µm,30.8s
TBI                               eLQ       LQ        21 39 53.8
       comp=Z,6µm,32.5s
TBI                               eLR       LR        21 42 20.7
       comp=Z,5µm,28.2s,baz=285
PMOR   Pomariorio Ree   58.98 104 eP        P         21 25 07.7 -0.9
       comp=Z,96nm,1.0s
NKL    Nikolayevsk      59.03 351 eP        P         21 25 10.1 +1.9
NKL                               eS        S         21 33 12.3 -0.3
NKL                               pmax      pmax
       comp=Z,36nm,1.0s
NKL                               pmax      pmax
       comp=N,7.0nm,0.8s
NKL                               pmax      pmax
       comp=E,2.0nm,0.9s
NKL                               pmax      pmax
       comp=Z,63nm,4.3s
CD2    Chengdu          59.04 311 ⇑iP       P         21 25 08.9 +0.1
CD2                               sP        pP        21 25 18.8 +0.8
CD2                               S         S         21 33 15.3 +1.5
CD2                               sS        pS        21 33 26.0 +1.5
CD2                               ScS       ScS       21 34 57.8 +0.9
CD2                               SS        SS        21 37 13.3 +5.0
CD2                               pmax      pmax
       comp=Z,180nm,1.1s
CD2                               pmax      pmax
       comp=Z,730nm,6.7s
CD2                               LR        LR
       comp=Z,3µm,19.4s
CD2                               LR        LR
       comp=Z,5µm,20.6s
CD2                               LR        LR
       comp=Z,5µm,19.6s
HHC    Hu-ho-hao-te     59.40 324 eP        P         21 25 11.8 +0.6
HHC                               pP        pP        21 25 19.9 -0.4
HHC                               sP        sP        21 25 25.4 +1.4
HHC                               PcP       PcP       21 25 53.8 -5.0
HHC                               ScP       ScP       21 29 51.4 -6.1
HHC                               S         S         21 33 20.4 +2.2
HHC                               ScS       ScS       21 35 00.6 +1.3
HHC                               LR        LR
       comp=Z,5µm,17.0s
HHC                               LR        LR
       comp=Z,2µm,17.9s
HHC                               LR        LR
       comp=Z,4µm,16.7s
BTO    Baotou           60.15 323 eP        P         21 25 17.1 +0.7
SMY    Shemya           60.45  15 P         P         21 25 17.7 -0.3
SMY                               pmax      pmax
       comp=Z,1µm,2.0s
SMY                               MLR       MLR
       comp=Z,8µm,22.0s
SMY    Shemya           60.45  15 P         P         21 25 17.7 -0.3
SMY                               IAMs_20   IAMs_20   21 47 06.1
       comp=Z,8µm,22.0s
HIA    Hailar           61.41 336 P         P         21 25 24.7  0.0
HIA                               pmax      pmax
       comp=Z,57nm,1.2s
HIA                               MLR       MLR
       comp=Z,2µm,19.0s
HIA    Hailar           61.41 336 P         P         21 25 24.7  0.0
HIA                               IAmb      IAmb      21 25 26.1
       comp=Z,57nm,1.2s
LZH    Lanzhou          61.55 316 ⇑P        P         21 25 27.0 +0.9
LZH                               sP        pwP       21 25 37.9 +0.1
LZH                               S         S         21 33 53.6 +7.5
LZH                               pmax      pmax
       comp=Z,140nm,1.2s
LZH                               pmax      pmax
       comp=Z,740nm,5.4s
LZH                               LR        LR
       comp=Z,2µm,17.3s
LZH                               LR        LR
       comp=Z,2µm,18.4s
LZH                               LR        LR
       comp=Z,2µm,18.9s
ADK    Adak             62.51  21 P         P         21 25 32.9 +1.0
ADK                               pmax      pmax
       comp=Z,144nm,1.1s
ADK                               MLR       MLR
       comp=Z,4µm,21.0s
ADK    Adak             62.51  21 P         P         21 25 32.9 +1.0
ADK    Adak             62.51  21 IAMs_20   IAMs_20   21 47 23.9
       comp=Z,4µm,21.0s
ZEA    Zeya             62.53 343 eP        P         21 25 32.0 -0.1
ZEA                               pmax      pmax
       comp=E,24nm,1.0s
ZEA                               pmax      pmax
       comp=N,86nm,1.2s
ZEA                               pmax      pmax
       comp=Z,140nm,1.2s
ATKA   Atka Island      63.67  22 P         P         21 25 39.2 -0.4
ATKA                              IAmb      IAmb      21 26 09.7
       comp=Z,117nm,1.2s
ATKA                              IAMs_20   IAMs_20   21 47 56.6
       comp=Z,4µm,22.0s
SIMRM  Sittwe           64.06 295 P         P         21 25 42.3 -0.5
SIMRM                             IAmb      IAmb      21 25 45.4
       comp=Z,47nm,1.2s
MA2    Magadan          64.59 359 P         P         21 25 45.7 +0.2
       comp=Z,89nm,0.8s,baz=157,slow=6.2,SNR=87
MA2    Magadan          64.59 359 ceP       P         21 25 45.4 -0.1
MA2                               pmax      pmax
       comp=Z,412nm,2.5s
MA2    Magadan          64.59 359 P         P         21 25 45.5 +0.1
BRDH   Bariadhala       65.90 298 P         P         21 25 55.5 +0.7
       comp=Z,102nm,0.4s,baz=87,slow=9.5,SNR=11
GTA    Gaotai           65.99 317 ⇑P        P         21 25 56.0 +0.8
GTA                               pP        pP        21 26 03.3 -1.2
GTA                               sP        pwP       21 26 06.9  0.0
GTA                               S         S         21 34 42.5 +1.5
GTA                               sS        sS        21 34 58.3 +1.6
GTA                               SS        SS        21 39 01.0 +4.1
GTA                               pmax      pmax
       comp=Z,66nm,1.1s
GTA                               pmax      pmax
       comp=Z,790nm,7.3s
GTA                               LR        LR
       comp=Z,970nm,20.3s
GTA                               LR        LR
       comp=Z,2µm,20.0s
GTA                               LR        LR
       comp=Z,3µm,20.0s
ULN    Ulaanbaatar      66.36 328 P         P         21 25 58.2 +0.7
ULN                               P         P         21 25 58.2 +0.7
ULN    Ulaanbaatar      66.36 328 ceP       P         21 25 58.1 +0.7
ULN                               pmax      pmax
       comp=Z,174nm,2.5s
ULN    Ulaanbaatar      66.36 328 P         P         21 25 58.3 +0.9
ULN                               IAmb      IAmb      21 25 59.1
       comp=Z,70nm,1.2s
TAOE   Nuku Hiva Isla   66.51  97 eLR       LR        21 46 13.5
       comp=Z,2µm,20.7s
TAOE   Nuku Hiva Isla   66.51  97 P         P         21 25 57.7 -1.3
SONM   Songino Array    66.69 328 P         P         21 26 00.1 +0.6
       comp=Z,28nm,1.1s,baz=135,slow=4.5,SNR=106
SONM                              LR        LR        21 53 26.4
       comp=Z,3µm,21.1s,baz=138,slow=34
SONM                              PKPPKP              21 54 28.9
       comp=Z,1.0nm,0.9s,baz=307,slow=1.3,SNR=6.5
SONM   Songino Array    66.69 328 P         P         21 25 58.7 -0.8
SONM                              pmax      pmax
       comp=Z,56nm,1.3s
SONM   Songino Array    66.69 328 P         P         21 25 58.7 -0.8
CASY   Casey            67.66 197 IAMs_20   IAMs_20   21 53 42.3
       comp=Z,4µm,20.0s
SEY    Seymchan         67.94 360 P         P         21 26 07.1 +0.2
       comp=Z,89nm,1.3s,baz=173,slow=6.1,SNR=73
UNV    Unalaska Valle   67.95  25 IAmb      IAmb      21 26 07.9
       comp=Z,56nm,0.8s
AKUT   Akutan           68.46  25 P         P         21 26 10.7 +0.4
LSA    Lhasa            68.51 305 P         P         21 26 12.4 +0.6
LSA                               P         P         21 26 12.4 +0.6
LSA    Lhasa            68.51 305 IAmb      IAmb      21 26 13.9
       comp=Z,43nm,0.9s
SPIA   Saint Paul Isl   69.00  20 IAMs_20   IAMs_20   21 51 11.2
       comp=Z,4µm,22.0s
YAK    Yakutsk          69.37 349 P         P         21 26 16.2 +0.4
       comp=Z,11nm,0.5s,baz=145,slow=2.7,SNR=31
YAK                               S         S         21 35 22.9 +2.6
       comp=Z,4.9nm,0.3s,baz=69,slow=2.1,SNR=1.1
YAK    Yakutsk          69.37 349 c iP      P         21 26 15.8  0.0
YAK                               e*PP      sP        21 26 29.7 +0.9
YAK                               e                   21 26 37.2
YAK                               ePPP      PPP       21 30 31.8
YAK                               eS        S         21 35 18.5 -1.9
YAK                               e*SS      sS        21 35 39.9 +3.7
YAK                               e                   21 36 10.7
YAK                               pmax      pmax
       comp=Z,86nm,1.0s
YAK                               pmax      pmax
       comp=N,68nm,1.3s
YAK                               pmax      pmax
       comp=E,29nm,1.3s
YAK                               pmax      pmax
       comp=Z,62nm,2.2s
YAK                               pmax      pmax
       comp=N,65nm,2.1s
YAK                               pmax      pmax
       comp=E,104nm,3.0s
YAK                               smax      smax
       comp=E,193nm,4.1s
YAK                               smax      smax
       comp=N,204nm,3.8s
YAK    Yakutsk          69.37 349 P         P         21 26 16.2 +0.4
ZAK    Zakamensk        69.86 329 eP        P         21 26 19.3  0.0
ZAK                               pmax      pmax
       comp=Z,76nm,1.3s
FALS   False Pass       69.95  25 IAMs_20   IAMs_20   21 51 03.6
       comp=Z,5µm,21.0s
BOD    Bodaibo          70.18 339 eP        P         21 26 20.3 -0.6
BOD                               pmax      pmax
       comp=Z,81nm,1.3s
TLY    Talaya           70.45 330 P         P         21 26 23.3 +0.5
       comp=Z,17nm,0.9s,baz=144,slow=5.0,SNR=33
TLY    Talaya           70.45 330 P         P         21 26 23.3 +0.5
TLY                               P         P         21 26 23.3 +0.5
TLY    Talaya           70.45 330 c iP      P         21 26 22.8  0.0
TLY                               e                   21 26 44.4
TLY                               eSS       SS        21 40 05.2 +0.1
TLY                               pmax      pmax
       comp=Z,115nm,1.3s
TLY                               MLR       MLR
       comp=Z,3µm,15.0s
TLY    Talaya           70.45 330 P         P         21 26 23.2 +0.4
IRK    Irkutsk          70.48 331 eP        P         21 26 21.6 -1.3
IRK                               pmax      pmax
       comp=Z,107nm,2.9s
TAPN   Taplejung        70.66 301 ⇑iP       P         21 26 25.1 +0.2
       comp=Z,352nm,1.2s
ODAN   Odare            70.80 301 ⇑iP       P         21 26 25.8 +0.1
       comp=Z,390nm,1.1s
RAMN   Ramite           71.50 300 ⇑iP       P         21 26 29.7 -0.2
CNBA   Chernabura Isl   71.59  27 P         P         21 26 29.0 -0.6
CNBA                              IAmb      IAmb      21 26 32.0
       comp=Z,72nm,1.0s
CNBA                              IAMs_20   IAMs_20   21 54 47.4
       comp=Z,6µm,20.0s
CHLP   Challavanipeta   71.74 291 eP        P         21 26 31.5 +0.3
CHLP                              IAmb      IAmb      21 26 33.1
       comp=Z,79nm,1.5s
MOY    Mondy            71.78 329 eP        P         21 26 31.5 +0.5
MOY                               pmax      pmax
       comp=Z,212nm,2.1s
JIRN   Jiri             72.05 301 ⇑iP       P         21 26 33.5 +0.1
GUN    Gumba            72.38 301 ⇑iP       P         21 26 35.4 +0.1
       comp=Z,348nm,1.0s
VNDA   Vanda            72.44 178 P         P         21 26 35.4 +1.0
       comp=Z,4.7nm,1.0s,baz=337,slow=7.5,SNR=11
VNDA                              LR        LR        21 56 04.0
       comp=Z,1µm,18.6s,baz=356,slow=34
VNDA   Vanda            72.44 178 P         P         21 26 35.5 +1.2
VNDA                              pmax      pmax
       comp=Z,44nm,1.4s
VNDA   Vanda            72.44 178 P         P         21 26 35.5 +1.2
PKI    Pulchoki         72.69 301 ⇑iP       P         21 26 36.9 -0.3
       comp=Z,382nm,1.2s
PKIN   Phulchoki        72.70 301 ⇑iP       P         21 26 36.9 -0.3
       comp=Z,238nm,1.2s
KKN    Kakani           72.86 301 ⇑iP       P         21 26 37.9 -0.1
       comp=Z,288nm,1.1s
DMN    Daman            72.96 301 ⇑iP       P         21 26 38.8 +0.1
       comp=Z,569nm,1.1s
SBA    Scott Base       72.98 177 P         P         21 26 39.4 +1.9
SBA                               pmax      pmax
       comp=Z,57nm,1.3s
SBA    Scott Base       72.98 177 P         P         21 26 39.4 +1.9
SBA                               IAmb      IAmb      21 27 09.8
       comp=Z,57nm,1.3s
CHGN   Chignik          73.05  26 IAmb      IAmb      21 26 40.2
       comp=Z,92nm,0.9s
CHGN                              IAMs_20   IAMs_20   21 55 27.6
       comp=Z,4µm,19.0s
PALK   Pallekele        73.06 279 P         P         21 26 39.0 -0.2
PALK   Pallekele        73.06 279 P         P         21 26 38.5 -0.8
PALK                              pmax      pmax
       comp=Z,34nm,1.2s
PALK                              MLR       MLR
       comp=Z,700nm,21.0s
PALK   Pallekele        73.06 279 P         P         21 26 38.5 -0.8
GKN    Gorkha           73.46 301 ⇑iP       P         21 26 41.4 -0.1
       comp=Z,625nm,1.2s
BILL   Bilibino         73.67   5 eP        P         21 26 41.6 -0.1
BILL                              e                   21 26 55.5
BILL                              e                   21 29 27.0
BILL                              eS        SKiKP     21 36 09.2 -0.1
BILL                              eSS       SS        21 40 54.0 +0.2
BILL                              pmax      pmax
       comp=Z,385nm,0.8s
BILL                              MLR       MLR
       comp=Z,3µm,19.0s
BILL   Bilibino         73.67   5 P         P         21 26 42.5 +0.8
BILL                              IAMs_20   IAMs_20   21 58 27.6
       comp=Z,3µm,20.0s
GAMB   Gambell          73.74  16 IAmb      IAmb      21 26 44.0
       comp=Z,115nm,1.1s
GAMB                              IAMs_20   IAMs_20   21 54 03.3
       comp=Z,5µm,22.0s
PVM    Polavaram        73.77 290 eP        P         21 26 42.7 -0.6
PVM                               IAmb      IAmb      21 26 43.5
       comp=Z,65nm,1.8s
CHIR   Chirikof Islan   74.00  27 P         P         21 26 44.0 +0.1
CHIR                              IAMs_20   IAMs_20   21 53 54.0
       comp=Z,5µm,21.0s
DANN   Dangsing         74.30 301 ⇑iP       P         21 26 46.2 -0.4
       comp=Z,332nm,1.1s
MYLAV  Mylavaram        74.61 289 eP        P         21 26 47.9 -0.3
MYLAV                             IAmb      IAmb      21 26 49.3
       comp=Z,72nm,1.8s
SKHT   Srikalahasti     74.97 286 eP        P         21 26 49.6 -0.7
SKHT                              IAmb      IAmb      21 26 51.3
       comp=Z,29nm,1.3s
ADKI   Addanki          75.08 288 eP        P         21 26 50.5 -0.4
ADKI                              IAmb      IAmb      21 26 52.0
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	comp=Z,31nm,1.2s						
SII	**Sitkinak Islan**	**75.09**	**27**	P	**P**	**21 26 49.8**	**-0.3**
SII				IAMs_20	IAMs_20	21 55 40.7	
	comp=Z,4µm,20.0s						
GGR	**Gangavaram**	**75.20**	**290**	*e*P	**P**	**21 26 51.0**	**-0.7**
GGR				IAmb	IAmb	21 26 52.4	
	comp=Z,93nm,1.8s						
NJS	**Nagarjunasagar**	**75.82**	**288**	*e*P	**P**	**21 26 54.4**	**-0.8**
NJS				IAmb	IAmb	21 26 55.9	
	comp=Z,50nm,1.4s						
OHAK	**Old Harbor**	**75.87**	**27**	P	**P**	**21 26 54.9**	**+0.3**
OHAK				IAmb	IAmb	21 26 57.5	
	comp=Z,105nm,1.0s						
OHAK				IAMs_20	IAMs_20	21 53 42.3	
	comp=Z,3µm,21.0s						
WMQ	**Urumqi**	**76.07**	**317**	*e*P	**P**	**21 26 57.1**	**+0.9**
WMQ				pP	pP	21 27 00.5	-5.2
WMQ				sP	PcP	21 27 08.1	-0.2
WMQ				PcP	**sP**	**21 27 12.6**	**+3.4**
WMQ				S	**S**	**21 36 37.8**	**+0.1**
WMQ				ScS	**SKSac**	**21 37 03.9**	**-1.0**
WMQ				pmax	pmax		
	comp=Z,49nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,680nm,4.7s						
WMQ				LR	LR		
	comp=Z,560nm,23.9s						
WMQ				LR	LR		
	comp=Z,840nm,25.7s						
WMQ				LR	LR		
	comp=Z,2µm,20.9s						
WMQ	**Urumqi**	**76.07**	**317**	P	**P**	**21 26 56.5**	**+0.3**
WMQ				pmax	pmax		
	comp=Z,162nm,1.3s						
WMQ				MLR	MLR		
	comp=Z,2µm,22.0s						
WMQ	**Urumqi**	**76.07**	**317**	P	**P**	**21 26 56.5**	**+0.3**
WMQ				IAmb	IAmb	21 26 58.6	
	comp=Z,162nm,1.3s						
PTCN	**Pitcairn Islan**	**76.09**	**114**	P	**P**	**21 26 56.3**	**-0.3**
ANM	**Nome**	**76.13**	**17**	IAmb	IAmb	21 26 58.0	
	comp=Z,97nm,1.0s						
ANM				IAMs_20	IAMs_20	21 55 03.5	
	comp=Z,4µm,22.0s						
SRLM	**Srisailam**	**76.14**	**288**	*e*P	**P**	**21 26 56.2**	**-0.9**
SRLM				IAmb	IAmb	21 26 57.6	
	comp=Z,34nm,1.0s						
RPR	**Rampur**	**76.24**	**291**	*e*P	**P**	**21 26 56.9**	**-0.7**
RPR				IAmb	IAmb	21 26 58.3	
	comp=Z,80nm,1.6s						
JBP	**Jabalpur**	**76.43**	**295**⇑	*e*P	**P**	**21 26 58.7**	**+0.2**
JBP				*e*S	**S**	**21 36 49.0**	**+6.8**
KDAK	**Kodiak Island**	**76.50**	**27**	P	**P**	**21 26 58.7**	**+0.5**
	comp=Z,60nm,0.9s,baz=218,slow=3.8,SNR=26						
KDAK				LR	LR	21 55 12.0	
	comp=Z,4µm,21.9s,baz=245,slow=32						
KDAK	**Kodiak Island**	**76.50**	**27**	P	**P**	**21 26 59.1**	**+0.9**
KDAK				pmax	pmax		
	comp=Z,59nm,0.9s						
KDAK				MLR	MLR		
	comp=Z,5µm,22.0s						
KDAK	**Kodiak Island**	**76.50**	**27**	P	**P**	**21 26 59.1**	**+0.9**
KDAK				IAmb	IAmb	21 26 59.9	
	comp=Z,59nm,0.8s						
KDAK	**Kodiak Island**	**76.50**	**27**	IAMs_20	IAMs_20	21 54 38.9	
	comp=Z,5µm,22.0s						
HYB	**Hyderabad**	**76.68**	**289**	*i* P	**P**	**21 26 59.0**	**-1.1**
HYBB	**Hyderabad (bro**	**76.68**	**289**	*e*P	**P**	**21 26 59.1**	**-1.1**
HYBB				IAmb	IAmb	21 27 00.5	
	comp=Z,66nm,1.6s						
SRSP	**Sriramsagar**	**77.14**	**291**	*e*P	**P**	**21 27 01.7**	**-0.9**
SRSP				IAmb	IAmb	21 27 03.1	
	comp=Z,94nm,1.6s						
SVW2	**Sparrevohn**	**77.16**	**23**	IAmb	IAmb	21 27 05.2	
	comp=Z,84nm,0.9s						
URV	**Uravakonda**	**77.51**	**286**	*e*P	**P**	**21 27 04.3**	**-0.5**
URV				IAmb	IAmb	21 27 05.6	
	comp=Z,56nm,1.1s						
HOM	**Homer**	**77.94**	**25**	P	**P**	**21 27 06.1**	**-0.1**
HOM				IAMs_20	IAMs_20	21 55 32.1	
	comp=Z,4µm,22.0s						
TTA	**Tatalina**	**78.11**	**21**	P	**P**	**21 27 07.3**	**+0.1**
TTA	**Tatalina**	**78.11**	**21**	P	**P**	**21 27 07.3**	**+0.1**
TIXI	**Tiksi**	**78.29**	**352**	P	**P**	**21 27 07.5**	**-0.4**
	comp=Z,31nm,1.0s,baz=142,slow=6.6,SNR=75						
TIXI				LR	LR	21 59 03.2	
	comp=Z,916nm,21.9s,baz=132,slow=34						
TIXI	**Tiksi**	**78.29**	**352**	P	**P**	**21 27 07.4**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,53nm,1.1s						
TIXI				MLR	MLR		
	comp=Z,2µm,20.0s						
TIXI	**Tiksi**	**78.29**	**352**	P	**P**	**21 27 07.4**	**-0.5**
TIXI				IAmb	IAmb	21 27 10.4	
	comp=Z,53nm,1.1s						
BRLK	**Bradley Lake**	**78.32**	**25**	IAmb	IAmb	21 27 09.8	
	comp=Z,60nm,0.8s						
BRLK				IAMs_20	IAMs_20	21 56 05.5	
	comp=Z,6µm,22.0s						
DGZ	**Jazzator, Alta**	**78.43**	**323***c*	*i*P	**P**	**21 27 09.6**	**+0.2**
DGZ				pmax	pmax		
	comp=Z,110nm,1.0s						
KLRI	**Killari**	**78.63**	**290**	*e*P	**P**	**21 27 09.9**	**-1.1**
KLRI				IAmb	IAmb	21 27 10.6	
	comp=Z,28nm,1.3s						
SEW	**Seward**	**79.11**	**26**	IAmb	IAmb	21 27 15.5	
	comp=Z,107nm,0.9s						
ZSN	**Zaisan**	**79.21**	**320**⇑	*i*P	**P**	**21 27 13.7**	**+0.1**
	comp=Z,196nm,3.0s						
ZSN	**Zaisan**	**79.21**	**320***c*	*i*P	**P**	**21 27 13.6**	**+0.1**
ZSN				pmax	pmax		
	comp=Z,196nm,3.0s						
RDOG	**Red Dog Mine**	**79.34**	**15**	IAMs_20	IAMs_20	21 59 02.3	
	comp=Z,3µm,20.0s						
RC01	**Rabbit Creek A**	**79.50**	**25**	IAmb	IAmb	21 27 15.8	
	comp=Z,112nm,1.0s						
RC01				IAMs_20	IAMs_20	21 58 03.2	
	comp=Z,4µm,21.0s						
DGAR	**Diego Garcia**	**79.86**	**263**	P	**P**	**21 27 17.4**	**-0.4**
DGAR				pmax	pmax		
	comp=Z,110nm,1.0s						
DGAR	**Diego Garcia**	**79.86**	**263**	P	**P**	**21 27 17.4**	**-0.4**
DGAR				IAmb	IAmb	21 28 15.2	
	comp=Z,110nm,0.9s						
KAAM	**Kaadhehdhoo**	**79.96**	**271**	P	**P**	**21 27 17.9**	**-0.4**
NDI	**New Delhi**	**79.98**	**300**	*e*P	**P**	**21 27 17.0**	**-1.1**
PMR	**Palmer**	**80.01**	**24**	IAmb	IAmb	21 27 18.3	
	comp=Z,70nm,1.0s						
PMR				IAMs_20	IAMs_20	21 59 10.7	
	comp=Z,4µm,21.0s						
GHO	**Glory Hole Cre**	**80.19**	**24**	IAmb	IAmb	21 27 20.8	
	comp=Z,63nm,0.8s						
GHO				IAMs_20	IAMs_20	21 59 37.4	
	comp=Z,3µm,20.0s						
KNK	**Knik Glacier**	**80.20**	**25**	IAmb	IAmb	21 27 19.9	
	comp=Z,79nm,1.1s						
KTH	**Kantishna Hill**	**80.35**	**22**	IAmb	IAmb	21 27 19.8	
	comp=Z,69nm,1.0s						
KTH				IAMs_20	IAMs_20	22 00 45.4	
	comp=Z,3µm,20.0s						
SML	**Sawmill**	**80.45**	**24**	IAMs_20	IAMs_20	21 59 45.3	
	comp=Z,4µm,20.0s						
GLI	**Glacier Island**	**80.51**	**25**	IAmb	IAmb	21 27 21.4	
	comp=Z,97nm,1.0s						
GLI				IAMs_20	IAMs_20	21 57 10.9	
	comp=Z,5µm,22.0s						
HIN	**Hinchinbrook I**	**80.53**	**26**	IAmb	IAmb	21 27 22.2	
	comp=Z,74nm,0.8s						
HIN				IAMs_20	IAMs_20	21 59 12.6	
	comp=Z,4µm,20.0s						
TRF	**Thorofare Moun**	**80.53**	**22**	IAmb	IAmb	21 27 20.7	
	comp=Z,44nm,1.0s						
TRF				IAMs_20	IAMs_20	21 59 24.3	
	comp=Z,3µm,20.0s						
BPAW	**Bear Paw Mtn.**	**80.62**	**22**	IAMs_20	IAMs_20	22 04 31.7	
	comp=Z,2µm,19.0s						
MK31	**Makanchi Array**	**80.66**	**319**	IAmb	IAmb	21 27 23.5	
	comp=Z,104nm,1.4s						
MKAR	**Makanchi Array**	**80.66**	**319**	P	**P**	**21 27 21.7**	**+0.3**
	comp=Z,30nm,1.0s,baz=102,slow=5.1,SNR=146						
MKAR				PKPPKP	**P'P'df**	**21 54 06.2**	**+1.1**
	comp=Z,1.0nm,0.9s,baz=298,slow=3.1,SNR=5.7						
MKAR				LR	LR	22 02 49.4	
	comp=Z,2µm,19.8s,baz=97,slow=36						
MKAR	**Makanchi Array**	**80.66**	**319**	*i* P	**P**	**21 27 21.7**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,29nm,1.0s						
MKAR	**Makanchi Array**	**80.66**	**319**	P	**P**	**21 27 20.8**	**-0.6**
FID	**Port Fidalgo**	**80.71**	**26**	IAmb	IAmb	21 27 24.2	
	comp=Z,127nm,1.2s						
FID				IAMs_20	IAMs_20	22 02 07.6	
	comp=Z,3µm,19.0s						
IMAR	**Indian Mountai**	**80.73**	**19**	P	**P**	**21 27 21.2**	**-0.1**
MAKZ	**Makanchi**	**80.87**	**319**	P	**P**	**21 27 22.8**	**+0.3**
MAKZ				pmax	pmax		
	comp=Z,160nm,1.4s						
MAKZ				MLR	MLR		
	comp=Z,2µm,20.0s						
MAKZ	**Makanchi**	**80.87**	**319**	P	**P**	**21 27 22.8**	**+0.3**
MAKZ				IAmb	IAmb	21 27 24.5	
	comp=Z,160nm,1.4s						
SCM	**Sheep Creek Mo**	**80.88**	**25**	P	**P**	**21 27 23.1**	**+0.8**
SCM				pmax	pmax		
	comp=Z,95nm,1.0s						
SCM				MLR	MLR		
	comp=Z,6µm,22.0s						
SCM	**Sheep Creek Mo**	**80.88**	**25**	P	**P**	**21 27 23.1**	**+0.8**
SCM				IAmb	IAmb	21 27 23.7	
	comp=Z,95nm,1.0s						
EYAK	**Cordova Ski Ar**	**80.93**	**26**	IAmb	IAmb	21 27 25.7	
	comp=Z,87nm,1.3s						
RND	**Reindeer**	**81.06**	**23**	IAmb	IAmb	21 27 24.3	
	comp=Z,84nm,0.8s						
MCK	**McKinley**	**81.20**	**22**	IAMs_20	IAMs_20	22 10 22.9	
	comp=Z,2µm,18.0s						
BHK	**Bhakra**	**81.20**	**303**	*e*x	**P**	**21 27 24.0**	**-0.7**
MLY	**Manley**	**81.22**	**21**	IAmb	IAmb	21 27 25.3	
	comp=Z,84nm,0.9s						
BWN	**Browne**	**81.23**	**22**	P	**P**	**21 27 23.8**	**-0.3**
BWN				IAMs_20	IAMs_20	22 02 21.3	
	comp=Z,3µm,20.0s						
RAGM	**Ragged Mountai**	**81.33**	**26**	IAmb	IAmb	21 27 28.2	
	comp=Z,132nm,1.1s						
DHY	**Denali Highway**	**81.47**	**23**	IAmb	IAmb	21 27 28.4	
	comp=Z,61nm,0.9s						
ZAA0	**Zalesovo Array**	**81.51**	**326**	IAmb	IAmb	21 27 26.5	
	comp=Z,83nm,0.9s						
ZALV	**Zalesovo Beam**	**81.51**	**326**	P	**P**	**21 27 25.4**	**-0.3**
	comp=Z,81nm,0.8s,baz=110,slow=5.3,SNR=243						
ZALV				S	**S**	**21 37 30.7**	**-4.5**
	comp=Z,0.3nm,0.3s,baz=197,slow=26,SNR=1.8						
ZALV				PKPPKP	**P'P'df**	**21 54 06.5**	**+3.5**
	comp=Z,0.3nm,0.4s,baz=318,slow=1.9,SNR=1.6						
ZALV				LR	LR	22 03 50.9	
	comp=Z,1µm,20.7s,baz=120,slow=36						
ZALV	**Zalesovo Beam**	**81.51**	**326**	*i* P	**P**	**21 27 25.2**	**-0.5**
ZALV				pmax	pmax		
	comp=Z,81nm,0.9s						
ZALV	**Zalesovo Beam**	**81.51**	**326**	P	**P**	**21 27 24.4**	**-1.4**
NEA	**Nenana**	**81.58**	**22**	IAmb	IAmb	21 27 26.3	
	comp=Z,78nm,1.0s						
NEA				IAMs_20	IAMs_20	21 59 42.3	
	comp=Z,3µm,21.0s						
UZB	**Uzynbulak**	**81.86**	**315**⇑	*i*P	**P**	**21 27 28.1**	**+0.1**
	comp=Z,84nm,1.6s						
UZB				*e*S	S	21 37 54.2	+15
UZB	**Uzynbulak**	**81.86**	**315***c*	*i*P	**P**	**21 27 28.1**	**+0.1**
UZB				pmax	pmax		
	comp=Z,84nm,1.6s						
WRH	**Wood River Hil**	**81.90**	**22**	IAmb	IAmb	21 27 27.9	
	comp=Z,89nm,1.1s						
WRH				IAMs_20	IAMs_20	22 02 39.3	
	comp=Z,3µm,20.0s						
CCB	**Clear Creek Bu**	**82.09**	**22**	IAmb	IAmb	21 27 28.7	
	comp=Z,66nm,1.0s						
CCB				IAMs_20	IAMs_20	22 02 45.5	
	comp=Z,2µm,20.0s						
MDM	**Murphy Dome**	**82.09**	**22**	IAmb	IAmb	21 27 29.7	
	comp=Z,152nm,1.7s						
CRQM	**Cirque**	**82.18**	**26**	IAmb	IAmb	21 27 32.7	
	comp=Z,108nm,1.0s						
CRQM				IAMs_20	IAMs_20	21 58 02.6	
	comp=Z,5µm,21.0s						
KPKS	**Kokpek**	**82.18**	**315**⇑	*i*P	**P**	**21 27 29.6**	**-0.1**
	comp=Z,140nm,2.1s						
KPKS	**Kokpek**	**82.18**	**315***c*	*i*P	**P**	**21 27 29.5**	**-0.1**
KPKS				pmax	pmax		
	comp=Z,140nm,2.1s						
GLB	**Gilahina Butte**	**82.18**	**26**	IAmb	IAmb	21 27 31.2	
	comp=Z,92nm,0.9s						
GLB				IAMs_20	IAMs_20	21 59 13.1	
	comp=Z,3µm,20.0s						
PAX	**Paxson**	**82.18**	**24**	IAMs_20	IAMs_20	22 00 30.0	
	comp=Z,4µm,20.0s						
TCOL	**CIGO, UAF Yank**	**82.19**	**22**	P	**P**	**21 27 28.5**	**-0.5**
	baz=240,SNR=20						
COLA	**College**	**82.19**	**22**	P	**P**	**21 27 28.6**	**-0.4**
COLA				pmax	pmax		
	comp=Z,98nm,0.9s						
COLA				MLR	MLR		
	comp=Z,3µm,18.0s						
COLA	**College**	**82.19**	**22**	P	**P**	**21 27 28.6**	**-0.4**
COLA				IAmb	IAmb	21 27 29.9	
	comp=Z,98nm,0.8s						
COLA	**College**	**82.19**	**22**	IAMs_20	IAMs_20	22 06 47.9	
	comp=Z,3µm,18.0s						
VRDI	**Verde Repeater**	**82.24**	**26**	IAMs_20	IAMs_20	21 58 51.8	
	comp=Z,5µm,21.0s						
SATY	**Saty**	**82.27**	**315**⇑	*i*P	**P**	**21 27 30.4**	**+0.2**
	comp=Z,96nm,2.3s						
SATY				*e*S	**S**	**21 37 49.4**	**+5.5**
SATY	**Saty**	**82.27**	**315***c*	*i*P	**P**	**21 27 30.3**	**+0.1**
SATY				*e*S	**S**	**21 37 49.3**	**+5.5**
SATY				pmax	pmax		
	comp=Z,96nm,2.3s						
HDA	**Harding Lake**	**82.30**	**22**	IAmb	IAmb	21 27 30.9	
	comp=Z,201nm,2.0s						
HDA	**Harding Lake**	**82.30**	**22**	P	**P**	**21 27 29.1**	**-0.6**
	baz=241,SNR=24						
TGL	**Tana Glacier**	**82.31**	**27**	IAmb	IAmb	21 27 33.3	
	comp=Z,114nm,1.3s						
TGL				IAMs_20	IAMs_20	21 57 54.7	
	comp=Z,5µm,22.0s						
POKR	**Poker Plat Res**	**82.47**	**22**	P	**P**	**21 27 29.6**	**-0.9**
	baz=240,SNR=11						
IL31		**82.50**	**22**	IAmb	IAmb	21 27 30.7	
	comp=Z,58nm,1.0s						
ILAR	**Eielson Array**	**82.50**	**22**	P	**P**	**21 27 30.2**	**-0.5**
	comp=Z,35nm,0.9s,baz=253,slow=5.3,SNR=231						
ILAR				S	**S**	**21 37 41.7**	**-3.3**
	comp=Z,0.3nm,0.8s,baz=284,slow=9.2,SNR=2.6						
ILAR				LR	LR	22 02 30.1	
	comp=Z,2µm,19.5s,baz=236,slow=34						
ILAR	**Eielson Array**	**82.50**	**22**	P	**P**	**21 27 27.8**	**-2.9**
MCARA	**McCarthy VSAT**	**82.50**	**26**	IAmb	IAmb	21 27 34.2	
	comp=Z,85nm,1.0s						
MCARA				IAMs_20	IAMs_20	21 58 38.5	
	comp=Z,5µm,22.0s						
COLD	**Coldfoot**	**82.60**	**19**	IAMs_20	IAMs_20	21 58 45.8	
	comp=Z,3µm,22.0s						
BALM	**Baldy**	**82.65**	**26**	IAmb	IAmb	21 27 34.9	
	comp=Z,119nm,1.3s						
BALM				IAMs_20	IAMs_20	21 58 05.5	
	comp=Z,5µm,22.0s						
TDK	**Taldyqorghan**	**82.76**	**316**	*i* P	**P**	**21 27 32.8**	**+0.2**
	comp=Z,376nm,2.5s						
TDK				*e*LR	LR	22 05 16.0	
TDK	**Taldyqorghan**	**82.76**	**316**	*i* P	**P**	**21 27 32.7**	**+0.2**
TDK				pmax	pmax		
	comp=Z,376nm,2.5s						
RIDG	**Independent Ri**	**82.79**	**23**	IAmb	IAmb	21 27 36.2	
	comp=Z,134nm,1.2s						
RIDG				IAMs_20	IAMs_20	22 07 23.1	
	comp=Z,3µm,19.0s						
MENT	**Mentasta**	**82.88**	**24**	IAmb	IAmb	21 27 35.5	
	comp=Z,33nm,0.9s						
BARN	**Barnard Glacie**	**82.96**	**26**	IAmb	IAmb	21 27 36.4	
	comp=Z,58nm,0.9s						
SEM	**Semipalatinsk**	**83.03**	**322**	*i* P	**P**	**21 27 32.2**	**-1.9**
	comp=Z,148nm,2.8s						
SEM				*e*LR	LR	22 02 13.6	
SEM	**Semipalatinsk**	**83.03**	**322**	*i* P	**P**	**21 27 32.1**	**-1.9**
SEM				pmax	pmax		
	comp=Z,148nm,2.8s						
CTGM	**Chitina Glacie**	**83.07**	**27**	IAMs_20	IAMs_20	21 58 16.6	
	comp=Z,4µm,22.0s						
PCA	**Pinnacle**	**83.21**	**28**	P	**P**	**21 27 35.0**	**+0.4**
PCA				IAmb	IAmb	21 27 37.9	
	comp=Z,70nm,1.0s						
PCA				IAMs_20	IAMs_20	22 00 35.6	
	comp=Z,3µm,20.0s						
SCRK	**Sand Creek**	**83.24**	**23**	IAmb	IAmb	21 27 37.8	
	comp=Z,97nm,1.3s						
SCRK				IAMs_20	IAMs_20	22 07 36.8	
	comp=Z,3µm,19.0s						
KSH	**Kashi**	**83.24**	**311**	P	**P**	**21 27 37.8**	**+2.5**
KSH				sP	sP	21 27 48.6	+0.2
KSH				PP	**PP**	**21 30 49.8**	**+2.7**
KSH				S	**S**	**21 37 54.1**	**+0.3**
KSH				sS	ScS	21 38 07.3	-0.3
KSH				pmax	pmax		
	comp=Z,260nm,1.4s						
KSH				pmax	pmax		
	comp=Z,2µm,5.8s						
KSH				LR	LR		
	comp=Z,600nm,11.9s						
KSH				LR	LR		
	comp=Z,820nm,15.0s						
KSH				LR	LR		
	comp=Z,1µm,17.3s						
MDOK	**Medeo**	**83.26**	**314**	*e*P	**P**	**21 27 35.2**	**-0.2**
MDOK				*e*S	**S**	**21 38 01.8**	**+7.7**
MDOK				*e*LR	LR	22 04 00.7	
MDOK	**Medeo**	**83.26**	**314**	*e*P	**P**	**21 27 35.1**	**-0.3**
TNSS	**Tian-Shan**	**83.31**	**314**⇑	*i*P	**P**	**21 27 36.4**	**+0.5**
TNSS	**Tian-Shan**	**83.31**	**314**⇑	*i*P	**P**	**21 27 36.4**	**+0.5**
PRP	**Porcupine Dome**	**83.36**	**22**	IAMs_20	IAMs_20	22 00 47.0	
	comp=Z,3µm,21.0s						
AAA	**Alma-Ata**	**83.37**	**314**	*i* P	**P**	**21 27 33.5**	**-2.4**
AAA				*e*LR	LR	22 01 50.1	
AAA	**Alma-Ata**	**83.37**	**314**	*i* P	**P**	**21 27 33.4**	**-2.4**
TOLK	**Toolik Lake Re**	**83.57**	**18**	IAmb	IAmb	21 27 38.2	
	comp=Z,82nm,1.1s						
TOLK				IAMs_20	IAMs_20	21 59 29.2	
	comp=Z,4µm,22.0s						
TOLK	**Toolik Lake Re**	**83.57**	**18**	P	**P**	**21 27 37.4**	**+1.2**
	baz=238						
ULHL	**Ulahol**	**83.63**	**313**	P	**P**	**21 27 38.4**	**+1.0**
	SNR=11						
BCAR	**Beaver Creek A**	**83.73**	**25**	P	**P**	**21 27 37.1**	**-0.1**
DHAK	**Deception Hill**	**83.81**	**29**	P	**P**	**21 27 36.7**	**-1.0**
DHAK				IAmb	IAmb	21 28 05.2	
	comp=Z,43nm,1.0s						
KUU	**Kurty**	**83.93**	**315**⇑	*i*P	**P**	**21 27 38.6**	**0.0**
	comp=Z,352nm,1.4s						
KUU				*e*S	**S**	**21 37 57.3**	**-3.2**
KUU				*e*LR	LR	22 09 10.9	
KUU	**Kurty**	**83.93**	**315***c*	*i*P	**P**	**21 27 38.6**	**0.0**
KUU				*e*S	**S**	**21 37 57.3**	**-3.2**
KUU				pmax	pmax		
	comp=Z,352nm,1.4s						
FYU	**Fort Yukon**	**83.96**	**21**	IAMs_20	IAMs_20	22 08 17.8	
	comp=Z,2µm,19.0s						
KURK	**Kurchatov**	**84.11**	**322***c*	*e*P	**P**	**21 27 39.2**	**-0.1**
KURK				pmax	pmax		
	comp=Z,188nm,1.3s						
KURK	**Kurchatov**	**84.11**	**322**	P	**P**	**21 27 39.3**	**0.0**
KURBB	**Kurchatov Arra**	**84.14**	**322**	P	**P**	**21 27 39.4**	**-0.1**
	comp=Z,61nm,1.1s,baz=103,slow=4.2,SNR=38						
NIL	**Nilore**	**84.25**	**304**	P	**P**	**21 27 40.4**	**-0.1**
NIL				pmax	pmax		
	comp=Z,241nm,0.9s						
NIL				MLR	MLR		
	comp=Z,1µm,21.0s						
NIL	**Nilore**	**84.25**	**304**	P	**P**	**21 27 40.4**	**-0.1**
KZA	**Kyzart**	**84.32**	**313**	P	**P**	**21 27 42.7**	**+1.6**
	SNR=180						
SIT	**Sitka**	**84.57**	**31**	IAmb	IAmb	21 27 43.3	
	comp=Z,40nm,1.0s						
SIT				IAMs_20	IAMs_20	22 00 00.8	
	comp=Z,4µm,20.0s						
BMAR	**Burnt Mountain**	**84.59**	**20**	P	**P**	**21 27 41.2**	**-0.3**
KBK	**Karagaybulak**	**84.66**	**314**	P	**P**	**21 27 43.4**	**+0.9**
	SNR=59						
EGAK	**Eagle**	**84.69**	**23**	IAMs_20	IAMs_20	22 07 56.3	
	comp=Z,3µm,18.0s						
HYT	**Haines Junctio**	**84.75**	**27**	IAMs_20	IAMs_20	22 00 28.2	
	comp=Z,4µm,20.0s						
QSPA	**South Pole Qui**	**84.77**	**180**	P	**P**	**21 27 44.2**	**+1.7**
QSPA				IAmb	IAmb	21 27 57.2	
	comp=Z,84nm,1.3s						
CHMS	**Chumysh**	**84.87**	**314**	P	**P**	**21 27 44.0**	**+0.6**
	SNR=98						
UCH	**Uchtor**	**84.88**	**313**	P	**P**	**21 27 45.4**	**+1.4**
	SNR=170						
AAK	**Ala-Archa**	**84.98**	**313**	P	**P**	**21 27 45.0**	**+0.9**
	comp=Z,41nm,1.0s,baz=107,slow=4.7,SNR=107						
AAK	**Ala-Archa**	**84.98**	**313**	P	**P**	**21 27 45.1**	**+0.9**
	SNR=56						
AAK	**Ala-Archa**	**84.98**	**313***c*	*e*P	**P**	**21 27 44.9**	**+0.8**
AAK				pmax	pmax		
	comp=Z,170nm,1.7s						
AAK	**Ala-Archa**	**84.98**	**313**	P	**P**	**21 27 45.0**	**+0.9**
DIB	**Dawson Inlet,**	**85.03**	**36**	IAMs_20	IAMs_20	22 03 24.2	
	comp=Z,2µm,19.0s						
SGDS	**Sogindy**	**85.05**	**314**⇑	*i*P	**P**	**21 27 44.7**	**+0.3**
	comp=Z,165nm,1.9s						
USP	**Ospenovka**	**85.11**	**314**	P	**P**	**21 27 45.4**	**+0.8**
	SNR=107						
DAWY	**Dawson**	**85.12**	**24**	IAmb	IAmb	21 27 48.3	
	comp=Z,89nm,1.4s						
MAW	**Mawson**	**85.23**	**203**	P	**P**	**21 27 43.9**	**-0.7**
	baz=85,SNR=6.1						
MAW	**Mawson**	**85.23**	**203**	P	**P**	**21 27 45.6**	**+0.9**
	comp=Z,3.9nm,0.6s,baz=99,slow=10.0,SNR=7.2						
MAW				LR	LR	22 02 31.3	
	comp=Z,3µm,21.6s,baz=86,slow=33						
MAW	**Mawson**	**85.23**	**203**	P	**P**	**21 27 45.6**	**+0.9**
MAW				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BESE	**Bessie Mountai**	**85.28**	**30**	IAmb	IAmb	21 27 49.1	
	comp=Z,101nm,1.4s						
MOBC	**Moresby Island**	**85.31**	**36**	P	**P**	**21 27 44.4**	**-1.0**
MOBC				IAmb	IAmb	21 28 58.8	
	comp=Z,69nm,1.4s						
SKAG	**Skagway**	**85.32**	**29**	P	**P**	**21 27 45.9**	**+0.7**
SKAG				IAmb	IAmb	21 27 49.1	
	comp=Z,60nm,1.3s						
JIS	**Juneau Island**	**85.43**	**30**	P	**P**	**21 27 46.4**	**+0.7**
JIS				IAmb	IAmb	21 28 19.5	
	comp=Z,67nm,1.6s						
AML	**Almayashu**	**85.46**	**313**	P	**P**	**21 27 48.2**	**+1.3**
	SNR=235						
EKS2	**Erkin-Say**	**85.50**	**313**	P	**P**	**21 27 47.9**	**+1.2**
	SNR=101						
BTLS	**Baital**	**85.78**	**316**	*i* P	**P**	**21 27 48.1**	**+0.2**
BTLS				*e*S	**SKSac**	**21 38 08.0**	**-3.3**
BTLS	**Baital**	**85.78**	**316**	*i* P	**P**	**21 27 48.0**	**+0.2**
BTLS				*e*S	**SKSac**	**21 38 08.0**	**-3.3**
ARSB	**Arslanbob**	**85.83**	**312**	P	**P**	**21 27 49.0**	**+0.6**
ARSB				pmax	pmax		
	comp=Z,786nm,1.5s						
ARSB	**Arslanbob**	**85.83**	**312**	P	**P**	**21 27 49.0**	**+0.6**
WHY	**Whitehorse**	**85.91**	**28**	IAmb	IAmb	21 27 51.2	
	comp=Z,76nm,1.3s						
WHY				IAMs_20	IAMs_20	22 00 28.0	
	comp=Z,4µm,20.0s						
WRAK	**Wrangell Islan**	**85.96**	**33**	IAmb	IAmb	21 27 52.4	
	comp=Z,73nm,1.3s						
WRAK	**Wrangell Islan**	**85.96**	**33**	IAMs_20	IAMs_20	21 58 18.6	
	comp=Z,3µm,21.0s						
NRIK	**Noril'sk**	**86.35**	**341**	P	**P**	**21 27 50.2**	**+0.1**
	comp=Z,54nm,0.8s,baz=117,slow=4.5,SNR=88						
NRIK				LR	LR	22 05 38.5	
	comp=Z,1µm,20.6s,baz=109,slow=35						
EPYK	**Eagle Plains**	**87.00**	**22**	IAMs_20	IAMs_20	22 01 56.3	
	comp=Z,3µm,21.0s						
EPYK	**Eagle Plains**	**87.00**	**22**	P	**P**	**21 27 54.3**	**+0.9**
	baz=250,SNR=88						
DZA	**Taraz**	**87.32**	**313**	*e*P	**P**	**21 27 53.1**	**-2.4**
DZA	**Taraz**	**87.32**	**313**	*e*P	**P**	**21 27 53.9**	**-1.6**
BRZS	**Berezniki**	**87.65**	**320**⇑	*i*P	**P**	**21 27 55.5**	**-1.4**
	comp=Z,94nm,2.4s						
BRZS	**Berezniki**	**87.65**	**320***c*	*i*P	**P**	**21 27 55.5**	**-1.4**
BRZS				pmax	pmax		
	comp=Z,94nm,2.4s						
DLBC	**Dease Lake**	**87.68**	**31**	P	**P**	**21 27 57.9**	**+1.0**
	comp=Z,17nm,1.0s,baz=271,slow=3.4,SNR=24						
DLBC	**Dease Lake**	**87.68**	**31**	IAmb	IAmb	21 28 01.0	
	comp=Z,54nm,1.2s						
KBL	**Kabul**	**87.84**	**305**	P	**P**	**21 27 57.3**	**-1.1**
KBL				P	**P**	**21 27 57.3**	**-1.1**
KBL	**Kabul**	**87.84**	**305**	P	**P**	**21 27 57.4**	**-1.1**
KBL				pmax	pmax		
	comp=Z,40nm,0.9s						
KBL				MLR	MLR		
	comp=Z,2µm,22.0s						
KBL	**Kabul**	**87.84**	**305**	P	**P**	**21 27 57.4**	**-1.0**
KBL				IAmb	IAmb	21 27 58.6	

	comp=Z,40nm,0.8s						
KK31	Karatay Array	87.94	313	IAmb	IAmb	21 28 00.6	
	comp=Z,74nm,1.1s						
KKAR	Karatay Array	87.94	313	P	P	21 27 57.6	-0.9
KKAR	Karatay Array	87.94	313	P	P	21 27 57.6	-0.9
KKAR	Karatay Array	87.94	313	IAmb	IAmb	21 28 00.6	
	comp=Z,74nm,1.1s						
IUG	Iuzhnay	88.15	312	⇑iP	P	21 27 59.6	0.0
IUG				eS	SKSac	21 38 27.5	+1.2
IUG	Iuzhnay	88.15	312	c iP	P	21 27 59.6	0.0
IUG				eS	SKSac	21 38 27.4	+1.2
KRMB	Red Mountain	88.35	48	IAMs_20	IAMs_20	22 02 04.2	
	comp=Z,4μm,20.0s						
KHMM	Horse Mountain	88.39	49	IAmb	IAmb	21 28 24.8	
	comp=Z,70nm,1.4s						
J01E	Myrtle Point	88.57	47	P	P	21 28 02.4	+1.1
	baz=262						
TAS	Tashkent	88.57	312	P	P	21 28 01.4	-0.1
TAS				pmax	pmax		
	comp=Z,136nm,1.0s						
TAS				MLR	MLR		
	comp=Z,1μm,22.0s						
TAS	Tashkent	88.57	312	P	P	21 28 01.4	-0.1
K02D	Willamette Mer	88.69	47	P	P	21 28 03.3	+1.1
	baz=262						
I02D	Swisshome	88.77	46	P	P	21 28 03.1	+0.9
	baz=262						
INK	Inuvik	88.80	21	P	P	21 28 02.1	+0.3
	comp=Z,38nm,0.9s,baz=243,slow=4.3,SNR=97						
INK	Inuvik	88.80	21	IAMs_20	IAMs_20	22 02 57.6	
	comp=Z,4μm,22.0s						
O02D	Mt. Diablo Mer	89.00	50	P	P	21 28 04.4	+0.8
	baz=262						
I03D	Drain, OR	89.07	46	P	P	21 28 04.3	+0.6
	baz=262						
M02C	Callahan	89.11	48	P	P	21 28 04.7	+0.5
	baz=262						
HUMO	Hull Mountain	89.20	47	IAMs_20	IAMs_20	22 01 14.7	
	comp=Z,3μm,20.0s						
COR	Corvallis	89.22	45	IAMs_20	IAMs_20	22 03 09.0	
	comp=Z,4μm,19.0s						
NLWA	Neilton Lookou	89.23	42	P	P	21 28 05.2	+0.7
NLWA				IAmb	IAmb	21 28 28.1	
	comp=Z,72nm,1.6s						
WDC	Whiskeytown Da	89.24	49	P	P	21 28 04.2	-0.4
WDC				pmax	pmax		
	comp=Z,20nm,1.3s						
WDC				MLR	MLR		
	comp=Z,5μm,20.0s						
WDC	Whiskeytown Da	89.24	49	P	P	21 28 04.2	-0.4
YBH	Yreka Blue Hor	89.27	48	P	P	21 28 05.5	+0.6
	comp=Z,9.4nm,1.1s,baz=321,slow=3.0,SNR=8.6						
YBH				LR	LR	22 05 33.6	
	comp=Z,3μm,18.0s,baz=258,slow=34						
YBH	Yreka Blue Hor	89.27	48	IAMs_20	IAMs_20	22 03 23.5	
	comp=Z,4μm,19.0s						
E03A	Lebam	89.32	43	IAMs_20	IAMs_20	22 03 46.4	
	comp=Z,4μm,19.0s						
G03D	McMinnville, O	89.34	45	P	P	21 28 05.9	+1.0
	baz=262						
BVAR	Borovoye Array	89.59	323	P	P	21 28 05.7	-0.3
	comp=Z,35nm,0.7s,baz=103,slow=5.7,SNR=183						
H04D	Lebanon	89.61	45	P	P	21 28 07.2	+0.9
	baz=262						
SAO	San Andreas Ge	89.62	53	P	P	21 28 05.9	-0.6
SAO				pmax	pmax		
	comp=Z,14nm,1.1s						
SAO	San Andreas Ge	89.62	53	P	P	21 28 05.9	-0.6
L04D	Klamath Falls	89.63	48	P	P	21 28 06.8	+0.2
	baz=263						
BRVK	Borovoye	89.66	323	P	P	21 28 05.6	-0.6
BRVK				P	P	21 28 05.6	-0.6
BRVK	Borovoye	89.66	323	ceP	P	21 28 05.5	-0.8
BRVK				pmax	pmax		
	comp=Z,107nm,1.7s						
BRVK	Borovoye	89.66	323	P	P	21 28 05.6	-0.6
BRVK				IAmb	IAmb	21 28 07.0	
	comp=Z,96nm,1.3s						
PGC	Sidney	89.69	41	P	P	21 28 06.0	-0.4
PGC				IAmb	IAmb	21 28 30.0	
	comp=Z,59nm,1.4s						
I04A	Tendick Farm,	89.75	46	P	P	21 28 07.7	+0.7
	baz=263						
D03D	Eldon	89.78	42	P	P	21 28 08.1	+1.1
	baz=262						
J04D	Umpqua Nationa	89.90	47	P	P	21 28 08.3	+0.4
	baz=263						
ORV	Oroville	89.91	50	IAMs_20	IAMs_20	22 01 17.7	
	comp=Z,4μm,20.0s						
M04C	Macdoel	89.92	48	P	P	21 28 08.6	+0.7
	baz=263						
E04D	Cinebar	90.00	43	P	P	21 28 08.4	+0.4
	baz=263						
F04A	Amboy	90.02	44	P	P	21 28 07.1	-1.0
H04A	Detroit Lake	90.03	45	P	P	21 28 06.9	-1.4
H04A				IAmb	IAmb	21 28 08.2	
	comp=Z,64nm,1.9s						
H04A				IAMs_20	IAMs_20	22 01 20.3	
	comp=Z,3μm,20.0s						
PMPB	Monarch Peak	90.08	54	P	P	21 28 08.7	0.0
PMPB				IAmb	IAmb	21 30 12.9	
	comp=Z,56nm,1.5s						
A04D	Lummi Island	90.19	41	P	P	21 28 09.3	+0.5
	baz=262						
AFDM	Forest Hills D	90.25	51	P	P	21 28 09.8	+0.4
AFDM				IAMs_20	IAMs_20	22 03 15.7	
	comp=Z,4μm,20.0s						
PAGB	Antelope Grade	90.47	54	P	P	21 28 11.6	+1.1
D05A	Enumclaw	90.47	43	P	P	21 28 10.0	-0.2
D05A				IAmb	IAmb	21 28 38.4	
	comp=Z,50nm,1.4s						
D05A				IAMs_20	IAMs_20	22 00 29.9	
	comp=Z,3μm,22.0s						
J05D	Fort Rock, OR	90.54	47	P	P	21 28 11.8	+1.0
	baz=264						
LON	Longmire	90.54	43	P	P	21 28 09.1	-1.5
LON				pmax	pmax		
	comp=Z,11nm,1.4s						
LON				MLR	MLR		
	comp=Z,4μm,22.0s						
LON	Longmire	90.54	43	P	P	21 28 09.1	-1.5
LON				IAMs_20	IAMs_20	22 00 20.8	
	comp=Z,4μm,22.0s						
I05D	Terrebonne, OR	90.58	46	P	P	21 28 11.8	+0.9
	baz=264						
CMB	Columbia Colle	90.61	52	P	P	21 28 10.2	-0.9
CMB				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CMB				MLR	MLR		
	comp=Z,5μm,20.0s						
CMB	Columbia Colle	90.61	52	P	P	21 28 10.2	-0.9
SMMC	Simmler	90.64	55	P	P	21 28 12.6	+1.2
	baz=264						
F05D	White Salmon	90.68	44	P	P	21 28 12.1	+0.9
	baz=263						
G05D	Wamic, OR	90.71	45	P	P	21 28 12.4	+1.0
	baz=264						
PKM	Mcpherson Peak	90.74	55	P	P	21 28 12.9	+0.9
	baz=264,SNR=9.3						
SCZ2	Santa Cruz Isl	90.80	56	P	P	21 28 13.2	+1.1
	baz=264						
PINE	Pine Mountain	90.81	46	P	P	21 28 12.3	+0.1
PINE				IAmb	IAmb	21 28 14.0	
	comp=Z,28nm,1.0s						
PINE				IAMs_20	IAMs_20	22 03 53.1	
	comp=Z,3μm,20.0s						
BEKR	Beckworth	90.82	50	P	P	21 28 10.4	-1.8
LLLB	Lillooet	90.96	39	P	P	21 28 12.1	-0.4
LLLB				IAMs_20	IAMs_20	22 05 40.5	
	comp=Z,2μm,19.0s						
B06A	Marblemount	90.97	42	P	P	21 28 11.8	-0.6
B06A				IAMs_20	IAMs_20	22 03 10.9	
	comp=Z,3μm,20.0s						
MOD	Modoc Plateau	91.07	48	P	P	21 28 13.1	-0.3
G06A	Carlson Farm,	91.18	45	P	P	21 28 13.6	-0.1
G06A				IAMs_20	IAMs_20	22 02 27.1	
	comp=Z,4μm,20.0s						
VCNR	Virginia City	91.31	51	P	P	21 28 15.0	+0.5
PNTR	Pine Nut	91.33	51	P	P	21 28 14.8	+0.1
PNTR				IAmb	IAmb	21 28 17.5	
	comp=Z,17nm,0.8s						
LTY	Liberty	91.37	43	P	P	21 28 14.3	-0.2
LTY				IAMs_20	IAMs_20	22 01 44.8	
	comp=Z,3μm,21.0s						
WAKR	Walker	91.39	52	P	P	21 28 15.0	0.0
WAKR				IAmb	IAmb	21 28 55.4	
	comp=Z,60nm,2.0s						
PAHR	Pah Rah Range	91.55	50	P	P	21 28 15.4	-0.2
ARVC	Arvin	91.57	55	P	P	21 28 16.3	+0.7
	baz=265						
YERR	Yerington	91.59	51	P	P	21 28 15.5	-0.4
MDPB	Devils Postpil	91.59	53	P	P	21 28 15.9	-0.1
MDPB				IAMs_20	IAMs_20	22 03 28.5	
	comp=Z,4μm,20.0s						
OSI	Osito Audit: C	91.61	56	IAMs_20	IAMs_20	22 01 19.1	
	comp=Z,3μm,21.0s						
SCI2	San Clemente I	91.61	57	P	P	21 28 15.8	0.0
	baz=265						
OMMB	Old Mammoth Mi	91.66	53	IAMs_20	IAMs_20	22 01 47.1	
	comp=Z,4μm,21.0s						
F07A	Phinny Hill Vi	91.75	44	P	P	21 28 16.0	-0.1
F07A				IAmb	IAmb	21 28 49.0	
	comp=Z,37nm,1.5s						
I07A	Izee	91.87	46	IAmb	IAmb	21 28 18.1	
	comp=Z,20nm,1.1s						
I07A				IAMs_20	IAMs_20	22 05 25.2	
	comp=Z,3μm,19.0s						
DECC	Green Verdugo	91.90	56	P	P	21 28 17.9	+0.7
	baz=265						
ISA	Isabella, Lake	91.90	55	IAMs_20	IAMs_20	22 06 19.8	
	comp=Z,2μm,19.0s						
ISA	Isabella, Lake	91.90	55	P	P	21 28 17.6	+0.4
	baz=265,SNR=8.2						
PASC	Pasadena Art C	92.01	56	P	P	21 28 18.1	+0.5
PASC				IAmb	IAmb	21 29 16.8	
	comp=Z,21nm,0.7s						
HAWA	Hanford	92.07	44	IAmb	IAmb	21 28 19.3	
	comp=Z,19nm,1.1s						
RYN	Ryan	92.12	52	IAMs_20	IAMs_20	22 02 56.3	
	comp=Z,4μm,20.0s						
MWC	Mount Wilson	92.12	56	IAmb	IAmb	21 28 20.5	
	comp=Z,36nm,0.9s						
TIN	Tinemaha, Big	92.22	53	P	P	21 28 19.7	+1.0
	baz=265						
EDW2	Edwards Air Fo	92.23	55	P	P	21 28 19.9	+1.2
	baz=265						
NVAR	Mina Array Bea	92.28	52	P	P	21 28 19.9	+0.8
	comp=Z,13nm,0.8s,baz=256,slow=6.4,SNR=60						
NVAR				LR	LR	22 03 36.1	
	comp=Z,5μm,20.3s,baz=274,slow=32						
NVAR	Mina Array Bea	92.28	52	P	P	21 28 19.5	+0.4
PNT	Penticton	92.28	41	P	P	21 28 14.8	-3.8
PNT				pmax	pmax		
	comp=Z,17nm,0.8s						
PNT				MLR	MLR		
	comp=Z,4μm,20.0s						
CWC	Cottonwood Cre	92.29	54	P	P	21 28 19.7	+0.6
	baz=265						
G08A	Pilot Rock	92.37	45	IAmb	IAmb	21 28 20.7	
	comp=Z,19nm,1.1s						
G08A				IAMs_20	IAMs_20	22 02 45.2	
	comp=Z,4μm,21.0s						
C36M	Paulatuk	92.37	21	IAMs_20	IAMs_20	22 06 38.1	
	comp=Z,3μm,20.0s						
C36M	Paulatuk	92.37	21	P	P	21 28 18.7	+0.2
	baz=262						
NV11	Mina Array Sit	92.39	52	IAmb	IAmb	21 28 21.4	
	comp=Z,14nm,0.8s						
E08A	Dider Farm, El	92.40	44	IAmb	IAmb	21 28 20.9	
	comp=Z,21nm,1.0s						
BFSC	Mount Baldy Ra	92.45	56	P	P	21 28 20.4	+0.5
	baz=266						
KVN	Kaiserville	92.48	51	IAMs_20	IAMs_20	22 06 01.9	
	comp=Z,3μm,19.0s						
LRMC	Laurel Mtn Rad	92.53	55	P	P	21 28 21.2	+1.0
	baz=266,SNR=24						
D08A	Wollman Farm,	92.54	43	IAMs_20	IAMs_20	22 03 12.7	
	comp=Z,4μm,20.0s						
J08A	Circle Bar Ran	92.55	47	IAMs_20	IAMs_20	22 05 10.3	
	comp=Z,3μm,20.0s						
MPMC	Manual Prospec	92.73	54	P	P	21 28 21.5	+0.3
	baz=266,SNR=19						
MURC	Murrieta	92.79	57	P	P	21 28 22.1	+0.8
	baz=266						
109C	Camp Elliot, M	92.81	57	P	P	21 28 21.8	+0.4
109C				IAmb	IAmb	21 29 21.7	
	comp=Z,18nm,1.0s						
109C				IAMs_20	IAMs_20	22 05 38.1	
	comp=Z,2μm,19.0s						
GRAC	Grapevine Rang	92.90	53	P	P	21 28 22.8	+1.0
	baz=266						
E09A	Wood Farm, Sta	93.03	44	IAmb	IAmb	21 28 23.6	
	comp=Z,28nm,1.0s						
C09A	Chrisman Ranch	93.04	42	IAMs_20	IAMs_20	22 02 10.8	
	comp=Z,3μm,21.0s						
RRX	Edison Barstow	93.05	55	P	P	21 28 23.7	+1.2
	baz=266						
BAR	Barrett	93.16	58	IAMs_20	IAMs_20	22 05 49.3	
	comp=Z,3μm,20.0s						
GSC	Goldstone, Bar	93.23	55	IAMs_20	IAMs_20	22 03 14.1	
	comp=Z,2μm,19.0s						
GSC	Goldstone, Bar	93.23	55	P	P	21 28 23.9	+0.5
	baz=266,SNR=7.8						
FURC	Furnace Creek,	93.27	54	P	P	21 28 24.2	+0.8
	baz=266,SNR=20						
SYO	Syowa Base	93.32	199	⇓iP	P	21 28 21.0	-1.9
SYO	Syowa Base	93.32	199	⇑eX	P	21 28 28.0	+5.1
SYO	Syowa Base	93.32	199	⇓iX	P	21 28 40.4	+17
MONP2	Monument Peak	93.38	57	P	P	21 28 25.2	+0.9
	baz=266,SNR=14						
PFO	Pinyon Flats O	93.40	57	P	P	21 28 25.2	+1.0
	comp=Z,9.3nm,0.9s,baz=256,slow=3.6,SNR=11						
PFO	Pinyon Flats O	93.40	57	P	P	21 28 25.7	+1.4
PFO				pmax	pmax		
	comp=Z,21nm,0.5s						
PFO				MLR	MLR		
	comp=Z,2μm,19.0s						
PFO	Pinyon Flats O	93.40	57	P	P	21 28 25.7	+1.4
PFO				IAmb	IAmb	21 30 25.1	
	comp=Z,21nm,0.5s						
PFO				IAMs_20	IAMs_20	22 08 41.7	
	comp=Z,2μm,19.0s						
PFO	Pinyon Flats O	93.40	57	P	P	21 28 24.8	+0.6
	baz=266,SNR=7.0						
XPFO	Pion Flat	93.41	57	P	P	21 28 26.2	+1.9
XPFO				IAMs_20	IAMs_20	22 08 41.7	
	comp=Z,2μm,20.0s						
HRA	Herat	93.41	304	P	P	21 28 23.7	-0.7
BMO	Blue Mountains	93.50	45	IAMs_20	IAMs_20	22 03 21.3	
	comp=Z,4μm,21.0s						
HEC	Hector,Ludlow	93.59	56	P	P	21 28 25.9	+0.9
	baz=266						
F10A	Beach Ranch, E	93.63	44	IAmb	IAmb	21 28 27.0	
	comp=Z,25nm,0.9s						
IKP	In-Ko-Pah, Jac	93.63	58	P	P	21 28 26.4	+1.2
	baz=266						
SHOC	Shoshone, Teco	93.70	54	P	P	21 28 26.2	+0.7
	baz=266						
TPNV	Topopah Spring	93.79	53	IAmb	IAmb	21 28 29.3	
	comp=Z,24nm,1.0s						
BELC	Belle Mtn. Jos	93.81	56	P	P	21 28 26.7	+0.5
	baz=266,SNR=11						
NEW	Newport	93.84	42	P	P	21 28 26.2	+0.3
	comp=Z,16nm,1.0s,baz=248,slow=5.0,SNR=14						
NEW	Newport	93.84	42	IAMs_20	IAMs_20	22 05 02.0	
	comp=Z,2μm,20.0s						
SWSC	Sam W. Stewart	93.91	57	P	P	21 28 27.2	+0.7
	baz=266						
TUQ	Turquoise Moun	93.96	55	P	P	21 28 27.6	+0.8
	baz=267,SNR=16						
GMRC	Granite Mounta	94.14	56	P	P	21 28 28.4	+0.8
	baz=267,SNR=14						
BC3	Big Chuckawall	94.24	57	P	P	21 28 29.0	+0.9
	baz=267,SNR=9.6						
R11A	Troy Canyon, C	94.40	52	IAMs_20	IAMs_20	22 03 48.7	
	comp=Z,4μm,20.0s						
R11A	Troy Canyon, C	94.40	52	P	P	21 28 29.5	+0.6
	baz=267						
MFID	Camas Ranch	94.48	47	P	P	21 28 28.7	-0.3
MFID				IAmb	IAmb	21 28 58.4	
	comp=Z,31nm,1.8s						
MFID				IAMs_20	IAMs_20	22 04 17.3	
	comp=Z,2μm,20.0s						
IRM	Iron Mountain	94.53	56	P	P	21 28 30.6	+1.3
	baz=267,SNR=12						
SHPR	Sheep Range	94.64	54	P	P	21 28 30.6	+0.7
SHPR				IAMs_20	IAMs_20	22 07 13.3	
	comp=Z,2μm,19.0s						
GLA	Glamis	94.73	57	P	P	21 28 31.0	+0.7
GLA				pmax	pmax		
	comp=Z,25nm,1.2s						
GLA				MLR	MLR		
	comp=Z,2μm,19.0s						
GLA	Glamis	94.73	57	P	P	21 28 31.0	+0.7
GLA				IAmb	IAmb	21 29 09.8	
	comp=Z,25nm,1.2s						
GLA				IAMs_20	IAMs_20	22 06 56.9	
	comp=Z,2μm,19.0s						
GLA	Glamis	94.73	57	P	P	21 28 31.5	+1.2
	baz=267						
ELK	Elko	94.79	50	P	P	21 28 30.0	-0.6
ELK				pmax	pmax		
	comp=Z,18nm,1.7s						
ELK				MLR	MLR		
	comp=Z,4μm,20.0s						
ELK	Elko	94.79	50	P	P	21 28 30.0	-0.6
ELK				IAMs_20	IAMs_20	22 05 55.8	
	comp=Z,4μm,20.0s						
Y12C	Blythe	95.02	57	P	P	21 28 32.4	+0.8
Y12C				IAmb	IAmb	21 29 34.5	
	comp=Z,43nm,1.8s						
Y12C				IAMs_20	IAMs_20	22 11 00.5	
	comp=Z,2μm,19.0s						
Y12C	Blythe	95.02	57	P	P	21 28 32.2	+0.7
	baz=267						
PDMCI	Parker Dam,Lak	95.36	56	P	P	21 28 33.8	+0.7
	baz=268						
SVE	Sverdlovsk	95.53	327	⇓eP	P	21 28 32.4	-0.9
SVE				pmax	pmax		
	comp=Z,73nm,1.8s						
SVE				MLR	MLR		
	comp=Z,2μm,22.0s						
WBK	Wadi Bani Khal	95.56	292	P	P	21 28 34.1	-0.2
	SNR=9.9						
WBK				P	P	21 28 34.1	-0.2
	SNR=9.9						
W13A	Hualapai Mount	95.61	55	P	P	21 28 35.0	+0.6
W13A				IAmb	IAmb	21 29 35.8	
	comp=Z,22nm,1.3s						
YKA	Yellowknife Ar	95.74	28	P	P	21 28 34.6	+0.4
	comp=Z,14nm,0.9s,baz=267,slow=4.3,SNR=100						
YKA				PKiKP	PKiKP	21 33 14.7	+1.2
	comp=Z,1.6nm,0.8s,baz=241,slow=1.2,SNR=6.8						
YKA				PKKPbc	PKKPbc	21 45 23.5	-3.1
	comp=Z,0.3nm,0.7s,baz=87,slow=3.2,SNR=5.2						
YKA				LR	LR	22 05 50.2	
	comp=Z,4μm,22.0s,baz=0.0,slow=32						
PSUT	Pine Spring	95.77	52	P	P	21 28 33.7	-1.4
ABKAR	Akbulak array	95.81	319	P	P	21 28 32.5	-2.3
WSAR	Wadi Sarin	95.91	293	P	P	21 28 35.2	-0.6
	SNR=12						
MSO	Missoula	95.94	44	P	P	21 28 35.7	+0.1
MSO	Missoula	95.94	44	P	P	21 28 36.6	+1.0
	baz=269						
WALA	Waterton Lakes	96.00	41	P	P	21 28 35.5	-0.3
WALA				IAmb	IAmb	21 28 37.7	
	comp=Z,22nm,0.9s						
WALA				IAMs_20	IAMs_20	22 07 55.0	
	comp=Z,2μm,19.0s						
CCUT	Cedar City	96.12	53	P	P	21 28 36.6	-0.1
LCMT	Little Creek M	96.20	53	P	P	21 28 37.3	+0.3
Y14A	Wickenburg	96.29	57	P	P	21 28 37.7	+0.3
Y14A				IAmb	IAmb	21 29 39.6	
	comp=Z,33nm,1.9s						
Y14A				IAMs_20	IAMs_20	22 11 48.2	
	comp=Z,2μm,18.0s						
SZCU	Shurtz Canyon	96.34	53	P	P	21 28 37.4	-0.4
JMDO	Jabal Madar	96.35	292	P	P	21 28 36.4	-1.4
JMDO				P	P	21 28 36.4	-1.4
214A	Organ Pipe Nat	96.38	59	IAMs_20	IAMs_20	22 04 02.8	
	comp=Z,2μm,21.0s						
214A	Organ Pipe Nat	96.38	59	P	P	21 28 39.4	+1.6
	baz=268						
BIDO	Bidbid	96.38	293	P	P	21 28 38.0	+0.1
	SNR=13						
MHTO	MHTO	96.40	290	P	P	21 28 36.8	-1.2
	SNR=8.4						
MHTO				P	P	21 28 36.8	-1.2
	SNR=8.4						
SMDO	Samad	96.43	293	P	P	21 28 37.4	-0.9
	SNR=6.5						
SMDO				P	P	21 28 37.4	-0.9
	SNR=6.5						
BGU	Big Grassy Mou	96.47	50	P	P	21 28 36.9	-1.3
KNB	Kanab	96.54	53	P	P	21 28 38.5	-0.1
KNB				pmax	pmax		
	comp=Z,18nm,1.1s						
KNB	Kanab	96.54	53	P	P	21 28 38.5	-0.1
DUG	Dugway, Tooele	96.62	50	IAMs_20	IAMs_20	22 06 03.3	
	comp=Z,3μm,20.0s						
ARU	Arti	96.68	326	P	P	21 28 37.1	-1.5
	comp=Z,13nm,0.9s,baz=131,slow=2.1,SNR=47						
ARU	Arti	96.68	326	c iP	P	21 28 37.0	-1.5
ARU						21 32 30.9	
ARU				S	SKSac	21 39 10.8	-2.2
ARU				SS	SS	21 46 37.1	+4.6
ARU				pmax	pmax		
	comp=Z,72nm,1.1s						
ARU				MLR	MLR		
	comp=Z,2μm,19.0s						
ARU	Arti	96.68	326	P	P	21 28 36.5	-2.0
ARU				IAMs_20	IAMs_20	22 12 37.4	
	comp=Z,3μm,21.0s						
SRIG	Santa Rosalia	96.70	63	IAMs_20	IAMs_20	22 06 48.5	
	comp=Z,3μm,19.0s						
DLMT	Dillon	96.85	45	IAMs_20	IAMs_20	22 05 17.9	
	comp=Z,3μm,21.0s						
GEYT	Alibeck	96.90	307	P	P	21 28 39.4	-0.6
	comp=Z,12nm,1.0s,baz=276,slow=1.3,SNR=18						
GEYT				PP	PP	21 32 34.2	-1.6
	comp=Z,4.3nm,0.9s,baz=20,slow=4.7,SNR=4.7						
GEYT				LR	LR	22 12 43.5	
	comp=Z,998nm,21.3s,baz=90,slow=36						
GEYT	Alibeck	96.90	307	P	P	21 28 39.5	-0.6
GYA0B	ALIBECK ARRAY	96.90	307	P	P	21 28 39.1	-1.0
GYA0B				IAmb	IAmb	21 28 40.8	
	comp=Z,16nm,1.1s						
SPUT	South Promonto	96.92	49	P	P	21 28 39.7	-0.5
U15A	North Rim	96.95	54	P	P	21 28 40.5	-0.1
PKCU	Pink Cliffs	96.95	53	P	P	21 28 40.6	-0.1
AKTO	Aktyubinsk	97.06	320	P	P	21 28 39.1	-1.3
	comp=Z,6.9nm,0.8s,baz=109,slow=3.7,SNR=21						
MTPU	Mount Pierson	97.07	52	P	Pdif	21 28 41.8	+0.5
HOQ	Hoqain	97.13	293	P	P	21 28 41.3	-0.1
	SNR=12						
HWUT	Hardware Ranch	97.58	49	IAMs_20	IAMs_20	22 08 34.6	
	comp=Z,3μm,20.0s						
X16A	Lo Mia Camp, P	97.60	56	IAMs_20	IAMs_20	22 12 38.8	
	comp=Z,2μm,19.0s						
WUAZ	Wupatki	97.67	55	P	Pdif	21 28 44.4	+0.6
QLMT	Earthquake Lak	97.68	46	P	Pdif	21 28 43.7	0.0
TMUT	Trail Mountain	97.85	51	P	P	21 28 44.3	-0.3
YHB	Horse Butte	97.85	46	P	P	21 28 44.0	-0.4
ARQ	Araqi	97.85	293	P	P	21 28 43.8	-0.8
	SNR=5.5						
ARQ				P	P	21 28 43.8	-0.8
	SNR=5.5						
YHL	Hebgen Lake	97.85	46	P	Pdif	21 28 44.8	+0.2
SOHO	SOHO	97.87	294	P	P	21 28 43.5	-1.1
	SNR=7.1						
SOHO				P	P	21 28 43.5	-1.1
	SNR=7.1						
Q16A	Castle Valley	97.87	52	P	P	21 28 44.4	-0.2
HSIG		97.90	62	IAMs_20	IAMs_20	22 06 50.1	
	comp=Z,3μm,20.0s						
FXWY	Fox Creek	97.98	47	IAMs_20	IAMs_20	22 05 38.8	
	comp=Z,3μm,21.0s						
TPAW	Teton Pass	98.03	47	IAMs_20	IAMs_20	22 06 32.3	
	comp=Z,4μm,20.0s						
IMW	Indian Meadow	98.04	47	IAMs_20	IAMs_20	22 05 52.4	
	comp=Z,3μm,21.0s						
YHH	Holmes Hill	98.09	46	P	P	21 28 45.4	-0.2
TUC	Tucson	98.11	58	P	P	21 28 45.7	0.0
TUC				pmax	pmax		
	comp=Z,5.0nm,1.3s						
TUC				MLR	MLR		
	comp=Z,2μm,20.0s						
TUC	Tucson	98.11	58	P	P	21 28 45.6	0.0
TUC	Tucson	98.11	58	IAMs_20	IAMs_20	22 07 43.5	
	comp=Z,2μm,20.0s						
TUC	Tucson	98.11	58	P	Pdif	21 28 47.1	+1.4
	baz=269						
UOSS	Minazif	98.20	294	P	P	21 28 45.1	-1.1
UOSS				P	P	21 28 45.1	-1.1
FLWY	Flagg Ranch	98.21	46	IAMs_20	IAMs_20	22 06 39.9	
	comp=Z,2μm,21.0s						
H17A	Grant Village	98.29	46	P	Pdif	21 28 48.0	+1.6
	baz=271						
SRU	San Rafael Swe	98.38	51	P	P	21 28 46.5	-0.4

SRU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SRU	San Rafael Swe	98.38	51	P	P	21 28 46.5	-0.4
YNE	Yellowstone No	98.69	45	P	Pdif	21 28 48.9	+0.7
EGMT	Eagleton	98.77	42	IAMs_20	IAMs_20	22 07 59.4	
	comp=Z,3µm,20.0s						
X18A	Snowflake	98.83	56	P	P	21 28 48.9	-0.1
X18A				IAmb	IAmb	21 29 53.5	
	comp=Z,25nm,1.9s						
X18A				IAMs_20	IAMs_20	22 13 19.4	
	comp=Z,2µm,18.0s						
W18A	Petrified Fore	99.01	55	P	Pdif	21 28 49.5	-0.3
W18A	Petrified Fore	99.01	55	P	Pdif	21 28 51.0	+1.1
	baz=270						
BW06	Boulder Array	99.06	48	P	Pdif	21 28 50.0	+0.1
	baz=271						
PDAR	Pinedale Array	99.06	48	P	Pdif	21 28 49.5	-0.4
	comp=Z,3.1nm,0.9s,baz=267,slow=2.5,SNR=17						
PDAR				PP	PP	21 32 52.2	-0.2
	comp=Z,1.5nm,1.0s,baz=263,slow=5.4,SNR=3.7						
PDAR				LR	LR	22 10 30.2	
	comp=Z,4µm,18.6s,baz=270,slow=34						
PDAR	Pinedale Array	99.06	48	P	Pdif	21 28 48.2	-1.7
RLMT	Red Lodge	99.21	45	P	Pdif	21 28 49.7	-0.8
RLMT				IAMs_20	IAMs_20	22 06 42.2	
	comp=Z,3µm,21.0s						
RLMT	Red Lodge	99.21	45	P	Pdif	21 28 51.3	+0.8
	baz=272						
319A	Douglas	99.38	59	IAMs_20	IAMs_20	22 07 00.2	
	comp=Z,2µm,19.0s						
PV09	Paradox Valley	99.47	52	P	Pdif	21 28 51.3	-0.6
NVL	N'lazarevskaya	99.89	192	*e*P	Pdif	21 29 01.0	+8.3
NVL				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MVCO	Mesa Verde	99.99	53		Pdif	21 28 54.2	0.0
O20A	White River Ci	100.12	50	IAMs_20	IAMs_20	22 08 19.0	
	comp=Z,4µm,20.0s						
O20A	White River Ci	100.12	50	P	Pdif	21 28 55.2	+0.5
	baz=272						
121A	Cookes Peak, D	100.65	58	IAMs_20	IAMs_20	22 10 19.7	
	comp=Z,2µm,20.0s						
RES	Resolute Bay	100.77	15	P	Pdif	21 28 56.6	+0.1
	comp=Z,11nm,1.1s,baz=317,slow=2.9,SNR=23						
RWWY	Rawlins	100.84	49	IAMs_20	IAMs_20	22 13 16.9	
	comp=Z,2µm,18.0s						
SMCO	Snowmass	101.14	51	IAMs_20	IAMs_20	22 09 01.3	
	comp=Z,3µm,20.0s						
LAO	LASA Array	101.24	44	IAMs_20	IAMs_20	22 10 35.0	
	comp=Z,4µm,20.0s						
K22A	Casper	101.30	48	IAMs_20	IAMs_20	22 09 35.9	
	comp=Z,3µm,20.0s						
S22A	4UR Ranch, Cre	101.31	53	IAMs_20	IAMs_20	22 08 15.6	
	comp=Z,4µm,21.0s						
S22A	4UR Ranch, Cre	101.31	53	P	Pdif	21 29 01.0	+0.9
	baz=272						
Y22D	IRIS PASSCAL I	101.35	56	IAMs_20	IAMs_20	22 11 07.0	
	comp=Z,2µm,20.0s						
KIRV	Kirov	101.41	329	P	Pdif	21 28 58.9	-0.7
	comp=Z,11nm,0.7s,baz=56,slow=3.3,SNR=7.4						
EPT	El Paso	101.75	59	IAMs_20	IAMs_20	22 10 55.8	
	comp=Z,2µm,19.0s						
N23A	Red Feather La	101.84	49	IAMs_20	IAMs_20	22 11 51.3	
	comp=Z,2µm,20.0s						
N23A	Red Feather La	101.84	49	P	Pdif	21 29 03.0	+0.6
	baz=274						
ISCO	Idaho Springs	102.16	51	IAMs_20	IAMs_20	22 08 33.8	
	comp=Z,3µm,21.0s						
PHWY	Pilot Hill	102.18	49	IAMs_20	IAMs_20	22 11 02.3	
	comp=Z,2µm,20.0s						
SDCO	Great Sand Dun	102.36	53	IAMs_20	IAMs_20	22 08 50.4	
	comp=Z,3µm,21.0s						
DGMT	Dagmar	102.45	42	IAMs_20	IAMs_20	22 18 10.5	
	comp=Z,2µm,18.0s						
Q24A	Divide	102.56	51	IAMs_20	IAMs_20	22 09 50.0	
	comp=Z,3µm,20.0s						
PRGR	Permogore	102.70	332	*e*P	Pdif	21 29 02.8	-2.5
PRGR				pmax	pmax		
	comp=Z,57nm,0.9s						
MNTX	Cornudas Mount	102.70	59	IAMs_20	IAMs_20	22 12 03.2	
	comp=Z,2µm,19.0s						
RSSD	Black Hills	103.00	46	P	Pdif	21 29 07.2	-0.2
	baz=276						
T25A	Trinidad	103.26	53	IAMs_20	IAMs_20	22 11 54.3	
	comp=Z,2µm,20.0s						
TXAR	Lajitas Array	104.26	61	Pdiff	Pdif	21 29 11.3	-1.9
	comp=Z,0.1nm,0.3s,baz=264,slow=3.6,SNR=1.8						
TXAR				PP	PKiKP	21 33 30.8	+0.8
	comp=Z,1.6nm,0.9s,baz=277,slow=4.9,SNR=6.6						
TXAR				PKKPbc	PKKPbc	21 45 01.5	+0.2
	comp=Z,0.5nm,1.0s,baz=115,slow=4.3,SNR=2.3						
KSCO	Kaye Shedlock'	104.52	51	IAMs_20	IAMs_20	22 10 13.5	
	comp=Z,4µm,20.0s						
MAK	Makhachkala	104.76	313	*e*P	Pdif	21 29 11.2	-3.7
MAK				*e*		21 33 31.3	
MAK				*e*		21 39 48.1	
MAK				*e*		21 40 31.5	
MAK				*e*SS	SS	21 48 23.0	-2.5
MAK				*e*SSS	SSS	21 52 20.6	
MAK				pmax	pmax		
	comp=Z,203nm,1.5s						
OGNE	Ogallala	104.79	49	IAMs_20	IAMs_20	22 16 51.4	
	comp=Z,2µm,18.0s						
MSTX	Muleshoe	104.79	56	IAMs_20	IAMs_20	22 14 11.2	
	comp=Z,2µm,19.0s						
TMCR	Tamitsa	105.31	336	*e*P	Pdif	21 29 15.3	-1.5
TMCR				pmax	pmax		
	comp=Z,45nm,0.8s						
ZAIG	Zacatecas	105.42	68	IAMs_20	IAMs_20	22 09 01.7	
	comp=Z,2µm,20.0s						
MDND	Maddock	105.58	42	IAMs_20	IAMs_20	22 11 23.4	
	comp=Z,2µm,20.0s						
AMTX	Amarillo	105.63	55	IAMs_20	IAMs_20	22 13 03.2	
	comp=Z,2µm,20.0s						
KLMR	Klimovskoe	105.76	332	*e*P	Pdif	21 29 14.2	-4.7
KLMR				pmax	pmax		
	comp=Z,58nm,1.3s						
KLMR	Klimovskoe	105.76	332	*e*Pdif	Pdif	21 29 14.3	-4.7
KLMR				AMP		21 29 18.8	
	comp=Z,58nm,1.3s						
KLMR				LQ	LQ	22 04 48.0	
KLMR				LQ	LQ	22 04 48.0	
KLMR				LR	LR	22 07 48.5	
KLMR				AMP		22 21 03.6	
	comp=Z,2µm,16.4s						
ARCES	ARCESS Array B	107.26	343	Pdiff	Pdif	21 29 24.8	-0.7
	comp=Z,4.5nm,0.8s,baz=48,slow=5.4,SNR=5.9						
ARCES				PKiKP	PKiKP	21 33 35.4	+1.2
	comp=Z,4.6nm,0.9s,baz=81,slow=1.8,SNR=16						
D32A	Dogwood Acres,	107.43	42	IAMs_20	IAMs_20	22 12 50.5	
	comp=Z,3µm,20.0s						
ULM	Lac du Bonnet	107.50	39	Pdiff	Pdif	21 29 26.7	-0.3
	comp=Z,3.1nm,1.1s,baz=322,slow=7.6,SNR=3.3						
ULM				PKiKP	PKiKP	21 33 36.0	+0.8
	comp=Z,1.4nm,0.4s,baz=324,slow=1.9,SNR=4.6						
ULM	Lac du Bonnet	107.50	39	IAMs_20	IAMs_20	22 18 51.0	
	comp=Z,3µm,18.0s						
ABTX	Abilene, Hawle	107.51	58	IAMs_20	IAMs_20	22 14 50.3	
	comp=Z,2µm,20.0s						
JCT	Junction City	107.55	60	IAMs_20	IAMs_20	22 11 44.6	
	comp=Z,3µm,20.0s						
R32A	Long Quarter,	107.63	51	IAMs_20	IAMs_20	22 12 51.8	
	comp=Z,3µm,20.0s						
BGNE	Belgrade	107.64	48	IAMs_20	IAMs_20	22 11 32.6	
	comp=Z,2µm,21.0s						
U32A	Winter Ranch,	107.65	54	IAMs_20	IAMs_20	22 13 46.7	
	comp=Z,2µm,20.0s						
AKH	Akhalkalaki	107.92	312	P	Pdif	21 29 28.6	-0.7
AKH				MLR	MLR		
	comp=Z,1µm,19.0s						
AKH	Akhalkalaki	107.92	312		Pdif	21 29 28.6	-0.7
RAYN	Ar Rayn	107.97	293	P	Pdif	21 29 28.3	-1.4
RAYN				MLR	MLR		
	comp=Z,800nm,22.0s						
RAYN	Ar Rayn	107.97	293		Pdif	21 29 28.3	-1.4
WMOK	Wichita Mounta	108.02	55	IAMs_20	IAMs_20	22 16 09.5	
	comp=Z,2µm,20.0s						
833A	Chaparral WMA,	108.06	62	IAMs_20	IAMs_20	22 13 57.3	
	comp=Z,3µm,20.0s						
MOS	Moscow	108.32	327	*e*P	Pdif	21 29 27.5	-2.9
MOS				*e*		21 33 58.3	
MOS				pmax	pmax		
	comp=Z,37nm,0.9s						
MOS				MLR	MLR		
	comp=E,2µm,20.0s						
MOS				MLR	MLR		
	comp=Z,2µm,20.0s						
DAG	Danmarks Havn	108.32	358	*i* P	Pdif	21 29 29.0	-1.0
	comp=Z,7.4nm,1.0s						
DAG	Danmarks Havn	108.32	358	*i* P	Pdif	21 29 29.0	-1.0
DAG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ECSD	EROS Data Cent	108.36	46	IAMs_20	IAMs_20	22 16 01.5	
	comp=Z,3µm,19.0s						
UNM	Universidad Na	108.64	71	IAMs_20	IAMs_20	22 11 56.3	
	comp=Z,2µm,20.0s						
X34A	Smith Ranch, M	108.81	55	IAMs_20	IAMs_20	22 15 38.4	
	comp=Z,2µm,20.0s						
OKCFA	Oklahoma City	109.02	54	IAMs_20	IAMs_20	22 16 57.9	
	comp=Z,2µm,20.0s						
OBN	Obninsk	109.09	327	*e*P	Pdif	21 29 33.2	-0.7
OBN				*e*		21 34 08.3	
OBN				*e*PPP	PPP	21 36 25.5	
OBN				pmax	pmax		
	comp=Z,37nm,1.2s						
OBN				MLR	MLR		
	comp=Z,2µm,22.0s						
TLIG	Tlapa	109.24	73	IAMs_20	IAMs_20	22 12 42.4	
	comp=Z,2µm,18.0s						
735A	Kenedy	109.41	61	IAMs_20	IAMs_20	22 15 30.0	
	comp=Z,2µm,20.0s						
WHTX	Lake Whitney,	109.41	58	IAMs_20	IAMs_20	22 16 06.8	
	comp=Z,2µm,19.0s						
435B	Jarrell	109.43	59	IAMs_20	IAMs_20	22 12 54.2	
	comp=Z,2µm,20.0s						
Z35A	Perchaven, San	109.44	57	IAMs_20	IAMs_20	22 12 30.2	
	comp=Z,2µm,22.0s						
KVTX	Kingsville	109.44	63	IAMs_20	IAMs_20	22 17 52.9	
	comp=Z,3µm,19.0s						
T35A	Sooner Cattle	109.57	53		Pdif	21 29 35.6	-0.9
T35A				IAMs_20	IAMs_20	22 16 01.2	
	comp=Z,1µm,19.0s						
N35A	Tabor	109.59	49	IAMs_20	IAMs_20	22 17 24.5	
	comp=Z,2µm,20.0s						
TUL1	Leonard	110.29	54	IAMs_20	IAMs_20	22 20 51.5	
	comp=Z,2µm,18.0s						
SPMN	Marine on St.	110.71	44	IAMs_20	IAMs_20	22 13 27.3	
	comp=Z,3µm,22.0s						
237A	Washetta, Mont	110.80	58	IAMs_20	IAMs_20	22 18 10.5	
	comp=Z,2µm,18.0s						
X37A	Clayton	110.82	55	IAMs_20	IAMs_20	22 14 42.7	
	comp=Z,2µm,21.0s						
EYMN	Ely	110.87	40	IAMs_20	IAMs_20	22 20 48.3	
	comp=Z,2µm,19.0s						
SCIA	State Center	111.18	47	IAMs_20	IAMs_20	22 17 53.2	
	comp=Z,3µm,20.0s						
E38A	The Farm, Brul	111.20	42	IAMs_20	IAMs_20	22 15 26.1	
	comp=Z,3µm,21.0s						
Z38A	Mt. Pleasant	111.33	56	IAMs_20	IAMs_20	22 14 09.3	
	comp=Z,2µm,21.0s						
U38A	Gravette	111.33	53	IAMs_20	IAMs_20	22 17 13.9	
	comp=Z,2µm,20.0s						
K38A	Parkersburg	111.33	46	IAMs_20	IAMs_20	22 14 43.3	
	comp=Z,2µm,21.0s						
FINES	FINESS Array B	111.43	336	Pdiff	Pdif	21 29 43.0	-1.2
	comp=Z,7.8nm,0.7s,baz=68,slow=5.5,SNR=17						
FINES				PKiKP	PKiKP	21 33 42.0	-0.2
	comp=Z,7.8nm,1.0s,baz=120,slow=2.1,SNR=6.0						
FINES	FINESS Array B	111.43	336	P	Pdif	21 29 42.2	-1.9
FINES	FINESS Array B	111.43	336		Pdif	21 29 42.2	-1.9
HHAR	Hobbs	111.71	53	IAMs_20	IAMs_20	22 16 48.0	
	comp=Z,1µm,19.0s						
NATX	Nacogdoches	111.80	58	IAMs_20	IAMs_20	22 19 01.0	
	comp=Z,3µm,20.0s						
W39A	Magazine	112.02	54	IAMs_20	IAMs_20	22 17 44.3	
	comp=Z,2µm,19.0s						
W39A	Magazine	112.02	54	P	PKiKP	21 33 44.8	+0.7
	baz=280						
MIAR	Mount Ida	112.29	55	IAMs_20	IAMs_20	22 31 28.6	
	comp=Z,2µm,18.0s						
U40A	Yellville	112.56	53	IAMs_20	IAMs_20	22 24 19.5	
	comp=Z,1µm,19.0s						
U40A	Yellville	112.56	53	P	PKiKP	21 33 45.7	+0.6
	baz=281						
L40A	Anamosa	112.59	47	IAMs_20	IAMs_20	22 15 41.5	
	comp=Z,2µm,20.0s						
R40A	Maddies Statio	112.65	51	IAMs_20	IAMs_20	22 17 52.5	
	comp=Z,2µm,20.0s						
WLAR	White Oak Lake	112.81	56	IAMs_20	IAMs_20	22 20 41.5	
	comp=Z,2µm,19.0s						
X40A	Basin Creek Fa	112.91	55	IAMs_20	IAMs_20	22 24 51.9	
	comp=Z,2µm,18.0s						
D41A	Chassel	113.03	41	IAMs_20	IAMs_20	22 13 42.5	
	comp=Z,2µm,22.0s						
JFWS	Jewell Farm	113.07	45	IAMs_20	IAMs_20	22 19 06.1	
	comp=Z,3µm,19.0s						
Z41A	Richland Creek	113.14	56	IAMs_20	IAMs_20	22 22 38.1	
	comp=Z,2µm,18.0s						
441A	DeRidder	113.19	59	IAMs_20	IAMs_20	22 24 45.8	
	comp=Z,2µm,19.0s						
WHAR	Wooly Hollow	113.21	54	IAMs_20	IAMs_20	22 16 37.7	
	comp=Z,2µm,19.0s						
FCAR	Ozark Folk Cen	113.23	53	IAMs_20	IAMs_20	22 24 32.2	
	comp=Z,2µm,18.0s						
UALR	University of	113.25	54	IAMs_20	IAMs_20	22 18 32.1	
	comp=Z,2µm,20.0s						
W41B	Gary Mavity, V	113.26	54	IAMs_20	IAMs_20	22 19 56.2	
	comp=Z,2µm,19.0s						
CCM	Cathedral Cave	113.48	51	IAMs_20	IAMs_20	22 23 13.7	
	comp=Z,2µm,19.0s						
L42A	Oliver, Polo	113.72	46	IAMs_20	IAMs_20	22 18 56.5	
	comp=Z,2µm,20.0s						
342A	Flagon Creek P	113.83	58	IAMs_20	IAMs_20	22 18 33.7	
	comp=Z,2µm,20.0s						
CCAR	Cane Creek	113.87	55	IAMs_20	IAMs_20	22 22 41.5	
	comp=Z,2µm,19.0s						
LCAR	Lake Charles	113.97	53	IAMs_20	IAMs_20	22 20 55.7	
	comp=Z,1µm,19.0s						
E43A	Lone Tree Farm	114.27	41	IAMs_20	IAMs_20	22 22 19.4	
	comp=Z,3µm,19.0s						
H43A	Windswept, Lux	114.36	43	IAMs_20	IAMs_20	22 16 03.2	
	comp=Z,3µm,21.0s						
HDIL	Hopedale	114.37	48	IAMs_20	IAMs_20	22 16 15.8	
	comp=Z,3µm,21.0s						
143A	Socs Landing,	114.39	57	IAMs_20	IAMs_20	22 19 57.3	
	comp=Z,3µm,19.0s						
P43A	Skaggs, Pawnee	114.43	49	IAMs_20	IAMs_20	22 22 35.5	
	comp=Z,2µm,19.0s						
HBAR	Harrisburg	114.46	53	IAMs_20	IAMs_20	22 22 23.0	
	comp=Z,3µm,20.0s						
K43A	Burlington	114.48	45	IAMs_20	IAMs_20	22 20 44.5	
	comp=Z,3µm,19.0s						
X43A	Marvell	114.49	54	IAMs_20	IAMs_20	22 19 28.7	
	comp=Z,1µm,19.0s						
LPAR	Lepanto	114.74	53	IAMs_20	IAMs_20	22 23 27.2	
	comp=Z,2µm,18.0s						
AKASG	Malin Array Be	114.85	324	Pdiff	Pdif	21 29 59.5	-0.1
	comp=Z,1.5nm,0.7s,baz=48,slow=4.0,SNR=5.8						
AKASG				PKiKP	PKiKP	21 33 48.8	-0.2
	comp=Z,1.8nm,0.5s,baz=61,slow=2.5,SNR=19						
GNAR	Gosnell	114.89	53	IAMs_20	IAMs_20	22 16 59.1	
	comp=Z,2µm,21.0s						
E44A	Grand Marais A	114.89	41	IAMs_20	IAMs_20	22 30 46.6	
	comp=Z,2µm,19.0s						
L44A	Lake County Fo	114.93	46	IAMs_20	IAMs_20	22 20 41.4	
	comp=Z,3µm,20.0s						
PEBM	Pemiscott Bayo	114.98	53	IAMs_20	IAMs_20	22 17 31.5	
	comp=Z,3µm,21.0s						
M44A	Midewin, Midew	115.06	47	IAMs_20	IAMs_20	22 21 09.9	
	comp=Z,3µm,20.0s						
S44A	Carbondale	115.10	51	IAMs_20	IAMs_20	22 15 38.5	
	comp=Z,3µm,22.0s						
MET	Memphis--Engin	115.13	54	IAMs_20	IAMs_20	22 20 10.7	
	comp=Z,1µm,19.0s						
344A	Westbrook Farm	115.16	58	IAMs_20	IAMs_20	22 22 16.0	
	comp=Z,2µm,19.0s						
VBMS	Vicksburg	115.21	57	IAMs_20	IAMs_20	22 20 12.1	
	comp=Z,2µm,20.0s						
LNXT	Lenox	115.28	52	IAMs_20	IAMs_20	22 17 08.3	
	comp=Z,3µm,21.0s						
KMBO	Kilima Mbogo	115.39	266	PKP	PKiKP	21 33 52.4	+0.9
	comp=Z,0.6nm,0.5s,baz=251,slow=0.6,SNR=2.7						
KMBO	Kilima Mbogo	115.39	266	PKIKP	PKiKP	21 33 52.4	+0.9
KMBO				MLR	MLR		
	comp=Z,500nm,18.0s						
HALT	Halls	115.44	53	IAMs_20	IAMs_20	22 17 25.6	
	comp=Z,2µm,21.0s						
F45A	CMU Biological	115.48	41	P	PKPdf	21 33 51.0	+0.6
	baz=290						
G45A	Suttons Bay	115.60	42	P	PKPdf	21 33 51.2	+0.5
	baz=290						
BRTR	Keskin Array B	115.61	312	Pdiff	Pdif	21 30 03.2	-0.3
	comp=Z,0.5nm,0.7s,baz=69,slow=4.8,SNR=2.7						
BRTR				PKP	PKiKP	21 33 51.0	-0.1
	comp=Z,2.9nm,0.9s,baz=113,slow=2.8,SNR=12						
BRTR				PKKPbc	PKKPbc	21 44 25.8	+0.8
	comp=Z,1.5nm,0.8s,baz=212,slow=2.9,SNR=7.2						
BRTR	Keskin Array B	115.61	312	PKIKP	PKiKP	21 33 50.6	-0.5
BRTR	Keskin Array B	115.61	312		PKiKP	21 33 50.6	-0.5
Y45A	Yeager Farm, C	115.70	55	IAMs_20	IAMs_20	22 17 58.9	
	comp=Z,2µm,20.0s						
W45A	Hickory Valley	115.72	53	IAMs_20	IAMs_20	22 21 23.3	
	comp=Z,1µm,18.0s						
T45A	Paducah	115.73	51	IAMs_20	IAMs_20	22 17 38.2	
	comp=Z,2µm,20.0s						
E46A	Sault Ste Mari	116.02	40	IAMs_20	IAMs_20	22 25 43.6	
	comp=Z,3µm,19.0s						
SFIN	Lafayette	116.03	47	IAMs_20	IAMs_20	22 21 01.7	
	comp=Z,3µm,19.0s						
L46A	Eue Claire	116.13	45	IAMs_20	IAMs_20	22 20 33.1	
	comp=Z,2µm,19.0s						
P46A	Rosedale	116.16	48	IAMs_20	IAMs_20	22 19 24.3	
	comp=Z,3µm,20.0s						
ANTO	Ankara	116.20	312	⇑P	PKiKP	21 33 52.6	+0.5
ANTO	Ankara	116.20	312	⇑PKIKP	PKiKP	21 33 52.6	+0.5
ANTO	Ankara	116.20	312		PKiKP	21 33 52.8	+0.7
346A	Big Creek Wild	116.24	58	IAMs_20	IAMs_20	22 23 15.5	
	comp=Z,2µm,19.0s						
146A	Union	116.34	56	IAMs_20	IAMs_20	22 20 31.1	
	comp=Z,2µm,20.0s						
SORM	Soroca	116.41	322	⇑P	PKPdf	21 33 51.8	-0.3
SORM	Soroca	116.41	322	⇑PKIKP	PKPdf	21 33 51.8	-0.3
D47A	Chapleau	116.53	39	P	PKiKP	21 33 52.9	+0.4
	baz=293,SNR=6.8						
WVT	Waverly	116.58	52	P	PKiKP	21 33 53.1	+0.2
	baz=284						
MILM	Milestii Mici	116.60	321	⇑P	PKPdf	21 33 52.4	-0.2
SUW	Suwalki	116.61	329	*e*PKP	PKiKP	21 33 53.0	+0.7
SUW	Suwalki	116.61	329	*e*PKIKP	PKiKP	21 33 53.0	+0.7
PLAL	Pickwick Lake	116.65	53	IAMs_20	IAMs_20	22 22 18.8	
	comp=Z,2µm,18.0s						
E47A	Iron Bridge	116.65	40	P	PKiKP	21 33 53.2	+0.5
	baz=292						
I47A	Gladwin	116.72	43	IAMs_20	IAMs_20	22 18 27.4	
	comp=Z,3µm,21.0s						
G47A	Hillman	116.75	41	P	PKiKP	21 33 53.7	+0.7
	baz=291						
J47A	Sunmer	116.77	44		PKiKP	21 33 53.5	+0.4
J47A	Sunmer	116.77	44	P	PKiKP	21 33 54.1	+1.0
	baz=290						
BLO	Bloomington	116.80	49	IAMs_20	IAMs_20	22 19 53.1	
	comp=Z,2µm,20.0s						
M47A	Cromwell	116.81	46	P	PKiKP	21 33 53.9	+0.8
	baz=288						
K47A	Vermontville	116.84	44	P	PKiKP	21 33 53.7	+0.6
	baz=289						
N47A	Urbana	116.91	47	IAMs_20	IAMs_20	22 21 20.7	
	comp=Z,3µm,19.0s						
N47A	Urbana	116.91	47	P	PKiKP	21 33 54.0	+0.6
	baz=288						
L47A	Sherwood	116.92	45	P	PKiKP	21 33 54.2	+0.9
	baz=289						
T47A	Sharon Grove	116.93	51		PKPdf	21 33 53.3	-0.2
T47A				IAMs_20	IAMs_20	22 16 22.0	
	comp=Z,3µm,22.0s						
Z47A	Carrollton	117.04	55	IAMs_20	IAMs_20	22 21 47.5	
	comp=Z,2µm,19.0s						
MDUB	Mudurnu	117.19	313		PKPdf	21 33 53.3	-0.8
WCI	Wyandotte Cave	117.23	50	IAMs_20	IAMs_20	22 20 17.6	
	comp=Z,3µm,20.0s						
WCI	Wyandotte Cave	117.23	50	P	PKiKP	21 33 55.1	+1.0
	baz=286						
H48A	Harrisville	117.27	42	P	PKiKP	21 33 54.5	+0.6
	baz=292						
D48A	Paudash Townsh	117.30	39	P	PKiKP	21 33 54.6	+0.6
	baz=294						
NB2	NORSAR Subarra	117.30	340	PKPdf	PKiKP	21 33 54.0	+0.4
	comp=Z,1.9nm,0.7s,baz=41,slow=1.8						
NOA	NORSAR Array B	117.30	340	PKP	PKiKP	21 33 53.7	+0.1
	comp=Z,5.2nm,0.9s,baz=45,slow=2.0,SNR=8.2						
F48A	Evansville	117.31	40	P	PKiKP	21 33 54.7	+0.7
	baz=293						
E48A	Lockeyer	117.35	40	P	PKiKP	21 33 54.3	+0.3
	baz=293,SNR=7.3						
N48A	Decatur	117.39	46	P	PKiKP	21 33 54.8	+0.5
	baz=288						
K48A	Perry	117.40	44	P	PKiKP	21 33 54.8	+0.5
	baz=290						
M48A	Edgerton	117.42	46	IAMs_20	IAMs_20	22 22 08.2	
	comp=Z,3µm,19.0s						
Q48A	North Vernon	117.45	49	P	PKiKP	21 33 54.8	+0.3
	baz=287						
J48A	Bridge Port	117.46	43		PKPdf	21 33 53.5	-0.9
J48A	Bridge Port	117.46	43	P	PKiKP	21 33 54.5	+0.1
	baz=290						
L48A	N Adams	117.47	45	P	PKiKP	21 33 55.1	+0.6
	baz=289						
O48A	Farmland	117.49	47	P	PKiKP	21 33 55.1	+0.6
	baz=288						
P48A	Milroy	117.53	48	P	PKiKP	21 33 54.8	+0.2
	baz=287						
D49A	Beulah Townshi	117.54	39	P	PKiKP	21 33 55.0	+0.6
	baz=294						
X48A	Hartselle	117.60	54	IAMs_20	IAMs_20	22 22 11.0	
	comp=Z,1µm,19.0s						
CFR	Carcaliu	117.70	319	⇑P	PKiKP	21 33 55.0	+0.3
CFR	Carcaliu	117.70	319	⇑PKIKP	PKiKP	21 33 55.0	+0.3
F49A	Sandfield	117.71	40	P	PKiKP	21 33 55.1	+0.4
	baz=293						
CLTN	Cedars of Leba	117.76	52	IAMs_20	IAMs_20	22 21 30.1	
	comp=Z,2µm,19.0s						
GHRR		117.83	320	⇑P	PKiKP	21 33 55.9	+0.9
L49A	Milan	117.88	45	P	PKiKP	21 33 55.8	+0.6
	baz=290						
I49A	Point Hope	117.89	42	P	PKiKP	21 33 55.9	+0.8
	baz=292						
M49A	Liberty Center	117.95	45	P	PKiKP	21 33 56.0	+0.6
	baz=290						
LRAL	Lakeview Retre	117.96	55	IAMs_20	IAMs_20	22 21 19.7	
	comp=Z,2µm,20.0s						
LRAL	Lakeview Retre	117.96	55	P	PKiKP	21 33 56.2	+0.6
	baz=283						
N49A	Columbus Grove	117.98	46	IAMs_20	IAMs_20	22 21 46.1	
	comp=Z,3µm,20.0s						
N49A	Columbus Grove	117.98	46	P	PKiKP	21 33 56.2	+0.7
	baz=289						
HARR	Harsova	118.02	319	⇑P	PKiKP	21 33 56.1	+0.7
HARR	Harsova	118.02	319	⇑PKIKP	PKiKP	21 33 56.1	+0.7
P49A	Miami Univ. Ec	118.03	48	P	PKiKP	21 33 56.1	+0.6
	baz=288						
Q49A	Aurora	118.06	48	P	PKiKP	21 33 55.9	+0.2
	baz=288						
R49A	Shelbyville	118.06	49	IAMs_20	IAMs_20	22 22 15.6	
	comp=Z,2µm,21.0s						
R49A	Shelbyville	118.06	49	P	PKiKP	21 33 56.5	+0.9
	baz=287						
U49A	Red Boiling Sp	118.08	51	IAMs_20	IAMs_20	22 17 18.5	
	comp=Z,2µm,22.0s						
O49A	Covington	118.11	47	IAMs_20	IAMs_20	22 22 06.5	
	comp=Z,2µm,20.0s						
O49A	Covington	118.11	47	P	PKiKP	21 33 55.8	+0.1
	baz=289						
S49A	Springfield	118.11	50	P	PKiKP	21 33 56.1	+0.3
	baz=287						
T49A	Edmonton	118.11	51	P	PKiKP	21 33 56.1	+0.3
	baz=286						
LVV	L'vov	118.23	325	*e*PKIKP	PKiKP	21 33 56.6	+0.9
LVV				MLR	MLR		
	comp=Z,800nm,22.0s						
LVV				MLR	MLR		
	comp=E,900nm,23.0s						
LVV				MLR	MLR		
	comp=N,400nm,21.0s						
Y49A	Blount Mountai	118.25	54	IAMs_20	IAMs_20	22 27 20.2	
	comp=Z,2µm,18.0s						
BIZ	Bicaz	118.29	321	⇑P	PKiKP	21 33 56.9	+1.0
SNET	Serv Nac Est T	118.31	77	IAMs_20	IAMs_20	22 15 20.8	
	comp=Z,2µm,20.0s						
D50A	G1974 Best Tow	118.52	38	P	PKiKP	21 33 56.4	+0.1
	baz=296						
BURAR	Bucovina Array	118.54	322	⇑P	PKiKP	21 33 57.8	+1.4
BURAR	Bucovina Array	118.54	322	⇑PKIKP	PKiKP	21 33 57.8	+1.4
BURAR	Bucovina Array	118.54	322		PKiKP	21 33 57.6	+1.1
L50A	Kingsville	118.58	44	P	PKiKP	21 33 56.6	0.0
	baz=291						
M50A	Fremont	118.63	45	IAMs_20	IAMs_20	22 21 50.3	
	comp=Z,3µm,20.0s						
M50A	Fremont	118.63	45	P	PKiKP	21 33 57.2	+0.5
	baz=290						
MATQ	Matagami	118.64	35	P	PKiKP	21 33 56.7	+0.3
	baz=299						
O50A	Cable	118.64	47	P	PKiKP	21 33 57.3	+0.5
	baz=289						

T50A	Nancy	118.67	50	P	PKPdf	21 33 56.8	-0.1
	baz=286,SNR=5.7						
P50A	Jamestown	118.68	47	P	PKiKP	21 33 57.4	+0.5
	baz=289						
R50A	Paris	118.69	49	IAMs_20	IAMs_20	22 20 10.4	
	comp=Z,2µm,21.0s						
R50A	Paris	118.69	49	P	PKiKP	21 33 57.1	+0.2
	baz=288						
FPAL	Fort Paine	118.72	53	IAMs_20	IAMs_20	22 23 21.8	
	comp=Z,2µm,20.0s						
N50A	Nevada	118.77	46	P	PKiKP	21 33 57.7	+0.7
	baz=290						
Q50A	Georgetown	118.78	48	P	PKiKP	21 33 57.5	+0.4
	baz=288						
Z50A	Ashland	118.79	55	IAMs_20	IAMs_20	22 25 38.6	
	comp=Z,2µm,19.0s						
Z50A	Ashland	118.79	55	P	PKiKP	21 33 57.4	+0.1
	baz=284						
250A	Grady	118.79	56	IAMs_20	IAMs_20	22 22 06.9	
	comp=Z,2µm,20.0s						
S50A	Richmond	118.82	50	P	PKiKP	21 33 57.4	+0.2
	baz=287,SNR=6.5						
D51A	Lot 18 Range I	118.84	38	P	PKiKP	21 33 57.5	+0.6
	baz=296						
MLR	Muntele Rosu	118.99	320	⇑P	PKiKP	21 33 58.1	+0.7
MLR	Muntele Rosu	118.99	320	⇑PKIKP	PKiKP	21 33 58.1	+0.7
MLR	Muntele Rosu	118.99	320	IAMs_20	IAMs_20	22 25 50.1	
	comp=Z,2µm,22.0s						
NEF	NEVSHA	119.00	317	*e*P	PKiKP	21 33 57.6	+0.2
F51A	Arnstein	119.00	39	P	PKiKP	21 33 57.8	+0.6
	baz=295						
E51A	G1948 Merrick	119.01	39	P	PKiKP	21 33 57.8	+0.5
	baz=296						
ACSO	Alum Creek Sta	119.07	46	IAMs_20	IAMs_20	22 23 42.0	
	comp=Z,2µm,19.0s						
KWP	Kalwaria Pacla	119.07	325	*e*PKP	PKiKP	21 33 57.9	+0.6
KWP	Kalwaria Pacla	119.07	325	*e*PKIKP	PKiKP	21 33 57.9	+0.6
I51A	Listowel	119.14	42	P	PKiKP	21 33 58.1	+0.5
	baz=293						
DOPR	Dopca	119.15	321	⇑P	PKiKP	21 33 58.1	+0.5
Q51A	Peebles	119.20	48	P	PKiKP	21 33 57.9	0.0
	baz=289						
R51A	Hillsboro	119.25	49	P	PKiKP	21 33 58.8	+0.8
	baz=288						
P51A	Williamsport	119.26	47	IAMs_20	IAMs_20	22 23 02.2	
	comp=Z,2µm,19.0s						
P51A	Williamsport	119.26	47	P	PKiKP	21 33 58.4	+0.4
	baz=289						
M51A	Elyria	119.26	45	P	PKiKP	21 33 58.5	+0.5
	baz=291						
N51A	Ashland	119.27	46	P	PKiKP	21 33 58.4	+0.4
	baz=290						
X51A	Calhoun	119.32	53	IAMs_20	IAMs_20	22 19 43.5	
	comp=Z,3µm,21.0s						
X51A	Calhoun	119.32	53	P	PKiKP	21 33 58.6	+0.4
	baz=285						
CPCT	Cooper Cave	119.35	52	IAMs_20	IAMs_20	22 22 28.2	
	comp=Z,2µm,20.0s						
LSQQ	Lebel-sur-Quev	119.35	35	P	PKiKP	21 33 58.1	+0.2
	baz=299						
O51A	Pataskala	119.37	46	P	PKiKP	21 33 58.9	+0.7
	baz=290						
Z51A	Franklin	119.38	55	IAMs_20	IAMs_20	22 24 54.2	
	comp=Z,2µm,19.0s						
V51A	Loudon	119.39	52	IAMs_20	IAMs_20	22 27 22.1	
	comp=Z,2µm,18.0s						
RAZG	Razgrad	119.40	318	⇑P	PKiKP	21 33 58.4	+0.3
PLCA	Paso Flores	119.43	143	PKP	PKiKP	21 33 59.4	+0.9
	comp=Z,2.5nm,0.7s,baz=309,slow=2.3,SNR=5.3						
PLCA				PKKPbc	PKKPbc	21 44 10.7	-0.7
	comp=Z,6.9nm,0.9s,baz=73,slow=1.7,SNR=6.8						
F52A	Sundridge	119.43	39	P	PKiKP	21 33 58.9	+0.7
	baz=296						
S51A	Beattyville	119.44	49	IAMs_20	IAMs_20	22 23 08.2	
	comp=Z,2µm,20.0s						
S51A	Beattyville	119.44	49	P	PKiKP	21 33 58.6	+0.2
	baz=288,SNR=7.4						
BOSA	Boshof	119.44	233	PKP	PKiKP	21 33 59.1	+0.2
	comp=Z,4.0nm,0.9s,baz=148,slow=9.3,SNR=3.8						
451A	Vernon	119.52	58	IAMs_20	IAMs_20	22 21 19.4	
	comp=Z,1µm,20.0s						
VLDQ	Val d'Or	119.53	36		PKPdf	21 33 57.9	-0.3
VLDQ				IAMs_20	IAMs_20	22 22 52.1	
	comp=Z,3µm,20.0s						
H52A	Wyevale	119.56	41	P	PKiKP	21 33 58.9	+0.5
	baz=294						
VOIR		119.59	320	⇑P	PKPdf	21 33 58.0	-0.5
VOIR		119.59	320	⇑PKIKP	PKPdf	21 33 58.0	-0.5
E52A	Mattawa	119.64	39	P	PKiKP	21 33 59.4	+0.9
	baz=296						
J52A	Paris	119.73	42	P	PKiKP	21 33 59.6	+0.8
	baz=293						
M52A	Chesterland	119.77	45	P	PKiKP	21 33 59.3	+0.4
	baz=292						
N52A	McGinn’s Farm,	119.80	45	P	PKiKP	21 33 59.8	+0.8
	baz=291						
TZTN	Tazewell	119.80	51	P	PKiKP	21 33 59.8	+0.6
	baz=287						
UZH	Uzhgorod	119.80	324	*e*PKIKP	PKPdf	21 33 56.8	-1.9
UZH				*e*		21 34 10.2	
D53A	Lac Vacive, Po	119.87	37	IAMs_20	IAMs_20	22 30 08.2	
	comp=Z,2µm,19.0s						
TKL	Tuckaleechee C	119.88	52	IAMs_20	IAMs_20	22 28 39.1	
	comp=Z,2µm,18.0s						
ARR	Arges	119.88	320	⇑P	PKiKP	21 33 59.7	+0.6
P52A	Corning	119.89	47	P	PKiKP	21 34 00.0	+0.8
	baz=290						
TRPA	Tarpa	119.90	324	⇑P	PKiKP	21 33 59.2	+0.3
SZH	Strazhica	119.90	318	*e*P	PKPdf	21 33 59.0	-0.1
152A	Waverly Hall	119.91	55	IAMs_20	IAMs_20	22 22 47.3	
	comp=Z,2µm,20.0s						
W52A	Murphy	119.92	52	IAMs_20	IAMs_20	22 21 01.2	
	comp=Z,3µm,20.0s						
CJR	Cluj-Napoca	119.93	322	⇑P	PKiKP	21 33 59.5	+0.4
CJR	Cluj-Napoca	119.93	322	⇑PKIKP	PKiKP	21 33 59.5	+0.4
O52A	Adamsville	119.94	46	IAMs_20	IAMs_20	22 23 14.9	
	comp=Z,2µm,20.0s						
O52A	Adamsville	119.94	46	P	PKiKP	21 33 59.8	+0.5
	baz=290						
R52A	Catlettsburg	119.94	48	P	PKiKP	21 33 59.9	+0.6
	baz=289						
V52A	Sevierville	119.97	51	IAMs_20	IAMs_20	22 18 17.4	
	comp=Z,2µm,22.0s						
SADO	Sadowa	119.99	40	IAMs_20	IAMs_20	22 27 08.5	
	comp=Z,3µm,19.0s						
Q52A	Bidwell	120.01	48	P	PKiKP	21 34 00.3	+0.8
	baz=290						
352A	Blakely	120.02	57	IAMs_20	IAMs_20	22 22 51.4	
	comp=Z,1µm,20.0s						
HUMR	Humele	120.02	319	⇑P	PKPdf	21 33 58.6	-0.6
COPA	Copaceanca	120.03	319	⇑P	PKiKP	21 33 59.3	0.0
T52A	Hallie	120.06	50	P	PKiKP	21 34 00.5	+0.8
	baz=288						
ELND	Elena	120.08	317	⇑P	PKiKP	21 33 59.9	+0.4
ZIMR		120.12	318	⇑P	PKPdf	21 33 58.0	-1.4
ZIMR		120.12	318	⇑PKIKP	PKPdf	21 33 58.0	-1.4
Y52A	Lilburn	120.14	54	IAMs_20	IAMs_20	22 20 03.2	
	comp=Z,3µm,21.0s						
Y52A	Lilburn	120.14	54	P	PKiKP	21 34 00.9	+1.0
	baz=285						
ALGO	Algonquin Park	120.16	39	P	PKiKP	21 34 00.1	+0.6
	baz=297						
G53A	Haliburton	120.17	40	P	PKiKP	21 34 00.6	+1.0
	baz=296						
TGUH	Tegucigalpa,Un	120.19	77	IAMs_20	IAMs_20	22 21 00.9	
	comp=Z,2µm,19.0s						
M53A	WI Miller and	120.28	44	P	PKiKP	21 34 00.9	+0.9
	baz=292						
O53A	New Philadelph	120.34	46	P	PKiKP	21 34 01.0	+0.9
	baz=291						
OJC	Ojcow	120.38	327	*e*PKP	PKiKP	21 34 00.5	+0.7
OJC	Ojcow	120.38	327	*e*PKIKP	PKiKP	21 34 00.5	+0.7
G54A	Lake Saint Pet	120.39	39	P	PKiKP	21 34 00.6	+0.5
	baz=296						
LOT	Lotru	120.39	321	⇑P	PKPdf	21 34 00.1	0.0
N53A	Lisbon	120.40	45	P	PKiKP	21 34 00.9	+0.7
	baz=292,SNR=6.4						
H53A	Bobcaygeon	120.43	40	P	PKiKP	21 34 00.4	+0.3
	baz=296						
DRGR		120.44	322	⇑P	PKiKP	21 34 00.3	+0.1
DRGR		120.44	322	⇑PKIKP	PKiKP	21 34 00.3	+0.1
T53A	Wise	120.44	50	P	PKiKP	21 34 01.1	+0.6
	baz=288,SNR=5.4						
R53A	Hurricane	120.45	48	P	PKPdf	21 34 00.1	-0.2
	baz=289						
D54A	Lac Fusel, La	120.46	37	P	PKiKP	21 34 00.1	0.0
	baz=299						
P53A	Whipple	120.48	47	IAMs_20	IAMs_20	22 23 33.3	
	comp=Z,2µm,20.0s						
P53A	Whipple	120.48	47	P	PKiKP	21 34 00.8	+0.4
	baz=290,SNR=6.1						
ERPA	Erie	120.50	43	P	PKiKP	21 34 00.9	+0.6
	baz=293						
NIE	Niedzica	120.53	326	*e*PKP	PKiKP	21 34 01.3	+1.1
NIE	Niedzica	120.53	326	*e*PKIKP	PKiKP	21 34 01.3	+1.1
S53A	Williamson	120.53	49	P	PKiKP	21 34 01.3	+0.7
	baz=289						
X53A	Estanollee	120.58	53	P	PKiKP	21 34 01.4	+0.7
	baz=286						
Q53A	Leroy	120.59	48	P	PKiKP	21 34 01.3	+0.6
	baz=290						
V53A	Saluda	120.63	51	IAMs_20	IAMs_20	22 23 13.9	
	comp=Z,2µm,20.0s						
553A	Crawfordville	120.72	58	IAMs_20	IAMs_20	22 22 14.2	
	comp=Z,2µm,20.0s						
BG3	Lake Jocassee	120.73	52	IAMs_20	IAMs_20	22 27 37.7	
	comp=Z,1µm,19.0s						
PLVB	Pleven	120.73	318	⇑P	PKiKP	21 34 01.3	+0.5
GOGA	Godfrey	120.74	54	IAMs_20	IAMs_20	22 20 32.1	
	comp=Z,2µm,22.0s						
DEV	Deva	120.74	321	⇑P	PKiKP	21 34 00.9	+0.2
DEV	Deva	120.74	321	⇑PKIKP	PKiKP	21 34 00.9	+0.2
L54A	Sinclairville	120.91	43	P	PKiKP	21 34 01.8	+0.7
	baz=294						
N54A	Moraine State	120.94	45	P	PKiKP	21 34 01.9	+0.6
	baz=292						
J54A	Appleton	120.94	42	P	PKiKP	21 34 01.8	+0.6
	baz=295						
O54A	Avella	120.96	46	P	PKiKP	21 34 01.8	+0.5
	baz=292,SNR=6.8						
M54A	Oil Creek Stat	120.96	44	P	PKiKP	21 34 01.8	+0.5
	baz=293						
GZR	Gura Zlata	121.04	321	⇑P	PKiKP	21 34 01.3	-0.1
GZR	Gura Zlata	121.04	321	⇑PKIKP	PKiKP	21 34 01.3	-0.1
Q54A	Coxs Mills	121.06	47	IAMs_20	IAMs_20	22 24 35.7	
	comp=Z,3µm,20.0s						
Q54A	Coxs Mills	121.06	47	P	PKiKP	21 34 01.9	+0.4
	baz=291,SNR=7.9						
DELO	Deloro Mine	121.08	40	IAMs_20	IAMs_20	22 21 18.2	
	comp=Z,2µm,21.0s						
P54A	Burton	121.09	46	P	PKiKP	21 34 01.9	+0.3
	baz=291						
S54A	Dingess, Beckl	121.11	49	IAMs_20	IAMs_20	22 20 26.2	
	comp=Z,3µm,20.0s						
S54A	Dingess, Beckl	121.11	49	P	PKiKP	21 34 02.4	+0.6
	baz=290						
SCHQ	Schefferville	121.11	26	PKP	PKiKP	21 34 01.6	+0.4
	comp=Z,6.5nm,0.8s,baz=243,slow=3.4,SNR=9.8						
U54A	Nelsons Funny	121.13	50	P	PKiKP	21 34 02.5	+0.7
	baz=288						
LANS	Liptovska Anna	121.14	326	*e*PKIKP	PKiKP	21 34 03.2	+1.8
LANS	Liptovska Anna	121.14	326	*e*PKP	PKiKP	21 34 03.2	+1.8
TIGA	Tifton	121.14	56	P	PKiKP	21 34 02.4	+0.5
	baz=284						
T54A	Tazewell	121.15	49	P	PKiKP	21 34 02.5	+0.6
	baz=289						
E55A	Montcerf-Lytto	121.16	38	P	PKiKP	21 34 01.9	+0.4
	baz=299						
I55A	Frankford	121.17	40	P	PKiKP	21 34 02.2	+0.6
	baz=296						
PLVO	Plevna	121.19	39	IAMs_20	IAMs_20	22 20 51.1	
	comp=Z,2µm,21.0s						
R54A	Victor	121.22	48	P	PKiKP	21 34 02.3	+0.4
	baz=290						
D55A	Sainte-Anne-du	121.23	37	P	PKiKP	21 34 02.2	+0.5
	baz=300						
154A	Montrose	121.24	55	IAMs_20	IAMs_20	22 27 20.5	
	comp=Z,2µm,18.0s						
V54A	Nebo	121.27	51	P	PKiKP	21 34 02.6	+0.5
	baz=288,SNR=6.0						
F55A	Otter Lake	121.27	38	P	PKiKP	21 34 02.3	+0.5
	baz=298						
W54A	Cherokee Point	121.29	52	P	PKiKP	21 34 02.6	+0.5
	baz=287,SNR=6.8						
X54A	Belton	121.30	53	P	PKiKP	21 34 02.8	+0.6
	baz=287						
G55A	Calabogie	121.31	39	P	PKiKP	21 34 02.2	+0.4
	baz=298						
SIRR	Siria	121.32	322	⇑P	PKiKP	21 34 02.2	+0.4
H55A	Tweed	121.34	40	P	PKiKP	21 34 02.6	+0.7
	baz=297						
HODGE	Hodges	121.48	53	IAMs_20	IAMs_20	22 21 49.6	
	comp=Z,3µm,20.0s						
OKC	Ostrava-Krasne	121.48	327	*e*PKPDF	PKiKP	21 34 02.6	+0.6
OKC				AMS	AMS	22 26 30.0	
	comp=Z,1µm,19.4s						
OKC	Ostrava-Krasne	121.48	327	*e*PKIKP	PKiKP	21 34 02.6	+0.6
OKC				MLR	MLR		
	comp=Z,1µm,19.4s						
L55A	Hinsdale	121.53	43	P	PKiKP	21 34 03.2	+0.8
	baz=294						
PSZ	Piszkesteto	121.54	325	⇑P	PKiKP	21 34 02.4	+0.1
PSZ	Piszkesteto	121.54	325	⇑PKIKP	PKiKP	21 34 02.4	+0.1
PSZ	Piszkesteto	121.54	325	IAMs_20	IAMs_20	22 32 32.2	
	comp=Z,1µm,19.0s						
K55A	Perry	121.55	42	P	PKiKP	21 34 02.8	+0.4
	baz=295						
M55A	Ridgway	121.59	44	P	PKiKP	21 34 03.4	+0.8
	baz=294						
P55A	Reedsville	121.60	46	P	PKiKP	21 34 03.4	+0.8
	baz=292						
Q55A	Buckhannon	121.60	47	P	PKiKP	21 34 03.1	+0.4
	baz=291,SNR=6.2						
D56A	ZEC Mazanza, M	121.64	36	P	PKiKP	21 34 02.7	+0.3
	baz=300						
PAULI	Pauline	121.66	52	IAMs_20	IAMs_20	22 28 32.2	
	comp=Z,2µm,19.0s						
BZS	Buzias	121.66	322	⇑P	PKiKP	21 34 02.6	+0.1
BZS	Buzias	121.66	322	⇑PKIKP	PKiKP	21 34 02.6	+0.1
O55A	Ligonier	121.71	45	P	PKiKP	21 34 03.5	+0.7
	baz=293						
N55A	Marion Center	121.71	45	P	PKiKP	21 34 03.5	+0.7
	baz=293						
S55A	Lewisburg	121.72	48	P	PKiKP	21 34 03.2	+0.3
	baz=290						
T55A	Pulaski	121.73	49	P	PKiKP	21 34 03.6	+0.6
	baz=290						
U55A	TA2, Sparta	121.73	50	P	PKiKP	21 34 03.1	+0.1
	baz=289,SNR=5.3						
E56A	St. Veronique	121.73	37	P	PKiKP	21 34 03.2	+0.6
	baz=300						
PECO	Prince Edward	121.74	40	IAMs_20	IAMs_20	22 21 27.8	
	comp=Z,3µm,21.0s						
V55A	Taylorsville	121.81	51	P	PKiKP	21 34 03.0	-0.1
	baz=289						
R55A	Marlinton	121.83	48	P	PKiKP	21 34 03.4	+0.2
	baz=291,SNR=8.5						
MORC	Moravsky Berou	121.84	328	⇑P	PKiKP	21 34 03.7	+0.9
MORC	Moravsky Berou	121.84	328	⇑PKIKP	PKiKP	21 34 03.7	+0.9
MORC	Moravsky Berou	121.84	328	*e*PKP	PKiKP	21 34 03.3	+0.5
MORC	Moravsky Berou	121.84	328	IAMs_20	IAMs_20	22 27 46.9	
	comp=Z,2µm,22.0s						
KSP	Ksiaz	121.88	329	*e*PKP	PKiKP	21 34 03.8	+1.0
KSP	Ksiaz	121.88	329	*e*PKIKP	PKiKP	21 34 03.8	+1.0
Y55A	Saluda	121.88	53	P	PKiKP	21 34 03.6	+0.4
	baz=287,SNR=5.9						
X55A	Gracelyn & Ava	121.90	52	P	PKiKP	21 34 03.9	+0.6
	baz=287,SNR=9.8						
H56A	Elgin	121.91	40	P	PKiKP	21 34 03.2	+0.3
	baz=298						
255A	Hazlehurst	121.93	56	IAMs_20	IAMs_20	22 25 36.0	
	comp=Z,2µm,20.0s						
KMSC	Kings Mountain	121.94	52	IAMs_20	IAMs_20	22 20 57.6	
	comp=Z,3µm,21.0s						
KMSC	Kings Mountain	121.94	52	P	PKiKP	21 34 03.3	-0.1
	baz=288,SNR=7.8						
BLA	Blacksburg	121.97	49	IAMs_20	IAMs_20	22 20 43.1	
	comp=Z,2µm,22.0s						
VTS	Vitosha	121.97	318	⇓P	PKiKP	21 34 03.8	+0.4
VTS	Vitosha	121.97	318	*e*P	PKPdf	21 34 03.2	-0.1
VTS	Vitosha	121.97	318	⇓PKIKP	PKiKP	21 34 03.8	+0.4
M56A	Emporium	121.99	44	P	PKiKP	21 34 03.5	+0.2
	baz=294						
MDVR	Moldovita	122.00	321	⇑P	PKiKP	21 34 03.4	+0.1
K56A	Middlesex	122.06	42	P	PKiKP	21 34 04.0	+0.6
	baz=296						
MMB	Musomiste	122.07	317	*e*P	PKPdf	21 34 02.8	-0.5
KRLC	Kraliky	122.07	328	*e*PKPDF	PKiKP	21 34 04.0	+0.8
KRLC				AMS	AMS	22 28 30.0	
	comp=Z,1µm,19.5s						
KRLC	Kraliky	122.07	328	*e*PKIKP	PKiKP	21 34 04.0	+0.8
KRLC				MLR	MLR		
	comp=Z,1µm,19.5s						
OSTC	Ostas	122.08	329	*e*PKPDF	PKiKP	21 34 04.0	+0.8
OSTC				*e*x	x	21 34 09.3	
OSTC				AMS	AMS	22 34 10.0	
	comp=Z,1µm,17.4s						
RUE	Ruedersdorf	122.10	332	*e*PKPdf	PKiKP	21 34 03.3	+0.2
	baz=49,slow=1.8						
N56A	West Decatur	122.14	44	P	PKiKP	21 34 04.0	+0.3
	baz=294,SNR=5.0						
L56A	Greenwood	122.14	43	P	PKiKP	21 34 03.6	0.0
	baz=295,SNR=5.8						
CHVC	Chvalec	122.15	329	AMS	AMS	22 31 00.0	
	comp=Z,1µm,20.6s						
DPC	Dobruska-Polom	122.15	329	*e*PKPDF	PKiKP	21 34 04.1	+0.7
DPC				*e*pPKP	pPKPdf	21 34 14.3	+1.0
DPC				AMS	AMS	22 33 20.0	
	comp=Z,1µm,19.9s						
DPC	Dobruska-Polom	122.15	329	*e*PKIKP	PKiKP	21 34 04.1	+0.7
DPC				*e*		21 34 14.3	
DPC				MLR	MLR		
	comp=Z,1µm,19.9s						
D57A	Chemin Vers le	122.17	36	P	PKiKP	21 34 04.2	+0.7
	baz=301						
O56A	Blue Knob Stat	122.21	45	P	PKiKP	21 34 04.4	+0.6
	baz=293						
UPC	Upice	122.22	329	*e*PKPDF	PKiKP	21 34 03.7	+0.2
UPC				AMS	AMS	22 26 20.0	
	comp=Z,1µm,24.1s						
UPC	Upice	122.22	329	*e*PKIKP	PKiKP	21 34 03.7	+0.2
UPC				MLR	MLR		
	comp=Z,1µm,24.1s						
Q56A	Snyder Ridge,	122.23	47	P	PKiKP	21 34 04.6	+0.7
	baz=292						
JAVC	Velka Javorina	122.29	327	*e*PKP	PKiKP	21 34 05.3	+1.6
U56A	King	122.29	50	IAMs_20	IAMs_20	22 21 26.6	
	comp=Z,3µm,20.0s						
R56A	Bull Pasture M	122.31	47	P	PKiKP	21 34 04.9	+0.8
	baz=292						
P56A	Dayton Farm, R	122.31	46	P	PKiKP	21 34 04.1	+0.1
	baz=293,SNR=5.2						
T56A	Rocky Mt	122.33	49	P	PKiKP	21 34 04.7	+0.6
	baz=290						
E57A	Chemin Saint G	122.33	37	P	PKiKP	21 34 04.4	+0.5
	baz=301						
X56A	White Oak	122.37	52	P	PKiKP	21 34 04.6	+0.3
	baz=288,SNR=6.8						
V56A	Mocksville	122.38	51	P	PKiKP	21 34 05.1	+0.9
	baz=289						
S56A	Natural Bridge	122.45	48	P	PKiKP	21 34 05.0	+0.7
	baz=291						
Z56A	Williston	122.45	54	IAMs_20	IAMs_20	22 21 30.4	
	comp=Z,3µm,20.0s						
G57A	Newington	122.47	38	P	PKiKP	21 34 05.0	+0.9
	baz=299						
656A	Willston	122.52	58	IAMs_20	IAMs_20	22 23 51.8	
	comp=Z,1µm,20.0s						
W56A	Indian Trail	122.52	51	P	PKiKP	21 34 04.7	+0.2
	baz=289,SNR=5.7						
SSPA	Standing Stone	122.54	44		PKiKP	21 34 05.1	+0.7
SSPA	Standing Stone	122.54	44	P	PKiKP	21 34 04.9	+0.6
	baz=294						
K57A	Scipio Center	122.58	42	P	PKiKP	21 34 04.7	+0.2
	baz=296						
I57A	Carthage	122.59	40	P	PKiKP	21 34 05.0	+0.6
	baz=298						
VRAC	Vranov	122.62	328	⇑P	PKiKP	21 34 04.9	+0.6
VRAC	Vranov	122.62	328	⇑PKIKP	PKiKP	21 34 04.9	+0.6
VRAC	Vranov	122.62	328	*e*PKP	PKiKP	21 34 04.7	+0.4
J57A	Williamstown	122.62	41	P	PKiKP	21 34 05.0	+0.5
	baz=297						
LATQ	La Tuque	122.62	35	P	PKiKP	21 34 05.0	+0.7
	baz=302						
L57A	Andrews Acres	122.68	42	P	PKiKP	21 34 05.1	+0.4
	baz=296						
BSEG	Bad Segeberg	122.68	335	*e*PKPdf	PKiKP	21 34 04.6	+0.4
	baz=49,slow=1.8						
D58A	Chemin du LacG	122.72	36	P	PKiKP	21 34 05.1	+0.5
	baz=302						
BIRD	Birdtown, Kers	122.77	52	IAMs_20	IAMs_20	22 20 29.7	
	comp=Z,2µm,22.0s						
M57A	Sunshine Farm,	122.77	43	P	PKiKP	21 34 05.4	+0.5
	baz=295						
Q57A	Strasburg	122.79	46	P	PKiKP	21 34 05.2	+0.3
	baz=293,SNR=6.1						
KRUC	Moravsky	122.86	327	*e*PKP	PKiKP	21 34 05.2	+0.4
E58A	La Victoria	122.86	36	P	PKiKP	21 34 05.3	+0.4
	baz=302						
S57A	Dark Hollow, R	122.87	48	P	PKPdf	21 34 04.9	0.0
	baz=291						
O57A	Amberson	122.89	45	P	PKiKP	21 34 05.3	+0.2
	baz=294						
V57A	Coltrane Farms	122.90	50	P	PKiKP	21 34 05.6	+0.3
	baz=290						
P57A	Homestead Farm	122.91	46	IAMs_20	IAMs_20	22 26 59.5	
	comp=Z,2µm,20.0s						
P57A	Homestead Farm	122.91	46	P	PKPdf	21 34 04.9	-0.1
	baz=293						
T57A	Hurt	122.92	49	P	PKiKP	21 34 05.2	0.0
	baz=291						
PVCC	Panska Ves	122.94	330	*e*PKPDF	PKiKP	21 34 05.7	+0.8
PVCC				AMS	AMS	22 31 50.0	
	comp=Z,1µm,19.2s						
PVCC	Panska Ves	122.94	330	*e*PKIKP	PKiKP	21 34 05.7	+0.8
PVCC				MLR	MLR		
	comp=Z,1µm,19.2s						
LONY	Lake Ozonia	122.95	39	IAMs_20	IAMs_20	22 27 18.7	
	comp=Z,2µm,19.0s						
VAY	Valandovo	122.97	317	*i* P	PKPdf	21 34 04.5	-0.4
W57A	Gilead	122.98	51	P	PKiKP	21 34 05.8	+0.4
	baz=289,SNR=6.4						
Z57A	Bowman	122.99	53	P	PKiKP	21 34 06.1	+0.6
	baz=287						
R57A	Stanardsville	122.99	47	P	PKiKP	21 34 05.9	+0.6
	baz=292						
G58A	Ormstown	123.02	38	P	PKiKP	21 34 05.1	0.0
	baz=300						
Y57A	Sumter	123.02	53	IAMs_20	IAMs_20	22 30 09.4	
	comp=Z,2µm,18.0s						
BRG	Berggiesshubel	123.04	330	*i* PKP	PKiKP	21 34 05.3	+0.2
	comp=Z,39nm,1.2s						
BRG				PP	PP	21 35 55.0	+11
BRG				SS	SS	21 53 15.0	+49
BRG	Berggiesshubel	123.04	330	*e*PKPdf	PKiKP	21 34 05.2	+0.2
	baz=49,slow=1.8						
BRG	Berggiesshubel	123.04	330	*i* PKIKP	PKiKP	21 34 05.3	+0.2
BRG				pmax	pmax		
	comp=Z,39nm,1.2s						
BRG				MLR	MLR		
	comp=N,1µm,20.4s						
BRG				MLR	MLR		
	comp=E,651nm,18.0s						
BRG				MLR	MLR		
	comp=Z,2µm,19.6s						
U57A	Blanch	123.05	49	P	PKiKP	21 34 05.7	+0.2
	baz=290						
J58A	Remsen	123.10	40	IAMs_20	IAMs_20	22 22 29.9	
	comp=Z,3µm,20.0s						
J58A	Remsen	123.10	40	P	PKiKP	21 34 05.9	+0.4
	baz=298						
257A	Skidaway Islan	123.11	55	IAMs_20	IAMs_20	22 22 00.3	
	comp=Z,2µm,21.0s						
K58A	Earlville	123.14	41	P	PKiKP	21 34 06.1	+0.5
	baz=297						
I58A	Old Forge	123.15	40	P	PKiKP	21 34 05.8	+0.3
	baz=298						
BINY	Binghamton	123.17	42	P	PKiKP	21 34 06.0	+0.4
	baz=297						
M58A	Price’s Panora	123.21	43	P	PKiKP	21 34 06.1	+0.4
	baz=296						
TREC	Trest	123.21	328	*e*PKPDF	PKiKP	21 34 06.3	+0.8
TREC				AMS	AMS	22 28 40.0	
	comp=Z,2µm,22.2s						
TREC	Trest	123.21	328	*e*PKIKP	PKiKP	21 34 06.3	+0.8
TREC				MLR	MLR		
	comp=Z,2µm,22.2s						
CLL	Collm	123.22	331	*i* PKPdf	PKiKP	21 34 06.5	+1.1
	comp=Z,26nm,0.9s						
CLL				*i*		21 34 23.1	
CLL				*e*PP	PP	21 35 48.0	+3.0
CLL				*e*PPP	PPP	21 38 30.0	
CLL				*e*PS	PS	21 45 32.0	-10
CLL				*e*PS	PS	21 45 46.0	+3.8
CLL				*e*PPS	PPS	21 47 02.0	
CLL				*e*SS	SS	21 52 48.0	+20
CLL				*e*SSS	SSS	21 57 18.0	
CLL				LmV		22 32 00.0	
	comp=Z,1µm,20.7s						
CLL	Collm	123.22	331	*e*PKPdf	PKiKP	21 34 06.3	+0.9
	baz=49,slow=1.8						

CLL	Collm	123.22	331	*i* PKIKP	PKiKP	21 34 06.5	+1.1
CLL				pmax	pmax		
	comp=Z,26nm,0.9s						
CLL				MLR	MLR		
	comp=Z,1µm,20.7s						
CLL	Collm	123.22	331	IAMs_20	IAMs_20	22 32 16.2	
	comp=Z,2µm,20.0s						
N58A	Sunbury	123.26	44	P	PKiKP	21 34 06.4	+0.6
	baz=295						
PRU	Pruhonice	123.29	329	*e*PKPDF	PKiKP	21 34 06.1	+0.5
PRU				*e*pPKP	sPKPdf	21 34 17.8	-0.6
PRU				AMS	AMS	22 30 50.0	
	comp=Z,1µm,18.0s						
PRU	Pruhonice	123.29	329	*e*PKIKP	PKiKP	21 34 06.1	+0.5
PRU				*e*		21 34 17.8	
PRU				MLR	MLR		
	comp=Z,1µm,18.0s						
PRA	Prague	123.29	329	AMS	AMS	22 31 40.0	
	comp=Z,1µm,20.2s						
FBE	Freiberg	123.30	331	*e*PKPdf	PKiKP	21 34 06.0	+0.5
	baz=49,slow=1.8						
H58A	Gabriels	123.30	39	P	PKiKP	21 34 05.9	+0.1
	baz=300						
L58A	Harry Jones Me	123.33	42	P	PKiKP	21 34 06.2	+0.3
	baz=297						
Q58A	Fox Den Farm,	123.35	46	P	PKiKP	21 34 05.9	-0.1
	baz=293						
D59A	Saint-Raymond	123.37	35	P	PKiKP	21 34 06.1	+0.3
	baz=303						
R58A	Rapidan	123.37	47	P	PKiKP	21 34 06.5	+0.5
	baz=292						
DIVS	Divibare	123.41	321	*e*P	PKiKP	21 34 06.4	+0.3
P58A	Pank, Wackersv	123.41	45	P	PKiKP	21 34 06.3	+0.1
	baz=294						
O58A	Lewisberry	123.42	45	P	PKiKP	21 34 06.3	+0.1
	baz=294						
F59A	Saint Guilaume	123.43	37	P	PKiKP	21 34 06.1	+0.2
	baz=302						
V58A	Windy Hill, Pi	123.44	50	P	PKiKP	21 34 06.5	+0.2
	baz=290						
SKO	Skopje	123.45	318	*i* P	PKiKP	21 34 06.7	+0.5
FRNY	Flat Rock	123.46	38		PKiKP	21 34 06.7	+0.6
FRNY				IAMs_20	IAMs_20	22 23 55.1	
	comp=Z,2µm,20.0s						
NHSC	New Hope	123.47	54	IAMs_20	IAMs_20	22 23 02.3	
	comp=Z,3µm,20.0s						
NHSC	New Hope	123.47	54	P	PKiKP	21 34 06.9	+0.5
	baz=288						
T58A	Grand View Acr	123.48	49	P	PKiKP	21 34 07.0	+0.6
	baz=291						
NCB	Newcomb	123.49	39	IAMs_20	IAMs_20	22 24 57.0	
	comp=Z,2µm,19.0s						
H59A	Cadyville	123.49	38	P	PKiKP	21 34 06.8	+0.7
	baz=300						
J59A	Piesco	123.56	40	IAMs_20	IAMs_20	22 30 21.8	
	comp=Z,2µm,18.0s						
J59A	Piesco	123.56	40	P	PKiKP	21 34 06.6	+0.3
	baz=299						
158A	Hollywood	123.56	54	P	PKiKP	21 34 07.1	+0.5
	baz=287						
G59A	Clarenceville	123.59	38	P	PKPdf	21 34 06.1	+0.1
	baz=301						
R58B	Mineral	123.59	47	P	PKiKP	21 34 07.4	+0.9
	baz=292						
S58A	Poland Farm, P	123.59	48	P	PKiKP	21 34 07.2	+0.7
	baz=292						
W58A	Raeford	123.61	51	P	PKiKP	21 34 07.6	+1.0
	baz=290						
Y58A	Scranton	123.63	52	IAMs_20	IAMs_20	22 30 44.5	
	comp=Z,1µm,18.0s						
K59A	Cooperstown	123.66	41	P	PKiKP	21 34 07.3	+0.7
	baz=298						
U58A	Oxford	123.66	49	P	PKiKP	21 34 07.1	+0.4
	baz=291						
X58A	Rowland	123.68	52	IAMs_20	IAMs_20	22 22 00.7	
	comp=Z,3µm,20.0s						
Z58A	St. Stephen	123.69	53	P	PKiKP	21 34 07.5	+0.7
	baz=288						
DWPF	Disney Wildern	123.75	60	IAMs_20	IAMs_20	22 23 10.6	
	comp=Z,1µm,21.0s						
DWPF	Disney Wildern	123.75	60	P	PKiKP	21 34 07.1	0.0
	baz=284						
PBCC	Pribram	123.75	329	*e*PKPDF	PKiKP	21 34 06.8	+0.3
PBCC				*e*x	x	21 34 11.9	
ASSE	Asse, Remlinge	123.77	333	*e*PKPdf	PKiKP	21 34 06.8	+0.4
	baz=49,slow=1.8						
SDMD	Soldier’s Deli	123.77	45	IAMs_20	IAMs_20	22 25 01.2	
	comp=Z,1µm,19.0s						
NRDL	Niedersach Rie	123.77	334	*e*PKPdf	PKiKP	21 34 06.8	+0.5
	baz=49,slow=1.8						
I59A	Olmsteadville	123.80	39	P	PKiKP	21 34 07.5	+0.7
	baz=299						
L59A	Walton	123.80	42	P	PKiKP	21 34 07.1	+0.2
	baz=297						
CONA	Conrad Observa	123.81	326	*i* PKiKP	PKiKP	21 34 07.0	+0.2
	comp=Z,16nm,0.7s,SNR=7.1						
M59A	Waymart	123.83	42	P	PKiKP	21 34 07.4	+0.4
	baz=297						
O59A	Robesonia	123.85	44	P	PKiKP	21 34 07.3	+0.3
	baz=295						
F60A	Warwick	123.86	36	P	PKiKP	21 34 07.0	+0.2
	baz=302						
CBN	Corbin Frederi	123.86	47	P	PKiKP	21 34 07.7	+0.7
	baz=293						
NEUB	Neuenburg	123.87	332	*e*PKPdf	PKiKP	21 34 06.7	0.0
	baz=49,slow=1.8						
N59A	State Game Lan	123.88	43	P	PKiKP	21 34 07.5	+0.4
	baz=296						
BBLS	Lazići	123.89	321	*e*P	PKiKP	21 34 07.3	+0.2
RETH	Rethem/Aller,	123.93	334	*e*PKPdf	PKiKP	21 34 07.2	+0.5
	baz=49,slow=1.8						
E60A	Ste Agathe de	123.94	36	P	PKiKP	21 34 07.5	+0.6
	baz=303						
D60A	Saint Jean D’O	123.94	35	P	PKiKP	21 34 07.5	+0.6
	baz=304						
P59A	Jarrettsville	123.97	45	P	PKiKP	21 34 07.6	+0.3
	baz=295						
RUDO	Rudo	124.03	321	*e*P	PKiKP	21 34 07.5	+0.2
R59A	King George, V	124.05	47	P	PKiKP	21 34 08.5	+1.1
	baz=293						
TANN	Tannenbergstha	124.06	331	*e*PKPdf	PKiKP	21 34 07.1	0.0
	baz=49,slow=1.8						
HAPS	Han Pijesak,Bl	124.06	321	*e*P	PKiKP	21 34 09.6	+2.1
G60A	Masonville	124.09	37	P	PKiKP	21 34 07.5	+0.2
	baz=302						
CLZ	Clausthal	124.10	333	*e*PKPdf	PKiKP	21 34 07.6	+0.4
	baz=49,slow=1.8						
V59A	Middlesex	124.12	50	P	PKiKP	21 34 08.9	+1.3
	baz=291						
I60A	Shoreham	124.14	39	P	PKiKP	21 34 07.7	+0.3
	baz=300,SNR=6.8						
H60A	Morristown	124.15	38	P	PKiKP	21 34 08.2	+0.7
	baz=301						
GUNZ	Gunzen	124.16	331	*e*PKPdf	PKiKP	21 34 07.6	+0.2
	baz=49,slow=1.8						
PLN	Plauen	124.16	331	*e*PKPdf	PKiKP	21 34 07.3	0.0
	baz=49,slow=1.8						
NKC	Novy Kostel	124.18	330	*e*PKPDF	PKiKP	21 34 08.0	+0.6
NKC				AMS	AMS	22 30 30.0	
	comp=Z,2µm,19.0s						
NKC	Novy Kostel	124.18	330	*e*PKIKP	PKiKP	21 34 08.0	+0.6
NKC				MLR	MLR		
	comp=Z,2µm,19.0s						
WERN	Wernitzgruen	124.18	330	*e*PKPdf	PKiKP	21 34 07.6	+0.2
	baz=49,slow=1.8						
T59A	Double "B" Far	124.20	48		PKiKP	21 34 09.4	+1.6
T59A	Double "B" Far	124.20	48	P	PKiKP	21 34 08.8	+1.1
	baz=292						
Y59A	Loris	124.23	52	IAMs_20	IAMs_20	22 27 28.3	
	comp=Z,2µm,19.0s						
U59A	Littleton	124.25	49	P	PKiKP	21 34 08.7	+0.8
	baz=292						
OHR	Ohrid	124.27	317	*i* P	PKiKP	21 34 07.9	0.0
KHC	Kasperske Hory	124.31	329	*e*PKPDF	PKiKP	21 34 07.8	+0.1
KHC				*e*x	x	21 34 21.0	
KHC				AMS	AMS	22 27 20.0	
	comp=Z,2µm,18.8s						
KHC	Kasperske Hory	124.31	329	*e*PKIKP	PKiKP	21 34 07.8	+0.1
KHC				*e*		21 34 21.0	
KHC				MLR	MLR		
	comp=Z,2µm,18.8s						
MOX	Moxa	124.32	331	*e*PKPdf	PKiKP	21 34 07.7	0.0
	baz=49,slow=1.8						
J60A	Lant Hill Farm	124.35	40	P	PKiKP	21 34 08.9	+1.0
	baz=300						
N60A	Cedar Hill Far	124.36	43	P	PKiKP	21 34 08.6	+0.7
	baz=297						
ARSA	Arzberg	124.39	326	*i* PKiKP	PKPdf	21 34 07.6	0.0
	comp=Z,12nm,1.1s						
O60A	Telford	124.39	44	P	PKiKP	21 34 08.7	+0.7
	baz=296						
F61A	St Evariste	124.42	36	P	PKiKP	21 34 08.7	+0.7
	baz=304						
GEC2	GERESS Array S	124.42	328	*e*PKPdf	PKPdf	21 34 07.7	0.0
	baz=49,slow=1.8						
GEC2	GERESS Array S	124.42	328	IAMs_20	IAMs_20	22 31 41.0	
	comp=Z,1µm,21.0s						
GERES	GERESS Array B	124.42	328	PKP	PKiKP	21 34 08.3	+0.4
	comp=Z,11nm,0.8s,baz=66,slow=1.6,SNR=55						
GERES	GERESS Array B	124.42	328	PKIKP	PKiKP	21 34 08.0	0.0
GERES	GERESS Array B	124.42	328		PKiKP	21 34 08.0	0.0
L60A	Shokan	124.43	41	P	PKiKP	21 34 08.4	+0.3
	baz=298						
P60A	Greenville	124.45	44	P	PKiKP	21 34 08.7	+0.5
	baz=296						
E61A	Lac Etchemin	124.46	35	P	PKiKP	21 34 08.4	+0.4
	baz=304,SNR=5.7						
M60A	Port Jervis	124.47	42	P	PKiKP	21 34 08.8	+0.6
	baz=297						
G61A	St-Isidore-de-	124.48	37	P	PKiKP	21 34 08.7	+0.6
	baz=302						
GTTG	Gottingen	124.49	333	*e*PKPdf	PKiKP	21 34 08.2	+0.3
	baz=49,slow=1.8						
MANZ	Manzenberg	124.51	330	*e*PKPdf	PKiKP	21 34 08.0	0.0
	baz=49,slow=1.8						
UPM	Unac-Piva	124.53	320	*e*P	PKPdf	21 34 08.2	0.0
CNNC	Cliffs of the	124.57	50	IAMs_20	IAMs_20	22 21 53.1	
	comp=Z,2µm,22.0s						
S60A	Water View	124.58	47	P	PKiKP	21 34 10.0	+1.5
	baz=293						
ROTZ	Rotzenmuhle	124.60	330	*e*PKPdf	PKiKP	21 34 08.0	-0.2
	baz=49,slow=1.8						
H61A	Lyndonville	124.63	38	P	PKiKP	21 34 09.6	+1.1
	baz=302						
WET	Wettzell	124.66	329	*e*PKPdf	PKiKP	21 34 08.5	+0.1
	baz=49,slow=1.8						
U60A	Pendleton	124.68	49	P	PKiKP	21 34 10.1	+1.4
	baz=292						
061Z	Ochoppi	124.70	62	IAMs_20	IAMs_20	22 34 12.1	
	comp=Z,1µm,18.0s						
MOA	Molln	124.72	327	*i* PKiKP	PKPdf	21 34 07.7	-0.5
	comp=Z,13nm,1.2s						
X60A	Albert Glenn T	124.73	51	P	PKiKP	21 34 10.0	+1.1
	baz=290						
K61A	Williamstown	124.73	40	P	PKiKP	21 34 10.1	+1.4
	baz=299						
Y60A	Bolivia	124.74	52	IAMs_20	IAMs_20	22 21 49.8	
	comp=Z,3µm,22.0s						
T60A	Surry	124.74	48	P	PKiKP	21 34 10.2	+1.4
	baz=293						
I61A	Oroboro, Fairl	124.77	39	P	PKiKP	21 34 10.3	+1.6
	baz=301						
LBNH	Lisbon	124.79	38	P	PKiKP	21 34 09.6	+0.9
	baz=302						
TIR	Tirane	124.79	318	IAMs_20	IAMs_20	22 30 56.6	
	comp=Z,2µm,22.0s						
BLY	Banja Luka	124.81	323	⇑P	PKiKP	21 34 09.3	+0.5
BLY	Banja Luka	124.81	323	*e*P	PKiKP	21 34 08.8	+0.1
BLY	Banja Luka	124.81	323	IAMs_20	IAMs_20	22 31 30.7	
	comp=Z,2µm,20.0s						
HNH	Hanover	124.84	39	IAMs_20	IAMs_20	22 26 36.6	
	comp=Z,2µm,20.0s						
DRME	Dracevica, Mon	124.84	319	*e*P	PKPdf	21 34 08.7	+0.1
GROS	Grobnik	124.85	325	*i* PKPdf	PKPdf	21 34 08.4	-0.2
J61A	Chester	124.85	39	P	PKiKP	21 34 09.5	+0.6
	baz=300						
V60A	Jim Taylor Roa	124.86	50	IAMs_20	IAMs_20	22 27 48.7	
	comp=Z,2µm,21.0s						
D62A	Allapoint, All	124.90	34	IAMs_20	IAMs_20	22 29 18.5	
	comp=Z,3µm,20.0s						
D62A	Allapoint, All	124.90	34	P	PKiKP	21 34 09.7	+0.8
	baz=306						
BRY	Bratogost	124.91	320	*e*P	PKPdf	21 34 08.7	-0.2
060A	Indiantown	124.92	61	IAMs_20	IAMs_20	22 39 06.7	
	comp=Z,1µm,18.0s						
IBBN	Ibbenburen	124.93	335	*e*PKPdf	PKiKP	21 34 09.0	+0.3
	baz=49,slow=1.8						
N61A	South Mountain	124.95	43	P	PKiKP	21 34 09.7	+0.6
	baz=297						
PERS	Pernice	124.97	326	*i* PKPdf	PKPdf	21 34 08.7	-0.1
UBBA	Unterbreizbach	124.97	332	*e*PKPdf	PKiKP	21 34 08.9	+0.2
	baz=49,slow=1.8						
SOKA	Soboth	124.99	326	*i* PKiKP	PKPdf	21 34 08.9	+0.1
	comp=Z,26nm,1.2s,SNR=11						
M61A	Granite Spring	125.05	42	P	PKiKP	21 34 09.9	+0.6
	baz=298						
H62A	Milan	125.08	37	IAMs_20	IAMs_20	22 26 36.8	
	comp=Z,3µm,20.0s						
H62A	Milan	125.08	37	P	PKiKP	21 34 10.3	+1.0
	baz=302						
PAL	Palisades	125.10	42	P	PKiKP	21 34 10.2	+0.8
	baz=298						
G62A	West of Eustis	125.11	36	P	PKiKP	21 34 10.2	+0.9
	baz=304						
GRF	Grafenberg Arr	125.14	330	*e*PKPdf	PKiKP	21 34 09.2	0.0
	baz=49,slow=1.8						
HCY	Herceg Novi	125.17	320	*e*P	PKPdf	21 34 09.0	-0.2
L61B	Northampton	125.22	40	P	PKiKP	21 34 10.5	+0.8
	baz=300						
CRES	Cresnjev	125.24	325	*e*P	PKiKP	21 34 09.6	0.0
I62A	Tamworth	125.34	38	P	PKiKP	21 34 11.1	+1.3
	baz=302						
OBKA	Obir	125.36	326	*i* PKiKP	PKiKP	21 34 09.8	-0.1
	comp=Z,14nm,1.2s,SNR=5.8						
V61A	Roper	125.37	49	IAMs_20	IAMs_20	22 26 59.1	
	comp=Z,2µm,20.0s						
V61A	Roper	125.37	49	P	PKiKP	21 34 11.3	+1.2
	baz=292						
K62A	Royalston	125.40	40	IAMs_20	IAMs_20	22 35 38.6	
	comp=Z,2µm,18.0s						
K62A	Royalston	125.40	40	P	PKiKP	21 34 11.1	+1.1
	baz=300						
STON	Ston	125.46	320	*e*P	PKPdf	21 34 09.4	-0.3
BOJS	Bojanci	125.54	324	*i* PKPdf	PKiKP	21 34 10.5	+0.3
RJOB	Jochberg	125.58	328	*e*PKPdf	PKPdf	21 34 09.6	-0.3
	baz=49,slow=1.8						
E63A	Oxbow	125.64	34	IAMs_20	IAMs_20	22 25 22.0	
	comp=Z,2µm,19.0s						
E63A	Oxbow	125.64	34	P	PKiKP	21 34 10.9	+0.5
	baz=306						
F63A	Nahmakanta, Br	125.67	35	IAMs_20	IAMs_20	22 28 43.0	
	comp=Z,3µm,21.0s						
F63A	Nahmakanta, Br	125.67	35	P	PKiKP	21 34 11.1	+0.7
	baz=305						
KBA	Koelnbreinsper	125.69	327	*i* PKiKP	PKPdf	21 34 09.7	-0.6
	comp=Z,18nm,1.1s,SNR=6.0						
G63A	Kingsbury	125.70	36	P	PKiKP	21 34 11.4	+0.9
	baz=304						
I63A	Otisfield	125.71	38	IAMs_20	IAMs_20	22 24 54.5	
	comp=Z,2µm,20.0s						
PQI	Presque Isle	125.71	34	IAMs_20	IAMs_20	22 30 10.0	
	comp=Z,2µm,21.0s						
BUG	Bochum--Univer	125.76	334	*e*PKPdf	PKiKP	21 34 10.4	0.0
	baz=49,slow=1.8						
MYKA	Terra Mystica	125.80	326	*e*PKiKP	PKPdf	21 34 10.3	0.0
	comp=Z,20nm,1.6s						
K63A	Dunstable	125.83	40	P	PKiKP	21 34 11.7	+0.9
	baz=301						
CEY	Cerknica	125.88	325	*e*P	PKPdf	21 34 10.6	+0.1
HRV	Adam Dziewonsk	125.91	40	IAMs_20	IAMs_20	22 27 48.1	
	comp=Z,2µm,20.0s						
HRV	Adam Dziewonsk	125.91	40	P	PKiKP	21 34 11.4	+0.4
	baz=301						
V62A	Hyde County Ai	125.92	49	IAMs_20	IAMs_20	22 31 37.8	
	comp=Z,2µm,20.0s						
E64A	Bridgewater	125.97	34	P	PKiKP	21 34 11.4	+0.4
	baz=307						
F64A	Sherman	126.00	35	IAMs_20	IAMs_20	22 26 32.9	
	comp=Z,2µm,21.0s						
F64A	Sherman	126.00	35	P	PKiKP	21 34 11.7	+0.6
	baz=306						
RIY	Rijeka	126.08	325	*e*P	PKPdf	21 34 08.3	-2.5
TNS	Taunus Mts	126.10	332	*e*PKPdf	PKiKP	21 34 11.1	-0.1
	baz=49,slow=1.8						
FUR	Furstenfeldbru	126.10	329	*e*PKPdf	PKPdf	21 34 11.0	+0.2
	baz=49,slow=1.8						
WES	Weston	126.12	40	IAMs_20	IAMs_20	22 27 55.7	
	comp=Z,3µm,21.0s						
G64A	Maxfield	126.12	36	P	PKiKP	21 34 12.2	+0.9
	baz=305						
H64A	Troy	126.20	36	P	PKiKP	21 34 12.2	+0.7
	baz=304						
TRI	Trieste	126.27	325	IAMs_20	IAMs_20	22 33 28.3	
	comp=Z,2µm,20.0s						
ABTA	Abfaltersbach	126.34	327	*i* PKiKP	PKPdf	21 34 11.4	0.0
	comp=Z,31nm,1.0s,SNR=16						
I64A	Boothbay	126.35	37	P	PKiKP	21 34 12.6	+0.8
	baz=304						
WATA	Walderalm	126.47	328	*i* PKiKP	PKPdf	21 34 11.8	+0.1
	comp=Z,36nm,1.0s,SNR=11						
WTTA	Wattenberg	126.49	328	*i* PKiKP	PKiKP	21 34 12.3	0.0
	comp=Z,65nm,1.2s,SNR=26						
AHRW	Bad Neuenahr-A	126.49	333	*e*PKPdf	PKiKP	21 34 12.0	+0.1
	baz=49,slow=1.8						
STAL	STALIGIAL	126.53	326	IAMs_20	IAMs_20	22 30 08.1	
	comp=Z,2µm,22.0s						
MOTA	Moosalm	126.72	328	*i* PKiKP	PKiKP	21 34 12.4	-0.2
	comp=Z,47nm,1.0s,SNR=18						
SQTA	Sankt Quirin	126.74	328	*i* PKiKP	PKiKP	21 34 12.6	-0.1
	comp=Z,37nm,1.0s,SNR=9.7						
STU	Stuttgart	126.74	331	*e*PKPdf	PKiKP	21 34 12.3	-0.2
	baz=49,slow=1.8						
RETA	Reutte	126.80	329	*i* PKiKP	PKiKP	21 34 12.6	-0.2
	comp=Z,18nm,1.1s,SNR=9.4						
G65A	Princeton	126.84	35	IAMs_20	IAMs_20	22 30 34.0	
	comp=Z,2µm,20.0s						
G65A	Princeton	126.84	35	P	PKiKP	21 34 13.7	+1.0
	baz=306						
MEM	Membach	126.91	334	PKiKP	PKiKP	21 34 13.4	+0.7
UBR	Ueberruh	127.01	329	*e*PKPdf	PKPdf	21 34 12.6	-0.1
	baz=49,slow=1.8						
FETA	Feichten	127.12	328	*i* PKiKP	PKiKP	21 34 13.6	+0.1
	comp=Z,45nm,1.0s,SNR=13						
BSTI	Sart Tilman	127.12	334	PKiKP	PKiKP	21 34 14.0	+0.8
EMMW	East Machias	127.19	35	IAMs_20	IAMs_20	22 29 58.4	
	comp=Z,2µm,20.0s						
MATE	Matera	127.22	319	⇑P	PKPdf	21 34 12.3	-0.9
H66A	Whiting	127.23	35	P	PKiKP	21 34 14.6	+1.0
	baz=306						
SGRT	San Giovanni R	127.28	320	IAMs_20	IAMs_20	22 35 34.3	
	comp=Z,2µm,21.0s						
GGN	Saint George	127.30	35	IAMs_20	IAMs_20	22 25 49.5	
	comp=Z,2µm,21.0s						
BCLA	Clavier	127.36	334	PKiKP	PKiKP	21 34 14.2	+0.5
BCLA				pPKiKP	pPKPdf	21 34 22.4	-0.7
DAVA	Damuels	127.39	329	*i* PKiKP	PKiKP	21 34 14.0	-0.1
	comp=Z,36nm,1.0s,SNR=9.2						
ATAH	Atahualpa	127.40	103	PKP	PKiKP	21 34 16.8	+1.5
	comp=Z,20nm,0.8s,baz=296,slow=2.8,SNR=16						
BFO	Black Forest	127.46	331	PKIKP	PKiKP	21 34 14.1	+0.1
BFO	Black Forest	127.46	331		PKiKP	21 34 14.1	+0.1
UCC	Uccle	127.47	335	PKiKP	PKiKP	21 34 14.2	+0.3
BGES	Gesves	127.48	335	PKPdf	PKiKP	21 34 13.9	0.0
BGES				PKiKP	PKPdf	21 34 14.4	+1.0
WLF	Walferdange	127.54	333	PKiKP	PKiKP	21 34 15.0	+1.0
WLF	Walferdange	127.54	333	*e*PKPdf	PKiKP	21 34 14.6	+0.6
	baz=49,slow=1.8						
WLF	Walferdange	127.54	333	IAMs_20	IAMs_20	22 33 42.3	
	comp=Z,3µm,20.0s						
BCIP	Isla Barro Col	127.60	82	IAMs_20	IAMs_20	22 27 29.3	
	comp=Z,1µm,18.0s						
ACER	Acerenza	127.65	319	IAMs_20	IAMs_20	22 35 14.3	
	comp=Z,1µm,21.0s						
TEOL	Teolo	127.66	326	IAMs_20	IAMs_20	22 31 16.8	
	comp=Z,1µm,19.0s						
BMRD	Maredsous	127.67	335	PKiKP	PKiKP	21 34 14.4	+0.1
SNF	Seneffe	127.72	335	PKiKP	PKiKP	21 34 14.8	+0.4
SNF				pPKiKP	pPKPdf	21 34 22.9	-0.9
DOU	Dourbes	127.90	335	PKiKP	PKiKP	21 34 14.9	+0.2
TIP	Timpagrande	127.91	317	⇑P	PKiKP	21 34 15.0	-0.2
AQU	L'Aquila	128.42	322	IAMs_20	IAMs_20	22 37 10.2	
	comp=Z,1µm,20.0s						
ZCCA	Zocca	128.67	325	IAMs_20	IAMs_20	22 37 16.6	
	comp=Z,2µm,20.0s						
OSSC	Osservatorio P	129.02	324	IAMs_20	IAMs_20	22 36 27.0	
	comp=Z,1µm,18.0s						
VLC	Villacollemand	129.12	326	IAMs_20	IAMs_20	22 32 16.6	
	comp=Z,2µm,22.0s						
MSSA	Maissana	129.50	326	IAMs_20	IAMs_20	22 34 09.7	
	comp=Z,1µm,22.0s						
TSUM	Tsumeb	129.75	240	IAMs_20	IAMs_20	22 32 57.9	
	comp=Z,1µm,18.0s						
PIZC	Pizarro, Choco	129.98	88	*e*P	PKiKP	21 34 22.5	+2.5
POPC	Popayan, Colom	130.51	91	*e*P	PKPdf	21 34 19.7	-0.8
SOTA	Rioblanco	130.55	92	*e*P	PKPdf	21 34 21.1	+0.2
PCON	Cinco Dias	130.77	91⇑	*e*P	PKiKP	21 34 23.2	+0.9
LCBC	Los crdobas,	131.03	83	*e*P	PKiKP	21 34 21.8	-0.3
DBBC	Dabeiba	131.19	85	*e*P	PKiKP	21 34 22.5	0.0
PB11	IPOC Station P	131.39	122	IAMs_20	IAMs_20	22 21 50.8	
	comp=Z,1µm,21.0s						
FLOC	Florencia	131.45	92	*e*P	PKPdf	21 34 22.5	+0.5
FLOC				*e*P	PKiKP	21 34 24.6	+1.6
GARC	Garzon, Huila	131.66	92	*e*P	PKiKP	21 34 24.6	+0.9
HELC	Santa Helena	131.85	86	*e*P	PKiKP	21 34 23.9	-0.3
UREC	San Jos de Ur	131.86	84	*e*P	PKPdf	21 34 22.5	-0.3
ANIL	Santa Ana	131.91	89	*e*P	PKPdf	21 34 23.2	0.0
GUY2C	Guyana, Caldas	131.98	88	*e*P	PKiKP	21 34 24.6	0.0
RREF	El Recreo	131.98	88	*e*P	PKiKP	21 34 24.6	-0.3
TOLC	Tolima	132.00	89	*e*P	PKPdf	21 34 23.9	+0.4
ORTC	Ortega, Tolima	132.03	89	*e*P	PKPdf	21 34 22.5	-0.7
SJCC	San Jacinto, C	132.18	81	*e*P	PKPdf	21 34 22.5	-0.9
NORC	Norcasia	132.49	87	*e*P	PKPdf	21 34 23.2	-0.8
PTBC	PUERTO BERRIO,	132.92	86	*e*P	PKPdf	21 34 22.5	-2.3
ROSC	El Rosal	133.00	88	PKP	PKiKP	21 34 26.4	-0.1
	comp=Z,8.9nm,0.4s,baz=96,slow=3.0,SNR=9.7						
ROSC				SKPbc	SKPab	21 37 52.9	+0.2
	comp=Z,14nm,0.4s,baz=130,slow=10,SNR=5.3						
ARGC	Ariguani, Magd	133.10	81	*e*P	PKiKP	21 34 25.9	-0.3
SPBC	San Pablo de B	133.28	87	*e*P	PKPdf	21 34 24.6	-1.0
MACC	Macarena, Meta	133.29	92	*e*P	PKPdf	21 34 25.9	+0.4
SMLC	San Martn de	133.30	83	*e*P	PKPdf	21 34 25.2	-0.2
CHIC	Chingaza	133.58	89	*e*P	PKPdf	21 34 26.6	+0.1
BRRC	Barranca, Sant	133.67	85	*e*P	PKPdf	21 34 25.9	-0.2
CODC	Agustn Codazz	133.88	81	*e*P	PKiKP	21 34 27.3	-0.5
OCAC	Ocana	134.05	84	*e*P	PKPdf	21 34 25.9	-1.1
LPAZ	La Paz	134.18	119	PKP	PKiKP	21 34 29.2	+0.1
	comp=Z,7.3nm,0.9s,baz=225,slow=0.5,SNR=20						
LPAZ				SKPbc	SKPab	21 37 59.3	+1.4
	comp=Z,34nm,1.2s,baz=300,slow=6.3,SNR=13						
LPAZ	La Paz	134.18	119	*e*P	PKiKP	21 34 30.3	+1.2
BARC	Barichara	134.19	86	*e*P	PKPdf	21 34 26.6	-0.8
RUSC	La Rusia	134.27	87	*e*P	PKPdf	21 34 27.3	-0.6
PAMC	Pamplona, Colo	134.67	85	*e*P	PKPdf	21 34 28.0	-0.6
KEST	Kesra	134.73	317	PKP	PKPdf	21 34 28.3	+0.7
	comp=Z,16nm,1.0s,baz=241,slow=1.8,SNR=12						
KEST				SKPbc	SKPab	21 37 58.0	-1.2
	comp=Z,14nm,1.0s,baz=289,slow=1.7,SNR=5.6						
SDDR	Presa de Saban	134.85	68	IAMs_20	IAMs_20	22 30 31.6	
	comp=Z,1µm,19.0s						
PTGC	Puerto Gaitan,	135.15	89	*e*P	PKPdf	21 34 28.0	-0.9
URIC	Uribia, Colomb	135.21	79	*e*P	PKPdf	21 34 28.7	-0.2
ITQB	Itaqui	135.25	143	*e*P	PKiKP	21 34 32.7	+2.5
SC01	Santiago de lo	135.27	68	IAMs_20	IAMs_20	22 47 30.8	
	comp=Z,1µm,19.0s						
TAMC	Tame, Arauca	135.57	86	*e*P	PKPdf	21 34 27.3	-2.4
SDV	Santo Domingo	136.69	83	PKP	PKiKP	21 34 33.2	-0.6
	comp=Z,63nm,0.8s,baz=242,slow=1.2,SNR=1.0						
SDV				SKPbc	SKiKP	21 38 06.5	-1.3
	comp=Z,16nm,1.1s,baz=213,slow=2.4,SNR=11						
SDV	Santo Domingo	136.69	83		PKPpre	21 34 22.5	
SDV	Santo Domingo	136.69	83	*e*P	PKiKP	21 34 33.4	-0.4
CPUP	Villa Florida	137.13	138	PKP	PKPdf	21 34 32.7	+0.4
	comp=Z,7.3nm,0.9s,baz=267,slow=2.3,SNR=9.8						
CPUP	Villa Florida	137.13	138	*e*P	PKiKP	21 34 35.5	+1.4
CNLB	Canela	138.81	148	*e*P	PKiKP	21 34 39.1	+1.5
PBRG	Braganca	139.26	336	*e*PKPdf	PKPdf	21 34 35.6	-0.2
PGAV	Gavieira, Arco	139.71	338	*i* LQ	LQ	21 34 43.5	
PGAV	Gavieira, Arco	139.71	338	*e*LR	LR	22 28 21.5	
	comp=Z,1µm,22.0s						
SJG	San Juan	139.80	68	SKPbc	SKiKP	21 38 13.2	-0.6
	comp=Z,4.5nm,0.2s,baz=291,slow=6.6,SNR=2.4						
SJG	San Juan	139.80	68		PKiKP	21 34 38.6	-1.1
SJG	San Juan	139.80	68	IAMs_20	IAMs_20	22 45 06.6	
	comp=Z,991nm,20.0s						
ESDC	Sonseca Array	139.80	332	PKhKP	PKPpre	21 34 30.5	
	comp=Z,1.4nm,0.6s,baz=30,slow=2.8,SNR=5.0						
ESDC				PP	PP	21 37 31.5	-0.4
	comp=Z,7.5nm,1.1s,baz=38,slow=7.1,SNR=7.2						
GCPR	Guaynabo City	139.81	68		PKiKP	21 34 38.8	-1.0
CART	Cartagena	139.90	327	IAMs_20	IAMs_20	22 38 15.8	
	comp=Z,1µm,20.0s						
MVO	Moncorvo	139.91	336	*e*PKPdf	PKPdf	21 34 30.9	-6.2
MVO				*i* LQ	LQ	21 34 39.0	
MVO	Moncorvo	139.91	336	*e*LR	LR	22 26 04.4	
	comp=Z,1µm,18.0s						
PAB	San Pablo	140.08	332	PKIKP	PKiKP	21 34 39.0	-0.9
PAB	San Pablo	140.08	332		PKiKP	21 34 39.0	-0.9
SIV	San Ignacio	140.36	123	PKhKP	PKPpre	21 34 33.0	
	comp=Z,4.1nm,1.0s,baz=270,slow=2.5,SNR=11						
SIV				SKPbc	SKiKP	21 38 15.8	+0.7

	comp=Z,15nm,1.1s,baz=249,slow=4.7,SNR=6.0						
PVIS	Viseu	140.64	337	ePKPdf	PKPdf	21 34 31.9	-6.5
MTE	Manteigas	140.77	336		PKPdf	21 34 38.7	+0.1
MTE				IAMs_20	IAMs_20	22 43 55.2	
	comp=Z,1µm,20.0s						
MTE	Manteigas	140.77	336	ePKPdf	PKPdf	21 34 33.2	-5.4
MTE				i LQ	LQ	21 34 42.9	
MTE	Manteigas	140.77	336	eLR	LR	22 25 46.2	
	comp=Z,892nm,20.0s						
PCBR	Castelo Branco	141.21	336	ePKPdf	PKPdf	21 34 38.8	-0.5
COI	Coimbra	141.28	337	IAMs_20	IAMs_20	22 41 57.6	
	comp=Z,1µm,21.0s						
SAML	Samuel	141.41	111	PKHKP	PKPpre	21 34 35.8	
SAML				MLR	MLR		
	comp=Z,600nm,21.0s						
SAML	Samuel	141.41	111		PKPpre	21 34 35.8	
SAML	Samuel	141.41	111	eP	PKiKP	21 34 42.2	-1.0
PCAS	Casmilo, Conde	141.44	337	ePKPdf	PKiKP	21 34 42.9	+0.3
PMRV	Marv??o	141.53	335	ePKPdf	PKPdf	21 34 39.5	-0.4
PMRV	Marv??o	141.53	335	eLR	LR	22 27 57.5	
	comp=Z,1µm,20.0s						
PTOM	Tomar	141.78	336	ePKPdf	PKiKP	21 34 44.6	+1.4
PMTG	Montargil	142.18	336	ePKPdf	PKPdf	21 34 40.1	-1.0
SABA	Saba	142.60	68	IAMs_20	IAMs_20	22 39 51.8	
	comp=Z,1µm,20.0s						
SMRT	St. Maarten	142.64	67	IAMs_20	IAMs_20	22 30 57.9	
	comp=Z,1µm,22.0s						
TRCB	Terra Rica	142.65	139	eP	PKiKP	21 34 44.8	-0.8
LIJA	Lijar	142.69	331	i P	PKPdf	21 34 38.0	-4.2
PMAFR	Mafra	142.70	337	ePKPdf	PKPdf	21 34 39.1	-2.9
LIS	Lisbon	142.85	336	ePKPdf	PKPdf	21 34 41.0	-1.3
LIS				AMS	AMS	22 44 53.9	
	comp=Z,2µm,17.6s						
LIS	Lisbon	142.85	336	ePKIKP	PKPdf	21 34 41.0	-1.3
SEUS	St. Eustatius	142.87	68	IAMs_20	IAMs_20	22 31 11.1	
	comp=Z,1µm,22.0s						
PBEJ	Beja	142.90	334	ePKPdf	PKPdf	21 34 39.5	-2.9
PNCL	Nicolau / Gran	143.11	335	ePKPdf	PKPbc	21 34 39.9	+0.3
SKI	Saint Kitts	143.14	68	IAMs_20	IAMs_20	22 31 09.1	
	comp=Z,1µm,22.0s						
MESJ	Messejana	143.21	335	ePKPdf	PKPbc	21 34 41.4	+1.5
MESJ				ePP	PP	21 37 52.1	-0.4
MESJ				AMS	AMS	22 40 58.8	
	comp=Z,1µm,18.5s						
MESJ	Messejana	143.21	335	ePKIKP	PKPbc	21 34 41.3	+1.4
MESJ				e		21 37 52.0	
MESJ	Messejana	143.21	335	ePKPdf	PKPbc	21 34 40.6	+0.7
PCVE	Castro Verde	143.31	334	ePKPdf	PKPbc	21 34 41.0	+0.8
PVAQ	Vaqueiros	143.36	334	IAMs_20	IAMs_20	22 42 22.8	
	comp=Z,2µm,21.0s						
PVAQ	Vaqueiros	143.36	334	ePKPdf	PKPbc	21 34 41.3	+1.0
PVAQ	Vaqueiros	143.36	334	eLR	LR	22 31 46.3	
	comp=Z,1µm,20.0s						
SFS	San Fernando	143.43	331	IAMs_20	IAMs_20	22 43 48.8	
	comp=Z,995nm,21.0s						
PBDV	Barranco-do-Ve	143.59	334	ePKPdf	PKPab	21 34 39.3	-0.8
PTEO	Sao Teotonio	143.67	335	ePKPdf	PKPbc	21 34 42.3	+1.1
MORF	Marmelete	143.84	335	ePKPdf	PKPbc	21 34 42.3	+0.5
MORF				AMS	AMS	22 41 10.2	
	comp=E,1µm,20.8s						
MORF	Marmelete	143.84	335	ePKIKP	PKPbc	21 34 42.3	+0.5
MORF	Marmelete	143.84	335	ePKPdf	PKPdf	21 34 44.1	-0.1
ANWB	Willy Bob	143.93	67	IAMs_20	IAMs_20	22 33 13.9	
	comp=Z,2µm,22.0s						
PFVI	Vila Bisbo	144.07	335	IAMs_20	IAMs_20	22 41 23.5	
	comp=Z,1µm,21.0s						
PFVI	Vila Bisbo	144.07	335	ePKPdf	PKiKP	21 34 47.5	-0.5
SALV	Santo Antonio	144.81	127	eP	PKPdf	21 34 47.4	+1.1
SPB	Sao Paulo	145.20	146	eP	PKiKP	21 34 48.9	-1.9
FDF	Fort de France	145.23	72	PKIKP	PKPdf	21 34 47.3	+0.2
FDF				MLR	MLR		
	comp=Z,1µm,20.0s						
FDF	Fort de France	145.23	72		PKPdf	21 34 47.3	+0.2
FDF				IAMs_20	IAMs_20	22 49 47.1	
	comp=Z,1µm,20.0s						
C2SB	Chapadao do Su	145.24	134	eP	PKPdf	21 34 48.2	+1.2
H07N1	FLORES T-PHASE	145.47	5	ePKiKP	PKiKP	21 34 49.9	-1.0
RTC	Rabat Centre	145.72	329	P	PKiKP	21 34 50.4	-1.1
	SNR=6.8						
H07S1	FLORES T-PHASE	145.77	6	ePKiKP	PKiKP	21 34 50.9	-0.6
VAO	Valinhos	145.93	146	eP	PKiKP	21 34 51.3	-1.1
ARF	Arif	146.18	323	P	PKPab	21 34 51.0	+0.9
	SNR=20						
SRBC	Serra Branca	146.30	1	ePKiKP	PKiKP	21 34 52.8	+0.2
PGRA	Graciosa	146.31	1	ePKiKP	PKiKP	21 34 51.6	-1.0
ITRB	Iturama	146.32	138	eP	PKiKP	21 34 53.1	-0.1
PARB	Paraibuna	146.38	148	eP	PKiKP	21 34 53.7	+0.4
ROSA	Rosais	146.61	2	ePKiKP	PKiKP	21 34 53.0	-0.2
PSCM	Serra do Cume	146.64	360	ePKiKP	PKiKP	21 34 53.1	-0.2
PTGA	Pitinga	146.69	99	PKPbc	PKPbc	21 34 51.2	-0.1
	comp=Z,40nm,0.8s,baz=263,slow=3.0,SNR=40						
PTGA	Pitinga	146.69	99		PKPbc	21 34 50.7	-0.6
PTGA				IAMs_20	IAMs_20	22 44 57.6	
	comp=Z,961nm,20.0s						
PTGA	Pitinga	146.69	99	eP	PKPbc	21 34 51.9	+0.6
ADH	Angra Heroismo	146.69	0	ePKiKP	PKiKP	21 34 53.0	-0.3
PMAN	Manadas	146.70	1	ePKiKP	PKiKP	21 34 53.1	-0.3
PICO	Pico	146.82	2	ePKiKP	PKiKP	21 34 53.9	+0.2
PCAN	Candelaria	146.86	2	ePKiKP	PKiKP	21 34 53.9	+0.2
CLDB	Colider	147.31	119	eP	PKPbc	21 34 51.9	-1.1
PSET	Sete Cidades	147.50	358	ePKiKP	PKPab	21 34 54.4	-0.5
ARAG	Araguaiana, MT	147.94	131	eP	PKPbc	21 34 55.5	+0.9
OUZM	OUZ	148.04	326	P	PKiKP	21 34 56.0	-0.6
	SNR=31						
PSMN	Pico do Norte,	148.28	357	ePKiKP	PKiKP	21 34 56.4	-0.3
OUK	Oukaimeden	148.42	327	P	PKiKP	21 34 58.0	+0.4
	SNR=29						
BSCB	Bom Sucesso	148.74	147	eP	PKPbc	21 34 56.4	-0.3
EAH	EAH	148.96	330	P	PKiKP	21 34 59.0	+0.7
	SNR=11						
IPMB	Ipameri, GO	148.97	138	eP	PKPbc	21 34 55.8	-1.5
TTIG	Tnine Tigouga,	149.24	327	P	PKiKP	21 34 59.0	-0.1
	SNR=16						
PMPST	Porto Santo, M	150.48	341	ePKPbc	PKiKP	21 35 02.3	+0.9
PMPST	Porto Santo, M	150.48	341	ePKPab	PKPab	21 35 05.3	-1.8
TOA0	Torodi Ar. Sit	150.49	288	P	PKPdf	21 34 56.2	+0.4
	SNR=32						
TORD	Torodi Ar. Bea	150.49	288	PKP	PKPdf	21 34 55.5	-0.3
	comp=Z,5.9nm,1.0s,baz=44,slow=1.7,SNR=18						
TORD				PKPbc	PKPbc	21 35 00.7	-0.4
	comp=Z,69nm,0.9s,baz=38,slow=1.5,SNR=29						
TORD	Torodi Ar. Bea	150.49	288	PKPdf	PKPdf	21 34 55.8	+0.1
PMPS	Porto Santo	150.50	341	ePKPdf	PKPdf	21 34 56.8	+1.5
PMPS	Porto Santo	150.50	341	ePKPab	PKPab	21 35 04.9	-2.2
BDFB	Brasilia	150.74	135	PKP	PKPdf	21 34 56.6	+0.4
	comp=Z,3.0nm,0.6s,baz=202,slow=2.8,SNR=2.7						
BDFB				PKPbc	PKiKP	21 35 02.4	-0.1
	comp=Z,64nm,0.8s,baz=190,slow=1.9,SNR=13						
BDFB	Brasilia	150.74	135	PKIKP	PKPdf	21 34 56.7	+0.4
BDFB				MLR	MLR		
	comp=Z,2µm,20.0s						
BDFB	Brasilia	150.74	135	IAMs_20	IAMs_20	22 40 57.6	
	comp=Z,2µm,20.0s						
PMOZ	Porto Moniz, M	150.99	343		PKiKP	21 35 03.9	+1.3
PMOZ	Porto Moniz, M	150.99	343	ePKPbc	PKPbc	21 35 01.5	-0.4
PMOZ	Porto Moniz, M	150.99	343	ePKPab	PKPab	21 35 06.4	-2.9
PMOZ	Porto Moniz, M	150.99	343	eLR	LR	22 34 21.1	
	comp=Z,609nm,18.0s						
PMAR	Madeira	150.99	342	ePKPbc	PKPbc	21 35 01.5	-0.6
PMAR	Madeira	150.99	342	ePKPab	PKPab	21 35 06.9	-2.5
FUL	Funchal	151.06	342	ePKPab	PKPab	21 35 06.2	-3.2
SJMB	Sao Joao De Ma	152.51	150	eP	PKPbc	21 35 02.8	-2.8
BSFB	Barra de Sao F	152.57	151	eP	PKPdf	21 35 01.1	+2.3
SMTB	Santa Maria do	155.29	124	eP	PKPdf	21 35 04.5	+1.7
KIC	Kosan Boka	157.69	274	eP	PKPdf	21 34 59.6	-6.3
	comp=Z,69nm,1.8s						
TIC	Toumodi	157.96	275	eP	PKPdf	21 35 00.7	-5.6
LIC	Lamto	157.98	274	eP	PKPdf	21 35 01.0	-5.3
	comp=Z,22nm,1.2s						
NBLI	Livramento-PB	164.14	142	eP	PKPdf	21 35 16.9	+3.9

TEH ***20*** *21:15:36.0,28.°43N×57.°23E,h8^{km},ML3.5*

THR ***20*** *21:15:36.0±0.3,28.°33N×57.°17E,h15^{km},ML3.4*

ISC 20 21:15:39.8±1.4,**28.°29N**±0.°04×**57.°27E**±0.°04,**h35**^{km},**n29,** σ**1.^{s}33**/30,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHNJ	Kahnooj	0.51	131	ePg	Pn	21 15 48.1	-2.6
KHNJ				eSg	Sn	21 15 58.1	-0.1
NIAN	Nian	0.82	208	ePg	Pn	21 15 55.1	+0.2
NIAN				e		21 16 10.5	
IBND	Bandar-abas	1.05	218	ePg	Pn	21 15 58.9	+0.8
IBND				e		21 16 17.6	
GENO	Geno	1.31	228	ePg	Pn	21 16 02.3	+0.5
GENO				e		21 16 26.2	
BNDS	Bandar-Abbas	1.31	228	ePg	Pn	21 15 59.7	-2.1
BNDS				IAML		21 16 22.7	
	comp=E,629nm,0.6s						
BNDS	Bandar-Abbas	1.31	228	ePg	Pn	21 15 59.7	-2.1
NGRK	Negar Kerman	1.43	341	ePg	Pn	21 16 00.7	-3.0
NGRK				e		21 16 21.3	
CHMN	Cheshme madani	1.59	8	ePg	Pn	21 16 03.3	-2.5
KRBR	Kerman	1.75	345	ePg	Pn	21 16 07.1	-0.8
KRBR				IAML		21 16 37.1	
	comp=N,388nm,0.5s						
KRBR	Kerman	1.75	345	ePg	Pn	21 16 07.1	-0.8
TVBK	TV Kerman	1.75	345	e	Pb	21 16 11.7	
TVBK				ePn	Pn	21 16 06.4	-1.6
KHGB	Koh Gabri	2.19	342	ePn	Pn	21 16 13.7	-0.3
KHGB				e		21 16 47.7	
LAR1	LAR	2.63	257	ePn	Pn	21 16 19.5	-0.4
LAR1				e		21 17 08.5	
JHRM	Jahrom	3.26	275	ePn	Pn	21 16 28.6	0.0
ZHSF	Zahedan	3.34	66	ePn	Pn	21 16 30.8	+1.1
ZHSF	Zahedan	3.34	66	ePn	Pn	21 16 30.8	+1.1
SZD1	Zahaedan-tmp	3.37	68	ePn	Pn	21 16 31.5	+1.4
LMD1	Lamerd	3.76	256	ePn	Pn	21 16 35.6	+0.3
IMEH	Mehriz	3.86	324	ePn	Pn	21 16 36.4	-0.5
NHDN	Nehbandan	3.93	37	ePn	Pn	21 16 37.7	0.0
NHDN				e		21 17 39.6	
IKOO	Kooshah	4.39	20	ePn	Pn	21 16 45.2	+1.0
TPRV	Parvadeh(Tabas	4.75	354	ePn	Pn	21 16 50.5	+1.4
ISAD	Sadrabad	4.77	320	ePn	Pn	21 16 50.1	+0.7
ITEG	Tejag	4.77	15	ePn	Pn	21 16 49.0	-0.4
IKAZ	Kazeroun	4.98	289	ePn	Pn	21 16 53.7	+1.3
IMON	Monand	5.31	22	ePn	Pn	21 16 57.1	+0.3
TKDS	Koohdasht(Taba	5.31	359	ePn	Pn	21 16 58.0	+1.2
AFRZ	Afriz	5.34	16	ePn	Pn	21 16 57.2	+0.1
IRAM	Ramesheh	5.50	311	ePn	Pn	21 16 58.9	-0.6

IDC ***20*** *21:27:37.9±0.9,5.°48S×153.°29E,h0^{km},mb3.9/13, mb1 4.1/14,mb1mx3.9/51,mbtmp3.9/14,ML2.1/1,Error ellipse: s-maj=19.4km s-min=15.4km az=64.0*

ISC 20 21:27:45.1±1.2,**5.°4S**±0.°1×**153.°1E**±0.°2,**h43**^{km},**n16,** σ**0.^{s}54**/16,**mb4.0**/13,**New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.47	315	Pg	Pn	21 28 08.9	-0.3
	110nm,0.3s,baz=221,slow=19,SNR=40						
KRVT				Lg	Lg	21 28 32.6	
	422nm,0.3s,baz=5.7,slow=21,SNR=15						
PMG	Port Moresby	7.10	235	Pn	Pn	21 29 26.8	+0.3
	1.8nm,0.3s,baz=41,slow=9.3,SNR=3.6						
WRA	Warramunga Arr	23.27	230	P	P	21 32 48.2	-1.1
	1.4nm,0.8s,baz=55,slow=10.0,SNR=4.6						
ASAR	Alice Springs	25.92	224	P	P	21 33 13.1	-0.4
	0.3nm,0.4s,baz=55,slow=8.9,SNR=5.9						
FITZ	Fitzroy Crossi	29.62	242	P	P	21 33 46.0	-0.6
	2.3nm,0.7s,baz=54,slow=8.7,SNR=5.4						
CMAR	Chiang Mai Arr	58.35	295	P	P	21 37 37.2	+0.7
	0.6nm,0.5s,baz=112,slow=4.9,SNR=6.3						
PETK	Petropavlovsk-	58.38	3	P	P	21 37 36.3	+0.2
	2.2nm,0.6s,baz=162,slow=7.4,SNR=4.2						
MA2	Magadan	64.76	359	P	P	21 38 18.8	-0.2
	1.8nm,0.3s,baz=157,slow=7.1,SNR=5.4						
SONM	Songino Array	66.94	328	P	P	21 38 33.8	+0.4
	0.3nm,0.5s,baz=122,slow=5.2,SNR=2.8						
SEY	Seymchan	68.11	360	P	P	21 38 40.3	+0.1
	0.8nm,0.3s,baz=146,slow=3.4,SNR=4.0						
MKAR	Makanchi Array	80.92	319	P	P	21 39 55.3	+0.3
	0.5nm,0.8s,baz=112,slow=6.7,SNR=4.1						
ZALV	Zalesovo Beam	81.77	326	P	P	21 39 59.1	-0.2
	1.3nm,0.6s,baz=107,slow=5.3,SNR=5.9						
ILAR	Eielson Array	82.58	22	P	P	21 40 03.2	-0.2
	0.3nm,0.7s,baz=239,slow=5.1,SNR=1.7						
KURBB	Kurchatov Arra	84.40	322	P	P	21 40 12.9	-0.1
	1.1nm,0.9s,baz=110,slow=3.8,SNR=6.0						
AAK	Ala-Archa	85.24	313	P	P	21 40 18.6	+0.9
	0.5nm,0.5s,baz=153,slow=6.8,SNR=4.8						
TORD	Torodi Ar. Bea	150.73	287	PKPbc	PKPbc	21 47 33.5	-0.3
	1.4nm,0.7s,baz=66,slow=1.9,SNR=6.5						

MOS ***20*** *21:32:57.5±1.0,9.°44S×114.°28E,h39^{km},mb5.4/23,Error ellipse: s-maj=10.2km s-min=6.0km az=114.6*

BJI ***20*** *21:32:57.0±0.0,9.°80S×114.°20E,h40^{km},mB5.3/42, mb5.2/65,Ms5.1/31,Ms7 4.9/30*

KLM ***20*** *21:33:00.0,9.°79S×114.°25E,h50^{km},mb5.0*

NEIC ***20*** *21:33:00.1±2.7,9.°65S±0.°06×114.°28E±0.°06,h51^{km}±4^{km}, mb5.0/80,Error ellipse: s-maj=9.0km s-min=8.1km az=190.0*

GCMT ***20*** *21:33:00.1±0.4,10.°06S±0.°02×114.°18E±0.°03,h36^{km}, MW5.1/83,Moment Tensor Solution. s36,c41; s83,c120; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.59±.33; $M_{\theta\theta}$-5.11±.19; $M_{\phi\phi}$0.51±.21; $M_{r\theta}$2.58±.15; $M_{\theta\phi}$0.06±.11; $M_{\phi r}$0.30±.21; Best double couple: $M_0$5.50400×10^{16} NP1:ϕ_s275.00000°,δ31.00000°,λ97.00000°. NP2: ϕ_s87.00000°,δ59.00000°,λ86.00000°. Principal axes: T 5.2530, Plg76.0000°, Azm345.0000°; N 0.4940, Plg4.0000°, Azm89.0000°; P -5.7540, Plg14.0000°, Azm180.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***20*** *21:33:01.5±2.2,9.°53S×114.°28E,h59^{km}±19^{km},mb4.6/41, mb1 4.6/45,mb1mx4.6/58,mbtmp4.9/45,ML4.8/4,MS4.6/6, Ms1 4.6/6,ms1mx4.0/43 Error ellipse: s-maj=11.9km s-min=8.8km az=46.0*

DJA ***20*** *21:33:02.1±0.2,10°S±2°×11°4E±°,h54^{km}±3^{km},M5.1/67, mb5.2/67,mB5.5/27,MLv5.5/24,Mw(mB)5.0/27*

ISC 20 21:33:01.6±0.7,**9.°63S**±0.°05×**114.°22E**±0.°04,**h66**^{km}±5^{km}, **n584,** σ**1.^{s}29**/570,**mb5.0**/102,**16C-2D,South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	1.16	357	P	Pn	21 33 20.6	-1.4
JAGI				S	Sn	21 33 38.8	+1.7
JAGI	Jajag, Banyuwa	1.16	357		Pn	21 33 21.2	-0.7
IGBI	Denpasar	1.22	48	P	Pn	21 33 22.5	-0.2
IGBI				S	Sn	21 33 41.1	+2.6
DNP	Denpasar	1.36	46	P	Pn	21 33 24.4	-0.2
DNP				S	Sn	21 33 45.4	+3.5
SRBI	Singaraja	1.82	33	P	Pn	21 33 31.5	+0.7
GRJI	Gresik	3.21	327	P	Pn	21 33 50.4	+0.8
PCJI	Pacitan	3.33	295	P	Pn	21 33 49.4	-1.9
PLAI	Plampang	3.60	77	P	Pn	21 33 56.1	+1.1
WOJI	Wonogiri, Jawa	3.72	298	P	Pn	21 33 55.1	-1.5
UGM	Wanagama	4.04	295	P	Pn	21 34 00.6	-0.4
UGM	Wanagama	4.04	295		Pn	21 33 59.3	-1.7
SMRI	Semarang	4.54	304	P	Pn	21 34 07.4	-0.5
SMRI	Semarang	4.54	304		Pn	21 34 08.1	+0.2
WBSI	Waikabubak, Su	5.10	91	P	Pn	21 34 18.1	+2.6
	4.7nm9µm580nm,0.6s						
WSI	Waingapu	5.99	91	P	Pn	21 34 29.5	+1.8
	20nm17µm1µm,0.6s						
BASI	Baing, Sumba	6.29	96	P	Pn	21 34 33.4	+1.6
	2.7nm3µm207nm,1.0s						
CISI	Cisompet, Garu	6.66	288	P	Pn	21 34 37.1	+0.1
	3.6nm9µm537nm,0.6s						
CISI	Cisompet, Garu	6.66	288		Pn	21 34 35.4	-1.6
LEM	Lembang	7.11	293	P	Pn	21 34 45.2	+2.1
	12nm,0.3s,baz=146,slow=9.9,SNR=8.7						
LEM				S	Sn	21 36 07.1	+4.5
	9.8nm,0.3s,baz=163,slow=19,SNR=1.4						
LEM	Lembang	7.11	293	P	Pn	21 34 44.1	+0.9
	0.6nm1µm139nm,0.8s						
KAPI	Kappang	7.15	50	P	Pn	21 34 43.8	+0.2
	19nm,0.3s,baz=229,slow=9.6,SNR=44						
KAPI				S	Sn	21 36 03.1	-0.4
	7.6nm,0.3s,baz=233,slow=20,SNR=1.6						
BKSI	Bulukumba	7.25	54	P	Pn	21 34 45.1	+0.1
	1.0nm3µm279nm,0.8s						
CNJI	Cibinong	7.39	288	P	Pn	21 34 46.8	0.0
	2.4nm4µm181nm,0.9s						
BNSI	Bone	7.82	49	P	Pn	21 34 55.3	+2.6
	1.0nm3µm295nm,1.0s						
SPSI	Sidrap Palu	7.88	45	P	Pn	21 34 55.2	+1.7
	0.4nm96nm,0.8s						
MMRI	Maumere	7.98	84	P	Pn	21 34 56.2	+1.3
	4µm471nm,1.0s						
MMRI	Maumere	7.98	84		Pn	21 34 53.2	-1.8
DBJI	Dramaga	8.01	292	P	Pn	21 34 56.7	+1.4
	0.7nm63nm,0.5s						
SKJI	Sukabumi	8.02	288	P	Pn	21 34 55.5	0.0
	2.2nm5µm372nm,0.6s						
TTSI	Tana Toraja	8.59	41	P	Pn	21 35 04.4	+1.1
	2µm149nm,0.8s						
BBSI	Bau Bau	9.24	64	P	Pn	21 35 14.5	+2.3
	547nm69nm,1.0s						
SMKI	Samarinda	9.60	18	P	Pn	21 35 19.7	+2.6
	340nm,1.3s						
SOEI	Soe	9.90	92	P	Pn	21 35 24.4	+3.0
	241nm,0.9s						
SOEI	Soe	9.90	92		Pn	21 35 18.9	-2.5
KASI	Kota Agung	10.47	292	P	Pn	21 35 27.9	-1.1
	2µm106nm,0.7s						
LWLI	Liwa	11.07	294	P	Pn	21 35 35.8	-1.6
	106nm,0.7s						
MDSI	Maura Dua	11.20	296	P	Pn	21 35 38.0	-1.0
	813nm28nm,0.8s						
APSI	Ampana	11.39	41	P	Pn	21 35 43.0	+1.5
	1µm152nm,1.0s						
MPSI	Mapaga	11.40	30	P	Pn	21 35 43.9	+2.1
	51nm,1.1s						
KSM	Kuching	11.70	340		Pn	21 35 48.1	+2.2
KSM	Kuching	11.70	340	P	Pn	21 35 48.0	+2.2
LUWI	Luwuk	12.05	45	P	Pn	21 35 52.6	+2.0
	77nm,1.1s						
SBUM	Sibu	12.17	350		Pn	21 35 55.0	+2.8
SBUM	Sibu	12.17	350	P	Pn	21 35 55.0	+2.8
MNAI	Manna	12.35	294	P	Pn	21 35 56.0	+1.3
	5µm340nm,0.7s						
MNAI	Manna	12.35	294		Pn	21 35 50.6	-4.0
MRSI	Marisa	12.65	38	P	Pn	21 36 00.7	+2.0
	71nm,0.6s						
GIRL	Giralia	12.94	180		Pn	21 35 53.9	-8.7
PSA00	Pilbara Seismi	13.04	156		Pn	21 35 54.7	-9.4
FITZ	Fitzroy Crossi	13.91	128	P	Pn	21 36 08.7	-7.0
	1.3nm,0.3s,baz=298,slow=7.9,SNR=14						
FITZ				S	Sn	21 38 33.4	-15
	2.1nm,0.3s,baz=111,slow=12,SNR=3.9						
FITZ	Fitzroy Crossi	13.91	128		Pn	21 36 08.9	-6.8
SANI	Sanana	13.91	58	P	Pn	21 36 17.6	+1.8
	184nm,0.9s						
KMSI	Cibinong	14.04	44	P	P	21 36 20.4	-2.9
	2µm142nm,0.7s						
NLAI	Namlea	14.28	64	P	Pn	21 36 22.6	+2.0
	130nm,0.9s						
KRJI	Kerinci	14.73	300	P	Pn	21 36 26.7	+0.1
	4µm397nm,0.8s						
AAI	Ambon	15.08	68	P	Pn	21 36 32.7	+1.7
	149nm,0.6s						
MYKOM	Kota Tinggi	15.35	317	P	Pn	21 36 35.7	+1.3
MYKOM	Kota Tinggi	15.35	317	P	P	21 36 37.0	-0.8
SDSI	Sungai Dareh	15.39	303	P	Pn	21 36 35.1	+0.2
	1µm48nm,0.7s						
KNRA	Kununurra	15.40	114		Pn	21 36 30.8	-4.3
KNRA				IAmb	IAmb	21 36 55.2	
	comp=Z,62nm,0.7s						
PPSI	Pulau Pagai	15.69	295	P	Pn	21 36 38.9	+0.2
	comp=Z,130nm,1.0s						
KKM	Kota Kinabalu	15.70	7	P	Pn	21 36 39.8	+0.7
MSAI	Masohi	15.88	68	P	P	21 36 43.1	-0.7
	comp=Z,28nm,0.6s						
LBMI	Labuha	15.95	57	P	P	21 36 44.8	+0.3
	comp=Z,243nm,1.0s						
PDSI	Padang	16.20	302	P	Pn	21 36 40.2	-5.1
BNDI	Bandanaira	16.37	73	P	P	21 36 50.2	+1.1
	comp=Z,34µmcomp=Z,1µm,0.8s						
TNTI	Ternate	16.68	52	P	P	21 36 53.7	+1.1
	comp=Z,102nm,1.2s						
TNTI	Ternate	16.68	52	P	Pn	21 36 51.6	+0.4
TNTI				IAmb	IAmb	21 37 08.5	
	comp=Z,78nm,0.9s						
MTN	Manton Dam	16.89	102	P	Pn	21 36 51.6	-2.3
MTN				IAmb	IAmb	21 37 09.9	
	comp=Z,98nm,1.1s						
SAUI	Saumlaki	16.96	86	P	P	21 36 55.3	-0.4
	comp=Z,774nm,0.8s						
SAUI	Saumlaki	16.96	86	P	Pn	21 36 51.4	-3.3
SISI	Saibi	17.16	298	P	Pn	21 36 51.8	-5.4
SKMP	Bagumbayan, Su	19.06	33	eP	Pn	21 37 20.6	+0.4
SIJI	Sorong	19.06	64	P	P	21 37 18.2	-0.6
	comp=Z,8.7nm,0.3s,baz=277,slow=6.2,SNR=66						
SIJI				S	S	21 40 49.9	-2.0
	comp=Z,0.6nm,0.3s,baz=253,slow=19,SNR=1.8						
FAKI	Fak Fak	19.11	71	P	P	21 37 17.3	-2.1
FAKI	Fak Fak	19.11	71	P	P	21 37 17.1	-2.3
FAKI				IAmb	IAmb	21 37 23.0	
	comp=Z,138nm,0.8s						
IPM	Ipoh	19.22	316	P	Pn	21 37 23.0	+0.8
MORW	Morawa	19.41	175	P	P	21 37 18.2	-4.3
RPSI	Rantau Prapat	19.55	308	P	P	21 37 23.2	-1.0
RPSI	Rantau Prapat	19.55	308	P	P	21 37 23.6	-0.6
PAGZ	Pagadian	19.62	28	eP	P	21 37 23.8	-1.1
PSI	Prapat	19.62	308	P	P	21 37 23.6	-1.5
	comp=Z,0.8nm,0.3s,baz=277,slow=16,SNR=2.4						
KCP	Kidapawan	19.76	34	⇓eP	Pn	21 37 27.5	-1.1
GSI	Gunungsitoli	19.82	302	IAmb	IAmb	21 37 56.2	
	comp=Z,104nm,1.0s						
KULM	Kulim	20.07	317	P	P	21 37 29.0	-0.8
KULM	Kulim	20.07	317	P	P	21 37 31.0	+1.2
BUKP	Musuan	20.48	32	eP	P	21 37 34.9	+0.7
RKPI	Ransiki, Papua	21.42	69	P	P	21 37 45.9	+1.5
	comp=Z,272nm,0.7s						
WB0	Warramunga Arr	21.93	120	P	P	21 37 48.5	-1.3
WB0				IAmb	IAmb	21 38 13.7	
	comp=Z,54nm,0.9s						
WRA	Warramunga Arr	21.96	120	P	P	21 37 49.2	-0.9
	comp=Z,5.8nm,0.5s,baz=294,slow=12,SNR=37						
WRA				S	S	21 41 42.5	-6.6
	comp=Z,6.0nm,1.0s,baz=292,slow=26,SNR=5.7						
WRA				LR	LR	21 46 00.6	
	comp=Z,2µm,21.7s,baz=10.0,slow=36						
WRA	Warramunga Arr	21.96	120	P	P	21 37 49.2	-0.9
WRA						21 41 42.5	
WRA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WRA	Warramunga Arr	21.96	120	P	P	21 37 49.2	-0.9
WRAB	Tennant Creek	21.96	120	ceP	P	21 37 50.0	-0.2
WRAB				pmax	pmax		
	comp=Z,29nm,1.7s						
WRAB	Tennant Creek	21.96	120	P	P	21 37 48.7	-1.5
WR0	Warramunga Arr	22.14	120	P	P	21 37 51.0	-1.1
WR0				IAmb	IAmb	21 38 10.9	
	comp=Z,50nm,0.9s						
MLSI	Meulaboh, Aceh	22.49	307	P	P	21 38 04.6	+8.7
LHMI	Lhok Sumawe	22.68	310	P	P	21 37 58.0	+0.1
	comp=Z,1µmcomp=Z,90nm,1.0s						
LHMI	Lhok Sumawe	22.68	310	P	P	21 37 56.6	-1.3
LHMI				IAmb	IAmb	21 38 09.4	
	comp=Z,85nm,1.0s						
NWAO	Narrogin (SRO)	23.35	174	P	P	21 38 10.8	+6.5
	comp=Z,8.3nm,0.5s,baz=23,slow=11,SNR=12						
NWAO				S	S	21 42 11.3	-0.8
	comp=Z,9.3nm,0.5s,baz=142,slow=19,SNR=2.7						
NWAO	Narrogin (SRO)	23.35	174	IAmb	IAmb	21 39 00.8	
	comp=Z,162nm,2.0s						
AS31	Alice Springs	23.41	129	P	P	21 38 04.0	-1.2
ASAR	Alice Springs	23.41	129	P	P	21 38 05.0	-0.1
	comp=Z,12nm,0.8s,baz=303,slow=8.6,SNR=71						
ASAR				S	S	21 42 15.1	+1.7
	comp=Z,4.6nm,1.0s,baz=314,slow=24,SNR=2.6						
ASAR				LR	LR	21 47 34.2	
	comp=Z,2µm,19.5s,baz=324,slow=37						
ASAR	Alice Springs	23.41	129	P	P	21 38 05.0	-0.1
ASAR	Alice Springs	23.41	129	P	P	21 38 04.4	-0.7
FORT	Forrest	24.67	150	P	P	21 38 16.4	0.0
WAMI	Wamena	24.97	78	P	P	21 38 37.0	+18
GENI	Genyem	26.71	76	P	P	21 38 37.7	+2.6
	comp=Z,119nm,1.0s						
PBKT	Sadao Pong	29.15	333	P	P	21 38 57.4	+0.6
CMAR	Chiang Mai Arr	31.73	332	P	P	21 39 20.6	+1.1
	comp=Z,29nm,0.8s,baz=164,slow=8.4,SNR=144						
CMAR	Chiang Mai Arr	31.73	332	P	P	21 39 19.8	+0.4
CMAR					PcP	21 42 12.0	+2.1
CHTO	Chiang Mai	32.03	332	P	P	21 39 23.0	+0.8
CHTO				pmax	pmax		
	comp=Z,19nm,0.9s						
CHTO	Chiang Mai	32.03	332	P	P	21 39 23.0	+0.8
CHTO				IAmb	IAmb	21 39 25.3	
	comp=Z,19nm,0.8s						
PMG	Port Moresby	32.48	92	P	P	21 39 26.2	0.0
	comp=Z,18nm,0.7s,baz=360,slow=6.1,SNR=8.4						
PMG	Port Moresby	32.48	92	ceP	P	21 39 26.5	+0.3
PMG				pmax	pmax		
	comp=Z,64nm,0.7s						
PMG	Port Moresby	32.48	92	IAmb	IAmb	21 39 29.4	

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            comp=Z,17nm,0.8s
CTA   Charters Tower   32.60 112   P      P       21 39 27.4 +0.2
            comp=Z,17nm,0.7s,baz=283,slow=11,SNR=18
STKA  Stephens Creek   33.66 135   P      P       21 39 36.3  0.0
            comp=Z,8.8nm,0.8s,baz=309,slow=8.8,SNR=10
STKA                               LR     LR      21 54 36.5
            comp=Z,1µm,19.2s,baz=322,slow=38
SIMRM Sittwe           36.28 325   IAmb   IAmb    21 40 01.3
            comp=Z,31nm,0.9s
KMI   Kunming          36.31 342   P      P       21 40 02.5 +3.1
KMI                                pP     pP      21 40 12.9 -1.5
KMI                                sP     pwP     21 40 18.3 -1.3
KMI                                pmax   pmax
            comp=Z,29nm,0.9s
KMI                                pmax   pmax
            comp=Z,1µm,9.9s
KMI                                LR     LR
            comp=Z,520nm,15.6s
KMI                                LR     LR
            comp=Z,710nm,16.4s
KMI                                LR     LR
            comp=Z,1µm,17.3s
KMI   Kunming          36.31 342   IAmb   IAmb    21 40 03.9
            comp=Z,32nm,1.1s
GYA   Guiyang          36.62 349⇑iP   P       21 40 02.6 +0.7
GYA                                pP     pP      21 40 16.3 -0.6
GYA                                PP     PnPn    21 41 31.3 +4.4
GYA                                S      S       21 45 47.5 +7.1
GYA                                sS     ScP     21 46 06.4 +1.3
GYA                                pmax   pmax
            comp=Z,20nm,1.2s
GYA                                pmax   pmax
            comp=Z,120nm,5.0s
GYA                                LR     LR
            comp=Z,460nm,17.6s
GYA                                LR     LR
            comp=Z,510nm,18.4s
GYA                                LR     LR
            comp=Z,420nm,17.8s
PALK  Pallekele        37.38 296   P      P       21 40 08.5 +0.1
            comp=Z,8.7nm,0.7s,baz=122,slow=7.8,SNR=14
PALK  Pallekele        37.38 296   P      P       21 40 07.6 -0.9
PALK                               IAmb   IAmb    21 40 26.1
            comp=Z,19nm,1.0s
KRVT  Keravat (AS076   37.88  85   LR     LR      21 59 45.5
            comp=Z,426nm,18.8s,baz=313,slow=42
GUMO  Guam             38.18  53   P      P       21 40 13.5 -1.5
            comp=Z,112nm,0.7s,baz=151,slow=12,SNR=5.7
GUMO  Guam             38.18  53   P      P       21 40 13.6 -1.5
GUMO                               pmax   pmax
            comp=Z,285nm,1.3s
ENH   Enshi            39.94 354   IAmb   IAmb    21 40 31.3
            comp=Z,25nm,0.8s
WHN   Wuhan            39.95   0   P      P       21 40 30.9 +1.3
H08S2 Diego Garcia H   41.29 269   T      T       22 24 32.1
            baz=94,slow=74
H08S3 Diego Garcia H   41.30 269   T      T       22 24 31.9
            baz=94,slow=74
H08S1 Diego Carcia H   41.30 269   T      T       22 24 41.7
            baz=94
CD2   Chengdu          41.54 346⇑iP   P       21 40 43.1 +0.2
CD2                                pmax   pmax
            comp=Z,50nm,0.6s
NJ2   Nanjing          41.69   6  eP      P       21 40 45.3 +1.4
NJ2                                pmax   pmax
            comp=Z,20nm,0.5s
XAN   Xi'an            43.72 354   P      P       21 41 00.9 +0.4
XAN                                pP     pP      21 41 13.6 -2.2
XAN                                pmax   pmax
            comp=Z,27nm,1.1s
XAN                                pmax   pmax
            comp=Z,290nm,6.7s
XAN                                LR     LR
            comp=Z,640nm,13.1s
XAN                                LR     LR
            comp=Z,350nm,16.3s
XAN                                LR     LR
            comp=Z,710nm,19.5s
XAN   Xi'an            43.72 354   P      P       21 41 00.4 -0.1
XAN                                pmax   pmax
            comp=Z,21nm,0.8s
XAN   Xi'an            43.72 354   P      P       21 41 00.3 -0.1
XAN                                IAmb   IAmb    21 41 01.6
            comp=Z,22nm,0.8s
HYB   Hyderabad        44.33 307  i P     P       21 41 04.0 -1.6
ODAN  Odare            44.66 325  eP      P       21 41 08.4 +0.1
            comp=Z,207nm,0.9s
TAPN  Taplejung        44.86 326  eP      P       21 41 10.4 +0.4
            comp=Z,237nm,1.0s
HNR   Honiara          45.07  94   P      P       21 41 13.1 +1.6
            comp=Z,48nm,0.4s,baz=214,slow=1.4,SNR=6.7
HNR   Honiara          45.07  94   P      P       21 41 13.4 +1.9
HNR                                pmax   pmax
            comp=Z,98nm,0.9s
HNR   Honiara          45.07  94   P      P       21 41 13.4 +1.9
RAMN  Ramite           45.18 324  eP      P       21 41 12.6 +0.2
            comp=Z,144nm,1.1s
JIRN  Jiri             45.95 325  eP      P       21 41 18.9 +0.2
            comp=Z,347nm,0.9s
GUN   Gumba            46.32 324  eP      P       21 41 21.7 +0.1
            comp=Z,214nm,0.8s
PKI   Pulchoki         46.34 324  eP      P       21 41 21.3 -0.4
            comp=Z,89nm,0.9s
PKIN  Phulchoki        46.35 324  eP      P       21 41 21.2 -0.5
            comp=Z,60nm,0.8s
LZH   Lanzhou          46.52 348  eP      P       21 41 23.6 +0.9
LZH                                pP     pP      21 41 34.5 -3.7
LZH                                sP     pwP     21 41 41.8 -1.3
LZH                                pmax   pmax
            comp=Z,91nm,1.0s
LZH                                pmax   pmax
            comp=Z,110nm,4.3s
LZH                                LR     LR
            comp=Z,540nm,14.3s
LZH                                LR     LR
            comp=Z,650nm,13.6s
LZH                                LR     LR
            comp=Z,750nm,15.6s
DMN   Daman            46.54 323  eP      P       21 41 23.1 -0.1
            comp=Z,197nm,0.9s
KKN   Kakani           46.58 324  eP      P       21 41 23.2 -0.2
            comp=Z,120nm,1.0s
GKN   Gorkha           47.11 323  eP      P       21 41 27.3 -0.2
DANN  Dangsing         47.89 323  eP      P       21 41 33.3 -0.4
            comp=Z,239nm,0.8s
KSAR  Wonju Array Be   48.55  15   P      P       21 41 38.8 +0.6
KSAR  Wonju Array Be   48.55  15   P      P       21 41 38.8 +0.6
KSRS  Korea Array      48.57  15   P      P       21 41 38.2 -0.2
            comp=Z,8.1nm,0.9s,baz=197,slow=6.8,SNR=12
KSRS                               PcP    PcP     21 43 04.7 +1.4
            comp=Z,3.5nm,0.8s,baz=181,slow=2.9,SNR=4.7
BJT   Baijiatuau       49.43   2   IAmb   IAmb    21 41 46.0
            comp=Z,18nm,0.9s
BJI   Beijing          49.45   2   P      P       21 41 45.1  0.0
BJI                                pP     pP      21 41 57.1 -3.6
BJI                                pmax   pmax
            comp=Z,20nm,1.0s
BTO   Baotou           50.14 356  eP      P       21 41 51.5 +1.0
HHC   Hu-ho-hao-te     50.29 357  eP      P       21 41 51.8 +0.2
HHC                                sP     pwP     21 42 12.9 +0.5
HHC                                pmax   pmax
            comp=Z,110nm,1.0s
HHC                                pmax   pmax
            comp=Z,390nm,5.1s
HHC                                LR     LR
            comp=Z,1µm,15.7s
HHC                                LR     LR
            comp=Z,620nm,15.1s
HHC                                LR     LR
            comp=Z,1µm,14.7s
GTA   Gaotai           50.60 346 ⇑P     P       21 41 54.8 +0.8
GTA                                pP     pP      21 42 02.1 -7.6
GTA                                PcP    PcP     21 43 12.9 +2.0
GTA                                ScP    ScP     21 47 06.3 +4.9
GTA                                ScS    ScS     21 51 42.3 +3.2
GTA                                pmax   pmax
            comp=Z,22nm,1.2s
MAT   Matsushiro       51.17  25   P      P       21 41 55.9 -2.3
MJAR  Matsushiro Arr   51.17  25   P      P       21 41 56.6 -1.7
            comp=Z,7.6nm,0.7s,baz=202,slow=7.8,SNR=17
MJAR                               PcP    PcP     21 43 14.1 +1.1
            comp=Z,7.2nm,0.8s,baz=195,slow=4.6,SNR=6.9
MJAR  Matsushiro Arr   51.17  25   P      P       21 41 56.4 -1.9
MJAR                                      PcP     21 43 13.2 +0.3
CN2   Changchun        54.15  10  eP      P       21 42 18.6 -1.5
CN2                                PcP    PcP     21 43 24.1 +0.2
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CN2                                LR     LR
            comp=Z,400nm,17.0s
CN2                                LR     LR
            comp=Z,700nm,17.0s
CN2                                LR     LR
            comp=Z,600nm,18.0s
MSHR  Mys Shultsa      54.22  15  i P     P       21 42 20.9 +0.3
MDJ   Mudanjiang       55.76  13   P      P       21 42 30.8 -0.9
MDJ                                pmax   pmax
            comp=Z,44nm,0.8s
USA0B Ussuriysk Arra   55.95  15  i P     P       21 42 31.6 -1.4
USRK  Ussuriysk Ar.    55.95  15   P      P       21 42 32.4 -0.6
            comp=Z,34nm,0.8s,baz=189,slow=6.7,SNR=78
USRK  Ussuriysk Ar.    55.95  15   P      P       21 42 31.8 -1.2
ULN   Ulaanbaatar      57.60 354ceP     P       21 42 44.6 -0.2
ULN                                pmax   pmax
            comp=Z,52nm,1.3s
ULN   Ulaanbaatar      57.60 354   P      P       21 42 45.1 +0.2
SONM  Songino Array    57.63 354   P      P       21 42 45.3 +0.2
            comp=Z,25nm,0.8s,baz=176,slow=8.5,SNR=174
SONM                               PcP    PcP     21 43 38.2 +0.7
            comp=Z,7.3nm,0.8s,baz=168,slow=5.4,SNR=4.7
SONM  Songino Array    57.63 354   P      P       21 42 44.5 -0.6
NIL   Nilore           58.04 320   P      P       21 42 47.0 -1.1
NIL                                pmax   pmax
            comp=Z,18nm,0.8s
NIL   Nilore           58.04 320   P      P       21 42 47.0 -1.1
NIL                                IAmb   IAmb    21 43 03.4
            comp=Z,18nm,0.8s
WMQ   Urumqi           58.41 338  eP      P       21 42 51.1 +0.6
WMQ                                sP     pP      21 43 10.8 +4.4
WMQ                                PcP    PcP     21 43 40.9 +0.3
WMQ                                pmax   pmax
            comp=Z,21nm,0.9s
WMQ                                pmax   pmax
            comp=Z,110nm,6.5s
WMQ                                LR     LR
            comp=Z,410nm,18.9s
WMQ                                LR     LR
            comp=Z,680nm,19.1s
WMQ                                LR     LR
            comp=Z,580nm,19.1s
HIA   Hailar           58.85   4   IAmb   IAmb    21 42 53.6
            comp=Z,15nm,1.0s
RPZ   Rata Peaks       59.62 135   P      P       21 42 59.9 +1.0
            comp=Z,15nm,1.0s,baz=126,slow=7.1,SNR=4.5
RPZ   Rata Peaks       59.62 135          pP      21 43 13.6 -1.4
KSH   Kashi            60.42 327   P      P       21 43 03.6 -0.9
KSH                                sP     pP      21 43 21.8 +1.0
KSH                                PcP    PcP     21 43 47.4 -1.5
KSH                                PcS    PcS     21 47 45.8 -5.7
KSH                                S      S       21 51 12.4 -2.5
KSH                                SS     SS      21 55 12.4 -1.6
KSH                                pmax   pmax
            comp=Z,20nm,0.8s
KSH                                pmax   pmax
            comp=Z,190nm,4.8s
KSH                                LR     LR
            comp=Z,220nm,8.2s
KSH                                LR     LR
            comp=Z,270nm,13.3s
KSH                                LR     LR
            comp=Z,1µm,17.9s
ZAK   Zakamensk        60.52 352  eP      P       21 43 04.5 -0.5
ZAK                                pmax   pmax
            comp=Z,11nm,1.2s
KLR   Kul'dur          60.60  13   P      P       21 43 04.3 -1.1
            comp=Z,5.1nm,0.6s,baz=204,slow=4.3,SNR=18
KBL   Kabul            61.32 318   P      P       21 43 10.0 -0.9
            SNR=5.5
KBL   Kabul            61.32 318   P      P       21 43 10.0 -0.9
KBL   Kabul            61.32 318   P      P       21 43 10.0 -0.9
TLY   Talaya           61.74 353   P      P       21 43 13.7 +0.6
            comp=Z,12nm,0.9s,baz=221,slow=4.9,SNR=17
TLY   Talaya           61.74 353c iP     P       21 43 13.5 +0.4
TLY                                pmax   pmax
            comp=Z,17nm,1.0s
TLY   Talaya           61.74 353   P      P       21 43 13.7 +0.6
TLY                                IAmb   IAmb    21 43 14.8
            comp=Z,22nm,1.1s
YSS   Yuzh-Sakhalins   61.81  22  eP      P       21 43 13.3 -0.3
YSS                                pmax   pmax
            comp=Z,20nm,1.3s
MOY   Mondy            62.11 351  eP      P       21 43 16.2 +0.5
MOY                                pmax   pmax
            comp=Z,40nm,1.6s
IRK   Irkutsk          62.22 353  eP      P       21 43 14.1 -2.2
IRK                                pmax   pmax
            comp=Z,32nm,1.8s
KZA   Kyzart           62.63 328   P      P       21 43 20.2 +0.5
            SNR=21
MK31  Makanchi Array   62.99 336   IAmb   IAmb    21 43 22.7
            comp=Z,13nm,0.9s
MKAR  Makanchi Array   62.99 336   P      P       21 43 21.6  0.0
            comp=Z,10nm,0.7s,baz=146,slow=7.7,SNR=108
MKAR  Makanchi Array   62.99 336   P      P       21 43 20.4 -1.2
UCH   Uchtor           63.12 328   P      P       21 43 22.7 -0.3
            SNR=8.6
MAKZ  Makanchi         63.13 336   P      P       21 43 22.5 +0.1
MAKZ                               pmax   pmax
            comp=Z,10.0nm,1.0s
MAKZ  Makanchi         63.13 336   P      P       21 43 22.5 +0.1
MAKZ                               IAmb   IAmb    21 43 23.5
            comp=Z,9.6nm,0.9s
GRNR  Gornyy           63.17  16⇑iP     P       21 43 22.6  0.0
GRNR                               pmax   pmax
            comp=Z,10.0nm,0.9s
GRNR                               MLR    MLR
            comp=Z,300nm,15.0s
KBK   Karagaybulak     63.20 328   P      P       21 43 23.9 +0.6
            SNR=29
AAK   Ala-Archa        63.42 328   P      P       21 43 25.1 +0.5
            comp=Z,10nm,0.8s,baz=140,slow=7.1,SNR=43
AAK   Ala-Archa        63.42 328   P      P       21 43 25.1 +0.5
            SNR=14
AAK   Ala-Archa        63.42 328ceP     P       21 43 25.4 +0.7
AAK                                pmax   pmax
            comp=Z,15nm,0.8s
AAK   Ala-Archa        63.42 328   P      P       21 43 25.2 +0.5
AAK                                IAmb   IAmb    21 43 39.2
            comp=Z,20nm,0.9s
WSAR  Wadi Sarin       63.43 302   P      P       21 43 25.0 +0.1
            comp=Z,9.9nm,0.8s,baz=192,slow=6.2,SNR=9.9
FRU1  Bishkek          63.47 328   IAmb   IAmb    21 43 39.2
            comp=Z,16nm,0.8s
AML   Almayashu        63.49 327   P      P       21 43 25.5 +0.1
            SNR=20
DGZ   Jazzator, Alta   63.57 341c iP     P       21 43 26.0 +0.5
EKS2  Erkin-Say        63.81 328   P      P       21 43 27.9 +0.7
            SNR=35
SMDO  Samad            63.84 302   P      P       21 43 27.5 -0.3
            SNR=6.9
USP   Ospenovka        63.87 329   P      P       21 43 27.5 +0.1
            SNR=9.9
ZEA   Zeya             64.09   9  eP      P       21 43 28.2 -0.4
ZEA                                pmax   pmax
            comp=N,47nm,1.0s
ZEA                                pmax   pmax
            comp=E,24nm,1.0s
ZEA                                pmax   pmax
            comp=Z,64nm,1.0s
HOQ   Hoqain           64.67 302   P      P       21 43 33.2 +0.1
            SNR=6.3
OPO   Ambohidratompo   65.32 254   P      P       21 43 39.0 +1.4
            comp=Z,2.0nm,0.6s,baz=97,slow=8.1,SNR=2.4
SOHO  SOHO             65.55 302   P      P       21 43 39.0 +0.3
            SNR=5.4
WHFO  Wadi Hawf        65.66 295   P      P       21 43 38.5 -1.1
            SNR=6.1
KK31  Karatay Array    65.87 326   IAmb   IAmb    21 43 54.8
            comp=Z,16nm,1.4s
KKAR  Karatay Array    65.87 326   P      P       21 43 39.8 -0.6
KKAR  Karatay Array    65.87 326   P      P       21 43 39.8 -0.6
KKAR  Karatay Array    65.87 326   IAmb   IAmb    21 43 54.8
            comp=Z,16nm,1.4s
ABTO  Aybut            65.90 294   P      P       21 43 40.7 -0.5
            SNR=12
UOSS  Minazif          66.15 303   P      P       21 43 42.1 -0.5
UOSS                               IAmb   IAmb    21 43 42.8
            comp=Z,11nm,0.9s
ASHO  Ashiyiah         66.16 302   P      P       21 43 42.7 -0.1
            SNR=11
BOD   Bodaibo          67.22 360  eP      P       21 43 48.2 -0.4
BOD                                pmax   pmax
            comp=Z,33nm,1.1s
KURBB Kurchatov Arra   67.55 336   P      P       21 43 50.7 -0.1
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            comp=Z,5.1nm,0.9s,baz=152,slow=5.4,SNR=23
KURK  Kurchatov        67.58 336ceP     P       21 43 50.3 -0.8
KURK                               pmax   pmax
            comp=Z,17nm,1.3s
KURK  Kurchatov        67.58 336   P      P       21 43 50.9 -0.2
KURK                               IAmb   IAmb    21 44 05.1
            comp=Z,14nm,0.9s
ZALV  Zalesovo Beam    68.06 342   P      P       21 43 53.2 -0.8
            comp=Z,9.7nm,0.7s,baz=134,slow=4.3,SNR=26
GEYT  Alibeck          70.55 316   P      P       21 44 10.5 +0.6
            comp=Z,11nm,0.9s,baz=155,slow=4.2,SNR=23
GEYT  Alibeck          70.55 316   P      P       21 44 10.4 +0.6
GYA0B ALIBECK ARRAY    70.55 316   IAmb   IAmb    21 44 28.5
            comp=Z,24nm,0.9s
VNDA  Vanda            72.13 170   P      P       21 44 19.7 +1.0
            comp=Z,2.1nm,0.9s,baz=281,slow=3.9,SNR=5.5
VNDA                               LR     LR      22 12 52.2
            comp=Z,549nm,20.8s,baz=347,slow=33
VNDA  Vanda            72.13 170   P      P       21 44 19.1 +0.4
VNDA                               pmax   pmax
            comp=Z,6.0nm,1.0s
VNDA  Vanda            72.13 170   P      P       21 44 19.1 +0.4
YAK   Yakutsk          72.46   8   P      P       21 44 20.4 -0.3
            comp=Z,33nm,0.7s,baz=206,slow=1.2,SNR=20
YAK   Yakutsk          72.46   8   P      P       21 44 20.1 -0.6
YAK                                pmax   pmax
            comp=Z,81nm,0.8s
YAK   Yakutsk          72.46   8   P      P       21 44 20.1 -0.6
PETK  Petropavlovsk-   72.62  26   P      P       21 44 21.9 -0.1
            comp=Z,19nm,0.9s,baz=193,slow=6.1,SNR=20
BVAR  Borovoye Array   72.71 334   P      P       21 44 22.5  0.0
            comp=Z,7.0nm,0.6s,baz=139,slow=8.2,SNR=39
BRVK  Borovoye         72.78 334ceP     P       21 44 20.9 -2.0
BRVK                               pmax   pmax
            comp=Z,16nm,1.3s
BRVK  Borovoye         72.78 334   P      P       21 44 22.9  0.0
BRVK                               IAmb   IAmb    21 44 34.5
            comp=Z,21nm,1.3s
RAYN  Ar Rayn          74.78 298   P      P       21 44 35.0 -0.3
RAYN                               pmax   pmax
            comp=Z,10.0nm,0.9s
RAYN  Ar Rayn          74.78 298   P      P       21 44 35.0 -0.3
MA2   Magadan          74.93  18ceP     P       21 44 35.3  0.0
MA2                                pmax   pmax
            comp=Z,53nm,1.3s
MA2   Magadan          74.93  18   P      P       21 44 35.5 +0.2
MA2                                IAmb   IAmb    21 44 36.4
            comp=Z,30nm,0.8s
ABKAR Akbulak array    75.43 327   P      P       21 44 38.4  0.0
SYO   Syowa Base       75.57 201⇑iP     P       21 44 40.0 +1.1
KMBO  Kilima Mbogo     76.97 271   P      P       21 44 49.4 +1.1
            comp=Z,3.6nm,0.8s,baz=58,slow=8.1,SNR=13
KMBO  Kilima Mbogo     76.97 271   P      P       21 44 49.6 +1.4
KMBO                               pmax   pmax
            comp=Z,6.0nm,0.9s
KMBO  Kilima Mbogo     76.97 271   P      P       21 44 49.6 +1.4
AKTO  Aktyubinsk       77.12 327   P      P       21 44 48.4 +0.4
            comp=Z,4.3nm,0.7s,baz=124,slow=2.7,SNR=16
SEY   Seymchan         78.06  17  i P     P       21 44 53.2 +0.3
SVE   Sverdlovsk       79.46 333⇓eP     P       21 45 01.0 +0.3
SVE                                pmax   pmax
            comp=Z,33nm,1.1s
ARU   Arti             80.17 332   P      P       21 45 04.7 +0.2
            comp=Z,3.7nm,0.9s,baz=157,slow=3.6,SNR=13
ARU   Arti             80.17 332ceP     P       21 45 04.5 -0.1
ARU                                pmax   pmax
            comp=Z,28nm,1.3s
ARU   Arti             80.17 332   P      P       21 45 04.6  0.0
ARU                                IAmb   IAmb    21 45 05.9
            comp=Z,30nm,1.2s
QSPA  South Pole Qui   80.37 180   P      P       21 45 06.5 +0.7
            comp=Z,8.3nm,1.1s,baz=191,slow=0.4,SNR=9.5
QSPA  South Pole Qui   80.37 180   P      P       21 45 05.9 +0.1
QSPA                               IAmb   IAmb    21 45 55.2
            comp=Z,18nm,1.1s
NRIK  Noril'sk         80.95 351   P      P       21 45 08.4  0.0
            comp=Z,18nm,1.3s,baz=144,slow=5.6,SNR=13
TBLG  Delisi           81.47 315   IAmb   IAmb    21 45 28.0
            comp=Z,18nm,0.9s
TIXI  Tiksi            81.69   5   P      P       21 45 11.8 -0.6
            comp=Z,20nm,0.8s,baz=162,slow=2.8,SNR=66
TIXI  Tiksi            81.69   5c iP     P       21 45 11.6 -0.8
TIXI                               pmax   pmax
            comp=Z,26nm,1.0s
TIXI  Tiksi            81.69   5   P      P       21 45 11.1 -1.3
TIXI                               IAmb   IAmb    21 45 12.8
            comp=Z,30nm,1.0s
AKH   Akhalkalaki      82.23 314   IAmb   IAmb    21 45 38.6
            comp=Z,15nm,1.0s
ZEI   Tsey             82.42 316  eP      P       21 45 18.0 +0.9
ZEI                                pmax   pmax
            comp=Z,14nm,0.8s
NCK   Nalchik          82.88 316  i P     P       21 45 19.3 +0.1
NCK                                pmax   pmax
            comp=Z,9.0nm,1.0s
NEY   Neytrino         83.39 316  i P     P       21 45 21.9 -0.2
NEY                                pmax   pmax
            comp=Z,3.0nm,1.0s
KBZ   Khabaz           83.43 316   P      P       21 45 22.8 +0.8
            comp=Z,4.8nm,0.9s,baz=104,slow=6.4,SNR=6.7
MBAR  Mbarara          83.48 270   P      P       21 45 24.9 +1.7
MBAR                               pmax   pmax
            comp=Z,11nm,0.9s
MBAR  Mbarara          83.48 270   P      P       21 45 24.9 +1.7
MBAR                               IAmb   IAmb    21 45 25.5
            comp=Z,11nm,0.9s
KIV   Kislovodsk       83.65 316  eP      P       21 45 23.0 -0.3
KIV                                pmax   pmax
            comp=Z,28nm,1.1s
LSZ   Lusaka           83.72 256   P      P       21 45 25.3 +1.0
LSZ                                pmax   pmax
            comp=Z,8.0nm,0.7s
LSZ   Lusaka           83.72 256   P      P       21 45 25.3 +1.0
BOSA  Boshof           84.56 242   P      P       21 45 29.6 +1.2
            comp=Z,3.5nm,0.7s,baz=94,slow=5.5,SNR=4.1
BOSA                               LR     LR      22 19 32.3
            comp=Z,520nm,19.1s,slow=33
BOSA  Boshof           84.56 242   P      P       21 45 29.6 +1.2
BOSA                               pmax   pmax
            comp=Z,19nm,1.3s
BOSA  Boshof           84.56 242   IAmb   IAmb    21 45 47.8
            comp=Z,19nm,1.3s
KIRV  Kirov            85.51 332   P      P       21 45 32.7 +0.6
            comp=Z,45nm,0.9s,baz=332,slow=0.4,SNR=21
SOC   Sochi            85.57 315  eP      P       21 45 31.7 -1.1
SOC                               eS      S       21 55 53.2 -6.4
SOC                               eSS     SS      22 01 33.2 -3.8
SOC                                pmax   pmax
            comp=Z,42nm,0.8s
SOC                                MLR    MLR
            comp=Z,762nm,19.0s
BILL  Bilibino         85.75  17  eP      P       21 45 32.9 -0.3
BILL                              e               21 48 53.0
BILL                              ePPP    PPP     21 50 43.5
BILL                               pmax   pmax
            comp=Z,5.0nm,1.0s
BILL  Bilibino         85.75  17   P      P       21 45 33.2  0.0
VRH   Novokhopyorsk    86.72 323  eP      P       21 45 38.2 -0.1
VRH                                pmax   pmax
            comp=Z,70nm,0.9s
VSR   Storozhevoye     88.24 323  i P     P       21 45 43.6 -2.0
VSR                                pmax   pmax
            comp=Z,121nm,0.9s
PRGR  Permogore        88.52 334  eP      P       21 45 43.9 -2.8
PRGR                               pmax   pmax
            comp=Z,19nm,1.0s
LPSR  Galich'ya Gora   88.80 324  eP      P       21 45 48.4 +0.2
LPSR                               pmax   pmax
            comp=Z,70nm,0.9s
BR131 Keskin Array S   88.94 310  i P     P       21 45 49.4  0.0
BRTR  Keskin Array B   88.94 310   P      P       21 45 49.6 +0.3
            comp=Z,11nm,0.8s,baz=132,slow=5.9,SNR=45
BRTR  Keskin Array B   88.94 310   P      P       21 45 48.7 -0.7
SNAA  Sanae            89.09 196   P      P       21 45 48.6 -0.9
MOS   Moscow           90.45 327  eP      P       21 45 55.2 -0.6
OBN   Obninsk          90.86 326   P      P       21 45 58.1 +0.4
            comp=Z,2.2nm,0.6s,baz=72,slow=16,SNR=5.3
OBN   Obninsk          90.86 326  eP      P       21 45 57.8 +0.1
OBN                               e               21 49 33.0
OBN                               ePPP    PPP     21 51 32.2
OBN                                pmax   pmax
            comp=Z,16nm,0.9s
OBN                                MLR    MLR
            comp=Z,876nm,19.0s
OBN   Obninsk          90.86 326   P      P       21 45 58.2 +0.5
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KLMR	Klimovskoe	91.01	332	*e*P	P	21 45 54.1	-4.2
KLMR				pmax	pmax		
	comp=Z,40nm,1.5s						
KLMR	Klimovskoe	91.01	332	*e*Pdif	P	21 45 54.1	-4.2
KLMR				AMP		21 46 00.9	
	comp=Z,40nm,1.5s						
TMCR	Tamitsa	92.65	335	*e*P	P	21 46 05.2	-0.7
TMCR				pmax	pmax		
	comp=Z,12nm,0.8s						
AKASG	Malin Array Be	94.22	321	P	P	21 46 12.9	-0.5
	comp=Z,3.8nm,0.8s,baz=79,slow=4.9,SNR=19						
AKASG				PP	PP	21 49 59.0	-2.0
	comp=Z,0.2nm,0.3s,baz=88,slow=6.0,SNR=4.7						
AKASG	Malin Array Be	94.22	321	P	P	21 46 13.5	+0.1
AKASG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
AKASG	Malin Array Be	94.22	321	P	P	21 46 13.4	+0.1
AKBB	Malin Array Si	94.22	321	P	P	21 46 12.6	-0.8
AKBB				pmax	pmax		
	comp=Z,9.0nm,0.9s						
AKBB	Malin Array Si	94.22	321	P	P	21 46 12.6	-0.8
AKBB				IAmb	IAmb	21 46 13.9	
	comp=Z,8.9nm,0.8s						
FINES	FINESS Array B	97.50	331	P	Pdif	21 46 28.4	+0.3
	comp=Z,10nm,0.7s,baz=97,slow=6.0,SNR=18						
FINES				PKiKP	PKiKP	21 51 03.7	+1.3
	comp=Z,5.5nm,1.1s,baz=122,slow=1.8,SNR=3.5						
ARCES	ARCESS Array B	98.50	339	P	P	21 46 31.7	-0.7
	comp=Z,5.5nm,1.0s,baz=116,slow=8.2,SNR=4.2						
IMAR	Indian Mountai	99.55	25		Pdif	21 46 37.6	+0.4
TOLK	Toolik Lake Re	101.17	22	P	Pdif	21 46 44.9	+0.5
	baz=272						
HDA	Harding Lake	102.44	26	P	Pdif	21 46 50.0	-0.1
	baz=274						
BCAR	Beaver Creek A	104.87	27		Pdif	21 47 02.5	+1.5
TORD	Torodi Ar. Bea	113.93	280	PKiKP	PKiKP	21 51 34.3	+0.2
	comp=Z,1.5nm,0.7s,baz=24,slow=2.3,SNR=8.1						
YKA	Yellowknife Ar	116.66	23	PKP	PKiKP	21 51 38.6	+0.6
	comp=Z,2.6nm,0.8s,baz=307,slow=1.5,SNR=36						
K02D	Willamette Mer	119.92	46	P	PKiKP	21 51 45.2	+0.2
	baz=285						
J04D	Umpqua Nationa	120.86	45	P	PKiKP	21 51 47.2	+0.1
	baz=287						
J05D	Fort Rock, OR	121.46	45	P	PKiKP	21 51 48.8	+0.6
	baz=288						
M04C	Macdoel	121.47	47	P	PKiKP	21 51 48.2	0.0
	baz=286						
MSO	Missoula	124.92	39	P	PKiKP	21 51 54.8	-0.1
	baz=296						
NVAR	Mina Array Bea	125.04	50	PKP	PKiKP	21 51 56.9	+1.4
	comp=Z,2.4nm,0.8s,baz=242,slow=2.0,SNR=13						
NVAR				PP	PP	21 53 42.5	-2.0
	comp=Z,1.2nm,0.9s,baz=296,slow=2.7,SNR=3.3						
EDW2	Edwards Air Fo	126.25	54	P	PKiKP	21 51 58.1	+0.3
	baz=285,SNR=6.6						
FFC	Flin Flon	126.66	25	PKIKP	PKiKP	21 51 58.5	+0.6
FFC	Flin Flon	126.66	25		PKiKP	21 51 58.5	+0.6
TUQ	Turquoise Moun	127.73	52	P	PKPdf	21 51 59.6	-0.6
	baz=287						
PDAR	Pinedale Array	129.55	41	PKP	PKiKP	21 52 04.6	+0.2
	comp=Z,0.5nm,0.6s,baz=0.0,slow=1.5,SNR=4.3						
PDAR	Pinedale Array	129.55	41		PKiKP	21 52 04.7	+0.3
O20A	White River Ci	131.64	44	P	PKiKP	21 52 08.6	-0.1
	baz=297,SNR=5.7						
RSSD	Black Hills	132.30	37	PKIKP	PKiKP	21 52 09.9	0.0
RSSD	Black Hills	132.30	37		PKiKP	21 52 09.9	0.0
RSSD	Black Hills	132.30	37	P	PKPdf	21 52 09.0	+0.2
	baz=304						
ULM	Lac du Bonnet	132.47	26	PKP	PKiKP	21 52 09.3	-0.4
	comp=Z,0.9nm,0.4s,baz=90,slow=1.0,SNR=4.0						
SCHQ	Schefferville	134.91	1	PKP	PKiKP	21 52 14.7	+0.1
	comp=Z,1.3nm,0.7s,baz=316,slow=3.4,SNR=4.8						
121A	Cookes Peak, D	135.07	53	P	PKPdf	21 52 14.0	-0.2
	baz=291						
MATQ	Matagami	138.80	12	P	PKPdf	21 52 20.9	+0.5
	baz=342						
TXAR	Lajitas Array	139.51	56	PKhKP	PKPpre	21 52 15.5	
	comp=Z,0.5nm,0.7s,baz=243,slow=3.0,SNR=6.7						
TXAR				PKP	PKPdf	21 52 22.4	-0.1
	comp=Z,0.9nm,0.7s,baz=252,slow=2.0,SNR=9.1						
TXAR	Lajitas Array	139.51	56		PKPpre	21 52 16.1	
F45A	CMU Biological	140.28	22	P	PKPdf	21 52 22.9	-0.3
	baz=329						
D50A	G1974 Best Tow	140.73	15	P	PKPdf	21 52 23.7	-0.3
	baz=338						
E51A	G1948 Merrick	141.41	15	P	PKPdf	21 52 24.7	-0.6
	baz=338						
F51A	Arnstein	141.86	16	P	PKPdf	21 52 25.2	-0.8
	baz=337						
J48A	Bridge Port	142.97	22	P	PKPdf	21 52 26.0	-2.2
	baz=330						
E60A	Ste Agathe de	143.07	7	P	PKPbc	21 52 26.4	+1.2
	baz=351						
J49A	Marlette	143.15	21	P	PKPdf	21 52 26.9	-1.5
	baz=331						
K48A	Perry	143.26	23	P	PKPdf	21 52 27.0	-1.6
	baz=329						
L47A	Sherwood	143.53	25	P	PKPbc	21 52 27.3	+0.7
	baz=326						
CCM	Cathedral Cave	143.60	35	PKIKP	PKPbc	21 52 27.1	+0.2
CCM	Cathedral Cave	143.60	35		PKPbc	21 52 27.1	+0.2
CCM	Cathedral Cave	143.60	35	P	PKPbc	21 52 27.2	+0.3
	baz=314						
U40A	Yellville	143.79	38	P	PKPbc	21 52 27.2	-0.4
	baz=310,SNR=9.9						
F64A	Sherman	143.83	3	P	PKPbc	21 52 27.8	+0.5
	baz=356						
H55A	Tweed	143.84	14	P	PKPbc	21 52 28.1	+0.8
	baz=341						
W39A	Magazine	143.94	41	P	PKPbc	21 52 28.1	+0.1
	baz=308,SNR=5.6						
L49A	Milan	143.99	23	P	PKPbc	21 52 28.6	+0.7
	baz=329						
SFIN	Lafayette	144.00	28	P	PKPdf	21 52 28.8	-1.2
	baz=322						
H56A	Elgin	144.01	13	P	PKPbc	21 52 28.5	+0.7
	baz=342						
I55A	Frankford	144.03	15	P	PKPdf	21 52 28.8	-1.1
	baz=340						
G59A	Clarenceville	144.11	9	P	PKPdf	21 52 29.3	-0.8
	baz=348						
G61A	St-Isidore-de-	144.14	7	P	PKPdf	21 52 29.6	-0.6
	baz=350						
M48A	Edgerton	144.14	25	P	PKPdf	21 52 29.6	-0.7
	baz=327						
J52A	Paris	144.15	18	P	PKPdf	21 52 29.7	-0.5
	baz=335						
G60A	Masonville	144.22	8	P	PKPdf	21 52 29.5	-0.8
	baz=349						
N47A	Urbana	144.23	26	P	PKPbc	21 52 28.6	-0.1
	baz=325,SNR=13						
K51A	Iona Station	144.28	20	P	PKPdf	21 52 29.8	-0.6
	baz=333						
G62A	West of Eustis	144.31	6	P	PKPdf	21 52 30.2	-0.3
	baz=352						
H57A	Richville	144.31	12	P	PKPdf	21 52 29.9	-0.6
	baz=344						
237A	Washetta, Mont	144.39	47		PKPdf	21 52 32.0	+1.1
L50A	Kingsville	144.41	22	P	PKPdf	21 52 30.0	-0.6
	baz=330						
G64A	Maxfield	144.42	4	P	PKPdf	21 52 30.4	-0.2
	baz=355						
H59A	Cadyville	144.45	10	P	PKPdf	21 52 30.1	-0.6
	baz=346						
M49A	Liberty Center	144.45	24	P	PKPdf	21 52 30.2	-0.6
	baz=328						
MIAR	Mount Ida	144.48	41	PKIKP	PKPdf	21 52 30.8	-0.3
MIAR	Mount Ida	144.48	41		PKPdf	21 52 30.8	-0.3
K52A	Tillsonburg	144.49	19	P	PKPdf	21 52 30.5	-0.3
	baz=334						
G63A	Kingsbury	144.49	5	P	PKPdf	21 52 30.4	-0.4
	baz=354						
G65A	Princeton	144.53	2	P	PKPbc	21 52 29.7	+0.2
	baz=357						
N48A	Decatur	144.53	26	P	PKPbc	21 52 29.3	-0.4
	baz=326,SNR=14						
H58A	Gabriels	144.59	10	P	PKPbc	21 52 30.0	+0.3
	baz=346,SNR=5.1						
J54A	Appleton	144.66	16	P	PKPbc	21 52 29.9	0.0
	baz=338						
H60A	Morristown	144.69	9	P	PKPdf	21 52 31.1	-0.1
	baz=348,SNR=7.3						
I57A	Carthage	144.76	12	P	PKPdf	21 52 31.0	-0.3
	baz=343						
H61A	Lyndonville	144.82	8	P	PKPdf	21 52 32.0	+0.6
	baz=349,SNR=5.7						
N49A	Columbus Grove	144.84	25	P	PKPdf	21 52 30.9	-0.6
	baz=327,SNR=21						
M50A	Fremont	144.88	23	P	PKPdf	21 52 30.9	-0.6
	baz=329,SNR=5.9						
H62A	Milan	144.88	7	P	PKPdf	21 52 31.6	+0.1
	baz=351						
J55A	Hilton	144.89	15	P	PKPdf	21 52 31.3	-0.2
	baz=339						
H63A	New Sharon	144.91	5	P	PKPdf	21 52 31.7	+0.2
	baz=353						
W41B	Gary Mavity, V	144.93	39	P	PKPdf	21 52 31.4	-0.4
	baz=310,SNR=9.1						
H66A	Whiting	144.95	2	P	PKPdf	21 52 31.9	+0.4
	baz=357						
O48A	Farmland	144.98	26	P	PKPdf	21 52 31.6	-0.1
	baz=325,SNR=40						
X40A	Basin Creek Fa	144.99	41	P	PKPdf	21 52 31.8	-0.1
	baz=309						
H64A	Troy	145.00	4	P	PKPdf	21 52 31.7	+0.1
	baz=354						
H65A	Eastbrook	145.00	3	P	PKPdf	21 52 31.7	+0.1
	baz=356						
LBNH	Lisbon	145.11	8	P	PKPdf	21 52 32.0	+0.1
	baz=349						
J56A	Wolcott	145.12	14	P	PKPdf	21 52 32.1	+0.3
	baz=341						
I58A	Old Forge	145.14	12	P	PKPdf	21 52 32.2	+0.2
	baz=344						
J57A	Williamstown	145.19	13	P	PKPdf	21 52 32.4	+0.4
	baz=342,SNR=8.5						
I59A	Olmsteadville	145.25	10	P	PKPdf	21 52 32.3	+0.2
	baz=346,SNR=10						
K54A	Basiliko Farm,	145.26	17	P	PKPdf	21 52 32.6	+0.4
	baz=337,SNR=12						
M51A	Elyria	145.26	22	P	PKPdf	21 52 32.4	+0.2
	baz=331						
I60A	Shoreham	145.30	10	P	PKPdf	21 52 32.1	0.0
	baz=347,SNR=17						
ERPA	Erie	145.31	19	P	PKPdf	21 52 32.3	+0.1
	baz=335,SNR=6.6						
K55A	Perry	145.32	16	P	PKPdf	21 52 33.0	+0.7
	baz=338,SNR=8.5						
NATX	Nacogdoches	145.34	46	P	PKPab	21 52 33.7	+0.9
	baz=303						
M52A	Chesterland	145.38	21	P	PKPab	21 52 32.5	0.0
	baz=332,SNR=8.7						
I61A	Oroboro, Fairl	145.38	8	P	PKPab	21 52 33.6	+1.2
	baz=349						
L53A	Girard	145.38	19	P	PKPab	21 52 32.5	0.0
	baz=334,SNR=9.6						
N50A	Nevada	145.38	24	P	PKPab	21 52 33.0	+0.4
	baz=329,SNR=32						
O49A	Covington	145.38	25	P	PKPab	21 52 32.9	+0.3
	baz=326,SNR=22						
J58A	Remsen	145.39	12	P	PKPab	21 52 32.3	-0.2
	baz=343,SNR=13						
L54A	Sinclairville	145.42	18	P	PKPab	21 52 33.3	+0.6
	baz=336,SNR=19						
HKT	Hockley	145.42	50	PKIKP	PKiKP	21 52 35.0	-1.7
HKT	Hockley	145.42	50		PKiKP	21 52 35.0	-1.7
J59A	Piesco	145.45	11	P	PKPab	21 52 33.8	+1.0
	baz=345,SNR=11						
I63A	Otisfield	145.46	6	P	PKPab	21 52 33.6	+0.8
	baz=352						
P48A	Milroy	145.50	27	P	PKPab	21 52 33.1	0.0
	baz=324,SNR=11						
K56A	Middlesex	145.54	15	P	PKPab	21 52 33.2	0.0
	baz=340,SNR=6.8						
I62A	Tamworth	145.55	7	P	PKPab	21 52 33.2	+0.1
	baz=350						
N51A	Ashland	145.55	22	P	PKPab	21 52 33.5	+0.3
	baz=330,SNR=11						
I64A	Boothbay	145.68	5	P	PKPab	21 52 34.0	+0.5
	baz=353						
M53A	WI Miller and	145.70	20	P	PKPab	21 52 33.7	0.0
	baz=333,SNR=11						
K57A	Scipio Center	145.72	14	P	PKPab	21 52 33.8	+0.1
	baz=341,SNR=8.3						
O50A	Cable	145.72	25	P	PKPab	21 52 33.9	0.0
	baz=328,SNR=28						
L55A	Hinsdale	145.72	17	P	PKPab	21 52 34.1	+0.2
	baz=337,SNR=8.4						
P49A	Miami Univ. Ec	145.76	26	P	PKPab	21 52 33.8	-0.2
	baz=325,SNR=11						
Z41A	Richland Creek	145.77	43	P	PKPab	21 52 34.6	+0.3
	baz=307						
Q48A	North Vernon	145.79	28	P	PKPab	21 52 33.9	-0.3
	baz=323,SNR=13						
J60A	Lant Hill Farm	145.86	10	P	PKPab	21 52 34.0	-0.3
	baz=346						
K58A	Earlville	145.88	13	P	PKPab	21 52 34.7	+0.3
	baz=342						
N52A	McGinn’s Farm,	145.90	22	P	PKPab	21 52 34.4	-0.1
	baz=331,SNR=6.9						
J61A	Chester	145.90	9	P	PKPab	21 52 35.3	+0.9
	baz=348						
M54A	Oil Creek Stat	145.97	19	P	PKPab	21 52 34.7	0.0
	baz=335,SNR=12						
L56A	Greenwood	146.01	16	P	PKPab	21 52 35.1	+0.2
	baz=339,SNR=7.9						
K59A	Cooperstown	146.04	12	P	PKPab	21 52 35.2	+0.2
	baz=344						
WCI	Wyandotte Cave	146.08	30	PKP2	PKPab	21 52 35.2	-0.1
WCI	Wyandotte Cave	146.08	30		PKPab	21 52 35.2	-0.1
WCI	Wyandotte Cave	146.08	30	P	PKPab	21 52 35.2	-0.1
	baz=322						
P50A	Jamestown	146.10	25	P	PKPab	21 52 34.7	-0.6
	baz=327,SNR=26						
Q49A	Aurora	146.11	27	P	PKPab	21 52 35.1	-0.3
	baz=325,SNR=10.0						
J62A	Henniker	146.12	8	P	PKPab	21 52 35.0	-0.3
	baz=349						
O51A	Pataskala	146.13	23	P	PKPab	21 52 35.0	-0.4
	baz=329,SNR=14						
J63A	Strafford	146.16	7	P	PKPab	21 52 35.4	0.0
	baz=351						
N53A	Lisbon	146.21	21	P	PKPab	21 52 35.1	-0.6
	baz=333,SNR=7.3						
M55A	Ridgway	146.28	18	P	PKPab	21 52 35.5	-0.5
	baz=336,SNR=9.9						
L57A	Andrews Acres	146.32	15	P	PKPab	21 52 36.0	-0.1
	baz=340						
BINY	Binghamton	146.34	14	P	PKPab	21 52 35.9	-0.3
	baz=342						
N54A	Moraine State	146.36	20	P	PKPbc	21 52 35.3	-0.1
	baz=334,SNR=9.2						
K60A	Five Rivers En	146.38	11	P	PKPab	21 52 36.2	0.0
	baz=345						
M56A	Emporium	146.44	17	P	PKPab	21 52 35.9	-0.7
	baz=338,SNR=11						
K61A	Williamstown	146.44	10	P	PKPab	21 52 36.1	-0.4
	baz=347						
O52A	Adamsville	146.45	23	P	PKPab	21 52 36.2	-0.4
	baz=330,SNR=11						
P51A	Williamsport	146.51	25	P	PKPbc	21 52 35.6	-0.2
	baz=328,SNR=14						
L58A	Harry Jones Me	146.52	14	P	PKPab	21 52 36.3	-0.5
	baz=342,SNR=7.4						
L59A	Walton	146.56	13	P	PKPab	21 52 36.9	-0.2
	baz=343,SNR=8.1						
O53A	New Philadelph	146.56	22	P	PKPab	21 52 36.5	-0.5
	baz=332,SNR=7.8						
R49A	Shelbyville	146.56	28	P	PKPab	21 52 36.9	-0.3
	baz=324,SNR=12						
K62A	Royalston	146.61	9	P	PKPab	21 52 37.3	+0.1
	baz=348						
Q50A	Georgetown	146.65	26	P	PKPab	21 52 36.6	-0.9
	baz=326,SNR=10						
K63A	Dunstable	146.69	8	P	PKPab	21 52 37.4	0.0
	baz=350						
P52A	Corning	146.75	23	P	PKPbc	21 52 36.8	+0.3
	baz=330,SNR=16						
L61B	Northampton	146.75	9	P	PKPab	21 52 37.5	-0.2
	baz=348						
Q51A	Peebles	146.78	25	P	PKPbc	21 52 36.8	+0.1
	baz=327,SNR=19						
N55A	Marion Center	146.84	18	P	PKPab	21 52 37.2	-1.0
	baz=336,SNR=10						
L61A	Hillsdale 1, H	146.86	11	P	PKPab	21 52 37.5	-0.7
	baz=346						
HRV	Adam Dziewonsk	146.87	8	PKP2	PKPab	21 52 38.4	+0.3
HRV	Adam Dziewonsk	146.87	8		PKPab	21 52 38.4	+0.3
HRV	Adam Dziewonsk	146.87	8	P	PKPab	21 52 37.8	-0.3
	baz=350						
M57A	Sunshine Farm,	146.87	16	P	PKPab	21 52 37.9	-0.3
	baz=339,SNR=17						
WVT	Waverly	146.88	34	PKP2	PKPbc	21 52 36.8	-0.2
WVT	Waverly	146.88	34		PKPbc	21 52 36.8	-0.2
WVT	Waverly	146.88	34	P	PKPab	21 52 37.9	-0.6
	baz=317						
S49A	Springfield	146.91	29	P	PKPab	21 52 37.6	-0.9
	baz=323,SNR=15						
O54A	Avella	146.92	21	P	PKPab	21 52 37.7	-0.8
	baz=333,SNR=9.6						
L60A	Shokan	146.93	12	P	PKPab	21 52 37.8	-0.6
	baz=345						
N56A	West Decatur	146.93	18	P	PKPab	21 52 37.8	-0.7
	baz=337,SNR=7.6						
R50A	Paris	146.96	27	P	PKPbc	21 52 37.4	+0.2
	baz=325,SNR=17						
M58A	Price’s Panora	147.01	15	P	PKPab	21 52 37.9	-0.9
	baz=340,SNR=7.8						
M59A	Waymart	147.10	13	P	PKPab	21 52 38.5	-0.6
	baz=342,SNR=8.8						
OXF	Oxford	147.12	38	P	PKPab	21 52 38.4	-1.0
	baz=313,SNR=26						
L62A	Suffield	147.16	9	P	PKPab	21 52 38.4	-0.9
	baz=347						
P53A	Whipple	147.17	23	P	PKPab	21 52 38.6	-0.9
	baz=331,SNR=12						
O55A	Ligonier	147.26	19	P	PKPbc	21 52 38.5	+0.5
	baz=335						
Q52A	Bidwell	147.28	24	P	PKPbc	21 52 38.5	+0.5
	baz=329,SNR=8.9						
R51A	Hillsboro	147.28	26	P	PKPbc	21 52 38.5	+0.4
	baz=326,SNR=9.1						
SSPA	Standing Stone	147.31	17		PKPbc	21 52 37.8	-0.3
SSPA	Standing Stone	147.31	17	P	PKPab	21 52 38.8	-1.2
	baz=338						
T49A	Edmonton	147.33	30	P	PKPab	21 52 39.0	-1.2
	baz=322,SNR=28						
P54A	Burton	147.40	21	P	PKPab	21 52 39.2	-1.2
	baz=332,SNR=13						
S50A	Richmond	147.42	28	P	PKPbc	21 52 38.5	0.0
	baz=324,SNR=9.8						
O56A	Blue Knob Stat	147.44	18	P	PKPab	21 52 39.3	-1.2
	baz=336						
N58A	Sunbury	147.44	16	P	PKPbc	21 52 38.9	+0.4
	baz=340,SNR=9.4						
M60A	Port Jervis	147.48	12	P	PKPab	21 52 39.7	-0.9
	baz=344,SNR=6.7						
L64A	Middleborough	147.52	7	P	PKPab	21 52 39.5	-1.2
	baz=351						
MCWV	Mont Chateau	147.57	20	P	PKiKP	21 52 39.7	-1.3
	baz=333,SNR=8.9						
N59A	State Game Lan	147.61	14	P	PKPbc	21 52 39.3	+0.3
	baz=341,SNR=7.8						
R52A	Catlettsburg	147.65	25	P	PKPbc	21 52 39.6	+0.5
	baz=328						
Q53A	Leroy	147.66	23	P	PKiKP	21 52 40.0	-1.1
	baz=330						
M61A	Granite Spring	147.67	11	P	PKPbc	21 52 39.7	+0.7
	baz=345						
M62A	Hamden	147.70	10	P	PKiKP	21 52 40.4	-0.7
	baz=347						
P55A	Reedsville	147.71	21	P	PKPbc	21 52 39.1	-0.2
	baz=333,SNR=12						
T50A	Nancy	147.74	29	P	PKPbc	21 52 40.0	+0.6
	baz=323,SNR=18						
O57A	Amberson	147.77	17	P	PKPbc	21 52 39.9	+0.5
	baz=338						
LVC	Limon Verde	147.81	175	PKP2	PKPab	21 52 43.2	+0.3
LVC	Limon Verde	147.81	175		PKPab	21 52 43.2	+0.3
N60A	Cedar Hill Far	147.81	13	P	PKPbc	21 52 39.9	+0.5
	baz=343						
Q54A	Coxs Mills	147.81	22	P	PKPbc	21 52 39.5	0.0
	baz=331,SNR=14						
S51A	Beattyville	147.82	27	P	PKPbc	21 52 39.9	+0.3
	baz=326,SNR=13						
VBMS	Vicksburg	147.92	42	P	PKiKP	21 52 41.0	-0.9
	baz=309						
PAL	Palisades	147.94	12	P	PKiKP	21 52 40.9	-0.7
	baz=345						
R53A	Hurricane	147.94	24	P	PKPbc	21 52 40.3	+0.4
	baz=329,SNR=7.3						
P56A	Dayton Farm, R	148.05	19	P	PKPbc	21 52 40.7	+0.5
	baz=335,SNR=17						
O58A	Lewisberry	148.06	16	P	PKPbc	21 52 40.6	+0.4
	baz=339,SNR=6.1						
O59A	Robesonia	148.08	15	P	PKiKP	21 52 40.8	-1.1
	baz=340						
Q55A	Buckhannon	148.08	21	P	PKPbc	21 52 40.8	+0.5
	baz=333,SNR=9.0						
N61A	South Mountain	148.10	12	P	PKiKP	21 52 41.2	-0.8
	baz=344						
T51A	Gray	148.21	28	P	PKPbc	21 52 41.1	+0.4
	baz=324,SNR=12						
O60A	Telford	148.27	14	P	PKiKP	21 52 41.6	-0.7
	baz=342						
P57A	Homestead Farm	148.33	18	P	PKiKP	21 52 41.6	-0.9
	baz=337						
Q56A	Snyder Ridge,	148.35	20	P	PKiKP	21 52 41.5	-1.1
	baz=334,SNR=6.6						
S53A	Williamson	148.42	25	P	PKiKP	21 52 41.7	-1.1
	baz=328						
R54A	Victor	148.45	23	P	PKPbc	21 52 41.4	+0.2
	baz=330,SNR=7.4						
T52A	Hallie	148.53	27	P	PKiKP	21 52 42.0	-1.0
	baz=326,SNR=6.6						
P58A	Pank, Wackersv	148.54	17	P	PKiKP	21 52 42.2	-0.8
	baz=338,SNR=8.3						
Q57A	Strasburg	148.61	19	P	PKiKP	21 52 42.4	-0.7
	baz=336						
S54A	Dingess, Beckl	148.66	24	P	PKPbc	21 52 42.1	+0.3
	baz=330,SNR=6.5						
P59A	Jarrettsville	148.67	16	P	PKiKP	21 52 42.4	-0.8
	baz=340						
P60A	Greenville	148.69	15	P	PKiKP	21 52 42.5	-0.7
	baz=341						
R55A	Marlinton	148.70	22	P	PKiKP	21 52 42.5	-0.9
	baz=332						
TZTN	Tazewell	148.74	28	P	PKiKP	21 52 42.6	-0.9
	baz=325,SNR=8.7						
T53A	Wise	148.83	26	P	PKiKP	21 52 42.8	-1.0
	baz=327						
R56A	Bull Pasture M	148.84	21	P	PKPbc	21 52 42.2	-0.1
	baz=333,SNR=6.4						
Q58A	Fox Den Farm,	148.93	18	P	PKiKP	21 52 43.3	-0.4
	baz=337,SNR=7.5						
S55A	Lewisburg	149.00	23	P	PKiKP	21 52 43.4	-0.7
	baz=331						
T54A	Tazewell	149.18	25	P	PKiKP	21 52 44.1	-0.3
	baz=328,SNR=18						
R57A	Stanardsville	149.25	20	P	PKiKP	21 52 44.3	-0.1
	baz=335,SNR=8.1						
Q59A	Harwood	149.30	17	P	PKiKP	21 52 44.7	+0.2
	baz=339						
BDFB	Brasilia	149.34	215	PKPbc	PKiKP	21 52 45.3	0.0
	comp=Z,7.6nm,0.8s,baz=166,slow=4.9,SNR=12						
BDFB	Brasilia	149.34	215	PKP2	PKiKP	21 52 46.0	+0.6
BDFB	Brasilia	149.34	215		PKiKP	21 52 46.0	+0.6
R58A	Rapidan	149.41	19	P	PKiKP	21 52 44.5	-0.3
	baz=336,SNR=6.7						
S56A	Natural Bridge	149.44	22	P	PKiKP	21 52 44.5	-0.4
	baz=332						
T55A	Pulaski	149.46	24	P	PKiKP	21 52 44.8	-0.2
	baz=330,SNR=10.0						
U54A	Nelsons Funny	149.53	26	P	PKiKP	21 52 44.9	-0.3
	baz=328						
S57A	Dark Hollow, R	149.58	21	P	PKiKP	21 52 44.7	-0.4
	baz=334						
LRAL	Lakeview Retre	149.58	37	P	PKiKP	21 52 44.9	-0.4
	baz=315,SNR=14						
Q61A	Milford	149.65	15	P	PKiKP	21 52 45.3	+0.1
	baz=341						
X51A	Calhoun	149.65	32	P	PKiKP	21 52 45.0	-0.4
	baz=320,SNR=9.1						
CBN	Corbin Frederi	149.70	18	P	PKiKP	21 52 45.1	-0.2
	baz=337						
R58B	Mineral	149.76	19	P	PKiKP	21 52 45.0	-0.5
	baz=336,SNR=5.3						
T56A	Rocky Mt	149.83	23	P	PKiKP	21 52 45.4	-0.3
	baz=331,SNR=8.2						
U55A	TA2, Sparta	149.88	25	P	PKiKP	21 52 45.9	0.0
	baz=329,SNR=9.6						
S58A	Poland Farm, P	150.02	20	P	PKiKP	21 52 45.9	-0.2
	baz=335						
Z50A	Ashland	150.05	35	P	PKiKP	21 52 45.8	-0.4
	baz=317,SNR=12						
V54A	Nebo	150.10	27	P	PKiKP	21 52 46.3	0.0
	baz=327,SNR=10						
S59A	Mechanicsville	150.13	19	P	PKiKP	21 52 46.3	0.0
	baz=337						
T57A	Hurt	150.15	22	P	PKiKP	21 52 46.0	-0.4
	baz=332,SNR=7.7						
U56A	King	150.28	24	P	PKiKP	21 52 46.4	-0.2
	baz=330						

V55A	Taylorsville	150.36	26	P	PKiKP	21 52 46.5	-0.3
	baz=328,SNR=6.9						
S60A	Water View	150.38	18	P	PKiKP	21 52 47.1	+0.4
	baz=338						
T58A	Grand View Acr	150.46	21	P	PKiKP	21 52 46.9	-0.1
	baz=334,SNR=8.4						
X53A	Estanollee	150.50	30	P	PKiKP	21 52 47.7	+0.5
	baz=323,SNR=6.6						
W54A	Cherokee Point	150.56	28	P	PKiKP	21 52 47.8	+0.5
	baz=326						
Y52A	Lilburn	150.61	32	P	PKiKP	21 52 48.1	+0.7
	baz=321,SNR=14						
U57A	Blanch	150.62	23	P	PKiKP	21 52 47.4	+0.1
	baz=332,SNR=8.5						
V56A	Mocksville	150.70	25	P	PKiKP	21 52 47.5	0.0
	baz=329,SNR=6.0						
T59A	Double "B" Far	150.77	20	P	PKiKP	21 52 47.9	+0.4
	baz=336,SNR=13						
T60A	Surry	150.88	18	P	PKiKP	21 52 48.3	+0.5
	baz=337						
KMSC	Kings Mountain	150.90	27	P	PKiKP	21 52 48.2	+0.2
	baz=327,SNR=9.6						
X54A	Belton	150.91	29	P	PKiKP	21 52 48.4	+0.4
	baz=325,SNR=10						
V57A	Coltrane Farms	150.93	24	P	PKiKP	21 52 48.1	+0.1
	baz=331,SNR=12						
U58A	Oxford	150.94	22	P	PKiKP	21 52 48.3	+0.3
	baz=333,SNR=5.8						
W56A	Indian Trail	151.24	26	P	PKiKP	21 52 48.9	+0.3
	baz=328						
U59A	Littleton	151.25	20	P	PKiKP	21 52 49.0	+0.4
	baz=335						
V58A	Windy Hill, Pi	151.27	23	P	PKiKP	21 52 48.8	+0.2
	baz=332						
X55A	Gracelyn & Ava	151.33	28	P	PKiKP	21 52 49.0	+0.2
	baz=326,SNR=8.4						
U60A	Pendleton	151.35	19	P	PKiKP	21 52 49.1	+0.3
	baz=336						
W57A	Gilead	151.47	25	P	PKiKP	21 52 49.4	+0.3
	baz=330,SNR=7.7						
X56A	White Oak	151.58	27	P	PKiKP	21 52 49.3	0.0
	baz=327,SNR=8.1						
V59A	Middlesex	151.62	22	P	PKiKP	21 52 49.2	-0.1
	baz=333,SNR=6.2						
Y55A	Saluda	151.66	29	P	PKiKP	21 52 49.9	+0.4
	baz=325,SNR=6.0						
U61A	Possum Corner	151.71	18	P	PKiKP	21 52 50.4	+0.9
	baz=337						
W58A	Raeford	151.90	24	P	PKiKP	21 52 50.6	+0.6
	baz=331						
V60A	Jim Taylor Roa	151.96	20	P	PKiKP	21 52 50.8	+0.7
	baz=335						
PB16	IPOC Station P	151.97	172		PKiKP	21 52 53.1	+1.8
X58A	Rowland	152.26	25	P	PKiKP	21 52 51.5	+0.7
	baz=330						
W60A	Pink Hill	152.45	22	P	PKiKP	21 52 52.0	+0.9
	baz=334						
TIGA	Tifton	152.72	35	P	PKiKP	21 52 52.9	+1.2
	baz=319						
Z57A	Bowman	152.73	28	P	PKiKP	21 52 53.0	+1.2
	baz=326						
Z58A	St. Stephen	153.10	27	P	PKiKP	21 52 53.9	+1.4
	baz=328						
NHSC	New Hope	153.13	28	P	PKiKP	21 52 54.4	+1.9
	baz=327						
LPAZ	La Paz	154.14	175	PKPbc	PKiKP	21 52 57.9	+2.0
	comp=Z,1.2nm,0.6s,baz=346,slow=7.3,SNR=4.2						
LPAZ				PKPab	PKPab	21 53 10.1	+0.7
	comp=Z,3.9nm,0.7s,baz=127,slow=4.0,SNR=12						

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*IDC **20** 21:37:18.5±6.3, 11°.28S×114°.51E, h0^{km}, mb4.1/9, mb1 4.2/9, mb1mx3.8/56, mbtmp4.1/9, Error ellipse: s-maj=147.4km s-min=53.8km az=0.0*

*NEIC **20** 21:37:32.4±1.1, 10°.03S±0°.07×114°.50E±0°.09, h46^{km}±10^{km}, mb4.2/8, Error ellipse: s-maj=12.8km s-min=9.3km az=105.0*

ISC 20 21:37:31.3±0.8**, 10°.11S**±0°.09×**114°.50E**±0°.10**, h35**^{km}**, n43, σ1^{s}.08**/41**, mb4.2**/13**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	Jajag, Banyuwa	1.66	348	Pn	Pn	21 37 57.9	-0.2
UGM	Wanagama	4.50	299	Pn	Pn	21 38 38.1	+1.1
SMRI	Semarang	5.04	307	Pn	Pn	21 38 46.7	+2.3
CISI	Cisompet, Garu	7.08	290	Pn	Pn	21 39 12.8	+0.3
XMIS	Christmas Isla	8.72	267	Pn	Pn	21 39 32.6	-2.4
BKB	Balikpapan	9.11	15	Pn	Pn	21 39 39.9	-0.4
SOEI	Soe	9.63	89	Pn	Pn	21 39 47.6	0.0
LUWI	Luwuk	12.20	43	Pn	Pn	21 40 22.8	+0.2
KSM	Kuching	12.24	340	Pn	Pn	21 40 21.4	-1.9
GIRL	Giralia	12.47	181	Pn	Pn	21 40 28.1	+1.8
SBUM	Sibu	12.68	350	Pn	Pn	21 40 30.8	+1.5
MNAI	Manna	12.79	296	Pn	Pn	21 40 31.7	+0.8
CMAR	Chiang Mai Arr	32.27	332	P	P	21 43 58.7	+1.8
	1.8nm,0.6s,baz=163,slow=9.6,SNR=5.7						
ODAN	Odare	45.20	325	*e*P	P	21 45 44.8	-0.6
	12nm,0.7s						
TAPN	Taplejung	45.40	326	*e*P	P	21 45 46.8	-0.3
LSA	Lhasa	45.53	331	P	P	21 45 47.6	-0.7
LSA				IAmb	IAmb	21 45 49.7	
	comp=Z,7.4nm,1.1s						
RAMN	Ramite	45.72	324	*e*P	P	21 45 49.2	-0.4
JIRN	Jiri	46.50	325	*e*P	P	21 45 55.3	-0.5
	comp=Z,28nm,0.6s						
GUN	Gumba	46.86	324	*e*P	P	21 45 58.1	-0.6
	comp=Z,19nm,0.6s						
PKI	Pulchoki	46.88	324	*e*P	P	21 45 57.6	-1.2
PKIN	Phulchoki	46.89	324	*e*P	P	21 45 57.5	-1.3
	comp=Z,2.6nm,0.4s						
DMN	Daman	47.09	324	*e*P	P	21 45 59.4	-0.9
	comp=Z,18nm,0.7s						
KKN	Kakani	47.12	324	*e*P	P	21 45 59.4	-1.1
GKN	Gorkha	47.65	323	*e*P	P	21 46 03.6	-1.0
DANN	Dangsing	48.43	323	*e*P	P	21 46 09.6	-1.1
	comp=Z,27nm,0.7s						
USA0B	Ussuriysk Arra	56.33	15	P	P	21 47 08.3	-0.4
USRK	Ussuriysk Ar.	56.33	15	P	P	21 47 08.7	-0.1
	comp=Z,2.9nm,0.7s,baz=171,slow=5.4,SNR=7.0						
SONM	Songino Array	58.13	354	P	P	21 47 21.8	+0.3
	comp=Z,1.8nm,0.4s,baz=173,slow=8.8,SNR=13						
SONM	Songino Array	58.13	354	P	P	21 47 21.7	+0.1
MK31	Makanchi Array	63.53	336	P	P	21 47 57.8	-0.4
MK31				IAmb	IAmb	21 48 06.6	
	comp=Z,1.7nm,1.0s						
MKAR	Makanchi Array	63.53	336	P	P	21 47 57.8	-0.4
	comp=Z,1.2nm,0.5s,baz=147,slow=7.4,SNR=12						
AAK	Ala-Archa	63.97	328	P	P	21 47 59.6	-1.7
	comp=Z,1.5nm,0.8s,baz=269,slow=5.6,SNR=3.8						
AAK	Ala-Archa	63.97	328	IAmb	IAmb	21 48 04.5	
	comp=Z,1.9nm,0.9s						
KK31	Karatay Array	66.41	326	P	P	21 48 16.6	-0.4
KKAR	Karatay Array	66.41	326	P	P	21 48 15.9	-1.1
KKAR	Karatay Array	66.41	326	P	P	21 48 16.4	-0.6
KKAR				IAmb	IAmb	21 48 17.5	
	comp=Z,1.5nm,0.9s						
KURBB	Kurchatov Arra	68.09	336	P	P	21 48 26.3	-1.1
	comp=Z,0.5nm,0.7s,baz=148,slow=6.4,SNR=2.8						
KURK	Kurchatov	68.12	336	P	P	21 48 26.3	-1.4
KURK	Kurchatov	68.12	336	IAmb	IAmb	21 48 36.1	
	comp=Z,2.4nm,1.0s						
ZALV	Zalesovo Beam	68.59	342	P	P	21 48 30.1	-0.3
	comp=Z,0.7nm,0.4s,baz=150,slow=3.1,SNR=2.9						
PETK	Petropavlovsk-	72.92	26	P	P	21 48 56.2	-0.6
	comp=Z,2.6nm,1.0s,baz=227,slow=3.2,SNR=2.5						
BVAR	Borovoye Array	73.26	334	P	P	21 48 58.2	-0.7
	comp=Z,0.5nm,0.3s,baz=135,slow=7.1,SNR=3.5						
ABKAR	Akbulak array	75.97	327	P	P	21 49 14.4	-0.3

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*IDC **20** 21:49:01.9±1.5, 9°.60S×114°.19E, h0^{km}, mb3.9/9, mb1 4.0/9, mb1mx3.8/38, mbtmp3.9/9, Error ellipse: s-maj=65.6km s-min=19.6km az=48.0*

*DJA **20** 21:49:09.5±0.8, 10°S±4°×11°4E±°, h11^{km}±5^{km}, M4.5/12, mb5.1/1, MLv4.2/12*

*NEIC **20** 21:49:10.2±1.2, 9°.70S±0°.05×114°.27E±0°.09, h73^{km}±9^{km}, mb4.0/14, Error ellipse: s-maj=12.7km s-min=6.3km az=74.0*

ISC 20 21:49:06.5±0.5**, 9°.75S**±0°.05×**113°.99E**±0°.04**, h31**^{km}**, n65, σ1^{s}.82**/69**, mb4.1**/11**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	Jajag, Banyuwa	1.28	7	P	Pb	21 49 30.0	0.0
JAGI				S	Sb	21 49 45.5	-0.6
JAGI	Jajag, Banyuwa	1.28	7		Pb	21 49 30.3	+0.3
IGBI	Denpasar	1.47	51	P	Pn	21 49 31.4	+0.6
IGBI				S	Sn	21 49 48.7	-0.3
DNP	Denpasar	1.61	49	P	Pn	21 49 33.8	+1.1
DNP				S	Sn	21 49 53.5	+1.1
SRBI	Singaraja	2.05	36	P	Pn	21 49 41.0	+2.2
KMMI	Kalianget	2.68	359	P	Pn	21 49 50.0	+2.5
PCJI	Pacitan	3.18	299	P	Pb	21 50 01.3	-1.0
PCJI				S	Sb	21 50 41.2	+0.6
GRJI	Gresik	3.19	332	P	Pb	21 49 59.9	-2.6
GRJI				S	Sb	21 50 37.4	-3.5
WOJI	Wonogiri, Jawa	3.58	302	P	Pb	21 50 06.6	-2.5
WOJI				S	Sb	21 50 50.4	-1.7
PLAI	Plampang	3.85	77	P	Pn	21 50 06.2	+2.6
UGM	Wanagama	3.88	298	P	Pb	21 50 10.7	-3.6
UGM	Wanagama	3.88	298		Pb	21 50 10.6	-3.6
SMRI	Semarang	4.42	307	Pn	Pn	21 50 17.4	+5.9
CISI	Cisompet, Garu	6.48	289	P	Pn	21 50 46.2	+6.3
CISI	Cisompet, Garu	6.48	289		Pn	21 50 45.2	+5.3
XMIS	Christmas Isla	8.24	264	Pn	Pn	21 51 08.5	+4.5
PSA00	Pilbara Seismi	13.04	155	Pn	Pn	21 52 11.1	+1.5
PSAA3	Pilbara Seismi	13.04	155	Pn	Pn	21 52 11.1	+1.3
PSAC2	Pilbara Seismi	13.05	155	Pn	Pn	21 52 12.5	+2.6
PSAB3	Pilbara Seismi	13.06	155	Pn	Pn	21 52 12.0	+2.0
PSAC3	Pilbara Seismi	13.07	155	Pn	Pn	21 52 12.7	+2.5
PSAD3	Pilbara Seismi	13.07	155	Pn	Pn	21 52 12.2	+2.1
PSAD2	Pilbara Seismi	13.12	155	Pn	Pn	21 52 12.5	+1.6
KNRA	Kununurra	15.56	114	Pn	Pn	21 52 41.7	-2.2
KNRA				IAmb	IAmb	21 53 01.1	
	comp=Z,10nm,0.9s						
MORW	Morawa	19.32	175	P	P	21 53 29.7	+0.5
MORW				IAmb	IAmb	21 53 42.8	
	comp=Z,9.2nm,0.9s						
FAKI	Fak Fak	19.36	71	P	P	21 53 27.4	-2.4
FAKI				IAmb	IAmb	21 53 40.6	
	comp=Z,15nm,1.1s						
GSI	Gunungsitoli	19.69	303	P	Pn	21 53 36.4	+1.4
GSI				IAmb	IAmb	21 53 48.6	
	comp=Z,11nm,1.0s						
KULM	Kulim	20.00	318	P	P	21 53 37.1	+0.4
KULM				IAmb	IAmb	21 53 51.5	
	comp=Z,6.9nm,1.0s						
WRA	Warramunga Arr	22.10	120	P	P	21 53 58.3	-1.1
	comp=Z,1.2nm,0.8s,baz=296,slow=11,SNR=7.3						
WRAB	Tennant Creek	22.11	120	P	P	21 53 57.9	-1.6
AS31	Alice Springs	23.52	129	P	P	21 54 12.5	-1.6
ASAR	Alice Springs	23.52	129	P	P	21 54 13.1	-1.0
	comp=Z,0.5nm,0.6s,baz=306,slow=8.7,SNR=11						
ASAR	Alice Springs	23.52	129	P	P	21 54 12.6	-1.6
CMAR	Chiang Mai Arr	31.72	332	P	P	21 55 27.3	-0.4
	comp=Z,2.0nm,0.5s,baz=164,slow=8.7,SNR=9.8						
ODAN	Odare	44.62	325	*e*P	P	21 57 17.5	+1.0
	comp=Z,21nm,0.9s						
TAPN	Taplejung	44.82	326	*e*P	P	21 57 19.5	+1.3
	comp=Z,18nm,0.9s						
LSA	Lhasa	44.97	331	P	P	21 57 19.3	-0.2
RAMN	Ramite	45.13	325	*e*P	P	21 57 21.9	+1.2
	comp=Z,4.0nm,0.4s						
JIRN	Jiri	45.91	325	*e*P	P	21 57 27.9	+1.0
	comp=Z,33nm,0.6s						
GUN	Gumba	46.28	325	*e*P	P	21 57 30.7	+0.9
	comp=Z,19nm,0.6s						
PKI	Pulchoki	46.29	324	*e*P	P	21 57 29.8	-0.1
PKIN	Phulchoki	46.30	324	*e*P	P	21 57 30.3	+0.4
DMN	Daman	46.50	324	*e*P	P	21 57 32.1	+0.7
	comp=Z,12nm,0.6s						
KKN	Kakani	46.53	324	*e*P	P	21 57 32.2	+0.6
GKN	Gorkha	47.06	324	*e*P	P	21 57 36.3	+0.6
DANN	Dangsing	47.84	323	*e*P	P	21 57 42.4	+0.5
	comp=Z,25nm,0.6s						
KS19	Wonju Array Si	48.77	15	P	P	21 57 46.6	-2.0
GTA	Gaotai	50.65	346	*e*P	P	21 58 04.1	+1.1
GTA				pP	pP	21 58 08.6	-2.7
GTA				sP	sP	21 58 11.4	-3.1
USRK	Ussuriysk Ar.	56.12	16	P	P	21 58 41.1	-1.8
	comp=Z,1.6nm,0.7s,baz=155,slow=6.8,SNR=4.9						
ULN	Ulaanbaatar	57.69	354	P	P	21 58 53.6	-0.5
SONM	Songino Array	57.72	354	P	P	21 58 53.9	-0.5
	comp=Z,1.7nm,0.7s,baz=176,slow=8.3,SNR=12						
SONM	Songino Array	57.72	354	IAmb	IAmb	21 58 55.1	
	comp=Z,1.4nm,0.8s						
KSH	Kashi	60.39	327	P	P	21 59 16.8	+3.7
KSH				pP	pwP	21 59 29.9	+3.6
KSH				PP	PP	22 01 31.6	+5.0
KSH				S	S	22 07 28.1	+2.0
CMWZ	Cape Campbell	61.45	132	P	P	21 59 17.5	-2.7
MK31	Makanchi Array	63.00	336	P	P	21 59 30.7	+0.3
MK31				IAmb	IAmb	21 59 44.9	
	comp=Z,1.5nm,1.1s						
MKAR	Makanchi Array	63.00	336	P	P	21 59 30.6	+0.3
	comp=Z,1.2nm,0.7s,baz=149,slow=7.4,SNR=20						
MAKZ	Makanchi	63.13	336	P	P	21 59 31.2	-0.1
AAK	Ala-Archa	63.40	328	P	P	21 59 32.9	-0.4
AAK				IAmb	IAmb	21 59 50.1	
	comp=Z,1.9nm,1.0s						
SOCY	Socotra	63.48	289	P	P	21 59 34.6	+0.4
ZALV	Zalesovo Beam	68.09	342	P	P	22 00 02.8	-0.3
	comp=Z,0.4nm,0.4s,baz=129,slow=3.4,SNR=2.3						
PETK	Petropavlovsk-	72.82	26	P	P	22 00 30.2	-1.8
ABKAR	Akbulak array	75.40	327	P	P	22 00 47.4	+0.2
BRTR	Keskin Array B	88.83	310	P	P	22 01 58.3	+0.3
	comp=Z,0.7nm,0.8s,baz=132,slow=7.5,SNR=4.4						
BRTR	Keskin Array B	88.83	310	P	P	22 01 57.3	-0.7
FINES	FINESS Array B	97.48	331	P	P	22 02 36.8	-0.3
	comp=Z,1.1nm,0.6s,baz=122,slow=9.3,SNR=4.3						

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*NEIC **20** 21:58:13.5±1.1, 4°.7S±0°.1×153°.7E±0°.1, h119^{km}±8^{km}, mb4.0/9, Error ellipse: s-maj=18.6km s-min=17.4km az=67.0*

*IDC **20** 21:58:14.4±4.8, 4°.78S×153°.59E, h124^{km}±30^{km}, mb3.4/5, mb1 3.6/6, mb1mx3.3/40, mbtmp3.9/6, Error ellipse: s-maj=56.0km s-min=19.1km az=102.0*

ISC 20 21:58:11.8±0.9**, 4°.78S**±0°.09×**153°.8E**±0°.1**, h100**^{km}**, n20, σ1^{s}.44**/21**, mb3.8**/8**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.73	290		Pn	21 58 41.9	+0.8
KRVT	Keravat (AS076	1.83	285	P	Pn	21 58 42.8	+0.5
	31nm,0.3s,baz=58,slow=3.2,SNR=11						
KRVT				S	Sn	21 59 05.9	+0.5
	18nm,0.3s,baz=24,slow=23,SNR=10						
PMG	Port Moresby	8.04	235	P	Pn	22 00 07.5	+1.6
	4.8nm,0.3s,baz=41,slow=7.0,SNR=7.9						
PMG				S	Sn	22 01 34.4	-0.7
	1.0nm,0.3s,baz=30,slow=20,SNR=1.3						
PMG	Port Moresby	8.04	235		Pn	22 00 07.2	+1.3
WB0	Warramunga Arr	24.07	230	P	P	22 03 17.3	-0.8
WB0				IAmb	IAmb	22 03 17.8	
	comp=Z,4.2nm,0.9s						
WR0	Warramunga Arr	24.07	230	P	P	22 03 17.5	-0.6
WRAB	Tennant Creek	24.20	230	P	P	22 03 18.9	-0.3
WB2	Warramunga Arr	24.20	230	P	P	22 03 19.0	-0.3
WB2				IAmb	IAmb	22 03 19.9	
	comp=Z,3.6nm,0.8s						
WRA	Warramunga Arr	24.21	230	P	P	22 03 18.7	-0.7
	comp=Z,2.2nm,0.6s,baz=53,slow=9.8,SNR=26						
WRA	Warramunga Arr	24.21	230	P	P	22 03 18.6	-0.9
ASAR	Alice Springs	26.85	224	P	P	22 03 42.0	-1.2
	comp=Z,0.5nm,0.4s,baz=54,slow=9.0,SNR=12						
FITZ	Fitzroy Crossi	30.55	242	P	P	22 04 14.2	-1.9
	comp=Z,1.1nm,0.4s,baz=79,slow=7.1,SNR=5.5						
FITZ	Fitzroy Crossi	30.55	242	IAmb	IAmb	22 04 16.5	
	comp=Z,2.7nm,1.1s						
THZ	Tophouse	40.59	158	P	P	22 05 42.1	+0.4
THZ				IAmb	IAmb	22 06 01.0	
	comp=Z,8.0nm,1.0s						
MORW	Morawa	43.14	232	P	P	22 06 00.8	-1.9
SONM	Songino Array	66.84	327	P	P	22 08 53.2	0.0
	comp=Z,0.2nm,0.4s,baz=136,slow=5.3,SNR=2.3						
CNPM	China Poot	77.27	25	P	P	22 09 53.7	-1.2
IMAR	Indian Mountai	80.03	19	P	P	22 10 09.7	-0.3
MKAR	Makanchi Array	80.97	319	P	P	22 10 14.9	-0.6
	comp=Z,0.2nm,0.5s,baz=94,slow=7.3,SNR=6.4						
TORD	Torodi Ar. Bea	151.25	289	PKPbc	PKPdf	22 17 53.0	+4.2
	comp=Z,0.2nm,0.3s,baz=87,slow=2.5,SNR=6.2						

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*MAN **20** 22:27:59.8, 6°.31N×126°.74E, h43^{km}, mb4.9, ML3.8, MS3.7*

*IDC **20** 22:28:05.7±3.5, 6°.48N×126°.38E, h72^{km}±28^{km}, mb3.2/5, mb1 3.4/5, mb1mx3.1/48, mbtmp3.5/5, Error ellipse: s-maj=84.8km s-min=17.9km az=68.0*

ISC 20 22:28:03.7±1.8**, 6°.23N**±0°.07×**126°.4E**±0°.1**, h51**^{km}±17^{km}**, n16, σ1^{s}.97**/23**, mb3.4**/5**, 3C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	0.70	260	*e*P	Pn	22 28 18.1	+0.6
MATI	Mati	0.73	348	*e*P	Pn	22 28 15.6	-2.3
DAV	Davao City (W)	1.17	316	P	Pn	22 28 23.2	-0.6
	512nm,0.3s,baz=180,slow=2.2,SNR=24						
DAV				S	Sn	22 28 38.5	-0.2
	282nm,0.3s,baz=304,slow=20,SNR=62						
DMPH	Davao City--Mi	1.23	314	⇑*i*P	Pn	22 28 24.2	-0.5
DMPH				*i* S	Sn	22 28 39.9	-0.3
GSPH	General Santos	1.45	265	⇓*i*P	Pn	22 28 26.2	-1.5
GSPH				*i* S	Sn	22 28 43.9	-1.9
KCP	Kidapawan	1.52	301	⇑*e*P	Pn	22 28 27.8	-0.8
KCP				*i* S	Sn	22 28 51.2	+3.9
SKMP	Bagumbayan, Su	1.87	279	*e*P	Pn	22 28 33.8	+0.4
SKMP				*e*S	Sn	22 28 56.3	+0.4
BUKP	Musuan	2.11	321	*e*P	Pn	22 28 36.4	-0.3
BUKP				*e*S	Sn	22 29 02.6	+0.7
CTBH	Cotabato--PC H	2.36	295	⇑*i*P	Pn	22 28 41.9	+1.8
CGP	Cagayan de Oro	2.79	323	⇓*e*P	Pn	22 28 45.0	-0.9
CGP				*e*S	Sn	22 29 20.1	+1.7
BUTP	Butuan	2.83	344	*e*P	Pn	22 28 47.6	+1.1
BUTP				*e*S	Sn	22 29 23.5	+4.1
FITZ	Fitzroy Crossi	24.18	182	P	P	22 33 17.8	+2.2
	1.6nm,0.7s,baz=9.5,slow=6.1,SNR=2.0						
WRA	Warramunga Arr	27.15	163	P	P	22 33 45.0	+2.6
	0.2nm,0.4s,baz=343,slow=10,SNR=5.0						
ASAR	Alice Springs	30.60	166	P	P	22 34 15.4	+2.3
	0.1nm,0.3s,baz=351,slow=7.4,SNR=2.1						
SONM	Songino Array	44.84	341	P	P	22 36 11.7	-1.3
	0.5nm,0.8s,baz=134,slow=6.2,SNR=2.1						
MKAR	Makanchi Array	55.34	324	P	P	22 37 30.1	-2.4
	0.4nm,0.4s,baz=120,slow=7.1,SNR=13						

IDC 20 22:28:23.2±2.9**, 6°.02S**×**152°.38E, h0**^{km}**, mb3.4**/2**, mb1 3.7**/2**, mb1mx3.4**/45**, mbtmp3.5**/2**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx3.0**/30**, Error ellipse: s-maj=78.8km s-min=25.5km az=105.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.74	348	Pn	Pn	22 28 54.7	+0.1
	68nm,0.3s,baz=165,slow=1.0,SNR=17						
KRVT				Sn	Sn	22 29 12.9	-4.6
	137nm,0.3s,baz=92,slow=22,SNR=36						
WRA	Warramunga Arr	22.34	230	P	P	22 33 22.8	-0.1
	0.8nm,0.6s,baz=53,slow=9.8,SNR=13						
WRA				LR	LR	22 43 26.8	
	comp=Z,184nm,18.8s,baz=160,slow=40						
ASAR	Alice Springs	24.98	223	P	P	22 33 48.7	-0.1
	0.6nm,0.6s,baz=61,slow=8.5,SNR=7.3						
TORD	Torodi Ar. Bea	150.26	286	PKPbc	PKPbc	22 48 17.3	-0.2
	0.2nm,0.6s,baz=88,slow=4.2,SNR=1.3						

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*IDC **20** 22:33:40.6±1.8, 15°.83S×75°.54W, h0^{km}, mb3.6/4, mb1 3.9/7, mb1mx3.7/40, mbtmp3.8/7, ML3.7/3, Error ellipse: s-maj=51.4km s-min=24.8km az=39.0*

ISC 20 22:33:43.8±1.1**, 16°.0S**±0°.1×**75°.8W**±0°.1**, h35**^{km}**, n14, σ2^{s}.12**/11**, mb3.6**/4**, Off coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	4.14	345	Pn	Pn	22 34 44.3	-0.3
	1.1nm,0.3s,baz=156,slow=9.9,SNR=1.4						
NNA				Sn	Sn	22 35 30.0	-1.9
	8.9nm,0.3s,baz=296,slow=13,SNR=3.7						
NNA				Lg	Lg	22 35 42.0	
	12nm,0.3s,baz=234,slow=12,SNR=2.4						
LPAZ	La Paz	7.34	93	Pn	Pn	22 35 28.1	-1.1
	1.0nm,0.3s,baz=278,slow=7.0,SNR=9.4						
LPAZ				Sn	Sn	22 36 54.9	+3.2
	baz=7.6,slow=25,SNR=1.0						
LVC	Limon Verde	9.21	136	Pn	Pn	22 35 55.6	+1.0
	3.0nm,0.3s,baz=315,slow=9.9,SNR=16						
LVC				Sn	Sn	22 37 34.0	-3.3
	0.3nm,0.3s,baz=72,slow=21,SNR=1.4						
PTGA	Pitinga	21.76	47	P	P	22 38 31.3	-1.3
	0.8nm,0.3s,baz=252,slow=8.3,SNR=2.1						
TXAR	Lajitas Array	52.52	329	P	P	22 42 54.9	+1.1
	0.1nm,0.5s,baz=158,slow=7.7,SNR=1.9						
TORD	Torodi Ar. Bea	81.87	74	P	P	22 46 00.2	0.0
	2.1nm,0.7s,baz=261,slow=5.5,SNR=12						
YKA	Yellowknife Ar	83.98	343	P	P	22 46 12.2	+2.1
	0.3nm,0.7s,baz=139,slow=6.0,SNR=5.3						
H11N3	WAKE ISLAND Hy	120.52	284	T	T	01 05 00.6	
	baz=98,slow=74,SNR=9.9						
H11N2	WAKE ISLAND Hy	120.53	284	T	T	01 05 01.8	
	baz=98,slow=74,SNR=14						
H11N1	WAKE ISLAND Hy	120.53	284	T	T	01 05 01.8	
	baz=98,slow=74,SNR=11						
H11S2	WAKE ISLAND Hy	120.55	282	T	T	01 05 02.7	
	baz=98,slow=75,SNR=22						
H11S1	WAKE ISLAND Hy	120.55	282	T	T	01 05 03.2	
	baz=98,slow=75,SNR=23						
H11S3	WAKE ISLAND Hy	120.56	282	T	T	01 05 04.3	
	baz=98,slow=75,SNR=26						
SONM	Songino Array	148.22	357	PKPbc	PKPab	22 53 28.2	-1.2
	0.3nm,0.4s,baz=342,slow=1.0,SNR=2.6						

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*IDC **20** 22:35:17.7±1.7, 11°.46S×117°.87E, h0^{km}, mb3.9/4, mb1 4.1/8, mb1mx3.8/51, mbtmp4.0/8, ML4.2/4, Error ellipse: s-maj=61.9km s-min=21.0km az=54.0*

*DJA **20** 22:35:20.8±1.3, 11°S±5°×11°8E±°, h16^{km}±13^{km}, M4.8/17, mB5.4/5, mb4.6/11, MLv4.8/17, Mw(mB)4.9/5*

*NEIC **20** 22:35:22.5±1.7, 11°.39S±0°.07×118°.17E±0°.06, h37^{km}±9^{km}, mb4.0/15, Error ellipse: s-maj=10.5km s-min=8.1km az=218.0*

ISC 20 22:35:22.0±0.6**, 11°.48S**±0°.05×**118°.22E**±0°.05**, h36**^{km}**, n66, σ2^{s}.24**/76**, mb4.0**/7**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	Waikabubak, Su	2.16	32	P	Pn	22 35 55.9	+0.4
BASI	Baing, Sumba	2.63	62	P	Pn	22 36 03.1	+1.2
BASI				S	Sn	22 36 32.8	+0.2
PLAI	Plampang	2.67	351	P	Pn	22 36 02.2	-0.3
PLAI				S	Sn	22 36 36.1	+2.5
WSI	Waingapu	2.72	49	P	Pn	22 36 04.0	+0.9
WSI				S	Sn	22 36 36.7	+1.9
IGBI	Denpasar	4.02	311	P	Pn	22 36 21.4	+0.4
DNP	Denpasar	4.07	313	P	Pn	22 36 22.9	+1.2
SRBI	Singaraja	4.49	318	P	Pn	22 36 28.5	+1.0
MMRI	Maumere	4.86	55	P	Pn	22 36 32.8	+0.2
MMRI	Maumere	4.86	55		Pn	22 36 33.2	+0.6
MMRI				Sn	Sn	22 37 25.3	-2.3
JAGI	Jajag, Banyuwa	5.00	306	P	Pn	22 36 34.8	+0.3
JAGI	Jajag, Banyuwa	5.00	306		Pn	22 36 34.1	-0.5
JAGI				Sn	Sn	22 37 27.3	-3.8
KMMI	Kalianget	6.08	316	P	Pn	22 36 50.8	+1.4
	0.4nm45nm,0.7s						
SOEI	Soe	6.18	75	P	Pn	22 36 50.4	-0.5
	0.4nm37nm,0.5s						
SOEI	Soe	6.18	75		Pn	22 36 53.5	+2.5
SOEI				Sn	Sn	22 38 01.4	+0.9
BKSI	Bulukumba	6.40	17	P	Pn	22 36 55.1	+1.4
	0.6nm2μm99nm,0.7s						
KAPI	Kappang	6.60	13	Pn	Pn	22 36 58.2	+1.7
	10nm,0.3s,baz=184,slow=7.8,SNR=34						
KAPI				Sn	Sn	22 38 04.9	-5.6
	12nm,0.3s,baz=295,slow=20,SNR=11						
GRJI	Gresik	7.26	308	P	Pn	22 37 06.2	+0.6
	0.2nm38nm,1.0s						
BNSI	Bone	7.27	15	P	Pn	22 37 05.4	-0.4
	0.2nm41nm,0.5s						
SPSI	Sidrap Palu	7.62	12	P	Pn	22 37 11.6	+1.1
	0.1nm26nm,0.7s						
PCJI	Pacitan	7.67	295	P	Pn	22 37 12.9	+1.7
	0.4nm49nm,1.5s						
WOJI	Wonogiri, Jawa	8.05	296	P	Pn	22 37 17.7	+1.2
	27nm,2.8s						
UGM	Wanagama	8.37	294	P	Pn	22 37 21.8	+0.9
	98nm,2.6s						
UGM	Wanagama	8.37	294	Pn	Pn	22 37 20.6	-0.3
TTSI	Tana Toraja	8.53	11	P	Pn	22 37 23.7	+0.7
	1μm32nm,0.5s						
FITZ	Fitzroy Crossi	9.73	133	Pn	Pn	22 37 42.8	+3.3
	2.3nm,0.3s,baz=312,slow=10,SNR=36						
FITZ				Sn	Sn	22 39 24.4	-3.2
	3.2nm,0.3s,baz=189,slow=21,SNR=9.0						

FITZ	**Fitzroy Crossi**	9.73	133		Pn	22 37 42.6	+3.1
FITZ				Sn	Sn	22 39 26.5	-1.2
PSA00	**Pilbara Seismi**	10.16	171		Pn	22 37 48.4	+3.0
PSA00	**Pilbara Seismi**	10.16	171	Pn	Pn	22 37 47.8	+2.5
PSAA1	**Pilbara Seismi**	10.16	171	Pn	Pn	22 37 47.7	+2.3
PSAA3	**Pilbara Seismi**	10.17	171	Pn	Pn	22 37 47.2	+1.7
PSAB3	**Pilbara Seismi**	10.18	171	Pn	Pn	22 37 47.5	+1.9
PSAC3	**Pilbara Seismi**	10.21	172	Pn	Pn	22 37 47.6	+1.5
PSAD3	**Pilbara Seismi**	10.22	172	Pn	Pn	22 37 48.0	+1.8
PSAD2	**Pilbara Seismi**	10.22	171	Pn	Pn	22 37 47.9	+1.7
BKB	**Balikpapan**	10.23	353	Pn	Pn	22 37 48.0	+1.6
CISI	**Cisompet, Garu**	10.98	290	Pn	Pn	22 37 54.9	-1.8
KNRA	**Kununurra**	11.06	113	Pn	Pn	22 38 00.0	+2.3
LUWI	**Luwuk**	11.31	24	Pn	Pn	22 38 00.8	-0.4
GIRL	**Giralia**	11.74	198	Pn	Pn	22 38 10.2	+3.3
XMIS	**Christmas Isla**	12.38	273	Pn	Pn	22 38 15.3	-0.5
MTN	**Manton Dam**	12.70	97	Pn	Pn	22 38 21.2	+1.1
SBUM	**Sibu**	15.07	336	Pn	Pn	22 38 52.3	-0.1
KSM	**Kuching**	15.08	328	Pn	Pn	22 38 52.1	-0.4
TNTI	**Ternate**	15.19	37	Pn	Pn	22 38 51.7	-2.3
TNTI				IAmb	IAmb	22 39 10.5	
	comp=Z,14nm,0.9s						
FAKI	**Fak Fak**	16.30	60	Pn	Pn	22 39 07.8	-0.4
FAKI				IAmb	IAmb	22 39 26.6	
	comp=Z,14nm,1.1s						
MNAI	**Manna**	16.68	294	Pn	Pn	22 39 11.1	-2.1
KKM	**Kota Kinabalu**	17.52	353	Pn	Pn	22 39 22.1	-1.6
KKM				IAmb	IAmb	22 39 28.5	
	comp=Z,6.1nm,0.7s						
WB0	**Warramunga Arr**	17.61	120		P	22 39 26.5	+1.0
MORW	**Morawa**	17.62	186	P	P	22 39 26.5	+1.1
WRA	**Warramunga Arr**	17.64	120	P	P	22 39 26.9	+1.1
	comp=Z,0.3nm,0.3s,baz=296,slow=13,SNR=22						
WRA				S	Sn	22 42 33.2	-7.5
	comp=Z,0.4nm,0.3s,baz=278,slow=21,SNR=6.0						
WRA	**Warramunga Arr**	17.64	120	IAmb	IAmb	22 39 31.2	
	comp=Z,0.1nm,0.8s						
WRAB	**Tennant Creek**	17.64	120		P	22 39 27.9	+2.0
WRAB				IAmb	IAmb	22 39 31.4	
	comp=Z,8.4nm,1.4s						
WB2	**Warramunga Arr**	17.65	120		P	22 39 27.1	+1.2
WR0	**Warramunga Arr**	17.82	120		P	22 39 28.8	+1.1
AS31	**Alice Springs**	19.22	131	P	Pn	22 39 45.3	+1.0
AS31				IAmb	IAmb	22 39 53.7	
	comp=Z,1.5nm,0.4s						
ASAR	**Alice Springs**	19.22	131	P	Pn	22 39 47.9	+3.5
	comp=Z,1.0nm,0.3s,baz=305,slow=8.5,SNR=14						
ASAR				S	Sn	22 43 11.4	-7.6
	comp=Z,0.3nm,0.3s,baz=313,slow=24,SNR=6.5						
ASAR	**Alice Springs**	19.22	131	P	Pn	22 39 46.2	+1.9
NWAO	**Narrogin (SRO)**	21.37	182	P	P	22 40 16.1	+10
	comp=Z,30nm,0.7s,baz=7.8,slow=12,SNR=20						
NWAO				S	S	22 43 56.1	-5.6
	comp=Z,6.2nm,0.5s,baz=9.7,slow=15,SNR=2.0						
USA0B	**Ussuriysk Arra**	56.81	12	P	P	22 45 01.9	-0.7
USRK	**Ussuriysk Ar.**	56.81	12	P	P	22 45 03.8	+1.2
	comp=Z,0.8nm,0.6s,baz=189,slow=6.2,SNR=2.1						
USRK	**Ussuriysk Ar.**	56.81	12	P	P	22 45 03.4	+0.7
SONM	**Songino Array**	59.98	351	P	P	22 45 25.0	+0.1
	comp=Z,0.4nm,0.6s,baz=177,slow=5.8,SNR=1.8						
MK31	**Makanchi Array**	66.31	334	P	P	22 46 07.8	+1.0
MK31				IAmb	IAmb	22 46 19.0	
	comp=Z,1.2nm,0.8s						
MKAR	**Makanchi Array**	66.31	334	P	P	22 46 07.4	+0.6
	comp=Z,0.5nm,0.4s,baz=149,slow=6.7,SNR=14						
AAK	**Ala-Archa**	67.09	326	P	P	22 46 12.8	+0.8
AAK				IAmb	IAmb	22 46 32.3	
	comp=Z,1.9nm,0.7s						
ZALV	**Zalesovo Beam**	71.08	340	P	P	22 46 36.2	-0.1
	comp=Z,1.4nm,0.5s,baz=154,slow=6.0,SNR=1.7						

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*NEIC **20** 22:41:47.2±1.9,23°.24S±0°.09×177°.4W±0°.1,h132^{km}±2^{km}, mb4.4/33,Error ellipse: s-maj=17.0km s-min=13.1km az=112.0*

*IDC **20** 22:41:51.8±6.4,23°.26S×177°.35W,h172^{km}±56^{km}, mb3.7/13,mb1 3.9/14,mb1mx3.7/45,mbtmp4.2/14,Error ellipse: s-maj=24.1km s-min=19.0km az=39.0*

ISC 20 22:41:48.5±0.5,**23°.24S**±0°.07×**177°.34W**±0°.09,**h150**^{km}, **n74,**σ**1^s.44**/74,**mb4.3**/24,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	6.01	185	Pn	Pn	22 43 13.4	-1.9
MSVF	**Nonsavu**	6.98	321	Pn	Pn	22 43 25.8	-2.6
NIUE	**Niue**	8.06	60	Pn	Pn	22 43 42.9	+0.2
AFI	**Afiamalu**	10.67	31	Pn	Pn	22 44 15.8	-1.7
OUZ	**Omahuta**	14.31	211		Pn	22 45 04.0	-0.3
URZ	**Urewera**	15.71	196	P	P	22 45 22.3	-0.1
	3.8nm,0.3s,baz=0.9,slow=4.0,SNR=11						
URZ	**Urewera**	15.71	196	P	P	22 45 22.9	+0.5
URZ				IAmb	IAmb	22 45 24.2	
	comp=Z,17nm,0.7s						
BKZ	**Black Stump Fm**	16.72	197	P	P	22 45 31.8	-1.9
BKZ				IAmb	IAmb	22 45 41.0	
	comp=Z,21nm,1.0s						
BFZ	**Birch Farm**	18.21	196	P	P	22 45 48.0	-2.0
BHW	**Baring Head**	19.26	198	P	P	22 45 59.4	-2.0
PLWZ	**Palliser**	19.30	197	P	P	22 46 00.2	-1.6
QRZ	**Quartz Range**	19.50	204	P	Pn	22 46 04.4	-2.4
NNZ	**Nelson**	19.55	201	P	P	22 46 02.0	-2.5
TUWZ	**Tuamarina**	19.56	200	P	P	22 46 02.0	-2.5
BSWZ	**Blackbirch Sta**	19.84	200	P	P	22 46 07.3	-0.2
THZ	**Tophouse**	20.19	202	P	P	22 46 10.1	-1.4
THZ				IAmb	IAmb	22 46 13.5	
	comp=Z,9.8nm,1.0s						
KHZ	**Kahutara**	20.58	200	P	P	22 46 13.5	-2.0
KHZ				IAmb	IAmb	22 46 26.8	
	comp=Z,14nm,1.1s						
LTZ	**Lake Taylor**	21.32	201	P	P	22 46 25.1	+1.7
LTZ				IAmb	IAmb	22 46 29.9	
	comp=Z,14nm,1.0s						
MQZ	**McQueen’s Vall**	22.02	200	P	P	22 46 30.8	+0.1
MQZ				IAmb	IAmb	22 46 36.5	
	comp=Z,17nm,1.1s						
RPZ	**Rata Peaks**	22.56	202	P	P	22 46 36.4	+0.4
	comp=Z,5.1nm,0.4s,baz=56,slow=3.6,SNR=2.9						
RPZ	**Rata Peaks**	22.56	202	IAmb	IAmb	22 46 41.3	
	comp=Z,8.0nm,0.9s						
FOZ	**Fox Glacier**	22.85	205	P	P	22 46 38.6	-0.1
FOZ				IAmb	IAmb	22 46 40.2	
	comp=Z,17nm,0.7s						
LBZ	**Lake Benmore**	23.45	203	P	P	22 46 42.3	-2.0
ODZ	**Otahua Downs**	23.86	201	P	P	22 46 47.9	-0.1
MLZ	**Mavora Lakes**	25.05	205	P	P	22 46 58.6	-0.2
MLZ				IAmb	IAmb	22 47 02.8	
	comp=Z,8.3nm,0.8s						
DCZ	**Deep Cove**	25.51	206	P	P	22 47 04.0	+1.1
DCZ				IAmb	IAmb	22 47 08.9	
	comp=Z,14nm,1.1s						
WHZ	**Wether Hill Ro**	25.56	204	P	P	22 47 04.3	+0.9
WHZ				IAmb	IAmb	22 47 06.3	
	comp=Z,18nm,1.2s						
PYZ	**Puysegur Point**	26.28	206	P	P	22 47 12.0	+2.2
CTA	**Charters Tower**	33.93	268	P	P	22 48 18.6	+1.1
	comp=Z,2.4nm,0.4s,baz=99,slow=9.5,SNR=5.4						
PMG	**Port Moresby**	36.62	286	P	P	22 48 42.8	+2.2
	comp=Z,21nm,0.7s,baz=98,slow=9.1,SNR=6.6						
PMG	**Port Moresby**	36.62	286	P	P	22 48 41.2	+0.6
ASAR	**Alice Springs**	44.55	259	P	P	22 49 46.5	+0.8
	comp=Z,2.2nm,0.9s,baz=89,slow=8.4,SNR=13						
ASAR				PcP	PcP	22 51 25.9	-0.4
	comp=Z,0.6nm,0.7s,baz=101,slow=4.3,SNR=4.1						
ASAR	**Alice Springs**	44.55	259	P	P	22 49 45.9	+0.2
WR0	**Warramunga Arr**	44.71	265	P	P	22 49 47.1	+0.2
WB0	**Warramunga Arr**	44.88	265	P	P	22 49 48.8	+0.5
WB0				IAmb	IAmb	22 49 50.2	
	comp=Z,5.8nm,0.8s						
WRAB	**Tennant Creek**	44.89	265	P	P	22 49 48.6	+0.3
WRAB				IAmb	IAmb	22 49 49.4	
	comp=Z,4.9nm,0.5s						
WRA	**Warramunga Arr**	44.89	265	P	P	22 49 49.0	+0.6
	comp=Z,2.8nm,0.5s,baz=90,slow=6.0,SNR=35						
WRA				PcP	PcP	22 51 28.0	+0.6
	comp=Z,1.2nm,0.9s,baz=100,slow=3.3,SNR=4.4						
WRA	**Warramunga Arr**	44.89	265	P	P	22 49 48.1	-0.3
KNRA	**Kununurra**	51.14	268	P	P	22 50 37.5	+1.0
KNRA				IAmb	IAmb	22 50 38.4	
	comp=Z,10nm,1.1s						
FAKI	**Fak Fak**	52.75	285	P	P	22 50 49.4	+1.0
FITZ	**Fitzroy Crossi**	53.32	264	P	P	22 50 53.5	+1.1
	comp=Z,1.2nm,0.5s,baz=217,slow=8.4,SNR=4.4						
FITZ	**Fitzroy Crossi**	53.32	264	IAmb	IAmb	22 50 58.1	
	comp=Z,6.2nm,1.1s						
VNDA	**Vanda**	55.25	185	P	P	22 51 07.4	+1.9
	comp=Z,0.9nm,0.8s,baz=45,slow=2.9,SNR=2.2						
PSA00	**Pilbara Seismi**	57.69	258	P	P	22 51 23.2	-0.5
MBWA	**Marble Bar**	57.89	259		sP	22 52 12.3	-3.2
QSPA	**South Pole Qui**	66.84	180	P	P	22 52 25.3	+1.3
	baz=171,slow=18						
QSPA	**South Pole Qui**	66.84	180	IAmb	IAmb	22 52 32.7	
	comp=Z,0.6nm,0.8s						
NVAR	**Mina Array Bea**	82.60	43	P	P	22 53 55.8	+0.6
	comp=Z,0.4nm,0.7s,baz=222,slow=7.9,SNR=2.6						
TXAR	**Lajitas Array**	88.02	57	P	P	22 54 23.6	+1.5
	comp=Z,0.3nm,0.9s,baz=257,slow=3.6,SNR=2.6						
PV14	**Lion Creek, Pa**	88.59	47	P	P	22 54 23.8	-1.0
KTH	**Kantishna Hill**	88.97	11	P	P	22 54 26.9	+1.2
KTH				IAmb	IAmb	22 54 28.3	
	comp=Z,3.7nm,0.9s						
TRF	**Thorofare Moun**	88.99	12	P	P	22 54 27.3	+1.4
SEY	**Seymchan**	89.17	347	P	P	22 54 27.2	+0.7
	comp=Z,0.7nm,0.3s,baz=31,slow=19,SNR=4.4						
O20A	**White River Ci**	90.02	46	P	P	22 54 30.3	-1.0
O20A				IAmb	IAmb	22 54 32.8	
	comp=Z,2.8nm,0.6s						
MLY	**Manley**	90.35	11	P	P	22 54 32.9	+0.9
WHY	**Whitehorse**	90.41	19	P	P	22 54 33.4	+0.8
HDA	**Harding Lake**	90.50	13	P	P	22 54 33.1	+0.4
PDAR	**Pinedale Array**	90.53	43	P	P	22 54 34.8	+1.1
	comp=Z,0.4nm,0.7s,baz=208,slow=3.7,SNR=3.6						
CCB	**Clear Creek Bu**	90.55	12	P	P	22 54 34.3	+1.4
IMAR	**Indian Mountai**	90.74	9	P	P	22 54 36.3	+2.5
IMAR	**Indian Mountai**	90.74	9	P	P	22 54 36.6	+2.8
ILAR	**Eielson Array**	90.84	13	P	P	22 54 35.1	+0.8
	comp=Z,0.4nm,0.5s,baz=215,slow=6.2,SNR=5.9						
CMAR	**Chiang Mai Arr**	91.60	289	P	P	22 54 40.2	+1.2
	comp=Z,0.5nm,0.3s,baz=116,slow=2.1,SNR=1.5						
MKAR	**Makanchi Array**	113.51	313	PKiKP	PKiKP	23 00 07.8	-0.9
	comp=Z,0.3nm,0.7s,baz=82,slow=4.1,SNR=3.2						
KURBB	**Kurchatov Arra**	116.45	316	PKP	PKiKP	23 00 13.6	-0.6
	comp=Z,0.2nm,0.6s,baz=86,slow=1.2,SNR=3.1						
BVAR	**Borovoye Array**	121.55	319	PKP	PKiKP	23 00 23.8	-0.3
	comp=Z,0.3nm,0.4s,baz=75,slow=0.8,SNR=2.6						
ARCES	**ARCESS Array B**	131.71	349	PKP	PKiKP	23 00 43.4	-0.5
	comp=Z,3.3nm,0.9s,baz=355,slow=1.0,SNR=2.3						
FINES	**FINESS Array B**	138.56	343	PKP	PKiKP	23 00 56.4	-1.6
	comp=Z,0.9nm,0.5s,baz=72,slow=4.5,SNR=8.4						
AKASG	**Malin Array Be**	145.69	330	PKPbc	PKPab	23 01 08.9	-1.1
	comp=Z,8.0nm,0.6s,baz=43,slow=4.3,SNR=50						
AKASG	**Malin Array Be**	145.69	330		PKPab	23 01 09.9	-0.1
BRTR	**Keskin Array B**	149.09	309	PKPbc	PKiKP	23 01 19.7	-0.8
	comp=Z,1.4nm,0.8s,baz=146,slow=5.7,SNR=8.6						
CLL	**Collm**	150.86	347	*e*PKPdf	PKPbc	23 01 20.0	-3.0
CLL				*i* PKPbc	PKiKP	23 01 25.0	+1.4
CLL				*i* PKPab	PKPab	23 01 31.5	+0.8
GERES	**GERESS Array B**	152.99	344	PKPbc	PKiKP	23 01 28.8	+0.6
	comp=Z,0.5nm,0.5s,baz=42,slow=3.2,SNR=4.2						
GERES	**GERESS Array B**	152.99	344	PKPab	PKPab	23 01 35.8	-4.1

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*DJA **20** 22:42:26.8±1.6,4°N±11°×12°8E±°,h18^{km}±23^{km},M4.8/9, mB5.3/6,mb4.9/7,MLv4.8/9,Mw(mB)4.7/6*

*IDC **20** 22:42:31.7±3.4,3°.71N×128°.37E,h126^{km}±37^{km},mb3.5/6, mb1 3.7/7,mb1mx3.3/53,mbtmp4.0/7,MS3.1/1,Ms1 3.1/1, ms1mx2.6/37,Error ellipse: s-maj=64.7km s-min=20.0km az=67.0*

*NEIC **20** 22:42:31.7±1.1,3°.6N±0°.1×128°.2E±0°.2,h123^{km}±10^{km}, mb4.0/6,Error ellipse: s-maj=24.3km s-min=14.8km az=55.0*

ISC 20 22:42:29.9±0.8,**3°.73N**±0°.06×**128°.22E**±0°.10,**h100**^{km},**n34,** σ**1^s.49**/34,**mb3.9**/9,**1C,North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	3.06	196	P	Pn	22 43 17.3	+0.9
TNTI				S	Sn	22 43 55.4	+3.2
TNTI	**Ternate**	3.06	196		Pn	22 43 17.2	+0.9
DDMP	**Don Marcelino,**	3.44	314	*e*P	Pn	22 43 19.8	-1.7
DDMP				*e*S	Sn	22 44 03.0	+1.6
LBMI	**Labuha**	4.39	189	P	Pn	22 43 35.1	+0.7
KCP	**Kidapawan**	4.51	316	⇑*e*P	Pn	22 43 36.1	0.0
KCP				*e*S	Sn	22 44 32.5	+5.1
SKMP	**Bagumbayan, Su**	4.59	307	*e*P	Pn	22 43 36.8	-0.3
SKMP				*e*S	Sn	22 44 21.7	-7.7
BUKP	**Musuan**	5.18	323	*e*P	Pn	22 43 45.3	+0.1
KMSI	**Cibinong**	5.26	234	P	Pn	22 43 44.9	-1.3
	1.1nm176nm,0.6s						
SIJI	**Sorong**	5.49	146	P	Pn	22 43 50.8	+1.5
	21nm,0.3s,baz=317,slow=17,SNR=105						
SIJI				S	Sn	22 44 50.8	-0.3
	1.1nm,0.3s,baz=182,slow=23,SNR=1.1						
SANI	**Sanana**	6.16	201	P	Pn	22 43 58.5	+0.2
	0.2nm14nm,0.9s						
MRSI	**Marisa**	7.05	243	P	Pn	22 44 09.3	-1.2
	1.5nm4μm385nm,0.7s						
FAKI	**Fak Fak**	7.73	149	P	Pn	22 44 21.4	+1.6
	0.3nm1μm78nm,0.7s						
FAKI	**Fak Fak**	7.73	149		Pn	22 44 21.5	+1.6
APSI	**Ampana**	8.02	235	P	Pn	22 44 22.4	-1.3
	49nm,1.1s						
MPSI	**Mapaga**	8.97	248	P	Pn	22 44 35.4	-1.2
GUMO	**Guam**	19.14	58	LR	LR	22 53 05.0	
	comp=Z,56nm,19.1s,baz=147,slow=33						
WRA	**Warramunga Arr**	24.28	166	P	P	22 47 37.5	-0.5
	1.0nm,0.6s,baz=342,slow=11,SNR=8.9						
WB2	**Warramunga Arr**	24.28	166	P	P	22 47 37.4	-0.6
WB2				IAmb	IAmb	22 47 55.2	
	comp=Z,4.7nm,1.1s						
WR0	**Warramunga Arr**	24.34	165	P	P	22 47 37.7	-0.8
WR0				IAmb	IAmb	22 47 39.1	
	comp=Z,5.1nm,1.1s						
ASAR	**Alice Springs**	27.79	169	P	P	22 48 08.2	-1.4
	comp=Z,0.3nm,0.5s,baz=356,slow=8.3,SNR=4.3						
ASAR	**Alice Springs**	27.79	169	P	P	22 48 07.1	-2.5
CMAR	**Chiang Mai Arr**	32.16	299	P	P	22 48 48.8	+0.5
	comp=Z,0.4nm,0.5s,baz=110,slow=7.8,SNR=1.3						
H11S3	**WAKE ISLAND Hy**	40.38	66	T	T	23 33 24.9	
	baz=253						
H11S1	**WAKE ISLAND Hy**	40.39	66	T	T	23 33 28.0	
	baz=253						
H11S2	**WAKE ISLAND Hy**	40.39	66	T	T	23 33 24.4	
	baz=253						
MK31	**Makanchi Array**	58.41	325	P	P	22 52 15.2	+0.2
MKAR	**Makanchi Array**	58.41	325	P	P	22 52 15.1	0.0
	comp=Z,1.6nm,0.4s,baz=115,slow=8.0,SNR=57						
MKAR	**Makanchi Array**	58.41	325	P	P	22 52 14.8	-0.3
MAKZ	**Makanchi**	58.60	324	P	P	22 52 16.3	-0.1
MAKZ				IAmb	IAmb	22 52 17.1	
	comp=Z,2.5nm,0.9s						
KURK	**Kurchatov**	62.55	327	P	P	22 52 42.9	-0.1
KKAR	**Karatay Array**	64.25	317	P	P	22 52 53.8	-0.7
BVAR	**Borovoye Array**	68.14	327	P	P	22 53 18.6	-0.6
	comp=Z,0.8nm,0.6s,baz=108,slow=5.7,SNR=5.9						
NRIK	**Noril'sk**	70.79	346	P	P	22 53 34.5	-0.6
	comp=Z,1.8nm,0.7s,baz=120,slow=8.1,SNR=4.8						
ABKAR	**Akbulak array**	73.09	320	P	P	22 53 48.4	-0.9

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*ANF **20** 22:42:32.2±0.8,36°.41N×97°.86W,h0^{km},ML4.2/6,Error ellipse: s-maj=10.0km s-min=5.8km az=17.0*

*TUL **20** 22:42:32.2±1.5,36°.57N±0°.02×97°.83W±0°.02,h4^{km}±6^{km}, ML3.3,Error ellipse: s-maj=2.4km s-min=2.2km az=101.0*

*NEIC **20** 22:42:32.5±1.4,36°.567N±0°.008×97°.80W±0°.02,h5^{km}±7^{km}, Error ellipse: s-maj=2.8km s-min=0.9km az=74.0*

ISC 20 22:42:32.6±0.9,**36°.56N**±0°.03×**97°.81W**±0°.03,**h10**^{km},**n23,** σ**1^s.34**/27,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADOK	**Arcadia Dam**	0.97	158	Pg	Pg	22 42 50.5	-0.8
U32A	**Winter Ranch,**	0.97	260		Pg	22 42 50.4	-0.9
T35A	**Sooner Cattle**	1.10	71		Pb	22 42 53.3	-0.6
OKCFA	**Oklahoma City**	1.18	165		Pb	22 42 54.0	-1.0
OKCFA				Sg	Sg	22 43 11.3	+0.8
OKCSW	**OKLAHOMA CITY**	1.19	165		Pb	22 42 54.7	-0.6
OKCSW				Sg	Sg	22 43 11.7	+0.8
FNO	**Franklin**	1.34	165		Pn	22 42 57.0	-0.4
W35A	**Tecumseh**	1.60	151		Pn	22 43 01.5	+0.5
TUL1	**Leonard**	1.76	111		Pn	22 43 04.0	+0.9
TUL1	**Leonard**	1.76	111	P	Pn	22 43 04.1	+0.9
	baz=293						
TUL1				S	Sb	22 43 28.0	+1.0
	baz=293						
X34A	**Smith Ranch, M**	1.95	180		Pb	22 43 07.5	-0.8
WMOK	**Wichita Mounta**	1.98	204		Pn	22 43 06.8	+0.6
R32A	**Long Quarter,**	1.99	339		Pb	22 43 08.6	-0.4
CBKS	**Cedar Bluff**	2.72	326	S	Sb	22 43 56.2	+1.4
	baz=145						
U38A	**Gravette**	2.77	91		Pb	22 43 20.6	-1.6
HHAR	**Hobbs**	3.14	94		Pn	22 43 24.0	+1.9
Z35A	**Perchaven, San**	3.25	172	Pn	Pn	22 43 24.4	+0.7
W39A	**Magazine**	3.54	111	Pg	Pb	22 43 37.6	+2.2
AMTX	**Amarillo**	3.56	243	Pg	Pb	22 43 35.9	+0.1
AMTX	**Amarillo**	3.56	243	Sb	Sb	22 44 20.5	+1.4
	baz=61						
U40A	**Yellville**	4.00	91		Pn	22 43 35.6	+1.6
U40A	**Yellville**	4.00	91	Pb	Pb	22 43 44.5	+1.2
	baz=274						
U40A				Sb	Sg	22 44 37.5	-3.7
	baz=274						
BGNE	**Belgrade**	4.85	357	P	Pn	22 43 46.0	+0.3
	baz=177						
Z41A	**Richland Creek**	5.27	127	S	Sn	22 44 51.1	-1.2
	baz=310						

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*IDC **20** 22:50:16.7±2.1,36°.22N×141°.15E,h0^{km},mb3.5/4, mb1 3.6/5,mb1mx3.3/57,mbtmp3.5/5,ML2.3/1,Error ellipse: s-maj=50.7km s-min=30.4km az=50.0*

*JMA **20** 22:50:22.1±0.2,35°.89N×140°.87E,h43^{km}±2^{km},M2.8*

ISC 20 22:50:22.3±1.4,**35°.95N**±0°.05×**140°.92E**±0°.09,**h31**^{km}±10^{km}, **n19,**σ**0^s.91**/18,**mb3.5**/4,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	0.26	191	P	Pb	22 50 29.4	+0.1
CHOJ				S	Sn	22 50 34.8	+0.1
JIHU	**Itakohorinouch**	0.32	272	P	Pn	22 50 30.8	0.0
JIHU				S	Sn	22 50 37.4	+1.1
JHYU	**Hitachinakayam**	0.47	325	P	Pn	22 50 33.2	+0.3
JHYU				S	Sn	22 50 41.2	+1.1
JSMT	**Sammumatsuo**	0.49	231	P	Pb	22 50 32.6	-0.1
JYT	**Yasato**	0.65	295	P	Pb	22 50 34.6	-0.6
JHO	**Hitachi**	0.71	337	P	Pb	22 50 36.4	+0.1
JAG	**Ashikaga**	1.27	292	P	Pn	22 50 43.3	-0.6
MJAR	**Matsushiro Arr**	2.27	286	Pn	Pn	22 50 57.7	+0.1
	0.7nm,0.3s,baz=92,slow=9.3,SNR=26						
MJAR				Sn	Sn	22 51 26.2	+1.7
	0.3nm,0.3s,baz=108,slow=14,SNR=4.9						
MAT	**Matsushiro**	2.27	286	P	Pn	22 50 58.2	+0.6
MAT				S	Sn	22 51 24.3	-0.2
H11N2	**WAKE ISLAND Hy**	27.96	118	T	T	23 25 11.9	
	baz=320,slow=75						
H11N1	**WAKE ISLAND Hy**	27.97	118	T	T	23 25 08.4	
	baz=320						
H11N3	**WAKE ISLAND Hy**	27.98	118	T	T	23 25 13.4	
	baz=320,slow=75						
H11S1	**WAKE ISLAND Hy**	28.63	121	T	T	23 26 04.5	
	baz=319,slow=74						
H11S3	**WAKE ISLAND Hy**	28.63	121	T	T	23 26 08.4	
	baz=319,slow=74						
H11S2	**WAKE ISLAND Hy**	28.65	121	T	T	23 26 11.8	
	baz=319						
ZALV	**Zalesovo Beam**	42.35	313	P	P	22 58 12.2	-1.1
	0.6nm,0.5s,baz=87,slow=10,SNR=2.2						
MKAR	**Makanchi Array**	44.36	303	P	P	22 58 28.4	-1.3
	0.4nm,0.7s,baz=94,slow=8.5,SNR=6.3						
KURBB	**Kurchatov Arra**	46.36	309	P	P	22 58 44.1	-1.2
	0.3nm,0.3s,baz=82,slow=7.5,SNR=7.3						
WRA	**Warramunga Arr**	55.94	187	P	P	22 59 58.5	+1.0
	0.4nm,0.9s,baz=360,slow=7.5,SNR=2.0						

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*ECX **20** 23:20:04.4±0.6,31°.38N×115°.30W,h5^{km}±3^{km},MD2.4, ML2.6*

*MEX **20** 23:20:04.9±0.8,31°.26N×115°.17W,h10^{km},MD3.5*

ISC 20 23:20:03.1±1.0,**31°.37N**±0°.03×**115°.30W**±0°.04, **h16**^{km}±10^{km},**n12,**σ**0^s.36**/23,**1C-3D,Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECBX	**El Chinero**	0.24	63	⇑*i*P	Pb	23 20 08.9	-0.1
ECBX				*e*S	Sg	23 20 12.3	+0.4
SPIG	**San Pedro Mart**	0.35	204	*e*P	Pb	23 20 11.2	+0.1
SPIG				*e*S	Sb	23 20 16.4	-0.2
SPIG	**San Pedro Mart**	0.35	204	*e*P	Pb	23 20 11.5	+0.3
SPIG				*e*S	Sb	23 20 16.8	+0.2
SPX	**San Pedro Mart**	0.36	203	⇓*e*P	Pg	23 20 10.5	-0.1
SPX				*e*S	Sg	23 20 15.6	-0.2
SPX				IAML		23 20 16.3	
	comp=E,386nm,0.2s						
SPX				*e*		23 20 16.3	
SPX				IAML		23 20 16.3	
	comp=N,437nm,0.2s						
SPX				*e*		23 20 16.3	
SPX	**San Pedro Mart**	0.36	203	*e*P	Pg	23 20 10.5	-0.1
SPX				*e*S	Sg	23 20 15.4	-0.4
SFX	**San Felipe**	0.51	130	*e*P	Pg	23 20 13.2	+0.1
SFX				*e*S	Sb	23 20 20.3	-0.4
ESJX	**Sierra Juarez**	0.84	319	*e*P	Pb	23 20 19.1	-0.4
ESJX				*e*S	Sb	23 20 30.2	-0.5
ESJX				⇓*e*		23 20 33.1	
ESJX				IAML		23 20 33.1	
	comp=N,246nm,0.1s						
SQX	**San Quintin**	0.93	212	*e*P	Pg	23 20 21.2	+0.1
SQX				*e*S	Sg	23 20 33.6	+0.3
ERMX	**Rumorosa**	1.34	333	*e*P	Pb	23 20 27.8	-0.1
ERMX				*e*S	Sb	23 20 45.3	+0.5
ERMX				⇓*e*		23 20 46.9	
ERMX				IAML		23 20 46.9	
	comp=E,79nm,0.2s						
CBX	**Cerro Bola**	1.50	309	*e*P	Pb	23 20 30.4	-0.2
CBX				*e*S	Sb	23 20 50.1	+0.7
CBX	**Cerro Bola**	1.50	309	*e*P	Pb	23 20 30.6	0.0
CBX				*e*S	Sb	23 20 49.9	+0.5
OLP	**Otay Lakes Par**	1.86	312	*e*P	Pb	23 20 36.2	-0.5

MAN 20 23:23:09.8,9°.96N×124°.08E,h3^{km},mb4.4,ML3.2,MS2.9, 2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	0.35	219	*e*P	Pg	23 23 17.2	+0.7
TBP				*i* S	Sb	23 23 23.4	-1.2
LLP	**Lapu-Lapu**	0.37	342	⇓*e*P	Pg	23 23 17.5	+0.5
LLP				*e*S	Sb	23 23 23.7	-1.6
MSLP	**Maasin**	0.78	77	*e*P	Pg	23 23 24.7	-0.2
MSLP				*e*S	Sb	23 23 36.5	-0.6
OCLP	**Ormoc**	1.20	26	*e*P	Pg	23 23 32.7	-0.2
OCLP				*e*S	Sn	23 23 50.7	+0.4
GUIM	**Jordan**	1.61	294	*e*P	Pn	23 23 37.9	-1.3
GUIM				*e*S	Sb	23 24 01.1	+0.1
RCP	**Roxas**	2.06	321	⇓*e*P	Pn	23 23 45.8	+0.4
PAGZ	**Pagadian**	2.21	198	*e*P	Pn	23 23 48.0	+0.6
PAGZ				*e*S	Sn	23 24 16.1	+0.7

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*NEIC **20** 23:26:29.6±1.5,4°.9S±0°.1×153°.9E±0°.1,h103^{km}±6^{km}, mb4.4/19,Error ellipse: s-maj=17.6km s-min=16.2km az=128.0*

*IDC **20** 23:26:30.9±2.8,4°.84S×153°.74E,h113^{km}±20^{km},mb3.9/16, mb1 4.1/17,mb1mx3.8/42,mbtmp4.3/17,Error ellipse: s-maj=29.5km s-min=13.5km az=105.0*

ISC 20 23:26:30.0±0.7,**4°.85S**±0°.08×**153°.9E**±0°.1,**h105**^{km},**n54,** σ**0^s.83**/55,**mb4.2**/24,**New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	1.81	291		Pn	23 27 00.9	+0.6
KRVT	**Keravat (AS076**	1.90	286	P	Pn	23 27 01.6	+0.1
	145nm,0.3s,baz=175,slow=0.6,SNR=67						
KRVT				S	Sn	23 27 24.6	-0.9
	228nm,0.3s,baz=85,slow=2.0,SNR=4.8						
KRVT				LR	LR	23 27 57.0	
	comp=Z,430nm,18.1s,baz=98,slow=48						
PMG	**Port Moresby**	8.04	235	P	Pn	23 28 25.6	+1.6
	24nm,0.3s,baz=66,slow=5.4,SNR=21						
PMG				S	Sn	23 29 52.3	-1.0
	baz=1.0,slow=15,SNR=1.6						
PMG	**Port Moresby**	8.04	235		Pn	23 28 25.2	+1.1
SIJI	**Sorong**	22.90	279	P	P	23 31 24.6	-0.5
	7.3nm,0.5s,baz=53,slow=10,SNR=3.7						
WR0	**Warramunga Arr**	24.07	230	P	P	23 31 36.4	+0.6
WR0				IAmb	IAmb	23 31 37.7	
	comp=Z,11nm,0.9s						
WB0	**Warramunga Arr**	24.07	230	P	P	23 31 36.8	+1.0
WB0				IAmb	IAmb	23 31 37.6	

	comp=Z,17nm,1.2s						
WB2	**Warramunga Arr**	**24.20**	**230**	P	**P**	**23 31 37.1**	**+0.1**
WB2				IAmb	IAmb	23 32 00.9	
	comp=Z,12nm,0.4s						
WRA	**Warramunga Arr**	**24.21**	**230**	P	**P**	**23 31 37.0**	**0.0**
	comp=Z,6.3nm,0.7s,baz=53,slow=10.0,SNR=30						
WRA	**Warramunga Arr**	**24.21**	**230**	IAmb	IAmb	23 31 38.2	
	comp=Z,0.4nm,0.9s						
AS31	**Alice Springs**	**26.83**	**224**	P	**P**	**23 32 01.1**	**+0.4**
ASAR	**Alice Springs**	**26.83**	**224**	P	**P**	**23 32 00.3**	**-0.5**
	comp=Z,1.8nm,0.4s,baz=54,slow=8.8,SNR=29						
ASAR	**Alice Springs**	**26.83**	**224**	P	**P**	**23 31 59.7**	**-1.0**
STKA	**Stephens Creek**	**29.24**	**202**	P	**P**	**23 32 21.5**	**-0.6**
	comp=Z,2.5nm,0.8s,baz=31,slow=14,SNR=3.9						
FITZ	**Fitzroy Crossi**	**30.56**	**242**	P	**P**	**23 32 33.6**	**-0.2**
CAN	**Canberra**	**30.65**	**188**	P	**P**	**23 32 34.3**	**-0.3**
MORW	**Morawa**	**43.14**	**232**	P	**P**	**23 34 20.1**	**-0.2**
USRK	**Ussuriysk Ar.**	**52.64**	**340**	P	**P**	**23 35 32.8**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=170,slow=9.6,SNR=4.1						
PETK	**Petropavlovsk-**	**57.83**	**3**	P	**P**	**23 36 10.8**	**+0.4**
	comp=Z,3.3nm,0.9s,baz=151,slow=6.3,SNR=4.0						
CMAR	**Chiang Mai Arr**	**58.85**	**295**	P	**P**	**23 36 17.6**	**-0.6**
	comp=Z,1.0nm,0.4s,baz=108,slow=4.5,SNR=7.5						
CMAR	**Chiang Mai Arr**	**58.85**	**295**	P	**P**	**23 36 19.4**	**+1.3**
MA2	**Magadan**	**64.27**	**358**	P	**P**	**23 36 54.2**	**+0.4**
	comp=Z,4.1nm,0.4s,baz=143,slow=9.8,SNR=4.8						
MA2	**Magadan**	**64.27**	**358**	IAmb	IAmb	23 36 56.4	
	comp=Z,5.7nm,0.8s						
ULN	**Ulaanbaatar**	**66.59**	**328**	P	**P**	**23 37 10.8**	**+1.6**
ULN				IAmb	IAmb	23 37 12.3	
	comp=Z,3.5nm,1.1s						
SONM	**Songino Array**	**66.93**	**327**	P	**P**	**23 37 11.8**	**+0.5**
	comp=Z,1.2nm,0.6s,baz=140,slow=5.6,SNR=9.7						
SONM	**Songino Array**	**66.93**	**327**	P	**P**	**23 37 12.2**	**+0.9**
SEY	**Seymchan**	**67.60**	**359**	P	**P**	**23 37 16.1**	**+1.1**
	comp=Z,1.1nm,0.2s,baz=156,slow=3.9,SNR=4.8						
TAPN	**Taplejung**	**71.33**	**301**	*e*P	**P**	**23 37 40.3**	**+1.1**
	comp=Z,23nm,0.9s						
ODAN	**Odare**	**71.47**	**300**	*e*P	**P**	**23 37 40.8**	**+0.9**
	comp=Z,36nm,0.8s						
RAMN	**Ramite**	**72.18**	**300**	*e*P	**P**	**23 37 44.9**	**+0.7**
	comp=Z,5.7nm,0.6s						
JIRN	**Jiri**	**72.71**	**301**	*e*P	**P**	**23 37 48.3**	**+0.8**
GUN	**Gumba**	**73.04**	**301**	*e*P	**P**	**23 37 50.3**	**+0.9**
	comp=Z,32nm,0.7s						
PKI	**Pulchoki**	**73.36**	**300**	*e*P	**P**	**23 37 51.9**	**+0.6**
PKIN	**Phulchoki**	**73.37**	**300**	*e*P	**P**	**23 37 51.9**	**+0.6**
	comp=Z,8.3nm,0.5s						
KKN	**Kakani**	**73.53**	**301**	*e*P	**P**	**23 37 53.0**	**+0.9**
DMN	**Daman**	**73.63**	**300**	*e*P	**P**	**23 37 53.8**	**+1.0**
	comp=Z,41nm,1.0s						
GKN	**Gorkha**	**74.13**	**301**	*e*P	**P**	**23 37 56.3**	**+0.8**
DANN	**Dangsing**	**74.97**	**301**	*e*P	**P**	**23 38 00.9**	**+0.4**
	comp=Z,19nm,0.8s						
MK31	**Makanchi Array**	**81.05**	**319**	P	**P**	**23 38 34.4**	**+0.9**
MKAR	**Makanchi Array**	**81.05**	**319**	P	**P**	**23 38 33.4**	**-0.1**
	comp=Z,2.4nm,0.9s,baz=94,slow=7.8,SNR=15						
MKAR	**Makanchi Array**	**81.05**	**319**	P	**P**	**23 38 34.0**	**+0.5**
MAKZ	**Makanchi**	**81.26**	**319**	P	**P**	**23 38 35.3**	**+0.7**
MAKZ				IAmb	IAmb	23 38 35.7	
	comp=Z,1.8nm,0.7s						
ZAA0	**Zalesovo Array**	**81.78**	**326**	P	**P**	**23 38 36.6**	**-0.5**
ZALV	**Zalesovo Beam**	**81.78**	**326**	P	**P**	**23 38 36.5**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=105,slow=6.1,SNR=5.7						
ILAR	**Eielson Array**	**81.81**	**22**	P	**P**	**23 38 36.6**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=252,slow=5.5,SNR=7.1						
KURK	**Kurchatov**	**84.45**	**322**	P	**P**	**23 38 50.0**	**-0.9**
KURK				IAmb	IAmb	23 38 52.0	
	comp=Z,5.5nm,1.2s						
JIS	**Juneau Island**	**84.64**	**30**	P	**P**	**23 38 51.7**	**+0.1**
NIL	**Nilore**	**84.87**	**304**	P	**P**	**23 38 54.3**	**+0.8**
NIL				IAmb	IAmb	23 38 54.8	
	comp=Z,5.8nm,0.7s						
AAK	**Ala-Archa**	**85.46**	**313**	P	**P**	**23 38 57.7**	**+1.3**
AAK				IAmb	IAmb	23 39 29.5	
	comp=Z,2.4nm,0.9s						
NRIK	**Noril'sk**	**86.35**	**341**	P	**P**	**23 38 58.2**	**-1.7**
	comp=Z,0.7nm,0.3s,baz=90,slow=4.0,SNR=4.9						
BVAR	**Borovoye Array**	**89.91**	**323**	P	**P**	**23 39 16.0**	**-1.3**
	comp=Z,2.6nm,0.8s,baz=85,slow=4.9,SNR=12						
YKA	**Yellowknife Ar**	**94.98**	**28**	P	**P**	**23 39 40.1**	**-0.3**
	comp=Z,0.1nm,0.7s,baz=272,slow=4.8,SNR=4.0						
TORD	**Torodi Ar. Bea**	**151.32**	**289**	PKPbc	**PKPbc**	**23 46 11.6**	**-0.9**
	comp=Z,2.0nm,0.6s,baz=69,slow=1.8,SNR=15						
TORD	**Torodi Ar. Bea**	**151.32**	**289**		**PKPbc**	**23 46 11.8**	**-0.7**
TORD				PKPab	**PKPab**	**23 46 20.7**	**-0.1**

CNRM ***20*** *23:27:32.5±1.3, 36°.27N×0°.27W, h0^{km}, Error ellipse: s-maj=11.2km s-min=6.5km az=77.0*

IDC ***20*** *23:27:34.0±1.0, 35°.88N×0°.35W, h0^{km}, mb3.8/9, mb1 4.0/14, mb1mx3.7/53, mbtmp3.9/14, ML3.8/4, Error ellipse: s-maj=23.1km s-min=15.9km az=136.0*

CRAAG ***20*** *23:27:34.4, 35°.81N×0°.37W, Ml4.3*

NEIC ***20*** *23:27:35.5±2.3, 35°.89N±0°.04×0°.40W±0°.05, h14^{km}±5^{km}, mb4.2/3, ML4.3(ALG), Error ellipse: s-maj=6.2km s-min=5.4km az=68.0*

MDD ***20*** *23:27:36.3±0.3, 35°.79N×0°.40W, h20^{km}±4^{km}, mbLg3.8/50, Error ellipse: s-maj=5.4km s-min=3.1km az=170.0, PRXIMO*

MDD EMS: II INTENSIDAD MAXIMA-ESPAA.

INMG ***20*** *23:27:36.0±1.4, 35°.90N×0°.48W, h10^{km}, ML3.3, Error ellipse: s-maj=3.2km s-min=2.3km az=149.0*

IGIL ***20*** *23:27:36.5, 35°.71N×0°.60W, h0^{km}, ML3.2*

LDG ***20*** *23:27:36.7±0.1, 35°.76N×0°.39W, h15^{km}, Ml3.5/23, Error ellipse: s-maj=2.7km s-min=1.8km az=163.0*

ISC 20 23:27:34.5±1.2, **35°.98N**±0°.03×**0°.40W**±0°.03, **h8**^{km}±8^{km}, **n282,** σ**2^{s}.56**/440, **mb3.9**/8, **6C-15D, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
USTO	**Oran**	**0.28**	**206**	P	**Pg**	**23 27 40.0**	**0.0**
USTO	**Oran**	**0.28**	**206**	P	**Pg**	**23 27 40.0**	**0.0**
USTO	**Oran**	**0.28**	**206**	P	**Pg**	**23 27 40.0**	**0.0**
USTO	**Oran**	**0.28**	**206**		**Pg**	**23 27 40.0**	**0.0**
ODJA	**Bouhanifia**	**0.68**	**163**	P	**Pg**	**23 27 46.0**	**-1.7**
ODJA	**Bouhanifia**	**0.68**	**163**	P	**Pg**	**23 27 46.0**	**-1.7**
ODJA	**Bouhanifia**	**0.68**	**163**	P	**Pg**	**23 27 46.0**	**-1.7**
ODJA	**Bouhanifia**	**0.68**	**163**		**Pg**	**23 27 46.0**	**-1.7**
OJBR	**Djebel Berber**	**0.72**	**123**	P	**Pb**	**23 27 49.0**	**-0.5**
OJBR	**Djebel Berber**	**0.72**	**123**	P	**Pb**	**23 27 49.0**	**-0.5**
OJBR	**Djebel Berber**	**0.72**	**123**	P	**Pb**	**23 27 49.0**	**-0.5**
OJBR	**Djebel Berber**	**0.72**	**123**		**Pb**	**23 27 49.0**	**-0.5**
OTSS	**Djebel Tessala**	**0.77**	**205**	P	**Pg**	**23 27 48.4**	**-0.9**
OTSS	**Djebel Tessala**	**0.77**	**205**	P	**Pg**	**23 27 48.4**	**-0.9**
OTSS	**Djebel Tessala**	**0.77**	**205**	P	**Pg**	**23 27 48.4**	**-0.9**
OTSS	**Djebel Tessala**	**0.77**	**205**		**Pg**	**23 27 48.5**	**-0.9**
OKGL	**Djebel Kef Gue**	**0.85**	**86**	P	**Pb**	**23 27 51.9**	**+0.3**
OKGL	**Djebel Kef Gue**	**0.85**	**86**	P	**Pb**	**23 27 51.9**	**+0.3**
OKGL	**Djebel Kef Gue**	**0.85**	**86**	⇑P	**Pb**	**23 27 51.7**	**+0.1**
	450nm,0.2s,SNR=18						
OKGL				S	**Sn**	**23 28 04.9**	**-0.6**
	20µm,0.3s,SNR=7.9						
OKGL	**Djebel Kef Gue**	**0.85**	**86**		**Pn**	**23 27 54.3**	**+1.5**
OJGS	**Djebel Guires**	**1.05**	**117**	P	Pg	23 27 47.0	-7.7
OJGS	**Djebel Guires**	**1.05**	**117**	P	Pg	23 27 47.0	-7.7
OJGS	**Djebel Guires**	**1.05**	**117**	P	Pg	23 27 47.0	-7.7
OLHC	**Oulhaca**	**1.11**	**229**	P	**Pn**	**23 27 56.5**	**+0.1**
OLHC	**Oulhaca**	**1.11**	**229**	P	**Pn**	**23 27 56.5**	**+0.1**
OLHC	**Oulhaca**	**1.11**	**229**	P	**Pn**	**23 27 56.5**	**+0.1**
EANR	**'Ain N'Sour**	**1.22**	**91**	P	**Pb**	**23 27 56.8**	**-1.1**
EANR	**'Ain N'Sour**	**1.22**	**91**	P	**Pb**	**23 27 56.8**	**-1.1**
EANR	**'Ain N'Sour**	**1.22**	**91**	P	**Pb**	**23 27 56.8**	**-1.1**
EANR	**'Ain N'Sour**	**1.22**	**91**		**Pb**	**23 27 56.8**	**-1.1**
ECHF	**Ech Chlef**	**1.42**	**82**	P	**Pn**	**23 27 59.9**	**-0.8**
ECHF	**Ech Chlef**	**1.42**	**82**		**Pn**	**23 27 59.0**	**-1.7**
ECHA	**Ech Chlef**	**1.44**	**83**	P	**Pn**	**23 27 59.9**	**-1.1**
ECHA	**Ech Chlef**	**1.44**	**83**	P	**Pn**	**23 27 59.9**	**-1.1**
ETRT	**Tiaret**	**1.50**	**113**	P	**Pn**	**23 28 00.0**	**-2.0**
ETRT	**Tiaret**	**1.50**	**113**	P	**Pn**	**23 28 00.0**	**-2.0**
ETRT	**Tiaret**	**1.50**	**113**	P	**Pn**	**23 28 00.0**	**-2.0**
ETRT	**Tiaret**	**1.50**	**113**		**Pn**	**23 28 00.0**	**-2.0**
EBNR	**Beni Rached**	**1.59**	**78**	P	**Pn**	**23 28 02.0**	**-1.1**
EBNR	**Beni Rached**	**1.59**	**78**	P	**Pn**	**23 28 02.0**	**-1.1**
EBNR	**Beni Rached**	**1.59**	**78**		**Pn**	**23 28 02.2**	**-0.9**
CART	**Cartagena**	**1.67**	**343**	P	**Pn**	**23 28 03.9**	**-0.3**
CART				S	**Sn**	**23 28 23.8**	**-2.0**
CART	**Cartagena**	**1.67**	**343**	*e*P	**Pn**	**23 28 03.9**	**-0.3**
CART				*e*S	**Sn**	**23 28 23.8**	**-2.0**
CART				*e*		23 29 41.8	
CART	**Cartagena**	**1.67**	**343**		**Pn**	**23 28 04.2**	**0.0**
ENIJ	**Nijar**	**1.76**	**305**	⇓P	**Pn**	**23 28 05.1**	**-0.3**
	111nm,0.4s,SNR=18						
ENIJ				S	**Sn**	**23 28 25.9**	**-2.1**
	2µm,0.3s,SNR=7.9						
TLOR	**Lorca, Murcia**	**1.96**	**329**	⇓P	**Pn**	**23 28 09.0**	**+0.8**
	1µm,0.2s,SNR=18						
TLOR				S	**Sn**	**23 28 31.8**	**-1.3**
	5µm,0.3s,SNR=7.9						
EMUR	**La Murta**	**1.98**	**340**	P	**Pn**	**23 28 08.8**	**+0.5**
	48nm,0.1s,SNR=213						
EMUR				S	**Sn**	**23 28 32.0**	**-1.3**
	490nm,0.3s,SNR=9.3						
ETRV	**Los Montesinos**	**2.06**	**352**	⇓P	**Pn**	**23 28 10.3**	**+0.9**
	123nm,0.2s,SNR=18						
ETRV				S	**Sn**	**23 28 36.0**	**+0.8**
	679nm,0.2s,SNR=7.9						
EALB	**Alboran**	**2.14**	**270**	P	**Pn**	**23 28 09.3**	**-1.2**
	50nm,0.2s,SNR=18						
EALB				S	**Sn**	**23 28 35.3**	**-2.0**
	259nm,0.2s,SNR=16						
EMEL	**Melilla**	**2.19**	**253**	P	**Pn**	**23 28 10.1**	**-1.1**
	38nm,0.1s,SNR=11						
EMEL				S	**Sn**	**23 28 35.8**	**-2.7**
	528nm,0.2s,SNR=6.6						
EBER	**Berja**	**2.21**	**295**	⇓P	**Pn**	**23 28 11.2**	**-0.4**
	54nm,0.3s,SNR=18						
EBER				S	**Sn**	**23 28 38.9**	**-0.4**
	301nm,0.2s,SNR=6.9						
GOG	**Mont Gurugu**	**2.25**	**251**	P	**Pn**	**23 28 13.8**	**+1.7**
GOG				S	**Sg**	**23 28 46.4**	**-0.3**
GORA	**Gorafe**	**2.59**	**306**	⇓P	**Pn**	**23 28 18.1**	**+1.2**
	110nm,0.2s,SNR=18						
GORA				S	**Sn**	**23 28 48.9**	**+0.1**
	339nm,0.2s,SNR=7.9						
AFON	**Font Roja**	**2.68**	**358**	P	**Pn**	**23 28 20.1**	**+1.9**
	11nm,0.1s,SNR=60						
AFON				S	**Sn**	**23 28 51.3**	**+0.4**
	227nm,0.3s,SNR=9.6						
EBEN2	**Beniarda presa**	**2.69**	**4**	P	**Pn**	**23 28 19.9**	**+1.6**
	24nm,0.2s,SNR=7.9						
EBEN2				S	**Sn**	**23 28 50.7**	**-0.4**
	531nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**2.73**	**297**	⇓P	**Pn**	**23 28 20.2**	**+1.3**
	133nm,0.4s,SNR=18						
EQUE				S	**Sn**	**23 28 51.3**	**-0.8**
	109nm,0.3s,SNR=6.1						
SESP	**Santiago Espad**	**2.74**	**322**	P	**Pn**	**23 28 21.0**	**+2.1**
	371nm,0.2s,SNR=7.9						
SESP				S	**Sn**	**23 28 53.2**	**+0.9**
	930nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**2.74**	**322**	P	**Pb**	**23 28 22.1**	**-1.8**
SESP				S	**Sn**	**23 28 51.2**	**-1.2**
ELGU	**Los Guajares,**	**2.75**	**290**	⇓P	**Pn**	**23 28 18.1**	**-0.9**
	87nm,0.2s,SNR=18						
ELGU				S	**Sn**	**23 28 50.4**	**-2.1**
	410nm,0.2s,SNR=7.9						
EQES	**Quesada**	**2.81**	**311**	⇓P	**Pn**	**23 28 21.9**	**+2.0**
	45nm,0.3s,SNR=18						
EQES				S	**Sn**	**23 28 55.4**	**+1.3**
	651nm,0.3s,SNR=11						
ETOB	**Tobarra**	**2.81**	**341**	⇓P	**Pn**	**23 28 21.9**	**+2.0**
	88nm,0.1s,SNR=18						
ETOB				S	**Sn**	**23 28 54.5**	**+0.4**
	259nm,0.2s,SNR=6.2						
PALE	**Palemas**	**2.98**	**256**	P	**Pn**	**23 28 23.0**	**+0.8**
PALE				S	**Sb**	**23 29 04.6**	**0.0**
TDRA	**Tendrara**	**3.23**	**205**	P	**Pb**	**23 28 33.5**	**+1.3**
TDRA				S	**Sg**	**23 29 16.1**	**-2.1**
PVLZ	**Peæn de**	**3.28**	**257**	*e*P	**Pn**	**23 28 25.0**	**-1.3**
PVLZ				*e*S	**Sn**	**23 29 03.2**	**-2.2**
EIBI	**Ibiza**	**3.34**	**24**	⇑P	**Pn**	**23 28 28.1**	**+1.0**
	49nm,0.2s,SNR=18						
EIBI				S	**Sn**	**23 29 05.2**	**-1.8**
	162nm,0.2s,SNR=32						
EMAL	**Malaga-Limoner**	**3.34**	**285**	*e*P	**Pn**	**23 28 25.3**	**-1.8**
EMAL				*e*S	**Sn**	**23 29 02.9**	**-4.2**
EMIJ	**Mijas**	**3.58**	**281**	P	**Pn**	**23 28 28.7**	**-1.7**
	10nm,0.3s,SNR=75						
EMIJ				S	**Sn**	**23 29 07.8**	**-5.1**
	78nm,0.3s,SNR=4.8						
ECHE	**Chera**	**3.63**	**353**	P	**Pn**	**23 28 32.7**	**+1.5**
	8.4nm,0.2s,SNR=7.9						
ECHE				S	**Sn**	**23 29 13.6**	**-0.7**
	17nm,0.2s,SNR=7.9						
FIGM	**Figuig**	**3.91**	**191**	P	**Pn**	**23 28 36.9**	**+1.9**
FIGM				S	**Sb**	**23 29 28.9**	**-2.3**
REAL	**Reales**	**3.92**	**279**	*e*P	**Pn**	**23 28 35.0**	**-0.2**
REAL				*e*S	**Sn**	**23 29 18.0**	**-3.5**
EADA	**Adamuz**	**3.99**	**304**	⇓P	**Pn**	**23 28 36.8**	**+0.8**
	9.8nm,0.4s,SNR=18						
EADA				S	**Sn**	**23 29 21.4**	**-1.6**
	44nm,0.2s						
CEU	**Ceuta**	**4.04**	**270**	*e*P	**Pn**	**23 28 34.4**	**-2.2**
CEU				*e*S	**Sn**	**23 29 18.4**	**-5.7**
CEU				*e*		23 32 25.9	
ECEU	**Ceuta**	**4.04**	**270**	P	**Pn**	**23 28 35.4**	**-1.3**
	2.3nm,0.1s,SNR=7.0						
ECEU				S	**Sn**	**23 29 19.7**	**-4.6**
	13nm,0.2s						
SMIR	**Smir Dam**	**4.06**	**267**	P	**Pn**	**23 28 37.7**	**+0.8**
SMIR				S	**Sn**	**23 29 29.5**	**+4.9**
CHEFC	**Chefchaouen**	**4.12**	**259**	P	**Pn**	**23 28 38.5**	**+0.5**
CHEFC				S	**Sn**	**23 29 31.2**	**+4.9**
LIJA	**Lijar**	**4.14**	**284**	*e*P	**Pn**	**23 28 39.0**	**+0.9**
LIJA	**Lijar**	**4.14**	**284**	*e*P	**Pn**	**23 28 39.0**	**+0.9**
ALJ	**Aljibe**	**4.28**	**279**	*e*P	**Pn**	**23 28 44.5**	**+4.5**
HORN	**Hornachuelos**	**4.32**	**297**	P	**Pn**	**23 28 41.3**	**+0.8**
	SNR=149						
EMOS	**Mosqueruela**	**4.38**	**359**	P	**Pn**	**23 28 44.0**	**+2.5**
	19nm,0.2s,SNR=218						
EMOS				S	**Sn**	**23 29 32.9**	**+0.1**
	90nm,0.4s,SNR=8.8						
ESPR	**Espera**	**4.49**	**283**	P	**Pn**	**23 28 43.8**	**+1.0**
	1.5nm,0.2s,SNR=9.1						
ESPR				S	**Sn**	**23 29 32.9**	**-2.3**
	34nm,0.3s						
ECAB	**El Cabril**	**4.53**	**299**	⇓P	**Pn**	**23 28 43.6**	**+0.2**
	35nm,0.3s,SNR=18						
ECAB				S	**Sn**	**23 29 33.7**	**-2.5**
	39nm,0.4s,SNR=7.8						
RSA	**Sarsar**	**4.56**	**258**	P	**Pn**	**23 28 44.5**	**+0.6**
RSA				S	**Sn**	**23 29 42.0**	**+4.8**
IFR	**Ifrane**	**4.60**	**239**	*e*P	**Pn**	**23 28 44.5**	**-0.1**
IFR				*e*S	**Sn**	**23 29 33.4**	**-5.0**
ESBB	**Sonseca Array**	**4.64**	**324**		**Pn**	**23 28 46.2**	**+1.2**
ESDC	**Sonseca Array**	**4.64**	**324**	Pn	**Pn**	**23 28 46.4**	**+1.4**
	53nm,0.3s,baz=143,slow=13,SNR=235						
ESDC				Sn	**Sn**	**23 29 37.6**	**-1.6**
	37nm,0.3s,baz=147,slow=40,SNR=6.1						
ESDC	**Sonseca Array**	**4.64**	**324**	P	**Pn**	**23 28 46.0**	**+0.9**
	108nm,0.2s,baz=141,slow=13,SNR=325						
ESDC				S	**Sn**	**23 29 37.8**	**-1.4**
	42nm,0.1s,baz=142,slow=23,SNR=7.9						
ESDC	**Sonseca Array**	**4.64**	**324**	Pn	**Pn**	**23 28 45.5**	**+0.5**
MDT	**Midelt**	**4.70**	**229**	Pn	**Pn**	**23 28 44.7**	**-1.2**
	2.6nm,0.3s,baz=48,slow=11,SNR=100						
MDT				Sn	**Sn**	**23 29 38.3**	**-2.3**
	2.0nm,0.3s,baz=245,slow=23,SNR=1.3						
MDT				Lg	Lg	23 30 04.7	
	2.3nm,0.3s,baz=112,slow=16,SNR=2.1						
MDT	**Midelt**	**4.70**	**229**	P	**Pn**	**23 28 48.5**	**+2.6**
	SNR=15						
SET	**Setif**	**4.70**	**86**	P	**Pn**	**23 28 47.0**	**+1.1**
SET	**Setif**	**4.70**	**86**	P	**Pn**	**23 28 47.0**	**+1.1**
SET	**Setif**	**4.70**	**86**	P	**Pn**	**23 28 47.0**	**+1.1**
PAB	**San Pablo**	**4.74**	**320**	P	**Pn**	**23 28 47.3**	**+1.0**
	49nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**23 29 39.2**	**-2.4**
	28nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**4.74**	**320**		**Pn**	**23 28 47.6**	**+1.2**
MD31	**MD31**	**4.76**	**230**	P	**Pn**	**23 28 46.0**	**-0.6**
CZD	**Col de Zad**	**4.83**	**234**	P	**Pn**	**23 28 49.7**	**+1.9**
CZD				S	**Sb**	**23 29 52.5**	**-5.5**
UCM	**Universidad Co**	**4.87**	**333**	*e*P	**Pn**	**23 28 51.1**	**+3.0**
UCM				*e*S	**Sb**	**23 29 57.8**	**-1.0**
ERTA	**Horta de San J**	**5.00**	**6**	P	**Pn**	**23 28 52.2**	**+2.3**
	11nm,0.2s,SNR=35						
ERTA				S	**Sn**	**23 29 47.5**	**-0.4**
	17nm,0.2s						
ETOR	**Torete**	**5.00**	**345**	P	**Pn**	**23 28 52.3**	**+2.3**
	28nm,0.2s,SNR=7.9						
ETOR				S	**Sn**	**23 29 47.7**	**-0.4**
	50nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.33**	**291**	⇓P	**Pn**	**23 28 53.8**	**-0.7**
	7.3nm,0.2s,SNR=18						
EMIN				S	**Sn**	**23 29 52.8**	**-3.3**
	10nm,0.3s,SNR=7.9						
MAHO	**Mahon**	**5.37**	**42**	*e*P	**Pn**	**23 28 55.5**	**+0.5**
MAHO				*e*S	**Sn**	**23 29 56.5**	**-0.5**
MAHO				*e*		23 32 41.9	
EPOB	**Poblet**	**5.49**	**12**	P	**Pn**	**23 28 58.5**	**+1.8**
	5.5nm,0.2s,SNR=52						
EPOB				S	**Sn**	**23 29 56.8**	**-3.2**
	35nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**5.51**	**329**	P	**Pn**	**23 28 58.2**	**+1.1**
	10.0nm,0.3s,SNR=68						
GUD				S	**Sn**	**23 29 58.0**	**-2.7**
	28nm,0.3s						
ARF	**Arif**	**5.54**	**216**	P	**Pn**	**23 29 00.0**	**+2.6**
ARF				S	**Sb**	**23 30 10.6**	**-7.7**
GOLM	**Goulmima**	**5.70**	**223**	P	**Pn**	**23 29 03.1**	**+3.4**
GOLM				S	**Sb**	**23 30 16.0**	**-7.0**
ESAC	**San Caprasio**	**5.73**	**359**	P	**Pn**	**23 29 02.7**	**+2.7**
	6.2nm,0.3s,SNR=7.9						
ESAC				S	**Sn**	**23 30 04.6**	**-1.4**
	104nm,0.3s,SNR=7.9						
PBAR	**Barrancos**	**5.74**	**294**	Pn	**Pn**	**23 29 00.6**	**+0.5**
PBAR				Sn	**Sn**	**23 30 04.7**	**-1.5**
	25nm,0.8s						
PBAR	**Barrancos**	**5.74**	**294**	*e*Pn	**Pn**	**23 29 00.6**	**+0.5**
PBAR				*e*Sn	**Sn**	**23 30 04.7**	**-1.5**
PBAR				A	A	23 30 05.5	
	25nm,0.8s						
EGRO	**El Granado**	**5.89**	**287**	⇓P	**Pn**	**23 29 01.4**	**-0.8**
	12nm,0.2s,SNR=18						
EGRO				S	**Sn**	**23 30 05.5**	**-4.4**
	20nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	**5.95**	**300**	⇓P	**Pn**	**23 29 03.0**	**0.0**
	55nm,0.2s,SNR=18						
EBAD				S	**Sn**	**23 30 07.4**	**-3.9**
	40nm,0.2s,SNR=7.9						
PVAQ	**Vaqueiros**	**6.05**	**286**	Pn	**Pn**	**23 29 03.5**	**-0.8**
PVAQ				Sn	**Sn**	**23 30 09.3**	**-4.4**
	12nm,0.4s						
PVAQ	**Vaqueiros**	**6.05**	**286**	P	**Pn**	**23 29 02.3**	**-2.0**
	SNR=87						
PVAQ				S	**Sn**	**23 30 12.1**	**-1.6**
PVAQ	**Vaqueiros**	**6.05**	**286**		**Pn**	**23 29 03.2**	**-1.1**
PVAQ	**Vaqueiros**	**6.05**	**286**	*e*Pn	**Pn**	**23 29 03.5**	**-0.8**
PVAQ				*e*Sn	**Sn**	**23 30 09.3**	**-4.4**
PVAQ				A	A	23 30 12.3	
	12nm,0.4s						
EPLA	**Plasencia**	**6.06**	**314**	P	**Pn**	**23 29 05.4**	**+0.9**
	5.9nm,0.2s,SNR=62						
EPLA				S	**Sn**	**23 30 11.6**	**-2.5**
	18nm,0.3s						
EMIR	**Miracle**	**6.11**	**14**	P	**Pn**	**23 29 07.9**	**+2.7**
	11nm,0.4s,SNR=40						
EMIR				S	**Sn**	**23 30 14.2**	**-1.2**
	91nm,0.3s,SNR=95						
CFON	**Fontmartina**	**6.18**	**20**	⇓P	**Pn**	**23 29 07.7**	**+1.5**
	9.2nm,0.2s,SNR=18						
CFON				S	**Sn**	**23 30 13.3**	**-3.8**
	22nm,0.3s,SNR=7.9						
PBDV	**Barranco-do-Ve**	**6.19**	**284**	Pn	**Pn**	**23 29 05.7**	**-0.5**
PBDV				Sn	**Sn**	**23 30 13.8**	**-3.4**
	9.3nm,0.3s						
PBDV	**Barranco-do-Ve**	**6.19**	**284**	*e*Pn	**Pn**	**23 29 05.7**	**-0.5**
PBDV				*e*Sn	**Sn**	**23 30 13.8**	**-3.4**
PBDV				A	A	23 30 23.7	
	9.3nm,0.3s						
PBEJ	**Beja**	**6.31**	**291**	Pn	**Pn**	**23 29 07.9**	**0.0**
PBEJ				Sn	**Sn**	**23 30 16.4**	**-3.9**
	3.8nm,0.4s						
PBEJ	**Beja**	**6.31**	**291**	⇑*i*Pn	**Pn**	**23 29 07.9**	**0.0**
PBEJ				*e*Sn	**Sn**	**23 30 16.4**	**-3.9**
PBEJ				A	A	23 30 24.4	
	7.6nm,0.4s						
PCVE	**Castro Verde**	**6.35**	**287**	Pn	**Pn**	**23 29 07.9**	**-0.5**
PCVE				Sn	**Sn**	**23 30 17.7**	**-3.4**
	8.6nm,0.6s						
PCVE	**Castro Verde**	**6.35**	**287**	*e*Pn	**Pn**	**23 29 07.9**	**-0.5**
PCVE				*e*Sn	**Sn**	**23 30 17.7**	**-3.4**
PCVE				A	A	23 30 33.1	
	8.6nm,0.6s						
AVE	**Averroes**	**6.37**	**247**	*e*P	**Pn**	**23 29 10.0**	**+1.2**
AVE				*e*S	**Sn**	**23 30 15.8**	**-5.8**
PESTR	**Estremoz**	**6.41**	**299**	P	**Pn**	**23 29 05.0**	**-4.2**
	SNR=21						
PESTR				S	**Sn**	**23 30 19.3**	**-3.2**
PESTR	**Estremoz**	**6.41**	**299**	Pn	**Pn**	**23 29 09.1**	**-0.1**
PESTR	**Estremoz**	**6.41**	**299**	*e*Pn	**Pn**	**23 29 09.5**	**+0.3**
PESTR				*e*Sn	**Sn**	**23 30 19.5**	**-3.0**
PESTR				A	A	23 30 54.9	
	14nm,0.7s						
CSOR	**Sort**	**6.50**	**10**	P	**Pn**	**23 29 12.9**	**+2.4**
	2.8nm,0.2s,SNR=23						
CSOR				S	**Sn**	**23 30 25.3**	**+0.4**
	5.9nm,0.2s,SNR=7.9						
PMRV	**Marv??o**	**6.52**	**304**	Pn	**Pn**	**23 29 11.2**	**+0.4**
PMRV				Sn	**Sn**	**23 30 22.7**	**-2.7**
	22nm,0.4s						
PMRV	**Marv??o**	**6.52**	**304**	*e*Pn	**Pn**	**23 29 11.2**	**+0.4**
PMRV				*e*Sn	**Sn**	**23 30 22.7**	**-2.7**
PMRV				A	A	23 30 52.8	
	22nm,0.4s						
MESJ	**Messejana**	**6.53**	**289**	*e*P	**Pn**	**23 29 10.4**	**-0.6**
MESJ				*e*S	**Sn**	**23 30 19.3**	**-6.4**
MESJ				AML	AML	23 30 25.8	
	comp=N,17nm,0.5s						
MESJ	**Messejana**	**6.53**	**289**	Pn	**Pn**	**23 29 10.5**	**-0.5**
MESJ				Sn	**Sn**	**23 30 22.1**	**-3.6**
	comp=N,12nm,0.4s						
MESJ	**Messejana**	**6.53**	**289**	⇑*e*Pn	**Pn**	**23 29 10.5**	**-0.5**
MESJ				*e*Sn	**Sn**	**23 30 22.1**	**-3.6**
MESJ				A	A	23 30 24.1	
	comp=N,12nm,0.4s						
ECHI	**Chisagues Biel**	**6.69**	**4**	P	**Pn**	**23 29 15.3**	**+2.0**
	comp=N,0.6nm,0.1s,SNR=7.9						
ECHI				S	**Sn**	**23 30 28.5**	**-1.2**
	comp=N,3.4nm,0.2s,SNR=7.9						
CLLI	**Llivia**	**6.75**	**15**	P	**Pn**	**23 29 16.8**	**+2.8**
	comp=N,2.1nm,0.4s,SNR=22						
CLLI				S	**Sn**	**23 30 29.6**	**-1.5**
	comp=N,12nm,0.4s,SNR=7.9						
TZRR	**Tazzarine**	**6.75**	**221**	P	**Pn**	**23 29 16.1**	**+2.1**
TZRR				S	Sn	23 30 40.3	+9.2
MORF	**Marmelete**	**6.76**	**284**	*e*P	**Pn**	**23 29 13.1**	**-1.1**
MORF				*e*S	**Sn**	**23 30 23.7**	**-7.7**
MORF				AML	AML	23 30 31.6	
	comp=N,28nm,0.2s						
MORF	**Marmelete**	**6.76**	**284**	Pn	**Pn**	**23 29 13.7**	**-0.5**
MORF				Sn	**Sn**	**23 30 28.1**	**-3.3**
	comp=N,8.5nm,0.4s						
MORF	**Marmelete**	**6.76**	**284**	*e*Pn	**Pn**	**23 29 13.7**	**-0.5**
MORF				*e*Sn	**Sn**	**23 30 28.1**	**-3.3**
MORF				A	A	23 30 33.0	
	comp=N,8.5nm,0.4s						
PCBR	**Castelo Branco**	**6.79**	**307**	Pn	**Pn**	**23 29 15.4**	**+0.9**
PCBR				Sn	**Sn**	**23 30 28.9**	**-3.1**
	comp=N,13nm,0.3s						
PCBR	**Castelo Branco**	**6.79**	**307**	⇑*e*Pn	**Pn**	**23 29 15.4**	**+0.9**
PCBR				*e*Sn	**Sn**	**23 30 28.9**	**-3.1**
PCBR				A	A	23 30 33.0	
	comp=N,25nm,0.3s						
PNCL	**Nicolau / Gran**	**6.84**	**291**	Pn	**Pn**	**23 29 14.8**	**-0.4**
PNCL				Sn	**Sn**	**23 30 30.6**	**-2.6**
	comp=N,6.7nm,0.3s						
PNCL	**Nicolau / Gran**	**6.84**	**291**	*e*Pn	**Pn**	**23 29 14.8**	**-0.4**
PNCL				*e*Sn	**Sn**	**23 30 30.6**	**-2.6**
PNCL				A	A	23 30 40.4	
	comp=N,6.7nm,0.3s						
EARA	**Aranguren**	**6.84**	**353**	P	**Pn**	**23 29 18.6**	**+3.4**
	comp=N,7.1nm,0.2s,SNR=6.7						
PTEO	**Sao Teotonio**	**6.86**	**286**	Pn	**Pn**	**23 29 15.4**	**-0.1**
PTEO				Sn	**Sn**	**23 30 30.1**	**-3.6**
	comp=N,8.8nm,0.5s						
PTEO	**Sao Teotonio**	**6.86**	**286**	*e*Pn	**Pn**	**23 29 15.4**	**-0.1**
PTEO				*e*Sn	**Sn**	**23 30 30.1**	**-3.6**
PTEO				A	A	23 30 42.3	
	comp=N,18nm,0.5s						
PFVI	**Vila Bisbo**	**6.88**	**282**	P	**Pn**	**23 29 15.8**	**0.0**
	comp=N,8.0nm,0.3s,SNR=7.4						
PFVI				S	**Sn**	**23 30 29.6**	**-4.6**
	comp=N,16nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**6.88**	**282**	P	**Pn**	**23 29 13.7**	**-2.0**
PFVI	**Vila Bisbo**	**6.88**	**282**	Pn	**Pn**	**23 29 14.9**	**-0.8**
PFVI	**Vila Bisbo**	**6.88**	**282**	*e*Pn	**Pn**	**23 29 15.7**	**0.0**
PFVI				*e*Sn	**Sn**	**23 30 30.2**	**-4.0**
PFVI				A	A	23 30 40.9	
	comp=N,16nm,0.5s						

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ETSF  Etsaut            6.91 359 ePn    Pn    23 29 19.7 +3.5
ETSF                             eSn    Sn    23 30 33.5 -1.5
      comp=N,19nm,0.6s
ETSF  Etsaut            6.91 359  Pn    Pn    23 29 19.7 +3.5
ETSF                              Sn    Sn    23 30 33.5 -1.5
      comp=N,9.4nm,0.6s
EORO  Oroz-Betelu       6.94 354  P     Pn    23 29 20.0 +3.4
      comp=N,11nm,0.2s,SNR=70
EORO                              S     Sn    23 30 34.4 -1.3
      comp=N,9.2nm,0.3s,SNR=7.9
PMTG  Montargil         6.94 299  Pn    Pn    23 29 16.2 -0.3
PMTG                              Sn    Sn    23 30 31.4 -4.3
      comp=N,18nm,0.4s
PMTG  Montargil         6.94 299 ePn    Pn    23 29 16.2 -0.3
PMTG                             eSn    Sn    23 30 31.4 -4.3
PMTG                              A     A     23 30 32.4
      comp=N,18nm,0.4s
EJON  La Jonquera       6.94  21  P     Pn    23 29 18.9 +2.3
      comp=N,1.7nm,0.2s,SNR=8.9
EJON                              S     Sn    23 30 33.4 -2.4
      comp=N,11nm,0.5s,SNR=7.9
SJAF  Saint Jean de     6.97  20  P     Pn    23 29 19.3 +2.3
      comp=N,1.7nm,0.4s,SNR=7.9
SJAF                              S     Sn    23 30 34.2 -2.4
      comp=N,7.9nm,0.4s,SNR=7.9
EPF   Esparros          7.06   4 ePn    Pn    23 29 21.6 +3.3
EPF   Esparros          7.06   4 eP     Pn    23 29 25.3 +7.0
EPF                              eSn    Sn    23 30 37.4 -1.4
      comp=N,8.4nm,0.3s
EPF   Esparros          7.06   4  Pn    Pn    23 29 21.6 +3.3
EPF                               Sn    Sn    23 30 37.4 -1.4
      comp=N,4.2nm,0.3s
ATE   Arette            7.10 358  P     Pn    23 29 22.1 +3.3
      comp=N,8.0nm,0.3s,SNR=7.9
ATE                               S     Sn    23 30 37.1 -2.5
      comp=N,17nm,0.7s,SNR=7.9
MTE   Manteigas         7.15 310  Pn    Pn    23 29 20.6 +1.1
MTE                               Sn    Sn    23 30 39.0 -1.9
      comp=N,12nm,0.5s
MTE   Manteigas         7.15 310        Pn    23 29 20.5 +1.1
MTE   Manteigas         7.15 310 ePn    Pn    23 29 20.6 +1.1
MTE                              eSn    Sn    23 30 39.0 -1.9
MTE                               A     A     23 31 19.6
      comp=N,24nm,0.5s
SJPF  Ste Jean          7.15 355 ePn    Pn    23 29 23.0 +3.6
SJPF                             eSn    Sn    23 30 39.6 -1.3
      comp=N,6.1nm,0.3s
SJPF  Ste Jean          7.15 355  Pn    Pn    23 29 23.0 +3.6
SJPF                              Sn    Sn    23 30 39.6 -1.3
      comp=N,3.1nm,0.3s
EALK  Alkurruntz        7.28 354  P     Pn    23 29 24.8 +3.6
      comp=N,9.0nm,0.2s,SNR=43
EALK                              S     Sn    23 30 42.8 -1.4
      comp=N,28nm,0.4s,SNR=7.9
ZGR   Zagora            7.30 218  P     Pn    23 29 24.2 +2.5
ZGR                               S     Sn    23 30 53.3 +8.4
PTOM  Tomar             7.31 302  Pn    Pn    23 29 22.5 +0.9
PTOM                              Sn    Sn    23 30 41.4 -3.3
      comp=N,12nm,0.5s
PTOM  Tomar             7.31 302⇑ePn    Pn    23 29 22.5 +0.9
PTOM                             eSn    Sn    23 30 41.4 -3.3
PTOM                              A     A     23 31 21.3
      comp=N,24nm,0.5s
MVO   Moncorvo          7.33 317  P     Pn    23 29 23.5 +1.6
      comp=N,20nm,0.3s,SNR=41
MVO                               S     Sn    23 30 42.0 -3.4
      comp=N,21nm,0.5s,SNR=7.9
MVO   Moncorvo          7.33 317 ePn    Pn    23 29 23.8 +1.9
MVO                              eSn    Sn    23 30 44.2 -1.2
MVO                               A     A     23 31 18.4
      comp=N,16nm,0.5s
OUZM  OUZ               7.34 228  P     Pn    23 29 27.2 +5.1
OUZM                              S     Sb    23 30 59.6  -10
LIS   Lisbon            7.48 294  Pn    Pn    23 29 24.1 +0.1
LIS   Lisbon            7.48 294 ePn    Pn    23 29 24.1 +0.1
PVIS  Viseu             7.55 311  Pn    Pn    23 29 25.9 +0.9
PVIS                              Sn    Sn    23 30 47.3 -3.4
      comp=N,6.8nm,0.7s
PVIS  Viseu             7.55 311 ePn    Pn    23 29 25.9 +0.9
PVIS                             eSn    Sn    23 30 47.3 -3.4
PVIS                              A     A     23 30 53.3
      comp=N,14nm,0.7s
PCAS  Casmilo, Conde    7.57 305  Pn    Pn    23 29 26.3 +1.1
PCAS                              Sn    Sn    23 30 46.5 -4.8
      comp=N,14nm,0.7s
PCAS  Casmilo, Conde    7.57 305 ePn    Pn    23 29 26.3 +1.1
PCAS                             eSn    Sn    23 30 46.5 -4.8
PCAS                              A     A     23 30 48.9
      comp=N,14nm,0.7s
COI   Coimbra           7.59 306  Pn    Pn    23 29 26.7 +1.2
COI                               Sn    Sn    23 30 47.8 -4.0
COI   Coimbra           7.59 306        Pn    23 29 26.8 +1.3
COI   Coimbra           7.59 306 ePn    Pn    23 29 26.7 +1.2
COI                              eSn    Sn    23 30 47.8 -4.0
ELAN  Lanestosa         7.61 343  P     Pn    23 29 28.6 +2.8
      comp=N,4.6nm,0.1s,SNR=74
ELAN                              S     Sn    23 30 49.0 -3.2
      comp=N,4.7nm,0.3s,SNR=7.9
MTLF  Montolieu         7.62  15 ePn    Pn    23 29 29.5 +3.6
MTLF  Montolieu         7.62  15 eP     Pn    23 29 33.4 +7.5
MTLF                             eSn    Sn    23 30 50.2 -2.3
      comp=N,4.7nm,0.3s
MTLF  Montolieu         7.62  15  Pn    Pn    23 29 29.5 +3.6
MTLF                              Sn    Sn    23 30 50.2 -2.3
      comp=N,2.3nm,0.3s
PBRG  Braganca          7.63 322  Pn    Pn    23 29 28.1 +2.0
PBRG                              Sn    Sn    23 30 50.1 -2.6
      comp=N,6.3nm,0.5s
PBRG  Braganca          7.63 322 ePn    Pn    23 29 28.1 +2.0
PBRG                             eSn    Sn    23 30 50.1 -2.6
PBRG                              A     A     23 31 37.7
      comp=N,13nm,0.5s
PMAFR Mafra             7.66 295  P     Pn    23 29 26.5 +0.1
      comp=N,18nm,0.4s,SNR=13
PMAFR                             S     Sn    23 30 48.8 -4.7
      comp=N,31nm,0.3s,SNR=7.9
PMAFR Mafra             7.66 295 ePn    Pn    23 29 26.5 +0.1
PMAFR                            eSn    Sn    23 30 49.8 -3.6
ECAL  Calabor           7.73 322  P     Pn    23 29 29.1 +1.6
      comp=N,46nm,0.4s,SNR=53
ECAL                              S     Sn    23 30 52.5 -2.7
      comp=N,20nm,0.5s,SNR=7.9
PVRL  Vila Real         7.79 315  Pn    Pn    23 29 29.5 +1.2
PVRL                              Sn    Sn    23 30 52.9 -3.8
      comp=N,5.6nm,1.1s
PVRL  Vila Real         7.79 315 ePn    Pn    23 29 29.5 +1.2
PVRL                             eSn    Sn    23 30 52.9 -3.8
PVRL                              A     A     23 30 56.4
      comp=N,11nm,1.1s
OUK   Oukaimeden        7.84 235  P     Pn    23 29 31.9 +2.7
OUK                               S     Sn    23 31 06.3 +8.0
KEST  Kesra             7.92  89  Pn    Pn    23 29 30.9 +0.8
      comp=N,1.7nm,0.3s,baz=224,slow=4.7,SNR=35
KEST                              Sn    Sn    23 30 58.7 -1.2
      comp=N,0.3nm,0.3s,baz=122,slow=21,SNR=1.7
EARI  Arriondas         8.20 335  P     Pn    23 29 35.9 +2.1
      comp=N,4.6nm,0.2s,SNR=62
EARI                              S     Sn    23 31 03.0 -3.6
      comp=N,4.6nm,0.4s,SNR=7.9
PCAB  Cabril            8.25 316  Pn    Pn    23 29 35.6 +1.0
PCAB                              Sn    Sn    23 31 05.5 -2.5
      comp=N,3.9nm,0.5s
PCAB  Cabril            8.25 316 ePn    Pn    23 29 35.6 +1.0
PCAB                             eSn    Sn    23 31 05.5 -2.5
PCAB                              A     A     23 31 09.4
      comp=N,7.8nm,0.5s
ELOB  Lobios            8.38 317  P     Pn    23 29 37.0 +0.7
      comp=N,5.8nm,0.2s,SNR=24
ELOB                              S     Sn    23 31 06.7 -4.4
      comp=N,8.8nm,0.3s,SNR=7.9
PGAV  Gavieira, Arco    8.56 317  Pn    Pn    23 29 40.2 +1.4
PGAV                              Sn    Sn    23 31 13.1 -2.5
      comp=N,8.0nm,0.6s
PGAV  Gavieira, Arco    8.56 317 ePn    Pn    23 29 40.2 +1.4
PGAV                             eSn    Sn    23 31 13.1 -2.5
PGAV                              A     A     23 31 17.5
      comp=N,8.0nm,0.6s
TTIG  Tnine Tigouga,    8.64 233  P     Pn    23 29 41.3 +1.2
TTIG                              S     Sn    23 31 22.9 +5.1
LASF  Ste Croix         8.72  21 ePn    Pn    23 29 42.8 +1.9
LASF                             eSn    Sn    23 31 15.9 -3.5
      comp=N,3.5nm,0.5s
LASF  Ste Croix         8.72  21  Pn    Pn    23 29 42.8 +1.9
LASF                              Sn    Sn    23 31 15.9 -3.5
      comp=N,1.8nm,0.5s
EZAM  Zamans            8.91 316  P     Pn    23 29 46.0 +2.3
      comp=N,7.7nm,0.3s,SNR=7.9
LFF   La Frestale       8.99   5 ePn    Pn    23 29 47.7 +3.1
LFF                              eSn    Sn    23 31 23.5 -2.6
      comp=N,4.2nm,0.3s
LFF   La Frestale       8.99   5  Pn    Pn    23 29 47.7 +3.1
LFF                               Sn    Sn    23 31 23.5 -2.6
      comp=N,2.1nm,0.3s
EPON  Pontenova         8.99 327  P     Pn    23 29 46.8 +2.1
      comp=N,14nm,0.3s,SNR=7.9
EPON                              S     Sn    23 31 21.2 -4.9
      comp=N,2.7nm,0.3s,SNR=7.9
EAGO  Agolada(Pontev    9.04 321  P     Pn    23 29 47.0 +1.6
      comp=N,3.6nm,0.2s,SNR=7.9
EAGO                              S     Sn    23 31 22.8 -4.5
      comp=N,6.6nm,0.4s,SNR=7.9
LMR   La Mourre         9.07  34 ePn    Pn    23 29 47.9 +2.2
LMR                              eSn    Sn    23 31 24.0 -4.0
      comp=N,1.6nm,0.2s
LMR   La Mourre         9.07  34  Pn    Pn    23 29 47.9 +2.2
LMR                               Sn    Sn    23 31 24.0 -4.0
      comp=N,0.8nm,0.2s
CAF   Calviac           9.13  11 ePn    Pn    23 29 46.7 +0.1
CAF                              eSn    Sn    23 31 26.2 -3.3
      comp=N,4.4nm,0.4s
CAF   Calviac           9.13  11  Pn    Pn    23 29 46.7 +0.1
CAF                               Sn    Sn    23 31 26.2 -3.3
      comp=N,2.2nm,0.4s
SMRF  Simiane la Rot    9.21  28 ePn    Pn    23 29 49.3 +1.7
SMRF                             eSn    Sn    23 31 27.5 -3.9
      comp=N,0.7nm,0.3s
SMRF  Simiane la Rot    9.21  28  Pn    Pn    23 29 49.3 +1.7
SMRF                              Sn    Sn    23 31 27.5 -3.9
      comp=N,0.7nm,0.3s
FRF   La Foret Royal    9.31  33 ePn    Pn    23 29 51.4 +2.4
FRF                              eSn    Sn    23 31 30.0 -3.9
      comp=N,2.2nm,0.3s
FRF   La Foret Royal    9.31  33  Pn    Pn    23 29 51.4 +2.4
FRF                               Sn    Sn    23 31 30.0 -3.9
      comp=N,1.1nm,0.3s
RJF   Les Rejaudoux     9.43   8 ePn    Pn    23 29 54.4 +3.8
RJF                              eSn    Sn    23 31 33.5 -3.3
      comp=N,2.8nm,0.4s
RJF   Les Rejaudoux     9.43   8  Pn    Pn    23 29 54.4 +3.8
RJF                               Sn    Sn    23 31 33.5 -3.3
      comp=N,1.4nm,0.4s
EMAZ  Mazaricos         9.61 319  P     Pn    23 29 55.0 +1.9
      comp=N,6.6nm,0.2s,SNR=4.0
VIVF  Saint-Julien-l    9.67  22 ePn    Pn    23 29 54.9 +0.9
VIVF                             eSn    Sn    23 31 38.9 -3.9
      comp=N,1.7nm,0.4s
VIVF  Saint-Julien-l    9.67  22  Pn    Pn    23 29 54.9 +0.9
VIVF                              Sn    Sn    23 31 38.9 -3.9
      comp=N,0.9nm,0.4s
PGF   Pioggiola         9.80  45 ePn    Pn    23 29 57.3 +1.4
PGF                              eSn    Sn    23 31 40.7 -5.4
      comp=N,5.1nm,0.5s
PGF   Pioggiola         9.80  45  Pn    Pn    23 29 57.3 +1.4
PGF                               Sn    Sn    23 31 40.7 -5.4
      comp=N,2.6nm,0.5s
SBF   Sospel            9.90  35 ePn    Pn    23 29 59.1 +1.9
SBF                              eSn    Sn    23 31 43.8 -4.8
      comp=N,1.2nm,0.3s
SBF   Sospel            9.90  35  Pn    Pn    23 29 59.1 +1.9
SBF                               Sn    Sn    23 31 43.8 -4.8
      comp=N,0.6nm,0.3s
SSB   Saint Sauveur    10.02  20  Pn    Pn    23 30 01.8 +3.1
ORIF  Oris-en-Rattie   10.12  26 ePn    Pn    23 30 01.4 +1.1
ORIF                             eSn    Sn    23 31 49.0 -5.1
      comp=N,1.6nm,0.3s
ORIF  Oris-en-Rattie   10.12  26  Pn    Pn    23 30 01.4 +1.1
ORIF                              Sn    Sn    23 31 49.0 -5.1
      comp=N,0.8nm,0.3s
MBDF  Montbardon       10.30  30 ePn    Pn    23 30 05.1 +2.3
MBDF  Montbardon       10.30  30  Pn    Pn    23 30 05.1 +2.3
TCF   Toulx Ste Croi   10.48  10 ePn    Pn    23 30 04.9 -0.2
TCF   Toulx Ste Croi   10.48  10  Pn    Pn    23 30 04.9 -0.2
MFF   Saint Martin d   10.61   1 ePn    Pn    23 30 09.8 +2.9
MFF   Saint Martin d   10.61   1  Pn    Pn    23 30 09.8 +2.9
BGF   Bois d'Agland    10.84  12 ePn    Pn    23 30 10.9 +0.9
BGF   Bois d'Agland    10.84  12  Pn    Pn    23 30 10.9 +0.9
LPG   La Plagne        10.94  27 ePn    Pn    23 30 13.4 +1.8
LPG   La Plagne        10.94  27  Pn    Pn    23 30 13.4 +1.8
LPL   La Plagne        10.95  27 ePn    Pn    23 30 13.3 +1.6
LPL   La Plagne        10.95  27  Pn    Pn    23 30 13.3 +1.6
SMF   Signal de Mont   11.12  15 ePn    Pn    23 30 13.6 -0.2
SMF   Signal de Mont   11.12  15  Pn    Pn    23 30 13.6 -0.2
AVF   Avril sur Loir   11.16  13 ePn    Pn    23 30 18.1 +3.8
AVF   Avril sur Loir   11.16  13  Pn    Pn    23 30 18.1 +3.8
MSSA  Maissana         11.26  39  Pn    Pn    23 30 18.3 +2.6
LATE  Laterza          11.54  51  Pn    Pn    23 30 21.3 +1.7
CABF  La Chapelle      11.68  23 ePn    Pn    23 30 22.6 +1.0
CABF  La Chapelle      11.68  23  Pn    Pn    23 30 22.6 +1.0
LOR   Lormes           11.72  14 eP     Pn    23 30 28.8 +6.8
SENIN Lac Senin/Sane   11.88  27  Pn    Pn    23 30 26.7 +2.3
QUIF  Quistinic        12.10 351 ePn    Pn    23 30 30.0 +2.8
QUIF                             eSn    Sn    23 32 37.1 -5.2
      comp=N,6.8nm,0.6s
QUIF  Quistinic        12.10 351  Pn    Pn    23 30 30.0 +2.8
QUIF                              Sn    Sn    23 32 37.1 -5.2
      comp=N,3.4nm,0.6s
CLF   Chambon-Foret    12.20   8  Pn    Pn    23 30 30.3 +1.8
SGMF  Saint Gilles     12.37 353 ePn    Pn    23 30 33.7 +2.9
SGMF  Saint Gilles     12.37 353  Pn    Pn    23 30 33.7 +2.9
GRR   Gorron           12.40 359 ePn    Pn    23 30 34.4 +3.1
GRR   Gorron           12.40 359  Pn    Pn    23 30 34.4 +3.1
NRCA  Norcia           12.48  53  Pn    Pn    23 30 34.4 +1.8
ROSF  Rostrenen        12.53 351 ePn    Pn    23 30 34.0 +1.0
ROSF                             eSn    Sn    23 32 47.7 -5.0
      comp=N,2.9nm,0.3s
ROSF  Rostrenen        12.53 351  Pn    Pn    23 30 34.0 +1.0
ROSF                              Sn    Sn    23 32 47.7 -5.0
      comp=N,1.4nm,0.3s
LDF   La Druitiere     12.61   1 ePn    Pn    23 30 35.9 +1.8
LDF                              eSn    Sn    23 32 49.2 -5.4
      comp=N,0.5nm,0.2s
FLN   La Foliniere     12.77 360 ePn    Pn    23 30 39.5 +3.1
      baz=178
FLN   La Foliniere     12.77 360  Pn    Pn    23 30 39.5 +3.1
GERES GERESS Array B   16.51  35  Pn    P     23 31 29.2 +0.1
      comp=N,0.2nm,0.3s,baz=221,slow=10,SNR=8.6
GERES GERESS Array B   16.51  35  P     P     23 31 30.1 +0.9
EKA   Eskdalemuir Ar   19.45 355  P     Pn    23 32 04.9 +2.4
      baz=172,slow=14,SNR=1.2
IDI   Anoyia           20.56  84  P     P     23 32 13.4 -0.3
      comp=N,14nm,1.0s,baz=301,slow=18,SNR=2.4
MLR   Muntele Rosu     22.02  56  P     P     23 32 30.8 +1.3
      comp=N,4.5nm,1.1s,baz=268,slow=19,SNR=4.6
MLR   Muntele Rosu     22.02  56  P     P     23 32 31.6 +2.1
MLR                               IAmb  IAmb  23 32 34.9
      comp=Z,12nm,1.3s
BURAR Bucovina Array   22.25  51  P     P     23 32 32.4 +0.6
TORD  Torodi Ar. Bea   22.81 175  P     P     23 32 37.4 -0.5
      comp=Z,1.2nm,0.7s,baz=352,slow=9.9,SNR=6.1
TORD  Torodi Ar. Bea   22.81 175  P     P     23 32 38.5 +0.5
AKASG Malin Array Be   25.87  46  P     P     23 33 07.3 +0.7
      comp=Z,0.5nm,0.4s,baz=246,slow=10.0,SNR=1.7
AKASG Malin Array Be   25.87  46  IAmb  IAmb  23 33 10.0
      comp=Z,0.8nm,0.9s
FINES FINESS Array B   30.48  25  P     P     23 33 48.0 +0.5
      comp=Z,2.5nm,1.0s,baz=224,slow=12,SNR=1.1
ARU   Arti             44.05  43  P     P     23 35 43.9 +1.2
      comp=Z,2.0nm,0.4s,baz=264,slow=3.9,SNR=14
ZALV  Zalesovo Beam    59.22  43  P     P     23 37 36.4 +0.4
      comp=Z,0.7nm,0.6s,baz=298,slow=9.2,SNR=2.6
MKAR  Makanchi Array   60.27  52  P     P     23 37 44.3 +0.8
      comp=Z,0.2nm,0.5s,baz=310,slow=4.5,SNR=3.6
WMQ   Urumqi           64.97  53 eP     P     23 38 18.6 +3.7
YKA   Yellowknife Ar   68.67 333  P     P     23 38 39.3 +1.2
      comp=Z,0.5nm,0.7s,baz=62,slow=6.3,SNR=5.9
```

IDC 20 23:35:30.9±14.0, 18°.44N×145°.54E, h369km±158km, mb3.0/8, mb1 3.2/8, mb1mx3.0/43, mbtmp3.7/8, Error ellipse: s-maj=39.4km s-min=21.3km az=77.0, Mariana Islands

```
Code  Station Name      Δ°   AZ°    Phase ID        Time       Res
                                 Op     ISC      h  m  s      ISC
WRA   Warramunga Arr   39.69 197  P     P     23 42 28.9 -0.2
      0.9nm,0.4s,baz=19,slow=8.9,SNR=9.7
SONM  Songino Array    43.25 322  P     P     23 42 57.5  0.0
      0.2nm,0.4s,baz=120,slow=10,SNR=1.8
ASAR  Alice Springs    43.36 196  P     P     23 42 58.3 -0.2
      0.4nm,0.4s,baz=8.8,slow=6.7,SNR=7.6
MKAR  Makanchi Array   58.53 314  P     P     23 44 50.1 +0.1
      0.3nm,0.5s,baz=90,slow=8.1,SNR=4.9
NRIK  Noril'sk         61.80 340  P     P     23 45 11.1 -0.4
      1.3nm,0.6s,baz=97,slow=6.0,SNR=4.9
ILAR  Eielson Array    63.95  26  P     P     23 45 25.5  0.0
      0.6nm,0.7s,baz=251,slow=5.3,SNR=7.6
YKA   Yellowknife Ar   78.29  28  P     P     23 46 50.9 +0.1
      0.4nm,0.6s,baz=288,slow=5.0,SNR=6.3
FINES FINESS Array B   87.06 335  P     P     23 47 35.3 -0.1
      3.0nm,0.9s,baz=98,slow=6.2,SNR=1.6
```

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*IDC **20** 23:53:48.2±1.0, 38°.16S×73°.31W, h0km, mb4.1/9, mb1 4.2/11, mb1mx4.1/23, mbtmp4.1/11, ML3.9/3, MS3.6/12, Ms1 3.6/12, ms1mx3.5/21, Error ellipse: s-maj=23.8km s-min=15.2km az=80.0*

*GUC **20** 23:53:51.9±0.4, 38°.20S×73°.61W, h46km±5km, ML4.8*

*NEIC **20** 23:53:53.3±1.6, 38°.13S±0°.06×73°.3W±0°.1, h32km±5km, mb4.6/19, ML4.5(GUC), Error ellipse: s-maj=12.5km s-min=8.4km az=88.0*

ISC 20 23:53:51.7±1.1, 38°.14S±0°.04×73°.45W±0°.06, h23km±9km, n65, σ0ˢ96/69, mb4.5/19, MS3.6/7, 10C-2D, Near coast of central Chile

```
Code  Station Name      Δ°   AZ°    Phase ID        Time       Res
                                 Op     ISC      h  m  s      ISC
BI04  Isla Mocha        0.44 232 eP     Pb    23 54 00.5 -0.3
BI04                             i S    Sb    23 54 07.5 +0.5
BI04                              IAML        23 54 09.5
      comp=N,48µm,0.6s
BI04  Isla Mocha        0.44 232⇓eP     Pb    23 54 00.6 -0.3
BI04                             i S    Sb    23 54 06.6 -0.4
LAJA  Laja              1.04  34 eP     Pb    23 54 11.8 +0.7
LAJA                             i S    Sn    23 54 26.4 +1.7
LAJA  Laja              1.04  34⇑eP     Pb    23 54 11.7 +0.6
LAJA                             i S    Sn    23 54 26.5 +1.8
CCSP  San Pedro de C    1.32  12 eP     Pb    23 54 15.8 -0.1
CCSP                             eS     Sb    23 54 33.3 +0.9
CCSP                              IAML        23 54 39.1
      comp=E,12µm,0.5s
CCSP  San Pedro de C    1.32  12⇑eP     Pn    23 54 15.2 +0.4
CCSP                             i S    Sb    23 54 33.0 +0.6
CCSP                              IAML        23 54 39.0
      comp=E,24µm,0.5s
BI03  Tigo              1.34  15⇑iP     Pb    23 54 16.1  0.0
BI03                             eS     Sb    23 54 33.9 +1.0
BI03                              IAML        23 54 41.3
      comp=N,24µm,0.4s
BI03  Tigo              1.34  15⇑eP     Pn    23 54 15.3 +0.2
BI03                            ⇑e            23 54 15.3
BI03                             i S    Sb    23 54 33.5 +0.6
BI03                              IAML        23 54 41.3
      comp=N,24µm,0.3s
GO06  Curarrehue        2.11 134⇑eP     Pn    23 54 25.7  0.0
GO06                             i S    Sn    23 54 51.7 +0.4
GO06  Curarrehue        2.11 134        Pn    23 54 25.7  0.0
BI02  San Fabin de      2.27  50⇑iP     Pn    23 54 29.1 +1.1
BI02                             eS     Sn    23 54 56.4 +1.1
BI02                              IAML        23 55 09.0
      comp=E,774nm,0.6s
BI02  San Fabin de      2.27  50⇑eP     Pn    23 54 29.3 +1.3
BI02                             i S    Sb    23 54 57.7 -2.2
GO05  Huala             3.36  22⇑iP     Pn    23 54 43.5 +0.7
GO05                             i S    Sn    23 55 21.5 -0.5
GO05                              IAML        23 55 46.5
      comp=E,1µm,0.7s
GO05  Huala             3.36  22        Pn    23 54 43.8 +0.9
PLCA  Paso Flores       3.42 140  Pn    Pn    23 54 43.8  0.0
      comp=E,1.5nm,0.3s,baz=331,slow=8.8,SNR=29
PLCA                              Lg    Lg    23 55 33.4
      comp=E,8.7nm,0.3s,baz=271,slow=8.2,SNR=6.3
PLCA                              LR    LR    23 56 12.9
      comp=E,1µm,19.0s,baz=322,slow=43
PLCA  Paso Flores       3.42 140        Pn    23 54 44.3 +0.6
GO07  Milladeo Hill,    4.97 182        Pn    23 55 06.5 +1.6
PEL   Peldehue          5.47  25        Pn    23 55 12.1 +0.2
ROC1  El Roble          5.52  22        Pn    23 55 13.3 +0.5
CFA   Coronel Fontan    7.80  35  Pn    Pn    23 55 43.0 -0.9
      comp=E,2.5nm,0.3s,baz=192,slow=12,SNR=16
CFA                               Sn    Sn    23 57 09.9 -1.6
      comp=E,1.7nm,0.3s,baz=160,slow=13,SNR=3.7
CFA                               Lg    Lg    23 57 56.9
      baz=294,slow=20
CFA                               LR    LR    23 58 52.0
      comp=E,278nm,18.6s,baz=274,slow=39
GO04  Tololo Observa    8.25  16        Pn    23 55 50.1 -0.1
LCO   Las Campanas      9.39  15  Pn    Pn    23 56 04.9 -1.0
GO03  Copiap           10.86  15  Pn    Pn    23 56 25.7 -0.2
GO02  Mina Guanaco     13.35  15  Pn    Pn    23 57 00.1  0.0
PB10  IPOC Station P   14.79  10  Pn    Pn    23 57 19.5  0.0
LVC   Limon Verde      15.97  15  LR    LR    00 03 13.9
      comp=E,135nm,21.3s,baz=202,slow=36
USHA  Ushuaia          17.04 170  LR    LR    00 03 44.2
      comp=E,339nm,18.6s,baz=25,slow=35
CPUP  Villa Florida    17.99  54  P     Pn    23 57 58.6 -1.6
      comp=E,0.2nm,0.3s,baz=223,slow=9.2,SNR=7.3
CPUP                              LR    LR    00 05 14.8
      comp=E,192nm,20.7s,slow=38
CPUP  Villa Florida    17.99  54  IAmb  IAmb  23 58 03.1
      comp=Z,3.7nm,0.9s
PB11  IPOC Station P   18.61  11  P     P     23 58 06.4 -1.4
PB11                              IAmb  IAmb  23 58 12.5
      comp=Z,20nm,0.9s
LPAZ  La Paz           22.27  14  P     P     23 58 47.4 -0.5
      comp=Z,2.3nm,1.0s,baz=203,slow=5.5,SNR=3.9
LPAZ                              LR    LR    00 08 32.8
      comp=Z,89nm,19.4s,baz=145,slow=40
LPAZ  La Paz           22.27  14  P     P     23 58 49.1 +1.2
SIV   San Ignacio      24.61  30  P     P     23 59 09.5 -1.0
      comp=Z,3.5nm,1.1s,baz=214,slow=10,SNR=7.8
SIV                               LR    LR    00 10 25.8
      comp=Z,220nm,18.1s,baz=200,slow=41
NNA   Nana             26.22 352  LR    LR    00 07 05.1
      comp=Z,98nm,21.5s,baz=188,slow=30
PMSA  Palmer Station   27.24 171  LR    LR    00 09 31.7
      comp=Z,155nm,20.5s,baz=334,slow=35
BDFB  Brasilia         31.70  52  P     P     00 00 12.6 -1.2
      comp=Z,1.8nm,0.5s,baz=249,slow=8.6,SNR=1.5
BDFB                              LR    LR    00 13 25.7
      comp=Z,85nm,20.6s,baz=159,slow=37
BDFB  Brasilia         31.70  52  IAmb  IAmb  00 00 31.5
      comp=Z,4.4nm,1.0s
ROSC  El Rosal         42.77 359  LR    LR    00 19 13.2
      comp=Z,76nm,18.8s,baz=142,slow=36
SDV   Santo Domingo    46.86   4  P     P     00 02 20.0 -0.3
      comp=Z,4.8nm,0.9s,baz=252,slow=7.1,SNR=3.2
QSPA  South Pole Qui   52.10 180  P     P     00 02 59.5 -0.3
      comp=Z,5.2nm,1.0s,baz=119,slow=4.9,SNR=5.8
QSPA  South Pole Qui   52.10 180  IAmb  IAmb  00 03 00.9
      comp=Z,12nm,1.2s
SYO   Syowa Base       62.45 158⇑iP     P     00 04 07.2 -5.3
SYO   Syowa Base       62.45 158⇓eX     P     00 04 14.6 +2.1
JCT   Junction City    72.57 336  P     P     00 05 17.8 +0.9
JCT                               IAmb  IAmb  00 05 19.1
      comp=Z,7.3nm,0.8s
TX32  Lajitas Array    72.83 333  P     P     00 05 18.8 +0.2
TXAR  Lajitas Array    72.83 333  P     P     00 05 19.5 +0.9
      comp=Z,1.4nm,1.0s,baz=155,slow=7.7,SNR=9.8
TXAR                              LR    LR    00 32 21.3
      comp=Z,34nm,19.3s,baz=0.0,slow=32
TXAR  Lajitas Array    72.83 333  P     P     00 05 19.7 +1.1
TX31  Lajitas Ar. Si   72.84 333  P     P     00 05 19.0 +0.4
W50A  Signal Mountai   73.80 350  P     P     00 05 25.1 +1.0
W50A                              IAmb  IAmb  00 05 25.7
      comp=Z,8.7nm,1.0s
CPCT  Cooper Cave      73.94 351  P     P     00 05 24.8  0.0
CPCT                              IAmb  IAmb  00 05 26.2
      comp=Z,8.1nm,1.0s
Z35A  Perchaven, San   74.48 339  P     P     00 05 29.0 +1.0
V48A  Smith Brothers   74.55 349  P     P     00 05 29.4 +1.0
U54A  Nelsons Funny    74.70 353  P     P     00 05 27.7 -1.6
U54A                              IAmb  IAmb  00 05 30.3
      comp=Z,7.8nm,1.1s
WVT   Waverly          75.09 348  P     P     00 05 32.1 +0.6
WVT                               IAmb  IAmb  00 05 32.7
      comp=Z,7.2nm,1.1s
WHAR  Wooly Hollow     75.12 344  P     P     00 05 30.7 -1.0
WHAR                              IAmb  IAmb  00 05 33.2
      comp=Z,7.7nm,1.2s
LIC   Lamto            77.17  71 eP     P     00 05 43.8 -0.1
      comp=Z,17nm,1.0s
TIC   Toumodi          77.45  71 eP     P     00 05 45.6 +0.1
KIC   Kosan Boka       77.47  72 eP     P     00 05 45.4 -0.2
      comp=Z,11nm,0.9s
```

CCM	Cathedral Cave	77.58	346	P	P	00 05 46.5	+0.9
CCM				IAmb	IAmb	00 05 47.1	
	comp=Z,6.9nm,1.0s						
DBIC	Dimbokro	77.59	71	P	P	00 05 46.6	+0.4
	comp=Z,1.7nm,0.7s,baz=236,slow=1.6,SNR=5.8						
DBIC	Dimbokro	77.59	71	P	P	00 05 45.0	-1.2
DBIC	Dimbokro	77.59	71		P	00 05 45.1	-1.1
ANMO	Albuquerque	78.91	333	P	P	00 05 55.3	+2.0
ANMO				IAmb	IAmb	00 05 56.6	
	comp=Z,3.7nm,1.2s						
TORD	Torodi Ar. Bea	86.68	71	P	P	00 06 33.3	-0.6
	comp=Z,2.4nm,0.8s,baz=214,slow=5.0,SNR=10						
PDAR	Pinedale Array	86.97	334	P	P	00 06 35.4	+0.5
	comp=Z,1.0nm,1.1s,baz=152,slow=7.8,SNR=2.7						

IDC ***21*** *00:44:32.4±4.2, 4°.75S×153°.70E, h119^{km}±28^{km}, mb3.5/6, mb1 3.7/7, mb1mx3.5/32, mbtmp3.9/7, Error ellipse: s-maj=46.0km s-min=18.0km az=107.0*

ISC 21 00:44:29.7±1.2, **4°.8S**±0°.1×**153°.9E**±0°.1, **h100**^{km}, **n9, σ1^{s}.32**/11, **mb3.5**/6, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.94	285	P	Pn	00 45 02.4	+0.9
	48nm,0.3s,baz=123,slow=0.9,SNR=14						
KRVT				S	Sn	00 45 25.4	-0.4
	52nm,0.3s,baz=72,slow=20,SNR=15						
PMG	Port Moresby	8.10	235	P	Pn	00 46 26.5	+1.9
	8.2nm,0.3s,baz=54,slow=5.8,SNR=12						
PMG				S	Sn	00 47 52.6	-1.9
	2.0nm,0.3s,baz=18,slow=20,SNR=1.2						
WRA	Warramunga Arr	24.27	230	P	P	00 49 38.4	+0.7
	2.6nm,0.6s,baz=53,slow=9.8,SNR=24						
ASAR	Alice Springs	26.89	224	P	P	00 50 01.6	+0.2
	1.0nm,0.6s,baz=55,slow=8.6,SNR=12						
FITZ	Fitzroy Crossi	30.62	242	P	P	00 50 34.1	-0.5
	2.0nm,0.6s,baz=70,slow=7.6,SNR=14						
SONM	Songino Array	66.93	327	P	P	00 55 12.8	+1.1
	0.3nm,0.4s,baz=139,slow=5.0,SNR=2.7						
MKAR	Makanchi Array	81.06	319	P	P	00 56 32.9	-1.0
	0.2nm,0.4s,baz=94,slow=6.6,SNR=4.2						
ILAR	Eielson Array	81.77	22	P	P	00 56 37.1	0.0
	0.3nm,0.7s,baz=232,slow=4.4,SNR=2.5						
TORD	Torodi Ar. Bea	151.36	289	PKPbc	PKiKP	01 04 11.7	-1.6
	0.9nm,0.7s,baz=67,slow=2.5,SNR=7.4						

IPEC ***21*** *01:10:08.1±0.2, 50°.27N×18°.79E, h1^{km}±1^{km}, ML2.6/3, Error ellipse: s-maj=2.3km s-min=1.1km az=169.0*
PRU ***21*** *01:10:08.5±0.0, 50°.26N×18°.73E, h0^{km}*
BGR ***21*** *01:10:16.0±1.2, 50°.17N×18°.37E, h1^{km}, ML3.2/12, Error ellipse: s-maj=17.8km s-min=11.1km az=68.0*

ISC 21 01:10:07.6±0.9, **50°.26N**±0°.03×**18°.84E**±0°.03, **h0**^{km}, **n51, σ1^{s}.40**/91, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.61	227	ePG	Pg	01 10 20.2	+0.9
OKC				eSG	Sg	01 10 26.8	-0.4
	comp=Z,52nm,0.4s						
OJC	Ojcow	0.62	93	ePg	Pb	01 10 20.6	-0.6
OJC				eSg	Sb	01 10 29.9	-0.6
MORC	Moravsky Berou	0.96	241	ePg	Pg	01 10 26.1	+0.1
	baz=58						
MORC				eSg	Sg	01 10 37.6	-0.9
	75nm,0.4s,baz=58						
MORC	Moravsky Berou	0.96	241	ePG	Pg	01 10 26.2	+0.2
MORC				eSG	Sg	01 10 37.6	-0.9
LANS	Liptovska Anna	1.18	159	ePG	Pb	01 10 31.2	+0.4
LANS				eSG	Sb	01 10 47.0	+0.4
LANS				eLG	Lg	01 10 50.2	
NIE	Niedzica	1.26	131	ePg	Pb	01 10 32.5	+0.2
NIE				eSg	Sn	01 10 50.8	+0.5
KRLC	Kraliky	1.33	263	ePG	Pg	01 10 32.3	-0.8
KRLC				eSG	Sg	01 10 49.3	-1.1
	comp=Z,53nm,0.5s						
JAVC	Velka Javorina	1.59	209	ePn	Pn	01 10 37.1	+0.1
	baz=27						
JAVC	Velka Javorina	1.59	209	ePN	Pn	01 10 37.2	+0.2
DPC	Dobruska-Polom	1.62	274	ePG	Pn	01 10 37.3	-0.1
DPC				eSG	Sb	01 10 58.8	-0.5
	comp=Z,45nm,0.4s						
OSTC	Ostas	1.71	281	ePG	Pn	01 10 38.7	+0.1
OSTC				eSG	Sb	01 11 01.2	-0.6
	comp=Z,32nm,0.5s						
KSP	Ksiaz	1.73	291	ePb	Pn	01 10 39.0	+0.2
KSP				ePg	Pg	01 10 40.8	+0.1
KSP				eSb	Sb	01 11 02.0	-0.4
KSP				eSg	Sg	01 11 03.3	+0.2
VRAC	Vranov	1.74	238	ePn	Pn	01 10 39.2	+0.3
	baz=55						
VRAC				eSg	Sn	01 11 02.0	+0.2
	58nm,0.5s,baz=55						
VRAC	Vranov	1.74	238	ePN	Pn	01 10 39.3	+0.3
VRAC				eSG	Sn	01 11 02.1	+0.2
VYHS	Vyhne	1.76	180	ePN	Pn	01 10 39.2	-0.2
VYHS				eSN	Sn	01 11 03.0	+0.5
CHVC	Chvalec	1.81	282	ePG	Pn	01 10 40.4	+0.3
CHVC				eSG	Sb	01 11 04.4	-0.5
	comp=Z,28nm,0.6s						
UPC	Upice	1.83	279	ePG	Pb	01 10 41.9	0.0
UPC				eSG	Sg	01 11 05.4	-0.8
	comp=Z,34nm,0.6s						
KRUC	Moravsky	1.99	234	ePn	Pn	01 10 42.5	+0.1
	baz=51						
KRUC				eSg	Sb	01 11 09.5	-0.3
	41nm,0.6s,baz=51						
KRUC	Moravsky	1.99	234	ePN	Pn	01 10 42.5	+0.1
KRUC				eSG	Sb	01 11 09.5	-0.3
TREC	Trest	2.38	247	eSG	Sb	01 11 20.1	-1.0
	comp=Z,22nm,0.5s						
PVCC	Panska Ves	2.75	277	ePG	Pb	01 10 58.4	+0.9
PVCC				eSG	Sg	01 11 33.6	-2.1
	comp=Z,39nm,0.4s						
PRU	Pruhonice	2.78	266	ePN	Pn	01 10 52.9	-0.4
PRU				ePG	Pb	01 10 57.3	-0.8
PRU				eSG	Sb	01 11 33.2	+0.6
	comp=Z,15nm,0.5s						
CONA	Conrad Observa	3.04	221	i Pn	Pn	01 10 56.7	-0.3
	0.1nm,0.1s						
CONA				i Sn	Sn	01 11 32.2	-2.0
	6.7nm,0.3s						
BRG	Berggiesshubel	3.18	283	PG	Pg	01 11 08.3	-0.2
BRG				SG	Sb	01 11 46.1	+1.9
	14nm,0.5s						
BRG	Berggiesshubel	3.18	283	ePg	Pg	01 11 08.9	+0.3
BRG				eSg	Sg	01 11 48.2	-1.6
KHC	Kasperske Hory	3.60	254	ePN	Pn	01 11 04.3	-0.3
KHC				ePG	Pb	01 11 11.7	-0.3
KHC				eSG	Sg	01 12 01.1	-1.9
	comp=Z,28nm,0.6s						
GEC2	GERESS Array S	3.63	249	ePg	Pg	01 11 14.8	-2.3
GEC2				eSg	Sb	01 12 00.4	+3.1
ARSA	Arzberg	3.72	217	i Pn	Pb	01 11 10.4	-3.8
	0.7nm,0.3s						
ARSA				i Sn	Sn	01 11 51.6	+0.8
	1.2nm,0.0s						
CLL	Collm	3.85	288	eSg	Sg	01 12 11.2	0.0
CLL	Collm	3.85	288	ePg	Pg	01 11 23.0	+1.7
CLL				eSg	Sg	01 12 13.0	+1.8
	comp=Z,66nm,1.8s						
MOA	Molln	3.85	233	i Pn	Pn	01 11 08.4	+0.3
	comp=Z,0.1nm,0.1s						
MOA				i Sg	Sb	01 12 01.8	-1.7
	comp=Z,6.8nm,0.4s						
WET	Wettzell	4.03	256	eSg	Sb	01 12 11.6	+3.1
ABG1	Leinawald	4.05	283	eSg	Sg	01 12 16.2	-1.5
TANN	Tannenbergstha	4.09	275	eSg	Sg	01 12 15.4	-3.5
MODW	Modelwitz	4.12	282	eSg	Sg	01 12 20.8	+1.1
MULD	Muldenberg	4.12	275	eSg	Sg	01 12 17.2	-2.9
WERN	Wernitzgruen	4.15	273	ePg	Pg	01 11 26.9	0.0
WERN				eSg	Sg	01 12 19.3	-1.4
ROTZ	Rotzenmuhle	4.30	266	eSg	Sg	01 12 22.8	-3.0
SOKA	Soboth	4.38	217	i Pn	Pn	01 11 17.6	+2.2
	comp=Z,0.9nm,0.4s						
SOKA				i Sg	Sb	01 12 20.3	+1.4
	comp=Z,0.7nm,0.4s						
MOX	Moxa	4.63	278	eSg	Sg	01 12 35.1	-1.2
RJOB	Jochberg	4.71	240	ePg	Pg	01 11 37.9	+0.1
RJOB				eSg	Sg	01 12 39.4	+0.6
KBA	Koelnbreinsper	4.83	231	i Pn	Pn	01 11 23.4	+1.7
KBA				i Sg	Sg	01 12 44.4	+1.7
	comp=Z,3.7nm,0.4s						
MYKA	Terra Mystica	5.01	226	i Sg	Sb	01 12 36.7	-0.2
	comp=Z,0.2nm,0.1s						
CHRS	Christianenhau	5.25	288	eSg	Sg	01 12 54.6	-1.5
ABTA	Abfaltersbach	5.48	233	i Pn	Pb	01 11 43.2	-0.9
	comp=Z,1.2nm,0.4s						
ABTA				i Sg	Sb	01 12 51.7	+1.3
	comp=Z,3.9nm,0.6s						
WTTA	Wattenberg	5.62	241	i Sg	Sb	01 12 54.9	+0.2
	comp=Z,4.7nm,0.5s						
MOTA	Moosalm	5.88	243	i Pg	Pg	01 11 57.9	-2.3
	comp=Z,0.8nm,0.3s						
MOTA				i Sg	Sb	01 13 04.5	+2.4
	comp=Z,2.6nm,0.4s						
SQTA	Sankt Quirin	5.89	242	i Pn	Pb	01 11 55.4	+4.3
	comp=Z,0.3nm,0.2s						
SQTA				i Sg	Sb	01 13 02.6	+0.4
	comp=Z,2.7nm,0.4s						
RETA	Reutte	6.00	246	i Pg	Pg	01 12 03.1	+0.5
	comp=Z,0.1nm,0.2s						
RETA				i Sg	Sg	01 13 21.2	+0.9
	comp=Z,5.9nm,0.6s						
FETA	Feichten	6.27	242	i Pn	Pb	01 11 56.7	-0.9
	comp=Z,0.2nm,0.3s						
FETA				i Sg	Sb	01 13 13.7	+0.5
	comp=Z,0.5nm,0.3s						
DAVA	Damuels	6.62	247	i Sg	Sb	01 13 26.1	+2.7
	comp=Z,2.5nm,0.5s						

ISK ***21*** *01:19:28.8, 38°.73N×43°.07E, h6^{km}, ML3.5/28*
DDA ***21*** *01:19:30.0, 38°.72N×43°.08E, h13^{km}±1^{km}, MW3.6*
NSSP ***21*** *01:19:30.0, 38°.77N×43°.05E, h10^{km}, Ms3.2*

ISC 21 01:19:30.8±1.0, **38°.72N**±0°.02×**43°.08E**±0°.02, **h5**^{km}±10^{km}, **n72, σ1^{s}.29**/61, **6C-5D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.27	117	PG	Pg	01 19 36.2	+0.1
VANB				SG	Sg	01 19 41.2	+1.5
ADCV	BITLIS_Adilcev	0.29	287	i P	Pg	01 19 36.5	0.0
TVAN	Van	0.32	127	i P	Pg	01 19 36.1	-0.9
TVAN				i S	Sg	01 19 41.5	+0.3
TVAN				IAML		01 19 42.0	
	comp=E,29µm,0.4s						
AKDM	Akdamar-Van	0.40	192	PG	Pg	01 19 36.9	-1.6
AKDM				SG	Sg	01 19 43.1	-0.7
GEVA	Gevas	0.41	183	i P	Pg	01 19 37.5	-1.2
GEVA				i S	Sg	01 19 44.2	+0.2
GEVA				IAML		01 19 45.0	
	comp=N,3µm,0.6s						
VMUR	Van-Muradiye	0.47	55	i P	Pg	01 19 38.8	-1.0
VMUR				i S	Sg	01 19 45.6	-0.3
VMUR				IAML		01 19 48.0	
	comp=E,6µm,0.4s						
CLDR	Caldiran	0.78	57	PG	Pg	01 19 43.9	-1.8
CLDR				SG	Sg	01 19 55.9	+0.1
CLDR	Caldiran	0.78	57	i P	Pg	01 19 43.6	-2.0
BLIS	Bitlis-Merkez	0.82	248	i P	Pg	01 19 45.1	-1.4
BLIS				i S	Sg	01 19 55.7	-1.4
BLIS				IAML		01 19 57.0	
	comp=E,4µm,0.2s						
GURO	Guroymak-BITLI	0.84	259	PG	Pg	01 19 45.1	-1.8
GURO				SG	Sg	01 19 57.3	-0.5
AGRB	Hanur-Agry	0.86	355	PG	Pg	01 19 45.4	-1.8
AGRB				SG	Sg	01 19 57.7	-0.7
DYDN	Diyadin	0.95	30	i P	Pg	01 19 46.3	-2.7
EKAR	Karacoban	0.96	304	i P	Pg	01 19 50.0	+0.8
BASK	Baskale_VAN	0.98	132	i P	Pg	01 19 47.3	-2.4
BASK				i S	Sg	01 20 01.6	-0.8
BASK				IAML		01 20 07.0	
	comp=N,905nm,0.5s						
SRTM	Siirt_Merkez	1.17	232	i P	Pg	01 19 52.0	-1.2
MUSM	Mu-Merkez	1.23	271	i P	Pg	01 19 52.9	-1.4
MUSM				i S	Sg	01 20 08.7	-1.5
MUSM				IAML		01 20 11.0	
	comp=N,471nm,0.5s						
EATA	Eleskirt	1.23	338	i P	Pg	01 19 52.6	-1.8
HAKT	HAKKARI	1.26	157	i P	Pg	01 19 52.6	-2.4
HAKT				i S	Sg	01 20 14.2	+3.0
HAKT				IAML		01 20 16.0	
	comp=N,354nm,0.8s						
SIRT	Sirnak	1.32	203	PN	Pg	01 19 54.3	-1.7
SIRT				SN	Sg	01 20 13.2	+0.1
SIRN	Sırnak	1.33	204	i P	Pg	01 19 54.4	-1.9
VRTB	Varto-Mus	1.34	290	PN	Pg	01 19 54.7	-1.8
VRTB				SN	Sg	01 20 13.2	-0.7
VRTB	Varto-Mus	1.34	290	i P	Pg	01 19 55.7	-0.8
IGDI	IGDIR	1.38	34	i P	Pg	01 19 54.9	-2.3
YOVA	Hakkari_Yksek	1.48	140	i P	Pn	01 19 56.1	-2.1
YOVA				i S	Sg	01 20 17.9	-0.4
YOVA				IAML		01 20 22.0	
	comp=E,441nm,1.0s						
VNNZ	Vanand	1.50	22	⇓iP	Pn	01 19 57.5	-0.9
VNNZ				⇓S	Sg	01 20 17.3	-1.6
BNGL	BINGOL	1.53	279	i P	Pn	01 19 58.9	+0.1
CUKT	Cukurca	1.53	164	PN	Pn	01 19 57.3	-1.5
CUKT				SN	Sg	01 20 18.3	-1.6
CUKT	Cukurca	1.53	164	i P	Pn	01 19 57.4	-1.5
CUKT				i S	Sg	01 20 20.9	+1.1
CUKT				IAML		01 20 23.0	
	comp=N,2µm,0.8s						
TASB	TASBURUN-IGDIR	1.55	35	PN	Pn	01 19 57.6	-1.4
SVAN	Silvan-Diyarba	1.58	250	PN	Pn	01 19 58.0	-1.5
SVAN	Silvan-Diyarba	1.58	250	i P	Pn	01 19 59.0	-0.5
SVAN				i S	Sn	01 20 21.1	+0.7
SVAN				IAML		01 20 22.0	
	comp=E,285nm,1.0s						
KOPR	Koprukoy-ERZUR	1.59	324	PN	Pn	01 19 58.1	-1.6
HOMI	Horasan	1.61	326	i P	Pn	01 19 59.7	-0.3
METS	Metsamor	1.62	28	i P	Pn	01 19 59.5	-0.5
METS				S	Sn	01 20 20.1	-1.3
BTMN	Batman	1.65	240	i P	Pn	01 20 00.7	+0.3
BTMN				i S	Sn	01 20 22.1	+0.1
BTMN				IAML		01 20 26.0	
	comp=N,1µm,0.6s						
KARO	Karliova-Bingo	1.69	291	PN	Pn	01 19 59.8	-1.3
ARUZ	Aruch	1.75	26	⇓iP	Pn	01 20 01.1	-0.7
ARUZ				⇓S	Sn	01 20 23.6	-0.9
NRKZ	NAREK	1.77	43	⇑iP	Pn	01 20 01.2	-0.9
NRKZ				⇑S	Sn	01 20 23.8	-1.2
ECAT	Cat-ERZURUM	1.86	299	i P	Pn	01 20 04.6	+1.1
BNGB	Bingl	1.90	279	PN	Pn	01 20 02.4	-1.4
AKDA	Akdag	1.92	317	i P	Pn	01 20 04.1	-0.2
GNI	Garni	1.92	41	⇑iP	Pn	01 20 03.3	-0.9
GNI				⇑iS	Sn	01 20 28.8	-0.1
GNI	Garni	1.92	41	PN	Pn	01 20 02.9	-1.3
SENK	Senkaya-Erzuru	1.92	343	PN	Pn	01 20 02.9	-1.4
EAK	Akyaka	2.00	11	i P	Pn	01 20 07.5	+2.1
KAPZ	Kaputan	2.03	38	⇑iP	Pn	01 20 05.2	-0.5
KAPZ				⇑S	Sn	01 20 30.7	-0.9
EMRE	Erzurum,Aziziy	2.09	309	i P	Pn	01 20 09.7	+3.1
YEDI	Yedisu-Bingol	2.10	291	PN	Pn	01 20 05.3	-1.4
MARD	Mardin	2.30	233	i P	Pn	01 20 09.4	0.0
KRIK	Erzurum-spir	2.32	315	i P	Pb	01 20 16.1	+2.9
DDEM	Demirkent	2.40	335	i P	Pn	01 20 15.3	+4.5
MAZI	Mazidag	2.43	240	PN	Pn	01 20 09.9	-1.3
DYBB	Diyarbakir	2.44	253	PN	Pn	01 20 10.2	-1.0
STE	Stepanavan	2.48	23	⇓eP	Pn	01 20 12.0	+0.1
BGD	Bogdanovka	2.57	9	P	Pn	01 20 17.1	+3.9
AKH	Akhalkalaki	2.71	7	P	Pn	01 20 19.7	+4.6
AKH	Akhalkalaki	2.71	7	PN	Pn	01 20 13.9	-1.1
ERZN	Erzincan	2.75	289	PN	Pn	01 20 14.5	-1.1
BAYT	Aydıntepe-Bayb	2.82	307	PN	Pn	01 20 15.5	-1.1
KZRT	Kazreti	2.85	20	P	Pn	01 20 19.9	+3.0
PTK	Pertek	2.89	275	PN	Pn	01 20 16.6	-1.0
BCA	Borcka	2.94	338	PN	Pn	01 20 17.2	-0.9
CHOM	Cayeli-Rize	2.97	324	PN	Pn	01 20 17.6	-0.9
SVRC	Sivrice-ELAZID	2.98	265	PN	Pn	01 20 17.8	-1.0
BKRG	Bakuriani	3.05	6	P	Pn	01 20 25.4	+5.6
DGRG	David-gareji	3.24	32	P	Pn	01 20 28.8	+6.5
TBLG	Delisi	3.26	22	P	Pn	01 20 28.2	+5.6
TBLG	Delisi	3.26	22	PN	Pn	01 20 21.9	-0.7
URFA	Urfa	3.60	251	PN	Pn	01 20 26.6	-0.6
MALT	Malatya	3.67	265	PN	Pn	01 20 27.6	-0.7
ONI	Oni	3.88	4	P	Pb	01 20 40.4	+0.8
LGD	Lagodekhi	3.94	37	P	Pb	01 20 41.0	+0.3

MEX ***21*** *01:31:47.4±0.5, 14°.36N×92°.16W, h56^{km}±23^{km}, MD3.6*
GCG ***21*** *01:31:48.3±0.4, 14°.37N×92°.18W, h30^{km}±15^{km}, MD3.3*

ISC 21 01:31:48.5±2.7, **14°.6N**±0°.3×**92°.2W**±0°.2, **h67**^{km}, **n5, σ0^{s}.81**/9, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.31	344	i P	Pn	01 31 57.9	-1.5
THIG				i S	Sn	01 32 07.1	-0.3
STG3	Santiaguito 3,	0.60	80	eP	Pn	01 32 02.1	-0.2
STG3				eS	Sn	01 32 12.6	+0.2
FUG	Fuego 3	1.30	97	eP	Pn	01 32 11.0	0.0
PCIG		1.48	317	i P	Pn	01 32 13.5	+0.4
PCIG				eS	Sn	01 32 32.6	+1.0
IXG	Ixpaco	1.74	104	eP	Pn	01 32 16.4	-0.3
IXG				eS	Sn	01 32 38.6	+0.5

DJA ***21*** *01:39:35.3±0.2, 9°S±3°×11°9E±°, h10^{km}, M3.8/10, MLv4.1/10, MLv3.5/1*
IDC ***21*** *01:39:37.9±2.1, 9°.11S×119°.81E, h0^{km}, mb3.2/1, mb1 3.6/5, mb1mx3.4/45, mbtmp3.4/5, ML3.4/4, Error ellipse: s-maj=97.2km s-min=23.4km az=62.0*

ISC 21 01:39:34.1±0.8, **9°.22S**±0°.05×**118°.81E**±0°.04, **h10**^{km}, **n16, σ1^{s}.44**/22, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.71	126	P	Pg	01 39 48.5	+0.7
WBSI				S	Sb	01 39 59.4	+1.0
PLAI	Plampang	1.10	291	P	Pb	01 39 54.8	-0.4
PLAI				S	Sg	01 40 10.5	+1.0
WSI	Waingapu	1.53	107	P	Pn	01 40 02.4	+0.8
WSI				S	Sb	01 40 23.1	+1.0
BASI	Baing, Sumba	2.00	120	P	Pb	01 40 11.3	+0.6
BASI				S	Sn	01 40 34.7	+1.5
EDFI	Ende, Flores	2.88	81	P	Pn	01 40 20.7	+0.5
MMRI	Maumere	3.43	81	P	Pn	01 40 28.1	+0.3
IGBI	Denpasar	3.64	276	P	Pn	01 40 31.3	+0.7
IGBI				S	Sn	01 41 13.5	-0.2
SRBI	Singaraja	3.73	287	P	Pn	01 40 34.3	+2.4
BKSI	Bulukumba	4.09	19	P	Pn	01 40 38.2	+1.5
BKSI				S	Sn	01 41 25.1	+0.5
KAPI	Kappang	4.28	13	Pn	Pn	01 40 40.8	+1.3
	2.8nm,0.3s,baz=191,slow=8.3,SNR=20						
KAPI				Sn	Sn	01 41 27.5	-2.0
	15nm,0.3s,baz=187,slow=19,SNR=18						
JAGI	Jajag, Banyuwa	4.67	279	P	Pn	01 40 45.4	+0.7
BNSI	Bone	4.96	15	P	Pn	01 40 49.9	+1.2
FITZ	Fitzroy Crossi	11.04	144	Pn	Pn	01 42 10.6	-1.6
	0.3nm,0.3s,baz=332,slow=12,SNR=12						
FITZ				Sn	Sn	01 44 05.2	-11
	0.2nm,0.3s,baz=225,slow=2.2,SNR=2.3						
WRA	Warramunga Arr	18.40	127	P	P	01 43 46.2	-3.5
	0.1nm,0.3s,baz=300,slow=13,SNR=2.8						
WRA				S	Sn	01 46 58.3	-17
	0.1nm,0.3s,baz=249,slow=21,SNR=1.2						
ASAR	Alice Springs	20.36	137	P	P	01 44 10.0	-1.1
	0.1nm,0.3s,baz=310,slow=10.0,SNR=8.1						
MKAR	Makanchi Array	64.57	333	P	P	01 50 19.6	+8.0
	0.1nm,0.6s,baz=139,slow=6.6,SNR=1.7						

IASPEI ***21*** *02:17:39.4±0.8, 34°.13N±0°.02×118°.49W±0°.01, h14^{km}±5^{km}, Error ellipse: s-maj=2.6km s-min=2.1km az=17.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
ANF ***21*** *02:17:39.0±0.1, 34°.11N×118°.48W, h12^{km}±1^{km}, ML2.7/29, Error ellipse: s-maj=1.4km s-min=1.1km az=4.0*
SCEDC ***21*** *02:17:40.2, 34°.16N×118°.48W, h1^{km}*
PAS ***21*** *02:17:40.2±0.9, 34°.13N±0°.03×118°.49W±0°.05, h8^{km}±5^{km}, ML2.6/199, Error ellipse: s-maj=6.2km s-min=4.4km az=108.0*
NEIC ***21*** *02:17:40.1±1.1, 34°.12N±0°.03×118°.53W±0°.05, h11^{km}±5^{km}, Error ellipse: s-maj=6.3km s-min=3.4km az=112.0*

ISC 21 02:17:39.7±0.8, **34°.13N**±0°.02×**118°.49W**±0°.01, **h13**^{km}±5^{km}, **n98, σ0^{s}.64**/133, **Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJJ	Donna J Jenkin	0.04	127		Pg	02 17 41.6	-0.5
DJJ	Donna J Jenkin	0.04	127		Pg	02 17 41.6	-0.5
HLLC	North Hollywoo	0.12	65		Pg	02 17 43.0	0.0
LCGC	La Cienega, Cu	0.16	144		Pg	02 17 44.3	+0.8
GR2C	Griffith Obs.	0.16	93		Pg	02 17 43.3	-0.2
DECC	Green Verdugo	0.18	45		Sg	02 17 46.5	-0.3
DECC	Green Verdugo	0.18	45	P	Pg	02 17 43.8	-0.1
	baz=232,SNR=48						
DECC				S	Sg	02 17 46.5	-0.3
	baz=232						
BLCC	Black Canyon	0.19	307		Pg	02 17 44.2	+0.1
AGOC	Agoura	0.23	275		Pg	02 17 44.7	0.0
AGOC					Sg	02 17 48.1	0.0
OAT	Oat Mountain	0.24	334		Pg	02 17 45.5	+0.5
PASC	Pasadena Art C	0.26	80	Pg	Pg	02 17 45.0	-0.1
PASC				Sg	Sg	02 17 48.6	-0.2
IR2C	Iron Canyon	0.27	16		Pg	02 17 45.5	+0.1
GVRC	Garvey Reservo	0.32	104		Sb	02 17 51.9	-0.3
GVRC	Garvey Reservo	0.32	104		Pg	02 17 46.6	+0.5
MWC	Mount Wilson	0.37	75	Pg	Pg	02 17 47.1	-0.1
MWC				Sg	Sg	02 17 52.6	+0.3
RPV	Rancho Palos V	0.39	170		Pg	02 17 47.9	+0.3
BALC	Balcom Canyon	0.43	295		Pg	02 17 49.0	+0.6
CHFC	Chilao Flat St	0.43	62		Pg	02 17 48.2	-0.2
CHFC					Sg	02 17 54.2	-0.1
FMP	Fort Macarthur	0.44	159	S	Sg	02 17 53.4	-1.0
	baz=341						
BLG	Laguna Peak, P	0.48	268		Pg	02 17 48.7	-0.5
BLG					Sg	02 17 55.0	-0.6
BLG	Laguna Peak, P	0.48	268	P	Pg	02 17 48.7	-0.5
	baz=84,SNR=99						
BLG				S	Sg	02 17 54.9	-0.6
	baz=84						
PYR	Pyramid	0.49	335		Pg	02 17 49.9	+0.5
PEM	Pine Mountain	0.52	85		Pg	02 17 49.6	-0.3
OSI	Osito Audit: C	0.52	338		Sg	02 17 58.1	+1.0
OSI	Osito Audit: C	0.52	338		Pg	02 17 49.3	-0.8
OSI	Osito Audit: C	0.52	338	P	Pg	02 17 50.2	+0.1
	baz=156,SNR=6.1						
OSI				S	Sg	02 17 57.7	+0.6
	baz=156						
LEOC	Leona Valley	0.53	17		Pg	02 17 49.7	-0.4
XTL	Crystal Lake,	0.55	72		Pg	02 17 50.2	-0.2
LRRC	Littlerock Res	0.55	44		Pg	02 17 50.3	-0.2
BTPC	Burnt Peak	0.56	353		Pg	02 17 50.8	0.0
PSRC	Puddingstone R	0.57	93		Pg	02 17 50.7	-0.2
PSRC					Sg	02 17 58.5	+0.2
ALPC	Antelope	0.58	16		Pg	02 17 50.8	-0.3
STCC	Santa Clara	0.60	287		Pg	02 17 51.9	+0.4
STCC					Sb	02 18 01.4	+0.9
HOLC	Holcomb Ridge	0.63	58		Pg	02 17 51.6	-0.4
FOXC	Fox Airport	0.65	19		Pg	02 17 52.1	-0.3
SSK	Sunset Peak	0.67	83		Pg	02 17 52.3	-0.5
BFSC	Mount Baldy Ra	0.70	81		Sg	02 18 01.9	-0.6
BFSC	Mount Baldy Ra	0.70	81	P	Pg	02 17 52.7	-0.7
	baz=264,SNR=21						
BFSC				S	Sg	02 18 01.7	-0.8
	baz=264						
CIAC	Catalina I. Ai	0.73	175		Pg	02 17 54.3	+0.5
CIS	Catalina Islan	0.73	175	Pn	Pg	02 17 54.4	+0.6
	baz=356						
CIS				S	Sg	02 18 03.8	+0.5
	baz=356						
SBI	Santa Barbara	0.79	215		Pg	02 17 55.1	+0.2
THC	Tehachapi Micr	0.79	350		Pg	02 17 54.8	-0.3
SS2	San Sevaine	0.82	84		Pg	02 17 55.3	-0.4
EDW2	Edwards Air Fo	0.86	28		Pg	02 17 55.5	-0.8
EDW2					Sg	02 18 06.4	-1.1
EDW2	Edwards Air Fo	0.86	28	P	Pg	02 17 55.5	-0.8
	baz=209,SNR=45						
EDW2				S	Sg	02 18 06.7	-0.9
	baz=209						
MPI	Mount Pinos, F	0.87	322		Pg	02 17 56.0	-0.7
MPI					Sg	02 18 08.1	-0.1
RYS	Reyes Peak	0.88	306		Pg	02 17 56.6	-0.2
ABL	Mount Abel	0.94	320		Pg	02 17 57.1	-0.8
CSP	Cedar Springs	0.95	79		Pg	02 17 57.5	-0.7
SCZ2	Santa Cruz Isl	0.96	262	P	Pg	02 17 57.2	-1.0
	baz=80						
SCZ2				S	Sg	02 18 10.5	-0.3
	baz=80						

SME	Santa Rosa Min	0.99	108		Pg	02 17 58.0	-0.9
ARVC	Arvin	1.04	344		Pg	02 17 58.9	-0.8
ARVC	Arvin	1.04	344	P	Pg	02 17 59.0	-0.7
	baz=163						
ARVC				S	Sg	02 18 13.4	+0.2
	baz=163						
HYS	Haystack Butte	1.06	46		Pg	02 17 59.1	-1.0
SBC	Santa Barbara	1.06	288	P	Pb	02 17 59.4	-0.5
	baz=105						
SBC				S	Sg	02 18 14.2	+0.1
	baz=105						
TEJ	El Tejon	1.11	352		Pb	02 18 00.1	-0.7
TEJ					Sb	02 18 15.0	-0.2
BCW	Bitter Crk WRg	1.11	317		Pb	02 18 00.1	-0.7
PEC	Perris	1.13	102		Pb	02 18 00.3	-0.8
SCI2	San Clemente I	1.15	182	P	Pb	02 18 00.5	-0.8
	baz=2.7						
SCI2				S	Sb	02 18 17.0	+0.9
	baz=2.7						
MURC	Murrieta	1.20	116		Pb	02 18 02.0	-0.3
MURC					Sb	02 18 17.8	+0.1
MURC	Murrieta	1.20	116	P	Pb	02 18 01.6	-0.6
	baz=298,SNR=9.3						
MURC				S	Sb	02 18 17.3	-0.3
	baz=298						
SNCC	San Nicolas Is	1.23	225		Pn	02 18 02.5	-0.1
SNCC	San Nicolas Is	1.23	225	P	Pn	02 18 02.1	-0.5
	baz=43						
SNCC				S	Sb	02 18 18.5	0.0
	baz=43						
DTP	Desert Tortois	1.25	25		Pn	02 18 02.6	-0.4
BBRC	Big Bear Solar	1.31	84	Pg	Pn	02 18 04.0	+0.2
	baz=266						
BBRC				S	Sb	02 18 21.0	0.0
	baz=266						
PKM	Mcpherson Peak	1.33	305	P	Pn	02 18 04.0	-0.2
	baz=123,SNR=23						
PKM				S	Sb	02 18 21.9	+0.2
	baz=123						
WOFM	Oak Flat	1.42	353		Pn	02 18 05.5	+0.2
RRX	Edison Barstow	1.44	58	Pg	Pb	02 18 06.7	+0.3
	baz=240						
RRX				Sb	Sg	02 18 26.1	0.0
	baz=240						
LRMC	Laurel Mtn Rad	1.50	26	P	Pn	02 18 06.6	+0.2
	baz=207,SNR=8.0						
LRMC				S	Sn	02 18 25.8	-0.2
	baz=207						
ISA	Isabella, Lake	1.53	0		Pn	02 18 07.3	+0.5
ISA	Isabella, Lake	1.53	0	P	Pn	02 18 07.1	+0.3
	baz=180						
ISA				S	Sn	02 18 26.5	-0.1
	baz=180						
CARC	Carrizo Plain	1.62	317		Pn	02 18 08.6	+0.5
109C	Camp Elliot, M	1.69	137	Pn	Pn	02 18 09.3	+0.4
109C	Camp Elliot, M	1.69	137	P	Pn	02 18 08.8	-0.1
	baz=318						
109C				S	Sn	02 18 29.2	-1.2
	baz=318						
SMMC	Simmler	1.72	314	P	Pn	02 18 09.6	+0.3
	baz=132						
SMMC				Sb	Sb	02 18 34.0	+1.4
	baz=132						
PFO	Pinyon Flats O	1.77	106		Pn	02 18 10.9	+0.9
PFO	Pinyon Flats O	1.77	106	P	Pn	02 18 10.1	+0.1
	baz=289						
PFO				Sb	Sb	02 18 34.2	+0.1
	baz=289						
XPFO	Pion Flat	1.77	106		Pn	02 18 11.4	+1.3
GSC	Goldstone, Bar	1.81	49		Pn	02 18 11.0	+0.3
GSC	Goldstone, Bar	1.81	49	P	Pn	02 18 11.1	+0.4
	baz=231,SNR=42						
GSC				S	Sn	02 18 33.7	+0.1
	baz=231						
HEC	Hector,Ludlow	1.91	68	Pb	Pb	02 18 14.9	+0.4
	baz=250						
HEC				Sb	Sb	02 18 39.8	+1.5
	baz=250						
BELC	Belle Mtn. Jos	2.07	93	Pb	Pb	02 18 17.2	0.0
	baz=275						
BELC				Sb	Sb	02 18 44.0	+1.0
	baz=275						
MPMC	Manual Prospec	2.09	23	P	Pn	02 18 14.9	+0.3
	baz=203						
MPMC				S	Sn	02 18 40.3	-0.3
	baz=203						
BAR	Barrett	2.10	133	Pn	Pn	02 18 15.6	+1.1
MONP2	Monument Peak	2.12	125	Sb	Sb	02 18 44.8	+0.4
	baz=307						
GMRC	Granite Mounta	2.43	74	Pb	Pb	02 18 23.4	+0.1
	baz=256						
TUQ	Turquoise Moun	2.48	58	Pg	Pg	02 18 26.9	-0.4
	baz=239						
SHOC	Shoshone, Teco	2.54	45	Pg	Pg	02 18 27.4	-0.9
	baz=227						
PMPB	Monarch Peak	2.82	318	Pn	Pn	02 18 25.5	+1.1
Y12C	Blythe	3.32	95	Pn	Pn	02 18 32.7	+1.4
TPNV	Topopah Spring	3.35	32		Pn	02 18 32.9	+0.9
TPNV	Topopah Spring	3.35	32	P	Pn	02 18 32.9	+0.9
	baz=214						
OMMB	Old Mammoth Mi	3.50	353	Pn	Pn	02 18 35.6	+1.4
MDPB	Devils Postpil	3.53	352	Pn	Pn	02 18 35.2	+0.7
SAO	San Andreas Ge	3.57	318	Pn	Pn	02 18 34.8	0.0
SHPR	Sheep Range	3.61	48	Pn	Pn	02 18 36.7	+1.2
W13A	Hualapai Mount	3.92	74		Pn	02 18 40.6	+0.8
NVAR	Mina Array Bea	4.30	2	Pn	Pn	02 18 47.1	+2.1

IDC 21 02:18:37.1±3.5**, 5°.37S**×**152°.43E, h0^{km}, mb3.8**/2**, mb1 4.1**/2**, mb1mx3.6**/25**, mbtmp3.9**/2**, Error ellipse: s-maj=85.3km s-min=19.4km az=91.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.13	339	Pn	Pb	02 18 59.8	+0.3
	582nm,0.3s,baz=153,slow=1.3,SNR=125						
KRVT				Sn	Sn	02 19 17.5	+1.0
	306nm,0.3s,baz=37,slow=20,SNR=30						
WRA	Warramunga Arr	22.80	229	P	P	02 23 40.5	-1.1
	1.4nm,0.3s,baz=55,slow=9.9,SNR=4.2						
ASAR	Alice Springs	25.48	223	P	P	02 24 07.5	+0.2
	1.1nm,0.7s,baz=54,slow=10,SNR=11						
TORD	Torodi Ar. Bea	150.13	287	PKPbc	PKiKP	02 38 31.6	-0.3
	0.3nm,0.6s,baz=59,slow=2.3,SNR=2.5						

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*CNRM **21** 02:23:59.1±0.8, 36°.47N×4°.70W, h102^{km}±13^{km}, Error ellipse: s-maj=5.3km s-min=3.3km az=72.0*
*MDD **21** 02:24:01.4±0.7, 36°.46N×4°.69W, h79^{km}±4^{km}, mb2.8/13, Error ellipse: s-maj=6.5km s-min=3.5km az=170.0, PRXIMO*
*INMG **21** 02:24:01.7±1.8, 36°.50N×4°.68W, h76^{km}±5^{km}, ML2.1, Error ellipse: s-maj=3.5km s-min=3.5km az=147.0*
*IGIL **21** 02:24:02.0, 36°.50N×4°.68W, h73^{km}, ML2.0*
*SFS **21** 02:24:02.0, 36°.50N×4°.60W, h73^{km}, ML3.0, FUENGIROLA (MALAGA)*
ISC 21 02:23:59.4±1.2**, 36°.47N**±0°.02×**4°.68W**±0°.02**, h95**^{km}±6^{km}**, n80, σ1ˢ43**/143**, 1D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMIJ	Mijas	0.12	323	P	Pn	02 24 12.4	-0.4
	5.9nm,0.1s,SNR=46						
EMIJ				S	Sn	02 24 21.8	-1.0
	25nm,0.2s,SNR=5.0						
EMAL	Malaga-Limoner	0.36	34	P	Pn	02 24 14.1	+0.5
EMAL				S	Sn	02 24 23.0	-1.3
EMAL	Malaga-Limoner	0.36	34	*e*P	Pn	02 24 14.1	+0.5
EMAL				*e*s	Sn	02 24 23.0	-1.3
LIJA	Lijar	0.73	307	*i* P	Pn	02 24 19.2	+2.5
LIJA				*e*S	Sn	02 24 29.0	-0.6
CEU	Ceuta	0.80	225	*e*S	Sn	02 24 30.0	-0.5
ECEU	Ceuta	0.80	225	P	Pn	02 24 17.7	+0.4
	1.1nm,0.1s,SNR=4.0						
ECEU				S	Sn	02 24 30.9	+0.2
	2.5nm,0.1s,SNR=7.9						
ELGU	Los Guajares,	0.94	64	P	Pn	02 24 18.8	+0.1
	5.2nm,0.1s,SNR=7.9						
ELGU				S	Sn	02 24 31.8	-1.5
	9.1nm,0.1s,SNR=7.9						
ESPR	Espera	1.03	293	P	Pn	02 24 21.1	+1.4
	1.3nm,0.1s,SNR=5.7						
ESPR				S	Sn	02 24 34.6	-0.4
	3.1nm,0.2s,SNR=9.6						
PVLZ	Peæn de	1.32	166	*e*P	Pn	02 24 23.1	-0.1
PVLZ				*e*S	Sn	02 24 39.0	-2.1
PALE	Palemas	1.38	154	P	Pn	02 24 24.4	+0.5
PALE				S	Sn	02 24 43.7	+1.3
EALB	Alboran	1.43	111	S	Sn	02 24 41.9	-1.5
	SNR=7.9						
HORN	Hornachuelos	1.46	342	P	Pn	02 24 26.0	+1.3
HORN				S	Sn	02 24 43.9	-0.1
CHEFC	Chefchaouen	1.46	202	P	Pn	02 24 25.4	+0.5
CHEFC				S	Sn	02 24 46.9	+2.7
EBER	Berja	1.50	73	P	Pn	02 24 25.8	+0.3
	0.9nm,0.2s,SNR=7.9						
EBER				S	Sn	02 24 44.6	-0.7
	1.1nm,0.2s,SNR=7.9						
GORA	Gorafe	1.66	52	P	Pn	02 24 29.4	+2.0
	1.6nm,0.0s,SNR=7.9						
GORA				S	Sn	02 24 48.8	+0.2
	3.1nm,0.2s,SNR=7.9						
EADA	Adamuz	1.70	3	P	Pn	02 24 29.4	+1.4
	0.8nm,0.1s,SNR=7.9						
EADA				S	Sn	02 24 49.6	0.0
	12nm,0.1s,SNR=37						
ECAB	El Cabril	1.71	340	P	Pn	02 24 28.9	+0.8
	0.7nm,0.0s,SNR=18						
ECAB				S	Sn	02 24 48.9	-1.0
	8.1nm,0.1s,SNR=49						
RSA	Sarsar	1.83	211	P	Pn	02 24 31.2	+1.6
RSA				S	Sn	02 24 52.5	-0.1
GOG	Mont Gurugu	1.85	132	P	Pn	02 24 29.6	-0.2
GOG				S	Sn	02 24 53.1	+0.1
EQES	Quesada	1.85	43	P	Pn	02 24 31.4	+1.4
	0.6nm,0.1s,SNR=20						
EQES				S	Sn	02 24 52.9	-0.3
	5.6nm,0.2s,SNR=5.0						
EMIN	Mina Concepcio	2.06	310	P	Pn	02 24 33.3	+0.9
	5.3nm,0.1s,SNR=57						
EMIN				S	Sn	02 24 56.2	-1.5
	6.3nm,0.1s,SNR=5.0						
SESP	Santiago Espad	2.37	45	P	Pn	02 24 37.8	+1.0
	1.3nm,0.1s,SNR=7.9						
SESP				S	Sn	02 25 03.9	-1.4
	3.6nm,0.3s,SNR=7.9						
SESP	Santiago Espad	2.37	45	P	Pn	02 24 38.6	+1.8
SESP				S	Sn	02 25 04.8	-0.5
EGRO	El Granado	2.49	296	P	Pn	02 24 39.0	+0.9
	1.3nm,0.0s,SNR=44						
EGRO				S	Sn	02 25 06.2	-1.6
	3.4nm,0.1s,SNR=5.0						
PBAR	Barrancos	2.54	313	S	Sn	02 25 07.7	-1.4
	17nm,0.6s						
PBAR	Barrancos	2.54	313	*e*S	Sn	02 25 07.7	-1.4
PBAR				A	A	02 25 10.0	
	17nm,0.6s						
PVAQ	Vaqueiros	2.61	292	P	Pn	02 24 40.6	+0.9
PVAQ				S	Sn	02 25 09.3	-1.4
	5.0nm,0.2s						
PVAQ	Vaqueiros	2.61	292	P	Pn	02 24 40.6	+0.9
PVAQ				S	Sn	02 25 09.8	-0.9
PVAQ	Vaqueiros	2.61	292	*e*P	Pn	02 24 40.6	+0.9
PVAQ				*e*S	Sn	02 25 09.3	-1.4
PVAQ				A	A	02 25 11.0	
	5.0nm,0.2s						
PBDV	Barranco-do-Ve	2.72	288	P	Pn	02 24 42.4	+1.1
PBDV				S	Sn	02 25 12.0	-1.5
	3.1nm,0.1s						
PBDV	Barranco-do-Ve	2.72	288	*e*P	Pn	02 24 42.4	+1.1
PBDV				*e*S	Sn	02 25 12.0	-1.5
PBDV				A	A	02 25 14.6	
	3.1nm,0.1s						
JBK	JBK	2.74	140	P	Pn	02 24 42.2	+0.5
JBK				S	Sn	02 25 15.0	+0.8
PCVE	Castro Verde	2.93	294	P	Pn	02 24 45.0	+1.0
PCVE				S	Sn	02 25 16.9	-1.5
	3.0nm,0.2s						
PCVE	Castro Verde	2.93	294	*e*P	Pn	02 24 45.0	+1.0
PCVE				*e*S	Sn	02 25 16.9	-1.5
PCVE				A	A	02 25 18.9	
	3.0nm,0.2s						
EBAD	Badajoz	2.94	322	⇓P	Pn	02 24 45.6	+1.4
	3.7nm,0.0s,SNR=18						
EBAD				S	Sn	02 25 17.9	-0.8
	5.1nm,0.1s,SNR=9.0						
IFR	Ifrane	2.96	187	*i* P	Pn	02 24 44.6	0.0
IFR				*e*S	Sn	02 25 16.3	-3.3
PBEJ	Beja	2.98	302	P	Pn	02 24 46.0	+1.3
PBEJ				S	Sn	02 25 18.1	-1.6
	1.8nm,0.4s						
PBEJ	Beja	2.98	302	*e*P	Pn	02 24 46.0	+1.3
PBEJ				*e*S	Sn	02 25 18.1	-1.6
PBEJ				A	A	02 25 19.8	
	3.6nm,0.4s						
PAB	San Pablo	3.09	5	P	Pn	02 24 47.3	+1.1
	0.3nm,0.3s,SNR=7.9						
PAB				S	Sn	02 25 20.7	-1.6
	1.5nm,0.1s,SNR=7.9						
MESJ	Messejana	3.14	297	*e*P	Pn	02 24 47.7	+0.9
MESJ				*e*S	Sn	02 25 21.1	-2.5
MESJ				AML	AML	02 25 23.6	
	comp=N,3.5nm,0.1s						
MESJ	Messejana	3.14	297	P	Pn	02 24 48.0	+1.1
MESJ				S	Sn	02 25 21.1	-2.5
	comp=N,3.5nm,0.1s						
MESJ	Messejana	3.14	297	*e*P	Pn	02 24 48.0	+1.1
MESJ				*e*S	Sn	02 25 22.0	-1.6
MESJ				A	A	02 25 26.5	
	comp=N,2.2nm,0.6s						
ESDC	Sonseca Array	3.25	10	S	Sn	02 25 24.3	-2.0
	comp=N,3.0nm,0.2s,baz=189,slow=23,SNR=7.9						
MORF	Marmelete	3.29	286	*e*S	Sn	02 25 24.8	-2.4
MORF				AML	AML	02 25 27.5	
	comp=N,5.7nm,0.2s						
MORF	Marmelete	3.29	286	P	Pn	02 24 50.4	+1.5
MORF				S	Sn	02 25 25.4	-1.8
	comp=N,3.7nm,0.1s						
MORF	Marmelete	3.29	286	*e*P	Pn	02 24 50.4	+1.5
MORF				*e*S	Sn	02 25 25.4	-1.8
MORF				A	A	02 25 27.2	
	comp=N,3.7nm,0.1s						
ETOB	Tobarra	3.31	48	P	Pn	02 24 50.3	+1.2
	comp=N,1.5nm,0.1s,SNR=27						
ETOB				S	Sn	02 25 26.3	-1.3
	comp=N,1.7nm,0.2s,SNR=8.1						
PESTR	Estremoz	3.33	317	P	Pn	02 24 49.1	-0.3
PESTR				S	Sn	02 25 27.7	-0.3
PESTR	Estremoz	3.33	317	*e*P	Pn	02 24 51.0	+1.6
PESTR				*e*S	Sn	02 25 26.8	-1.2
PFVI	Vila Bisbo	3.40	283	S	Sn	02 25 27.8	-1.7
	comp=N,3.9nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	3.40	283	*e*S	Sn	02 25 27.9	-1.7
PFVI				A	A	02 25 34.0	
	comp=N,4.3nm,0.8s						
PTEO	Sao Teotonio	3.41	290	P	Pn	02 24 52.1	+1.6
PTEO				S	Sn	02 25 28.3	-1.7
	comp=N,2.2nm,1.1s						
PTEO	Sao Teotonio	3.41	290	*e*P	Pn	02 24 52.1	+1.6
PTEO				*e*S	Sn	02 25 28.3	-1.7
PTEO				A	A	02 25 31.1	
	comp=N,4.5nm,1.1s						
CZD	Col de Zad	3.44	185	P	Pn	02 24 50.5	-0.6
CZD				S	Sn	02 25 32.1	+1.0
PNCL	Nicolau / Gran	3.48	299	P	Pn	02 24 52.7	+1.3
PNCL				S	Sn	02 25 29.6	-2.1
	comp=N,2.0nm,0.2s						
PNCL	Nicolau / Gran	3.48	299	*e*P	Pn	02 24 52.7	+1.3
PNCL				*e*S	Sn	02 25 29.6	-2.1
PNCL				A	A	02 25 31.8	
	comp=N,2.0nm,0.2s						
MD31	MD31	3.59	181	P	Pn	02 24 53.1	+0.1
MD31				S	Sn	02 25 33.9	-0.6
MDT	Midelt	3.64	179	P	Pn	02 24 54.7	+0.9
MDT				S	Sn	02 25 34.5	-1.3
PMRV	Marv??o	3.65	325	P	Pn	02 24 55.3	+1.5
PMRV				S	Sn	02 25 34.4	-1.5
	comp=N,1.3nm,0.5s						
PMRV	Marv??o	3.65	325	*e*P	Pn	02 24 55.3	+1.5
PMRV				*e*S	Sn	02 25 34.4	-1.5
PMRV				A	A	02 25 37.4	
	comp=N,1.3nm,0.5s						
EPLA	Plasencia	3.76	343	P	Pn	02 24 56.8	+1.6
	comp=N,0.7nm,0.1s,SNR=7.3						
EPLA				S	Sn	02 25 37.2	-1.2
	comp=N,2.1nm,0.1s						
PMTG	Montargil	3.83	314	P	Pn	02 24 57.4	+1.3
PMTG				S	Sn	02 25 38.3	-1.7
	comp=N,1.1nm,0.7s						
PMTG	Montargil	3.83	314	*e*P	Pn	02 24 57.4	+1.3
PMTG				*e*S	Sn	02 25 38.3	-1.7
PMTG				A	A	02 25 41.4	
	comp=N,1.1nm,0.7s						
PCBR	Castelo Branco	4.03	328	P	Pn	02 25 00.5	+1.7
PCBR				S	Sn	02 25 43.2	-1.7
	comp=N,0.3nm,0.1s						
PCBR	Castelo Branco	4.03	328	*e*P	Pn	02 25 00.5	+1.7
PCBR				*e*S	Sn	02 25 43.2	-1.7
PCBR				A	A	02 25 43.8	
	comp=N,0.7nm,0.1s						
ECHE	Chera	4.28	42	P	Pn	02 25 03.4	+1.1
	comp=N,0.2nm,0.1s,SNR=7.9						
ECHE				S	Sn	02 25 49.0	-2.1
	comp=N,0.6nm,0.2s,SNR=7.9						
PTOM	Tomar	4.31	318	P	Pn	02 25 04.4	+1.8
PTOM	Tomar	4.31	318	*e*P	Pn	02 25 04.4	+1.8
PMAFR	Mafra	4.42	306	P	Pn	02 25 05.7	+1.6
	comp=N,3.3nm,0.2s,SNR=7.9						
PMAFR				S	Sn	02 25 53.7	-0.6
	comp=N,7.5nm,0.2s,SNR=7.9						
PMAFR	Mafra	4.42	306	*e*P	Pn	02 25 05.9	+1.8
PMAFR				*e*S	Sn	02 25 53.6	-0.7
PCAS	Casmilo, Conde	4.68	321	P	Pn	02 25 09.1	+1.5
PCAS	Casmilo, Conde	4.68	321	*e*P	Pn	02 25 09.1	+1.5
ETOR	Torete	4.81	24	P	Pn	02 25 11.2	+1.8
	comp=N,3.0nm,0.2s,SNR=7.4						
ETOR				S	Sn	02 26 00.3	-3.7
	comp=N,3.4nm,0.2s						
PVIS	Viseu	4.94	330	P	Pn	02 25 13.0	+1.9
PVIS				S	Sn	02 26 05.5	-1.5
PVIS	Viseu	4.94	330	*e*P	Pn	02 25 13.0	+1.9
PVIS				*e*S	Sn	02 26 05.5	-1.5
MVO	Moncorvo	5.04	339	*e*P	Pn	02 25 14.5	+1.9
PVRL	Vila Real	5.36	335	S	Sn	02 26 16.0	-1.2
	comp=N,1.4nm,0.1s						
PVRL	Vila Real	5.36	335	*e*S	Sn	02 26 16.0	-1.2
PVRL				A	A	02 26 19.1	
	comp=N,2.9nm,0.1s						
PBRG	Braganca	5.57	344	S	Sn	02 26 22.3	-0.1
PBRG	Braganca	5.57	344	*e*S	Sn	02 26 22.3	-0.1

SSNC 21 02:36:32.0±1.8**, 23°.46N**×**80°.59W, h21**^{km}±34^{km}**, MD3.5, ML2.8, MW3.9, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGV	Manicaragua	1.46	157	*i* P	Pn	02 36 54.6	-2.4
MGV				*i* S	Sn	02 37 12.4	-3.2
MGV				IAML		02 37 14.3	
	comp=E,279nm,0.5s						
MGV				IAML		02 37 18.0	
	comp=N,247nm,0.3s						
SOR	Soroa	2.32	254	*e*P	Pn	02 37 07.1	-1.9
SOR				*e*S	Sn	02 37 33.2	-3.7
SOR				IAML		02 37 36.8	
	comp=N,18nm,0.2s						
SOR				IAML		02 37 37.1	
	comp=E,28nm,0.2s						
LMGC	Las Mercedes	4.75	135	*e*P	Pn	02 37 40.8	-1.5
LMGC				*e*S	Sn	02 38 32.1	-4.7
RCC	Rio Carpintero	5.71	126	*e*P	Pn	02 37 55.6	0.0
RCC				*e*S	Sn	02 38 53.9	-6.6
GTMO	Guantanamo	6.08	123	*e*P	Pn	02 38 03.7	+3.0
GTMO				*e*S	Sn	02 39 07.4	-2.2

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*IDC **21** 02:39:56.2±0.9, 5°.40S×153°.05E, h0^{km}, mb4.1/14, mb1 4.2/15, mb1mx4.1/42, mbtmp4.1/15, ML2.0/1, MS3.2/7, Ms1 3.2/7, ms1mx3.0/28, Error ellipse: s-maj=25.6km s-min=14.8km az=113.0*
*NEIC **21** 02:39:57.7±1.4, 5°.38S±0°.09×153°.1E±0°.1, h10^{km}±1^{km}, mb4.4/9, Error ellipse: s-maj=23.6km s-min=14.6km az=94.0*
ISC 21 02:40:01.7±0.8**, 5°.37S**±0°.07×**153°.1E**±0°.1**, h37**^{km}**, n31, σ0ˢ93**/27**, mb4.1**/15**, MS3.1**/6**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.48	323		Pn	02 40 24.8	-1.1
KRVT	Keravat (AS076	1.48	316	Pn	Pn	02 40 25.0	-0.9
	338nm,0.3s,baz=89,slow=1.3,SNR=94						
KRVT				Sn	Sn	02 40 45.0	+1.0
	957nm,0.3s,baz=137,slow=22,SNR=29						
KRVT				LR	LR	02 41 03.2	
	comp=Z,916nm,19.6s,baz=115,slow=45						
PMG	Port Moresby	7.10	235	Pn	Pn	02 41 43.0	0.0
	1.4nm,0.3s,baz=19,slow=7.4,SNR=6.3						
PMG				Sn	Sn	02 43 02.8	+0.3
	3.6nm,0.3s,baz=335,slow=23,SNR=6.8						
PMG	Port Moresby	7.10	235		Sn	02 43 04.6	+2.1
HNR	Honiara	7.93	121	LR	LR	02 45 02.1	
	comp=Z,142nm,21.3s,baz=256,slow=39						
GUMO	Guam	20.52	337	LR	LR	02 53 21.1	
	comp=Z,48nm,18.5s,baz=126,slow=39						
WRA	Warramunga Arr	23.27	230	P	P	02 45 06.2	0.0
	2.6nm,0.8s,baz=53,slow=9.5,SNR=12						
WRA				LR	LR	02 54 22.1	
	comp=Z,65nm,21.9s,baz=80,slow=37						
ASAR	Alice Springs	25.91	224	P	P	02 45 30.3	-0.3
	1.8nm,0.9s,baz=62,slow=9.2,SNR=12						
ASAR				LR	LR	02 56 54.9	
	comp=Z,61nm,18.5s,baz=52,slow=39						
STKA	Stephens Creek	28.47	201	P	P	02 45 52.0	-1.4
	1.6nm,0.8s,baz=352,slow=23,SNR=1.4						
STKA				LR	LR	02 56 13.5	
	comp=Z,89nm,19.7s,baz=25,slow=34						
STKA	Stephens Creek	28.47	201	IAmb	IAmb	02 46 10.2	
	comp=Z,11nm,1.9s						
FITZ	Fitzroy Crossi	29.62	242	P	P	02 46 02.8	-1.0
	comp=Z,2.3nm,0.8s,baz=63,slow=8.0,SNR=8.1						
FITZ				LR	LR	02 58 44.0	
	comp=Z,42nm,18.1s,baz=222,slow=38						
FITZ	Fitzroy Crossi	29.62	242	IAmb	IAmb	02 46 09.5	
	comp=Z,16nm,1.6s						
MJAR	Matsushiro Arr	43.95	343	LR	LR	03 04 32.4	
	comp=Z,34nm,20.5s,baz=220,slow=34						
KLR	Kul'dur	57.47	344	P	P	02 49 46.7	-0.2
	comp=Z,1.4nm,0.8s,baz=174,slow=4.2,SNR=5.3						
CMAR	Chiang Mai Arr	58.36	295	P	P	02 49 53.5	-0.2
	comp=Z,1.8nm,0.3s,baz=123,slow=7.0,SNR=6.0						
PETK	Petropavlovsk-	58.39	3	P	P	02 49 53.5	+0.2
	comp=Z,1.8nm,0.5s,baz=173,slow=6.6,SNR=5.8						
MA2	Magadan	64.77	359	P	P	02 50 37.3	+1.1
	comp=Z,3.0nm,0.3s,baz=191,slow=6.2,SNR=4.3						
SONM	Songino Array	66.95	328	P	P	02 50 50.9	+0.3
	comp=Z,0.5nm,0.6s,baz=146,slow=6.9,SNR=3.7						
SONM	Songino Array	66.95	328	IAmb	IAmb	02 50 52.0	
	comp=Z,3.6nm,1.6s						
SEY	Seymchan	68.12	360	P	P	02 50 58.7	+1.1
	comp=Z,0.6nm,0.3s,baz=103,slow=10,SNR=3.9						
BILL	Bilibino	73.83	5	P	P	02 51 33.0	+0.9
MK31	Makanchi Array	80.93	319	P	P	02 52 12.6	+0.2
MKAR	Makanchi Array	80.93	319	P	P	02 52 12.5	+0.1
	comp=Z,0.7nm,0.7s,baz=99,slow=5.4,SNR=5.5						
MKAR	Makanchi Array	80.93	319	P	P	02 52 13.8	+1.4
ZAA0	Zalesovo Array	81.77	326	P	P	02 52 15.9	-0.7
ZAA0				IAmb	IAmb	02 52 16.8	
	comp=Z,2.1nm,0.8s						
ZALV	Zalesovo Beam	81.77	326	P	P	02 52 15.4	-1.2
	comp=Z,1.6nm,0.6s,baz=94,slow=5.9,SNR=8.2						
ZALV	Zalesovo Beam	81.77	326	P	P	02 52 15.8	-0.8
ILAR	Eielson Array	82.59	22	P	P	02 52 20.4	-0.2
	comp=Z,0.7nm,0.7s,baz=249,slow=5.4,SNR=3.7						
NIL	Nilore	84.52	304	P	P	02 52 31.1	-0.2
YKA	Yellowknife Ar	95.81	28	P	P	02 53 25.3	+1.4
	comp=Z,0.2nm,0.8s,baz=263,slow=4.6,SNR=5.2						
TORD	Torodi Ar. Bea	150.73	287	PKPbc	PKiKP	02 59 51.5	-0.3
	comp=Z,1.7nm,0.8s,baz=74,slow=2.9,SNR=9.6						

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*IDC **21** 02:47:55.7±2.5, 5°.39S×153°.03E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.5/38, mbtmp3.6/4, MS3.7/1, Ms1 3.7/1, ms1mx2.5/27, Error ellipse: s-maj=51.1km s-min=22.9km az=81.0*
ISC 21 02:48:01.6±2.3**, 5°.4S**±0°.1×**152°.9E**±0°.3**, h37**^{km}**, n7, σ1ˢ05**/7**, mb3.4**/4**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.41	321	Pn	Pn	02 48 23.6	-1.0
	281nm,0.3s,baz=133,slow=1.7,SNR=69						
KRVT				Sn	Sn	02 48 42.7	+0.7
	187nm,0.3s,baz=184,slow=21,SNR=16						

WRA	**Warramunga Arr**	**23.13**	**230**	P	**P**	**02 53 05.4**	**+0.7**
	0.8nm,0.5s,baz=55,slow=9.9,SNR=7.0						
ASAR	**Alice Springs**	**25.78**	**223**	P	**P**	**02 53 29.3**	**+0.1**
	0.6nm,0.7s,baz=58,slow=9.5,SNR=8.1						
FITZ	**Fitzroy Crossi**	**29.47**	**242**	P	**P**	**02 54 02.0**	**-0.3**
	3.0nm,1.1s,baz=60,slow=8.1,SNR=2.4						
RAR	**Rarotonga**	**48.43**	**114**	LR	LR	03 13 07.3	
	comp=Z,84nm,19.4s,baz=246,slow=31						
MKAR	**Makanchi Array**	**80.86**	**319**	P	**P**	**03 00 13.1**	**+1.3**
	0.2nm,0.6s,baz=94,slow=5.1,SNR=2.0						
TORD	**Torodi Ar. Bea**	**150.60**	**287**	PKPbc	**PKPbc**	**03 07 49.8**	**-0.8**
	0.5nm,1.0s,baz=85,slow=1.6,SNR=1.3						

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*SJA **21** 03:31:17.2±0.7, 22°.18S×67°.58W, h178^{km}±7^{km}, ML3.3, MW3.2*
*GUC **21** 03:31:18.5±0.6, 22°.09S×67°.85W, h185^{km}±4^{km}, ML3.7*
ISC 21 03:31:16.8±1.9, **22°.12S**±0°.05×**67°.63W**±0°.05, **h187**^{km}±16^{km}, **n24**, σ**0^{s}.84**/44, **2C-5D**, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.28**	**248**	eP	**Pn**	**03 31 48.6**	**+0.7**
LVC				eS	**Sn**	**03 32 11.5**	**-0.4**
PB09	**IPOC Station P**	**1.54**	**282**	⇓iP	**Pn**	**03 31 50.9**	**+1.0**
PB09				i S	**Sn**	**03 32 14.8**	**-0.7**
PB09	**IPOC Station P**	**1.54**	**282**	i P	**Pn**	**03 31 51.0**	**+1.0**
PB09				eS	**Sn**	**03 32 15.6**	**+0.1**
PB09				IAML		03 32 16.8	
	comp=Z,120nm,0.3s						
PB06	**IPOC Station P**	**1.89**	**252**	eP	**Pn**	**03 31 54.1**	**+0.6**
PB06				eS	**Sn**	**03 32 21.4**	**-0.5**
PB06				IAML		03 32 23.6	
	comp=E,731nm,0.1s						
PB06	**IPOC Station P**	**1.89**	**252**	i P	**Pn**	**03 31 54.2**	**+0.8**
PB06				eS	**Sn**	**03 32 21.7**	**-0.1**
PB06				IAML		03 32 23.8	
	comp=Z,147nm,0.1s						
YJA	**Yavi**	**1.96**	**92**	i P	**Pn**	**03 31 54.7**	**+0.3**
YJA				eS	**Sn**	**03 32 22.5**	**-1.0**
PB03	**IPOC Station P**	**1.98**	**272**	eP	**Pn**	**03 31 54.9**	**+0.6**
PB03				i S	**Sn**	**03 32 22.5**	**-0.9**
PB03				IAML		03 32 23.5	
	comp=E,452nm,0.1s						
PB01	**IPOC Station P**	**2.04**	**301**	eP	**Pn**	**03 31 55.4**	**+0.5**
PB01				i S	**Sn**	**03 32 23.6**	**-0.8**
PB01				IAML		03 32 25.4	
	comp=E,299nm,0.1s						
PB07	**IPOC Station P**	**2.13**	**280**	⇓iP	**Pn**	**03 31 56.6**	**+0.6**
PB07				i S	**Sn**	**03 32 25.3**	**-1.2**
PB07				IAML		03 32 26.8	
	comp=N,346nm,0.1s						
PB02	**IPOC Station P**	**2.26**	**290**	⇓iP	**Pn**	**03 31 57.6**	**+0.3**
PB02				i S	**Sn**	**03 32 27.6**	**-1.2**
PB02				IAML		03 32 29.1	
	comp=N,495nm,0.2s						
PB04	**IPOC Station P**	**2.35**	**264**	eP	**Pn**	**03 31 59.1**	**+0.7**
PB04				i S	**Sn**	**03 32 29.6**	**-1.1**
PB04				IAML		03 32 30.8	
	comp=N,285nm,0.3s						
PB04	**IPOC Station P**	**2.35**	**264**	i P	**Pn**	**03 31 59.1**	**+0.7**
PB04				eS	**Sn**	**03 32 30.0**	**-0.6**
PB08	**IPOC Station P**	**2.43**	**324**	⇓iP	**Pn**	**03 32 00.9**	**+1.3**
PB08				i S	**Sn**	**03 32 33.1**	**+0.3**
PB05	**IPOC Station P**	**2.49**	**253**	⇑iP	**Pn**	**03 32 00.7**	**+0.7**
PB05				i S	**Sn**	**03 32 32.3**	**-1.2**
PB05				IAML		03 32 34.0	
	comp=E,126nm,0.2s						
PB05	**IPOC Station P**	**2.49**	**253**	i P	**Pn**	**03 32 00.7**	**+0.7**
PB05				eS	**Sn**	**03 32 32.7**	**-0.8**
PB05				IAML		03 32 35.8	
	comp=Z,91nm,0.4s						
PATCX	**Punta Patache**	**2.69**	**298**	i P	**Pn**	**03 32 02.3**	**+0.1**
PATCX				i S	**Sn**	**03 32 35.8**	**-1.7**
PATCX				IAML		03 32 36.7	
	comp=N,262nm,0.2s						
GO01	**Chusmiza**	**2.85**	**329**	⇓iP	**Pn**	**03 32 05.4**	**+0.9**
GO01				i S	**Sn**	**03 32 41.6**	**0.0**
PB10	**IPOC Station P**	**3.04**	**242**	i P	**Pn**	**03 32 06.9**	**+0.6**
PB10				eS	**Sn**	**03 32 43.9**	**-0.9**
PB10				IAML		03 32 44.6	
	comp=Z,51nm,0.3s						
AZAP	**Zapla**	**3.15**	**132**	i P	**Pn**	**03 32 08.4**	**+0.5**
SLA	**San Lorenzo**	**3.24**	**143**	eP	**Pn**	**03 32 09.1**	**+0.2**
GO02	**Mina Guanaco**	**3.52**	**210**	⇑iP	**Pn**	**03 32 13.4**	**+1.0**
GO02				i S	**Sn**	**03 32 56.3**	**+0.2**
PB14	**IPOC Station P**	**3.57**	**225**	i P	**Pn**	**03 32 13.9**	**+0.9**
PB14				eS	**Sn**	**03 32 55.6**	**-1.5**
PB14				IAML		03 32 58.9	
	comp=Z,37nm,0.2s						
VCA	**Vinchina**	**6.61**	**184**	i P	**Pn**	**03 32 52.5**	**+0.6**
VCA				IAML		03 34 29.9	
	comp=Z,11nm,3.5s						
AGUA	**GUANDACOL**	**7.38**	**186**	i P	**Pn**	**03 33 02.5**	**+0.6**
AGUA				IAML		03 34 32.6	
	comp=Z,2.4nm,3.3s						

IDC 21 03:51:51.0±2.0, **16°.20S**×**166°.15E**, **h0**^{km}, **mb3.8**/3, **mb1 4.1**/4, **mb1mx3.7**/28, **mbtmp3.8**/4, **ML3.6**/1, **Error ellipse: s-maj=46.5km s-min=37.3km az=126.0**, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.84**	**177**	Pn	Pn	03 53 18.3	-0.7
	1.6nm,0.3s,baz=349,slow=16,SNR=64						
DZM				Sn	Sn	03 54 24.0	-2.9
	baz=0.0,slow=20,SNR=1.0						
WRA	**Warramunga Arr**	**30.44**	**258**	P	P	03 58 05.0	-0.5
	0.8nm,0.7s,baz=86,slow=9.2,SNR=7.2						
ASAR	**Alice Springs**	**31.15**	**251**	P	P	03 58 12.3	+0.5
	1.9nm,0.6s,baz=76,slow=9.1,SNR=35						
ILAR	**Eielson Array**	**88.25**	**18**	P	P	04 04 43.9	+0.1
	0.4nm,1.0s,baz=224,slow=5.0,SNR=2.0						

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*NEIC **21** 04:14:55.6±2.0, 5°.16S±0°.08×153°.02E±0°.08, h39^{km}±7^{km}, mb4.3/12, Error ellipse: s-maj=13.8km s-min=9.6km az=220.0*
*IDC **21** 04:14:56.1±2.0, 5°.30S×152°.90E, h44^{km}±16^{km}, mb3.9/12, mb1 4.1/14, mb1mx3.8/48, mbtmp4.2/14, ML2.2/1, MS3.2/5, Ms1 3.2/5, ms1mx2.9/26, Error ellipse: s-maj=20.4km s-min=10.7km az=83.0*
*DJA **21** 04:14:56.8±2.1, 5°S±8°×15°3E±2°2, h72^{km}±10^{km}, M4.7/7, mb4.5/7, mB5.1/1, MLv4.8/2, Mw(mB)4.4/1*
ISC 21 04:14:55.9±0.7, **5°.23S**±0°.06×**152°.94E**±0°.09, **h43**^{km}, **n35**, σ**0^{s}.79**/35, **mb4.2**/15, **MS3.2**/4, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.29**	**323**	Pn	**Pn**	**04 15 17.3**	**-0.3**
RABL				Sn	**Sn**	**04 15 33.7**	**0.0**
KRVT	**Keravat (AS076**	**1.30**	**315**	P	**Pn**	**04 15 17.3**	**-0.3**
	555nm,0.3s,baz=165,slow=1.8,SNR=178						
KRVT				S	**Sn**	**04 15 34.6**	**+0.8**
	954nm,0.3s,baz=207,slow=18,SNR=24						
PMG	**Port Moresby**	**7.08**	**234**	P	**Pn**	**04 16 37.7**	**+0.7**
	2.3nm,0.3s,baz=27,slow=8.0,SNR=8.6						
PMG				S	**Sn**	**04 17 54.6**	**-1.6**
	2.9nm,0.3s,baz=342,slow=20,SNR=6.6						
PMG				LR	LR	04 19 25.4	
	comp=Z,120nm,21.9s,baz=86,slow=38						
PMG	**Port Moresby**	**7.08**	**234**	Pn	**Pn**	**04 16 38.6**	**+1.7**
HNR	**Honiara**	**8.10**	**121**	P	**Pn**	**04 16 50.8**	**-0.4**
	27nm,0.3s,baz=260,slow=6.1,SNR=2.0						
GUMO	**Guam**	**20.35**	**337**	LR	LR	04 28 13.4	
	comp=Z,41nm,18.4s,baz=112,slow=39						
DZM	**Mont Dzumac**	**21.24**	**143**	LR	LR	04 26 07.7	
	comp=Z,118nm,19.3s,baz=46,slow=32						
WB0	**Warramunga Arr**	**23.12**	**230**	P	**P**	**04 19 58.1**	**-0.4**
WR0	**Warramunga Arr**	**23.12**	**229**	P	**P**	**04 19 58.4**	**-0.1**
WR0				IAmb	IAmb	04 19 59.5	
	comp=Z,10nm,0.9s						
WB2	**Warramunga Arr**	**23.26**	**229**	P	**P**	**04 19 58.7**	**-1.2**
WRA	**Warramunga Arr**	**23.27**	**229**	P	**P**	**04 19 58.0**	**-2.0**
	comp=Z,12nm,1.0s,baz=54,slow=10.0,SNR=40						
WRA				LR	LR	04 28 40.1	
	comp=Z,74nm,19.4s,baz=150,slow=36						
WRA	**Warramunga Arr**	**23.27**	**229**	P	**P**	**04 19 59.2**	**-0.7**
KNRA	**Kununurra**	**25.91**	**245**	P	**P**	**04 20 24.2**	**0.0**
AS31	**Alice Springs**	**25.93**	**223**	P	**P**	**04 20 24.1**	**-0.3**
ASAR	**Alice Springs**	**25.93**	**223**	P	**P**	**04 20 24.1**	**-0.3**
	comp=Z,5.9nm,0.8s,baz=57,slow=9.1,SNR=30						
ASAR	**Alice Springs**	**25.93**	**223**	P	**P**	**04 20 23.4**	**-1.0**
STKA	**Stephens Creek**	**28.56**	**200**	LR	LR	04 31 28.9	
	comp=Z,74nm,19.0s,baz=30,slow=35						
FITZ	**Fitzroy Crossi**	**29.58**	**242**	P	**P**	**04 20 56.0**	**-1.1**
	comp=Z,5.5nm,0.8s,baz=66,slow=7.9,SNR=25						
FITZ	**Fitzroy Crossi**	**29.58**	**242**	P	**P**	**04 20 56.1**	**-1.0**
FITZ				IAmb	IAmb	04 20 59.6	
	comp=Z,5.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**58.19**	**295**	P	**P**	**04 24 46.5**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=99,slow=5.6,SNR=4.1						
VNDA	**Vanda**	**72.39**	**178**	P	**P**	**04 26 17.6**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=320,slow=6.8,SNR=5.9						
MK31	**Makanchi Array**	**80.74**	**319**	P	**P**	**04 27 06.2**	**+1.3**
MK31				IAmb	IAmb	04 27 09.8	
	comp=Z,6.5nm,1.9s						
MKAR	**Makanchi Array**	**80.74**	**319**	P	**P**	**04 27 05.7**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=96,slow=7.4,SNR=4.9						
ZAA0	**Zalesovo Array**	**81.59**	**326**	P	**P**	**04 27 09.6**	**+0.5**
ZAA0				IAmb	IAmb	04 27 10.7	
	comp=Z,1.8nm,0.8s						
ZALV	**Zalesovo Beam**	**81.59**	**326**	P	**P**	**04 27 08.6**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=102,slow=2.7,SNR=4.2						
ILAR	**Eielson Array**	**82.51**	**22**	P	**P**	**04 27 13.9**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=243,slow=4.7,SNR=7.6						
KURK	**Kurchatov**	**84.19**	**322**	P	**P**	**04 27 22.8**	**0.0**
KURBB	**Kurchatov Arra**	**84.22**	**322**	P	**P**	**04 27 22.8**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=101,slow=4.8,SNR=2.1						
NIL	**Nilore**	**84.33**	**304**	P	**P**	**04 27 24.1**	**+0.1**
AAK	**Ala-Archa**	**85.06**	**313**	P	**P**	**04 27 27.8**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=114,slow=11,SNR=3.8						
NRIK	**Noril'sk**	**86.42**	**341**	P	**P**	**04 27 33.3**	**-0.2**
	comp=Z,1.5nm,0.5s,baz=63,slow=3.1,SNR=3.5						
BVAR	**Borovoye Array**	**89.67**	**323**	P	**P**	**04 27 48.6**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=116,slow=6.4,SNR=7.4						
GERES	**GERESS Array B**	**124.50**	**328**	PKP	**PKiKP**	**04 33 51.7**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=28,slow=4.4,SNR=1.9						
TORD	**Torodi Ar. Bea**	**150.57**	**287**	PKPbc	**PKPbc**	**04 34 44.2**	**0.0**
	comp=Z,2.8nm,0.8s,baz=50,slow=2.3,SNR=14						
TORD	**Torodi Ar. Bea**	**150.57**	**287**		**PKPbc**	**04 34 44.5**	**+0.2**

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*JMA **21** 04:17:50.3±0.2, 44°.11N×142°.73E, h211^{km}±2^{km}, M3.0*
*IDC **21** 04:18:26.1±8.1, 45°.52N×138°.26E, h280^{km}±64^{km}, mb3.2/4, mb1 3.1/5, mb1mx2.7/49, mbtmp3.8/5, Error ellipse: s-maj=150.6km s-min=85.8km az=171.0*
ISC 21 04:17:50.3±1.1, **44°.06N**±0°.08×**142°.76E**±0°.08, **h213**^{km}±8^{km}, **n19**, σ**0^{s}.69**/23, **mb3.6**/4, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	**Asahikawa**	**0.13**	**296**	P	**Pn**	**04 18 18.1**	**0.0**
ASAJ				eS	**S**	**04 18 39.6**	**-0.2**
JKK2	**Kamakawa 2**	**0.19**	**183**	P	**Pn**	**04 18 18.3**	**+0.1**
JAB	**Ashibetsu**	**0.68**	**215**	P	**Pn**	**04 18 20.2**	**+0.5**
JSS	**Shosan**	**0.74**	**298**	P	**Pn**	**04 18 19.7**	**-0.1**
JTKR	**Abashiri--Toko**	**0.83**	**96**	P	**Pn**	**04 18 20.9**	**+0.5**
JTKR				eS	**S**	**04 18 44.1**	**+0.4**
JSE	**Soyaes**	**0.91**	**352**	P	**Pn**	**04 18 20.2**	**-0.5**
JAR	**Ashorobuto**	**1.06**	**136**	P	**Pn**	**04 18 22.4**	**+0.6**
JAR				eS	**S**	**04 18 47.2**	**+1.0**
JWK2	**Keihoku**	**1.40**	**334**	P	**Pn**	**04 18 23.8**	**-0.4**
JCH	**Churui**	**1.51**	**163**	P	**Pn**	**04 18 24.7**	**-0.6**
JCH				eS	**S**	**04 18 50.6**	**-1.6**
JEW	**Eniwo**	**1.55**	**219**	eS	**S**	**04 18 53.1**	**+0.3**
JRA	**Rausu**	**1.71**	**93**	P	**Pn**	**04 18 27.7**	**+0.8**
JAK	**Akkeshi**	**1.76**	**126**	eS	**S**	**04 18 55.0**	**-1.2**
NEM2	**Nemuro 2**	**2.27**	**107**	P	**Pn**	**04 18 31.7**	**-0.8**
JKB	**Kayabe**	**2.52**	**211**	P	**Pn**	**04 18 35.4**	**+0.3**
USRK	**Ussuriysk Ar.**	**7.75**	**275**	P	**Pn**	**04 19 39.7**	**-0.5**
	baz=84,slow=15,SNR=13						
USRK				S	S	04 20 36.2	-32
	baz=153,slow=39,SNR=2.2						
SONM	**Songino Array**	**25.41**	**291**	P	**P**	**04 22 58.7**	**+0.5**
	2.3nm,0.5s,baz=89,slow=8.4,SNR=14						
ZALV	**Zalesovo Beam**	**38.27**	**306**	P	**P**	**04 24 49.6**	**0.0**
	0.8nm,0.4s,baz=92,slow=11,SNR=2.1						
MKAR	**Makanchi Array**	**41.61**	**296**	P	**P**	**04 25 17.4**	**+0.1**
	0.5nm,0.5s,baz=83,slow=8.5,SNR=6.5						
KURBB	**Kurchatov Arra**	**42.79**	**302**	P	**P**	**04 25 26.6**	**0.0**
	1.3nm,0.8s,baz=73,slow=9.1,SNR=5.0						

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*ATH **21** 04:23:39.9, 39°.15N×22°.14E, h25^{km}, ML3.1/33, Error ellipse: s-maj=0.8km s-min=0.5km az=174.0*
*TIR **21** 04:23:39.4, 39°.27N×22°.27E, h20^{km}, Md3.5/6*
*THE **21** 04:23:40.9, 39°.14N×22°.13E, h12^{km}, ML3.1/33, Error ellipse: s-maj=0.9km s-min=0.4km az=146.0*
*ISK **21** 04:23:40.7, 39°.16N×22°.32E, h23^{km}, ML3.2/15*
ISC 21 04:23:40.7±0.9, **39°.16N**±0°.01×**22°.15E**±0°.01, **h20**^{km}±2^{km}, **n162**, σ**0^{s}.93**/229, **13C-3D**, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAKR	**Makrakomi, Fth**	**0.14**	**185**	P	**Pg**	**04 23 44.9**	**-0.2**
MAKR				S	**Sg**	**04 23 48.4**	**+0.3**
	260μm,0.5s						
MAKR	**Makrakomi, Fth**	**0.14**	**185**	P	**Pg**	**04 23 44.9**	**-0.2**
MAKR				S	**Sg**	**04 23 48.3**	**+0.3**
AGG	**Agios Georgios**	**0.20**	**133**	P	**Pg**	**04 23 45.8**	**0.0**
AGG				S	**Sg**	**04 23 49.3**	**0.0**
	16μm,0.3s						
AGG	**Agios Georgios**	**0.20**	**133**	P	**Pg**	**04 23 45.8**	**0.0**
AGG				S	**Sg**	**04 23 49.8**	**+0.5**
AGG				AML	AML	04 23 50.1	
	comp=E,31830μm,0.3s						
AGG				AML	AML	04 23 50.2	
	comp=N,31636μm,0.3s						
AGG	**Agios Georgios**	**0.20**	**133**	PG	**Pg**	**04 23 45.8**	**0.0**
AGG				SG	**Sg**	**04 23 49.5**	**+0.2**
EVR	**Evrytania**	**0.35**	**228**	P	**Pg**	**04 23 47.5**	**-0.9**
EVR				S	**Sg**	**04 23 52.5**	**-1.1**
	comp=N,6μm,0.4s						
EVR	**Evrytania**	**0.35**	**228**	P	**Pg**	**04 23 47.5**	**-0.9**
EVR				S	**Sg**	**04 23 53.3**	**-0.3**
EVR				AML	AML	04 23 53.4	
	comp=N,15396μm,0.4s						
EVR				AML	AML	04 23 54.3	
	comp=E,6742μm,0.3s						
THL	**Klokotos Trika**	**0.42**	**346**	P	**Pg**	**04 23 49.0**	**-0.5**
THL				S	**Sb**	**04 23 56.0**	**+0.4**
	comp=E,5μm,0.5s						
THL	**Klokotos Trika**	**0.42**	**346**	P	**Pg**	**04 23 49.1**	**-0.5**
THL				S	**Sb**	**04 23 56.1**	**+0.4**
THL				AML	AML	04 23 56.2	
	comp=E,14142μm,0.5s						
THL				AML	AML	04 23 56.2	
	comp=N,6910μm,0.4s						
LRSO	**Larissa Observ**	**0.55**	**20**	P	**Pb**	**04 23 51.5**	**-0.1**
LRSO				S	**Sb**	**04 23 59.7**	**+0.6**
	comp=N,5μm,0.3s						
LRSO	**Larissa Observ**	**0.55**	**20**	P	**Pb**	**04 23 51.6**	**-0.1**
LRSO				S	**Sg**	**04 23 59.3**	**+0.1**
AXAR	**Agios Charalam**	**0.56**	**134**	P	**Pb**	**04 23 51.5**	**-0.3**
AXAR				S	**Sb**	**04 24 00.7**	**+1.4**
	comp=N,4μm,0.4s						
AXAR	**Agios Charalam**	**0.56**	**134**	P	**Pb**	**04 23 51.6**	**-0.3**
AXAR				AML	AML	04 24 05.2	
	comp=N,10153μm,0.4s						
AXAR				AML	AML	04 24 05.9	
	comp=E,7569μm,0.4s						
ANX	**Ano Chora**	**0.59**	**198**	P	**Pb**	**04 23 51.6**	**-0.8**
ANX				S	**Sg**	**04 24 00.7**	**+0.2**
	comp=E,5μm,0.2s						
ANX	**Ano Chora**	**0.59**	**198**	P	**Pb**	**04 23 51.6**	**-0.8**
ANX				S	**Sg**	**04 24 00.4**	**-0.1**
ANX				AML	AML	04 24 01.5	
	comp=N,8446μm,0.2s						
ANX				AML	AML	04 24 01.5	
	comp=E,9590μm,0.2s						
PVO	**Paravola**	**0.72**	**222**	P	**Pb**	**04 23 53.8**	**-0.9**
PVO				S	**Sb**	**04 24 04.4**	**+0.2**
	comp=E,1μm,0.3s						
PVO	**Paravola**	**0.72**	**222**	P	**Pb**	**04 23 53.7**	**-1.0**
PVO				S	**Sb**	**04 24 04.2**	**+0.1**
PVO				AML	AML	04 24 15.0	
	comp=N,2249μm,0.5s						
PVO				AML	AML	04 24 15.0	
	comp=E,2493μm,0.7s						
DLFA	**Delphi**	**0.73**	**158**	P	**Pb**	**04 23 54.0**	**-0.8**
DLFA				S	**Sg**	**04 24 04.6**	**-0.3**
SERG	**Sergoula**	**0.74**	**185**	P	**Pb**	**04 23 54.1**	**-1.0**
SERG				S	**Sb**	**04 24 05.0**	**+0.2**
	comp=E,3μm,0.3s						
SERG	**Sergoula**	**0.74**	**185**	P	**Pb**	**04 23 54.1**	**-1.0**
SERG				S	**Sb**	**04 24 04.8**	**0.0**
SERG				AML	AML	04 24 06.3	
	comp=E,6313μm,0.4s						
SERG				AML	AML	04 24 11.4	
	comp=N,5481μm,0.3s						
EFP	**Efpalio**	**0.75**	**195**	P	**Pb**	**04 23 54.3**	**-0.9**
EFP				S	**Sg**	**04 24 05.8**	**+0.3**
	comp=N,5μm,0.4s						
EFP	**Efpalio**	**0.75**	**195**	P	**Pb**	**04 23 54.2**	**-1.0**
EFP				S	**Sg**	**04 24 05.3**	**-0.2**
EFP				AML	AML	04 24 06.4	
	comp=E,10198μm,0.4s						
EFP				AML	AML	04 24 06.5	
	comp=N,9028μm,0.4s						
KALE	**Kalithea**	**0.76**	**180**	P	**Pb**	**04 23 54.3**	**-1.1**
KALE				S	**Sg**	**04 24 05.7**	**-0.2**
	comp=N,2μm,0.4s						
KALE	**Kalithea**	**0.76**	**180**	P	**Pb**	**04 23 54.3**	**-1.1**
KALE				AML	AML	04 24 06.2	
	comp=E,3997μm,0.5s						
KALE				AML	AML	04 24 08.6	
	comp=N,4477μm,0.2s						
TRIZ	**Trizonia**	**0.79**	**184**	P	**Pb**	**04 23 54.9**	**-0.9**
TRIZ				S	**Sb**	**04 24 06.4**	**+0.3**
	comp=N,3μm,0.3s						
TRIZ	**Trizonia**	**0.79**	**184**	P	**Pb**	**04 23 54.9**	**-0.9**
TRIZ				S	**Sb**	**04 24 06.0**	**-0.1**
DSF	**Desfina**	**0.80**	**158**	P	**Pb**	**04 23 54.9**	**-1.1**
DSF				S	**Sb**	**04 24 06.7**	**+0.2**
	comp=N,980nm,0.3s						
DSF	**Desfina**	**0.80**	**158**	P	**Pb**	**04 23 54.9**	**-1.1**
DSF				S	**Sb**	**04 24 06.5**	**+0.1**
LKR	**Lokris**	**0.83**	**127**	P	**Pb**	**04 23 56.3**	**-0.3**
LKR				S	**Sn**	**04 24 09.2**	**+0.1**
	comp=N,798nm,0.2s						
LKR	**Lokris**	**0.83**	**127**	P	**Pb**	**04 23 56.0**	**-0.5**
LKR				S	**Sg**	**04 24 08.2**	**0.0**
LKR				AML	AML	04 24 10.2	
	comp=E,1821μm,0.2s						
LKR				AML	AML	04 24 11.3	
	comp=N,1358μm,0.2s						
XOR	**Xorichti**	**0.84**	**75**	P	**Pb**	**04 23 56.3**	**-0.4**
XOR				S	**Sn**	**04 24 09.7**	**+0.4**
	comp=N,2μm,0.4s						
XOR	**Xorichti**	**0.84**	**75**	P	**Pb**	**04 23 56.4**	**-0.2**
XOR				AML	AML	04 24 10.6	
	comp=E,3350μm,0.3s						
XOR				AML	AML	04 24 12.1	
	comp=N,6338μm,0.4s						
NEO	**Neokhori**	**0.85**	**79**	P	**Pb**	**04 23 56.8**	**-0.1**
NEO				S	**Sn**	**04 24 10.2**	**+0.6**
	comp=N,2μm,0.4s						
NEO	**Neokhori**	**0.85**	**79**	P	**Pb**	**04 23 56.6**	**-0.3**
NEO				AML	AML	04 24 11.6	
	comp=N,6166μm,0.3s						
NEO				AML	AML	04 24 12.8	
	comp=E,3244μm,0.6s						
ALIK	**Aliki, Aigiali**	**0.89**	**182**	P	**Pb**	**04 23 57.9**	**+0.3**
ALIK				S	**Sn**	**04 24 10.9**	**+0.3**
LAKA	**Lakka**	**0.92**	**188**	P	**Pb**	**04 23 57.6**	**-0.5**
LAKA				S	**Sg**	**04 24 10.6**	**-0.4**
	comp=E,340nm,0.4s						
LAKA	**Lakka**	**0.92**	**188**	P	**Pb**	**04 23 57.6**	**-0.5**
LAKA				AML	AML	04 24 14.0	
	comp=N,747μm,0.5s						
LAKA				AML	AML	04 24 17.4	
	comp=E,719μm,0.4s						
PDO	**Prodromos**	**0.94**	**234**	P	**Pb**	**04 23 58.5**	**+0.2**
PDO				S	**Sn**	**04 24 11.8**	**+0.2**
	comp=E,2μm,0.3s						
PDO	**Prodromos**	**0.94**	**234**	P	**Pb**	**04 23 58.3**	**0.0**
PDO				AML	AML	04 24 15.8	
	comp=N,3280μm,0.3s						
PDO				AML	AML	04 24 17.2	
	comp=E,3220μm,0.3s						
MEV	**Metsovon**	**0.95**	**312**	P	**Pb**	**04 23 58.0**	**-0.6**
LIT	**Litokhoron**	**0.98**	**16**	P	**Pb**	**04 23 59.1**	**0.0**
LIT				S	**Sn**	**04 24 13.7**	**+0.9**
	comp=E,3μm,0.6s						
LIT	**Litokhoron**	**0.98**	**16**	P	**Pb**	**04 23 59.1**	**0.0**
LIT				AML	AML	04 24 16.2	
	comp=N,4448μm,0.7s						
LIT				AML	AML	04 24 16.5	
	comp=E,6671μm,0.5s						
KPRO	**Kipourio**	**1.00**	**323**	P	**Pb**	**04 23 58.8**	**-0.7**
KPRO				S	**Sn**	**04 24 15.0**	**+1.6**
	comp=E,830nm,0.4s						
KPRO	**Kipourio**	**1.00**	**323**	P	**Pb**	**04 23 58.7**	**-0.8**
SKIA	**Skiathos**	**1.03**	**89**	P	**Pb**	**04 23 59.6**	**-0.2**
SKIA				S	**Sg**	**04 24 15.3**	**+1.1**
	comp=E,768nm,0.5s						
SKIA	**Skiathos**	**1.03**	**89**	P	**Pb**	**04 23 59.7**	**-0.2**
SKIA				S	**Sn**	**04 24 14.0**	**+0.1**
SKIA				AML	AML	04 24 18.9	
	comp=E,1605μm,0.3s						
SKIA				AML	AML	04 24 22.0	
	comp=N,1543μm,0.7s						
PROD	**Prodromos**	**1.07**	**146**	P	**Pb**	**04 24 00.0**	**-0.7**
PROD				S	**Sg**	**04 24 17.0**	**+1.3**
PROD	**Prodromos**	**1.07**	**146**	P	**Pb**	**04 23 59.9**	**-0.7**
KLV	**Kalavryta, Ach**	**1.11**	**180**	P	**Pb**	**04 24 00.8**	**-0.5**
KLV				S	**Sn**	**04 24 16.2**	**+0.2**
	comp=N,328nm,0.6s						
KLV	**Kalavryta, Ach**	**1.11**	**180**	P	**Pb**	**04 24 00.6**	**-0.7**
KLV				S	**Sn**	**04 24 16.2**	**+0.2**
KLV				AML	AML	04 24 22.4	
	comp=N,569μm,0.6s						
KLV				AML	AML	04 24 25.1	
	comp=E,745μm,0.7s						
JAN	**Janina**	**1.12**	**297**	P	**Pn**	**04 24 01.2**	**-0.2**
JAN				S	**Sn**	**04 24 16.7**	**+0.4**
	comp=E,640nm,0.4s						
JAN	**Janina**	**1.12**	**297**	P	**Pn**	**04 24 01.0**	**-0.4**
JAN				AML	AML	04 24 23.0	
	comp=N,1287μm,0.3s						
JAN				AML	AML	04 24 25.7	
	comp=E,1258μm,0.5s						
KZN	**Kozani**	**1.19**	**346**	P	**Pn**	**04 24 02.3**	**0.0**
KZN				S	**Sg**	**04 24 19.9**	**+0.6**
	comp=E,790nm,0.4s						
KZN	**Kozani**	**1.19**	**346**	P	**Pn**	**04 24 02.2**	**-0.1**
KZN				AML	AML	04 24 21.4	
	comp=E,1841μm,0.4s						
KZN				AML	AML	04 24 23.9	
	comp=N,1223μm,0.4s						
TSLK	**Tsoukalades, L**	**1.21**	**255**	P	**Pb**	**04 24 03.1**	**+0.2**
TSLK	**Tsoukalades, L**	**1.21**	**255**	P	**Pb**	**04 24 03.2**	**+0.2**
MRKA	**Markates**	**1.21**	**111**	P	**Pb**	**04 24 03.0**	**0.0**
MRKA				S	**Sg**	**04 24 20.7**	**+0.7**
	comp=N,472nm,0.8s						
MRKA	**Markates**	**1.21**	**111**	P	**Pb**	**04 24 03.0**	**0.0**
MRKA				AML	AML	04 24 26.4	
	comp=E,985μm,0.9s						
MRKA				AML	AML	04 24 28.4	
	comp=N,910μm,0.8s						
LKD2	**Lefkada island**	**1.22**	**253**	P	**Pn**	**04 24 03.1**	**+0.4**
LKD2				S	**Sg**	**04 24 20.2**	**-0.1**
	comp=N,918nm,0.7s						
LKD2	**Lefkada island**	**1.22**	**253**	P	**Pn**	**04 24 03.0**	**+0.3**
LKD2				AML	AML	04 24 28.0	
	comp=N,1902μm,0.7s						
LKD2				AML	AML	04 24 30.0	
	comp=E,1782μm,0.7s						
RLS	**Riolos of Patr**	**1.22**	**206**	P	**Pb**	**04 24 03.6**	**+0.5**
RLS				AML	AML	04 24 26.1	
	comp=E,1173μm,0.6s						
RLS				AML	AML	04 24 26.6	
	comp=N,751μm,0.4s						
KTI	**Kastanea**	**1.24**	**359**	P	**Pg**	**04 24 04.3**	**-0.4**
DRO	**Drossia**	**1.25**	**196**	P	**Pb**	**04 24 03.7**	**+0.1**
DRO				AML	AML	04 24 26.9	
	comp=N,1731μm,0.3s						
DRO				AML	AML	04 24 32.7	
	comp=E,1724μm,0.5s						
EVGI	**Lefkada island**	**1.28**	**246**	P	**Pn**	**04 24 04.0**	**+0.5**
EVGI				S	**Sg**	**04 24 21.8**	**-0.5**
EVGI	**Lefkada island**	**1.28**	**246**	P	**Pn**	**04 24 04.0**	**+0.5**
VIL2	**Platees**	**1.29**	**137**	P	**Pg**	**04 24 05.4**	**-0.3**
PENT	**Pentalofos**	**1.30**	**323**	P	**Pn**	**04 24 04.0**	**+0.1**
PENT				S	**Sg**	**04 24 23.4**	**+0.5**
	comp=E,345nm,0.6s						
LTK	**Loutraki**	**1.30**	**150**	P	**Pb**	**04 24 04.3**	**-0.3**
LTK				S	**Sg**	**04 24 22.8**	**-0.1**

	comp=E,392nm,0.5s						
LTK	Loutraki	1.30	150	P	Pb	04 24 04.3	-0.3
LTK				AML	AML	04 24 31.4	
	comp=N,916µm,0.4s						
LTK				AML	AML	04 24 34.9	
	comp=E,632µm,0.6s						
LOUT	Loutraki	1.33	151	P	Pb	04 24 05.0	-0.1
LOUT	Loutraki	1.33	151	P	Pb	04 24 04.8	-0.3
LOUT				AML	AML	04 24 33.0	
	comp=E,97µm,0.4s						
LOUT				AML	AML	04 24 36.2	
	comp=N,149µm,0.4s						
ALNA	Alonissos	1.34	90	P	Pb	04 24 04.9	-0.2
VILL	Villia	1.35	137	P	Pb	04 24 05.5	+0.2
AOS	Alonissos	1.35	89	P	Pn	04 24 04.4	0.0
AOS				S	Sn	04 24 22.0	+0.2
	comp=N,498nm,0.8s						
AOS	Alonissos	1.35	89	P	Pn	04 24 04.4	0.0
AOS				AML	AML	04 24 28.7	
	comp=N,1052µm,0.8s						
AOS				AML	AML	04 24 30.5	
	comp=E,952µm,0.7s						
AOS	Alonissos	1.35	89	PN	Pn	04 24 03.6	-0.9
AOS				SN	Sn	04 24 18.7	-3.1
FSK	Fiskardo	1.42	241	P	Pn	04 24 05.8	+0.4
FSK				S	Sn	04 24 24.1	+0.5
	comp=E,520nm,0.5s						
FSK	Fiskardo	1.42	241	P	Pn	04 24 05.8	+0.4
FSK				AML	AML	04 24 32.1	
	comp=N,833µm,0.5s						
FSK				AML	AML	04 24 32.5	
	comp=E,1257µm,0.5s						
IGT	Igoumenitsa	1.46	286	P	Pb	04 24 07.1	-0.1
IGT				S	Sn	04 24 25.0	+0.5
	comp=E,350nm,0.7s						
IGT	Igoumenitsa	1.46	286	P	Pb	04 24 07.0	-0.1
IGT				AML	AML	04 24 37.0	
	comp=N,633µm,0.8s						
IGT				AML	AML	04 24 38.7	
	comp=E,768µm,0.9s						
KFL	Anninata	1.49	226	P	Pb	04 24 08.2	+0.4
KFL				S	Sb	04 24 27.7	+1.4
	comp=E,622nm,0.6s						
NEST	Nestorio	1.52	326	P	Pb	04 24 08.2	-0.1
KEF1	Kardakata, Kep	1.58	237	P	Pb	04 24 09.0	-0.2
HORT	Hortiatis	1.62	27	P	Pn	04 24 07.9	-0.4
HORT	Hortiatis	1.62	27	PN	Pn	04 24 07.6	-0.7
HORT				SN	Sn	04 24 27.5	-1.1
AMT	Artemida-Makis	1.66	192	P	Pb	04 24 10.4	-0.2
AMT				AML	AML	04 24 44.5	
	comp=E,694µm,0.5s						
AMT				AML	AML	04 24 46.6	
	comp=N,754µm,0.6s						
FNA	Florina	1.73	340	P	Pn	04 24 10.7	+0.9
FNA				S	Sb	04 24 33.0	-0.3
	comp=N,330nm,0.3s						
FNA	Florina	1.73	340	P	Pn	04 24 10.7	+0.9
FNA				AML	AML	04 24 33.9	
	comp=E,744µm,0.4s						
FNA				AML	AML	04 24 40.8	
	comp=N,585µm,0.3s						
FNA	Florina	1.73	340	PN	Pn	04 24 10.6	+0.8
FNA				SN	Sn	04 24 32.7	+1.3
PTL	Penteli	1.74	129	P	Pn	04 24 10.7	+0.8
PTL				AML	AML	04 24 43.0	
	comp=E,296µm,0.8s						
PTL				AML	AML	04 24 47.6	
	comp=N,338µm,0.6s						
VLX	Vlachokerasia	1.79	174	P	Pn	04 24 11.5	+0.9
GRG	Griva	1.81	6	P	Pn	04 24 11.6	+0.7
GRG	Griva	1.81	6	P	Pn	04 24 11.5	+0.7
GRG				AML	AML	04 24 45.4	
	comp=N,519µm,0.9s						
GRG				AML	AML	04 24 47.4	
	comp=E,408µm,0.8s						
GRG	Griva	1.81	6	PN	Pn	04 24 11.3	+0.4
SRN	Sarande	1.81	294	*i* PN	Pb	04 24 12.8	-0.5
SRN				*i* SN	Sg	04 24 39.5	+0.3
VLY	Voula,Athens	1.83	135	P	Pn	04 24 12.1	+0.9
VLY	Voula,Athens	1.83	135	P	Pn	04 24 12.0	+0.9
OUR	Ouranopolis	1.84	50	P	Pn	04 24 11.6	+0.4
OUR	Ouranopolis	1.84	50	PN	Pn	04 24 10.5	-0.7
DID	Didima	1.86	152	P	Pn	04 24 12.2	+0.7
SOH	Sokhos	1.91	29	P	Pn	04 24 12.7	+0.5
KRND	KRANIDI	1.94	156	P	Pn	04 24 13.0	+0.4
ITM	Ithomi	1.98	185	PN	Pn	04 24 14.1	+0.9
TPE	Tepelena	2.00	305	*i* PN	Pg	04 24 19.1	-0.1
TPE				*i* SN	Sb	04 24 43.3	+2.3
KNT	Kendrikon	2.08	16	P	Pn	04 24 15.5	+0.9
KNT				AML	AML	04 24 48.3	
	comp=E,298µm,0.6s						
KNT				AML	AML	04 24 49.2	
	comp=N,192µm,0.6s						
KNT	Kendrikon	2.08	16	PN	Pn	04 24 14.7	+0.1
OHR	Ohrid	2.21	333	*i* Pn	Pn	04 24 18.1	+1.7
OHR				*i* Sn	Sn	04 24 44.5	+1.3
DYR	Agios Nikonas	2.39	176	P	Pn	04 24 20.5	+1.6
VLI	Veliai	2.51	165	P	Pn	04 24 21.0	+0.5
MMB	Musomiste	2.71	26	*e*P	Pn	04 24 23.6	+0.3
TIR	Tirane	2.80	322	⇑P	Pn	04 24 26.0	+1.6
TIR				⇑S	Sn	04 24 59.6	+2.0
PHP	Peshkopia	2.84	333	*i* PN	Pn	04 24 26.2	+1.1
PHP				*i* SN	Sn	04 24 58.3	-0.4
SIGR	SIGRI	2.88	88	PN	Pn	04 24 24.7	-0.9
BOZC	Bozcaada	3.10	76	PN	Pn	04 24 27.9	-0.6
CHOS	Chios island	3.15	103	PN	Pn	04 24 28.7	-0.6
RZN	Rozhen	3.20	37	*e*P	Pn	04 24 30.9	+0.8
RDO	Rodhopi	3.27	52	PN	Pn	04 24 30.7	-0.2
EZN	Ezine	3.30	77	PN	Pn	04 24 30.7	-0.6
PUK	Puka	3.36	330	*i* PN	Pn	04 24 35.4	+3.3
PUK				*i* SN	Sb	04 25 16.4	-3.6
APE	Apeiranthos	3.39	127	PN	Pn	04 24 32.4	-0.1
ENEZ	Enez	3.46	62	PN	Pn	04 24 33.2	-0.3
ALN	Alexandroupoli	3.46	59	PN	Pn	04 24 33.2	-0.3
KDZ	Kurdzhali	3.53	44	PN	Pn	04 24 33.6	-0.8
VTS	Vitosha	3.56	13	⇑P	Pn	04 24 36.3	+1.3
VTS	Vitosha	3.56	13	*e*P	Pn	04 24 35.5	+0.5
GELI	Tayfur-Gelibol	3.56	68	PN	Pn	04 24 34.3	-0.5
URLA	Izmir	3.57	101	PN	Pn	04 24 34.5	-0.5
ERIK	Erikli-Kesan	3.68	64	PN	Pn	04 24 36.2	-0.3
DRME	Dracevica, Mon	3.77	324	*e*Pn	Pn	04 24 40.0	+2.2
PDG	Podgorica	3.94	327	⇑P	Pn	04 24 41.4	+1.3
PDG	Podgorica	3.94	327	*e*Pn	Pn	04 24 41.2	+1.1
UKOP	Uzunkopru-Edir	3.96	59	PN	Pn	04 24 40.4	0.0
IMMV	Iera Moni Meta	3.97	158	PN	Pn	04 24 41.5	+1.0
TIP	Timpagrande	4.19	272	⇑P	Pn	04 24 45.1	+1.5
MATE	Matera	4.44	291	⇑P	Pn	04 24 48.7	+1.7
BAI	Bari	4.48	297	⇓*i*Pn	Pn	04 24 50.1	+2.6
SG1	Sgolgore (BA)	4.52	294	⇓*i*Pn	Pn	04 24 50.0	+1.8
TREB	Trebinje	4.57	322	*e*Pn	Pn	04 24 49.6	+0.8
BRY	Bratogost	4.63	325	*e*Pn	Pn	04 24 51.2	+1.5
DBRK	Dubrovnik	4.64	320	*e*Pn	Pn	04 24 49.8	+0.1
DBRK				Sn	Sn	04 25 41.0	-1.9
ELND	Elena	4.71	36	⇑P	Pn	04 24 50.5	-0.1
RUDO	Rudo	4.92	336	*e*Pn	Pn	04 24 54.4	+0.8
STON	Ston	5.01	319	*i* Pn	Pn	04 24 55.3	+0.5
STON				Sn	Sn	04 25 50.5	-1.5
STON	Ston	5.01	319	*e*Pn	Pn	04 24 54.0	-0.8
DIVS	Divibare	5.20	343	*e*Pn	Pn	04 24 58.3	+0.9
HAPS	Han Pijesak,Bl	5.48	335	*e*Pn	Pn	04 25 04.7	+3.4
MAKA	Makarska	5.66	319	*e*Pn	Pn	04 25 03.6	0.0
MAKA				Sn	Sn	04 26 06.5	-1.5
GZR	Gura Zlata	6.25	4	⇓P	Pn	04 25 12.9	+1.0
ARR	Arges	6.47	16	⇑P	Pn	04 25 15.6	+0.6
VOIR		6.63	18	⇑P	Pn	04 25 18.6	+1.4
ZIRJ	Zirje	6.64	315	*e*Pn	Pn	04 25 16.8	-0.3
ZIRJ				Sn	Sn	04 26 30.8	-1.5
BLY	Banja Luka	6.70	328	⇑P	Pn	04 25 19.6	+1.5
MORI	Morici	6.74	316	*e*Pn	Pn	04 25 19.2	+0.6
MORI				Sn	Sn	04 26 33.6	-1.3
MLR	Muntele Rosu	6.93	23	⇑P	Pn	04 25 22.9	+1.7
UDBI	Udbina	7.18	320	*i* Pn	Pn	04 25 26.0	+1.4
DUGI	Dugi Otok	7.18	315	*e*Pn	Pn	04 25 25.1	+0.5
PLOR	Plostina	7.47	25	⇑P	Pn	04 25 29.2	+0.5
VRI	Vrincioaia	7.51	25	⇑P	Pn	04 25 30.5	+1.4
NVLJ	Novalja	7.66	317	*i* Pn	Pn	04 25 30.2	-0.9
NVLJ				Sn	Sn	04 26 53.7	-3.6
CRES	Cresnjev	8.29	326	*e*Pn	Pn	04 25 39.4	-0.5
CEY	Cerknica	8.71	322	*e*Pn	Pn	04 25 44.9	-0.7
VYHS	Vyhne	9.64	347	*e*SN	Sn	04 27 45.0	-0.9

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*IDC **21** 04:39:22.9±1.1, 49°.39S×69°.90E, h0^{km}, mb4.1/7, mb1 4.1/7, mb1mx3.9/22, mbtmp4.0/7, MS3.7/3, Ms1 3.7/3, ms1mx3.2/23, Error ellipse: s-maj=33.3km s-min=29.2km az=14.0*

*NEIC **21** 04:39:24.0±1.4, 49°.66S±0°.07×69°.73E±0°.09, h10^{km}±1^{km}, mb4.7/10, Error ellipse: s-maj=14.1km s-min=5.8km az=137.0*

ISC 21 04:39:23.9±0.8, 49°.7S±0°.1×69°.7E±0°.1, h10^{km}, n22, σ1^{s}67/19, mb4.1/8, 1C, Kerguelen Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAF	Port-aux-Franc	0.45	47		Pg	04 39 32.6	0.0
PAF				Sg	Sb	04 39 40.0	-0.6
I23FR	KERGUELEN INFR	0.47	48	Pg	Pg	04 39 33.0	0.0
	baz=279,slow=57,SNR=2.0						
I23FR				*i*		04 41 40.0	
	baz=256,slow=326,SNR=0.6						
MAW	Mawson	18.33	188	LR	LR	04 49 32.1	
	comp=Z,251nm,18.9s,baz=53,slow=33						
SYO	Syowa Base	24.28	206	⇑*i*X	P	04 44 36.0	-4.9
QSPA	South Pole Qui	40.52	180	P	P	04 47 05.7	+2.9
	1.2nm,0.6s,baz=279,slow=3.5,SNR=10						
QSPA	South Pole Qui	40.52	180	P	P	04 47 05.1	+2.3
QSPA				IAmb	IAmb	04 47 07.6	
	comp=Z,31nm,1.8s						
VNDA	Vanda	42.56	161	LR	LR	05 04 50.4	
	comp=Z,85nm,19.5s,baz=241,slow=36						
STKA	Stephens Creek	55.16	100	P	P	04 48 55.8	-0.7
	comp=Z,3.2nm,0.9s,baz=220,slow=8.0,SNR=3.9						
STKA	Stephens Creek	55.16	100	P	P	04 48 56.5	0.0
STKA				IAmb	IAmb	04 49 11.1	
	comp=Z,10nm,2.0s						
ASAR	Alice Springs	55.75	87	P	P	04 49 01.1	+0.2
	comp=Z,1.7nm,0.9s,baz=219,slow=6.8,SNR=12						
AS31	Alice Springs	55.75	87	P	P	04 49 01.6	+0.6
WRA	Warramunga Arr	58.69	84	P	P	04 49 20.9	-0.7
	comp=Z,1.7nm,1.0s,baz=220,slow=6.0,SNR=7.6						
WRA	Warramunga Arr	58.69	84	IAmb	IAmb	04 49 24.3	
	comp=Z,0.2nm,1.0s						
WRAB	Tennant Creek	58.70	84	P	P	04 49 20.9	-0.8
WB0	Warramunga Arr	58.85	84	P	P	04 49 22.8	0.0
CMAR	Chiang Mai Arr	72.59	29	LR	LR	05 14 59.2	
	comp=Z,38nm,22.0s,baz=224,slow=30						
KBL	Kabul	83.83	359	P	P	04 51 54.6	+1.3
HRA	Herat	83.94	354	P	P	04 51 53.9	0.0
TOA0	Torodi Ar. Sit	86.26	295	P	P	04 52 06.3	+0.5
TOA0				IAmb	IAmb	04 52 11.8	
	comp=Z,8.8nm,1.5s						
TORD	Torodi Ar. Bea	86.26	295	P	P	04 52 05.8	-0.1
	comp=Z,0.7nm,0.9s,baz=125,slow=3.7,SNR=3.9						
BRTR	Keskin Array B	94.51	333	P	P	04 52 45.2	+1.1
	comp=Z,0.6nm,0.9s,baz=157,slow=7.8,SNR=2.9						
MKAR	Makanchi Array	96.69	9	P	P	04 52 52.6	-1.1
	comp=Z,0.5nm,0.8s,baz=187,slow=6.1,SNR=5.0						

IDC 21 05:15:01.1±4.6, 30°.11S×138°.65E, h0^{km}, mb1 3.0/3, mb1mx2.9/28, mbtmp2.7/3, ML2.4/3, Error ellipse: s-maj=156.8km s-min=16.8km az=45.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	3.08	126	Pn	Pn	05 15 50.8	-0.3
	0.1nm,0.3s,baz=306,slow=19,SNR=1.6						
STKA				Sn	Sn	05 16 28.4	-0.3
	1.0nm,0.3s,baz=273,slow=11,SNR=4.7						
STKA				Lg	Lg	05 16 39.9	
	2.2nm,0.3s,baz=205,slow=24,SNR=6.9						
ASAR	Alice Springs	7.69	325	Pn	Pn	05 16 53.8	-0.6
	0.1nm,0.3s,baz=150,slow=12,SNR=2.2						
ASAR				Sn	Sn	05 18 24.2	+2.0
	0.1nm,0.3s,baz=157,slow=21,SNR=3.6						
WRA	Warramunga Arr	10.85	338	Pn	Pn	05 17 38.3	+0.6
	0.1nm,0.3s,baz=154,slow=11,SNR=1.6						
WRA				Lg	Lg	05 20 30.7	
	baz=169,slow=34,SNR=1.0						

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*IDC **21** 05:39:39.9±1.5, 21°.66S×70°.34W, h0^{km}, mb3.9/5, mb1 3.9/6, mb1mx3.7/24, mbtmp3.9/6, ML3.5/1, Error ellipse: s-maj=39.1km s-min=14.3km az=47.0*

*SJA **21** 05:39:41.7±1.2, 21°.97S×70°.40W, h21^{km}±6^{km}, ML3.7, MW3.8*

*GUC **21** 05:39:43.2±0.9, 21°.96S×70°.41W, h29^{km}±4^{km}, ML3.7*

*NEIC **21** 05:39:43, 21°.95S×70°.39W, h32^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}2.88; $M_{\theta\theta}$0.06; $M_{\phi\phi}$-2.94; $M_{r\theta}$0.75; $M_{\theta\phi}$-0.92; $M_{\phi r}$-3.29; Fault plane solution: $M_0$4.55000×10^{14} NP1:ϕ_s34.96000°, δ25.47000°, λ126.80000°. NP2:ϕ_s175.32000°, δ69.86000°, λ74.08000°. Principal axes: T 4.6142, Plg62.0000°, Azm61.0000°; N -0.1248, Plg15.0000°, Azm181.0000°; P -4.4893, Plg23.0000°, Azm278.0000°;*

*NEIC **21** 05:39:43.4±2.0, 21°.96S±0°.03×70°.43W±0°.04, h30^{km}±5^{km} Error ellipse: s-maj=5.1km s-min=4.5km az=83.0*

ISC 21 05:39:41.0±1.1, 21°.97S±0°.02×70°.43W±0°.04, h15^{km}±8^{km}, n67, σ1^{s}07/80, mb4.1/6, 1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB04	IPOC Station P	0.45	145	*e*P	Pn	05 39 53.0	-0.1
PB04				*i* S	Sn	05 39 59.2	-1.8
PB04				IAML		05 40 00.3	
	comp=E,26µm,0.6s						
PB04	IPOC Station P	0.45	145		Pn	05 39 52.7	-0.4
PB04				Sg	Sb	05 39 59.0	+1.6
PB04	IPOC Station P	0.45	145	*e*P	Pn	05 39 53.0	-0.1
PB04				*e*S	Sb	05 39 58.6	+1.2
PB07	IPOC Station P	0.56	65	*e*P	Pn	05 39 54.1	-0.5
PB07				*i* S	Sb	05 40 01.5	+1.0
PB07				IAML		05 40 02.3	
	comp=N,11µm,0.3s						
PB07	IPOC Station P	0.56	65		Pn	05 39 54.2	-0.4
PB07				Sg	Sb	05 40 01.2	+0.7
PB07	IPOC Station P	0.56	65	*e*P	Pn	05 39 54.3	-0.4
PB07				IAML		05 40 04.7	
	comp=Z,3µm,0.7s						
PB03	IPOC Station P	0.63	98	*e*P	Pn	05 39 55.4	-0.3
PB03				*i* S	Sb	05 40 03.6	+1.0
PB03	IPOC Station P	0.63	98	*e*P	Pn	05 39 55.4	-0.3
PB03				IAML		05 40 09.3	
	comp=Z,2µm,0.3s						
PB02	IPOC Station P	0.81	38	*e*P	Pn	05 39 57.8	-0.3
PB02				*i* S	Sb	05 40 08.3	+0.5
PB02	IPOC Station P	0.81	38	*e*P	Pn	05 39 57.9	-0.1
PB02				IAML		05 40 10.7	
	comp=Z,6µm,0.4s						
PB05	IPOC Station P	0.91	167	*e*P	Pn	05 39 59.8	+0.5
PB05				*i* S	Sn	05 40 11.6	-0.6
PB05	IPOC Station P	0.91	167	*i* P	Pn	05 39 59.8	+0.5
PB05				*e*S	Sn	05 40 11.4	-0.9
PB05				IAML		05 40 18.2	
	comp=Z,2µm,0.4s						
PB06	IPOC Station P	1.08	133	*e*P	Pn	05 40 02.3	+0.5
PB06				*i* S	Sn	05 40 16.5	-0.1
PB06	IPOC Station P	1.08	133	*i* P	Pn	05 40 02.4	+0.5
PB06				IAML		05 40 23.3	
	comp=Z,1µm,0.5s						
PB09	IPOC Station P	1.12	81	*i* S	Sg	05 40 17.4	+0.2
PB09				IAML		05 40 21.3	
	comp=E,2µm,0.4s						
PB09	IPOC Station P	1.12	81		Pg	05 40 03.1	+0.6
PB09	IPOC Station P	1.12	81	*e*P	Pg	05 40 03.2	+0.6
PB09				*e*S	Sn	05 40 17.9	+0.4
PB09				IAML		05 40 20.6	
	comp=Z,2µm,0.6s						
PATCX	Punta Patache	1.17	13		Pg	05 40 03.3	-0.3
PATCX				Sn	Sb	05 40 18.0	+0.1
PATCX	Punta Patache	1.17	13	*e*P	Pg	05 40 03.4	-0.1
PATCX				IAML		05 40 24.9	
	comp=Z,1µm,0.4s						
PB01	IPOC Station P	1.27	44	*e*P	Pg	05 40 04.9	-0.6
PB01				*i* S	Sb	05 40 20.5	-0.5
PB01				IAML		05 40 24.9	
	comp=E,2µm,0.1s						
PB01	IPOC Station P	1.27	44		Pg	05 40 05.1	-0.3
PB01				Sn	Sb	05 40 20.3	-0.6
PB01	IPOC Station P	1.27	44	*e*P	Pg	05 40 05.2	-0.3
PB01				IAML		05 40 24.8	
	comp=Z,1µm,0.1s						
TA01	Diego Aracena	1.41	10	*e*P	Pb	05 40 07.0	-0.1
TA01				*i* S	Sb	05 40 24.8	-0.1
PB15	IPOC Station P	1.52	145	*i* P	Pg	05 40 09.2	-1.0
PB15				*i* S	Sb	05 40 28.6	+0.4
PB15	IPOC Station P	1.52	145		Pg	05 40 09.3	-1.0
PB15	IPOC Station P	1.52	145	*i* P	Pg	05 40 09.4	-0.9
PB15				*e*S	Sg	05 40 30.5	+0.4
PB15				IAML		05 40 35.5	
	comp=Z,4µm,0.3s						
PB10	IPOC Station P	1.54	184	⇓*e*P	Pg	05 40 09.2	-1.5
PB10				*i* S	Sg	05 40 29.7	-1.1
PB10				IAML		05 40 37.0	
	comp=N,956nm,0.6s						
PB10	IPOC Station P	1.54	184		Pg	05 40 09.3	-1.4
PB10	IPOC Station P	1.54	184	*i* P	Pg	05 40 09.3	-1.5
PB10				*e*S	Sg	05 40 34.2	+3.4
PB10				IAML		05 40 38.7	
	comp=Z,676nm,0.4s						
LVC	Limon Verde	1.55	115	Pn	Pg	05 40 10.1	-0.8
	comp=Z,46nm,0.3s,baz=288,slow=9.2,SNR=309						
LVC				Lg	Lg	05 40 31.6	
	comp=Z,266nm,0.3s,baz=353,slow=22,SNR=16						
LVC				LR	LR	05 40 57.4	
	comp=Z,312nm,19.4s,baz=260,slow=48						
LVC	Limon Verde	1.55	115		Pg	05 40 10.0	-0.8
LVC	Limon Verde	1.55	115	*e*P	Pg	05 40 09.9	-0.8
LVC				*e*S	Sb	05 40 29.8	+0.7
LVC				IAML		05 40 34.6	
	comp=Z,444nm,0.4s						
PB08	IPOC Station P	2.17	34	*e*P	Pb	05 40 19.6	-0.7
PB08				IAML		05 40 51.0	
	comp=Z,645nm,0.2s						
PB11	IPOC Station P	2.31	18		Pn	05 40 19.8	+1.1
PB11	IPOC Station P	2.31	18	*e*P	Pb	05 40 21.1	-1.4
PB11				IAML		05 40 56.9	
	comp=Z,855nm,0.4s						
PSGCX	Pisagua	2.38	7		Pn	05 40 20.3	+0.8
PSGCX	Pisagua	2.38	7	*e*P	Pn	05 40 20.4	+0.9
PSGCX				IAML		05 40 59.0	
	comp=Z,299nm,0.3s						
GO01	Chusmiza	2.56	27	*e*P	Pb	05 40 25.8	-1.2
GO01				*i* S	Sb	05 40 57.3	-1.2
GO01	Chusmiza	2.56	27		Pb	05 40 25.7	-1.2
PB14	IPOC Station P	2.65	179		Pn	05 40 24.3	+0.9
PB14	IPOC Station P	2.65	179	*e*P	Pn	05 40 24.4	+1.0
PB14				IAML		05 41 06.2	
	comp=Z,288nm,0.5s						
GO02	Mina Guanaco	3.27	167		Pn	05 40 34.3	+2.2
PB12	IPOC Station P	3.34	2		Pn	05 40 33.9	+1.1
PB12	IPOC Station P	3.34	2	*e*P	Pn	05 40 33.3	+0.6
PB12				IAML		05 41 32.2	
	comp=Z,170nm,0.6s						
PB16	IPOC Station P	3.71	14		Pn	05 40 40.2	+1.8
LPAZ	La Paz	6.05	21	Pn	Pn	05 41 15.8	+5.2
	comp=Z,1.4nm,0.3s,baz=216,slow=6.4,SNR=37						
LPAZ	La Paz	6.05	21		Pn	05 41 14.8	+4.3
CFA	Coronel Fontan	9.80	169	Pn	Pn	05 42 07.2	+5.7
	comp=Z,0.4nm,0.3s,baz=336,slow=14,SNR=4.7						
CFA				Sn	Sn	05 44 08.2	+17
	comp=Z,0.5nm,0.3s,baz=204,slow=12,SNR=3.9						
SIV	San Ignacio	10.66	58	Pn	Pn	05 42 13.6	+0.3
	comp=Z,1.4nm,0.3s,baz=248,slow=14,SNR=40						
BDFB	Brasilia	22.12	77	P	P	05 44 36.8	+0.5
	comp=Z,0.7nm,0.3s,baz=255,slow=12,SNR=1.7						
BDFB	Brasilia	22.12	77	P	P	05 44 36.2	-0.1
PTGA	Pitinga	23.44	27	P	P	05 44 48.2	-1.7
	comp=Z,2.2nm,0.5s,baz=213,slow=12,SNR=5.4						
PTGA	Pitinga	23.44	27	P	P	05 44 49.4	-0.5
PTGA				IAmb	IAmb	05 44 50.8	
	comp=Z,7.1nm,1.2s						
SNAA	Sanae	62.31	161	P	P	05 50 03.4	+1.0
ULM	Lac du Bonnet	75.35	343	P	P	05 51 23.9	+0.3
	comp=Z,0.7nm,0.5s,baz=128,slow=7.2,SNR=2.4						
ULM	Lac du Bonnet	75.35	343	P	P	05 51 24.1	+0.5
ULM				IAmb	IAmb	05 51 42.9	
	comp=Z,3.6nm,1.4s						
TOA0	Torodi Ar. Sit	78.84	71	P	P	05 51 43.5	-0.5
TOA0				IAmb	IAmb	05 51 44.2	
	comp=Z,1.5nm,0.7s						
TORD	Torodi Ar. Bea	78.84	71	P	P	05 51 43.6	-0.4
	comp=Z,1.2nm,0.5s,baz=258,slow=5.1,SNR=8.8						
TORD	Torodi Ar. Bea	78.84	71	P	P	05 51 43.1	-0.9
YKA	Yellowknife Ar	91.16	341	P	P	05 52 45.0	+0.1
	comp=Z,0.3nm,0.7s,baz=140,slow=4.9,SNR=5.3						
H11S2	WAKE ISLAND Hy	126.53	277	T	T	08 18 14.4	
	baz=104,slow=74,SNR=98						
H11S1	WAKE ISLAND Hy	126.54	277	T	T	08 18 21.3	
	baz=104,slow=74,SNR=53						
H11S3	WAKE ISLAND Hy	126.55	277	T	T	08 18 15.7	
	baz=104,slow=74,SNR=60						
H11N3	WAKE ISLAND Hy	126.63	279	T	T	08 18 21.7	
	baz=104,slow=75,SNR=38						
H11N2	WAKE ISLAND Hy	126.65	279	T	T	08 18 27.6	
	baz=104,slow=75,SNR=35						
H11N1	WAKE ISLAND Hy	126.65	279	T	T	08 18 27.7	
	baz=104,slow=75,SNR=41						
MKAR	Makanchi Array	146.83	35	PKPbc	PKPbc	05 59 21.8	-0.9
	comp=Z,0.3nm,0.7s,baz=333,slow=1.4,SNR=4.0						

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*TAP **21** 05:42:23.1, 24°.65N×122°.27E, h12^{km}, ML3.0, C*

*JMA **21** 05:42:23.6±0.1, 24°.51N×122°.23E, h49^{km}±4^{km}, M2.4*

ISC 21 05:42:22.6±1.0, 24°.64N±0°.02×122°.32E±0°.02, h13^{km}±7^{km}, n62, σ0^{s}71/122, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	EOS1	0.20	243	⇑*i*P	Pg	05 42 27.2	+0.3
	baz=232						
EOS1				*i* S	Sg	05 42 30.5	+0.7
	baz=232						
TWC	Suao	0.43	266	P	Pg	05 42 30.1	-1.0
	baz=263						
TWC				S	Sg	05 42 36.8	-0.1
	baz=263						
TWB1	Santiao Chiao	0.48	321	*e*P	Pb	05 42 32.8	0.0
	baz=325						
TWB1				*e*S	Sg	05 42 38.6	+0.3
	baz=325						
NTC	Toucheng	0.49	296	*e*P	Pb	05 42 32.9	-0.3
	baz=297						
NTC				*e*S	Sb	05 42 40.0	-0.3
	baz=297						
TIPB	Shuangxi	0.56	307	P	Pg	05 42 33.7	+0.2
	baz=300						
TIPB				*e*S	Sb	05 42 41.9	-0.3
	baz=300						
ENA	Nanau	0.57	248	P	Pg	05 42 33.1	-0.6
	baz=252						
ENA				S	Sg	05 42 41.1	-0.1
	baz=252						
JYNG	Yonagunijimaku	0.60	108	P	Pn	05 42 36.7	-0.1
JYNG				S	Sn	05 42 46.0	-0.4
TWE	Neicheng	0.60	278	⇑*i*P	Pg	05 42 33.7	-0.6
	baz=268						
TWE				S	Sg	05 42 42.2	-0.1
	baz=268						
SLBB	Yuanshan	0.63	281	*e*P	Pg	05 42 33.6	-1.4
	baz=272						
SLBB				S	Sb	05 42 43.8	-0.6
	baz=272						
NWF	Wu-fen Shan	0.65	311	*e*P	Pb	05 42 36.6	+0.7
	baz=306						
NWF				S	Sb	05 42 45.5	+0.5
	baz=306						
WFSB	Wu-fen Shan	0.65	311	*e*P	Pb	05 42 36.5	+0.7
	baz=306						
WFSB				*e*S	Sb	05 42 45.5	+0.6
	baz=306						
YOJ	Yonaguni jima	0.65	105	P	Pn	05 42 37.4	-0.2
	baz=105						
YOJ				S	Sn	05 42 47.4	-0.3
	baz=105						
YOJ	Yonaguni jima	0.65	105	P	Pn	05 42 37.8	+0.2
YOJ				*e*S	Sn	05 42 47.3	-0.5
ENTT	Nioudou	0.69	270	*e*P	Pg	05 42 35.8	-0.2
	baz=268						
ENTT				*e*S	Sg	05 42 44.9	-0.1
	baz=268						
NDT	Datong Townshi	0.73	267	P	Pg	05 42 36.8	0.0
	baz=265						
NDT				S	Sb	05 42 46.8	-0.4
	baz=265						
TWA	Mucha	0.75	297	*e*P	Pb	05 42 37.7	+0.1
	baz=289						
TWA				*e*S	Sg	05 42 46.7	-0.3
	baz=289						
NWLT	Wulai	0.76	281	*e*P	Pb	05 42 37.7	+0.1

	baz=280						
NWLT				*e*S	**Sg**	**05 42 47.2**	**0.0**
	baz=280						
NHDH	**Xindian Distri**	**0.79**	**294**	*e*P	**Pg**	**05 42 38.1**	**+0.1**
	baz=286						
NHDH				*e*S	**Sb**	**05 42 48.9**	**0.0**
	baz=286						
NACB	**Ninganchiao**	**0.81**	**235**	*e*P	**Pg**	**05 42 37.3**	**-0.9**
	baz=243						
NACB				*e*S	**Sg**	**05 42 47.1**	**-1.7**
	baz=243						
TATO	**Taipei**	**0.83**	**294**	*e*P	**Pb**	**05 42 38.9**	**0.0**
	baz=288						
TATO				*e*S	**Sg**	**05 42 48.5**	**-1.0**
	baz=288						
YM01	**YM01**	**0.85**	**307**	P	**Pn**	**05 42 40.0**	**-0.4**
	baz=308						
YM01				S	**Sb**	**05 42 50.8**	**+0.3**
	baz=308						
YM11	**YM11**	**0.86**	**308**	*e*P	**Pn**	**05 42 40.0**	**-0.5**
	baz=309						
YM11				*e*S	**Sb**	**05 42 51.0**	**+0.2**
	baz=309						
YHNB	**Yeheng**	**0.86**	**272**	*e*P	**Pg**	**05 42 39.0**	**-0.3**
	baz=265						
YHNB				*e*S	**Sg**	**05 42 49.8**	**-0.8**
	baz=265						
YM08	**YM08**	**0.86**	**310**	*e*P	**Pb**	**05 42 39.5**	**+0.1**
	baz=311						
YM08				*e*S	**Sb**	**05 42 50.5**	**-0.4**
	baz=311						
YM10	**YM10**	**0.86**	**307**	P	**Pb**	**05 42 39.8**	**+0.4**
	baz=308						
YM10				*i* S	**Sb**	**05 42 51.1**	**+0.1**
	baz=308						
YM05	**YM05**	**0.86**	**308**	*e*P	**Pb**	**05 42 39.9**	**+0.4**
	baz=308						
YM05				*e*S	**Sn**	**05 42 52.0**	**-1.0**
	baz=308						
TWD	**Chiawan**	**0.86**	**230**	*e*P	**Pg**	**05 42 37.5**	**-1.8**
	baz=233						
TWD				*e*S	**Sn**	**05 42 52.8**	**-0.2**
	baz=233						
ETLH	**Xiulin Townshi**	**0.88**	**241**	*e*P	**Pg**	**05 42 38.6**	**-0.9**
	baz=246						
ETLH				*e*S	**Sg**	**05 42 50.5**	**-0.6**
	baz=246						
NSK	**Sanguang**	**0.88**	**273**	P	**Pg**	**05 42 39.1**	**-0.5**
	baz=271						
NSK				S	**Sg**	**05 42 50.7**	**-0.3**
	baz=271						
YM04	**YM04**	**0.88**	**306**	*e*P	**Pb**	**05 42 40.2**	**+0.5**
	baz=307						
YM04				*e*S	**Sb**	**05 42 52.1**	**+0.7**
	baz=307						
NNSH	**Datong**	**0.88**	**256**	*e*P	**Pg**	**05 42 38.8**	**-0.8**
	baz=254						
NNSH				*e*S	**Sg**	**05 42 50.8**	**-0.3**
	baz=254						
NNSB	**Datong**	**0.88**	**256**	*e*P	**Pg**	**05 42 38.6**	**-1.0**
	baz=254						
NNSB				*e*S	**Sg**	**05 42 50.8**	**-0.3**
	baz=254						
NNS	**Nan Shan**	**0.89**	**257**	*e*P	**Pg**	**05 42 39.2**	**-0.6**
	baz=254						
NNS				S	**Sg**	**05 42 50.5**	**-0.9**
	baz=254						
TWY	**Chenhua**	**0.91**	**314**	*e*P	**Pn**	**05 42 42.2**	**+1.0**
	baz=316						
TWY				S	**Sn**	**05 42 53.3**	**-0.8**
	baz=316						
WHF	**Hehuan Shan**	**1.08**	**243**	P	**Pb**	**05 42 42.8**	**-0.6**
	baz=240						
WHF				*e*S	**Sb**	**05 42 57.0**	**-0.6**
	baz=240						
TWT	**Tachien**	**1.11**	**250**	*e*P	**Pg**	**05 42 44.2**	**+0.1**
	baz=247						
TWT				*e*S	**Sn**	**05 42 58.9**	**-0.4**
	baz=247						
TDCB	**Techi**	**1.13**	**250**	*e*P	**Pb**	**05 42 43.8**	**-0.2**
	baz=239						
TDCB				*e*S	**Sn**	**05 42 59.9**	**+0.3**
	baz=239						
LIOB	**Emei**	**1.19**	**271**	P	**Pg**	**05 42 46.0**	**+0.5**
	baz=260						
LIOB				*e*S	**Sg**	**05 43 01.5**	**+0.6**
	baz=260						
CHGB	**Renai**	**1.19**	**241**	*e*P	**Pn**	**05 42 45.3**	**+0.1**
	baz=246						
CHGB				*e*S	**Sn**	**05 43 02.5**	**+1.1**
	baz=246						
OWD	**Renai**	**1.25**	**237**	*e*P	**Pn**	**05 42 46.1**	**+0.2**
	baz=241						
OWD				*e*S	**Sg**	**05 43 03.5**	**+0.7**
	baz=241						
WHP	**Taichung City**	**1.30**	**254**	*e*P	**Pg**	**05 42 47.5**	**-0.1**
	baz=251						
WHP				*e*S	**Sg**	**05 43 04.4**	**-0.3**
	baz=251						
IRIF	**Iriomote-Funau**	**1.32**	**103**	P	**Pn**	**05 42 46.9**	**+0.2**
IRIF				*e*S	**Sn**	**05 43 04.0**	**-0.2**
VWDT	**VWDT**	**1.39**	**231**	*e*P	**Pb**	**05 42 48.8**	**+0.3**
	baz=209						
VWDT				*e*S	**Sg**	**05 43 08.1**	**+0.6**
	baz=209						
HGSD	**Ruisui**	**1.40**	**216**	*e*P	**Pb**	**05 42 49.4**	**+0.7**
	baz=197						
HGSD				*e*S	**Sg**	**05 43 09.3**	**+1.4**
	baz=197						
DPDB	**Guoxing**	**1.41**	**245**	*e*P	**Pg**	**05 42 49.4**	**-0.2**
	baz=242						
DPDB				*e*S	**Sg**	**05 43 08.9**	**+0.9**
	baz=242						
TWQ1	**Liyutan**	**1.44**	**259**	*e*P	**Pg**	**05 42 52.1**	**+1.8**
	baz=270						
TWQ1				*e*S	**Sg**	**05 43 11.4**	**+2.4**
	baz=270						
EHY	**Hungye**	**1.45**	**219**	*e*P	**Pn**	**05 42 48.6**	**+0.1**
	baz=215						
EHY				*e*S	**Sg**	**05 43 10.8**	**+1.5**
	baz=215						
SMLT	**Sun Moon Lake**	**1.50**	**240**	*e*P	**Pg**	**05 42 51.3**	**-0.1**
	baz=243						
SMLT				*e*S	**Sg**	**05 43 12.7**	**+1.8**
	baz=243						
SSLB	**Suanglung**	**1.51**	**236**	*e*P	**Pb**	**05 42 50.5**	**0.0**
	baz=214						
SSLB				*e*S	**Sn**	**05 43 08.4**	**-0.5**
	baz=214						
TYC	**Yuchr**	**1.52**	**242**	*e*P	**Pb**	**05 42 51.2**	**+0.5**
	baz=244						
TYC				*e*S	**Sg**	**05 43 12.3**	**+0.7**
	baz=244						
YULB	**Yu-li**	**1.55**	**217**	*e*P	**Pn**	**05 42 50.1**	**+0.1**
	baz=213						
YULB				*e*S	**Sn**	**05 43 09.6**	**-0.5**
	baz=213						
TWF1	**Yuli**	**1.59**	**216**	*e*P	**Pn**	**05 42 50.5**	**+0.1**
	baz=201						
JKRS	**Kuro-shima**	**1.59**	**104**	P	**Pn**	**05 42 51.1**	**+0.6**
JKRS				*e*S	**Sn**	**05 43 11.2**	**+0.3**
JIJ	**Ishigaki jima**	**1.68**	**99**	P	**Pn**	**05 42 51.7**	**-0.1**
JIJ				S	**Sn**	**05 43 12.5**	**-0.7**
FULB	**Fuli**	**1.71**	**213**	*e*P	**Pb**	**05 42 53.5**	**-0.5**
	baz=195						
FULB				*e*S	**Sn**	**05 43 13.1**	**-0.9**
	baz=195						
ALS	**Alishan**	**1.78**	**231**	*e*P	**Pb**	**05 42 54.8**	**-0.5**
	baz=211						
ALS				*e*S	**Sb**	**05 43 18.1**	**+0.3**
	baz=211						
CHN5	**Tsauling**	**1.82**	**236**	*e*P	**Pn**	**05 42 55.0**	**+1.2**
	baz=214						
CHN5				*e*S	**Sb**	**05 43 18.5**	**-0.2**
	baz=214						
ELDTW	**Lidau**	**1.87**	**220**	*e*P	**Pb**	**05 42 55.8**	**-0.9**
	baz=204						
TPUB	**Ta-pu**	**2.04**	**230**	*e*P	**Pb**	**05 42 59.0**	**-0.6**
	baz=209						
TPUB				*e*S	**Sb**	**05 43 26.4**	**+1.5**
	baz=209						
WTP	**Ta-pu**	**2.09**	**229**	*e*P	**Pb**	**05 43 00.2**	**-0.2**
	baz=209						
WTP				*e*S	**Sb**	**05 43 27.0**	**+0.8**
	baz=209						
TWK	**Hsinying**	**2.16**	**231**	*e*P	**Pb**	**05 43 00.3**	**-1.4**
	baz=210						
TWK				*e*S	**Sb**	**05 43 29.1**	**+0.7**
	baz=210						
CHN1	**Nanshi**	**2.19**	**229**	*e*P	**Pb**	**05 43 01.6**	**-0.4**
	baz=210						
CHN1				*e*S	**Sb**	**05 43 30.0**	**+0.9**
	baz=210						

WEL 21 05:50:36.8, 40°.3S±0°.7×**17°.6E**±°**, h28**^{km}±1^{km}**, ML3.8**/12**, MLv3.5**/73**, Error ellipse: s-maj=0.0km s-min=0.0km az=75.3, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVHZ	**Dannevirke**	**0.12**	**113**	P	Pb	05 50 42.4	+0.2
DVHZ				S	Sb	05 50 46.6	+0.9
TSZ	**Takapari Road**	**0.20**	**347**	P	Pb	05 50 43.2	+0.3
TSZ				S	Sb	05 50 48.0	+1.0
POWZ	**Post Office Ro**	**0.24**	**234**	P	Pb	05 50 43.9	+0.5
PRWZ	**Pori Road**	**0.30**	**187**	P	Pn	05 50 44.9	-0.6
PNHZ	**Pukenui**	**0.36**	**22**	P	Pb	05 50 45.3	+0.2
WPHZ	**Waipukurau**	**0.37**	**60**	P	Pb	05 50 45.6	+0.4
ANWZ	**Angora Road**	**0.41**	**121**	P	Pn	05 50 46.4	-0.4
BFZ	**Birch Farm**	**0.46**	**158**	P	Pb	05 50 46.8	+0.2
PRHZ	**Porangahau**	**0.47**	**92**	P	Pn	05 50 47.4	-0.3
PRHZ				S	Sn	05 50 56.1	+1.0
MRZ	**Mangatainoka R**	**0.53**	**219**	P	Pb	05 50 47.9	+0.3
MRZ				S	Sn	05 50 56.3	-0.3
TIWZ	**Tintock**	**0.53**	**191**	P	Pb	05 50 47.8	0.0
OHWZ	**Ohakea**	**0.54**	**275**	P	Pn	05 50 49.2	+0.6
KRHZ	**Kereru**	**0.66**	**24**	P	Pb	05 50 50.0	0.0
CPWZ	**Castlepoint**	**0.67**	**168**	P	Pn	05 50 50.4	-0.1
PXZ	**Pawanui**	**0.68**	**71**	P	Pb	05 50 50.2	0.0
PXZ				S	Sn	05 51 01.9	+1.6
HOWZ	**Holdsworth Sta**	**0.75**	**211**	P	Pb	05 50 51.0	-0.4
BHHZ	**Black Hill Sta**	**0.76**	**3**	P	Pb	05 50 51.5	-0.1
KAHZ	**Kahuranaki**	**0.80**	**56**	P	Pb	05 50 52.0	-0.2
OGWZ	**Otaki Gorge**	**0.86**	**229**	P	Pn	05 50 52.9	-0.1
TMWZ	**Te Maipa**	**0.86**	**187**	P	Pn	05 50 52.2	-0.9
MOVZ	**Moawhango**	**0.87**	**346**	P	Pb	05 50 53.5	+0.1
KWHZ	**Kaweka Forest**	**0.88**	**21**	P	Pn	05 50 53.4	0.0
WAZ	**Wanganui**	**0.94**	**302**	P	Pb	05 50 55.6	+1.2
MCHZ	**McNeill Hill**	**0.96**	**33**	P	Pn	05 50 54.5	+0.1
MTVZ	**Mangateitei**	**0.96**	**334**	P	Pb	05 50 55.3	+0.4
MTW	**Mount Morrison**	**0.99**	**203**	P	Pn	05 50 53.9	-0.9
CKHZ	**Cape Kidnapper**	**1.01**	**54**	P	Pn	05 50 54.4	-0.6
TRVZ	**Turoa**	**1.02**	**339**	P	Pb	05 50 56.2	+0.2
TUVZ	**Tukino**	**1.02**	**344**	P	Pb	05 50 56.3	+0.3
WHVZ	**Whangaehu Hut**	**1.02**	**341**	P	Pb	05 50 56.5	+0.4
DRZ	**Dome Shelter**	**1.04**	**340**	P	Pb	05 50 56.9	+0.6
KIW	**Kapiti Island**	**1.04**	**234**	P	Pn	05 50 55.4	-0.2
FWVZ	**Far West T-bar**	**1.06**	**340**	P	Pb	05 50 56.9	+0.2
PKVZ	**Pokaka**	**1.09**	**331**	P	Pb	05 50 57.2	0.0
CAW	**Cannon Point**	**1.12**	**220**	P	Pn	05 50 56.0	-0.7
NGZ	**Ngauruhoe**	**1.12**	**343**	P	Pb	05 50 58.0	+0.3
BKZ	**Black Stump Fm**	**1.14**	**19**	P	Pn	05 50 56.8	-0.2
TRWZ	**Traveller**	**1.17**	**192**	P	Pn	05 50 56.4	-1.0
WTVZ	**West Tongariro**	**1.18**	**344**	P	Pb	05 50 58.6	-0.1
KRVZ	**Karewarewa**	**1.19**	**346**	P	Pb	05 50 59.0	+0.1
PAWZ	**Paruwai Farm**	**1.22**	**202**	P	Pn	05 50 56.8	-1.2
ARHZ	**Aropaoanui**	**1.24**	**38**	P	Pn	05 50 58.0	-0.3
TWVZ	**Taurewa**	**1.26**	**339**	P	Pn	05 50 59.3	+0.6
RITZ	**Rihia Road**	**1.28**	**354**	P	Pb	05 50 59.8	-0.5
KATZ	**Kakaramea**	**1.30**	**349**	P	Pb	05 51 00.6	-0.1
MSWZ	**Moikau Station**	**1.30**	**206**	P	Pn	05 50 57.7	-1.5
NMHZ	**Naumai**	**1.30**	**28**	P	Pn	05 50 59.1	-0.1
RATZ	**Rangitukua**	**1.40**	**352**	P	Pb	05 51 03.4	+1.1
WEL	**Wellington**	**1.40**	**222**	P	Pn	05 50 59.6	-0.9
PLWZ	**Palliser**	**1.44**	**204**	P	Pn	05 50 59.4	-1.7
BHW	**Baring Head**	**1.45**	**217**	P	Pn	05 50 59.7	-1.4
LREZ	**Lake Rotokare**	**1.47**	**302**	P	Pb	05 51 03.8	+0.2
WHHZ	**Waihua**	**1.50**	**39**	P	Pn	05 51 01.4	-0.4
MTHZ	**Maungataniwha**	**1.54**	**25**	P	Pn	05 51 01.8	-0.6
WATZ	**Wairara**	**1.56**	**352**	P	Pb	05 51 04.3	-0.8
RAHZ	**Arahi**	**1.57**	**32**	P	Pn	05 51 02.1	-0.7
TCW	**Tory Channel**	**1.64**	**234**	P	Pn	05 51 02.7	-1.0
DUWZ	**D'Urville Isla**	**1.69**	**250**	P	Pn	05 51 04.0	-0.5
PREZ	**Palmer Road**	**1.70**	**302**	P	Pb	05 51 08.3	+0.9
KNZ	**Kokohu**	**1.77**	**47**	P	Pn	05 51 04.1	-1.5
SNGZ	**Shannon Statio**	**1.79**	**35**	P	Pn	05 51 04.9	-1.0
RTZ	**Ruatahuna**	**1.79**	**25**	P	Pn	05 51 05.3	-0.7
KHEZ	**Kahui Hut**	**1.82**	**301**	P	Pb	05 51 08.7	-0.8
MUGZ	**Murupara**	**1.86**	**18**	P	Pn	05 51 06.2	-0.7
PKE	**Pukeiti**	**1.89**	**303**	P	Pb	05 51 09.4	-1.2
TLZ	**Tolley Road**	**1.96**	**349**	P	Pb	05 51 11.2	-0.6
HIZ	**Hauiti**	**1.96**	**332**	P	Pb	05 51 10.5	-1.3
PRGZ	**Paritu Road**	**1.96**	**48**	P	Pn	05 51 06.7	-1.5
TARZ	**Mount Tarawera**	**2.05**	**11**	P	Pn	05 51 09.0	-0.4
RIGZ	**Rimuhau**	**2.05**	**42**	P	Pn	05 51 07.8	-1.7
URZ	**Urewera**	**2.16**	**23**	P	Pn	05 51 09.3	-1.7
BSWZ	**Blackbirch Sta**	**2.18**	**227**	P	Pn	05 51 09.6	-1.6
NNZ	**Nelson**	**2.23**	**243**	P	Pn	05 51 11.0	-0.8
MWZ	**Matawai**	**2.24**	**32**	P	Pn	05 51 10.3	-1.8
TOZ	**Tahuroa Road**	**2.55**	**351**	P	Pb	05 51 21.9	+0.1
TWGZ	**Tauwhareparae**	**2.57**	**37**	P	Pn	05 51 15.0	-1.7
QRZ	**Quartz Range**	**2.72**	**257**	P	Pn	05 51 17.8	-0.8
PUZ	**Puketiti**	**2.79**	**39**	P	Pn	05 51 17.0	-2.5
THZ	**Tophouse**	**2.80**	**236**	P	Pn	05 51 18.1	-1.7
HAZ	**Te Kaha**	**2.84**	**29**	P	Pn	05 51 19.3	-1.0
KHZ	**Kahutara**	**2.86**	**220**	P	Pn	05 51 17.7	-2.7
WMGZ	**Waiomatatini S**	**3.06**	**38**	P	Pn	05 51 20.9	-2.5
OKCZ	**Okains Bay**	**4.11**	**211**	P	Pn	05 51 34.1	-3.7
MQZ	**McQueen's Vall**	**4.27**	**215**	P	Pn	05 51 36.1	-3.8
AKCZ	**Akaroa Harbour**	**4.29**	**212**	P	Pn	05 51 36.4	-3.9
CTZ	**Chatham Island**	**6.50**	**125**	P	Pn	05 52 09.8	-0.7

*INET **21** 05:54:06.1, 11°.40N×87°.32W, h5^{km}, ML3.6*
*IDC **21** 05:54:10.8±1.9, 11°.46N×87°.18W, h60^{km}±31^{km}, mb3.2/7, mb1 3.5/10, mb1mx3.3/47, mbtmp3.4/10, ML3.0/3, Error ellipse: s-maj=69.6km s-min=14.3km az=30.0*
ISC 21 05:54:09.8±1.5**, 11°.5N**±0°.2×**87°.2W**±0°.2**, h49**^{km}**, n10, σ1**^{s}**.31**/11**, mb3.4**/7**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	**Las Juntas de**	**2.48**	**118**	P	**Pn**	**05 54 48.4**	**+0.7**
	4.5nm,0.3s,baz=336,slow=23,SNR=11						
JTS				S	**Sn**	**05 55 18.7**	**+1.8**
	9.5nm,0.3s,baz=143,slow=21,SNR=7.8						
APG	**El Apazote**	**4.75**	**318**	P	**Pn**	**05 55 21.1**	**+1.9**
	0.2nm,0.3s,baz=40,slow=13,SNR=2.2						
CMIG	**Matias Romero**	**9.33**	**308**	P	**Pn**	**05 56 21.2**	**-0.5**
	0.4nm,0.3s,baz=144,slow=12,SNR=6.8						
TXAR	**Lajitas Array**	**23.50**	**322**	P	**P**	**05 59 15.6**	**0.0**
	0.7nm,0.8s,baz=135,slow=10.0,SNR=21						
TKL	**Tuckaleechee C**	**24.29**	**7**	P	**P**	**05 59 23.8**	**+1.2**
	1.4nm,0.5s,baz=170,slow=7.1,SNR=4.7						
PDAR	**Pinedale Array**	**36.76**	**332**	P	**P**	**06 01 13.1**	**+0.1**
	0.4nm,0.7s,baz=93,slow=12,SNR=3.8						
NVAR	**Mina Array Bea**	**38.62**	**319**	P	**P**	**06 01 29.8**	**+1.1**
	0.1nm,0.5s,baz=114,slow=6.0,SNR=1.3						
ULM	**Lac du Bonnet**	**39.33**	**351**	P	**P**	**06 01 33.2**	**-0.9**
	0.7nm,0.5s,baz=170,slow=9.3,SNR=3.2						
SCHQ	**Schefferville**	**46.15**	**16**	P	**P**	**06 02 28.4**	**-1.0**
	1.6nm,0.9s,baz=229,slow=11,SNR=1.8						
YKA	**Yellowknife Ar**	**54.63**	**345**	P	**P**	**06 03 32.0**	**-1.2**
	0.2nm,0.5s,baz=137,slow=8.1,SNR=6.1						

*IDC **21** 06:23:23.9±0.7, 26°.94N×128°.41E, h0^{km}, mb4.0/18, mb1 4.0/18, mb1mx3.9/50, mbtmp4.0/18, MS3.1/3, Ms1 3.2/3, ms1mx2.7/44, Error ellipse: s-maj=19.7km s-min=6.1km az=125.0*
*NEIC **21** 06:23:28.5±1.5, 26°.7N±0°.1×128°.3E±0°.1, h33^{km}±6^{km}, mb4.4/27, Error ellipse: s-maj=18.6km s-min=11.6km az=126.0*
*JMA **21** 06:23:28.7±0.1, 26°.80N×128°.42E, h31^{km}±1^{km}, M4.0*
JMA Felt II J1.
ISC 21 06:23:28.4±0.9**, 26°.80N**±0°.05×**128°.39E**±0°.06**, h33**^{km}±3^{km}**, n77, σ0**^{s}**.91**/79**, mb4.2**/30**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**0.10**	**288**	P	**Pb**	**06 23 34.3**	**+0.1**
JOW				S	**Sb**	**06 23 38.3**	**+0.1**
JOW	**Kunigami**	**0.10**	**288**	Pn	**Pb**	**06 23 34.4**	**+0.2**
	496nm,0.3s,baz=158,slow=13,SNR=1468						
JOW				Sn	**Sb**	**06 23 38.3**	**+0.1**
	2µm,0.3s,baz=105,slow=16,SNR=127						
JYRO	**Yoronjima**	**0.23**	**14**	P	**Pb**	**06 23 35.2**	**-0.1**
JYRO				S	**Sb**	**06 23 39.9**	**-0.1**
JNTH	**Nagotoyohara**	**0.43**	**229**	P	**Pn**	**06 23 38.0**	**-0.3**
JNTH				S	**Sn**	**06 23 44.7**	**-0.3**
JIH	**Iheya**	**0.44**	**302**	P	**Pn**	**06 23 38.4**	**-0.1**
JIH				S	**Sn**	**06 23 45.7**	**+0.4**
JOKE	**Okinoerabujima**	**0.58**	**16**	P	**Pn**	**06 23 40.0**	**-0.4**
JOKE				*e*S	**Sb**	**06 23 48.1**	**-0.4**
JJT3	**Tamagusuku3**	**0.85**	**220**	P	**Pb**	**06 23 45.6**	**+0.9**
JJT3				*e*S	**Sb**	**06 23 57.4**	**+1.6**
JAGN	**Aguni-jima**	**1.04**	**259**	P	**Pb**	**06 23 47.7**	**-0.3**
JAGN				S	**Sb**	**06 24 02.2**	**+0.8**
JTK	**Tokunoshima**	**1.10**	**27**	P	**Pn**	**06 23 47.8**	**+0.2**
JTK				*e*S	**Sn**	**06 24 01.7**	**0.0**
JNU	**Nakatsue**	**6.66**	**18**	Pn	**Pn**	**06 25 05.9**	**+1.9**
	2.1nm,0.3s,baz=190,slow=11,SNR=16						
JNU	**Nakatsue**	**6.66**	**18**	Pn	**Pn**	**06 25 06.6**	**+2.6**
YHNB	**Yeheng**	**6.67**	**253**	Pn	**Pn**	**06 25 06.0**	**+1.8**
NACB	**Ninganchiao**	**6.67**	**248**	Pn	**Pn**	**06 25 03.1**	**-1.0**
YULB	**Yu-li**	**7.27**	**244**	Pn	**Pn**	**06 25 09.8**	**-2.5**
SSLB	**Suanglung**	**7.36**	**248**	Pn	**Pn**	**06 25 12.4**	**-1.3**
TPUB	**Ta-pu**	**7.85**	**245**	Pn	**Pn**	**06 25 19.8**	**-0.5**
KSRS	**Korea Array**	**10.63**	**358**	Pn	**Pn**	**06 25 60.0**	**+1.6**
	0.2nm,0.3s,baz=121,slow=19,SNR=4.1						
KSRS				LR	LR	06 30 29.1	
	comp=Z,64nm,18.5s,baz=170,slow=41						
SONM	**Songino Array**	**27.15**	**326**	P	**P**	**06 29 09.3**	**+0.5**
	1.5nm,0.8s,baz=137,slow=11,SNR=9.5						
SONM				LR	LR	06 41 44.8	
	comp=Z,47nm,20.1s,baz=165,slow=41						
SONM	**Songino Array**	**27.15**	**326**	P	**P**	**06 29 09.5**	**+0.7**
CMAR	**Chiang Mai Arr**	**28.36**	**259**	LR	LR	06 40 49.8	
	comp=Z,47nm,21.1s,baz=122,slow=37						
PETK	**Petropavlovsk-**	**34.14**	**32**	P	**P**	**06 30 10.2**	**0.0**
	1.8nm,0.8s,baz=220,slow=3.8,SNR=3.1						
PETK	**Petropavlovsk-**	**34.14**	**32**	P	**P**	**06 30 10.7**	**+0.5**
H11N2	**WAKE ISLAND Hy**	**35.97**	**93**	T	T	07 08 35.9	
	baz=290,slow=74,SNR=12						
H11N1	**WAKE ISLAND Hy**	**35.97**	**93**	T	T	07 08 33.8	
	baz=290,slow=74,SNR=11						
H11N3	**WAKE ISLAND Hy**	**35.98**	**93**	T	T	07 08 37.0	
	baz=290,slow=74,SNR=11						
H11S3	**WAKE ISLAND Hy**	**36.19**	**95**	T	T	07 08 44.5	
	baz=290,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy**	**36.20**	**95**	T	T	07 08 45.3	
	baz=290,slow=75,SNR=19						
H11S2	**WAKE ISLAND Hy**	**36.21**	**95**	T	T	07 08 46.1	
	baz=290,slow=75,SNR=25						
MK31	**Makanchi Array**	**41.26**	**311**	P	**P**	**06 31 09.8**	**-0.7**
MKAR	**Makanchi Array**	**41.26**	**311**	P	**P**	**06 31 10.0**	**-0.5**
	1.3nm,0.6s,baz=101,slow=10,SNR=19						
MKAR	**Makanchi Array**	**41.26**	**311**	P	**P**	**06 31 09.8**	**-0.6**
MAKZ	**Makanchi**	**41.48**	**311**	P	**P**	**06 31 11.2**	**-1.0**
ZALV	**Zalesovo Beam**	**41.88**	**322**	P	**P**	**06 31 14.5**	**-0.9**
	1.7nm,0.5s,baz=100,slow=12,SNR=1.8						
KURK	**Kurchatov**	**44.50**	**316**	P	**P**	**06 31 35.4**	**-1.2**
KURBB	**Kurchatov Arra**	**44.54**	**316**	P	**P**	**06 31 36.1**	**-0.8**
	1.1nm,0.3s,baz=102,slow=9.2,SNR=16						
AAK	**Ala-Archa**	**46.26**	**304**	P	**P**	**06 31 51.1**	**+0.2**
	0.5nm,0.3s,baz=119,slow=8.3,SNR=4.5						
AAK	**Ala-Archa**	**46.26**	**304**	P	**P**	**06 31 50.8**	**-0.1**
AAK				IAmb	IAmb	06 31 57.2	
	comp=Z,3.9nm,1.4s						
WB0	**Warramunga Arr**	**46.66**	**172**	P	**P**	**06 31 52.0**	**-1.9**
WB0				IAmb	IAmb	06 32 09.3	
	comp=Z,3.5nm,1.1s						
WRA	**Warramunga Arr**	**46.82**	**172**	P	**P**	**06 31 55.1**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=353,slow=8.6,SNR=3.5						
KK31	**Karatay Array**	**49.20**	**305**	P	**P**	**06 32 13.7**	**+0.2**
KK31				IAmb	IAmb	06 32 14.8	
	comp=Z,1.7nm,0.8s						
KKAR	**Karatay Array**	**49.20**	**305**	P	**P**	**06 32 13.9**	**+0.4**
KKAR	**Karatay Array**	**49.20**	**305**	P	**P**	**06 32 13.9**	**+0.4**
KKAR				IAmb	IAmb	06 32 14.9	
	comp=Z,1.7nm,0.8s						
BVAR	**Borovoye Array**	**49.94**	**318**	P	**P**	**06 32 18.3**	**-0.7**
	comp=Z,2.5nm,0.7s,baz=81,slow=9.2,SNR=15						
BRVK	**Borovoye**	**50.01**	**318**	P	**P**	**06 32 18.6**	**-0.9**
BRVK				IAmb	IAmb	06 32 20.3	
	comp=Z,4.0nm,0.8s						
ASAR	**Alice Springs**	**50.45**	**173**	P	**P**	**06 32 23.6**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=4.5,slow=13,SNR=4.9						
KBL	**Kabul**	**51.00**	**294**	P	**P**	**06 32 27.8**	**+0.3**
KBL				IAmb	IAmb	06 32 29.1	
	comp=Z,5.0nm,0.8s						
ANM	**Nome**	**55.94**	**28**	P	**P**	**06 33 04.6**	**+1.5**
ANM				IAmb	IAmb	06 33 05.7	
	comp=Z,9.6nm,1.4s						
ABKAR	**Akbulak array**	**56.36**	**313**	P	**P**	**06 33 05.8**	**-0.5**
IMAR	**Indian Mountai**	**60.92**	**27**	P	**P**	**06 33 38.7**	**+1.0**
PPLA	**Purkeypile**	**61.72**	**31**	P	**P**	**06 33 44.7**	**+1.3**
MLY	**Manley**	**62.21**	**28**	P	**P**	**06 33 47.7**	**+1.2**
MLY				IAmb	IAmb	06 34 00.6	
	comp=Z,3.5nm,1.3s						
SUA	**Susitna One**	**62.52**	**32**	P	**P**	**06 33 49.2**	**+0.5**
SUA				IAmb	IAmb	06 33 57.2	
	comp=Z,3.9nm,1.0s						
RND	**Reindeer**	**63.18**	**30**	P	**P**	**06 33 53.2**	**+0.1**
RND				IAmb	IAmb	06 34 05.3	
	comp=Z,2.5nm,0.9s						
KNK	**Knik Glacier**	**63.61**	**32**	P	**P**	**06 33 56.2**	**+0.4**
ILAR	**Eielson Array**	**63.87**	**28**	P	**P**	**06 33 56.7**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=298,slow=10,SNR=4.8						
ILAR	**Eielson Array**	**63.87**	**28**	P	**P**	**06 33 56.8**	**-0.6**
DHY	**Denali Highway**	**63.89**	**30**	P	**P**	**06 33 58.4**	**+0.6**
SCM	**Sheep Creek Mo**	**64.09**	**32**	P	**P**	**06 33 59.8**	**+0.7**
RIDG	**Independent Ri**	**64.91**	**29**	P	**P**	**06 34 05.4**	**+1.1**
RIDG				IAmb	IAmb	06 34 19.4	
	comp=Z,4.5nm,1.0s						
GLB	**Gilahina Butte**	**65.81**	**32**	P	**P**	**06 34 10.9**	**+0.6**
VRDI	**Verde Repeater**	**66.02**	**32**	P	**P**	**06 34 12.5**	**+0.7**
BCAR	**Beaver Creek A**	**66.39**	**30**	P	**P**	**06 34 14.9**	**+1.0**
EPYK	**Eagle Plains**	**67.69**	**26**	P	**P**	**06 34 22.9**	**+0.8**
EPYK				IAmb	IAmb	06 34 38.7	
	comp=Z,2.0nm,0.8s						
SPITS	**Spitsbergen Ar**	**68.30**	**348**	P	**P**	**06 34 25.7**	**-0.1**
	comp=Z,1.9nm,0.5s,baz=83,slow=6.8,SNR=11						
WHY	**Whitehorse**	**70.20**	**31**	P	**P**	**06 34 39.2**	**+1.3**
C36M	**Paulatuk**	**71.11**	**21**	P	**P**	**06 34 43.7**	**+0.6**
C36M				IAmb	IAmb	06 34 44.0	
	comp=Z,3.2nm,0.6s						
FIA1	**FINESS Array S**	**72.44**	**331**	P	**P**	**06 34 50.8**	**-0.4**
FINES	**FINESS Array B**	**72.44**	**331**	P	**P**	**06 34 50.6**	**-0.6**
	comp=Z,2.0nm,0.4s,baz=64,slow=5.7,SNR=21						
FINES	**FINESS Array B**	**72.44**	**331**	P	**P**	**06 34 50.7**	**-0.5**
RES	**Resolute Bay**	**74.96**	**11**	P	**P**	**06 35 05.8**	**0.0**
	comp=Z,1.3nm,0.6s,baz=293,slow=7.3,SNR=11						
RES	**Resolute Bay**	**74.96**	**11**	P	**P**	**06 35 06.3**	**+0.5**
AKASG	**Malin Array Be**	**75.19**	**320**	P	**P**	**06 35 06.5**	**-1.1**
	comp=Z,1.5nm,0.5s,baz=57,slow=6.8,SNR=4.9						
BRTR	**Keskin Array B**	**76.80**	**308**	P	**P**	**06 35 16.8**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=140,slow=24,SNR=3.6						
BRTR	**Keskin Array B**	**76.80**	**308**	P	**P**	**06 35 17.3**	**+0.2**
YKA	**Yellowknife Ar**	**77.95**	**25**	P	**P**	**06 35 23.4**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=302,slow=5.6,SNR=11						
NOA	**NORSAR Array B**	**78.86**	**334**	P	**P**	**06 35 27.2**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=32,slow=15,SNR=1.4						
FRB	**Frobisher Bay**	**88.77**	**7**	P	**P**	**06 36 17.2**	**-1.3**
	comp=Z,0.9nm,0.8s,baz=358,slow=3.9,SNR=3.5						

*NEIC **21** 06:25:04.9±1.4, 24°.84N±0°.06×121°.84E±0°.05, h101^{km}±4^{km}, mb4.0/3, ML4.5(TAP), Error ellipse: s-maj=9.2km s-min=6.7km az=174.0*
*TAP **21** 06:25:05.8, 24°.79N×121°.83E, h96^{km}, ML4.1, B*
*JMA **21** 06:25:05.4±0.1, 24°.75N×121°.83E, h98^{km}±2^{km}, M3.3*
ISC 21 06:25:05.0±0.7**, 24°.83N**±0°.03×**121°.84E**±0°.02**, h103**^{km}±4^{km}**, n140, σ0**^{s}**.75**/252**, mb3.9**/3**, 28C-3D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NTC	**Toucheng**	**0.03**	**344**	*e*P	**Pn**	**06 25 19.8**	**+0.6**
	baz=25						
NTC				*e*S	**Sn**	**06 25 29.7**	**-0.1**
	baz=25						
ILA	**Ilan**	**0.10**	**233**	P	**Pn**	**06 25 20.1**	**+0.8**
	baz=223						
ILA				S	**Sn**	**06 25 31.0**	**+1.1**
	baz=223						
TIPB	**Shuangxi**	**0.14**	**355**	⇑*i*P	**Pn**	**06 25 19.8**	**+0.4**
	baz=4.0						
TIPB				S	**Sn**	**06 25 29.8**	**-0.5**
	baz=4.0						
TWE	**Neicheng**	**0.19**	**236**	P	**Pn**	**06 25 20.2**	**+0.7**
	baz=256						
TWE				S	**Sn**	**06 25 31.1**	**+0.8**
	baz=256						

SLBB	Yuanshan baz=271	0.20	248	*e*P	Pn	06 25 19.2	-0.3
SLBB	baz=271			*e*S	Sn	06 25 29.5	-1.0
TWC	Suao baz=163	0.22	177	⇑*i*P	Pn	06 25 20.3	+0.7
TWC	baz=163			S	Sn	06 25 30.8	+0.3
TWB1	Santiao Chiao baz=42	0.23	37	⇑*i*P	Pn	06 25 19.9	+0.3
TWB1	baz=42			S	Sn	06 25 30.1	-0.4
NWF	Wu-fen Shan baz=3.0	0.25	348	P	Pn	06 25 20.1	+0.3
NWF	baz=3.0			S	Sn	06 25 30.8	-0.1
WFSB	Wu-fen Shan baz=360	0.25	348	⇑P	Pn	06 25 20.2	+0.4
WFSB	baz=360			S	Sn	06 25 30.3	-0.4
TWA	Mucha baz=316	0.28	303	⇑*i*P	Pn	06 25 20.4	+0.5
TWA	baz=316			S	Sn	06 25 31.0	+0.1
NWLT	Wulai baz=255	0.31	261	P	Pn	06 25 20.1	+0.1
NWLT	baz=255			*e*S	Sn	06 25 30.9	-0.3
ENTT	Nioudou baz=248	0.31	233	⇑*i*P	Pn	06 25 20.6	+0.6
ENTT	baz=248			S	Sn	06 25 31.0	-0.2
NHDH	Xindian Distri baz=290	0.32	295	⇑*e*P	Pn	06 25 20.6	+0.6
NHDH	baz=290			*e*S	Sn	06 25 31.2	0.0
TATO	Taipei baz=291	0.35	295	⇑P	Pn	06 25 20.5	+0.4
TATO	baz=291			S	Sn	06 25 31.1	-0.4
TATO	Taipei	0.35	295	Pn	Pn	06 25 20.3	+0.2
TATO				Sn	Sn	06 25 30.9	-0.6
TAP	Taipei baz=312	0.37	305	*e*P	Pn	06 25 20.7	+0.5
TAP	baz=312			*e*S	Sn	06 25 31.4	-0.3
NDT	Datong Townshi baz=245	0.37	233	⇑*i*P	Pn	06 25 20.7	+0.4
NDT	baz=245			S	Sn	06 25 31.2	-0.6
EOS1	EOS1 baz=124	0.38	136	⇑P	Pn	06 25 20.9	+0.6
EOS1	baz=124			*e*S	Sn	06 25 32.1	+0.4
YM01	YM01 baz=322	0.40	323	⇑*i*P	Pn	06 25 21.0	+0.5
YM01	baz=322			S	Sn	06 25 32.1	0.0
ENA	Nanau baz=182	0.41	193	*e*P	Pn	06 25 20.9	+0.4
ENA	baz=182			*e*S	Sn	06 25 32.8	+0.8
YM10	YM10 baz=321	0.41	322	⇑P	Pn	06 25 21.0	+0.4
YM10	baz=321			*e*S	Sn	06 25 32.2	-0.1
YM11	YM11 baz=324	0.41	325	*e*P	Pn	06 25 21.1	+0.4
YM11	baz=324			*e*S	Sn	06 25 32.3	-0.1
YM08	YM08 baz=327	0.42	328	⇑P	Pn	06 25 20.9	+0.3
YM08	baz=327			S	Sn	06 25 32.3	0.0
YM03	YM03 baz=321	0.44	322	P	Pn	06 25 20.9	+0.1
YM03	baz=321			*e*S	Sn	06 25 32.3	-0.3
YHNB	Yeheng baz=244	0.45	250	⇑P	Pn	06 25 20.8	0.0
YHNB	baz=244			S	Sn	06 25 31.4	-1.3
YHNB	Yeheng	0.45	250	Pn	Pn	06 25 20.8	0.0
YHNB				Sn	Sn	06 25 31.7	-1.0
ANP	Anpu baz=323	0.46	321	⇓P	Pn	06 25 21.4	+0.4
ANP	baz=323			*e*S	Sn	06 25 33.1	+0.3
NSK	Sanguang baz=244	0.46	251	⇑*i*P	Pn	06 25 20.9	0.0
NSK	baz=244			*e*S	Sn	06 25 31.3	-1.5
TWS1	Kuangyinshan baz=300	0.47	306	*e*P	Pn	06 25 21.6	+0.8
TWS1	baz=300			S	Sn	06 25 33.0	+0.3
NTST	Danshui baz=321	0.49	314	*e*P	Pn	06 25 21.9	+0.9
NTST	baz=321			*e*S	Sn	06 25 33.8	+0.8
TWY	Chenhua baz=339	0.50	334	P	Pn	06 25 21.7	+0.7
TWY	baz=339			S	Sn	06 25 33.5	+0.4
WLTB	Daxi baz=275	0.53	273	⇑P	Pn	06 25 21.9	+0.6
WLTB	baz=275			S	Sn	06 25 34.1	+0.6
NNSB	Datong baz=227	0.57	226	⇑P	Pn	06 25 22.3	+0.5
NNSB	baz=227			S	Sn	06 25 33.9	-0.4
NNSH	Datong baz=231	0.57	226	⇑*i*P	Pn	06 25 22.2	+0.4
NNSH	baz=231			*e*S	Sn	06 25 33.6	-0.7
NCU	National Centr baz=286	0.61	284	⇑*i*P	Pn	06 25 22.5	+0.6
NCU	baz=286			S	Sn	06 25 35.0	+0.5
NCUH	Zhongli baz=286	0.61	283	⇑*e*P	Pn	06 25 22.4	+0.5
NCUH	baz=286			*e*S	Sn	06 25 34.8	+0.1
NACB	Ninganchiao baz=203	0.69	199	⇑P	Pn	06 25 22.0	-0.6
NACB	baz=203			S	Sn	06 25 34.5	-1.3
NACB	Ninganchiao	0.69	199		Pn	06 25 21.9	-0.7
ETLH	Xiulin Townshi baz=214	0.70	208	*e*P	Pn	06 25 22.9	+0.1
ETLH	baz=214			*e*S	Sn	06 25 35.8	-0.3
LIOB	Emei baz=251	0.77	257	⇑*i*P	Pn	06 25 23.8	+0.5
LIOB	baz=251			S	Sn	06 25 36.8	-0.3
SBCB	Hsinchu baz=262	0.78	268	*e*P	Pn	06 25 24.0	+0.6
SBCB	baz=262			*e*S	Sn	06 25 37.5	+0.3
TWD	Chiawan baz=201	0.78	197	*e*P	Pn	06 25 22.9	-0.5
TWD	baz=201			S	Sn	06 25 36.2	-0.9
NSTT	Nanjuang baz=250	0.79	256	⇑*i*P	Pn	06 25 23.9	+0.4
NSTT	baz=250			*e*S	Sn	06 25 37.1	-0.3
HSN	Hsinchu baz=263	0.79	268	P	Pn	06 25 23.7	+0.2
HSN	baz=263			*e*S	Sn	06 25 36.9	-0.5
TWT	Tachien baz=220	0.83	227	⇑*i*P	Pn	06 25 25.2	+1.1
TWT	baz=220			*e*S	Sn	06 25 39.9	+1.5
TDCB	Techi baz=234	0.84	227	P	Pn	06 25 25.2	+1.0
TDCB	baz=234			S	Sn	06 25 38.5	-0.1
WHF	Hehuan Shan baz=210	0.86	218	⇑*i*P	Pn	06 25 25.1	+0.4
WHF	baz=210			*e*S	Sn	06 25 39.3	0.0
HWA	Hwalien baz=199	0.87	194	*e*P	Pn	06 25 24.1	-0.3
HWA	baz=199			*e*S	Sn	06 25 39.1	+0.3
ENLB	Shoufeng baz=198	0.94	193	P	Pn	06 25 24.8	-0.2
ENLB	baz=198			S	Sn	06 25 40.7	+0.6
CHGB	Renai baz=222	0.97	219	⇑P	Pn	06 25 26.5	+0.9
CHGB	baz=222			S	Sn	06 25 41.4	+0.3
WHP	Taichung City baz=235	0.98	236	⇑*e*P	Pn	06 25 26.4	+0.9
WHP	baz=235			S	Sn	06 25 40.9	-0.1
NMLH	Miaoli baz=253	1.00	253	*e*P	Pn	06 25 26.2	+0.6
NMLH	baz=253			*e*S	Sn	06 25 41.3	+0.2
OWD	Renai baz=219	1.06	215	*e*P	Pn	06 25 27.1	+0.7
OWD	baz=219			*e*S	Sn	06 25 42.6	+0.1
NSY	Sanyi baz=247	1.06	248	*e*P	Pn	06 25 27.1	+0.8
NSY	baz=247			*e*S	Sn	06 25 42.9	+0.4
ESL	Shilin baz=192	1.07	200	*e*P	Pn	06 25 25.6	-0.8
ESL	baz=192			*e*S	Sn	06 25 40.8	-1.8
JYNG	Yonagunijimaku	1.07	110	P	Pn	06 25 26.6	+0.2
JYNG				S	Sn	06 25 41.9	-0.7
TWQ1	Liyutan baz=243	1.08	244	P	Pn	06 25 27.1	+0.6
TWQ1	baz=243			S	Sn	06 25 42.5	-0.3
PTSB	Yuanli baz=249	1.10	250	*e*P	Pn	06 25 26.8	+0.1
PTSB	baz=249			*e*S	Sn	06 25 43.2	+0.1
YOJ	Yonaguni jima baz=107	1.13	109	*e*P	Pn	06 25 27.0	0.0
YOJ	Yonaguni jima	1.13	109	P	Pn	06 25 27.2	+0.2
YOJ				S	Sn	06 25 43.1	-0.5
YOJ	Yonaguni jima	1.13	109	Pn	Pn	06 25 27.0	0.0
YOJ				Sn	Sn	06 25 43.3	-0.3
DPDB	Guoxing baz=233	1.15	227	*e*P	Pn	06 25 28.8	+1.4
DPDB	baz=233			*e*S	Sn	06 25 44.6	+0.4
WDJ	Dajia District baz=239	1.19	247	*e*P	Pn	06 25 28.4	+0.7
WDJ	baz=239			*e*S	Sn	06 25 45.1	+0.1
EGFH	Guangfu baz=195	1.21	198	*e*P	Pn	06 25 27.8	-0.3
EGFH	baz=195			*e*S	Sn	06 25 43.9	-1.5
VWDT	VWDT baz=216	1.24	211	⇑P	Pn	06 25 29.2	+0.9
VWDT	baz=216			*e*S	Sn	06 25 46.5	+0.5
TCU	Taichung baz=236	1.26	238	*e*P	Pn	06 25 29.3	+0.8
TCU	baz=236			*e*S	Sn	06 25 45.6	-0.6
SMLT	Sun Moon Lake baz=226	1.27	222	*e*P	Pn	06 25 29.7	+0.9
SMLT	baz=226			*e*S	Sn	06 25 47.2	+0.4
TYC	Yuchr baz=230	1.28	224	*e*P	Pn	06 25 29.6	+0.8
TYC	baz=230			S	Sn	06 25 47.3	+0.5
SSLB	Suanglung baz=225	1.31	218	*e*P	Pn	06 25 30.0	+0.8
SSLB	baz=225			S	Sn	06 25 47.7	+0.2
SSLB	Suanglung	1.31	218		Pn	06 25 30.1	+0.9
SSLB				Sn	Sn	06 25 48.5	+1.0
HGSD	Ruisui baz=199	1.38	196	*e*P	Pn	06 25 30.2	+0.2
HGSD	baz=199			*e*S	Sn	06 25 50.1	+1.2
WCHH	Zhanghua baz=236	1.38	238	*e*P	Pn	06 25 30.8	+0.8
WCHH	baz=236			*e*S	Sn	06 25 49.3	+0.4
EHY	Hungye baz=189	1.40	200	*e*P	Pn	06 25 29.2	-1.0
EHY	baz=189			*e*S	Sn	06 25 48.2	-1.0
WNT	Mingjian baz=234	1.42	228	*e*P	Pn	06 25 31.2	+0.8
WNT	baz=234			*e*S	Sn	06 25 50.2	+0.6
WJS	Zhushan baz=233	1.42	226	*e*P	Pn	06 25 31.6	+1.1
WJS	baz=233			*e*S	Sn	06 25 50.5	+0.7
YULB	Yu-li baz=192	1.51	199	*e*P	Pn	06 25 30.7	-1.0
YULB	baz=192			*e*S	Sn	06 25 50.9	-0.9
YULB	Yu-li	1.51	199		Pn	06 25 30.6	-1.0
YULB				Sn	Sn	06 25 51.4	-0.4
TWF1	Yuli baz=196	1.55	199	*e*P	Pn	06 25 31.4	-0.7
TWF1	baz=196			*e*S	Sn	06 25 50.9	-1.7
YUS	Yu-Shan baz=219	1.56	211	*e*P	Pn	06 25 34.0	+1.4
YUS	baz=219			*e*S	Sn	06 25 54.4	+0.9
ALS	Alishan baz=221	1.62	216	*e*P	Pn	06 25 34.3	+1.1
ALS	baz=221			*e*S	Sn	06 25 55.3	+0.8
CHN5	Tsauling baz=218	1.62	221	*e*P	Pn	06 25 34.0	+1.0
CHN5	baz=218			*e*S	Sn	06 25 55.0	+0.8
WGK	Gukeng baz=233	1.63	226	*e*P	Pn	06 25 33.6	+0.6
WGK	baz=233			*e*S	Sn	06 25 54.9	+0.7
RLNB	Erlin baz=234	1.64	236	*e*P	Pn	06 25 33.6	+0.5
RLNB	baz=234			*e*S	Sn	06 25 54.2	-0.3
WDLH	Douliu baz=233	1.64	227	*e*P	Pn	06 25 33.3	+0.1
WDLH	baz=233			*e*S	Sn	06 25 55.4	+0.9
FULB	Fuli baz=193	1.70	197	*e*P	Pn	06 25 34.0	+0.1
FULB	baz=193			*e*S	Sn	06 25 56.4	+0.5
CHKT	Chengkung baz=185	1.77	194	*e*P	Pn	06 25 34.5	-0.4
IRIF	Iriomote-Funau	1.79	106	P	Pn	06 25 35.2	+0.2
IRIF				S	Sn	06 25 57.5	-0.4
CHN2	Minshiung baz=230	1.79	224	*e*P	Pn	06 25 35.5	+0.5
CHN2	baz=230			*e*S	Sn	06 25 59.2	+1.2
ELDTW	Lidau baz=198	1.80	205	*e*P	Pn	06 25 35.6	+0.3
CHY	Chiayi baz=230	1.85	225	*e*P	Pn	06 25 36.4	+0.6
CHY	baz=230			*e*S	Sn	06 25 59.8	+0.6
CHN4	Tsaushan baz=215	1.86	218	*e*P	Pn	06 25 36.9	+1.0
CHN4	baz=215			*e*S	Sn	06 25 60.0	+0.5
TPUB	Ta-pu baz=213	1.88	216	*e*P	Pn	06 25 36.7	+0.5
TPUB	baz=213			*e*S	Sn	06 25 59.9	0.0
TPUB	Ta-pu	1.88	216		Pn	06 25 36.5	+0.3
TPUB				Sn	Sn	06 26 00.0	0.0
WSF	Szhu baz=229	1.89	232	*e*P	Pn	06 25 36.7	+0.4
WSF	baz=229			*e*S	Sn	06 26 00.5	+0.4
WTP	Ta-pu baz=213	1.93	216	*e*P	Pn	06 25 37.6	+0.7
WTP	baz=213			*e*S	Sn	06 26 01.3	+0.2
HATJ	Hateruma jima	1.95	113	P	Pn	06 25 37.6	+0.6
HATJ				S	Sn	06 26 01.9	+0.4
TWK	Hsinying baz=215	1.98	219	*e*P	Pn	06 25 38.2	+0.7
TWK	baz=215			*e*S	Sn	06 26 02.2	-0.2
PTTC	Pingtan baz=290	1.99	290	P	Pn	06 25 37.2	-0.3
SNST	Tainan City baz=214	2.02	218	*e*P	Pn	06 25 38.7	+0.8
SNST	baz=214			*e*S	Sn	06 26 03.0	-0.1
CHN1	Nanshi baz=213	2.03	216	*e*P	Pn	06 25 38.7	+0.6
CHN1	baz=213			S	Sn	06 26 03.3	0.0
JKRS	Kuro-shima	2.06	106	P	Pn	06 25 39.0	+0.5
JKRS				S	Sn	06 26 04.6	+0.5
SGST	Jiashian baz=218	2.08	214	*e*P	Pn	06 25 39.9	+1.1
SGST	baz=218			*e*S	Sn	06 26 03.9	-0.7
TWG	Pinlang baz=187	2.12	200	*e*P	Pn	06 25 39.1	-0.2
TWG	baz=187			*e*S	Sn	06 26 04.0	-1.4
TWG	Pinlang	2.12	200		Pn	06 25 38.8	-0.5
TWG				Sn	Sn	06 26 04.0	-1.4
TWGBT	Beinan baz=187	2.12	199	*e*P	Pn	06 25 38.9	-0.4
TWGBT	baz=187			*e*S	Sn	06 26 04.0	-1.4
SLGT	Liugui baz=216	2.13	211	*e*P	Pn	06 25 40.9	+1.6
SLGT	baz=216			*e*S	Sn	06 26 05.8	+0.2
TWH	Lutao baz=179	2.13	189	*e*P	Pn	06 25 39.7	+0.3
TWH	baz=179			*e*S	Sn	06 26 04.4	-1.3
JIJ	Ishigaki jima	2.15	102	P	Pn	06 25 39.8	+0.2
JIJ				S	Sn	06 26 05.3	-0.8
MATB	Ma-tsu baz=306	2.16	308	*e*P	Pn	06 25 39.6	-0.2
TTN	Taitung baz=189	2.16	197	*e*P	Pn	06 25 41.0	+1.3
VWUC	VWUC baz=274	2.17	275	*e*P	Pn	06 25 40.0	+0.1
VWUC	baz=274			S	Sn	06 25 56.0	-11
JISG	Ishigakijimahi	2.26	96	P	Pn	06 25 41.6	+0.6
JISG				S	Sn	06 26 08.7	0.0
SSD	Sandimen baz=207	2.35	208	*e*P	Pn	06 25 43.8	+1.5
ECL	Taimali baz=192	2.36	200	*e*P	Pn	06 25 43.3	+0.8
PNG	Penghu baz=239	2.43	239	*e*P	Pn	06 25 43.2	-0.1
PHUB	P'eng-hu baz=237	2.45	238	*e*P	Pn	06 25 43.0	-0.5
PHUB	baz=237			S	Sn	06 26 10.3	-2.7
MASBT	Mashibuluo baz=203	2.47	207	*e*P	Pn	06 25 44.6	+0.8
MASBT	baz=203			*e*S	Sn	06 26 13.4	-0.2
PTMZ	Houxiangcun baz=275	2.48	275	⇓*e*P	Pn	06 25 43.9	+0.1
LYJJ	Jianjiangzhen baz=311	2.54	313	*e*P	Pn	06 25 44.6	-0.1
XPSS	Dashiqiu baz=323	2.57	325	*e*P	Pn	06 25 45.0	-0.1
EAST	Anshuo baz=191	2.60	201	*e*P	Pn	06 25 45.2	-0.3
TAW	Tawu baz=191	2.61	200	*e*P	Pn	06 25 47.9	+2.3
JTJ	Tarama	2.61	93	P	Pn	06 25 46.5	+0.9
JTJ				*e*S	Sn	06 26 16.7	-0.2
WSSB	Gushan baz=210	2.61	214	*e*P	Pn	06 25 46.0	+0.2
WSSB	baz=210			*e*S	Sn	06 26 17.8	+0.8
SCZT	Fangliau baz=200	2.69	205	*e*P	Pn	06 25 47.4	+0.7
SCZT	baz=200			*e*S	Sn	06 26 18.3	-0.4
VCHM	Qimei baz=233	2.73	234	P	Pn	06 25 47.3	+0.1
VCHM	baz=233			S	Sn	06 26 17.9	-1.8
MHZQ	Yeshan baz=296	2.84	297	⇓*e*P	Pn	06 25 48.3	-0.3
TWKBT	Hengchun baz=197	3.02	198	*e*P	Pn	06 25 52.4	+1.2
JIRB	Irabujima	3.03	89	P	Pn	06 25 52.4	+1.2
JIRB				*e*S	Sn	06 26 27.7	+0.9
KNMB	Chin-men Tao baz=263	3.16	264	*e*P	Pn	06 25 52.7	-0.2
KNMB	Chin-men Tao	3.16	264	Pn	Pn	06 25 52.6	-0.3
KNMB				Sn	Sn	06 26 27.9	-2.0
AXDP	Jialang baz=271	3.51	272	*e*P	Pn	06 25 57.9	+0.3
ZPLA	Ao Xicun baz=256	3.83	257	*e*P	Pn	06 26 02.3	+0.3
JNU	Nakatsue	11.44	42	Pn	Pn	06 27 42.5	-2.6
MAKZ	Makanchi	38.50	315	P	P	06 32 18.9	+1.7
MAKZ	comp=Z,2.6nm,1.3s			IAmb	IAmb	06 32 21.1	
KURK	Kurchatov	41.99	319	P	P	06 32 45.4	-0.5
KURK	comp=Z,2.0nm,0.9s			IAmb	IAmb	06 32 54.4	
ABKAR	Akbulak array	53.42	314	P	P	06 34 15.1	+0.9
ARCES	ARCESS Array B	69.17	338	P	P	06 36 00.5	+0.5
GLB	Gilahina Butte	70.55	31	P	P	06 36 08.8	+0.2
GLB	comp=Z,3.9nm,1.0s			IAmb	IAmb	06 36 12.7	
FINES	FINESS Array B	71.19	330	P	P	06 36 12.5	+0.1

NNC 21 06:29:31.6±8.1, 53$\overset{\circ}{.}$98N×86$\overset{\circ}{.}$39E, h0^{km}, mb3.6, mpv2.5, 4C-1D, Error ellipse: s-maj=105.4km s-min=35.3km az=11.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array 0.4nm,0.4s	0.93	269	⇑P	Pg	06 29 49.6	+0.2
ZAA0	4.2nm,0.8s			⇑S	Sg	06 30 02.4	+0.9
MK31	Makanchi Array 1.2nm,0.7s,baz=25,slow=12,SNR=12	7.66	202	⇑Pn	Pn	06 31 25.5	+1.2
MK31	5.8nm,1.2s,baz=26,slow=27			⇑Lg	Lg	06 33 37.5	
MAKZ	Makanchi 4.0nm,1.2s	7.71	203	⇓Lg	Lg	06 33 36.7	

*IDC **21** 06:52:53.1±0.7, 6$\overset{\circ}{.}$68S×128$\overset{\circ}{.}$77E, h0^{km}, mb4.1/15, mb1 4.3/19, mb1mx4.1/43, mbtmp4.2/19, ML4.4/3, MS3.5/16, Ms1 3.5/16, ms1mx3.3/42, Error ellipse: s-maj=21.3km s-min=15.5km az=70.0*

*DJA **21** 06:52:56.2±0.2, 7°S±2°×12°9E±°, h10^{km}, M4.8/29, mb5.0/29, mB5.3/14, MLv4.8/15, Mw(mB)4.7/14, Mwp5.5/2*

*NEIC **21** 06:52:58.5±2.2, 6$\overset{\circ}{.}$59S±0$\overset{\circ}{.}$06×128$\overset{\circ}{.}$74E±0$\overset{\circ}{.}$06, h35^{km}±8^{km}, mb4.4/20, Error ellipse: s-maj=9.4km s-min=8.8km az=67.0*

ISC 21 06:52:58.2±0.4, 6$\overset{\circ}{.}$62S±0$\overset{\circ}{.}$05×128$\overset{\circ}{.}$77E±0$\overset{\circ}{.}$06, h35^{km}, n96, σ1$\overset{s}{.}$79/85, mb4.2/23, MS3.4/10, 1C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.85	118	P	Pn	06 53 44.9	+3.7
SAUI	Saumlaki	2.85	118	Pn	Pn	06 53 44.2	+2.9
AAI	Ambon	2.97	349	P	Pn	06 53 39.8	-3.0
MSAI	Masohi	3.25	3	P	Pn	06 53 44.2	-2.6
NLAI	Namlea	3.75	334	P	Pn	06 53 52.6	-0.9
FAKI	Fak Fak 0.4nm1μm124nm,0.8s	5.05	43	P	Pn	06 54 11.9	+0.4
FAKI	Fak Fak	5.05	43		Pn	06 54 11.4	-0.1
SANI	Sanana 0.3nm1μm81nm,0.7s	5.32	328	P	Pn	06 54 15.0	-0.1
SOEI	Soe 1.1nm3μm300nm,0.9s	5.44	235	P	Pn	06 54 18.0	+1.1
SOEI	Soe	5.44	235		Pn	06 54 18.3	+1.4

LBMI	Labuha	6.08	348	P	Pn	06 54 26.1	+0.6
	1.2nm3µm376nm,0.9s						
SIJI	Sorong	6.23	24	Pn	Pn	06 54 27.1	-0.6
	20nm,0.3s,baz=22,slow=23,SNR=27						
SIJI				Sn	Sn	06 55 31.0	-6.8
	baz=252,slow=22,SNR=1.2						
SWI	Sorong	6.24	24	P	Pn	06 54 27.4	-0.3
	0.6nm2µm122nm,0.6s						
BBSI	Bau Bau	6.26	280	P	Pn	06 54 29.6	+1.4
	0.3nm783nm85nm,1.0s						
MTN	Manton Dam	6.61	160		Pn	06 54 33.8	+0.9
MMRI	Maumere	6.78	252	P	Pn	06 54 37.3	+2.1
	2.0nm151nm,0.6s						
MMRI	Maumere	6.78	252		Pn	06 54 37.0	+1.8
RKPI	Ransiki, Papua	7.41	47	P	Pn	06 54 44.4	+0.6
	1.1nm9µm124nm,0.7s						
TNTI	Ternate	7.47	349	P	Pn	06 54 44.9	+0.1
	0.3nm102nm,0.8s						
TNTI	Ternate	7.47	349		Pn	06 54 44.9	+0.1
BKSI	Bulukumba	8.70	278	P	Pn	06 55 01.8	+0.3
	2µm298nm,0.8s						
BNSI	Bone	8.90	284	P	Pn	06 55 04.3	0.0
	3µm404nm,0.6s						
KNRA	Kununurra	9.00	180		Pn	06 55 04.6	-1.1
KAPI	Kappang	9.11	280	Pn	Pn	06 55 07.4	+0.2
	24nm,0.3s,baz=118,slow=6.2,SNR=116						
KAPI				LR	LR	06 58 38.6	
	comp=Z,396nm,18.9s,baz=96,slow=38						
SPSI	Sidrap Palu	9.34	286	P	Pn	06 55 10.6	+0.2
	2µm208nm,0.6s						
PLAI	Plampang	11.11	258	P	Pn	06 55 36.3	+1.6
	973nm56nm,1.5s						
FITZ	Fitzroy Crossi	11.81	195	Pn	Pn	06 55 40.3	-3.9
	1.4nm,0.3s,baz=28,slow=9.9,SNR=40						
FITZ				Sn	Sn	06 57 48.7	-6.2
	2.3nm,0.3s,baz=121,slow=18,SNR=5.4						
FITZ				LR	LR	07 00 51.7	
	comp=Z,143nm,21.9s,baz=18,slow=41						
DDMP	Don Marcelino,	13.00	346	eP	Pn	06 55 52.4	-8.1
MATI	Mati	13.71	349	eP	Pn	06 55 52.6	-18
SKMP	Bagumbayan, Su	13.71	342	eP	Pn	06 56 07.7	-2.6
DAV	Davao City (W)	13.97	347	LR	LR	07 02 46.0	
	comp=Z,75nm,20.2s,baz=157,slow=42						
KCP	Kidapawan	14.03	345	⇑eP	Pn	06 56 13.0	-1.6
WB0	Warramunga Arr	14.17	158		Pn	06 56 11.5	-4.9
WB0				P	P	06 56 22.2	-1.2
WRAB	Tennant Creek	14.30	158	Pn	Pn	06 56 12.8	-5.5
WRA	Warramunga Arr	14.31	158	Pn	Pn	06 56 13.2	-5.1
	2.2nm,0.3s,baz=342,slow=13,SNR=77						
WRA				Sn	Sn	06 58 43.2	-13
	0.7nm,0.3s,baz=335,slow=22,SNR=9.9						
WRA				LR	LR	07 01 57.9	
	comp=Z,393nm,19.9s,baz=335,slow=38						
WRA	Warramunga Arr	14.31	158		Pn	06 56 11.9	-6.5
WB2	Warramunga Arr	14.31	158		Pn	06 56 13.2	-5.3
WR0	Warramunga Arr	14.40	158		Pn	06 56 14.4	-5.2
BUKP	Musuan	14.87	346	eP	Pn	06 56 25.5	-0.5
PAGZ	Pagadian	15.34	339	eP	Pn	06 56 29.9	-2.3
COEN	Coen	15.93	118		Pn	06 56 39.8	-0.1
COEN				IAmb	IAmb	06 56 49.9	
	comp=Z,27nm,1.1s						
PSA00	Pilbara Seismi	17.19	209		Pn	06 56 52.7	-3.0
PSA00				IAmb	IAmb	06 56 58.9	
	comp=Z,34nm,0.8s						
PSA00	Pilbara Seismi	17.19	209		Pn	06 56 54.1	-1.6
PSA00				IAmb	IAmb	06 56 58.6	
	comp=Z,15nm,0.9s						
PCJI	Pacitan	17.52	264	P	Pn	06 56 58.0	-1.8
	comp=Z,79nm,1.5s						
AS31	Alice Springs	17.65	164		Pn	06 56 59.5	-1.9
ASAR	Alice Springs	17.65	164	P	Pn	06 56 58.5	-3.0
	comp=Z,0.6nm,0.3s,baz=339,slow=10.0,SNR=44						
ASAR				LR	LR	07 03 50.2	
	comp=Z,301nm,19.8s,baz=337,slow=37						
ASAR	Alice Springs	17.65	164	P	Pn	06 57 01.6	+0.1
PMG	Port Moresby	18.42	100	P	P	06 57 10.2	-0.4
	comp=Z,1.2nm,0.3s,baz=299,slow=16,SNR=6.2						
PMG				LR	LR	07 04 52.8	
	comp=Z,142nm,21.1s,baz=156,slow=39						
PMG	Port Moresby	18.42	100	P	P	06 57 10.5	-0.1
PMG				IAmb	IAmb	06 57 16.7	
	comp=Z,23nm,0.8s						
SBUM	Sibu	18.82	298	P	Pn	06 57 16.8	+1.1
KSM	Kuching	20.10	293	P	P	06 57 29.4	+0.3
CISI	Cisompet, Garu	20.81	266	P	Pn	06 57 38.9	-0.6
	comp=Z,3µmcomp=Z,46nm,0.8s						
LEM	Lembang	21.01	268	P	P	06 57 39.8	+0.7
	comp=Z,25nm,0.5s,baz=128,slow=17,SNR=4.8						
LEM				LR	LR	07 07 19.3	
	comp=Z,202nm,19.0s,baz=72,slow=41						
PPBI	Pangkal Pinang	22.99	280	P	P	06 58 01.8	+1.7
	comp=Z,45nm,1.1s						
KRVT	Keravat (AS076	23.26	86	LR	LR	07 08 16.9	
	comp=Z,63nm,20.6s,baz=254,slow=40						
FORT	Forrest	24.04	181	P	P	06 58 09.9	-0.1
MDSI	Maura Dua	24.57	274	P	P	06 58 15.0	0.0
	comp=Z,7.1nm,0.9s						
LWLI	Liwa	24.63	272	P	P	06 58 19.9	+4.1
MORW	Morawa	25.36	207	P	P	06 58 23.4	+1.3
MORW				IAmb	IAmb	06 58 27.4	
	comp=Z,19nm,1.2s						
GUMO	Guam	25.66	39	LR	LR	07 08 59.2	
	comp=Z,43nm,18.4s,baz=250,slow=38						
BBOO	Buckleboo	26.93	166	P	P	06 58 36.1	-0.2
STKA	Stephens Creek	27.84	156	P	P	06 58 44.7	+0.3
	comp=Z,5.1nm,0.8s,baz=311,slow=9.1,SNR=5.4						
STKA				LR	LR	07 10 34.6	
	comp=Z,275nm,18.0s,baz=342,slow=38						
STKA	Stephens Creek	27.84	156	P	P	06 58 44.8	+0.3
NWAO	Narrogin (SRO)	28.29	201	LR	LR	07 12 02.7	
	comp=Z,104nm,19.3s,baz=338,slow=41						
HNR	Honiara	30.99	97	LR	LR	07 13 03.6	
	comp=Z,82nm,18.6s,baz=261,slow=39						
RPSI	Rantau Prapat	31.20	286	P	P	06 59 13.8	-0.6
RPSI				IAmb	IAmb	06 59 17.2	
	comp=Z,7.7nm,0.7s						
PSI	Prapat	31.23	287	P	P	06 59 13.8	-1.1
	comp=Z,7.3nm,0.8s,baz=130,slow=2.8,SNR=6.1						
CMAR	Chiang Mai Arr	38.55	311	P	P	07 00 17.7	-0.1
	comp=Z,0.9nm,0.4s,baz=140,slow=7.6,SNR=4.9						
CMAR				LR	LR	07 19 15.8	
	comp=Z,37nm,18.0s,baz=80,slow=41						
KSRS	Korea Array	43.85	359	P	P	07 01 01.4	+0.3
	comp=Z,1.2nm,0.6s,baz=170,slow=8.9,SNR=4.1						
KSRS				LR	LR	07 20 52.1	
	comp=Z,11nm,18.9s,baz=167,slow=38						
HHC	Hu-ho-hao-te	49.81	343	eP	P	07 01 49.5	+1.7
USRK	Ussuriysk Ar.	50.67	3	P	P	07 01 54.4	+0.3
	comp=Z,1.6nm,0.6s,baz=175,slow=11,SNR=4.2						
USRK	Ussuriysk Ar.	50.67	3	P	P	07 01 54.6	+0.6
SONM	Songino Array	57.70	342	P	P	07 02 45.9	+0.5
	comp=Z,1.1nm,1.0s,baz=145,slow=5.3,SNR=3.6						
WMQ	Urumqi	62.41	328	eP	P	07 03 19.6	+1.8
PETK	Petropavlovsk-	64.35	19	P	P	07 03 31.1	+0.8
	comp=Z,1.6nm,0.7s,baz=205,slow=6.4,SNR=2.2						
PETK				LR	LR	07 26 30.4	
	comp=Z,24nm,21.9s,baz=248,slow=31						
KSH	Kashi	66.92	318	P	P	07 03 49.4	+2.1
KSH				pP	pwP	07 04 01.8	-0.6
KSH				PcP	PcP	07 04 17.6	+1.9
KSH				PcS		07 08 19.8	
KSH				S	S	07 12 39.8	+1.6
KSH	Kashi	66.92	318	SS	SS	07 16 56.1	-1.1
MK31	Makanchi Array	67.24	327	P	P	07 03 49.7	+0.6
MKAR	Makanchi Array	67.24	327	P	P	07 03 49.1	0.0
	comp=Z,0.9nm,0.7s,baz=126,slow=6.8,SNR=10						
MKAR	Makanchi Array	67.24	327	P	P	07 03 48.9	-0.2
MAKZ	Makanchi	67.42	327	P	P	07 03 52.8	+2.6
MAKZ				IAmb	IAmb	07 04 01.2	
	comp=Z,2.9nm,1.1s						
YAK	Yakutsk	68.45	0	P	P	07 03 56.6	+0.3
BOOM	Boomskoye usch	68.48	321	P	P	07 03 57.7	+0.6
BOOM				IAmb	IAmb	07 04 08.7	
	comp=Z,2.9nm,0.9s						
AAK	Ala-Archa	69.47	320	P	P	07 04 04.0	+0.8
	comp=Z,0.5nm,0.5s,baz=224,slow=10,SNR=2.3						
AAK	Ala-Archa	69.47	320	IAmb	IAmb	07 04 15.5	
	comp=Z,3.3nm,1.2s						
KBL	Kabul	69.59	310	P	P	07 04 04.3	+0.1
KBL				IAmb	IAmb	07 04 22.6	
	comp=Z,2.4nm,0.7s						
ZALV	Zalesovo Beam	70.71	334	P	P	07 04 10.2	-0.2
	comp=Z,0.6nm,0.4s,baz=172,slow=4.2,SNR=2.5						
ZALV	Zalesovo Beam	70.71	334	P	P	07 04 09.5	-0.9
KURBB	Kurchatov Arra	71.55	329	P	P	07 04 16.8	+1.2
	comp=Z,1.9nm,1.0s,baz=128,slow=5.1,SNR=11						
KURK	Kurchatov	71.56	329	P	P	07 04 16.0	+0.3
KURK				IAmb	IAmb	07 04 27.4	
	comp=Z,6.7nm,0.9s						
VNDA	Vanda	72.97	173	P	P	07 04 23.3	-0.4
	comp=Z,0.7nm,1.0s,baz=18,slow=3.2,SNR=1.9						
VNDA				LR	LR	07 35 49.8	
	comp=Z,56nm,19.9s,baz=247,slow=35						
BVAR	Borovoye Array	77.09	328	P	P	07 04 50.2	+2.3
	comp=Z,1.4nm,0.9s,baz=132,slow=4.4,SNR=6.8						
TIXI	Tiksi	78.11	0	P	P	07 04 53.3	+0.2
	comp=Z,1.3nm,0.5s,baz=188,slow=1.4,SNR=1.6						
TIXI	Tiksi	78.11	0	P	P	07 04 52.9	-0.2
TIXI				IAmb	IAmb	07 05 05.5	
	comp=Z,3.0nm,0.9s						
CPUP	Villa Florida	146.72	170	PKPbc	PKPbc	07 12 37.6	+0.5
	comp=Z,0.9nm,0.8s,baz=257,slow=2.5,SNR=3.0						
CPUP	Villa Florida	146.72	170		PKPbc	07 12 37.8	+0.6

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*IDC **21** 06:59:21.2±3.8, 20°.12S×70°.17W, h0^{km}, mb3.8/1, mb1 3.5/2, mb1mx3.3/23, mbtmp3.4/2, ML2.5/1, Error ellipse: s-maj=137.3km s-min=67.0km az=105.0*

*GUC **21** 06:59:23.0±0.9, 19°.96S×70°.82W, h32^{km}±5^{km}, ML3.5*

ISC 21 06:59:19.7±2.1, **19°.98S**±0°.04×**70°.84W**±0°.09, **h9**^{km}±11^{km}, **n13**, σ**0^{s}.99**/20, **1C, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.78	60	eP	Pn	06 59 36.6	-0.4
PSGC				iS	Sn	06 59 47.3	-1.5
TA01	Diego Aracena	0.85	133	iP	Pn	06 59 38.8	+1.0
TA01				iS	Sn	06 59 50.0	-0.4
TA01				IAML		06 59 53.0	
	comp=N,4µm,0.3s						
PATCX	Punta Patache	1.05	142	IAML		07 00 04.4	
	comp=E,957nm,0.3s						
PB11	IPOC Station P	1.14	79	eP	Pn	06 59 42.9	+0.9
PB11				iS	Sn	06 59 57.5	-0.2
PB11				IAML		07 00 01.6	
	comp=N,2µm,0.3s						
PB12	IPOC Station P	1.44	20	eP	Pn	06 59 47.5	+1.3
PB12				iS	Sb	07 00 06.3	+0.9
GO01	Chusmiza	1.58	79	eP	Pg	06 59 50.3	+0.3
GO01				iS	Sg	07 00 11.5	+0.9
PB08	IPOC Station P	1.59	96	eP	Pg	06 59 50.8	+0.5
PB08				iS	Sg	07 00 11.9	+0.9
PB08				IAML		07 00 15.2	
	comp=E,900nm,0.4s						
PB02	IPOC Station P	1.60	147	⇑iP	Pb	06 59 47.8	-1.7
PB02				iS	Sg	07 00 10.8	-0.3
PB02				IAML		07 00 19.6	
	comp=E,1µm,0.5s						
PB01	IPOC Station P	1.65	130	eP	Pg	06 59 51.4	0.0
PB01				iS	Sg	07 00 13.3	+0.5
PB01				IAML		07 00 17.8	
	comp=E,770nm,0.3s						
PB16	IPOC Station P	2.07	38	iS	Sg	07 00 24.9	-1.3
LPAZ	La Paz	4.49	35	Pn	Pn	07 00 28.2	-0.3
	comp=E,0.2nm,0.3s,baz=216,slow=4.2,SNR=5.3						
TORD	Torodi Ar. Bea	78.57	71	P	P	07 11 22.1	-0.1
	comp=E,0.5nm,0.6s,baz=258,slow=4.7,SNR=3.8						
MKAR	Makanchi Array	145.41	33	PKPbc	PKPdf	07 18 59.6	+1.3
	comp=E,0.7nm,0.6s,baz=324,slow=4.7,SNR=7.4						

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*IDC **21** 07:04:32.5±4.1, 21°.07S×70°.79W, h0^{km}, mb3.9/1, mb1 3.6/2, mb1mx3.4/22, mbtmp3.5/2, ML2.9/1, Error ellipse: s-maj=149.2km s-min=68.7km az=106.0*

*GUC **21** 07:04:37.8±0.7, 20°.15S×70°.93W, h38^{km}±2^{km}, ML3.1*

ISC 21 07:04:35.4±2.3, **20°.12S**±0°.03×**70°.9W**±0°.1, **h11**^{km}±12^{km}, **n13**, σ**0^{s}.96**/24, **1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA01	Diego Aracena	0.82	123	eP	Pn	07 04 53.2	+0.2
TA01				iS	Sn	07 05 04.3	-0.9
TA01				IAML		07 05 06.2	
	comp=N,2µm,0.4s						
PSGC	Pisagua	0.91	55	eP	Pn	07 04 54.9	+0.6
PSGC				iS	Sn	07 05 08.3	+0.8
PATCX	Punta Patache	1.00	135	eP	Pn	07 04 55.7	+0.1
PATCX				iS	Sn	07 05 09.0	-0.8
PATCX				IAML		07 05 13.4	
	comp=E,694nm,0.5s						
PB11	IPOC Station P	1.23	74	eP	Pg	07 05 00.1	+0.9
PB11				iS	Sg	07 05 16.6	+1.3
PB11				IAML		07 05 19.2	
	comp=N,995nm,0.5s						
PB02	IPOC Station P	1.53	142	eP	Pb	07 05 04.2	+0.2
PB02				iS	Sg	07 05 24.5	-0.3
PB02				IAML		07 05 28.1	
	comp=E,1µm,0.5s						
PB12	IPOC Station P	1.59	20	⇓eP	Pb	07 05 05.5	+0.5
PB12				iS	Sb	07 05 25.7	+0.5
PB12				IAML		07 05 36.6	
	comp=N,316nm,0.6s						
PB01	IPOC Station P	1.62	125	eP	Pb	07 05 05.6	+0.1
PB01				iS	Sg	07 05 26.6	-1.2
PB01				IAML		07 05 31.0	
	comp=N,510nm,0.5s						
PB08	IPOC Station P	1.66	91	eP	Pg	07 05 06.9	-0.4
PB08				iS	Sg	07 05 28.8	0.0
PB08				IAML		07 05 34.0	
	comp=N,229nm,0.4s						
GO01	Chusmiza	1.68	75	eP	Pg	07 05 07.3	-0.4
GO01				iS	Sg	07 05 30.5	+0.9
PB03	IPOC Station P	2.21	151	eP	Pn	07 05 13.6	+1.3
PB03				iS	Sn	07 05 39.1	-0.6
PB03				IAML		07 05 51.7	
	comp=E,141nm,0.6s						
LPAZ	La Paz	4.63	35	Pn	Pb	07 05 54.7	-2.5
	comp=E,0.2nm,0.3s,baz=211,slow=7.8,SNR=4.1						
LPAZ				Sn	Sg	07 07 03.1	-1.3
	comp=E,0.2nm,0.3s,baz=7.0,slow=17,SNR=1.0						
TORD	Torodi Ar. Bea	78.68	71	P	P	07 16 38.2	-0.1
	comp=E,0.3nm,0.5s,baz=248,slow=4.2,SNR=3.8						
MKAR	Makanchi Array	145.56	33	PKPbc	PKPdf	07 24 14.3	+0.4
	comp=E,0.5nm,0.7s,baz=332,slow=3.9,SNR=3.2						

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*IDC **21** 07:14:01.0±1.3, 32°.55S×178°.48W, h0^{km}, mb4.3/3, mb1 4.5/4, mb1mx4.0/25, mbtmp4.3/4, ML3.9/1, MS3.7/4, Ms1 3.7/4, ms1mx3.2/33, Error ellipse: s-maj=36.5km s-min=30.6km az=91.0*

*NEIC **21** 07:14:04.6±2.7, 32°.9S±0°.1×177°.8W±0°.2, h35^{km}±1^{km}, mb4.8/7, Error ellipse: s-maj=27.6km s-min=20.7km az=131.0*

ISC 21 07:14:01.9±0.8, **32°.66S**±0°.06×**177°.9W**±0°.1, **h20**^{km}, **n60**, σ**1^{s}.52**/63, **mb4.6**/7, **MS3.9**/4, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.39	359	P	Pn	07 14 53.4	-0.2
GLKZ				S	Sn	07 15 30.9	-2.3
WMGZ	Waiomatatini S	5.98	210	P	Pn	07 15 29.2	0.0
WMGZ				S	Sn	07 16 37.2	+0.2
HAZ	Te Kaha	6.21	214	P	Pn	07 15 30.2	-2.1
HAZ				S	Sn	07 16 43.9	+1.3
PUZ	Puketiti	6.26	209	P	Pn	07 15 30.9	-2.1
PUZ				S	Sn	07 16 42.9	-1.1
RUGZ	Raukumara Rang	6.42	213	P	Pn	07 15 35.6	+0.2
TWGZ	Tauwhareparae	6.46	210	P	Pn	07 15 36.1	+0.2
TWGZ				S	Sn	07 16 49.3	+0.2
CNGZ	Carnagh Statio	6.63	208	P	Pn	07 15 36.7	-1.5
CNGZ				S	Sn	07 16 53.8	+0.7
KUZ	Kuaotunu	6.67	231	P	Pn	07 15 38.5	-0.2
WHRZ	Whale Island	6.68	218	P	Pn	07 15 42.2	+3.3
TKGZ	Te Karaka	6.74	210	P	Pn	07 15 38.6	-1.0
MWZ	Matawai	6.79	212	P	Pn	07 15 39.7	-0.7
URZ	Urewera	6.93	215	Pn	Pn	07 15 40.7	-1.5
	2.5nm,0.3s,baz=342,slow=1.0,SNR=14						
URZ				Sn	Sn	07 16 57.8	-2.6
	3.3nm,0.3s,baz=92,slow=22,SNR=6.8						
URZ	Urewera	6.93	215		Pn	07 15 41.4	-0.9
URZ	Urewera	6.93	215	P	Pn	07 15 41.3	-0.9
RIGZ	Rimuhau	7.00	209	P	Pn	07 15 42.7	-0.6
SNGZ	Shannon Statio	7.24	211	P	Pn	07 15 45.9	-0.7
MUGZ	Murupara	7.26	215	P	Pn	07 15 46.1	-0.8
RAHZ	Arahi	7.47	212	P	Pn	07 15 49.2	-0.5
MTHZ	Maungataniwha	7.53	213	P	Pn	07 15 50.2	-0.3
OUZ	Omahuta	7.54	248		Pn	07 15 51.9	+1.3
OUZ	Omahuta	7.54	248	P	Pn	07 15 52.8	+2.2
NMHZ	Naumai	7.74	212	P	Pn	07 15 52.6	-0.8
BKZ	Black Stump Fm	7.94	214		Pn	07 15 56.2	0.0
BKZ	Black Stump Fm	7.94	214	P	Pn	07 15 54.6	-1.6
MCHZ	McNeill Hill	8.07	211	P	Pn	07 15 56.1	-1.9
KWHZ	Kaweka Forest	8.18	213	P	Pn	07 15 58.2	-1.2
KAHZ	Kahuranaki	8.29	209	P	Pn	07 15 58.9	-2.1
BHHZ	Black Hill Sta	8.40	214	P	Pn	07 16 02.1	-0.4
BFZ	Birch Farm	9.29	209	Pn	Pn	07 16 12.1	-2.6
BFZ	Birch Farm	9.29	209	P	Pn	07 16 11.7	-3.0
TUWZ	Tuamarina	10.92	214	Pn	Pn	07 16 36.3	-0.7
BSWZ	Blackbirch Sta	11.18	214	Pn	Pn	07 16 42.5	+2.1
THZ	Tophouse	11.68	216	Pn	Pn	07 16 47.4	0.0
KHZ	Kahutara	11.88	212	Pn	Pn	07 16 50.1	+0.1
MCQ	Macquarie Isla	27.30	210	P	P	07 19 44.2	-0.7
PPT	Papeete	29.58	66	LR	LR	07 30 50.0	
	comp=Z,38nm,18.7s,baz=268,slow=34						
STKA	Stephens Creek	34.14	260	LR	LR	07 33 47.4	
	comp=Z,219nm,18.2s,baz=111,slow=35						
AS31	Alice Springs	43.14	269	P	P	07 22 00.6	-0.7
ASAR	Alice Springs	43.14	269	P	P	07 21 59.6	-1.7
	4.3nm,0.8s,baz=113,slow=7.9,SNR=29						
ASAR	Alice Springs	43.14	269	P	P	07 22 00.0	-1.3
WR0	Warramunga Arr	44.16	274	P	P	07 22 08.8	-0.6
WR0				IAmb	IAmb	07 22 20.8	
	comp=Z,12nm,1.1s						
WB2	Warramunga Arr	44.33	274	P	P	07 22 09.4	-1.4
WB2				IAmb	IAmb	07 22 23.0	
	comp=Z,21nm,1.3s						
WRA	Warramunga Arr	44.34	274	P	P	07 22 09.0	-1.9
	comp=Z,2.5nm,0.5s,baz=115,slow=8.0,SNR=14						
WRA	Warramunga Arr	44.34	274	P	P	07 22 09.4	-1.5
WB0	Warramunga Arr	44.37	275	P	P	07 22 09.7	-1.4
WB0				IAmb	IAmb	07 22 21.8	
	comp=Z,16nm,1.2s						
NWAO	Narrogin (SRO)	53.73	251	P	P	07 23 20.2	-2.6
NWAO				IAmb	IAmb	07 23 21.0	
	comp=Z,38nm,1.3s						
QSPA	South Pole Qui	57.46	180	P	P	07 23 53.6	+4.4
	comp=Z,3.6nm,1.1s,baz=66,slow=3.0,SNR=2.8						
LPIG	La Paz	85.64	58	LR	LR	08 00 32.0	
	comp=Z,48nm,18.4s,baz=328,slow=32						
ANMO	Albuquerque	94.90	51	LR	LR	08 00 18.3	
	comp=Z,50nm,20.5s,baz=28,slow=29						
MKAR	Makanchi Array	119.29	309	PKP	PKiKP	07 32 49.9	+0.5
	comp=Z,0.7nm,0.9s,baz=57,slow=4.5,SNR=3.9						
MKAR	Makanchi Array	119.29	309		PKiKP	07 32 51.5	+2.0
FIA1	FINESS Array S	147.29	339	PKPbc	PKPbc	07 33 44.0	+0.9
FINES	FINESS Array B	147.29	339	PKPbc	PKPab	07 33 45.2	+0.2
	comp=Z,5.2nm,0.7s,baz=59,slow=3.3,SNR=12						
FINES	FINESS Array B	147.29	339		PKPab	07 33 44.2	-0.8
NB2	NORSAR Subarra	150.99	351	PKP	PKiKP	07 33 53.9	+0.7
	comp=Z,3.8nm,1.2s,baz=17,slow=2.6						
BRTR	Keskin Array B	153.70	295	PKPbc	PKPbc	07 33 59.0	-0.5
	comp=Z,0.9nm,0.9s,baz=108,slow=4.0,SNR=5.0						
BRTR	Keskin Array B	153.70	295		PKPbc	07 33 59.6	+0.1
ROSA	Rosais	154.67	68	PKPdf	PKPdf	07 33 53.7	+0.8
TORD	Torodi Ar. Bea	160.57	179	PKPab	PKPab	07 34 43.9	+1.8
	comp=Z,0.8nm,0.9s,baz=116,slow=3.4,SNR=2.7						
TORD	Torodi Ar. Bea	160.57	179		PKPab	07 34 41.8	-0.3

TAP 21 07:14:14.3, 24°.84N×122°.10E, h8^{km}±1^{km}, ML2.6, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.19	329	iP	Pg	07 14 17.9	-0.3
	baz=330						
TWB1				S	Sg	07 14 21.1	+0.2
	baz=330						
NTC	Toucheng	0.24	272	eP	Pg	07 14 19.6	+0.5
	baz=272						
TIPB	Shuangxi	0.28	297	P	Pg	07 14 20.2	+0.4
	baz=297						
TIPB				eS	Sg	07 14 23.3	-0.2
	baz=297						
EOS1	EOS1	0.29	175	P	Pg	07 14 20.0	-0.1
	baz=174						
EOS1				eS	Sg	07 14 24.9	+0.9
	baz=174						
TWC	Suao	0.33	224	P	Pg	07 14 20.4	-0.3
	baz=222						
TWC				eS	Sg	07 14 24.9	-0.1
	baz=222						
TWE	Neicheng	0.41	253	eP	Pg	07 14 22.2	-0.1
	baz=251						
SLBB	Yuanshan	0.43	258	eP	Pg	07 14 22.4	-0.3
	baz=257						
ENTT	Nioudou	0.53	247	eP	Pg	07 14 24.8	+0.4
	baz=246						
ENA	Nanau	0.53	218	eP	Pg	07 14 24.8	+0.3
	baz=217						
ENA				S	Sg	07 14 31.7	+0.4
	baz=217						
NWLT	Wulai	0.55	263	eP	Pb	07 14 25.8	-0.2
	baz=262						

JMA 21 07:14:42.7±0.1, **24°.21N×123°.77E, h15**^{km}±2^{km}, **M1.6, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.13	344	P	Pg	07 14 46.4	0.0
IRIF				S	Sg	07 14 49.1	+0.4
HATJ	Hateruma jima	0.16	168	P	Pg	07 14 46.5	-0.2
HATJ				S	Sg	07 14 49.4	+0.1
JKRS	Kuro-shima	0.22	83	P	Pg	07 14 47.9	+0.2
JKRS				S	Sb	07 14 51.8	-0.4
JIJ	Ishigaki jima	0.37	66	P	Pg	07 14 50.2	-0.1
JIJ				S	Sg	07 14 55.4	-0.1
JISG	Ishigakijimahi	0.62	53	P	Pg	07 14 55.0	+0.1
JISG				eS	Sg	07 15 03.1	0.0
JTJ	Tarama	0.95	63	P	Pb	07 15 00.1	-0.8
JTJ				S	Sg	07 15 14.1	+0.5

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*BJI **21** 07:31:39.4±0.0, 7°.87N×125°.88E, h58^{km}, mB5.1/24, mb4.7/36, Ms4.5/5, Ms7 4.3/6*

*MAN **21** 07:31:43.4, 8°.41N×125°.70E, h57^{km}, mb5.3, ML4.3, MS4.5*

MAN Intensity IV - Talacogon Agusan del Sur; Intensity III - San Francisco Agusan del Sur; Rosario, Agusan del Sur; Intensity II - Malaybalay Bukidnon; Bayugan City Agusan del Sur; Guingoog Misamis Oriental; Intensity I - Manolo Fortich Bukidnon; Mambajao Camiguin.

*DJA **21** 07:31:44.4±0.6, 9°N±4°×12°6E±°, h51^{km}±5^{km}, M4.9/30, mb4.8/30, mB5.4/7, MLv5.1/3, Mw(mB)4.9/7*

*IDC **21** 07:31:45.0±1.7, 8°.42N×125°.83E, h62^{km}±16^{km}, mb3.9/22, mb1 4.1/24, mb1mx3.9/57, mbtmp4.3/24, MS3.4/17, Ms1 3.4/17, ms1mx3.2/51, Error ellipse: s-maj=22.5km s-min=10.8km az=74.0*

*NEIC **21** 07:31:45.1±1.4, 8°.39N±0°.07×125°.9E±0°.1, h64^{km}±6^{km}, mb4.7/32, Error ellipse: s-maj=14.9km s-min=10.4km az=85.0*

ISC 21 07:31:45.1±0.7, **8°.44N**±0°.03×**125°.75E**±0°.05, **h58**^{km}±7^{km}, **n140**, σ**1^{s}.67**/154, **mb4.6**/44, **MS3.6**/16, **6C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	0.55	346	eP	Pn	07 31 56.9	-0.6
BUTP				eS	Sn	07 32 09.2	+2.8
BUKP	Musuan	0.88	231	eP	Pn	07 32 00.2	-1.4
BUKP				eS	Sn	07 32 13.2	-0.5
CGP	Cagayan de Oro	1.05	271	⇑iP	Pn	07 32 01.9	-1.9
CGP				iS	Sn	07 32 15.4	-2.2
SCPH	Surigao	1.36	349	eP	Pn	07 32 06.7	-1.3
SCPH				eS	Sn	07 32 23.4	-1.7
DMPH	Davao City--Mi	1.36	190	⇑eP	Pn	07 32 07.0	-1.0
DMPH				eS	Sn	07 32 29.8	+4.7
DAV	Davao City (W)	1.37	187	P	Pn	07 32 07.5	-0.5
	156nm,0.3s,baz=13,slow=1.7,SNR=14						
DAV				S	Sn	07 32 25.3	+0.2
	338nm,0.3s,baz=116,slow=21,SNR=4.7						
DAV	Davao City (W)	1.37	187	P	Pn	07 32 09.4	+1.3
DAV	Davao City (W)	1.37	187		Pn	07 32 07.3	-0.7
DAV				Sn	Sn	07 32 24.8	-0.3
MATI	Mati	1.56	161	eP	Pn	07 32 10.8	+0.1
MATI				eS	Sn	07 32 31.2	+1.4
KCP	Kidapawan	1.56	205	⇑eP	Pn	07 32 09.6	-1.1
KCP				iS	Sn	07 32 29.2	-0.7
MSLP	Maasin	1.91	332	eP	Pn	07 32 13.2	-2.2
MSLP				eS	Sn	07 32 36.6	-1.6
CTBH	Cotabato--PC H	1.92	231	⇓eP	Pn	07 32 14.3	-1.2

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TBP   Tagbilaran          2.25 304  eP      Pn      07 32 19.1  -0.9
TBP                                 i S     Sn      07 32 46.2  -0.4
SKMP  Bagumbayan, Su      2.25 212  eP      Pn      07 32 17.0  -3.0
DDMP  Don Marcelino,      2.31 181  eP      Pn      07 32 17.3  -3.6
DDMP                                eS      Sn      07 32 47.0  -1.3
DCPH  Dipolog City        2.38 274⇑eP      Pn      07 32 21.3  -0.5
PAGZ  Pagadian            2.42 256  eP      Pn      07 32 20.5  -1.8
PAGZ                                eS      Sn      07 32 54.4  +3.6
LLP   Lapu-Lapu           2.57 317⇓eP      Pn      07 32 24.0  -0.4
LLP                                 eS      Sn      07 32 53.8  -0.7
SNPH  Sibulan             2.65 290⇑iP      Pn      07 32 24.6  -0.8
SNPH                                i S     Sn      07 32 54.2  -2.3
OCLP  Ormoc               2.83 337  eP      Pn      07 32 27.5  -0.5
OCLP                                eS      Sn      07 32 57.4  -3.6
CNP   Catarman            4.19 345  eP      Pn      07 32 47.5  +0.9
CNP                                 eS      Sn      07 33 36.1  +1.8
RCP   Roxas               4.29 317⇑eP      Pn      07 32 47.9  -0.1
PVCP  Virac               5.36 343  eP      Pn      07 33 05.1  +2.4
PVCP                                eS      Sn      07 34 05.5  +2.4
TGY   Tagaytay City       7.35 320  LR      LR      07 36 29.2
      comp=Z,589nm,22.0s,baz=124,slow=38
TNTI  Ternate             7.78 168  P       Pn      07 33 36.0  +0.2
      0.6nm171nm,1.0s
TNTI  Ternate             7.78 168  Pn      Pn      07 33 35.4  -0.4
MRSI  Marisa              8.77 206  P       Pn      07 33 48.9  -0.5
LBMI  Labuha              9.18 169  P       Pn      07 33 55.1  +0.1
      2μm81nm,0.9s
KKM   Kota Kinabalu       9.76 257  Pn      Pn      07 34 04.7  +1.7
LUWI  Luwuk               9.87 198  P       Pn      07 34 06.8  +2.4
      88nm,1.1s
LUWI  Luwuk               9.87 198          Pn      07 34 06.8  +2.4
SWI   Sorong             10.74 149  P       Pn      07 34 16.7  +0.3
      66nm,0.8s
SIJI  Sorong             10.75 149  P       Pn      07 34 15.3  -1.2
      3.7nm,0.3s,baz=352,slow=4.7,SNR=11
SIJI                                LR      LR      07 38 17.3
      comp=Z,102nm,21.5s,baz=351,slow=37
NLAI  Namlea             11.67 173  P       Pn      07 34 25.7  -3.4
      76nm,1.0s
FAKI  Fak Fak            13.01 150  P       Pn      07 34 48.0  +0.7
      31nm,1.0s
FAKI  Fak Fak            13.01 150          Pn      07 34 46.2  -1.1
BKB   Balikpapan         13.07 223  Pn      Pn      07 34 50.2  +2.1
SPSI  Sidrap Palu        13.69 206  P       P       07 35 13.5   +10
BNSI  Bone               13.94 204  P       P       07 35 03.3  -3.0
      56nm,1.6s
KAPI  Kappang            14.64 204  P       Pn      07 35 09.5  +0.4
      0.3nm,0.3s,baz=20,slow=7.1,SNR=17
KAPI                                LR      LR      07 41 13.7
      comp=Z,83nm,21.8s,baz=30,slow=39
SBUM  Sibu               14.72 247          Pn      07 35 10.5  +0.3
BKSI  Bulukumba          14.78 203  P       Pn      07 35 12.2  +1.3
      15nm,1.2s
SOEI  Soe                18.13 185  P       Pn      07 35 54.7  +1.5
      66nm,0.8s
SOEI  Soe                18.13 185  P       P       07 35 52.2  -0.6
SOEI                                IAmb    IAmb    07 36 09.6
      comp=Z,83nm,1.1s
GUMO  Guam               19.44  73  LR      LR      07 44 38.1
      comp=Z,24nm,18.3s,baz=194,slow=40
MTN   Manton Dam         21.80 166  P       P       07 36 31.2  -1.4
MTN                                 IAmb    IAmb    07 36 34.3
      comp=Z,77nm,1.2s
KNRA  Kununurra          24.14 173  P       P       07 36 54.8  -1.1
NJ2   Nanjing            24.36 346  eP      P       07 36 58.9  +1.1
NJ2                                 pmax    pmax
      comp=Z,15nm,0.5s
WHN   Wuhan              24.45 336  P       P       07 37 03.9  +5.3
IPM   Ipoh               24.88 262          P       07 37 02.2  -0.6
KULM  Kulim              25.12 264  P       P       07 37 04.5  -0.4
KULM                                IAmb    IAmb    07 37 06.0
      comp=Z,17nm,0.9s
GYA   Guiyang            25.49 317  eP      P       07 37 07.1  -1.2
GYA                                 pP      pP      07 37 23.4  +0.9
GYA                                 PP      PnPn    07 37 52.0  +5.6
GYA                                 S       S       07 41 32.5  +0.8
GYA                                 sS      sS      07 41 55.8  -0.2
GYA                                 pmax    pmax
      comp=Z,10.0nm,0.8s
GYA                                 pmax    pmax
      comp=Z,110nm,4.8s
PBKT  Sadao Pong         25.49 291  P       P       07 37 08.3   0.0
BKNI  Bangkinang         25.91 253  P       P       07 37 12.4  +0.3
FITZ  Fitzroy Crossi     26.36 180  P       P       07 37 14.3  -1.8
      comp=Z,22nm,1.0s,baz=20,slow=6.2,SNR=20
FITZ  Fitzroy Crossi     26.36 180  P       P       07 37 13.9  -2.2
FITZ                                IAmb    IAmb    07 37 17.1
      comp=Z,31nm,1.1s
PSI   Prapat             27.27 260  LR      LR      07 49 18.8
      comp=Z,43nm,20.8s,baz=174,slow=38
PMG   Port Moresby       27.72 129  LR      LR      07 49 33.7
      comp=Z,39nm,19.8s,baz=336,slow=39
CMAR  Chiang Mai Arr     27.88 294  P       P       07 37 28.7  -1.1
      comp=Z,1.1nm,0.3s,baz=121,slow=7.2,SNR=8.7
CMAR                                LR      LR      07 48 12.2
      comp=Z,55nm,20.2s,baz=82,slow=35
CMAR  Chiang Mai Arr     27.88 294  P       P       07 37 29.4  -0.4
KCSI  Kotacane, Aceh     28.25 262  P       P       07 37 32.4  -0.7
      comp=Z,8.8nm,0.8s
KSRS  Korea Array        28.96   4  P       P       07 37 38.2  -0.9
      comp=Z,0.4nm,0.3s,baz=185,slow=12,SNR=1.8
KSRS                                LR      LR      07 48 27.2
      comp=Z,36nm,21.8s,baz=211,slow=35
KRVT  Keravat (AS076     29.10 115  LR      LR      07 47 02.4
      comp=Z,16nm,21.9s,baz=301,slow=32
WB0   Warramunga Arr     29.29 163  P       P       07 37 39.9  -2.4
WB0                                 IAmb    IAmb    07 37 46.5
      comp=Z,16nm,1.1s
WRAB  Tennant Creek      29.43 163  P       P       07 37 41.0  -2.5
WRA   Warramunga Arr     29.44 163  P       P       07 37 41.4  -2.2
      comp=Z,11nm,0.8s,baz=55,slow=9.9,SNR=18
WRA   Warramunga Arr     29.44 163  P       P       07 37 42.2  -1.4
WB2   Warramunga Arr     29.44 163  P       P       07 37 41.6  -2.0
WB2                                 IAmb    IAmb    07 37 47.2
      comp=Z,13nm,1.0s
WR0   Warramunga Arr     29.51 163  P       P       07 37 42.2  -2.0
WR0                                 IAmb    IAmb    07 37 46.0
      comp=Z,12nm,0.9s
CD2   Chengdu            30.36 320  P       P       07 37 52.1  +0.4
CD2                                 pmax    pmax
      comp=Z,30nm,0.5s
AS31  Alice Springs      32.88 166  P       P       07 38 10.9  -3.0
ASAR  Alice Springs      32.88 166  P       P       07 38 12.8  -1.1
      comp=Z,4.4nm,0.8s,baz=340,slow=6.7,SNR=48
ASAR  Alice Springs      32.88 166  P       P       07 38 12.5  -1.4
LZH   Lanzhou            34.01 327  eP      P       07 38 27.3  +3.5
LZH                                 pP      pP      07 38 39.0  +0.7
LZH                                 sP      sP      07 38 45.3  +0.2
LZH                                 pmax    pmax
      comp=Z,14nm,1.3s
LZH                                 pmax    pmax
      comp=Z,59nm,5.4s
LZH                                 LR      LR
      comp=Z,260nm,15.2s
LZH                                 LR      LR
      comp=Z,210nm,14.4s
LZH                                 LR      LR
      comp=Z,310nm,16.8s
HHC   Hu-ho-hao-te       34.66 341  eP      P       07 38 30.1  +0.8
HHC                                 pmax    pmax
      comp=Z,89nm,0.8s
HHC                                 pmax    pmax
      comp=Z,310nm,4.4s
USA0B Ussuriysk Arra     36.04   8  P       P       07 38 40.5  -0.5
USA0B                               IAmb    IAmb    07 38 56.3
      comp=Z,7.7nm,0.9s
USRK  Ussuriysk Ar.      36.04   8  P       P       07 38 39.7  -1.3
      comp=Z,3.4nm,0.7s,baz=185,slow=6.4,SNR=7.0
USRK  Ussuriysk Ar.      36.04   8  P       P       07 38 39.2  -1.8
GTA   Gaotai             38.62 327  P       P       07 39 03.4  +0.4
GTA                                 pP      pP      07 39 17.6  -0.1
GTA                                 sP      sP      07 39 23.9  -0.6
GTA                                 pmax    pmax
      comp=Z,10.0nm,1.0s
LSA   Lhasa              38.71 308  P       P       07 39 02.4  -2.0
FORT  Forrest            39.05 177  P       P       07 39 05.5  -1.0
KLR   Kul'dur            40.97   6  P       P       07 39 20.6  -1.7
      comp=Z,0.9nm,0.6s,baz=171,slow=6.3,SNR=4.4
BBOO  Buckleboo          42.17 167  P       P       07 39 32.0  -0.3
SONM  Songino Array      42.56 341  P       P       07 39 34.8  -0.6
      comp=Z,0.5nm,0.5s,baz=149,slow=7.5,SNR=2.1
STKA  Stephens Creek     42.85 160  P       P       07 39 37.5  -0.3
      comp=Z,15nm,0.7s,baz=334,slow=8.0,SNR=18
STKA                                LR      LR      07 58 09.7
      comp=Z,48nm,19.9s,baz=12,slow=37
STKA  Stephens Creek     42.85 160  P       P       07 39 37.5  -0.3
WMQ   Urumqi             48.37 323  eP      P       07 40 23.5  +2.2
WMQ                                 pmax    pmax
      comp=Z,6.0nm,0.7s
WMQ                                 pmax    pmax
      comp=Z,160nm,4.1s
WMQ                                 LR      LR
      comp=Z,1μm,23.5s
CAN   Canberra           48.74 155  P       P       07 40 25.6  +1.4
TOO   Toolangi           49.35 159  P       P       07 40 30.1  +1.3
TOO                                 IAmb    IAmb    07 40 30.8
      comp=Z,18nm,1.0s
PETK  Petropavlovsk-     51.51  24  P       P       07 40 44.7  -0.3
      comp=Z,1.5nm,0.8s,baz=227,slow=2.3,SNR=4.1
PETK  Petropavlovsk-     51.51  24  P       P       07 40 45.1  +0.2
MK31  Makanchi Array     53.19 324  P       P       07 40 58.0  +0.5
MKAR  Makanchi Array     53.19 324  P       P       07 40 57.8  +0.3
      comp=Z,4.8nm,0.7s,baz=125,slow=8.2,SNR=56
MKAR                                LR      LR      08 05 41.7
      comp=Z,46nm,18.8s,baz=51,slow=38
MKAR  Makanchi Array     53.19 324  P       P       07 40 57.7  +0.2
MAKZ  Makanchi           53.38 324  P       P       07 40 59.0  +0.1
MAKZ                                IAmb    IAmb    07 41 16.3
      comp=Z,12nm,1.2s
KSH   Kashi              54.09 313  P       P       07 41 06.5  +2.1
KSH                                 pP      sP      07 41 23.3  -3.1
KSH                                 PP      PP      07 43 11.3  +4.9
KSH                                 PcS     PcS     07 46 08.8  +0.6
KSH                                 S       S       07 48 39.3  +2.4
KSH                                 SS      SS      07 52 24.8  +5.6
KSH                                 pmax    pmax
      comp=Z,86nm,1.6s
KSH                                 pmax    pmax
      comp=Z,370nm,8.9s
KSH                                 LR      LR
      comp=Z,200nm,9.1s
KSH                                 LR      LR
      comp=Z,210nm,11.4s
NIL   Nilore             54.36 305  P       P       07 41 06.1  -0.2
ULHL  Ulahol             54.93 316  P       P       07 41 11.0  +0.5
      SNR=10
BOOM  Boomskoye usch     55.23 317  P       P       07 41 12.8  +0.2
BOOM                                IAmb    IAmb    07 41 14.0
      comp=Z,12nm,1.3s
KZA   Kyzart             55.55 316  P       P       07 41 16.1  +0.9
      SNR=10
KBK   Karagaybulak       55.97 316  P       P       07 41 18.8  +0.8
      SNR=11
ZALV  Zalesovo Beam      55.99 332  P       P       07 41 16.7  -0.9
      comp=Z,0.5nm,0.3s,baz=108,slow=9.3,SNR=2.0
ZALV                                LR      LR      08 05 32.5
      comp=Z,72nm,18.1s,baz=62,slow=36
ZALV  Zalesovo Beam      55.99 332  P       P       07 41 17.3  -0.3
UCH   Uchtor             56.11 316  P       P       07 41 20.3  +1.0
      SNR=28
CHMS  Chumysh            56.24 317  P       P       07 41 19.7   0.0
      SNR=5.2
AAK   Ala-Archa          56.28 316  P       P       07 41 20.3  +0.2
      comp=Z,2.5nm,0.6s,baz=138,slow=6.7,SNR=14
AAK   Ala-Archa          56.28 316  P       P       07 41 20.6  +0.5
USP   Ospenovka          56.51 317  P       P       07 41 21.9  +0.3
      SNR=8.0
AML   Almayashu          56.64 315  P       P       07 41 23.5  +0.5
      SNR=22
EKS2  Erkin-Say          56.78 316  P       P       07 41 24.4  +0.7
      SNR=13
ARSB  Arslanbob          56.86 314  P       P       07 41 24.5  +0.2
ARSB                                IAmb    IAmb    07 41 25.4
      comp=Z,8.1nm,0.8s
KURK  Kurchatov          57.29 326  P       P       07 41 27.3  +0.4
KURK                                IAmb    IAmb    07 41 41.8
      comp=Z,10nm,1.1s
KURBB Kurchatov Arra     57.30 326  P       P       07 41 26.9  -0.1
      comp=Z,2.0nm,0.7s,baz=124,slow=6.7,SNR=22
KBL   Kabul              57.96 306  P       P       07 41 32.5  +0.3
KBL                                 IAmb    IAmb    07 41 33.3
      comp=Z,4.9nm,0.8s
KKAR  Karatay Array      59.18 316  P       P       07 41 40.7  +0.3
BVAR  Borovoye Array     62.89 326  P       P       07 42 04.8  -0.4
      comp=Z,4.6nm,0.9s,baz=111,slow=8.1,SNR=22
BRVK  Borovoye           62.96 326  P       P       07 42 05.5  -0.1
BRVK                                IAmb    IAmb    07 42 06.3
      comp=Z,10nm,0.9s
ABKAR Akbulak array      67.93 320  P       P       07 42 37.0  -0.9
AKTO  Aktyubinsk         69.41 321  P       P       07 42 46.4  -0.7
      comp=Z,2.3nm,0.7s,baz=93,slow=10.0,SNR=6.4
AKTO                                LR      LR      08 15 00.3
      comp=Z,84nm,19.2s,baz=105,slow=37
ARU   Arti               70.47 327  LR      LR      08 18 32.0
      comp=Z,43nm,18.1s,baz=140,slow=40
KIRV  Kirov              75.73 328  LR      LR      08 22 01.9
      comp=Z,74nm,18.1s,baz=247,slow=40
MLY   Manley             79.66  25  P       P       07 43 46.5  +0.2
ILAR  Eielson Array      81.30  26  P       P       07 43 54.8  -0.3
      comp=Z,0.3nm,0.7s,baz=256,slow=6.1,SNR=4.2
ILAR  Eielson Array      81.30  26  P       P       07 43 54.1  -1.0
BMAR  Burnt Mountain     82.15  23  P       P       07 43 59.7  +0.2
ARCES ARCESS Array B     85.73 340  P       P       07 44 18.0  +0.3
      comp=Z,1.6nm,0.8s,baz=79,slow=4.7,SNR=1.5
ARCES ARCESS Array B     85.73 340  P       P       07 44 17.3  -0.4
BRTR  Keskin Array B     86.30 309  P       P       07 44 20.3  -1.0
      comp=Z,0.4nm,0.5s,baz=86,slow=5.7,SNR=2.5
BRTR                                LR      LR      08 28 60.0
      comp=Z,13nm,19.1s,baz=158,slow=40
BRTR  Keskin Array B     86.30 309  P       P       07 44 20.0  -1.3
FINES FINESS Array B     87.25 332  P       P       07 44 25.2  -0.1
      comp=Z,2.4nm,0.8s,baz=31,slow=3.2,SNR=1.7
FINES FINESS Array B     87.25 332  P       P       07 44 24.9  -0.4
VNDA  Vanda              88.19 173  P       P       07 44 28.7  -0.7
      comp=Z,4.1nm,0.9s,baz=313,slow=5.9,SNR=12
VNDA  Vanda              88.19 173  P       P       07 44 28.6  -0.7
VNDA                                IAmb    IAmb    07 44 30.3
      comp=Z,6.9nm,1.2s
NOA   NORSAR Array B     94.17 334  LR      LR      08 31 05.3
      comp=Z,56nm,18.6s,baz=60,slow=38
YKA   Yellowknife Ar     95.63  24  P       P       07 45 03.5  -0.6
      comp=Z,0.2nm,0.7s,baz=69,slow=38,SNR=3.8
TORD  Torodi Ar. Bea    120.45 291  PKP     PKPdf   07 50 31.2   0.0
      comp=Z,0.2nm,0.4s,baz=345,slow=1.5,SNR=1.9
TORD  Torodi Ar. Bea    120.45 291          PKPdf   07 50 30.4  -0.8
PLCA  Paso Flores       144.72 158  PKP     PKPab   07 51 14.8   0.0
      comp=Z,1.4nm,0.7s,baz=261,slow=3.5,SNR=4.7
PLCA  Paso Flores       144.72 158  PKPdf   PKPbc   07 51 15.3  +0.5
NNA   Nana              157.49 101  PKPab   PKPab   07 52 05.7  -2.3
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IDC ***21*** *07:32:42.6±2.4, 5°.21S×152°.95E, h52km±19km, mb3.7/11, mb1 3.9/12, mb1mx3.6/53, mbtmp4.0/12, ML2.3/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/33, Error ellipse: s-maj=24.9km s-min=12.3km az=81.0*

NEIC ***21*** *07:32:43.7±2.3, 5°.20S±0°.06×152°.89E±0°.10, h61km±7km, mb4.4/12, Error ellipse: s-maj=14.2km s-min=8.2km az=91.0*

ISC 21 07:32:42.1±0.6**, 5°.22S**±0°.05×**152°.97E**±0°.08**, h43km, n38, σ1ˢ25**/41**, mb4.1**/14**, New Britain region**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                    Op      ISC       h  m  s     ISC
RABL  Rabaul              1.29 322          Pn      07 33 03.9  +0.1
RABL                                Sn      Sn      07 33 22.4  +2.5
KRVT  Keravat (AS076      1.30 314  P       Pn      07 33 02.7  -1.1
      324nm,0.3s,baz=144,slow=1.9,SNR=72
KRVT                                S       Sn      07 33 20.6  +0.5
      1μm,0.3s,baz=49,slow=20,SNR=16
MANU  Manus Island        6.42 299  Pn      Pn      07 34 16.9  +2.8
PMG   Port Moresby        7.11 234  P       Pn      07 34 24.4  +0.9
      3.3nm,0.3s,baz=39,slow=9.3,SNR=13
PMG                                 S       Sn      07 35 42.1  -1.0
      4.1nm,0.3s,baz=171,slow=20,SNR=2.9
PMG                                 LR      LR      07 37 12.9
      comp=Z,201nm,19.4s,baz=18,slow=38
PMG   Port Moresby        7.11 234          Pn      07 34 25.5  +1.9
PMG                                 Sn      Sn      07 35 43.9  +0.8
COEN  Coen               12.98 227          P       07 35 55.3  +1.7
PATS  Pohnpei            13.11  24  Pn      Pn      07 35 47.4  +1.6
CTA   Charters Tower     16.16 203  P       P       07 36 29.2  +0.2
      0.1nm,0.3s,baz=53,slow=21,SNR=3.5
EIDS  Eidsvold           20.12 185          Pn      07 37 13.7  -0.9
EIDS                                IAmb    IAmb    07 37 16.7
      comp=Z,20nm,1.4s
FAKI  Fak Fak            20.79 275  P       P       07 37 18.7  -1.1
FAKI                                IAmb    IAmb    07 37 34.9
      comp=Z,13nm,1.1s
DZM   Mont Dzumac        21.23 143  P       P       07 37 25.6  +1.0
      comp=Z,7.9nm,0.7s,baz=226,slow=9.6,SNR=7.3
DZM   Mont Dzumac        21.23 143  P       P       07 37 25.5  +0.8
DZM                                 IAmb    IAmb    07 37 38.1
      comp=Z,55nm,1.4s
STKA  Stephens Creek     28.58 201  P       P       07 38 32.8  -1.4
      comp=Z,1.4nm,0.5s,baz=12,slow=9.6,SNR=5.0
STKA  Stephens Creek     28.58 201  P       P       07 38 33.4  -0.9
FITZ  Fitzroy Crossi     29.61 242  P       P       07 38 42.5  -1.0
      comp=Z,3.9nm,0.7s,baz=91,slow=11,SNR=2.4
FITZ  Fitzroy Crossi     29.61 242  P       P       07 38 42.3  -1.2
FITZ                                IAmb    IAmb    07 39 01.3
      comp=Z,6.4nm,0.9s
SNZO  South Karori       40.86 155  P       P       07 40 19.7  -0.1
MJAR  Matsushiro Arr     43.78 343  P       P       07 40 42.6  -1.0
DLV   T  Lat             47.40 291  P       P       07 41 13.0  +0.1
DLV                                 IAmb    IAmb    07 41 29.0
      comp=Z,37nm,1.4s
CM31  Chiang Mai Arr     58.20 295  P       P       07 42 30.9  -1.5
CMAR  Chiang Mai Arr     58.20 295  P       P       07 42 31.9  -0.5
      comp=Z,1.2nm,0.3s,baz=129,slow=7.1,SNR=2.1
PETK  Petropavlovsk-     58.24   3  P       P       07 42 30.8  -1.2
      comp=Z,1.7nm,0.9s,baz=178,slow=8.2,SNR=2.0
PETK  Petropavlovsk-     58.24   3  P       P       07 42 33.2  +1.2
VNDA  Vanda              72.41 178  P       P       07 44 04.2  +0.8
      comp=Z,1.0nm,0.7s,baz=338,slow=6.8,SNR=7.2
VNDA  Vanda              72.41 178  P       P       07 44 04.8  +1.4
IMAR  Indian Mountai     80.72  19  P       P       07 44 51.3  +0.8
MKAR  Makanchi Array     80.75 319  P       P       07 44 52.1  +1.0
      comp=Z,0.3nm,0.6s,baz=103,slow=8.0,SNR=3.6
MKAR  Makanchi Array     80.75 319  P       P       07 44 50.1  -1.0
ZALV  Zalesovo Beam      81.59 326  P       P       07 44 54.7  -0.7
      comp=Z,0.6nm,0.4s,baz=108,slow=4.7,SNR=1.8
ZALV  Zalesovo Beam      81.59 326  P       P       07 44 54.3  -1.1
ILAR  Eielson Array      82.48  22  P       P       07 44 57.4  -2.4
      comp=Z,0.3nm,0.6s,baz=250,slow=5.4,SNR=1.9
ILAR  Eielson Array      82.48  22  P       P       07 44 59.3  -0.5
KURK  Kurchatov          84.20 322  P       P       07 45 08.3  -0.6
KURK                                IAmb    IAmb    07 45 15.1
      comp=Z,1.6nm,0.9s
KURBB Kurchatov Arra     84.23 322  P       P       07 45 08.1  -1.0
      comp=Z,0.3nm,0.6s,baz=100,slow=3.9,SNR=2.1
QSPA  South Pole Qui     84.75 180  P       P       07 45 12.3  +0.7
QSPA                                IAmb    IAmb    07 45 13.3
      comp=Z,4.2nm,0.8s
BVAR  Borovoye Array     89.67 323  P       P       07 45 33.9  -1.6
      comp=Z,0.6nm,0.7s,baz=107,slow=7.9,SNR=3.6
TORD  Torodi Ar. Bea    150.59 288  PKPbc   PKPbc   07 52 30.1  -0.3
      comp=Z,1.6nm,0.7s,baz=68,slow=2.7,SNR=6.0
TORD  Torodi Ar. Bea    150.59 288          PKiKP   07 52 30.6  -0.5
```

IDC ***21*** *07:38:07.6±4.6, 29°.20N×87°.31E, h0km, mb3.4/5, mb1 3.6/6, mb1mx3.4/58, mbtmp3.5/6, ML2.6/1, Error ellipse: s-maj=94.4km s-min=56.9km az=39.0*

DMN ***21*** *07:38:19.6±2.2, 29°.99N×87°.95E, h10km, Error ellipse: s-maj=54.9km s-min=9.2km az=32.0*

ISC 21 07:38:20.4±1.0**, 30°.1N**±0°.1×**88°.1E**±0°.1**, h35km, n15, σ1ˢ43**/15**, mb3.4**/5**, Xizang**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                    Op      ISC       h  m  s     ISC
TAPN  Taplejung           2.79 187  eP      Pn      07 39 03.8  +0.9
      50nm,0.6s
GUN   Gumba               2.94 222  eP      Pn      07 39 05.7  +0.8
JIRN  Jiri                2.97 214  eP      Pn      07 39 06.4  +1.0
ODAN  Odare               3.32 191  eP      Pn      07 39 10.4  +0.4
RAMN  Ramite              3.43 203  eP      Pn      07 39 11.0  -0.6
PKI   Pulchoki            3.47 223  eP      Pn      07 39 12.6  +0.4
      24nm,0.7s
PKIN  Phulchoki           3.47 223  eP      Pn      07 39 12.4  +0.2
DMN   Daman               3.63 227  eP      Pn      07 39 14.9  +0.6
DANN  Dangsing            4.18 246  eP      Pn      07 39 22.9  +1.0
MKAR  Makanchi Array     17.23 346  P       P       07 42 19.1  -0.4
      0.0nm,0.3s,baz=144,slow=12,SNR=1.9
KURBB Kurchatov Arra     21.69 343  P       P       07 43 07.3  -0.7
      1.1nm,0.7s,baz=156,slow=11,SNR=5.6
SONM  Songino Array      22.60  33  P       P       07 43 21.5  +3.6
      1.0nm,0.7s,baz=221,slow=11,SNR=5.3
ZALV  Zalesovo Beam      23.91 355  P       P       07 43 31.3  +0.5
      0.4nm,0.3s,baz=146,slow=10,SNR=1.4
ILAR  Eielson Array      76.22  21  P       P       07 50 03.9  -0.9
      0.3nm,0.9s,baz=307,slow=7.5,SNR=2.7
YKA   Yellowknife Ar     85.91  10  P       P       07 50 54.0  -2.3
      0.3nm,0.7s,baz=338,slow=4.4,SNR=3.5
```

NEIC ***21*** *07:38:33.1±1.0, 5°.45S±0°.08×151°.7E±0°.1, h96km±14km, mb4.1/9, Error ellipse: s-maj=19.5km s-min=8.6km az=119.0*

IDC ***21*** *07:38:33.5±0.7, 5°.10S×151°.28E, h101km±12km, mb4.1/4, mb1 4.2/5, mb1mx3.4/51, mbtmp4.5/5, Error ellipse: s-maj=33.0km s-min=13.6km az=137.0*

ISC 21 07:38:33.9±0.8**, 5°.2S**±0°.1×**151°.4E**±0°.1**, h100km, n22, σ0ˢ68**/26**, mb4.1**/8**, New Britain region**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                    Op      ISC       h  m  s     ISC
KRVT  Keravat (AS076      1.09  34  P       Pn      07 38 55.1  -0.3
      403nm,0.3s,baz=94,slow=0.1,SNR=91
KRVT                                S       Sn      07 39 11.2  -0.3
      373nm,0.3s,baz=164,slow=22,SNR=14
RABL  Rabaul              1.27  36          Pn      07 38 56.9  -0.5
RABL                                Sn      Sn      07 39 15.2  +0.1
MANU  Manus Island        5.12 308          Pn      07 39 53.1  +4.8
PMG   Port Moresby        5.92 225  P       Pn      07 39 59.0  -0.1
      18nm,0.3s,baz=57,slow=6.2,SNR=14
PMG                                 S       Sn      07 41 04.2  -1.5
      11nm,0.3s,baz=133,slow=21,SNR=9.4
PMG   Port Moresby        5.92 225          Pn      07 39 59.3  +0.2
PMG                                 Sn      Sn      07 41 05.7   0.0
COEN  Coen               11.88 222  Pn      Pn      07 41 20.4  +0.3
MTN   Manton Dam         21.40 248  P       P       07 43 15.5  +1.8
MTN                                 IAmb    IAmb    07 43 16.7
      comp=Z,9.5nm,0.9s
WB0   Warramunga Arr     21.99 227  P       P       07 43 20.1   0.0
WR0   Warramunga Arr     22.00 227  P       P       07 43 20.2  +0.1
WR0                                 IAmb    IAmb    07 43 37.2
      comp=Z,5.7nm,0.7s
WRAB  Tennant Creek      22.12 227  P       P       07 43 21.2  -0.2
WRAB                                IAmb    IAmb    07 43 38.9
      comp=Z,7.9nm,1.0s
WB2   Warramunga Arr     22.13 227  P       P       07 43 21.4  -0.1
WB2                                 IAmb    IAmb    07 43 24.4
      comp=Z,12nm,1.2s
WRA   Warramunga Arr     22.14 227  P       P       07 43 21.3  -0.3
      comp=Z,3.2nm,0.4s,baz=48,slow=10,SNR=20
WRA                                 S       S       07 47 18.9  -0.5
      comp=Z,0.4nm,0.8s,baz=47,slow=18,SNR=2.2
WRA   Warramunga Arr     22.14 227  P       P       07 43 21.8  +0.2
DZM   Mont Dzumac        22.19 140  P       P       07 43 22.4  +0.2
      comp=Z,12nm,1.0s,baz=275,slow=6.0,SNR=5.5
DZM   Mont Dzumac        22.19 140  P       P       07 43 22.3  +0.2
AS31  Alice Springs      24.92 221  P       P       07 43 48.8  +1.0
ASAR  Alice Springs      24.92 221  P       P       07 43 48.6  +0.8
      comp=Z,6.7nm,0.7s,baz=55,slow=8.8,SNR=47
ASAR  Alice Springs      24.92 221  P       P       07 43 48.7  +0.9
FITZ  Fitzroy Crossi     28.24 241  P       P       07 44 17.9  +0.2
      comp=Z,2.4nm,0.3s,baz=59,slow=8.1,SNR=24
FITZ  Fitzroy Crossi     28.24 241  P       P       07 44 17.9  +0.2
TORD  Torodi Ar. Bea    149.11 287  PKPbc   PKPdf   07 58 08.4  +1.0
      comp=Z,0.6nm,0.8s,baz=63,slow=0.3,SNR=2.8
TORD  Torodi Ar. Bea    149.11 287          PKiKP   07 58 12.1  -0.8
```

IDC ***21*** *07:47:35.5±1.7, 12°.28N×86°.54W, h0km, mb3.2/3, mb1 3.5/6, mb1mx3.4/42, mbtmp3.2/6, ML2.9/3, Error ellipse: s-maj=82.4km s-min=24.3km az=47.0*

INET ***21*** *07:47:40.8, 11°.58N×87°.21W, h23km, ML3.6*

ISC 21 07:47:39.3±1.1**, 11°.9N**±0°.4×**86°.9W**±0°.3**, h35km, n6, σ0ˢ74**/7**, mb3.2**/3**, Near coast of Nicaragua**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                    Op      ISC       h  m  s     ISC
JTS   Las Juntas de       2.48 131  Pn      Pn      07 48 17.6  +0.4
      1.0nm,0.3s,baz=360,slow=22,SNR=11
JTS                                 Sn      Sn      07 48 46.7  +0.4
      8.1nm,0.3s,baz=9.3,slow=7.4,SNR=5.7
APG   El Apazote          4.66 311  Pn      Pn      07 48 48.1  +0.7
      0.3nm,0.3s,baz=34,slow=19,SNR=1.8
CMIG  Matias Romero       9.32 304  Pn      Pn      07 49 50.8  -0.5
      0.6nm,0.3s,baz=165,slow=11,SNR=13
TXAR  Lajitas Array      23.34 320  P       P       07 52 45.6  +0.8
      0.5nm,0.6s,baz=136,slow=9.7,SNR=12
PDAR  Pinedale Array     36.50 331  P       P       07 54 41.1  -0.6
      0.3nm,0.6s,baz=121,slow=11,SNR=2.2
```

YKA	Yellowknife Ar	54.26	345	P	P	07 57 01.3	-0.3
	0.1nm,0.4s,baz=139,slow=7.5,SNR=4.6						

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*ISK **21** 07:54:09.9, 37°.35N×42°.60E, h2^{km}, ML2.6/9*
*DDA **21** 07:54:10.4, 37°.36N×42°.61E, h8^{km}±2^{km}, ML2.4*
*ISN **21** 07:54:11.0±1.1, 37°.32N×42°.60E, h15^{km}, ML2.8*
ISC 21 07:54:10.5±1.1**, 37°.34N**±0°.03×**42°.61E**±0°.03**, h7**^{km}±9^{km}**,**
n23, σ0^{s}.79/39**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIRT	Sirnak	0.21	321	PG	Pg	07 54 14.7	-0.1
SIRT				SG	Sg	07 54 18.3	+0.6
SIRN	Sırnak	0.22	316	*i* P	Pg	07 54 14.8	-0.2
SIRN				IAML		07 54 18.0	
	comp=E,2µm,0.1s						
SIRN				*i* S	Sg	07 54 18.2	+0.2
SIRN				IAML		07 54 19.0	
	comp=N,2µm,0.1s						
CUKT	Cukurca	0.80	96	PG	Pg	07 54 26.3	+0.3
CUKT				SG	Sb	07 54 38.4	+0.4
CUKT	Cukurca	0.80	96	*i* P	Pg	07 54 26.4	+0.3
CUKT				*i* S	Sb	07 54 37.2	-0.8
CUKT				IAML		07 54 40.0	
	comp=N,112nm,0.5s						
CUKT				IAML		07 54 40.0	
	comp=E,207nm,0.6s						
SRTM	Siirt_Merkez	0.85	320	*i* P	Pg	07 54 26.7	-0.1
SRTM				*i* S	Sb	07 54 39.6	+0.3
SRTM				IAML		07 54 45.0	
	comp=N,81nm,0.6s						
HAKT	HAKKARI	0.90	76	*i* P	Pg	07 54 27.7	-0.3
HAKT				*i* S	Sg	07 54 40.0	+0.3
MSL	Mosul	1.02	157	*e*Pg	Pg	07 54 29.0	-1.1
	baz=336						
MSL				*e*Sg	Sg	07 54 44.0	+0.6
MSL				AML	AML	07 54 45.7	
	comp=N,244nm,0.4s						
MSL				AML	AML	07 54 46.6	
	comp=E,280nm,0.5s						
AKDM	Akdamar-Van	1.03	17	PG	Pg	07 54 30.0	-0.4
AKDM				SG	Sn	07 54 45.3	-1.1
BLIS	Bitlis-Merkez	1.14	340	*i* P	Pn	07 54 33.4	+0.3
BLIS				*i* S	Sn	07 54 48.1	-1.0
BTMN	Batman	1.20	298	*i* P	Pn	07 54 33.9	+0.1
BTMN				*i* S	Sn	07 54 51.4	+1.1
BTMN				IAML		07 54 53.0	
	comp=E,278nm,0.4s						
BTMN				IAML		07 54 53.0	
	comp=N,74nm,0.3s						
GURO	Guroymak-BITLI	1.29	340	PN	Pg	07 54 35.2	-0.2
GURO				SN	Sn	07 54 53.5	+0.7
SVAN	Silvan-Diyarba	1.38	306	PN	Pg	07 54 36.9	-0.1
SVAN				SN	Sg	07 54 56.6	+1.7
SVAN	Silvan-Diyarba	1.38	306	*i* P	Pg	07 54 36.7	-0.3
SVAN				IAML		07 55 00.0	
	comp=N,28nm,0.2s						
MARD	Mardin	1.46	270	*i* P	Pb	07 54 37.8	-0.3
MARD				*i* S	Sg	07 54 57.5	+0.1
MUSM	Mu-Merkez	1.63	328	*i* P	Pb	07 54 40.5	-0.5
MUSM				*i* S	Sg	07 55 02.0	-1.0
MUSM				IAML		07 55 06.0	
	comp=N,25nm,0.7s						
MAZI	Mazidag	1.72	275	PN	Pb	07 54 41.7	-0.9
MAZI				SN	Sg	07 55 05.3	-0.7
VRTB	Varto-Mus	2.03	334	PN	Pn	07 54 46.0	+0.7
HANI	Diyarbakir_Han	2.05	302	*i* P	Pn	07 54 46.2	+0.7
HANI				*i* S	Sb	07 55 12.9	-0.9
HANI				IAML		07 55 25.0	
	comp=E,17nm,0.6s						
DIYA	Diyarbakir	2.06	287	*i* P	Pb	07 54 47.2	-1.0
DIYA				IAML		07 55 21.0	
	comp=N,38nm,0.4s						
DIYA				IAML		07 55 23.0	
	comp=E,41nm,0.2s						
AGRB	Hanur-Agry	2.25	8	PN	Pn	07 54 49.3	+0.9
SVRC	Sivrice-ELAZID	2.81	293	PN	Pn	07 54 57.3	+1.3
PTK	Pertek	2.97	302	PN	Pn	07 54 59.4	+1.1
URFA	Urfa	3.02	273	PN	Pn	07 55 00.3	+1.5

MAN 21 08:10:04.4, 6°.30N×124°.04E, h3^{km}, mb4.2, ML3.0, MS2.7,
1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKMP	Bagumbayan, Su	0.55	67	*e*P	Pg	08 10 14.8	-0.2
SKMP				*e*S	Sb	08 10 25.3	+0.4
CTBH	Cotabato--PC H	0.94	13	⇑*e*P	Pb	08 10 23.4	+0.1
CTBH				*i* S	Sn	08 10 37.9	-0.5
KCP	Kidapawan	1.26	56	⇓*e*P	Pn	08 10 31.5	+2.5
KCP				*i* S	Sn	08 10 50.0	+3.5
PAGZ	Pagadian	1.67	337	*e*P	Pn	08 10 33.8	-0.8
PAGZ				*e*S	Sn	08 10 52.9	-3.6
DDMP	Don Marcelino,	1.68	97	*e*P	Pn	08 10 34.5	-0.2
DDMP				*e*S	Sb	08 10 57.2	-0.3
BUKP	Musuan	1.87	33	*e*P	Pb	08 10 38.5	-0.7
BUKP				*e*S	Sg	08 11 05.5	+1.0

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*SOME **21** 08:12:27.6, 41°.70N×81°.43E, h15^{km}*
*NNC **21** 08:12:29.6±1.3, 41°.75N×81°.32E, h3^{km}±7^{km}, mb3.8,*
mpv3.4, Error ellipse: s-maj=8.4km s-min=7.6km az=163.0
ISC 21 08:12:32.6±2.3**, 41°.9N**±0°.1×**81°.23E**±0°.07**, h10**^{km}**, n24,**
σ1^{s}.40/38**, 3C-5D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	1.71	338	*e*P	Pb	08 13 03.8	-0.4
	26nm,0.2s						
KTMS				*e*S	Sg	08 13 29.5	+2.0
	116nm,0.5s						
KTMS	Ketmen	1.71	338	Pg	Pb	08 13 03.8	-0.4
	26nm,0.2s						
KTMS				Lg	Lg	08 13 29.4	
	116nm,0.5s						
PDGK	Podgornoye	1.95	319	Pg	Pb	08 13 08.1	-0.2
	15nm,0.3s						
PDGK				Lg	Lg	08 13 37.5	
	48nm,0.3s						
PDGK	Podgornoye	1.95	319	⇓Pg	Pb	08 13 07.9	-0.4
	17nm,0.4s						
PDGK				⇑Lg	Lg	08 13 37.5	
	114nm,0.8s						
UZB	Uzynbulak	2.08	309	*e*P	Pb	08 13 10.1	-0.4
	9.8nm,0.3s						
UZB				*e*S	Sg	08 13 40.6	+1.2
	66nm,0.3s						
UZB	Uzynbulak	2.08	309	Pg	Pb	08 13 10.1	-0.4
	22nm,0.5s						
UZB				Lg	Lg	08 13 41.1	
	66nm,0.3s						
SATY	Saty	2.41	301	*e*P	Pb	08 13 15.7	-0.4
	16nm,0.2s						
SATY				*e*S	Sg	08 13 50.5	+0.5
	69nm,0.3s						
SATY	Saty	2.41	301	Pg	Pb	08 13 15.7	-0.4
	16nm,0.2s						
SATY				Lg	Lg	08 13 50.4	
	69nm,0.3s						
KPKS	Kokpek	2.47	311	*e*P	Pb	08 13 15.3	-1.8
	33nm,0.2s						
KPKS				*e*S	Sb	08 13 49.6	+2.0
	114nm,0.4s						
DJR	Jarkent	2.68	337	*e*P	Pb	08 13 21.0	+0.2
	0.8nm,0.4s						
DJR				*e*S	Sg	08 13 59.5	+0.7
	46nm,0.8s						
DJR	Jarkent	2.68	337	Pg	Pb	08 13 21.0	+0.2
	0.8nm,0.4s						
DJR				Lg	Lg	08 13 59.5	
	46nm,0.8s						
TNSS	Tian-Shan	3.38	292	*e*P	Pb	08 13 32.8	-0.1
	4.5nm,0.3s						
TNSS				*e*S	Sg	08 14 19.9	-1.2
	15nm,0.8s						
TNSS	Tian-Shan	3.38	292	Pg	Pb	08 13 32.8	-0.1
	4.5nm,0.3s						
TNSS				Lg	Lg	08 14 19.9	
	15nm,0.8s						
ARXS	Arharly	3.43	314	*e*P	Pb	08 13 33.4	0.0
	9.7nm,0.2s						
ARXS				*e*S	Sg	08 14 20.8	-1.8
	20nm,0.5s						
ARXS	Arharly	3.43	314	Pg	Pb	08 13 33.4	0.0
	9.7nm,0.2s						
ARXS				Lg	Lg	08 14 20.8	
IZV	Izvestkoviy	3.61	290	*e*P	Pb	08 13 37.3	+0.6
	4.3nm,0.3s						
IZV				*e*S	Sg	08 14 27.3	-1.4
	25nm,0.5s						
IZV	Izvestkoviy	3.61	290	Pg	Pb	08 13 37.3	+0.6
	4.3nm,0.3s						
IZV				Lg	Lg	08 14 27.3	
	25nm,0.5s						
KAPS	Kapalarasan	3.68	339	Pg	Pb	08 13 38.6	+0.8
	5.6nm,0.4s						
KAPS				Lg	Lg	08 14 29.1	
	14nm,0.4s						
KTBS	Karatobe	3.82	300	*e*P	Pb	08 13 41.9	+1.7
	3.7nm,0.4s						
KTBS				*e*S	Sg	08 14 35.3	-0.1
	34nm,0.4s						
KTBS	Karatobe	3.82	300	Pg	Pb	08 13 41.9	+1.7
	3.7nm,0.4s						
KTBS				Lg	Lg	08 14 35.3	
	34nm,0.4s						
DGS	Degeres	4.26	291	*e*P	Pb	08 13 50.3	+2.7
	3.8nm,0.7s						
DGS				*e*S	Sg	08 14 50.0	+0.6
	14nm,0.5s						
DGS	Degeres	4.26	291	Pg	Pb	08 13 50.3	+2.7
	3.8nm,0.7s						
DGS				Lg	Lg	08 14 50.0	
	14nm,0.5s						
MAKZ	Makanchi	4.97	6	⇓Pn	Pn	08 13 47.9	+0.6
	1.1nm,0.3s						
MAKZ				⇑Pg	Pg	08 14 03.7	-4.1
	2.1nm,0.7s						
MAKZ				⇓Sn	Sn	08 14 46.1	+1.3
	4.7nm,1.1s						
MAKZ				⇓Lg	Lg	08 15 09.2	
	3.0nm,0.6s						
MK31	Makanchi Array	4.99	8	⇓Pn	Pn	08 13 47.8	+0.3
	0.2nm,0.3s,baz=192,slow=13,SNR=29						
MK31				⇑Pg	Pb	08 14 01.8	+1.9
	0.9nm,0.4s,baz=166,slow=4.1,SNR=3.5						
MK31				Sn	Sn	08 14 46.8	+1.6
	3.5nm,0.7s,baz=177,slow=34,SNR=3.3						
MK31				Lg	Lg	08 15 10.5	
	4.1nm,0.6s,baz=190,slow=29,SNR=4.8						

IDC 21 08:18:07.1±2.5**, 5°.60N×123°.98E, h0**^{km}**, mb3.5**/4**,**
mb1 3.6/4**, mb1mx3.3**/45**, mbtmp3.5**/4**, MS3.0**/1**, Ms1 3.0**/1**,**
ms1mx2.5/26**, Error ellipse: s-maj=341.0km**
s-min=22.5km az=64.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	27.35	158	P	P	08 23 53.7	-0.4
	0.2nm,0.4s,baz=336,slow=10.0,SNR=1.7						
ASAR	Alice Springs	30.66	162	P	P	08 24 23.9	+0.3
	0.3nm,0.3s,baz=342,slow=7.3,SNR=7.5						
MKAR	Makanchi Array	54.47	326	P	P	08 27 37.1	+0.5
	0.2nm,0.3s,baz=120,slow=8.1,SNR=7.4						
PETK	Petropavlovsk-	54.81	24	LR	LR	08 48 41.9	
	comp=Z,15nm,21.0s,baz=66,slow=34						
KURBB	Kurchatov Arra	58.70	328	P	P	08 28 05.8	-0.7
	0.4nm,0.5s,baz=130,slow=6.6,SNR=6.2						

IDC 21 08:37:17.5±4.9**, 23°.91S×176°.06W, h0**^{km}**, mb3.9**/3**,**
mb1 4.2/3**, mb1mx3.7**/24**, mbtmp3.9**/3**, MS4.7**/1**, Ms1 4.7**/1**,**
ms1mx2.9/39**, Error ellipse: s-maj=198.4km**
s-min=86.5km az=154.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	45.59	260	P	P	08 45 40.0	+0.4
	0.6nm,0.8s,baz=93,slow=8.1,SNR=5.0						
WRA	Warramunga Arr	46.00	265	P	P	08 45 42.4	-0.5
	0.9nm,0.7s,baz=102,slow=8.6,SNR=13						
WRA				PcP	PcP	08 47 18.7	-1.1
	0.3nm,0.8s,baz=103,slow=4.1,SNR=1.9						
SIJI	Sorong	55.88	286	LR	LR	09 11 56.6	
	comp=Z,616nm,18.0s,baz=250,slow=37						
CMAR	Chiang Mai Arr	92.93	289	P	P	08 50 33.6	+0.6
	0.5nm,0.3s,baz=152,slow=3.0,SNR=5.6						

RSNC 21 08:40:40.4±1.2**, 4°.54N×73°.29W, h0**^{km}±8^{km}**, ML1.4,**
Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHIC	Chingaza	0.45	281	*e*P	Pg	08 40 49.4	+0.3
CHIC				*e*S	Sg	08 40 56.6	+1.7
CHIC				*i*		08 40 59.5	
	comp=Z,12nm,0.2s						
CHIC	Chingaza	0.45	281	*e*P	Pg	08 40 49.4	+0.3
CHIC				*e*S	Sb	08 40 57.2	-1.8
CHIC				*i*		08 40 59.5	
	comp=Z,13nm,0.2s						
PTGC	Puerto Gaitan,	1.20	107	*e*P	Pg	08 41 00.9	-2.5
PTGC				*e*S	Sg	08 41 18.8	-0.2
PTGC				*i*		08 41 21.8	
	comp=Z,12nm,0.2s						
SPBC	San Pablo de B	1.35	325	*e*P	Pg	08 41 05.4	-0.9
SPBC				*e*S	Sn	08 41 26.1	+0.7
SPBC				*i*		08 41 28.4	
	comp=Z,5.9nm,0.2s						
RUSC	La Rusia	1.35	9	*e*P	Pg	08 41 05.8	-0.6
RUSC				*e*S	Sg	08 41 24.1	0.0
RUSC				*i*		08 41 28.9	
	comp=Z,3.2nm,0.2s						
RUSC	La Rusia	1.35	9	*e*P	Pg	08 41 05.3	-1.1
RUSC				*e*S	Sb	08 41 24.7	-0.3
RUSC				*i*		08 41 28.9	
	comp=Z,3.0nm,0.3s						
NORC	Norcasia	1.87	303	*e*S	Sb	08 41 39.9	+0.3
ORTC	Ortega, Tolima	2.05	252	*e*P	Pb	08 41 17.5	-1.1
ORTC				*e*S	Sg	08 41 46.9	+0.4
ORTC				*i*		08 41 48.6	
	comp=Z,4.0nm,0.5s						
ORTC	Ortega, Tolima	2.05	252	*e*P	Pb	08 41 17.6	-1.0
ORTC				*e*S	Sg	08 41 46.7	+0.3
ORTC				*i*		08 41 49.8	
	comp=Z,2.9nm,0.3s						
RREF	El Recreo	2.08	280	*e*P	Pn	08 41 17.4	+0.2
RREF				*e*S	Sg	08 41 47.6	+0.1
MACC	Macarena, Meta	2.45	193	*e*P	Pn	08 41 20.9	-0.8
MACC				*e*S	Sn	08 41 52.3	-0.1
MACC				*i*		08 41 59.8	
	comp=Z,2.6nm,0.3s						

IDC 21 08:41:08.7±2.7**, 20°.90S×178°.23W, h0**^{km}**, mb3.9**/4**,**
mb1 4.1/4**, mb1mx3.8**/23**, mbtmp3.9**/4**, Error ellipse:**
s-maj=136.1km s-min=49.4km az=160.0, Fiji Islands
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	33.24	265	P	P	08 47 49.8	+1.9
	1.6nm,0.4s,baz=87,slow=7.9,SNR=1.6						
ASAR	Alice Springs	44.22	257	P	P	08 49 19.1	-0.9
	0.5nm,0.7s,baz=95,slow=7.4,SNR=6.8						
WRA	Warramunga Arr	44.34	262	P	P	08 49 20.4	-0.6
	0.8nm,0.8s,baz=98,slow=8.5,SNR=22						
CMAR	Chiang Mai Arr	90.05	290	P	P	08 54 10.6	-0.3
	0.6nm,0.3s,baz=137,slow=3.8,SNR=8.7						
AKASG	Malin Array Be	143.26	331	PKhKP	PKPpre	09 00 35.0	
	0.4nm,0.4s,baz=36,slow=4.0,SNR=2.7						
BRTR	Keskin Array B	146.95	312	PKPbc	PKPbc	09 00 53.2	-0.4
	0.2nm,0.3s,baz=15,slow=3.6,SNR=1.9						
TORD	Torodi Ar. Bea	172.29	179	PKP	PKPdf	09 01 20.2	-0.4
	0.9nm,1.0s,baz=0.0,slow=1.4,SNR=3.6						

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*ASRS **21** 08:59:29.9, 54°.29N×86°.17E, M1.7, Industrial explosion*
(after: The Earthquakes of Russia in 2012. Obninsk, GS
RAS, 224p + CD-ROM, 2014)
*KRAR **21** 08:59:51.9±0.1, 53°.64N×88°.01E, M2.1, Industrial*
explosion (after: The Earthquakes of Russia in 2012.
Obninsk, GS RAS, 224p + CD-ROM, 2014)
NNC 21 08:59:27.1±10.0**, 54°.49N×86°.04E, h0**^{km}**, mb3.7, mpv2.7,**
3C-1D, Error ellipse: s-maj=347.9km s-min=62.7km
az=146.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array	0.90	233	⇑P	Pg	08 59 44.1	-0.2
	0.3nm,0.3s						
ZAA0				⇓S	Sg	08 59 56.9	+1.0
	1.9nm,0.4s						
KURBB	Kurchatov Arra	6.00	233	⇑Pn	Pn	09 00 59.6	+2.6
	1.8nm,0.5s						
MK31	Makanchi Array	8.06	199	⇑Pn	Pn	09 01 26.4	+0.9
	0.7nm,0.5s,baz=25,slow=13,SNR=22						

DDA 21 09:03:52.1, 39°.86N×37°.58E, h7^{km}±1^{km}, ML1.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUZAR	Zara_SIVAS	0.15	81	*i* P	Pg	09 03 55.5	+0.2
CUZAR				IAML		09 03 58.0	
	comp=E,530nm,0.2s						
CUZAR				IAML		09 03 58.0	
	comp=N,886nm,0.4s						
CUZAR				*i* S	Sg	09 03 58.1	+0.6
CUZAR	Zara_SIVAS	0.15	81	*i* P	Pg	09 03 55.5	+0.2
CUZAR				*i* S	Sg	09 03 58.2	+0.7
SCER	sogukcermik	0.34	270	*i* P	Pg	09 03 59.2	+0.3
SCER	sogukcermik	0.34	270	*i* P	Pg	09 03 59.4	+0.5
SCER				IAML		09 04 09.0	
	comp=E,96nm,0.5s						
SCER				IAML		09 04 12.0	
	comp=N,122nm,0.4s						
CUKAN	kangal_SIVAS	0.55	189	*i* P	Pg	09 04 02.9	+0.1
CUKAN				*i* S	Sb	09 04 11.7	-0.7
CUKAN	kangal_SIVAS	0.55	189	*i* P	Pg	09 04 02.9	0.0
CUKAN				*i* S	Sb	09 04 11.8	-0.6
SUSE	Susehri	0.59	54	*i* P	Pg	09 04 03.6	0.0
SUSE				*i* S	Sg	09 04 10.8	-0.5
SUSE	Susehri	0.59	54	*i* P	Pg	09 04 03.7	+0.1
SUSE				IAML		09 04 14.0	
	comp=N,33nm,0.2s						
SUSE				IAML		09 04 16.0	
	comp=E,32nm,0.3s						
KEMA	Kemaliye	0.93	130	*i* P	Pg	09 04 09.0	-0.8
KEMA				*i* S	Sg	09 04 21.4	-0.5
KEMA				IAML		09 04 24.0	
	comp=N,20nm,0.6s						
KEMA				IAML		09 04 26.0	
	comp=E,16nm,0.4s						
KEMA	Kemaliye	0.93	130	*i* P	Pg	09 04 08.9	-1.0
KEMA				*i* S	Sg	09 04 21.1	-0.8
KEMA				IAML		09 04 24.0	
	comp=N,20nm,0.6s						
KEMA				IAML		09 04 26.0	
	comp=E,16nm,0.4s						
REFA	Refahiye_ERZN	1.03	117	*i* P	Pg	09 04 09.2	-2.7
REFA	Refahiye_ERZN	1.03	117	*i* P	Pg	09 04 09.3	-2.6
REFA				IAML		09 04 18.0	
	comp=E,10nm,1.1s						
REFA				IAML		09 04 26.0	
	comp=N,12nm,0.1s						
CUSAR	Sarkisla-SIVAS	1.12	247	*i* P	Pb	09 04 13.9	0.0
CUSAR				*i* S	Sn	09 04 30.7	+0.6
CUSAR				IAML		09 04 34.0	
	comp=N,16nm,0.6s						
CUSAR				IAML		09 04 36.0	
	comp=E,12nm,0.5s						
CUSAR	Sarkisla-SIVAS	1.12	247	*i* P	Pg	09 04 13.5	-0.1
CUSAR				IAML		09 04 34.0	
	comp=N,16nm,0.6s						
CUSAR				IAML		09 04 36.0	
	comp=E,12nm,0.5s						
KELT	Kelkit	1.32	77	*i* P	Pn	09 04 15.6	-1.5
KELT				IAML		09 04 32.0	
	comp=E,15nm,1.1s						
KELT				*i* S	Sb	09 04 33.9	-0.6
KELT				IAML		09 04 50.0	
	comp=N,17nm,1.0s						
KELT	Kelkit	1.32	77	*i* P	Pn	09 04 16.6	-0.5
KELT				IAML		09 04 29.0	
	comp=E,8.5nm,0.7s						
KELT				*i* S	Sb	09 04 33.3	-1.2
KELT				IAML		09 04 51.0	
	comp=N,17nm,1.1s						

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*IDC **21** 09:04:37.3±1.3, 3°.15S×135°.97E, h0^{km}, mb3.7/4,*
mb1 4.1/6, mb1mx3.7/40, mbtmp4.0/6, ML4.1/2, MS3.2/5,
Ms1 3.2/5, ms1mx2.8/48, Error ellipse: s-maj=49.8km
s-min=24.6km az=66.0
*NEIC **21** 09:04:43.3±3.0, 3°.55S±0°.09×135°.5E±0°.1, h40^{km}±13^{km},*
mb4.1/8, Error ellipse: s-maj=17.5km s-min=11.6km
az=58.0
*DJA **21** 09:04:44.4±0.4, 3°S±4°×13°5E±°, h10^{km}, M4.5/6, mB5.2/1,*
mb4.8/1, MLv4.4/6, Mw(mB)4.5/1
ISC 21 09:04:39.3±0.8**, 3°.53S**±0°.06×**135°.62E**±0°.09**, h22**^{km}**, n28,**
σ3^{s}.22/28**, mb3.7**/4**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RKPI	Ransiki, Papua	2.46	324	P	Pn	09 05 17.9	-0.3
FAKI	Fak Fak	3.41	280	P	Pn	09 05 34.6	+3.3
FAKI	Fak Fak	3.41	280		Pn	09 05 34.5	+3.3
FAKI				Sn	Sn	09 06 08.4	-2.7
SIJI	Sorong	5.08	301	Pn	Pn	09 05 55.9	+1.7
	15nm,0.3s,baz=114,slow=20,SNR=18						
SWI	Sorong	5.09	301	P	Pn	09 05 56.3	+2.0
MTN	Manton Dam	10.27	205		Pn	09 07 11.5	+6.1
COEN	Coen	12.77	145		Pn	09 07 42.4	+2.6
PMG	Port Moresby	12.87	118	LR	LR	09 13 04.5	
	comp=Z,51nm,21.1s,baz=208,slow=40						
KNRA	Kununurra	13.83	209	Pn	Pn	09 07 57.9	+3.8
KNRA					Sn	09 10 28.2	+1.0
WB0	Warramunga Arr	16.19	184		Pn	09 08 25.3	-0.3
WB0				IAmb	IAmb	09 08 35.1	
	comp=Z,16nm,1.1s						
WRAB	Tennant Creek	16.36	184	Pn	Pn	09 08 28.8	+1.1
WRAB				IAmb	IAmb	09 08 37.5	
	comp=Z,19nm,1.1s						
WB2	Warramunga Arr	16.36	184		Pn	09 08 29.0	+1.2
WRA	Warramunga Arr	16.37	184	Pn	Pn	09 08 28.9	+1.1
	comp=Z,1.0nm,0.3s,baz=360,slow=13,SNR=47						
WRA				Sn	Sn	09 11 21.7	-7.3
	comp=Z,0.5nm,0.3s,baz=6.9,slow=23,SNR=6.1						
WRA				LR	LR	09 15 24.6	
	comp=Z,97nm,19.1s,baz=340,slow=39						
WRA	Warramunga Arr	16.37	184	Pn	Pn	09 08 29.3	+1.5
WR0	Warramunga Arr	16.37	184	P	P	09 08 31.4	+0.8
WR0				IAmb	IAmb	09 08 37.6	
	comp=Z,13nm,1.0s						
FITZ	Fitzroy Crossi	17.47	213	P	P	09 08 44.9	+2.1
	comp=Z,0.6nm,0.3s,baz=41,slow=7.3,SNR=8.2						
FITZ				S	Sn	09 11 49.4	-6.4
	comp=Z,0.3nm,0.3s,baz=194,slow=17,SNR=2.5						
FITZ	Fitzroy Crossi	17.47	213	P	P	09 08 44.0	+1.2
CTA	Charters Tower	19.46	149	P	Pn	09 09 07.2	+1.3
	comp=Z,0.2nm,0.3s,baz=309,slow=6.5,SNR=2.2						
AS31	Alice Springs	20.09	185	P	Pn	09 09 16.6	+3.1
AS31				IAmb	IAmb	09 09 18.9	
	comp=Z,4.7nm,0.7s						
ASAR	Alice Springs	20.09	185	P	Pn	09 09 17.1	+3.6
	comp=Z,14nm,0.8s,baz=8.6,slow=12,SNR=84						
ASAR				S	S	09 12 50.5	-6.0
	comp=Z,0.7nm,0.6s,baz=3.9,slow=27,SNR=3.4						
ASAR				LR	LR	09 18 17.5	
	comp=Z,36nm,20.2s,baz=8.5,slow=40						
ASAR	Alice Springs	20.09	185	P	Pn	09 09 15.8	+2.3
RPZ	Rata Peaks	50.82	147	LR	LR	09 33 53.7	
	comp=Z,89nm,20.3s,baz=199,slow=34						
MKAR	Makanchi Array	68.58	324	P	P	09 15 42.4	+1.8
	comp=Z,0.2nm,0.5s,baz=116,slow=8.2,SNR=6.8						
MAKZ	Makanchi	68.77	324	P	P	09 15 43.8	+2.1
MAKZ				IAmb	IAmb	09 15 58.2	
	comp=Z,1.4nm,0.7s						
KSH	Kashi	69.42	315	P	P	09 15 48.4	+2.4
KSH				pP	sP	09 16 02.3	+6.4
KSH				ScP		09 20 12.3	
KSH				PcS		09 20 14.3	
KSH				S	S	09 24 46.4	-5.9
KSH				ScS	SKSac	09 25 42.4	-3.0
KURBB	Kurchatov Arra	72.64	326	P	P	09 16 05.5	+0.3
	comp=Z,0.3nm,0.8s,baz=119,slow=6.0,SNR=3.1						
ILAR	Eielson Array	87.86	25	P	P	09 17 25.7	-1.1
	comp=Z,0.3nm,0.6s,baz=244,slow=3.9,SNR=1.7						
GNI	Garni	92.92	310	LR	LR	10 05 37.0	
	comp=Z,14nm,19.1s,baz=211,slow=39						

IDC 21 09:15:20.2±9.5,24°.05S×176°.41W,h0km,mb4.1/4,mb1 4.2/4,mb1mx3.8/46,mbtmp4.0/4,Error ellipse: s-maj=338.8km s-min=102.2km az=149.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	34.76	269	P	P	09 22 12.8	+0.2
	3.5nm,1.0s,baz=105,slow=16,SNR=1.7						
ASAR	Alice Springs	45.24	260	P	P	09 23 39.6	-0.1
	0.7nm,1.0s,baz=105,slow=8.7,SNR=3.1						
WRA	Warramunga Arr	45.67	265	P	P	09 23 42.7	-0.4
	0.3nm,0.3s,baz=103,slow=8.1,SNR=10						
CMAR	Chiang Mai Arr	92.67	289	P	P	09 28 34.6	0.0
	0.8nm,0.3s,baz=151,slow=4.3,SNR=4.3						

IDC 21 09:20:01.7±3.6,29°.09N×114°.68W,h0km,mb3.4/1,mb1 3.4/3,mb1mx3.2/52,mbtmp2.9/3,ML2.8/2,MS2.9/1,Ms1 2.9/1,ms1mx2.4/27,Error ellipse: s-maj=60.2km s-min=16.1km az=43.0

ECX 21 09:20:09.3±0.8,30°.39N×114°.06W,h8km,MD3.5,ML3.8

MEX 21 09:20:17.1±1.1,30°.10N×113°.97W,h10km,MD4.0

ISC 21 09:20:09.3±0.9,30°.46N±0°.06×114°.08W±0°.05,h10km,n19,σ1s.53/22,1C,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAHB	Baha de los	0.68	139	eP	Sn	09 20 35.5	0.0
SFX	San Felipe	0.88	311	eP	Pg	09 20 25.0	-1.2
SFX				eS	Sb	09 20 38.7	+0.2
PIX	Pinacate	1.22	26	eP	Pn	09 20 31.0	-1.4
PIX				eS	Sn	09 20 49.2	+0.3
ECBX	El Chinero	1.31	321	eP	Pn	09 20 32.2	-1.5
SPX	San Pedro Mart	1.33	296	eP	Pn	09 20 33.5	-0.7
SPX				eS	Sn	09 20 52.2	+0.1
SPIG	San Pedro Mart	1.33	296	eP	Pn	09 20 33.2	-1.0
SQX	San Quintin	1.56	275	eP	Pn	09 20 36.4	-0.6
SQX				⇑e		09 21 09.1	
SQX				IAML		09 21 09.1	
	comp=N,1µm,0.6s						
VTX	Valle De La Tr	1.74	303	eP	Pn	09 20 39.4	-0.2
CBX	Cerro Bola	2.88	311	eP	Pn	09 20 56.4	+1.0
CBX	Cerro Bola	2.88	311	eP	Pg	09 21 06.0	+1.4
CBX				eS	Sg	09 21 41.0	-1.0
TJIG	Tijuana	2.97	312	eP	Pg	09 21 05.3	-0.9
TJIG				i S	Sg	09 21 42.9	-1.8
PFO	Pinyon Flats O	3.74	328	Pg	Pg	09 21 22.5	+1.5
	comp=N,0.2nm,0.3s,baz=215,slow=9.2,SNR=2.5						
PFO				Sn	Sg	09 22 10.2	+0.8
	comp=N,1.3nm,0.3s,baz=68,slow=20,SNR=6.4						
GUYB	Guaymas	3.79	132	i P	Pn	09 21 07.9	+0.2
NZIG	Nacozari, Sono	3.91	90	eP	Pb	09 21 15.1	-3.3
ANMO	Albuquerque	7.83	53	Lg	Lg	09 24 38.5	
	comp=N,0.1nm,0.3s,baz=19,slow=5.9,SNR=6.5						
NVAR	Mina Array Bea	8.68	337	Pn	Pn	09 22 23.6	+8.5
	comp=N,0.0nm,0.3s,baz=159,slow=15,SNR=2.7						
TXAR	Lajitas Array	9.10	94	Pn	Pn	09 22 22.9	+2.1
	comp=N,0.0nm,0.3s,baz=263,slow=15,SNR=2.3						
TXAR				Lg	Lg	09 25 00.7	
	comp=N,0.1nm,0.3s,baz=279,slow=25,SNR=3.4						
YBH	Yreka Blue Hor	13.23	331	LR	LR	09 29 13.7	
	comp=N,52nm,19.6s,baz=66,slow=39						
ILAR	Eielson Array	39.94	339	P	P	09 27 46.6	+3.3
	comp=N,0.3nm,0.7s,baz=150,slow=6.6,SNR=5.7						

ECX 21 09:34:20.5±0.5,30°.48N×114°.06W,h14km±5km,MD3.5,ML3.6

MEX 21 09:34:23.9±0.8,31°.47N×113°.97W,h16km±18km,MD4.0

ISC 21 09:34:20.6±0.9,30°.71N±0°.07×114°.09W±0°.04,h10km,n14,σ0s.81/17,1C-1D,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFX	San Felipe	0.73	296	⇓eP	Pb	09 34 35.6	+0.3
SFX				eS	Sn	09 34 48.1	0.0
BAHB	Baha de los	0.90	149	eP	Pn	09 34 47.3	+8.1
PIX	Pinacate	1.00	33	eP	Pn	09 34 41.2	+0.5
ECBX	El Chinero	1.12	313	eP	Pn	09 34 42.6	+0.3
SPX	San Pedro Mart	1.22	286	eP	Pb	09 34 44.0	-0.1
SPX				IAML		09 35 16.8	
	comp=E,513nm,1.8s						
SPX				⇑e		09 35 19.7	
SPIG	San Pedro Mart	1.23	286	eP	Pb	09 34 43.9	-0.2
SPIG	San Pedro Mart	1.23	286	i P	Pg	09 34 44.3	+0.1
SPIG				i S	Sn	09 35 01.5	+0.5
SQX	San Quintin	1.54	265	eP	Pn	09 34 47.0	-1.2
VTX	Valle De La Tr	1.60	295	eP	Pn	09 34 49.6	+0.6
SVX	San Vicente	1.95	289	eP	Pn	09 34 54.8	+1.0
ESJX	Sierra Juarez	2.04	309	eP	Pb	09 34 57.0	-0.9
HSIG		3.21	121	eP	Pb	09 35 16.9	-0.8
HSIG				i S	Sb	09 35 56.2	-0.6
SRIG	Santa Rosalia	3.75	154	eP	Pb	09 35 27.7	+0.8
CGIG		5.29	92	eP	Pn	09 35 41.0	+1.2
CGIG				i S	Sn	09 36 39.6	-1.2

IDC 21 09:51:45.4±5.6,35°.11N×67°.85E,h0km,mb3.4/1,mb1 3.5/6,mb1mx3.3/63,mbtmp3.5/6,ML3.4/5,Error ellipse: s-maj=77.2km s-min=24.6km az=169.0

ISC 21 09:51:51.4±3.6,35°.3N±0°.3×67°.7E±0°.1,h35km,n6,σ0s.92/8,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GEYT	Alibeck	8.13	292	Pn	Pn	09 53 47.4	+0.5
	0.8nm,0.3s,baz=114,slow=15,SNR=5.3						
GEYT				Sn	Sn	09 55 16.9	-0.6
	0.3nm,0.3s,baz=234,slow=24,SNR=1.8						
GEYT				Lg	Lg	09 56 10.1	
	0.2nm,0.3s,baz=124,slow=7.2,SNR=2.0						
AAK	Ala-Archa	9.03	34	Pn	Pn	09 54 00.4	+1.1
	1.2nm,0.3s,baz=216,slow=6.3,SNR=15						
AAK				Sn	Sn	09 55 39.7	-0.2
	baz=139,slow=17,SNR=0.8						
MKAR	Makanchi Array	15.87	39	Pn	Pn	09 55 31.6	-0.4
	0.1nm,0.3s,baz=225,slow=12,SNR=3.5						
KURBB	Kurchatov Arra	17.21	24	P	P	09 55 49.9	-0.3
	0.0nm,0.3s,baz=213,slow=11,SNR=7.0						
BVAR	Borovoye Array	17.81	5	P	P	09 55 56.9	0.0
	0.2nm,0.3s,baz=183,slow=5.3,SNR=2.2						
ZALV	Zalesovo Beam	22.16	27	P	P	09 56 42.5	-1.5
	1.1nm,0.5s,baz=209,slow=9.7,SNR=5.0						

ECX 21 09:58:04.2±0.6,30°.49N×114°.05W,h17km±6km,MD3.4,ML3.3

MEX 21 09:58:07.3±1.0,30°.57N×114°.11W,h5km,MD4.0

ISC 21 09:58:04.2±1.9,30°.60N±0°.09×114°.14W±0°.05,h7km±14km,n15,σ0s.62/22,1C-2D,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFX	San Felipe	0.76	306	⇓eP	Pg	09 58 19.2	+0.5
SFX				IAML		09 58 34.5	
	comp=N,1µm,0.5s						
SFX				⇓e		09 58 34.5	
BAHB	Baha de los	0.82	143	eP	Pn	09 58 30.9	+8.7
PIX	Pinacate	1.12	31	eP	Pb	09 58 24.7	-1.3
ECBX	El Chinero	1.17	318	eP	Pb	09 58 26.2	-0.6
ECBX				eS	Sn	09 58 43.4	+0.1
SPX	San Pedro Mart	1.23	291	eP	Pn	09 58 27.6	-0.5
SPX				eS	Sn	09 58 45.2	+0.1
SPX				IAML		09 58 58.4	
	comp=N,275nm,0.4s						
SPX				e		09 58 58.4	
SPIG	San Pedro Mart	1.23	292	eP	Pn	09 58 27.5	-0.6
SPIG	San Pedro Mart	1.23	292	eP	Pn	09 58 27.6	-0.6
SPIG				i S	Sb	09 58 45.0	+0.8
SQX	San Quintin	1.50	270	eP	Pn	09 58 30.7	-0.9
SQX				e		09 59 04.2	
SQX				IAML		09 59 04.2	
	comp=E,457nm,0.4s						
VTX	Valle De La Tr	1.62	300	eP	Pn	09 58 33.4	+0.1
VTX				eS	Sb	09 58 55.5	+0.2
ESJX	Sierra Juarez	2.09	313	eP	Pn	09 58 40.0	+0.1
CBX	Cerro Bola	2.75	309	eP	Pn	09 58 49.3	+0.3
CBX				IAML		09 59 56.4	
	comp=E,155nm,0.9s						
CBX				⇑e		09 59 56.4	
CBX	Cerro Bola	2.75	309	i P	Pn	09 58 49.6	+0.7
CBX				i S	Sn	09 59 22.8	+0.3
TJIG	Tijuana	2.84	311	i P	Pn	09 58 50.9	+0.9
TJIG				eS	Sn	09 59 24.6	+0.1
HSIG		3.19	119	i P	Pn	09 58 55.5	+0.7
HSIG				i S	Sn	09 59 33.3	+0.3
CGIG		5.32	91	i P	Pn	09 59 24.4	+0.1
CGIG				i S	Sn	10 00 25.6	-0.3

NNC 21 10:01:37.0±0.7,42°.86N×76°.86E,h0km,mpv2.2,Error ellipse: s-maj=4.7km s-min=3.0km az=143.0

SOME 21 10:01:37.2,42°.85N×76°.83E,h10km

ISC 21 10:01:37.5±4.0,42°.9N±0°.2×76°.84E±0°.04,h13km±14km,n14,σ0s.37/27,3C-1D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNSS	Tian-Shan	0.16	28	eP	Pg	10 01 41.4	-0.3
	9.8nm,0.1s						
TNSS				eS	Sg	10 01 44.5	-0.2
	26nm,0.2s						
TNSS	Tian-Shan	0.16	28	P	Pg	10 01 41.4	-0.3
	9.8nm,0.1s						
TNSS				S	Sg	10 01 44.5	-0.2
	26nm,0.2s						
IZV	Izvestkoviy	0.22	311	eP	Pg	10 01 42.5	0.0
	2.0nm,0.1s						
IZV				eS	Sg	10 01 46.2	+0.4
	60nm,0.1s						
IZV	Izvestkoviy	0.22	311	P	Pg	10 01 42.5	0.0
	2.0nm,0.1s						
IZV				S	Sg	10 01 46.2	+0.4
	60nm,0.1s						
MDOK	Medeo	0.31	29	eP	Pg	10 01 43.7	-0.2
	1.1nm,0.1s						
MDOK				eS	Sg	10 01 48.4	+0.1
	18nm,0.2s						
MDOK	Medeo	0.31	29	⇑P	Pg	10 01 43.7	-0.2
	0.3nm,0.3s						
MDOK				⇑S	Sg	10 01 48.2	-0.1
	4.7nm,0.3s						
MDOK	Medeo	0.31	29	Pg	Pg	10 01 43.7	-0.2
	1.1nm,0.1s						
MDOK				Lg	Lg	10 01 48.4	
	18nm,0.2s						
KNDC	Almaty	0.34	15	⇑P	Pg	10 01 44.4	0.0
	2.4nm,0.2s						
KNDC				⇓S	Sg	10 01 49.8	+0.8
	14nm,0.2s						
MTBS	Maitube	0.39	308	eP	Pg	10 01 45.0	-0.2
	2.3nm,0.1s						
MTBS				eS	Sg	10 01 50.6	+0.1
	14nm,0.2s						
MTBS	Maitube	0.39	308	P	Pg	10 01 45.0	-0.2
	2.3nm,0.1s						
MTBS				S	Sg	10 01 50.6	+0.1
	14nm,0.2s						
KOTS	Kotyrbulak	0.40	30	eP	Pg	10 01 45.5	+0.1
	3.7nm,0.2s						
KOTS				eS	Sg	10 01 51.5	+0.7
	40nm,0.3s						
KOTS	Kotyrbulak	0.40	30	P	Pg	10 01 45.5	+0.1
	3.7nm,0.2s						
KOTS				S	Sg	10 01 51.5	+0.7
	40nm,0.3s						
KTBS	Karatobe	0.83	352	eP	Pg	10 01 53.0	-0.6
	0.6nm,0.1s						
KTBS				eS	Sg	10 02 04.5	+0.1
	3.7nm,0.2s						
KTBS	Karatobe	0.83	352	P	Pg	10 01 53.0	-0.6
	0.6nm,0.1s						
KTBS				S	Sg	10 02 04.5	+0.1
	3.7nm,0.2s						

KRNET 21 10:01:38.4±0.1,41°.71N×75°.66E,h30km,mb1.8,10C-2D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	0.38	136	⇓iP	Pb	10 01 46.7	-0.5
	baz=40						
NRN				⇓iS	Sb	10 01 52.8	-0.4
	baz=40						
ULHL	Ulahol	0.69	39	⇑iP	Pb	10 01 51.8	-0.3
	baz=39						
ULHL				⇑iS	Sn	10 02 02.0	-0.2
	baz=39						
BOOM	Boomskoye usch	0.81	15	⇑iP	Pn	10 01 53.9	0.0
	baz=15						
BOOM				⇑iS	Sn	10 02 05.0	0.0
	baz=15						
ARLS	Aral	1.01	279	⇑iP	Pb	10 01 57.1	-0.2
	baz=80						
ARLS				⇑iS	Sb	10 02 10.9	+0.6
	baz=80						
EKS2	Erkin-Say	1.69	305	⇑eP	Pb	10 02 08.2	-0.7
	baz=5.0						
EKS2				⇑iS	Sb	10 02 30.0	+0.2
	baz=5.0						
USP	Ospenovka	1.78	332	⇑iP	Pb	10 02 09.4	-0.9
	baz=32						
USP				⇑iS	Sb	10 02 31.9	-0.3
	baz=32						

IDC 21 10:06:50.3±4.1,5°.24S×152°.92E,h47km±34km,mb3.4/4,mb1 3.7/5,mb1mx3.4/24,mbtmp3.7/5,ML1.9/1,MS2.6/1,Ms1 2.6/1,ms1mx2.3/18,Error ellipse: s-maj=40.7km s-min=13.8km az=97.0

ISC 21 10:06:49.7±1.4,5°.23S±0°.08×153°.0E±0°.1,h43km,n8,σ0s.58/9,mb3.5/4,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.31	314	P	Pn	10 07 11.7	+0.1
	268nm,0.3s,baz=187,slow=2.6,SNR=184						
KRVT				S	Sn	10 07 27.9	0.0
	403nm,0.3s,baz=321,slow=23,SNR=31						
KRVT				LR	LR	10 07 49.4	
	comp=Z,193nm,19.2s,baz=128,slow=46						
PMG	Port Moresby	7.10	234	P	Pn	10 08 31.6	+0.5
	1.3nm,0.3s,baz=29,slow=6.4,SNR=7.9						
PMG				S	Sn	10 09 50.4	-0.2
	2.5nm,0.3s,baz=98,slow=11,SNR=4.7						
GUMO	Guam	20.35	337	LR	LR	10 19 08.4	
	comp=Z,16nm,20.8s,baz=146,slow=36						
WRA	Warramunga Arr	23.29	229	P	P	10 11 52.8	-1.1
	2.4nm,0.7s,baz=53,slow=10.0,SNR=7.2						
ASAR	Alice Springs	25.95	223	P	P	10 12 18.6	+0.3
	1.3nm,0.8s,baz=58,slow=9.2,SNR=15						
MKAR	Makanchi Array	80.76	319	P	P	10 18 59.3	+0.6
	0.5nm,1.0s,baz=123,slow=5.1,SNR=1.9						
ILAR	Eielson Array	82.49	22	P	P	10 19 07.3	-0.2
	0.3nm,0.7s,baz=244,slow=4.5,SNR=5.3						
TORD	Torodi Ar. Bea	150.60	288	PKPbc	PKPbc	10 26 37.7	-0.3
	0.4nm,0.4s,baz=76,slow=2.7,SNR=2.2						

IDC 21 10:41:10.6±2.4,13°.56N×56°.89E,h0km,mb3.9/5,mb1 4.1/6,mb1mx3.5/53,mbtmp3.9/6,ML2.9/1,MS3.2/4,Ms1 3.2/4,ms1mx2.8/49,Error ellipse: s-maj=60.6km s-min=30.5km az=48.0

NEIC 21 10:41:12.2±2.6,13°.70N±0°.08×57°.03E±0°.10,h10km±1km,mb4.6/4,Error ellipse: s-maj=16.8km s-min=12.8km az=123.0

ISC 21 10:41:11.9±0.7,13°.6N±0°.1×56°.94E±0°.10,h10km,n19,σ1s.15/16,mb4.1/8,MS3.3/3,2C,Socotra region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCY	Socotra	3.20	244		Pn	10 42 03.5	+1.0
SOCY				Sn	Sn	10 42 39.6	-1.1
WSAR	Wadi Sarin	9.72	9	Pn	Pn	10 43 30.4	-1.5
	0.1nm,0.3s,baz=329,slow=18,SNR=1.2						
WSAR				LR	LR	10 46 29.5	
	comp=Z,87nm,21.8s,baz=224,slow=33						
AAK	Ala-Archa	32.67	24	LR	LR	11 01 44.3	
	comp=Z,34nm,18.2s,baz=198,slow=38						
MK31	Makanchi Array	39.33	28	P	P	10 48 42.6	+1.3
MK31				IAmb	IAmb	10 48 51.4	
	comp=Z,1.0nm,1.4s						
MKAR	Makanchi Array	39.33	28	P	P	10 48 41.9	+0.6
	comp=Z,0.2nm,0.6s,baz=207,slow=7.7,SNR=3.2						
CMAR	Chiang Mai Arr	40.59	77	P	P	10 48 53.6	+1.4
	comp=Z,0.6nm,0.2s,baz=276,slow=8.8,SNR=8.6						
CMAR	Chiang Mai Arr	40.59	77	P	P	10 48 52.5	+0.4
AKASG	Malin Array Be	43.30	334	LR	LR	11 10 51.2	
	comp=Z,68nm,18.6s,baz=315,slow=41						
FINES	FINESS Array B	52.70	342	P	P	10 50 27.2	+0.9
	comp=Z,3.9nm,0.9s,baz=145,slow=7.0,SNR=3.8						
FINES	FINESS Array B	52.70	342	P	P	10 50 26.7	+0.3
ESDC	Sonseca Array	59.10	308	P	P	10 51 12.5	-0.2
ARCES	ARCESS Array B	59.30	348	P	P	10 51 14.3	+0.7
	comp=Z,3.8nm,1.0s,baz=136,slow=8.2,SNR=4.4						
LUWI	Luwuk	66.81	97	P	P	10 52 04.3	-0.2
LUWI				IAmb	IAmb	10 52 17.6	
	comp=Z,34nm,0.5s						
KSRS	Korea Array	66.82	55	LR	LR	11 24 49.5	
	comp=Z,16nm,18.2s,baz=201,slow=39						
WRA	Warramunga Arr	83.09	112	P	P	10 53 38.1	-0.4
	comp=Z,0.7nm,0.8s,baz=295,slow=4.5,SNR=4.8						
WB2	Warramunga Arr	83.10	112	P	P	10 53 36.0	-2.6
WB2				IAmb	IAmb	10 53 40.4	
	comp=Z,7.7nm,1.5s						
SYO	Syowa Base	83.32	186	⇑eP	P	10 53 38.4	-0.1
SYO	Syowa Base	83.32	186	⇑epp		10 53 44.0	
ASAR	Alice Springs	83.81	116	P	P	10 53 41.5	-0.7

NEIC 21 10:52:10.9±3.0,8°.39S±0°.05×107°.75E±0°.06,h43km±6km,mb4.2/34,Error ellipse: s-maj=8.7km s-min=6.6km az=79.0

DJA 21 10:52:13.8±0.3,8°S±4°×10°8E±°,h64km±6km,M4.8/18,mB5.2/6,mb4.9/13,MLv4.9/18,Mw(mB)4.5/6

IDC 21 10:52:16.9±1.8,8°.04S×108°.02E,h80km±15km,mb4.0/20,mb1 4.1/21,mb1mx3.8/59,mbtmp4.3/21,MS3.3/8,Ms1 3.3/8,ms1mx3.0/43,Error ellipse: s-maj=23.7km s-min=10.6km az=55.0

ISC 21 10:52:12.9±1.0,8°.34S±0°.06×107°.86E±0°.04,h52km±9km,n105,σ1s.60/111,mb4.2/29,MS3.2/6,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	0.78	357	P	Pn	10 52 27.2	-0.6
CISI	Cisompet, Garu	0.78	357		Pn	10 52 27.2	-0.6
CISI				Sn	Sn	10 52 37.5	-1.2
CNJI	Cibinong	1.25	325	P	Pn	10 52 34.1	0.0
CNJI				S	Sn	10 52 51.5	+1.7
LEM	Lembang	1.52	351	P	Pn	10 52 39.6	+1.7
	403nm,0.3s,baz=164,slow=11,SNR=128						
LEM				S	Sn	10 53 01.2	+4.6
	288nm,0.3s,baz=4.2,slow=21,SNR=8.6						
LEM				LR	LR	10 53 27.9	
	comp=Z,1µm,19.2s,baz=70,slow=56						
SKJI	Sukabumi	1.85	316	P	Pn	10 52 42.9	+0.7
SKJI				S	Sn	10 53 05.3	+0.9
DBJI	Dramaga	2.08	328	P	Pn	10 52 47.6	+2.1
TNG	Tangerang	2.46	331	P	Pn	10 52 53.1	+2.5
UGM	Wanagama	2.67	81	P	Pn	10 52 53.5	-0.1
UGM	Wanagama	2.67	81		Pn	10 52 53.7	+0.2
UGM				Sn	Sn	10 53 22.6	-2.1
SMRI	Semarang	2.86	64	P	Pn	10 52 57.4	+1.3
SMRI				S	Sn	10 53 31.2	+1.8
SMRI	Semarang	2.86	64		Pn	10 52 58.0	+1.9
SMRI				Sn	Sn	10 53 27.8	-1.6
XMIS	Christmas Isla	3.04	225	Pn	Pn	10 52 57.5	-1.2
WOJI	Wonogiri, Jawa	3.08	81	P	Pn	10 52 59.6	+0.6
PCJI	Pacitan	3.29	88	P	Pn	10 53 02.8	+0.8
PCJI				S	Sn	10 53 39.8	-0.1
PWJI	Pagerwojo	3.92	86	P	Pn	10 53 11.6	+1.0
PWJI				S	Sn	10 53 56.7	+1.3
KASI	Kota Agung	4.35	310	P	Pn	10 53 19.1	+2.6
GRJI	Gresik	4.79	73	P	Pn	10 53 23.0	+0.4
GRJI				S	Sn	10 54 17.7	+0.8
LWLI	Liwa	5.01	311	P	Pn	10 53 38.2	+13
MDSI	Maura Dua	5.29	316	P	Pn	10 53 32.0	+2.6
	0.5nm1µm137nm,1.1s						
GMJI	Gumukmas	5.53	90	P	Pn	10 53 34.2	+1.5
	0.8nm2µm89nm,0.6s						
GMJI				S	Sn	10 54 36.6	+1.6
	0.8nm2µm89nm,0.6s						
JAGI	Jajag, Banyuwa	6.23	92	P	Pn	10 53 43.6	+1.3
	1.1nm3µm139nm,0.8s						
JAGI				S	Sn	10 54 53.2	+0.9
	1.1nm3µm139nm,0.8s						
JAGI	Jajag, Banyuwa	6.23	92		Pn	10 53 42.8	+0.5
MNAI	Manna	6.27	309	Pn	Pn	10 53 40.2	-2.7
IGBI	Denpasar	7.22	94	P	Pn	10 53 59.0	+3.0
	0.4nm2µm83nm,0.9s						
IGBI				S	Sn	10 55 17.8	+1.1
	0.4nm2µm83nm,0.9s						
SRBI	Singaraja	7.29	89	P	Pn	10 53 58.7	+1.9
	0.4nm2µm94nm,0.5s						
PLAI	Plampang	9.82	94	P	Pn	10 54 32.5	+0.9
	793nm59nm,0.8s						
KAPI	Kappang	12.27	75	LR	LR	11 00 33.7	
	comp=Z,132nm,20.4s,baz=264,slow=41						
MMRI	Maumere	14.23	92	P	P	10 55 38.7	+1.0
MMRI	Maumere	14.23	92		Pn	10 55 29.4	-2.3
IPM	Ipoh	14.44	332	Pn	Pn	10 55 34.7	+0.2
MPSI	Mapaga	14.77	55	P	P	10 55 46.7	+3.0
GIRL	Giralia	15.49	157	Pn	Pn	10 55 46.0	-2.1
SOEI	Soe	16.27	96	P	Pn	10 55 58.2	0.0
	80nm,0.9s						
SOEI	Soe	16.27	96		Pn	10 55 57.1	-1.1
MRSI	Marisa	16.54	59	P	Pn	10 55 59.4	-2.1
	1µm34nm,0.9s						
PSAD1	Pilbara Seismi	17.42	140		Pn	10 56 11.0	-1.3
PSAD1				IAmb	IAmb	10 56 24.0	
	comp=Z,30nm,1.4s						
PSAC1	Pilbara Seismi	17.46	140		Pn	10 56 10.9	-2.0
PSAC1				IAmb	IAmb	10 56 16.8	
	comp=Z,13nm,0.8s						
PSAB1	Pilbara Seismi	17.50	140		Pn	10 56 11.7	-1.6
PSAB1				IAmb	IAmb	10 56 17.2	
	comp=Z,12nm,0.8s						
PSAA2	Pilbara Seismi	17.51	140		Pn	10 56 12.6	-0.8
PSAA2				IAmb	IAmb	10 56 17.4	
	comp=Z,14nm,0.9s						
PSAA1	Pilbara Seismi	17.51	140		Pn	10 56 12.0	-1.5
PSAA1				IAmb	IAmb	10 56 17.4	
	comp=Z,20nm,1.1s						
PSAB2	Pilbara Seismi	17.51	140		Pn	10 56 12.2	-1.3
PSA00	Pilbara Seismi	17.51	140		Pn	10 56 12.7	-0.8
PSA00	Pilbara Seismi	17.51	140		Pn	10 56 12.8	-0.7
PSA00				IAmb	IAmb	10 56 17.4	
	comp=Z,17nm,1.0s						
PSAD3	Pilbara Seismi	17.52	140		Pn	10 56 12.3	-1.3
PSAD3				IAmb	IAmb	10 56 16.9	
	comp=Z,21nm,1.1s						
PSAB3	Pilbara Seismi	17.54	140		Pn	10 56 12.1	-1.7
PSAC2	Pilbara Seismi	17.54	140	P	Pn	10 56 11.7	-2.2
PSAD2	Pilbara Seismi	17.62	140		Pn	10 56 14.2	-0.6
SANI	Sanana	19.10	72	P	P	10 56 29.9	-1.7
	comp=Z,42nm,0.7s						
FITZ	Fitzroy Crossi	19.83	121	P	Pn	10 56 41.5	+0.1
	comp=Z,0.3nm,0.3s,baz=294,slow=5.8,SNR=17						
FITZ				S	S	11 00 06.1	-14
	comp=Z,0.1nm,0.3s,baz=193,slow=18,SNR=1.7						
FITZ				LR	LR	11 04 02.8	
	comp=Z,60nm,21.4s,baz=284,slow=36						
FITZ	Fitzroy Crossi	19.83	121	P	P	10 56 40.4	+0.9
AAI	Ambon	20.74	78	P	P	10 56 48.5	-0.9
	comp=Z,64nm,0.6s						
LBMI	Labuha	21.01	70	P	P	10 56 52.9	+0.6
KNRA	Kununurra	21.70	112	P	P	10 56 59.8	+0.2
KNRA				IAmb	IAmb	10 57 12.2	
	comp=Z,16nm,0.8s						
DAV	Davao City (W)	23.38	50	LR	LR	11 08 27.7	
	comp=Z,60nm,19.4s,baz=216,slow=42						
SIJI	Sorong	24.47	74	P	P	10 57 26.0	-1.3
	comp=Z,6.8nm,0.6s,baz=314,slow=3.6,SNR=3.8						
FAKI	Fak Fak	24.86	79	P	P	10 57 30.7	-0.2
CMAR	Chiang Mai Arr	28.04	342	P	P	10 57 58.4	-1.0
	comp=Z,0.5nm,0.4s,baz=180,slow=8.1,SNR=1.5						
CMAR				LR	LR	11 11 13.8	
	comp=Z,22nm,19.8s,baz=210,slow=41						
WB0	Warramunga Arr	28.09	117	P	P	10 58 00.8	+0.9
WB0				IAmb	IAmb	10 58 12.0	
	comp=Z,7.7nm,1.1s						
WRA	Warramunga Arr	28.10	117	P	P	10 58 01.1	+1.1
	comp=Z,2.8nm,0.8s,baz=288,slow=10,SNR=23						
WRA	Warramunga Arr	28.10	117	P	P	10 57 55.9	-4.2
WRAB	Tennant Creek	28.11	117	P	P	10 58 00.2	+0.1
WB2	Warramunga Arr	28.11	117	P	P	10 58 01.5	+1.4
WB2				IAmb	IAmb	10 58 04.8	
	comp=Z,7.2nm,1.2s						
WR0	Warramunga Arr	28.29	117	P	P	10 58 02.2	+0.5

WR0				IAmb	IAmb	10 58 04.5	
	comp=Z,4.1nm,0.8s						
ASAR	**Alice Springs**	**29.23**	**124**	P	**P**	**10 58 11.2**	**+1.1**
	comp=Z,1.9nm,0.6s,baz=296,slow=8.1,SNR=15						
ASAR				LR	LR	11 10 01.1	
	comp=Z,44nm,21.6s,baz=268,slow=36						
ASAR	**Alice Springs**	**29.23**	**124**	P	**P**	**10 58 11.8**	**+1.7**
H08S2	**Diego Garcia H**	**35.02**	**269**	T	T	11 36 15.5	
	baz=93,slow=76,SNR=64						
H08S3	**Diego Garcia H**	**35.03**	**269**	T	T	11 36 16.2	
	baz=93,slow=76,SNR=95						
H08S1	**Diego Carcia H**	**35.04**	**269**	T	T	11 36 16.3	
	baz=93,slow=76,SNR=33						
COEN	**Coen**	**35.07**	**102**	P	**P**	**10 59 01.7**	**+0.4**
BBOO	**Buckleboo**	**35.70**	**137**	P	**P**	**10 59 08.1**	**+1.6**
STKA	**Stephens Creek**	**39.12**	**132**	P	**P**	**10 59 37.7**	**+2.2**
	comp=Z,8.2nm,0.6s,baz=308,slow=7.8,SNR=15						
STKA				LR	LR	11 18 44.0	
	comp=Z,47nm,18.9s,baz=219,slow=40						
STKA	**Stephens Creek**	**39.12**	**132**	P	**P**	**10 59 35.0**	**-0.5**
SONM	**Songino Array**	**55.94**	**359**	P	**P**	**11 01 44.7**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=171,slow=7.6,SNR=5.5						
SONM				PcP	**PcP**	**11 02 45.0**	**+1.1**
	comp=Z,0.8nm,0.5s,baz=173,slow=6.4,SNR=3.6						
SONM				LR	LR	11 26 37.1	
	comp=Z,44nm,19.6s,baz=239,slow=37						
SONM	**Songino Array**	**55.94**	**359**	P	**P**	**11 01 43.7**	**-2.1**
MK31	**Makanchi Array**	**59.42**	**340**	P	**P**	**11 02 08.3**	**-1.9**
MK31				IAmb	IAmb	11 02 10.9	
	comp=Z,1.6nm,0.7s						
MKAR	**Makanchi Array**	**59.42**	**340**	P	**P**	**11 02 09.7**	**-0.5**
	comp=Z,2.3nm,0.5s,baz=144,slow=7.7,SNR=32						
MKAR	**Makanchi Array**	**59.42**	**340**	P	**P**	**11 02 08.4**	**-1.8**
KLR	**Kul'dur**	**61.03**	**18**	P	**P**	**11 02 19.7**	**-1.4**
	comp=Z,1.4nm,0.8s,baz=234,slow=3.9,SNR=5.2						
KK31	**Karatay Array**	**61.44**	**330**	P	**P**	**11 02 21.2**	**-2.8**
KK31				IAmb	IAmb	11 02 37.6	
	comp=Z,1.5nm,1.0s						
KKAR	**Karatay Array**	**61.44**	**330**	P	**P**	**11 02 23.1**	**-0.9**
KKAR	**Karatay Array**	**61.44**	**330**	P	**P**	**11 02 22.2**	**-1.7**
KKAR				IAmb	IAmb	11 02 37.5	
	comp=Z,1.5nm,1.0s						
KURBB	**Kurchatov Arra**	**63.99**	**340**	P	**P**	**11 02 40.4**	**-0.3**
	comp=Z,1.3nm,0.5s,baz=155,slow=5.8,SNR=8.6						
KURK	**Kurchatov**	**64.04**	**340**	P	**P**	**11 02 39.6**	**-1.4**
KURK				IAmb	IAmb	11 02 42.2	
	comp=Z,2.2nm,0.6s						
ZALV	**Zalesovo Beam**	**65.03**	**345**	P	**P**	**11 02 45.3**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=167,slow=7.4,SNR=2.2						
GEYT	**Alibeck**	**65.32**	**318**	P	**P**	**11 02 50.0**	**+0.1**
	comp=Z,1.7nm,0.4s,baz=157,slow=4.2,SNR=5.3						
MAW	**Mawson**	**66.34**	**197**	P	**P**	**11 02 58.5**	**+2.7**
	comp=Z,4.9nm,0.9s,baz=49,slow=11,SNR=3.0						
ATD	**Arta Tunnel**	**67.60**	**286**	LR	LR	11 26 31.5	
	comp=Z,41nm,20.6s,baz=36,slow=30						
BVAR	**Borovoye Array**	**68.92**	**337**	P	**P**	**11 03 12.0**	**-0.2**
	comp=Z,4.4nm,0.6s,baz=140,slow=8.9,SNR=27						
BRVK	**Borovoye**	**68.99**	**337**	P	**P**	**11 03 12.3**	**-0.4**
BRVK				IAmb	IAmb	11 03 13.0	
	comp=Z,2.8nm,0.7s						
ABKAR	**Akbulak array**	**70.99**	**329**	P	**P**	**11 03 25.0**	**0.0**
ABKAR	**Akbulak array**	**70.99**	**329**	P	**P**	**11 03 25.1**	**0.0**
ABKAR				IAmb	IAmb	11 03 26.1	
	comp=Z,10nm,0.6s						
AKTO	**Aktyubinsk**	**72.70**	**329**	P	**P**	**11 03 34.5**	**-0.7**
	comp=Z,1.8nm,0.6s,baz=176,slow=6.0,SNR=7.0						
PETK	**Petropavlovsk-**	**74.35**	**29**	P	**P**	**11 03 43.7**	**-1.2**
	comp=Z,1.2nm,0.8s,baz=215,slow=3.4,SNR=4.0						
PETK	**Petropavlovsk-**	**74.35**	**29**	P	**P**	**11 03 43.0**	**-1.8**
VNDA	**Vanda**	**74.51**	**169**	P	**P**	**11 03 47.8**	**+2.3**
	comp=Z,1.5nm,0.7s,baz=323,slow=3.9,SNR=6.6						
VNDA	**Vanda**	**74.51**	**169**	P	**P**	**11 03 42.3**	**-3.2**
VNDA				IAmb	IAmb	11 03 50.3	
	comp=Z,2.4nm,1.1s						
ARU	**Arti**	**76.19**	**334**	P	**P**	**11 03 55.5**	**+0.1**
	comp=Z,2.3nm,0.2s,baz=136,slow=1.4,SNR=4.4						
SEY	**Seymchan**	**78.78**	**19**	P	**P**	**11 04 09.6**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=0.1,slow=23,SNR=9.9						
QSPA	**South Pole Qui**	**81.66**	**180**	P	**P**	**11 04 26.6**	**+1.2**
BRTR	**Keskin Array B**	**83.34**	**312**	P	**P**	**11 04 34.0**	**-0.8**
	comp=Z,1.9nm,0.8s,baz=108,slow=4.0,SNR=4.7						
ARCES	**ARCESS Array B**	**95.08**	**340**	P	**P**	**11 05 29.7**	**-0.1**
	comp=Z,4.1nm,0.9s,baz=92,slow=3.0,SNR=3.6						
SPITS	**Spitsbergen Ar**	**98.41**	**348**	P	Pdif	11 05 45.1	+0.3
	comp=Z,6.4nm,0.9s,baz=113,slow=3.3,SNR=1.5						
YKA	**Yellowknife Ar**	**117.81**	**21**	PKP	**PKiKP**	**11 10 53.4**	**+0.2**
	comp=Z,0.1nm,0.5s,baz=348,slow=1.8,SNR=3.8						
TXAR	**Lajitas Array**	**143.78**	**51**	PKP	**PKPdf**	**11 11 41.6**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=237,slow=1.9,SNR=5.0						
LPAZ	**La Paz**	**155.21**	**189**	PKPab	**PKPab**	**11 12 30.2**	**+3.3**
	comp=Z,0.7nm,0.6s,baz=205,slow=9.8,SNR=4.2						

*ATH **21** 10:56:06.4, 40°.76N×25°.58E, h17^{km}±3^{km}, ML2.3/3, Error ellipse: s-maj=3.5km s-min=1.1km az=4.0*
*SOF **21** 10:56:06.8, 40°.80N×25°.53E, h2^{km}, MD2.8*
*ISK **21** 10:56:06.5, 40°.76N×25°.60E, h5^{km}, ML2.5/14*
*THE **21** 10:56:06.9, 40°.77N×25°.54E, h3^{km}±1^{km}, ML2.2/12, Error ellipse: s-maj=1.5km s-min=0.8km az=61.0*
*DDA **21** 10:56:07.8, 40°.70N×25°.70E, h22^{km}, ML2.5*
ISC 21 10:56:06.8±1.0**, 40°.76N**±0°.02×**25°.57E**±0°.02**, h8**^{km}±9^{km}**, n51, σ0^{s}.45**/75**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMTH	**Samothraki Isl**	**0.29**	**186**	P	**Pg**	**10 56 12.4**	**-0.1**
SMTH				S	**Sg**	**10 56 17.4**	**+1.0**
	335nm,0.1s						
SMTH	**Samothraki Isl**	**0.29**	**186**	P	**Pg**	**10 56 12.5**	**-0.1**
RDO	**Rodhopi**	**0.39**	**357**	P	**Pg**	**10 56 14.2**	**-0.2**
RDO				S	**Sg**	**10 56 19.8**	**+0.3**
	298nm,0.1s						
RDO	**Rodhopi**	**0.39**	**357**	P	**Pg**	**10 56 14.3**	**-0.1**
RDO	**Rodhopi**	**0.39**	**357**	PG	**Pg**	**10 56 14.5**	**+0.1**
RDO				SG	**Sg**	**10 56 20.4**	**+0.9**
ALN	**Alexandroupoli**	**0.39**	**69**	P	**Pg**	**10 56 14.2**	**-0.2**
ALN				S	**Sg**	**10 56 20.1**	**+0.5**
	645nm,0.5s						
ALN	**Alexandroupoli**	**0.39**	**69**	P	**Pg**	**10 56 14.2**	**-0.2**
ALN				AML	AML	10 56 20.0	
	comp=E,984µm,0.4s						
ALN				S	**Sg**	**10 56 20.0**	**+0.5**
ALN				AML	AML	10 56 20.7	
	comp=N,1203µm,0.5s						
ALN	**Alexandroupoli**	**0.39**	**69**	PG	**Pg**	**10 56 14.2**	**-0.2**
ALN				SG	**Sg**	**10 56 19.8**	**+0.3**
ENEZ	**Enez**	**0.45**	**93**	PG	**Pg**	**10 56 15.3**	**-0.2**
ENEZ				SG	**Sg**	**10 56 21.6**	**+0.3**
THAS	**Thassos island**	**0.66**	**257**	P	**Pg**	**10 56 19.3**	**-0.3**
THAS				S	**Sg**	**10 56 28.2**	**0.0**
	comp=N,330nm,0.2s						
THAS	**Thassos island**	**0.66**	**257**	P	**Pg**	**10 56 19.3**	**-0.3**
THAS				S	**Sg**	**10 56 28.3**	**+0.1**
THAS				AML	AML	10 56 31.7	
	comp=N,765µm,0.2s						
THAS				AML	AML	10 56 31.9	
	comp=E,535µm,0.2s						
ERIK	**Erikli-Kesan**	**0.72**	**97**	PG	**Pg**	**10 56 19.9**	**-0.8**
GELI	**Tayfur-Gelibol**	**0.78**	**117**	PG	**Pg**	**10 56 21.6**	**-0.2**
KAVA	**Kavala**	**0.83**	**287**	P	**Pg**	**10 56 22.3**	**-0.5**
KAVA				S	**Sg**	**10 56 33.9**	**+0.2**
	comp=E,355nm,0.1s						
KAVA	**Kavala**	**0.83**	**287**	P	**Pg**	**10 56 22.4**	**-0.5**
KAVA				S	**Sg**	**10 56 33.8**	**+0.2**
KAVA				AML	AML	10 56 37.2	
	comp=E,860µm,0.2s						
KAVA				AML	AML	10 56 37.6	
	comp=N,555µm,0.1s						
KESN	**Edirne-Kesan**	**0.85**	**85**	*i* P	**Pg**	**10 56 22.0**	**-1.1**
KESN				*i* S	**Sg**	**10 56 33.4**	**-0.8**
UKOP	**Uzunkopru-Edir**	**0.89**	**65**	PG	**Pg**	**10 56 23.6**	**-0.3**
KDZ	**Kurdzhali**	**0.90**	**353**	*i* P	**Pg**	**10 56 23.3**	**-0.8**
KDZ	**Kurdzhali**	**0.90**	**353**	PG	**Pg**	**10 56 23.9**	**-0.2**
LIA	**Limnos Island**	**0.91**	**199**	P	**Pg**	**10 56 23.9**	**-0.4**
LIA				S	**Sb**	**10 56 37.2**	**+0.2**
	comp=N,98nm,0.4s						
LIA	**Limnos Island**	**0.91**	**199**	P	**Pg**	**10 56 24.1**	**-0.2**
LIA				S	**Sb**	**10 56 36.7**	**-0.3**
KVLA	**Kavala**	**0.91**	**282**	P	**Pg**	**10 56 24.2**	**-0.2**
KVLA				S	**Sb**	**10 56 36.9**	**-0.2**
LPK	**Lapseki**	**0.99**	**113**	PG	**Pg**	**10 56 25.4**	**-0.4**
BOZC	**Bozcaada**	**0.99**	**158**	PG	**Pg**	**10 56 25.5**	**-0.3**
BOZC	**Bozcaada**	**0.99**	**158**	*i* P	**Pg**	**10 56 25.6**	**-0.2**
BOZC				*i* S	**Sg**	**10 56 38.2**	**-0.4**
BOZC				IAML		10 56 39.0	
	comp=N,122nm,0.5s						
RZN	**Rozhen**	**1.13**	**326**	*i* P	**Pg**	**10 56 27.9**	**-0.6**
RKY	**Sarkoy-Tekirda**	**1.23**	**93**	PN	**Pb**	**10 56 29.9**	**-0.3**
BAYC	**CANAKKALE_Bayr**	**1.26**	**143**	*i* P	**Pn**	**10 56 30.2**	**-0.5**
BAYC				*i* S	**Sb**	**10 56 46.3**	**-0.9**
OUR	**Ouranopolis**	**1.28**	**251**	P	**Pg**	**10 56 31.5**	**+0.2**
OUR				S	**Sn**	**10 56 48.9**	**+0.6**
	comp=N,220nm,0.4s						
OUR	**Ouranopolis**	**1.28**	**251**	P	**Pg**	**10 56 31.4**	**0.0**
OUR	**Ouranopolis**	**1.28**	**251**	PN	**Pg**	**10 56 31.6**	**+0.2**
KRBG	**Karabiga-Canak**	**1.37**	**105**	PN	**Pn**	**10 56 32.2**	**+0.1**
EDRB	**Edirne**	**1.40**	**39**	PN	**Pn**	**10 56 32.8**	**+0.2**
NVR	**Nevrokopi**	**1.42**	**295**	P	**Pn**	**10 56 32.7**	**-0.2**
NVR				S	**Sb**	**10 56 51.4**	**-0.3**
	comp=N,62nm,0.3s						
PLD	**Plovdiv**	**1.49**	**334**	*i* P	**Pg**	**10 56 35.4**	**-0.1**
PLD	**Plovdiv**	**1.49**	**334**	PN	**Pb**	**10 56 34.6**	**-0.2**
TKR	**Tekirdag**	**1.51**	**81**	PN	**Pn**	**10 56 34.3**	**+0.2**
SRS	**Serrai**	**1.54**	**284**	P	**Pn**	**10 56 33.6**	**-0.9**
SRS				S	**Sb**	**10 56 55.5**	**+0.3**
	comp=N,78nm,0.2s						
MRMT	**Marmara Adasi**	**1.55**	**95**	PN	**Pn**	**10 56 34.5**	**-0.2**
SIGR	**SIGRI**	**1.56**	**172**	P	**Pb**	**10 56 35.5**	**-0.4**
SIGR				S	**Sg**	**10 56 57.1**	**+0.1**
	comp=N,88nm,0.5s						
SIGR	**SIGRI**	**1.56**	**172**	PN	**Pb**	**10 56 35.7**	**-0.2**
PRK	**Paraskevi**	**1.60**	**160**	P	**Pn**	**10 56 36.0**	**+0.5**
PRK				S	**Sb**	**10 56 56.8**	**-0.2**
	comp=N,202nm,0.5s						
PRK	**Paraskevi**	**1.60**	**160**	P	**Pn**	**10 56 35.9**	**+0.5**
MMB	**Musomiste**	**1.62**	**301**	*i* P	**Pb**	**10 56 36.8**	**-0.1**
SOH	**Sokhos**	**1.68**	**273**	P	**Pb**	**10 56 37.7**	**-0.3**
SOH				S	**Sn**	**10 56 58.4**	**+0.1**
	comp=N,58nm,0.4s						
GONE	**Gonen-Balikesi**	**1.77**	**113**	PN	**Pn**	**10 56 37.9**	**+0.3**
EDC	**Edincik**	**1.80**	**103**	PN	**Pn**	**10 56 38.3**	**+0.2**
JMB	**Yambol**	**1.87**	**24**	*i* P	**Pb**	**10 56 41.3**	**+0.1**
BALB	**Balikesir**	**2.09**	**122**	PN	**Pn**	**10 56 42.5**	**+0.4**
STEP	**BALIKESIR_Sava**	**2.15**	**129**	*i* P	**Pn**	**10 56 43.6**	**+0.7**
STEP				*i* S	**Sn**	**10 57 10.9**	**+1.1**
STEP				IAML		10 57 19.0	
	comp=E,53nm,0.9s						
STEP				IAML		10 57 21.0	
	comp=N,76nm,0.9s						
CTKS	**Kestanelik-??a**	**2.27**	**77**	PN	**Pn**	**10 56 45.2**	**+0.6**

*BJI **21** 10:59:49.0±0.0, 34°.10N×26°.10E, h10^{km}, mB5.0/3, mb4.6/12, Ms4.6/3, Ms7 4.6/3*
*NIC **21** 10:59:50.5±0.0, 34°.19N×25°.97E, h18^{km}±5^{km}, Ml4.4/4*
*NEIC **21** 10:59:52.5±1.7, 34°.21N±0°.04×26°.12E±0°.07, h16^{km}±3^{km}, Error ellipse: s-maj=8.5km s-min=5.4km az=81.0*
*MED_RC **21** 10:59:52.0±1.8, 34°.11N×26°.12E, h14^{km}±3^{km}, MW4.2/7, Moment Tensor Solution.Mantle waves: s7,c7;   Duration: 1^{s}.0   Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.72±.58; M$_{\theta\theta}$-1.74±.42; M$_{\phi\phi}$0.02±.46; M$_{r\theta}$-0.24±.67; M$_{\theta\phi}$0.50±.26; M$_{\phi r}$1.31±.65;   Best double couple: M$_0$2.21000×10^{15} NP1:φ$_s$82.00000°, δ41.00000°, λ48.00000°.   NP2: φ$_s$312.00000°, δ61.00000°, λ120.00000°.   Principal axes: T 2.4300, Plg61.0000°, Azm271.0000°; N -0.4500, Plg26.0000°, Azm116.0000°; P -1.9800, Plg11.0000°, Azm21.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*MOS **21** 10:59:52.0±1.2, 34°.24N×26°.12E, h23^{km}, mb4.6/18 Error ellipse: s-maj=8.2km s-min=4.8km az=82.3*
*HLW **21** 10:59:53.6, 34°.22N×26°.24E, h7^{km}±14^{km}, Ml4.1*
*IDC **21** 10:59:54.8±3.5, 34°.26N×26°.13E, h30^{km}±25^{km}, mb4.0/32, mb1 4.1/40, mb1mx4.0/60, mbtmp4.2/40, ML4.0/8, MS3.5/8, Ms1 3.6/8, ms1mx3.0/48, Error ellipse: s-maj=13.3km s-min=10.0km az=178.0*
*ATH **21** 10:59:56.0, 34°.46N×26°.27E, h31^{km}±3^{km}, ML3.6/5, Error ellipse: s-maj=4.9km s-min=1.4km az=34.0*
*ISK **21** 10:59:55.9, 34°.60N×26°.23E, h22^{km}, ML3.9/12*
*GII **21** 10:59:57.4±0.0, 34°.02N×26°.67E, h10^{km}, mb4.1/3, MD3.9/3*
*THE **21** 10:59:58.4, 34°.57N×26°.16E, h0^{km}±6^{km}, ML3.4/3, Error ellipse: s-maj=11.4km s-min=1.9km az=181.0*
ISC 21 10:59:52.3±0.8**, 34°.17N**±0°.03×**26°.19E**±0°.03**, h17**^{km}±4^{km}**, n247, σ1^{s}.72**/288**, mb4.3**/52**, MS3.5**/9**, 9C-7D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRMA	**Ierapetra Chan**	**0.92**	**336**	P	**Pb**	**11 00 08.3**	**-1.6**
FRMA				S	**Sb**	**11 00 17.9**	**-3.9**
	3µm,0.6s						
ZKR	**Zakros**	**0.94**	**1**	P	**Pb**	**11 00 09.4**	**-0.8**
ZKR				S	**Sb**	**11 00 18.7**	**-3.7**
	5µm,0.5s						
ZKR	**Zakros**	**0.94**	**1**	P	**Pb**	**11 00 09.2**	**-1.1**
ZKR				S	**Sb**	**11 00 19.2**	**-3.2**
ZKR				AML	AML	11 00 23.4	
	comp=N,6057µm,0.6s						
ZKR				AML	AML	11 00 28.7	
	comp=E,13611µm,0.5s						
ZKR	**Zakros**	**0.94**	**1**	PG	**Pb**	**11 00 07.2**	**-3.0**
ZKR				SG	Sb	11 00 14.8	-7.6
ZKR	**Zakros**	**0.94**	**1**	P	**Pb**	**11 00 09.1**	**-1.1**
ZKR				S	**Sb**	**11 00 22.3**	**-0.1**
ZKR				AML	AML	11 00 28.6	
	comp=E,13nm,0.4s						
ZKR				AML	AML	11 00 28.6	
	comp=E,13nm,0.4s						
STIA	**Sitia Lasithi**	**1.03**	**356**	P	**Pb**	**11 00 12.2**	**+0.5**
STIA				S	**Sb**	**11 00 20.7**	**-4.3**
LAST	**Lasithi**	**1.15**	**330**	P	**Pg**	**11 00 14.6**	**-0.1**
LAST				S	**Sb**	**11 00 28.2**	**-0.2**
LAST				AML	AML	11 00 40.8	
	comp=N,6532µm,0.6s						
LAST				AML	AML	11 00 43.7	
	comp=E,6896µm,0.8s						
SIVA	**Sivas**	**1.42**	**307**	P	**Pg**	**11 00 20.8**	**+1.1**
SIVA				S	**Sg**	**11 00 37.5**	**-0.7**
SIVA				AML	AML	11 00 52.0	
	comp=N,7507µm,0.4s						
SIVA				AML	AML	11 00 54.9	
	comp=E,8276µm,0.6s						
HRKL	**Herakleio**	**1.45**	**322**	PN	**Pn**	**11 00 17.5**	**-0.2**
HRKL				SN	**Sn**	**11 00 33.1**	**-3.2**
IDI	**Anoyia**	**1.55**	**317**	Pn	**Pb**	**11 00 21.0**	**+0.4**
	comp=E,25nm,0.3s,baz=323,slow=22,SNR=11						
IDI				Sn	**Sn**	**11 00 36.9**	**-1.9**
	comp=E,58nm,0.3s,baz=338,slow=16,SNR=5.9						
IDI				LR	LR	11 01 01.5	
	comp=E,596nm,21.5s,baz=144,slow=46						
IDI	**Anoyia**	**1.55**	**317**	P	**Pg**	**11 00 21.4**	**-0.7**
IDI				AML	AML	11 00 56.8	
	comp=E,1688µm,1.2s						
IDI				AML	AML	11 00 58.2	
	comp=N,2428µm,0.6s						
IDI	**Anoyia**	**1.55**	**317**	PN	**Pn**	**11 00 19.5**	**+0.4**
IDI				SN	**Sn**	**11 00 36.5**	**-2.3**
KARP	**Karpathos**	**1.59**	**30**	P	**Pb**	**11 00 22.2**	**+0.9**
KARP				S	**Sn**	**11 00 41.1**	**+1.2**
	comp=N,2µm,0.9s						
KARP	**Karpathos**	**1.59**	**30**	P	**Pn**	**11 00 20.0**	**+0.3**
KARP				AML	AML	11 00 53.6	
	comp=E,4172µm,0.6s						
KARP				AML	AML	11 00 54.9	
	comp=N,5220µm,0.9s						
KARP	**Karpathos**	**1.59**	**30**	PN	**Pn**	**11 00 18.4**	**-1.3**
KARP				SN	**Sn**	**11 00 34.3**	**-5.6**
KARP	**Karpathos**	**1.59**	**30**	Pn	**Pn**	**11 00 20.3**	**+0.6**
GVDS	**Gavdos**	**1.86**	**292**	PN	**Pb**	**11 00 25.7**	**-0.1**
GVDS				SN	**Sb**	**11 00 49.0**	**+0.2**
GVD	**Gavdhos**	**1.86**	**292**	P	**Pg**	**11 00 27.0**	**-1.1**
GVD	**Gavdhos**	**1.86**	**292**	PN	**Pb**	**11 00 25.3**	**-0.5**
GVD				SN	**Sb**	**11 00 48.2**	**-0.6**
IMMV	**Iera Moni Meta**	**2.23**	**306**	P	**Pb**	**11 00 31.2**	**-0.9**
IMMV	**Iera Moni Meta**	**2.23**	**306**	PN	**Pn**	**11 00 29.9**	**+1.5**
IMMV				SN	**Sn**	**11 00 54.9**	**-0.6**
SANT	**Santorini**	**2.28**	**345**	PN	**Pn**	**11 00 27.6**	**-1.5**
SANT				SN	**Sn**	**11 00 50.5**	**-6.3**
KNDR	**Palaiochora Ch**	**2.32**	**298**	PN	**Pb**	**11 00 32.9**	**-0.8**
THT2	**Imerovigli**	**2.35**	**345**	PN	**Pn**	**11 00 27.9**	**-2.2**
THT2				SN	**Sn**	**11 00 52.3**	**-6.2**
RODP	**Rodopos**	**2.43**	**305**	PN	**Pb**	**11 00 33.4**	**-2.2**
ARG	**Arkhangelos**	**2.59**	**37**	PN	**Pn**	**11 00 32.7**	**-0.6**
KOSK	**Kos Island**	**2.66**	**14**	PN	**Pn**	**11 00 32.7**	**-1.6**
DAT	**Datca**	**2.79**	**24**	PN	**Pn**	**11 00 34.7**	**-1.6**
SLUM	**Salum**	**2.79**	**197**	P	**Pb**	**11 00 38.1**	**-3.7**
	baz=199						
SLUM				AMP		11 01 00.0	
	baz=199						
SLUM				S	**Sn**	**11 01 08.3**	**-1.1**
	baz=199						
APE	**Apeiranthos**	**2.94**	**350**	PN	**Pn**	**11 00 34.9**	**-3.4**
APE	**Apeiranthos**	**2.94**	**350**	⇑P	**Pn**	**11 00 36.0**	**-2.3**
BODT	**Bodrum**	**3.03**	**17**	PN	**Pn**	**11 00 37.7**	**-1.7**
DALY	**Dalyan (Mula)**	**3.32**	**37**	PN	**Pn**	**11 00 43.5**	**+0.1**
TURN	**Turunc**	**3.34**	**35**	PN	Pn	11 00 39.9	-3.8
KSL	**Kastellorizon**	**3.41**	**54**	⇑P	**Pn**	**11 00 46.1**	**+1.4**
KSL				AML	AML	11 01 36.4	
	comp=N,0.4nm,1.0s						
KSL				AML	AML	11 01 37.9	
	comp=N,0.5nm,0.5s						
YER	**Yerkesik**	**3.42**	**29**	PN	**Pn**	**11 00 44.1**	**-0.7**
ELL	**Elmali**	**3.98**	**49**	P	**Pn**	**11 00 54.8**	**+2.1**
ELL	**Elmali**	**3.98**	**49**	Pn	**Pn**	**11 00 54.8**	**+2.1**
ELL	**Elmali**	**3.98**	**49**	P	**Pn**	**11 00 54.7**	**+2.1**
ITM	**Ithomi**	**4.59**	**312**		**Pn**	**11 01 01.4**	**+0.4**
MANT	**Manisa**	**4.72**	**23**		**Pn**	**11 01 03.3**	**+0.5**
ISP	**Isparta**	**5.06**	**43**	P	**Pn**	**11 01 05.4**	**-2.1**
ISP	**Isparta**	**5.06**	**43**		**Pn**	**11 01 05.4**	**-2.1**
AKMS	**Akamas**	**5.14**	**79**	P	**Pn**	**11 01 09.1**	**+0.6**
AKMS				AML	AML	11 02 08.5	
	comp=N,0.9nm,0.4s						
AKMS				AML	AML	11 02 09.6	
	comp=N,0.6nm,0.4s						
OSC2	**CSNet OBS 4**	**5.19**	**100**	P	**Pn**	**11 01 11.0**	**+1.9**
OSC2				S	**Sn**	**11 02 13.6**	**+5.1**
NATA	**Nata**	**5.30**	**82**	P	**Pn**	**11 01 11.5**	**+0.8**
ALFC	**Alefka**	**5.37**	**78**	⇑P	**Pn**	**11 01 12.4**	**+0.7**
ALFC				AML	AML	11 02 14.1	
	comp=N,1.1nm,0.6s						
ALFC				AML	AML	11 02 22.3	
	comp=N,0.8nm,0.8s						
SZAC	**Souni**	**5.56**	**82**	P	**Pn**	**11 01 16.2**	**+1.9**
AGG	**Agios Georgios**	**5.75**	**328**	P	**Pn**	**11 01 14.4**	**-2.5**
AGG	**Agios Georgios**	**5.75**	**328**		**Pn**	**11 01 14.4**	**-2.5**
HMYD	**Mayadein**	**5.86**	**137**	P	**Pn**	**11 01 19.0**	**+0.6**
	baz=137						
ASGA	**Asgata**	**5.86**	**82**	P	**Pn**	**11 01 20.6**	**+2.2**
HNAT	**Natroun**	**5.88**	**139**	P	**Pn**	**11 01 19.6**	**+0.9**
	baz=139						
CSS	**Mathiatis**	**5.95**	**80**	Pn	**Pn**	**11 01 20.8**	**+1.3**
CSS				Sn	**Sn**	**11 02 25.2**	**-2.0**
CSS	**Mathiatis**	**5.95**	**80**		**Pn**	**11 01 19.4**	**-0.2**
MVOU	**Mavrovouni**	**6.20**	**80**	⇑P	**Pn**	**11 01 24.4**	**+1.5**
KOT	**Kottamia**	**6.39**	**130**	P	**Pn**	**11 01 25.9**	**+0.3**
	baz=130						
KOT				S	**Sn**	**11 02 34.6**	**-3.6**
	baz=130						
HHAG	**Hagoal**	**6.54**	**128**	P	**Pn**	**11 01 28.2**	**+0.4**
	baz=129						
GLL	**Jalalah**	**6.56**	**133**	P	**Pn**	**11 01 28.1**	**+0.2**
	baz=133						
LIT	**Litokhoron**	**6.62**	**335**	P	**Pn**	**11 01 28.9**	**+0.2**
LIT	**Litokhoron**	**6.62**	**335**		**Pn**	**11 01 28.9**	**+0.2**
HFRF	**Wahat Farafira**	**7.23**	**165**	P	**Pn**	**11 01 38.7**	**+1.5**
	baz=165						
HFRF				S	**Sn**	**11 02 55.0**	**-4.0**
	baz=165						
MDUB	**Mudurnu**	**7.45**	**31**	Pn	**Pn**	**11 01 41.6**	**+1.4**
FNA	**Florina**	**7.63**	**331**	P	**Pn**	**11 01 42.2**	**-0.5**
FNA	**Florina**	**7.63**	**331**		**Pn**	**11 01 42.2**	**-0.5**
KZIT	**Kziot**	**7.66**	**113**	Pn	**Pn**	**11 01 43.0**	**0.0**
KZIT				Sn	**Sn**	**11 03 05.3**	**-4.0**
SLTI	**Sal'it**	**7.66**	**102**	Pn	**Pn**	**11 01 44.1**	**+1.0**
MMA0B	**Mount Meron ar**	**7.77**	**96**	Pn	**Pn**	**11 01 46.1**	**+1.4**
MMAI	**Mount Meron Ar**	**7.77**	**96**	Pn	**Pn**	**11 01 45.6**	**+0.9**
	comp=N,3.3nm,0.3s,baz=283,slow=13,SNR=5.4						
MMAI				Sn	**Sn**	**11 03 11.6**	**-0.8**
	comp=N,5.4nm,0.3s,baz=277,slow=22,SNR=5.5						
MMLI	**Mount Malkishu**	**7.92**	**100**	Pn	**Pn**	**11 01 47.1**	**+0.4**
KSDI	**Kefar Szold**	**7.95**	**94**	Pn	**Pn**	**11 01 47.0**	**-0.1**
NATI	**Neve Ativ**	**8.01**	**94**	Pn	**Pn**	**11 01 48.0**	**+0.2**
YTIR	**Yattir**	**8.02**	**108**	Pn	**Pn**	**11 01 48.5**	**+0.4**
YTIR				Sn	**Sn**	**11 03 15.4**	**-3.1**
HMDT	**Nahal Hemdat**	**8.05**	**101**	Pn	**Pn**	**11 01 49.1**	**+0.6**
HMDT				Sn	**Sn**	**11 03 15.3**	**-3.8**
QRNJ	**Al-Qirein**	**8.07**	**100**	Pn	**Pn**	**11 01 48.6**	**-0.1**
BR131	**Keskin Array S**	**8.14**	**45**	P	**Pn**	**11 01 50.8**	**+1.0**
BR131	**Keskin Array S**	**8.14**	**45**		**Pn**	**11 01 50.8**	**+1.0**
BRTR	**Keskin Array B**	**8.14**	**45**	Pn	**Pn**	**11 01 51.8**	**+2.0**
	comp=N,0.3nm,0.3s,baz=219,slow=14,SNR=15						
BRTR				Sn	**Sn**	**11 03 19.5**	**-2.0**
	comp=N,0.1nm,0.3s,baz=127,slow=33,SNR=2.7						
BRTR				LR	LR	11 06 00.9	
	comp=N,226nm,18.9s,baz=178,slow=45						
BRTR	**Keskin Array B**	**8.14**	**45**	*i* P	**Pn**	**11 01 52.2**	**+2.4**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRTR	**Keskin Array B**	**8.14**	**45**		**Pn**	**11 01 48.7**	**-1.1**
DSI	**Dead Sea**	**8.15**	**106**	Pn	**Pn**	**11 01 49.9**	**0.0**
DSI				Sn	**Sn**	**11 03 18.1**	**-3.5**
KRMI	**Paran Flat**	**8.29**	**117**	Pn	**Pn**	**11 01 52.6**	**+0.9**
KRMI				Sn	**Sn**	**11 03 21.2**	**-3.7**
DAMI2	**DAM2**	**8.35**	**108**	Pn	**Pn**	**11 01 52.9**	**+0.4**
DAMI2				Sn	**Sn**	**11 03 23.3**	**-3.1**
PRNI	**Paran**	**8.38**	**115**	Pn	**Pn**	**11 01 53.5**	**+0.5**
PRNI				Sn	**Sn**	**11 03 23.5**	**-3.7**
GHAJ	**Ghor Haditha**	**8.40**	**107**	Pn	**Pn**	**11 01 53.6**	**+0.4**
GHAJ				Sn	**Sn**	**11 03 24.0**	**-3.6**
ZFRI	**Zfri**	**8.41**	**113**	Pn	**Pn**	**11 01 53.1**	**-0.3**
ZFRI				Sn	**Sn**	**11 03 23.3**	**-4.7**
SCTE	**Santa Cesarea**	**8.53**	**316**	Pn	**Pn**	**11 01 52.0**	**-2.9**
HRFI	**Mount Harif**	**8.56**	**116**	Pn	**Pn**	**11 01 56.2**	**+0.7**
HRFI				Sn	**Sn**	**11 03 28.3**	**-3.4**
MBRI	**Mt Berech**	**8.60**	**118**	Pn	**Pn**	**11 01 56.6**	**+0.6**
MBRI				Sn	**Sn**	**11 03 29.5**	**-3.1**
EIL	**Elat**	**8.69**	**119**	Pn	**Pn**	**11 01 58.5**	**+1.2**
	comp=Z,4.0nm,0.3s,baz=261,slow=5.9,SNR=23						
EIL				Sn	**Sn**	**11 03 29.1**	**-5.8**
	comp=Z,1.4nm,0.3s,baz=325,slow=21,SNR=2.5						
EIL	**Elat**	**8.69**	**119**	Pn	**Pn**	**11 01 58.0**	**+0.7**
EIL				Sn	**Sn**	**11 03 30.8**	**-4.0**
VTS	**Vitosha**	**8.75**	**346**	P	**Pn**	**11 01 57.9**	**-0.2**
VTS	**Vitosha**	**8.75**	**346**	Pn	**Pn**	**11 01 57.9**	**-0.2**
TIP	**Timpagrande**	**9.07**	**306**		**Pn**	**11 02 00.6**	**-2.0**
ASF	**Jabal al Asfar**	**9.19**	**100**	Pn	**Pn**	**11 02 04.4**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=208,slow=6.8,SNR=1.9						
ASF				Sn	**Sn**	**11 03 43.6**	**-3.7**
	comp=Z,0.3nm,0.3s,baz=336,slow=23,SNR=1.7						
ACER	**Acerenza**	**10.48**	**312**	Pn	**Pn**	**11 02 21.5**	**-0.3**
CORL	**Corleone**	**11.07**	**293**		**Pn**	**11 02 29.6**	**-0.4**
MLR	**Muntele Rosu**	**11.31**	**359**	P	**Pn**	**11 02 32.7**	**-0.4**
MLR	**Muntele Rosu**	**11.31**	**359**	Pn	**Pn**	**11 02 32.7**	**-0.4**
NRCA	**Norcia**	**13.39**	**314**	Pn	**Pn**	**11 03 00.2**	**-1.3**
BURAR	**Bucovina Array**	**13.45**	**357**	Pn	**Pn**	**11 03 00.5**	**-1.9**
TRI	**Trieste**	**14.93**	**324**	P	**P**	**11 03 31.3**	**+3.3**
TRI				pmax	pmax		
	comp=Z,50nm,0.6s						
SOKA	**Soboth**	**15.09**	**329**	*i* Pn	**Pn**	**11 03 24.2**	**-0.5**
	comp=Z,5.4nm,1.3s						
OBKA	**Obir**	**15.17**	**328**	*i* Pn	**Pn**	**11 03 27.3**	**+1.6**
	comp=Z,4.1nm,1.3s						
VYHS	**Vyhne**	**15.33**	**341**	*e*P	**Pn**	**11 03 25.8**	**-2.0**
VYHS	**Vyhne**	**15.33**	**341**	*e*PN	**Pn**	**11 03 25.8**	**-2.0**
NEY	**Neytrino**	**15.75**	**50**	⇓*e*P	**P**	**11 03 36.7**	**-0.6**
NEY				pmax	pmax		
	comp=Z,8.0nm,1.0s						
STAL	**STALIGIAL**	**15.84**	**324**	P	**P**	**11 03 37.6**	**-0.6**
STAL				IAmb	IAmb	11 03 39.8	
	comp=Z,6.1nm,0.5s						
KIV	**Kislovodsk**	**16.09**	**48**	*e*P	**P**	**11 03 41.4**	**+0.4**
KIV				pmax	pmax		
	comp=Z,55nm,1.1s						
KIV				MLR	MLR		
	comp=Z,116nm,13.0s						
KIV	**Kislovodsk**	**16.09**	**48**		**P**	**11 03 40.9**	**0.0**
KIV				IAmb	IAmb	11 03 46.2	
	comp=Z,17nm,1.0s						
KBZ	**Khabaz**	**16.10**	**49**	Pn	**Pn**	**11 03 40.0**	**+2.3**
	comp=Z,0.2nm,0.3s,baz=248,slow=12,SNR=3.7						
KBZ	**Khabaz**	**16.10**	**49**	⇑*e*P	**P**	**11 03 41.6**	**+0.6**
KBA	**Koelnbreinsper**	**16.14**	**327**	*i* Pn	**Pn**	**11 03 39.2**	**+0.8**
	comp=Z,1.9nm,0.6s						
KBA	**Koelnbreinsper**	**16.14**	**327**	P	**P**	**11 03 44.6**	**+3.0**
KBA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CTI	**Castel Tesino**	**16.23**	**321**	P	**Pn**	**11 03 41.3**	**+1.8**

CTI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CTI	Castel Tesino	16.23	321	P	Pn	11 03 41.3	+1.8
ABTA	Abfaltersbach	16.28	325	*i* Pn	P	11 03 42.2	-0.9
	comp=Z,5.5nm,0.6s						
ZEI	Tsey	16.30	53	*e*P	Pn	11 03 33.2	-7.3
ZEI				pmax	pmax		
	comp=Z,15nm,1.5s						
MOA	Molln	16.34	330	*i* Pn	Pn	11 03 42.3	+1.5
	comp=Z,3.9nm,1.1s						
SALO	Salr	16.56	318	P	P	11 03 45.5	-0.6
AKASG	Malin Array Be	16.67	7	Pn	Pn	11 03 44.8	-0.2
	comp=Z,3.3nm,0.3s,baz=190,slow=11,SNR=9.1						
AKASG	Malin Array Be	16.67	7	P	Pn	11 03 46.4	+1.4
AKBB	Malin Array Si	16.67	7	P	Pn	11 03 45.2	+0.2
AKBB				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AKBB	Malin Array Si	16.67	7	P	Pn	11 03 45.1	+0.2
WTTA	Wattenberg	17.07	324	*i* P	P	11 03 52.8	+0.8
	comp=Z,5.2nm,1.0s						
WATA	Walderalm	17.15	324	*i* Pn	Pn	11 03 51.9	+0.7
	comp=Z,3.2nm,0.5s						
SQTA	Sankt Quirin	17.25	324	*i* Pn	Pn	11 03 52.1	-0.3
	comp=Z,1.9nm,0.4s						
FETA	Feichten	17.36	322	*i* Pn	Pn	11 03 54.0	+0.2
	comp=Z,9.9nm,1.1s						
GERES	GERESS Array B	17.36	331	P	Pn	11 03 54.0	+0.4
	comp=Z,0.3nm,0.3s,baz=143,slow=10.0,SNR=2.9						
GERES	GERESS Array B	17.36	331	P	Pn	11 03 53.7	0.0
GERES	GERESS Array B	17.36	331		Pn	11 03 53.7	0.0
MOTA	Moosalm	17.39	324	*i* Pn	P	11 03 55.1	-0.3
	comp=Z,3.9nm,0.7s						
KHC	Kasperske Hory	17.63	332	*e*P	P	11 04 00.0	+2.0
KHC	Kasperske Hory	17.63	332	*e*P	P	11 04 00.0	+2.0
DAVOX	Davos/Dischmat	17.64	320	P	P	11 03 58.4	+0.2
	comp=Z,0.8nm,0.3s,baz=138,slow=17,SNR=4.1						
RETA	Reutte	17.66	323	*i* Pn	P	11 03 58.4	+0.1
	comp=Z,1.3nm,0.4s						
DPC	Dobruska-Polom	17.71	339	*e*P	Pn	11 03 58.5	+0.4
DPC	Dobruska-Polom	17.71	339	*e*P	Pn	11 03 58.5	+0.4
ISO	Isola	17.86	310	P	P	11 04 01.8	+1.3
ISO				pmax	pmax		
	comp=Z,8.0nm,1.3s						
DAVA	Damuels	17.96	322	*i* Pn	Pn	11 04 01.7	+0.4
	comp=Z,4.9nm,0.8s						
SENIN	Lac Senin/Sane	18.82	316	P	P	11 04 09.9	-1.3
VSR	Storozhevoye	19.47	25	*e*P	P	11 04 18.8	+0.7
VSR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CLL	Collm	19.62	335	*e*pP	pP	11 04 25.0	+1.2
CLL				*e*PP	PnPn	11 04 33.0	-1.8
VRH	Novokhopyorsk	20.42	29	*e*P	P	11 04 28.1	-0.4
VRH				pmax	pmax		
	comp=Z,30nm,0.6s						
LPSR	Galich'ya Gora	20.56	23	*e*P	P	11 04 32.0	+2.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TAM	Tamanrasset	21.37	243	P	P	11 04 39.1	0.0
TAM				pmax	pmax		
	comp=Z,7.0nm,0.7s						
TAM	Tamanrasset	21.37	243	P	P	11 04 39.1	0.0
TAM				IAmb	IAmb	11 04 44.9	
	comp=Z,6.9nm,0.7s						
MEM	Membach	22.07	324	P	P	11 04 46.3	+0.1
	comp=Z,14nm,0.7s						
MEM				pP	sP	11 04 50.9	-1.4
OBN	Obninsk	22.16	16⇓	*e*P	P	11 04 49.9	+2.8
OBN				*e*		11 05 13.8	
OBN				pmax	pmax		
	comp=Z,22nm,1.0s						
OBN				MLR	MLR		
	comp=Z,138nm,18.0s						
ESBB	Sonseca Array	24.66	292	P	P	11 05 12.0	-0.1
ESBB				IAmb	IAmb	11 05 12.9	
	comp=Z,15nm,1.1s						
ESDC	Sonseca Array	24.66	292	P	P	11 05 12.2	+0.1
	comp=Z,4.5nm,0.6s,baz=81,slow=10,SNR=19						
ESDC	Sonseca Array	24.66	292	P	P	11 05 11.6	-0.5
MDT	Midelt	25.67	276	P	P	11 05 22.1	+0.6
	comp=Z,1.9nm,0.6s,baz=97,slow=14,SNR=4.7						
GEYT	Alibeck	26.02	72	P	P	11 05 25.8	+1.3
	comp=Z,2.1nm,0.4s,baz=266,slow=8.9,SNR=5.2						
GEYT	Alibeck	26.02	72	P	P	11 05 25.8	+1.3
HFS	Hagfors	27.23	346	P	P	11 05 34.3	-0.8
	comp=Z,5.9nm,0.8s,baz=134,slow=11,SNR=10						
HFS				LR	LR	11 19 13.0	
	comp=Z,78nm,20.7s,baz=152,slow=43						
FINES	FINESS Array B	27.29	360	P	P	11 05 34.2	-1.4
	comp=Z,3.4nm,0.7s,baz=166,slow=9.2,SNR=10						
FINES	FINESS Array B	27.29	360	P	P	11 05 34.5	-1.1
FINES	FINESS Array B	27.29	360	P	P	11 05 34.5	-1.1
FIA1	FINESS Array S	27.29	360	P	P	11 05 34.4	-1.2
FIA1				IAmb	IAmb	11 05 38.8	
	comp=Z,16nm,1.1s						
NC602	NORSAR Array S	28.23	345	P	P	11 05 43.0	-1.1
AKTO	Aktyubinsk	28.32	45	P	P	11 05 44.8	-0.2
	comp=Z,0.9nm,0.4s,baz=230,slow=10,SNR=3.1						
NOA	NORSAR Array B	28.57	345	P	P	11 05 45.7	-1.4
	comp=Z,0.6nm,0.6s,baz=135,slow=9.5,SNR=1.8						
NOA				LR	LR	11 17 46.8	
	comp=Z,65nm,18.1s,baz=265,slow=38						
ABKAR	Akbulak array	29.07	49	P	P	11 05 52.4	+0.8
ABKAR	Akbulak array	29.07	49	P	P	11 05 52.8	+1.2
EKA	Eskdalemuir Ar	29.34	325	P	P	11 05 53.3	-0.6
	comp=Z,1.5nm,0.5s,baz=119,slow=11,SNR=5.4						
TOA0	Torodi Ar. Sit	30.53	233	P	P	11 06 06.1	+1.3
TOA0				IAmb	IAmb	11 06 06.6	
	comp=Z,8.3nm,1.1s						
TORD	Torodi Ar. Bea	30.53	233	P	P	11 06 05.9	+1.0
	comp=Z,2.7nm,0.5s,baz=28,slow=8.8,SNR=24						
TORD				PcP	PcP	11 09 04.7	+1.0
	comp=Z,0.7nm,0.6s,baz=46,slow=2.4,SNR=3.6						
TORD				LR	LR	11 20 53.4	
	comp=Z,102nm,19.8s,baz=15,slow=41						
TORD	Torodi Ar. Bea	30.53	233	P	P	11 06 05.1	+0.3
ARCES	ARCESS Array B	35.42	360	P	P	11 06 45.5	-1.5
	comp=Z,1.1nm,0.4s,baz=176,slow=9.1,SNR=21						
ARCES	ARCESS Array B	35.42	360	P	P	11 06 45.2	-1.8
ARE0	ARCESS Array S	35.42	360	P	P	11 06 45.4	-1.6
BRVK	Borovoye	36.37	45⇓	*e*P	P	11 06 57.0	+1.6
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRVK	Borovoye	36.37	45	P	P	11 06 55.7	+0.3
BRVK				IAmb	IAmb	11 06 58.5	
	comp=Z,5.3nm,1.1s						
BVAR	Borovoye Array	36.43	45	P	P	11 06 56.6	+0.7
	comp=Z,3.3nm,0.9s,baz=256,slow=5.6,SNR=14						
AAK	Ala-Archa	38.35	63	P	P	11 07 14.1	+1.6
	comp=Z,2.1nm,0.6s,baz=256,slow=5.2,SNR=7.3						
AAK	Ala-Archa	38.35	63⇑	*e*P	P	11 07 14.1	+1.6
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AAK	Ala-Archa	38.35	63	P	P	11 07 14.1	+1.6
AAK				IAmb	IAmb	11 07 15.8	
	comp=Z,5.4nm,1.1s						
DBIC	Dimbokro	39.63	233	P	P	11 07 23.4	+0.2
	comp=Z,1.4nm,0.3s,baz=41,slow=7.5,SNR=6.4						
DBIC				LR	LR	11 28 05.3	
	comp=Z,82nm,18.4s,baz=78,slow=43						
DBIC	Dimbokro	39.63	233	P	P	11 07 23.1	-0.2
DBIC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
DBIC	Dimbokro	39.63	233	P	P	11 07 23.1	-0.2
DBIC				IAmb	IAmb	11 07 27.6	
	comp=Z,6.7nm,1.1s						
TIC	Toumodi	39.76	234	*e*P	P	11 07 24.3	-0.1
KIC	Kosan Boka	39.79	233	*e*P	P	11 07 24.8	+0.3
	comp=Z,6.3nm,0.5s						
KSH	Kashi	39.79	67	P	P	11 07 24.0	-0.5
KSH				pP	pP	11 07 28.3	-0.9
KSH				PP	PnPn	11 08 58.9	-0.2
KSH				PcS	PcS	11 13 18.9	-1.8
KSH				S	S	11 13 26.5	-1.5
KSH				ScS	ScS	11 17 27.8	-3.7
KSH				pmax	pmax		
	comp=Z,11nm,0.7s						
KSH				LR	LR		
	comp=Z,240nm,9.8s						
KSH				LR	LR		
	comp=Z,260nm,12.1s						
KSH				LR	LR		
	comp=Z,370nm,9.0s						
LIC	Lamto	40.08	233	*e*P	P	11 07 27.2	+0.2
	comp=Z,9.7nm,0.6s						
KURBB	Kurchatov Arra	41.09	50	P	P	11 07 36.3	+1.3
	comp=Z,9.7nm,0.8s,baz=276,slow=8.8,SNR=47						
KURK	Kurchatov	41.16	50⇑	*i*P	P	11 07 36.5	+1.0
KURK				pmax	pmax		
	comp=Z,15nm,1.3s						
KURK	Kurchatov	41.16	50	P	P	11 07 34.8	-0.6
KURK				IAmb	IAmb	11 07 38.0	
	comp=Z,8.5nm,0.8s						
MAKZ	Makanchi	43.41	56	P	P	11 07 55.2	+1.3
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MAKZ	Makanchi	43.41	56	P	P	11 07 55.2	+1.3
MAKZ				IAmb	IAmb	11 07 59.4	
	comp=Z,3.3nm,0.6s						
MK31	Makanchi Array	43.62	56	P	P	11 07 57.2	+1.5
MK31				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MK31	Makanchi Array	43.62	56	P	P	11 07 57.2	+1.5
MK31				IAmb	IAmb	11 08 01.5	
	comp=Z,5.9nm,0.7s						
MKAR	Makanchi Array	43.62	56	P	P	11 07 57.0	+1.3
	comp=Z,7.9nm,0.6s,baz=282,slow=6.1,SNR=26						
MKAR	Makanchi Array	43.62	56	P	P	11 07 56.8	+1.1
SPITS	Spitsbergen Ar	44.31	357	P	P	11 08 00.1	-0.7
	comp=Z,1.6nm,0.5s,baz=150,slow=10,SNR=6.3						
SPITS				LR	LR	11 28 15.3	
	comp=Z,41nm,19.0s,baz=230,slow=38						
ZAA0	Zalesovo Array	45.08	45	P	P	11 08 07.9	+0.7
ZAA0				IAmb	IAmb	11 08 08.4	
	comp=Z,2.9nm,0.7s						
ZALV	Zalesovo Beam	45.08	45	P	P	11 08 07.7	+0.5
	comp=Z,3.4nm,0.5s,baz=262,slow=9.5,SNR=12						
ZALV	Zalesovo Beam	45.08	45	P	P	11 08 07.2	0.0
ZALV	Zalesovo Beam	45.08	45	P	P	11 08 07.2	0.0
DGZ	Jazzator, Alta	46.83	51⇓	*e*P	P	11 08 22.5	+1.3
WMQ	Urumqi	47.77	59	*e*P	P	11 08 32.3	+3.7
TSUM	Tsumeb	53.70	190	LR	LR	11 32 42.0	
	comp=Z,108nm,18.4s,baz=349,slow=37						
ZAK	Zakamensk	56.77	48	*e*P	P	11 09 36.8	+1.5
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LBTB	Lobatse	58.86	181	LR	LR	11 38 24.4	
	comp=Z,66nm,18.1s,baz=87,slow=39						
SONM	Songino Array	59.46	50	P	P	11 09 54.7	+0.4
	comp=Z,1.7nm,0.7s,baz=284,slow=5.8,SNR=5.3						
ULN	Ulaanbaatar	59.87	50⇑	*i*P	P	11 09 58.2	+1.1
ULN				pmax	pmax		
	comp=Z,7.0nm,2.5s						
DRLN	Deer Lake	61.18	312	P	P	11 10 06.0	+0.1
TIXI	Tiksi	61.79	21	P	P	11 10 09.2	-0.4
	comp=Z,1.0nm,0.3s,baz=317,slow=4.7,SNR=2.1						
TIXI	Tiksi	61.79	21⇓	*e*P	P	11 10 12.6	+3.0
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.4s						
BOSA	Boshof	62.45	181	P	P	11 10 14.9	+0.3
	comp=Z,1.0nm,0.7s,baz=31,slow=5.9,SNR=1.1						
CD2	Chengdu	63.95	69	*e*P	P	11 10 23.9	-0.8
SCHQ	Schefferville	64.49	320	P	P	11 10 27.7	-0.1
	comp=Z,4.0nm,0.6s,baz=60,slow=6.4,SNR=11						
SCHQ	Schefferville	64.49	320	P	P	11 10 27.7	-0.1
HHC	Hu-ho-hao-te	65.48	56	*e*P	P	11 10 34.8	+0.2
HHC				pmax	pmax		
	comp=Z,23nm,1.0s						
HHC				pmax	pmax		
	comp=Z,97nm,5.9s						
CMAR	Chiang Mai Arr	65.84	83	P	P	11 10 38.0	+0.8
	comp=Z,0.6nm,0.3s,baz=298,slow=8.0,SNR=6.8						
D62A	Allapoint, All	69.12	313	P	P	11 10 58.2	+0.8
KLR	Kul'dur	73.96	41	P	P	11 11 27.3	+0.8
	comp=Z,1.7nm,0.8s,baz=286,slow=7.8,SNR=4.4						
KLR	Kul'dur	73.96	41⇓	*e*P	P	11 11 26.9	+0.4
KLR				pmax	pmax		
	comp=Z,10.0nm,2.8s						
SEY	Seymchan	74.15	23	P	P	11 11 28.1	+0.8
	comp=Z,1.3nm,0.7s,baz=88,slow=22,SNR=4.6						
SEY	Seymchan	74.15	23⇓	*e*P	P	11 11 28.7	+1.3
D53A	Lac Vacive, Po	74.21	316	P	P	11 11 29.1	+1.1
C36M	Paulatuk	74.50	349	P	P	11 11 29.4	+0.1
MA2	Magadan	76.01	26	P	P	11 11 38.7	+0.5
	comp=Z,2.3nm,0.4s,baz=323,slow=5.1,SNR=4.5						
MA2	Magadan	76.01	26⇑	*e*P	P	11 11 39.2	+1.0
MA2				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MA2	Magadan	76.01	26	P	P	11 11 39.2	+1.0
MA2				IAmb	IAmb	11 11 40.0	
	comp=Z,5.1nm,0.9s						
USRK	Ussuriysk Ar.	76.94	45	P	P	11 11 44.2	+0.5
	comp=Z,3.5nm,0.8s,baz=286,slow=4.6,SNR=6.6						
USRK	Ussuriysk Ar.	76.94	45	P	P	11 11 44.4	+0.6
TOLK	Toolik Lake Re	77.45	358	P	P	11 11 47.2	+1.0
M56A	Emporium	77.63	312	P	P	11 11 47.3	-0.4
SSPA	Standing Stone	77.92	311	P	P	11 11 49.2	-0.2
KSRS	Korea Array	78.21	53	P	P	11 11 51.7	+0.8
	comp=Z,1.2nm,0.6s,baz=301,slow=5.3,SNR=3.6						
YKA	Yellowknife Ar	78.65	343	P	P	11 11 52.6	-0.3
	comp=Z,1.2nm,0.8s,baz=37,slow=5.4,SNR=21						
E43A	Lone Tree Farm	79.78	320	P	P	11 12 00.0	+0.6
E43A				IAmb	IAmb	11 12 00.8	
	comp=Z,3.8nm,0.8s						
FFC	Flin Flon	80.90	332	P	P	11 12 05.8	+0.5
FFC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FFC	Flin Flon	80.90	332	P	P	11 12 05.8	+0.5
FFC				IAmb	IAmb	11 12 06.4	
	comp=Z,2.7nm,0.8s						
ILAR	Eielson Array	81.24	357	P	P	11 12 07.6	+0.7
	comp=Z,0.3nm,0.7s,baz=347,slow=3.7,SNR=3.5						
DAWY	Dawson	81.43	354	P	P	11 12 08.1	+0.1
WRH	Wood River Hil	81.58	357	P	P	11 12 08.8	+0.1
WRH				IAmb	IAmb	11 12 09.7	
	comp=Z,2.8nm,1.1s						
ULM	Lac du Bonnet	81.60	327	P	P	11 12 09.0	-0.1
	comp=Z,1.0nm,0.5s,baz=24,slow=3.0,SNR=3.3						
ULM	Lac du Bonnet	81.60	327	P	P	11 12 09.0	-0.1
PPLA	Purkeypile	83.26	359	P	P	11 12 18.0	+0.3
MJAR	Matsushiro Arr	85.35	49	P	P	11 12 28.9	+0.3
	comp=Z,3.0nm,0.9s,baz=308,slow=4.7,SNR=4.3						
NEW	Newport	91.62	336	P	P	11 12 58.9	+0.5
NEW				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NEW	Newport	91.62	336	P	P	11 12 58.9	+0.5
PDAR	Pinedale Array	93.39	329	P	P	11 13 06.5	-0.4
	comp=Z,0.3nm,0.7s,baz=52,slow=1.6,SNR=3.1						
WRA	Warramunga Arr	115.63	97	PKP	PKPdf	11 18 33.4	-0.5
	comp=Z,0.5nm,0.9s,baz=311,slow=2.0,SNR=3.1						
ASAR	Alice Springs	117.03	101	PKP	PKPdf	11 18 36.3	-0.3
	comp=Z,0.2nm,0.6s,baz=311,slow=0.6,SNR=2.5						

IDC ***21*** *11:16:36.1±1.2, 40°.31S×174°.58E, h79^{km}±11^{km}, mb3.9/3, mb1 4.0/5, mb1mx3.7/22, mbtmp4.1/5, MS3.0/2, Ms1 3.0/2, ms1mx2.7/22, Error ellipse: s-maj=21.7km s-min=8.7km az=130.0*

NEIC ***21*** *11:16:38.0±2.5, 40°.35S±0°.05×174°.69E±0°.06, h99^{km}±4^{km}, Error ellipse: s-maj=7.0km s-min=5.9km az=150.0*

WEL ***21*** *11:16:38.2, 40°S±2°×17°5E±°, h97^{km}±4^{km}, ML4.9/15, MLv4.5/17, Error ellipse: s-maj=0.0km s-min=0.0km az=52.8*

ISC 21 11:16:38.7±0.6**, 40°.39S**±0°.03×**174°.68E**±0°.03**, h102**^{km}±5^{km}**,** **n218,** σ**1**^{s}**.46**/239**, mb4.3**/11**, 2C, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KIW	Kapiti Island	0.50	160	P	Pn	11 16 54.1	-0.7
KIW				S	Sn	11 17 05.1	-1.7
OHWZ	Ohakea	0.52	70	P	Pn	11 16 54.4	-0.4
OHWZ				S	Sn	11 17 06.3	-0.6
OGWZ	Otaki Gorge	0.57	139	P	Pn	11 16 54.8	-0.4
OGWZ				S	Sn	11 17 06.7	-0.9
WAZ	Wanganui	0.67	20	P	Pn	11 16 55.5	-0.6
DUWZ	D'Urville Isla	0.71	234	P	Pn	11 16 55.3	-1.1
MRZ	Mangatainoka R	0.74	112	P	Pn	11 16 56.1	-0.5
MRZ				S	Sn	11 17 08.9	-1.2
CAW	Cannon Point	0.78	158	P	Pn	11 16 56.8	-0.2
HOWZ	Holdsworth Sta	0.81	129	P	Pn	11 16 56.9	-0.5
HOWZ				S	Sn	11 17 10.6	-0.8
POWZ	Post Office Ro	0.83	91	P	Pn	11 16 56.8	-0.7
POWZ				S	Sn	11 17 10.4	-1.3
TCW	Tory Channel	0.88	200	P	Pn	11 16 57.7	-0.3
WEL	Wellington	0.90	176	P	Pn	11 16 57.9	-0.3
SNZO	South Karori	0.92	179		Pn	11 16 58.0	-0.4
SNZO				Sn	Sn	11 17 11.2	-2.1
LREZ	Lake Rotokare	0.95	347	P	Pn	11 16 58.1	-0.6
MTW	Mount Morrison	0.99	141	P	Pn	11 16 58.8	-0.4
TIWZ	Tintock	0.99	113	P	Pn	11 16 58.8	-0.4
PRWZ	Pori Road	1.00	100	P	Pn	11 16 59.0	-0.2
BHW	Baring Head	1.03	172		Pn	11 16 59.0	-0.6
BHW				Sn	Sn	11 17 13.0	-2.4
BHW	Baring Head	1.03	172	P	Pn	11 16 59.2	-0.4
TSZ	Takapari Road	1.03	72	P	Pn	11 16 58.9	-0.7
MSWZ	Moikau Station	1.11	157		Pn	11 17 00.1	-0.4
MSWZ				Sn	Sn	11 17 15.0	-2.0
MSWZ	Moikau Station	1.11	157	P	Pn	11 17 00.3	-0.3
PREZ	Palmer Road	1.12	339	P	Pn	11 17 00.1	-0.5
DVHZ	Dannevirke	1.14	86	P	Pn	11 16 59.9	-0.8
PAWZ	Paruwai Farm	1.14	151	P	Pn	11 17 00.6	-0.2
NMEZ	Namu Road	1.15	327	P	Pn	11 17 00.1	-0.8
TMWZ	Te Maipa	1.17	128	P	Pn	11 17 00.9	-0.2
MTVZ	Mangateitei	1.17	31	P	Pn	11 17 00.4	-0.8
TUWZ	Tuamarina	1.18	208		Pn	11 17 00.7	-0.5
TUWZ				Sn	Sn	11 17 16.5	-1.8
TUWZ	Tuamarina	1.18	208	P	Pn	11 17 00.8	-0.5
KHEZ	Kahui Hut	1.21	335	P	Pn	11 17 00.9	-0.7
PKVZ	Pokaka	1.21	25	P	Pn	11 17 00.6	-1.0
BFZ	Birch Farm	1.23	104		Pn	11 17 01.2	-0.6
BFZ				Sn	Sn	11 17 17.3	-2.0
BFZ	Birch Farm	1.23	104	P	Pn	11 17 01.2	-0.6
DREZ	Durham Road	1.25	343	P	Pn	11 17 01.6	-0.5
PNHZ	Pukenui	1.26	68	P	Pn	11 17 01.2	-1.0
PLWZ	Palliser	1.26	160		Pn	11 17 01.7	-0.5
PLWZ				Sn	Sn	11 17 18.2	-1.8
PLWZ	Palliser	1.26	160	P	Pn	11 17 01.7	-0.5
VRZ	Vera Road	1.26	3	P	Pn	11 17 01.5	-0.7
TRWZ	Traveller	1.27	143	P	Pn	11 17 01.9	-0.4
CPWZ	Castlepoint	1.27	115	P	Pn	11 17 02.4	+0.2
TRVZ	Turoa	1.27	32	P	Pn	11 17 01.8	-0.8
MOVZ	Moawhango	1.28	40	P	Pn	11 17 01.4	-1.1
NBEZ	Newall Road No	1.28	330	P	Pn	11 17 01.8	-0.6
NNZ	Nelson	1.29	230		Pn	11 17 01.8	-0.7
NNZ				Sn	Sn	11 17 19.2	-1.3
NNZ	Nelson	1.29	230	P	Pn	11 17 01.5	-1.0
DRZ	Dome Shelter	1.30	32	P	Pn	11 17 02.5	-0.4
WHVZ	Whangaehu Hut	1.30	33	P	Pn	11 17 02.2	-0.8
PKE	Pukeiti	1.31	336	P	Pn	11 17 01.9	-0.9
FWVZ	Far West T-bar	1.31	31	P	Pn	11 17 02.1	-1.0
MHEZ	Mangahewa	1.34	348	P	Pn	11 17 03.4	+0.3
TUVZ	Tukino	1.34	34	P	Pn	11 17 02.6	-0.8
ANWZ	Angora Road	1.37	94	P	Pn	11 17 02.9	-0.5
WPHZ	Waipukurau	1.38	77	P	Pn	11 17 02.9	-0.7
BHHZ	Black Hill Sta	1.39	50	P	Pn	11 17 02.7	-1.1
NGZ	Ngauruhoe	1.40	31	P	Pn	11 17 03.0	-1.0
CMWZ	Cape Campbell	1.41	194		Pn	11 17 04.1	+0.3
CMWZ	Cape Campbell	1.41	194	P	Pn	11 17 04.2	+0.3
TWVZ	Taurewa	1.44	24	P	Pn	11 17 03.1	-1.3
WTVZ	West Tongariro	1.45	29	P	Pn	11 17 03.4	-1.1
BSWZ	Blackbirch Sta	1.46	204		Pn	11 17 04.2	-0.4
BSWZ	Blackbirch Sta	1.46	204	P	Pn	11 17 04.2	-0.4
KRVZ	Karewarewa	1.49	30	P	Pn	11 17 03.8	-1.2
KRHZ	Kereru	1.49	61	P	Pn	11 17 03.8	-1.2
PRHZ	Porangahau	1.50	86	P	Pn	11 17 04.3	-0.7
KATZ	Kakaramea	1.61	29	P	Pn	11 17 05.4	-1.2
KWHZ	Kaweka Forest	1.65	55	P	Pn	11 17 05.7	-1.2
RITZ	Rihia Road	1.68	33	P	Pn	11 17 06.5	-0.8
QRZ	Quartz Range	1.70	254		Pn	11 17 05.9	-1.6
QRZ	Quartz Range	1.70	254	P	Pn	11 17 05.8	-1.6
PXZ	Pawanui	1.71	79	P	Pn	11 17 06.6	-1.0
RATZ	Rangitukua	1.74	29	P	Pn	11 17 07.2	-0.8
KAHZ	Kahuranaki	1.78	71	P	Pn	11 17 07.7	-0.9
MCHZ	McNeill Hill	1.81	59	P	Pn	11 17 08.0	-0.9
HATZ	Hinemaiaia	1.85	37	P	Pn	11 17 07.6	-1.8
BKZ	Black Stump Fm	1.85	49		Pn	11 17 08.3	-1.2
BKZ	Black Stump Fm	1.85	49	P	Pn	11 17 08.2	-1.3
WATZ	Wairara	1.86	26	P	Pn	11 17 08.7	-1.0
HIZ	Hauiti	1.88	4		Pn	11 17 09.4	-0.4
HIZ	Hauiti	1.88	4	P	Pn	11 17 09.0	-0.8
THZ	Tophouse	1.92	224		Pn	11 17 10.2	-0.2
THZ	Tophouse	1.92	224	P	Pn	11 17 10.1	-0.3
CKHZ	Cape Kidnapper	1.98	69	P	Pn	11 17 10.0	-1.1
MRHZ	Matea Rd	2.05	41	P	Pn	11 17 10.3	-1.8
NMHZ	Naumai	2.08	52	P	Pn	11 17 11.4	-1.1
KUTZ	Kaahu Road	2.09	25	P	Pn	11 17 11.6	-0.9
ARHZ	Aropaoanui	2.11	59	P	Pn	11 17 11.3	-1.3
TLZ	Tolley Road	2.16	18	P	Pn	11 17 12.1	-1.4
WPRZ	Whakapapatarin	2.19	32	P	Pn	11 17 12.1	-1.7
KHZ	Kahutara	2.20	203		Pn	11 17 13.6	-0.4
KHZ	Kahutara	2.20	203	P	Pn	11 17 13.5	-0.4
ALRZ	Allen Road	2.23	36	P	Pn	11 17 12.8	-1.5
MTHZ	Maungataniwha	2.27	48	P	Pn	11 17 13.0	-1.8
PRRZ	Plateau Road	2.30	36	P	Pn	11 17 13.7	-1.6
GRRZ	Galatos Road	2.32	29	P	Pn	11 17 14.4	-1.0
HRRZ	Handcock Road	2.35	32	P	Pn	11 17 14.8	-1.1
WHHZ	Waihua	2.36	57	P	Pn	11 17 14.7	-1.3
RAHZ	Arahi	2.37	52	P	Pn	11 17 14.3	-1.8
HSRZ	Hossack Road	2.40	31	P	Pn	11 17 15.4	-1.1
RRRZ	Republican Roa	2.49	35	P	Pn	11 17 16.2	-1.6
HLRZ	Highlands Stat	2.50	32	P	Pn	11 17 17.1	-0.7
MUGZ	Murupara	2.50	41	P	Pn	11 17 15.5	-2.3
RTZ	Ruatahuna	2.51	46	P	Pn	11 17 21.2	+3.2
DSZ	Denniston Nort	2.56	237	P	Pn	11 17 17.2	-1.5
SNGZ	Shannon Statio	2.60	53	P	Pn	11 17 17.3	-1.9
OMRZ	Omania	2.63	30	P	Pn	11 17 18.0	-1.6
KNZ	Kokohu	2.68	60	P	Pn	11 17 18.1	-2.1
KMRZ	Kaimai	2.72	22	P	Pn	11 17 20.0	-0.8
TOZ	Tahuroa Road	2.73	14	P	Pn	11 17 20.0	-0.9
URZ	Urewera	2.84	42	P	Pn	11 17 19.2	-3.1
	6.1nm,0.3s,baz=231,slow=7.8,SNR=48						
URZ				S	Sn	11 17 53.0	-2.9
	33nm,0.3s,baz=11,slow=10.0,SNR=8.5						
URZ	Urewera	2.84	42		Pn	11 17 19.6	-2.7
URZ	Urewera	2.84	42	P	Pn	11 17 19.6	-2.7
GVZ	Greta Valley S	2.86	205	P	Pn	11 17 21.6	-1.0
PRGZ	Paritu Road	2.87	60	P	Pn	11 17 20.7	-2.0
RIGZ	Rimuhau	2.91	56	P	Pn	11 17 21.5	-1.8
TGRZ	Tauranga	2.92	25	P	Pn	11 17 22.5	-0.9
OPRZ	Ohinepanea	2.93	30	P	Pn	11 17 21.8	-1.6
LTZ	Lake Taylor	3.00	216		Pn	11 17 23.2	-1.3
LTZ	Lake Taylor	3.00	216	P	Pn	11 17 23.2	-1.3
MWZ	Matawai	3.01	48	P	Pn	11 17 22.0	-2.7
TKGZ	Te Karaka	3.13	53	P	Pn	11 17 23.7	-2.4
AMCZ	Amberley	3.17	208	P	Pn	11 17 25.3	-1.5
KBAZ	Karaka Road Bo	3.29	3	P	Pn	11 17 27.7	-0.7
MKAZ	Moumakai	3.30	7	P	Pn	11 17 27.2	-1.2
AWAZ	Awhitu Peninsu	3.32	359	P	Pn	11 17 28.0	-0.8
RUGZ	Raukumara Rang	3.36	45	P	Pn	11 17 26.2	-3.2
INZ	Inchbonnie	3.37	225	P	Pn	11 17 28.2	-1.2
TWGZ	Tauwhareparae	3.38	50	P	Pn	11 17 27.4	-2.1
ETAZ	East Tamaki Re	3.43	3	P	Pn	11 17 29.6	-0.7
WTAZ	Waiatarua	3.45	359	P	Pn	11 17 30.2	-0.3
EPAZ	Eden Park BICE	3.51	1	P	Pn	11 17 30.9	-0.3
HBAZ	Herne Bay Bore	3.53	1	P	Pn	11 17 31.8	+0.2
OXZ	Oxford	3.54	213		Pn	11 17 29.8	-1.8
OXZ	Oxford	3.54	213	P	Pn	11 17 29.6	-2.0
OKCZ	Okains Bay	3.55	199	P	Pn	11 17 29.9	-1.8
HAZ	Te Kaha	3.57	44	P	Pn	11 17 28.3	-3.7
WIAZ	Waiheke Island	3.61	6	P	Pn	11 17 31.6	-0.9
PUZ	Puketiti	3.61	51	P	Pn	11 17 29.7	-3.0
RVAZ	Riverhead Bore	3.61	359	P	Pn	11 17 31.8	-0.9
MBAZ	Motutapu North	3.62	3	P	Pn	11 17 31.9	-0.8
MQZ	McQueen's Vall	3.64	204		Pn	11 17 30.7	-2.4
MQZ	McQueen's Vall	3.64	204	P	Pn	11 17 30.4	-2.6
AKCZ	Akaroa Harbour	3.72	200	P	Pn	11 17 32.0	-2.1
KUZ	Kuaotunu	3.73	13	P	Pn	11 17 33.0	-1.2
ABAZ	Army Bay	3.78	2	P	Pn	11 17 35.1	+0.1
WMGZ	Waiomatatini S	3.87	50	P	Pn	11 17 33.1	-3.0
MXZ	Matakaoa Point	3.99	46	Pn	Pn	11 17 35.2	-2.6
WVZ	Waitaha Valley	3.99	226	P	Pn	11 17 36.6	-1.0
RPZ	Rata Peaks	4.28	218	P	Pn	11 17 40.4	-1.3
	10nm,0.3s,baz=79,slow=1.7,SNR=60						
RPZ				S	Sn	11 18 26.7	-3.8
	34nm,0.3s,baz=349,slow=23,SNR=28						
RPZ	Rata Peaks	4.28	218		Pn	11 17 40.5	-1.1
RPZ	Rata Peaks	4.28	218	P	Pn	11 17 40.5	-1.1
WCZ	Waipu Caves	4.45	356	P	Pn	11 17 43.5	-0.4
FOZ	Fox Glacier	4.80	228		Pn	11 17 46.5	-2.1
FOZ	Fox Glacier	4.80	228	P	Pn	11 17 46.6	-2.0
LBZ	Lake Benmore	5.20	218	Pn	Pn	11 17 52.4	-1.7
LBZ	Lake Benmore	5.20	218	P	Pn	11 17 52.8	-1.3
OUZ	Omahuta	5.23	350		Pn	11 17 54.0	-0.4
OUZ	Omahuta	5.23	350	P	Pn	11 17 54.8	+0.3
ODZ	Otahua Downs	5.52	211	Pn	Pn	11 17 56.8	-1.6
ODZ	Otahua Downs	5.52	211	P	Pn	11 17 56.6	-1.8
JCZ	Jackson Bay	5.72	228	P	Pn	11 17 58.4	-2.8
WKZ	Wanaka	6.09	221	Pn	Pn	11 18 04.0	-2.2
WKZ	Wanaka	6.09	221	P	Pn	11 18 04.1	-2.0
EAZ	Earnscleugh	6.25	217	P	Pn	11 18 06.6	-1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
HHSZ	Highcliff Hill	6.25	207	P	Pn	11 18 06.6	-1.7
MSZ	Milford Sound	6.58	227	P	Pn	11 18 11.5	-1.2
MLZ	Mavora Lakes	6.93	222	Pn	Pn	11 18 15.1	-2.4
MLZ	Mavora Lakes	6.93	222	P	Pn	11 18 15.7	-1.8
CTZ	Chatham Island	7.29	120	P	Pn	11 18 21.6	-0.8
SYZ	Scrubby Hill	7.35	211	P	Pn	11 18 22.1	-1.1
WHZ	Wether Hill Ro	7.38	220	Pn	Pn	11 18 21.3	-2.3
WHZ	Wether Hill Ro	7.38	220	P	Pn	11 18 21.8	-1.9
APZ	The Paps	8.06	215	P	Pn	11 18 31.0	-1.9
DZM	Mont Dzumac	19.55	337	LR	LR	11 27 49.7	
	comp=Z,45nm,18.7s,baz=53,slow=35						
TOO	Toolangi	22.82	268	P	P	11 21 33.1	+0.2
BBOO	Buckleboo	31.72	271	P	P	11 22 53.3	+0.6
BBOO				IAmb	IAmb	11 23 05.7	
	comp=Z,24nm,1.4s						
VNDA	Vanda	37.63	185	P	P	11 23 45.4	+2.4
AS31	Alice Springs	38.01	283	P	P	11 23 46.9	0.0
ASAR	Alice Springs	38.01	283	P	P	11 23 47.0	+0.1
	comp=Z,1.2nm,0.5s,baz=131,slow=7.7,SNR=31						
ASAR				ScP	ScP	11 29 35.7	-2.9
	comp=Z,0.6nm,0.9s,baz=120,slow=3.7,SNR=4.2						
ASAR	Alice Springs	38.01	283	P	P	11 23 46.8	-0.1
COEN	Coen	38.10	305	P	P	11 23 47.2	-0.4
WB2	Warramunga Arr	39.95	289	P	P	11 24 03.2	+0.1
WB2				IAmb	IAmb	11 24 05.1	
	comp=Z,3.2nm,0.7s						
WRAB	Tennant Creek	39.95	289	P	P	11 24 03.2	+0.1
WRAB				IAmb	IAmb	11 24 04.7	
	comp=Z,3.1nm,0.8s						
WRA	Warramunga Arr	39.96	289	P	P	11 24 03.0	-0.1
	comp=Z,1.3nm,0.6s,baz=126,slow=8.0,SNR=22						
WB0	Warramunga Arr	40.03	289	P	P	11 24 03.5	-0.3
WB0				IAmb	IAmb	11 24 09.1	
	comp=Z,5.6nm,1.4s						
CASY	Casey	43.53	212	P	P	11 24 32.1	+0.5
KNRA	Kununurra	46.75	288	P	P	11 24 58.5	+0.8
KNRA				IAmb	IAmb	11 25 08.5	
	comp=Z,16nm,1.4s						
FITZ	Fitzroy Crossi	47.51	283	P	P	11 25 04.0	+0.4
FITZ				IAmb	IAmb	11 25 16.2	
	comp=Z,6.3nm,1.2s						
MORW	Morawa	48.70	264	P	P	11 25 12.5	-0.2
MORW				IAmb	IAmb	11 25 27.6	
	comp=Z,10nm,1.1s						
QSPA	South Pole Qui	49.74	180	P	P	11 25 22.3	+2.0
	comp=Z,4.5nm,0.6s,baz=360,slow=0.7,SNR=32						
QSPA	South Pole Qui	49.74	180	P	P	11 25 22.3	+2.0
QSPA				IAmb	IAmb	11 25 24.0	
	comp=Z,7.3nm,0.9s						
MAW	Mawson	60.83	204	P	P	11 26 40.5	+1.0
SYO	Syowa Base	65.97	196	⇑eP	P	11 27 11.6	-1.8
SYO	Syowa Base	65.97	196	⇑epP	pP	11 27 34.9	-4.0
SNAA	Sanae	68.23	181	P	P	11 27 29.3	+1.5
SNAA	Sanae	68.23	181	P	P	11 27 29.1	+1.3
SNAA				IAmb	IAmb	11 27 31.8	
	comp=Z,11nm,1.5s						
VNA3	Neumayer Olymp	68.63	178	P	P	11 27 31.9	+1.7
VNA2	Neumayer--Watz	68.99	179	P	P	11 27 34.2	+1.8
	baz=185,slow=6.9						
KSRS	Korea Array	88.53	325	LR	LR	12 04 37.4	
	comp=Z,8.6nm,20.2s,baz=350,slow=33						
KSAR	Wonju Array Be	88.54	325	P	P	11 29 16.8	-2.7
KS19	Wonju Array Si	88.60	325	P	P	11 29 18.0	-1.8
CD2	Chengdu	96.62	305	eP	P	11 29 58.6	+1.5
HHC	Hu-ho-hao-te	99.12	317	eP	Pdif	11 30 10.3	+2.2
YKA	Yellowknife Ar	117.03	29	PKP	PKPdf	11 35 09.4	-1.0
	comp=Z,2.3nm,1.2s,baz=232,slow=1.4,SNR=7.4						
MKAR	Makanchi Array	119.40	308	PKP	PKPdf	11 35 13.7	-1.8
	comp=Z,0.3nm,0.6s,baz=212,slow=3.0,SNR=4.6						
KSH	Kashi	119.90	298	PKP	PKiKP	11 35 18.3	+1.4
KSH				sPKP		11 35 55.3	
KSH				PP	PP	11 36 49.4	+6.6
KSH				PKS	PKSdf	11 38 54.4	+0.8
KSH				SKKS		11 43 30.9	
LIC	Lamto	145.99	181	ePKP1	PKPbc	11 36 07.0	+0.1
	comp=Z,30nm,0.7s						
KIC	Kosan Boka	146.12	181	ePKP1	PKPbc	11 36 07.3	0.0
	comp=Z,18nm,0.6s						
TIC	Toumodi	146.40	181	ePKP1	PKPbc	11 36 08.2	0.0
	comp=Z,4.5nm,0.5s						
DBIC	Dimbokro	146.43	181	PKPbc	PKPab	11 36 08.8	-0.4
	comp=Z,5.7nm,0.7s,baz=142,slow=4.1,SNR=14						
DBIC	Dimbokro	146.43	181		PKPbc	11 36 08.6	+0.4
ARCES	ARCESS Array B	146.60	341	PKPbc	PKPdf	11 36 06.0	+0.6
	comp=Z,4.2nm,0.6s,baz=54,slow=1.8,SNR=17						
ARCES	ARCESS Array B	146.60	341		PKPdf	11 36 05.8	+0.5
BRTR	Keskin Array B	150.34	282	PKPbc	PKPbc	11 36 16.1	-1.8
	comp=Z,2.3nm,0.8s,baz=131,slow=3.4,SNR=9.5						
BRTR				PKPab	PKPab	11 36 23.9	-0.7
	comp=Z,0.9nm,0.7s,baz=116,slow=5.6,SNR=3.9						
BRTR	Keskin Array B	150.34	282		PKPbc	11 36 16.4	-1.4
BRTR					PKPab	11 36 23.7	-0.9
FINES	FINESS Array B	151.56	328	PKPbc	PKPbc	11 36 18.5	-1.3
	comp=Z,2.1nm,0.8s,baz=46,slow=5.5,SNR=4.5						
FINES				PKPab	PKPab	11 36 27.6	-1.2
	comp=Z,3.2nm,0.9s,baz=64,slow=6.3,SNR=1.7						
FINES	FINESS Array B	151.56	328		PKPbc	11 36 18.9	-0.9
FINES					PKPab	11 36 27.8	-0.9
TORD	Torodi Ar. Bea	152.17	195	PKPbc	PKiKP	11 36 22.9	0.0
	comp=Z,1.8nm,0.4s,baz=160,slow=3.6,SNR=46						
TORD				PKPab	PKPab	11 36 33.0	+0.6
	comp=Z,5.8nm,0.9s,baz=171,slow=3.3,SNR=16						
TORD	Torodi Ar. Bea	152.17	195		PKPbc	11 36 22.6	0.0
TORD					PKPab	11 36 32.8	+0.3

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*IDC **21** 11:41:37.3±9.0, 31°.50S×179°.85W, h314km±98km, mb2.7/2, mb1 3.0/3, mb1mx2.9/25, mbtmp3.6/3, Error ellipse: s-maj=102.1km s-min=45.8km az=180.0*

*WEL **21** 11:41:46.9±0.4, 32°S±4°×18°0E±°, h33km, M4.9/12, mB5.0/3, ML5.2/12, MLv4.9/12, Mw(mB)4.3/3*

ISC 21 11:41:37.4±1.0**, 31°.66S**±0°.08×**179°.4W**±0°.2**, h350**km**, n18,** σ**2^{s}19**/25**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.69	28	P	Pn	11 42 34.6	+0.5
GLKZ				S	S	11 43 17.2	-2.5
WMGZ	Waiomatatini S	6.42	196	P	Pn	11 43 16.9	+4.0
WMGZ				S	S	11 44 30.1	-0.3
HAZ	Te Kaha	6.53	200	P	Pn	11 43 16.5	+2.4
HAZ				S	S	11 44 31.9	-0.7
PUZ	Puketiti	6.69	196	P	Pn	11 43 17.4	+1.3
PUZ				S	S	11 44 32.9	-3.5
RUGZ	Raukumara Rang	6.75	200	P	Pn	11 43 19.9	+3.0
RUGZ				S	S	11 44 34.9	-2.8
TWGZ	Tauwhareparae	6.86	198	P	Pn	11 43 22.1	+3.9
TWGZ				S	S	11 44 39.7	-0.3
OUZ	Omahuta	6.88	237	P	Pn	11 43 20.8	+2.5
MWZ	Matawai	7.13	200	P	Pn	11 43 22.6	+1.3
TKGZ	Te Karaka	7.14	198	P	Pn	11 43 22.6	+1.2
URZ	Urewera	7.20	203	P	Pn	11 43 21.8	-0.2
	1.5nm,0.3s,baz=278,slow=3.9,SNR=26						
URZ				S	S	11 44 44.5	-2.5
	6.6nm,0.3s,baz=116,slow=7.8,SNR=14						
URZ	Urewera	7.20	203	P	Pn	11 43 22.1	+0.2
RIGZ	Rimuhau	7.42	198	P	Pn	11 43 26.9	+2.3
MUGZ	Murupara	7.51	204	P	Pn	11 43 26.8	+1.2
SNGZ	Shannon Statio	7.61	200	P	Pn	11 43 29.4	+2.6
ARHZ	Aropaoanui	8.15	200	P	P	11 43 35.7	-0.5
ASAR	Alice Springs	41.90	269	P	P	11 48 54.6	-0.5
	0.2nm,0.5s,baz=100,slow=7.7,SNR=5.1						
WRA	Warramunga Arr	43.01	274	P	P	11 49 03.3	-0.6
	0.3nm,0.3s,baz=113,slow=8.0,SNR=2.9						
FINES	FINESS Array B	145.91	338	PKPbc	PKPab	12 00 37.5	+0.9
	1.2nm,0.4s,baz=44,slow=3.4,SNR=8.7						

IDC 21 11:56:15.9±2.4**, 5°.14S**×**150°.45E, h97**km±29km**, mb3.1**/2**, mb1 3.4**/3**, mb1mx3.0**/42**, mbtmp3.6**/3**, Error ellipse: s-maj=95.2km s-min=11.2km az=137.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.78	62	P	Pn	11 56 45.4	-0.1
	15nm,0.3s,baz=258,slow=20,SNR=16						
KRVT				S	Sn	11 57 08.2	+0.2
	12nm,0.3s,baz=301,slow=19,SNR=9.6						
PMG	Port Moresby	5.35	217	P	Pn	11 57 34.7	+1.4
	3.7nm,0.3s,baz=42,slow=12,SNR=12						
PMG				S	Sn	11 58 33.7	0.0
	8.5nm,0.3s,baz=234,slow=17,SNR=12						
WRA	Warramunga Arr	21.50	225	P	P	12 00 56.9	-0.2
	0.7nm,0.6s,baz=51,slow=10,SNR=9.5						
ASAR	Alice Springs	24.36	219	P	P	12 01 25.3	+0.2
	0.7nm,0.6s,baz=54,slow=8.4,SNR=27						
TORD	Torodi Ar. Bea	148.17	287	PKPbc	PKPbc	12 15 50.8	-0.9
	0.3nm,0.5s,baz=93,slow=2.9,SNR=1.9						

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*IDC **21** 12:11:35.4±2.1, 8°.80S×110°.06E, h0km, mb3.8/5, mb1 3.9/6, mb1mx3.6/44, mbtmp3.8/6, ML3.6/1, MS3.1/1, Ms1 3.3/1, ms1mx2.6/38, Error ellipse: s-maj=83.6km s-min=20.9km az=55.0*

*NEIC **21** 12:11:41.6±2.5, 9°.04S±0°.05×109°.97E±0°.05, h52km±3km, mb4.1/13, Error ellipse: s-maj=8.3km s-min=7.4km az=136.0*

*DJA **21** 12:11:50.1±0.9, 8°S±7°×11°0E±°, h28km±7km, M4.6/12, mb5.9/3, mB6.9/2, MLv4.0/12, Mw(mB)6.8/2*

ISC 21 12:11:39.9±0.6**, 9°.04S**±0°.06×**109°.93E**±0°.06**, h35**km**, n49,** σ**1^{s}74**/49**, mb4.1**/11**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	Wanagama	1.26	28	P	Pn	12 12 01.8	+0.7
UGM	Wanagama	1.26	28		Pn	12 12 01.8	+0.7
UGM				Sn	Sn	12 12 15.9	-0.9
PCJI	Pacitan	1.49	56	P	Pn	12 12 04.7	+0.5
WOJI	Wonogiri, Jawa	1.54	40	P	Pn	12 12 05.5	+0.6
SMRI	Semarang	2.04	14	P	Pn	12 12 14.8	+3.0
SMRI	Semarang	2.04	14		Pn	12 12 15.2	+3.5
SMRI				Sn	Sn	12 12 36.7	+0.7
PWJI	Pagerwojo	2.11	62	P	Pn	12 12 13.5	+0.8
CISI	Cisompet, Garu	2.56	305	Pn	Pn	12 12 21.9	+3.0
CISI				Sn	Sn	12 12 50.4	+1.4
UWJI	Ujung Watu	2.79	21	P	Pn	12 12 22.4	+0.3
LEM	Lembang	3.17	314	Pn	Pn	12 12 11.6	-16
	13nm,0.3s,baz=124,slow=21,SNR=4.1						
LEM				Sn	Sn	12 13 13.7	+9.5
	23nm,0.3s,baz=335,slow=21,SNR=5.9						
GRJI	Gresik	3.29	50	P	Pn	12 12 29.2	+0.3
GMJI	Gumukmas	3.56	78	P	Pn	12 12 36.3	+3.7
DBJI	Dramaga	4.00	308	P	Pn	12 12 52.3	+14
JAGI	Jajag, Banyuwa	4.21	83	P	Pn	12 12 44.5	+2.8
JAGI	Jajag, Banyuwa	4.21	83		Pn	12 12 43.8	+2.1
XMIS	Christmas Isla	4.46	251	Pn	Pn	12 12 45.9	+0.9
PLAI	Plampang	7.75	89	P	Pn	12 13 32.8	+2.4
	0.1nm26nm,0.6s						
MNAI	Manna	8.34	303	Pn	Pn	12 13 40.9	+2.5
RGRI	Rengat	11.47	318	P	Pn	12 14 29.9	+8.5
SBUM	Sibu	11.63	11	Pn	Pn	12 14 25.0	+1.4
GIRL	Giralia	14.15	164	Pn	Pn	12 14 56.2	-1.7
SOEI	Soe	14.16	94	Pn	Pn	12 14 58.2	0.0
FITZ	Fitzroy Crossi	17.72	122	P	Pn	12 15 42.8	-1.3
	0.1nm,0.3s,baz=300,slow=9.0,SNR=1.9						
FITZ	Fitzroy Crossi	17.72	122	P	Pn	12 15 43.0	-1.0
KNRA	Kununurra	19.54	112	P	P	12 16 04.8	+0.2
KNRA				IAmb	IAmb	12 16 23.1	
	comp=Z,23nm,1.5s						
MTN	Manton Dam	21.16	102	P	P	12 16 22.4	+0.2
MTN				IAmb	IAmb	12 16 31.2	
	comp=Z,11nm,1.2s						
FAKI	Fak Fak	23.00	76	P	P	12 16 42.5	+0.6
WB0	Warramunga Arr	25.95	117	P	P	12 17 09.8	+0.5
WB0				IAmb	IAmb	12 17 11.7	
	comp=Z,13nm,1.5s						
WRA	Warramunga Arr	25.96	117	P	P	12 17 09.9	+0.5
	comp=Z,0.7nm,0.7s,baz=291,slow=11,SNR=17						
WB2	Warramunga Arr	25.97	117	P	P	12 17 10.1	+0.5
WB2				IAmb	IAmb	12 17 11.4	
	comp=Z,8.0nm,1.4s						
ASAR	Alice Springs	27.15	125	P	P	12 17 21.1	+0.9
	comp=Z,0.5nm,0.5s,baz=301,slow=9.2,SNR=12						
CMAR	Chiang Mai Arr	29.39	338	LR	LR	12 30 31.4	
	comp=Z,31nm,18.9s,baz=170,slow=39						
H08S2	Diego Garcia H	37.06	269	T	T	12 57 53.6	
	baz=209,slow=74,SNR=3.0						
H08S3	Diego Garcia H	37.07	269	T	T	12 58 04.2	
	baz=96,slow=74,SNR=3.1						
H08S1	Diego Carcia H	37.08	269	T	T	12 57 57.3	
STKA	Stephens Creek	37.13	132	P	P	12 18 48.6	+1.2
	comp=Z,1.9nm,0.5s,baz=316,slow=7.5,SNR=8.8						
STKA	Stephens Creek	37.13	132	P	P	12 18 48.1	+0.7
KSH	Kashi	57.66	329	P	P	12 21 27.9	+0.9
KSH				pP	pwP	12 21 43.0	+1.7
KSH				PcP	PcP	12 22 20.1	+0.2
KSH				PcS	PcS	12 26 21.9	+0.7
KSH				S	S	12 29 17.8	-5.5
KSH				ScS	ScS	12 31 10.0	-4.1
MK31	Makanchi Array	60.80	339	P	P	12 21 47.7	-0.7
MKAR	Makanchi Array	60.80	339	P	P	12 21 47.8	-0.7
	comp=Z,0.4nm,0.5s,baz=149,slow=7.1,SNR=8.7						
MKAR	Makanchi Array	60.80	339	P	P	12 21 47.2	-1.3
ABKAR	Akbulak array	72.65	328	P	P	12 23 03.8	-0.1
ABKAR	Akbulak array	72.65	328	P	P	12 23 03.9	0.0
ABKAR				IAmb	IAmb	12 23 04.6	
	comp=Z,5.2nm,1.4s						
PEA0B	Petropavlovsk-	73.99	28	P	P	12 23 12.4	+0.6
PETK	Petropavlovsk-	73.99	28	P	P	12 23 11.6	-0.2
	comp=Z,0.7nm,0.5s,baz=188,slow=2.2,SNR=7.0						
PETK	Petropavlovsk-	73.99	28	P	P	12 23 11.8	+0.1
AFI	Afiamalu	76.59	102	P	P	12 23 27.0	-0.6
QSPA	South Pole Qui	80.97	180	P	P	12 23 51.5	+0.7
QSPA				IAmb	IAmb	12 24 09.3	
	comp=Z,3.0nm,1.2s						
TIXI	Tiksi	81.49	6	P	P	12 23 52.9	-0.3
TIXI				IAmb	IAmb	12 23 56.1	
	comp=Z,2.4nm,1.0s						

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*NNC **21** 12:17:12.6±2.3, 37°.82N×71°.69E, h174km±38km, mb2.8, mpv3.8, Error ellipse: s-maj=23.7km s-min=13.5km az=21.0*

ISC 21 12:17:11.1±3.4**, 37°.7N**±0°.2×**71°.6E**±0°.1**, h150**km**, n10,** σ**0^{s}74**/14**, 4C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	4.68	19	P	Pn	12 18 20.3	-0.3
	SNR=56						
UCH	Uchtor	5.01	25	P	Pn	12 18 24.4	-0.7
	SNR=7.9						
EKS2	Erkin-Say	5.20	18	P	Pn	12 18 27.6	+0.4
	SNR=6.9						
AAK	Ala-Archa	5.38	23	P	Pn	12 18 29.6	0.0
	SNR=13						
AAK	Ala-Archa	5.38	23	P	Pn	12 18 30.2	+0.6
	3.6nm,0.5s						
AAK				⇑S	Sn	12 19 30.9	0.0
	4.7nm,0.5s						
KK31	Karatay Array	5.45	351	P	Pn	12 18 31.2	+0.8
	11nm,0.4s,baz=171,slow=12,SNR=148						
KK31				S	Sn	12 19 33.1	+0.7
	2.5nm,0.5s,baz=185,slow=25,SNR=8.3						
CHMS	Chumysh	5.78	23	P	Pn	12 18 34.9	0.0
	SNR=7.2						
CHMS	Chumysh	5.78	23	⇓P	Pn	12 18 34.5	-0.4
	7.5nm,0.7s						
CHMS				⇑S	Sn	12 19 41.3	+0.9
	4.7nm,0.7s						
AB31	Akbulak array	14.30	327	P	Pn	12 20 27.0	+0.4
	0.3nm,0.3s,baz=132,slow=13,SNR=31						
AB31				⇑S	Sn	12 23 03.4	-1.7
	0.6nm,0.5s,baz=124,slow=5.8,SNR=13						
AKTO	Aktyubinsk	16.01	327	⇑P	Pn	12 20 47.6	-0.2
	2.5nm,0.9s						

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*IDC **21** 12:18:15.6±1.4, 1°.13N×125°.75E, h0km, mb4.1/4, mb1 4.3/5, mb1mx3.7/35, mbtmp4.1/5, ML4.1/1, Error ellipse: s-maj=105.0km s-min=21.2km az=67.0*

*NEIC **21** 12:18:16.3±0.8, 1°.2N±0°.1×126°.0E±0°.1, h10km±1km, mb4.1/15, Error ellipse: s-maj=24.8km s-min=14.3km az=31.0*

*DJA **21** 12:18:21.0±0.4, 1°N±5°×12°6E±°, h10km, M4.3/9, mB4.9/1, mb5.0/1, MLv4.0/9, Mw(mB)4.1/1*

ISC 21 12:18:20.9±0.7**, 1°.43N**±0°.09×**126°.26E**±0°.06**, h44**km**, n34,** σ**1^{s}47**/37**, mb4.0**/10**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.28	121	P	Pn	12 18 42.6	+0.2
TNTI				S	Sn	12 19 02.4	+4.0
TNTI	Ternate	1.28	121		Pn	12 18 42.5	+0.2
LBMI	Labuha	2.40	149	P	Pn	12 18 57.7	0.0
LBMI				S	Sn	12 19 28.4	+2.5
KMSI	Cibinong	2.44	250	P	Pn	12 18 58.5	+0.3
SANI	Sanana	3.47	185	P	Pn	12 19 13.6	+1.2
LUWI	Luwuk	4.27	235	P	Pn	12 19 25.2	+1.8
LUWI	Luwuk	4.27	235		Pn	12 19 25.4	+2.0
MRSI	Marisa	4.43	258	P	Pn	12 19 26.9	+1.4
APSI	Ampana	5.17	243	P	Pn	12 19 37.1	+1.4
FAKI	Fak Fak	7.38	126	Pn	Pn	12 20 07.5	+1.3
MTN	Manton Dam	14.98	161	Pn	Pn	12 21 47.7	-2.2
KNRA	Kununurra	17.18	172	P	Pn	12 22 15.8	-2.0
KNRA				IAmb	IAmb	12 22 20.3	
	comp=Z,18nm,1.4s						
FITZ	Fitzroy Crossi	19.42	182	P	P	12 22 42.1	-1.5
	comp=Z,0.4nm,0.3s,baz=16,slow=8.7,SNR=13						
FITZ	Fitzroy Crossi	19.42	182	P	P	12 22 41.6	-1.9
WB0	Warramunga Arr	22.53	160	P	P	12 23 15.7	-1.5
WRAB	Tennant Creek	22.67	160	P	P	12 23 17.1	-1.6
WRAB				IAmb	IAmb	12 23 22.5	
	comp=Z,5.9nm,0.9s						
WRA	Warramunga Arr	22.67	160	P	P	12 23 17.1	-1.7
	comp=Z,5.0nm,0.3s,baz=334,slow=11,SNR=36						
WRA	Warramunga Arr	22.67	160	P	P	12 23 16.8	-1.9
WB2	Warramunga Arr	22.68	160	P	P	12 23 16.9	-1.8
WB2				IAmb	IAmb	12 23 22.6	
	comp=Z,7.6nm,0.8s						
COEN	Coen	22.69	133		P	12 23 18.8	-0.1
COEN				IAmb	IAmb	12 23 36.4	
	comp=Z,7.0nm,1.2s						
WR0	Warramunga Arr	22.76	160	P	P	12 23 18.1	-1.5
WR0				IAmb	IAmb	12 23 18.8	
	comp=Z,5.6nm,0.9s						
AS31	Alice Springs	26.03	164	P	P	12 23 49.2	-0.9
ASAR	Alice Springs	26.03	164	P	P	12 23 49.1	-1.0
	comp=Z,1.5nm,0.5s,baz=344,slow=11,SNR=28						
ASAR				PcP	PcP	12 27 18.6	+1.0
	comp=Z,0.4nm,0.6s,baz=359,slow=2.4,SNR=4.8						
ASAR	Alice Springs	26.03	164	P	P	12 23 48.9	-1.2
STKA	Stephens Creek	36.18	158	P	P	12 25 19.1	-0.3
	comp=Z,2.1nm,0.4s,baz=331,slow=7.3,SNR=4.5						
STKA	Stephens Creek	36.18	158	P	P	12 25 18.6	-0.7
STKA				IAmb	IAmb	12 25 20.6	
	comp=Z,2.7nm,1.4s						
MK31	Makanchi Array	59.18	326	P	P	12 28 18.2	+0.8
MKAR	Makanchi Array	59.18	326	P	P	12 28 18.1	+0.7
	comp=Z,0.4nm,0.5s,baz=124,slow=7.5,SNR=12						
MKAR	Makanchi Array	59.18	326	P	P	12 28 17.9	+0.5
LBZ	Lake Benmore	60.07	145	P	P	12 28 23.5	0.0
KURK	Kurchatov	63.43	328	P	P	12 28 46.3	+0.3
KK31	Karatay Array	64.60	318	P	P	12 28 53.9	0.0
KK31				IAmb	IAmb	12 28 56.0	
	comp=Z,2.0nm,1.3s						
ABKAR	Akbulak array	73.63	321	P	P	12 29 49.8	0.0
ABKAR	Akbulak array	73.63	321	P	P	12 29 49.5	-0.3
ABKAR				IAmb	IAmb	12 29 55.8	
	comp=Z,2.9nm,1.4s						

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*IDC **21** 12:39:46.6±1.1, 24°.19N×94°.23E, h0km, mb3.9/12, mb1 3.9/13, mb1mx3.7/40, mbtmp3.8/13, ML3.6/1, MS2.9/5, Ms1 3.0/5, ms1mx2.7/56, Error ellipse: s-maj=46.0km s-min=15.1km az=58.0*

*NEIC **21** 12:39:54.2±0.9, 24°.18N±0°.04×94°.3E±0°.1, h61km±9km, mb4.0/16, Error ellipse: s-maj=16.0km s-min=5.3km az=92.0*

ISC 21 12:39:54.7±0.8**, 24°.2N**±0°.1×**94°.3E**±0°.1**, h68**km**, n45,** σ**0^{s}73**/43**, mb3.9**/18**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	Lhasa	6.17	334	Pn	Pn	12 41 22.4	-1.3
CHTO	Chiang Mai	6.88	140	Pn	Pn	12 41 31.9	-1.1
CM31	Chiang Mai Arr	7.16	141	Pn	Pn	12 41 37.0	+0.1
CMAR	Chiang Mai Arr	7.16	141	Pn	Pn	12 41 33.7	-3.2
	0.2nm,0.3s,baz=321,slow=13,SNR=6.2						
CMAR				Lg	Lg	12 43 36.6	
	0.4nm,0.3s,baz=50,slow=42,SNR=2.4						
CMAR				LR	LR	12 44 44.5	
	comp=Z,55nm,19.9s,baz=310,slow=41						
CMAR	Chiang Mai Arr	7.16	141		Pn	12 41 36.5	-0.4
PBKT	Sadao Pong	9.83	139		Pn	12 42 13.2	-0.1
ENH	Enshi	14.86	62		Pn	12 43 21.1	0.0
WMQ	Urumqi	20.34	346	P	P	12 44 25.1	-0.3
WMQ				IAmb	IAmb	12 44 25.4	
	comp=Z,5.6nm,0.8s						
NIL	Nilore	20.64	302	P	P	12 44 28.9	+0.1
NIL				IAmb	IAmb	12 44 34.1	
	comp=Z,7.7nm,0.6s						
PALK	Pallekele	21.23	220	LR	LR	12 52 41.7	
	comp=Z,41nm,21.1s,baz=44,slow=36						
KBL	Kabul	24.22	301	P	P	12 45 05.1	-0.3
KBL				IAmb	IAmb	12 45 16.6	
	comp=Z,3.5nm,0.6s						
MK31	Makanchi Array	24.54	340	P	P	12 45 08.0	+0.1
MKAR	Makanchi Array	24.54	340	P	P	12 45 08.3	+0.4
	comp=Z,1.9nm,0.6s,baz=152,slow=10.0,SNR=36						
MKAR	Makanchi Array	24.54	340	P	P	12 45 07.7	-0.2
AAK	Ala-Archa	24.63	323	P	P	12 45 09.4	+0.5
	comp=Z,1.7nm,0.7s,baz=141,slow=8.4,SNR=7.7						
AAK				LR	LR	12 57 02.6	
	comp=Z,47nm,18.4s,baz=274,slow=42						
AAK	Ala-Archa	24.63	323	P	P	12 45 09.3	+0.4
AAK				IAmb	IAmb	12 45 14.7	
	comp=Z,5.0nm,1.4s						
MAKZ	Makanchi	24.65	340	P	P	12 45 09.0	+0.1
MAKZ				IAmb	IAmb	12 45 10.5	
	comp=Z,3.2nm,0.6s						
SONM	Songino Array	25.53	19	P	P	12 45 17.6	+0.6
	comp=Z,0.4nm,0.5s,baz=188,slow=11,SNR=5.0						
SONM	Songino Array	25.53	19	P	P	12 45 16.7	-0.3
KKAR	Karatay Array	27.19	320	P	P	12 45 31.9	0.0
KKAR	Karatay Array	27.19	320	P	P	12 45 31.6	-0.3
KKAR				IAmb	IAmb	12 45 48.0	
	comp=Z,3.6nm,1.5s						
TLY	Talaya	28.41	12	P	P	12 45 42.7	0.0
	comp=Z,1.7nm,0.3s,baz=336,slow=4.4,SNR=3.6						
KURBB	Kurchatov Arra	29.10	339	P	P	12 45 48.3	-0.4
	comp=Z,1.1nm,0.9s,baz=152,slow=8.8,SNR=6.6						
KURK	Kurchatov	29.15	339	P	P	12 45 48.7	-0.4
ZAA0	Zalesovo Array	30.58	349	P	P	12 46 01.6	-0.3
ZAA0				IAmb	IAmb	12 46 03.1	
	comp=Z,6.3nm,1.2s						
ZALV	Zalesovo Beam	30.58	349	P	P	12 46 01.8	-0.1
	comp=Z,1.8nm,0.6s,baz=170,slow=9.0,SNR=13						
ZALV				LR	LR	12 58 27.6	
	comp=Z,40nm,18.6s,baz=120,slow=37						
KSRS	Korea Array	31.64	57	LR	LR	13 00 44.3	
	comp=Z,12nm,18.6s,baz=55,slow=40						
ABKAR	Akbulak array	36.70	322	P	P	12 46 55.6	+0.6
ABKAR	Akbulak array	36.70	322	P	P	12 46 55.9	+0.9
ABKAR				IAmb	IAmb	12 47 00.8	
	comp=Z,3.7nm,1.5s						
YAK	Yakutsk	44.78	23	P	P	12 48 01.9	+0.6
FIA1	FINESS Array S	58.66	329	P	P	12 49 44.9	+0.2
FINES	FINESS Array B	58.66	329	P	P	12 49 45.2	+0.5
	comp=Z,1.5nm,0.7s,baz=119,slow=6.7,SNR=4.5						
FINES	FINESS Array B	58.66	329	P	P	12 49 45.4	+0.7
WRA	Warramunga Arr	58.71	135	P	P	12 49 46.4	+0.8
	comp=Z,0.3nm,0.6s,baz=326,slow=7.3,SNR=2.6						
ARCES	ARCESS Array B	60.17	338	P	P	12 49 54.9	-0.1
	comp=Z,2.9nm,1.0s,baz=100,slow=9.2,SNR=3.8						
AS31	Alice Springs	61.16	138	P	P	12 50 02.7	+0.3
AS31				IAmb	IAmb	12 50 05.7	
	comp=Z,0.8nm,1.0s						
ASAR	Alice Springs	61.16	138	P	P	12 50 03.7	+1.3
	comp=Z,0.5nm,0.8s,baz=321,slow=7.1,SNR=3.8						
ASAR	Alice Springs	61.16	138	P	P	12 50 02.7	+0.3
NOA	NORSAR Array B	65.83	328	P	P	12 50 32.9	+0.2
	comp=Z,0.6nm,0.5s,baz=96,slow=5.4,SNR=1.9						
NC204	NORSAR Array S	66.02	328	P	P	12 50 34.2	+0.2
IMAR	Indian Mountai	76.63	23	P	P	12 51 38.0	+0.2
TOLK	Toolik Lake Re	76.64	20	P	P	12 51 38.0	+0.1
TOLK				IAmb	IAmb	12 51 53.3	
	comp=Z,1.9nm,1.0s						
BMAR	Burnt Mountain	78.88	20	P	P	12 51 51.3	+1.0
ILAR	Eielson Array	79.71	22	P	P	12 51 54.4	-0.4
	comp=Z,0.4nm,1.0s,baz=219,slow=1.8,SNR=4.2						
ILAR	Eielson Array	79.71	22	P	P	12 51 54.7	-0.1

IDC 21 12:55:37.8±5.6**, 4°.85S**×**153°.82E, h102**km±40km**, mb3.0**/2**, mb1 3.3**/3**, mb1mx3.0**/43**, mbtmp3.5**/3**, Error ellipse: s-maj=53.4km s-min=29.2km az=98.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.87	287	P	Pn	12 56 08.0	-0.8
	10nm,0.3s,baz=135,slow=1.3,SNR=16						
KRVT				S	Sn	12 56 32.8	+0.4
	11nm,0.3s,baz=20,slow=22,SNR=12						
PMG	Port Moresby	8.01	235	P	Pn	12 57 32.8	+1.3
	1.4nm,0.3s,baz=66,slow=10.0,SNR=3.6						
PMG				S	Sn	12 59 01.4	+0.9
	0.4nm,0.3s,baz=151,slow=20,SNR=3.1						
WRA	Warramunga Arr	24.18	230	P	P	13 00 44.7	-0.2
	0.8nm,0.8s,baz=53,slow=9.7,SNR=5.6						
ASAR	Alice Springs	26.81	224	P	P	13 01 08.0	-0.6
	0.2nm,0.6s,baz=54,slow=8.5,SNR=6.6						
TORD	Torodi Ar. Bea	151.28	289	PKPbc	PKiKP	13 15 21.0	0.0
	0.4nm,0.8s,baz=27,slow=4.8,SNR=1.6						

UCR ***21*** *13:04:54.4±1.7, 12.°56N×87.°79W, h74^{km}±13^{km}, ML3.7*
INET ***21*** *13:04:54.3, 12.°51N×87.°78W, h71^{km}, ML3.7*
SNET ***21*** *13:04:54.4±0.9, 12.°45N×87.°85W, h38^{km}±99^{km}, ML3.7*
ISC 21 13:04:55.0±1.6**, 12.°55N**±0.°08×**87.°79W**±0.°06**, h70**^{km}±15^{km}**,**
n28, σ0^{s}.99/41**, 6D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	0.48	28	*e*P	Pn	13 05 07.7	-0.1
CSGN				*e*S	Sn	13 05 19.2	+2.1
CNCH	Conchagua	0.73	356	⇓*i*P	Pn	13 05 09.8	-0.6
CNCH				*e*S	Sn	13 05 22.1	+0.4
CNCH				IAML		13 05 27.9	
	comp=Z,6µm,0.4s						
CNCH	Conchagua	0.73	356	⇓*i*P	Pn	13 05 09.8	-0.6
CNCH				*e*S	Sn	13 05 22.1	+0.4
CNCH				IAML		13 05 27.9	
	comp=Z,6µm,0.4s						
CRIN	San Cristobal	0.73	78	*e*P	Pn	13 05 10.2	-0.2
CRIN				*e*S	Sn	13 05 22.5	+0.7
LCND	La Caada	0.76	352	⇓*e*P	Pn	13 05 10.2	-0.5
LCND				*e*S	Sn	13 05 22.4	+0.2
LCND				IAML		13 05 25.8	
	comp=Z,2µm,0.3s						
LCND	La Caada	0.76	352	⇓*e*P	Pn	13 05 10.2	-0.5
LCND				*e*S	Sn	13 05 22.4	+0.2
LCND				IAML		13 05 25.8	
	comp=Z,2µm,0.3s						
JUCU	Jucuar¡n	0.83	327	*e*P	Pn	13 05 10.8	-0.7
JUCU				*e*S	Sn	13 05 22.7	-1.0
JUCU				IAML		13 05 27.8	
	comp=Z,962nm,0.3s						
JUCU	Jucuar¡n	0.83	327	*e*P	Pn	13 05 10.8	-0.7
JUCU				*e*S	Sn	13 05 22.7	-1.0
JUCU				IAML		13 05 27.8	
	comp=Z,962nm,0.3s						
LCY	Lacayo	1.00	330	*e*P	Pn	13 05 13.6	0.0
LCY	Lacayo	1.00	330	*e*P	Pn	13 05 13.6	0.0
PACA	Pacayal	1.05	330	*e*P	Pn	13 05 14.1	-0.2
PACA				*e*S	Sn	13 05 28.7	0.0
PACA	Pacayal	1.05	330	*e*P	Pn	13 05 14.1	-0.2
PACA				*e*S	Sn	13 05 28.7	0.0
TECA	Tecapa	1.17	324	*e*P	Pn	13 05 15.9	0.0
TECA				*e*S	Sn	13 05 31.7	+0.3
TECA	Tecapa	1.17	324	*e*P	Pn	13 05 15.9	0.0
TECA				*e*S	Sn	13 05 31.7	+0.3
FAGO	Alcalda de S	1.18	345	*e*P	Pn	13 05 15.6	-0.3
FAGO	Alcalda de S	1.18	345	*e*P	Pn	13 05 15.6	-0.3
COPN	Copaltepe	1.22	107	*e*P	Pn	13 05 15.3	-1.0
COPN	Copaltepe	1.22	107	*e*P	Pn	13 05 15.3	-1.0
MOMN	Momotombo	1.23	96	*e*P	Pn	13 05 15.5	-0.9
MOMN	Momotombo	1.23	96	*e*P	Pn	13 05 15.5	-0.9
TGUH	Tegucigalpa,Un	1.58	18	⇓*i*P	Pn	13 05 21.7	+0.5
TGUH	Tegucigalpa,Un	1.58	18	⇓*i*P	Pn	13 05 21.7	+0.5
LFRS	El Faro	1.64	311	*e*P	Pn	13 05 21.8	-0.1
MATN	Matagalpa	1.86	78	*e*P	Pn	13 05 24.4	-0.4
MATN				*e*S	Sn	13 05 47.2	-0.2
ACON	Acoyapa	2.62	102	*e*P	Pn	13 05 33.0	-2.0
CUI	Cuipilapa	3.18	126	*e*P	Pn	13 05 40.7	-2.0
PLVR	Palo Verde	3.24	132	*e*P	Pn	13 05 44.1	+0.5
JTS	Las Juntas de	3.57	129	*e*P	Pn	13 05 51.7	+3.6

KRNET ***21*** *13:20:39.2±0.1, 43.°50N×79.°43E, mb2.3*
SOME ***21*** *13:20:41.8, 42.°60N×79.°68E, h5^{km}*
NNC ***21*** *13:20:42.0±1.0, 42.°61N×79.°67E, h0^{km}, mb2.7, mpv2.6,*
Error ellipse: s-maj=5.5km s-min=4.8km az=138.0
ISC 21 13:20:42.6±1.5**, 42.°65N**±0.°05×**79.°59E**±0.°04**, h12**^{km}±11^{km}**,**
n19, σ1^{s}.59/36**, 8C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.65	320	*e*P	Pb	13 20 55.8	-0.2
	4.2nm,0.2s						
UZB				*e*S	Sb	13 21 05.8	+0.7
	18nm,0.2s						
UZB	Uzynbulak	0.65	320	P	Pb	13 20 55.8	-0.2
	4.2nm,0.2s						
UZB				S	Sb	13 21 06.1	+1.0
	18nm,0.2s						
PDGK	Podgornoye	0.68	354	P	Pb	13 20 56.3	-0.2
	1.9nm,0.1s						
PDGK				S	Sb	13 21 06.7	+0.7
	4.5nm,0.2s						
PDGK	Podgornoye	0.68	354	⇓P	Pb	13 20 56.1	-0.4
	0.6nm,0.2s						
PDGK				⇓S	Sb	13 21 06.6	+0.7
	6.0nm,0.5s						
PRZ	Przheval'sk	0.90	259	⇓*i*P	Pn	13 21 02.4	+1.2
	baz=17						
PRZ				⇓*i*S	Sn	13 21 19.7	+5.5
	baz=17						
KTMS	Ketmen	0.97	35	*e*P	Pb	13 21 00.8	-0.7
	1.2nm,0.1s						
KTMS				*e*S	Sb	13 21 14.5	+0.2
	1.9nm,0.1s						
KTMS	Ketmen	0.97	35	P	Pb	13 21 00.7	-0.7
	1.2nm,0.1s						
KTMS				S	Sb	13 21 14.5	+0.2
	1.9nm,0.1s						
KPKS	Kokpek	1.05	321	*e*P	Pn	13 21 03.2	0.0
	8.1nm,0.1s						
KPKS				*e*S	Sn	13 21 18.6	+0.7
	9.9nm,0.2s						
ANVS	Anan'yevo	1.43	276	⇑*i*P	Pn	13 21 06.6	-1.9
	baz=42						
ANVS				⇑*i*S	Sb	13 21 26.3	-1.1
	baz=42						
DJR	Jarkent	1.68	5	*e*P	Pg	13 21 14.6	-0.4
	0.3nm,0.1s						
DJR				*e*S	Sg	13 21 38.1	+1.2
	3.6nm,0.2s						
DJR	Jarkent	1.68	5	P	Pg	13 21 14.6	-0.4
	0.6nm,0.2s						
DJR				S	Sg	13 21 38.1	+1.2
	3.0nm,0.5s						
KDJ	Kajisay	1.86	255	⇓*i*P	Pg	13 21 17.2	-1.2
	baz=31						
KDJ				⇓*i*S	Sg	13 21 44.8	+2.3
	baz=31						
TNSS	Tian-Shan	1.98	282	*e*P	Pg	13 21 20.4	-0.3
	1.5nm,0.5s						
TNSS				*e*S	Sg	13 21 47.9	+1.5
	2.3nm,0.5s						
TNSS	Tian-Shan	1.98	282	Pg	Pg	13 21 20.4	-0.3
	1.5nm,0.5s						
TNSS				Lg	Lg	13 21 47.9	
	2.3nm,0.5s						
ARXS	Arharly	2.02	321	*e*P	Pg	13 21 20.4	-1.0
	0.8nm,0.2s						
ARXS				*e*S	Sg	13 21 47.9	+0.3
	7.1nm,0.3s						
ARXS	Arharly	2.02	321	Pg	Pg	13 21 20.4	-1.0
	0.8nm,0.2s						
ARXS				Lg	Lg	13 21 47.9	
	7.1nm,0.3s						
ULHL	Ulahol	2.51	262	⇑*i*P	Pn	13 21 24.5	+1.0
	baz=43						
ULHL				⇑*i*S	Sb	13 21 57.3	-1.5
	baz=43						
BOOM	Boomskoye usch	2.70	268	⇑*i*P	Pn	13 21 25.6	-0.5
	baz=50						
BOOM				⇑*i*S	Sn	13 21 59.5	+0.7
	baz=50						
CHMS	Chumysh	3.58	277	⇑*i*P	Pn	13 21 35.3	-2.6
	baz=63						
CHMS				⇑*i*S	Sn	13 22 16.3	-3.8
	baz=63						

IDC ***21*** *13:31:21.3±3.4, 4.°68S×144.°10E, h108^{km}±36^{km}, mb3.6/6, mb1 3.8/9, mb1mx3.5/48, mbtmp4.1/9, Error ellipse: s-maj=25.7km s-min=21.2km az=149.0*
ISC 21 13:31:21.6±0.8**, 4.°7S**±0.°1×**144.°1E**±0.°1**, h110**^{km}**, n10,**
σ0^{s}.43/11**, mb3.9**/6**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.60	147	P	Pn	13 32 43.1	+0.5
	3.8nm,0.3s,baz=22,slow=5.4,SNR=15						
PMG				S	Sn	13 33 45.3	-0.4
	2.8nm,0.3s,baz=289,slow=23,SNR=5.6						
SIJI	Sorong	13.35	286	P	Pn	13 34 26.9	+0.1
	4.9nm,0.3s,baz=82,slow=9.1,SNR=18						
WRA	Warramunga Arr	17.90	211	P	P	13 35 22.6	-0.1
	0.6nm,0.3s,baz=26,slow=12,SNR=38						
ASAR	Alice Springs	21.28	207	P	P	13 35 59.1	-0.3
	0.5nm,0.4s,baz=32,slow=7.8,SNR=17						
FITZ	Fitzroy Crossi	22.43	232	P	P	13 36 11.5	-0.1
	6.2nm,0.4s,baz=48,slow=12,SNR=50						
PETK	Petropavlovsk-	58.71	10	P	P	13 41 07.9	+0.3
	3.6nm,1.0s,baz=143,slow=10,SNR=4.4						
MKAR	Makanchi Array	74.64	321	P	P	13 42 48.9	-0.1
	0.2nm,0.4s,baz=95,slow=8.1,SNR=6.9						
BVAR	Borovoye Array	84.00	324	P	P	13 43 39.6	-0.1
	0.6nm,0.5s,baz=114,slow=7.0,SNR=8.0						
ILAR	Eielson Array	85.43	24	P	P	13 43 46.0	-0.6
	1.2nm,0.7s,baz=257,slow=4.7,SNR=19						
DBIC	Dimbokro	149.03	275	PKPbc	PKPbc	13 50 58.7	+0.7
	1.4nm,0.6s,baz=312,slow=2.3,SNR=5.0						

IDC ***21*** *13:41:06.5±0.2, 7.°80N×94.°26E, h0^{km}, mb5.4/53, mb1 5.4/57, mb1mx5.4/59, mbtmp5.4/57, ML5.2/4, MS6.4/43, Ms1 6.4/43, ms1mx6.2/54, Error ellipse: s-maj=8.1km s-min=5.9km az=38.0*
MOS ***21*** *13:41:06.5±1.1, 7.°74N×94.°23E, h14^{km}, mb6.1/127, MS6.4/71, Error ellipse: s-maj=6.0km s-min=2.9km az=122.0*
BGR ***21*** *13:41:06.5±0.0, 7.°37N×94.°51E, h20^{km}, mb6.4, mB_BB6.6, Ms6.4*
NEIC ***21*** *13:41:07.8, 7.°77N×94.°33E, h19^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.00; $M_{\theta\theta}$-4.20; $M_{\phi\phi}$4.19; $M_{r\theta}$-0.00; $M_{\theta\phi}$2.14; $M_{\phi r}$-0.11; Fault plane solution: $M_0$4.71000×10^{18} NP1:ϕ_s238.52000°, δ88.88000°, λ0.71000°. NP2:ϕ_s148.51000°, δ89.29000°, λ178.88000°. Principal axes: T 4.7104, Plg1.0000°, Azm104.0000°; N 0.0024, Plg89.0000°, Azm296.0000°; P -4.7128, Plg0.0000°, Azm194.0000°;*
BJI ***21*** *13:41:09.2±0.0, 7.°73N×94.°22E, h20^{km}, mB6.3/83, mb5.5/82, Ms6.7/99, Ms7 6.5/93*
NEIC ***21*** *13:41:09.5±2.3, 7.°75N±0.°07×94.°33E±0.°07, h22^{km}±3^{km}, mb6.2/148, Ms_20 6.6/855, Mwb6.4/49, Mwc6.4/132, Mww6.4, Mwc6.4(GCMT), Error ellipse: s-maj=11.5km s-min=8.7km az=46.0*
NDI ***21*** *13:41:09.2±2.7, 7.°67N×94.°40E, h29^{km}±24^{km}, mb6.1, MS6.3, mb6.2(NEIC)*
DJA ***21*** *13:41:09.6±0.3, 8°N±2°×9°4E±°, h21^{km}±2^{km}, M6.2/109, mB6.5/106, mb5.9/109, MLv6.5/7, Mw6.4/82, Mw(mB)6.3/106, Mwp6.1/84*
KLM ***21*** *13:41:12.0, 7.°72N×94.°43E, h10^{km}, mb6.3*
GCMT ***21*** *13:41:12.5±0.0, 7.°73N×94.°32E, h16^{km}, MW6.4/167, Moment Tensor Solution. s167,c402; s163,c681; Duration: 3^{s}.9 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.61±.02; $M_{\theta\theta}$-3.65±.02; $M_{\phi\phi}$4.26±.02; $M_{r\theta}$-1.44±.07; $M_{\theta\phi}$2.78±.02; $M_{\phi r}$0.07±.06; Best double couple: $M_0$5.07000×10^{18} NP1:ϕ_s154.00000°, δ75.00000°, λ-170.00000°. NP2:ϕ_s61.00000°, δ80.00000°, λ-15.00000°. Principal axes: T 5.1640, Plg4.0000°, Azm108.0000°; N -0.1890, Plg72.0000°, Azm210.0000°; P -4.9760, Plg18.0000°, Azm17.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
NEIC ***21*** *13:41:13, 7.°72N×94.°29E, h17^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.43; $M_{\theta\theta}$-4.00; $M_{\phi\phi}$4.42; $M_{r\theta}$-0.65; $M_{\theta\phi}$3.09; $M_{\phi r}$-0.07; Fault plane solution: $M_0$5.28000×10^{18} NP1:ϕ_s63.00000°, δ87.00000°, λ-7.00000°. NP2:ϕ_s153.00000°, δ83.00000°, λ-177.00000°. Principal axes: T 5.4480, Plg3.0000°, Azm108.0000°; N -0.3627, Plg82.0000°, Azm218.0000°; P -5.0853, Plg7.0000°, Azm18.0000°;*
NEIC ***21*** *13:41:14, 7.°57N×94.°53E, h20^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.76; $M_{\theta\theta}$-3.19; $M_{\phi\phi}$3.95; $M_{r\theta}$-0.17; $M_{\theta\phi}$2.58; $M_{\phi r}$0.85; Fault plane solution: $M_0$4.54000×10^{18} NP1:ϕ_s333.00000°, δ90.00000°, λ169.00000°. NP2:ϕ_s63.00000°, δ79.00000°, λ0.00000°. Principal axes: T 4.8866, Plg8.0000°, Azm288.0000°; N -0.8061, Plg79.0000°, Azm152.0000°; P -4.0804, Plg7.0000°, Azm19.0000°;*
NEIC ***21*** *13:41:25, 7.°38N×94.°40E, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.58; $M_{\theta\theta}$-3.39; $M_{\phi\phi}$3.97; $M_{r\theta}$-0.32; $M_{\theta\phi}$2.82; $M_{\phi r}$1.89; Fault plane solution: $M_0$4.99000×10^{18} NP1:ϕ_s64.50000°, δ68.71000°, λ1.51000°. NP2:ϕ_s333.95000°, δ88.59000°, λ158.70000°. Principal axes: T 5.4085, Plg16.0000°, Azm287.0000°; N -0.8350, Plg69.0000°, Azm150.0000°; P -4.5735, Plg14.0000°, Azm21.0000°;*
ISC 21 13:41:09.9±0.3**, 7.°68N**±0.°02×**94.°23E**±0.°02**, h19**^{km}±1^{km}**,**
h20^{km}:pP-P, n1789, σ2^{s}.23/1726**, mb6.0**/350**, MS6.5**/541**,**
44C-47D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.73	204	*e*P	Pg	13 41 24.2	0.0
CMBY				*e*S	Sn	13 41 35.6	-0.1
LHMI	Lhok Sumawe	3.64	132	P	Pn	13 42 05.0	-0.2
LHMI	Lhok Sumawe	3.64	132		Pn	13 42 05.1	-0.2
MLSI	Meulaboh, Aceh	4.02	147	P	Pn	13 42 11.3	+0.8
PKDT	Phuket	4.08	87	P	Pn	13 42 11.6	+0.4
PBA	Port Blair	4.21	340	*e*P	Pn	13 42 12.9	-0.1
PBA				*e*x	x	13 42 24.4	
PBA				*e*S	Sn	13 42 57.8	-4.0
PBA				*e*x	x	13 43 03.4	
RNTT	Ranong	4.54	68	P	Pn	13 42 17.5	0.0
SURT	Suratani	4.70	74	P	Pn	13 42 21.5	+1.8
KRAB	Krabi	4.95	83	P	Pn	13 42 23.8	+0.5
TPTI		5.29	146	P	Pn	13 42 28.4	+0.6
TRTT	Trang	5.42	88	P	Pn	13 42 29.6	-0.1
KCSI	Kotacane, Aceh	5.43	139	P	Pn	13 42 30.2	+0.3
	30nm369µm69µm4µm,1.0s						
DGPR	DIGLIPUR	5.61	347	*e*P	Pn	13 42 33.1	+0.8
DGPR				*e*S	Sn	13 43 30.8	-5.4
DGPR				*e*x	x	13 43 32.9	
SNSI	Sinabang, Aceh	5.64	158	P	Pn	13 42 31.8	-0.9
SKLT	Songkhla	6.36	94	P	Pn	13 42 41.8	-0.8
PSI	Prapat	6.74	136	Pn	Pn	13 42 48.4	+0.5
	41nm,0.3s,baz=321,slow=15,SNR=77						
PSI				Sn	Sn	13 44 10.1	+5.9
	40nm,0.3s,baz=166,slow=19,SNR=1.4						
PSI				LR	LR	13 45 46.6	
	comp=Z,557µm,19.7s,baz=304,slow=41						
KULM	Kulim	6.81	110		Pn	13 42 47.1	-1.8
KULM	Kulim	6.81	110	P	Pn	13 42 48.0	-0.8
RPSI	Rantau Prapat	6.81	136		Pn	13 42 48.5	-0.4
RPSI	Rantau Prapat	6.81	136		Pn	13 42 48.4	-0.4
RPSI					Sn	13 44 10.1	+4.2
GSI	Gunungsitoli	7.16	152		Pn	13 42 52.8	-0.9
PHET	Kaeng Krachan	7.43	45	P	Pn	13 42 57.2	-0.2
IPM	Ipoh	7.47	115		Pn	13 42 55.5	-2.4
IPM	Ipoh	7.47	115	P	Pn	13 42 56.0	-1.9
SRDT	SRDT	8.19	36	P	Pn	13 43 08.3	+0.6
PATY	Pattaya	8.36	51	P	Pn	13 43 10.2	+0.2
UMPA	Umpang Tak	9.61	28	P	Pn	13 43 25.8	-1.5
SRAK	Srakaew	9.93	50	P	Pn	13 43 39.3	+7.7
BKNI	Bangkinang	9.98	137	P	Pn	13 43 33.4	+1.1
BKNI	Bangkinang	9.98	137		Pn	13 43 33.3	+1.0
SISI	Saibi	10.18	151	P	Pn	13 43 34.7	-0.3
	70µm12µm287nm,1.3s						
PDSI	Padang	10.56	144	P	Pn	13 43 40.0	-0.3
	65µm11µm334nm,1.0s						
PBKT	Sadao Pong	11.02	36	P	Pn	13 43 47.5	+0.9
PBKT	Sadao Pong	11.02	36		Pn	13 43 47.2	+0.7
MHMT	Maesarieng	11.04	19	P	Pn	13 43 49.9	+3.1
SDSI	Sungai Dareh	11.17	140	P	Pn	13 43 45.9	-2.8
	12µm374nm,1.4s						
PHIT	Phitsanulok	11.22	32	P	Pn	13 43 50.3	+1.0
MYKOM	Kota Tinggi	11.23	121		Pn	13 43 47.4	-2.1
MYKOM	Kota Tinggi	11.23	121	P	Pn	13 43 49.0	-0.5
CM05	Chiang Mai Arr	11.60	23	P	Pn	13 43 56.5	+2.0
CM31	Chiang Mai Arr	11.65	23	P	Pn	13 43 57.3	+2.0
	SNR=178						
CM31	Chiang Mai Arr	11.65	23		Pn	13 43 56.7	+1.4
CMAR	Chiang Mai Arr	11.65	23	Pn	Pn	13 43 56.6	+1.3
	12nm,0.3s,baz=210,slow=14,SNR=195						
CMAR				Sn	Sn	13 46 12.6	+7.7
	baz=18,slow=28,SNR=1.5						
CMAR				LR	LR	13 48 39.1	
	comp=Z,231µm,18.5s,baz=220,slow=39						
CMAR	Chiang Mai Arr	11.65	23	*i* P	Pn	13 43 56.4	+1.1
CMAR				pmax	pmax		
	comp=Z,99nm,0.7s						
UTTA	Uttaradit	11.75	31	P	Pn	13 43 57.8	+1.3
PPSI	Pulau Pagai	11.87	151	P	Pn	13 43 59.4	+1.2
CHTO	Chiang Mai	11.98	22	P	Pn	13 44 01.7	+2.0
CHTO	Chiang Mai	11.98	22		Pn	13 44 01.7	+2.0
LAMP	Lampang	11.99	25	P	Pn	13 44 02.1	+2.2
KRJI	Kerinci	12.10	143	P	Pn	13 44 00.5	-0.9
	comp=Z,106µmcomp=Z,45µmcomp=Z,2µm,1.1s						
TPRI	Tanjung Pinang	12.27	123	P	Pn	13 44 00.5	-3.2
	comp=Z,154µmcomp=Z,27µmcomp=Z,724nm,1.8s						
SIMRM	Sittwe	12.45	354		Pn	13 44 04.4	-1.7
SKNT	Sakolnakorn	13.27	45	P	Pn	13 44 19.4	+2.1
PALK	Pallekele	13.41	269	Pn	Pn	13 44 18.8	-0.6
	comp=Z,3.2nm,0.3s,baz=84,slow=14,SNR=18						
PALK				Sn	Sn	13 46 50.5	+2.4
	comp=Z,20nm,0.3s,baz=39,slow=8.1,SNR=5.2						
PALK				LR	LR	13 49 07.3	
	comp=Z,279µm,21.0s,baz=99,slow=36						
PALK	Pallekele	13.41	269	*c* *i*P	Pn	13 44 18.1	-1.3
PALK	Pallekele	13.41	269		Pn	13 44 19.4	0.0
NONG	Nongkai	13.49	39	P	Pn	13 44 21.1	+0.8
CHLP	Challavanipeta	14.62	318	*e*P	Pn	13 44 32.3	-3.5
CHLP				IAmb	IAmb	13 44 37.3	
	comp=Z,121nm,0.6s						
CHLP				*e*		13 47 04.2	
CHLP				*e*Sn	Sn	13 47 16.6	-0.7
CHLP				IVMs_BB	IVMs_BB	13 51 37.3	
	comp=Z,39µm,16.2s						
DLV	T Lat	14.68	72		Pn	13 44 37.0	+0.3
MDRS	Chennai	14.75	292	*e*x	Pn	13 44 34.7	-2.9
MDRS				IAMs_20	IAMs_20	13 50 32.9	
	comp=Z,201µm,17.9s						
MNAI	Manna	14.80	144	P	Pn	13 44 35.1	-3.1
	comp=Z,45µmcomp=Z,20µmcomp=Z,2µm,0.7s						
MNAI	Manna	14.80	144		Pn	13 44 35.5	-2.8
PMBI	Palembang	14.89	135	P	Pn	13 44 38.0	-1.5
BWNR	Bhubaneshwar	14.96	328	*e*x	Pn	13 44 35.9	-4.5
BWNR				IAMs_20	IAMs_20	13 50 44.9	
	comp=Z,181µm,19.0s						
BRDH	Bariadhala	15.12	351	Pn	Pn	13 44 40.2	-2.3
	comp=Z,53nm,0.3s,baz=171,slow=1.6,SNR=11						
BRDH				Sn	Sn	13 47 31.1	+1.7
	comp=Z,17nm,0.3s,baz=284,slow=20,SNR=1.1						
SKHT	Srikalahasti	15.48	294	*e*P	Pn	13 44 45.8	-1.5
SKHT				*e*		13 47 25.0	
SKHT				IVMs_BB	IVMs_BB	13 50 01.5	
	comp=Z,35µm,21.5s						
PVM	Polavaram	15.54	309	*e*P	Pn	13 44 46.0	-2.1
PVM				IAmb	IAmb	13 44 54.5	
	comp=Z,141nm,1.1s						
PVM				*e*		13 47 28.1	
PVM				*e*Sn	Sn	13 47 40.4	+0.5
PVM				IVMs_BB	IVMs_BB	13 49 25.9	
	comp=Z,25µm,28.7s						
MDSI	Maura Dua	15.64	140	P	Pn	13 44 46.4	-3.0
	comp=Z,50µmcomp=Z,9µmcomp=Z,686nm,1.2s						
LWLI	Liwa	15.98	142	P	Pn	13 44 50.6	-3.3
	comp=Z,522nm,0.7s						
MYLAV	Mylavaram	16.04	305	*e*P	Pn	13 44 53.7	-0.9
MYLAV				IAmb	IAmb	13 45 01.0	
	comp=Z,130nm,0.7s						
MYLAV				*e*		13 47 36.3	
MYLAV				*e*Sn	Sn	13 47 51.9	-0.1
MYLAV				IVMs_BB	IVMs_BB	13 53 43.5	
	comp=Z,26µm,15.8s						
ADKI	Addanki	16.14	301	*e*P	Pn	13 44 53.3	-2.5
ADKI				IAmb	IAmb	13 44 59.7	
	comp=Z,354nm,1.8s						
ADKI				IVmBBB		13 45 10.8	
	comp=Z,8µm,2.2s						
ADKI				*e*		13 47 37.0	
ADKI				IVMs_BB	IVMs_BB	13 50 33.2	
	comp=Z,26µm,21.8s						
SLVN	Son La	16.48	34	P	P	13 45 02.6	-0.2
KASI	Kota Agung	16.64	142	P	Pn	13 44 58.2	-4.0
GGR	Gangavaram	16.98	308	*e*P	Pn	13 45 04.9	-1.6
GGR				IAmb	IAmb	13 45 13.5	
	comp=Z,377nm,1.2s						
GGR				*e*		13 48 02.7	
GGR				*e*Sn	Sn	13 48 13.4	-1.5
GGR				IVMs_BB	IVMs_BB	13 52 37.2	
	comp=Z,19µm,20.0s						
NJS	Nagarjunasagar	17.03	303	*e*P	Pn	13 45 05.1	-2.0
NJS				IAmb	IAmb	13 45 10.8	
	comp=Z,215nm,1.1s						
NJS				*e*		13 48 04.0	
NJS				IVMs_BB	IVMs_BB	13 50 06.3	
	comp=Z,22µm,28.2s						
TRD	Trivandrum	17.11	274	*e*P	Pn	13 45 08.8	+0.6
TRD				IAmb	IAmb	13 45 16.3	
	comp=Z,982nm,1.8s						
TRD				IAMs_20	IAMs_20	13 51 00.9	
	comp=Z,196µm,19.9s						
SRLM	Srisailam	17.17	301	*e*P	Pn	13 45 07.8	-1.1
SRLM				IAmb	IAmb	13 45 12.4	
	comp=Z,389nm,1.3s						
SRLM				*e*		13 48 07.9	
SRLM				*e*Sn	Sn	13 48 20.5	+1.0
SRLM				IVMs_BB	IVMs_BB	13 50 10.2	
	comp=Z,21µm,29.6s						
KSM	Kuching	17.17	110	P	P	13 45 10.3	-0.1
KSM				IAmb	IAmb	13 45 21.4	
	comp=Z,2µm,1.3s						
KSM	Kuching	17.17	110	P	P	13 45 11.0	+0.6
BOK	Bokaro	17.91	334	*e*P	Pn	13 45 17.3	-0.7
BOK				IAmb	IAmb	13 45 33.0	
	comp=Z,1µm,1.1s						
BOK				*i* x	x	13 48 36.0	
BOK				*i* x	x	13 48 50.5	
BOK				IAMs_20	IAMs_20	13 52 20.5	
	comp=Z,148µm,21.5s						
SHL	Shillong	17.93	353	*e*P	Pn	13 45 17.4	-0.9
SHL				IAmb	IAmb	13 45 24.8	
	comp=Z,5µm,2.4s						
KOHI	KOHIMA	17.94	360	*e*P	Pn	13 45 16.7	-1.8
KOHI				IAmb	IAmb	13 45 21.0	
	comp=Z,495nm,0.9s						
HYB	Hyderabad	18.09	304	*i* P	Pn	13 45 17.0	-3.3
	comp=Z,2µm,1.4s						
HYB				*e*S	Sn	13 48 40.0	-1.7
HYB				*e*LR	LR		
	comp=Z,96nm,28.0s						
HYB	Hyderabad	18.09	304	⇑*i*P	P	13 45 21.2	+0.7
HYB				IAmb	IAmb	13 45 31.2	
	comp=Z,791nm,1.0s						
HYBB	Hyderabad (bro	18.09	304	*e*P	Pn	13 45 18.8	-1.5
HYBB				IAmb	IAmb	13 45 25.9	
	comp=Z,230nm,1.0s						
HYBB				*e*		13 48 35.8	
HYBB				*e*Sn	Sn	13 48 42.3	+0.5
HYBB				IVMs_BB	IVMs_BB	13 54 40.9	
	comp=Z,19µm,16.8s						
URV	Uravakonda	18.13	295	*e*P	Pn	13 45 19.7	-1.1
URV				IAmb	IAmb	13 45 24.6	
	comp=Z,400nm,1.4s						
URV				*e*		13 48 34.7	
URV				*e*Sn	Sn	13 48 43.4	+0.7
URV				IVMs_BB	IVMs_BB	13 53 04.2	
	comp=Z,66µm,16.6s						
RPR	Rampur	18.27	309	*e*P	Pn	13 45 21.1	-1.4
RPR				*e*		13 48 39.5	
RPR				IVMs_BB	IVMs_BB	13 50 47.1	
	comp=Z,17µm,27.9s						
SBUM	Sibu	18.66	105	P	Pn	13 45 28.1	+0.8
SBUM	Sibu	18.66	105	P	Pn	13 45 28.0	+0.8
DBJI	Dramaga	18.87	138	P	P	13 45 26.1	-3.0
	comp=Z,14µmcomp=Z,818nm,1.1s						

QIZ	Qiongzhong	18.91	52	P	Pn	13 45 33.5	+3.3
QIZ				pP	pwP	13 45 37.0	-0.3
QIZ				S	Sn	13 49 02.0	+0.5
QIZ				pmax	pmax		
	comp=Z,69nm,1.1s						
QIZ				pmax	pmax		
	comp=Z,8µm,6.7s						
QIZ				LR	LR		
	comp=Z,559µm,12.9s						
QIZ				LR	LR		
	comp=Z,239µm,13.3s						
QIZ				LR	LR		
	comp=Z,111µm,9.6s						
QIZ	Qiongzhong	18.91	52	P	Pn	13 45 32.5	+2.3
SRSP	Sriramsagar	19.05	307	eP	P	13 45 30.5	-0.7
SRSP				IAmb	IAmb	13 45 38.5	
	comp=Z,2µm,2.3s						
SRSP				e		13 48 56.8	
SRSP				eSn	Sn	13 49 05.3	+0.2
SRSP				IVMs_BB	IVMs_BB	13 55 18.5	
	comp=Z,26µm,15.7s						
SKJI	Sukabumi	19.08	140	P	P	13 45 28.4	-3.1
	comp=Z,28µmcomp=Z,9µmcomp=Z,673nm,0.8s						
KMI	Kunming	19.16	24	P	Pn	13 45 35.3	+1.9
KMI				pP	sP	13 45 39.9	-0.2
KMI				sP	pwP	13 45 41.5	+1.3
KMI				PP	PnPn	13 45 52.4	+6.0
KMI				S	Sn	13 49 07.6	-0.2
KMI				sS	sS	13 49 14.9	-1.7
KMI				pmax	pmax		
	comp=Z,450nm,1.2s						
KMI				pmax	pmax		
	comp=Z,6µm,4.5s						
KMI				LR	LR		
	comp=Z,64µm,18.1s						
KMI				LR	LR		
	comp=Z,167µm,15.8s						
KMI				LR	LR		
	comp=Z,156µm,17.1s						
LKP	Lekhapani	19.61	4	eP	P	13 45 36.4	-0.7
LKP				IAmb	IAmb	13 45 49.0	
	comp=Z,403nm,0.6s						
LEM	Lembang	19.65	137	P	P	13 45 36.1	-1.8
	comp=Z,4.2nm,0.3s,baz=292,slow=4.9,SNR=15						
LEM				S	Sn	13 49 21.9	+2.2
	comp=Z,5.0nm,0.3s,baz=341,slow=23,SNR=1.6						
LEM				LR	LR	13 55 01.0	
	comp=Z,236µm,18.4s,baz=300,slow=42						
LEM	Lembang	19.65	137	P	P	13 45 35.6	-2.3
	comp=Z,29µmcomp=Z,8µmcomp=Z,259nm,1.1s						
CNJI	Cibinong	19.68	139	P	P	13 45 33.0	-5.0
ZIRO	ZIRO	19.74	359	eP	P	13 45 35.7	-3.1
NGP	Nagpur	19.86	314	eP	P	13 45 40.3	+0.4
NGP				ex	x	13 49 26.2	
KLRI	Killari	20.03	303	eP	P	13 45 41.5	-0.4
KLRI				IAmb	IAmb	13 45 48.5	
	comp=Z,2µm,2.3s						
KLRI				e		13 49 22.3	
KLRI				eSn	Sn	13 49 28.9	+0.2
KLRI				IVMs_BB	IVMs_BB	13 56 22.3	
	comp=Z,22µm,15.8s						
ODAN	Odare	20.15	342	eP	P	13 45 41.3	-2.0
GTK	Tadong	20.25	345	eP	P	13 45 42.8	-1.5
GTK				IAmb	IAmb	13 45 51.3	
	comp=Z,1µm,1.3s						
CISI	Cisompet, Garu	20.32	138	P	P	13 45 42.1	-2.9
	comp=Z,30µmcomp=Z,9µmcomp=Z,640nm,1.6s						
CISI	Cisompet, Garu	20.32	138	P	P	13 45 44.0	-1.0
CISI				IAmb	IAmb	13 45 55.5	
	comp=Z,2µm,1.6s						
CISI				IAMs_20	IAMs_20	13 54 26.7	
	comp=Z,165µm,18.0s						
RAMN	Ramite	20.49	340	eP	P	13 45 46.0	-1.0
	comp=Z,3µm,1.2s						
TAPN	Taplejung	20.52	343	eP	P	13 45 45.8	-1.6
	comp=Z,2µm,1.1s						
JBP	Jabalpur	20.60	320	eP	P	13 45 48.9	+0.9
JBP				ex	x	13 49 33.5	
MNCY	Minicoy	21.00	273	eP	P	13 45 51.6	-0.7
MNCY				IAmb	IAmb	13 46 11.7	
	comp=Z,3µm,1.6s						
JIRN	Jiri	21.28	340	eP	P	13 45 54.1	-1.6
	comp=Z,3µm,1.2s						
GOA	Goa	21.43	293	eP	P	13 45 56.5	-0.4
GOA				IAmb	IAmb	13 46 09.3	
	comp=Z,588nm,1.1s						
PKI	Pulchoki	21.47	338	eP	P	13 45 56.0	-1.7
PKIN	Phulchoki	21.48	338	eP	P	13 45 56.1	-1.7
GUN	Gumba	21.62	340	eP	P	13 45 57.4	-1.9
DMN	Daman	21.62	338	eP	P	13 45 57.7	-1.6
KKN	Kakani	21.72	338	eP	P	13 45 58.4	-1.9
KAD	Karad	21.76	298	i P	P	13 46 01.5	+0.9
SMRI	Semarang	21.81	132	P	P	13 46 00.3	-0.8
	comp=Z,91µmcomp=Z,37µmcomp=Z,2µm,1.1s						
SMRI	Semarang	21.81	132	IAmb	IAmb	13 46 13.6	
	comp=Z,2µm,0.9s						
KKM	Kota Kinabalu	21.89	93	IAmb	IAmb	13 46 14.9	
	comp=Z,3µm,1.6s						
LSA	Lhasa	22.09	353	P	P	13 46 02.3	-2.2
LSA				S	S	13 50 03.3	-4.4
LSA				pmax	pmax		
	comp=Z,790nm,1.4s						
LSA				LR	LR		
	comp=Z,299µm,22.8s						
LSA				LR	LR		
	comp=Z,168µm,26.3s						
LSA				LR	LR		
	comp=Z,435µm,22.8s						
LSA	Lhasa	22.09	353	P	P	13 46 04.1	-0.4
LSA				pmax	pmax		
	comp=Z,1µm,1.2s						
LSA	Lhasa	22.09	353	P	P	13 46 04.1	-0.4
LSA				IAmb	IAmb	13 46 21.9	
	comp=Z,1µm,1.2s						
GYA	Guiyang	22.11	31⇓	iP	P	13 46 04.9	+0.6
GYA				PP	PnPn	13 46 28.5	+1.8
GYA				S	S	13 50 05.8	-1.6
GYA				SS	SnSn	13 50 41.8	+7.4
GYA				ScP	ScP	13 53 38.5	+0.2
GYA				pmax	pmax		
	comp=Z,220nm,1.0s						
GYA				pmax	pmax		
	comp=Z,2µm,4.8s						
GYA				LR	LR		
	comp=Z,157µm,12.1s						
GYA				LR	LR		
	comp=Z,282µm,14.0s						
GYA				LR	LR		
	comp=Z,151µm,16.8s						
GKN	Gorkha	22.16	337	eP	P	13 46 03.1	-1.8
SPMM	Sapulut	22.30	96	P	P	13 46 10.0	+3.5
KAAM	Kaadhehdhoo	22.34	252	P	P	13 46 11.3	+4.6
	SNR=51						
BHPL	Bhopal	22.36	316	eP	P	13 46 07.5	+0.6
BHPL				IAmb	IAmb	13 46 15.7	
	comp=Z,893nm,1.2s						
BHPL				ex	x	13 50 10.6	
BHPL				IAMs_20	IAMs_20	13 56 01.4	
	comp=Z,174µm,14.3s						
UGM	Wanagama	22.45	133	P	P	13 46 06.1	-1.9
	comp=Z,40µmcomp=Z,29µmcomp=Z,896nm,1.7s						
UGM	Wanagama	22.45	133	P	P	13 46 05.8	-2.2
UGM				IAMs_20	IAMs_20	13 55 03.6	
	comp=Z,175µm,22.0s						
POO	Poona	22.56	301	eP	P	13 46 08.9	-0.3
POO				ex	x	13 49 53.0	
POO				i x	x	13 50 16.0	
POO				ex	x	13 51 03.0	
POO				ex	x	13 51 18.5	
WOJI	Wonogiri, Jawa	22.69	132	P	P	13 46 09.7	-0.8
	comp=Z,24µmcomp=Z,10µmcomp=Z,783nm,1.1s						
DANN	Dangsing	22.81	336	eP	P	13 46 10.1	-1.9
PCJI	Pacitan	23.11	133	P	P	13 46 13.3	-1.6
	comp=Z,12µmcomp=Z,870nm,1.3s						
GRJI	Gresik	23.27	128	P	P	13 46 15.2	-1.3
	comp=Z,4µmcomp=Z,8µmcomp=Z,407nm,1.3s						
PWJI	Pagerwojo	23.46	131	P	P	13 46 16.3	-2.1
	comp=Z,32µmcomp=Z,13µmcomp=Z,666nm,1.4s						
GZH	Guangzhou	23.92	48	P	P	13 46 28.8	+6.1
GZH				S	Sn	13 50 50.6	-11
GZH				LR	LR		
	comp=Z,436µm,14.1s						
GZH				LR	LR		
	comp=Z,270µm,14.8s						
HKC	Hong Kong Obse	24.09	51	⇑P	P	13 46 27.0	+2.6
BKB	Balikpapan	24.29	111	P	P	13 46 25.0	-1.4
	comp=Z,95µmcomp=Z,62µmcomp=Z,2µm,2.7s						
BKB	Balikpapan	24.29	111	IAMs_20	IAMs_20	13 57 07.1	
	comp=Z,179µm,19.0s						
SMKI	Samarinda	24.30	108	P	P	13 46 27.7	+1.3
KMMI	Kalianget	24.53	126	P	P	13 46 26.7	-1.8
	comp=Z,34µmcomp=Z,1µm,1.3s						
CD2	Chengdu	24.77	20⇓	iP	P	13 46 30.0	-0.6
CD2				PP	PnPn	13 47 07.1	+4.1
CD2				S	S	13 50 52.9	+0.8
CD2				sS	pS	13 50 57.3	-0.7
CD2				SS	SnSn	13 51 45.1	+5.6
CD2				pmax	pmax		
	comp=Z,440nm,1.2s						
CD2				pmax	pmax		
	comp=Z,5µm,4.6s						
CD2				LR	LR		
	comp=Z,226µm,12.9s						
GMJI	Gumukmas	24.86	129	P	P	13 46 29.7	-1.8
	comp=Z,36µmcomp=Z,17µmcomp=Z,409nm,2.4s						
ENPP	El Nido	25.10	80	eP	P	13 46 33.1	-0.6
PTH	Pithoragarh	25.43	331	eP	P	13 46 34.9	-1.8
JAGI	Jajag, Banyuwa	25.53	129	P	P	13 46 36.3	-1.3
	comp=Z,35µmcomp=Z,15µmcomp=Z,528nm,1.2s						
JAGI	Jajag, Banyuwa	25.53	129	P	P	13 46 35.6	-2.0
JAGI				IAmb	IAmb	13 47 17.9	
	comp=Z,1µm,1.4s						
JAGI				IAMs_20	IAMs_20	13 57 05.2	
	comp=Z,138µm,22.0s						
BUSP	Coron	25.94	78	eP	P	13 46 44.8	+3.5
SRBI	Singaraja	26.13	126	P	P	13 46 42.2	-0.8
	comp=Z,45µmcomp=Z,27µmcomp=Z,1µm,1.6s						
LUBP	Lubang	26.25	75	eP	P	13 46 42.5	-1.6
NDI	New Delhi	26.34	325	ex	P	13 46 42.0	-2.8
SCZP	Santa Cruz	26.38	70	eP	P	13 46 53.2	+7.9
AJM	Ajmer	26.38	317	i x	P	13 46 46.0	+0.8
H08S3	Diego Garcia H	26.48	235	T	T	14 13 36.2	
	baz=55,slow=75						
H08S2	Diego Garcia H	26.48	235	T	T	14 13 28.1	
	baz=55,slow=75,SNR=6794						
DNP	Denpasar	26.48	127	P	P	13 46 48.0	+1.8
DNP				pmax	pmax		
	comp=Z,881nm,1.2s						
H08S1	Diego Carcia H	26.50	235	T	T	14 13 29.3	
	baz=55,slow=75,SNR=5161						
IGBI	Denpasar	26.52	128	P	P	13 46 45.7	-0.8
	comp=Z,14µmcomp=Z,7µmcomp=Z,335nm,1.3s						
MPSI	Mapaga	26.61	105	P	P	13 46 46.1	-1.3
	comp=Z,42µmcomp=Z,24µmcomp=Z,1µm,1.4s						
ENH	Enshi	26.64	31	IAmb	IAmb	13 46 59.4	
	comp=Z,499nm,1.1s						
ENH				IAMs_20	IAMs_20	13 57 37.7	
	comp=Z,144µm,18.0s						
PGP	Puerto Galera	26.89	75⇑	eP	P	13 46 53.5	+3.6
TGY	Tagaytay City	26.98	74	P	P	13 46 49.8	-0.9
	comp=Z,100nm,0.3s,baz=72,slow=7.8,SNR=1.1						
TGY				S	S	13 51 32.4	+5.0
	comp=Z,83nm,0.3s,baz=50,slow=21,SNR=1.1						
TGY				LR	LR	13 57 13.8	
	comp=Z,72µm,18.7s,baz=246,slow=36						
DDI	Dehra Dun	27.15	328	ex	P	13 46 49.7	-2.4
DDI				IAmb	IAmb	13 47 01.1	
	comp=Z,920nm,0.3s						
SMPP	San Manuel, Pa	27.19	70	eP	P	13 46 50.9	-1.7
BOAC	Boac	27.74	76	eP	P	13 47 01.4	+4.0
OTRP	Odiongan	27.75	78	eP	P	13 46 59.8	+2.1
BALP	Baler	27.93	71	eP	P	13 47 05.8	+6.7
SPSI	Sidrap Palu	27.99	114	P	P	13 46 59.0	-0.7
	comp=Z,29µmcomp=Z,9µmcomp=Z,173nm,2.9s						
POLP	Polilio Island	28.05	73	eP	P	13 47 01.9	+1.6
GUIM	Jordan	28.15	82	eP	P	13 47 01.6	+0.4
APYP	Conner	28.19	66	eP	P	13 47 01.5	+0.1
BHUJ	Bhuj	28.22	306⇑	ix	P	13 47 04.1	+2.4
BHUJ				IAmb	IAmb	13 47 15.9	
	comp=Z,1µm,1.8s						
BHUJ				IAMs_20	IAMs_20	13 56 34.6	
	comp=Z,81µm,30.1s						
SMLA	Simla	28.25	328	eP	P	13 47 01.0	-0.9
SMLA				ex	x	13 51 42.2	
SMLA				IAMs_20	IAMs_20	13 58 24.7	
	comp=Z,129µm,20.3s						
RCP	Roxas	28.37	80⇑	eP	P	13 47 04.3	+1.1
KAPI	Kappang	28.42	116	P	P	13 47 02.7	-0.9
	comp=Z,42nm,1.0s,baz=273,slow=6.9,SNR=11						
KAPI				S	S	13 51 53.8	+3.7
	comp=Z,5.2nm,0.5s,baz=269,slow=23,SNR=1.6						
KAPI				LR	LR	13 58 31.9	
	comp=Z,59µm,20.9s,baz=296,slow=37						
CAUP	Cauayan	28.46	69	eP	P	13 47 07.8	+3.9
BNSI	Bone	28.48	114	P	P	13 47 03.4	-0.7
	comp=Z,7µmcomp=Z,181nm,1.9s						
MRSI	Marisa	28.54	103	P	P	13 47 04.6	0.0
	comp=Z,35µmcomp=Z,12µmcomp=Z,592nm,1.1s						
PLAI	Plampang	28.63	124	P	P	13 47 01.0	-4.4
APSI	Ampana	28.65	106	P	P	13 47 05.0	-0.6
	comp=Z,25µmcomp=Z,10µmcomp=Z,569nm,1.5s						
BHK	Bhakra	28.88	327	ex	P	13 47 08.0	+0.5
BKSI	Bulukumba	28.89	116	P	P	13 47 07.0	-0.7
	comp=Z,29µmcomp=Z,7µmcomp=Z,376nm,1.2s						
PAGZ	Pagadian	28.89	88	eP	P	13 47 09.0	+1.2
QZH	Quanzhou	28.92	51⇓	iP	P	13 47 13.3	+5.4
QZH				S	S	13 52 02.8	+5.1
QZH				pmax	pmax		
	comp=Z,130nm,1.9s						
QZH				pmax	pmax		
	comp=Z,2µm,7.2s						
QZH				LR	LR		
	comp=Z,321µm,14.5s						
QZH				LR	LR		
	comp=Z,96µm,13.7s						
QZH				LR	LR		
	comp=Z,126µm,11.0s						
TBP	Tagbilaran	29.36	84	eP	P	13 47 17.7	+5.7
XAN	Xi'an	29.53	25	P	P	13 47 11.9	-1.4
XAN				pP	pP	13 47 17.8	-0.7
XAN				sP	sP	13 47 20.9	+0.2
XAN				PP	PnPn	13 48 09.9	+1.9
XAN				S	S	13 52 06.3	-0.9
XAN				sS	sS	13 52 17.1	+0.7
XAN				SS	SnSn	13 53 41.6	+6.0
XAN				pmax	pmax		
	comp=Z,42nm,0.8s						
XAN				pmax	pmax		
	comp=Z,4µm,6.5s						
XAN				LR	LR		
	comp=Z,142µm,14.1s						
XAN				LR	LR		
	comp=Z,157µm,14.9s						
XAN				LR	LR		
	comp=Z,198µm,16.8s						
XAN	Xi'an	29.53	25	P	P	13 47 11.9	-1.4
XAN				pmax	pmax		
	comp=Z,172nm,0.9s						
XAN				MLR	MLR		
	comp=Z,201µm,18.0s						
XAN	Xi'an	29.53	25	P	P	13 47 11.9	-1.4
WHN	Wuhan	29.54	37	P	P	13 47 14.1	+0.8
WHN				pP	pwP	13 47 22.9	+1.3
WHN				S	S	13 52 05.1	-2.2
WHN				pmax	pmax		
	comp=Z,290nm,1.1s						
WHN				pmax	pmax		
	comp=Z,820nm,2.7s						
WHN				LR	LR		
	comp=Z,134µm,12.4s						
WHN				LR	LR		
	comp=Z,267µm,12.2s						
WHN				LR	LR		
	comp=Z,278µm,13.1s						
DHRM	DHARAMSHALA	29.59	328	eP	P	13 47 12.0	-2.0
LZH	Lanzhou	29.61	16	eP	P	13 47 14.0	-0.1
LZH				pP	pP	13 47 20.0	+0.7
LZH				sP	pwP	13 47 23.3	+0.9
LZH				S	S	13 52 01.0	-7.7
LZH				sS	sS	13 52 16.8	-0.8
LZH				pmax	pmax		
	comp=Z,140nm,1.4s						
LZH				pmax	pmax		
	comp=Z,3µm,4.9s						
LZH				LR	LR		
	comp=Z,79µm,15.7s						
LZH				LR	LR		
	comp=Z,89µm,16.7s						
LZH				LR	LR		
	comp=Z,90µm,17.3s						
BBP	Basco	29.68	62	eP	P	13 47 20.1	+5.4
LUWI	Luwuk	29.76	106	P	P	13 47 16.9	+1.4
LUWI	Luwuk	29.76	106	P	P	13 47 16.6	+1.1
CTBH	Cotabato--PC H	29.77	89⇑	eP	P	13 47 15.8	+0.2
PVCP	Virac	29.98	76	eP	P	13 47 17.5	+0.1
THN	Thein Dam	30.04	328	eP	P	13 47 17.5	-0.2
THN				ex	x	13 54 05.0	
SKMP	Bagumbayan, Su	30.10	90	eP	P	13 47 19.6	+1.0
OCLP	Ormoc	30.16	81	eP	P	13 47 23.3	+4.3
MSLP	Maasin	30.36	83	eP	P	13 47 26.3	+5.5
KMSI	Cibinong	30.49	102	P	P	13 47 23.4	+1.5
BUKP	Musuan	30.55	88	eP	P	13 47 23.7	+1.1
KCP	Kidapawan	30.62	89⇑	eP	P	13 47 23.2	0.0
NACB	Ninganchiao	30.91	55	IAMs_20	IAMs_20	13 59 22.2	
	comp=Z,154µm,20.0s						
YHNB	Yeheng	30.96	54	IAMs_20	IAMs_20	13 59 23.7	
	comp=Z,158µm,19.0s						
BUTP	Butuan	31.09	85	eP	P	13 47 35.1	+7.9
DAV	Davao City (W)	31.10	89	S	S	13 52 40.6	+8.4
	comp=Z,81nm,0.3s,baz=238,slow=15,SNR=1.3						
DAV	Davao City (W)	31.10	89	P	P	13 47 26.1	-1.2
MNI	Manado	31.12	100	P	P	13 47 28.5	+0.9
MNI				pmax	pmax		
	comp=Z,740nm,1.2s						
DDMP	Don Marcelino,	31.29	91	eP	P	13 47 30.1	+1.1
BASI	Baing, Sumba	31.70	124	P	P	13 47 29.9	-2.7
	comp=Z,9µmcomp=Z,6µmcomp=Z,338nm,1.5s						
MATI	Mati	31.78	89	eP	P	13 47 35.2	+1.8
GTA	Gaotai	31.99	8	⇓P	P	13 47 34.1	-0.9
GTA				S	S	13 52 50.0	+4.2
GTA				ScP	ScP	13 54 06.4	-1.2
GTA				ScS	ScS	13 58 08.6	+2.4
GTA				pmax	pmax		
	comp=Z,100nm,1.3s						
GTA				pmax	pmax		
	comp=Z,2µm,7.9s						
GTA				LR	LR		
	comp=Z,47µm,19.0s						
GTA				LR	LR		
	comp=Z,47µm,15.9s						
GTA				LR	LR		
	comp=Z,59µm,21.6s						
YOJ	Yonaguni jima	32.19	55	IAMs_20	IAMs_20	14 00 18.2	
	comp=Z,87µm,18.0s						
MMRI	Maumere	32.28	120	P	P	13 47 33.2	-4.5
MMRI	Maumere	32.28	120	IAMs_20	IAMs_20	14 01 08.6	
	comp=Z,85µm,20.0s						
NIL	Nilore	32.30	326	P	P	13 47 36.3	-1.5
NIL				pmax	pmax		
	comp=Z,481nm,0.8s						
NIL				MLR	MLR		
	comp=Z,79µm,19.0s						
NIL	Nilore	32.30	326	P	P	13 47 36.3	-1.5
NIL	Nilore	32.30	326	IAMs_20	IAMs_20	14 02 07.1	
	comp=Z,79µm,19.0s						
SANI	Sanana	33.13	106	P	P	13 47 44.1	-1.1
	comp=Z,26µmcomp=Z,11µmcomp=Z,286nm,2.3s						
NJ2	Nanjing	33.36	40	eP	P	13 47 47.6	+0.6
NJ2				pP	pP	13 47 51.8	-0.4
NJ2				sP	pwP	13 47 55.1	-0.2
NJ2				PP	PP	13 49 03.9	+1.3
NJ2				S	S	13 53 08.8	+1.7
NJ2				SS	SS	13 55 11.8	-20
NJ2				pmax	pmax		
	comp=Z,120nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,1µm,3.5s						
NJ2				LR	LR		
	comp=Z,132µm,13.9s						
NJ2				LR	LR		
	comp=Z,128µm,13.9s						
NJ2				LR	LR		
	comp=Z,90µm,13.9s						
TNTI	Ternate	33.73	100	P	P	13 47 49.3	-1.2
	comp=Z,16µmcomp=Z,5µmcomp=Z,186nm,1.8s						
TIY	Taiyuan	34.15	26	eP	P	13 47 55.8	+1.9
TIY				PP	PP	13 49 10.0	-1.4
TIY				S	S	13 53 21.0	+1.7
TIY				pmax	pmax		
	comp=Z,20nm,0.7s						
TIY				pmax	pmax		
	comp=Z,4µm,5.6s						
TIY				LR	LR		
	comp=Z,123µm,11.7s						
TIY				LR	LR		
	comp=Z,46µm,11.2s						
TIY				LR	LR		
	comp=Z,173µm,13.0s						
LBMI	Labuha	34.20	103	P	P	13 47 53.4	-1.1
	comp=Z,17µmcomp=Z,729nm,2.2s						
SSE	Sheshan	34.30	44	P	P	13 47 56.4	+1.2
SSE				S	S	13 53 19.1	-2.6
SSE				pmax	pmax		
	comp=Z,47nm,0.8s						
SSE				pmax	pmax		
	comp=Z,1µm,6.1s						
SSE				LR	LR		
	comp=Z,10µm,15.1s						
SSE				LR	LR		
	comp=Z,5µm,15.3s						
SSE	Sheshan	34.30	44	IAMs_20	IAMs_20	14 03 04.2	
	comp=Z,72µm,20.0s						
SOEI	Soe	34.57	120	P	P	13 47 53.6	-4.3
SOEI	Soe	34.57	120	P	P	13 47 54.3	-3.5
SOEI				IAmb	IAmb	13 48 15.6	
	comp=Z,389nm,1.0s						
SOEI				IAMs_20	IAMs_20	14 04 03.3	
	comp=Z,129µm,20.0s						
TIA	Tai'an	35.27	33	P	P	13 48 03.8	+0.3
TIA				pP	pwP	13 48 11.5	-0.3
TIA				sP	sP	13 48 14.8	+3.9
TIA				S	S	13 53 37.8	+1.4
TIA				sS	sS	13 53 45.8	0.0
TIA				pmax	pmax		
	comp=Z,2µm,5.9s						
TIA				LR	LR		
	comp=Z,80µm,13.5s						
TIA				LR	LR		
	comp=Z,118µm,14.1s						
TIA				LR	LR		
	comp=Z,45µm,13.8s						
KBL	Kabul	35.38	323	P	P	13 48 03.0	-1.7
KBL				pmax	pmax		
	comp=Z,204nm,1.0s						
KBL				MLR	MLR		
	comp=Z,55µm,20.0s						
KBL	Kabul	35.38	323	P	P	13 48 03.0	-1.7
KBL				IAmb	IAmb	13 48 12.3	
	comp=Z,204nm,1.0s						
KSH	Kashi	35.68	335	P	P	13 48 04.3	-2.9
KSH				PP	PnPn	13 49 23.8	-3.2
KSH				S	S	13 53 36.9	-6.1
KSH				PcS	PcS	13 54 21.5	-1.2
KSH				ScS	ScS	13 58 21.0	-4.5
KSH				pmax	pmax		
	comp=Z,120nm,1.0s						
KSH				pmax	pmax		
	comp=Z,3µm,4.9s						
KSH				LR	LR		
	comp=Z,8µm,9.7s						
KSH				LR	LR		
	comp=Z,25µm,12.6s						
KSH				LR	LR		
	comp=Z,41µm,15.0s						
BTO	Baotou	35.69	21	eP	P	13 48 04.6	-2.5
BTO				ePP	PP	13 49 28.3	-0.1
BTO				S	S	13 53 41.5	-1.5
AAI	Ambon	35.72	107	P	P	13 48 07.3	-0.4
	comp=Z,33µmcomp=Z,12µmcomp=Z,413nm,1.0s						
AAI	Ambon	35.72	107	P	P	13 48 06.7	-1.0
AAI				pmax	pmax		
	comp=Z,412nm,1.3s						
GIRL	Giralia	35.95	147	P	P	13 48 09.5	+0.1
	baz=36,SNR=13						
GIRL	Giralia	35.95	147	P	P	13 48 09.1	-0.3
GIRL				IAmb	IAmb	13 48 18.9	
	comp=Z,364nm,0.9s						
MSAI	Masohi	36.32	106	P	P	13 48 12.1	-0.6
	comp=Z,6µmcomp=Z,2µmcomp=Z,90nm,1.2s						
WMQ	Urumqi	36.45	352	P	P	13 48 13.4	-0.2
WMQ				sP	pwP	13 48 21.8	+0.2
WMQ				S	S	13 53 54.3	-0.2
WMQ				sS	sS	13 54 06.5	+3.4
WMQ				PcS	PcS	13 54 20.0	-5.2
WMQ				SS	SS	13 56 18.8	-15

WMQ				pmax	pmax		
	comp=Z,130nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,580nm,4.7s						
WMQ				LR	LR		
	comp=Z,28µm,19.3s						
WMQ				LR	LR		
	comp=Z,42µm,26.1s						
WMQ				LR	LR		
	comp=Z,31µm,29.1s						
HHC	**Hu-ho-hao-te**	**36.47**	**22**	*e*P	**P**	**13 48 13.8**	**0.0**
HHC				pP	sP	13 48 20.3	-0.9
HHC				sP	pwP	13 48 26.0	+3.9
HHC				S	**S**	**13 53 58.5**	**+3.6**
HHC				pmax	pmax		
	comp=Z,4µm,4.6s						
HHC				LR	LR		
	comp=Z,37µm,14.1s						
HHC				LR	LR		
	comp=Z,21µm,13.5s						
HHC				LR	LR		
	comp=Z,40µm,13.2s						
JLN	**Jalan Bani Buh**	**36.47**	**297**	P	**P**	**13 48 17.3**	**+3.3**
	SNR=11						
WBK	**Wadi Bani Khal**	**37.00**	**298**	P	**P**	**13 48 20.8**	**+2.3**
	SNR=86						
WBK				S	**S**	**13 54 08.4**	**+5.1**
MHTO	**MHTO**	**37.43**	**295**	P	**P**	**13 48 23.2**	**+1.1**
	SNR=64						
WSAR	**Wadi Sarin**	**37.49**	**298**	P	**P**	**13 48 22.7**	**0.0**
	comp=Z,30nm,0.8s,baz=128,slow=5.7,SNR=20						
WSAR				S	**S**	**13 54 17.0**	**+6.2**
	comp=Z,2.1nm,0.7s,baz=120,slow=22,SNR=1.1						
WSAR				LR	LR	14 04 33.4	
	comp=Z,51µm,18.6s,baz=118,slow=38						
WSAR	**Wadi Sarin**	**37.49**	**298**	P	**P**	**13 48 25.1**	**+2.4**
	SNR=154						
DQM	**DQM**	**37.55**	**293**	P	**P**	**13 48 25.3**	**+2.1**
	SNR=27						
DQM				S	**S**	**13 54 16.7**	**+4.9**
BNDI	**Bandanaira**	**37.61**	**108**	P	**P**	**13 48 21.7**	**-2.0**
	comp=Z,17µmcomp=Z,13µmcomp=Z,601nm,1.1s						
SHLS	**Shalkode**	**37.64**	**342**	*e*P	**P**	**13 48 20.6**	**-3.3**
	comp=Z,191nm,1.4s						
SHLS				*e*PP	**PnPn**	**13 49 50.4**	**-0.5**
SHLS				*e*S	**S**	**13 54 14.8**	**+1.9**
SHLS	**Shalkode**	**37.64**	**342**	*e*P	**P**	**13 48 20.5**	**-3.3**
SHLS				*e*		13 49 50.3	
SHLS				*e*S	**S**	**13 54 14.7**	**+1.9**
SHLS				pmax	pmax		
	comp=Z,191nm,1.4s						
JMDO	**Jabal Madar**	**37.69**	**297**	P	**P**	**13 48 26.1**	**+1.7**
	SNR=85						
JMDO				S	**S**	**13 54 19.8**	**+6.0**
BJI	**Beijing**	**37.74**	**28**	P	**P**	**13 48 26.1**	**+1.6**
BJI				PP	**PP**	**13 49 55.9**	**+5.1**
BJI				S	**S**	**13 54 11.9**	**-2.1**
BJI				ScP	**ScP**	**13 54 25.1**	**-2.9**
BJI				pmax	pmax		
	comp=Z,9µm,9.3s						
BJI				LR	LR		
	comp=Z,46µm,17.2s						
BJI				LR	LR		
	comp=Z,57µm,22.6s						
BJI				LR	LR		
	comp=Z,48µm,26.5s						
UZB	**Uzynbulak**	**37.77**	**342**	*e*P	**P**	**13 48 23.5**	**-1.4**
	comp=Z,194nm,1.7s						
UZB				*e*PP	**PP**	**13 49 48.6**	**-2.7**
UZB				*e*S	**S**	**13 54 16.5**	**+1.8**
	comp=Z,740nm,5.4s						
UZB				*e*SS	**SS**	**13 57 14.4**	**+13**
UZB	**Uzynbulak**	**37.77**	**342**	*e*P	**P**	**13 48 23.5**	**-1.4**
UZB				*e*		13 49 48.6	
UZB				*e*S	**S**	**13 54 16.5**	**+1.8**
UZB				*e*SS	**SS**	**13 57 14.3**	**+13**
UZB				pmax	pmax		
	comp=Z,194nm,1.7s						
UZB				smax	smax		
	comp=E,740nm,5.4s						
SATY	**Saty**	**37.88**	**341**	*e*P	**P**	**13 48 24.6**	**-1.3**
	comp=E,191nm,2.4s						
SATY				*e*PP	**PP**	**13 49 55.5**	**+3.0**
SATY				*e*S	**S**	**13 54 14.1**	**-2.4**
	comp=E,355nm,4.2s						
SATY				*e*SS	**SS**	**13 57 07.2**	**+4.1**
SATY				*e*LR	LR	14 08 41.7	
SATY	**Saty**	**37.88**	**341**	*e*P	**P**	**13 48 24.5**	**-1.3**
SATY				*e*		13 49 55.5	
SATY				*e*S	**S**	**13 54 14.1**	**-2.4**
SATY				pmax	pmax		
	comp=Z,191nm,2.4s						
SATY				smax	smax		
	comp=E,355nm,4.2s						
SWI	**Sorong**	**37.90**	**101**	P	**P**	**13 48 25.2**	**-1.0**
	comp=E,18µmcomp=E,13µmcomp=E,800nm,1.5s						
SWI				pP	**pP**	**13 48 31.5**	**0.0**
	comp=E,18µmcomp=E,13µmcomp=E,800nm,1.5s						
SIJI	**Sorong**	**37.90**	**101**	LR	LR	14 05 34.7	
	comp=E,22µm,21.1s,baz=261,slow=39						
ULHL	**Ulahol**	**37.92**	**338**	P	**P**	**13 48 25.1**	**-1.1**
	SNR=59						
SMDO	**Samad**	**37.95**	**298**	P	**P**	**13 48 28.7**	**+2.1**
	SNR=116						
SMDO				S	**S**	**13 54 19.7**	**+1.8**
BIDO	**Bidbid**	**38.02**	**299**	P	**P**	**13 48 29.3**	**+2.2**
	SNR=168						
BIDO				S	**S**	**13 54 21.5**	**+2.7**
KZA	**Kyzart**	**38.15**	**337**	P	**P**	**13 48 27.2**	**-1.3**
	SNR=75						
KPKS	**Kokpek**	**38.16**	**342**	*e*P	**P**	**13 48 26.3**	**-1.9**
	comp=E,230nm,2.5s						
KPKS				*e*PP	**PP**	**13 49 55.8**	**+0.2**
KPKS				*e*S	**S**	**13 54 17.8**	**-2.9**
KPKS				*e*SS	**SS**	**13 57 15.6**	**+6.8**
KPKS	**Kokpek**	**38.16**	**342**	*e*P	**P**	**13 48 26.3**	**-1.9**
KPKS				*e*		13 49 55.7	
KPKS				*e*S	**S**	**13 54 17.7**	**-2.9**
KPKS				pmax	pmax		
	comp=Z,230nm,2.5s						
MDOK	**Medeo**	**38.43**	**340**	*e*P	**P**	**13 48 29.2**	**-1.4**
MDOK				*e*PP	PP	13 50 10.3	+12
MDOK				*e*S	**S**	**13 54 22.8**	**-2.0**
	comp=Z,6µm,10.9s						
MDOK				*e*SS	**SS**	**13 57 11.9**	**-2.3**
MDOK				*e*LR	LR	14 04 50.6	
	comp=Z,20µm,20.5s						
MDOK	**Medeo**	**38.43**	**340**	*e*P	**P**	**13 48 29.1**	**-1.4**
MDOK				*e*S	**S**	**13 54 22.8**	**-2.0**
MDOK				MLR	MLR		
	comp=Z,20µm,21.0s						
PSA00	**Pilbara Seismi**	**38.44**	**140**	P	**P**	**13 48 29.3**	**-1.3**
PSA00				IAmb	IAmb	13 48 38.8	
	comp=Z,401nm,1.4s						
PSA00	**Pilbara Seismi**	**38.44**	**140**	P	**P**	**13 48 26.8**	**-3.8**
PSA00				IAmb	IAmb	13 48 31.8	
	comp=Z,38nm,0.6s						
KNDC	**Almaty**	**38.51**	**340**	P	**P**	**13 48 31.0**	**0.0**
AAA	**Alma-Ata**	**38.52**	**340**	*e*P	**P**	**13 48 30.5**	**-0.6**
	comp=Z,510nm,1.5s						
AAA				*e*PP	**PP**	**13 50 00.5**	**+1.0**
AAA				*e*LR	LR	14 04 52.1	
	comp=Z,23µm,17.8s						
AAA	**Alma-Ata**	**38.52**	**340**	*e*P	**P**	**13 48 31.4**	**+0.3**
AAA				*e*S	**S**	**13 54 27.0**	**+1.1**
AAA				pmax	pmax		
	comp=Z,3µm,4.5s						
AAA				smax	smax		
	comp=N,4µm,9.6s						
UCH	**Uchtor**	**38.56**	**336**	P	**P**	**13 48 30.7**	**-1.3**
	SNR=104						
BSY	**Bisya**	**38.60**	**297**	P	**P**	**13 48 34.4**	**+2.4**
	SNR=257						
BSY				S	**S**	**13 54 33.7**	**+6.1**
MTBS	**Maitube**	**38.62**	**339**	*e*P	**P**	**13 48 29.6**	**-2.4**
MTBS	**Maitube**	**38.62**	**339**	*e*P	**P**	**13 48 29.6**	**-2.4**
TKM2	**Tokmak 2**	**38.74**	**338**	P	**P**	**13 48 31.6**	**-1.6**
	SNR=43						
HOQ	**Hoqain**	**38.75**	**298**	P	**P**	**13 48 35.6**	**+2.2**
	SNR=136						
HOQ				S	**S**	**13 54 33.9**	**+4.0**
KBK	**Karagaybulak**	**38.76**	**337**	P	**P**	**13 48 32.3**	**-0.9**
	SNR=88						
AML	**Almayashu**	**38.81**	**335**	P	**P**	**13 48 32.7**	**-1.3**
	SNR=297						
AAK	**Ala-Archa**	**38.92**	**337**	P	**P**	**13 48 33.6**	**-0.9**
	comp=N,84nm,1.0s,baz=154,slow=6.2,SNR=124						
AAK				PP	**PnPn**	**13 50 05.8**	**-0.5**
	comp=N,128nm,1.3s,baz=154,slow=13,SNR=1.8						
AAK				LR	LR	14 06 10.6	
	comp=N,108µm,21.5s,baz=146,slow=39						
AAK	**Ala-Archa**	**38.92**	**337**	P	**P**	**13 48 33.7**	**-0.9**
	SNR=83						
AAK	**Ala-Archa**	**38.92**	**337**	*d i*P	**P**	**13 48 33.0**	**-1.6**
AAK				pmax	pmax		
	comp=Z,180nm,1.3s						
AAK				MLR	MLR		
	comp=Z,107µm,21.0s						
AAK	**Ala-Archa**	**38.92**	**337**	P	**P**	**13 48 34.8**	**+0.2**
AAK				IAmb	IAmb	13 48 43.6	
	comp=Z,486nm,1.4s						
AAK	**Ala-Archa**	**38.92**	**337**	IAMs_20	IAMs_20	14 05 45.7	
	comp=Z,102µm,21.0s						
SHAO	**Shalim**	**38.93**	**289**	P	**P**	**13 48 36.9**	**+2.0**
	SNR=8.9						
SHAO				S	**S**	**13 54 37.4**	**+4.7**
FRU1	**Bishkek**	**39.01**	**337**	IAMs_20	IAMs_20	14 06 14.1	
	comp=Z,104µm,21.0s						
CHKK	**Chushkaly**	**39.06**	**340**	*e*P	**P**	**13 48 33.6**	**-2.0**
CHKK	**Chushkaly**	**39.06**	**340**	*e*P	**P**	**13 48 33.6**	**-2.0**
CHMS	**Chumysh**	**39.12**	**337**	P	**P**	**13 48 34.7**	**-1.5**
	SNR=54						
CHMS	**Chumysh**	**39.12**	**337**	*i* P	**P**	**13 48 33.9**	**-2.3**
CHMS				pmax	pmax		
	comp=Z,241nm,1.4s						
EKS2	**Erkin-Say**	**39.22**	**336**	P	**P**	**13 48 36.2**	**-0.9**
	SNR=67						
KUU	**Kurty**	**39.32**	**339**	*e*P	**P**	**13 48 34.9**	**-2.9**
	comp=Z,623nm,2.3s						
KUU				*e*PP	**PnPn**	**13 50 09.6**	**-1.3**
KUU				*e*S	**S**	**13 54 35.1**	**-2.8**
KUU				*e*SS	**SnSn**	**13 57 33.4**	**+0.8**
KUU				*e*LR	LR	14 06 37.8	
	comp=Z,17µm,14.8s						
KUU	**Kurty**	**39.32**	**339**	*e*P	**P**	**13 48 34.8**	**-2.9**
KUU				*e*		13 50 09.6	
KUU				*e*S	**S**	**13 54 35.0**	**-2.8**
KUU				pmax	pmax		
	comp=Z,623nm,2.3s						
KUU				MLR	MLR		
	comp=Z,17µm,15.0s						
ARQ	**Araqi**	**39.37**	**298**	P	**P**	**13 48 40.7**	**+2.2**
	SNR=116						
ARQ				S	**S**	**13 54 42.5**	**+3.3**
FAKI	**Fak Fak**	**39.37**	**104**	P	**P**	**13 48 38.0**	**-0.6**
	comp=Z,20µmcomp=Z,14µmcomp=Z,452nm,1.8s						
FAKI	**Fak Fak**	**39.37**	**104**	P	**P**	**13 48 38.7**	**+0.1**
FAKI				IAmb	IAmb	13 48 48.3	
	comp=Z,560nm,1.2s						
USP	**Ospenovka**	**39.45**	**337**	P	**P**	**13 48 37.4**	**-1.5**
	SNR=130						
DMTO	**DMTO**	**39.52**	**288**	P	**P**	**13 48 41.2**	**+1.5**
	SNR=8.6						
DMTO				S	**S**	**13 54 43.9**	**+2.5**
SGDS	**Sogindy**	**39.56**	**337**	*e*P	**P**	**13 48 37.4**	**-2.4**
SGDS				*e*PP	**PP**	**13 50 11.3**	**+0.5**
SGDS				*e*S	**S**	**13 54 38.0**	**-3.6**
SGDS				*e*SS	**SS**	**13 57 39.9**	**+3.2**
SGDS				*e*LR	LR	14 05 20.8	
SOHO	**SOHO**	**39.60**	**299**	P	**P**	**13 48 42.0**	**+1.6**
	SNR=153						
SOHO				S	**S**	**13 54 40.6**	**-2.0**
DL2	**Dalian**	**39.68**	**34**	⇑*i*P	**P**	**13 48 43.3**	**+2.5**
DL2				S	**S**	**13 54 50.1**	**+6.7**
DL2				pmax	pmax		
	comp=Z,92nm,1.1s						
DL2				pmax	pmax		
	comp=Z,4µm,6.6s						
DL2				LR	LR		
	comp=Z,29µm,12.8s						
DL2				LR	LR		
	comp=Z,84µm,12.4s						
DL2				LR	LR		
	comp=Z,62µm,12.6s						
SOCY	**Socotra**	**39.86**	**280**	P	**P**	**13 48 44.5**	**+1.8**
	SNR=76						
SOCY	**Socotra**	**39.86**	**280**	P	**P**	**13 48 43.9**	**+1.2**
SOCY				IAmb	IAmb	13 48 56.0	
	comp=Z,818nm,1.6s						
SOCY				IAMs_20	IAMs_20	14 02 17.7	
	comp=Z,73µm,21.0s						
SAUI	**Saumlaki**	**40.10**	**112**	P	**P**	**13 48 45.6**	**+1.0**
	comp=Z,16µmcomp=Z,9µmcomp=Z,241nm,1.6s						
SAUI	**Saumlaki**	**40.10**	**112**	IAMs_20	IAMs_20	14 07 58.2	
	comp=Z,54µm,18.0s						
UOSS	**Minazif**	**40.14**	**300**	P	**P**	**13 48 45.5**	**+0.7**
UOSS	**Minazif**	**40.14**	**300**	P	**P**	**13 48 45.1**	**+0.2**
UOSS				IAmb	IAmb	13 48 56.5	
	comp=Z,559nm,1.4s						
TAS	**Tashkent**	**40.16**	**331**	P	**P**	**13 48 44.3**	**-0.5**
TAS				pmax	pmax		
	comp=Z,249nm,0.8s						
MDH	**Madha**	**40.17**	**300**	P	**P**	**13 48 45.5**	**+0.4**
	SNR=37						
MDH				S	**S**	**13 54 56.8**	**+5.6**
ASHO	**Ashiyiah**	**40.18**	**299**	P	**P**	**13 48 46.9**	**+1.7**
	SNR=107						
ASHO				S	**S**	**13 54 53.9**	**+2.5**
RBK	**Rabkut**	**40.18**	**288**	P	**P**	**13 48 47.7**	**+2.3**
	SNR=39						
RBK				S	**S**	**13 54 55.4**	**+3.8**
FITZ	**Fitzroy Crossi**	**40.22**	**130**	P	**P**	**13 48 43.4**	**-2.2**
	baz=40,SNR=35						
FITZ	**Fitzroy Crossi**	**40.22**	**130**	P	**P**	**13 48 44.5**	**-1.1**
	comp=Z,16nm,0.6s,baz=336,slow=6.6,SNR=37						
FITZ				PP	**PnPn**	**13 50 20.2**	**-1.8**
	comp=Z,26nm,1.0s,baz=316,slow=13,SNR=4.5						
FITZ				S	**S**	**13 54 47.4**	**-4.6**
	comp=Z,7.3nm,0.9s,baz=29,slow=18,SNR=2.5						
FITZ				LR	LR	14 07 57.6	
	comp=Z,43µm,19.4s,baz=297,slow=40						
FITZ	**Fitzroy Crossi**	**40.22**	**130**	P	**P**	**13 48 43.7**	**-1.9**
MK31	**Makanchi Array**	**40.29**	**347**	*i* P	**P**	**13 48 43.9**	**-1.9**
MK31	**Makanchi Array**	**40.29**	**347**	P	**P**	**13 48 44.3**	**-1.6**
MKAR	**Makanchi Array**	**40.29**	**347**	P	**P**	**13 48 43.9**	**-2.0**
	comp=Z,166nm,0.9s,baz=170,slow=5.8,SNR=292						
MKAR				PP	**PP**	**13 50 18.4**	**-0.4**
	comp=Z,16nm,0.9s,baz=154,slow=7.2,SNR=1.2						
MKAR				S	**S**	**13 54 51.4**	**-1.1**
	comp=Z,2.1nm,0.8s,baz=170,slow=25,SNR=1.6						
MKAR	**Makanchi Array**	**40.29**	**347**	P	**P**	**13 48 44.4**	**-1.5**
MAKZ	**Makanchi**	**40.38**	**347**	*i* P	**P**	**13 48 44.4**	**-2.1**
MAKZ				pmax	pmax		
	comp=Z,129nm,0.8s						
MAKZ	**Makanchi**	**40.38**	**347**	P	**P**	**13 48 44.6**	**-1.9**
BANOM	**Banah**	**40.38**	**301**	P	**P**	**13 48 49.0**	**+2.1**
	SNR=48						
BANOM				S	**S**	**13 54 52.5**	**-1.8**
ZSN	**Zaisan**	**40.43**	**350**	*e*P	**P**	**13 48 46.0**	**-0.9**
	comp=Z,157nm,1.3s						
ZSN				*e*S	**S**	**13 54 52.7**	**-1.8**
ZSN	**Zaisan**	**40.43**	**350**	*e*P	**P**	**13 48 46.0**	**-0.9**
ZSN				*e*S	**S**	**13 54 52.6**	**-1.8**
ZSN				pmax	pmax		
	comp=Z,157nm,1.3s						
IUG	**Iuzhnay**	**40.44**	**332**	*e*P	**P**	**13 48 45.9**	**-1.4**
IUG				*e*PP	**PnPn**	**13 50 22.6**	**-1.8**
IUG				*e*S	**S**	**13 54 51.9**	**-3.0**
IUG				*e*SS	**SnSn**	**13 57 57.2**	**-2.6**
IUG				*e*LR	LR	14 05 57.0	
IUG	**Iuzhnay**	**40.44**	**332**	*e*P	**P**	**13 48 45.8**	**-1.4**
IUG				*e*		13 50 22.5	
IUG				*e*S	**S**	**13 54 51.9**	**-3.0**
DZA	**Taraz**	**40.44**	**334**	*e*P	**P**	**13 48 45.3**	**-1.8**
DZA	**Taraz**	**40.44**	**334**	*e*P	**P**	**13 48 45.3**	**-1.8**
MSEY	**Mahe Island**	**40.56**	**254**	P	P	13 48 53.4	+4.9
MSEY	**Mahe Island**	**40.56**	**254**	IAMs_20	IAMs_20	14 03 19.8	
	comp=Z,95µm,18.0s						
WHFO	**Wadi Hawf**	**40.65**	**289**	P	**P**	**13 48 50.7**	**+1.5**
	SNR=77						
WHFO				P	**P**	**13 48 52.7**	**+3.5**
WHFO				S	**S**	**13 54 59.8**	**+1.2**
UMQ	**Umm Al-Quwin**	**40.79**	**300**	P	**P**	**13 48 52.4**	**+2.2**
	SNR=14						
UMQ				S	**S**	**13 55 03.0**	**+2.7**
RKPI	**Ransiki, Papua**	**40.88**	**101**	P	**P**	**13 48 51.1**	**0.0**
	comp=Z,12µmcomp=Z,407nm,1.3s						
KK31	**Karatay Array**	**40.97**	**333**	*i* P	**P**	**13 48 50.2**	**-1.3**
KK31	**Karatay Array**	**40.97**	**333**	P	**P**	**13 48 50.6**	**-0.8**
KKAR	**Karatay Array**	**40.97**	**333**	P	**P**	**13 48 50.7**	**-0.8**
KKAR						13 48 50.7	
KKAR				pmax	pmax		
	comp=Z,170nm,1.0s						
KKAR	**Karatay Array**	**40.97**	**333**	P	**P**	**13 48 50.6**	**-0.8**
KKAR	**Karatay Array**	**40.97**	**333**	P	**P**	**13 48 50.7**	**-0.8**
ABTO	**Aybut**	**41.02**	**288**	P	**P**	**13 48 53.6**	**+1.3**
	SNR=110						
ABTO				S	**S**	**13 55 03.5**	**-0.6**
AJN	**Ajban**	**41.07**	**299**	P	**P**	**13 48 53.9**	**+1.3**
	SNR=164						
AJN				S	**S**	**13 55 03.7**	**-0.9**
BTLS	**Baital**	**41.13**	**338**	*e*P	P	13 49 00.8	+8.0
BTLS				*e*S	**S**	**13 54 56.9**	**-8.0**
BTLS				*e*SS	**SnSn**	**13 58 12.7**	**-3.5**
BTLS	**Baital**	**41.13**	**338**	*e*P	P	13 49 00.7	+7.9
BTLS				*e*S	**S**	**13 54 56.9**	**-8.0**
BRLS	**Borolday**	**41.22**	**333**	*e*S	**S**	**13 54 57.8**	**-8.6**
	comp=Z,28nm,3.2s						
SONM	**Songino Array**	**41.33**	**12**	P	**P**	**13 48 52.1**	**-2.4**
	comp=Z,93nm,0.9s,baz=194,slow=8.6,SNR=133						
SONM				PcP	**PcP**	**13 50 53.6**	**+0.8**
	comp=Z,26nm,1.1s,baz=197,slow=4.5,SNR=2.3						
SONM				LR	LR	14 08 30.5	
	comp=Z,65µm,18.5s,baz=185,slow=40						
SONM	**Songino Array**	**41.33**	**12**	P	**P**	**13 48 54.4**	**-0.1**
SONM				pmax	pmax		
	comp=Z,93nm,1.0s						
SONM	**Songino Array**	**41.33**	**12**	P	**P**	**13 48 54.4**	**-0.1**
KNRA	**Kununurra**	**41.34**	**124**	P	**P**	**13 48 51.9**	**-2.9**
	baz=41,SNR=15						
KNRA	**Kununurra**	**41.34**	**124**	P	**P**	**13 48 52.2**	**-2.6**
KNRA				IAMs_20	IAMs_20	14 07 31.5	
	comp=Z,93µm,21.0s						
ULN	**Ulaanbaatar**	**41.51**	**13**	⇑*e*P	**P**	**13 48 55.3**	**-0.7**
ULN				pmax	pmax		
	comp=Z,93nm,1.3s						
ULN				MLR	MLR		
	comp=Z,36µm,15.0s						
ULN	**Ulaanbaatar**	**41.51**	**13**	IAMs_20	IAMs_20	14 08 23.4	
	comp=Z,48µm,18.0s						
MEEK	**Meekatharra**	**41.52**	**146**	P	**P**	**13 48 55.2**	**-0.9**
	baz=42,SNR=22						
TJN	**Taejon**	**41.57**	**42**	*de*P	**P**	**13 48 56.5**	**+0.1**
INCN	**Inchon**	**41.74**	**40**	IAMs_20	IAMs_20	14 07 22.9	
	comp=Z,60µm,22.0s						
MTN	**Manton Dam**	**41.96**	**119**	P	**P**	**13 48 57.5**	**-2.4**
	baz=42,SNR=30						
MTN	**Manton Dam**	**41.96**	**119**	P	**P**	**13 48 57.5**	**-2.4**
MORW	**Morawa**	**42.15**	**151**	P	**P**	**13 49 00.8**	**-0.5**
	baz=42,SNR=22						
DGZ	**Jazzator, Alta**	**42.27**	**353**	*d i*P	**P**	**13 49 01.0**	**-1.2**
DGZ				pmax	pmax		
	comp=Z,280nm,1.7s						
DGZ				MLR	MLR		
	comp=Z,34µm,18.0s						
JNU	**Nakatsue**	**42.31**	**48**	P	**P**	**13 49 02.5**	**-0.1**
	comp=Z,47nm,0.8s,baz=178,slow=2.9,SNR=21						
JNU				S	**S**	**13 55 23.0**	**+0.1**
	comp=Z,5.2nm,1.0s,baz=41,slow=14,SNR=1.1						
JNU				LR	LR	14 08 21.1	
	comp=Z,60µm,18.8s,baz=248,slow=39						
JNU	**Nakatsue**	**42.31**	**48**	IAMs_20	IAMs_20	14 06 47.5	
	comp=Z,64µm,20.0s						
KSRS	**Korea Array**	**42.55**	**41**	P	**P**	**13 49 04.3**	**-0.1**
	comp=Z,30nm,1.1s,baz=232,slow=7.8,SNR=40						
KSRS				PcP	**PcP**	**13 50 57.8**	**+0.9**
	comp=Z,5.9nm,0.9s,baz=228,slow=4.7,SNR=2.4						
KSRS				LR	LR	14 08 43.1	
	comp=Z,66µm,18.4s,baz=224,slow=39						
BAKI	**Biak**	**42.69**	**100**	P	**P**	**13 49 05.4**	**-0.5**
	comp=Z,298µmcomp=Z,499nm,1.2s						
SNY	**Shenyang**	**42.79**	**33**	⇓P	**P**	**13 49 08.4**	**+2.1**
SNY				S	**S**	**13 55 25.4**	**-4.1**
SNY				pmax	pmax		
	comp=Z,120nm,1.6s						
SNY				pmax	pmax		
	comp=Z,6µm,5.3s						
SNY				LR	LR		
	comp=Z,55µm,15.4s						
SNY				LR	LR		
	comp=Z,40µm,17.9s						
SNY				LR	LR		
	comp=Z,95µm,16.7s						
KDU	**Kakadu**	**43.06**	**118**	P	**P**	**13 49 07.7**	**-1.1**
	baz=43,SNR=4.0						
ZAK	**Zakamensk**	**43.23**	**8**	*e*P	**P**	**13 49 08.1**	**-1.8**
ZAK				*e*		13 51 03.9	
ZAK				pmax	pmax		
	comp=Z,64nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,45nm,1.2s						
BLDU	**Ballidu**	**43.76**	**152**	P	**P**	**13 49 13.5**	**-0.8**
	baz=44,SNR=16						
SEM	**Semipalatinsk**	**44.16**	**347**	*e*P	**P**	**13 49 14.9**	**-2.6**
	comp=Z,147nm,1.4s						
SEM				*i* S	**S**	**13 55 46.8**	**-2.9**
SEM				*e*SS	**SS**	**13 59 08.7**	**+1.0**
SEM				*e*LR	LR	14 10 18.3	
SEM	**Semipalatinsk**	**44.16**	**347**	*e*P	**P**	**13 49 14.9**	**-2.6**
SEM				*i* S	**S**	**13 55 46.8**	**-2.9**
SEM				*e*SS	**SS**	**13 59 08.7**	**+1.0**
SEM				pmax	pmax		
	comp=Z,147nm,1.4s						
MOY	**Mondy**	**44.20**	**6**	*e*P	**P**	**13 49 16.5**	**-1.2**
MOY				pmax	pmax		
	comp=Z,355nm,2.2s						
ASHT	**Ashkhabad**	**44.23**	**318**	P	**P**	**13 49 18.9**	**+0.9**
ASHT				pmax	pmax		
	comp=Z,449nm,1.3s						
ASHT	**Ashkhabad**	**44.23**	**318**	IAMs_20	IAMs_20	14 10 47.5	
	comp=Z,47µm,19.0s						
GEYT	**Alibeck**	**44.40**	**318**	P	**P**	**13 49 19.1**	**-0.3**
	comp=Z,78nm,0.7s,baz=146,slow=8.2,SNR=133						
GEYT				PP	**PP**	**13 51 03.9**	**+0.8**
	comp=Z,15nm,0.7s,baz=126,slow=7.3,SNR=1.1						
GEYT				LR	LR	14 11 11.7	
	comp=Z,55µm,18.2s,baz=95,slow=41						
GEYT	**Alibeck**	**44.40**	**318**	P	**P**	**13 49 19.1**	**-0.3**
GYA0B	**ALIBECK ARRAY**	**44.40**	**318**	IAMs_20	IAMs_20	14 10 52.0	
	comp=Z,59µm,18.0s						
TLY	**Talaya**	**44.55**	**8**	P	**P**	**13 49 19.7**	**-0.7**
	comp=Z,27nm,0.8s,baz=209,slow=7.5,SNR=19						
TLY				PP	**PP**	**13 51 04.0**	**-0.5**
	comp=Z,10nm,0.8s,baz=236,slow=7.3,SNR=1.6						
TLY				LR	LR	14 09 18.2	
	comp=Z,44µm,21.5s,baz=174,slow=38						
TLY	**Talaya**	**44.55**	**8**	*d i*P	**P**	**13 49 19.3**	**-1.1**
TLY				*e*S	**S**	**13 55 50.3**	**-4.7**
TLY				*e*SS	**ScS**	**13 59 17.1**	**-0.3**
TLY				*e*SSS	SSS	13 59 54.5	
TLY				pmax	pmax		
	comp=Z,496nm,2.0s						
TLY				MLR	MLR		
	comp=Z,47µm,11.0s						
MUN	**Mundaring**	**44.67**	**153**	P	**P**	**13 49 21.1**	**-0.5**
	baz=45,SNR=39						
KURBB	**Kurchatov Arra**	**44.75**	**346**	P	**P**	**13 49 20.6**	**-1.4**
	comp=Z,321nm,1.1s,baz=164,slow=7.1,SNR=305						
KURK	**Kurchatov**	**44.82**	**346**	P	**P**	**13 49 22.2**	**-0.3**
KURK	**Kurchatov**	**44.82**	**346**	*d i*P	**P**	**13 49 21.1**	**-1.3**
KURK				pmax	pmax		
	comp=Z,566nm,1.3s						
KURK				MLR	MLR		
	comp=Z,56µm,21.0s						
KURK	**Kurchatov**	**44.82**	**346**	P	**P**	**13 49 21.2**	**-1.3**
KURK	**Kurchatov**	**44.82**	**346**	IAMs_20	IAMs_20	14 10 53.2	
	comp=Z,53µm,21.0s						
KLBR	**Kellerberrin**	**45.07**	**151**	P	**P**	**13 49 24.0**	**-0.7**
	baz=45,SNR=15						
CN2	**Changchun**	**45.15**	**32**	*e*P	**P**	**13 49 24.8**	**-0.5**
CN2				PcP	**PcP**	**13 51 05.3**	**-0.2**
CN2				*e*S	**S**	**13 56 03.5**	**-0.4**
CN2				*e*SS	**ScS**	**13 59 17.5**	**-4.0**
CN2				pmax	pmax		
	comp=Z,50nm,1.5s						
CN2				pmax	pmax		
	comp=Z,440nm,3.0s						
CN2				LR	LR		
	comp=Z,17µm,16.0s						
CN2				LR	LR		
	comp=Z,90µm,16.0s						
CN2				LR	LR		
	comp=Z,57µm,18.0s						
IRK	**Irkutsk**	**45.19**	**9**	*e*P	**P**	**13 49 24.8**	**-0.6**
IRK				pmax	pmax		
	comp=Z,423nm,2.3s						

BRZS	**Berezniki**	**45.85**	**341**	*e*P	**P**	**13 49 28.6**	**-2.1**
	comp=Z,123nm,1.2s						
BRZS				*e*S	**S**	**13 56 11.6**	**-2.3**
BRZS	**Berezniki**	**45.85**	**341**	*e*P	**P**	**13 49 28.6**	**-2.1**
BRZS				*e*S	**S**	**13 56 11.6**	**-2.3**
BRZS				pmax	pmax		
	comp=Z,123nm,1.2s						
NWAO	**Narrogin (SRO)**	**45.94**	**153**	P	**P**	**13 49 30.9**	**-0.6**
	baz=46,SNR=64						
NWAO	**Narrogin (SRO)**	**45.94**	**153**	P	**P**	**13 49 31.0**	**-0.6**
	comp=Z,210nm,1.0s,baz=324,slow=6.1,SNR=57						
NWAO				LR	LR	14 07 33.0	
	comp=Z,50µm,21.6s,baz=334,slow=34						
NWAO	**Narrogin (SRO)**	**45.94**	**153**	P	**P**	**13 49 31.6**	**0.0**
NWAO	**Narrogin (SRO)**	**45.94**	**153**	P	**P**	**13 49 31.0**	**-0.6**
NWAO	**Narrogin (SRO)**	**45.94**	**153**	P	**P**	**13 49 31.0**	**-0.6**
NWAO				IAmb	IAmb	13 49 43.2	
	comp=Z,633nm,1.2s						
NWAO	**Narrogin (SRO)**	**45.94**	**153**	IAmb	IAmb	13 49 43.2	
	comp=Z,508nm,1.2s						
NWAO	**Narrogin (SRO)**	**45.94**	**153**	IAMs_20	IAMs_20	14 07 31.7	
	comp=Z,49µm,21.0s						
H01W3	**Cape Leeuwin H**	**46.33**	**157**	T	T	14 39 15.9	
	baz=332,slow=76,SNR=18						
H01W2	**Cape Leeuwin H**	**46.34**	**157**	T	T	14 39 16.8	
	baz=332,slow=76,SNR=13						
H01W1	**Cape Leeuwin H**	**46.34**	**157**	T	T	14 39 17.1	
	baz=332,slow=76,SNR=8.8						
WRKA	**Warakurna**	**46.46**	**135**	P	**P**	**13 49 34.5**	**-1.5**
	baz=46,SNR=59						
HIA	**Hailar**	**46.67**	**23**	IAMs_20	IAMs_20	14 09 35.8	
	comp=Z,58µm,19.0s						
ZAA0	**Zalesovo Array**	**46.76**	**352**	P	**P**	**13 49 37.0**	**-0.8**
ZALV	**Zalesovo Beam**	**46.76**	**352**	P	**P**	**13 49 36.5**	**-1.2**
	comp=Z,272nm,0.9s,baz=180,slow=7.0,SNR=191						
ZALV	**Zalesovo Beam**	**46.76**	**352**	*i* P	**P**	**13 49 36.5**	**-1.2**
ZALV				pmax	pmax		
	comp=Z,267nm,0.9s						
ZALV	**Zalesovo Beam**	**46.76**	**352**	P	**P**	**13 49 37.1**	**-0.7**
GENI	**Genyem**	**46.96**	**101**	P	**P**	**13 49 39.3**	**-0.7**
	comp=Z,13µmcomp=Z,11µmcomp=Z,529nm,1.8s						
CIT	**Chita**	**46.97**	**16**	*e*P	**P**	**13 49 39.4**	**-0.2**
CIT				*e*		13 51 15.6	
CIT				pmax	pmax		
	comp=Z,335nm,1.3s						
KMBL	**Kambalda**	**46.98**	**147**	P	**P**	**13 49 39.5**	**-0.4**
	baz=47,SNR=27						
RKGY	**Rocky Gully**	**47.25**	**154**	P	**P**	**13 49 41.8**	**0.0**
	baz=47,SNR=20						
MSHR	**Mys Shultsa**	**47.57**	**37**	⇑*e*P	**P**	**13 49 44.6**	**+0.3**
MDJ	**Mudanjiang**	**47.92**	**34**	P	**P**	**13 49 47.3**	**+0.3**
MDJ				S	**S**	**13 56 43.3**	**-0.3**
MDJ				pmax	pmax		
	comp=Z,17nm,1.7s						
MDJ				pmax	pmax		
	comp=Z,4µm,5.6s						
MDJ				LR	LR		
	comp=Z,62µm,12.9s						
MDJ				LR	LR		
	comp=Z,68µm,11.6s						
MDJ				LR	LR		
	comp=Z,62µm,17.5s						
MDJ	**Mudanjiang**	**47.92**	**34**	IAMs_20	IAMs_20	14 10 53.7	
	comp=Z,47µm,18.0s						
WB0	**Warramunga Arr**	**48.03**	**125**	P	**P**	**13 49 46.2**	**-2.1**
WB0				IAmb	IAmb	13 49 56.0	
	comp=Z,147nm,1.0s						
WB0				IAMs_20	IAMs_20	14 12 52.3	
	comp=Z,46µm,19.0s						
WB9	**Warramunga Arr**	**48.04**	**125**	IAMs_20	IAMs_20	14 13 03.1	
	comp=Z,48µm,19.0s						
WB8	**Warramunga Arr**	**48.05**	**125**	IAMs_20	IAMs_20	14 11 05.7	
	comp=Z,49µm,22.0s						
WB6	**Warramunga Arr**	**48.06**	**125**	IAMs_20	IAMs_20	14 11 16.9	
	comp=Z,51µm,22.0s						
WB5	**Warramunga Arr**	**48.07**	**125**	IAMs_20	IAMs_20	14 11 16.2	
	comp=Z,51µm,22.0s						
WC1	**Warramunga Arr**	**48.07**	**125**	IAMs_20	IAMs_20	14 11 16.3	
	comp=Z,51µm,21.0s						
WB4	**Warramunga Arr**	**48.08**	**125**	IAMs_20	IAMs_20	14 11 17.4	
	comp=Z,53µm,22.0s						
WR1	**Warramunga Arr**	**48.08**	**125**	IAMs_20	IAMs_20	14 11 17.5	
	comp=Z,45µm,22.0s						
WRA	**Warramunga Arr**	**48.08**	**125**	P	**P**	**13 49 47.0**	**-1.6**
	comp=Z,30nm,0.6s,baz=306,slow=8.3,SNR=180						
WRA				PcP	**PcP**	**13 51 16.7**	**+0.3**
	comp=Z,26nm,0.9s,baz=305,slow=8.5,SNR=1.1						
WRA				LR	LR	14 11 28.4	
	comp=Z,42µm,20.9s,baz=300,slow=38						
WRA	**Warramunga Arr**	**48.08**	**125**	*i* P	**P**	**13 49 46.5**	**-2.1**
WRA				pmax	pmax		
	comp=Z,30nm,0.6s						
WRA	**Warramunga Arr**	**48.08**	**125**	P	**P**	**13 49 46.8**	**-1.8**
WB3	**Warramunga Arr**	**48.08**	**125**	IAMs_20	IAMs_20	14 11 17.6	
	comp=Z,53µm,22.0s						
WRAB	**Tennant Creek**	**48.09**	**125**	*c i*P	**P**	**13 49 46.6**	**-2.0**
WRAB				pmax	pmax		
	comp=Z,154nm,1.7s						
WRAB				MLR	MLR		
	comp=Z,40µm,18.0s						
WRAB	**Tennant Creek**	**48.09**	**125**	P	**P**	**13 49 46.8**	**-1.9**
WRAB				IAmb	IAmb	13 49 56.5	
	comp=Z,291nm,1.2s						
WRAB	**Tennant Creek**	**48.09**	**125**	IAMs_20	IAMs_20	14 11 17.9	
	comp=Z,51µm,22.0s						
WB2	**Warramunga Arr**	**48.09**	**125**	P	**P**	**13 49 47.0**	**-1.7**
WB2				IAmb	IAmb	13 49 56.6	
	comp=Z,286nm,1.2s						
WB2				IAMs_20	IAMs_20	14 11 17.8	
	comp=Z,53µm,22.0s						
WC4	**Warramunga Arr**	**48.09**	**125**	IAMs_20	IAMs_20	14 11 17.8	
	comp=Z,56µm,22.0s						
WC2	**Warramunga Arr**	**48.09**	**125**	IAMs_20	IAMs_20	14 11 17.9	
	comp=Z,52µm,22.0s						
WB1	**Warramunga Ar.**	**48.09**	**125**	IAMs_20	IAMs_20	14 11 17.9	
	comp=Z,53µm,22.0s						
WR2	**Warramunga Arr**	**48.10**	**125**	IAMs_20	IAMs_20	14 11 18.1	
	comp=Z,44µm,21.0s						
WC3	**Warramunga Arr**	**48.12**	**125**	IAMs_20	IAMs_20	14 11 18.5	
	comp=Z,53µm,22.0s						
WR3	**Warramunga Arr**	**48.12**	**125**	IAMs_20	IAMs_20	14 11 18.6	
	comp=Z,51µm,22.0s						
WR4	**Warramunga Arr**	**48.14**	**125**	IAMs_20	IAMs_20	14 11 09.1	
	comp=Z,48µm,21.0s						
WR6	**Warramunga Arr**	**48.18**	**125**	IAMs_20	IAMs_20	14 13 08.1	
	comp=Z,47µm,19.0s						
WR7	**Warramunga Arr**	**48.20**	**125**	IAMs_20	IAMs_20	14 11 20.6	
	comp=Z,51µm,22.0s						
WR8	**Warramunga Arr**	**48.22**	**125**	IAMs_20	IAMs_20	14 13 09.2	
	comp=Z,49µm,18.0s						
WR9	**Warramunga Arr**	**48.23**	**125**	IAMs_20	IAMs_20	14 13 08.5	
	comp=Z,47µm,18.0s						
WR0	**Warramunga Arr**	**48.25**	**125**	P	**P**	**13 49 48.1**	**-1.8**
WR0				IAmb	IAmb	13 49 57.8	
	comp=Z,456nm,1.4s						
WR0				IAMs_20	IAMs_20	14 13 10.1	
	comp=Z,48µm,18.0s						
SBV	**Sambava**	**48.75**	**245**	P	**P**	**13 49 57.4**	**+3.6**
	SNR=5.5						
USA0B	**Ussuriysk Arra**	**49.02**	**36**	IAMs_20	IAMs_20	14 11 18.7	
	comp=Z,67µm,18.0s						
USRK	**Ussuriysk Ar.**	**49.02**	**36**	P	**P**	**13 49 55.0**	**-0.5**
	comp=Z,12nm,1.0s,baz=232,slow=8.6,SNR=11						
USRK				PcP	**PcP**	**13 51 20.1**	**+0.9**
	comp=Z,5.3nm,0.8s,baz=238,slow=4.9,SNR=1.2						
USRK				PP	**PP**	**13 51 49.4**	**+0.3**
	comp=Z,29nm,1.1s,baz=227,slow=7.6,SNR=5.1						
USRK				LR	LR	14 11 28.9	
	comp=Z,53µm,18.2s,baz=206,slow=37						
JHJ2	**Mitsune**	**49.13**	**52**	IAMs_20	IAMs_20	14 10 10.8	
	comp=Z,37µm,19.0s						
BVAR	**Borovoye Array**	**49.20**	**341**	P	**P**	**13 49 54.7**	**-2.0**
	comp=Z,74nm,1.0s,baz=142,slow=7.4,SNR=150						
BVAR				PcP	**PcP**	**13 51 20.2**	**+0.5**
	comp=Z,13nm,0.7s,baz=150,slow=3.2,SNR=1.7						
MJB9	**Matsu-Tunnel**	**49.23**	**48**	IAMs_20	IAMs_20	14 13 02.2	
	comp=Z,37µm,18.0s						
MAJO	**Matsushiro**	**49.23**	**48**	IAMs_20	IAMs_20	14 13 02.2	
	comp=Z,35µm,18.0s						
MAT	**Matsushiro**	**49.23**	**48**	P	**P**	**13 49 58.1**	**+0.9**
MAT				S	**S**	**13 57 01.8**	**-0.5**
MJAR	**Matsushiro Arr**	**49.23**	**48**	P	**P**	**13 49 56.5**	**-0.7**
	comp=Z,9.4nm,0.8s,baz=239,slow=9.5,SNR=22						
MJAR				PcP	**PcP**	**13 51 21.0**	**+0.7**
	comp=Z,29nm,0.8s,baz=243,slow=5.6,SNR=5.7						
MJAR				LR	LR	14 13 05.4	
	comp=Z,37µm,18.0s,baz=250,slow=39						
RAYN	**Ar Rayn**	**49.24**	**294**	P	**P**	**13 49 58.3**	**+0.7**
RAYN				pmax	pmax		
	comp=Z,2µm,1.9s						
RAYN	**Ar Rayn**	**49.24**	**294**	P	**P**	**13 49 58.3**	**+0.7**
BRVK	**Borovoye**	**49.26**	**341**	P	**P**	**13 49 56.4**	**-0.8**
BRVK	**Borovoye**	**49.26**	**341**	*de*P	**P**	**13 49 54.9**	**-2.3**
BRVK				pmax	pmax		
	comp=Z,165nm,1.3s						
BRVK				MLR	MLR		
	comp=Z,27µm,18.0s						
BRVK	**Borovoye**	**49.26**	**341**	P	**P**	**13 49 55.5**	**-1.7**
DAMY	**Dhamar**	**49.29**	**283**	P	**P**	**13 50 00.9**	**+2.5**
	SNR=94						
DAMY	**Dhamar**	**49.29**	**283**	IAMs_20	IAMs_20	14 08 23.1	
	comp=Z,46µm,19.0s						
ASAR	**Alice Springs**	**49.73**	**130**	P	**P**	**13 50 00.1**	**-1.1**
	comp=Z,21nm,0.6s,baz=300,slow=6.8,SNR=143						
ASAR				PcP	**PcP**	**13 51 22.0**	**-0.3**
	comp=Z,13nm,0.8s,baz=309,slow=5.9,SNR=0.8						
ASAR				S	**S**	**13 57 11.3**	**+1.6**
	comp=Z,2.2nm,1.1s,baz=200,slow=10,SNR=2.8						
ASAR				LR	LR	14 13 10.9	
	comp=Z,39µm,20.8s,baz=298,slow=39						
ASAR	**Alice Springs**	**49.73**	**130**	P	**P**	**13 49 59.4**	**-1.8**
ASAR	**Alice Springs**	**49.73**	**130**	P	**P**	**13 49 59.4**	**-1.8**
AS31	**Alice Springs**	**49.73**	**130**	P	**P**	**13 49 59.4**	**-1.9**
FORT	**Forrest**	**50.14**	**141**	P	**P**	**13 50 04.1**	**0.0**
	baz=50,SNR=18						
FORT	**Forrest**	**50.14**	**141**	P	**P**	**13 50 03.9**	**-0.3**
FORT				IAMs_20	IAMs_20	14 14 47.7	
	comp=Z,45µm,20.0s						
AB31	**Akbulak array**	**50.44**	**331**	*i* P	**P**	**13 50 04.8**	**-1.4**
ABKAR	**Akbulak array**	**50.44**	**331**	P	**P**	**13 50 05.4**	**-0.8**
ABKAR	**Akbulak array**	**50.44**	**331**	P	**P**	**13 50 05.2**	**-1.0**
ABKAR				IAmb	IAmb	13 50 15.0	
	comp=Z,941nm,1.8s						
ATD	**Arta Tunnel**	**50.75**	**279**	P	**P**	**13 50 10.4**	**+1.2**
	comp=Z,104nm,1.1s,baz=30,slow=4.5,SNR=14						
ATD				S	**S**	**13 57 27.2**	**+3.0**
	comp=Z,2.4nm,0.3s,baz=255,slow=21,SNR=1.2						
ATD				LR	LR	14 08 32.0	
	comp=Z,37µm,21.6s,baz=86,slow=32						
ATD	**Arta Tunnel**	**50.75**	**279**	P	**P**	**13 50 11.4**	**+2.2**
	SNR=32						
ATD	**Arta Tunnel**	**50.75**	**279**	IAMs_20	IAMs_20	14 08 10.0	
	comp=Z,42µm,21.0s						
LKRN	**Lenkeran, Azer**	**51.19**	**314**	P	**P**	**13 50 10.5**	**-1.5**
KLR	**Kul'dur**	**52.01**	**30**	P	**P**	**13 50 18.0**	**0.0**
	comp=Z,5.0nm,0.8s,baz=252,slow=7.2,SNR=15						
KLR				PcP	**PcP**	**13 51 32.1**	**+1.9**
	comp=Z,13nm,0.9s,baz=283,slow=8.5,SNR=1.2						
KLR				S	**S**	**13 57 40.5**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=49,slow=9.9,SNR=1.3						
KLR	**Kul'dur**	**52.01**	**30**	*d i*P	**P**	**13 50 18.1**	**+0.1**
KLR				pmax	pmax		
	comp=Z,97nm,1.5s						
KLR				MLR	MLR		
	comp=Z,32µm,17.0s						
TEY	**Ternei**	**52.21**	**37**	⇑*e*P	**P**	**13 50 19.3**	**-0.2**
TEY				*e*		13 57 48.7	
TEY				pmax	pmax		
	comp=Z,20nm,1.1s						
TEY				pmax	pmax		
	comp=N,300nm,12.9s						
BOD	**Bodaibo**	**52.32**	**13**	*e*P	**P**	**13 50 18.9**	**-1.2**
BOD				pmax	pmax		
	comp=Z,257nm,1.7s						
QIS	**Mount Isa**	**52.70**	**123**	P	**P**	**13 50 22.0**	**-1.6**
	baz=53,SNR=22						
ZEA	**Zeya**	**53.10**	**24**	*e*P	**P**	**13 50 25.9**	**-0.1**
ZEA				*e*		13 52 32.0	
ZEA				*e*PPP	PPP	13 53 26.0	
ZEA				*e*S	**S**	**13 57 53.0**	**-2.2**
ZEA				pmax	pmax		
	comp=E,61nm,1.6s						
ZEA				pmax	pmax		
	comp=N,74nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,78nm,1.4s						
ZEA				pmax	pmax		
	comp=E,900nm,6.0s						
ZEA				pmax	pmax		
	comp=Z,3µm,6.0s						
ZEA				pmax	pmax		
	comp=N,1µm,8.0s						
ZEA				pmax	pmax		
	comp=Z,1µm,6.0s						
ZEA				pmax	pmax		
	comp=N,1µm,5.0s						
ZEA				pmax	pmax		
	comp=E,1µm,5.0s						
AKT	**Akhty**	**53.11**	**317**	*e*P	**P**	**13 50 25.4**	**-1.0**
AKT				*e*		13 51 29.0	
AKT				*e*		13 52 27.0	
AKT				pmax	pmax		
	comp=Z,370nm,1.7s						
COEN	**Coen**	**53.12**	**114**	P	**P**	**13 50 25.7**	**-1.0**
OPO	**Ambohidratompo**	**53.22**	**240**	P	**P**	**13 50 29.4**	**+1.7**
	comp=Z,15nm,0.6s,baz=69,slow=5.4,SNR=21						
MNGR	**Mingechevir, A**	**53.24**	**316**	P	**P**	**13 50 25.7**	**-1.6**
SEKA	**Sheki**	**53.35**	**317**	P	**P**	**13 50 26.5**	**-1.7**
GANJ	**Ganja**	**53.72**	**316**	P	**P**	**13 50 28.3**	**-2.5**
NAX	**Nakhchivan**	**53.72**	**314**	P	P	13 50 26.0	-4.9
ANKE	**Ethiopia-Afar**	**53.86**	**276**	*i* P	**P**	**13 50 35.7**	**+3.0**
ANKE				*e*S	**S**	**13 58 14.7**	**+7.1**
DESE	**Dese**	**53.91**	**278**	*i* P	**P**	**13 50 32.7**	**-0.3**
DESE				*e*S	**S**	**13 58 14.7**	**+6.6**
MAK	**Makhachkala**	**53.92**	**319**	*e*P	P	13 50 26.9	-5.3
MAK				*e*S	**S**	**13 57 59.6**	**-7.1**
MAK				*e*SS	**SKiKP**	**14 01 40.8**	**-4.1**
MAK				pmax	pmax		
	comp=Z,524nm,1.3s						
MAK				MLR	MLR		
	comp=Z,21µm,17.0s						
GNI	**Garni**	**54.63**	**314**	P	**P**	**13 50 38.4**	**+0.8**
	comp=Z,31nm,0.4s,baz=184,slow=6.0,SNR=8.3						
GNI				LR	LR	14 18 27.4	
	comp=Z,8µm,18.3s,baz=99,slow=41						
ERM	**Erimo**	**54.99**	**43**	IAMs_20	IAMs_20	14 16 07.7	
	comp=Z,38µm,19.0s						
VOI	**Vohitsoka**	**55.01**	**237**	P	**P**	**13 50 44.5**	**+3.8**
	SNR=18						
TBLG	**Delisi**	**55.25**	**316**	P	**P**	**13 50 42.3**	**+0.3**
GRNR	**Gornyy**	**55.33**	**31**	⇓*i*P	**P**	**13 50 44.6**	**+2.3**
GRNR				*i*		13 50 51.9	
GRNR				*e*S	S	13 58 35.5	+10
GRNR				*e*SS	**SS**	**14 02 06.6**	**-3.5**
GRNR				pmax	pmax		
	comp=Z,40nm,1.1s						
GRNR				MLR	MLR		
	comp=Z,13µm,15.0s						
KZRT	**Kazreti**	**55.35**	**316**	P	**P**	**13 50 42.9**	**+0.2**
PMG	**Port Moresby**	**55.40**	**107**	⇓*i*P	**P**	**13 50 42.3**	**-1.1**
PMG				pmax	pmax		
	comp=Z,505nm,1.4s						
PMG				MLR	MLR		
	comp=Z,97µm,23.0s						
PMG	**Port Moresby**	**55.40**	**107**	P	**P**	**13 50 42.9**	**-0.5**
SVE	**Sverdlovsk**	**55.61**	**338**	*de*P	**P**	**13 50 43.6**	**-0.6**
SVE				*e*		13 52 44.1	
SVE				*e*S	**S**	**13 58 27.2**	**-1.8**
SVE				*e*		14 00 28.8	
SVE				*e*SS	**SS**	**14 02 19.1**	**+4.8**
SVE				*e*SSS	SSS	14 04 22.4	
SVE				pmax	pmax		
	comp=Z,765nm,1.6s						
SVE				pmax	pmax		
	comp=Z,1µm,6.6s						
SVE				MLR	MLR		
	comp=E,40µm,22.0s						
SVE				MLR	MLR		
	comp=Z,65µm,20.0s						
SVE				MLR	MLR		
	comp=N,34µm,20.0s						
MTSU	**Mount Surprise**	**55.69**	**118**	P	**P**	**13 50 44.6**	**-0.9**
	baz=56,SNR=6.2						
GUDG	**Gudauri**	**55.72**	**317**	P	**P**	**13 50 45.4**	**-0.2**
AKH	**Akhalkalaki**	**55.99**	**315**	P	**P**	**13 50 47.4**	**0.0**
ARU	**Arti**	**56.10**	**337**	P	**P**	**13 50 46.5**	**-1.2**
	comp=N,25nm,0.8s,baz=143,slow=4.8,SNR=75						
ARU				S	**S**	**13 58 31.6**	**-3.9**
	comp=N,0.6nm,0.3s,baz=91,slow=22,SNR=1.2						
ARU				LR	LR	14 16 50.3	
	comp=N,71µm,21.3s,baz=140,slow=38						
ARU	**Arti**	**56.10**	**337**	*d i*P	**P**	**13 50 45.9**	**-1.8**
ARU						13 51 39.7	
ARU						13 52 46.5	
ARU				S	**S**	**13 58 35.4**	**-0.1**
ARU						14 00 37.7	
ARU				SSS	SSS	14 04 27.3	
ARU				pmax	pmax		
	comp=Z,272nm,1.3s						
ARU				pmax	pmax		
	comp=Z,1µm,6.7s						
ARU				smax	smax		
	comp=N,7µm,14.7s						
ARU				MLR	MLR		
	comp=Z,67µm,21.0s						
ARU	**Arti**	**56.10**	**337**	P	**P**	**13 50 46.8**	**-0.9**
ZEI	**Tsey**	**56.24**	**317**	*e*P	**P**	**13 50 48.0**	**-1.3**
ZEI				*e*S	**S**	**13 58 42.2**	**+3.8**
ZEI				pmax	pmax		
	comp=Z,96nm,0.9s						
ZEI				pmax	pmax		
	comp=N,47nm,0.8s						
ZEI				pmax	pmax		
	comp=E,53nm,0.8s						
ZEI				pmax	pmax		
	comp=Z,889nm,6.4s						
ONI	**Oni**	**56.47**	**317**	P	**P**	**13 50 51.0**	**+0.3**
BBOO	**Buckleboo**	**56.61**	**138**	P	**P**	**13 50 50.0**	**-1.7**
	baz=57,SNR=20						
BBOO	**Buckleboo**	**56.61**	**138**	IAmb	IAmb	13 50 59.7	
	comp=Z,586nm,1.9s						
BBOO				IAMs_20	IAMs_20	14 19 41.0	
	comp=Z,38µm,19.0s						
NCK	**Nalchik**	**56.73**	**318**	⇓*e*P	**P**	**13 50 52.0**	**-0.5**
NCK				pmax	pmax		
	comp=Z,127nm,2.2s						
YSS	**Yuzh-Sakhalins**	**56.88**	**38**	*e*P	**P**	**13 50 54.5**	**+1.0**
YSS				*e**SP	**pwP**	**13 51 01.9**	**+0.5**
YSS				*e*		13 53 04.3	
YSS				*e*S	**S**	**13 58 44.6**	**-1.6**
YSS				*e*PS	**pS**	**13 58 54.3**	**+1.4**
YSS				*e*SS	**SS**	**14 02 38.8**	**+4.2**
YSS				*e*SSS	SSS	14 04 45.1	
YSS				pmax	pmax		
	comp=Z,40nm,1.1s						
YSS				MLR	MLR		
	comp=N,29µm,15.0s						
YSS				MLR	MLR		
	comp=Z,29µm,15.0s						
YSS				MLR	MLR		
	comp=E,20µm,16.0s						
KIBK	**Kibwezi**	**56.92**	**262**	P	**P**	**13 50 55.3**	**+0.9**
	SNR=76						
NEY	**Neytrino**	**57.22**	**317**	⇓*e*P	**P**	**13 50 56.1**	**-0.1**
NEY				MLR	MLR		
	comp=Z,8µm,19.0s						
KBZ	**Khabaz**	**57.29**	**318**	P	**P**	**13 50 55.7**	**-0.7**
	comp=Z,39nm,0.9s,baz=136,slow=5.8,SNR=49						
KBZ				LR	LR	14 18 52.2	
	comp=Z,14µm,20.2s,baz=112,slow=40						
KBZ	**Khabaz**	**57.29**	**318**	*c i*P	**P**	**13 50 55.1**	**-1.3**
KBZ				pmax	pmax		
	comp=Z,54nm,0.9s						
KBZ				MLR	MLR		
	comp=Z,19µm,21.0s						
BATM	**Batumi**	**57.32**	**315**	P	**P**	**13 50 59.1**	**+2.4**
KMBO	**Kilima Mbogo**	**57.48**	**264**	P	**P**	**13 50 59.4**	**+0.8**
	comp=Z,42nm,0.9s,baz=56,slow=10.0,SNR=68						
KMBO				S	**S**	**13 58 55.2**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=112,slow=24,SNR=1.1						
KMBO				LR	LR	14 12 51.5	
	comp=Z,49µm,19.1s,baz=84,slow=33						
KMBO	**Kilima Mbogo**	**57.48**	**264**	IAMs_20	IAMs_20	14 12 19.4	
	comp=Z,51µm,20.0s						
KVAR	**Kislovodsk Arr**	**57.51**	**318**	P	**P**	**13 50 57.5**	**-0.6**
	comp=Z,21nm,0.8s,baz=265,slow=24,SNR=5.6						
KVAR				LR	LR	14 18 06.9	
	comp=Z,11µm,21.4s,baz=182,slow=39						
KIV	**Kislovodsk**	**57.52**	**318**	*e*P	**P**	**13 50 57.2**	**-1.0**
KIV				*e*		13 53 08.4	
KIV				*e*S	**S**	**13 58 55.6**	**+0.7**
KIV				*e*SS	**SS**	**14 02 46.3**	**+1.3**
KIV				pmax	pmax		
	comp=Z,550nm,5.7s						
KIV				pmax	pmax		
	comp=Z,745nm,1.0s						
KIV				MLR	MLR		
	comp=Z,39µm,17.0s						
KIV	**Kislovodsk**	**57.52**	**318**	P	**P**	**13 50 57.2**	**-1.0**
KIV				IAmb	IAmb	13 51 06.0	
	comp=Z,241nm,1.0s						
YUK	**Yuzh-Kuril'sk**	**57.61**	**42**	*e*P	**P**	**13 50 56.3**	**-2.4**
YUK				*e*		13 51 51.9	
YUK				*e*		13 53 09.2	
YUK				*i* S	**S**	**13 58 53.8**	**-2.1**
YUK				*e*		14 00 43.7	
YUK				*i* SS	**SS**	**14 02 45.7**	**-0.5**
YUK				pmax	pmax		
	comp=N,696nm,1.1s						
YUK				pmax	pmax		
	comp=Z,854nm,1.1s						
YUK				pmax	pmax		
	comp=E,444nm,1.0s						
YUK				pmax	pmax		
	comp=Z,2µm,3.7s						
YUK				MLR	MLR		
	comp=N,21µm,16.0s						
YUK				MLR	MLR		
	comp=Z,18µm,16.0s						
YUK				MLR	MLR		
	comp=E,22µm,15.0s						
GOF	**Gofitskoye**	**57.72**	**319**	⇑*i*P	**P**	**13 50 58.9**	**-0.6**
GOF				*e*S	**S**	**13 59 00.5**	**+3.1**
GOF				pmax	pmax		
	comp=Z,223nm,1.5s						
GOF				smax	smax		
	comp=E,136nm,1.6s						
GOF				smax	smax		
	comp=N,163nm,1.8s						
CTA	**Charters Tower**	**58.14**	**119**	LR	LR	14 18 07.4	
	comp=N,20µm,20.7s,baz=292,slow=38						
CTA	**Charters Tower**	**58.14**	**119**	P	**P**	**13 51 02.0**	**-0.8**
CTA				pmax	pmax		
	comp=Z,114nm,1.7s						
CTAO	**Charters Tower**	**58.14**	**119**	P	**P**	**13 51 02.0**	**-0.8**
CTAO				pmax	pmax		
	comp=Z,106nm,1.7s						
ASF	**Jabal al Asfar**	**58.39**	**303**	P	**P**	**13 51 04.4**	**-0.1**
	comp=Z,20nm,0.8s,baz=61,slow=3.6,SNR=40						
ASF				LR	LR	14 19 14.0	
	comp=Z,25µm,19.4s,baz=36,slow=39						
ASF				PKP2bc		14 20 51.5	
	comp=Z,0.8nm,0.5s,baz=290,slow=7.8,SNR=4.4						
LODK	**Lodwar**	**58.70**	**269**	P	**P**	**13 51 09.0**	**+2.1**
	SNR=50						
TYV	**Tymovskoe**	**58.70**	**34**	*e*P	P	13 51 11.6	+5.4
TYV				*e*S	S	13 59 25.0	+15
TYV				pmax	pmax		
	comp=Z,68nm,1.3s						
TYV				pmax	pmax		
	comp=Z,3µm,5.0s						
NKL	**Nikolayevsk**	**58.85**	**31**	*e*P	P	13 51 14.8	+7.7
NKL				*e*		13 51 55.7	
NKL				*e*		13 53 19.2	
NKL				*e*S	S	13 59 21.4	+10
NKL				pmax	pmax		
	comp=Z,97nm,1.1s						
NKL				pmax	pmax		
	comp=Z,596nm,6.2s						
NKL				smax	smax		
	comp=E,6.0nm,3.2s						
NKL				smax	smax		
	comp=N,11nm,1.7s						
HTT	**Hallett**	**58.91**	**137**	P	**P**	**13 51 06.4**	**-1.6**
	baz=59,SNR=7.7						
QLP	**Quilpie**	**59.25**	**127**	P	**P**	**13 51 09.3**	**-1.1**
	baz=59,SNR=15						
SOC	**Sochi**	**59.38**	**317**	*c i*P	**P**	**13 51 09.0**	**-2.0**
SOC				*e*S	**S**	**13 59 17.3**	**-1.7**
SOC				*e*SS	**SS**	**14 03 14.0**	**0.0**
SOC				pmax	pmax		
	comp=Z,174nm,1.1s						
SOC				MLR	MLR		
	comp=Z,15µm,20.0s						
KUR	**Kuril'sk**	**59.39**	**41**	*e*P	**P**	**13 51 11.5**	**+0.4**
KUR				*e*S	**S**	**13 59 21.6**	**+2.5**
KUR				MLR	MLR		
	comp=Z,20µm,15.0s						

KUR				MLR	MLR		
	comp=E,13µm,17.0s						
SHBL	**Chebaa**	59.58	304	*e*P	P	13 51 13.2	+0.3
EIL	**Elat**	59.59	300	P	P	13 51 12.9	+0.1
	comp=E,38nm,0.8s,baz=115,slow=2.4,SNR=26						
EIL				LR	LR	14 17 08.6	
	comp=E,41µm,21.6s,baz=100,slow=36						
HWQ	**Hawqa**	59.60	305	*e*P	P	13 51 10.4	-2.5
BHL	**Bhannes**	59.76	305	*e*P	P	13 51 13.5	-0.5
MMAI	**Mount Meron Ar**	59.79	304	P	P	13 51 14.1	-0.1
	comp=E,16nm,0.8s,baz=98,slow=9.4,SNR=25						
MMAI				LR	LR	14 18 48.2	
	comp=E,22µm,21.9s,baz=95,slow=38						
MMAI				PKP2bc		14 20 54.7	
	comp=E,6.2nm,1.0s,baz=232,slow=51,SNR=4.0						
STKA	**Stephens Creek**	59.91	134	P	P	13 51 13.1	-1.8
	baz=60,SNR=11						
STKA	**Stephens Creek**	59.91	134	P	P	13 51 13.7	-1.2
	comp=E,33nm,1.2s,baz=312,slow=8.3,SNR=11						
STKA				LR	LR	14 17 50.0	
	comp=E,34µm,21.8s,baz=295,slow=37						
STKA				PKP2bc		14 20 58.8	
	comp=E,5.7nm,1.1s,baz=276,slow=7.2,SNR=3.1						
STKA	**Stephens Creek**	59.91	134	P	P	13 51 13.2	-1.8
YAK	**Yakutsk**	60.15	18	P	P	13 51 14.9	-1.0
	comp=E,73nm,0.8s,baz=251,slow=0.5,SNR=51						
YAK				PKP2bc		14 20 52.5	
	comp=E,4.1nm,0.4s,baz=188,slow=0.5,SNR=5.3						
YAK				PKP2ab		14 20 59.6	
	comp=E,3.4nm,0.3s,baz=99,slow=0.3,SNR=4.6						
YAK	**Yakutsk**	60.15	18	*e*P	P	13 51 13.6	-2.4
YAK				*e**PP	pP	13 51 22.0	+0.5
YAK				*e*		13 51 54.8	
YAK				*e*		13 53 28.7	
YAK				*e*PPP	PPP	13 55 00.7	
YAK				*e*S	S	13 59 24.7	-3.6
YAK				*e**SS	sS	13 59 45.7	+7.8
YAK				*e*		14 00 58.9	
YAK				*e*SSS	SSS	14 06 00.9	
YAK				pmax	pmax		
	comp=Z,185nm,1.0s						
YAK				pmax	pmax		
	comp=E,61nm,1.1s						
YAK				pmax	pmax		
	comp=N,64nm,1.1s						
YAK				pmax	pmax		
	comp=Z,440nm,4.2s						
YAK				pmax	pmax		
	comp=N,439nm,4.3s						
YAK				pmax	pmax		
	comp=E,193nm,2.9s						
YAK				smax	smax		
	comp=N,1µm,5.2s						
YAK				smax	smax		
	comp=E,864nm,4.6s						
YAK				MLR	MLR		
	comp=Z,43µm,16.0s						
YAK				MLR	MLR		
	comp=N,43µm,15.0s						
YAK				MLR	MLR		
	comp=E,19µm,16.0s						
YAK	**Yakutsk**	60.15	18	P	P	13 51 14.4	-1.6
YAK				IAmb	IAmb	13 51 24.1	
	comp=Z,314nm,0.9s						
YAK				IAMs_20	IAMs_20	14 19 08.3	
	comp=Z,34µm,18.0s						
PAF	**Port-aux-Franc**	60.55	198	IAMs_20	IAMs_20	14 11 12.9	
	comp=Z,41µm,21.0s						
VRH	**Novokhopyorsk**	61.13	325	*e*P	P	13 51 21.4	-1.5
VRH				*e*		13 51 24.6	
VRH				*e*S	S	13 59 33.7	-7.5
VRH				pmax	pmax		
	comp=Z,900nm,1.9s						
VRH				pmax	pmax		
	comp=Z,1µm,1.9s						
VRH				smax	smax		
	comp=N,7µm,13.0s						
VRH				MLR	MLR		
	comp=Z,40µm,21.0s						
KVT	**Kavak**	61.19	313	P	P	13 51 22.9	-0.6
KIRV	**Kirov**	61.22	335	P	P	13 51 22.2	-1.1
	comp=Z,91nm,0.7s,baz=149,slow=2.6,SNR=41						
KIRV				PKP2bc		14 20 50.8	
	comp=Z,5.3nm,0.5s,baz=338,slow=15,SNR=2.0						
ANN	**Anapa**	61.34	317	*e*P	P	13 51 20.5	-3.9
ANN				*e**PP	pP	13 51 22.5	-7.4
ANN				*e*PPP	PPP	13 55 14.3	
ANN				*e*S	S	13 59 41.7	-2.3
ANN				*e*SSS	SSS	14 06 29.7	
ANN				pmax	pmax		
	comp=Z,32nm,1.3s						
ANN				MLR	MLR		
	comp=Z,29µm,21.0s						
ANN				MLR	MLR		
	comp=E,23µm,23.0s						
ANN				MLR	MLR		
	comp=N,4µm,14.0s						
NRIK	**Noril'sk**	61.74	357	P	P	13 51 25.2	-1.5
	comp=N,52nm,0.7s,baz=156,slow=5.9,SNR=68						
NRIK				PKP2bc		14 20 42.6	
	comp=N,2.4nm,0.7s,baz=134,slow=3.3,SNR=3.5						
NRIK				LR	LR	14 22 18.8	
	comp=N,34µm,21.9s,baz=187,slow=40						
NRIK	**Noril'sk**	61.74	357	*i* P	P	13 51 25.2	-1.5
NRIK				pmax	pmax		
	comp=Z,105nm,1.0s						
CSS	**Mathiatis**	61.85	306	IAMs_20	IAMs_20	14 20 49.2	
	comp=Z,42µm,20.0s						
DIKM	**Dikmen**	61.91	313	⇑P	P	13 51 27.7	-0.6
VSR	**Storozhevoye**	62.60	324	*e*P	P	13 51 30.6	-2.1
VSR				*e*S	S	13 59 53.7	-6.0
VSR				pmax	pmax		
	comp=Z,250nm,1.0s						
VSR				pmax	pmax		
	comp=Z,750nm,1.9s						
VSR				smax	smax		
	comp=N,4µm,10.6s						
VSR				MLR	MLR		
	comp=Z,40µm,20.0s						
BR131	**Keskin Array S**	62.62	311	P	P	13 51 30.7	-2.6
	SNR=69						
BR131	**Keskin Array S**	62.62	311	P	P	13 51 31.2	-2.1
BR131				pmax	pmax		
	comp=Z,88nm,1.0s						
BR131	**Keskin Array S**	62.62	311	P	P	13 51 31.2	-2.1
BRTR	**Keskin Array B**	62.62	311	P	P	13 51 31.4	-1.9
	comp=Z,22nm,0.7s,baz=126,slow=7.1,SNR=101						
BRTR				PKPPKP	P'P'df	14 20 34.2	-5.2
	comp=Z,0.8nm,0.9s,baz=222,slow=1.7,SNR=4.1						
BRTR	**Keskin Array B**	62.62	311	*i* P	P	13 51 30.7	-2.6
BRTR				pmax	pmax		
	comp=Z,23nm,0.8s						
BRTR	**Keskin Array B**	62.62	311	P	P	13 51 30.7	-2.6
CMSA	**Cobar Meteorol**	62.73	131	P	P	13 51 32.9	-1.0
	baz=63,SNR=35						
VORR	**Voronezh**	62.76	325	*e*P	P	13 51 32.0	-1.8
VORR				pmax	pmax		
	comp=Z,800nm,2.0s						
ARPS	**Mount Arapiles**	62.78	138	P	P	13 51 34.2	0.0
	baz=63,SNR=15						
RMQ	**Roma**	62.84	125	P	P	13 51 34.6	-0.1
	baz=63,SNR=10						
ILGA	**Ilgaz**	62.88	312	P	P	13 51 34.6	-0.5
ILGA				IAMs_20	IAMs_20	14 21 39.6	
	comp=Z,31µm,21.0s						
BZK	**Bozkurt**	62.90	313	⇓P	P	13 51 33.3	-1.6
ANTO	**Ankara**	63.28	311	P	P	13 51 36.5	-1.2
ANTO				pmax	pmax		
	comp=Z,177nm,1.2s						
ANTO				MLR	MLR		
	comp=Z,15µm,21.0s						
ANTO	**Ankara**	63.28	311	P	P	13 51 36.5	-1.2
ANTO				IAmb	IAmb	13 51 45.1	
	comp=Z,177nm,1.1s						
LPSR	**Galich'ya Gora**	63.30	326	*e*P	P	13 51 35.7	-1.6
LPSR				*e*		13 51 39.3	
LPSR				*e*SSS	SSS	14 06 56.1	
LPSR				pmax	pmax		
	comp=Z,350nm,1.1s						
LPSR				pmax	pmax		
	comp=Z,980nm,2.0s						
LPSR				MLR	MLR		
	comp=Z,36µm,21.0s						
PATS	**Pohnpei**	63.53	86	P	P	13 51 38.1	-1.5
	baz=63,SNR=5.1						
SIM	**Simferopol'**	63.63	317	*i* P	P	13 51 39.2	-0.5
MBAR	**Mbarara**	63.83	266	IAMs_20	IAMs_20	14 16 29.5	
	comp=Z,47µm,20.0s						
EIDS	**Eidsvold**	64.30	123	P	P	13 51 43.5	-1.0
	baz=64,SNR=4.4						
EIDS	**Eidsvold**	64.30	123	P	P	13 51 43.5	-1.0
EIDS				IAMs_20	IAMs_20	14 24 23.1	
	comp=Z,32µm,19.0s						
PRGR	**Permogore**	64.55	337	*e*P	P	13 51 43.4	-2.0
PRGR				*e*S	S	14 00 20.2	-3.5
PRGR				pmax	pmax		
	comp=Z,347nm,0.9s						
KDZE	**Karadeniz Ereo**	64.61	312	⇑P	P	13 51 45.0	-1.3
ISP	**Isparta**	64.61	308	⇑P	P	13 51 44.4	-2.1
ELL	**Elmali**	64.91	307	P	P	13 51 48.7	+0.3
ELL				pmax	pmax		
	comp=Z,3µm,1.5s						
ELL				MLR	MLR		
	comp=Z,67µm,21.0s						
ELL	**Elmali**	64.91	307	P	P	13 51 48.7	+0.3
MOS	**Moscow**	65.29	329	*e*P	P	13 51 46.3	-4.0
MOS				*e*S	S	14 00 27.9	-5.1
MOS				*e*		14 01 41.4	
MOS				pmax	pmax		
	comp=Z,3µm,1.8s						
MOS				pmax	pmax		
	comp=Z,2µm,1.6s						
MOS				smax	smax		
	comp=N,10µm,6.4s						
MOS				MLR	MLR		
	comp=N,22µm,19.0s						
MOS				MLR	MLR		
	comp=E,28µm,19.0s						
MOS				MLR	MLR		
	comp=Z,45µm,19.0s						
OBN	**Obninsk**	65.59	328	P	P	13 51 50.8	-1.5
	comp=Z,25nm,0.7s,baz=337,slow=2.0,SNR=7.4						
OBN				PKP2bc		14 20 38.8	
	comp=Z,2.8nm,0.4s,baz=294,slow=2.1,SNR=6.5						
OBN	**Obninsk**	65.59	328	⇑P	P	13 51 51.7	-0.6
OBN	**Obninsk**	65.59	328	⇑*i*P	P	13 51 50.5	-1.8
OBN				*e*		13 54 17.7	
OBN				*e*PPP	PPP	13 55 51.0	
OBN				*i* S	S	14 00 28.1	-8.5
OBN				*e*SS	SS	14 04 53.7	+3.1
OBN				pmax	pmax		
	comp=Z,313nm,1.3s						
OBN				MLR	MLR		
	comp=Z,30µm,20.0s						
OBN	**Obninsk**	65.59	328	IAMs_20	IAMs_20	14 23 55.8	
	comp=Z,32µm,20.0s						
TOO	**Toolangi**	65.66	137	P	P	13 51 53.3	+0.2
	baz=66,SNR=17						
TOO	**Toolangi**	65.66	137	P	P	13 51 52.5	-0.6
TOO				pmax	pmax		
	comp=Z,261nm,1.2s						
TOO				MLR	MLR		
	comp=Z,43µm,20.0s						
TOO	**Toolangi**	65.66	137	P	P	13 51 52.5	-0.6
TOO				IAmb	IAmb	13 52 02.9	
	comp=Z,261nm,1.2s						
TOO				IAMs_20	IAMs_20	14 22 43.5	
	comp=Z,43µm,20.0s						
YNG	**Young**	66.06	133	P	P	13 51 55.6	-0.1
	baz=66,SNR=8.8						
ARG	**Arkhangelos**	66.24	306	P	P	13 51 55.0	-1.9
MANT	**Manisa**	66.25	309	IAMs_20	IAMs_20	14 22 46.2	
	comp=Z,47µm,22.0s						
ISK	**Istanbul-Kandi**	66.32	311	P	P	13 51 54.9	-2.4
SKR	**Severo-Kuril's**	66.45	38	*e*P	P	13 52 05.5	+7.6
SKR				*e*		13 54 24.8	
SKR				pmax	pmax		
	comp=Z,3µm,6.1s						
SKR				MLR	MLR		
	comp=Z,11µm,15.0s						
KLMR	**Klimovskoe**	66.67	334	*d i*P	P	13 51 56.9	-2.1
KLMR				S	S	14 00 45.2	-4.4
KLMR				pmax	pmax		
	comp=Z,901nm,1.5s						
KLMR				pmax	pmax		
	comp=Z,2µm,1.7s						
KLMR				MLR	MLR		
	comp=Z,19µm,20.0s						
KLMR	**Klimovskoe**	66.67	334	⇓*i*P	P	13 51 57.0	-2.1
KLMR				*e*P	P	13 51 57.0	-2.1
KLMR				*e*P	P	13 51 57.0	-2.1
KLMR				AMP		13 52 07.9	
	comp=Z,2µm,1.7s						
KLMR				AMP		13 52 08.3	
	comp=Z,901nm,1.5s						
KLMR				S	S	14 00 45.2	-4.4
KLMR				S	S	14 00 45.2	-4.4
KLMR				SSS	SSS	14 08 16.1	
KLMR				SSS	SSS	14 08 16.1	
KLMR				LQ	LQ	14 12 32.7	
KLMR				LQ	LQ	14 12 32.7	
KLMR				LR	LR	14 13 53.4	
KLMR				AMP		14 23 15.3	
	comp=Z,19µm,19.6s						
ARMA	**Armidale**	66.78	128	P	P	13 52 00.9	+0.4
	baz=67,SNR=8.1						
ARMA	**Armidale**	66.78	128	IAmb	IAmb	13 52 10.6	
	comp=Z,262nm,1.4s						
ARMA				IAMs_20	IAMs_20	14 22 44.8	
	comp=Z,28µm,20.0s						
MA2	**Magadan**	66.90	27	*de*P	P	13 51 59.4	-1.2
MA2				pmax	pmax		
	comp=Z,164nm,2.5s						
MA2				MLR	MLR		
	comp=Z,19µm,16.0s						
MA2	**Magadan**	66.90	27	IAMs_20	IAMs_20	14 25 21.6	
	comp=Z,28µm,22.0s						
KARP	**Karpathos**	66.93	305	P	P	13 51 59.7	-1.7
KARP	**Karpathos**	66.93	305	P	P	13 52 00.2	-1.2
KARP				IAMs_20	IAMs_20	14 26 14.6	
	comp=Z,33µm,21.0s						
CAN	**Canberra**	66.98	133	P	P	13 52 01.1	-0.6
CAN				pmax	pmax		
	comp=Z,783nm,1.7s						
CAN				MLR	MLR		
	comp=Z,31µm,22.0s						
CAN	**Canberra**	66.98	133	P	P	13 52 01.1	-0.6
CAN				IAMs_20	IAMs_20	14 23 44.3	
	comp=Z,31µm,22.0s						
JURR	**Jurilovca**	67.19	315	⇑P	P	13 52 00.3	-2.4
CNB	**Canberra Magne**	67.24	133	P	P	13 52 02.4	-0.9
	baz=67,SNR=14						
TIXI	**Tiksi**	67.41	11	*d i*P	P	13 52 01.6	-2.0
TIXI				pmax	pmax		
	comp=Z,193nm,1.1s						
TIXI				MLR	MLR		
	comp=Z,21µm,16.0s						
TIXI	**Tiksi**	67.41	11	P	P	13 52 01.9	-1.7
TIXI				IAMs_20	IAMs_20	14 25 35.9	
	comp=Z,29µm,18.0s						
TIRR	**Tirgusor**	67.45	315	⇑P	P	13 52 02.6	-1.8
TIRR	**Tirgusor**	67.45	315	P	P	13 52 02.8	-1.6
TIRR				pmax	pmax		
	comp=Z,828nm,1.6s						
TIRR				MLR	MLR		
	comp=Z,37µm,22.0s						
TIRR	**Tirgusor**	67.45	315	P	P	13 52 02.8	-1.6
TIRR				IAMs_20	IAMs_20	14 25 17.3	
	comp=Z,37µm,22.0s						
SMG	**Samos**	67.47	308	P	P	13 52 02.6	-2.2
MGCD	**Mangrove Creek**	67.57	131	P	P	13 52 05.2	-0.2
	baz=68,SNR=5.0						
HNR	**Honiara**	67.64	103	P	P	13 52 05.1	-1.1
	comp=Z,176nm,1.1s,baz=166,slow=5.3,SNR=22						
HNR	**Honiara**	67.64	103	*e*P	P	13 52 04.0	-2.1
MILM	**Milestii Mici**	67.71	318	⇑P	P	13 52 04.2	-1.8
KIS	**Kishinev**	67.72	318	⇓*i*P	P	13 52 06.0	-0.1
	comp=Z,840nm,2.0s						
KIS	**Kishinev**	67.72	318	*e*PcP	PcP	13 52 37.0	+4.1
KIS	**Kishinev**	67.72	318	*e*PP	PP	13 55 02.0	+27
KIS	**Kishinev**	67.72	318	*i* PPP	PPP	13 56 40.0	
KIS				*i* ScP		13 56 58.0	
KIS	**Kishinev**	67.72	318	*i* PS	pS	14 01 16.0	+6.2
KIS				*i* SS	SS	14 05 05.0	-19
KIS				*i* SSS	SSS	14 06 58.0	
KIS				*e*LQ	LQ	14 13 24.0	
	comp=Z,20µm,26.0s						
KIS				LRM	MLR	14 26 16.0	
	comp=Z,18µm,16.0s						
KIS	**Kishinev**	67.72	318	⇓*i*P	P	13 52 06.0	-0.1
KIS				*e*		13 52 37.0	
KIS				*i* S	S	14 00 55.0	-7.8
KIS				pmax	pmax		
	comp=Z,840nm,2.0s						
KIS				pmax	pmax		
	comp=Z,3µm,5.0s						
KIS				MLR	MLR		
	comp=Z,18µm,16.0s						
CFR	**Carcaliu**	67.79	316	⇑P	P	13 52 04.3	-2.3
CFR	**Carcaliu**	67.79	316	P	P	13 52 04.9	-1.7
CFR				pmax	pmax		
	comp=Z,115nm,1.8s						
HARR	**Harsova**	67.83	315	⇑P	P	13 52 06.2	-0.7
HARR	**Harsova**	67.83	315	P	P	13 52 06.1	-0.7
RIV	**Riverview**	67.88	131	P	P	13 52 07.7	+0.4
RIV				pmax	pmax		
	comp=Z,178nm,1.4s						
MILA	**Mila**	67.92	135	P	P	13 52 08.4	+0.8
	baz=68,SNR=3.4						
PRD	**Provadia**	67.93	313	*e*P	P	13 52 06.0	-1.5
PEA0B	**Petropavlovsk-**	68.11	36	*de*P	P	13 52 07.8	-0.7
PETK	**Petropavlovsk-**	68.11	36	P	P	13 52 06.7	-1.7
	comp=Z,1.7nm,0.8s,baz=235,slow=5.2,SNR=2.0						
PETK				PKP2bc		14 20 34.0	
	comp=Z,27nm,1.0s,baz=104,slow=4.7,SNR=17						
PETK				LR	LR	14 23 39.0	
	comp=Z,19µm,18.0s,baz=236,slow=38						
PRK	**Paraskevi**	68.13	309	P	P	13 52 09.1	+0.3
NPS	**Neapolis**	68.16	305	P	P	13 52 09.1	0.0
NPS	**Neapolis**	68.16	305	P	P	13 52 09.1	0.0
CHOS	**Chios island**	68.18	308	P	P	13 52 08.5	-0.8
LAST	**Lasithi**	68.25	305	P	P	13 52 09.3	-0.5
SORM	**Soroca**	68.29	319	⇑P	P	13 52 08.3	-1.3
SORM	**Soroca**	68.29	319	P	P	13 52 08.3	-1.3
AKASG	**Malin Array Be**	68.36	322	P	P	13 52 08.9	-1.1
	comp=Z,24nm,0.9s,baz=88,slow=4.9,SNR=41						
AKASG				PP	PP	13 54 40.1	-0.8
	comp=Z,19nm,1.1s,baz=89,slow=6.8,SNR=5.5						
AKASG				PKP2ab		14 20 28.6	
	comp=Z,0.4nm,0.4s,baz=283,slow=3.5,SNR=5.7						
AKASG	**Malin Array Be**	68.36	322	*i* P	P	13 52 07.0	-3.0
AKASG				pmax	pmax		
	comp=Z,36nm,0.8s						
AKBB	**Malin Array Si**	68.36	322	IAmb	IAmb	13 52 17.1	
	comp=Z,390nm,1.9s						
KIEV	**Kiev**	68.36	322	P	P	13 52 08.0	-2.1
JMB	**Yambol**	68.39	313	*e*P	P	13 52 08.9	-1.5
APE	**Apeiranthos**	68.42	307	P	P	13 52 08.8	-2.0
SIGR	**SIGRI**	68.44	309	P	P	13 52 10.4	-0.4
ALN	**Alexandroupoli**	68.54	311	P	P	13 52 09.4	-2.0
ALN	**Alexandroupoli**	68.54	311	P	P	13 52 09.9	-1.5
ALN				pmax	pmax		
	comp=Z,97nm,1.6s						
ALN	**Alexandroupoli**	68.54	311	IAmb	IAmb	13 52 19.4	
	comp=Z,305nm,1.7s						
PET	**Petropavlovsk**	68.64	36	*e*P	P	13 52 17.8	+6.1
PET				*i* S	S	14 01 15.1	+1.6
PET				pmax	pmax		
	comp=Z,58nm,1.0s						
PET				smax	smax		
	comp=E,5µm,18.1s						
PET				smax	smax		
	comp=E,3µm,11.5s						
PET				smax	smax		
	comp=N,2µm,12.6s						
PET				MLR	MLR		
	comp=Z,24µm,19.0s						
PET	**Petropavlovsk**	68.64	36	IAMs_20	IAMs_20	14 24 14.7	
	comp=Z,23µm,18.0s						
IDI	**Anoyia**	68.75	305	P	P	13 52 10.7	-2.2
IDI	**Anoyia**	68.75	305	LR	LR	14 26 17.8	
	comp=Z,12µm,22.0s,baz=86,slow=40						
SIVA	**Sivas**	68.78	304	P	P	13 52 11.3	-1.7
TMCR	**Tamitsa**	68.84	337	*e*P	P	13 52 11.4	-1.3
TMCR				*e*S	S	14 01 15.9	+0.4
TMCR				pmax	pmax		
	comp=Z,191nm,1.3s						
BISRR	**Bisoca**	68.85	316	⇑P	P	13 52 13.4	+0.1
SMTH	**Samothraki Isl**	68.86	310	P	P	13 52 11.2	-2.2
ISR	**Istrita**	68.89	315	⇑P	P	13 52 14.2	+0.7
ISR	**Istrita**	68.89	315	P	P	13 52 12.2	-1.3
VRI	**Vrincioaia**	68.90	316	⇑P	P	13 52 12.6	-0.9
VRI	**Vrincioaia**	68.90	316	P	P	13 52 12.7	-0.9
VRI				pmax	pmax		
	comp=Z,451nm,1.5s						
PLOR	**Plostina**	68.95	316	⇓P	P	13 52 12.9	-1.0
PLOR	**Plostina**	68.95	316	P	P	13 52 12.8	-1.0
RDO	**Rodhopi**	68.96	311	P	P	13 52 12.3	-1.7
SZH	**Strazhica**	68.99	313	*e*P	P	13 52 12.9	-1.3
LIA	**Limnos Island**	69.05	310	P	P	13 52 13.3	-1.3
SEY	**Seymchan**	69.07	25	⇓*e*P	P	13 52 13.8	-0.4
TESR	**Tescani**	69.08	317	⇑P	P	13 52 13.2	-1.4
KDZ	**Kurdzhali**	69.12	312	*e*P	P	13 52 13.8	-1.2
LSZ	**Lusaka**	69.28	251	LR	LR	14 18 37.4	
	comp=Z,36µm,20.2s,baz=78,slow=32						
GVDS	**Gavdos**	69.36	304	P	P	13 52 15.1	-1.5
MLR	**Muntele Rosu**	69.37	316	⇓P	P	13 52 16.0	-0.6
MLR	**Muntele Rosu**	69.37	316	IAMs_20	IAMs_20	14 27 58.0	
	comp=Z,23µm,20.0s						
PVL	**Pavlikeni**	69.42	313	*e*P	P	13 52 16.4	-0.4
THAS	**Thassos island**	69.50	310	P	P	13 52 15.9	-1.4
IMMV	**Iera Moni Meta**	69.50	305	P	P	13 52 17.0	-0.5
RZN	**Rozhen**	69.64	312	*e*P	P	13 52 17.3	-1.2
TAU	**Tasmania Unive**	69.68	141	P	P	13 52 18.4	+0.1
TAU				pmax	pmax		
	comp=Z,382nm,1.6s						
TAU	**Tasmania Unive**	69.68	141	P	P	13 52 18.4	+0.1
TAU				IAmb	IAmb	13 52 27.8	
	comp=Z,382nm,1.6s						
TAU	**Tasmania Unive**	69.68	141	IAMs_20	IAMs_20	14 18 47.2	
	comp=Z,22µm,20.0s						
KAVA	**Kavala**	69.70	311	P	P	13 52 16.2	-2.4
PLD	**Plovdiv**	69.71	312	*e*P	P	13 52 17.0	-1.6
PLD	**Plovdiv**	69.71	312	P	P	13 52 17.6	-1.0
PLD				pmax	pmax		
	comp=Z,9.0nm,1.8s						
DOPR	**Dopca**	69.83	316	⇓P	P	13 52 18.4	-1.0
VLY	**Voula,Athens**	69.88	307	P	P	13 52 18.0	-1.8
ATHU	**Athens Univers**	69.90	308	P	P	13 52 18.3	-1.6
MTUR	**Matau**	69.93	315	⇓P	P	13 52 19.4	-0.6
PLVB	**Pleven**	69.96	313	⇑P	P	13 52 19.0	-1.1
AOS	**Alonnisos**	69.96	309	P	P	13 52 16.7	-3.5
VOIR		69.98	316	⇓P	P	13 52 18.6	-1.7
VOIR		69.98	316	P	P	13 52 19.1	-1.2
VOIR				pmax	pmax		
	comp=Z,52nm,0.8s						
OUR	**Ouranopolis**	70.02	310	P	P	13 52 17.8	-2.7
OUR	**Ouranopolis**	70.02	310	P	P	13 52 17.8	-2.7
MICGM	**Minsk**	70.13	325	⇓*e*P	P	13 52 18.0	-3.0
MICGM				PM		13 52 20.0	
	comp=Z,0.9nm,1.0s						
MICGM				*e*PP	PP	13 54 47.0	-9.2
MICGM				*e*PPP	PPP	13 56 45.0	
MICGM				*e*S	S	14 01 28.0	-3.1
MICGM				*e*PS	PnS	14 02 04.0	+5.1
MICGM				*e*SS	SS	14 06 20.0	+19
MICGM				*e*SSS	SSS	14 09 36.0	
MICGM				*e*LQ	LQ	14 16 30.0	
MICGM				*e*LR	LR	14 21 11.0	
MICGM				LRM	MLR	14 28 28.0	
	comp=Z,52nm,20.0s						
MICGM				LRM	MLR	14 28 28.0	
	comp=E,29nm,18.0s						
MICGM				LRM	MLR	14 28 30.0	
	comp=Z,49nm,18.0s						
MNK	**Minsk**	70.13	325	⇓*e*P	P	13 52 18.0	-3.0
MNK				*e*S	S	14 01 28.0	-3.1
MNK				*e*		14 02 04.0	
MNK				pmax	pmax		
	comp=Z,880nm,1.0s						
MNK				MLR	MLR		
	comp=Z,52µm,20.0s						
PGB	**Panagyurishte**	70.17	312	*e*P	P	13 52 20.2	-1.3
NVR	**Nevrokopi**	70.24	311	P	P	13 52 20.5	-1.4
BURAR	**Bucovina Array**	70.25	318	⇓P	P	13 52 20.1	-1.9
BURAR	**Bucovina Array**	70.25	318	P	P	13 52 20.0	-1.9
BURAR	**Bucovina Array**	70.25	318	P	P	13 52 20.2	-1.7
ARR	**Arges**	70.26	315	⇑P	P	13 52 19.4	-2.6
SKIA	**Skiathos**	70.28	309	P	P	13 52 19.0	-3.2
DID	**Didima**	70.29	307	P	P	13 52 19.4	-2.9
VILL	**Villia**	70.30	308	P	P	13 52 20.2	-2.2
KRND	**KRANIDI**	70.35	307	P	P	13 52 19.1	-3.5
MATP	**Matopo**	70.36	245	*i* P	P	13 52 22.0	-1.1
MATP	**Matopo**	70.36	245	*i* P	P	13 52 22.0	-1.1

MMB	**Musomiste**	70.37	311	*e*P	P	13 52 20.7	-2.0
SRS	**Serrai**	70.41	311	P	P	13 52 20.9	-2.1
SRS	**Serrai**	70.41	311	P	P	13 52 20.9	-2.1
SRS				pmax	pmax		
	comp=Z,108nm,1.5s						
PUL	**Pulkovo**	70.42	331	⇓*e*P	P	13 52 22.4	-0.2
PUL				pmax	pmax		
	comp=Z,253nm,1.0s						
KSV	**Kosov**	70.47	319	P	P	13 52 22.4	-0.8
XOR	**Xorichti**	70.51	309	P	P	13 52 19.0	-4.7
LTK	**Loutraki**	70.55	308	P	P	13 52 20.8	-3.1
SOH	**Sokhos**	70.55	311	P	P	13 52 20.7	-3.2
SOH	**Sokhos**	70.55	311	P	P	13 52 22.6	-1.3
SOH				pmax	pmax		
	comp=Z,64nm,1.8s						
HORT	**Hortiatis**	70.72	310	P	P	13 52 22.8	-2.1
NACGM	**Naroch**	70.85	326	*e*P	P	13 52 24.0	-1.3
NACGM				PM		13 52 25.0	
	comp=Z,0.3nm,1.0s						
NACGM				*e*PPP	PPP	13 56 48.0	
NACGM				*e*S	S	14 01 32.0	-7.5
NACGM				*e*PS	PnS	14 02 26.0	+18
NACGM				*e*SS	SS	14 06 40.0	+28
NACGM				*e*SSS	SSS	14 09 16.0	
NACGM				*e*LQ	LQ	14 17 14.0	
NACGM				*e*LR	LR	14 21 24.0	
NACGM				LRM	MLR	14 26 38.0	
	comp=Z,34nm,22.0s						
VTS	**Vitosha**	70.86	312	⇓P	P	13 52 24.0	-1.8
VTS	**Vitosha**	70.86	312	*e*P	P	13 52 24.6	-1.3
VTS	**Vitosha**	70.86	312	P	P	13 52 24.2	-1.7
VTS				pmax	pmax		
	comp=Z,124nm,1.5s						
VTS	**Vitosha**	70.86	312	IAmb	IAmb	13 52 33.9	
	comp=Z,419nm,1.7s						
AXAR	**Agios Charalam**	70.86	308	P	P	13 52 22.6	-3.2
LOT	**Lotru**	70.87	315	⇑P	P	13 52 24.6	-1.2
KKB	**Krupnik**	70.88	312	*e*P	P	13 52 24.0	-1.8
DSF	**Desfina**	70.93	308	P	P	13 52 22.9	-3.4
KNT	**Kendrikon**	70.93	311	P	P	13 52 23.8	-2.4
KNT				pmax	pmax		
	comp=Z,179nm,1.3s						
VLX	**Vlachokerasia**	70.96	307	P	P	13 52 25.2	-1.3
IDID	**Didziasalis**	70.98	326	*e*P	P	13 52 25.3	-0.8
JOF	**Joensuu**	71.06	334	P	P	13 52 25.4	-1.0
JOF				pmax	pmax		
	comp=Z,185nm,1.4s						
LIT	**Litokhoron**	71.13	310	P	P	13 52 24.2	-3.2
LIT	**Litokhoron**	71.13	310	P	P	13 52 25.0	-2.4
LIT				pmax	pmax		
	comp=Z,233nm,1.6s						
AGG	**Agios Georgios**	71.14	309	P	P	13 52 24.0	-3.5
KLV	**Kalavryta, Ach**	71.20	307	P	P	13 52 25.3	-2.6
VAY	**Valandovo**	71.20	311	*i* P	P	13 52 25.6	-2.1
VAY	**Valandovo**	71.20	311	P	P	13 52 26.3	-1.4
VAY				pmax	pmax		
	comp=Z,175nm,1.5s						
KALE	**Kalithea**	71.23	308	P	P	13 52 25.1	-3.0
GRG	**Griva**	71.28	311	P	P	13 52 25.5	-2.8
GRG	**Griva**	71.28	311	P	P	13 52 26.0	-2.3
GRG				pmax	pmax		
	comp=Z,187nm,1.4s						
TRIZ	**Trizonia**	71.28	308	P	P	13 52 25.7	-2.6
MAKR	**Makrakomi, Fth**	71.30	308	P	P	13 52 25.5	-2.9
ITM	**Ithomi**	71.30	307	P	P	13 52 26.9	-1.6
SERG	**Sergoula**	71.30	308	P	P	13 52 26.0	-2.5
LAKA	**Lakka**	71.35	308	P	P	13 52 25.8	-3.0
IZAR	**Zarasai**	71.36	326	*e*P	P	13 52 27.5	-0.9
ISAL	**Salakas**	71.38	326	*e*P	P	13 52 26.6	-1.9
MORS	**Morshin**	71.38	319	P	P	13 52 28.2	-0.5
LVV	**L'vov**	71.42	320	*e*P	P	13 52 28.7	-0.2
LVV				*e*		13 55 13.2	
LVV				*e*S	S	14 01 42.9	-3.4
LVV				pmax	pmax		
	comp=Z,900nm,17.0s						
EFP	**Efpalio**	71.42	308	P	P	13 52 26.9	-2.2
ANX	**Ano Chora**	71.42	308	P	P	13 52 27.1	-2.2
PYL	**PYLOS**	71.43	306	P	P	13 52 27.1	-2.1
THL	**Klokotos Trika**	71.44	309	P	P	13 52 25.7	-3.5
DEV	**Deva**	71.53	316	P	P	13 52 29.5	-0.2
DEV				pmax	pmax		
	comp=Z,172nm,1.6s						
DRO	**Drossia**	71.53	307	P	P	13 52 27.7	-2.2
EVR	**Evrytania**	71.54	308	P	P	13 52 27.6	-2.4
GZR	**Gura Zlata**	71.55	315	⇓P	P	13 52 29.1	-0.9
GZR	**Gura Zlata**	71.55	315	P	P	13 52 29.0	-0.9
PVO	**Paravola**	71.73	308	P	P	13 52 29.8	-1.2
LVZ	**Lovozero**	71.77	340	*ce*P	P	13 52 30.3	-0.4
LVZ				pmax	pmax		
	comp=Z,47nm,0.6s						
LVZ				MLR	MLR		
	comp=Z,83µm,21.0s						
LVZ	**Lovozero**	71.77	340	P	P	13 52 29.2	-1.5
LVZ				IAmb	IAmb	13 52 38.2	
	comp=Z,432nm,1.7s						
DRGR		71.80	317	⇑P	P	13 52 29.3	-2.0
DRGR		71.80	317	P	P	13 52 30.0	-1.3
DRGR				pmax	pmax		
	comp=Z,289nm,1.6s						
VSU	**Vasula**	71.80	329	*e*P	P	13 52 29.7	-1.3
VSU	**Vasula**	71.80	329	*de*P	P	13 52 30.3	-0.6
VSU				pmax	pmax		
	comp=Z,694nm,1.3s						
VSU				MLR	MLR		
	comp=Z,58µm,19.0s						
TRSU	**Trosnyk**	71.83	318	P	P	13 52 32.3	+0.9
FNA	**Florina**	72.04	310	P	P	13 52 30.8	-2.1
FNA	**Florina**	72.04	310	P	P	13 52 31.5	-1.4
FNA				pmax	pmax		
	comp=Z,84nm,1.0s						
FNA	**Florina**	72.04	310	P	P	13 52 31.5	-1.4
APA	**Apatity**	72.06	339	⇓*i*P	P	13 52 30.8	-1.6
APA				*i*		13 52 51.7	
APA				*i* S	S	14 01 50.0	-3.0
APA				*i* PS	PnS	14 02 26.0	+2.1
APA				*i* SSS	SSS	14 09 38.0	
APA				pmax	pmax		
	comp=Z,74nm,0.8s						
TRPA	**Tarpa**	72.11	318	⇓P	P	13 52 31.5	-1.5
SKO	**Skopje**	72.11	312	*i* P	P	13 52 31.5	-1.7
SKO	**Skopje**	72.11	312	P	P	13 52 32.0	-1.2
MDVR	**Moldovita**	72.22	314	⇓P	P	13 52 33.2	-0.7
KWP	**Kalwaria Pacla**	72.23	320	P	P	13 52 32.8	-1.0
KWP				pmax	pmax		
	comp=Z,338nm,1.6s						
UZH	**Uzhgorod**	72.35	319	⇑*i*P	P	13 52 34.1	-0.4
UZH				*i*		13 52 39.9	
UZH				*e*		13 52 50.9	
UZH				*e*		13 56 55.7	
UZH				*i* S	S	14 01 54.4	-2.6
UZH				*i*		14 02 29.7	
UZH				*e*		14 02 40.1	
BZS	**Buzias**	72.39	315	⇓P	P	13 52 33.7	-1.1
BZS	**Buzias**	72.39	315	P	P	13 52 33.5	-1.3
BZS				pmax	pmax		
	comp=Z,169nm,1.6s						
LKD2	**Lefkada island**	72.42	308	P	P	13 52 32.8	-2.4
OHR	**Ohrid**	72.51	311	*i* P	P	13 52 33.7	-2.0
OHR	**Ohrid**	72.51	311	P	P	13 52 34.7	-1.0
OHR				pmax	pmax		
	comp=Z,157nm,1.2s						
PABE	**Paberze**	72.56	326	*e*P	P	13 52 34.5	-1.1
SUW	**Suwalki**	72.71	324	*e*P	P	13 52 35.9	-0.6
SUW				*e*L	L	14 29 54.3	
	comp=Z,24µm,18.5s						
SUW	**Suwalki**	72.71	324	*e*P	P	13 52 35.9	-0.6
SUW				MLR	MLR		
	comp=Z,24µm,18.5s						
SUW	**Suwalki**	72.71	324	IAMs_20	IAMs_20	14 30 01.5	
	comp=Z,24µm,18.0s						
IGT	**Igoumenitsa**	72.73	309	P	P	13 52 34.2	-2.8
IGT	**Igoumenitsa**	72.73	309	P	P	13 52 35.1	-1.9
IGT				pmax	pmax		
	comp=Z,125nm,1.1s						
PHP	**Peshkopia**	72.83	311	P	P	13 52 35.6	-2.0
PHP	**Peshkopia**	72.83	311	*i* PG	P	13 52 36.4	-1.2
PHP	**Peshkopia**	72.83	311	P	P	13 52 35.6	-2.0
FIA1	**FINESS Array S**	72.92	332	IAmb	IAmb	13 52 46.9	
	comp=Z,404nm,1.2s						
FINES	**FINESS Array B**	72.92	332	P	P	13 52 36.0	-1.6
	comp=Z,70nm,0.7s,baz=101,slow=5.5,SNR=125						
FINES				LR	LR	14 29 03.1	
	comp=Z,19µm,19.6s,baz=112,slow=40						
FINES	**FINESS Array B**	72.92	332	P	P	13 52 36.2	-1.4
CRVS	**Cervenica-Dubn**	72.93	319	*e*P	P	13 52 37.8	-0.2
CRVS				pmax	pmax		
	comp=Z,1µm,1.6s						
CRVS	**Cervenica-Dubn**	72.93	319	*e*P	P	13 52 37.8	-0.2
CRVS				*e*L	L	14 22 13.3	
SRN	**Sarande**	73.01	309	*i* PG	P	13 52 34.1	-4.5
MSF	**Maaselka**	73.03	337	P	P	13 52 36.8	-1.4
MSF				pmax	pmax		
	comp=Z,223nm,0.8s						
LHI	**Lord Howe Isla**	73.09	126	IAMs_20	IAMs_20	14 28 08.0	
	comp=Z,21µm,19.0s						
TIR	**Tirane**	73.23	311	*i* PG	P	13 52 39.4	-0.5
TIR	**Tirane**	73.23	311	P	P	13 52 42.6	+2.7
SUF	**Sumiainen**	73.24	333	P	P	13 52 38.3	-1.2
SUF				pmax	pmax		
	comp=Z,309nm,1.6s						
PUK	**Puka**	73.26	312	*i* PG	P	13 52 35.9	-4.3
DIVS	**Divibare**	73.38	314	*e*P	P	13 52 38.9	-1.9
VLO	**Vlora**	73.44	310	*i* PG	P	13 52 40.3	-0.8
KECS	**Kecovo**	73.52	318	*e*P	P	13 52 41.5	+0.1
KECS				pmax	pmax		
	comp=Z,85nm,1.5s						
KECS	**Kecovo**	73.52	318	*e*P	P	13 52 41.5	+0.1
NIE	**Niedzica**	73.75	319	*e*P	P	13 52 42.8	-0.1
NIE				*e*L	L	14 29 26.4	
	comp=Z,14µm,21.3s						
NIE	**Niedzica**	73.75	319	*e*P	P	13 52 42.8	-0.1
NIE				MLR	MLR		
	comp=Z,14µm,21.3s						
PDG	**Podgorica**	73.77	312	⇓P	P	13 52 41.1	-1.9
PDG	**Podgorica**	73.77	312	*e*P	P	13 52 40.7	-2.3
BEL	**Belsk**	73.77	322	*e*P	P	13 52 42.9	+0.1
BEL				*e*L	L	14 28 03.4	
	comp=Z,22µm,23.3s						
BEL	**Belsk**	73.77	322	*e*P	P	13 52 42.9	+0.1
BEL				MLR	MLR		
	comp=Z,22µm,23.3s						
BBLS	**Lazići**	73.78	313	*e*P	P	13 52 41.5	-1.7
RUDO	**Rudo**	73.78	313	*e*P	P	13 52 41.5	-1.6
PBUR	**Paburge**	73.79	326	*e*P	P	13 52 41.9	-0.9
PSZ	**Piszkesteto**	73.84	318	⇑P	P	13 52 43.2	-0.2
PSZ	**Piszkesteto**	73.84	318	P	P	13 52 42.3	-1.2
PSZ				pmax	pmax		
	comp=Z,142nm,2.3s						
PSZ	**Piszkesteto**	73.84	318	IAmb	IAmb	13 52 51.9	
	comp=Z,400nm,1.6s						
SLIT	**Slitere, Latvi**	73.90	328	*e*P	P	13 52 44.1	+0.6
OUL	**Oulu**	74.02	336	P	P	13 52 43.0	-1.0
OUL				pmax	pmax		
	comp=Z,239nm,1.7s						
HAPS	**Han Pijesak,Bl**	74.12	314	*e*P	P	13 52 45.5	+0.3
OJC	**Ojcow**	74.18	320	*e*P	P	13 52 45.8	+0.5
OJC				*e*L	L	14 28 27.6	
	comp=Z,9µm,23.7s						
OJC	**Ojcow**	74.18	320	*e*P	P	13 52 45.8	+0.5
OJC				MLR	MLR		
	comp=Z,9µm,23.7s						
LBTB	**Lobatse**	74.22	241	*i* P	P	13 52 47.6	+1.5
LBTB	**Lobatse**	74.22	241	*i* P	P	13 52 47.6	+1.5
LBTB	**Lobatse**	74.22	241	P	P	13 52 46.6	+0.5
LBTB				pmax	pmax		
	comp=Z,145nm,1.1s						
LBTB	**Lobatse**	74.22	241	P	P	13 52 46.6	+0.5
LANS	**Liptovska Anna**	74.26	319	*e*P	P	13 52 46.3	+0.4
LANS				pmax	pmax		
	comp=Z,65nm,1.6s						
LANS	**Liptovska Anna**	74.26	319	*e*P	P	13 52 46.2	+0.4
BRY	**Bratogost**	74.33	312	*e*P	P	13 52 44.7	-1.8
TREB	**Trebinje**	74.45	312	*e*P	P	13 52 45.1	-2.0
SGF	**Sodankyl**	74.48	338	P	P	13 52 45.9	-0.8
SGF				pmax	pmax		
	comp=Z,178nm,0.9s						
KLNR	**Kaliningrad**	74.53	325	*d* *i*P	P	13 52 46.4	-0.8
KLNR				pmax	pmax		
	comp=Z,384nm,1.2s						
DBRK	**Dubrovnik**	74.60	312	*i* P	P	13 52 45.2	-2.7
VYHS	**Vyhne**	74.61	318	*e*P	P	13 52 47.0	-0.8
VYHS				pmax	pmax		
	comp=Z,363nm,1.7s						
VYHS	**Vyhne**	74.61	318	*e*P	P	13 52 47.0	-0.8
VYHS				*e*S	S	14 02 21.4	-1.3
VYHS				*e*L	L	14 20 39.6	
VAF	**Ylistaro**	74.86	333	P	P	13 52 48.2	-0.8
VAF				pmax	pmax		
	comp=Z,351nm,1.7s						
SRO	**Srobarova**	74.89	317	*e*P	P	13 52 49.8	+0.4
SRO				pmax	pmax		
	comp=Z,558nm,2.1s						
SRO	**Srobarova**	74.89	317	*e*P	P	13 52 49.8	+0.4
STON	**Ston**	74.94	312	*i* P	P	13 52 47.2	-2.6
STON	**Ston**	74.94	312	*e*P	P	13 52 48.0	-1.8
KEV	**Kevo**	75.05	341	P	P	13 52 49.1	-0.8
KEV				pmax	pmax		
	comp=Z,200nm,1.2s						
KEV				MLR	MLR		
	comp=Z,62µm,22.0s						
KEV	**Kevo**	75.05	341	P	P	13 52 49.0	-0.8
KEV				IAmb	IAmb	13 52 58.1	
	comp=Z,200nm,1.2s						
OKC	**Ostrava-Krasne**	75.19	319	*e*P	P	13 52 50.6	-0.6
OKC				*e*S	S	14 02 29.9	+0.8
OKC				AMS	AMS	14 33 00.0	
	comp=Z,8µm,17.5s						
OKC	**Ostrava-Krasne**	75.19	319	*e*P	P	13 52 50.6	-0.6
OKC				*e*S	S	14 02 29.9	+0.8
OKC				MLR	MLR		
	comp=Z,8µm,17.5s						
JAVC	**Velka Javorina**	75.41	318	*e*P	P	13 52 52.1	-0.4
JAVC				*e*S	S	14 02 30.2	-1.5
BLY	**Banja Luka**	75.43	314	*e*P	P	13 52 51.8	-0.8
MAKA	**Makarska**	75.46	313	*i* P	P	13 52 50.3	-2.6
ARCES	**ARCESS Array B**	75.47	340	P	P	13 52 51.2	-1.2
	comp=Z,41nm,0.8s,baz=99,slow=5.8,SNR=77						
ARCES	**ARCESS Array B**	75.47	340	P	P	13 52 51.5	-0.9
ARCES	**ARCESS Array B**	75.47	340	P	P	13 52 51.5	-0.9
ARE0	**ARCESS Array S**	75.47	340	*e*P	P	13 52 51.7	-0.8
ARE0				*e*S	S	14 02 32.8	+1.2
ARE0	**ARCESS Array S**	75.47	340	P	P	13 52 52.4	0.0
TIP	**Timpagrande**	75.48	308	⇑P	P	13 52 52.9	-0.3
TIP	**Timpagrande**	75.48	308	P	P	13 52 52.4	-0.7
TIP				IAmb	IAmb	13 53 01.8	
	comp=Z,314nm,1.5s						
MGRS	**Mrkonjic Grad**	75.48	314	*e*P	P	13 52 50.5	-2.5
BOSA	**Boshof**	75.55	238	*i* P	P	13 52 55.8	+2.0
BOSA	**Boshof**	75.55	238	P	P	13 52 54.0	+0.2
	comp=Z,26nm,0.7s,baz=79,slow=3.9,SNR=54						
BOSA				LR	LR	14 22 44.5	
	comp=Z,14µm,19.4s,baz=68,slow=33						
BOSA	**Boshof**	75.55	238	*i* P	P	13 52 55.8	+2.0
BOSA	**Boshof**	75.55	238	P	P	13 52 54.0	+0.2
BOSA	**Boshof**	75.55	238	IAmb	IAmb	13 53 07.8	
	comp=Z,472nm,1.7s						
MATE	**Matera**	75.58	310	⇑P	P	13 52 52.6	-1.0
MORC	**Moravsky Berou**	75.58	319	⇑P	P	13 52 52.8	-0.6
MORC	**Moravsky Berou**	75.58	319	P	P	13 52 52.8	-0.6
MORC				pmax	pmax		
	comp=Z,247nm,1.6s						
MORC	**Moravsky Berou**	75.58	319	*e*P	P	13 52 52.4	-1.0
MORC				*e*S	S	14 02 25.8	-7.7
MODS	**Modra-Piesok**	75.63	318	*e*P	P	13 52 52.1	-1.6
MODS				pmax	pmax		
	comp=Z,524nm,1.7s						
MODS	**Modra-Piesok**	75.63	318	*e*P	P	13 52 52.1	-1.6
MODS				*e*S	S	14 02 25.1	-9.0
MODS				*e*L	L	14 21 14.9	
ZST	**Bratislava**	75.73	318	*e*P	P	13 52 53.5	-0.8
ZST				pmax	pmax		
	comp=Z,724nm,1.7s						
ZST	**Bratislava**	75.73	318	*e*P	P	13 52 53.5	-0.8
ZST				*e*S	S	14 02 29.6	-5.5
MOSL	**Moslavina**	75.79	315	*i* P	P	13 52 54.0	-0.8
BEHE	**Becsehely**	75.83	316	*e*P	P	13 52 54.9	0.0
KALN	**Kalnik**	76.03	316	*i* P	P	13 52 56.4	+0.3
KRLC	**Kraliky**	76.09	320	*e*P	P	13 52 56.7	+0.3
KRLC				*e*pP	pP	13 53 00.5	-1.6
KRLC				*e*S	S	14 02 33.7	-5.5
KRLC				AMS	AMS	14 30 50.0	
	comp=Z,11µm,18.8s						
KRLC	**Kraliky**	76.09	320	*e*P	P	13 52 56.7	+0.3
KRLC				*e*		13 53 00.5	
KRLC				*e*S	S	14 02 33.7	-5.5
KRLC				MLR	MLR		
	comp=Z,11µm,18.8s						
GKP	**Gorka Klasztor**	76.10	323	*e*P	P	13 52 56.3	0.0
GKP				*e*L	L	14 31 48.2	
	comp=Z,29µm,20.1s						
GKP	**Gorka Klasztor**	76.10	323	*e*P	P	13 52 56.3	0.0
KTK1	**Kautokeino**	76.10	339	*e*P	P	13 52 55.8	-0.2
KTK1				*e*S	S	14 02 40.0	+1.5
VRAC	**Vranov**	76.15	319	P	P	13 52 56.2	-0.5
VRAC				pmax	pmax		
	comp=Z,84nm,1.9s						
VRAC	**Vranov**	76.15	319	*e*P	P	13 52 55.9	-0.8
VRAC				*e*S	S	14 02 36.6	-3.2
KOGS	**Kog**	76.19	316	*i* P	P	13 52 55.8	-1.1
KOGS				*e*		13 53 03.2	
BILL	**Bilibino**	76.23	22	*d* *i*P	P	13 52 55.1	-1.7
BILL				*e*		13 55 48.5	
BILL				*e*PPP	PPP	13 57 33.2	
BILL				*i* S	S	14 02 33.6	-6.4
BILL				*e*SS	SS	14 07 42.2	+8.7
BILL				pmax	pmax		
	comp=Z,13nm,0.8s						
BILL				MLR	MLR		
	comp=Z,69µm,18.0s						
BILL	**Bilibino**	76.23	22	P	P	13 52 56.5	-0.3
KRUC	**Moravsky**	76.26	319	P	P	13 52 56.4	-0.9
KRUC				pmax	pmax		
	comp=Z,108nm,1.6s						
KRUC	**Moravsky**	76.26	319	*e*P	P	13 52 56.1	-1.2
KRUC				*e*S	S	14 02 35.2	-5.8
ZAG	**Zagreb**	76.34	315	P	P	13 52 58.4	+0.7
SGRT	**San Giovanni R**	76.34	311	IAmb	IAmb	13 53 05.4	
	comp=Z,266nm,1.8s						
PTJ	**Puntijarka**	76.36	315	P	P	13 52 56.8	-1.2
HAMF	**Hammerfest**	76.39	341	*e*P	P	13 52 56.8	-0.8
HAMF				*e*S	S	14 02 42.2	+0.6
HAMF				*e*SS	SS	14 07 38.3	+2.5
HAMF				IVMs_BB	IVMs_BB	14 29 04.5	
	comp=Z,15µm,21.5s						
DPC	**Dobruska-Polom**	76.41	320	*e*P	P	13 52 58.2	0.0
DPC				*e*pP	pP	13 53 03.4	-0.4
DPC				*e*S	S	14 02 34.1	-8.5
DPC				AMS	AMS	14 32 30.0	
	comp=Z,13µm,18.4s						
DPC	**Dobruska-Polom**	76.41	320	*e*P	P	13 52 58.2	0.0
DPC				*e*		13 53 03.4	
DPC				*e*S	S	14 02 34.1	-8.5
DPC				MLR	MLR		
	comp=Z,13µm,18.4s						
UDBI	**Udbina**	76.43	314	*i* P	P	13 52 57.6	-0.8
MORI	**Morici**	76.44	313	*i* P	P	13 52 56.8	-1.6
KSP	**Ksiaz**	76.46	320	*e*P	P	13 52 58.6	+0.2
KSP				*e*L	L	14 29 58.6	
	comp=Z,13µm,22.8s						
KSP	**Ksiaz**	76.46	320	*e*P	P	13 52 58.6	+0.2
KSP				MLR	MLR		
	comp=Z,13µm,22.8s						
ZIRJ	**Zirje**	76.48	313	*i* P	P	13 52 55.6	-3.1
OSTC	**Ostas**	76.49	320	*e*P	P	13 52 58.2	-0.4
OSTC				*e*S	S	14 02 35.2	-8.3
OSTC				AMS	AMS	14 32 00.0	
	comp=Z,15µm,18.0s						
CONA	**Conrad Observa**	76.54	317	*i* P	P	13 52 57.9	-1.2
	comp=Z,144nm,1.6s,SNR=12						
CONA				*e*PP	PP	13 55 50.7	-0.4
	comp=Z,62nm,1.6s						
CHVC	**Chvalec**	76.60	320	*e*P	P	13 52 59.3	+0.1
CHVC				*e*pP	sP	13 53 05.9	-1.2
CHVC				AMS	AMS	14 32 50.0	
	comp=Z,15µm,17.6s						
UPC	**Upice**	76.62	320	*e*P	P	13 52 59.6	+0.3
UPC				*e*S	S	14 02 39.7	-5.1
UPC				AMS	AMS	14 32 40.0	
	comp=Z,14µm,18.6s						
UPC	**Upice**	76.62	320	*e*P	P	13 52 59.6	+0.3
UPC				*e*S	S	14 02 39.7	-5.1
UPC				MLR	MLR		
	comp=Z,14µm,18.6s						
DZM	**Mont Dzumac**	76.64	115	*e*P	P	13 53 00.0	0.0
	comp=Z,399nm,1.5s						
DZM				*e*S	S	14 02 39.5	-6.6
	comp=Z,7µm,35.0s						
DZM				*e*SS	SS	14 07 37.0	-5.0
	comp=Z,20µm,28.1s						
DZM				*e*LQ	LQ	14 13 05.5	
	comp=Z,19µm,27.6s						
DZM				*e*LR	LR	14 16 33.0	
	comp=Z,40µm,30.3s						
DZM	**Mont Dzumac**	76.64	115	P	P	13 52 60.0	0.0
	comp=Z,34nm,1.1s,baz=211,slow=18,SNR=4.8						
DZM				LR	LR	14 29 13.2	
	comp=Z,708nm,20.7s,baz=284,slow=38						
DZM	**Mont Dzumac**	76.64	115	IAMs_20	IAMs_20	14 31 27.6	
	comp=Z,22µm,19.0s						
OZLJ	**Ozalj**	76.69	315	*i* P	P	13 52 59.9	+0.1
CRES	**Cresnjev**	76.71	315	*e*P	P	13 52 58.8	-1.1
ARSA	**Arzberg**	76.73	317	*i* P	P	13 52 59.8	-0.3
	comp=Z,258nm,1.5s,SNR=17						
ARSA				*e*PP	PP	13 55 50.9	-1.8
	comp=Z,35nm,1.4s						
BOJS	**Bojanci**	76.84	315	*i* P	P	13 52 59.4	-1.3
BOJS				*e*S	S	14 02 47.5	+0.1
TREC	**Trest**	76.88	319	*e*P	P	13 53 00.9	+0.1
TREC				*e*S	S	14 02 40.8	-6.9
TREC				AMS	AMS	14 33 00.0	
	comp=Z,13µm,18.9s						
TREC	**Trest**	76.88	319	*e*P	P	13 53 00.9	+0.1
TREC				*e*S	S	14 02 40.8	-6.9
TREC				MLR	MLR		
	comp=Z,13µm,18.9s						
DUGI	**Dugi Otok**	76.92	313	*i* P	P	13 52 58.9	-2.3
SOKA	**Soboth**	77.04	316	*i* P	P	13 53 01.0	-0.9
	comp=Z,366nm,1.5s,SNR=25						
SOKA				*e*PP	PP	13 55 56.0	+0.7
	comp=Z,55nm,1.3s						
NVLJ	**Novalja**	77.07	314	*i* P	P	13 53 00.5	-1.4
WDD	**Wied Dalam**	77.21	305	IAMs_20	IAMs_20	14 30 50.7	
	comp=Z,19µm,19.0s						
VAE	**Valguarnera**	77.30	307	LR	LR	14 31 07.7	
	comp=Z,8µm,18.8s,baz=84,slow=39						
LJU	**Ljubljana**	77.37	315	*i* P	P	13 53 02.9	-0.7
LJU				*e*		13 53 10.2	
LJU				*e*S	S	14 02 52.4	-0.8
LJU	**Ljubljana**	77.37	315	*e*P	P	13 53 03.1	-0.5
OBKA	**Obir**	77.37	316	*i* P	P	13 53 02.9	-0.8
	comp=Z,258nm,1.7s,SNR=27						
OBKA				*e*PP	PP	13 55 54.8	-3.3
	comp=Z,28nm,1.3s						
RIY	**Rijeka**	77.37	315	P	P	13 53 01.5	-2.1
CEY	**Cerknica**	77.42	315	*e*P	P	13 53 02.5	-1.5
PRU	**Pruhonice**	77.53	319	*e*P	P	13 53 04.2	-0.2
PRU				*e*S	S	14 02 48.1	-6.6
PRU				AMS	AMS	14 32 20.0	
	comp=Z,12µm,19.3s						
PRU	**Pruhonice**	77.53	319	*e*P	P	13 53 04.2	-0.2
PRU				*e*S	S	14 02 48.1	-6.6
PRU				MLR	MLR		
	comp=Z,12µm,19.3s						
PVCC	**Panska Ves**	77.54	320	*e*P	P	13 53 04.9	+0.4
PVCC				AMS	AMS	14 33 10.0	
	comp=Z,17µm,17.5s						
PVCC	**Panska Ves**	77.54	320	*e*P	P	13 53 04.9	+0.4
PVCC				MLR	MLR		
	comp=Z,17µm,17.5s						
PRA	**Prague**	77.60	320	*e*P	P	13 53 05.1	+0.3
PRA				AMS	AMS	14 32 20.0	
	comp=Z,12µm,18.8s						
PRA	**Prague**	77.60	320	*e*P	P	13 53 05.1	+0.3
PRA				MLR	MLR		
	comp=Z,12µm,18.8s						
MOA	**Molln**	77.61	317	*i* P	P	13 53 03.8	-1.1
	comp=Z,190nm,1.6s,SNR=15						
BSD	**Bornholm Skovb**	77.63	325	*i* P	P	13 53 03.1	-1.7
	comp=Z,687nm,1.6s						
BSD	**Bornholm Skovb**	77.63	325	*i* P	P	13 53 03.1	-1.7
BSD				pmax	pmax		
	comp=Z,690nm,1.6s						
BSD				MLR	MLR		
	comp=Z,27µm,20.0s						
TRO	**Tromso**	77.73	340	*e*P	P	13 53 04.9	-0.2
TRO				IVmB_BB		13 53 18.7	
	comp=Z,5µm,4.3s						
TRO				*e*PP	PP	13 55 59.9	-0.6
TRO				*e*S	S	14 02 58.1	+1.9
TRO				*e*SS	SS	14 07 59.2	+3.2

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HOPEN Hopen             77.78 347 eP        P         13 53 05.0 -0.3
HOPEN                               IVmB_BB           13 53 21.4
      comp=Z,4µm,7.5s
HOPEN                             eS        S         14 02 58.7 +2.2
HOPEN                               IVMs_BB IVMs_BB   14 34 21.9
      comp=Z,9µm,15.3s
PBCC  Pribram           77.87 319 eP        P         13 53 06.4 +0.1
PBCC                              eS        S         14 02 53.8 -4.6
TRI   Trieste           77.89 315   P       P         13 53 06.1 -0.4
TRI                                 pmax    pmax
      comp=Z,82nm,1.7s
BRG   Berggiesshubel    77.95 320 i P       P         13 53 06.4 -0.4
      comp=Z,64nm,1.4s
BRG                               i PCP     sP        13 53 14.2 -0.4
      comp=Z,5.2nm,1.5s
BRG                               i PP      PP        13 56 07.3 +4.6
      comp=Z,110nm,1.6s
BRG                                 SKS     S         14 03 00.0 +0.7
BRG                                 S       ScS       14 03 28.0 +2.7
BRG                                 SS      SS        14 07 50.0  -10
BRG                               ePKPPKP   P'P'df    14 20 08.0 -4.4
      comp=Z,2.3nm,0.5s
BRG   Berggiesshubel    77.95 320 eP        P         13 53 06.1 -0.7
      comp=Z,520nm,1.5s,baz=91,slow=5.4
BRG                               esP       sP        13 53 14.3 -0.3
      comp=Z,520nm,1.5s
BRG                               eS        S         14 03 00.8 +1.6
      baz=91,slow=11
BRG   Berggiesshubel    77.95 320 i P       P         13 53 06.4 -0.4
BRG                               i                   13 53 14.2
BRG                                 pmax    pmax
      comp=Z,64nm,1.4s
BRG                                 pmax    pmax
      comp=Z,5.0nm,1.5s
MYKA  Terra Mystica     78.00 316 i P       P         13 53 06.8 -0.4
      comp=Z,276nm,1.7s
GEC2  GERESS Array S    78.03 318 eP        P         13 53 06.5 -0.8
      comp=Z,821nm,1.7s,baz=91,slow=5.4
GEC2                              esP       sP        13 53 14.8 -0.4
      comp=Z,821nm,1.7s
GEC2                              eS        S         14 03 01.4 +1.0
      baz=91,slow=11
GEC2  GERESS Array S    78.03 318   P       P         13 53 06.5 -0.8
GERES GERESS Array B    78.03 318   P       P         13 53 06.3 -1.0
      comp=Z,26nm,0.8s,baz=86,slow=5.5,SNR=98
AQU   L'Aquila          78.09 312   P       P         13 53 07.3 -0.5
AQU                                 pmax    pmax
      comp=Z,130nm,1.6s
KHC   Kasperske Hory    78.12 319 eP        P         13 53 06.8 -1.0
KHC                               epP       pP        13 53 12.6 -0.9
KHC                               eS        S         14 02 52.4 -8.8
KHC                                 AMS     AMS       14 32 10.0
      comp=Z,12µm,18.8s
KHC   Kasperske Hory    78.12 319ceP        P         13 53 07.0 -0.8
KHC                                 pmax    pmax
      comp=Z,63nm,1.0s
KHC                                 MLR     MLR
      comp=Z,22µm,19.0s
RUE   Ruedersdorf       78.13 322 eP        P         13 53 07.3 -0.4
RUE   Ruedersdorf       78.13 322 eP        P         13 53 06.8 -0.9
      comp=Z,1µm,1.5s,baz=91,slow=5.4
RUE                               esP       sP        13 53 15.0 -0.5
      comp=Z,1µm,1.5s
KBA   Koelnbreinsper    78.21 316 i P       P         13 53 07.5 -1.0
      comp=Z,121nm,1.6s,SNR=18
KBA                               ePP       PP        13 56 04.4 -0.8
      comp=Z,26nm,1.5s
KBA   Koelnbreinsper    78.21 316   P       P         13 53 06.9 -1.6
KBA                                 pmax    pmax
      comp=Z,104nm,1.3s
FBE   Freiberg          78.33 320 eP        P         13 53 08.3 -0.5
      comp=Z,831nm,1.6s,baz=91,slow=5.4
FBE                               esP       sP        13 53 16.6 -0.1
      comp=Z,831nm,1.6s
MAW   Mawson            78.36 192   P       P         13 53 10.0 +1.4
      baz=79,SNR=23
MAW   Mawson            78.36 192   P       P         13 53 09.2 +0.6
      comp=Z,23nm,0.7s,baz=33,slow=4.9,SNR=25
MAW                                 PKP2ab            14 19 53.2
      comp=Z,7.4nm,1.2s,baz=309,slow=7.8,SNR=3.6
MAW                                 LR      LR        14 23 27.5
      comp=Z,13µm,18.9s,baz=24,slow=32
MAW   Mawson            78.36 192   P       P         13 53 09.9 +1.4
RGN   Rugen             78.51 324 eP        P         13 53 09.0 -0.7
RGN   Rugen             78.51 324 eP        P         13 53 09.2 -0.6
      comp=Z,1µm,1.7s,baz=91,slow=5.4
RGN                               esP       sP        13 53 17.4  0.0
      comp=Z,1µm,1.7s
RGN   Rugen             78.51 324   IAMs_20 IAMs_20   14 33 42.9
      comp=Z,33µm,20.0s
CLL   Collm             78.56 321 eP        P         13 53 10.0 -0.1
CLL                               i pP      sP        13 53 17.4 -0.6
      comp=Z,363nm,1.5s
CLL                               ePmax               13 53 25.0
CLL                               epPP                13 56 16.0
CLL                               eS        S         14 03 03.0 -2.8
CLL                               ePS                 14 03 42.0
CLL                               eSS       SS        14 08 00.0 -9.3
CLL                               e                   14 09 00.0
CLL                               eSSS      SSS       14 11 30.0
CLL                               e                   14 13 12.0
CLL                                 Lm      MLR       14 33 00.0
      comp=N,10µm,20.6s
CLL                                 Lm      MLR       14 33 00.0
      comp=E,8µm,21.6s
CLL                                 Lm      MLR       14 33 00.0
      comp=Z,13µm,20.6s
CLL                                 Lmax              14 34 00.0
CLL                                 Lm(360            16 13 00.0
      comp=Z,1µm,19.7s
CLL   Collm             78.56 321 eP        P         13 53 10.0 -0.1
      comp=Z,363nm,1.6s,baz=91,slow=5.4
CLL                               esP       pwP       13 53 18.2 -0.4
      comp=Z,363nm,1.6s
CLL                               eS        S         14 03 07.4 +1.6
      baz=91,slow=11
CLL   Collm             78.56 321 eP        P         13 53 10.0 -0.1
CLL                               i                   13 53 17.4
CLL                               eS        S         14 03 03.0 -2.8
CLL                                 pmax    pmax
      comp=Z,363nm,1.5s
CLL                                 MLR     MLR
      comp=Z,13µm,20.6s
WET   Wettzell          78.58 319 eP        P         13 53 09.5 -0.8
      comp=Z,532nm,1.7s,baz=91,slow=5.4
WET                               esP       sP        13 53 17.8 -0.4
      comp=Z,532nm,1.7s
WET                               eS        S         14 03 07.3 +1.2
      baz=91,slow=11
WET   Wettzell          78.58 319   P       P         13 53 09.5 -0.8
RJOB  Jochberg          78.60 317 eP        P         13 53 08.9 -1.6
      comp=Z,414nm,1.8s,baz=91,slow=5.4
RJOB                              esP       sP        13 53 17.2 -1.2
      comp=Z,414nm,1.8s
STAL  STALIGIAL         78.63 316   IAmb    IAmb      13 53 18.2
      comp=Z,539nm,1.4s
BJO1  Bjornoya          78.71 345 eP        P         13 53 10.2 -0.3
BJO1                              eS        S         14 03 08.1 +1.6
BJO1                              eSS       SS        14 08 13.4 +2.9
BJO1                                IVMs_BB IVMs_BB   14 33 42.3
      comp=Z,9µm,15.8s
MURB  Monte Urbino      78.75 313   IAMs_20 IAMs_20   14 32 16.5
      comp=Z,23µm,22.0s
ABTA  Abfaltersbach     78.78 316 i P       P         13 53 10.2 -1.3
      comp=Z,183nm,1.8s,SNR=11
ABTA                              ePP       PP        13 56 07.2 -2.6
      comp=Z,18nm,1.3s
STEI  Steigen           78.78 338 eP        P         13 53 10.4 -0.5
STEI                              eS        S         14 03 09.1 +1.6
STEI                              eSS       SS        14 08 14.4 +2.5
TANN  Tannenbergstha    78.88 320 eP        P         13 53 11.1 -0.9
      comp=Z,630nm,1.6s,baz=91,slow=5.4
TANN                              esP       sP        13 53 19.3 -0.5
      comp=Z,630nm,1.6s
NKC   Novy Kostel       78.88 320 eP        P         13 53 12.3 +0.3
NKC                                 AMS     AMS       14 34 00.0
      comp=Z,14µm,17.2s
NKC   Novy Kostel       78.88 320 eP        P         13 53 12.3 +0.3
NKC                                 MLR     MLR
      comp=Z,14µm,17.2s
MOR8  Moi Rana          78.89 336 eP        P         13 53 10.7 -0.9
MOR8                              ePP       PP        13 56 09.7 -0.5
MOR8                              eS        S         14 03 09.2 +0.4
MOR8                              eSS       SS        14 08 13.6  0.0
MOR8                                IVMs_BB IVMs_BB   14 32 36.6
      comp=Z,10µm,17.5s
WERN  Wernitzgruen      78.93 320 eP        P         13 53 11.5 -0.8
      comp=Z,252nm,1.6s,baz=91,slow=5.4
WERN                              esP       sP        13 53 19.7 -0.4
      comp=Z,252nm,1.6s
GUNZ  Gunzen            78.96 320 eP        P         13 53 11.6 -0.8
      comp=Z,373nm,1.6s,baz=91,slow=5.4
GUNZ                              esP       sP        13 53 19.9 -0.4
      comp=Z,373nm,1.6s
ROTZ  Rotzenmuhle       79.03 319 eP        P         13 53 12.3 -0.5
      comp=Z,622nm,1.6s,baz=91,slow=5.4
ROTZ                              esP       sP        13 53 20.5 -0.1
      comp=Z,622nm,1.6s
COP   Copenhagen        79.07 325 i P       P         13 53 12.4 -0.4
      comp=Z,63nm,0.8s
COP   Copenhagen        79.07 325 i P       P         13 53 12.4 -0.4
COP                                 pmax    pmax
      comp=Z,63nm,0.8s
COP                                 MLR     MLR
      comp=Z,11µm,22.0s
PLN   Plauen            79.08 320 eP        P         13 53 12.1 -0.9
      comp=Z,268nm,1.6s,baz=91,slow=5.4
PLN                               esP       sP        13 53 20.4 -0.5
      comp=Z,268nm,1.6s
PLN   Plauen            79.08 320   P       P         13 53 12.1 -0.9
MANZ  Manzenberg        79.10 319 eP        P         13 53 12.8 -0.4
      comp=Z,734nm,1.6s,baz=91,slow=5.4
MANZ                              esP       sP        13 53 21.0  0.0
      comp=Z,734nm,1.6s
NEUB  Neuenburg         79.33 321 eP        P         13 53 13.2 -1.1
      comp=Z,502nm,1.7s,baz=91,slow=5.4
NEUB                              esP       sP        13 53 21.5 -0.7
      comp=Z,502nm,1.7s
CTI   Castel Tesino     79.37 315   P       P         13 53 14.0 -0.8
CTI                                 pmax    pmax
      comp=Z,270nm,1.6s
WTTA  Wattenberg        79.38 317 i P       P         13 53 13.1 -1.9
      comp=Z,440nm,1.6s,SNR=20
WTTA                              ePP       PP        13 56 09.5 -5.5
      comp=Z,44nm,1.5s
GRB1  Grafenberg Arr    79.38 319   P       P         13 53 15.1 +0.4
GRB1                                pmax    pmax
      comp=Z,430nm,1.6s
WATA  Walderalm         79.42 317 i P       P         13 53 13.4 -1.7
      comp=Z,1.2nm,0.3s,SNR=13
MOX   Moxa              79.42 320 eP        P         13 53 14.1 -0.8
      comp=Z,396nm,1.6s,baz=91,slow=5.4
MOX                               esP       sP        13 53 22.3 -0.4
      comp=Z,396nm,1.6s
MOX                               eS        S         14 03 16.4 +1.4
      baz=91,slow=11
MOX                               eL        L         14 34 51.0
      comp=Z,22µm,18.5s
MOX   Moxa              79.42 320   P       P         13 53 14.2 -0.7
MOX                                                   14 04 00.0
MOX                                 pmax    pmax
      comp=Z,148nm,1.8s
LOF   Lofoten           79.44 338 eP        P         13 53 14.3 -0.3
LOF                               eS        S         14 03 16.4 +1.8
LOF                               eSS       SS        14 08 21.2 -0.5
KONS  Konsvik           79.45 336 eP        P         13 53 14.5 -0.2
KONS                              eS        S         14 03 14.7  0.0
GRC1  Grafenberg Arr    79.47 318   P       P         13 53 15.1 -0.1
FUR   Furstenfeldbru    79.63 318 eP        P         13 53 14.7 -1.4
      comp=Z,761nm,1.7s,baz=91,slow=5.4
FUR                               esP       sP        13 53 23.0 -0.9
      comp=Z,761nm,1.7s
FUR   Furstenfeldbru    79.63 318   P       P         13 53 14.7 -1.4
GRF   Grafenberg Arr    79.67 319 eP        P         13 53 15.7 -0.5
      comp=Z,620nm,1.5s,baz=91,slow=5.4
GRF                               esP       PcP       13 53 24.0  0.0
      comp=Z,620nm,1.5s
GRF                               ePP       PP        13 56 22.9 +5.8
      baz=100,slow=7.8
GRF                               eS        S         14 03 18.9 +1.2
      baz=91,slow=11
GRF                               eL        L         14 36 34.7
      comp=Z,11µm,20.3s
GRF   Grafenberg Arr    79.67 319   P       P         13 53 16.6 +0.3
GRF                                 pmax    pmax
      comp=Z,252nm,1.5s
SQTA  Sankt Quirin      79.67 317 i P       P         13 53 15.0 -1.4
      comp=Z,155nm,1.2s,SNR=12
NFK   Norfolk Island    79.67 121   P       P         13 53 16.1 -0.5
      baz=80,SNR=3.6
MOTA  Moosalm           79.74 317 i P       P         13 53 15.1 -1.8
      comp=Z,311nm,1.4s,SNR=18
MOTA                              ePP       PP        13 56 14.8 -3.1
      comp=Z,38nm,1.6s
NORES NORESS Array B    79.77 330   P       P         13 53 13.0 -3.5
NORES                               pmax    pmax
      comp=Z,36nm,1.1s
NSS   Namsos            79.78 334 eP        P         13 53 16.1 -0.4
NSS                               eS        S         14 03 19.5 +1.3
NSS                               eSS       SS        14 08 29.5 +2.5
NSS                                 IVMs_BB IVMs_BB   14 35 35.2
      comp=Z,13µm,17.9s
ZCCA  Zocca             79.86 314   IAmb    IAmb      13 53 31.8
      comp=Z,285nm,1.0s
ZCCA                                IAMs_20 IAMs_20   14 35 24.8
      comp=Z,19µm,20.0s
NC303 NORSAR Array S    79.87 331 eP        P         13 53 15.6 -1.5
NC303                             eS        S         14 03 20.9 +1.5
NC303                               IVMs_BB IVMs_BB   14 33 08.0
      comp=Z,11µm,24.0s
STRU  Stroemstad        79.88 329 eP        P         13 53 16.1 -1.0
NB2   NORSAR Subarra    79.94 331   P       P         13 53 15.4 -2.1
      comp=Z,509nm,1.4s,baz=96,slow=5.1
NB2   NORSAR Subarra    79.94 331   P       P         13 53 15.4 -2.1
      baz=96,slow=5.1
NOA   NORSAR Array B    79.94 331   P       P         13 53 15.5 -2.1
      comp=Z,41nm,0.9s,baz=93,slow=5.5,SNR=64
NOA                                 LR      LR        14 32 30.7
      comp=Z,19µm,19.8s,baz=110,slow=39
RETA  Reutte            79.97 317 i P       P         13 53 16.3 -1.8
      comp=Z,614nm,1.7s,SNR=32
FETA  Feichten          80.00 316 i P       P         13 53 16.4 -1.9
      comp=Z,197nm,1.4s,SNR=25
HSPB  Hornsund (broa    80.02 347 eP        P         13 53 24.6 +7.1
HSPB                              eS        S         14 03 17.1 -3.3
HSPB                              eL        L         14 32 53.1
      comp=Z,33µm,21.9s
HSPB  Hornsund (broa    80.02 347 eP        P         13 53 17.7 +0.1
HSPB                                IVmBBB            13 53 24.9
      comp=Z,2µm,3.0s
HSPB                              eS        S         14 03 21.8 +1.4
HSPB                              eSS       SS        14 08 36.1 +6.0
HSPB                                IVMs_BB IVMs_BB   14 32 57.9
      comp=Z,10µm,21.0s
HSPB  Hornsund (broa    80.02 347 eP        P         13 53 24.6 +7.0
HSPB                              eS        S         14 03 17.1 -3.3
HSPB                                MLR     MLR
      comp=Z,33µm,21.9s
ASSE  Asse, Remlinge    80.03 322 eP        P         13 53 17.1 -1.0
      comp=Z,572nm,1.6s,baz=91,slow=5.4
ASSE                              esP       PcP       13 53 25.3 -0.1
      comp=Z,572nm,1.6s
TSUM  Tsumeb            80.04 249 i P       P         13 53 21.0 +2.1
TSUM  Tsumeb            80.04 249 i P       P         13 53 21.0 +2.1
TSUM  Tsumeb            80.04 249   P       P         13 53 20.1 +1.1
SPA0  Spitsbergen Ar    80.04 348 eP        P         13 53 17.3 -0.5
SPA0                                IVmB_BB           13 53 26.2
      comp=Z,3µm,1.2s
SPA0                              eS        S         14 03 22.3 +1.6
SPA0                              eSS       SS        14 08 34.0 +3.5
SPA0  Spitsbergen Ar    80.04 348   IAmb    IAmb      13 53 26.5
      comp=Z,407nm,1.2s
SPITS Spitsbergen Ar    80.04 348   P       P         13 53 16.6 -1.2
SPITS                               pmax    pmax
      comp=Z,18nm,0.2s
NAO01 NORSAR Array S    80.09 330   P       P         13 53 16.5 -1.8
NAO01                               IAmb    IAmb      13 53 27.7
      comp=Z,392nm,1.2s
OSL   Oslo              80.14 329 eP        P         13 53 18.2 -0.3
OSL                                 IVmB_BB           13 53 27.4
      comp=Z,5µm,1.8s
OSL                               eS        S         14 03 21.3 -0.9
SALO  Salr              80.16 315   IAmb    IAmb      13 53 27.7
      comp=Z,388nm,1.2s
CLZ   Clausthal         80.21 321 eP        P         13 53 18.3 -0.9
      comp=Z,608nm,1.6s,baz=91,slow=5.4
CLZ                               esP       PcP       13 53 26.6 +0.2
      comp=Z,608nm,1.6s
CLZ                               eS        S         14 03 24.8 +1.4
      baz=91,slow=11
BSEG  Bad Segeberg      80.25 323 eP        P         13 53 18.6 -0.6
      comp=Z,935nm,1.5s,baz=91,slow=5.4
BSEG                              esP       sP        13 53 26.9 -0.1
      comp=Z,935nm,1.5s
BSEG                              eS        S         14 03 25.5 +1.9
      baz=91,slow=11
BSEG  Bad Segeberg      80.25 323   P       P         13 53 18.9 -0.4
BSEG                                pmax    pmax
      comp=Z,399nm,1.5s
SUR   Sutherland        80.29 235   P       P         13 53 21.7 +1.5
SUR                                 IAmb    IAmb      13 53 34.2
      comp=Z,247nm,1.4s
NRDL  Niedersach Rie    80.38 322 eP        P         13 53 19.6 -0.3
      comp=Z,1µm,1.6s,baz=91,slow=5.4
NRDL                              esP       sP        13 53 27.8 +0.2
      comp=Z,1µm,1.6s
NRDL                              eS        S         14 03 26.6 +1.8
      baz=91,slow=11
UBR   Ueberruh          80.42 317 eP        P         13 53 18.9 -1.5
      comp=Z,454nm,1.8s,baz=91,slow=5.4
UBR                               esP       PcP       13 53 27.1 -0.3
      comp=Z,454nm,1.8s
UBBA  Unterbreizbach    80.45 320 eP        P         13 53 19.7 -0.6
      comp=Z,410nm,1.9s,baz=91,slow=5.4
UBBA                              esP       sP        13 53 27.9 -0.2
      comp=Z,410nm,1.9s
UBBA                              eS        S         14 03 28.7 +3.0
      baz=91,slow=11
GTTG  Gottingen         80.47 321 eP        P         13 53 19.6 -0.9
      comp=Z,709nm,1.6s,baz=91,slow=5.4
GTTG                              esP       sP        13 53 27.8 -0.4
      comp=Z,709nm,1.6s
TBLU  Trondheim         80.47 333 eP        P         13 53 19.7 -0.6
TBLU                              eS        S         14 03 28.7 +3.1
TBLU                              eSS       SS        14 08 39.6 +2.3
TBLU                                IVMs_BB IVMs_BB   14 32 50.1
      comp=Z,8µm,15.5s
DAVA  Damuels           80.58 317 i P       P         13 53 20.3 -1.1
      comp=Z,353nm,1.7s,SNR=24
DAVA                              ePP       PP        13 56 17.1 -7.7
      comp=Z,43nm,1.3s
KONO  Kongsberg         80.71 329 eP        P         13 53 21.1 -0.5
KONO                                IVmBBB            13 53 30.5
      comp=Z,4µm,1.7s
KONO                              eS        S         14 03 29.5 +1.3
KONO                              eSS       SS        14 08 42.7 +1.7
KONO                                IVMs_BB IVMs_BB   14 33 12.9
      comp=Z,15µm,22.7s
KONO  Kongsberg         80.71 329   P       P         13 53 19.8 -1.8
KONO                                pmax    pmax
      comp=Z,811nm,1.7s
KONO                                MLR     MLR
      comp=Z,41µm,19.0s
KONO  Kongsberg         80.71 329   P       P         13 53 19.8 -1.8
RETH  Rethem/Aller,     80.83 322 eP        P         13 53 21.5 -0.9
      comp=Z,624nm,1.5s,baz=91,slow=5.4
RETH                              esP       sP        13 53 29.8 -0.3
      comp=Z,624nm,1.5s
GOET  G??ttrup          80.89 327 i P       P         13 53 23.6 +1.0
GOET                              i                   13 53 31.1
MSSA  Maissana          80.91 314   IAmb    IAmb      13 53 31.8
      comp=Z,316nm,1.4s
DOMB  Dombas            81.00 332 eP        P         13 53 22.7 -0.5
DOMB                                IVmB_BB           13 53 30.3
      comp=Z,3µm,3.6s
DOMB                              eS        S         14 03 31.1 -0.1
DOMB                              eSS       SS        14 08 45.5 +0.1
DOMB                                IVMs_BB IVMs_BB   14 32 33.7
      comp=Z,12µm,17.1s
STU   Stuttgart         81.00 318 eP        P         13 53 22.4 -1.1
      comp=Z,520nm,1.7s,baz=91,slow=5.4
STU                               esP       sP        13 53 30.6 -0.7
      comp=Z,520nm,1.7s
STU                               eS        S         14 03 32.8 +1.0
      baz=91,slow=11
STU   Stuttgart         81.00 318   P       P         13 53 22.3 -1.1
KBS   Kingsbay          81.03 349 eP        P         13 53 23.0  0.0
KBS                                 IVmBBB            13 53 35.4
      comp=Z,2µm,2.2s
KBS                               eS        S         14 03 32.8 +1.9
KBS                               eSS       SS        14 08 47.9 +2.8
KBS                                 IVMs_BB IVMs_BB   14 35 02.9
      comp=Z,9µm,19.0s
KBS   Kingsbay          81.03 349   IAMs_20 IAMs_20   14 35 05.0
      comp=Z,29µm,20.0s
TOD   Tromm             81.24 319   P       P         13 53 25.3 +0.6
HOMB  Homborsund        81.27 328 eP        P         13 53 24.3 -0.3
HOMB                              eS        S         14 03 35.2 +1.2
HOMB                              eSS       SS        14 08 54.2 +4.8
HOMB                                IVMs_BB IVMs_BB   14 34 14.6
      comp=Z,12µm,23.2s
PGF   Pioggiola         81.35 312   P       P         13 53 24.5 -1.1
PGF                                 pmax    pmax
      comp=Z,129nm,1.6s
SKAR  Skarslia          81.36 330 eP        P         13 53 24.9 -0.3
SKAR                                IVmB_BB           13 53 39.2
      comp=Z,6µm,5.1s
SKAR                              eS        S         14 03 36.4 +1.3
SKAR                              eSS       SS        14 08 52.7 +1.9
SKAR                                IVMs_BB IVMs_BB   14 33 16.4
      comp=Z,13µm,21.8s
KEST  Kesra             81.42 305   P       P         13 53 25.0 -1.0
      comp=Z,23nm,0.9s,baz=297,slow=0.8,SNR=20
KEST                                LR      LR        14 35 03.3
      comp=Z,7µm,18.8s,baz=49,slow=40
KEST  Kesra             81.42 305   IAMs_20 IAMs_20   14 32 40.2
      comp=Z,20µm,19.0s
TNS   Taunus Mts        81.45 320 eP        P         13 53 25.0 -0.9
      comp=Z,360nm,1.6s,baz=91,slow=5.4
TNS                               esP       sP        13 53 33.3 -0.5
      comp=Z,360nm,1.6s
TNS   Taunus Mts        81.45 320   P       P         13 53 25.0 -0.9
SLE   Schleitheim       81.50 317   P       P         13 53 27.3 +1.1
SLE                                 pmax    pmax
      comp=Z,211nm,1.6s
BFO   Black Forest      81.59 318 eP        P         13 53 25.2 -1.5
      comp=Z,277nm,1.5s,baz=91,slow=5.4
BFO                               esP       sP        13 53 33.4 -1.1
      comp=Z,277nm,1.5s
BFO                               eS        S         14 03 40.5 +2.6
      baz=91,slow=11
BFO   Black Forest      81.59 318   P       P         13 53 25.1 -1.5
HLG   Helgoland         81.69 324 eP        P         13 53 26.4 -0.5
      comp=Z,814nm,1.4s,baz=91,slow=5.4
HLG                               esP       sP        13 53 34.6  0.0
      comp=Z,814nm,1.4s
MOL   Molde             81.70 332 eP        P         13 53 26.7 -0.2
MOL                               eS        S         14 03 38.9 +0.5
MOL                               eSS       SS        14 09 00.5 +4.8
MOL                                 IVMs_BB IVMs_BB   14 38 44.4
      comp=Z,9µm,15.4s
KTD   Kalmit            81.72 319   P       P         13 53 23.7 -3.6
IBBN  Ibbenburen        81.82 322 eP        P         13 53 26.9 -0.7
      comp=Z,836nm,1.6s,baz=91,slow=5.4
IBBN                              esP       sP        13 53 35.2 -0.2
      comp=Z,836nm,1.6s
LANF  Langenberg        81.91 318   P       P         13 53 28.3  0.0
SNART Snartemo          81.95 328 eP        P         13 53 27.9 -0.4
SNART                             eS        S         14 03 40.0 -1.2
SNART                             eSS       SS        14 09 03.1 +3.5
BUG   Bochum--Univer    82.16 321 eP        P         13 53 28.6 -0.9
      comp=Z,713nm,1.6s,baz=91,slow=5.4
BUG                               esP       sP        13 53 36.8 -0.4
      comp=Z,713nm,1.6s
BUG                               eS        S         14 03 47.3 +3.8
      baz=91,slow=11
BUG   Bochum--Univer    82.16 321   P       P         13 53 29.0 -0.4
BUG                                 pmax    pmax
      comp=Z,258nm,1.6s
ODD1  Odda              82.20 329 eP        P         13 53 29.1 -0.5
BLS5  Blasjo            82.31 329 eP        P         13 53 29.9 -0.3
BLS5                              eS        S         14 03 45.9 +1.0
BLS5                              eSS       SS        14 09 07.1 +2.1
BLS5                                IVMs_BB IVMs_BB   14 34 31.0
      comp=Z,17µm,18.7s
AHRW  Bad Neuenahr-A    82.32 320 eP        P         13 53 29.9 -0.5
      comp=Z,571nm,1.6s,baz=91,slow=5.4
AHRW                              esP       sP        13 53 38.1 +0.1
      comp=Z,571nm,1.6s
SAOF  Saorge            82.33 313   P       P         13 53 29.7 -0.9
SAOF                                pmax    pmax
      comp=Z,105nm,0.9s
ECH   Echery            82.38 318   P       P         13 53 31.3 +0.5
ECH                                 pmax    pmax
      comp=Z,84nm,1.6s
ECH   Echery            82.38 318   IAmb    IAmb      13 53 40.1
      comp=Z,258nm,1.7s
HYA   Hoyanger          82.38 331 eP        P         13 53 30.2 -0.1
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HYA				eS	S	14 03 46.7	+1.3
HYA				eSS	SS	14 09 08.2	+2.3
MOF	Molkenrain	82.42	317	P	P	13 53 31.6	+0.6
ISO	Isola	82.68	314	P	P	13 53 31.6	-0.9
ISO				pmax	pmax		
	comp=Z,146nm,1.6s						
STAV	Stavanger	82.72	328	eP	P	13 53 31.9	-0.3
STAV				eS	S	14 03 49.1	+0.2
STAV				eSS	SS	14 09 10.1	-0.8
STAV				IVMs_BB	IVMs_BB	14 35 28.0	
	comp=Z,14µm,14.4s						
BER	Bergen	82.83	330	eP	P	13 53 32.4	-0.4
BER				IVmB_BB		13 53 36.0	
	comp=Z,5µm,4.4s						
BER				eS	S	14 03 51.3	+1.3
BER				eSS	SS	14 09 14.4	+1.9
BER				IVMs_BB	IVMs_BB	14 34 24.1	
	comp=Z,14µm,16.2s						
BNI	Bardonecchia	82.89	314	P	P	13 53 33.0	-0.6
BNI				pmax	pmax		
	comp=Z,138nm,1.3s						
ASK	Askoy	82.90	330	eP	P	13 53 32.7	-0.4
ASK				eSKSac	SKSac	14 03 54.1	+0.5
FOO	Floro	82.91	331	eP	P	13 53 32.8	-0.3
FOO				eS	S	14 03 51.7	+0.9
FOO				eSS	SS	14 09 14.5	+0.8
CMAH	Djebel Manchou	82.92	306	P	P	13 53 33.4	-0.5
CMAH	Djebel Manchou	82.92	306	P	P	13 53 33.4	-0.5
KMY	Karmoy	82.94	329	eP	P	13 53 33.0	-0.3
KMY				eS	S	14 03 52.4	+1.3
KMY				eSS	SS	14 09 17.1	+2.9
WLF	Walferdange	82.96	319	eP	P	13 53 33.3	-0.4
	comp=Z,560nm,1.6s,baz=91,slow=5.4						
WLF				esP	sP	13 53 41.5	+0.1
	comp=Z,560nm,1.6s						
WLF	Walferdange	82.96	319	P	P	13 53 34.3	+0.6
WLF				pmax	pmax		
	comp=Z,202nm,1.7s						
MEM	Membach	83.00	320	P	P	13 53 33.7	-0.2
MEM				pmax	pmax		
	comp=Z,110nm,1.8s						
SUE	Sulen	83.08	331	eP	P	13 53 33.6	-0.4
SUE				eS	S	14 03 53.7	+1.2
SUE				eSS	SS	14 09 18.9	+2.8
CAEH	'Ain El Ouahch	83.36	306	P	P	13 53 37.5	+1.4
CAEH	'Ain El Ouahch	83.36	306	P	P	13 53 37.5	+1.4
CKFL	Kef-Lekhel	83.50	306	P	P	13 53 37.1	+0.2
CKFL	Kef-Lekhel	83.50	306	P	P	13 53 37.1	+0.2
CASM	Ain Smara	83.69	306	P	P	13 53 37.7	-0.2
CASM	Ain Smara	83.69	306	P	P	13 53 37.7	-0.2
CTEI	Djebel Teioual	83.78	305	P	P	13 53 39.1	+0.7
CTEI	Djebel Teioual	83.78	305	P	P	13 53 39.1	+0.7
DOU	Dourbes	83.93	320	P	P	13 53 39.4	+0.7
DOU				pmax	pmax		
	comp=Z,117nm,1.6s						
DFRA	Djebel Bou Aff	84.16	306	P	P	13 53 40.3	0.0
DFRA	Djebel Bou Aff	84.16	306	P	P	13 53 40.3	0.0
MLZ	Mavora Lakes	84.28	137	IAMs_20	IAMs_20	14 34 03.3	
	comp=Z,18µm,20.0s						
SSB	Saint Sauveur	84.38	315	P	P	13 53 40.9	-0.3
SSB				pmax	pmax		
	comp=Z,122nm,1.5s						
SSB	Saint Sauveur	84.38	315	IAmb	IAmb	13 53 50.7	
	comp=Z,155nm,1.2s						
CKHR	Kef el Ahmar	84.50	305	P	P	13 53 42.7	+0.6
CKHR	Kef el Ahmar	84.50	305	P	P	13 53 42.7	+0.6
WKZ	Wanaka	84.74	136	IAMs_20	IAMs_20	14 33 07.4	
	comp=Z,23µm,20.0s						
FOZ	Fox Glacier	84.94	135	IAMs_20	IAMs_20	14 30 01.7	
	comp=Z,22µm,22.0s						
GAMB	Gambell	84.97	26	IAmb	IAmb	13 53 52.4	
	comp=Z,180nm,1.2s						
GAMB				IAMs_20	IAMs_20	14 35 31.3	
	comp=Z,23µm,19.0s						
MAHO	Mahon	85.10	309	eP	P	13 53 55.5	+11
MAHO				eS	S	14 04 09.7	-4.0
SYO	Syowa Base	85.25	197⇑	eP	P	13 53 44.6	-0.2
SYO	Syowa Base	85.25	197⇑	ePcP	PcP	13 53 47.6	-0.3
SYO	Syowa Base	85.25	197⇓	ipP	pP	13 53 53.4	+2.9
LBZ	Lake Benmore	85.42	136	IAMs_20	IAMs_20	14 32 36.5	
	comp=Z,18µm,21.0s						
ATAF	Djebel Tarf	85.52	305	P	P	13 53 48.0	+0.9
ATAF	Djebel Tarf	85.52	305	P	P	13 53 48.0	+0.9
AKET	Djebel Ketaf	85.81	306	P	P	13 53 50.2	+1.5
AKET	Djebel Ketaf	85.81	306	P	P	13 53 50.2	+1.5
RPZ	Rata Peaks	85.85	135	IAMs_20	IAMs_20	14 29 17.9	
	comp=Z,29µm,22.0s						
TAM	Tamanrasset	85.88	292	IAMs_20	IAMs_20	14 33 25.6	
	comp=Z,26µm,19.0s						
ODZ	Otahua Downs	85.91	136	IAMs_20	IAMs_20	14 32 20.4	
	comp=Z,16µm,20.0s						
WACR	West Acre	86.13	323	eP	P	13 53 49.6	0.0
WACR				IAmb	IAmb	13 53 50.7	
	comp=Z,201nm,1.1s						
ADJB	Djebel Djouab	86.16	306	P	P	13 53 51.5	+1.2
ADJB	Djebel Djouab	86.16	306	P	P	13 53 51.5	+1.2
QRZ	Quartz Range	86.22	132	IAMs_20	IAMs_20	14 36 17.5	
	comp=Z,18µm,20.0s						
ABA	Alger-Bouzarea	86.41	306	P	P	13 53 51.2	-0.2
ABA	Alger-Bouzarea	86.41	306	P	P	13 53 51.2	-0.2
OXZ	Oxford	86.45	134	IAMs_20	IAMs_20	14 30 12.8	
	comp=Z,26µm,22.0s						
LTZ	Lake Taylor	86.49	134	P	P	13 53 50.1	-1.6
LTZ				IAmb	IAmb	13 54 00.4	
	comp=Z,254nm,1.6s						
THZ	Tophouse	86.71	133	IAMs_20	IAMs_20	14 36 41.5	
	comp=Z,20µm,20.0s						
NNZ	Nelson	86.93	132	IAMs_20	IAMs_20	14 33 23.5	
	comp=Z,20µm,21.0s						
MQZ	McQueen's Vall	86.97	135	IAMs_20	IAMs_20	14 36 10.6	
	comp=Z,18µm,20.0s						
HPK	Haverah Park	87.28	324	eP	P	13 53 55.8	+0.6
HPK				IAmb	IAmb	13 54 04.2	
	comp=Z,449nm,1.2s						
KHZ	Kahutara	87.31	133	IAMs_20	IAMs_20	14 38 35.6	
	comp=Z,19µm,18.0s						
EDMD	Edmundbyers	87.34	325	eP	P	13 53 55.5	0.0
EDMD				IAmb	IAmb	13 54 05.2	
	comp=Z,851nm,1.8s						
LBWR	Ladybower, Pea	87.43	323	eP	P	13 53 56.3	+0.3
LBWR				IAmb	IAmb	13 54 03.3	
	comp=Z,218nm,1.0s						
HIZ	Hauiti	87.46	129	IAMs_20	IAMs_20	14 37 30.6	
	comp=Z,20µm,18.0s						
ANM	Nome	87.57	25	IAmb	IAmb	13 54 05.7	
	comp=Z,255nm,1.3s						
ANM				IAMs_20	IAMs_20	14 38 45.9	
	comp=Z,15µm,20.0s						
DAG	Danmarks Havn	87.68	348	iP	P	13 53 54.4	-2.4
	comp=Z,24nm,0.9s						
DAG	Danmarks Havn	87.68	348	iP	P	13 53 54.4	-2.4
DAG				pmax	pmax		
	comp=Z,24nm,0.9s						
DAG				MLR	MLR		
	comp=Z,19µm,20.0s						
SWN1	Swindon	87.79	322	eP	P	13 53 58.7	+1.0
SWN1				IAmb	IAmb	13 54 06.7	
	comp=Z,1µm,1.7s						
SNZO	South Karori	87.93	132	IAMs_20	IAMs_20	14 33 53.8	
	comp=Z,19µm,22.0s						
EKA	Eskdalemuir Ar	87.93	325	P	P	13 53 57.0	-1.3
EKA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ESK	Eskdalemuir	87.96	325	IAMs_20	IAMs_20	14 38 52.5	
	comp=Z,22µm,21.0s						
MDO	Dochfour	88.19	328	eP	P	13 53 59.9	+0.4
OLDB	Oldbury-Upon-S	88.22	322	eP	P	13 53 59.7	-0.1
HLM1	Long Mynd	88.27	323	eP	P	13 54 00.3	+0.2
FOEL	Foel Wylfa	88.40	323	eP	P	13 54 01.0	+0.3
FOEL				IAmb	IAmb	13 54 09.7	
	comp=Z,288nm,1.6s						
MCH1	Michaelchurch	88.44	322	eP	P	13 54 00.7	-0.1
MCH1				IAmb	IAmb	13 54 07.8	
	comp=Z,152nm,1.3s						
KAC	Achnashellach	88.67	328	eP	P	13 54 02.1	+0.3
BKZ	Black Stump Fm	88.84	130	IAMs_20	IAMs_20	14 36 21.1	
	comp=Z,26µm,20.0s						
KPL	Plockton	88.89	328	eP	P	13 54 03.2	+0.4
KPL				IAmb	IAmb	13 54 11.9	
	comp=Z,685nm,2.1s						
YLL	Llanberis	88.92	323	eP	P	13 54 03.4	+0.3
BFZ	Birch Farm	88.94	131	IAMs_20	IAMs_20	14 38 06.8	
	comp=Z,25µm,20.0s						
WME	Myndd Eilian	88.95	324	eP	P	13 54 04.0	+0.8
WIM	Isle of Man	89.02	324	eP	P	13 54 04.2	+0.6
WLF1	Llynfaes	89.03	324	eP	P	13 54 04.0	+0.5
URZ	Urewera	89.15	129	P	P	13 54 05.0	+0.6
	comp=Z,33nm,0.8s,baz=274,slow=0.2,SNR=5.9						
URZ	Urewera	89.15	129	IAMs_20	IAMs_20	14 33 43.3	
	comp=Z,17µm,21.0s						
CART	Cartagena	89.49	308	eP	P	13 54 15.5	+9.4
CART				eS	S	14 04 54.2	-1.8
RSBS	Rosebush, Pemb	89.50	322	eP	P	13 54 06.1	+0.3
RSBS				IAmb	IAmb	13 54 14.8	
	comp=Z,732nm,2.0s						
OTSS	Djebel Tessala	89.69	305	P	P	13 54 08.4	+1.2
OTSS	Djebel Tessala	89.69	305	P	P	13 54 08.4	+1.2
MXZ	Matakaoa Point	89.97	128	IAMs_20	IAMs_20	14 37 03.8	
	comp=Z,29µm,21.0s						
DSB	Dublin	90.20	324	IAMs_20	IAMs_20	14 39 25.1	
	comp=Z,20µm,22.0s						
OLHC	Oulhaca	90.20	305	P	P	13 54 11.0	+1.4
OLHC	Oulhaca	90.20	305	P	P	13 54 11.0	+1.4
TOC2	Torodi Ar. Sit	90.70	283	IAMs_20	IAMs_20	14 34 15.2	
	comp=Z,22µm,20.0s						
TOC3	Torodi Ar. Sit	90.70	283	IAMs_20	IAMs_20	14 34 15.3	
	comp=Z,22µm,20.0s						
TOC1	Torodi Ar. Sit	90.71	283	IAMs_20	IAMs_20	14 34 14.7	
	comp=Z,27µm,20.0s						
TOB3	Torodi Ar. Sit	90.72	283	IAMs_20	IAMs_20	14 34 16.7	
	comp=Z,21µm,20.0s						
TOA2	Torodi Ar. Sit	90.72	283	IAMs_20	IAMs_20	14 34 16.8	
	comp=Z,23µm,20.0s						
TOC4	Torodi Ar. Sit	90.72	283	IAMs_20	IAMs_20	14 34 16.9	
	comp=Z,21µm,20.0s						
TOA0	Torodi Ar. Sit	90.72	283	P	P	13 54 14.3	+2.0
	SNR=24						
TOA0	Torodi Ar. Sit	90.72	283	IAmb	IAmb	13 54 22.1	
	comp=Z,252nm,1.9s						
TOA0				IAMs_20	IAMs_20	14 34 16.9	
	comp=Z,22µm,20.0s						
TORD	Torodi Ar. Bea	90.72	283	P	P	13 54 12.2	0.0
	comp=Z,10.0nm,0.9s,baz=79,slow=4.1,SNR=40						
TORD				PP	PP	13 57 49.0	+1.1
	comp=Z,4.0nm,0.9s,baz=66,slow=9.6,SNR=3.0						
TORD				PKKPbc	PKKPbc	14 11 40.2	+2.1
	comp=Z,1.0nm,0.6s,baz=296,slow=2.7,SNR=5.5						
TOA1	Torodi Ar. Sit	90.72	283	IAMs_20	IAMs_20	14 34 17.0	
	comp=Z,23µm,20.0s						
TOA3	Torodi Ar. Sit	90.72	283	IAMs_20	IAMs_20	14 34 17.0	
	comp=Z,22µm,20.0s						
TOB4	Torodi Ar. Sit	90.73	283	IAMs_20	IAMs_20	14 34 16.2	
	comp=Z,21µm,20.0s						
TOB5	Torodi Ar. Sit	90.74	283	IAMs_20	IAMs_20	14 34 16.3	
	comp=Z,23µm,20.0s						
TOC7	Torodi Ar. Sit	90.74	283	IAMs_20	IAMs_20	14 34 16.3	
	comp=Z,22µm,20.0s						
UCM	Universidad Co	90.74	311	eS	S	14 05 10.1	+2.5
TOC5	Torodi Ar. Sit	90.75	283	IAMs_20	IAMs_20	14 34 16.5	
	comp=Z,24µm,20.0s						
FALS	False Pass	90.82	34	IAMs_20	IAMs_20	14 42 39.4	
	comp=Z,14µm,19.0s						
SCO	Scoresbysund	91.25	342	IAMs_20	IAMs_20	14 36 41.8	
	comp=Z,30µm,22.0s						
ESDC	Sonseca Array	91.41	310	P	P	13 54 14.5	-0.6
	comp=Z,17nm,0.8s,baz=61,slow=5.2,SNR=25						
IMAR	Indian Mountai	91.78	22	P	P	13 54 16.1	0.0
RAO	Raoul Island	91.84	119	IAMs_20	IAMs_20	14 35 07.2	
	comp=Z,16µm,22.0s						
TOLK	Toolik Lake Re	92.11	19	IAmb	IAmb	13 54 27.0	
	comp=Z,135nm,1.1s						
TOLK	Toolik Lake Re	92.11	19	P	P	13 54 18.2	+0.5
	baz=297						
EMAL	Malaga-Limoner	92.33	307	eP	P	13 54 20.9	+1.6
EMAL				eS	S	14 05 13.1	-9.0
PVLZ	Peæn de	92.54	306	eP	P	13 54 26.4	+6.1
PVLZ				eS	S	14 05 20.4	-3.5
COLD	Coldfoot	92.54	21	P	P	13 54 19.1	-0.6
VNDA	Vanda	92.72	168	P	P	13 54 20.6	+0.4
	comp=Z,3.3nm,0.7s,baz=306,slow=6.1,SNR=10						
VNDA				PP	PP	13 58 02.8	+0.6
	comp=Z,12nm,1.3s,baz=302,slow=11,SNR=3.1						
VNDA				PKKPbc	PKKPbc	14 11 37.9	+2.6
	comp=Z,1.6nm,0.8s,baz=182,slow=1.3,SNR=6.2						
VNDA				LR	LR	14 33 28.7	
	comp=Z,12µm,18.2s,baz=306,slow=34						
VNDA	Vanda	92.72	168	P	P	13 54 21.8	+1.6
VNDA				IAmb	IAmb	13 54 31.4	
	comp=Z,341nm,2.0s						
SVW2	Sparrevohn	92.88	27	IAMs_20	IAMs_20	14 38 32.7	
	comp=Z,15µm,19.0s						
PBRG	Braganca	93.03	313	eP	P	13 54 22.9	+0.4
	comp=Z,126nm,1.4s						
PBRG	Braganca	93.03	313	ePP	PP	13 58 19.5	+14
LIJA	Lijar	93.07	308	eP	P	13 54 21.0	-1.9
CEU	Ceuta	93.25	307	eP	P	13 54 31.9	+8.3
CEU				es	S	14 05 30.6	+0.4
MLY	Manley	93.31	23	IAmb	IAmb	13 54 31.9	
	comp=Z,104nm,1.3s						
MLY				IAMs_20	IAMs_20	14 42 58.9	
	comp=Z,17µm,18.0s						
MVO	Moncorvo	93.38	312	eP	P	13 54 24.3	+0.1
	comp=Z,176nm,1.4s						
MVO	Moncorvo	93.38	312	ePP	PP	13 58 09.6	+1.5
MVO				eSKSac	SKSac	14 04 56.1	-1.8
MVO				eS	ScS	14 05 35.4	+2.3
MVO	Moncorvo	93.38	312	eLR	LR	14 26 26.4	
MVO				A	A	14 40 56.5	
	comp=Z,11nm,8.0s						
IFR	Ifrane	93.53	304	eP	P	13 54 35.9	+11
IFR				eS	SKSac	14 04 56.3	-3.0
BPAW	Bear Paw Mtn.	93.62	24	IAMs_20	IAMs_20	14 40 05.1	
	comp=Z,19µm,19.0s						
PPLA	Purkeypile	93.65	25	P	P	13 54 24.6	-0.4
PPLA				IAmb	IAmb	13 54 35.5	
	comp=Z,110nm,1.1s						
PPLA				IAMs_20	IAMs_20	14 43 47.6	
	comp=Z,13µm,19.0s						
SFS	San Fernando	93.79	307	eP	P	13 54 35.2	+9.1
SFS				eS	S	14 05 37.8	+2.8
SBA	Scott Base	93.83	168	IAMs_20	IAMs_20	14 34 35.6	
	comp=Z,12µm,18.0s						
PVRL	Vila Real	93.86	312	A	A	13 54 37.6	
	comp=Z,143nm,1.8s						
KTH	Kantishna Hill	93.89	24	IAmb	IAmb	13 55 00.5	
	comp=Z,94nm,1.2s						
MTE	Manteigas	93.94	311	IAmb	IAmb	13 54 37.4	
	comp=Z,145nm,1.4s						
MTE	Manteigas	93.94	311	eP	P	13 54 27.9	+1.1
	comp=Z,184nm,1.6s						
MTE	Manteigas	93.94	311	ePP	PP	13 58 14.8	+2.3
MTE				eSKSac	SKSac	14 05 00.1	-0.9
MTE				eS	ScS	14 05 40.7	+3.0
MTE	Manteigas	93.94	311	eLR	LR	14 27 25.9	
MTE				A	A	14 55 30.4	
	comp=Z,15nm,8.0s						
PCBR	Castelo Branco	94.02	311	eP	P	13 54 27.1	+0.1
	comp=Z,114nm,1.7s						
PMRV	Marv??o	94.05	310	eP	P	13 54 27.4	+0.2
	comp=Z,117nm,1.4s						
PMRV	Marv??o	94.05	310	ePP	PP	13 58 11.6	-1.7
PMRV				eSKSac	SKSac	14 04 58.9	-2.6
PMRV				eS	ScS	14 05 42.7	+4.1
PMRV	Marv??o	94.05	310	eLR	LR	14 27 19.3	
PMRV				A	A	15 01 04.0	
	comp=Z,4.8nm,2.0s						
PGAV	Gavieira, Arco	94.10	313	ePP	PP	13 58 23.9	+10
PGAV				eS	S	14 05 40.6	+2.9
PGAV	Gavieira, Arco	94.10	313	eLR	LR	14 27 35.6	
PGAV	Gavieira, Arco	94.10	313	A	A	15 12 17.5	
	comp=Z,20nm,8.0s						
NEA	Nenana	94.16	23	IAMs_20	IAMs_20	14 41 33.0	
	comp=Z,13µm,18.0s						
TRF	Thorofare Moun	94.19	24	P	P	13 54 27.4	-0.1
TRF				IAmb	IAmb	13 54 43.8	
	comp=Z,125nm,1.4s						
TRF				IAMs_20	IAMs_20	14 36 28.0	
	comp=Z,16µm,21.0s						
MDM	Murphy Dome	94.30	22	P	P	13 54 27.6	-0.2
MDM				IAmb	IAmb	13 54 36.6	
	comp=Z,128nm,1.3s						
MDM				IAMs_20	IAMs_20	14 40 37.8	
	comp=Z,12µm,18.0s						
SKT	Skwentna	94.31	26	IAMs_20	IAMs_20	14 40 50.2	
	comp=Z,15µm,19.0s						
PESTR	Estremoz	94.33	310	eSKSac	SKSac	14 05 02.4	-0.7
PESTR				eS	ScS	14 05 43.2	+2.3
BMAR	Burnt Mountain	94.34	19	P	P	13 54 28.6	+0.6
SUMG	Summit	94.35	347	iP	P	13 54 28.0	-0.4
	comp=Z,416nm,1.5s						
SUMG	Summit	94.35	347	iP	P	13 54 28.0	-0.4
SUMG				pmax	pmax		
	comp=Z,420nm,1.5s						
SUMG				MLR	MLR		
	comp=Z,35µm,21.0s						
COLA	College	94.48	22	IAMs_20	IAMs_20	14 39 18.6	
	comp=Z,13µm,19.0s						
POKR	Poker Plat Res	94.52	22	P	P	13 54 29.6	+0.8
	baz=299						
FYU	Fort Yukon	94.58	20	IAmb	IAmb	13 54 38.7	
	comp=Z,148nm,1.2s						
MCK	McKinley	94.60	23	IAmb	IAmb	13 54 37.7	
	comp=Z,161nm,1.3s						
MCK				IAMs_20	IAMs_20	14 41 24.9	
	comp=Z,17µm,20.0s						
COI	Coimbra	94.63	311	ePP	PP	13 58 31.7	+14
COI				eSKSac	SKSac	14 05 07.5	+3.0
COI				eS	ScS	14 05 48.2	+4.9
NVL	N'lazarevskaya	94.69	199	eP	P	13 54 37.0	+7.7
NVL				pmax	pmax		
	comp=Z,70nm,1.3s						
PCAS	Casmilo, Conde	94.73	311	ePP	PP	13 58 30.8	+12
PCAS				eS	S	14 05 42.9	-0.2
PCAS	Casmilo, Conde	94.73	311	eLR	LR	14 27 45.1	
PBEJ	Beja	94.73	309	eP	P	13 54 30.3	-0.1
	comp=Z,56nm,1.7s						
PMTG	Montargil	94.76	310	ePP	PP	13 58 29.7	+11
PMTG				eSKSac	SKSac	14 05 03.4	-1.9
PMTG				eS	ScS	14 05 49.3	+4.9
PVAQ	Vaqueiros	94.76	309	IAMs_20	IAMs_20	14 41 37.9	
	comp=Z,16µm,20.0s						
PVAQ	Vaqueiros	94.76	309	eP	P	13 54 29.5	-1.0
	comp=Z,94nm,1.4s						
PVAQ	Vaqueiros	94.76	309	ePP	PP	13 58 28.9	+10
PVAQ				eSKSac	SKSac	14 05 01.8	-3.6
PVAQ				eS	ScS	14 05 49.8	+5.3
PVAQ	Vaqueiros	94.76	309	eLR	LR	14 28 31.2	
PVAQ				A	A	14 41 17.2	
	comp=Z,3.0nm,8.0s						
RND	Reindeer	94.78	24	IAmb	IAmb	13 54 38.5	
	comp=Z,145nm,1.5s						
RND				IAMs_20	IAMs_20	14 44 31.7	
	comp=Z,14µm,18.0s						
ILAR	Eielson Array	94.89	22	P	P	13 54 29.1	-1.4
	comp=Z,3.5nm,0.8s,baz=300,slow=4.4,SNR=26						
ILAR				PP	PP	13 58 18.2	-0.8
	comp=Z,4.4nm,1.0s,baz=296,slow=8.3,SNR=4.8						
ILAR				PKKPbc	PKKPdf	14 11 26.6	-1.4
	comp=Z,0.7nm,0.7s,baz=162,slow=2.3,SNR=5.2						
ILAR				PKPPKP	P'P'df	14 19 41.5	+1.1
	comp=Z,1.6nm,1.1s,baz=176,slow=2.7,SNR=6.6						
ILAR	Eielson Array	94.89	22	P	P	13 54 29.0	-1.6
PCVE	Castro Verde	94.96	309	ePP	PP	13 58 30.4	+10
PCVE				eSKSac	SKSac	14 05 07.2	+0.7
PCVE				eS	ScS	14 05 52.1	+5.9
PBDV	Barranco-do-Ve	94.97	308	eP	P	13 54 31.4	-0.1
	comp=Z,89nm,1.5s						
PBDV	Barranco-do-Ve	94.97	308	ePP	PP	13 58 25.6	+5.0
PBDV				eSKSac	SKSac	14 05 05.3	-1.3
PBDV				eS	ScS	14 05 50.1	+3.8
PRP	Porcupine Dome	95.01	21	IAMs_20	IAMs_20	14 41 08.7	
	comp=Z,18µm,20.0s						
HDA	Harding Lake	95.05	22	IAMs_20	IAMs_20	14 40 37.6	
	comp=Z,15µm,21.0s						
MESJ	Messejana	95.05	309	eP	P	13 54 30.6	-1.3
MESJ				ePP	PP	13 58 19.9	-1.2
MESJ				eSKSac	SKSac	14 05 06.1	-0.8
MESJ				AMS	AMS	14 42 12.4	
	comp=Z,10µm,17.3s						
MESJ	Messejana	95.05	309	eP	P	13 54 30.5	-1.3
MESJ				e		13 58 19.8	
MESJ				e		14 05 06.0	
MESJ	Messejana	95.05	309	eP	P	13 54 32.8	+1.0
	comp=Z,54nm,1.4s						
PNCL	Nicolau / Gran	95.22	309	eP	P	13 54 33.3	+0.7
	comp=Z,56nm,1.7s						
PNCL	Nicolau / Gran	95.22	309	ePP	PP	13 58 31.8	+9.3
PNCL				eSKSac	SKSac	14 05 05.0	-2.8
PNCL				eS	ScS	14 05 53.7	+5.4
SII	Sitkinak Islan	95.24	31	IAMs_20	IAMs_20	14 42 58.0	
	comp=Z,21µm,18.0s						
AVE	Averroes	95.45	305	eP	P	13 54 44.3	+11
AVE	Averroes	95.45	305	PS	PS	14 06 57.4	-12
RC01	Rabbit Creek A	95.47	26	IAMs_20	IAMs_20	14 41 41.9	
	comp=Z,13µm,19.0s						
PMR	Palmer	95.51	25	IAmb	IAmb	13 54 41.9	
	comp=Z,128nm,1.1s						
PMR				IAMs_20	IAMs_20	14 41 35.8	
	comp=Z,13µm,18.0s						
MORF	Marmelete	95.51	309	eP	P	13 54 32.6	-1.5
MORF				ePP	PP	13 58 23.4	-1.4
MORF				AMS	AMS	14 43 00.0	
	comp=E,11µm,20.2s						
MORF	Marmelete	95.51	309	eP	P	13 54 32.5	-1.5
MORF				e		13 58 23.3	
MORF	Marmelete	95.51	309	ePP	PP	13 58 29.2	+4.4
MORF				eSKSac	SKSac	14 05 08.3	-1.2
MORF				eS	ScS	14 05 56.5	+5.6
GHO	Glory Hole Cre	95.51	25	IAmb	IAmb	13 54 52.2	
	comp=Z,142nm,1.2s						
GHO				IAMs_20	IAMs_20	14 40 42.9	
	comp=Z,14µm,20.0s						
LIS	Lisbon	95.55	310	eP	P	13 54 32.8	-1.3
LIS				ePP	PP	13 58 23.8	-1.2
LIS				AMS	AMS	14 44 38.0	
	comp=N,10µm,18.5s						
LIS	Lisbon	95.55	310	eP	P	13 54 32.7	-1.3
LIS				e		13 58 23.7	
KDAK	Kodiak Island	95.56	30	IAMs_20	IAMs_20	14 37 58.5	
	comp=Z,20µm,22.0s						
PMAFR	Mafra	95.59	310	ePP	PP	13 58 35.9	+11
PMAFR				eSKSac	SKSac	14 05 08.1	-1.7
PMAFR				eS	ScS	14 05 53.4	+2.0
PFVI	Vila Bisbo	95.69	309	IAMs_20	IAMs_20	14 42 35.4	
	comp=Z,13µm,20.0s						
PFVI	Vila Bisbo	95.69	309	eP	P	13 54 36.7	+2.0
	comp=Z,70nm,1.6s						
PFVI	Vila Bisbo	95.69	309	ePP	PP	13 58 31.0	+4.9
PFVI				eSKSac	SKSac	14 05 09.3	-1.0
PFVI				eS	ScS	14 05 57.3	+5.1
KNK	Knik Glacier	95.88	25	IAmb	IAmb	13 54 44.1	
	comp=Z,218nm,1.2s						
KNK				IAMs_20	IAMs_20	14 40 54.6	
	comp=Z,16µm,21.0s						
KULLO	Kullorsuaq	96.03	353	iP	P	13 54 35.5	0.0
	comp=Z,159nm,1.2s						
KULLO	Kullorsuaq	96.03	353	iP	P	13 54 35.5	0.0
KULLO				pmax	pmax		
	comp=Z,160nm,1.2s						
KULLO				MLR	MLR		
	comp=Z,29µm,22.0s						
SEW	Seward	96.04	27	IAmb	IAmb	13 54 48.9	
	comp=Z,100nm,1.0s						
SEW				IAMs_20	IAMs_20	14 41 54.0	
	comp=Z,18µm,20.0s						
SCM	Sheep Creek Mo	96.15	25	IAMs_20	IAMs_20	14 46 44.8	
	comp=Z,13µm,19.0s						
RIDG	Independent Ri	96.18	23	IAmb	IAmb	13 54 44.7	
	comp=Z,75nm,1.3s						
RIDG				IAMs_20	IAMs_20	14 41 10.7	
	comp=Z,19µm,21.0s						
PAX	Paxson	96.34	23	IAMs_20	IAMs_20	14 43 17.8	
	comp=Z,16µm,19.0s						
SCRK	Sand Creek	96.38	22	IAMs_20	IAMs_20	14 41 52.9	
	comp=Z,14µm,21.0s						
EGAK	Eagle	96.97	21	IAMs_20	IAMs_20	14 42 27.4	
	comp=Z,22µm,21.0s						
FID	Port Fidalgo	97.04	26	IAMs_20	IAMs_20	14 43 27.2	
	comp=Z,15µm,18.0s						
MENT	Mentasta	97.04	23	IAMs_20	IAMs_20	14 42 02.3	
	comp=Z,14µm,21.0s						
INK	Inuvik	97.15	16	P	P	13 54 40.1	-0.6
	comp=Z,13nm,1.1s,baz=308,slow=4.6,SNR=22						
INK	Inuvik	97.15	16	IAmb	IAmb	13 54 49.1	
	comp=Z,92nm,1.2s						
EYAK	Cordova Ski Ar	97.45	26	IAMs_20	IAMs_20	14 44 41.2	
	comp=Z,21µm,18.0s						
EPYK	Eagle Plains	97.48	18	P	P	13 54 41.1	-1.3
EPYK				IAmb	IAmb	13 54 51.6	
	comp=Z,44nm,0.8s						
EPYK				IAMs_20	IAMs_20	14 45 23.9	
	comp=Z,21µm,18.0s						
EPYK	Eagle Plains	97.48	18	P	P	13 54 41.8	-0.5
	baz=309						
QSPA	South Pole Qui	97.58	180	P	P	13 54 41.4	-1.4

QSPA	South Pole Qui	97.58	180	IAMs_20	IAMs_20	14 36 21.8	
	comp=Z,17µm,18.0s						
RES	Resolute Bay	97.59	2	P	P	13 54 42.5	-0.1
RES				pmax	pmax		
	comp=Z,75nm,1.0s						
RES	Resolute Bay	97.59	2	P	P	13 54 42.5	-0.1
RES				IAmb	IAmb	13 54 56.0	
	comp=Z,75nm,1.0s						
RES				IAMs_20	IAMs_20	14 46 59.8	
	comp=Z,13µm,20.0s						
BCAR	Beaver Creek A	97.71	22	P	Pdif	13 54 43.9	+0.5
GLB	Gilahina Butte	97.80	24	IAMs_20	IAMs_20	14 43 08.4	
	comp=Z,16µm,18.0s						
KIC	Kosan Boka	97.99	278	*e*PKP1	Pdif	13 54 45.8	+0.1
	comp=Z,73nm,1.6s						
DAWY	Dawson	98.01	21	IAMs_20	IAMs_20	14 46 53.8	
	comp=Z,21µm,20.0s						
DBIC	Dimbokro	98.05	278	P	Pdif	13 54 46.6	+0.6
	comp=Z,7.0nm,1.1s,baz=86,slow=7.6,SNR=5.2						
DBIC				PP	PP	13 58 46.2	+1.0
	comp=Z,5.7nm,1.0s,baz=307,slow=5.5,SNR=2.7						
DBIC				LR	LR	14 39 14.7	
	comp=Z,27µm,19.1s,baz=64,slow=36						
VRDI	Verde Repeater	98.06	24	IAMs_20	IAMs_20	14 43 16.2	
	comp=Z,17µm,20.0s						
MCARA	McCarthy VSAT	98.15	24	IAMs_20	IAMs_20	14 43 28.7	
	comp=Z,15µm,19.0s						
TIC	Toumodi	98.22	278	*e*PKP1	Pdif	13 54 47.1	+0.4
LIC	Lamto	98.29	277	*e*PKP1	P	13 54 45.6	-1.4
	comp=Z,34nm,1.6s						
CRQM	Cirque	98.44	25	IAMs_20	IAMs_20	14 43 13.9	
	comp=Z,15µm,19.0s						
TGL	Tana Glacier	98.57	25	IAmb	IAmb	13 54 58.4	
	comp=Z,48nm,1.0s						
TGL				IAMs_20	IAMs_20	14 43 16.8	
	comp=Z,13µm,19.0s						
BALM	Baldy	98.62	24	IAMs_20	IAMs_20	14 43 44.0	
	comp=Z,12µm,18.0s						
C36M	Paulatuk	98.73	13	IAmb	IAmb	13 54 55.6	
	comp=Z,59nm,0.8s						
C36M	Paulatuk	98.73	13	P	P	13 54 47.5	-0.3
	baz=322						
ANGG	Ammassalik, Gr	98.85	342	IAMs_20	IAMs_20	14 40 54.6	
	comp=Z,20µm,22.0s						
CTGM	Chitina Glacie	99.07	24	IAMs_20	IAMs_20	14 43 14.8	
	comp=Z,15µm,20.0s						
SNAA	Sanae	99.47	199	P	PKKPbc	14 11 15.6	-1.3
SNAA	Sanae	99.47	199	Pdiff	Pdif	13 54 50.8	-0.3
SNAA	Sanae	99.47	199	P	Pdif	13 54 51.4	+0.3
SNAA				pmax	pmax		
	comp=Z,52nm,2.0s						
SNAA	Sanae	99.47	199	P	Pdif	13 54 51.4	+0.3
ILULI	Ilulissat	99.61	348	IAMs_20	IAMs_20	14 47 25.2	
	comp=Z,21µm,21.0s						
PCA	Pinnacle	100.00	24	IAMs_20	IAMs_20	14 43 54.6	
	comp=Z,21µm,21.0s						
HYT	Haines Junctio	100.66	23	IAMs_20	IAMs_20	14 44 23.2	
	comp=Z,20µm,20.0s						
VNA2	Neumayer--Watz	101.01	199	P	PKKPbc	14 11 12.9	+0.6
VNA2	Neumayer--Watz	101.01	199	Pdiff	Pdif	13 54 59.5	+1.7
	baz=87,slow=5.0						
SFJD	Kangerlussuaq	101.33	347	IAMs_20	IAMs_20	14 46 15.6	
	comp=Z,16µm,20.0s						
SHEL	Horse Pasture	101.62	255	IAMs_20	IAMs_20	14 37 39.9	
	comp=Z,13µm,20.0s						
VNA3	Neumayer Olymp	101.69	199	P	PKKPbc	14 11 12.3	+2.0
WHY	Whitehorse	101.77	22	IAMs_20	IAMs_20	14 49 28.4	
	comp=Z,12µm,21.0s						
SKAG	Skagway	102.37	23	IAMs_20	IAMs_20	14 45 57.3	
	comp=Z,18µm,18.0s						
BESE	Bessie Mountai	103.12	24	IAMs_20	IAMs_20	14 43 28.1	
	comp=Z,14µm,21.0s						
JIS	Juneau Island	103.51	24	IAMs_20	IAMs_20	14 43 39.2	
	comp=Z,16µm,20.0s						
SIT	Sitka	103.89	25	IAMs_20	IAMs_20	14 46 55.6	
	comp=Z,15µm,20.0s						
NRS	Narsarsuaq	104.48	341	IAMs_20	IAMs_20	14 50 16.6	
	comp=Z,18µm,20.0s						
DLBC	Dease Lake	105.10	22	IAMs_20	IAMs_20	14 52 19.4	
	comp=Z,15µm,19.0s						
YKA	Yellowknife Ar	106.59	14	Pdiff	Pdif	13 55 22.6	-0.3
	comp=Z,0.8nm,0.9s,baz=327,slow=4.1,SNR=8.7						
YKA				PP	PP	13 59 44.9	-2.4
	comp=Z,7.0nm,0.9s,baz=334,slow=7.1,SNR=13						
YKA				PKKPbc	PKKPbc	14 10 54.7	-0.6
	comp=Z,1.4nm,0.7s,baz=149,slow=3.4,SNR=10						
ASCN	Ascension	109.34	264	IAMs_20	IAMs_20	14 44 41.2	
	comp=Z,12µm,19.0s						
LLLB	Lillooet	114.07	24	IAMs_20	IAMs_20	14 53 25.7	
	comp=Z,14µm,19.0s						
SACV	Santiago Islan	114.41	290	IAMs_20	IAMs_20	14 50 17.7	
	comp=Z,13µm,19.0s						
SCHQ	Schefferville	115.73	348	PKP	PKPdf	13 59 51.5	+0.5
	comp=Z,4.2nm,0.9s,baz=9.1,slow=2.3,SNR=5.6						
SCHQ				PP	PP	14 00 51.5	-1.4
	comp=Z,16nm,1.1s,baz=33,slow=7.5,SNR=5.0						
SCHQ				PKKPbc	PKKPbc	14 10 26.8	+1.6
	comp=Z,1.9nm,0.7s,baz=258,slow=2.1,SNR=4.8						
SCHQ	Schefferville	115.73	348	IAMs_20	IAMs_20	14 51 26.2	
	comp=Z,21µm,22.0s						
B06A	Marblemount	115.84	26	IAMs_20	IAMs_20	14 56 45.6	
	comp=Z,15µm,18.0s						
FFC	Flin Flon	116.36	10	IAMs_20	IAMs_20	14 59 33.8	
	comp=Z,12µm,19.0s						
D05A	Enumclaw	116.64	27	IAMs_20	IAMs_20	14 58 06.7	
	comp=Z,10µm,21.0s						
B08A	Colville Reser	116.87	24	IAMs_20	IAMs_20	14 51 00.7	
	comp=Z,10µm,20.0s						
PPT2	Papeete2	117.21	106	*e*PP	PP	14 00 57.6	-7.9
	comp=Z,730nm,24.2s						
PPT2	Papeete2	117.21	106	*e*PS	PS	14 10 41.0	-9.1
	comp=Z,4µm,25.8s						
PPT2				*e*SS	SS	14 17 05.3	-10
	comp=Z,8µm,32.2s						
PPT2	Papeete2	117.21	106	*e*LQ	LQ	14 30 29.7	
	comp=Z,17µm,43.8s						
PPT2				*e*LR	LR	14 35 17.2	
	comp=Z,27µm,33.8s						
C09A	Chrisman Ranch	117.74	24	IAMs_20	IAMs_20	14 51 34.8	
	comp=Z,12µm,21.0s						
E07A	Sunnyside	118.06	26	IAMs_20	IAMs_20	14 58 14.3	
	comp=Z,11µm,18.0s						
D08A	Wollman Farm,	118.07	25	IAMs_20	IAMs_20	14 52 15.4	
	comp=Z,10µm,22.0s						
DRLN	Deer Lake	118.14	339	IAMs_20	IAMs_20	14 54 45.0	
	comp=Z,10µm,21.0s						
HAWA	Hanford	118.33	26	IAMs_20	IAMs_20	14 58 22.4	
	comp=Z,13µm,18.0s						
WALA	Waterton Lakes	118.35	21	IAMs_20	IAMs_20	14 58 32.9	
	comp=Z,12µm,19.0s						
F07A	Phinny Hill Vi	118.54	27	IAMs_20	IAMs_20	15 01 03.1	
	comp=Z,10µm,19.0s						
HOPE	Hope Point	119.12	211	IAMs_20	IAMs_20	14 39 24.8	
	comp=Z,13µm,21.0s						
JTMT	Jette	119.33	22	IAMs_20	IAMs_20	14 55 35.7	
	comp=Z,14µm,19.0s						
J04D	Umpqua Nationa	119.53	30	P	PKiKP	13 59 59.4	+0.4
	baz=318						
F10A	Beach Ranch, E	119.64	25	IAMs_20	IAMs_20	14 52 37.0	
	comp=Z,11µm,22.0s						
J05D	Fort Rock, OR	119.92	29	P	PKiKP	14 00 00.4	+0.7
	baz=318						
L04D	Klamath Falls	120.18	31	P	PKiKP	14 00 00.5	+0.3
	baz=317						
MSO	Missoula	120.23	22	IAMs_20	IAMs_20	14 56 24.5	
	comp=Z,14µm,20.0s						
MSO	Missoula	120.23	22	P	PKPdf	13 59 59.8	-0.3
	baz=327						
BMO	Blue Mountains	120.50	26	IAMs_20	IAMs_20	14 54 36.9	
	comp=Z,11µm,21.0s						
EGMT	Eagleton	120.63	18	IAMs_20	IAMs_20	14 57 00.0	
	comp=Z,14µm,19.0s						
EGMT	Eagleton	120.63	18	P	PKiKP	14 00 00.9	+0.1
	baz=332						
M04C	Macdoel	120.74	31	P	PKiKP	14 00 02.1	+0.8
	baz=317						
PMSA	Palmer Station	120.97	191	IAMs_20	IAMs_20	14 56 08.3	
	comp=Z,11µm,19.0s						
ULM	Lac du Bonnet	121.64	8	PKP	PKPdf	14 00 01.8	-0.7
	comp=Z,12nm,0.8s,baz=355,slow=2.6,SNR=23						
ULM				PKKPbc	PKKPab	14 10 04.5	+0.6
	comp=Z,3.4nm,0.7s,baz=141,slow=2.1,SNR=4.6						
ULM	Lac du Bonnet	121.64	8	IAMs_20	IAMs_20	14 59 46.6	
	comp=Z,16µm,20.0s						
DGMT	Dagmar	121.78	14	P	PKiKP	14 00 03.1	0.0
	baz=338						
WVOR	Wild Horse Val	121.81	28	IAMs_20	IAMs_20	15 00 39.6	
	comp=Z,8µm,19.0s						
DLMT	Dillon	121.97	22	IAMs_20	IAMs_20	15 00 43.5	
	comp=Z,14µm,19.0s						
MATQ	Matagami	122.36	354	P	PKPdf	14 00 03.4	-0.5
	baz=9.4						
LAO	LASA Array	122.89	17	IAMs_20	IAMs_20	14 59 03.7	
	comp=Z,15µm,20.0s						
LAO	LASA Array	122.89	17	P	PKPdf	14 00 04.4	-0.7
	baz=336						
LSQQ	Lebel-sur-Quev	122.98	353	P	PKPdf	14 00 04.8	-0.3
	baz=10						
RLMT	Red Lodge	123.35	20	IAMs_20	IAMs_20	15 01 39.1	
	comp=Z,12µm,20.0s						
RLMT	Red Lodge	123.35	20	P	PKiKP	14 00 06.9	+0.5
	baz=332						
D62A	Allapoint, All	123.49	346	IAMs_20	IAMs_20	15 01 38.6	
	comp=Z,14µm,22.0s						
LMN	Caledonia Moun	123.50	343	IAMs_20	IAMs_20	15 03 16.3	
	comp=Z,12µm,19.0s						
H17A	Grant Village	123.53	21	IAMs_20	IAMs_20	14 50 26.9	
	comp=Z,19µm,22.0s						
H17A	Grant Village	123.53	21	P	PKiKP	14 00 08.7	+1.7
	baz=330						
AGMN	Agassiz Nation	123.56	8	IAMs_20	IAMs_20	15 00 51.3	
	comp=Z,16µm,20.0s						
AGMN	Agassiz Nation	123.56	8	P	PKPdf	14 00 05.6	-0.6
	baz=348						
PQI	Presque Isle	123.62	345	IAMs_20	IAMs_20	15 05 33.8	
	comp=Z,14µm,19.0s						
D61A	St Aubert, Com	123.63	347	P	PKPdf	14 00 06.3	-0.1
	baz=18						
FLWY	Flagg Ranch	123.76	21	IAMs_20	IAMs_20	15 01 37.9	
	comp=Z,9µm,19.0s						
IMW	Indian Meadow	123.83	22	IAMs_20	IAMs_20	15 03 33.9	
	comp=Z,9µm,19.0s						
E63A	Oxbow	123.96	346	IAMs_20	IAMs_20	15 01 48.1	
	comp=Z,16µm,20.0s						
VLDQ	Val d'Or	123.97	353	IAMs_20	IAMs_20	14 57 34.5	
	comp=Z,15µm,21.0s						
LATQ	La Tuque	123.98	349	P	PKPdf	14 00 07.2	+0.1
	baz=15						
FXWY	Fox Creek	124.02	22	IAMs_20	IAMs_20	15 03 30.9	
	comp=Z,9µm,20.0s						
YERR	Yerington	124.14	31	IAMs_20	IAMs_20	15 03 31.5	
	comp=Z,11µm,21.0s						
TPAW	Teton Pass	124.18	22	IAMs_20	IAMs_20	15 02 29.1	
	comp=Z,10µm,20.0s						
HAL	Halifax	124.21	341	IAMs_20	IAMs_20	15 04 24.4	
	comp=Z,12µm,21.0s						
D58A	Chemin du LacG	124.28	349	P	PKPdf	14 00 07.3	-0.4
	baz=15						
SNOW	Snow King Moun	124.28	22	IAMs_20	IAMs_20	15 03 55.6	
	comp=Z,9µm,18.0s						
REDW	Red Top Meadow	124.33	22	IAMs_20	IAMs_20	15 02 34.9	
	comp=Z,11µm,19.0s						
EYMN	Ely	124.39	5	P	PKPdf	14 00 07.6	-0.3
	baz=353						
E61A	Lac Etchemin	124.43	347	P	PKiKP	14 00 08.2	-0.1
	baz=18						
F64A	Sherman	124.46	345	IAMs_20	IAMs_20	15 06 15.5	
	comp=Z,16µm,20.0s						
D57A	Chemin Vers le	124.53	350	P	PKPdf	14 00 07.6	-0.6
	baz=14						
D56A	ZEC Mazanza, M	124.64	351	P	PKPdf	14 00 07.8	-0.6
	baz=13						
AHID	Auburn Hatcher	124.75	23	IAMs_20	IAMs_20	15 02 51.1	
	comp=Z,14µm,19.0s						
GGN	Saint George	124.75	344	IAMs_20	IAMs_20	14 57 53.3	
	comp=Z,12µm,21.0s						
D55A	Sainte-Anne-du	124.78	351	P	PKPdf	14 00 08.7	+0.1
	baz=12						
F63A	Nahmakanta, Br	124.80	346	IAMs_20	IAMs_20	15 02 08.3	
	comp=Z,13µm,20.0s						
D54A	Lac Fusel, La	124.81	352	P	PKPdf	14 00 08.3	-0.4
	baz=11						
G65A	Princeton	124.87	344	IAMs_20	IAMs_20	15 01 58.5	
	comp=Z,12µm,20.0s						
F61A	St Evariste	124.97	347	P	PKiKP	14 00 09.3	-0.1
	baz=18						
D53A	Lac Vacive, Po	125.01	353		PKPdf	14 00 08.3	-0.8
D53A	Lac Vacive, Po	125.01	353	P	PKPdf	14 00 08.5	-0.6
	baz=9.6						
NVAR	Mina Array Bea	125.04	31	PKP	PKPdf	14 00 09.7	0.0
	comp=Z,5.2nm,0.8s,baz=283,slow=1.2,SNR=26						
NVAR				PKKPbc	PKKPab	14 09 49.8	0.0
	comp=Z,0.7nm,0.8s,baz=150,slow=3.5,SNR=4.0						
NVAR	Mina Array Bea	125.04	31	PKPdf	PKiKP	14 00 10.2	+0.2
NV11	Mina Array Sit	125.11	31	IAMs_20	IAMs_20	14 59 44.3	
	comp=Z,8µm,19.0s						
D50A	G1974 Best Tow	125.14	355	P	PKPdf	14 00 08.5	-0.8
	baz=7.0						
E57A	Chemin Saint G	125.16	350	P	PKPdf	14 00 09.1	-0.3
	baz=14						
E56A	St. Veronique	125.17	351	P	PKPdf	14 00 09.0	-0.4
	baz=13						
D51A	Lot 18 Range I	125.17	355	P	PKPdf	14 00 08.8	-0.6
	baz=7.6						
F60A	Warwick	125.18	348	P	PKPdf	14 00 09.4	0.0
	baz=17						
PKME	Peaks-Kenny Pk	125.25	346	IAMs_20	IAMs_20	15 01 44.4	
	comp=Z,11µm,22.0s						
D48A	Paudash Townsh	125.27	357	P	PKPdf	14 00 09.1	-0.5
	baz=4.7						
EMMW	East Machias	125.30	344	IAMs_20	IAMs_20	14 56 45.8	
	comp=Z,13µm,22.0s						
BW06	Boulder Array	125.31	21	IAMs_20	IAMs_20	15 04 41.1	
	comp=Z,14µm,21.0s						
BW06	Boulder Array	125.31	21	P	PKPdf	14 00 09.8	-0.3
	baz=331						
PDAR	Pinedale Array	125.31	21	PKP	PKPdf	14 00 09.8	-0.4
	comp=Z,7.2nm,0.9s,baz=36,slow=1.8,SNR=26						
PDAR				PKKPbc	PKKPab	14 09 48.8	+0.2
	comp=Z,0.6nm,0.5s,baz=133,slow=6.8,SNR=5.2						
PDAR	Pinedale Array	125.31	21		PKPdf	14 00 10.1	0.0
D41A	Chassel	125.44	2	IAMs_20	IAMs_20	15 01 28.3	
	comp=Z,18µm,21.0s						
D47A	Chapleau	125.45	358	P	PKPdf	14 00 09.6	-0.3
	baz=3.1						
HWUT	Hardware Ranch	125.55	24	IAMs_20	IAMs_20	15 00 44.5	
	comp=Z,11µm,20.0s						
G62A	West of Eustis	125.59	347	IAMs_20	IAMs_20	15 06 37.2	
	comp=Z,13µm,19.0s						
D46A	Sault St. Mari	125.65	359	P	PKPdf	14 00 09.4	-0.9
	baz=2.0						
E53A	Dumoine, Ponti	125.70	353	P	PKPdf	14 00 10.0	-0.4
	baz=9.8						
E51A	G1948 Merrick	125.74	355	P	PKPdf	14 00 10.0	-0.5
	baz=7.5						
RSSD	Black Hills	125.86	16	P	PKPdf	14 00 11.0	-0.1
	baz=337						
E52A	Mattawa	125.90	354	P	PKPdf	14 00 10.3	-0.5
	baz=8.6						
E44A	Grand Marais A	125.94	0	IAMs_20	IAMs_20	15 02 42.5	
	comp=Z,13µm,20.0s						
E44A	Grand Marais A	125.94	0	P	PKPdf	14 00 10.9	0.0
	baz=360						
E48A	Lockeyer	125.98	357	P	PKPdf	14 00 10.7	-0.3
	baz=4.3						
H63A	New Sharon	126.00	346	P	PKiKP	14 00 11.2	-0.2
	baz=19						
WVL	Waterville	126.00	346	IAMs_20	IAMs_20	15 03 30.2	
	comp=Z,13µm,21.0s						
E47A	Iron Bridge	126.06	358	P	PKPdf	14 00 10.9	-0.2
	baz=2.9						
ALGO	Algonquin Park	126.16	353	P	PKPdf	14 00 11.4	+0.1
	baz=9.3						
E43A	Lone Tree Farm	126.18	1	IAMs_20	IAMs_20	14 58 07.7	
	comp=Z,13µm,22.0s						
TAOE	Nuku Hiva Isla	126.22	95	*e*LR	LR	14 39 30.0	
	comp=Z,13µm,34.1s						
DUG	Dugway, Tooele	126.22	26	IAMs_20	IAMs_20	15 01 08.2	
	comp=Z,9µm,21.0s						
DUG	Dugway, Tooele	126.22	26	P	PKiKP	14 00 12.0	-0.2
	baz=326						
H62A	Milan	126.34	347	IAMs_20	IAMs_20	15 03 17.0	
	comp=Z,12µm,21.0s						
F51A	Arnstein	126.38	355	P	PKPdf	14 00 11.3	-0.4
	baz=7.1						
COWI	Conover	126.38	3	IAMs_20	IAMs_20	15 00 36.0	
	comp=Z,17µm,22.0s						
R11A	Troy Canyon, C	126.45	29	P	PKiKP	14 00 13.1	+0.4
	baz=322						
F52A	Sundridge	126.45	354	P	PKPdf	14 00 11.5	-0.4
	baz=7.8						
K22A	Casper	126.45	19	IAMs_20	IAMs_20	15 06 35.1	
	comp=Z,14µm,20.0s						
K22A	Casper	126.45	19	P	PKPdf	14 00 12.0	-0.2
	baz=334						
FRNY	Flat Rock	126.58	349	IAMs_20	IAMs_20	15 00 25.3	
	comp=Z,11µm,20.0s						
CWC	Cottonwood Cre	126.66	32	P	PKiKP	14 00 13.6	+0.4
	baz=319						
F48A	Evansville	126.66	357	P	PKPdf	14 00 11.8	-0.5
	baz=3.8						
F49A	Sandfield	126.69	357	P	PKPdf	14 00 12.0	-0.4
	baz=4.5						
I63A	Otisfield	126.70	346	IAMs_20	IAMs_20	15 01 11.8	
	comp=Z,11µm,22.0s						
H59A	Cadyville	126.79	349	P	PKPdf	14 00 12.7	+0.2
	baz=15						
LBNH	Lisbon	126.83	348	IAMs_20	IAMs_20	14 59 40.8	
	comp=Z,11µm,20.0s						
F45A	CMU Biological	126.88	360	P	PKPdf	14 00 12.8	+0.2
	baz=0.2						
LONY	Lake Ozonia	126.97	350	IAMs_20	IAMs_20	14 59 30.4	
	comp=Z,12µm,22.0s						
I62A	Tamworth	127.05	347	IAMs_20	IAMs_20	15 03 47.7	
	comp=Z,13µm,20.0s						
G53A	Haliburton	127.05	354	P	PKPdf	14 00 13.0	0.0
	baz=8.7						
RWWY	Rawlins	127.09	20	IAMs_20	IAMs_20	15 03 10.9	
	comp=Z,12µm,20.0s						
G40A	Rib Lake	127.14	4	IAMs_20	IAMs_20	15 04 16.2	
	comp=Z,15µm,18.0s						
TPNV	Topopah Spring	127.22	31	IAMs_20	IAMs_20	15 00 43.0	
	comp=Z,9µm,20.0s						
MPMC	Manual Prospec	127.26	32	P	PKPdf	14 00 13.5	-0.4
	baz=319						
H56A	Elgin	127.27	351	P	PKPdf	14 00 13.3	-0.1
	baz=12						
G47A	Hillman	127.36	358	P	PKPdf	14 00 13.2	-0.4
	baz=2.3						
SADO	Sadowa	127.45	354	IAMs_20	IAMs_20	15 05 10.8	
	comp=Z,14µm,21.0s						
I60A	Shoreham	127.48	349	P	PKiKP	14 00 14.7	+0.3
	baz=16						
G45A	Suttons Bay	127.52	360	IAMs_20	IAMs_20	15 04 00.4	
	comp=Z,16µm,20.0s						
NCB	Newcomb	127.54	349	IAMs_20	IAMs_20	15 04 51.4	
	comp=Z,8µm,20.0s						
LRMC	Laurel Mtn Rad	127.59	33	P	PKPdf	14 00 13.8	-0.7
	baz=319						
I59A	Olmsteadville	127.64	349	P	PKiKP	14 00 14.7	0.0
	baz=15						
I57A	Carthage	127.81	351	P	PKPdf	14 00 14.4	-0.1
	baz=13						
ECSD	EROS Data Cent	127.89	10	IAMs_20	IAMs_20	14 59 39.9	
	comp=Z,13µm,20.0s						
ECSD	EROS Data Cent	127.89	10	P	PKPdf	14 00 14.3	-0.4
	baz=346						
ACCN	Adirondack Com	128.00	349	IAMs_20	IAMs_20	15 00 16.8	
	comp=Z,14µm,21.0s						
PHWY	Pilot Hill	128.01	19	IAMs_20	IAMs_20	14 59 36.4	
	comp=Z,9µm,22.0s						
H43A	Windswept, Lux	128.06	2	IAMs_20	IAMs_20	15 04 05.6	
	comp=Z,13µm,18.0s						
J59A	Piesco	128.08	350	IAMs_20	IAMs_20	15 01 10.8	
	comp=Z,14µm,21.0s						
O20A	White River Ci	128.09	22	IAMs_20	IAMs_20	15 04 41.7	
	comp=Z,11µm,18.0s						
O20A	White River Ci	128.09	22	P	PKPdf	14 00 15.6	+0.2
	baz=331						
N23A	Red Feather La	128.22	19	IAMs_20	IAMs_20	15 07 29.9	
	comp=Z,15µm,20.0s						
N23A	Red Feather La	128.22	19	P	PKPdf	14 00 16.0	+0.2
	baz=334						
J58A	Remsen	128.31	350	IAMs_20	IAMs_20	15 04 51.0	
	comp=Z,12µm,21.0s						
I48A	Sherman Twp	128.34	358	P	PKPdf	14 00 15.5	0.0
	baz=2.5						
HRV	Adam Dziewonsk	128.40	347	IAMs_20	IAMs_20	15 04 36.5	
	comp=Z,13µm,21.0s						
K62A	Royalston	128.40	347	IAMs_20	IAMs_20	15 04 31.4	
	comp=Z,10µm,20.0s						
WES	Weston	128.46	346	IAMs_20	IAMs_20	15 04 40.1	
	comp=Z,13µm,21.0s						
BCX	Boston College	128.47	346	IAMs_20	IAMs_20	15 04 42.4	
	comp=Z,14µm,21.0s						
I45A	Fountain	128.53	0	IAMs_20	IAMs_20	15 03 18.9	
	comp=Z,15µm,20.0s						
K31A	O'Neill	128.56	12	IAMs_20	IAMs_20	15 03 17.5	
	comp=Z,15µm,20.0s						
I51A	Listowel	128.58	356	P	PKPdf	14 00 16.2	+0.2
	baz=5.9						
I42A	Draeger Farm,	128.59	3	IAMs_20	IAMs_20	15 04 05.6	
	comp=Z,15µm,20.0s						
TRY	Troy	128.63	349	IAMs_20	IAMs_20	15 00 22.4	
	comp=Z,15µm,21.0s						
QUA2	Belchertown	128.79	347	IAMs_20	IAMs_20	15 04 40.8	
	comp=Z,13µm,20.0s						
BRYW	Bryant College	128.95	346	IAMs_20	IAMs_20	15 05 26.2	
	comp=Z,13µm,20.0s						
K58A	Earlville	128.96	350	IAMs_20	IAMs_20	15 07 44.9	
	comp=Z,11µm,18.0s						
M65A	Busby, Falmout	129.07	345	IAMs_20	IAMs_20	15 06 10.5	
	comp=Z,13µm,19.0s						
J48A	Bridge Port	129.23	358	P	PKiKP	14 00 18.3	+0.4
	baz=2.4						
PV22	Blue Mesa, Par	129.28	23	IAMs_20	IAMs_20	15 03 14.1	
	comp=Z,10µm,20.0s						
PV10	Paradox Valley	129.32	24	IAMs_20	IAMs_20	14 58 52.1	
	comp=Z,12µm,20.0s						
ISCO	Idaho Springs	129.32	20	IAMs_20	IAMs_20	15 08 24.9	
	comp=Z,12µm,21.0s						
PV14	Lion Creek, Pa	129.32	24	IAMs_20	IAMs_20	15 04 27.4	
	comp=Z,13µm,20.0s						
OGNE	Ogallala	129.35	16	IAMs_20	IAMs_20	15 02 17.7	
	comp=Z,17µm,22.0s						
PV04	Paradox Valley	129.35	24	IAMs_20	IAMs_20	15 04 18.2	
	comp=Z,15µm,20.0s						
PV20	West Nyswonger	129.37	24	IAMs_20	IAMs_20	15 04 18.7	
	comp=Z,12µm,20.0s						
PV19	Morning Glory	129.40	24	IAMs_20	IAMs_20	15 04 30.2	
	comp=Z,11µm,20.0s						
PV07	Paradox Valley	129.42	23	IAMs_20	IAMs_20	15 03 27.7	
	comp=Z,9µm,20.0s						
PV16	Nyswonger Mesa	129.42	24	IAMs_20	IAMs_20	15 04 19.9	
	comp=Z,12µm,20.0s						
PV11	David Mesa, Pa	129.45	24	IAMs_20	IAMs_20	15 04 30.6	
	comp=Z,15µm,20.0s						
PV18	Skein Mesa, Pa	129.48	24	IAMs_20	IAMs_20	15 04 21.4	
	comp=Z,11µm,20.0s						
JFWS	Jewell Farm	129.48	4	IAMs_20	IAMs_20	15 03 29.1	
	comp=Z,14µm,21.0s						
JFWS	Jewell Farm	129.48	4	P	PKPdf	14 00 17.8	+0.1
	baz=354						
PV03	Paradox Valley	129.50	24	IAMs_20	IAMs_20	15 04 31.9	
	comp=Z,13µm,21.0s						
K54A	Basiliko Farm,	129.54	353	P	PKiKP	14 00 18.5	-0.1
	baz=8.9						
PV05	Paradox Valley	129.55	24	IAMs_20	IAMs_20	14 58 57.1	
	comp=Z,11µm,20.0s						
U15A	North Rim	129.55	28	IAMs_20	IAMs_20	15 03 54.5	
	comp=Z,8µm,21.0s						
KSCT	Kent School, K	129.56	348	IAMs_20	IAMs_20	14 59 06.1	
	comp=Z,14µm,22.0s						
BINY	Binghamton	129.56	351	IAMs_20	IAMs_20	15 00 48.9	
	comp=Z,11µm,21.0s						
BINY	Binghamton	129.56	351	P	PKiKP	14 00 18.6	0.0
	baz=12						
PV15	Paradox Valley	129.56	23	IAMs_20	IAMs_20	15 03 32.7	
	comp=Z,10µm,22.0s						
PV13	Radium Mtn., P	129.59	24	IAMs_20	IAMs_20	15 04 34.4	
	comp=Z,12µm,21.0s						
K50A	Casco	129.71	357	IAMs_20	IAMs_20	15 01 20.3	
	comp=Z,14µm,20.0s						
PV01	Paradox Valley	129.71	23	IAMs_20	IAMs_20	15 03 36.5	
	comp=Z,12µm,20.0s						
K43A	Burlington	129.80	2	IAMs_20	IAMs_20	15 06 54.6	
	comp=Z,12µm,19.0s						
YLE	Yale	129.84	347	IAMs_20	IAMs_20	15 05 21.6	
	comp=Z,13µm,20.0s						
L55A	Hinsdale	129.93	353	P	PKiKP	14 00 19.5	0.0
	baz=9.3						
IRM	Iron Mountain	129.95	32	P	PKiKP	14 00 20.7	+1.0
	baz=321						
L54A	Sinclairville	129.98	354	P	PKPdf	14 00 18.8	+0.1
	baz=8.2						
ERPA	Erie	130.16	354	IAMs_20	IAMs_20	15 00 36.5	
	comp=Z,14µm,21.0s						
ERPA	Erie	130.16	354	P	PKiKP	14 00 20.0	+0.2
	baz=7.3						
BC3	Big Chuckawall	130.17	33	P	PKiKP	14 00 20.9	+0.7
	baz=320						
Q24A	Divide	130.22	20	IAMs_20	IAMs_20	15 09 10.0	
	comp=Z,13µm,20.0s						
L40A	Anamosa	130.25	5	IAMs_20	IAMs_20	15 09 22.3	
	comp=Z,14µm,19.0s						

PAL	Palisades	130.34	348	IAMs_20	IAMs_20	15 59 39.7	
	comp=Z,13µm,22.0s						
L53A	Girard	130.35	355	P	PKiKP	14 00 20.0	-0.2
	baz=7.0						
ODNJ	Ogdensburg	130.40	349	IAMs_20	IAMs_20	15 06 19.3	
	comp=Z,16µm,20.0s						
RCBR	Riachuelo	130.46	269	PKP	PKiKP	14 00 21.3	+0.1
	comp=Z,15nm,0.9s,baz=80,slow=6.1,SNR=1.9						
RCBR				SKPbc	SKPab	14 03 42.3	-0.7
	comp=Z,39nm,1.2s,baz=50,slow=7.6,SNR=4.4						
RCBR	Riachuelo	130.46	269	IAMs_20	IAMs_20	14 53 30.1	
	comp=Z,11µm,21.0s						
MVCO	Mesa Verde	130.54	24	IAMs_20	IAMs_20	15 05 06.4	
	comp=Z,11µm,21.0s						
CPNY	Central Park	130.56	348	IAMs_20	IAMs_20	15 06 47.5	
	comp=Z,10µm,20.0s						
M57A	Sunshine Farm,	130.58	351	IAMs_20	IAMs_20	15 01 29.8	
	comp=Z,14µm,22.0s						
L47A	Sherwood	130.58	359	P	PKiKP	14 00 20.6	-0.1
	baz=0.6						
M56A	Emporium	130.58	352	P	PKiKP	14 00 21.0	+0.2
	baz=9.8						
Y12C	Blythe	130.59	32	IAMs_20	IAMs_20	15 08 50.3	
	comp=Z,8µm,20.0s						
L48A	N Adams	130.60	359	P	PKiKP	14 00 20.8	+0.1
	baz=1.6						
ALLY	Alegheny Colle	130.64	354	IAMs_20	IAMs_20	15 00 51.2	
	comp=Z,15µm,22.0s						
S22A	4UR Ranch, Cre	130.72	22	IAMs_20	IAMs_20	15 06 27.1	
	comp=Z,12µm,20.0s						
BRNJ	Basking Ridge	130.78	349	IAMs_20	IAMs_20	15 06 31.4	
	comp=Z,11µm,19.0s						
USHA	Ushuaia	130.97	193	SKPbc	SKPbc	14 03 42.2	-1.3
	comp=Z,23nm,1.0s,baz=207,slow=5.7,SNR=3.7						
N58A	Sunbury	131.00	351	IAMs_20	IAMs_20	15 01 44.1	
	comp=Z,14µm,22.0s						
SDCO	Great Sand Dun	131.20	21	IAMs_20	IAMs_20	15 06 30.8	
	comp=Z,10µm,20.0s						
N55A	Marion Center	131.38	353	P	PKiKP	14 00 22.7	+0.3
	baz=8.8						
SSPA	Standing Stone	131.38	352	PKPdf	PKPdf	14 00 16.6	-4.8
SSPA	Standing Stone	131.38	352	IAMs_20	IAMs_20	15 00 03.9	
	comp=Z,15µm,22.0s						
N53A	Lisbon	131.54	355	P	PKPdf	14 00 21.9	+0.2
	baz=6.4						
PAGS	Pennsylvania G	131.60	351	IAMs_20	IAMs_20	15 07 59.0	
	comp=Z,13µm,20.0s						
N41A	Harden Midland	131.63	5	IAMs_20	IAMs_20	15 08 27.8	
	comp=Z,13µm,20.0s						
PSUB	Penn St. - Bra	131.68	349	IAMs_20	IAMs_20	15 04 03.1	
	comp=Z,15µm,22.0s						
N47A	Urbana	131.68	360	P	PKiKP	14 00 22.7	-0.2
	baz=360						
N48A	Decatur	131.70	359	P	PKiKP	14 00 22.7	-0.3
	baz=0.9						
MVL	Millersville	131.77	350	IAMs_20	IAMs_20	15 00 36.3	
	comp=Z,14µm,21.0s						
W18A	Petrified Fore	131.79	27	IAMs_20	IAMs_20	15 07 10.8	
	comp=Z,12µm,22.0s						
P61A	Hammonton	131.80	349	IAMs_20	IAMs_20	15 07 32.4	
	comp=Z,11µm,20.0s						
O56A	Blue Knob Stat	131.83	353	P	PKiKP	14 00 24.1	+0.8
	baz=9.4						
HDIL	Hopedale	131.90	4	IAMs_20	IAMs_20	15 05 05.9	
	comp=Z,15µm,22.0s						
T25A	Trinidad	132.12	20	IAMs_20	IAMs_20	15 08 05.2	
	comp=Z,14µm,20.0s						
SFIN	Lafayette	132.17	1	P	PKiKP	14 00 24.7	+0.8
	baz=358						
X18A	Snowflake	132.19	27	IAMs_20	IAMs_20	15 07 28.4	
	comp=Z,9µm,22.0s						
ACSO	Alum Creek Sta	132.26	357	IAMs_20	IAMs_20	15 05 51.8	
	comp=Z,13µm,20.0s						
ACSO	Alum Creek Sta	132.26	357	P	PKPdf	14 00 22.9	-0.2
	baz=3.6						
O48A	Farmland	132.30	359	P	PKiKP	14 00 23.8	-0.4
	baz=0.7						
O52A	Adamsville	132.31	356	IAMs_20	IAMs_20	15 02 47.1	
	comp=Z,15µm,20.0s						
O44A	Mansfield	132.34	3	IAMs_20	IAMs_20	15 05 55.8	
	comp=Z,13µm,20.0s						
O49A	Covington	132.35	359	IAMs_20	IAMs_20	15 03 17.3	
	comp=Z,15µm,20.0s						
O49A	Covington	132.35	359	P	PKPdf	14 00 23.7	+0.5
	baz=1.8						
O50A	Cable	132.37	358	P	PKPdf	14 00 23.8	+0.5
	baz=2.7						
KSU1	Kansas State U	132.38	11	P	PKiKP	14 00 24.4	0.0
	baz=345						
P38A	Dawn	132.39	8	IAMs_20	IAMs_20	15 06 36.9	
	comp=Z,15µm,21.0s						
SDMD	Soldier's Deli	132.42	351	IAMs_20	IAMs_20	15 03 14.6	
	comp=Z,8µm,21.0s						
P57A	Homestead Farm	132.53	352	IAMs_20	IAMs_20	15 10 28.3	
	comp=Z,11µm,18.0s						
P57A	Homestead Farm	132.53	352	P	PKiKP	14 00 25.8	+1.1
	baz=10						
R32A	Long Quarter,	132.58	14	IAMs_20	IAMs_20	15 07 00.0	
	comp=Z,15µm,20.0s						
MCWV	Mont Chateau	132.58	354	IAMs_20	IAMs_20	15 01 32.6	
	comp=Z,12µm,22.0s						
Q60A	Greensboro	132.65	349	IAMs_20	IAMs_20	15 03 57.7	
	comp=Z,12µm,20.0s						
P43A	Skaggs, Pawnee	132.79	4	IAMs_20	IAMs_20	15 05 32.6	
	comp=Z,15µm,21.0s						
P53A	Whipple	132.90	355	IAMs_20	IAMs_20	15 02 41.8	
	comp=Z,14µm,19.0s						
P50A	Jamestown	132.91	358	P	PKiKP	14 00 25.3	-0.2
	baz=2.5						
P51A	Williamsport	133.01	357	IAMs_20	IAMs_20	15 03 06.7	
	comp=Z,14µm,21.0s						
Q58A	Fox Den Farm,	133.01	351	P	PKiKP	14 00 25.4	-0.3
	baz=11						
P49A	Miami Univ. Ec	133.01	359	P	PKiKP	14 00 25.4	-0.3
	baz=1.3						
P48A	Milroy	133.10	360	P	PKiKP	14 00 25.5	-0.3
	baz=0.3						
Q56A	Snyder Ridge,	133.12	353	IAMs_20	IAMs_20	15 08 25.8	
	comp=Z,12µm,20.0s						
Q56A	Snyder Ridge,	133.12	353	P	PKiKP	14 00 25.4	-0.6
	baz=8.8						
R61A	Willards	133.21	349	IAMs_20	IAMs_20	15 08 52.5	
	comp=Z,13µm,19.0s						
Q55A	Buckhannon	133.26	354	P	PKiKP	14 00 25.9	-0.4
	baz=7.6						
ANMO	Albuquerque	133.32	24	SKPbc	SKPbc	14 03 51.6	-1.2
	comp=Z,5.6nm,1.0s,baz=348,slow=5.8,SNR=2.9						
ANMO	Albuquerque	133.32	24	IAMs_20	IAMs_20	15 07 40.0	
	comp=Z,11µm,22.0s						
ANMO	Albuquerque	133.32	24	P	PKiKP	14 00 26.9	+0.2
	baz=331						
Q54A	Coxs Mills	133.35	355	P	PKiKP	14 00 27.2	+0.9
	baz=6.6						
BLO	Bloomington	133.38	1	IAMs_20	IAMs_20	15 03 44.4	
	comp=Z,13µm,20.0s						
Q51A	Peebles	133.48	357	IAMs_20	IAMs_20	15 09 00.1	
	comp=Z,13µm,19.0s						
TUC	Tucson	133.63	30	IAMs_20	IAMs_20	15 01 56.6	
	comp=Z,8µm,22.0s						
CBN	Corbin Frederi	133.69	351	IAMs_20	IAMs_20	15 01 44.0	
	comp=Z,13µm,21.0s						
R58A	Rapidan	133.69	352	P	PKiKP	14 00 26.7	-0.4
	baz=10						
SLM	Saint Louis	133.74	5	IAMs_20	IAMs_20	15 05 06.6	
	comp=Z,13µm,21.0s						
R57A	Stanardsville	133.76	352	P	PKiKP	14 00 26.7	-0.5
	baz=9.8						
R56A	Bull Pasture M	133.77	353	P	PKiKP	14 00 26.9	-0.5
	baz=8.6						
Y22D	IRIS PASSCAL I	133.89	25	IAMs_20	IAMs_20	15 11 48.2	
	comp=Z,12µm,20.0s						
R49A	Shelbyville	134.26	359	IAMs_20	IAMs_20	15 06 25.8	
	comp=Z,17µm,22.0s						
S39A	Bolivar	134.32	8	IAMs_20	IAMs_20	15 06 39.0	
	comp=Z,14µm,19.0s						
S57A	Dark Hollow, R	134.35	352	IAMs_20	IAMs_20	15 02 42.5	
	comp=Z,14µm,22.0s						
S58A	Poland Farm, P	134.37	351	P	PKPdf	14 00 27.7	+0.6
	baz=10						
U32A	Winter Ranch,	134.45	15	IAMs_20	IAMs_20	15 08 26.5	
	comp=Z,15µm,20.0s						
USIN	University of	134.56	2	IAMs_20	IAMs_20	15 12 39.5	
	comp=Z,12µm,18.0s						
T60A	Surry	134.62	350	IAMs_20	IAMs_20	15 04 08.8	
	comp=Z,13µm,21.0s						
121A	Cookes Peak, D	134.84	27	IAMs_20	IAMs_20	15 09 00.5	
	comp=Z,13µm,20.0s						
S50A	Richmond	134.86	358	P	PKPdf	14 00 28.7	+0.7
	baz=1.8						
T59A	Double "B" Far	134.92	351	IAMs_20	IAMs_20	15 02 28.7	
	comp=Z,10µm,21.0s						
319A	Douglas	135.12	29	IAMs_20	IAMs_20	15 11 21.1	
	comp=Z,8µm,20.0s						
GO09	Cerro Castillo	135.15	192	IAMs_20	IAMs_20	14 56 01.7	
	comp=Z,9µm,20.0s						
SJMB	Sao Joao De Ma	135.34	251	*e*P	PKiKP	14 00 36.9	+6.0
U38A	Gravette	135.38	10	IAMs_20	IAMs_20	15 06 07.0	
	comp=Z,16µm,22.0s						
BBSR	BB Station	135.39	334	IAMs_20	IAMs_20	15 00 29.1	
	comp=Z,8µm,22.0s						
T49A	Edmonton	135.45	360	IAMs_20	IAMs_20	15 05 53.2	
	comp=Z,15µm,22.0s						
T47A	Sharon Grove	135.55	2	IAMs_20	IAMs_20	15 06 29.7	
	comp=Z,13µm,21.0s						
MSTX	Muleshoe	135.55	20	P	PKPdf	14 00 29.7	+0.1
	baz=336						
U59A	Littleton	135.56	351	IAMs_20	IAMs_20	15 06 34.8	
	comp=Z,14µm,22.0s						
TUL1	Leonard	135.63	12	P	PKiKP	14 00 30.8	-0.3
	baz=346						
U58A	Oxford	135.64	352	P	PKPdf	14 00 29.0	-0.5
	baz=10						
U40A	Yellville	135.69	8	IAMs_20	IAMs_20	15 08 26.5	
	comp=Z,14µm,20.0s						
U40A	Yellville	135.69	8	P	PKPdf	14 00 29.9	+0.2
	baz=350						
PARMO	Parma	135.73	5	IAMs_20	IAMs_20	15 08 03.5	
	comp=Z,15µm,20.0s						
V62A	Hyde County Ai	136.01	348	IAMs_20	IAMs_20	15 06 33.7	
	comp=Z,14µm,21.0s						
U49A	Red Boiling Sp	136.04	0	IAMs_20	IAMs_20	15 07 19.8	
	comp=Z,14µm,22.0s						
EPT	El Paso	136.05	26	IAMs_20	IAMs_20	15 14 01.5	
	comp=Z,10µm,20.0s						
WMOK	Wichita Mounta	136.06	15	IAMs_20	IAMs_20	15 09 55.1	
	comp=Z,13µm,21.0s						
FCAR	Ozark Folk Cen	136.25	7	IAMs_20	IAMs_20	15 09 38.2	
	comp=Z,15µm,21.0s						
V57A	Coltrane Farms	136.30	353	P	PKiKP	14 00 32.1	-0.3
	baz=8.4						
WVT	Waverly	136.38	2	IAMs_20	IAMs_20	15 07 20.7	
	comp=Z,12µm,21.0s						
V56A	Mocksville	136.46	354	P	PKiKP	14 00 32.2	-0.6
	baz=7.4						
CLTN	Cedars of Leba	136.46	1	IAMs_20	IAMs_20	15 05 26.9	
	comp=Z,14µm,20.0s						
MNTX	Cornudas Mount	136.59	25	IAMs_20	IAMs_20	15 13 13.6	
	comp=Z,11µm,20.0s						
MNTX	Cornudas Mount	136.59	25	P	PKPdf	14 00 30.5	-1.0
	baz=331						
CNNC	Cliffs of the	136.67	351	IAMs_20	IAMs_20	15 06 29.0	
	comp=Z,12µm,21.0s						
LPAR	Lepanto	136.74	5	IAMs_20	IAMs_20	15 06 15.1	
	comp=Z,15µm,21.0s						
W41B	Gary Mavity, V	136.94	8	P	PKPdf	14 00 32.8	+0.9
	baz=350						
HDBT	Hernando Brdge	137.21	5	IAMs_20	IAMs_20	15 09 32.5	
	comp=Z,14µm,22.0s						
W45A	Hickory Valley	137.27	4	IAMs_20	IAMs_20	15 08 00.3	
	comp=Z,12µm,20.0s						
UALR	University of	137.32	8	IAMs_20	IAMs_20	15 10 21.5	
	comp=Z,14µm,21.0s						
SWET	Sewanee	137.34	0	IAMs_20	IAMs_20	15 10 23.1	
	comp=Z,11µm,20.0s						
PLAL	Pickwick Lake	137.51	3	IAMs_20	IAMs_20	15 08 46.7	
	comp=Z,10µm,19.0s						
X58A	Rowland	137.56	352	IAMs_20	IAMs_20	15 08 28.4	
	comp=Z,14µm,22.0s						
BIRD	Birdtown, Kers	137.61	353	IAMs_20	IAMs_20	15 04 12.6	
	comp=Z,16µm,22.0s						
ABTX	Abilene, Hawle	137.80	18	IAMs_20	IAMs_20	15 08 54.3	
	comp=Z,15µm,21.0s						
Y60A	Bolivia	137.93	351	IAMs_20	IAMs_20	15 13 36.4	
	comp=Z,12µm,18.0s						
JSC	Jenkinsville	138.05	354	IAMs_20	IAMs_20	15 04 58.3	
	comp=Z,8µm,18.0s						
HODGE	Hodges	138.19	356	IAMs_20	IAMs_20	15 04 09.8	
	comp=Z,14µm,22.0s						
PARB	Paraibuna	138.47	243	*e*P	PKiKP	14 00 41.9	+4.6
Y49A	Blount Mountai	138.69	1	IAMs_20	IAMs_20	15 09 10.8	
	comp=Z,13µm,20.0s						
Z57A	Bowman	138.97	354	P	PKPdf	14 00 35.3	-0.5
	baz=7.5						
GOGA	Godfrey	139.08	357	PKIKP	PKiKP	14 00 37.6	-0.6
TXAR	Lajitas Array	139.37	24	PKhKP	PKPpre	14 00 27.8	
	comp=Z,1.0nm,0.5s,baz=328,slow=0.8,SNR=11						
TXAR				PKP	PKPdf	14 00 35.3	-1.4
	comp=Z,1.8nm,0.7s,baz=225,slow=0.3,SNR=11						
TXAR				PP	PP	14 03 29.3	+0.1
	comp=Z,10nm,1.2s,baz=14,slow=2.5,SNR=4.0						
143A	Socs Landing,	139.49	7	IAMs_20	IAMs_20	15 08 57.8	
	comp=Z,13µm,19.0s						
LRAL	Lakeview Retre	139.49	2	IAMs_20	IAMs_20	15 12 07.2	
	comp=Z,14µm,21.0s						
JCT	Junction City	139.74	19	IAMs_20	IAMs_20	15 08 58.9	
	comp=Z,12µm,20.0s						
JCT	Junction City	139.74	19	P	PKPdf	14 00 38.2	+0.8
	baz=338						
SPB	Sao Paulo	140.00	242	IAMs_20	IAMs_20	14 54 38.8	
	comp=Z,14µm,22.0s						
255A	Hazlehurst	140.49	356	IAMs_20	IAMs_20	15 06 32.9	
	comp=Z,14µm,21.0s						
HPIG		140.56	29	IAMs_20	IAMs_20	15 11 24.0	
	comp=Z,9µm,20.0s						
342A	Flagon Creek P	140.66	9	IAMs_20	IAMs_20	15 10 13.0	
	comp=Z,13µm,22.0s						
346A	Big Creek Wild	140.99	5	IAMs_20	IAMs_20	15 09 01.8	
	comp=Z,13µm,20.0s						
HKT	Hockley	141.36	14	PKIKP	PKPdf	14 00 40.6	+0.5
456A	Hilliard	141.65	355	IAMs_20	IAMs_20	15 07 27.5	
	comp=Z,12µm,21.0s						
BB19B	Bebedouro	141.66	246	*e*P	PKiKP	14 00 48.0	+4.2
FRTB	Fartura	141.94	242	*e*P	PKiKP	14 00 47.5	+3.2
IPMB	Ipameri, GO	142.05	251	*e*P	PKiKP	14 00 45.7	+1.0
SMTB	Santa Maria do	142.20	265	*e*P	PKiKP	14 00 49.0	+3.9
CPSB	Cacapava Do Su	142.22	229	*e*P	PKiKP	14 00 47.5	+2.9
BDFB	Brasilia	142.23	254	PKP	PKPdf	14 00 41.4	-0.8
	comp=Z,22nm,0.8s,baz=131,slow=5.1,SNR=8.8						
LPA	La Plata	142.74	219	PKIKP	PKPdf	14 00 36.2	-6.2
TRQA	Tornquist	142.88	212	*e*P	PKiKP	14 00 47.1	+1.2
656A	Willston	143.03	355	IAMs_20	IAMs_20	15 11 52.2	
	comp=Z,13µm,21.0s						
KVTX	Kingsville	143.07	18	IAMs_20	IAMs_20	15 15 24.0	
	comp=Z,12µm,21.0s						
GO07	Milladeo Hill,	143.14	195	IAMs_20	IAMs_20	15 03 43.0	
	comp=Z,9µm,21.0s						
PTGB	Pitanga	143.61	238	*e*P	PKiKP	14 00 50.4	+2.6
ITRB	Iturama	143.66	247	*e*P	PKiKP	14 00 51.6	+3.6
PCMB	Pacaembu	143.96	244	*e*P	PKiKP	14 00 51.6	+3.1
DWPF	Disney Wildern	144.17	353	IAMs_20	IAMs_20	15 14 19.5	
	comp=Z,11µm,20.0s						
PLCA	Paso Flores	144.40	200	PKP	PKPab	14 00 43.2	-0.2
	comp=Z,54nm,1.1s,baz=197,slow=2.0,SNR=21						
PLCA	Paso Flores	144.40	200		PKPdf	14 00 46.2	+0.9
MDP	Montagnes des	144.59	290	PKP	PKPbc	14 00 45.5	+0.5
	comp=Z,29nm,1.0s,baz=97,slow=5.2,SNR=2.4						
ITQB	Itaqui	144.96	228	*e*P	PKiKP	14 00 49.4	-0.9
ANWB	Willy Bob	145.42	317	*e*P	PKPbc	14 00 45.9	-1.6
ANWB	Willy Bob	145.42	317	IAMs_20	IAMs_20	15 02 15.9	
	comp=Z,8µm,22.0s						
GO06	Curarrehue	145.74	200		PKPdf	14 00 47.8	0.0
GO06				IAMs_20	IAMs_20	15 08 56.4	
	comp=Z,8µm,20.0s						
SMRT	St. Maarten	146.00	319	*e*P	PKPdf	14 00 48.4	-0.3
SMRT	St. Maarten	146.00	319		PKPbc	14 00 49.0	-0.3
SMRT				IAMs_20	IAMs_20	15 07 47.9	
	comp=Z,12µm,20.0s						
C2SB	Chapadao do Su	146.16	248	*e*P	PKiKP	14 00 55.8	+2.8
SKI	Saint Kitts	146.29	318	*e*P	PKPdf	14 00 47.3	-1.8
SKI	Saint Kitts	146.29	318	IAMs_20	IAMs_20	15 08 06.0	
	comp=Z,11µm,21.0s						
061Z	Ochoppi	146.32	352	IAMs_20	IAMs_20	15 15 30.5	
	comp=Z,12µm,20.0s						
SEUS	St. Eustatius	146.34	318	*e*P	PKPbc	14 00 50.2	-0.1
SEUS	St. Eustatius	146.34	318	IAMs_20	IAMs_20	15 07 08.1	
	comp=Z,12µm,22.0s						
MLYT	Lee's Yard	146.35	316	*e*P	PKPbc	14 00 50.4	0.0
NVDO	Nevis, Disaste	146.37	317	*e*	PKPab	14 00 51.1	-0.1
SABA	Saba	146.42	319	*e*P	PKPbc	14 00 50.2	-0.4
SABA	Saba	146.42	319	IAMs_20	IAMs_20	15 07 35.2	
	comp=Z,11µm,21.0s						
DWS	Wesley	146.52	314	*e*P	PKPbc	14 00 50.7	-0.2
MDPO	Dominica; Chan	146.61	314	*e*P	PKPbc	14 00 51.1	0.0
DLPL	La Plaine	146.63	313	*e*P	PKPab	14 00 52.0	-0.3
BBSP	Saint Philip	146.69	308	*e*P	PKiKP	14 01 06.1	+12
BBGH	Gun Hill	146.74	308	*e*P	PKiKP	14 01 03.3	+8.9
BBGH	Gun Hill	146.74	308	IAMs_20	IAMs_20	15 06 44.6	
	comp=Z,14µm,22.0s						
MDN	Morne-Daniel	146.74	313	*e*P	PKPbc	14 00 51.3	-0.3
DPMT	Pointe Michel	146.77	313	*e*P	PKPdf	14 00 50.6	+0.7
BCHC	Barbados, Cave	146.80	308	*e*P	PKiKP	14 01 07.7	+13
FDF	Fort de France	146.95	312	*e*P	PKPbc	14 00 51.9	-0.3
FDF	Fort de France	146.95	312	PKP2	PKPbc	14 00 51.6	-0.6
FDF	Fort de France	146.95	312	IAMs_20	IAMs_20	15 19 18.3	
	comp=Z,7µm,21.0s						
CPUP	Villa Florida	147.21	232	PKPbc	PKPbc	14 00 51.8	-0.8
	comp=Z,26nm,0.8s,baz=119,slow=2.4,SNR=36						
CPUP	Villa Florida	147.21	232	*e*P	PKiKP	14 00 55.1	+0.1
SLBI	Saint Lucia, B	147.28	311	*e*P	PKPbc	14 00 52.4	-0.7
MCLT	Moule a Chique	147.45	311	*e*P	PKiKP	14 00 55.7	-0.1
SLB	Belfond	147.45	311	*e*P	PKPbc	14 00 53.8	+0.1
CBYP	Canovanas	147.57	323		PKPbc	14 00 54.3	+0.4
GRTK	Grand Turk	147.62	334	IAMs_20	IAMs_20	15 17 24.3	
	comp=Z,11µm,20.0s						
SJG	San Juan	147.87	323	PKPbc	PKPbc	14 00 53.7	-0.9
	comp=Z,25nm,0.5s,baz=48,slow=5.6,SNR=11						
SJG	San Juan	147.87	323	IAMs_20	IAMs_20	15 10 58.8	
	comp=Z,9µm,21.0s						
SVCV	St. Vincent, C	147.88	310	*e*P	PKPdf	14 00 52.5	+0.7
SSV	Crater Summit	147.88	310	*e*P	PKPbc	14 00 54.3	-0.6
SVV	Soufriere Volc	147.90	310	*e*P	PKPbc	14 00 54.2	-0.6
SVB	Belmont	147.96	310	*e*P	PKPbc	14 00 53.9	-1.1
OBIP	Obispado Ponce	148.20	324	IAMs_20	IAMs_20	15 09 33.2	
	comp=Z,13µm,22.0s						
AQDB	Aquidauana	148.25	243	*e*P	PKPab	14 00 59.1	+0.5
MLPR	Magueyes Islan	148.51	324		PKPbc	14 00 56.1	-0.2
CRPR	Cabo Rojo, PR	148.52	324		PKiKP	14 00 57.5	-0.4
TOSP	Speyside	148.60	307	*e*P	PKiKP	14 00 58.8	+0.6
TOSP	Speyside	148.60	307	IAMs_20	IAMs_20	15 10 30.1	
	comp=Z,11µm,22.0s						
GRGR	Grenville	148.97	309	*e*P	PKPbc	14 00 56.5	-1.2
SC01	Santiago de lo	149.25	331	IAMs_20	IAMs_20	15 13 39.9	
	comp=Z,10µm,22.0s						
SALV	Santo Antonio	149.47	252	*e*P	PKiKP	14 01 00.8	+0.8
TBH	Brigand Hill	149.49	306	*e*P	PKPab	14 01 07.3	+3.5
TRN	Trinidad (W)	149.67	307	*e*P	PKiKP	14 01 02.0	+1.6
TPP	Pointe-a-Pierr	149.90	306	*e*P	PKPab	14 01 09.3	+3.9
SDDR	Presa de Saban	149.90	332	IAMs_20	IAMs_20	15 09 15.0	
	comp=Z,12µm,22.0s						
GO05	Huala	149.97	203	IAMs_20	IAMs_20	15 03 12.9	
	comp=Z,8µm,21.0s						
UNM	Universidad Na	150.09	26	IAMs_20	IAMs_20	15 22 34.3	
	comp=Z,9µm,22.0s						
CLDB	Colider	150.25	262	*e*P	PKiKP	14 01 02.0	+0.3
GUIV	Guiria	150.32	308	*e*P	PKPdf	14 00 56.5	+0.7
RPN	Rapa Nui	150.45	134	PKPbc	PKiKP	14 01 01.5	-0.2
	comp=Z,31nm,0.7s,baz=305,slow=5.0,SNR=1.7						
RPN				PKPab	PKPab	14 01 07.6	+0.3
	comp=Z,391nm,1.2s,baz=312,slow=8.1,SNR=8.1						
GTBY	Guantanamo Bay	150.63	339	IAMs_20	IAMs_20	15 10 31.1	
	comp=Z,10µm,21.0s						
PEL	Peldehue	151.06	207	IAMs_20	IAMs_20	15 11 52.0	
	comp=Z,10µm,20.0s						
TEIG	Tepich	152.16	5	PKPbc	PKPbc	14 01 04.3	-0.8
	baz=120,slow=0.0						
TEIG				PKPab	sPKPbc	14 01 13.4	+0.4
ORIV	Oritupano	152.19	306	*e*P	PKPdf	14 01 00.1	+1.4
PLCV	Puerto La Cruz	152.45	310		PKPab	14 01 13.0	-3.0
PCRV	Puerto La Cruz	152.47	310	PKPbc	PKPbc	14 01 05.1	-0.9
	comp=Z,17nm,0.5s,baz=318,slow=2.6,SNR=7.9						
PCRV				PKPab	sPKPbc	14 01 13.0	-0.9
	comp=Z,56nm,0.8s,baz=234,slow=3.5,SNR=8.8						
PTGA	Pitinga	153.37	284	PKP	PKPdf	14 01 00.5	0.0
	comp=Z,3.0nm,0.4s,baz=63,slow=1.5,SNR=5.9						
PTGA				PKPbc	sPKPdf	14 01 08.8	+0.4
	comp=Z,18nm,0.9s,baz=80,slow=3.8,SNR=12						
PTGA	Pitinga	153.37	284	*e*P	PKPbc	14 01 06.9	-1.1
GO04	Tololo Observa	153.58	210	IAMs_20	IAMs_20	15 15 43.3	
	comp=Z,10µm,19.0s						
CMIG	Matias Romero	153.79	20	PKP	PKPdf	14 01 00.4	-0.5
	comp=Z,2.3nm,0.8s,baz=282,slow=14,SNR=2.3						
CMIG				PKPbc	pPKPdf	14 01 07.6	+0.8
	comp=Z,8.8nm,1.0s,baz=281,slow=3.8,SNR=6.8						
CMIG				PKPab	PKPab	14 01 19.7	-1.8
	comp=Z,13nm,0.9s,baz=358,slow=6.6,SNR=7.7						
SIV	San Ignacio	154.47	249	PKP	PKPdf	14 01 01.9	0.0
	comp=Z,2.3nm,0.8s,baz=201,slow=1.3,SNR=9.4						
SIV				PKPbc	PKiKP	14 01 10.7	+0.4
	comp=Z,9.0nm,0.8s,baz=116,slow=4.1,SNR=16						
BAUV	El Baul	155.81	313	*e*P	PKPdf	14 01 12.5	+8.7
URIC	Uribia, Colomb	156.36	324	*e*P	PKPdf	14 01 09.4	+5.0
SAML	Samuel	157.61	265	*e*P	PKPdf	14 01 13.5	+7.4
PB14	IPOC Station P	157.64	219	IAMs_20	IAMs_20	15 11 06.2	
	comp=Z,8µm,20.0s						
SDV	Santo Domingo	157.67	317	PKP	PKPdf	14 01 05.9	-0.5
	comp=Z,5.4nm,0.9s,baz=95,slow=5.2,SNR=7.3						
SDV				PKPab	PKPab	14 01 38.5	0.0
	comp=Z,26nm,0.9s,baz=88,slow=1.0,SNR=4.7						
SDV				PP	PP	14 05 20.0	+3.1
	comp=Z,4.3nm,0.5s,baz=52,slow=10.0,SNR=2.4						
SDV	Santo Domingo	157.67	317	*e*P	PKPdf	14 01 10.3	+3.9
SDV	Santo Domingo	157.67	317	IAMs_20	IAMs_20	15 17 44.7	
	comp=Z,8µm,21.0s						
SDV	Santo Domingo	157.67	317	*e*P	PKPdf	14 01 12.3	+5.9
LVC	Limon Verde	158.01	226	PKP	PKPdf	14 01 07.3	+0.5
	comp=Z,5.3nm,1.0s,baz=51,slow=24,SNR=4.3						
LVC				PKPab	PKPab	14 01 39.6	-0.4
	comp=Z,5.3nm,0.4s,baz=93,slow=20,SNR=18						
LVC	Limon Verde	158.01	226	IAMs_20	IAMs_20	15 21 27.9	
	comp=Z,9µm,20.0s						
LVC	Limon Verde	158.01	226	*e*P	PKPdf	14 01 10.9	+4.1
PB15	IPOC Station P	158.01	224	IAMs_20	IAMs_20	15 09 05.6	
	comp=Z,10µm,21.0s						
SMRC	Santa Marta, M	158.03	328	*e*P	PKPdf	14 01 12.9	+6.3
PB10	IPOC Station P	158.52	221	IAMs_20	IAMs_20	15 11 45.1	
	comp=Z,7µm,22.0s						
CODC	Agustn Codazz	158.62	325	*e*P	PKPdf	14 01 07.5	+0.1
PRVC	Isla de Provid	158.63	348	*e*P	PKPdf	14 01 13.3	+6.0
PB09	IPOC Station P	158.76	227	IAMs_20	IAMs_20	15 12 07.0	
	comp=Z,8µm,20.0s						
PB04	IPOC Station P	159.06	224	IAMs_20	IAMs_20	15 16 53.5	
	comp=Z,9µm,21.0s						
ARGC	Ariguani, Magd	159.13	326	*e*P	PKPdf	14 01 16.2	+8.2
PB07	IPOC Station P	159.27	226	IAMs_20	IAMs_20	15 17 28.3	
	comp=Z,9µm,20.0s						
PB01	IPOC Station P	159.40	228	IAMs_20	IAMs_20	15 09 31.2	
	comp=Z,8µm,22.0s						
SJCC	San Jacinto, C	159.60	329	*e*P	PKPdf	14 01 11.3	+2.7
OCAC	Ocana	159.89	322	*e*P	PKPdf	14 01 14.8	+5.8
SMLC	San Martn de	159.90	324	*e*P	PKPdf	14 01 13.3	+4.5
TAMC	Tame, Arauca	160.22	315	*e*P	PKPdf	14 01 14.7	+5.4
LPAZ	La Paz	160.75	242	PKP	PKPdf	14 01 11.1	+0.6
	comp=Z,6.1nm,1.0s,baz=69,slow=4.0,SNR=12						
LPAZ				PKPab	PKPab	14 01 53.4	+0.9
	comp=Z,16nm,0.9s,baz=93,slow=25,SNR=3.9						
LPAZ				PP	PP	14 05 41.5	+6.5
	comp=Z,3.9nm,1.0s,baz=123,slow=4.1,SNR=2.7						
LPAZ	La Paz	160.75	242	*e*P	PKPdf	14 01 14.7	+4.3
BARC	Barichara	161.06	318	*e*P	PKPdf	14 01 16.7	+6.3
ZARC	Zaragoza, Cauc	161.41	324	*e*P	PKPdf	14 01 11.8	+1.3
RUSC	La Rusia	161.50	316	*e*P	PKPdf	14 01 12.2	+1.0
UREC	San Jos de Ur	161.58	326	*e*P	PKPdf	14 01 10.3	-0.3
PTGC	Puerto Gaitan,	161.99	310	*e*P	PKPdf	14 01 14.0	+2.9
DBBC	Dabeiba	162.56	327	*e*P	PKPdf	14 01 13.7	+1.9
HELC	Santa Helena	162.84	323	*e*P	PKPdf	14 01 13.8	+1.4
CHIC	Chingaza	162.86	315	*e*P	PKPdf	14 01 11.4	-1.1
ROSC	El Rosal	163.11	317	PKP	PKPdf	14 01 13.1	+0.3
	comp=Z,7.2nm,0.3s,baz=92,slow=7.9,SNR=6.7						
ROSC	El Rosal	163.11	317	*e*P	PKPdf	14 01 10.3	-2.4
PTAC	Punta Ardita,	163.26	331	*e*P	PKPdf	14 01 19.2	+6.9
RREF	El Recreo	163.74	320	*e*P	PKPdf	14 01 15.6	+2.0
ANIL	Santa Ana	164.09	319	*e*P	PKPdf	14 01 23.2	+10
PLMC	San Jos del P	164.32	323	*e*P	PKPdf	14 01 16.2	+2.8
ORTC	Ortega, Tolima	164.41	317	*e*P	PKPdf	14 01 18.8	+5.4
MACC	Macarena, Meta	164.61	309	*e*P	PKPdf	14 01 13.7	0.0
YOTC	Yotoco, Valle	165.07	321	*e*P	PKPdf	14 01 12.5	-1.6
GARC	Garzon, Huila	165.81	313	*e*P	PKPdf	14 01 15.3	+0.4
FLOC	Florencia	166.34	312	*e*P	PKPdf	14 01 14.6	-0.4
PCON	Cinco Dias	166.35	316	*e*P	PKPdf	14 01 15.2	-0.6
POPC	Popayan, Colom	166.38	318	*e*P	PKPdf	14 01 16.6	+1.3
SOTA	Rioblanco	166.63	316	*e*P	PKPdf	14 01 16.8	+0.9
GCUF	Volcan Galeras	167.79	316	*e*P	PKPdf	14 01 19.1	+2.4
NNA	Nana	170.21	243	PKP	PKPdf	14 01 19.5	+1.9
	comp=Z,4.2nm,0.3s,baz=259,slow=5.2,SNR=1.9						
ATAH	Atahualpa	172.66	274	PKP	PKPdf	14 01 21.0	+1.7
	comp=Z,7.1nm,0.8s,baz=153,slow=14,SNR=5.8						
ATAH				PKPab	PKPab	14 02 44.2	-0.8
	comp=Z,2.9nm,0.6s,baz=202,slow=5.4,SNR=1.2						

*IDC **21** 13:44:07.5±0.9, 7°.85N×94°.40E, h0km, mb4.9/11, mb1 5.0/12, mb1mx4.6/53, mbtmp4.9/12, ML4.4/1, MS6.2/4, Ms1 6.2/4, ms1mx5.6/50, Error ellipse: s-maj=40.0km s-min=20.7km az=65.0*

ISC 21 13:44:10.7±0.8**, 7°.8N**±0°.1×**94°.4E**±0°.2**, h21km, n21, σ0s.70**/17**, mb5.0**/11**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.47	22	Pn	Pn	13 46 53.5	+0.1
	0.8nm,0.3s,baz=209,slow=14,SNR=1.2						
MKAR	Makanchi Array	40.20	347	P	P	13 51 45.4	-0.3
	21nm,0.8s,baz=161,slow=9.2,SNR=3.3						
SONM	Songino Array	41.17	12	P	P	13 51 54.5	+0.7
	18nm,0.9s,baz=198,slow=7.1,SNR=2.8						
KURBB	Kurchatov Arra	44.67	346	P	P	13 52 21.0	-0.9
	43nm,1.0s,baz=162,slow=7.9,SNR=4.6						
ZALV	Zalesovo Beam	46.65	352	P	P	13 52 36.1	-1.4
	24nm,0.7s,baz=176,slow=7.8,SNR=3.9						
WRA	Warramunga Arr	48.02	126	P	P	13 52 49.1	+0.4
	8.8nm,0.8s,baz=303,slow=8.9,SNR=2.0						
BVAR	Borovoye Array	49.13	341	P	P	13 52 56.2	-0.6
	13nm,0.9s,baz=104,slow=6.1,SNR=2.3						
ASAR	Alice Springs	49.68	130	P	P	13 53 00.3	-1.1
	5.3nm,0.8s,baz=316,slow=7.7,SNR=1.3						
YAK	Yakutsk	59.98	18	LR	LR	14 19 53.1	
	comp=Z,30µm,20.3s,baz=216,slow=36						
FINES	FINESS Array B	72.89	332	P	P	13 55 37.5	-0.4
	12nm,0.8s,baz=135,slow=14,SNR=1.7						
ARCES	ARCESS Array B	75.41	340	P	P	13 55 52.5	-0.1
	14nm,0.9s,baz=101,slow=9.3,SNR=2.5						
NOA	NORSAR Array B	79.91	331	P	P	13 56 18.6	+0.7
	14nm,0.9s,baz=91,slow=6.0,SNR=3.5						
TORD	Torodi Ar. Bea	90.86	283	P	P	13 57 13.4	-0.1
	3.2nm,1.0s,baz=62,slow=5.7,SNR=3.0						
AFI	Afiamalu	95.54	103	LR	LR	14 41 36.8	
	comp=Z,6µm,20.9s,baz=272,slow=36						
INK	Inuvik	96.98	16	LR	LR	14 47 07.5	
	comp=Z,13µm,19.5s,baz=280,slow=39						
RES	Resolute Bay	97.45	2	LR	LR	14 46 51.4	
	comp=Z,12µm,19.5s,baz=339,slow=39						
ULM	Lac du Bonnet	121.49	8	PKP	PKiKP	14 03 03.2	+0.3
	6.5nm,0.8s,baz=335,slow=4.5,SNR=2.1						
NVAR	Mina Array Bea	124.84	31	PKP	PKPdf	14 03 09.8	0.0
	1.5nm,0.7s,baz=305,slow=1.9,SNR=1.9						
PDAR	Pinedale Array	125.13	21	PKP	PKPdf	14 03 10.4	+0.1
	3.9nm,1.1s,baz=20,slow=2.9,SNR=1.9						
PLCA	Paso Flores	144.58	200	PKP	PKPdf	14 03 46.1	-0.1
	18nm,0.9s,baz=202,slow=4.3,SNR=3.5						
CPUP	Villa Florida	147.42	232	PKPbc	PKPbc	14 03 54.8	+1.0
	17nm,0.8s,baz=72,slow=1.6,SNR=3.8						

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*IDC **21** 13:49:12.2±10.0, 7°.38N×94°.86E, h0km, mb4.1/6, mb1 4.1/6, mb1mx3.7/48, mbtmp4.1/6, Error ellipse: s-maj=224.3km s-min=76.4km az=138.0*

ISC 21 13:49:15.1±5.2**, 7°.5N**±0°.5×**94°.6E**±0°.6**, h10km, n7, σ1s.47**/8**, mb4.1**/6**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.82	235	*e*P	Pg	13 49 31.3	+0.3
CMBY				*e*S	Sg	13 49 41.3	-0.5
MKAR	Makanchi Array	40.57	347	P	P	13 56 55.9	+1.1
	2.0nm,0.8s,baz=173,slow=8.0,SNR=2.8						
GEYT	Alibeck	44.80	318	P	P	13 57 28.5	-0.9
	1.5nm,0.6s,baz=136,slow=11,SNR=2.0						
KURBB	Kurchatov Arra	45.04	346	P	P	13 57 29.9	-1.0
	1.6nm,0.7s,baz=166,slow=7.3,SNR=4.9						
ZALV	Zalesovo Beam	47.00	352	P	P	13 57 46.4	0.0
	1.3nm,0.5s,baz=164,slow=7.9,SNR=2.2						
BRTR	Keskin Array B	63.03	311	P	P	13 59 45.1	+2.3
	1.1nm,0.6s,baz=115,slow=4.8,SNR=3.6						
FINES	FINESS Array B	73.27	332	P	P	14 00 45.0	-1.5
	1.8nm,0.7s,baz=108,slow=8.9,SNR=1.4						

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*IDC **21** 13:50:31.9±1.2, 7°.76N×94°.61E, h0km, mb4.1/10, mb1 4.2/11, mb1mx3.9/50, mbtmp4.1/11, ML3.8/1, Error ellipse: s-maj=64.4km s-min=19.4km az=54.0*

*NEIC **21** 13:50:32.4±2.3, 7°.54N±0°.09×94°.3E±0°.1, h10km±1km, mb4.7/11, Error ellipse: s-maj=20.0km s-min=14.6km az=251.0*

ISC 21 13:50:35.1±0.6**, 7°.60N**±0°.07×**94°.40E**±0°.08**, h24km, n34, σ1s.64**/34**, mb4.5**/16**, 1C, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.75	219	*e*P	Pb	13 50 48.4	-1.1
CMBY				*e*S	Sb	13 50 59.2	-0.2
PSI	Prapat	6.56	136	Pn	Pn	13 52 12.6	+2.4
	1.8nm,0.3s,baz=317,slow=18,SNR=2.3						
KULM	Kulim	6.62	110	Pn	Pn	13 52 09.4	-1.5
RPSI	Rantau Prapat	6.64	137		Pn	13 52 12.6	+1.4
IPM	Ipoh	7.28	115	Pn	Pn	13 52 20.9	+0.8
PBKT	Sadao Pong	10.98	35	Pn	Pn	13 53 12.2	+1.4
MYKOM	Kota Tinggi	11.04	121	Pn	Pn	13 53 11.8	+0.2
CMAR	Chiang Mai Arr	11.66	22	Pn	Pn	13 53 22.2	+2.1
	1.0nm,0.3s,baz=213,slow=13,SNR=5.8						
CHTO	Chiang Mai	11.99	21	Pn	Pn	13 53 25.3	+0.7
LSA	Lhasa	22.19	352	P	P	13 55 27.0	-3.2
KBL	Kabul	35.55	323	P	P	13 57 29.6	-1.1
KBL				IAmb	IAmb	13 57 41.7	
	comp=Z,7.3nm,1.0s						
MK31	Makanchi Array	40.41	347	P	P	13 58 10.6	-0.7
MKAR	Makanchi Array	40.41	347	P	P	13 58 10.1	-1.2
	comp=Z,1.6nm,0.6s,baz=171,slow=6.6,SNR=2.6						
MSEY	Mahe Island	40.70	254	P	P	13 58 15.3	+1.0
KURBB	Kurchatov Arra	44.87	346	P	P	13 58 47.0	-0.5
	comp=Z,3.2nm,0.5s,baz=170,slow=7.2,SNR=9.5						
KURK	Kurchatov	44.94	346	P	P	13 58 47.0	-1.0
KURK	Kurchatov	44.94	346	IAmb	IAmb	13 58 52.8	
	comp=Z,19nm,1.1s						
ZAA0	Zalesovo Array	46.86	352	P	P	13 59 03.3	+0.2
ZAA0				IAmb	IAmb	13 59 10.2	
	comp=Z,6.2nm,0.8s						
ZALV	Zalesovo Beam	46.86	352	P	P	13 59 04.0	+0.9
	comp=Z,4.7nm,0.6s,baz=171,slow=7.7,SNR=8.8						
ZALV	Zalesovo Beam	46.86	352	P	P	13 59 03.4	+0.3
WB0	Warramunga Arr	47.85	125	P	P	13 59 10.8	-0.5
WB0				IAmb	IAmb	13 59 27.0	
	comp=Z,6.7nm,1.1s						
WRA	Warramunga Arr	47.89	126	P	P	13 59 11.4	-0.3
	comp=Z,0.4nm,0.5s,baz=305,slow=8.4,SNR=1.1						
WRA	Warramunga Arr	47.89	126	P	P	13 59 07.7	-4.0
WRAB	Tennant Creek	47.90	125	P	P	13 59 09.0	-2.7
ASAR	Alice Springs	49.54	130	P	P	13 59 23.6	-0.7
	comp=Z,0.5nm,0.6s,baz=316,slow=6.5,SNR=1.7						
NRIK	Noril'sk	61.82	357	P	P	14 00 51.7	-0.1
	comp=Z,1.1nm,0.4s,baz=99,slow=24,SNR=1.7						
BRTR	Keskin Array B	62.80	311	P	P	14 01 00.8	+1.7
	comp=Z,0.8nm,0.6s,baz=142,slow=5.6,SNR=4.1						
ILGA	Ilgaz	63.06	312	P	P	14 01 00.5	-0.4
ILGA				IAmb	IAmb	14 01 06.9	
	comp=Z,5.9nm,1.0s						
TIXI	Tiksi	67.45	11	P	P	14 01 28.8	+0.4
TIXI				IAmb	IAmb	14 01 33.2	
	comp=Z,5.4nm,0.6s						
FINES	FINESS Array B	73.07	332	P	P	14 02 01.6	-1.4
	comp=Z,3.5nm,0.8s,baz=118,slow=12,SNR=1.4						
GERES	GERESS Array B	78.20	318	P	P	14 02 34.8	+2.0
	comp=Z,0.7nm,0.6s,baz=9.5,slow=4.1,SNR=3.7						
NB2	NORSAR Subarra	80.09	331	P	P	14 02 46.4	+3.6
	comp=Z,3.0nm,0.9s,baz=91,slow=5.9						
NOA	NORSAR Array B	80.09	331	P	P	14 02 42.3	-0.5
	comp=Z,2.2nm,0.8s,baz=225,slow=27,SNR=2.4						
SYO	Syowa Base	85.22	197⇑	*e*PcP	PcP	14 03 12.0	-0.3

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*IDC **21** 13:52:18.6±0.9, 7°.59N×94°.30E, h0km, mb4.1/13, mb1 4.2/13, mb1mx3.9/49, mbtmp4.1/13, Error ellipse: s-maj=33.9km s-min=20.1km az=64.0*

*NEIC **21** 13:52:20.1±2.4, 7°.61N±0°.06×94°.4E±0°.1, h10km±1km, mb4.8/14, Error ellipse: s-maj=17.1km s-min=10.6km az=258.0*

ISC 21 13:52:22.3±0.5**, 7°.55N**±0°.06×**94°.31E**±0°.07**, h24km, n38, σ1s.41**/34**, mb4.5**/19**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.66	215	*e*P	Pb	13 52 34.5	-0.7
CMBY				*e*S	Sb	13 52 44.1	+0.1
CMBY				IAML		13 52 47.0	
	comp=N,18µm,0.2s						
CMBY				IAML		13 52 47.8	
	comp=E,15µm,0.3s						
PSI	Prapat	6.59	136	Pn	Pn	13 54 04.7	+6.8
	comp=E,1.1nm,0.3s,baz=322,slow=18,SNR=2.1						
RPSI	Rantau Prapat	6.66	136		Pn	13 54 04.7	+5.8
GSI	Gunungsitoli	7.01	152	Pn	Pn	13 54 05.5	+1.9
PBKT	Sadao Pong	11.08	35	Pn	Pn	13 55 01.1	+1.7
MYKOM	Kota Tinggi	11.10	121	Pn	Pn	13 55 02.1	+2.5
CMAR	Chiang Mai Arr	11.74	22	Pn	Pn	13 55 14.0	+5.5
	comp=E,0.2nm,0.3s,baz=212,slow=14,SNR=2.8						
DLV	T Lat	14.64	72	Pn	Pn	13 55 49.3	+1.1
KKM	Kota Kinabalu	21.80	93	P	P	13 57 09.8	-3.3
LSA	Lhasa	22.23	353	P	P	13 57 20.6	+2.7
UGM	Wanagama	22.30	133	P	P	13 57 18.5	+0.2
TBP	Tagbilaran	29.29	84	*e*P	P	13 58 24.0	+0.8
NIL	Nilore	32.46	326	P	P	13 58 50.3	-0.6
NIL				IAmb	IAmb	13 58 56.8	
	comp=Z,17nm,0.8s						
JOW	Kunigami	37.50	55	P	P	13 59 31.4	-3.1
JOW				IAmb	IAmb	13 59 35.4	
	comp=Z,23nm,0.9s						
PSA00	Pilbara Seismi	38.28	140	P	P	13 59 40.5	-0.7
PSA00				IAmb	IAmb	13 59 50.2	
	comp=Z,23nm,1.4s						
MKAR	Makanchi Array	40.44	347	P	P	13 59 58.5	-0.4
	comp=Z,3.1nm,0.8s,baz=162,slow=8.4,SNR=5.5						
MKAR	Makanchi Array	40.44	347	P	P	13 59 57.6	-1.2
MSEY	Mahe Island	40.60	254	P	P	14 00 01.5	+0.8
SONM	Songino Array	41.44	12	P	P	14 00 07.5	+0.3
	comp=Z,2.0nm,0.9s,baz=186,slow=7.2,SNR=3.8						
GEYT	Alibeck	44.55	318	P	P	14 00 32.6	+0.1
	comp=Z,5.4nm,0.6s,baz=134,slow=4.3,SNR=7.3						
GEYT	Alibeck	44.55	318	P	P	14 00 32.5	+0.1
GYA0B	ALIBECK ARRAY	44.55	318	P	P	14 00 33.5	+1.0
GYA0B				IAmb	IAmb	14 00 42.8	
	comp=Z,8.2nm,0.9s						
KURBB	Kurchatov Arra	44.90	346	P	P	14 00 34.5	-0.5
	comp=Z,6.0nm,0.8s,baz=171,slow=6.9,SNR=7.8						
KURK	Kurchatov	44.96	346	P	P	14 00 34.5	-1.0
KURK	Kurchatov	44.96	346	IAmb	IAmb	14 00 41.3	
	comp=Z,15nm,1.1s						
ZALV	Zalesovo Beam	46.90	352	P	P	14 00 50.9	+0.2
	comp=Z,3.2nm,0.6s,baz=189,slow=7.6,SNR=4.9						
WRA	Warramunga Arr	47.94	125	P	P	14 00 59.0	-0.3
	comp=Z,0.9nm,0.9s,baz=303,slow=9.1,SNR=2.2						
WRA	Warramunga Arr	47.94	125	P	P	14 00 56.5	-2.8
BVAR	Borovoye Array	49.35	341	P	P	14 01 08.8	-0.9
	comp=Z,1.9nm,1.0s,baz=116,slow=6.6,SNR=2.3						
RAYN	Ar Rayn	49.37	294	P	P	14 01 11.3	+0.9
RAYN				IAmb	IAmb	14 01 19.2	
	comp=Z,7.1nm,0.8s						
ASAR	Alice Springs	49.58	130	P	P	14 01 11.8	-0.1
	comp=Z,1.3nm,0.8s,baz=303,slow=7.6,SNR=2.8						
BRTR	Keskin Array B	62.76	311	P	P	14 02 44.5	-1.5
	comp=Z,0.7nm,0.6s,baz=131,slow=5.2,SNR=1.0						
FINES	FINESS Array B	73.07	332	P	P	14 03 50.0	-0.3
	comp=Z,3.1nm,0.8s,baz=97,slow=9.8,SNR=2.2						
BOSA	Boshof	75.56	238	P	P	14 04 06.4	+0.8
	comp=Z,1.9nm,0.7s,baz=112,slow=6.3,SNR=4.3						
BOSA	Boshof	75.56	238	IAmb	IAmb	14 04 13.0	
	comp=Z,15nm,1.4s						
GERES	GERESS Array B	78.18	318	P	P	14 04 20.1	+0.1
	comp=Z,0.7nm,0.7s,baz=74,slow=7.2,SNR=2.8						
NOA	NORSAR Array B	80.09	331	P	P	14 04 29.4	-0.8
	comp=Z,1.6nm,0.8s,baz=93,slow=5.5,SNR=3.3						
CPUP	Villa Florida	147.20	232	PKPbc	PKPbc	14 12 04.7	+0.3
	comp=Z,2.5nm,0.9s,baz=129,slow=7.1,SNR=3.1						

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*DDA **21** 13:53:00.9, 38°.54N×44°.03E, h7km±5km, ML2.4*

*ISK **21** 13:53:04.5, 38°.56N×43°.67E, h15km, ML2.6/5*

ISC 21 13:53:01.9±1.4**, 38°.52N**±0°.03×**43°.88E**±0°.05**, h12km**±9km**, n12, σ1s.11**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TVAN	Van	0.37	272	*i* P	Pg	13 53 09.7	+0.3
TVAN				*i* S	Sb	13 53 18.6	+2.1
TVAN				IAML		13 53 25.0	
	comp=N,539nm,0.5s						
TVAN				IAML		13 53 26.0	
	comp=E,616nm,0.7s						
VANB	Van	0.39	281	PG	Pg	13 53 09.7	-0.1
VANB				SG	Sg	13 53 13.5	-1.6
BASK	Baskale_VAN	0.47	168	*i* P	Pg	13 53 11.6	+0.3
BASK				IAML		13 53 23.0	
	comp=E,217nm,0.4s						
BASK				IAML		13 53 24.0	
	comp=N,309nm,0.2s						
VMUR	Van-Muradiye	0.53	333	*i* P	Pg	13 53 12.4	+0.1
VMUR				*i* S	Sn	13 53 23.6	-1.0
VMUR				IAML		13 53 24.0	
	comp=N,185nm,0.7s						
VMUR				IAML		13 53 27.0	
	comp=E,178nm,0.6s						
CLDR	Caldiran	0.62	3	PG	Pn	13 53 16.7	-0.2
CLDR				SG	Sn	13 53 26.2	-0.8
GEVA	Gevas	0.68	253	*i* P	Pg	13 53 13.8	-1.3
GEVA				*i* S	Sb	13 53 25.8	+0.5
AKDM	Akdamar-Van	0.73	255	PG	Pg	13 53 15.9	-0.2
AKDM				SG	Sg	13 53 25.5	-0.3
HAKT	HAKKARI	0.97	188	*i* P	Pg	13 53 19.8	-0.8
HAKT				*i* S	Sn	13 53 35.3	-0.1
HAKT				IAML		13 53 39.0	
	comp=E,40nm,0.4s						
HAKT				IAML		13 53 42.0	
	comp=N,29nm,0.5s						
AGRB	Hanur-Agry	1.26	327	PN	Pg	13 53 26.5	+0.3
AGRB				SN	Sn	13 53 42.5	-0.2
GURO	Guroymak-BITLI	1.45	272	PN	Pn	13 53 28.1	-0.1
GURO				SN	Sn	13 53 45.8	-1.4
SIRT	Sirnak	1.52	229	PN	Pg	13 53 30.9	-0.3
SRTM	Siirt_Merkez	1.63	252	*i* P	Pg	13 53 32.6	-0.6
SRTM				*i* S	Sg	13 53 57.2	+2.9
SRTM				IAML		13 53 58.0	
	comp=E,110nm,0.4s						
SRTM				IAML		13 54 07.0	
	comp=N,86nm,0.8s						

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*IDC **21** 13:53:06.5±5.7, 7°.03N×94°.70E, h0km, mb4.2/10, mb1 4.3/10, mb1mx3.9/48, mbtmp4.2/10, Error ellipse: s-maj=125.5km s-min=52.9km az=142.0*

*NEIC **21** 13:53:08.7±2.2, 7°.0N±0°.1×94°.5E±0°.2, h10km±2km, mb4.6/12, Error ellipse: s-maj=26.2km s-min=20.6km az=255.0*

ISC 21 13:53:11.7±1.1**, 7°.1N**±0°.2×**94°.5E**±0°.1**, h26km, n33, σ1s.21**/30**, mb4.5**/16**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBKT	Sadao Pong	11.37	34	Pn	Pn	13 55 53.6	+1.1
CMAR	Chiang Mai Arr	12.11	21	Pn	Pn	13 56 04.9	+2.2
	0.2nm,0.3s,baz=213,slow=14,SNR=1.7						
CMAR	Chiang Mai Arr	12.11	21		Pn	13 56 02.6	-0.1
LSA	Lhasa	22.70	353	P	P	13 58 12.7	+0.7
LSA				IAmb	IAmb	13 58 14.0	
	comp=Z,13nm,0.7s						
KNRA	Kununurra	40.83	124	P	P	14 00 51.4	-0.1
KNRA				IAmb	IAmb	14 00 56.0	
	comp=Z,14nm,1.2s						
MK31	Makanchi Array	40.91	347	P	P	14 00 49.3	-2.5
MK31				IAmb	IAmb	14 00 58.3	
	comp=Z,11nm,1.2s						
MKAR	Makanchi Array	40.91	347	P	P	14 00 51.1	-0.8
	comp=Z,3.7nm,0.7s,baz=165,slow=8.2,SNR=6.0						
MKAR	Makanchi Array	40.91	347	P	P	14 00 49.7	-2.1
MAKZ	Makanchi	40.99	347	P	P	14 00 49.8	-2.8
SONM	Songino Array	41.85	12	P	P	14 00 58.1	-1.6
	comp=Z,2.4nm,1.0s,baz=192,slow=13,SNR=3.2						
SONM	Songino Array	41.85	12	IAmb	IAmb	14 01 07.9	
	comp=Z,2.8nm,1.1s						
GEYT	Alibeck	44.98	318	P	P	14 01 25.9	+0.8
	comp=Z,3.4nm,0.5s,baz=108,slow=4.8,SNR=4.6						
GEYT	Alibeck	44.98	318	IAmb	IAmb	14 01 32.7	
	comp=Z,3.4nm,0.7s						
KURBB	Kurchatov Arra	45.37	346	P	P	14 01 27.7	-0.1
	comp=Z,7.1nm,0.8s,baz=170,slow=7.0,SNR=7.4						
KURK	Kurchatov	45.43	346	P	P	14 01 27.7	-0.6
KURK	Kurchatov	45.43	346	IAmb	IAmb	14 01 35.5	
	comp=Z,23nm,1.4s						
ZAA0	Zalesovo Array	47.36	352	P	P	14 01 42.7	-0.7
ZAA0				IAmb	IAmb	14 01 44.8	
	comp=Z,8.4nm,1.0s						
ZALV	Zalesovo Beam	47.36	352	P	P	14 01 43.4	0.0
	comp=Z,7.9nm,0.8s,baz=179,slow=8.0,SNR=5.7						
ZALV	Zalesovo Beam	47.36	352	P	P	14 01 43.3	-0.1
RAYN	Ar Rayn	49.69	295	P	P	14 02 03.8	+1.9
RAYN				IAmb	IAmb	14 02 11.4	
	comp=Z,4.2nm,0.7s						
BVAR	Borovoye Array	49.82	341	P	P	14 02 01.4	-1.0
	comp=Z,1.4nm,0.7s,baz=145,slow=13,SNR=2.7						
ABKAR	Akbulak array	51.05	331	P	P	14 02 11.7	-0.1
ABKAR	Akbulak array	51.05	331	P	P	14 02 10.9	-0.8
ABKAR				IAmb	IAmb	14 02 24.9	
	comp=Z,6.0nm,1.3s						
BRTR	Keskin Array B	63.16	311	P	P	14 03 37.3	-0.6
	comp=Z,0.6nm,0.6s,baz=121,slow=6.4,SNR=2.1						
BRTR	Keskin Array B	63.16	311	P	P	14 03 36.1	-1.7
TIXI	Tiksi	67.93	11	P	P	14 04 08.1	+0.3
TIXI				IAmb	IAmb	14 04 09.2	
	comp=Z,8.3nm,1.1s						
FIA1	FINESS Array S	73.53	332	P	P	14 04 41.7	-0.4
FINES	FINESS Array B	73.53	332	P	P	14 04 42.6	+0.5
	comp=Z,3.5nm,0.8s,baz=104,slow=8.0,SNR=3.9						
FINES	FINESS Array B	73.53	332	P	P	14 04 41.8	-0.3
ARCES	ARCESS Array B	76.09	340	P	P	14 04 57.3	+0.5
GERES	GERESS Array B	78.61	318	P	P	14 05 11.9	+0.4
	comp=Z,0.9nm,0.7s,baz=99,slow=6.1,SNR=2.8						
NB2	NORSAR Subarra	80.55	331	P	P	14 05 22.1	+0.4
	comp=Z,3.3nm,0.8s,baz=92,slow=5.9						
NOA	NORSAR Array B	80.55	331	P	P	14 05 21.7	0.0
	comp=Z,2.6nm,0.9s,baz=92,slow=5.7,SNR=3.3						

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*NEIC **21** 13:54:33.8±2.6, 7°.8N±0°.1×94°.71E±0°.07, h10km±1km, mb4.9/7, Error ellipse: s-maj=17.8km s-min=10.7km az=163.0*

*IDC **21** 13:54:33.5±0.7, 7°.81N×94°.80E, h0km, mb4.1/19, mb1 4.2/20, mb1mx4.0/51, mbtmp4.1/20, ML3.7/1, Error ellipse: s-maj=24.6km s-min=17.3km az=55.0*

ISC 21 13:54:34.7±0.5**, 7°.8N**±0°.1×**94°.8E**±0°.1**, h10km, n46, σ1s.47**/37**, mb4.2**/20**, 1C, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	1.19	226	*e*P	Pb	13 54 47.8	-10
CMBY				*e*S	Sb	13 55 01.7	-11
KULM	Kulim	6.35	113	Pn	Pn	13 56 08.2	-0.1
PSI	Prapat	6.48	140	Pn	Pn	13 56 12.5	+2.2
	1.7nm,0.3s,baz=337,slow=13,SNR=2.0						
RPSI	Rantau Prapat	6.56	141		Pn	13 56 12.5	+1.2
IPM	Ipoh	7.04	118	Pn	Pn	13 56 20.1	+2.1
CMAR	Chiang Mai Arr	11.30	21	Pn	Pn	13 57 23.2	+6.9
	0.2nm,0.3s,baz=211,slow=14,SNR=1.6						
H08S3	Diego Garcia H	27.03	236	T	T	14 29 09.4	
	baz=55,slow=75,SNR=15						
H08S2	Diego Garcia H	27.03	236	T	T	14 29 18.4	
	baz=55,slow=75,SNR=14						
H08S1	Diego Carcia H	27.05	236	T	T	14 29 19.7	
	baz=55,slow=75						
WSAR	Wadi Sarin	37.91	298	P	P	14 01 54.4	+1.9
	2.4nm,0.6s,baz=153,slow=9.0,SNR=2.0						
MK31	Makanchi Array	40.27	347	P	P	14 02 11.2	-0.7
MKAR	Makanchi Array	40.27	347	P	P	14 02 12.8	+0.9
	2.8nm,0.7s,baz=170,slow=7.2,SNR=6.6						
MKAR	Makanchi Array	40.27	347	P	P	14 02 11.0	-0.9
SONM	Songino Array	41.06	12	P	P	14 02 20.2	+1.7
	0.6nm,0.8s,baz=5.1,slow=25,SNR=1.2						
SONM	Songino Array	41.06	12	P	P	14 02 16.2	-2.3
GEYT	Alibeck	44.66	318	P	P	14 02 46.4	-1.4
	4.0nm,0.6s,baz=149,slow=6.9,SNR=4.7						
GEYT	Alibeck	44.66	318	P	P	14 02 45.0	-2.8
KURBB	Kurchatov Arra	44.74	345	P	P	14 02 48.0	-0.1
	1.4nm,0.7s,baz=171,slow=7.2,SNR=9.6						
KURK	Kurchatov	44.80	345	P	P	14 02 48.0	-0.6
KURK	Kurchatov	44.80	345	IAmb	IAmb	14 02 58.6	
	comp=Z,27nm,1.2s						
ZALV	Zalesovo Beam	46.68	352	P	P	14 03 04.8	+1.3
	comp=Z,5.6nm,0.6s,baz=184,slow=7.1,SNR=6.8						
ZALV	Zalesovo Beam	46.68	352	P	P	14 03 03.9	+0.5
WRA	Warramunga Arr	47.72	126	P	P	14 03 12.2	+0.1
	comp=Z,0.4nm,0.6s,baz=303,slow=9.0,SNR=1.5						
WRA	Warramunga Arr	47.72	126	P	P	14 03 06.6	-5.5
BVAR	Borovoye Array	49.23	341	P	P	14 03 24.3	+1.1
	comp=Z,2.0nm,0.8s,baz=145,slow=8.2,SNR=4.4						
ASAR	Alice Springs	49.40	130	P	P	14 03 24.6	-0.4
	comp=Z,1.2nm,0.8s,baz=316,slow=3.9,SNR=3.1						
ASAR	Alice Springs	49.40	130	P	P	14 03 22.1	-2.9
ARU	Arti	56.17	337	P	P	14 04 14.7	+0.2
	comp=Z,0.4nm,0.3s,baz=299,slow=23,SNR=1.4						
ARU	Arti	56.17	337	IAmb	IAmb	14 04 23.5	
	comp=Z,29nm,1.5s						
KMBO	Kilima Mbogo	58.06	264	P	P	14 04 29.6	+0.7
	comp=Z,1.7nm,0.5s,baz=108,slow=16,SNR=4.9						
BRTR	Keskin Array B	62.94	311	P	P	14 05 00.8	-1.0
	comp=Z,1.0nm,0.7s,baz=123,slow=7.8,SNR=4.2						
PETK	Petropavlovsk-	67.66	35	P	P	14 05 31.7	-0.2
	comp=Z,4.2nm,1.0s,baz=262,slow=10,SNR=3.6						
FINES	FINESS Array B	73.04	332	P	P	14 06 06.0	+1.3
	comp=Z,7.0nm,0.9s,baz=107,slow=4.1,SNR=4.3						
ARCES	ARCESS Array B	75.52	340	P	P	14 06 20.7	+1.7
	comp=Z,3.9nm,1.0s,baz=66,slow=5.9,SNR=3.7						
ARCES	ARCESS Array B	75.52	340	P	P	14 06 19.1	+0.1
BOSA	Boshof	76.11	238	P	P	14 06 23.8	+0.4
	comp=Z,3.2nm,0.8s,baz=105,slow=5.3,SNR=3.7						
BOSA	Boshof	76.11	238	P	P	14 06 21.5	-1.8
BOSA				IAmb	IAmb	14 06 35.5	
	comp=Z,12nm,1.4s						
DPC	Dobruska-Polom	76.65	320	*e*P	P	14 06 27.2	+1.3
GERES	GERESS Array B	78.28	318	P	P	14 06 34.9	-0.2
	comp=Z,1.5nm,0.6s,baz=81,slow=6.1,SNR=4.7						
KHC	Kasperske Hory	78.37	318	*e*P	P	14 06 39.5	+4.0
NB2	NORSAR Subarra	80.08	331	P	P	14 06 45.4	+0.8
	comp=Z,5.3nm,0.9s,baz=92,slow=5.9						
NOA	NORSAR Array B	80.08	331	P	P	14 06 45.5	+0.8
	comp=Z,3.1nm,0.9s,baz=92,slow=5.7,SNR=4.4						
SYO	Syowa Base	85.56	197⇑	*i*X	P	14 07 10.0	-2.7
TORD	Torodi Ar. Bea	91.23	283	P	P	14 07 42.7	+1.7
	comp=Z,1.0nm,0.9s,baz=122,slow=3.6,SNR=3.0						
NVAR	Mina Array Bea	124.61	31	PKP	PKPdf	14 13 33.6	-1.6
	comp=Z,0.7nm,0.9s,baz=139,slow=3.5,SNR=2.1						
PDAR	Pinedale Array	124.96	22	PKP	PKiKP	14 13 36.9	+0.7
	comp=Z,0.1nm,0.4s,baz=82,slow=32,SNR=1.4						

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*IDC **21** 13:56:39.0±0.6, 7°.60N×94°.85E, h0km, mb4.2/23, mb1 4.3/23, mb1mx4.1/49, mbtmp4.2/23, Error ellipse: s-maj=25.0km s-min=15.0km az=55.0*

*NEIC **21** 13:56:40.3±2.7, 7°.3N±0°.1×94°.21E±0°.06, h10km±1km, mb4.8/11, Error ellipse: s-maj=20.4km s-min=6.1km az=204.0*

ISC 21 13:56:42.8±0.5**, 7°.39N**±0°.07×**94°.46E**±0°.07**, h24km, n57, σ1s.80**/55**, mb4.3**/28**, 4C-4D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.65	235	*e*P	Pb	13 56 52.8	-2.8
CMBY				*e*S	Sb	13 57 04.4	+0.1
LHMI	Lhok Sumawe	3.27	131	Pn	Pn	13 57 33.3	+0.7
PSI	Prapat	6.37	136	Pn	Pn	13 58 16.9	+1.6
	1.3nm,0.3s,baz=356,slow=23,SNR=2.5						
RPSI	Rantau Prapat	6.44	136		Pn	13 58 16.9	+0.6
KULM	Kulim	6.49	108	Pn	Pn	13 58 21.7	+4.8
IPM	Ipoh	7.14	114		Pn	13 58 26.3	+0.5
IPM					Pn	13 58 26.4	+0.6
PBKT	Sadao Pong	11.12	34		Pn	13 59 23.1	+2.7
CMAR	Chiang Mai Arr	11.83	21	Pn	Pn	13 59 30.9	+0.7
	0.6nm,0.3s,baz=212,slow=14,SNR=6.2						
LSA	Lhasa	22.41	352	P	P	14 01 40.8	+0.5
LSA				IAmb	IAmb	14 01 47.6	
	comp=Z,30nm,0.8s						
WSAR	Wadi Sarin	37.84	299	P	P	14 04 00.4	+2.5
	comp=Z,3.0nm,0.7s,baz=111,slow=8.6,SNR=1.8						
AAK	Ala-Archa	39.28	337	P	P	14 04 09.0	-0.8
	comp=Z,0.9nm,0.4s,baz=205,slow=17,SNR=2.5						
FITZ	Fitzroy Crossi	39.86	130	P	P	14 04 12.3	-2.5
	comp=Z,3.1nm,1.2s,baz=342,slow=6.4,SNR=1.7						
FITZ	Fitzroy Crossi	39.86	130	IAmb	IAmb	14 04 20.7	
	comp=Z,7.1nm,1.5s						
MK31	Makanchi Array	40.63	347	P	P	14 04 19.1	-1.8
MK31				IAmb	IAmb	14 04 25.4	
	comp=Z,11nm,0.9s						
MKAR	Makanchi Array	40.63	347	P	P	14 04 18.4	-2.5
	comp=Z,2.0nm,0.7s,baz=169,slow=8.8,SNR=6.4						
SONM	Songino Array	41.56	12	P	P	14 04 25.0	-3.7
	comp=Z,1.3nm,0.8s,baz=150,slow=6.0,SNR=3.9						
GEYT	Alibeck	44.77	318	P	P	14 04 55.8	+1.1
	comp=Z,2.4nm,0.7s,baz=152,slow=6.5,SNR=3.1						

GEYT	Alibeck	44.77	318	P	P	14 04 54.0	-0.7
KURBB	Kurchatov Arra	45.09	346	P	P	14 04 55.9	-1.1
	comp=Z,6.2nm,0.9s,baz=168,slow=7.2,SNR=7.7						
KURK	Kurchatov	45.15	346	P	P	14 04 58.9	+1.4
KURK				IAmb	IAmb	14 05 02.6	
	comp=Z,16nm,0.9s						
ZAA0	Zalesovo Array	47.07	352	P	P	14 05 11.2	-1.4
ZALV	Zalesovo Beam	47.07	352	P	P	14 05 11.2	-1.4
	comp=Z,4.9nm,0.6s,baz=170,slow=8.6,SNR=4.2						
ZALV	Zalesovo Beam	47.07	352	P	P	14 05 10.7	-1.8
WRA	Warramunga Arr	47.72	125	P	P	14 05 16.4	-1.7
	comp=Z,0.3nm,0.4s,baz=296,slow=6.4,SNR=7.5						
WRA	Warramunga Arr	47.72	125	IAmb	IAmb	14 05 25.9	
	comp=Z,0.2nm,0.8s						
ASAR	Alice Springs	49.36	130	P	P	14 05 30.1	-0.6
	comp=Z,2.4nm,1.0s,baz=304,slow=7.0,SNR=4.9						
BVAR	Borovoye Array	49.55	341	P	P	14 05 32.6	+1.0
	comp=Z,7.0nm,0.9s,baz=134,slow=6.4,SNR=12						
RAYN	Ar Rayn	49.58	295	P	P	14 05 29.7	-2.7
RAYN				IAmb	IAmb	14 05 38.6	
	comp=Z,7.8nm,0.7s						
ABKAR	Akbulak array	50.81	331	P	P	14 05 40.7	-0.6
ARU	Arti	56.46	337	P	P	14 06 22.9	+0.3
	comp=Z,1.4nm,0.6s,baz=150,slow=6.4,SNR=4.9						
KBZ	Khabaz	57.66	318	P	P	14 06 31.8	+0.5
	comp=Z,3.4nm,0.9s,baz=151,slow=6.7,SNR=3.5						
KMBO	Kilima Mbogo	57.69	264	P	P	14 06 34.9	+2.6
	comp=Z,1.2nm,0.3s,baz=39,slow=11,SNR=4.0						
NRIK	Noril'sk	62.04	357	P	P	14 07 02.7	+1.8
	comp=Z,4.5nm,0.8s,baz=143,slow=10.0,SNR=5.8						
BRTR	Keskin Array B	62.98	311	P	P	14 07 08.1	+0.1
	comp=Z,2.0nm,0.7s,baz=119,slow=7.4,SNR=9.0						
BRTR	Keskin Array B	62.98	311	P	P	14 07 09.1	+1.0
TIXI	Tiksi	67.64	11	P	P	14 07 36.6	-0.8
AKASG	Malin Array Be	68.73	322	P	P	14 07 44.7	+0.1
	comp=Z,0.9nm,0.6s,baz=88,slow=5.1,SNR=6.1						
VRI	Vrincioaia	69.27	316	⇑P	P	14 07 46.5	-1.6
PLOR	Plostina	69.32	316	⇓P	P	14 07 47.6	-0.8
TESR	Tescani	69.45	317	⇓P	P	14 07 52.8	+3.6
MLR	Muntele Rosu	69.74	316	⇓P	P	14 07 49.2	-2.0
ARR	Arges	70.63	315	⇓P	P	14 07 57.1	+0.6
DRGR		72.17	317	⇑P	P	14 08 09.5	+3.7
FINES	FINESS Array B	73.28	332	P	P	14 08 10.4	-1.6
	comp=Z,4.9nm,0.9s,baz=86,slow=5.9,SNR=4.6						
BOSA	Boshof	75.60	238	P	P	14 08 29.4	+3.1
	comp=Z,1.6nm,0.7s,baz=21,slow=6.1,SNR=3.9						
ARCES	ARCESS Array B	75.83	340	P	P	14 08 25.6	-1.0
	comp=Z,3.3nm,0.9s,baz=97,slow=7.4,SNR=2.3						
GERES	GERESS Array B	78.40	318	P	P	14 08 43.7	+2.1
	comp=Z,2.1nm,0.8s,baz=88,slow=4.1,SNR=8.6						
NB2	NORSAR Subarra	80.31	331	P	P	14 08 48.5	-3.2
	comp=Z,26nm,1.4s,baz=91,slow=5.3						
NB2	NORSAR Subarra	80.31	331	P	P	14 08 48.5	-3.2
	baz=91,slow=5.3						
NOA	NORSAR Array B	80.31	331	P	P	14 08 52.8	+1.1
	comp=Z,3.2nm,0.8s,baz=93,slow=5.5,SNR=6.5						
SYO	Syowa Base	85.04	197	⇑ePcP	PcP	14 09 19.0	-0.2
SYO	Syowa Base	85.04	197	⇑eX	P	14 09 25.4	+9.4
TORD	Torodi Ar. Bea	91.02	283	P	P	14 09 47.2	+1.4
	comp=Z,1.1nm,0.9s,baz=63,slow=6.2,SNR=2.8						
ILAR	Eielson Array	95.07	22	P	P	14 10 03.1	-0.4
	comp=Z,0.2nm,0.8s,baz=270,slow=4.5,SNR=1.7						
NVAR	Mina Array Bea	125.16	31	PKP	PKiKP	14 15 42.4	0.0
	comp=Z,0.7nm,0.9s,baz=270,slow=0.9,SNR=2.5						
PLCA	Paso Flores	144.21	200	PKP	PKPdf	14 16 17.5	+0.3
	comp=Z,2.5nm,0.8s,baz=179,slow=4.0,SNR=3.6						
CPUP	Villa Florida	147.22	232	PKPbc	PKPdf	14 16 23.6	+1.0
	comp=Z,2.4nm,0.8s,baz=118,slow=1.7,SNR=3.1						

IDC ***21*** *13:59:24.8±0.9, 7°.47N×94°.15E, h0km, mb4.1/14, mb1 4.2/16, mb1mx3.9/62, mbtmp4.1/16, ML4.2/2, Error ellipse: s-maj=37.2km s-min=17.8km az=55.0*

NEIC ***21*** *13:59:25.8±1.6, 7°.43N±0°.08×94°.08E±0°.09, h10km±1km, mb4.6/4, Error ellipse: s-maj=15.3km s-min=14.2km az=100.0*

ISC 21 13:59:28.2±0.5**, 7°.54N**±0°.06×**94°.23E**±0°.09**, h20**km**, n32, σ1ˢ05**/34**, mb4.2**/17**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.61	209	eP	Pb	13 59 39.9	-0.2
CMBY				i x	x	13 59 42.1	
CMBY				eS	Sn	13 59 52.0	+1.1
CMBY	CAMPBELL BAY	0.61	209	eP	Pb	13 59 40.0	-0.2
CMBY				eS	Sn	13 59 51.8	+0.9
LHMI	Lhok Sumawe	3.55	130	Pn	Pn	14 00 23.3	+1.1
PSI	Prapat	6.64	135	Pn	Pn	14 01 06.9	+2.1
	3.0nm,0.3s,baz=316,slow=16,SNR=2.3						
RPSI	Rantau Prapat	6.71	136		Pn	14 01 06.9	+1.1
RPSI	Rantau Prapat	6.71	136	Pn	Pn	14 01 04.3	-1.4
KULM	Kulim	6.76	109		Pn	14 01 05.8	-0.7
IPM	Ipoh	7.41	114	Pn	Pn	14 01 13.8	-1.6
PBKT	Sadao Pong	11.13	36		Pn	14 02 07.5	+1.2
CMAR	Chiang Mai Arr	11.78	22	Pn	Pn	14 02 17.4	+2.1
	0.7nm,0.3s,baz=212,slow=14,SNR=7.2						
CMAR	Chiang Mai Arr	11.78	22		Pn	14 02 16.9	+1.6
MKAR	Makanchi Array	40.43	347	P	P	14 07 04.8	-0.4
	3.5nm,0.8s,baz=169,slow=8.7,SNR=6.7						
MKAR	Makanchi Array	40.43	347	P	P	14 07 03.8	-1.4
SONM	Songino Array	41.47	12	P	P	14 07 14.6	+0.7
	1.1nm,0.8s,baz=190,slow=7.3,SNR=2.7						
GEYT	Alibeck	44.50	318	P	P	14 07 39.2	+0.6
	3.9nm,0.7s,baz=134,slow=8.5,SNR=5.2						
GEYT	Alibeck	44.50	318	P	P	14 07 39.0	+0.5
KURBB	Kurchatov Arra	44.89	346	P	P	14 07 40.7	-0.6
	4.6nm,0.7s,baz=171,slow=7.1,SNR=8.6						
KURK	Kurchatov	44.95	346	P	P	14 07 41.9	0.0
KURK				IAmb	IAmb	14 07 50.0	
	comp=Z,5.4nm,0.8s						
ZALV	Zalesovo Beam	46.89	352	P	P	14 07 57.3	+0.2
	comp=Z,1.7nm,0.4s,baz=185,slow=7.6,SNR=3.6						
ZALV	Zalesovo Beam	46.89	352	P	P	14 07 56.7	-0.4
WRA	Warramunga Arr	48.00	125	P	P	14 08 05.5	-0.8
	comp=Z,0.8nm,0.6s,baz=305,slow=8.4,SNR=2.3						
RAYN	Ar Rayn	49.30	295	P	P	14 08 14.8	-1.5
RAYN				IAmb	IAmb	14 08 26.5	
	comp=Z,10nm,1.1s						
BVAR	Borovoye Array	49.33	341	P	P	14 08 15.7	-0.2
	comp=Z,2.3nm,0.9s,baz=133,slow=8.1,SNR=4.0						
ASAR	Alice Springs	49.64	130	P	P	14 08 17.9	-1.0
	comp=Z,0.6nm,0.5s,baz=302,slow=7.7,SNR=4.2						
BRTR	Keskin Array B	62.71	311	P	P	14 09 50.7	-1.4
	comp=Z,0.6nm,0.7s,baz=121,slow=5.6,SNR=2.7						
TIXI	Tiksi	67.54	11	P	P	14 10 22.1	-0.6
TIXI				IAmb	IAmb	14 10 23.4	
	comp=Z,3.9nm,0.9s						
AKASG	Malin Array Be	68.47	322	P	P	14 10 29.1	+0.2
	comp=Z,0.4nm,0.4s,baz=135,slow=11,SNR=1.9						
FINES	FINESS Array B	73.04	332	P	P	14 10 56.3	-0.3
	comp=Z,2.9nm,0.8s,baz=76,slow=5.9,SNR=4.3						
ARCES	ARCESS Array B	75.60	340	P	P	14 11 11.4	0.0
	comp=Z,3.2nm,1.0s,baz=96,slow=9.2,SNR=1.4						
GERES	GERESS Array B	78.13	318	P	P	14 11 27.2	+1.0
	comp=Z,0.8nm,0.7s,baz=44,slow=4.4,SNR=3.2						
NOA	NORSAR Array B	80.06	331	P	P	14 11 36.8	+0.4
	comp=Z,1.8nm,0.8s,baz=94,slow=5.3,SNR=3.0						
CPUP	Villa Florida	147.13	232	PKPbc	PKPbc	14 19 10.3	-0.4
	comp=Z,1.5nm,0.6s,baz=83,slow=10,SNR=3.2						

HEL 21 14:00:09.9±0.1**, 67°.42N**×**23°.38E, h0**km**, ML1.6, ML1.2**(UPP)**, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAJU	Pajala	0.41	194	i P	Pg	14 00 17.1	-0.7
PAJU				i S	Sg	14 00 22.8	-0.4
MASU	Masugnsbyn	0.53	274	i P	Pg	14 00 19.1	-1.0
MASU				i S	Sg	14 00 26.8	-0.2
LANU	Lannavaara	0.82	321	eP	Pg	14 00 24.3	-1.3
LANU				eSB	Sb	14 00 37.5	-1.1
ERTU	Ertsjaerv	0.99	209	eP	Pg	14 00 27.5	-1.3
ERTU				eS	Sg	14 00 41.0	-0.7
HEF	Hetta	0.99	6	eP	Pg	14 00 27.8	-1.1
HEF	Hetta	0.99	6	ePB	Pg	14 00 28.0	-0.9
HEF				MSG		14 00 41.1	
	comp=Z,3.5nm,0.2s						
HEF				eSB	Sg	14 00 42.1	+0.3
DUNU	Dundret	1.13	256	eP	Pg	14 00 30.1	-1.4
SGF	Sodankyl	1.22	88	ePB	Pg	14 00 32.1	-1.1
	baz=271						
SGF				eSB	Sg	14 00 48.8	-0.1
KUA	Kurravaara	1.28	296	eP	Pg	14 00 32.8	-1.5
RNF	Rovaniemi	1.32	127	ePB	Pg	14 00 33.6	-1.5
RNF				eSB	Sg	14 00 51.5	-0.7
TOF	Tornio	1.40	164	ePG	Pn	14 00 35.3	-1.3
TOF				MSG		14 00 51.2	
	comp=Z,1.7nm,0.2s						
KALU	Kalix	1.57	180	eP	Pn	14 00 37.9	-1.1
KALU				eSN	Sg	14 01 01.2	+0.9
KIF	Kilpisjarvi	1.86	330	ePN	Pn	14 00 43.2	+0.3
	baz=154						
KIF				MSG		14 01 05.7	
	comp=Z,5.9nm,0.2s						
KIF				eSG	Sb	14 01 07.9	-0.4
VRF	Varrio	2.41	79	ePB	Pn	14 00 52.0	+1.4
VRF				MSG		14 01 22.6	
	comp=Z,1.3nm,0.2s						
VRF				eSG	Sb	14 01 23.7	-0.6
OUL	Oulu	2.56	155	ePG	Pb	14 00 55.1	-1.6
KEV	Kevo	2.69	28	eP	Pn	14 00 54.4	-0.1
KEV	Kevo	2.69	28	ePB	Pn	14 00 56.0	+1.6
KEV				eSB	Sn	14 01 29.2	+1.5
KEV				MSG		14 01 30.6	
	comp=Z,2.4nm,0.2s						
MSF	Maaselka	2.72	121	eSG	Sb	14 01 32.5	-0.7
KU6	Riekki	2.94	115	ePB	Pb	14 01 01.0	-2.1
KU6				MSG		14 01 37.1	
	comp=Z,3.5nm,0.2s						
KU6				eSG	Sb	14 01 39.8	+0.1

TAP ***21*** *14:00:16.1, 24°.38N×121°.97E, h31km, ML3.5, B*

JMA ***21*** *14:00:16.0±0.1, 24°.29N×121°.94E, h47km±3km, M2.5*

ISC 21 14:00:17.0±0.9**, 24°.37N**±0°.02×**122°.00E**±0°.02**, h26**km±6km**, n108, σ0ˢ82**/197**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1 baz=47	0.21	34	P	Pb	14 00 23.3	+0.3
EOS1	 baz=47			S	Sb	14 00 28.9	+1.8
ENA	Nanau baz=282	0.24	284	i P	Pb	14 00 22.7	-0.6
ENA	 baz=282			i S	Sb	14 00 27.8	+0.2
TWC	Suao baz=335	0.27	331	i P	Pb	14 00 23.1	-0.6
TWC	 baz=335			i S	Sb	14 00 27.7	-0.7
NACB	Ninganchiao baz=237	0.41	242	P	Pb	14 00 25.1	-0.8
NACB	 baz=237			S	Sb	14 00 32.8	+0.8
ILA	Ilan baz=330	0.45	330	eP	Pb	14 00 25.4	-1.1
ILA	 baz=330			i S	Sb	14 00 33.6	+0.6
TWE	Neicheng baz=322	0.46	319	i P	Pb	14 00 26.0	-0.7
TWE	 baz=322			S	Sb	14 00 33.1	-0.1
TWD	Chiawan baz=226	0.47	232	i P	Pb	14 00 25.8	-0.9
TWD	 baz=226			S	Sb	14 00 34.2	+0.8
ENTT	Nioudou baz=304	0.47	304	i P	Pb	14 00 26.4	-0.5
ENTT	 baz=304			i S	Sb	14 00 33.7	+0.1
ETLH	Xiulin Townshi baz=246	0.50	251	P	Pb	14 00 26.6	-0.7
ETLH	 baz=246			S	Sb	14 00 34.5	+0.2
NDT	Datong Townshi baz=297	0.50	298	i P	Pb	14 00 26.6	-0.6
NDT	 baz=297			i S	Sb	14 00 34.2	0.0
SLBB	Yuanshan baz=321	0.50	319	i P	Pb	14 00 26.0	-1.4
SLBB	 baz=321			S	Sb	14 00 33.9	-0.6
NTC	Toucheng baz=347	0.50	343	i P	Pb	14 00 26.8	-0.6
NTC	 baz=347			S	Sb	14 00 35.0	+0.6
HWA	Hwalien baz=217	0.53	222	eP	Pb	14 00 27.9	+0.1
HWA	 baz=217			eS	Sb	14 00 36.4	+1.3
NNSB	Datong baz=280	0.56	276	P	Pb	14 00 27.6	-0.8
NNSB	 baz=280			S	Sb	14 00 36.2	0.0
NNSH	Datong baz=278	0.56	276	i P	Pb	14 00 27.7	-0.8
NNSH	 baz=278			i S	Sb	14 00 35.9	-0.3
NNS	Nan Shan baz=281	0.57	277	i P	Pb	14 00 27.8	-0.8
NNS	 baz=281			i S	Sb	14 00 36.2	-0.2
ENLB	Shoufeng baz=214	0.59	218	P	Pb	14 00 28.2	-0.6
ENLB	 baz=214			S	Sn	14 00 38.8	+0.3
NWLT	Wulai baz=313	0.60	312	i P	Pb	14 00 28.5	-0.6
NWLT	 baz=313			i S	Sb	14 00 37.1	-0.2
TIPB	Shuangxi baz=348	0.62	346	i P	Pb	14 00 28.7	-0.6
TIPB	 baz=348			S	Sb	14 00 37.6	-0.1
TWB1	Santiao Chiao baz=4.0	0.64	359	P	Pb	14 00 29.2	-0.4
TWB1	 baz=4.0			S	Sn	14 00 38.8	-0.8
YHNB	Yeheng baz=297	0.64	298	P	Pb	14 00 28.9	-0.8
YHNB	 baz=297			S	Sb	14 00 37.8	-0.5
NSK	Sanguang baz=297	0.66	298	i P	Pb	14 00 29.3	-0.7
NSK	 baz=297			i S	Sb	14 00 38.3	-0.5
WHF	Hehuan Shan baz=249	0.70	252	i P	Pb	14 00 29.9	-1.1
WHF	 baz=249			S	Sb	14 00 40.9	+0.4
TWA	Mucha baz=324	0.71	328	i P	Pn	14 00 31.2	-0.2
TWA	 baz=324			S	Sn	14 00 40.9	-0.7
NWF	Wu-fen Shan baz=341	0.72	344	i P	Pb	14 00 30.8	-0.4
NWF	 baz=341			S	Sn	14 00 41.5	-0.4
WFSB	Wu-fen Shan baz=341	0.72	344	P	Pb	14 00 30.9	-0.2
WFSB	 baz=341			S	Sn	14 00 41.4	-0.4
NHDH	Xindian Distri baz=321	0.73	324	i P	Pn	14 00 31.5	-0.2
NHDH	 baz=321			i S	Sb	14 00 40.9	+0.2
ESL	Shilin baz=232	0.76	223	i P	Pb	14 00 30.0	-1.6
TWT	Tachien baz=259	0.76	261	i P	Pb	14 00 30.6	-1.1
TWT	 baz=259			S	Sb	14 00 42.0	+0.3
TATO	Taipei baz=323	0.76	323	P	Pb	14 00 31.6	0.0
TATO	 baz=323			S	Sb	14 00 41.8	+0.2
TAP	Taipei baz=328	0.80	326	P	Pb	14 00 32.5	+0.1
TAP	 baz=328			S	Sn	14 00 43.7	0.0
CHGB	Renai baz=236	0.81	248	P	Pn	14 00 31.8	-1.2
CHGB	 baz=236			S	Sb	14 00 43.8	+0.4
WLTB	Daxi baz=307	0.83	305	P	Pn	14 00 32.5	-0.5
WLTB	 baz=307			S	Sn	14 00 44.2	-0.2
OWD	Renai baz=238	0.86	241	i P	Pn	14 00 32.0	-1.5
OWD	 baz=238			S	Sb	14 00 44.0	-0.5
YM01	YM01 baz=348	0.86	333	i P	Pn	14 00 33.0	-0.5
YM01	 baz=348			S	Sn	14 00 45.0	-0.3
JYNG	Yonagunijimaku	0.87	85	P	Pn	14 00 33.0	-0.5
JYNG				S	Sn	14 00 45.3	-0.1
EGFH	Guangfu baz=230	0.87	217	P	Pn	14 00 32.1	-1.5
EGFH	 baz=230			eS	Sb	14 00 44.6	-0.2
YM10	YM10 baz=347	0.88	333	i P	Pn	14 00 33.3	-0.4
YM10	 baz=347			S	Sn	14 00 45.4	-0.3
YM11	YM11 baz=336	0.88	334	eP	Pn	14 00 32.9	-0.9
YM08	YM08 baz=348	0.89	336	i P	Pn	14 00 33.1	-0.8
YM08	 baz=348			eS	Sn	14 00 45.6	-0.4
TWS1	Kuangyinshan baz=336	0.90	324	i P	Pn	14 00 33.6	-0.3
TWS1	 baz=336			i S	Sn	14 00 47.1	+1.1
YM03	YM03 baz=345	0.91	333	P	Pn	14 00 33.4	-0.8
YM03	 baz=345			S	Sb	14 00 45.8	-0.1
ANP	Anpu baz=345	0.92	332	P	Pn	14 00 33.6	-0.8
ANP	 baz=345			eS	Sn	14 00 46.5	-0.3
YOJ	Yonaguni jima baz=80	0.93	84	eP	Pn	14 00 33.9	-0.6
YOJ	 baz=80			S	Sb	14 00 46.9	+0.4
YOJ	Yonaguni jima	0.93	84	P	Pn	14 00 33.8	-0.6
YOJ				eS	Sb	14 00 46.9	+0.4
LIOB	Emei baz=286	0.93	287	i P	Pn	14 00 34.4	-0.1
LIOB	 baz=286			S	Sn	14 00 46.9	-0.1
NSTT	Nanjuang baz=284	0.94	286	P	Pn	14 00 34.0	-0.5
NSTT	 baz=284			i S	Sb	14 00 47.6	+0.7
NCU	National Centr baz=309	0.95	309	eS	Sb	14 00 49.0	+2.0
NCUH	Zhongli baz=309	0.95	309	P	Pn	14 00 34.0	-0.7
NCUH	 baz=309			S	Sb	14 00 48.3	+1.3
WHP	Taichung City baz=262	0.96	265	i P	Pn	14 00 34.6	-0.3
WHP	 baz=262			i S	Sn	14 00 47.6	-0.2
TWY	Chenhua baz=341	0.97	338	eP	Pb	14 00 35.2	-0.1
TWY	 baz=341			S	Sb	14 00 47.5	-0.2
VWDT	VWDT baz=228	0.99	232	P	Pn	14 00 34.2	-1.0
VWDT	 baz=228			eS	Sn	14 00 47.8	-0.7
SBCB	Hsinchu baz=310	1.01	295	eP	Pn	14 00 35.6	+0.1
SBCB	 baz=310			S	Sb	14 00 50.8	+1.9
HGSD	Ruisui baz=192	1.02	211	P	Pn	14 00 34.8	-0.9
HGSD	 baz=192			eS	Sb	14 00 49.8	+0.8
HSN	Hsinchu baz=296	1.03	295	S	Sb	14 00 49.5	+0.2
DPDB	Guoxing baz=248	1.03	251	i P	Pn	14 00 35.4	-0.4
DPDB	 baz=248			eS	Sn	14 00 49.7	+0.2
EHY	Hungye baz=212	1.06	216	i P	Pn	14 00 34.1	-2.1
NMLH	Miaoli baz=277	1.11	279	eP	Pn	14 00 36.9	0.0
NMLH	 baz=277			S	Sb	14 00 53.6	+1.9
SMLT	Sun Moon Lake baz=234	1.11	244	i P	Pn	14 00 36.7	-0.3
SMLT	 baz=234			S	Sn	14 00 51.8	+0.3
SSLB	Suanglung baz=228	1.11	239	P	Pn	14 00 36.0	-1.0
SSLB	 baz=228			S	Sn	14 00 50.9	-0.6
TWQ1	Liyutan baz=266	1.11	269	i P	Pb	14 00 38.0	+0.3
TWQ1	 baz=266			i S	Sb	14 00 52.7	+0.9
NSY	Sanyi baz=270	1.13	273	eP	Pn	14 00 37.5	+0.3
NSY	 baz=270			S	Sb	14 00 53.9	+1.7
TYC	Yuchr baz=232	1.14	246	i P	Pn	14 00 36.7	-0.6
TYC	 baz=232			S	Sb	14 00 53.3	+0.8
YULB	Yu-li baz=221	1.17	213	P	Pn	14 00 35.6	-2.0
YULB	 baz=221			eS	Sn	14 00 51.5	-1.3
PTSB	Yuanli baz=271	1.18	274	eP	Pb	14 00 39.1	+0.3
PTSB	 baz=271			S	Sb	14 00 54.3	+0.6
TWF1	Yuli baz=222	1.20	212	i P	Pn	14 00 36.2	-1.9
TCU	Taichung baz=256	1.23	260	eP	Pn	14 00 39.2	+0.8
TCU	 baz=256			eS	Sb	14 00 55.9	+1.0
WDJ	Dajia District baz=267	1.24	269	eP	Pn	14 00 39.4	+0.7
WDJ	 baz=267			eS	Sb	14 00 55.7	+0.5
WHYT	Xinyi Township baz=229	1.24	237	i P	Pn	14 00 39.0	+0.3
WHYT	 baz=229			S	Sb	14 00 55.8	+0.3
WJS	Zhushan baz=227	1.28	245	i P	Pn	14 00 39.9	+0.7
WJS	 baz=227			i S	Sb	14 00 57.9	+1.3
WNT	Mingjian baz=244	1.29	248	i P	Pb	14 00 40.5	-0.2
WNT	 baz=244			i S	Sb	14 00 59.2	+2.3
FULB	Fuli baz=189	1.33	209	eP	Pn	14 00 39.1	-0.9
FULB	 baz=189			eS	Sn	14 00 57.4	+0.5
WCHH	Zhanghua baz=254	1.34	258	eS	Sb	14 00 59.0	+0.6
ALS	Alishan baz=218	1.39	232	P	Pn	14 00 41.4	+0.4
ALS	 baz=218			eS	Sn	14 00 59.4	+0.8
CHN5	Tsauling baz=233	1.43	238	i P	Pn	14 00 42.0	+0.6
CHN5	 baz=233			S	Sb	14 01 01.3	+0.3
WGK	Gukeng baz=240	1.48	243	eP	Pn	14 00 42.7	+0.8
ELDTW	Lidau baz=202	1.48	218	i P	Pn	14 00 41.0	-1.1
WDLH	Douliu baz=239	1.50	243	P	Pn	14 00 43.4	+1.2
WDLH	 baz=239			S	Sb	14 01 03.3	+0.6
RLNB	Erlin baz=265	1.57	253	eP	Pn	14 00 43.8	+0.6
RLNB	 baz=265			S	Sb	14 01 04.5	-0.3
IRIF	Iriomote-Funau	1.58	91	P	Pn	14 00 43.1	-0.3
IRIF				eS	Sn	14 01 03.0	0.0
CHN2	Minshiung baz=235	1.62	239	eS	Sb	14 01 06.8	+0.4
CHN4	Tsaushan baz=213	1.64	232	i P	Pn	14 00 45.1	+1.0

CHN4				*i* S	Sb	14 01 07.7	+0.9
	baz=213						
TPUB	Ta-pu	1.64	230	P	Pn	14 00 45.1	+0.9
	baz=211						
TPUB				S	Sb	14 01 06.9	-0.1
	baz=211						
STYT	Tauyuan	1.65	224	*i* P	Pn	14 00 44.9	+0.5
	baz=217						
STYT				S	Sb	14 01 06.9	-0.4
	baz=217						
WTP	Ta-pu	1.69	229	P	Pn	14 00 45.3	+0.4
	baz=210						
WTP				*e*S	Sb	14 01 07.9	-0.5
	baz=210						
TWG	Pinlang	1.76	209	*e*P	Pn	14 00 44.5	-1.3
	baz=194						
TWGBT	Beinan	1.76	209	P	Pn	14 00 44.2	-1.6
	baz=194						
TWK	Hsinying	1.77	232	*i* P	Pn	14 00 46.9	+0.9
	baz=226						
TWK				S	Sb	14 01 10.6	+0.1
	baz=226						
SNST	Tainan City	1.79	230	P	Pn	14 00 46.8	+0.6
	baz=224						
SNST				S	Sb	14 01 10.7	-0.5
	baz=224						
CHN1	Nanshi	1.79	229	*i* P	Pn	14 00 47.4	+1.1
	baz=223						
CHN1				S	Sb	14 01 10.7	-0.5
	baz=223						
SGST	Jiashian	1.82	226	*i* P	Pn	14 00 47.0	+0.3
	baz=208						
SGST				S	Sb	14 01 11.9	-0.2
	baz=208						
JKRS	Kuro-shima	1.84	94	P	Pn	14 00 47.8	+0.9
JKRS				S	Sn	14 01 09.4	0.0
JIJ	Ishigaki jima	1.96	90	P	Pn	14 00 48.7	+0.2
JIJ				*e*S	Sn	14 01 11.8	-0.5
SSD	Sandimen	2.04	218	*i* P	Pn	14 00 51.3	+1.5
	baz=211						
SSD				S	Sn	14 01 16.9	+2.5
	baz=211						
JISG	Ishigakijimahi	2.12	84	P	Pn	14 00 51.1	+0.3
JISG				*e*S	Sn	14 01 16.3	+0.1
MASBT	Mashibuluo	2.15	216	P	Pn	14 00 52.5	+1.3
	baz=195						
MASBT				S	Sn	14 01 19.3	+2.2
	baz=195						
EAST	Anshuo	2.24	208	P	Pn	14 00 52.2	-0.2
	baz=195						
PTTC	Pingtan	2.31	300	*e*P	Pn	14 00 53.7	+0.3
	baz=297						
PTTC				*e*S	Sn	14 01 20.0	-0.9
	baz=297						
SCZT	Fangliau	2.36	213	*e*P	Pn	14 00 54.2	+0.2
	baz=196						
PHUB	P'eng-hu	2.38	249	*e*P	Pn	14 00 53.2	-1.1
	baz=244						
PHUB				S	Sn	14 01 22.1	-0.4
	baz=244						
VWUC	VWUC	2.40	285	*e*S	Sn	14 01 22.5	-0.6
	baz=282						
MATB	Ma-tsu	2.57	314	*e*S	Sn	14 01 27.7	+0.5
	baz=313						
PTMZ	Houxiangcun	2.70	285	P	Pn	14 00 58.8	+0.1
	baz=282						
PTMZ				*e*S	Sn	14 01 30.4	-0.1
	baz=282						
LYJJ	Jianjiangzhen	2.96	318	*e*S	Sn	14 01 37.8	+0.7
	baz=317						
XPSS	Dashiqiu	3.02	328	*e*P	Pn	14 01 02.7	-0.5
	baz=328						
XPSS				*e*S	Sn	14 01 38.9	+0.3
	baz=328						
MHZQ	Yeshan	3.19	303	*e*S	Sn	14 01 42.9	+0.2
	baz=301						
KNMB	Chin-men Tao	3.29	272	*e*S	Sn	14 01 45.1	0.0
	baz=268						
AXDP	Jialang	3.70	279	*e*P	Pn	14 01 13.6	+1.1
	baz=275						
AXDP				*e*S	Sn	14 01 56.1	+0.9
	baz=275						

UPP 21 14:00:43.8±0.1**,67°.65N**×**20°.99E,h0**^{km}**,ML2.3, Explosion,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.39	321	P	Pg	14 00 51.4	+0.1
KUA				S	Sg	14 00 57.0	+0.6
LANU	Lannavaara	0.55	43	P	Pg	14 00 54.2	-0.1
DUNU	Dundret	0.56	197	P	Pg	14 00 54.4	0.0
DUNU				S	Sg	14 01 02.2	+0.5
KOVU	Salmi	0.65	332	P	Pg	14 00 56.1	-0.1
NIKU	Nikkaluokta	0.78	287	P	Pg	14 00 58.2	-0.4

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*IDC **21** 14:03:49.5±0.8,7°.76N×94°.36E,h0^{km},mb4.1/20, mb1 4.2/21,mb1mx3.9/71,mbtmp4.1/21,ML3.6/1,Error ellipse: s-maj=36.4km s-min=15.1km az=46.0*

*NEIC **21** 14:03:51.6±2.2,8°.00N±0°.10×94°.5E±0°.1,h10^{km}±1^{km}, mb4.7/6,Error ellipse: s-maj=21.6km s-min=14.5km az=239.0*

ISC 21 14:03:52.8±0.5**,7°.61N**±0°.06×**94°.27E**±0°.08**,h24**^{km}**,n44, σ1ˢ.32**/41**,mb4.2**/22**,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMBY	CAMPBELL BAY	0.69	210	*e*P	Pb	14 04 04.9	-1.2
CMBY				*e*S	Sb	14 04 14.9	-0.3
PSI	Prapat	6.65	136	Pn	Pn	14 05 30.9	+1.7
	1.2nm,0.3s,baz=310,slow=13,SNR=3.9						
RPSI	Rantau Prapat	6.73	136		Pn	14 05 31.7	+1.6
RPSI	Rantau Prapat	6.73	136		Pn	14 05 30.9	+0.8
KULM	Kulim	6.74	110	Pn	Pn	14 05 29.1	-1.2
IPM	Ipoh	7.40	114	Pn	Pn	14 05 37.5	-1.9
CMAR	Chiang Mai Arr	11.70	22	Pn	Pn	14 06 41.3	+2.9
	0.2nm,0.3s,baz=211,slow=14,SNR=3.3						
CMAR	Chiang Mai Arr	11.70	22		Pn	14 06 29.7	-8.7
H08S3	Diego Garcia H	26.48	236	T	T	14 36 02.3	
	baz=55,slow=75,SNR=12						
H08S2	Diego Garcia H	26.48	236	T	T	14 36 27.8	
	baz=55,slow=75,SNR=11						
H08S1	Diego Carcia H	26.50	236	T	T	14 36 01.7	
	baz=55,slow=75,SNR=9.0						
WSAR	Wadi Sarin	37.57	298	P	P	14 11 07.6	+2.0
	3.0nm,0.8s,baz=216,slow=17,SNR=2.4						
SIJI	Sorong	37.84	101	P	P	14 11 08.9	+0.8
	1.8nm,0.5s,baz=204,slow=19,SNR=1.2						
AAK	Ala-Archa	39.00	337	P	P	14 11 16.9	-0.7
	3.1nm,1.1s,baz=237,slow=4.7,SNR=3.1						
MK31	Makanchi Array	40.38	347	P	P	14 11 27.3	-1.5
MKAR	Makanchi Array	40.38	347	P	P	14 11 27.8	-0.9
	1.8nm,0.7s,baz=168,slow=8.1,SNR=16						
MKAR	Makanchi Array	40.38	347	P	P	14 11 27.5	-1.2
KKAR	Karatay Array	41.06	333	P	P	14 11 33.3	-1.2
SONM	Songino Array	41.39	12	P	P	14 11 37.0	-0.3
	1.3nm,0.7s,baz=198,slow=8.7,SNR=3.9						
GEYT	Alibeck	44.48	318	P	P	14 12 02.3	0.0
	5.4nm,0.5s,baz=159,slow=9.5,SNR=9.5						
GEYT	Alibeck	44.48	318	P	P	14 12 02.1	-0.3
KURBB	Kurchatov Arra	44.84	346	P	P	14 12 04.7	-0.2
	2.5nm,0.8s,baz=170,slow=7.2,SNR=22						
KURK	Kurchatov	44.90	346	P	P	14 12 04.6	-0.8
ZALV	Zalesovo Beam	46.84	352	P	P	14 12 20.2	-0.5
	2.8nm,0.6s,baz=178,slow=7.8,SNR=9.4						
ZALV	Zalesovo Beam	46.84	352	P	P	14 12 18.2	-2.4
WRA	Warramunga Arr	48.00	125	P	P	14 12 31.2	+1.0
	2.7nm,1.1s,baz=307,slow=8.3,SNR=7.2						
WRA	Warramunga Arr	48.00	125	P	P	14 12 30.9	+0.6
BVAR	Borovoye Array	49.28	341	P	P	14 12 38.9	-0.7
	0.7nm,0.7s,baz=139,slow=9.2,SNR=4.5						
RAYN	Ar Rayn	49.31	294	P	P	14 12 41.4	+0.9
RAYN				IAmb	IAmb	14 12 47.8	
	comp=Z,5.1nm,0.8s						
ASAR	Alice Springs	49.64	130	P	P	14 12 41.8	-1.0
	comp=Z,0.4nm,0.8s,baz=303,slow=7.7,SNR=3.0						
ABKAR	Akbulak array	50.53	331	P	P	14 12 48.8	-0.3
ARU	Arti	56.19	337	P	P	14 13 31.0	+0.5
	comp=Z,0.7nm,0.4s,baz=143,slow=20,SNR=1.4						
BRTR	Keskin Array B	62.70	311	P	P	14 14 16.5	+0.4
	comp=Z,1.1nm,0.6s,baz=111,slow=6.2,SNR=7.0						
TIXI	Tiksi	67.47	11	P	P	14 14 44.8	-1.5
TIXI				IAmb	IAmb	14 14 52.6	
	comp=Z,4.3nm,0.7s						
IDI	Anoyia	68.83	305	P	P	14 14 57.8	+2.2
	comp=Z,4.3nm,0.6s,baz=102,slow=12,SNR=1.5						
FINES	FINESS Array B	73.01	332	P	P	14 15 19.3	-1.0
	comp=Z,3.8nm,0.9s,baz=132,slow=2.1,SNR=12						
FINES	FINESS Array B	73.01	332	P	P	14 15 19.5	-0.8
ARCES	ARCESS Array B	75.56	340	P	P	14 15 35.3	+0.2
	comp=Z,1.6nm,0.7s,baz=88,slow=7.3,SNR=8.0						
GERES	GERESS Array B	78.11	318	P	P	14 15 49.3	-0.7
	comp=Z,1.3nm,0.7s,baz=87,slow=9.2,SNR=2.9						
HFS	Hagfors	78.75	330	P	P	14 15 52.6	-0.6
	comp=Z,3.2nm,0.6s,baz=69,slow=4.8,SNR=2.1						
NB2	NORSAR Subarra	80.03	331	P	P	14 16 02.9	+2.7
	comp=Z,11nm,1.4s,baz=91,slow=5.9						
NOA	NORSAR Array B	80.03	331	P	P	14 15 58.5	-1.7
	comp=Z,1.1nm,0.8s,baz=79,slow=2.1,SNR=2.0						
SPITS	Spitsbergen Ar	80.12	348	P	P	14 15 58.8	-1.6
	comp=Z,4.5nm,0.7s,baz=294,slow=23,SNR=1.6						
PDAR	Pinedale Array	125.36	21	PKP	PKiKP	14 22 53.6	+0.8
	comp=Z,0.8nm,1.1s,baz=338,slow=7.1,SNR=2.2						

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*IDC **21** 14:05:06.5±2.9,7°.17N×94°.20E,h0^{km},mb4.0/10, mb1 4.0/11,mb1mx3.7/71,mbtmp3.9/11,ML3.6/1,Error ellipse: s-maj=66.1km s-min=46.0km az=140.0*

*NEIC **21** 14:05:07.7±1.3,7°.2N±0°.2×94°.2E±0°.1,h10^{km}±2^{km}, mb4.6/2,Error ellipse: s-maj=34.3km s-min=9.0km az=208.0*

ISC 21 14:05:09.7±1.0**,7°.2N**±0°.1×**94°.1E**±0°.1**,h21**^{km}**,n19, σ1ˢ.35**/19**,mb4.0**/12**,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPSI	Rantau Prapat	6.54	133	Pn	Pn	14 06 44.0	-0.6
KULM	Kulim	6.74	106	Pn	Pn	14 06 44.7	-2.8
IPM	Ipoh	7.36	111	Pn	Pn	14 06 58.7	+2.6
CMAR	Chiang Mai Arr	12.13	22	Pn	Pn	14 08 02.4	+0.9
	0.1nm,0.3s,baz=218,slow=14,SNR=1.3						
MK31	Makanchi Array	40.74	348	P	P	14 12 48.3	-0.9
MK31				IAmb	IAmb	14 12 54.7	
	comp=Z,2.2nm,1.1s						
MKAR	Makanchi Array	40.74	348	P	P	14 12 48.8	-0.3
	comp=Z,0.7nm,0.7s,baz=166,slow=9.0,SNR=2.0						
KKAR	Karatay Array	41.36	334	P	P	14 12 51.4	-2.9
SONM	Songino Array	41.82	12	P	P	14 12 57.8	-0.3
	comp=Z,1.4nm,0.7s,baz=197,slow=4.5,SNR=1.0						
GEYT	Alibeck	44.70	319	P	P	14 13 22.1	+0.6
	comp=Z,1.4nm,0.5s,baz=148,slow=8.5,SNR=2.1						
KURBB	Kurchatov Arra	45.20	346	P	P	14 13 25.2	+0.1
	comp=Z,0.7nm,0.6s,baz=166,slow=7.0,SNR=1.7						
ZALV	Zalesovo Beam	47.22	353	P	P	14 13 40.9	-0.1
	comp=Z,1.0nm,0.6s,baz=178,slow=7.2,SNR=1.7						
BVAR	Borovoye Array	49.63	341	P	P	14 13 59.6	0.0
	comp=Z,0.7nm,0.8s,baz=117,slow=8.3,SNR=1.9						
BRTR	Keskin Array B	62.87	311	P	P	14 15 35.2	+0.6
	comp=Z,0.4nm,0.4s,baz=146,slow=9.4,SNR=1.8						
FIA1	FINESS Array S	73.31	332	P	P	14 16 39.0	-0.4
FIA1				IAmb	IAmb	14 16 58.0	
	comp=Z,46nm,1.4s						
FINES	FINESS Array B	73.31	332	P	P	14 16 40.0	+0.5
	comp=Z,3.0nm,0.9s,baz=108,slow=9.2,SNR=1.7						
FINES	FINESS Array B	73.31	332	P	P	14 16 39.0	-0.4
ARCES	ARCESS Array B	75.90	340	P	P	14 16 55.4	+1.0
	comp=Z,3.2nm,1.0s,baz=89,slow=11,SNR=1.6						
HFS	Hagfors	79.04	330	P	P	14 17 13.2	+1.0
	comp=Z,4.2nm,0.9s,baz=103,slow=6.5,SNR=4.1						
PDAR	Pinedale Array	125.79	21	PKP	PKPdf	14 24 10.4	-0.1
	comp=Z,0.1nm,0.3s,baz=274,slow=2.4,SNR=1.7						

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*IDC **21** 14:06:57.3±2.0,7°.59N×94°.34E,h0^{km},mb4.2/5,mb1 4.1/7, mb1mx3.6/69,mbtmp4.0/7,ML3.6/2,MS5.3/1,Ms1 5.3/1, ms1mx4.5/55,Error ellipse: s-maj=61.1km s-min=33.1km az=56.0*

ISC 21 14:07:01.2±1.2**,7°.7N**±0°.2×**94°.4E**±0°.2**,h24**^{km}**,n8,**σ**0ˢ.57**/7**, mb4.2**/5**,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	6.60	137	Pn	Pn	14 08 36.8	-0.1
	0.4nm,0.3s,baz=331,slow=13,SNR=1.3						
CMAR	Chiang Mai Arr	11.59	22	Pn	Pn	14 09 45.0	-0.3
	0.2nm,0.3s,baz=211,slow=15,SNR=2.4						
MKAR	Makanchi Array	40.34	347	P	P	14 14 36.9	0.0
	1.6nm,0.6s,baz=166,slow=7.7,SNR=8.8						
GEYT	Alibeck	44.53	318	P	P	14 15 10.6	-0.6
	1.1nm,0.5s,baz=170,slow=34,SNR=1.7						
KURBB	Kurchatov Arra	44.81	346	P	P	14 15 13.5	+0.4
	2.2nm,0.6s,baz=171,slow=7.0,SNR=12						
ZALV	Zalesovo Beam	46.79	352	P	P	14 15 29.5	+0.8
	2.1nm,0.7s,baz=180,slow=6.8,SNR=5.0						
OPO	Ambohidratompo	53.38	240	LR	LR	14 34 59.4	
	comp=Z,3µm,21.7s,baz=186,slow=32						
FINES	FINESS Array B	73.02	332	P	P	14 18 29.0	+0.3
	7.7nm,1.1s,baz=120,slow=8.5,SNR=2.1						

IDC 21 14:08:10.3±20.0**,7°.28N**×**93°.98E,h0**^{km}**,mb3.7**/3**, mb1 3.7**/4**,mb1mx3.3**/68**,mbtmp3.6**/4**,ML3.8**/1**,Error ellipse: s-maj=399.3km s-min=90.8km az=148.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	12.12	23	Pn	Pn	14 11 04.4	0.0
	0.2nm,0.3s,baz=210,slow=12,SNR=1.7						
MKAR	Makanchi Array	40.63	348	P	P	14 15 51.5	-0.6
	0.7nm,0.7s,baz=163,slow=8.1,SNR=4.1						
KURBB	Kurchatov Arra	45.08	346	P	P	14 16 28.1	0.0
	0.9nm,0.8s,baz=165,slow=7.4,SNR=4.1						
ZALV	Zalesovo Beam	47.12	353	P	P	14 16 44.3	+0.2
	1.2nm,0.6s,baz=178,slow=7.2,SNR=2.9						

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*IDC **21** 14:09:15.9±2.4,6°.48S×149°.10E,h58^{km}±22^{km},mb3.9/6, mb1 4.3/9,mb1mx3.9/45,mbtmp4.3/9,ML4.0/3,Error ellipse: s-maj=28.0km s-min=14.5km az=131.0*

*NEIC **21** 14:09:15.6±1.4,6°.5S±0°.1×149°.1E±0°.1,h59^{km}±9^{km}, mb4.4/12,Error ellipse: s-maj=27.0km s-min=6.9km az=134.0*

*DJA **21** 14:09:15.8±0.5,6°S±4°×14°9E±°,h56^{km}±8^{km},M4.6/6, mb4.5/6,MLv4.6/3*

ISC 21 14:09:15.4±0.7**,6°.5S**±0°.1×**149°.1E**±0°.1**,h53**^{km}**,n26,** σ**0ˢ.73**/28**,mb4.2**/7**,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.48	213	P	Pn	14 10 08.1	+1.0
	140nm,0.3s,baz=21,slow=4.1,SNR=296						
PMG				S	Sn	14 10 47.8	+0.6
	16nm,0.3s,baz=210,slow=22,SNR=1.6						
KRVT	Keravat (AS076	3.64	54	P	Pn	14 10 11.3	+2.1
	6.3nm,0.3s,baz=0.0,slow=7.1,SNR=1.5						
RABL	Rabaul	3.82	54		Pn	14 10 12.2	+0.5
COEN	Coen	9.44	217	Pn	Pn	14 11 28.4	-0.4
MTN	Manton Dam	18.78	249	P	P	14 13 30.8	+0.2
MTN				IAmb	IAmb	14 13 38.4	
	comp=Z,15nm,1.3s						
EIDS	Eidsvold	18.90	174		P	14 13 31.6	-0.1
WB0	Warramunga Arr	19.45	226	P	P	14 13 38.3	+0.5
WB0				IAmb	IAmb	14 13 39.3	
	comp=Z,13nm,0.7s						
WR0	Warramunga Arr	19.47	225	P	P	14 13 38.7	+0.6
WR0				IAmb	IAmb	14 13 39.4	
	comp=Z,12nm,0.8s						
WRAB	Tennant Creek	19.59	225	P	P	14 13 39.3	-0.1
WRAB				IAmb	IAmb	14 13 40.6	
	comp=Z,21nm,0.6s						
WB2	Warramunga Arr	19.59	225	P	P	14 13 39.0	-0.4
WRA	Warramunga Arr	19.60	225	P	P	14 13 39.6	+0.1
	comp=Z,2.8nm,0.3s,baz=52,slow=11,SNR=95						
WRA				PcP	PcP	14 17 58.7	+0.9
	comp=Z,0.1nm,0.3s,baz=31,slow=1.9,SNR=2.6						
WRA	Warramunga Arr	19.60	225	P	P	14 13 39.0	-0.5
KNRA	Kununurra	21.91	244	P	P	14 14 04.1	-0.3
KNRA				IAmb	IAmb	14 14 21.9	
	comp=Z,9.2nm,0.7s						
AS31	Alice Springs	22.48	219	P	P	14 14 10.8	+0.3
ASAR	Alice Springs	22.48	219	P	P	14 14 10.8	+0.3
	comp=Z,5.5nm,0.6s,baz=55,slow=9.4,SNR=133						
ASAR	Alice Springs	22.48	219	P	P	14 14 10.3	-0.2
DZM	Mont Dzumac	22.85	135	P	P	14 14 13.7	-0.8
	comp=Z,6.2nm,0.6s,baz=307,slow=8.8,SNR=8.1						
DZM	Mont Dzumac	22.85	135	P	P	14 14 13.4	-1.1
DZM				IAmb	IAmb	14 14 32.5	
	comp=Z,58nm,1.5s						
FITZ	Fitzroy Crossi	25.61	241	P	P	14 14 40.6	+0.6
	comp=Z,7.4nm,0.3s,baz=51,slow=9.9,SNR=39						
FITZ	Fitzroy Crossi	25.61	241	P	P	14 14 40.8	+0.7
FITZ				IAmb	IAmb	14 14 42.9	
	comp=Z,20nm,1.2s						
MMRI	Maumere	26.69	264	P	P	14 14 49.8	-0.1
PETK	Petropavlovsk-	59.80	6	P	P	14 19 14.2	-0.8
	comp=Z,1.5nm,0.8s,baz=167,slow=8.1,SNR=7.3						
VNDA	Vanda	71.34	177	P	P	14 20 29.2	+0.1
	comp=Z,1.0nm,0.6s,baz=346,slow=8.4,SNR=7.4						
ILAR	Eielson Array	85.10	23	P	P	14 21 44.5	-0.8
	comp=Z,0.3nm,0.6s,baz=243,slow=4.2,SNR=7.0						
MCARA	McCarthy VSAT	85.30	27	P	P	14 21 47.0	+0.5
TORD	Torodi Ar. Bea	147.20	284	PKPbc	PKPbc	14 28 53.2	-0.7
	comp=Z,0.9nm,0.3s,baz=100,slow=2.8,SNR=19						

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*IDC **21** 14:10:18.2±1.5,7°.15N×93°.49E,h0^{km},mb3.9/7,mb1 3.9/8, mb1mx3.6/67,mbtmp3.8/8,ML4.1/1,Error ellipse: s-maj=66.3km s-min=22.8km az=57.0*

*NEIC **21** 14:10:21.1±1.1,7°.58N±0°.07×94°.1E±0°.2,h10^{km}±2^{km}, mb4.4/4,Error ellipse: s-maj=26.9km s-min=9.9km az=253.0*

ISC 21 14:10:22.4±0.8**,7°.56N**±0°.08×**94°.09E**±0°.09**,h20**^{km}**,n23,** σ**1ˢ.13**/23**,mb4.2**/9**,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMBY	CAMPBELL BAY	0.57	197	*e*P	Pn	14 10 34.7	-0.8
CMBY				*i* x	x	14 10 37.2	
CMBY				*e*S	Sn	14 10 45.9	+1.5
LHMI	Lhok Sumawe	3.67	129	Pn	Pn	14 11 19.0	+1.0
KULM	Kulim	6.90	109	Pn	Pn	14 12 03.0	+0.5
IPM	Ipoh	7.54	114	Pn	Pn	14 12 09.8	-1.6
PBKT	Sadao Pong	11.19	36	Pn	Pn	14 13 01.6	+0.2
CMAR	Chiang Mai Arr	11.81	23	Pn	Pn	14 13 17.3	+7.4
	0.3nm,0.3s,baz=214,slow=14,SNR=2.2						
FITZ	Fitzroy Crossi	40.25	130	P	P	14 17 56.8	-1.5
FITZ				IAmb	IAmb	14 18 01.2	
	comp=Z,9.2nm,1.5s						
MK31	Makanchi Array	40.38	347	P	P	14 17 59.1	+0.2
MKAR	Makanchi Array	40.38	347	P	P	14 17 59.7	+0.7
	comp=Z,0.9nm,0.7s,baz=167,slow=8.1,SNR=7.4						
MKAR	Makanchi Array	40.38	347	P	P	14 17 59.2	+0.3
KURBB	Kurchatov Arra	44.83	346	P	P	14 18 35.9	+0.9
	comp=Z,1.3nm,0.7s,baz=169,slow=7.2,SNR=7.8						
ZALV	Zalesovo Beam	46.85	352	P	P	14 18 52.1	+1.2
	comp=Z,1.2nm,0.4s,baz=188,slow=7.5,SNR=5.5						
ZALV	Zalesovo Beam	46.85	352	P	P	14 18 50.5	-0.5
WRA	Warramunga Arr	48.12	125	P	P	14 19 02.0	+0.6
	comp=Z,0.4nm,0.9s,baz=306,slow=8.3,SNR=1.8						
WRAB	Tennant Creek	48.13	125	P	P	14 18 58.1	-3.3
WRAB				IAmb	IAmb	14 18 59.0	
	comp=Z,4.3nm,0.9s						
WB2	Warramunga Arr	48.13	125	P	P	14 19 01.5	+0.1
ASAR	Alice Springs	49.76	130	P	P	14 19 14.3	+0.4
	comp=Z,0.5nm,0.9s,baz=303,slow=8.5,SNR=2.5						
ASAR	Alice Springs	49.76	130	P	P	14 19 14.3	+0.4
ABKAR	Akbulak array	50.48	332	P	P	14 19 19.0	+0.1
FINES	FINESS Array B	72.96	332	P	P	14 21 50.7	+0.4
	comp=Z,2.6nm,1.0s,baz=106,slow=8.8,SNR=3.8						
FINES	FINESS Array B	72.96	332	P	P	14 21 50.7	+0.4
HFS	Hagfors	78.70	330	P	P	14 22 22.2	-0.9
	comp=Z,2.9nm,0.9s,baz=196,slow=20,SNR=4.2						
HFS	Hagfors	78.70	330	P	P	14 22 22.2	-0.9

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*BJI **21** 14:11:09.0±0.0,7°.21N×93°.89E,h10^{km},mB5.4/6, mb5.0/68,Ms5.7/24,Ms7 5.7/24*

*IDC **21** 14:11:12.6±0.3,7°.60N×94°.25E,h0^{km},mb4.9/57, mb1 5.0/61,mb1mx4.9/68,mbtmp4.9/61,ML4.7/4,MS5.4/18, Ms1 5.4/18,ms1mx5.1/58,Error ellipse: s-maj=10.5km s-min=8.0km az=45.0*

*MOS **21** 14:11:12.9±1.1,7°.62N×94°.19E,h16^{km},mb5.5/56, MS5.8/6,Error ellipse: s-maj=6.9km s-min=3.6km az=117.5*

*NEIC **21** 14:11:13.9±2.2,7°.54N±0°.07×94°.27E±0°.08,h10^{km}±1^{km}, mb5.5/95,Error ellipse: s-maj=14.3km s-min=11.2km az=239.0*

*NDI **21** 14:11:14.5±3.6,7°.49N×94°.46E,h18^{km}±102^{km},mb5.4, mb5.5(NEIC)*

*DJA **21** 14:11:14.8±0.1,8°N±2°×9°4E±°,h10^{km},M5.7/70,mb5.4/70, mB6.4/6,MLv5.7/6,Mw(mB)6.1/6,Mwp6.9/1*

*KLM **21** 14:11:16.0,7°.51N×94°.33E,h10^{km},mb5.4*

*BGR **21** 14:11:17.2±0.0,7°.35N×93°.83E,h33^{km},mb5.4*

*GCMT **21** 14:11:18.9±0.2,7°.65N±0°.01×94°.34E±0°.01,h14^{km}±1^{km}, MW5.6/133,Moment Tensor Solution. s38,c46; s133,c246; Duration: 1ˢ.6 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.70±.12; $M_{\theta\theta}$-1.90±.07; $M_{\phi\phi}$3.60±.10; $M_{r\theta}$-0.91±.21; $M_{\theta\phi}$1.72±.06; $M_{\phi r}$-1.41±.21; Best double couple: $M_0$3.62600×10^{17} NP1:ϕ_s153.00000°,δ54.00000°, λ-163.00000°. NP2:ϕ_s53.00000°,δ77.00000°, λ-37.00000°. Principal axes: T 4.5110, Plg15.0000°, Azm107.0000°; N -1.7690, Plg51.0000°, Azm216.0000°; P -2.7420, Plg36.0000°, Azm6.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 14:11:15.4±0.6**,7°.56N**±0°.04×**94°.26E**±0°.04**,h18**^{km}±3^{km}**, n717,**σ**1ˢ.43**/723**,mb5.3**/228**,MS5.5**/27**,28C-31D,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMBY	CAMPBELL BAY	0.64	211	*e*P	Pb	14 11 28.6	+0.6
CMBY				*i* pP	Pn	14 11 29.9	+0.3
CMBY				*e*S	Sn	14 11 39.1	-0.2
LHMI	Lhok Sumawe	3.54	131		Pn	14 12 09.6	0.0
MLSI	Meulaboh, Aceh	3.91	147	P	Pn	14 12 15.8	+1.2
PKDT	Phuket	4.05	85	P	Pn	14 12 17.1	+0.4
PBA	Port Blair	4.33	340	*e*P	Pn	14 12 22.6	+2.1
RNTT	Ranong	4.55	66	P	Pn	14 12 23.4	-0.1
SURT	Suratani	4.70	73	P	Pn	14 12 26.2	+0.7
KRAB	Krabi	4.94	82	P	Pn	14 12 29.9	+1.1
TPTI		5.17	146	P	Pn	14 12 33.5	+1.5
	330nm,1.2s						
KCSI	Kotacane, Aceh	5.32	139	P	Pn	14 12 35.6	+1.5
	3.9nm866nm,0.9s						
TRTT	Trang	5.39	87	P	Pn	14 12 35.2	+0.1
SNSI	Sinabang, Aceh	5.52	158	P	Pn	14 12 36.4	-0.4
	5.4nm872nm,0.7s						
DGPR	DIGLIPUR	5.73	347	*e*P	Pn	14 12 43.2	+3.5
SKLT	Songkhla	6.32	93	P	Pn	14 12 47.4	-0.4
PSI	Prapat	6.63	135	Pn	Pn	14 12 54.0	+1.8
	9.1nm,0.3s,baz=326,slow=12,SNR=65						
PSI				LR	LR	14 15 47.4	
	comp=Z,57µm,18.9s,baz=306,slow=41						
PSI	Prapat	6.63	135	P	Pn	14 12 54.0	+1.8
RPSI	Rantau Prapat	6.71	136		Pn	14 12 53.7	+0.6
RPSI	Rantau Prapat	6.71	136		Pn	14 12 54.0	+0.9
KULM	Kulim	6.74	109		Pn	14 12 52.3	-1.3
KULM	Kulim	6.74	109	P	Pn	14 12 53.0	-0.6
GSI	Gunungsitoli	7.04	152		Pn	14 12 57.7	0.0
IPM	Ipoh	7.39	114		Pn	14 13 01.0	-1.6
IPM	Ipoh	7.39	114	P	Pn	14 13 01.0	-1.6
PHET	Kaeng Krachan	7.50	44	P	Pn	14 13 04.1	+0.1
SRDT	SRDT	8.27	35	P	Pn	14 13 15.5	+1.0
PATY	Pattaya	8.41	50	P	Pn	14 13 16.6	+0.1
UMPA	Umpang Tak	9.70	27	P	Pn	14 13 33.2	-1.0
BKNI	Bangkinang	9.87	136	P	Pn	14 13 37.9	+1.4
	12µm504nm,1.0s						
SRAK	Srakaew	9.98	49	P	Pn	14 13 45.5	+7.5
SISI	Saibi	10.06	151	P	Pn	14 13 40.9	+1.8
	93nm,1.2s						
PDSI	Padang	10.45	143	P	Pn	14 13 44.7	+0.2
	131nm,0.9s						
SDSI	Sungai Dareh	11.06	139	P	Pn	14 13 53.6	+0.7
	118nm,1.1s						
PBKT	Sadao Pong	11.10	36	P	Pn	14 13 54.6	+1.2
PBKT	Sadao Pong	11.10	36		Pn	14 13 54.6	+1.2
MHMT	Maesarieng	11.14	18	P	Pn	14 13 53.9	0.0
MYKOM	Kota Tinggi	11.15	120		Pn	14 13 53.4	-0.6
MYKOM	Kota Tinggi	11.15	120	P	Pn	14 14 01.0	+7.0
RGRI	Rengat	11.25	134	P	Pn	14 13 56.5	+1.0
	75µm150nm,0.5s						
CM31	Chiang Mai Arr	11.75	22	P	Pn	14 14 05.2	+2.8
	SNR=32						
CMAR	Chiang Mai Arr	11.75	22	Pn	Pn	14 14 04.5	+2.2
	2.6nm,0.3s,baz=213,slow=14,SNR=42						

CMAR				LR	LR	14 18 35.4	
	comp=Z,18µm,18.3s,baz=178,slow=38						
CMAR	Chiang Mai Arr	11.75	22	*i* P	Pn	14 14 04.5	+2.2
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.3s						
PPSI	Pulau Pagai	11.75	151	P	Pn	14 14 01.9	-0.4
	comp=Z,220nm,0.9s						
KRJI	Kerinci	11.98	143	P	Pn	14 14 05.8	+0.2
	comp=Z,365nm,0.8s						
CHTO	Chiang Mai	12.08	22	P	Pn	14 14 09.0	+2.2
CHTO	Chiang Mai	12.08	22		Pn	14 14 09.0	+2.2
TPRI	Tanjung Pinang	12.18	122	P	Pn	14 14 10.0	+1.8
	comp=Z,142nm,1.0s						
PALK	Pallekele	13.45	270	Pn	Pn	14 14 25.7	+0.2
	comp=Z,0.7nm,0.3s,baz=64,slow=12,SNR=4.6						
PALK				Sn	Sn	14 16 43.4	-11
	comp=Z,2.4nm,0.3s,baz=191,slow=22,SNR=1.7						
PALK				LR	LR	14 19 12.8	
	comp=Z,23µm,20.0s,baz=103,slow=36						
MNAI	Manna	14.68	143	P	Pn	14 14 41.3	-1.1
	comp=Z,404nm,0.9s						
CHLP	Challavanipeta	14.72	319	*e*P	Pn	14 14 40.0	-3.0
CHLP				*e*		14 17 10.0	
PMBI	Palembang	14.79	134	P	Pn	14 14 41.7	-2.1
	comp=Z,261nm,0.7s						
MDRS	Chennai	14.83	293	*e*P	Pn	14 14 45.3	+0.9
MDRS				IAmb	IAmb	14 14 53.0	
	comp=Z,149nm,1.0s						
BWNR	Bhubaneshwar	15.07	328	*e*P	Pn	14 14 44.9	-2.7
BRDH	Bariadhala	15.24	351	Pn	Pn	14 14 49.0	-0.8
	comp=Z,28nm,0.3s,baz=270,slow=18,SNR=1.2						
MDSI	Maura Dua	15.53	140	P	Pn	14 14 51.4	-2.3
SKHT	Srikalahasti	15.55	294	*e*P	Pn	14 14 53.6	-0.4
SKHT				*e*		14 17 35.4	
PVM	Polavaram	15.64	309	*e*P	Pn	14 14 54.2	-0.9
PVM				*e*		14 17 35.0	
LWLI	Liwa	15.87	142	P	Pn	14 14 55.0	-3.2
MYLAV	Mylavaram	16.14	306	*e*P	Pn	14 15 00.6	-0.9
MYLAV				*e*		14 17 48.4	
ADKI	Addanki	16.22	302	*e*P	Pn	14 15 03.2	+0.6
ADKI				*e*		14 17 52.3	
KASI	Kota Agung	16.53	142	P	Pn	14 15 00.6	-6.0
GGR	Gangavaram	17.08	308	*e*P	Pn	14 15 11.6	-1.8
GGR				*e*		14 18 18.0	
NJS	Nagarjunasagar	17.12	303	*e*P	Pn	14 15 13.5	-0.5
NJS				*e*		14 18 14.1	
SRLM	Srisailam	17.26	301	*e*P	Pn	14 15 16.0	+0.3
BOK	Bokaro	18.03	334	*e*P	Pn	14 15 24.4	-0.8
BOK				IAmb	IAmb	14 15 34.2	
	comp=Z,189nm,1.3s						
KOHI	KOHIMA	18.06	360	*e*P	Pn	14 15 24.1	-1.6
KOHI				IAmb	IAmb	14 15 35.3	
	comp=Z,180nm,0.9s						
HYB	Hyderabad	18.18	304	*i* P	Pn	14 15 26.0	-1.1
HYB	Hyderabad	18.18	304	*e*P	P	14 15 30.0	+2.6
HYBB	Hyderabad (bro	18.18	304	*e*P	Pn	14 15 26.0	-1.1
HYBB				*e*Sn	Sn	14 18 50.3	+0.4
URV	Uravakonda	18.20	295	*e*P	P	14 15 28.3	+0.6
URV				*e*		14 18 45.4	
RPR	Rampur	18.37	309	*e*P	P	14 15 28.8	-0.6
DBJI	Dramaga	18.76	138	P	P	14 15 30.8	-2.9
QIZ	Qiongzhong	18.95	51	P	Pn	14 15 37.8	+1.3
QIZ				S	S	14 19 09.8	-0.9
QIZ				pmax	pmax		
	comp=Z,41nm,1.1s						
QIZ				LR	LR		
	comp=Z,15µm,13.9s						
SKJI	Sukabumi	18.97	139	P	P	14 15 34.4	-1.6
SRSP	Sriramsagar	19.15	308	*e*P	P	14 15 37.0	-1.0
SRSP				*e*		14 19 07.2	
KMI	Kunming	19.25	24	P	Pn	14 15 42.4	+2.1
KMI				pP	sP	14 15 45.0	-0.7
KMI				sP	pwP	14 15 46.3	-0.2
KMI				PP	PnPn	14 15 59.4	+5.9
KMI				pmax	pmax		
	comp=Z,43nm,1.1s						
LEM	Lembang	19.54	137	P	P	14 15 40.8	-1.6
	comp=Z,1.8nm,0.3s,baz=314,slow=23,SNR=4.8						
LEM				LR	LR	14 24 45.0	
	comp=Z,16µm,18.4s,baz=314,slow=42						
KLRI	Killari	20.12	303	*e*P	P	14 15 48.8	+0.2
ODAN	Odare	20.27	342	*e*P	P	14 15 49.5	-0.9
GTK	Tadong	20.37	345	*e*x	P	14 15 51.0	-0.4
GTK				*e*x	x	14 15 51.1	
GTK				IAmb	IAmb	14 16 02.5	
	comp=Z,192nm,0.8s						
RAMN	Ramite	20.61	340	*e*P	P	14 15 53.8	-0.3
	comp=Z,900nm,1.0s						
TAPN	Taplejung	20.64	343	*e*P	P	14 15 53.5	-1.0
	comp=Z,656nm,0.9s						
MNCY	Minicoy	21.03	273	*e*P	P	14 16 00.9	+2.4
MNCY				*e*x	x	14 16 01.1	
MNCY				IAmb	IAmb	14 16 03.8	
	comp=Z,632nm,1.8s						
JIRN	Jiri	21.40	340	*e*P	P	14 16 01.7	-1.1
GOA	Goa	21.50	293	*e*x	P	14 16 04.5	+1.0
GOA				IAmb	IAmb	14 16 08.4	
	comp=Z,211nm,1.1s						
PKI	Pulchoki	21.60	338	*e*P	P	14 16 03.4	-1.4
PKIN	Phulchoki	21.61	338	*e*P	P	14 16 03.5	-1.4
UWJI	Ujung Watu	21.68	129	P	P	14 16 06.0	+0.5
	comp=Z,4µmcomp=Z,326nm,1.6s						
SMRI	Semarang	21.71	132	P	P	14 16 07.6	+1.8
	comp=Z,365nm,1.0s						
GUN	Gumba	21.74	340	*e*P	P	14 16 05.0	-1.4
DMN	Daman	21.74	338	*e*P	P	14 16 05.1	-1.2
KAD	Karad	21.84	298	*i* x	P	14 16 07.4	+0.1
KKN	Kakani	21.84	338	*e*P	P	14 16 05.5	-1.8
KKM	Kota Kinabalu	21.86	93	P	P	14 16 09.6	+2.1
KKM				IAmb	IAmb	14 16 17.6	
	comp=Z,444nm,1.5s						
GYA	Guiyang	22.19	31	⇑*i*P	P	14 16 13.3	+2.3
GYA				PP	PnPn	14 16 40.0	+6.4
GYA				S	S	14 20 13.3	-1.6
GYA				SS	SnSn	14 20 51.8	+9.4
GYA				pmax	pmax		
	comp=Z,40nm,1.2s						
GYA				pmax	pmax		
	comp=Z,140nm,4.6s						
GYA				LR	LR		
	comp=Z,14µm,16.1s						
GYA				LR	LR		
	comp=Z,13µm,14.9s						
LSA	Lhasa	22.22	353	P	P	14 16 11.5	-0.1
LSA				pmax	pmax		
	comp=Z,131nm,0.8s						
LSA	Lhasa	22.22	353	P	P	14 16 11.5	-0.1
LSA				IAmb	IAmb	14 16 21.9	
	comp=Z,131nm,0.8s						
GKN	Gorkha	22.28	337	*e*P	P	14 16 10.6	-1.3
UGM	Wanagama	22.34	133	P	P	14 16 11.7	-0.9
	comp=Z,148nm,1.4s						
UGM	Wanagama	22.34	133	P	P	14 16 11.8	-0.9
UGM				IAmb	IAmb	14 16 19.4	
	comp=Z,134nm,1.1s						
BHPL	Bhopal	22.46	316	*e*x	P	14 16 14.9	+1.1
BHPL				IAmb	IAmb	14 16 22.3	
	comp=Z,114nm,0.6s						
WOJI	Wonogiri, Jawa	22.59	132	P	P	14 16 15.8	+0.6
	comp=Z,55nm,1.0s						
DANN	Dangsing	22.93	336	*e*P	P	14 16 17.7	-1.4
	comp=Z,409nm,0.9s						
PCJI	Pacitan	23.01	133	P	P	14 16 18.2	-1.4
	comp=Z,85nm,1.3s						
PWJI	Pagerwojo	23.36	131	P	P	14 16 21.4	-1.8
BKB	Balikpapan	24.22	110	P	P	14 16 31.6	+0.1
	comp=Z,223nm,2.8s						
SMKI	Samarinda	24.23	108	P	P	14 16 34.8	+3.2
KBKI	Kotabaru	24.38	116	P	P	14 16 31.6	-1.3
	comp=Z,19nm,1.0s						
KMMI	Kalianget	24.43	126	P	P	14 16 34.1	+0.7
	comp=Z,157nm,1.0s						
GMJI	Gumukmas	24.76	129	P	P	14 16 38.3	+1.9
	comp=Z,77nm,1.2s						
CD2	Chengdu	24.87	20	⇓*i*P	P	14 16 37.5	+0.2
CD2				pmax	pmax		
	comp=Z,120nm,1.3s						
JAGI	Jajag, Banyuwa	25.43	128	P	P	14 16 43.0	+0.6
	comp=Z,97nm,1.5s						
PTH	Pithoragarh	25.55	331	*e*x	P	14 16 40.2	-3.4
SRBI	Singaraja	26.04	126	P	P	14 16 47.2	-0.7
	comp=Z,222nm,1.2s						
H08S3	Diego Garcia H	26.44	236	T	T	14 43 45.3	
	baz=55,slow=76,SNR=407						
H08S2	Diego Garcia H	26.44	236	T	T	14 43 42.0	
	baz=55,slow=76,SNR=299						
H08S1	Diego Carcia H	26.45	236	T	T	14 43 31.4	
	baz=55,slow=76,SNR=246						
MPSI	Mapaga	26.55	105	P	P	14 16 54.4	+1.8
	comp=Z,7µmcomp=Z,228nm,1.5s						
TGY	Tagaytay City	26.98	74	LR	LR	14 26 00.8	
	comp=Z,8µm,21.9s,baz=239,slow=33						
KAPI	Kappang	28.34	115	P	P	14 17 06.9	-1.8
	comp=Z,28nm,1.1s,baz=256,slow=1.7,SNR=4.1						
SMLA	Simla	28.37	328	*e*x	P	14 17 07.5	-1.2
BNSI	Bone	28.40	114	P	P	14 17 09.3	+0.1
	comp=Z,40nm,2.0s						
MRSI	Marisa	28.48	103	P	P	14 17 10.8	+0.9
	comp=Z,113nm,1.2s						
APSI	Ampana	28.59	106	P	P	14 17 12.7	+1.8
	comp=Z,109nm,1.0s						
BKSI	Bulukumba	28.81	116	P	P	14 17 11.4	-1.4
	comp=Z,47nm,0.9s						
PAGZ	Pagadian	28.86	87	*e*P	P	14 17 14.1	+0.8
BHK	Bhakra	29.00	327	*e*x	P	14 17 18.0	+3.7
WHN	Wuhan	29.61	37	⇑P	P	14 17 21.8	+2.0
WHN				pmax	pmax		
	comp=Z,440nm,1.8s						
XAN	Xi'an	29.62	25	P	P	14 17 20.0	+0.1
XAN				pP	sP	14 17 25.8	-0.8
XAN				sP	pwP	14 17 28.1	+0.7
XAN				pmax	pmax		
	comp=Z,27nm,0.9s						
LUWI	Luwuk	29.70	106	P	P	14 17 22.6	+1.9
	comp=Z,7µmcomp=Z,243nm,0.9s						
DHRM	DHARAMSHALA	29.71	328	*e*x	P	14 17 20.3	-0.6
DHRM				IAmb	IAmb	14 17 37.1	
	comp=Z,48nm,0.9s						
LZH	Lanzhou	29.72	16	*e*P	P	14 17 21.6	+0.8
LZH				pP	sP	14 17 26.4	-1.1
LZH				sP	pwP	14 17 30.3	+2.0
LZH				pmax	pmax		
	comp=Z,26nm,1.5s						
LZH				LR	LR		
	comp=Z,7µm,13.0s						
LZH				LR	LR		
	comp=Z,11µm,13.6s						
LZH				LR	LR		
	comp=Z,11µm,14.1s						
SKMP	Bagumbayan, Su	30.07	90	*e*P	P	14 17 31.7	+7.7
WBSI	Waikabubak, Su	30.31	124	P	P	14 17 19.7	-6.5
YULB	Yu-li	30.35	56	P	P	14 17 25.4	-1.0
KMSI	Cibinong	30.43	102	P	P	14 17 27.7	+0.5
	comp=Z,2µmcomp=Z,242nm,1.1s						
BUKP	Musuan	30.52	87	*e*P	P	14 17 38.3	+10
KCP	Kidapawan	30.59	89	⇓*i*P	P	14 17 30.8	+2.1
DDMP	Don Marcelino,	31.26	91	*e*P	P	14 17 35.6	+1.0
GTA	Gaotai	32.10	8	P	P	14 17 41.6	-0.2
GTA				pP	pP	14 17 45.8	-0.8
GTA				sP	pwP	14 17 48.8	-0.4
GTA				ScS	ScS	14 28 11.0	-1.7
GTA				pmax	pmax		
	comp=Z,17nm,1.1s						
MMRI	Maumere	32.20	119	P	P	14 17 39.6	-3.2
NIL	Nilore	32.42	326	P	P	14 17 43.3	-1.3
NIL				pmax	pmax		
	comp=Z,88nm,0.9s						
NIL	Nilore	32.42	326	P	P	14 17 43.3	-1.3
NIL				IAmb	IAmb	14 17 52.7	
	comp=Z,88nm,0.9s						
SANI	Sanana	33.07	106	P	P	14 17 50.0	-0.4
	comp=Z,40nm,2.2s						
NJ2	Nanjing	33.43	40	*e*P	P	14 17 52.4	-1.0
NJ2				pmax	pmax		
	comp=Z,27nm,0.6s						
NJ2				LR	LR		
	comp=Z,7µm,14.5s						
NJ2				LR	LR		
	comp=Z,10µm,14.2s						
LBMI	Labuha	34.14	102	P	P	14 18 00.6	+0.8
	comp=Z,112nm,1.6s						
SOEI	Soe	34.49	119	P	P	14 17 59.7	-3.2
TIA	Tai'an	35.35	33	P	P	14 18 11.0	+1.1
TIA				pmax	pmax		
	comp=Z,16nm,1.3s						
KBL	Kabul	35.49	323	P	P	14 18 10.5	-0.9
KBL				pmax	pmax		
	comp=Z,27nm,0.9s						
KBL	Kabul	35.49	323	P	P	14 18 10.5	-0.9
AAI	Ambon	35.66	107	P	P	14 18 13.4	+0.5
	comp=Z,81nm,0.9s						
AAI	Ambon	35.66	107	P	P	14 18 13.9	+1.0
AAI				pmax	pmax		
	comp=Z,81nm,0.9s						
KSH	Kashi	35.80	335	P	P	14 18 11.5	-2.5
KSH				pP	pP	14 18 17.8	-1.0
KSH				PcP	PcP	14 20 39.8	-1.7
KSH				S	S	14 23 45.6	-5.2
KSH				PcS	PcS	14 24 26.3	-2.6
KSH				ScS	ScS	14 28 30.9	-1.3
KSH				pmax	pmax		
	comp=Z,280nm,2.0s						
KSH				LR	LR		
	comp=Z,5µm,12.3s						
GIRL	Giralia	35.83	147	P	P	14 18 14.5	+0.3
MSAI	Masohi	36.25	106	P	P	14 18 15.2	-2.8
HHC	Hu-ho-hao-te	36.56	22	*e*P	P	14 18 21.4	+1.0
HHC				sP	pwP	14 18 28.4	+0.5
HHC				LR	LR		
	comp=Z,4µm,13.1s						
HHC				LR	LR		
	comp=Z,1µm,14.2s						
HHC				LR	LR		
	comp=Z,4µm,13.7s						
WMQ	Urumqi	36.57	352	*e*P	P	14 18 20.8	+0.4
WMQ				pP	pP	14 18 25.3	+0.1
WMQ				sP	pwP	14 18 30.0	+2.0
WMQ				pmax	pmax		
	comp=Z,48nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,880nm,10.3s						
WMQ				LR	LR		
	comp=Z,5µm,13.1s						
WMQ				LR	LR		
	comp=Z,5µm,16.7s						
WMQ				LR	LR		
	comp=Z,5µm,18.5s						
WMQ	Urumqi	36.57	352	P	P	14 18 19.5	-0.9
WMQ				pmax	pmax		
	comp=Z,91nm,1.1s						
WMQ	Urumqi	36.57	352	P	P	14 18 19.5	-0.9
WMQ				IAmb	IAmb	14 18 30.7	
	comp=Z,91nm,1.1s						
WBK	Wadi Bani Khal	37.08	298	P	P	14 18 27.7	+2.7
	SNR=13						
MHTO	MHTO	37.51	295	P	P	14 18 30.8	+2.2
	SNR=8.3						
JOW	Kunigami	37.54	55	LR	LR	14 35 13.0	
	comp=Z,541nm,18.1s,baz=230,slow=38						
WSAR	Wadi Sarin	37.58	299	P	P	14 18 30.1	+1.0
	comp=Z,19nm,1.0s,baz=147,slow=5.3,SNR=17						
WSAR				PcP	PcP	14 20 46.6	-0.5
	comp=Z,6.0nm,0.8s,baz=47,slow=10,SNR=2.1						
WSAR				LR	LR	14 34 20.1	
	comp=Z,4µm,18.1s,baz=115,slow=37						
WSAR	Wadi Sarin	37.58	299	P	P	14 18 32.1	+2.9
	SNR=15						
SHLS	Shalkode	37.77	342	*e*P	P	14 18 26.6	-4.1
SHLS	Shalkode	37.77	342	*e*P	P	14 18 26.5	-4.1
JMDO	Jabal Madar	37.77	297	P	P	14 18 33.3	+2.5
	SNR=8.1						
BJI	Beijing	37.83	28	P	P	14 18 33.8	+2.8
BJI				pmax	pmax		
	comp=Z,28nm,1.9s						
SWI	Sorong	37.84	101	P	P	14 18 32.2	+0.7
	comp=Z,142nm,1.3s						
SWI	Sorong	37.84	101	P	P	14 18 32.7	+1.2
SWI				pmax	pmax		
	comp=Z,141nm,1.3s						
SIJI	Sorong	37.85	101	P	P	14 18 32.7	+1.1
	comp=Z,64nm,0.9s,baz=304,slow=7.4,SNR=34						
SIJI				PcP	PcP	14 20 49.3	+1.3
	comp=Z,14nm,1.0s,baz=285,slow=7.8,SNR=3.4						
UZB	Uzynbulak	37.89	342	*e*P	P	14 18 28.9	-2.8
UZB	Uzynbulak	37.89	342	*e*P	P	14 18 28.9	-2.8
SATY	Saty	38.01	341	*e*P	P	14 18 30.4	-2.3
SATY	Saty	38.01	341	*e*P	P	14 18 30.3	-2.3
SMDO	Samad	38.03	298	P	P	14 18 35.8	+2.6
	SNR=16						
ULHL	Ulahol	38.04	338	P	P	14 18 32.4	-0.7
	SNR=9.2						
BIDO	Bidbid	38.10	299	P	P	14 18 36.2	+2.5
	SNR=17						
KZA	Kyzart	38.27	337	P	P	14 18 35.0	-0.2
	SNR=15						
KPKS	Kokpek	38.28	342	*e*P	P	14 18 32.6	-2.4
KPKS	Kokpek	38.28	342	*e*P	P	14 18 32.5	-2.4
PSA00	Pilbara Seismi	38.33	140	P	P	14 18 34.5	-0.9
MDOK	Medeo	38.55	340	*e*P	P	14 18 34.5	-2.8
MDOK	Medeo	38.55	340	*e*P	P	14 18 34.5	-2.8
KNDC	Almaty	38.63	340	P	P	14 18 37.8	0.0
AAA	Alma-Ata	38.64	340	*e*P	P	14 18 34.5	-3.4
AAA	Alma-Ata	38.64	340	*e*P	P	14 18 34.5	-3.4
BSY	Bisya	38.68	297	P	P	14 18 41.0	+2.5
	SNR=17						
UCH	Uchtor	38.69	336	P	P	14 18 38.3	-0.5
	SNR=12						
HOQ	Hoqain	38.84	298	P	P	14 18 42.1	+2.3
	SNR=22						
KBK	Karagaybulak	38.88	337	P	P	14 18 40.2	+0.2
	SNR=15						
AML	Almayashu	38.94	335	P	P	14 18 40.4	-0.5
	SNR=40						
AAK	Ala-Archa	39.04	337	P	P	14 18 41.4	0.0
	comp=Z,14nm,1.0s,baz=142,slow=6.4,SNR=26						
AAK				PcP	PcP	14 20 52.5	+1.1
	comp=Z,9.1nm,0.6s,baz=172,slow=5.4,SNR=6.9						
AAK				LR	LR	14 36 56.8	
	comp=Z,8µm,18.3s,baz=148,slow=40						
AAK	Ala-Archa	39.04	337	P	P	14 18 41.4	0.0
	SNR=23						
AAK	Ala-Archa	39.04	337	⇓*i*P	P	14 18 41.2	-0.2
AAK				pmax	pmax		
	comp=Z,43nm,1.3s						
AAK	Ala-Archa	39.04	337	P	P	14 18 41.5	+0.1
AAK					PcP	14 20 53.0	+1.7
CHMS	Chumysh	39.25	337	P	P	14 18 42.4	-0.5
	SNR=11						
CHMS	Chumysh	39.25	337	*i* P	P	14 18 41.4	-1.6
CHMS				pmax	pmax		
	comp=Z,41nm,1.0s						
EKS2	Erkin-Say	39.34	336	P	P	14 18 43.4	-0.5
	SNR=14						
KUU	Kurty	39.44	340	*e*P	P	14 18 41.2	-3.4
KUU	Kurty	39.44	340	*e*P	P	14 18 41.1	-3.4
ARQ	Araqi	39.45	298	P	P	14 18 47.1	+2.2
	SNR=25						
USP	Ospenovka	39.57	337	P	P	14 18 44.9	-0.8
	SNR=21						
SGDS	Sogindy	39.68	337	*e*P	P	14 18 43.8	-2.8
SOHO	SOHO	39.68	299	P	P	14 18 48.7	+1.9
	SNR=16						
DL2	Dalian	39.76	34	P	P	14 18 49.5	+2.2
DL2				pmax	pmax		
	comp=Z,34nm,1.3s						
SOCY	Socotra	39.91	280	P	P	14 18 51.1	+2.2
	SNR=13						
SOCY	Socotra	39.91	280	P	P	14 18 50.3	+1.3
FITZ	Fitzroy Crossi	40.12	130	P	P	14 18 48.8	-1.8
	comp=Z,7.8nm,1.0s,baz=263,slow=3.0,SNR=7.8						
FITZ				PcP	PcP	14 20 55.4	+0.4
	comp=Z,14nm,1.0s,baz=333,slow=5.4,SNR=3.7						
FITZ				LR	LR	14 36 18.0	
	comp=Z,4µm,19.1s,baz=326,slow=38						
FITZ	Fitzroy Crossi	40.12	130	P	P	14 18 49.0	-1.5
MK31	Makanchi Array	40.42	347	*i* P	P	14 18 51.3	-1.3
MK31	Makanchi Array	40.42	347	P	P	14 18 51.7	-0.9
MK31				IAmb	IAmb	14 19 00.7	
	comp=Z,50nm,1.0s						
MKAR	Makanchi Array	40.42	347	P	P	14 18 51.4	-1.3
	comp=Z,30nm,0.7s,baz=165,slow=8.0,SNR=93						
MKAR				PcP	PcP	14 20 54.5	-1.1
	comp=Z,2.7nm,0.7s,baz=182,slow=4.9,SNR=2.0						
MKAR	Makanchi Array	40.42	347	P	P	14 18 51.7	-0.9
MKAR	Makanchi Array	40.42	347	P	P	14 18 51.7	-0.9
MAKZ	Makanchi	40.50	347	*i* P	P	14 18 51.5	-1.8
MAKZ				pmax	pmax		
	comp=Z,37nm,1.0s						
MAKZ	Makanchi	40.50	347	P	P	14 18 51.8	-1.5
ZSN	Zaisan	40.55	350	*e*P	P	14 18 51.1	-2.6
ZSN	Zaisan	40.55	350	*e*P	P	14 18 51.1	-2.6
IUG	Iuzhnay	40.56	332	*e*P	P	14 18 52.0	-2.0
IUG	Iuzhnay	40.56	332	*e*P	P	14 18 51.9	-2.0
WHFO	Wadi Hawf	40.72	289	P	P	14 18 57.6	+2.1
	SNR=14						
ABTO	Aybut	41.08	288	P	P	14 19 00.8	+2.3
	SNR=11						
KK31	Karatay Array	41.09	333	*i* P	P	14 18 56.8	-1.5
KK31	Karatay Array	41.09	333	P	P	14 18 57.7	-0.6
KKAR	Karatay Array	41.09	333	P	P	14 18 58.2	-0.1
KKAR				pmax	pmax		
	comp=Z,20nm,0.9s						
KKAR	Karatay Array	41.09	333	P	P	14 18 58.2	-0.1
KKAR	Karatay Array	41.09	333	P	P	14 18 57.8	-0.4
KKAR				IAmb	IAmb	14 19 05.8	
	comp=Z,20nm,0.8s						
AJN	Ajban	41.16	299	P	P	14 19 00.8	+1.8
	SNR=13						
BTLS	Baital	41.25	338	*e*P	P	14 19 05.5	+6.0
BTLS	Baital	41.25	338	*e*P	P	14 19 05.5	+6.0
SONM	Songino Array	41.44	12	P	P	14 19 01.2	0.0
	comp=Z,11nm,0.8s,baz=195,slow=8.1,SNR=20						
SONM				PcP	PcP	14 20 59.3	+0.3
	comp=Z,4.6nm,0.6s,baz=198,slow=3.5,SNR=3.3						
SONM	Songino Array	41.44	12	P	P	14 19 01.7	+0.5
ULN	Ulaanbaatar	41.61	13	⇓*e*P	P	14 19 02.4	-0.2
ULN				pmax	pmax		
	comp=Z,34nm,2.5s						
TJN	Taejon	41.63	42	⇓*e*P	P	14 19 03.4	+0.6
MORW	Morawa	42.03	151	P	P	14 19 05.2	-1.0
JNU	Nakatsue	42.37	48	P	P	14 19 09.8	+0.9
	comp=Z,17nm,0.9s,baz=273,slow=1.1,SNR=5.8						
DGZ	Jazzator, Alta	42.39	353	⇓*e*P	P	14 19 08.6	-0.3
DGZ				pmax	pmax		
	comp=Z,52nm,2.3s						
KSRS	Korea Array	42.62	41	P	P	14 19 11.8	+1.0
	comp=Z,19nm,1.2s,baz=238,slow=8.1,SNR=13						
KSRS				PcP	PcP	14 21 03.7	+0.8
	comp=Z,1.6nm,0.9s,baz=254,slow=3.0,SNR=2.2						
ZAK	Zakamensk	43.34	8	*e*P	P	14 19 15.8	-0.8
ZAK				pmax	pmax		
	comp=Z,13nm,1.3s						
SEM	Semipalatinsk	44.28	347	*e*P	P	14 19 21.3	-3.0
SEM	Semipalatinsk	44.28	347	*e*P	P	14 19 21.2	-3.0
MOY	Mondy	44.32	6	*e*P	P	14 19 23.5	-0.9
MOY				pmax	pmax		
	comp=Z,45nm,2.5s						
GEYT	Alibeck	44.51	318	P	P	14 19 26.1	0.0
	comp=Z,26nm,0.7s,baz=142,slow=7.4,SNR=48						
GEYT				PcP	PP	14 21 09.9	-0.2
	comp=Z,6.7nm,0.6s,baz=190,slow=6.6,SNR=2.3						
GEYT				LR	LR	14 38 55.1	
	comp=Z,7µm,20.1s,baz=100,slow=37						
GEYT	Alibeck	44.51	318	P	P	14 19 26.4	+0.3
GYA0B	ALIBECK ARRAY	44.51	318	P	P	14 19 26.7	+0.6
GYA0B				IAmb	IAmb	14 19 33.6	
	comp=Z,35nm,0.6s						
TLY	Talaya	44.66	8	P	P	14 19 27.7	+0.6
	comp=Z,5.3nm,0.8s,baz=186,slow=3.1,SNR=7.9						
TLY				PcP	PcP	14 21 10.5	+0.9
	comp=Z,2.7nm,0.7s,baz=209,slow=10,SNR=2.4						
TLY	Talaya	44.66	8	⇓*e*P	P	14 19 27.3	+0.2
TLY				pmax	pmax		
	comp=Z,16nm,1.0s						
KURBB	Kurchatov Arra	44.88	346	P	P	14 19 27.9	-0.8
	comp=Z,37nm,0.7s,baz=163,slow=7.8,SNR=90						
KURBB				PcP	PcP	14 21 10.8	+0.6
	comp=Z,6.6nm,0.7s,baz=156,slow=2.8,SNR=5.9						
KURBB	Kurchatov Arra	44.88	346	P	P	14 19 27.3	-1.4
KURK	Kurchatov	44.94	346	*d i*P	P	14 19 28.8	-0.4
KURK				pmax	pmax		
	comp=Z,138nm,1.3s						
KURK	Kurchatov	44.94	346	P	P	14 19 28.6	-0.6
CN2	Changchun	45.23	32	*e*P	P	14 19 31.3	-0.4
CN2				*e*sP	pwP	14 19 38.4	-0.9
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
IRK	Irkutsk	45.30	9	*e*P	P	14 19 31.8	-0.3
IRK				pmax	pmax		
	comp=Z,72nm,3.2s						
NWAO	Narrogin (SRO)	45.82	153	P	P	14 19 36.9	+0.5
	comp=Z,53nm,0.9s,baz=330,slow=9.8,SNR=14						
NWAO				LR	LR	14 37 45.0	
	comp=Z,5µm,20.6s,baz=354,slow=35						

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NWAO  Narrogin (SRO)   45.82 153    P       P         14 19 35.5 -1.0
NWAO                                pmax    pmax
      comp=Z,72nm,1.0s
NWAO  Narrogin (SRO)   45.82 153    P       P         14 19 35.5 -1.0
NWAO                                IAmb    IAmb      14 19 37.7
      comp=Z,72nm,0.9s
NWAO  Narrogin (SRO)   45.82 153    P       P         14 19 35.6 -1.0
NWAO                                IAmb    IAmb      14 19 37.7
      comp=Z,62nm,1.0s
BRZS  Berezniki        45.97 341   eP       P         14 19 34.9 -2.6
BRZS  Berezniki        45.97 341   eP       P         14 19 34.9 -2.6
ZAA0  Zalesovo Array   46.88 352    P       P         14 19 44.2 -0.3
ZALV  Zalesovo Beam    46.88 352    P       P         14 19 44.3 -0.2
      comp=Z,33nm,0.5s,baz=179,slow=8.0,SNR=65
ZALV  Zalesovo Beam    46.88 352    P       P         14 19 44.6 +0.1
GENI  Genyem           46.90 101    P       P         14 19 45.7 +0.4
      comp=Z,76nm,1.8s
WB0   Warramunga Arr   47.94 125    P       P         14 19 52.3 -1.0
WB0                                 IAmb    IAmb      14 19 58.7
      comp=Z,17nm,0.8s
WRA   Warramunga Arr   47.99 125    P       P         14 19 52.3 -1.4
      comp=Z,5.7nm,0.5s,baz=306,slow=8.3,SNR=46
WRA                                 LR      LR        14 42 13.4
      comp=Z,5µm,18.1s,baz=300,slow=39
WRA   Warramunga Arr   47.99 125  i P       P         14 19 52.2 -1.5
WRA                                 pmax    pmax
      comp=Z,8.0nm,0.5s
WRA   Warramunga Arr   47.99 125    P       P         14 19 53.1 -0.5
WRAB  Tennant Creek    47.99 125⇓iP       P         14 19 53.0 -0.7
WRAB                                pmax    pmax
      comp=Z,32nm,1.3s
WRAB  Tennant Creek    47.99 125    P       P         14 19 52.7 -1.0
WRAB                                IAmb    IAmb      14 19 59.8
      comp=Z,29nm,0.8s
WB2   Warramunga Arr   48.00 125    P       P         14 19 52.9 -0.9
WB2                                 IAmb    IAmb      14 19 59.8
      comp=Z,28nm,0.8s
MDJ   Mudanjiang       48.00  34    P       P         14 19 53.8 +0.4
MDJ                                 S       S         14 26 51.0 +0.3
MDJ                                 pmax    pmax
      comp=Z,9.0nm,1.4s
MDJ                                 LR      LR
      comp=Z,7µm,15.9s
MDJ                                 LR      LR
      comp=Z,8µm,17.2s
WR0   Warramunga Arr   48.16 125    P       P         14 19 53.9 -1.1
WR0                                 IAmb    IAmb      14 20 01.1
      comp=Z,33nm,1.1s
USRK  Ussuriysk Ar.    49.10  36    P       P         14 20 02.5 +0.6
      comp=Z,3.1nm,0.8s,baz=266,slow=5.7,SNR=6.0
USRK                                PcP     PcP       14 21 26.9 +1.6
      comp=Z,1.8nm,0.8s,baz=343,slow=34,SNR=2.5
MAT   Matsushiro       49.28  48    P       P         14 20 03.9 +0.4
MJAR  Matsushiro Arr   49.29  48    P       P         14 20 04.4 +0.9
      comp=Z,5.9nm,0.9s,baz=241,slow=7.3,SNR=8.6
MJAR                                PcP     PcP       14 21 26.2 -0.1
      comp=Z,6.2nm,0.9s,baz=242,slow=4.9,SNR=5.2
RAYN  Ar Rayn          49.32 294    P       P         14 20 05.3 +1.3
RAYN                                pmax    pmax
      comp=Z,103nm,1.0s
RAYN  Ar Rayn          49.32 294    P       P         14 20 05.3 +1.3
BVAR  Borovoye Array   49.32 341    P       P         14 20 02.4 -1.1
      comp=Z,11nm,0.8s,baz=140,slow=7.7,SNR=49
BVAR                                PcP     PcP       14 21 26.3 +0.4
      comp=Z,6.4nm,0.6s,baz=139,slow=7.0,SNR=4.2
DAMY  Dhamar           49.35 283    P       P         14 20 07.5 +2.9
      SNR=14
BRVK  Borovoye         49.38 341⇓iP       P         14 20 03.0 -0.8
BRVK                                pmax    pmax
      comp=Z,33nm,1.3s
BRVK  Borovoye         49.38 341    P       P         14 20 03.1 -0.8
BRVK                                IAmb    IAmb      14 20 11.3
      comp=Z,34nm,1.0s
AS31  Alice Springs    49.63 130    P       P         14 20 05.0 -1.3
ASAR  Alice Springs    49.63 130    P       P         14 20 04.9 -1.4
      comp=Z,14nm,0.9s,baz=305,slow=7.2,SNR=49
ASAR                                PcP     PcP       14 21 27.1 -0.6
      comp=Z,9.1nm,0.9s,baz=302,slow=3.9,SNR=8.0
ASAR                                LR      LR        14 43 34.3
      comp=Z,4µm,20.1s,baz=301,slow=39
ASAR  Alice Springs    49.63 130    P       P         14 20 05.9 -0.4
FORT  Forrest          50.02 141    P       P         14 20 10.1 +1.0
AB31  Akbulak array    50.56 331  i P       P         14 20 12.0 -0.9
ABKAR Akbulak array    50.56 331    P       P         14 20 12.6 -0.3
ABKAR Akbulak array    50.56 331    P       P         14 20 12.5 -0.4
ABKAR                               IAmb    IAmb      14 20 20.5
      comp=Z,30nm,0.9s
ATD   Arta Tunnel      50.80 279    P       P         14 20 16.7 +1.4
      comp=Z,22nm,0.9s,baz=278,slow=23,SNR=7.0
ATD                                 LR      LR        14 39 29.8
      comp=Z,739nm,18.4s,baz=60,slow=33
ATD   Arta Tunnel      50.80 279    P       P         14 20 18.1 +2.8
      SNR=5.7
KLR   Kul'dur          52.09  30    P       P         14 20 25.8 +1.4
      comp=Z,5.2nm,1.0s,baz=237,slow=3.7,SNR=8.0
KLR   Kul'dur          52.09  30⇑eP       P         14 20 25.8 +1.4
KLR                                 pmax    pmax
      comp=Z,22nm,1.5s
BOD   Bodaibo          52.43  13   eP       P         14 20 26.5 -0.2
BOD                                 pmax    pmax
      comp=Z,66nm,1.3s
OPO   Ambohidratompo   53.19 240    P       P         14 20 34.6 +1.4
      comp=Z,9.1nm,0.7s,baz=64,slow=9.2,SNR=11
ZEA   Zeya             53.19  24   eP       P         14 20 33.1 +0.6
ZEA                                 pmax    pmax
      comp=Z,32nm,1.0s
AKT   Akhty            53.22 317   eP       P         14 20 32.1 -0.9
AKT                                e                  14 21 40.5
AKT                                e                  14 22 32.1
AKT                                 pmax    pmax
      comp=Z,36nm,1.2s
LGD   Lagodekhi        54.38 317    P       P         14 20 41.5 +0.1
GNI   Garni            54.74 314    P       P         14 20 43.8 -0.4
      comp=Z,26nm,0.3s,baz=158,slow=11,SNR=7.0
PMG   Port Moresby     55.33 107⇓eP       P         14 20 49.1 +0.4
PMG                                 pmax    pmax
      comp=Z,61nm,0.7s
GRNR  Gornyy           55.42  31⇑iP       P         14 20 50.1 +1.4
GRNR                                pmax    pmax
      comp=Z,10.0nm,0.8s
GRNR                                MLR     MLR
      comp=Z,2µm,13.0s
SVE   Sverdlovsk       55.73 338   eP       P         14 20 50.8 -0.1
SVE                                 pmax    pmax
      comp=Z,234nm,1.6s
GUDG  Gudauri          55.83 317    P       P         14 20 52.7 +0.6
AKH   Akhalkalaki      56.09 315    P       P         14 20 54.5 +0.5
ARU   Arti             56.22 337    P       P         14 20 53.7 -0.7
      comp=Z,2.1nm,0.3s,baz=138,slow=4.7,SNR=26
ARU   Arti             56.22 337d iP       P         14 20 53.4 -1.0
ARU                                                   14 22 56.4
ARU                                 S       S         14 28 44.4 +1.3
ARU                                 SS      SS        14 32 26.7 -3.1
ARU                                 pmax    pmax
      comp=Z,135nm,1.6s
ARU   Arti             56.22 337    P       P         14 20 53.1 -1.2
ZEI   Tsey             56.35 317   eP       P         14 20 53.9 -1.9
ZEI                                 pmax    pmax
      comp=Z,32nm,1.3s
ONI   Oni              56.58 317    P       P         14 20 58.6 +1.3
NCK   Nalchik          56.84 318⇓eP       P         14 20 58.0 -1.1
NCK                                 pmax    pmax
      comp=Z,68nm,1.5s
KIBK  Kibwezi          56.93 262    P       P         14 21 02.4 +2.1
      SNR=15
YSS   Yuzh-Sakhalins   56.96  38   eP       P         14 21 01.4 +1.6
YSS                                e                  14 21 10.2
YSS                                 pmax    pmax
      comp=Z,20nm,0.9s
NEY   Neytrino         57.33 317⇓eP       P         14 21 01.9 -0.8
KBZ   Khabaz           57.40 318    P       P         14 21 02.1 -0.8
      comp=Z,12nm,1.1s,baz=94,slow=7.0,SNR=11
KBZ                                 LR      LR        14 49 13.3
      comp=Z,4µm,18.6s,baz=88,slow=40
KMBO  Kilima Mbogo     57.50 264    P       P         14 21 06.2 +1.7
      comp=Z,14nm,0.8s,baz=57,slow=10.0,SNR=3.5
KMBO                                LR      LR        14 42 56.1
      comp=Z,5µm,19.0s,baz=70,slow=33
KMBO  Kilima Mbogo     57.50 264  i P       P         14 21 03.4 -1.1
KMBO                                pmax    pmax
      comp=Z,14nm,0.8s
KIV   Kislovodsk       57.62 318   eP       P         14 21 04.2 -0.5
KIV                                 pmax    pmax
      comp=Z,155nm,1.1s
GOF   Gofitskoye       57.83 319⇑eP       P         14 21 05.7 -0.3
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ASF   Jabal al Asfar   58.48 303    P       P         14 21 11.4 +0.4
      comp=Z,3.7nm,0.7s,baz=25,slow=4.6,SNR=6.0
LODK  Lodwar           58.73 269    P       P         14 21 15.4 +2.5
      SNR=9.3
EIL   Elat             59.68 300    P       P         14 21 18.4 -0.8
      comp=Z,10nm,0.7s,baz=117,slow=2.4,SNR=8.6
STKA  Stephens Creek   59.81 134    P       P         14 21 19.0 -0.9
      comp=Z,11nm,0.9s,baz=318,slow=7.7,SNR=9.9
STKA                                LR      LR        14 50 24.4
      comp=Z,4µm,20.4s,baz=306,slow=39
MMAI  Mount Meron Ar   59.88 304    P       P         14 21 19.6 -1.0
      comp=Z,3.0nm,0.7s,baz=101,slow=8.7,SNR=5.0
YAK   Yakutsk          60.25  18    P       P         14 21 21.8 -0.7
      comp=Z,18nm,0.6s,baz=1.8,slow=0.6,SNR=10
YAK   Yakutsk          60.25  18   eP       P         14 21 19.8 -2.7
YAK                                 pmax    pmax
      comp=Z,79nm,1.0s
YAK                                 pmax    pmax
      comp=N,52nm,1.1s
YAK                                 pmax    pmax
      comp=E,34nm,1.1s
YAK   Yakutsk          60.25  18    P       P         14 21 21.6 -0.9
VRH   Novokhopyorsk    61.25 325   eP       P         14 21 27.2 -2.2
VRH                                 pmax    pmax
      comp=Z,50nm,0.7s
KIRV  Kirov            61.34 335    P       P         14 21 29.4 -0.5
      comp=Z,47nm,0.8s,baz=165,slow=3.6,SNR=11
NRIK  Noril'sk         61.86 357    P       P         14 21 32.9 -0.4
      comp=Z,18nm,0.6s,baz=149,slow=5.2,SNR=31
NRIK  Noril'sk         61.86 357⇓iP       P         14 21 32.6 -0.6
NRIK                                pmax    pmax
      comp=Z,31nm,0.7s
VSR   Storozhevoye     62.71 325   eP       P         14 21 36.7 -2.6
VSR                                 pmax    pmax
      comp=Z,30nm,1.0s
BR131 Keskin Array S   62.72 311    P       P         14 21 38.3 -1.5
BR131                               pmax    pmax
      comp=Z,12nm,0.8s
BR131 Keskin Array S   62.72 311    P       P         14 21 38.3 -1.5
BRTR  Keskin Array B   62.72 311    P       P         14 21 37.8 -1.9
      comp=Z,6.7nm,0.7s,baz=129,slow=7.2,SNR=31
LPSR  Galich'ya Gora   63.41 326   eP       P         14 21 40.8 -3.1
LPSR                                pmax    pmax
      comp=Z,80nm,1.6s
MBAR  Mbarara          63.85 266    P       P         14 21 49.5 +1.8
      comp=Z,4.4nm,0.3s,baz=72,slow=4.6,SNR=6.7
PRGR  Permogore        64.67 337   eP       P         14 21 50.0 -2.0
PRGR                               e                  14 24 12.2
PRGR                                pmax    pmax
      comp=Z,118nm,1.0s
ELL   Elmali           65.00 307    P       P         14 21 54.0 -0.9
MOS   Moscow           65.41 329   eP       P         14 21 54.6 -2.3
MOS                                e                  14 24 15.1
MOS                                eS       S         14 30 35.4 -5.0
MOS                                 pmax    pmax
      comp=Z,198nm,1.3s
MOS                                 MLR     MLR
      comp=E,6µm,17.0s
MOS                                 MLR     MLR
      comp=Z,7µm,17.0s
OBN   Obninsk          65.70 328    P       P         14 21 57.5 -1.3
      comp=Z,5.7nm,0.4s,baz=109,slow=8.1,SNR=12
OBN   Obninsk          65.70 328 ⇓P       P         14 21 57.9 -0.9
OBN   Obninsk          65.70 328d iP       P         14 21 57.4 -1.4
OBN                                e                  14 22 28.1
OBN                                e                  14 24 18.7
OBN                                 pmax    pmax
      comp=Z,159nm,1.3s
OBN                                 MLR     MLR
      comp=Z,6µm,19.0s
KLMR  Klimovskoe       66.78 334   eP       P         14 22 02.2 -3.5
KLMR                                pmax    pmax
      comp=Z,129nm,1.2s
KLMR  Klimovskoe       66.78 334   eP       P         14 22 02.2 -3.5
KLMR                                AMP               14 22 12.7
      comp=Z,129nm,1.2s
MA2   Magadan          66.99  27⇑eP       P         14 22 07.6 +0.6
MA2                                 pmax    pmax
      comp=Z,20nm,1.3s
TIXI  Tiksi            67.52  11⇓eP       P         14 22 09.0 -1.1
TIXI                                pmax    pmax
      comp=Z,87nm,1.2s
TIXI  Tiksi            67.52  11    P       P         14 22 08.8 -1.4
TIRR  Tirgusor         67.56 315 ⇑P       P         14 22 09.8 -1.1
HNR   Honiara          67.58 103    LR      LR        14 56 44.8
      comp=Z,1µm,18.7s,baz=269,slow=40
HNR   Honiara          67.58 103    P       P         14 22 11.0 -0.6
CFR   Carcaliu         67.90 316 ⇑P       P         14 22 11.4 -1.7
CFR   Carcaliu         67.90 316    P       P         14 22 11.3 -1.7
HARR  Harsova          67.94 315 ⇑P       P         14 22 12.4 -0.9
HARR  Harsova          67.94 315    P       P         14 22 12.4 -0.9
PETK  Petropavlovsk-   68.19  36    P       P         14 22 15.6 +0.9
      comp=Z,2.7nm,0.9s,baz=206,slow=9.6,SNR=2.1
PETK                                PKPPKP  P'P'df    14 50 33.5 -1.6
      comp=Z,4.8nm,0.9s,baz=51,slow=2.6,SNR=4.8
SORM  Soroca           68.40 319 ⇓P       P         14 22 14.0 -2.1
SORM  Soroca           68.40 319    P       P         14 22 14.0 -2.1
AKASG Malin Array Be   68.47 322    P       P         14 22 14.6 -1.9
      comp=Z,3.1nm,0.8s,baz=88,slow=4.7,SNR=24
AKASG Malin Array Be   68.47 322  i P       P         14 22 14.3 -2.2
AKASG                               pmax    pmax
      comp=Z,7.0nm,0.9s
ALN   Alexandroupoli   68.64 311    P       P         14 22 16.3 -1.5
ALN                                 pmax    pmax
      comp=Z,28nm,1.4s
ALN   Alexandroupoli   68.64 311    P       P         14 22 16.3 -1.5
ALN                                 IAmb    IAmb      14 22 31.6
      comp=Z,28nm,1.4s
IDI   Anoyia           68.84 305    P       P         14 22 18.6 -0.7
      comp=Z,25nm,0.6s,baz=86,slow=7.6,SNR=29
TMCR  Tamitsa          68.96 337   eP       P         14 22 17.7 -1.6
TMCR                               eS       S         14 31 23.7 +0.8
TMCR                                pmax    pmax
      comp=Z,107nm,1.4s
VRI   Vrincioaia       69.00 316 ⇑P       P         14 22 19.0 -1.0
VRI   Vrincioaia       69.00 316    P       P         14 22 19.0 -1.0
PLOR  Plostina         69.06 316 ⇓P       P         14 22 20.0 -0.4
PLOR  Plostina         69.06 316    P       P         14 22 19.9 -0.4
ELND  Elena            69.08 313 ⇑P       P         14 22 19.1 -1.4
SEY   Seymchan         69.16  25⇑eP       P         14 22 20.9 +0.3
TESR  Tescani          69.18 317 ⇓P       P         14 22 20.1 -1.0
LSZ   Lusaka           69.27 251    P       P         14 22 23.4 +1.1
      comp=Z,10.0nm,0.7s,baz=64,slow=6.5,SNR=17
MLR   Muntele Rosu     69.47 316    P       P         14 22 22.5 -0.6
      comp=Z,34nm,1.1s,baz=54,slow=3.1,SNR=19
MLR   Muntele Rosu     69.47 316 ⇓P       P         14 22 22.5 -0.6
BIZ   Bicaz            69.63 317 ⇑P       P         14 22 22.7 -1.2
PLD   Plovdiv          69.81 312    P       P         14 22 24.8 -0.3
PLD                                 pmax    pmax
      comp=Z,822nm,0.8s
DOPR  Dopca            69.94 316 ⇑P       P         14 22 24.9 -0.9
PLVB  Pleven           70.06 313 ⇑P       P         14 22 25.4 -1.2
VOIR                   70.08 316 ⇑P       P         14 22 25.2 -1.6
VOIR                   70.08 316    P       P         14 22 25.2 -1.6
MATP  Matopo           70.34 245  i P       P         14 22 26.8 -2.0
MATP  Matopo           70.34 245  i P       P         14 22 26.8 -2.0
BURAR Bucovina Array   70.35 318 ⇑P       P         14 22 26.5 -1.9
BURAR Bucovina Array   70.35 318    P       P         14 22 26.5 -1.9
BURAR Bucovina Array   70.35 318    P       P         14 22 26.6 -1.9
ARR   Arges            70.36 315 ⇑P       P         14 22 26.7 -1.7
PUL   Pulkovo          70.54 331⇑eP       P         14 22 29.8 +0.7
VTS   Vitosha          70.96 312 ⇑P       P         14 22 30.8 -1.5
VTS   Vitosha          70.96 312    P       P         14 22 31.8 -0.5
VTS                                 pmax    pmax
      comp=Z,440nm,1.6s
NACGM Naroch           70.97 326   e        P         14 22 30.0 -1.8
LOT   Lotru            70.98 315 ⇑P       P         14 22 30.3 -2.0
LIT   Litokhoron       71.23 310    P       P         14 22 31.5 -2.3
LIT   Litokhoron       71.23 310    IAmb    IAmb      14 22 45.3
      comp=Z,35nm,0.9s
VAY   Valandovo        71.30 311  i P       P         14 22 32.5 -1.6
ITM   Ithomi           71.40 307    IAmb    IAmb      14 22 46.5
      comp=Z,72nm,1.3s
IZAR  Zarasai          71.48 326   eP       P         14 22 34.0 -0.9
ISAL  Salakas          71.50 326   eP       P         14 22 32.9 -2.1
LVV   L'vov            71.53 320   eP       P         14 22 33.9 -1.4
LVV                                 MLR     MLR
      comp=Z,400nm,17.0s
GZR   Gura Zlata       71.66 315 ⇓P       P         14 22 35.9 -0.5
GZR   Gura Zlata       71.66 315    P       P         14 22 35.8 -0.5
LVZ   Lovozero         71.89 340⇓eP       P         14 22 37.6 +0.4
LVZ                                 pmax    pmax
      comp=Z,70nm,1.7s
DRGR                   71.90 317 ⇑P       P         14 22 36.6 -1.2
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DRGR                   71.90 317    P       P         14 22 37.0 -0.8
DRGR                                pmax    pmax
      comp=Z,17nm,1.9s
VSU   Vasula           71.91 329   eP       P         14 22 36.0 -1.5
VSU   Vasula           71.91 329deP       P         14 22 36.4 -1.1
VSU                                 pmax    pmax
      comp=Z,505nm,2.5s
FNA   Florina          72.14 310    P       P         14 22 37.8 -1.5
APA   Apatity          72.18 339⇓iP       P         14 22 37.4 -1.5
APA                                 pmax    pmax
      comp=Z,36nm,0.9s
SKO   Skopje           72.21 312  i P       P         14 22 37.3 -2.3
TRPA  Tarpa            72.22 318 ⇑P       P         14 22 39.0 -0.5
MDVR  Moldovita        72.33 315 ⇓P       P         14 22 38.3 -2.0
KWP   Kalwaria Pacla   72.34 320    IAmb    IAmb      14 22 41.1
      comp=Z,83nm,1.4s
UZH   Uzhgorod         72.45 319   eP       P         14 22 40.0 -0.9
UZH                                e                  14 22 44.0
UZH                                e                  14 23 00.5
BZS   Buzias           72.50 315    P       P         14 22 41.0 -0.3
OHR   Ohrid            72.61 311  i P       P         14 22 39.4 -2.7
PABE  Paberze          72.68 326   eP       P         14 22 40.8 -1.2
IGT   Igoumenitsa      72.83 309    P       P         14 22 42.2 -1.2
IGT                                 pmax    pmax
      comp=Z,363nm,0.9s
CRVS  Cervenica-Dubn   73.04 319   eP       P         14 22 44.5 +0.1
CRVS                                pmax    pmax
      comp=Z,95nm,1.3s
CRVS  Cervenica-Dubn   73.04 319   eP       P         14 22 44.5 +0.1
FINES FINESS Array B   73.04 332    P       P         14 22 43.6 -0.5
      comp=Z,18nm,0.6s,baz=97,slow=5.8,SNR=34
FINES FINESS Array B   73.04 332    P       P         14 22 43.0 -1.1
FINES FINESS Array B   73.04 332    P       P         14 22 43.0 -1.1
KECS  Kecovo           73.62 318   eP       P         14 22 47.5 -0.4
KECS  Kecovo           73.62 318   eP       P         14 22 47.5 -0.4
PDG   Podgorica        73.87 312    IAmb    IAmb      14 22 49.1
      comp=Z,23nm,1.0s
PBUR  Paburge          73.91 326   eP       P         14 22 48.6 -0.8
PSZ   Piszkesteto      73.95 318    P       P         14 22 49.8 -0.1
PSZ                                 pmax    pmax
      comp=Z,189nm,0.8s
LBTB  Lobatse          74.19 241    P       P         14 22 51.7  0.0
LBTB                                pmax    pmax
      comp=Z,51nm,1.2s
LBTB  Lobatse          74.19 241    P       P         14 22 51.7  0.0
LBTB                                IAmb    IAmb      14 23 01.5
      comp=Z,51nm,1.2s
OJC   Ojcow            74.29 320    IAmb    IAmb      14 23 01.6
      comp=Z,29nm,0.9s
SCTE  Santa Cesarea    74.30 309    IAmb    IAmb      14 22 51.0
      comp=Z,50nm,0.9s
KLNR  Kaliningrad      74.64 325ceP       P         14 22 53.6  0.0
KLNR                                pmax    pmax
      comp=Z,136nm,0.9s
VYHS  Vyhne            74.72 318   eP       P         14 22 53.6 -0.7
VYHS                                pmax    pmax
      comp=Z,51nm,1.7s
VYHS  Vyhne            74.72 318   eP       P         14 22 53.6 -0.7
SRO   Srobarova        75.00 317   eP       P         14 22 55.7 -0.2
SRO                                 pmax    pmax
      comp=Z,37nm,1.4s
SRO   Srobarova        75.00 317   eP       P         14 22 55.7 -0.2
KEV   Kevo             75.17 341    P       P         14 22 58.0 +1.6
OKC   Ostrava-Krasne   75.30 319   eP       P         14 22 57.0 -0.6
OKC   Ostrava-Krasne   75.30 319   eP       P         14 22 57.0 -0.6
BOSA  Boshof           75.52 238  i P       P         14 23 01.4 +2.0
BOSA                              i                   14 23 01.4
      baz=72,slow=6.9
BOSA  Boshof           75.52 238    P       P         14 22 59.4  0.0
      comp=Z,24nm,0.9s,baz=70,slow=6.1,SNR=32
BOSA  Boshof           75.52 238  i         P         14 23 01.4 +2.0
      baz=72,slow=6.9
BOSA                              i P       P         14 23 01.4 +2.0
BOSA  Boshof           75.52 238    P       P         14 23 00.5 +1.1
BOSA                                IAmb    IAmb      14 23 08.8
      comp=Z,58nm,1.3s
JAVC  Velka Javorina   75.52 318   eP       P         14 22 58.5 -0.4
BLY   Banja Luka       75.54 314 ⇓P       P         14 22 58.0 -1.1
TIP   Timpagrande      75.58 308 ⇓P       P         14 22 58.5 -1.0
ARCES ARCESS Array B   75.60 340    P       P         14 22 58.6 -0.3
      comp=Z,22nm,1.1s,baz=103,slow=5.9,SNR=16
ARCES ARCESS Array B   75.60 340    P       P         14 22 58.9  0.0
MORC  Moravsky Berou   75.69 319 ⇓P       P         14 22 59.5 -0.4
MORC  Moravsky Berou   75.69 319    P       P         14 22 59.5 -0.4
MORC  Moravsky Berou   75.69 319   eP       P         14 22 58.9 -1.0
MORC  Moravsky Berou   75.69 319    IAmb    IAmb      14 23 01.1
      comp=Z,75nm,1.5s
MODS  Modra-Piesok     75.74 318   eP       P         14 22 58.7 -1.5
MODS                                pmax    pmax
      comp=Z,56nm,1.6s
MODS  Modra-Piesok     75.74 318   eP       P         14 22 58.7 -1.5
ZST   Bratislava       75.84 318   eP       P         14 22 59.4 -1.3
ZST                                 pmax    pmax
      comp=Z,87nm,1.6s
ZST   Bratislava       75.84 318   eP       P         14 22 59.4 -1.3
KRLC  Kraliky          76.20 320   eP       P         14 23 02.5 -0.3
KRLC                               epP      pP        14 23 07.8 -0.1
KRLC  Kraliky          76.20 320   eP       P         14 23 02.5 -0.3
KRLC                               e                  14 23 07.8
ACER  Acerenza         76.26 310    IAmb    IAmb      14 23 04.1
      comp=Z,26nm,0.9s
VRAC  Vranov           76.26 319    P       P         14 23 02.5 -0.6
      comp=Z,1.8nm,0.2s,baz=47,slow=4.5,SNR=5.5
VRAC  Vranov           76.26 319   eP       P         14 23 02.3 -0.8
KOGS  Kog              76.30 316  i P       P         14 23 02.3 -1.1
BILL  Bilibino         76.33  22c iP       P         14 23 02.0 -1.1
BILL                               e                  14 23 17.4
BILL                               e                  14 25 52.1
BILL                               eS       S         14 32 49.1 +2.1
BILL                                pmax    pmax
      comp=Z,26nm,1.1s
BILL                                MLR     MLR
      comp=Z,4µm,17.0s
BILL  Bilibino         76.33  22    P       P         14 23 03.9 +0.7
BILL                                IAmb    IAmb      14 23 10.9
      comp=Z,25nm,1.1s
KRUC  Moravsky         76.37 319   eP       P         14 23 02.5 -1.2
DPC   Dobruska-Polom   76.52 320   eP       P         14 23 04.5 -0.1
DPC                                epP      sP        14 23 09.9 -1.8
DPC   Dobruska-Polom   76.52 320   eP       P         14 23 04.5 -0.1
DPC                                e                  14 23 09.9
OSTC  Ostas            76.60 320   eP       P         14 23 05.1 +0.1
CONA  Conrad Observa   76.65 317   eP       P         14 23 04.7 -0.8
      comp=Z,17nm,1.6s,SNR=5.6
CHVC  Chvalec          76.71 320   eP       P         14 23 05.2 -0.4
ARSA  Arzberg          76.84 317   eP       P         14 23 05.6 -0.9
      comp=Z,37nm,1.6s,SNR=10
BOJS  Bojanci          76.94 315  i P       P         14 23 05.7 -1.3
SOKA  Soboth           77.15 316   eP       P         14 23 07.3 -0.9
      comp=Z,43nm,1.3s,SNR=18
VAE   Valguarnera      77.39 307    P       P         14 23 10.9 +1.1
      comp=Z,11nm,0.3s,baz=286,slow=10,SNR=1.5
LJU   Ljubljana        77.47 315  i P       P         14 23 09.3 -0.7
OBKA  Obir             77.47 316   eP       P         14 23 09.0 -1.1
      comp=Z,41nm,1.6s,SNR=9.8
PRU   Pruhonice        77.64 319   eP       P         14 23 10.1 -0.7
PRU                                epP      pP        14 23 15.7 -0.3
PRU   Pruhonice        77.64 319   eP       P         14 23 10.1 -0.7
PRU                                e                  14 23 15.7
MOA   Molln            77.72 317   eP       P         14 23 10.0 -1.4
      comp=Z,22nm,1.5s
BRG   Berggiesshubel   78.06 320   eP       P         14 23 12.6 -0.6
      comp=Z,43nm,1.4s
BRG   Berggiesshubel   78.06 320   eP       P         14 23 12.6 -0.6
      comp=Z,43nm,1.4s,baz=91,slow=5.4
BRG   Berggiesshubel   78.06 320   eP       P         14 23 12.6 -0.6
BRG                                 pmax    pmax
      comp=Z,43nm,1.4s
MYKA  Terra Mystica    78.10 316   eP       P         14 23 12.6 -1.0
      comp=Z,12nm,0.9s,SNR=7.4
GEC2  GERESS Array S   78.14 318   eP       P         14 23 13.0 -0.8
      comp=Z,91nm,1.7s,baz=91,slow=5.4
GEC2  GERESS Array S   78.14 318    P       P         14 23 12.9 -0.8
GEC2  GERESS Array S   78.14 318    IAmb    IAmb      14 23 15.0
      comp=Z,36nm,1.2s
GERES GERESS Array B   78.14 318    P       P         14 23 13.3 -0.5
      comp=Z,6.3nm,0.7s,baz=90,slow=5.3,SNR=38
GERES GERESS Array B   78.14 318    P       P         14 23 12.7 -1.1
KHC   Kasperske Hory   78.23 319   eP       P         14 23 13.1 -1.1
KHC                                epP      sP        14 23 20.2 -1.1
KHC   Kasperske Hory   78.23 319⇓iP       P         14 23 13.6 -0.6
KHC                                 pmax    pmax
      comp=Z,44nm,1.6s
RUE   Ruedersdorf      78.24 322   eP       P         14 23 13.4 -0.7
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	comp=Z,152nm,1.4s,baz=91,slow=5.4						
MAW	Mawson	78.25	192	P	P	14 23 15.4	+1.6
	comp=Z,18nm,0.8s,baz=53,slow=4.6,SNR=22						
MAW	Mawson	78.25	192	P	P	14 23 15.7	+1.9
KBA	Koelnbreinsper	78.32	316	eP	P	14 23 13.0	-1.9
	comp=Z,14nm,0.9s						
FBE	Freiberg	78.44	320	eP	P	14 23 15.0	-0.2
	comp=Z,120nm,1.8s,baz=91,slow=5.4						
CLL	Collm	78.67	321	i P	P	14 23 16.5	0.0
	comp=Z,28nm,1.3s						
CLL				Lm	MLR	14 52 00.0	
	comp=Z,10µm,19.4s						
CLL	Collm	78.67	321	eP	P	14 23 16.5	0.0
	comp=Z,40nm,1.6s,baz=91,slow=5.4						
CLL	Collm	78.67	321	i P	P	14 23 16.5	0.0
CLL				pmax	pmax		
	comp=Z,28nm,1.3s						
CLL				MLR	MLR		
	comp=Z,10µm,19.4s						
WET	Wettzell	78.69	319	eP	P	14 23 16.2	-0.5
	comp=Z,53nm,1.6s,baz=91,slow=5.4						
WET	Wettzell	78.69	319	P	P	14 23 16.2	-0.5
RJOB	Jochberg	78.71	317	eP	P	14 23 15.2	-1.7
	comp=Z,35nm,1.5s,baz=91,slow=5.4						
STAL	STALIGIAL	78.74	316	IAmb	IAmb	14 23 24.8	
	comp=Z,71nm,1.2s						
HFS	Hagfors	78.78	330	P	P	14 23 16.6	-0.4
	comp=Z,18nm,0.6s,baz=102,slow=6.2,SNR=38						
ABTA	Abfaltersbach	78.88	316	eP	P	14 23 16.6	-1.4
	comp=Z,21nm,1.6s,SNR=5.6						
TANN	Tannenbergstha	78.99	320	eP	P	14 23 17.5	-0.9
	comp=Z,97nm,1.7s,baz=91,slow=5.4						
WERN	Wernitzgruen	79.04	320	eP	P	14 23 18.0	-0.6
	comp=Z,35nm,1.6s,baz=91,slow=5.4						
GUNZ	Gunzen	79.07	320	eP	P	14 23 18.1	-0.7
	comp=Z,51nm,1.6s,baz=91,slow=5.4						
ROTZ	Rotzenmuhle	79.14	319	eP	P	14 23 18.7	-0.5
	comp=Z,71nm,1.7s,baz=91,slow=5.4						
PLN	Plauen	79.19	320	eP	P	14 23 18.6	-0.8
	comp=Z,65nm,1.9s,baz=91,slow=5.4						
MANZ	Manzenberg	79.21	319	eP	P	14 23 19.2	-0.3
	comp=Z,70nm,1.6s,baz=91,slow=5.4						
CTI	Castel Tesino	79.47	315	P	P	14 23 20.7	-0.5
CTI				pmax	pmax		
	comp=Z,44nm,1.2s						
WTTA	Wattenberg	79.49	317	eP	P	14 23 19.4	-1.9
	comp=Z,21nm,0.8s,SNR=9.4						
WATA	Walderalm	79.53	317	eP	P	14 23 19.8	-1.7
	comp=Z,40nm,1.5s,SNR=6.5						
MOX	Moxa	79.53	320	eP	P	14 23 20.6	-0.8
	comp=Z,47nm,1.7s,baz=91,slow=5.4						
MOX	Moxa	79.53	320	P	P	14 23 20.5	-0.8
FUR	Furstenfeldbru	79.73	318	eP	P	14 23 21.3	-1.1
	comp=Z,29nm,0.9s,baz=91,slow=5.4						
FUR	Furstenfeldbru	79.73	318	P	P	14 23 21.3	-1.1
GRF	Grafenberg Arr	79.78	319	eP	P	14 23 22.3	-0.4
	comp=Z,32nm,1.0s,baz=91,slow=5.4						
GRF	Grafenberg Arr	79.78	319	P	P	14 23 22.2	-0.4
SQTA	Sankt Quirin	79.78	317	eP	P	14 23 21.2	-1.6
	comp=Z,19nm,0.8s						
NC405	NORSAR Array S	79.82	331	IAmb	IAmb	14 23 28.9	
	comp=Z,81nm,0.9s						
MOTA	Moosalm	79.85	317	eP	P	14 23 21.5	-1.8
	comp=Z,48nm,1.2s,SNR=16						
NC602	NORSAR Array S	79.89	330	IAmb	IAmb	14 23 29.2	
	comp=Z,63nm,0.8s						
NORES	NORESS Array B	79.89	330	P	P	14 23 22.2	-0.8
NORES				pmax	pmax		
	comp=Z,23nm,0.6s						
NC303	NORSAR Array S	79.99	331	P	P	14 23 22.1	-1.4
NC303				IAmb	IAmb	14 23 29.7	
	comp=Z,87nm,1.1s						
NB2	NORSAR Subarra	80.06	331	P	P	14 23 22.6	-1.4
	comp=Z,35nm,0.9s,baz=91,slow=5.9						
NB2	NORSAR Subarra	80.06	331	P	P	14 23 22.6	-1.4
	baz=91,slow=5.9						
NOA	NORSAR Array B	80.06	331	P	P	14 23 22.8	-1.2
	comp=Z,8.9nm,0.7s,baz=93,slow=5.6,SNR=34						
RETA	Reutte	80.08	317	eP	P	14 23 22.9	-1.5
	comp=Z,22nm,0.7s,SNR=11						
FETA	Feichten	80.11	316	eP	P	14 23 23.0	-1.6
	comp=Z,16nm,0.9s,SNR=8.4						
ASSE	Asse, Remlinge	80.14	322	eP	P	14 23 23.5	-0.9
	comp=Z,86nm,1.8s,baz=91,slow=5.4						
SPITS	Spitsbergen Ar	80.17	348	P	P	14 23 24.3	+0.1
	baz=100,slow=7.5						
SUR	Sutherland	80.25	235	P	P	14 23 26.5	+0.7
SUR				IAmb	IAmb	14 23 28.5	
	comp=Z,37nm,1.1s						
NBO00	NORSAR Array S	80.27	331	P	P	14 23 23.9	-1.1
NBO00				IAmb	IAmb	14 23 31.6	
	comp=Z,66nm,1.1s						
NC204	NORSAR Array S	80.29	331	P	P	14 23 24.6	-0.6
NC204				IAmb	IAmb	14 23 31.3	
	comp=Z,72nm,1.1s						
CLZ	Clausthal	80.33	321	eP	P	14 23 24.8	-0.9
	comp=Z,60nm,1.4s,baz=91,slow=5.4						
CLZ	Clausthal	80.33	321	P	P	14 23 24.7	-0.9
BSEG	Bad Segeberg	80.37	323	eP	P	14 23 25.2	-0.5
	comp=Z,97nm,1.4s,baz=91,slow=5.4						
BSEG	Bad Segeberg	80.37	323	P	P	14 23 25.2	-0.5
NRDL	Niedersach Rie	80.49	322	eP	P	14 23 26.1	-0.2
	comp=Z,93nm,1.5s,baz=91,slow=5.4						
UBBA	Unterbreizbach	80.56	320	eP	P	14 23 26.2	-0.5
	comp=Z,38nm,1.8s,baz=91,slow=5.4						
GTTG	Gottingen	80.58	321	eP	P	14 23 26.3	-0.6
	comp=Z,36nm,0.9s,baz=91,slow=5.4						
DAVA	Damuels	80.68	317	eP	P	14 23 26.7	-1.1
	comp=Z,35nm,1.1s,SNR=8.0						
DAVOX	Davos/Dischmat	80.69	316	P	P	14 23 27.4	-0.4
	comp=Z,11nm,0.7s,baz=127,slow=2.8,SNR=17						
RETH	Rethem/Aller,	80.94	322	eP	P	14 23 28.2	-0.6
	comp=Z,68nm,1.4s,baz=91,slow=5.4						
KEST	Kesra	81.51	305	P	P	14 23 32.4	0.0
	comp=Z,7.9nm,0.6s,baz=52,slow=1.3,SNR=8.0						
KEST	Kesra	81.51	305	IAmb	IAmb	14 23 33.9	
	comp=Z,21nm,1.0s						
TNS	Taunus Mts	81.56	320	eP	P	14 23 31.6	-0.7
	comp=Z,72nm,1.9s,baz=91,slow=5.4						
TNS	Taunus Mts	81.56	320	P	P	14 23 31.5	-0.7
BFO	Black Forest	81.70	318	eP	P	14 23 31.5	-1.5
	comp=Z,26nm,1.3s,baz=91,slow=5.4						
BFO	Black Forest	81.70	318	P	P	14 23 31.5	-1.5
IBBN	Ibbenburen	81.93	322	eP	P	14 23 33.5	-0.5
	comp=Z,125nm,1.7s,baz=91,slow=5.4						
BUG	Bochum--Univer	82.27	321	eP	P	14 23 35.0	-0.8
	comp=Z,67nm,1.7s,baz=91,slow=5.4						
BUG	Bochum--Univer	82.27	321	P	P	14 23 35.0	-0.8
AHRW	Bad Neuenahr-A	82.43	320	eP	P	14 23 36.4	-0.3
	comp=Z,54nm,1.7s,baz=91,slow=5.4						
BNI	Bardonecchia	83.00	314	P	P	14 23 40.3	+0.3
WLF	Walferdange	83.07	319	eP	P	14 23 39.8	-0.2
	comp=Z,18nm,0.6s,baz=91,slow=5.4						
WLF	Walferdange	83.07	319	P	P	14 23 39.8	-0.2
MEM	Membach	83.11	320	x	P	14 23 36.3	-3.9
MEM	Membach	83.11	320	P	P	14 23 38.7	-1.5
BCLA	Clavier	83.57	320	P	P	14 23 42.6	0.0
BMRD	Maredsous	83.92	320	P	P	14 23 44.1	-0.3
DOU	Dourbes	84.04	320	P	P	14 23 43.9	-1.2
SSB	Saint Sauveur	84.49	315	P	P	14 23 48.1	+0.6
GAMB	Gambell	85.06	26	P	P	14 23 50.2	+0.4
GAMB				IAmb	IAmb	14 23 58.2	
	comp=Z,33nm,1.0s						
SYO	Syowa Base	85.14	197⇑	eP	P	14 23 50.3	+0.2
SYO	Syowa Base	85.14	197⇑	ePcP	PcP	14 23 53.0	-0.2
SYO	Syowa Base	85.14	197⇑	esP	sP	14 23 56.6	-0.5
NOR	Nord	85.57	352	i P	P	14 23 50.9	-1.3
	comp=Z,52nm,0.9s						
NOR	Nord	85.57	352	i P	P	14 23 50.9	-1.3
NOR				pmax	pmax		
	comp=Z,52nm,0.9s						
TAM	Tamanrasset	85.95	292	P	P	14 23 56.6	+1.2
ANM	Nome	87.66	25	IAmb	IAmb	14 24 11.4	
	comp=Z,36nm,1.1s						
DAG	Danmarks Havn	87.80	348	i P	P	14 24 01.5	-1.6
	comp=Z,6.5nm,0.7s						
DAG	Danmarks Havn	87.80	348	i P	P	14 24 01.5	-1.6
DAG				pmax	pmax		
	comp=Z,7.0nm,0.7s						
EKA	Eskdalemuir Ar	88.04	325	P	P	14 24 03.6	-1.1
EKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MSWZ	Moikau Station	88.25	132	P	P	14 24 05.6	-0.3
TOA0	Torodi Ar. Sit	90.78	283	IAmb	IAmb	14 24 19.6	
	comp=Z,24nm,1.4s						
TORD	Torodi Ar. Bea	90.78	283	P	P	14 24 18.5	+0.1
	comp=Z,5.6nm,1.0s,baz=89,slow=4.7,SNR=21						
TORD				PP	PP	14 27 58.1	+4.0
	comp=Z,2.6nm,1.0s,baz=76,slow=4.9,SNR=5.1						
TORD	Torodi Ar. Bea	90.78	283	P	P	14 24 18.1	-0.2
ESDC	Sonseca Array	91.50	310	P	P	14 24 21.4	+0.1
	comp=Z,3.0nm,0.6s,baz=60,slow=6.4,SNR=7.3						
PAB	San Pablo	91.82	310	P	P	14 24 21.9	-0.9
PAB				pmax	pmax		
	comp=Z,12nm,1.0s						
PAB	San Pablo	91.82	310	P	P	14 24 21.9	-0.9
PAB				IAmb	IAmb	14 24 24.3	
	comp=Z,12nm,1.0s						
TOLK	Toolik Lake Re	92.21	19	P	P	14 24 24.7	+0.7
TOLK				IAmb	IAmb	14 24 32.6	
	comp=Z,34nm,1.1s						
TOLK	Toolik Lake Re	92.21	19	P	P	14 24 24.4	+0.4
	baz=297						
VNDA	Vanda	92.60	168	P	P	14 24 25.8	+0.4
	comp=Z,3.5nm,1.1s,baz=306,slow=5.0,SNR=7.0						
VNDA	Vanda	92.60	168	P	P	14 24 25.1	-0.3
VNDA				pmax	pmax		
	comp=Z,9.0nm,1.3s						
VNDA	Vanda	92.60	168	P	P	14 24 25.1	-0.3
COLD	Coldfoot	92.64	21	P	P	14 24 26.7	+0.8
MLY	Manley	93.41	23	IAmb	IAmb	14 24 38.4	
	comp=Z,29nm,1.3s						
PPLA	Purkeypile	93.74	25	IAmb	IAmb	14 24 47.9	
	comp=Z,34nm,1.2s						
BMAR	Burnt Mountain	94.44	19	P	P	14 24 35.4	+1.1
SUMG	Summit	94.47	347	i P	P	14 24 34.8	+0.1
SUMG	Summit	94.47	347	i P	P	14 24 34.8	+0.1
RND	Reindeer	94.88	24	IAmb	IAmb	14 24 44.2	
	comp=Z,19nm,1.3s						
ILAR	Eielson Array	94.99	22	P	P	14 24 36.5	-0.2
	comp=Z,1.2nm,0.8s,baz=290,slow=4.5,SNR=14						
ILAR				PP	PP	14 28 27.5	+1.9
	comp=Z,1.2nm,0.9s,baz=292,slow=5.7,SNR=2.4						
ILAR	Eielson Array	94.99	22	P	P	14 24 36.4	-0.4
ILAR	Eielson Array	94.99	22	P	P	14 24 36.4	-0.4
KNK	Knik Glacier	95.97	25	IAmb	IAmb	14 24 50.4	
	comp=Z,27nm,1.0s						
EPYK	Eagle Plains	97.58	18	IAmb	IAmb	14 24 56.0	
	comp=Z,12nm,0.8s						
EPYK	Eagle Plains	97.58	18	P	P	14 24 48.3	-0.3
	baz=309						
BCAR	Beaver Creek A	97.81	22	P	Pdif	14 24 51.0	+1.3
KIC	Kosan Boka	98.03	278	ePKIKP	Pdif	14 24 51.8	+0.1
	comp=Z,29nm,1.3s						
DBIC	Dimbokro	98.10	278	P	Pdif	14 24 52.5	+0.5
	comp=Z,2.5nm,0.6s,baz=122,slow=0.5,SNR=4.3						
DAWY	Dawson	98.11	21	IAmb	IAmb	14 24 58.5	
	comp=Z,9.8nm,1.1s						
TIC	Toumodi	98.26	278	ePKIKP	P	14 24 51.8	-0.9
LIC	Lamto	98.33	277	ePKIKP	P	14 24 51.9	-1.1
	comp=Z,12nm,1.0s						
C36M	Paulatuk	98.84	13	P	P	14 24 53.5	-0.6
	baz=322						
YKA	Yellowknife Ar	106.70	14	Pdiff	Pdif	14 25 29.5	+0.3
	comp=Z,0.1nm,0.4s,baz=10.0,slow=12,SNR=2.3						
YKA				PP	PP	14 29 53.1	-0.7
	comp=Z,1.5nm,0.8s,baz=333,slow=7.6,SNR=6.4						
YKA				PKKPbc	PKKPbc	14 40 57.1	-3.6
	comp=Z,0.7nm,0.7s,baz=153,slow=3.5,SNR=10						
YKA				PKKP	PKKPdf	14 41 13.2	+1.0
	comp=Z,2.0nm,0.9s,baz=145,slow=4.5,SNR=16						
SCHQ	Schefferville	115.85	348	PKP	PKiKP	14 29 56.8	-0.3
	comp=Z,1.2nm,0.6s,baz=43,slow=5.8,SNR=1.9						
SCHQ				PP	PP	14 31 00.2	+0.6
	comp=Z,2.8nm,0.7s,baz=66,slow=8.4,SNR=4.1						
J04D	Umpqua Nationa	119.61	30	P	PKiKP	14 30 05.2	+0.2
	baz=318						
J05D	Fort Rock, OR	120.01	29	P	PKiKP	14 30 06.2	+0.5
	baz=318						
MSO	Missoula	120.33	22	P	PKPdf	14 30 05.6	-0.5
	baz=327						
EGMT	Eagleton	120.73	19	P	PKiKP	14 30 06.9	0.0
	baz=332						
ULM	Lac du Bonnet	121.76	8	PKP	PKPdf	14 30 07.6	-0.9
	comp=Z,5.2nm,0.6s,baz=8.4,slow=0.6,SNR=13						
MATQ	Matagami	122.48	354	P	PKPdf	14 30 09.7	-0.2
	baz=9.6						
LSQQ	Lebel-sur-Quev	123.10	353	P	PKPdf	14 30 11.0	-0.2
	baz=10						
RLMT	Red Lodge	123.45	20	P	PKiKP	14 30 12.7	+0.3
	baz=332						
H17A	Grant Village	123.63	21	P	PKiKP	14 30 14.1	+1.1
	baz=330						
LATQ	La Tuque	124.10	349	P	PKPdf	14 30 12.4	-0.7
	baz=16						
EYMN	Ely	124.50	5		PKiKP	14 30 14.1	-0.1
EYMN	Ely	124.50	5	P	PKPdf	14 30 13.8	-0.1
	baz=353						
E61A	Lac Etchemin	124.55	347	P	PKPdf	14 30 14.0	0.0
	baz=18						
D57A	Chemin Vers le	124.65	350	P	PKPdf	14 30 13.6	-0.6
	baz=14						
D56A	ZEC Mazanza, M	124.76	351	P	PKPdf	14 30 13.7	-0.7
	baz=13						
D55A	Sainte-Anne-du	124.90	351	P	PKPdf	14 30 14.4	-0.3
	baz=12						
NVAR	Mina Array Bea	125.12	31	PKP	PKiKP	14 30 16.3	+0.2
	comp=Z,1.9nm,0.7s,baz=328,slow=2.4,SNR=12						
NVAR	Mina Array Bea	125.12	31	PKPdf	PKiKP	14 30 16.6	+0.6
D53A	Lac Vacive, Po	125.13	353	P	PKPdf	14 30 15.1	0.0
	baz=9.8						
E58A	La Victoria	125.17	349	P	PKPdf	14 30 14.9	-0.3
	baz=15						
D50A	G1974 Best Tow	125.26	355	P	PKPdf	14 30 14.5	-0.9
	baz=7.2						
E57A	Chemin Saint G	125.28	350	P	PKPdf	14 30 15.1	-0.3
	baz=14						
D51A	Lot 18 Range I	125.30	355	P	PKPdf	14 30 13.2	-2.2
	baz=7.8						
E56A	St. Veronique	125.30	351	P	PKPdf	14 30 15.0	-0.4
	baz=13						
D48A	Paudash Townsh	125.39	357	P	PKPdf	14 30 14.7	-1.0
	baz=4.8						
BW06	Boulder Array	125.41	21	P	PKPdf	14 30 15.7	-0.4
	baz=331						
PDAR	Pinedale Array	125.41	21	PKP	PKPdf	14 30 15.3	-0.8
	comp=Z,3.4nm,0.9s,baz=5.7,slow=1.5,SNR=20						
PDAR				PKKPab	PKKPab	14 39 53.2	-0.7
	comp=Z,0.2nm,0.4s,baz=142,slow=5.6,SNR=3.8						
PDAR	Pinedale Array	125.41	21		PKPdf	14 30 15.8	-0.3
D47A	Chapleau	125.57	358	P	PKPdf	14 30 15.4	-0.6
	baz=3.2						
D46A	Sault St. Mari	125.77	359	P	PKPdf	14 30 15.6	-0.8
	baz=2.1						
E53A	Dumoine, Ponti	125.82	353	P	PKPdf	14 30 16.3	-0.2
	baz=9.9						
E51A	G1948 Merrick	125.86	355	P	PKPdf	14 30 16.2	-0.3
	baz=7.7						
RSSD	Black Hills	125.96	16	P	PKPdf	14 30 16.2	-0.9
	baz=338						
E52A	Mattawa	126.02	354	P	PKPdf	14 30 16.4	-0.5
	baz=8.7						
E48A	Lockeyer	126.11	357	P	PKPdf	14 30 16.8	-0.2
	baz=4.4						
E47A	Iron Bridge	126.18	358	P	PKPdf	14 30 17.0	-0.2
	baz=3.0						
DUG	Dugway, Tooele	126.31	26	P	PKPdf	14 30 17.7	-0.1
	baz=326						
F51A	Arnstein	126.50	355	P	PKPdf	14 30 17.3	-0.4
	baz=7.2						
R11A	Troy Canyon, C	126.54	29	P	PKPdf	14 30 18.5	+0.2
	baz=322						
K22A	Casper	126.56	19	P	PKPdf	14 30 17.7	-0.5
	baz=334						
F52A	Sundridge	126.58	354	P	PKPdf	14 30 17.8	-0.1
	baz=8.0						
F48A	Evansville	126.78	357	P	PKPdf	14 30 17.7	-0.6
	baz=3.9						
F49A	Sandfield	126.81	357	P	PKPdf	14 30 18.0	-0.3
	baz=4.6						
F45A	CMU Biological	127.00	360	P	PKiKP	14 30 19.3	+0.1
	baz=0.3						
LONY	Lake Ozonia	127.09	350	P	PKiKP	14 30 22.3	+2.8
	baz=14						
I61A	Oroboro, Fairl	127.30	348	P	PKPdf	14 30 19.3	0.0
	baz=17						
TPNV	Topopah Spring	127.31	31	P	PKiKP	14 30 20.8	+0.5
	baz=321						
MPMC	Manual Prospec	127.34	32	P	PKiKP	14 30 20.3	-0.2
	baz=319						
G47A	Hillman	127.48	358	P	PKPdf	14 30 19.6	-0.1
	baz=2.4						
G45A	Suttons Bay	127.64	360	P	PKPdf	14 30 20.2	+0.2
	baz=0.1						
LRMC	Laurel Mtn Rad	127.67	33	P	PKiKP	14 30 21.3	+0.2
	baz=319						
I59A	Olmsteadville	127.76	349	P	PKiKP	14 30 21.2	+0.4
	baz=15						
ECSD	EROS Data Cent	128.00	10	P	PKPdf	14 30 20.5	-0.2
	baz=346						
O20A	White River Ci	128.19	22	P	PKPdf	14 30 21.3	-0.1
	baz=331						
N23A	Red Feather La	128.32	19	P	PKiKP	14 30 22.4	+0.1
	baz=334						
I48A	Sherman Twp	128.46	358	P	PKiKP	14 30 22.3	+0.1
	baz=2.6						
I49A	Point Hope	128.67	357	P	PKPdf	14 30 21.8	-0.2
	baz=3.7						
GMRC	Granite Mounta	129.28	32	P	PKiKP	14 30 24.7	+0.4
	baz=320						
BINY	Binghamton	129.68	351	P	PKiKP	14 30 24.6	-0.2
	baz=13						
BELC	Belle Mtn. Jos	129.69	33	P	PKiKP	14 30 25.5	+0.3
	baz=320						
IRM	Iron Mountain	130.03	32	P	PKiKP	14 30 26.6	+1.0
	baz=321						
L55A	Hinsdale	130.05	353	P	PKPdf	14 30 24.7	0.0
	baz=9.5						
BC3	Big Chuckawall	130.25	33	P	PKiKP	14 30 27.1	+0.9
	baz=320						
PDMCI	Parker Dam,Lak	130.44	31	P	PKiKP	14 30 27.2	+0.7
	baz=322						
MVCO	Mesa Verde	130.63	24	P	PKiKP	14 30 27.4	+0.3
	baz=330						
L47A	Sherwood	130.70	359	P	PKiKP	14 30 26.6	-0.2
	baz=0.7						
M57A	Sunshine Farm,	130.70	351	P	PKiKP	14 30 26.8	0.0
	baz=11						
M56A	Emporium	130.71	353	P	PKPdf	14 30 26.1	+0.2
	baz=9.9						
L48A	N Adams	130.72	359	P	PKPdf	14 30 26.1	+0.1
	baz=1.8						
M55A	Ridgway	130.79	353	P	PKPdf	14 30 26.5	+0.4
	baz=9.2						
S22A	4UR Ranch, Cre	130.81	22	P	PKPdf	14 30 26.9	+0.3
	baz=332						
M54A	Oil Creek Stat	130.85	354	P	PKiKP	14 30 26.8	-0.3
	baz=8.0						
SDCO	Great Sand Dun	131.30	21	P	PKiKP	14 30 28.7	+0.2
	baz=334						
T25A	Trinidad	132.22	20	P	PKiKP	14 30 30.1	-0.2
	baz=335						
ACSO	Alum Creek Sta	132.38	357	P	PKiKP	14 30 29.9	-0.3
	baz=3.7						
O51A	Pataskala	132.44	357	P	PKiKP	14 30 29.9	-0.4
	baz=4.2						
O50A	Cable	132.49	358	P	PKPdf	14 30 29.7	+0.4
	baz=2.9						
P52A	Corning	132.93	356	P	PKiKP	14 30 31.8	+0.5
	baz=4.9						
P50A	Jamestown	133.03	358	P	PKiKP	14 30 31.3	-0.2
	baz=2.7						
P48A	Milroy	133.22	360	P	PKiKP	14 30 31.7	-0.2
	baz=0.5						
Q55A	Buckhannon	133.38	354	P	PKiKP	14 30 32.5	+0.2
	baz=7.7						
ANMO	Albuquerque	133.41	24	P	PKiKP	14 30 33.4	+0.7
	baz=331						
R58A	Rapidan	133.81	352	P	PKPdf	14 30 32.4	+0.5
	baz=11						
R57A	Stanardsville	133.88	352	P	PKPdf	14 30 32.4	+0.4
	baz=10.0						
R56A	Bull Pasture M	133.89	353	P	PKiKP	14 30 33.4	0.0
	baz=8.7						
S57A	Dark Hollow, R	134.47	352	P	PKPdf	14 30 33.1	0.0
	baz=9.5						
V59A	Middlesex	136.33	351	P	PKPdf	14 30 36.7	+0.1
	baz=11						
V57A	Coltrane Farms	136.42	353	P	PKPdf	14 30 36.5	-0.3
	baz=8.6						
WVT	Waverly	136.50	2	P	PKPdf	14 30 36.7	-0.2
	baz=357						
MNTX	Cornudas Mount	136.68	25	P	PKPdf	14 30 38.3	+0.8
	baz=331						
W39A	Magazine	136.80	10	P	PKPdf	14 30 37.3	-0.2
	baz=348						
KMSC	Kings Mountain	137.32	355	P	PKPdf	14 30 39.3	+0.8
	baz=6.5						
W54A	Cherokee Point	137.45	356	P	PKPdf	14 30 39.3	+0.5
	baz=5.2						
MIAR	Mount Ida	137.47	10	P	PKPdf	14 30 38.3	-0.5
	baz=349						
X54A	Belton	138.00	356	P	PKPdf	14 30 40.5	+0.7
	baz=5.0						
TXAR	Lajitas Array	139.46	24	PKhKP	PKPpre	14 30 34.8	
	comp=Z,0.5nm,0.8s,baz=319,slow=2.6,SNR=4.1						
TXAR				PKP	PKPdf	14 30 43.2	+0.5
	comp=Z,1.2nm,0.7s,baz=307,slow=0.5,SNR=10.0						
TXAR				PP	PP	14 33 36.7	+1.0
	comp=Z,2.9nm,1.1s,baz=354,slow=5.0,SNR=5.7						
JCT	Junction City	139.84	19	P	PKPdf	14 30 42.7	-0.6
	baz=338						
BDFB	Brasilia	142.23	254	PKhKP	PKPpre	14 30 43.3	
	comp=Z,7.6nm,0.7s,baz=111,slow=4.9,SNR=8.6						
PLCA	Paso Flores	144.30	200	PKP	PKPbc	14 30 49.2	0.0
	comp=Z,28nm,0.9s,baz=180,slow=3.3,SNR=29						
PLCA	Paso Flores	144.30	200		PKPdf	14 30 50.3	-0.7
GO06	Curarrehue	145.64	200		PKPab	14 30 54.4	+0.5
SMRT	St. Maarten	146.11	319		PKPbc	14 30 55.7	+0.3
FDF	Fort de France	147.05	312	PKP2	PKPbc	14 30 58.7	+0.4
FDF	Fort de France	147.05	312		PKPbc	14 30 58.7	+0.4
STVI	Saint Thomas	147.08	322		PKPbc	14 30 59.0	+0.8
CPUP	Villa Florida	147.16	232	PKPbc	PKPbc	14 30 57.5	-0.9
	comp=Z,20nm,0.8s,baz=121,slow=2.6,SNR=37						
CPUP	Villa Florida	147.16	232		PKPbc	14 30 59.0	+0.7
CUPR	Culebra, Puert	147.31	322		PKPbc	14 30 59.0	+0.1
MLPR	Magueyes Islan	148.62	324		PKPbc	14 31 02.1	-0.4
LPAZ	La Paz	160.72	242	PKP	PKPdf	14 31 15.1	-1.2
	comp=Z,4.4nm,1.0s,baz=28,slow=4.7,SNR=9.5						
ROSC	El Rosal	163.22	317	PKP	PKPdf	14 31 19.1	+0.5
	comp=Z,9.7nm,0.3s,baz=239,slow=10.0,SNR=2.2						

IDC ***21*** *14:13:28.0±1.2, 7.°40N×94.°16E, h0^{km}, mb4.5/15, mb1 4.5/15, mb1mx4.2/58, mbtmp4.5/15, Error ellipse: s-maj=46.6km s-min=27.7km az=50.0*

NDI ***21*** *14:13:29.1±4.0, 7.°14N×94.°26E, h26^{km}±65^{km}, mb5.2, mb5.1(NEIC)*

NEIC ***21*** *14:13:29.1±2.0, 7.°3N±0.°1×94.°17E±0.°10, h10^{km}±1^{km}, mb5.1/19, Error ellipse: s-maj=21.8km s-min=13.1km az=33.0*

ISC 21 14:13:30.4±0.4, **7.°31N**±0.°07×**94.°18E**±0.°07, **h20**^{km}**, n47,** σ1.^{s}07/44, **mb4.8**/22, **1C, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMBY	CAMPBELL BAY	0.39	220	eS	Sb	14 13 42.4	-1.7
CMBY				i x	x	14 13 57.4	
LHMI	Lhok Sumawe	3.44	127	Pn	Pn	14 14 23.7	+0.7
MDRS	Chennai	14.85	294	eP	Pn	14 17 00.9	+1.5
BWNR	Bhubaneshwar	15.24	329	eP	Pn	14 17 04.7	0.0
BWNR				IAmb	IAmb	14 17 24.6	
	comp=Z,68nm,0.9s						
KOHI	KOHIMA	18.31	360	IAmb	IAmb	14 15 31.6	
	comp=Z,216nm,1.0s						
NGP	Nagpur	20.08	315	eP	P	14 18 02.4	-0.4
NGP				IAmb	IAmb	14 18 20.0	
	comp=Z,51nm,0.3s						
LSA	Lhasa	22.45	353	P	P	14 18 30.3	+1.5
LSA				IAmb	IAmb	14 18 36.6	
	comp=Z,31nm,0.7s						
BKB	Balikpapan	24.21	110	P	P	14 18 45.0	-1.1
DGAR	Diego Garcia	26.14	236	P	P	14 19 03.6	+0.1
SMLA	Simla	28.54	328	eP	P	14 19 23.1	-1.8
TWG	Pinlang	30.12	56	P	P	14 19 37.5	-1.5
PSA00	Pilbara Seismi	38.19	139	P	P	14 20 49.7	+0.7
FAKI	Fak Fak	39.33	104	P	P	14 20 58.9	+0.2
FAKI				IAmb	IAmb	14 20 59.4	
	comp=Z,27nm,1.0s						
GEYT	Alibeck	44.64	319	P	P	14 21 40.9	-0.9
	comp=Z,6.2nm,0.8s,baz=184,slow=9.8,SNR=2.1						
GEYT	Alibeck	44.64	319	P	P	14 21 40.0	-1.9
GYA0B	ALIBECK ARRAY	44.64	319	P	P	14 21 40.0	-1.8
KURBB	Kurchatov Arra	45.10	346	P	P	14 21 45.3	+0.1
	comp=Z,8.7nm,0.8s,baz=171,slow=7.0,SNR=4.5						
KURK	Kurchatov	45.16	346	P	P	14 21 45.2	-0.4
KURK	Kurchatov	45.16	346	IAmb	IAmb	14 21 52.8	
	comp=Z,30nm,1.1s						
NWAO	Narrogin (SRO)	45.63	153	P	P	14 21 50.7	+1.0
NWAO				IAmb	IAmb	14 22 01.1	

	comp=Z,36nm,1.4s						
NWAO	Narrogin (SRO)	45.63	153	P	P	14 21 50.7	+1.0
NWAO				IAmb	IAmb	14 22 01.1	
	comp=Z,45nm,1.4s						
ZAA0	Zalesovo Array	47.12	352	P	P	14 22 01.5	+0.4
ZAA0				IAmb	IAmb	14 22 09.9	
	comp=Z,21nm,1.1s						
ZALV	Zalesovo Beam	47.12	352	P	P	14 22 01.5	+0.5
	comp=Z,6.7nm,0.4s,baz=175,slow=7.8,SNR=4.1						
WRA	Warramunga Arr	47.91	125	P	P	14 22 06.4	-1.3
WRAB	Tennant Creek	47.91	125	P	P	14 22 06.2	-1.5
ASAR	Alice Springs	49.53	130	P	P	14 22 20.7	+0.5
	comp=Z,2.5nm,0.7s,baz=306,slow=6.8,SNR=1.6						
ASAR	Alice Springs	49.53	130	P	P	14 22 18.5	-1.7
BRVK	Borovoye	49.59	341	P	P	14 22 20.4	+0.2
FORT	Forrest	49.88	141	P	P	14 22 22.2	-0.4
NRIK	Noril'sk	62.10	357	P	P	14 23 49.6	0.0
	comp=Z,4.5nm,0.5s,baz=167,slow=4.9,SNR=2.0						
BRTR	Keskin Array B	62.82	311	P	P	14 23 54.5	-0.6
	comp=Z,1.4nm,0.7s,baz=144,slow=6.4,SNR=2.5						
TIXI	Tiksi	67.78	11	P	P	14 24 26.6	+0.1
TIXI				IAmb	IAmb	14 24 31.9	
	comp=Z,11nm,0.8s						
AKASG	Malin Array Be	68.61	322	P	P	14 24 31.5	-0.6
	comp=Z,0.6nm,0.4s,baz=88,slow=4.9,SNR=2.1						
AKASG	Malin Array Be	68.61	322	IAmb	IAmb	14 24 37.4	
	comp=Z,1.4nm,0.8s						
IDI	Anoyia	68.92	305	P	P	14 24 34.6	+0.3
	comp=Z,14nm,1.0s,baz=221,slow=6.9,SNR=3.0						
FIA1	FINESS Array S	73.22	332	P	P	14 25 00.2	+0.4
FIA1				IAmb	IAmb	14 25 09.7	
	comp=Z,23nm,1.1s						
FINES	FINESS Array B	73.22	332	P	P	14 25 00.3	+0.4
	comp=Z,7.6nm,0.8s,baz=101,slow=7.2,SNR=3.8						
ARCES	ARCESS Array B	75.81	340	P	P	14 25 15.1	+0.3
	comp=Z,5.9nm,0.9s,baz=102,slow=7.2,SNR=5.5						
GERES	GERESS Array B	78.27	318	P	P	14 25 30.3	+1.1
	comp=Z,1.9nm,0.7s,baz=146,slow=5.9,SNR=3.4						
HFS	Hagfors	78.96	330	P	P	14 25 33.5	+0.9
	comp=Z,3.4nm,0.4s,baz=101,slow=4.0,SNR=6.8						
NOA	NORSAR Array B	80.24	331	P	P	14 25 40.3	+0.7
	comp=Z,3.2nm,0.8s,baz=95,slow=5.1,SNR=4.2						
SYO	Syowa Base	84.88	197	⇑eP	P	14 26 04.0	+0.6
TORD	Torodi Ar. Bea	90.76	283	P	P	14 26 34.7	+1.8
	comp=Z,0.8nm,0.9s,baz=79,slow=7.5,SNR=2.1						
ILAR	Eielson Array	95.25	22	P	P	14 26 52.9	+0.3
	comp=Z,0.2nm,0.6s,baz=307,slow=6.5,SNR=2.4						
TXAR	Lajitas Array	139.72	24	PKP	PKPdf	14 32 58.9	+1.1
	comp=Z,0.6nm,0.9s,baz=304,slow=1.6,SNR=1.9						
PLCA	Paso Flores	144.03	200	PKP	PKiKP	14 33 06.8	-1.8
	comp=Z,6.1nm,1.1s,baz=195,slow=21,SNR=3.1						
PLCA	Paso Flores	144.03	200	PKPdf	PKiKP	14 33 07.2	-1.4

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*IDC **21** 14:16:20.6±1.3, 7°.54N×93°.97E, h0km, mb4.0/9, mb1 4.1/9, mb1mx3.8/52, mbtmp4.0/9, Error ellipse: s-maj=70.2km s-min=22.2km az=50.0*

*NEIC **21** 14:16:21.1±2.2, 7°.8N±0°.1×94°.3E±0°.2, h10km±1km, mb4.8/12, Error ellipse: s-maj=29.0km s-min=13.8km az=243.0*

ISC 21 14:16:22.4±0.6, **7°.60N**±0°.07×**94°.1E**±0°.1, **h18km, n29,** σ**1s.56**/27, **mb4.4**/14, **1D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMBY	CAMPBELL BAY	0.62	200	eP	Pb	14 16 29.2	-5.5
CMBY				eS	Sb	14 16 40.8	-2.2
LHMI	Lhok Sumawe	3.65	130	Pn	Pn	14 17 18.8	+0.7
PBKT	Sadao Pong	11.14	36	Pn	Pn	14 18 59.1	-1.8
CISI	Cisompet, Garu	20.31	138	P	P	14 20 57.7	0.0
CISI				IAmb	IAmb	14 21 06.8	
	comp=Z,55nm,1.1s						
MKAR	Makanchi Array	40.36	347	P	P	14 24 02.0	+2.9
	comp=Z,3.0nm,0.8s,baz=175,slow=6.4,SNR=4.7						
MKAR	Makanchi Array	40.36	347	P	P	14 23 57.9	-1.2
MAKZ	Makanchi	40.44	347	P	P	14 23 59.5	-0.2
GEYT	Alibeck	44.40	318	P	P	14 24 32.4	+0.2
	comp=Z,2.8nm,0.6s,baz=151,slow=9.4,SNR=1.9						
GEYT	Alibeck	44.40	318	IAmb	IAmb	14 24 39.3	
	comp=Z,2.5nm,0.7s						
KURBB	Kurchatov Arra	44.81	346	P	P	14 24 35.4	+0.2
	comp=Z,3.9nm,0.7s,baz=169,slow=7.0,SNR=3.6						
KURK	Kurchatov	44.88	346	P	P	14 24 34.4	-1.3
KURK				IAmb	IAmb	14 24 45.8	
	comp=Z,10.0nm,1.1s						
NWAO	Narrogin (SRO)	45.90	153	P	P	14 24 44.8	+0.7
NWAO				IAmb	IAmb	14 24 55.0	
	comp=Z,40nm,1.4s						
ZALV	Zalesovo Beam	46.83	352	P	P	14 24 51.9	+0.8
	comp=Z,2.3nm,0.5s,baz=172,slow=9.9,SNR=2.5						
ZALV	Zalesovo Beam	46.83	352	P	P	14 24 48.9	-2.1
WB0	Warramunga Arr	48.06	125	P	P	14 24 57.9	-3.4
WB0				IAmb	IAmb	14 25 12.8	
	comp=Z,14nm,1.4s						
WRA	Warramunga Arr	48.11	125	P	P	14 25 03.3	+1.7
	comp=Z,0.8nm,0.8s,baz=306,slow=8.4,SNR=1.6						
WRA	Warramunga Arr	48.11	125	P	P	14 24 57.9	-3.7
WRAB	Tennant Creek	48.11	125	P	P	14 24 59.7	-1.9
WRAB				IAmb	IAmb	14 25 05.7	
	comp=Z,10nm,1.4s						
WB2	Warramunga Arr	48.12	125	P	P	14 24 59.9	-1.7
WB2				IAmb	IAmb	14 25 15.9	
	comp=Z,8.3nm,1.1s						
ASAR	Alice Springs	49.74	130	P	P	14 25 16.0	+1.9
	comp=Z,1.8nm,1.0s,baz=300,slow=7.2,SNR=2.9						
ASAR	Alice Springs	49.74	130	P	P	14 25 14.5	+0.4
FORT	Forrest	50.13	141	P	P	14 25 16.4	-0.4
STKA	Stephens Creek	59.92	134	P	P	14 26 29.0	+1.3
BRTR	Keskin Array B	62.60	311	P	P	14 26 48.3	+2.3
	comp=Z,0.7nm,0.7s,baz=123,slow=6.7,SNR=2.0						
BRTR	Keskin Array B	62.60	311	P	P	14 26 46.5	+0.6
TOO	Toolangi	65.66	137	P	P	14 27 05.5	-0.4
FINES	FINESS Array B	72.95	332	P	P	14 27 50.1	-0.4
	comp=Z,3.2nm,0.7s,baz=99,slow=8.7,SNR=2.2						
GERES	GERESS Array B	78.03	318	P	P	14 28 19.9	-0.2
	comp=Z,1.0nm,0.7s,baz=54,slow=5.0,SNR=3.7						
SYO	Syowa Base	85.14	197	⇓eP	P	14 28 57.0	0.0

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*IDC **21** 14:17:09.7±0.6, 7°.56N×94°.25E, h0km, mb4.3/20, mb1 4.4/21, mb1mx4.1/52, mbtmp4.3/21, ML3.6/1, Error ellipse: s-maj=23.7km s-min=15.1km az=53.0*

*NEIC **21** 14:17:11.7±2.0, 7°.48N±0°.03×94°.23E±0°.09, h15km±4km, mb4.6/10, Error ellipse: s-maj=12.7km s-min=3.0km az=79.0*

ISC 21 14:17:12.8±0.5, **7°.56N**±0°.05×**94°.22E**±0°.07, **h20km, n50,** σ**1s.18**/48, **mb4.4**/22, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMBY	CAMPBELL BAY	0.62	209	eP	Pb	14 17 25.0	+0.1
CMBY				eS	Sn	14 17 35.4	-0.4
CMBY				eS	Sb	14 17 35.5	+2.3
PSI	Prapat	6.65	135	Pn	Pn	14 18 51.5	+2.0
	1.1nm,0.3s,baz=336,slow=7.1,SNR=2.0						
RPSI	Rantau Prapat	6.72	136	Pn	Pn	14 18 51.3	+0.9
KULM	Kulim	6.77	109	Pn	Pn	14 18 50.2	-0.9
GSI	Gunungsitoli	7.05	152	Pn	Pn	14 18 52.6	-2.3
IPM	Ipoh	7.42	114	Pn	Pn	14 18 58.3	-1.8
PBKT	Sadao Pong	11.12	36	Pn	Pn	14 19 52.4	+1.6
CMAR	Chiang Mai Arr	11.77	23	Pn	Pn	14 20 02.0	+2.4
	0.7nm,0.3s,baz=217,slow=14,SNR=1.5						
CMAR	Chiang Mai Arr	11.77	23		Pn	14 19 59.0	-0.7
CHTO	Chiang Mai	12.10	22	Pn	Pn	14 20 04.5	+0.4
PALK	Pallekele	13.41	270	Pn	Pn	14 20 20.0	-2.2
NIL	Nilore	32.41	326	P	P	14 23 40.7	-0.8
WSAR	Wadi Sarin	37.55	299	P	P	14 24 27.4	+1.4
	4.7nm,1.0s,baz=96,slow=9.2,SNR=2.5						
SIJI	Sorong	37.88	101	P	P	14 24 29.5	+0.6
	6.5nm,0.8s,baz=180,slow=19,SNR=3.4						
MKAR	Makanchi Array	40.41	347	P	P	14 24 50.0	+0.3
	5.5nm,0.8s,baz=160,slow=7.8,SNR=6.8						
MKAR	Makanchi Array	40.41	347	P	P	14 24 49.9	+0.2
MAKZ	Makanchi	40.50	347	P	P	14 24 51.0	+0.6
SONM	Songino Array	41.45	12	P	P	14 24 57.1	-1.2
	2.2nm,1.0s,baz=224,slow=8.0,SNR=2.3						
SONM	Songino Array	41.45	12	IAmb	IAmb	14 25 06.1	
	comp=Z,8.6nm,1.0s						
GEYT	Alibeck	44.49	318	P	P	14 25 24.3	+1.3
	comp=Z,6.5nm,0.6s,baz=160,slow=9.1,SNR=6.3						
GEYT	Alibeck	44.49	318	IAmb	IAmb	14 25 25.3	
	comp=Z,4.7nm,0.6s						
KURBB	Kurchatov Arra	44.87	346	P	P	14 25 26.6	+0.8
	comp=Z,6.3nm,0.8s,baz=166,slow=7.1,SNR=7.4						
KURK	Kurchatov	44.94	346	P	P	14 25 26.6	+0.3
KURK	Kurchatov	44.94	346	IAmb	IAmb	14 25 33.8	
	comp=Z,12nm,0.9s						
ZALV	Zalesovo Beam	46.88	352	P	P	14 25 42.7	+1.1
	comp=Z,3.6nm,0.4s,baz=177,slow=7.4,SNR=4.9						
ZALV	Zalesovo Beam	46.88	352	P	P	14 25 41.4	-0.1
WB0	Warramunga Arr	47.96	125	P	P	14 25 49.2	-1.3
WB0				IAmb	IAmb	14 26 02.3	
	comp=Z,4.1nm,0.9s						
WRA	Warramunga Arr	48.01	125	P	P	14 25 50.2	-0.7
	comp=Z,1.1nm,0.8s,baz=295,slow=12,SNR=2.5						
RAYN	Ar Rayn	49.29	294	P	P	14 26 02.5	+1.7
RAYN				IAmb	IAmb	14 26 03.9	
	comp=Z,5.5nm,0.6s						
BVAR	Borovoye Array	49.32	341	P	P	14 26 00.4	0.0
	comp=Z,2.7nm,0.7s,baz=139,slow=9.2,SNR=5.3						
ASAR	Alice Springs	49.65	130	P	P	14 26 02.1	-1.4
	comp=Z,1.3nm,0.8s,baz=270,slow=25,SNR=1.3						
ABKAR	Akbulak array	50.55	331	P	P	14 26 10.2	+0.4
KMBO	Kilima Mbogo	57.47	264	P	P	14 27 01.4	+0.1
	comp=Z,2.8nm,0.8s,baz=53,slow=9.9,SNR=5.4						
KMBO	Kilima Mbogo	57.47	264	P	P	14 26 58.9	-2.4
KMBO				IAmb	IAmb	14 27 05.9	
	comp=Z,4.0nm,0.9s						
BRTR	Keskin Array B	62.70	311	P	P	14 27 35.9	-0.8
	comp=Z,1.1nm,0.6s,baz=120,slow=7.1,SNR=4.0						
AKASG	Malin Array Be	68.45	322	P	P	14 28 12.2	-1.2
	comp=Z,1.4nm,0.5s,baz=86,slow=5.7,SNR=3.7						
IDI	Anoyia	68.82	305	P	P	14 28 16.3	+0.2
	comp=Z,5.9nm,0.6s,baz=28,slow=23,SNR=1.7						
FINES	FINESS Array B	73.03	332	P	P	14 28 41.3	+0.2
	comp=Z,5.6nm,0.7s,baz=123,slow=7.0,SNR=4.8						
BOSA	Boshof	75.49	238	P	P	14 28 56.3	+0.1
	comp=Z,4.2nm,0.8s,baz=69,slow=4.7,SNR=4.9						
BOSA	Boshof	75.49	238	IAmb	IAmb	14 28 59.1	
	comp=Z,5.2nm,0.9s						
ARCES	ARCESS Array B	75.59	340	P	P	14 28 56.2	+0.3
	comp=Z,2.5nm,0.8s,baz=60,slow=2.2,SNR=2.3						
GERES	GERESS Array B	78.12	318	P	P	14 29 11.2	+0.6
	comp=Z,1.5nm,0.7s,baz=73,slow=4.5,SNR=4.7						
GERES	GERESS Array B	78.12	318	P	P	14 29 10.9	+0.2
MAW	Mawson	78.24	192	P	P	14 29 12.7	+2.0
	comp=Z,2.5nm,0.7s,baz=233,slow=20,SNR=1.9						
MAW	Mawson	78.24	192	P	P	14 29 10.4	-0.3
NB2	NORSAR Subarra	80.05	331	P	P	14 29 20.6	-0.3
	comp=Z,1.8nm,0.7s,baz=91,slow=5.9						
NOA	NORSAR Array B	80.05	331	P	P	14 29 20.6	-0.3
	comp=Z,1.7nm,0.7s,baz=92,slow=5.5,SNR=4.8						
IMAR	Indian Mountai	91.89	22	P	P	14 30 19.8	+0.3
PDAR	Pinedale Array	125.43	21	PKP	PKPdf	14 36 12.7	-0.4
	comp=Z,0.2nm,0.5s,baz=87,slow=3.1,SNR=2.4						
PLCA	Paso Flores	144.28	200	PKP	PKPab	14 36 45.5	-0.3
	comp=Z,2.8nm,0.9s,baz=186,slow=6.5,SNR=3.7						

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*IDC **21** 14:18:02.6±0.5, 7°.56N×94°.26E, h0km, mb4.4/26, mb1 4.5/27, mb1mx4.3/52, mbtmp4.4/27, ML4.2/1, Error ellipse: s-maj=17.2km s-min=12.6km az=50.0*

*NEIC **21** 14:18:03.6±1.9, 7°.56N±0°.08×94°.32E±0°.10, h10km±1km, mb4.8/28, Error ellipse: s-maj=17.2km s-min=12.6km az=64.0*

ISC 21 14:18:06.0±0.4, **7°.51N**±0°.05×**94°.30E**±0°.06, **h24km, n95,** σ**1s.15**/94, **mb4.5**/37, **1D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMBY	CAMPBELL BAY	0.62	217	eP	Pb	14 18 16.8	-1.4
CMBY				eS	Sn	14 18 28.2	-0.4
LHMI	Lhok Sumawe	3.47	131	Pn	Pn	14 18 58.3	-0.2
PBA	Port Blair	4.39	340	i x	Pb	14 19 20.4	-2.1
DGPR	DIGLIPUR	5.79	347	i x	Pn	14 19 34.3	+3.9
PSI	Prapat	6.56	135	Pn	Pn	14 19 43.3	+2.1
	5.0nm,0.3s,baz=307,slow=5.6,SNR=5.6						
RPSI	Rantau Prapat	6.64	136		Pn	14 19 43.3	+1.2
KULM	Kulim	6.68	109	Pn	Pn	14 19 42.5	-0.2
IPM	Ipoh	7.33	114	Pn	Pn	14 19 50.6	-1.0
CMAR	Chiang Mai Arr	11.78	22	Pn	Pn	14 20 55.1	+2.5
	0.8nm,0.3s,baz=212,slow=14,SNR=4.8						
CMAR	Chiang Mai Arr	11.78	22		Pn	14 20 50.6	-2.0
MNAI	Manna	14.62	144	P	P	14 21 36.7	-0.9
ODAN	Odare	20.33	342	eP	P	14 22 40.6	-0.2
RAMN	Ramite	20.67	340	eP	P	14 22 45.1	+0.6
	195nm,0.8s						
TAPN	Taplejung	20.70	343	eP	P	14 22 44.9	0.0
	126nm,0.7s						
JIRN	Jiri	21.46	340	eP	P	14 22 53.7	+0.5
PKI	Pulchoki	21.66	338	eP	P	14 22 55.8	+0.6
	100nm,1.0s						
PKIN	Phulchoki	21.67	338	eP	P	14 22 55.0	-0.3
GUN	Gumba	21.80	340	eP	P	14 22 57.4	+0.6
	156nm,1.0s						
LSA	Lhasa	22.27	353	P	P	14 23 03.2	+1.3
LSA				IAmb	IAmb	14 23 05.5	
	comp=Z,37nm,0.8s						
GKN	Gorkha	22.34	337	eP	P	14 23 01.6	-0.8
DANN	Dangsing	23.00	336	eP	P	14 23 08.7	-0.8
	comp=Z,180nm,1.0s						
H08S3	Diego Garcia H	26.45	236	T	T	14 50 28.4	
	baz=55,slow=75,SNR=3.4						
H08S2	Diego Garcia H	26.45	236	T	T	14 50 29.4	
	baz=55,slow=75,SNR=3.8						
H08S1	Diego Carcia H	26.47	236	T	T	14 50 22.6	
	baz=55,slow=75,SNR=3.3						
NACB	Ninganchiao	30.94	55	P	P	14 24 21.5	+0.2
NIL	Nilore	32.49	326	P	P	14 24 34.5	-0.3
SSE	Sheshan	34.37	43	P	P	14 24 51.7	+0.4
KBL	Kabul	35.56	323	P	P	14 25 01.5	-0.2
KBL				IAmb	IAmb	14 25 08.7	
	comp=Z,12nm,1.2s						
SIJI	Sorong	37.79	101	P	P	14 25 21.8	+1.0
	comp=Z,21nm,0.9s,baz=324,slow=4.1,SNR=6.3						
AAK	Ala-Archa	39.10	337	P	P	14 25 32.1	+0.5
	comp=Z,4.6nm,1.0s,baz=93,slow=8.0,SNR=3.4						
AAK	Ala-Archa	39.10	337	P	P	14 25 29.1	-2.5
MK31	Makanchi Array	40.47	347	P	P	14 25 41.2	-1.5
MK31				IAmb	IAmb	14 25 45.9	
	comp=Z,12nm,1.1s						
MKAR	Makanchi Array	40.47	347	P	P	14 25 42.2	-0.5
	comp=Z,12nm,0.9s,baz=168,slow=7.3,SNR=9.9						
MKAR	Makanchi Array	40.47	347	P	P	14 25 40.2	-2.5
MAKZ	Makanchi	40.56	347	P	P	14 25 42.6	-0.8
MAKZ				IAmb	IAmb	14 25 43.7	
	comp=Z,14nm,1.1s						
KK31	Karatay Array	41.16	333	P	P	14 25 47.5	-0.9
KKAR	Karatay Array	41.16	333	P	P	14 25 47.9	-0.5
KKAR	Karatay Array	41.16	333	P	P	14 25 47.4	-1.0
KKAR				IAmb	IAmb	14 25 52.2	
	comp=Z,5.4nm,0.9s						
SONM	Songino Array	41.48	12	P	P	14 25 51.9	+0.8
	comp=Z,4.0nm,0.9s,baz=186,slow=7.9,SNR=4.2						
SONM				PcP	PcP	14 27 49.6	+1.0
	comp=Z,2.5nm,0.8s,baz=199,slow=4.2,SNR=5.5						
SONM	Songino Array	41.48	12	IAmb	IAmb	14 25 53.3	
	comp=Z,3.9nm,1.0s						
SONM					PcP	14 27 50.4	+1.7
JNU	Nakatsue	42.37	48	P	P	14 25 59.4	+0.9
	comp=Z,10nm,0.8s,baz=74,slow=2.5,SNR=4.3						
JNU	Nakatsue	42.37	48	P	P	14 25 56.7	-1.8
JNU				IAmb	IAmb	14 26 02.6	
	comp=Z,14nm,1.0s						
KSRS	Korea Array	42.63	41	P	P	14 26 02.2	+1.6
	comp=Z,0.8nm,0.7s,baz=237,slow=10,SNR=4.5						
GEYT	Alibeck	44.58	318	P	P	14 26 17.5	+1.2
	comp=Z,7.9nm,0.8s,baz=157,slow=9.2,SNR=5.0						
GEYT	Alibeck	44.58	318	P	P	14 26 17.3	+1.0
KURBB	Kurchatov Arra	44.93	346	P	P	14 26 18.7	-0.1
	comp=Z,9.4nm,0.6s,baz=173,slow=6.8,SNR=10						
KURBB				PcP	PcP	14 28 01.1	+1.1
	comp=Z,2.5nm,0.8s,baz=156,slow=2.7,SNR=4.5						
KURK	Kurchatov	45.00	346	P	P	14 26 18.7	-0.6
KURK	Kurchatov	45.00	346	IAmb	IAmb	14 26 22.6	
	comp=Z,34nm,1.2s						
ZALV	Zalesovo Beam	46.93	352	P	P	14 26 34.7	+0.1
	comp=Z,7.3nm,0.4s,baz=174,slow=8.1,SNR=8.7						
ZALV	Zalesovo Beam	46.93	352	P	P	14 26 32.9	-1.7
WB0	Warramunga Arr	47.88	125	P	P	14 26 40.9	-1.6
WB0				IAmb	IAmb	14 26 59.6	
	comp=Z,17nm,1.4s						
WRA	Warramunga Arr	47.92	125	P	P	14 26 42.3	-0.6
	comp=Z,3.4nm,0.9s,baz=303,slow=8.9,SNR=4.7						
WRA	Warramunga Arr	47.92	125	P	P	14 26 40.7	-2.1
WRAB	Tennant Creek	47.93	125	P	P	14 26 43.2	+0.3
WRAB				IAmb	IAmb	14 26 43.6	
	comp=Z,7.2nm,0.9s						
WB2	Warramunga Arr	47.93	125	P	P	14 26 42.7	-0.2
WB2				IAmb	IAmb	14 26 48.6	
	comp=Z,5.6nm,1.0s						
MJAR	Matsushiro Arr	49.28	47	P	P	14 26 54.2	+1.1
	comp=Z,2.7nm,0.7s,baz=242,slow=9.5,SNR=5.5						
MJAR	Matsushiro Arr	49.28	47	P	P	14 26 52.5	-0.6
BVAR	Borovoye Array	49.38	341	P	P	14 26 53.2	-0.4
	comp=Z,3.6nm,0.8s,baz=151,slow=6.8,SNR=4.7						
BVAR				PcP	PcP	14 28 17.0	+1.2
	comp=Z,1.9nm,0.8s,baz=161,slow=2.7,SNR=2.9						
BVAR	Borovoye Array	49.38	341		PcP	14 28 17.0	+1.2
RAYN	Ar Rayn	49.38	295	P	P	14 26 53.8	-0.3
RAYN				IAmb	IAmb	14 26 59.2	
	comp=Z,12nm,1.0s						
ASAR	Alice Springs	49.56	130	P	P	14 26 54.9	-0.5
	comp=Z,4.7nm,0.9s,baz=310,slow=7.8,SNR=6.7						
ASAR				PcP	PcP	14 28 16.7	-0.3
	comp=Z,3.4nm,0.8s,baz=310,slow=3.5,SNR=8.1						
ABKAR	Akbulak array	50.62	331	P	P	14 27 02.7	-0.4
ABKAR	Akbulak array	50.62	331	P	P	14 27 02.9	-0.2
ABKAR				IAmb	IAmb	14 27 11.3	
	comp=Z,20nm,1.4s						
KMBO	Kilima Mbogo	57.55	264	P	P	14 27 56.5	+2.1
	comp=Z,1.6nm,0.3s,baz=58,slow=12,SNR=5.4						
STKA	Stephens Creek	59.74	134	P	P	14 28 11.4	+2.3
	comp=Z,3.1nm,0.9s,baz=268,slow=1.6,SNR=3.2						
STKA	Stephens Creek	59.74	134	P	P	14 28 07.8	-1.3
YAK	Yakutsk	60.28	18	P	P	14 28 10.8	-1.5
	comp=Z,6.9nm,0.7s,baz=35,slow=1.3,SNR=4.6						
BRTR	Keskin Array B	62.78	311	P	P	14 28 27.9	-1.9
	comp=Z,1.5nm,0.7s,baz=124,slow=3.6,SNR=3.5						
TIXI	Tiksi	67.55	11	P	P	14 28 58.6	-1.4
TIXI				IAmb	IAmb	14 29 14.8	
	comp=Z,14nm,1.0s						
AKASG	Malin Array Be	68.53	322	P	P	14 29 05.2	-1.4
	comp=Z,0.2nm,0.3s,baz=82,slow=6.3,SNR=1.6						
IDI	Anoyia	68.91	305	P	P	14 29 08.9	-0.4
	baz=65,slow=9.1						
FINES	FINESS Array B	73.10	332	P	P	14 29 34.0	-0.1
	comp=Z,3.9nm,0.8s,baz=100,slow=6.2,SNR=4.0						
LBTB	Lobatse	74.21	241	P	P	14 29 41.6	+0.1
LBTB				IAmb	IAmb	14 29 45.0	
	comp=Z,9.0nm,0.8s						
BOSA	Boshof	75.53	238	P	P	14 29 50.2	+1.2
	comp=Z,7.7nm,1.0s,baz=69,slow=7.9,SNR=5.9						
BOSA	Boshof	75.53	238	P	P	14 29 48.9	-0.2
BOSA				IAmb	IAmb	14 29 52.5	
	comp=Z,7.6nm,0.9s						
ARCES	ARCESS Array B	75.66	340	P	P	14 29 49.0	+0.1
	comp=Z,4.5nm,0.9s,baz=103,slow=7.3,SNR=6.2						
ARCES	ARCESS Array B	75.66	340	P	P	14 29 49.6	+0.8
GERES	GERESS Array B	78.20	318	P	P	14 30 03.9	+0.2
	comp=Z,2.2nm,0.8s,baz=76,slow=5.6,SNR=5.4						
GERES	GERESS Array B	78.20	318	P	P	14 30 04.3	+0.5
MAW	Mawson	78.22	192	P	P	14 30 04.3	+1.2
	comp=Z,4.8nm,1.1s,baz=324,slow=19,SNR=1.8						
NB2	NORSAR Subarra	80.12	331	P	P	14 30 13.8	-0.1
	comp=Z,3.0nm,0.8s,baz=92,slow=5.6						
NOA	NORSAR Array B	80.12	331	P	P	14 30 13.6	-0.3
	comp=Z,3.2nm,0.8s,baz=95,slow=5.0,SNR=3.9						
DAVOX	Davos/Dischmat	80.76	316	P	P	14 30 17.2	-0.6
	comp=Z,4.1nm,0.7s,baz=116,slow=7.9,SNR=3.1						
SYO	Syowa Base	85.11	197	⇓eP	P	14 30 40.0	+0.5
TORD	Torodi Ar. Bea	90.84	283	P	P	14 31 08.6	+0.4
	comp=Z,1.1nm,0.9s,baz=94,slow=4.1,SNR=3.0						
TORD	Torodi Ar. Bea	90.84	283	P	P	14 31 07.2	-1.1
IMAR	Indian Mountai	91.90	22	P	P	14 31 12.4	+0.3
SKT	Skwentna	94.43	26	P	P	14 31 23.9	+0.1
NVAR	Mina Array Bea	125.14	31	PKP	PKiKP	14 37 06.1	+0.5
	comp=Z,1.2nm,0.9s,baz=258,slow=2.3,SNR=4.9						
PDAR	Pinedale Array	125.44	21	PKP	PKPdf	14 37 04.9	-0.9
	comp=Z,1.0nm,0.8s,baz=55,slow=2.3,SNR=6.4						
TXAR	Lajitas Array	139.49	24	PKP	PKiKP	14 37 33.6	-1.1
	comp=Z,0.5nm,0.7s,baz=185,slow=0.4,SNR=4.2						
PLCA	Paso Flores	144.27	200	PKP	PKPbc	14 37 39.0	+0.4
	comp=Z,4.6nm,0.8s,baz=182,slow=2.6,SNR=6.6						
PLCA	Paso Flores	144.27	200		PKPdf	14 37 40.7	+0.2
CPUP	Villa Florida	147.17	232	PKPbc	PKPbc	14 37 48.2	+0.3
	comp=Z,5.9nm,0.8s,baz=93,slow=4.2,SNR=7.9						
CPUP	Villa Florida	147.17	232		PKPbc	14 37 48.6	+0.7

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*DNK **21** 14:20:14.5±0.8, 58°.35N×5°.22E, h0km±7km, ML1.9, Hypocentre not reviewed by the ISC*

BER 21 14:20:27.3±1.5, **58°.38N×6°.49E, h0km, ML1.4, Explosion, Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNART	Snartemo	0.38	96	i P		14 20 33.1	
SNART				IAML		14 20 46.3	
	comp=Z,6.2nm,0.3s						
BLS5	Blasjo	1.05	359	eP	Pg	14 20 45.4	-1.9
BLS5				eS	Sg	14 21 00.1	-0.8
KMY	Karmoy	1.05	323	eP	Pg	14 20 45.8	-1.7
KMY				eS	Sg	14 20 59.3	-1.9
KMY				IAML		14 21 02.1	
	comp=Z,11nm,0.1s						
HOMB	Homborsund	1.07	95	e		14 20 45.2	
	baz=275,slow=14						
HOMB				i P		14 20 45.6	
HOMB				IAML		14 21 03.4	
	comp=Z,8.3nm,0.3s						
ODD1	Odda	1.54	3	eP	Pn	14 20 54.5	-1.6
ODD1				eS	Sg	14 21 14.9	-1.8
ODD1				IAML		14 21 17.0	
	comp=Z,8.5nm,0.3s						
KONO	Kongsberg	2.05	50	eP	Pn	14 21 00.8	-2.3
KONO				eSg	Sb	14 21 30.4	-1.0
SKAR	Skarslia	2.49	21	eP	Pn	14 21 08.0	-1.1

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*IDC **21** 14:20:32.7±1.8, 7°.25N×93°.49E, h0km, mb4.1/11, mb1 4.2/13, mb1mx3.9/50, mbtmp4.1/13, ML3.9/2, Error ellipse: s-maj=42.9km s-min=29.9km az=145.0*

ISC 21 14:20:33.8±1.7, **7°.2N**±0°.2×**93°.6E**±0°.2, **h10km, n16,** σ**0s.90**/16, **mb4.1**/11, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	12.35	25	Pn	Pn	14 23 28.7	-1.2
	0.2nm,0.3s,baz=212,slow=15,SNR=1.3						
PALK	Pallekele	12.76	271	Pn	Pn	14 23 35.3	-0.2
	0.8nm,0.3s,baz=191,slow=23,SNR=1.6						
MKAR	Makanchi Array	40.62	348	P	P	14 28 13.6	-0.3
	5.0nm,0.9s,baz=153,slow=8.2,SNR=4.5						
SONM	Songino Array	41.94	13	P	P	14 28 25.8	+1.0
	1.9nm,0.8s,baz=206,slow=8.8,SNR=3.3						
KSRS	Korea Array	43.34	41	P	P	14 28 37.2	+1.0
	1.5nm,0.9s,baz=221,slow=11,SNR=4.0						
GEYT	Alibeck	44.33	319	P	P	14 28 45.4	+1.2
	1.2nm,0.7s,baz=123,slow=5.5,SNR=1.6						
KURBB	Kurchatov Arra	45.06	346	P	P	14 28 49.6	-0.1
	6.6nm,0.9s,baz=171,slow=7.0,SNR=5.6						
ZALV	Zalesovo Beam	47.15	353	P	P	14 29 06.2	0.0
	3.5nm,0.8s,baz=180,slow=6.8,SNR=3.6						
BVAR	Borovoye Array	49.44	342	P	P	14 29 24.6	+0.7
	2.0nm,0.9s,baz=116,slow=9.8,SNR=3.1						
FINES	FINESS Array B	73.04	332	P	P	14 32 02.4	-1.4
	1.3nm,0.4s,baz=98,slow=8.1,SNR=3.5						
ARCES	ARCESS Array B	75.70	340	P	P	14 32 18.1	-1.1
	4.6nm,0.9s,baz=79,slow=5.6,SNR=3.2						
GERES	GERESS Array B	77.95	318	P	P	14 32 33.0	+0.7
	0.5nm,0.5s,baz=97,slow=5.0,SNR=2.5						
NB2	NORSAR Subarra	80.03	331	P	P	14 32 42.8	-0.7
	comp=Z,2.0nm,0.8s,baz=96,slow=5.1						
NOA	NORSAR Array B	80.03	331	P	P	14 32 42.7	-0.8
	comp=Z,0.3nm,0.5s,baz=88,slow=5.7,SNR=1.7						
PDAR	Pinedale Array	126.00	21	PKP	PKiKP	14 39 37.0	-0.3
	comp=Z,0.4nm,0.8s,baz=44,slow=4.0,SNR=2.6						
CPUP	Villa Florida	146.40	232	PKPbc	PKPab	14 40 16.1	-0.6
	comp=Z,2.2nm,1.0s,baz=357,slow=12,SNR=2.3						

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*PRU **21** 14:20:52.0±0.0, 50°.27N×12°.49E, h0km, West Bohemia*

WBNET 21 14:20:51.5, 50°.24N×12°.46E, h6km, Ml0.5, 5C-6D, Germany

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NKC	Novy Kostel	0.01	216	ePG	Pg	14 20 52.7	0.0
NKC				eSG	Sg	14 20 53.6	+0.1
	comp=Z,25nm,0.2s						
NKC	Novy Kostel	0.01	216	⇓P	Pg	14 20 52.8	+0.2
NKC				S	Sg	14 20 53.7	+0.2
LBCW	Luby	0.04	305	⇓P	Pg	14 20 53.0	+0.1
LBCW				S	Sg	14 20 54.1	+0.2

STCW	Studenec	0.04	68	⇑P	Pg	14 20 53.0	+0.1
STCW				S	Sg	14 20 54.0	+0.1
KVC	Kvetna	0.05	137	⇑P	Pg	14 20 53.1	+0.1
KVC				S	Sg	14 20 54.2	+0.1
VAC	Vackov	0.05	261	⇓P	Pg	14 20 53.1	+0.1
VAC				S	Sg	14 20 54.1	0.0
POCW	Potky	0.08	344	⇓P	Pg	14 20 53.5	+0.1
POCW				S	Sg	14 20 54.9	+0.1
SKC	Skalna	0.10	221	⇑P	Pg	14 20 53.7	+0.1
SKC				S	Sg	14 20 55.3	+0.2
KRCW	Kraslice	0.10	27	⇑P	Pg	14 20 53.8	+0.1
KRCW				S	Sg	14 20 55.3	0.0
KOCW	Kopaniny	0.15	278	⇓P	Pg	14 20 54.4	-0.1
KOCW				S	Sg	14 20 56.5	-0.1
ZHC	Zelena Hora	0.20	209	⇑P	Pg	14 20 55.5	+0.1
ZHC				S	Sg	14 20 58.2	+0.1
TRCW	Trojmez	0.21	286	⇓P	Pg	14 20 55.6	-0.1
TRCW				S	Sg	14 20 58.5	0.0

IDC **21** *14:23:56.7±1.7, 7°.32N×94°.06E, h0^{km}, mb3.9/8, mb1 4.0/9, mb1mx3.6/53, mbtmp3.9/9, ML4.3/1, Error ellipse: s-maj=53.1km s-min=28.3km az=58.0*

NEIC **21** *14:23:58.4±1.8, 7°.38N±0°.09×94°.2E±0°.1, h10^{km}±1^{km}, mb4.4/8, Error ellipse: s-maj=19.1km s-min=14.2km az=239.0*

ISC 21 14:24:00.3±0.8,**7°.4N**±0°.1×**94°.2E**±0°.1,**h20**^{km},**n27**, σ**0^{s}.88**/27,**mb4.1**/11,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	3.47	129	Pn	Pn	14 24 54.9	+1.6
KULM	Kulim	6.72	108	Pn	Pn	14 25 37.9	0.0
IPM	Ipoh	7.36	113	Pn	Pn	14 25 45.9	-0.9
PBKT	Sadao Pong	11.21	35	Pn	Pn	14 26 40.4	+0.8
CMAR	Chiang Mai Arr	11.88	22	Pn	Pn	14 26 50.1	+1.4
	0.5nm,0.3s,baz=196,slow=26,SNR=3.2						
CMAR	Chiang Mai Arr	11.88	22		Pn	14 26 49.4	+0.7
MKAR	Makanchi Array	40.54	347	P	P	14 31 37.9	-0.3
	1.5nm,0.7s,baz=168,slow=8.6,SNR=9.4						
MKAR	Makanchi Array	40.54	347	P	P	14 31 37.3	-0.9
SONM	Songino Array	41.57	12	P	P	14 31 47.4	+0.6
	0.9nm,0.9s,baz=234,slow=5.0,SNR=2.6						
SONM	Songino Array	41.57	12	P	P	14 31 45.6	-1.2
GEYT	Alibeck	44.59	318	P	P	14 32 10.8	-0.6
	1.7nm,0.6s,baz=222,slow=1.9,SNR=4.5						
GEYT	Alibeck	44.59	318	P	P	14 32 10.4	-0.9
KURBB	Kurchatov Arra	44.99	346	P	P	14 32 14.5	+0.3
	1.9nm,0.7s,baz=167,slow=7.2,SNR=9.6						
ZALV	Zalesovo Beam	47.00	352	P	P	14 32 30.6	+0.5
	1.3nm,0.4s,baz=178,slow=7.7,SNR=4.8						
ZALV	Zalesovo Beam	47.00	352	P	P	14 32 30.1	0.0
WRA	Warramunga Arr	47.93	125	P	P	14 32 36.8	-1.0
WRAB	Tennant Creek	47.93	125	P	P	14 32 38.5	+0.6
WRAB				IAmb	IAmb	14 32 44.1	
	comp=Z,6.9nm,1.2s						
WR0	Warramunga Arr	48.10	125	P	P	14 32 37.8	-1.3
WR0				IAmb	IAmb	14 32 38.7	
	comp=Z,3.4nm,1.1s						
RAYN	Ar Rayn	49.35	295	P	P	14 32 50.3	+1.5
RAYN				IAmb	IAmb	14 32 51.8	
	comp=Z,1.8nm,0.8s						
BVAR	Borovoye Array	49.44	341	P	P	14 32 47.7	-1.2
	comp=Z,1.1nm,0.8s,baz=131,slow=6.1,SNR=4.4						
ASAR	Alice Springs	49.56	130	P	P	14 32 50.2	-0.1
	comp=Z,0.7nm,0.9s,baz=317,slow=7.6,SNR=3.4						
ABKAR	Akbulak array	50.66	331	P	P	14 32 59.0	+0.7
STKA	Stephens Creek	59.73	134	P	P	14 34 03.7	-0.3
BRTR	Keskin Array B	62.79	311	P	P	14 34 24.2	-0.6
FIA1	FINESS Array S	73.14	332	P	P	14 35 29.1	-0.2
FINES	FINESS Array B	73.14	332	P	P	14 35 29.2	-0.1
NOA	NORSAR Array B	80.16	331	P	P	14 36 09.0	-0.1
	comp=Z,1.5nm,0.9s,baz=96,slow=5.1,SNR=3.2						

NEIC **21** *14:24:23.6±2.4, 7°.7N±0°.1×93°.6E±0°.1, h10^{km}±1^{km}, mb4.7/19, Error ellipse: s-maj=18.5km s-min=17.1km az=161.0*

IDC **21** *14:24:24.2±5.6, 7°.64N×93°.44E, h0^{km}, mb4.1/10, mb1 4.1/10, mb1mx3.8/53, mbtmp4.1/10, Error ellipse: s-maj=120.2km s-min=48.5km az=144.0*

ISC 21 14:24:24.0±0.6,**7°.7N**±0°.1×**93°.68E**±0°.09,**h10**^{km},**n38**, σ**1^{s}.42**/37,**mb4.5**/17,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBKT	Sadao Pong	11.36	38	Pn	Pn	14 27 03.9	-2.4
PALK	Pallekele	12.87	269	Pn	Pn	14 27 25.7	-1.5
QIZ	Qiongzhong	19.34	53	P	P	14 28 48.2	-1.5
QIZ				IAmb	IAmb	14 28 51.4	
	comp=Z,91nm,1.3s						
MK31	Makanchi Array	40.18	348	P	P	14 31 59.1	-1.3
MKAR	Makanchi Array	40.18	348	P	P	14 32 01.1	+0.6
	comp=Z,2.7nm,0.7s,baz=165,slow=8.5,SNR=11						
MKAR	Makanchi Array	40.18	348	P	P	14 32 01.3	+0.8
MAKZ	Makanchi	40.26	348		P	14 31 59.4	-1.8
SONM	Songino Array	41.46	13	P	P	14 32 14.7	+3.6
	comp=Z,1.9nm,0.8s,baz=188,slow=4.4,SNR=6.4						
SONM	Songino Array	41.46	13	P	P	14 32 10.3	-0.8
MTN	Manton Dam	42.43	118	P	P	14 32 20.1	+0.8
MTN				IAmb	IAmb	14 32 24.8	
	comp=Z,18nm,1.4s						
GEYT	Alibeck	44.04	319	P	P	14 32 34.7	+2.6
	comp=Z,1.8nm,0.6s,baz=169,slow=8.9,SNR=4.1						
GEYT	Alibeck	44.04	319	P	P	14 32 31.1	-1.0
KURBB	Kurchatov Arra	44.63	346	P	P	14 32 37.7	+1.1
	comp=Z,2.9nm,0.7s,baz=168,slow=7.0,SNR=11						
KURK	Kurchatov	44.69	346	P	P	14 32 37.7	+0.6
KURK	Kurchatov	44.69	346	IAmb	IAmb	14 32 43.7	
	comp=Z,6.6nm,0.9s						
NWAO	Narrogin (SRO)	46.18	152	P	P	14 32 50.5	+1.4
NWAO	Narrogin (SRO)	46.18	152	P	P	14 32 50.7	+1.5
NWAO				IAmb	IAmb	14 33 07.4	
	comp=Z,32nm,1.4s						
ZAA0	Zalesovo Array	46.69	353	P	P	14 32 54.5	+1.6
ZAA0				IAmb	IAmb	14 33 03.7	
	comp=Z,6.0nm,1.1s						
ZALV	Zalesovo Beam	46.69	353	P	P	14 32 54.0	+1.1
	comp=Z,2.1nm,0.5s,baz=181,slow=8.5,SNR=5.2						
ZALV	Zalesovo Beam	46.69	353	P	P	14 32 54.0	+1.1
WRA	Warramunga Arr	48.52	125	P	P	14 33 07.7	0.0
WRAB	Tennant Creek	48.53	125	P	P	14 33 08.2	+0.5
WRAB				IAmb	IAmb	14 33 25.6	
	comp=Z,6.2nm,0.9s						
BVAR	Borovoye Array	49.03	342	P	P	14 33 12.5	+1.5
	comp=Z,1.7nm,0.8s,baz=139,slow=7.9,SNR=4.5						
BVAR	Borovoye Array	49.03	342	P	P	14 33 12.5	+1.5
ABPO	Ambohimpanom	52.91	239	P	P	14 33 39.3	-1.6
BR131	Keskin Array S	62.21	311	P	P	14 34 46.1	-0.1
BRTR	Keskin Array B	62.21	311	P	P	14 34 46.6	+0.4
	comp=Z,0.7nm,0.8s,baz=128,slow=9.8,SNR=3.6						
BRTR	Keskin Array B	62.21	311	P	P	14 34 46.6	+0.4
ILGA	Ilgaz	62.48	312	P	P	14 34 46.4	-1.6
ILGA				IAmb	IAmb	14 35 05.4	
	comp=Z,12nm,1.4s						
EIDS	Eidsvold	64.75	123	P	P	14 35 02.3	-0.7
EIDS				IAmb	IAmb	14 35 19.8	
	comp=Z,9.2nm,1.2s						
ARMA	Armidale	67.20	127	P	P	14 35 17.7	-1.2
TIXI	Tiksi	67.52	11	P	P	14 35 20.0	0.0
TIXI				IAmb	IAmb	14 35 23.7	
	comp=Z,4.1nm,0.6s						
ITM	Ithomi	70.87	307	P	P	14 35 40.3	-1.1
FINES	FINESS Array B	72.67	332	P	P	14 35 52.5	+0.8
	comp=Z,3.3nm,0.8s,baz=108,slow=6.0,SNR=5.7						
FINES	FINESS Array B	72.67	332	P	P	14 35 52.7	+0.9
GERES	GERESS Array B	77.67	318	P	P	14 36 22.1	+1.1
	comp=Z,0.5nm,0.6s,baz=123,slow=3.6,SNR=2.5						
GERES	GERESS Array B	77.67	318	P	P	14 36 22.1	+1.1
NOA	NORSAR Array B	79.68	331	P	P	14 36 33.3	+1.6
	comp=Z,1.6nm,0.8s,baz=339,slow=17,SNR=2.4						

IDC **21** *14:25:07.8±0.4, 7°.52N×94°.11E, h0^{km}, mb4.7/40, mb1 4.8/43, mb1mx4.7/55, mbtmp4.7/43, ML4.9/3, MS5.1/2, Ms1 5.1/2, ms1mx4.2/44, Error ellipse: s-maj=13.1km s-min=9.6km az=59.0*

BJI **21** *14:25:07.4±0.0, 7°.28N×94°.09E, h16^{km}, mB5.9/8, mb4.8/63, Ms5.7/23, Ms7 5.4/23*

MOS **21** *14:25:08.1±1.2, 7°.52N×94°.16E, h16^{km}, mb5.4/45, Error ellipse: s-maj=8.7km s-min=4.4km az=113.4*

NEIC **21** *14:25:08.9±2.2, 7°.50N±0°.07×94°.19E±0°.08, h10^{km}±1^{km}, mb5.2/71, Error ellipse: s-maj=13.5km s-min=11.3km az=52.0*

NDI **21** *14:25:10.5±1.9, 7°.50N×94°.35E, h10^{km}, mb5.0*

DJA **21** *14:25:10.6±0.2, 8°N±3°×9°4E±°, h10^{km}, M5.4/48, mb5.2/48, mB5.7/2, MLv5.5/5, Mw(mB)5.2/2, Mwp6.5/1*

KLM **21** *14:25:12.0, 7°.49N×94°.36E, h10^{km}, mb5.4*

BGR **21** *14:25:13.8±0.0, 7°.50N×93°.89E, h33^{km}, mb5.1*

GCMT **21** *14:25:13.9±0.2, 7°.57N±0°.01×94°.35E±0°.01, h15^{km}±1^{km}, MW5.5/137, Moment Tensor Solution. s23,c26; s137,c228; Duration: 1^{s}.4 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.54±.08; $M_{\theta\theta}$-1.49±.05; $M_{\phi\phi}$2.03±.07; $M_{r\theta}$-0.85±.16; $M_{\theta\phi}$1.54±.05; $M_{\phi r}$-0.57±.14; Best double couple: $M_0$2.55500×10^{17} NP1:ϕ_s156.00000°,δ65.00000°, λ-175.00000°. NP2:ϕ_s64.00000°,δ86.00000°, λ-25.00000°. Principal axes: T 2.8180, Plg14.0000°, Azm112.0000°; N -0.5270, Plg65.0000°, Azm235.0000°; P -2.2920, Plg20.0000°, Azm17.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 14:25:10.4±0.8,**7°.46N**±0°.04×**94°.21E**±0°.04,**h17**^{km}±4^{km}, **n472**,σ**1^{s}.65**/477,**mb5.1**/148,**19C-27D**,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMBY	CAMPBELL BAY	0.53	212	eP	Pn	14 25 22.8	-0.5
CMBY				eS	Sn	14 25 33.1	+1.2
LHMI	Lhok Sumawe	3.51	129		Pn	14 26 04.1	-0.2
MLSI	Meulaboh, Aceh	3.85	145	P	Pn	14 26 12.5	+3.5
PKDT	Phuket	4.11	84	P	Pn	14 26 11.5	-1.0
PBA	Port Blair	4.41	341	eP	Pn	14 26 18.1	+1.4
SURT	Suratani	4.77	72	P	Pn	14 26 22.7	+1.0
KCSI	Kotacane, Aceh	5.28	138	P	Pn	14 26 28.1	-0.6
TRTT	Trang	5.44	86	P	Pn	14 26 29.8	-1.1
SNSI	Sinabang, Aceh	5.45	157	P	Pn	14 26 29.7	-1.2
DGPR	DIGLIPUR	5.82	348	eP	Pn	14 26 38.7	+2.7
SKLT	Songkhla	6.36	92	P	Pn	14 26 42.8	-0.7
PSI	Prapat	6.59	134	Pn	Pn	14 26 49.1	+2.3
	11nm,0.3s,baz=319,slow=14,SNR=15						
RPSI	Rantau Prapat	6.67	135		Pn	14 26 49.1	+1.4
RPSI	Rantau Prapat	6.67	135		Pn	14 26 49.1	+1.4
KULM	Kulim	6.75	108		Pn	14 26 47.0	-1.9
KULM	Kulim	6.75	108	P	Pn	14 26 48.0	-0.9
GSI	Gunungsitoli	6.98	151		Pn	14 26 52.1	+0.1
IPM	Ipoh	7.40	113		Pn	14 26 55.1	-2.7
IPM	Ipoh	7.40	113	P	Pn	14 26 56.0	-1.7
PHET	Kaeng Krachan	7.60	44	P	Pn	14 26 59.3	-1.2
SRDT	SRDT	8.37	35	P	Pn	14 27 10.4	-0.7
UMPA	Umpang Tak	9.81	27	P	Pn	14 27 28.4	-2.4
BKNI	Bangkinang	9.83	136	P	Pn	14 27 31.4	+0.3
	208nm,1.0s						
BKNI	Bangkinang	9.83	136		Pn	14 27 33.2	+2.1
SISI	Saibi	10.00	151	P	Pn	14 27 35.2	+1.8
	41nm,0.6s						
SRAK	Srakaew	10.07	49	P	Pn	14 27 40.6	+6.1
PDSI	Padang	10.40	143	P	Pn	14 27 39.7	+0.8
	51nm,0.7s						
SDSI	Sungai Dareh	11.02	139	P	Pn	14 27 49.7	+2.3
	35nm,0.7s						
MYKOM	Kota Tinggi	11.13	120		Pn	14 27 48.0	-1.0
MYKOM	Kota Tinggi	11.13	120	P	Pn	14 27 48.0	-1.0
PBKT	Sadao Pong	11.20	36	P	Pn	14 27 49.7	-0.3
PBKT	Sadao Pong	11.20	36		Pn	14 27 49.6	-0.3
MHMT	Maesarieng	11.25	18	P	Pn	14 27 53.1	+2.5
CHAI	Chaiyaphum	11.32	42	P	Pn	14 27 52.6	+1.0
PHIT	Phitsanulok	11.41	31	P	Pn	14 27 52.7	0.0
PPSI	Pulau Pagai	11.69	150	P	Pn	14 27 59.3	+2.7
	143nm,1.0s						
CM31	Chiang Mai Arr	11.86	22	P	Pn	14 28 00.8	+1.9
	SNR=12						
CM31	Chiang Mai Arr	11.86	22	P	Pn	14 27 59.6	+0.7
CM31	Chiang Mai Arr	11.86	22		Pn	14 28 00.2	+1.3
CMAR	Chiang Mai Arr	11.86	22	Pn	Pn	14 27 59.9	+0.9
	6.7nm,0.3s,baz=213,slow=14,SNR=38						
CMAR	Chiang Mai Arr	11.86	22	iP	Pn	14 27 59.9	+0.9
CMAR				pmax	pmax		
	comp=Z,22nm,0.4s						
CMAR	Chiang Mai Arr	11.86	22		Pn	14 27 59.4	+0.5
KRJI	Kerinci	11.93	142	P	Pn	14 28 00.0	-0.1
	comp=Z,295nm,1.4s						
UTTA	Uttaradit	11.94	31	P	Pn	14 28 00.0	0.0
TPRI	Tanjung Pinang	12.16	122	P	Pn	14 28 01.1	-2.0
CHTO	Chiang Mai	12.18	22	P	Pn	14 28 04.4	+1.0
CHTO	Chiang Mai	12.18	22		Pn	14 28 04.4	+1.0
LAMP	Lampang	12.19	25	P	Pn	14 28 03.8	+0.4
PALK	Pallekele	13.40	270	LR	LR	14 32 20.8	
	comp=Z,8μm,21.8s,baz=102,slow=33						
PALK	Pallekele	13.40	270	P	Pn	14 28 15.1	-5.0
PALK	Pallekele	13.40	270	Pn	Pn	14 28 15.1	-5.0
MNAI	Manna	14.63	143	P	P	14 28 40.3	-2.8
	comp=Z,202nm,0.6s						
MNAI	Manna	14.63	143	Pn	Pn	14 28 34.6	-2.3
MDRS	Chennai	14.82	293	eP	Pn	14 28 40.9	+1.4
BWNR	Bhubaneshwar	15.13	328	eP	Pn	14 28 44.0	+0.4
BWNR				IAmb	IAmb	14 28 46.0	
	comp=Z,44nm,0.6s						
BRDH	Bariadhala	15.33	351	Pn	Pn	14 28 47.9	+1.7
	comp=Z,52nm,0.3s,baz=271,slow=18,SNR=1.9						
BRDH				LR	LR	14 35 24.7	
	comp=Z,7μm,20.1s,baz=180,slow=40						
MDSI	Maura Dua	15.48	140	P	Pn	14 28 47.3	-1.0
LWLI	Liwa	15.82	141	P	P	14 28 56.0	-0.5
	comp=Z,110nm,0.6s						
KASI	Kota Agung	16.48	141	P	P	14 29 02.9	-0.8
	comp=Z,119nm,0.8s						
SLVN	Son La	16.67	33	P	P	14 29 06.2	+0.4
KSM	Kuching	17.11	110	P	P	14 29 11.4	+0.8
KSM				IAmb	IAmb	14 29 21.6	
	comp=Z,176nm,1.4s						
KSM	Kuching	17.11	110	P	P	14 29 13.0	+2.3
BOK	Bokaro	18.10	335	eP	Pn	14 29 21.2	0.0
HYB	Hyderabad	18.20	304	iP	Pn	14 29 22.0	-0.5
HYB	Hyderabad	18.20	304	eP	P	14 29 23.7	+1.0
HYB				IAmb	IAmb	14 29 32.0	
	comp=Z,71nm,1.1s						
SBUM	Sibu	18.61	105	P	Pn	14 29 27.9	+0.3
SBUM	Sibu	18.61	105	P	Pn	14 29 30.0	+2.4
DBJI	Dramaga	18.72	138	P	P	14 29 26.5	-1.9
QIZ	Qiongzhong	19.05	51	P	P	14 29 30.5	-1.5
QIZ				S	Sn	14 33 05.9	-0.1
QIZ				pmax	pmax		
	comp=Z,26nm,0.9s						
QIZ				LR	LR		
	comp=Z,26μm,12.4s						
QIZ				LR	LR		
	comp=Z,12μm,12.2s						
QIZ				LR	LR		
	comp=Z,6μm,11.6s						
TEZP	TEZPUR	19.10	356	eP	Pn	14 29 34.1	+0.8
KMI	Kunming	19.36	24	P	Pn	14 29 38.1	+1.3
KMI				pP	sP	14 29 41.0	-0.7
KMI				sP	pwP	14 29 42.4	-0.2
KMI				PP	pP	14 29 55.3	+16
KMI				pmax	pmax		
	comp=Z,36nm,0.8s						
LEM	Lembang	19.50	136	P	Pn	14 29 38.7	+0.3
	comp=Z,2.2nm,0.3s,baz=343,slow=19,SNR=1.3						
LEM	Lembang	19.50	136	P	Pn	14 29 38.8	+0.3
	comp=Z,37nm,1.8s						
NGP	Nagpur	20.00	314	ex	P	14 29 45.1	+2.7
NGP				IAmb	IAmb	14 29 51.6	
	comp=Z,91nm,1.3s						
ODAN	Odare	20.35	342	eP	P	14 29 45.3	-1.1
RAMN	Ramite	20.69	340	eP	P	14 29 50.5	+0.4
	comp=Z,451nm,0.8s						
TAPN	Taplejung	20.72	343	eP	P	14 29 50.2	-0.3
JIRN	Jiri	21.48	340	eP	P	14 29 58.7	-0.1
UWJI	Ujung Watu	21.65	129	P	P	14 30 02.0	+1.7
	comp=Z,2μmcomp=Z,181nm,1.1s						
PKI	Pulchoki	21.67	338	eP	P	14 29 59.9	-0.9
	comp=Z,264nm,1.0s						
SMRI	Semarang	21.68	131	P	P	14 30 03.3	+2.7
	comp=Z,278nm,1.1s						
PKIN	Phulchoki	21.68	338	eP	P	14 30 00.8	0.0
GUN	Gumba	21.81	340	eP	P	14 30 02.4	+0.1
	comp=Z,786nm,1.1s						
DMN	Daman	21.82	338	eP	P	14 30 03.4	+1.1
	comp=Z,319nm,0.9s						
KKM	Kota Kinabalu	21.89	92	P	P	14 30 03.0	0.0
KKM				IAmb	IAmb	14 30 10.1	
	comp=Z,143nm,1.5s						
SPMM	Sapulut	22.29	96	P	P	14 30 17.0	+10
GYA	Guiyang	22.30	31	⇓iP	P	14 30 08.5	+1.2
GYA				PP	PnPn	14 30 36.3	+6.1
GYA				S	S	14 34 09.3	-2.9
GYA				SS	SnSn	14 34 50.0	+10
GYA				pmax	pmax		
	comp=Z,30nm,0.8s						
GYA				LR	LR		
	comp=Z,9μm,16.2s						
GYA				LR	LR		
	comp=Z,11μm,15.2s						
GYA				LR	LR		
	comp=Z,9μm,16.2s						
LSA	Lhasa	22.31	353	P	P	14 30 09.6	+1.8
LSA				pmax	pmax		
	comp=Z,85nm,0.7s						
LSA	Lhasa	22.31	353	P	P	14 30 09.6	+1.8
LSA				IAmb	IAmb	14 30 19.8	
	comp=Z,85nm,0.7s						
BHPL	Bhopal	22.50	316	ex	P	14 30 10.3	+0.9
BHPL				IAmb	IAmb	14 30 15.8	
	comp=Z,86nm,1.1s						
WOJI	Wonogiri, Jawa	22.55	132	P	P	14 30 13.4	+3.4
	comp=Z,39nm,1.2s						
DANN	Dangsing	23.00	336	eP	P	14 30 14.3	-0.7
	comp=Z,337nm,0.8s						
PWJI	Pagerwojo	23.33	131	P	P	14 30 21.5	+3.5
KBKI	Kotabaru	24.38	115	P	P	14 30 31.3	+3.2
KMMI	Kalianget	24.41	126	P	P	14 30 32.3	+3.9
GMJI	Gumukmas	24.74	129	P	P	14 30 34.8	+3.5
CD2	Chengdu	24.98	20	⇓iP	P	14 30 32.8	-0.6
CD2				S	S	14 35 01.9	+5.2
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				LR	LR		
	comp=Z,18μm,12.0s						
CD2				LR	LR		
	comp=Z,17μm,11.0s						
CD2				LR	LR		
	comp=Z,15μm,12.0s						
JAGI	Jajag, Banyuwa	25.41	128	P	P	14 30 39.2	+1.8
	comp=Z,63nm,0.8s						
SRBI	Singaraja	26.02	126	P	P	14 30 43.9	+1.0
	comp=Z,241nm,1.1s						
H08S3	Diego Garcia H	26.35	236	T	T	14 57 50.7	
	baz=55,slow=75,SNR=43						
H08S2	Diego Garcia H	26.35	236	T	T	14 57 42.3	
	baz=55,slow=75,SNR=39						
H08S1	Diego Carcia H	26.36	236	T	T	14 57 39.8	
	baz=55,slow=75,SNR=145						
MPSI	Mapaga	26.57	104	P	P	14 30 49.2	+1.2
	comp=Z,147nm,1.0s						
ENH	Enshi	26.84	30	P	P	14 30 48.3	-1.9
ENH				IAmb	IAmb	14 31 00.4	
	comp=Z,27nm,0.8s						
SMLA	Simla	28.43	328	ex	P	14 31 03.9	-0.5
MRSI	Marisa	28.50	103	P	P	14 31 04.1	-1.2
APSI	Ampana	28.60	106	P	P	14 31 18.0	+12
BKSI	Bulukumba	28.80	115	P	P	14 31 10.2	+2.3
	comp=Z,45nm,0.8s						
LUWI	Luwuk	29.71	105	P	P	14 31 17.6	+1.5
	comp=Z,144nm,0.9s						
LUWI	Luwuk	29.71	105	P	P	14 31 16.2	+0.2
WHN	Wuhan	29.72	37	⇓P	P	14 31 17.8	+1.9
WHN				pmax	pmax		
	comp=Z,36nm,0.8s						
XAN	Xi'an	29.73	25	P	P	14 31 16.5	+0.5
XAN				pP	pP	14 31 21.1	+0.6
XAN				sP	pwP	14 31 24.1	+1.0
XAN				pmax	pmax		
	comp=Z,18nm,0.8s						
XAN	Xi'an	29.73	25	P	P	14 31 14.1	-1.9
XAN				pmax	pmax		
	comp=Z,34nm,0.8s						
XAN	Xi'an	29.73	25	P	P	14 31 14.1	-1.9
XAN				IAmb	IAmb	14 31 27.1	
	comp=Z,34nm,0.8s						
DHRM	DHARAMSHALA	29.77	328	ex	P	14 31 16.0	-0.6
LZH	Lanzhou	29.82	16	eP	P	14 31 21.4	+4.5
LZH				pP	pwP	14 31 25.6	+1.5
LZH				sP	sP	14 31 28.8	+5.6
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				LR	LR		
	comp=Z,4μm,11.6s						
LZH				LR	LR		
	comp=Z,6μm,13.0s						
LZH				LR	LR		
	comp=Z,7μm,13.5s						
KMSI	Cibinong	30.45	102	P	P	14 31 22.4	-0.2
	comp=Z,2μmcomp=Z,176nm,0.9s						
KCP	Kidapawan	30.63	89	⇓eP	P	14 31 22.9	-1.3
MMRI	Maumere	32.19	119	P	P	14 31 37.9	0.0
	comp=Z,35nm,1.3s						
GTA	Gaotai	32.20	8	P	P	14 31 37.6	-0.3
GTA				pP	pP	14 31 43.1	+0.8
GTA				sP	pwP	14 31 45.6	+0.5
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NIL	Nilore	32.48	326	P	P	14 31 39.1	-1.1
NIL				pmax	pmax		
	comp=Z,99nm,0.9s						
NIL	Nilore	32.48	326	P	P	14 31 39.1	-1.1
NJ2	Nanjing	33.54	40	eP	P	14 31 48.9	-0.6
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
LBMI	Labuha	34.16	102	P	P	14 31 57.6	+2.4
	comp=Z,60nm,1.5s						
SOEI	Soe	34.48	119	P	P	14 32 01.4	+3.4
TIA	Tai'an	35.45	33	P	P	14 32 06.9	+0.9
AAI	Ambon	35.67	107	P	P	14 32 09.4	+1.2
	comp=Z,64nm,0.8s						
KSH	Kashi	35.87	336	P	P	14 32 09.8	0.0
KSH				pP	pP	14 32 13.9	-0.3
KSH				PP	PnPn	14 33 28.5	-1.7
KSH				S	S	14 37 46.8	-0.4
KSH				PcS	PcS	14 38 24.5	+0.1
KSH				pmax	pmax		
	comp=Z,30nm,0.6s						
KSH				LR	LR		
	comp=Z,6μm,11.6s						
KSH				LR	LR		
	comp=Z,3μm,12.2s						
KSH				LR	LR		
	comp=Z,5μm,15.6s						
MSAI	Masohi	36.27	106	P	P	14 32 15.7	+2.4
	comp=Z,12nm,0.9s						
WMQ	Urumqi	36.66	352	eP	P	14 32 18.8	+2.4
WMQ				pP	pP	14 32 20.8	0.0
WMQ				sP	pwP	14 32 23.4	-0.3
WMQ				pmax	pmax		
	comp=Z,28nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,1μm,11.7s						
WMQ				LR	LR		
	comp=Z,3μm,24.9s						
WMQ				LR	LR		
	comp=Z,7μm,25.1s						
WMQ				LR	LR		
	comp=Z,3μm,25.1s						
HHC	Hu-ho-hao-te	36.67	22	eP	P	14 32 17.8	+1.3
HHC				pP	sP	14 32 23.0	+0.2
HHC				sP	pwP	14 32 26.3	+2.6
HHC				pmax	pmax		
	comp=Z,1μm,4.8s						
HHC				LR	LR		
	comp=Z,2μm,13.8s						
HHC				LR	LR		
	comp=Z,4μm,14.1s						
HHC				LR	LR		
	comp=Z,4μm,13.1s						
WBK	Wadi Bani Khal	37.09	298	P	P	14 32 23.6	+3.4
WSAR	Wadi Sarin	37.59	299	P	P	14 32 27.1	+2.7
	comp=Z,17nm,0.9s,baz=118,slow=6.8,SNR=9.0						
WSAR	Wadi Sarin	37.59	299	P	P	14 32 27.9	+3.5
	SNR=7.8						
DQM	DQM	37.62	293	P	P	14 32 28.0	+3.2
JOW	Kunigami	37.63	55	P	P	14 32 23.8	-0.9
JOW				IAmb	IAmb	14 32 40.8	
	comp=Z,44nm,1.3s						
JMDO	Jabal Madar	37.78	297	P	P	14 32 28.4	+2.3
SWI	Sorong	37.87	101	P	P	14 32 27.0	+0.1
	comp=Z,78nm,0.9s						
SIJI	Sorong	37.87	101	P	P	14 32 28.0	+1.0

	comp=Z,50nm,0.8s,baz=297,slow=6.8,SNR=13						
BJI	**Beijing**	**37.93**	**28**	P	**P**	**14 32 29.6**	**+2.5**
BJI				pmax	pmax		
	comp=Z,21nm,1.3s						
PDGK	**Podgornoye**	**37.99**	**342**	*i*P	**P**	**14 32 26.8**	**-0.9**
PDGK				pmax	pmax		
	comp=Z,15nm,1.2s						
SMDO	**Samad**	**38.03**	**298**	P	**P**	**14 32 31.7**	**+3.3**
	SNR=7.0						
BIDO	**Bidbid**	**38.11**	**299**	P	**P**	**14 32 32.3**	**+3.4**
	SNR=14						
PSA00	**Pilbara Seismi**	**38.28**	**139**	P	**P**	**14 32 29.9**	**-0.3**
PSA00	**Pilbara Seismi**	**38.28**	**139**	P	**P**	**14 32 28.8**	**-1.4**
PSA00				IAmb	IAmb	14 32 36.6	
	comp=Z,27nm,1.2s						
KZA	**Kyzart**	**38.34**	**337**	P	**P**	**14 32 30.5**	**-0.5**
	SNR=5.4						
BOOM	**Boomskoye usch**	**38.43**	**338**	P	**P**	**14 32 30.5**	**-1.0**
BOOM	**Boomskoye usch**	**38.43**	**338**	P	**P**	**14 32 30.5**	**-1.0**
BSY	**Bisya**	**38.69**	**297**	P	**P**	**14 32 36.5**	**+2.8**
	SNR=13						
HOQ	**Hoqain**	**38.84**	**299**	P	**P**	**14 32 38.0**	**+2.9**
	SNR=12						
KBK	**Karagaybulak**	**38.95**	**337**	P	**P**	**14 32 35.8**	**-0.1**
	SNR=9.3						
AML	**Almayashu**	**39.01**	**336**	P	**P**	**14 32 36.0**	**-0.6**
	SNR=11						
AAK	**Ala-Archa**	**39.11**	**337**	P	**P**	**14 32 37.1**	**-0.1**
	comp=Z,10nm,1.0s,baz=344,slow=2.1,SNR=14						
AAK	**Ala-Archa**	**39.11**	**337**	P	**P**	**14 32 40.0**	**+2.8**
	SNR=24						
AAK	**Ala-Archa**	**39.11**	**337**	⇓*i*P	**P**	**14 32 37.9**	**+0.7**
AAK				pmax	pmax		
	comp=Z,24nm,1.0s						
FAKI	**Fak Fak**	**39.33**	**104**	P	**P**	**14 32 38.6**	**-0.7**
FAKI				IAmb	IAmb	14 32 55.3	
	comp=Z,33nm,0.9s						
EKS2	**Erkin-Say**	**39.42**	**336**	P	**P**	**14 32 39.2**	**-0.4**
	SNR=7.8						
ARQ	**Araqi**	**39.46**	**298**	P	**P**	**14 32 43.3**	**+3.1**
	SNR=7.7						
USP	**Ospenovka**	**39.64**	**337**	P	**P**	**14 32 40.7**	**-0.8**
	SNR=11						
SOHO	**SOHO**	**39.69**	**299**	P	**P**	**14 32 44.6**	**+2.5**
	SNR=7.8						
DL2	**Dalian**	**39.87**	**34**	P	P	14 32 49.9	+6.6
FITZ	**Fitzroy Crossi**	**40.09**	**130**	P	**P**	**14 32 47.8**	**+2.3**
	baz=40,SNR=7.3						
FITZ	**Fitzroy Crossi**	**40.09**	**130**	P	**P**	**14 32 46.1**	**+0.7**
	comp=Z,4.3nm,0.7s,baz=340,slow=11,SNR=7.3						
FITZ	**Fitzroy Crossi**	**40.09**	**130**	P	**P**	**14 32 44.1**	**-1.3**
UOSS	**Minazif**	**40.23**	**300**	P	**P**	**14 32 48.6**	**+1.9**
UOSS	**Minazif**	**40.23**	**300**	P	**P**	**14 32 46.0**	**-0.7**
BANOM	**Banah**	**40.48**	**302**	P	**P**	**14 32 51.9**	**+3.2**
MK31	**Makanchi Array**	**40.50**	**347**	*i*P	**P**	**14 32 47.0**	**-1.5**
MK31	**Makanchi Array**	**40.50**	**347**	P	**P**	**14 32 47.7**	**-0.9**
MK31				IAmb	IAmb	14 32 56.1	
	comp=Z,23nm,0.9s						
MKAR	**Makanchi Array**	**40.50**	**347**	P	**P**	**14 32 47.5**	**-1.0**
	comp=Z,28nm,0.9s,baz=167,slow=7.8,SNR=29						
MAKZ	**Makanchi**	**40.58**	**347**	*i*P	**P**	**14 32 46.8**	**-2.4**
MAKZ				pmax	pmax		
	comp=Z,24nm,0.9s						
MAKZ	**Makanchi**	**40.58**	**347**	P	**P**	**14 32 48.2**	**-1.0**
ABTO	**Aybut**	**41.07**	**288**	P	**P**	**14 32 56.0**	**+2.3**
	SNR=7.4						
KK31	**Karatay Array**	**41.16**	**333**	*i*P	**P**	**14 32 53.0**	**-1.0**
KK31	**Karatay Array**	**41.16**	**333**	P	**P**	**14 32 53.3**	**-0.7**
KKAR	**Karatay Array**	**41.16**	**333**	P	**P**	**14 32 53.1**	**-0.9**
KKAR	**Karatay Array**	**41.16**	**333**	P	**P**	**14 32 53.1**	**-0.9**
KKAR	**Karatay Array**	**41.16**	**333**	P	**P**	**14 32 53.2**	**-0.9**
KKAR				IAmb	IAmb	14 33 01.0	
	comp=Z,23nm,1.1s						
AJN	**Ajban**	**41.16**	**299**	P	**P**	**14 32 56.4**	**+2.1**
	SNR=6.1						
KNRA	**Kununurra**	**41.23**	**124**	P	**P**	**14 32 55.5**	**+0.6**
	baz=41,SNR=3.1						
MEEK	**Meekatharra**	**41.34**	**146**	P	**P**	**14 32 59.0**	**+3.3**
	baz=42,SNR=4.3						
SONM	**Songino Array**	**41.55**	**12**	P	**P**	**14 32 57.5**	**+0.3**
	comp=Z,5.6nm,0.9s,baz=198,slow=8.2,SNR=12						
SONM	**Songino Array**	**41.55**	**12**	P	**P**	**14 32 58.2**	**+0.9**
ULN	**Ulaanbaatar**	**41.72**	**13**	⇑*e*P	**P**	**14 32 59.0**	**+0.3**
ULN				pmax	pmax		
	comp=Z,21nm,1.6s						
ULN	**Ulaanbaatar**	**41.72**	**13**	P	**P**	**14 32 59.0**	**+0.3**
MTN	**Manton Dam**	**41.87**	**119**	P	**P**	**14 33 00.1**	**-0.1**
	baz=42,SNR=6.4						
MTN	**Manton Dam**	**41.87**	**119**	P	**P**	**14 32 59.9**	**-0.3**
JNU	**Nakatsue**	**42.47**	**48**	P	**P**	**14 33 05.3**	**+0.5**
	comp=Z,7.5nm,0.7s,baz=27,slow=11,SNR=2.7						
JNU	**Nakatsue**	**42.47**	**48**	IAmb	IAmb	14 33 13.6	
	comp=Z,21nm,0.8s						
DGZ	**Jazzator, Alta**	**42.48**	**353**	⇓*e*P	**P**	**14 33 05.0**	**+0.1**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KSRS	**Korea Array**	**42.73**	**41**	P	**P**	**14 33 08.0**	**+1.1**
	comp=Z,7.3nm,0.9s,baz=229,slow=8.5,SNR=13						
KSRS	**Korea Array**	**42.73**	**41**	P	**P**	**14 33 08.0**	**+1.1**
KDU	**Kakadu**	**42.97**	**118**	P	**P**	**14 33 08.8**	**-0.4**
	baz=43,SNR=3.2						
MOY	**Mondy**	**44.42**	**6**	*e*P	**P**	**14 33 25.1**	**+4.7**
MOY				pmax	pmax		
	comp=Z,21nm,1.7s						
MUN	**Mundaring**	**44.49**	**153**	P	**P**	**14 33 21.9**	**+0.8**
	baz=45,SNR=6.4						
GEYT	**Alibeck**	**44.55**	**318**	P	**P**	**14 33 21.7**	**+0.1**
	comp=Z,25nm,0.7s,baz=148,slow=8.6,SNR=28						
GEYT	**Alibeck**	**44.55**	**318**	P	**P**	**14 33 20.7**	**-0.9**
GEYT					**PcP**	**14 34 59.8**	**-4.9**
GYA0B	**ALIBECK ARRAY**	**44.55**	**318**	P	**P**	**14 33 20.7**	**-0.9**
GYA0B				IAmb	IAmb	14 33 27.3	
	comp=Z,37nm,0.8s						
GYA0B				PcP	**PcP**	**14 34 59.6**	**-5.1**
TLY	**Talaya**	**44.76**	**8**	P	**P**	**14 33 23.9**	**+0.8**
	comp=Z,1.9nm,0.4s,baz=292,slow=4.9,SNR=3.7						
TLY	**Talaya**	**44.76**	**8**	⇑*e*P	**P**	**14 33 21.3**	**-1.8**
TLY				pmax	pmax		
	comp=Z,22nm,3.2s						
KURBB	**Kurchatov Arra**	**44.96**	**346**	P	**P**	**14 33 23.9**	**-0.7**
	comp=Z,38nm,0.9s,baz=164,slow=7.5,SNR=27						
KURBB	**Kurchatov Arra**	**44.96**	**346**	P	**P**	**14 33 24.1**	**-0.5**
KURK	**Kurchatov**	**45.02**	**346**	⇓*e*P	**P**	**14 33 24.8**	**-0.3**
KURK				pmax	pmax		
	comp=Z,74nm,1.3s						
KURK	**Kurchatov**	**45.02**	**346**	P	**P**	**14 33 25.0**	**-0.1**
CN2	**Changchun**	**45.34**	**32**	*e*P	**P**	**14 33 27.0**	**-0.7**
CN2				*e*sP	sP	14 33 33.9	-0.2
CN2				pmax	pmax		
	comp=Z,20nm,1.2s						
NWAO	**Narrogin (SRO)**	**45.75**	**153**	P	**P**	**14 33 32.8**	**+1.6**
	baz=46,SNR=5.0						
NWAO	**Narrogin (SRO)**	**45.75**	**153**	P	**P**	**14 33 32.8**	**+1.6**
	comp=Z,11nm,0.8s,baz=305,slow=15,SNR=2.2						
NWAO	**Narrogin (SRO)**	**45.75**	**153**	P	**P**	**14 33 30.3**	**-0.8**
NWAO				pmax	pmax		
	comp=Z,41nm,1.0s						
NWAO	**Narrogin (SRO)**	**45.75**	**153**	P	**P**	**14 33 30.3**	**-0.8**
NWAO				IAmb	IAmb	14 33 41.8	
	comp=Z,40nm,1.0s						
NWAO	**Narrogin (SRO)**	**45.75**	**153**	P	**P**	**14 33 30.5**	**-0.6**
NWAO				IAmb	IAmb	14 33 41.8	
	comp=Z,51nm,1.0s						
WRKA	**Warakurna**	**46.31**	**135**	P	**P**	**14 33 36.3**	**+0.5**
	baz=46,SNR=9.0						
ZAA0	**Zalesovo Array**	**46.97**	**352**	P	**P**	**14 33 40.3**	**-0.1**
ZALV	**Zalesovo Beam**	**46.97**	**352**	P	**P**	**14 33 40.1**	**-0.3**
	comp=Z,15nm,0.6s,baz=187,slow=7.6,SNR=21						
ZALV	**Zalesovo Beam**	**46.97**	**352**	P	**P**	**14 33 40.5**	**+0.1**
WB0	**Warramunga Arr**	**47.92**	**125**	P	**P**	**14 33 48.4**	**0.0**
WB0				IAmb	IAmb	14 34 03.8	
	comp=Z,14nm,0.6s						
WRA	**Warramunga Arr**	**47.97**	**125**	P	**P**	**14 33 47.5**	**-1.2**
	comp=Z,5.6nm,0.8s,baz=306,slow=8.1,SNR=13						
WRA	**Warramunga Arr**	**47.97**	**125**	*i*P	**P**	**14 33 47.2**	**-1.5**
WRA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WRA	**Warramunga Arr**	**47.97**	**125**	P	**P**	**14 33 47.7**	**-1.0**
WRAB	**Tennant Creek**	**47.97**	**125**	⇓*e*P	**P**	**14 33 46.9**	**-1.8**
WRAB				pmax	pmax		
	comp=Z,27nm,1.6s						
WRAB	**Tennant Creek**	**47.97**	**125**	P	**P**	**14 33 47.8**	**-0.9**
WRAB				IAmb	IAmb	14 33 54.3	
	comp=Z,16nm,0.9s						
WB2	**Warramunga Arr**	**47.98**	**125**	P	**P**	**14 33 48.0**	**-0.7**
WB2				IAmb	IAmb	14 34 00.5	
	comp=Z,44nm,1.5s						
MDJ	**Mudanjiang**	**48.11**	**34**	P	**P**	**14 33 50.8**	**+1.4**
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WR0	**Warramunga Arr**	**48.14**	**125**	P	**P**	**14 33 48.9**	**-1.2**
WR0				IAmb	IAmb	14 34 01.7	
	comp=Z,51nm,1.4s						
USRK	**Ussuriysk Ar.**	**49.20**	**36**	P	**P**	**14 33 58.7**	**+0.9**
	comp=Z,1.4nm,0.8s,baz=237,slow=10,SNR=4.8						
USRK	**Ussuriysk Ar.**	**49.20**	**36**	P	**P**	**14 33 56.6**	**-1.2**
USRK	**Ussuriysk Ar.**	**49.20**	**36**	P	**P**	**14 33 56.6**	**-1.2**
RAYN	**Ar Rayn**	**49.32**	**295**	P	**P**	**14 34 00.3**	**+1.1**
RAYN				pmax	pmax		
	comp=Z,39nm,0.8s						
RAYN	**Ar Rayn**	**49.32**	**295**	P	**P**	**14 34 00.3**	**+1.1**
MJAR	**Matsushiro Arr**	**49.38**	**47**	P	**P**	**14 34 01.1**	**+1.7**
	comp=Z,4.8nm,0.7s,baz=240,slow=8.1,SNR=8.0						
MJAR				PcP	**PcP**	**14 35 22.1**	**+0.4**
	comp=Z,3.9nm,1.1s,baz=253,slow=4.9,SNR=2.0						
MJAR	**Matsushiro Arr**	**49.38**	**47**	P	**P**	**14 33 57.2**	**-2.2**
MJAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MJAR	**Matsushiro Arr**	**49.38**	**47**	P	**P**	**14 33 57.2**	**-2.2**
BVAR	**Borovoye Array**	**49.40**	**341**	P	**P**	**14 33 58.4**	**-0.8**
	comp=Z,15nm,0.7s,baz=138,slow=9.1,SNR=27						
BVAR				PcP	**PcP**	**14 35 21.4**	**0.0**
	comp=Z,4.2nm,0.6s,baz=143,slow=5.0,SNR=2.2						
BRVK	**Borovoye**	**49.46**	**341**	⇑*e*P	**P**	**14 33 59.1**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,23nm,1.0s						
BRVK	**Borovoye**	**49.46**	**341**	P	**P**	**14 33 59.2**	**-0.4**
BRVK				IAmb	IAmb	14 34 02.5	
	comp=Z,18nm,0.8s						
AS31	**Alice Springs**	**49.60**	**130**	P	**P**	**14 34 00.1**	**-1.1**
ASAR	**Alice Springs**	**49.60**	**130**	P	**P**	**14 34 00.2**	**-1.0**
	comp=Z,6.1nm,0.9s,baz=306,slow=7.0,SNR=11						
ASAR				PcP	**PcP**	**14 35 22.9**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=312,slow=5.7,SNR=0.8						
ASAR	**Alice Springs**	**49.60**	**130**	P	**P**	**14 34 00.6**	**-0.6**
ASAR					**PcP**	**14 35 23.2**	**+0.4**
AB31	**Akbulak array**	**50.62**	**331**	*i*P	**P**	**14 34 08.1**	**-0.5**
ABKAR	**Akbulak array**	**50.62**	**331**	P	**P**	**14 34 08.0**	**-0.6**
ATD	**Arta Tunnel**	**50.77**	**279**	P	**P**	**14 34 11.0**	**+0.7**
	comp=Z,12nm,0.8s,baz=274,slow=20,SNR=2.7						
LKRN	**Lenkeran, Azer**	**51.33**	**314**	P	**P**	**14 34 13.4**	**-0.7**
KLR	**Kul'dur**	**52.20**	**30**	P	**P**	**14 34 22.0**	**+1.6**
	comp=Z,1.5nm,0.8s,baz=250,slow=9.5,SNR=5.5						
KLR	**Kul'dur**	**52.20**	**30**	⇑*e*P	**P**	**14 34 21.9**	**+1.6**
KLR				pmax	pmax		
	comp=Z,15nm,1.5s						
BOD	**Bodaibo**	**52.53**	**13**	*e*P	**P**	**14 34 21.9**	**-0.8**
BOD				pmax	pmax		
	comp=Z,36nm,2.0s						
OPO	**Ambohidratompo**	**53.10**	**240**	P	**P**	**14 34 28.7**	**+0.9**
	comp=Z,4.9nm,0.7s,baz=79,slow=8.3,SNR=4.8						
ZEA	**Zeya**	**53.30**	**24**	*e*P	**P**	**14 34 29.3**	**+0.9**
ZEA				pmax	pmax		
	comp=Z,21nm,1.2s						
MNGR	**Mingechevir, A**	**53.39**	**316**	P	**P**	**14 34 28.7**	**-0.6**
SEKA	**Sheki**	**53.50**	**317**	P	**P**	**14 34 28.9**	**-1.4**
NAX	**Nakhchivan**	**53.86**	**314**	P	**P**	**14 34 32.1**	**-0.9**
GANJ	**Ganja**	**53.87**	**316**	P	**P**	**14 34 32.1**	**-0.8**
GROC	**Groznyy**	**55.30**	**318**	P	**P**	**14 34 41.1**	**-2.1**
GROC				*e*		14 36 47.5	
GROC				*e*S	**S**	**14 42 23.5**	**-3.1**
GROC				pmax	pmax		
	comp=Z,41nm,0.9s						
GRNR	**Gornyy**	**55.52**	**31**	*e*P	P	14 34 37.0	-7.7
GRNR				MLR	MLR		
	comp=Z,1µm,13.0s						
SVE	**Sverdlovsk**	**55.81**	**338**	*e*P	**P**	**14 34 46.5**	**-0.1**
SVE				pmax	pmax		
	comp=Z,120nm,1.4s						
GUDG	**Gudauri**	**55.87**	**317**	P	**P**	**14 34 51.9**	**+4.3**
ARU	**Arti**	**56.29**	**337**	*d i*P	**P**	**14 34 49.6**	**-0.5**
ARU				S	**S**	**14 42 42.0**	**+2.6**
ARU				SS	**SS**	**14 46 30.1**	**+3.9**
ARU				pmax	pmax		
	comp=Z,39nm,1.0s						
ARU	**Arti**	**56.29**	**337**	IAmb	IAmb	14 34 56.6	
	comp=Z,40nm,1.0s						
ZEI	**Tsey**	**56.39**	**317**	*e*P	**P**	**14 34 49.6**	**-1.7**
ZEI				pmax	pmax		
	comp=Z,13nm,0.9s						
BBOO	**Buckleboo**	**56.46**	**138**	P	**P**	**14 34 51.6**	**-0.1**
	baz=57,SNR=6.2						
ONI	**Oni**	**56.62**	**317**	P	**P**	**14 34 56.8**	**+4.0**
YSS	**Yuzh-Sakhalins**	**57.06**	**38**	*e*P	**P**	**14 34 58.1**	**+2.4**
YSS				*e*		14 35 08.0	
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
NEY	**Neytrino**	**57.37**	**317**	⇓*e*P	**P**	**14 34 57.5**	**-0.7**
KBZ	**Khabaz**	**57.44**	**318**	P	**P**	**14 34 57.9**	**-0.5**
	comp=Z,6.2nm,0.9s,baz=158,slow=5.2,SNR=7.0						
KMBO	**Kilima Mbogo**	**57.45**	**264**	P	**P**	**14 35 01.8**	**+2.5**
	comp=Z,10nm,0.7s,baz=59,slow=11,SNR=26						
KIV	**Kislovodsk**	**57.67**	**318**	*e*P	**P**	**14 35 00.7**	**+0.5**
KIV				pmax	pmax		
	comp=Z,96nm,1.1s						
GOF	**Gofitskoye**	**57.88**	**319**	⇑*e*P	**P**	**14 35 06.1**	**+4.6**
HTT	**Hallett**	**58.76**	**137**	P	**P**	**14 35 08.4**	**+0.4**
	baz=59,SNR=9.2						
QLP	**Quilpie**	**59.13**	**127**	P	**P**	**14 35 10.6**	**+0.1**
	baz=59,SNR=3.6						
STKA	**Stephens Creek**	**59.77**	**134**	P	**P**	**14 35 14.7**	**-0.2**
	comp=Z,2.7nm,0.8s,baz=299,slow=6.5,SNR=6.1						
YAK	**Yakutsk**	**60.36**	**18**	*e*P	**P**	**14 35 16.1**	**-2.3**
YAK				pmax	pmax		
	comp=Z,35nm,1.1s						
YAK				pmax	pmax		
	comp=N,12nm,1.1s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.4s						
YAK	**Yakutsk**	**60.36**	**18**	P	**P**	**14 35 17.8**	**-0.6**
VRH	**Novokhopyorsk**	**61.30**	**325**	*e*P	**P**	**14 35 23.2**	**-1.8**
VRH				pmax	pmax		
	comp=Z,50nm,0.8s						
NRIK	**Noril'sk**	**61.95**	**357**	P	**P**	**14 35 28.1**	**-1.0**
	comp=Z,14nm,0.7s,baz=150,slow=5.5,SNR=19						
CMSA	**Cobar Meteorol**	**62.60**	**131**	P	**P**	**14 35 33.6**	**-0.5**
	baz=63,SNR=5.5						
RMQ	**Roma**	**62.72**	**125**	P	**P**	**14 35 35.7**	**+0.7**
	baz=63,SNR=4.7						
BR131	**Keskin Array S**	**62.75**	**311**	P	**P**	**14 35 32.9**	**-2.3**
	SNR=7.2						
BR131	**Keskin Array S**	**62.75**	**311**	P	**P**	**14 35 32.7**	**-2.5**
BR131				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BR131	**Keskin Array S**	**62.75**	**311**	P	**P**	**14 35 32.7**	**-2.5**
BR131				IAmb	IAmb	14 35 38.4	
	comp=Z,8.4nm,0.8s						
BRTR	**Keskin Array B**	**62.75**	**311**	P	**P**	**14 35 32.7**	**-2.5**
	comp=Z,4.6nm,0.6s,baz=129,slow=7.4,SNR=25						
VSR	**Storozhevoye**	**62.77**	**325**	*e*P	**P**	**14 35 32.8**	**-2.0**
VSR				pmax	pmax		
	comp=Z,30nm,1.1s						
LPSR	**Galich'ya Gora**	**63.47**	**326**	*e*P	**P**	**14 35 36.9**	**-2.6**
LPSR				pmax	pmax		
	comp=Z,40nm,1.0s						
PRGR	**Permogore**	**64.75**	**337**	*e*P	**P**	**14 35 46.8**	**-0.9**
PRGR				pmax	pmax		
	comp=Z,68nm,0.8s						
ELL	**Elmali**	**65.03**	**307**	P	**P**	**14 35 50.1**	**-0.1**
MOS	**Moscow**	**65.47**	**329**	*e*P	**P**	**14 35 50.8**	**-1.7**
MOS				pmax	pmax		
	comp=Z,150nm,1.3s						
TOO	**Toolangi**	**65.51**	**137**	P	**P**	**14 35 54.7**	**+1.5**
	baz=66,SNR=3.9						
OBN	**Obninsk**	**65.76**	**328**	⇑*e*P	**P**	**14 35 53.4**	**-1.0**
OBN				*e*		14 36 23.3	
OBN				*e*		14 38 17.1	
OBN				*e*SS	SS	14 48 49.9	-4.6
OBN				pmax	pmax		
	comp=Z,59nm,1.1s						
OBN				MLR	MLR		
	comp=Z,2µm,16.0s						
KLMR	**Klimovskoe**	**66.85**	**334**	*e*P	**P**	**14 35 59.7**	**-1.6**
KLMR				pmax	pmax		
	comp=Z,72nm,1.1s						
KLMR	**Klimovskoe**	**66.85**	**334**	*e*P	**P**	**14 35 59.8**	**-1.6**
KLMR				AMP		14 36 12.3	
	comp=Z,72nm,1.1s						
KARP	**Karpathos**	**67.05**	**305**	P	**P**	**14 36 02.5**	**-0.6**
MA2	**Magadan**	**67.09**	**27**	P	**P**	**14 36 02.7**	**-0.2**
	comp=Z,9.2nm,0.9s,baz=247,slow=12,SNR=5.4						
MA2	**Magadan**	**67.09**	**27**	⇑*e*P	**P**	**14 36 03.3**	**+0.4**
MA2				pmax	pmax		
	comp=Z,29nm,2.0s						
MA2	**Magadan**	**67.09**	**27**	P	**P**	**14 36 03.7**	**+0.8**
MA2				IAmb	IAmb	14 36 22.2	
	comp=Z,28nm,1.2s						
TLCR		**67.47**	**316**	⇑P	**P**	**14 36 04.3**	**-1.3**
TLCR		**67.47**	**316**	P	**P**	**14 36 04.2**	**-1.3**
TIRR	**Tirgusor**	**67.59**	**315**	⇓P	**P**	**14 36 04.8**	**-1.5**
TIXI	**Tiksi**	**67.62**	**11**	P	**P**	**14 36 04.7**	**-1.3**
	comp=Z,20nm,0.6s,baz=209,slow=4.9,SNR=20						
TIXI	**Tiksi**	**67.62**	**11**	⇑*e*P	**P**	**14 36 04.4**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,21nm,0.8s						
TIXI	**Tiksi**	**67.62**	**11**	P	**P**	**14 36 04.4**	**-1.6**
CFR	**Carcaliu**	**67.94**	**316**	⇓P	**P**	**14 36 07.2**	**-1.3**
CFR	**Carcaliu**	**67.94**	**316**	P	**P**	**14 36 07.1**	**-1.3**
SORM	**Soroca**	**68.44**	**319**	⇓P	**P**	**14 36 10.4**	**-1.2**
SORM	**Soroca**	**68.44**	**319**	P	**P**	**14 36 10.4**	**-1.2**
AKASG	**Malin Array Be**	**68.52**	**322**	P	**P**	**14 36 09.9**	**-2.1**
	comp=Z,5.2nm,0.8s,baz=86,slow=4.9,SNR=10						
AKASG				PP	**PP**	**14 38 39.4**	**-3.9**
	comp=Z,1.6nm,0.8s,baz=88,slow=6.6,SNR=2.7						
AKASG	**Malin Array Be**	**68.52**	**322**	*i*P	**P**	**14 36 10.3**	**-1.7**
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KIEV	**Kiev**	**68.53**	**322**	P	**P**	**14 36 10.0**	**-2.1**
ALN	**Alexandroupoli**	**68.67**	**311**	P	**P**	**14 36 17.2**	**+4.0**
BISRR	**Bisoca**	**69.00**	**316**	⇓P	**P**	**14 36 15.6**	**+0.4**
TMCR	**Tamitsa**	**69.03**	**337**	*e*P	**P**	**14 36 11.7**	**-3.2**
VRI	**Vrincioaia**	**69.05**	**316**	⇓P	**P**	**14 36 15.2**	**-0.2**
VRI	**Vrincioaia**	**69.05**	**316**	P	**P**	**14 36 15.2**	**-0.2**
PLOR	**Plostina**	**69.09**	**316**	⇑P	**P**	**14 36 15.2**	**-0.6**
PLOR	**Plostina**	**69.09**	**316**	P	**P**	**14 36 15.2**	**-0.6**
TESR	**Tescani**	**69.22**	**317**	⇓P	**P**	**14 36 15.5**	**-1.1**
SEY	**Seymchan**	**69.27**	**25**	⇑*e*P	**P**	**14 36 15.6**	**-0.8**
MLR	**Muntele Rosu**	**69.51**	**316**	⇑P	**P**	**14 36 18.3**	**-0.2**
MLR	**Muntele Rosu**	**69.51**	**316**	P	**P**	**14 36 18.7**	**+0.2**
MLR				pmax	pmax		
	comp=Z,17nm,1.0s						
BIZ	**Bicaz**	**69.68**	**317**	⇓P	**P**	**14 36 18.6**	**-0.7**
DOPR	**Dopca**	**69.98**	**316**	⇓P	**P**	**14 36 20.9**	**-0.3**
PLVB	**Pleven**	**70.10**	**313**	⇑P	**P**	**14 36 21.4**	**-0.6**
VOIR		**70.12**	**316**	⇑P	**P**	**14 36 20.9**	**-1.3**
VOIR		**70.12**	**316**	P	**P**	**14 36 20.9**	**-1.3**
BURAR	**Bucovina Array**	**70.40**	**318**	⇓P	**P**	**14 36 23.2**	**-0.6**
BURAR	**Bucovina Array**	**70.40**	**318**	P	**P**	**14 36 23.2**	**-0.6**
BURAR	**Bucovina Array**	**70.40**	**318**	P	**P**	**14 36 22.4**	**-1.5**
ARR	**Arges**	**70.40**	**315**	⇑P	**P**	**14 36 22.4**	**-1.5**
VTS	**Vitosha**	**71.00**	**312**	⇓P	**P**	**14 36 26.0**	**-1.7**
NACGM	**Naroch**	**71.03**	**326**	*e*	P	14 36 33.0	+5.6
LIT	**Litokhoron**	**71.26**	**310**	P	**P**	**14 36 27.2**	**-2.0**
LIT				pmax	pmax		
	comp=Z,18nm,0.7s						
LIT	**Litokhoron**	**71.26**	**310**	P	**P**	**14 36 27.2**	**-2.0**
LIT				IAmb	IAmb	14 36 34.0	
	comp=Z,18nm,0.7s						
LVV	**L'vov**	**71.57**	**320**	*e*P	**P**	**14 36 33.2**	**+2.4**
DRGR		**71.94**	**317**	⇓P	**P**	**14 36 32.5**	**-0.7**
DRGR		**71.94**	**317**	P	**P**	**14 36 33.1**	**-0.1**
DRGR				pmax	pmax		
	comp=Z,160nm,3.9s						
VSU	**Vasula**	**71.97**	**329**	⇓*e*P	**P**	**14 36 31.8**	**-1.2**
APA	**Apatity**	**72.25**	**339**	⇓*i*P	**P**	**14 36 34.8**	**+0.3**
APA				pmax	pmax		
	comp=Z,20nm,0.9s						
UZH	**Uzhgorod**	**72.50**	**319**	*e*P	**P**	**14 36 38.5**	**+2.1**
UZH				*e*		14 36 41.3	
IGT	**Igoumenitsa**	**72.86**	**309**	P	**P**	**14 36 38.6**	**-0.1**
IGT				pmax	pmax		
	comp=Z,55nm,0.9s						
CRVS	**Cervenica-Dubn**	**73.08**	**319**	*e*P	**P**	**14 36 40.6**	**+0.7**
CRVS				pmax	pmax		
	comp=Z,70nm,1.4s						
CRVS	**Cervenica-Dubn**	**73.08**	**319**	*e*P	**P**	**14 36 40.6**	**+0.7**
FIA1	**FINESS Array S**	**73.10**	**332**	P	**P**	**14 36 38.2**	**-1.5**
FINES	**FINESS Array B**	**73.11**	**332**	P	**P**	**14 36 38.6**	**-1.1**
	comp=Z,22nm,0.9s,baz=93,slow=6.0,SNR=14						
PDG	**Podgorica**	**73.90**	**312**	⇑P	**P**	**14 36 43.4**	**-1.3**
PSZ	**Piszkesteto**	**73.99**	**318**	P	**P**	**14 36 49.5**	**+4.2**
PSZ				pmax	pmax		
	comp=Z,167nm,1.6s						
LBTB	**Lobatse**	**74.11**	**241**	P	**P**	**14 36 46.0**	**-0.5**
LBTB				pmax	pmax		
	comp=Z,17nm,0.9s						
LBTB	**Lobatse**	**74.11**	**241**	P	**P**	**14 36 46.0**	**-0.5**
LBTB				IAmb	IAmb	14 36 55.7	
	comp=Z,17nm,0.8s						
KLNR	**Kaliningrad**	**74.70**	**325**	⇓*e*P	**P**	**14 36 50.4**	**+1.3**
KLNR				pmax	pmax		
	comp=Z,125nm,0.8s						
VYHS	**Vyhne**	**74.76**	**318**	*e*P	**P**	**14 36 48.5**	**-1.2**
VYHS				pmax	pmax		
	comp=Z,40nm,1.8s						
VYHS	**Vyhne**	**74.76**	**318**	*e*P	**P**	**14 36 48.5**	**-1.2**
OKC	**Ostrava-Krasne**	**75.35**	**319**	*e*pP	pP	14 36 59.1	+1.3
OKC	**Ostrava-Krasne**	**75.35**	**319**	*e*P	P	14 36 59.1	+6.1
BOSA	**Boshof**	**75.43**	**238**	P	**P**	**14 36 54.9**	**+0.8**
	comp=Z,8.3nm,0.8s,baz=86,slow=4.4,SNR=12						
BOSA	**Boshof**	**75.43**	**238**	P	**P**	**14 36 54.7**	**+0.6**
BOSA				pmax	pmax		
	comp=Z,20nm,1.0s						
BOSA	**Boshof**	**75.43**	**238**	P	**P**	**14 36 54.7**	**+0.6**
BOSA				IAmb	IAmb	14 37 02.9	
	comp=Z,20nm,1.0s						
JAVC	**Velka Javorina**	**75.56**	**318**	*e*P	**P**	**14 36 54.1**	**-0.3**
TIP	**Timpagrande**	**75.61**	**308**	⇓P	**P**	**14 36 54.3**	**-0.6**
TIP	**Timpagrande**	**75.61**	**308**	P	**P**	**14 36 53.1**	**-1.7**
ARCES	**ARCESS Array B**	**75.67**	**340**	P	**P**	**14 36 53.4**	**-1.2**
	comp=Z,10nm,0.9s,baz=97,slow=6.6,SNR=15						
MORC	**Moravsky Berou**	**75.73**	**319**	⇑P	**P**	**14 36 53.6**	**-1.7**
MORC	**Moravsky Berou**	**75.73**	**319**	P	**P**	**14 36 53.6**	**-1.7**
MORC	**Moravsky Berou**	**75.73**	**319**	*e*P	**P**	**14 36 54.7**	**-0.6**
MODS	**Modra-Piesok**	**75.78**	**318**	*e*P	**P**	**14 36 54.7**	**-0.9**
MODS				pmax	pmax		
	comp=Z,22nm,1.3s						
MODS	**Modra-Piesok**	**75.78**	**318**	*e*P	**P**	**14 36 54.7**	**-0.9**
KRLC	**Kraliky**	**76.25**	**320**	*e*P	**P**	**14 36 58.6**	**+0.3**
KRLC	**Kraliky**	**76.25**	**320**	*e*P	**P**	**14 36 58.6**	**+0.3**
BILL	**Bilibino**	**76.44**	**22**	⇑*e*P	**P**	**14 36 59.0**	**+0.1**
BILL				*e*		14 39 54.1	
BILL				*e*S	**PnS**	**14 47 26.3**	**+4.4**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BILL				MLR	MLR		
	comp=Z,3µm,17.0s						
DPC	**Dobruska-Polom**	**76.56**	**320**	*e*P	**P**	**14 37 00.0**	**-0.1**
DPC	**Dobruska-Polom**	**76.56**	**320**	*e*P	**P**	**14 37 00.0**	**-0.1**
KSP	**Ksiaz**	**76.62**	**320**	P	**P**	**14 37 00.6**	**+0.3**
CONA	**Conrad Observa**	**76.69**	**317**	*e*P	**P**	**14 37 00.5**	**-0.4**
	comp=Z,7.9nm,1.1s						
CHVC	**Chvalec**	**76.75**	**320**	*e*P	**P**	**14 37 01.0**	**-0.1**
CHVC				*e*pP	**sP**	**14 37 07.5**	**-0.2**
ARSA	**Arzberg**	**76.88**	**317**	*e*P	**P**	**14 37 00.1**	**-1.8**
	comp=Z,22nm,1.5s						
SOKA	**Soboth**	**77.19**	**316**	*e*pP	**P**	**14 37 03.4**	**-0.3**
	comp=Z,18nm,1.0s						
OBKA	**Obir**	**77.51**	**316**	*e*P	**P**	**14 37 04.7**	**-0.8**
	comp=Z,16nm,1.3s						
PRU	**Pruhonice**	**77.68**	**319**	*e*P	**P**	**14 37 06.1**	**-0.2**
PRU	**Pruhonice**	**77.68**	**319**	*e*P	**P**	**14 37 06.1**	**-0.2**
MOA	**Molln**	**77.76**	**317**	*e*P	**P**	**14 37 06.3**	**-0.5**
	comp=Z,14nm,1.1s						
BRG	**Berggiesshubel**	**78.11**	**320**	*e*P	**P**	**14 37 08.1**	**-0.6**
	comp=Z,4.7nm,1.0s						
BRG				*e*		14 37 13.1	
	comp=Z,12nm,1.0s						
BRG	**Berggiesshubel**	**78.11**	**320**	*e*P	**P**	**14 37 08.1**	**-0.6**
BRG				*e*		14 37 13.1	
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,13nm,1.0s						
MYKA	**Terra Mystica**	**78.14**	**316**	P	**P**	**14 37 08.2**	**-0.9**
	comp=Z,5.0nm,0.6s						
MAW	**Mawson**	**78.15**	**192**	P	**P**	**14 37 10.1**	**+1.8**
	comp=Z,4.2nm,0.7s,baz=50,slow=3.8,SNR=11						
MAW	**Mawson**	**78.15**	**192**	IAmb	IAmb	14 37 16.6	
	comp=Z,3.9nm,1.2s						
GEC2	**GERESS Array S**	**78.18**	**318**	*e*P	**P**	**14 37 08.6**	**-0.6**
	comp=Z,23nm,1.1s,baz=91,slow=5.4						
GEC2	**GERESS Array S**	**78.18**	**318**	IAmb	IAmb	14 37 16.8	
	comp=Z,19nm,1.0s						
GERES	**GERESS Array B**	**78.18**	**318**	P	**P**	**14 37 08.5**	**-0.7**

	comp=Z,6.0nm,0.7s,baz=76,slow=5.6,SNR=22						
KHC	Kasperske Hory	78.27	319	eP	P	14 37 08.6	-1.0
KHC				epP	pP	14 37 14.0	-0.4
KHC	Kasperske Hory	78.27	319⇓	eP	P	14 37 09.2	-0.4
KHC				pmax	pmax		
	comp=Z,19nm,1.5s						
KBA	Koelnbreinsper	78.36	316	eP	P	14 37 08.8	-1.6
	comp=Z,22nm,1.2s						
CLL	Collm	78.72	321	eP	P	14 37 11.0	-1.0
	comp=Z,18nm,1.4s						
CLL	Collm	78.72	321	eP	P	14 37 11.0	-1.0
CLL				pmax	pmax		
	comp=Z,18nm,1.4s						
WET	Wettzell	78.73	319	eP	P	14 37 11.9	-0.2
	comp=Z,19nm,1.2s,baz=91,slow=5.4						
WET	Wettzell	78.73	319	P	P	14 37 13.2	+1.0
ABTA	Abfaltersbach	78.92	316	eP	P	14 37 11.9	-1.5
	comp=Z,13nm,1.1s						
GUNZ	Gunzen	79.12	320	eP	P	14 37 14.0	-0.2
	comp=Z,17nm,1.3s,baz=91,slow=5.4						
ROTZ	Rotzenmuhle	79.18	319	eP	P	14 37 14.4	-0.1
	comp=Z,24nm,1.2s,baz=91,slow=5.4						
MANZ	Manzenberg	79.25	319	eP	P	14 37 15.2	+0.2
	baz=91,slow=5.4						
WTTA	Wattenberg	79.53	317	P	P	14 37 15.9	-0.9
	comp=Z,16nm,0.7s						
WATA	Walderalm	79.57	317	eP	P	14 37 15.8	-1.1
	comp=Z,11nm,0.7s						
MOX	Moxa	79.58	320	eP	P	14 37 16.4	-0.3
	comp=Z,13nm,1.1s,baz=91,slow=5.4						
SQTA	Sankt Quirin	79.82	317	i P	P	14 37 16.7	-1.5
	comp=Z,8.0nm,0.6s						
GRF	Grafenberg Arr	79.82	319	eP	P	14 37 17.9	-0.2
	baz=91,slow=5.4						
NC405	NORSAR Array S	79.88	331	P	P	14 37 16.9	-1.3
NC405				IAmb	IAmb	14 37 28.7	
	comp=Z,54nm,1.1s						
MOTA	Moosalm	79.89	317	eP	P	14 37 17.7	-1.0
	comp=Z,26nm,1.1s						
NORES	NORESS Array B	79.95	330	P	P	14 37 16.3	-2.2
NORES				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NB2	NORSAR Subarra	80.12	331	P	P	14 37 18.2	-1.3
	comp=Z,17nm,1.0s,baz=90,slow=5.3						
NB2	NORSAR Subarra	80.12	331	P	P	14 37 18.2	-1.3
	baz=90,slow=5.3						
NOA	NORSAR Array B	80.12	331	P	P	14 37 18.3	-1.2
	comp=Z,9.4nm,0.9s,baz=94,slow=5.3,SNR=13						
RETA	Reutte	80.12	317	eP	P	14 37 18.6	-1.3
	comp=Z,9.2nm,0.7s						
FETA	Feichten	80.15	316	eP	P	14 37 18.5	-1.6
	comp=Z,19nm,1.1s						
BSEG	Bad Segeberg	80.42	323	eP	P	14 37 21.2	0.0
	comp=Z,30nm,1.1s,baz=91,slow=5.4						
DAVA	Damuels	80.72	317	eP	P	14 37 21.8	-1.4
	comp=Z,12nm,0.7s						
RETH	Rethem/Aller,	80.99	322	eP	P	14 37 24.0	-0.2
	comp=Z,32nm,1.2s,baz=91,slow=5.4						
KEST	Kesra	81.53	305	P	P	14 37 26.7	-1.0
	comp=Z,3.5nm,0.6s,baz=341,slow=5.0,SNR=5.0						
BNI	Bardonecchia	83.03	314	P	P	14 37 38.5	+3.1
SYO	Syowa Base	85.04	197⇓	ePcP	PcP	14 37 48.0	0.0
SYO	Syowa Base	85.04	197⇑	esP	sP	14 37 50.6	-0.7
GAMB	Gambell	85.17	26	P	P	14 37 44.9	-0.7
GAMB				IAmb	IAmb	14 37 56.2	
	comp=Z,11nm,0.8s						
NOR	Nord	85.66	352	i P	P	14 37 46.0	-1.8
NOR	Nord	85.66	352	i P	P	14 37 46.0	-1.8
DAG	Danmarks Havn	87.89	348	i P	P	14 37 57.0	-1.7
DAG	Danmarks Havn	87.89	348	i P	P	14 37 57.0	-1.7
EKA	Eskdalemuir Ar	88.10	325	P	P	14 37 59.8	-0.3
EKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TOA0	Torodi Ar. Sit	90.76	283	P	P	14 38 11.7	-1.8
TOA0				IAmb	IAmb	14 38 22.5	
	comp=Z,11nm,1.4s						
TORD	Torodi Ar. Bea	90.76	283	P	P	14 38 13.6	+0.2
	comp=Z,2.8nm,0.8s,baz=93,slow=4.7,SNR=11						
TORD				PP	PP	14 41 48.3	-0.9
	comp=Z,0.7nm,0.7s,baz=23,slow=2.8,SNR=3.4						
TORD	Torodi Ar. Bea	90.76	283	P	P	14 38 11.4	-2.1
ESDC	Sonseca Array	91.53	310	P	P	14 38 15.9	-0.7
	comp=Z,2.1nm,0.6s,baz=57,slow=4.6,SNR=3.1						
IMAR	Indian Mountai	91.98	22	P	P	14 38 18.3	+0.2
TOLK	Toolik Lake Re	92.32	19	P	P	14 38 20.3	+0.7
TOLK				IAmb	IAmb	14 38 30.2	
	comp=Z,18nm,0.9s						
VNDA	Vanda	92.52	168	P	P	14 38 21.4	+1.2
	comp=Z,0.9nm,0.7s,baz=94,slow=12,SNR=2.2						
VNDA	Vanda	92.52	168	P	P	14 38 20.8	+0.5
VNDA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
VNDA	Vanda	92.52	168	P	P	14 38 20.8	+0.5
COLD	Coldfoot	92.74	21	P	P	14 38 21.9	+0.3
MLY	Manley	93.52	23	P	P	14 38 25.8	+0.5
MLY				IAmb	IAmb	14 38 32.6	
	comp=Z,5.7nm,0.9s						
BPAW	Bear Paw Mtn.	93.83	24	P	P	14 38 27.7	+1.0
PPLA	Purkeypile	93.85	25	P	P	14 38 26.7	-0.3
PPLA				IAmb	IAmb	14 38 36.5	
	comp=Z,9.6nm,0.8s						
SKT	Skwentna	94.51	26	P	P	14 38 29.2	-0.6
BMAR	Burnt Mountain	94.55	19	P	P	14 38 30.3	+0.3
SUMG	Summit	94.56	347	i P	P	14 38 33.0	+2.7
SUMG	Summit	94.56	347	i P	P	14 38 33.0	+2.7
RND	Reindeer	94.99	24	P	P	14 38 32.8	+0.7
RND				pmax	pmax		
	comp=Z,22nm,1.4s						
RND	Reindeer	94.99	24	P	P	14 38 32.8	+0.7
RND				IAmb	IAmb	14 38 40.0	
	comp=Z,22nm,1.4s						
SUA	Susitna One	95.07	26	P	P	14 38 32.7	+0.1
ILAR	Eielson Array	95.09	22	P	P	14 38 31.9	-0.5
	comp=Z,1.0nm,0.8s,baz=292,slow=4.2,SNR=10.0						
ILAR				PP	PP	14 42 23.9	+2.3
	comp=Z,0.8nm,0.8s,baz=300,slow=6.5,SNR=5.0						
ILAR				PKKP	PKKPbc	14 55 31.2	+1.8
	comp=Z,0.4nm,0.8s,baz=79,slow=1.0,SNR=4.2						
ILAR	Eielson Array	95.09	22	P	P	14 38 32.0	-0.5
ILAR	Eielson Array	95.09	22	P	P	14 38 32.0	-0.5
RC01	Rabbit Creek A	95.67	26	P	P	14 38 33.9	-1.2
BRLK	Bradley Lake	95.74	27	P	P	14 38 34.9	-0.7
SML	Sawmill	95.94	25	P	P	14 38 35.8	-0.7
INK	Inuvik	97.36	16	P	P	14 38 42.2	-0.4
	comp=Z,4.7nm,1.2s,baz=324,slow=6.1,SNR=5.1						
INK	Inuvik	97.36	16	P	P	14 38 41.7	-0.9
INK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
INK	Inuvik	97.36	16	P	P	14 38 41.7	-0.9
INK				IAmb	IAmb	14 38 50.7	
	comp=Z,9.7nm,1.2s						
RES	Resolute Bay	97.81	2	P	P	14 38 43.9	-0.6
	comp=Z,4.2nm,0.9s,baz=4.2,slow=2.4						
RES	Resolute Bay	97.81	2	P	P	14 38 44.1	-0.4
RES				IAmb	IAmb	14 38 52.9	
	comp=Z,6.5nm,0.8s						
BCAR	Beaver Creek A	97.91	22	P	P	14 38 44.6	-0.7
DAWY	Dawson	98.21	21	P	Pdif	14 38 46.7	0.0
DAWY				IAmb	IAmb	14 38 58.3	
	comp=Z,10nm,1.4s						
YKA	Yellowknife Ar	106.80	14	PP	PP	14 43 49.7	-0.2
	comp=Z,1.5nm,0.9s,baz=330,slow=7.6,SNR=5.7						
YKA				PKKPbc	PKKPbc	14 54 52.9	-2.7
	comp=Z,0.2nm,0.5s,baz=151,slow=4.0,SNR=3.0						
YKA				PKKP	PKKPdf	14 55 07.3	0.0
	comp=Z,0.3nm,0.4s,baz=143,slow=4.4,SNR=4.3						
ULM	Lac du Bonnet	121.86	8	PKP	PKPdf	14 44 02.8	-1.1
	comp=Z,3.9nm,0.7s,baz=301,slow=0.2,SNR=4.6						
ELK	Elko	124.90	27	PKP	PKPdf	14 44 10.4	0.0
	comp=Z,0.8nm,0.7s,baz=285,slow=1.6,SNR=2.7						
NVAR	Mina Array Bea	125.23	31	PKP	PKiKP	14 44 11.3	-0.1
	comp=Z,1.0nm,0.7s,baz=4.0,slow=2.6,SNR=4.0						
NVAR	Mina Array Bea	125.23	31		PKiKP	14 44 12.4	+0.9
PDAR	Pinedale Array	125.52	21	PKP	PKPdf	14 44 11.1	-0.4
	comp=Z,1.1nm,0.7s,baz=224,slow=12,SNR=4.8						
PDAR	Pinedale Array	125.52	21		PKPdf	14 44 11.4	-0.1
ANMO	Albuquerque	133.52	24	PKP	PKPdf	14 44 27.2	+0.3
	comp=Z,0.8nm,0.6s,baz=271,slow=6.3,SNR=1.7						
TXAR	Lajitas Array	139.57	24	PKP	PKPdf	14 44 36.7	-1.4
	comp=Z,0.9nm,0.7s,baz=46,slow=0.2,SNR=6.0						
TXAR				PP	PP	14 47 32.8	+1.3
	comp=Z,0.5nm,1.0s,baz=43,slow=17,SNR=2.7						
TXAR	Lajitas Array	139.57	24		PP	14 47 32.8	+1.3
BDFB	Brasilia	142.16	254	PKhKP	PKPpre	14 44 39.5	
	comp=Z,3.2nm,0.6s,baz=82,slow=8.0,SNR=3.6						
PLCA	Paso Flores	144.19	200	PKP	PKPbc	14 44 45.0	+0.9
	comp=Z,6.9nm,0.8s,baz=96,slow=1.8,SNR=10.0						
PLCA	Paso Flores	144.19	200	PKIKP	PKPdf	14 44 45.7	-0.3
PLCA	Paso Flores	144.19	200		PKPdf	14 44 45.7	-0.3
GO06	Curarrehue	145.53	200		PKPdf	14 44 47.8	-0.6
CPUP	Villa Florida	147.07	232	PKPbc	PKPbc	14 44 53.0	-0.3
	comp=Z,7.7nm,0.7s,baz=113,slow=2.5,SNR=12						
CPUP	Villa Florida	147.07	232	PKP2	PKPbc	14 44 52.5	-0.8
CPUP	Villa Florida	147.07	232		PKPbc	14 44 52.5	-0.8
CBYP	Canovanas	147.74	323		PKiKP	14 44 57.1	-0.4
LPAZ	La Paz	160.64	241	PKP	PKPdf	14 45 11.8	+0.5
	comp=Z,1.8nm,0.8s,baz=186,slow=3.6,SNR=2.3						

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*IDC **21** 14:26:41.5±3.5, 7°.11N×94°.44E, h0^{km}, mb4.5/13, mb1 4.6/13, mb1mx4.2/57, mbtmp4.5/13, MS5.1/2, Ms1 5.1/2, ms1mx4.1/51, Error ellipse: s-maj=77.2km s-min=50.1km az=155.0*

*NEIC **21** 14:26:44.1±1.6, 7°.3N±0°.1×94°.31E±0°.10, h10^{km}±1^{km}, mb4.8/13, Error ellipse: s-maj=21.0km s-min=12.8km az=218.0*

ISC 21 14:26:46.3±0.6**, 7°.28N**±0°.10×**94°.28E**±0°.08**, h26**^{km}**, n37, σ1^s.13**/33**, mb4.7**/18**, 2C, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPSI	Rantau Prapat	6.49	134	Pn	Pn	14 28 19.9	-0.3
KULM	Kulim	6.63	107	Pn	Pn	14 28 21.9	-0.2
BKNI	Bangkinang	9.65	135	Pn	Pn	14 29 03.7	+0.1
CHTO	Chiang Mai	12.33	21	Pn	Pn	14 29 40.9	+0.6
PALK	Pallekele	13.47	271	Pn	Pn	14 29 53.4	-2.6
DLV	T Lat	14.75	71	P	P	14 30 17.6	-1.7
SBUM	Sibu	18.50	104	P	P	14 30 59.7	-1.0
TPUB	Ta-pu	29.91	55	P	P	14 32 51.0	-1.3
NIL	Nilore	32.67	326	P	P	14 33 16.3	-0.3
KBL	Kabul	35.73	323	P	P	14 33 42.6	-0.7
KBL				IAmb	IAmb	14 33 51.3	
	comp=Z,11nm,1.1s						
SIJI	Sorong	37.77	101	LR	LR	14 51 42.7	
	comp=Z,1μm,19.2s,baz=224,slow=40						
AAK	Ala-Archa	39.31	337	P	P	14 34 16.0	+2.6
	comp=Z,15nm,1.1s,baz=124,slow=12,SNR=5.8						
AAK	Ala-Archa	39.31	337	P	P	14 34 13.7	+0.3
AAK				IAmb	IAmb	14 34 17.8	
	comp=Z,34nm,1.2s						
MKAR	Makanchi Array	40.70	347	P	P	14 34 24.6	-0.1
	comp=Z,9.8nm,0.7s,baz=166,slow=8.3,SNR=3.9						
MAKZ	Makanchi	40.78	347	P	P	14 34 23.5	-1.9
MAKZ				IAmb	IAmb	14 34 34.7	
	comp=Z,22nm,1.4s						
KNRA	Kununurra	41.06	124	P	P	14 34 29.6	+1.5
SONM	Songino Array	41.71	12	P	P	14 34 33.1	0.0
	comp=Z,1.6nm,0.7s,baz=183,slow=7.9,SNR=2.1						
GEYT	Alibeck	44.74	318	P	P	14 34 59.1	+1.4
	comp=Z,8.6nm,0.6s,baz=146,slow=8.0,SNR=3.2						
GEYT				LR	LR	14 55 07.2	
	comp=Z,4μm,18.1s,baz=335,slow=38						
KURBB	Kurchatov Arra	45.16	346	P	P	14 35 01.1	+0.4
	comp=Z,11nm,0.8s,baz=165,slow=7.3,SNR=4.5						
KURK	Kurchatov	45.22	346	P	P	14 35 01.1	-0.1
KURK	Kurchatov	45.22	346	IAmb	IAmb	14 35 04.7	
	comp=Z,27nm,1.2s						
ZALV	Zalesovo Beam	47.16	352	P	P	14 35 15.8	-0.7
	comp=Z,12nm,0.7s,baz=180,slow=7.3,SNR=2.8						
MJAR	Matsushiro Arr	49.46	47	P	P	14 35 34.5	0.0
RAYN	Ar Rayn	49.46	295	P	P	14 35 34.7	-0.1
RAYN				IAmb	IAmb	14 35 45.6	
	comp=Z,8.1nm,0.8s						
BR131	Keskin Array S	62.92	311	P	P	14 37 10.7	-0.1
BR131				IAmb	IAmb	14 37 12.0	
	comp=Z,3.2nm,0.8s						
BRTR	Keskin Array B	62.92	311	P	P	14 37 10.7	-0.2
	comp=Z,2.0nm,0.7s,baz=132,slow=6.5,SNR=1.8						
BRTR	Keskin Array B	62.92	311	P	P	14 37 09.6	-1.3
TIXI	Tiksi	67.79	11	P	P	14 37 42.1	+0.6
TIXI				IAmb	IAmb	14 37 44.7	
	comp=Z,12nm,1.1s						
AKASG	Malin Array Be	68.71	322	P	P	14 37 47.0	-0.6
	comp=Z,0.3nm,0.3s,baz=91,slow=4.8,SNR=1.6						
AKASG	Malin Array Be	68.71	322	IAmb	IAmb	14 37 48.9	
	comp=Z,1.2nm,1.1s						
FINES	FINESS Array B	73.30	332	P	P	14 38 16.0	+0.6
	comp=Z,7.5nm,0.7s,baz=108,slow=4.5,SNR=2.5						
ARCES	ARCESS Array B	75.87	340	P	P	14 38 31.2	+1.1
	comp=Z,5.2nm,0.8s,baz=78,slow=4.7,SNR=2.2						
GERES	GERESS Array B	78.36	318	P	P	14 38 46.3	+1.6
	comp=Z,1.7nm,0.6s,baz=72,slow=6.3,SNR=1.6						
NOA	NORSAR Array B	80.32	331	P	P	14 38 55.5	+0.5
	comp=Z,3.2nm,0.7s,baz=93,slow=5.5,SNR=3.7						
SYO	Syowa Base	84.88	197⇑	ePcP	PcP	14 39 23.6	+1.9
SYO	Syowa Base	84.88	197⇑	esP	sP	14 39 26.4	-2.5
ILAR	Eielson Array	95.24	22	P	P	14 40 07.9	+0.3
	comp=Z,0.7nm,0.8s,baz=283,slow=5.2,SNR=3.1						

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*NEIC **21** 14:28:04.5±2.4, 7°.4N±0°.1×94°.03E±0°.10, h10^{km}±1^{km}, mb4.8/7, Error ellipse: s-maj=21.3km s-min=14.4km az=205.0*

*IDC **21** 14:28:04.4±1.5, 7°.38N×93°.97E, h0^{km}, mb4.1/8, mb1 4.2/8, mb1mx3.8/58, mbtmp4.1/8, Error ellipse: s-maj=77.3km s-min=22.3km az=52.0*

ISC 21 14:28:06.8±0.6**, 7°.51N**±0°.07×**94°.12E**±0°.09**, h20**^{km}**, n20, σ1^s.57**/19**, mb4.2**/11**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.53	201	eP	Pn	14 28 20.9	+1.7
CMBY				eS	Sn	14 28 28.1	+0.5
MYKOM	Kota Tinggi	11.24	120	Pn	Pn	14 30 44.8	-1.7
CM31	Chiang Mai Arr	11.85	23	Pn	Pn	14 30 56.4	+1.5
CHTO	Chiang Mai	12.18	22	Pn	Pn	14 30 58.2	-1.1
PALK	Pallekele	13.30	270	Pn	Pn	14 31 11.7	-3.0
YULB	Yu-li	30.50	56	P	P	14 34 18.2	-0.6
YULB				IAmb	IAmb	14 34 27.6	
	comp=Z,22nm,1.1s						
NACB	Ninganchiao	31.10	55	P	P	14 34 22.9	-1.2
KBL	Kabul	35.45	323	P	P	14 35 01.4	-0.7
KBL				IAmb	IAmb	14 35 06.4	
	comp=Z,10nm,1.1s						
MKAR	Makanchi Array	40.44	347	P	P	14 35 45.5	+1.6
	comp=Z,2.5nm,0.7s,baz=163,slow=7.2,SNR=1.9						
GEYT	Alibeck	44.46	318	P	P	14 36 19.2	+2.5
	comp=Z,3.5nm,0.7s,baz=246,slow=6.1,SNR=1.9						
GEYT	Alibeck	44.46	318	IAmb	IAmb	14 36 22.1	
	comp=Z,3.1nm,0.8s						
KURBB	Kurchatov Arra	44.89	346	P	P	14 36 20.4	+0.5
	comp=Z,2.3nm,0.7s,baz=165,slow=7.0,SNR=1.9						
KURK	Kurchatov	44.96	346	P	P	14 36 20.4	0.0
KURK	Kurchatov	44.96	346	IAmb	IAmb	14 36 23.3	
	comp=Z,5.0nm,0.8s						
ZALV	Zalesovo Beam	46.91	352	P	P	14 36 37.8	+2.0
	comp=Z,1.8nm,0.3s,baz=183,slow=8.3,SNR=1.6						
WRA	Warramunga Arr	48.07	125	P	P	14 36 46.0	+0.6
	comp=Z,1.0nm,0.9s,baz=306,slow=8.5,SNR=1.1						
WRAB	Tennant Creek	48.07	125	P	P	14 36 44.0	-1.4
WRAB				IAmb	IAmb	14 36 46.4	
	comp=Z,17nm,1.5s						
BVAR	Borovoye Array	49.33	341	P	P	14 36 55.2	+0.7
	comp=Z,1.7nm,0.6s,baz=189,slow=5.5,SNR=2.0						
ASAR	Alice Springs	49.70	130	P	P	14 36 59.4	+1.5
	comp=Z,2.3nm,0.8s,baz=294,slow=7.0,SNR=2.8						
BRTR	Keskin Array B	62.65	311	P	P	14 38 29.7	-0.6
	comp=Z,0.7nm,0.6s,baz=133,slow=6.8,SNR=1.3						

LJU 21 14:35:26.7, 45°.46N×14°.34E, h8^{km}, ML1.0, 1C-1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDS	Knezji Dol	0.07	26⇓	iPg	Pg	14 35 28.4	-0.3
KNDS				i Sg	Sg	14 35 29.9	-0.3
	comp=Z,42nm,0.1s						
SKDS	Skadanscina	0.24	290⇑	iPg	Pg	14 35 31.3	-0.2
SKDS				i Sg	Sg	14 35 35.4	+0.6
	comp=Z,9.0nm,0.1s						
CEY	Cerknica	0.28	13	ePg	Pg	14 35 31.9	-0.4
CEY				i Sg	Sg	14 35 36.6	+0.5
	comp=Z,4.0nm,0.1s						
GBRS	Gornja Briga	0.34	78	i Pg	Pg	14 35 33.6	+0.3
GBRS				eSg	Sg	14 35 39.1	+1.2
	comp=Z,17nm,0.1s						
JAVS	Javornik	0.47	336	eSg	Sg	14 35 43.1	+1.0
GBAS	Gorenja Brezov	0.48	9	ePg	Pg	14 35 35.8	-0.1
GBAS				eSg	Sg	14 35 43.0	+0.8
	comp=Z,2.0nm,0.1s						
VISS	Visnje	0.49	46	i Sg	Sg	14 35 43.4	+0.8
	comp=Z,1.0nm,0.1s						

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*BJI **21** 14:35:59.5±0.0, 6°.94N×94°.10E, h10^{km}, mB5.0/2, mb4.5/40, Ms5.3/6, Ms7 5.1/6*

*MOS **21** 14:36:04.8±1.2, 7°.58N×94°.44E, h12^{km}, mb4.8/24, Error ellipse: s-maj=11.2km s-min=6.2km az=109.6*

*IDC **21** 14:36:04.5±0.5, 7°.62N×94°.47E, h0^{km}, mb4.3/27, mb1 4.3/29, mb1mx4.2/59, mbtmp4.3/29, ML3.7/2, Error ellipse: s-maj=18.5km s-min=12.5km az=55.0*

*NEIC **21** 14:36:05.0±2.1, 7°.51N±0°.08×94°.46E±0°.08, h10^{km}±1^{km}, mb4.7/24, Error ellipse: s-maj=15.2km s-min=12.3km az=229.0*

*NDI **21** 14:36:06.6±0.4, 7°.18N×94°.51E, h0^{km}±999^{km}, ML4.1, mb4.7(NEIC)*

*DJA **21** 14:36:07.0±0.4, 8°N±4°×9°4E±°, h10^{km}, M4.7/10, mb4.5/10, MLv4.7/5*

*KLM **21** 14:36:12.0, 7°.49N×94°.82E, h10^{km}, mb4.8*

ISC 21 14:36:08.5±0.3**, 7°.49N**±0°.05×**94°.30E**±0°.05**, h24**^{km}**, n165, σ1^s.93**/166**, mb4.6**/60**, 13C-14D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.60	218	eP	Pb	14 36 18.4	-2.0
CMBY				eS	Sb	14 36 27.1	-1.5
CMBY				IAML		14 36 34.3	
	comp=E,68μm,0.5s						
CMBY				IAML		14 36 35.1	
	comp=N,60μm,0.5s						
LHMI	Lhok Sumawe	3.46	130		Pn	14 36 58.2	-2.7
MLSI	Meulaboh, Aceh	3.83	147	P	Pn	14 37 08.7	+2.8
PBA	Port Blair	4.42	340	eP	Pb	14 37 19.9	-5.5
PBA				IAML		14 37 37.9	
	comp=E,82nm,0.7s						
PBA				IAML		14 37 38.3	
	comp=N,82nm,0.1s						
TPTI		5.09	146	P	Pn	14 37 24.1	+0.8
	comp=N,0.2nmcomp=N,35nm,1.3s						
KCSI	Kotacane, Aceh	5.24	139	P	Pn	14 37 28.2	+2.7
	comp=N,0.7nmcomp=N,124nm,0.9s						
SNSI	Sinabang, Aceh	5.44	158	P	Pn	14 37 26.5	-1.6
DGPR	DIGLIPUR	5.81	347	eP	Pn	14 37 39.2	+6.0
DGPR				ex	x	14 37 46.1	
DGPR				ex	x	14 37 46.3	
PSI	Prapat	6.55	135	Pn	Pn	14 37 44.1	+0.6
	comp=N,0.7nm,0.3s,baz=292,slow=6.3,SNR=4.7						
RPSI	Rantau Prapat	6.62	136		Pn	14 37 45.1	+0.7
RPSI	Rantau Prapat	6.62	136		Pn	14 37 44.1	-0.3
KULM	Kulim	6.68	109		Pn	14 37 43.1	-2.1
KULM	Kulim	6.68	109	P	Pn	14 37 44.0	-1.2
IPM	Ipoh	7.33	114		Pn	14 37 50.9	-3.2
IPM	Ipoh	7.33	114	P	Pn	14 37 53.0	-1.1
MYKOM	Kota Tinggi	11.07	120		Pn	14 38 41.3	-4.2
MYKOM	Kota Tinggi	11.07	120	P	Pn	14 38 49.0	+3.5
PBKT	Sadao Pong	11.13	35		Pn	14 38 46.4	+0.1
CMAR	Chiang Mai Arr	11.80	22	Pn	Pn	14 38 56.5	+1.0
	comp=N,1.6nm,0.3s,baz=215,slow=14,SNR=9.3						
CMAR	Chiang Mai Arr	11.80	22	i P	Pn	14 38 56.5	+1.0
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
CMAR	Chiang Mai Arr	11.80	22		Pn	14 38 53.6	-1.9
CHTO	Chiang Mai	12.13	21	P	Pn	14 38 59.0	-0.9
CHTO	Chiang Mai	12.13	21		Pn	14 38 59.0	-0.9
PALK	Pallekele	13.49	270	Pn	Pn	14 39 20.1	+1.5
	comp=Z,0.7nm,0.3s,baz=52,slow=17,SNR=2.3						
MDSI	Maura Dua	15.45	140	P	Pn	14 39 46.1	+1.0
	comp=Z,16nm,1.2s						
KSM	Kuching	17.04	110	P	P	14 40 08.0	+1.0
HYB	Hyderabad	18.25	304	i P	Pn	14 40 20.0	-0.4
SBUM	Sibu	18.54	105	P	Pn	14 40 25.0	+1.1
KMI	Kunming	19.30	24	P	Pn	14 40 34.0	+0.7
KMI				sP	pP	14 40 37.8	-0.4
KMI				pmax	pmax		
	comp=Z,11nm,1.1s						
ODAN	Odare	20.35	342	eP	P	14 40 42.9	-0.7
RAMN	Ramite	20.69	340	eP	P	14 40 46.5	-0.8
	comp=Z,129nm,0.8s						
TAPN	Taplejung	20.72	343	eP	P	14 40 46.4	-1.2
	comp=Z,193nm,0.9s						
JIRN	Jiri	21.48	340	eP	P	14 40 53.8	-2.1
PKI	Pulchoki	21.68	338	eP	P	14 40 56.0	-2.0
	comp=Z,123nm,1.1s						
PKIN	Phulchoki	21.69	338	eP	P	14 40 57.5	-0.5
GUN	Gumba	21.82	340	eP	P	14 40 56.3	-3.2
	comp=Z,128nm,0.9s						
DMN	Daman	21.82	338	eP	P	14 40 59.3	-0.2
KKN	Kakani	21.92	338	eP	P	14 40 58.3	-2.2
	comp=Z,73nm,1.1s						
SPMM	Sapulut	22.21	96	P	P	14 41 07.0	+3.5
GYA	Guiyang	22.23	30⇓	iP	P	14 41 06.1	+2.4
GYA				PP	PnPn	14 41 31.6	+5.0
GYA				S	S	14 45 05.0	-2.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,110nm,4.6s						
GYA				LR	LR		
	comp=Z,2μm,13.7s						
GYA				LR	LR		
	comp=Z,2μm,11.2s						
GYA				LR	LR		
	comp=Z,3μm,13.7s						
LSA	Lhasa	22.29	353	P	P	14 41 05.3	+0.6
LSA				pmax	pmax		
	comp=Z,31nm,0.8s						
LSA	Lhasa	22.29	353	P	P	14 41 05.3	+0.6
GKN	Gorkha	22.36	337	eP	P	14 41 02.4	-2.7
	comp=Z,103nm,1.0s						
DANN	Dangsing	23.02	336	eP	P	14 41 10.4	-1.8
	comp=Z,157nm,1.0s						
CD2	Chengdu	24.93	20	P	P	14 41 28.8	-1.2
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
MPSI	Mapaga	26.49	104	P	P	14 41 43.3	-1.0
XAN	Xi'an	29.67	25	P	P	14 42 16.3	+3.8
XAN				pP	sP	14 42 20.8	-0.9
XAN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GTA	Gaotai	32.17	8	P	P	14 42 34.1	-0.5
GTA				pP	pP	14 42 40.0	-1.2
GTA				sP	pwP	14 42 42.8	-1.1
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NIL	Nilore	32.50	326	P	P	14 42 36.3	-1.2
NIL				pmax	pmax		
	comp=Z,24nm,0.7s						
NJ2	Nanjing	33.46	40	eP	P	14 42 45.4	-0.5
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
KBL	Kabul	35.57	323	P	P	14 43 06.0	+1.6
KBL				pmax	pmax		
	comp=Z,6.0nm,1.9s						
KSH	Kashi	35.89	335	P	P	14 43 08.1	+1.2
KSH				pP	pP	14 43 11.3	-2.3
KSH				PcP	PcP	14 45 34.8	+0.9
KSH				S	S	14 48 44.4	+0.7
KSH				PcS	PcS	14 49 21.1	-0.2
KSH				SS	SnSn	14 51 04.1	-3.8
KSH				pmax	pmax		
	comp=Z,52nm,1.3s						
KSH				LR	LR		
	comp=Z,3μm,9.6s						
KSH				LR	LR		
	comp=Z,1μm,12.6s						
KSH				LR	LR		
	comp=Z,5μm,12.3s						
HHC	Hu-ho-hao-te	36.61	22	eP	P	14 43 13.6	+0.5
HHC				S	S	14 49 00.8	+6.1
HHC				pmax	pmax		
	comp=Z,80nm,0.9s						
HHC				pmax	pmax		
	comp=Z,340nm,4.8s						
HHC				LR	LR		
	comp=Z,700nm,13.9s						
HHC				LR	LR		
	comp=Z,980nm,14.2s						
HHC				LR	LR		
	comp=Z,840nm,13.5s						
WMQ	Urumqi	36.65	352	eP	P	14 43 14.0	+0.7
WMQ				pmax	pmax		
	comp=Z,23nm,0.9s						

WMQ				LR	LR		
	comp=Z,2µm,13.5s						
WMQ				LR	LR		
	comp=Z,2µm,23.3s						
WMQ				LR	LR		
	comp=Z,1µm,29.1s						
WSAR	**Wadi Sarin**	**37.65**	**299**	P	**P**	**14 43 23.8**	**+1.8**
	comp=Z,2.9nm,0.7s,baz=131,slow=11,SNR=2.6						
SIJI	**Sorong**	**37.79**	**101**	P	**P**	**14 43 23.3**	**-0.1**
	comp=Z,17nm,1.0s,baz=294,slow=11,SNR=3.6						
AAK	**Ala-Archa**	**39.12**	**337**	P	**P**	**14 43 34.9**	**+0.6**
	comp=Z,6.1nm,0.9s,baz=173,slow=4.7,SNR=6.5						
AAK	**Ala-Archa**	**39.12**	**337**	⇓eP	**P**	**14 43 35.2**	**+0.9**
AAK				pmax	pmax		
	comp=Z,11nm,1.2s						
AAK	**Ala-Archa**	**39.12**	**337**	P	**P**	**14 43 33.0**	**-1.3**
MK31	**Makanchi Array**	**40.50**	**347**	P	**P**	**14 43 43.7**	**-1.8**
MK31				pmax	pmax		
	comp=Z,14nm,0.9s						
MK31	**Makanchi Array**	**40.50**	**347**	P	**P**	**14 43 43.7**	**-1.8**
MK31				IAmb	IAmb	14 43 50.3	
	comp=Z,14nm,0.9s						
MKAR	**Makanchi Array**	**40.50**	**347**	P	**P**	**14 43 43.5**	**-2.0**
	comp=Z,6.0nm,0.7s,baz=165,slow=8.2,SNR=26						
MAKZ	**Makanchi**	**40.58**	**347**	P	**P**	**14 43 44.0**	**-2.2**
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MAKZ	**Makanchi**	**40.58**	**347**	P	**P**	**14 43 44.0**	**-2.2**
MAKZ				IAmb	IAmb	14 43 50.9	
	comp=Z,9.5nm,0.7s						
KK31	**Karatay Array**	**41.17**	**333**	P	**P**	**14 43 50.0**	**-1.2**
KK31				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KK31	**Karatay Array**	**41.17**	**333**	P	**P**	**14 43 50.0**	**-1.2**
KKAR	**Karatay Array**	**41.17**	**333**	P	**P**	**14 43 50.9**	**-0.3**
KKAR	**Karatay Array**	**41.17**	**333**	P	**P**	**14 43 50.9**	**-0.3**
KKAR	**Karatay Array**	**41.17**	**333**	P	**P**	**14 43 49.9**	**-1.2**
KKAR				IAmb	IAmb	14 43 55.6	
	comp=Z,5.3nm,1.0s						
SONM	**Songino Array**	**41.50**	**12**	P	**P**	**14 43 52.5**	**-1.4**
	comp=Z,5.1nm,1.0s,baz=201,slow=7.9,SNR=6.1						
DGZ	**Jazzator, Alta**	**42.46**	**353**	⇓eP	**P**	**14 44 00.6**	**-1.2**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KSRS	**Korea Array**	**42.65**	**41**	P	**P**	**14 44 00.5**	**-2.7**
	comp=Z,0.9nm,0.9s,baz=36,slow=38,SNR=3.3						
GEYT	**Alibeck**	**44.59**	**318**	P	**P**	**14 44 18.6**	**-0.3**
	comp=Z,6.6nm,0.7s,baz=148,slow=12,SNR=8.3						
GEYT	**Alibeck**	**44.59**	**318**	P	**P**	**14 44 17.8**	**-1.2**
KURBB	**Kurchatov Arra**	**44.95**	**346**	P	**P**	**14 44 20.4**	**-1.1**
	comp=Z,9.3nm,0.6s,baz=168,slow=7.1,SNR=29						
KURK	**Kurchatov**	**45.02**	**346**	⇑iP	**P**	**14 44 21.0**	**-1.1**
KURK				pmax	pmax		
	comp=Z,22nm,1.1s						
KURK	**Kurchatov**	**45.02**	**346**	P	**P**	**14 44 20.8**	**-1.3**
ZAA0	**Zalesovo Array**	**46.96**	**352**	P	**P**	**14 44 35.2**	**-2.1**
ZALV	**Zalesovo Beam**	**46.96**	**352**	P	**P**	**14 44 36.3**	**-1.0**
	comp=Z,8.7nm,0.8s,baz=179,slow=7.9,SNR=16						
ZALV	**Zalesovo Beam**	**46.96**	**352**	P	**P**	**14 44 36.8**	**-0.5**
WB0	**Warramunga Arr**	**47.87**	**125**	P	**P**	**14 44 43.2**	**-1.8**
WB0				IAmb	IAmb	14 44 58.9	
	comp=Z,4.0nm,0.8s						
WRA	**Warramunga Arr**	**47.91**	**125**	P	**P**	**14 44 43.3**	**-2.0**
	comp=Z,1.6nm,0.6s,baz=307,slow=8.2,SNR=8.1						
WRA	**Warramunga Arr**	**47.91**	**125**	i P	**P**	**14 44 45.2**	**-0.1**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WRA	**Warramunga Arr**	**47.91**	**125**	P	P	14 44 35.9	-9.4
WRAB	**Tennant Creek**	**47.91**	**125**	P	P	14 44 35.4	-10
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WRAB	**Tennant Creek**	**47.91**	**125**	P	P	14 44 35.4	-10
WRAB				IAmb	IAmb	14 44 43.6	
	comp=Z,4.4nm,0.8s						
WB2	**Warramunga Arr**	**47.92**	**125**	P	P	14 44 36.1	-9.3
WB2				IAmb	IAmb	14 44 53.7	
	comp=Z,2.9nm,0.6s						
RAYN	**Ar Rayn**	**49.39**	**295**	P	**P**	**14 44 55.9**	**-0.8**
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
RAYN	**Ar Rayn**	**49.39**	**295**	P	**P**	**14 44 55.9**	**-0.8**
RAYN				IAmb	IAmb	14 45 09.9	
	comp=Z,5.7nm,0.8s						
BVAR	**Borovoye Array**	**49.40**	**341**	P	**P**	**14 44 54.6**	**-1.7**
	comp=Z,2.5nm,0.7s,baz=140,slow=7.7,SNR=13						
BVAR				PcP	**PcP**	**14 46 18.5**	**+0.1**
	comp=Z,1.7nm,0.9s,baz=152,slow=7.5,SNR=1.5						
BRVK	**Borovoye**	**49.46**	**341**	⇓iP	**P**	**14 44 55.3**	**-1.4**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRVK	**Borovoye**	**49.46**	**341**	P	**P**	**14 44 55.2**	**-1.5**
BRVK				IAmb	IAmb	14 45 01.6	
	comp=Z,9.3nm,0.9s						
ASAR	**Alice Springs**	**49.55**	**130**	P	**P**	**14 44 55.8**	**-2.0**
	comp=Z,0.8nm,0.7s,baz=299,slow=8.0,SNR=7.6						
ASAR	**Alice Springs**	**49.55**	**130**	P	**P**	**14 44 55.5**	**-2.3**
ASAR	**Alice Springs**	**49.55**	**130**	P	**P**	**14 44 55.5**	**-2.3**
ABKAR	**Akbulak array**	**50.64**	**331**	P	**P**	**14 45 04.5**	**-1.3**
ABKAR	**Akbulak array**	**50.64**	**331**	P	**P**	**14 45 04.9**	**-0.8**
ABKAR				IAmb	IAmb	14 45 10.9	
	comp=Z,8.3nm,0.9s						
SVE	**Sverdlovsk**	**55.81**	**338**	eP	**P**	**14 45 43.2**	**-0.4**
SVE				pmax	pmax		
	comp=Z,33nm,1.0s						
ARU	**Arti**	**56.30**	**337**	P	**P**	**14 45 45.8**	**-1.3**
ARU						14 47 50.3	
ARU				S	**S**	**14 53 37.8**	**+2.0**
KBZ	**Khabaz**	**57.48**	**318**	P	**P**	**14 45 56.1**	**+0.4**
	comp=Z,4.0nm,1.0s,baz=254,slow=1.7,SNR=4.0						
KBZ	**Khabaz**	**57.48**	**318**	⇓eP	**P**	**14 45 55.4**	**-0.3**
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KMBO	**Kilima Mbogo**	**57.54**	**264**	P	**P**	**14 45 58.0**	**+1.1**
	comp=Z,1.8nm,0.4s,baz=62,slow=12,SNR=4.3						
KMBO	**Kilima Mbogo**	**57.54**	**264**	P	**P**	**14 45 58.0**	**+1.1**
KMBO				pmax	pmax		
	comp=Z,9.0nm,1.4s						
KMBO	**Kilima Mbogo**	**57.54**	**264**	IAmb	IAmb	14 46 05.1	
	comp=Z,9.5nm,1.4s						
KIV	**Kislovodsk**	**57.71**	**318**	eP	**P**	**14 45 57.0**	**-0.5**
KIV				pmax	pmax		
	comp=Z,28nm,1.1s						
STKA	**Stephens Creek**	**59.73**	**134**	P	**P**	**14 46 12.4**	**+0.8**
	comp=Z,1.9nm,0.8s,baz=270,slow=11,SNR=3.4						
YAK	**Yakutsk**	**60.31**	**18**	P	**P**	**14 46 13.8**	**-1.3**
	comp=Z,1.8nm,0.3s,baz=138,slow=3.7,SNR=4.4						
YAK	**Yakutsk**	**60.31**	**18**	⇑eP	**P**	**14 46 13.7**	**-1.3**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
NRIK	**Noril'sk**	**61.93**	**357**	P	**P**	**14 46 24.0**	**-1.9**
	comp=Z,1.9nm,0.7s,baz=170,slow=6.6,SNR=4.8						
NRIK	**Noril'sk**	**61.93**	**357**	⇑eP	**P**	**14 46 24.6**	**-1.3**
NRIK				pmax	pmax		
	comp=Z,8.0nm,2.1s						
VSR	**Storozhevoye**	**62.79**	**325**	⇓eP	**P**	**14 46 33.2**	**+1.2**
VSR				pmax	pmax		
	comp=Z,12nm,1.0s						
BRTR	**Keskin Array B**	**62.80**	**311**	P	**P**	**14 46 29.8**	**-2.7**
	comp=Z,1.0nm,0.7s,baz=133,slow=7.5,SNR=2.4						
BRTR	**Keskin Array B**	**62.80**	**311**	i P	**P**	**14 46 33.5**	**+1.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PRGR	**Permogore**	**64.76**	**337**	eP	**P**	**14 46 47.5**	**+2.8**
PRGR				pmax	pmax		
	comp=Z,30nm,0.9s						
OBN	**Obninsk**	**65.79**	**328**	⇓eP	**P**	**14 46 53.3**	**+1.8**
OBN				e		14 47 21.8	
OBN				e		14 49 15.4	
OBN				eS	**S**	**14 55 33.8**	**-2.8**
OBN				pmax	pmax		
	comp=Z,12nm,0.6s						
KLMR	**Klimovskoe**	**66.87**	**334**	eP	**P**	**14 46 59.7**	**+1.4**
KLMR				pmax	pmax		
	comp=Z,63nm,2.5s						
KLMR	**Klimovskoe**	**66.87**	**334**	eP	**P**	**14 46 59.8**	**+1.4**
KLMR				AMP		14 47 02.4	
	comp=Z,63nm,2.5s						
TIXI	**Tiksi**	**67.58**	**11**	P	**P**	**14 47 00.8**	**-1.8**
	comp=Z,3.0nm,0.5s,baz=218,slow=4.3,SNR=9.1						
TIXI	**Tiksi**	**67.58**	**11**	⇑eP	**P**	**14 47 00.9**	**-1.8**
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
TIXI	**Tiksi**	**67.58**	**11**	P	**P**	**14 47 00.9**	**-1.8**
CFR	**Carcaliu**	**67.98**	**316**	⇑P	**P**	**14 47 08.0**	**+2.3**
CFR	**Carcaliu**	**67.98**	**316**	⇑P	**P**	**14 47 08.0**	**+2.3**
AKASG	**Malin Array Be**	**68.55**	**322**	P	**P**	**14 47 09.7**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=85,slow=5.3,SNR=5.1						
AKASG	**Malin Array Be**	**68.55**	**322**	i P	**P**	**14 47 09.6**	**+0.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PETR	**Petresti**	**68.71**	**316**	⇓P	**P**	**14 47 13.8**	**+3.5**
TMCR	**Tamitsa**	**69.04**	**337**	eP	**P**	**14 47 13.9**	**+2.0**
TMCR				pmax	pmax		
	comp=Z,22nm,1.0s						
VRI	**Vrincioaia**	**69.09**	**316**	⇓P	**P**	**14 47 12.3**	**-0.4**
VRI	**Vrincioaia**	**69.09**	**316**	⇓P	**P**	**14 47 12.3**	**-0.4**
PLOR	**Plostina**	**69.14**	**316**	⇑P	**P**	**14 47 16.5**	**+3.5**
PLOR	**Plostina**	**69.14**	**316**	⇑P	**P**	**14 47 16.5**	**+3.5**
SEY	**Seymchan**	**69.21**	**25**	P	**P**	**14 47 12.4**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=17,slow=19,SNR=2.9						
SEY	**Seymchan**	**69.21**	**25**	⇓eP	**P**	**14 47 12.7**	**-0.3**
TESR	**Tescani**	**69.27**	**317**	⇓P	**P**	**14 47 16.0**	**+2.2**
MLR	**Muntele Rosu**	**69.56**	**316**	⇑P	**P**	**14 47 19.0**	**+3.3**
MLR	**Muntele Rosu**	**69.56**	**316**	⇑P	**P**	**14 47 19.0**	**+3.3**
DOPR	**Dopca**	**70.02**	**316**	⇑P	**P**	**14 47 17.1**	**-1.4**
BURAR	**Bucovina Array**	**70.44**	**318**	⇓P	**P**	**14 47 22.1**	**+1.0**
BURAR	**Bucovina Array**	**70.44**	**318**	⇓P	**P**	**14 47 22.1**	**+1.0**
ARR	**Arges**	**70.44**	**315**	⇑P	**P**	**14 47 19.4**	**-1.7**
FINES	**FINESS Array B**	**73.12**	**332**	P	**P**	**14 47 34.9**	**-1.8**
	comp=Z,6.1nm,0.8s,baz=83,slow=5.3,SNR=6.3						
FINES	**FINESS Array B**	**73.12**	**332**	i P	**P**	**14 47 37.7**	**+0.9**
FINES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BOSA	**Boshof**	**75.52**	**238**	P	**P**	**14 47 52.1**	**+0.6**
	comp=Z,2.0nm,0.9s,baz=84,slow=4.5,SNR=2.1						
BOSA	**Boshof**	**75.52**	**238**	P	**P**	**14 47 52.1**	**+0.6**
BOSA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BOSA	**Boshof**	**75.52**	**238**	IAmb	IAmb	14 48 05.9	
	comp=Z,9.0nm,1.1s						
ARCES	**ARCESS Array B**	**75.68**	**340**	P	**P**	**14 47 50.1**	**-1.4**
	comp=Z,1.7nm,0.8s,baz=99,slow=7.6,SNR=5.1						
BILL	**Bilibino**	**76.38**	**22**	⇑eP	**P**	**14 47 54.6**	**-1.0**
BILL				e		14 48 11.3	
BILL				e		14 50 46.9	
BILL				eS	**S**	**14 57 46.4**	**+7.3**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,1µm,17.0s						
BRG	**Berggiesshubel**	**78.15**	**320**	eP	**P**	**14 48 09.3**	**+3.5**
	comp=Z,5.2nm,0.9s						
BRG	**Berggiesshubel**	**78.15**	**320**	eP	**P**	**14 48 09.3**	**+3.5**
BRG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MAW	**Mawson**	**78.19**	**192**	P	**P**	**14 48 06.7**	**+1.1**
	comp=Z,2.3nm,0.6s,baz=317,slow=16,SNR=2.0						
MAW	**Mawson**	**78.19**	**192**	IAmb	IAmb	14 48 10.2	
	comp=Z,0.3nm,0.8s						
GERES	**GERESS Array B**	**78.22**	**318**	P	**P**	**14 48 07.1**	**+0.8**
	comp=Z,1.7nm,0.8s,baz=91,slow=5.3,SNR=9.4						
NORES	**NORESS Array B**	**79.97**	**330**	P	**P**	**14 48 20.1**	**+4.5**
NORES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
NB2	**NORSAR Subarra**	**80.14**	**331**	P	**P**	**14 48 14.9**	**-1.6**
	comp=Z,36nm,2.0s,baz=96,slow=5.1						
NB2	**NORSAR Subarra**	**80.14**	**331**	P	**P**	**14 48 14.9**	**-1.6**
	baz=96,slow=5.1						
NOA	**NORSAR Array B**	**80.14**	**331**	P	**P**	**14 48 15.2**	**-1.3**
	comp=Z,4.9nm,1.0s,baz=95,slow=5.0,SNR=4.2						
IMAR	**Indian Mountai**	**91.92**	**22**	P	**P**	**14 49 14.4**	**-0.3**
RES	**Resolute Bay**	**97.78**	**2**	P	**P**	**14 49 40.6**	**-0.7**
	comp=Z,1.6nm,1.0s,baz=33,slow=8.6,SNR=2.8						
RES	**Resolute Bay**	**97.78**	**2**	P	**P**	**14 49 40.6**	**-0.7**
RES				pmax	pmax		
	comp=Z,3.0nm,1.2s						
RES	**Resolute Bay**	**97.78**	**2**	IAmb	IAmb	14 49 47.1	
	comp=Z,3.1nm,1.2s						
NVAR	**Mina Array Bea**	**125.16**	**31**	PKP	**PKPdf**	**14 55 07.8**	**0.0**
	comp=Z,0.1nm,0.3s,baz=300,slow=1.8,SNR=1.6						
PDAR	**Pinedale Array**	**125.47**	**21**	PKP	**PKiKP**	**14 55 09.3**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=323,slow=0.7,SNR=5.6						
TXAR	**Lajitas Array**	**139.51**	**25**	PKP	**PKPdf**	**14 55 33.3**	**-1.6**
	comp=Z,0.2nm,0.8s,baz=207,slow=1.8,SNR=2.2						
PLCA	**Paso Flores**	**144.24**	**200**	PKP	PKPbc	14 55 41.3	+0.2
	comp=Z,3.0nm,1.0s,baz=243,slow=3.1,SNR=3.7						
CPUP	**Villa Florida**	**147.15**	**232**	PKPbc	**PKPdf**	**14 55 49.0**	**+0.7**
	comp=Z,1.5nm,0.8s,baz=174,slow=5.3,SNR=3.3						
CPUP	**Villa Florida**	**147.15**	**232**	PKP2	**PKPdf**	**14 55 49.0**	**+0.7**

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*NEIC **21** 14:37:36.4±2.8, 40°.64N±0°.04×125°.2W±0°.1, h16^{km}±9^{km}, Error ellipse: s-maj=11.6km s-min=5.5km az=76.0*

*IDC **21** 14:37:36.3±1.7, 40°.72N×125°.00W, h0^{km}, mb3.7/3, mb1 4.1/9, mb1mx3.8/54, mbtmp3.9/9, ML3.8/6, Error ellipse: s-maj=19.2km s-min=12.1km az=111.0*

*NCEDC **21** 14:37:36.4±3.6, 40°.67N±0°.04×125°.34W±0°.07, h21^{km}±7^{km}, ML3.8/34, Error ellipse: s-maj=8.7km s-min=5.5km az=64.0*

*ANF **21** 14:37:37.8±1.0, 40°.85N×124°.90W, h0^{km}, ML3.8/16, Error ellipse: s-maj=11.6km s-min=6.2km az=76.0*

ISC 21 14:37:35.7±2.2**, 40°.65N**±0°.04×**125°.28W**±0°.07**, h17**^{km}±13^{km}**, n145, σ1^{s}.32**/158**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCTM	**Capetown**	**0.74**	**104**		**Pb**	**14 37 50.7**	**+0.6**
KCTM					**Sn**	**14 38 02.0**	**-0.4**
KMPM	**Mount Pierce**	**0.92**	**105**		**Pb**	**14 37 53.0**	**-0.2**
KMPM					**Sg**	**14 38 05.3**	**-0.3**
JCC	**Jacoby Creek,**	**0.96**	**80**		**Pb**	**14 37 53.0**	**-1.0**
JCC				Sg	**Sb**	**14 38 05.7**	**-0.7**
KSMM	**Slide Mountain**	**0.97**	**119**		**Pb**	**14 37 53.1**	**-0.9**
KRPM	**Rodgers**	**1.08**	**62**		**Pb**	**14 37 54.7**	**-1.2**
KRPM					**Sb**	**14 38 08.7**	**-1.1**
KCRM	**Chalk Rock**	**1.14**	**101**		**Pb**	**14 37 56.3**	**-0.7**
KHMM	**Horse Mountain**	**1.20**	**79**		**Sb**	**14 38 12.1**	**-1.2**
KHMM	**Horse Mountain**	**1.20**	**79**		**Pn**	**14 37 56.9**	**-0.9**
KMRM	**Mail Ridge**	**1.28**	**109**		**Pn**	**14 37 58.8**	**-0.1**
KMRM					**Sg**	**14 38 16.0**	**-1.0**
KCSM	**Cold Springs**	**1.35**	**94**		**Pn**	**14 37 59.5**	**-0.5**
KRMB	**Red Mountain**	**1.35**	**50**	Pn	**Pn**	**14 37 58.3**	**-1.6**
KBSM	**Bell Springs**	**1.48**	**119**		**Pn**	**14 38 01.0**	**-0.7**
KPPM	**Pickett Peak**	**1.50**	**101**		**Pn**	**14 38 01.6**	**-0.3**
KOMM	**Orleans Mounta**	**1.52**	**65**		**Pn**	**14 38 01.1**	**-1.1**
KHBM	**Hayfork Bally**	**1.57**	**89**		**Pn**	**14 38 02.0**	**-0.9**
KSXB	**Camp Six Broad**	**1.58**	**42**		**Pn**	**14 38 01.6**	**-1.4**
KIPM	**Iron Peak**	**1.62**	**121**		**Pn**	**14 38 02.8**	**-0.7**
KCPM	**Cahto Peak**	**1.62**	**126**		**Pn**	**14 38 02.8**	**-0.9**
KCPM	**Cahto Peak**	**1.62**	**126**		**Sn**	**14 38 21.8**	**-2.4**
KFPM	**Farley Peak**	**1.75**	**125**		**Pn**	**14 38 04.5**	**-0.8**
KBNM	**Bluenose Ridge**	**1.77**	**115**		**Pn**	**14 38 05.4**	**-0.3**
GTC	**Three Chop Rid**	**1.82**	**133**		**Pn**	**14 38 05.1**	**-1.2**
LBPM	**Beegum Peak**	**1.86**	**100**		**Pn**	**14 38 06.3**	**-0.6**
LGPM	**Granite Peak**	**1.88**	**81**		**Pn**	**14 38 06.2**	**-0.9**
KTRM	**Thompson Ridge**	**1.91**	**48**		**Pn**	**14 38 06.3**	**-1.2**
GNAM	**Navarro Ridge**	**1.93**	**138**		**Pn**	**14 38 06.3**	**-1.4**
KRKM	**Rackout Spring**	**1.94**	**123**		**Pn**	**14 38 07.4**	**-0.7**
O02D	**Mt. Diablo Mer**	**1.96**	**103**		**Pn**	**14 38 07.8**	**-0.4**
O02D	**Mt. Diablo Mer**	**1.96**	**103**	P	**Pn**	**14 38 07.9**	**-0.4**
	baz=285,SNR=183						
O02D				S	**Sn**	**14 38 32.0**	**-0.6**
	baz=285						
M02C	**Callahan**	**1.98**	**67**		**Pn**	**14 38 07.7**	**-0.8**
M02C	**Callahan**	**1.98**	**67**	P	**Pn**	**14 38 07.5**	**-1.0**
	baz=250,SNR=34						
M02C				S	**Sn**	**14 38 31.5**	**-1.5**
	baz=250						
N02D	**Trinity Center**	**1.98**	**80**		**Pn**	**14 38 07.5**	**-1.0**
N02D	**Trinity Center**	**1.98**	**80**	P	**Pn**	**14 38 07.6**	**-1.0**
	baz=262,SNR=251						
LBKM	**Bonanza King**	**2.03**	**77**		**Pn**	**14 38 08.6**	**-0.7**
WDC	**Whiskeytown Da**	**2.09**	**91**	Pn	**Pn**	**14 38 09.3**	**-0.6**
GHOM	**Hamilton Openi**	**2.09**	**140**		**Pn**	**14 38 09.0**	**-1.0**
GROM	**Round Mountain**	**2.13**	**109**		**Pn**	**14 38 10.5**	**-0.1**
GHMM	**Hull Mountain**	**2.14**	**122**		**Pn**	**14 38 10.0**	**-0.8**
GVV	**Valley View**	**2.18**	**113**		**Pn**	**14 38 10.9**	**-0.5**
GASB	**Alder Springs**	**2.21**	**116**		**Pn**	**14 38 10.9**	**-0.8**
YBH	**Yreka Blue Hor**	**2.22**	**60**	Pn	**Pn**	**14 38 11.3**	**-0.5**
	7.4nm,0.3s,baz=257,slow=14,SNR=90						
YBH				Lg	Lg	14 38 38.4	
	99nm,0.3s,baz=150,slow=16,SNR=37						
YBH	**Yreka Blue Hor**	**2.22**	**60**	Pn	**Pn**	**14 38 11.4**	**-0.4**
LAMM	**Antelope Mount**	**2.22**	**64**		**Pn**	**14 38 11.2**	**-0.8**
GGUM	**Gualala**	**2.26**	**142**		**Pn**	**14 38 10.9**	**-1.5**
LCSM	**College of the**	**2.31**	**70**		**Pn**	**14 38 13.0**	**-0.2**
GSNM	**Snow Mountain**	**2.35**	**136**		**Pn**	**14 38 12.7**	**-0.9**
K02D	**Willamette Mer**	**2.37**	**30**	P	**Pn**	**14 38 13.4**	**-0.5**
	baz=212,SNR=995						
K02D				S	**Sn**	**14 38 39.5**	**-3.2**
	baz=212						
GHLM	**Highland Sprin**	**2.37**	**132**		**Pn**	**14 38 12.9**	**-1.0**
HOPS	**Hopland Field**	**2.38**	**134**		**Pn**	**14 38 12.7**	**-1.2**
HOPS	**Hopland Field**	**2.38**	**134**		**Pn**	**14 38 13.2**	**-0.7**
LGBM	**Gray Butte**	**2.44**	**73**		**Pn**	**14 38 15.0**	**+0.1**
GCK	**Clark Valley**	**2.45**	**116**		**Pn**	**14 38 15.6**	**+0.7**
LTCM	**Tuscan Springs**	**2.45**	**99**		**Pn**	**14 38 14.8**	**-0.2**
B040	**Montague**	**2.46**	**60**		**Pn**	**14 38 14.9**	**-0.1**
GDCM	**Dry Creek**	**2.46**	**139**		**Pn**	**14 38 13.9**	**-1.1**
GTSM	**Trough Springs**	**2.46**	**122**		**Pn**	**14 38 14.5**	**-0.6**
LSHM	**Sage Hen Hill**	**2.47**	**86**		**Pn**	**14 38 14.9**	**-0.3**
M03C	**McCloud**	**2.47**	**74**		**Pn**	**14 38 15.6**	**+0.3**
LMPM	**Military Pass**	**2.50**	**70**		**Pn**	**14 38 16.4**	**+0.5**
LHEM	**Herd Peak**	**2.51**	**66**		**Pn**	**14 38 16.4**	**+0.4**
GPMM	**Pine Mountain**	**2.55**	**134**		**Pn**	**14 38 16.0**	**-0.4**
GMKM	**Mount Konoctai**	**2.55**	**130**		**Pn**	**14 38 16.0**	**-0.4**
GACM	**Adobe Creek**	**2.58**	**133**		**Pn**	**14 38 16.3**	**-0.5**
HUMO	**Hull Mountain**	**2.62**	**41**		**Pn**	**14 38 16.7**	**-0.6**
HUMO	**Hull Mountain**	**2.62**	**41**		**Pn**	**14 38 16.8**	**-0.4**
HUMO				Sn	**Sn**	**14 38 47.2**	**-1.4**
GSSM	**Skaggs Springs**	**2.62**	**137**		**Pn**	**14 38 15.5**	**-1.8**
GFC	**Funks Creek**	**2.65**	**119**		**Pn**	**14 38 18.2**	**+0.5**
LBFM	**Black Fox Moun**	**2.66**	**74**		**Pn**	**14 38 18.1**	**+0.2**
GDXM	**Geysers**	**2.66**	**133**		**Pn**	**14 38 17.9**	**0.0**
J01E	**Myrtle Point**	**2.70**	**21**	P	**Pn**	**14 38 17.6**	**-0.7**
	baz=203,SNR=25						
J01E				S	**Sn**	**14 38 47.1**	**-3.6**
	baz=203						
L04D	**Klamath Falls**	**2.73**	**54**	P	**Pn**	**14 38 19.2**	**+0.3**
	baz=237,SNR=87						
L04D				Sb	**Sn**	**14 38 53.3**	**+1.7**
	baz=237						
M04C	**Macdoel**	**2.83**	**65**	P	**Pn**	**14 38 20.3**	**+0.1**
	baz=248,SNR=55						
ORV	**Oroville**	**3.10**	**110**		**Pn**	**14 38 22.8**	**-1.1**
MCCM	**Marconi Confer**	**3.12**	**143**	Pn	**Pn**	**14 38 23.4**	**-0.7**
K04D	**Chiloquin, OR**	**3.30**	**52**	P	**Pn**	**14 38 26.5**	**-0.2**
	baz=235,SNR=38						
I03D	**Drain, OR**	**3.36**	**25**	P	**Pn**	**14 38 27.9**	**+0.4**
	baz=207,SNR=38						
I03D				S	**Sn**	**14 39 05.6**	**-1.3**
	baz=207						
J04D	**Umpqua Nationa**	**3.50**	**41**	P	**Pn**	**14 38 30.6**	**+1.0**
	baz=224,SNR=93						
I02D	**Swisshome**	**3.61**	**17**	P	**Pn**	**14 38 30.6**	**-0.2**
	baz=198						
I02D				S	**Sn**	**14 39 10.3**	**-2.7**
	baz=198						
AFDM	**Forest Hills D**	**3.73**	**116**		**Pn**	**14 38 32.5**	**-0.1**
I04A	**Tendick Farm,**	**3.79**	**33**	P	**Pn**	**14 38 34.4**	**+1.0**
	baz=216,SNR=14						
I04A				S	**Sn**	**14 39 15.7**	**-2.0**
	baz=216						
BEKR	**Beckworth**	**3.85**	**100**		**Pn**	**14 38 34.4**	**+0.1**
MOD	**Modoc Plateau**	**3.95**	**70**		**Pn**	**14 38 35.9**	**+0.2**
J05D	**Fort Rock, OR**	**4.00**	**48**	P	**Pn**	**14 38 37.6**	**+1.3**
	baz=231,SNR=66						
COR	**Corvallis**	**4.19**	**20**	Pn	**Pn**	**14 38 40.0**	**+1.2**
RUBR	**Rubicon Trail**	**4.26**	**110**		**Pn**	**14 38 41.5**	**+1.5**
H04D	**Lebanon**	**4.30**	**25**	P	**Pn**	**14 38 41.5**	**+1.2**
	baz=207,SNR=11						
H04D				S	**Sn**	**14 39 28.2**	**-1.8**
	baz=207						
PINE	**Pine Mountain**	**4.50**	**44**		**Pn**	**14 38 45.0**	**+1.7**
VCNR	**Virginia City**	**4.53**	**106**		**Pn**	**14 38 44.7**	**+1.0**
CMB	**Columbia Colle**	**4.61**	**123**		**Pn**	**14 38 45.9**	**+1.3**
PAHR	**Pah Rah Range**	**4.62**	**100**		**Pn**	**14 38 45.2**	**+0.4**
H04A	**Detroit Lake**	**4.63**	**29**		**Pn**	**14 38 45.8**	**+1.0**
PNTR	**Pine Nut**	**4.64**	**108**		**Pn**	**14 38 46.6**	**+1.3**
I05D	**Terrebonne, OR**	**4.70**	**37**	P	**Pn**	**14 38 47.1**	**+1.3**
	baz=220						
G03D	**McMinnville, O**	**4.79**	**17**	P	**Pn**	**14 38 49.0**	**+1.9**
	baz=199						
G03D				S	**Sn**	**14 39 40.3**	**-1.8**
	baz=199						
SAO	**San Andreas Ge**	**4.91**	**141**	Pn	**Pn**	**14 38 47.2**	**-1.5**
SAO					**Sn**	**14 39 42.9**	**-2.2**
YERR	**Yerington**	**4.94**	**108**		**Pn**	**14 38 50.0**	**+0.7**
WAKR	**Walker**	**5.00**	**114**		**Pn**	**14 38 51.4**	**+1.2**
WVOR	**Wild Horse Val**	**5.29**	**68**		**Pn**	**14 38 54.2**	**+0.1**
F03A	**Seaside**	**5.42**	**13**		**Pn**	**14 38 57.0**	**+1.3**
G05D	**Wamic, OR**	**5.43**	**31**	P	**Pn**	**14 38 57.6**	**+1.7**
	baz=214						
I07A	**Izee**	**5.48**	**49**		**Pn**	**14 38 58.6**	**+1.9**
RYN	**Ryan**	**5.59**	**109**		**Pn**	**14 38 59.3**	**+1.0**
PMPB	**Monarch Peak**	**5.66**	**140**	Pn	**Pn**	**14 38 58.5**	**-0.6**
F04A	**Amboy**	**5.67**	**21**		**Pn**	**14 38 59.9**	**+0.7**
MDPB	**Devils Postpil**	**5.69**	**120**		**Pn**	**14 39 01.8**	**+2.1**
G06A	**Carlson Farm,**	**5.71**	**35**		**Pn**	**14 39 02.4**	**+2.7**
J08A	**Circle Bar Ran**	**5.75**	**60**	Pn	**Pn**	**14 39 00.2**	**-0.1**
OMMB	**Old Mammoth Mi**	**5.75**	**120**		**Pn**	**14 39 01.4**	**+0.8**
KVN	**Kaiserville**	**5.75**	**104**		**Pn**	**14 39 00.8**	**+0.3**
NVAR	**Mina Array Bea**	**5.83**	**110**	Pn	**Pn**	**14 39 02.6**	**+1.0**
	3.2nm,0.3s,baz=290,slow=14,SNR=57						
NVAR	**Mina Array Bea**	**5.83**	**110**		**Pn**	**14 39 02.5**	**+0.8**
NV11	**Mina Array Sit**	**5.94**	**110**		**Pn**	**14 39 03.9**	**+0.8**
G08A	**Pilot Rock**	**6.55**	**43**		**Pn**	**14 39 14.6**	**+3.2**
LON	**Longmire**	**6.59**	**21**		**Pn**	**14 39 13.2**	**+1.4**
D03D	**Eldon**	**7.06**	**12**	P	**Pn**	**14 39 19.2**	**+1.1**
	baz=194						
HAWA	**Hanford**	**7.09**	**34**		**Pn**	**14 39 19.2**	**+0.5**
PKM	**Mcpherson Peak**	**7.20**	**141**	P	**Pn**	**14 39 19.6**	**-0.7**
	baz=324						
BMO	**Blue Mountains**	**7.21**	**52**		**Pn**	**14 39 22.6**	**+2.1**
ISA	**Isabella, Lake**	**7.32**	**131**		**Pn**	**14 39 23.9**	**+2.1**
ISA	**Isabella, Lake**	**7.32**	**131**	P	**Pn**	**14 39 23.7**	**+1.8**
	baz=315						
E08A	**Dider Farm, El**	**7.38**	**36**		**Pn**	**14 39 24.9**	**+2.3**
ARVC	**Arvin**	**7.51**	**135**	P	**Pn**	**14 39 26.8**	**+2.4**
	baz=319						
MFID	**Camas Ranch**	**7.56**	**65**		**Pn**	**14 39 27.5**	**+2.3**
ELK	**Elko**	**7.63**	**86**	Pn	**Pn**	**14 39 28.8**	**+2.5**
	0.2nm,0.3s,baz=292,slow=16,SNR=5.1						
R11A	**Troy Canyon, C**	**7.84**	**104**		**Pn**	**14 39 30.2**	**+1.0**
R11A	**Troy Canyon, C**	**7.84**	**104**	P	**Pn**	**14 39 30.2**	**+1.0**
	baz=290						
F10A	**Beach Ranch, E**	**7.92**	**45**		**Pn**	**14 39 32.8**	**+2.7**
TPNV	**Topopah Spring**	**7.96**	**115**		**Pn**	**14 39 33.6**	**+2.8**
GSC	**Goldstone, Bar**	**8.56**	**126**		**Pn**	**14 39 41.0**	**+2.1**
PFO	**Pinyon Flats O**	**9.95**	**132**	Pn	**Pn**	**14 39 59.6**	**+1.7**
	1.5nm,0.3s,baz=322,slow=10,SNR=13						
PFO	**Pinyon Flats O**	**9.95**	**132**		**Pn**	**14 39 59.1**	**+1.2**
XPFO	**Pion Flat**	**9.95**	**132**		**Pn**	**14 39 59.3**	**+1.3**
MSU	**Marysvale**	**10.34**	**98**		**Pn**	**14 40 05.7**	**+2.2**
LRM	**Limekiln Ridge**	**10.69**	**57**		**Pn**	**14 40 10.4**	**+2.2**
PDAR	**Pinedale Array**	**11.94**	**75**	Pn	**Pn**	**14 40 28.1**	**+2.8**
	0.2nm,0.3s,baz=253,slow=12,SNR=12						
PDAR	**Pinedale Array**	**11.94**	**75**		**Pn**	**14 40 25.5**	**+0.1**
ANMO	**Albuquerque**	**15.92**	**105**	Pn	**Pn**	**14 41 21.1**	**+1.9**
	0.1nm,0.3s,baz=302,slow=11,SNR=4.0						
DLBC	**Dease Lake**	**18.06**	**352**	P	**P**	**14 41 49.0**	**+3.0**
	0.1nm,0.3s,baz=163,slow=7.7,SNR=4.5						
TXAR	**Lajitas Array**	**20.95**	**116**	P	Pn	14 42 20.9	+0.5
	2.3nm,0.8s,baz=296,slow=8.9,SNR=17						
TXAR	**Lajitas Array**	**20.95**	**116**	P	**P**	**14 42 18.0**	**+0.2**
ULM	**Lac du Bonnet**	**22.62**	**55**	P	**P**	**14 42 36.2**	**+0.7**
	9.5nm,0.9s,baz=256,slow=9.9,SNR=16						
YKA	**Yellowknife Ar**	**22.79**	**13**	P	**P**	**14 42 38.1**	**+0.9**
	0.9nm,0.8s,baz=198,slow=10,SNR=7.2						
H11N3	**WAKE ISLAND Hy**	**60.77**	**272**	T	T	15 54 32.7	
	baz=53,slow=75,SNR=3.5						
H11N2	**WAKE ISLAND Hy**	**60.77**	**272**	T	T	15 54 32.0	
	baz=53,slow=75,SNR=4.8						
H11N1	**WAKE ISLAND Hy**	**60.78**	**272**	T	T	15 54 37.7	
	baz=53,slow=75,SNR=4.2						

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*NEIC **21** 14:40:56.6±2.0, 7°.56N±0°.06×94°.5E±0°.1, h10^{km}±1^{km}, mb4.4/6, Error ellipse: s-maj=24.3km s-min=9.6km az=260.0*

*IDC **21** 14:40:56.7±8.9, 7°.91N×94°.60E, h0^{km}, mb3.9/8, mb1 4.0/8, mb1mx3.6/54, mbtmp3.9/8, Error ellipse: s-maj=225.7km s-min=69.2km az=123.0*

ISC 21 14:40:57.5±0.8**, 7°.8N**±0°.2×**94°.7E**±0°.2**, h10**^{km}**, n20, σ1^{s}.40**/20**, mb3.9**/10**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**3.40**	**138**	Pn	**Pn**	**14 41 50.4**	**-0.2**

KULM	Kulim	6.43	112	Pn	Pn	14 42 32.6	+0.2
RPSI	Rantau Prapat	6.60	140	Pn	Pn	14 42 36.0	+1.4
IPM	Ipoh	7.12	117	Pn	Pn	14 42 42.9	+1.1
MK31	Makanchi Array	40.28	347	P	P	14 48 33.1	-1.7
MKAR	Makanchi Array	40.28	347	P	P	14 48 33.0	-1.9
	0.7nm,0.7s,baz=157,slow=6.6,SNR=5.2						
GEYT	Alibeck	44.62	318	P	P	14 49 09.2	-1.0
KURBB	Kurchatov Arra	44.76	345	P	P	14 49 10.8	-0.2
	0.7nm,0.6s,baz=168,slow=7.1,SNR=4.2						
KURK	Kurchatov	44.82	346	P	P	14 49 12.7	+1.1
KURK				IAmb	IAmb	14 49 18.4	
	comp=Z,3.4nm,0.8s						
ZALV	Zalesovo Beam	46.71	352	P	P	14 49 27.4	+1.0
	comp=Z,2.3nm,0.8s,baz=183,slow=7.4,SNR=4.8						
ZALV	Zalesovo Beam	46.71	352	P	P	14 49 27.9	+1.4
WRA	Warramunga Arr	47.78	126	P	P	14 49 34.9	-0.5
WRAB	Tennant Creek	47.79	126	P	P	14 49 33.6	-1.8
WR0	Warramunga Arr	47.95	126	P	P	14 49 35.2	-1.5
WR0				IAmb	IAmb	14 49 49.4	
	comp=Z,6.4nm,1.4s						
BVAR	Borovoye Array	49.24	341	P	P	14 49 45.7	-0.4
	comp=Z,0.6nm,0.7s,baz=158,slow=9.0,SNR=2.7						
BRTR	Keskin Array B	62.88	311	P	P	14 51 24.9	+0.7
	comp=Z,0.4nm,0.5s,baz=142,slow=9.1,SNR=2.8						
FINES	FINESS Array B	73.03	332	P	P	14 52 27.8	+0.4
	comp=Z,3.0nm,0.7s,baz=80,slow=2.3,SNR=6.1						
GERES	GERESS Array B	78.24	318	P	P	14 52 57.0	-0.6
	comp=Z,0.7nm,0.7s,baz=103,slow=4.4,SNR=2.1						
NB2	NORSAR Subarra	80.06	331	P	P	14 53 10.7	+3.4
	comp=Z,0.9nm,0.6s,baz=96,slow=5.1						
NOA	NORSAR Array B	80.06	331	P	P	14 53 07.1	-0.3
	comp=Z,0.8nm,0.7s,baz=94,slow=5.2,SNR=3.9						

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*IDC **21** 14:42:06.0±0.7, 7°.67N×94°.26E, h0^{km}, mb4.0/14, mb1 4.1/16, mb1mx3.8/57, mbtmp4.0/16, ML3.8/2, Error ellipse: s-maj=30.9km s-min=16.3km az=58.0*

*NEIC **21** 14:42:06.4±3.0, 7°.61N±0°.09×94°.6E±0°.1, h10^{km}±1^{km}, mb4.5/11, Error ellipse: s-maj=22.0km s-min=13.4km az=245.0*

ISC 21 14:42:08.7±0.5, **7°.65N**±0°.08×**94°.52E**±0°.09, **h24^{km}, n41,** σ1^{s}.**51**/40, **mb4.2**/18, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	3.40	135	Pn	Pn	14 43 01.8	+1.5
PSI	Prapat	6.51	137	Pn	Pn	14 43 46.4	+3.2
	0.9nm,0.3s,baz=291,slow=14,SNR=2.8						
KULM	Kulim	6.53	111		Pn	14 43 44.4	+1.1
RPSI	Rantau Prapat	6.59	138		Pn	14 43 46.4	+2.3
RPSI	Rantau Prapat	6.59	138	Pn	Pn	14 43 46.6	+2.5
GSI	Gunungsitoli	7.00	154	Pn	Pn	14 43 51.7	+2.0
IPM	Ipoh	7.19	116		Pn	14 43 52.6	+0.2
PBKT	Sadao Pong	10.88	35	Pn	Pn	14 44 44.5	+1.5
MYKOM	Kota Tinggi	10.96	122	Pn	Pn	14 44 44.5	+0.3
CMAR	Chiang Mai Arr	11.58	21	Pn	Pn	14 44 53.1	+0.6
	0.3nm,0.3s,baz=230,slow=13,SNR=1.4						
MNAI	Manna	14.60	145	P	P	14 45 38.7	-1.4
MK31	Makanchi Array	40.39	347	P	P	14 49 44.7	-0.1
MKAR	Makanchi Array	40.39	347	P	P	14 49 45.3	+0.5
	1.2nm,0.7s,baz=163,slow=7.2,SNR=6.4						
MKAR	Makanchi Array	40.39	347	P	P	14 49 45.2	+0.4
MAKZ	Makanchi	40.48	347	P	P	14 49 46.0	+0.5
KNRA	Kununurra	41.08	124	P	P	14 49 47.4	-3.4
KNRA				IAmb	IAmb	14 49 52.9	
	comp=Z,17nm,1.4s						
KKAR	Karatay Array	41.13	333	P	P	14 49 49.2	-1.7
JNU	Nakatsue	42.12	48	P	P	14 49 58.8	-0.5
GEYT	Alibeck	44.62	318	P	P	14 50 19.9	+0.5
	comp=Z,1.6nm,0.5s,baz=114,slow=3.7,SNR=3.9						
GEYT	Alibeck	44.62	318	P	P	14 50 19.8	+0.5
KURBB	Kurchatov Arra	44.86	346	P	P	14 50 21.9	+1.0
	comp=Z,1.6nm,0.7s,baz=173,slow=6.9,SNR=7.7						
KURK	Kurchatov	44.92	346	P	P	14 50 21.6	+0.1
KURK				IAmb	IAmb	14 50 31.7	
	comp=Z,5.0nm,0.9s						
ZALV	Zalesovo Beam	46.83	352	P	P	14 50 37.7	+1.2
	comp=Z,1.0nm,0.4s,baz=13,slow=15,SNR=2.4						
WRA	Warramunga Arr	47.82	126	P	P	14 50 47.8	+3.0
	comp=Z,1.2nm,0.8s,baz=306,slow=8.2,SNR=7.6						
WRA	Warramunga Arr	47.82	126	P	P	14 50 42.7	-2.0
WB2	Warramunga Arr	47.83	126	P	P	14 50 45.0	+0.2
WB2				IAmb	IAmb	14 51 00.2	
	comp=Z,6.0nm,1.2s						
BVAR	Borovoye Array	49.33	341	P	P	14 50 55.3	-0.5
	comp=Z,0.4nm,0.6s,baz=140,slow=7.8,SNR=2.4						
ASAR	Alice Springs	49.48	130	P	P	14 51 00.2	+2.7
	comp=Z,0.8nm,0.7s,baz=301,slow=7.6,SNR=9.0						
ASAR	Alice Springs	49.48	130	P	P	14 50 57.7	+0.2
RAYN	Ar Rayn	49.52	294	P	P	14 50 58.4	+0.5
RAYN				IAmb	IAmb	14 51 06.6	
	comp=Z,4.2nm,1.0s						
BRTR	Keskin Array B	62.86	311	P	P	14 52 31.6	-1.5
	comp=Z,0.6nm,0.7s,baz=134,slow=7.1,SNR=4.3						
CAN	Canberra	66.74	134	P	P	14 52 55.8	-2.5
TIXI	Tiksi	67.38	11	P	P	14 53 01.5	0.0
	comp=Z,1.0nm,0.4s,baz=192,slow=0.8,SNR=2.4						
TIXI	Tiksi	67.38	11	IAmb	IAmb	14 53 12.6	
	comp=Z,2.5nm,0.7s						
FINES	FINESS Array B	73.09	332	P	P	14 53 36.6	-0.1
	comp=Z,3.2nm,0.8s,baz=96,slow=5.6,SNR=4.5						
ARCES	ARCESS Array B	75.61	340	P	P	14 53 51.4	+0.1
	comp=Z,4.2nm,1.0s,baz=98,slow=6.5,SNR=2.2						
BOSA	Boshof	75.78	238	P	P	14 53 52.4	-0.8
	comp=Z,1.3nm,0.6s,baz=82,slow=5.4,SNR=4.0						
GERES	GERESS Array B	78.25	318	P	P	14 54 07.4	+0.8
	comp=Z,0.2nm,0.3s,baz=155,slow=2.8,SNR=1.8						
NOA	NORSAR Array B	80.11	331	P	P	14 54 17.6	+1.0
	comp=Z,0.9nm,0.9s,baz=96,slow=4.7,SNR=3.4						
TXAR	Lajitas Array	139.28	25	PKP	PKiKP	15 01 37.2	+0.3
	comp=Z,0.2nm,0.7s,baz=197,slow=2.8,SNR=2.2						
CPUP	Villa Florida	147.42	232	PKPbc	PKPab	15 01 52.7	-0.5
	comp=Z,1.1nm,0.6s,baz=75,slow=5.6,SNR=4.5						

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*BJI **21** 14:45:46.9±0.0, 6°.98N×93°.97E, h10^{km}, mB5.1/5, mb4.5/47, Ms5.2/11, Ms7 4.9/11*

*IDC **21** 14:45:49.8±0.5, 7°.62N×94°.30E, h0^{km}, mb4.3/27, mb1 4.3/28, mb1mx4.2/53, mbtmp4.3/28, ML3.6/1, Error ellipse: s-maj=21.2km s-min=11.8km az=49.0*

*NDI **21** 14:45:50.2±2.4, 7°.30N×94°.70E, h10^{km}, mb4.8, mb5.1(NEIC)*

*NEIC **21** 14:45:51.9±1.2, 7°.59N±0°.10×94°.3E±0°.1, h10^{km}±2^{km}, mb5.1/20, Error ellipse: s-maj=18.2km s-min=11.4km az=55.0*

*MOS **21** 14:45:54.1±1.9, 7°.87N×94°.65E, h21^{km}, mb5.2/35, Error ellipse: s-maj=12.2km s-min=5.3km az=118.4*

*DJA **21** 14:45:55.1±0.3, 8°N±3°×9°4E±°, h10^{km}, M4.8/21, mB6.4/3, mb4.8/21, MLv4.7/6, Mw(mB)6.1/3, Mwp6.5/1*

ISC 21 14:45:54.6±0.3, **7°.54N**±0°.04×**94°.34E**±0°.05, **h24^{km}, n263,** σ2^{s}.**35**/255, **mb4.8**/95, **12C-16D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.66	218	eP	Pb	14 46 06.5	-1.1
CMBY				eS	Sn	14 46 17.3	-0.9
LHMI	Lhok Sumawe	3.46	131		Pn	14 46 46.6	-0.4
MLSI	Meulaboh, Aceh	3.84	148	P	Pb	14 46 57.3	-4.5
PKDT	Phuket	3.98	85	P	Pn	14 46 55.0	+0.8
PBA	Port Blair	4.38	339	eP	Pn	14 47 02.8	+3.1
RNTT	Ranong	4.49	65	P	Pn	14 47 01.3	+0.1
TPTI		5.10	146	P	Pn	14 47 13.1	+3.4
	0.2nm59nm,1.3s						
KCSI	Kotacane, Aceh	5.25	139	P	Pn	14 47 16.9	+5.2
	0.5nm133nm,0.9s						
TRTT	Trang	5.31	86	P	Pn	14 47 13.3	+0.8
SNSI	Sinabang, Aceh	5.47	159	P	Pn	14 47 20.6	+5.9
	0.8nm122nm,1.0s						
DGPR	DIGLIPUR	5.77	346	eP	Pn	14 47 20.7	+1.8
SKLT	Songkhla	6.24	93	P	Pn	14 47 25.9	+0.6
PSI	Prapat	6.56	136	Pn	Pn	14 47 30.6	+0.8
	1.2nm,0.3s,baz=305,slow=12,SNR=4.9						
PSI	Prapat	6.56	136	P	Pn	14 47 33.1	+3.3
RPSI	Rantau Prapat	6.63	136		Pn	14 47 32.7	+2.0
RPSI	Rantau Prapat	6.63	136		Pn	14 47 30.6	-0.1
KULM	Kulim	6.66	109		Pn	14 47 30.7	-0.3
IPM	Ipoh	7.31	114		Pn	14 47 39.1	-0.9
BKNI	Bangkinang	9.79	137	P	Pn	14 48 18.2	+4.1
	34μm62nm,0.6s						
PDSI	Padang	10.38	144	P	Pn	14 48 27.6	+5.4
PBKT	Sadao Pong	11.07	35	P	Pn	14 48 31.1	-0.5
PBKT	Sadao Pong	11.07	35		Pn	14 48 31.8	+0.2
PHIT	Phitsanulok	11.28	31	P	Pn	14 48 35.5	+1.1
CMAR	Chiang Mai Arr	11.74	22	Pn	Pn	14 48 43.1	+2.3
	0.6nm,0.3s,baz=214,slow=14,SNR=13						
CHTO	Chiang Mai	12.07	21	P	Pn	14 48 43.2	-2.1
CHTO	Chiang Mai	12.07	21		Pn	14 48 43.2	-2.1
MDRS	Chennai	14.91	293	eP	P	14 49 27.5	-2.0
BWNR	Bhubaneshwar	15.14	328	eP	Pn	14 49 27.7	+0.7
BWNR				IAmb	IAmb	14 49 34.5	
	comp=Z,43nm,0.3s						
MDSI	Maura Dua	15.46	140	P	P	14 49 36.6	+1.0
	comp=Z,38nm,1.0s						
LWLI	Liwa	15.80	142	P	P	14 49 41.1	+1.6
SHL	Shillong	18.08	353	ex	P	14 50 02.3	-2.5
SHL				IAmb	IAmb	14 50 11.1	
	comp=Z,21nm,0.3s						
KOHI	KOHIMA	18.08	359	eP	Pn	14 50 04.1	-0.4
BOK	Bokaro	18.09	334	eP	P	14 50 04.5	-0.2
BOK				IAmb	IAmb	14 50 11.9	
	comp=Z,24nm,0.7s						
HYB	Hyderabad	18.26	304	i P	P	14 50 10.0	+3.3
KMI	Kunming	19.24	24	P	Pn	14 50 23.3	+4.6
KMI				pP	pwP	14 50 25.9	-0.3
KMI				sP	sP	14 50 27.3	+0.8
KMI				pmax	pmax		
	comp=Z,16nm,0.9s						
ODAN	Odare	20.32	342	eP	P	14 50 29.3	-0.1
RAMN	Ramite	20.66	340	eP	P	14 50 31.8	-1.3
	comp=Z,249nm,0.8s						
TAPN	Taplejung	20.68	343	eP	P	14 50 32.7	-0.7
	comp=Z,155nm,0.8s						
JIRN	Jiri	21.45	340	eP	P	14 50 39.8	-1.9
	comp=Z,207nm,0.9s						
PKI	Pulchoki	21.65	338	eP	P	14 50 43.8	0.0
	comp=Z,79nm,0.9s						
PKIN	Phulchoki	21.66	338	eP	P	14 50 43.7	-0.2
GUN	Gumba	21.79	339	eP	P	14 50 42.9	-2.4
	comp=Z,122nm,0.8s						
DMN	Daman	21.80	337	eP	P	14 50 45.2	-0.1
KKN	Kakani	21.89	338	eP	P	14 50 45.5	-0.8
	comp=Z,89nm,0.8s						
GYA	Guiyang	22.17	30	⇓iP	P	14 50 53.4	+4.2
GYA				S	S	14 54 50.6	-1.9
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GYA				pmax	pmax		
	comp=Z,120nm,4.8s						
GYA				LR	LR		
	comp=Z,3μm,13.7s						
GYA				LR	LR		
	comp=Z,2μm,14.0s						
GYA				LR	LR		
	comp=Z,3μm,13.7s						
GKN	Gorkha	22.33	337	eP	P	14 50 50.7	-0.3
	comp=Z,95nm,0.7s						
WOJI	Wonogiri, Jawa	22.51	132	P	P	14 50 57.2	+4.4
	comp=Z,37nm,1.3s						
BHPL	Bhopal	22.54	316	ex	P	14 50 57.0	+3.9
BHPL				IAmb	IAmb	14 51 02.6	
	comp=Z,41nm,1.2s						
DANN	Dangsing	22.99	336	eP	P	14 50 57.1	-1.0
	comp=Z,150nm,0.9s						
PWJI	Pagerwojo	23.28	131	P	P	14 51 15.1	+14
SRBI	Singaraja	25.96	126	P	P	14 51 29.1	+3.5
MPSI	Mapaga	26.47	105	P	P	14 51 34.8	+4.6
	comp=Z,58nm,1.0s						
H08S3	Diego Garcia H	26.49	236	T	T	15 18 03.1	
	baz=56,slow=75,SNR=51						
H08S2	Diego Garcia H	26.49	236	T	T	15 18 03.4	
	baz=56,slow=75,SNR=23						
H08S1	Diego Carcia H	26.51	236	T	T	15 18 04.1	
	baz=56,slow=75,SNR=22						
MRSI	Marisa	28.40	103	P	P	14 51 53.3	+5.8
	comp=Z,50nm,1.1s						
BKSI	Bulukumba	28.72	116	P	P	14 51 55.0	+4.6
	comp=Z,22nm,0.9s						
XAN	Xi'an	29.61	25	P	P	14 51 59.8	+1.6
XAN				pP	pP	14 52 04.9	+0.2
XAN				sP	sP	14 52 08.1	+0.6
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LUWI	Luwuk	29.61	106	P	P	14 52 03.4	+5.1
	comp=Z,79nm,1.2s						
LZH	Lanzhou	29.72	16	eP	P	14 52 05.1	+5.9
LZH				pP	pwP	14 52 09.0	+0.5
LZH				sP	sP	14 52 11.5	+3.0
LZH				pmax	pmax		
	comp=Z,22nm,1.0s						
KMSI	Cibinong	30.35	102	P	P	14 52 09.1	+4.3
	comp=Z,88nm,1.0s						
GTA	Gaotai	32.11	8	eP	P	14 52 21.4	+1.1
GTA				pP	pP	14 52 24.8	-2.0
GTA				sP	sP	14 52 27.4	-2.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
NIL	Nilore	32.49	326	P	P	14 52 22.0	-1.5
NIL				pmax	pmax		
	comp=Z,34nm,0.8s						
NIL	Nilore	32.49	326	P	P	14 52 22.0	-1.5
NJ2	Nanjing	33.40	40	eP	P	14 52 31.5	0.0
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KBL	Kabul	35.56	323	P	P	14 52 53.1	+2.7
KBL				pmax	pmax		
	comp=Z,13nm,0.9s						
KSH	Kashi	35.86	335	P	P	14 52 52.9	+0.1
KSH				pP	pP	14 52 56.1	-3.3
KSH				PcP	PcP	14 55 19.4	-0.5
KSH				S	S	14 58 29.5	+0.1
KSH				PcS	PcS	14 59 06.9	-0.5
KSH				ScS	ScS	15 03 08.3	-1.8
KSH				pmax	pmax		
	comp=Z,54nm,1.3s						
KSH				LR	LR		
	comp=Z,2μm,9.8s						
KSH				LR	LR		
	comp=Z,3μm,11.3s						
KSH				LR	LR		
	comp=Z,4μm,12.2s						
HHC	Hu-ho-hao-te	36.55	22	eP	P	14 53 00.5	+1.8
HHC				sP	pwP	14 53 07.1	-0.9
HHC				pmax	pmax		
	comp=Z,430nm,4.7s						
HHC				LR	LR		
	comp=Z,840nm,13.7s						
HHC				LR	LR		
	comp=Z,470nm,14.0s						
HHC				LR	LR		
	comp=Z,900nm,13.3s						
WMQ	Urumqi	36.61	352	eP	P	14 53 01.1	+2.0
WMQ				pP	pP	14 53 03.6	-2.0
WMQ				sP	pwP	14 53 09.0	+0.4
WMQ				pmax	pmax		
	comp=Z,14nm,1.1s						
WMQ				LR	LR		
	comp=Z,2μm,16.5s						
WMQ				LR	LR		
	comp=Z,1μm,17.7s						
WMQ				LR	LR		
	comp=Z,1μm,15.9s						
WSAR	Wadi Sarin	37.66	299	P	P	14 53 05.1	-3.2
	comp=Z,2.3nm,0.7s,baz=78,slow=4.4,SNR=2.1						
SWI	Sorong	37.76	101	P	P	14 53 10.7	+1.6
SWI	Sorong	37.76	101	P	P	14 53 11.8	+2.7
SWI				pmax	pmax		
	comp=Z,53nm,1.1s						
SIJI	Sorong	37.77	101	P	P	14 53 06.8	-2.4
	comp=Z,9.9nm,0.9s,baz=194,slow=22,SNR=4.2						
ULHL	Ulahol	38.09	338	P	P	14 53 14.9	+3.0
	SNR=8.1						
KZA	Kyzart	38.32	337	P	P	14 53 17.1	+3.1
	SNR=6.1						
UCH	Uchtor	38.74	336	P	P	14 53 21.0	+3.4
	SNR=9.3						
KBK	Karagaybulak	38.93	337	P	P	14 53 22.6	+3.7
	SNR=8.2						
AML	Almayashu	38.99	335	P	P	14 53 23.0	+3.4
	SNR=12						
AAK	Ala-Archa	39.09	337	P	P	14 53 17.9	-2.3
	comp=Z,1.9nm,1.0s,baz=170,slow=5.9,SNR=3.3						
AAK	Ala-Archa	39.09	337	P	P	14 53 24.6	+4.4
	SNR=9.1						
AAK	Ala-Archa	39.09	337	⇑eP	P	14 53 20.4	+0.2
AAK				pmax	pmax		
	comp=Z,9.0nm,2.4s						
CHMS	Chumysh	39.30	337	P	P	14 53 25.0	+3.2
	SNR=6.5						
EKS2	Erkin-Say	39.40	336	P	P	14 53 26.6	+3.9
	SNR=8.9						
USP	Ospenovka	39.62	337	P	P	14 53 27.6	+3.1
	SNR=11						
FITZ	Fitzroy Crossi	40.05	130	P	P	14 53 26.8	-1.4
	comp=Z,1.4nm,0.7s,baz=45,slow=1.4,SNR=4.9						
MK31	Makanchi Array	40.46	347	P	P	14 53 29.7	-1.6
MK31				pmax	pmax		
	comp=Z,22nm,1.0s						
MK31	Makanchi Array	40.46	347	P	P	14 53 29.7	-1.6
MK31				IAmb	IAmb	14 53 35.5	
	comp=Z,22nm,0.9s						
MKAR	Makanchi Array	40.46	347	P	P	14 53 29.5	-1.8
	comp=Z,5.6nm,0.7s,baz=165,slow=8.0,SNR=28						
MAKZ	Makanchi	40.54	347	P	P	14 53 31.7	-0.3
MAKZ				pmax	pmax		
	comp=Z,21nm,1.0s						
MAKZ	Makanchi	40.54	347	P	P	14 53 31.7	-0.3
MAKZ				IAmb	IAmb	14 53 36.0	
	comp=Z,22nm,1.0s						
KK31	Karatay Array	41.15	333	P	P	14 53 36.2	-0.9
KK31				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KK31	Karatay Array	41.15	333	P	P	14 53 36.2	-0.9
KKAR	Karatay Array	41.15	333	P	P	14 53 35.8	-1.3
KKAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KKAR	Karatay Array	41.15	333	P	P	14 53 35.8	-1.3
KKAR	Karatay Array	41.15	333	P	P	14 53 36.2	-0.9
KKAR				IAmb	IAmb	14 53 41.2	
	comp=Z,7.8nm,0.9s						
SONM	Songino Array	41.45	12	P	P	14 53 38.5	-1.1
	comp=Z,7.9nm,1.0s,baz=190,slow=7.5,SNR=11						
ULN	Ulaanbaatar	41.62	13	⇑eP	P	14 53 40.3	-0.7
ULN				pmax	pmax		
	comp=Z,11nm,3.2s						
ZAK	Zakamensk	43.35	8	eP	P	14 53 53.9	-1.1
ZAK				e		14 55 45.5	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GEYT	Alibeck	44.58	318	P	P	14 54 04.0	-1.0
	comp=Z,9.8nm,0.8s,baz=145,slow=5.4,SNR=16						
GEYT	Alibeck	44.58	318	P	P	14 54 04.6	-0.4
GYA0B	ALIBECK ARRAY	44.58	318	P	P	14 54 04.6	-0.4
GYA0B				IAmb	IAmb	14 54 09.8	
	comp=Z,27nm,0.7s						
TLY	Talaya	44.67	8	⇓eP	P	14 54 05.9	+0.4
TLY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURBB	Kurchatov Arra	44.92	346	P	P	14 54 05.9	-1.5
	baz=168,slow=7.2						
KURK	Kurchatov	44.98	346	deP	P	14 54 06.1	-1.8
KURK				pmax	pmax		
	comp=Z,42nm,1.0s						
KURK	Kurchatov	44.98	346	P	P	14 54 06.8	-1.1
ZAA0	Zalesovo Array	46.91	352	P	P	14 54 22.3	-0.8
ZALV	Zalesovo Beam	46.91	352	P	P	14 54 21.9	-1.2
	comp=Z,7.0nm,0.6s,baz=181,slow=8.4,SNR=21						
ZALV	Zalesovo Beam	46.91	352	P	P	14 54 22.6	-0.5
ZALV	Zalesovo Beam	46.91	352	P	P	14 54 22.6	-0.5
WRA	Warramunga Arr	47.91	125	P	P	14 54 30.5	-0.9
	comp=Z,4.1nm,0.9s,baz=305,slow=8.5,SNR=6.2						
WRA	Warramunga Arr	47.91	125	i P	P	14 54 35.5	+4.1
WRA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WRAB	Tennant Creek	47.91	125	⇑eP	P	14 54 31.0	-0.4
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
WB2	Warramunga Arr	47.92	125	P	P	14 54 30.9	-0.6
WB2				IAmb	IAmb	14 54 36.2	
	comp=Z,10nm,1.1s						
MDJ	Mudanjiang	47.98	34	P	P	14 54 31.8	+0.2
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BVAR	Borovoye Array	49.37	341	P	P	14 54 40.0	-2.1
	comp=Z,11nm,0.9s,baz=139,slow=7.9,SNR=27						
BVAR				PcP	PcP	14 56 04.1	-0.3
	comp=Z,2.2nm,0.6s,baz=148,slow=8.5,SNR=1.8						
RAYN	Ar Rayn	49.40	294	P	P	14 54 43.3	+0.3
RAYN				pmax	pmax		
	comp=Z,22nm,0.8s						
RAYN	Ar Rayn	49.40	294	P	P	14 54 43.2	+0.3
RAYN				IAmb	IAmb	14 54 48.6	
	comp=Z,22nm,0.8s						
BRVK	Borovoye	49.43	341	⇓eP	P	14 54 40.9	-1.7
BRVK				pmax	pmax		
	comp=Z,14nm,1.0s						
BRVK	Borovoye	49.43	341	P	P	14 54 41.5	-1.1
BRVK				IAmb	IAmb	14 54 46.7	
	comp=Z,11nm,0.8s						
AS31	Alice Springs	49.55	130	P	P	14 54 42.7	-1.3
ASAR	Alice Springs	49.55	130	P	P	14 54 43.4	-0.7
	comp=Z,2.8nm,0.9s,baz=301,slow=7.8,SNR=11						
ASAR	Alice Springs	49.55	130	P	P	14 54 43.8	-0.2
ASAR	Alice Springs	49.55	130	P	P	14 54 43.8	-0.2
ABKAR	Akbulak array	50.62	331	P	P	14 54 50.6	-1.1
BOD	Bodaibo	52.43	13	eP	P	14 55 04.7	-0.4
BOD				pmax	pmax		
	comp=Z,11nm,1.1s						
ZEA	Zeya	53.18	24	eP	P	14 55 16.5	+5.8
GRNR	Gornyy	55.39	31	eP	P	14 55 23.1	-3.8
GRNR				MLR	MLR		
	comp=Z,370nm,14.0s						
SVE	Sverdlovsk	55.78	338	eP	P	14 55 28.5	-1.1
SVE				pmax	pmax		
	comp=Z,39nm,1.0s						
ARU	Arti	56.27	337	P	P	14 55 30.6	-2.5
	comp=Z,0.9nm,0.4s,baz=139,slow=11,SNR=3.3						
ARU	Arti	56.27	337	c iP	P	14 55 34.1	+1.0
ARU						14 57 38.9	
ARU				S	S	15 03 27.7	+6.2
ARU				SS	SS	15 07 13.2	+4.7
ARU				pmax	pmax		
	comp=Z,32nm,1.2s						
ZEI	Tsey	56.42	317	eP	P	14 55 36.0	+1.3
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NCK	Nalchik	56.91	318	⇑eP	P	14 55 38.4	+0.5
NCK				pmax	pmax		
	comp=Z,11nm,0.3s						
YSS	Yuzh-Sakhalins	56.93	38	⇑eP	P	14 55 37.7	-0.2
YSS				pmax	pmax		
	comp=Z,25nm,2.1s						
KBZ	Khabaz	57.47	318	⇓eP	P	14 55 43.7	+1.9
KBZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KMBO	Kilima Mbogo	57.58	264	P	P	14 55 43.1	-0.3
	comp=Z,0.8nm,0.3s,baz=54,slow=8.7,SNR=5.2						
KMBO	Kilima Mbogo	57.58	264	i P	P	14 55 43.0	-0.4
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KIV	Kislovodsk	57.70	318	eP	P	14 55 41.7	-1.8
KIV				pmax	pmax		
	comp=Z,46nm,1.0s						
GOF	Gofitskoye	57.90	319	⇑eP	P	14 55 38.8	-6.0
MALT	Malatya	58.83	310	P	P	14 55 55.1	+3.5
STKA	Stephens Creek	59.73	134	P	P	14 55 58.4	+0.7
	comp=Z,3.2nm,0.8s,baz=307,slow=15,SNR=3.8						
STKA	Stephens Creek	59.73	134	P	P	14 55 57.7	0.0
STKA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
STKA	Stephens Creek	59.73	134	P	P	14 55 57.7	0.0
YAK	Yakutsk	60.25	18	P	P	14 55 59.6	-1.1
	comp=Z,1.6nm,0.3s,baz=287,slow=1.0,SNR=1.6						
YAK	Yakutsk	60.25	18	eP	P	14 55 58.8	-1.9
YAK				pmax	pmax		
	comp=Z,22nm,1.0s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.3s						
YAK				pmax	pmax		
	comp=N,13nm,1.3s						
YAK	Yakutsk	60.25	18	IAmb	IAmb	14 56 08.5	
	comp=Z,22nm,1.0s						
VRH	Novokhopyorsk	61.31	325	eP	P	14 56 10.0	+1.8
VRH				pmax	pmax		
	comp=Z,30nm,0.7s						
NRIK	Noril'sk	61.88	357	P	P	14 56 10.1	-1.7
	comp=Z,1.2nm,0.4s,baz=178,slow=7.8,SNR=5.0						
NRIK	Noril'sk	61.88	357	⇓eP	P	14 56 10.0	-1.7
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.9s						
VSR	Storozhevoye	62.78	325	eP	P	14 56 19.3	+1.3
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BRTR	Keskin Array B	62.80	311	P	P	14 56 15.6	-3.0

	comp=Z,4.8nm,0.7s,baz=116,slow=7.4,SNR=13						
BRTR	Keskin Array B	62.80	311	iP	P	14 56 18.3	-0.3
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BRTR	Keskin Array B	62.80	311	P	P	14 56 17.0	-1.6
BR131	Keskin Array S	62.80	311	P	P	14 56 17.0	-1.6
BR131				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BR131	Keskin Array S	62.80	311	P	P	14 56 17.0	-1.6
BR131				IAmb	IAmb	14 56 21.0	
	comp=Z,6.7nm,0.7s						
LPSR	Galich'ya Gora	63.48	326	eP	P	14 56 24.6	+2.0
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
PRGR	Permogore	64.73	337	eP	P	14 56 32.7	+2.0
PRGR				pmax	pmax		
	comp=Z,34nm,0.7s						
ELL	Elmali	65.08	307	P	P	14 56 36.4	+2.7
MOS	Moscow	65.47	329	eP	P	14 56 37.0	+1.4
MOS				pmax	pmax		
	comp=Z,65nm,0.7s						
OBN	Obninsk	65.77	328	⇑eP	P	14 56 40.1	+2.6
OBN				e		14 57 06.1	
OBN				e		14 59 01.5	
OBN				pmax	pmax		
	comp=Z,31nm,0.9s						
OBN				MLR	MLR		
	comp=Z,857nm,17.0s						
KLMR	Klimovskoe	66.84	334	eP	P	14 56 45.9	+1.6
KLMR				pmax	pmax		
	comp=Z,28nm,1.1s						
KLMR	Klimovskoe	66.84	334	eP	P	14 56 46.0	+1.6
KLMR				AMP		14 56 48.1	
	comp=Z,28nm,1.1s						
KARP	Karpathos	67.11	305	P	P	14 56 45.7	-0.9
TIXI	Tiksi	67.52	11	P	P	14 56 46.6	-1.9
	comp=Z,7.3nm,0.5s,baz=187,slow=4.1,SNR=14						
TIXI	Tiksi	67.52	11	⇓eP	P	14 56 46.6	-1.9
TIXI				pmax	pmax		
	comp=Z,12nm,1.0s						
TIXI	Tiksi	67.52	11	P	P	14 56 46.7	-1.8
TIXI				IAmb	IAmb	14 56 55.6	
	comp=Z,23nm,1.1s						
CFR	Carcaliu	67.97	316	P	P	14 56 54.1	+2.3
AKASG	Malin Array Be	68.54	322	P	P	14 56 51.8	-3.4
	comp=Z,2.7nm,0.8s,baz=86,slow=5.6,SNR=2.8						
AKASG	Malin Array Be	68.54	322	ceP	P	14 56 57.0	+1.8
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VRI	Vrincioaia	69.08	316	⇓P	P	14 57 02.5	+3.7
VRI	Vrincioaia	69.08	316	P	P	14 57 01.8	+3.0
PLOR	Plostina	69.13	316	⇑P	P	14 57 02.5	+3.4
SEY	Seymchan	69.15	25	P	P	14 56 57.0	-1.8
	comp=Z,0.4nm,0.4s,baz=15,slow=16,SNR=2.4						
SEY	Seymchan	69.15	25	⇓eP	P	14 57 00.0	+1.2
TESR	Tescani	69.26	317	⇑P	P	14 57 02.2	+2.4
MLR	Muntele Rosu	69.55	316	⇓P	P	14 57 05.2	+3.4
MLR	Muntele Rosu	69.55	316	P	P	14 57 05.0	+3.2
BIZ	Bicaz	69.71	317	⇓P	P	14 57 05.6	+3.0
DOPR	Dopca	70.02	316	⇑P	P	14 57 07.6	+3.1
PLVB	Pleven	70.14	313	P	P	14 57 08.2	+2.8
VOIR		70.16	316	P	P	14 57 04.9	-0.6
BURAR	Bucovina Array	70.43	318	⇓P	P	14 57 10.3	+3.2
ARR	Arges	70.44	315	⇓P	P	14 57 09.6	+2.4
VTS	Vitosha	71.04	312	P	P	14 57 13.1	+2.0
VTS	Vitosha	71.04	312	P	P	14 57 14.6	+3.6
VTS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KNT	Kendrikon	71.11	311	P	P	14 57 14.3	+3.0
LIT	Litokhoron	71.31	310	P	P	14 57 15.0	+2.5
GRG	Griva	71.46	311	P	P	14 57 16.3	+2.8
IZAR	Zarasai	71.54	326	eP	P	14 57 16.5	+2.9
ISAL	Salakas	71.56	326	eP	P	14 57 16.8	+3.0
VSU	Vasula	71.98	329	eP	P	14 57 18.9	+2.8
VSU	Vasula	71.98	329	P	P	14 57 21.0	+4.9
VSU				pmax	pmax		
	comp=Z,128nm,0.9s						
DRGR		71.98	317	P	P	14 57 19.2	+2.7
PABE	Paberze	72.74	326	eP	P	14 57 23.8	+3.1
FIA1	FINESS Array S	73.10	332	P	P	14 57 21.5	-1.3
FIA1				IAmb	IAmb	14 57 26.9	
	comp=Z,25nm,0.9s						
FINES	FINESS Array B	73.10	332	P	P	14 57 20.6	-2.1
	comp=Z,4.5nm,0.8s,baz=113,slow=4.4,SNR=8.7						
FINES	FINESS Array B	73.10	332	P	P	14 57 21.2	-1.6
MSF	Maaselka	73.21	337	P	P	14 57 27.9	+4.5
SUF	Sumiainen	73.42	333	P	P	14 57 29.3	+4.7
SUF				pmax	pmax		
	comp=Z,28nm,1.2s						
PDG	Podgorica	73.95	312	P	P	14 57 30.3	+2.1
PBUR	Paburge	73.97	326	eP	P	14 57 30.9	+2.9
OJC	Ojcow	74.36	320	P	P	14 57 34.6	+4.2
KLNR	Kaliningrad	74.71	325	⇓eP	P	14 57 33.8	+1.5
VYHS	Vyhne	74.79	318	eP	P	14 57 35.9	+2.9
VYHS	Vyhne	74.79	318	eP	P	14 57 35.8	+2.8
JAVC	Velka Javorina	75.59	318	eP	P	14 57 41.3	+3.6
ARCES	ARCESS Array B	75.65	340	P	P	14 57 36.3	-1.2
	comp=Z,7.4nm,1.0s,baz=100,slow=6.0,SNR=12						
TIP	Timpagrande	75.66	308	P	P	14 57 41.8	+3.5
MORC	Moravsky Berou	75.76	319	P	P	14 57 42.0	+3.5
MORC	Moravsky Berou	75.76	319	P	P	14 57 43.2	+4.6
MORC				pmax	pmax		
	comp=Z,15nm,1.1s						
MORC	Moravsky Berou	75.76	319	eP	P	14 57 41.7	+3.1
MODS	Modra-Piesok	75.81	318	eP	P	14 57 41.1	+2.2
MODS	Modra-Piesok	75.81	318	eP	P	14 57 41.1	+2.2
ZST	Bratislava	75.91	318	eP	P	14 57 41.8	+2.4
ZST				pmax	pmax		
	comp=Z,24nm,1.2s						
ZST	Bratislava	75.91	318	eP	P	14 57 41.8	+2.4
BILL	Bilibino	76.33	22	⇓eP	P	14 57 40.8	-0.6
BILL				e		14 57 53.3	
BILL				eS	SKSac	15 07 47.9	-3.0
BILL				pmax	pmax		
	comp=Z,1.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,1μm,16.0s						
DPC	Dobruska-Polom	76.59	320	eP	P	14 57 47.3	+4.0
DPC	Dobruska-Polom	76.59	320	eP	P	14 57 47.3	+4.0
KSP	Ksiaz	76.65	320	P	P	14 57 48.2	+4.7
CONA	Conrad Observa	76.72	317	epP	P	14 57 45.4	+1.2
	comp=Z,2.6nm,0.9s						
ARSA	Arzberg	76.92	317	eP	P	14 57 43.9	-1.2
	comp=Z,1.1nm,0.8s						
ARSA				epP	pP	14 57 46.7	-5.6
	comp=Z,8.3nm,1.1s						
SOKA	Soboth	77.22	316	eP	P	14 57 45.7	-1.3
	comp=Z,2.0nm,0.9s						
SOKA				epP	pP	14 57 48.7	-5.2
	comp=Z,13nm,1.0s						
OBKA	Obir	77.55	316	esP	P	14 57 51.5	+2.7
	comp=Z,12nm,1.1s						
PRU	Pruhonice	77.71	319	eP	P	14 57 52.7	+3.2
PRU	Pruhonice	77.71	319	eP	P	14 57 52.7	+3.2
MOA	Molln	77.79	317	esP	P	14 57 52.4	+2.3
	comp=Z,5.3nm,1.1s						
BRG	Berggiesshubel	78.13	320	eP	P	14 57 55.0	+3.1
	comp=Z,32nm,1.8s						
BRG	Berggiesshubel	78.13	320	eP	P	14 57 55.0	+3.1
BRG				pmax	pmax		
	comp=Z,32nm,1.8s						
GERES	GERESS Array B	78.21	318	P	P	14 57 50.2	-2.3
	comp=Z,0.9nm,0.7s,baz=90,slow=5.3,SNR=22						
GERES	GERESS Array B	78.21	318	P	P	14 57 51.0	-1.5
GERES	GERESS Array B	78.21	318	P	P	14 57 51.0	-1.5
KHC	Kasperske Hory	78.30	319	eP	P	14 57 56.3	+3.4
KHC	Kasperske Hory	78.30	319	⇓eP	P	14 57 53.1	+0.2
KHC				pmax	pmax		
	comp=Z,30nm,2.3s						
KBA	Koelnbreinsper	78.39	316	epP	P	14 57 55.2	+1.6
	comp=Z,8.4nm,1.7s						
CLL	Collm	78.75	321	eP	P	14 57 55.0	-0.2
CLL	Collm	78.75	321	eP	P	14 57 55.0	-0.2
ABTA	Abfaltersbach	78.96	316	esP	P	14 57 59.7	+3.1
	comp=Z,10nm,1.2s						
WTTA	Wattenberg	79.56	317	eP	P	14 57 58.2	-1.8
	comp=Z,1.7nm,0.4s						
WTTA				esP	pP	14 58 02.8	-4.3
	comp=Z,14nm,1.1s						
WATA	Walderalm	79.60	317	esP	P	14 58 02.7	+2.5
	comp=Z,7.6nm,0.7s						
MOTA	Moosalm	79.92	317	iP	P	14 58 00.3	-1.6
	comp=Z,2.4nm,0.6s						
MOTA				esP	pP	14 58 04.2	-4.7
	comp=Z,18nm,1.0s,SNR=5.3						
NORES	NORESS Array B	79.95	330	P	P	14 58 01.6	0.0
NORES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NB2	NORSAR Subarra	80.12	331	P	P	14 58 00.9	-1.7
	comp=Z,13nm,0.8s,baz=96,slow=5.1						
NB2	NORSAR Subarra	80.12	331	P	P	14 58 00.9	-1.7
	baz=96,slow=5.1						
NOA	NORSAR Array B	80.12	331	P	P	14 58 00.4	-2.2
	comp=Z,3.1nm,1.0s,baz=89,slow=5.4,SNR=2.5						
RETA	Reutte	80.16	317	eP	P	14 58 01.5	-1.6
	comp=Z,1.1nm,0.4s						
RETA				esP	pP	14 58 05.3	-4.9
	comp=Z,6.9nm,0.6s						
FETA	Feichten	80.18	316	iP	P	14 58 02.0	-1.3
	comp=Z,1.1nm,0.5s						
FETA				eP	pP	14 58 02.1	-8.3
	comp=Z,1.1nm,0.5s						
FETA				epP	PcP	14 58 04.7	-5.9
	comp=Z,8.3nm,0.9s,SNR=4.4						
BSEG	Bad Segeberg	80.44	323	P	P	14 58 10.2	+5.9
BSEG				pmax	pmax		
	comp=Z,19nm,1.1s						
DAVA	Damuels	80.76	317	esP	P	14 58 09.5	+3.1
	comp=Z,6.0nm,0.7s						
SAOF	Saorge	82.51	313	P	P	14 58 22.0	+6.4
RSL	Roselend	83.07	315	P	P	14 58 22.5	+3.8
TORD	Torodi Ar. Bea	90.87	283	P	P	14 58 57.3	+0.3
	comp=Z,2.6nm,1.0s,baz=93,slow=3.7,SNR=8.1						
TORD	Torodi Ar. Bea	90.87	283	P	P	14 59 00.5	+3.5
IMAR	Indian Mountai	91.86	22	P	P	14 59 00.1	-0.5
BMAR	Burnt Mountain	94.44	19	P	P	14 59 13.2	+0.6
ILAR	Eielson Array	94.98	22	P	P	14 59 18.4	+3.4
	comp=Z,0.8nm,1.1s,baz=297,slow=4.0,SNR=3.2						
INK	Inuvik	97.26	16	P	Pdif	14 59 25.6	+0.3
	comp=Z,0.5nm,0.6s,baz=15,slow=10,SNR=2.5						
DBIC	Dimbokro	98.18	278	P	P	14 59 29.2	-1.4
	comp=Z,1.0nm,0.4s,baz=243,slow=4.5,SNR=2.4						
NVAR	Mina Array Bea	125.10	31	PKP	PKPdf	15 04 53.3	-0.5
	comp=Z,0.1nm,0.4s,baz=137,slow=45,SNR=2.8						
PDAR	Pinedale Array	125.41	21	PKP	PKPdf	15 04 52.7	-1.6
	comp=Z,1.1nm,1.1s,baz=27,slow=4.2,SNR=4.5						
TXAR	Lajitas Array	139.45	25	PKP	PKPdf	15 05 20.9	-0.1
	comp=Z,0.3nm,0.8s,baz=270,slow=5.4,SNR=3.6						
PLCA	Paso Flores	144.30	200	PKP	PKPab	15 05 26.9	-0.2
	comp=Z,4.9nm,1.1s,baz=170,slow=1.6,SNR=3.7						
PLCA	Paso Flores	144.30	200	PKIKP	PKPbc	15 05 27.5	0.0
PLCA	Paso Flores	144.30	200		PKPbc	15 05 27.5	+0.1
CPUP	Villa Florida	147.21	232	PKPbc	PKPbc	15 05 35.6	-1.1
	comp=Z,2.5nm,0.8s,baz=74,slow=5.5,SNR=3.9						

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*IDC **21** 14:47:39.1±1.1, 7°.47N×94°.08E, h0^{km}, mb4.1/12, mb1 4.2/12, mb1mx3.8/55, mbtmp4.1/12, MS4.5/1, Ms1 4.5/1, ms1mx3.8/49, Error ellipse: s-maj=43.4km s-min=26.7km az=62.0*

*NEIC **21** 14:47:39.2±2.9, 7°.5N±0°.1×94°.40E±0°.07, h10^{km}±1^{km}, mb4.7/13, Error ellipse: s-maj=22.0km s-min=11.4km az=191.0*

ISC 21 14:47:41.1±0.5**, 7°.5N**±0°.1×**94°.38E**±0°.08**, h20^{km}, n38, σ1ˢ.63**/33**, mb4.3**/15**, 1C-1D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	3.39	131		Pb	14 48 39.2	-1.5
KULM	Kulim	6.60	109	Pn	Pn	14 49 21.5	+4.4
IPM	Ipoh	7.25	114	Pn	Pn	14 49 29.5	+3.4
PALK	Pallekele	13.57	270	Pn	Pn	14 50 52.4	-0.3
SBUM	Sibu	18.45	105	P	P	14 51 52.8	-3.0
TPUB	Ta-pu	29.71	55	P	P	14 53 44.2	-2.0
SSLB	Suanglung	30.20	55	P	P	14 53 49.0	-1.5
YULB	Yu-li	30.29	56	P	P	14 53 50.1	-1.2
MKAR	Makanchi Array	40.52	347	P	P	14 55 20.7	+1.9
	4.8nm,0.9s,baz=165,slow=6.0,SNR=3.6						
KKAR	Karatay Array	41.22	333	P	P	14 55 24.9	+0.2
SONM	Songino Array	41.49	12	P	P	14 55 28.8	+1.8
	1.4nm,0.9s,baz=202,slow=11,SNR=2.6						
SONM	Songino Array	41.49	12	IAmb	IAmb	14 55 35.8	
	comp=Z,2.3nm,0.9s						
GEYT	Alibeck	44.65	318	P	P	14 55 52.4	-0.3
	comp=Z,2.0nm,0.6s,baz=118,slow=18,SNR=2.3						
GEYT	Alibeck	44.65	318	IAmb	IAmb	14 56 00.6	
	comp=Z,4.9nm,0.7s						
NWAO	Narrogin (SRO)	45.69	153	LR	LR	15 17 22.6	
	comp=Z,511nm,18.7s,baz=300,slow=39						
ZALV	Zalesovo Beam	46.97	352	P	P	14 56 12.4	+1.8
	comp=Z,5.6nm,0.9s,baz=182,slow=9.4,SNR=4.0						
ZALV	Zalesovo Beam	46.97	352	P	P	14 56 09.4	-1.2
WRA	Warramunga Arr	47.84	125	P	P	14 56 16.5	-1.4
WRAB	Tennant Creek	47.84	125	P	P	14 56 15.6	-2.3
WRAB				IAmb	IAmb	14 56 27.9	
	comp=Z,5.1nm,0.7s						
WB2	Warramunga Arr	47.85	125	P	P	14 56 16.6	-1.4
WB2				IAmb	IAmb	14 56 21.5	
	comp=Z,10nm,1.4s						
BVAR	Borovoye Array	49.43	341	P	P	14 56 30.1	+0.4
	comp=Z,1.4nm,0.8s,baz=165,slow=6.0,SNR=2.4						
RAYN	Ar Rayn	49.47	295	P	P	14 56 27.6	-2.9
RAYN				IAmb	IAmb	14 56 39.3	
	comp=Z,5.9nm,0.7s						
ASAR	Alice Springs	49.48	130	P	P	14 56 33.2	+2.7
	comp=Z,1.0nm,0.8s,baz=305,slow=6.7,SNR=1.9						
ERM	Erimo	55.02	43	P	P	14 57 10.7	-0.7
BR131	Keskin Array S	62.87	311	P	P	14 58 05.4	-0.7
BR131				IAmb	IAmb	14 58 11.7	
	comp=Z,2.0nm,0.7s						
BRTR	Keskin Array B	62.87	311	P	P	14 58 04.1	-2.0
	comp=Z,0.3nm,0.5s,baz=174,slow=5.8,SNR=1.4						
TIXI	Tiksi	67.57	11	P	P	14 58 35.8	0.0
	comp=Z,1.6nm,0.5s,baz=186,slow=5.1,SNR=2.7						
TIXI	Tiksi	67.57	11	IAmb	IAmb	14 58 43.1	
	comp=Z,4.0nm,0.9s						
FINES	FINESS Array B	73.17	332	P	P	14 59 11.0	+0.8
	comp=Z,2.9nm,0.7s,baz=117,slow=6.6,SNR=3.4						
ARCES	ARCESS Array B	75.71	340	P	P	14 59 25.7	+0.7
	comp=Z,3.9nm,1.1s,baz=87,slow=6.4,SNR=1.8						
GERES	GERESS Array B	78.28	318	P	P	14 59 40.8	+0.9
	comp=Z,0.6nm,0.3s,baz=122,slow=4.8,SNR=3.8						
NB2	NORSAR Subarra	80.19	331	P	P	14 59 50.5	+0.5
	comp=Z,6.4nm,1.0s,baz=93,slow=5.1						
NOA	NORSAR Array B	80.19	331	P	P	14 59 49.4	-0.6
	comp=Z,1.5nm,0.8s,baz=91,slow=5.5,SNR=2.2						
SYO	Syowa Base	85.11	197	⇑eP	P	15 00 16.0	+0.7
SYO	Syowa Base	85.11	197	⇓ePcP	PcP	15 00 19.4	+1.0
PLCA	Paso Flores	144.27	200	PKP	PKPdf	15 07 16.8	+0.5
	comp=Z,1.9nm,0.9s,baz=221,slow=3.7,SNR=2.8						
PLCA	Paso Flores	144.27	200		PKPdf	15 07 17.6	+1.3
CPUP	Villa Florida	147.21	232	PKPbc	PKPbc	15 07 25.0	+1.1
	comp=Z,1.4nm,0.6s,baz=116,slow=4.3,SNR=3.0						

IDC 21 14:48:19.1±2.3**, 8°.01N**×**94°.11E, h0^{km}, mb4.1**/5**, mb1 4.2**/5**, mb1mx3.7**/56**, mbtmp4.1**/5**, MS4.8**/1**, Ms1 4.8**/1**, ms1mx3.7**/51**, Error ellipse: s-maj=104.1km s-min=29.9km az=52.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRDH	Bariadhala	14.78	351	LR	LR	14 57 20.2	
	comp=Z,4μm,18.9s,baz=174,slow=37						
MKAR	Makanchi Array	39.95	347	P	P	14 55 55.1	-0.2
	3.2nm,0.7s,baz=156,slow=8.4,SNR=5.8						
GEYT	Alibeck	44.08	318	P	P	14 56 29.3	+0.1
	3.8nm,0.7s,baz=159,slow=9.2,SNR=4.3						
ZALV	Zalesovo Beam	46.42	352	P	P	14 56 47.8	+0.4
	2.2nm,0.7s,baz=183,slow=9.5,SNR=1.8						
WRA	Warramunga Arr	48.36	126	P	P	14 57 03.0	-0.1
	1.2nm,0.7s,baz=304,slow=9.1,SNR=2.7						
BVAR	Borovoye Array	48.86	341	P	P	14 57 05.6	-0.8
	1.7nm,0.8s,baz=128,slow=9.6,SNR=3.5						

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*IDC **21** 14:49:58.5±0.6, 7°.87N×94°.01E, h0^{km}, mb4.2/29, mb1 4.3/30, mb1mx4.2/59, mbtmp4.2/30, ML4.2/1, MS4.2/1, Ms1 4.4/1, ms1mx3.8/49, Error ellipse: s-maj=18.4km s-min=12.9km az=51.0*

*BJI **21** 14:49:58.2±0.0, 7°.62N×94°.06E, h7^{km}, mB5.1/7, mb4.5/44, Ms5.2/10, Ms7 5.0/9*

*MOS **21** 14:49:58.7±1.2, 7°.77N×94°.01E, h15^{km}, mb4.8/31, Error ellipse: s-maj=13.7km s-min=6.8km az=110.8*

*NEIC **21** 14:49:59.2±2.9, 7°.79N±0°.08×94°.23E±0°.05, h10^{km}±1^{km}, mb4.8/14, Error ellipse: s-maj=13.5km s-min=8.7km az=11.0*

ISC 21 14:50:00.8±0.3**, 7°.60N**±0°.04×**94°.13E**±0°.05**, h20^{km}, n137, σ2ˢ.07**/140**, mb4.5**/62**, 8C-6D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.62	199	eP	Pb	14 50 09.2	-3.8
CMBY				eS	Sb	14 50 20.9	-0.4
CMBY				IAML		14 50 25.2	
LHMI	Lhok Sumawe	3.66	130	Pn	Pn	14 50 53.0	-3.3
LHMI				Sn	Sn	14 51 43.0	+4.0
PBA	Port Blair	4.25	341	eP	Pb	14 51 12.3	-2.6
PBA				ex	x	14 51 24.2	
DGPR	DIGLIPUR	5.66	348	eP	Pn	14 51 28.7	+4.9
DGPR				ex	x	14 51 31.5	
PSI	Prapat	6.75	135	Pn	Pn	14 51 44.9	+6.0
	4.2nm,0.3s,baz=312,slow=15,SNR=3.5						
RPSI	Rantau Prapat	6.82	135		Pn	14 51 44.9	+5.1
RPSI	Rantau Prapat	6.82	135	Pn	Pn	14 51 37.3	-2.5
KULM	Kulim	6.88	109	Pn	Pn	14 51 35.7	-4.8
KULM				Sn	Sn	14 52 57.9	-0.3
IPM	Ipoh	7.53	114	Pn	Pn	14 51 44.0	-5.5
IPM				Sn	Sn	14 53 14.3	-0.1
PBKT	Sadao Pong	11.14	36		Pn	14 52 38.7	-0.3
CM31	Chiang Mai Arr	11.76	23		Pn	14 52 48.1	+0.5
CMAR	Chiang Mai Arr	11.76	23	Pn	Pn	14 52 48.2	+0.7
	1.3nm,0.3s,baz=212,slow=15,SNR=16						
CMAR				LR	LR	14 57 19.2	
	comp=Z,1μm,18.8s,baz=0.0,slow=38						
CHTO	Chiang Mai	12.09	22	P	Pn	14 52 52.8	+0.8
CHTO	Chiang Mai	12.09	22		Pn	14 52 52.8	+0.8
MDRS	Chennai	14.69	293	eP	P	14 53 33.3	-0.4
MDRS				IAmb	IAmb	14 53 39.2	
	comp=Z,23nm,1.0s						
HYB	Hyderabad	18.05	304	iP	P	14 54 12.0	+1.0
KMI	Kunming	19.27	24	P	Pn	14 54 27.0	+1.5
KMI				sP	pP	14 54 30.4	+0.9
KMI				pmax	pmax		
	comp=Z,14nm,0.8s						
RAMN	Ramite	20.53	341	eP	P	14 54 37.7	-0.5
	comp=Z,156nm,0.7s						
TAPN	Taplejung	20.56	344	eP	P	14 54 38.8	+0.1
	comp=Z,136nm,0.8s						
JIRN	Jiri	21.32	340	eP	P	14 54 48.5	+1.6
	comp=Z,152nm,0.9s						
PKI	Pulchoki	21.51	338	eP	P	14 54 50.8	+1.9
	comp=Z,79nm,0.8s						
PKIN	Phulchoki	21.52	338	eP	P	14 54 49.5	+0.5
	comp=Z,32nm,0.6s						
DMN	Daman	21.66	338	eP	P	14 54 51.7	+1.3
	comp=Z,85nm,0.8s						
KKN	Kakani	21.76	338	eP	P	14 54 51.9	+0.5
LSA	Lhasa	22.16	353	P	P	14 54 52.7	-3.3
LSA				pmax	pmax		
	comp=Z,31nm,0.8s						
LSA	Lhasa	22.16	353	P	P	14 54 52.7	-3.3
LSA				IAmb	IAmb	14 55 04.3	
	comp=Z,31nm,0.8s						
GYA	Guiyang	22.22	31	⇓iP	P	14 54 56.3	0.0
GYA				PP	PnPn	14 55 22.0	+3.0
GYA				S	S	14 58 54.4	-5.9
GYA				SS	SnSn	14 59 32.3	+4.3
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=Z,2μm,12.1s						
GYA				LR	LR		
	comp=Z,1μm,14.6s						
GYA				LR	LR		
	comp=Z,2μm,14.0s						
DANN	Dangsing	22.84	336	eP	P	14 55 04.7	+1.6
	comp=Z,114nm,0.9s						
CD2	Chengdu	24.88	20	P	P	14 55 20.8	-1.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
H08S3	Diego Garcia H	26.36	235	T	T	15 22 19.6	
	baz=55,slow=75,SNR=12						
H08S2	Diego Garcia H	26.36	235	T	T	15 22 36.5	
	baz=55,slow=75,SNR=12						
H08S1	Diego Carcia H	26.38	235	T	T	15 22 23.4	
	baz=55,slow=75,SNR=13						
ENH	Enshi	26.76	31	P	P	14 55 37.5	-1.8
ENH				IAmb	IAmb	14 55 54.2	
	comp=Z,12nm,0.9s						
XAN	Xi'an	29.64	25	P	P	14 56 06.9	+1.9
XAN				pP	sP	14 56 12.4	-0.4
XAN				sP	pwP	14 56 15.3	+2.0
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GTA	Gaotai	32.08	8	eP	P	14 56 28.3	+1.7
GTA				pP	pP	14 56 31.8	-0.4
GTA				sP	sP	14 56 34.3	-0.2
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NIL	Nilore	32.31	326	P	P	14 56 26.8	-1.9
NIL				pmax	pmax		
	comp=Z,18nm,0.8s						
NIL	Nilore	32.31	326	P	P	14 56 26.8	-1.9
NIL				IAmb	IAmb	14 56 36.0	
	comp=Z,18nm,0.8s						
NJ2	Nanjing	33.48	40	eP	P	14 56 37.3	-1.5
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KBL	Kabul	35.38	323	P	P	14 56 52.7	-2.8
KBL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KSH	Kashi	35.71	336	P	P	14 56 58.8	+0.6
KSH				PcP	PcP	14 59 28.3	+2.1
KSH				S	S	15 02 30.4	-3.8
KSH				PcS	PcS	15 03 13.0	-0.6
KSH				pmax	pmax		
	comp=Z,13nm,0.8s						
KSH				LR	LR		
	comp=Z,2μm,10.7s						
KSH				LR	LR		
	comp=Z,2μm,9.0s						
KSH				LR	LR		
	comp=Z,3μm,14.6s						
WMQ	Urumqi	36.51	352	eP	P	14 57 08.9	+4.0
WMQ				pP	pP	14 57 10.3	-0.2
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				LR	LR		
	comp=Z,1μm,16.7s						
WMQ				LR	LR		
	comp=Z,2μm,15.5s						
WMQ				LR	LR		
	comp=Z,960nm,20.7s						
HHC	Hu-ho-hao-te	36.57	22	eP	P	14 57 06.3	+0.8
HHC				sP	sP	14 57 13.0	-0.4
HHC				S	S	15 02 41.3	-5.9
HHC				pmax	pmax		
	comp=Z,370nm,4.8s						
HHC				LR	LR		
	comp=Z,820nm,14.8s						
HHC				LR	LR		
	comp=Z,620nm,13.2s						
HHC				LR	LR		
	comp=Z,840nm,13.6s						
SIJI	Sorong	37.98	101	P	P	14 57 21.6	+3.9
	comp=Z,12nm,0.9s,baz=282,slow=3.9,SNR=3.8						
AAK	Ala-Archa	38.95	337	P	P	14 57 25.4	-0.2
	comp=Z,4.0nm,1.0s,baz=144,slow=3.2,SNR=5.0						
AAK	Ala-Archa	38.95	337	⇑eP	P	14 57 26.3	+0.6
AAK				pmax	pmax		
	comp=Z,13nm,1.1s						
FITZ	Fitzroy Crossi	40.25	130	P	P	14 57 40.8	+4.3
	comp=Z,2.1nm,0.9s,baz=246,slow=12,SNR=2.7						
MK31	Makanchi Array	40.35	347	P	P	14 57 35.8	-1.3
MK31				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MK31	Makanchi Array	40.35	347	P	P	14 57 35.8	-1.3
MKAR	Makanchi Array	40.35	347	P	P	14 57 35.9	-1.2
	comp=Z,5.0nm,0.8s,baz=168,slow=7.0,SNR=10						
MKAR	Makanchi Array	40.35	347	P	P	14 57 36.1	-1.0
MKAR	Makanchi Array	40.35	347	P	P	14 57 36.0	-1.0
MAKZ	Makanchi	40.43	347	P	P	14 57 36.7	-1.1
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MAKZ	Makanchi	40.43	347	P	P	14 57 36.6	-1.1
SONM	Songino Array	41.43	12	P	P	14 57 45.2	-0.9
	comp=Z,3.2nm,0.9s,baz=168,slow=7.4,SNR=5.9						
SONM	Songino Array	41.43	12	P	P	14 57 41.6	-4.5
SONM				pmax	pmax		
	comp=Z,6.0nm,0.8s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SONM	Songino Array	41.43	12	P	P	14 57 41.6	-4.5
ULN	Ulaanbaatar	41.60	13	⇓eP	P	14 57 46.8	-0.7
ULN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
DGZ	Jazzator, Alta	42.33	354	⇑eP	P	14 57 53.8	+0.3
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KSRS	Korea Array	42.67	41	P	P	14 57 56.3	0.0
	comp=Z,0.2nm,0.3s,baz=166,slow=29,SNR=2.8						
GEYT	Alibeck	44.39	318	P	P	14 58 10.0	-0.1
	comp=Z,4.3nm,0.8s,baz=140,slow=5.8,SNR=5.0						
GEYT	Alibeck	44.39	318	P	P	14 58 10.1	-0.1
KURK	Kurchatov	44.87	346	⇑eP	P	14 58 13.2	-0.5
KURK				pmax	pmax		
	comp=Z,11nm,0.9s						
KURK	Kurchatov	44.87	346	P	P	14 58 13.0	-0.7
KURK				IAmb	IAmb	14 58 21.0	
	comp=Z,18nm,0.9s						
ZAA0	Zalesovo Array	46.82	352	P	P	14 58 27.9	-1.2
ZALV	Zalesovo Beam	46.82	352	P	P	14 58 28.3	-0.7
	comp=Z,8.2nm,0.7s,baz=173,slow=7.8,SNR=12						
MDJ	Mudanjiang	48.04	34	P	P	14 58 47.8	+9.1
WRA	Warramunga Arr	48.11	125	P	P	14 58 40.8	+1.1
	comp=Z,1.1nm,0.7s,baz=306,slow=8.5,SNR=5.2						
WRA	Warramunga Arr	48.11	125	P	P	14 58 36.2	-3.5
WRA	Warramunga Arr	48.11	125	P	P	14 58 36.2	-3.5
RAYN	Ar Rayn	49.19	294	P	P	14 58 48.8	+0.9
RAYN				pmax	pmax		
	comp=Z,18nm,1.2s						
RAYN	Ar Rayn	49.19	294	P	P	14 58 48.8	+0.9
RAYN				IAmb	IAmb	14 58 56.7	
	comp=Z,18nm,1.2s						
BVAR	Borovoye Array	49.24	341	P	P	14 58 47.0	-0.8
	comp=Z,3.8nm,0.8s,baz=163,slow=6.2,SNR=7.9						
BVAR				PcP	PcP	15 00 09.7	-1.0
	comp=Z,2.5nm,0.9s,baz=70,slow=1.7,SNR=3.7						
BRVK	Borovoye	49.30	341	⇓eP	P	14 58 49.1	+0.8
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BRVK	Borovoye	49.30	341	P	P	14 58 45.8	-2.5
BRVK				IAmb	IAmb	14 58 53.9	
	comp=Z,5.2nm,0.8s						
ASAR	Alice Springs	49.75	130	P	P	14 58 53.5	+1.3
	comp=Z,1.4nm,0.6s,baz=302,slow=7.8,SNR=5.9						
ASAR	Alice Springs	49.75	130	P	P	14 58 52.3	+0.1
ASAR	Alice Springs	49.75	130	P	P	14 58 52.3	+0.1
ABKAR	Akbulak array	50.46	331	P	P	14 58 57.0	-0.2
BOD	Bodaibo	52.41	13	eP	P	14 59 12.9	+1.3
BOD				pmax	pmax		
	comp=Z,13nm,1.1s						
OPO	Ambohidratompo	53.10	240	P	P	14 59 19.9	+2.3
	comp=Z,2.1nm,0.8s,baz=6.0,slow=19,SNR=1.7						
ZEA	Zeya	53.20	24	eP	P	14 59 21.3	+3.8
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
PMG	Port Moresby	55.46	107	P	P	14 59 37.1	+2.4
	comp=Z,6.0nm,0.8s,baz=271,slow=15,SNR=3.0						
SVE	Sverdlovsk	55.65	338	eP	P	14 59 35.4	+0.2
SVE				pmax	pmax		
	comp=Z,18nm,0.9s						
ARU	Arti	56.13	337	P	P	14 59 37.4	-1.3
	comp=Z,0.6nm,0.4s,baz=125,slow=6.4,SNR=4.1						
ARU	Arti	56.13	337	c iP	P	14 59 37.6	-1.1
ARU				S	S	15 07 30.3	+3.6
ARU				SS	SS	15 11 13.4	+0.2
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KBZ	Khabaz	57.28	318	P	P	14 59 46.0	-1.0
	comp=Z,2.6nm,0.9s,baz=141,slow=5.9,SNR=2.9						
KBZ	Khabaz	57.28	318	⇓eP	P	14 59 46.8	-0.3
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KMBO	Kilima Mbogo	57.38	264	P	P	14 59 49.7	+1.1
	comp=Z,2.3nm,0.7s,baz=54,slow=14,SNR=3.7						
KMBO	Kilima Mbogo	57.38	264	P	P	14 59 50.8	+2.1
KMBO				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KIV	Kislovodsk	57.51	318	eP	P	14 59 48.6	-0.3
KIV				pmax	pmax		
	comp=Z,31nm,1.1s						
YAK	Yakutsk	60.25	18	P	P	15 00 06.3	-1.1
	comp=Z,2.4nm,0.3s,baz=310,slow=1.4,SNR=3.6						
YAK	Yakutsk	60.25	18	eP	P	15 00 08.5	+1.1
YAK				pmax	pmax		
	comp=Z,23nm,0.9s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.2s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
NRIK	Noril'sk	61.81	357	P	P	15 00 16.1	-1.8
	comp=N,2.3nm,0.7s,baz=153,slow=8.1,SNR=3.1						
NRIK	Noril'sk	61.81	357	⇓eP	P	15 00 17.3	-0.6
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.6s						
BRTR	Keskin Array B	62.60	311	P	P	15 00 22.2	-1.7
	comp=Z,0.8nm,0.8s,baz=134,slow=8.3,SNR=2.8						
BRTR	Keskin Array B	62.60	311	P	P	15 00 22.7	-1.3
BRTR	Keskin Array B	62.60	311	P	P	15 00 22.7	-1.3
VSR	Storozhevoye	62.60	325	⇑eP	P	15 00 24.1	+0.5
VSR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
OBN	Obninsk	65.60	328	⇑eP	P	15 00 44.3	+1.2
OBN				e		15 01 19.6	
OBN				e		15 03 06.0	
OBN				eS	PnS	15 09 52.4	+4.5
OBN				pmax	pmax		
	comp=Z,33nm,1.2s						
OBN				MLR	MLR		
	comp=Z,655nm,16.0s						
KLMR	Klimovskoe	66.69	334	eP	P	15 00 47.8	-2.3
KLMR				pmax	pmax		
	comp=Z,38nm,2.1s						
KLMR	Klimovskoe	66.69	334	eP	P	15 00 47.8	-2.3
KLMR				AMP		15 00 54.3	
	comp=Z,38nm,2.1s						
MA2	Magadan	67.01	28	P	P	15 00 51.2	-0.9
	comp=Z,7.2nm,0.9s,baz=151,slow=15,SNR=3.9						
TIXI	Tiksi	67.50	11	P	P	15 00 52.9	-2.0
	comp=Z,5.1nm,0.7s,baz=184,slow=4.0,SNR=5.8						
TIXI	Tiksi	67.50	11	⇑eP	P	15 00 53.0	-2.0
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TIXI	Tiksi	67.50	11	P	P	15 00 53.3	-1.7
CFR	Carcaliu	67.78	316	P	P	15 00 56.9	-0.4
CFR				pmax	pmax		
	comp=Z,4.0nm,2.7s						
VRI	Vrincioaia	68.89	316	P	P	15 01 04.2	-0.1
VRI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SEY	Seymchan	69.17	25	P	P	15 01 06.3	+0.6
	comp=Z,0.9nm,0.7s,baz=75,slow=22,SNR=4.3						
SEY	Seymchan	69.17	25	⇓eP	P	15 01 07.4	+1.7
MLR	Muntele Rosu	69.36	316	P	P	15 01 05.9	-1.4
MLR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KNT	Kendrikon	70.91	311	P	P	15 01 17.2	+0.4
KNT				pmax	pmax		
	comp=Z,6.0nm,1.7s						
JOF	Joensuu	71.09	335	P	P	15 01 15.4	-2.0
JOF				pmax	pmax		
	comp=Z,7.0nm,1.9s						
LIT	Litokhoron	71.10	310	P	P	15 01 15.6	-2.4
LIT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GRG	Griva	71.26	311	P	P	15 01 19.3	+0.3
GRG				pmax	pmax		
	comp=Z,8.0nm,2.4s						
FINES	FINESS Array B	72.94	332	P	P	15 01 26.9	-1.6
	comp=Z,4.2nm,0.6s,baz=98,slow=6.3,SNR=6.1						
FINES	FINESS Array B	72.94	332	P	P	15 01 27.0	-1.6
BOSA	Boshof	75.43	238	P	P	15 01 43.6	-0.3
	comp=Z,1.9nm,0.8s,baz=102,slow=16,SNR=1.8						
BOSA	Boshof	75.43	238	P	P	15 01 43.6	-0.3
BOSA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BOSA	Boshof	75.43	238	IAmb	IAmb	15 01 53.1	
	comp=Z,6.4nm,0.9s						
ARCES	ARCESS Array B	75.51	340	P	P	15 01 42.2	-1.2
	comp=Z,3.5nm,0.9s,baz=93,slow=4.9,SNR=6.8						
MORC	Moravsky Berou	75.57	319	P	P	15 01 43.7	-0.5
MORC				pmax	pmax		
	comp=Z,9.0nm,2.2s						
BILL	Bilibino	76.34	22	⇑eP	P	15 01 51.4	+3.3
BILL				e		15 04 41.2	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KSP	Ksiaz	76.46	320	P	P	15 01 52.2	+3.0
BRG	Berggiesshubel	77.95	320	eP	P	15 02 00.8	+3.3
	comp=Z,15nm,1.5s						
BRG	Berggiesshubel	77.95	320	eP	P	15 02 00.8	+3.3
BRG				pmax	pmax		
	comp=Z,15nm,1.5s						
GERES	GERESS Array B	78.02	318	P	P	15 01 57.1	-1.0
	comp=Z,1.0nm,0.8s,baz=52,slow=5.1,SNR=3.9						
NB2	NORSAR Subarra	79.96	331	P	P	15 02 06.9	-1.5
	comp=Z,13nm,1.4s,baz=91,slow=5.9						
NOA	NORSAR Array B	79.96	331	P	P	15 02 06.9	-1.5
	comp=Z,1.0nm,0.7s,baz=316,slow=23,SNR=3.1						
NOR	Nord	85.51	352	i P	P	15 02 41.0	+4.1
NOR	Nord	85.51	352	i P	P	15 02 41.0	+4.1
IMAR	Indian Mountai	91.88	22	P	P	15 03 06.9	-0.5
ILAR	Eielson Array	95.00	22	P	P	15 03 22.2	+0.4
	comp=Z,0.8nm,1.0s,baz=279,slow=2.3,SNR=1.8						
RES	Resolute Bay	97.67	2	P	Pdif	15 03 34.9	+1.1
	comp=Z,3.9nm,0.8s,baz=330,slow=23,SNR=5.6						
NVAR	Mina Array Bea	125.15	31	PKP	PKiKP	15 09 02.3	+1.3
	comp=Z,0.8nm,0.8s,baz=330,slow=2.5,SNR=2.9						
PDAR	Pinedale Array	125.42	21	PKP	PKiKP	15 09 02.0	+0.6
	comp=Z,1.0nm,0.9s,baz=52,slow=2.4,SNR=6.5						
PLCA	Paso Flores	144.29	200	PKP	PKiKP	15 09 38.2	-1.3
	comp=Z,5.2nm,1.0s,baz=236,slow=3.9,SNR=4.9						
CPUP	Villa Florida	147.09	232	PKPbc	PKPbc	15 09 43.8	+0.7
	comp=Z,2.4nm,0.6s,baz=81,slow=2.0,SNR=3.9						

ISC 21 14:52:15.6±1.0, 45°.23N±0°.03×14°.53E±0°.04, h11km±7km, n14, σ0s.72/24, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIY	Rijeka	0.10	341	i Pg	Pg	14 52 18.2	-0.2
RIY				Sg	Sg	14 52 20.6	+0.3
KNDS	Knezji Dol	0.31	341	i Pg	Pg	14 52 22.1	+0.1
KNDS				eSg	Sb	14 52 28.3	-0.2
GBRS	Gornja Briga	0.36	34	i Pg	Pg	14 52 22.8	-0.1
GBRS				eSg	Sb	14 52 28.8	-0.9
SKDS	Skadanscina	0.48	311	i Pg	Pg	14 52 24.6	-0.4
SKDS				i Sg	Sb	14 52 32.8	-0.4
CEY	Cerknica	0.51	352	eSg	Sb	14 52 35.4	+1.3
	comp=Z,3.0nm,0.1s						
BOJS	Bojanci	0.58	62	ePg	Pg	14 52 26.6	-0.3
BOJS				eSg	Sg	14 52 34.7	+0.2
VISS	Visnje	0.61	21	ePg	Pg	14 52 27.2	-0.3
VISS				eSg	Sb	14 52 36.8	-0.1
GBAS	Gorenja Brezov	0.70	355	eSg	Sb	14 52 40.5	+0.8
	comp=Z,3.0nm,0.2s						
NVLJ	Novalja	0.71	160	Sg	Sg	14 52 37.7	-1.0
JAVS	Javornik	0.74	334	ePg	Pg	14 52 29.5	-0.4
JAVS				eSg	Sb	14 52 42.0	+1.4
OZLJ	Ozalj	0.76	60	Sg	Sg	14 52 40.8	+0.4
DUGI	Dugi Otok	1.30	163	ePg	Pn	14 52 39.4	-0.2
DUGI				Sg	Sg	14 52 57.8	+0.4
MORI	Morici	1.60	148	ePn	Pn	14 52 44.1	+0.2
MORI				Sn	Sg	14 53 07.3	+0.1
ZIRJ	Zirje	1.77	153	ePn	Pn	14 52 45.4	-0.8
ZIRJ				Sn	Sb	14 53 11.8	+1.6

WEL 21 14:52:48.8, 40°.7S±0°.7×17°6E±°, h30km±1km, ML3.7/12, MLv3.4/12, Error ellipse: s-maj=0.0km s-min=0.0km az=96.8, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIWZ	Tintock	0.13	158	P	Pn	14 52 54.6	-0.1
TIWZ				S	Sn	14 52 58.9	+0.5
PRWZ	Pori Road	0.15	47	P	Pn	14 52 55.0	-0.1
PRWZ				S	Sn	14 53 00.0	+1.1
MRZ	Mangatainoka R	0.18	269	P	Pn	14 52 55.3	-0.3
MRZ				S	Sn	14 53 00.1	+0.3
POWZ	Post Office Ro	0.27	351	P	Pb	14 52 56.3	+0.4
BFZ	Birch Farm	0.32	94	P	Pb	14 52 56.8	+0.2
BFZ				S	Sn	14 53 03.5	+0.4
HOWZ	Holdsworth Sta	0.33	224	P	Pn	14 52 57.2	-0.4
CPWZ	Castlepoint	0.38	131	P	Pn	14 52 58.3	+0.1
DVHZ	Dannevirke	0.45	36	P	Pb	14 52 58.5	+0.1
DVHZ				S	Sb	14 53 05.4	+0.5
TMWZ	Te Maipa	0.45	173	P	Pn	14 52 59.0	-0.3
OGWZ	Otaki Gorge	0.52	252	P	Pn	14 53 00.2	0.0
OGWZ				S	Sn	14 53 07.9	0.0
ANWZ	Angora Road	0.54	68	P	Pb	14 53 00.0	+0.3
ANWZ				S	Sn	14 53 09.0	+0.7
MTW	Mount Morrison	0.55	206	P	Pb	14 53 00.3	+0.2
MTW				S	Sn	14 53 09.5	+0.6
OHWZ	Ohakea	0.60	319	P	Pn	14 53 02.2	+1.1
TSZ	Takapari Road	0.61	10	P	Pb	14 53 01.2	+0.2
TSZ				S	Sn	14 53 10.2	-0.1
KIW	Kapiti Island	0.72	253	P	Pn	14 53 03.4	+0.5
KIW				S	Sn	14 53 13.8	+0.8
CAW	Cannon Point	0.73	232	P	Pn	14 53 03.0	0.0
PRHZ	Porangahau	0.73	58	P	Pb	14 53 02.8	-0.3
TRWZ	Traveller	0.74	188	P	Pn	14 53 02.8	-0.5
WPHZ	Waipukurau	0.76	39	P	Pb	14 53 03.7	+0.2
PAWZ	Paruwai Farm	0.78	202	P	Pn	14 53 03.6	-0.2
PNHZ	Pukenui	0.80	21	P	Pb	14 53 04.2	0.0
PNHZ				S	Sn	14 53 16.1	+1.2
MSWZ	Moikau Station	0.87	210	P	Pn	14 53 04.4	-0.6
PLWZ	Palliser	1.00	205	P	Pn	14 53 06.1	-0.8
PLWZ				S	Sn	14 53 19.4	-0.7
PXZ	Pawanui	1.01	52	P	Pn	14 53 06.6	-0.3
WEL	Wellington	1.01	232	P	Pn	14 53 07.0	+0.1
BHW	Baring Head	1.04	224	P	Pn	14 53 06.9	-0.4
KRHZ	Kereru	1.10	23	P	Pn	14 53 08.2	+0.1
WAZ	Wanganui	1.11	324	P	Pb	14 53 10.0	+0.7
KAHZ	Kahuranaki	1.18	43	P	Pn	14 53 09.1	-0.2
BHHZ	Black Hill Sta	1.18	9	P	Pn	14 53 09.8	+0.5
MOVZ	Moawhango	1.25	358	P	Pn	14 53 11.0	+0.7
TCW	Tory Channel	1.29	244	P	Pn	14 53 10.7	-0.1
MTVZ	Mangateitei	1.30	348	P	Pb	14 53 12.8	+0.1
KWHZ	Kaweka Forest	1.32	21	P	Pn	14 53 11.4	+0.2
TRVZ	Turoa	1.38	351	P	Pb	14 53 13.6	-0.4
MCHZ	McNeill Hill	1.39	29	P	Pn	14 53 12.2	+0.1
WHVZ	Whangaehu Hut	1.39	352	P	Pb	14 53 13.8	-0.4
TUVZ	Tukino	1.40	355	P	Pb	14 53 13.7	-0.7
PKVZ	Pokaka	1.42	345	P	Pb	14 53 14.0	-0.6
FWVZ	Far West T-bar	1.42	352	P	Pb	14 53 14.0	-0.7
DUWZ	D'Urville Isla	1.45	264	P	Pn	14 53 14.0	+1.0
NGZ	Ngauruhoe	1.49	353	P	Pb	14 53 15.1	-0.9
WTVZ	West Tongariro	1.55	353	P	Pb	14 53 15.8	-1.2
KRVZ	Karewarewa	1.57	355	P	Pb	14 53 16.0	-1.2
BKZ	Black Stump Fm	1.58	19	P	Pn	14 53 14.7	-0.1
TWVZ	Taurewa	1.61	349	P	Pn	14 53 16.4	+1.1
TUWZ	Tuamarina	1.62	241	P	Pn	14 53 14.8	-0.4
LREZ	Lake Rotokare	1.62	317	P	Pb	14 53 18.2	+0.2
CMWZ	Cape Campbell	1.63	228	P	Pb	14 53 17.1	-1.1
ARHZ	Aropaoanui	1.66	33	P	Pn	14 53 15.6	-0.3
RITZ	Rihia Road	1.68	1	P	Pn	14 53 17.3	+1.2
KATZ	Kakaramea	1.69	357	P	Pn	14 53 17.6	+1.3
NMHZ	Naumai	1.73	26	P	Pn	14 53 17.0	+0.1
VRZ	Vera Road	1.74	332	P	Pb	14 53 19.2	-0.8
RATZ	Rangitukua	1.79	359	P	Pn	14 53 18.6	+0.9
BSWZ	Blackbirch Sta	1.81	234	P	Pn	14 53 17.3	-0.6
PREZ	Palmer Road	1.83	315	P	Pb	14 53 20.7	-0.9
MRHZ	Matea Rd	1.88	14	P	Pn	14 53 18.8	-0.1
WHHZ	Waihua	1.92	35	P	Pn	14 53 19.0	-0.4
DREZ	Durham Road	1.93	319	P	Pb	14 53 23.2	0.0
NNZ	Nelson	1.93	252	P	Pn	14 53 19.9	+0.4
NMEZ	Namu Road	1.94	309	P	Pb	14 53 23.5	0.0
KHEZ	Kahui Hut	1.95	314	P	Pb	14 53 22.2	-1.5
WATZ	Wairara	1.95	358	P	Pn	14 53 20.4	+0.5
MTHZ	Maungataniwha	1.97	24	P	Pn	14 53 19.7	-0.4
RAHZ	Arahi	2.00	30	P	Pn	14 53 19.8	-0.7
PKE	Pukeiti	2.03	315	P	Pb	14 53 24.6	-0.5
NBEZ	Newall Road No	2.05	312	P	Pb	14 53 26.1	+0.9
ALRZ	Allen Road	2.13	11	P	Pn	14 53 21.9	-0.5
WPRZ	Whakapapatarin	2.15	7	P	Pn	14 53 22.5	-0.1
PRRZ	Plateau Road	2.20	12	P	Pn	14 53 22.9	-0.4
SNGZ	Shannon Statio	2.21	32	P	Pn	14 53 22.5	-0.9
RTZ	Ruatahuna	2.23	24	P	Pn	14 53 23.3	-0.5
HIZ	Hauiti	2.27	340	P	Pn	14 53 25.7	+1.4
TLZ	Tolley Road	2.34	355	P	Pn	14 53 26.4	+1.2
PRGZ	Paritu Road	2.35	43	P	Pn	14 53 24.1	-1.2
HSRZ	Hossack Road	2.37	8	P	Pn	14 53 25.6	+0.1
RRRZ	Republican Roa	2.38	13	P	Pn	14 53 25.3	-0.4
KHZ	Kahutara	2.45	224	P	Pn	14 53 25.0	-1.7
RIGZ	Rimuhau	2.46	38	P	Pn	14 53 25.5	-1.4
THZ	Tophouse	2.46	242	P	Pn	14 53 26.8	-0.1
TARZ	Mount Tarawera	2.48	13	P	Pn	14 53 26.8	-0.3
QRZ	Quartz Range	2.51	265	P	Pn	14 53 28.1	+0.7
URZ	Urewera	2.60	23	P	Pn	14 53 27.1	-1.6
MWZ	Matawai	2.67	30	P	Pn	14 53 28.1	-1.7
TKGZ	Te Karaka	2.71	36	P	Pn	14 53 28.6	-1.7
TOZ	Tahuroa Road	2.94	355	P	Pn	14 53 33.8	+0.5
TWGZ	Tauwhareparae	2.99	35	P	Pn	14 53 32.1	-2.0
RUGZ	Raukumara Rang	3.05	29	P	Pn	14 53 33.4	-1.6
DSZ	Denniston Nort	3.22	249	P	Pn	14 53 38.7	+1.3
PKGZ	Pakihiroa	3.27	33	P	Pn	14 53 36.7	-1.3
HAZ	Te Kaha	3.27	28	P	Pn	14 53 36.3	-1.7
LTZ	Lake Taylor	3.40	230	P	Pn	14 53 38.6	-1.2
WMGZ	Waiomatatini S	3.48	36	P	Pn	14 53 39.0	-1.8
OKCZ	Okains Bay	3.69	213	P	Pn	14 53 41.6	-2.1
MQZ	McQueen's Vall	3.85	217	P	Pn	14 53 43.2	-2.7
AKCZ	Akaroa Harbour	3.87	213	P	Pn	14 53 45.2	-1.0
OXZ	Oxford	3.88	225	P	Pn	14 53 45.2	-1.2
RVAZ	Riverhead Bore	4.00	346	P	Pn	14 53 46.5	-1.5
ODZ	Otahua Downs	5.80	219	P	Pn	14 54 10.5	-2.2
CTZ	Chatham Island	6.40	121	P	Pn	14 54 20.0	-0.9

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*NEIC **21** 14:53:03.8±1.4, 7°.38N±0°.05×94°.2E±0°.1, h10km±1km, mb4.5/16, Error ellipse: s-maj=19.6km s-min=6.6km az=254.0*

*IDC **21** 14:53:03.3±0.6, 7°.52N×94°.35E, h0km, mb4.2/21, mb1 4.2/22, mb1mx4.1/56, mbtmp4.2/22, ML3.7/1, Error ellipse: s-maj=24.0km s-min=14.0km az=54.0*

*NDI **21** 14:53:05.6±2.6, 7°.48N×94°.08E, h10km, mb4.5, mb4.5(NEIC)*

ISC 21 14:53:06.7±0.5, 7°.49N±0°.08×94°.29E±0°.08, h24km, n73, σ1s.13/69, mb4.3/26, 4C-2D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	3.47	130	Pn	Pn	14 53 59.6	+0.4
PBA	Port Blair	4.41	340	eP	Pn	14 54 12.7	+0.5
DGPR	DIGLIPUR	5.81	347	eP	Pn	14 54 31.8	+0.3
PSI	Prapat	6.56	135	Pn	Pn	14 54 43.2	+1.3
	1.6nm,0.3s,baz=310,slow=11,SNR=2.9						
RPSI	Rantau Prapat	6.63	136		Pn	14 54 43.2	+0.4
KULM	Kulim	6.69	109	Pn	Pn	14 54 42.8	-0.7
IPM	Ipoh	7.34	114	Pn	Pn	14 54 50.4	-2.1
PBKT	Sadao Pong	11.14	35		Pn	14 55 45.5	+0.9
CMAR	Chiang Mai Arr	11.81	22	Pn	Pn	14 55 55.4	+1.6
	0.5nm,0.3s,baz=212,slow=14,SNR=7.8						
MDRS	Chennai	14.88	293	IAmb	IAmb	14 56 10.1	
	comp=Z,11nm,0.7s						
MDRS				eP	Pn	14 56 33.1	-2.7
BOK	Bokaro	18.11	335	eP	Pn	14 57 16.5	-0.3
SHL	Shillong	18.13	353	eP	Pn	14 57 16.8	-0.3
ODAN	Odare	20.35	342	eP	P	14 57 41.7	-0.1
	comp=Z,26nm,0.6s						
RAMN	Ramite	20.69	340	eP	P	14 57 46.2	+0.8
	comp=Z,64nm,0.7s						
TAPN	Taplejung	20.72	343	eP	P	14 57 44.9	-0.9
	comp=Z,79nm,0.9s						
JIRN	Jiri	21.48	340	eP	P	14 57 53.3	-0.8
PKI	Pulchoki	21.68	338	eP	P	14 57 56.2	0.0
	comp=Z,52nm,1.0s						
PKIN	Phulchoki	21.69	338	eP	P	14 57 58.1	+1.9
	comp=Z,32nm,0.8s						
GUN	Gumba	21.82	340	eP	P	14 57 58.0	+0.3
KKN	Kakani	21.92	338	eP	P	14 57 58.4	-0.3
	comp=Z,86nm,1.3s						
LSA	Lhasa	22.29	353	P	P	14 58 02.6	-0.4
LSA				IAmb	IAmb	14 58 11.3	
	comp=Z,21nm,0.8s						
GKN	Gorkha	22.36	337	eP	P	14 58 02.5	-0.8
H08S3	Diego Garcia H	26.42	236	T	T	15 25 26.6	
	baz=55,slow=75,SNR=17						
H08S2	Diego Garcia H	26.42	236	T	T	15 25 33.8	
	baz=55,slow=75,SNR=17						
H08S1	Diego Carcia H	26.44	236	T	T	15 25 25.7	
	baz=55,slow=75,SNR=15						
NIL	Nilore	32.50	326	P	P	14 59 35.4	-0.3
AAK	Ala-Archa	39.12	337	P	P	15 00 34.1	+1.6
	comp=Z,4.1nm,1.1s,baz=187,slow=10,SNR=3.4						
FITZ	Fitzroy Crossi	40.05	130	P	P	15 00 39.6	-0.7
	comp=Z,2.3nm,1.0s,baz=45,slow=10.0,SNR=2.6						
FITZ	Fitzroy Crossi	40.05	130	P	P	15 00 37.9	-2.5
FITZ				IAmb	IAmb	15 00 48.8	
	comp=Z,5.3nm,1.1s						
MK31	Makanchi Array	40.50	347	P	P	15 00 42.9	-0.8
MK31				IAmb	IAmb	15 00 49.0	
	comp=Z,8.1nm,0.9s						
MKAR	Makanchi Array	40.50	347	P	P	15 00 43.0	-0.6
	comp=Z,5.5nm,0.8s,baz=166,slow=7.9,SNR=10						
MKAR				PcP	PcP	15 02 47.4	+1.4
	comp=Z,0.9nm,0.7s,baz=182,slow=7.2,SNR=3.5						
MKAR	Makanchi Array	40.50	347	P	P	15 00 42.7	-1.0
MAKZ	Makanchi	40.58	347	P	P	15 00 43.8	-0.5
MAKZ				IAmb	IAmb	15 00 49.6	
	comp=Z,5.0nm,0.8s						
KK31	Karatay Array	41.17	333	P	P	15 00 49.1	-0.2
KKAR	Karatay Array	41.17	333	P	P	15 00 48.5	-0.8
KKAR	Karatay Array	41.17	333	P	P	15 00 49.1	-0.2
KKAR				IAmb	IAmb	15 01 01.5	
	comp=Z,3.8nm,0.9s						
SONM	Songino Array	41.51	12	P	P	15 00 52.6	+0.5
	comp=Z,2.4nm,1.0s,baz=218,slow=20,SNR=2.9						
KSRS	Korea Array	42.66	41	P	P	15 01 02.8	+1.2
	comp=Z,1.7nm,1.0s,baz=213,slow=11,SNR=4.1						
GEYT	Alibeck	44.58	318	P	P	15 01 17.6	+0.5
	comp=Z,4.1nm,0.7s,baz=141,slow=9.6,SNR=7.6						
GEYT	Alibeck	44.58	318	P	P	15 01 17.1	0.0
KURK	Kurchatov	45.02	346	P	P	15 01 20.1	-0.1
ZAA0	Zalesovo Array	46.96	352	P	P	15 01 35.5	0.0
ZAA0				IAmb	IAmb	15 01 41.6	
	comp=Z,10nm,0.9s						
ZALV	Zalesovo Beam	46.96	352	P	P	15 01 35.4	-0.1
	comp=Z,4.7nm,0.5s,baz=185,slow=8.0,SNR=10.0						
ZALV	Zalesovo Beam	46.96	352	P	P	15 01 34.1	-1.4
WRA	Warramunga Arr	47.92	125	P	P	15 01 42.9	-0.7
	comp=Z,1.3nm,0.8s,baz=307,slow=8.3,SNR=5.1						
WRA	Warramunga Arr	47.92	125	P	P	15 01 41.7	-1.8
RAYN	Ar Rayn	49.38	295	P	P	15 01 54.0	-0.8
RAYN				IAmb	IAmb	15 01 59.5	
	comp=Z,7.0nm,0.8s						
BRVK	Borovoye	49.46	341	P	P	15 01 54.2	-0.7
BRVK				IAmb	IAmb	15 01 58.6	
	comp=Z,4.0nm,0.9s						
ASAR	Alice Springs	49.56	130	P	P	15 01 55.1	-1.0
	comp=Z,1.6nm,0.6s,baz=301,slow=7.6,SNR=4.8						
ASAR				PcP	PcP	15 03 18.0	+0.2
	comp=Z,0.5nm,0.7s,baz=302,slow=3.8,SNR=1.2						
ABKAR	Akbulak array	50.64	331	P	P	15 02 04.4	+0.5
KMBO	Kilima Mbogo	57.52	264	P	P	15 02 57.0	+1.9
	comp=Z,2.6nm,0.9s,baz=32,slow=19,SNR=3.3						
STKA	Stephens Creek	59.74	134	P	P	15 03 10.6	+0.8
	comp=Z,1.9nm,0.9s,baz=201,slow=16,SNR=2.0						
STKA	Stephens Creek	59.74	134	P	P	15 03 09.1	-0.7
NRIK	Noril'sk	61.93	357	P	P	15 03 25.9	+1.8
	comp=Z,2.3nm,0.6s,baz=139,slow=8.9,SNR=4.3						
TIXI	Tiksi	67.58	11	P	P	15 03 59.9	-1.0
	comp=Z,3.8nm,0.6s,baz=217,slow=3.7,SNR=7.1						
TIXI	Tiksi	67.58	11	P	P	15 03 59.8	-1.1
AKASG	Malin Array Be	68.55	322	P	P	15 04 06.2	-1.2
	comp=Z,0.2nm,0.3s,baz=87,slow=4.9,SNR=1.8						
PETR	Petresti	68.70	316	⇓P	P	15 04 15.6	+7.2
VRI	Vrincioaia	69.08	316	⇑P	P	15 04 09.8	-1.0
PLOR	Plostina	69.13	316	⇑P	P	15 04 13.0	+1.8
TESR	Tescani	69.26	317	⇓P	P	15 04 10.5	-1.4
MLR	Muntele Rosu	69.55	316	⇑P	P	15 04 15.7	+1.8
ARR	Arges	70.44	315	⇑P	P	15 04 17.3	-1.9
FINES	FINESS Array B	73.12	332	P	P	15 04 34.2	-0.7
	comp=Z,3.6nm,0.7s,baz=108,slow=6.2,SNR=8.9						
BOSA	Boshof	75.50	238	P	P	15 04 51.0	+1.4
	comp=Z,1.2nm,0.6s,baz=128,slow=19,SNR=1.7						
BOSA	Boshof	75.50	238	P	P	15 04 48.1	-1.6
BOSA				IAmb	IAmb	15 04 56.8	
	comp=Z,5.7nm,0.9s						
ARCES	ARCESS Array B	75.68	340	P	P	15 04 49.5	-0.2
	comp=Z,5.5nm,1.0s,baz=62,slow=4.9,SNR=2.7						
GERES	GERESS Array B	78.21	318	P	P	15 05 04.9	+0.4
	comp=Z,1.4nm,0.7s,baz=90,slow=5.9,SNR=6.0						
NB2	NORSAR Subarra	80.14	331	P	P	15 05 13.4	-1.3
	comp=Z,11nm,1.1s,baz=94,slow=5.1						
NOA	NORSAR Array B	80.14	331	P	P	15 05 14.3	-0.4
	comp=Z,0.9nm,0.8s,baz=101,slow=4.4,SNR=2.2						
TORD	Torodi Ar. Bea	90.83	283	P	P	15 06 10.8	+1.9
	comp=Z,0.7nm,0.7s,baz=133,slow=4.7,SNR=3.8						
RES	Resolute Bay	97.78	2	P	Pdif	15 06 39.7	+0.2
	comp=Z,0.8nm,0.9s,baz=0.0,slow=20,SNR=2.0						

PDAR	**Pinedale Array**	**125.47**	**21**	PKP	**PKiKP**	**15 12 07.5**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=204,slow=2.0,SNR=3.0						

WEL 21 14:55:49.9±0.6,**35°S**±10°×**18°0W**±2°3,**h428**^{km}±6^{km}, **ML4.7**/2,**MLv4.0**/12,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PKGZ	**Pakihiroa**	**3.60**	**208**	P	P	14 56 57.7	-2.3
PKGZ				S	S	14 57 56.6	-0.7
HAZ	**Te Kaha**	**3.61**	**212**	P	P	14 56 57.2	-2.8
HAZ				S	S	14 57 57.4	+0.2
PUZ	**Puketiti**	**3.70**	**205**	P	P	14 57 00.0	-0.8
PUZ				S	S	14 57 58.9	+0.2
RUGZ	**Raukumara Rang**	**3.83**	**212**	P	P	14 56 59.9	-2.2
RUGZ				S	S	14 58 00.3	-0.7
TWGZ	**Tauwhareparae**	**3.89**	**207**	P	P	14 57 02.4	-0.2
TWGZ				S	S	14 58 05.0	+3.1
TKGZ	**Te Karaka**	**4.17**	**207**	P	P	14 57 03.8	-1.2
TKGZ				S	S	14 58 09.6	+3.2
MWZ	**Matawai**	**4.21**	**210**	P	P	14 57 04.4	-1.0
MWZ				S	S	14 58 07.0	-0.1
URZ	**Urewera**	**4.33**	**214**	P	P	14 57 04.8	-1.7
SNGZ	**Shannon Statio**	**4.66**	**209**	P	P	14 57 09.9	+0.2
BKZ	**Black Stump Fm**	**5.34**	**213**	P	P	14 57 17.0	+0.5
RIZ	**Raoul Island**	**5.68**	**17**	S	S	14 58 35.9	+2.1
KAHZ	**Kahuranaki**	**5.72**	**207**	P	P	14 57 22.5	+2.1
HIZ	**Hauiti**	**5.74**	**227**	P	P	14 57 21.2	+0.7
KRHZ	**Kereru**	**5.79**	**211**	P	P	14 57 21.9	+0.8
BHHZ	**Black Hill Sta**	**5.80**	**214**	P	P	14 57 21.6	+0.4
PRHZ	**Porangahau**	**6.22**	**206**	P	P	14 57 28.0	+2.5
TSZ	**Takapari Road**	**6.31**	**211**	P	P	14 57 27.8	+1.2

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*NEIC **21** 15:00:30.0±1.5,5°.59S±0°.08×152°.2E±0°.1,h59^{km}±10^{km}, mb4.3/16,Error ellipse: s-maj=17.8km s-min=10.7km az=107.0*

*IDC **21** 15:00:31.0±4.0,5°.62S×152°.22E,h59^{km}±31^{km},mb3.6/4, mb1 3.9/5,mb1mx3.4/46,mbtmp3.9/5,ML2.2/1,Error ellipse: s-maj=59.7km s-min=11.4km az=117.0*

ISC 21 15:00:28.3±0.7,**5°.65S**±0°.06×**152°.4E**±0°.1,**h40**^{km},**n28**, σ**1^{s}85**/29,**mb4.1**/12,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.38**	**346**	P	**Pn**	**15 00 52.1**	**+1.0**
	730nm,0.3s,baz=173,slow=8.1,SNR=996						
KRVT				S	**Sn**	**15 01 10.2**	**+2.1**
	278nm,0.3s,baz=59,slow=21,SNR=4.7						
RABL	**Rabaul**	**1.47**	**352**		**Pn**	**15 00 53.5**	**+1.2**
PMG	**Port Moresby**	**6.37**	**234**	P	**Pn**	**15 02 01.5**	**+1.8**
	3.2nm,0.3s,baz=49,slow=14,SNR=16						
PMG				S	**Sn**	**15 03 12.6**	**+1.5**
	3.9nm,0.3s,baz=111,slow=23,SNR=9.1						
PMG	**Port Moresby**	**6.37**	**234**		**Pn**	**15 02 00.4**	**+0.8**
WB0	**Warramunga Arr**	**22.41**	**230**	P	**P**	**15 05 23.8**	**+0.1**
WB0				IAmb	IAmb	15 05 36.2	
	comp=Z,9.4nm,1.4s						
WR0	**Warramunga Arr**	**22.42**	**229**		P	15 05 15.9	-7.9
WRAB	**Tennant Creek**	**22.55**	**229**	P	**P**	**15 05 20.3**	**-4.9**
WRAB				IAmb	IAmb	15 05 33.4	
	comp=Z,3.8nm,0.9s						
WB2	**Warramunga Arr**	**22.55**	**229**	P	**P**	**15 05 23.5**	**-1.7**
WRA	**Warramunga Arr**	**22.56**	**229**	P	**P**	**15 05 25.6**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=54,slow=10,SNR=9.9						
WRA	**Warramunga Arr**	**22.56**	**229**	P	**P**	**15 05 22.1**	**-3.2**
KNRA	**Kununurra**	**25.21**	**245**	P	**P**	**15 05 52.1**	**+1.5**
KNRA				IAmb	IAmb	15 06 06.2	
	comp=Z,13nm,1.1s						
AS31	**Alice Springs**	**25.23**	**223**	P	**P**	**15 05 52.2**	**+1.4**
ASAR	**Alice Springs**	**25.23**	**223**	P	**P**	**15 05 51.6**	**+0.9**
	comp=Z,2.5nm,0.8s,baz=55,slow=9.4,SNR=21						
ASAR	**Alice Springs**	**25.23**	**223**	P	**P**	**15 05 52.6**	**+1.9**
FITZ	**Fitzroy Crossi**	**28.88**	**242**	P	**P**	**15 06 21.5**	**-2.0**
	comp=Z,1.2nm,0.7s,baz=45,slow=2.9,SNR=3.1						
FITZ	**Fitzroy Crossi**	**28.88**	**242**	P	**P**	**15 06 22.8**	**-0.7**
FITZ				IAmb	IAmb	15 06 42.3	
	comp=Z,2.6nm,0.9s						
BBOO	**Buckleboo**	**31.00**	**207**	P	**P**	**15 06 41.8**	**-0.4**
BBOO				IAmb	IAmb	15 06 54.3	
	comp=Z,8.1nm,1.1s						
OUZ	**Omahuta**	**35.34**	**149**	P	**P**	**15 07 20.8**	**+0.8**
AFI	**Afiamalu**	**36.23**	**106**	P	**P**	**15 07 26.8**	**-1.1**
YOJ	**Yonaguni jima**	**41.39**	**318**	P	**P**	**15 08 09.5**	**-1.4**
YULB	**Yu-li**	**41.88**	**315**	P	**P**	**15 08 13.8**	**-1.1**
MAJO	**Matsushiro**	**44.02**	**344**	P	**P**	**15 08 31.0**	**-1.1**
MAJO				IAmb	IAmb	15 08 38.2	
	comp=Z,21nm,1.4s						
MJB9	**Matsu-Tunnel**	**44.02**	**344**	P	**P**	**15 08 30.8**	**-1.3**
MJB9				IAmb	IAmb	15 08 38.2	
	comp=Z,21nm,1.4s						
IPM	**Ipoh**	**52.25**	**280**	P	**P**	**15 09 32.9**	**-3.2**
IPM				IAmb	IAmb	15 09 35.0	
	comp=Z,5.6nm,0.8s						
IL31		**83.11**	**22**	P	**P**	**15 12 51.5**	**+1.9**
IL31				IAmb	IAmb	15 12 52.0	
	comp=Z,1.8nm,0.9s						
ILAR	**Eielson Array**	**83.11**	**22**	P	**P**	**15 12 50.4**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=244,slow=5.4,SNR=18						
ILAR	**Eielson Array**	**83.11**	**22**	P	**P**	**15 12 51.3**	**+1.7**
TORD	**Torodi Ar. Bea**	**150.15**	**287**	PKPbc	**PKiKP**	**15 20 16.2**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=64,slow=3.4,SNR=2.6						

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*SOME **21** 15:03:15.3,41°.35N×68°.95E,h10^{km}*

*ISU **21** 15:03:15.4,41°.43N×68°.97E,h10^{km}*

*NNC **21** 15:03:17.3±1.0,41°.40N×69°.09E,h11^{km}±6^{km},mb3.7, mpv3.4,Error ellipse: s-maj=7.1km s-min=6.2km az=99.0*

ISC 21 15:03:15.5±1.2,**41°.48N**±0°.05×**68°.91E**±0°.04,**h14**^{km}±10^{km}, **n31**,σ**2^{s}70**/40,**1C-3D**,**Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAS	**Tashkent**	**0.33**	**118**	P	**Pg**	**15 03 21.2**	**-1.0**
TAS				S	**Sb**	**15 03 25.6**	**-2.7**
TGS	**TashGRES**	**0.46**	**97**	P	**Pg**	**15 03 21.5**	**-3.1**
TGS				S	Sb	15 03 45.6	+13
CHRV	**Charvak**	**0.80**	**78**	P	**Pn**	**15 03 32.4**	**0.0**
CHRV				S	**Sb**	**15 03 42.1**	**+0.2**
IUG	**Iuzhnay**	**1.07**	**51**	*e*P	**Pb**	**15 03 36.7**	**+0.8**
	24nm,0.2s						
IUG				*e*S	**Sg**	**15 03 51.9**	**+1.7**
	256nm,0.2s						
IUG	**Iuzhnay**	**1.07**	**51**	P	**Pb**	**15 03 36.7**	**+0.8**
	24nm,0.2s						
IUG				S	**Sg**	**15 03 51.8**	**+1.7**
	256nm,0.2s						
DZI	**Dzhizak**	**1.59**	**212**	P	**Pg**	**15 03 44.4**	**-1.6**
DZI				S	**Sg**	**15 04 04.6**	**-2.0**
BRLS	**Borolday**	**1.70**	**24**	*e*P	**Pn**	**15 03 43.1**	**-1.7**
	19nm,0.3s						
BRLS				*e*S	**Sn**	**15 04 03.0**	**-3.3**
	89nm,0.2s						
BRLS	**Borolday**	**1.70**	**24**	P	**Pn**	**15 03 43.1**	**-1.7**
	19nm,0.3s						
BRLS				S	**Sn**	**15 04 03.0**	**-3.3**
	89nm,0.2s						
KK31	**Karatay Array**	**2.01**	**36**	Pn	**Pn**	**15 03 50.8**	**+1.7**
	0.5nm,0.2s,baz=206,slow=12,SNR=159						
KK31				⇓Pg	**Pb**	**15 03 54.2**	**+2.3**
	3.9nm,0.2s,baz=215,slow=17,SNR=8.6						
KK31				Lg	Lg	15 04 20.3	
	48nm,0.3s,baz=219,slow=27,SNR=32						
NAM	**Namangan**	**2.13**	**102**	P	**Pg**	**15 03 56.8**	**+0.5**
DZA	**Taraz**	**2.29**	**51**	*e*P	**Pb**	**15 03 58.5**	**+1.9**
	45nm,0.1s						
DZA				*e*S	**Sg**	**15 04 28.9**	**-0.1**
	163nm,0.3s						
FRG	**Fergana**	**2.29**	**108**	P	**Pg**	**15 03 57.3**	**-2.2**
FRG				S	**Sg**	**15 04 28.4**	**-0.8**
MRKS	**Merke**	**3.45**	**67**	*e*P	**Pb**	**15 04 18.6**	**+2.1**
	18nm,0.5s						
MRKS				*e*S	**Sg**	**15 05 03.8**	**-2.5**
	40nm,0.5s						
AML	**Almayashu**	**3.63**	**78**	P	**Pb**	**15 04 21.7**	**+2.0**
	SNR=23						
EKS2	**Erkin-Say**	**3.81**	**70**	P	**Pb**	**15 04 25.2**	**+2.6**
	SNR=13						
UCH	**Uchtor**	**4.25**	**78**	P	**Pb**	**15 04 33.0**	**+2.7**
	SNR=9.3						
AAK	**Ala-Archa**	**4.32**	**73**	Pn	**Pn**	**15 04 22.2**	**+1.3**
	0.7nm,0.4s						
AAK				Pg	**Pb**	**15 04 34.7**	**+3.4**
	7.0nm,0.8s						
AAK				Lg	Lg	15 05 31.6	
	12nm,0.8s						
USP	**Ospenovka**	**4.51**	**65**	P	**Pb**	**15 04 37.3**	**+2.8**
	SNR=7.2						
CHMS	**Chumysh**	**4.59**	**69**	P	**Pb**	**15 04 38.3**	**+2.4**
	SNR=6.2						
CHMS	**Chumysh**	**4.59**	**69**	⇑Pg	**Pb**	**15 04 39.6**	**+3.7**
	6.6nm,0.8s						
CHMS				⇓Lg	Lg	15 05 39.4	
	37nm,1.2s						
SGDS	**Sogindy**	**4.67**	**63**	Pg	**Pb**	**15 04 39.9**	**+2.7**
	4.0nm,0.3s						
SGDS				Lg	Lg	15 05 40.1	
	20nm,0.6s						
KZA	**Kyzart**	**4.78**	**81**	P	**Pb**	**15 04 42.5**	**+3.2**
	SNR=5.6						
DGS	**Degeres**	**5.38**	**69**	Pg	**Pb**	**15 04 54.1**	**+4.8**
	3.7nm,0.3s						
DGS				Lg	Lg	15 06 03.3	
	25nm,0.6s						
KST	**Kastek**	**5.46**	**71**	Pg	**Pb**	**15 04 54.7**	**+3.9**
	3.9nm,0.4s						
KST				Lg	Lg	15 06 05.4	
	14nm,0.5s						
KRBS	**Karabastau**	**5.46**	**64**	Pg	**Pb**	**15 04 55.3**	**+4.6**
	4.5nm,0.6s						
KRBS				Lg	Lg	15 06 04.2	
	6.8nm,0.6s						
ULHL	**Ulahol**	**5.53**	**80**	P	Pn	15 04 25.9	-12
	SNR=8.0						
KTBS	**Karatobe**	**6.16**	**66**	Pg	Pg	15 05 08.6	-4.7
KTBS				Lg	Lg	15 06 28.5	
TNSS	**Tian-Shan**	**6.16**	**73**	Pg	**Pg**	**15 05 08.8**	**-4.7**
	2.1nm,0.6s						
TNSS				Lg	Lg	15 06 29.6	
	9.5nm,0.6s						
CHKK	**Chushkaly**	**6.41**	**66**	Pg	Pb	15 05 12.8	+6.0
	1.8nm,0.4s						
CHKK				Lg	Lg	15 06 36.0	
	6.4nm,0.3s						
ARXS	**Arharly**	**7.10**	**64**	Pg	Pb	15 05 25.4	+6.8
	2.3nm,0.5s						
ARXS				Lg	Lg	15 06 56.7	
	9.0nm,0.7s						
AB31	**Akbulak array**	**10.01**	**324**	Pn	**Pn**	**15 05 42.8**	**+3.9**
	0.4nm,0.6s,baz=130,slow=14,SNR=8.8						
AB31				⇓Sn	**Sn**	**15 07 29.0**	**-1.8**
	0.3nm,0.4s,baz=234,slow=44,SNR=5.8						

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*IDC **21** 15:03:22.6±4.0,20°.93S×70°.36W,h0^{km},mb3.6/1, mb1 3.6/2,mb1mx3.4/24,mbtmp3.5/2,ML3.4/1,Error ellipse: s-maj=145.6km s-min=65.1km az=102.0*

*GUC **21** 15:03:27.9±0.8,19°.93S×70°.75W,h21^{km}±4^{km},ML3.6*

ISC 21 15:03:25.7±1.5,**19°.91S**±0°.03×**70°.73W**±0°.07,**h14**^{km}±9^{km}, **n15**,σ**1^{s}09**/28,**3C-5D**,**Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.65**	**61**	⇓*i*P	**Pn**	**15 03 40.2**	**-0.3**
PSGC				*e*S	**Sn**	**15 03 50.1**	**-0.5**
TA01	**Diego Aracena**	**0.83**	**142**	*e*P	**Pg**	**15 03 42.5**	**+0.7**
TA01				*i* S	**Sn**	**15 03 56.3**	**+1.3**
TA01				IAML		15 03 58.2	
	comp=E,4µm,0.3s						
PB11	**IPOC Station P**	**1.02**	**82**	⇓*i*P	**Pn**	**15 03 46.5**	**+0.9**
PB11				*e*S	**Sn**	**15 04 01.0**	**+1.1**
PB11				IAML		15 04 03.9	
	comp=N,4µm,0.3s						
PATCX	**Punta Patache**	**1.05**	**149**	⇑*i*P	**Pg**	**15 03 47.3**	**+1.2**
PATCX				*e*S	**Sn**	**15 04 01.2**	**+0.5**
PATCX				IAML		15 04 04.7	
	comp=E,3µm,0.6s						
PB12	**IPOC Station P**	**1.34**	**16**	⇓*i*P	**Pb**	**15 03 51.4**	**+0.7**
PB12				*e*S	**Sg**	**15 04 09.7**	**+0.7**
GO01	**Chusmiza**	**1.46**	**81**	⇓*i*P	**Pg**	**15 03 54.1**	**+0.2**
GO01				*e*S	**Sg**	**15 04 14.2**	**+1.3**
GO01				IAML		15 04 17.4	
	comp=N,3µm,0.2s						
PB08	**IPOC Station P**	**1.50**	**99**	⇑*i*P	**Pg**	**15 03 54.5**	**0.0**
PB08				*e*S	**Sg**	**15 04 14.9**	**+0.9**
PB08				IAML		15 04 22.7	
	comp=N,679nm,0.6s						
AP01	**Chacalluta**	**1.57**	**13**	*e*P	**Pb**	**15 03 55.1**	**+0.6**
AP01				*i* S	**Sg**	**15 04 16.4**	**+0.1**
AP01				IAML		15 04 19.1	
	comp=N,2µm,0.3s						
PB02	**IPOC Station P**	**1.60**	**151**	⇓*i*P	**Pb**	**15 03 55.1**	**-0.1**
PB02				*i* S	**Sg**	**15 04 16.5**	**-0.9**
PB02				IAML		15 04 19.4	
	comp=E,2µm,0.5s						
PB01	**IPOC Station P**	**1.62**	**134**	⇑*i*P	**Pb**	**15 03 55.5**	**+0.1**
PB01				*i* S	**Sg**	**15 04 16.8**	**-1.1**
PB01				IAML		15 04 20.0	
	comp=N,719nm,0.7s						
PB16	**IPOC Station P**	**1.94**	**37**	*e*P	**Pg**	**15 04 02.0**	**-1.0**
PB16				*i* S	**Sg**	**15 04 27.8**	**-0.5**
PB09	**IPOC Station P**	**2.33**	**144**	*e*P	**Pb**	**15 04 07.3**	**-0.4**
PB09				*e*S	**Sg**	**15 04 37.7**	**-3.1**
PB09				IAML		15 04 47.5	
	comp=E,489nm,0.7s						
LPAZ	**La Paz**	**4.37**	**35**	Pn	**Pb**	**15 04 40.5**	**-2.0**
	comp=E,0.8nm,0.3s,baz=211,slow=7.0,SNR=9.9						
LPAZ				Sn	**Sg**	**15 05 46.7**	**+0.7**
	comp=E,0.2nm,0.3s,baz=237,slow=7.4,SNR=1.1						
TORD	**Torodi Ar. Bea**	**78.44**	**71**	P	**P**	**15 15 25.9**	**-0.8**
	comp=E,0.2nm,0.4s,baz=264,slow=4.3,SNR=1.9						
MKAR	**Makanchi Array**	**145.29**	**33**	PKPbc	**PKPbc**	**15 23 03.4**	**+0.5**
	comp=E,0.3nm,0.5s,baz=330,slow=3.3,SNR=5.3						

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*IDC **21** 15:08:34.8±0.7,7°.52N×94°.29E,h0^{km},mb4.1/16, mb1 4.1/18,mb1mx3.9/44,mbtmp4.0/18,ML3.7/2,Error ellipse: s-maj=29.8km s-min=13.6km az=51.0*

*NEIC **21** 15:08:36.4±1.7,7°.50N±0°.10×94°.3E±0°.1,h10^{km}±1^{km}, mb4.7/12,Error ellipse: s-maj=22.0km s-min=13.1km az=236.0*

*NDI **21** 15:08:37.2±3.4,7°.38N×94°.54E,h10^{km},mb4.3, mb4.5(NEIC)*

*DJA **21** 15:08:38.2±0.4,8°N±4°×9°4E±°,h10^{km},M4.5/10,mb4.4/10, MLv4.5/6*

ISC 21 15:08:38.6±0.4,**7°.51N**±0°.06×**94°.29E**±0°.07,**h24**^{km},**n75**, σ**1^{s}29**/72,**mb4.3**/22,**1D**,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMBY	**CAMPBELL BAY**	**0.61**	**216**	*e*P	**Pn**	**15 08 51.6**	**-0.2**
CMBY				*e*S	**Sn**	**15 09 01.4**	**+0.4**
LHMI	**Lhok Sumawe**	**3.48**	**131**		**Pn**	**15 09 31.1**	**-0.2**
MLSI	**Meulaboh, Aceh**	**3.85**	**147**	P	**Pb**	**15 09 41.7**	**-4.1**
PBA	**Port Blair**	**4.39**	**340**	*e*P	Pn	15 09 48.8	+5.0
TPTI		**5.11**	**146**	P	**Pn**	**15 09 57.4**	**+3.7**
	0.1nm20nm,1.0s						
KCSI	**Kotacane, Aceh**	**5.26**	**139**	P	**Pn**	**15 09 59.7**	**+3.9**
	0.4nm53nm,0.7s						
DGPR	**DIGLIPUR**	**5.79**	**347**	*e*P	**Pn**	**15 10 04.8**	**+1.8**
PSI	**Prapat**	**6.57**	**135**	Pn	**Pn**	**15 10 14.5**	**+0.6**
	0.8nm,0.3s,baz=172,slow=19,SNR=1.5						
RPSI	**Rantau Prapat**	**6.65**	**136**		**Pn**	**15 10 14.5**	**-0.3**
KULM	**Kulim**	**6.70**	**109**		**Pn**	**15 10 15.8**	**+0.3**
IPM	**Ipoh**	**7.34**	**114**		**Pn**	**15 10 23.8**	**-0.7**
PBKT	**Sadao Pong**	**11.12**	**35**		**Pn**	**15 11 17.8**	**+1.6**
CMAR	**Chiang Mai Arr**	**11.78**	**22**	Pn	**Pn**	**15 11 25.1**	**-0.2**
	0.2nm,0.3s,baz=210,slow=15,SNR=8.5						
CMAR	**Chiang Mai Arr**	**11.78**	**22**		**Pn**	**15 11 23.7**	**-1.6**
KRJI	**Kerinci**	**11.93**	**143**	P	**Pn**	**15 11 31.3**	**+4.0**
	110nm,0.5s						
BWNR	**Bhubaneshwar**	**15.13**	**328**	*e*P	**P**	**15 12 14.0**	**-1.9**
BWNR				IAmb	IAmb	15 12 21.8	
	comp=Z,22nm,1.2s						
MDSI	**Maura Dua**	**15.47**	**140**	P	**P**	**15 12 22.1**	**+2.4**
RAMN	**Ramite**	**20.66**	**340**	*e*P	**P**	**15 13 17.9**	**+0.8**
	comp=Z,88nm,0.8s						
TAPN	**Taplejung**	**20.69**	**343**	*e*P	**P**	**15 13 17.6**	**+0.2**
	comp=Z,61nm,0.8s						
JIRN	**Jiri**	**21.46**	**340**	*e*P	**P**	**15 13 26.1**	**+0.4**
	comp=Z,88nm,1.2s						
PKI	**Pulchoki**	**21.65**	**338**	*e*P	**P**	**15 13 29.3**	**+1.5**
	comp=Z,33nm,0.9s						
PKIN	**Phulchoki**	**21.66**	**338**	*e*P	**P**	**15 13 29.0**	**+1.2**
GUN	**Gumba**	**21.80**	**340**	*e*P	**P**	**15 13 28.7**	**-0.6**
	comp=Z,53nm,0.9s						
DMN	**Daman**	**21.80**	**338**	*e*P	**P**	**15 13 29.4**	**+0.1**
KKN	**Kakani**	**21.90**	**338**	*e*P	**P**	**15 13 29.7**	**-0.6**
LSA	**Lhasa**	**22.27**	**353**	P	**P**	**15 13 36.6**	**+2.0**
LSA				IAmb	IAmb	15 13 42.5	
	comp=Z,17nm,0.7s						
GKN	**Gorkha**	**22.33**	**337**	*e*P	**P**	**15 13 34.2**	**-0.7**
	comp=Z,57nm,1.0s						
DANN	**Dangsing**	**22.99**	**336**	*e*P	**P**	**15 13 41.0**	**-1.0**
	comp=Z,30nm,0.7s						
JAGI	**Jajag, Banyuwa**	**25.38**	**128**	P	**P**	**15 14 02.8**	**-1.5**
H08S3	**Diego Garcia H**	**26.44**	**236**	T	T	15 40 47.5	
	baz=57						
H08S2	**Diego Garcia H**	**26.44**	**236**	T	T	15 41 11.2	
	baz=57						
H08S1	**Diego Carcia H**	**26.46**	**236**	T	T	15 40 48.4	
	baz=57						
MPSI	**Mapaga**	**26.51**	**104**	P	P	15 14 26.6	+12
GTA	**Gaotai**	**32.15**	**8**	*e*P	**P**	**15 15 05.3**	**+0.8**
GTA				pP	pP	15 15 08.8	-2.2
GTA				sP	sP	15 15 11.3	-2.5
NIL	**Nilore**	**32.48**	**326**	P	**P**	**15 15 06.5**	**-0.9**
NIL				IAmb	IAmb	15 15 12.3	
	comp=Z,7.1nm,0.7s						
KSH	**Kashi**	**35.86**	**335**	P	**P**	**15 15 37.8**	**+1.0**
KSH				pP	pP	15 15 41.9	-1.4
KSH				PcP	PcP	15 18 35.9	+32
KSH				S	**S**	**15 21 12.8**	**-0.6**
KSH				PcS	**PcS**	**15 21 52.4**	**+1.1**
KSH	**Kashi**	**35.86**	**335**	ScS	ScS	15 25 54.8	+0.8
WSAR	**Wadi Sarin**	**37.63**	**299**	P	**P**	**15 15 52.0**	**+0.1**
	comp=Z,5.5nm,1.2s,baz=79,slow=11,SNR=1.9						
SIJI	**Sorong**	**37.81**	**101**	P	**P**	**15 15 53.8**	**+0.3**
	comp=Z,5.3nm,0.8s,baz=294,slow=9.0,SNR=2.6						
AAK	**Ala-Archa**	**39.10**	**337**	P	**P**	**15 16 03.5**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=161,slow=8.7,SNR=2.3						
FITZ	**Fitzroy Crossi**	**40.07**	**130**	P	**P**	**15 16 10.5**	**-1.9**
	comp=Z,1.4nm,0.9s,baz=331,slow=10,SNR=1.9						
MK31	**Makanchi Array**	**40.47**	**347**	P	**P**	**15 16 14.8**	**-0.5**
MKAR	**Makanchi Array**	**40.47**	**347**	P	**P**	**15 16 14.9**	**-0.4**
	comp=Z,3.8nm,0.8s,baz=167,slow=8.1,SNR=38						
MKAR	**Makanchi Array**	**40.47**	**347**	P	**P**	**15 16 14.1**	**-1.3**
MAKZ	**Makanchi**	**40.55**	**347**	P	**P**	**15 16 15.1**	**-1.0**
SONM	**Songino Array**	**41.48**	**12**	P	**P**	**15 16 23.5**	**-0.3**
	comp=Z,2.0nm,0.9s,baz=213,slow=11,SNR=7.6						
GEYT	**Alibeck**	**44.57**	**318**	P	**P**	**15 16 49.2**	**+0.4**
	comp=Z,3.0nm,0.6s,baz=141,slow=9.6,SNR=7.7						
GEYT	**Alibeck**	**44.57**	**318**	P	**P**	**15 16 49.4**	**+0.6**
KURBB	**Kurchatov Arra**	**44.93**	**346**	P	**P**	**15 16 51.5**	**+0.1**
	comp=Z,2.3nm,0.5s,baz=166,slow=7.0,SNR=36						
KURK	**Kurchatov**	**44.99**	**346**	P	**P**	**15 16 52.0**	**+0.1**
KURK				IAmb	IAmb	15 16 57.4	
	comp=Z,8.7nm,0.8s						
ZAA0	**Zalesovo Array**	**46.93**	**352**	P	**P**	**15 17 08.0**	**+0.8**
ZAA0				IAmb	IAmb	15 17 12.8	
	comp=Z,7.0nm,0.9s						
ZALV	**Zalesovo Beam**	**46.93**	**352**	P	**P**	**15 17 07.5**	**+0.3**
	comp=Z,4.1nm,0.6s,baz=183,slow=8.3,SNR=22						
ZALV	**Zalesovo Beam**	**46.93**	**352**	P	**P**	**15 17 07.3**	**+0.2**
WRA	**Warramunga Arr**	**47.93**	**125**	P	**P**	**15 17 15.4**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=303,slow=8.6,SNR=5.4						
WRA	**Warramunga Arr**	**47.93**	**125**	P	**P**	**15 17 16.1**	**+0.6**
RAYN	**Ar Rayn**	**49.37**	**295**	P	**P**	**15 17 28.1**	**+1.5**
RAYN				IAmb	IAmb	15 17 34.3	
	comp=Z,8.6nm,1.0s						
ASAR	**Alice Springs**	**49.57**	**130**	P	**P**	**15 17 28.4**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=303,slow=7.1,SNR=9.8						
ASAR	**Alice Springs**	**49.57**	**130**	P	**P**	**15 17 27.8**	**-0.3**
ABKAR	**Akbulak array**	**50.62**	**331**	P	**P**	**15 17 35.9**	**+0.3**
NRIK	**Noril'sk**	**61.91**	**357**	P	**P**	**15 18 55.5**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=116,slow=4.1,SNR=5.4						
BRTR	**Keskin Array B**	**62.78**	**311**	P	**P**	**15 19 01.4**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=108,slow=4.7,SNR=3.3						
BRTR	**Keskin Array B**	**62.78**	**311**	P	**P**	**15 19 00.7**	**-1.7**
TIXI	**Tiksi**	**67.56**	**11**	P	**P**	**15 19 32.4**	**-0.2**
LIT	**Litokhoron**	**71.28**	**310**	P	**P**	**15 19 55.7**	**-0.7**
LIT				IAmb	IAmb	15 20 01.2	
	comp=Z,4.5nm,0.8s						
FINES	**FINESS Array B**	**73.10**	**332**	P	**P**	**15 20 06.0**	**-0.7**
	comp=Z,3.6nm,0.8s,baz=111,slow=7.7,SNR=2.2						
FINES	**FINESS Array B**	**73.10**	**332**	P	**P**	**15 20 06.5**	**-0.1**
GERES	**GERESS Array B**	**78.19**	**318**	P	**P**	**15 20 36.5**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=94,slow=5.0,SNR=3.5						
NB2	**NORSAR Subarra**	**80.12**	**331**	P	**P**	**15 20 46.2**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=92,slow=5.6						
NOA	**NORSAR Array B**	**80.12**	**331**	P	**P**	**15 20 46.4**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=96,slow=4.9,SNR=1.7						
SYO	**Syowa Base**	**85.11**	**197**	⇓*e*P	**P**	**15 21 12.2**	**+0.1**
ULM	**Lac du Bonnet**	**121.80**	**8**	PKP	**PKiKP**	**15 27 31.1**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=90,slow=1.0,SNR=1.9						
NVAR	**Mina Array Bea**	**125.15**	**31**	PKP	**PKPdf**	**15 27 37.9**	**0.0**
	comp=Z,0.2nm,0.5s,baz=298,slow=1.9,SNR=2.0						
TXAR	**Lajitas Array**	**139.49**	**24**	PKP	**PKPdf**	**15 28 04.2**	**-0.8**
	comp=Z,0.1nm,0.5s,baz=308,slow=4.4,SNR=2.0						
PLCA	**Paso Flores**	**144.26**	**200**	PKP	**PKPdf**	**15 28 12.9**	**-0.1**
	comp=Z,2.2nm,1.0s,baz=270,slow=3.2,SNR=2.9						
CPUP	**Villa Florida**	**147.16**	**232**	PKPbc	**PKPbc**	**15 28 21.2**	**+0.7**
	comp=Z,1.5nm,0.6s,baz=108,slow=5.4,SNR=3.9						

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*IDC **21** 15:09:06.9±0.8,7°.78N×94°.52E,h0^{km},mb4.2/14, mb1 4.3/14,mb1mx4.0/42,mbtmp4.2/14,Error ellipse: s-maj=27.8km s-min=21.1km az=50.0*

*NEIC **21** 15:09:07.7±2.8,7°.71N±0°.09×94°.6E±0°.1,h10^{km}±1^{km}, mb4.5/12,Error ellipse: s-maj=19.3km s-min=12.6km az=236.0*

ISC 21 15:09:09.8±0.5,**7°.72N**±0°.09×**94°.66E**±0°.09,**h24**^{km},**n33**, σ**1^{s}32**/29,**mb4.4**/19,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**3.36**	**137**	Pn	**Pn**	**15 10 01.2**	**+0.3**
GSI	**Gunungsitoli**	**7.00**	**155**	Pn	**Pn**	**15 10 50.9**	**0.0**
IPM	**Ipoh**	**7.10**	**117**	Pn	**Pn**	**15 10 53.5**	**+1.2**
CMAR	**Chiang Mai Arr**	**11.46**	**21**	Pn	Pn	15 11 57.5	+5.4
	0.1nm,0.3s,baz=210,slow=12,SNR=2.5						
CMAR	**Chiang Mai Arr**	**11.46**	**21**		**Pn**	**15 11 53.0**	**+0.9**
SBUM	**Sibu**	**18.26**	**106**	Pn	**Pn**	**15 13 19.1**	**-2.6**
JOW	**Kunigami**	**37.12**	**55**	P	**P**	**15 16 17.3**	**-1.4**
SIJI	**Sorong**	**37.49**	**102**	P	**P**	**15 16 23.1**	**+1.0**
	5.6nm,0.9s,baz=291,slow=22,SNR=2.4						
MKAR	**Makanchi Array**	**40.35**	**347**	P	**P**	**15 16 45.6**	**0.0**
	1.6nm,0.7s,baz=165,slow=7.6,SNR=1.4						
KNRA	**Kununurra**	**41.01**	**125**	P	**P**	**15 16 48.6**	**-2.8**
KNRA				IAmb	IAmb	15 16 52.6	
	comp=Z,13nm,1.4s						
GEYT	**Alibeck**	**44.66**	**318**	P	**P**	**15 17 20.2**	**-0.6**
	comp=Z,3.7nm,0.6s,baz=150,slow=6.3,SNR=4.6						
KURBB	**Kurchatov Arra**	**44.82**	**345**	P	**P**	**15 17 23.1**	**+1.3**
	comp=Z,3.4nm,0.7s,baz=171,slow=7.0,SNR=4.5						
KURK	**Kurchatov**	**44.89**	**346**	P	**P**	**15 17 23.1**	**+0.8**
KURK	**Kurchatov**	**44.89**	**346**	IAmb	IAmb	15 17 32.4	
	comp=Z,9.7nm,1.2s						
ZALV	**Zalesovo Beam**	**46.78**	**352**	P	**P**	**15 17 38.2**	**+1.0**
	comp=Z,3.5nm,0.8s,baz=166,slow=7.2,SNR=2.3						
WRA	**Warramunga Arr**	**47.76**	**126**	P	**P**	**15 17 47.7**	**+2.4**
	comp=Z,0.7nm,0.7s,baz=304,slow=8.8,SNR=2.2						
WRA	**Warramunga Arr**	**47.76**	**126**	P	**P**	**15 17 47.4**	**+2.0**
WR0	**Warramunga Arr**	**47.93**	**126**	P	**P**	**15 17 46.5**	**-0.2**
WR0				IAmb	IAmb	15 17 49.6	
	comp=Z,4.4nm,1.3s						
BRVK	**Borovoye**	**49.37**	**341**	P	**P**	**15 17 55.6**	**-1.6**
BRVK				IAmb	IAmb	15 18 12.1	
	comp=Z,4.3nm,1.1s						
ASAR	**Alice Springs**	**49.42**	**130**	P	**P**	**15 18 00.0**	**+1.8**
RAYN	**Ar Rayn**	**49.62**	**294**	P	**P**	**15 17 59.0**	**-0.8**
RAYN				IAmb	IAmb	15 18 08.7	
	comp=Z,5.3nm,0.7s						
KBZ	**Khabaz**	**57.55**	**318**	P	**P**	**15 18 57.0**	**-0.5**
	comp=Z,3.1nm,0.9s,baz=157,slow=7.2,SNR=4.4						
CTAO	**Charters Tower**	**57.79**	**119**	P	**P**	**15 18 58.9**	**-0.6**
KMBO	**Kilima Mbogo**	**57.91**	**264**	P	**P**	**15 19 01.1**	**+0.3**
	comp=Z,3.5nm,0.8s,baz=44,slow=9.3,SNR=8.3						
BRTR	**Keskin Array B**	**62.92**	**311**	P	**P**	**15 19 33.6**	**-0.9**
	comp=Z,1.3nm,0.6s,baz=120,slow=7.9,SNR=6.8						
FINES	**FINESS Array B**	**73.09**	**332**	P	**P**	**15 20 36.5**	**-1.3**
	comp=Z,2.0nm,0.5s,baz=98,slow=5.2,SNR=6.7						
BOSA	**Boshof**	**75.93**	**238**	P	**P**	**15 20 56.0**	**+0.8**
	comp=Z,4.0nm,0.8s,baz=54,slow=4.5,SNR=5.8						
BOSA	**Boshof**	**75.93**	**238**	IAmb	IAmb	15 20 56.9	
	comp=Z,5.8nm,0.8s						
GERES	**GERESS Array B**	**78.28**	**318**	P	**P**	**15 21 08.7**	**+0.7**
	comp=Z,1.5nm,0.8s,baz=76,slow=5.6,SNR=5.7						
NOA	**NORSAR Array B**	**80.12**	**331**	P	**P**	**15 21 18.9**	**+1.2**
	comp=Z,2.1nm,0.8s,baz=92,slow=6.1,SNR=4.2						
TORD	**Torodi Ar. Bea**	**91.13**	**283**	P	**P**	**15 22 13.2**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=53,slow=3.9,SNR=3.3						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**91.13**	**283**	IAmb	IAmb	15 22 14.7	
	comp=Z,1.0nm,1.0s						
CPUP	**Villa Florida**	**147.57**	**232**	PKPbc	**PKPbc**	**15 28 53.6**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=156,slow=3.8,SNR=3.8						

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*IDC **21** 15:10:19.6±0.9, 7°.31N×94°.05E, h0km, mb4.0/14, mb1 4.1/16, mb1mx3.9/42, mbtmp4.0/16, ML3.8/2, Error ellipse: s-maj=40.0km s-min=15.2km az=53.0*

*NEIC **21** 15:10:21.1±2.0, 7°.35N±0°.07×94°.2E±0°.1, h10km±1km, mb4.6/16, Error ellipse: s-maj=23.0km s-min=11.1km az=258.0*

ISC 21 15:10:23.4±0.5, **7°.45N**±0°.07×**94°.31E**±0°.07, **h20**km, **n44**, σ**0s.95**/39, **mb4.3**/21, **1C, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	**CAMPBELL BAY**	**0.58**	**221**	eP	**Pn**	**15 10 37.0**	**+0.5**
CMBY				eS	**Sn**	**15 10 46.1**	**+0.8**
LHMI	**Lhok Sumawe**	**3.43**	**130**	Pn	**Pn**	**15 11 14.6**	**-1.1**
PSI	**Prapat**	**6.51**	**135**	Pn	**Pn**	**15 11 59.5**	**+1.2**
	1.9nm,0.3s,baz=102,slow=16,SNR=2.1						
RPSI	**Rantau Prapat**	**6.59**	**136**		**Pn**	**15 11 59.5**	**+0.3**
PBKT	**Sadao Pong**	**11.16**	**35**	Pn	**Pn**	**15 13 03.0**	**+1.1**
CMAR	**Chiang Mai Arr**	**11.84**	**22**	Pn	**Pn**	**15 13 13.2**	**+2.1**
	0.2nm,0.3s,baz=217,slow=13,SNR=2.2						
LSA	**Lhasa**	**22.33**	**353**	P	**P**	**15 15 21.9**	**+1.4**
LSA				IAmb	IAmb	15 15 23.6	
	comp=Z,15nm,0.8s						
H08S3	**Diego Garcia H**	**26.42**	**236**	T	T	15 42 46.1	
	baz=55,slow=75						
H08S2	**Diego Garcia H**	**26.42**	**236**	T	T	15 42 39.4	
	baz=55,slow=75						
H08S1	**Diego Carcia H**	**26.44**	**236**	T	T	15 42 51.3	
	baz=55,slow=75						
FITZ	**Fitzroy Crossi**	**40.01**	**130**	P	**P**	**15 17 56.8**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=286,slow=7.4,SNR=1.2						
FITZ	**Fitzroy Crossi**	**40.01**	**130**	IAmb	IAmb	15 18 03.4	
	comp=Z,6.3nm,1.2s						
MK31	**Makanchi Array**	**40.54**	**347**	P	**P**	**15 18 00.4**	**-0.8**
MKAR	**Makanchi Array**	**40.54**	**347**	P	**P**	**15 18 01.1**	**-0.1**
	comp=Z,4.3nm,0.7s,baz=163,slow=8.1,SNR=12						
MKAR	**Makanchi Array**	**40.54**	**347**	P	**P**	**15 18 00.4**	**-0.8**
MAKZ	**Makanchi**	**40.62**	**347**	P	**P**	**15 18 01.6**	**-0.3**
KNRA	**Kununurra**	**41.14**	**124**	P	**P**	**15 18 04.7**	**-1.8**
KNRA				IAmb	IAmb	15 18 12.2	
	comp=Z,10nm,1.1s						
SONM	**Songino Array**	**41.54**	**12**	P	**P**	**15 18 10.8**	**+1.2**
	comp=Z,1.1nm,0.7s,baz=195,slow=10,SNR=3.7						
SONM	**Songino Array**	**41.54**	**12**	P	**P**	**15 18 09.3**	**-0.3**
GEYT	**Alibeck**	**44.63**	**318**	P	**P**	**15 18 34.3**	**-0.3**
	comp=Z,2.4nm,0.6s,baz=148,slow=8.5,SNR=3.3						
GEYT	**Alibeck**	**44.63**	**318**	IAmb	IAmb	15 18 42.3	
	comp=Z,2.5nm,0.7s						
KURBB	**Kurchatov Arra**	**45.00**	**346**	P	**P**	**15 18 37.2**	**-0.1**
	comp=Z,5.0nm,0.7s,baz=166,slow=7.2,SNR=11						
KURK	**Kurchatov**	**45.06**	**346**	P	**P**	**15 18 38.2**	**+0.4**
KURK				IAmb	IAmb	15 18 41.0	
	comp=Z,12nm,1.2s						
ZAA0	**Zalesovo Array**	**47.00**	**352**	P	**P**	**15 18 53.1**	**+0.1**
ZALV	**Zalesovo Beam**	**47.00**	**352**	P	**P**	**15 18 53.3**	**+0.3**
	comp=Z,8.3nm,0.8s,baz=184,slow=7.4,SNR=8.8						
ZALV	**Zalesovo Beam**	**47.00**	**352**	P	**P**	**15 18 52.4**	**-0.6**
WB0	**Warramunga Arr**	**47.84**	**125**	P	**P**	**15 18 58.7**	**-1.4**
WB0				IAmb	IAmb	15 19 01.7	
	comp=Z,7.1nm,1.4s						
WRA	**Warramunga Arr**	**47.88**	**125**	P	**P**	**15 19 00.8**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=305,slow=8.4,SNR=9.0						
WRA	**Warramunga Arr**	**47.88**	**125**	IAmb	IAmb	15 19 07.0	
	comp=Z,0.1nm,0.8s						
WRAB	**Tennant Creek**	**47.88**	**125**	P	**P**	**15 19 00.2**	**-0.2**
WRAB				IAmb	IAmb	15 19 15.0	
	comp=Z,9.8nm,1.4s						
WB2	**Warramunga Arr**	**47.89**	**125**	P	**P**	**15 19 00.8**	**+0.3**
WB2				IAmb	IAmb	15 19 14.5	
	comp=Z,7.1nm,1.4s						
ASAR	**Alice Springs**	**49.52**	**130**	P	**P**	**15 19 13.4**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=302,slow=7.5,SNR=5.8						
ABKAR	**Akbulak array**	**50.68**	**331**	P	**P**	**15 19 21.9**	**+0.5**
BBOO	**Buckleboo**	**56.39**	**138**	P	**P**	**15 20 04.0**	**+0.5**
KBZ	**Khabaz**	**57.51**	**318**	P	**P**	**15 20 10.5**	**-0.9**
	comp=Z,1.1nm,0.7s,baz=135,slow=5.7,SNR=1.8						
NRIK	**Noril'sk**	**61.97**	**357**	P	**P**	**15 20 40.9**	**-0.7**
	comp=Z,1.4nm,0.4s,baz=145,slow=3.0,SNR=2.4						
BRTR	**Keskin Array B**	**62.83**	**311**	P	**P**	**15 20 46.4**	**-1.8**
	comp=Z,0.4nm,0.5s,baz=119,slow=9.2,SNR=1.9						
TIXI	**Tiksi**	**67.61**	**11**	P	**P**	**15 21 18.1**	**-0.2**
TIXI				IAmb	IAmb	15 21 28.3	
	comp=Z,3.2nm,0.8s						
FIA1	**FINESS Array S**	**73.16**	**332**	P	**P**	**15 21 50.9**	**-1.5**
FINES	**FINESS Array B**	**73.16**	**332**	P	**P**	**15 21 51.6**	**-0.8**
	comp=Z,1.9nm,0.6s,baz=74,slow=8.1,SNR=3.5						
FINES	**FINESS Array B**	**73.16**	**332**	P	**P**	**15 21 50.9**	**-1.6**
GERES	**GERESS Array B**	**78.25**	**318**	P	**P**	**15 22 21.4**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=80,slow=7.1,SNR=2.1						
NOA	**NORSAR Array B**	**80.18**	**331**	P	**P**	**15 22 32.0**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=91,slow=5.8,SNR=1.7						
SYO	**Syowa Base**	**85.05**	**197**	⇑eP	**P**	**15 22 58.0**	**+0.8**

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*IDC **21** 15:14:20.4±2.5, 7°.41N×94°.11E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.3/39, mbtmp3.4/5, ML3.7/1, Error ellipse: s-maj=92.4km s-min=25.9km az=63.0*

ISC 21 15:14:24.0±1.0, **7°.5N**±0°.1×**94°.3E**±0°.2, **h20**km, **n9**, σ**0s.66**/7, **mb3.5**/4, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	**CAMPBELL BAY**	**0.58**	**214**	eP	**Pn**	**15 14 36.9**	**-0.3**
CMBY				eS	**Sn**	**15 14 46.6**	**+0.5**
CMAR	**Chiang Mai Arr**	**11.81**	**22**	Pn	**Pn**	**15 17 11.8**	**+0.3**
	0.1nm,0.3s,baz=210,slow=15,SNR=1.6						
H08S3	**Diego Garcia H**	**26.40**	**236**	T	T	15 46 34.4	
	baz=56						
H08S2	**Diego Garcia H**	**26.40**	**236**	T	T	15 46 34.4	
	baz=56						
H08S1	**Diego Carcia H**	**26.42**	**236**	T	T	15 46 33.9	
	baz=56						
MKAR	**Makanchi Array**	**40.48**	**347**	P	**P**	**15 22 00.6**	**-0.9**
	0.6nm,0.8s,baz=149,slow=7.8,SNR=3.8						
ZALV	**Zalesovo Beam**	**46.95**	**352**	P	**P**	**15 22 53.9**	**+0.7**
	0.8nm,0.7s,baz=160,slow=9.0,SNR=2.6						
WRA	**Warramunga Arr**	**47.95**	**125**	P	**P**	**15 23 01.3**	**-0.3**
	0.6nm,1.0s,baz=306,slow=7.9,SNR=1.7						
ASAR	**Alice Springs**	**49.59**	**130**	P	**P**	**15 23 14.3**	**+0.1**
	0.3nm,0.9s,baz=301,slow=7.6,SNR=2.4						

MAN 21 15:15:20.9, 9°.82N×123°.79E, h25km, mb3.9, ML2.7, MS2.3, 1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.15**	**152**	eP	Pn	15 15 27.1	-0.5
LLP	**Lapu-Lapu**	**0.52**	**19**	⇓eP	Pn	15 15 32.3	-0.5
LLP				eS	Sb	15 15 39.1	+0.3
MSLP	**Maasin**	**1.10**	**73**	eP	Pn	15 15 39.8	-0.8
MSLP				eS	Sb	15 15 55.4	+0.3

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*IDC **21** 15:18:57.7±2.5, 7°.61N×94°.37E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.3/55, mbtmp3.5/6, ML3.5/1, Error ellipse: s-maj=80.9km s-min=30.3km az=61.0*

ISC 21 15:19:00.3±0.9, **7°.6N**±0°.1×**94°.3E**±0°.2, **h24**km, **n10**, σ**1s.55**/8, **mb3.4**/5, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	**CAMPBELL BAY**	**0.64**	**212**	eP	**Pb**	**15 19 12.6**	**-0.1**
CMBY				eS	**Sn**	**15 19 22.3**	**-0.9**
CMAR	**Chiang Mai Arr**	**11.75**	**22**	Pn	**Pn**	**15 21 44.1**	**-2.5**
	0.1nm,0.3s,baz=209,slow=14,SNR=1.9						
H08S3	**Diego Garcia H**	**26.44**	**236**	T	T	15 51 11.9	
	baz=56,slow=74						
H08S2	**Diego Garcia H**	**26.45**	**236**	T	T	15 51 10.9	
	baz=56,slow=74						
H08S1	**Diego Carcia H**	**26.46**	**236**	T	T	15 51 13.4	
	baz=56						
MKAR	**Makanchi Array**	**40.43**	**347**	P	**P**	**15 26 36.6**	**-0.1**
	0.5nm,0.6s,baz=171,slow=7.7,SNR=6.4						
SONM	**Songino Array**	**41.45**	**12**	P	**P**	**15 26 46.9**	**+1.7**
	0.2nm,0.4s,baz=179,slow=5.8,SNR=1.7						
KURBB	**Kurchatov Arra**	**44.89**	**346**	P	**P**	**15 27 13.4**	**+0.6**
	0.6nm,0.3s,baz=171,slow=6.8,SNR=4.0						
ZALV	**Zalesovo Beam**	**46.89**	**352**	P	**P**	**15 27 29.8**	**+1.3**
	0.6nm,0.6s,baz=150,slow=6.1,SNR=2.3						
WRA	**Warramunga Arr**	**47.97**	**125**	P	**P**	**15 27 37.9**	**+0.4**
	0.3nm,0.7s,baz=306,slow=8.6,SNR=2.2						

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*IDC **21** 15:19:57.7±7.8, 7°.85N×94°.61E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/54, mbtmp3.4/4, Error ellipse: s-maj=399.2km s-min=26.6km az=59.0*

ISC 21 15:19:57.9±1.2, **7°.6N**±0°.1×**94°.2E**±0°.2, **h10**km, **n5**, σ**0s.27**/6, **mb3.4**/4, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	**CAMPBELL BAY**	**0.65**	**205**	eP	**Pg**	**15 20 10.6**	**+0.2**
CMBY				eS	**Sn**	**15 20 23.2**	**-0.2**
MKAR	**Makanchi Array**	**40.37**	**347**	P	**P**	**15 27 35.8**	**-0.1**
	0.5nm,0.7s,baz=170,slow=8.1,SNR=4.5						
ZALV	**Zalesovo Beam**	**46.83**	**352**	P	**P**	**15 28 28.0**	**+0.1**
	0.9nm,0.5s,baz=152,slow=6.5,SNR=2.5						
WRA	**Warramunga Arr**	**48.05**	**125**	P	**P**	**15 28 38.1**	**+0.2**
	0.5nm,1.0s,baz=306,slow=8.3,SNR=1.8						
ASAR	**Alice Springs**	**49.70**	**130**	P	**P**	**15 28 50.2**	**-0.3**
	0.2nm,0.7s,baz=305,slow=7.8,SNR=1.6						

IDC 21 15:22:28.7±2.6, **7°.65N**×**94°.40E**, **h0**km, **mb3.5**/2, **mb1 3.6**/4, **mb1mx3.3**/56, **mbtmp3.5**/4, **ML3.6**/1, **Error ellipse: s-maj=88.0km s-min=32.2km az=60.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.59**	**137**	Pn	Pn	15 24 08.2	+1.1
	1.3nm,0.3s,baz=332,slow=22,SNR=6.8						
CMAR	**Chiang Mai Arr**	**11.62**	**22**	Pn	Pn	15 25 16.0	+0.1
	baz=213,slow=13,SNR=1.6						
MKAR	**Makanchi Array**	**40.36**	**347**	P	P	15 30 08.2	-0.1
	0.3nm,0.7s,baz=171,slow=7.9,SNR=3.4						
KURBB	**Kurchatov Arra**	**44.83**	**346**	P	P	15 30 44.9	+0.5
	4.4nm,0.2s,baz=170,slow=7.5,SNR=8.9						
ZALV	**Zalesovo Beam**	**46.81**	**352**	P	P	15 30 59.0	-1.1
	0.5nm,0.5s,baz=174,slow=9.2,SNR=2.1						

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*IDC **21** 15:22:59.6±1.0, 7°.57N×94°.05E, h0km, mb3.8/10, mb1 3.9/12, mb1mx3.7/57, mbtmp3.8/12, ML3.9/2, Error ellipse: s-maj=34.5km s-min=18.1km az=59.0*

*NEIC **21** 15:23:00.1±2.3, 7°.52N±0°.09×94°.24E±0°.06, h10km±1km, mb4.7/10, Error ellipse: s-maj=15.6km s-min=9.4km az=185.0*

ISC 21 15:23:02.2±0.6, **7°.58N**±0°.09×**94°.3E**±0°.1, **h20**km, **n36**, σ**1s.41**/32, **mb4.1**/14, **1C-1D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**3.54**	**131**	Pn	**Pn**	**15 23 54.8**	**-1.3**
PSI	**Prapat**	**6.63**	**135**	Pn	**Pn**	**15 24 41.5**	**+2.8**
	1.5nm,0.3s,baz=288,slow=9.6,SNR=2.1						
RPSI	**Rantau Prapat**	**6.71**	**136**		**Pn**	**15 24 41.5**	**+1.9**
RPSI	**Rantau Prapat**	**6.71**	**136**	Pn	**Pn**	**15 24 38.3**	**-1.3**
KULM	**Kulim**	**6.73**	**109**	Pn	**Pn**	**15 24 37.8**	**-2.2**
IPM	**Ipoh**	**7.39**	**114**	Pn	**Pn**	**15 24 46.0**	**-3.0**
PBKT	**Sadao Pong**	**11.07**	**36**	Pn	**Pn**	**15 25 40.2**	**+0.6**
CMAR	**Chiang Mai Arr**	**11.73**	**22**	Pn	**Pn**	**15 25 49.5**	**+0.9**
	0.3nm,0.3s,baz=212,slow=15,SNR=4.4						
H08S3	**Diego Garcia H**	**26.46**	**236**	T	T	15 55 15.5	
	baz=55,slow=75,SNR=5.2						
H08S2	**Diego Garcia H**	**26.46**	**236**	T	T	15 55 25.1	
	baz=55,slow=75,SNR=4.6						
H08S1	**Diego Carcia H**	**26.48**	**236**	T	T	15 55 19.3	
	baz=55,slow=75,SNR=4.9						
GIRL	**Giralia**	**35.84**	**147**	P	**P**	**15 29 58.0**	**-2.7**
WMQ	**Urumqi**	**36.56**	**352**	P	**P**	**15 30 05.1**	**-1.7**
PSA00	**Pilbara Seismi**	**38.33**	**140**	P	**P**	**15 30 22.0**	**0.0**
MK31	**Makanchi Array**	**40.40**	**347**	P	**P**	**15 30 38.6**	**-0.4**
MKAR	**Makanchi Array**	**40.40**	**347**	P	**P**	**15 30 38.5**	**-0.6**
	0.9nm,0.7s,baz=166,slow=8.1,SNR=14						
MKAR	**Makanchi Array**	**40.40**	**347**	P	**P**	**15 30 38.1**	**-0.9**
SONM	**Songino Array**	**41.42**	**12**	P	**P**	**15 30 48.3**	**+0.8**
	1.1nm,0.8s,baz=202,slow=7.8,SNR=1.2						
MTN	**Manton Dam**	**41.87**	**119**	P	**P**	**15 30 51.3**	**-0.2**
MTN				IAmb	IAmb	15 30 55.5	
	comp=Z,14nm,1.3s						
GEYT	**Alibeck**	**44.51**	**318**	P	**P**	**15 31 12.6**	**0.0**
	comp=Z,1.9nm,0.9s,baz=142,slow=10,SNR=2.6						
KURBB	**Kurchatov Arra**	**44.86**	**346**	P	**P**	**15 31 15.2**	**+0.1**
	comp=Z,1.6nm,0.2s,baz=167,slow=7.3,SNR=11						
KURK	**Kurchatov**	**44.93**	**346**	P	**P**	**15 31 15.0**	**-0.7**
KURK				IAmb	IAmb	15 31 22.6	
	comp=Z,13nm,1.1s						
ZALV	**Zalesovo Beam**	**46.86**	**352**	P	**P**	**15 31 31.4**	**+0.6**
	comp=Z,2.6nm,0.7s,baz=179,slow=7.5,SNR=2.9						
ZALV	**Zalesovo Beam**	**46.86**	**352**	P	**P**	**15 31 30.8**	**-0.1**
WRA	**Warramunga Arr**	**47.98**	**125**	P	**P**	**15 31 42.0**	**+1.9**
	comp=Z,0.6nm,1.0s,baz=306,slow=8.6,SNR=2.5						
WRA	**Warramunga Arr**	**47.98**	**125**	P	**P**	**15 31 41.8**	**+1.7**
MJB9	**Matsu-Tunnel**	**49.26**	**48**	P	**P**	**15 31 51.0**	**+1.3**
MJB9				IAmb	IAmb	15 32 03.3	
	comp=Z,10nm,1.1s						
MAJO	**Matsushiro**	**49.26**	**48**	P	**P**	**15 31 51.0**	**+1.2**
MAJO				IAmb	IAmb	15 32 03.3	
	comp=Z,9.2nm,1.1s						
BVAR	**Borovoye Array**	**49.31**	**341**	P	**P**	**15 31 49.0**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=141,slow=7.4,SNR=3.0						
RAYN	**Ar Rayn**	**49.33**	**294**	P	**P**	**15 31 50.4**	**-0.1**
ASAR	**Alice Springs**	**49.62**	**130**	P	**P**	**15 31 54.1**	**+1.4**
	comp=Z,0.3nm,0.5s,baz=303,slow=7.9,SNR=6.6						
KMBO	**Kilima Mbogo**	**57.52**	**264**	P	**P**	**15 32 49.8**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=86,slow=8.4,SNR=1.4						
NRIK	**Noril'sk**	**61.84**	**357**	P	**P**	**15 33 20.5**	**+0.9**
	comp=Z,0.6nm,0.2s,baz=144,slow=8.7,SNR=2.2						
SYO	**Syowa Base**	**85.17**	**197**	⇑ePcP	**PcP**	**15 35 39.7**	**-0.1**
SYO	**Syowa Base**	**85.17**	**197**	⇓esP	sP	15 35 42.0	-2.7
PDAR	**Pinedale Array**	**125.39**	**21**	PKP	**PKiKP**	**15 42 03.4**	**+0.5**
	comp=Z,0.4nm,0.9s,baz=327,slow=1.5,SNR=2.2						

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*NEIC **21** 15:24:33.1±2.2, 7°.56N±0°.06×94°.50E±0°.07, h10km±1km, mb4.5/13, Error ellipse: s-maj=14.5km s-min=7.0km az=312.0*

*IDC **21** 15:24:33.2±1.1, 7°.52N×94°.32E, h0km, mb3.9/11, mb1 3.9/12, mb1mx3.7/57, mbtmp3.8/12, ML3.8/1, Error ellipse: s-maj=43.7km s-min=20.3km az=53.0*

ISC 21 15:24:35.3±0.7, **7°.48N**±0°.10×**94°.5E**±0°.1, **h24**km, **n33**, σ**1s.55**/31, **mb4.2**/16, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**3.28**	**133**	Pn	**Pn**	**15 25 25.9**	**+0.6**
CMAR	**Chiang Mai Arr**	**11.73**	**21**	Pn	**Pn**	**15 27 22.7**	**+1.3**
	0.2nm,0.3s,baz=212,slow=13,SNR=1.9						
CMAR	**Chiang Mai Arr**	**11.73**	**21**		**Pn**	**15 27 19.7**	**-1.6**
QIZ	**Qiongzhong**	**18.79**	**51**	P	**P**	**15 28 51.3**	**-2.0**
QIZ				IAmb	IAmb	15 28 55.9	
	comp=Z,58nm,1.4s						
H08S3	**Diego Garcia H**	**26.62**	**236**	T	T	15 57 15.1	
	baz=55,slow=75,SNR=5.7						
H08S2	**Diego Garcia H**	**26.62**	**236**	T	T	15 56 52.9	
	baz=55,slow=75,SNR=7.8						
H08S1	**Diego Carcia H**	**26.63**	**236**	T	T	15 57 02.2	
	baz=55,slow=75,SNR=4.5						
GIRL	**Giralia**	**35.61**	**148**	P	**P**	**15 31 28.2**	**-3.2**
MK31	**Makanchi Array**	**40.56**	**347**	P	**P**	**15 32 14.4**	**+1.5**
MKAR	**Makanchi Array**	**40.56**	**347**	P	**P**	**15 32 13.1**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=163,slow=8.7,SNR=5.5						
MKAR	**Makanchi Array**	**40.56**	**347**	P	**P**	**15 32 12.7**	**-0.2**
MAKZ	**Makanchi**	**40.64**	**347**	P	**P**	**15 32 12.2**	**-1.4**
KNRA	**Kununurra**	**40.97**	**124**	P	**P**	**15 32 16.5**	**-0.1**
SONM	**Songino Array**	**41.47**	**12**	P	**P**	**15 32 22.0**	**+1.5**
	comp=Z,0.3nm,0.5s,baz=186,slow=5.8,SNR=1.1						
SONM	**Songino Array**	**41.47**	**12**	P	**P**	**15 32 20.4**	**0.0**
GEYT	**Alibeck**	**44.75**	**318**	P	**P**	**15 32 47.5**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=146,slow=11,SNR=3.6						
GEYT	**Alibeck**	**44.75**	**318**	P	**P**	**15 32 46.2**	**-0.9**
KURBB	**Kurchatov Arra**	**45.02**	**346**	P	**P**	**15 32 49.4**	**+0.4**
	comp=Z,1.9nm,0.5s,baz=169,slow=7.4,SNR=6.3						
KURBB				PcP	**PcP**	**15 34 31.3**	**+1.6**
	comp=Z,0.4nm,0.3s,baz=170,slow=3.4,SNR=1.2						
KURK	**Kurchatov**	**45.09**	**346**	P	**P**	**15 32 49.8**	**+0.4**
KURK				IAmb	IAmb	15 32 57.6	
	comp=Z,8.0nm,1.4s						
ZALV	**Zalesovo Beam**	**47.00**	**352**	P	**P**	**15 33 06.0**	**+1.6**
	comp=Z,1.3nm,0.3s,baz=174,slow=6.7,SNR=4.5						
ZALV	**Zalesovo Beam**	**47.00**	**352**	P	**P**	**15 33 02.7**	**-1.8**
WB0	**Warramunga Arr**	**47.67**	**125**	P	**P**	**15 33 13.0**	**+2.8**
WB0				IAmb	IAmb	15 33 24.6	
	comp=Z,5.0nm,1.2s						
WRA	**Warramunga Arr**	**47.72**	**126**	P	**P**	**15 33 13.7**	**+3.1**
	comp=Z,0.4nm,0.5s,baz=305,slow=8.4,SNR=5.0						
WRAB	**Tennant Creek**	**47.72**	**125**	P	**P**	**15 33 09.7**	**-0.9**
WRAB				IAmb	IAmb	15 33 22.6	
	comp=Z,8.4nm,1.4s						
WB2	**Warramunga Arr**	**47.73**	**125**	P	**P**	**15 33 11.8**	**+1.1**
WB2				IAmb	IAmb	15 33 25.6	
	comp=Z,3.4nm,1.1s						
ASAR	**Alice Springs**	**49.36**	**130**	P	**P**	**15 33 26.1**	**+2.8**
	comp=Z,0.3nm,0.6s,baz=304,slow=7.5,SNR=4.5						
RAYN	**Ar Rayn**	**49.60**	**294**	P	**P**	**15 33 24.2**	**-1.0**
RAYN				IAmb	IAmb	15 33 33.0	
	comp=Z,2.6nm,0.7s						
FORT	**Forrest**	**49.79**	**142**	P	**P**	**15 33 27.2**	**+0.9**
ABKAR	**Akbulak array**	**50.76**	**331**	P	**P**	**15 33 32.0**	**-1.5**
BRTR	**Keskin Array B**	**62.98**	**311**	P	**P**	**15 35 01.6**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=105,slow=6.0,SNR=2.8						
FINES	**FINESS Array B**	**73.24**	**332**	P	**P**	**15 36 04.6**	**+0.3**
	comp=Z,1.9nm,0.8s,baz=104,slow=4.8,SNR=1.6						
ARCES	**ARCESS Array B**	**75.77**	**340**	P	**P**	**15 36 19.5**	**+0.6**
	comp=Z,4.3nm,1.0s,baz=91,slow=6.7,SNR=2.4						
GERES	**GERESS Array B**	**78.38**	**318**	P	**P**	**15 36 34.6**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=71,slow=7.4,SNR=2.6						

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*NIC **21** 15:24:45.4±0.0, 37°.12N×28°.24E, h0km±1km, Ml3.7/3*

*ATH **21** 15:24:48.0, 37°.00N×28°.33E, h28km±1km, ML3.3/6, Error ellipse: s-maj=1.9km s-min=1.0km az=168.0*

*ISK **21** 15:24:47.4, 36°.99N×28°.37E, h4km, ML3.5/15*

*DDA **21** 15:24:48.0, 36°.96N×28°.37E, h10km±2km, MW3.8*

*THE **21** 15:24:49.2, 36°.95N×28°.24E, h0km±2km, ML3.3/3, Error ellipse: s-maj=4.2km s-min=1.9km az=208.0*

ISC 21 15:24:48.4±1.0, **36°.98N**±0°.02×**28°.32E**±0°.01, **h6**km±8km, **n80**, σ**1s.16**/126, **4C-1D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.16**	**349**	PG	**Pg**	**15 24 51.7**	**+0.1**
YER				SG	**Sg**	**15 24 54.7**	**+0.9**
TURN	**Turunc**	**0.25**	**116**	PG	**Pg**	**15 24 52.6**	**-0.7**
TURN				SG	**Sg**	**15 24 56.9**	**+0.3**
TURN	**Turunc**	**0.25**	**116**	iP	**Pg**	**15 24 52.7**	**-0.7**
TURN				iS	**Sg**	**15 24 56.3**	**-0.4**
MRSB	**Marmaris-Mugla**	**0.28**	**201**	PG	**Pg**	**15 24 53.7**	**-0.3**
MRSB				SG	**Sb**	**15 24 59.3**	**-1.6**
DALY	**Dalyan (Mula)**	**0.31**	**122**	PG	**Pg**	**15 24 53.9**	**-0.6**
DALY	**Dalyan (Mula)**	**0.31**	**122**	iP	**Pg**	**15 24 53.8**	**-0.7**
DALY				iS	**Sg**	**15 24 58.3**	**-0.3**
DATC	**Datca-Mugla**	**0.57**	**247**	PG	**Pg**	**15 24 59.7**	**+0.2**
DATC				SG	**Sb**	**15 25 09.2**	**0.0**
DAT	**Datca**	**0.65**	**247**	PG	**Pb**	**15 25 01.6**	**-0.5**
DAT	**Datca**	**0.65**	**247**	iP	**Pg**	**15 25 00.9**	**+0.1**
DAT				iS	**Sb**	**15 25 12.1**	**+0.6**
TAVA	**DENIZLI_Tavas**	**0.68**	**44**	iP	**Pg**	**15 25 00.1**	**-1.3**
TAVA				iS	**Sg**	**15 25 09.7**	**-0.5**
FETY	**Fethiye**	**0.70**	**119**	PG	**Pg**	**15 25 01.3**	**-0.6**
FETY	**Fethiye**	**0.70**	**119**	iP	**Pg**	**15 25 01.2**	**-0.6**
FETY				iS	**Sg**	**15 25 10.5**	**-0.5**
BDRM	**Kayabasi**	**0.71**	**277**	iP	**Pb**	**15 25 02.8**	**-0.3**
BDRM				iS	**Sb**	**15 25 13.8**	**+0.7**
ARG	**Arkhangelos**	**0.78**	**192**	P	**Pg**	**15 25 02.8**	**-0.6**
ARG	**Arkhangelos**	**0.78**	**192**	P	**Pg**	**15 25 03.0**	**-0.4**
ARG				S	**Sb**	**15 25 15.6**	**+0.5**
ARG				AML	AML	15 25 19.9	
	comp=N,4728µm,0.3s						
ARG				AML	AML	15 25 23.1	
	comp=E,3966µm,0.6s						
ARG	**Arkhangelos**	**0.78**	**192**	PG	**Pg**	**15 25 02.7**	**-0.6**
ARG	**Arkhangelos**	**0.78**	**192**	⇑P	**Pg**	**15 25 02.9**	**-0.5**
ARG				S	**Sn**	**15 25 18.2**	**+0.3**
BODT	**Bodrum**	**0.81**	**276**	PG	**Pb**	**15 25 04.7**	**-0.2**
DENT	**Denizli**	**0.96**	**36**	PG	**Pg**	**15 25 05.5**	**-1.3**
AYDB	**Zeytinkoy-Aydi**	**1.02**	**341**	PG	**Pg**	**15 25 07.5**	**-0.5**
GOLH	**Golhisar**	**1.02**	**75**	iP	**Pb**	**15 25 08.0**	**-0.6**
GOLH				iS	**Sb**	**15 25 21.5**	**-0.8**
KOSK	**Kos Island**	**1.10**	**258**	P	**Pb**	**15 25 09.7**	**-0.1**
KOSK				S	**Sb**	**15 25 25.0**	**+0.6**
	comp=E,2µm,0.5s						
GCAM	**G?zelcaml?**	**1.12**	**310**	PN	**Pb**	**15 25 10.3**	**+0.1**
GCAM	**G?zelcaml?**	**1.12**	**310**	iP	**Pb**	**15 25 10.1**	**-0.1**
GCAM				iS	**Sb**	**15 25 25.3**	**+0.2**
AKAS	**Kas**	**1.27**	**126**	PN	**Pg**	**15 25 12.1**	**-0.8**
AKAS	**Kas**	**1.27**	**126**	iP	**Pb**	**15 25 12.5**	**-0.3**
AKAS				iS	**Sn**	**15 25 33.7**	**+3.4**
AKAS				IAML		15 25 37.0	
	comp=N,1µm,1.0s						
AKAS				IAML		15 25 37.0	
	comp=E,553nm,1.0s						
ELL	**Elmali**	**1.29**	**100**	PN	**Pg**	**15 25 12.2**	**-1.0**
ELL	**Elmali**	**1.29**	**100**	P	**Pg**	**15 25 12.6**	**-0.7**
ELL				S	**Sn**	**15 25 33.0**	**+2.2**
KSL	**Kastellorizon**	**1.31**	**129**	P	**Pg**	**15 25 13.0**	**-0.6**
KSL				S	**Sn**	**15 25 34.2**	**+3.2**
	comp=E,595nm,0.6s						
KSL	**Kastellorizon**	**1.31**	**129**	P	**Pg**	**15 25 12.9**	**-0.6**
KSL				S	**Sg**	**15 25 30.0**	**-0.5**
KSL				AML	AML	15 25 35.1	
	comp=E,1672µm,0.4s						
KSL				AML	AML	15 25 36.8	
	comp=N,891µm,0.5s						
KSL	**Kastellorizon**	**1.31**	**129**	⇓P	**Pg**	**15 25 12.8**	**-0.8**
KSL				S	**Sn**	**15 25 34.2**	**+3.2**
KSL				AML	AML	15 25 34.9	
	comp=N,1.7nm,0.4s						
KSL				AML	AML	15 25 34.9	
	comp=N,1.7nm,0.4s						
SMG	**Samos**	**1.39**	**302**	P	**Pn**	**15 25 13.5**	**-0.8**
SMG				S	**Sb**	**15 25 32.8**	**+0.1**
	comp=N,1µm,0.4s						
SMG	**Samos**	**1.39**	**302**	P	**Pn**	**15 25 13.5**	**-0.8**
SMG				S	**Sg**	**15 25 32.2**	**-0.8**
SMG				AML	AML	15 25 40.3	
	comp=N,2362µm,0.5s						
SMG				AML	AML	15 25 42.3	
	comp=E,2105µm,0.4s						
MANT	**Manisa**	**1.52**	**7**	iP	**Pn**	**15 25 15.4**	**-0.9**
MANT				iS	**Sn**	**15 25 34.9**	**-1.5**
KULA	**Kula-Manisa**	**1.55**	**10**	PN	**Pn**	**15 25 16.2**	**-0.4**
BRDR	**BURDUR-Merkez**	**1.56**	**62**	iP	**Pb**	**15 25 17.4**	**-0.3**
BRDR				iS	**Sn**	**15 25 37.0**	**-0.2**
DGB	**zmir**	**1.56**	**313**	iP	**Pn**	**15 25 15.7**	**-1.0**
DGB				iS	**Sn**	**15 25 35.6**	**-1.6**
KORT	**Korkueli**	**1.62**	**89**	iP	**Pg**	**15 25 19.6**	**0.0**
KORT				iS	**Sg**	**15 25 43.9**	**+3.2**
KHAL	**Karahalli**	**1.67**	**33**	iP	**Pn**	**15 25 17.6**	**-0.6**
KHAL				iS	**Sg**	**15 25 41.9**	**-0.1**
KARP	**Karpathos**	**1.71**	**214**	P	**Pn**	**15 25 18.6**	**-0.2**
KARP	**Karpathos**	**1.71**	**214**	P	**Pn**	**15 25 18.5**	**-0.2**
KARP				S	**Sn**	**15 25 40.3**	**-0.6**
KARP				AML	AML	15 25 46.4	
	comp=E,1854µm,0.6s						
KARP				AML	AML	15 25 49.3	
	comp=N,2380µm,0.9s						
KARP	**Karpathos**	**1.71**	**214**	⇑P	**Pn**	**15 25 18.4**	**-0.3**
KARP				S	**Sb**	**15 25 42.5**	**+0.5**
KARP				AML	AML	15 25 46.0	
	comp=N,1.9nm,0.6s						
KARP				AML	AML	15 25 46.0	
	comp=N,1.9nm,0.6s						
KARP				AML	AML	15 25 48.5	
	comp=N,2.4nm,0.9s						
KARP				AML	AML	15 25 48.5	
	comp=N,2.4nm,0.9s						
AKUM	**Antalya-Kumluc**	**1.75**	**111**	iP	**Pg**	**15 25 21.7**	**-0.3**
AKUM				IAML		15 25 52.0	
	comp=E,168nm,0.6s						
AKUM				IAML		15 26 04.0	
	comp=N,153nm,0.7s						
USAK	**Uak-Merkez**	**1.81**	**17**	iP	**Pn**	**15 25 19.7**	**-0.5**
USAK				iS	**Sn**	**15 25 42.3**	**-1.2**
KZIL	**AFYON_Kizioren**	**1.93**	**48**	iP	**Pb**	**15 25 23.9**	**0.0**
KZIL				iS	**Sb**	**15 25 47.7**	**-0.6**
AKHS	**Akhisar**	**1.94**	**348**	iP	**Pn**	**15 25 20.7**	**-1.1**
AKHS				iS	**Sg**	**15 25 52.6**	**+2.0**
AKHS				IAML		15 26 01.0	
	comp=E,120nm,0.7s						
URLA	**Izmir**	**1.94**	**316**	PN	**Pn**	**15 25 22.5**	**+0.6**
URLA	**Izmir**	**1.94**	**316**	iP	**Pn**	**15 25 22.4**	**+0.6**
URLA				iS	**Sg**	**15 25 56.0**	**+5.2**

AMGA	Amorgos Island	1.95	266	P	Pn	15 25 21.5	-0.5
AMGA				S	Sn	15 25 45.8	-1.0
DEMI	Demirci	2.08	9	i P	Pn	15 25 23.8	-0.1
DEMI				i S	Sn	15 25 48.6	-1.6
ANAF	Anafi Island	2.14	254	P	Pn	15 25 24.4	-0.2
ANAF				S	Sn	15 25 50.7	-0.9
ANAF				AML	AML	15 26 04.8	
	comp=E,1407µm,0.7s						
ANAF				AML	AML	15 26 06.0	
	comp=N,1378µm,0.6s						
SIMA	Simav-Kutahya	2.16	14	PN	Pn	15 25 25.3	+0.3
BAGO	Egridir - ISPA	2.21	62	i P	Pn	15 25 26.7	+1.1
BAGO				i S	Sn	15 25 53.2	-0.1
ZEDA	zmir-Bergama	2.21	334	i P	Pn	15 25 25.0	-0.6
ZEDA				i S	Sg	15 26 00.8	+1.3
GEDZ	Gediz	2.23	22	PN	Pn	15 25 26.1	+0.2
APE	Apeiranthos	2.23	273	P	Pn	15 25 25.5	-0.4
APE				S	Sn	15 25 52.4	-1.4
CHOS	Chios island	2.28	309	P	Pn	15 25 26.1	-0.5
GDZ	Gediz	2.29	23	i P	Pn	15 25 26.9	+0.1
GDZ				i S	Sg	15 26 04.1	+1.9
STEP	BALIKESIR_Sava	2.44	349	i P	Pn	15 25 28.8	0.0
ZKR	Zakros	2.53	223	P	Pn	15 25 29.3	-0.6
ZKR				S	Sn	15 26 00.4	-0.6
ZKR				AML	AML	15 26 12.7	
	comp=E,403µm,0.5s						
ZKR				AML	AML	15 26 18.8	
	comp=N,168µm,0.7s						
DURS	Dursunbey	2.62	3	i P	Pn	15 25 30.4	-0.8
KEPZ	Antalya-Kepez	2.63	91	i P	Pb	15 25 33.6	-2.3
KEPZ				i S	Sb	15 26 08.2	-0.3
AYVA	Ayvalik	2.66	332	i P	Pb	15 25 35.3	-1.0
AYVA				IAML		15 26 20.0	
	comp=E,94nm,0.8s						
AYVA				IAML		15 26 22.0	
	comp=N,138nm,0.7s						
BOLV	Bolvadin	2.71	49	i P	Pb	15 25 36.0	-1.3
BOLV				i S	Sg	15 26 19.8	+4.4
NPS	Neapolis	2.78	233	P	Pn	15 25 33.6	+0.1
NPS				S	Sn	15 26 07.5	+0.1
LAST	Lasithi	2.93	233	P	Pn	15 25 35.8	+0.2
LAST				S	Sn	15 26 10.2	-0.9
BAYC	CANAKKALE_Bayr	3.09	334	i P	Pn	15 25 37.2	-0.5
ULDT	Uludag	3.22	11	i P	Pb	15 25 47.4	+1.3
IDI	Anoyia	3.25	240	P	Pn	15 25 40.2	+0.3
IDI				S	Sn	15 26 17.8	-1.2
GAZI	Gazipasa	3.30	102	i P	Pn	15 25 40.6	0.0
KDHN	Kadinhani	3.38	62	i P	Pn	15 25 43.6	+1.9
VLY	Voula,Athens	3.71	285	P	Pn	15 25 46.8	+0.7
AKMS	Akamas	3.80	120	P	Pn	15 25 47.3	-0.1
LIA	Limnos Island	3.81	321	P	Pn	15 25 47.3	-0.3
ALFC	Alefka	3.92	116	⇑P	Pn	15 25 48.8	-0.3
ALFC				AML	AML	15 26 37.8	
	comp=N,0.2nm,0.3s						
ALFC				AML	AML	15 26 41.7	
	comp=N,0.3nm,0.5s						
NATA	Nata	4.09	121	P	Pn	15 25 51.3	-0.2
SMTH	Samothraki Isl	4.11	329	P	Pn	15 25 51.5	-0.2
SZAC	Souni	4.32	120	⇑P	Pn	15 25 54.5	-0.1
ASGA	Asgata	4.56	117	P	Pn	15 25 57.8	-0.1
OSC2	CSNet OBS 4	5.07	139	P	Pn	15 26 06.0	+1.2

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*NEIC **21** 15:26:04.5±2.1, 2°.0N±0°.1×128°.4E±0°.1, h158km±3km, mb4.0/17, Error ellipse: s-maj=20.0km s-min=12.4km az=222.0*

*IDC **21** 15:26:05.3±3.8, 2°.00N×128°.50E, h160km±43km, mb3.5/6, mb1 3.5/7, mb1mx3.1/47, mbtmp3.9/7, Error ellipse: s-maj=103.2km s-min=15.7km az=70.0*

ISC 21 15:26:03.3±0.7**, 2°.00N**±0°.10×**128°.36E**±0°.10**, h150**km**, n26,** σ**1s.27**/26**, mb3.9**/15**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.07	134	P	Pn	15 27 05.5	+1.0
	2.2nm,0.3s,baz=331,slow=17,SNR=12						
LUWI	Luwuk	6.35	242	Pn	Pn	15 27 35.5	+0.7
WB0	Warramunga Arr	22.43	165	P	P	15 30 50.6	+0.8
WB0				IAmb	IAmb	15 30 51.1	
	comp=Z,1.6nm,0.5s						
TPUB	Ta-pu	22.46	341	P	P	15 30 49.5	-0.6
TPUB				IAmb	IAmb	15 31 01.5	
	comp=Z,10nm,1.0s						
WRA	Warramunga Arr	22.58	165	P	P	15 30 52.2	+0.9
	comp=Z,2.5nm,1.0s,baz=345,slow=11,SNR=25						
WRA	Warramunga Arr	22.58	165	P	P	15 30 50.9	-0.5
WB2	Warramunga Arr	22.59	165	P	P	15 30 52.0	+0.7
WB2				IAmb	IAmb	15 30 53.1	
	comp=Z,4.6nm,1.1s						
WR0	Warramunga Arr	22.65	165	P	P	15 30 52.5	+0.6
WR0				IAmb	IAmb	15 31 08.0	
	comp=Z,6.3nm,1.4s						
QIZ	Qiongzhong	24.80	314	P	P	15 31 12.2	+0.6
PSA00	Pilbara Seismi	24.87	199	P	P	15 31 11.4	-0.7
AS31	Alice Springs	26.08	168	P	P	15 31 24.3	+1.2
ASAR	Alice Springs	26.08	168	P	P	15 31 24.1	+0.9
	comp=Z,0.3nm,0.5s,baz=353,slow=7.7,SNR=16						
ASAR				PcP	PcP	15 34 47.8	+0.7
	comp=Z,0.2nm,0.5s,baz=341,slow=2.0,SNR=1.9						
PBKT	Sadao Pong	30.59	300	P	P	15 32 01.4	-1.8
PBKT				IAmb	IAmb	15 32 02.8	
	comp=Z,1.4nm,0.8s						
GSI	Gunungsitoli	30.78	269	P	P	15 32 04.8	-0.2
GSI				IAmb	IAmb	15 32 06.0	
	comp=Z,4.2nm,0.7s						
INCN	Inchon	35.34	358	P	P	15 32 44.3	0.0
STKA	Stephens Creek	35.96	161	P	P	15 32 49.8	+0.1
	comp=Z,1.5nm,0.4s,baz=341,slow=7.0,SNR=7.9						
STKA	Stephens Creek	35.96	161	P	P	15 32 50.3	+0.7
ARMA	Armidale	39.14	147	P	P	15 33 13.3	-3.2
ARMA				IAmb	IAmb	15 33 31.6	
	comp=Z,7.8nm,1.1s						
TOO	Toolangi	42.46	160	P	P	15 33 41.3	-2.2
MK31	Makanchi Array	59.89	325	P	P	15 35 55.1	+1.7
MKAR	Makanchi Array	59.89	325	P	P	15 35 55.2	+1.8
	comp=Z,0.9nm,0.5s,baz=116,slow=7.9,SNR=15						
MAKZ	Makanchi	60.08	325	P	P	15 35 55.2	+0.5
MAKZ				IAmb	IAmb	15 35 59.2	
	comp=Z,1.1nm,1.1s						
ZALV	Zalesovo Beam	62.86	333	P	P	15 36 13.5	+0.4
	comp=Z,0.7nm,0.6s,baz=144,slow=10,SNR=2.3						
KURBB	Kurchatov Arra	64.06	327	P	P	15 36 22.4	+1.4
	comp=Z,0.9nm,0.6s,baz=129,slow=6.5,SNR=2.6						
KURK	Kurchatov	64.06	327	P	P	15 36 22.4	+1.4
KURK	Kurchatov	64.06	327	IAmb	IAmb	15 36 23.6	
	comp=Z,1.8nm,0.8s						

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*BUL **21** 15:30:03.7±0.4, 20°.76S×25°.39E, h10km±41km, MD4.0*

*EAF **21** 15:30:04.0±1.3, 21°.08S×25°.53E, h10km, MD3.7*

ISC 21 15:29:58.0±5.2**, 21°.2S**±0°.3×**25°.8E**±0°.3**, h10**km**, n6,** σ**0s.34**/8**, Botswana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATP	Matopo	2.64	74	i P	Pg	15 30 48.9	+0.2
MATP				i S	Sg	15 31 22.8	-0.2
MATP	Matopo	2.64	74	i P	Pg	15 30 48.9	+0.2
MATP				i S	Sg	15 31 22.8	-0.2
LBTB	Lobatse	3.82	183	i P	Pb	15 31 05.2	-0.3
LBTB	Lobatse	3.82	183	i P	Pb	15 31 05.2	-0.3
BOSA	Boshof	7.41	184	i P	Pn	15 31 51.6	+5.2
BOSA				i S	Sn	15 33 11.0	+0.3
BOSA	Boshof	7.41	184	i P	Pn	15 31 51.6	+5.2
BOSA				i S	Sn	15 33 11.0	+0.3

IDC 21 15:31:11.3±7.2**, 7°.45N**×**94°.33E, h0**km**, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.2**/52**, mbtmp3.2**/3**, Error ellipse: s-maj=385.2km s-min=26.3km az=58.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	40.54	347	P	P	15 38 52.4	+0.1
	0.3nm,0.6s,baz=165,slow=6.3,SNR=4.8						
KURBB	Kurchatov Arra	45.00	346	P	P	15 39 27.9	-0.4
	0.3nm,0.2s,baz=173,slow=7.2,SNR=2.4						
WRA	Warramunga Arr	47.87	125	P	P	15 39 50.0	-1.4
	0.5nm,0.9s,baz=304,slow=8.5,SNR=2.4						
ASAR	Alice Springs	49.50	130	P	P	15 40 05.2	+1.2
	0.3nm,0.8s,baz=298,slow=8.0,SNR=2.1						

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*IDC **21** 15:32:04.1±1.1, 7°.46N×94°.11E, h0km, mb3.9/13, mb1 3.9/15, mb1mx3.7/57, mbtmp3.8/15, ML3.3/2, Error ellipse: s-maj=46.0km s-min=17.7km az=56.0*

*NEIC **21** 15:32:05.4±1.9, 7°.5N±0°.1×94°.1E±0°.2, h10km±1km, mb4.2/9, Error ellipse: s-maj=27.2km s-min=15.3km az=243.0*

ISC 21 15:32:07.4±0.6**, 7°.54N**±0°.07×**94°.25E**±0°.08**, h20**km**, n34,** σ**1s.39**/30**, mb4.0**/17**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.62	212	eP	Pn	15 32 21.8	+0.7
CMBY				eS	Sn	15 32 31.6	+1.2
PSI	Prapat	6.62	135	Pn	Pn	15 33 45.7	+2.0
	0.3nm,0.3s,baz=231,slow=11,SNR=1.2						
RPSI	Rantau Prapat	6.69	136	Pn	Pn	15 33 45.3	+0.7
IPM	Ipoh	7.39	114	Pn	Pn	15 33 54.3	0.0
PBKT	Sadao Pong	11.12	36	Pn	Pn	15 34 47.5	+2.1
CMAR	Chiang Mai Arr	11.77	22	Pn	Pn	15 34 55.9	+1.5
	0.1nm,0.3s,baz=211,slow=14,SNR=2.4						
H08S3	Diego Garcia H	26.42	236	T	T	16 04 23.6	
	baz=56						
H08S2	Diego Garcia H	26.42	236	T	T	16 04 27.2	
	baz=56						
H08S1	Diego Carcia H	26.44	236	T	T	16 04 22.1	
	baz=56						
AAK	Ala-Archa	39.06	337	P	P	15 39 33.7	+0.5
	0.3nm,0.5s,baz=180,slow=11,SNR=1.7						
MK31	Makanchi Array	40.44	347	P	P	15 39 44.4	-0.1
MK31				IAmb	IAmb	15 39 50.5	
	comp=Z,2.2nm,0.9s						
MKAR	Makanchi Array	40.44	347	P	P	15 39 44.5	+0.1
	comp=Z,2.0nm,0.6s,baz=164,slow=8.2,SNR=13						
MKAR	Makanchi Array	40.44	347	P	P	15 39 44.3	-0.2
MAKZ	Makanchi	40.52	347	P	P	15 39 44.4	-0.8
MAKZ				IAmb	IAmb	15 39 51.4	
	comp=Z,3.1nm,1.1s						
SONM	Songino Array	41.47	12	P	P	15 39 54.0	+0.9
	comp=Z,0.4nm,0.3s,baz=201,slow=7.7,SNR=3.2						
SONM	Songino Array	41.47	12	IAmb	IAmb	15 40 00.1	
	comp=Z,1.3nm,1.1s						
GEYT	Alibeck	44.52	318	P	P	15 40 18.5	+0.6
	comp=Z,1.3nm,0.6s,baz=140,slow=7.6,SNR=2.7						
GEYT	Alibeck	44.52	318	IAmb	IAmb	15 40 25.3	
	comp=Z,2.0nm,0.6s						
KURBB	Kurchatov Arra	44.90	346	P	P	15 40 21.0	+0.4
	comp=Z,2.8nm,0.7s,baz=168,slow=7.2,SNR=12						
KURK	Kurchatov	44.96	346	P	P	15 40 21.1	0.0
KURK				IAmb	IAmb	15 40 27.2	
	comp=Z,4.8nm,0.9s						
ZALV	Zalesovo Beam	46.90	352	P	P	15 40 36.6	+0.3
	comp=Z,2.3nm,0.6s,baz=179,slow=8.9,SNR=9.5						
ZALV	Zalesovo Beam	46.90	352	P	P	15 40 34.8	-1.6
WB0	Warramunga Arr	47.93	125	P	P	15 40 39.1	-5.8
WB0				IAmb	IAmb	15 40 44.0	
	comp=Z,7.5nm,1.5s						
WRA	Warramunga Arr	47.98	125	P	P	15 40 45.6	+0.3
	comp=Z,0.8nm,1.1s,baz=305,slow=8.4,SNR=2.1						
WRA	Warramunga Arr	47.98	125	P	P	15 40 42.4	-2.9
WB2	Warramunga Arr	47.99	125	P	P	15 40 41.2	-4.1
BVAR	Borovoye Array	49.34	341	P	P	15 40 54.9	-0.3
	comp=Z,0.2nm,0.3s,baz=126,slow=7.3,SNR=2.9						
BVAR				PcP	PcP	15 42 17.2	-0.5
	comp=Z,0.6nm,0.8s,baz=144,slow=3.2,SNR=2.5						
ASAR	Alice Springs	49.62	130	P	P	15 40 58.0	+0.1
	comp=Z,0.5nm,0.7s,baz=302,slow=7.1,SNR=6.0						
ASAR	Alice Springs	49.62	130	P	P	15 40 55.5	-2.3
ABKAR	Akbulak array	50.58	331	P	P	15 41 03.5	-1.2
NRIK	Noril'sk	61.88	357	P	P	15 42 24.2	-0.9
	comp=Z,1.3nm,0.7s,baz=125,slow=5.0,SNR=4.3						
FINES	FINESS Array B	73.06	332	P	P	15 43 36.1	+0.2
	comp=Z,3.0nm,0.9s,baz=157,slow=6.2,SNR=3.6						
GERES	GERESS Array B	78.15	318	P	P	15 44 05.2	-0.2
	comp=Z,0.3nm,0.5s,baz=90,slow=3.9,SNR=1.5						
NOA	NORSAR Array B	80.08	331	P	P	15 44 14.8	-0.9
	comp=Z,0.8nm,0.9s,baz=95,slow=5.1,SNR=1.2						

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*IDC **21** 15:34:20.8±19.0, 7°.69N×93°.38E, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.4/56, mbtmp4.0/4, Error ellipse: s-maj=538.3km s-min=139.8km az=117.0*

*NEIC **21** 15:34:22.0±1.4, 7°.8N±0°.1×93°.7E±0°.1, h10km±1km, mb4.3/11, Error ellipse: s-maj=21.9km s-min=15.9km az=334.0*

ISC 21 15:34:22.2±1.2**, 7°.9N**±0°.1×**93°.8E**±0°.2**, h10**km**, n19,** σ**0s.99**/18**, mb4.2**/8**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBKT	Sadao Pong	11.13	38	Pn	Pn	15 37 00.3	-1.2
TPUB	Ta-pu	29.96	56	P	P	15 40 32.3	+1.3
YOJ	Yonaguni jima	32.43	56	P	P	15 40 53.9	+1.2
MK31	Makanchi Array	40.04	348	P	P	15 41 57.6	+0.1
MKAR	Makanchi Array	40.04	348	P	P	15 41 57.8	+0.3
	0.7nm,0.7s,baz=168,slow=8.7,SNR=6.2						
MKAR	Makanchi Array	40.04	348	P	P	15 41 57.5	0.0
KNRA	Kununurra	41.77	124	P	P	15 42 12.0	-0.1
MORW	Morawa	42.50	151	P	P	15 42 16.9	-1.1
KURBB	Kurchatov Arra	44.49	346	P	P	15 42 34.5	+0.8
	0.9nm,0.6s,baz=169,slow=7.1,SNR=5.0						
KURK	Kurchatov	44.55	346	P	P	15 42 34.5	+0.3
KURK	Kurchatov	44.55	346	IAmb	IAmb	15 42 37.1	
	comp=Z,1.6nm,0.9s						
ZAA0	Zalesovo Array	46.53	353	P	P	15 42 48.8	-1.0
ZAA0				IAmb	IAmb	15 42 51.8	
	comp=Z,1.3nm,0.8s						
ZALV	Zalesovo Beam	46.53	353	P	P	15 42 50.6	+0.8
	comp=Z,1.1nm,0.5s,baz=168,slow=7.4,SNR=4.4						
ZALV	Zalesovo Beam	46.53	353	P	P	15 42 48.9	-0.9
WB0	Warramunga Arr	48.47	125	P	P	15 43 07.5	+2.1
WB0				IAmb	IAmb	15 43 15.2	
	comp=Z,5.3nm,1.3s						
WRA	Warramunga Arr	48.51	125	P	P	15 43 06.8	+1.1
WB2	Warramunga Arr	48.52	125	P	P	15 43 06.1	+0.2
WB2				IAmb	IAmb	15 43 09.7	
	comp=Z,7.8nm,1.4s						
WR0	Warramunga Arr	48.68	125	P	P	15 43 06.5	-0.6
WR0				IAmb	IAmb	15 43 11.7	
	comp=Z,4.0nm,1.2s						
FINES	FINESS Array B	72.58	332	P	P	15 45 49.3	-0.1
	comp=Z,4.3nm,0.9s,baz=108,slow=4.5,SNR=3.5						

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*IDC **21** 15:43:23.8±0.5, 7°.49N×94°.06E, h0km, mb4.2/29, mb1 4.3/31, mb1mx4.2/54, mbtmp4.2/31, ML4.1/2, Error ellipse: s-maj=17.4km s-min=11.6km az=47.0*

*MOS **21** 15:43:24.8±1.3, 7°.70N×94°.11E, h10km, mb4.8/24, Error ellipse: s-maj=14.2km s-min=6.8km az=112.2*

*NEIC **21** 15:43:25.5±1.8, 7°.54N±0°.07×94°.10E±0°.07, h10km±1km, mb4.6/25, Error ellipse: s-maj=15.9km s-min=3.9km az=223.0*

*NDI **21** 15:43:27.5±1.2, 7°.49N×94°.48E, h1km, mb4.5, mb4.6(NEIC)*

*DJA **21** 15:43:27.4±0.4, 8°N±4°×9°4E±°, h10km, M4.4/12, mb4.6/12, mB5.0/5, MLv4.4/4, Mw(mB)4.3/5*

*KLM **21** 15:43:47.0, 7°.04N×95°.61E, h10km, mb4.4*

ISC 21 15:43:28.7±1.6**, 7°.60N**±0°.05×**94°.18E**±0°.05**, h28**km±11km**, n180,** σ**1s.67**/188**, mb4.5**/52**, 15C-12D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.63	204	eP	Pn	15 43 42.0	+0.2
CMBY				eS	Sn	15 43 52.0	+1.0
LHMI	Lhok Sumawe	3.62	130		Pn	15 44 23.7	+0.8
MLSI	Meulaboh, Aceh	3.98	146	P	Pn	15 44 31.9	+4.0
PKDT	Phuket	4.13	86	P	Pn	15 44 30.2	+0.3
PBA	Port Blair	4.28	341	eP	Pn	15 44 37.4	+5.4
RNTT	Ranong	4.61	67	P	Pn	15 44 36.2	-0.4
SURT	Suratani	4.76	73	P	Pn	15 44 40.3	+1.7
TPTI		5.24	145	P	Pn	15 44 49.2	+4.0
	0.2nm394nm48nm,1.0s						
SRIT	Nakonsritamara	5.46	79	P	Pb	15 44 59.1	-4.2
TRTT	Trang	5.46	87	P	Pn	15 44 48.6	+0.3
DGPR	DIGLIPUR	5.68	348	eP	Pn	15 44 55.1	+3.8
PSI	Prapat	6.71	135	Pn	Pn	15 45 06.8	+1.3
	1.2nm,0.3s,baz=306,slow=10,SNR=14						
PSI				Sn	Sn	15 46 22.4	+1.3
	2.8nm,0.3s,baz=228,slow=19,SNR=2.8						
PSI	Prapat	6.71	135	P	Pn	15 45 09.9	+4.4
PSI				pmax	pmax		
	comp=Z,23nm,0.7s						
RPSI	Rantau Prapat	6.78	136		Pn	15 45 06.8	+0.4
RPSI					Sn	15 46 22.4	-0.3
KULM	Kulim	6.82	109		Pn	15 45 06.0	-1.0
KULM	Kulim	6.82	109	P	Pn	15 45 06.0	-1.0
GSI	Gunungsitoli	7.11	151		Pn	15 45 12.0	+1.1
IPM	Ipoh	7.47	114		Pn	15 45 14.6	-1.4
IPM	Ipoh	7.47	114	P	Pn	15 45 15.0	-1.0
PHET	Kaeng Krachan	7.53	45	P	Pn	15 45 16.6	-0.1
SRDT	SRDT	8.28	35	P	Pn	15 45 27.9	+0.9
PDSI	Padang	10.52	143	P	Pn	15 46 09.3	+12
PBKT	Sadao Pong	11.12	36	P	Pn	15 46 06.9	+1.0
PBKT	Sadao Pong	11.12	36		Pn	15 46 06.6	+0.7
MYKOM	Kota Tinggi	11.23	120	P	Pn	15 46 07.0	-0.4
CHAI	Chaiyaphum	11.24	42	P	Pn	15 46 08.6	+0.9
PHIT	Phitsanulok	11.31	32	P	Pn	15 46 09.8	+1.3
CM05	Chiang Mai Arr	11.70	23	P	Pn	15 46 17.2	+3.3
CM04	Chiang Mai Arr	11.71	23	P	Pn	15 46 16.4	+2.3
CMAR	Chiang Mai Arr	11.75	23	Pn	Pn	15 46 15.5	+0.9
	comp=Z,0.6nm,0.3s,baz=214,slow=14,SNR=31						
UTTA	Uttaradit	11.85	31	P	Pn	15 46 16.4	+0.5
CM35	Chiang Mai Arr	12.03	23	P	Pn	15 46 20.2	+1.8
CHTO	Chiang Mai	12.07	22	P	Pn	15 46 22.0	+3.0
CHTO				pmax	pmax		
	comp=Z,18nm,1.1s						
CHTO	Chiang Mai	12.07	22		Pn	15 46 20.6	+1.6
LAMP	Lampang	12.09	25	P	Pn	15 46 21.9	+2.7
BWNR	Bhubaneshwar	15.01	328	ex	Pn	15 46 57.9	-1.1
BWNR				IAmb	IAmb	15 47 00.0	
	comp=Z,11nm,0.5s						
MDSI	Maura Dua	15.60	140	P	P	15 47 11.7	+0.9
	comp=Z,13nm,0.9s						
HYB	Hyderabad	18.10	304	i P	Pn	15 47 38.0	-0.3
KMI	Kunming	19.25	24	P	Pn	15 47 54.8	+2.4
KMI				sP	pP	15 47 58.0	-0.1
KMI				PP	PnPn	15 48 12.0	+6.3
ODAN	Odare	20.22	342	eP	P	15 48 02.3	+0.4
	comp=Z,34nm,0.9s						
RAMN	Ramite	20.55	340	eP	P	15 48 05.9	+0.4
	comp=Z,75nm,0.7s						
TAPN	Taplejung	20.59	343	eP	P	15 48 06.0	+0.1
	comp=Z,23nm,0.4s						
JIRN	Jiri	21.34	340	eP	P	15 48 13.6	-0.6
	comp=Z,128nm,1.1s						
PKI	Pulchoki	21.54	338	eP	P	15 48 15.7	-0.5
PKIN	Phulchoki	21.55	338	eP	P	15 48 15.6	-0.7
GUN	Gumba	21.68	340	eP	P	15 48 17.2	-0.6
DMN	Daman	21.68	338	eP	P	15 48 17.7	0.0
KKN	Kakani	21.78	338	eP	P	15 48 16.8	-1.9
LSA	Lhasa	22.17	353	P	P	15 48 23.0	-0.2
LSA				pmax	pmax		
	comp=Z,24nm,0.7s						
LSA	Lhasa	22.17	353	P	P	15 48 23.9	+0.8
LSA				IAmb	IAmb	15 48 26.8	
	comp=Z,24nm,0.7s						
GYA	Guiyang	22.20	31	⇑iP	P	15 48 25.0	+1.9
GYA				PP	PnPn	15 48 51.6	+5.6
GYA				S	S	15 52 24.5	-1.8
GYA				SS	SnSn	15 53 04.0	+10
GKN	Gorkha	22.22	337	eP	P	15 48 23.0	-0.3
DANN	Dangsing	22.87	336	eP	P	15 48 29.8	-0.6
	comp=Z,55nm,0.8s						
CD2	Chengdu	24.87	20	eP	P	15 48 49.5	+0.4
H08S3	Diego Garcia H	26.40	236	T	T	16 15 56.2	
	baz=54,slow=75,SNR=18						
H08S2	Diego Garcia H	26.40	235	T	T	16 15 56.2	
	baz=54,slow=75,SNR=17						
H08S1	Diego Carcia H	26.41	236	T	T	16 15 59.1	
	baz=54,slow=75,SNR=12						
MPSI	Mapaga	26.63	105	P	P	15 49 05.3	+0.1
XAN	Xi'an	29.63	25	P	P	15 49 32.3	+0.5
WHN	Wuhan	29.63	37	P	P	15 49 33.1	+1.3
GTA	Gaotai	32.08	8	P	P	15 49 54.1	+0.6
GTA				pP	pP	15 49 58.3	-2.7
GTA				sP	pwP	15 50 01.3	-2.5
NJ2	Nanjing	33.46	40	eP	P	15 50 06.9	+1.4
SOEI	Soe	34.57	119	P	P	15 50 30.8	+15
KSH	Kashi	35.74	336	P	P	15 50 26.3	+1.0
KSH				pP	sP	15 50 41.4	+5.0
KSH				PcP	PcP	15 52 53.5	+0.4
KSH				S	S	15 55 56.9	-4.0
KSH				PcS	PcS	15 56 39.8	-0.6
KSH	Kashi	35.74	336	ScS	ScS	16 00 35.5	-7.0
WMQ	Urumqi	36.53	352	eP	P	15 50 33.0	+1.1
WMQ				pP	pP	15 50 38.8	-0.9
HHC	Hu-ho-hao-te	36.56	22	eP	P	15 50 34.0	+1.7
WSAR	Wadi Sarin	37.50	299	P	P	15 50 39.2	-1.2
	comp=Z,2.4nm,0.7s,baz=121,slow=7.3,SNR=1.4						
SWI	Sorong	37.92	101	P	P	15 50 53.4	+9.3
SIJI	Sorong	37.93	101	P	P	15 50 44.1	0.0
	comp=Z,6.1nm,0.8s,baz=298,slow=6.3,SNR=4.3						
ARSB	Arslanbob	38.51	334	P	P	15 50 49.1	+0.2
ARSB				IAmb	IAmb	15 51 03.1	
	comp=Z,20nm,1.4s						
AAK	Ala-Archa	38.98	337	P	P	15 50 51.7	-1.1
	comp=Z,2.0nm,0.8s,baz=133,slow=4.4,SNR=9.7						
AAK				PcP	PcP	15 53 03.5	+0.6
	comp=Z,3.2nm,0.8s,baz=200,slow=2.4,SNR=6.1						
AAK	Ala-Archa	38.98	337	⇑eP	P	15 50 53.7	+0.9
AAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MK31	Makanchi Array	40.37	347	i P	P	15 51 03.7	-0.4
MK31	Makanchi Array	40.37	347	P	P	15 51 03.7	-0.4
MKAR	Makanchi Array	40.37	347	P	P	15 51 03.9	-0.2
	comp=Z,7.6nm,0.7s,baz=165,slow=8.3,SNR=86						
MKAR				PcP	PcP	15 53 07.1	+0.1
	comp=Z,0.8nm,0.7s,baz=175,slow=5.2,SNR=3.2						
MKAR	Makanchi Array	40.37	347	P	P	15 51 03.6	-0.5
MKAR					PcP	15 53 07.2	+0.2
MAKZ	Makanchi	40.45	347	P	P	15 51 03.5	-1.3
MAKZ				IAmb	IAmb	15 51 05.1	
	comp=Z,7.3nm,0.8s						
KK31	Karatay Array	41.03	333	P	P	15 51 06.9	-2.8
KKAR	Karatay Array	41.03	333	⇑eP	P	15 51 10.1	+0.5
KKAR	Karatay Array	41.03	333	P	P	15 51 08.5	-1.1
SONM	Songino Array	41.42	12	P	P	15 51 13.2	+0.3
	comp=Z,4.1nm,0.9s,baz=197,slow=8.4,SNR=20						
SONM				PcP	PcP	15 53 11.1	+0.5
	comp=Z,0.7nm,0.7s,baz=192,slow=3.6,SNR=4.6						
SONM	Songino Array	41.42	12	P	P	15 51 12.4	-0.5
SONM				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SONM	Songino Array	41.42	12	P	P	15 51 12.4	-0.5
SONM					PcP	15 53 11.7	+1.1
ULN	Ulaanbaatar	41.60	13	⇓eP	P	15 51 14.2	-0.2
ULN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
DGZ	Jazzator, Alta	42.35	353	⇓eP	P	15 51 20.0	-0.5
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
JNU	Nakatsue	42.40	48	P	P	15 51 21.9	+0.8
	comp=Z,7.9nm,0.9s,baz=176,slow=8.8,SNR=2.6						
JNU	Nakatsue	42.40	48	IAmb	IAmb	15 51 35.6	
	comp=Z,9.9nm,1.0s						
KSRS	Korea Array	42.65	41	P	P	15 51 23.6	+0.7
	comp=Z,1.6nm,0.9s,baz=231,slow=7.9,SNR=5.0						
GEYT	Alibeck	44.44	318	P	P	15 51 38.2	+0.8
	comp=Z,5.6nm,0.6s,baz=148,slow=8.5,SNR=17						
GEYT	Alibeck	44.44	318	P	P	15 51 37.3	-0.1
KURBB	Kurchatov Arra	44.83	346	P	P	15 51 40.2	0.0
	comp=Z,11nm,0.8s,baz=166,slow=7.1,SNR=70						
KURBB				PcP	PcP	15 53 21.6	-0.2
	comp=Z,1.6nm,0.7s,baz=161,slow=3.1,SNR=6.5						
KURK	Kurchatov	44.89	346	d iP	P	15 51 40.4	-0.3
KURK				pmax	pmax		
	comp=Z,17nm,1.0s						
KURK	Kurchatov	44.89	346	P	P	15 51 40.7	0.0
KURK	Kurchatov	44.89	346		PcP	15 53 21.6	-0.4
ZAA0	Zalesovo Array	46.84	352	P	P	15 51 56.1	+0.1
ZALV	Zalesovo Beam	46.84	352	P	P	15 51 56.2	+0.1
	comp=Z,15nm,0.8s,baz=177,slow=8.1,SNR=49						
WRA	Warramunga Arr	48.07	125	P	P	15 52 05.2	-0.9
	comp=Z,0.9nm,0.7s,baz=305,slow=8.3,SNR=6.6						
WRA				PcP	PcP	15 53 33.4	-0.4
	comp=Z,0.6nm,0.9s,baz=310,slow=2.7,SNR=2.7						
WRA	Warramunga Arr	48.07	125	i P	P	15 52 06.5	+0.3
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRAB	Tennant Creek	48.07	125	⇓eP	P	15 52 10.1	+3.9
WRAB				pmax	pmax		
	comp=Z,15nm,1.5s						
WRAB	Tennant Creek	48.07	125	P	P	15 52 05.3	-0.9
WB2	Warramunga Arr	48.08	125	P	P	15 52 05.6	-0.7
WB2				IAmb	IAmb	15 52 13.7	

	comp=Z,4.5nm,0.8s						
WR0	Warramunga Arr	48.24	125	P	P	15 52 07.6	+0.1
WR0				IAmb	IAmb	15 52 14.0	
	comp=Z,5.1nm,0.8s						
USA0B	Ussuriysk Arra	49.11	36	P	P	15 52 13.6	-0.2
USA0B				IAmb	IAmb	15 52 16.5	
	comp=Z,15nm,1.4s						
RAYN	Ar Rayn	49.24	294	P	P	15 52 17.2	+2.0
RAYN				pmax	pmax		
	comp=Z,22nm,1.2s						
RAYN	Ar Rayn	49.24	294	P	P	15 52 17.1	+1.9
BVAR	Borovoye Array	49.27	341	P	P	15 52 14.2	-0.7
	comp=Z,3.3nm,0.8s,baz=132,slow=8.2,SNR=21						
BVAR				PcP	PcP	15 53 37.2	-0.3
	comp=Z,1.7nm,0.7s,baz=130,slow=4.6,SNR=5.4						
BRVK	Borovoye	49.33	341	⇑eP	P	15 52 15.0	-0.3
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRVK	Borovoye	49.33	341	P	P	15 52 14.8	-0.5
BRVK				IAmb	IAmb	15 52 16.3	
	comp=Z,4.3nm,0.9s						
ASAR	Alice Springs	49.70	130	P	P	15 52 18.0	-0.7
	comp=Z,1.0nm,0.8s,baz=307,slow=7.5,SNR=10.0						
ASAR				PcP	PcP	15 53 39.8	0.0
	comp=Z,1.6nm,0.7s,baz=318,slow=3.8,SNR=4.3						
ASAR	Alice Springs	49.70	130	P	P	15 52 18.8	+0.1
ASAR	Alice Springs	49.70	130	P	P	15 52 18.8	+0.1
ABKAR	Akbulak array	50.49	331	P	P	15 52 24.5	+0.2
ABKAR	Akbulak array	50.49	331	P	P	15 52 24.4	+0.2
ABKAR				IAmb	IAmb	15 52 25.5	
	comp=Z,4.3nm,0.9s						
KLR	Kul'dur	52.10	30	P	P	15 52 37.4	+1.0
	comp=Z,0.3nm,0.5s,baz=278,slow=3.1,SNR=1.3						
BOD	Bodaibo	52.41	13	eP	P	15 52 38.2	-0.2
BOD				pmax	pmax		
	comp=Z,9.0nm,1.6s						
SVE	Sverdlovsk	55.67	338	eP	P	15 53 02.8	+0.5
SVE				pmax	pmax		
	comp=Z,21nm,1.1s						
ARU	Arti	56.16	337	d iP	P	15 53 05.6	-0.2
ARU						15 55 08.8	
ARU				S	S	16 00 57.7	+4.5
ARU				SS	SS	16 04 40.0	+0.1
ARU				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KBZ	Khabaz	57.32	318	P	P	15 53 13.8	-0.5
	comp=Z,1.9nm,0.8s,baz=197,slow=1.5,SNR=4.1						
KMBO	Kilima Mbogo	57.43	264	P	P	15 53 14.2	-1.7
	comp=Z,0.8nm,0.7s,baz=69,slow=8.6,SNR=2.4						
KMBO	Kilima Mbogo	57.43	264	P	P	15 53 19.0	+3.1
KMBO				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KIV	Kislovodsk	57.55	318	eP	P	15 53 12.9	-3.1
KIV				pmax	pmax		
	comp=Z,22nm,0.9s						
STKA	Stephens Creek	59.88	134	P	P	15 53 32.3	0.0
	comp=Z,0.5nm,0.3s,baz=328,slow=15,SNR=1.6						
STKA	Stephens Creek	59.88	134	IAmb	IAmb	15 53 42.0	
	comp=Z,1.8nm,1.2s						
YAK	Yakutsk	60.24	18	eP	P	15 53 31.7	-2.5
YAK				pmax	pmax		
	comp=Z,12nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
VRH	Novokhopyorsk	61.18	325	eP	P	15 53 38.7	-2.1
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NRIK	Noril'sk	61.82	357	P	P	15 53 44.8	-0.1
	comp=Z,4.2nm,0.8s,baz=158,slow=7.3,SNR=14						
NRIK	Noril'sk	61.82	357	⇑iP	P	15 53 45.0	+0.2
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRTR	Keskin Array B	62.64	311	P	P	15 53 49.6	-1.4
	comp=Z,1.4nm,0.6s,baz=125,slow=6.6,SNR=10						
BRTR	Keskin Array B	62.64	311	i P	P	15 53 49.9	-1.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	Keskin Array B	62.64	311	P	P	15 53 48.3	-2.8
VSR	Storozhevoye	62.64	325	⇓eP	P	15 53 49.2	-1.4
LPSR	Galich'ya Gora	63.34	326	eP	P	15 53 53.3	-2.0
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
OBN	Obninsk	65.64	328	⇑eP	P	15 54 09.0	-1.2
OBN				e		15 54 48.0	
OBN				e		15 56 36.7	
OBN				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MA2	Magadan	66.99	27	⇑eP	P	15 54 18.9	+0.1
MA2				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TIXI	Tiksi	67.50	11	⇓eP	P	15 54 20.4	-1.4
TIXI				pmax	pmax		
	comp=Z,14nm,1.0s						
TIXI	Tiksi	67.50	11	P	P	15 54 19.9	-1.9
CFR	Carcaliu	67.82	316	⇓P	P	15 54 23.8	-0.6
CFR	Carcaliu	67.82	316	⇓P	P	15 54 23.8	-0.6
PETK	Petropavlovsk-	68.21	36	P	P	15 54 26.0	-0.6
	comp=Z,2.0nm,0.9s,baz=262,slow=6.5,SNR=1.8						
AKASG	Malin Array Be	68.40	322	P	P	15 54 26.0	-1.8
	comp=Z,0.2nm,0.4s,baz=92,slow=4.8,SNR=5.2						
AKASG	Malin Array Be	68.40	322	i P	P	15 54 26.7	-1.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ODBI	Odobesti	68.69	316	⇑P	P	15 54 29.2	-0.6
VRI	Vrincioaia	68.93	316	⇑P	P	15 54 31.9	+0.6
VRI	Vrincioaia	68.93	316	P	P	15 54 31.9	+0.6
PLOR	Plostina	68.98	316	⇓P	P	15 54 32.0	+0.3
PLOR	Plostina	68.98	316	⇓P	P	15 54 32.0	+0.3
TESR	Tescani	69.11	317	⇑P	P	15 54 32.3	-0.1
SEY	Seymchan	69.16	25	⇓eP	P	15 54 33.1	+0.7
MLR	Muntele Rosu	69.40	316	⇑P	P	15 54 34.8	+0.4
MLR	Muntele Rosu	69.40	316	P	P	15 54 34.9	+0.5
MLR				pmax	pmax		
	comp=Z,9.0nm,1.4s						
BURAR	Bucovina Array	70.28	318	⇑P	P	15 54 39.9	+0.2
BURAR	Bucovina Array	70.28	318	P	P	15 54 39.9	+0.2
ARR	Arges	70.29	315	⇑P	P	15 54 39.1	-0.7
FINES	FINESS Array B	72.98	332	P	P	15 54 55.2	-0.3
	comp=Z,5.4nm,0.7s,baz=82,slow=6.1,SNR=13						
FINES	FINESS Array B	72.98	332	i P	P	15 54 55.5	0.0
FINES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BOSA	Boshof	75.47	238	P	P	15 55 09.7	-1.2
	comp=Z,1.7nm,0.7s,baz=93,slow=6.6,SNR=3.3						
BOSA	Boshof	75.47	238	IAmb	IAmb	15 55 19.4	
	comp=Z,8.3nm,1.1s						
ARCES	ARCESS Array B	75.54	340	P	P	15 55 10.0	-0.4
	comp=Z,4.6nm,1.0s,baz=80,slow=7.5,SNR=5.3						
MORC	Moravsky Berou	75.61	319	⇑P	P	15 55 11.7	+0.5
MORC	Moravsky Berou	75.61	319	P	P	15 55 11.7	+0.5
BILL	Bilibino	76.33	22	⇑iP	P	15 55 14.4	-0.5
BILL				e		15 58 03.4	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GERES	GERESS Array B	78.06	318	P	P	15 55 24.7	-0.4
	comp=Z,1.3nm,0.6s,baz=86,slow=4.1,SNR=11						
GERES	GERESS Array B	78.06	318	P	P	15 55 24.2	-0.9
GERES	GERESS Array B	78.06	318	P	P	15 55 24.2	-0.9
CLL	Collm	78.60	321	eP	P	15 55 30.0	+2.1
NB2	NORSAR Subarra	79.99	331	P	P	15 55 34.5	-0.9
	comp=Z,5.9nm,0.9s,baz=92,slow=5.6						
NOA	NORSAR Array B	79.99	331	P	P	15 55 35.0	-0.4
	comp=Z,3.1nm,0.8s,baz=93,slow=5.5,SNR=7.9						
KEST	Kesra	81.44	305	P	P	15 55 43.3	-0.4
	comp=Z,1.4nm,0.4s,baz=238,slow=2.7,SNR=2.0						
KEST	Kesra	81.44	305	IAmb	IAmb	15 56 02.5	
	comp=Z,4.5nm,1.1s						
TORD	Torodi Ar. Bea	90.70	283	P	P	15 56 30.8	+1.0
	comp=Z,0.3nm,0.4s,baz=109,slow=5.8,SNR=3.1						
IMAR	Indian Mountai	91.87	22	P	P	15 56 35.2	+1.1
ILAR	Eielson Array	94.99	22	P	P	15 56 47.3	-1.2
	comp=Z,0.1nm,0.6s,baz=308,slow=4.0,SNR=1.5						
RES	Resolute Bay	97.68	2	P	Pdif	15 57 00.6	0.0
	baz=357,slow=2.2						
ULM	Lac du Bonnet	121.73	8	PKP	PKPdf	16 02 17.6	-2.6
	comp=Z,1.1nm,0.4s,baz=315,slow=1.4,SNR=2.2						
NVAR	Mina Array Bea	125.14	31	PKP	PKiKP	16 02 27.7	-0.1
	comp=Z,0.2nm,0.4s,baz=285,slow=4.2,SNR=2.1						
PDAR	Pinedale Array	125.41	21	PKP	PKPdf	16 02 27.3	-0.5
	comp=Z,0.5nm,0.8s,baz=338,slow=1.6,SNR=4.2						
TXAR	Lajitas Array	139.46	24	PKP	PKPdf	16 02 51.8	-2.6
	comp=Z,0.2nm,0.8s,baz=289,slow=2.8,SNR=1.9						
PLCA	Paso Flores	144.30	200	PKP	PKPab	16 03 00.3	-0.3
	comp=Z,4.2nm,1.0s,baz=268,slow=6.6,SNR=4.2						
CPUP	Villa Florida	147.12	232	PKPbc	PKPdf	16 03 07.5	-0.3
	comp=Z,2.3nm,0.9s,baz=133,slow=6.2,SNR=4.0						

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*IDC **21** 15:46:05.4±1.3, 7°.18N×94°.09E, h0^{km}, mb3.8/11, mb1 3.9/12, mb1mx3.7/54, mbtmp3.7/12, ML4.0/1, Error ellipse: s-maj=48.6km s-min=21.9km az=54.0*

*NEIC **21** 15:46:06.1±2.2, 7°.05N±0°.07×94°.12E±0°.07, h10^{km}±1^{km}, mb4.3/14, Error ellipse: s-maj=14.5km s-min=8.1km az=315.0*

ISC 21 15:46:07.7±0.8**, 7°.07N**±0°.10×**94°.2E**±0°.1**, h21^{km}, n38, σ1^{s}.00**/32**, mb4.0**/18**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMBY	CAMPBELL BAY	0.23	254	eP	Pb	15 46 22.6	+9.0
CMBY				eS	Sb	15 46 31.2	+13
LHMI	Lhok Sumawe	3.33	123	Pn	Pn	15 46 57.1	-1.4
GSI	Gunungsitoli	6.67	149	Pn	Pn	15 47 45.4	+0.8
KULM	Kulim	6.70	105	Pn	Pn	15 47 46.1	+1.2
IPM	Ipoh	7.31	110	Pn	Pn	15 47 54.6	+1.3
PBKT	Sadao Pong	11.56	35	Pn	Pn	15 48 51.0	-0.5
CM31	Chiang Mai Arr	12.24	22	Pn	Pn	15 49 02.1	+1.2
CMAR	Chiang Mai Arr	12.24	22	Pn	Pn	15 49 00.3	-0.6
	0.3nm,0.3s,baz=210,slow=15,SNR=1.8						
LSA	Lhasa	22.68	353	P	P	15 51 08.0	-0.4
LSA				IAmb	IAmb	15 51 17.1	
	comp=Z,6.9nm,1.0s						
H08S3	Diego Garcia H	26.08	236	T	T	16 18 31.6	
	baz=57						
H08S2	Diego Garcia H	26.08	236	T	T	16 18 31.7	
	baz=57						
H08S1	Diego Carcia H	26.09	236	T	T	16 18 18.9	
	baz=57						
TPUB	Ta-pu	30.13	55	P	P	15 52 16.2	-0.1
AAK	Ala-Archa	39.44	337	P	P	15 53 36.9	+0.4
	comp=Z,0.8nm,0.9s,baz=203,slow=20,SNR=1.0						
MK31	Makanchi Array	40.87	348	P	P	15 53 48.9	+0.7
MK31				IAmb	IAmb	15 53 54.4	
	comp=Z,2.8nm,0.9s						
MKAR	Makanchi Array	40.87	348	P	P	15 53 48.0	-0.1
	comp=Z,0.8nm,0.7s,baz=167,slow=8.4,SNR=3.4						
MKAR	Makanchi Array	40.87	348	P	P	15 53 48.4	+0.2
MAKZ	Makanchi	40.95	347	P	P	15 53 49.3	+0.6
MAKZ				IAmb	IAmb	15 53 54.7	
	comp=Z,2.8nm,0.7s						
KNRA	Kununurra	41.07	124	P	P	15 53 48.3	-1.8
KNRA				IAmb	IAmb	15 54 00.7	
	comp=Z,8.3nm,1.2s						
KK31	Karatay Array	41.48	334	P	P	15 53 51.5	-1.7
SONM	Songino Array	41.94	12	P	P	15 53 57.5	+0.5
	comp=Z,1.0nm,0.8s,baz=194,slow=9.6,SNR=2.6						
SONM	Songino Array	41.94	12	P	P	15 53 56.8	-0.3
GEYT	Alibeck	44.80	319	P	P	15 54 20.8	+0.7
	comp=Z,0.5nm,0.4s,baz=116,slow=6.6,SNR=1.4						
GEYT	Alibeck	44.80	319	IAmb	IAmb	15 54 29.2	
	comp=Z,2.7nm,0.7s						
KURK	Kurchatov	45.38	346	P	P	15 54 24.8	+0.3
KURK				IAmb	IAmb	15 54 31.1	
	comp=Z,6.4nm,0.9s						
ZALV	Zalesovo Beam	47.34	353	P	P	15 54 39.4	-0.5
	comp=Z,0.6nm,0.4s,baz=168,slow=7.4,SNR=2.4						
WRA	Warramunga Arr	47.80	125	P	P	15 54 45.3	+1.4
	comp=Z,0.7nm,0.8s,baz=308,slow=9.3,SNR=2.9						
WRA	Warramunga Arr	47.80	125	IAmb	IAmb	15 54 46.8	
	comp=Z,0.1nm,0.8s						
WRAB	Tennant Creek	47.80	125	P	P	15 54 44.4	+0.5
WB2	Warramunga Arr	47.81	125	P	P	15 54 43.6	-0.5
WB2				IAmb	IAmb	15 54 51.7	
	comp=Z,2.9nm,0.5s						
WR0	Warramunga Arr	47.97	125	P	P	15 54 44.1	-1.1
WR0				IAmb	IAmb	15 54 56.1	
	comp=Z,2.9nm,1.1s						
ASAR	Alice Springs	49.40	129	P	P	15 54 58.5	+2.2
	comp=Z,0.5nm,0.8s,baz=302,slow=7.5,SNR=2.1						
ASAR	Alice Springs	49.40	129	P	P	15 54 54.9	-1.4
BVAR	Borovoye Array	49.74	341	P	P	15 54 57.9	-0.5
	comp=Z,0.6nm,0.7s,baz=148,slow=8.6,SNR=2.1						
ABKAR	Akbulak array	50.93	332	P	P	15 55 06.5	-1.0
FINES	FINESS Array B	73.42	332	P	P	15 57 38.9	+0.8
	comp=Z,3.3nm,1.0s,baz=111,slow=6.1,SNR=2.2						
GERES	GERESS Array B	78.42	318	P	P	15 58 07.3	+0.2
	comp=Z,0.4nm,0.7s,baz=60,slow=6.0,SNR=2.0						
HFS	Hagfors	79.15	330	P	P	15 58 11.0	+0.3
	comp=Z,3.1nm,1.0s,baz=90,slow=8.6,SNR=1.6						

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*IDC **21** 15:48:23.2±0.4, 7°.80N×94°.23E, h0^{km}, mb4.3/32, mb1 4.4/35, mb1mx4.3/59, mbtmp4.3/35, ML3.8/2, MS4.2/5, Ms1 4.2/5, ms1mx3.7/56, Error ellipse: s-maj=15.1km s-min=10.4km az=55.0*

*BJI **21** 15:48:24.4±0.0, 7°.74N×93°.60E, h12^{km}, mB5.2/30, mb4.5/54, Ms4.6/14, Ms7 4.4/14*

*NEIC **21** 15:48:25.1±1.9, 7°.77N±0°.07×94°.24E±0°.08, h10^{km}±1^{km}, mb4.7/22, Error ellipse: s-maj=14.1km s-min=11.5km az=230.0*

*MOS **21** 15:48:25.0±1.1, 7°.77N×94°.19E, h21^{km}, mb4.8/30, Error ellipse: s-maj=10.0km s-min=6.3km az=110.0*

*DJA **21** 15:48:26.3±0.3, 8°N±3°×9°4E±°, h10^{km}, M4.9/18, mb4.8/18, mB5.1/4, MLv5.0/6, Mw(mB)4.5/4, Mwp5.4/1*

*NDI **21** 15:48:27.6±3.2, 7°.76N×94°.12E, h0^{km}±134^{km}, mb4.8, mb4.7(NEIC)*

ISC 21 15:48:26.7±0.3**, 7°.74N**±0°.04×**94°.16E**±0°.05**, h18^{km}, n192, σ1^{s}.79**/191**, mb4.6**/70**, MS4.5**/7**, 22C-13D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMBY	CAMPBELL BAY	0.76	198	eP	Pg	15 48 42.2	+0.6
CMBY				eS	Sn	15 48 53.8	+0.4
LHMI	Lhok Sumawe	3.73	132	Pn	Pn	15 49 24.1	+0.8
LHMI					Sn	15 50 06.5	-0.3
MLSI	Meulaboh, Aceh	4.11	147	P	Pn	15 49 30.6	+2.0
PBA	Port Blair	4.14	340	eP	Pn	15 49 31.4	+2.4
PKDT	Phuket	4.14	88	P	Pn	15 49 29.2	+0.2
TPTI		5.37	146	P	Pn	15 49 47.7	+1.8
	0.4nm1µm137nm,1.1s						
TRTT	Trang	5.48	89	P	Pn	15 49 47.8	+0.3
DGPR	DIGLIPUR	5.54	347	eP	Pn	15 49 52.1	+3.8
SNSI	Sinabang, Aceh	5.72	158	P	Pn	15 49 55.2	+4.5
PSI	Prapat	6.82	136	Pn	Pn	15 50 07.2	+1.2
	1.9nm,0.3s,baz=279,slow=10,SNR=9.5						
PSI				Sn	Sn	15 51 25.3	+2.0
	3.5nm,0.3s,baz=58,slow=17,SNR=1.7						
PSI				LR	LR	15 53 02.1	
	comp=Z,2µm,19.0s,baz=309,slow=40						
KULM	Kulim	6.89	110		Pn	15 50 06.1	-0.7
RPSI	Rantau Prapat	6.90	136		Pn	15 50 08.8	+1.9
RPSI	Rantau Prapat	6.90	136		Pn	15 50 07.2	+0.2
RPSI					Sn	15 51 25.3	+0.3
GSI	Gunungsitoli	7.24	152		Pn	15 50 11.4	-0.3
PHET	Kaeng Krachan	7.44	46	P	Pn	15 50 14.3	-0.1
IPM	Ipoh	7.55	115		Pn	15 50 14.7	-1.3
IPM					Sn	15 51 38.6	-2.6
BKNI	Bangkinang	10.06	137	P	Pn	15 50 52.9	+2.5
	153nm,0.8s						
PDSI	Padang	10.64	144	P	Pn	15 50 59.1	+0.7
	39nm,0.8s						
PBKT	Sadao Pong	11.01	37	P	Pn	15 51 04.0	+0.6
PBKT	Sadao Pong	11.01	37		Pn	15 51 04.7	+1.2
CHAI	Chaiyaphum	11.15	43	P	Pn	15 51 07.7	+2.3
SDSI	Sungai Dareh	11.26	140	P	Pn	15 50 57.5	-9.3
CM31	Chiang Mai Arr	11.63	23		Pn	15 51 14.0	+2.2
CMAR	Chiang Mai Arr	11.63	23	Pn	Pn	15 51 09.7	-2.2
	baz=210,slow=14,SNR=1.2						
CMAR				LR	LR	15 55 44.1	
	comp=Z,467nm,21.6s,baz=270,slow=38						
CMAR	Chiang Mai Arr	11.63	23	i P	Pn	15 51 15.0	+3.2
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CHTO	Chiang Mai	11.95	22	P	Pn	15 51 16.9	+0.6
CHTO	Chiang Mai	11.95	22		Pn	15 51 16.9	+0.6
KRJI	Kerinci	12.18	143	P	Pn	15 51 23.1	+3.6
	comp=Z,181nm,0.8s						
PALK	Pallekele	13.35	269	Pn	Pn	15 51 36.9	+1.4
	comp=Z,0.4nm,0.3s,baz=42,slow=13,SNR=1.9						
PALK				Sn	Sn	15 53 50.1	-14
	comp=Z,0.6nm,0.3s,baz=19,slow=23,SNR=1.4						
PALK				LR	LR	15 56 31.0	
	comp=Z,870nm,19.2s,baz=112,slow=36						
MDRS	Chennai	14.67	292	eP	Pn	15 51 55.7	+2.2
MDRS				IAmb	IAmb	15 52 09.6	
	comp=Z,21nm,1.0s						
MDSI	Maura Dua	15.73	140	P	Pn	15 52 05.9	-1.6
LWLI	Liwa	16.06	142	P	P	15 52 14.6	-0.6
	comp=Z,43nm,0.6s						
HYB	Hyderabad	18.00	304	i P	Pn	15 52 36.0	-0.2
QIZ	Qiongzhong	18.92	52	P	Pn	15 52 46.9	-0.4
QIZ				S	S	15 56 20.8	-0.4
KMI	Kunming	19.13	24	P	Pn	15 52 52.3	+2.2
KMI				pP	sP	15 52 54.9	-1.0
KMI				S	Sn	15 56 24.5	+0.3
KMI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ODAN	Odare	20.08	342	eP	P	15 52 59.3	-0.2
	comp=Z,163nm,1.3s						
RAMN	Ramite	20.41	340	eP	P	15 53 04.1	+0.9
	comp=Z,154nm,1.0s						
TAPN	Taplejung	20.44	343	eP	P	15 53 03.2	-0.4
	comp=Z,276nm,1.4s						
JIRN	Jiri	21.20	340	eP	P	15 53 12.3	+0.4
	comp=Z,284nm,1.1s						
PKI	Pulchoki	21.40	338	eP	P	15 53 12.2	-1.7
PKIN	Phulchoki	21.41	338	eP	P	15 53 13.3	-0.7
GUN	Gumba	21.54	340	eP	P	15 53 14.8	-0.7
DMN	Daman	21.55	338	eP	P	15 53 15.7	+0.3
	comp=Z,68nm,0.8s						
KKN	Kakani	21.64	338	eP	P	15 53 15.7	-0.7
LSA	Lhasa	22.03	353	P	P	15 53 20.2	-0.6
LSA				pmax	pmax		
	comp=Z,21nm,0.8s						
LSA	Lhasa	22.03	353	P	P	15 53 20.2	-0.6
LSA				IAmb	IAmb	15 53 31.0	
	comp=Z,21nm,0.8s						
GKN	Gorkha	22.08	337	eP	P	15 53 20.2	-0.8
	comp=Z,139nm,1.0s						
GYA	Guiyang	22.09	31	⇓iP	P	15 53 25.3	+4.2
GYA				PP	PnPn	15 53 50.3	+6.9
GYA				S	S	15 57 23.0	-1.2
GYA				SS	SnSn	15 58 02.8	+12
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,4.9s						
GYA				LR	LR		
	comp=Z,800nm,14.6s						
GYA				LR	LR		
	comp=Z,710nm,14.9s						
GYA				LR	LR		
	comp=Z,600nm,12.4s						
DANN	Dangsing	22.74	336	eP	P	15 53 27.1	-1.1
	comp=Z,153nm,1.0s						
CD2	Chengdu	24.74	20	P	P	15 53 47.3	0.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
H08S3	Diego Garcia H	26.46	235	T	T	16 20 46.0	
	baz=55,slow=75,SNR=20						
H08S2	Diego Garcia H	26.46	235	T	T	16 20 52.4	
	baz=55,slow=75,SNR=44						
H08S1	Diego Carcia H	26.48	235	T	T	16 20 57.9	
	baz=55,slow=75,SNR=25						
XAN	Xi'an	29.51	25	P	P	15 54 33.0	+2.9
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,220nm,7.9s						
WHN	Wuhan	29.53	37	⇑P	P	15 54 37.5	+7.2
WHN				pmax	pmax		
	comp=Z,120nm,1.4s						
LZH	Lanzhou	29.57	16	eP	P	15 54 35.5	+4.7
LZH				pP	pwP	15 54 40.0	+1.6
LZH				sP	sP	15 54 42.8	+5.0
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
GTA	Gaotai	31.94	8	eP	P	15 54 51.8	+0.2
GTA				pP	pP	15 54 56.6	+0.1
GTA				sP	pwP	15 54 59.9	+0.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NJ2	Nanjing	33.36	40	eP	P	15 55 03.9	-0.1
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
SOEI	Soe	34.66	120	P	P	15 55 15.9	+0.3
	comp=Z,17nm,0.9s						
KBL	Kabul	35.29	323	P	P	15 55 20.7	-0.3
KBL				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KSH	Kashi	35.61	335	P	P	15 55 23.9	+0.4
KSH				pP	pP	15 55 27.3	-1.1
KSH				S	S	16 00 57.8	-1.1
KSH				PcS	PcS	16 01 40.5	+1.1
KSH				ScS	ScS	16 05 40.6	-1.7
KSH				pmax	pmax		
	comp=Z,27nm,0.8s						
KSH				pmax	pmax		
	comp=Z,570nm,4.9s						
KSH				LR	LR		
	comp=Z,270nm,8.9s						
KSH				LR	LR		
	comp=Z,360nm,11.3s						
KSH				LR	LR		
	comp=Z,650nm,9.9s						
WMQ	Urumqi	36.39	352	eP	P	15 55 28.8	-1.2
WMQ				pP	pP	15 55 33.3	-1.7
WMQ				sP	sP	15 55 36.4	-0.8
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,280nm,8.3s						
WMQ				LR	LR		
	comp=Z,410nm,28.9s						
WMQ				LR	LR		
	comp=Z,430nm,28.8s						
WMQ				LR	LR		
	comp=Z,340nm,28.9s						
HHC	Hu-ho-hao-te	36.44	22	eP	P	15 55 31.9	+1.3
HHC				pP	sP	15 55 36.9	-0.8
HHC				sP	pwP	15 55 39.5	+1.3
HHC				pmax	pmax		
	comp=Z,310nm,4.8s						
HHC				LR	LR		
	comp=Z,850nm,13.6s						
HHC				LR	LR		
	comp=Z,480nm,14.8s						
HHC				LR	LR		
	comp=Z,820nm,13.6s						
BJI	Beijing	37.72	28	P	P	15 55 46.3	+5.0
BJI				pmax	pmax		
	comp=Z,11nm,1.7s						
SWI	Sorong	37.97	101	P	P	15 55 47.9	+4.1
SIJI	Sorong	37.98	101	P	P	15 55 42.7	-1.2
	comp=Z,9.1nm,1.0s,baz=293,slow=7.9,SNR=5.1						
ARSB	Arslanbob	38.37	334	P	P	15 55 47.1	+0.1
ARSB				pmax	pmax		
	comp=Z,26nm,0.9s						
ARSB	Arslanbob	38.37	334	P	P	15 55 47.1	+0.1
ARSB				IAmb	IAmb	15 55 54.8	
	comp=Z,26nm,0.9s						
AAK	Ala-Archa	38.84	337	P	P	15 55 50.1	-0.8
	comp=Z,4.0nm,0.9s,baz=145,slow=6.4,SNR=10						
AAK	Ala-Archa	38.84	337	⇓eP	P	15 55 51.1	+0.1
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AAK	Ala-Archa	38.84	337	P	P	15 55 48.9	-2.0
AAK				IAmb	IAmb	15 55 59.1	
	comp=Z,13nm,0.9s						
MK31	Makanchi Array	40.23	347	P	P	15 56 01.0	-1.3
MK31				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MK31	Makanchi Array	40.23	347	P	P	15 56 01.0	-1.3
MKAR	Makanchi Array	40.23	347	P	P	15 56 01.0	-1.3
	comp=Z,7.2nm,0.9s,baz=162,slow=8.3,SNR=32						
MKAR	Makanchi Array	40.23	347	ceP	P	15 56 01.5	-0.8
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MKAR	Makanchi Array	40.23	347	P	P	15 56 01.1	-1.1
FITZ	Fitzroy Crossi	40.31	130	P	P	15 56 02.2	-1.1
	comp=Z,1.2nm,0.7s,baz=315,slow=10.0,SNR=1.7						
MAKZ	Makanchi	40.31	347	P	P	15 55 59.2	-3.7
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MAKZ	Makanchi	40.31	347	P	P	15 55 59.2	-3.7
SONM	Songino Array	41.29	12	P	P	15 56 10.1	-1.0
	comp=Z,3.1nm,0.9s,baz=198,slow=8.5,SNR=11						
SONM				PcP	PcP	15 58 09.5	-0.1
	comp=Z,0.8nm,0.7s,baz=195,slow=3.4,SNR=2.8						

SONM	**Songino Array**	**41.29**	**12**	P	**P**	**15 56 09.6**	**-1.6**
ULN	**Ulaanbaatar**	**41.47**	**13**	⇓eP	**P**	**15 56 12.5**	**-0.1**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.7s						
DGZ	**Jazzator, Alta**	**42.20**	**353**	⇑eP	**P**	**15 56 18.9**	**+0.3**
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KSRS	**Korea Array**	**42.55**	**41**	P	**P**	**15 56 19.7**	**-1.8**
	comp=Z,0.7nm,0.7s,baz=220,slow=7.8,SNR=1.7						
GEYT	**Alibeck**	**44.31**	**318**	P	**P**	**15 56 34.7**	**-1.1**
	comp=Z,4.0nm,0.7s,baz=138,slow=8.9,SNR=7.5						
GEYT	**Alibeck**	**44.31**	**318**	P	**P**	**15 56 33.7**	**-2.0**
TLY	**Talaya**	**44.50**	**8**	LR	LR	16 18 00.9	
	comp=Z,507nm,18.8s,baz=1.0,slow=40						
TLY	**Talaya**	**44.50**	**8**	eP	**P**	**15 56 32.5**	**-4.5**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KURK	**Kurchatov**	**44.75**	**346**	d iP	**P**	**15 56 38.5**	**-0.5**
KURK				pmax	pmax		
	comp=Z,36nm,2.5s						
KURK	**Kurchatov**	**44.75**	**346**	P	**P**	**15 56 38.4**	**-0.5**
NWAO	**Narrogin (SRO)**	**46.02**	**153**	P	**P**	**15 56 49.0**	**-0.2**
	comp=Z,22nm,1.1s,baz=314,slow=6.0,SNR=6.3						
ZALV	**Zalesovo Beam**	**46.69**	**352**	P	**P**	**15 56 54.1**	**-0.2**
	comp=Z,12nm,0.8s,baz=174,slow=7.8,SNR=29						
ZALV	**Zalesovo Beam**	**46.69**	**352**	P	**P**	**15 56 54.5**	**+0.2**
ZALV	**Zalesovo Beam**	**46.69**	**352**	P	**P**	**15 56 54.5**	**+0.2**
MDJ	**Mudanjiang**	**47.91**	**34**	P	**P**	**15 57 07.1**	**+3.2**
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,110nm,4.4s						
WRA	**Warramunga Arr**	**48.16**	**125**	P	**P**	**15 57 04.5**	**-1.7**
	comp=Z,1.2nm,0.5s,baz=305,slow=8.3,SNR=14						
WRA				PcP	**PcP**	**15 58 33.1**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=316,slow=2.8,SNR=1.6						
WRA	**Warramunga Arr**	**48.16**	**125**	i P	**P**	**15 57 05.5**	**-0.8**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**48.16**	**125**	P	**P**	**15 57 05.2**	**-1.1**
WRAB	**Tennant Creek**	**48.17**	**125**	⇑eP	**P**	**15 57 05.5**	**-0.8**
WR0	**Warramunga Arr**	**48.34**	**125**	P	**P**	**15 57 06.0**	**-1.5**
USRK	**Ussuriysk Ar.**	**49.01**	**36**	P	**P**	**15 57 12.9**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=226,slow=9.9,SNR=1.9						
USRK	**Ussuriysk Ar.**	**49.01**	**36**	P	**P**	**15 57 13.3**	**+0.9**
USRK	**Ussuriysk Ar.**	**49.01**	**36**	P	**P**	**15 57 13.3**	**+0.9**
RAYN	**Ar Rayn**	**49.16**	**294**	P	**P**	**15 57 15.4**	**+1.4**
RAYN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
RAYN	**Ar Rayn**	**49.16**	**294**	P	**P**	**15 57 15.4**	**+1.4**
RAYN				IAmb	IAmb	15 57 23.2	
	comp=Z,6.9nm,0.9s						
BRVK	**Borovoye**	**49.19**	**341**	⇓eP	**P**	**15 57 12.5**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRVK	**Borovoye**	**49.19**	**341**	P	**P**	**15 57 13.1**	**-0.5**
BRVK				IAmb	IAmb	15 57 20.6	
	comp=Z,8.2nm,1.0s						
ASAR	**Alice Springs**	**49.81**	**130**	P	**P**	**15 57 17.4**	**-1.5**
	comp=Z,1.1nm,0.7s,baz=302,slow=7.5,SNR=14						
ASAR				PcP	**PcP**	**15 58 39.2**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=311,slow=3.0,SNR=1.4						
ASAR	**Alice Springs**	**49.81**	**130**	P	**P**	**15 57 17.7**	**-1.2**
ASAR	**Alice Springs**	**49.81**	**130**	P	**P**	**15 57 17.6**	**-1.2**
ABKAR	**Akbulak array**	**50.36**	**331**	P	**P**	**15 57 22.3**	**-0.3**
ABKAR				IAmb	IAmb	15 57 29.8	
	comp=Z,19nm,1.3s						
ABKAR	**Akbulak array**	**50.36**	**331**	P	**P**	**15 57 22.1**	**-0.5**
BOD	**Bodaibo**	**52.28**	**13**	eP	**P**	**15 57 36.6**	**-0.2**
BOD				pmax	pmax		
	comp=Z,14nm,1.6s						
ZEA	**Zeya**	**53.07**	**24**	eP	P	15 57 48.0	+5.2
ZEA				pmax	pmax		
	comp=Z,18nm,1.4s						
OPO	**Ambohidratompo**	**53.20**	**240**	LR	LR	16 15 30.1	
	comp=Z,385nm,21.5s,baz=28,slow=30						
SVE	**Sverdlovsk**	**55.53**	**338**	eP	**P**	**15 58 00.6**	**-0.1**
SVE				pmax	pmax		
	comp=Z,38nm,1.4s						
ARU	**Arti**	**56.02**	**337**	c iP	**P**	**15 58 04.0**	**-0.2**
ARU						16 00 11.1	
ARU				S	**S**	**16 05 54.5**	**+2.8**
ARU				SS	**SS**	**16 09 39.8**	**+1.9**
ARU				pmax	pmax		
	comp=Z,16nm,1.4s						
KBZ	**Khabaz**	**57.20**	**318**	P	**P**	**15 58 12.7**	**-0.1**
	comp=Z,3.0nm,0.9s,baz=164,slow=6.4,SNR=3.5						
KMBO	**Kilima Mbogo**	**57.43**	**264**	P	**P**	**15 58 15.8**	**+0.6**
	comp=Z,2.2nm,0.7s,baz=53,slow=9.3,SNR=6.5						
KMBO	**Kilima Mbogo**	**57.43**	**264**	P	**P**	**15 58 17.6**	**+2.4**
KMBO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KIV	**Kislovodsk**	**57.43**	**318**	eP	**P**	**15 58 13.0**	**-1.6**
KIV				pmax	pmax		
	comp=Z,25nm,1.0s						
STKA	**Stephens Creek**	**60.00**	**134**	P	**P**	**15 58 30.7**	**-1.8**
	comp=Z,2.9nm,0.9s,baz=302,slow=19,SNR=3.2						
YAK	**Yakutsk**	**60.12**	**18**	eP	**P**	**15 58 31.3**	**-1.4**
YAK				pmax	pmax		
	comp=Z,15nm,0.9s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.4s						
NRIK	**Noril'sk**	**61.68**	**357**	P	**P**	**15 58 42.5**	**-0.8**
	comp=E,2.9nm,0.7s,baz=153,slow=6.8,SNR=9.2						
NRIK	**Noril'sk**	**61.68**	**357**	⇓eP	**P**	**15 58 42.8**	**-0.5**
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VSR	**Storozhevoye**	**62.51**	**324**	⇓eP	**P**	**15 58 47.4**	**-1.8**
VSR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BRTR	**Keskin Array B**	**62.53**	**311**	P	**P**	**15 58 47.8**	**-2.0**
	comp=Z,1.4nm,0.7s,baz=129,slow=7.4,SNR=9.2						
BRTR	**Keskin Array B**	**62.53**	**311**	P	**P**	**15 58 45.2**	**-4.5**
MOS	**Moscow**	**65.21**	**329**	eP	**P**	**15 59 09.1**	**+2.3**
MOS				pmax	pmax		
	comp=Z,40nm,0.8s						
OBN	**Obninsk**	**65.50**	**328**	⇓eP	**P**	**15 59 06.4**	**-2.3**
OBN				e		15 59 37.1	
OBN				e		16 01 30.3	
OBN				eS	S	16 08 08.0	+15
OBN				pmax	pmax		
	comp=Z,39nm,1.7s						
MA2	**Magadan**	**66.88**	**28**	⇓eP	**P**	**15 59 18.5**	**+1.0**
MA2				pmax	pmax		
	comp=Z,15nm,1.7s						
TIXI	**Tiksi**	**67.36**	**11**	⇓eP	**P**	**15 59 19.6**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,15nm,1.3s						
TIXI	**Tiksi**	**67.36**	**11**	P	**P**	**15 59 19.9**	**-0.5**
CFR	**Carcaliu**	**67.71**	**316**	⇓P	**P**	**15 59 22.0**	**-1.0**
CFR	**Carcaliu**	**67.71**	**316**	⇓P	**P**	**15 59 22.0**	**-1.0**
AKASG	**Malin Array Be**	**68.27**	**322**	P	**P**	**15 59 24.2**	**-2.3**
	comp=Z,5.9nm,1.1s,baz=90,slow=4.7,SNR=5.9						
AKASG	**Malin Array Be**	**68.27**	**322**	c eP	**P**	**15 59 25.5**	**-1.0**
AKASG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
AKASG	**Malin Array Be**	**68.27**	**322**	IAmb	IAmb	15 59 32.2	
	comp=Z,3.1nm,1.4s						
IDI	**Anoyia**	**68.66**	**305**	P	**P**	**15 59 28.6**	**-0.8**
	comp=Z,6.2nm,0.7s,baz=141,slow=6.5,SNR=1.8						
VRI	**Vrincioaia**	**68.81**	**316**	⇑P	**P**	**15 59 29.5**	**-0.5**
VRI	**Vrincioaia**	**68.81**	**316**	⇑P	**P**	**15 59 29.5**	**-0.5**
PLOR	**Plostina**	**68.86**	**316**	⇑P	**P**	**15 59 30.1**	**-0.2**
PLOR	**Plostina**	**68.86**	**316**	P	**P**	**15 59 30.2**	**-0.2**
LSZ	**Lusaka**	**69.24**	**251**	P	**P**	**15 59 34.1**	**+0.7**
	comp=Z,1.6nm,0.6s,baz=98,slow=7.1,SNR=3.6						
MLR	**Muntele Rosu**	**69.28**	**316**	⇑P	**P**	**15 59 32.9**	**-0.2**
MLR	**Muntele Rosu**	**69.28**	**316**	⇑P	**P**	**15 59 32.9**	**-0.2**
DOPR	**Dopca**	**69.75**	**316**	⇓P	**P**	**15 59 32.5**	**-3.4**
VOIR		**69.89**	**316**	⇑P	**P**	**15 59 35.2**	**-1.6**
VOIR		**69.89**	**316**	⇑P	**P**	**15 59 35.2**	**-1.6**
BURAR	**Bucovina Array**	**70.16**	**318**	⇑P	**P**	**15 59 37.9**	**-0.5**
BURAR	**Bucovina Array**	**70.16**	**318**	⇑P	**P**	**15 59 37.9**	**-0.5**
ARR	**Arges**	**70.17**	**315**	⇑P	**P**	**15 59 34.7**	**-3.7**
FINES	**FINESS Array B**	**72.84**	**332**	P	**P**	**15 59 53.2**	**-0.9**
	comp=Z,6.7nm,0.8s,baz=110,slow=8.3,SNR=8.9						
FINES	**FINESS Array B**	**72.84**	**332**	i P	**P**	**15 59 53.5**	**-0.6**
FINES				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LBTB	**Lobatse**	**74.20**	**241**	P	**P**	**16 00 03.7**	**+0.7**
	comp=Z,6.1nm,0.8s,baz=47,slow=6.9,SNR=6.1						
LBTB	**Lobatse**	**74.20**	**241**	P	**P**	**16 00 03.7**	**+0.7**
LBTB				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LBTB	**Lobatse**	**74.20**	**241**	IAmb	IAmb	16 00 10.8	
	comp=Z,9.5nm,0.9s						
VYHS	**Vyhne**	**74.52**	**318**	eP	**P**	**16 00 04.1**	**-0.2**
VYHS	**Vyhne**	**74.52**	**318**	eP	**P**	**16 00 04.1**	**-0.2**
ARCES	**ARCESS Array B**	**75.40**	**340**	P	**P**	**16 00 08.1**	**-0.9**
	comp=Z,5.4nm,1.0s,baz=102,slow=6.7,SNR=6.6						
MORC	**Moravsky Berou**	**75.49**	**319**	⇑P	**P**	**16 00 10.0**	**0.0**
MORC	**Moravsky Berou**	**75.49**	**319**	⇑P	**P**	**16 00 10.0**	**0.0**
BOSA	**Boshof**	**75.53**	**238**	P	**P**	**16 00 10.7**	**0.0**
	comp=Z,2.7nm,0.6s,baz=93,slow=6.3,SNR=7.5						
BOSA	**Boshof**	**75.53**	**238**	P	**P**	**16 00 10.7**	**0.0**
BOSA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BOSA	**Boshof**	**75.53**	**238**	IAmb	IAmb	16 00 18.2	
	comp=Z,6.9nm,0.8s						
BILL	**Bilibino**	**76.21**	**22**	⇑eP	**P**	**16 00 13.0**	**-0.6**
BILL				e		16 03 12.0	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,449nm,19.0s						
BRG	**Berggiesshubel**	**77.87**	**320**	eP	**P**	**16 00 23.2**	**-0.1**
	comp=Z,4.8nm,1.1s						
BRG				e		16 00 29.2	
	comp=Z,31nm,1.9s						
BRG	**Berggiesshubel**	**77.87**	**320**	eP	**P**	**16 00 23.2**	**-0.1**
BRG				e		16 00 29.2	
BRG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BRG				pmax	pmax		
	comp=Z,31nm,1.9s						
GERES	**GERESS Array B**	**77.94**	**318**	P	**P**	**16 00 23.4**	**-0.5**
	comp=Z,2.2nm,0.8s,baz=84,slow=5.5,SNR=15						
KHC	**Kasperske Hory**	**78.03**	**319**	⇑eP	**P**	**16 00 24.5**	**+0.2**
KHC				pmax	pmax		
	comp=Z,13nm,1.8s						
MAW	**Mawson**	**78.41**	**192**	P	**P**	**16 00 26.1**	**+0.3**
	comp=Z,3.9nm,1.0s,baz=351,slow=12,SNR=2.4						
MAW	**Mawson**	**78.41**	**192**	IAmb	IAmb	16 00 34.5	
	comp=Z,3.6nm,1.4s						
HFS	**Hagfors**	**78.58**	**330**	P	**P**	**16 00 26.3**	**-0.8**
	comp=Z,3.5nm,0.6s,baz=117,slow=5.2,SNR=5.4						
NB2	**NORSAR Subarra**	**79.86**	**331**	P	**P**	**16 00 33.0**	**-1.1**
	comp=Z,2.0nm,0.8s,baz=91,slow=6.2						
NOA	**NORSAR Array B**	**79.86**	**331**	P	**P**	**16 00 33.0**	**-1.1**
	comp=Z,3.0nm,0.8s,baz=92,slow=5.6,SNR=8.5						
SPITS	**Spitsbergen Ar**	**79.97**	**348**	P	**P**	**16 00 33.5**	**-0.9**
	comp=Z,13nm,1.0s,baz=103,slow=3.1,SNR=2.3						
DAVOX	**Davos/Dischmat**	**80.50**	**316**	P	**P**	**16 00 35.8**	**-2.2**
	comp=Z,1.2nm,0.5s,baz=57,slow=7.3,SNR=3.9						
SYO	**Syowa Base**	**85.28**	**197**	⇑iP	**P**	**16 01 02.6**	**+0.6**
SYO	**Syowa Base**	**85.28**	**197**	⇑isP	sP	16 01 08.9	-0.6
TORD	**Torodi Ar. Bea**	**90.65**	**283**	P	**P**	**16 01 29.4**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=134,slow=4.3,SNR=4.3						
TORD	**Torodi Ar. Bea**	**90.65**	**283**	IAmb	IAmb	16 01 35.9	
	comp=Z,1.4nm,1.1s						
IMAR	**Indian Mountai**	**91.75**	**22**	P	**P**	**16 01 32.3**	**-0.8**
RES	**Resolute Bay**	**97.54**	**2**	P	**P**	**16 01 59.1**	**-0.2**
	comp=Z,1.5nm,0.8s,baz=216,slow=17,SNR=4.3						
RES	**Resolute Bay**	**97.54**	**2**	IAmb	IAmb	16 02 00.5	
	comp=Z,2.3nm,1.0s						
ULM	**Lac du Bonnet**	**121.60**	**8**	PKP	**PKPdf**	**16 07 18.7**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=27,slow=4.5,SNR=2.3						
NVAR	**Mina Array Bea**	**125.02**	**31**	PKP	**PKPdf**	**16 07 26.4**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=247,slow=1.9,SNR=2.7						
PDAR	**Pinedale Array**	**125.28**	**21**	PKP	**PKPdf**	**16 07 26.4**	**-0.7**
	comp=Z,0.4nm,0.8s,baz=350,slow=2.2,SNR=2.6						
TXAR	**Lajitas Array**	**139.34**	**24**	PKP	**PKPdf**	**16 07 53.1**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=338,slow=1.9,SNR=3.1						
PLCA	**Paso Flores**	**144.43**	**200**	PKP	PKPbc	16 08 01.2	+0.4
	comp=Z,2.6nm,0.8s,baz=212,slow=4.2,SNR=5.7						
GO06	**Curarrehue**	**145.77**	**200**		**PKPab**	**16 08 05.7**	**+0.2**
CPUP	**Villa Florida**	**147.19**	**232**	PKPbc	**PKPbc**	**16 08 09.0**	**-0.6**
	comp=Z,3.4nm,0.7s,baz=82,slow=1.4,SNR=8.0						
LPAZ	**La Paz**	**160.72**	**242**	PKPab	**PKPab**	**16 09 09.7**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=106,slow=7.4,SNR=2.2						

DDA ***21*** *15:56:52.8, 36°.98N×28°.37E, h7^{km}±4^{km}, ML2.4*
ISK ***21*** *15:56:53.3, 36°.98N×28°.37E, h8^{km}, ML2.6/11*
ISC 21 15:56:53.5±0.9**, 36°.99N**±0°.03×**28°.37E**±0°.02**, h11**^{km}±7^{km}**,**
n22, σ0^{s}.82/41**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.16**	**336**	PG	**Pg**	**15 56 57.2**	**+0.1**
YER				SG	**Sg**	**15 57 00.3**	**+0.6**
TURN	**Turunc**	**0.22**	**121**	PG	**Pg**	**15 56 58.2**	**0.0**
TURN				SG	**Sg**	**15 57 02.1**	**+0.8**
TURN	**Turunc**	**0.22**	**121**	i P	**Pg**	**15 56 58.1**	**0.0**
TURN				i S	**Sg**	**15 57 01.1**	**-0.2**
TURN				IAML		15 57 02.0	
	comp=N,782nm,0.4s						
TURN				IAML		15 57 04.0	
	comp=E,645nm,0.2s						
DALY	**Dalyan (Mula)**	**0.29**	**126**	PG	**Pg**	**15 56 59.4**	**+0.1**
DALY				SG	**Sb**	**15 57 03.9**	**-1.6**
DALY	**Dalyan (Mula)**	**0.29**	**126**	i P	**Pb**	**15 56 59.7**	**-1.0**
DALY				i S	**Sg**	**15 57 02.9**	**-0.3**
MRSB	**Marmaris-Mugla**	**0.30**	**206**	PG	**Pg**	**15 56 59.6**	**0.0**
MRSB				SG	**Sb**	**15 57 04.4**	**-1.6**
DATC	**Datca-Mugla**	**0.61**	**248**	PG	**Pb**	**15 57 05.6**	**-0.6**
DATC				SG	**Sb**	**15 57 14.5**	**-0.3**
TAVA	**DENIZLI_Tavas**	**0.65**	**42**	i P	**Pg**	**15 57 05.8**	**-0.3**
TAVA				i S	**Sg**	**15 57 13.8**	**-0.8**
FETY	**Fethiye**	**0.68**	**121**	PG	**Pb**	**15 57 06.8**	**-0.5**
FETY				SG	**Sb**	**15 57 16.6**	**-0.1**
FETY	**Fethiye**	**0.68**	**121**	i P	**Pb**	**15 57 06.6**	**-0.7**
FETY				i S	**Sg**	**15 57 15.5**	**+0.1**
DAT	**Datca**	**0.68**	**248**	PG	**Pb**	**15 57 06.9**	**-0.6**
DAT				SG	**Sb**	**15 57 16.8**	**-0.2**
DAT	**Datca**	**0.68**	**248**	i P	**Pb**	**15 57 07.2**	**-0.3**
DAT				i S	**Sb**	**15 57 16.0**	**-1.0**
AYDN	**Tasoluk**	**0.78**	**330**	i P	**Pg**	**15 57 08.5**	**0.0**
AYDN				i S	**Sg**	**15 57 17.1**	**-1.6**
AYDN				IAML		15 57 24.0	
	comp=E,219nm,0.3s						
AYDN				IAML		15 57 24.0	
	comp=N,223nm,0.3s						
ARG	**Arkhangelos**	**0.79**	**194**	PG	**Pb**	**15 57 08.9**	**-0.4**
ARG				SG	**Sb**	**15 57 20.3**	**+0.2**
BODT	**Bodrum**	**0.85**	**275**	PG	**Pb**	**15 57 10.2**	**-0.1**
BODT				SG	**Sb**	**15 57 22.4**	**+0.7**
GOLH	**Golhisar**	**0.99**	**75**	i P	**Pb**	**15 57 13.0**	**+0.2**
GOLH				i S	**Sn**	**15 57 27.6**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.03**	**339**	PG	**Pb**	**15 57 13.5**	**+0.1**
AYDB				SG	**Sn**	**15 57 28.5**	**-0.1**
GCAM	**G?zelcaml?**	**1.15**	**309**	PN	**Pn**	**15 57 15.9**	**+0.4**
GCAM	**G?zelcaml?**	**1.15**	**309**	i P	**Pn**	**15 57 16.4**	**+0.9**
GCAM				i S	**Sb**	**15 57 30.4**	**+0.1**
GCAM				IAML		15 57 35.0	
	comp=N,62nm,0.6s						
GCAM				IAML		15 57 36.0	
	comp=E,63nm,0.6s						
AKAS	**Kas**	**1.25**	**127**	PN	**Pg**	**15 57 17.6**	**0.0**
AKAS	**Kas**	**1.25**	**127**	i P	**Pg**	**15 57 17.5**	**0.0**
AKAS				i S	**Sn**	**15 57 37.1**	**+3.1**
AKAS				IAML		15 57 42.0	
	comp=N,99nm,0.4s						
DGB	**zmir**	**1.59**	**312**	i P	**Pn**	**15 57 21.3**	**-0.3**

IDC 21 16:03:54.8±2.6**, 7°.27N**×**94°.07E, h0**^{km}**, mb3.4**/3**, mb1 3.4**/4**,**
mb1mx3.2/59**, mbtmp3.3**/4**, ML3.6**/1**, Error ellipse:**
s-maj=90.1km s-min=31.6km az=64.0, Nicobar Islands
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMBY	**CAMPBELL BAY**	**0.30**	**208**	eP	Pn	16 04 11.8	+5.4
CMBY				eS	Sb	16 04 22.1	+14
CMAR	**Chiang Mai Arr**	**12.09**	**23**	Pn	Pn	16 06 49.0	+0.6
	0.1nm,0.3s,baz=212,slow=14,SNR=2.3						
H08S3	**Diego Garcia H**	**26.12**	**236**	T	T	16 36 18.5	
	baz=53,slow=74						
H08S2	**Diego Garcia H**	**26.12**	**236**	T	T	16 36 22.6	
	baz=53,slow=74						
H08S1	**Diego Carcia H**	**26.14**	**236**	T	T	16 36 16.1	
	baz=53						
MKAR	**Makanchi Array**	**40.66**	**348**	P	P	16 11 37.1	+0.4
	0.4nm,0.7s,baz=169,slow=7.2,SNR=4.7						
ZALV	**Zalesovo Beam**	**47.14**	**353**	P	P	16 12 27.7	-1.0
	0.3nm,0.3s,baz=163,slow=6.0,SNR=1.7						
ASAR	**Alice Springs**	**49.59**	**130**	P	P	16 12 48.2	0.0
	0.3nm,0.9s,baz=304,slow=7.8,SNR=2.5						

IDC ***21*** *16:08:45.5±0.9, 36°.28N×137°.28E, h256^{km}±9^{km}, mb2.9/2,*
mb1 3.1/5, mb1mx2.7/54, mbtmp3.6/5, Error ellipse:
s-maj=46.7km s-min=17.4km az=85.0
JMA ***21*** *16:08:46.2±0.2, 36°.19N×137°.33E, h256^{km}±2^{km}, M2.6*
ISC 21 16:08:45.5±0.9**, 36°.28N**±0°.10×**137°.3E**±0°.1**, h259**^{km}±7^{km}**,**
n17, σ0^{s}.66/22**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JGN	**Niukaw**	**0.06**	**152**	P	**Pn**	**16 09 19.1**	**+0.3**
JGN				eS	**S**	**16 09 44.7**	**-0.3**
JKG	**Kaga**	**0.77**	**270**	P	**Pn**	**16 09 21.4**	**+1.1**
MAT	**Matsushiro**	**0.79**	**70**	P	**Pn**	**16 09 21.0**	**+0.6**
MAT				eS	**S**	**16 09 48.2**	**+0.3**
MAT	**Matsushiro**	**0.79**	**70**	P	**Pn**	**16 09 21.0**	**+0.6**
MAT				S	**S**	**16 09 48.3**	**+0.3**
MJAR	**Matsushiro Arr**	**0.79**	**70**	P	**Pn**	**16 09 20.6**	**+0.2**
	0.5nm,0.3s,baz=248,slow=0.7,SNR=35						
MJAR				S	**S**	**16 09 48.2**	**+0.2**
	0.0nm,0.3s,baz=35,slow=31,SNR=4.0						
JYTA	**Yamagatataniai**	**0.81**	**213**	P	**Pn**	**16 09 20.6**	**0.0**
JYTA				eS	**S**	**16 09 46.9**	**-1.3**
JAG	**Ashikaga**	**1.76**	**85**	P	**Pn**	**16 09 26.6**	**0.0**
JWT	**Wachi**	**1.82**	**238**	P	**Pn**	**16 09 27.5**	**+0.3**
JSD	**Sado**	**1.92**	**24**	P	**Pn**	**16 09 29.1**	**+1.2**
JIE	**Ise**	**1.94**	**194**	P	**Pn**	**16 09 28.6**	**+0.4**
JWY	**Kouya**	**2.48**	**214**	P	**Pn**	**16 09 33.7**	**+0.4**
ASAJ	**Asahikawa**	**8.82**	**26**	P	**Pn**	**16 10 48.0**	**-1.0**
	0.9nm,0.3s,baz=227,slow=19,SNR=9.9						
USRK	**Ussuriysk Ar.**	**8.89**	**335**	P	**Pn**	**16 10 50.1**	**+0.3**
	baz=133,slow=12,SNR=4.3						
KLR	**Kul'dur**	**13.56**	**344**	P	**Pn**	**16 11 47.0**	**-0.8**
	0.2nm,0.3s,baz=167,slow=10,SNR=4.8						
WRA	**Warramunga Arr**	**55.98**	**183**	P	**P**	**16 17 57.3**	**-0.1**
	0.8nm,0.3s,baz=360,slow=7.6,SNR=21						
ASAR	**Alice Springs**	**59.70**	**184**	P	**P**	**16 18 23.5**	**+0.4**
	0.1nm,0.4s,baz=357,slow=5.3,SNR=6.7						
LPAZ	**La Paz**	**149.90**	**55**	PKPbc	**PKPbc**	**16 28 06.7**	**+0.4**
	0.9nm,0.5s,baz=314,slow=6.3,SNR=4.7						

IDC ***21*** *16:21:09.2±1.2, 7°.44N×94°.17E, h0^{km}, mb3.6/9,*
mb1 3.6/11, mb1mx3.6/42, mbtmp3.6/11, ML3.7/1, Error
ellipse: s-maj=44.4km s-min=18.2km az=50.0
ISC 21 16:21:12.3±0.9**, 7°.48N**±0°.10×**94°.2E**±0°.1**, h20**^{km}**, n19,**
σ0^{s}.99/16**, mb3.5**/9**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PKDT	**Phuket**	**4.16**	**84**	P	**Pn**	**16 22 15.0**	**+0.4**
RNTT	**Ranong**	**4.67**	**66**	P	**Pn**	**16 22 21.9**	**+0.1**
SURT	**Suratani**	**4.81**	**72**	P	**Pn**	**16 22 25.3**	**+1.5**
TRTT	**Trang**	**5.49**	**86**	P	**Pn**	**16 22 33.4**	**+0.3**
SKLT	**Songkhla**	**6.41**	**92**	P	**Pn**	**16 22 47.3**	**+1.5**
PSI	**Prapat**	**6.64**	**134**	Pn	**Pn**	**16 22 49.5**	**+0.5**
	baz=319,slow=23,SNR=1.4						
CMAR	**Chiang Mai Arr**	**11.86**	**23**	Pn	**Pn**	**16 23 59.3**	**-1.2**
	0.1nm,0.3s,baz=218,slow=15,SNR=2.2						
H08S3	**Diego Garcia H**	**26.32**	**236**	T	T	16 53 29.5	
	baz=57,slow=74						
H08S2	**Diego Garcia H**	**26.32**	**236**	T	T	16 53 42.0	
	baz=57,slow=74						
H08S1	**Diego Carcia H**	**26.33**	**236**	T	T	16 53 39.4	
	baz=57						
SIJI	**Sorong**	**37.92**	**101**	P	**P**	**16 28 27.5**	**-1.3**
	1.2nm,0.4s,baz=255,slow=19,SNR=1.3						
MKAR	**Makanchi Array**	**40.48**	**347**	P	**P**	**16 28 51.0**	**+1.3**
	0.8nm,0.8s,baz=163,slow=8.5,SNR=4.1						
SONM	**Songino Array**	**41.54**	**12**	P	**P**	**16 28 59.5**	**+0.9**
	0.2nm,0.5s,baz=212,slow=10,SNR=1.9						
GEYT	**Alibeck**	**44.51**	**318**	P	**P**	**16 29 23.4**	**+0.8**
	0.7nm,0.5s,baz=134,slow=10,SNR=2.2						
ZALV	**Zalesovo Beam**	**46.95**	**352**	P	**P**	**16 29 41.1**	**-0.5**
	0.6nm,0.6s,baz=183,slow=7.8,SNR=1.6						
WRA	**Warramunga Arr**	**48.02**	**125**	P	**P**	**16 29 51.1**	**+0.6**
	0.3nm,0.8s,baz=306,slow=8.4,SNR=2.0						
ASAR	**Alice Springs**	**49.65**	**130**	P	**P**	**16 30 02.5**	**-0.5**
	0.2nm,0.7s,baz=303,slow=7.7,SNR=1.8						
BRTR	**Keskin Array B**	**62.70**	**311**	P	**P**	**16 31 35.8**	**-0.4**
	0.2nm,0.5s,baz=111,slow=7.9,SNR=1.2						
FINES	**FINESS Array B**	**73.07**	**332**	P	**P**	**16 32 40.3**	**-0.5**
	3.8nm,1.0s,baz=128,slow=4.1,SNR=1.5						

IDC ***21*** *16:22:23.0±1.3, 7°.63N×94°.24E, h0^{km}, mb3.5/7, mb1 3.5/9,*
mb1mx3.4/42, mbtmp3.5/9, ML3.7/2, Error ellipse:
s-maj=47.7km s-min=20.2km az=55.0
ISC 21 16:22:26.2±1.0**, 7°.6N**±0°.1×**94°.11E**±0°.10**, h20**^{km}**, n19,**
σ2^{s}.29/17**, mb3.7**/7**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PKDT	**Phuket**	**4.20**	**86**	P	**Pn**	**16 23 31.4**	**+2.3**
RNTT	**Ranong**	**4.67**	**67**	P	**Pn**	**16 23 38.7**	**+3.1**
RNTT				S	**Sn**	**16 24 26.3**	**-3.0**
SURT	**Suratani**	**4.83**	**73**	P	**Pn**	**16 23 40.9**	**+3.1**
KRAB	**Krabi**	**5.08**	**83**	P	**Pn**	**16 23 44.6**	**+3.5**
TRTT	**Trang**	**5.53**	**87**	P	**Pn**	**16 23 50.1**	**+2.6**
SKLT	**Songkhla**	**6.47**	**93**	P	**Pn**	**16 24 03.0**	**+2.7**
PSI	**Prapat**	**6.75**	**135**	Pn	**Pn**	**16 24 05.4**	**+1.1**
	1.4nm,0.3s,baz=329,slow=17,SNR=2.0						
PHET	**Kaeng Krachan**	**7.58**	**45**	P	**Pn**	**16 24 17.7**	**+2.2**
CMAR	**Chiang Mai Arr**	**11.78**	**23**	Pn	**Pn**	**16 25 12.1**	**-1.1**
	0.1nm,0.3s,baz=216,slow=13,SNR=2.5						
H08S3	**Diego Garcia H**	**26.34**	**235**	T	T	16 54 40.1	
	baz=56						
H08S2	**Diego Garcia H**	**26.34**	**235**	T	T	16 54 34.4	
	baz=56						
H08S1	**Diego Carcia H**	**26.35**	**235**	T	T	16 54 37.6	
	baz=56						
MKAR	**Makanchi Array**	**40.36**	**347**	P	**P**	**16 30 03.0**	**+0.5**
	1.4nm,0.8s,baz=159,slow=8.5,SNR=2.3						
SONM	**Songino Array**	**41.44**	**13**	P	**P**	**16 30 11.3**	**-0.3**
	0.1nm,0.4s,baz=191,slow=6.8,SNR=1.3						
GEYT	**Alibeck**	**44.39**	**318**	P	**P**	**16 30 35.9**	**+0.4**
	0.4nm,0.3s,baz=114,slow=9.6,SNR=1.2						
ZALV	**Zalesovo Beam**	**46.83**	**352**	P	**P**	**16 30 52.8**	**-1.8**
	0.3nm,0.3s,baz=163,slow=5.6,SNR=1.6						
WRA	**Warramunga Arr**	**48.12**	**125**	P	**P**	**16 31 03.8**	**-1.3**
	0.4nm,0.9s,baz=305,slow=8.4,SNR=1.4						
ASAR	**Alice Springs**	**49.76**	**130**	P	**P**	**16 31 16.8**	**-0.9**
	0.2nm,0.5s,baz=308,slow=7.9,SNR=1.1						
BRTR	**Keskin Array B**	**62.59**	**311**	P	**P**	**16 32 50.2**	**+0.9**
	0.3nm,0.4s,baz=114,slow=7.0,SNR=2.9						

IDC 21 16:27:42.9±2.6**, 17°.45N**×**145°.51E, h221**^{km}±17^{km}**, mb2.9**/4**,**
mb1 3.2/5**, mb1mx2.8**/43**, mbtmp3.5**/5**, Error ellipse:**
s-maj=62.6km s-min=16.4km az=84.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.89**	**189**	P	Pn	16 28 44.3	+0.2
	3.2nm,0.3s,baz=344,slow=2.3,SNR=3.1						
GUMO				S	S	16 29 32.9	+0.6
	6.3nm,0.3s,baz=168,slow=24,SNR=6.9						
MJAR	**Matsushiro Arr**	**20.09**	**343**	P	P	16 31 59.4	-0.3
	0.8nm,0.3s,baz=145,slow=14,SNR=4.0						
WRA	**Warramunga Arr**	**38.74**	**197**	P	P	16 34 46.0	-0.1
	0.6nm,0.5s,baz=17,slow=8.6,SNR=13						
ASAR	**Alice Springs**	**42.41**	**196**	P	P	16 35 15.7	-0.3
	0.2nm,0.4s,baz=16,slow=6.8,SNR=8.8						
CMAR	**Chiang Mai Arr**	**44.22**	**279**	P	P	16 35 30.6	0.0
	0.3nm,0.6s,baz=76,slow=7.5,SNR=4.1						

KRNET ***21*** *16:32:20.7±0.1, 40°.20N×72°.37E, h15^{km}, mb2.5*
NNC ***21*** *16:32:21.2±2.5, 40°.21N×72°.53E, h0^{km}, mb2.8, mpv2.5,*
Error ellipse: s-maj=19.3km s-min=8.9km az=169.0
ISC 21 16:32:20.7±2.3**, 40°.22N**±0°.08×**72°.23E**±0°.05**, h2**^{km}±14^{km}**,**
n19, σ1^{s}.51/30**, 15C-11D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTK	**Batken**	**1.09**	**262**	⇑iP	**Pn**	**16 32 43.3**	**+0.2**
	baz=64						
BTK				⇑iS	**Sn**	**16 33 00.2**	**+1.3**
	baz=64						
ARSB	**Arslanbob**	**1.24**	**27**	⇑iP	**Pn**	**16 32 43.8**	**-1.4**
	baz=22						
ARSB				⇑iS	**Sb**	**16 33 00.4**	**-1.0**
	baz=22						

ARK	Arkit	1.59	353	⇑iP	Pb	16 32 50.7	-0.1
	baz=50						
ARK				⇑iS	Sg	16 33 12.7	+1.0
	baz=50						
AML	Almayashu	2.20	30	⇑iP	Pb	16 33 00.3	-1.2
	baz=27						
AML				⇑iS	Sb	16 33 29.4	0.0
	baz=27						
IUG	Iuzhnay	2.54	320	Pg	Pg	16 33 09.8	+0.4
	0.7nm,0.3s						
IUG				Lg	Lg	16 33 48.2	
	10nm,0.4s						
MRKS	Merke	2.63	16	Pg	Pb	16 33 06.7	-1.9
	2.9nm,0.3s						
MRKS				Lg	Lg	16 33 44.2	
	8.3nm,0.4s						
UCH	Uchtor	2.64	40	⇑iP	Pb	16 33 06.1	-2.9
	baz=38						
UCH				⇑iS	Sn	16 33 38.5	+0.9
	baz=38						
EKS2	Erkin-Say	2.70	25	⇑iP	Pb	16 33 06.9	-2.9
	baz=23						
EKS2				⇑iS	Sb	16 33 41.4	-2.0
	baz=23						
KZA	Kyzart	2.94	50	⇓iP	Pn	16 33 10.0	+1.2
	baz=48						
KZA				⇓iS	Sn	16 33 45.5	+0.6
	baz=48						
AAK	Ala-Archa	2.95	34	⇓iP	Pn	16 33 10.3	+1.5
	baz=33						
AAK				⇓iS	Sn	16 33 46.2	+1.3
	baz=33						
AAK	Ala-Archa	2.95	34	⇑Pg	Pb	16 33 14.6	+0.5
	0.9nm,0.4s						
AAK				⇓Lg	Lg	16 33 51.7	
	5.4nm,0.6s						
NRN	Naryn	3.10	66	⇓iP	Pn	16 33 11.4	+0.4
	baz=65						
NRN				⇓iS	Sn	16 33 48.4	-0.5
	baz=65						
KK31	Karatay Array	3.15	336	Pn	Pb	16 33 14.5	-3.0
	0.1nm,0.4s,baz=145,slow=13,SNR=7.7						
KK31				⇓Pg	Pg	16 33 22.1	+1.0
	0.3nm,0.3s,baz=160,slow=14,SNR=8.4						
KK31				Lg	Lg	16 34 01.1	
	4.0nm,0.4s,baz=155,slow=29,SNR=7.6						
KBK	Karagaybulak	3.18	39	⇑iP	Pn	16 33 13.5	+1.7
	baz=37						
KBK				⇑iS	Sn	16 33 51.2	+0.8
	baz=37						
CHMS	Chumysh	3.36	33	⇓Lg	Lg	16 34 04.7	
	2.4nm,0.5s						
USP	Ospenovka	3.48	28	⇓iP	Pn	16 33 17.4	+1.4
	baz=27						
USP				⇓iS	Sn	16 33 58.9	+1.1
	baz=27						
SGDS	Sogindy	3.69	28	Pg	Pb	16 33 25.6	-1.1
	1.0nm,0.4s						
SGDS				Lg	Lg	16 34 15.4	
	2.6nm,0.7s						
KST	Kastek	3.97	44	Pg	Pb	16 33 30.0	-1.5
	1.8nm,0.5s						
KST				Lg	Lg	16 34 23.0	
	1.3nm,0.3s						
KRBS	Karabastau	4.32	35	Pg	Pb	16 33 37.0	-0.3
	0.6nm,0.5s						
KRBS				Lg	Lg	16 34 35.2	
	0.7nm,0.5s						

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*IDC **21** 16:33:01.8±0.9, 7°.24N×93°.88E, h0^{km}, mb3.8/8, mb1 3.9/11, mb1mx3.7/48, mbtmp3.8/11, ML3.5/3, MS4.1/1, Ms1 4.1/1, ms1mx3.4/49, Error ellipse: s-maj=28.1km s-min=19.2km az=65.0*

*NEIC **21** 16:33:03.8±3.0, 7°.31N±0°.08×94°.04E±0°.09, h10^{km}±1^{km}, mb4.2/11, Error ellipse: s-maj=15.2km s-min=13.4km az=241.0*

ISC 21 16:33:05.4±0.6, **7°.33N**±0°.08×**94°.08E**±0°.08, **h20**^{km}, **n51**, σ**1^s.11**/45, **mb4.0**/13, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	3.53	126		Pn	16 34 00.5	+1.4
PKDT	Phuket	4.25	82	P	Pn	16 34 08.0	-1.1
RNTT	Ranong	4.81	64	P	Pn	16 34 15.0	-1.8
SURT	Suratani	4.94	71	P	Pn	16 34 18.5	-0.1
TRTT	Trang	5.58	84	P	Pn	16 34 26.2	-1.2
SKLT	Songkhla	6.49	91	P	Pn	16 34 39.9	0.0
PSI	Prapat	6.59	133	Pn	Pn	16 34 42.2	+0.8
	0.2nm,0.3s,baz=317,slow=23,SNR=1.1						
RPSI	Rantau Prapat	6.67	133		Pn	16 34 41.8	-0.6
RPSI	Rantau Prapat	6.67	133		Pn	16 34 42.2	-0.1
KULM	Kulim	6.84	107		Pn	16 34 43.4	-1.2
IPM	Ipoh	7.46	112		Pn	16 34 51.6	-1.7
PBKT	Sadao Pong	11.39	36	P	Pn	16 35 46.3	-0.8
PBKT	Sadao Pong	11.39	36	Pn	Pn	16 35 46.8	-0.3
CMAR	Chiang Mai Arr	12.03	23	Pn	Pn	16 35 56.6	+0.6
	0.4nm,0.3s,baz=214,slow=14,SNR=11						
CMAR	Chiang Mai Arr	12.03	23		Pn	16 35 53.8	-2.1
PALK	Pallekele	13.27	271	Pn	Pn	16 36 10.7	-2.3
	0.2nm,0.3s,baz=55,slow=6.3,SNR=2.8						
KMI	Kunming	19.54	24	P	Pn	16 37 33.6	+0.2
ODAN	Odare	20.44	343	eP	Pn	16 37 44.2	+0.1
RAMN	Ramite	20.77	341	eP	P	16 37 47.2	+1.7
	17nm,0.7s						
TAPN	Taplejung	20.81	344	eP	P	16 37 46.7	+0.7
	29nm,0.8s						
DMN	Daman	21.89	338	eP	P	16 37 58.5	+0.9
LSA	Lhasa	22.43	353	P	P	16 38 04.4	+0.8
LSA				IAmb	IAmb	16 38 14.4	
	comp=Z,5.5nm,0.9s						
DANN	Dangsing	23.07	336	eP	P	16 38 09.7	-0.5
	comp=Z,19nm,0.8s						
H08S3	Diego Garcia H	26.16	236	T	T	17 05 35.7	
	baz=55,slow=75,SNR=11						
H08S2	Diego Garcia H	26.16	236	T	T	17 05 28.8	
	baz=55,slow=75,SNR=16						
H08S1	Diego Carcia H	26.18	236	T	T	17 05 33.5	
	baz=55,slow=75,SNR=12						
GTA	Gaotai	32.36	8	eP	P	16 39 35.0	+1.3
GTA				pP	pP	16 39 38.6	-0.8
GTA				sP	sP	16 39 41.1	-0.6
WMQ	Urumqi	36.78	352	eP	P	16 40 13.3	+1.5
HHC	Hu-ho-hao-te	36.84	22	eP	P	16 40 12.0	-0.5
MK31	Makanchi Array	40.60	348	P	P	16 40 43.7	-0.2
MKAR	Makanchi Array	40.60	348	P	P	16 40 44.1	+0.2
	comp=Z,1.7nm,0.6s,baz=169,slow=7.7,SNR=21						
MKAR	Makanchi Array	40.60	348	P	P	16 40 43.9	0.0
MAKZ	Makanchi	40.69	347	P	P	16 40 44.4	-0.2
SONM	Songino Array	41.71	12	P	P	16 40 53.3	+0.2
	comp=Z,0.3nm,0.6s,baz=189,slow=8.4,SNR=4.2						
SONM	Songino Array	41.71	12	IAmb	IAmb	16 40 59.4	
	comp=Z,0.8nm,0.9s						
GEYT	Alibeck	44.57	319	P	P	16 41 17.4	+1.1
	comp=Z,1.8nm,0.6s,baz=163,slow=11,SNR=5.4						
GEYT	Alibeck	44.57	319	P	P	16 41 17.8	+1.5
KURK	Kurchatov	45.12	346	P	P	16 41 20.6	+0.2
KURK				IAmb	IAmb	16 41 26.6	
	comp=Z,5.6nm,1.2s						
ZAA0	Zalesovo Array	47.09	353	P	P	16 41 36.9	+1.0
ZALV	Zalesovo Beam	47.09	353	P	P	16 41 36.6	+0.8
	comp=Z,1.3nm,0.4s,baz=172,slow=7.7,SNR=8.2						
ZALV	Zalesovo Beam	47.09	353	P	P	16 41 36.9	+1.1
WRA	Warramunga Arr	47.99	125	P	P	16 41 44.0	+0.6
	comp=Z,0.3nm,0.4s,baz=306,slow=8.4,SNR=3.5						
RAYN	Ar Rayn	49.26	295	P	P	16 41 54.1	+0.9
RAYN				IAmb	IAmb	16 42 05.1	
	comp=Z,2.0nm,0.7s						
ASAR	Alice Springs	49.61	130	P	P	16 41 55.9	+0.1
	comp=Z,0.2nm,0.7s,baz=304,slow=7.6,SNR=4.1						
ATD	Arta Tunnel	50.66	279	LR	LR	16 59 56.0	
	comp=Z,209nm,21.7s,baz=130,slow=32						
ABKAR	Akbulak array	50.68	332	P	P	16 42 04.7	+1.2
TIXI	Tiksi	67.78	11	P	P	16 44 00.9	-0.5
TIXI				IAmb	IAmb	16 44 16.2	
	comp=Z,2.8nm,1.1s						
FINES	FINESS Array B	73.16	332	P	P	16 44 32.2	-2.3
	comp=Z,0.8nm,0.6s,baz=91,slow=9.9,SNR=4.6						
BOSA	Boshof	75.25	238	P	P	16 44 46.0	-1.5
	comp=Z,1.7nm,1.0s						
ARCES	ARCESS Array B	75.76	340	P	P	16 44 48.8	-0.7
	comp=Z,2.2nm,1.0s,baz=90,slow=6.3,SNR=1.1						
TXAR	Lajitas Array	139.74	24	PKP	PKPdf	16 52 34.0	+1.1
	comp=Z,0.1nm,0.4s,baz=292,slow=0.5,SNR=6.3						

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*IDC **21** 16:34:00.2±1.6, 7°.58N×94°.32E, h0^{km}, mb3.9/6, mb1 3.9/7, mb1mx3.6/45, mbtmp3.8/7, ML4.1/1, MS4.0/1, Ms1 4.0/1, ms1mx3.3/50, Error ellipse: s-maj=52.4km s-min=29.8km az=54.0*

*NEIC **21** 16:34:01.2±1.9, 7°.46N±0°.08×94°.29E±0°.10, h10^{km}±1^{km}, mb4.3/9, Error ellipse: s-maj=16.7km s-min=13.7km az=258.0*

ISC 21 16:34:03.6±0.7, **7°.51N**±0°.09×**94°.32E**±0°.10, **h24**^{km}, **n25**, σ**1^s.05**/23, **mb4.1**/11, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	3.45	131	Pn	Pn	16 34 56.3	+0.4
KULM	Kulim	6.66	109	Pn	Pn	16 35 39.1	-0.9
GSI	Gunungsitoli	6.96	152	Pn	Pn	16 35 43.5	-0.7
IPM	Ipoh	7.31	114	Pn	Pn	16 35 47.5	-1.6
PBKT	Sadao Pong	11.11	35	Pn	Pn	16 36 42.6	+1.6
CM31	Chiang Mai Arr	11.78	22	Pn	Pn	16 36 52.5	+2.2
CMAR	Chiang Mai Arr	11.78	22	Pn	Pn	16 36 49.9	-0.4
	0.3nm,0.3s,baz=212,slow=14,SNR=5.8						
CMAR	Chiang Mai Arr	11.78	22		Pn	16 36 50.6	+0.4
PALK	Pallekele	13.51	270	LR	LR	16 41 04.6	
	comp=Z,558nm,19.4s,baz=199,slow=31						
PSA00	Pilbara Seismi	38.24	140	P	P	16 41 23.4	+1.4
MK31	Makanchi Array	40.48	347	P	P	16 41 39.5	-1.0
MKAR	Makanchi Array	40.48	347	P	P	16 41 40.0	-0.5
	1.1nm,0.5s,baz=161,slow=7.7,SNR=7.9						
MKAR	Makanchi Array	40.48	347	P	P	16 41 39.9	-0.6
MAKZ	Makanchi	40.57	347	P	P	16 41 40.5	-0.7
MAKZ				IAmb	IAmb	16 41 46.4	
	comp=Z,1.8nm,0.7s						
MSEY	Mahe Island	40.60	254		P	16 41 41.8	-0.1
GEYT	Alibeck	44.59	318	P	P	16 42 13.8	-0.2
	comp=Z,1.2nm,0.7s,baz=146,slow=8.2,SNR=2.1						
GEYT	Alibeck	44.59	318	IAmb	IAmb	16 42 19.3	
	comp=Z,1.3nm,0.7s						
KURK	Kurchatov	45.01	346	P	P	16 42 17.7	+0.6
KURK				IAmb	IAmb	16 42 24.3	
	comp=Z,3.6nm,0.8s						
ZALV	Zalesovo Beam	46.94	352	P	P	16 42 31.7	-0.6
	comp=Z,1.0nm,0.4s,baz=179,slow=7.2,SNR=2.3						
WB0	Warramunga Arr	47.86	125	P	P	16 42 38.7	-1.3
WB0				IAmb	IAmb	16 42 45.2	
	comp=Z,2.5nm,1.3s						
RAYN	Ar Rayn	49.40	295	P	P	16 42 52.0	+0.1
RAYN				IAmb	IAmb	16 42 53.7	
	comp=Z,3.2nm,0.6s						
ASAR	Alice Springs	49.54	130	P	P	16 42 53.6	+0.7
	comp=Z,0.6nm,0.9s,baz=301,slow=7.0,SNR=1.7						
BRTR	Keskin Array B	62.80	311	P	P	16 44 28.8	+1.2
	comp=Z,0.5nm,0.5s,baz=116,slow=8.1,SNR=3.2						
TIXI	Tiksi	67.56	11	P	P	16 44 57.3	-0.3
TIXI				IAmb	IAmb	16 45 07.7	
	comp=Z,4.5nm,1.4s						
FINES	FINESS Array B	73.12	332	P	P	16 45 30.4	-1.4
	comp=Z,2.8nm,1.0s,baz=108,slow=4.5,SNR=1.9						

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*MOS **21** 16:47:06.3±1.5, 45°.28N×151°.54E, h91^{km}, mb4.0/4, Error ellipse: s-maj=18.2km s-min=11.1km az=46.1*

*SKHL **21** 16:47:07.4±0.5, 45°.90N×151°.72E, h114^{km}±4^{km}, mb4.1/2, msh5.3/2*

*NEIC **21** 16:47:10.6±1.0, 46°.4N±0°.1×151°.2E±0°.2, h116^{km}±10^{km}, mb4.4/7, Error ellipse: s-maj=18.6km s-min=14.7km az=122.0*

*IDC **21** 16:47:11.3±2.9, 46°.40N×151°.15E, h124^{km}±24^{km}, mb3.5/9, mb1 3.6/11, mb1mx3.3/53, mbtmp3.8/11, Error ellipse: s-maj=37.4km s-min=21.3km az=169.0*

ISC 21 16:47:08.0±0.8, **46°.1N**±0°.1×**151°.57E**±0°.09, **h100**^{km}, **n45**, σ**1^s.31**/40, **mb3.8**/12, **1C-2D**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.74	253	iP	Pn	16 47 52.0	+1.7
KUR				AMB	AMB	16 47 52.0	
	20nm,0.4s						
KUR				eS	Sn	16 48 24.0	+1.2
KUR				A	A	16 48 25.0	
	50nm,0.3s						
KUR				A	A	16 48 25.0	
	280nm,0.3s						
KUR	Kuril'sk	2.74	253	d iPN	Pn	16 47 52.0	+1.7
KUR				eS	Sn	16 48 24.0	+1.2
KUR				pmax	pmax		
	comp=Z,239nm,0.4s						
KUR				pmax	pmax		
	comp=N,137nm,0.2s						
KUR				pmax	pmax		
	comp=E,43nm,0.2s						
KUR				smax	smax		
	comp=N,514nm,0.3s						
KUR				smax	smax		
	comp=E,276nm,0.3s						
GRPR	Tuman	4.62	245	eP	Pn	16 48 16.0	+0.5
GRPR				AMB	AMB	16 48 17.0	
	comp=E,10.0nm,0.4s						
GRPR				eS	Sn	16 49 07.8	-0.3
GRPR				A	A	16 49 08.0	
	comp=E,20nm,0.4s						
GRPR				A	A	16 49 08.0	
	comp=E,60nm,0.4s						
GRPR	Tuman	4.62	245	ePN	Pn	16 48 16.1	+0.5
GRPR				eS	Sn	16 49 07.8	-0.3
GRPR				pmax	pmax		
	comp=Z,96nm,0.4s						
GRPR				pmax	pmax		
	comp=E,44nm,0.2s						
GRPR				pmax	pmax		
	comp=N,55nm,0.3s						
GRPR				smax	smax		
	comp=E,56nm,0.2s						
GRPR				smax	smax		
	comp=N,158nm,0.4s						
NMR	Nemuro--Hokkai	4.99	239	eP	Pn	16 48 19.7	-0.8
NMR	Nemuro--Hokkai	4.99	239	⇑iPN	Pn	16 48 19.7	-0.8
YSS	Yuzh-Sakhalins	6.14	281	eP	Pn	16 48 37.7	+1.6
YSS	Yuzh-Sakhalins	6.14	281	ePN	Pn	16 48 37.7	+1.6
JKA	Kamikawa-asahi	6.65	256	eP	Pn	16 48 44.0	+0.9
JKA	Kamikawa-asahi	6.65	256		Pn	16 48 44.0	+0.9
ASAJ	Asahikawa	6.66	256	P	Pn	16 48 44.0	+0.9
	comp=N,0.7nm,0.3s,baz=217,slow=24,SNR=8.5						
ERM	Erimo	7.31	239	PN	Pn	16 48 52.6	+0.5
ERM	Erimo	7.31	239	Pn	Pn	16 48 52.6	+0.5
PETK	Petropavlovsk-	8.05	27	P	Pn	16 49 03.2	+1.2
	comp=N,0.2nm,0.3s,baz=193,slow=14,SNR=6.4						
USA0B	Ussuriysk Arra	13.95	269	P	Pn	16 50 20.3	-0.9
USA0B	Ussuriysk Arra	13.95	269	Pn	Pn	16 50 20.3	-0.9
JHJ2	Mitsune	15.81	219	Pn	P	16 50 47.1	+0.5
TIXI	Tiksi	27.79	345	P	P	16 52 45.0	-2.1
	comp=N,1.3nm,0.4s,baz=149,slow=8.0,SNR=14						
TIXI	Tiksi	27.79	345	⇓iP	P	16 52 44.8	-2.3
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TIXI	Tiksi	27.79	345	IAmb	IAmb	16 52 45.7	
	comp=Z,1.6nm,0.4s						
H11N2	WAKE ISLAND Hy	29.18	149	T	T	17 24 44.9	
	baz=337,slow=76,SNR=66						
H11N1	WAKE ISLAND Hy	29.20	149	T	T	17 24 47.5	
	baz=337,slow=76,SNR=46						
H11N3	WAKE ISLAND Hy	29.20	149	T	T	17 24 46.2	
	baz=337,slow=76,SNR=61						
FALS	False Pass	29.48	56	P	P	16 53 03.6	+1.3
FALS				IAmb	IAmb	16 53 22.2	
	comp=Z,102nm,1.3s						
H11S1	WAKE ISLAND Hy	30.25	151	T	T	17 26 06.3	
	baz=338,slow=76,SNR=47						
H11S3	WAKE ISLAND Hy	30.25	151	T	T	17 26 03.5	
	baz=338,slow=76,SNR=30						
H11S2	WAKE ISLAND Hy	30.26	151	T	T	17 26 02.0	
	baz=338,slow=76,SNR=37						
IMAR	Indian Mountai	34.91	36	P	P	16 53 50.5	+0.9
KTH	Kantishna Hill	35.94	40	P	P	16 53 55.2	-3.3
KTH				IAmb	IAmb	16 54 04.9	
	comp=Z,9.7nm,1.5s						
INK	Inuvik	42.76	32	P	P	16 54 55.5	+0.5
	comp=Z,0.8nm,0.6s,baz=261,slow=6.7,SNR=3.7						
INK	Inuvik	42.76	32	IAmb	IAmb	16 55 00.2	
	comp=Z,2.1nm,1.4s						
MKAR	Makanchi Array	46.28	297	PcP	PcP	16 56 56.9	-0.2
	comp=Z,0.5nm,0.6s,baz=92,slow=4.2,SNR=2.6						
YKA	Yellowknife Ar	52.07	36	P	P	16 56 07.3	+0.2
	comp=Z,0.5nm,0.7s,baz=295,slow=6.2,SNR=5.3						
FINES	FINESS Array B	64.15	334	P	P	16 57 29.2	-2.1
	comp=Z,1.3nm,0.5s,baz=34,slow=6.1,SNR=10.0						
PDAR	Pinedale Array	65.98	53	P	P	16 57 44.9	+1.1
	comp=Z,0.3nm,0.7s,baz=343,slow=2.8,SNR=3.5						
NOA	NORSAR Array B	68.48	340	P	P	16 57 57.1	-1.9
	comp=Z,0.4nm,0.4s,baz=29,slow=6.7,SNR=5.1						
NOA	NORSAR Array B	68.48	340	eP	P	16 57 58.6	-0.4
AKASG	Malin Array Be	71.47	325	P	P	16 58 16.0	-1.4
	comp=Z,0.8nm,0.4s,baz=38,slow=6.2,SNR=5.5						
AKASG	Malin Array Be	71.47	325	iP	P	16 58 16.2	-1.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	71.47	325	IAmb	IAmb	16 58 24.0	
	comp=Z,0.8nm,1.1s						
BUR08	Bucovina Ar. S	75.50	326	P	P	16 58 40.7	-0.6
BUR08				IAmb	IAmb	16 58 41.7	
	comp=Z,1.9nm,0.7s						
BURAR	Bucovina Array	75.52	326	P	P	16 58 41.2	-0.1
GERES	GERESS Array B	78.55	333	P	P	16 58 56.1	-2.1
	comp=Z,0.6nm,0.8s,baz=29,slow=6.1,SNR=4.0						
GERES	GERESS Array B	78.55	333	eP	P	16 58 58.8	+0.5
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR	Lajitas Array	78.73	59	P	P	16 59 00.5	+0.9
	comp=Z,0.3nm,0.5s,baz=13,slow=23,SNR=8.1						

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*IDC **21** 16:47:37.4±0.7, 7°.50N×93°.93E, h0^{km}, mb3.9/14, mb1 4.0/16, mb1mx3.9/55, mbtmp3.9/16, ML4.1/2, MS4.0/1, Ms1 4.0/1, ms1mx3.2/48, Error ellipse: s-maj=27.3km s-min=14.9km az=56.0*

*NEIC **21** 16:47:39.1±2.2, 7°.50N±0°.06×94°.0E±0°.1, h10^{km}±1^{km}, mb4.3/12, Error ellipse: s-maj=21.5km s-min=3.5km az=244.0*

ISC 21 16:47:40.8±0.6, **7°.60N**±0°.08×**94°.0E**±0°.1, **h20**^{km}, **n58**, σ**2^s.28**/50, **mb3.9**/17, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	3.75	129		Pn	16 48 37.4	-0.2
PSI	Prapat	6.83	134	Pn	Pn	16 49 20.8	+0.8
	0.9nm,0.3s,baz=329,slow=16,SNR=2.3						
RPSI	Rantau Prapat	6.91	135		Pn	16 49 20.7	-0.2
RPSI	Rantau Prapat	6.91	135		Pn	16 49 20.8	-0.2
KULM	Kulim	6.99	109		Pn	16 49 19.9	-2.2
IPM	Ipoh	7.64	114		Pn	16 49 28.1	-2.9
PBKT	Sadao Pong	11.22	37		Pn	16 50 20.3	+0.2
CM31	Chiang Mai Arr	11.82	24		Pn	16 50 29.8	+1.4
CMAR	Chiang Mai Arr	11.82	24	Pn	Pn	16 50 29.7	+1.4
	0.8nm,0.3s,baz=210,slow=14,SNR=18						
CMAR	Chiang Mai Arr	11.82	24	Pn	Pn	16 50 29.0	+0.7
CHTO	Chiang Mai	12.14	23	Pn	Pn	16 50 34.7	+2.0
ODAN	Odare	20.16	343	eP	P	16 52 15.0	+0.7
RAMN	Ramite	20.49	341	eP	Pn	16 52 19.9	-0.2
	23nm,0.6s						
TAPN	Taplejung	20.54	344	eP	Pn	16 52 19.9	-0.7
	13nm,0.4s						
JIRN	Jiri	21.29	341	eP	P	16 52 27.0	+0.4
PKI	Pulchoki	21.47	339	eP	P	16 52 32.0	+3.5
	8.3nm,0.5s						
PKIN	Phulchoki	21.48	339	eP	P	16 52 31.9	+3.3
	6.4nm,0.6s						
GUN	Gumba	21.62	340	eP	P	16 52 30.7	+0.6
LSA	Lhasa	22.15	353	P	P	16 52 39.3	+3.3
LSA				IAmb	IAmb	16 52 39.9	
	comp=Z,7.7nm,0.6s						
DANN	Dangsing	22.80	336	eP	P	16 52 43.4	+0.7
	comp=Z,15nm,0.5s						
H08S3	Diego Garcia H	26.25	235	T	T	17 20 00.9	
	baz=55,slow=75,SNR=40						
H08S2	Diego Garcia H	26.25	235	T	T	17 20 12.1	
	baz=55,slow=75,SNR=41						
H08S1	Diego Carcia H	26.27	235	T	T	17 20 12.4	
	baz=55,slow=75,SNR=20						
TGY	Tagaytay City	27.21	74	LR	LR	17 03 19.6	
	comp=Z,291nm,20.8s,baz=134,slow=34						
GTA	Gaotai	32.10	8	eP	P	16 54 07.3	+0.5
GTA				pP	pP	16 54 13.0	+0.6
GTA				sP	pwP	16 54 15.9	+1.1
KSH	Kashi	35.67	336	P	P	16 54 38.8	+1.0
KSH				pP	pP	16 54 42.8	-0.6
KSH				S	S	17 00 13.8	+0.3
KSH				sS	sS	17 00 21.4	-1.3
KSH				SS	SnSn	17 02 22.9	-13
WMQ	Urumqi	36.50	352	eP	P	16 54 47.3	+2.5
HHC	Hu-ho-hao-te	36.63	23	eP	P	16 54 48.4	+2.4
MK31	Makanchi Array	40.33	348	iP	P	16 55 17.5	+0.6
MK31	Makanchi Array	40.33	348	P	P	16 55 17.2	+0.3
MKAR	Makanchi Array	40.33	348	P	P	16 55 16.9	-0.1
	comp=Z,2.1nm,0.7s,baz=166,slow=7.5,SNR=25						
MKAR	Makanchi Array	40.33	348	iP	P	16 55 17.5	+0.6
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	Makanchi Array	40.33	348	P	P	16 55 16.7	-0.2
FITZ	Fitzroy Crossi	40.34	130	P	P	16 55 16.5	-0.8
	comp=Z,0.9nm,0.7s,baz=331,slow=10,SNR=1.6						
FITZ	Fitzroy Crossi	40.34	130	IAmb	IAmb	16 55 31.8	
	comp=Z,8.2nm,1.4s						
MAKZ	Makanchi	40.41	347	P	P	16 55 17.6	0.0
SONM	Songino Array	41.46	13	P	P	16 55 26.2	-0.1
	comp=Z,0.7nm,0.8s,baz=195,slow=12,SNR=4.9						
SONM	Songino Array	41.46	13	IAmb	IAmb	16 55 33.2	
	comp=Z,1.2nm,0.9s						
GEYT	Alibeck	44.32	318	P	P	16 55 49.7	+0.1
	comp=Z,1.8nm,0.5s,baz=114,slow=7.1,SNR=6.7						
GEYT	Alibeck	44.32	318	P	P	16 55 51.0	+1.4
KURK	Kurchatov	44.85	346	P	P	16 55 54.3	+0.8
KURK				IAmb	IAmb	16 55 56.5	
	comp=Z,2.6nm,0.7s						
ZAA0	Zalesovo Array	46.81	353	P	P	16 56 09.7	+0.7
ZAA0				IAmb	IAmb	16 56 16.0	
	comp=Z,3.2nm,0.8s						
ZALV	Zalesovo Beam	46.81	353	P	P	16 56 09.6	+0.6
	comp=Z,2.6nm,0.3s,baz=172,slow=8.4,SNR=18						
ZALV	Zalesovo Beam	46.81	353	P	P	16 56 09.8	+0.8
WRA	Warramunga Arr	48.21	125	P	P	16 56 19.7	-0.7
	comp=Z,0.4nm,0.6s,baz=305,slow=8.6,SNR=7.6						
WRA	Warramunga Arr	48.21	125	IAmb	IAmb	16 56 28.4	
	comp=Z,0.2nm,1.2s						
ASAR	Alice Springs	49.84	130	P	P	16 56 32.2	-0.7
	comp=Z,0.4nm,0.5s,baz=301,slow=7.7,SNR=9.1						
BRTR	Keskin Array B	62.51	311	P	P	16 58 01.5	-1.9
	comp=Z,0.4nm,0.5s,baz=136,slow=8.1,SNR=4.0						
TIXI	Tiksi	67.53	11	P	P	16 58 34.2	-1.1
AKASG	Malin Array Be	68.29	322	P	P	16 58 40.1	-0.3
	comp=Z,0.1nm,0.3s,baz=91,slow=4.8,SNR=1.6						
FINES	FINESS Array B	72.89	332	P	P	16 59 08.9	+0.7
	comp=Z,4.9nm,0.9s,baz=104,slow=6.2,SNR=10						
BOSA	Boshof	75.32	238	P	P	16 59 22.4	-0.9
	comp=Z,0.7nm,0.6s						
BOSA	Boshof	75.32	238	IAmb	IAmb	16 59 31.9	
	comp=Z,14nm,1.4s						
ARCES	ARCESS Array B	75.48	340	P	P	16 59 24.2	+0.9
	comp=Z,5.0nm,1.1s,baz=97,slow=6.6,SNR=8.8						
GERES	GERESS Array B	77.94	318	P	P	16 59 38.0	+0.3
	comp=Z,0.3nm,0.4s,baz=117,slow=5.6,SNR=2.2						
NOA	NORSAR Array B	79.91	331	P	P	16 59 48.3	+0.1
	comp=Z,0.7nm,0.6s,baz=92,slow=5.7,SNR=1.9						
TXAR	Lajitas Array	139.53	24	PKP	PKPdf	17 07 07.6	-0.2
	comp=Z,0.0nm,0.4s,baz=340,slow=4.8,SNR=1.2						
CPUP	Villa Florida	146.99	232	PKPbc	PKPbc	17 07 23.3	+0.5
	comp=Z,0.6nm,0.4s,baz=106,slow=7.4,SNR=1.4						

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*IDC **21** 16:55:39.2±0.8, 7°.47N×94°.23E, h0^{km}, mb3.8/12, mb1 3.9/14, mb1mx3.7/48, mbtmp3.8/14, ML3.7/2, MS3.6/1, Ms1 3.8/1, ms1mx3.2/50, Error ellipse: s-maj=26.3km s-min=17.2km az=59.0*

*NEIC **21** 16:55:40.5±1.6, 7°.43N±0°.07×94°.28E±0°.07, h10^{km}±1^{km}, mb4.4/8, Error ellipse: s-maj=15.6km s-min=8.1km az=134.0*

*KLM **21** 16:56:05.0, 6°.69N×95°.88E, h10^{km}, mb4.2*

ISC 21 16:55:42.6±0.6, **7°.48N**±0°.07×**94°.27E**±0°.07, **h24**^{km}, **n39**, σ**1^s.23**/34, **mb4.0**/15, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.58	216	eP	Pn	16 55 54.9	-0.5
CMBY				eS	Sn	16 56 03.7	-0.4
LHMI	Lhok Sumawe	3.48	130		Pn	16 56 35.8	+0.6
PBA	Port Blair	4.42	340	ex	Pb	16 56 57.8	-1.7
DGPR	DIGLIPUR	5.81	347	ex	Pb	16 57 17.8	-5.6
PSI	Prapat	6.56	135	Pn	Pn	16 57 19.9	+2.0
	0.9nm,0.3s,baz=284,slow=10,SNR=1.8						
RPSI	Rantau Prapat	6.64	135		Pn	16 57 19.9	+1.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPSI	Rantau Prapat	6.64	135	Pn	Pn	16 57 19.8	+1.1
KULM	Kulim	6.70	109		Pn	16 57 19.3	-0.4
KULM	Kulim	6.70	109	P	Pn	16 57 19.0	-0.7
IPM	Ipoh	7.35	114		Pn	16 57 27.6	-1.0
IPM	Ipoh	7.35	114	P	Pn	16 57 28.0	-0.6
PBKT	Sadao Pong	11.16	35	Pn	Pn	16 58 23.1	+2.4
CMAR	Chiang Mai Arr	11.82	22	Pn	Pn	16 58 29.2	-0.7
	0.2nm,0.3s,baz=213,slow=14,SNR=5.4						
CMAR				LR	LR	17 03 07.0	
	comp=Z,281nm,18.4s,baz=15,slow=38						
H08S3	Diego Garcia H	26.40	236	T	T	17 28 04.8	
	baz=55,slow=75,SNR=10						
H08S2	Diego Garcia H	26.41	236	T	T	17 28 05.1	
	baz=55,slow=75,SNR=11						
H08S1	Diego Carcia H	26.42	236	T	T	17 28 06.2	
	baz=55,slow=75,SNR=10.0						
SSLB	Suanglung	30.29	55	P	P	17 01 50.9	-1.4
MK31	Makanchi Array	40.50	347	P	P	17 03 19.6	-0.1
MKAR	Makanchi Array	40.50	347	P	P	17 03 20.2	+0.6
	1.9nm,0.7s,baz=165,slow=7.6,SNR=16						
MAKZ	Makanchi	40.58	347	P	P	17 03 20.2	-0.1
MAKZ				IAmb	IAmb	17 03 23.1	
	comp=Z,4.4nm,1.3s						
KKAR	Karatay Array	41.17	333	P	P	17 03 24.8	-0.5
SONM	Songino Array	41.52	12	P	P	17 03 28.1	0.0
	comp=Z,0.6nm,0.9s,baz=189,slow=8.6,SNR=2.3						
SONM	Songino Array	41.52	12	IAmb	IAmb	17 03 34.0	
	comp=Z,1.2nm,0.8s						
GEYT	Alibeck	44.58	318	P	P	17 03 53.8	+0.8
	comp=Z,0.7nm,0.5s,baz=142,slow=7.3,SNR=2.4						
KURK	Kurchatov	45.02	346	P	P	17 03 57.1	+0.9
KURK				IAmb	IAmb	17 04 00.2	
	comp=Z,6.1nm,1.1s						
ZALV	Zalesovo Beam	46.96	352	P	P	17 04 11.7	+0.2
	comp=Z,1.2nm,0.4s,baz=177,slow=7.1,SNR=6.6						
WB0	Warramunga Arr	47.88	125	P	P	17 04 18.5	-0.7
WB0				IAmb	IAmb	17 04 21.0	
	comp=Z,4.8nm,1.2s						
WRA	Warramunga Arr	47.93	125	P	P	17 04 19.4	-0.2
	comp=Z,0.4nm,0.9s,baz=304,slow=8.8,SNR=2.2						
WRA	Warramunga Arr	47.93	125	P	P	17 04 16.6	-2.9
WB2	Warramunga Arr	47.94	125	P	P	17 04 15.9	-3.7
ASAR	Alice Springs	49.57	130	P	P	17 04 32.4	+0.3
	comp=Z,0.3nm,0.5s,baz=303,slow=7.4,SNR=8.0						
ASAR				PcP	PcP	17 05 54.0	+0.3
	comp=Z,0.3nm,0.8s,baz=308,slow=4.6,SNR=1.4						
ABKAR	Akbulak array	50.64	331	P	P	17 04 40.7	+0.9
KMBO	Kilima Mbogo	57.51	264	P	P	17 05 31.6	+0.8
	comp=Z,0.7nm,0.5s,baz=65,slow=6.0,SNR=1.5						
BRTR	Keskin Array B	62.78	311	P	P	17 06 05.3	-1.2
	comp=Z,0.2nm,0.5s,baz=115,slow=7.3,SNR=1.6						
FINES	FINESS Array B	73.12	332	P	P	17 07 11.9	+1.0
	comp=Z,3.4nm,0.8s,baz=123,slow=7.1,SNR=5.1						
BOSA	Boshof	75.48	238	P	P	17 07 25.6	+0.1
	comp=Z,1.9nm,0.8s						
BOSA	Boshof	75.48	238	IAmb	IAmb	17 07 30.2	
	comp=Z,6.1nm,1.3s						
ARCES	ARCESS Array B	75.68	340	P	P	17 07 26.1	+0.5
	comp=Z,3.0nm,0.9s,baz=99,slow=4.7,SNR=2.0						
GERES	GERESS Array B	78.20	318	P	P	17 07 39.7	-0.7
	comp=Z,0.1nm,0.3s,baz=83,slow=4.1,SNR=2.0						

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*IDC **21** 16:58:20.4±2.6, 7.°55N×94.°15E, h0^{km}, mb3.4/4, mb1 3.4/5, mb1mx3.2/49, mbtmp3.3/5, Error ellipse: s-maj=85.4km s-min=31.1km az=66.0*

ISC 21 16:58:23.8±0.9**, 7.°6N**±0.°1×**94.°2E**±0.°2**, h20**^{km}**, n9,** σ**0^{s}31**/7**,** **mb3.4**/4**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.66	207	*e*P	Pn	16 58 37.7	-0.2
CMBY				*e*S	Sn	16 58 48.1	+0.4
CMAR	Chiang Mai Arr	11.73	23	Pn	Pn	17 01 10.3	+0.2
	baz=212,slow=15,SNR=0.8						
H08S3	Diego Garcia H	26.43	236	T	T	17 30 39.2	
	baz=55						
H08S2	Diego Garcia H	26.44	236	T	T	17 30 44.4	
	baz=55						
H08S1	Diego Carcia H	26.45	236	T	T	17 30 46.9	
	baz=55						
MKAR	Makanchi Array	40.37	347	P	P	17 06 00.3	0.0
	0.6nm,0.7s,baz=170,slow=7.7,SNR=4.2						
SONM	Songino Array	41.41	12	P	P	17 06 09.0	+0.1
	0.3nm,0.8s,baz=198,slow=9.1,SNR=1.5						
ZALV	Zalesovo Beam	46.84	352	P	P	17 06 51.9	-0.3
	0.6nm,0.3s,baz=160,slow=9.0,SNR=1.8						
ASAR	Alice Springs	49.68	130	P	P	17 07 14.6	-0.1
	0.2nm,0.6s,baz=300,slow=7.6,SNR=1.1						

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*IDC **21** 17:05:19.2±1.1, 7.°40N×94.°17E, h0^{km}, mb3.9/10, mb1 4.0/12, mb1mx3.8/53, mbtmp3.9/12, ML3.8/2, MS3.9/4, Ms1 3.9/4, ms1mx3.4/58, Error ellipse: s-maj=41.6km s-min=18.5km az=53.0*

*NEIC **21** 17:05:20.8±3.0, 7.°55N±0.°08×94.°5E±0.°1, h12^{km}±4^{km}, mb4.5/16, Error ellipse: s-maj=16.0km s-min=10.1km az=59.0*

ISC 21 17:05:22.6±0.5**, 7.°56N**±0.°05×**94.°42E**±0.°06**, h24**^{km}**, n62,** σ**1^{s}48**/59**, mb4.3**/18**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.73	222	*e*P	Pb	17 05 35.1	-1.6
CMBY				*e*S	Sb	17 05 45.3	-0.9
LHMI	Lhok Sumawe	3.42	132		Pn	17 06 16.1	+1.7
PBA	Port Blair	4.40	338	*e*x	Pb	17 06 39.9	+0.6
PBA				*e*x	x	17 06 48.7	
DGPR	DIGLIPUR	5.78	345	*e*x	Pb	17 06 59.0	-3.7
PSI	Prapat	6.51	136	Pn	Pn	17 06 58.9	+1.7
	1.6nm,0.3s,baz=167,slow=14,SNR=12						
PSI				Sn	Sn	17 08 10.6	-0.2
	0.3nm,0.3s,baz=248,slow=17,SNR=1.4						
PSI				LR	LR	17 09 53.7	
	comp=Z,864nm,18.7s,baz=286,slow=41						
KULM	Kulim	6.59	110		Pn	17 06 56.7	-1.4
KULM				Sn	Sn	17 08 10.3	-2.3
RPSI	Rantau Prapat	6.59	137		Pn	17 06 56.1	-2.0
RPSI	Rantau Prapat	6.59	137		Pn	17 06 58.9	+0.8
RPSI					Sn	17 08 10.6	-1.9
GSI	Gunungsitoli	6.96	153	Pn	Pn	17 07 02.8	-0.4
IPM	Ipoh	7.25	115		Pn	17 07 06.8	-0.3
PBKT	Sadao Pong	11.01	35		Pn	17 08 00.8	+2.0
CM31	Chiang Mai Arr	11.70	22	Pn	Pn	17 08 03.6	-4.6
CMAR	Chiang Mai Arr	11.70	22	Pn	Pn	17 08 11.8	+3.6
	0.2nm,0.3s,baz=213,slow=14,SNR=6.2						
CMAR				LR	LR	17 13 01.8	
	comp=Z,331nm,18.5s,baz=188,slow=39						
CMAR	Chiang Mai Arr	11.70	22		Pn	17 08 10.5	+2.3
CHTO	Chiang Mai	12.03	21	Pn	Pn	17 08 15.4	+2.8
PALK	Pallekele	13.60	270	LR	LR	17 13 29.1	
	comp=Z,441nm,18.8s,baz=111,slow=37						
RAMN	Ramite	20.67	340	*e*P	Pn	17 10 03.4	-0.2
	42nm,0.7s						
TAPN	Taplejung	20.69	343	*e*P	P	17 10 02.2	+0.7
	27nm,0.8s						
JIRN	Jiri	21.46	340	*e*P	P	17 10 10.8	+0.9
	33nm,0.8s						
PKI	Pulchoki	21.66	338	*e*P	P	17 10 12.3	+0.4
	14nm,0.7s						
PKIN	Phulchoki	21.67	338	*e*P	P	17 10 13.2	+1.2
	9.1nm,0.7s						
GUN	Gumba	21.80	339	*e*P	P	17 10 13.6	+0.1
LSA	Lhasa	22.24	352	P	P	17 10 19.8	+1.5
LSA				IAmb	IAmb	17 10 23.5	
	comp=Z,11nm,0.6s						
DANN	Dangsing	23.01	335	*e*P	P	17 10 25.1	-1.1
	comp=Z,18nm,0.7s						
H08S3	Diego Garcia H	26.57	236	T	T	17 37 36.3	
	baz=55,slow=75,SNR=33						
H08S2	Diego Garcia H	26.57	236	T	T	17 37 36.3	
	baz=55,slow=75,SNR=24						
H08S1	Diego Carcia H	26.58	236	T	T	17 37 36.3	
	baz=55,slow=75,SNR=11						
NIL	Nilore	32.52	326	P	P	17 11 51.6	-0.1
NIL				IAmb	IAmb	17 11 53.9	
	comp=Z,6.0nm,0.7s						
MK31	Makanchi Array	40.46	347	P	P	17 12 57.9	-1.4
MKAR	Makanchi Array	40.46	347	P	P	17 12 59.3	0.0
	comp=Z,3.0nm,0.7s,baz=167,slow=7.0,SNR=31						
MKAR	Makanchi Array	40.46	347	P	P	17 12 57.8	-1.5
MAKZ	Makanchi	40.54	347	P	P	17 12 57.8	-2.3
KK31	Karatay Array	41.17	333	P	P	17 13 02.4	-2.8
KKAR	Karatay Array	41.17	333	P	P	17 13 04.3	-0.9
SONM	Songino Array	41.41	12	P	P	17 13 09.3	+2.0
	comp=Z,1.5nm,1.0s,baz=195,slow=6.8,SNR=5.1						
SONM	Songino Array	41.41	12	P	P	17 13 08.1	+0.8
GEYT	Alibeck	44.62	318	P	P	17 13 34.0	+0.6
	comp=Z,2.0nm,0.7s,baz=134,slow=11,SNR=3.8						
GEYT	Alibeck	44.62	318	P	P	17 13 33.0	-0.4
KURK	Kurchatov	44.98	346	P	P	17 13 36.4	+0.4
KURK				IAmb	IAmb	17 13 44.6	
	comp=Z,5.0nm,1.1s						
ZAA0	Zalesovo Array	46.91	352	P	P	17 13 52.0	+0.9
ZAA0				IAmb	IAmb	17 13 58.4	
	comp=Z,4.1nm,0.8s						
ZALV	Zalesovo Beam	46.91	352	P	P	17 13 52.6	+1.5
	comp=Z,4.2nm,0.7s,baz=180,slow=8.1,SNR=19						
ZALV				PcP	PcP	17 15 22.3	-1.2
	comp=Z,0.7nm,0.5s,baz=164,slow=5.3,SNR=1.7						
ZALV	Zalesovo Beam	46.91	352	P	P	17 13 50.9	-0.2
ZALV					PcP	17 15 21.5	-2.0
WB0	Warramunga Arr	47.81	125	P	P	17 13 58.6	0.0
WB0				IAmb	IAmb	17 14 16.8	
	comp=Z,5.9nm,1.3s						
WRA	Warramunga Arr	47.85	125	P	P	17 14 00.8	+1.8
	comp=Z,1.1nm,1.1s,baz=304,slow=8.6,SNR=4.1						
WB2	Warramunga Arr	47.86	125	P	P	17 13 58.6	-0.4
WB2				IAmb	IAmb	17 13 59.4	
	comp=Z,5.9nm,1.4s						
RAYN	Ar Rayn	49.47	294	P	P	17 14 12.4	+1.0
RAYN				IAmb	IAmb	17 14 35.0	
	comp=Z,6.5nm,1.2s						
ASAR	Alice Springs	49.50	130	P	P	17 14 12.0	+0.3
	comp=Z,0.3nm,0.7s,baz=300,slow=7.8,SNR=2.7						
ASAR	Alice Springs	49.50	130	P	P	17 14 11.2	-0.4
GUMO	Guam	49.88	79	P	P	17 14 13.8	-0.9
ABKAR	Akbulak array	50.64	331	P	P	17 14 20.6	+0.8
ARU	Arti	56.29	337	LR	LR	17 40 07.5	
	comp=Z,188nm,19.8s,baz=141,slow=37						
BRTR	Keskin Array B	62.84	311	P	P	17 15 47.6	+0.7
	comp=Z,0.5nm,0.7s,baz=120,slow=5.5,SNR=3.7						
BRTR	Keskin Array B	62.84	311	P	P	17 15 46.8	-0.1
TIXI	Tiksi	67.49	11	P	P	17 16 16.4	+0.1
TIXI				IAmb	IAmb	17 16 22.4	
	comp=Z,3.8nm,1.1s						
FIA1	FINESS Array S	73.12	332	P	P	17 16 48.9	-2.0
FINES	FINESS Array B	73.12	332	P	P	17 16 51.1	+0.3
	comp=Z,2.4nm,0.7s,baz=101,slow=6.0,SNR=5.0						
FINES	FINESS Array B	73.12	332	P	P	17 16 50.2	-0.7
BOSA	Boshof	75.65	238	P	P	17 17 08.1	+1.7
ARCES	ARCESS Array B	75.66	340	P	P	17 17 06.3	+0.7
	comp=Z,2.3nm,0.9s,baz=93,slow=8.1,SNR=1.8						
ARCES	ARCESS Array B	75.66	340	P	P	17 17 11.7	+6.1
GERES	GERESS Array B	78.25	318	P	P	17 17 20.3	-0.3
	comp=Z,0.7nm,0.8s,baz=90,slow=1.0,SNR=3.0						
GERES	GERESS Array B	78.25	318	P	P	17 17 19.9	-0.7

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*IDC **21** 17:13:54.6±1.3, 7.°07N×94.°05E, h0^{km}, mb3.7/7, mb1 3.9/8, mb1mx3.6/40, mbtmp3.7/8, ML4.2/1, Error ellipse: s-maj=56.0km s-min=23.2km az=55.0*

*NEIC **21** 17:13:59.4±2.6, 7.°47N±0.°08×94.°33E±0.°05, h13^{km}±5^{km}, mb4.3/12, Error ellipse: s-maj=11.4km s-min=6.2km az=166.0*

ISC 21 17:14:00.5±0.6**, 7.°39N**±0.°07×**94.°33E**±0.°07**, h24**^{km}**, n38,** σ**1^{s}42**/40**, mb4.1**/13**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.55	227	*e*P	Pn	17 14 12.9	0.0
CMBY				*e*S	Sn	17 14 21.2	-0.1
LHMI	Lhok Sumawe	3.37	129		Pn	17 14 54.0	+2.2
RPSI	Rantau Prapat	6.53	135	Pn	Pn	17 15 38.0	+2.8
KULM	Kulim	6.62	108		Pn	17 15 37.0	+0.6
GSI	Gunungsitoli	6.86	152	Pn	Pn	17 15 40.7	+1.0
IPM	Ipoh	7.26	113		Pn	17 15 44.9	-0.4
MYKOM	Kota Tinggi	11.00	120	Pn	Pn	17 16 35.3	-1.2
PBKT	Sadao Pong	11.19	35	Pn	Pn	17 16 40.8	+1.6
CM31	Chiang Mai Arr	11.88	22		Pn	17 16 51.1	+2.6
CMAR	Chiang Mai Arr	11.88	22	Pn	Pn	17 16 50.5	+1.9
	0.4nm,0.3s,baz=212,slow=14,SNR=9.3						
CHTO	Chiang Mai	12.21	21	Pn	Pn	17 16 54.7	+1.6
PALK	Pallekele	13.52	270		P	17 17 21.1	+1.1
COCO	West Island	19.61	173	P	P	17 18 27.6	+0.3
ARSB	Arslanbob	38.76	334	P	P	17 21 24.1	+0.8
ARSB				IAmb	IAmb	17 21 38.1	
	comp=Z,6.1nm,1.3s						
MK31	Makanchi Array	40.60	347	P	P	17 21 37.9	-0.5
MKAR	Makanchi Array	40.60	347	P	P	17 21 38.0	-0.4
	comp=Z,0.9nm,0.6s,baz=172,slow=7.7,SNR=9.0						
MKAR	Makanchi Array	40.60	347	P	P	17 21 37.6	-0.7
MAKZ	Makanchi	40.68	347	P	P	17 21 38.2	-0.9
KKAR	Karatay Array	41.27	333	P	P	17 21 44.5	+0.5
GEYT	Alibeck	44.68	318	P	P	17 22 10.2	-1.5
GEYT					P	17 22 12.4	+0.6
KURK	Kurchatov	45.12	346	P	P	17 22 14.9	0.0
KURK				IAmb	IAmb	17 22 39.4	
	comp=Z,2.3nm,1.1s						
ZALV	Zalesovo Beam	47.06	352	P	P	17 22 29.7	-0.4
	comp=Z,0.8nm,0.4s,baz=119,slow=27,SNR=2.7						
ZALV	Zalesovo Beam	47.06	352	P	P	17 22 30.0	-0.1
WB0	Warramunga Arr	47.78	125	P	P	17 22 37.5	+1.1
WB0				IAmb	IAmb	17 23 05.1	
	comp=Z,5.3nm,1.2s						
WRA	Warramunga Arr	47.83	125	P	P	17 22 36.3	-0.4
	comp=Z,0.4nm,0.9s,baz=306,slow=9.4,SNR=2.3						
WRA	Warramunga Arr	47.83	125	P	P	17 22 36.0	-0.7
WB2	Warramunga Arr	47.84	125	P	P	17 22 37.1	+0.3
WB2				IAmb	IAmb	17 23 10.7	
	comp=Z,7.4nm,1.4s						
RAYN	Ar Rayn	49.46	295	P	P	17 22 50.3	+1.1
RAYN				IAmb	IAmb	17 22 58.6	
	comp=Z,3.5nm,0.7s						
ASAR	Alice Springs	49.46	130	P	P	17 22 45.4	-3.8
	comp=Z,0.4nm,1.0s,baz=301,slow=7.2,SNR=2.6						
ASAR	Alice Springs	49.46	130	P	P	17 22 46.8	-2.5
BRVK	Borovoye	49.57	341	P	P	17 22 49.5	0.0
BRVK				IAmb	IAmb	17 23 08.0	
	comp=Z,2.5nm,1.2s						
ABKAR	Akbulak array	50.74	331	P	P	17 22 59.1	+0.6
FURI	Furi	55.07	276	P	P	17 23 31.0	-0.4
BRTR	Keskin Array B	62.88	311	P	P	17 24 22.3	-2.8
	comp=Z,0.3nm,0.7s,baz=150,slow=4.4,SNR=1.6						
FINES	FINESS Array B	73.22	332	P	P	17 25 29.1	-0.3
	comp=Z,1.4nm,0.7s,baz=110,slow=8.0,SNR=5.1						
FINES	FINESS Array B	73.22	332	P	P	17 25 28.3	-1.1
ARCES	ARCESS Array B	75.78	340	P	P	17 25 43.5	-0.6
	comp=Z,3.2nm,0.9s,baz=108,slow=7.9,SNR=1.8						
ARCES	ARCESS Array B	75.78	340	P	P	17 25 42.5	-1.6

JMA 21 17:26:56.9, 32.°35N×132.°12E, h17^{km}±1^{km}, M0.8, Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHHC	Hyugahichiya	0.42	283	P	Pg	17 27 05.2	-0.2
JHHC				*e*S	Sg	17 27 11.3	+0.1
JSKE	Saikikamae	0.48	338	P	Pg	17 27 06.5	-0.1
JSKE				*e*S	Sg	17 27 13.0	-0.2
JTSN	Tsuno	0.53	259	P	Pg	17 27 07.3	-0.2
JTSN				*e*S	Sg	17 27 14.8	+0.1
JTO	Tosashimizu	0.77	48	P	Pb	17 27 11.5	-0.3
JTO				*e*S	Sb	17 27 21.8	-0.2

IDC 21 17:27:32.7±999.0**, 30.°63N×131.°62E, h0^{km}, Error ellipse: s-maj=383.8km s-min=161.2km az=40.0, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I30JP	ISUMI INFRASON	8.66	55	*i*		18 20 50.0	
	baz=240,slow=329,SNR=19						
I45RU	USSURIYSK INFR	13.55	1	*i*		18 46 45.0	
	baz=181,slow=338,SNR=13						
I44RU	PETROPAVLOVSK	29.40	33	*i*		20 30 00.0	
	baz=229,slow=334,SNR=1.5						

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*ANF **21** 17:30:17.0±1.1, 37.°06N×97.°95W, h5^{km}±7^{km}, ML3.9/6, Error ellipse: s-maj=3.8km s-min=2.6km az=73.0*

*NEIC **21** 17:30:16.7±1.2, 37.°09N±0.°03×97.°85W±0.°03, h11^{km}±4^{km}, mb_Lg3.0/89, Error ellipse: s-maj=4.8km s-min=3.1km az=157.0*

ISC 21 17:30:14.8±1.4**, 37.°11N**±0.°03×**97.°87W**±0.°04**, h5**^{km}±13^{km}**, n73,** σ**1^{s}22**/53**, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	1.10	100		Pn	17 30 36.9	-0.1
T35A				Sg	Sb	17 30 51.2	0.0
U32A	Winter Ranch,	1.16	232		Pg	17 30 38.1	+0.9
U32A				Sg	Sn	17 30 54.1	-0.1
R32A	Long Quarter,	1.47	333		Pg	17 30 44.0	+0.9
ADOK	Arcadia Dam	1.51	164	Pn	Pb	17 30 43.6	+0.3
OKCFA	Oklahoma City	1.72	169		Pb	17 30 46.4	-0.6
OKCSW	OKLAHOMA CITY	1.73	168		Pb	17 30 46.9	-0.3
FNO	Franklin	1.89	168		Pb	17 30 49.3	-0.5
TUL1	Leonard	2.06	125		Pb	17 30 52.1	-0.6
TUL1	Leonard	2.06	125	P	Pb	17 30 52.5	-0.2
	baz=306						
TUL1				S	Sg	17 31 20.1	-0.8
	baz=306						
W35A	Tecumseh	2.11	157		Pn	17 30 52.1	+1.2
KSU1	Kansas State U	2.22	26	IAmb_Lg		17 31 26.9	
	comp=Z,60nm,0.8s						
KSU1	Kansas State U	2.22	26	P	Pb	17 30 55.8	+0.2
	baz=206						
KSU1				S	Sg	17 31 24.8	-1.5
	baz=206						
CBKS	Cedar Bluff	2.25	320		Pb	17 30 54.9	-1.2
CBKS				IAmb_Lg		17 31 34.8	
	comp=Z,97nm,0.9s						
CBKS	Cedar Bluff	2.25	320	P	Pb	17 30 55.4	-0.7
	baz=139						
CBKS				S	Sb	17 31 24.2	-0.1
	baz=139						
WMOK	Wichita Mounta	2.48	198		Pb	17 30 58.0	-1.9
WMOK	Wichita Mounta	2.48	198	S	Sb	17 31 28.4	-2.4
	baz=18						
X34A	Smith Ranch, M	2.50	179		Pn	17 30 57.6	+1.4
U38A	Gravette	2.88	102		Pn	17 31 00.8	-0.6
U38A				IAmb_Lg		17 31 47.4	
	comp=Z,58nm,0.8s						
X37A	Clayton	3.23	140		Pn	17 31 07.7	+1.4
X37A				IAmb_Lg		17 32 06.5	
	comp=Z,48nm,0.8s						
HHAR	Hobbs	3.26	103		Pn	17 31 07.9	+1.2
N33A	J Bar K, Exete	3.64	5	IAmb_Lg		17 32 22.4	
	comp=Z,48nm,0.7s						
S39A	Bolivar	3.67	79		Pn	17 31 13.7	+1.4
Z35A	Perchaven, San	3.80	172	Pn	Pn	17 31 16.0	+1.8
AMTX	Amarillo	3.81	235	Pn	Pn	17 31 15.3	+1.1
AMTX				IAmb_Lg		17 32 24.2	
	comp=Z,47nm,0.8s						
W39A	Magazine	3.82	119		Pn	17 31 14.7	+0.3
W39A				IAmb_Lg		17 32 21.5	
	comp=Z,47nm,0.8s						
U40A	Yellville	4.10	99		Pn	17 31 19.3	+1.1
U40A	Yellville	4.10	99	P	Pn	17 31 21.6	+3.4
	baz=282						
KSCO	Kaye Shedlock'	4.21	298		Pn	17 31 21.3	+1.4
P38A	Dawn	4.23	52	Pn	Pn	17 31 20.8	+0.8
BGNE	Belgrade	4.30	357	Pn	Pn	17 31 20.8	-0.2
BGNE				IAmb_Lg		17 32 38.9	
	comp=Z,43nm,0.7s						
MIAR	Mount Ida	4.32	125		Pn	17 31 20.9	-0.4
MIAR				IAmb_Lg		17 32 40.4	
	comp=Z,31nm,0.8s						
MGMO	Mountain Grove	4.47	88		Pn	17 31 23.1	-0.3
MGMO				IAmb_Lg		17 32 44.1	
	comp=Z,32nm,1.1s						
Z38A	Mt. Pleasant	4.51	148	Pn	Pn	17 31 24.4	+0.5
R40A	Maddies Statio	4.60	73	Pn	Pn	17 31 25.6	+0.6
R40A				IAmb_Lg		17 32 51.6	
	comp=Z,24nm,1.1s						
ABTX	Abilene, Hawle	4.71	199	Pn	Pn	17 31 28.0	+1.4
FCAR	Ozark Folk Cen	4.79	103	IAmb_Lg		17 32 48.4	
	comp=Z,27nm,0.8s						
X40A	Basin Creek Fa	4.86	121		Pn	17 31 30.7	+2.1
X40A				IAmb_Lg		17 33 00.2	
	comp=Z,25nm,0.9s						
WHAR	Wooly Hollow	4.86	110		Pn	17 31 29.7	+1.0
W41B	Gary Mavity, V	4.94	111		Pn	17 31 29.9	+0.1
W41B				IAmb_Lg		17 32 58.7	
	comp=Z,33nm,0.8s						
OGNE	Ogallala	5.02	321	Pn	Pn	17 31 30.2	-0.8
OGNE				IAmb_Lg		17 33 01.6	
	comp=Z,33nm,0.7s						
UALR	University of	5.05	116	Pn	Pn	17 31 31.8	+0.5
UALR				IAmb_Lg		17 33 00.3	
	comp=Z,28nm,0.8s						
MSTX	Muleshoe	5.08	233		Pn	17 31 31.0	-0.8
WHTX	Lake Whitney,	5.12	176	Pn	Pn	17 31 33.3	+1.1
WHTX				IAmb_Lg		17 33 07.5	
	comp=Z,23nm,1.1s						
WHTX	Lake Whitney,	5.12	176	P	Pn	17 31 33.2	+1.1
	baz=356						
N38A	Joes South For	5.16	43	IAmb_Lg		17 33 08.1	
	comp=Z,24nm,0.8s						
WLAR	White Oak Lake	5.17	130	IAmb_Lg		17 33 03.7	
	comp=Z,26nm,0.7s						
T25A	Trinidad	5.23	272		Pn	17 31 35.2	+1.2
T25A				IAmb_Lg		17 33 17.9	
	comp=Z,29nm,0.9s						
CCM	Cathedral Cave	5.35	78		Pn	17 31 33.6	-1.8
CCM				IAmb_Lg		17 33 11.2	
	comp=Z,26nm,1.0s						
T42A	Van Buren	5.42	89		Pn	17 31 37.8	+1.5
LCAR	Lake Charles	5.50	99	Pn	Pn	17 31 36.1	-1.4
SCIA	State Center	5.99	35	IAmb_Lg		17 33 34.0	
	comp=Z,30nm,0.9s						
Q24A	Divide	6.04	290	IAmb_Lg		17 33 38.3	
	comp=Z,21nm,0.8s						
SDCO	Great Sand Dun	6.11	278		Pn	17 31 48.0	+1.9
435B	Jarrell	6.31	178	IAmb_Lg		17 33 40.2	
	comp=Z,25nm,0.8s						
N41A	Harden Midland	6.54	55	IAmb_Lg		17 33 45.6	
	comp=Z,20nm,0.9s						
ISCO	Idaho Springs	6.64	296		Pn	17 31 54.9	+1.4
ISCO				IAmb_Lg		17 34 00.6	
	comp=Z,16nm,0.9s						
ECSD	EROS Data Cent	6.69	8		Pn	17 31 54.2	+0.4
JCT	Junction City	6.80	194	IAmb_Lg		17 34 02.5	
	comp=Z,19nm,0.8s						
P43A	Skaggs, Pawnee	7.03	66	IAmb_Lg		17 34 03.3	
	comp=Z,22nm,0.8s						
L40A	Anamosa	7.13	44	IAmb_Lg		17 34 01.9	
	comp=Z,17nm,0.8s						
N23A	Red Feather La	7.34	303	IAmb_Lg		17 34 10.5	
	comp=Z,25nm,0.8s						
OXF	Oxford	7.34	108	IAmb_Lg		17 34 17.1	
	comp=Z,27nm,1.1s						
SUSD	Miller	7.37	354	IAmb_Lg		17 34 18.6	
	comp=Z,18nm,0.8s						
Y45A	Yeager Farm, C	7.52	113	IAmb_Lg		17 34 24.4	
	comp=Z,23nm,0.7s						
HDIL	Hopedale	7.53	60	IAmb_Lg		17 34 21.8	
	comp=Z,24nm,0.7s						
OLIL	Olney	7.89	75	IAmb_Lg		17 34 43.3	
	comp=Z,17nm,0.8s						
O44A	Mansfield	7.96	65	IAmb_Lg		17 34 45.3	
	comp=Z,13nm,0.7s						
WVT	Waverly	8.13	94	IAmb_Lg		17 34 41.6	
	comp=Z,7.3nm,0.7s						
JFWS	Jewell Farm	8.23	43	IAmb_Lg		17 34 50.5	
	comp=Z,13nm,0.8s						
T47A	Sharon Grove	8.61	88	IAmb_Lg		17 34 52.0	
	comp=Z,11nm,0.8s						
PV11	David Mesa, Pa	8.80	281	IAmb_Lg		17 35 01.7	
	comp=Z,14nm,1.1s						
V48A	Smith Brothers	9.01	95	IAmb_Lg		17 35 04.9	
	comp=Z,16nm,1.2s						
WCI	Wyandotte Cave	9.25	80	IAmb_Lg		17 35 09.2	
	comp=Z,14nm,0.8s						

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*BGR **21** 17:31:56.6±0.0, 39.°31N×64.°40E, h33^{km}, mb4.4*

*NNC **21** 17:31:59.9±1.4, 40.°39N×63.°06E, h0^{km}±10^{km}, mb4.6, mpv4.5, Error ellipse: s-maj=14.8km s-min=5.4km az=151.0*

*BJI **21** 17:32:01.9±0.0, 40.°38N×63.°04E, h11^{km}, mB4.9/25, mb4.5/39, Ms4.3/11, Ms7 4.3/8*

*IDC **21** 17:32:02.7±0.4, 40.°20N×63.°13E, h0^{km}, mb4.4/39, mb1 4.5/47, mb1mx4.4/70, mbtmp4.4/47, ML4.0/7, MS3.4/4, Ms1 3.4/4, ms1mx3.0/53, Error ellipse: s-maj=10.7km s-min=6.2km az=166.0*

*MOS **21** 17:32:02.5±1.1, 40.°35N×63.°25E, h10^{km}, mb4.9/25, Error ellipse: s-maj=4.8km s-min=3.8km az=31.5*

*NEIC **21** 17:32:04.2±2.1, 40.°29N±0.°06×63.°11E±0.°08, h10^{km}±3^{km}, mb4.8/122, Error ellipse: s-maj=9.1km s-min=7.9km az=144.0*

ISC 21 17:32:04.4±0.8, **40°.34N**±0°.04×**63°.10E**±0°.03, **h13**^{km}±4^{km}, **n477**, σ**1^{s}.84**/510, **mb4.7**/145, **42C-43D**, **Northwestern Uzbekistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASHT	Ashkhabad	4.38	238	PN	Pn	17 33 11.1	+0.6
ASHT	Ashkhabad	4.38	238		Pn	17 33 09.7	-0.8
GEYT	Alibeck	4.56	240	Pn	Pn	17 33 12.9	-0.1
	41nm,0.3s,baz=62,slow=10,SNR=259						
GEYT				Sn	Sn	17 34 04.0	-1.9
	143nm,0.3s,baz=99,slow=29,SNR=3.2						
GEYT	Alibeck	4.56	240		Pn	17 33 12.7	-0.4
GYA0B	ALIBECK ARRAY	4.56	240	⇓Pn	Pn	17 33 11.1	-1.9
GYA0B				⇓Pg	Pb	17 33 22.2	-2.0
GYA0B				⇓Sn	Sn	17 34 04.1	-1.8
GYA0B				⇑Lg	Lg	17 34 26.7	
GYA0B	ALIBECK ARRAY	4.56	240		Pn	17 33 12.7	-0.4
TAS	Tashkent	4.80	76	PN	Pn	17 33 16.3	-0.1
TAS	Tashkent	4.80	76		Pn	17 33 16.3	-0.1
IUG	Iuzhnay	5.53	69	Pg	Pn	17 33 26.0	-0.4
	29nm,0.4s						
IUG				Lg	Lg	17 34 27.9	
	700nm,0.4s						
BRLS	Borolday	5.72	60	Pg	Pn	17 33 25.3	-3.6
	14nm,0.6s						
BRLS				Lg	Lg	17 34 26.8	
	113nm,0.5s						
HRA	Herat	5.98	187		Pn	17 33 31.1	-1.6
KK31	Karatay Array	6.20	61	Pn	Pn	17 33 33.7	-1.8
	14nm,0.5s,baz=240,slow=17,SNR=126						
KK31				⇑Pg	Pb	17 33 54.2	+2.1
	20nm,0.5s,baz=239,slow=20,SNR=8.1						
KK31				⇓Sn	Sn	17 34 44.7	-1.4
	58nm,0.5s						
KK31				Lg	Lg	17 35 19.3	
	341nm,0.7s,baz=245,slow=30,SNR=6.7						
KK31	Karatay Array	6.20	61	*e*PN	Pn	17 33 34.7	-0.7
KK31	Karatay Array	6.20	61		Pn	17 33 34.8	-0.7
KKAR	Karatay Array	6.20	61	PN	Pn	17 33 34.8	-0.7
KKAR	Karatay Array	6.20	61		Pn	17 33 34.4	-1.0
KKAR	Karatay Array	6.20	61		Pn	17 33 34.8	-0.7
DZA	Taraz	6.68	65	Pg	Pn	17 33 42.2	+0.1
	63nm,0.4s						
DZA				Lg	Lg	17 34 56.0	
	221nm,0.3s						
KBL	Kabul	7.47	139	P	Pn	17 33 52.9	-0.3
KBL	Kabul	7.47	139		Pn	17 33 52.9	-0.3
ARSB	Arslanbob	7.56	79	P	Pn	17 33 53.3	-1.0
ARSB	Arslanbob	7.56	79		Pn	17 33 53.3	-1.0
MRKS	Merke	7.97	69	Pg	Pn	17 33 59.4	-0.5
	14nm,0.6s						
MRKS				Lg	Lg	17 35 27.5	
	99nm,0.6s						
AML	Almayashu	8.18	74	P	Pn	17 34 03.4	+0.3
	SNR=12						
EKS2	Erkin-Say	8.35	70	P	Pn	17 34 04.7	-0.3
	SNR=25						
UCH	Uchtor	8.80	74	P	Pn	17 34 11.3	-0.3
	SNR=14						
AAK	Ala-Archa	8.86	71	Pn	Pn	17 34 11.7	-0.4
	3.3nm,0.3s,baz=234,slow=5.2,SNR=65						
AAK				Sn	Sn	17 35 49.5	-2.3
	2.9nm,0.3s,baz=320,slow=4.4,SNR=1.7						
AAK				Lg	Lg	17 36 44.1	
	3.3nm,0.3s,baz=96,slow=8.0,SNR=4.0						
AAK	Ala-Archa	8.86	71	P	Pn	17 34 11.8	-0.3
	SNR=22						
AAK	Ala-Archa	8.86	71	⇓Pn	Pn	17 34 10.6	-1.5
	16nm,0.8s						
AAK				⇓Sn	Sn	17 35 51.3	-0.5
	27nm,0.6s						
AAK				⇓Lg	Lg	17 36 43.3	
	180nm,1.1s						
AAK	Ala-Archa	8.86	71	P	Pn	17 34 11.7	-0.4
AAK						17 35 52.1	
AAK	Ala-Archa	8.86	71		Pn	17 34 11.6	-0.6
FRU1	Bishkek	8.99	70	P	Pn	17 34 13.9	0.0
FRU1	Bishkek	8.99	70		Pn	17 34 13.9	0.0
USP	Ospenovka	9.00	67	P	Pn	17 34 12.8	-1.2
	SNR=23						
CHMS	Chumysh	9.12	69	⇓Pn	Pn	17 34 12.2	-3.4
	7.5nm,0.8s						
CHMS				⇑Sn	Sn	17 35 56.7	-1.3
	28nm,0.6s						
CHMS				⇑Lg	Lg	17 36 50.9	
	146nm,0.9s						
CHMS	Chumysh	9.12	69	*i* P	Pn	17 34 14.0	-1.6
CHMS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KBK	Karagaybulak	9.19	72	P	Pn	17 34 16.3	-0.4
	SNR=16						
AB31	Akbulak array	9.19	347	⇑Pn	Pn	17 34 13.8	-2.7
	comp=Z,6.2nm,0.5s						
AB31				⇑Sn	Sn	17 35 55.8	-3.9
	comp=Z,16nm,0.2s,baz=189,slow=26,SNR=7.3						
AB31				⇓Lg	Lg	17 36 52.5	
	comp=Z,113nm,0.8s,baz=144,slow=29,SNR=5.1						
AB31	Akbulak array	9.19	347	P	Pn	17 34 14.3	-2.2
ABKAR	Akbulak array	9.19	347		Pn	17 34 16.0	-0.5
ABKAR	Akbulak array	9.19	347		Pn	17 34 16.5	0.0
KZA	Kyzart	9.32	75	P	Pn	17 34 17.8	-1.0
	SNR=21						
CEP	Cherat	9.58	130	P	Pn	17 34 21.8	-0.2
CEP				S	Sn	17 36 04.0	-5.6
BOOM	Boomskoye usch	9.88	73	P	Pn	17 34 25.3	-0.9
BOOM	Boomskoye usch	9.88	73		Pn	17 34 25.2	-0.9
KSH	Kashi	9.93	91	P	Pn	17 34 23.6	-3.1
KSH				pP		17 34 26.9	
KSH				S	Sn	17 36 12.4	-5.6
KSH				pmax	pmax		
	comp=Z,37nm,1.2s						
KSH				pmax	pmax		
	comp=Z,570nm,5.9s						
KSH				LR	LR		
	comp=Z,2μm,10.4s						
KSH				LR	LR		
	comp=Z,1μm,8.0s						
KSH				LR	LR		
	comp=Z,1μm,12.6s						
ULHL	Ulahol	10.08	75	P	Pn	17 34 30.1	+1.2
	SNR=17						
NIL	Nilore	10.51	126	P	Pn	17 34 33.4	-1.2
NIL	Nilore	10.51	126		Pn	17 34 33.4	-1.2
CHCP	Chirah Chowk	10.51	126	P	Pn	17 34 33.3	-1.4
MDOK	Medeo	10.80	70	⇓Pn	Pn	17 34 36.6	-2.1
	comp=Z,4.7nm,0.7s						
MDOK				⇓Pg		17 35 19.7	
	comp=Z,7.8nm,0.8s						
MDOK				Lg	Lg	17 37 44.0	
	comp=Z,177nm,1.2s						
MDOK	Medeo	10.80	70	P	Pn	17 34 36.6	-2.1
LKRN	Lenkeran, Azer	11.18	266	P	Pn	17 34 42.6	-1.2
AKT	Akhty	11.69	281	*e*P	Pn	17 34 50.5	-0.3
AKT				*e*S	Sn	17 36 58.2	-3.0
AKT				pmax	pmax		
	comp=Z,26nm,0.4s						
AKT				smax	smax		
	comp=N,66nm,0.4s						
AKT				smax	smax		
	comp=E,107nm,0.3s						
MAK	Makhachkala	11.96	288	*e*P	Pn	17 34 50.8	-3.6
MAK				*e*S	Sn	17 37 03.6	-3.9
MAK				pmax	pmax		
	comp=Z,206nm,1.1s						
MAK				MLR	MLR		
	comp=Z,578nm,9.0s						
SEKA	Sheki	12.09	279	P	Pn	17 34 54.8	-1.5
MNGR	Mingechevir, A	12.19	277	P	Pn	17 34 56.9	-0.7
PDGK	Podgornoye	12.59	71	⇑Pn	Pn	17 35 01.5	-1.6
	comp=Z,5.6nm,0.9s						
PDGK				⇓Lg	Lg	17 38 41.9	
	comp=Z,55nm,0.9s						
PDGK	Podgornoye	12.59	71	P	Pn	17 35 03.9	+0.8
GANJ	Ganja	12.78	277	P	Pn	17 35 04.8	-0.9
GROC	Groznyy	13.23	288	*e*P	Pn	17 35 12.1	+0.3
GROC				*e*S	Sn	17 37 38.3	-0.3
GROC				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NAX	Nakhchivan	13.60	271	P	Pn	17 35 15.8	-1.1
BVAR	Borovoye Array	13.63	19	Pn	Pn	17 35 15.1	-2.1
	comp=Z,2.1nm,0.3s,baz=191,slow=12,SNR=44						
BVAR				Sn	Sn	17 37 37.2	-11
	comp=Z,1.3nm,0.3s,baz=201,slow=15,SNR=2.2						
BRVK	Borovoye	13.64	19	⇑Pn	Pn	17 35 15.2	-2.1
	comp=Z,15nm,0.5s						
BRVK				⇑Sn	Sn	17 37 44.5	-4.0
	comp=Z,19nm,0.6s						
BRVK	Borovoye	13.64	19	*d* *i*P	Pn	17 35 16.0	-1.2
BRVK				pmax	pmax		
	comp=Z,12nm,0.6s						
BRVK	Borovoye	13.64	19		Pn	17 35 15.6	-1.6
TBLG	Delisi	13.93	282	P	Pn	17 35 19.8	-1.6
TBLG	Delisi	13.93	282	Pn	Pn	17 35 19.8	-1.6
GNI	Garni	14.03	275	Pn	Pn	17 35 19.4	-3.5
	comp=Z,0.9nm,0.3s,baz=95,slow=23,SNR=1.8						
GNI				Sn	Sn	17 37 52.9	-5.5
	comp=Z,0.7nm,0.3s,baz=116,slow=17,SNR=2.5						
GNI				LR	LR	17 42 15.3	
	comp=Z,144nm,19.3s,baz=84,slow=44						
GNI	Garni	14.03	275	P	Pn	17 35 21.8	-1.0
GNI	Garni	14.03	275	Pn	Pn	17 35 21.8	-1.0
GUDG	Gudauri	14.14	285	P	Pn	17 35 26.7	+2.3
ZEI	Tsey	14.58	286	*e*P	P	17 35 34.3	-2.6
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BGD	Bogdanovka	14.80	280	P	P	17 35 39.2	-0.2
NCK	Nalchik	14.86	289	⇓*e*P	Pn	17 35 35.2	+1.2
NCK				pmax	pmax		
	comp=Z,13nm,0.4s						
AKH	Akhalkalaki	14.87	281	P	Pn	17 35 33.8	-0.6
AKH	Akhalkalaki	14.87	281		Pn	17 35 33.8	-0.6
KURBB	Kurchatov Arra	14.90	41	Pn	Pn	17 35 30.1	-4.4
	comp=Z,0.3nm,0.3s,baz=238,slow=13,SNR=37						
KURBB				Sn	Sn	17 38 12.3	-7.0
	comp=Z,0.3nm,0.3s,baz=304,slow=27,SNR=4.1						
KURBB				Lg	Lg	17 40 01.9	
	comp=Z,0.2nm,0.3s,baz=254,slow=31,SNR=6.0						
ONI	Oni	14.90	285	P	Pn	17 35 37.9	+3.2
KURK	Kurchatov	15.00	41	⇑Pn	Pn	17 35 31.0	-4.9
	comp=Z,5.0nm,0.8s						
KURK	Kurchatov	15.00	41	*c* *i*P	Pn	17 35 32.3	-3.6
KURK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KURK	Kurchatov	15.00	41		Pn	17 35 32.2	-3.7
MAKZ	Makanchi	15.12	58	⇑Lg	Lg	17 39 59.9	
	comp=Z,65nm,1.4s						
MAKZ	Makanchi	15.12	58	P	Pn	17 35 34.8	-2.7
MAKZ				pmax	pmax		
	comp=Z,27nm,0.5s						
MAKZ	Makanchi	15.12	58		Pn	17 35 34.8	-2.7
MAKZ				IAmb	IAmb	17 35 43.8	
	comp=Z,27nm,0.5s						
MK31	Makanchi Array	15.32	59	Pn	Pn	17 35 36.8	-3.4
	comp=Z,25nm,0.7s,baz=248,slow=12,SNR=144						
MK31				⇑Lg	Lg	17 40 08.6	
	comp=Z,57nm,1.1s,baz=255,slow=26,SNR=3.9						
MK31	Makanchi Array	15.32	59	*i* P	Pn	17 35 36.8	-3.4
MK31	Makanchi Array	15.32	59		Pn	17 35 37.2	-2.9
MK31				IAmb	IAmb	17 35 48.7	
	comp=Z,20nm,0.7s						
MKAR	Makanchi Array	15.32	59	Pn	Pn	17 35 37.1	-3.1
	comp=Z,1.1nm,0.3s,baz=250,slow=13,SNR=139						
MKAR				Sn	Sn	17 38 18.8	-11
	comp=Z,0.3nm,0.3s,baz=249,slow=27,SNR=1.7						
MKAR				Lg	Lg	17 40 12.6	
	comp=Z,0.5nm,0.3s,baz=259,slow=36,SNR=2.4						
MKAR	Makanchi Array	15.32	59	*i* P	Pn	17 35 37.0	-3.1
MKAR				pmax	pmax		
	comp=Z,12nm,0.7s						
MKAR	Makanchi Array	15.32	59	P	Pn	17 35 37.6	-2.6
KBZ	Khabaz	15.38	289	Pn	Pn	17 35 38.2	-2.7
	comp=Z,2.0nm,0.3s,baz=256,slow=7.4,SNR=31						
KBZ				Sn	Sn	17 38 19.0	-12
	comp=Z,0.7nm,0.3s,baz=287,slow=23,SNR=1.5						
KBZ				LR	LR	17 42 56.6	
	comp=Z,159nm,19.0s,baz=90,slow=42						
KBZ	Khabaz	15.38	289	⇓*i*P	Pn	17 35 39.8	-1.2
KBZ				pmax	pmax		
	comp=Z,11nm,0.6s						
NEY	Neytrino	15.47	288	⇑*e*P	Pn	17 35 42.9	+0.6
GOF	Gofitskoye	15.47	294	*ce*P	P	17 35 50.4	+3.8
GOF				pmax	pmax		
	comp=Z,18nm,0.4s						
KVAR	Kislovodsk Arr	15.55	290	Sn	Sn	17 38 23.0	-13
	baz=159,slow=5.2,SNR=5.0						
KIV	Kislovodsk	15.56	290	*e*P	Pn	17 35 41.8	-1.6
KIV				*e*S	Sn	17 38 35.6	0.0
KIV				pmax	pmax		
	comp=Z,64nm,1.1s						
KIV				MLR	MLR		
	comp=Z,298nm,12.0s						
KIV	Kislovodsk	15.56	290	P	Pn	17 35 40.9	-2.5
KIV				IAmb	IAmb	17 35 57.3	
	comp=Z,28nm,0.7s						
ARU	Arti	16.38	351	Pn	Pn	17 35 51.8	-1.9
	comp=Z,0.0nm,0.3s,baz=162,slow=11,SNR=9.6						
ARU				Sn	Sn	17 38 44.7	-10
	comp=Z,0.0nm,0.3s,baz=88,slow=22,SNR=1.8						
ARU				Lg	Lg	17 40 46.0	
	comp=Z,0.0nm,0.3s,baz=149,slow=20,SNR=1.4						
ARU	Arti	16.38	351	*c* *i*P	Pn	17 35 52.0	-1.7
ARU				S	Sn	17 38 52.1	-3.0
ARU				pmax	pmax		
	comp=Z,18nm,1.4s						
ARU	Arti	16.38	351	P	Pn	17 35 51.3	-2.4
ARU				IAmb	IAmb	17 35 59.0	
	comp=Z,33nm,0.6s						
UOSS	Minazif	16.40	203	P	Pn	17 35 53.2	-1.0
SVE	Sverdlovsk	16.58	355	*e*P	P	17 36 00.4	+1.6
SVE				pmax	pmax		
	comp=Z,21nm,0.9s						
SOC	Sochi	17.68	288	*e*P	Pn	17 36 09.0	-1.1
SOC				*e*		17 39 26.8	
SOC				pmax	pmax		
	comp=Z,20nm,0.7s						
SOC				MLR	MLR		
	comp=Z,212nm,12.0s						
VRH	Novokhopyorsk	18.38	313	*e*P	P	17 36 18.6	-0.1
VRH				*e*S	Sn	17 39 36.8	-6.9
VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
WMQ	Urumqi	18.57	71	*e*P	Pn	17 36 22.6	+1.5
WMQ				pmax	pmax		
	comp=Z,21nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,160nm,5.1s						
WMQ				LR	LR		
	comp=Z,590nm,29.1s						
WMQ				LR	LR		
	comp=Z,990nm,29.0s						
WMQ	Urumqi	18.57	71	P	P	17 36 19.6	-1.3
WMQ				pmax	pmax		
	comp=Z,15nm,0.5s						
WMQ	Urumqi	18.57	71	P	P	17 36 19.6	-1.3
ANN	Anapa	19.39	292	*e*P	P	17 36 28.1	-1.7
ANN				*e*S	Sn	17 40 07.1	-1.0
ANN				pmax	pmax		
	comp=Z,42nm,1.3s						
DGZ	Jazzator, Alta	19.51	53	*c* *i*P	P	17 36 31.9	+0.6
DGZ				pmax	pmax		
	comp=Z,17nm,0.5s						
VSR	Storozhevoye	19.83	311	*e*P	P	17 36 34.5	-0.1
VSR				*e*S	S	17 40 07.9	-10
VSR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VSR				smax	smax		
	comp=N,120nm,0.9s						
ZAA0	Zalesovo Array	19.98	40	⇑Pn	P	17 36 36.1	-0.1
	comp=N,1.8nm,0.7s						
ZAA0	Zalesovo Array	19.98	40	P	P	17 36 35.4	-0.8
ZALV	Zalesovo Beam	19.98	40	P	P	17 36 36.1	-0.1
	comp=N,6.7nm,0.4s,baz=239,slow=11,SNR=35						
ZALV				S	S	17 40 11.1	-9.3
	comp=N,3.7nm,0.8s,baz=226,slow=24,SNR=3.3						
ZALV	Zalesovo Beam	19.98	40	P	P	17 36 35.5	-0.7
KIRV	Kirov	20.24	339	P	P	17 36 40.5	+1.6
	comp=N,39nm,0.7s,baz=150,slow=7.4,SNR=3.5						
LPSR	Galich'ya Gora	20.56	315	*e*P	P	17 36 43.2	+0.7
LPSR				*e*S	S	17 40 24.1	-7.9
LPSR				pmax	pmax		
	comp=Z,40nm,0.8s						
LPSR				smax	smax		
	comp=E,60nm,1.7s						
DANN	Dangsing	20.78	119	*e*P	P	17 36 44.7	-0.7
GKN	Gorkha	21.59	118	*e*P	P	17 36 53.2	-0.8
DMN	Daman	22.16	118	*e*P	P	17 37 01.2	+1.0
	comp=E,59nm,1.1s						
KKN	Kakani	22.16	118	*e*P	P	17 37 01.2	+1.0
	comp=E,26nm,0.7s						
ILGA	Ilgaz	22.25	281	P	P	17 37 00.8	-0.2
ILGA				IAmb	IAmb	17 37 06.4	
	comp=Z,16nm,0.8s						
PKIN	Phulchoki	22.38	118	*e*P	P	17 37 01.4	-1.2
	comp=Z,31nm,0.8s						
RAYN	Ar Rayn	22.38	227	P	P	17 37 02.0	-0.4
RAYN				pmax	pmax		
	comp=Z,14nm,1.1s						
RAYN	Ar Rayn	22.38	227	P	P	17 37 02.0	-0.4
PKI	Pulchoki	22.39	118	*e*P	P	17 37 01.4	-1.4
	comp=Z,42nm,0.8s						
GUN	Gumba	22.50	116	*e*P	P	17 37 02.8	-1.1
	comp=Z,109nm,0.9s						
BR131	Keskin Array S	22.52	278	P	P	17 37 04.7	+0.8
BR131				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BR131	Keskin Array S	22.52	278	P	P	17 37 04.7	+0.8
BRTR	Keskin Array B	22.52	278	P	P	17 37 04.9	+1.0
	comp=Z,3.4nm,0.9s,baz=87,slow=6.3,SNR=18						
BRTR	Keskin Array B	22.52	278	P	P	17 37 04.3	+0.4
ASF	Jabal al Asfar	22.59	257	P	P	17 37 05.6	+1.0
	comp=Z,6.4nm,0.8s,baz=18,slow=6.1,SNR=5.4						
MOS	Moscow	22.78	321	*e*P	P	17 37 06.7	+0.5
MOS				*e*		17 37 29.2	
MOS				*e*		17 41 17.8	
JIRN	Jiri	22.87	116	*e*P	P	17 37 06.8	-1.0
OBN	Obninsk	22.98	319	P	P	17 37 08.9	+0.6
	comp=Z,3.9nm,0.3s,baz=147,slow=2.1,SNR=3.4						
OBN				LR	LR	17 48 31.9	
	comp=Z,53nm,18.3s,baz=170,slow=43						
OBN	Obninsk	22.98	319	⇑*e*P	P	17 37 09.0	+0.6
OBN				*e*		17 37 33.1	
OBN				*e*S	S	17 41 04.8	-13
OBN				pmax	pmax		
	comp=Z,27nm,1.0s						
OBN				MLR	MLR		
	comp=Z,200nm,17.0s						
OBN	Obninsk	22.98	319	P	P	17 37 07.8	-0.5
OBN				IAmb	IAmb	17 37 10.7	
	comp=Z,62nm,1.4s						
ANTO	Ankara	23.14	279	P	P	17 37 11.8	+1.6
ANTO				pmax	pmax		
	comp=Z,20nm,0.9s						
ANTO	Ankara	23.14	279	P	P	17 37 11.8	+1.6
ANTO				IAmb	IAmb	17 37 14.3	
	comp=Z,20nm,0.8s						
BR231	Keskin MP Arra	23.15	279	P	P	17 37 11.6	+1.2
BR231				IAmb	IAmb	17 37 14.5	
	comp=Z,16nm,0.8s						
MMAI	Mount Meron Ar	23.32	261	P	P	17 37 13.2	+1.0
	comp=Z,2.2nm,0.5s,baz=70,slow=9.8,SNR=16						
MMAI				PcP	PcP	17 41 00.1	+1.0
	comp=Z,0.5nm,0.5s,baz=35,slow=3.5,SNR=2.1						
RAMN	Ramite	23.60	117	*e*P	P	17 37 14.8	-0.3
	comp=Z,42nm,0.7s						
PRGR	Permogore	23.84	339	*e*P	P	17 37 14.6	-2.2
PRGR				pmax	pmax		
	comp=Z,71nm,1.1s						
CSS	Mathiatis	24.11	267	P	P	17 37 19.5	-0.2
TAPN	Taplejung	24.11	115	*e*P	P	17 37 20.0	-0.1
	comp=Z,46nm,0.9s						
ODAN	Odare	24.20	116	*e*P	P	17 37 20.9	+0.1
	comp=Z,156nm,1.1s						
MDUB	Mudurnu	24.23	281	P	P	17 37 21.3	+0.4
KLMR	Klimovskoe	25.15	333	*e*P	P	17 37 24.0	-4.8
KLMR				pmax	pmax		
	comp=Z,17nm,0.8s						
KLMR	Klimovskoe	25.15	333	*e*P	P	17 37 24.1	-4.8
KLMR				AMP		17 37 32.7	
	comp=Z,17nm,0.8s						
LSA	Lhasa	25.21	106	P	P	17 37 29.5	-0.7
LSA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LSA	Lhasa	25.21	106	P	P	17 37 29.5	-0.7
LSA				IAmb	IAmb	17 37 37.1	
	comp=Z,10nm,0.9s						
EIL	Elat	25.29	254	P	P	17 37 32.6	+2.1
	comp=Z,12nm,0.8s,baz=26,slow=6.1,SNR=10						
TLCR		25.51	292	⇓P	P	17 37 33.9	+1.6
TLCR		25.51	292	⇓P	P	17 37 33.9	+1.6
MILM	Milestii Mici	25.53	296	⇑P	P	17 37 34.5	+2.1
AKASG	Malin Array Be	25.69	305	P	P	17 37 35.0	+1.2
	comp=Z,13nm,0.4s,baz=109,slow=8.1,SNR=92						
AKASG				PcP	PcP	17 41 03.9	0.0
	comp=Z,1.0nm,0.5s,baz=78,slow=3.0,SNR=3.6						
AKASG	Malin Array Be	25.69	305	*ce*P	P	17 37 35.4	+1.6
AKASG				pmax	pmax		
	comp=Z,13nm,0.4s						
AKASG	Malin Array Be	25.69	305	P	P	17 37 34.4	+0.6
AKASG					PcP	17 41 03.5	-0.3
AKBB	Malin Array Si	25.69	305	P	P	17 37 34.6	+0.8
AKBB				pmax	pmax		
	comp=Z,17nm,0.6s						
AKBB	Malin Array Si	25.69	305	P	P	17 37 34.6	+0.8
AKBB				IAmb	IAmb	17 37 36.9	
	comp=Z,17nm,0.6s						
TIRR	Tirgusor	25.82	291	P	P	17 37 35.7	+0.6
TIRR				pmax	pmax		
	comp=Z,11nm,0.8s						
TIRR	Tirgusor	25.82	291	P	P	17 37 35.7	+0.6
TIRR				IAmb	IAmb	17 37 39.9	
	comp=Z,10nm,0.8s						
TOPG	Topolog	25.83	292	⇑P	P	17 37 37.0	+1.8
SORM	Soroca	25.91	299	⇑P	P	17 37 36.9	+1.0
SORM	Soroca	25.91	299	⇑P	P	17 37 36.9	+1.0
CFR	Carcaliu	25.99	292	⇑P	P	17 37 38.4	+1.8
CFR	Carcaliu	25.99	292	⇑P	P	17 37 38.4	+1.8
ELL	Elmali	26.12	273	P	P	17 37 40.5	+2.5
ELL				pmax	pmax		
	comp=Z,80nm,0.8s						
ELL	Elmali	26.12	273	P	P	17 37 40.5	+2.5
HARR	Harsova	26.16	291	⇓P	P	17 37 40.2	+2.1
HARR	Harsova	26.16	291	⇓P	P	17 37 40.2	+2.1
HYB	Hyderabad	26.47	145	*i* P	P	17 37 41.0	-0.2
MANT	Manisa	26.65	277	P	P	17 37 44.4	+1.4
MANT				IAmb	IAmb	17 37 45.3	
	comp=Z,29nm,1.0s						
VRI	Vrincioaia	26.96	294	⇓P	P	17 37 48.5	+3.1
VRI	Vrincioaia	26.96	294	⇓P	P	17 37 48.5	+3.1
TESR	Tescani	27.01	295	⇓P	P	17 37 48.2	+2.3
PLOR	Plostina	27.02	294	⇓P	P	17 37 49.1	+3.1
PLOR	Plostina	27.02	294	⇓P	P	17 37 49.1	+3.1
ISR	Istrita	27.12	292	⇓P	P	17 37 50.1	+3.2
ISR	Istrita	27.12	292	⇓P	P	17 37 50.1	+3.2
BIZ	Bicaz	27.38	296	⇑P	P	17 37 52.1	+2.8
MLR	Muntele Rosu	27.52	293	P	P	17 37 53.5	+2.8
	comp=Z,19nm,0.8s,baz=77,slow=10,SNR=22						
MLR				LR	LR	17 51 28.6	
	comp=Z,124nm,20.6s,baz=91,slow=42						
MLR	Muntele Rosu	27.52	293	⇑P	P	17 37 53.7	+3.1
MLR	Muntele Rosu	27.52	293	P	P	17 37 53.3	+2.7
MLR				pmax	pmax		
	comp=Z,27nm,0.9s						
MLR	Muntele Rosu	27.52	293	P	P	17 37 53.3	+2.7
MLR				IAmb	IAmb	17 37 54.8	
	comp=Z,27nm,0.9s						
OZUR		27.61	294	⇓P	P	17 37 53.7	+2.4
DOPR	Dopca	27.89	294	⇓P	P	17 37 56.6	+2.8
BURAR	Bucovina Array	28.00	298	⇓P	P	17 37 57.0	+2.2
BURAR	Bucovina Array	28.00	298	⇓P	P	17 37 57.0	+2.2
BURAR	Bucovina Array	28.00	298	P	P	17 37 55.5	+0.7
TMCR	Tamitsa	28.00	337	*e*P	P	17 37 54.0	-0.5
TMCR				pmax	pmax		
	comp=Z,26nm,0.6s						
BUR08	Bucovina Ar. S	28.01	298	P	P	17 37 56.0	+1.1
GTA	Gaotai	28.07	80	*e*P	P	17 37 56.3	+0.7
GTA				pP	sP	17 38 00.3	-1.1
GTA				sP	pP	17 38 03.3	+3.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
NACGM	Naroch	28.11	313	*e*	P	17 37 55.0	-0.6
VOIR		28.16	293	⇓P	P	17 37 58.8	+2.6
VOIR		28.16	293	⇓P	P	17 37 58.8	+2.6
ARCR	ARCALIA	28.58	297	⇑P	P	17 38 03.4	+3.5
KARP	Karpathos	28.61	272	P	P	17 38 01.1	+0.8
LOT	Lotru	29.05	293	⇑P	P	17 38 07.2	+2.9
VSU	Vasula	29.30	320	⇑*e*P	P	17 38 07.3	+1.2
SANT	Santorini	29.63	275	⇑P	P	17 38 05.5	-3.9
SANT	Santorini	29.63	275	P	P	17 38 11.9	+2.6
ZAK	Zakamensk	29.64	57	*e*P	P	17 38 10.8	+1.4
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
DRGR		29.71	296	⇓P	P	17 38 12.8	+2.8
DRGR		29.71	296	⇓P	P	17 38 12.8	+2.8
KWP	Kalwaria Pacla	29.73	302	P	P	17 38 12.1	+2.1

KWP				pmax	pmax		
	comp=Z,37nm,1.3s						
KWP	Kalwaria Pacla	29.73	302	P	P	17 38 12.1	+2.1
GZR	Gura Zlata	29.75	293	⇓P	P	17 38 12.5	+2.1
VTS	Vitosha	29.77	288	⇓P	P	17 38 11.6	+1.0
VTS	Vitosha	29.77	288	P	P	17 38 12.1	+1.4
VTS				pmax	pmax		
	comp=Z,3.0nm,0.6s						
VTS	Vitosha	29.77	288	P	P	17 38 12.1	+1.4
TRPA	Tarpa	29.80	299	⇑P	P	17 38 13.6	+2.9
SUW	Suwalki	29.95	311	P	P	17 38 12.6	+0.7
SUW				pmax	pmax		
	comp=Z,18nm,0.7s						
SUW	Suwalki	29.95	311	P	P	17 38 12.6	+0.7
UZH	Uzhgorod	29.97	300	*e*P	P	17 38 19.0	+6.8
IDI	Anoyia	30.44	273	P	P	17 38 16.5	0.0
	comp=Z,14nm,1.0s,baz=136,slow=3.2,SNR=2.7						
CRVS	Cervenica-Dubn	30.52	300	*e*P	P	17 38 17.9	+0.8
CRVS	Cervenica-Dubn	30.52	300	*e*P	P	17 38 17.9	+0.8
BZS	Buzias	30.55	294	⇑P	P	17 38 20.0	+2.7
BZS	Buzias	30.55	294	⇑P	P	17 38 20.0	+2.7
FIA1	FINESS Array S	30.83	326	P	P	17 38 20.7	+1.1
FINES	FINESS Array B	30.83	326	P	P	17 38 21.2	+1.6
	comp=Z,6.2nm,0.5s,baz=122,slow=9.4,SNR=57						
FINES	FINESS Array B	30.83	326	P	P	17 38 20.3	+0.7
AGG	Agios Georgios	31.21	281	P	P	17 38 24.4	+1.1
AGG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AGG	Agios Georgios	31.21	281	P	P	17 38 24.4	+1.1
NIE	Niedzica	31.29	301	P	P	17 38 26.9	+3.0
NIE				pmax	pmax		
	comp=Z,8.0nm,1.8s						
FNA	Florina	31.49	285	P	P	17 38 26.7	+0.9
FNA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FNA	Florina	31.49	285	P	P	17 38 26.7	+0.9
PSZ	Piszkesteto	31.58	298	P	P	17 38 27.9	+1.4
PSZ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PSZ	Piszkesteto	31.58	298	P	P	17 38 27.9	+1.4
PSZ				IAmb	IAmb	17 38 32.4	
	comp=Z,7.7nm,0.7s						
OJC	Ojcow	31.62	303	P	P	17 38 27.8	+1.0
OJC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
OJC	Ojcow	31.62	303	P	P	17 38 27.8	+1.0
OJC				IAmb	IAmb	17 38 28.9	
	comp=Z,9.2nm,0.6s						
SONM	Songino Array	31.65	62	P	P	17 38 27.9	+0.7
	comp=Z,2.0nm,0.8s,baz=272,slow=9.5,SNR=13						
SONM				PcP	PcP	17 41 19.7	+0.7
	comp=Z,0.5nm,0.6s,baz=255,slow=5.5,SNR=2.5						
SONM	Songino Array	31.65	62	P	P	17 38 26.9	-0.2
KLNR	Kaliningrad	31.76	311	⇓*e*P	P	17 38 28.6	+0.7
KLNR				pmax	pmax		
	comp=Z,123nm,2.6s						
APA	Apatity	31.77	339	⇓*i*P	P	17 38 29.0	+1.2
APA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,2µm,11.0s						
NRIK	Noril'sk	31.82	16	P	P	17 38 30.2	+2.0
	comp=Z,4.4nm,0.6s,baz=202,slow=5.6,SNR=9.3						
NRIK	Noril'sk	31.82	16	⇑*e*P	P	17 38 30.2	+2.0
NRIK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LANS	Liptovska Anna	31.83	301	*e*P	P	17 38 31.3	+2.6
LANS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LANS	Liptovska Anna	31.83	301	*e*P	P	17 38 31.3	+2.6
ULN	Ulaanbaatar	32.09	62	*d i*P	P	17 38 32.5	+1.4
ULN				pmax	pmax		
	comp=Z,15nm,1.0s						
ULN	Ulaanbaatar	32.09	62	P	P	17 38 32.1	+1.1
ULN				IAmb	IAmb	17 38 33.8	
	comp=Z,11nm,0.8s						
VYHS	Vyhne	32.27	300	*e*P	P	17 38 34.9	+2.4
VYHS	Vyhne	32.27	300	*e*P	P	17 38 34.9	+2.4
IGT	Igoumenitsa	32.57	283	P	P	17 38 35.6	+0.4
IGT				pmax	pmax		
	comp=Z,11nm,0.9s						
PDG	Podgorica	32.69	288	P	P	17 38 36.2	0.0
PDG				IAmb	IAmb	17 38 40.8	
	comp=Z,6.2nm,0.7s						
JAVC	Velka Javorina	33.02	300	*e*P	P	17 38 41.4	+2.3
MORC	Moravsky Berou	33.08	302	P	P	17 38 40.7	+1.1
MORC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MORC	Moravsky Berou	33.08	302	*e*P	P	17 38 41.8	+2.2
MORC	Moravsky Berou	33.08	302	P	P	17 38 40.7	+1.1
BRY	Bratogost	33.12	289	P	P	17 38 43.0	+2.9
KRLC	Kraliky	33.57	303	*e*P	P	17 38 45.8	+2.0
KRLC	Kraliky	33.57	303	*e*P	P	17 38 45.8	+2.0
VRAC	Vranov	33.71	301	⇑P	P	17 38 47.7	+2.6
VRAC	Vranov	33.71	301	⇑P	P	17 38 47.7	+2.6
VRAC	Vranov	33.71	301	*e*P	P	17 38 47.5	+2.4
BLY	Banja Luka	33.77	293	P	P	17 38 46.0	+0.4
BLY				IAmb	IAmb	17 38 51.4	
	comp=Z,5.4nm,0.6s						
SCTE	Santa Cesarea	33.81	284	P	P	17 38 46.5	+0.5
SCTE				IAmb	IAmb	17 38 59.9	
	comp=Z,16nm,1.0s						
SOP	Sopron	33.84	298	P	P	17 38 50.7	+4.5
SOP				pmax	pmax		
	comp=Z,22nm,0.7s						
DPC	Dobruska-Polom	33.85	303	*e*P	P	17 38 48.6	+2.2
DPC	Dobruska-Polom	33.85	303	*e*P	P	17 38 48.6	+2.2
KRUC	Moravsky	33.85	301	*e*P	P	17 38 48.5	+2.2
KSP	Ksiaz	33.87	304	P	P	17 38 49.3	+2.9
KSP				pmax	pmax		
	comp=Z,14nm,1.4s						
OSTC	Ostas	33.92	303	*e*P	P	17 38 49.8	+2.9
CHVC	Chvalec	34.02	304	*e*P	P	17 38 49.8	+2.0
UPC	Upice	34.05	303	*e*P	P	17 38 50.0	+2.0
UPC	Upice	34.05	303	*e*P	P	17 38 50.0	+2.0
CD2	Chengdu	34.11	93	P	P	17 38 47.6	-1.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CONA	Conrad Observa	34.29	299	*e*pP	P	17 38 52.4	+2.2
	comp=Z,11nm,0.7s,SNR=15						
ARSA	Arzberg	34.58	298	*e*P	P	17 38 54.7	+2.0
	comp=Z,3.5nm,0.8s,baz=86,slow=8.3						
ARSA	Arzberg	34.58	298	*i* pP	P	17 38 54.7	+2.0
	comp=Z,5.4nm,1.1s						
PERS	Pernice	34.93	297	*i* P	P	17 38 57.6	+1.9
KEV	Kevo	34.97	339	P	P	17 38 56.4	+0.7
KEV				pmax	pmax		
	comp=Z,26nm,1.2s						
KEV	Kevo	34.97	339	P	P	17 38 56.4	+0.7
KEV				IAmb	IAmb	17 39 01.1	
	comp=Z,26nm,1.2s						
SOKA	Soboth	34.98	297	*e*pP	P	17 38 58.2	+2.0
	comp=Z,9.6nm,0.8s						
BOJS	Bojanci	35.00	295	*i* P	P	17 38 58.3	+2.0
PRU	Pruhonice	35.01	303	*e*P	P	17 38 55.4	-0.9
PRU				*e*pP	pP	17 38 58.7	-1.8
PRU	Pruhonice	35.01	303	*e*P	P	17 38 55.4	-0.9
PRU				*e*		17 38 58.7	
ARCES	ARCESS Array B	35.26	338	P	P	17 38 59.9	+1.7
	comp=Z,10.0nm,0.8s,baz=137,slow=8.7,SNR=35						
ARCES	ARCESS Array B	35.26	338	P	P	17 38 59.6	+1.4
ARE0	ARCESS Array S	35.26	338	P	P	17 38 59.6	+1.4
TIP	Timpagrande	35.33	283	P	P	17 38 58.9	-0.4
BRG	Berggiesshubel	35.36	304	*i* P	P	17 39 01.1	+1.8
	comp=Z,9.6nm,0.5s						
BRG	Berggiesshubel	35.36	304	*e*P	P	17 39 01.3	+2.1
	comp=Z,9.6nm,0.5s,baz=86,slow=8.3						
BRG	Berggiesshubel	35.36	304	*i* P	P	17 39 01.1	+1.8
BRG				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MOA	Molln	35.37	299	*e*P	P	17 39 00.9	+1.5
	baz=86,slow=8.3						
MOA	Molln	35.37	299	*i* pP	P	17 39 01.1	+1.7
	comp=Z,5.6nm,0.9s						
SGRT	San Giovanni R	35.39	288	P	P	17 39 00.7	+0.9
SGRT				IAmb	IAmb	17 39 01.6	
	comp=Z,11nm,0.8s						
GEC2	GERESS Array S	35.64	301	*e*P	P	17 39 03.7	+1.8
	baz=86,slow=8.3						
GEC2	GERESS Array S	35.64	301	P	P	17 39 03.4	+1.5
GERES	GERESS Array B	35.64	301	P	P	17 39 03.8	+1.9
	comp=Z,2.7nm,0.7s,baz=79,slow=8.4,SNR=18						
GERES				PcP	PcP	17 41 30.2	+0.1
	comp=Z,1.2nm,0.8s,baz=53,slow=3.8,SNR=4.5						
GERES	GERESS Array B	35.64	301	P	P	17 39 02.7	+0.8
GERES					PcP	17 41 29.8	-0.4
KHC	Kasperske Hory	35.70	301	*e*P	P	17 39 04.0	+1.7
KHC				*e*pP	sP	17 39 07.0	-1.1
KHC	Kasperske Hory	35.70	301	⇓*e*P	P	17 39 04.6	+2.3
KHC				pmax	pmax		
	comp=Z,12nm,0.8s						
KHC	Kasperske Hory	35.70	301	P	P	17 39 04.5	+2.2
FBE	Freiberg	35.73	304	*e*P	P	17 39 04.6	+2.2
	comp=Z,8.8nm,0.6s,baz=86,slow=8.3						
CLL	Collm	35.93	305	*i* P	P	17 39 06.6	+2.4
	comp=Z,9.0nm,0.6s						
CLL				*e*PPP	PPP	17 40 40.0	
CLL	Collm	35.93	305	*e*P	P	17 39 06.7	+2.5
	comp=Z,8.6nm,0.6s,baz=86,slow=8.3						
CLL	Collm	35.93	305	*i* P	P	17 39 06.6	+2.4
CLL				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CLL	Collm	35.93	305	P	P	17 39 05.2	+1.1
CLL				IAmb	IAmb	17 39 07.4	
	comp=Z,8.5nm,0.6s						
MYKA	Terra Mystica	35.94	297	*e*pP	P	17 39 06.3	+1.9
	comp=Z,4.7nm,0.9s						
TRI	Trieste	36.00	295	P	P	17 39 06.3	+1.5
TRI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TRI	Trieste	36.00	295	P	P	17 39 06.3	+1.5
TRI				IAmb	IAmb	17 39 10.4	
	comp=Z,9.1nm,0.8s						
KBA	Koelnbreinsper	36.08	298	*e*P	P	17 39 07.5	+1.8
	comp=Z,8.2nm,0.6s,baz=86,slow=8.3						
KBA	Koelnbreinsper	36.08	298	*i* pP	P	17 39 07.7	+1.9
	comp=Z,8.1nm,0.6s						
KBA	Koelnbreinsper	36.08	298	P	P	17 39 08.5	+2.8
KBA				pmax	pmax		
	comp=Z,13nm,1.1s						
ROBS	Robic	36.09	296	*i* P	P	17 39 07.1	+1.5
RJOB	Jochberg	36.36	299	*e*P	P	17 39 09.5	+1.5
	comp=Z,3.8nm,0.7s,baz=86,slow=8.3						
HHC	Hu-ho-hao-te	36.43	73	*e*P	P	17 39 08.8	+0.1
HHC				pmax	pmax		
	comp=Z,66nm,0.9s						
HHC				pmax	pmax		
	comp=Z,250nm,4.8s						
HHC				LR	LR		
	comp=Z,680nm,14.1s						
HHC				LR	LR		
	comp=Z,360nm,13.2s						
HHC				LR	LR		
	comp=Z,630nm,13.4s						
PALK	Pallekele	36.50	150	P	P	17 39 09.2	-0.2
	comp=Z,4.0nm,0.9s,baz=226,slow=14,SNR=2.4						
PALK	Pallekele	36.50	150	P	P	17 39 09.5	+0.1
PALK				pmax	pmax		
	comp=Z,13nm,1.2s						
PALK	Pallekele	36.50	150	P	P	17 39 09.5	+0.1
PALK				IAmb	IAmb	17 39 16.1	
	comp=Z,13nm,1.2s						
PLN	Plauen	36.51	304	*e*P	P	17 39 11.0	+1.8
	comp=Z,5.1nm,0.8s,baz=86,slow=8.3						
MANZ	Manzenberg	36.58	303	*e*P	P	17 39 12.5	+2.7
	comp=Z,3.7nm,0.8s,baz=86,slow=8.3						
STAL	STALIGIAL	36.63	296	P	P	17 39 11.4	+1.1
STAL				IAmb	IAmb	17 39 12.2	
	comp=Z,8.3nm,0.7s						
ABTA	Abfaltersbach	36.69	297	*e*pP	P	17 39 12.6	+1.8
	comp=Z,4.0nm,0.6s,SNR=4.0						
MOX	Moxa	36.84	304	*e*P	P	17 39 13.9	+1.9
	comp=Z,3.3nm,0.8s,baz=86,slow=8.3						
NRCA	Norcia	37.03	291	P	P	17 39 16.0	+2.2
NRCA				IAmb	IAmb	17 39 19.2	
	comp=Z,12nm,0.8s						
WTTA	Wattenberg	37.21	298	*e*P	P	17 39 16.2	+0.9
	comp=Z,6.8nm,0.9s,baz=86,slow=8.3						
WTTA	Wattenberg	37.21	298	pP	P	17 39 16.5	+1.1
	comp=Z,8.8nm,0.9s,SNR=4.8						
WATA	Walderalm	37.24	298	*e*pP	P	17 39 16.4	+0.8
	comp=Z,4.2nm,0.6s						
NC405	NORSAR Array S	37.32	321	P	P	17 39 17.9	+2.0
NC602	NORSAR Array S	37.34	321	P	P	17 39 16.5	+0.5
NORES	NORESS Array B	37.34	321	P	P	17 39 16.7	+0.7
NORES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MURB	Monte Urbino	37.35	292	P	P	17 39 16.1	-0.4
MURB				IAmb	IAmb	17 39 21.0	
	comp=Z,20nm,0.9s						
CTI	Castel Tesino	37.40	296	P	P	17 39 18.2	+1.3
CTI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CTI	Castel Tesino	37.40	296	P	P	17 39 18.2	+1.3
BSEG	Bad Segeberg	37.50	309	*e*P	P	17 39 19.8	+2.3
	comp=Z,9.4nm,0.9s,baz=86,slow=8.3						
NC303	NORSAR Array S	37.50	321	P	P	17 39 19.0	+1.5
SQTA	Sankt Quirin	37.50	298	*e*P	P	17 39 18.3	+0.6
	comp=Z,6.5nm,1.1s						
NB201	NORSAR Array S	37.51	321	P	P	17 39 18.4	+0.8
NB2	NORSAR Subarra	37.54	321	P	P	17 39 18.5	+0.6
	comp=Z,2.8nm,0.5s,baz=100,slow=8.6						
NOA	NORSAR Array B	37.54	321	P	P	17 39 18.6	+0.8
	comp=Z,2.9nm,0.5s,baz=99,slow=8.4,SNR=15						
MOTA	Moosalm	37.55	298	*e*P	P	17 39 18.9	+0.6
	comp=Z,11nm,0.9s,SNR=8.3						
NRDL	Niedersach Rie	37.67	307	*e*P	P	17 39 20.9	+2.0
	comp=Z,3.2nm,0.6s,baz=86,slow=8.3						
NAO01	NORSAR Array S	37.67	321	P	P	17 39 19.7	+0.8
NAO01				IAmb	IAmb	17 39 36.4	
	comp=Z,31nm,1.1s						
CMAR	Chiang Mai Arr	37.72	115	P	P	17 39 19.6	-0.1
	comp=Z,0.8nm,0.7s,baz=295,slow=8.0,SNR=9.9						
CMAR				PcP	PcP	17 41 36.8	+0.1
	comp=Z,2.1nm,0.9s,baz=297,slow=4.5,SNR=9.5						
CMAR	Chiang Mai Arr	37.72	115	*ce*P	P	17 39 20.2	+0.5
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR	Chiang Mai Arr	37.72	115	P	P	17 39 19.8	0.0
NBO00	NORSAR Array S	37.75	321	P	P	17 39 20.4	+0.8
RETA	Reutte	37.76	299	*e*P	P	17 39 20.5	+0.6
	comp=Z,4.2nm,0.7s						
NC204	NORSAR Array S	37.80	321	P	P	17 39 21.1	+1.1
GTTG	Gottingen	37.82	305	*e*P	P	17 39 22.4	+2.2
	comp=Z,9.1nm,0.7s,baz=86,slow=8.3						
KONO	Kongsberg	38.16	319	P	P	17 39 22.6	-0.4
KONO				pmax	pmax		
	comp=Z,68nm,1.5s						
KONO	Kongsberg	38.16	319	P	P	17 39 22.6	-0.4
UBR	Ueberruh	38.17	299	*e*P	P	17 39 25.0	+1.6
	comp=Z,13nm,0.9s,baz=86,slow=8.3						
OSSC	Osservatorio P	38.20	292	P	P	17 39 24.7	+1.1
DAVA	Damuels	38.38	299	*e*P	P	17 39 26.2	+1.0
	comp=Z,10nm,0.8s,baz=86,slow=8.3						
DAVA	Damuels	38.38	299	*e*pP	P	17 39 26.4	+1.1
	comp=Z,12nm,0.8s						
GYA	Guiyang	38.53	97	*e*P	P	17 39 27.8	+1.1
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ENH	Enshi	38.78	90	P	P	17 39 29.9	+1.2
MSSA	Maissana	39.23	294	P	P	17 39 32.9	+0.6
MSSA				IAmb	IAmb	17 39 47.8	
	comp=Z,41nm,1.5s						
BFO	Black Forest	39.24	300	P	P	17 39 33.5	+1.2
BFO				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BFO	Black Forest	39.24	300	P	P	17 39 33.5	+1.2
SENIN	Lac Senin/Sane	40.30	298	P	P	17 39 42.0	+0.7
SENIN				IAmb	IAmb	17 39 42.9	
	comp=Z,8.5nm,0.8s						
BNI	Bardonecchia	41.02	296	P	P	17 39 47.9	+0.7
BNI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BNI	Bardonecchia	41.02	296	P	P	17 39 47.9	+0.7
KEST	Kesra	42.05	282	P	P	17 39 56.9	+1.2
	comp=Z,15nm,0.8s,baz=72,slow=3.6,SNR=17						
KEST	Kesra	42.05	282	P	P	17 39 57.2	+1.6
KEST				IAmb	IAmb	17 39 58.6	
	comp=Z,17nm,0.8s						
SPA0	Spitsbergen Ar	42.36	347	P	P	17 39 59.8	+2.2
SPA0				IAmb	IAmb	17 40 16.3	
	comp=Z,29nm,1.1s						
WHN	Wuhan	42.37	87	⇓P	P	17 39 59.1	+0.8
SSB	Saint Sauveur	42.43	297	P	P	17 39 59.7	+1.1
SSB				pmax	pmax		
	comp=Z,19nm,1.5s						
SSB	Saint Sauveur	42.43	297	P	P	17 39 59.6	+1.1
SSB				IAmb	IAmb	17 40 14.6	
	comp=Z,19nm,1.5s						
KBS	Kingsbay	43.51	347	P	P	17 40 08.6	+1.7
KBS				pmax	pmax		
	comp=Z,37nm,1.2s						
KBS	Kingsbay	43.51	347	P	P	17 40 08.6	+1.7
YAK	Yakutsk	44.62	38	*e*P	P	17 40 15.2	-0.7
YAK				pmax	pmax		
	comp=Z,13nm,0.9s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.1s						
YAK	Yakutsk	44.62	38	P	P	17 40 16.2	+0.2
YAK				IAmb	IAmb	17 40 17.7	
	comp=Z,14nm,0.7s						
TIXI	Tiksi	44.69	24	P	P	17 40 17.6	+1.2
	comp=Z,10nm,0.8s,baz=285,slow=5.8,SNR=23						
TIXI	Tiksi	44.69	24	⇑*i*P	P	17 40 17.6	+1.2
TIXI				pmax	pmax		
	comp=Z,12nm,1.0s						
TIXI	Tiksi	44.69	24	P	P	17 40 17.5	+1.1
TIXI				IAmb	IAmb	17 40 18.6	
	comp=Z,8.7nm,0.7s						
NJ2	Nanjing	45.11	82	*e*P	P	17 40 20.6	+0.3
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
EKB	Eskdalemuir	45.19	312	P	P	17 40 20.6	0.0
ESK	Eskdalemuir	45.20	312	P	P	17 40 21.6	+0.9
ESK				pmax	pmax		
	comp=Z,60nm,1.5s						
ESK	Eskdalemuir	45.20	312	P	P	17 40 21.6	+0.9
DSB	Dublin	47.44	310	P	P	17 40 40.1	+1.8
KMBO	Kilima Mbogo	47.53	216	P	P	17 40 40.3	+0.6
	comp=Z,0.7nm,0.3s,baz=43,slow=23,SNR=2.1						
KMBO	Kilima Mbogo	47.53	216	P	P	17 40 39.8	+0.1
KLR	Kul'dur	47.99	55	P	P	17 40 43.7	+1.1
	comp=Z,2.9nm,0.6s,baz=287,slow=5.6,SNR=12						
KLR	Kul'dur	47.99	55	⇓*e*P	P	17 40 42.9	+0.3
KLR				pmax	pmax		
	comp=Z,8.0nm,1.3s						
DAG	Danmarks Havn	49.26	342	P	P	17 40 55.3	+3.3
KSAR	Wonju Array Be	49.50	71	P	P	17 40 55.2	+0.8
KSAR	Wonju Array Be	49.50	71	P	P	17 40 55.2	+0.8
KSAR				PcP	PcP	17 42 15.8	-0.5
KSRS	Korea Array	49.52	71	P	P	17 40 55.0	+0.5
	comp=Z,1.8nm,0.8s,baz=304,slow=3.4,SNR=7.6						
KSRS				PcP	PcP	17 42 16.5	+0.2
	comp=Z,1.1nm,0.7s,baz=303,slow=5.2,SNR=4.0						
USRK	Ussuriysk Ar.	49.76	62	P	P	17 40 57.5	+1.2
	comp=Z,2.4nm,0.6s,baz=291,slow=7.9,SNR=7.8						
USRK	Ussuriysk Ar.	49.76	62	P	P	17 40 57.7	+1.4
USRK	Ussuriysk Ar.	49.76	62	P	P	17 40 57.7	+1.4
GSI	Gunungsitoli	49.87	132	P	P	17 40 57.8	+0.3
ESDC	Sonseca Array	50.21	292	P	P	17 41 00.8	+0.9
	comp=Z,0.9nm,0.3s,baz=58,slow=8.5,SNR=2.3						
PAB	San Pablo	50.54	292	P	P	17 41 02.6	+0.2
PAB				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PAB	San Pablo	50.54	292	P	P	17 41 02.6	+0.2
TPUB	Ta-pu	50.89	91	P	P	17 41 06.7	+1.6
JNU	Nakatsue	53.61	75	P	P	17 41 26.0	+0.7
PVAQ	Vaqueiros	53.84	291	P	P	17 41 28.0	+1.1
PVAQ				IAmb	IAmb	17 41 41.8	
	comp=Z,19nm,1.5s						
SDSI	Sungai Dareh	53.91	130	P	P	17 41 24.8	-2.7
SEY	Seymchan	54.71	34	P	P	17 41 34.0	+1.2
	comp=Z,1.6nm,0.7s						
SEY	Seymchan	54.71	34	⇑*e*P	P	17 41 34.0	+1.2
MA2	Magadan	55.19	38	P	P	17 41 38.0	+1.7
	comp=Z,2.1nm,0.7s,baz=312,slow=21,SNR=2.4						
MA2	Magadan	55.19	38	P	P	17 41 38.0	+1.7
SUMG	Summit	55.34	339	P	P	17 41 39.5	+1.8
SUMG				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SUMG	Summit	55.34	339	P	P	17 41 39.5	+1.8
MJAR	Matsushiro Arr	57.29	68	P	P	17 41 51.7	0.0
	comp=Z,3.1nm,0.9s,baz=297,slow=7.5,SNR=3.3						
MJAR	Matsushiro Arr	57.29	68	P	P	17 41 51.2	-0.6
BILL	Bilibino	57.87	26	⇑*e*P	P	17 41 56.6	+1.3
BILL				*e*		17 44 04.8	
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TULEG	Thule	59.52	348	P	P	17 42 06.6	-0.1
TULEG				IAmb	IAmb	17 42 16.9	
	comp=Z,13nm,1.3s						
TOA0	Torodi Ar. Sit	59.86	261	P	P	17 42 09.6	-0.3
TOA0				IAmb	IAmb	17 42 10.6	
	comp=Z,5.8nm,0.8s						
TORD	Torodi Ar. Bea	59.86	261	P	P	17 42 09.6	-0.2
	comp=Z,4.6nm,0.7s,baz=46,slow=6.7,SNR=28						
TORD	Torodi Ar. Bea	59.86	261	P	P	17 42 08.7	-1.2
RES	Resolute Bay	64.33	354	P	P	17 42 40.6	+1.7
RES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
RES	Resolute Bay	64.33	354	P	P	17 42 40.6	+1.7
GAMB	Gambell	67.55	23	P	P	17 43 00.9	+1.1
GAMB				IAmb	IAmb	17 43 01.9	
	comp=Z,4.4nm,1.0s						
TOLK	Toolik Lake Re	68.64	12	P	P	17 43 08.5	+1.8
TOLK				IAmb	IAmb	17 43 09.5	
	comp=Z,11nm,1.1s						
ANM	Nome	68.73	20	P	P	17 43 09.2	+1.9
ANM				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ANM	Nome	68.73	20	P	P	17 43 09.2	+1.9
DBIC	Dimbokro	68.94	261	P	P	17 43 09.1	-0.2
	comp=Z,5.7nm,1.0s,baz=9.1,slow=6.2,SNR=6.2						
DBIC	Dimbokro	68.94	261	P	P	17 43 08.7	-0.6
DBIC				IAmb	IAmb	17 43 09.7	
	comp=Z,5.4nm,0.9s						
KIC	Kosan Boka	69.05	260	*e*P	P	17 43 09.5	-0.5
	comp=Z,12nm,0.8s						
TIC	Toumodi	69.08	261	*e*P	P	17 43 09.5	-0.7
LIC	Lamto	69.36	260	*e*P	P	17 43 11.3	-0.6
	comp=Z,18nm,0.8s						
FRB	Frobisher Bay	69.42	339	P	P	17 43 12.1	+0.6
	comp=Z,5.7nm,0.6s,baz=27,slow=6.3,SNR=16						
IMAR	Indian Mountai	70.25	15	P	P	17 43 17.6	+1.0
C36M	Paulatuk	70.50	3	P	P	17 43 19.2	+1.2
BMAR	Burnt Mountain	70.52	11	P	P	17 43 20.7	+2.3
INK	Inuvik	70.96	6	P	P	17 43 21.5	+0.6
	comp=Z,3.7nm,0.8s,baz=6.5,slow=9.0,SNR=13						
INK	Inuvik	70.96	6	P	P	17 43 22.3	+1.4
INK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
INK	Inuvik	70.96	6	P	P	17 43 22.3	+1.4
INK				IAmb	IAmb	17 43 22.9	
	comp=Z,3.8nm,0.8s						
FYU	Fort Yukon	71.22	12	P	P	17 43 24.8	+2.3
FYU				IAmb	IAmb	17 43 28.1	
	comp=Z,5.5nm,1.0s						
IL31		72.61	13	P	P	17 43 32.5	+1.7
ILAR	Eielson Array	72.61	13	P	P	17 43 32.0	+1.1
	comp=Z,1.3nm,0.7s,baz=340,slow=4.5,SNR=13						
ILAR	Eielson Array	72.61	13	P	P	17 43 31.7	+0.8
TSUM	Tsumeb	72.82	225	P	P	17 43 33.5	+0.7
TSUM				IAmb	IAmb	17 43 33.8	
	comp=Z,3.1nm,0.7s						
EGAK	Eagle	73.50	11	P	P	17 43 37.5	+1.3
EGAK				IAmb	IAmb	17 43 38.7	
	comp=Z,4.7nm,1.1s						
LBTB	Lobatse	73.80	215	P	P	17 43 38.8	+0.3
LBTB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LBTB	Lobatse	73.80	215	P	P	17 43 38.8	+0.3
LBTB				IAmb	IAmb	17 43 39.7	
	comp=Z,7.7nm,0.8s						
DAWY	Dawson	74.42	10	P	P	17 43 43.3	+1.6
DAWY				IAmb	IAmb	17 43 44.1	
	comp=Z,5.1nm,0.8s						
SUA	Susitna One	74.89	16	P	P	17 43 45.6	+1.1
SUA				IAmb	IAmb	17 43 57.8	
	comp=Z,14nm,1.3s						
BCAR	Beaver Creek A	75.03	11	P	P	17 43 46.9	+1.6
SCM	Sheep Creek Mo	75.24	14	P	P	17 43 48.0	+1.6
SCM				pmax	pmax		
	comp=Z,12nm,1.3s						
SCM	Sheep Creek Mo	75.24	14	P	P	17 43 48.0	+1.6
SCM				IAmb	IAmb	17 44 01.9	
	comp=Z,12nm,1.3s						
SCHQ	Schefferville	75.99	333	P	P	17 43 51.6	+0.8
	comp=Z,6.6nm,0.6s,baz=36,slow=5.7,SNR=13						
SCHQ	Schefferville	75.99	333	P	P	17 43 51.5	+0.8
SCHQ				IAmb	IAmb	17 43 52.4	
	comp=Z,6.4nm,0.8s						
FAKI	Fak Fak	76.17	106	P	P	17 43 52.5	+0.1
BRLK	Bradley Lake	76.39	17	P	P	17 43 53.1	+0.1
HIN	Hinchinbrook I	76.72	15	P	P	17 43 55.5	+0.7
BALM	Baldy	76.86	12	P	P	17 43 56.7	+0.9

BALM				IAmb	IAmb	17 43 57.9	
	comp=Z,6.7nm,0.8s						
BARN	Barnard Glacie	76.95	12	P	P	17 43 57.9	+1.5
BARN				IAmb	IAmb	17 44 15.2	
	comp=Z,9.6nm,0.8s						
BOSA	Boshof	77.08	214	P	P	17 43 57.2	-0.1
	comp=Z,2.0nm,0.6s,baz=31,slow=7.5,SNR=7.0						
BOSA	Boshof	77.08	214	P	P	17 43 57.2	-0.1
BOSA				IAmb	IAmb	17 43 57.6	
	comp=Z,3.3nm,0.8s						
CTGM	Chitina Glacie	77.09	12	P	P	17 43 59.2	+2.1
CTGM				IAmb	IAmb	17 44 16.8	
	comp=Z,17nm,1.3s						
YKA	Yellowknife Ar	77.50	359	P	P	17 44 00.1	+1.0
	comp=Z,5.9nm,0.7s,baz=0.6,slow=5.9,SNR=71						
GIRL	Giralia	78.68	133	P	P	17 44 07.1	+0.9
DLBC	Dease Lake	80.98	7	P	P	17 44 19.8	+1.5
	comp=Z,2.3nm,0.7s,baz=324,slow=8.7,SNR=2.0						
DLBC	Dease Lake	80.98	7	P	P	17 44 20.0	+1.7
PSA00	Pilbara Seismi	81.12	128	P	P	17 44 19.0	-0.4
PSA00				IAmb	IAmb	17 44 19.6	
	comp=Z,21nm,1.4s						
GBN	Guysborough	81.27	324	P	P	17 44 22.1	+2.1
BATG	Bathurst New B	81.75	328	P	P	17 44 22.6	+0.1
FITZ	Fitzroy Crossi	82.17	122	P	P	17 44 24.7	-0.4
	comp=Z,4.6nm,0.9s,baz=297,slow=7.0,SNR=4.3						
FITZ	Fitzroy Crossi	82.17	122	P	P	17 44 24.6	-0.4
FITZ				IAmb	IAmb	17 44 28.5	
	comp=Z,6.2nm,0.9s						
KNRA	Kununurra	82.52	118	P	P	17 44 26.6	-0.2
KNRA				IAmb	IAmb	17 44 27.1	
	comp=Z,6.9nm,0.8s						
PQI	Presque Isle	83.03	328	P	P	17 44 31.1	+1.9
E63A	Oxbow	83.39	329	P	P	17 44 33.1	+2.0
D53A	Lac Vacive, Po	86.22	334	P	P	17 44 46.5	+1.2
D53A				IAmb	IAmb	17 44 50.4	
	comp=Z,7.0nm,1.2s						
WRA	Warramunga Arr	89.28	117	P	P	17 44 59.6	-0.7
	comp=Z,4.1nm,0.7s,baz=326,slow=4.5,SNR=29						
WRA				PKKPbc	PKKPbc	18 02 37.5	+1.8
	comp=Z,0.3nm,0.5s,baz=128,slow=2.7,SNR=5.2						
WRA	Warramunga Arr	89.28	117	P	P	17 44 59.0	-1.3
WRAB	Tennant Creek	89.28	117	⇓eP	P	17 44 59.9	-0.4
WRAB				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WB2	Warramunga Arr	89.28	117	P	P	17 44 59.9	-0.4
AS31	Alice Springs	91.54	120	P	P	17 45 10.6	-0.2
AS31				IAmb	IAmb	17 45 11.0	
	comp=Z,1.4nm,0.6s						
ASAR	Alice Springs	91.54	120	P	P	17 45 10.3	-0.5
	comp=Z,4.4nm,0.8s,baz=315,slow=4.4,SNR=56						
ASAR				PKKPbc	PKKPbc	18 02 32.0	+1.8
	comp=Z,0.2nm,0.6s,baz=126,slow=3.6,SNR=4.8						
ASAR	Alice Springs	91.54	120	P	P	17 45 10.2	-0.6
ASAR					PKKPbc	18 02 31.0	+0.8
MCMT	McKenzie Canyo	95.14	357	P	P	17 45 26.8	-0.6
VNA2	Neumayer--Watz	121.67	201	PKPdf	PKPdf	17 50 56.7	+0.2
VNA3	Neumayer Olymp	122.47	201	PKPdf	PKPdf	17 50 57.3	-0.8
CPUP	Villa Florida	129.19	267	PKP	PKPdf	17 51 11.9	-0.3
	comp=Z,3.5nm,0.9s,baz=299,slow=4.8,SNR=4.3						
CPUP	Villa Florida	129.19	267		PKPdf	17 51 10.7	-1.5
VNDA	Vanda	130.89	163	PKP	PKPdf	17 51 13.5	-0.5
	comp=Z,0.6nm,0.6s,baz=120,slow=9.7,SNR=1.5						
PLCA	Paso Flores	145.09	254	PKPbc	PKPbc	17 51 40.9	+0.2
	comp=Z,6.6nm,1.1s,baz=138,slow=6.0,SNR=7.0						
PLCA	Paso Flores	145.09	254		PKPbc	17 51 41.2	+0.5
GO06	Curarrehue	145.46	256		PKPdf	17 51 41.9	0.0

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*IDC **21** 17:33:35.2±3.5, 2°.29S×141°.05E, h0^{km}, mb3.6/3, mb1 4.0/4, mb1mx3.6/45, mbtmp3.7/4, ML3.8/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/35, Error ellipse: s-maj=87.9km s-min=31.5km az=84.0*

*NEIC **21** 17:33:38.0±2.1, 2°.1S±0°.2×140°.79E±0°.07, h35^{km}±9^{km}, mb4.0/12, Error ellipse: s-maj=24.0km s-min=10.2km az=182.0*

ISC 21 17:33:36.0±1.1, **2°.2S**±0°.1×**141°.0E**±0°.2, **h20**^{km}, **n28**, σ**1^{s}68**/21, **mb3.8**/4, **Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	8.74	265	Pn	Pn	17 35 39.4	-1.9
PMG	Port Moresby	9.46	140	LR	LR	17 39 30.4	
	comp=Z,139nm,20.7s,baz=254,slow=38						
MTN	Manton Dam	14.39	222	Pn	Pn	17 36 56.8	-1.9
GUMO	Guam	16.14	14	Pn	Pn	17 37 19.5	-2.3
KNRA	Kununurra	18.02	221	P	Pn	17 37 44.6	-0.8
KNRA				IAmb	IAmb	17 37 50.2	
	comp=Z,27nm,1.4s						
SOEI	Soe	18.23	245	P	P	17 37 49.3	+1.1
SOEI				IAmb	IAmb	17 38 07.1	
	comp=Z,18nm,0.9s						
WB0	Warramunga Arr	18.62	200	P	P	17 37 53.7	+1.3
WR0	Warramunga Arr	18.75	199	P	P	17 37 55.1	+1.3
WR0				IAmb	IAmb	17 38 07.2	
	comp=Z,5.0nm,0.8s						
WRAB	Tennant Creek	18.79	200	P	P	17 37 56.3	+2.0
WRAB				IAmb	IAmb	17 37 58.1	
	comp=Z,5.6nm,1.0s						
WB2	Warramunga Arr	18.80	200	P	P	17 37 55.0	+0.6
WB2				IAmb	IAmb	17 38 02.1	
	comp=Z,4.4nm,0.8s						
WRA	Warramunga Arr	18.80	200	P	P	17 37 55.0	+0.6
	comp=Z,0.3nm,0.3s,baz=22,slow=12,SNR=16						
WRA	Warramunga Arr	18.80	200	P	P	17 37 55.2	+0.8
FITZ	Fitzroy Crossi	21.83	223	P	P	17 38 28.4	+1.1
	comp=Z,4.1nm,0.8s,baz=34,slow=11,SNR=8.2						
FITZ	Fitzroy Crossi	21.83	223	P	P	17 38 26.5	-0.7
FITZ				IAmb	IAmb	17 38 35.1	
	comp=Z,10.0nm,1.2s						
AS31	Alice Springs	22.43	197	P	P	17 38 34.2	+0.5
ASAR	Alice Springs	22.43	197	P	P	17 38 35.3	+1.6
	comp=Z,1.4nm,0.6s,baz=31,slow=10,SNR=38						
ASAR	Alice Springs	22.43	197	P	P	17 38 31.5	-2.2
H11S3	WAKE ISLAND Hy	32.60	50	T	T	18 15 15.6	
	baz=232,slow=75,SNR=32						
H11S2	WAKE ISLAND Hy	32.61	50	T	T	18 15 13.2	
	baz=232,slow=75,SNR=17						
H11S1	WAKE ISLAND Hy	32.62	50	T	T	18 15 13.1	
	baz=232,slow=75,SNR=20						
H11N1	WAKE ISLAND Hy	33.48	48	T	T	18 16 23.8	
	baz=229,slow=76,SNR=5.7						
H11N2	WAKE ISLAND Hy	33.50	48	T	T	18 16 22.8	
	baz=229,slow=76,SNR=6.1						
H11N3	WAKE ISLAND Hy	33.50	48	T	T	18 16 26.3	
	baz=229,slow=76,SNR=4.5						
CMAR	Chiang Mai Arr	46.15	298	P	P	17 42 03.2	+3.7
	comp=Z,0.2nm,0.4s,baz=112,slow=5.8,SNR=2.0						
MLY	Manley	82.95	23	P	P	17 45 58.4	-0.9
MLY				IAmb	IAmb	17 45 59.5	
	comp=Z,2.9nm,0.7s						
MCK	McKinley	83.25	25	P	P	17 46 00.9	0.0
DBIC	Dimbokro	145.65	279	PKPbc	PKPab	17 53 16.6	+1.9
	comp=Z,1.8nm,0.6s,baz=108,slow=3.8,SNR=4.8						
DBIC	Dimbokro	145.65	279		PKiKP	17 53 17.6	-0.6

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*ANF **21** 17:37:09.8±0.8, 30°.38N×114°.02W, h0^{km}, ML4.8/22, Error ellipse: s-maj=9.6km s-min=3.2km az=11.0*

*ECX **21** 17:37:11.3±1.0, 30°.38N×114°.06W, h11^{km}±14^{km}, MD5.1, ML4.8*

*BJI **21** 17:37:11.0±0.0, 30°.15N×114°.48W, h16^{km}, mb5.1/3*

*IDC **21** 17:37:12.0±0.5, 30°.38N×114°.01W, h0^{km}, mb4.3/27, mb1 4.4/36, mb1mx4.3/55, mbtmp4.2/36, ML3.8/9, MS4.4/38, Ms1 4.4/38, ms1mx4.4/49, Error ellipse: s-maj=14.0km s-min=7.4km az=49.0*

*NEIC **21** 17:37:13.5, 30°.39N×114°.01W, h6^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.89; M$_{\theta\theta}$0.15; M$_{\phi\phi}$1.73; M$_{r\theta}$-1.79; M$_{\theta\phi}$1.03; M$_{\phi r}$-0.19; Fault plane solution: M$_0$2.75000×10^{16} NP1:ϕ_s181.89000°, δ38.32000°, λ-137.19000°. NP2:ϕ_s55.89000°, δ65.08000°, λ-59.90000°. Principal axes: T 2.4964, Plg15.0000°, Azm124.0000°; N 0.4579, Plg27.0000°, Azm222.0000°; P -2.9544, Plg59.0000°, Azm9.0000°;*

*GCMT **21** 17:37:13.1±0.2, 30°.32N±0°.03×114°.12W±0°.02, h12^{km}, MW5.1/110, Moment Tensor Solution. s27,c35; s110,c162; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.52±.13; M$_{\theta\theta}$0.49±.14; M$_{\phi\phi}$4.03±.11; M$_{r\theta}$-1.17±.60; M$_{\theta\phi}$2.05±.10; M$_{\phi r}$-0.44±.48; Best double couple: M$_0$4.91600×10^{16} NP1:ϕ_s193.00000°, δ41.00000°, λ-107.00000°. NP2:ϕ_s36.00000°, δ51.00000°, λ-75.00000°. Principal axes: T 5.0510, Plg5.0000°, Azm115.0000°; N -0.2740, Plg11.0000°, Azm207.0000°; P -4.7800, Plg77.0000°, Azm0.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **21** 17:37:13.1±3.0, 30°.41N±0°.06×114°.08W±0°.06, h10^{km}±1^{km}, mb4.7/191, Mwr4.9/32, Md5.3/20(MEX) Error ellipse: s-maj=9.3km s-min=6.1km az=217.0*

*MEX **21** 17:37:14.4±1.3, 30°.38N×114°.03W, h20^{km}±31^{km}, MD5.3*

ISC 21 17:37:13.1±0.3, **30°.43N**±0°.04×**114°.06W**±0°.03, **h10**^{km}, **n515**, σ**1^{s}68**/514, **mb4.7**/104, **MS4.4**/34, **2C-4D**, **Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAHB	Baha de los	0.65	138	eP	Sb	17 37 37.2	+1.7
SFX	San Felipe	0.92	312	eP	Pg	17 37 27.0	-3.7
SFX				eS	Sg	17 37 39.9	-2.8
PIX	Pinacate	1.24	24	⇓eP	Pn	17 37 32.4	-4.0
PIX				eS	Sb	17 37 51.5	-1.1
ECBX	El Chinero	1.35	321	eP	Pn	17 37 34.0	-4.0
ECBX				eS	Sb	17 37 53.9	-1.8
SPX	San Pedro Mart	1.36	297	⇓eP	Pn	17 37 35.5	-2.9
SPX				eS	Sb	17 37 54.1	-2.2
SPX				IAML		17 38 08.0	
	comp=N,6µm,1.4s						
SPX				⇑e		17 38 08.0	
SPX	San Pedro Mart	1.36	297	eP	Pn	17 37 35.3	-3.1
SPX	San Pedro Mart	1.36	297		Pn	17 37 35.3	-3.1
SPIG	San Pedro Mart	1.36	297	⇓eP	Pn	17 37 35.3	-3.2
SPIG	San Pedro Mart	1.36	297	eP	Pn	17 37 35.4	-3.1
SPIG				i S	Sb	17 37 53.8	-2.6
SPIG	San Pedro Mart	1.36	297		Pn	17 37 35.4	-3.1
SPIG					Sb	17 37 53.8	-2.6
SQX	San Quintin	1.58	276	eP	Pn	17 37 38.5	-2.6
SQX				IAML		17 38 11.2	
	comp=E,12µm,0.5s						
SQX				⇓e		17 38 11.2	
VTX	Valle De La Tr	1.77	303	eP	Pn	17 37 41.7	-2.1
214A	Organ Pipe Nat	1.86	35	eP	Pn	17 37 42.4	-2.7
214A	Organ Pipe Nat	1.86	35		Pn	17 37 42.3	-2.7
214A	Organ Pipe Nat	1.86	35	P	Pn	17 37 42.0	-3.1
	baz=214,SNR=233						
214A				S	Sn	17 38 08.8	+0.1
	baz=214						
SVX	San Vicente	2.09	296	eP	Pn	17 37 46.7	-1.5
MBIG	Mexicali	2.20	334	eP	Pn	17 37 49.5	-0.2
MBIG	Mexicali	2.20	334		Pn	17 37 49.5	-0.2
GLA	Glamis	2.70	346		Pn	17 37 54.4	-2.2
GLA	Glamis	2.70	346	P	Pn	17 37 54.8	-1.8
	baz=165,SNR=39						
IKP	In-Ko-Pah, Jac	2.83	322	P	Pn	17 37 56.6	-1.8
	baz=140						
IKP				Sb	Sg	17 38 41.3	-2.6
	baz=140						
CBX	Cerro Bola	2.92	311	eP	Pn	17 37 58.5	-1.2
CBX				IAML		17 38 56.9	
	comp=N,5µm,0.7s						
CBX				IAML		17 39 11.2	
	comp=E,4µm,1.0s						
CBX				⇑e		17 39 11.2	
CBX	Cerro Bola	2.92	311	eP	Pn	17 37 57.9	-1.8
CBX				i S	Sn	17 38 32.0	-2.9
CBX	Cerro Bola	2.92	311		Pn	17 37 57.9	-1.8
CBX					Pg	17 38 08.2	-0.8
SWSC	Sam W. Stewart	2.92	330	P	Pn	17 37 57.8	-1.8
	baz=148						
TJIG	Tijuana	3.00	312	i P	Pn	17 37 53.3	-7.4
TJIG	Tijuana	3.00	312		Pn	17 37 53.3	-7.4
HSIG		3.04	117	eP	Pn	17 37 58.6	-2.7
HSIG		3.04	117	eP	Pn	17 37 58.1	-3.3
HSIG				i S	Sn	17 38 33.3	-4.6
HSIG		3.04	117		Pn	17 37 58.6	-2.7
HSIG		3.04	117		Pn	17 37 58.1	-3.3
HSIG					Pg	17 38 17.2	+5.7
BAR	Barrett	3.17	316	eP	Pn	17 38 01.4	-1.6
BAR	Barrett	3.17	316		Pn	17 38 01.1	-2.0
MONP2	Monument Peak	3.18	321	P	Pn	17 38 01.6	-1.8
	baz=140,SNR=20						
MONP2				Sb	Sb	17 38 51.7	+3.0
	baz=140						
Y12C	Blythe	3.34	353		Pn	17 38 04.0	-1.4
Y12C	Blythe	3.34	353	P	Pn	17 38 03.7	-1.6
	baz=172,SNR=7.2						
TUC	Tucson	3.37	55	eP	Pn	17 38 03.1	-2.8
TUC				eP	Pn	17 38 03.7	-2.1
TUC				i S	Sg	17 39 00.5	-0.9
TUC	Tucson	3.37	55		Pn	17 38 03.8	-2.1
TUC	Tucson	3.37	55	P	Pn	17 38 03.1	-2.8
	baz=236						
TUC				Sg	Sg	17 39 00.4	-0.9
	baz=236						
BC3	Big Chuckawall	3.43	340	P	Pn	17 38 04.7	-2.0
	baz=159,SNR=27						
SRIG	Santa Rosalia	3.48	152	Pn	Pn	17 38 05.3	-2.0
109C	Camp Elliot, M	3.58	314		Pn	17 38 06.7	-1.9
109C	Camp Elliot, M	3.58	314	P	Pn	17 38 06.7	-1.9
	baz=132,SNR=7.6						
109C				S	Sn	17 38 51.1	+0.2
	baz=132						
Y14A	Wickenburg	3.61	14		Pn	17 38 07.6	-1.6
GUYB	Guaymas	3.75	131	eP	Pn	17 38 08.5	-2.6
GUYB	Guaymas	3.75	131	eP	Pn	17 38 08.9	-2.2
XPFO	Pion Flat	3.77	328		Pn	17 38 09.8	-1.6
PFO	Pinyon Flats O	3.77	328	Pn	Pn	17 38 10.1	-1.4
	comp=E,2.7nm,0.3s,baz=152,slow=12,SNR=19						
PFO				Pg	Pg	17 38 23.3	-2.1
	comp=E,1.8nm,0.3s,baz=126,slow=14,SNR=9.7						
PFO				Lg	Lg	17 39 13.6	
	comp=E,31nm,0.3s,baz=114,slow=2.3,SNR=8.1						
PFO				LR	LR	17 39 44.4	
	comp=E,12µm,20.1s,baz=174,slow=40						
PFO	Pinyon Flats O	3.77	328	Pn	Pn	17 38 09.7	-1.8
PFO	Pinyon Flats O	3.77	328	P	Pn	17 38 09.5	-1.9
	baz=146,SNR=13						
IRM	Iron Mountain	3.83	346	P	Pn	17 38 10.6	-1.6
	baz=165,SNR=26						
PDMCI	Parker Dam,Lak	3.87	359	P	Pn	17 38 11.2	-1.4
	baz=178						
BELC	Belle Mtn. Jos	3.92	336	P	Pn	17 38 12.0	-1.6
	baz=154						
MURC	Murrieta	4.14	321	Pb	Pb	17 38 24.8	-1.3
	baz=139						
MURC				Sb	Sb	17 39 20.7	+4.6
	baz=139						
319A	Douglas	4.21	76		Pn	17 38 15.8	-1.7
NEE2	Needles Airpor	4.35	354	P	Pn	17 38 17.9	-1.4
	baz=173						
GMRC	Granite Mounta	4.55	343	P	Pn	17 38 20.6	-1.6
	baz=162						
X16A	Lo Mia Camp, P	4.55	28	Pn	Pn	17 38 21.8	-0.5
SCI2	San Clemente I	4.59	305	P	Pn	17 38 21.2	-1.4
	baz=122						
W13A	Hualapai Mount	4.66	2	Pn	Pn	17 38 22.5	-1.2
CIS	Catalina Islan	4.75	310	Sg	Sg	17 39 48.9	+3.3
	baz=127						
HEC	Hector,Ludlow	4.79	337	P	Pn	17 38 24.3	-1.1
	baz=155						
FMP	Fort Macarthur	4.86	313	Sb	Sb	17 39 40.3	+3.4
	baz=131						
BFSC	Mount Baldy Ra	4.87	322	Pg	Pg	17 38 44.0	-2.4
	baz=140						
MWC	Mount Wilson	5.08	319		Pn	17 38 33.8	+4.3
PASC	Pasadena Art C	5.11	318	Pn	Pn	17 38 29.3	-0.5
DECC	Green Verdugo	5.26	318	Pg	Pg	17 38 52.1	-1.7
	baz=135						
DECC				Sb	Sb	17 39 55.0	+6.6
	baz=135						
X18A	Snowflake	5.36	39		Pn	17 38 32.7	-0.7
GSC	Goldstone, Bar	5.38	335		Pn	17 38 33.5	-0.1
GSC	Goldstone, Bar	5.38	335	P	Pn	17 38 32.4	-1.1
	baz=153						
SNCC	San Nicolas Is	5.44	303	Pn	Pn	17 38 34.6	+0.4
EDW2	Edwards Air Fo	5.54	324	Pg	Pg	17 38 57.6	-1.7
	baz=142						
WUAZ	Wupatki	5.55	23		Pn	17 38 36.1	+0.2
WUAZ	Wupatki	5.55	23	P	Pn	17 38 35.4	-0.5
	baz=204						
OSI	Osito Audit: C	5.74	318	Pn	Pn	17 38 38.8	+0.3
121A	Cookes Peak, D	5.75	67	i P	Pn	17 38 38.0	-0.7
121A	Cookes Peak, D	5.75	67		Pn	17 38 37.3	-1.4
121A	Cookes Peak, D	5.75	67	P	Pn	17 38 37.1	-1.7
	baz=250						
LRMC	Laurel Mtn Rad	5.89	330	P	Pn	17 38 41.0	+0.5
	baz=148						
W18A	Petrified Fore	5.93	37		Pn	17 38 41.3	+0.2
W18A	Petrified Fore	5.93	37	P	Pn	17 38 40.8	-0.3
	baz=219						
SHPR	Sheep Range	6.13	352		Pn	17 38 44.3	+0.4
U15A	North Rim	6.16	13		Pn	17 38 45.1	+0.7
MPMC	Manual Prospec	6.31	334	P	Pn	17 38 45.4	-1.0
	baz=152						
ISA	Isabella, Lake	6.40	326		Pn	17 38 48.1	+0.6
ISA	Isabella, Lake	6.40	326	P	Pn	17 38 47.8	+0.3
	baz=143						
PKM	Mcpherson Peak	6.58	314	P	Pn	17 38 48.8	-1.3
	baz=131						
LCMT	Little Creek M	6.60	6		Pn	17 38 50.3	0.0
KNB	Kanab	6.65	9		Pn	17 38 52.3	+1.3
TPNV	Topopah Spring	6.76	345		Pn	17 38 53.0	+0.6
TPNV	Topopah Spring	6.76	345	P	Pn	17 38 52.6	+0.1
	baz=163						
CWC	Cottonwood Cre	6.87	332	P	Pn	17 38 54.6	+0.5
	baz=149						
Y22D	IRIS PASSCAL I	7.05	57	Pn	Pn	17 38 55.8	-0.7
LPIG	La Paz	7.13	151	Pn	Pn	17 38 58.4	+1.0
	comp=E,5.2nm,0.3s,baz=122,slow=5.0,SNR=5.7						
LPIG				Lg	Lg	17 40 54.4	
	comp=E,2.9nm,0.3s,baz=344,slow=7.2,SNR=1.1						
LPIG				LR	LR	17 41 34.8	
	comp=E,6µm,20.7s,baz=334,slow=37						
CCUT	Cedar City	7.13	4		Pn	17 38 58.8	+1.1
PKCU	Pink Cliffs	7.15	11		Pn	17 38 59.6	+1.6
SZCU	Shurtz Canyon	7.20	6		Pn	17 38 59.7	+1.1
PAGB	Antelope Grade	7.41	317	Pn	Pn	17 39 03.9	+2.5
MNTX	Cornudas Mount	7.55	78		Pn	17 39 02.8	-0.4
MNTX	Cornudas Mount	7.55	78	P	Pn	17 39 00.6	-2.6
	baz=262						
MTPU	Mount Pierson	7.75	11		Pn	17 39 08.1	+1.7
ANMO	Albuquerque	7.83	53	Pn	Pn	17 39 06.2	-1.1
	comp=E,0.8nm,0.3s,baz=228,slow=12,SNR=15						
ANMO				Lg	Lg	17 41 16.1	
	comp=E,0.9nm,0.3s,baz=284,slow=17,SNR=3.4						
ANMO	Albuquerque	7.83	53		Pn	17 39 06.6	-0.6
ANMO	Albuquerque	7.83	53	P	Pn	17 39 05.7	-1.6
	baz=237						
R11A	Troy Canyon, C	8.00	351		Pn	17 39 11.2	+1.6
R11A	Troy Canyon, C	8.00	351	P	Pn	17 39 09.9	+0.3
	baz=170						
PMPB	Monarch Peak	8.07	317	Pn	Pn	17 39 11.0	+0.5
PSUT	Pine Spring	8.09	1		Pn	17 39 12.1	+1.3
HPIG		8.15	113	eP	Pn	17 39 08.8	-2.9
HPIG		8.15	113		Pn	17 39 09.3	-2.3
HPIG		8.15	113		Pn	17 39 08.8	-2.9
MVCO	Mesa Verde	8.19	33		Pn	17 39 13.3	+1.1
MVCO	Mesa Verde	8.19	33	P	Pn	17 39 12.0	-0.3
	baz=216						
MSU	Marysvale	8.21	10		Pn	17 39 15.1	+2.5
OMMB	Old Mammoth Mi	8.26	332	Pn	Pn	17 39 16.1	+2.9
TCRU	Three Creeks R	8.27	9	Pn	Pn	17 39 14.7	+1.4
MDPB	Devils Postpil	8.31	331		Pn	17 39 14.7	+0.8
PV05	Paradox Valley	8.66	27		Pn	17 39 21.2	+2.5
NV11	Mina Array Sit	8.67	338		Pn	17 39 19.4	+0.7
NVAR	Mina Array Bea	8.72	337	Pn	Pn	17 39 21.7	+2.3
	comp=E,0.6nm,0.3s,baz=162,slow=13,SNR=40						
NVAR				Lg	Lg	17 41 50.0	
	baz=140,slow=45,SNR=1.6						
NVAR				LR	LR	17 42 52.7	
	comp=E,3µm,19.2s,baz=150,slow=39						
NVAR	Mina Array Bea	8.72	337		Pn	17 39 20.1	+0.7
Q16A	Castle Valley	8.80	15		Pn	17 39 22.2	+1.7
PV13	Radium Mtn., P	8.84	28		Pn	17 39 22.1	+0.9
PV18	Skein Mesa, Pa	8.88	27	Pn	Pn	17 39 21.6	-0.1
PV17	East Wray Mesa	8.89	27		Pn	17 39 22.0	+0.2
PV19	Morning Glory	8.91	27		Pn	17 39 23.6	+1.5
PV03	Paradox Valley	8.91	27		Pn	17 39 22.4	+0.2
PV02	Paradox Valley	8.92	28		Pn	17 39 23.6	+1.4
PV01	Paradox Valley	8.93	29	Pn	Pn	17 39 24.1	+1.8
PV16	Nyswonger Mesa	8.94	27		Pn	17 39 23.5	+1.1
PV11	David Mesa, Pa	8.94	27		Pn	17 39 23.7	+1.2
PV20	West Nyswonger	8.94	27		Pn	17 39 23.2	+0.7
PV10	Paradox Valley	8.95	26	Pn	Pn	17 39 21.3	-1.3
PV14	Lion Creek, Pa	8.95	26		Pn	17 39 23.1	+0.4
RYN	Ryan	8.97	337		Pn	17 39 24.6	+1.8
PV12	Saucer Basin,	8.99	27		Pn	17 39 24.6	+1.4
PV04	Paradox Valley	9.01	27		Pn	17 39 25.1	+1.6
PV09	Paradox Valley	9.02	25		Pn	17 39 25.1	+1.4
PV23	Carpenter Ridg	9.02	26		Pn	17 39 25.4	+1.8
TX31	Lajitas Ar. Si	9.09	94		Pn	17 39 25.0	+0.6
TX32	Lajitas Array	9.09	94		Pn	17 39 25.1	+0.6
TXAR	Lajitas Array	9.09	94	Pn	Pn	17 39 24.2	-0.2
	comp=E,0.6nm,0.3s,baz=265,slow=14,SNR=24						
TXAR				Lg	Lg	17 41 56.3	
	comp=E,0.9nm,0.3s,baz=262,slow=27,SNR=4.5						
TXAR				LR	LR	17 43 15.1	
	comp=E,5µm,18.3s,baz=0.0,slow=40						
TXAR	Lajitas Array	9.09	94		Pn	17 39 24.6	+0.2
SRU	San Rafael Swe	9.14	18		Pn	17 39 27.2	+2.0
PV15	Paradox Valley	9.14	29	Pn	Pn	17 39 26.8	+1.5
TMUT	Trail Mountain	9.15	14		Pn	17 39 27.6	+2.2
PV07	Paradox Valley	9.15	28		Pn	17 39 27.4	+1.9
PV22	Blue Mesa, Par	9.18	27		Pn	17 39 27.7	+1.9
WAKR	Walker	9.20	333		Pn	17 39 27.8	+1.8
CMB	Columbia Colle	9.22	327		Pn	17 39 26.8	+0.6
KVN	Kaiserville	9.22	340		Pn	17 39 28.2	+1.9
P17A	Butcher Ranch,	9.43	16	Pn	Pn	17 39 29.4	+0.3
S22A	4UR Ranch, Cre	9.44	37		Pn	17 39 30.6	+1.1
S22A	4UR Ranch, Cre	9.44	37	P	Pn	17 39 29.4	-0.1
	baz=221						
YERR	Yerington	9.54	335		Pn	17 39 31.6	+0.9
NLU	North Lily Min	9.64	9	Pn	Pn	17 39 33.6	+1.4
PNTR	Pine Nut	9.77	334		Pn	17 39 34.3	+0.4
MPU	Maple Canyon	9.77	11	Pn	Pn	17 39 35.5	+1.6
DUG	Dugway, Tooele	9.80	6		Pn	17 39 35.6	+1.4
RUBR	Rubicon Trail	9.96	331		Pn	17 39 36.5	+0.1
VCNR	Virginia City	9.97	334	Pn	Pn	17 39 35.7	-0.9
SDCO	Great Sand Dun	10.17	42		Pn	17 39 41.0	+1.5
SDCO	Great Sand Dun	10.17	42	P	Pn	17 39 39.0	-0.5
	baz=226						
MSTX	Muleshoe	10.19	67		Pn	17 39 41.0	+1.4
AFDM	Forest Hills D	10.23	328	Pn	Pn	17 39 39.8	-0.2
PAHR	Pah Rah Range	10.23	336		Pn	17 39 40.0	-0.1
ELK	Elko	10.34	355	Pn	Pn	17 39 43.7	+2.0
	comp=E,0.2nm,0.3s,baz=181,slow=13,SNR=11						
ELK				Lg	Lg	17 42 40.3	
	comp=E,0.1nm,0.3s,baz=327,slow=16,SNR=2.4						
ELK				LR	LR	17 43 55.5	
	comp=E,2µm,18.4s,baz=175,slow=39						
ELK	Elko	10.34	355		Pn	17 39 42.6	+0.9
JLU	Jordanelle	10.37	11	Pn	Pn	17 39 42.7	+0.5
CTU	Camp Tracy	10.41	10	Pn	Pn	17 39 43.1	+0.5
T25A	Trinidad	10.45	48		Pn	17 39 43.5	+0.4
T25A	Trinidad	10.45	48	P	Pn	17 39 48.2	+5.0
	baz=233						
BGU	Big Grassy Mou	10.51	4		Pn	17 39 45.7	+1.8
RDMU	Red Mountain	10.76	19	Pn	Pn	17 39 49.4	+2.0
O20A	White River Ci	10.79	25		Pn	17 39 49.7	+2.0
O20A	White River Ci	10.79	25	P	Pn	17 39 48.0	+0.3
	baz=208						
TCUT	Toone Canyon	10.88	11	Pn	Pn	17 39 51.8	+2.6
ORV	Oroville	10.96	328	Pn	Pn	17 39 53.8	+3.9
HOPS	Hopland Field	11.31	321	Pn	Pn	17 39 56.7	+2.0
AMTX	Amarillo	11.34	64	Pn	Pn	17 39 55.7	+0.5
HWUT	Hardware Ranch	11.34	10		Pn	17 39 58.4	+3.1
HVU	Hansel Valley	11.38	5		Pn	17 39 57.5	+1.7
ISCO	Idaho Springs	11.62	34	Pn	Pn	17 40 01.8	+2.5
JCT	Junction City	12.30	86	Pn	Pn	17 40 08.4	+0.1
N23A	Red Feather La	12.35	30	Pn	Pn	17 40 10.4	+1.2
ABTX	Abilene, Hawle	12.49	76	Pn	Pn	17 40 09.8	-1.2
MOD	Modoc Plateau	12.51	338		Pn	17 40 14.6	+3.3
RWWY	Rawlins	12.52	24	Pn	Pn	17 40 13.1	+1.5
WVOR	Wild Horse Val	12.53	344		Pn	17 40 15.8	+4.2
AHID	Auburn Hatcher	12.54	10	Pn	Pn	17 40 14.9	+3.2
KSCO	Kaye Shedlock’	12.71	45	P	Pn	17 40 09.7	-4.3
	baz=231						
ZAIG	Zacatecas	12.79	124	Pn	Pn	17 40 16.9	+1.5
BW06	Boulder Array	12.83	15		Pn	17 40 17.0	+1.2
PD31	Pinedale Array	12.83	15		Pn	17 40 15.6	-0.1
PDAR	Pinedale Array	12.83	15	Pn	Pn	17 40 19.2	+3.5
	comp=E,0.1nm,0.3s,baz=205,slow=12,SNR=9.3						
PDAR				LR	LR	17 45 36.4	
	comp=E,1µm,20.2s,baz=206,slow=39						
PDAR	Pinedale Array	12.83	15		Pn	17 40 17.1	+1.4
PHWY	Pilot Hill	12.89	30	Pn	Pn	17 40 16.5	-0.2
833A	Chaparral WMA,	12.96	96	Pn	Pn	17 40 19.1	+1.7

MFID	Camas Ranch	13.04	354		Pn	17 40 20.5	+2.0
KHMM	Horse Mountain	13.05	326	Pn	Pn	17 40 19.2	+0.5
M02C	Callahan	13.05	329	P	Pn	17 40 19.7	+1.1
	baz=144						
REDW	Red Top Meadow	13.16	10		Pn	17 40 21.6	+1.3
YBH	Yreka Blue Hor	13.27	331	Pn	Pn	17 40 25.0	+3.4
	comp=E,0.1nm,0.3s,baz=139,slow=9.1,SNR=5.3						
YBH				LR	LR	17 45 54.2	
	comp=E,518nm,18.3s,baz=152,slow=39						
YBH	Yreka Blue Hor	13.27	331	Pn	Pn	17 40 25.6	+4.1
TPAW	Teton Pass	13.27	10		Pn	17 40 22.4	+0.6
SNOW	Snow King Moun	13.27	11	Pn	Pn	17 40 20.7	-1.2
J08A	Circle Bar Ran	13.38	346		Pn	17 40 20.9	-2.2
FXWY	Fox Creek	13.40	10		Pn	17 40 24.4	+0.8
L04D	Klamath Falls	13.51	333	P	Pn	17 40 24.6	-0.3
	baz=148						
WMOK	Wichita Mounta	13.58	68		Pn	17 40 26.2	+0.4
K22A	Casper	13.61	24		Pn	17 40 28.1	+1.8
IMW	Indian Meadow	13.67	10		Pn	17 40 28.7	+1.4
FLWY	Flagg Ranch	13.89	10		Pn	17 40 34.5	+4.3
U32A	Winter Ranch,	13.90	61	Pn	Pn	17 40 31.2	+1.0
J05D	Fort Rock, OR	14.05	338	P	Pn	17 40 32.5	+0.1
	baz=154						
YPP	Pitchstone Pla	14.06	10		P	17 40 37.2	-3.3
HUMO	Hull Mountain	14.09	332	Pn	P	17 40 37.0	-3.6
435B	Jarrell	14.19	84		Pn	17 40 37.4	+3.1
H17A	Grant Village	14.21	10		Pn	17 40 38.6	+4.0
735A	Kenedy	14.22	92		P	17 40 38.8	-3.2
WHTX	Lake Whitney,	14.29	79		Pn	17 40 38.0	+2.4
I07A	Izee	14.30	344		P	17 40 39.8	-3.1
X34A	Smith Ranch, M	14.31	69		Pn	17 40 35.4	-0.4
LKWY	Lake	14.41	11		Pn	17 40 41.1	+3.8
MCMT	McKenzie Canyo	14.41	3		P	17 40 41.6	-2.7
PINE	Pine Mountain	14.42	340		Pn	17 40 40.4	+3.0
YMR	Madison River	14.43	9		Pn	17 40 40.9	+3.3
CBKS	Cedar Bluff	14.44	51	Pn	Pn	17 40 37.4	-0.2
YHB	Horse Butte	14.48	8		Pn	17 40 41.4	+3.2
YNR	Norris Junctio	14.51	10		Pn	17 40 42.2	+3.5
QLMT	Earthquake Lak	14.53	7		P	17 40 42.7	-2.9
YUF	Upper Falls	14.53	10	Pn	P	17 40 42.9	-2.8
YHH	Holmes Hill	14.56	9		Pn	17 40 41.8	+2.4
Z35A	Perchaven, San	14.57	74		Pn	17 40 38.4	-0.9
YHL	Hebgen Lake	14.58	8		Pn	17 40 41.1	+1.4
YMP	Mirror Lake Pl	14.62	11		Pn	17 40 41.8	+1.6
BMO	Blue Mountains	14.63	351		Pn	17 40 43.3	+3.1
FNO	Franklin	14.80	67	Pn	Pn	17 40 43.5	+1.0
YNE	Yellowstone No	14.90	11		Pn	17 40 45.4	+1.3
R32A	Long Quarter,	14.95	54		P	17 40 48.4	-1.7
DLMT	Dillon	14.96	4		Pn	17 40 47.5	+2.9
RLMT	Red Lodge	15.15	13	P	Pn	17 40 49.6	+2.3
W35A	Tecumseh	15.20	67	P	Pn	17 40 49.8	+2.0
G08A	Pilot Rock	15.33	347	P	Pn	17 40 51.9	+2.3
H04A	Detroit Lake	15.61	338	P	P	17 40 55.6	-1.8
H04A				IAmb	IAmb	17 41 08.2	
	comp=Z,91nm,1.3s						
G06A	Carlson Farm,	15.66	343	P	Pn	17 40 55.3	+1.4
237A	Washetta, Mont	15.70	80	P	P	17 40 57.6	-0.8
237A				IAmb	IAmb	17 41 12.9	
	comp=Z,64nm,1.4s						
F10A	Beach Ranch, E	15.72	352	P	Pn	17 40 55.8	+1.2
GCMT	Greycliff	15.72	11	P	Pn	17 40 55.9	+1.2
HKT	Hockley	15.77	87	P	Pn	17 40 56.3	+1.1
HKT				IAmb	IAmb	17 41 21.2	
	comp=Z,84nm,1.9s						
RSSD	Black Hills	15.81	27	P	Pn	17 40 56.1	+0.2
COR	Corvallis	15.91	335	P	Pn	17 40 57.8	+0.9
COR				IAmb	IAmb	17 41 30.3	
	comp=Z,134nm,1.8s						
T35A	Sooner Cattle	15.97	61	P	Pn	17 41 00.0	+2.2
F07A	Phinny Hill Vi	16.11	345	P	P	17 41 02.6	-0.3
F07A				IAmb	IAmb	17 41 15.7	
	comp=Z,115nm,1.7s						
TUL1	Leonard	16.23	66	P	Pn	17 41 03.2	+2.0
X37A	Clayton	16.30	70	P	Pn	17 41 03.5	+1.4
E09A	Wood Farm, Sta	16.37	350	P	P	17 41 05.5	-0.3
MSO	Missoula	16.38	0	P	P	17 41 05.3	-0.7
MSO	Missoula	16.38	0	P	Pn	17 41 04.0	+0.9
	baz=180						
Z38A	Mt. Pleasant	16.45	75	P	Pn	17 41 05.6	+1.6
Z38A				IAmb	IAmb	17 41 25.0	
	comp=Z,88nm,1.2s						
HAWA	Hanford	16.50	347	P	Pn	17 41 05.7	+1.1
E08A	Dider Farm, El	16.50	348	P	Pn	17 41 05.7	+1.1
NATX	Nacogdoches	16.67	80	P	P	17 41 11.0	+1.8
NATX				IAmb	IAmb	17 41 26.5	
	comp=Z,61nm,1.1s						
E07A	Sunnyside	16.73	346	P	P	17 41 09.0	-0.7
F04A	Amboy	16.80	339	P	P	17 41 09.9	-0.6
D08A	Wollman Farm,	17.03	349	P	P	17 41 13.6	+0.5
F03A	Seaside	17.16	337	P	P	17 41 17.5	+2.9
F03A				IAmb	IAmb	17 41 22.9	
	comp=Z,75nm,0.8s						
K31A	O'Neill	17.27	41	P	P	17 41 17.0	+1.2
LAO	LASA Array	17.34	18	P	Pn	17 41 15.0	-0.2
LAO	LASA Array	17.34	18	P	Pn	17 41 13.4	-1.8
	baz=203						
E04D	Cinebar	17.41	340	P	Pn	17 41 13.8	-2.2
	baz=155						
U38A	Gravette	17.47	65	P	Pn	17 41 15.1	-1.7
LTY	Liberty	17.57	345	P	P	17 41 19.0	-0.1
C09A	Chrisman Ranch	17.65	351	P	Pn	17 41 19.4	+0.4
E03A	Lebam	17.71	338	P	P	17 41 22.2	+1.6
E03A				IAmb	IAmb	17 41 29.4	
	comp=Z,65nm,0.9s						
MIAR	Mount Ida	17.75	71	P	Pn	17 41 18.9	-1.5
HHAR	Hobbs	17.78	66	P	Pn	17 41 17.4	-3.3
EGMT	Eagleton	17.88	9	P	Pn	17 41 21.8	-0.1
	baz=192						
NEW	Newport	17.97	353	P	P	17 41 24.6	+1.1
	comp=Z,0.3nm,0.3s,baz=178,slow=12,SNR=12						
NEW				LR	LR	17 48 37.7	
	comp=Z,1µm,19.0s,baz=179,slow=38						
NEW	Newport	17.97	353	P	Pn	17 41 20.6	-2.3
	baz=171						
441A	DeRidder	17.97	84	P	P	17 41 24.4	+0.7
WLAR	White Oak Lake	18.05	74	P	Pn	17 41 23.3	-0.7
Z41A	Richland Creek	18.27	76	P	P	17 41 28.7	+1.7
Z41A				IAmb	IAmb	17 41 45.6	
	comp=Z,53nm,0.8s						
SUSD	Miller	18.38	36		P	17 41 25.9	-2.2
D03D	Eldon	18.45	340	P	Pn	17 41 29.2	+0.4
	baz=155						
WALA	Waterton Lakes	18.61	0	P	Pn	17 41 32.6	+1.7
WALA				IAmb	IAmb	17 41 46.9	
	comp=Z,72nm,1.5s						
S39A	Bolivar	18.62	62	P	P	17 41 30.3	-0.5
342A	Flagon Creek P	18.67	82	P	P	17 41 30.2	-1.1
UALR	University of	18.79	71	P	Pn	17 41 34.0	+0.9
W41B	Gary Mavity, V	18.93	70	P	P	17 41 32.6	-1.5
W41B				IAmb	IAmb	17 42 07.5	
	comp=Z,80nm,2.0s						
W41B	Gary Mavity, V	18.93	70	P	P	17 41 31.8	-2.3
	baz=262						
TLIG	Tlapa	19.06	129	P	Pn	17 41 38.3	+1.7
ECSD	EROS Data Cent	19.18	41	P	P	17 41 36.9	0.0
	baz=232						
MGMO	Mountain Grove	19.29	64	P	P	17 41 36.8	-1.3
143A	Socs Landing,	19.43	77	P	P	17 41 40.3	+0.7
143A				IAmb	IAmb	17 42 13.2	
	comp=Z,58nm,1.0s						
DGMT	Dagmar	19.53	20	P	P	17 41 41.0	+0.3
	baz=206						
PGC	Sidney	19.56	341	P	Pn	17 41 42.0	-0.2
PGC				IAmb	IAmb	17 41 56.7	
	comp=Z,45nm,1.3s						
R40A	Maddies Statio	19.59	61	P	P	17 41 42.3	+0.9
LCAR	Lake Charles	19.95	68	P	P	17 41 45.1	-0.1
344A	Westbrook Farm	20.03	81	P	P	17 41 47.0	+0.8
T42A	Van Buren	20.18	65	P	P	17 41 48.1	+0.3
CCM	Cathedral Cave	20.30	62	P	P	17 41 49.3	+0.1
MDND	Maddock	20.64	28	P	P	17 41 53.3	+0.7
MDND				IAmb	IAmb	17 42 12.4	
	comp=Z,54nm,1.0s						
Y45A	Yeager Farm, C	21.02	74	P	P	17 41 56.9	0.0
346A	Big Creek Wild	21.11	81	P	P	17 41 58.3	+0.3
I37A	Lemond, Waseca	21.24	45	P	P	17 42 00.2	+0.9
HALT	Halls	21.38	69	P	P	17 42 01.2	+0.4
W45A	Hickory Valley	21.41	71	P	P	17 42 02.9	+1.8
W45A				IAmb	IAmb	17 42 18.1	
	comp=Z,18nm,0.6s						
L40A	Anamosa	21.70	51	P	P	17 42 04.0	-0.2
L40A				IAmb	IAmb	17 42 06.2	
	comp=Z,25nm,0.9s						
S44A	Carbondale	21.75	64	P	P	17 42 02.4	-2.4
CMIG	Matias Romero	21.96	123	P	P	17 42 07.8	+0.7
	comp=Z,12nm,0.8s,baz=315,slow=9.6,SNR=11						
CMIG				LR	LR	17 50 49.0	
	comp=Z,2µm,20.1s,baz=290,slow=37						
P43A	Skaggs, Pawnee	22.04	59	P	P	17 42 08.5	+0.7
P43A				IAmb	IAmb	17 42 12.1	
	comp=Z,50nm,1.4s						
Q44A	Meyer Farm, Va	22.21	61	P	P	17 42 08.6	-1.1
Q44A				IAmb	IAmb	17 42 11.8	
	comp=Z,78nm,1.8s						
Z47A	Carrollton	22.24	76	P	P	17 42 10.0	0.0
WVT	Waverly	22.62	68	P	P	17 42 15.4	+1.3
WVT				IAmb	IAmb	17 42 41.8	
	comp=Z,39nm,1.4s						
AGMN	Agassiz Nation	22.62	33	P	P	17 42 13.4	-0.6
L42A	Oliver, Polo	22.74	53	P	P	17 42 14.3	-1.0
L42A				IAmb	IAmb	17 42 36.1	
	comp=Z,42nm,1.4s						
OLIL	Olney	22.87	62	P	P	17 42 15.2	-1.4
O44A	Mansfield	22.96	58	P	P	17 42 16.8	-0.8
O44A				IAmb	IAmb	17 42 55.0	
	comp=Z,46nm,1.4s						
X48A	Hartselle	23.12	73	P	P	17 42 18.8	-0.5
X48A				IAmb	IAmb	17 42 37.9	
	comp=Z,60nm,1.7s						
T47A	Sharon Grove	23.31	67	P	P	17 42 20.4	-0.8
V48A	Smith Brothers	23.39	70	P	P	17 42 20.3	-1.8
V48A				IAmb	IAmb	17 42 49.4	
	comp=Z,35nm,1.8s						
Y49A	Blount Mountai	23.63	74	P	P	17 42 24.1	-0.4
M44A	Midewin, Midew	23.65	55	P	P	17 42 24.8	+0.2
P46A	Rosedale	23.75	60	P	P	17 42 25.6	0.0
P46A				IAmb	IAmb	17 42 28.1	
	comp=Z,29nm,1.1s						
E38A	The Farm, Brul	23.77	41	P	P	17 42 25.4	-0.3
E38A				IAmb	IAmb	17 43 00.8	
	comp=Z,16nm,0.8s						
250A	Grady	23.80	79	P	P	17 42 26.3	+0.2
CLTN	Cedars of Leba	23.82	69	P	P	17 42 26.5	+0.3
CLTN				IAmb	IAmb	17 42 37.5	
	comp=Z,65nm,2.0s						
G40A	Rib Lake	23.85	45	P	P	17 42 26.6	+0.2
G40A				IAmb	IAmb	17 43 02.8	
	comp=Z,29nm,1.1s						
K43A	Burlington	23.92	52	P	P	17 42 27.5	+0.4
I42A	Draeger Farm,	24.01	49	P	P	17 42 28.0	0.0
L44A	Lake County Fo	24.02	54	P	P	17 42 28.8	+0.8
SFIN	Lafayette	24.03	58	P	P	17 42 28.3	0.0
Z50A	Ashland	24.04	76	P	P	17 42 28.2	-0.2
Z50A				IAmb	IAmb	17 42 47.6	
	comp=Z,21nm,1.3s						
ULM	Lac du Bonnet	24.05	29	P	P	17 42 28.0	-0.3
	comp=Z,7.4nm,1.1s,baz=226,slow=10,SNR=15						
ULM				Lg	Lg	17 49 58.2	
	comp=Z,0.8nm,0.5s,baz=174,slow=0.7,SNR=3.4						
SWET	Sewanee	24.07	71	P	P	17 42 29.0	+0.2
SWET				IAmb	IAmb	17 42 48.2	
	comp=Z,16nm,1.1s						
BBB	Bella Bella	24.08	339	P	P	17 42 29.7	+1.2
	comp=Z,5.2nm,0.7s,baz=312,slow=2.5,SNR=3.0						
BBB				LR	LR	17 52 06.5	
	comp=Z,1µm,21.6s,baz=163,slow=37						
BBB	Bella Bella	24.08	339	P	P	17 42 28.7	+0.2
WCI	Wyandotte Cave	24.15	64	P	P	17 42 28.7	-0.7
BLO	Bloomington	24.16	61	P	P	17 42 28.6	-0.9
BLO				IAmb	IAmb	17 42 32.8	
	comp=Z,20nm,0.8s						
FPAL	Fort Paine	24.31	73	P	P	17 42 29.5	-1.4
FPAL				IAmb	IAmb	17 43 07.4	
	comp=Z,20nm,1.3s						
U49A	Red Boiling Sp	24.31	68	P	P	17 42 30.4	-0.4
U49A				IAmb	IAmb	17 42 50.7	
	comp=Z,21nm,1.4s						
T49A	Edmonton	24.57	67	P	P	17 42 33.0	-0.2
T49A				IAmb	IAmb	17 43 05.2	
	comp=Z,25nm,1.4s						
W50A	Signal Mountai	24.58	71	P	P	17 42 33.6	+0.2
W50A				IAmb	IAmb	17 42 53.9	
	comp=Z,20nm,1.1s						
EYMN	Ely	24.59	38	P	P	17 42 33.4	0.0
Z51A	Franklin	24.66	76	P	P	17 42 34.1	0.0
Z51A				IAmb	IAmb	17 42 56.5	
	comp=Z,32nm,1.6s						
X51A	Calhoun	24.93	73	P	P	17 42 36.9	+0.4
352A	Blakely	24.97	80	P	P	17 42 37.7	+0.8
H43A	Windswept, Lux	25.00	49	P	P	17 42 37.3	+0.3
H43A				IAmb	IAmb	17 43 05.2	
	comp=Z,17nm,0.8s						
R49A	Shelbyville	25.03	64	P	P	17 42 37.9	+0.5
R49A				IAmb	IAmb	17 43 08.4	
	comp=Z,20nm,1.3s						
P48A	Milroy	25.06	61	P	P	17 42 38.1	+0.5
P48A				IAmb	IAmb	17 43 11.3	
	comp=Z,20nm,1.3s						
152A	Waverly Hall	25.07	77	P	P	17 42 37.5	-0.3
L46A	Eue Claire	25.09	55	P	P	17 42 38.8	+0.9
N47A	Urbana	25.20	58	P	P	17 42 39.0	+0.2
N47A				IAmb	IAmb	17 42 42.1	
	comp=Z,33nm,1.4s						
CPCT	Cooper Cave	25.24	71	P	P	17 42 40.3	+1.0
Y52A	Lilburn	25.58	74	P	P	17 42 41.6	-0.8
Y52A				IAmb	IAmb	17 42 44.7	
	comp=Z,40nm,1.9s						
R50A	Paris	25.68	64	P	P	17 42 42.2	-1.1
R50A				IAmb	IAmb	17 42 56.9	
	comp=Z,29nm,1.8s						
W52A	Murphy	25.71	72	P	P	17 42 42.6	-1.0
W52A				IAmb	IAmb	17 43 04.1	
	comp=Z,26nm,1.4s						
D41A	Chassel	25.74	43	P	P	17 42 43.7	+0.1
D41A				IAmb	IAmb	17 43 07.2	
	comp=Z,21nm,1.3s						
FFC	Flin Flon	25.79	16	P	P	17 42 44.5	+0.5
FFC				IAmb	IAmb	17 43 01.4	
	comp=Z,18nm,1.4s						
TKL	Tuckaleechee C	25.86	70	P	P	17 42 45.6	+0.7
	comp=Z,3.9nm,0.8s,baz=244,slow=9.1,SNR=5.3						
TKL				LR	LR	17 53 09.6	
	comp=Z,1µm,20.7s,baz=266,slow=37						
TKL	Tuckaleechee C	25.86	70	P	P	17 42 45.1	+0.2
V52A	Sevierville	26.01	70	P	P	17 42 45.5	-0.8
O49A	Covington	26.03	60	P	P	17 42 46.3	-0.1
O49A				IAmb	IAmb	17 42 50.4	
	comp=Z,14nm,1.1s						
GOGA	Godfrey	26.09	75	P	P	17 42 46.8	-0.3
GOGA				IAmb	IAmb	17 42 48.4	
	comp=Z,36nm,1.9s						
TZTN	Tazewell	26.10	68	P	P	17 42 46.9	-0.2
TZTN				IAmb	IAmb	17 43 26.2	
	comp=Z,13nm,1.1s						
TIGA	Tifton	26.12	80	P	P	17 42 46.6	-0.7
N49A	Columbus Grove	26.32	58	P	P	17 42 48.9	-0.1
E43A	Lone Tree Farm	26.34	45	P	P	17 42 49.1	-0.1
DIB	Dawson Inlet,	26.42	335	P	P	17 42 49.8	0.0
J47A	Sunmer	26.52	53	P	P	17 42 49.2	-1.6
J47A				IAmb	IAmb	17 42 56.4	
	comp=Z,30nm,1.3s						
BG3	Lake Jocassee	26.52	72	P	P	17 42 50.4	-0.6
BG3				IAmb	IAmb	17 43 12.8	
	comp=Z,20nm,1.5s						
APG	El Apazote	26.55	120	P	P	17 42 52.9	+1.3
	comp=Z,7.2nm,0.3s,baz=68,slow=19,SNR=1.4						
APG				LR	LR	17 53 59.9	
	comp=Z,1µm,18.9s,baz=299,slow=38						
Q51A	Peebles	26.56	63	P	P	17 42 51.6	+0.3
T52A	Hallie	26.60	67	P	P	17 42 48.9	-2.7
T52A				IAmb	IAmb	17 43 17.4	
	comp=Z,46nm,1.8s						
G45A	Suttons Bay	26.61	49	P	P	17 42 50.2	-1.4
G45A				IAmb	IAmb	17 43 25.9	
	comp=Z,19nm,0.8s						
V53A	Saluda	26.64	70	P	P	17 42 51.0	-1.0
V53A				IAmb	IAmb	17 43 24.4	
	comp=Z,16nm,1.2s						
P51A	Williamsport	26.86	62	P	P	17 42 54.1	+0.2
P51A				IAmb	IAmb	17 43 07.5	
	comp=Z,54nm,2.0s						
I47A	Gladwin	26.99	52	P	P	17 42 53.5	-1.6
255A	Hazlehurst	27.02	79	P	P	17 42 54.5	-0.8
ACSO	Alum Creek Sta	27.06	60	P	P	17 42 54.9	-0.8
E44A	Grand Marais A	27.11	45	P	P	17 42 56.7	+0.6
E44A				IAmb	IAmb	17 43 30.9	
	comp=Z,14nm,0.8s						
M50A	Fremont	27.27	58	P	P	17 42 58.1	+0.6
PAULI	Pauline	27.44	72	P	P	17 42 59.2	0.0
U54A	Nelsons Funny	27.49	69	P	P	17 42 59.9	+0.2
U54A				IAmb	IAmb	17 43 07.1	
	comp=Z,25nm,1.2s						
R53A	Hurricane	27.54	65	P	P	17 43 00.2	+0.1
KMSC	Kings Mountain	27.84	72	P	P	17 43 03.5	+0.8
KMSC				IAmb	IAmb	17 43 04.8	
	comp=Z,30nm,1.8s						
JSC	Jenkinsville	27.90	73	P	P	17 43 02.2	-1.1
M52A	Chesterland	28.53	58	P	P	17 43 09.2	+0.3
M52A				IAmb	IAmb	17 43 11.5	
	comp=Z,16nm,0.9s						
BIRD	Birdtown, Kers	28.55	73	P	P	17 43 08.7	-0.4
BIRD				IAmb	IAmb	17 43 16.0	
	comp=Z,14nm,1.2s						
BLA	Blacksburg	28.65	67	P	P	17 43 10.0	0.0
BLA				IAmb	IAmb	17 43 19.2	
	comp=Z,14nm,1.2s						
N53A	Lisbon	28.77	60	P	P	17 43 10.7	-0.3
R55A	Marlinton	28.97	65	P	P	17 43 12.8	-0.1
R55A				IAmb	IAmb	17 43 43.3	
	comp=Z,17nm,1.2s						
O54A	Avella	29.01	61	P	P	17 43 12.6	-0.6
MCWV	Mont Chateau	29.34	62	P	P	17 43 16.4	+0.4
MCWV				IAmb	IAmb	17 43 46.3	
	comp=Z,25nm,1.8s						
DLBC	Dease Lake	30.08	343	P	P	17 43 24.7	+2.3
	comp=Z,11nm,0.8s,baz=162,slow=6.7,SNR=21						
O56A	Blue Knob Stat	30.39	61	P	P	17 43 24.4	-1.0
SADO	Sadowa	30.89	53	P	P	17 43 30.2	+0.5
	comp=Z,2.3nm,0.5s,baz=270,slow=9.9,SNR=1.9						
SADO				LR	LR	17 57 52.8	
	comp=Z,563nm,19.2s,baz=260,slow=40						
SADO	Sadowa	30.89	53	P	P	17 43 30.0	+0.3
YKA	Yellowknife Ar	32.08	360	P	P	17 43 41.1	+1.1
	comp=Z,0.4nm,0.5s,baz=176,slow=9.1,SNR=14						
YKA				PcP	PcP	17 46 29.1	0.0
	comp=Z,0.6nm,0.7s,baz=165,slow=3.0,SNR=5.5						
YKA				LR	LR	17 58 27.7	
	comp=Z,1µm,18.9s,baz=0.0,slow=40						
J57A	Williamstown	32.79	56	P	P	17 43 45.9	-0.5
LUPA	Lehigh Univers	32.85	61	P	P	17 43 49.1	+2.0
VLDQ	Val d'Or	33.00	47	P	P	17 43 45.2	-2.9
VLDQ				IAmb	IAmb	17 43 57.2	
	comp=Z,21nm,1.6s						
WHY	Whitehorse	33.26	341	P	P	17 43 51.8	+1.3
WHY				IAmb	IAmb	17 44 05.3	
	comp=Z,24nm,1.6s						
HYT	Haines Junctio	34.15	340	P	P	17 43 60.0	+1.7
PCA	Pinnacle	34.47	337	P	P	17 44 01.1	+0.1
MCARA	McCarthy VSAT	36.34	337	P	P	17 44 19.8	+2.8
MCARA				IAmb	IAmb	17 44 21.9	
	comp=Z,16nm,0.9s						
GLB	Gilahina Butte	36.65	336	P	P	17 44 21.3	+1.7
GLB				IAmb	IAmb	17 44 23.7	
	comp=Z,13nm,0.8s						
BCAR	Beaver Creek A	37.17	339	P	P	17 44 25.1	+1.0
DAWY	Dawson	37.26	342	P	P	17 44 26.4	+1.6
DAWY				IAmb	IAmb	17 44 28.0	
	comp=Z,27nm,1.4s						
KDAK	Kodiak Island	38.05	327	LR	LR	17 57 55.7	
	comp=Z,1µm,20.1s,baz=107,slow=33						
SCM	Sheep Creek Mo	38.16	335	P	P	17 44 35.9	+3.4
SCM				IAmb	IAmb	17 44 37.0	
	comp=Z,16nm,0.9s						
EGAK	Eagle	38.30	342	P	P	17 44 35.1	+1.7
EGAK				IAmb	IAmb	17 44 37.1	
	comp=Z,13nm,0.8s						
KNK	Knik Glacier	38.32	334	P	P	17 44 36.2	+2.5
EPYK	Eagle Plains	38.51	346	P	P	17 44 36.8	+1.5
EPYK				IAmb	IAmb	17 44 38.5	
	comp=Z,22nm,1.3s						
SCRK	Sand Creek	38.52	339	P	P	17 44 36.6	+1.2
SCRK				IAmb	IAmb	17 44 39.2	
	comp=Z,11nm,0.8s						
RIDG	Independent Ri	38.61	339	P	P	17 44 38.1	+1.9
RIDG				IAmb	IAmb	17 44 41.6	
	comp=Z,13nm,1.0s						
PMR	Palmer	38.68	334	P	P	17 44 39.2	+2.5
PMR				IAmb	IAmb	17 44 40.2	
	comp=Z,17nm,0.9s						
INK	Inuvik	39.59	349	P	P	17 44 46.4	+2.2
	comp=Z,2.9nm,0.9s,baz=140,slow=8.2,SNR=6.9						
INK	Inuvik	39.59	349	P	P	17 44 45.6	+1.3
RND	Reindeer	39.72	336	P	P	17 44 47.7	+2.2
HDA	Harding Lake	39.74	338	P	P	17 44 47.5	+1.9
HDA				IAmb	IAmb	17 44 49.2	
	comp=Z,37nm,1.8s						
MCK	McKinley	39.95	337	P	P	17 44 49.4	+2.0
MCK				IAmb	IAmb	17 44 50.7	
	comp=Z,14nm,0.8s						
IL31		39.97	339	P	P	17 44 49.5	+2.1
IL31				IAmb	IAmb	17 44 50.7	
	comp=Z,14nm,0.8s						
ILAR	Eielson Array	39.97	339	P	P	17 44 49.9	+2.4
	comp=Z,11nm,0.7s,baz=152,slow=7.6,SNR=104						
ILAR	Eielson Array	39.97	339	P	P	17 44 49.5	+2.1
PRP	Porcupine Dome	40.09	340	P	P	17 44 49.9	+1.4
PRP				IAmb	IAmb	17 44 53.7	
	comp=Z,16nm,1.2s						
WRH	Wood River Hil	40.15	338	P	P	17 44 51.9	+2.9
CCB	Clear Creek Bu	40.18	338	P	P	17 44 50.3	+1.1
CCB				IAmb	IAmb	17 44 52.5	
	comp=Z,27nm,1.6s						
TRF	Thorofare Moun	40.25	336	P	P	17 44 51.8	+1.8
TRF				IAmb	IAmb	17 44 53.1	
	comp=Z,13nm,0.7s						
COLA	College	40.35	338	P	P	17 44 52.2	+1.7
COLA				IAmb	IAmb	17 44 54.0	
	comp=Z,22nm,0.9s						
BWN	Browne	40.41	337	P	P	17 44 51.7	+0.5
BWN				IAmb	IAmb	17 44 54.0	
	comp=Z,17nm,0.7s						
KTH	Kantishna Hill	40.53	336	P	P	17 44 54.1	+1.8
KTH				IAmb	IAmb	17 44 56.3	
	comp=Z,19nm,0.9s						
PPLA	Purkeypile	40.61	334	P	P	17 44 54.4	+1.4
FYU	Fort Yukon	40.76	342	P	P	17 44 56.2	+2.3
BPAW	Bear Paw Mtn.	40.89	336	P	P	17 44 56.7	+1.6
BPAW				IAmb	IAmb	17 44 58.0	
	comp=Z,18nm,0.8s						
BMAR	Burnt Mountain	41.23	343	P	P	17 44 59.9	+2.0
SCHQ	Schefferville	41.37	40	P	P	17 45 00.1	+0.9
	comp=Z,3.5nm,0.8s,baz=283,slow=4.0,SNR=4.9						
SCHQ				LR	LR	18 00 47.8	
	comp=Z,287nm,18.8s,baz=290,slow=34						
SCHQ	Schefferville	41.37	40	P	P	17 45 00.2	+0.9
SCHQ				IAmb	IAmb	17 45 02.2	
	comp=Z,20nm,1.2s						
MLY	Manley	41.38	337	P	P	17 45 01.2	+2.0
TTA	Tatalina	42.10	333	P	P	17 45 06.5	+1.4
COLD	Coldfoot	42.63	340	P	P	17 45 11.9	+2.6
IMAR	Indian Mountai	42.96	337	P	P	17 45 14.1	+2.1
TOLK	Toolik Lake Re	43.41	342	P	P	17 45 18.2	+2.6
TOLK				IAmb	IAmb	17 45 19.5	
	comp=Z,18nm,0.8s						
ROSC	El Rosal	45.24	116	LR	LR	18 06 40.7	
	comp=Z,437nm,18.2s,baz=326,slow=39						
RUSC	La Rusia	45.56	114	P	P	17 45 33.0	-1.0
SDV	Santo Domingo	45.79	109	LR	LR	18 06 11.6	
	comp=Z,341nm,21.5s,baz=291,slow=38						
SDV	Santo Domingo	45.79	109	P	P	17 45 36.1	+0.6
SDV				IAmb	IAmb	17 45 37.7	
	comp=Z,9.3nm,0.8s						
TAOE	Nuku Hiva Isla	46.41	217	*e*LR	LR	17 58 37.2	
	comp=Z,234nm,26.1s						
ANM	Nome	46.56	332	P	P	17 45 42.6	+1.9
ANM				IAmb	IAmb	17 45 54.4	
	comp=Z,6.2nm,1.1s						
RDOG	Red Dog Mine	47.11	337	P	P	17 45 45.7	+0.7
GAMB	Gambell	48.94	330	P	P	17 46 00.3	+1.1
GAMB				IAmb	IAmb	17 46 00.7	
	comp=Z,12nm,1.5s						
ATAH	Atahualpa	50.64	132	LR	LR	18 05 19.8	
	comp=Z,357nm,19.2s,baz=341,slow=33						
NNA	Nana	55.31	134	LR	LR	18 07 58.5	
	comp=Z,358nm,19.5s,baz=324,slow=33						
SUMG	Summit	56.96	20	*i* P	P	17 46 59.3	+0.6
	comp=Z,49nm,1.2s						
PPT	Papeete	58.70	220	LR	LR	18 07 56.1	
	comp=Z,98nm,18.1s,baz=359,slow=31						
PPT2	Papeete2	58.72	220	*e*LR	LR	18 04 22.5	
	comp=Z,275nm,24.8s,baz=45						
PTGA	Pitinga	59.99	111	LR	LR	18 16 44.4	

	comp=Z,210nm,18.3s,baz=309,slow=40						
PTGA	Pitinga	59.99	111	P	P	17 47 20.1	-0.1
PTGA				IAmb	IAmb	17 47 21.8	
	comp=Z,9.3nm,0.9s						
DAG	Danmarks Havn	61.86	15	i P	P	17 47 32.2	+0.2
	comp=Z,18nm,1.2s						
TBI	Tubuai	63.35	217	eLR	LR	18 06 27.5	
	comp=Z,131nm,23.5s						
LPAZ	La Paz	64.12	130	P	P	17 47 48.2	-0.3
	comp=Z,1.1nm,0.7s,baz=327,slow=7.2,SNR=4.6						
LPAZ				LR	LR	18 14 59.9	
	comp=Z,282nm,18.1s,baz=321,slow=35						
LPAZ	La Paz	64.12	130	P	P	17 47 48.1	-0.5
LPAZ				IAmb	IAmb	17 47 52.1	
	comp=Z,16nm,2.0s						
SEY	Seymchan	64.94	330	P	P	17 47 53.8	+1.2
	comp=Z,1.2nm,0.9s,baz=357,slow=22,SNR=2.7						
PETK	Petropavlovsk-	65.29	318	P	P	17 47 55.8	+0.7
	comp=Z,2.4nm,0.9s,baz=71,slow=11,SNR=2.1						
PETK				LR	LR	18 11 08.3	
	comp=Z,145nm,21.9s,baz=62,slow=31						
PB11	IPOC Station P	65.68	134	P	P	17 47 58.1	0.0
GO01	Chusmiza	65.90	133	P	P	17 47 59.8	-0.1
GO01				IAmb	IAmb	17 48 01.2	
	comp=Z,10nm,1.3s						
PB01	IPOC Station P	66.74	134	P	P	17 48 04.9	+0.1
MA2	Magadan	66.79	327	P	P	17 48 05.6	+1.0
	comp=Z,2.1nm,0.7s,baz=70,slow=9.8,SNR=4.7						
MA2	Magadan	66.79	327	P	P	17 48 05.0	+0.4
RAR	Rarotonga	67.58	226	LR	LR	18 10 26.3	
	comp=Z,157nm,21.3s,baz=342,slow=30						
SIV	San Ignacio	68.77	125	LR	LR	18 18 55.2	
	comp=Z,184nm,18.7s,baz=0.5,slow=36						
TIXI	Tiksi	69.30	342	P	P	17 48 19.2	-0.9
TIXI				IAmb	IAmb	17 48 20.5	
	comp=Z,9.7nm,1.4s						
ARCES	ARCESS Array B	76.08	14	P	P	17 49 01.4	+0.9
	comp=Z,6.7nm,0.8s,baz=321,slow=7.0,SNR=8.0						
ARCES				LR	LR	18 25 55.3	
	comp=Z,249nm,18.7s,baz=332,slow=38						
ARCES	ARCESS Array B	76.08	14	P	P	17 49 01.1	+0.6
CPUP	Villa Florida	78.29	130	P	P	17 49 13.5	+0.1
	comp=Z,1.8nm,0.8s,baz=12,slow=7.0,SNR=3.3						
CPUP				LR	LR	18 22 43.8	
	comp=Z,175nm,21.7s,baz=344,slow=35						
CPUP	Villa Florida	78.29	130	P	P	17 49 13.2	-0.3
BDFB	Brasilia	78.29	116	LR	LR	18 26 35.8	
	comp=Z,242nm,18.7s,baz=318,slow=38						
NB2	NORSAR Subarra	78.61	24	P	P	17 49 16.1	+1.2
	comp=Z,1.5nm,0.7s,baz=313,slow=5.6						
NOA	NORSAR Array B	78.61	24	P	P	17 49 16.1	+1.2
	comp=Z,1.7nm,0.7s,baz=313,slow=5.3,SNR=6.7						
NOA				LR	LR	18 26 08.0	
	comp=Z,101nm,19.3s,baz=295,slow=37						
NRIK	Noril'sk	79.27	352	P	P	17 49 19.1	+0.8
	comp=Z,2.3nm,0.6s,baz=12,slow=4.9,SNR=5.8						
NRIK				LR	LR	18 26 01.9	
	comp=Z,206nm,21.3s,baz=40,slow=37						
PLCA	Paso Flores	81.46	148	P	P	17 49 31.2	+0.8
	comp=Z,3.5nm,1.0s,baz=343,slow=4.8,SNR=4.5						
PLCA				LR	LR	18 18 16.3	
	comp=Z,412nm,20.2s,baz=354,slow=30						
PLCA	Paso Flores	81.46	148	P	P	17 49 30.7	+0.3
PLCA				IAmb	IAmb	17 50 02.6	
	comp=Z,14nm,1.5s						
KLR	Kul'dur	81.46	323	P	P	17 49 32.2	+1.8
	comp=Z,0.6nm,0.6s,baz=351,slow=5.3,SNR=4.2						
FINES	FINESS Array B	82.91	18	P	P	17 49 39.0	+1.2
	comp=Z,6.5nm,0.7s,baz=343,slow=6.0,SNR=14						
FINES	FINESS Array B	82.91	18	P	P	17 49 36.8	-1.0
USRK	Ussuriysk Ar.	84.38	319	P	P	17 49 46.3	+0.6
	comp=Z,4.0nm,0.8s,baz=66,slow=5.7,SNR=9.8						
USRK	Ussuriysk Ar.	84.38	319	P	P	17 49 46.1	+0.5
MAT	Matsushiro	85.02	310	P	P	17 49 49.2	+0.1
MJAR	Matsushiro Arr	85.02	310	P	P	17 49 49.2	+0.1
	comp=Z,4.0nm,0.8s,baz=61,slow=6.1,SNR=9.1						
MJAR				LR	LR	18 21 10.5	
	comp=Z,351nm,20.8s,baz=70,slow=31						
KSRS	Korea Array	91.02	315	LR	LR	18 26 17.5	
	comp=Z,110nm,20.1s,baz=61,slow=32						
DZM	Mont Dzumac	92.42	246	eLR	LR	18 19 59.5	
	comp=Z,256nm,24.0s						
GUMO	Guam	92.50	287	LR	LR	18 23 14.6	
	comp=Z,399nm,21.7s,baz=37,slow=30						
AKASG	Malin Array Be	92.94	22	P	P	17 50 26.3	-0.1
	comp=Z,0.2nm,0.3s,baz=330,slow=3.9,SNR=4.6						
AKASG	Malin Array Be	92.94	22	P	P	17 50 26.0	-0.4
SONM	Songino Array	94.04	334	P	P	17 50 33.7	+2.0
	comp=Z,0.5nm,1.0s,baz=20,slow=4.6,SNR=2.0						
SONM				LR	LR	18 33 41.8	
	comp=Z,206nm,20.0s,baz=22,slow=36						
ZALV	Zalesovo Beam	94.40	349	P	P	17 50 34.1	+1.0
	comp=Z,0.3nm,0.3s,baz=13,slow=3.2,SNR=2.3						
ZALV				LR	LR	18 39 14.0	
	comp=Z,100nm,19.4s,baz=9.5,slow=39						
KEST	Kesra	95.39	43	LR	LR	18 33 53.5	
	comp=Z,142nm,18.2s,baz=332,slow=36						
HHC	Hu-ho-hao-te	97.47	327	eP	P	17 50 46.6	-0.8
NJ2	Nanjing	100.15	317	eP	Pdif	17 50 57.4	-2.0
CD2	Chengdu	109.20	326	Pdif	Pdif	17 51 37.9	-1.9
STKA	Stephens Creek	116.55	247	PKP	PKPdf	17 55 57.0	-0.6
	comp=Z,1.6nm,0.7s,baz=11,slow=7.3,SNR=3.2						
STKA	Stephens Creek	116.55	247	PKPdf	PKPdf	17 55 56.7	-0.8
WRA	Warramunga Arr	118.04	262	PKP	PKiKP	17 56 00.5	-0.3
	comp=Z,1.3nm,0.9s,baz=68,slow=2.4,SNR=5.8						
WRA	Warramunga Arr	118.04	262		PKPdf	17 56 00.1	-0.6
ASAR	Alice Springs	119.89	259	PKP	PKPdf	17 56 03.6	-0.6
	comp=Z,1.2nm,0.8s,baz=74,slow=1.8,SNR=15						
ASAR	Alice Springs	119.89	259		PKPdf	17 56 03.1	-1.1
CM31	Chiang Mai Arr	121.94	322		PKPdf	17 56 08.0	-0.3
CMAR	Chiang Mai Arr	121.94	322	PKP	PKiKP	17 56 09.3	+0.8
	comp=Z,2.0nm,0.8s,baz=332,slow=2.1,SNR=24						
CMAR	Chiang Mai Arr	121.94	322		PKPdf	17 56 08.2	-0.2
VNA3	Neumayer Olymp	123.11	158	P	PKPdf	17 56 07.5	-1.5
VNA2	Neumayer--Watz	123.87	158	P	PKPdf	17 56 10.3	-0.2
SNAA	Sanae	125.24	159	P	PKPdf	17 56 12.9	-0.2
BOSA	Boshof	144.68	98	PKP	PKPab	17 56 48.5	-0.8
	comp=Z,3.6nm,0.8s,baz=149,slow=2.6,SNR=6.1						
BOSA	Boshof	144.68	98		PKPab	17 56 48.8	-0.5

MAN 21 17:46:53.3, 5°.67N×126°.31E, h60^{km}, mb5.2, ML4.2, MS4.3, Mindanao

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ANF **21** *17:50:07.3±1.7, 30°.12N×114°.11W, h13^{km}±12^{km}, ML4.5/15, Error ellipse: s-maj=17.7km s-min=5.8km az=21.0*

ECX **21** *17:50:10.3±0.8, 30°.39N×114°.04W, h10^{km}±9^{km}, MD5.0, ML4.4*

IDC **21** *17:50:11.4±0.9, 30°.33N×113°.96W, h0^{km}, mb4.0/9, mb1 4.0/18, mb1mx3.9/54, mbtmp3.9/18, ML3.7/9, MS4.1/18, Ms1 4.1/18, ms1mx3.9/50, Error ellipse: s-maj=18.1km s-min=8.7km az=42.0*

NEIC **21** *17:50:13.4±2.9, 30°.42N±0°.03×114°.06W±0°.05, h15^{km}±4^{km}, mb4.7/69, Mwr4.6/23, Md5.1/13(MEX), Error ellipse: s-maj=6.6km s-min=2.2km az=60.0*

NEIC **21** *17:50:13, 30°.41N×113°.97W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-8.21; $M_{\theta\theta}$1.08; $M_{\phi\phi}$7.14; $M_{r\theta}$-3.64; $M_{\theta\phi}$3.69; $M_{\phi r}$2.57; Fault plane solution: $M_0$9.66000×10^{15} NP1:ϕ_s47.51000°, δ47.29000°, λ-55.65000°. NP2:ϕ_s182.29000°, δ52.65000°, λ-121.44000°. Principal axes: T 8.9200, Plg3.0000°, Azm294.0000°; N 1.3350, Plg24.0000°, Azm203.0000°; P -10.2550, Plg65.0000°, Azm30.0000°;*

MEX **21** *17:50:13.1±0.5, 30°.42N×114°.02W, h5^{km}, MD5.1*

GCMT **21** *17:50:15.4±0.5, 30°.71N±0°.05×113°.90W±0°.03, h23^{km}±1^{km}, MW5.0/72, Moment Tensor Solution. s14,c16; s72,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.54±.30; $M_{\theta\theta}$0.71±.18; $M_{\phi\phi}$2.82±.18; $M_{r\theta}$1.24±.33; $M_{\theta\phi}$1.42±.11; $M_{\phi r}$0.09±.23; Best double couple: $M_0$3.74100×10^{16} NP1:ϕ_s12.00000°, δ42.00000°, λ-113.00000°. NP2: ϕ_s222.00000°, δ52.00000°, λ-71.00000°. Principal axes: T 3.5950, Plg5.0000°, Azm298.0000°; N 0.2870, Plg15.0000°, Azm30.0000°; P -3.8880, Plg74.0000°, Azm189.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 17:50:12.2±0.5, **30°.37N**±0°.05×**114°.07W**±0°.03, **h10**^{km}, **n298**, σ**1^{s}83**/308, **mb4.6**/35, **MS4.1**/10, **4D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BAHB	Baha de los	0.61	134	eP	Pn	17 50 37.0	+10
SFX	San Felipe	0.95	315	eP	Pg	17 50 27.0	-3.5
SFX				eS	Sg	17 50 40.7	-2.2
SFX				IAML		17 50 51.2	
	comp=N,9µm,0.7s						
SFX				⇓e		17 50 51.2	
PIX	Pinacate	1.30	23	eP	Pn	17 50 32.2	-4.2
PIX				eS	Sb	17 50 50.6	-2.8
SPX	San Pedro Mart	1.38	299	eP	Pn	17 50 35.1	-2.7
SPX	San Pedro Mart	1.38	299	eP	Pn	17 50 35.2	-2.6
SPX				eS	Sb	17 50 53.3	-2.8
SPX	San Pedro Mart	1.38	299		Pn	17 50 35.2	-2.6
SPX					Sb	17 50 53.3	-2.8
SPIG	San Pedro Mart	1.38	300	eP	Pn	17 50 35.2	-2.7
SPIG	San Pedro Mart	1.38	300	eP	Pn	17 50 35.2	-2.7
SPIG				eS	Sb	17 50 53.3	-2.9
SPIG	San Pedro Mart	1.38	300		Pn	17 50 35.2	-2.7
SPIG					Sb	17 50 53.3	-2.9
ECBX	El Chinero	1.39	323	eP	Pn	17 50 34.1	-3.6
SQX	San Quintin	1.58	278	eP	Pn	17 50 38.5	-1.8
SQX				IAML		17 51 11.1	
	comp=N,9µm,0.6s						
SQX				e		17 51 11.1	
SQX				⇓e		17 51 11.2	
SQX				IAML		17 51 11.2	
	comp=E,7µm,1.1s						
VTX	Valle De La Tr	1.79	305	eP	Pn	17 50 41.5	-1.8
VTX				eS	Sn	17 51 05.9	-0.4
VTX				IAML		17 51 26.5	
	comp=E,3µm,1.4s						
VTX				⇓e		17 51 26.5	
214A	Organ Pipe Nat	1.91	34		Pn	17 50 42.1	-2.9
214A	Organ Pipe Nat	1.91	34	P	Pn	17 50 42.1	-2.9
	baz=213,SNR=54						
214A				S	Sb	17 51 10.4	-0.8
	baz=213						
SVX	San Vicente	2.11	297	eP	Pn	17 50 46.6	-1.0
MBIG	Mexicali	2.25	335	i P	Pn	17 50 46.8	-2.7
MBIG				i S	Sn	17 51 14.3	-3.0
MBIG	Mexicali	2.25	335		Sn	17 51 04.4	-13
ESJX	Sierra Juarez	2.29	316	eP	Pn	17 50 47.9	-2.4
CPBX	Cerro Prieto	2.30	333	IAML		17 52 12.9	
	comp=N,11µm,2.2s						
CPBX				⇓e		17 52 12.9	
GLA	Glamis	2.75	347		Pn	17 50 54.3	-2.2
GLA	Glamis	2.75	347	P	Pn	17 50 54.0	-2.5
	baz=165,SNR=8.4						
IKP	In-Ko-Pah, Jac	2.87	323	P	Pn	17 50 55.1	-3.0
	baz=141						
IKP				Sb	Sb	17 51 41.6	+2.9
	baz=141						
CBX	Cerro Bola	2.95	312	eP	Pn	17 50 58.0	-1.3
CBX				e		17 51 57.9	
CBX				IAML		17 51 57.9	
	comp=E,3µm,1.5s						
CBX	Cerro Bola	2.95	312	i P	Pn	17 50 58.2	-1.0
CBX				i S	Sn	17 51 33.2	-1.6
CBX	Cerro Bola	2.95	312		Pb	17 51 06.7	+1.7
SWSC	Sam W. Stewart	2.96	331	S	Sn	17 51 37.1	+2.2
	baz=148						
HSIG		3.03	116	eP	Pn	17 50 58.2	-2.0
HSIG		3.03	116		Pn	17 50 58.1	-2.1
TJIG	Tijuana	3.04	313	i P	Pn	17 50 59.3	-1.0
TJIG				i S	Sn	17 51 34.8	-2.0
TJIG	Tijuana	3.04	313		Pb	17 51 07.5	+1.1
BAR	Barrett	3.20	317		Pn	17 51 01.3	-1.4
MONP2	Monument Peak	3.22	322	P	Pn	17 51 00.4	-2.6
	baz=140						
MONP2				Sb	Sg	17 51 52.6	-3.1
	baz=140						
Y12C	Blythe	3.39	354		Pn	17 51 05.1	-0.1
Y12C	Blythe	3.39	354	P	Pn	17 51 03.0	-2.3
	baz=172						
TUC	Tucson	3.41	55	eP	Pn	17 51 03.3	-2.3
TUC				eS	Sn	17 51 43.0	-3.1
TUC	Tucson	3.41	55		Pn	17 51 03.1	-2.4
TUC	Tucson	3.41	55		Sn	17 51 43.0	-3.1
TUC	Tucson	3.41	55	P	Pn	17 51 02.7	-2.9
	baz=236						
TUC				Sb	Sb	17 51 56.2	+1.8
	baz=236						
SRIG	Santa Rosalia	3.43	152		Pn	17 51 06.0	+0.2
BC3	Big Chuckawall	3.48	341	P	Pn	17 51 04.6	-2.0
	baz=159						
109C	Camp Elliot, M	3.61	315		Pn	17 51 07.0	-1.2
109C	Camp Elliot, M	3.61	315	Pg	Pg	17 51 19.5	-1.9
	baz=132						
109C				Sb	Sb	17 52 02.1	+2.0
	baz=132						
Y14A	Wickenburg	3.67	14		Pn	17 51 07.9	-1.2
GUYB	Guaymas	3.72	131	eP	Pn	17 51 08.7	-1.1
GUYB	Guaymas	3.72	131	eP	Pn	17 51 08.6	-1.2
XPFO	Pion Flat	3.82	328		Pn	17 51 10.1	-1.1
PFO	Pinyon Flats O	3.82	328	Pn	Pn	17 51 10.4	-0.8
	comp=E,1.3nm,0.3s,baz=146,slow=12,SNR=9.9						
PFO				Pg	Pb	17 51 19.3	-0.6
	comp=E,0.7nm,0.3s,baz=144,slow=13,SNR=4.8						
PFO				Lg	Lg	17 52 12.0	
	comp=E,6.8nm,0.3s,baz=279,slow=13,SNR=2.0						
PFO				LR	LR	17 52 43.9	
	comp=E,4µm,20.6s,baz=178,slow=39						
PFO	Pinyon Flats O	3.82	328		Pn	17 51 09.8	-1.4
PFO	Pinyon Flats O	3.82	328	P	Pn	17 51 09.3	-2.0
	baz=146						
IRM	Iron Mountain	3.89	347	P	Pn	17 51 10.1	-2.0
	baz=165						
MURC	Murrieta	4.18	321	Pg	Pg	17 51 31.2	-1.1
	baz=139						
MURC				Sb	Sb	17 52 20.7	+4.3
	baz=139						
319A	Douglas	4.23	75		Pn	17 51 15.5	-1.4
NEE2	Needles Airpor	4.41	354	P	Pn	17 51 17.6	-1.7
	baz=173						
GMRC	Granite Mounta	4.61	343	Pg	Pg	17 51 40.2	-0.2
	baz=162						
X16A	Lo Mia Camp, P	4.61	28		Pn	17 51 20.8	-1.3
W13A	Hualapai Mount	4.72	2		Pn	17 51 22.9	-0.8
BFSC	Mount Baldy Ra	4.91	323	Sb	Sb	17 52 42.9	+5.2
	baz=140						
MWC	Mount Wilson	5.12	320	Pn	Pn	17 51 33.8	+4.6
PASC	Pasadena Art C	5.15	318	Pn	Pn	17 51 29.4	-0.1
DECC	Green Verdugo	5.30	318	S	Sn	17 52 32.3	-0.3
	baz=135						
X18A	Snowflake	5.41	39		Pn	17 51 31.8	-1.4
GSC	Goldstone, Bar	5.43	336	Pn	Pn	17 51 37.0	+3.7
SNCC	San Nicolas Is	5.46	303	Pn	Pn	17 51 34.4	+0.7
EDW2	Edwards Air Fo	5.59	325	Sb	Sb	17 53 03.8	+6.8
	baz=142						
WUAZ	Wupatki	5.61	23		Pn	17 51 34.7	-1.2
WUAZ	Wupatki	5.61	23	P	Pn	17 51 34.5	-1.4
	baz=204						
BLG	Laguna Peak, P	5.64	313	Sb	Sb	17 53 05.7	+7.1
	baz=130						
OSI	Osito Audit: C	5.78	318		Pn	17 51 39.7	+1.6
121A	Cookes Peak, D	5.78	66		Pn	17 51 37.7	-0.5
121A	Cookes Peak, D	5.78	66	P	Pn	17 51 36.6	-1.7
	baz=250,SNR=16						
W18A	Petrified Fore	5.98	36		Pn	17 51 40.1	-0.8
W18A	Petrified Fore	5.98	36	P	Pn	17 51 40.9	0.0
	baz=218,SNR=12						
W18A				Sb	Sb	17 53 15.1	+6.8
	baz=218						
SHPR	Sheep Range	6.19	352		Pn	17 51 44.0	+0.2
U15A	North Rim	6.22	13		Pn	17 51 44.7	+0.3
ISA	Isabella, Lake	6.45	326		Pn	17 51 46.9	-0.4
LCMT	Little Creek M	6.66	6		Pn	17 51 49.9	-0.4
KNB	Kanab	6.71	9		Pn	17 51 51.0	0.0
TPNV	Topopah Spring	6.81	345		Pn	17 51 52.6	+0.2
LPIG	La Paz	7.08	151	Pn	Pn	17 51 54.9	-1.0
	comp=E,9.0nm,0.3s,baz=297,slow=4.5,SNR=1.2						
LPIG				Lg	Lg	17 53 48.7	
	comp=E,11nm,0.3s,baz=272,slow=4.5,SNR=1.8						
LPIG				LR	LR	17 54 34.1	
	comp=E,2µm,20.6s,baz=337,slow=38						
Y22D	IRIS PASSCAL I	7.09	57	Pn	Pn	17 51 53.5	-2.7
CCUT	Cedar City	7.19	4		Pn	17 51 58.1	+0.5
PKCU	Pink Cliffs	7.21	11		Pn	17 51 58.4	+0.5
SZCU	Shurtz Canyon	7.25	6		Pn	17 51 59.0	+0.5
PAGB	Antelope Grade	7.45	317	Pn	Pn	17 52 02.8	+1.8
MNTX	Cornudas Mount	7.57	78		Pn	17 52 02.5	-0.2
MTPU	Mount Pierson	7.81	11		Pn	17 52 07.4	+1.1
ANMO	Albuquerque	7.87	53	Pn	Pn	17 52 06.6	-0.3
	comp=E,0.4nm,0.3s,baz=232,slow=13,SNR=3.6						
ANMO				Sn	Sn	17 53 35.7	-0.6
	comp=E,0.4nm,0.3s,baz=224,slow=12,SNR=3.9						
ANMO				Lg	Lg	17 54 13.4	
	comp=E,0.4nm,0.3s,baz=179,slow=9.4,SNR=1.9						
ANMO	Albuquerque	7.87	53		Pn	17 52 06.1	-0.8
R11A	Troy Canyon, C	8.06	351		Pn	17 52 09.6	0.0
HPIG		8.13	113	Pn	Pn	17 52 12.0	+1.4
PSUT	Pine Spring	8.15	1		Pn	17 52 11.6	+0.9
MVCO	Mesa Verde	8.25	33	Pn	Pn	17 52 12.4	+0.3
MSU	Marysvale	8.27	10		Pn	17 52 12.8	+0.3
OMMB	Old Mammoth Mi	8.30	332		Pn	17 52 14.7	+1.7
TCRU	Three Creeks R	8.33	9	Pn	Pn	17 52 13.8	+0.6
MDPB	Devils Postpil	8.35	331	Pn	Pn	17 52 15.4	+1.7
PV05	Paradox Valley	8.72	27	Pn	Pn	17 52 19.8	+1.2
NV11	Mina Array Sit	8.72	338		Pn	17 52 20.5	+1.9
NVAR	Mina Array Bea	8.77	338	Pn	Pn	17 52 23.1	+3.8
	comp=E,0.1nm,0.3s,baz=163,slow=15,SNR=12						
NVAR				Lg	Lg	17 54 49.1	
	comp=E,0.1nm,0.3s,baz=120,slow=14,SNR=1.9						
NVAR				LR	LR	17 55 52.4	
	comp=E,1µm,19.8s,baz=154,slow=39						
NVAR	Mina Array Bea	8.77	338		Pn	17 52 21.6	+2.3
Q16A	Castle Valley	8.86	15		Pn	17 52 20.6	+0.1
PV13	Radium Mtn., P	8.90	28		Pn	17 52 21.8	+0.7
PV18	Skein Mesa, Pa	8.94	27		Pn	17 52 21.9	+0.3
PV17	East Wray Mesa	8.95	27		Pn	17 52 21.0	-0.8
PV19	Morning Glory	8.96	27		Pn	17 52 22.3	+0.3
PV03	Paradox Valley	8.97	27		Pn	17 52 21.6	-0.5
PV02	Paradox Valley	8.97	28	Pn	Pn	17 52 21.8	-0.4
PV01	Paradox Valley	8.98	29	Pn	Pn	17 52 22.4	+0.2
PV16	Nyswonger Mesa	8.99	27		Pn	17 52 23.1	+0.7
PV11	David Mesa, Pa	9.00	27		Pn	17 52 22.1	-0.3
PV20	West Nyswonger	9.00	27	Pn	Pn	17 52 21.1	-1.3
PV10	Paradox Valley	9.00	26	Pn	Pn	17 52 21.2	-1.3
PV14	Lion Creek, Pa	9.00	26	Pn	Pn	17 52 22.2	-0.4
RYN	Ryan	9.02	337	Pn	Pn	17 52 24.2	+1.5
PV12	Saucer Basin,	9.04	27		Pn	17 52 22.6	-0.5
PV04	Paradox Valley	9.07	27		Pn	17 52 24.2	+0.9
PV09	Paradox Valley	9.07	25		Pn	17 52 23.4	-0.1
PV23	Carpenter Ridg	9.08	26		Pn	17 52 23.5	-0.1
TX31	Lajitas Ar. Si	9.09	94		Pn	17 52 24.1	+0.5
TX32	Lajitas Array	9.09	94		Pn	17 52 24.1	+0.5
TXAR	Lajitas Array	9.09	94	Pn	Pn	17 52 23.9	+0.3
	comp=E,0.6nm,0.3s,baz=257,slow=16,SNR=21						
TXAR				Pg		17 52 42.4	
	comp=E,1.6nm,0.3s,baz=266,slow=14,SNR=9.2						
TXAR				Lg	Lg	17 54 53.0	
	comp=E,0.3nm,0.3s,baz=27,slow=40,SNR=3.2						
TXAR				LR	LR	17 56 14.2	
	comp=E,2µm,18.7s,baz=0.0,slow=40						
TXAR	Lajitas Array	9.09	94		Pn	17 52 23.6	+0.1
PV21	Cone Mtn., Par	9.19	26	Pn	Pn	17 52 23.5	-1.6
PV15	Paradox Valley	9.19	29	Pn	Pn	17 52 25.2	0.0
SRU	San Rafael Swe	9.19	18	Pn	Pn	17 52 25.0	-0.1
PV07	Paradox Valley	9.21	28	Pn	Pn	17 52 24.9	-0.4
TMUT	Trail Mountain	9.21	14	Pn	Pn	17 52 24.9	-0.5
PV22	Blue Mesa, Par	9.24	27	Pn	Pn	17 52 25.1	-0.6
WAKR	Walker	9.25	333		Pn	17 52 27.4	+1.6
CMB	Columbia Colle	9.26	327	Pn	Pn	17 52 28.1	+2.2
KVN	Kaiserville	9.28	340		Pn	17 52 29.1	+2.9
P17A	Butcher Ranch,	9.48	16	Pn	Pn	17 52 29.4	+0.4
S22A	4UR Ranch, Cre	9.49	37	Pn	Pn	17 52 30.6	+1.3
YERR	Yerington	9.59	335	Pn	Pn	17 52 30.9	+0.3
NLU	North Lily Min	9.70	9	Pn	Pn	17 52 31.6	-0.5
PNTR	Pine Nut	9.82	334		Pn	17 52 33.0	-0.6
MPU	Maple Canyon	9.83	11	Pn	Pn	17 52 32.7	-1.1
DUG	Dugway, Tooele	9.86	6	Pn	Pn	17 52 33.1	-1.0
RUBR	Rubicon Trail	10.00	332		Pn	17 52 38.0	+1.7
VCNR	Virginia City	10.02	334	Pn	Pn	17 52 36.3	-0.1
MSTX	Muleshoe	10.22	67	Pn	Pn	17 52 37.8	-1.4
SDCO	Great Sand Dun	10.22	42	Pn	Pn	17 52 36.7	-2.5
AFDM	Forest Hills D	10.27	328	Pn	Pn	17 52 40.3	+0.6
PAHR	Pah Rah Range	10.28	336		Pn	17 52 40.5	+0.5
ELK	Elko	10.40	355	Pn	Pn	17 52 42.5	+0.9
	comp=E,0.3nm,0.3s,baz=184,slow=14,SNR=4.1						
ELK				Lg	Lg	17 55 41.8	
	comp=E,0.1nm,0.3s,baz=15,slow=16,SNR=1.0						
ELK				LR	LR	17 56 29.6	
	comp=E,556nm,18.5s,baz=174,slow=36						
ELK	Elko	10.40	355	Pn	Pn	17 52 41.7	0.0
JLU	Jordanelle	10.43	11	Pn	Pn	17 52 40.8	-1.2
CTU	Camp Tracy	10.47	10	Pn	Pn	17 52 42.9	+0.3
T25A	Trinidad	10.49	47		Pn	17 52 42.2	-0.7
BGU	Big Grassy Mou	10.57	4	Pn	Pn	17 52 43.9	0.0
MCCM	Marconi Confer	10.64	319	Pn	Pn	17 52 46.6	+1.9
RDMU	Red Mountain	10.82	19	Pn	Pn	17 52 46.0	-1.3
O20A	White River Ci	10.84	24	Pn	Pn	17 52 46.5	-1.1
TCUT	Toone Canyon	10.94	11	Pn	Pn	17 52 48.8	-0.3
AMTX	Amarillo	11.37	63	Pn	Pn	17 52 54.0	-0.8
HVU	Hansel Valley	11.44	5	Pn	Pn	17 52 57.2	+1.4
KCPM	Cahto Peak	12.13	323	Pn	Pn	17 53 05.2	+0.1
WDC	Whiskeytown Da	12.30	328	Pn	Pn	17 53 04.8	-2.6
JCT	Junction City	12.31	86		Pn	17 53 05.7	-2.0
MOD	Modoc Plateau	12.56	338		Pn	17 53 10.4	-0.7
RWWY	Rawlins	12.58	24	Pn	Pn	17 53 09.2	-2.3
WVOR	Wild Horse Val	12.59	344		Pn	17 53 08.2	-3.3
AHID	Auburn Hatcher	12.60	10	Pn	Pn	17 53 11.3	-0.4
ZAIG	Zacatecas	12.77	124	Pn	Pn	17 53 14.9	+0.8
PD31	Pinedale Array	12.89	15	Pn	Pn	17 53 14.7	-1.0
PDAR	Pinedale Array	12.89	15	Pn	Pn	17 53 19.4	+3.7
	comp=E,0.1nm,0.3s,baz=173,slow=13,SNR=5.3						
PDAR				LR	LR	17 58 24.4	
	comp=E,413nm,18.7s,baz=186,slow=38						
PDAR	Pinedale Array	12.89	15		Pn	17 53 14.8	-0.9
MFID	Camas Ranch	13.10	354		Pn	17 53 17.2	-1.2
REDW	Red Top Meadow	13.22	10		Pn	17 53 19.1	-1.1
YBH	Yreka Blue Hor	13.31	331	Pn	Pn	17 53 24.7	+3.3
	comp=E,0.1nm,0.3s,baz=134,slow=4.0,SNR=3.4						
YBH				LR	LR	17 59 09.9	
	comp=E,462nm,18.5s,baz=153,slow=40						
YBH	Yreka Blue Hor	13.31	331		Pn	17 53 25.1	+3.8
TPAW	Teton Pass	13.33	10		Pn	17 53 23.7	+1.9
SNOW	Snow King Moun	13.33	11	Pn	Pn	17 53 23.0	+1.2
J08A	Circle Bar Ran	13.43	346	Pn	Pn	17 53 25.3	+2.3
FXWY	Fox Creek	13.46	10		Pn	17 53 25.0	+1.4
K22A	Casper	13.67	24	Pn	Pn	17 53 27.9	+1.7
IMW	Indian Meadow	13.73	10		Pn	17 53 28.4	+1.2
FLWY	Flagg Ranch	13.95	10		Pn	17 53 32.9	+2.8
YPP	Pitchstone Pla	14.12	10	P	P	17 53 36.3	-3.9
HUMO	Hull Mountain	14.14	332	Pn	Pn	17 53 34.6	+2.0
H17A	Grant Village	14.27	10		Pn	17 53 37.1	+2.5
WHTX	Lake Whitney,	14.31	79	Pn	Pn	17 53 35.2	+0.3
X34A	Smith Ranch, M	14.33	69		Pn	17 53 38.2	+2.9
I07A	Izee	14.35	344		P	17 53 39.8	-2.9
LKWY	Lake	14.46	11	Pn	Pn	17 53 39.8	+2.6
MCMT	McKenzie Canyo	14.47	3		Pn	17 53 39.5	+2.3
PINE	Pine Mountain	14.47	340		P	17 53 41.2	-2.9
YMR	Madison River	14.48	9		Pn	17 53 40.7	+3.2
YHB	Horse Butte	14.54	8		P	17 53 41.6	-3.2
YNR	Norris Junctio	14.57	10	Pn	Pn	17 53 39.8	+1.1
QLMT	Earthquake Lak	14.59	7	Pn	Pn	17 53 40.0	+1.1
YHH	Holmes Hill	14.62	9	P	P	17 53 42.9	-2.9
YHL	Hebgen Lake	14.63	8	P	P	17 53 43.8	-2.3
YMP	Mirror Lake Pl	14.67	11	P	P	17 53 43.9	-2.6
BMO	Blue Mountains	14.68	351	P	P	17 53 44.1	-2.2
YNE	Yellowstone No	14.96	11	P	P	17 53 47.2	-2.4
RLMT	Red Lodge	15.20	13	P	P	17 53 49.8	-2.5
G08A	Pilot Rock	15.38	347	P	P	17 53 52.1	-2.1
G08A				IAmb	IAmb	17 54 02.1	
	comp=Z,51nm,2.0s						
H04A	Detroit Lake	15.66	338	P	P	17 53 56.2	-0.9
H04A				IAmb	IAmb	17 54 07.7	
	comp=Z,60nm,1.5s						
G06A	Carlson Farm,	15.71	343	P	P	17 53 58.1	+0.4
G06A				IAmb	IAmb	17 54 03.1	
	comp=Z,136nm,2.0s						
F10A	Beach Ranch, E	15.78	352	P	P	17 53 58.2	-0.2
RSSD	Black Hills	15.86	27	P	Pn	17 53 56.6	+0.8
T35A	Sooner Cattle	16.00	61	P	Pn	17 53 58.1	+0.7
X37A	Clayton	16.32	70	P	P	17 54 02.9	-1.6
E09A	Wood Farm, Sta	16.43	350	P	P	17 54 04.7	-0.9
MSO	Missoula	16.44	0	P	P	17 54 04.4	-1.4
LAO	LASA Array	17.40	18	P	Pn	17 54 15.5	+0.5
LON	Longmire	17.43	342	P	P	17 54 16.9	+0.3
EGMT	Eagleton	17.94	9	P	P	17 54 23.2	+0.9
EGMT				IAmb	IAmb	17 54 26.2	
	comp=Z,70nm,1.7s						
NEW	Newport	18.02	353	P	P	17 54 24.3	+1.0
	comp=Z,0.2nm,0.3s,baz=170,slow=12,SNR=5.2						
NEW				LR	LR	18 01 46.1	
	comp=Z,511nm,18.3s,baz=192,slow=38						

NEW	**Newport**	18.02	353	P	P	17 54 23.8	+0.5
WALA	**Waterton Lakes**	18.67	0	P	Pn	17 54 31.8	+1.0
ECSD	**EROS Data Cent**	19.23	41	P	Pn	17 54 37.3	-0.2
DGMT	**Dagmar**	19.59	20	P	Pn	17 54 41.4	-0.3
DGMT				IAmb	IAmb	17 54 45.7	
	comp=Z,100nm,1.8s						
LLLB	**Lillooet**	21.05	346	P	P	17 54 57.8	+1.5
LLLB				IAmb	IAmb	17 55 03.5	
	comp=Z,78nm,1.8s						
CMIG	**Matias Romero**	21.93	123	P	P	17 55 06.3	+0.4
	comp=Z,3.5nm,0.6s,baz=314,slow=12,SNR=5.4						
CMIG				LR	LR	18 03 48.0	
	comp=Z,805nm,20.0s,baz=304,slow=37						
ULM	**Lac du Bonnet**	24.11	29	P	P	17 55 28.6	+0.6
	comp=Z,1.5nm,0.6s,baz=195,slow=8.7,SNR=4.4						
ULM	**Lac du Bonnet**	24.11	29	P	P	17 55 27.1	-0.8
ULM				IAmb	IAmb	17 55 28.2	
	comp=Z,32nm,1.6s						
BBB	**Bella Bella**	24.13	339	LR	LR	18 04 30.2	
	comp=Z,618nm,21.2s,baz=165,slow=36						
TKL	**Tuckaleechee C**	25.89	70	LR	LR	18 06 29.8	
	comp=Z,687nm,18.2s,baz=260,slow=38						
DLBC	**Dease Lake**	30.13	343	P	P	17 56 24.2	+2.1
	comp=Z,3.3nm,0.8s,baz=189,slow=11,SNR=4.7						
DLBC	**Dease Lake**	30.13	343	P	P	17 56 22.5	+0.4
DLBC				IAmb	IAmb	17 57 04.0	
	comp=Z,33nm,1.9s						
SADO	**Sadowa**	30.93	53	LR	LR	18 07 59.3	
	comp=Z,363nm,19.0s,baz=324,slow=35						
YKA	**Yellowknife Ar**	32.14	360	P	P	17 56 40.5	+0.9
	comp=Z,0.3nm,0.7s,baz=174,slow=9.2,SNR=6.4						
YKA				PcP	PcP	17 59 28.6	+0.2
	comp=Z,0.2nm,0.7s,baz=160,slow=2.4,SNR=4.5						
YKA				LR	LR	18 11 27.3	
	comp=Z,394nm,19.9s,baz=0.0,slow=40						
PSUB	**Penn St. - Bra**	32.77	62	P	P	17 56 45.8	+0.4
JTS	**Las Juntas de**	33.66	120	LR	LR	18 10 53.3	
	comp=Z,395nm,19.4s,baz=16,slow=37						
BCAR	**Beaver Creek A**	37.23	340	P	P	17 57 25.1	+1.5
DAWY	**Dawson**	37.32	342	P	P	17 57 25.9	+1.5
DAWY				IAmb	IAmb	17 57 28.2	
	comp=Z,28nm,1.6s						
KDAK	**Kodiak Island**	38.09	327	LR	LR	18 10 56.1	
	comp=Z,433nm,19.6s,baz=100,slow=33						
EGAK	**Eagle**	38.35	342	P	P	17 57 34.6	+1.6
SML	**Sawmill**	38.57	335	P	P	17 57 36.2	+1.2
SML				IAmb	IAmb	17 58 58.2	
	comp=Z,53nm,1.8s						
SCRK	**Sand Creek**	38.57	339	P	P	17 57 34.8	-0.3
SCRK				IAmb	IAmb	17 57 39.7	
	comp=Z,14nm,1.3s						
EPYK	**Eagle Plains**	38.57	346	P	P	17 57 34.9	0.0
EPYK				IAmb	IAmb	17 57 38.2	
	comp=Z,38nm,1.7s						
F64A	**Sherman**	38.60	53	P	P	17 57 35.5	+0.1
RC01	**Rabbit Creek A**	38.66	333	P	P	17 57 34.9	-0.9
RC01				IAmb	IAmb	17 57 42.9	
	comp=Z,24nm,1.1s						
PUH	**Pauahi**	38.72	263	P	P	17 57 37.4	+0.6
PMR	**Palmer**	38.73	334	P	P	17 57 38.0	+1.7
PMR				IAmb	IAmb	17 57 39.8	
	comp=Z,27nm,1.3s						
BYL	**Byron's Ledge**	38.74	263	P	P	17 57 37.9	+0.9
SBLHI	**Steaming Bluff**	38.74	263	P	P	17 57 39.2	+2.2
UWB	**Uwekahuna B**	38.75	263	P	P	17 57 36.2	-0.9
KKO	**Keanakako`i**	38.75	263	P	P	17 57 36.5	-0.6
NPH	**North Pit**	38.76	263	P	P	17 57 37.5	+0.3
OBL	**Observatory Le**	38.76	263	P	P	17 57 36.8	-0.4
GHO	**Glory Hole Cre**	38.77	334	P	P	17 57 36.9	+0.2
GHO				IAmb	IAmb	17 57 39.6	
	comp=Z,19nm,1.2s						
HLP	**Hilina Pali**	38.83	263	P	P	17 57 37.5	-0.2
AIN	**Ainahou**	38.92	263	P	P	17 57 38.8	+0.1
DHY	**Denali Highway**	39.04	337	P	P	17 57 39.6	+0.5
G65A	**Princeton**	39.07	54	P	P	17 57 39.0	-0.4
EMMW	**East Machias**	39.10	55	P	P	17 57 39.5	-0.1
EMMW				IAmb	IAmb	17 57 43.7	
	comp=Z,69nm,1.3s						
HUH	**Hualalai**	39.12	264	P	P	17 57 41.6	+1.2
INK	**Inuvik**	39.65	349	P	P	17 57 46.0	+2.1
	comp=Z,0.9nm,0.6s,baz=178,slow=8.2,SNR=4.7						
INK	**Inuvik**	39.65	349	P	P	17 57 44.3	+0.5
INK				IAmb	IAmb	17 57 46.8	
	comp=Z,16nm,1.7s						
HDA	**Harding Lake**	39.80	338	P	P	17 57 45.2	+0.1
HDA				IAmb	IAmb	17 57 52.3	
	comp=Z,17nm,1.4s						
MCK	**McKinley**	40.00	337	P	P	17 57 48.2	+1.3
MCK				IAmb	IAmb	17 57 49.7	
	comp=Z,14nm,1.0s						
IL31		40.02	339	P	P	17 57 48.3	+1.4
IL31				IAmb	IAmb	17 57 50.3	
	comp=Z,28nm,1.6s						
ILAR	**Eielson Array**	40.02	339	P	P	17 57 49.2	+2.1
	comp=Z,3.6nm,0.8s,baz=151,slow=7.5,SNR=37						
ILAR	**Eielson Array**	40.02	339	P	P	17 57 48.6	+1.6
PRP	**Porcupine Dome**	40.14	340	P	P	17 57 48.3	+0.2
PRP				IAmb	IAmb	17 57 52.0	
	comp=Z,23nm,1.6s						
WRH	**Wood River Hil**	40.20	338	P	P	17 57 48.9	+0.4
OPA	**Opana**	40.22	268	P	P	17 57 48.5	-0.7
CCB	**Clear Creek Bu**	40.23	338	P	P	17 57 49.6	+0.9
CCB				IAmb	IAmb	17 57 52.9	
	comp=Z,26nm,2.0s						
TRF	**Thorofare Moun**	40.30	336	P	P	17 57 50.0	+0.4
TRF				IAmb	IAmb	17 57 52.7	
	comp=Z,64nm,1.9s						
CHGN	**Chignik**	40.35	323	P	P	17 57 50.0	+0.2
COLA	**College**	40.40	339	P	P	17 57 50.0	-0.1
COLA				IAmb	IAmb	17 57 54.0	
	comp=Z,17nm,1.3s						
KTH	**Kantishna Hill**	40.59	336	P	P	17 57 52.6	+0.8
NEA	**Nenana**	40.60	338	P	P	17 57 53.6	+1.8
NEA				IAmb	IAmb	17 59 00.3	
	comp=Z,23nm,0.8s						
PPLA	**Purkeypile**	40.66	334	P	P	17 57 53.1	+0.6
PPLA				IAmb	IAmb	17 57 55.9	
	comp=Z,33nm,1.3s						
FYU	**Fort Yukon**	40.81	342	P	P	17 57 54.3	+0.8
FYU				IAmb	IAmb	17 57 57.5	
	comp=Z,47nm,1.5s						
BPAW	**Bear Paw Mtn.**	40.94	336	P	P	17 57 56.2	+1.5
BPAW				IAmb	IAmb	17 57 57.0	
	comp=Z,12nm,1.0s						
SDPT	**Sand Point**	41.13	321	P	P	17 57 57.8	+1.6
BMAR	**Burnt Mountain**	41.28	343	P	P	17 57 59.2	+1.8
MLY	**Manley**	41.44	337	P	P	17 58 00.7	+1.9
MLY				IAmb	IAmb	17 58 01.5	
	comp=Z,7.4nm,0.8s						
COLD	**Coldfoot**	42.69	340	P	P	17 58 11.2	+2.3
IMAR	**Indian Mountai**	43.01	337	P	P	17 58 13.2	+1.6
TOLK	**Toolik Lake Re**	43.46	342	P	P	17 58 16.8	+1.6
TOLK				IAmb	IAmb	17 58 19.0	
	comp=Z,10nm,1.1s						
SDV	**Santo Domingo**	45.78	109	P	P	17 58 34.6	+0.1
SDV				IAmb	IAmb	18 00 14.9	
	comp=Z,6.5nm,0.6s						
TAOE	**Nuku Hiva Isla**	46.35	217	P	P	17 58 40.9	+2.0
ANM	**Nome**	46.60	332	P	P	17 58 41.2	+1.0
ANM				IAmb	IAmb	17 58 53.7	
	comp=Z,12nm,1.6s						
RDOG	**Red Dog Mine**	47.16	337	P	P	17 58 46.0	+1.5
RDOG				IAmb	IAmb	17 58 47.2	
	comp=Z,21nm,1.4s						
PETK	**Petropavlovsk-**	65.33	318	LR	LR	18 27 07.2	
	comp=Z,47nm,18.7s,baz=61,slow=34						
SPA0	**Spitsbergen Ar**	67.87	10	*e*P	P	18 01 09.5	-0.8
TIXI	**Tiksi**	69.36	342	P	P	18 01 19.1	-0.4
TIXI				IAmb	IAmb	18 01 20.7	
	comp=Z,15nm,1.7s						
NRIK	**Noril'sk**	79.33	352	P	P	18 02 18.7	+1.0
	comp=Z,0.5nm,0.4s,baz=283,slow=3.5,SNR=3.7						
PLCA	**Paso Flores**	81.41	148	LR	LR	18 31 45.5	
	comp=Z,205nm,18.3s,baz=8.0,slow=31						
FINES	**FINESS Array B**	82.97	18	P	P	18 02 38.5	+1.2
	comp=Z,2.7nm,0.7s,baz=156,slow=1.9,SNR=4.9						
FINES	**FINESS Array B**	82.97	18	P	P	18 02 36.8	-0.4
KSRS	**Korea Array**	91.06	315	LR	LR	18 38 20.4	
	comp=Z,66nm,21.1s,baz=75,slow=32						
SONM	**Songino Array**	94.09	334	P	P	18 03 32.8	+1.7
	comp=Z,0.4nm,0.6s,baz=37,slow=3.7,SNR=5.0						
SONM	**Songino Array**	94.09	334	P	P	18 03 30.0	-1.1
HHC	**Hu-ho-hao-te**	97.51	327	*e*P	P	18 03 44.5	-2.3
NJ2	**Nanjing**	100.19	317	*e*P	Pdif	18 03 57.8	-0.9
CD2	**Chengdu**	109.25	326	Pdif	Pdif	18 04 36.8	-2.4
WRA	**Warramunga Arr**	118.02	262	PKP	PKiKP	18 08 59.7	-0.1
	comp=Z,0.5nm,0.8s,baz=53,slow=2.2,SNR=2.7						
WRA	**Warramunga Arr**	118.02	262		PKPdf	18 08 59.1	-0.7
ASAR	**Alice Springs**	119.87	259	PKP	PKiKP	18 09 03.2	-0.2
	comp=Z,0.4nm,0.7s,baz=64,slow=2.4,SNR=6.5						
ASAR	**Alice Springs**	119.87	259		PKPdf	18 09 02.8	-0.5
CMAR	**Chiang Mai Arr**	121.98	322	PKP	PKiKP	18 09 08.2	+0.4
	comp=Z,0.4nm,0.7s,baz=336,slow=2.6,SNR=4.4						
CMAR	**Chiang Mai Arr**	121.98	322		PKPdf	18 09 06.9	-0.7

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*IDC **21** 17:54:52.5±2.8, 20°.02S×71°.28W, h0^{km}, mb4.1/1, mb1 3.8/4, mb1mx3.5/38, mbtmp3.8/4, ML3.6/3, Error ellipse: s-maj=55.6km s-min=21.3km az=66.0*

*GUC **21** 17:54:56.6±0.9, 19°.92S×71°.10W, h55^{km}±15^{km}, ML3.7*

ISC 21 17:54:56.1±2.2, **19°.92S**±0°.04×**71°.03W**±0°.09, **h16**^{km}±12^{km}, **n17**, σ**0^{s}.95**/29, **8C, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	0.91	70	IAML		17 55 28.7	
	comp=N,2µm,0.8s						
TA01	**Diego Aracena**	1.02	129	⇑*i*P	Pg	17 55 15.7	-0.3
TA01				*i* S	Sn	17 55 29.3	-0.6
TA01				IAML		17 55 30.3	
	comp=E,2µm,0.3s						
PATCX	**Punta Patache**	1.22	138	⇑*i*P	Pb	17 55 18.5	-0.4
PATCX				*i* S	Sn	17 55 34.3	-0.5
PB11	**IPOC Station P**	1.30	83	*i* P	Pn	17 55 19.9	+0.1
PB11				*i* S	Sb	17 55 37.7	+0.9
PB11				IAML		17 55 38.8	
	comp=N,4µm,0.3s						
PB12	**IPOC Station P**	1.46	27	⇑*i*P	Pn	17 55 21.5	-0.3
PB12				*i* S	Sn	17 55 40.5	-0.1
PB12				IAML		17 55 46.8	
	comp=E,973nm,0.4s						
AP01	**Chacalluta**	1.67	23	⇑*i*P	Pn	17 55 24.0	-0.7
AP01				*i* S	Sn	17 55 44.7	-1.1
AP01				IAML		17 55 57.4	
	comp=N,2µm,0.2s						
GO01	**Chusmiza**	1.74	82	⇑*i*P	Pn	17 55 26.8	+0.6
GO01				*e*P	Pb	17 55 27.5	-0.5
GO01				*i* S	Sb	17 55 50.1	+0.2
PB02	**IPOC Station P**	1.75	143	⇑*i*P	Pn	17 55 25.4	-0.5
PB02				*i* S	Sn	17 55 47.8	-0.3
PB02				IAML		17 56 00.1	
	comp=N,4µm,0.4s						
PB08	**IPOC Station P**	1.78	98	⇑*i*P	Pn	17 55 26.9	+0.4
PB08				*i* S	Sb	17 55 50.5	-0.3
PB08				IAML		17 55 53.9	
	comp=N,877nm,0.3s						
PB01	**IPOC Station P**	1.83	128	*e*P	Pn	17 55 27.5	+0.5
PB01				*i* S	Sn	17 55 49.5	-0.4
PB01				IAML		17 55 59.9	
	comp=E,1µm,0.4s						
PB07	**IPOC Station P**	2.09	150	⇑*i*P	Pn	17 55 30.7	-0.1
PB07				*i* S	Sb	17 56 00.1	+0.4
PB16	**IPOC Station P**	2.13	43	*e*P	Pn	17 55 32.1	+0.5
PB16				*i* S	Sb	17 56 01.5	+0.4
PB16				IAML		17 56 07.9	
	comp=E,749nm,0.3s						
LVC	**Limon Verde**	3.33	144	Pn	Pn	17 55 48.9	+1.0
	comp=E,2.9nm,0.3s,baz=22,slow=7.3,SNR=31						
LVC				Sn	Sn	17 56 28.2	+0.9
	comp=E,13nm,0.3s,baz=129,slow=22,SNR=8.6						
LVC				Lg	Lg	17 56 40.6	
	comp=E,27nm,0.3s,baz=176,slow=15,SNR=4.1						
LPAZ	**La Paz**	4.54	38	Pn	Pn	17 56 08.2	+3.4
	comp=E,1.5nm,0.3s,baz=231,slow=7.2,SNR=24						
SIV	**San Ignacio**	10.25	69	Pn	Pn	17 57 24.3	+1.6
	comp=E,0.8nm,0.3s,baz=276,slow=9.0,SNR=16						
TORD	**Torodi Ar. Bea**	78.72	72	P	P	18 06 57.4	-0.9
	comp=E,1.0nm,0.6s,baz=255,slow=5.1,SNR=5.9						
MKAR	**Makanchi Array**	145.46	33	PKPbc	PKPab	18 14 33.6	-0.1
	comp=E,0.1nm,0.5s,baz=308,slow=3.9,SNR=1.9						

IDC 21 18:03:57.3±1.8, **7°.16N**×**93°.84E, h0**^{km}, **mb3.3**/3, **mb1 3.4**/4, **mb1mx3.2**/41, **mbtmp3.3**/4, **ML3.7**/1, **Error ellipse: s-maj=60.7km s-min=32.1km az=57.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	12.28	23	Pn	Pn	18 06 51.8	-1.8
	0.1nm,0.3s,baz=215,slow=7.6,SNR=2.1						
MKAR	**Makanchi Array**	40.72	348	P	P	18 11 40.6	+0.9
	0.4nm,0.5s,baz=166,slow=7.9,SNR=7.0						
ASAR	**Alice Springs**	49.69	129	P	P	18 12 51.4	0.0
	0.3nm,0.9s,baz=300,slow=7.9,SNR=2.0						
BRTR	**Keskin Array B**	62.67	311	P	P	18 14 23.4	-0.8
	0.3nm,0.7s,baz=86,slow=7.8,SNR=2.0						

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*IDC **21** 18:07:38.6±0.9, 6°.78N×72°.96W, h162^{km}±16^{km}, mb3.2/4, mb1 3.6/6, mb1mx3.1/43, mbtmp3.8/6, MS3.5/2, Ms1 3.5/2, ms1mx3.0/23, Error ellipse: s-maj=48.1km s-min=7.9km az=132.0*

*RSNC **21** 18:07:39.8±1.0, 6°.81N×73°.10W, h153^{km}±4^{km}, ML3.5, Mw3.7*

ISC 21 18:07:38.6±0.8, **6°.84N**±0°.03×**73°.08W**±0°.04, **h161**^{km}±5^{km}, **n43**, σ**1^{s}.48**/71, **mb3.5**/4, **3C-4D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	0.27	202	⇑*i*P	Pn	18 08 00.3	-0.4
BARC				*e*S	Sn	18 08 15.5	-2.1
BARC				*i*		18 08 17.9	
	comp=Z,1µm,0.4s						
PAMC	**Pamplona, Colo**	0.62	38	⇓*i*P	Pn	18 08 03.2	+0.7
PAMC				*e*S	Sn	18 08 20.6	-0.1
PAMC				*i*		18 08 21.8	
	comp=Z,310nm,0.7s						
BRRC	**Barranca, Sant**	0.68	293	⇑*i*P	Pn	18 08 02.3	+0.1
BRRC				*e*S	Sn	18 08 19.8	-0.3
BRRC				*i*		18 08 22.0	
	comp=Z,384nm,0.2s						
RUSC	**La Rusia**	0.94	180	⇓*i*P	Pn	18 08 04.2	-0.4
RUSC				*e*S	Sn	18 08 23.0	-1.5
RUSC				*i*		18 08 24.6	
	comp=Z,181nm,0.2s						
TAMC	**Tame, Arauca**	1.35	107	⇓*i*P	Pn	18 08 08.5	+0.9
TAMC				*e*S	Sn	18 08 29.0	-0.7
TAMC				*i*		18 08 29.2	
	comp=Z,293nm,0.3s						
PTBC	**PUERTO BERRIO,**	1.40	258	⇑*i*P	Pn	18 08 06.9	-1.1
PTBC				*e*S	Sn	18 08 28.9	-1.6
PTBC				*i*		18 08 35.5	
	comp=Z,666nm,0.3s						
OCAC	**Ocana**	1.41	350	*e*P	Pn	18 08 08.6	+0.3
OCAC				*e*S	Sn	18 08 31.3	+0.2
OCAC				*i*		18 08 35.1	
	comp=Z,449nm,0.4s						
SPBC	**San Pablo de B**	1.54	220	*e*P	Pn	18 08 09.2	-0.4
SPBC				*e*S	Sn	18 08 31.6	-1.7
SPBC				*i*		18 08 38.5	
	comp=Z,794nm,0.4s						
ZARC	**Zaragoza, Cauc**	1.88	290	*e*P	Pn	18 08 12.7	-0.3
ZARC				*e*S	Sn	18 08 39.3	-0.2
ZARC				*i*		18 08 44.8	
	comp=Z,446nm,0.2s						
SMLC	**San Martn de**	2.18	333	*e*P	Pn	18 08 16.8	+0.3
SMLC				*e*S	Sn	18 08 46.4	+0.6
SMLC				*i*		18 08 50.1	
	comp=Z,357nm,0.1s						
NORC	**Norcasia**	2.18	235	*e*P	Pn	18 08 16.0	-0.6
NORC				*e*S	Sn	18 08 45.0	-0.9
NORC				*i*		18 08 48.1	
	comp=Z,387nm,0.2s						
CHIC	**Chingaza**	2.29	196	⇓*e*P	Pn	18 08 18.0	-0.3
CHIC				*e*S	Sn	18 08 48.8	-0.1
CHIC				*i*		18 08 51.5	
	comp=Z,93nm,0.2s						
ROSC	**El Rosal**	2.34	212	P	Pn	18 08 20.1	+1.3
	comp=Z,79nm,0.3s,baz=106,slow=14,SNR=46						
ROSC				S	Sn	18 08 50.3	+0.5
	comp=Z,81nm,0.3s,baz=102,slow=17,SNR=8.7						
ROSC	**El Rosal**	2.34	212	*e*P	Pn	18 08 19.9	+1.1
ROSC				*e*S	Sn	18 08 52.0	+2.3
ROSC				*i*		18 08 58.2	
	comp=Z,396nm,0.5s						
HELC	**Santa Helena**	2.52	255	*e*P	Pn	18 08 21.0	+0.1
HELC				*e*S	Sn	18 08 53.5	+0.1
HELC				*i*		18 08 59.6	
	comp=Z,216nm,0.6s						
UREC	**San Jos de Ur**	2.59	291	*e*P	Pn	18 08 20.2	-1.2
UREC				*e*S	Sn	18 08 51.6	-2.9
UREC				*i*		18 09 04.0	
	comp=Z,200nm,0.2s						
VILC	**Villavicencio,**	2.78	193	*e*P	Pn	18 08 23.5	-0.4
VILC				*e*S	Sn	18 09 00.0	+1.1
VILC				*i*		18 09 07.3	
	comp=Z,140nm,0.4s						
GUY2C	**Guyana, Caldas**	2.78	235	*e*P	Pn	18 08 24.5	+0.3
GUY2C				*e*S	Sn	18 09 03.0	+3.5
GUY2C				*i*		18 09 04.8	
	comp=Z,240nm,0.9s						
PTGC	**Puerto Gaitan,**	2.79	160	*e*P	Pn	18 08 23.2	-0.7
PTGC				*e*S	Sn	18 08 56.6	-2.4
RREF	**El Recreo**	2.96	230	*e*P	Pn	18 08 27.4	+0.8
RREF				*e*S	Sn	18 09 05.5	+1.8
CBOC	**Ciudad Bolivar**	3.07	252	*e*P	Pn	18 08 28.0	+0.5
CBOC				*e*S	Sn	18 09 05.7	+0.3
CBOC				*i*		18 09 18.7	
	comp=Z,101nm,0.8s						
CODC	**Agustn Codazz**	3.09	353	*e*P	Pn	18 08 27.8	+0.1
CODC				*e*S	Sn	18 09 05.7	-0.1
CODC				*i*		18 09 14.1	
	comp=Z,82nm,0.5s						
TOLC	**Tolima**	3.16	225	*e*P	Pn	18 08 29.7	+0.9
TOLC				*e*S	Sn	18 09 10.6	+3.0
TOLC				*i*		18 09 11.7	
	comp=Z,93nm,0.3s						
SDV	**Santo Domingo**	3.16	50	P	Pn	18 08 29.7	+1.0
	comp=Z,24nm,0.3s,baz=222,slow=3.4,SNR=100						
SDV				S	Sn	18 09 06.3	-1.2
	comp=Z,22nm,0.3s,baz=360,slow=11,SNR=30						
SDV	**Santo Domingo**	3.16	50	*e*P	Pn	18 08 29.6	+0.8
SDV				*e*S	Sn	18 09 06.8	-0.7
ANIL	**Santa Ana**	3.28	225	*e*P	Pn	18 08 31.5	+1.2
ANIL				*e*S	Sn	18 09 11.4	+1.0
ANIL				*i*		18 09 16.7	
	comp=Z,437nm,0.5s						
ORTC	**Ortega, Tolima**	3.62	217	*e*P	Pn	18 08 34.4	0.0
ORTC				*e*S	Sn	18 09 17.6	-0.3
ORTC				*i*		18 09 21.3	
	comp=Z,91nm,0.6s						
SJCC	**San Jacinto, C**	3.67	326	*e*P	Pn	18 08 34.1	-0.9
SJCC				*e*S	Sn	18 09 15.9	-3.1
SJCC				*i*		18 09 20.6	
	comp=Z,71nm,0.4s						
PLMC	**San Jos del P**	3.72	239	*e*P	Pn	18 08 35.9	+0.3
PLMC				*e*S	Sn	18 09 16.8	-3.2
PLMC				*i*		18 09 29.7	
	comp=Z,85nm,0.2s						
SMRC	**Santa Marta, M**	4.44	345	*e*P	Pn	18 08 45.1	+0.2
SMRC				*e*S	Sn	18 09 33.5	-3.2
SMRC				*i*		18 09 39.2	
	comp=Z,32nm,0.3s						
PTAC	**Punta Ardita,**	4.70	274	*e*P	Pn	18 08 47.6	-0.8
PTAC				*i*		18 09 54.3	
	comp=Z,44nm,0.3s						
MACC	**Macarena, Meta**	4.73	189	*e*P	Pn	18 08 46.7	-2.1
MACC				*e*S	Sn	18 09 38.5	-5.1
MACC				*i*		18 09 42.3	
	comp=Z,32nm,0.9s						
GARC	**Garzon, Huila**	5.21	208	*e*P	Pn	18 08 54.2	-1.1
GARC				*i*		18 10 16.6	
	comp=Z,34nm,0.2s						
PCON	**Cinco Dias**	5.57	217	*e*P	Pn	18 09 00.8	+0.4
PCON				*i*		18 10 17.4	
	comp=Z,9.9nm,0.8s						
POPC	**Popayan, Colom**	5.58	220	*e*P	Pn	18 08 58.4	-1.7
POPC				*i*		18 10 08.3	
	comp=Z,6.3nm,0.6s						
CMBC	**Cumbal**	7.53	219	*e*		17 59 51.8	
ATAH	**Atahualpa**	14.86	201	LR	LR	18 18 28.0	
	comp=Z,210nm,18.2s,baz=14,slow=44						
NNA	**Nana**	19.08	191	LR	LR	18 19 58.4	
	comp=Z,139nm,20.5s,baz=356,slow=39						
TXAR	**Lajitas Array**	36.48	312	P	P	18 14 29.6	+1.1
	comp=Z,0.2nm,0.4s,baz=126,slow=8.6,SNR=4.5						
ULM	**Lac du Bonnet**	47.28	340	P	P	18 15 55.1	-0.5
	comp=Z,1.0nm,0.3s,baz=154,slow=7.8,SNR=2.6						
PDAR	**Pinedale Array**	48.08	324	P	P	18 16 03.3	+1.0
	comp=Z,0.2nm,0.6s,baz=137,slow=9.4,SNR=2.3						
YKA	**Yellowknife Ar**	63.26	340	P	P	18 17 50.4	+0.6
	comp=Z,0.6nm,0.5s,baz=132,slow=7.1,SNR=13						
WRA	**Warramunga Arr**	150.38	241	PKPbc	PKPbc	18 27 11.4	-0.5
	comp=Z,0.3nm,0.5s,baz=106,slow=2.8,SNR=2.0						

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*NDI **21** 18:08:23.6±1.4, 7°.04N×94°.77E, h10^{km}, ML4.0, mb4.4(NEIC)*

*MOS **21** 18:08:24.3±0.9, 7°.53N×94°.21E, h17^{km}, mb4.5/15, Error ellipse: s-maj=11.7km s-min=6.5km az=112.0*

*IDC **21** 18:08:24.1±0.6, 7°.61N×94°.27E, h0^{km}, mb4.1/18, mb1 4.2/21, mb1mx4.0/50, mbtmp4.1/21, ML4.0/3, MS3.8/9, Ms1 3.8/9, ms1mx3.4/53, Error ellipse: s-maj=19.9km s-min=14.4km az=50.0*

*NEIC **21** 18:08:25.4±2.0, 7°.65N±0°.08×94°.27E±0°.08, h9^{km}±4^{km}, mb4.4/29, Error ellipse: s-maj=12.7km s-min=9.8km az=47.0*

*DJA **21** 18:08:26.0±0.4, 8°N±4°×9°4E±°, h10^{km}, M4.6/11, mb4.6/11, mB4.9/2, MLv4.6/3, Mw(mB)4.2/2*

ISC 21 18:08:28.0±0.3, **7°.65N**±0°.04×**94°.29E**±0°.05, **h24**^{km}, **n150**, σ**1^{s}.45**/152, **mb4.4**/40, **MS4.1**/5, **7C-5D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	**CAMPBELL BAY**	0.73	209	*e*P	Pb	18 08 41.0	-1.2
CMBY				*e*S	Sb	18 08 51.4	-0.4
CMBY				IAML		18 08 56.0	
	comp=N,52µm,0.4s						
CMBY				IAML		18 08 56.5	
	comp=E,32µm,0.3s						
LHMI	**Lhok Sumawe**	3.58	132		Pn	18 09 22.0	-0.1
MLSI	**Meulaboh, Aceh**	3.97	148	P	Pn	18 09 28.3	+0.8
PBA	**Port Blair**	4.26	339	*e*P	Pb	18 09 38.1	-4.2
PBA				IAML		18 09 58.5	
	comp=N,42nm,0.3s						
PBA				IAML		18 09 60.0	
	comp=E,44nm,0.0s						
TPTI		5.23	146	P	Pn	18 09 46.9	+2.1
DGPR	**DIGLIPUR**	5.65	346	*e*P	Pn	18 09 57.4	+6.9
DGPR				*e*S	Sb	18 11 07.2	-6.1
PSI	**Prapat**	6.68	136	Pn	Pn	18 10 05.1	+0.3
	comp=E,3.0nm,0.3s,baz=326,slow=15,SNR=17						
PSI				Sn	Sn	18 11 21.3	+1.0
	comp=E,1.7nm,0.3s,baz=9.5,slow=12,SNR=1.2						
PSI				LR	LR	18 12 58.5	
	comp=E,531nm,18.3s,baz=298,slow=41						
PSI	**Prapat**	6.68	136	P	Pn	18 10 04.0	-0.8
KULM	**Kulim**	6.75	110		Pn	18 10 04.3	-1.4
KULM				Sn	Sn	18 11 18.9	-2.9
RPSI	**Rantau Prapat**	6.75	137		Pn	18 10 05.0	-0.8
RPSI	**Rantau Prapat**	6.75	137		Pn	18 10 05.1	-0.7
RPSI					Sn	18 11 21.3	-0.7
GSI	**Gunungsitoli**	7.11	152	Pn	Pn	18 10 09.2	-1.5
IPM	**Ipoh**	7.41	115		Pn	18 10 12.6	-2.2
IPM				Sn	Sn	18 11 33.9	-4.3
BKNI	**Bangkinang**	9.92	137	Pn	Pn	18 10 50.3	+1.1
PDSI	**Padang**	10.51	144	P	Pn	18 10 57.3	0.0
	comp=E,11nm,0.8s						
PBKT	**Sadao Pong**	11.01	36		Pn	18 11 05.9	+1.8
MYKOM	**Kota Tinggi**	11.17	121		Pn	18 11 04.7	-1.6
CM31	**Chiang Mai Arr**	11.66	22		Pn	18 11 14.4	+1.4
CMAR	**Chiang Mai Arr**	11.66	22	Pn	Pn	18 11 14.5	+1.5
	comp=E,0.7nm,0.3s,baz=212,slow=14,SNR=28						
CMAR				LR	LR	18 15 38.3	
	comp=E,152nm,18.3s,baz=230,slow=37						
CMAR	**Chiang Mai Arr**	11.66	22	*e*P	Pn	18 11 16.0	+3.0
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	11.66	22	Pn	Pn	18 11 15.0	+2.0
CHTO	**Chiang Mai**	11.98	22	P	Pn	18 11 19.7	+2.2
CHTO	**Chiang Mai**	11.98	22		Pn	18 11 19.7	+2.2
PALK	**Pallekele**	13.47	269	Pn	Pn	18 11 38.1	+0.2
	comp=Z,0.2nm,0.3s,baz=56,slow=12,SNR=2.1						
PALK				Sn	Sn	18 13 56.5	-11
	comp=Z,0.3nm,0.3s,baz=21,slow=18,SNR=2.4						
PALK				LR	LR	18 16 24.6	
	comp=Z,170nm,21.2s,baz=99,slow=36						
PALK	**Pallekele**	13.47	269	P	Pn	18 11 37.7	-0.2
PALK	**Pallekele**	13.47	269	Pn	Pn	18 11 37.6	-0.2
LWLI	**Liwa**	15.92	142	P	Pn	18 12 11.1	+0.3

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      comp=Z,19nm,0.7s
SLVN  Son La            16.47  33   P      Pn      18 12 19.1 +1.4
KSM   Kuching           17.11 110   P      P       18 12 28.6 +1.3
KSM                                 IAmb   IAmb    18 12 31.1
      comp=Z,17nm,1.0s
HYB   Hyderabad         18.15 304 i P      Pn      18 12 38.0 -0.7
HYB                               e                18 12 47.0
SBUM  Sibu              18.59 105   P      Pn      18 12 44.3 +0.2
KMI   Kunming           19.16  24   P      Pn      18 12 54.4 +3.3
KMI                                 pP     pwP     18 13 01.6 +2.4
KMI                                 sP     sP      18 13 07.3 +8.6
KMI                                 S      S       18 16 28.5 +2.6
KMI                                 sS     pS      18 16 45.3 +1.0
LEM   Lembang           19.59 137   LR     LR      18 21 06.6
      comp=Z,150nm,18.3s,baz=254,slow=39
RAMN  Ramite            20.53 340  eP      Pn      18 13 06.9 -0.5
      comp=Z,60nm,0.9s
TAPN  Taplejung         20.56 343  eP      P       18 13 05.9 +0.5
      comp=Z,60nm,0.8s
JIRN  Jiri              21.32 340  eP      P       18 13 13.2 -0.6
PKI   Pulchoki          21.52 338  eP      P       18 13 15.9 +0.1
      comp=Z,27nm,0.7s
PKIN  Phulchoki         21.53 338  eP      P       18 13 16.3 +0.4
      comp=Z,22nm,0.7s
GUN   Gumba             21.66 339  eP      P       18 13 17.0 -0.4
DMN   Daman             21.67 337  eP      P       18 13 17.4 +0.1
KKN   Kakani            21.77 338  eP      P       18 13 17.9 -0.5
LSA   Lhasa             22.13 353   P      P       18 13 21.9 -0.6
LSA                                 pmax   pmax
      comp=Z,12nm,0.7s
LSA   Lhasa             22.13 353   P      P       18 13 21.9 -0.6
LSA                                 IAmb   IAmb    18 13 33.9
      comp=Z,12nm,0.7s
GKN   Gorkha            22.20 337  eP      P       18 13 22.7 -0.3
DANN  Dangsing          22.86 336  eP      P       18 13 29.5 -0.6
      comp=Z,43nm,0.8s
H08S3 Diego Garcia H    26.51 236   T      T       18 41 02.6
      baz=55,slow=75,SNR=131
H08S2 Diego Garcia H    26.52 236   T      T       18 40 54.5
      baz=55,slow=75,SNR=100
H08S1 Diego Carcia H    26.53 236   T      T       18 40 41.1
      baz=55,slow=75,SNR=15
MPSI  Mapaga            26.55 105   P      P       18 14 05.5 +1.2
      comp=Z,19nm,1.0s
GTA   Gaotai            32.01   8  eP      P       18 14 53.8 +1.1
GTA                                 pP     pwP     18 15 03.3 +1.1
NIL   Nilore            32.36 326   P      P       18 14 54.3 -1.5
NIL                                 pmax   pmax
      comp=Z,10.0nm,1.0s
NIL   Nilore            32.36 326   P      P       18 14 54.3 -1.5
KBL   Kabul             35.43 323   P      P       18 15 21.8 -0.9
KBL                                 pmax   pmax
      comp=Z,4.0nm,0.9s
KBL   Kabul             35.43 323   P      P       18 15 21.8 -0.9
KBL                                 IAmb   IAmb    18 15 24.5
      comp=Z,3.9nm,0.9s
KSH   Kashi             35.73 335   P      P       18 15 26.0 +0.9
KSH                                 pP     pwP     18 15 38.1 +3.7
KSH                                 PP     PP      18 16 47.6 +1.1
KSH                                 S      S       18 20 58.1 -2.7
KSH                                 PcS    PcS     18 21 40.4 +0.1
KSH   Kashi             35.73 335   ScS    ScS     18 25 39.3 -3.5
HHC   Hu-ho-hao-te      36.47  22  eP      P       18 15 33.9 +2.5
WMQ   Urumqi            36.48 352  eP      P       18 15 32.3 +0.9
SIJI  Sorong            37.84 101   P      P       18 15 44.2 +1.0
      comp=Z,5.1nm,0.8s,baz=280,slow=8.5,SNR=2.4
ARSB  Arslanbob         38.50 334   P      P       18 15 48.5 -0.2
ARSB                                pmax   pmax
      comp=Z,6.0nm,0.6s
ARSB  Arslanbob         38.50 334   P      P       18 15 48.5 -0.2
ARSB                                IAmb   IAmb    18 16 01.4
      comp=Z,5.5nm,0.6s
AAK   Ala-Archa         38.97 337⇑eP      P       18 15 53.6 +1.1
AAK                                 pmax   pmax
      comp=Z,2.0nm,0.9s
AAK   Ala-Archa         38.97 337   P      P       18 15 52.8 +0.3
MKAR  Makanchi Array    40.33 347   P      P       18 16 04.0 +0.3
      comp=Z,5.6nm,0.9s,baz=164,slow=8.5,SNR=42
MKAR  Makanchi Array    40.33 347   P      P       18 16 02.6 -1.1
MK31  Makanchi Array    40.33 347   P      P       18 16 03.3 -0.4
MK31                                pmax   pmax
      comp=Z,4.0nm,0.9s
MK31  Makanchi Array    40.33 347   P      P       18 16 03.3 -0.4
MAKZ  Makanchi          40.41 347   P      P       18 16 03.7 -0.7
MAKZ                                pmax   pmax
      comp=Z,5.0nm,1.0s
MAKZ  Makanchi          40.41 347   P      P       18 16 03.7 -0.7
MAKZ                                IAmb   IAmb    18 16 05.6
      comp=Z,5.1nm,0.9s
KK31  Karatay Array     41.02 333   P      P       18 16 09.2 -0.3
KK31                                pmax   pmax
      comp=Z,3.0nm,1.1s
KK31  Karatay Array     41.02 333   P      P       18 16 09.2 -0.3
KKAR  Karatay Array     41.02 333   P      P       18 16 09.3 -0.1
KKAR  Karatay Array     41.02 333   P      P       18 16 09.3 -0.1
SONM  Songino Array     41.34  12   P      P       18 16 13.0 +0.8
      comp=Z,1.9nm,0.9s,baz=194,slow=7.7,SNR=9.7
SONM  Songino Array     41.34  12   P      P       18 16 12.4 +0.3
SONM                                pmax   pmax
      comp=Z,2.0nm,1.0s
SONM  Songino Array     41.34  12   P      P       18 16 12.4 +0.3
ULN   Ulaanbaatar       41.52  13⇓eP      P       18 16 14.6 +1.0
ULN                                 pmax   pmax
      comp=Z,2.0nm,1.2s
DGZ   Jazzator, Alta    42.30 353⇓eP      P       18 16 22.8 +2.8
DGZ                                 pmax   pmax
      comp=Z,14nm,4.0s
GEYT  Alibeck           44.46 318   P      P       18 16 38.1 +0.7
      comp=Z,6.1nm,0.6s,baz=139,slow=7.5,SNR=17
GEYT  Alibeck           44.46 318   P      P       18 16 37.7 +0.2
GYA0B ALIBECK ARRAY     44.46 318   P      P       18 16 38.0 +0.5
GYA0B                               IAmb   IAmb    18 16 38.8
      comp=Z,5.6nm,0.6s
TLY   Talaya            44.56   8⇓iP      P       18 16 39.7 +1.7
TLY                                 pmax   pmax
      comp=Z,2.0nm,1.2s
KURK  Kurchatov         44.86 346ceP      P       18 16 40.7 +0.4
KURK                                pmax   pmax
      comp=Z,7.0nm,1.0s
KURK  Kurchatov         44.86 346   P      P       18 16 40.4 +0.1
KURK                                IAmb   IAmb    18 16 47.7
      comp=Z,5.6nm,0.8s
ZAA0  Zalesovo Array    46.79 352   P      P       18 16 56.1 +0.6
ZAA0                                IAmb   IAmb    18 17 04.6
      comp=Z,6.1nm,0.9s
ZALV  Zalesovo Beam     46.79 352   P      P       18 16 56.4 +0.8
      comp=Z,3.1nm,0.4s,baz=178,slow=7.9,SNR=23
ZALV  Zalesovo Beam     46.79 352   P      P       18 16 55.6 +0.1
WB0   Warramunga Arr    47.97 125   P      P       18 17 03.7 -1.6
WRA   Warramunga Arr    48.02 125   P      P       18 17 04.3 -1.4
      comp=Z,0.7nm,0.7s,baz=306,slow=8.3,SNR=10
WRA                                 LR     LR      18 38 29.7
      comp=Z,280nm,20.7s,baz=75,slow=38
WRA   Warramunga Arr    48.02 125 i P      P       18 17 05.3 -0.4
WRA                                 pmax   pmax
      comp=Z,1.0nm,0.7s
WRA   Warramunga Arr    48.02 125   P      P       18 17 04.1 -1.5
WRAB  Tennant Creek     48.02 125⇓eP      P       18 17 04.3 -1.4
WRAB                                pmax   pmax
      comp=Z,13nm,2.5s
WR0   Warramunga Arr    48.19 125   P      P       18 17 05.9 -1.1
WR0                                 IAmb   IAmb    18 17 26.9
      comp=Z,4.6nm,1.0s
BRVK  Borovoye          49.30 341⇑eP      P       18 17 14.9 -0.1
BRVK                                pmax   pmax
      comp=Z,3.0nm,0.8s
BRVK  Borovoye          49.30 341   P      P       18 17 14.6 -0.4
BRVK                                IAmb   IAmb    18 17 16.2
      comp=Z,4.4nm,1.1s
RAYN  Ar Rayn           49.31 294   P      P       18 17 16.1 +0.5
RAYN                                pmax   pmax
      comp=Z,9.0nm,0.9s
RAYN  Ar Rayn           49.31 294   P      P       18 17 16.1 +0.5
ASAR  Alice Springs     49.67 130   P      P       18 17 17.2 -1.1
      comp=Z,0.6nm,0.5s,baz=303,slow=7.6,SNR=21
ASAR                                LR     LR      18 40 08.5
      comp=Z,237nm,20.3s,baz=55,slow=38
ASAR  Alice Springs     49.67 130   P      P       18 17 17.4 -0.9
ASAR  Alice Springs     49.67 130   P      P       18 17 17.4 -0.9
GUMO  Guam              49.99  79   LR     LR      18 36 46.7
      comp=Z,198nm,20.4s,baz=33,slow=34
ABKAR Akbulak array     50.49 331   P      P       18 17 23.4 -0.7
OPO   Ambohidratompo    53.26 240   P      P       18 17 46.3 +0.8
      comp=Z,1.5nm,0.5s,baz=98,slow=19,SNR=1.7
GNI   Garni             54.69 314   LR     LR      18 44 36.5
      comp=Z,93nm,18.6s,baz=308,slow=40
SVE   Sverdlovsk        55.66 338  eP      P       18 18 02.7 +0.7
ARU   Arti              56.15 337c iP      P       18 18 06.4 +0.8
ARU                                 S      S       18 25 58.6 +5.4
ARU                                 SS     SS      18 29 44.6 +4.8
ARU                                 pmax   pmax
      comp=Z,8.0nm,1.2s
KMBO  Kilima Mbogo      57.54 264   P      P       18 18 17.7 +1.2
      comp=Z,0.6nm,0.4s,baz=56,slow=13,SNR=3.7
KMBO  Kilima Mbogo      57.54 264   P      P       18 18 15.2 -1.3
KMBO                                pmax   pmax
      comp=Z,3.0nm,1.0s
KMBO  Kilima Mbogo      57.54 264   P      P       18 18 15.2 -1.3
KMBO                                IAmb   IAmb    18 18 26.2
      comp=Z,3.3nm,1.0s
YAK   Yakutsk           60.16  18⇑eP      P       18 18 33.9 +0.4
YAK                                 pmax   pmax
      comp=Z,7.0nm,0.9s
NRIK  Noril'sk          61.77 357   P      P       18 18 44.2 -0.1
      comp=Z,1.5nm,0.6s,baz=125,slow=7.4,SNR=2.2
NRIK  Noril'sk          61.77 357⇑eP      P       18 18 45.5 +1.2
NRIK                                pmax   pmax
      comp=Z,1.0nm,0.5s
BRTR  Keskin Array B    62.68 311   P      P       18 18 49.4 -1.9
      comp=Z,1.1nm,0.6s,baz=123,slow=6.8,SNR=10
BRTR                                LR     LR      18 48 10.7
      comp=Z,129nm,18.3s,baz=320,slow=38
BRTR  Keskin Array B    62.68 311   P      P       18 18 48.8 -2.4
BR131 Keskin Array S    62.68 311   P      P       18 18 49.0 -2.2
BR131                               pmax   pmax
      comp=Z,11nm,1.8s
BR131 Keskin Array S    62.68 311   P      P       18 18 49.0 -2.2
OBN   Obninsk           65.64 328⇑eP      P       18 19 09.9 -0.2
OBN                               e                18 19 41.6
OBN                               e                18 21 34.9
OBN                                 pmax   pmax
      comp=Z,54nm,2.9s
AKASG Malin Array Be    68.41 322   P      P       18 19 26.4 -1.4
      comp=Z,0.2nm,0.3s,baz=88,slow=4.6,SNR=2.4
AKASG Malin Array Be    68.41 322   P      P       18 19 26.2 -1.7
AKASG                               pmax   pmax
      comp=Z,1.0nm,1.0s
AKASG Malin Array Be    68.41 322   P      P       18 19 26.2 -1.7
VRI   Vrincioaia        68.96 316   P      P       18 19 31.0 -0.4
BURAR Bucovina Array    70.30 318   P      P       18 19 38.9 -0.9
BURAR Bucovina Array    70.30 318   P      P       18 19 38.9 -0.9
LIT   Litokhoron        71.19 310   P      P       18 19 43.1 -2.2
LIT                                 pmax   pmax
      comp=Z,5.0nm,0.9s
LIT   Litokhoron        71.19 310   P      P       18 19 43.1 -2.2
LIT                                 IAmb   IAmb    18 19 50.8
      comp=Z,4.6nm,0.9s
VSU   Vasula            71.85 329⇓eP      P       18 19 49.7 +0.9
FIA1  FINESS Array S    72.97 332   P      P       18 19 54.9 -0.5
FINES FINESS Array B    72.97 332   P      P       18 19 54.5 -0.8
      comp=Z,3.9nm,0.8s,baz=104,slow=4.4,SNR=11
FINES FINESS Array B    72.97 332 i P      P       18 19 55.2 -0.2
FINES                               pmax   pmax
      comp=Z,4.0nm,0.8s
ARCES ARCESS Array B    75.52 340   P      P       18 20 10.2 +0.1
      comp=Z,1.3nm,0.7s,baz=69,slow=6.9,SNR=3.9
ARCES ARCESS Array B    75.52 340   P      P       18 20 10.0 -0.1
ARCES ARCESS Array B    75.52 340   P      P       18 20 10.0 -0.1
BOSA  Boshof            75.59 238   P      P       18 20 11.7 +0.2
      comp=Z,1.9nm,0.6s,baz=132,slow=4.5,SNR=4.9
BOSA  Boshof            75.59 238   P      P       18 20 11.6 +0.2
BOSA                                pmax   pmax
      comp=Z,30nm,1.7s
BOSA  Boshof            75.59 238   P      P       18 20 11.6 +0.2
GERES GERESS Array B    78.08 318   P      P       18 20 24.8 -0.4
      comp=Z,1.1nm,0.8s,baz=91,slow=5.3,SNR=8.1
GERES GERESS Array B    78.08 318   P      P       18 20 24.4 -0.8
NB2   NORSAR Subarra    79.99 331   P      P       18 20 34.3 -1.0
      comp=Z,6.5nm,1.1s,baz=92,slow=5.6
NOA   NORSAR Array B    79.99 331   P      P       18 20 34.5 -0.7
      comp=Z,1.1nm,0.7s,baz=93,slow=5.8,SNR=2.9
TORD  Torodi Ar. Bea    90.79 283   P      P       18 21 29.5 -0.6
      comp=Z,0.5nm,0.8s,baz=91,slow=7.2,SNR=2.5
TORD  Torodi Ar. Bea    90.79 283   P      P       18 21 29.1 -1.0
IMAR  Indian Mountai    91.78  22   P      P       18 21 33.8 +0.2
PDAR  Pinedale Array   125.32  21   PKP    PKiKP   18 27 28.6 +0.7
      comp=Z,0.6nm,0.9s,baz=290,slow=2.6,SNR=3.3
PDAR  Pinedale Array   125.32  21          PKPdf   18 27 26.9 -0.6
TXAR  Lajitas Array    139.37  24   PKP    PKPdf   18 27 52.9 -1.3
      comp=Z,0.1nm,0.5s,baz=79,slow=1.4,SNR=2.5
TXAR  Lajitas Array    139.37  24   PKIKP  PKPdf   18 27 52.3 -1.9
TXAR  Lajitas Array    139.37  24          PKPdf   18 27 52.3 -1.9
PLCA  Paso Flores      144.39 200   PKP    PKPdf   18 28 02.2 -0.5
      comp=Z,2.8nm,0.9s,baz=167,slow=2.3,SNR=3.0
PLCA  Paso Flores      144.39 200   PKIKP  PKPdf   18 28 02.1 -0.7
PLCA  Paso Flores      144.39 200          PKPdf   18 28 02.1 -0.7
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*IDC **21** 18:12:26.5±4.2, 30.°16N×114.°31W, h0^{km}, mb3.6/1, mb1 3.5/4, mb1mx3.3/43, mbtmp3.1/4, ML3.0/3, Error ellipse: s-maj=84.4km s-min=13.7km az=30.0*

*ECX **21** 18:12:27.2±0.5, 30.°47N×114.°05W, h6^{km}±11^{km}, MD3.4, ML3.6*

ISC 21 18:12:28.0±1.4, **30.°4N**±0.°1×**114.°30W**±0.°09, **h3**^{km}, **n13**, σ**1ˢ53**/11, **Gulf of California**

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Code  Station Name        Δ°  AZ°    Phase ID          Time      Res
                                   Op     ISC       h  m  s    ISC
SFX   San Felipe         0.82 325  eP      Pg      18 12 42.6 -1.2
SFX                                eS      Sg      18 12 55.2 +0.8
SFX                                 IAML           18 13 06.6
      comp=N,2µm,0.5s
SPX   San Pedro Mart     1.21 304  eP      Pg      18 12 50.7 -0.5
SPX                                e               18 13 23.4
SPX                                 IAML           18 13 23.4
      comp=N,490nm,0.7s
SPIG  San Pedro Mart     1.21 304  eP      Pg      18 12 50.8 -0.5
ECBX  El Chinero         1.28 330  eP      Pg      18 12 49.6 -3.0
SQX   San Quintin        1.38 279  eP      Pn      18 12 54.2 +0.1
SQX                                 IAML           18 13 26.4
      comp=E,986nm,0.5s
SQX                                e               18 13 26.4
PIX   Pinacate           1.39  31  eP      Pn      18 12 48.0 -6.4
VTX   Valle De La Tr     1.64 309  eP      Pn      18 12 57.1 -0.7
CBX   Cerro Bola         2.80 314   IAML           18 14 15.8
      comp=E,302nm,0.9s
CBX                                e               18 14 15.8
PFO   Pinyon Flats O     3.72 331   Pn     Pn      18 13 27.5 +1.0
      comp=E,0.2nm,0.3s,baz=174,slow=9.2,SNR=2.0
ANMO  Albuquerque        8.03  53   Lg     Lg      18 16 54.2
      comp=E,0.1nm,0.3s,baz=322,slow=19,SNR=3.7
NVAR  Mina Array Bea     8.70 339   Pn     Pn      18 14 37.2 +2.3
      comp=E,0.0nm,0.3s,baz=176,slow=14,SNR=1.9
TXAR  Lajitas Array      9.29  94   Pn     Pn      18 14 42.6 -0.4
      comp=E,0.2nm,0.3s,baz=268,slow=14,SNR=9.4
TXAR                                Lg     Lg      18 17 21.0
      comp=E,0.1nm,0.3s,baz=279,slow=29,SNR=3.5
ILAR  Eielson Array     39.95 339   P      P       18 20 04.1 +0.7
      comp=E,0.7nm,0.8s,baz=149,slow=7.0,SNR=7.7
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*DJA **21** 18:15:39.5±0.2, 5°S±3°×12°5E±°, h468^{km}±4^{km}, M4.2/24, mb4.4/24, mB4.8/14, MLv4.5/20, Mw(mB)4.0/14*

*NEIC **21** 18:15:39.9±2.0, 4.°52S±0.°09×125.°2E±0.°1, h465^{km}±5^{km}, mb4.3/35, Error ellipse: s-maj=15.1km s-min=13.0km az=79.0*

*IDC **21** 18:15:40.5±1.2, 4.°45S×125.°21E, h466^{km}±15^{km}, mb3.3/12, mb1 3.4/16, mb1mx3.3/36, mbtmp4.2/16, Error ellipse: s-maj=18.5km s-min=11.5km az=66.0*

ISC 21 18:15:40.0±0.6, **4.°56S**±0.°05×**125.°15E**±0.°06, **h466**^{km}±8^{km}, **n106**, σ**1ˢ22**/116, **mb4.2**/21, **Banda Sea**

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Code  Station Name        Δ°  AZ°    Phase ID          Time      Res
                                   Op     ISC       h  m  s    ISC
NLAI  Namlea             2.35  56   P      P       18 16 43.0 -1.0
NLAI                                S      S       18 17 22.7  -13
SANI  Sanana             2.63  19   P      P       18 16 42.6 -3.2
BBSI  Bau Bau            2.73 250   P      P       18 16 48.1 +1.7
AAI   Ambon              3.16  74   P      P       18 16 47.2 -2.3
MSAI  Masohi             3.96  72   P      P       18 16 53.6 -2.3
LUWI  Luwuk              4.22 326   P      P       18 16 58.9 +0.8
LBMI  Labuha             4.55  31   P      P       18 17 00.9 -0.2
BNDI  Bandanaira         4.74  90   P      P       18 17 00.6 -2.2
MMRI  Maumere            4.98 215   P      P       18 17 06.8 +1.8
      0.5nm2µm138nm,0.8s
MMRI  Maumere            4.98 215   P      P       18 17 06.3 +1.3
BNSI  Bone               5.03 272   P      P       18 17 07.0 +1.5
      0.7nm2µm170nm,0.7s
BKSI  Bulukumba          5.07 261   P      P       18 17 06.9 +1.1
      0.2nm701nm67nm,0.8s
SOEI  Soe                5.24 190   P      P       18 17 07.4 -0.2
SOEI  Soe                5.24 190   P      P       18 17 07.5 -0.1
KAPI  Kappang            5.40 265   P      P       18 17 10.3 +1.3
      6.9nm,0.3s,baz=67,slow=3.1,SNR=14
SPSI  Sidrap Palu        5.40 276   P      P       18 17 10.2 +1.2
      0.2nm57nm,0.6s
TNTI  Ternate            5.74  23   P      P       18 17 11.2 -1.2
      0.1nm14nm,0.5s
TNTI  Ternate            5.74  23   P      P       18 17 10.1 -2.3
MRSI  Marisa             5.94 327   P      P       18 17 13.6 -0.8
      0.1nm32nm,1.2s
WSI   Waingapu           7.00 223   P      P       18 17 26.4 +1.3
SAUI  Saumlaki           7.00 119   P      P       18 17 22.6 -2.5
      0.6nm4µm128nm,0.7s
SAUI  Saumlaki           7.00 119   P      P       18 17 24.1 -1.1
SWI   Sorong             7.12  59   P      P       18 17 25.8 -0.6
      0.6nm2µm151nm,0.8s
SIJI  Sorong             7.12  59   P      P       18 17 25.8 -0.6
      5.9nm,0.3s,baz=250,slow=6.5,SNR=63
SIJI                                S      S       18 18 55.5 +1.8
      4.0nm,0.3s,baz=83,slow=23,SNR=7.2
MPSI  Mapaga             7.15 313   P      P       18 17 27.9 +1.2
      0.1nm12nm,1.7s
BASI  Baing, Sumba       7.22 219   P      P       18 17 33.4 +5.9
FAKI  Fak Fak            7.27  77   P      P       18 17 26.3 -1.7
      0.7nm3µm111nm,0.4s
FAKI  Fak Fak            7.27  77   P      P       18 17 26.4 -1.6
WBSI  Waikabubak, Su     7.62 228   P      P       18 17 31.9 +0.2
PLAI  Plampang           8.46 240   P      P       18 17 40.8 +0.2
      1µm67nm,0.7s
RKPI  Ransiki, Papua     9.51  72   P      P       18 17 52.1 +0.2
MTN   Manton Dam        10.14 145   P      P       18 17 58.4 -0.2
SRBI  Singaraja         10.48 250   P      P       18 18 03.0 +0.7
      55nm,1.1s
IGBI  Denpasar          10.80 246   P      P       18 18 05.7 -0.1
      2µm57nm,0.5s
KMMI  Kalianget         11.40 257   P      P       18 18 12.4 +0.1
      66nm,0.9s
JAGI  Jajag, Banyuwa    11.60 250   P      P       18 18 14.0 -0.4
      3µm65nm,0.6s
JAGI  Jajag, Banyuwa    11.60 250   P      P       18 18 14.1 -0.4
KNRA  Kununurra         11.61 162   P      P       18 18 14.7 +0.2
GMJI  Gumukmas          12.20 252   P      P       18 18 20.3 -0.7
FITZ  Fitzroy Crossi    13.47 178   P      P       18 18 34.9 +0.4
      1.2nm,0.3s,baz=348,slow=13,SNR=56
FITZ                                S      S       18 20 56.9 -1.7
      0.6nm,0.3s,baz=160,slow=18,SNR=12
FITZ  Fitzroy Crossi    13.47 178   P      P       18 18 34.9 +0.4
FITZ                                       S       18 20 56.4 -2.1
SBUM  Sibu              14.67 298   P      P       18 18 48.4 +0.9
UGM   Wanagama          14.91 256   P      P       18 18 49.5 -0.6
GENI  Genyem            15.12  83   P      P       18 18 51.6 -0.6
      54nm,0.5s
KSM   Kuching           15.99 292   P      P       18 19 02.2 +0.8
KSM                                 IAmb   IAmb    18 19 13.8
      comp=Z,9.6nm,1.1s
CISI  Cisompet, Garu    17.49 259   P      P       18 19 15.7 -1.5
CISI  Cisompet, Garu    17.49 259   P      P       18 19 15.4 -1.7
WB0   Warramunga Arr    17.60 150   P      P       18 19 17.6 -0.5
WB0                                 IAmb   IAmb    18 19 19.0
      comp=Z,3.7nm,0.7s
PSA00 Pilbara Seismi    17.68 196   P      P       18 19 18.4 -0.5
PSA00                               IAmb   IAmb    18 19 30.5
      comp=Z,18nm,1.4s
WRA   Warramunga Arr    17.72 150   P      P       18 19 18.8 -0.6
      comp=Z,1.2nm,0.3s,baz=326,slow=10,SNR=62
WRA   Warramunga Arr    17.72 150   P      P       18 19 19.0 -0.4
WB2   Warramunga Arr    17.73 150   P      P       18 19 19.2 -0.2
WR0   Warramunga Arr    17.84 150   P      P       18 19 20.4 -0.1
WR0                                 IAmb   IAmb    18 19 21.2
      comp=Z,7.0nm,0.5s
COEN  Coen              20.08 119   P      P       18 19 40.8 -0.6
COEN                                IAmb   IAmb    18 19 48.8
      comp=Z,7.0nm,1.1s
AS31  Alice Springs     20.79 157   P      P       18 19 49.6 +1.8
ASAR  Alice Springs     20.79 157   P      P       18 19 49.9 +2.1
      comp=Z,0.8nm,0.5s,baz=339,slow=15,SNR=12
ASAR                                PcP    PcP     18 23 37.1 +0.4
      comp=Z,0.4nm,0.3s,baz=348,slow=1.7,SNR=4.2
ASAR                                ScP    ScP     18 26 29.9 +0.9
      comp=Z,0.4nm,0.6s,baz=355,slow=2.3,SNR=4.1
ASAR  Alice Springs     20.79 157   P      P       18 19 49.6 +1.8
ASAR                                       PcP     18 23 36.8 +0.1
ASAR                                       ScP     18 26 29.0  0.0
GIRL  Giralia           20.85 209   P      P       18 19 50.4 +2.2
PMG   Port Moresby      22.37 104   P      P       18 20 03.7 +1.6
      comp=Z,3.2nm,0.5s,baz=243,slow=2.3,SNR=2.0
PMG   Port Moresby      22.37 104   P      P       18 20 02.1  0.0
PMG                                 IAmb   IAmb    18 20 15.2
      comp=Z,22nm,1.4s
MORW  Morawa            25.86 199   P      P       18 20 33.2  0.0
MORW                                IAmb   IAmb    18 20 44.6
      comp=Z,16nm,1.2s
YULB  Yu-li             28.03 352   P      P       18 20 52.7 +0.4
YULB                                IAmb   IAmb    18 20 53.0
      comp=Z,18nm,1.1s
TPUB  Ta-pu             28.04 351   P      P       18 20 51.4 -0.9
GSI   Gunungsitoli      28.16 281   P      P       18 20 53.1 -0.5
SSLB  Suanglung         28.47 352   P      P       18 20 54.9 -1.3
YHNB  Yeheng            29.28 353   P      P       18 21 02.3 -1.0
CMAR  Chiang Mai Arr    34.50 312   P      P       18 21 49.5 +1.4
      comp=Z,0.5nm,0.6s,baz=141,slow=7.3,SNR=7.1
CMAR  Chiang Mai Arr    34.50 312   P      P       18 21 49.0 +0.9
CHTO  Chiang Mai        34.72 313   P      P       18 21 51.1 +1.2
ENH   Enshi             37.74 338   P      P       18 22 14.8 -0.1
ENH                                 IAmb   IAmb    18 22 28.6
      comp=Z,14nm,1.5s
KSRS  Korea Array       41.87   3   P      P       18 22 47.7 -0.4
      comp=Z,0.9nm,0.6s,baz=181,slow=9.1,SNR=6.2
MAJO  Matsushiro        42.67  16   P      P       18 22 53.4 -1.0
MAJO                                IAmb   IAmb    18 23 12.5
      comp=Z,16nm,1.2s
MJAR  Matsushiro Arr    42.67  16   P      P       18 22 53.3 -1.1
      comp=Z,2.0nm,0.7s,baz=188,slow=8.7,SNR=6.0
MJAR  Matsushiro Arr    42.67  16   P      P       18 22 54.2 -0.3
MJB9  Matsu-Tunnel      42.67  16   P      P       18 22 53.4 -1.1
MJB9                                IAmb   IAmb    18 23 12.5
      comp=Z,16nm,1.2s
HHC   Hu-ho-hao-te      46.87 346  eP      P       18 23 29.8 +2.8
LSA   Lhasa             47.14 318   P      P       18 23 30.5 +0.8
USA0B Ussuriysk Arra    48.92   7   P      P       18 23 42.1 -0.1
USA0B                               IAmb   IAmb    18 23 42.8
      comp=Z,7.2nm,0.7s
USRK  Ussuriysk Ar.     48.92   7   P      P       18 23 42.2  0.0
      comp=Z,6.1nm,0.5s,baz=191,slow=7.5,SNR=27
MDJ   Mudanjiang        49.11   4   P      P       18 23 43.9 +0.3
MDJ                                 IAmb   IAmb    18 23 45.0
      comp=Z,11nm,0.9s
GTA   Gaotai            49.60 334  eP      P       18 23 47.8 +0.3
ULN   Ulaanbaatar       54.57 345   P      P       18 24 23.4  0.0
SONM  Songino Array     54.71 345   P      P       18 24 24.5 +0.2
      comp=Z,1.7nm,0.9s,baz=161,slow=9.2,SNR=7.6
SONM  Songino Array     54.71 345   P      P       18 24 24.6 +0.2
SONM                                PcP    PcP     18 25 20.0 -0.1
WMQ   Urumqi            58.78 329  eP      P       18 24 54.4 +2.0
KSH   Kashi             62.99 319   P      P       18 25 21.4 +0.9
KSH                                 PcP    PcP     18 25 54.1 +0.6
KSH                                 pP     pwP     18 27 01.5 +1.2
KSH                                 S      S       18 33 08.8 -5.1
KSH   Kashi             62.99 319   sS     sS      18 36 02.3 -1.6
MK31  Makanchi Array    63.59 329   P      P       18 25 24.1 +0.1
MKAR  Makanchi Array    63.59 329   P      P       18 25 24.1 +0.1
      comp=Z,2.0nm,0.4s,baz=116,slow=8.1,SNR=57
MKAR  Makanchi Array    63.59 329   P      P       18 25 24.0  0.0
MKAR                                PcP    PcP     18 25 56.4 +0.7
PEA0B Petropavlovsk-    63.66  21   P      P       18 25 25.3 +1.0
PEA0B                               IAmb   IAmb    18 25 44.3
      comp=Z,16nm,1.1s
PETK  Petropavlovsk-    63.66  21   P      P       18 25 24.8 +0.5
      comp=Z,2.6nm,0.7s,baz=213,slow=3.6,SNR=5.6
PETK  Petropavlovsk-    63.66  21   P      P       18 25 25.4 +1.1
PETK                                PcP    PcP     18 25 54.5 -1.2
MAKZ  Makanchi          63.77 328   P      P       18 25 25.2  0.0
MAKZ                                IAmb   IAmb    18 25 25.8
      comp=Z,5.8nm,1.4s
ZAA0  Zalesovo Array    67.32 336   P      P       18 25 46.5 -0.8
ZALV  Zalesovo Beam     67.32 336   P      P       18 25 46.3 -1.0
      comp=Z,1.9nm,0.5s,baz=126,slow=4.0,SNR=9.1
ZALV  Zalesovo Beam     67.32 336   P      P       18 25 46.5 -0.8
KURK  Kurchatov         67.97 330   P      P       18 25 51.4  0.0
ABKAR Akbulak array     77.63 322   P      P       18 26 47.0 -0.2
NRIK  Noril'sk          78.08 347   P      P       18 26 49.0 -0.2
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	comp=Z,1.7nm,0.5s,baz=95,slow=5.2,SNR=3.8						
GAMB	Gambell	82.57	24	P	P	18 27 13.8	+1.0
SDPT	Sand Point	84.92	34	P	P	18 27 24.6	-0.1
QSPA	South Pole Qui	85.41	180	P	P	18 27 27.5	+0.4
QSPA				IAmb	IAmb	18 27 35.6	
	comp=Z,8.6nm,1.4s						
IMAR	Indian Mountai	90.51	24	P	P	18 27 51.2	+0.3
ILAR	Eielson Array	93.22	25	P	P	18 28 01.9	-1.5
	comp=Z,0.4nm,0.5s,baz=248,slow=4.6,SNR=8.0						
TORD	Torodi Ar. Bea	123.58	283	PKP	PKiKP	18 33 45.0	0.0
	comp=Z,0.6nm,0.5s,baz=59,slow=1.8,SNR=3.7						

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*IASPEI **21** 18:17:00.7±0.8, 36°.16N±0°.02×120°.76W±0°.02, h15^{km}±6^{km}, Error ellipse: s-maj=3.3km s-min=2.2km az=53.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*NCEDC **21** 18:17:01.0±1.7, 36°.17N±0°.01×120°.73W±0°.02, h9^{km}±4^{km}, ML3.1/26, Error ellipse: s-maj=2.2km s-min=1.5km az=50.0*

*ANF **21** 18:17:01.2±0.9, 36°.13N×120°.72W, h13^{km}±5^{km}, ML3.0/16, Error ellipse: s-maj=7.7km s-min=3.4km az=101.0*

*NEIC **21** 18:17:01±1.1, 36°.16N±0°.01×120°.77W±0°.02, h16^{km}±1^{km}, Error ellipse: s-maj=2.5km s-min=1.5km az=51.0*

ISC 21 18:17:00.9±0.8, **36°.16N**±0°.02×**120°.75W**±0°.02, **h12**^{km}±5^{km}, **n205**, σ**0^{s}.77**/217, **Central California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMPB	Monarch Peak	0.07	325		Pg	18 17 03.4	-0.1
PMPB				Sg	Sg	18 17 05.2	-0.2
PSAM	San Ardo	0.17	219		Pg	18 17 05.2	+0.4
PBWM	Bitterwater Cr	0.21	317		Pg	18 17 05.8	+0.4
PHRM	Hernandez Vall	0.22	346		Pg	18 17 06.1	+0.4
LRC	Lone Oak Road	0.25	290		Pg	18 17 06.3	+0.2
PKD	Bear Valley Ra	0.28	141		Pg	18 17 06.7	+0.1
PKD					Sg	18 17 10.8	+0.4
PVCM	Vineyard Canyo	0.30	143		Pg	18 17 07.2	+0.2
PSTM	Stockdale Moun	0.30	139		Pg	18 17 07.2	+0.1
PPO	Portuguese Can	0.31	159		Pb	18 17 08.0	-0.4
LRV	Little Rabbit	0.34	321		Pg	18 17 08.4	+0.6
PCCM	Crazy Canyon	0.34	258		Pg	18 17 08.3	+0.6
PARM	Anticline Ridg	0.34	75		Pb	18 17 08.9	0.0
PWKM	Work Ranch	0.40	150		Pb	18 17 09.4	-0.5
PHFM	Heflinger Ranc	0.40	134		Pg	18 17 09.2	+0.4
PANM	San Antonio Re	0.40	198		Pg	18 17 09.3	+0.4
CTM	Castle Mountai	0.41	124		Pb	18 17 10.1	0.0
PHSB	Hesperia Broad	0.41	216		Pg	18 17 09.6	+0.5
PHSB					Sg	18 17 15.8	+1.1
BBNM	San Benito	0.43	323		Pg	18 17 10.2	+0.7
PCMM	Cholame Hills	0.45	142		Pb	18 17 10.2	-0.6
GHC	Gold Hill	0.46	135		Pg	18 17 10.2	+0.2
BPIM	Pinnacles	0.47	315		Pg	18 17 10.1	-0.1
BBGB	Big Mountain B	0.48	331		Pb	18 17 11.3	+0.1
BSGM	Shirttail Gulc	0.48	302		Pg	18 17 10.1	-0.1
PSRM	Scobie Ranch	0.49	128		Pb	18 17 10.9	-0.5
BMSM	Mercy Hot Spri	0.50	356		Pb	18 17 11.7	+0.1
PKLM	Kerr Lake	0.51	139		Pg	18 17 11.2	+0.3
PWMM	Westland Maint	0.52	58		Pb	18 17 12.6	+0.8
PSNM	Stone Corral	0.53	135		Pg	18 17 11.4	+0.2
PKEM	Kettleman Hill	0.53	101		Pb	18 17 12.6	+0.5
RAMR	Ramage Ranch	0.53	190		Pg	18 17 11.7	+0.3
BAVM	Antelope Valle	0.53	335		Pg	18 17 11.9	+0.6
PMCM	McMillan Canyo	0.54	144		Pb	18 17 11.8	-0.4
BVL	Bear Valley	0.54	320		Pg	18 17 11.6	+0.1
PAPM	Alder Peak	0.55	244		Pg	18 17 12.1	+0.4
TCHL	Shandon	0.55	149		Pb	18 17 12.2	-0.3
PMRM	Maxey Ranch	0.56	132		Pg	18 17 12.0	+0.1
BEMM	Emmet	0.57	331		Pb	18 17 12.7	-0.1
PHCM	Hearst Castle	0.58	214		Pg	18 17 12.7	+0.5
BSMM	Soledad Missio	0.59	292		Pg	18 17 12.3	0.0
BEHM	Elkhorn Ranch	0.61	326		Pb	18 17 13.6	+0.1
THIS	South End of C	0.61	135		Pb	18 17 13.1	-0.4
TRAM	Private Proper	0.62	141		Pg	18 17 13.2	+0.2
BLDC	Black Mountain	0.64	191		Pg	18 17 13.6	+0.3
BLDC	Black Mountain	0.64	191		Pg	18 17 13.6	+0.3
BJCM	Johnson Can.	0.64	307		Pg	18 17 13.2	-0.2
BJOM	Mount Johnson	0.65	316		Pg	18 17 13.1	-0.5
BLRM	Lewis Ranch	0.66	320		Pg	18 17 13.9	+0.3
BRMM	Rolling Bench	0.68	355		Pb	18 17 15.0	+0.4
SCZ	Santa Cruz	0.68	310		Pg	18 17 13.8	-0.3
HAST	Hastings Reser	0.68	290		Pg	18 17 13.9	-0.3
PCBM	Cambria	0.69	201		Pg	18 17 14.6	+0.4
TSCN	Private Proper	0.70	152		Pb	18 17 14.7	-0.3
BHRM	Hodges Ranch	0.70	324		Pb	18 17 15.3	+0.3
ARDC	Alexander Ranc	0.72	195		Pg	18 17 15.1	+0.3
BAPM	Anderson Peak	0.72	271		Pg	18 17 14.7	-0.1
BCGM	Cienega Road	0.72	319		Pg	18 17 14.9	0.0
PTAM	Tassajara Cree	0.77	177		Pg	18 17 15.8	0.0
BSLM	Silva Ranch	0.78	322		Pb	18 17 16.7	+0.4
HJSM	John Smith Roa	0.79	326		Pb	18 17 16.7	+0.2
BVYM	Vineyard	0.79	318		Pg	18 17 15.8	-0.4
BSRM	Salinas Radio	0.80	309		Pg	18 17 16.0	-0.3
PBPM	Bitterwater Pu	0.80	136		Pb	18 17 16.6	-0.1
BPCNC	Pine Canyon	0.82	301		Pg	18 17 16.6	-0.1
BPOM	Post Ranch	0.82	275		Pg	18 17 16.4	-0.4
SAO	San Andreas Ge	0.82	317		Pg	18 17 16.1	-0.6
SAO				Sg	Sg	18 17 27.2	-0.3
FRP	Fremont Peak	0.84	315		Pg	18 17 16.5	-0.6
EFD	Emergency Oper	0.84	178		Pg	18 17 17.0	-0.1
HLTM	Lone Tree Road	0.85	328		Pg	18 17 17.5	+0.2
LSDC	Los Osos Digit	0.86	185		Pb	18 17 18.1	+0.2
HJGM	San Juan Grade	0.92	314		Pg	18 17 18.1	-0.5
VPDC	Valencia Peak	0.92	186		Pb	18 17 19.0	+0.2
DPD	Davis Peak	0.93	181		Pb	18 17 19.1	+0.3
HBTM	San Juan Bauti	0.94	317		Pb	18 17 19.4	+0.3
PACP	Pacheco Peak	0.95	333		Pb	18 17 19.7	+0.4
DCD	Diablo Creek	0.95	184		Pg	18 17 19.0	-0.2
SFJWR	San Luis Fatjo	0.95	339		Pg	18 17 19.6	+0.4
OCR	O'Connell Ranc	0.97	321		Pb	18 17 19.4	-0.2
YEG	Yeguas Mountai	0.97	138		Pb	18 17 19.7	0.0
HFEM	San Felipe	0.97	328		Pb	18 17 19.8	+0.1
HTUM	Tustin Road	0.98	313		Pb	18 17 19.4	-0.4
SLD	San Luis Dam	0.99	338		Pb	18 17 20.1	+0.2
ANZ	Anzar Road	0.99	317		Pb	18 17 19.5	-0.4
HPCM	Pacheco Lake	0.99	335		Pb	18 17 20.1	+0.1
HERM	Elkhorn Road	1.00	310		Pb	18 17 20.0	-0.1
HMOM	Monterey	1.04	295		Pb	18 17 20.0	-0.7
CDC	Canada Road	1.04	326		Pn	18 17 21.5	+0.1
SMMC	Simmler	1.05	144		Pb	18 17 20.6	-0.3
SMMC	Simmler	1.05	144	P	Pb	18 17 20.7	-0.3
	baz=325,SNR=58						
SMMC				S	Sb	18 17 34.1	-0.5
	baz=325						
HCOM	Corn Cob Canyo	1.06	314		Pb	18 17 20.8	-0.3
CBC	Chamberlain	1.06	317		Pb	18 17 21.0	-0.2
GHS	Gilroy Hot Spr	1.09	329		Pb	18 17 21.6	-0.1
BCH	Branch Mountai	1.12	151		Pb	18 17 21.5	-0.7
VOG	Valley Oaks Go	1.12	81	P	Pb	18 17 20.8	-1.3
	baz=262						
VOG				S	Sb	18 17 36.3	-0.4
	baz=262						
CARC	Carrizo Plain	1.13	139		Pb	18 17 22.3	-0.1
HLPM	Lions Peak	1.13	321		Pb	18 17 22.0	-0.3
HSPM	Sheep	1.13	327		Pn	18 17 22.8	+0.1
JELB	Ellicott, Sant	1.16	312		Pb	18 17 22.2	-0.5
MHDM	Hidden Dam	1.18	36		Pb	18 17 22.0	-1.2
FRI	Friant	1.18	45		Pn	18 17 21.9	-1.3
CADM	Anderson Res.	1.22	325		Pn	18 17 23.6	-0.1
MYLM	Yosemite Lake	1.25	12		Pn	18 17 23.4	-0.8
JLAB	Laurel Hill	1.27	322		Pn	18 17 24.3	-0.1
PMLM	Mount Lospe	1.27	175		Pn	18 17 24.0	-0.5
JRGM	Rodeo Gulch Ro	1.31	312		Pn	18 17 23.9	-1.1
CCOB	Coe Ranch Numb	1.32	326		Pn	18 17 25.0	-0.2
AMC	Almaden	1.33	319		Pn	18 17 24.6	-0.6
JSTM	Santa Teresa H	1.34	322		Pn	18 17 25.1	-0.3
ARN	Arnold Ranch	1.34	332		Pn	18 17 25.0	-0.5
MRHM	Rocky Hill	1.35	84		Pn	18 17 24.1	-1.5
JUMM	Mount Umunhum	1.36	318		Pn	18 17 24.8	-0.9
MHC	Mount Hamilton	1.38	329		Pn	18 17 25.5	-0.5
VES	Vestal, Richgr	1.39	103		Pn	18 17 25.3	-0.8
VES	Vestal, Richgr	1.39	103	P	Pn	18 17 25.5	-0.6
	baz=284,SNR=8.8						
VES				S	Sb	18 17 44.4	-0.1
	baz=284						
CMMM	Mount Mocho	1.42	336		Pn	18 17 26.4	-0.2
JBNB	Ben Lomond Mou	1.48	311		Pn	18 17 26.3	-1.1
PKM	Mcpherson Peak	1.48	149		Pn	18 17 27.0	-0.5
PKM	Mcpherson Peak	1.48	149	P	Pn	18 17 27.0	-0.5
	baz=330,SNR=33						
PKM				S	Sb	18 17 47.5	+0.2
	baz=330						
HELL	Mitchell Peak,	1.49	69		Pn	18 17 26.6	-0.9
MMIM	Miami Mountain	1.50	33		Pn	18 17 27.6	-0.1
CMLM	Mount Lewis	1.50	332		Pn	18 17 27.6	-0.1
FIGC	Figueroa Mtn.	1.56	156		Pn	18 17 28.2	-0.3
SPG2	Springville 2	1.61	88		Pn	18 17 28.2	-1.0
GATR	Gnd/Air Tx Cnt	1.62	173		Pn	18 17 28.7	-0.6
CMJM	Mission San Jo	1.63	327		Pn	18 17 29.0	-0.3
KCC	Kaiser Creek	1.64	44		Pn	18 17 29.4	-0.1
JJRM	Joaquin Road	1.66	316		Pn	18 17 27.2	-2.6
CVLM	Vallecito	1.70	330		Pn	18 17 30.1	-0.2
JRSC	Jasper Ridge	1.72	317		Pn	18 17 29.4	-1.2
BGH	Bear Gulch	1.73	313		Pn	18 17 30.1	-0.8
SYP	Santa Ynez Pea	1.75	159		Pn	18 17 30.5	-0.7
WOFM	Oak Flat	1.77	110		Pn	18 17 30.4	-1.0
JHPM	Huddart Park	1.79	316		Pn	18 17 31.1	-0.4
MCUB	Copperopolis B	1.81	3		Pn	18 17 31.5	-0.5
WASM	Alta Sierra Ca	1.83	103		Pn	18 17 32.1	-0.3
ARVC	Arvin	1.88	123	P	Pn	18 17 32.4	-0.3
	baz=304						
ARVC				S	Sb	18 17 57.3	-1.2
	baz=304						
CMB	Columbia Colle	1.89	9		Pn	18 17 33.1	0.0
SBC	Santa Barbara	1.92	153	P	Pn	18 17 33.3	0.0
	baz=335						
ISA	Isabella, Lake	1.92	104		Pn	18 17 32.9	-0.5
ISA	Isabella, Lake	1.92	104	P	Pn	18 17 33.1	-0.3
	baz=286,SNR=34						
ISA				S	Sn	18 17 57.3	-0.1
	baz=286						
TEJ	El Tejon	1.92	118		Pn	18 17 31.9	-1.6
MNHB	New Hogan Dam	1.98	359		Pn	18 17 34.2	-0.1
MDPB	Devils Postpil	1.99	42		Pn	18 17 35.1	+0.5
MINS	Minaret Summit	2.02	42		Pb	18 17 36.6	-1.1
OMMB	Old Mammoth Mi	2.02	44		Pn	18 17 35.3	+0.3
SCHCA	Scheelite	2.04	54		Pn	18 17 36.5	+1.2
MMLB	Mammoth Lakes	2.06	43		Pb	18 17 37.3	-1.2
MLCM	Laurel Creek C	2.07	45		Pn	18 17 36.7	+1.1
MDCM	Deadman Creek	2.07	41		Pn	18 17 36.0	+0.3
BRIB	Briones	2.08	328		Pn	18 17 35.8	+0.2
MCBM	Casa Benchmark	2.10	45		Pb	18 17 38.0	-1.0
MCVM	Convict Lake	2.10	47		Pn	18 17 37.1	+1.0
MTUM	Tungsten Hills	2.12	55		Pn	18 17 37.5	+1.2
MLAC	Mammoth, Mammo	2.12	46		Pb	18 17 39.3	-0.2
MLAC	Mammoth, Mammo	2.12	46	Pb	Pb	18 17 38.9	-0.5
	baz=227						
MDRNC	Doe Ridge	2.13	46		Pn	18 17 37.4	+0.9
LMCR	Lookout Mounta	2.13	42		Pb	18 17 38.6	-1.0
BHPR	Bishop	2.15	57		Pn	18 17 37.8	+1.1
CWC	Cottonwood Cre	2.18	82		Pn	18 17 38.2	+1.1
CWC	Cottonwood Cre	2.18	82	P	Pn	18 17 37.7	+0.7
	baz=264						
CWC				S	Sn	18 18 04.9	+0.9
	baz=264						
WCHM	Chimney Peak	2.19	96		Pn	18 17 38.0	+0.7
TIN	Tinemaha, Big	2.22	66	P	Pn	18 17 37.9	+0.3
	baz=247,SNR=8.2						
TIN				S	Sn	18 18 06.2	+1.3
	baz=247						
ORC	Owens River	2.23	48		Pn	18 17 39.4	+1.5
MFBM	Five Bridges	2.25	55		Pb	18 17 39.9	-1.7
OSI	Osito Audit: C	2.27	132		Pn	18 17 38.1	-0.1
OSI	Osito Audit: C	2.27	132	S	Sn	18 18 07.4	+1.4
	baz=314						
LUL	Lundy Lake	2.27	33		Pb	18 17 40.7	-1.2
AASM	Arroyo Seco	2.28	353		Pn	18 17 38.2	-0.1
PYR	Pyramid	2.29	133		Pn	18 17 39.7	+1.1
POCCA	Poleta Canyon	2.32	58		Pn	18 17 40.6	+1.5
BENR	Benton	2.34	48		Pn	18 17 41.1	+1.7
SCZ2	Santa Cruz Isl	2.35	157	P	Pn	18 17 38.9	-0.4
	baz=338						
VPEM	Volcano Peak E	2.39	94		Pn	18 17 41.5	+1.5
MLNR	Milner Canyon	2.40	53		Pb	18 17 42.5	-1.6
BLG	Laguna Peak, P	2.47	145	P	Pn	18 17 40.8	-0.1
	baz=327						
WAKR	Walker	2.56	24		Pn	18 17 44.6	+2.1
HCK	Huntoon Valley	2.58	41		Pb	18 17 45.1	-1.9
LRMC	Laurel Mtn Rad	2.59	104	P	Pn	18 17 42.8	+0.2
	baz=286,SNR=10						
EDW2	Edwards Air Fo	2.59	119	P	Pn	18 17 42.7	+0.1
	baz=301						
MCCM	Marconi Confer	2.61	320	Pn	Pn	18 17 42.4	-0.4
BONR	Boundary Peak	2.66	47		Pb	18 17 46.9	-1.7
AFDM	Forest Hills D	2.79	356		Pn	18 17 45.8	+0.4
PASC	Pasadena Art C	2.89	133	Pn	Pn	18 17 46.6	-0.1
RUBR	Rubicon Trail	2.92	9		Pn	18 17 48.3	+0.9
MWC	Mount Wilson	2.93	130		Pn	18 17 46.7	-0.8
NVAR	Mina Array Bea	2.99	40		Pn	18 17 49.2	+0.9
RYN	Ryan	3.04	35		Pn	18 17 49.0	+0.1
PNTR	Pine Nut	3.06	17		Pn	18 17 50.9	+1.6
YERR	Yerington	3.06	23		Pn	18 17 50.3	+1.0
NV11	Mina Array Sit	3.07	42		Pn	18 17 49.0	-0.3
VCNR	Virginia City	3.25	15		Pn	18 17 50.3	-1.5
GSC	Goldstone, Bar	3.32	104		Pn	18 17 52.6	-0.2
GSC	Goldstone, Bar	3.32	104	P	Pn	18 17 52.1	-0.7
	baz=286,SNR=6.2						
HOPS	Hopland Field	3.37	328	Pn	Pn	18 17 53.6	+0.2
ORV	Oroville	3.44	350		Pn	18 17 55.5	+1.2
KVN	Kaiserville	3.57	35		Pn	18 17 57.8	+1.5
PAHR	Pah Rah Range	3.70	17		Pn	18 17 59.6	+1.6
TPNV	Topopah Spring	3.71	76		Pn	18 17 59.7	+1.6
PFO	Pinyon Flats O	4.35	125	Pn	Pn	18 18 07.2	+0.3
XPFO	Pion Flat	4.35	125		Pn	18 18 07.3	+0.4
SHPR	Sheep Range	4.53	84	Pn	Pn	18 18 10.5	+1.1
WDC	Whiskeytown Da	4.63	343	Pn	Pn	18 18 12.8	+2.2
R11A	Troy Canyon, C	4.67	61	Pn	Pn	18 18 09.3	-2.0
KMRM	Mail Ridge	4.67	331	Pn	Pn	18 18 10.1	-1.2
BAR	Barrett	4.84	135	Pn	Pn	18 18 13.0	-0.6
Y12C	Blythe	5.65	113	Pn	Pn	18 18 23.1	-1.6

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*IDC **21** 18:23:56.9±3.4, 9°.50S×114°.42E, h0^{km}, mb3.3/6, mb1 3.5/6, mb1mx3.3/46, mbtmp3.4/6, Error ellipse: s-maj=187.6km s-min=22.4km az=49.0*

*DJA **21** 18:24:02.6±0.6, 10°S±5°×11°4E±°, h10^{km}, M3.7/8, MLv3.7/8*

ISC 21 18:24:01.0±1.3, **9°.8S**±0°.1×**114°.07E**±0°.10, **h35**^{km}, **n12**, σ**0^{s}.88**/14, **mb3.6**/6, **South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	Jajag, Banyuwa	1.35	4	P	Pn	18 24 23.7	+0.3
JAGI				S	Sn	18 24 40.7	+0.6
IGBI	Denpasar	1.46	47	P	Pn	18 24 24.7	-0.2
IGBI				S	Sn	18 24 42.4	-0.5
DNP	Denpasar	1.60	45	P	Pn	18 24 27.6	+0.7
DNP				S	Sn	18 24 45.6	-0.8
SRBI	Singaraja	2.07	33	P	Pn	18 24 34.4	+1.1
PCJI	Pacitan	3.28	299	P	Pn	18 24 55.6	+5.6
PLAI	Plampang	3.79	75	P	Pn	18 24 58.5	+1.4
WRA	Warramunga Arr	22.00	120	P	P	18 28 51.3	-1.1
	0.2nm,0.6s,baz=297,slow=11,SNR=1.5						
ASAR	Alice Springs	23.41	128	P	P	18 29 07.5	+0.3
	0.3nm,0.4s,baz=299,slow=8.4,SNR=2.9						
CMAR	Chiang Mai Arr	31.82	332	P	P	18 30 23.6	+0.9
	0.7nm,0.7s,baz=162,slow=9.5,SNR=7.6						
SONM	Songino Array	57.81	354	P	P	18 33 48.5	-0.5
	0.4nm,0.5s,baz=176,slow=9.4,SNR=2.3						
MKAR	Makanchi Array	63.10	336	P	P	18 34 24.7	-0.4
	0.4nm,0.7s,baz=138,slow=6.8,SNR=5.6						
ZALV	Zalesovo Beam	68.19	342	P	P	18 34 56.8	-0.9
	0.3nm,0.5s,baz=128,slow=9.3,SNR=1.8						

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*IDC **21** 18:29:43.5±2.2, 7°.43N×94°.08E, h0^{km}, mb3.5/4, mb1 3.6/6, mb1mx3.3/62, mbtmp3.5/6, ML3.8/2, MS3.1/1, Ms1 3.1/1, ms1mx2.6/40, Error ellipse: s-maj=82.2km s-min=21.6km az=61.0*

*NEIC **21** 18:29:45.9±3.5, 7°.5N±0°.1×94°.3E±0°.2, h12^{km}±7^{km}, mb4.3/5, Error ellipse: s-maj=26.5km s-min=12.1km az=66.0*

ISC 21 18:29:47.2±0.7, **7°.43N**±0°.07×**94°.40E**±0°.06, **h24**^{km}, **n31**, σ**1^{s}.85**/31, **mb3.7**/6, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMBY	CAMPBELL BAY	0.62	229	*e*P	Pb	18 29 58.5	-0.9
CMBY				*e*S	Sb	18 30 07.4	-0.4
CMBY				*e*S	Sn	18 30 07.6	-2.1
LHMI	Lhok Sumawe	3.34	131		Pn	18 30 39.5	+1.5
PSI	Prapat	6.44	135	Pn	Pn	18 31 23.8	+3.1
	0.6nm,0.3s,baz=349,slow=15,SNR=1.8						
RPSI	Rantau Prapat	6.51	136		Pn	18 31 23.8	+2.2
RPSI	Rantau Prapat	6.51	136	Pn	Pn	18 31 22.1	+0.6
KULM	Kulim	6.57	108		Pn	18 31 22.6	+0.3
KULM				Sn	Sn	18 32 34.9	-1.7
GSI	Gunungsitoli	6.86	152	Pn	Pn	18 31 28.4	+2.1
IPM	Ipoh	7.21	114		Pn	18 31 30.6	-0.6
IPM				Sn	Sn	18 32 48.3	-4.2
MYKOM	Kota Tinggi	10.96	120	Pn	Pn	18 32 23.4	+0.8
PBKT	Sadao Pong	11.13	35	Pn	Pn	18 32 27.0	+2.1
CM31	Chiang Mai Arr	11.83	22	Pn	Pn	18 32 37.3	+2.8
CMAR	Chiang Mai Arr	11.83	22	Pn	Pn	18 32 35.0	+0.5
	0.3nm,0.3s,baz=213,slow=14,SNR=12						
CMAR	Chiang Mai Arr	11.83	22		Pn	18 32 35.2	+0.8
CHTO	Chiang Mai	12.15	21	Pn	Pn	18 32 40.5	+1.5
PALK	Pallekele	13.58	270	LR	LR	18 37 11.6	
	comp=Z,85nm,20.5s,baz=153,slow=34						
LSA	Lhasa	22.37	353	P	P	18 34 45.7	+1.5
LSA				IAmb	IAmb	18 34 49.9	
	comp=Z,2.8nm,0.8s						
H08S3	Diego Garcia H	26.48	236	T	T	19 02 08.4	
	baz=56,slow=75,SNR=20						
H08S2	Diego Garcia H	26.48	236	T	T	19 02 08.2	
	baz=56,slow=75,SNR=19						
H08S1	Diego Carcia H	26.49	236	T	T	19 02 10.2	
	baz=56,slow=75,SNR=5.4						
MK31	Makanchi Array	40.58	347	P	P	18 37 23.2	-1.7
MKAR	Makanchi Array	40.58	347	P	P	18 37 23.9	-1.0
	comp=Z,0.6nm,0.5s,baz=173,slow=7.8,SNR=11						
MKAR	Makanchi Array	40.58	347	P	P	18 37 23.6	-1.3
KNRA	Kununurra	41.06	124	P	P	18 37 30.4	+1.3
KNRA				IAmb	IAmb	18 38 19.2	
	comp=Z,28nm,1.5s						
KSAR	Wonju Array Be	42.61	40	P	P	18 37 38.9	-2.6
ZALV	Zalesovo Beam	47.03	352	P	P	18 38 16.4	-0.2
	comp=Z,1.0nm,0.6s,baz=183,slow=7.6,SNR=5.7						
ZALV	Zalesovo Beam	47.03	352	P	P	18 38 15.2	-1.3
WB0	Warramunga Arr	47.75	125	P	P	18 38 23.8	+1.1
WRA	Warramunga Arr	47.80	125	P	P	18 38 26.4	+3.4
	comp=Z,0.2nm,0.9s,baz=305,slow=8.7,SNR=2.9						
WRA	Warramunga Arr	47.80	125	P	P	18 38 24.3	+1.3
ASAR	Alice Springs	49.44	130	P	P	18 38 36.1	+0.5
	comp=Z,0.3nm,0.7s,baz=298,slow=7.8,SNR=2.5						
ABKAR	Akbulak array	50.74	331	P	P	18 38 45.1	0.0

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*NIED **21** 18:33:00, 36°.00N×141°.30E, h8^{km}, Mw3.8 Best double couple: M$_0$6.11000×10^{14} NP1:φ$_s$342.00000°, δ87.00000°, λ-135.00000°. NP2:φ$_s$249.00000°, δ45.00000°, λ-5.00000°.*

*IDC **21** 18:33:46.3±0.8, 35°.78N×141°.10E, h0^{km}, mb3.6/14, mb1 3.7/16, mb1mx3.7/45, mbtmp3.6/16, ML3.1/2, Error ellipse: s-maj=20.6km s-min=16.9km az=96.0*

*JMA **21** 18:33:47.6±0.2, 35°.95N×141°.14E, h21^{km}±2^{km}, M3.9*

JMA Felt II J1.

ISC 21 18:33:46.6±1.6, **35°.90N**±0°.03×**141°.13E**±0°.06, **h2**^{km}±9^{km}, **n36**, σ**1^{s}.33**/36, **mb3.6**/14, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	0.30	229	P	Pb	18 33 54.8	+0.2
CHOJ				S	Sb	18 34 00.0	0.0
JIHU	Itakohorinouch	0.50	278	P	Pb	18 33 58.2	+0.1
JIHU				S	Sb	18 34 05.7	-0.1
JSMT	Sammumatsuo	0.61	246	P	Pn	18 34 00.7	-1.6
JHYU	Hitachinakayam	0.62	315	P	Pg	18 33 59.5	+1.0
JHYU				S	Sg	18 34 07.8	+1.1
JYT	Yasato	0.83	294	P	Pg	18 34 02.3	-0.2
JYT				S	Sg	18 34 13.6	+0.4
JHO	Hitachi	0.84	327	P	Pg	18 34 02.5	-0.3
BSO3	Boso 3	1.21	205	P	Pg	18 34 09.8	+0.1
BSO1	Boso 1	1.25	186	S	Sg	18 34 26.6	-0.1
JAG	Ashikaga	1.46	292	P	Pn	18 34 11.6	-2.4
JFK	Kawauchi	1.48	352	P	Pn	18 34 11.1	-3.2
MJAR	Matsushiro Arr	2.45	286	Pn	Pn	18 34 26.7	-1.0
	1.9nm,0.3s,baz=105,slow=8.2,SNR=113						
MJAR				Sn	Sg	18 35 05.1	-0.2
	5.0nm,0.3s,baz=244,slow=33,SNR=3.0						
MAT	Matsushiro	2.45	286	P	Pn	18 34 26.5	-1.2
MAT				*e*S	Sn	18 34 56.6	-1.7
JHJ	Hachijo jima 2	2.99	202	Pn	Pn	18 34 33.9	-1.1
	17nm,0.3s,baz=76,slow=23,SNR=1.6						
JHJ				Sn	Sn	18 35 11.8	+0.3
	19nm,0.3s,baz=242,slow=24,SNR=1.4						
ASAJ	Asahikawa	8.28	7	Pn	Pn	18 35 45.8	-1.9
	0.9nm,0.3s,baz=222,slow=12,SNR=10						
USRK	Ussuriysk Ar.	10.85	323	Pn	Pn	18 36 27.3	+4.4
	baz=129,slow=13,SNR=1.6						
H11N2	WAKE ISLAND Hy	27.78	119	T	T	19 08 45.2	
	baz=311,slow=75,SNR=42						
H11N1	WAKE ISLAND Hy	27.79	119	T	T	19 08 41.1	
	baz=311,slow=75,SNR=45						
H11N3	WAKE ISLAND Hy	27.80	119	T	T	19 08 47.9	
	baz=311,slow=75,SNR=34						
SEY	Seymchan	27.95	11	P	P	18 39 40.2	+2.1
	0.2nm,0.3s,baz=114,slow=10.0,SNR=1.6						
SONM	Songino Array	28.25	306	P	P	18 39 42.7	+1.5
	1.0nm,0.8s,baz=97,slow=6.0,SNR=2.0						
H11S1	WAKE ISLAND Hy	28.45	121	T	T	19 09 35.1	
	baz=314,slow=75,SNR=71						
H11S3	WAKE ISLAND Hy	28.45	121	T	T	19 09 36.2	
	baz=314,slow=75,SNR=63						
H11S2	WAKE ISLAND Hy	28.47	121	T	T	19 09 37.1	
	baz=314,slow=75,SNR=69						
CMAR	Chiang Mai Arr	41.00	256	P	P	18 41 29.2	-2.1
	0.2nm,0.5s,baz=90,slow=6.3,SNR=1.7						
ZALV	Zalesovo Beam	42.52	313	P	P	18 41 42.3	-1.0
	0.5nm,0.5s,baz=103,slow=10,SNR=2.5						
MKAR	Makanchi Array	44.54	303	P	P	18 41 59.5	-0.3
	0.8nm,0.6s,baz=87,slow=8.9,SNR=11						
ILAR	Eielson Array	50.57	32	P	P	18 42 45.9	-0.5
	0.3nm,0.7s,baz=268,slow=6.0,SNR=5.4						
AAK	Ala-Archa	50.84	299	P	P	18 42 48.1	-0.8
	0.2nm,0.2s,baz=139,slow=9.3,SNR=1.7						
WRA	Warramunga Arr	55.91	188	P	P	18 43 25.3	-0.7
	1.3nm,0.6s,baz=3.4,slow=7.2,SNR=16						
ARU	Arti	57.06	319	P	P	18 43 35.9	+1.9
	0.3nm,0.3s,baz=91,slow=5.9,SNR=4.8						
ASAR	Alice Springs	59.63	188	P	P	18 43 51.5	-0.8
	0.4nm,0.7s,baz=20,slow=12,SNR=7.8						
YKA	Yellowknife Ar	64.90	30	P	P	18 44 26.6	-0.6
	0.3nm,0.7s,baz=304,slow=6.2,SNR=6.7						
AKASG	Malin Array Be	75.06	322	P	P	18 45 31.2	+1.5
	0.6nm,0.5s,baz=44,slow=6.0,SNR=17						
NVAR	Mina Array Bea	75.85	53	P	P	18 45 36.3	+1.4
	0.3nm,0.7s,baz=22,slow=5.1,SNR=2.6						
BRTR	Keskin Array B	79.43	312	P	P	18 45 55.9	+1.1
	0.6nm,0.9s,baz=91,slow=5.8,SNR=1.9						
TORD	Torodi Ar. Bea	117.96	314	PKP	PKiKP	18 52 34.7	-0.9
	0.1nm,0.4s,baz=26,slow=0.9,SNR=2.0						

ROM 21 18:35:39.5±0.0, **43°.366N**±0°.002×**12°.542E**±0°.003, **h9**^{km}, **ML1.8**/11, **4C**, **Error ellipse: s-maj=0.2km s-min=0.2km az=8.0**, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATFO	Monte Foce - G	0.02	88	⇑*i*P	Pg	18 35 41.3	0.0
ATFO				S	Sg	18 35 42.1	-0.3
ATFO				AML	AML		
	comp=E,7375μm,0.3s						
ATFO				AML	AML		
	comp=N,5535μm,0.7s						
ATVO	AVT- Monte Val	0.10	279	⇑*i*P	Pg	18 35 42.5	+0.4
ATVO				S	Sg	18 35 44.4	+0.6
MURB	Monte Urbino	0.10	187	P	Pg	18 35 42.6	+0.5
MURB				S	Sg	18 35 44.8	+0.9
MURB				AML	AML		
	comp=E,2605μm,0.7s						
MURB				AML	AML		
	comp=N,2675μm,0.2s						
MURB				AML	AML		
	comp=N,2680μm,0.2s						
MURB				AML	AML		
	comp=E,2610μm,0.7s						
MURB				AML	AML		
	comp=N,3210μm,0.2s						
MURB				AML	AML		

	comp=E,2960µm,0.2s						
ATPI	**Pietralunga -**	0.13	310	P	Pg	18 35 43.1	+0.6
ATPI				S	Sg	18 35 45.7	+1.1
ATPI				AML	AML		
	comp=E,322µm,0.6s						
ATPI				AML	AML		
	comp=N,326µm,1.0s						
PIEI	**Pieia**	0.17	358	P	Pg	18 35 43.9	+0.7
PIEI				S	Sg	18 35 46.9	+1.3
FOSV	**Fossato di Vic**	0.17	114	P	Pg	18 35 43.8	+0.6
FOSV				S	Sg	18 35 46.9	+1.1
FOSV				AML	AML		
	comp=N,212µm,1.0s						
FOSV				AML	AML		
	comp=N,212µm,1.0s						
FOSV				AML	AML		
	comp=E,197µm,0.4s						
SSFR	**Montelago di S**	0.19	68	P	Pg	18 35 44.1	+0.6
SSFR				S	Sg	18 35 47.4	+1.2
SSFR				AML	AML		
	comp=N,805µm,0.2s						
SSFR				AML	AML		
	comp=N,700µm,0.2s						
SSFR				AML	AML		
	comp=E,1385µm,0.2s						
SSFR				AML	AML		
	comp=E,1470µm,0.2s						
ATCC	**AVT- Casa Cast**	0.19	158	P	Pg	18 35 44.4	+0.8
ATCC				S	Sg	18 35 48.0	+1.7
ATCC				AML	AML		
	comp=N,540µm,0.8s						
ATCC				AML	AML		
	comp=E,596µm,0.6s						
ATMI	**Monte Miggiano**	0.20	261	P	Pg	18 35 44.4	+0.7
ATMI				S	Sg	18 35 47.6	+1.1
ATMI				AML	AML		
	comp=E,264µm,0.4s						
ATMI				AML	AML		
	comp=N,212µm,0.3s						
ATMI				AML	AML		
	comp=E,263µm,0.4s						
FRON	**Frontone**	0.20	41	P	Pg	18 35 44.4	+0.6
FRON				S	Sg	18 35 47.9	+1.3
FRON				AML	AML		
	comp=N,481µm,0.6s						
FRON				AML	AML		
	comp=E,184µm,0.6s						
ATTE	**AVT- Monte Tez**	0.22	219	P	Pg	18 35 44.4	+0.5
ATTE				S	Sg	18 35 48.5	+1.5
ATTE				AML	AML		
	comp=N,164µm,0.4s						
ATTE				AML	AML		
	comp=E,141µm,1.5s						
NARO	**Abbazia di Nar**	0.25	7	P	Pg	18 35 45.2	+0.7
NARO				S	Sg	18 35 49.4	+1.5
BADI	**Badiali**	0.26	304	P	Pg	18 35 45.5	+0.8
BADI				S	Sb	18 35 50.0	-1.0
MPAG	**Monte Paganucc**	0.31	31	P	Pg	18 35 46.3	+0.7
MPAG				S	Sb	18 35 51.3	-1.1
SNTG	**Esanatoglia**	0.31	111	P	Pg	18 35 46.3	+0.5
SNTG				S	Sb	18 35 51.5	-1.0
SNTG				AML	AML		
	comp=N,182µm,0.3s						
SNTG				AML	AML		
	comp=E,107µm,0.3s						
ARVD	**Arcevia**	0.32	65	⇑P	Pg	18 35 46.5	+0.7
ARVD				S	Sb	18 35 52.1	-0.7
ARVD				AML	AML		
	comp=N,117µm,0.4s						
ARVD				AML	AML		
	comp=E,135µm,1.3s						
ASSB	**Assisi San Ben**	0.33	165	⇑P	Pg	18 35 46.6	+0.5
ASSB				S	Sb	18 35 52.0	-1.1
ASSB				AML	AML		
	comp=N,153µm,1.4s						
ASSB				AML	AML		
	comp=E,190µm,0.2s						
FSSB	**Fossombrone**	0.37	28	P	Pb	18 35 47.8	-0.5
FSSB				S	Sb	18 35 53.6	-0.6
GAG1	**Gagliole**	0.40	108	P	Pg	18 35 45.7	-1.7
EL6	**Elcito**	0.41	95	P	Pg	18 35 48.1	+0.6
EL6				S	Sb	18 35 54.8	-0.6
CAFI	**Castiglion Fio**	0.42	265	S	Sg	18 35 49.0	-4.3
FDMO	**Fiordimonte**	0.52	129	P	Pg	18 35 49.9	+0.3
FDMO				S	Sb	18 35 58.2	-0.2
CSP1	**Cessapalombo**	0.56	119	P	Pg	18 35 50.6	+0.3
CSP1				S	Sb	18 35 59.0	-0.7
NRCA	**Norcia**	0.68	142	S	Sn	18 36 10.0	+3.9

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*NEIC **21** 18:35:50.4, 38°.45N×22°.51E, h17^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-2.15; M$_{\theta\theta}$7.37; M$_{\phi\phi}$-5.22; M$_{r\theta}$3.03; M$_{\theta\phi}$4.15; M$_{\phi r}$-3.90; Fault plane solution: M$_0$9.20000×10^{14} NP1:φ$_s$33.10000°, δ59.25000°, λ-162.68000°. NP2:φ$_s$294.04000°, δ75.17000°, λ-31.93000°. Principal axes: T 8.9396, Plg10.0000°, Azm346.0000°; N 0.5010, Plg55.0000°, Azm92.0000°; P -9.4405, Plg33.0000°, Azm250.0000°;*

*ATH **21** 18:35:50.2, 38°.43N×22°.46E, h8^{km}±2^{km}, ML3.9/31 Error ellipse: s-maj=2.0km s-min=0.5km az=9.0*

*THE **21** 18:35:50.7, 38°.42N×22°.45E, h6^{km}±1^{km}, ML4.0/10, Error ellipse: s-maj=1.2km s-min=0.3km az=183.0*

*ISK **21** 18:35:50.4, 38°.49N×22°.50E, h10^{km}, ML3.9/22*

*IASPEI **21** 18:35:50.2±0.8, 38°.42N±0°.02×22°.46E±0°.02, h9^{km}±4^{km}, mb4.0/32, Error ellipse: s-maj=2.3km s-min=2.2km az=152.8, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*TIR **21** 18:35:50.8, 38°.72N×22°.59E, h6^{km}, Md3.8/6*

*MOS **21** 18:35:50.1±1.0, 38°.40N×22°.47E, h18^{km}, mb4.4/9, Error ellipse: s-maj=6.8km s-min=3.5km az=85.8*

*NEIC **21** 18:35:51.4±2.1, 38°.46N±0°.05×22°.49E±0°.07, h15^{km}±3^{km}, Error ellipse: s-maj=8.5km s-min=7.2km az=46.0*

*IDC **21** 18:35:53.1±3.1, 38°.42N×22°.48E, h26^{km}±21^{km}, mb3.8/20, mb1 3.9/28, mb1mx3.8/60, mbtmp3.9/28, ML3.7/8, MS3.2/1, Ms1 3.2/1, ms1mx2.6/62, Error ellipse: s-maj=13.7km s-min=13.0km az=149.0*

ISC 21 18:35:50.5±0.7, **38°.42N**±0°.01×**22°.47E**±0°.01, **h9**^{km}±4^{km}, **n330**, σ1§**17**/393, **mb4.0**/32, **11C-17D, Greece**

PDG 21 18:35:50.7±0.6, **38°.44N×22°.45E, h11**^{km}, **ML3.8**/12, **Error ellipse: s-maj=0.6km s-min=0.6km az=0.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DSF	**Desfina**	0.04	103	P	**Pg**	**18 35 52.2**	**-0.2**
DSF				S	**Sg**	**18 35 53.4**	**-0.3**
	399µm,0.3s						
DSF	**Desfina**	0.04	103	P	**Pg**	**18 35 52.2**	**-0.2**
DSF				S	**Sg**	**18 35 53.2**	**-0.5**
DSF				AML	AML	18 35 53.4	
DSF				AML	AML	18 35 54.4	
DLFA	**Delphi**	0.06	18	P	**Pg**	**18 35 52.3**	**-0.2**
DLFA				S	**Sg**	**18 35 53.4**	**-0.6**
DLFA				AML	AML	18 35 54.1	
DLFA				AML	AML	18 35 54.1	
KALE	**Kalithea**	0.26	264	P	**Pg**	**18 35 55.5**	**-0.3**
KALE				S	**Sg**	**18 35 59.6**	**+0.2**
	33µm,0.6s						
KALE	**Kalithea**	0.26	264	P	**Pg**	**18 35 55.4**	**-0.5**
KALE				S	**Sg**	**18 35 58.4**	**-1.0**
KALE				AML	AML	18 36 00.7	
	comp=N,75117µm,0.3s						
KALE				AML	AML	18 36 01.9	
	comp=E,49110µm,0.3s						
TRIZ	**Trizonia**	0.32	260	P	**Pg**	**18 35 56.4**	**-0.5**
TRIZ	**Trizonia**	0.32	260	P	**Pg**	**18 35 56.3**	**-0.5**
TRIZ				S	**Sg**	**18 36 00.7**	**-0.4**
ALIK	**Aliki, Aigiali**	0.33	241	P	**Pg**	**18 35 57.1**	**+0.1**
ALIK				S	**Sg**	**18 36 01.5**	**+0.2**
SERG	**Sergoula**	0.33	269	P	**Pg**	**18 35 56.6**	**-0.4**
SERG	**Sergoula**	0.33	269	P	**Pg**	**18 35 56.6**	**-0.4**
SERG				S	**Sg**	**18 36 01.4**	**0.0**
SERG				AML	AML	18 36 02.5	
SERG				AML	AML	18 36 04.7	
	comp=E,50406µm,0.5s						
AXAR	**Agios Charalam**	0.37	23	P	**Pg**	**18 35 58.5**	**+0.6**
AXAR				S	**Sg**	**18 36 04.1**	**+1.2**
	comp=E,138µm,0.4s						
AXAR	**Agios Charalam**	0.37	23	P	**Pg**	**18 35 58.7**	**+0.7**
AXAR				S	**Sg**	**18 36 03.7**	**+0.8**
AXAR				AML	AML	18 36 05.8	
AXAR				AML	AML	18 36 05.9	
PROD	**Prodromos**	0.37	116	P	**Pg**	**18 35 58.4**	**+0.5**
PROD				S	**Sb**	**18 36 04.3**	**-1.0**
PROD	**Prodromos**	0.37	116	P	**Pg**	**18 35 58.0**	**+0.1**
PROD				S	**Sg**	**18 36 02.8**	**0.0**
PROD				AML	AML	18 36 05.3	
PROD				AML	AML	18 36 07.0	
LAKA	**Lakka**	0.43	245	P	**Pg**	**18 35 58.5**	**-0.4**
LAKA	**Lakka**	0.43	245	P	**Pg**	**18 35 58.5**	**-0.4**
LAKA				S	**Sg**	**18 36 04.3**	**-0.3**
LAKA				AML	AML	18 36 09.0	
	comp=N,8958µm,0.8s						
LAKA				AML	AML	18 36 15.7	
	comp=E,7821µm,0.9s						
EFP	**Efpalio**	0.45	271	P	**Pg**	**18 35 58.6**	**-0.6**
EFP	**Efpalio**	0.45	271	P	**Pg**	**18 35 58.6**	**-0.6**
EFP				S	**Sg**	**18 36 04.5**	**-0.5**
EFP				AML	AML	18 36 08.4	
	comp=N,24539µm,0.4s						
EFP				AML	AML	18 36 09.0	
	comp=E,26531µm,0.6s						
KLV	**Kalavryta, Ach**	0.45	214	P	**Pg**	**18 35 58.8**	**-0.6**
KLV				S	**Sg**	**18 36 05.5**	**+0.1**
	comp=E,3µm,0.5s						
KLV	**Kalavryta, Ach**	0.45	214	P	**Pg**	**18 35 58.6**	**-0.8**
KLV				S	**Sg**	**18 36 04.4**	**-1.0**
KLV				AML	AML	18 36 15.3	
	comp=E,8279µm,0.7s						
KLV				AML	AML	18 36 19.2	
	comp=N,8356µm,0.7s						
ANX	**Ano Chora**	0.47	292	P	**Pg**	**18 35 59.4**	**-0.2**
ANX				S	**Sg**	**18 36 06.1**	**+0.3**
	comp=N,32µm,0.4s						
ANX	**Ano Chora**	0.47	292	P	**Pg**	**18 35 59.4**	**-0.2**
ANX				S	**Sg**	**18 36 05.7**	**-0.1**
ANX				AML	AML	18 36 08.2	
	comp=N,85874µm,0.4s						
ANX				AML	AML	18 36 11.2	
	comp=E,42516µm,0.4s						
LKR	**Lokris**	0.47	61	P	**Pg**	**18 35 59.8**	**0.0**
LKR				S	**Sb**	**18 36 07.3**	**-0.9**
	comp=E,69µm,0.1s						
LKR	**Lokris**	0.47	61	P	**Pg**	**18 35 59.7**	**0.0**
LKR				S	**Sg**	**18 36 05.9**	**0.0**
LKR				AML	AML	18 36 08.3	
LKR				AML	AML	18 36 08.3	
	comp=N,88346µm,0.2s						
LTK	**Loutraki**	0.56	135	P	**Pg**	**18 36 01.7**	**+0.3**
LTK				S	**Sb**	**18 36 10.2**	**-0.4**
	comp=N,16µm,0.6s						
LTK	**Loutraki**	0.56	135	P	**Pg**	**18 36 01.6**	**+0.3**
LTK				S	**Sg**	**18 36 08.5**	**-0.2**
LTK				AML	AML	18 36 11.6	
	comp=E,35393µm,0.6s						
LTK				AML	AML	18 36 16.1	
	comp=N,33380µm,0.3s						
UPR	**University Cam**	0.56	256	P	**Pg**	**18 36 01.3**	**0.0**
UPR	**University Cam**	0.56	256	P	**Pg**	**18 36 01.3**	**0.0**
LOUT	**Loutraki**	0.59	137	P	**Pg**	**18 36 02.1**	**+0.2**
LOUT				S	**Sg**	**18 36 10.5**	**+1.0**
	comp=N,19µm,0.4s						
LOUT	**Loutraki**	0.59	137	P	**Pg**	**18 36 02.0**	**+0.1**
LOUT				S	**Sb**	**18 36 10.8**	**-0.6**
LOUT				AML	AML	18 36 13.0	
	comp=E,7410µm,0.4s						
LOUT				AML	AML	18 36 13.9	
	comp=N,6838µm,0.4s						
AGG	**Agios Georgios**	0.61	350	P	**Pg**	**18 36 01.8**	**-0.6**
AGG				S	**Sg**	**18 36 11.1**	**+0.7**
	comp=N,5µm,0.3s						
AGG	**Agios Georgios**	0.61	350	P	**Pg**	**18 36 01.6**	**-0.7**
AGG				S	**Sg**	**18 36 10.2**	**-0.2**
AGG				AML	AML	18 36 12.3	
	comp=E,10876µm,0.4s						
AGG				AML	AML	18 36 12.7	
	comp=N,9914µm,0.4s						
AGG	**Agios Georgios**	0.61	350	PG	**Pg**	**18 36 01.7**	**-0.7**
AGG				SG	**Sg**	**18 36 09.7**	**-0.7**
AGG	**Agios Georgios**	0.61	350	P	**Pg**	**18 36 01.7**	**-0.7**
AGG	**Agios Georgios**	0.61	350		**Pg**	**18 36 01.7**	**-0.7**
MAKR	**Makrakomi, Fth**	0.65	336	P	**Pg**	**18 36 02.8**	**-0.3**
MAKR	**Makrakomi, Fth**	0.65	336	P	**Pg**	**18 36 02.8**	**-0.3**
MAKR				S	**Sg**	**18 36 11.3**	**-0.3**
VIL2	**Platees**	0.66	108	P	**Pb**	**18 36 04.0**	**-0.3**
VIL2				S	**Sb**	**18 36 14.4**	**+0.9**
VIL2				AML	AML	18 36 17.6	
	comp=N,89613µm,0.5s						
VIL2				AML	AML	18 36 17.8	
	comp=E,65068µm,0.6s						
VILL	**Villia**	0.71	111	P	**Pg**	**18 36 04.5**	**+0.3**
EVR	**Evrytania**	0.72	314	P	**Pg**	**18 36 04.0**	**-0.4**
EVR	**Evrytania**	0.72	314	P	**Pg**	**18 36 03.7**	**-0.7**
EVR				S	**Sg**	**18 36 13.9**	**+0.2**
EVR				AML	AML	18 36 23.0	
	comp=E,12466µm,0.8s						
EVR				AML	AML	18 36 24.1	
	comp=N,17392µm,1.1s						
DRO	**Drossia**	0.76	232	P	**Pg**	**18 36 04.4**	**-0.8**
DRO	**Drossia**	0.76	232	P	**Pg**	**18 36 04.3**	**-0.8**
PVO	**Paravola**	0.77	285	P	**Pg**	**18 36 04.8**	**-0.5**
PVO	**Paravola**	0.77	285	P	**Pg**	**18 36 04.7**	**-0.7**
PVO				AML	AML	18 36 23.9	
	comp=N,7141µm,0.8s						
PVO				AML	AML	18 36 26.3	
	comp=E,7935µm,1.0s						
RLS	**Riolos of Patr**	0.87	246	P	**Pg**	**18 36 06.5**	**-0.8**
RLS	**Riolos of Patr**	0.87	246	P	**Pg**	**18 36 06.2**	**-1.1**
MRKA	**Markates**	0.92	72	P	**Pg**	**18 36 07.9**	**-0.3**
MRKA				S	**Sb**	**18 36 21.3**	**+0.3**
	comp=E,9µm,0.8s						
MRKA	**Markates**	0.92	72	P	**Pg**	**18 36 07.0**	**-1.2**
PDO	**Prodromos**	1.03	280	P	**Pg**	**18 36 10.2**	**-0.1**
PDO	**Prodromos**	1.03	280	P	**Pg**	**18 36 10.0**	**-0.2**
PDO				AML	AML	18 36 35.8	
	comp=N,9528µm,0.7s						
PDO				AML	AML	18 36 37.1	
	comp=E,13676µm,0.5s						
VLX	**Vlachokerasia**	1.05	184	P	**Pg**	**18 36 10.2**	**-0.5**
VLX	**Vlachokerasia**	1.05	184	P	**Pg**	**18 36 10.1**	**-0.6**
VLX				AML	AML	18 36 31.6	
	comp=E,11844µm,0.4s						
VLX				AML	AML	18 36 32.6	
	comp=N,11561µm,0.5s						
NEO	**Neokhori**	1.06	33	P	**Pg**	**18 36 10.2**	**-0.7**
NEO	**Neokhori**	1.06	33	P	**Pg**	**18 36 09.9**	**-1.0**
NEO				S	**Sg**	**18 36 24.3**	**-0.4**
NEO				AML	AML	18 36 30.7	
	comp=E,12565µm,0.3s						
NEO				AML	AML	18 36 32.9	
	comp=N,12390µm,0.6s						
AMT	**Artemida-Makis**	1.07	214	P	**Pg**	**18 36 10.3**	**-0.8**
AMT	**Artemida-Makis**	1.07	214	P	**Pg**	**18 36 10.0**	**-1.2**
SKIA	**Skiathos**	1.08	46	P	**Pg**	**18 36 11.0**	**-0.2**
SKIA	**Skiathos**	1.08	46	P	**Pg**	**18 36 10.7**	**-0.5**
SKIA				S	**Sg**	**18 36 24.5**	**-0.7**
SKIA				AML	AML	18 36 28.9	
	comp=E,13813µm,0.8s						
SKIA				AML	AML	18 36 29.6	
	comp=N,18003µm,0.9s						
ATH	**Athens Observa**	1.08	114	P	**Pg**	**18 36 11.1**	**-0.1**
ATH	**Athens Observa**	1.08	114	P	**Pn**	**18 36 11.8**	**-0.1**
ATH				S	**Sb**	**18 36 26.1**	**+0.5**
ATH				AML	AML	18 36 32.7	
	comp=E,33151µm,0.7s						
ATH				AML	AML	18 36 32.9	
	comp=N,31357µm,0.6s						
ATH	**Athens Observa**	1.08	114	P	**Pg**	**18 36 11.1**	**-0.1**
DID	**Didima**	1.09	146	P	**Pb**	**18 36 11.7**	**0.0**
DID	**Didima**	1.09	146	P	**Pg**	**18 36 11.5**	**0.0**
DID				S	**Sb**	**18 36 26.5**	**+0.4**
DID				AML	AML	18 36 28.7	
	comp=E,16087µm,0.7s						
DID				AML	AML	18 36 29.1	
	comp=N,20657µm,0.8s						
XOR	**Xorichti**	1.10	31	P	**Pg**	**18 36 11.1**	**-0.5**
XOR	**Xorichti**	1.10	31	P	**Pg**	**18 36 10.9**	**-0.7**
XOR				S	**Sg**	**18 36 25.3**	**-0.6**
XOR				AML	AML	18 36 31.1	
	comp=E,10075µm,0.7s						
XOR				AML	AML	18 36 32.4	
	comp=N,17987µm,0.9s						
ATHU	**Athens Univers**	1.13	113	P	**Pn**	**18 36 12.5**	**-0.1**
ATHU	**Athens Univers**	1.13	113	P	**Pg**	**18 36 12.2**	**0.0**
ATHU				S	**Sn**	**18 36 28.1**	**-0.1**
ATHU				AML	AML	18 36 32.1	
	comp=N,17031µm,0.4s						
ATHU				AML	AML	18 36 32.3	
	comp=E,8346µm,0.4s						
PTL	**Penteli**	1.16	108	P	**Pb**	**18 36 12.9**	**+0.1**
PTL	**Penteli**	1.16	108	P	**Pg**	**18 36 12.0**	**-0.8**
PTL				S	**Sn**	**18 36 29.0**	**0.0**
PTL				AML	AML	18 36 31.2	
	comp=N,12670µm,0.7s						
PTL				AML	AML	18 36 34.4	
	comp=E,16017µm,0.6s						
KRND	**KRANIDI**	1.17	152	P	**Pb**	**18 36 12.6**	**-0.3**
KRND	**KRANIDI**	1.17	152	P	**Pb**	**18 36 12.6**	**-0.3**
KRND				S	**Sn**	**18 36 29.2**	**0.0**
KRND				AML	AML	18 36 31.4	
	comp=E,19914µm,0.6s						
KRND				AML	AML	18 36 32.6	
	comp=N,20828µm,0.6s						
VLY	**Voula,Athens**	1.19	118	P	**Pn**	**18 36 13.5**	**+0.2**
VLY	**Voula,Athens**	1.19	118	P	**Pn**	**18 36 13.5**	**+0.2**
VLY				S	**Sn**	**18 36 29.5**	**-0.1**
VLY				AML	AML	18 36 33.6	
	comp=E,32135µm,0.6s						
VLY				AML	AML	18 36 34.0	
	comp=N,27037µm,0.4s						
THL	**Klokotos Trika**	1.20	343	P	**Pb**	**18 36 13.2**	**-0.2**
THL	**Klokotos Trika**	1.20	343	P	**Pb**	**18 36 12.9**	**-0.5**
THL				S	**Sg**	**18 36 29.4**	**+0.3**
THL				AML	AML	18 36 31.9	
	comp=N,1530µm,0.7s						
THL				AML	AML	18 36 33.5	
	comp=E,2260µm,0.5s						
DION	**Dionisos Attik**	1.20	106	P	**Pb**	**18 36 13.2**	**-0.3**
DION	**Dionisos Attik**	1.20	106	P	**Pg**	**18 36 13.6**	**0.0**
DION				S	**Sn**	**18 36 30.4**	**+0.4**
ITM	**Ithomi**	1.31	199	P	**Pn**	**18 36 14.0**	**-1.1**
ITM	**Ithomi**	1.31	199		**Pn**	**18 36 14.0**	**-1.1**
AOS	**Alonnisos**	1.33	55	P	**Pn**	**18 36 14.6**	**-0.7**
AOS				S	**Sb**	**18 36 32.3**	**-0.6**
AOS				AML	AML	18 36 38.1	
	comp=E,4994µm,0.6s						
AOS				AML	AML	18 36 41.4	
	comp=N,6324µm,0.8s						
AOS	**Alonnisos**	1.33	55	PN	**Pn**	**18 36 14.7**	**-0.7**
AOS				SN	**Sb**	**18 36 32.3**	**-0.6**
KFL	**Anninata**	1.36	257	P	**Pn**	**18 36 15.1**	**-0.6**
KARY	**Karystos**	1.59	103	P	**Pn**	**18 36 19.2**	**+0.3**
PYL	**PYLOS**	1.63	201	P	**Pn**	**18 36 20.1**	**+0.7**
DYR	**Agios Nikonas**	1.66	184	P	**Pb**	**18 36 20.8**	**-0.5**
LIT	**Litokhoron**	1.68	0	P	**Pn**	**18 36 20.1**	**0.0**
LIT	**Litokhoron**	1.68	0		**Pn**	**18 36 20.1**	**0.0**
SKY	**Skiros Island**	1.69	74	P	**Pb**	**18 36 21.5**	**-0.3**
VLI	**Veliai**	1.74	168	P	**Pb**	**18 36 22.8**	**+0.1**
VLI				S	**Sn**	**18 36 43.6**	**+0.3**
VLI				AML	AML	18 36 50.4	
	comp=N,8314µm,0.9s						
VLI				AML	AML	18 36 55.7	
	comp=E,5898µm,0.7s						
KZN	**Kozani**	1.96	344	P	**Pb**	**18 36 26.2**	**-0.3**
IGT	**Igoumenitsa**	2.00	304	P	**Pb**	**18 36 27.8**	**+0.6**
HORT	**Hortiatis**	2.23	12	PN	**Pn**	**18 36 27.3**	**-0.5**
HORT				SN	**Sn**	**18 36 54.5**	**-1.0**
OUR	**Ouranopolis**	2.24	31	PN	**Pn**	**18 36 27.7**	**-0.1**
OUR				SN	**Sn**	**18 36 54.9**	**-0.7**
OUR	**Ouranopolis**	2.24	31	P	**Pn**	**18 36 27.4**	**-0.4**
THE	**Thessaloniki**	2.24	10	P	**Pn**	**18 36 27.4**	**-0.4**
SRN	**Sarande**	2.41	308	*i* PN	**Pb**	**18 36 32.9**	**-1.2**
SRN				*i* SN	**Sb**	**18 37 05.3**	**+1.3**
SOH	**Sokhos**	2.49	16	P	**Pn**	**18 36 31.9**	**+0.5**
FNA	**Florina**	2.51	341	PN	**Pn**	**18 36 31.7**	**+0.1**
FNA				SN	**Sn**	**18 37 01.4**	**-0.9**
FNA	**Florina**	2.51	341	P	**Pn**	**18 36 32.2**	**+0.6**
FNA	**Florina**	2.51	341		**Pn**	**18 36 32.1**	**+0.6**
GRG	**Griva**	2.53	359	PN	**Pn**	**18 36 31.9**	**0.0**
GRG	**Griva**	2.53	359	P	**Pn**	**18 36 32.2**	**+0.3**
TPE	**Tepelena**	2.67	315	*i* PN	**Pb**	**18 36 37.3**	**-1.3**
TPE				*i* SN	**Sg**	**18 37 19.9**	**+3.5**
KNT	**Kendrikon**	2.76	7	PN	**Pn**	**18 36 34.8**	**-0.2**
KNT				SN	**Sn**	**18 37 07.6**	**-0.8**
KNT	**Kendrikon**	2.76	7	P	**Pn**	**18 36 35.7**	**+0.7**
SIGR	**SIGRI**	2.76	72	PN	**Pn**	**18 36 35.8**	**+0.9**
APE	**Apeiranthos**	2.77	118	PN	**Pn**	**18 36 35.9**	**+0.7**
APE	**Apeiranthos**	2.77	118	*i* P	**Pn**	**18 36 36.2**	**+1.0**
APE				*i* S	**Sn**	**18 37 07.6**	**-1.3**
CHOS	**Chios island**	2.81	90	PN	**Pn**	**18 36 36.6**	**+0.8**
SRS	**Serrai**	2.83	17	P	**Pn**	**18 36 36.2**	**+0.3**
VAY	**Valandovo**	2.90	1	*i* Pn	**Pn**	**18 36 37.6**	**+0.7**
VAY				*i* Sn	**Sn**	**18 37 11.9**	**+0.1**
VAY	**Valandovo**	2.90	1	P	**Pn**	**18 36 37.4**	**+0.5**
OHR	**Ohrid**	2.98	335	*i* Pn	**Pn**	**18 36 39.9**	**+1.8**
OHR				*i* Sn	**Sb**	**18 37 18.8**	**-1.6**
RODP	**Rodopos**	3.04	160	PN	**Pn**	**18 36 40.8**	**+2.0**
BOZC	**Bozcaada**	3.12	62	PN	**Pn**	**18 36 40.6**	**+0.6**
SANT	**Santorini**	3.14	130	Pn	**Pn**	**18 36 41.7**	**+1.5**
IMMV	**Iera Moni Meta**	3.19	157	PN	**Pn**	**18 36 42.9**	**+2.0**
URLA	**Izmir**	3.24	90	PN	**Pn**	**18 36 42.7**	**+1.1**
MMB	**Musomiste**	3.31	17	*i* P	**Pn**	**18 36 42.4**	**-0.2**
EZN	**Ezine**	3.31	64	PN	**Pn**	**18 36 42.7**	**+0.2**
EZN	**Ezine**	3.31	64	P	**Pn**	**18 36 42.6**	**+0.1**
KNDR	**Palaiochora Ch**	3.33	163	PN	**Pn**	**18 36 44.9**	**+2.1**
KKB	**Krupnik**	3.47	8	*i* P	**Pn**	**18 36 45.0**	**+0.2**
SCTE	**Santa Cesarea**	3.52	299		**Pn**	**18 36 47.4**	**+2.0**
DKL	**Dikili**	3.53	78	PN	**Pn**	**18 36 46.8**	**+1.3**
TIR	**Tirane**	3.54	326	*i* PN	**Pn**	**18 36 48.8**	**+3.0**
TIR	**Tirane**	3.54	326	P	**Pn**	**18 36 45.5**	**-0.3**
TIR	**Tirane**	3.54	326		**Pn**	**18 36 45.5**	**-0.3**
BLCB	**Balcova**	3.59	89	PN	**Pn**	**18 36 46.8**	**+0.4**
PHP	**Peshkopia**	3.61	335	*i* PN	**Pn**	**18 36 48.2**	**+1.5**
PHP				*i* SN	**Sn**	**18 37 32.3**	**+2.7**
SKO	**Skopje**	3.63	348	*i* Pn	**Pn**	**18 36 48.4**	**+1.4**
ENEZ	**Enez**	3.67	50	PN	**Pn**	**18 36 48.1**	**+0.7**
GELI	**Tayfur-Gelibol**	3.67	56	PN	**Pn**	**18 36 47.6**	**0.0**
IDI	**Anoyia**	3.68	147	Pn	**Pn**	**18 36 48.5**	**+0.8**
	comp=E,3.9nm,0.3s,baz=276,slow=16,SNR=24						
IDI				Sn	**Sn**	**18 37 30.7**	**-0.6**
	comp=E,3.0nm,0.3s,baz=133,slow=21,SNR=4.0						
IDI	**Anoyia**	3.68	147	PN	**Pn**	**18 36 48.8**	**+1.1**
RZN	**Rozhen**	3.69	27	*i* P	**Pn**	**18 36 48.2**	**+0.3**
ALN	**Alexandroupoli**	3.70	47	PN	**Pn**	**18 36 48.6**	**+0.6**
ALN	**Alexandroupoli**	3.70	47	P	**Pn**	**18 36 47.5**	**-0.5**
ALN	**Alexandroupoli**	3.70	47		**Pn**	**18 36 47.5**	**-0.5**
GVDS	**Gavdos**	3.80	159	PN	**Pn**	**18 36 51.5**	**+2.2**
GVD	**Gavdhos**	3.80	160	PN	**Pn**	**18 36 51.7**	**+2.4**
GCAM	**G?zelcaml?**	3.83	99	PN	**Pn**	**18 36 51.1**	**+1.5**
ERIK	**Erikli-Kesan**	3.85	53	PN	**Pn**	**18 36 49.2**	**-0.7**
LPK	**Lapseki**	3.85	58	PN	**Pn**	**18 36 50.8**	**+0.8**
PLD	**Plovdiv**	4.06	24	PN	**Pn**	**18 36 52.9**	**+0.1**
PLD	**Plovdiv**	4.06	24	P	**Pn**	**18 36 53.9**	**+1.1**
BODT	**Bodrum**	4.07	108	PN	**Pn**	**18 36 54.9**	**+1.9**
PUK	**Puka**	4.12	332	*i* PN	**Pn**	**18 36 56.6**	**+2.8**
PUK				*i* SN	**Sn**	**18 37 46.3**	**+4.1**
VTS	**Vitosha**	4.23	8	⇓P	**Pn**	**18 36 56.6**	**+1.3**
VTS	**Vitosha**	4.23	8	*i* P	**Pn**	**18 36 56.4**	**+1.0**
VTS	**Vitosha**	4.23	8	P	**Pn**	**18 36 55.7**	**+0.3**
VTS	**Vitosha**	4.23	8		**Pn**	**18 36 55.7**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	4.29	95	PN	**Pn**	**18 36 58.3**	**+2.1**
BCI	**Bajram Curri**	4.35	336	*i* PN	**Pn**	**18 36 59.5**	**+2.6**
BCI				*i* SN	**Sn**	**18 37 48.6**	**+1.0**
DRME	**Dracevica, Mon**	4.52	327	*e*Pn	**Pn**	**18 37 00.6**	**+1.4**
TIP	**Timpagrande**	4.53	281	⇓P	**Pn**	**18 37 02.4**	**+3.0**
TIP	**Timpagrande**	4.53	281		**Pn**	**18 37 01.1**	**+1.7**
PDG	**Podgorica**	4.70	330	⇓P	**Pn**	**18 37 03.9**	**+2.3**
PDG	**Podgorica**	4.70	330	*e*Pn	**Pn**	**18 37 03.0**	**+1.4**
PDG	**Podgorica**	4.70	330		**Pn**	**18 37 02.7**	**+1.1**
KARP	**Karpathos**	4.72	126		**Pn**	**18 37 05.3**	**+3.3**
EDRB	**Edirne**	4.74	42	PN	**Pn**	**18 37 02.3**	**+0.2**
MANT	**Manisa**	4.78	87	Pn	**Pn**	**18 37 03.6**	**+0.6**
BAI	**Bari**	5.08	304	*e*Pn	**Pn**	**18 37 09.5**	**+2.7**
SG1	**Sgolgore (BA)**	5.08	300	*e*Pn	**Pn**	**18 37 08.6**	**+1.6**
CEL	**Celeste**	5.17	270	Pn	**Pn**	**18 37 08.3**	**+0.1**
ELND	**Elena**	5.19	29	⇓P	**Pn**	**18 37 08.8**	**+0.4**
PLVB	**Pleven**	5.22	17	⇑P	**Pn**	**18 37 10.2**	**+1.4**
TREB	**Trebinje**	5.32	325	*e*Pn	**Pn**	**18 37 10.5**	**+0.4**
DBRK	**Dubrovnik**	5.37	324	*i* Pn	**Pn**	**18 37 11.0**	**+0.2**
DBRK				Sn	**Sn**	**18 38 12.2**	**-0.6**
BRY	**Bratogost**	5.38	327	*e*Pn	**Pn**	**18 37 13.1**	**+1.9**
UPM	**Unac-Piva**	5.49	332	*e*Pn	**Pn**	**18 37 13.1**	**+0.4**
ACER	**Acerenza**	5.57	297		**Pn**	**18 37 15.2**	**+1.6**

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RUDO  Rudo              5.70 337 ePn    Pn    18 37 16.6 +1.2
STON  Ston              5.74 322 ePn    Pn    18 37 16.2 +0.3
STON                              Sn    Sn    18 38 20.4 -1.4
STON  Ston              5.74 322 ePn    Pn    18 37 15.7 -0.2
BBLS  Lazi&#263;i       5.91 338 ePn    Pn    18 37 19.7 +1.3
DIVS  Divibare          5.97 343 ePn    Pn    18 37 20.0 +0.8
ELL   Elmali            6.14 104  P     Pn    18 37 19.9 -1.6
ELL   Elmali            6.14 104  Pn    Pn    18 37 19.9 -1.6
HAPS  Han Pijesak,Bl    6.25 336 ePn    Pn    18 37 25.1 +2.0
ISP   Isparta           6.38  93  P     Pn    18 37 27.7 +2.9
ISP   Isparta           6.38  93  Pn    Pn    18 37 27.7 +2.9
MAKA  Makarska          6.38 321 ePn    Pn    18 37 24.5 -0.2
MAKA                              Sn    Sn    18 38 36.0 -1.6
VAE   Valguarnera       6.44 264  Sn    Sn    18 38 42.9 +3.6
      comp=E,1.7nm,0.3s,baz=325,slow=7.2,SNR=4.1
PAOL  Paolisi           6.63 296        Pn    18 37 30.1 +1.9
GZR   Gura Zlata        6.97   2 ⇑P     Pn    18 37 34.8 +1.9
MDUB  Mudurnu           7.06  70  Pn    Pn    18 37 35.9 +1.8
MTUR  Matau             7.07  15 ⇓P     Pn    18 37 33.8 -0.5
LOT   Lotru             7.09   7 ⇑P     Pn    18 37 36.3 +1.8
BZS   Buzias            7.22 355 ⇓P     Pn    18 37 38.0 +1.8
BZS   Buzias            7.22 355  P     Pn    18 37 37.7 +1.5
CORL  Corleone          7.24 269  Pn    Pn    18 37 37.2 +0.5
VOIR                    7.27  14 ⇑P     Pn    18 37 38.5 +1.5
VOIR                    7.27  14  P     Pn    18 37 38.1 +1.1
VOIR                              pmax  pmax
      comp=Z,17nm,0.9s
ZIRJ  Zirje             7.34 318 ePn    Pn    18 37 37.9  0.0
ZIRJ                              Sn    Sn    18 38 59.0 -2.4
CLTB  Caltabellotta     7.36 266  Pn    Pn    18 37 39.0 +0.8
MORI  Morici            7.46 319 i Pn   Pn    18 37 40.0 +0.5
BLY   Banja Luka        7.46 330 ⇓P     Pn    18 37 41.1 +1.5
BLY   Banja Luka        7.46 330        Pn    18 37 40.5 +0.9
INTR  Introdacqua       7.47 301        Pn    18 37 41.7 +1.9
TIRR  Tirgusor          7.50  35  P     Pn    18 37 39.2 -0.9
TIRR  Tirgusor          7.50  35  Pn    Pn    18 37 39.2 -0.9
MLR   Muntele Rosu      7.52  19  Pn    Pn    18 37 41.8 +1.2
      comp=Z,2.8nm,0.3s,baz=246,slow=5.7,SNR=19
MLR   Muntele Rosu      7.52  19 ⇑P     Pn    18 37 42.9 +2.4
BISRR Bisoca            7.79  23 ⇑P     Pn    18 37 47.0 +2.9
DOPR  Dopca             7.84  15 ⇓P     Pn    18 37 47.0 +2.1
DUGI  Dugi Otok         7.88 317 i Pn   Pn    18 37 45.7 +0.3
UDBI  Udbina            7.91 323 ePn    Pn    18 37 47.6 +1.8
AQU   L'Aquila          7.96 302  P     Pn    18 37 45.2 -1.2
AQU   L'Aquila          7.96 302  Pn    Pn    18 37 45.2 -1.2
PLOR  Plostina          8.05  21 ⇓P     Pn    18 37 49.7 +2.1
PLOR  Plostina          8.05  21  P     Pn    18 37 49.7 +2.1
OZUR                    8.05  17 ⇓P     Pn    18 37 49.2 +1.5
VRI   Vrincioaia        8.08  22 ⇑P     Pn    18 37 50.5 +2.4
VRI   Vrincioaia        8.08  22  P     Pn    18 37 50.4 +2.4
VRI                               pmax  pmax
      comp=Z,30nm,1.0s
DRGR                    8.37   1  P     Pn    18 37 55.1 +3.0
DRGR                              pmax  pmax
      comp=Z,11nm,1.7s
NRCA  Norcia            8.37 305        Pn    18 37 53.6 +1.5
NVLJ  Novalja           8.38 320 ePn    Pn    18 37 52.4 +0.3
TESR  Tescani           8.65  20 ⇑P     Pn    18 37 58.4 +2.5
BR131 Keskin Array S    8.78  78  P     Pn    18 37 58.1 +0.3
BR131 Keskin Array S    8.78  78        Pn    18 37 58.1 +0.3
BRTR  Keskin Array B    8.78  78  Pn    Pn    18 37 59.6 +1.7
      comp=Z,0.5nm,0.3s,baz=258,slow=12,SNR=14
BRTR  Keskin Array B    8.78  78 eP     Pn    18 38 01.0 +3.1
BRTR                              pmax  pmax
      comp=Z,1.0nm,0.3s
BRTR  Keskin Array B    8.78  78        Pn    18 37 57.0 -0.8
MURB  Monte Urbino      8.96 306  Pn    Pn    18 37 60.0 -0.1
CRES  Cresnjev          9.05 327 ePn    Pn    18 38 00.6 -0.7
ILGA  Ilgaz             9.05  70  Pn    Pn    18 38 01.1 -0.5
LATE  Laterza           9.14 301  Pn    Pn    18 38 02.9 +0.3
BURAR Bucovina Array    9.40  11  P     Pn    18 38 05.0 -1.3
BURAR Bucovina Array    9.40  11  Pn    Pn    18 38 06.0 -0.4
BUR08 Bucovina Ar. S    9.43  11  Pn    Pn    18 38 06.2 -0.5
CEY   Cerknica          9.44 323 ePn    Pn    18 38 06.7 -0.1
PSZ   Piszkesteto       9.68 350  P     Pn    18 38 09.7 -0.3
PSZ   Piszkesteto       9.68 350  Pn    Pn    18 38 09.7 -0.3
CASP  Castiglione de    9.85 300  Pn    Pn    18 38 11.4 -0.9
ARSA  Arzberg          10.19 332 ePn    Pn    18 38 17.4 +0.4
      comp=Z,1.2nm,0.3s
UZH   Uzhgorod         10.21 359 eP     Pn    18 38 21.4 +4.2
VYHS  Vyhne            10.41 346 eP     Pn    18 38 22.2 +2.2
VYHS                             e            18 40 16.4
VYHS  Vyhne            10.41 346 ePN    Pn    18 38 22.2 +2.2
VYHS                             eSN    Sn    18 40 16.4 -0.3
CONA  Conrad Observa   10.65 335 ePn    Pn    18 38 25.4 +2.0
      comp=Z,0.8nm,0.4s
CTI   Castel Tesino    11.06 317  P     Pn    18 38 29.2 +0.2
CTI   Castel Tesino    11.06 317  Pn    Pn    18 38 29.2 +0.2
ABTA  Abfaltersbach    11.09 322  Pn    Pn    18 38 30.9 +1.6
      comp=Z,1.1nm,0.4s
MOA   Molln            11.16 330 ePn    Pn    18 38 32.2 +1.9
      comp=Z,1.9nm,0.6s
MMAI  Mount Meron Ar   11.81 113  Pn    Pn    18 38 38.9 -0.3
      comp=Z,0.4nm,0.3s,baz=297,slow=11,SNR=4.3
GERES GERESS Array B   12.19 332  Pn    Pn    18 38 46.0 +1.6
      comp=Z,0.1nm,0.3s,baz=145,slow=8.1,SNR=4.6
GERES                             LR    LR    18 45 05.4
      comp=Z,108nm,19.2s,baz=313,slow=45
GERES GERESS Array B   12.19 332  Pn    Pn    18 38 44.8 +0.4
MOTA  Moosalm          12.20 321 ePn    Pn    18 38 46.6 +2.0
      comp=Z,1.2nm,0.5s
KHC   Kasperske Hory   12.48 332 eP     Pn    18 38 49.5 +1.2
KHC                              ex     x     18 39 02.0
KHC   Kasperske Hory   12.48 332⇓eP     Pn    18 38 49.9 +1.6
AKASG Malin Array Be   13.18  19  Pn    Pn    18 38 57.8  0.0
      comp=Z,0.6nm,0.3s,baz=210,slow=11,SNR=5.3
AKASG Malin Array Be   13.18  19 eP     Pn    18 38 58.8 +1.0
AKASG                             pmax  pmax
      comp=Z,1.0nm,0.3s
CLL   Collm            14.51 336 e(PP)        18 39 27.0
CLL   Collm            14.51 336 eP     P     18 39 27.0 +4.3
SUW   Suwalki          15.60   2  P     P     18 39 32.9 -1.9
SUW                               pmax  pmax
      comp=Z,35nm,1.1s
SUW   Suwalki          15.60   2  P     P     18 39 32.9 -1.9
KIV   Kislovodsk       16.18  64 eP     Pn    18 39 38.1  0.0
KIV                               pmax  pmax
      comp=Z,23nm,1.1s
KIV                               MLR   MLR
      comp=Z,263nm,13.0s
KBZ   Khabaz           16.28  65  Pn    P     18 39 43.1 +0.8
      comp=Z,0.0nm,0.3s,baz=240,slow=17,SNR=3.2
VSR   Storozhevoye     17.38  37⇓eP     Pn    18 39 53.5 +0.3
LPSR  Galich'ya Gora   18.21  34 eP     P     18 40 05.1 +1.4
LPSR                              pmax  pmax
      comp=Z,20nm,1.2s
OBN   Obninsk          19.22  25  P     Pn    18 40 16.3 +0.6
      comp=Z,0.6nm,0.3s,baz=176,slow=14,SNR=3.5
OBN   Obninsk          19.22  25⇑eP     P     18 40 14.6 -0.1
OBN                              eS     Sn    18 43 50.1 -1.0
OBN                               pmax  pmax
      comp=Z,71nm,3.2s
OBN                               MLR   MLR
      comp=Z,135nm,16.0s
OBN   Obninsk          19.22  25  P     Pn    18 40 15.6 -0.1
VSU   Vasula           20.25   6⇓eP     P     18 40 26.1 +0.2
ESDC  Sonseca Array    20.55 282  P     Pn    18 40 31.1 -0.6
      comp=Z,2.8nm,0.5s,baz=49,slow=5.8,SNR=4.4
HFS   Hagfors          22.43 348  P     P     18 40 49.5 +0.1
      comp=Z,0.8nm,0.4s,baz=183,slow=8.7,SNR=5.1
FINES FINESS Array B   23.16   4  P     P     18 40 57.5 +0.6
      comp=Z,4.6nm,0.9s,baz=155,slow=17,SNR=4.3
FINES FINESS Array B   23.16   4  P     P     18 40 56.7 -0.3
FINES FINESS Array B   23.16   4  P     P     18 40 56.6 -0.3
NAO01 NORSAR Array S   23.59 346  P     P     18 41 00.7 -0.7
NC405 NORSAR Array S   23.69 347  P     P     18 41 01.7 -0.7
NB201 NORSAR Array S   23.71 346  P     P     18 41 01.5 -1.1
NB2   NORSAR Subarra   23.71 346  P     P     18 41 01.2 -1.4
      comp=Z,2.6nm,1.0s,baz=160,slow=11
NOA   NORSAR Array B   23.71 346  P     P     18 41 02.1 -0.5
      comp=Z,1.9nm,0.9s,baz=152,slow=9.5,SNR=3.1
NC204 NORSAR Array S   24.02 346  P     P     18 41 04.5 -1.0
NC204                             IAmb  IAmb  18 41 34.1
      comp=Z,3.8nm,0.7s
EKA   Eskdalemuir Ar   24.14 323  P     P     18 41 05.9 -0.7
      comp=Z,1.6nm,0.6s,baz=121,slow=9.8,SNR=3.7
RAYN  Ar Rayn          24.61 120  P     P     18 41 10.6 -0.8
RAYN                              pmax  pmax
      comp=Z,6.0nm,0.7s
RAYN  Ar Rayn          24.61 120  P     P     18 41 10.6 -0.8
RAYN                              IAmb  IAmb  18 41 27.2
      comp=Z,6.0nm,0.7s
KLMR  Klimovskoe       24.87  20 eP     P     18 41 11.7 -1.5
KLMR                              pmax  pmax
      comp=Z,11nm,0.8s
KLMR  Klimovskoe       24.87  20 eP     P     18 41 11.8 -1.5
KLMR                              AMP         18 41 15.2
      comp=Z,11nm,0.8s
TOA0  Torodi Ar. Sit   31.21 222  P     P     18 42 10.3  0.0
TOA0                              IAmb  IAmb  18 42 11.4
      comp=Z,3.1nm,0.7s
TORD  Torodi Ar. Bea   31.21 222  P     P     18 42 10.5 +0.2
      comp=Z,3.1nm,0.6s,baz=33,slow=9.2,SNR=25
TORD  Torodi Ar. Bea   31.21 222  P     P     18 42 09.8 -0.6
BRVK  Borovoye         35.73  50⇓eP     P     18 42 47.6 -1.7
BRVK                              pmax  pmax
      comp=Z,2.0nm,0.9s
BRVK  Borovoye         35.73  50  P     P     18 42 48.2 -1.1
BRVK                              IAmb  IAmb  18 43 14.2
      comp=Z,6.6nm,1.4s
KK31  Karatay Array    36.29  67  P     P     18 42 53.8 -0.6
KK31                              pmax  pmax
      comp=Z,3.0nm,1.2s
KK31  Karatay Array    36.29  67  P     P     18 42 53.8 -0.6
KK31                              IAmb  IAmb  18 43 14.8
      comp=Z,3.5nm,1.1s
KKAR  Karatay Array    36.29  67  P     P     18 42 53.5 -0.8
KKAR                              pmax  pmax
      comp=Z,3.0nm,1.2s
KKAR  Karatay Array    36.29  67  P     P     18 42 53.5 -0.8
KKAR                              IAmb  IAmb  18 43 14.8
      comp=Z,3.5nm,1.1s
AAK   Ala-Archa        39.25  67  P     P     18 43 20.3 +0.8
      comp=Z,0.9nm,0.6s,baz=232,slow=7.3,SNR=5.1
AAK   Ala-Archa        39.25  67⇓eP     P     18 43 21.5 +1.9
AAK                               pmax  pmax
      comp=Z,10.0nm,2.9s
AAK   Ala-Archa        39.25  67  P     P     18 43 20.0 +0.5
DBIC  Dimbokro         40.13 225  P     P     18 43 26.9  0.0
      comp=Z,6.8nm,0.8s,baz=354,slow=7.9,SNR=9.0
DBIC  Dimbokro         40.13 225  P     P     18 43 26.9  0.0
DBIC                              pmax  pmax
      comp=Z,8.0nm,0.9s
DBIC  Dimbokro         40.13 225  P     P     18 43 26.9  0.0
DBIC                              IAmb  IAmb  18 43 27.9
      comp=Z,7.7nm,0.9s
TIC   Toumodi          40.24 225 eP     P     18 43 27.6 -0.2
KIC   Kosan Boka       40.32 225 eP     P     18 43 28.6 +0.1
      comp=Z,7.7nm,0.7s
LIC   Lamto            40.59 225 eP     P     18 43 30.9 +0.2
      comp=Z,18nm,0.6s
KURK  Kurchatov        40.90  54⇑eP     P     18 43 33.3 +0.4
KURK                              pmax  pmax
      comp=Z,4.0nm,1.3s
MK31  Makanchi Array   43.86  59  P     P     18 43 56.8 -0.4
MK31                              pmax  pmax
      comp=Z,2.0nm,0.8s
MK31  Makanchi Array   43.86  59  P     P     18 43 56.8 -0.4
MKAR  Makanchi Array   43.86  59  P     P     18 43 56.5 -0.7
      comp=Z,1.7nm,0.6s,baz=280,slow=6.7,SNR=15
MKAR                              ScP   ScP   18 49 33.2 -2.0
      comp=Z,0.5nm,0.6s,baz=270,slow=4.5,SNR=7.4
MKAR  Makanchi Array   43.86  59 eP     P     18 43 58.5 +1.4
MKAR                              pmax  pmax
      comp=Z,2.0nm,0.6s
MKAR  Makanchi Array   43.86  59  P     P     18 43 57.2  0.0
ZAA0  Zalesovo Array   44.38  48  P     P     18 43 59.9 -1.3
ZALV  Zalesovo Beam    44.38  48  P     P     18 44 00.9 -0.2
      comp=Z,5.1nm,0.6s,baz=274,slow=8.8,SNR=18
ZALV  Zalesovo Beam    44.38  48  P     P     18 43 59.6 -1.6
NRIK  Noril'sk         45.89  27⇓eP     P     18 44 13.6 +0.7
NRIK                              pmax  pmax
      comp=Z,5.0nm,1.2s
DGZ   Jazzator, Alta   46.64  54⇓eP     P     18 44 19.6 +0.3
DGZ                               pmax  pmax
      comp=Z,3.0nm,0.8s
SONM  Songino Array    59.11  51  P     P     18 45 52.5 +1.0
      comp=Z,1.9nm,0.9s,baz=276,slow=13,SNR=4.9
SCHQ  Schefferville    59.32 318  P     P     18 45 53.6 +1.1
      comp=Z,1.4nm,0.6s,baz=81,slow=7.4,SNR=4.3
SCHQ  Schefferville    59.32 318  P     P     18 45 54.3 +1.7
SCHQ                              IAmb  IAmb  18 45 56.2
      comp=Z,2.8nm,1.0s
CMAR  Chiang Mai Arr   68.33  83  P     P     18 46 51.8 -0.7
      comp=Z,0.3nm,0.6s,baz=315,slow=8.9,SNR=2.6
CMAR  Chiang Mai Arr   68.33  83  P     P     18 46 50.8 -1.7
SEY   Seymchan         71.35  22  P     P     18 47 10.3  0.0
      comp=Z,0.3nm,0.4s,baz=140,slow=5.3,SNR=1.7
INK   Inuvik           72.08 351  P     P     18 47 14.1 -0.5
      comp=Z,0.6nm,0.5s,baz=29,slow=10,SNR=3.5
INK   Inuvik           72.08 351  P     P     18 47 13.9 -0.7
INK                               pmax  pmax
      comp=Z,1.0nm,0.6s
INK   Inuvik           72.08 351  P     P     18 47 13.9 -0.7
KLR   Kul'dur          72.70  40  P     P     18 47 18.6 -0.2
      comp=Z,0.9nm,0.7s,baz=290,slow=19,SNR=2.5
KLR   Kul'dur          72.70  40⇑eP     P     18 47 19.1 +0.4
KLR                               pmax  pmax
      comp=Z,6.0nm,1.8s
YKA   Yellowknife Ar   73.68 341  P     P     18 47 22.9 -1.2
      comp=Z,0.3nm,0.6s,baz=33,slow=4.8,SNR=5.7
YKA   Yellowknife Ar   73.68 341  P     P     18 47 23.0 -1.2
ILAR  Eielson Array    76.80 355  P     P     18 47 41.2 -1.0
      comp=Z,0.6nm,0.8s,baz=342,slow=3.5,SNR=7.7
ILAR  Eielson Array    76.80 355 eP     P     18 47 42.7 +0.5
ILAR                              pmax  pmax
      comp=Z,1.0nm,0.8s
ILAR  Eielson Array    76.80 355  P     P     18 47 40.7 -1.5
KSRS  Korea Array      77.98  52  P     P     18 47 48.6 -0.6
      comp=Z,0.7nm,0.6s,baz=311,slow=4.8,SNR=2.7
PDAR  Pinedale Array   88.20 327  P     P     18 48 42.8 +0.5
      comp=Z,0.3nm,0.8s,baz=60,slow=5.3,SNR=2.2
PDAR  Pinedale Array   88.20 327  P     P     18 48 42.4 +0.1
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IDC ***21*** *18:46:58.2±1.4, 0°.62N×99°.97E, h147^{km}±10^{km}, mb3.7/9, mb1 3.7/11, mb1mx3.4/48, mbtmp4.1/11, Error ellipse: s-maj=46.9km s-min=11.8km az=58.0*

DJA ***21*** *18:46:59.1±0.2, 1°N±3°×10°0E±°, h164^{km}±3^{km}, M4.5/18, mb4.5/12, mB5.5/6, MLv4.3/18, Mw(mB)4.9/6*

KLM ***21*** *18:46:59.0, 0°.62N×99°.78E, h166^{km}, mb4.3*

NEIC ***21*** *18:46:59.3±1.8, 0°.64N±0°.07×99°.85E±0°.07, h156^{km}±6^{km}, mb4.3/29, Error ellipse: s-maj=11.4km s-min=8.1km az=225.0*

ISC 21 18:46:58.2±0.4**, 0°.61N**±0°.04×**99°.85E**±0°.05**, h150**^{km}**, n95, σ1^{s}.34**/111**, mb4.2**/25**, Northern Sumatera**

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Code  Station Name       Δ°  AZ°    Phase ID        Time      Res
                                  Op    ISC       h  m  s    ISC
BKNI  Bangkinang        1.22 103  P     Pn    18 47 27.2 +2.2
BKNI  Bangkinang        1.22 103        Pn    18 47 27.2 +2.2
PDSI  Padang            1.63 158  P     Pn    18 47 31.6 +2.4
PDSI                              S     Sn    18 47 52.3 -0.7
SISI  Saibi             2.06 202  P     Pn    18 47 35.7 +1.6
SISI                              S     Sn    18 47 59.0 -2.7
SDSI  Sungai Dareh      2.20 134  P     Pn    18 47 38.4 +2.7
RPSI  Rantau Prapat     2.27 336        Pn    18 47 38.3 +1.7
RPSI  Rantau Prapat     2.27 336        Pn    18 47 37.8 +1.2
RPSI                                    Sn    18 48 07.2 +1.0
PSI   Prapat            2.37 337  P     Pn    18 47 37.8 -0.1
      10nm,0.3s,baz=149,slow=11,SNR=54
PSI                               S     Sn    18 48 07.2 -1.3
      6.0nm,0.3s,baz=19,slow=20,SNR=15
GSI   Gunungsitoli      2.38 287        Pn    18 47 40.1 +2.2
KRJI  Kerinci           3.13 149  P     Pn    18 47 49.8 +2.5
PPSI  Pulau Pagai       3.35 177  P     Pn    18 47 50.5 +0.4
TPTI                    3.75 315  P     Pn    18 47 56.5 +1.2
SNSI  Sinabang, Aceh    3.95 297  P     Pn    18 48 00.0 +2.1
IPM   Ipoh              4.02  17        Pn    18 48 00.6 +1.7
IPM   Ipoh              4.02  17  P     Pn    18 48 01.0 +2.1
MYKOM Kota Tinggi       4.17  74        Pn    18 48 02.5 +1.8
MYKOM Kota Tinggi       4.17  74  P     Pn    18 48 03.0 +2.3
KULM  Kulim             4.72  10        Pn    18 48 08.7 +0.7
KULM  Kulim             4.72  10  P     Pn    18 48 09.0 +1.0
MLSI  Meulaboh, Aceh    5.01 317  P     Pn    18 48 12.8 +1.0
      1.9nm9µm249nm,0.5s
LHMI  Lhok Sumawe       5.43 328  P     Pn    18 48 17.8 +0.4
      0.4nm1µm105nm,0.7s
LHMI  Lhok Sumawe       5.43 328        Pn    18 48 17.8 +0.4
MNAI  Manna             5.83 148  P     Pn    18 48 23.8 +1.1
      0.9nm174nm,1.0s
MNAI  Manna             5.83 148  Pn    Pn    18 48 23.6 +0.9
MDSI  Maura Dua         6.65 140  P     Pn    18 48 35.3 +1.6
      0.1nm30nm,0.8s
LWLI  Liwa              6.99 143  P     Pn    18 48 38.9 +0.6
      0.1nm9µm18nm,0.9s
KASI  Kota Agung        7.66 143  P     Pn    18 48 46.3 -0.8
      0.2nm31nm,1.5s
CISI  Cisompet, Garu   11.35 136  Pn    Pn    18 49 33.0 -3.1
UGM   Wanagama         13.60 129  Pn    Pn    18 50 04.3 -0.8
DLV   T  Lat           14.15  37  Pn    Pn    18 50 10.6 -1.9
CMAR  Chiang Mai Arr   17.76 357  P     P     18 50 53.1 -1.9
      0.1nm,0.3s,baz=188,slow=11,SNR=13
CMAR  Chiang Mai Arr   17.76 357  P     P     18 50 53.8 -1.2
MPSI  Mapaga           20.05  91  P     P     18 51 20.7 +0.8
      9.7nm,0.6s
MRSI  Marisa           22.09  90  P     P     18 51 43.8 +2.2
SOEI  Soe              26.39 114  P     P     18 52 19.7 -1.5
SOEI                              IAmb  IAmb  18 52 32.7
      comp=Z,21nm,1.2s
ODAN  Odare            28.72 336 eP     P     18 52 43.1 +1.2
      comp=Z,12nm,0.6s
TAPN  Taplejung        29.04 337 eP     P     18 52 46.1 +1.4
      comp=Z,21nm,0.9s
RAMN  Ramite           29.13 335 eP     P     18 52 47.1 +1.6
JIRN  Jiri             29.92 335 eP     P     18 52 53.8 +1.2
LSA   Lhasa            30.10 345  P     P     18 52 55.2 +0.9
LSA                               IAmb  IAmb  18 52 56.9
      comp=Z,8.7nm,0.5s
PKI   Pulchoki         30.18 334 eP     P     18 52 55.1 +0.2
PKIN  Phulchoki        30.19 334 eP     P     18 52 56.2 +1.3
      comp=Z,1.5nm,0.2s
GUN   Gumba            30.27 335 eP     P     18 52 56.9 +1.2
      comp=Z,32nm,0.6s
KKN   Kakani           30.43 334 eP     P     18 52 57.8 +0.9
GKN   Gorkha           30.90 333 eP     P     18 53 02.4 +1.4
      comp=Z,7.1nm,0.2s
DANN  Dangsing         31.59 332 eP     P     18 53 08.1 +0.9
      comp=Z,14nm,0.4s
FAKI  Fak Fak          32.58  96  P     P     18 53 16.6 +0.9
KNRA  Kununurra        32.82 121  P     P     18 53 18.5 +0.8
KNRA                              IAmb  IAmb  18 53 33.4
      comp=Z,9.3nm,1.1s
MTN   Manton Dam       33.78 114  P     P     18 53 26.0 -0.1
MTN                               IAmb  IAmb  18 53 46.3
      comp=Z,11nm,1.1s
XAN   Xi'an            34.33  13  P     P     18 53 26.5 -4.2
RKPI  Ransiki, Papua   34.39  94  P     P     18 53 32.1 +0.7
      comp=Z,8µmcomp=Z,51nm,0.6s
NWAO  Narrogin (SRO)   37.17 155  P     P     18 53 53.9 -0.9
WB0   Warramunga Arr   39.45 123  P     P     18 54 13.4 -0.7
WB0                               IAmb  IAmb  18 54 16.6
      comp=Z,2.1nm,0.7s
WRA   Warramunga Arr   39.48 123  P     P     18 54 13.8 -0.5
      comp=Z,2.6nm,0.6s,baz=304,slow=8.9,SNR=21
WRA                               PcP   PcP   18 56 19.4 +0.1
      comp=Z,0.5nm,0.4s,baz=317,slow=2.6,SNR=7.4
WRA   Warramunga Arr   39.48 123  P     P     18 54 13.9 -0.5
WB2   Warramunga Arr   39.49 123  P     P     18 54 13.3 -1.1
WB2                               IAmb  IAmb  18 54 17.8
      comp=Z,4.7nm,1.1s
WR0   Warramunga Arr   39.66 123  P     P     18 54 14.8 -1.0
WR0                               IAmb  IAmb  18 54 18.9
      comp=Z,4.4nm,0.6s
ASAR  Alice Springs    40.94 128  P     P     18 54 24.9 -1.5
      comp=Z,0.4nm,0.3s,baz=296,slow=7.7,SNR=19
ASAR                              PcP   PcP   18 56 24.2 +0.2
      comp=Z,0.7nm,0.5s,baz=306,slow=2.7,SNR=10
ASAR                              ScP   ScP   18 59 58.0 -1.8
      comp=Z,0.3nm,0.6s,baz=301,slow=4.4,SNR=5.2
ASAR  Alice Springs    40.94 128  P     P     18 54 25.7 -0.7
FORT  Forrest          41.15 142  P     P     18 54 28.9 +1.0
NIL   Nilore           41.27 326  P     P     18 54 29.4 +0.5
NIL                               IAmb  IAmb  18 54 30.3
      comp=Z,8.9nm,0.7s
HHC   Hu-ho-hao-te     41.45  13 eP     P     18 54 31.3 +1.0
WMQ   Urumqi           44.37 347 eP     P     18 54 55.8 +2.0
KSH   Kashi            44.44 333  P     P     18 54 54.3 -0.2
KSH                               pP    pP    18 55 30.8 +2.7
KSH                               PP    PP    18 56 41.6 +0.3
KSH                               PcS   PcS   19 00 27.9 -1.2
KSH                               S     S     19 01 15.6 -2.6
KSRS  Korea Array      44.89  32  P     P     18 54 57.8  0.0
      comp=Z,0.8nm,0.7s,baz=228,slow=7.7,SNR=3.4
ARSB  Arslanbob        47.26 332  P     P     18 55 17.0 +0.5
SONM  Songino Array    47.38   6  P     P     18 55 17.8 +0.4
      comp=Z,1.0nm,0.5s,baz=192,slow=7.9,SNR=7.1
SONM                              ScP   ScP   19 00 23.8 -2.0
      comp=Z,0.7nm,0.7s,baz=147,slow=3.4,SNR=3.9
SONM  Songino Array    47.38   6  P     P     18 55 18.6 +1.2
SONM                                    ScP   19 00 27.7 +1.9
AAK   Ala-Archa        47.63 335  P     P     18 55 20.9 +1.5
BBOO  Buckleboo        47.64 138  P     P     18 55 19.3 -0.2
MK31  Makanchi Array   48.50 344  P     P     18 55 26.3 +0.5
MK31                              IAmb  IAmb  18 55 27.1
      comp=Z,2.8nm,0.6s
MKAR  Makanchi Array   48.50 344  P     P     18 55 26.6 +0.7
      comp=Z,3.4nm,0.4s,baz=157,slow=8.7,SNR=125
MKAR  Makanchi Array   48.50 344  P     P     18 55 26.2 +0.3
MAKZ  Makanchi         48.60 344  P     P     18 55 26.9 +0.3
MAKZ                              IAmb  IAmb  18 55 28.3
      comp=Z,2.2nm,0.8s
KK31  Karatay Array    49.79 332  P     P     18 55 36.1 +0.4
KKAR  Karatay Array    49.79 332  P     P     18 55 35.5 -0.2
KKAR  Karatay Array    49.79 332  P     P     18 55 36.5 +0.8
KKAR                              IAmb  IAmb  18 55 55.0
      comp=Z,3.3nm,1.4s
STKA  Stephens Creek   51.01 133  P     P     18 55 44.9 -0.2
      comp=Z,1.2nm,0.5s,baz=315,slow=8.7,SNR=3.9
STKA  Stephens Creek   51.01 133  P     P     18 55 44.9 -0.2
KURK  Kurchatov        53.09 343  P     P     18 56 00.3 +0.3
KURK                              IAmb  IAmb  18 56 02.0
      comp=Z,3.9nm,1.0s
ZAA0  Zalesovo Array   54.60 349  P     P     18 56 11.2 +0.2
ZAA0                              IAmb  IAmb  18 56 12.0
      comp=Z,6.7nm,0.6s
ZALV  Zalesovo Beam    54.60 349  P     P     18 56 11.3 +0.3
      comp=Z,6.4nm,0.5s,baz=173,slow=7.0,SNR=35
ZALV                              pP    pP    18 56 47.8 +2.0
      comp=Z,1.6nm,0.5s,baz=169,slow=7.3,SNR=4.5
ZALV  Zalesovo Beam    54.60 349  P     P     18 56 11.1 +0.1
ZALV                                    pP    18 56 46.9 +1.1
EIDS  Eidsvold         55.81 121  P     P     18 56 20.7 +0.5
BRVK  Borovoye         57.77 339  P     P     18 56 33.1 -0.4
BRVK                              IAmb  IAmb  18 56 33.8
      comp=Z,2.2nm,0.6s
ARMA  Armidale         58.05 127  P     P     18 56 37.0 +1.0
ABKAR Akbulak array    59.30 331  P     P     18 56 44.0 -0.2
ABKAR                             pP    pP    18 57 19.8 +0.1
BURAR Bucovina Array   79.22 318  P     P     18 58 48.0 +1.1
BURAR                             pP    pP    18 59 24.4 +0.2
BUR08 Bucovina Ar. S   79.24 318  P     P     18 58 47.8 +0.7
BUR08                             IAmb  IAmb  18 58 52.0
      comp=Z,4.3nm,1.4s
FINES FINESS Array B   81.75 332  P     P     18 59 00.7 +0.8
      comp=Z,2.0nm,0.7s,baz=108,slow=4.5,SNR=2.0
FINES FINESS Array B   81.75 332  P     P     18 59 00.5 +0.6
ARCES ARCESS Array B   83.99 340  P     P     18 59 11.8 +0.4
      comp=Z,3.3nm,0.9s,baz=99,slow=6.8,SNR=13
ARCES ARCESS Array B   83.99 340  P     P     18 59 12.1 +0.7
ARE0  ARCESS Array S   83.99 340  P     P     18 59 12.2 +0.9
VNDA  Vanda            84.73 169  P     P     18 59 16.1 +1.2
VNDA                              IAmb  IAmb  18 59 20.4
      comp=Z,6.2nm,1.5s
```

IDC ***21*** *18:50:36.3±1.1, 7°.29N×94°.05E, h0^{km}, mb3.8/8, mb1 3.8/10, mb1mx3.6/50, mbtmp3.7/10, ML3.5/2, MS3.1/2, Ms1 3.1/2, ms1mx2.7/46, Error ellipse: s-maj=48.1km s-min=19.2km az=50.0*

NEIC ***21*** *18:50:37.9±1.9, 7°.3N±0°.1×94°.2E±0°.1, h11^{km}±5^{km}, mb4.6/17, Error ellipse: s-maj=19.2km s-min=12.0km az=51.0*

ISC 21 18:50:39.5±0.7**, 7°.4N**±0°.1×**94°.3E**±0°.1**, h20**^{km}**, n46, σ0^{s}.92**/45**, mb4.4**/16**, Nicobar Islands region**

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Code  Station Name       Δ°  AZ°    Phase ID        Time      Res
                                  Op    ISC       h  m  s    ISC
LHMI  Lhok Sumawe       3.42 128  Pn    Pn    18 51 32.2 +0.4
PSI   Prapat            6.50 134  Pn    Pn    18 52 16.6 +2.4
      0.8nm,0.3s,baz=243,slow=11,SNR=1.0
PSI                               LR    LR    18 55 07.4
      comp=Z,170nm,21.5s,baz=342,slow=41
RPSI  Rantau Prapat     6.58 135        Pn    18 52 16.6 +1.5
KULM  Kulim             6.69 108        Pn    18 52 17.1 +0.4
IPM   Ipoh              7.33 113        Pn    18 52 25.3 -0.2
PBKT  Sadao Pong       11.26  35        Pn    18 53 20.1 +0.8
CMAR  Chiang Mai Arr   11.93  22  Pn    Pn    18 53 31.0 +2.4
      0.1nm,0.3s,baz=218,slow=14,SNR=4.1
RAMN  Ramite           20.79 340 eP     P     18 55 20.4 +0.7
      18nm,0.7s
```

TAPN	Taplejung	20.82	343	eP	P	18 55 20.0	-0.1
	15nm,0.8s						
PKI	Pulchoki	21.77	338	eP	P	18 55 31.1	+0.7
	7.4nm,0.6s						
PKIN	Phulchoki	21.78	338	eP	P	18 55 30.8	+0.3
GUN	Gumba	21.91	340	eP	P	18 55 31.6	-0.4
LSA	Lhasa	22.41	353	P	P	18 55 38.9	+1.6
DANN	Dangsing	23.10	336	eP	P	18 55 43.6	-0.9
	8.7nm,0.7s						
NIL	Nilore	32.57	326	P	P	18 57 09.2	-0.5
NIL				IAmb	IAmb	18 57 10.3	
	comp=Z,5.5nm,0.7s						
ARSB	Arslanbob	38.74	334	P	P	18 58 02.7	+0.1
ARSB				IAmb	IAmb	18 58 48.2	
	comp=Z,16nm,1.8s						
FITZ	Fitzroy Crossi	40.01	130	P	P	18 58 12.3	-1.0
FITZ				IAmb	IAmb	18 58 15.1	
	comp=Z,15nm,1.6s						
MK31	Makanchi Array	40.60	347	P	P	18 58 17.2	-0.7
MKAR	Makanchi Array	40.60	347	P	P	18 58 17.4	-0.4
	comp=Z,1.7nm,0.6s,baz=168,slow=7.9,SNR=15						
MKAR	Makanchi Array	40.60	347	P	P	18 58 17.3	-0.6
MAKZ	Makanchi	40.68	347	P	P	18 58 18.0	-0.5
KKAR	Karatay Array	41.26	333	P	P	18 58 23.7	+0.3
KSRS	Korea Array	42.78	41	LR	LR	19 17 47.0	
	comp=Z,25nm,18.1s,baz=170,slow=38						
GEYT	Alibeck	44.65	318	P	P	18 58 50.8	-0.1
	comp=Z,2.4nm,0.6s,baz=157,slow=8.0,SNR=7.5						
GEYT	Alibeck	44.65	318	P	P	18 58 51.9	+1.0
KURK	Kurchatov	45.12	346	P	P	18 58 54.5	+0.1
ZAA0	Zalesovo Array	47.07	352	P	P	18 59 09.1	-0.5
ZAA0				IAmb	IAmb	18 59 19.2	
	comp=Z,5.7nm,1.4s						
ZALV	Zalesovo Beam	47.07	352	P	P	18 59 09.8	+0.2
	comp=Z,1.7nm,0.7s,baz=191,slow=7.3,SNR=6.6						
ZALV	Zalesovo Beam	47.07	352	P	P	18 59 09.6	-0.1
WRA	Warramunga Arr	47.88	125	P	P	18 59 17.1	+0.5
	comp=Z,0.2nm,0.6s,baz=307,slow=8.1,SNR=1.3						
WB2	Warramunga Arr	47.89	125	P	P	18 59 17.1	+0.4
WB2				IAmb	IAmb	19 00 20.2	
	comp=Z,25nm,1.9s						
RAYN	Ar Rayn	49.39	295	P	P	18 59 29.5	+1.2
RAYN				IAmb	IAmb	18 59 31.3	
	comp=Z,2.6nm,0.8s						
ASAR	Alice Springs	49.51	130	P	P	18 59 29.6	+0.5
	comp=Z,0.3nm,1.0s,baz=311,slow=8.5,SNR=1.9						
BRVK	Borovoye	49.56	341	P	P	18 59 29.0	0.0
BRVK				IAmb	IAmb	19 00 25.1	
	comp=Z,9.6nm,1.6s						
ABKAR	Akbulak array	50.72	332	P	P	18 59 38.3	+0.5
BRTR	Keskin Array B	62.84	311	P	P	19 01 03.2	-1.0
	comp=Z,0.6nm,0.7s,baz=142,slow=6.3,SNR=4.2						
BRTR	Keskin Array B	62.84	311	P	P	19 01 02.8	-1.5
HNR	Honiara	67.54	103	P	P	19 01 32.8	-2.2
TIXI	Tiksi	67.70	11	P	P	19 01 34.5	-0.5
TIXI				IAmb	IAmb	19 02 23.1	
	comp=Z,15nm,2.0s						
PETK	Petropavlovsk-	68.35	35	P	P	19 01 39.0	-0.5
FIA1	FINESS Array S	73.20	332	P	P	19 02 08.2	-0.5
FINES	FINESS Array B	73.20	332	P	P	19 02 08.9	+0.1
	comp=Z,5.8nm,1.1s,baz=116,slow=4.4,SNR=5.4						
FINES	FINESS Array B	73.20	332	P	P	19 02 08.8	0.0
GERES	GERESS Array B	78.27	318	P	P	19 02 38.5	+0.4
	comp=Z,0.4nm,0.6s,baz=64,slow=6.1,SNR=3.9						
GERES	GERESS Array B	78.27	318	P	P	19 02 38.3	+0.1
SPA0	Spitsbergen Ar	80.35	348	P	P	19 02 47.8	-1.1

IDC 21 18:52:31.4±2.8,7°.23N×94°.11E,h0^{km},mb3.6/3,mb1 3.6/4, mb1mx3.3/53,mbtmp3.5/4,Error ellipse: s-maj=95.9km s-min=32.1km az=62.0,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	12.11	22	Pn	Pn	18 55 25.3	-0.1
	baz=222,slow=13,SNR=1.2						
MKAR	Makanchi Array	40.70	348	P	P	19 00 13.6	-0.2
	0.6nm,0.6s,baz=165,slow=8.0,SNR=5.8						
ZALV	Zalesovo Beam	47.19	353	P	P	19 01 05.7	0.0
	0.5nm,0.3s,baz=166,slow=7.1,SNR=2.1						
WRA	Warramunga Arr	47.92	125	P	P	19 01 11.8	-0.1
	0.5nm,1.0s,baz=304,slow=8.4,SNR=2.2						

IDC 21 18:56:00.9±2.4,7°.42N×94°.10E,h0^{km},mb3.5/4,mb1 3.6/5, mb1mx3.2/55,mbtmp3.4/5,ML3.9/1,Error ellipse: s-maj=82.6km s-min=30.0km az=59.0

NDI 21 18:56:07.2±2.9,7°.33N×94°.21E,h10^{km},ML3.4

ISC 21 18:56:04.3±1.0,7°.5N±0°.1×94°.1E±0°.2,h20^{km},n8,σ0^{s}.47/7, mb3.6/4,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
CMBY	CAMPBELL BAY	0.49	205	eP	Pn	18 56 16.3	+0.1
CMBY				eS	Sn	18 56 24.5	+0.2
CMBY				IAML		18 56 28.2	
	comp=N,4µm,0.2s						
CMBY				IAML		18 56 29.1	
	comp=E,3µm,0.3s						
PBA	Port Blair	4.39	342	eP	Pn	18 57 14.3	+4.4
PBA				ex	x	18 57 42.3	
PBA				IAML		18 57 53.1	
	comp=N,76nm,0.8s						
DGPR	DIGLIPUR	5.80	348	eP	Pn	18 57 34.7	+5.4
DGPR				ex	x	18 57 58.0	
DGPR				IAML		18 58 22.0	
	comp=E,23nm,0.4s						
CMAR	Chiang Mai Arr	11.89	23	Pn	Pn	18 58 53.4	+0.5
	comp=E,0.2nm,0.3s,baz=211,slow=15,SNR=6.0						
MKAR	Makanchi Array	40.49	347	P	P	19 03 41.1	-0.7
	comp=E,0.5nm,0.7s,baz=170,slow=8.4,SNR=6.6						
KURBB	Kurchatov Arra	44.94	346	P	P	19 04 18.0	+0.1
	comp=E,0.9nm,0.7s,baz=170,slow=7.0,SNR=12						
ZALV	Zalesovo Beam	46.96	352	P	P	19 04 33.5	-0.3
	comp=E,0.7nm,0.5s,baz=179,slow=12,SNR=2.3						
WRA	Warramunga Arr	48.03	125	P	P	19 04 42.3	-0.2
	comp=E,0.3nm,0.9s,baz=306,slow=8.3,SNR=1.3						

TAP 21 18:56:36.3,23°.15N×120°.92E,h7^{km},ML0.8,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
ELDTW	Lidau	0.10	66	i P	Pg	18 56 39.2	+0.6
	baz=67						
ELDTW				i S	Sg	18 56 40.8	+0.6
	baz=67						
STYT	Tauyuan	0.15	275	P	Pg	18 56 39.9	+0.4
	baz=275						
STYT				S	Sg	18 56 42.1	+0.5
	baz=275						
SLGT	Liugui	0.30	239	P	Pg	18 56 43.1	+0.9
	baz=233						
SLGT				S	Sg	18 56 47.5	+1.4
	baz=233						
WTP	Ta-pu	0.30	289	eP	Pb	18 56 43.2	-0.9
	baz=289						
WTP				S	Sb	18 56 47.9	-1.3
	baz=289						
TPUB	Ta-pu	0.31	299	P	Pg	18 56 43.0	+0.6
	baz=309						
TPUB				S	Sb	18 56 48.3	-1.2
	baz=309						
TPUB	Ta-pu	0.31	299	P	Sb	18 56 48.2	-1.3
FULB	Fuli	0.35	82	eS	Sb	18 56 49.2	-1.4
	baz=73						
YULB	Yu-li	0.42	55	eP	Pg	18 56 44.8	+0.3
	baz=53						
YULB				S	Sg	18 56 50.5	+0.4
	baz=53						

IDC 21 18:59:27.9±14.0,7°.46N×94°.01E,h0^{km},mb3.7/3, mb1 3.6/4,mb1mx3.3/54,mbtmp3.6/4,ML3.4/1,MS2.9/1, Ms1 3.1/1,ms1mx2.6/48,Error ellipse: s-maj=270.6km s-min=85.9km az=150.0

ISC 21 18:59:33.0±1.3,7°.77N±0°.07×93°.8E±0°.4,h18^{km},n5, σ1^{s}.27/6,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
CMBY	CAMPBELL BAY	0.76	173	eP	Pb	18 59 47.0	-0.6
CMBY				eS	Sg	18 59 58.6	+0.7
CMAR	Chiang Mai Arr	11.73	25	Pn	Pn	19 02 19.3	-0.3
	0.1nm,0.3s,baz=211,slow=16,SNR=4.6						
CMAR				LR	LR	19 06 49.3	
	comp=Z,53nm,18.4s,baz=263,slow=37						
MKAR	Makanchi Array	40.12	348	P	P	19 07 07.4	-0.3
	0.4nm,0.7s,baz=155,slow=6.7,SNR=4.8						
KURBB	Kurchatov Arra	44.57	346	P	P	19 07 43.3	-0.5
	0.9nm,0.9s,baz=166,slow=6.9,SNR=8.0						
ZALV	Zalesovo Beam	46.62	353	P	P	19 08 01.9	+1.9
	1.8nm,0.8s,baz=170,slow=9.0,SNR=6.4						

IDC 21 19:00:07.4±2.2,7°.54N×94°.16E,h0^{km},mb3.3/5,mb1 3.4/6, mb1mx3.2/53,mbtmp3.3/6,ML3.5/1,MS3.1/2,Ms1 3.1/2, ms1mx2.7/27,Error ellipse: s-maj=83.5km s-min=23.9km az=61.0

ISC 21 19:00:11.2±1.0,7°.6N±0°.1×94°.3E±0°.2,h20^{km},n9,σ0^{s}.99/8, mb3.5/5,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
CMBY	CAMPBELL BAY	0.66	209	eP	Pb	19 00 24.8	+0.7
CMBY				eS	Sn	19 00 35.1	-0.2
CMAR	Chiang Mai Arr	11.72	22	Pn	Pn	19 02 58.6	+1.1
	0.1nm,0.3s,baz=211,slow=14,SNR=2.3						
MKAR	Makanchi Array	40.38	347	P	P	19 07 46.2	-1.6
	0.4nm,0.8s,baz=171,slow=8.6,SNR=3.7						
KSRS	Korea Array	42.60	41	LR	LR	19 28 32.5	
	comp=Z,24nm,19.8s,baz=223,slow=40						
KURBB	Kurchatov Arra	44.84	346	P	P	19 08 23.7	-0.2
	0.5nm,0.8s,baz=168,slow=6.8,SNR=3.2						
ZALV	Zalesovo Beam	46.84	352	P	P	19 08 39.3	-0.3
	0.4nm,0.4s,baz=175,slow=6.8,SNR=2.0						
WRA	Warramunga Arr	48.02	125	P	P	19 08 49.0	-0.4
	0.2nm,0.5s,baz=307,slow=8.4,SNR=1.9						
MJAR	Matsushiro Arr	49.27	48	LR	LR	19 32 53.8	
	comp=Z,17nm,18.0s,baz=215,slow=40						
ASAR	Alice Springs	49.66	130	P	P	19 09 01.4	-0.5
	0.2nm,0.8s,baz=309,slow=8.4,SNR=1.8						

KRNET 21 19:12:51.2±0.1,40°.56N×80°.14E,mb2.4

SOME 21 19:12:57.8,40°.72N×79°.75E,h15^{km}

NNC 21 19:12:58.2±2.1,40°.72N×79°.67E,h0^{km},mb3.3,mpv2.9, Error ellipse: s-maj=14.1km s-min=12.5km az=146.0

ISC 21 19:12:55.0±2.3,40°.62N±0°.09×79°.88E±0°.07,h10^{km},n28, σ2^{s}.31/45,11C-4D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
PRZ	Przheval'sk	2.17	330	⇑eP	Pb	19 13 32.3	-2.2
	baz=27						
PRZ				⇑iS	Sb	19 14 02.5	+1.0
	baz=27						
KDJ	Kajisay	2.53	308	⇓iP	Pb	19 13 38.1	-2.5
	baz=6.0						
KDJ				⇓iS	Sb	19 14 11.9	0.0
	baz=6.0						
SHLS	Shalkode	2.56	353	eP	Pg	19 13 43.7	-0.3
	6.7nm,0.6s						
SHLS				eS	Sg	19 14 16.7	-0.4
	19nm,0.4s						
SHLS	Shalkode	2.56	353	Pg	Pg	19 13 43.7	-0.3
	9.1nm,0.5s						
SHLS				Lg	Lg	19 14 17.4	
	19nm,0.4s						
UZB	Uzynbulak	2.61	346	eP	Pg	19 13 43.8	-1.1
	1.5nm,0.2s						
UZB				eS	Sg	19 14 17.2	-1.5
	13nm,0.4s						
UZB	Uzynbulak	2.61	346	Pg	Pg	19 13 43.8	-1.1
	1.5nm,0.2s						
UZB				Lg	Lg	19 14 17.2	
	13nm,0.4s						
SATY	Saty	2.68	336	eP	Pg	19 13 44.9	-1.4
	3.9nm,0.5s						
SATY				eS	Sg	19 14 19.0	-2.0
	22nm,0.4s						
SATY	Saty	2.68	336	Pg	Pg	19 13 44.9	-1.4
	6.2nm,0.6s						
SATY				Lg	Lg	19 14 19.5	
	22nm,0.6s						
ANVS	Anan'yevo	2.72	323	⇑iP	Pb	19 13 40.4	-3.5
	baz=21						
ANVS				⇑iS	Sb	19 14 16.4	-1.0
	baz=21						
PDGK	Podgornoye	2.73	354	Pg	Pg	19 13 45.1	-2.2
	1.3nm,0.4s						
PDGK				Lg	Lg	19 14 19.2	
	7.9nm,0.6s						
PDGK	Podgornoye	2.73	354	⇓Pg	Pg	19 13 45.0	-2.2
	3.5nm,0.9s						
PDGK				⇑Lg	Lg	19 14 19.4	
	16nm,0.7s						
KTMS	Ketmen	2.85	7	eP	Pg	19 13 48.1	-1.5
	0.2nm,0.1s						
KTMS				eS	Sg	19 14 24.4	-2.1
	5.1nm,0.2s						
KTMS	Ketmen	2.85	7	Pg	Pg	19 13 48.1	-1.5
	0.5nm,0.1s						
KTMS				Lg	Lg	19 14 24.4	
	6.3nm,0.4s						
KPKS	Kokpek	2.98	343	eP	Pg	19 13 50.4	-1.7
	2.3nm,0.2s						
KPKS				eS	Sg	19 14 28.2	-2.5
	13nm,0.4s						
NRN	Naryn	3.04	287	⇑iP	Pn	19 13 45.5	+2.0
	baz=87						
NRN				⇑iS	Sb	19 14 25.5	-1.3
	baz=87						
KURS	Kuram	3.14	337	eP	Pg	19 13 52.8	-2.3
	3.4nm,0.6s						
KURS				eS	Sb	19 14 32.0	+2.8
	16nm,0.7s						
TNSS	Tian-Shan	3.26	319	eP	Pg	19 13 54.7	-2.8
	1.1nm,0.3s						
TNSS				eS	Sb	19 14 35.9	+2.8
	6.9nm,0.9s						
TNSS	Tian-Shan	3.26	319	Pg	Pg	19 13 54.7	-2.8
	1.9nm,0.5s						
TNSS				Lg	Lg	19 14 35.9	
	7.0nm,0.7s						
MDOK	Medeo	3.31	321	eP	Pb	19 13 55.1	+1.3
	1.5nm,0.5s						
MDOK				eS	Sb	19 14 36.2	+2.1
	6.9nm,0.7s						
MDOK	Medeo	3.31	321	Pg	Pb	19 13 53.4	-0.4
	2.2nm,0.8s						
MDOK				⇓Lg	Lg	19 14 35.9	
	9.0nm,1.0s						
KOTS	Kotyrbulak	3.33	323	eP	Pg	19 13 56.2	-2.5
	1.6nm,0.2s						
KOTS				eS	Sb	19 14 38.8	+3.9
	9.9nm,0.5s						
KOTS	Kotyrbulak	3.33	323	Pg	Pg	19 13 56.2	-2.5
	1.6nm,0.2s						
KOTS				Lg	Lg	19 14 38.8	
	9.9nm,0.5s						
IZV	Izvestkoviy	3.43	316	eP	Pb	19 13 57.7	+1.7
	1.4nm,0.4s						
IZV				eS	Sb	19 14 40.6	+2.7
	1.2nm,0.1s						
BOOM	Boomskoye usch	3.50	304	⇑iP	Pn	19 13 51.6	+2.0
	baz=3.0						
BOOM				⇑iS	Sn	19 14 35.8	+4.7
	baz=3.0						
CHKK	Chushkaly	3.88	327	eP	Pg	19 14 05.9	-3.4
	0.6nm,0.1s						
CHKK				eS	Sb	19 14 54.6	+4.0
	3.2nm,0.5s						
KAPS	Kapalarasan	4.68	356	eP	Pg	19 14 22.1	-2.5
	0.6nm,0.6s						
KAPS				eS	Sg	19 15 22.6	-2.7
	2.9nm,0.5s						
KAPS	Kapalarasan	4.68	356	Pg	Pg	19 14 23.5	-1.1
	0.5nm,0.5s						
KAPS				Lg	Lg	19 15 27.0	
	2.8nm,0.5s						
MK31	Makanchi Array	6.42	15	Pn	Pg	19 15 09.7	+12
	0.1nm,0.3s,baz=57,slow=13,SNR=7.8						
MK31				⇑Sn	Sb	19 16 04.7	+1.2
	0.5nm,0.6s						
MK31				⇑Lg	Lg	19 16 29.2	
	0.4nm,0.5s,baz=54,slow=30						

KRNET 21 19:26:32.0±0.1,39°.74N×71°.60E,mb3.2

ISU 21 19:26:31.1,39°.72N×71°.69E,h0^{km}

SOME 21 19:26:33.9,39°.63N×71°.25E,h15^{km}

NNC 21 19:26:34.5±1.0,39°.81N×71°.66E,h0^{km},mb3.7,mpv3.4, Error ellipse: s-maj=8.0km s-min=4.3km az=12.0

ISC 21 19:26:32.1±1.9,39°.68N±0°.08×71°.57E±0°.03,h2^{km}±11^{km}, n42,σ1^{s}.26/68,20C-18D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
BTK	Batken	0.69	304	⇑iP	Pg	19 26 44.6	-0.7
	baz=98						
BTK				⇑iS	Sg	19 26 54.5	+0.3
	baz=98						
FRG	Fergana	1.07	9	eP	Pg	19 26 44.7	-7.8
FRG				S	Sg	19 26 55.3	-11
ANR	Andizhan	1.23	29	eP	Pn	19 26 54.9	-1.5
ANR				eS	Sn	19 27 12.5	-1.2
NAM	Namangan	1.31	3	eP	Pg	19 26 58.4	+1.2
NAM				S	Sg	19 27 17.0	+2.8
ARSB	Arslanbob	1.97	33	⇓iP	Pb	19 27 07.3	-1.4
	baz=33						
ARSB				⇓iS	Sb	19 27 32.9	-0.8
	baz=33						
ARSB	Arslanbob	1.97	33	eP	Pn	19 27 05.9	-0.7
ARSB				eS	Sb	19 27 33.7	0.0
ARK	Arkit	2.14	8	⇓iP	Pn	19 27 09.7	+0.8
	baz=8.0						
ARK				⇓iS	Sb	19 27 37.1	-1.6
	baz=8.0						
ARK	Arkit	2.14	8	eP	Pb	19 27 10.5	-1.1
ARK				i S	Sb	19 27 37.8	-0.9
CHRV	Charvak	2.31	328	eP	Pb	19 27 14.6	0.0
CHRV				eS	Sg	19 27 46.9	+0.5
TAS	Tashkent	2.39	314	⇑iP	Pn	19 27 13.7	+1.4
	baz=13						
TAS				⇑iS	Sb	19 27 44.4	-1.3
	baz=13						
IUG	Iuzhnay	2.73	335	eP	Pg	19 27 23.4	-0.9
	3.1nm,0.2s						
IUG				eS	Sg	19 27 59.7	0.0
	121nm,0.5s						
IUG	Iuzhnay	2.73	335	Pg	Pb	19 27 22.3	+0.7
	3.5nm,0.1s						
IUG				Lg	Lg	19 27 58.6	
	108nm,0.4s						
AML	Almayashu	2.93	33	⇑iP	Pn	19 27 20.5	+0.4
	baz=33						
AML				⇑iS	Sn	19 27 56.4	+0.3
	baz=33						
AML	Almayashu	2.93	33	P	Pn	19 27 20.7	+0.6
	SNR=21						
ARLS	Aral	3.02	43	⇑iP	Pn	19 27 22.0	+0.9
	baz=43						
ARLS				⇑iS	Sn	19 27 58.9	+0.9
	baz=43						
DZA	Taraz	3.21	357	eP	Pg	19 27 33.6	-0.1
	8.6nm,0.1s						
DZA				eS	Sg	19 28 16.6	+1.3
	139nm,0.4s						
DZA	Taraz	3.21	357	Pg	Pg	19 27 31.8	-1.9
	30nm,0.1s						
DZA				Lg	Lg	19 28 15.0	
	179nm,0.4s						
MRKS	Merke	3.31	22	Pg	Pb	19 27 32.1	+0.5
	9.0nm,0.4s						
MRKS				Lg	Lg	19 28 15.1	
	11nm,0.4s						
UCH	Uchtor	3.39	40	⇑iP	Pn	19 27 26.9	+0.5
	baz=41						
UCH				⇑iS	Sn	19 28 06.7	-0.7
	baz=41						
UCH	Uchtor	3.39	40	P	Pn	19 27 27.2	+0.8
	SNR=16						
EKS2	Erkin-Say	3.42	29	⇑iP	Pn	19 27 27.5	+1.0
	baz=29						
EKS2				⇑iS	Sn	19 28 07.7	0.0
	baz=29						
EKS2	Erkin-Say	3.42	29	P	Pn	19 27 27.8	+1.3
	SNR=14						
KK31	Karatay Array	3.51	347	⇑Pn	Pn	19 27 28.4	+0.7
	0.4nm,0.2s,baz=1.1,slow=30,SNR=81						
KK31				⇓Pg	Pg	19 27 37.3	-2.0
	1.5nm,0.3s,baz=164,slow=15,SNR=22						
KK31				⇓Sn	Sn	19 28 10.6	+0.7
	4.5nm,0.4s,baz=181,slow=26,SNR=3.9						
KK31				Lg	Lg	19 28 22.1	
	39nm,0.8s,baz=148,slow=23,SNR=13						
BRLS	Borolday	3.59	339	eP	Pb	19 27 35.8	-0.5
	0.3nm,0.1s						
BRLS				eS	Sb	19 28 20.8	+0.3
	9.7nm,0.2s						
BRLS	Borolday	3.59	339	Pg	Pb	19 27 35.3	-1.0
	2.6nm,0.3s						
BRLS				Lg	Lg	19 28 20.6	
	17nm,0.2s						
KZA	Kyzart	3.68	48	⇓iP	Pn	19 27 30.9	+0.5
	baz=49						
KZA				⇓iS	Sn	19 28 13.2	-1.4
	baz=49						
KZA	Kyzart	3.68	48	P	Pn	19 27 31.5	+1.1
	SNR=11						
AAK	Ala-Archa	3.69	36	⇓iP	Pn	19 27 31.4	+1.1
	baz=36						
AAK				⇓iS	Sn	19 28 14.2	-0.3
	baz=36						
AAK	Ala-Archa	3.69	36	P	Pn	19 27 31.5	+1.1
	SNR=13						
AAK	Ala-Archa	3.69	36	⇓Pn	Pn	19 27 31.2	+0.9
	2.8nm,0.3s						
AAK				⇓Pg	Pb	19 27 39.6	+1.5
	15nm,0.5s						
AAK				⇓Lg	Lg	19 28 26.7	
	14nm,0.6s						
NRN	Naryn	3.81	61	⇑iP	Pn	19 27 32.5	+0.5
	baz=62						
NRN				⇑iS	Sn	19 28 17.7	+0.1
	baz=62						
KBK	Karagaybulak	3.92	40	⇑iP	Pn	19 27 34.5	+1.0
	baz=40						
KBK				⇑iS	Sn	19 28 19.5	-0.7
	baz=40						
KBK	Karagaybulak	3.92	40	P	Pn	19 27 35.4	+1.9
	SNR=6.2						
CHMS	Chumysh	4.09	35	P	Pn	19 27 37.2	+1.4
	SNR=9.2						
CHMS	Chumysh	4.09	35	⇑Pn	Pn	19 27 36.8	+1.0
	1.1nm,0.2s						
CHMS				⇑Pg	Pb	19 27 46.1	+1.2
	12nm,0.9s						
CHMS				⇓Sn	Sn	19 28 25.5	+1.3
	5.8nm,0.8s						
CHMS				⇓Lg	Lg	19 28 38.6	
	9.3nm,0.7s						
USP	Ospenovka	4.21	31	⇓iP	Pn	19 27 38.2	+0.9
	baz=31						
USP				⇓iS	Sn	19 28 26.1	-1.0
	baz=31						
USP	Ospenovka	4.21	31	P	Pn	19 27 38.6	+1.2
	SNR=12						
SGDS	Sogindy	4.42	30	Pg	Pb	19 27 51.7	+1.3
	3.7nm,0.4s						
SGDS				Lg	Lg	19 28 48.3	
	8.9nm,0.5s						
KST	Kastek	4.72	43	Pg	Pb	19 27 57.2	+1.6
	6.2nm,0.4s						
KST				Lg	Lg	19 28 57.0	
	4.8nm,0.5s						
DGS	Degeres	4.76	40	Pg	Pb	19 27 57.9	+1.6
	7.7nm,0.6s						
DGS				Lg	Lg	19 28 59.1	
	10nm,0.7s						
MDOK	Medeo	5.39	48	Pn	Pn	19 27 53.2	-0.5
	2.4nm,0.8s						
MDOK				Pg	Pg	19 28 11.4	-4.0
	1.7nm,0.5s						
MDOK				Lg	Lg	19 29 21.0	
	5.3nm,0.7s						
PDGK	Podgornoye	6.98	56	⇑Pg	Pb	19 28 37.1	+3.0
	2.0nm,0.8s						
PDGK				⇓Lg	Lg	19 30 10.9	
	3.9nm,1.1s						

IDC 21 19:40:47.2±0.7,27°.01N×143°.68E,h0^{km},mb4.1/24, mb1 4.2/29,mb1mx4.1/72,mbtmp4.1/29,ML3.5/5,MS2.8/2, Ms1 2.8/2,ms1mx2.3/38,Error ellipse: s-maj=16.4km s-min=16.3km az=163.0

JMA 21 19:40:50.4,27°.15N×143°.55E,h78^{km}±4^{km},M4.3

NEIC 21 19:40:51.4±2.3,27°.05N±0°.09×143°.58E±0°.08,h26^{km}±5^{km},

mb4.9/46, Error ellipse: s-maj=13.1km s-min=9.8km az=165.0

ISC 21 19:40:53.0±0.5**, 27°.15N**±0°.06×**143°.52E**±0°.06**, h35km, n105,** σ1s.29/114**, mb4.6**/41**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.19	268	P	Pn	19 41 12.3	-0.8
CBIJ				eS	Sn	19 41 28.5	+0.4
JCJ	Chichijima	1.19	268	Pn	Pn	19 41 12.8	-0.3
	68nm,0.3s,baz=85,slow=19,SNR=8.4						
JCJ				Sn	Sn	19 41 29.0	+0.9
	359nm,0.3s,baz=283,slow=23,SNR=10						
JHH2	Haha-jima-NKT2	1.30	247	P	Pn	19 41 13.7	-1.0
JHH2				eS	Sn	19 41 31.2	+0.3
JHJ2	Mitsune	6.75	333	Pn	Pn	19 42 28.3	-1.2
BSO3	Boso 3	8.05	342	P	Pn	19 42 46.4	-0.8
BSO3				eS	Sn	19 44 16.3	-0.5
JHU	Hanno	9.40	338	P	Pn	19 43 04.6	-1.3
JHU				eS	Sn	19 44 46.1	-4.2
JYT	Yasato	9.48	343	P	Pn	19 43 06.5	-0.5
JHO	Hitachi	9.76	346	P	Pn	19 43 08.1	-2.7
JHO				eS	Sn	19 44 52.4	-6.8
JAG	Ashikaga	9.87	341	P	Pn	19 43 11.0	-1.3
JAG				eS	Sn	19 44 57.0	-4.9
INU	Inuyama	9.88	327	Pn	Pn	19 43 11.5	-1.1
MJAR	Matsushiro Arr	10.39	336	Pn	Pn	19 43 18.8	-0.7
	0.6nm,0.3s,baz=149,slow=11,SNR=49						
MAJO	Matsushiro	10.39	336		Pn	19 43 19.4	-0.1
MAT	Matsushiro	10.39	336	P	Pn	19 43 19.1	-0.4
MAT				eS	Sn	19 45 10.9	-3.9
MJB9	Matsu-Tunnel	10.40	336		Pn	19 43 19.3	-0.3
JNU	Nakatsue	12.45	302	Pn	Pn	19 43 47.9	+0.2
	0.1nm,0.3s,baz=206,slow=1.0,SNR=3.6						
JNU	Nakatsue	12.45	302		Pn	19 43 48.2	+0.5
GUMO	Guam	13.55	174	LR	LR	19 48 43.7	
	comp=Z,25nm,19.5s,baz=1.5,slow=36						
KSRS	Korea Array	16.69	312	Pn	Pn	19 44 45.0	+0.9
	0.4nm,0.3s,baz=121,slow=11,SNR=15						
KSRS				LR	LR	19 50 39.2	
	comp=Z,40nm,18.2s,baz=139,slow=35						
ASAJ	Asahikawa	16.95	358	P	Pn	19 44 46.0	-1.3
	0.4nm,0.3s,baz=357,slow=31,SNR=1.6						
JKA	Kamikawa-asahi	16.95	358	P	Pn	19 44 46.0	-1.3
USA0B	Ussuriysk Arra	19.39	334	P	P	19 45 15.6	-0.1
USRK	Ussuriysk Ar.	19.39	334	P	P	19 45 15.9	+0.2
	baz=148,slow=10.0,SNR=13						
USRK	Ussuriysk Ar.	19.39	334	P	P	19 45 15.7	0.0
YHNB	Yeheng	20.07	268	P	P	19 45 22.2	-1.3
YHNB				IAmb	IAmb	19 46 06.9	
	comp=Z,94nm,1.6s						
YULB	Yu-li	20.43	264	P	P	19 45 27.1	-0.3
YULB				IAmb	IAmb	19 46 10.6	
	comp=Z,73nm,1.7s						
SSLB	Suanglung	20.64	266	P	P	19 45 30.3	+0.7
SSLB				IAmb	IAmb	19 45 39.3	
	comp=Z,96nm,1.8s						
MDJ	Mudanjiang	20.71	331	P	P	19 45 31.9	+1.8
TPUB	Ta-pu	21.05	265	P	P	19 45 37.4	+3.3
TPUB				IAmb	IAmb	19 46 32.6	
	comp=Z,122nm,1.6s						
KLR	Kul'dur	23.85	341	P	P	19 46 04.5	+1.6
	comp=Z,8.6nm,0.6s,baz=155,slow=7.7,SNR=47						
XAN	Xi'an	30.46	292	P	P	19 47 01.5	-1.0
XAN				IAmb	IAmb	19 47 02.4	
	comp=Z,6.0nm,0.5s						
SONM	Songino Array	35.50	316	P	P	19 47 48.3	+1.8
	comp=Z,1.6nm,0.6s,baz=108,slow=6.1,SNR=12						
SONM	Songino Array	35.50	316	P	P	19 47 48.0	+1.5
YAK	Yakutsk	36.08	349	P	P	19 47 52.3	+1.3
	comp=Z,2.5nm,0.5s,baz=78,slow=0.9,SNR=4.4						
YAK	Yakutsk	36.08	349	P	P	19 47 51.8	+0.8
SEY	Seymchan	36.26	7	P	P	19 47 53.6	+1.1
	comp=Z,0.9nm,0.6s,baz=269,slow=24,SNR=8.1						
SOEI	Soe	41.16	210	P	P	19 48 30.8	-3.5
SOEI				IAmb	IAmb	19 48 44.5	
	comp=Z,28nm,1.6s						
MTN	Manton Dam	41.53	198	P	P	19 48 35.7	-1.4
TIXI	Tiksi	45.28	354	P	P	19 49 07.7	+0.9
WB0	Warramunga Arr	47.47	192	P	P	19 49 22.4	-2.2
WB2	Warramunga Arr	47.65	192	P	P	19 49 24.1	-1.8
WB2				IAmb	IAmb	19 49 43.8	
	comp=Z,7.2nm,1.1s						
WRA	Warramunga Arr	47.65	192	P	P	19 49 24.2	-1.8
	comp=Z,1.3nm,0.5s,baz=11,slow=8.7,SNR=14						
WRA	Warramunga Arr	47.65	192	P	P	19 49 24.1	-1.8
FITZ	Fitzroy Crossi	48.21	203	P	P	19 49 29.9	-0.4
ZAA0	Zalesovo Array	50.23	319	P	P	19 49 45.9	+0.6
ZALV	Zalesovo Beam	50.23	319	P	P	19 49 46.7	+1.3
	comp=Z,0.7nm,0.4s,baz=108,slow=9.3,SNR=2.7						
ZALV				PcP	PcP	19 51 03.8	-0.2
	comp=Z,0.9nm,0.5s,baz=112,slow=4.2,SNR=2.6						
ZALV	Zalesovo Beam	50.23	319	P	P	19 49 45.4	0.0
ZALV					PcP	19 51 04.2	+0.2
MKAR	Makanchi Array	51.36	310	P	P	19 49 54.9	+0.8
ASAR	Alice Springs	51.37	191	P	P	19 49 53.0	-1.2
	comp=Z,0.4nm,0.7s,baz=14,slow=11,SNR=4.2						
ASAR	Alice Springs	51.37	191	P	P	19 49 52.3	-2.0
SVW2	Sparrevohn	52.61	32	P	P	19 50 03.9	+0.8
SVW2				IAmb	IAmb	19 50 47.6	
	comp=Z,20nm,1.4s						
NRIK	Noril'sk	53.03	338	P	P	19 50 06.1	+0.1
	comp=Z,2.1nm,0.5s,baz=90,slow=7.9,SNR=3.8						
PSAD1	Pilbara Seismi	53.48	208	P	P	19 50 10.7	+0.7
PSAC2	Pilbara Seismi	53.55	208	P	P	19 50 10.8	+0.4
KDAK	Kodiak Island	53.61	37	P	P	19 50 09.6	-0.9
	comp=Z,19nm,1.0s,baz=296,slow=21,SNR=5.2						
KDAK	Kodiak Island	53.61	37	P	P	19 50 10.6	+0.1
KURK	Kurchatov	53.79	314	P	P	19 50 12.8	+0.8
KURK				IAmb	IAmb	19 52 10.1	
	comp=Z,17nm,1.1s						
KURBB	Kurchatov Arra	53.85	314	P	P	19 50 13.3	+0.9
	comp=Z,7.3nm,0.6s,baz=92,slow=8.3,SNR=28						
IMAR	Indian Mountai	54.46	27	P	P	19 50 17.5	+0.9
CNPM	China Poot	54.50	35	P	P	19 50 16.9	-0.1
PPLA	Purkeypile	54.51	30	P	P	19 50 17.6	+0.4
PPLA				IAmb	IAmb	19 52 14.5	
	comp=Z,29nm,1.6s						
SKT	Skwentna	54.67	32	P	P	19 50 17.8	-0.4
SKT				IAmb	IAmb	19 51 28.4	
	comp=Z,34nm,2.0s						
BRLK	Bradley Lake	54.70	34	P	P	19 50 17.8	-0.7
KTH	Kantishna Hill	55.19	30	P	P	19 50 22.9	+0.9
KTH				IAmb	IAmb	19 51 16.9	
	comp=Z,26nm,1.7s						
TRF	Thorofare Moun	55.45	30	P	P	19 50 22.7	-1.3
TRF				IAmb	IAmb	19 51 40.9	
	comp=Z,25nm,1.8s						
SEW	Seward	55.46	34	P	P	19 50 23.8	-0.1
MLY	Manley	55.50	28	P	P	19 50 24.3	+0.1
MLY				PcP	PcP	19 51 25.5	+1.6
MLY				IAmb	IAmb	19 51 47.9	
	comp=Z,13nm,1.8s						
GHO	Glory Hole Cre	55.87	32	P	P	19 50 26.8	-0.1
COLD	Coldfoot	56.11	25	P	P	19 50 29.8	+1.4
SCM	Sheep Creek Mo	56.63	32	P	P	19 50 33.0	+0.6
DHY	Denali Highway	56.72	31	P	P	19 50 33.1	+0.1
DHY				IAmb	IAmb	19 51 31.5	
	comp=Z,23nm,1.8s						
ILAR	Eielson Array	57.10	29	P	P	19 50 35.0	-0.5
	comp=Z,1.0nm,0.8s,baz=266,slow=6.7,SNR=8.4						
ILAR	Eielson Array	57.10	29	P	P	19 50 34.7	-0.8
BMAR	Burnt Mountain	58.29	26	P	P	19 50 45.6	+1.7
BVAR	Borovoye Array	58.81	317	P	P	19 50 49.0	+1.3
	comp=Z,0.9nm,0.3s,baz=100,slow=6.9,SNR=5.7						
BALM	Baldy	59.00	33	P	P	19 50 48.3	-0.7
EGAK	Eagle	59.55	29	P	P	19 50 53.0	+0.4
EGAK				IAmb	IAmb	19 52 00.4	
	comp=Z,8.1nm,1.4s						
KK31	Karatay Array	60.01	306	P	P	19 50 57.5	+1.3
KK31				IAmb	IAmb	19 50 58.0	
	comp=Z,5.4nm,0.7s						
KKAR	Karatay Array	60.01	306	P	P	19 50 57.4	+1.2
KKAR	Karatay Array	60.01	306	P	P	19 50 57.3	+1.2
KKAR				IAmb	IAmb	19 50 58.0	
	comp=Z,5.4nm,0.7s						
DAWY	Dawson	60.32	30	P	P	19 50 59.0	+1.0
DAWY				IAmb	IAmb	19 52 56.5	
	comp=Z,8.9nm,1.6s						
XMAS	Kiritimati	61.69	103	P	P	19 51 06.8	-1.2
INK	Inuvik	62.48	25	P	P	19 51 12.6	+0.1
	comp=Z,1.3nm,0.8s,baz=266,slow=4.9,SNR=4.1						
INK	Inuvik	62.48	25	P	P	19 51 11.2	-1.2
INK				IAmb	IAmb	19 51 52.7	
	comp=Z,15nm,1.9s						
WHY	Whitehorse	62.67	33	P	P	19 51 13.7	-0.3
WHY				IAmb	IAmb	19 51 40.9	
	comp=Z,14nm,1.5s						
ARU	Arti	65.11	322	P	P	19 51 30.7	+0.8
	comp=Z,0.8nm,0.4s,baz=110,slow=7.1,SNR=4.0						
ARU	Arti	65.11	322	P	P	19 51 29.4	-0.5
ARU				IAmb	IAmb	19 52 18.0	
	comp=Z,35nm,2.0s						
ABKAR	Akbulak array	65.91	315	P	P	19 51 35.9	+0.7
GEYT	Alibeck	70.47	303	P	P	19 52 05.6	+1.5
	comp=Z,0.6nm,0.4s,baz=23,slow=7.8,SNR=2.1						
GEYT	Alibeck	70.47	303	P	P	19 52 05.3	+1.2
YKA	Yellowknife Ar	71.53	29	P	P	19 52 09.7	-0.3
	comp=Z,0.6nm,0.8s,baz=291,slow=5.5,SNR=6.4						
RES	Resolute Bay	71.73	14	P	P	19 52 11.4	+0.4
	comp=Z,0.2nm,0.4s,baz=322,slow=7.1,SNR=3.7						
RES	Resolute Bay	71.73	14	P	P	19 52 11.7	+0.8
FINES	FINESS Array B	78.42	334	P	P	19 52 50.4	+0.6
	comp=Z,1.5nm,0.6s,baz=73,slow=4.7,SNR=7.5						
FINES	FINESS Array B	78.42	334	P	P	19 52 50.1	+0.4
KBZ	Khabaz	78.84	313	P	P	19 52 53.4	+0.9
	comp=Z,1.6nm,0.8s,baz=86,slow=7.8,SNR=4.4						
NVAR	Mina Array Bea	79.55	52	P	P	19 52 56.9	+0.1
	comp=Z,0.6nm,0.6s,baz=313,slow=5.2,SNR=5.9						
NVAR	Mina Array Bea	79.55	52	P	P	19 52 57.5	+0.7
AKASG	Malin Array Be	83.27	324	P	P	19 53 15.8	-0.1
	comp=Z,2.3nm,0.7s,baz=52,slow=5.4,SNR=11						
AKASG	Malin Array Be	83.27	324	P	P	19 53 14.8	-1.1
PDAR	Pinedale Array	83.33	45	P	P	19 53 15.6	-1.1
	comp=Z,0.3nm,0.5s,baz=328,slow=5.3,SNR=3.6						
PDAR	Pinedale Array	83.33	45	P	P	19 53 15.7	-1.0
FRB	Frobisher Bay	85.94	14	P	P	19 53 29.0	-0.1
	comp=Z,2.3nm,0.6s,baz=320,slow=4.9,SNR=4.7						
BRTR	Keskin Array B	86.83	313	P	P	19 53 34.3	+0.1
	comp=Z,1.1nm,1.0s,baz=113,slow=3.7,SNR=4.0						
BRTR	Keskin Array B	86.83	313	P	P	19 53 33.3	-0.9
LPAZ	La Paz	148.76	76	PKPbc	PKPbc	20 00 38.2	+0.1
	comp=Z,1.0nm,0.5s,baz=252,slow=3.2,SNR=4.3						

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*RSPR **21** 19:42:09.5, 18°.91N×68°.65W, h47km±6km, MD3.2/9*

*NEIC **21** 19:42:10.1±3.6, 19°.1N±0°.1×68°.36W±0°.06, h47km±45km, Error ellipse: s-maj=17.6km s-min=4.1km az=206.0*

ISC 21 19:42:07.4±1.2**, 19°.00N**±0°.07×**68°.41W**±0°.03**, h10km, n38,** σ0s.83/43**, 10C, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.48	176	⇑eP	Pn	19 42 19.6	-0.7
PCDR				eS	Sb	19 42 27.2	+2.1
PCDR	Punta Cana, DR	0.48	176	⇑eP	Pn	19 42 19.7	-0.7
PCDR	Punta Cana, DR	0.48	176	eS	Sb	19 42 26.8	+1.7
PCDR	Punta Cana, DR	0.48	176		Pn	19 42 19.6	-0.8
DR12	Loma Pena Alta	0.94	257		Pn	19 42 26.9	+0.2
IDE	Isla Desecheo	1.08	124	⇑eP	Pg	19 42 27.2	-0.9
IDE	Isla Desecheo	1.08	124	eS	Sg	19 42 41.3	-0.9
IDE	Isla Desecheo	1.08	124		Pg	19 42 27.2	-0.9
IDE					Sg	19 42 41.3	-0.9
AGPR	Aguadilla, PR	1.34	113	⇑eP	Pb	19 42 32.9	+0.3
AGPR	Aguadilla, PR	1.34	113	eS	Sg	19 42 52.1	+1.5
AGPR	Aguadilla, PR	1.34	113	Pn	Pn	19 42 31.6	-0.6
AGPR	Aguadilla, PR	1.34	113		Sg	19 42 52.1	+1.5
MPR	Mayaguez	1.44	123	Pn	Pn	19 42 32.6	-0.9
LSP	Las Mesas	1.50	123	⇑eP	Pb	19 42 35.8	+0.4
LSP	Las Mesas	1.50	123	eS	Sb	19 42 54.7	+0.2
LSP	Las Mesas	1.50	123		Pb	19 42 35.8	+0.4
LSP					Sb	19 42 54.7	+0.2
CRPR	Cabo Rojo, PR	1.58	128	⇑eP	Pn	19 42 35.9	+0.4
CRPR	Cabo Rojo, PR	1.58	128	eS	Sb	19 42 57.2	+0.4
CRPR	Cabo Rojo, PR	1.58	128	Pn	Pn	19 42 35.4	-0.1
MLPR	Magueyes Islan	1.65	128	⇑eP	Pb	19 42 37.7	-0.2
MLPR	Magueyes Islan	1.65	128	eS	Sn	19 42 57.9	+0.1
MLPR	Magueyes Islan	1.65	128	Pn	Pn	19 42 36.2	-0.3
MLPR	Magueyes Islan	1.65	128		Sn	19 42 57.9	+0.1
AOPR	Arecibo Observ	1.70	112	⇑eP	Pn	19 42 37.9	+0.7
AOPR	Arecibo Observ	1.70	112	eS	Sb	19 43 00.2	-0.1
AOPR	Arecibo Observ	1.70	112	Pn	Pn	19 42 37.9	+0.7
AOPR					Sg	19 43 01.3	-0.9
EMPR	Esperanza - Ma	1.86	106	⇑eP	Pn	19 42 40.5	+1.2
EMPR	Esperanza - Ma	1.86	106	eS	Sg	19 43 06.3	-0.9
EMPR	Esperanza - Ma	1.86	106	Pn	Pn	19 42 39.6	+0.3
EMPR	Esperanza - Ma	1.86	106		Sg	19 43 06.3	-0.9
BANI	BANI	1.94	252		Pg	19 42 44.2	-0.4
OBIP	Obispado Ponce	1.96	119	⇑eP	Pn	19 42 41.3	+0.6
OBIP				eS	Sb	19 43 08.0	+0.3
OBIP	Obispado Ponce	1.96	119	Pn	Pn	19 42 41.7	+1.0
GCPR	Guaynabo City	2.31	107	Pn	Pn	19 42 45.8	+0.3
IGPR	InterUniversit	2.42	115	Pn	Pb	19 42 51.1	0.0
PDPR	Patillas Dam,	2.47	113	Pn	Pn	19 42 49.1	+1.4
CBYP	Canovanas	2.53	106	Pn	Pn	19 42 48.7	+0.1
SDDR	Presa de Saban	2.72	270	Pn	Pn	19 42 50.7	-0.6

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*IDC **21** 19:43:45.4±0.6, 36°.22N×83°.04E, h0km, mb4.1/20, mb1 4.2/26, mb1mx4.0/68, mbtmp4.1/26, ML3.7/6, MS3.2/9, Ms1 3.2/9, ms1mx3.0/46, Error ellipse: s-maj=17.2km s-min=12.2km az=44.0*

*BJI **21** 19:43:45.2±0.0, 36°.24N×82°.84E, h8km, mB4.4/7, mb4.3/23, ML4.4/8, Ms3.9/13, Ms7 3.7/11*

*NEIC **21** 19:43:46.7±2.1, 36°.22N±0°.07×82°.88E±0°.09, h12km±4km, mb4.6/41, Error ellipse: s-maj=11.4km s-min=9.0km az=220.0*

*MOS **21** 19:43:46.0±1.7, 36°.30N×83°.02E, h10km, mb4.5/10, Error ellipse: s-maj=8.6km s-min=4.5km az=114.0*

*NNC **21** 19:43:48.6±2.3, 36°.38N×82°.70E, h12km±9km, mb4.5, mpv4.5, Error ellipse: s-maj=19.4km s-min=12.8km az=96.0*

ISC 21 19:43:47.1±0.4**, 36°.22N**±0°.05×**82°.88E**±0°.05**, h10km, n209,** σ1s.73/205**, mb4.4**/42**, MS3.1**/7**, 25C-21D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	6.38	303	Pn	Pn	19 45 23.3	+2.1
KSH				Sn	Sn	19 46 36.9	+2.7
KSH				smax	smax		
	comp=N,660nm,0.8s						
KSH				smax	smax		
	comp=E,1µm,0.8s						
KSH				LR	LR		
	comp=N,2µm,15.2s						
KSH				LR	LR		
	comp=Z,1µm,13.2s						
DHRM	DHARAMSHALA	6.73	236	ex	Pn	19 45 36.5	+10
SMLA	Simla	6.96	225	ex	Pn	19 45 36.7	+7.6
PDGK	Podgornoye	7.57	341	⇓Pn	Pn	19 45 36.2	-1.4
	24nm,0.7s						
PDGK				⇓Pg	Pb	19 46 03.6	+5.1
	26nm,0.7s						
PDGK				⇑Sn	Sn	19 47 00.9	-2.5
	55nm,0.6s						
PDGK				⇓Lg	Lg	19 47 42.2	
	158nm,0.8s						
PDGK	Podgornoye	7.57	341	P	Pn	19 45 37.6	+0.1
PDGK						19 47 02.5	
DANN	Dangsing	7.88	174	eP	Pn	19 45 44.9	+2.9
	8.0nm,0.5s						
ULHL	Ulahol	7.92	321	P	Pn	19 45 42.6	+0.2
	SNR=17						
MDOK	Medeo	8.26	329	⇓Pn	Pn	19 45 46.7	-0.5
	14nm,0.6s						
MDOK				Pg	Pb	19 46 15.5	+5.1
	16nm,0.6s						
MDOK				⇑Lg	Lg	19 48 04.2	
	56nm,0.7s						
MDOK	Medeo	8.26	329	P	Pn	19 45 46.6	-0.5
NIL	Nilore	8.31	255	P	Pn	19 45 47.5	-0.2
NIL	Nilore	8.31	255		Pn	19 45 47.5	-0.2
KZA	Kyzart	8.33	317	P	Pn	19 45 51.1	+2.8
	SNR=6.5						
KNDC	Almaty	8.34	329	⇑Pn	Pn	19 45 47.2	-0.9
	23nm,0.7s						
KNDC				⇓Pg	Pb	19 46 16.8	+5.2
	24nm,0.7s						
KNDC				⇑Lg	Lg	19 48 07.5	
	140nm,0.8s						
WMQ	Urumqi	8.44	24	eP	Pn	19 45 51.8	+2.3
WMQ				S	Sn	19 47 28.3	+3.4
WMQ				smax	smax		
	comp=N,66nm,1.1s						
WMQ				smax	smax		
	comp=E,51nm,1.1s						
WMQ	Urumqi	8.44	24	P	Pn	19 45 49.4	-0.1
WMQ	Urumqi	8.44	24		Pn	19 45 49.4	-0.1
KKN	Kakani	8.65	166	eP	Pn	19 45 54.0	+1.5
GUN	Gumba	8.66	162	eP	Pn	19 45 53.9	+1.1
	61nm,0.9s						
UCH	Uchtor	8.84	315	P	Pn	19 45 56.3	+1.0
	SNR=17						
PKIN	Phulchoki	8.88	165	eP	Pn	19 45 57.1	+1.4
	10nm,0.6s						
PKI	Pulchoki	8.88	165	eP	Pn	19 45 57.1	+1.3
	26nm,0.9s						
JIRN	Jiri	8.98	161	eP	Pn	19 45 58.9	+1.7
	37nm,0.6s						
AAK	Ala-Archa	9.12	317	Pn	Pn	19 45 59.5	+0.7
	0.2nm,0.3s,baz=113,slow=11,SNR=5.2						
AAK				Lg	Lg	19 48 32.5	
	0.9nm,0.3s,baz=267,slow=22,SNR=4.0						
AAK				LR	LR	19 49 42.0	
	comp=Z,84nm,18.5s,baz=172,slow=39						
AAK	Ala-Archa	9.12	317	P	Pn	19 46 04.2	+5.4
	SNR=7.8						
AAK	Ala-Archa	9.12	317	⇑Pn	Pn	19 45 58.4	-0.5
	7.0nm,0.6s						
AAK				Pg		19 46 30.7	
	13nm,0.7s						
AAK				Lg	Lg	19 48 30.4	
	48nm,1.1s						
AAK	Ala-Archa	9.12	317	⇓eP	Pn	19 46 01.9	+3.1
AAK				pmax	pmax		
	comp=Z,11nm,1.3s						
AAK	Ala-Archa	9.12	317		Pn	19 45 59.4	+0.5
FRU1	Bishkek	9.16	318	P	Pn	19 45 58.7	-0.6
FRU1	Bishkek	9.16	318		Pn	19 45 58.7	-0.6
CHMS	Chumysh	9.23	320	P	Pn	19 46 06.0	+5.8
	SNR=6.1						
CHMS	Chumysh	9.23	320	⇑Pn	Pn	19 46 00.0	-0.2
	comp=Z,8.0nm,0.7s						
CHMS				⇓Pg		19 46 32.1	
	comp=Z,8.2nm,0.7s						
CHMS				⇓Lg	Lg	19 48 33.2	
	comp=Z,21nm,0.8s						
CHMS	Chumysh	9.23	320	i P	Pn	19 46 02.8	+2.6
CHMS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
AML	Almayashu	9.26	312	P	Pn	19 46 02.4	+1.5
	SNR=13						
ARSB	Arslanbob	9.26	306	P	Pn	19 45 59.9	-0.9
ARSB	Arslanbob	9.26	306		Pn	19 45 59.9	-0.9
LSA	Lhasa	9.51	131	P	Pn	19 46 05.8	+1.3
LSA	Lhasa	9.51	131	Pn	Pn	19 46 05.8	+1.3
EKS2	Erkin-Say	9.54	315	P	Pn	19 46 06.1	+1.6
	SNR=30						
TAPN	Taplejung	9.75	154	eP	Pn	19 46 07.9	+0.3
	comp=Z,38nm,1.4s						
RAMN	Ramite	9.77	160	eP	Pn	19 46 07.6	-0.3
	comp=Z,81nm,0.9s						
ODAN	Odare	10.09	156	eP	Pn	19 46 12.1	-0.2
	comp=Z,85nm,1.3s						
MK31	Makanchi Array	10.58	358	Pn	Pn	19 46 17.1	-1.5
	comp=Z,5.7nm,0.6s,baz=180,slow=12,SNR=247						
MK31				⇓Sn	Sn	19 48 15.5	-1.7
	comp=Z,13nm,0.8s,baz=170,slow=24,SNR=5.0						
MK31				⇑Lg	Lg	19 49 17.6	
	comp=Z,11nm,0.8s,baz=170,slow=24,SNR=5.0						
MK31	Makanchi Array	10.58	358	eP	Pn	19 46 17.1	-1.5
MK31				e		19 48 14.3	
MK31	Makanchi Array	10.58	358		Pn	19 46 17.2	-1.5
MKAR	Makanchi Array	10.58	358	Pn	Pn	19 46 17.4	-1.2
	comp=Z,2.5nm,0.3s,baz=188,slow=12,SNR=56						
MKAR				Sn	Sn	19 48 16.0	-1.2
	comp=Z,1.3nm,0.3s,baz=189,slow=21,SNR=6.2						
MKAR				Lg	Lg	19 49 18.6	
	comp=Z,0.4nm,0.3s,baz=182,slow=27,SNR=2.3						
MKAR	Makanchi Array	10.58	358	i P	Pn	19 46 17.2	-1.5
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.4s						
MKAR	Makanchi Array	10.58	358		Pn	19 46 16.8	-1.9
MKAR					Sn	19 48 14.1	-3.0
MAKZ	Makanchi	10.60	357	⇑Pn	Pn	19 46 17.5	-1.5
	comp=Z,11nm,0.5s						
MAKZ				⇓Sn	Sn	19 48 15.5	-2.3
	comp=Z,7.3nm,0.7s						
MAKZ				⇑Lg	Lg	19 49 16.2	
	comp=Z,26nm,1.1s						
MAKZ	Makanchi	10.60	357	P	Pn	19 46 17.7	-1.3
MAKZ	Makanchi	10.60	357		Pn	19 46 17.7	-1.3
KBL	Kabul	11.42	266	P	Pn	19 46 29.5	-0.9
KBL	Kabul	11.42	266		Pn	19 46 29.5	-0.9
KK31	Karatay Array	11.75	310	⇑Pn	Pn	19 46 33.6	-1.1
	comp=Z,0.9nm,0.5s,baz=124,slow=13,SNR=13						
KK31				⇓Pg		19 47 20.1	
	comp=Z,2.4nm,0.6s,baz=134,slow=12,SNR=4.2						
KK31				⇑Lg	Lg	19 49 55.6	
	comp=Z,23nm,1.4s,baz=133,slow=26,SNR=3.9						
KK31	Karatay Array	11.75	310	i P	Pn	19 46 37.2	+2.5
KK31	Karatay Array	11.75	310		Pn	19 46 33.6	-1.1
KKAR	Karatay Array	11.75	310	P	Pn	19 46 32.4	-2.3
KKAR	Karatay Array	11.75	310		Pn	19 46 32.8	-1.9
KKAR	Karatay Array	11.75	310		Pn	19 46 32.4	-2.3
GTA	Gaotai	13.76	72	eP	Pn	19 47 05.0	+2.7
GTA				pP	P	19 47 12.9	+1.9
GTA				sP		19 47 16.8	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
DGZ	Jazzator, Alta	13.88	12	deP	Pn	19 47 02.9	-1.0
KURBB	Kurchatov Arra	14.74	349	Pn	Pn	19 47 12.3	-3.1
	comp=Z,0.1nm,0.3s,baz=174,slow=12,SNR=22						
KURBB				Lg	Lg	19 51 36.3	
	comp=Z,0.0nm,0.3s,baz=165,slow=30,SNR=4.5						
KURBB	Kurchatov Arra	14.74	349	⇑Pn	Pn	19 47 14.9	-0.6
	comp=Z,3.6nm,0.8s						
KURBB	Kurchatov Arra	14.74	349	P	Pn	19 47 14.8	-0.6
KURK	Kurchatov	14.81	349	⇓eP	Pn	19 47 15.0	-1.5
KURK	Kurchatov	14.81	349		Pn	19 47 14.9	-1.6
BRDH	Bariadhala	15.49	148	LR	LR	19 54 30.5	
	comp=Z,50nm,20.2s,baz=312,slow=42						
LZH	Lanzhou	16.93	84	eP	P	19 47 47.9	+1.6
LZH				pP	pP	19 47 50.8	+0.3
LZH				sP	sP	19 47 53.0	+0.6
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH				pmax	pmax		
	comp=Z,57nm,4.3s						
HRA	Herat	16.95	270		Pn	19 47 42.1	-2.3
ZAA0	Zalesovo Array	17.78	4		Pn	19 47 51.5	-3.0
ZALV	Zalesovo Beam	17.78	4	P	Pn	19 47 52.1	-2.4
	comp=Z,0.4nm,0.3s,baz=190,slow=12,SNR=15						
ZALV				LR	LR	19 56 01.5	
	comp=Z,30nm,21.7s,baz=222,slow=41						
ZALV	Zalesovo Beam	17.78	4		Pn	19 47 51.3	-3.2
CD2	Chengdu	18.18	101	P	Pn	19 47 58.5	-1.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BVAR	Borovoye Array	18.96	336	P	P	19 48 07.9	-0.4
	comp=Z,1.9nm,0.3s,baz=136,slow=9.6,SNR=30						
BRVK	Borovoye	19.03	336	⇑Pn	Pn	19 48 09.7	0.0
	comp=Z,22nm,0.7s						
BRVK	Borovoye	19.03	336	d iP	Pn	19 48 09.7	0.0
BRVK	Borovoye	19.03	336	P	Pn	19 48 09.2	-0.6
BRVK				IAmb	IAmb	19 48 12.7	
	comp=Z,24nm,0.7s						
GEYT	Alibeck	19.82	282	P	P	19 48 18.1	+0.2
	comp=Z,0.6nm,0.3s,baz=96,slow=11,SNR=13						
GEYT				LR	LR	19 57 44.9	
	comp=Z,58nm,19.0s,baz=200,slow=42						
GEYT	Alibeck	19.82	282	P	P	19 48 16.9	-1.0
GYA0B	ALIBECK ARRAY	19.82	282	P	P	19 48 15.9	-2.0
MOY	Mondy	20.13	34	eP	Pn	19 48 23.3	+0.3
KMI	Kunming	20.31	117	P	P	19 48 23.6	+0.1
KMI				pP	pP	19 48 26.8	-0.9
KMI				sP	sP	19 48 29.0	-0.7
KMI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KMI	Kunming	20.31	117	P	P	19 48 23.1	-0.3
KMI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KMI	Kunming	20.31	117		P	19 48 23.1	-0.3
KMI				IAmb	IAmb	19 48 28.4	
	comp=Z,9.7nm,0.5s						
SONM	Songino Array	20.89	49	P	P	19 48 27.8	-1.7
	comp=Z,3.4nm,0.8s,baz=242,slow=11,SNR=13						
SONM	Songino Array	20.89	49	eP	Pn	19 48 31.2	-0.7
SONM				pmax	pmax		
	comp=Z,3.0nm,0.8s						

SONM	Songino Array	20.89	49	P	P	19 48 29.5	+0.1
AB31	Akbulak array	21.20	315	⇓Pn	P	19 48 31.5	-1.1
	comp=Z,3.6nm,0.6s,baz=116,slow=12,SNR=68						
AB31	Akbulak array	21.20	315	P	P	19 48 31.5	-1.1
ABKAR	Akbulak array	21.20	315	P	P	19 48 31.6	-1.0
ABKAR	Akbulak array	21.20	315	P	P	19 48 29.7	-2.9
ABKAR				IAmb	IAmb	19 48 49.2	
	comp=Z,16nm,0.6s						
ULN	Ulaanbaatar	21.30	49	⇑*i*P	P	19 48 35.9	+1.9
ULN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ULN	Ulaanbaatar	21.30	49	P	P	19 48 32.5	-1.4
XAN	Xi'an	21.39	88	P	P	19 48 24.3	-11
XAN				pP	pP	19 48 33.4	-5.8
XAN	Xi'an	21.39	88	P	P	19 48 32.6	-2.4
XAN				pmax	pmax		
	comp=Z,18nm,1.7s						
XAN	Xi'an	21.39	88	P	P	19 48 32.6	-2.4
CHTO	Chiang Mai	22.38	137	P	P	19 48 42.7	-2.9
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.2s						
CHTO	Chiang Mai	22.38	137	P	P	19 48 42.7	-2.9
CM31	Chiang Mai Arr	22.67	137	P	P	19 48 46.5	-2.2
CMAR	Chiang Mai Arr	22.67	137	P	P	19 48 48.0	-0.6
	comp=Z,1.3nm,0.8s,baz=321,slow=8.6,SNR=14						
CMAR				LR	LR	19 59 42.7	
	comp=Z,4.4nm,21.6s,baz=260,slow=42						
CMAR	Chiang Mai Arr	22.67	137	*e*P	P	19 48 48.7	0.0
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CMAR	Chiang Mai Arr	22.67	137	P	P	19 48 45.4	-3.2
HHC	Hu-ho-hao-te	22.86	70	*e*P	P	19 48 47.1	-3.5
HHC				sP	sP	19 48 57.5	+0.6
HHC				LR	LR		
	comp=Z,520nm,11.2s						
HHC				LR	LR		
	comp=Z,810nm,12.1s						
WSAR	Wadi Sarin	24.63	245	LR	LR	20 00 20.7	
	comp=Z,73nm,21.8s,baz=50,slow=40						
ARU	Arti	26.04	329	P	P	19 49 21.4	+1.2
	comp=Z,2.9nm,0.7s,baz=157,slow=6.3,SNR=19						
ARU	Arti	26.04	329	P	P	19 49 22.7	+2.5
ARU						19 49 55.4	
ARU				S	S	19 53 53.1	+2.2
ARU	Arti	26.04	329	P	P	19 49 20.1	-0.1
ARU				IAmb	IAmb	19 49 25.4	
	comp=Z,9.6nm,0.8s						
WHN	Wuhan	26.81	93	P	P	19 49 41.3	+14
PALK	Pallekele	28.88	184	LR	LR	20 02 43.0	
	comp=Z,47nm,18.0s,baz=323,slow=39						
NJ2	Nanjing	29.96	87	*e*P	P	19 49 54.8	-0.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NRIK	Noril'sk	33.28	3	P	P	19 50 25.3	+1.0
	comp=Z,1.5nm,0.6s,baz=141,slow=6.6,SNR=3.9						
NRIL	Noril'sk	33.48	4	⇓*e*P	P	19 50 27.0	+0.9
NRIL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KSRS	Korea Array	35.81	74	LR	LR	20 06 39.6	
	comp=Z,28nm,18.4s,baz=275,slow=38						
GSI	Gunungsitoli	37.31	155	P	P	19 50 58.6	-0.9
KLR	Kul'dur	37.54	54	P	P	19 51 00.8	-0.4
	comp=Z,0.8nm,0.7s,baz=287,slow=3.9,SNR=3.6						
KLR	Kul'dur	37.54	54	⇓*e*P	P	19 51 04.0	+2.8
KLR				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ILGA	Ilgaz	38.30	293	P	P	19 51 08.4	+0.4
ILGA				IAmb	IAmb	19 51 13.0	
	comp=Z,6.1nm,0.8s						
BR131	Keskin Array S	38.59	291	P	P	19 51 10.5	+0.1
BR131				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BR131	Keskin Array S	38.59	291	P	P	19 51 10.5	+0.1
BRTR	Keskin Array B	38.59	291	P	P	19 51 11.1	+0.7
	comp=Z,3.2nm,0.8s,baz=94,slow=8.3,SNR=17						
BRTR	Keskin Array B	38.59	291	*e*P	P	19 51 14.1	+3.7
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	Keskin Array B	38.59	291	P	P	19 51 09.8	-0.5
YAK	Yakutsk	38.76	33	⇓*e*P	P	19 51 12.2	+0.9
YAK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
YAK	Yakutsk	38.76	33	P	P	19 51 10.9	-0.4
YAK				IAmb	IAmb	19 51 15.5	
	comp=Z,4.7nm,0.7s						
AKASG	Malin Array Be	40.65	308	P	P	19 51 27.9	+0.7
	comp=Z,1.5nm,0.8s,baz=83,slow=7.1,SNR=7.2						
AKASG	Malin Array Be	40.65	308	*i* P	P	19 51 30.2	+3.1
AKASG	Malin Array Be	40.65	308	P	P	19 51 27.2	+0.1
AKBB	Malin Array Si	40.65	308	P	P	19 51 28.1	+0.9
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AKBB	Malin Array Si	40.65	308	P	P	19 51 28.1	+0.9
KIEV	Kiev	40.66	308	P	P	19 51 29.0	+1.8
CFR	Carcaliu	41.75	300	P	P	19 51 37.8	+1.5
CFR				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KMPD	K-Podol'skiy	42.54	305	P	P	19 51 44.0	+1.3
VRI	Vrincioaia	42.65	301	⇑P	P	19 51 47.0	+3.3
VRI	Vrincioaia	42.65	301	P	P	19 51 47.0	+3.3
PLOR	Plostina	42.70	301	⇑P	P	19 51 47.6	+3.4
PLOR	Plostina	42.70	301	P	P	19 51 47.6	+3.4
FINES	FINESS Array B	43.23	324	P	P	19 51 49.6	+1.6
	comp=Z,3.5nm,1.0s,baz=64,slow=4.4,SNR=3.8						
FINES	FINESS Array B	43.23	324	*e*P	P	19 51 50.7	+2.6
FINES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
FINES	FINESS Array B	43.23	324	P	P	19 51 49.2	+1.2
MLR	Muntele Rosu	43.24	301	P	P	19 51 50.9	+2.3
	comp=Z,8.8nm,1.1s,baz=113,slow=7.2,SNR=7.9						
MLR	Muntele Rosu	43.24	301	⇑P	P	19 51 52.4	+3.8
MLR	Muntele Rosu	43.24	301	P	P	19 51 50.8	+2.2
MLR				pmax	pmax		
	comp=Z,14nm,1.3s						
MLR	Muntele Rosu	43.24	301	P	P	19 51 50.8	+2.2
MLR				IAmb	IAmb	19 51 53.7	
	comp=Z,14nm,1.3s						
BURAR	Bucovina Array	43.46	304	P	P	19 51 49.1	-1.2
BURAR	Bucovina Array	43.46	304	P	P	19 51 49.1	-1.2
DOPR	Dopca	43.56	301	⇑P	P	19 51 53.4	+2.4
ELND	Elena	43.73	297	⇑P	P	19 51 53.8	+1.4
VOIR		43.87	301	⇑P	P	19 51 56.6	+2.9
VOIR		43.87	301	P	P	19 51 56.6	+2.9
ARR	Arges	44.17	301	⇑P	P	19 51 58.4	+2.3
LOT	Lotru	44.76	301	⇑P	P	19 52 04.3	+3.5
TRPA	Tarpa	45.19	305	⇓P	P	19 52 04.2	+0.2
ARCES	ARCESS Array B	45.25	335	P	P	19 52 05.9	+1.7
	comp=Z,3.0nm,0.7s,baz=103,slow=9.2,SNR=4.7						
ARCES	ARCESS Array B	45.25	335	*e*P	P	19 52 07.7	+3.5
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARCES	ARCESS Array B	45.25	335	P	P	19 52 04.0	-0.2
DRGR		45.27	303	⇑P	P	19 52 07.0	+2.3
DRGR		45.27	303	P	P	19 52 07.0	+2.3
BZS	Buzias	46.22	302	⇑P	P	19 52 15.0	+2.8
BZS	Buzias	46.22	302	P	P	19 52 15.0	+2.8
VYHS	Vyhne	47.57	306	*e*P	P	19 52 24.6	+1.8
VYHS	Vyhne	47.57	306	*e*P	P	19 52 24.6	+1.8
MORC	Moravsky Berou	48.19	308	⇓P	P	19 52 28.8	+1.2
MORC	Moravsky Berou	48.19	308	⇓P	P	19 52 28.8	+1.2
MORC	Moravsky Berou	48.19	308	P	P	19 52 27.9	+0.3
DPC	Dobruska-Polom	48.87	309	P	P	19 52 34.5	+1.7
KRUC	Moravsky	49.06	307	P	P	19 52 36.5	+2.3
KRUC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HFS	Hagfors	49.22	322	P	P	19 52 35.6	+0.3
	comp=Z,4.7nm,0.9s,baz=82,slow=14,SNR=5.0						
SEY	Seymchan	49.26	34	P	P	19 52 35.4	-0.1
	comp=Z,1.1nm,0.7s,baz=258,slow=23,SNR=6.1						
SEY	Seymchan	49.26	34	⇑*e*P	P	19 52 36.5	+1.0
BRG	Berggiesshubel	50.26	310	*e*P	P	19 52 45.6	+2.3
	comp=Z,12nm,1.5s						
BRG	Berggiesshubel	50.26	310	*e*P	P	19 52 45.7	+2.3
BRG				pmax	pmax		
	comp=Z,12nm,1.5s						
NB201	NORSAR Array S	50.34	323	P	P	19 52 44.6	+0.8
NB2	NORSAR Subarra	50.38	323	P	P	19 52 44.5	+0.4
	comp=Z,19nm,1.4s,baz=86,slow=7.4						
NOA	NORSAR Array B	50.38	323	P	P	19 52 44.3	+0.2
	comp=Z,3.1nm,0.9s,baz=85,slow=7.4,SNR=5.9						
NOA				LR	LR	20 15 40.5	
	comp=Z,41nm,18.5s,baz=285,slow=38						
NC204	NORSAR Array S	50.58	323	P	P	19 52 45.1	-0.6
GEC2	GERESS Array S	50.84	307	P	P	19 52 49.9	+2.0
GEC2				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GEC2	GERESS Array S	50.84	307	P	P	19 52 48.1	+0.3
GEC2				IAmb	IAmb	19 52 50.9	
	comp=Z,8.2nm,1.1s						
GERES	GERESS Array B	50.84	307	P	P	19 52 49.0	+1.2
	comp=Z,2.2nm,0.8s,baz=72,slow=5.7,SNR=17						
GERES				LR	LR	20 17 40.6	
	comp=Z,97nm,19.4s,baz=79,slow=40						
GERES	GERESS Array B	50.84	307	*e*P	P	19 52 50.5	+2.6
GERES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GERES	GERESS Array B	50.84	307	P	P	19 52 48.0	+0.2
NEA	Nenana	71.61	21	P	P	19 55 07.2	-1.1
NEA				IAmb	IAmb	19 55 09.5	
	comp=Z,5.1nm,0.9s						
PPLA	Purkeypile	71.89	23	P	P	19 55 09.3	-0.8
ILAR	Eielson Array	72.08	20	P	P	19 55 10.6	-0.6
	comp=Z,1.0nm,0.8s,baz=303,slow=4.4,SNR=13						
ILAR	Eielson Array	72.08	20	P	P	19 55 09.7	-1.4
INK	Inuvik	72.30	13	P	P	19 55 12.0	-0.2
	comp=Z,1.6nm,0.6s,baz=288,slow=14,SNR=3.9						
INK	Inuvik	72.30	13	P	P	19 55 11.9	-0.3
INK				IAmb	IAmb	19 55 13.6	
	comp=Z,10nm,1.6s						
SKT	Skwentna	72.77	24	P	P	19 55 14.4	-0.9
SKT				IAmb	IAmb	19 55 46.8	
	comp=Z,7.9nm,1.3s						
DHY	Denali Highway	73.24	21	P	P	19 55 17.8	-0.4
DHY				IAmb	IAmb	19 55 53.0	
	comp=Z,6.4nm,1.4s						
RIDG	Independent Ri	73.45	20	P	P	19 55 18.4	-0.9
RIDG				IAmb	IAmb	19 55 22.7	
	comp=Z,6.3nm,1.0s						
EGAK	Eagle	73.59	18	P	P	19 55 20.0	0.0
EGAK				IAmb	IAmb	19 55 43.1	
	comp=Z,8.1nm,1.4s						
WB0	Warramunga Arr	73.97	130	P	P	19 55 22.4	-0.4
WB0				IAmb	IAmb	19 55 23.1	
	comp=Z,6.9nm,0.8s						
WRA	Warramunga Arr	74.06	130	P	P	19 55 22.4	-1.0
	comp=Z,4.3nm,0.8s,baz=326,slow=5.8,SNR=36						
WRA	Warramunga Arr	74.06	130	*e*P	P	19 55 22.8	-0.6
WRA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WRA	Warramunga Arr	74.06	130	P	P	19 55 22.5	-0.9
WRAB	Tennant Creek	74.06	130	P	P	19 55 22.8	-0.6
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WRAB	Tennant Creek	74.06	130	P	P	19 55 22.8	-0.6
WRAB				IAmb	IAmb	19 55 23.8	
	comp=Z,7.0nm,0.8s						
WB2	Warramunga Arr	74.07	130	P	P	19 55 22.9	-0.5
KNK	Knik Glacier	74.17	23	P	P	19 55 22.9	-0.6
SCM	Sheep Creek Mo	74.20	22	P	P	19 55 23.6	-0.2
SCM				pmax	pmax		
	comp=Z,29nm,1.5s						
SCM	Sheep Creek Mo	74.20	22	P	P	19 55 23.6	-0.2
WR0	Warramunga Arr	74.20	130	P	P	19 55 22.9	-1.4
WR0				IAmb	IAmb	19 55 24.4	
	comp=Z,4.7nm,0.9s						
CNPM	China Poot	74.66	25	P	P	19 55 24.1	-2.3
BCAR	Beaver Creek A	74.82	19	P	P	19 55 25.7	-1.6
TOA0	Torodi Ar. Sit	75.31	276	P	P	19 55 28.3	-2.5
TOA0				IAmb	IAmb	19 55 31.9	
	comp=Z,6.4nm,1.4s						
TORD	Torodi Ar. Bea	75.31	276	P	P	19 55 29.7	-1.1
	comp=Z,0.8nm,0.6s,baz=41,slow=6.0,SNR=5.0						
TORD	Torodi Ar. Bea	75.31	276	P	P	19 55 29.2	-1.6
ASAR	Alice Springs	76.61	133	P	P	19 55 37.4	-0.6
	comp=Z,1.8nm,0.8s,baz=322,slow=5.9,SNR=17						
ASAR	Alice Springs	76.61	133	P	P	19 55 37.8	-0.2
ASAR	Alice Springs	76.61	133	P	P	19 55 37.8	-0.2
YKA	Yellowknife Ar	80.62	8	P	P	19 55 59.0	-0.5
	comp=Z,1.0nm,0.8s,baz=344,slow=4.7,SNR=16						

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*NEIC **21** 20:13:37.3±1.4, 52°.5N±0°.1×174°.0E±0°.2, h60^{km}±7^{km}, mb4.1/9, Error ellipse: s-maj=21.4km s-min=17.8km az=119.0*

*IDC **21** 20:13:39.3±5.1, 52°.52N×174°.00E, h77^{km}±45^{km}, mb3.1/7, mb1 3.4/8, mb1mx3.1/53, mbtmp3.5/8, ML2.4/1, Error ellipse: s-maj=39.4km s-min=22.4km az=141.0*

ISC 21 20:13:35.7±0.7**, 52°.55N**±0°.04×**174°.1E**±0°.1**, h37^{km}, n28, σ1^{s}.22**/22**, mb3.7**/11**, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	0.18	355		Pn	20 13 46.7	+1.2
SMY				Sn	Sn	20 13 54.6	-0.6
PETK	Petropavlovsk-	9.96	280	P	Pn	20 15 58.9	+2.8
	0.2nm,0.3s,baz=93,slow=16,SNR=1.6						
PETK	Petropavlovsk-	9.96	280		Pn	20 15 56.8	+0.8
IMAR	Indian Mountai	20.90	38	P	P	20 18 16.0	+1.6
SML	Sawmill	22.05	50	P	P	20 18 28.0	+1.2
SML				IAmb	IAmb	20 18 36.2	
	comp=Z,12nm,1.1s						
SCM	Sheep Creek Mo	22.53	51	P	P	20 18 32.8	+0.8
SCM				IAmb	IAmb	20 18 37.4	
	comp=Z,12nm,1.2s						
WRH	Wood River Hil	22.66	44	P	P	20 18 33.9	+0.6
WRH				IAmb	IAmb	20 18 38.7	
	comp=Z,6.9nm,1.3s						
CCB	Clear Creek Bu	22.82	43	P	P	20 18 35.4	+0.5
ILAR	Eielson Array	23.23	43	P	P	20 18 39.5	+0.4
	comp=Z,0.3nm,0.4s,baz=251,slow=8.5,SNR=6.8						
GLB	Gilahina Butte	24.17	52	P	P	20 18 47.7	-0.4
GLB				IAmb	IAmb	20 19 01.2	
	comp=Z,5.5nm,1.1s						
BMAR	Burnt Mountain	24.82	37	P	P	20 18 53.6	-0.3
BCAR	Beaver Creek A	25.21	48	P	P	20 18 56.5	-1.1
EGAK	Eagle	25.65	44	P	P	20 19 01.8	+0.3
H11N2	WAKE ISLAND Hy	33.23	192	T	T	20 55 12.4	
	baz=8.5,slow=76,SNR=14						
H11N3	WAKE ISLAND Hy	33.25	192	T	T	20 55 17.7	
	baz=8.5,slow=76,SNR=16						
H11N1	WAKE ISLAND Hy	33.25	192	T	T	20 55 22.1	
	baz=8.5,slow=76,SNR=16						
H11S1	WAKE ISLAND Hy	34.47	193	T	T	20 56 56.4	
	baz=8.2,slow=76,SNR=9.6						
H11S3	WAKE ISLAND Hy	34.48	193	T	T	20 56 52.8	
	baz=8.2,slow=76,SNR=7.2						
H11S2	WAKE ISLAND Hy	34.48	193	T	T	20 56 50.4	
	baz=8.2,slow=76,SNR=9.7						
YKA	Yellowknife Ar	37.59	46	P	P	20 20 46.7	+0.6
	comp=Z,0.2nm,0.6s,baz=279,slow=7.1,SNR=3.6						
MKAR	Makanchi Array	55.81	304	P	P	20 23 07.1	-1.7
	comp=Z,0.2nm,0.4s,baz=51,slow=7.9,SNR=4.0						
NOA	NORSAR Array B	65.94	351	P	P	20 24 17.0	-0.4
	comp=Z,1.0nm,0.9s,baz=340,slow=3.0,SNR=1.6						
AKASG	Malin Array Be	72.94	338	P	P	20 25 00.4	-0.3
	comp=Z,0.3nm,0.4s,baz=18,slow=3.0,SNR=1.2						
AKASG	Malin Array Be	72.94	338	IAmb	IAmb	20 25 01.9	
	comp=Z,1.7nm,1.4s						
WR0	Warramunga Arr	79.98	217	P	P	20 25 39.5	-1.4
WB2	Warramunga Arr	80.04	218	P	P	20 25 39.5	-1.6
WRA	Warramunga Arr	80.04	218	P	P	20 25 39.4	-1.8
	comp=Z,0.7nm,1.1s,baz=32,slow=6.2,SNR=4.6						
ASAR	Alice Springs	83.60	217	P	P	20 25 59.2	-0.6
	comp=Z,0.1nm,0.4s,baz=28,slow=5.3,SNR=1.6						

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*IDC **21** 20:26:03.5±0.9, 7°.14N×126°.24E, h0^{km}, mb3.7/7, mb1 3.9/7, mb1mx3.6/49, mbtmp3.7/7, Error ellipse: s-maj=19.2km s-min=9.5km az=174.0*

*MAN **21** 20:26:08.3, 7°.04N×125°.67E, h44^{km}, mb5.0, ML3.9, MS3.9*

*NEIC **21** 20:26:09.5±1.6, 7°.11N±0°.08×125°.6E±0°.1, h52^{km}±6^{km}, mb4.3/8, Error ellipse: s-maj=19.2km s-min=10.9km az=72.0*

ISC 21 20:26:10.1±0.7**, 7°.04N**±0°.04×**125°.62E**±0°.05**, h53^{km}**±6^{km}**, n36, σ1^{s}.16**/44**, mb4.0**/11**, 3C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.05	300	Pg	Pn	20 26 17.8	-0.4
	4μm,0.3s,baz=135,slow=1.4,SNR=190						
DAV				Lg	Lg	20 26 24.2	
	2μm,0.3s,baz=270,slow=20,SNR=9.4						
DMPH	Davao City--Mi	0.12	289	⇑*e*P	Pn	20 26 16.7	-1.6
DMPH				*e*S	Sn	20 26 24.1	-0.2
KCP	Kidapawan	0.53	266	⇓*i*P	Pn	20 26 21.9	-0.1
KCP				*i* S	Sn	20 26 31.3	+0.8
MATI	Mati	0.64	99	*e*P	Pn	20 26 21.6	-1.6
MATI				*e*S	Sn	20 26 31.7	-0.9
DDMP	Don Marcelino,	0.94	175	*e*P	Pn	20 26 26.3	-0.7
BUKP	Musuan	1.00	326	*e*P	Pn	20 26 26.8	-1.1
BUKP				*e*S	Sn	20 26 41.5	+0.4
GSPH	General Santos	1.16	215	⇑*i*P	Pn	20 26 30.4	+0.2
SKMP	Bagumbayan, Su	1.19	244	*e*P	Pn	20 26 30.3	-0.2
SKMP				*e*S	Sn	20 26 45.8	+0.1
CTBH	Cotabato--PC H	1.38	277	⇓*i*P	Pn	20 26 32.8	-0.2
CGP	Cagayan de Oro	1.68	327	⇑*e*P	Pn	20 26 38.5	+1.4
CGP				*e*S	Sn	20 26 59.7	+2.2
BUTP	Butuan	1.91	360	*e*P	Pn	20 26 40.2	-0.1
BUTP				*e*S	Sn	20 27 06.1	+2.9
PAGZ	Pagadian	2.36	290	*e*P	Pn	20 26 45.5	-1.0
PAGZ				*e*S	Sn	20 27 13.3	-0.9
TBP	Tagbilaran	3.16	327	*e*P	Pn	20 26 58.4	+1.1
MSLP	Maasin	3.16	346	*e*P	Pn	20 26 55.9	-1.5
TNTI	Ternate	6.47	164	Pn	Pn	20 27 44.7	+2.0
LUWI	Luwuk	8.52	200	Pn	Pn	20 28 10.5	-0.4
KKM	Kota Kinabalu	9.40	264	Pn	Pn	20 28 21.3	-1.7
FAKI	Fak Fak	11.90	146	Pn	Pn	20 28 59.5	+2.3
KNRA	Kununurra	22.79	172	P	P	20 31 08.5	+0.1
KNRA				IAmb	IAmb	20 31 25.3	
	comp=Z,7.0nm,0.8s						
FITZ	Fitzroy Crossi	24.98	180	P	P	20 31 28.9	0.0
	comp=Z,1.1nm,0.5s,baz=13,slow=6.5,SNR=9.8						
FITZ	Fitzroy Crossi	24.98	180	P	P	20 31 29.1	+0.2
WB0	Warramunga Arr	28.01	162	P	P	20 31 55.8	-0.4
WB0				IAmb	IAmb	20 32 27.8	
	comp=Z,8.9nm,1.3s						
WRA	Warramunga Arr	28.16	162	P	P	20 31 56.6	-0.9
	comp=Z,0.1nm,0.3s,baz=335,slow=11,SNR=1.3						
WB2	Warramunga Arr	28.16	162	P	P	20 31 57.2	-0.3
INU	Inuyama	30.05	19	P	P	20 32 12.9	-1.3
ASAR	Alice Springs	31.58	165	P	P	20 32 28.3	+0.5
	comp=Z,0.3nm,0.4s,baz=343,slow=7.6,SNR=9.0						
ASAR	Alice Springs	31.58	165	P	P	20 32 27.9	0.0
USRK	Ussuriysk Ar.	37.43	8	P	P	20 33 16.9	-1.2
	comp=Z,1.5nm,0.7s,baz=189,slow=9.1,SNR=3.1						
BBOO	Buckleboo	40.86	167	P	P	20 33 47.1	+0.3
MKAR	Makanchi Array	54.23	324	P	P	20 35 31.2	+0.6
	comp=Z,0.5nm,0.7s,baz=123,slow=7.8,SNR=1.8						
MKAR	Makanchi Array	54.23	324	P	P	20 35 31.5	+1.0
KURK	Kurchatov	58.38	327	P	P	20 36 01.8	+1.9
KURK				IAmb	IAmb	20 36 33.2	
	comp=Z,3.1nm,1.1s						
TIXI	Tiksi	64.57	1	P	P	20 36 40.7	-0.6
TIXI				IAmb	IAmb	20 37 19.5	
	comp=Z,4.5nm,1.1s						
ILAR	Eielson Array	82.61	26	P	P	20 38 26.7	-0.6
	comp=Z,0.3nm,0.6s,baz=251,slow=4.9,SNR=9.3						
ILAR	Eielson Array	82.61	26	P	P	20 38 26.1	-1.2
YKA	Yellowknife Ar	96.95	24	P	P	20 39 35.9	+0.3
	comp=Z,0.6nm,0.8s,baz=299,slow=3.9,SNR=8.6						

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*IDC **21** 20:26:22.2±0.8, 7°.62N×94°.18E, h0^{km}, mb4.1/11, mb1 4.2/13, mb1mx3.9/56, mbtmp4.1/13, ML4.0/2, MS3.4/11, Ms1 3.5/11, ms1mx3.2/50, Error ellipse: s-maj=29.1km s-min=18.5km az=65.0*

*DJA **21** 20:26:23.7±0.4, 8°N±4°×9°4E±°, h10^{km}, M4.4/10, mb4.4/10, mB4.9/2, MLv4.3/5, Mw(mB)4.2/2*

*NEIC **21** 20:26:23.1±2.2, 7°.49N±0°.05×94°.22E±0°.10, h12^{km}±4^{km}, mb4.4/22, Error ellipse: s-maj=13.8km s-min=7.4km az=85.0*

*NDI **21** 20:26:23.9±1.4, 7°.14N×94°.62E, h10^{km}, ML4.2, mb4.4(NEIC)*

*MOS **21** 20:26:24.0±1.0, 7°.55N×94°.21E, h28^{km}, mb4.4/14, Error ellipse: s-maj=15.3km s-min=7.1km az=107.7*

ISC 21 20:26:24.8±0.4**, 7°.56N**±0°.05×**94°.26E**±0°.06**, h20^{km}, n116, σ1^{s}.27**/108**, mb4.4**/31**, MS3.5**/7**, 2C-4D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.64	211	*e*P	Pb	20 26 37.2	-0.2
CMBY				*e*S	Sn	20 26 47.2	-1.2
CMBY				IAML		20 26 50.2	
	comp=N,18μm,0.3s						
CMBY				IAML		20 26 50.4	
	comp=E,7μm,0.1s						
LHMI	Lhok Sumawe	3.54	131		Pn	20 27 18.5	-0.1
LHMI				Sn	Sn	20 27 58.6	-1.3
MLSI	Meulaboh, Aceh	3.91	147	P	Pn	20 27 25.4	+1.7
PBA	Port Blair	4.33	340	*e*P	Pb	20 27 37.8	-2.4
DGPR	DIGLIPUR	5.73	347	*e*P	Pb	20 27 56.8	-7.3
PSI	Prapat	6.63	135	Pn	Pn	20 28 04.0	+2.7
	comp=E,1.4nm,0.3s,baz=298,slow=5.4,SNR=7.6						
PSI				LR	LR	20 30 54.6	
	comp=E,325nm,18.7s,baz=299,slow=40						
PSI	Prapat	6.63	135	P	Pn	20 28 04.0	+2.7
RPSI	Rantau Prapat	6.71	136		Pn	20 28 00.5	-1.7
RPSI	Rantau Prapat	6.71	136		Pn	20 28 04.0	+1.7
KULM	Kulim	6.74	109		Pn	20 28 01.3	-1.4
GSI	Gunungsitoli	7.04	152	Pn	Pn	20 28 05.9	-1.0
IPM	Ipoh	7.39	114		Pn	20 28 09.4	-2.3
PBKT	Sadao Pong	11.10	36		Pn	20 29 03.6	+1.2
MYKOM	Kota Tinggi	11.14	121	Pn	Pn	20 29 00.9	-2.2
CM31	Chiang Mai Arr	11.75	22		Pn	20 29 12.3	+0.9
CMAR	Chiang Mai Arr	11.75	22	Pn	Pn	20 29 11.6	+0.2
	comp=E,0.5nm,0.3s,baz=212,slow=15,SNR=17						
CMAR				LR	LR	20 33 36.7	
	comp=E,144nm,18.6s,baz=222,slow=37						
CMAR	Chiang Mai Arr	11.75	22	*i* P	Pn	20 29 14.3	+2.9
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
CMAR	Chiang Mai Arr	11.75	22	Pn	Pn	20 29 13.0	+1.6
CHTO	Chiang Mai	12.07	22	P	Pn	20 29 17.4	+1.6
CHTO	Chiang Mai	12.07	22		Pn	20 29 17.4	+1.6
PALK	Pallekele	13.45	270	LR	LR	20 34 22.2	
	comp=Z,125nm,20.8s,baz=104,slow=36						
SLVN	Son La	16.56	33	P	P	20 30 21.1	+2.6
SLVN				IAmb	IAmb	20 30 23.4	
	comp=Z,26nm,1.3s						
LEM	Lembang	19.54	137	LR	LR	20 39 41.1	
	comp=Z,146nm,18.6s,baz=202,slow=41						
RAMN	Ramite	20.61	340	*e*P	Pn	20 31 04.1	-1.3
	comp=Z,48nm,0.8s						
TAPN	Taplejung	20.64	343	*e*P	Pn	20 31 04.3	-1.5
	comp=Z,41nm,0.8s						
PKI	Pulchoki	21.59	338	*e*P	P	20 31 13.6	-0.2
	comp=Z,14nm,0.6s						
PKIN	Phulchoki	21.60	338	*e*P	P	20 31 13.7	-0.2
	comp=Z,14nm,0.7s						
GUN	Gumba	21.74	340	*e*P	P	20 31 15.0	-0.4
	comp=Z,35nm,0.8s						
DMN	Daman	21.74	338	*e*P	P	20 31 15.4	0.0
KKN	Kakani	21.84	338	*e*P	P	20 31 14.6	-1.8
	comp=Z,34nm,1.0s						
LSA	Lhasa	22.21	353	P	P	20 31 19.4	-1.2
LSA				pmax	pmax		
	comp=Z,15nm,0.9s						
LSA	Lhasa	22.21	353	P	P	20 31 19.4	-1.2
LSA				IAmb	IAmb	20 31 25.0	
	comp=Z,15nm,0.9s						
GKN	Gorkha	22.27	337	*e*P	P	20 31 20.5	-0.5
	comp=Z,24nm,0.7s						
DANN	Dangsing	22.93	336	*e*P	P	20 31 27.8	-0.3
	comp=Z,40nm,1.0s						
H08S3	Diego Garcia H	26.44	236	T	T	20 58 31.9	
	baz=56,slow=75,SNR=66						
H08S2	Diego Garcia H	26.44	236	T	T	20 58 41.9	
	baz=56,slow=75,SNR=14						
H08S1	Diego Carcia H	26.46	236	T	T	20 58 42.3	
	baz=56,slow=75,SNR=5.8						
KAPI	Kappang	28.34	115	LR	LR	20 43 17.8	
	comp=Z,60nm,20.2s,baz=277,slow=36						
WHN	Wuhan	29.61	37	P	P	20 32 41.8	+13
XAN	Xi'an	29.62	25	P	P	20 32 28.0	-0.9
GTA	Gaotai	32.10	8	P	P	20 32 51.4	+0.6
GTA				pP	pwP	20 33 00.6	+1.6
GTA				sP	sP	20 33 05.3	+6.7
NIL	Nilore	32.42	326	P	P	20 32 52.4	-1.2
NIL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NIL	Nilore	32.42	326	P	P	20 32 52.4	-1.2
KBL	Kabul	35.49	323	P	P	20 33 21.3	+0.8
KBL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KSH	Kashi	35.80	335	P	P	20 33 23.3	+0.3
KSH				pP	pwP	20 33 39.1	+7.7
KSH				S	S	20 38 55.3	-4.3
KSH				sS	ScP	20 39 21.9	-14
KSH	Kashi	35.80	335	ScS	ScS	20 43 34.5	-6.4

WMQ	**Urumqi**	36.57	352	eP	P	20 33 30.6	+1.2
ARSB	**Arslanbob**	38.57	334	P	P	20 33 46.7	+0.2
ARSB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ARSB	**Arslanbob**	38.57	334	P	P	20 33 46.7	+0.2
ARSB				IAmb	IAmb	20 33 57.6	
	comp=Z,6.4nm,0.8s						
AAK	**Ala-Archa**	39.04	337	⇓eP	P	20 33 51.9	+1.5
AAK				pmax	pmax		
	comp=Z,8.0nm,2.5s						
AAK	**Ala-Archa**	39.04	337	P	P	20 33 50.3	-0.1
MK31	**Makanchi Array**	40.41	347	P	P	20 34 01.3	-0.4
MK31				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MK31	**Makanchi Array**	40.41	347	P	P	20 34 01.3	-0.4
MK31				IAmb	IAmb	20 34 02.7	
	comp=Z,4.3nm,0.9s						
MKAR	**Makanchi Array**	40.41	347	P	P	20 34 01.6	-0.1
	comp=Z,5.0nm,0.9s,baz=161,slow=7.7,SNR=46						
MKAR	**Makanchi Array**	40.41	347	P	P	20 34 01.0	-0.7
MAKZ	**Makanchi**	40.50	347	P	P	20 34 01.9	-0.4
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAKZ	**Makanchi**	40.50	347	P	P	20 34 01.9	-0.4
MAKZ				IAmb	IAmb	20 34 04.1	
	comp=Z,3.8nm,0.8s						
KK31	**Karatay Array**	41.09	333	P	P	20 34 06.4	-0.9
KK31				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KK31	**Karatay Array**	41.09	333	P	P	20 34 06.4	-0.9
KKAR	**Karatay Array**	41.09	333	P	P	20 34 06.5	-0.8
KKAR				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KKAR	**Karatay Array**	41.09	333	P	P	20 34 07.6	+0.3
KKAR	**Karatay Array**	41.09	333	P	P	20 34 06.5	-0.8
KKAR				IAmb	IAmb	20 34 32.2	
	comp=Z,2.7nm,1.2s						
SONM	**Songino Array**	41.44	12	P	P	20 34 10.2	0.0
	comp=Z,1.7nm,0.9s,baz=199,slow=7.9,SNR=9.2						
SONM				PcP	PcP	20 36 09.6	+1.7
	comp=Z,0.8nm,0.8s,baz=190,slow=5.9,SNR=3.1						
SONM				LR	LR	20 52 32.6	
	comp=Z,65nm,18.1s,baz=222,slow=38						
SONM	**Songino Array**	41.44	12	eP	P	20 34 11.4	+1.2
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM	**Songino Array**	41.44	12	P	P	20 34 10.7	+0.5
ULN	**Ulaanbaatar**	41.61	13	deP	P	20 34 10.7	-0.9
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
DGZ	**Jazzator, Alta**	42.39	353	⇓eP	P	20 34 19.0	+1.1
DGZ				pmax	pmax		
	comp=Z,5.0nm,2.0s						
KSRS	**Korea Array**	42.62	41	LR	LR	20 55 26.5	
	comp=Z,46nm,18.2s,baz=226,slow=41						
GEYT	**Alibeck**	44.51	318	P	P	20 34 35.8	+0.6
	comp=Z,3.5nm,0.7s,baz=157,slow=9.0,SNR=12						
GEYT				LR	LR	20 53 53.3	
	comp=Z,45nm,20.8s,baz=175,slow=37						
GEYT	**Alibeck**	44.51	318	P	P	20 34 35.9	+0.8
GYA0B	**ALIBECK ARRAY**	44.51	318	P	P	20 34 34.0	-1.1
TLY	**Talaya**	44.66	8	P	P	20 34 35.0	-1.1
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TLY	**Talaya**	44.66	8	P	P	20 34 35.0	-1.1
KURK	**Kurchatov**	44.94	346	⇑eP	P	20 34 38.8	+0.5
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KURK	**Kurchatov**	44.94	346	P	P	20 34 38.4	+0.1
KURK				IAmb	IAmb	20 34 39.4	
	comp=Z,5.9nm,0.9s						
ZAA0	**Zalesovo Array**	46.88	352	P	P	20 34 53.6	+0.1
ZAA0				IAmb	IAmb	20 34 56.0	
	comp=Z,4.8nm,0.8s						
ZALV	**Zalesovo Beam**	46.88	352	P	P	20 34 53.9	+0.4
	comp=Z,5.0nm,0.6s,baz=177,slow=8.2,SNR=26						
ZALV	**Zalesovo Beam**	46.88	352	P	P	20 34 53.5	0.0
WB0	**Warramunga Arr**	47.94	125	P	P	20 35 02.6	+0.3
WRA	**Warramunga Arr**	47.99	125	P	P	20 35 02.7	0.0
WRA	**Warramunga Arr**	47.99	125	P	P	20 35 02.7	0.0
WRAB	**Tennant Creek**	47.99	125	⇓eP	P	20 35 03.5	+0.8
WRAB				pmax	pmax		
	comp=Z,12nm,2.6s						
WB2	**Warramunga Arr**	48.00	125	P	P	20 35 02.3	-0.5
WB2				IAmb	IAmb	20 35 25.6	
	comp=Z,6.2nm,1.3s						
USRK	**Ussuriysk Ar.**	49.09	36	LR	LR	20 56 43.9	
	comp=Z,44nm,18.8s,baz=141,slow=37						
RAYN	**Ar Rayn**	49.32	294	P	P	20 35 13.2	+0.2
RAYN				pmax	pmax		
	comp=Z,9.0nm,1.5s						
RAYN	**Ar Rayn**	49.32	294	P	P	20 35 13.2	+0.2
RAYN				IAmb	IAmb	20 35 17.9	
	comp=Z,8.8nm,1.4s						
BRVK	**Borovoye**	49.38	341	⇑eP	P	20 35 12.9	0.0
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRVK	**Borovoye**	49.38	341	P	P	20 35 13.2	+0.3
BRVK				IAmb	IAmb	20 35 15.2	
	comp=Z,5.6nm,1.2s						
ASAR	**Alice Springs**	49.63	130	P	P	20 35 15.3	0.0
	comp=Z,0.5nm,0.7s,baz=309,slow=7.0,SNR=4.5						
ASAR				PcP	PcP	20 36 38.2	+1.5
	comp=Z,0.6nm,0.9s,baz=314,slow=4.1,SNR=4.6						
ASAR	**Alice Springs**	49.63	130	P	P	20 35 14.0	-1.3
ASAR	**Alice Springs**	49.63	130	P	P	20 35 14.0	-1.3
ASAR					PcP	20 36 37.6	+0.9
ABKAR	**Akbulak array**	50.56	331	P	P	20 35 21.9	0.0
SVE	**Sverdlovsk**	55.73	338	eP	P	20 36 00.7	+0.8
ARU	**Arti**	56.22	337	P	P	20 36 04.0	+0.6
ARU						20 38 03.5	
ARU				S	S	20 43 56.6	+4.7
ARU				SS	SS	20 47 37.5	-1.1
KMBO	**Kilima Mbogo**	57.51	264	LR	LR	20 58 57.9	
	comp=Z,54nm,18.3s,baz=94,slow=34						
KIV	**Kislovodsk**	57.62	318	eP	P	20 36 12.2	-1.5
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
BRTR	**Keskin Array B**	62.72	311	P	P	20 36 47.4	-1.4
	comp=Z,0.6nm,0.6s,baz=117,slow=7.0,SNR=5.6						
BRTR	**Keskin Array B**	62.72	311	P	P	20 36 47.8	-1.0
FINES	**FINESS Array B**	73.04	332	P	P	20 37 53.4	+0.3
	comp=Z,2.9nm,0.8s,baz=108,slow=6.2,SNR=5.5						
FINES	**FINESS Array B**	73.04	332	i P	P	20 37 56.2	+3.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	**FINESS Array B**	73.04	332	P	P	20 37 53.0	-0.2
BOSA	**Boshof**	75.52	238	P	P	20 38 09.8	+1.4
	comp=Z,1.7nm,0.7s,baz=45,slow=2.7,SNR=4.1						
BOSA	**Boshof**	75.52	238	P	P	20 38 08.9	+0.5
BOSA				pmax	pmax		
	comp=Z,16nm,1.6s						
BOSA	**Boshof**	75.52	238	P	P	20 38 08.9	+0.5
TIP	**Timpagrande**	75.58	308	P	P	20 38 06.7	-1.8
TIP				IAmb	IAmb	20 38 38.6	
	comp=Z,4.6nm,1.1s						
ARCES	**ARCESS Array B**	75.59	340	P	P	20 38 08.3	+0.4
	comp=Z,2.3nm,0.9s,baz=98,slow=6.5,SNR=1.8						
ARCES	**ARCESS Array B**	75.59	340	P	P	20 38 07.3	-0.6
ARCES	**ARCESS Array B**	75.59	340	P	P	20 38 07.3	-0.6
GERES	**GERESS Array B**	78.13	318	P	P	20 38 22.6	-0.2
	comp=Z,0.8nm,0.7s,baz=86,slow=5.5,SNR=7.3						
GERES	**GERESS Array B**	78.13	318	eP	P	20 38 24.4	+1.6
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	**GERESS Array B**	78.13	318	P	P	20 38 23.2	+0.4
HFS	**Hagfors**	78.78	330	LR	LR	21 14 00.2	
	comp=Z,19nm,18.3s,baz=282,slow=36						
NB2	**NORSAR Subarra**	80.06	331	P	P	20 38 32.8	-0.2
	comp=Z,2.1nm,1.0s,baz=92,slow=5.3						
NOA	**NORSAR Array B**	80.06	331	P	P	20 38 32.5	-0.5
	comp=Z,1.1nm,0.7s,baz=94,slow=5.4,SNR=4.6						
IMAR	**Indian Mountai**	91.87	22	P	P	20 39 31.9	+0.5
CPUP	**Villa Florida**	147.17	232	PKPbc	PKPbc	20 46 07.5	+0.2
	comp=Z,1.0nm,0.6s,baz=61,slow=5.1,SNR=3.3						

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*RSNC **21** 20:29:26.3±1.1, 6°.80N×73°.14W, h144^{km}±5^{km}, ML3.5, Mw3.7*

*IDC **21** 20:29:30.3±4.3, 4°.73N×76°.52W, h111^{km}±44^{km}, mb3.2/2, mb1 3.5/3, mb1mx3.1/29, mbtmp3.6/3, Error ellipse: s-maj=50.7km s-min=28.8km az=58.0*

ISC 21 20:29:25.5±0.9, **6°.81N**±0°.03×**73°.09W**±0°.04, **h148**^{km}±6^{km}, **n38**, σ**1s.40**/67, **mb3.4**/3, **4C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	0.23	202	⇓iP	Pn	20 29 45.9	-0.1
BARC				eS	Sn	20 30 00.4	-1.2
PAMC	**Pamplona, Colo**	0.66	37	⇑iP	Pn	20 29 48.7	+0.6
PAMC				eS	Sn	20 30 05.5	+0.1
BRRC	**Barranca, Sant**	0.68	296	⇑iP	Pn	20 29 47.8	0.0
BRRC				eS	Sn	20 30 04.4	-0.2
BRRC				i		20 30 08.8	
	comp=Z,826nm,0.3s						
RUSC	**La Rusia**	0.91	179	⇓iP	Pn	20 29 49.7	-0.3
RUSC				eS	Sn	20 30 08.1	-0.5
RUSC				i		20 30 09.2	
	comp=Z,382nm,0.2s						
TAMC	**Tame, Arauca**	1.35	106	⇓iP	Pn	20 29 54.2	+0.8
TAMC				eS	Sn	20 30 15.5	+0.8
TAMC				i		20 30 16.1	
	comp=Z,221nm,0.2s						
PTBC	**PUERTO BERRIO,**	1.38	259	eP	Pn	20 29 52.3	-1.4
PTBC				eS	Sn	20 30 13.2	-2.0
PTBC				i		20 30 15.8	
	comp=Z,776nm,0.2s						
OCAC	**Ocana**	1.44	351	⇑iP	Pn	20 29 54.2	-0.3
OCAC				eS	Sn	20 30 16.1	-0.5
OCAC				i		20 30 21.0	
	comp=Z,949nm,0.2s						
SPBC	**San Pablo de B**	1.50	220	eP	Pn	20 29 54.6	-0.5
SPBC				eS	Sn	20 30 17.2	-0.6
SPBC				i		20 30 21.2	
	comp=Z,300nm,0.2s						
ZARC	**Zaragoza, Cauc**	1.88	291	eP	Pn	20 29 58.7	-0.5
ZARC				eS	Sn	20 30 24.6	-0.3
ZARC				i		20 30 28.1	
	comp=Z,615nm,0.4s						
NORC	**Norcasia**	2.15	235	eP	Pn	20 30 01.8	-0.7
NORC				eS	Sn	20 30 30.5	-0.3
NORC				i		20 30 36.3	
	comp=Z,200nm,0.2s						
SMLC	**San Martn de**	2.20	334	eP	Pn	20 30 02.1	-0.9
SMLC				eS	Sn	20 30 31.6	-0.2
CHIC	**Chingaza**	2.26	196	eP	Pn	20 30 04.0	0.0
CHIC				eS	Sn	20 30 32.8	-0.8
CHIC				i		20 30 40.0	
	comp=Z,128nm,0.4s						
ROSC	**El Rosal**	2.31	212	P	Pn	20 30 05.7	+1.1
	comp=Z,19nm,0.3s,baz=43,slow=21,SNR=14						
ROSC				S	Sn	20 30 34.2	-0.4
	comp=Z,37nm,0.3s,baz=83,slow=16,SNR=13						
ROSC	**El Rosal**	2.31	212	eP	Pn	20 30 05.6	+1.1
ROSC				eS	Sn	20 30 36.0	+1.4
ROSC				i		20 30 42.2	
	comp=Z,242nm,0.4s						
HELC	**Santa Helena**	2.50	256	eP	Pn	20 30 06.0	-0.8
HELC				eS	Sn	20 30 37.8	-0.9
HELC				i		20 30 44.8	
	comp=Z,209nm,0.3s						
VILC	**Villavicencio,**	2.74	193	eP	Pn	20 30 09.9	+0.1
VILC				eS	Sn	20 30 43.0	-0.9
VILC				i		20 30 53.8	
	comp=Z,229nm,0.4s						
GUY2C	**Guyana, Caldas**	2.75	235	eP	Pn	20 30 10.3	+0.1
GUY2C				eS	Sn	20 30 46.1	+1.6
GUY2C				i		20 30 53.4	
	comp=Z,161nm,0.7s						
PTGC	**Puerto Gaitan,**	2.76	160	eP	Pn	20 30 09.1	-0.8
PTGC				eS	Sn	20 30 42.2	-1.9
PTGC				i		20 30 44.5	
	comp=Z,283nm,0.4s						
RREF	**El Recreo**	2.94	230	eP	Pn	20 30 12.9	+0.3
RREF				eS	Sn	20 30 51.5	+2.6
RREF				i		20 31 00.1	
	comp=Z,126nm,0.2s						
CBOC	**Ciudad Bolivar**	3.05	252	eP	Pn	20 30 13.9	+0.3
CBOC				eS	Sn	20 30 50.5	-0.2
CBOC				i		20 30 54.3	
	comp=Z,78nm,0.2s						
CODC	**Agustn Codazz**	3.13	354	⇑iP	Pn	20 30 13.6	-0.8
CODC				eS	Sn	20 30 51.4	-1.0
CODC				i		20 30 57.5	
	comp=Z,65nm,0.2s						
TOLC	**Tolima**	3.13	225	eP	Pn	20 30 15.2	+0.4
TOLC				eS	Sn	20 30 53.8	+1.0
TOLC				i		20 30 59.9	
	comp=Z,50nm,0.2s						
ARGC	**Ariguani, Magd**	3.24	339	eP	Pn	20 30 16.3	+0.4
ARGC				eS	Sn	20 30 54.8	-0.1
ARGC				i		20 31 09.1	
	comp=Z,92nm,0.6s						
ANIL	**Santa Ana**	3.25	225	eP	Pn	20 30 16.9	+0.6
ANIL				eS	Sn	20 30 57.9	+2.2
ANIL				i		20 31 01.8	
	comp=Z,285nm,0.3s						
ORTC	**Ortega, Tolima**	3.59	217	eP	Pn	20 30 20.2	-0.2
ORTC				eS	Sn	20 31 02.6	-0.4
ORTC				i		20 31 09.0	
	comp=Z,98nm,0.4s						
PLMC	**San Jos del P**	3.69	239	eP	Pn	20 30 21.9	+0.1
PLMC				eS	Sn	20 31 04.3	-1.1
PLMC				i		20 31 10.8	
	comp=Z,101nm,0.1s						
SJCC	**San Jacinto, C**	3.70	326	eP	Pn	20 30 20.3	-1.6
SJCC				eS	Sn	20 31 01.1	-4.5
SJCC				i		20 31 06.0	
	comp=Z,220nm,0.4s						
LCBC	**Los crdobas,**	3.83	302	eP	Pn	20 30 24.2	+0.7
LCBC				eS	Sn	20 31 09.0	+0.5
LCBC				i		20 31 12.6	
	comp=Z,119nm,0.4s						
YOTC	**Yotoco, Valle**	4.28	229	eP	Pn	20 30 29.0	-0.6
YOTC				eS	Sn	20 31 17.3	-2.1
YOTC				i		20 31 28.5	
	comp=Z,11nm,0.4s						
MACC	**Macarena, Meta**	4.69	189	eP	Pn	20 30 33.0	-1.9
MACC				eS	Sn	20 31 24.5	-4.4
MACC				i		20 31 32.1	
	comp=Z,32nm,0.6s						
PCON	**Cinco Dias**	5.54	217	eP	Pn	20 30 47.6	+1.0
PCON				eS	Sn	20 31 48.6	-1.2
PCON				i		20 32 01.4	
	comp=Z,14nm,0.5s						
FLOC	**Florencia**	5.78	206	eP	Pn	20 30 41.2	-8.2
FLOC				eS	Sn	20 31 52.0	-3.0
FLOC				i		20 32 00.1	
	comp=Z,11nm,0.8s						
LPAZ	**La Paz**	23.47	168	P	P	20 34 21.3	-1.2
	comp=Z,0.9nm,0.3s,baz=348,slow=10,SNR=4.1						
TXAR	**Lajitas Array**	36.49	312	P	P	20 36 16.7	0.0
	comp=Z,0.2nm,0.4s,baz=141,slow=9.2,SNR=3.6						
YKA	**Yellowknife Ar**	63.28	340	pP	pP	20 40 13.7	+0.1
	comp=Z,0.4nm,0.8s,baz=132,slow=7.5,SNR=5.7						
MKAR	**Makanchi Array**	122.32	20	PKP	PKiKP	20 48 18.0	+15
	comp=Z,0.6nm,1.0s,baz=349,slow=5.9,SNR=3.9						
ASAR	**Alice Springs**	149.12	234	PKPbc	PKPdf	20 48 55.1	+2.2
	comp=Z,0.5nm,0.5s,baz=122,slow=3.3,SNR=5.7						
WRA	**Warramunga Arr**	150.35	241	PKPbc	PKPdf	20 48 58.2	+3.3
	comp=Z,0.5nm,0.4s,baz=109,slow=2.7,SNR=6.5						

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*IDC **21** 20:34:35.7±1.2, 28°.61S×62°.18E, h0^{km}, mb4.1/7, mb1 4.2/7, mb1mx3.8/53, mbtmp4.1/7, Error ellipse: s-maj=44.1km s-min=26.2km az=93.0*

*NEIC **21** 20:34:37.1±1.0, 28°.6S±0°.2×62°.3E±0°.3, h10^{km}±1^{km}, mb4.5/5, Error ellipse: s-maj=41.1km s-min=25.6km az=289.0*

ISC 21 20:34:37.2±1.1, **28°.6S**±0°.2×**62°.2E**±0°.3, **h10**^{km}, **n17**, σ**0s.58**/18, **mb4.3**/9, **Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	58.69	42	P	P	20 44 35.0	-0.1
CM31				IAmb	IAmb	20 44 36.6	
	comp=Z,3.7nm,0.8s						
CMAR	**Chiang Mai Arr**	58.69	42	P	P	20 44 36.0	+0.9
	comp=Z,2.0nm,0.7s,baz=231,slow=7.2,SNR=20						
CMAR	**Chiang Mai Arr**	58.69	42	P	P	20 44 34.5	-0.7
QSPA	**South Pole Qui**	61.60	180	P	P	20 44 54.6	0.0
	comp=Z,2.8nm,0.8s,baz=267,slow=3.0,SNR=11						
QSPA	**South Pole Qui**	61.60	180	P	P	20 44 55.1	+0.5
QSPA				IAmb	IAmb	20 44 56.5	
	comp=Z,3.3nm,0.9s						
ASAR	**Alice Springs**	63.68	104	P	P	20 45 08.9	-0.2
	comp=Z,1.3nm,0.6s,baz=244,slow=6.2,SNR=11						
ASAR	**Alice Springs**	63.68	104	P	P	20 45 08.7	-0.5
AS31	**Alice Springs**	63.68	104	P	P	20 45 08.9	-0.2
AS31				IAmb	IAmb	20 45 39.4	
	comp=Z,3.3nm,1.6s						
FAKI	**Fak Fak**	71.08	83	P	P	20 45 55.4	-0.7
SIJI	**Sorong**	71.23	80	P	P	20 45 57.9	+0.9
	comp=Z,5.1nm,0.7s,baz=249,slow=7.5,SNR=4.2						
MKAR	**Makanchi Array**	77.16	14	P	P	20 46 31.3	+0.5
	comp=Z,0.6nm,0.9s,baz=168,slow=8.2,SNR=4.9						
MKAR	**Makanchi Array**	77.16	14	P	P	20 46 30.1	-0.7
ZALV	**Zalesovo Beam**	84.46	13	P	P	20 47 09.4	-0.2
	comp=Z,1.3nm,0.7s,baz=174,slow=4.5,SNR=5.3						
SONM	**Songino Array**	85.77	28	P	P	20 47 17.1	+0.5
	comp=Z,0.5nm,0.7s,baz=211,slow=5.8,SNR=4.4						
SONM	**Songino Array**	85.77	28	P	P	20 47 16.9	+0.4
SONM					P	20 47 17.1	+0.5
YKA	**Yellowknife Ar**	146.00	357	PKPbc	PKPbc	20 54 16.1	-0.4
	comp=Z,1.6nm,0.8s,baz=352,slow=2.8,SNR=27						
V48A	**Smith Brothers**	152.91	293		PKPdf	20 54 27.3	-0.3

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*IDC **21** 20:38:08.8±2.5, 5°.75S×133°.07E, h0^{km}, mb4.0/2, mb1 4.2/6, mb1mx3.8/37, mbtmp4.1/6, ML4.2/4, Error ellipse: s-maj=114.9km s-min=24.1km az=82.0*

*NEIC **21** 20:38:11.6±2.0, 5°.63S±0°.08×133°.43E±0°.03, h45^{km}±13^{km}, mb4.0/5, Error ellipse: s-maj=12.3km s-min=4.3km az=191.0*

ISC 21 20:38:10.9±0.8, **5°.78S**±0°.06×**133°.26E**±0°.10, **h35**^{km}, **n26**, σ**2s.35**/29, **mb4.1**/4, **Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	2.93	222	Pn	Pn	20 38 58.5	+3.5
FAKI	**Fak Fak**	3.02	340		Pn	20 38 56.9	+0.6
SIJI	**Sorong**	5.27	338	Pn	Pn	20 39 27.3	0.0
	3.9nm,0.3s,baz=91,slow=3.2,SNR=45						
SIJI				Sn	Sn	20 40 15.8	-11
	12nm,0.3s,baz=202,slow=1.6,SNR=14						
MTN	**Manton Dam**	7.33	197		Pn	20 40 00.7	+5.2
SOEI	**Soe**	9.75	246		Pn	20 40 30.8	+1.9
SOEI					Sn	20 42 14.6	-2.7
KNRA	**Kununurra**	10.78	204		Pn	20 40 46.2	+3.3
KNRA					Sn	20 42 41.6	-0.8
COEN	**Coen**	12.70	131	Pn	Pn	20 41 08.6	-0.6
WB0	**Warramunga Arr**	13.95	176		Pn	20 41 29.2	+2.9
WRAB	**Tennant Creek**	14.11	176	Pn	Pn	20 41 29.3	+0.9
WRA	**Warramunga Arr**	14.12	176	Pn	Pn	20 41 30.1	+1.6
	0.8nm,0.3s,baz=354,slow=13,SNR=45						
WRA				Sn	Sn	20 43 58.1	-6.0
	0.7nm,0.3s,baz=359,slow=23,SNR=7.2						
WRA	**Warramunga Arr**	14.12	176		Pn	20 41 28.8	+0.2
WRA					Sn	20 43 56.3	-7.8
WB2	**Warramunga Arr**	14.12	176	Pn	Pn	20 41 29.7	+1.1
WR0	**Warramunga Arr**	14.15	175	Pn	Pn	20 41 31.3	+2.3
FITZ	**Fitzroy Crossi**	14.33	211	Pn	Pn	20 41 31.9	+0.5
	2.6nm,0.3s,baz=30,slow=11,SNR=58						
FITZ				Sn	Sn	20 44 02.2	-7.0
	1.1nm,0.3s,baz=210,slow=13,SNR=8.9						
FITZ	**Fitzroy Crossi**	14.33	211		Pn	20 41 31.9	+0.5
FITZ					Sn	20 44 01.6	-7.6
AS31	**Alice Springs**	17.80	178	P	P	20 42 18.5	+2.0
ASAR	**Alice Springs**	17.80	178	P	P	20 42 19.0	+2.5
	0.5nm,0.3s,baz=356,slow=14,SNR=28						
ASAR				S	Sn	20 45 29.3	-4.2
	0.2nm,0.3s,baz=358,slow=27,SNR=6.6						
ASAR	**Alice Springs**	17.80	178	P	P	20 42 18.7	+2.1
SONM	**Songino Array**	58.39	339	P	P	20 48 00.8	-2.2
MK31	**Makanchi Array**	69.03	325	P	P	20 49 12.5	-0.6
MK31				IAmb	IAmb	20 49 16.7	
	comp=Z,1.5nm,1.0s						
MKAR	**Makanchi Array**	69.03	325	P	P	20 49 16.0	+2.9
	comp=Z,0.9nm,0.4s,baz=119,slow=7.7,SNR=27						
MKAR	**Makanchi Array**	69.03	325	P	P	20 49 13.2	0.0
MAKZ	**Makanchi**	69.22	325	P	P	20 49 13.9	-0.4
MAKZ				IAmb	IAmb	20 49 17.5	
	comp=Z,1.2nm,0.5s						
ZALV	**Zalesovo Beam**	71.97	332	P	P	20 49 32.9	+2.0
	comp=Z,0.5nm,0.5s,baz=142,slow=7.3,SNR=3.1						
ZALV	**Zalesovo Beam**	71.97	332	P	P	20 49 29.9	-0.9
KURK	**Kurchatov**	73.21	327	P	P	20 49 40.2	+1.9

IDC 21 20:50:42.3±1.7, **13°.99S**×**178°.27W**, **h0**^{km}, **mb3.9**/7, **mb1 4.2**/7, **mb1mx3.8**/47, **mbtmp3.9**/7, **MS3.2**/1, **Ms1 3.2**/1, **ms1mx2.6**/37, **Error ellipse: s-maj=126.7km s-min=23.3km az=152.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	16.61	239	LR	LR	20 59 42.9	
	comp=Z,90nm,19.7s,baz=206,slow=33						
H11S2	**WAKE ISLAND Hy**	35.51	335	T	T	21 35 48.5	
	baz=154,slow=76,SNR=7.6						
H11S3	**WAKE ISLAND Hy**	35.52	335	T	T	21 35 54.7	
	baz=154,slow=76,SNR=7.5						
H11S1	**WAKE ISLAND Hy**	35.53	335	T	T	21 35 51.2	
	baz=154,slow=76,SNR=12						
WRA	**Warramunga Arr**	45.60	256	P	P	20 59 04.8	+0.1
	0.5nm,0.9s,baz=83,slow=8.4,SNR=2.2						
ASAR	**Alice Springs**	46.10	251	P	P	20 59 08.3	-0.3
	0.8nm,0.7s,baz=83,slow=8.2,SNR=12						
NVAR	**Mina Array Bea**	76.53	44	P	P	21 02 34.5	-0.3
	0.6nm,0.7s,baz=229,slow=8.2,SNR=4.9						
ILAR	**Eielson Array**	82.06	13	P	P	21 03 04.4	+0.3
	0.9nm,1.0s,baz=215,slow=8.2,SNR=4.3						
ANMO	**Albuquerque**	83.57	52	P	P	21 03 13.2	+0.3
	1.9nm,0.9s,baz=235,slow=4.6,SNR=4.4						
TXAR	**Lajitas Array**	83.80	58	P	P	21 03 14.6	+0.5
	1.5nm,0.9s,baz=243,slow=6.0,SNR=3.6						
PDAR	**Pinedale Array**	84.43	44	P	P	21 03 16.8	-0.4
	1.4nm,1.0s,baz=224,slow=4.1,SNR=8.0						

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*JMA **21** 20:54:18.8±0.6, 33°.88N×142°.08E, h31^{km}, M3.3*

*IDC **21** 20:54:21.4±10.0, 33°.48N×141°.36E, h0^{km}, mb3.2/3, mb1 3.3/4, mb1mx3.1/55, mbtmp3.1/4, ML1.9/1, MS3.5/1, Ms1 3.5/1, ms1mx2.5/19, Error ellipse: s-maj=367.9km s-min=24.9km az=64.0*

ISC 21 20:54:23.4±1.6, **33°.9N**±0°.1×**142°.0E**±0°.2, **h35**^{km}, **n12**, σ**1s.72**/15, **mb3.3**/3, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	1.09	311	P	Pn	20 54 39.8	-1.8
BSO3	**Boso 3**	1.48	306	P	Pn	20 54 46.2	-1.1
BSO4	**Boso 4**	1.71	308	P	Pn	20 54 49.5	-1.0
JKUC	**kamogawauchiur**	1.90	310	P	Pn	20 54 51.8	-1.5
JKUC				eS	Sn	20 55 15.9	-0.1
JIM2	**Oshima 3**	2.24	291	P	Pn	20 54 56.0	-2.0
JIM2				eS	Sn	20 55 24.4	0.0
JOD2	**Odawara 2**	2.72	300	eS	Sn	20 55 37.1	+0.9
JAG	**Ashikaga**	3.23	321	P	Pn	20 55 10.2	-1.3
JAG				eS	Sn	20 55 46.5	-2.2
MJAR	**Matsushiro Arr**	4.03	311	Pn	Pn	20 55 21.4	-1.2
	0.1nm,0.3s,baz=154,slow=15,SNR=1.7						
MJAR				Sn	Sn	20 56 10.0	+1.5
	0.2nm,0.3s,baz=18,slow=22,SNR=7.5						
DAV	**Davao City (W)**	30.74	213	LR	LR	21 10 28.9	
	comp=Z,101nm,22.0s,baz=271,slow=32						
MKAR	**Makanchi Array**	46.20	305	P	P	21 02 48.2	+3.4
	0.2nm,0.7s,baz=88,slow=7.4,SNR=2.0						
WRA	**Warramunga Arr**	54.07	189	P	P	21 03 43.5	-1.1
	0.3nm,0.8s,baz=6.9,slow=7.7,SNR=5.4						
ASAR	**Alice Springs**	57.80	189	P	P	21 04 10.8	-0.5
	0.2nm,0.7s,baz=9.2,slow=8.3,SNR=1.4						

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*IDC **21** 21:03:39.9±0.4, 7°.45N×94°.13E, h0^{km}, mb4.6/38, mb1 4.6/42, mb1mx4.6/53, mbtmp4.6/42, ML4.8/5, MS4.7/36, Ms1 4.7/36, ms1mx4.6/46, Error ellipse: s-maj=13.5km s-min=9.5km az=48.0*

*NDI **21** 21:03:40.1±2.7, 7°.39N×94°.50E, h10^{km}, mb5.1, mb5.2(NEIC)*

*NEIC **21** 21:03:41.6±2.0, 7°.45N±0°.07×94°.30E±0°.07, h10^{km}±2^{km}, mb5.2/151, Error ellipse: s-maj=10.3km s-min=9.0km az=51.0*

*BJI **21** 21:03:41.2±0.0, 7°.45N×94°.03E, h16^{km}, mB5.1/58, mb4.7/63, Ms5.3/73, Ms7 5.0/70*

*MOS **21** 21:03:41.6±1.1, 7°.45N×94°.21E, h24^{km}, mb5.3/29, MS5.1/8, Error ellipse: s-maj=6.7km s-min=4.2km az=114.8*

*DJA **21** 21:03:43.8±0.2, 7°N±3°×9°4E±°, h10^{km}, M5.0/38, mb5.1/38, mB5.4/22, MLv5.6/3, Mw(mB)4.9/22, Mwp5.2/6*

*GCMT **21** 21:03:44.6±0.1, 7°.48N±0°.01×94°.41E±0°.01, h17km, MW5.4/145, Moment Tensor Solution. s90,c141; s145,c256; Duration: 1s.2 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.31±.02; $M_{\theta\theta}$-0.98±.02; $M_{\phi\phi}$1.29±.02; $M_{r\theta}$-0.54±.05; $M_{\theta\phi}$0.45±.01; $M_{\phi r}$-0.18±.04; Best double couple: $M_0$1.37100×10^{17} NP1:ϕ_s148.00000°,δ64.00000°, λ-167.00000°. NP2:ϕ_s53.00000°,δ78.00000°, λ-27.00000°. Principal axes: T 1.4240, Plg10.0000°, Azm103.0000°; N -0.1090, Plg61.0000°, Azm211.0000°; P -1.3170, Plg27.0000°, Azm8.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*KLM **21** 21:03:47.0, 7°.23N×94°.37E, h30km, mb5.2*

*BGR **21** 21:03:48.6±0.0, 7°.46N×94°.72E, h10km, mb4.9*

ISC 21 21:03:43.3±0.5, **7°.41N**±0°.03×**94°.20E**±0°.03, **h17**km±2km, **h17**km**:pP-P, n570,** σ**1s.95**/584, **mb5.1**/167, **MS4.9**/58, **34C-23D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.48	214	*e*P	Pn	21 03 54.6	-0.8
CMBY				*e*S	Sn	21 04 02.7	-0.8
LHMI	Lhok Sumawe	3.49	128		Pn	21 04 35.3	-1.5
MLSI	Meulaboh, Aceh	3.82	145	P	Pn	21 04 43.1	+1.7
PBA	Port Blair	4.45	341	*e*P	Pn	21 04 48.1	-1.9
PBA				*e*S	Sn	21 05 40.6	-0.9
SNSI	Sinabang, Aceh	5.40	157	P	Pn	21 05 01.8	-1.4
	2.3nm7μm499nm,0.8s						
DGPR	DIGLIPUR	5.86	348	*e*P	Pn	21 05 09.7	+0.2
DGPR				*e*x	x	21 06 22.0	
PSI	Prapat	6.57	134	Pn	Pn	21 05 19.1	-0.1
	3.2nm,0.3s,baz=322,slow=12,SNR=18						
PSI				LR	LR	21 08 11.9	
	comp=Z,12μm,18.4s,baz=302,slow=40						
RPSI	Rantau Prapat	6.64	135		Pn	21 05 18.3	-1.9
RPSI	Rantau Prapat	6.64	135		Pn	21 05 19.1	-1.0
KULM	Kulim	6.75	108		Pn	21 05 18.3	-3.4
KULM	Kulim	6.75	108	P	Pn	21 05 19.0	-2.7
GSI	Gunungsitoli	6.94	151		Pn	21 05 22.1	-2.2
IPM	Ipoh	7.39	113		Pn	21 05 26.5	-4.0
IPM	Ipoh	7.39	113	P	Pn	21 05 28.0	-2.5
BKNI	Bangkinang	9.80	136	P	Pn	21 06 05.1	+1.5
	4μm3μm238nm,1.3s						
BKNI	Bangkinang	9.80	136		Pn	21 06 02.1	-1.5
SISI	Saibi	9.96	150	P	Pn	21 06 09.2	+3.5
	37nm,1.0s						
PDSI	Padang	10.36	143	P	Pn	21 06 09.7	-1.6
	1μm583nm37nm,0.8s						
MYKOM	Kota Tinggi	11.12	120		Pn	21 06 18.6	-3.0
MYKOM	Kota Tinggi	11.12	120	P	Pn	21 06 24.0	+2.3
PBKT	Sadao Pong	11.25	35		Pn	21 06 22.4	-1.0
KRJI	Kerinci	11.90	142	P	Pn	21 06 32.1	-0.3
	3μm202nm,1.1s						
CM31	Chiang Mai Arr	11.91	22	P	Pn	21 06 33.0	+0.6
	SNR=12						
CM31	Chiang Mai Arr	11.91	22		Pn	21 06 32.3	-0.1
CMAR	Chiang Mai Arr	11.91	22	Pn	Pn	21 06 32.2	-0.2
	1.8nm,0.3s,baz=210,slow=13,SNR=38						
CMAR				LR	LR	21 11 16.1	
	comp=Z,5μm,18.4s,baz=220,slow=38						
CMAR	Chiang Mai Arr	11.91	22	*i* P	Pn	21 06 32.2	-0.2
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
CMAR	Chiang Mai Arr	11.91	22		Pn	21 06 31.1	-1.4
CHTO	Chiang Mai	12.23	22	P	Pn	21 06 36.4	-0.5
CHTO	Chiang Mai	12.23	22		Pn	21 06 36.4	-0.5
SIMRM	Sittwe	12.71	354	Pn	Pn	21 06 40.8	-2.6
PALK	Pallekele	13.39	270	Pn	Pn	21 06 51.6	-1.1
	comp=Z,1.7nm,0.3s,baz=60,slow=13,SNR=15						
PALK				Sn	Sn	21 09 12.3	-9.1
	comp=Z,4.1nm,0.3s,baz=215,slow=21,SNR=7.9						
PALK				LR	LR	21 11 30.9	
	comp=Z,7μm,21.9s,baz=102,slow=35						
PALK	Pallekele	13.39	270	*ce*P	Pn	21 06 53.4	+0.7
PALK	Pallekele	13.39	270		Pn	21 06 52.6	-0.1
MNAI	Manna	14.60	143	Pn	Pn	21 07 09.4	+0.2
PMBI	Palembang	14.72	134	Pn	Pn	21 07 09.0	-1.9
DLV	T Lat	14.78	71	Pn	Pn	21 07 08.8	-3.2
CHLP	Challavanipeta	14.80	319	*e*P	Pn	21 07 11.4	-0.6
CHLP				*e*		21 09 42.6	
CHLP				IVMs_BB	IVMs_BB	21 14 14.7	
	comp=Z,895nm,16.7s						
MDRS	Chennai	14.83	293	*e*x	Pn	21 07 16.4	+4.0
BWNR	Bhubaneshwar	15.17	328	*e*P	Pn	21 07 15.2	-1.7
BWNR				IAmb	IAmb	21 07 23.2	
	comp=Z,60nm,0.8s						
BWNR				*e*x	x	21 09 55.9	
BRDH	Bariadhala	15.37	351	Pn	Pn	21 07 19.4	-0.2
	comp=Z,32nm,0.3s,baz=112,slow=19,SNR=1.6						
MDSI	Maura Dua	15.46	140	P	Pn	21 07 16.2	-4.5
SKHT	Srikalahasti	15.56	295	*e*P	Pn	21 07 21.4	-0.8
SKHT				*e*		21 10 02.6	
SKHT				IVMs_BB	IVMs_BB	21 12 50.2	
	comp=Z,723nm,20.0s						
PVM	Polavaram	15.69	310	*e*P	Pn	21 07 22.4	-1.3
PVM				*e*		21 10 11.6	
PVM				IVMs_BB	IVMs_BB	21 12 02.3	
	comp=Z,479nm,34.2s						
LWLI	Liwa	15.79	141	P	P	21 07 32.7	+3.8
MYLAV	Mylavaram	16.18	306	*e*P	Pn	21 07 29.8	-0.2
MYLAV				*e*		21 10 17.3	
MYLAV				IVMs_BB	IVMs_BB	21 12 33.9	
	comp=Z,468nm,24.5s						
ADKI	Addanki	16.25	302	*e*P	Pn	21 07 30.4	-0.5
ADKI				*e*		21 10 18.3	
ADKI				IVMs_BB	IVMs_BB	21 12 58.8	
	comp=Z,558nm,27.3s						
SLVN	Son La	16.72	33	Pn	Pn	21 07 32.7	-4.2
KSM	Kuching	17.10	109		Pn	21 07 40.4	-1.4
KSM				IAmb	IAmb	21 07 53.7	
	comp=Z,275nm,1.3s						
KSM	Kuching	17.10	109	P	P	21 07 43.0	-0.4
GGR	Gangavaram	17.12	308	*e*P	Pn	21 07 41.3	-0.7
GGR				*e*		21 10 42.8	
GGR				IVMs_BB	IVMs_BB	21 12 45.2	
	comp=Z,424nm,29.0s						
NJS	Nagarjunasagar	17.16	303	*e*P	Pn	21 07 41.8	-0.7
NJS				*e*		21 10 42.4	
NJS				IVMs_BB	IVMs_BB	21 12 41.3	
	comp=Z,506nm,32.9s						
SRLM	Srisailam	17.28	301	*e*P	Pn	21 07 43.2	-0.8
SRLM				IVMs_BB	IVMs_BB	21 16 05.3	
	comp=Z,454nm,18.8s						
BOK	Bokaro	18.14	335	*e*P	Pn	21 07 52.9	-1.6
SHL	Shillong	18.19	353	*e*P	Pn	21 07 52.7	-2.6
HYB	Hyderabad	18.21	305	*i* P	Pn	21 07 55.0	-0.5
	comp=Z,70nm,1.0s						
HYB				*e*S	Sn	21 11 20.0	+1.3
HYB	Hyderabad	18.21	305	*e*P	P	21 07 56.5	+0.7
HYBB	Hyderabad (bro	18.22	305	*e*P	Pn	21 07 54.8	-0.8
HYBB				*e*Sn	Sn	21 11 18.9	+0.1
HYBB				IVMs_BB	IVMs_BB	21 13 16.9	
	comp=Z,424nm,24.4s						
URV	Uravakonda	18.22	296	*e*P	Pn	21 07 55.1	-0.5
URV				*e*		21 11 12.9	
URV				IVMs_BB	IVMs_BB	21 15 34.6	
	comp=Z,1μm,15.6s						
RPR	Rampur	18.42	310	*e*P	Pn	21 07 58.1	+0.1
SBUM	Sibu	18.61	104	P	P	21 07 58.0	-2.1
SBUM	Sibu	18.61	104	P	Pn	21 08 01.0	+0.6
DBJI	Dramaga	18.69	138	P	Pn	21 08 02.1	+0.8
	comp=Z,2μmcomp=Z,68nm,1.3s						
QIZ	Qiongzhong	19.09	51	P	P	21 08 04.6	-0.7
QIZ				S	Sn	21 11 40.4	+0.6
QIZ				ScP	ScP	21 16 06.0	+0.9
QIZ				LR	LR		
	comp=Z,16μm,12.2s						
QIZ				LR	LR		
	comp=Z,6μm,12.6s						
QIZ				LR	LR		
	comp=Z,3μm,11.5s						
SRSP	Sriramsagar	19.20	308	*e*P	P	21 08 06.7	+0.2
SRSP				IVMs_BB	IVMs_BB	21 17 56.6	
	comp=Z,417nm,15.8s						
KMI	Kunming	19.41	24	P	Pn	21 08 11.1	+0.9
KMI				pP	pwP	21 08 15.6	-0.3
KMI				sP	sP	21 08 18.4	+3.1
KMI				PP	pP	21 08 30.1	+17
KMI				S	S	21 11 49.8	+1.6
KMI				sS	sS	21 11 58.5	+3.6
KMI				pmax	pmax		
	comp=Z,54nm,1.4s						
KMI				pmax	pmax		
	comp=Z,480nm,6.0s						
KMI				LR	LR		
	comp=Z,3μm,13.7s						
KMI				LR	LR		
	comp=Z,4μm,14.6s						
KMI				LR	LR		
	comp=Z,4μm,16.1s						
KMI	Kunming	19.41	24	P	P	21 08 07.3	-1.7
KMI				pmax	pmax		
	comp=Z,77nm,1.1s						
KMI	Kunming	19.41	24	P	P	21 08 07.2	-1.7
LEM	Lembang	19.47	136	P	P	21 08 10.0	+0.3
	comp=Z,3.0nm,0.3s,baz=66,slow=3.9,SNR=4.8						
LEM				LR	LR	21 17 17.7	
	comp=Z,5μm,19.2s,baz=290,slow=42						
COCO	West Island	19.65	172	P	P	21 08 10.5	-0.9
COCO				pmax	pmax		
	comp=Z,238nm,1.1s						
COCO	West Island	19.65	172	P	P	21 08 10.5	-0.9
COCO				IAmb	IAmb	21 08 32.7	
	comp=Z,238nm,1.1s						
NGP	Nagpur	20.02	315	*e*P	P	21 08 16.1	+0.6
NGP				*e*P	Pn	21 08 16.2	-1.1
CISI	Cisompet, Garu	20.14	137	P	P	21 08 15.1	-1.7
CISI				IAmb	IAmb	21 08 27.6	
	comp=Z,159nm,1.6s						
KLRI	Killari	20.15	303	*e*P	P	21 08 16.0	-1.0
KLRI				IVMs_BB	IVMs_BB	21 17 52.9	
	comp=Z,532nm,17.6s						
ODAN	Odare	20.39	342	*e*P	P	21 08 19.0	-0.7
RAMN	Ramite	20.73	341	*e*P	P	21 08 23.2	-0.2
	comp=Z,579nm,1.1s						
TAPN	Taplejung	20.76	344	*e*P	P	21 08 22.4	-1.4
	comp=Z,292nm,0.8s						
JBP	Jabalpur	20.79	320	*e*P	P	21 08 24.9	+1.2
XMIS	Christmas Isla	21.12	147	P	P	21 08 26.6	-0.9
GOA	Goa	21.51	294	*e*P	P	21 08 33.4	+1.9
GOA				IAmb	IAmb	21 08 36.7	
	comp=Z,87nm,1.1s						
JIRN	Jiri	21.52	340	*e*P	P	21 08 32.3	+0.3
	comp=Z,466nm,1.0s						
SMRI	Semarang	21.65	131	P	P	21 08 31.6	-1.6
SMRI	Semarang	21.65	131	P	P	21 08 31.9	-1.3
PKI	Pulchoki	21.71	338	*e*P	P	21 08 32.2	-1.8
	comp=Z,284nm,1.1s						
PKIN	Phulchoki	21.72	338	*e*P	P	21 08 32.8	-1.3
	comp=Z,124nm,0.8s						
GUN	Gumba	21.86	340	*e*P	P	21 08 33.3	-2.3
DMN	Daman	21.86	338	*e*P	P	21 08 34.3	-1.2
KKM	Kota Kinabalu	21.91	92	P	P	21 08 34.6	-1.4
KKM				IAmb	IAmb	21 09 07.1	
	comp=Z,156nm,1.3s						
KKN	Kakani	21.96	338	*e*P	P	21 08 35.1	-1.5
	comp=Z,210nm,1.0s						
KAAM	Kaadhehdhoo	22.23	253	P	P	21 08 40.0	+0.6
KAAM				IAmb	IAmb	21 08 57.8	
	comp=Z,85nm,1.0s						
UGM	Wanagama	22.29	133	P	P	21 08 38.5	-1.5
UGM				IAmb	IAmb	21 09 01.8	
	comp=Z,126nm,1.1s						
SPMM	Sapulut	22.30	96	P	P	21 08 43.0	+2.8
GYA	Guiyang	22.35	31	⇑*i*P	P	21 08 40.9	+0.2
GYA				PP	PnPn	21 09 12.3	+8.6
GYA				S	S	21 12 44.8	-1.1
GYA				SS	SnSn	21 13 18.1	+3.9
GYA				ScP	ScP	21 16 13.3	+0.3
GYA				pmax	pmax		
	comp=Z,20nm,1.2s						
GYA				pmax	pmax		
	comp=Z,320nm,4.8s						
GYA				LR	LR		
	comp=Z,5μm,13.4s						
GYA				LR	LR		
	comp=Z,8μm,15.1s						
GYA				LR	LR		
	comp=Z,4μm,15.9s						
LSA	Lhasa	22.36	353	IAmb	IAmb	21 08 49.0	
	comp=Z,72nm,1.0s						
GKN	Gorkha	22.39	337	*e*P	P	21 08 39.2	-1.9
BHPL	Bhopal	22.53	316	*e*P	P	21 08 43.2	+0.7
BHPL				IAmb	IAmb	21 08 49.9	
	comp=Z,48nm,0.7s						
WOJI	Wonogiri, Jawa	22.53	132	P	P	21 08 49.0	+6.4
POO	Poona	22.67	301	*e*x	P	21 08 34.0	-10
PCJI	Pacitan	22.95	132	P	P	21 08 55.4	+8.4
DANN	Dangsing	23.04	336	*e*P	P	21 08 46.2	-2.0
	comp=Z,280nm,0.9s						
GRJI	Gresik	23.13	128	P	P	21 08 55.5	+6.7
BKB	Balikpapan	24.23	110	P	P	21 09 03.2	+3.7
BKB	Balikpapan	24.23	110	P	P	21 08 55.3	-4.2
KMMI	Kalianget	24.39	126	P	P	21 09 05.3	+4.3
GMJI	Gumukmas	24.72	129	P	P	21 09 10.0	+6.1
CD2	Chengdu	25.03	20	P	P	21 09 04.1	-2.6
CD2				sP	pwP	21 09 13.8	+0.3
CD2				PP	PnPn	21 09 44.9	+4.6
CD2				S	S	21 13 27.9	-2.3
CD2				sS	pS	21 13 35.0	-0.5
CD2				SS	SnSn	21 14 29.4	+10
CD2				pmax	pmax		
	comp=Z,460nm,5.9s						
CD2				LR	LR		
	comp=Z,5μm,11.2s						
CD2				LR	LR		
	comp=Z,11μm,10.6s						
CD2				LR	LR		
	comp=Z,6μm,12.7s						
JAGI	Jajag, Banyuwa	25.39	128	P	P	21 09 13.3	+3.3
	comp=Z,59nm,0.9s						
JAGI	Jajag, Banyuwa	25.39	128	P	P	21 09 08.7	-1.4
JAGI				IAmb	IAmb	21 09 21.3	
	comp=Z,92nm,1.2s						
SRBI	Singaraja	26.00	126	P	P	21 09 17.3	+1.8
	comp=Z,2μmcomp=Z,166nm,1.5s						
H08S3	Diego Garcia H	26.31	236	T	T	21 35 58.7	
	baz=56,slow=75,SNR=1911						
H08S2	Diego Garcia H	26.31	236	T	T	21 36 02.7	
	baz=56,slow=75,SNR=454						
H08S1	Diego Carcia H	26.33	236	T	T	21 36 02.7	
	baz=56,slow=75,SNR=170						
MPSI	Mapaga	26.57	104	P	P	21 09 21.5	+0.7
	comp=Z,928nmcomp=Z,63nm,1.0s						
ENH	Enshi	26.89	30	P	P	21 09 22.7	-0.8
ENH				IAmb	IAmb	21 09 34.3	
	comp=Z,42nm,1.1s						
TGY	Tagaytay City	27.08	74	LR	LR	21 18 50.0	
	comp=Z,2μm,21.4s,baz=280,slow=34						
KAPI	Kappang	28.33	115	P	P	21 09 36.6	+0.1
	comp=Z,3.6nm,0.4s,baz=56,slow=3.6,SNR=2.4						
KAPI				LR	LR	21 20 59.4	
	comp=Z,1μm,21.7s,baz=290,slow=37						
MRSI	Marisa	28.50	103	P	P	21 09 37.5	-0.6
	comp=Z,59nm,1.2s						
APSI	Ampana	28.60	106	P	P	21 09 42.1	+3.1
	comp=Z,60nm,1.4s						
BKSI	Bulukumba	28.79	115	P	P	21 09 38.0	-2.7
LUWI	Luwuk	29.71	105	P	P	21 09 49.8	+0.9
	comp=Z,3μmcomp=Z,203nm,1.2s						
LUWI	Luwuk	29.71	105	P	P	21 09 47.1	-1.8
WHN	Wuhan	29.77	37	⇑P	P	21 09 49.3	+0.2
WHN				S	S	21 14 50.3	+5.4
WHN				pmax	pmax		
	comp=Z,21nm,0.8s						
WHN				LR	LR		
	comp=Z,3μm,7.7s						
WHN				LR	LR		
	comp=Z,7μm,11.0s						
WHN				LR	LR		
	comp=Z,7μm,12.3s						
XAN	Xi'an	29.78	25	P	P	21 09 48.3	-1.0
XAN				pP	pP	21 09 52.5	-1.5
XAN				sP	sP	21 09 55.1	-0.7
XAN				PP	PP	21 10 42.6	-14
XAN				S	S	21 14 40.3	-4.9
XAN				SS	SnSn	21 16 21.8	+6.2
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,150nm,4.8s						
XAN				LR	LR		
	comp=Z,5μm,14.4s						
XAN				LR	LR		
	comp=Z,5μm,14.9s						
XAN				LR	LR		
	comp=Z,5μm,15.2s						
XAN	Xi'an	29.78	25	P	P	21 09 48.8	-0.5
XAN				pmax	pmax		
	comp=Z,23nm,0.9s						
XAN	Xi'an	29.78	25	P	P	21 09 48.8	-0.5
XAN				IAmb	IAmb	21 09 59.1	
	comp=Z,23nm,0.9s						
DHRM	DHARAMSHALA	29.80	328	*e*x	P	21 09 48.4	-1.3
LZH	Lanzhou	29.87	16	*e*P	P	21 09 53.3	+3.1
LZH				sP	pwP	21 10 01.3	+4.1
LZH				S	S	21 14 42.3	-4.5
LZH				SS	SnSn	21 16 19.4	+1.5
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,350nm,5.4s						
LZH				LR	LR		
	comp=Z,2μm,12.8s						
LZH				LR	LR		
	comp=Z,2μm,15.2s						
LZH				LR	LR		
	comp=Z,2μm,16.3s						
KMSI	Cibinong	30.46	102	P	P	21 09 58.9	+3.5
	comp=Z,127nm,1.1s						
MMRI	Maumere	32.17	119	P	P	21 10 16.3	+5.7
MMRI	Maumere	32.17	119	P	P	21 10 09.5	-1.0
MMRI				IAmb	IAmb	21 10 19.7	
	comp=Z,54nm,1.3s						
GTA	Gaotai	32.26	8	*e*P	P	21 10 09.9	-1.2
GTA				pP	pP	21 10 13.5	-2.3
GTA				S	S	21 15 21.8	-2.1
GTA				ScP	ScP	21 16 46.1	+3.5
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,100nm,5.3s						
GTA				LR	LR		
	comp=Z,1μm,18.4s						
GTA				LR	LR		
	comp=Z,2μm,11.7s						
GTA				LR	LR		
	comp=Z,1μm,17.8s						
YOJ	Yonaguni jima	32.36	55	P	P	21 10 10.8	-1.3
YOJ				pmax	pmax		
	comp=Z,347nm,1.6s						
YOJ	Yonaguni jima	32.36	55	P	P	21 10 10.8	-1.3
NIL	Nilore	32.51	326	P	P	21 10 11.9	-1.4
NIL				pmax	pmax		
	comp=Z,59nm,0.9s						
NIL	Nilore	32.51	326	P	P	21 10 11.9	-1.4
SANI	Sanana	33.08	105	P	P	21 10 34.1	+16
NJ2	Nanjing	33.58	40	*e*P	P	21 10 23.9	+1.2
NJ2				pP	sP	21 10 29.3	+0.1
NJ2				sP	pwP	21 10 31.3	+1.2
NJ2				S	S	21 15 48.9	+4.4
NJ2				sS	sS	21 15 54.1	+2.0
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,530nm,3.5s						
NJ2				LR	LR		
	comp=Z,4μm,15.1s						
NJ2				LR	LR		
	comp=Z,3μm,15.6s						
NJ2				LR	LR		
	comp=Z,3μm,17.9s						
LBMI	Labuha	34.16	102	P	P	21 10 31.5	+3.5
	comp=Z,989nmcomp=Z,50nm,1.3s						
SOEI	Soe	34.47	119	P	P	21 10 32.7	+2.0
	comp=Z,38nm,1.1s						
SOEI	Soe	34.47	119	P	P	21 10 28.5	-2.2
SOEI				IAmb	IAmb	21 11 26.8	
	comp=Z,46nm,1.1s						
TIA	Tai'an	35.50	33	P	P	21 10 28.9	-10
KBL	Kabul	35.57	323	P	P	21 10 38.3	-1.9
KBL				pmax	pmax		
	comp=Z,23nm,1.1s						
KBL	Kabul	35.57	323	P	P	21 10 38.3	-1.9
KBL				IAmb	IAmb	21 10 49.9	
	comp=Z,23nm,1.1s						
KSH	Kashi	35.91	336	P	P	21 10 40.4	-2.5
KSH				pP	pP	21 10 44.8	-2.7
KSH				PcP	PcP	21 13 07.8	-2.0
KSH				S	S	21 16 15.3	-5.2
KSH				sS	pS	21 16 23.3	-2.6
KSH				ScS	ScS	21 20 56.1	-4.8
KSH				pmax	pmax		
	comp=Z,11nm,0.8s						
KSH				pmax	pmax		
	comp=Z,590nm,5.7s						
KSH				LR	LR		
	comp=Z,1μm,12.9s						
KSH				LR	LR		
	comp=Z,2μm,14.8s						
KSH				LR	LR		
	comp=Z,1μm,14.5s						
BTO	Baotou	35.95	21	*e*P	P	21 10 41.6	-1.5
BTO				S	S	21 16 16.3	-4.6
WMQ	Urumqi	36.71	352	*e*P	P	21 10 50.0	+0.4
WMQ				pP	sP	21 10 55.5	-0.5
WMQ				sP	pwP	21 11 02.8	+5.9
WMQ				PP	PnPn	21 12 12.5	-0.7
WMQ				pmax	pmax		
	comp=Z,16nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,52nm,8.5s						
WMQ				LR	LR		
	comp=Z,730nm,14.7s						
WMQ				LR	LR		
	comp=Z,930nm,23.5s						
WMQ				LR	LR		
	comp=Z,1μm,27.3s						
WMQ	Urumqi	36.71	352	P	P	21 10 49.9	+0.4
WMQ				pmax	pmax		
	comp=Z,34nm,1.1s						
WMQ	Urumqi	36.71	352	P	P	21 10 49.9	+0.4
WMQ				IAmb	IAmb	21 10 57.1	
	comp=Z,34nm,1.1s						
HHC	Hu-ho-hao-te	36.72	22	*e*P	P	21 10 48.5	-1.2
HHC				pP	pP	21 10 54.8	+0.3
HHC				sP	pwP	21 10 59.6	+2.9
HHC				PP	PnPn	21 12 11.0	-2.4
HHC				S	S	21 16 32.9	+0.1
HHC				pmax	pmax		
	comp=Z,700nm,4.9s						
HHC				LR	LR		
	comp=Z,1μm,12.7s						
HHC				LR	LR		
	comp=Z,2μm,13.5s						
HHC				LR	LR		
	comp=Z,3μm,13.7s						
WSAR	Wadi Sarin	37.60	299	P	P	21 10 59.6	+2.3
	SNR=10						
SWI	Sorong	37.87	101	P	P	21 10 59.7	0.0
	comp=Z,37nm,1.2s						
SWI	Sorong	37.87	101	P	P	21 10 59.9	+0.2
SWI				pmax	pmax		
	comp=Z,36nm,1.2s						
SIJI	Sorong	37.88	101	P	P	21 10 59.3	-0.5
	comp=Z,19nm,0.9s,baz=302,slow=7.4,SNR=12						
BJT	Baijiatuau	37.96	28	P	P	21 11 00.3	+0.1
BJT				pmax	pmax		
	comp=Z,15nm,1.0s						
BJT	Baijiatuau	37.96	28	P	P	21 11 00.3	+0.1
BJI	Beijing	37.98	28	P	P	21 11 01.6	+1.3
BJI				S	S	21 16 59.3	+7.6
BJI				pmax	pmax		
	comp=Z,11nm,1.6s						
BJI				pmax	pmax		
	comp=Z,290nm,5.3s						
BJI				LR	LR		
	comp=Z,1μm,12.2s						
BJI				LR	LR		
	comp=Z,2μm,14.5s						
BJI				LR	LR		
	comp=Z,890nm,23.5s						
SMDO	Samad	38.05	298	P	P	21 11 03.3	+2.0
	SNR=8.6						
BIDO	Bidbid	38.13	299	P	P	21 11 04.1	+2.3
	SNR=18						
ULHL	Ulahol	38.15	338	P	P	21 11 00.9	-1.1
	SNR=9.6						
PSA00	Pilbara Seismi	38.25	139	P	P	21 11 02.0	-0.8
KZA	Kyzart	38.38	337	P	P	21 11 04.0	-0.2
	SNR=8.5						
BSY	Bisya	38.70	297	P	P	21 11 10.0	+3.3

	SNR=12						
UCH	**Uchtor**	**38.80**	**336**	P	**P**	**21 11 07.0**	**-0.7**
	SNR=9.5						
HOQ	**Hoqain**	**38.85**	**299**	P	**P**	**21 11 10.0**	**+2.0**
	SNR=13						
KBK	**Karagaybulak**	**38.99**	**337**	P	**P**	**21 11 08.5**	**-0.5**
	SNR=13						
AML	**Almayashu**	**39.05**	**336**	P	**P**	**21 11 08.7**	**-1.1**
	SNR=24						
AAK	**Ala-Archa**	**39.15**	**337**	P	**P**	**21 11 10.1**	**-0.2**
	SNR=7.7						
AAK	**Ala-Archa**	**39.15**	**337**	*de*P	**P**	**21 11 10.0**	**-0.4**
AAK				pmax	pmax		
	comp=Z,15nm,1.3s						
AAK	**Ala-Archa**	**39.15**	**337**	P	**P**	**21 11 09.9**	**-0.4**
FRU1	**Bishkek**	**39.24**	**337**	P	**P**	**21 11 11.1**	**+0.1**
FRU1				pmax	pmax		
	comp=Z,44nm,1.4s						
FRU1	**Bishkek**	**39.24**	**337**	P	**P**	**21 11 11.1**	**+0.1**
EKS2	**Erkin-Say**	**39.46**	**336**	P	**P**	**21 11 12.3**	**-0.5**
	SNR=7.1						
ARQ	**Araqi**	**39.47**	**298**	P	**P**	**21 11 15.2**	**+2.1**
	SNR=9.0						
USP	**Ospenovka**	**39.68**	**337**	P	**P**	**21 11 13.5**	**-1.1**
	SNR=11						
SOHO	**SOHO**	**39.70**	**299**	P	**P**	**21 11 16.7**	**+1.7**
	SNR=6.1						
HRA	**Herat**	**39.83**	**317**	P	**P**	**21 11 15.3**	**-0.9**
SOCY	**Socotra**	**39.88**	**280**	P	**P**	**21 11 18.2**	**+1.5**
DL2	**Dalian**	**39.92**	**34**	*e*P	**P**	**21 11 16.3**	**-0.2**
DL2				S	**S**	**21 17 23.0**	**+2.1**
DL2				LR	LR		
	comp=Z,710nm,10.9s						
DL2				LR	LR		
	comp=Z,2µm,12.8s						
DL2				LR	LR		
	comp=Z,2µm,15.2s						
FITZ	**Fitzroy Crossi**	**40.07**	**130**	P	**P**	**21 11 19.2**	**+1.1**
	baz=40,SNR=4.9						
FITZ	**Fitzroy Crossi**	**40.07**	**130**	P	**P**	**21 11 17.8**	**-0.3**
	comp=Z,3.4nm,0.6s,baz=292,slow=6.7,SNR=6.3						
UOSS	**Minazif**	**40.25**	**300**	P	**P**	**21 11 20.7**	**+1.2**
ASHO	**Ashiyiah**	**40.29**	**300**	P	**P**	**21 11 23.0**	**+3.0**
	SNR=9.7						
TAS	**Tashkent**	**40.38**	**331**	P	**P**	**21 11 20.5**	**+0.1**
TAS				pmax	pmax		
	comp=Z,66nm,1.2s						
TAS	**Tashkent**	**40.38**	**331**	P	**P**	**21 11 20.4**	**+0.1**
TAS				IAmb	IAmb	21 11 36.5	
	comp=Z,66nm,1.2s						
MK31	**Makanchi Array**	**40.55**	**347**	*e*P	**P**	**21 11 19.6**	**-2.1**
MK31	**Makanchi Array**	**40.55**	**347**	IAmb	IAmb	21 11 27.2	
	comp=Z,37nm,1.1s						
MKAR	**Makanchi Array**	**40.55**	**347**	P	**P**	**21 11 19.7**	**-2.0**
	comp=Z,10nm,0.8s,baz=165,slow=7.5,SNR=95						
MKAR				LR	LR	21 31 27.3	
	comp=Z,627nm,19.9s,baz=164,slow=41						
MKAR	**Makanchi Array**	**40.55**	**347**	P	**P**	**21 11 19.4**	**-2.3**
MAKZ	**Makanchi**	**40.63**	**347**	P	**P**	**21 11 20.5**	**-1.9**
MAKZ				pmax	pmax		
	comp=Z,25nm,0.9s						
MAKZ	**Makanchi**	**40.63**	**347**	P	**P**	**21 11 20.5**	**-1.9**
KKAR	**Karatay Array**	**41.20**	**333**	P	**P**	**21 11 25.4**	**-1.8**
KKAR	**Karatay Array**	**41.20**	**333**	P	**P**	**21 11 25.4**	**-1.8**
KKAR	**Karatay Array**	**41.20**	**333**	IAmb	IAmb	21 11 33.0	
	comp=Z,20nm,1.0s						
MEEK	**Meekatharra**	**41.31**	**146**	P	**P**	**21 11 30.4**	**+2.1**
	baz=42,SNR=4.2						
SONM	**Songino Array**	**41.60**	**12**	P	**P**	**21 11 29.6**	**-0.9**
	comp=Z,3.1nm,0.7s,baz=193,slow=7.5,SNR=15						
SONM				ScP	**ScP**	**21 17 20.4**	**+3.3**
	comp=Z,0.8nm,0.9s,baz=108,slow=4.8,SNR=3.7						
SONM				LR	LR	21 30 35.3	
	comp=Z,1µm,18.3s,baz=185,slow=39						
SONM	**Songino Array**	**41.60**	**12**	P	**P**	**21 11 29.7**	**-0.7**
ULN	**Ulaanbaatar**	**41.77**	**13**	P	**P**	**21 11 30.5**	**-1.4**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ULN	**Ulaanbaatar**	**41.77**	**13**	P	**P**	**21 11 30.5**	**-1.4**
MTN	**Manton Dam**	**41.85**	**119**	P	**P**	**21 11 32.9**	**0.0**
	baz=42,SNR=7.7						
INCN	**Inchon**	**41.97**	**40**	P	**P**	**21 11 31.7**	**-1.8**
INCN				pmax	pmax		
	comp=Z,28nm,1.2s						
INCN	**Inchon**	**41.97**	**40**	P	**P**	**21 11 31.6**	**-1.8**
JNU	**Nakatsue**	**42.51**	**48**	P	**P**	**21 11 37.5**	**-0.5**
	comp=Z,7.5nm,0.8s,baz=336,slow=13,SNR=2.7						
DGZ	**Jazzator, Alta**	**42.53**	**354**	⇑*e*P	**P**	**21 11 38.4**	**+0.3**
DGZ				pmax	pmax		
	comp=Z,13nm,1.3s						
KSAR	**Wonju Array Be**	**42.74**	**41**	P	**P**	**21 11 39.3**	**-0.5**
KSAR	**Wonju Array Be**	**42.74**	**41**	P	**P**	**21 11 39.3**	**-0.5**
KSRS	**Korea Array**	**42.77**	**41**	P	**P**	**21 11 40.5**	**+0.4**
	comp=Z,3.5nm,0.9s,baz=222,slow=8.9,SNR=11						
KSRS				LR	LR	21 31 27.0	
	comp=Z,1µm,19.0s,baz=228,slow=39						
SNY	**Shenyang**	**43.02**	**33**	⇓P	**P**	**21 11 45.8**	**+3.8**
SNY				S	**S**	**21 18 02.5**	**-4.5**
SNY				pmax	pmax		
	comp=Z,390nm,4.9s						
SNY				LR	LR		
	comp=Z,2µm,14.2s						
SNY				LR	LR		
	comp=Z,2µm,15.7s						
SNY				LR	LR		
	comp=Z,2µm,13.2s						
ZAK	**Zakamensk**	**43.49**	**8**	*e*P	**P**	**21 11 47.4**	**+1.6**
ZAK				*e*		21 13 35.1	
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.5s						
MUN	**Mundaring**	**44.45**	**153**	P	**P**	**21 11 56.4**	**+2.8**
	baz=45,SNR=4.5						
MOY	**Mondy**	**44.47**	**6**	*e*P	**P**	**21 11 54.2**	**+0.5**
GEYT	**Alibeck**	**44.58**	**318**	P	**P**	**21 11 54.7**	**0.0**
	comp=Z,15nm,0.6s,baz=148,slow=7.0,SNR=36						
GEYT				LR	LR	21 33 40.5	
	comp=Z,1µm,18.7s,baz=140,slow=40						
GEYT	**Alibeck**	**44.58**	**318**	P	**P**	**21 11 54.5**	**-0.1**
GYA0B	**ALIBECK ARRAY**	**44.58**	**318**	IAmb	IAmb	21 11 58.5	
	comp=Z,24nm,0.7s						
TLY	**Talaya**	**44.81**	**8**	LR	LR	21 31 56.2	
	comp=Z,1µm,21.5s,baz=186,slow=38						
TLY	**Talaya**	**44.81**	**8**	*e*P	**P**	**21 11 58.2**	**+1.9**
TLY				*e*S	**S**	**21 18 34.2**	**+1.3**
TLY				pmax	pmax		
	comp=Z,27nm,1.3s						
TLY				MLR	MLR		
	comp=Z,1µm,11.0s						
TLY	**Talaya**	**44.81**	**8**	P	**P**	**21 11 56.6**	**+0.3**
KURK	**Kurchatov**	**45.07**	**346**	*de*P	**P**	**21 11 56.6**	**-1.7**
KURK				pmax	pmax		
	comp=Z,77nm,1.3s						
KURK	**Kurchatov**	**45.07**	**346**	P	**P**	**21 11 56.9**	**-1.4**
CN2	**Changchun**	**45.39**	**32**	*e*P	**P**	**21 12 00.6**	**-0.3**
CN2				*e*S	**S**	**21 18 40.0**	**-1.3**
CN2				*e*SS	**ScS**	**21 21 54.8**	**-2.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				LR	LR		
	comp=Z,2µm,15.0s						
CN2				LR	LR		
	comp=Z,2µm,15.0s						
CN2				LR	LR		
	comp=Z,2µm,15.0s						
NWAO	**Narrogin (SRO)**	**45.71**	**153**	P	**P**	**21 12 02.4**	**-1.2**
	comp=Z,20nm,1.1s,baz=310,slow=13,SNR=3.6						
NWAO	**Narrogin (SRO)**	**45.71**	**153**	P	**P**	**21 12 03.8**	**+0.1**
NWAO				IAmb	IAmb	21 12 06.0	
	comp=Z,59nm,1.4s						
NWAO	**Narrogin (SRO)**	**45.71**	**153**	IAmb	IAmb	21 12 06.0	
	comp=Z,47nm,1.4s						
WRKA	**Warakurna**	**46.29**	**135**	P	**P**	**21 12 07.7**	**-0.6**
	baz=46,SNR=23						
HIA	**Hailar**	**46.92**	**23**	P	**P**	**21 12 13.3**	**+0.3**
HIA				pmax	pmax		
	comp=Z,33nm,1.1s						
HIA	**Hailar**	**46.92**	**23**	P	**P**	**21 12 13.3**	**+0.3**
HIA				IAmb	IAmb	21 12 29.9	
	comp=Z,33nm,1.1s						
ZALV	**Zalesovo Beam**	**47.02**	**352**	P	**P**	**21 12 11.8**	**-1.8**
	comp=Z,11nm,0.6s,baz=178,slow=8.0,SNR=30						
ZALV				LR	LR	21 36 38.3	
	comp=Z,881nm,19.2s,baz=181,slow=42						
ZALV	**Zalesovo Beam**	**47.02**	**352**	P	**P**	**21 12 12.0**	**-1.6**
RER	**Riviere de l'E**	**47.24**	**232**	P	**P**	**21 12 15.7**	**-0.2**
WRA	**Warramunga Arr**	**47.95**	**125**	P	**P**	**21 12 20.3**	**-1.1**
	comp=Z,9.7nm,1.1s,baz=306,slow=8.3,SNR=27						
WRA				LR	LR	21 34 05.6	
	comp=Z,1µm,21.4s,baz=290,slow=38						
WRA	**Warramunga Arr**	**47.95**	**125**	P	**P**	**21 12 20.5**	**-0.9**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
WRA	**Warramunga Arr**	**47.95**	**125**	P	**P**	**21 12 20.4**	**-0.9**
WRAB	**Tennant Creek**	**47.95**	**125**	*de*P	**P**	**21 12 19.5**	**-1.9**
WRAB				pmax	pmax		
	comp=Z,14nm,0.8s						
WRAB	**Tennant Creek**	**47.95**	**125**	P	**P**	**21 12 22.2**	**+0.8**
WRAB				IAmb	IAmb	21 12 28.6	
	comp=Z,24nm,0.9s						
WB2	**Warramunga Arr**	**47.96**	**125**	IAmb	IAmb	21 12 28.6	
	comp=Z,24nm,1.0s						
INU	**Inuyama**	**48.05**	**48**	P	**P**	**21 12 21.3**	**-0.6**
WR0	**Warramunga Arr**	**48.12**	**125**	IAmb	IAmb	21 12 29.9	
	comp=Z,46nm,1.2s						
MDJ	**Mudanjiang**	**48.16**	**34**	P	**P**	**21 12 22.8**	**+0.2**
MDJ				pP	pP	21 12 25.5	-1.9
MDJ				PP	**PP**	**21 14 15.3**	**+0.3**
MDJ				S	**S**	**21 19 23.4**	**+2.5**
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,330nm,4.9s						
MDJ				LR	LR		
	comp=Z,2µm,13.6s						
MDJ				LR	LR		
	comp=Z,2µm,14.0s						
MDJ				LR	LR		
	comp=Z,2µm,16.0s						
MDJ	**Mudanjiang**	**48.16**	**34**		**P**	**21 12 21.9**	**-0.7**
MDJ				IAmb	IAmb	21 12 28.3	
	comp=Z,33nm,1.4s						
USA0B	**Ussuriysk Arra**	**49.25**	**36**	P	**P**	**21 12 30.4**	**-0.6**
USA0B				pmax	pmax		
	comp=Z,39nm,1.9s						
USA0B	**Ussuriysk Arra**	**49.25**	**36**	P	**P**	**21 12 30.4**	**-0.6**
USA0B				IAmb	IAmb	21 13 30.0	
	comp=Z,39nm,1.9s						
USRK	**Ussuriysk Ar.**	**49.25**	**36**	P	**P**	**21 12 31.3**	**+0.3**
	comp=Z,2.3nm,0.8s,baz=182,slow=5.7,SNR=6.2						
USRK	**Ussuriysk Ar.**	**49.25**	**36**	P	**P**	**21 12 29.8**	**-1.2**
USRK	**Ussuriysk Ar.**	**49.25**	**36**	P	**P**	**21 12 29.8**	**-1.2**
DAMY	**Dhamar**	**49.33**	**283**	P	**P**	**21 12 35.2**	**+2.8**
	SNR=5.0						
DAMY	**Dhamar**	**49.33**	**283**	P	**P**	**21 12 32.5**	**+0.1**
RAYN	**Ar Rayn**	**49.33**	**295**	P	**P**	**21 12 32.5**	**+0.4**
RAYN				pmax	pmax		
	comp=Z,72nm,0.8s						
RAYN	**Ar Rayn**	**49.33**	**295**	P	**P**	**21 12 32.5**	**+0.4**
MAT	**Matsushiro**	**49.42**	**47**	P	**P**	**21 12 32.8**	**+0.3**
MJAR	**Matsushiro Arr**	**49.43**	**47**	P	**P**	**21 12 31.9**	**-0.6**
	comp=Z,4.4nm,1.0s,baz=237,slow=7.2,SNR=7.3						
MJAR				LR	LR	21 35 58.6	
	comp=Z,887nm,18.1s,baz=225,slow=39						
MJAR	**Matsushiro Arr**	**49.43**	**47**	P	**P**	**21 12 31.4**	**-1.2**
MJAR				pmax	pmax		
	comp=Z,13nm,1.4s						
MJAR	**Matsushiro Arr**	**49.43**	**47**	P	**P**	**21 12 31.4**	**-1.2**
BRVK	**Borovoye**	**49.50**	**341**	*de*P	**P**	**21 12 31.3**	**-1.5**
BRVK				pmax	pmax		
	comp=Z,24nm,1.3s						
BRVK	**Borovoye**	**49.50**	**341**	P	**P**	**21 12 31.4**	**-1.4**
BRVK				IAmb	IAmb	21 12 38.4	
	comp=Z,56nm,1.4s						
ASAR	**Alice Springs**	**49.58**	**130**	P	**P**	**21 12 32.4**	**-1.5**
	comp=Z,6.2nm,0.9s,baz=302,slow=6.6,SNR=16						
ASAR				LR	LR	21 35 36.6	
	comp=Z,964nm,20.5s,baz=300,slow=39						
FORT	**Forrest**	**49.95**	**141**	P	**P**	**21 12 38.2**	**+1.7**
	baz=50,SNR=14						
FORT	**Forrest**	**49.95**	**141**	P	**P**	**21 12 35.0**	**-1.4**
ABKAR	**Akbulak array**	**50.66**	**332**	P	**P**	**21 12 40.1**	**-1.6**
ATD	**Arta Tunnel**	**50.77**	**279**	P	**P**	**21 12 45.6**	**+2.6**
ATD				IAmb	IAmb	21 12 53.1	
	comp=Z,60nm,1.2s						
KLR	**Kul'dur**	**52.25**	**30**	⇑*e*P	**P**	**21 12 54.1**	**+0.5**
QIS	**Mount Isa**	**52.57**	**123**	P	**P**	**21 12 57.2**	**+0.8**
	baz=53,SNR=5.3						
BOD	**Bodaibo**	**52.58**	**13**	*e*P	**P**	**21 12 55.3**	**-0.6**
BOD				pmax	pmax		
	comp=Z,23nm,1.6s						
ZEA	**Zeya**	**53.35**	**24**	*e*P	**P**	**21 13 00.5**	**-1.1**
ZEA				*e*S	**S**	**21 20 31.0**	**-1.7**
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
ZEA				smax	smax		
	comp=E,300nm,11.0s						
ZEA				MLR	MLR		
	comp=E,800nm,14.0s						
ZEA				MLR	MLR		
	comp=N,2µm,16.0s						
MANU	**Manus Island**	**53.87**	**98**	P	**P**	**21 13 05.2**	**-0.9**
GNI	**Garni**	**54.80**	**315**	P	**P**	**21 13 11.8**	**-0.9**
GNI				pmax	pmax		
	comp=Z,17nm,1.0s						
GNI	**Garni**	**54.80**	**315**	P	**P**	**21 13 11.8**	**-0.9**
GNI				IAmb	IAmb	21 13 45.8	
	comp=Z,17nm,0.9s						
FURI	**Furi**	**54.94**	**276**	P	**P**	**21 13 16.5**	**+2.3**
PMG	**Port Moresby**	**55.34**	**107**	P	**P**	**21 13 16.1**	**-0.6**
	comp=Z,5.7nm,0.6s,baz=133,slow=23,SNR=1.5						
PMG				LR	LR	21 38 55.5	
	comp=Z,671nm,21.7s,baz=335,slow=38						
PMG	**Port Moresby**	**55.34**	**107**	IAmb	IAmb	21 13 36.3	
	comp=Z,13nm,0.8s						
SVE	**Sverdlovsk**	**55.85**	**338**	*e*P	**P**	**21 13 19.1**	**-0.6**
SVE				pmax	pmax		
	comp=Z,112nm,1.3s						
SVE				MLR	MLR		
	comp=Z,2µm,22.0s						
AKH	**Akhalkalaki**	**56.16**	**316**	P	**P**	**21 13 26.0**	**+3.5**
ARU	**Arti**	**56.33**	**337**	*c i*P	**P**	**21 13 21.4**	**-1.8**
ARU						21 14 16.9	
ARU				S	**S**	**21 21 13.8**	**+1.1**
ARU				SS	**SS**	**21 25 00.7**	**+1.0**
ARU				pmax	pmax		
	comp=Z,55nm,1.7s						
ARU				MLR	MLR		
	comp=Z,2µm,22.0s						
ARU	**Arti**	**56.33**	**337**	P	**P**	**21 13 21.8**	**-1.4**
ZEI	**Tsey**	**56.42**	**317**	*e*P	**P**	**21 13 22.0**	**-2.3**
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ONI	**Oni**	**56.64**	**317**	P	**P**	**21 13 29.7**	**+3.9**
KIBK	**Kibwezi**	**56.86**	**262**	P	**P**	**21 13 29.6**	**+1.8**
	SNR=7.8						
YSS	**Yuzh-Sakhalins**	**57.11**	**38**	*e*P	P	21 13 34.7	+5.9
YSS				*e*		21 13 40.3	
YSS				MLR	MLR		
	comp=Z,1µm,15.0s						
KMBO	**Kilima Mbogo**	**57.43**	**264**	P	**P**	**21 13 32.3**	**+0.3**
	comp=Z,10nm,0.8s,baz=60,slow=10,SNR=42						
KMBO				LR	LR	21 35 05.1	
	comp=Z,1µm,19.3s,baz=92,slow=33						
KMBO	**Kilima Mbogo**	**57.43**	**264**	P	**P**	**21 13 34.2**	**+2.2**
KMBO				IAmb	IAmb	21 13 41.4	
	comp=Z,27nm,0.8s						
KBZ	**Khabaz**	**57.47**	**318**	P	**P**	**21 13 30.1**	**-1.4**
	comp=Z,5.6nm,0.9s,baz=176,slow=8.4,SNR=7.8						
KBZ				LR	LR	21 41 29.7	
	comp=Z,266nm,20.4s,baz=117,slow=40						
KBZ	**Khabaz**	**57.47**	**318**	*ce*P	**P**	**21 13 29.8**	**-1.6**
KBZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIV	**Kislovodsk**	**57.70**	**318**	*e*P	**P**	**21 13 32.4**	**-0.8**
KIV				pmax	pmax		
	comp=Z,55nm,1.1s						
KIV				MLR	MLR		
	comp=Z,806nm,17.0s						
KIV	**Kislovodsk**	**57.70**	**318**	P	**P**	**21 13 32.2**	**-1.0**
KIV				IAmb	IAmb	21 13 47.6	
	comp=Z,16nm,0.9s						
GOF	**Gofitskoye**	**57.91**	**319**	⇑*e*P	**P**	**21 13 33.8**	**-0.7**
CTA	**Charters Tower**	**58.03**	**119**	LR	LR	21 40 34.6	
	comp=Z,1µm,21.2s,baz=306,slow=38						
HTT	**Hallett**	**58.74**	**136**	P	**P**	**21 13 39.8**	**-0.7**
	baz=59,SNR=8.8						
QLP	**Quilpie**	**59.11**	**127**	P	**P**	**21 13 44.1**	**+0.9**
	baz=59,SNR=3.9						
GAZ	**Gaziantep**	**59.42**	**309**	P	**P**	**21 13 43.8**	**-1.5**
STKA	**Stephens Creek**	**59.75**	**134**	P	**P**	**21 13 48.2**	**+0.7**
	baz=60,SNR=5.6						
STKA	**Stephens Creek**	**59.75**	**134**	P	**P**	**21 13 48.0**	**+0.4**
	comp=Z,3.8nm,0.6s,baz=304,slow=8.0,SNR=9.0						
STKA				LR	LR	21 44 25.6	
	comp=Z,638nm,18.5s,baz=299,slow=41						
STKA	**Stephens Creek**	**59.75**	**134**	P	**P**	**21 13 47.3**	**-0.2**
STKA				pmax	pmax		
	comp=Z,9.0nm,1.6s						
STKA	**Stephens Creek**	**59.75**	**134**	P	**P**	**21 13 47.3**	**-0.2**
YAK	**Yakutsk**	**60.41**	**18**	P	**P**	**21 13 52.2**	**+0.6**
	comp=Z,12nm,0.7s,baz=26,slow=3.0,SNR=10						
YAK	**Yakutsk**	**60.41**	**18**	*e*P	**P**	**21 13 51.2**	**-0.3**
YAK				*e**PP	**pwP**	**21 14 01.5**	**+2.7**
YAK				*e*		21 14 33.7	
YAK				*e*		21 16 04.1	
YAK				*e*S	**S**	**21 22 07.7**	**+2.1**
YAK				*e**SS	sS	21 22 24.2	+10
YAK				pmax	pmax		
	comp=Z,42nm,0.9s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,11nm,0.9s						
YAK				pmax	pmax		
	comp=Z,172nm,4.6s						
YAK				pmax	pmax		
	comp=N,162nm,4.9s						
YAK				pmax	pmax		
	comp=E,130nm,5.1s						
YAK				smax	smax		
	comp=N,206nm,4.8s						
YAK				smax	smax		
	comp=E,94nm,4.8s						
YAK				MLR	MLR		
	comp=E,964nm,16.0s						
YAK				MLR	MLR		
	comp=Z,975nm,20.0s						
YAK				MLR	MLR		
	comp=E,981nm,15.0s						
YAK	**Yakutsk**	**60.41**	**18**	P	**P**	**21 13 50.6**	**-0.9**
VRH	**Novokhopyorsk**	**61.34**	**325**	*e*P	**P**	**21 13 55.3**	**-2.7**
VRH				pmax	pmax		
	comp=Z,40nm,0.7s						
ANN	**Anapa**	**61.51**	**317**	*e*P	**P**	**21 13 55.9**	**-3.4**
ANN				*e**PP	**pP**	**21 13 59.7**	**-4.8**
ANN				*e*S	**S**	**21 22 17.7**	**-2.6**
ANN				pmax	pmax		
	comp=Z,25nm,1.1s						
CSS	**Mathiatis**	**61.99**	**306**	IAmb	IAmb	21 14 22.1	
	comp=Z,45nm,1.9s						
NRIK	**Noril'sk**	**62.00**	**357**	P	**P**	**21 14 01.4**	**-0.8**
	comp=Z,5.1nm,0.5s,baz=145,slow=6.9,SNR=6.8						
NRIK				LR	LR	21 44 57.4	
	comp=Z,763nm,20.5s,baz=187,slow=40						
NRIK	**Noril'sk**	**62.00**	**357**	*i* P	**P**	**21 14 04.1**	**+1.9**
NRIK				pmax	pmax		
	comp=Z,21nm,1.5s						
BR131	**Keskin Array S**	**62.77**	**311**	P	**P**	**21 14 05.8**	**-2.4**
	SNR=6.9						
BRTR	**Keskin Array B**	**62.77**	**311**	P	**P**	**21 14 05.8**	**-2.4**
	comp=Z,3.2nm,0.6s,baz=125,slow=7.2,SNR=27						
BRTR				LR	LR	21 44 10.1	
	comp=Z,333nm,20.7s,baz=92,slow=39						
BRTR	**Keskin Array B**	**62.77**	**311**	P	**P**	**21 14 05.3**	**-2.8**
VSR	**Storozhevoye**	**62.80**	**325**	⇓*e*P	**P**	**21 14 04.5**	**-3.4**
ILGA	**Ilgaz**	**63.04**	**312**	IAmb	IAmb	21 14 27.5	
	comp=Z,29nm,1.4s						
ANTO	**Ankara**	**63.44**	**311**	P	**P**	**21 14 10.7**	**-1.8**
ANTO				pmax	pmax		
	comp=Z,14nm,1.0s						
ANTO	**Ankara**	**63.44**	**311**	P	**P**	**21 14 10.7**	**-1.8**
ANTO				IAmb	IAmb	21 14 28.9	
	comp=Z,14nm,1.0s						
LPSR	**Galich'ya Gora**	**63.50**	**326**	*e*P	**P**	**21 14 08.9**	**-3.6**
LPSR				pmax	pmax		
	comp=Z,30nm,0.9s						
MBAR	**Mbarara**	**63.78**	**266**	P	**P**	**21 14 15.1**	**-0.2**
MBAR				pmax	pmax		
	comp=Z,22nm,1.2s						
MBAR	**Mbarara**	**63.78**	**266**	P	**P**	**21 14 15.1**	**-0.2**
MBAR				IAmb	IAmb	21 14 25.7	
	comp=Z,22nm,1.1s						
MDUB	**Mudurnu**	**64.77**	**311**	P	**P**	**21 14 20.1**	**-1.1**
PRGR	**Permogore**	**64.79**	**337**	*e*P	**P**	**21 14 18.2**	**-2.6**
PRGR				pmax	pmax		
	comp=Z,49nm,0.7s						
ELL	**Elmali**	**65.05**	**307**	P	**P**	**21 14 22.0**	**-1.1**
TOO	**Toolangi**	**65.48**	**137**	P	**P**	**21 14 25.7**	**-0.1**
TOO				pmax	pmax		
	comp=Z,40nm,1.2s						
TOO	**Toolangi**	**65.48**	**137**	P	**P**	**21 14 25.7**	**-0.1**
MOS	**Moscow**	**65.50**	**329**	*e*P	**P**	**21 14 22.6**	**-2.9**
MOS				pmax	pmax		
	comp=Z,90nm,1.1s						
OBN	**Obninsk**	**65.80**	**328**	⇑P	**P**	**21 14 26.4**	**-1.0**
OBN	**Obninsk**	**65.80**	**328**	⇓*e*P	**P**	**21 14 25.8**	**-1.6**
OBN				*e*		21 14 52.9	
OBN				*e*		21 16 52.8	
OBN				*e*S	**S**	**21 23 16.4**	**+3.2**
OBN				pmax	pmax		
	comp=Z,63nm,1.3s						
OBN	**Obninsk**	**65.80**	**328**	P	**P**	**21 14 25.9**	**-1.6**
MANT	**Manisa**	**66.39**	**309**	P	**P**	**21 14 30.2**	**-1.7**
ARMA	**Armidale**	**66.63**	**128**	P	**P**	**21 14 32.5**	**-0.9**
CAN	**Canberra**	**66.81**	**133**	P	**P**	**21 14 32.7**	**-1.7**
CAN				pmax	pmax		
	comp=Z,66nm,1.5s						
CAN	**Canberra**	**66.81**	**133**	P	**P**	**21 14 32.7**	**-1.7**
KLMR	**Klimovskoe**	**66.89**	**334**	*e*P	**P**	**21 14 31.7**	**-2.7**
KLMR				pmax	pmax		
	comp=Z,51nm,1.3s						
KLMR	**Klimovskoe**	**66.89**	**334**	*e*P	**P**	**21 14 31.7**	**-2.7**
KLMR				AMP		21 14 37.9	
	comp=Z,51nm,1.3s						
MA2	**Magadan**	**67.14**	**27**	⇓*e*P	**P**	**21 14 37.2**	**+1.2**
MA2				pmax	pmax		
	comp=Z,16nm,1.0s						
MA2	**Magadan**	**67.14**	**27**	P	**P**	**21 14 36.4**	**+0.4**
MA2				IAmb	IAmb	21 14 42.8	
	comp=Z,13nm,0.9s						
HNR	**Honiara**	**67.60**	**103**	P	**P**	**21 14 38.2**	**-1.5**
HNR	**Honiara**	**67.60**	**103**	P	**P**	**21 14 38.1**	**-1.5**
TIRR	**Tirgusor**	**67.62**	**315**	⇑P	**P**	**21 14 37.4**	**-1.9**
TIRR	**Tirgusor**	**67.62**	**315**	P	**P**	**21 14 37.4**	**-1.9**
TIRR	**Tirgusor**	**67.62**	**315**	IAmb	IAmb	21 14 51.0	
	comp=Z,20nm,0.9s						
TIXI	**Tiksi**	**67.67**	**11**	P	**P**	**21 14 36.7**	**-2.4**
TIXI				pmax	pmax		
	comp=Z,24nm,0.8s						
TIXI	**Tiksi**	**67.67**	**11**	P	**P**	**21 14 36.7**	**-2.4**
TIXI				IAmb	IAmb	21 14 46.2	
	comp=Z,24nm,0.8s						
MILM	**Milestii Mici**	**67.89**	**318**	⇑P	**P**	**21 14 38.1**	**-2.8**
CFR	**Carcaliu**	**67.96**	**316**	⇑P	**P**	**21 14 40.1**	**-1.3**
CFR	**Carcaliu**	**67.96**	**316**	⇑P	**P**	**21 14 40.1**	**-1.3**
PETK	**Petropavlovsk-**	**68.34**	**35**	LR	LR	21 45 53.8	
	comp=Z,457nm,20.6s,baz=240,slow=37						
SORM	**Soroca**	**68.47**	**319**	⇑P	**P**	**21 14 42.8**	**-1.8**
SORM	**Soroca**	**68.47**	**319**	⇑P	**P**	**21 14 42.8**	**-1.8**
AKASG	**Malin Array Be**	**68.55**	**322**	P	**P**	**21 14 42.4**	**-2.6**
	comp=Z,1.4nm,0.7s,baz=88,slow=5.0,SNR=18						
AKASG				PP	**PP**	**21 17 18.9**	**+2.5**
	comp=Z,2.0nm,0.8s,baz=97,slow=6.6,SNR=5.6						
AKASG				LR	LR	21 49 29.1	
	comp=Z,354nm,18.6s,baz=110,slow=40						
AKASG	**Malin Array Be**	**68.55**	**322**	P	**P**	**21 14 42.6**	**-2.4**
AKASG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
AKASG	**Malin Array Be**	**68.55**	**322**	P	**P**	**21 14 42.6**	**-2.4**
BISRR	**Bisoca**	**69.02**	**316**	⇑P	**P**	**21 14 45.9**	**-2.3**
VRI	**Vrincioaia**	**69.07**	**316**	⇑P	**P**	**21 14 47.3**	**-1.1**
VRI	**Vrincioaia**	**69.07**	**316**	⇑P	**P**	**21 14 47.3**	**-1.1**
PLOR	**Plostina**	**69.12**	**316**	⇓P	**P**	**21 14 48.3**	**-0.4**
PLOR	**Plostina**	**69.12**	**316**	⇓P	**P**	**21 14 48.3**	**-0.4**
ELND	**Elena**	**69.14**	**313**	⇑P	**P**	**21 14 47.1**	**-1.8**
TESR	**Tescani**	**69.25**	**317**	⇓P	**P**	**21 14 48.2**	**-1.3**
SEY	**Seymchan**	**69.32**	**25**	P	**P**	**21 14 49.1**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=273,slow=8.3,SNR=3.3						
SEY	**Seymchan**	**69.32**	**25**	⇑*e*P	**P**	**21 14 47.2**	**-2.4**
MLR	**Muntele Rosu**	**69.54**	**316**	⇓P	**P**	**21 14 50.8**	**-0.7**
MLR	**Muntele Rosu**	**69.54**	**316**	⇓P	**P**	**21 14 50.8**	**-0.7**
BIZ	**Bicaz**	**69.70**	**317**	⇑P	**P**	**21 14 51.6**	**-0.7**
HUMR	**Humele**	**70.05**	**315**	⇑P	**P**	**21 14 53.4**	**-1.1**
MTUR	**Matau**	**70.11**	**315**	⇑P	**P**	**21 14 52.7**	**-2.2**

MTUR	Matau	70.11	315	⇑P	P	21 14 52.7	-2.2
PLVB	Pleven	70.12	313	⇓P	P	21 14 54.2	-0.7
VOIR		70.15	316	⇑P	P	21 14 53.5	-1.7
VOIR		70.15	316	⇑P	P	21 14 53.5	-1.7
MICGM	Minsk	70.34	325	*e*	P	21 14 58.0	+2.0
MNK	Minsk	70.34	325	*e*P	P	21 14 58.0	+2.0
BURAR	Bucovina Array	70.42	318	⇑P	P	21 14 56.2	-0.6
BURAR	Bucovina Array	70.42	318	⇑P	P	21 14 56.2	-0.6
BURAR	Bucovina Array	70.42	318	P	P	21 14 55.5	-1.4
ARR	Arges	70.43	315	⇑P	P	21 14 55.5	-1.3
BUR08	Bucovina Ar. S	70.44	318	IAmb	IAmb	21 15 12.5	
	comp=Z,20nm,1.3s						
SRS	Serrai	70.56	311	P	P	21 14 56.6	-1.1
SRS				pmax	pmax		
	comp=Z,11nm,0.9s						
VTS	Vitosha	71.02	312	⇑P	P	21 14 59.5	-1.1
VTS	Vitosha	71.02	312	⇑P	P	21 14 59.5	-1.1
LOT	Lotru	71.04	315	⇓P	P	21 14 59.3	-1.3
NACGM	Naroch	71.06	326	*e*	P	21 15 04.0	+3.6
LIT	Litokhoron	71.28	310	P	P	21 14 59.6	-2.5
LIT	Litokhoron	71.28	310	IAmb	IAmb	21 15 07.5	
	comp=Z,20nm,0.7s						
VAY	Valandovo	71.35	311	*i* P	P	21 15 00.4	-2.0
GRG	Griva	71.44	311	P	P	21 15 00.9	-2.1
ITM	Ithomi	71.44	307	IAmb	IAmb	21 15 14.6	
	comp=Z,16nm,0.8s						
IZAR	Zarasai	71.57	326	*e*P	P	21 15 03.3	-0.1
ISAL	Salakas	71.59	326	*e*P	P	21 15 03.3	-0.3
DRGR		71.97	317	⇓P	P	21 15 05.3	-0.9
DRGR		71.97	317	⇓P	P	21 15 05.3	-0.9
VSU	Vasula	72.01	329	*e*P	P	21 15 04.4	-1.7
VSU	Vasula	72.01	329	⇓*e*P	P	21 15 04.6	-1.4
FNA	Florina	72.19	310	P	P	21 15 10.2	+2.6
FNA				pmax	pmax		
	comp=Z,13nm,1.1s						
TRPA	Tarpa	72.29	318	⇓P	P	21 15 07.2	-0.8
APA	Apatity	72.30	339	⇓*i*P	P	21 15 06.4	-1.2
APA				pmax	pmax		
	comp=Z,19nm,1.0s						
KWP	Kalwaria Pacla	72.42	320	P	P	21 15 11.8	+3.1
KWP	Kalwaria Pacla	72.42	320	IAmb	IAmb	21 15 25.6	
	comp=Z,47nm,1.3s						
UZH	Uzhgorod	72.53	319	*e*P	P	21 15 06.9	-2.4
UZH				*e*		21 15 19.4	
PABE	Paberze	72.77	326	*e*P	P	21 15 09.0	-1.6
IGT	Igoumenitsa	72.88	309	P	P	21 15 12.6	+0.9
IGT				pmax	pmax		
	comp=Z,21nm,1.0s						
CRVS	Cervenica-Dubn	73.11	319	*e*P	P	21 15 12.6	-0.3
CRVS				pmax	pmax		
	comp=Z,52nm,1.5s						
CRVS	Cervenica-Dubn	73.11	319	*e*P	P	21 15 12.6	-0.3
FINES	FINESS Array B	73.14	332	P	P	21 15 11.4	-1.3
	comp=Z,8.2nm,0.7s,baz=96,slow=5.5,SNR=41						
FINES				LR	LR	21 51 41.0	
	comp=Z,525nm,18.4s,slow=39						
PDG	Podgorica	73.92	312	⇑P	P	21 15 16.0	-1.8
PBUR	Paburge	74.00	326	*e*P	P	21 15 16.4	-1.4
PSZ	Piszkesteto	74.02	318	P	P	21 15 20.7	+2.4
PSZ				pmax	pmax		
	comp=Z,14nm,3.1s						
PSZ	Piszkesteto	74.02	318	IAmb	IAmb	21 15 21.4	
	comp=Z,21nm,1.4s						
LBTB	Lobatse	74.08	241	P	P	21 15 20.4	+1.4
LBTB				pmax	pmax		
	comp=Z,26nm,1.0s						
LBTB	Lobatse	74.08	241	P	P	21 15 20.4	+1.4
LBTB				IAmb	IAmb	21 15 28.1	
	comp=Z,26nm,1.0s						
OJC	Ojcow	74.36	320	P	P	21 15 19.4	-0.8
OJC	Ojcow	74.36	320	IAmb	IAmb	21 15 26.9	
	comp=Z,21nm,0.8s						
VYHS	Vyhne	74.79	318	*e*P	P	21 15 20.7	-2.0
VYHS	Vyhne	74.79	318	*e*P	P	21 15 20.7	-2.0
OKC	Ostrava-Krasne	75.38	320	*e*P	P	21 15 25.1	-0.9
OKC				*e*pP	pP	21 15 30.2	-0.7
OKC	Ostrava-Krasne	75.38	320	*e*P	P	21 15 25.1	-0.9
OKC				*e*		21 15 30.2	
BOSA	Boshof	75.39	238	P	P	21 15 26.9	+0.3
	comp=Z,6.9nm,0.8s,baz=80,slow=5.6,SNR=11						
BOSA				LR	LR	21 44 43.6	
	comp=Z,337nm,19.6s,baz=67,slow=33						
BOSA	Boshof	75.39	238	P	P	21 15 27.7	+1.1
BOSA				IAmb	IAmb	21 15 34.9	
	comp=Z,21nm,0.8s						
JAVC	Velka Javorina	75.59	318	*e*P	P	21 15 26.8	-0.6
ARCES	ARCESS Array B	75.72	340	P	P	21 15 26.8	-0.8
	comp=Z,6.4nm,0.9s,baz=79,slow=6.4,SNR=9.0						
ARCES				LR	LR	21 51 25.6	
	comp=Z,1µm,21.0s,baz=118,slow=38						
ARE0	ARCESS Array S	75.72	340	*e*P	P	21 15 27.2	-0.4
MORC	Moravsky Berou	75.76	319	⇓P	P	21 15 27.9	-0.4
MORC	Moravsky Berou	75.76	319	⇓P	P	21 15 27.9	-0.4
MORC	Moravsky Berou	75.76	319	*e*P	P	21 15 27.2	-1.1
MORC	Moravsky Berou	75.76	319	IAmb	IAmb	21 15 42.3	
	comp=Z,24nm,1.2s						
ZST	Bratislava	75.91	318	*e*P	P	21 15 27.4	-1.7
ZST	Bratislava	75.91	318	*e*P	P	21 15 27.4	-1.7
KRLC	Kraliky	76.28	320	*e*P	P	21 15 30.5	-0.7
KRLC				*e*pP	pP	21 15 35.7	-0.4
KRLC	Kraliky	76.28	320	*e*P	P	21 15 30.5	-0.7
KRLC				*e*		21 15 35.7	
ACER	Acerenza	76.31	310	P	P	21 15 31.1	-0.5
ACER				IAmb	IAmb	21 15 39.8	
	comp=Z,13nm,0.8s						
VRAC	Vranov	76.34	319	*e*P	P	21 15 30.1	-1.4
KTK1	Kautokeino	76.34	339	*e*P	P	21 15 31.1	-0.1
KRUC	Moravsky	76.45	319	*e*P	P	21 15 30.8	-1.4
BILL	Bilibino	76.49	22	⇑*e*P	P	21 15 31.4	-0.6
BILL				*e*		21 18 27.6	
BILL				*e*S	PnS	21 26 05.9	+11
BILL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,1µm,17.0s						
BILL	Bilibino	76.49	22	P	P	21 15 31.6	-0.4
DZM	Mont Dzumac	76.55	115	*e*LR	LR	21 39 09.7	
	comp=Z,1µm,24.6s						
DPC	Dobruska-Polom	76.59	320	*e*P	P	21 15 32.5	-0.5
DPC				*e*pP	pP	21 15 36.0	-1.9
DPC	Dobruska-Polom	76.59	320	*e*P	P	21 15 32.5	-0.5
DPC				*e*		21 15 36.0	
HAMF	Hammerfest	76.64	341	*e*P	P	21 15 32.9	+0.1
KSP	Ksiaz	76.65	320	P	P	21 15 33.1	-0.2
OSTC	Ostas	76.68	320	*e*P	P	21 15 32.8	-0.7
OSTC				*e*x	x	21 15 36.3	
CONA	Conrad Observa	76.72	317	*e*P	P	21 15 32.2	-1.7
	comp=Z,8.5nm,1.5s						
CHVC	Chvalec	76.78	320	*e*P	P	21 15 33.0	-1.1
ARSA	Arzberg	76.91	317	*e*P	P	21 15 34.1	-0.7
	comp=Z,13nm,1.3s						
SOKA	Soboth	77.22	316	*e*P	P	21 15 35.2	-1.5
	comp=Z,11nm,1.0s						
OBKA	Obir	77.54	316	*e*P	P	21 15 37.6	-0.9
	comp=Z,14nm,1.3s						
PRU	Pruhonice	77.71	319	*e*P	P	21 15 38.4	-0.8
PRU	Pruhonice	77.71	319	*e*P	P	21 15 38.4	-0.8
MOA	Molln	77.79	317	P	P	21 15 38.7	-1.1
	comp=Z,6.5nm,1.1s						
INTR	Introdacqua	77.87	311	P	P	21 15 40.8	+0.3
INTR				IAmb	IAmb	21 15 56.2	
	comp=Z,25nm,1.6s						
MAW	Mawson	78.10	192	P	P	21 15 40.5	-0.4
	comp=Z,4.6nm,0.9s,baz=53,slow=6.3,SNR=6.8						
MAW				LR	LR	21 45 43.6	
	comp=Z,350nm,18.1s,baz=52,slow=32						
BRG	Berggiesshubel	78.14	320	*e*P	P	21 15 40.8	-0.8
	comp=Z,11nm,1.3s						
BRG				*e*		21 15 44.4	
	comp=Z,37nm,1.6s						
BRG	Berggiesshubel	78.14	320	*e*P	P	21 15 40.8	-0.8
BRG				*e*		21 15 44.4	
BRG				pmax	pmax		
	comp=Z,11nm,1.3s						
BRG				pmax	pmax		
	comp=Z,37nm,1.6s						
BRG				MLR	MLR		
	comp=N,593nm,22.1s						
BRG				MLR	MLR		
	comp=E,966nm,19.7s						
BRG				MLR	MLR		
	comp=Z,1µm,19.1s						
MYKA	Terra Mystica	78.17	316	*e*P	P	21 15 40.6	-1.4
	comp=Z,6.8nm,0.7s						
GEC2	GERESS Array S	78.21	318	IAmb	IAmb	21 15 48.9	
	comp=Z,10nm,0.7s						
GERES	GERESS Array B	78.21	318	P	P	21 15 41.3	-0.9
	comp=Z,3.4nm,0.7s,baz=87,slow=5.5,SNR=34						
GERES				LR	LR	21 54 48.8	
	comp=Z,271nm,21.2s,baz=83,slow=39						
GERES	GERESS Array B	78.21	318	P	P	21 15 40.7	-1.4
GERES	GERESS Array B	78.21	318	P	P	21 15 40.7	-1.4
KHC	Kasperske Hory	78.30	319	*e*P	P	21 15 41.5	-1.0
KHC				*e*pP	pP	21 15 46.2	-1.2
KHC	Kasperske Hory	78.30	319	⇓*e*P	P	21 15 41.6	-1.0
KHC				pmax	pmax		
	comp=Z,11nm,1.0s						
KBA	Koelnbreinsper	78.39	316	*e*P	P	21 15 41.7	-1.6
	comp=Z,6.5nm,0.7s						
CLL	Collm	78.75	321	*e*P	P	21 15 45.0	0.0
CLL				*e*		21 15 58.0	
CLL				*e*S	S	21 25 42.0	+0.1
CLL				*e*PS	PnS	21 26 24.0	-0.7
CLL				*e*SS	SS	21 30 48.0	+1.8
CLL				*e*SSS	SSS	21 34 30.0	
CLL				*e*		21 35 54.0	
CLL				*e*SSSS		21 36 30.0	
CLL	Collm	78.75	321	P	P	21 15 44.6	-0.3
CLL				pmax	pmax		
	comp=Z,39nm,1.9s						
CLL	Collm	78.75	321	P	P	21 15 44.6	-0.3
CLL				IAmb	IAmb	21 15 50.9	
	comp=Z,39nm,1.9s						
STAL	STALIGIAL	78.81	316	IAmb	IAmb	21 15 58.4	
	comp=Z,29nm,1.0s						
HFS	Hagfors	78.88	330	P	P	21 15 44.3	-1.2
	comp=Z,9.6nm,0.6s,baz=104,slow=6.3,SNR=36						
ABTA	Abfaltersbach	78.95	316	*e*P	P	21 15 44.6	-1.7
	comp=Z,6.8nm,1.0s						
STEI	Steigen	79.02	338	*e*P	P	21 15 46.1	0.0
MOR8	Moi Rana	79.12	336	*e*P	P	21 15 46.1	-0.6
CTI	Castel Tesino	79.54	315	IAmb	IAmb	21 16 03.7	
	comp=Z,15nm,0.9s						
WTTA	Wattenberg	79.56	317	*e*P	P	21 15 47.8	-1.9
	comp=Z,8.6nm,0.8s,SNR=5.9						
WATA	Walderalm	79.60	317	P	P	21 15 48.4	-1.5
	comp=Z,12nm,1.0s						
LOF	Lofoten	79.68	338	*e*P	P	21 15 49.8	+0.2
OSSC	Osservatorio P	79.84	313	P	P	21 15 49.9	-1.2
SQTA	Sankt Quirin	79.85	317	*e*P	P	21 15 49.5	-1.7
	comp=Z,15nm,0.6s						
GRA1	Grafenberg Arr	79.85	319	P	P	21 15 49.6	-1.4
GRA1				IAmb	IAmb	21 17 54.3	
	comp=Z,52nm,1.7s						
GRF	Grafenberg Arr	79.85	319	*e*P	P	21 15 50.3	-0.7
	comp=Z,24nm,1.5s,baz=102,slow=4.6						
GRF	Grafenberg Arr	79.85	319	P	P	21 15 49.6	-1.4
GRF				pmax	pmax		
	comp=Z,52nm,1.7s						
MOTA	Moosalm	79.92	317	*e*P	P	21 15 49.8	-1.9
	comp=Z,9.7nm,0.9s						
TSUM	Tsumeb	79.92	249	P	P	21 15 52.8	+0.6
NORES	NORESS Array B	79.98	330	P	P	21 15 51.9	+0.4
NORES				pmax	pmax		
	comp=Z,4.0nm,0.5s						
NSS	Namsos	80.01	334	*e*P	P	21 15 51.3	-0.2
ZCCA	Zocca	80.02	314	IAmb	IAmb	21 16 04.9	
	comp=Z,25nm,0.8s						
NC303	NORSAR Array S	80.09	331	P	P	21 15 52.3	+0.2
NB201	NORSAR Array S	80.12	331	P	P	21 15 51.4	-0.9
SUR	Sutherland	80.12	235	P	P	21 15 52.8	-0.2
SUR				IAmb	IAmb	21 16 02.3	
	comp=Z,22nm,0.8s						
CASP	Castiglione de	80.12	312	P	P	21 15 52.6	0.0
RETA	Reutte	80.15	317	*e*P	P	21 15 51.1	-1.7
	comp=Z,10.0nm,1.0s						
NB2	NORSAR Subarra	80.16	331	P	P	21 15 50.2	-2.3
	comp=Z,2.9nm,0.6s,baz=97,slow=5.1						
NB2	NORSAR Subarra	80.16	331	P	P	21 15 50.2	-2.3
	baz=97,slow=5.1						
NOA	NORSAR Array B	80.16	331	P	P	21 15 50.9	-1.6
	comp=Z,2.3nm,0.6s,baz=95,slow=5.2,SNR=13						
NOA				LR	LR	21 55 08.6	
	comp=Z,391nm,19.1s,baz=115,slow=39						
FETA	Feichten	80.17	316	*e*P	P	21 15 51.5	-1.5
	comp=Z,9.6nm,1.0s,SNR=7.9						
SPA0	Spitsbergen Ar	80.30	348	*e*P	P	21 15 52.5	-0.5
SPA0	Spitsbergen Ar	80.30	348	P	P	21 15 52.9	0.0
SPA0				IAmb	IAmb	21 16 05.6	
	comp=Z,38nm,1.0s						
SPITS	Spitsbergen Ar	80.30	348	P	P	21 15 51.4	-1.5
	comp=Z,4.0nm,0.6s,baz=102,slow=7.9,SNR=8.6						
SALO	Salr	80.33	315	P	P	21 15 52.9	-0.9
SALO				IAmb	IAmb	21 16 04.0	
	comp=Z,23nm,0.9s						
NC204	NORSAR Array S	80.39	331	*e*P	P	21 15 53.4	-0.4
DAVA	Damuels	80.75	317	*e*P	P	21 15 54.6	-1.5
	comp=Z,12nm,0.8s						
TUE	Stuetta	81.13	316	P	P	21 15 58.0	-0.2
TUE				IAmb	IAmb	21 16 14.0	
	comp=Z,12nm,0.8s						
STU	Stuttgart	81.19	318	P	P	21 15 57.7	-0.5
STU				pmax	pmax		
	comp=Z,27nm,1.4s						
STU	Stuttgart	81.19	318	P	P	21 15 57.7	-0.5
STU				IAmb	IAmb	21 16 24.3	
	comp=Z,27nm,1.4s						
KEST	Kesra	81.55	305	P	P	21 15 59.4	-1.2
	comp=Z,6.7nm,0.7s,baz=160,slow=6.7,SNR=5.5						
KEST				LR	LR	21 57 39.7	
	comp=Z,224nm,19.3s,baz=354,slow=40						
SKAR	Skarslia	81.58	330	*e*P	P	21 15 59.9	-0.2
BFO	Black Forest	81.77	318	P	P	21 15 59.3	-2.0
BFO				pmax	pmax		
	comp=Z,45nm,1.9s						
BFO	Black Forest	81.77	318	P	P	21 15 59.3	-2.0
BFO				IAmb	IAmb	21 16 47.5	
	comp=Z,46nm,1.9s						
MOL	Molde	81.93	332	*e*P	P	21 16 02.3	+0.5
BLS5	Blasjo	82.52	329	*e*P	P	21 16 05.0	-0.1
SENIN	Lac Senin/Sane	82.55	316	P	P	21 16 05.5	-0.3
SENIN				IAmb	IAmb	21 16 25.3	
	comp=Z,15nm,1.0s						
ECH	Echery	82.56	318	P	P	21 16 05.6	+0.1
ECH				pmax	pmax		
	comp=Z,30nm,1.6s						
ECH	Echery	82.56	318	P	P	21 16 05.6	+0.1
ECH				IAmb	IAmb	21 16 07.8	
	comp=Z,30nm,1.6s						
BNI	Bardonecchia	83.06	314	P	P	21 16 08.6	+0.3
BNI				pmax	pmax		
	comp=Z,11nm,0.9s						
BNI	Bardonecchia	83.06	314	P	P	21 16 08.6	+0.3
BNI				IAmb	IAmb	21 16 19.4	
	comp=Z,11nm,0.9s						
WLF	Walferdange	83.14	319	P	P	21 16 08.4	-0.1
WLF				pmax	pmax		
	comp=Z,42nm,1.6s						
WLF	Walferdange	83.14	319	P	P	21 16 08.4	-0.1
WLF				IAmb	IAmb	21 18 04.0	
	comp=Z,42nm,1.6s						
SSB	Saint Sauveur	84.55	315	P	P	21 16 15.6	-0.2
SSB				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SSB	Saint Sauveur	84.55	315	P	P	21 16 15.6	-0.2
SSB				IAmb	IAmb	21 16 32.6	
	comp=Z,10nm,1.0s						
SYO	Syowa Base	84.99	197	⇑*e*X	P	21 16 29.8	+13
MIDW	Midway	85.17	62	P	P	21 16 17.5	-1.6
GAMB	Gambell	85.22	26	P	P	21 16 18.3	-0.3
NOR	Nord	85.71	352	*i* P	P	21 16 19.5	-1.4
NOR	Nord	85.71	352	*i* P	P	21 16 19.5	-1.4
TAM	Tamanrasset	85.96	292	P	P	21 16 24.5	+1.1
ANM	Nome	87.82	25	IAmb	IAmb	21 16 40.0	
	comp=Z,12nm,1.2s						
DAG	Danmarks Havn	87.94	348	*i* P	P	21 16 33.6	+1.8
DAG	Danmarks Havn	87.94	348	P	P	21 16 35.6	+3.8
EKA	Eskdalemuir Ar	88.13	325	P	P	21 16 31.9	-1.2
	comp=Z,3.9nm,0.7s,baz=97,slow=4.9,SNR=14						
MSWZ	Moikau Station	88.19	132	P	P	21 16 32.7	-1.0
TORD	Torodi Ar. Bea	90.76	283	P	P	21 16 45.3	-0.9
	comp=Z,2.0nm,0.9s,baz=94,slow=3.5,SNR=9.1						
TORD				PP	PP	21 20 22.9	+0.9
	comp=Z,1.2nm,1.0s,baz=100,slow=7.5,SNR=3.6						
TORD				LR	LR	21 58 08.4	
	comp=Z,417nm,18.3s,baz=65,slow=36						
TORD	Torodi Ar. Bea	90.76	283	P	P	21 16 45.1	-1.1
ESDC	Sonseca Array	91.56	310	P	P	21 16 49.0	-0.6
	comp=Z,1.5nm,0.5s,baz=66,slow=4.8,SNR=2.8						
ESDC				LR	LR	22 01 19.9	
	comp=Z,134nm,21.1s,baz=25,slow=38						
IMAR	Indian Mountai	92.03	22	P	P	21 16 51.8	+0.7
TOLK	Toolik Lake Re	92.37	19	P	P	21 16 52.5	-0.2
TOLK				IAmb	IAmb	21 17 01.8	
	comp=Z,11nm,0.7s						
VNDA	Vanda	92.47	168	LR	LR	21 55 36.9	
	comp=Z,359nm,18.1s,baz=304,slow=34						
SDPT	Sand Point	92.55	33	P	P	21 16 52.1	-1.6
BPAW	Bear Paw Mtn.	93.88	24	P	P	21 16 59.3	-0.5
BPAW				IAmb	IAmb	21 17 08.8	
	comp=Z,14nm,1.1s						
BMAR	Burnt Mountain	94.60	19	P	P	21 17 05.1	+2.1
SUMG	Summit	94.60	347	*i* P	P	21 17 08.0	+4.7
	comp=Z,76nm,1.5s						
SUMG	Summit	94.60	347	*i* P	P	21 17 08.0	+4.7
SUMG				pmax	pmax		
	comp=Z,76nm,1.5s						
ILAR	Eielson Array	95.15	22	P	P	21 17 05.4	-0.1
	comp=Z,0.5nm,0.7s,baz=297,slow=4.0,SNR=2.9						
ILAR				PP	PP	21 21 01.0	+6.2
	comp=Z,0.4nm,0.8s,baz=303,slow=6.6,SNR=4.9						
ILAR				PKKPbc	PKKPbc	21 34 04.0	+1.9
	comp=Z,0.4nm,0.6s,baz=137,slow=1.6,SNR=4.9						
ILAR				LR	LR	22 02 19.1	
	comp=Z,341nm,19.5s,baz=311,slow=37						
INK	Inuvik	97.41	16	P	P	21 17 15.7	0.0
	comp=Z,0.8nm,0.6s,baz=307,slow=10,SNR=2.3						
INK	Inuvik	97.41	16	IAmb	IAmb	21 17 25.2	
	comp=Z,5.8nm,1.1s						
RES	Resolute Bay	97.86	2	P	P	21 17 17.3	-0.3
	comp=Z,1.6nm,0.9s,baz=327,slow=7.5,SNR=4.6						
RES	Resolute Bay	97.86	2	IAmb	IAmb	21 17 33.3	
	comp=Z,3.8nm,0.9s						
DBIC	Dimbokro	98.06	278	LR	LR	22 01 39.3	
	comp=Z,648nm,18.9s,baz=66,slow=36						
C36M	Paulatuk	99.00	13	P	P	21 17 22.4	-0.3
C36M				IAmb	IAmb	21 17 29.1	
	comp=Z,4.8nm,0.8s						
YKA	Yellowknife Ar	106.86	14	Pdiff	Pdif	21 17 59.2	+1.3
	comp=Z,0.1nm,0.3s,baz=318,slow=3.0,SNR=2.0						
YKA				PP	PP	21 22 25.6	+2.6
	comp=Z,0.7nm,0.8s,baz=334,slow=7.1,SNR=5.3						
YKA				PKKPbc	PKKPbc	21 33 30.3	+2.1
	comp=Z,0.5nm,0.6s,baz=152,slow=4.0,SNR=8.8						
TBI	Tubuai	117.06	112	*e*LR	LR	21 57 58.6	
	comp=Z,408nm,24.5s						
PPT2	Papeete2	117.16	106	*e*PS	PS	21 33 19.9	-3.5
	comp=Z,104nm,26.8s						
PPT2	Papeete2	117.16	106	*e*LR	LR	21 58 04.2	
	comp=Z,344nm,24.8s						
ULM	Lac du Bonnet	121.91	8	PKP	PKPdf	21 22 35.9	-1.0
	comp=Z,1.5nm,0.6s,baz=117,slow=1.6,SNR=3.1						
NVAR	Mina Array Bea	125.28	31	PKP	PKiKP	21 22 44.2	-0.1
	comp=Z,0.6nm,0.6s,baz=268,slow=2.4,SNR=3.7						
PDAR	Pinedale Array	125.57	21	PKP	PKPdf	21 22 43.0	-1.4
	comp=Z,0.8nm,0.9s,baz=38,slow=2.6,SNR=4.2						
PDAR	Pinedale Array	125.57	21		PKPdf	21 22 42.6	-1.8
LONY	Lake Ozonia	127.23	350		PKiKP	21 22 47.7	0.0
SFIN	Lafayette	132.43	1		PKPdf	21 22 54.8	-2.4
O44A	Mansfield	132.61	3		PKPdf	21 22 57.0	-0.5
P48A	Milroy	133.36	360	PKPdf	PKPdf	21 22 55.0	-4.0
TXAR	Lajitas Array	139.62	24	PKP	PKPdf	21 23 11.2	+0.2
	comp=Z,0.4nm,0.5s,baz=305,slow=3.2,SNR=2.8						
BDFB	Brasilia	142.14	254	PKP	PKPdf	21 23 15.5	-0.3
	comp=Z,7.5nm,1.0s,baz=116,slow=5.7,SNR=4.2						
PLCA	Paso Flores	144.14	200	PKP	PKPbc	21 23 17.0	+0.3
	comp=Z,5.7nm,0.8s,baz=202,slow=3.7,SNR=6.3						
PLCA	Paso Flores	144.14	200	PKIKP	PKPbc	21 23 17.0	+0.3
PLCA	Paso Flores	144.14	200		PKPdf	21 23 20.0	+1.3
GO06	Curarrehue	145.48	200		PKPab	21 23 21.4	+0.2
CPUP	Villa Florida	147.03	232	PKPbc	PKPbc	21 23 25.6	-0.4
	comp=Z,9.2nm,0.7s,baz=99,slow=3.7,SNR=10						
CPUP				PKKPbc		21 30 49.1	
	comp=Z,2.5nm,0.9s,baz=311,slow=7.4,SNR=3.1						
CPUP	Villa Florida	147.03	232		PKPbc	21 23 25.8	-0.2
MLPR	Magueyes Islan	148.71	324		PKPab	21 23 33.8	-0.4
CRPR	Cabo Rojo, PR	148.72	324		PKPab	21 23 34.1	-0.2
AAGR	Agrelo	150.00	209	*i* P	PKPbc	21 23 33.9	+0.2
SDDR	Presa de Saban	150.12	332		PKPab	21 23 40.6	+0.6
ARCO	CERRO ARCO	150.24	209	*i* P	PKPbc	21 23 34.3	0.0
ASAL	Salagasta	150.40	210	*i* P	PKiKP	21 23 35.0	-0.4
PEL	Peldehue	150.81	207		PKPab	21 23 41.7	-0.9
ROC1	El Roble	151.10	206	*i* P	PKPbc	21 23 33.7	-2.8
ZON	Zonda	151.16	211	*i* P	PKPbc	21 23 35.9	-0.5
RTLS	Leoncito	151.27	210	*i* P	PKPbc	21 23 37.1	+0.2
CYA	Choya	151.82	220	*i* P	PKPbc	21 23 38.1	+0.1
TLIG	Tlapa	152.16	27		PKPab	21 23 46.1	-2.5
TEIG	Tepich	152.43	5		PKPab	21 23 46.6	-2.8
AGUA	GUANDACOL	152.66	214	*i* P	PKPbc	21 23 36.8	-3.1
AROD	Rodeo	152.66	212	*i* P	PKiKP	21 23 40.4	-0.1
LPAZ	La Paz	160.60	241	PKP	PKPdf	21 23 45.2	+1.1
	comp=Z,1.3nm,0.7s,baz=76,slow=3.6,SNR=6.2						

NEIC ***21*** *21:10:48.7±1.7, 16°.69N±0°.07×94°.51W±0°.05, h112^{km}±8^{km}, Error ellipse: s-maj=10.5km s-min=6.1km az=186.0*

MEX ***21*** *21:10:49.3±0.6, 16°.68N×94°.54W, h120^{km}±6^{km}, MD4.0*

ISC 21 21:10:47.8±1.6**, 16°.70N**±0°.07×**94°.53W**±0°.04**, h119**^{km}±14^{km}**, n19, σ0^{s}.75**/30**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.52	319	*e*P	Pn	21 11 06.4	+0.6
CMIG				*e*S	Sn	21 11 18.8	-0.6
CMIG	Matias Romero	0.52	319		Pn	21 11 06.4	+0.6
CMIG					Sn	21 11 18.8	-0.6
TGIG		1.35	86	*e*P	Pn	21 11 14.3	+0.8
TGIG				*i* S	Sn	21 11 32.7	-0.4
TGIG		1.35	86		Pn	21 11 14.3	+0.8
TGIG					Sn	21 11 31.4	-1.7
PCIG		1.60	128	*e*P	Pn	21 11 16.6	+0.2
PCIG				*e*S	Sn	21 11 38.2	+0.2
PCIG		1.60	128		Pn	21 11 16.6	+0.2
PCIG					Sn	21 11 38.2	+0.2
HUIG	Huatulco	1.77	239	*e*P	Pn	21 11 18.1	-0.4
HUIG				*e*S	Sn	21 11 42.1	+0.3
HUIG	Huatulco	1.77	239		Pn	21 11 18.1	-0.4
HUIG					Sn	21 11 42.1	+0.3
VHO	Vista Hermosa	2.14	280	*e*P	Pn	21 11 23.3	+0.1
VHO				*e*S	Sn	21 11 50.1	-0.1
CCIG	Comitan	2.33	100	Pn	Pn	21 11 27.2	+1.6
PEIG	Puerto Escondi	2.61	255	*e*P	Pn	21 11 28.8	-0.2
TOIG	Toxpalan	2.79	300	*e*P	Pn	21 11 31.8	+0.3
TOIG				*i* S	Sn	21 12 04.6	-0.5
YOIG	Yosondua	2.89	274	*i* P	Pn	21 11 33.5	+0.6
YOIG				*e*S	Sn	21 12 07.3	-0.3
TLIG	Tlapa	3.95	283	Pn	Pn	21 11 48.0	+1.2
UNM	Universidad Na	5.14	301	Pn	Pn	21 12 03.7	+0.8
SNET	Serv Nac Est T	5.93	120	Pn	Pn	21 12 13.9	+0.6
TEIG	Tepich	6.90	58	Pn	Pn	21 12 25.3	-1.1
MOIG	Morelia	6.99	296	Pn	Pn	21 12 28.4	+0.6
TGUH	Tegucigalpa,Un	7.48	110	Pn	Pn	21 12 33.4	-0.9

IDC ***21*** *21:11:01.0±0.8, 7°.31N×94°.26E, h0^{km}, mb4.1/15, mb1 4.2/17, mb1mx4.0/52, mbtmp4.1/17, ML3.9/2, MS4.1/1, Ms1 4.1/1, ms1mx3.1/42, Error ellipse: s-maj=29.1km s-min=16.2km az=51.0*

DJA ***21*** *21:11:02.3±0.5, 8°N±6°×9°4E±°, h10^{km}, M4.6/10, mb4.5/10, mB5.6/1, MLv4.7/5, Mw(mB)5.1/1, Mwp5.6/2*

NEIC ***21*** *21:11:04.6±2.0, 7°.75N±0°.08×94°.7E±0°.1, h10^{km}±2^{km}, mb4.6/31, Error ellipse: s-maj=15.6km s-min=9.7km az=61.0*

ISC 21 21:11:05.8±0.4**, 7°.46N**±0°.05×**94°.39E**±0°.06**, h24**^{km}**, n109, σ2^{s}.03**/103**, mb4.5**/24**, 7C-5D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.64	226	*e*P	Pb	21 11 15.3	-3.0
CMBY				*e*S	Sb	21 11 24.7	-2.2
CMBY				IAML		21 11 28.2	
	comp=N,27µm,0.2s						
CMBY				IAML		21 11 29.1	
	comp=E,20µm,0.3s						
LHMI	Lhok Sumawe	3.37	131	Pn	Pn	21 11 56.6	-0.3
LHMI					Pn	21 11 56.9	-0.1
LHMI					Sn	21 12 39.3	+3.0
MLSI	Meulaboh, Aceh	3.75	148	P	Pn	21 12 03.6	+1.4
PBA	Port Blair	4.47	339	*e*x	Pn	21 12 07.5	-4.6
PBA				*e*x	x	21 12 55.8	
DGPR	DIGLIPUR	5.86	346	*e*x	Pn	21 12 26.6	-4.6
DGPR				*e*x	x	21 13 49.1	

PSI	Prapat	6.47	135	Pn	Pn	21 12 40.5	+0.9
	comp=E,0.9nm,0.3s,baz=312,slow=8.2,SNR=12						
RPSI	Rantau Prapat	6.54	136		Pn	21 12 42.9	+2.3
RPSI	Rantau Prapat	6.54	136		Pn	21 12 40.5	-0.1
KULM	Kulim	6.58	109		Pn	21 12 39.8	-1.4
GSI	Gunungsitoli	6.89	152	Pn	Pn	21 12 44.0	-1.4
IPM	Ipoh	7.23	114		Pn	21 12 47.9	-2.2
BKNI	Bangkinang	9.71	137	Pn	Pn	21 13 24.4	+0.3
MYKOM	Kota Tinggi	10.98	120	Pn	Pn	21 13 38.3	-3.2
PBKT	Sadao Pong	11.11	35	Pn	Pn	21 13 36.5	-6.6
CMAR	Chiang Mai Arr	11.79	22	Pn	Pn	21 13 55.0	+2.3
	comp=E,0.5nm,0.3s,baz=217,slow=14,SNR=7.4						
CMAR	Chiang Mai Arr	11.79	22		Pn	21 13 49.3	-3.4
MNAI	Manna	14.53	144	Pn	Pn	21 14 31.6	+1.6
MDSI	Maura Dua	15.37	140	P	Pn	21 14 36.7	-4.6
KSM	Kuching	16.94	110		P	21 15 03.8	+0.5
KSM				IAmb	IAmb	21 15 16.0	
	comp=Z,45nm,1.3s						
HYB	Hyderabad	18.34	304	*i* P	P	21 15 18.0	-0.7
SBUM	Sibu	18.44	105		P	21 15 18.9	-0.9
KMI	Kunming	19.29	23	P	Pn	21 15 31.3	+0.9
KMI				pP	pP	21 15 33.0	-2.2
RAMN	Ramite	20.75	340	*e*P	P	21 15 46.0	+0.8
	comp=Z,91nm,1.0s						
TAPN	Taplejung	20.77	343	*e*P	Pn	21 15 47.0	-0.9
	comp=Z,62nm,0.8s						
PKI	Pulchoki	21.74	338	*e*P	P	21 15 55.5	-0.4
	comp=Z,105nm,1.2s						
PKIN	Phulchoki	21.75	338	*e*P	P	21 15 55.4	-0.5
	comp=Z,74nm,1.3s						
GUN	Gumba	21.88	339	*e*P	P	21 15 56.8	-0.6
	comp=Z,60nm,0.9s						
DMN	Daman	21.89	337	*e*P	P	21 15 56.6	-0.8
	comp=Z,83nm,1.3s						
KKN	Kakani	21.98	338	*e*P	P	21 15 57.9	-0.5
	comp=Z,51nm,0.9s						
GYA	Guiyang	22.21	30	*e*P	P	21 15 59.3	-1.5
LSA	Lhasa	22.33	353	P	P	21 16 02.2	-0.2
LSA				IAmb	IAmb	21 16 10.5	
	comp=Z,23nm,0.8s						
GKN	Gorkha	22.42	337	*e*P	P	21 16 01.4	-1.6
	comp=Z,44nm,0.9s						
DANN	Dangsing	23.08	335	*e*P	P	21 16 07.0	-3.1
	comp=Z,64nm,0.9s						
CD2	Chengdu	24.92	19	P	P	21 16 24.8	-2.4
MPSI	Mapaga	26.40	104	P	P	21 16 40.7	0.0
	comp=Z,20μmcomp=Z,14nm,1.1s						
H08S3	Diego Garcia H	26.49	236	T	T	21 43 14.7	
	baz=56,slow=75,SNR=15						
H08S2	Diego Garcia H	26.49	236	T	T	21 43 19.8	
	baz=56,slow=75,SNR=17						
H08S1	Diego Carcia H	26.51	236	T	T	21 43 22.1	
	baz=56,slow=75,SNR=8.8						
XAN	Xi'an	29.66	25	P	P	21 17 12.0	+2.3
GTA	Gaotai	32.18	8	P	P	21 17 37.6	+5.6
GTA				pP	pwP	21 17 46.9	+5.4
GTA				sP	sP	21 17 50.6	+9.4
NIL	Nilore	32.58	326	P	P	21 17 35.4	0.0
NJ2	Nanjing	33.43	40	*e*P	P	21 17 41.9	-0.9
KBL	Kabul	35.65	323	P	P	21 18 03.1	+0.8
KSH	Kashi	35.95	335	P	P	21 18 06.8	+2.1
KSH				pP	pP	21 18 10.1	-1.1
KSH				PcP	PcP	21 20 34.8	+3.5
KSH				S	S	21 23 42.9	+1.0
KSH				sS	pS	21 23 49.4	-0.2
HHC	Hu-ho-hao-te	36.60	22	*e*P	P	21 18 07.5	-2.8
WMQ	Urumqi	36.69	352	*e*P	P	21 18 11.5	+0.6
WMQ				pP	pP	21 18 15.0	-2.4
ARSB	Arslanbob	38.72	334	P	P	21 18 28.2	0.0
ARSB				IAmb	IAmb	21 18 33.6	
	comp=Z,13nm,0.7s						
AAK	Ala-Archa	39.18	337	P	P	21 18 33.2	+1.1
	comp=Z,3.8nm,1.0s,baz=146,slow=17,SNR=6.4						
AAK	Ala-Archa	39.18	337	P	P	21 18 32.4	+0.3
FITZ	Fitzroy Crossi	39.96	130	LR	LR	21 37 25.6	
	comp=Z,207nm,18.0s,baz=262,slow=40						
MK31	Makanchi Array	40.54	347	P	P	21 18 41.7	-1.5
MK31				IAmb	IAmb	21 18 48.1	
	comp=Z,8.3nm,0.8s						
MKAR	Makanchi Array	40.54	347	P	P	21 18 42.4	-0.8
	comp=Z,2.7nm,0.7s,baz=165,slow=7.4,SNR=18						
MKAR	Makanchi Array	40.54	347	P	P	21 18 41.1	-2.1
MAKZ	Makanchi	40.63	347	P	P	21 18 42.3	-1.5
MAKZ				IAmb	IAmb	21 18 48.6	
	comp=Z,7.6nm,0.7s						
KK31	Karatay Array	41.24	333	P	P	21 18 48.2	-0.7
KKAR	Karatay Array	41.24	333	P	P	21 18 48.6	-0.4
SONM	Songino Array	41.51	12	P	P	21 18 51.4	+0.2
	comp=Z,0.8nm,0.7s,baz=182,slow=11,SNR=4.0						
SONM				PcP	PcP	21 20 50.1	+1.6
	comp=Z,0.8nm,0.8s,baz=194,slow=4.6,SNR=1.8						
SONM	Songino Array	41.51	12	P	P	21 18 49.8	-1.5
GEYT	Alibeck	44.67	318	P	P	21 19 16.8	-0.1
	comp=Z,5.0nm,0.7s,baz=152,slow=6.7,SNR=11						
GEYT	Alibeck	44.67	318	P	P	21 19 18.4	+1.5
GYA0B	ALIBECK ARRAY	44.67	318	P	P	21 19 18.0	+1.1
GYA0B				IAmb	IAmb	21 19 23.6	
	comp=Z,7.8nm,0.8s						
KURK	Kurchatov	45.07	346	P	P	21 19 18.8	-0.9
ZALV	Zalesovo Beam	47.00	352	P	P	21 19 35.0	+0.1
	comp=Z,6.8nm,0.9s,baz=177,slow=7.0,SNR=8.9						
ZALV	Zalesovo Beam	47.00	352	P	P	21 19 33.9	-1.0
WRA	Warramunga Arr	47.82	125	P	P	21 19 40.6	-1.2
	comp=Z,0.7nm,0.9s,baz=307,slow=8.0,SNR=8.4						
ASAR	Alice Springs	49.46	130	P	P	21 19 52.5	-1.9
	comp=Z,1.7nm,1.0s,baz=312,slow=7.7,SNR=6.8						
RAYN	Ar Rayn	49.48	295	P	P	21 19 57.9	+3.2
BRVK	Borovoye	49.52	341	P	P	21 19 53.9	-0.5
BRVK				IAmb	IAmb	21 19 59.3	
	comp=Z,3.8nm,0.7s						
FORT	Forrest	49.86	141	P	P	21 20 02.7	+5.3
ABKAR	Akbulak array	50.71	331	P	P	21 20 03.4	-0.1
ARU	Arti	56.36	337	P	P	21 20 45.7	+0.8
ARU				IAmb	IAmb	21 20 50.1	
	comp=Z,8.6nm,0.9s						
KMBO	Kilima Mbogo	57.62	264	P	P	21 20 54.0	-0.8
	comp=Z,1.2nm,0.7s,baz=50,slow=9.8,SNR=5.9						
KMBO	Kilima Mbogo	57.62	264	IAmb	IAmb	21 21 02.1	
	comp=Z,4.4nm,1.1s						
BR131	Keskin Array S	62.88	311	P	P	21 21 31.3	+1.0
BR131				IAmb	IAmb	21 21 34.5	
	comp=Z,1.8nm,0.8s						
BRTR	Keskin Array B	62.88	311	P	P	21 21 28.8	-1.6
	comp=Z,1.5nm,0.7s,baz=119,slow=7.6,SNR=4.4						
BRTR	Keskin Array B	62.88	311	P	P	21 21 31.5	+1.2
ELL	Elmali	65.17	307	P	P	21 21 47.3	+2.0
OBN	Obninsk	65.86	328	P	P	21 21 50.0	+0.7
TIXI	Tiksi	67.59	11	P	P	21 21 58.8	-1.2
TIRR	Tirgusor	67.72	315	P	P	21 22 02.3	+1.0
CFR	Carcaliu	68.06	316	⇑P	P	21 22 06.8	+3.3
SORM	Soroca	68.56	319	⇓P	P	21 22 09.6	+3.1
BISRR	Bisoca	69.12	316	⇓P	P	21 22 15.0	+4.8
VRI	Vrincioaia	69.17	316	⇓P	P	21 22 15.2	+4.7
PLOR	Plostina	69.22	316	⇓P	P	21 22 15.4	+4.7
TESR	Tescani	69.35	317	⇓P	P	21 22 15.7	+4.2
MLR	Muntele Rosu	69.64	316	⇑P	P	21 22 12.5	-1.0
MLR	Muntele Rosu	69.64	316	P	P	21 22 15.1	+1.6
BIZ	Bicaz	69.80	317	⇑P	P	21 22 18.0	+3.7
BURAR	Bucovina Array	70.52	318	P	P	21 22 19.1	+0.3
ARR	Arges	70.53	315	⇑P	P	21 22 22.1	+3.2
VTS	Vitosha	71.13	312	P	P	21 22 23.9	+1.3
LIT	Litokhoron	71.39	310	P	P	21 22 25.7	+1.5
LIT				IAmb	IAmb	21 22 28.8	
	comp=Z,4.4nm,0.7s						
DRGR		72.07	317	⇑P	P	21 22 32.2	+4.1
TRPA	Tarpa	72.38	318	⇑P	P	21 22 33.9	+4.0
FINES	FINESS Array B	73.19	332	P	P	21 22 33.0	-1.4
	comp=Z,1.5nm,0.7s,baz=101,slow=9.9,SNR=4.8						
ARCES	ARCESS Array B	75.73	340	P	P	21 22 47.8	-1.3
	comp=Z,3.8nm,0.9s,baz=96,slow=5.5,SNR=2.7						
GEC2	GERESS Array S	78.30	318	IAmb	IAmb	21 23 09.2	
	comp=Z,4.0nm,0.9s						
GERES	GERESS Array B	78.30	318	P	P	21 23 03.1	-0.9
	comp=Z,2.1nm,0.8s,baz=72,slow=4.3,SNR=5.0						
GERES	GERESS Array B	78.30	318	P	P	21 23 06.2	+2.1
KHC	Kasperske Hory	78.39	319	*e*P	P	21 23 06.0	+1.5
HFS	Hagfors	78.94	330	P	P	21 23 05.5	-1.7
	comp=Z,11nm,1.2s,baz=100,slow=6.0,SNR=5.7						
ZCCA	Zocca	80.13	314	P	P	21 23 16.8	+2.7
NB2	NORSAR Subarra	80.21	331	P	P	21 23 17.3	+3.1
	comp=Z,2.4nm,0.8s,baz=92,slow=5.6						
NOA	NORSAR Array B	80.21	331	P	P	21 23 11.7	-2.5
	comp=Z,1.6nm,1.0s,baz=93,slow=5.5,SNR=2.2						
SYO	Syowa Base	85.09	197	⇑*i*PcP	PcP	21 23 45.4	+3.0
IMAR	Indian Mountai	91.92	22	P	P	21 24 12.4	+0.4
ILAR	Eielson Array	95.03	22	P	P	21 24 27.2	+0.8
	comp=Z,0.4nm,0.8s,baz=298,slow=3.4,SNR=2.5						
PDAR	Pinedale Array	125.46	22	PKP	PKPdf	21 30 05.0	-0.6
	comp=Z,0.3nm,0.8s,baz=20,slow=2.9,SNR=1.6						

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*NEIC **21** 21:12:09.9±1.4, 7°.0N±0°.1×94°.8E±0°.1, h7^{km}±6^{km}, mb4.4/6, Error ellipse: s-maj=22.7km s-min=7.5km az=225.0*

*IDC **21** 21:12:12.5±1.0, 7°.48N×94°.63E, h0^{km}, mb4.0/10, mb1 4.1/10, mb1mx3.8/49, mbtmp4.0/10, Error ellipse: s-maj=34.1km s-min=21.6km az=45.0*

ISC 21 21:12:12.7±0.7**, 6°.9N**±0°.1×**94°.73E**±0°.07**, h26^{km}, n25,** σ1^s.**36**/23**, mb4.1**/14**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.81	277	*e*P	Pb	21 12 27.4	-0.6
CMBY				*e*S	Sb	21 12 35.9	-2.7
LHMI	Lhok Sumawe	2.77	127	Pn	Pn	21 12 53.9	-1.4
RPSI	Rantau Prapat	5.91	135	Pn	Pn	21 13 38.8	+0.2
KULM	Kulim	6.10	105	Pn	Pn	21 13 39.7	-1.5
GSI	Gunungsitoli	6.25	153	Pn	Pn	21 13 41.9	-1.3
IPM	Ipoh	6.71	111	Pn	Pn	21 13 47.3	-2.3
MK31	Makanchi Array	41.15	347	P	P	21 19 54.2	-0.6
MK31				IAmb	IAmb	21 20 00.3	
	comp=Z,4.1nm,0.9s						
MKAR	Makanchi Array	41.15	347	P	P	21 19 53.8	-1.0
	comp=Z,4.7nm,0.8s,baz=167,slow=7.3,SNR=8.3						
MAKZ	Makanchi	41.24	347	P	P	21 19 54.7	-0.8
GEYT	Alibeck	45.30	318	P	P	21 20 28.4	-0.1
	comp=Z,2.4nm,0.7s,baz=128,slow=8.3,SNR=3.7						
GEYT	Alibeck	45.30	318	P	P	21 20 28.8	+0.3
GYA0B	ALIBECK ARRAY	45.30	318	P	P	21 20 28.0	-0.5
KURK	Kurchatov	45.68	346	P	P	21 20 30.5	-0.7
WRA	Warramunga Arr	47.23	125	P	P	21 20 51.0	+7.1
	comp=Z,0.4nm,0.7s,baz=304,slow=8.5,SNR=0.8						
ZAA0	Zalesovo Array	47.58	352	P	P	21 20 46.0	-0.1
ZAA0				IAmb	IAmb	21 20 52.3	
	comp=Z,4.8nm,0.9s						
ZALV	Zalesovo Beam	47.58	352	P	P	21 20 46.7	+0.6
	comp=Z,1.7nm,0.4s,baz=152,slow=6.4,SNR=1.5						
ASAR	Alice Springs	48.85	130	P	P	21 21 03.6	+7.2
	comp=Z,0.5nm,0.5s,baz=301,slow=7.9,SNR=4.4						
RAYN	Ar Rayn	50.02	295	P	P	21 21 06.6	+1.2
RAYN				IAmb	IAmb	21 21 12.7	
	comp=Z,3.6nm,0.7s						
ABKAR	Akbulak array	51.35	331	P	P	21 21 15.0	+0.1
KLR	Kul'dur	52.42	30	P	P	21 21 22.4	-0.4
	comp=Z,0.8nm,0.4s,baz=100,slow=18,SNR=5.6						
KMBO	Kilima Mbogo	57.91	264	P	P	21 22 06.7	+3.3
	comp=Z,1.5nm,0.8s,baz=58,slow=11,SNR=4.3						
BRTR	Keskin Array B	63.50	311	P	P	21 22 41.1	+0.2
	comp=Z,0.8nm,0.6s,baz=127,slow=6.2,SNR=5.2						
FINES	FINESS Array B	73.83	332	P	P	21 23 44.5	-0.3
	comp=Z,3.3nm,0.8s,baz=142,slow=9.5,SNR=4.1						
GERES	GERESS Array B	78.93	318	P	P	21 24 16.9	+2.8
	comp=Z,1.0nm,0.7s,baz=81,slow=7.0,SNR=2.7						
NB2	NORSAR Subarra	80.85	331	P	P	21 24 24.3	+0.1
	comp=Z,1.0nm,0.6s,baz=97,slow=5.1						

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*JMA **21** 21:18:03.2±0.8, 45°.56N×151°.18E, h30^{km}, M4.6*

*MOS **21** 21:18:04.0±0.8, 45°.43N×151°.18E, h52^{km}, mb4.5/22, Error ellipse: s-maj=7.5km s-min=5.8km az=93.7*

*SKHL **21** 21:18:04.6±0.3, 45°.34N×151°.24E, h54^{km}±5^{km}, mb5.0/5*

*IDC **21** 21:18:07.7±2.5, 45°.57N×151°.02E, h64^{km}±21^{km}, mb3.7/19, mb1 3.9/25, mb1mx3.8/38, mbtmp4.0/25, MS3.2/2, Ms1 3.2/2, ms1mx2.8/44, Error ellipse: s-maj=17.5km s-min=12.0km az=139.0*

*NEIC **21** 21:18:08.2±1.3, 45°.5N±0°.1×151°.0E±0°.1, h71^{km}±5^{km}, mb4.3/58, Error ellipse: s-maj=15.9km s-min=11.2km az=147.0*

ISC 21 21:18:04.2±0.4**, 45°.31N**±0°.06×**151°.22E**±0°.05**, h42^{km}, n279,** σ1^s.**45**/293**, mb4.3**/75**, 11C-13D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.37	269	*e*P	Pn	21 18 40.6	+0.1
KUR				AMB	AMB	21 18 45.0	
	210nm,0.4s						
KUR				*i* S	Sn	21 19 07.4	-0.9
KUR				A	A	21 19 11.0	
	720nm,0.5s						
KUR				A	A	21 19 11.0	
	590nm,0.5s						
KUR	Kuril'sk	2.37	269	*e*PN	Pn	21 18 40.6	+0.1
KUR				*i* S	Sn	21 19 07.4	-0.9
KUR				pmax	pmax		
	comp=Z,207nm,0.4s						
KUR				pmax	pmax		
	comp=E,169nm,0.3s						
KUR				smax	smax		
	comp=N,720nm,0.6s						
KUR				smax	smax		
	comp=E,587nm,0.4s						
YUK	Yuzh-Kuril'sk	4.03	254	*e*P	Pn	21 19 04.3	+1.0
YUK				AMB	AMB	21 19 07.0	
	comp=E,210nm,0.4s						
YUK				*e*S	Sn	21 19 49.3	+0.1
YUK				A	A	21 19 52.0	
	comp=E,250nm,0.5s						
YUK				A	A	21 19 52.0	
	comp=E,650nm,0.5s						
YUK	Yuzh-Kuril'sk	4.03	254	*e*PN	Pn	21 19 05.6	+2.3
YUK				*e*S	Sn	21 19 52.5	+3.3
YUK				pmax	pmax		
	comp=Z,435nm,0.2s						
YUK				smax	smax		
	comp=N,249nm,0.4s						
YUK				smax	smax		
	comp=E,645nm,0.5s						
GRPR	Tuman	4.10	253	*e*P	Pn	21 19 06.5	+2.2
GRPR				AMB	AMB	21 19 10.0	
	comp=E,290nm,0.5s						
GRPR				*e*S	Sn	21 19 53.6	+2.5
GRPR				A	A	21 19 54.0	
	comp=E,300nm,0.5s						
GRPR				A	A	21 19 54.0	
	comp=E,410nm,0.5s						
GRPR	Tuman	4.10	253	*e*PN	Pn	21 19 06.5	+2.2
GRPR				*e*S	Sn	21 19 53.6	+2.5
GRPR				pmax	pmax		
	comp=N,92nm,0.3s						
GRPR				pmax	pmax		
	comp=E,141nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,294nm,0.3s						
GRPR				smax	smax		
	comp=N,303nm,0.5s						
GRPR				smax	smax		
	comp=E,405nm,0.6s						
NEM2	Nemuro 2	4.38	246	P	Pn	21 19 08.1	-0.1
NEM2				*e*S	Sn	21 19 55.2	-2.7
NMR	Nemuro--Hokkai	4.39	246	*i* P	Pn	21 19 08.2	-0.1
NMR				*i* S	Sn	21 19 56.9	-1.2
NMR	Nemuro--Hokkai	4.39	246	⇓*i*PN	Pn	21 19 08.0	-0.3
JRA	Rausu	4.56	255	P	Pn	21 19 12.6	+2.0
JNK	Nakash	4.96	252	P	Pn	21 19 17.6	+1.5
JAK	Akkeshi	5.23	246	P	Pn	21 19 19.8	0.0
JTKR	Abashiri--Toko	5.38	258	P	Pn	21 19 23.8	+1.9
JAR	Ashorobuto	5.71	252	P	Pn	21 19 27.8	+1.4
JAR				*e*S	Sn	21 20 31.2	+0.5
JMP	Maruseppu	5.75	260	P	Pn	21 19 29.4	+2.3
JOB	Onbets	5.83	248	P	Pn	21 19 28.7	+0.6
YSS	Yuzh-Sakhalins	6.11	289	*e*P	Pn	21 19 34.1	+2.2
YSS				*e*S	Sn	21 20 40.6	+0.2
YSS				A	A	21 20 46.9	
	comp=E,20nm,1.0s						
YSS				AMS	AMS	21 21 50.0	
	comp=E,400nm,16.0s						
YSS	Yuzh-Sakhalins	6.11	289	*e*PN	Pn	21 19 34.1	+2.2
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
YSS	Yuzh-Sakhalins	6.11	289		Pn	21 19 33.0	+1.2
JKK2	Kamakawa 2	6.22	260	P	Pn	21 19 35.5	+2.1
JKA	Kamikawa-asahi	6.26	262		Pn	21 19 36.1	+2.2
ASAJ	Asahikawa	6.26	262	P	Pn	21 19 36.7	+2.8
ASAJ	Asahikawa	6.26	262	P	Pn	21 19 36.1	+2.2
	comp=Z,4.2nm,0.3s,baz=52,slow=15,SNR=31						
ASAJ				LR	LR	21 21 37.6	
	comp=Z,216nm,18.6s,baz=18,slow=34						
JCH	Churui	6.28	247	P	Pn	21 19 34.5	+0.3
JCH				*e*S	Sn	21 20 42.1	-2.4
SKR	Severo-Kuril's	6.30	30	*e*P	Pn	21 19 34.7	+0.2
SKR				AMB	AMB	21 19 41.8	
	comp=Z,30nm,0.4s						
SKR				*e*S	Sn	21 20 42.7	-2.5
SKR	Severo-Kuril's	6.30	30	⇓*e*PN	Pn	21 19 34.7	+0.2
JFR	Furan	6.55	254	P	Pn	21 19 40.4	+2.4
ERM	Erimo	6.71	243	*de*PN	Pn	21 19 43.2	+3.1
ERM	Erimo	6.71	243		Pn	21 19 43.6	+3.5
JNBK	Urakawa-nobuka	6.83	247	P	Pn	21 19 41.5	-0.3
JBT2	Biratori 2	6.86	252	P	Pn	21 19 42.8	+0.6
UGL	Uglegorsk	7.29	304	*e*P	Pn	21 19 51.0	+3.0
JNB	Noboribetsu	7.88	253	P	Pn	21 19 57.1	+0.9
JNB				*e*S	Sn	21 21 22.9	-1.1
TYV	Tymovskoe	7.98	317	*e*P	Pn	21 19 58.7	+1.1
TYV				AMB	AMB	21 20 00.5	
	comp=Z,10.0nm,0.3s						
TYV				AMB	AMB	21 20 00.7	
	comp=Z,200nm,4.0s						
TYV				*e*S	Sn	21 21 24.7	-1.8
TYV	Tymovskoe	7.98	317	*e*PN	Pn	21 19 59.9	+2.4
TYV				pmax	pmax		
	comp=Z,12nm,0.3s						
TYV				pmax	pmax		
	comp=Z,200nm,3.9s						
JKB	Kayabe	8.14	249	P	Pn	21 19 59.3	-0.5
JKB				*e*S	Sn	21 21 25.1	-5.3
JYM2	Yakumo 2	8.48	252	P	Pn	21 20 04.6	+0.2
JSH	Shimam	8.49	256	P	Pn	21 20 05.9	+1.4
JANG	Nango	8.66	239	P	Pn	21 20 05.0	-1.9
JANG				*e*S	Sn	21 21 35.2	-8.1
JTM	Tenmabayashi	8.70	242	P	Pn	21 20 07.0	-0.3
PEA0B	Petropavlovsk-	8.88	26	⇑*i*PN	Pn	21 20 11.0	+1.1
PEA0B	Petropavlovsk-	8.88	26	Pn	Pn	21 20 10.4	+0.5
PETK	Petropavlovsk-	8.88	26	P	Pn	21 20 09.9	+0.1
	comp=Z,1.3nm,0.3s,baz=190,slow=13,SNR=20						
PETK				LR	LR	21 23 38.5	
	comp=Z,128nm,20.5s,baz=235,slow=38						
PETK	Petropavlovsk-	8.88	26	PN	Pn	21 20 10.0	+0.1
JOSM	Okushiri--Mats	9.10	253	P	Pn	21 20 13.3	+0.5
OFUJ	Ofunato	9.43	232	*e*S	Sn	21 21 53.6	-8.4
JRG	Rokugo	9.81	237	P	Pn	21 20 21.5	-1.1
OKH	Okha	9.85	330	*e*P	Pn	21 20 24.8	+1.7
JIO	Ouri	10.04	230	P	Pn	21 20 24.7	-1.1
NKL	Nikolayevsk	10.44	323	*e*P	Pn	21 20 31.6	+0.5
MJAR	Matsushiro Arr	13.15	233	P	Pn	21 21 07.1	-1.3
	comp=Z,0.0nm,0.3s,baz=27,slow=11,SNR=4.1						
USA0B	Ussuriysk Arra	13.71	272	P	Pn	21 21 17.3	+1.4
USA0B	Ussuriysk Arra	13.71	272	Pn	Pn	21 21 17.3	+1.4
USRK	Ussuriysk Ar.	13.71	272	P	Pn	21 21 17.1	+1.2
	baz=70,slow=13,SNR=6.0						
KLR	Kul'dur	13.78	294	⇑*e*P	Pn	21 21 20.0	+3.1
KLR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
EKMR	Ekimchan	14.22	310	*e*P	Pn	21 21 20.0	-2.8
MA2	Magadan	14.30	359	P	Pn	21 21 23.4	-0.3
	comp=Z,1.0nm,0.3s,baz=174,slow=15,SNR=3.1						
MA2	Magadan	14.30	359	*e*P	Pn	21 21 23.6	-0.1
MA2	Magadan	14.30	359	⇓*e*P	Pn	21 21 23.6	-0.1
MA2				pmax	pmax		
	comp=Z,14nm,1.6s						
MA2	Magadan	14.30	359	Pn	Pn	21 21 23.8	0.0
MDJ	Mudanjiang	15.32	275	P	Pn	21 21 38.4	+1.0
MDJ				S	S	21 25 14.3	+33
BMKR	Bomnak	17.12	311	*e*P	Pn	21 21 58.3	-1.8
BMKR				AMB	AMB	21 22 04.0	
	comp=Z,6.0nm,0.9s						
ZEA	Zeya	17.63	307	*e*P	Pn	21 22 05.0	-1.5
ZEA				AMB	AMB	21 22 09.2	
	comp=Z,10.0nm,1.0s						
ZEA	Zeya	17.63	307	*e*P	Pn	21 22 05.8	-0.7
ZEA				pmax	pmax		
	comp=Z,14nm,1.2s						
SEY	Seymchan	17.68	2	*e*P	Pn	21 22 06.4	-0.5
SEY	Seymchan	17.68	2	⇓*e*P	Pn	21 22 06.4	-0.5
KROS	Kirovskiy	18.02	309	*e*P	Pn	21 22 10.0	-1.3
KROS				AMB	AMB	21 22 16.2	
	comp=Z,6.0nm,0.8s						
KSRS	Korea Array	19.12	254	P	Pn	21 22 25.4	+0.8
	comp=Z,1.0nm,0.3s,baz=58,slow=12,SNR=5.5						
KS19	Wonju Array Si	19.13	254	P	Pn	21 22 25.9	+1.1
KSAR	Wonju Array Be	19.15	254	P	Pn	21 22 26.3	+1.3
KSAR	Wonju Array Be	19.15	254	P	Pn	21 22 26.3	+1.3
JNU	Nakatsue	19.85	239	P	Pn	21 22 34.6	+1.2
	comp=Z,0.4nm,0.3s,baz=50,slow=18,SNR=3.3						
JNU	Nakatsue	19.85	239	P	Pn	21 22 33.5	+0.2
JNU				IAmb	IAmb	21 22 36.9	
	comp=Z,10nm,1.0s						
BJT	Baijiatuau	26.17	271	P	P	21 23 35.0	+0.4
BJT				pmax	pmax		
	comp=Z,9.0nm,1.1s						
NJ2	Nanjing	28.32	253	*e*P	P	21 23 54.3	+0.5
H11N2	WAKE ISLAND Hy	28.62	148	T	T	21 54 34.8	
	baz=338,slow=75,SNR=490						
H11N1	WAKE ISLAND Hy	28.63	148	T	T	21 54 40.9	
	baz=338,slow=75,SNR=242						
H11N3	WAKE ISLAND Hy	28.64	148	T	T	21 54 36.1	
	baz=338,slow=75,SNR=267						
HHC	Hu-ho-hao-te	29.10	275	*e*P	P	21 24 01.0	+0.2
H11S1	WAKE ISLAND Hy	29.67	149	T	T	21 56 01.9	
	baz=338,slow=76,SNR=151						
H11S3	WAKE ISLAND Hy	29.68	149	T	T	21 56 10.1	
	baz=338,slow=76,SNR=151						
H11S2	WAKE ISLAND Hy	29.68	149	T	T	21 55 54.9	
	baz=338,slow=76,SNR=191						
WHN	Wuhan	32.29	256	P	P	21 24 44.1	+15
CNPM	China Poot	36.62	46	P	P	21 25 07.3	+1.1
LZH	Lanzhou	36.62	272	*e*P	P	21 25 07.5	+0.9
LZH				pP	sP	21 25 24.8	+2.9
LZH				sP	pwP	21 25 32.6	+12
BRLK	Bradley Lake	36.79	46	P	P	21 25 07.5	0.0
GHO	Glory Hole Cre	37.65	42	P	P	21 25 15.5	+0.6
TOLK	Toolik Lake Re	37.67	31	P	P	21 25 15.4	+0.5
TOLK				IAmb	IAmb	21 25 31.0	
	comp=Z,1.8nm,0.8s						
SML	Sawmill	37.93	42	P	P	21 25 18.6	+1.4
WRH	Wood River Hil	37.98	38	P	P	21 25 18.4	+0.9
WRH				IAmb	IAmb	21 25 33.0	
	comp=Z,3.5nm,1.1s						
CCB	Clear Creek Bu	38.10	38	P	P	21 25 19.9	+1.3
DHY	Denali Highway	38.32	40	P	P	21 25 21.0	+0.4
DHY				IAmb	IAmb	21 25 21.5	
	comp=Z,1.3nm,0.7s						
SCM	Sheep Creek Mo	38.40	42	P	P	21 25 21.1	-0.1
SCM				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SCM	Sheep Creek Mo	38.40	42	P	P	21 25 21.1	-0.1
HDA	Harding Lake	38.48	38	P	P	21 25 22.4	+0.7
HDA				IAmb	IAmb	21 25 34.7	
	comp=Z,1.8nm,0.8s						
IL31		38.50	37	P	P	21 25 22.0	+0.2
ILAR	Eielson Array	38.50	37	P	P	21 25 22.4	+0.5
	comp=Z,0.6nm,0.7s,baz=258,slow=7.1,SNR=9.6						
NRIK	Noril'sk	39.33	330	PcP	PcP	21 27 36.7	+0.2
	comp=Z,1.8nm,0.5s,baz=23,slow=4.5,SNR=4.1						
CD2	Chengdu	39.45	265	P	P	21 25 29.1	-1.2
BMAR	Burnt Mountain	39.45	33	P	P	21 25 30.0	+0.1
VRDI	Verde Repeater	40.31	43	P	P	21 25 36.4	-0.8
VRDI				IAmb	IAmb	21 25 51.3	
	comp=Z,6.9nm,1.1s						
MCARA	McCarthy VSAT	40.49	43	P	P	21 25 39.1	+0.6
MCARA				IAmb	IAmb	21 25 51.1	
	comp=Z,7.0nm,1.0s						
BCAR	Beaver Creek A	40.86	40	P	P	21 25 42.8	+1.2
EGAK	Eagle	40.95	37	P	P	21 25 42.5	+0.2
BARN	Barnard Glacie	41.19	43	P	P	21 25 44.9	+0.3
BARN				IAmb	IAmb	21 25 49.9	
	comp=Z,5.8nm,1.1s						
CTGM	Chitina Glacie	41.37	43	P	P	21 25 47.1	+1.2
CTGM				IAmb	IAmb	21 26 03.1	
	comp=Z,6.6nm,1.0s						
ZALV	Zalesovo Beam	42.40	307	PcP	PcP	21 27 47.1	+0.4
	comp=Z,0.6nm,0.6s,baz=84,slow=2.0,SNR=6.6						
HYT	Haines Junctio	43.23	43	P	P	21 26 02.3	+1.3
HYT				IAmb	IAmb	21 26 08.2	
	comp=Z,5.3nm,1.1s						
INK	Inuvik	43.57	31	P	P	21 26 03.6	+0.1
	comp=Z,1.1nm,0.6s,baz=235,slow=2.6,SNR=5.1						
INK	Inuvik	43.57	31	IAmb	IAmb	21 26 04.9	
	comp=Z,2.5nm,0.9s						
WMQ	Urumqi	44.23	292	*e*P	P	21 26 11.1	+1.9
MK31	Makanchi Array	46.44	298	P	P	21 26 25.3	-1.4
MK31				pmax	pmax		
	comp=Z,1.0nm,0.5s						

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MK31  Makanchi Array    46.44 298   P      P       21 26 25.3 -1.4
MKAR  Makanchi Array    46.44 298   P      P       21 26 25.8 -0.9
      comp=Z,0.6nm,0.4s,baz=65,slow=6.3,SNR=16
MKAR                                PcP    PcP     21 28 01.2 +0.5
      comp=Z,0.9nm,0.5s,baz=236,slow=1.1,SNR=9.6
MKAR  Makanchi Array    46.44 298  eP      P       21 26 26.7  0.0
MKAR  Makanchi Array    46.44 298  eP      P       21 26 26.7  0.0
MKAR                                pmax   pmax
      comp=Z,1.0nm,0.4s
MKAR  Makanchi Array    46.44 298   P      P       21 26 24.9 -1.8
MAKZ  Makanchi          46.63 298   P      P       21 26 27.2 -0.9
MAKZ                                pmax   pmax
      comp=Z,1.0nm,1.1s
MAKZ  Makanchi          46.63 298   P      P       21 26 27.2 -0.9
C36M  Paulatuk          46.73  29   P      P       21 26 29.4 +0.9
C36M                                IAmb   IAmb    21 26 45.9
      comp=Z,2.2nm,0.6s
KURK  Kurchatov         47.07 304⇑eP      P       21 26 29.2 -2.3
KURK                                pmax   pmax
      comp=Z,8.0nm,3.0s
KURK  Kurchatov         47.07 304   P      P       21 26 29.3 -2.2
LSA   Lhasa             49.03 273  eP      P       21 26 47.6 +0.1
LSA   Lhasa             49.03 273   P      P       21 26 47.6 +0.1
LSA                                 pmax   pmax
      comp=Z,3.0nm,0.8s
LSA   Lhasa             49.03 273   P      P       21 26 47.6 +0.1
LSA                                 IAmb   IAmb    21 26 49.8
      comp=Z,3.3nm,0.8s
CMAR  Chiang Mai Arr    50.74 256   P      P       21 27 00.8 +0.8
      comp=Z,0.4nm,0.4s,baz=41,slow=8.4,SNR=2.1
CMAR                                PcP    PcP     21 28 18.1 +1.4
      comp=Z,0.6nm,0.6s,baz=43,slow=2.2,SNR=4.2
RES   Resolute Bay      52.62  18   P      P       21 27 12.8 -0.5
RES                                 pmax   pmax
      comp=Z,8.0nm,2.6s
TAPN  Taplejung         52.86 273  eP      P       21 27 15.8 -0.3
      comp=Z,8.3nm,0.4s
YKA   Yellowknife Ar    52.87  36   P      P       21 27 16.0 +0.7
      comp=Z,0.6nm,0.6s,baz=295,slow=6.4,SNR=8.3
AAK   Ala-Archa         53.29 296  eP      P       21 27 19.0 +0.1
AAK   Ala-Archa         53.29 296⇓eP      P       21 27 19.0 +0.1
AAK                                 pmax   pmax
      comp=Z,1.0nm,0.7s
ODAN  Odare             53.38 273  eP      P       21 27 21.1 +1.2
      comp=Z,6.0nm,0.4s
JIRN  Jiri              53.74 274  eP      P       21 27 22.8 +0.2
      comp=Z,24nm,0.4s
GUN   Gumba             53.81 275  eP      P       21 27 23.7 +0.6
      comp=Z,19nm,0.5s
RAMN  Ramite            53.88 273  eP      P       21 27 23.9 +0.4
      comp=Z,22nm,0.4s
KSH   Kashi             53.98 292   P      P       21 27 28.1 +4.1
KSH                                 pP     sP      21 27 47.1 +7.3
KSH                                 PP     PP      21 29 30.8 +5.5
KSH                                 PcS    PcS     21 32 30.3 +2.1
KSH                                 S      S       21 34 56.4 -0.4
KSH   Kashi             53.98 292   SS     SS      21 38 38.1 +0.1
KKN   Kakani            54.30 275  eP      P       21 27 27.5 +1.0
      comp=Z,12nm,0.5s
PKI   Pulchoki          54.34 275  eP      P       21 27 27.2 +0.2
      comp=Z,6.8nm,0.4s
PKIN  Phulchoki         54.35 275  eP      P       21 27 27.2 +0.2
      comp=Z,4.5nm,0.4s
DMN   Daman             54.53 275  eP      P       21 27 29.0 +0.7
      comp=Z,11nm,0.4s
GKN   Gorkha            54.62 276  eP      P       21 27 29.3 +0.5
      comp=Z,17nm,0.6s
DANN  Dangsing          55.03 277  eP      P       21 27 32.9 +1.0
      comp=Z,28nm,0.4s
ARU   Arti              55.19 317c iP      P       21 27 30.8 -1.4
ARU                                                21 29 34.1
ARU                                 S      S       21 35 08.9 -3.3
ARU                                 SS     SS      21 38 52.9 -3.0
ARU                                 pmax   pmax
      comp=Z,4.0nm,1.0s
KK31  Karatay Array     55.54 299   P      P       21 27 33.8 -1.2
KK31                                pmax   pmax
      comp=Z,1.0nm,1.2s
KK31  Karatay Array     55.54 299   P      P       21 27 33.8 -1.2
KKAR  Karatay Array     55.54 299   P      P       21 27 34.6 -0.4
KKAR  Karatay Array     55.54 299   P      P       21 27 34.6 -0.4
KKAR  Karatay Array     55.54 299   P      P       21 27 34.3 -0.7
KKAR                                IAmb   IAmb    21 27 41.6
      comp=Z,1.0nm,1.1s
DAG   Danmarks Havn     58.03 357   P      P       21 27 50.9 -1.2
DAG                                 pmax   pmax
      comp=Z,6.0nm,2.0s
ABKAR Akbulak array     58.34 310   P      P       21 27 53.5 -1.2
ARCES ARCESS Array B    58.78 340   P      P       21 27 56.0 -1.5
      comp=Z,2.9nm,1.0s,baz=41,slow=8.4,SNR=1.3
ARCES ARCESS Array B    58.78 340   P      P       21 27 56.0 -1.5
NIL   Nilore            59.10 288   P      P       21 28 00.3  0.0
NIL                                 pmax   pmax
      comp=Z,13nm,0.9s
NIL   Nilore            59.10 288   P      P       21 28 00.3  0.0
WALA  Waterton Lakes    60.38  49   P      P       21 28 09.7 +0.7
WALA                                IAmb   IAmb    21 28 14.5
      comp=Z,4.4nm,1.1s
JTMT  Jette             60.96  50   P      P       21 28 13.5 +0.5
JTMT                                IAmb   IAmb    21 28 18.2
      comp=Z,2.2nm,0.9s
KBL   Kabul             61.37 291   P      P       21 28 15.2 -0.8
KBL                                 pmax   pmax
      comp=Z,6.0nm,0.6s
KBL   Kabul             61.37 291   P      P       21 28 15.2 -0.8
SUMG  Summit            62.23   3  iP      P       21 28 21.6 +0.2
SUMG  Summit            62.23   3  iP      P       21 28 21.6 +0.2
SUMG  Summit            62.23   3   P      P       21 28 21.3 -0.1
SUF   Sumiainen         63.77 335   P      P       21 28 30.4 -0.9
NVAR  Mina Array Bea    64.28  61   P      P       21 28 36.7 +1.3
      comp=Z,0.3nm,0.5s,baz=309,slow=8.0,SNR=3.3
SCO   Scoresbysund      64.42 357   P      P       21 28 34.6 -0.8
SCO                                 pmax   pmax
      comp=Z,6.0nm,1.1s
SCO   Scoresbysund      64.42 357   P      P       21 28 34.6 -0.8
SCO                                 IAmb   IAmb    21 28 42.3
      comp=Z,5.5nm,1.1s
FIA1  FINESS Array S    64.77 334   P      P       21 28 36.5 -1.3
FIA1                                IAmb   IAmb    21 28 43.7
      comp=Z,1.5nm,0.7s
FINES FINESS Array B    64.78 334   P      P       21 28 36.0 -1.8
      comp=Z,1.9nm,0.4s,baz=34,slow=7.4,SNR=22
FINES FINESS Array B    64.78 334  eP      P       21 28 36.9 -1.0
FINES                               pmax   pmax
      comp=Z,2.0nm,0.4s
FINES FINESS Array B    64.78 334   P      P       21 28 36.4 -1.5
HRA   Herat             65.87 295   IAmb   IAmb    21 28 46.6
      comp=Z,2.5nm,0.5s
R11A  Troy Canyon, C    65.99  59   P      P       21 28 46.1 -0.3
GEYT  Alibeck           66.20 300   P      P       21 28 46.4 -1.2
      comp=Z,1.5nm,0.5s,baz=32,slow=5.9,SNR=4.7
GEYT  Alibeck           66.20 300   P      P       21 28 47.1 -0.5
WB0   Warramunga Arr    66.55 197   P      P       21 28 51.1 +1.3
WB0                                 IAmb   IAmb    21 28 52.9
      comp=Z,3.7nm,1.0s
PDAR  Pinedale Array    66.67  52   P      P       21 28 51.5 +0.7
      comp=Z,0.4nm,0.8s,baz=252,slow=3.0,SNR=3.9
WB2   Warramunga Arr    66.73 197   P      P       21 28 51.2 +0.3
WB2                                 IAmb   IAmb    21 29 03.6
      comp=Z,4.6nm,1.1s
WRA   Warramunga Arr    66.73 197   P      P       21 28 52.0 +1.1
      comp=Z,1.3nm,0.8s,baz=14,slow=6.4,SNR=9.1
FRB   Frobisher Bay     66.84  18   P      P       21 28 50.2 -0.9
FRB                                 pmax   pmax
      comp=Z,5.0nm,1.7s
DZM   Mont Dzumac       68.47 165   P      P       21 29 03.1 +1.2
RSSD  Black Hills       68.77  48   P      P       21 29 03.7 -0.2
RSSD                                pmax   pmax
      comp=Z,2.0nm,0.6s
RSSD  Black Hills       68.77  48   P      P       21 29 03.7 -0.2
RSSD                                IAmb   IAmb    21 29 04.9
      comp=Z,1.6nm,0.6s
NC303 NORSAR Array S    68.96 340   P      P       21 29 03.5 -1.0
NC405 NORSAR Array S    68.97 340   P      P       21 29 03.6 -1.0
NC204 NORSAR Array S    69.06 341   P      P       21 29 04.0 -1.2
NB201 NORSAR Array S    69.13 340   P      P       21 29 04.6 -1.1
NB2   NORSAR Subarra    69.16 340   P      P       21 29 04.4 -1.4
      comp=Z,1.0nm,0.5s,baz=26,slow=6.9
NOA   NORSAR Array B    69.16 340   P      P       21 29 04.9 -0.9
      comp=Z,0.9nm,0.5s,baz=28,slow=6.5,SNR=11
NC602 NORSAR Array S    69.35 340   P      P       21 29 05.5 -1.4
NORES NORESS Array B    69.35 340   P      P       21 29 05.6 -1.3
NORES                               pmax   pmax
      comp=Z,1.0nm,0.3s
NAO01 NORSAR Array S    69.41 340   P      P       21 29 06.1 -1.2
PV17  East Wray Mesa    69.98  56   P      P       21 29 12.2 +0.7
ASAR  Alice Springs     70.43 197   P      P       21 29 16.4 +2.5
      comp=Z,1.3nm,0.8s,baz=11,slow=5.4,SNR=12
ASAR  Alice Springs     70.43 197   P      P       21 29 15.9 +1.9
ASAR  Alice Springs     70.43 197   P      P       21 29 15.9 +1.9
KIV   Kislovodsk        70.85 314  eP      P       21 29 18.1 +1.5
KIV   Kislovodsk        70.85 314  eP      P       21 29 18.0 +1.5
KIV                                 pmax   pmax
      comp=Z,23nm,1.1s
KBZ   Khabaz            70.90 313   P      P       21 29 16.6  0.0
      comp=Z,3.9nm,0.9s,baz=62,slow=5.3,SNR=9.6
KBZ   Khabaz            70.90 313  eP      P       21 29 17.6 +0.9
KBZ   Khabaz            70.90 313  eP      P       21 29 17.6 +0.9
KBZ                                 pmax   pmax
      comp=Z,4.0nm,0.9s
TBLG  Delisi            71.34 311   P      P       21 29 19.6 +0.1
TBLG                                pmax   pmax
      comp=Z,7.0nm,0.6s
TBLG  Delisi            71.34 311   P      P       21 29 19.6 +0.1
AKASG Malin Array Be    72.00 325   P      P       21 29 21.8 -1.4
      comp=Z,1.4nm,0.4s,baz=38,slow=6.0,SNR=6.9
EYMN  Ely               72.12  39   P      P       21 29 23.7 -0.3
EYMN                                IAmb   IAmb    21 29 25.0
      comp=Z,2.3nm,1.1s
GNI   Garni             72.45 310  eP      P       21 29 27.7 +1.4
ECSD  EROS Data Cent    72.84  45   P      P       21 29 28.7 +0.3
ECSD                                IAmb   IAmb    21 29 35.8
      comp=Z,2.7nm,1.1s
NRS   Narsarsuaq        73.03   8   P      P       21 29 29.1 -0.1
NRS                                 pmax   pmax
      comp=Z,59nm,1.0s
SCHQ  Schefferville     75.15  22   P      P       21 29 41.5 -0.1
      comp=Z,2.0nm,0.8s,baz=302,slow=15,SNR=2.5
SCHQ  Schefferville     75.15  22   IAmb   IAmb    21 29 42.1
      comp=Z,4.1nm,1.1s
OJC   Ojcow             75.93 330   P      P       21 29 45.8 -0.5
OJC                                 pmax   pmax
      comp=Z,4.0nm,1.0s
OJC   Ojcow             75.93 330   P      P       21 29 45.8 -0.5
OJC                                 IAmb   IAmb    21 29 46.5
      comp=Z,3.8nm,1.0s
BUR08 Bucovina Ar. S    76.03 326   P      P       21 29 46.2 -0.8
UOSS  Minazif           76.05 291   P      P       21 29 46.8 -0.5
UOSS                                IAmb   IAmb    21 29 52.0
      comp=Z,3.0nm,0.9s
BURAR Bucovina Array    76.05 326 ⇑P      P       21 29 47.1 +0.1
BURAR Bucovina Array    76.05 326   P      P       21 29 46.3 -0.8
BURAR Bucovina Array    76.05 326   P      P       21 29 46.8 -0.3
TESR  Tescani           76.36 324 ⇓P      P       21 29 48.1 -0.6
TRPA  Tarpa             76.67 327 ⇓P      P       21 29 50.9 +0.5
CLL   Collm             77.22 335  eP      P       21 29 53.0 -0.5
      comp=Z,4.0nm,0.6s
CLL                                epP     sP      21 30 14.0 +4.0
CLL   Collm             77.22 335  eP      P       21 29 53.0 -0.5
CLL                                e               21 30 14.0
CLL                                 pmax   pmax
      comp=Z,4.0nm,0.6s
HARR  Harsova           77.27 322 ⇓P      P       21 29 53.9  0.0
EKA   Eskdalemuir Ar    77.42 345   P      P       21 29 53.9 -0.6
MLR   Muntele Rosu      77.47 324 ⇑P      P       21 29 55.5 +0.4
MLR   Muntele Rosu      77.47 324   P      P       21 29 56.0 +0.8
MLR                                 pmax   pmax
      comp=Z,8.0nm,2.7s
DRGR                    77.71 327 ⇑P      P       21 29 55.9 -0.4
DRGR                    77.71 327   P      P       21 29 56.0 -0.4
DRGR                                pmax   pmax
      comp=Z,7.0nm,1.6s
VYHS  Vyhne             77.73 330  eP      P       21 29 56.3 -0.1
VYHS  Vyhne             77.73 330  eP      P       21 29 56.3 -0.1
VRAC  Vranov            77.81 332 ⇓P      P       21 29 56.4 -0.5
VOIR                    77.89 324 ⇓P      P       21 29 57.7 +0.3
VOIR                    77.89 324   P      P       21 29 57.5 +0.1
VOIR                                pmax   pmax
      comp=Z,9.0nm,0.9s
PRU   Pruhonice         77.89 333  eP      P       21 29 57.1 -0.2
PRU   Pruhonice         77.89 333  eP      P       21 29 57.1 -0.2
KRUC  Moravsky          78.09 332   P      P       21 29 58.4  0.0
ARR   Arges             78.11 325 ⇑P      P       21 30 00.0 +1.3
TREC  Trest             78.19 332   P      P       21 29 58.9  0.0
MOX   Moxa              78.22 335   P      P       21 29 58.6 -0.5
MOX                                 pmax   pmax
      comp=Z,6.0nm,2.1s
BR131 Keskin Array S    78.52 316   P      P       21 30 00.8 -0.3
BR131                               pmax   pmax
      comp=Z,2.0nm,1.1s
BR131 Keskin Array S    78.52 316   P      P       21 30 00.8 -0.3
BRTR  Keskin Array B    78.52 316   P      P       21 30 00.6 -0.5
      comp=Z,0.8nm,0.4s,baz=88,slow=4.7,SNR=11
BRTR  Keskin Array B    78.52 316   P      P       21 29 59.9 -1.2
GZR   Gura Zlata        78.84 326 ⇑P      P       21 30 02.2 -0.5
COPA  Copaceanca        78.87 324 ⇑P      P       21 30 02.6 -0.2
KHC   Kasperske Hory    78.95 333  eP      P       21 30 03.1 -0.1
KHC   Kasperske Hory    78.95 333  eP      P       21 30 03.1 -0.1
KHC   Kasperske Hory    78.95 333   P      P       21 30 02.8 -0.3
KHC                                 IAmb   IAmb    21 30 03.8
      comp=Z,1.5nm,0.6s
BZS   Buzias            79.11 327 ⇓P      P       21 30 02.9 -1.2
BZS   Buzias            79.11 327   P      P       21 30 03.8 -0.2
BZS                                 pmax   pmax
      comp=Z,4.0nm,1.5s
GEC2  GERESS Array S    79.16 333   P      P       21 30 03.9 -0.5
GEC2                                pmax   pmax
      comp=Z,8.0nm,2.9s
GERES GERESS Array B    79.16 333   P      P       21 30 04.0 -0.5
      comp=Z,1.8nm,0.6s,baz=34,slow=6.0,SNR=17
GERES GERESS Array B    79.16 333   P      P       21 30 03.7 -0.7
GRF   Grafenberg Arr    79.18 335   P      P       21 30 04.6 +0.2
GRF                                 pmax   pmax
      comp=Z,13nm,0.9s
CONA  Conrad Observa    79.24 331  iP      P       21 30 05.1 +0.3
      comp=Z,3.4nm,0.6s
TX31  Lajitas Ar. Si    79.36  59   P      P       21 30 07.2 +1.4
TX32  Lajitas Array     79.36  59   P      P       21 30 06.0 +0.2
TXAR  Lajitas Array     79.36  59   P      P       21 30 06.4 +0.5
      comp=Z,1.1nm,0.6s,baz=293,slow=4.1,SNR=10
U40A  Yellville         80.27  47   P      P       21 30 10.6 +0.1
U40A                                IAmb   IAmb    21 30 11.4
      comp=Z,5.4nm,0.7s
KBA   Koelnbreinsper    80.82 332  iP      P       21 30 13.9 +0.4
      comp=Z,2.9nm,0.5s
KBA   Koelnbreinsper    80.82 332   P      P       21 30 14.0 +0.5
KBA                                 pmax   pmax
      comp=Z,8.0nm,2.5s
OBKA  Obir              80.92 331  iP      P       21 30 13.6 -0.4
      comp=Z,1.0nm,0.2s
VTS   Vitosha           80.94 324 ⇑P      P       21 30 14.5 +0.3
VTS   Vitosha           80.94 324   P      P       21 30 13.6 -0.6
VTS                                 pmax   pmax
      comp=Z,6.0nm,0.6s
VTS   Vitosha           80.94 324   P      P       21 30 13.6 -0.6
ZAG   Zagreb            81.02 330   P      P       21 30 12.9 -1.4
WATA  Walderalm         81.16 334  iP      P       21 30 14.7 -0.5
      comp=Z,1.9nm,0.3s
WTTA  Wattenberg        81.21 333  iP      P       21 30 15.3 -0.3
      comp=Z,5.8nm,0.5s
WTTA  Wattenberg        81.21 333   P      P       21 30 15.7 +0.1
MOTA  Moosalm           81.30 334  iP      P       21 30 16.2 +0.2
      comp=Z,1.5nm,0.4s
ECH   Echery            81.69 337   P      P       21 30 17.6 -0.3
PDG   Podgorica         82.71 326 ⇓P      P       21 30 22.4 -0.9
LOR   Lormes            83.45 338   P      P       21 30 27.0 -0.1
LOR                                 pmax   pmax
      comp=Z,6.0nm,1.3s
OSSC  Osservatorio P    84.66 332   P      P       21 30 32.8 -0.5
OSSC                                IAmb   IAmb    21 30 51.8
      comp=Z,5.8nm,1.1s
ISO   Isola             85.39 335   P      P       21 30 37.1 +0.1
ISO                                 pmax   pmax
      comp=Z,5.0nm,2.9s
SAOF  Saorge            85.41 335   P      P       21 30 37.0 -0.1
TORD  Torodi Ar. Bea   115.62 327   PKP    PKiKP   21 36 41.3 -0.7
      comp=Z,0.4nm,0.8s,baz=28,slow=2.5,SNR=5.3
PLCA  Paso Flores      149.37  96   PKPbc  PKPbc   21 37 48.9 +0.8
      comp=Z,1.2nm,0.5s,baz=348,slow=3.3,SNR=7.9
SNAA  Sanae            150.79 196   PKPdf  PKiKP   21 37 51.6 +0.3
VNA2  Neumayer--Watz   152.27 195   PKPdf  PKiKP   21 37 55.2 +1.0
VNA3  Neumayer Olymp   152.39 193   PKPdf  PKiKP   21 37 55.2 +0.7
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*IDC **21** 21:21:51.7±1.8, 7°.98N×94°.18E, h0^{km}, mb3.6/5, mb1 3.7/5, mb1mx3.4/42, mbtmp3.6/5, Error ellipse: s-maj=86.1km s-min=31.2km az=51.0*

ISC 21 21:21:52.8±0.9**, 7°.4N**±0°.2×**93°.8E**±0°.4**, h20^{km}, n6, σ2^{s}.08**/7**, mb3.7**/5**, Nicobar Islands region**

```
Code  Station Name          Δ°  AZ°    Phase ID         Time      Res
                                    Op     ISC       h  m  s     ISC
CMBY  CAMPBELL BAY       0.43 161  eP      Pb      21 22 01.0 -0.7
CMBY                               eS      Sn      21 22 10.4 -0.8
MKAR  Makanchi Array    40.45 348   P      P       21 29 27.6 -2.3
      0.6nm,0.8s,baz=168,slow=8.6,SNR=4.9
ZALV  Zalesovo Beam     46.95 353   P      P       21 30 21.2 -0.9
      0.5nm,0.4s,baz=182,slow=6.5,SNR=2.8
WRA   Warramunga Arr    48.29 125   P      P       21 30 35.0 +2.0
      0.4nm,0.8s,baz=310,slow=7.9,SNR=2.4
BRTR  Keskin Array B    62.46 311   P      P       21 32 17.4 +2.3
      0.4nm,0.6s,baz=115,slow=10,SNR=3.7
FINES FINESS Array B    72.94 332   P      P       21 33 19.6 -0.9
      2.2nm,1.0s,baz=98,slow=3.1,SNR=1.3
```

LJU 21 21:28:00.8, 45°.74N×14°.86E, h2^{km}, ML0.2, Northwestern Balkan Peninsula

```
Code  Station Name          Δ°  AZ°    Phase ID         Time      Res
                                    Op     ISC       h  m  s     ISC
VISS  Visnje             0.06 349  i Pg    Pg      21 28 02.0 -0.1
VISS                               i Sg    Sg      21 28 03.0 +0.1
      comp=Z,9.0nm,0.1s
```

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*MOS **21** 21:31:39.2±0.9, 5°.08S×152°.66E, h40^{km}, mb4.9/13, Error ellipse: s-maj=9.5km s-min=7.4km az=100.0*

*IDC **21** 21:31:42.2±1.6, 5°.24S×152°.76E, h59^{km}±11^{km}, mb4.0/19, mb1 4.2/21, mb1mx4.1/33, mbtmp4.3/21, MS4.0/13, Ms1 4.0/13, ms1mx3.8/31, Error ellipse: s-maj=15.8km s-min=9.2km az=104.0*

*NEIC **21** 21:31:42.3±1.6, 5°.12S±0°.06×152°.67E±0°.07, h54^{km}±5^{km}, mb4.6/70, Error ellipse: s-maj=10.8km s-min=9.1km az=72.0*

*DJA **21** 21:31:45.1±0.7, 5°S±4°×15°2E±°, h70^{km}±4^{km}, M4.9/13, mb4.6/13, mB5.0/4, MLv5.1/2, Mw(mB)4.3/4*

ISC 21 21:31:42.2±0.4**, 5°.17S**±0°.05×**152°.74E**±0°.06**, h55^{km}, n203, σ0^{s}.94**/187**, mb4.5**/72**, MS3.9**/13**, 5C-7D, New Britain region**

```
Code  Station Name          Δ°  AZ°    Phase ID         Time      Res
                                    Op     ISC       h  m  s     ISC
KRVT  Keravat (AS076     1.12 320   P      Pn      21 32 00.3 -1.3
      5µm,0.3s,baz=156,slow=1.4,SNR=2882
KRVT                                S      Sn      21 32 18.0 +2.0
      5µm,0.3s,baz=109,slow=22,SNR=23
RABL  Rabaul             1.13 329          Pn      21 32 00.8 -1.0
MANU  Manus Island       6.20 300   Pn     Pn      21 33 10.7 -0.5
PMG   Port Moresby       6.96 232   P      Pn      21 33 20.7 -0.8
      8.5nm,0.3s,baz=41,slow=8.4,SNR=24
PMG                                 S      Sn      21 34 38.8 -0.5
      22nm,0.3s,baz=134,slow=17,SNR=12
PMG   Port Moresby       6.96 232deP      Pn      21 33 21.5  0.0
PMG                                 pmax   pmax
      comp=Z,201nm,0.7s
PMG   Port Moresby       6.96 232          Pn      21 33 21.2 -0.3
HNR   Honiara            8.30 121   P      Pn      21 33 42.4 +2.4
HNR   Honiara            8.30 121   Pn     Pn      21 33 42.4 +2.4
COEN  Coen              12.85 227   Pn     Pn      21 34 41.4 -0.8
PATS  Pohnpei           13.16  25   Pn     Pn      21 34 43.5 -2.9
CTA   Charters Tower    16.12 203   P      Pn      21 35 24.2 -1.1
      comp=Z,0.2nm,0.3s,baz=20,slow=16,SNR=3.2
GUMO  Guam              20.21 337   LR     LR      21 44 46.6
      comp=Z,260nm,18.2s,baz=204,slow=39
DZM   Mont Dzumac       21.40 143   P      P       21 36 24.4 -1.2
      comp=Z,7.5nm,0.9s,baz=3.5,slow=19,SNR=2.3
DZM   Mont Dzumac       21.40 143   IAmb   IAmb    21 36 41.6
      comp=Z,20nm,1.1s
SIJI  Sorong            21.86 281   P      P       21 36 30.8 +0.3
      comp=Z,16nm,0.6s,baz=77,slow=6.7,SNR=9.7
SWI   Sorong            21.87 281   P      P       21 36 29.7 -0.9
      comp=Z,1µmcomp=Z,29nm,0.7s
SWI   Sorong            21.87 281   P      P       21 36 31.7 +1.1
SWI                                 pmax   pmax
      comp=Z,29nm,0.7s
MTN   Manton Dam        22.65 249   P      P       21 36 38.5 -0.4
MTN                                 IAmb   IAmb    21 36 58.3
      comp=Z,10nm,0.6s
WB0   Warramunga Arr    23.01 229   P      P       21 36 42.7  0.0
WR0   Warramunga Arr    23.02 229   P      P       21 36 42.6 -0.1
WRAB  Tennant Creek     23.14 229⇓eP      P       21 36 43.2 -0.8
WRAB                                pmax   pmax
      comp=Z,16nm,1.7s
WRAB  Tennant Creek     23.14 229   P      P       21 36 44.6 +0.6
WB2   Warramunga Arr    23.15 229   P      P       21 36 45.0 +1.0
WRA   Warramunga Arr    23.16 229   P      P       21 36 43.0 -1.1
      comp=Z,3.3nm,0.8s,baz=56,slow=10,SNR=21
WRA                                 S      S       21 40 51.7  0.0
      comp=Z,2.0nm,1.0s,baz=53,slow=18,SNR=5.0
WRA                                 LR     LR      21 46 49.3
      comp=Z,338nm,19.7s,baz=65,slow=39
WRA   Warramunga Arr    23.16 229  iP      P       21 36 43.0 -1.1
WRA                                 pmax   pmax
      comp=Z,3.0nm,0.9s
AAI   Ambon             24.52 272   P      P       21 36 56.7 -0.1
AAI                                 pmax   pmax
      comp=Z,22nm,0.5s
KNRA  Kununurra         25.76 244   P      P       21 37 08.5 +0.5
KNRA                                IAmb   IAmb    21 37 26.8
      comp=Z,15nm,0.7s
AS31  Alice Springs     25.84 223   P      P       21 37 09.0 +0.3
ASAR  Alice Springs     25.84 223   P      P       21 37 07.7 -1.1
      comp=Z,2.8nm,0.5s,baz=58,slow=8.8,SNR=49
ASAR                                LR     LR      21 46 46.8
      comp=Z,397nm,20.1s,baz=344,slow=35
ASAR  Alice Springs     25.84 223   P      P       21 37 09.4 +0.7
ASAR  Alice Springs     25.84 223   P      P       21 37 09.4 +0.7
STKA  Stephens Creek    28.55 200   P      P       21 37 31.9 -1.0
      comp=Z,1.3nm,0.5s,baz=26,slow=12,SNR=4.2
STKA  Stephens Creek    28.55 200   P      P       21 37 31.9 -1.0
STKA                                pmax   pmax
      comp=Z,2.0nm,1.2s
FITZ  Fitzroy Crossi    29.43 242   P      P       21 37 40.8 -0.1
      comp=Z,5.1nm,0.6s,baz=45,slow=7.4,SNR=18
FITZ  Fitzroy Crossi    29.43 242   P      P       21 37 41.2 +0.3
FITZ                                IAmb   IAmb    21 37 54.3
      comp=Z,7.2nm,0.6s
JCJ   Chichijima        33.66 343   LR     LR      21 50 42.0
      comp=Z,182nm,20.1s,baz=238,slow=34
MJAR  Matsushiro Arr    43.67 343   P      P       21 39 40.9 -0.7
      comp=Z,0.9nm,0.5s,baz=166,slow=6.1,SNR=4.5
MJAR                                LR     LR      21 55 45.3
      comp=Z,190nm,21.9s,baz=220,slow=33
MJAR  Matsushiro Arr    43.67 343   P      P       21 39 40.9 -0.7
MJAR                                pmax   pmax
      comp=Z,2.0nm,1.1s
MJAR  Matsushiro Arr    43.67 343   IAmb   IAmb    21 39 42.8
      comp=Z,2.3nm,1.1s
MAJO  Matsushiro        43.67 343   P      P       21 39 40.7 -1.0
MAJO                                pmax   pmax
      comp=Z,4.0nm,0.9s
MAJO  Matsushiro        43.67 343   P      P       21 39 40.7 -1.0
MJB9  Matsu-Tunnel      43.67 343   P      P       21 39 40.8 -0.9
KSRS  Korea Array       48.30 333   P      P       21 40 17.7 -0.4
      comp=Z,1.7nm,0.5s,baz=148,slow=6.9,SNR=7.1
KSRS                                LR     LR      21 59 01.4
      comp=Z,79nm,19.8s,baz=130,slow=34
NJ2   Nanjing           49.10 321  eP      P       21 40 24.9 +0.6
WHN   Wuhan             51.08 316   P      P       21 40 50.0  +11
USA0B Ussuriysk Arra    52.58 341   P      P       21 40 50.6 +0.4
USA0B                               pmax   pmax
      comp=Z,5.0nm,1.0s
USA0B Ussuriysk Arra    52.58 341   P      P       21 40 50.6 +0.4
USA0B                               IAmb   IAmb    21 40 53.7
      comp=Z,5.3nm,0.9s
USRK  Ussuriysk Ar.     52.58 341   P      P       21 40 50.5 +0.3
      comp=Z,1.7nm,0.5s,baz=130,slow=5.2,SNR=12
USRK  Ussuriysk Ar.     52.58 341   P      P       21 40 50.1 -0.1
USRK  Ussuriysk Ar.     52.58 341   P      P       21 40 50.1 -0.1
XAN   Xi'an             56.85 317   P      P       21 41 21.1 -0.4
XAN   Xi'an             56.85 317   P      P       21 41 21.1 -0.4
XAN                                 pmax   pmax
      comp=Z,7.0nm,0.6s
XAN   Xi'an             56.85 317   P      P       21 41 21.1 -0.4
KMI   Kunming           57.15 304   P      P       21 41 25.8 +1.9
KMI                                 pP     pwP     21 41 40.1 -2.2
KLR   Kul'dur           57.18 344⇓eP      P       21 41 23.6 +0.2
KLR                                 pmax   pmax
      comp=Z,9.0nm,1.5s
CM31  Chiang Mai Arr    57.98 295   P      P       21 41 29.9 +0.2
CM31                                IAmb   IAmb    21 41 32.3
      comp=Z,5.7nm,0.8s
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CMAR  Chiang Mai Arr   57.98 295   P       P       21 41 30.2 +0.6
            comp=Z,3.1nm,0.7s,baz=115,slow=5.5,SNR=21
CMAR                               LR      LR      22 04 37.5
            comp=Z,53nm,21.8s,baz=100,slow=34
CMAR  Chiang Mai Arr   57.98 295   P       P       21 41 29.7 +0.1
CMAR  Chiang Mai Arr   57.98 295   P       P       21 41 29.7 +0.1
CHTO  Chiang Mai       58.10 296   P       P       21 41 31.6 +1.2
CHTO                               pmax    pmax
            comp=Z,4.0nm,1.4s
PEA0B Petropavlovsk-   58.21   4   P       P       21 41 30.9 +0.3
PEA0B                              pmax    pmax
            comp=Z,39nm,1.2s
PEA0B Petropavlovsk-   58.21   4   P       P       21 41 30.9 +0.3
PETK  Petropavlovsk-   58.21   4   P       P       21 41 30.6  0.0
            comp=Z,4.9nm,0.4s,baz=169,slow=8.5,SNR=28
PETK                               LR      LR      22 01 33.6
            comp=Z,157nm,21.5s,baz=242,slow=31
PETK  Petropavlovsk-   58.21   4   P       P       21 41 31.0 +0.4
PETK  Petropavlovsk-   58.21   4   P       P       21 41 31.0 +0.4
CD2   Chengdu          58.94 311   P       P       21 41 35.3 -0.8
HHC   Hu-ho-hao-te     59.31 324  eP       P       21 41 39.4 +0.8
LZH   Lanzhou          61.46 316  eP       P       21 41 54.5 +1.1
LZH                                pP      sP      21 42 14.0 +0.9
LZH                                sP      pwP     21 42 22.0  +10
ADK   Adak             62.53  21   P       P       21 42 00.8 +0.7
ADK                                pmax    pmax
            comp=Z,75nm,2.5s
MA2   Magadan          64.56 359⇑eP       P       21 42 12.3 -1.1
MA2                                pmax    pmax
            comp=Z,7.0nm,0.6s
MA2   Magadan          64.56 359   P       P       21 42 12.9 -0.5
GTA   Gaotai           65.89 317   P       P       21 42 22.3 -0.3
GTA                                pP      pP      21 42 38.1 +1.1
GTA                                sP      sP      21 42 45.3 +2.4
SONM  Songino Array    66.61 328   P       P       21 42 26.4 -0.6
            comp=Z,1.4nm,0.6s,baz=141,slow=5.1,SNR=14
SONM                               LR      LR      22 13 24.6
            comp=Z,101nm,18.1s,baz=138,slow=38
SONM  Songino Array    66.61 328   P       P       21 42 26.2 -0.8
SONM                               pmax    pmax
            comp=Z,1.0nm,0.7s
SONM  Songino Array    66.61 328   P       P       21 42 26.2 -0.8
SEY   Seymchan         67.91 360⇓iP       P       21 42 34.2 -0.5
UNV   Unalaska Valle   67.98  25   P       P       21 42 33.5 -1.8
LSA   Lhasa            68.40 305   P       P       21 42 39.2 +0.1
LSA                                pmax    pmax
            comp=Z,4.0nm,0.7s
LSA   Lhasa            68.40 305   P       P       21 42 39.2 +0.1
LSA                                IAmb    IAmb    21 42 41.2
            comp=Z,3.9nm,0.7s
YAK   Yakutsk          69.33 349⇑eP       P       21 42 44.2 +0.7
YAK                                pmax    pmax
            comp=Z,5.0nm,0.6s
ZAK   Zakamensk        69.78 329  eP       P       21 42 46.3 -0.5
ZAK                                pmax    pmax
            comp=Z,3.0nm,1.4s
TAPN  Taplejung        70.55 301  eP       P       21 42 52.4 +0.2
            comp=Z,8.7nm,0.6s
ODAN  Odare            70.68 301  eP       P       21 42 53.1 +0.2
            comp=Z,14nm,0.6s
RAMN  Ramite           71.39 301  eP       P       21 42 57.0 -0.2
            comp=Z,7.5nm,0.6s
JIRN  Jiri             71.93 301  eP       P       21 43 00.9 +0.3
            comp=Z,16nm,0.5s
GUN   Gumba            72.26 301  eP       P       21 43 02.8 +0.2
            comp=Z,18nm,0.7s
VNDA  Vanda            72.46 178   P       P       21 43 02.4  0.0
            comp=Z,1.0nm,0.7s,baz=345,slow=6.6,SNR=5.4
PKI   Pulchoki         72.57 301  eP       P       21 43 04.3 -0.1
            comp=Z,6.5nm,0.6s
PKIN  Phulchoki        72.59 301  eP       P       21 43 04.1 -0.3
            comp=Z,7.7nm,0.8s
KKN   Kakani           72.74 301  eP       P       21 43 05.1 -0.2
            comp=Z,12nm,0.6s
DMN   Daman            72.84 301  eP       P       21 43 06.2 +0.3
            comp=Z,21nm,0.9s
GKN   Gorkha           73.35 301  eP       P       21 43 08.7 -0.1
            comp=Z,12nm,0.6s
BILL  Bilibino         73.66   5   P       P       21 43 09.9 +0.3
BILL                               pmax    pmax
            comp=Z,18nm,0.8s
BILL  Bilibino         73.66   5   P       P       21 43 09.8 +0.3
GAMB  Gambell          73.75  16   IAmb    IAmb    21 43 12.4
            comp=Z,5.4nm,1.0s
DANN  Dangsing         74.19 301  eP       P       21 43 13.5 -0.4
            comp=Z,13nm,0.5s
SII   Sitkinak Islan   75.12  27   P       P       21 43 17.4 -0.9
OHAK  Old Harbor       75.90  27   IAmb    IAmb    21 43 21.6
            comp=Z,5.8nm,0.8s
OHAK                               P       P       21 43 21.7 -1.0
WMQ   Urumqi           75.97 317  eP       P       21 43 25.3 +1.7
WMQ   Urumqi           75.97 317   P       P       21 43 22.2 -1.4
WMQ                                pmax    pmax
            comp=Z,7.0nm,0.5s
WMQ   Urumqi           75.97 317   P       P       21 43 22.1 -1.4
ANM   Nome             76.14  17   P       P       21 43 24.2 +0.2
ANM                                pmax    pmax
            comp=Z,5.0nm,0.7s
ANM   Nome             76.14  17   P       P       21 43 24.1 +0.2
ANM                                IAmb    IAmb    21 43 26.0
            comp=Z,5.3nm,0.7s
TIXI  Tiksi            78.25 352   P       P       21 43 36.8 +1.2
TIXI                               pmax    pmax
            comp=Z,4.0nm,1.1s
TIXI  Tiksi            78.25 352   P       P       21 43 36.8 +1.2
DGZ   Jazzator, Alta   78.34 323⇑eP       P       21 43 36.6 -0.2
DGZ                                pmax    pmax
            comp=Z,3.0nm,0.7s
RDOG  Red Dog Mine     79.35  16   P       P       21 43 42.5 +0.7
RC01  Rabbit Creek A   79.53  25   P       P       21 43 43.0 +0.1
SML   Sawmill          80.48  24   P       P       21 43 48.7 +0.6
SML                                pmax    pmax
            comp=Z,14nm,0.6s
SML   Sawmill          80.48  24   P       P       21 43 48.7 +0.6
TRF   Thorofare Moun   80.56  22   IAmb    IAmb    21 43 49.2
            comp=Z,4.5nm,1.0s
MK31  Makanchi Array   80.57 319  i P      P       21 43 49.1 +0.3
MKAR  Makanchi Array   80.57 319   P       P       21 43 48.8 -0.1
            comp=Z,0.7nm,0.4s,baz=93,slow=7.6,SNR=33
MKAR                               LR      LR      22 17 34.6
            comp=Z,79nm,21.6s,baz=87,slow=34
MKAR  Makanchi Array   80.57 319   P       P       21 43 48.4 -0.4
MKAR  Makanchi Array   80.57 319   P       P       21 43 48.4 -0.4
HIN   Hinchinbrook I   80.57  26   P       P       21 43 48.1 -0.4
BPAW  Bear Paw Mtn.    80.65  22   P       P       21 43 48.5 -0.4
IMAR  Indian Mountai   80.75  19   P       P       21 43 49.2 -0.2
MAKZ  Makanchi         80.78 319   P       P       21 43 49.7 -0.3
MAKZ                               pmax    pmax
            comp=Z,4.0nm,1.1s
MAKZ  Makanchi         80.78 319   P       P       21 43 49.7 -0.3
SCM   Sheep Creek Mo   80.91  25   P       P       21 43 51.2 +0.8
SCM                                pmax    pmax
            comp=Z,23nm,1.2s
SCM   Sheep Creek Mo   80.91  25   P       P       21 43 51.2 +0.8
RND   Reindeer         81.09  23   IAmb    IAmb    21 43 51.8
            comp=Z,6.6nm,0.6s
ZAA0  Zalesovo Array   81.43 326   IAmb    IAmb    21 43 54.4
            comp=Z,3.4nm,0.6s
ZALV  Zalesovo Beam    81.43 326   P       P       21 43 51.6 -1.5
            comp=Z,3.4nm,0.5s,baz=115,slow=6.5,SNR=15
ZALV  Zalesovo Beam    81.43 326   P       P       21 43 52.1 -1.1
ZALV  Zalesovo Beam    81.43 326   P       P       21 43 52.1 -1.1
DHY   Denali Highway   81.50  23   IAmb    IAmb    21 43 59.9
            comp=Z,3.6nm,0.8s
WRH   Wood River Hil   81.92  22   IAmb    IAmb    21 43 56.0
            comp=Z,4.0nm,0.7s
CCB   Clear Creek Bu   82.12  22   IAmb    IAmb    21 43 56.7
            comp=Z,5.0nm,0.7s
CRQM  Cirque           82.21  26   P       P       21 43 58.1 +0.7
COLA  College          82.21  22  eP       P       21 43 57.1  0.0
GLB   Gilahina Butte   82.22  26   P       P       21 43 58.1 +0.9
VRDI  Verde Repeater   82.28  26   P       P       21 43 57.9 +0.2
VRDI                               IAmb    IAmb    21 44 00.3
            comp=Z,11nm,1.1s
HDA   Harding Lake     82.32  22   IAmb    IAmb    21 43 59.5
            comp=Z,3.0nm,0.5s
IL31                   82.52  22   IAmb    IAmb    21 43 59.0
            comp=Z,3.7nm,0.9s
ILAR  Eielson Array    82.52  22   P       P       21 43 57.5 -1.2
            comp=Z,2.4nm,0.5s,baz=253,slow=5.2,SNR=38
MCARA McCarthy VSAT    82.53  26   P       P       21 43 58.3 -0.6
MCARA                              IAmb    IAmb    21 43 59.0
            comp=Z,12nm,1.2s
COLD  Coldfoot         82.62  19   P       P       21 43 60.0 +0.8
BALM  Baldy            82.68  26   P       P       21 44 00.1 +0.3
BALM                               IAmb    IAmb    21 44 13.0
            comp=Z,7.0nm,1.1s
RIDG  Independent Ri   82.82  23   P       P       21 44 01.2 +0.8
RIDG                               IAmb    IAmb    21 44 03.4
            comp=Z,3.8nm,0.8s
KSH   Kashi            83.13 311   P       P       21 44 05.5 +2.9
KSH                                pP      sP      21 44 22.3 -0.9
KSH                                PP      PP      21 47 19.4 +4.9
KSH   Kashi            83.13 311   S       S       21 54 19.3 +0.7
KSH   Kashi            83.13 311   sS      sS      21 54 49.0 +5.7
KSH   Kashi            83.13 311   SS      SS      21 59 49.0 +5.1
ULHL  Ulahol           83.53 313   P       P       21 44 05.7 +1.0
            SNR=6.3
TOLK  Toolik Lake Re   83.58  18   P       P       21 44 04.6 +0.4
TOLK                               IAmb    IAmb    21 44 06.1
            comp=Z,7.2nm,0.9s
BCAR  Beaver Creek A   83.77  25   P       P       21 44 05.8 +0.6
FYU   Fort Yukon       83.98  21   P       P       21 44 06.3 +0.1
FYU                                IAmb    IAmb    21 44 10.1
            comp=Z,10nm,1.2s
KURK  Kurchatov        84.03 322⇓eP       P       21 44 06.6 -0.1
KURK                               pmax    pmax
            comp=Z,14nm,2.5s
KURK  Kurchatov        84.03 322   P       P       21 44 06.7  0.0
KURK                               IAmb    IAmb    21 44 07.7
            comp=Z,6.8nm,1.1s
NIL   Nilore           84.14 304   P       P       21 44 07.9 +0.1
NIL                                pmax    pmax
            comp=Z,20nm,1.0s
NIL   Nilore           84.14 304   P       P       21 44 07.9 +0.1
KZA   Kyzart           84.22 313   P       P       21 44 10.2 +1.7
            SNR=16
BMAR  Burnt Mountain   84.61  20   P       P       21 44 10.2 +0.7
EGAK  Eagle            84.72  23   IAmb    IAmb    21 44 16.2
            comp=Z,3.0nm,0.8s
CHMS  Chumysh          84.77 314   P       P       21 44 11.5 +0.7
            SNR=7.0
UCH   Uchtor           84.78 313   P       P       21 44 12.8 +1.5
            SNR=10
HYT   Haines Junctio   84.79  27   P       P       21 44 11.9 +1.4
QSPA  South Pole Qui   84.79 180   P       P       21 44 11.3 +0.8
QSPA                               IAmb    IAmb    21 44 29.5
            comp=Z,4.1nm,1.0s
AAK   Ala-Archa        84.88 314   P       P       21 44 12.5 +1.0
            SNR=5.5
AAK   Ala-Archa        84.88 314deP       P       21 44 12.7 +1.2
AAK                                pmax    pmax
            comp=Z,11nm,1.7s
AAK   Ala-Archa        84.88 314   P       P       21 44 11.7 +0.2
AAK                                IAmb    IAmb    21 44 14.1
            comp=Z,5.4nm,1.0s
USP   Ospenovka        85.00 314   P       P       21 44 12.7 +0.7
            SNR=7.8
DAWY  Dawson           85.15  24   P       P       21 44 13.2 +1.0
DAWY                               IAmb    IAmb    21 44 30.9
            comp=Z,2.8nm,0.8s
MAW   Mawson           85.21 203   LR      LR      22 20 29.8
            comp=Z,143nm,18.5s,baz=60,slow=34
MAW   Mawson           85.21 203   P       P       21 44 12.0 -0.4
MAW                                pmax    pmax
            comp=Z,1.0nm,1.1s
MAW   Mawson           85.21 203   P       P       21 44 11.9 -0.4
AML   Almayashu        85.36 313   P       P       21 44 15.5 +1.3
            SNR=13
EKS2  Erkin-Say        85.40 313   P       P       21 44 15.2 +1.1
            SNR=9.5
NRIK  Noril'sk         86.30 341   P       P       21 44 17.0 -0.7
            comp=Z,8.2nm,0.5s,baz=121,slow=4.3,SNR=17
NRIK  Noril'sk         86.30 341⇑eP       P       21 44 17.0 -0.7
NRIK                               pmax    pmax
            comp=Z,7.0nm,0.5s
KBL   Kabul            87.73 305   P       P       21 44 24.6 -1.1
KBL                                pmax    pmax
            comp=Z,3.0nm,0.7s
KBL   Kabul            87.73 305   P       P       21 44 24.6 -1.1
KBL                                IAmb    IAmb    21 44 26.0
            comp=Z,3.5nm,0.7s
KK31  Karatay Array    87.84 313   IAmb    IAmb    21 44 28.1
            comp=Z,3.5nm,1.1s
KKAR  Karatay Array    87.84 313   P       P       21 44 25.5 -0.3
KKAR                               pmax    pmax
            comp=Z,3.0nm,1.1s
KKAR  Karatay Array    87.84 313   P       P       21 44 25.7 -0.2
KKAR  Karatay Array    87.84 313   P       P       21 44 25.5 -0.3
KKAR                               IAmb    IAmb    21 44 28.1
            comp=Z,3.5nm,1.1s
INK   Inuvik           88.82  21   P       P       21 44 30.3 +0.5
INK                                pmax    pmax
            comp=Z,7.0nm,1.5s
BRVK  Borovoye         89.57 323⇓iP       P       21 44 33.4 -0.3
BRVK                               pmax    pmax
            comp=Z,9.0nm,1.7s
NVAR  Mina Array Bea   92.36  52   P       P       21 44 48.2 +0.9
            comp=Z,0.7nm,0.7s,baz=252,slow=6.9,SNR=5.3
NVAR                               LR      LR      22 19 32.8
            comp=Z,210nm,21.6s,baz=342,slow=31
HRA   Herat            93.30 304   IAmb    IAmb    21 44 52.5
            comp=Z,2.8nm,0.8s
YKA   Yellowknife Ar   95.78  28   P       P       21 45 02.5 +0.4
            comp=Z,0.9nm,0.7s,baz=266,slow=4.5,SNR=18
ARU   Arti             96.59 326c iP      P       21 45 04.2 -1.8
ARU                                                21 48 59.4
ARU                                S       SKSac   21 55 36.5 -1.5
ARU                                pmax    pmax
            comp=Z,3.0nm,0.8s
GEYT  Alibeck          96.80 307   LR      LR      22 32 26.0
            comp=Z,35nm,19.0s,baz=170,slow=38
TMCR  Tamitsa         105.24 336  eP       Pdif    21 45 42.7 -1.7
TMCR                               pmax    pmax
            comp=Z,31nm,0.6s
FINES FINESS Array B  111.36 336   Pdiff   Pdif    21 46 10.4 -1.2
            comp=Z,1.4nm,0.8s,baz=76,slow=5.9,SNR=8.8
AKASG Malin Array Be  114.76 324   PKP     PKiKP   21 50 16.1 -0.5
            comp=Z,0.6nm,0.5s,baz=61,slow=2.5,SNR=2.2
BRTR  Keskin Array B  115.51 312   PKP     PKiKP   21 50 18.1 -0.5
            comp=Z,0.4nm,0.7s,baz=277,slow=1.2,SNR=2.7
CLL   Collm           123.15 331  ePKPdf   PKiKP   21 50 35.0 +2.1
CONA  Conrad Observa  123.72 326  ePKiKP   PKiKP   21 50 34.3  0.0
            comp=Z,0.6nm,0.4s
ARSA  Arzberg         124.30 326  ePKiKP   PKPdf   21 50 34.5 -0.6
            comp=Z,0.7nm,0.4s
GERES GERESS Array B  124.34 328   PKP     PKPdf   21 50 35.1 -0.1
            comp=Z,1.4nm,0.6s,baz=80,slow=1.8,SNR=15
GERES GERESS Array B  124.34 328           PKPdf   21 50 35.0 -0.3
MOTA  Moosalm         126.64 328  i PKiKP  PKPdf   21 50 39.5 -0.3
            comp=Z,1.7nm,0.5s
RETA  Reutte          126.72 329  i PKPdf  PKPdf   21 50 38.5 -1.3
            comp=Z,0.3nm,0.2s
FETA  Feichten        127.04 328  i PKiKP  PKiKP   21 50 40.9 -0.1
            comp=Z,0.9nm,0.5s
LPAZ  La Paz          134.29 119   PKP     PKiKP   21 50 56.8 -0.3
            comp=Z,0.4nm,0.4s,baz=219,slow=8.5,SNR=3.7
TOA0  Torodi Ar. Sit  150.37 288           PKPbc   21 51 28.1 -0.4
TORD  Torodi Ar. Bea  150.37 288   PKPbc   PKPbc   21 51 27.8 -0.7
            comp=Z,3.7nm,0.7s,baz=62,slow=2.7,SNR=19
TORD  Torodi Ar. Bea  150.37 288           PKPbc   21 51 28.2 -0.3
BDFB  Brasilia        150.84 136   PKPbc   PKiKP   21 51 30.6 +0.2
            comp=Z,2.9nm,0.5s,baz=177,slow=1.0,SNR=4.4
DBIC  Dimbokro        157.67 275   PKPab   PKPab   21 52 05.4 -0.6
            comp=Z,3.2nm,0.7s,baz=76,slow=6.1,SNR=5.6
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*IDC **21** 21:41:38.2±3.9, 7°.42N×93°.74E, h0^{km}, mb3.4/5, mb1 3.5/5, mb1mx3.3/40, mbtmp3.4/5, MS3.1/1, Ms1 3.1/1, ms1mx2.7/30, Error ellipse: s-maj=160.9km s-min=24.9km az=62.0*

ISC 21 21:41:40.9±1.0**, 7°.60N**±0°.09×**94°.1E**±0°.3**, h10**^{km}**, n8, σ0^s.70**/9**, mb3.4**/5**, Nicobar Islands region**

```
Code  Station Name      Δ°   AZ°   Phase ID        Time        Res
                                   Op      ISC     h  m  s     ISC
CMBY  CAMPBELL BAY      0.60 192  eP       Pn      21 41 55.2 -0.3
CMBY                              eS       Sn      21 42 05.7 +0.4
CMBY  CAMPBELL BAY      0.60 192  eP       Pn      21 41 55.5  0.0
CMBY                              eS       Sn      21 42 05.5 +0.2
MKAR  Makanchi Array   40.33 348   P       P       21 49 17.9 -0.8
            0.5nm,0.7s,baz=164,slow=7.4,SNR=5.8
SONM  Songino Array    41.45  13   P       P       21 49 28.2 +0.2
            0.4nm,0.9s,baz=186,slow=7.2,SNR=2.1
ZALV  Zalesovo Beam    46.81 353   P       P       21 50 11.5 +0.7
            0.7nm,0.4s,baz=187,slow=7.3,SNR=4.6
WRA   Warramunga Arr   48.18 125   P       P       21 50 22.5 +0.6
            0.2nm,0.6s,baz=292,slow=9.1,SNR=3.2
ASAR  Alice Springs    49.81 130   P       P       21 50 33.4 -1.0
            0.3nm,0.7s,baz=297,slow=6.1,SNR=2.1
GUMO  Guam             50.23  79   LR      LR      22 11 29.3
            comp=Z,17nm,19.3s,baz=179,slow=35
```

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*IDC **21** 21:42:14.0±11.0, 7°.30N×94°.07E, h0^{km}, mb3.6/4, mb1 3.6/5, mb1mx3.4/41, mbtmp3.5/5, MS4.4/1, Ms1 4.4/1, ms1mx3.0/37, Error ellipse: s-maj=214.2km s-min=58.2km az=156.0*

ISC 21 21:42:18.4±1.0**, 7°.5N**±0°.1×**94°.1E**±0°.3**, h20**^{km}**, n8, σ0^s.39**/9**, mb3.6**/4**, Nicobar Islands region**

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Code  Station Name      Δ°   AZ°   Phase ID        Time        Res
                                   Op      ISC     h  m  s     ISC
CMBY  CAMPBELL BAY      0.48 197  eP       Pn      21 42 29.8 -0.4
CMBY                              eS       Sn      21 42 38.4 +0.4
CMBY  CAMPBELL BAY      0.48 197  eP       Pn      21 42 29.9 -0.4
CMBY                              eS       Sn      21 42 38.4 +0.4
CMAR  Chiang Mai Arr   11.90  23   Pn      Pn      21 45 07.3 +0.2
            baz=218,slow=15,SNR=1.5
MKAR  Makanchi Array   40.46 348   P       P       21 49 55.4 -0.2
            0.5nm,0.6s,baz=172,slow=7.7,SNR=3.8
SONM  Songino Array    41.56  13   P       P       21 50 05.0 +0.2
            0.4nm,0.9s,baz=179,slow=7.2,SNR=1.8
GEYT  Alibeck          44.45 318   P       P       21 50 28.5 +0.2
            0.9nm,0.7s,baz=134,slow=12,SNR=2.0
ZALV  Zalesovo Beam    46.94 353   P       P       21 50 47.2 -0.4
            0.5nm,0.5s,baz=176,slow=5.4,SNR=1.8
CTA   Charters Tower   58.18 119   LR      LR      22 18 45.6
            comp=Z,275nm,18.8s,baz=165,slow=38
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*IDC **21** 21:54:01.9±1.6, 7°.31N×94°.08E, h0^{km}, mb3.7/9, mb1 3.8/10, mb1mx3.6/47, mbtmp3.7/10, ML4.1/1, Error ellipse: s-maj=46.4km s-min=29.4km az=56.0*

ISC 21 21:54:05.1±1.3**, 7°.3N**±0°.2×**94°.1E**±0°.2**, h20**^{km}**, n10, σ0^s.66**/10**, mb3.7**/9**, Nicobar Islands region**

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Code  Station Name      Δ°   AZ°   Phase ID        Time        Res
                                   Op      ISC     h  m  s     ISC
CMAR  Chiang Mai Arr   12.07  23   Pn      Pn      21 56 56.5 +0.5
            0.3nm,0.3s,baz=216,slow=17,SNR=1.7
MKAR  Makanchi Array   40.64 348   P       P       22 01 43.4 -0.5
            1.2nm,0.7s,baz=162,slow=8.3,SNR=14
SONM  Songino Array    41.74  12   P       P       22 01 52.3 -0.7
            0.1nm,0.4s,baz=211,slow=8.2,SNR=3.0
KURBB Kurchatov Arra   45.10 346   P       P       22 02 18.7 -1.1
            1.5nm,0.8s,baz=164,slow=7.0,SNR=15
ZALV  Zalesovo Beam    47.12 353   P       P       22 02 35.8 +0.1
            0.6nm,0.4s,baz=169,slow=8.3,SNR=6.8
WRA   Warramunga Arr   47.97 125   P       P       22 02 42.8 -0.1
            0.2nm,0.6s,baz=305,slow=8.5,SNR=1.7
BVAR  Borovoye Array   49.52 341   P       P       22 02 54.7 +0.5
            1.1nm,0.8s,baz=120,slow=10,SNR=9.1
BRTR  Keskin Array B   62.77 311   P       P       22 04 29.2 -0.2
            0.3nm,0.5s,baz=79,slow=7.5,SNR=2.3
FINES FINESS Array B   73.20 332   P       P       22 05 34.5 +0.2
            2.6nm,0.9s,baz=115,slow=9.4,SNR=3.4
GERES GERESS Array B   78.22 318   P       P       22 06 04.3 +0.8
            0.4nm,0.6s,baz=87,slow=4.0,SNR=3.0
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*IDC **21** 21:54:33.2±10.0, 6°.94N×93°.34E, h0^{km}, mb3.5/4, mb1 3.5/4, mb1mx3.2/47, mbtmp3.5/4, MS3.8/1, Ms1 3.8/1, ms1mx2.8/35, Error ellipse: s-maj=570.9km s-min=30.9km az=59.0*

ISC 21 21:54:34.6±1.7**, 6°.9N**±0°.2×**93°.2E**±0°.1**, h10**^{km}**, n6, σ0^s.93**/6**, mb3.5**/4**, Nicobar Islands region**

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Code  Station Name      Δ°   AZ°   Phase ID        Time        Res
                                   Op      ISC     h  m  s     ISC
CMBY  CAMPBELL BAY      0.71  80  eP       Pn      21 54 51.7 +1.0
CMBY                              eS       Sn      21 55 00.8 -0.9
TGY   Tagaytay City    28.16  73   LR      LR      22 12 23.9
            comp=Z,176nm,18.0s,baz=112,slow=38
MKAR  Makanchi Array   40.85 349   P       P       22 02 16.0 -0.6
            0.3nm,0.5s,baz=162,slow=7.3,SNR=4.8
KURBB Kurchatov Arra   45.28 347   P       P       22 02 52.9 +0.6
            0.3nm,0.3s,baz=172,slow=7.1,SNR=6.7
ZALV  Zalesovo Beam    47.41 353   P       P       22 03 08.7 -0.3
            0.5nm,0.3s,baz=171,slow=7.7,SNR=2.3
ASAR  Alice Springs    50.00 129   P       P       22 03 29.2 -0.3
            0.2nm,0.6s,baz=300,slow=8.3,SNR=2.1
```

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*JMA **21** 22:03:29.9±0.1, 36°.93N×141°.41E, h33^{km}±1^{km}, M3.4*
JMA Felt I J1.

*IDC **21** 22:03:34.4±6.3, 35°.90N×141°.32E, h76^{km}±47^{km}, mb3.0/2, mb1 3.1/3, mb1mx2.9/45, mbtmp3.1/3, ML2.0/1, Error ellipse: s-maj=94.3km s-min=39.1km az=177.0*

ISC 21 22:03:28.3±2.2**, 36°.97N**±0°.06×**141°.50E**±0°.09**, h8**^{km}±10^{km}**, n13, σ0^s.56**/23**, Near east coast of eastern Honshu**

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Code  Station Name      Δ°   AZ°   Phase ID        Time        Res
                                   Op      ISC     h  m  s     ISC
ONAJ  Iwakimizuishiy    0.57 284   P       Pb      22 03 40.4 -0.3
ONAJ                               S       Sg      22 03 47.9 +0.9
JFK   Kawauchi          0.64 309   P       Pb      22 03 41.8 +0.1
JFK                                S       Sb      22 03 50.2 -0.6
JFFD  Fukushimafurud    0.76 280   P       Pg      22 03 43.1 +0.1
JFFD                               S       Sg      22 03 52.3 -0.5
JHO   Hitachi           0.83 245   P       Pg      22 03 43.9 -0.3
JHO                                S       Sg      22 03 54.3 -0.7
JMM   Marumori          1.06 328   P       Pg      22 03 48.6  0.0
JMM                                S       Sg      22 04 02.3 -0.1
JFT   Otama             1.08 301   P       Pg      22 03 49.2 +0.2
JFT                                S       Sg      22 04 03.2 +0.2
JIO   Ouri              1.49 356   P       Pn      22 03 55.7 +0.3
JIO                                S       Sn      22 04 13.9 -1.1
JFY   Yanaizu           1.50 288   P       Pn      22 03 55.7 +0.2
JFY                                S       Sn      22 04 14.4 -0.8
JOU   Okura             1.54 335   P       Pb      22 03 57.1 -0.1
JOU                               eS       Sb      22 04 16.8 -0.1
MJAR  Matsushiro Arr    2.67 262   P       Pn      22 04 12.1 +0.3
            0.3nm,0.3s,baz=91,slow=14,SNR=22
MJAR                               S       Sn      22 04 45.3 +1.0
            0.5nm,0.3s,baz=83,slow=31,SNR=6.2
MAT   Matsushiro        2.68 262   P       Pn      22 04 12.3 +0.6
MAT                               eS       Sb      22 04 49.0 -0.5
MKAR  Makanchi Array   44.21 302   P       P       22 11 38.3 +0.4
            0.2nm,0.5s,baz=96,slow=9.2,SNR=2.8
ILAR  Eielson Array    49.51  32   P       P       22 12 25.4 +6.3
            0.4nm,0.8s,baz=254,slow=6.1,SNR=4.0
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*IDC **21** 22:14:55.4±1.6, 18°.07S×177°.77W, h595^{km}±20^{km}, mb3.6/15, mb1 3.7/17, mb1mx3.5/35, mbtmp4.5/17, Error ellipse: s-maj=18.5km s-min=12.9km az=141.0*

*NEIC **21** 22:14:56.9±1.1, 18°.1S±0°.1×177°.9W±0°.1, h612^{km}±8^{km}, mb4.3/34, Error ellipse: s-maj=20.7km s-min=15.3km az=123.0*

ISC 21 22:14:55.3±0.5**, 18°.08S**±0°.10×**177°.81W**±0°.10**, h590**^{km}**, n88, σ0^s.91**/88**, mb4.3**/29**, Fiji Islands region**

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Code  Station Name      Δ°   AZ°   Phase ID        Time        Res
                                   Op      ISC     h  m  s     ISC
MSVF  Nonsavu           3.96 274   P       P       22 16 23.8 +3.9
AFI   Afiamalu          7.13  55   P       P       22 16 46.3  0.0
            10nm,0.3s,baz=45,slow=3.8,SNR=6.1
AFI   Afiamalu          7.13  55   P       P       22 16 48.9 +2.6
DZM   Mont Dzumac      15.32 252   P       P       22 18 07.5 +0.6
            0.7nm,0.3s,baz=93,slow=21,SNR=8.1
DZM   Mont Dzumac      15.32 252   P       P       22 18 06.8 -0.2
DZM                                IAmb    IAmb    22 18 09.6
            comp=Z,26nm,1.1s
OUZ   Omahuta          18.71 202   P       P       22 18 37.7 +0.1
OUZ                                IAmb    IAmb    22 18 49.1
            comp=Z,17nm,1.1s
URZ   Urewera          20.59 191   P       P       22 18 52.9 -1.7
            comp=Z,4.4nm,0.6s,baz=90,slow=7.1,SNR=1.9
URZ   Urewera          20.59 191   IAmb    IAmb    22 18 53.1
            comp=Z,22nm,1.2s
MSWZ  Moikau Station   24.01 193   P       P       22 19 24.1 -1.1
BHW   Baring Head      24.09 194   P       P       22 19 24.6 -1.1
THZ   Tophouse         24.91 197   P       P       22 19 32.6 -0.5
THZ                                IAmb    IAmb    22 19 37.5
            comp=Z,12nm,1.1s
LTZ   Lake Taylor      26.03 197   P       P       22 19 42.4 -0.5
LTZ                                IAmb    IAmb    22 19 44.0
            comp=Z,4.2nm,0.8s
FOZ   Fox Glacier      27.45 200   P       P       22 19 54.4 -0.8
FOZ                                IAmb    IAmb    22 20 11.8
            comp=Z,9.6nm,1.1s
WKZ   Wanaka           28.86 200   P       P       22 20 08.5 +0.9
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WKZ				IAmb	IAmb	22 20 24.7	
	comp=Z,9.0nm,1.0s						
MLZ	Mavora Lakes	29.64	200	P	P	22 20 13.7	-0.5
MLZ				IAmb	IAmb	22 20 26.4	
	comp=Z,4.8nm,0.9s						
EIDS	Eidsvold	29.75	250	P	P	22 20 14.8	-0.7
DCZ	Deep Cove	30.05	201	P	P	22 20 18.4	+0.7
WHZ	Wether Hill Ro	30.16	200	P	P	22 20 18.8	+0.1
WHZ				IAmb	IAmb	22 20 20.8	
	comp=Z,7.8nm,1.2s						
ARMA	Armidale	30.35	240	P	P	22 20 20.9	+0.1
ARMA				IAmb	IAmb	22 20 22.3	
	comp=Z,4.8nm,0.8s						
CTA	Charters Tower	33.98	261	P	P	22 20 51.6	+0.1
	comp=Z,7.4nm,0.6s,baz=100,slow=13,SNR=11						
CAN	Canberra	34.06	233	P	P	22 20 52.5	+0.6
CAN				IAmb	IAmb	22 20 53.1	
	comp=Z,9.5nm,0.8s						
PMG	Port Moresby	35.05	279	P	P	22 21 01.2	+0.8
	comp=Z,18nm,0.7s,baz=67,slow=6.1,SNR=8.5						
PMG	Port Moresby	35.05	279	P	P	22 21 00.2	-0.2
TOO	Toolangi	37.51	231	P	P	22 21 20.3	-0.1
TOO				IAmb	IAmb	22 21 22.0	
	comp=Z,14nm,1.1s						
COEN	Coen	37.68	270	P	P	22 21 21.8	-0.2
STKA	Stephens Creek	39.05	241	P	P	22 21 33.3	+0.5
	comp=Z,8.6nm,0.7s,baz=84,slow=9.4,SNR=15						
STKA	Stephens Creek	39.05	241	P	P	22 21 32.5	-0.3
BBOO	Buckleboo	43.83	241	P	P	22 22 10.3	-0.2
WR0	Warramunga Arr	44.97	260	P	P	22 22 19.4	-0.1
WB0	Warramunga Arr	45.13	260	P	P	22 22 20.1	-0.6
WB0				IAmb	IAmb	22 22 20.6	
	comp=Z,12nm,0.8s						
WB2	Warramunga Arr	45.15	260	P	P	22 22 19.9	-0.9
WB2				IAmb	IAmb	22 22 20.9	
	comp=Z,15nm,1.1s						
WRA	Warramunga Arr	45.16	260	P	P	22 22 20.4	-0.5
	comp=Z,4.6nm,0.4s,baz=96,slow=7.4,SNR=95						
WRA				PcP	PcP	22 23 47.2	-1.3
	comp=Z,1.0nm,0.8s,baz=102,slow=3.4,SNR=3.1						
WRA	Warramunga Arr	45.16	260	P	P	22 22 19.9	-1.0
AS31	Alice Springs	45.29	254	P	P	22 22 21.4	-0.4
ASAR	Alice Springs	45.30	254	P	P	22 22 21.6	-0.3
	comp=Z,33nm,1.1s,baz=90,slow=7.8,SNR=182						
ASAR				PcP	PcP	22 23 48.3	-0.6
	comp=Z,1.1nm,0.5s,baz=105,slow=3.7,SNR=5.7						
ASAR	Alice Springs	45.30	254	P	P	22 22 20.9	-1.0
MTN	Manton Dam	49.37	268	P	P	22 22 51.8	-0.5
MTN				IAmb	IAmb	22 22 52.1	
	comp=Z,11nm,0.7s						
FORT	Forrest	50.45	245	P	P	22 22 59.3	-0.8
KNRA	Kununurra	51.04	264	P	P	22 23 04.2	-0.3
KNRA				IAmb	IAmb	22 23 05.2	
	comp=Z,11nm,0.9s						
FAKI	Fak Fak	51.17	281	P	P	22 23 04.8	-0.7
FAKI				IAmb	IAmb	22 23 21.2	
	comp=Z,21nm,1.0s						
SIJI	Sorong	52.83	283	P	P	22 23 17.2	-0.2
	comp=Z,66nm,1.1s,baz=83,slow=5.7,SNR=15						
FITZ	Fitzroy Crossi	53.56	261	P	P	22 23 22.2	-0.3
	comp=Z,2.2nm,0.5s,baz=166,slow=8.2,SNR=4.3						
FITZ	Fitzroy Crossi	53.56	261	P	P	22 23 22.0	-0.5
SOEI	Soe	56.64	270	P	P	22 23 43.8	-0.3
PSA00	Pilbara Seismi	58.42	255	P	P	22 23 54.5	-1.4
PSA00				IAmb	IAmb	22 24 12.5	
	comp=Z,14nm,1.1s						
VNDA	Vanda	60.33	185	P	P	22 24 07.8	+0.2
	comp=Z,1.0nm,1.0s,baz=11,slow=7.5,SNR=5.1						
MJAR	Matsushiro Arr	68.38	323	P	P	22 24 57.6	-1.5
	comp=Z,4.0nm,0.6s,baz=140,slow=6.3,SNR=12						
MJAR	Matsushiro Arr	68.38	323	IAmb	IAmb	22 24 59.0	
	comp=Z,1.8nm,0.7s						
QSPA	South Pole Qui	71.98	180	P	P	22 25 20.1	+0.1
PETK	Petropavlovsk-	73.99	345	P	P	22 25 30.8	-0.6
	comp=Z,5.0nm,0.7s,baz=116,slow=8.3,SNR=6.1						
USRK	Ussuriysk Ar.	77.08	325	P	P	22 25 49.0	+0.4
	comp=Z,0.7nm,0.6s,baz=157,slow=40,SNR=2.6						
NVAR	Mina Array Bea	79.15	44	P	P	22 26 01.0	+0.8
	comp=Z,0.8nm,0.7s,baz=227,slow=9.7,SNR=5.4						
NVAR	Mina Array Bea	79.15	44	P	P	22 26 00.6	+0.4
R11A	Troy Canyon, C	80.91	45	P	P	22 26 10.4	+1.1
LCMT	Little Creek M	81.83	47	P	P	22 26 14.1	+0.1
ILAR	Eielson Array	85.92	13	P	P	22 26 32.5	-0.8
	comp=Z,0.8nm,0.4s,baz=217,slow=4.9,SNR=17						
XAN	Xi'an	86.81	307	P	P	22 26 39.5	+1.2
CMAR	Chiang Mai Arr	89.48	289	P	P	22 26 51.9	+0.9
	comp=Z,0.7nm,0.4s,baz=106,slow=2.6,SNR=6.9						
MKAR	Makanchi Array	109.66	314	PKiKP	PKiKP	22 32 17.6	-2.3
	comp=Z,0.2nm,0.5s,baz=136,slow=0.7,SNR=5.1						
ARCES	ARCESS Array B	126.58	350	PKP	PKPdf	22 32 50.0	-1.6
	comp=Z,5.0nm,1.1s,baz=90,slow=0.7,SNR=5.5						
AKASG	Malin Array Be	140.97	333	PKP	PKPdf	22 33 20.2	+1.2
	comp=Z,0.3nm,0.2s,baz=46,slow=2.8,SNR=4.0						
BUR08	Bucovina Ar. S	145.01	333		PKPab	22 33 27.8	-0.5
BURAR	Bucovina Array	145.03	333		PKPbc	22 33 27.5	+0.2
BR131	Keskin Array S	145.30	315		PKPbc	22 33 27.9	-0.4
BRTR	Keskin Array B	145.30	315	PKPbc	PKPbc	22 33 27.9	-0.5
	comp=Z,2.5nm,0.8s,baz=135,slow=3.9,SNR=13						
BRTR	Keskin Array B	145.30	315		PKPdf	22 33 26.9	-0.2
OSTC	Ostas	145.71	344	*e*PKP	PKPbc	22 33 29.1	+0.1
CHVC	Chvalec	145.72	344	*e*PKP	PKPab	22 33 30.6	-0.2
CLL	Collm	145.75	348	*i* PKPbc	PKPbc	22 33 29.7	+0.7
	comp=Z,12nm,1.0s						
DPC	Dobruska-Polom	145.87	344	*e*PKP	PKPbc	22 33 29.8	+0.3
DPC				*e*x	x	22 33 32.2	
BRG	Berggiesshubel	145.96	347	*i* PKP	PKPbc	22 33 29.5	-0.1
	comp=Z,4.3nm,0.7s						
KRLC	Kraliky	146.00	343	*e*PKP	PKPbc	22 33 30.3	+0.4
PVCC	Panska Ves	146.14	346	*e*PKP	PKPbc	22 33 30.2	0.0
PRU	Pruhonice	146.65	345	*e*PKP	PKPbc	22 33 31.5	-0.1
VYHS	Vyhne	146.78	340	*e*PKP	PKPbc	22 33 32.1	+0.1
KHC	Kasperske Hory	147.68	346	*e*PKP	PKPbc	22 33 33.9	-0.5
GERES	GERESS Array B	147.92	346	PKPbc	PKPbc	22 33 34.3	-0.7
	comp=Z,1.9nm,0.7s,baz=23,slow=3.0,SNR=17						
GERES	GERESS Array B	147.92	346		PKPbc	22 33 34.5	-0.5
CONA	Conrad Observa	148.20	342	*i* PKiKP	PKPbc	22 33 36.1	+0.3
	comp=Z,1.3nm,0.5s						
MOA	Molln	148.70	344	*e*PKiKP	PKiKP	22 33 37.4	-0.6
	comp=Z,0.6nm,0.4s						
SOKA	Soboth	149.57	342	*i* PKiKP	PKPbc	22 33 38.2	-0.9
	comp=Z,0.6nm,0.4s						
WATA	Walderalm	149.82	347	*i* PKiKP	PKPbc	22 33 39.1	-0.6
	comp=Z,0.8nm,0.3s						
WTTA	Wattenberg	149.87	347	*i* PKiKP	PKPbc	22 33 39.5	-0.5
	comp=Z,4.7nm,0.6s						
MOTA	Moosalm	149.91	348	*i* PKiKP	PKPbc	22 33 39.3	-0.7
	comp=Z,1.5nm,0.6s						
SQTA	Sankt Quirin	150.00	348	*e*PKiKP	PKPbc	22 33 39.8	-0.3
	comp=Z,2.5nm,0.5s						
ABTA	Abfaltersbach	150.16	346	*i* PKiKP	PKPbc	22 33 39.5	-1.1
	comp=Z,3.9nm,0.7s						
DAVA	Damuels	150.19	349	*i* PKPbc	PKPbc	22 33 38.7	-1.9
	comp=Z,0.6nm,0.3s						
FETA	Feichten	150.29	348	*i* PKiKP	PKPbc	22 33 40.5	-0.4
	comp=Z,0.9nm,0.5s						

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*ATH **21** 22:28:15.7, 38°.37N×20°.49E, h13km±1km, ML2.8/14, Error ellipse: s-maj=1.8km s-min=0.6km az=284.0*

*THE **21** 22:28:16.0, 38°.38N×20°.46E, h9km, ML3.2/11, Error ellipse: s-maj=0.8km s-min=0.2km az=192.0*

ISC 21 22:28:15.2±0.8**, 38°.38N**±0°.02×**20°.46E**±0°.03**, h14**km±4km**,**
n64, σ0ˢ60/91**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VSK1	VASILIKIADES	0.09	73	P	Pg	22 28 18.1	-0.1
VSK1				S	Sg	22 28 19.9	-0.4
	43µm,0.2s						
KONA	Konidatara, Ke	0.10	65	P	Pg	22 28 18.3	0.0
KONA				S	Sg	22 28 20.1	-0.4
KONA				AML	AML	22 28 20.4	
	comp=N,35687µm,0.2s						
KONA				AML	AML	22 28 20.4	
	comp=E,19899µm,0.3s						
KEF1	Kardakata, Kep	0.11	175	P	Pg	22 28 18.4	+0.1
KEF1				S	Sg	22 28 20.4	-0.1
FSK	Fiskardo	0.11	47	P	Pg	22 28 18.5	0.0
FSK				S	Sg	22 28 20.7	0.0
	comp=E,16µm,0.2s						
FSK	Fiskardo	0.11	47	P	Pg	22 28 18.6	0.0
FSK				S	Sg	22 28 20.7	0.0
FSK				AML	AML	22 28 20.8	
	comp=N,27792µm,0.2s						
FSK				AML	AML	22 28 20.9	
	comp=E,37360µm,0.2s						
KEF4	Livadi, Kephal	0.13	192	P	Pg	22 28 18.9	+0.2
KEF4				S	Sg	22 28 21.7	+0.6
AGT1	Agia Thekli	0.14	204	P	Pg	22 28 19.1	+0.2
AGT1				S	Sg	22 28 21.6	+0.2
	comp=E,19µm,0.3s						
LXR1	Lixouri, Cepha	0.18	185	P	Pg	22 28 19.9	+0.4
LXR1				S	Sg	22 28 23.1	+0.8
	comp=E,43µm,0.3s						
LXRA	Lixouri, Kepha	0.18	185	P	Pg	22 28 20.0	+0.5
LXRA				S	Sg	22 28 23.3	+0.9
ARG2	Argostoli	0.21	174	P	Pg	22 28 20.2	+0.4
ARG2				S	Sg	22 28 23.1	+0.1
	comp=E,29µm,0.2s						
ARGA	Argostoli. Kep	0.21	175	P	Pg	22 28 20.1	+0.2
ARGA				S	Sg	22 28 23.6	+0.6
CHV1	Chavriata, Kef	0.21	197	P	Pg	22 28 20.3	+0.4
CHV1				S	Sg	22 28 23.8	+0.8
	comp=E,18µm,0.2s						
KEF2	Argostoli. Kep	0.22	174	P	Pg	22 28 20.3	+0.3
KEF2				S	Sg	22 28 23.8	+0.5
VLS	Valsamata	0.23	153	P	Pg	22 28 20.4	+0.2
VLS				S	Sg	22 28 24.2	+0.5
	comp=E,4µm,0.2s						
VLS	Valsamata	0.23	153	P	Pg	22 28 20.5	+0.2
VLS				S	Sg	22 28 24.3	+0.7
VLS				AML	AML	22 28 26.1	
	comp=E,7066µm,0.2s						
VLS				AML	AML	22 28 26.1	
	comp=N,8590µm,0.3s						
EVGI	Lefkada island	0.28	33	P	Pg	22 28 21.8	+0.6
EVGI				S	Sg	22 28 26.2	+1.0
	comp=N,2µm,0.1s						
EVGI	Lefkada island	0.28	33	P	Pg	22 28 21.8	+0.6
EVGI				S	Sg	22 28 26.2	+1.0
KFL	Anninata	0.38	136	P	Pg	22 28 23.1	+0.3
KFL				S	Sb	22 28 29.2	-0.2
	comp=N,3µm,0.3s						
KFL	Anninata	0.38	136	P	Pg	22 28 23.2	+0.3
KFL				S	Sg	22 28 28.3	+0.3
KFL				AML	AML	22 28 30.8	
	comp=N,5782µm,0.3s						
KFL				AML	AML	22 28 31.0	
	comp=E,6657µm,0.3s						
MGNA	Meganis	0.38	44	P	Pg	22 28 23.2	+0.3
MGNA				S	Sb	22 28 29.3	-0.1
MGNA				AML	AML	22 28 29.8	
	comp=N,5013µm,0.3s						
MGNA				AML	AML	22 28 29.9	
	comp=E,5700µm,0.3s						
LKD2	Lefkada island	0.43	21	P	Pg	22 28 24.4	+0.5
LKD2				S	Sg	22 28 30.6	+0.8
	comp=E,800nm,0.3s						
LKD2	Lefkada island	0.43	21	P	Pg	22 28 24.3	+0.4
LKD2				S	Sg	22 28 31.2	+1.4
LKD2				AML	AML	22 28 32.7	
	comp=E,1538µm,0.2s						
LKD2				AML	AML	22 28 34.1	
	comp=N,1762µm,0.3s						
AST1	Astakos	0.52	72	P	Pg	22 28 26.0	+0.5
AST1				S	Sb	22 28 33.7	+0.2
	comp=N,3µm,0.2s						
PDO	Prodromos	0.61	69	P	Pg	22 28 27.5	+0.4
PDO	Prodromos	0.61	69	P	Pg	22 28 27.5	+0.4
PDO				S	Sg	22 28 35.7	+0.5
PDO				AML	AML	22 28 41.9	
	comp=E,1717µm,0.2s						
PDO				AML	AML	22 28 42.6	
	comp=N,1881µm,0.4s						
VTN	Vitineika	0.74	129	P	Pg	22 28 30.0	+0.4
RLS	Riolos of Patr	0.86	112	P	Pg	22 28 31.4	-0.5
RLS				AML	AML	22 28 47.8	
	comp=E,565µm,0.4s						
RLS				AML	AML	22 28 56.4	
	comp=N,628µm,0.4s						
PVO	Paravola	0.87	74	P	Pg	22 28 32.6	+0.5
PVO	Paravola	0.87	74	P	Pg	22 28 32.5	+0.5
DRO	Drossia	1.08	113	P	Pb	22 28 35.6	-0.1
DRO	Drossia	1.08	113	P	Pb	22 28 35.3	-0.4
DRO				AML	AML	22 28 58.5	
	comp=N,1601µm,0.5s						
DRO				AML	AML	22 28 58.8	
	comp=E,1625µm,0.5s						
EFP	Efpalio	1.14	87	P	Pb	22 28 36.5	-0.2
EFP	Efpalio	1.14	87	P	Pb	22 28 36.4	-0.2
EFP				AML	AML	22 29 00.0	
	comp=E,1268µm,0.7s						
EFP				AML	AML	22 29 00.1	
	comp=N,904µm,0.6s						
IGT	Igoumenitsa	1.15	355	P	Pb	22 28 37.5	+0.5
IGT	Igoumenitsa	1.15	355	P	Pb	22 28 37.0	+0.1
IGT				AML	AML	22 28 57.7	
	comp=E,570µm,0.7s						
IGT				AML	AML	22 28 58.5	
	comp=N,570µm,0.4s						
ANX	Ano Chora	1.17	79	P	Pb	22 28 37.3	0.0
ANX	Ano Chora	1.17	79	P	Pb	22 28 37.3	0.0
ANX				AML	AML	22 29 00.9	
	comp=N,1258µm,0.6s						
ANX				AML	AML	22 29 01.5	
	comp=E,1230µm,0.7s						
EVR	Evrytania	1.18	63	P	Pb	22 28 37.7	+0.1
EVR	Evrytania	1.18	63	P	Pb	22 28 37.5	-0.1
LAKA	Lakka	1.20	96	P	Pb	22 28 37.6	-0.2
LAKA				AML	AML	22 29 02.4	
	comp=N,299µm,0.5s						
LAKA				AML	AML	22 29 04.3	
	comp=E,344µm,0.7s						
SERG	Sergoula	1.26	88	P	Pn	22 28 38.5	+0.1
SERG	Sergoula	1.26	88	P	Pn	22 28 38.5	+0.1
SERG				AML	AML	22 29 02.3	
	comp=N,786µm,0.6s						
SERG				AML	AML	22 29 02.9	
	comp=E,711µm,0.3s						
TRIZ	Trizonia	1.27	90	P	Pn	22 28 38.7	+0.1
TRIZ	Trizonia	1.27	90	P	Pn	22 28 38.7	+0.1
AMT	Artemida-Makis	1.30	130	P	Pn	22 28 39.9	+0.8
KALE	Kalithea	1.32	89	P	Pn	22 28 39.4	+0.1
KALE	Kalithea	1.32	89	P	Pn	22 28 39.5	+0.1
KLV	Kalavryta, Ach	1.38	104	P	Pn	22 28 40.5	+0.4
KLV	Kalavryta, Ach	1.38	104	P	Pn	22 28 40.5	+0.4
KEK	Kerkira	1.42	339	P	Pn	22 28 41.7	+1.0
MAKR	Makrakomi, Fth	1.45	64	P	Pb	22 28 42.5	+0.4
MAKR	Makrakomi, Fth	1.45	64	P	Pb	22 28 42.6	+0.5
AGG	Agios Georgios	1.60	66	P	Pb	22 28 45.0	+0.5
ITM	Ithomi	1.67	135	P	Pb	22 28 45.9	+0.1
THL	Klokotos Trika	1.69	45	P	Pb	22 28 46.9	+0.8
KPRO	Kipourio	1.72	24	P	Pg	22 28 48.6	+0.3
PYL	PYLOS	1.80	145	P	Pn	22 28 47.2	+1.3
DBRK	Dubrovnik	4.63	338	*e*Pn	Pn	22 29 23.7	-1.1
DBRK				Sn	Sn	22 30 16.5	-1.8
STON	Ston	4.95	336	*e*Pn	Pn	22 29 28.8	-0.3
STON				Sn	Sn	22 30 24.0	-2.2
MAKA	Makarska	5.55	333	*i* Pn	Pn	22 29 38.0	+0.6
ZIRJ	Zirje	6.40	327	*e*Pn	Pn	22 29 49.2	+0.1
MORI	Morici	6.55	328	*e*Pn	Pn	22 29 51.4	+0.3
DUGI	Dugi Otok	6.92	326	*i* Pn	Pn	22 29 56.7	+0.4
DUGI				Sn	Sn	22 31 13.2	-1.6
NVLJ	Novalja	7.46	328	*e*Pn	Pn	22 30 03.3	-0.4

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*IDC **21** 22:40:27.6±0.7, 7°.68N×94°.39E, h0km, mb4.1/22, mb1 4.1/24, mb1mx3.9/58, mbtmp4.1/24, ML4.0/2, MS3.7/2, Ms1 3.8/2, ms1mx3.2/37, Error ellipse: s-maj=22.5km s-min=15.7km az=66.0*

*NEIC **21** 22:40:28.6±1.2, 7°.47N±0°.09×94°.2E±0°.1, h10km±1km, mb4.4/28, Error ellipse: s-maj=18.5km s-min=12.9km az=237.0*

*DJA **21** 22:40:29.9±0.4, 8°N±5°×9°4E±°, h10km, M4.3/9, mb4.3/9, mB4.8/1, MLv4.4/3, Mw(mB)4.0/1, Mwp4.7/1*

ISC 21 22:40:30.7±0.5**, 7°.58N**±0°.06×**94°.29E**±0°.06**, h20**km**, n93,**
σ**1ˢ50**/90**, mb4.3**/33**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	3.53	131		Pn	22 41 24.9	+0.6
MLSI	Meulaboh, Aceh	3.91	147	P	Pn	22 41 32.3	+2.7
PSI	Prapat	6.62	136	Pn	Pn	22 42 08.0	+0.9
	1.1nm,0.3s,baz=330,slow=16,SNR=2.4						
RPSI	Rantau Prapat	6.70	136		Pn	22 42 07.3	-0.7
RPSI	Rantau Prapat	6.70	136		Pn	22 42 08.0	0.0
KULM	Kulim	6.72	109		Pn	22 42 07.5	-0.8
GSI	Gunungsitoli	7.04	152	Pn	Pn	22 42 11.5	-1.3
IPM	Ipoh	7.37	114		Pn	22 42 15.7	-1.6
PDSI	Padang	10.44	144	P	Pn	22 43 01.6	+2.2
	8.7nm,0.9s						
PBKT	Sadao Pong	11.06	36		Pn	22 43 09.7	+1.8
MYKOM	Kota Tinggi	11.13	121	Pn	Pn	22 43 07.8	-0.9
CM31	Chiang Mai Arr	11.72	22	Pn	Pn	22 43 17.4	+0.5
CMAR	Chiang Mai Arr	11.72	22	Pn	Pn	22 43 16.2	-0.7
	0.6nm,0.3s,baz=213,slow=15,SNR=11						
CMAR				LR	LR	22 47 34.3	
	comp=Z,213nm,18.8s,baz=220,slow=37						
CMAR	Chiang Mai Arr	11.72	22	Pn	Pn	22 43 17.8	+0.9
CHTO	Chiang Mai	12.05	22		Pn	22 43 23.4	+2.0
MDSI	Maura Dua	15.53	140	P	Pn	22 44 03.6	-5.0
SLVN	Son La	16.53	33	Pn	P	22 44 22.5	-1.5
KSM	Kuching	17.07	110	Pn	Pn	22 44 27.9	-0.5
HYB	Hyderabad	18.20	304	*i* P	P	22 44 44.0	+1.5
SBUM	Sibu	18.57	105	P	P	22 44 45.1	-1.5
QIZ	Qiongzhong	18.91	51	P	Pn	22 44 51.1	+0.1
QIZ				S	Sn	22 48 23.6	+1.2
KMI	Kunming	19.22	24	P	Pn	22 44 56.6	+1.7
KMI				pP	pwP	22 45 05.3	+3.4
KMI				sP	sP	22 45 08.5	+7.2
KMI				PP	PnPn	22 45 14.8	+6.8
ODAN	Odare	20.26	342	*e*P	Pn	22 45 05.2	-2.1
	17nm,0.7s						
RAMN	Ramite	20.60	340	*e*P	Pn	22 45 10.1	-1.2
	52nm,0.6s						
TAPN	Taplejung	20.63	343	*e*P	P	22 45 07.1	-2.2
	24nm,0.4s						
JIRN	Jiri	21.39	340	*e*P	P	22 45 16.4	-1.2
	37nm,0.7s						
PKI	Pulchoki	21.59	338	*e*P	P	22 45 20.4	+0.7
	17nm,0.5s						
PKIN	Phulchoki	21.60	338	*e*P	P	22 45 20.4	+0.7
	14nm,0.5s						
GUN	Gumba	21.73	340	*e*P	P	22 45 20.4	-0.8
	30nm,0.8s						
LSA	Lhasa	22.20	353	P	P	22 45 27.8	+1.4
LSA				IAmb	IAmb	22 45 30.9	
	comp=Z,8.7nm,0.7s						
GKN	Gorkha	22.27	337	*e*P	P	22 45 26.7	-0.1
	comp=Z,22nm,0.7s						
DANN	Dangsing	22.93	336	*e*P	P	22 45 33.7	-0.3
	comp=Z,26nm,0.6s						
H08S3	Diego Garcia H	26.48	236	T	T	23 12 57.4	
	baz=55,slow=75,SNR=60						
H08S2	Diego Garcia H	26.48	236	T	T	23 12 54.9	
	baz=55,slow=75,SNR=68						
H08S1	Diego Carcia H	26.49	236	T	T	23 12 58.4	
	baz=55,slow=75,SNR=12						
MPSI	Mapaga	26.52	105	P	P	22 46 09.5	+2.2
	comp=Z,24nm,1.2s						
XAN	Xi'an	29.59	25	P	P	22 46 35.9	+1.3
GTA	Gaotai	32.08	8	*e*P	P	22 46 58.0	+1.5
GTA				pP	sP	22 47 03.3	-1.0
GTA				sP	pwP	22 47 07.6	+2.9
NIL	Nilore	32.42	326	P	P	22 46 59.4	-0.1
SOEI	Soe	34.47	120	P	P	22 47 15.8	-1.8
KBL	Kabul	35.49	323	P	P	22 47 26.3	-0.1
KBL				IAmb	IAmb	22 47 43.9	
	comp=Z,6.1nm,1.2s						
KSH	Kashi	35.80	335	P	P	22 47 29.3	+0.4
KSH				sP	pwP	22 47 43.0	+6.0
KSH				PcP	PcP	22 49 57.3	+0.9
KSH				S	S	22 53 03.3	-2.1
KSH				sS	sS	22 53 19.8	+5.3
KSH				SS	SnSn	22 55 23.9	-4.6
HHC	Hu-ho-hao-te	36.53	22	*e*P	P	22 47 27.4	-7.7
WMQ	Urumqi	36.56	352	*e*P	P	22 47 37.0	+1.8
SWI	Sorong	37.81	101	P	P	22 47 38.1	-8.1
AAK	Ala-Archa	39.03	337	P	P	22 47 55.3	-1.0
	comp=Z,1.3nm,0.8s,baz=208,slow=6.5,SNR=3.6						
AAK	Ala-Archa	39.03	337	P	P	22 47 56.4	+0.1
MK31	Makanchi Array	40.41	347	P	P	22 48 07.4	-0.1
MKAR	Makanchi Array	40.41	347	P	P	22 48 07.1	-0.4
	comp=Z,2.5nm,0.6s,baz=167,slow=7.5,SNR=26						
MKAR	Makanchi Array	40.41	347	P	P	22 48 07.2	-0.3
MAKZ	Makanchi	40.49	347	P	P	22 48 07.9	-0.2
MAKZ				IAmb	IAmb	22 48 09.1	
	comp=Z,3.3nm,0.5s						
KKAR	Karatay Array	41.09	333	P	P	22 48 13.2	+0.1
SONM	Songino Array	41.41	12	P	P	22 48 15.6	-0.3
	comp=Z,1.0nm,0.8s,baz=205,slow=6.6,SNR=6.6						
SONM	Songino Array	41.41	12	P	P	22 48 16.7	+0.8
GEYT	Alibeck	44.52	318	P	P	22 48 40.9	-0.2
	comp=Z,2.5nm,0.7s,baz=125,slow=9.3,SNR=6.1						
GEYT	Alibeck	44.52	318	P	P	22 48 41.4	+0.3
GYA0B	ALIBECK ARRAY	44.52	318	P	P	22 48 40.0	-1.1
GYA0B				IAmb	IAmb	22 48 48.4	
	comp=Z,4.5nm,0.7s						
KURBB	Kurchatov Arra	44.87	346	P	P	22 48 43.5	0.0
	comp=Z,3.4nm,0.5s,baz=174,slow=6.9,SNR=42						
KURK	Kurchatov	44.93	346	P	P	22 48 44.2	+0.1
KURK				IAmb	IAmb	22 49 00.5	
	comp=Z,6.0nm,1.0s						
ZALV	Zalesovo Beam	46.86	352	P	P	22 48 59.9	+0.6
	comp=Z,3.7nm,0.4s,baz=176,slow=7.7,SNR=21						
ZALV	Zalesovo Beam	46.86	352	P	P	22 48 59.6	+0.3
WB0	Warramunga Arr	47.93	125	P	P	22 49 07.9	-0.3
WB0				IAmb	IAmb	22 49 26.7	
	comp=Z,7.1nm,1.2s						
WRA	Warramunga Arr	47.97	125	P	P	22 49 08.4	-0.1
	comp=Z,0.6nm,0.7s,baz=303,slow=8.8,SNR=4.6						
WRA	Warramunga Arr	47.97	125	P	P	22 49 06.5	-2.0
WB2	Warramunga Arr	47.98	125	P	P	22 49 07.6	-1.0
WB2				IAmb	IAmb	22 49 22.3	
	comp=Z,3.3nm,0.8s						
BVAR	Borovoye Array	49.31	341	P	P	22 49 18.2	-0.1
	comp=Z,0.5nm,0.5s,baz=144,slow=8.1,SNR=7.9						
RAYN	Ar Rayn	49.34	294	P	P	22 49 19.5	+0.4
BRVK	Borovoye	49.38	341	P	P	22 49 19.8	+1.0
BRVK				IAmb	IAmb	22 49 32.5	
	comp=Z,3.4nm,0.8s						
ASAR	Alice Springs	49.62	130	P	P	22 49 20.9	-0.2
	comp=Z,0.8nm,0.8s,baz=303,slow=7.4,SNR=8.5						
ABKAR	Akbulak array	50.56	331	P	P	22 49 27.4	-0.4
ARU	Arti	56.22	337	P	P	22 50 09.4	+0.2
	comp=Z,0.7nm,0.6s,baz=179,slow=11,SNR=3.5						
KMBO	Kilima Mbogo	57.54	264	P	P	22 50 22.3	+2.6
	comp=Z,0.7nm,0.4s,baz=60,slow=11,SNR=7.1						
KMBO	Kilima Mbogo	57.54	264	P	P	22 50 18.6	-1.1
KMBO				IAmb	IAmb	22 50 23.4	
	comp=Z,2.3nm,0.8s						
YAK	Yakutsk	60.22	18	P	P	22 50 35.6	-1.6
	comp=Z,8.1nm,0.5s,baz=43,slow=0.8,SNR=1.6						
NRIK	Noril'sk	61.84	357	P	P	22 50 47.2	-0.8
	comp=Z,1.7nm,0.5s,baz=194,slow=7.8,SNR=4.6						
BRTR	Keskin Array B	62.73	311	P	P	22 50 53.1	-1.6
	comp=Z,0.4nm,0.5s,baz=121,slow=6.9,SNR=5.9						
ILGA	Ilgaz	62.99	312	P	P	22 50 56.2	-0.4
TIXI	Tiksi	67.49	11	P	P	22 51 24.4	-0.4
BURAR	Bucovina Array	70.36	318	P	P	22 51 42.2	-1.2
LIT	Litokhoron	71.24	310	P	P	22 51 48.0	-0.8
LIT				IAmb	IAmb	22 52 02.3	
	comp=Z,3.7nm,0.8s						
FIA1	FINESS Array S	73.04	332	P	P	22 51 58.6	-0.4
FINES	FINESS Array B	73.04	332	P	P	22 51 58.5	-0.5
	comp=Z,1.4nm,0.5s,baz=102,slow=5.2,SNR=14						
BOSA	Boshof	75.56	238	P	P	22 52 15.7	+1.2
	comp=Z,2.1nm,0.7s,baz=67,slow=4.4,SNR=5.2						
ARCES	ARCESS Array B	75.59	340	P	P	22 52 13.8	0.0
	comp=Z,2.4nm,1.1s,baz=98,slow=7.5,SNR=4.5						
GERES	GERESS Array B	78.14	318	P	P	22 52 29.2	+0.5
	comp=Z,0.7nm,0.7s,baz=67,slow=4.5,SNR=6.5						
GERES	GERESS Array B	78.14	318	P	P	22 52 28.4	-0.3
HFS	Hagfors	78.78	330	P	P	22 52 31.2	-0.6
	comp=Z,1.2nm,0.4s,baz=94,slow=5.9,SNR=12						
TEOL	Teolo	79.47	315	P	P	22 52 36.2	+0.2
TEOL				IAmb	IAmb	22 52 40.6	
	comp=Z,7.1nm,0.7s						
NOA	NORSAR Array B	80.06	331	P	P	22 52 38.3	-0.5
	comp=Z,0.3nm,0.5s,baz=113,slow=3.5,SNR=2.1						
SPITS	Spitsbergen Ar	80.15	348	P	P	22 52 38.3	-0.7
	comp=Z,1.9nm,0.5s,baz=104,slow=7.1,SNR=7.4						
TORD	Torodi Ar. Bea	90.81	283	P	P	22 53 34.2	+0.8
	comp=Z,0.6nm,0.9s,baz=66,slow=3.5,SNR=3.0						
INK	Inuvik	97.23	16	LR	LR	23 39 54.7	
	comp=Z,73nm,21.6s,baz=302,slow=37						
PLCA	Paso Flores	144.33	200	PKP	PKPdf	23 00 04.7	-1.3
	comp=Z,2.3nm,0.8s,baz=104,slow=6.1,SNR=3.9						

IDC 21 22:41:01.0±7.9**, 7°.54N**×**94°.01E, h0**km**, mb4.0**/7**, mb1 4.2**/8**,**
mb1mx3.7/58**, mbtmp4.1**/8**, ML4.2**/1**, MS3.6**/3**, Ms1 3.6**/3**,**

ms1mx3.2/37, **Error ellipse: s-maj=192.1km s-min=51.6km az=133.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	6.79	134	LR	LR	22 45 44.5	
	comp=Z,416nm,21.2s,baz=304,slow=41						
CMAR	Chiang Mai Arr	11.87	23	Pn	Pn	22 43 51.4	-0.2
	0.4nm,0.3s,baz=212,slow=11,SNR=7.0						
BRDH	Bariadhala	15.22	352	LR	LR	22 51 20.7	
	comp=Z,365nm,20.2s,baz=182,slow=41						
FITZ	Fitzroy Crossi	40.30	130	LR	LR	23 06 39.7	
	comp=Z,66nm,19.2s,baz=287,slow=38						
MKAR	Makanchi Array	40.38	348	P	P	22 48 40.1	-0.6
	1.9nm,0.8s,baz=167,slow=7.5,SNR=4.4						
KURBB	Kurchatov Arra	44.84	346	P	P	22 49 17.2	+0.4
	1.7nm,0.7s,baz=167,slow=7.3,SNR=2.4						
BRTR	Keskin Array B	62.55	311	P	P	22 51 27.3	+0.2
	0.5nm,0.6s,baz=129,slow=6.9,SNR=2.4						
FINES	FINESS Array B	72.95	332	P	P	22 52 32.1	0.0
	1.1nm,0.5s,baz=122,slow=6.7,SNR=1.3						
GERES	GERESS Array B	77.99	318	P	P	22 53 00.6	-0.9
	1.3nm,0.9s,baz=72,slow=4.3,SNR=4.4						
HFS	Hagfors	78.68	330	P	P	22 53 05.6	+0.7
	2.8nm,0.7s,baz=132,slow=6.2,SNR=4.2						
NOA	NORSAR Array B	79.96	331	P	P	22 53 12.2	+0.3
	1.7nm,0.9s,baz=93,slow=5.8,SNR=2.3						

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*IDC **21** 22:42:52.5±1.2, 7°.79N×94°.04E, h0^{km}, mb3.8/8, mb1 3.9/9, mb1mx3.6/56, mbtmp3.8/9, ML3.8/1, Error ellipse: s-maj=49.3km s-min=22.0km az=48.0*

ISC 21 22:42:55.2±1.1, **7°.8N**±0°.2×**94°.0E**±0°.2, **h18**^{km}, **n9**, σ**0ˢ.81**/9, **mb3.9**/8, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	13.24	269	Pn	Pn	22 46 02.5	0.0
	0.5nm,0.3s,baz=156,slow=20,SNR=1.6						
MKAR	Makanchi Array	40.15	347	P	P	22 50 30.2	0.0
	0.6nm,0.7s,baz=178,slow=8.5,SNR=2.7						
GEYT	Alibeck	44.20	318	P	P	22 51 04.8	+1.4
	2.5nm,0.7s,baz=134,slow=8.5,SNR=3.9						
KURBB	Kurchatov Arra	44.61	346	P	P	22 51 06.5	+0.2
	0.8nm,0.5s,baz=171,slow=6.4,SNR=6.2						
ZALV	Zalesovo Beam	46.63	353	P	P	22 51 22.4	0.0
	1.4nm,0.7s,baz=175,slow=10,SNR=2.8						
WRA	Warramunga Arr	48.29	125	P	P	22 51 35.4	-0.4
	0.6nm,0.7s,baz=308,slow=7.9,SNR=2.5						
ASAR	Alice Springs	49.93	130	P	P	22 51 49.0	+0.6
	0.5nm,0.7s,baz=300,slow=7.8,SNR=2.5						
BRTR	Keskin Array B	62.41	311	P	P	22 53 16.5	-1.0
	0.5nm,0.6s,baz=131,slow=4.3,SNR=3.2						
FINES	FINESS Array B	72.74	332	P	P	22 54 21.5	-0.7
	1.5nm,0.8s,baz=104,slow=12,SNR=1.5						

AEIC 21 22:43:10.2±6.1, **52°.3N**±0°.3×**173°.3W**±0°.3, **h223**^{km}±7^{km}, **mb3.8**/22(NEIC), **Error ellipse: s-maj=44.7km s-min=14.7km az=155.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	0.50	263		Pn	22 43 41.2	+1.3
KOKL	Mount Kliuchef	0.56	269		Pn	22 43 41.5	+1.3
ATKA	Atka Island	0.57	257		Pn	22 43 41.0	+0.9
ATKA	Atka Island	0.57	257		S	22 44 06.3	+2.8
GSTR	Great Sitkin T	1.72	263	Pn	Pn	22 43 48.9	+1.1
GSMY	Great Sitkin M	1.73	261		Pn	22 43 49.6	+1.7
GSTD	Great Sitkin T	1.78	262		Pn	22 43 50.1	+1.7
GSTD					S	22 44 20.7	+2.6
ADK	Adak	2.14	259		Pn	22 43 54.0	+2.2
ADK					S	22 44 27.0	+2.9
KIMD	Kanaga Island	2.50	258		Pn	22 43 58.3	+2.9
KDAK	Kodiak Island	13.04	57	Pn	Pn	22 46 03.0	-4.1
CNPM	China Poot	14.26	51	Pn	Pn	22 46 17.2	-4.9
BRLK	Bradley Lake	14.51	50	Pn	Pn	22 46 18.4	-6.7
SUA	Susitna One	15.26	44	P	P	22 46 29.6	-4.7
SUA				IAmb	IAmb	22 46 30.2	
	comp=Z,6.3nm,1.0s						
SEW	Seward	15.30	50	P	P	22 46 27.1	-7.5
PPLA	Purkeypile	15.39	38	P	P	22 46 33.0	-2.8
PPLA				IAmb	IAmb	22 46 44.8	
	comp=Z,4.9nm,1.1s						
KTH	Kantishna Hill	16.24	38	P	P	22 46 39.2	-5.7
KTH				IAmb	IAmb	22 46 54.0	
	comp=Z,2.5nm,1.1s						
TRF	Thorofare Moun	16.42	38	P	P	22 46 42.5	-4.5
BPAW	Bear Paw Mtn.	16.52	36	P	P	22 46 43.7	-4.3
BPAW				IAmb	IAmb	22 46 44.4	
	comp=Z,5.3nm,1.2s						
MID	Middleton Isla	16.62	54	P	P	22 46 48.0	-1.0
HIN	Hinchinbrook I	16.79	51	P	P	22 46 48.9	-2.1
SCM	Sheep Creek Mo	16.90	46	P	P	22 46 47.6	-4.6
SCM				IAmb	IAmb	22 47 02.9	
	comp=Z,6.1nm,1.0s						
RND	Reindeer	16.95	40	P	P	22 46 46.6	-6.2
MCK	McKinley	17.09	39	P	P	22 46 47.0	-7.1
MCK				IAmb	IAmb	22 46 57.0	
	comp=Z,2.8nm,1.1s						
MLY	Manley	17.16	33	P	P	22 46 51.0	-4.0
DHY	Denali Highway	17.39	42	P	P	22 46 51.5	-6.1
DHY				IAmb	IAmb	22 46 56.9	
	comp=Z,3.4nm,1.2s						
WRH	Wood River Hil	17.79	37	P	P	22 46 57.1	-4.6
CCB	Clear Creek Bu	17.98	37		P	22 46 59.1	-4.8
HDA	Harding Lake	18.18	38	P	P	22 47 00.9	-5.1
HDA				IAmb	IAmb	22 47 02.2	
	comp=Z,2.2nm,0.8s						
GLB	Gilahina Butte	18.35	49	P	P	22 47 05.1	-2.9
GLB				IAmb	IAmb	22 47 15.7	
	comp=Z,5.7nm,1.2s						
ILAR	Eielson Array	18.38	37	P	P	22 47 03.7	-4.5
RIDG	Independent Ri	18.70	41	P	P	22 47 05.6	-6.1
RIDG				IAmb	IAmb	22 47 20.9	
	comp=Z,4.1nm,1.1s						
BALM	Baldy	18.93	51	P	P	22 47 10.9	-3.4
SCRK	Sand Creek	19.15	41	P	P	22 47 10.3	-6.3
SCRK				IAmb	IAmb	22 47 10.7	
	comp=Z,4.0nm,0.6s						
TOLK	Toolik Lake Re	19.86	26	P	P	22 47 20.0	-4.1
YKU2	Yakutat	19.98	56	P	P	22 47 23.0	-2.4
BMAR	Burnt Mountain	20.58	32	P	P	22 47 26.6	-5.2
EGAK	Eagle	20.59	40	P	P	22 47 26.0	-5.9
EGAK				IAmb	IAmb	22 47 29.2	
	comp=Z,2.1nm,1.1s						

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*IDC **21** 22:51:24.0±1.6, 0°.09N×124°.45E, h0^{km}, mb3.4/3, mb1 3.7/3, mb1mx3.3/46, mbtmp3.4/3, Error ellipse: s-maj=196.2km s-min=26.4km az=63.0*

*DJA **21** 22:51:31.9±0.3, 0°S±2°×12°5E±°, h10^{km}, M4.1/12, mb4.3/5, MLv4.0/12*

ISC 21 22:51:33.1±1.0, **0°.02S**±0°.07×**124°.49E**±0°.05, **h73**^{km}, **n15**, σ**1ˢ.58**/17, **mb3.5**/3, **Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	0.78	319	P	Pn	22 51 48.1	-1.0
KMSI				S	Sn	22 52 00.0	-1.0
LUWI	Luwuk	2.00	239	P	Pn	22 52 05.3	+0.5
SANI	Sanana	2.51	143	P	Pn	22 52 08.8	-2.9
MRSI	Marisa	2.60	281	P	Pn	22 52 10.3	-2.6
APSI	Ampana	2.98	253	P	Pn	22 52 19.4	+1.4
TNTI	Ternate	2.98	75	P	Pn	22 52 18.9	+0.9
LBMI	Labuha	3.07	102	P	Pn	22 52 20.3	+1.0
NLAI	Namlea	4.12	141	P	Pn	22 52 32.5	-1.2
MPSI	Mapaga	4.61	274	P	Pn	22 52 42.7	+2.4
MSAI	Masohi	5.53	127	P	Pn	22 52 54.2	+1.4
	0.1nm27nm,0.8s						
SPSI	Sidrap Palu	6.13	230	P	Pn	22 53 02.0	+0.9
	0.1nm34nm,0.5s						
BNSI	Bone	6.18	225	P	Pn	22 53 02.4	+0.7
	0.1nm30nm,0.8s						
WRA	Warramunga Arr	22.02	155	P	P	22 56 20.7	-0.9
	0.9nm,0.5s,baz=333,slow=11,SNR=10						
ASAR	Alice Springs	25.22	159	P	P	22 56 53.4	+1.1
	0.7nm,0.9s,baz=331,slow=7.4,SNR=6.1						
ASAR				PcP	PcP	23 00 25.5	+1.2
	0.2nm,0.5s,baz=351,slow=1.6,SNR=5.5						
MKAR	Makanchi Array	59.42	328	P	P	23 01 27.6	-0.6
	0.4nm,0.8s,baz=117,slow=8.4,SNR=4.7						

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*IDC **21** 22:57:12.6±0.8, 7°.62N×94°.41E, h0^{km}, mb3.9/14, mb1 4.0/16, mb1mx3.8/51, mbtmp3.9/16, ML3.9/2, MS3.7/18, Ms1 3.7/18, ms1mx3.5/43, Error ellipse: s-maj=25.7km s-min=16.7km az=61.0*

*NEIC **21** 22:57:14.5±2.0, 7°.46N±0°.09×94°.3E±0°.1, h10^{km}±1^{km}, mb4.4/23, Error ellipse: s-maj=18.1km s-min=13.2km az=241.0*

*DJA **21** 22:57:16.1±0.4, 8°N±4°×9°4E±°, h10^{km}, M4.6/9, mB5.6/4, mb4.3/9, MLv4.6/4, Mw(mB)5.1/4, Mwp6.3/1*

*NDI **21** 22:57:17.0±1.2, 7°.31N×94°.42E, h16^{km}, ML4.6*

ISC 21 22:57:16.5±0.5, **7°.44N**±0°.05×**94°.34E**±0°.06, **h24**^{km}, **n82**, σ**1ˢ.47**/76, **mb4.1**/21, **MS3.7**/14, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.59	224	*e*P	Pb	22 57 28.1	-0.1
CMBY				*e*S	Sn	22 57 37.6	-0.7
CMBY				IAML		22 57 42.6	
	comp=E,38μm,0.4s						
CMBY				IAML		22 57 42.9	
	comp=N,30μm,0.1s						
LHMI	Lhok Sumawe	3.39	130		Pn	22 58 09.0	+1.0
MLSI	Meulaboh, Aceh	3.76	147	P	Pn	22 58 17.2	+4.2
PBA	Port Blair	4.48	339	*e*P	Pn	22 58 27.1	+4.2
PBA				*e*S	Sn	22 59 16.8	+2.5
DGPR	DIGLIPUR	5.87	346	*e*P	Pn	22 58 45.7	+3.6
DGPR				*e*S	Sn	22 59 49.9	+1.2
PSI	Prapat	6.48	135	Pn	Pn	22 58 53.7	+3.1
	comp=N,1.9nm,0.3s,baz=296,slow=7.8,SNR=6.6						
PSI				LR	LR	23 01 36.5	
	comp=N,593nm,21.3s,baz=300,slow=40						
RPSI	Rantau Prapat	6.56	136		Pn	22 58 52.9	+1.4
RPSI	Rantau Prapat	6.56	136		Pn	22 58 53.7	+2.2
KULM	Kulim	6.62	108		Pn	22 58 52.3	0.0
GSI	Gunungsitoli	6.89	152	Pn	Pn	22 58 57.0	+0.9
IPM	Ipoh	7.26	113		Pn	22 59 00.3	-1.0
SDSI	Sungai Dareh	10.91	139	P	Pn	22 59 47.4	-3.8
PBKT	Sadao Pong	11.15	35		Pn	22 59 56.1	+1.6
CMAR	Chiang Mai Arr	11.84	22	Pn	Pn	23 00 01.5	-2.4
	comp=N,0.3nm,0.3s,baz=215,slow=14,SNR=1.1						
CMAR				LR	LR	23 04 38.3	
	comp=N,404nm,19.1s,baz=222,slow=38						
CHTO	Chiang Mai	12.16	21		Pn	23 00 09.8	+1.4
PALK	Pallekele	13.53	270	LR	LR	23 05 13.5	
	comp=N,420nm,21.5s,baz=37,slow=35						
MDSI	Maura Dua	15.38	140	P	P	23 00 55.5	-1.1
	comp=N,92μmcomp=N,1μmcomp=N,6.3nm,1.0s						
KSM	Kuching	16.98	110	Pn	Pn	23 01 12.6	0.0
KSM				IAmb	IAmb	23 01 25.5	
	comp=Z,29nm,1.2s						
SBUM	Sibu	18.48	105	P	P	23 01 30.8	-0.2
QIZ	Qiongzhong	18.96	51	P	P	23 01 36.6	+0.4
QIZ				S	S	23 05 09.8	-0.4
KMI	Kunming	19.33	24	P	Pn	23 01 44.0	+2.4
KMI				pP	pwP	23 01 50.8	+2.0
KMI				S	Sn	23 05 16.4	-1.6
KMI				sS	sS	23 05 29.8	+1.9
KMI				SS	S	23 05 43.3	+25
LEM	Lembang	19.39	137	LR	LR	23 11 00.9	
	comp=Z,411nm,19.1s,baz=244,slow=42						
ODAN	Odare	20.42	342	*e*P	P	23 01 53.0	+0.7
RAMN	Ramite	20.76	340	*e*P	P	23 01 56.3	+0.3
	comp=Z,30nm,0.6s						
TAPN	Taplejung	20.78	343	*e*P	P	23 01 55.8	-0.5
	comp=Z,57nm,1.0s						
JIRN	Jiri	21.55	340	*e*P	P	23 02 04.0	-0.6
	comp=Z,31nm,0.7s						
PKI	Pulchoki	21.74	338	*e*P	P	23 02 05.6	-1.1
	comp=Z,16nm,1.0s						
PKIN	Phulchoki	21.75	338	*e*P	P	23 02 05.6	-1.1
	comp=Z,13nm,0.7s						
GUN	Gumba	21.89	340	*e*P	P	23 02 06.4	-1.8
	comp=Z,28nm,0.9s						
DMN	Daman	21.89	338	*e*P	P	23 02 07.5	-0.7
	comp=Z,9.9nm,0.6s						
KKN	Kakani	21.99	338	*e*P	P	23 02 07.7	-1.5
	comp=Z,13nm,0.8s						
LSA	Lhasa	22.35	353	P	P	23 02 13.7	+0.3
LSA				IAmb	IAmb	23 02 23.0	
	comp=Z,8.7nm,0.8s						
GKN	Gorkha	22.43	337	*e*P	P	23 02 12.5	-1.3
	comp=Z,19nm,0.7s						
DANN	Dangsing	23.08	336	*e*P	P	23 02 19.1	-1.8
	comp=Z,21nm,0.6s						
XAN	Xi'an	29.70	25	P	P	23 03 22.8	+2.0
XAN				S	S	23 08 15.8	+0.3
GTA	Gaotai	32.21	8	*e*P	P	23 03 43.3	+0.3
GTA				pP	pP	23 03 46.6	-2.9
GTA				sP	sP	23 03 49.3	-2.9
NIL	Nilore	32.57	326	P	P	23 03 45.7	-0.4
NIL				IAmb	IAmb	23 03 54.0	
	comp=Z,5.8nm,0.7s						
KBL	Kabul	35.64	323	P	P	23 04 13.5	+0.6
KSH	Kashi	35.95	335	P	P	23 04 18.1	+2.7
KSH				pP	pwP	23 04 28.3	+3.4
KSH				PP	PP	23 05 39.6	+2.2
KSH				S	S	23 09 53.5	+0.8
KSH				sS	sS	23 10 10.0	+6.4
HHC	Hu-ho-hao-te	36.65	22	*e*P	P	23 04 14.3	-7.0
WMQ	Urumqi	36.71	352	*e*P	P	23 04 23.4	+1.6
ARSB	Arslanbob	38.72	334	P	P	23 04 38.6	-0.3
AAK	Ala-Archa	39.19	337	P	P	23 04 42.0	-0.8
	comp=Z,1.2nm,0.7s,baz=114,slow=10.0,SNR=3.7						
AAK	Ala-Archa	39.19	337	P	P	23 04 43.2	+0.4
AAK				IAmb	IAmb	23 04 52.4	
	comp=Z,7.2nm,1.2s						
MK31	Makanchi Array	40.56	347	P	P	23 04 53.1	-0.9
MK31				IAmb	IAmb	23 04 59.4	
	comp=Z,4.3nm,1.1s						
MKAR	Makanchi Array	40.56	347	P	P	23 04 52.6	-1.4
	comp=Z,2.9nm,0.8s,baz=163,slow=8.3,SNR=27						
MKAR				LR	LR	23 24 04.3	
	comp=Z,33nm,18.6s,baz=169,slow=40						
MAKZ	Makanchi	40.64	347	P	P	23 04 53.7	-1.0
KK31	Karatay Array	41.24	333	P	P	23 04 59.6	-0.1
KKAR	Karatay Array	41.24	333	P	P	23 04 59.6	-0.1
KKAR	Karatay Array	41.24	333	P	P	23 05 01.3	+1.6
SONM	Songino Array	41.55	12	P	P	23 05 00.3	-1.9
	comp=Z,1.3nm,0.9s,baz=197,slow=6.6,SNR=8.7						
SONM				LR	LR	23 23 24.3	
	comp=Z,125nm,19.7s,baz=146,slow=38						
SONM	Songino Array	41.55	12	P	P	23 05 01.8	-0.4
KSRS	Korea Array	42.66	41	LR	LR	23 24 58.7	
	comp=Z,79nm,20.6s,baz=228,slow=39						
GEYT	Alibeck	44.66	318	P	P	23 05 27.1	-0.4
	comp=Z,1.1nm,0.4s,baz=174,slow=5.8,SNR=3.0						
GEYT				LR	LR	23 27 21.6	
	comp=Z,72nm,18.5s,baz=175,slow=41						
GEYT	Alibeck	44.66	318	P	P	23 05 27.9	+0.4
GYA0B	ALIBECK ARRAY	44.66	318	P	P	23 05 27.3	-0.2
GYA0B				IAmb	IAmb	23 05 35.0	
	comp=Z,5.1nm,0.9s						
KURBB	Kurchatov Arra	45.02	346	P	P	23 05 29.1	-0.9
	comp=Z,4.3nm,0.9s,baz=165,slow=7.1,SNR=34						
KURK	Kurchatov	45.08	346	P	P	23 05 30.3	-0.3
ZALV	Zalesovo Beam	47.02	352	P	P	23 05 43.9	-1.9
	comp=Z,2.4nm,0.4s,baz=177,slow=9.0,SNR=19						
ZALV				LR	LR	23 29 59.0	
	comp=Z,76nm,19.5s,baz=191,slow=42						
ZALV	Zalesovo Beam	47.02	352	P	P	23 05 45.0	-0.7
WRA	Warramunga Arr	47.84	125	P	P	23 05 52.0	-0.8
	comp=Z,0.8nm,0.6s,baz=307,slow=8.3,SNR=7.7						
WRA	Warramunga Arr	47.84	125	IAmb	IAmb	23 05 57.8	
	comp=Z,0.3nm,1.1s						
MJAR	Matsushiro Arr	49.31	47	LR	LR	23 29 20.9	
	comp=Z,93nm,18.6s,baz=215,slow=39						
RAYN	Ar Rayn	49.45	295	P	P	23 06 05.4	+0.3
RAYN				IAmb	IAmb	23 06 15.5	
	comp=Z,3.9nm,0.8s						
ASAR	Alice Springs	49.48	130	P	P	23 06 05.9	+0.6
	comp=Z,0.4nm,0.7s,baz=301,slow=8.3,SNR=3.5						
ASAR				LR	LR	23 29 30.7	
	comp=Z,70nm,19.3s,baz=296,slow=39						
BRVK	Borovoye	49.53	341	P	P	23 06 05.1	-0.1
BRVK				IAmb	IAmb	23 06 08.4	
	comp=Z,2.6nm,0.8s						
ABKAR	Akbulak array	50.71	331	P	P	23 06 13.8	-0.3
ARU	Arti	56.37	337	P	P	23 06 56.3	+0.7
ARU				IAmb	IAmb	23 07 01.0	
	comp=Z,4.3nm,0.9s						
KBZ	Khabaz	57.55	318	LR	LR	23 34 09.9	
	comp=Z,41nm,19.4s,baz=158,slow=39						
KMBO	Kilima Mbogo	57.58	264	P	P	23 07 07.2	+2.0
	comp=Z,0.8nm,0.5s,baz=54,slow=13,SNR=6.0						
KMBO				LR	LR	23 28 37.2	
	comp=Z,98nm,21.1s,baz=98,slow=33						
KMBO	Kilima Mbogo	57.58	264	IAmb	IAmb	23 07 09.2	
	comp=Z,2.9nm,1.1s						
STKA	Stephens Creek	59.66	134	LR	LR	23 37 57.4	
	comp=Z,58nm,18.2s,baz=242,slow=41						
NRIK	Noril'sk	61.99	357	LR	LR	23 38 37.2	
	comp=Z,74nm,18.4s,baz=296,slow=40						
BRTR	Keskin Array B	62.87	311	P	P	23 07 38.3	-2.6
	comp=Z,0.2nm,0.3s,baz=119,slow=17,SNR=3.6						
TIXI	Tiksi	67.62	11	P	P	23 08 10.1	-0.9
FINES	FINESS Array B	73.19	332	P	P	23 08 43.5	-1.6
	comp=Z,1.2nm,0.7s,baz=72,slow=6.2,SNR=8.4						
BOSA	Boshof	75.52	238	P	P	23 08 59.8	+0.3
	comp=Z,2.3nm,0.9s,baz=0.0,slow=3.0,SNR=2.6						
BOSA	Boshof	75.52	238	IAmb	IAmb	23 09 13.9	
	comp=Z,7.1nm,1.1s						
ARCES	ARCESS Array B	75.74	340	P	P	23 08 58.1	-1.8
	comp=Z,1.0nm,0.7s,baz=88,slow=6.4,SNR=1.1						
ARCES				LR	LR	23 44 46.0	
	comp=Z,113nm,20.3s,baz=236,slow=38						
GERES	GERESS Array B	78.29	318	P	P	23 09 14.1	-0.6
	comp=Z,1.1nm,0.9s,baz=59,slow=3.4,SNR=6.3						
GERES				LR	LR	23 47 55.0	
	comp=Z,31nm,18.1s,baz=352,slow=39						
RPZ	Rata Peaks	85.60	135	LR	LR	23 49 48.9	
	comp=Z,57nm,18.5s,baz=266,slow=37						
IMAR	Indian Mountai	91.96	22	P	P	23 10 23.5	+0.7

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*HEL **21** 23:04:59.6±0.3, 67°.95N×20°.24E, h0^{km}, ML1.7, Explosion*

*UPP **21** 23:05:12.0±0.1, 67°.18N×20°.68E, h0^{km}, ML2.5, Explosion*

ISC 21 23:04:58.3±1.1, **67°.89N**±0°.03×**20°.39E**±0°.05, **h0**^{km}, **n22**, σ**2ˢ.30**/29, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.07	345	P	Pg	23 05 26.7	+27
LANU	Lannavaara	0.63	74	PG	Pb	23 05 11.9	-0.2
LANU				SG	Sb	23 05 19.4	-2.1
MASU	Masugnsbyn	0.75	124	P	Pn	23 05 23.2	+6.9
MASU				S	Sn	23 05 30.9	+2.6
DUNU	Dundret	0.77	175	P	Pg	23 05 13.6	+0.5
DUNU				S	Sg	23 05 14.8	-8.3
KIF	Kilpisjarvi	1.13	8	*e*P	Pn	23 05 22.1	+0.7
KIF	Kilpisjarvi	1.13	8	PG	Pg	23 05 19.5	-0.6
KIF				MSG		23 05 33.8	
	comp=Z,6.7nm,0.2s						
KIF				SN	Sn	23 05 38.7	+1.1
HEF	Hetta	1.33	65	*e*P	Pn	23 05 26.1	+1.9
HEF	Hetta	1.33	65	PN	Pn	23 05 25.8	+1.6
HEF				MSG		23 05 40.6	
	comp=Z,4.3nm,0.2s						
HEF				SN	Sn	23 05 48.1	+5.5
PAJU	Pajala	1.36	128	P	Pn	23 05 29.9	+5.3
PAJU				S	Sn	23 05 42.6	-0.8
ERTU	Ertsjaerv	1.51	151	P	Pb	23 05 27.8	+0.6
ERTU	Ertsjaerv	1.51	151	PG	Pb	23 05 27.8	+0.6
HARU	Harads	1.75	172	P	Pn	23 05 30.8	+0.9
HARU				S	Sn	23 05 45.2	-7.5
TOF	Tornio	2.39	138	PN	Pb	23 05 41.1	-1.0
TOF				SN	Sn	23 06 09.7	+1.2
TOF				MSG		23 06 12.7	
	comp=Z,4.9nm,0.2s						
SGF	Sodankyl	2.39	98	PG	Pg	23 05 43.6	-0.5
SGF				SG	Sg	23 06 15.1	+0.1
SJUU	Sjulsmark	2.44	168	P	Pb	23 05 43.1	+0.1
ARE0	ARCESS Array S	2.50	46	PG	Pb	23 05 43.7	-0.3
ARE0				SN	Sn	23 06 09.3	-2.0
RNF	Rovaniemi	2.54	118	PB	Pb	23 05 44.4	-0.3
	baz=308						
RNF				SB	Sg	23 06 18.2	-1.5
LILU	Lilltraesk	2.62	185	P	Pb	23 05 46.6	+0.4
KEV	Kevo	3.05	49	MSG		23 06 29.2	
	comp=Z,1.2nm,0.2s						
KEV				SG	Sg	23 06 34.4	-1.8
BURU	Burvik	3.34	173	PB	Pn	23 05 55.4	+3.7
MSF	Maaselka	3.94	116	PG	Pg	23 06 12.6	-1.3
KU6	Riekki	4.18	112	SG	Sg	23 07 12.3	0.0

IDC 21 23:05:09.5±1.8, **17°.12S**×**177°.77W**, **h0**^{km}, **mb3.9**/6, **mb1 4.2**/6, **mb1mx3.9**/33, **mbtmp3.9**/6, **Error ellipse: s-maj=113.0km s-min=22.7km az=149.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.55	240	P	P	23 12 41.8	-0.6
	0.7nm,0.3s,baz=37,slow=12,SNR=3.0						
WRA	Warramunga Arr	45.38	259	P	P	23 13 30.6	+0.5
	1.4nm,0.4s,baz=97,slow=7.8,SNR=10						
ASAR	Alice Springs	45.60	253	P	P	23 13 31.6	-0.3
	2.0nm,0.5s,baz=91,slow=7.8,SNR=27						
NVAR	Mina Array Bea	78.43	44	P	P	23 17 13.5	+0.9
	0.3nm,0.7s,baz=243,slow=8.0,SNR=2.2						
ILAR	Eielson Array	84.98	13	P	P	23 17 45.7	-0.6
	0.2nm,0.4s,baz=217,slow=5.0,SNR=8.3						
TXAR	Lajitas Array	85.05	57	P	P	23 17 47.4	-0.2
	0.4nm,0.6s,baz=198,slow=5.7,SNR=4.4						

IDC 21 23:14:20.6±4.3, **4°.12S**×**153°.29E**, **h0**^{km}, **mb3.5**/2, **mb1 3.7**/2, **mb1mx3.3**/33, **mbtmp3.5**/2, **Error ellipse: s-maj=192.6km s-min=55.6km az=119.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.26	228	P	P	23 19 40.5	+0.9
	1.2nm,0.6s,baz=53,slow=9.7,SNR=2.7						
ASAR	Alice Springs	26.98	222	P	P	23 20 03.8	-0.5
	0.2nm,0.4s,baz=56,slow=8.9,SNR=6.3						
TORD	Torodi Ar. Bea	150.55	290	PKPbc	PKPbc	23 34 15.0	-0.5
	0.3nm,0.7s,baz=65,slow=1.0,SNR=1.9						

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*IDC **21** 23:17:39.5±1.2, 26°.33N×140°.77E, h427^{km}±12^{km}, mb3.3/17, mb1 3.4/21, mb1mx3.3/41, mbtmp4.1/21, Error ellipse: s-maj=16.8km s-min=13.4km az=82.0*

ISC 21 23:17:40.7±0.8, **26°.3N**±0°.1×**140°.9E**±0°.1, **h450**^{km}, **n34**, σ**0ˢ.99**/34, **mb3.6**/17, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.40	56	P	P	23 18 34.2	-4.1
	33nm,0.3s,baz=78,slow=22,SNR=6.3						
JCJ				S	S	23 19 14.4	-11
	158nm,0.3s,baz=270,slow=22,SNR=20						
MJAR	Matsushiro Arr	10.44	348	P	P	23 20 01.9	-0.6
	0.2nm,0.3s,baz=189,slow=7.1,SNR=7.5						
JNU	Nakatsue	11.02	310	P	P	23 20 08.2	-0.7
	0.8nm,0.3s,baz=8.4,slow=4.5,SNR=5.9						
KSRS	Korea Array	15.61	318	P	P	23 20 58.7	+0.5
	0.7nm,0.3s,baz=145,slow=8.6,SNR=12						
USRK	Ussuriysk Ar.	19.24	340	P	P	23 21 34.3	-0.6
	baz=165,slow=8.6,SNR=12						
KLR	Kul'dur	23.95	345	P	P	23 22 17.4	0.0
	1.2nm,0.5s,baz=168,slow=7.7,SNR=7.5						
SONM	Songino Array	34.48	318	P	P	23 23 48.8	-0.6
	0.5nm,0.6s,baz=128,slow=5.3,SNR=4.0						
SEY	Seymchan	37.39	9	P	P	23 24 14.2	+0.9
	1.5nm,0.5s,baz=157,slow=6.8,SNR=5.9						
CMAR	Chiang Mai Arr	39.42	267	P	P	23 24 29.5	-1.1
	0.6nm,0.3s,baz=63,slow=6.2,SNR=1.5						
WRA	Warramunga Arr	46.42	189	P	P	23 25 26.5	+0.9
	0.7nm,0.3s,baz=7.0,slow=7.9,SNR=18						
ODAN	Odare	47.53	283	*e*P	P	23 25 34.2	-0.1
	6.8nm,0.4s						
RAMN	Ramite	48.20	284	*e*P	P	23 25 39.5	+0.1
	4.1nm,0.5s						
JIRN	Jiri	48.41	285	*e*P	P	23 25 41.9	+0.8
	13nm,0.4s						
GUN	Gumba	48.63	285	*e*P	P	23 25 43.3	+0.6
	9.5nm,0.4s						
PKI	Pulchoki	49.11	285	*e*P	P	23 25 46.0	-0.3
	4.0nm,0.4s						
PKIN	Phulchoki	49.12	285	*e*P	P	23 25 46.0	-0.3
	4.7nm,0.4s						
KKN	Kakani	49.18	285	*e*P	P	23 25 46.7	+0.1
	5.5nm,0.5s						
ZALV	Zalesovo Beam	49.32	320	P	P	23 25 46.4	-0.6
	1.3nm,0.8s,baz=124,slow=8.0,SNR=3.6						
GKN	Gorkha	49.69	285	*e*P	P	23 25 50.9	+0.5
	4.2nm,0.3s						
MKAR	Makanchi Array	50.08	310	P	P	23 25 52.3	-0.5
	1.0nm,0.6s,baz=93,slow=9.7,SNR=15						

DANN	Dangsing	50.38	286	eP	P	23 25 56.4	+0.8
	18nm,0.6s						
NRIK	Noril'sk	52.95	339	P	P	23 26 13.7	+0.5
	4.1nm,0.4s,baz=122,slow=6.3,SNR=13						
ILAR	Eielson Array	58.95	28	P	P	23 26 56.1	+1.1
	0.7nm,0.5s,baz=238,slow=6.4,SNR=11						
YKA	Yellowknife Ar	73.37	28	P	P	23 28 26.4	+1.1
	0.9nm,0.8s,baz=295,slow=5.3,SNR=14						
ARCES	ARCESS Array B	73.89	341	P	P	23 28 29.3	+1.2
	2.9nm,0.6s,baz=68,slow=7.8,SNR=16						
KBZ	Khabaz	77.68	313	P	P	23 28 51.0	+1.2
	2.2nm,0.8s,baz=123,slow=8.3,SNR=6.0						
FINES	FINESS Array B	78.12	334	P	P	23 28 52.2	+0.5
	2.7nm,0.3s,baz=73,slow=4.8,SNR=85						
AKASG	Malin Array Be	82.55	323	P	P	23 29 15.3	+0.1
	1.2nm,0.4s,baz=50,slow=4.7,SNR=8.4						
NB2	NORSAR Subarra	83.89	338	P	P	23 29 21.4	-0.4
	comp=Z,3.4nm,0.6s,baz=45,slow=5.1						
NOA	NORSAR Array B	83.89	338	P	P	23 29 22.0	+0.2
	comp=Z,1.9nm,0.5s,baz=56,slow=5.9,SNR=8.7						
BRTR	Keskin Array B	85.67	312	P	P	23 29 31.8	+0.7
	comp=Z,0.3nm,0.6s,baz=74,slow=5.4,SNR=4.0						
GERES	GERESS Array B	91.56	328	P	P	23 29 58.4	-0.1
	comp=Z,0.2nm,0.3s,baz=46,slow=5.8,SNR=4.8						
TORD	Torodi Ar. Bea	124.20	310	PKP	PKiKP	23 35 48.7	+0.3
	comp=Z,0.3nm,0.6s,baz=21,slow=2.7,SNR=2.7						
LPAZ	La Paz	151.25	76	PKPbc	PKiKP	23 36 44.5	+0.3
	comp=Z,1.8nm,0.4s,baz=278,slow=4.6,SNR=6.1						

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*IDC **21** 23:19:28.2±1.3, 7°.67N×93°.80E, h0^{km}, mb3.5/7, mb1 3.6/8, mb1mx3.5/35, mbtmp3.5/8, ML4.2/1, MS3.0/3, Ms1 3.0/3, ms1mx2.7/44, Error ellipse: s-maj=46.6km s-min=22.0km az=55.0*

*NEIC **21** 23:19:28.3±1.3, 7°.4N±0°.1×94°.2E±0°.2, h16^{km}±5^{km}, mb4.0/5, Error ellipse: s-maj=27.7km s-min=14.0km az=57.0*

ISC 21 23:19:28.9±0.8, **7°.44N**±0°.08×**94°.27E**±0°.07, **h20**^{km}, **n24**, σ**0s.89**/22, **mb3.8**/9, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.55	219	eP	Pn	23 19 41.8	+0.2
CMBY				eS	Sn	23 19 50.6	+0.4
CMBY	CAMPBELL BAY	0.55	219	eP	Pn	23 19 41.9	+0.2
CMBY				eS	Sn	23 19 50.6	+0.4
LHMI	Lhok Sumawe	3.45	129	Pn	Pn	23 20 22.0	+0.5
PSI	Prapat	6.54	135	LR	LR	23 23 40.8	
	comp=Z,66nm,20.1s,baz=225,slow=36						
RPSI	Rantau Prapat	6.61	135	Pn	Pn	23 21 05.2	+0.2
KULM	Kulim	6.69	108		Pn	23 21 06.3	+0.3
IPM	Ipoh	7.33	113		Pn	23 21 14.2	-0.7
PBKT	Sadao Pong	11.18	35	Pn	Pn	23 22 08.4	+0.7
CMAR	Chiang Mai Arr	11.85	22	Pn	Pn	23 22 18.4	+1.5
	0.5nm,0.3s,baz=211,slow=14,SNR=2.2						
CMAR				LR	LR	23 26 53.6	
	comp=Z,68nm,18.4s,baz=214,slow=38						
PALK	Pallekele	13.46	270	LR	LR	23 27 27.5	
	comp=Z,84nm,18.4s,baz=26,slow=37						
MK31	Makanchi Array	40.53	347	P	P	23 27 06.7	-0.1
MKAR	Makanchi Array	40.53	347	P	P	23 27 06.0	-0.7
	1.5nm,0.8s,baz=168,slow=7.8,SNR=10						
MAKZ	Makanchi	40.62	347	P	P	23 27 06.2	-1.2
MAKZ				IAmb	IAmb	23 27 13.0	
	comp=Z,1.4nm,0.6s						
SONM	Songino Array	41.55	12	P	P	23 27 16.7	+1.5
	comp=Z,0.3nm,0.7s,baz=193,slow=5.9,SNR=2.0						
GEYT	Alibeck	44.61	318	P	P	23 27 39.4	-0.7
	comp=Z,1.0nm,0.6s,baz=140,slow=7.2,SNR=4.1						
GEYT	Alibeck	44.61	318	P	P	23 27 39.9	-0.1
GYA0B	ALIBECK ARRAY	44.61	318	P	P	23 27 40.5	+0.5
KURK	Kurchatov	45.06	346	P	P	23 27 44.0	+0.7
KURK				IAmb	IAmb	23 27 50.0	
	comp=Z,2.5nm,0.9s						
ZALV	Zalesovo Beam	47.00	352	P	P	23 27 58.8	+0.2
	comp=Z,0.6nm,0.3s,baz=181,slow=7.8,SNR=4.8						
ZALV	Zalesovo Beam	47.00	352	P	P	23 27 58.9	+0.4
WRA	Warramunga Arr	47.91	125	P	P	23 28 11.6	+5.4
	comp=Z,0.3nm,0.6s,baz=305,slow=8.5,SNR=1.9						
USRK	Ussuriysk Ar.	49.18	36		P	23 28 13.8	-1.8
ASAR	Alice Springs	49.54	130	P	P	23 28 25.8	+7.1
	comp=Z,0.2nm,0.6s,baz=301,slow=6.4,SNR=4.2						
BRTR	Keskin Array B	62.81	311	P	P	23 29 52.0	-1.5
	comp=Z,0.3nm,0.5s,baz=126,slow=8.6,SNR=2.1						

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*SJA **21** 23:24:31.5±1.3, 22°.07S×67°.42W, h185^{km}±13^{km}, ML3.1, MW3.0*

*GUC **21** 23:24:32.2±0.7, 21°.96S×67°.90W, h212^{km}±10^{km}, ML3.7*

*IDC **21** 23:24:40.0±9.0, 21°.43S×67°.29W, h236^{km}±57^{km}, mb3.4/3, mb1 3.3/5, mb1mx3.1/21, mbtmp3.8/5, Error ellipse: s-maj=108.9km s-min=25.4km az=27.0*

ISC 21 23:24:32.0±0.8, **22°.05S**±0°.04×**67°.48W**±0°.04, **h190**^{km}±7^{km}, **n48**, σ**0s.96**/76, **mb3.6**/3, **10C**, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	1.44	247	i P	Pn	23 25 05.1	+0.4
LVC	Limon Verde	1.44	247	i P	Pn	23 25 05.1	+0.4
PB09	IPOC Station P	1.66	278	⇑iP	Pn	23 25 07.2	+0.7
PB09				i S	Sn	23 25 34.0	+0.8
PB09	IPOC Station P	1.66	278	i P	Pn	23 25 07.2	+0.7
PB09				eS	Sn	23 25 34.2	+1.0
PB09				IAML		23 25 35.3	
	comp=Z,50nm,0.3s						
PB09	IPOC Station P	1.66	278	i P	Pn	23 25 07.2	+0.7
PB09				eS	Sn	23 25 34.2	+1.0
PB09				IAML		23 25 35.3	
	comp=Z,50nm,0.3s						
YJA	Yavi	1.82	94	i P	Pn	23 25 08.3	-0.1
YJA				eS	Sn	23 25 35.0	-1.7
YJA				IAML		23 25 36.2	
	comp=Z,60nm,0.5s						
YJA	Yavi	1.82	94	i P	Pn	23 25 08.3	-0.1
YJA				IAML		23 25 38.0	
	comp=Z,43nm,0.6s						
PB06	IPOC Station P	2.05	251	⇑iP	Pn	23 25 10.5	+0.1
PB06				i S	Sn	23 25 39.7	-0.6
PB06	IPOC Station P	2.05	251	i P	Pn	23 25 10.6	+0.1
PB06				eS	Sn	23 25 40.8	+0.5
PB06				IAML		23 25 42.6	
	comp=Z,60nm,0.2s						
PB06	IPOC Station P	2.05	251	i P	Pn	23 25 10.6	+0.1
PB06				eS	Sn	23 25 41.0	+0.7
PB06				IAML		23 25 42.6	
	comp=Z,60nm,0.2s						
PB03	IPOC Station P	2.11	270	⇑iP	Pn	23 25 11.1	-0.1
PB03				i S	Sn	23 25 40.3	-1.2
PB03				IAML		23 25 41.4	
	comp=N,206nm,0.1s						
PB03	IPOC Station P	2.11	270	i P	Pn	23 25 11.2	0.0
PB03				eS	Sn	23 25 40.5	-1.1
PB03				IAML		23 25 41.5	
	comp=Z,190nm,0.2s						
PB03	IPOC Station P	2.11	270	i P	Pn	23 25 11.2	0.0
PB03				IAML		23 25 43.9	
	comp=Z,117nm,0.1s						
PB01	IPOC Station P	2.12	298	⇑iP	Pn	23 25 11.3	+0.1
PB01				i S	Sn	23 25 40.7	-0.9
PB01				IAML		23 25 41.9	
	comp=E,419nm,0.3s						
PB01	IPOC Station P	2.12	298	i P	Pn	23 25 11.4	+0.1
PB01				eS	Sn	23 25 40.9	-0.8
PB01				IAML		23 25 41.3	
	comp=Z,143nm,0.2s						
PB01	IPOC Station P	2.12	298	i P	Pn	23 25 11.3	+0.1
PB01				IAML		23 25 45.4	
	comp=Z,122nm,0.2s						
PB15	IPOC Station P	2.17	238	⇑iP	Pn	23 25 12.3	+0.4
PB15				i S	Sn	23 25 42.5	-0.4
PB15	IPOC Station P	2.17	238	i P	Pn	23 25 12.3	+0.4
PB15				eS	Sn	23 25 43.1	+0.2
PB15	IPOC Station P	2.17	238	i P	Pn	23 25 12.3	+0.4
PB15				IAML		23 25 48.1	
	comp=Z,594nm,0.2s						
PB07	IPOC Station P	2.26	278	⇑iP	Pn	23 25 12.0	-0.8
PB07				i S	Sn	23 25 42.3	-2.2
PB07				IAML		23 25 45.4	
	comp=E,374nm,0.2s						
PB07	IPOC Station P	2.26	278	i P	Pn	23 25 13.1	+0.3
PB07				eS	Sn	23 25 43.5	-0.9
PB07				IAML		23 25 45.6	
	comp=Z,135nm,0.2s						
PB07	IPOC Station P	2.26	278	i P	Pn	23 25 12.9	+0.2
PB07				eS	Sn	23 25 43.6	-0.9
PB07				IAML		23 25 45.6	
	comp=Z,135nm,0.2s						
PB02	IPOC Station P	2.36	287	⇑iP	Pn	23 25 13.8	-0.1
PB02				i S	Sn	23 25 44.6	-1.8
PB02				IAML		23 25 46.4	
	comp=E,440nm,0.2s						
PB02	IPOC Station P	2.36	287	i P	Pn	23 25 13.9	-0.1
PB02				eS	Sn	23 25 45.4	-1.0
PB02	IPOC Station P	2.36	287	i P	Pn	23 25 13.7	-0.1
PB02				IAML		23 25 49.2	
	comp=Z,276nm,0.2s						
PB08	IPOC Station P	2.46	320	i P	Pn	23 25 16.2	+1.0
PB08				i S	Sn	23 25 48.6	-0.3
PB08				IAML		23 25 52.0	
	comp=E,114nm,0.3s						
PB08	IPOC Station P	2.46	320	i P	Pn	23 25 16.3	+1.0
PB08				eS	Sn	23 25 49.2	+0.3
PB08				IAML		23 25 50.1	
	comp=Z,71nm,0.7s						
PB08	IPOC Station P	2.46	320	i P	Pn	23 25 16.3	+1.0
PB08				eS	Sn	23 25 49.3	+0.3
PB08				IAML		23 25 50.1	
	comp=Z,71nm,0.7s						
PB04	IPOC Station P	2.49	263	⇑iP	Pn	23 25 14.5	-0.9
PB04				i S	Sn	23 25 46.3	-2.8
PB04				IAML		23 25 53.6	
	comp=N,130nm,0.1s						
PB04	IPOC Station P	2.49	263	i P	Pn	23 25 15.4	0.0
PB04				eS	Sn	23 25 48.7	-0.4
PB04	IPOC Station P	2.49	263	i P	Pn	23 25 15.3	0.0
PB04				eS	Sn	23 25 48.9	-0.2
PB05	IPOC Station P	2.65	252	⇑iP	Pn	23 25 16.6	-0.4
PB05				i S	Sn	23 25 50.1	-2.1
PB05	IPOC Station P	2.65	252	i P	Pn	23 25 17.1	+0.1
PB05				IAML		23 26 17.5	
	comp=Z,14nm,0.5s						
PB05	IPOC Station P	2.65	252	i P	Pn	23 25 17.1	+0.1
PB05				IAML		23 25 57.5	
	comp=Z,22nm,0.3s						
PATCX	Punta Patache	2.78	296	i P	Pn	23 25 18.4	-0.2
PATCX				IAML		23 25 57.1	
	comp=Z,117nm,0.4s						
PB11	IPOC Station P	3.05	318	eP	Pn	23 25 21.5	-0.5
PB11				i S	Sn	23 25 58.6	-2.4
PB11				IAML		23 26 00.1	
	comp=E,363nm,0.2s						
PB11	IPOC Station P	3.05	318	i P	Pn	23 25 21.6	-0.5
PB11				IAML		23 26 01.8	
	comp=Z,87nm,0.2s						
AZAP	Zapla	3.10	135	i P	Pn	23 25 22.2	-0.4
AZAP				IAML		23 26 12.8	
	comp=Z,14nm,2.9s						
PB10	IPOC Station P	3.19	242	⇑iP	Pn	23 25 23.1	-0.3
PB10				i S	Sn	23 26 01.4	-2.3
PB10	IPOC Station P	3.19	242	i P	Pn	23 25 23.2	-0.3
PB10				IAML		23 26 11.8	
	comp=Z,17nm,0.9s						
SLA	San Lorenzo	3.22	146	i P	Pn	23 25 24.5	+0.6
SLA				IAML		23 26 16.2	
	comp=Z,12nm,4.0s						
PSGCX	Pisagua	3.47	314	i P	Pn	23 25 25.8	-1.2
PSGCX				IAML		23 26 09.4	
	comp=Z,56nm,0.2s						
PB14	IPOC Station P	3.72	226	i P	Pn	23 25 30.0	-0.2
PB14				IAML		23 26 17.9	
	comp=Z,37nm,0.2s						
LPAZ	La Paz	5.76	354	P	Pn	23 25 57.8	+1.1
	comp=Z,0.7nm,0.3s,baz=172,slow=8.7,SNR=10						
LPAZ				S	Sn	23 27 00.6	-2.8
	comp=Z,0.1nm,0.3s,baz=350,slow=3.3,SNR=1.4						
BDFB	Brasilia	19.48	74	P	Pn	23 28 47.3	-0.9
	comp=Z,0.4nm,0.3s,baz=225,slow=14,SNR=1.7						
ULM	Lac du Bonnet	76.25	342	P	P	23 35 59.8	+0.6
	comp=Z,0.5nm,0.3s,baz=162,slow=3.2,SNR=3.7						
TORD	Torodi Ar. Bea	76.29	70	P	P	23 36 00.6	+0.4
	comp=Z,0.6nm,0.3s,baz=251,slow=5.7,SNR=14						
YKA	Yellowknife Ar	92.15	340	P	P	23 37 20.4	+1.1
	comp=Z,0.2nm,0.6s,baz=132,slow=5.1,SNR=3.8						

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*NEIC **21** 23:29:24.8±2.5, 17°.3N±0°.1×94°.49W±0°.05, h157^{km}±5^{km}, Error ellipse: s-maj=16.0km s-min=4.5km az=202.0*

*MEX **21** 23:29:25.8±0.7, 17°.33N×94°.46W, h158^{km}±6^{km}, MD4.0*

ISC 21 23:29:24.4±1.7, **17°.23N**±0°.09×**94°.48W**±0°.04, **h157**^{km}±12^{km}, **n15**, σ**0s.77**/25, **Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.41	250	i P	Pn	23 29 46.8	+0.6
CMIG				eS	Sn	23 30 02.7	-0.1
CMIG	Matias Romero	0.41	250		Pn	23 29 46.8	+0.6
CMIG					Sn	23 30 02.7	-0.1
TGIG		1.38	109	eP	Pn	23 29 53.7	+0.3
TGIG				i S	Sn	23 30 14.7	-0.9
TGIG		1.38	109		Pn	23 29 53.7	+0.3
TGIG					Sn	23 30 14.1	-1.4
HUIG	Huatulco	2.13	227	eP	Pn	23 30 01.0	-0.5
HUIG				eS	Sn	23 30 30.8	+0.6
HUIG	Huatulco	2.13	227		Pn	23 30 00.9	-0.7
HUIG					Sn	23 30 30.9	+0.8
VHO	Vista Hermosa	2.16	266	eP	Pn	23 30 02.3	+0.3
VHO				eS	Sn	23 30 30.9	-0.1
CCIG	Comitan	2.44	112	Pn	Pn	23 30 06.3	+1.0
CCIG					Sn	23 30 36.6	-0.3
TOIG	Toxpalan	2.61	290	i P	Pn	23 30 07.8	+0.4
TOIG				eS	Sn	23 30 39.0	-1.4
PEIG	Puerto Escondi	2.83	245	eP	Pn	23 30 09.8	-0.2
YOIG	Yosondua	2.95	263	eP	Pn	23 30 12.4	+0.7
YOIG				i S	Sn	23 30 47.6	-0.7
HLIG	Huajuapan de L	3.22	281	eP	Pn	23 30 15.7	+0.6
HLIG				eS	Sn	23 30 53.4	-0.9
TLIG	Tlapa	3.91	275	Pn	Pn	23 30 25.0	+1.1
UNM	Universidad Na	4.92	296	Pn	Pn	23 30 37.4	+0.2
LONY	Lake Ozonia	32.03	27		pP	23 36 05.4	-3.9

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*IDC **21** 23:50:08.9±0.6, 7°.43N×94°.31E, h0^{km}, mb4.2/26, mb1 4.3/28, mb1mx4.2/64, mbtmp4.2/28, ML4.1/2, MS3.7/16, Ms1 3.7/16, ms1mx3.5/41, Error ellipse: s-maj=19.8km s-min=13.5km az=47.0*

*NEIC **21** 23:50:10.0±1.5, 7°.37N±0°.08×94°.25E±0°.09, h8^{km}±4^{km}, mb4.6/37, Error ellipse: s-maj=13.8km s-min=10.6km az=66.0*

*DJA **21** 23:50:10.8±0.4, 7°N±3°×9°4E±°, h10^{km}, M4.4/13, mb4.3/13, mB4.8/1, MLv4.5/3, Mw(mB)4.1/1*

*MOS **21** 23:50:11.7±0.8, 7°.39N×94°.27E, h32^{km}, mb4.8/20, Error ellipse: s-maj=11.7km s-min=5.6km az=113.1*

*KLM **21** 23:50:15.0, 7°.52N×94°.42E, h27^{km}, mb4.5*

*NDI **21** 23:50:17.0±2.6, 7°.31N×94°.36E, h10^{km}, mb4.5, mb4.6(NEIC)*

ISC 21 23:50:11.9±0.4, **7°.28N**±0°.05×**94°.24E**±0°.05, **h20**^{km}, **n210**, σ**1s.35**/196, **mb4.5**/65, **MS3.7**/14, **18C-22D**, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	3.37	127		Pn	23 51 04.0	+0.5
MLSI	Meulaboh, Aceh	3.69	144	P	Pn	23 51 11.2	+3.4
PBA	Port Blair	4.59	341	eP	Pb	23 51 26.9	-5.0
PBA				eS	Sn	23 52 17.2	+4.1
DGPR	DIGLIPUR	6.00	348	eP	Pn	23 51 46.1	+6.4
DGPR				eS	Sn	23 52 52.1	+4.2
PSI	Prapat	6.45	133	Pn	Pn	23 51 48.5	+2.7
	1.5nm,0.3s,baz=292,slow=7.1,SNR=11						
PSI				LR	LR	23 54 29.4	
	comp=Z,635nm,20.7s,baz=303,slow=40						
RPSI	Rantau Prapat	6.52	134		Pn	23 51 47.5	+0.7
RPSI	Rantau Prapat	6.52	134		Pn	23 51 48.5	+1.8
KULM	Kulim	6.67	107		Pn	23 51 47.7	-1.1
KULM	Kulim	6.67	107	P	Pn	23 51 48.0	-0.9
GSI	Gunungsitoli	6.80	151	Pn	Pn	23 51 51.4	+0.7
IPM	Ipoh	7.30	112		Pn	23 51 55.7	-1.9
BKNI	Bangkinang	9.68	135	Pn	Pn	23 52 31.9	+1.8
PDSI	Padang	10.23	142	P	Pn	23 52 40.5	+2.7
	9.5nm,1.3s						
PBKT	Sadao Pong	11.34	35		Pn	23 52 53.1	+0.2
CMAR	Chiang Mai Arr	12.02	22	Pn	Pn	23 53 00.7	-1.6
	0.6nm,0.3s,baz=213,slow=13,SNR=11						
CMAR				LR	LR	23 57 35.6	
	comp=Z,362nm,18.4s,baz=220,slow=38						
CMAR	Chiang Mai Arr	12.02	22	P	Pn	23 53 02.1	-0.2
CMAR	Chiang Mai Arr	12.02	22	Pn	Pn	23 53 02.1	-0.2
CHTO	Chiang Mai	12.35	21	P	Pn	23 53 06.2	-0.5
CHTO	Chiang Mai	12.35	21		Pn	23 53 06.2	-0.5
MDRS	Chennai	14.92	294	eP	P	23 53 49.4	+2.0
MDSI	Maura Dua	15.33	139	P	P	23 53 50.8	-1.1
	408nm12nm,1.1s						
BRDH	Bariadhala	15.52	351	LR	LR	00 01 03.2	
	comp=Z,450nm,20.9s,baz=150,slow=43						
SLVN	Son La	16.81	33	Pn	Pn	23 54 04.0	-2.3
SLVN				IAmb	IAmb	23 54 15.9	
	comp=Z,39nm,1.2s						
KSM	Kuching	17.02	109		P	23 54 11.9	+1.1
KSM				IAmb	IAmb	23 54 16.8	
	comp=Z,67nm,1.4s						
KSM	Kuching	17.02	109	P	P	23 54 13.0	+2.3
TNG	Tangerang	18.21	137	P	Pn	23 54 21.0	-2.7
HYB	Hyderabad	18.32	305	i P	Pn	23 54 25.0	-0.1
SHL	Shillong	18.33	353	ex	P	23 54 26.4	+1.1
SHL				IAmb	IAmb	23 54 27.3	
	comp=Z,15nm,0.4s						
KOHI	KOHIMA	18.34	360	ex	P	23 54 27.2	+1.8
SBUM	Sibu	18.54	104	P	Pn	23 54 28.1	+0.3
QIZ	Qiongzhong	19.14	51	P	P	23 54 34.3	+0.2
QIZ				S	Sn	23 58 08.9	-0.3
LEM	Lembang	19.35	136	LR	LR	00 03 24.9	
	comp=Z,388nm,18.9s,baz=233,slow=41						
KMI	Kunming	19.52	24	P	Pn	23 54 40.4	+0.7
KMI				sP	pwP	23 54 46.8	+0.2
ZIRO	ZIRO	20.14	359	ex	Pn	23 54 47.6	+0.5
RAMN	Ramite	20.87	341	eP	P	23 54 53.3	+0.2
	comp=Z,178nm,1.3s						
TAPN	Taplejung	20.90	344	eP	P	23 54 52.4	-1.1
	comp=Z,227nm,1.4s						
JIRN	Jiri	21.66	340	eP	P	23 55 00.5	-1.3
	comp=Z,177nm,1.1s						
PKI	Pulchoki	21.85	339	eP	P	23 55 03.3	-0.5
	comp=Z,129nm,1.2s						
KKM	Kota Kinabalu	21.86	92	P	P	23 55 04.7	+1.0
KKM				IAmb	IAmb	23 55 22.9	
	comp=Z,32nm,1.4s						
PKIN	Phulchoki	21.86	339	eP	P	23 55 03.5	-0.3
	comp=Z,91nm,1.3s						
GUN	Gumba	22.00	340	eP	P	23 55 03.8	-1.6
	comp=Z,155nm,1.3s						
KKN	Kakani	22.10	338	eP	P	23 55 05.6	-0.7
	comp=Z,77nm,1.0s						
GYA	Guiyang	22.44	30	⇓iP	P	23 55 11.8	+1.9
GYA				PP	PnPn	23 55 37.8	+4.5
GYA				S	Sn	23 59 46.0	+17
GYA				SS	SnSn	23 59 53.3	+8.7
LSA	Lhasa	22.50	353	P	P	23 55 09.8	-1.0
LSA				pmax	pmax		
	comp=Z,40nm,1.1s						
LSA	Lhasa	22.50	353	P	P	23 55 09.8	-1.0
LSA				IAmb	IAmb	23 55 18.6	
	comp=Z,40nm,1.1s						
GKN	Gorkha	22.53	337	eP	P	23 55 09.4	-1.5
	comp=Z,100nm,1.1s						
DANN	Dangsing	23.18	336	eP	P	23 55 16.4	-1.4
	comp=Z,90nm,0.9s						
CD2	Chengdu	25.14	20	P	P	23 55 35.0	-0.9
H08S3	Diego Garcia H	26.27	236	T	T	00 22 30.5	
	baz=56,slow=75,SNR=4.5						
H08S2	Diego Garcia H	26.27	236	T	T	00 22 29.5	
	baz=56,slow=75,SNR=82						
H08S1	Diego Carcia H	26.28	236	T	T	00 22 31.8	
	baz=56,slow=75,SNR=33						
MPSI	Mapaga	26.50	104	P	P	23 55 49.5	+1.2
	comp=Z,27nm,1.2s						
KAPI	Kappang	28.23	115	LR	LR	00 07 15.5	
	comp=Z,116nm,21.5s,baz=286,slow=36						
WHN	Wuhan	29.85	37	P	P	23 56 29.3	+11
XAN	Xi'an	29.89	25	P	P	23 56 19.9	+1.5
XAN	Xi'an	29.89	25	pP	pP	23 56 24.4	+0.6
LZH	Lanzhou	29.99	16	eP	P	23 56 20.3	+0.8
LZH				pP	pP	23 56 24.8	-0.1
LZH				sP	pwP	23 56 27.9	0.0
DAV	Davao City (W)	31.09	88	LR	LR	00 10 42.0	
	comp=Z,111nm,19.2s,baz=300,slow=40						
GTA	Gaotai	32.38	8	eP	P	23 56 45.8	+5.3
GTA				pP	pwP	23 56 49.0	0.0
GTA				sP	sP	23 56 51.8	+3.7
NIL	Nilore	32.65	326	P	P	23 56 42.0	-0.7
NIL				pmax	pmax		
	comp=Z,42nm,1.5s						
NIL	Nilore	32.65	326	P	P	23 56 42.0	-0.7
KBL	Kabul	35.70	323	P	P	23 57 08.5	-1.0
KBL				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KBL	Kabul	35.70	323	P	P	23 57 08.5	-1.0
KSH	Kashi	36.05	336	P	P	23 57 12.3	0.0
KSH	Kashi	36.05	336	pP	pP	23 57 17.8	-0.1
KSH	Kashi	36.05	336	PP	PP	23 58 34.8	+0.4
HHC	Hu-ho-hao-te	36.83	22	eP	P	23 57 20.5	+1.6
WMQ	Urumqi	36.85	352	eP	P	23 57 23.0	+4.0
WMQ				sP	pwP	23 57 26.3	-0.5
SIJI	Sorong	37.81	101	P	P	23 57 27.6	+0.1
	comp=Z,3.6nm,0.4s,baz=312,slow=6.4,SNR=5.5						
BJI	Beijing	38.08	28	P	P	23 57 31.1	+1.7
ARSB	Arslanbob	38.82	334	P	P	23 57 35.1	-0.6
ARSB				pmax	pmax		
	comp=Z,22nm,0.9s						
ARSB	Arslanbob	38.82	334	P	P	23 57 35.1	-0.6
AAK	Ala-Archa	39.29	337	deP	P	23 57 39.7	0.0
AAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
AAK	Ala-Archa	39.29	337	P	P	23 57 39.4	-0.3
FRU1	Bishkek	39.38	337	P	P	23 57 40.8	+0.4
FRU1				pmax	pmax		
	comp=Z,7.0nm,0.4s						
FRU1	Bishkek	39.38	337	P	P	23 57 40.8	+0.4
FRU1				IAmb	IAmb	23 57 46.6	
	comp=Z,7.3nm,0.4s						
MK31	Makanchi Array	40.69	347	P	P	23 57 50.0	-1.1
MK31				pmax	pmax		
	comp=Z,13nm,1.1s						
MK31	Makanchi Array	40.69	347	P	P	23 57 50.0	-1.1
MK31				IAmb	IAmb	23 57 56.7	
	comp=Z,13nm,1.1s						
MKAR	Makanchi Array	40.69	347	P	P	23 57 50.4	-0.7
	comp=Z,2.6nm,0.5s,baz=164,slow=7.4,SNR=40						
MKAR				LR	LR	00 17 56.1	
	comp=Z,69nm,18.3s,baz=173,slow=41						
MKAR	Makanchi Array	40.69	347	P	P	23 57 49.3	-1.7
MAKZ	Makanchi	40.77	347	P	P	23 57 50.1	-1.7
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MAKZ	Makanchi	40.77	347	P	P	23 57 50.1	-1.7
KK31	Karatay Array	41.34	333	P	P	23 57 55.8	-0.7
KK31				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KK31	Karatay Array	41.34	333	P	P	23 57 55.8	-0.7
KKAR	Karatay Array	41.34	333	P	P	23 57 55.5	-1.0
KKAR				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KKAR	Karatay Array	41.34	333	P	P	23 57 55.5	-1.0
KKAR	Karatay Array	41.34	333	P	P	23 57 56.2	-0.3
KKAR				IAmb	IAmb	23 58 02.0	
	comp=Z,8.3nm,1.1s						
SONM	Songino Array	41.72	12	P	P	23 57 59.6	-0.1
	comp=Z,2.5nm,1.0s,baz=190,slow=7.3,SNR=10						
SONM				PcP	PcP	23 59 55.5	-0.5
	comp=Z,0.7nm,0.9s,baz=198,slow=2.8,SNR=2.9						
SONM				LR	LR	00 15 45.6	
	comp=Z,86nm,21.9s,baz=200,slow=37						
SONM	Songino Array	41.72	12	P	P	23 57 59.1	-0.6
SONM						23 59 55.5	
SONM				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SONM	Songino Array	41.72	12	P	P	23 57 59.0	-0.6
DGZ	Jazzator, Alta	42.67	353	⇓eP	P	23 58 06.6	-0.8
KSRS	Korea Array	42.85	40	LR	LR	00 17 56.4	
	comp=Z,76nm,18.2s,baz=225,slow=39						
GEYT	Alibeck	44.71	318	P	P	23 58 24.3	+0.4
	comp=Z,2.9nm,0.6s,baz=134,slow=6.4,SNR=10						
GEYT				LR	LR	00 20 19.9	
	comp=Z,63nm,19.6s,baz=175,slow=41						
GEYT	Alibeck	44.71	318	P	P	23 58 24.0	+0.1
GYA0B	ALIBECK ARRAY	44.71	318	P	P	23 58 24.0	+0.1
GYA0B				IAmb	IAmb	23 58 31.8	
	comp=Z,6.1nm,0.7s						
KURK	Kurchatov	45.21	346	d iP	P	23 58 27.1	-0.5

KURK				pmax	pmax		
	comp=Z,14nm,1.0s						
KURK	**Kurchatov**	**45.21**	**346**	P	**P**	**23 58 27.0**	**-0.5**
ZALV	**Zalesovo Beam**	**47.16**	**352**	P	**P**	**23 58 41.4**	**-1.5**
	comp=Z,1.7nm,0.4s,baz=173,slow=8.6,SNR=14						
ZALV				LR	LR	00 19 28.1	
	comp=Z,50nm,19.4s,baz=196,slow=37						
ZALV	**Zalesovo Beam**	**47.16**	**352**	P	**P**	**23 58 41.9**	**-1.0**
ZALV	**Zalesovo Beam**	**47.16**	**352**	P	**P**	**23 58 41.9**	**-1.0**
WRA	**Warramunga Arr**	**47.84**	**125**	P	**P**	**23 58 48.0**	**-0.7**
	comp=Z,3.4nm,1.1s,baz=308,slow=8.5,SNR=6.9						
WRA				LR	LR	00 20 43.0	
	comp=Z,84nm,19.9s,baz=115,slow=38						
WRA	**Warramunga Arr**	**47.84**	**125**	P	**P**	**23 58 48.0**	**-0.7**
USRK	**Ussuriysk Ar.**	**49.34**	**35**	P	**P**	**23 58 59.5**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=225,slow=14,SNR=2.6						
USRK	**Ussuriysk Ar.**	**49.34**	**35**	P	**P**	**23 59 00.3**	**+0.4**
USRK	**Ussuriysk Ar.**	**49.34**	**35**	P	**P**	**23 59 00.3**	**+0.4**
RAYN	**Ar Rayn**	**49.42**	**295**	P	**P**	**23 59 01.3**	**+0.4**
RAYN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
RAYN	**Ar Rayn**	**49.42**	**295**	P	**P**	**23 59 01.3**	**+0.4**
RAYN				IAmb	IAmb	23 59 09.1	
	comp=Z,9.6nm,0.9s						
ASAR	**Alice Springs**	**49.46**	**130**	P	**P**	**23 59 01.4**	**+0.2**
	comp=Z,2.1nm,1.0s,baz=303,slow=7.3,SNR=13						
ASAR				PcP	**PcP**	**00 00 22.8**	**-0.4**
	comp=Z,1.2nm,0.9s,baz=302,slow=3.4,SNR=5.3						
ASAR				LR	LR	00 21 53.4	
	comp=Z,82nm,19.3s,baz=296,slow=38						
ASAR	**Alice Springs**	**49.46**	**130**	P	**P**	**23 59 01.5**	**+0.3**
JCJ	**Chichijima**	**49.50**	**61**	LR	LR	00 18 45.8	
	comp=Z,146nm,18.7s,baz=268,slow=35						
BRVK	**Borovoye**	**49.65**	**341**	⇓*e*P	**P**	**23 59 01.2**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRVK	**Borovoye**	**49.65**	**341**	P	**P**	**23 59 01.8**	**-0.3**
BRVK				IAmb	IAmb	23 59 09.5	
	comp=Z,6.0nm,0.8s						
ABKAR	**Akbulak array**	**50.80**	**332**	P	**P**	**23 59 10.2**	**-0.6**
BOD	**Bodaibo**	**52.70**	**13**	*e*P	**P**	**23 59 24.4**	**-0.5**
BOD				pmax	pmax		
	comp=Z,10.0nm,1.4s						
SVE	**Sverdlovsk**	**55.99**	**338**	*e*P	**P**	**23 59 48.6**	**-0.3**
SVE				pmax	pmax		
	comp=Z,44nm,1.3s						
ARU	**Arti**	**56.47**	**337**	*d i*P	**P**	**23 59 51.8**	**-0.5**
ARU						00 00 47.4	
ARU						00 01 51.9	
ARU				S	**S**	**00 07 45.9**	**+3.5**
ARU				SS	**SS**	**00 11 29.7**	**-0.1**
ARU				pmax	pmax		
	comp=Z,23nm,1.0s						
ARU	**Arti**	**56.47**	**337**	P	**P**	**23 59 51.9**	**-0.5**
KMBO	**Kilima Mbogo**	**57.46**	**264**	P	**P**	**00 00 02.0**	**+1.7**
	comp=Z,2.2nm,0.5s,baz=48,slow=10,SNR=12						
KMBO	**Kilima Mbogo**	**57.46**	**264**	P	**P**	**00 00 01.5**	**+1.1**
KMBO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KMBO	**Kilima Mbogo**	**57.46**	**264**	P	**P**	**00 00 01.5**	**+1.1**
KMBO				IAmb	IAmb	00 00 10.3	
	comp=Z,4.7nm,0.9s						
KBZ	**Khabaz**	**57.59**	**318**	P	**P**	**00 00 00.6**	**+0.1**
	comp=Z,2.4nm,0.9s,baz=176,slow=15,SNR=2.1						
KBZ	**Khabaz**	**57.59**	**318**	⇑*e*P	**P**	**23 59 58.5**	**-2.0**
KBZ				pmax	pmax		
	comp=Z,5.0nm,1.6s						
KIV	**Kislovodsk**	**57.82**	**318**	*e*P	**P**	**00 00 01.6**	**-0.7**
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
KIV				MLR	MLR		
	comp=Z,112nm,17.0s						
YAK	**Yakutsk**	**60.53**	**18**	⇓*e*P	**P**	**00 00 20.6**	**+0.1**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KIRV	**Kirov**	**61.59**	**335**	P	**P**	**00 00 26.8**	**-1.0**
	comp=Z,4.1nm,0.5s,baz=110,slow=15,SNR=2.5						
NRIK	**Noril'sk**	**62.14**	**357**	P	**P**	**00 00 29.3**	**-2.0**
	comp=Z,1.2nm,0.6s,baz=130,slow=5.7,SNR=4.4						
NRIK	**Noril'sk**	**62.14**	**357**	⇑*e*P	**P**	**00 00 30.2**	**-1.1**
NRIK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BR131	**Keskin Array S**	**62.89**	**311**	P	**P**	**00 00 36.0**	**-1.1**
BR131				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BR131	**Keskin Array S**	**62.89**	**311**	P	**P**	**00 00 36.0**	**-1.1**
BRTR	**Keskin Array B**	**62.89**	**311**	P	**P**	**00 00 35.2**	**-1.8**
	comp=Z,0.8nm,0.8s,baz=138,slow=7.8,SNR=7.3						
VSR	**Storozhevoye**	**62.93**	**325**	*e*P	**P**	**00 00 35.9**	**-1.0**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.7s						
LPSR	**Galich'ya Gora**	**63.63**	**326**	*e*P	**P**	**00 00 41.1**	**-0.5**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MOS	**Moscow**	**65.64**	**329**	*e*P	**P**	**00 00 52.8**	**-1.8**
MOS				*e*		00 03 15.2	
OBN	**Obninsk**	**65.93**	**328**	⇑*e*P	**P**	**00 00 57.3**	**+0.8**
OBN				*e*		00 01 27.7	
OBN				*e*		00 03 22.1	
OBN				*e*S	**S**	**00 09 41.1**	**-1.6**
OBN				pmax	pmax		
	comp=Z,16nm,1.2s						
MA2	**Magadan**	**67.25**	**27**	⇓*e*P	**P**	**00 01 04.4**	**-0.4**
MA2				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TIXI	**Tiksi**	**67.80**	**11**	P	**P**	**00 01 06.7**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,12nm,1.1s						
TIXI	**Tiksi**	**67.80**	**11**	P	**P**	**00 01 06.7**	**-1.3**
CFR	**Carcaliu**	**68.09**	**316**	⇑P	**P**	**00 01 09.6**	**-0.8**
CFR	**Carcaliu**	**68.09**	**316**	⇑P	**P**	**00 01 09.6**	**-0.8**
HARR	**Harsova**	**68.13**	**315**	⇑P	**P**	**00 01 11.1**	**+0.4**
HARR	**Harsova**	**68.13**	**315**	⇑P	**P**	**00 01 11.1**	**+0.4**
SORM	**Soroca**	**68.60**	**319**	⇓P	**P**	**00 01 14.1**	**+0.6**
SORM	**Soroca**	**68.60**	**319**	⇓P	**P**	**00 01 14.1**	**+0.6**
AKASG	**Malin Array Be**	**68.68**	**322**	P	**P**	**00 01 13.6**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=91,slow=5.0,SNR=4.6						
AKASG	**Malin Array Be**	**68.68**	**322**	P	**P**	**00 01 13.6**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,2.0nm,1.5s						
AKASG	**Malin Array Be**	**68.68**	**322**	IAmb	IAmb	00 01 21.8	
	comp=Z,2.4nm,1.4s						
VRI	**Vrincioaia**	**69.20**	**316**	⇓P	**P**	**00 01 17.4**	**0.0**
VRI	**Vrincioaia**	**69.20**	**316**	⇓P	**P**	**00 01 17.4**	**0.0**
PLOR	**Plostina**	**69.25**	**316**	⇑P	**P**	**00 01 17.9**	**+0.2**
PLOR	**Plostina**	**69.25**	**316**	⇑P	**P**	**00 01 17.9**	**+0.2**
ELND	**Elena**	**69.27**	**313**	⇑P	**P**	**00 01 17.3**	**-0.6**
TESR	**Tescani**	**69.38**	**317**	⇑P	**P**	**00 01 18.0**	**-0.5**
MLR	**Muntele Rosu**	**69.66**	**316**	P	**P**	**00 01 19.9**	**-0.5**
	comp=Z,2.5nm,0.9s,baz=120,slow=4.4,SNR=2.6						
MLR	**Muntele Rosu**	**69.66**	**316**	⇓P	**P**	**00 01 19.7**	**-0.7**
MLR	**Muntele Rosu**	**69.66**	**316**	⇓P	**P**	**00 01 19.7**	**-0.7**
MLR	**Muntele Rosu**	**69.66**	**316**	IAmb	IAmb	00 01 26.6	
	comp=Z,10nm,1.0s						
PLVB	**Pleven**	**70.24**	**313**	⇓P	**P**	**00 01 22.9**	**-0.9**
VOIR		**70.28**	**316**	⇓P	**P**	**00 01 23.5**	**-0.6**
VOIR		**70.28**	**316**	⇓P	**P**	**00 01 23.5**	**-0.6**
ARR	**Arges**	**70.55**	**316**	⇑P	**P**	**00 01 25.0**	**-0.7**
BURAR	**Bucovina Array**	**70.55**	**318**	⇑P	**P**	**00 01 25.6**	**-0.2**
BURAR	**Bucovina Array**	**70.55**	**318**	⇑P	**P**	**00 01 25.6**	**-0.2**
BURAR	**Bucovina Array**	**70.55**	**318**	P	**P**	**00 01 25.4**	**-0.4**
BUR08	**Bucovina Ar. S**	**70.57**	**318**	P	**P**	**00 01 25.0**	**-0.9**
BUR08				IAmb	IAmb	00 01 31.8	
	comp=Z,4.4nm,1.1s						
VTS	**Vitosha**	**71.14**	**312**	P	**P**	**00 01 27.9**	**-1.6**
VTS				pmax	pmax		
	comp=Z,4.0nm,1.1s						
VTS	**Vitosha**	**71.14**	**312**	P	**P**	**00 01 27.9**	**-1.6**
VTS				IAmb	IAmb	00 01 35.0	
	comp=Z,4.4nm,1.1s						
LIT	**Litokhoron**	**71.39**	**310**	P	**P**	**00 01 29.6**	**-1.3**
LIT				pmax	pmax		
	comp=Z,7.0nm,1.1s						
LIT	**Litokhoron**	**71.39**	**310**	P	**P**	**00 01 29.6**	**-1.3**
LIT				IAmb	IAmb	00 01 35.5	
	comp=Z,6.6nm,1.1s						
DEV	**Deva**	**71.83**	**316**	⇓P	**P**	**00 01 33.0**	**-0.4**
DEV	**Deva**	**71.83**	**316**	⇓P	**P**	**00 01 33.0**	**-0.4**
DRGR		**72.10**	**317**	⇑P	**P**	**00 01 34.9**	**-0.2**
DRGR		**72.10**	**317**	⇑P	**P**	**00 01 33.2**	**-1.9**
TRPA	**Tarpa**	**72.42**	**318**	⇑P	**P**	**00 01 37.0**	**+0.2**
FINES	**FINESS Array B**	**73.28**	**332**	P	**P**	**00 01 41.2**	**-0.5**
	comp=Z,3.6nm,0.7s,baz=91,slow=5.4,SNR=14						
BOSA	**Boshof**	**75.35**	**238**	P	**P**	**00 01 56.2**	**+1.6**
	comp=Z,3.0nm,0.8s,baz=84,slow=2.5,SNR=3.8						
BOSA	**Boshof**	**75.35**	**238**	P	**P**	**00 01 56.2**	**+1.6**
BOSA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BOSA	**Boshof**	**75.35**	**238**	IAmb	IAmb	00 02 03.6	
	comp=Z,9.1nm,1.1s						
ARCES	**ARCESS Array B**	**75.86**	**340**	P	**P**	**00 01 56.2**	**-0.4**
	comp=Z,3.9nm,0.9s,baz=81,slow=5.6,SNR=2.4						
MORC	**Moravsky Berou**	**75.89**	**319**	⇓P	**P**	**00 01 56.7**	**-0.5**
MORC	**Moravsky Berou**	**75.89**	**319**	⇓P	**P**	**00 01 56.7**	**-0.5**
BILL	**Bilibino**	**76.60**	**22**	⇑*e*P	**P**	**00 01 58.4**	**-2.4**
BILL				*e*		00 02 14.3	
BILL				*e*		00 04 49.2	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.6s						
BILL				MLR	MLR		
	comp=Z,269nm,23.0s						
SOKA	**Soboth**	**77.34**	**316**	*e*P	**P**	**00 02 05.6**	**+0.1**
	comp=Z,4.4nm,0.9s						
MOA	**Molln**	**77.92**	**317**	*e*P	**P**	**00 02 08.3**	**-0.3**
	comp=Z,4.1nm,1.2s						
GEC2	**GERESS Array S**	**78.33**	**318**	P	**P**	**00 02 11.1**	**0.0**
GEC2				IAmb	IAmb	00 02 16.9	
	comp=Z,7.6nm,1.2s						
GERES	**GERESS Array B**	**78.33**	**318**	P	**P**	**00 02 10.7**	**-0.4**
	comp=Z,1.8nm,0.9s,baz=105,slow=3.2,SNR=10						
GERES	**GERESS Array B**	**78.33**	**318**	P	**P**	**00 02 10.4**	**-0.6**
GERES	**GERESS Array B**	**78.33**	**318**	P	**P**	**00 02 10.4**	**-0.6**
KHC	**Kasperske Hory**	**78.43**	**319**	⇓*e*P	**P**	**00 02 10.5**	**-1.0**
HFS	**Hagfors**	**79.02**	**330**	P	**P**	**00 02 14.3**	**-0.1**
	comp=Z,2.1nm,0.5s,baz=108,slow=8.3,SNR=14						
WTTA	**Wattenberg**	**79.68**	**317**	*e*P	**P**	**00 02 17.8**	**-0.7**
	comp=Z,7.6nm,1.0s						
WATA	**Walderalm**	**79.72**	**317**	*e*P	**P**	**00 02 17.8**	**-0.9**
	comp=Z,6.6nm,1.3s						
TSUM	**Tsumeb**	**79.91**	**249**	LR	LR	00 32 58.1	
	comp=Z,61nm,19.9s,baz=90,slow=32						
SQTA	**Sankt Quirin**	**79.97**	**317**	P	**P**	**00 02 19.4**	**-0.7**
	comp=Z,8.3nm,1.2s						
MOTA	**Moosalm**	**80.04**	**317**	P	**P**	**00 02 18.9**	**-1.6**
	comp=Z,7.4nm,1.0s						
RETA	**Reutte**	**80.28**	**317**	*e*P	**P**	**00 02 21.2**	**-0.4**
	comp=Z,4.7nm,0.9s						
NB2	**NORSAR Subarra**	**80.30**	**331**	P	**P**	**00 02 20.8**	**-0.6**
	comp=Z,8.9nm,1.0s,baz=93,slow=5.3						
NOA	**NORSAR Array B**	**80.30**	**331**	P	**P**	**00 02 20.6**	**-0.8**
	comp=Z,1.3nm,0.7s,baz=91,slow=5.8,SNR=1.9						
FETA	**Feichten**	**80.30**	**316**	*e*P	**P**	**00 02 20.6**	**-1.3**
	comp=Z,5.7nm,1.2s						
SPITS	**Spitsbergen Ar**	**80.44**	**348**	P	**P**	**00 02 21.3**	**-0.5**
	comp=Z,13nm,0.9s,baz=114,slow=8.3,SNR=8.7						
DAVA	**Damuels**	**80.88**	**317**	*e*P	**P**	**00 02 23.6**	**-1.4**
	comp=Z,7.8nm,1.1s						
DAVOX	**Davos/Dischmat**	**80.89**	**316**	P	**P**	**00 02 25.6**	**+0.5**
	comp=Z,3.5nm,1.0s,baz=45,slow=4.3,SNR=2.9						
KEST	**Kesra**	**81.66**	**305**	LR	LR	00 44 27.9	
	comp=Z,51nm,19.0s,baz=238,slow=40						
EKA	**Eskdalemuir Ar**	**88.27**	**325**	P	**P**	**00 03 00.9**	**-1.0**
	comp=Z,3.3nm,0.8s,baz=81,slow=5.2,SNR=4.8						
TORD	**Torodi Ar. Bea**	**90.83**	**283**	P	**P**	**00 03 15.1**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=60,slow=6.8,SNR=2.5						
TORD	**Torodi Ar. Bea**	**90.83**	**283**	IAmb	IAmb	00 03 21.9	
	comp=Z,2.0nm,1.1s						
IMAR	**Indian Mountai**	**92.14**	**22**	P	**P**	**00 03 19.7**	**-0.1**
BPAW	**Bear Paw Mtn.**	**93.99**	**24**	P	**P**	**00 03 29.5**	**+1.2**
ILAR	**Eielson Array**	**95.26**	**22**	P	**P**	**00 03 33.7**	**-0.5**
	comp=Z,0.4nm,0.9s,baz=242,slow=7.8,SNR=2.7						
PDAR	**Pinedale Array**	**125.68**	**21**	PKP	**PKPdf**	**00 09 11.2**	**-1.6**
	comp=Z,0.3nm,0.7s,baz=336,slow=3.3,SNR=3.7						
CPUP	**Villa Florida**	**146.97**	**232**	PKPbc	**PKPab**	**00 09 55.0**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=123,slow=2.5,SNR=5.5						

IDC 21 23:50:19.1±7.0,**5°.49S**×**147°.17E**,**h158**^{km}±72^{km},**mb3.2**/2, **mb1 3.3**/4,**mb1mx3.0**/39,**mbtmp3.6**/4,**Error ellipse: s-maj=94.4km s-min=47.6km az=130.0,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.89**	**180**	P	Pn	23 51 19.4	+1.3
	6.4nm,0.3s,baz=312,slow=22,SNR=6.6						
PMG				S	Sn	23 52 03.9	-0.2
	4.6nm,0.3s,baz=185,slow=23,SNR=8.3						
WRA	**Warramunga Arr**	**19.03**	**220**	P	P	23 54 29.3	+0.2
	0.2nm,0.3s,baz=41,slow=11,SNR=12						
ASAR	**Alice Springs**	**22.13**	**214**	P	P	23 55 03.0	+0.9
	0.9nm,0.7s,baz=41,slow=8.4,SNR=9.9						
FITZ	**Fitzroy Crossi**	**24.48**	**237**	P	P	23 55 23.4	-0.4
	1.2nm,0.5s,baz=63,slow=10.0,SNR=8.3						
TORD	**Torodi Ar. Bea**	**145.13**	**285**	PKPbc	PKPbc	00 09 37.3	-1.4
	0.2nm,0.5s,baz=84,slow=3.3,SNR=6.3						

*IDC **22** 00:10:23.8±0.4, 7°.40N×94°.22E, h0^{km}, mb4.4/26, mb1 4.5/29, mb1mx4.4/38, mbtmp4.4/29, ML4.2/3, MS3.7/24, Ms1 3.7/24, ms1mx3.7/39, Error ellipse: s-maj=16.0km s-min=10.5km az=51.0*

*DJA **22** 00:10:26.4±0.2, 7°N±3°×9°4E±°, h10^{km}, M4.7/17, mb4.7/17, mB5.4/5, MLv4.7/4, Mw(mB)4.8/5*

*NEIC **22** 00:10:26.2±1.6, 7°.41N±0°.07×94°.33E±0°.08, h17^{km}±3^{km}, mb4.7/59, Error ellipse: s-maj=11.3km s-min=9.6km az=67.0*

*MOS **22** 00:10:26.0±1.3, 7°.44N×94°.29E, h26^{km}, mb4.9/31, Error ellipse: s-maj=12.9km s-min=5.9km az=119.0*

*KLM **22** 00:10:29.0, 7°.27N×94°.49E, h10^{km}, mb4.8*

*NDI **22** 00:10:33.7±2.5, 7°.48N×94°.35E, h10^{km}, mb4.8, mb4.7(NEIC)*

ISC 22 00:10:28.2±1.7,**7°.33N**±0°.04×**94°.29E**±0°.05,**h29**^{km}±12^{km}, **n263,**σ1^{s}.**78**/254,**mb4.7**/85,**MS3.7**/22,**18C-20D,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**3.37**	**128**		**Pn**	**00 11 19.5**	**+0.6**
MLSI	**Meulaboh, Aceh**	**3.70**	**145**	P	**Pn**	**00 11 26.9**	**+3.4**
PBA	**Port Blair**	**4.56**	**341**	*e*P	Pb	00 11 41.2	-6.4
PBA				*e*S	Sn	00 12 30.8	+3.3
DGPR	**DIGLIPUR**	**5.96**	**347**	*e*P	Pn	00 12 00.2	+5.6
DGPR				*e*S	**Sn**	**00 13 04.2**	**+2.2**
PSI	**Prapat**	**6.44**	**134**	Pn	**Pn**	**00 12 02.6**	**+1.3**
	5.3nm,0.3s,baz=279,slow=6.7,SNR=19						
PSI				LR	LR	00 14 45.0	
	comp=Z,886nm,20.7s,baz=301,slow=40						
PSI	**Prapat**	**6.44**	**134**	P	**Pn**	**00 12 03.6**	**+2.2**
PSI				pmax	pmax		
	comp=Z,40nm,1.5s						
RPSI	**Rantau Prapat**	**6.52**	**135**		**Pn**	**00 12 02.7**	**+0.4**
RPSI	**Rantau Prapat**	**6.52**	**135**		**Pn**	**00 12 02.6**	**+0.4**
KULM	**Kulim**	**6.64**	**107**		**Pn**	**00 12 02.3**	**-1.6**
GSI	**Gunungsitoli**	**6.82**	**151**		**Pn**	**00 12 07.3**	**+0.9**
IPM	**Ipoh**	**7.27**	**113**		**Pn**	**00 12 10.4**	**-2.2**
IPM	**Ipoh**	**7.27**	**113**	P	**Pn**	**00 12 11.0**	**-1.6**
PDSI	**Padang**	**10.24**	**143**	P	**Pn**	**00 12 53.9**	**+0.5**
	comp=Z,13nm,1.0s						
PBKT	**Sadao Pong**	**11.27**	**35**		**Pn**	**00 13 05.1**	**-2.3**
CMAR	**Chiang Mai Arr**	**11.95**	**22**	Pn	**Pn**	**00 13 16.6**	**-0.1**
	comp=Z,1.1nm,0.3s,baz=212,slow=14,SNR=21						
CMAR				LR	LR	00 17 59.7	
	comp=Z,376nm,18.4s,baz=220,slow=38						
CHTO	**Chiang Mai**	**12.28**	**21**	P	**Pn**	**00 13 22.6**	**+1.3**
CHTO				pmax	pmax		
	comp=Z,13nm,1.0s						
CHTO	**Chiang Mai**	**12.28**	**21**		**Pn**	**00 13 19.2**	**-2.1**
PALK	**Pallekele**	**13.48**	**271**	Pn	**Pn**	**00 13 37.7**	**0.0**
	comp=Z,0.2nm,0.3s,baz=114,slow=19,SNR=2.3						
PALK				Sn	Sn	00 15 56.0	-11
	comp=Z,1.8nm,0.3s,baz=310,slow=23,SNR=6.8						
PALK	**Pallekele**	**13.48**	**271**	P	**P**	**00 13 43.1**	**-3.6**
PMBI	**Palembang**	**14.60**	**134**	P	**P**	**00 14 01.6**	**+2.5**
MDRS	**Chennai**	**14.95**	**294**	*e*P	**P**	**00 14 05.0**	**+2.1**
MDRS				IVmB_BB		00 14 12.3	
	comp=Z,229nm,0.9s						
MDSI	**Maura Dua**	**15.33**	**140**	P	**Pn**	**00 14 01.0**	**-1.8**
SLVN	**Son La**	**16.74**	**33**	P	**Pn**	**00 14 18.2**	**-2.6**
KSM	**Kuching**	**16.99**	**109**	P	**Pn**	**00 14 20.4**	**-3.6**
SHL	**Shillong**	**18.28**	**353**	*e*P	**P**	**00 14 45.4**	**+5.4**
HYB	**Hyderabad**	**18.34**	**305**	*i* P	**P**	**00 14 41.0**	**+0.5**
SBUM	**Sibu**	**18.50**	**104**	P	**P**	**00 14 39.8**	**-2.5**
SBUM	**Sibu**	**18.50**	**104**	P	**Pn**	**00 14 45.0**	**+2.3**
QIZ	**Qiongzhong**	**19.07**	**51**	P	**P**	**00 14 46.3**	**-2.3**
QIZ				S	**Sn**	**00 18 17.9**	**-4.6**
TEZP	**TEZPUR**	**19.23**	**356**	*e*P	**Pn**	**00 14 57.8**	**+6.4**
LEM	**Lembang**	**19.35**	**136**	LR	LR	00 23 50.0	
	comp=Z,450nm,18.5s,baz=290,slow=42						
KMI	**Kunming**	**19.45**	**24**	P	**Pn**	**00 14 55.8**	**+1.6**
KMI				sP	pwP	00 15 05.5	+2.6
KMI				S	**Sn**	**00 18 26.6**	**-5.2**
KMI				SS	**SnSn**	**00 18 53.1**	**+6.6**
ODAN	**Odare**	**20.50**	**342**	*e*P	**P**	**00 15 04.6**	**+0.2**
RAMN	**Ramite**	**20.84**	**340**	*e*P	**P**	**00 15 07.6**	**-0.4**
	comp=Z,52nm,0.6s						
TAPN	**Taplejung**	**20.87**	**343**	*e*P	**P**	**00 15 07.3**	**-1.1**
	comp=Z,74nm,0.8s						
JIRN	**Jiri**	**21.63**	**340**	*e*P	**P**	**00 15 15.6**	**-1.0**
	comp=Z,212nm,1.4s						
PKI	**Pulchoki**	**21.82**	**338**	*e*P	**P**	**00 15 17.0**	**-1.7**
	comp=Z,65nm,1.1s						
PKIN	**Phulchoki**	**21.83**	**338**	*e*P	**P**	**00 15 17.0**	**-1.7**
GUN	**Gumba**	**21.97**	**340**	*e*P	**P**	**00 15 18.5**	**-1.7**
	comp=Z,53nm,0.7s						
DMN	**Daman**	**21.97**	**338**	*e*P	**P**	**00 15 18.5**	**-1.7**
KKN	**Kakani**	**22.07**	**338**	*e*P	**P**	**00 15 19.4**	**-1.8**
SPMM	**Sapulut**	**22.20**	**95**	P	**P**	**00 15 27.0**	**+4.4**
GYA	**Guiyang**	**22.37**	**30**	⇑*i*P	**P**	**00 15 26.4**	**+2.0**
GYA				PP	**PnPn**	**00 15 56.4**	**+8.6**
GYA				S	**S**	**00 19 23.8**	**-5.0**
GYA				SS	**SnSn**	**00 20 03.0**	**+5.0**
LSA	**Lhasa**	**22.45**	**353**	P	**P**	**00 15 26.8**	**+1.3**
LSA				IAmb	IAmb	00 15 28.0	
	comp=Z,25nm,0.6s						
GKN	**Gorkha**	**22.50**	**337**	*e*P	**P**	**00 15 24.5**	**-1.3**
DANN	**Dangsing**	**23.16**	**336**	*e*P	**P**	**00 15 31.5**	**-1.3**
	comp=Z,49nm,0.7s						
CD2	**Chengdu**	**25.08**	**19**	P	**P**	**00 15 50.1**	**-0.3**
SRBI	**Singaraja**	**25.88**	**126**	P	**P**	**00 15 55.5**	**-2.3**
H08S3	**Diego Garcia H**	**26.34**	**236**	T	T	00 42 50.0	
	baz=56,slow=75,SNR=48						
H08S2	**Diego Garcia H**	**26.34**	**236**	T	T	00 42 45.1	
	baz=56,slow=75,SNR=48						
H08S1	**Diego Carcia H**	**26.35**	**236**	T	T	00 42 48.2	
	baz=56,slow=75,SNR=50						
MPSI	**Mapaga**	**26.46**	**104**	P	**P**	**00 16 02.8**	**-0.3**
	comp=Z,39nm,1.0s						
WHN	**Wuhan**	**29.78**	**37**	P	**P**	**00 16 34.4**	**+1.9**
WHN				S	**S**	**00 21 33.8**	**+6.5**
XAN	**Xi'an**	**29.82**	**25**	P	**P**	**00 16 32.6**	**-0.3**
XAN				pP	pP	00 16 37.5	-3.2
XAN				S	**S**	**00 21 25.0**	**-3.0**
XAN	**Xi'an**	**29.82**	**25**	P	**P**	**00 16 31.6**	**-1.3**
XAN				IAmb	IAmb	00 16 33.9	
	comp=Z,10nm,1.0s						
LZH	**Lanzhou**	**29.93**	**16**	*e*P	**P**	**00 16 36.5**	**+2.5**
LZH				pP	pwP	00 16 45.3	+0.6
LZH				sP	sP	00 16 59.0	+14
LZH				*e*PP	**PnPn**	**00 17 34.6**	**+3.7**
DAV	**Davao City (W)**	**31.04**	**88**	LR	LR	00 31 42.5	
	comp=Z,109nm,18.1s,baz=325,slow=41						
GTA	**Gaotai**	**32.33**	**8**	*e*P	**P**	**00 16 54.8**	**-0.3**
GTA				pP	pP	00 17 00.8	-2.0
GTA				sP	pwP	00 17 03.6	-2.2
NIL	**Nilore**	**32.63**	**326**	P	**P**	**00 16 57.8**	**+0.1**
NIL				pmax	pmax		
	comp=Z,15nm,0.9s						
NIL	**Nilore**	**32.63**	**326**	P	**P**	**00 16 56.5**	**-1.2**
NJ2	**Nanjing**	**33.59**	**40**	*e*P	**P**	**00 17 04.3**	**-1.7**
SOEI	**Soe**	**34.35**	**119**	P	**P**	**00 17 12.1**	**-0.8**
SOEI				IAmb	IAmb	00 17 17.2	
	comp=Z,12nm,0.9s						
KBL	**Kabul**	**35.69**	**323**	P	**P**	**00 17 23.5**	**-1.0**
KBL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBL	**Kabul**	**35.69**	**323**	P	**P**	**00 17 23.5**	**-1.0**
KSH	**Kashi**	**36.03**	**336**	P	**P**	**00 17 26.8**	**-0.4**
KSH				pP	pwP	00 17 36.8	-0.6
KSH				S	**S**	**00 23 00.6**	**-3.9**
KSH				PcS	**PcS**	**00 23 37.5**	**-3.3**
KSH	**Kashi**	**36.03**	**336**	ScS	ScS	00 27 37.5	-5.8
HHC	**Hu-ho-hao-te**	**36.76**	**22**	*e*P	**P**	**00 17 33.3**	**-0.1**
WMQ	**Urumqi**	**36.80**	**352**	*e*P	**P**	**00 17 34.1**	**+0.4**
WMQ				pP	pP	00 17 39.6	-1.9
WMQ				sP	pwP	00 17 44.8	+0.3
WSAR	**Wadi Sarin**	**37.72**	**299**	LR	LR	00 33 47.9	
	comp=Z,83nm,18.8s,baz=122,slow=37						
SWI	**Sorong**	**37.77**	**101**	P	**P**	**00 17 43.2**	**+1.1**
SWI				pmax	pmax		
	comp=Z,16nm,1.1s						
SIJI	**Sorong**	**37.77**	**101**	P	**P**	**00 17 43.5**	**+1.3**
	baz=325,slow=18						
BJI	**Beijing**	**38.01**	**28**	P	**P**	**00 17 43.0**	**-0.9**
PDGK	**Podgornoye**	**38.14**	**342**	P	**P**	**00 17 43.0**	**-2.1**
ULHL	**Ulahol**	**38.26**	**338**	P	**P**	**00 17 45.7**	**-0.5**
	SNR=5.1						
UCH	**Uchtor**	**38.91**	**336**	P	**P**	**00 17 51.6**	**-0.4**
	SNR=6.4						
KBK	**Karagaybulak**	**39.10**	**337**	P	**P**	**00 17 53.7**	**+0.4**
	SNR=12						
AML	**Almayashu**	**39.16**	**336**	P	**P**	**00 17 53.8**	**-0.1**
	SNR=24						
AAK	**Ala-Archa**	**39.26**	**337**	P	**P**	**00 17 54.7**	**+0.2**
	SNR=6.8						
AAK	**Ala-Archa**	**39.26**	**337**	⇓*e*P	**P**	**00 17 54.6**	**+0.1**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
AAK	**Ala-Archa**	**39.26**	**337**	P	**P**	**00 17 54.6**	**+0.1**
AAK				IAmb	IAmb	00 18 01.3	
	comp=Z,13nm,1.4s						
FRU1	**Bishkek**	**39.36**	**337**	P	**P**	**00 17 54.6**	**-0.7**
FRU1				IAmb	IAmb	00 17 55.9	
	comp=Z,6.8nm,0.6s						
EKS2	**Erkin-Say**	**39.57**	**336**	P	**P**	**00 17 57.4**	**+0.4**
	SNR=7.2						
USP	**Ospenovka**	**39.80**	**337**	P	**P**	**00 17 58.7**	**-0.2**
	SNR=5.5						
FITZ	**Fitzroy Crossi**	**39.95**	**130**	P	**P**	**00 17 59.7**	**-0.7**
	comp=Z,2.9nm,0.9s,baz=324,slow=8.8,SNR=9.7						
FITZ				PcP	**PcP**	**00 20 06.5**	**+0.9**
	comp=Z,3.4nm,0.9s,baz=348,slow=4.5,SNR=2.8						
FITZ	**Fitzroy Crossi**	**39.95**	**130**	IAmb	IAmb	00 18 01.7	
	comp=Z,3.5nm,1.1s						
UOSS	**Minazif**	**40.37**	**300**	P	**P**	**00 18 02.2**	**-1.6**
MK31	**Makanchi Array**	**40.65**	**347**	*i* P	**P**	**00 18 04.3**	**-1.5**
MK31	**Makanchi Array**	**40.65**	**347**	IAmb	IAmb	00 18 06.0	
	comp=Z,9.4nm,0.9s						
MKAR	**Makanchi Array**	**40.65**	**347**	P	**P**	**00 18 04.8**	**-1.0**
	comp=Z,10.0nm,0.6s,baz=169,slow=8.0,SNR=142						
MKAR				PcP	**PcP**	**00 20 07.8**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=203,slow=4.8,SNR=4.3						
MKAR				LR	LR	00 38 21.8	
	comp=Z,69nm,18.6s,baz=162,slow=41						
MKAR	**Makanchi Array**	**40.65**	**347**	P	**P**	**00 18 04.6**	**-1.2**
MKAR					**PcP**	**00 20 07.3**	**0.0**
MAKZ	**Makanchi**	**40.73**	**347**	P	**P**	**00 18 04.0**	**-2.5**
MAKZ	**Makanchi**	**40.73**	**347**	P	**P**	**00 18 04.6**	**-1.9**
MAKZ				IAmb	IAmb	00 18 06.5	
	comp=Z,10nm,0.6s						
KK31	**Karatay Array**	**41.31**	**333**	*i* P	**P**	**00 18 09.4**	**-2.0**
KKAR	**Karatay Array**	**41.31**	**333**	P	**P**	**00 18 10.6**	**-0.8**
KKAR	**Karatay Array**	**41.31**	**333**	IAmb	IAmb	00 18 11.8	
	comp=Z,3.9nm,0.8s						
SONM	**Songino Array**	**41.66**	**12**	P	**P**	**00 18 13.9**	**-0.3**
	comp=Z,2.1nm,0.9s,baz=191,slow=8.0,SNR=14						
SONM				PcP	**PcP**	**00 20 11.1**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=198,slow=4.3,SNR=5.2						
SONM				LR	LR	00 36 25.8	
	comp=Z,125nm,20.5s,baz=167,slow=38						
SONM	**Songino Array**	**41.66**	**12**	P	**P**	**00 18 14.3**	**+0.1**
SONM				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM	**Songino Array**	**41.66**	**12**	P	**P**	**00 18 14.3**	**+0.1**
ULN	**Ulaanbaatar**	**41.83**	**13**	P	**P**	**00 18 13.9**	**-1.8**
JNU	**Nakatsue**	**42.50**	**48**	P	**P**	**00 18 22.4**	**+1.1**
	comp=Z,9.2nm,0.9s,baz=252,slow=6.6,SNR=3.8						
JNU	**Nakatsue**	**42.50**	**48**	IAmb	IAmb	00 18 25.4	
	comp=Z,10nm,0.9s						
DGZ	**Jazzator, Alta**	**42.62**	**353**	⇓*e*P	**P**	**00 18 23.0**	**+0.9**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KSRS	**Korea Array**	**42.78**	**40**	P	**P**	**00 18 23.9**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=224,slow=9.4,SNR=5.2						
KSRS				LR	LR	00 36 39.1	
	comp=Z,63nm,18.5s,baz=232,slow=37						
GEYT	**Alibeck**	**44.70**	**318**	P	**P**	**00 18 39.3**	**+0.4**
	comp=Z,8.0nm,0.6s,baz=142,slow=7.5,SNR=30						
GEYT				PcP	**PP**	**00 20 22.2**	**-1.4**
	comp=Z,1.9nm,0.7s,baz=120,slow=5.2,SNR=3.2						
GEYT				LR	LR	00 40 33.9	
	comp=Z,114nm,18.1s,baz=15,slow=41						

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GEYT  Alibeck            44.70 318    P      P       00 18 39.1 +0.2
GYA0B ALIBECK ARRAY      44.70 318    IAmb   IAmb    00 18 40.5
      comp=Z,11nm,0.7s
KURBB Kurchatov Arra     45.11 346    P      P       00 18 40.7 -1.1
KURK  Kurchatov          45.17 346 deP       P       00 18 41.6 -0.7
KURK                                  pmax   pmax
      comp=Z,20nm,1.3s
KURK  Kurchatov          45.17 346    P      P       00 18 42.0 -0.4
CN2   Changchun          45.41  32   eP      P       00 18 45.5 +1.1
NWAO  Narrogin (SRO)     45.60 153    LR     LR      00 36 07.6
      comp=Z,87nm,19.4s,baz=314,slow=34
ZALV  Zalesovo Beam      47.11 352    P      P       00 18 56.0 -1.6
      comp=Z,7.7nm,0.7s,baz=178,slow=7.8,SNR=44
ZALV                                  PcP    PcP     00 20 28.4 -0.6
      comp=Z,0.8nm,0.4s,baz=177,slow=4.2,SNR=1.7
ZALV                                  LR     LR      00 39 55.1
      comp=Z,69nm,19.1s,baz=194,slow=38
ZALV  Zalesovo Beam      47.11 352    P      P       00 18 56.2 -1.4
RER   Riviere de l'E     47.26 232    P      P       00 18 59.1 -0.2
WRA   Warramunga Arr     47.83 125    P      P       00 19 03.1 -0.6
      comp=Z,2.2nm,0.6s,baz=306,slow=8.4,SNR=12
WRA                                   PcP    PcP     00 20 31.9 -0.4
      comp=Z,2.7nm,0.4s,baz=306,slow=2.9,SNR=9.8
WRA                                   LR     LR      00 40 48.2
      comp=Z,121nm,20.9s,baz=315,slow=38
WRA   Warramunga Arr     47.83 125  i P      P       00 19 04.3 +0.6
WRA                                   pmax   pmax
      comp=Z,3.0nm,0.4s
WRAB  Tennant Creek      47.83 125⇓iP        P       00 19 03.2 -0.5
WRAB                                  pmax   pmax
      comp=Z,4.0nm,0.6s
WB2   Warramunga Arr     47.84 125    P      P       00 19 03.8  0.0
WB2                                   IAmb   IAmb    00 19 18.7
      comp=Z,7.7nm,0.7s
MJAR  Matsushiro Arr     49.42  47    P      P       00 19 17.1 +1.4
      comp=Z,1.5nm,0.5s,baz=244,slow=20,SNR=4.9
MJAR                                  PcP    PcP     00 20 38.1 +0.3
      comp=Z,0.5nm,0.3s,baz=154,slow=11,SNR=1.6
MJAR                                  LR     LR      00 42 50.7
      comp=Z,55nm,18.1s,baz=210,slow=39
MJAR  Matsushiro Arr     49.42  47    P      P       00 19 14.5 -1.3
RAYN  Ar Rayn            49.45 295    P      P       00 19 17.8 +1.6
RAYN                                  pmax   pmax
      comp=Z,14nm,0.9s
RAYN  Ar Rayn            49.45 295    P      P       00 19 16.2  0.0
ASAR  Alice Springs      49.45 130    P      P       00 19 16.0 -0.2
      comp=Z,3.1nm,0.7s,baz=302,slow=8.1,SNR=33
ASAR                                  PcP    PcP     00 20 39.0 +0.8
      comp=Z,3.7nm,0.7s,baz=311,slow=3.5,SNR=15
ASAR                                  LR     LR      00 42 08.5
      comp=Z,89nm,20.4s,baz=303,slow=38
ASAR  Alice Springs      49.45 130    P      P       00 19 15.0 -1.2
ASAR  Alice Springs      49.45 130    P      P       00 19 15.0 -1.2
ASAR                                         PcP     00 20 38.4 +0.3
BVAR  Borovoye Array     49.55 341    P      P       00 19 15.3 -1.1
      comp=Z,4.3nm,0.6s,baz=140,slow=9.5,SNR=39
BRVK  Borovoye           49.61 341 deP       P       00 19 16.0 -0.9
BRVK                                  pmax   pmax
      comp=Z,6.0nm,0.8s
BRVK  Borovoye           49.61 341    P      P       00 19 15.8 -1.1
BRVK                                  IAmb   IAmb    00 19 17.1
      comp=Z,6.2nm,0.6s
FORT  Forrest            49.82 141    P      P       00 19 18.4 -0.4
ABKAR Akbulak array      50.78 331    P      P       00 19 25.1 -0.6
BOD   Bodaibo            52.64  13   eP      P       00 19 38.4 -1.1
BOD                                   pmax   pmax
      comp=Z,6.0nm,1.7s
SVE   Sverdlovsk         55.96 338   eP      P       00 20 03.9 +0.2
SVE                                   pmax   pmax
      comp=Z,24nm,0.8s
ARU   Arti               56.45 337 d iP      P       00 20 06.9 -0.3
ARU                                                  00 22 09.6
ARU                                   S      S       00 28 01.0 +4.7
ARU                                   SS     SS      00 31 48.7 +5.0
ARU                                   pmax   pmax
      comp=Z,73nm,3.9s
ARU   Arti               56.45 337    P      P       00 20 06.8 -0.3
KMBO  Kilima Mbogo       57.51 264    LR     LR      00 41 58.4
      comp=Z,121nm,18.5s,baz=96,slow=33
KMBO  Kilima Mbogo       57.51 264    P      P       00 20 16.6 +0.8
KMBO                                  pmax   pmax
      comp=Z,6.0nm,0.7s
KMBO  Kilima Mbogo       57.51 264    P      P       00 20 16.6 +0.8
KMBO                                  IAmb   IAmb    00 20 19.6
      comp=Z,6.6nm,0.8s
KBZ   Khabaz             57.59 318    P      P       00 20 14.4 -1.1
      comp=Z,2.6nm,0.8s,baz=155,slow=6.8,SNR=4.8
KBZ                                   PcP    PcP     00 21 09.7 +1.1
      comp=Z,4.0nm,0.8s,baz=174,slow=3.0,SNR=6.1
KBZ                                   LR     LR      00 48 24.0
      comp=Z,55nm,18.1s,baz=146,slow=40
KBZ   Khabaz             57.59 318⇓eP        P       00 20 14.5 -1.0
KBZ                                   pmax   pmax
      comp=Z,15nm,2.4s
KIV   Kislovodsk         57.82 318   eP      P       00 20 19.5 +2.2
KIV                                   pmax   pmax
      comp=Z,16nm,0.9s
KIV                                   MLR    MLR
      comp=Z,131nm,17.0s
KIV   Kislovodsk         57.82 318    P      P       00 20 16.7 -0.6
KIV                                   IAmb   IAmb    00 20 20.3
      comp=Z,6.2nm,0.9s
STKA  Stephens Creek     59.62 134    P      P       00 20 30.2 +0.4
      comp=Z,2.1nm,0.6s,baz=309,slow=6.6,SNR=6.3
STKA                                  LR     LR      00 49 10.0
      comp=Z,74nm,20.1s,baz=285,slow=39
YAK   Yakutsk            60.46  18   eP      P       00 20 35.1  0.0
YAK                                   pmax   pmax
      comp=Z,12nm,0.5s
VRH   Novokhopyorsk      61.46 325   eP      P       00 20 39.5 -2.6
VRH                                   pmax   pmax
      comp=Z,10.0nm,0.8s
NRIK  Noril'sk           62.09 357    P      P       00 20 45.2 -0.8
      comp=Z,2.1nm,0.4s,baz=159,slow=5.5,SNR=9.9
NRIK  Noril'sk           62.09 357⇓iP        P       00 20 45.6 -0.4
NRIK                                  pmax   pmax
      comp=Z,4.0nm,0.7s
BR131 Keskin Array S     62.90 311    IAmb   IAmb    00 20 51.0
      comp=Z,3.4nm,0.9s
BRTR  Keskin Array B     62.90 311    P      P       00 20 50.4 -1.8
      comp=Z,2.2nm,0.7s,baz=126,slow=7.2,SNR=17
BRTR                                  LR     LR      00 50 55.0
      comp=Z,38nm,19.0s,baz=116,slow=39
VSR   Storozhevoye       62.92 325   eP      P       00 20 49.3 -2.6
VSR                                   pmax   pmax
      comp=Z,5.0nm,0.7s
LPSR  Galich'ya Gora     63.62 326   eP      P       00 20 53.7 -2.8
LPSR                                  pmax   pmax
      comp=Z,9.0nm,0.9s
KDZE  Karadeniz Ereo     64.89 312 ⇑P        P       00 21 13.2 +8.1
ELL   Elmali             65.17 307    P      P       00 21 07.0 -0.1
MOS   Moscow             65.62 329   eP      P       00 21 07.4 -2.1
MOS                                  e               00 21 13.5
OBN   Obninsk            65.92 328⇓eP        P       00 21 11.1 -0.3
OBN                                  i               00 21 16.2
OBN                                  e               00 23 35.6
OBN                                   pmax   pmax
      comp=Z,35nm,1.7s
KLMR  Klimovskoe         67.01 334   eP      P       00 21 07.0  -11
KLMR                                  pmax   pmax
      comp=Z,30nm,1.8s
KLMR  Klimovskoe         67.01 334   eP      P       00 21 07.1  -11
KLMR                                  AMP            00 21 15.6
      comp=Z,30nm,1.8s
MA2   Magadan            67.18  27⇑eP        P       00 21 19.3 -0.1
MA2                                   pmax   pmax
      comp=Z,7.0nm,1.2s
TIXI  Tiksi              67.73  11    P      P       00 21 21.6 -1.1
AKASG Malin Array Be     68.67 322    P      P       00 21 26.8 -2.1
      comp=Z,0.3nm,0.3s,baz=88,slow=5.0,SNR=9.9
AKASG                                 LR     LR      00 55 56.1
      comp=Z,33nm,19.1s,baz=50,slow=40
AKASG Malin Array Be     68.67 322  i P      P       00 21 27.1 -1.9
AKASG                                 pmax   pmax
      comp=Z,2.0nm,0.6s
AKASG Malin Array Be     68.67 322    IAmb   IAmb    00 21 27.9
      comp=Z,1.1nm,1.1s
BISRR Bisoca             69.14 316 ⇑P        P       00 21 32.0 -0.1
TMCR  Tamitsa            69.19 337   eP      P       00 21 28.0 -3.9
TMCR                                  pmax   pmax
      comp=Z,30nm,0.8s
VRI   Vrincioaia         69.19 316 ⇓P        P       00 21 32.1 -0.3
VRI   Vrincioaia         69.19 316 ⇓P        P       00 21 32.1 -0.3
PLOR  Plostina           69.25 316 ⇓P        P       00 21 32.7  0.0
PLOR  Plostina           69.25 316 ⇓P        P       00 21 32.7  0.0
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```
SEY   Seymchan           69.36  25⇑eP        P       00 21 32.6 -0.4
TESR  Tescani            69.38 317 ⇑P        P       00 21 31.1 -2.4
SGRR  Singureni          69.42 314 ⇑P        P       00 21 28.4 -5.3
MLR   Muntele Rosu       69.66 316 ⇓P        P       00 21 35.3 -0.1
MLR   Muntele Rosu       69.66 316 ⇓P        P       00 21 35.3 -0.1
MLR   Muntele Rosu       69.66 316    IAmb   IAmb    00 21 36.3
      comp=Z,7.5nm,0.9s
BIZ   Bicaz              69.83 317 ⇑P        P       00 21 35.3 -0.9
PLVB  Pleven             70.25 313 ⇑P        P       00 21 38.7 -0.2
VOIR                     70.27 316 ⇑P        P       00 21 38.3 -0.8
VOIR                     70.27 316 ⇑P        P       00 21 38.3 -0.8
BURAR Bucovina Array     70.55 318 ⇑P        P       00 21 40.7 -0.1
BURAR Bucovina Array     70.55 318 ⇑P        P       00 21 40.7 -0.1
BURAR Bucovina Array     70.55 318    P      P       00 21 39.9 -0.9
ARR   Arges              70.55 315 ⇓P        P       00 21 39.7 -1.1
BUR08 Bucovina Ar. S     70.56 318    P      P       00 21 40.5 -0.4
VTS   Vitosha            71.14 312 ⇓P        P       00 21 43.1 -1.4
VTS   Vitosha            71.14 312 ⇓P        P       00 21 43.1 -1.4
LIT   Litokhoron         71.40 310    IAmb   IAmb    00 21 45.3
      comp=Z,7.3nm,0.7s
DRGR                     72.09 317 ⇑P        P       00 21 49.9 -0.2
DRGR                     72.09 317 ⇑P        P       00 21 49.9 -0.2
LVZ   Lovozero           72.12 340⇑eP        P       00 21 51.8 +2.0
VSU   Vasula             72.13 329⇑iP        P       00 21 49.5 -0.4
VSU                                   pmax   pmax
      comp=Z,98nm,1.7s
TRPA  Tarpa              72.41 318 ⇑P        P       00 21 51.1 -0.7
FINES FINESS Array B     73.26 332    P      P       00 21 55.8 -0.8
      comp=Z,8.6nm,0.7s,baz=89,slow=5.6,SNR=40
FINES                                 LR     LR      00 55 31.0
      comp=Z,69nm,18.1s,baz=78,slow=37
FINES FINESS Array B     73.26 332    P      P       00 21 55.5 -1.1
LBTB  Lobatse            74.11 242    P      P       00 22 04.8 +2.3
LBTB                                  pmax   pmax
      comp=Z,8.0nm,0.8s
LBTB  Lobatse            74.11 242    P      P       00 22 03.1 +0.7
LBTB                                  IAmb   IAmb    00 22 05.4
      comp=Z,8.1nm,0.8s
PSZ   Piszkesteto        74.14 318    P      P       00 22 01.2 -1.0
PSZ                                   IAmb   IAmb    00 22 02.3
      comp=Z,5.4nm,1.0s
OJC   Ojcow              74.48 320    P      P       00 22 03.5 -0.5
OJC                                   pmax   pmax
      comp=Z,8.0nm,0.9s
OJC   Ojcow              74.48 320    P      P       00 22 03.5 -0.5
OJC                                   IAmb   IAmb    00 22 04.7
      comp=Z,8.0nm,0.9s
VYHS  Vyhne              74.91 318   eP      P       00 22 06.0 -0.5
VYHS  Vyhne              74.91 318   eP      P       00 22 06.0 -0.5
BOSA  Boshof             75.42 238    P      P       00 22 10.9 +1.0
      comp=Z,4.9nm,0.6s,baz=80,slow=4.9,SNR=15
BOSA  Boshof             75.42 238    IAmb   IAmb    00 22 12.6
      comp=Z,6.1nm,0.7s
ARCES ARCESS Array B     75.83 340    P      P       00 22 10.9 -0.5
      comp=Z,2.5nm,0.8s,baz=96,slow=6.8,SNR=8.2
ARCES                                 LR     LR      00 58 10.1
      comp=Z,109nm,19.5s,baz=149,slow=38
MORC  Moravsky Berou     75.88 319    P      P       00 22 14.4 +2.2
MORC                                  pmax   pmax
      comp=Z,8.0nm,1.1s
KRLC  Kraliky            76.40 320   eP      P       00 22 15.1  0.0
KRLC  Kraliky            76.40 320   eP      P       00 22 15.1  0.0
DPC   Dobruska-Polom     76.72 320   eP      P       00 22 17.5 +0.6
DPC   Dobruska-Polom     76.72 320   eP      P       00 22 17.5 +0.6
OSTC  Ostas              76.80 320   eP      P       00 22 17.7 +0.4
ARSA  Arzberg            77.03 317   eP      P       00 22 19.1 +0.4
      comp=Z,5.5nm,1.1s
SOKA  Soboth             77.34 316   eP      P       00 22 20.8 +0.3
      comp=Z,6.5nm,1.0s,SNR=5.1
OBKA  Obir               77.66 316  i P      P       00 22 22.7 +0.4
      comp=Z,6.6nm,1.3s
MOA   Molln              77.91 317   eP      P       00 22 23.5 -0.1
      comp=Z,4.7nm,1.1s
MAW   Mawson             78.03 192    P      P       00 22 25.5 +1.8
      comp=Z,4.4nm,0.8s,baz=54,slow=5.3,SNR=8.1
MAW                                   LR     LR      00 52 17.4
      comp=Z,72nm,19.4s,baz=56,slow=32
BRG   Berggiesshubel     78.26 320   eP      P       00 22 25.4  0.0
      comp=Z,6.3nm,1.3s
GEC2  GERESS Array S     78.33 318    IAmb   IAmb    00 22 26.6
      comp=Z,4.8nm,0.8s
GERES GERESS Array B     78.33 318    P      P       00 22 25.8 -0.2
      comp=Z,3.5nm,0.8s,baz=90,slow=5.3,SNR=28
GERES                                 LR     LR      01 00 49.4
      comp=Z,29nm,20.7s,baz=45,slow=39
GERES GERESS Array B     78.33 318    P      P       00 22 25.2 -0.8
GERES GERESS Array B     78.33 318    P      P       00 22 25.2 -0.8
KHC   Kasperske Hory     78.42 319   eP      P       00 22 26.2 -0.2
KHC   Kasperske Hory     78.42 319⇓eP        P       00 22 26.1 -0.3
KHC                                   pmax   pmax
      comp=Z,10.0nm,1.9s
KBA   Koelnbreinsper     78.51 316  i P      P       00 22 26.6 -0.6
      comp=Z,2.9nm,0.9s
STAL  STALIGIAL          78.93 316    IAmb   IAmb    00 22 30.3
      comp=Z,12nm,1.0s
ABTA  Abfaltersbach      79.07 316   eP      P       00 22 29.7 -0.5
      comp=Z,3.3nm,1.0s
CTI   Castel Tesino      79.66 315    IAmb   IAmb    00 22 34.4
      comp=Z,12nm,1.1s
WTTA  Wattenberg         79.68 317   eP      P       00 22 33.0 -0.5
      comp=Z,8.4nm,0.9s
WTTA  Wattenberg         79.68 317    P      P       00 22 34.3 +0.8
WTTA                                  pmax   pmax
      comp=Z,11nm,1.3s
WATA  Walderalm          79.72 317   eP      P       00 22 33.0 -0.8
      comp=Z,8.5nm,1.2s
SQTA  Sankt Quirin       79.97 317  i P      P       00 22 33.9 -1.1
      comp=Z,6.1nm,0.8s
MOTA  Moosalm            80.04 317   eP      P       00 22 34.9 -0.6
      comp=Z,6.7nm,1.0s
NORES NORESS Array B     80.10 330    P      P       00 22 35.0 -0.3
NORES                                 pmax   pmax
      comp=Z,8.0nm,0.5s
RETA  Reutte             80.27 317   eP      P       00 22 36.4 -0.2
      comp=Z,7.8nm,1.1s,SNR=4.5
NB2   NORSAR Subarra     80.28 331    P      P       00 22 35.8 -0.5
      comp=Z,2.4nm,0.6s,baz=96,slow=5.1
NOA   NORSAR Array B     80.28 331    P      P       00 22 35.2 -1.1
      comp=Z,3.5nm,0.8s,baz=98,slow=5.4,SNR=11
NOA                                   LR     LR      01 00 17.6
      comp=Z,49nm,18.1s,baz=250,slow=37
FETA  Feichten           80.30 316   eP      P       00 22 36.7 -0.1
      comp=Z,5.2nm,1.0s,SNR=4.1
DAVA  Damuels            80.87 317   eP      P       00 22 39.3 -0.7
      comp=Z,2.7nm,0.6s
KEST  Kesra              81.67 305    P      P       00 22 44.1 -0.2
      comp=Z,3.1nm,0.7s,baz=15,slow=4.1,SNR=5.3
KEST  Kesra              81.67 305    IAmb   IAmb    00 22 45.8
      comp=Z,3.7nm,0.8s
SYO   Syowa Base         84.93 197⇓ePcP      PcP     00 23 04.2 +0.8
GAMB  Gambell            85.25  26    IAmb   IAmb    00 23 02.7
      comp=Z,4.6nm,0.7s
ANM   Nome               87.85  25    P      P       00 23 15.7 +1.0
ANM                                   pmax   pmax
      comp=Z,5.0nm,1.0s
ANM   Nome               87.85  25    IAmb   IAmb    00 23 16.5
      comp=Z,5.0nm,1.0s
EKA   Eskdalemuir Ar     88.25 325    P      P       00 23 17.0 +0.2
TORD  Torodi Ar. Bea     90.87 283    P      P       00 23 30.5 +0.6
      comp=Z,1.4nm,0.8s,baz=78,slow=5.7,SNR=8.8
ESDC  Sonseca Array      91.68 310    P      P       00 23 34.0 +0.7
      comp=Z,1.0nm,0.4s,baz=65,slow=3.9,SNR=2.1
IMAR  Indian Mountai     92.07  22    P      P       00 23 35.2 +0.8
TOLK  Toolik Lake Re     92.42  19    IAmb   IAmb    00 23 43.6
      comp=Z,5.2nm,1.1s
COLD  Coldfoot           92.84  21    IAmb   IAmb    00 23 38.8
      comp=Z,2.5nm,0.6s
BPAW  Bear Paw Mtn.      93.92  24    P      P       00 23 44.1 +1.1
BMAR  Burnt Mountain     94.65  19    P      P       00 23 47.4 +1.0
ILAR  Eielson Array      95.19  22    P      P       00 23 48.2 -0.6
      comp=Z,0.5nm,0.7s,baz=290,slow=4.8,SNR=7.1
ULM   Lac du Bonnet     121.98   8    PKP    PKPdf   00 29 19.3 -0.7
      comp=Z,1.5nm,0.6s,baz=16,slow=4.3,SNR=4.6
NVAR  Mina Array Bea    125.30  31    PKP    PKiKP   00 29 27.4 -0.1
      comp=Z,1.3nm,0.8s,baz=268,slow=1.9,SNR=8.4
NVAR  Mina Array Bea    125.30  31           PKiKP   00 29 27.8 +0.4
PDAR  Pinedale Array    125.62  21    PKP    PKPdf   00 29 26.9 -0.7
      comp=Z,0.9nm,0.8s,baz=49,slow=2.3,SNR=8.4
PDAR  Pinedale Array    125.62  21           PKPdf   00 29 27.0 -0.6
R11A  Troy Canyon, C    126.72  29           PKPdf   00 29 30.0 +0.2
ECSD  EROS Data Cent    128.22  10           PKPdf   00 29 31.8 -0.4
TXAR  Lajitas Array     139.66  25    PKP    PKPdf   00 29 53.2 -1.0
      comp=Z,0.1nm,0.4s,baz=324,slow=40,SNR=3.2
PLCA  Paso Flores       144.09 200    PKP    PKPbc   00 30 00.1 +0.4
      comp=Z,4.9nm,0.8s,baz=238,slow=4.2,SNR=10
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PLCA  Paso Flores       144.09 200    PKIKP  PKPdf   00 30 01.1 -0.6
PLCA  Paso Flores       144.09 200           PKPdf   00 30 01.1 -0.6
MDP   Montagnes des     144.77 290    PKP    PKPdf   00 30 03.3 -0.2
      comp=Z,16nm,1.1s,baz=153,slow=11,SNR=1.2
CPUP  Villa Florida     147.05 232    PKPbc  PKPdf   00 30 08.2 +1.1
      comp=Z,5.3nm,0.8s,baz=96,slow=3.0,SNR=11
```

LDG ***22*** *00:15:53.6±0.1, 43.°76N×13.°53E, h20^{km}, Ml2.6/4, Error ellipse: s-maj=2.5km s-min=2.0km az=18.0*
ROM ***22*** *00:15:54.1±0.2, 43.°729N±0.°008×13.°51E±0.°01, h10^{km}, ML2.4/23, Error ellipse: s-maj=1.1km s-min=0.4km az=43.0*
PRU ***22*** *00:15:57.2±0.0, 43.°31N×14.°13E, h91^{km}*
ISC 22 00:15:54.2±0.8, **43.°71N**±0.°02×**13.°49E**±0.°02, **h18**^{km}±5^{km}, **n74,** σ**2.^{s}33**/96, **1C-10D, Central Italy**

```
Code  Station Name          Δ°  AZ°    Phase ID             Time      Res
                                      Op     ISC        h  m  s    ISC
PCRO  Pietralacroce        0.10 162    P      Pg       00 15 57.7 -0.1
PCRO                                   S      Sg       00 16 00.1 -0.2
PCRO                                   AML    AML
      comp=E,32850µm,0.3s
PCRO                                   AML    AML
      comp=N,28550µm,0.1s
PCRO                                   AML    AML
      comp=E,32850µm,0.3s
PCRO                                   AML    AML
      comp=N,28550µm,0.1s
PCRO                                   AML    AML
      comp=E,32850µm,0.3s
AOI   Ancona               0.18 152 ⇓P        Pg       00 15 59.0 +0.2
AOI                                    S      Sg       00 16 02.5 +0.6
AOI                                    AML    AML
      comp=E,1870µm,0.4s
AOI                                    AML    AML
      comp=N,2435µm,0.8s
SENI  Senigallia           0.19 270    P      Pb       00 15 59.1  0.0
SENI                                   S      Sb       00 16 02.5 +0.1
SENI                                   AML    AML
      comp=E,1526µm,0.9s
SENI                                   AML    AML
      comp=N,1530µm,1.1s
SENI                                   AML    AML
      comp=E,6280µm,0.3s
SENI                                   AML    AML
      comp=E,1525µm,0.9s
SENI                                   AML    AML
      comp=N,1525µm,1.1s
SENI                                   AML    AML
      comp=N,6725µm,0.3s
PP3   Marolino             0.34 165    P      Pb       00 16 02.2 +0.4
PP3                                    S      Sb       00 16 07.7 +0.9
PP3                                    AML    AML
      comp=E,691µm,0.7s
PP3                                    AML    AML
      comp=N,778µm,0.7s
PP3                                    AML    AML
      comp=E,602µm,0.9s
PP3                                    AML    AML
      comp=E,692µm,0.7s
PP3                                    AML    AML
      comp=N,778µm,0.7s
PP3                                    AML    AML
      comp=N,696µm,0.2s
PP3                                    AML    AML
      comp=N,778µm,0.7s
CING  Cingoli              0.39 213 ⇓P        Pg       00 16 02.5 +0.2
CING                                   S      Sb       00 16 09.7 +1.2
CING                                   AML    AML
      comp=E,468µm,0.4s
CING                                   AML    AML
      comp=N,512µm,0.5s
ARVD  Arcevia              0.45 243 ⇓P        Pg       00 16 03.4 +0.1
ARVD                                   S      Sb       00 16 10.7 +0.6
ARVD                                   AML    AML
      comp=E,359µm,0.6s
ARVD                                   AML    AML
      comp=E,360µm,0.6s
ARVD                                   AML    AML
      comp=N,304µm,0.6s
EL6   Elcito               0.47 217 ⇓P        Pb       00 16 03.9 -0.1
EL6                                    S      Sb       00 16 11.8 +1.1
EL6                                    AML    AML
      comp=E,526µm,0.4s
EL6                                    AML    AML
      comp=N,522µm,1.2s
FSSB  Fossombrone          0.52 269    P      Pb       00 16 04.7 -0.1
FSSB                                   S      Sg       00 16 12.8 +1.3
FSSB                                   AML    AML
      comp=N,1000µm,0.3s
FSSB                                   AML    AML
      comp=E,825µm,1.5s
FSSB                                   AML    AML
      comp=N,1001µm,0.3s
FSSB                                   AML    AML
      comp=N,1000µm,0.3s
FSSB                                   AML    AML
      comp=E,824µm,1.5s
PESA  Pesaro               0.53 297    P      Pg       00 16 05.2 +0.5
PESA                                   S      Sg       00 16 13.0 +1.2
MPAG  Monte Paganucc       0.54 262    P      Pb       00 16 04.8 -0.3
MPAG                                   S      Sb       00 16 12.4 -0.2
SSFR  Montelago di S       0.58 243 ⇓P        Pb       00 16 05.6 -0.3
SSFR                                   S      Sg       00 16 14.9 +1.4
SSFR                                   AML    AML
      comp=E,566µm,0.7s
SSFR                                   AML    AML
      comp=N,990µm,0.3s
SSFR                                   AML    AML
      comp=E,548µm,0.2s
SSFR                                   AML    AML
      comp=N,989µm,0.3s
SSFR                                   AML    AML
      comp=N,993µm,0.3s
FRON  Frontone             0.59 251 ⇑P        Pb       00 16 06.0  0.0
FRON                                   S      Sg       00 16 15.4 +1.7
FRON                                   AML    AML
      comp=E,222µm,1.4s
FRON                                   AML    AML
      comp=N,286µm,0.3s
FRON                                   AML    AML
      comp=N,285µm,0.3s
FRON                                   AML    AML
      comp=E,221µm,1.4s
SNTG  Esanatoglia          0.60 222 ⇓P        Pb       00 16 06.1 -0.2
SNTG                                   S      Sg       00 16 15.7 +1.4
SNTG                                   AML    AML
      comp=N,364µm,0.3s
SNTG                                   AML    AML
      comp=E,226µm,1.6s
CSP1  Cessapalombo         0.65 199 ⇓P        Pb       00 16 07.0 -0.1
NARO  Abbazia di Nar       0.67 262    P      Pb       00 16 07.2 -0.1
NARO                                   AML    AML
      comp=E,163µm,1.1s
NARO                                   AML    AML
      comp=N,192µm,1.0s
FOSV  Fossato di Vic       0.67 232 ⇓P        Pb       00 16 07.2 -0.2
FOSV                                   AML    AML
      comp=E,273µm,0.4s
FOSV                                   AML    AML
      comp=E,274µm,0.4s
FOSV                                   AML    AML
      comp=N,226µm,0.4s
PIEI  Pieia                0.71 257    P      Pb       00 16 08.1  0.0
PIEI                                   AML    AML
      comp=E,230µm,0.6s
PIEI                                   AML    AML
      comp=N,235µm,1.0s
PE3   Peglio               0.72 270    P      Pb       00 16 08.5 +0.2
PE3                                    AML    AML
      comp=N,404µm,0.4s
PE3                                    AML    AML
      comp=E,545µm,0.4s
FDMO  Fiordimonte          0.73 204 ⇓P        Pb       00 16 08.3 -0.1
FDMO                                   AML    AML
      comp=N,195µm,1.1s
FDMO                                   AML    AML
      comp=N,194µm,1.1s
FDMO                                   AML    AML
      comp=E,299µm,0.9s
ATFO  Monte Foce - G       0.75 243    P      Pb       00 16 09.0 +0.2
ATFO                                   AML    AML
      comp=N,268µm,0.3s
ATFO                                   AML    AML
      comp=E,352µm,0.3s
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OFFI	Offida	0.78	169	AML	AML		
	comp=E,858µm,0.5s						
OFFI				AML	AML		
	comp=N,591µm,0.4s						
OFFI				AML	AML		
	comp=E,857µm,0.5s						
ASSB	Assisi San Ben	0.90	223	P	Pb	00 16 11.3	0.0
ASSB				AML	AML		
	comp=E,266µm,0.3s						
ASSB				AML	AML		
	comp=N,312µm,1.2s						
NRCA	Norcia	0.91	198	P	Pb	00 16 11.7	0.0
NRCA				AML	AML		
	comp=E,411µm,0.2s						
NRCA				AML	AML		
	comp=N,289µm,0.4s						
BADI	Badiali	0.93	258	⇓P	Pn	00 16 12.4	0.0
BADI				AML	AML		
	comp=N,237µm,0.3s						
BADI				AML	AML		
	comp=E,294µm,0.3s						
ATTE	AVT- Monte Tez	0.97	239	AML	AML		
	comp=E,249µm,1.2s						
ATTE				AML	AML		
	comp=N,309µm,1.4s						
SMA1	SAN MARTINO	1.08	186	P	Pb	00 16 14.7	+0.3
SMA1				AML	AML		
	comp=E,242µm,0.8s						
SMA1				AML	AML		
	comp=N,326µm,0.4s						
CRE	Caprese Michel	1.12	266	AML	AML		
	comp=N,121µm,1.5s						
CRE				AML	AML		
	comp=E,110µm,0.6s						
CRE				AML	AML		
	comp=E,110µm,0.6s						
MOMA	Monte Martano	1.12	217	AML	AML		
	comp=E,208µm,0.3s						
MOMA				AML	AML		
	comp=N,278µm,0.3s						
LNSS	Leonessa	1.15	197	P	Pn	00 16 15.6	+0.1
LNSS				AML	AML		
	comp=E,200µm,0.6s						
LNSS				AML	AML		
	comp=N,238µm,0.4s						
LNSS				AML	AML		
	comp=E,200µm,0.6s						
DUGI	Dugi Otok	1.17	75	*e*Pg	Pg	00 16 17.8	+0.9
DUGI				Sg	Sg	00 16 34.4	+2.2
CAMP	Campotosto	1.17	183	P	Pb	00 16 16.5	+0.5
CAMP				AML	AML		
	comp=N,114µm,0.8s						
CAMP				AML	AML		
	comp=E,105µm,0.3s						
MGAB	Montegabbione	1.28	232	AML	AML		
	comp=E,274µm,0.4s						
MGAB				AML	AML		
	comp=N,212µm,0.5s						
MGAB				AML	AML		
	comp=E,263µm,0.4s						
MGAB				AML	AML		
	comp=N,195µm,0.5s						
CESX	Cesi	1.28	212	AML	AML		
	comp=N,246µm,0.5s						
CESX				AML	AML		
	comp=E,272µm,0.5s						
NVLJ	Novalja	1.31	49	*e*Pg	Pg	00 16 19.7	+0.1
NVLJ				Sg	Sg	00 16 38.0	+1.3
VCEL	Villa Celiera	1.34	169	AML	AML		
	comp=N,120µm,0.7s						
VCEL				AML	AML		
	comp=E,152µm,0.4s						
LMD	Lutirano	1.34	287	AML	AML		
	comp=N,61µm,1.6s						
LMD				AML	AML		
	comp=E,55µm,0.4s						
LMD				AML	AML		
	comp=N,61µm,1.6s						
LMD				AML	AML		
	comp=E,55µm,0.4s						
FAGN	Fagnano	1.44	177	AML	AML		
	comp=E,153µm,0.6s						
FAGN				AML	AML		
	comp=N,190µm,0.5s						
FIAM	Fiamignano	1.46	191	AML	AML		
	comp=E,86µm,0.5s						
FIAM				AML	AML		
	comp=N,102µm,0.8s						
ZIRJ	Zirje	1.56	91	*i* Pn	Pg	00 16 23.4	-0.9
ZIRJ				Sn	Sg	00 16 44.4	-0.3
MORI	Morici	1.61	84	*e*Pn	Pg	00 16 24.8	-0.5
MORI				Sn	Sg	00 16 45.9	-0.4
INTR	Introdacqua	1.72	170	AML	AML		
	comp=E,73µm,1.3s						
INTR				AML	AML		
	comp=N,81µm,0.6s						
UDBI	Udbina	1.83	63	*e*Pn	Pg	00 16 28.3	-1.1
UDBI				Sn	Sg	00 16 52.7	-0.6
KNDS	Knezji Dol	1.93	19	*i* Pn	Pb	00 16 28.6	-0.3
KNDS				*e*Sn	Sg	00 16 54.5	-1.8
SABO	M.te Sabotino	2.27	2	AML	AML		
	comp=E,60µm,1.5s						
SABO				AML	AML		
	comp=N,93µm,0.7s						
GBAS	Gorenja Brezov	2.33	17	*i* Pn	Pb	00 16 34.5	-1.2
GBAS				*i* Sn	Sb	00 17 03.6	-0.6
OZLJ	Ozalj	2.37	36	*e*Pn	Pb	00 16 35.7	-0.7
OZLJ				Sn	Sb	00 17 05.8	+0.5
LJU	Ljubljana	2.45	17	AML	AML		
	comp=E,80µm,1.3s						
LJU				AML	AML		
	comp=N,159µm,0.6s						
MAKA	Makarska	2.60	98	*e*Pn	Pb	00 16 38.4	-2.0
MAKA				Sn	Sb	00 17 11.1	-0.9
OBKA	Obir	2.90	15	Pn	Pb	00 16 43.7	-1.8
	comp=N,1.6nm,0.3s						
OBKA				Sg	Sg	00 17 30.3	+2.9
	comp=N,12nm,0.6s						
MYKA	Terra Mystica	2.93	2	*e*Pn	Pb	00 16 44.2	-1.7
	comp=N,0.8nm,0.2s						
ABTA	Abfaltersbach	3.12	348	*i* Pn	Pb	00 16 45.8	-3.4
	comp=N,0.4nm,0.1s						
ABTA				*i* Sn	Sn	00 17 20.3	+0.9
	comp=N,0.9nm,0.2s						
SOKA	Soboth	3.17	20	*i* Pn	Pb	00 16 47.2	-2.8
	comp=N,0.8nm,0.3s						
SOKA				*e*Sn	Sn	00 17 22.7	+2.1
	comp=N,2.0nm,0.5s						
STON	Ston	3.19	104	*e*Pn	Pb	00 16 46.6	-3.7
KBA	Koelnbreinsper	3.37	358	*e*Pn	Pb	00 16 49.4	-4.2
	comp=N,0.7nm,0.2s						
KBA				*e*Sn	Sn	00 17 28.4	+2.5
	comp=N,1.5nm,0.2s						
PGF	Pioggiola	3.48	252	*e*P	Pn	00 16 49.2	+1.5
WTTA	Wattenberg	3.79	341	*e*Pn	Pb	00 16 56.6	-4.1
	comp=N,0.6nm,0.2s						
ARSA	Arzberg	3.82	21	*i* Pn	Pn	00 16 55.9	+3.7
	comp=N,1.0nm,0.2s						
ARSA				*i* Sn	Sn	00 17 38.8	+2.0
	comp=N,1.4nm,0.3s						
FETA	Feichten	3.84	331	*e*Pn	Pn	00 16 56.6	+3.9
	comp=N,0.8nm,0.3s						
FETA				*e*Sn	Sn	00 17 40.8	+3.4
	comp=N,1.3nm,0.6s						
SQTA	Sankt Quirin	3.86	336	*e*Pn	Pn	00 16 56.0	+3.1
	comp=N,1.0nm,0.2s						
SQTA				*e*Sn	Sn	00 17 40.5	+2.6
	comp=N,1.4nm,0.2s						
WATA	Walderalm	3.87	340	*i* Pn	Pb	00 16 57.2	-4.9
	comp=N,1.4nm,0.2s						
MOTA	Moosalm	4.01	336	*e*Pn	Pn	00 16 59.1	+4.3
	comp=N,0.7nm,0.2s						
MOTA				*e*Sn	Sn	00 17 44.8	+3.4
	comp=N,0.8nm,0.2s						
MOA	Molln	4.18	7	*i* Pn	Pn	00 17 01.5	+4.4
	comp=N,0.3nm,0.2s						
MOA				*e*Sn	Sn	00 17 47.4	+1.9
	comp=N,0.6nm,0.2s						
RETA	Reutte	4.24	334	*e*Pn	Pn	00 17 01.4	+3.4
	comp=N,0.6nm,0.2s						
RETA				*i* Sn	Sn	00 17 50.6	+3.5
	comp=N,1.1nm,0.5s						
DAVA	Damuels	4.39	326	*e*Pn	Pn	00 17 03.6	+3.5
	comp=N,0.5nm,0.3s						
CONA	Conrad Observa	4.54	21	*i* Pn	Pn	00 17 05.4	+3.4
	comp=N,1.0nm,0.4s						
CONA				*e*Sn	Sn	00 17 55.1	+0.7
	comp=N,1.6nm,0.5s						
MBDF	Montbardon	4.94	284	*e*Pn	Pn	00 17 04.9	-2.7
MBDF				*e*Sn	Sn	00 17 58.2	-6.2
	comp=N,0.8nm,0.3s						
FRF	La Foret Royal	4.97	271	*e*P	Pn	00 17 09.3	+1.3
LPG	La Plagne	5.13	293	*e*P	Pn	00 17 12.0	+1.5
LPG				*e*Sn	Sn	00 18 02.9	-6.5
	comp=N,0.9nm,0.3s						
LPL	La Plagne	5.15	293	*e*P	Pn	00 17 12.2	+1.5
KHC	Kasperske Hory	5.43	1	*e*PN	Pn	00 17 18.6	+4.3
KHC				*e*SN	Sn	00 18 16.0	-0.3
ORIF	Oris-en-Rattie	5.59	285	*e*P	Pn	00 17 19.2	+2.6
HINF	Hinteralfeld	6.20	314	*e*P	Pn	00 17 26.4	+1.5
HINF				*e*Sn	Sn	00 18 28.0	-7.3
	comp=N,1.8nm,0.3s						
CDF	Champ du Feu	6.39	320	*e*P	Pn	00 17 29.1	+1.6
HAU	Haudompre	6.58	313	*e*P	Pn	00 17 31.7	+1.6
HAU				*e*Sn	Sn	00 18 36.9	-7.8
	comp=N,1.9nm,0.4s						

SKO 22 00:22:15.9, 41°.25N×22°.53E, h0^{km}, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	Valandovo	0.08	23	⇓*i*Pg	Pg	00 22 17.3	-0.1
VAY				*i* Sg	Sg	00 22 18.5	+0.1
VAY				*e*Lg	Lg	00 22 18.6	
	comp=E,26nm,0.2s						

ATH 22 00:22:36.5, 40°.03N×24°.38E, h33^{km}±5^{km}, ML1.5/2, Error ellipse: s-maj=5.6km s-min=1.0km az=273.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OUR	Ouranopolis	0.43	315	P	Pb	00 22 45.6	-0.4
THAS	Thassos island	0.63	24	P	Pb	00 22 49.4	+0.2
THAS				S	Sn	00 22 59.3	+1.3
THAS				AML	AML	00 22 59.7	
	comp=E,114µm,0.2s						
THAS				AML	AML	00 23 00.1	
	comp=N,132µm,0.3s						
LIA	Limnos Island	0.63	102	P	Pb	00 22 49.8	+0.5
LIA				S	Sn	00 22 59.1	+0.9
KVLA	Kavala	0.90	0	P	Pb	00 22 53.9	+0.1
AOS	Alonnisos	0.94	204	P	Pb	00 22 54.6	+0.1
AOS				S	Sb	00 23 08.2	+1.6
KAVA	Kavala	0.97	6	P	Pb	00 22 55.1	+0.2
KAVA				S	Sb	00 23 08.8	+1.5
KAVA				AML	AML	00 23 09.6	
	comp=E,59µm,0.2s						
KAVA				AML	AML	00 23 10.0	
	comp=N,38µm,0.1s						
SMTH	Samothraki Isl	0.98	63	P	Pb	00 22 55.2	+0.1
SMTH				S	Sb	00 23 09.0	+1.2
SOH	Sokhos	1.11	316	P	Pb	00 22 57.2	-0.1
HORT	Hortiatis	1.13	300	P	Pb	00 22 58.0	+0.4
HORT				S	Sb	00 23 12.9	+0.9
XOR	Xorichti	1.13	234	P	Pb	00 22 57.8	+0.1
NEO	Neokhori	1.15	231	P	Pb	00 22 57.8	-0.1
SRS	Serrai	1.24	331	P	Pb	00 22 59.3	0.0
RDO	Rodhopi	1.42	38	P	Pb	00 23 01.6	-0.9
ALN	Alexandroupoli	1.54	55	P	Pb	00 23 03.3	-1.1

IDC 22 00:22:56.2±8.8, 6°.91N×94°.42E, h0^{km}, mb3.9/6, mb1 3.9/6, mb1mx3.6/47, mbtmp3.9/6, Error ellipse: s-maj=183.4km s-min=58.7km az=150.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	41.09	347	P	P	00 30 40.8	-0.9
	1.7nm,0.7s,baz=173,slow=7.8,SNR=12						
SONM	Songino Array	42.04	12	P	P	00 30 50.6	+0.9
	0.5nm,0.8s,baz=188,slow=9.5,SNR=0.8						
GEYT	Alibeck	45.10	319	P	P	00 31 15.4	+1.0
	1.1nm,0.6s,baz=109,slow=3.5,SNR=2.2						
ZALV	Zalesovo Beam	47.54	352	P	P	00 31 33.2	-0.1
	0.9nm,0.3s,baz=171,slow=8.3,SNR=6.5						
BRTR	Keskin Array B	63.27	311	P	P	00 33 27.3	+0.2
	0.3nm,0.5s,baz=148,slow=8.4,SNR=2.0						
FINES	FINESS Array B	73.69	332	P	P	00 34 30.7	-1.0
	3.4nm,1.0s,baz=116,slow=6.3,SNR=3.0						

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*ARE **22** 00:38:45±1.6, 5°.43S±0°.06×80°.83W±0°.07, h37^{km}±3^{km}, ML4.7, mb4.9/468(NEIC), Error ellipse: s-maj=10.6km s-min=8.1km az=71.0*

*IDC **22** 00:38:45.4±0.8, 5°.64S×81°.00W, h35^{km}±5^{km}, mb4.4/25, mb1 4.5/30, mb1mx4.5/31, mbtmp4.5/30, ML4.1/5, MS4.1/6, Ms1 4.1/6, ms1mx3.8/36, Error ellipse: s-maj=15.9km s-min=9.0km az=48.0*

*NEIC **22** 00:38:46.1±1.6, 5°.58S±0°.07×80°.94W±0°.08, h44^{km}±4^{km}, Error ellipse: s-maj=12.7km s-min=8.9km az=63.0*

*BJI **22** 00:38:48.7±0.0, 5°.60S×81°.00W, h45^{km}, mB5.4/18, Ms5.7/14, Ms7 5.5/14*

*VAO **22** 00:38:50.7±2.1, 5°.51S×80°.83W, h76^{km}±16^{km}, mb4.7*

ISC 22 00:38:45.6±0.4, 5°.62S±0°.05×80°.95W±0°.06, h37^{km}±1^{km}, n818, σ0^{s}98/748, mb4.9/238, 2C, Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	Atahualpa	2.96	121	Pn	Pn	00 39 31.5	+1.1
	22nm,0.3s,baz=300,slow=5.1,SNR=79						
ATAH				Lg	Lg	00 40 21.9	
	337nm,0.3s,baz=315,slow=20,SNR=6.8						
NNA	Nana	7.52	148	Pn	Pn	00 40 32.3	-0.6
	14nm,0.3s,baz=5.6,slow=4.3,SNR=19						
NNA				Sn	Sn	00 41 55.6	-1.3
	7.2nm,0.3s,baz=166,slow=17,SNR=1.3						
NNA				Lg	Lg	00 42 38.8	
	19nm,0.3s,baz=38,slow=22,SNR=4.5						
NNA				LR	LR	00 44 08.1	
	comp=Z,823nm,18.4s,baz=308,slow=43						
NNA	Nana	7.52	148		Pn	00 40 33.9	+1.1
GCUF	Volcan Galeras	7.69	28	*e*P	Pn	00 40 34.6	-1.0
CRUC	La Cruz	8.18	29	*e*P	Pn	00 40 41.9	-0.3
FLOC	Florencia	8.90	37		Pn	00 40 51.4	-0.3
PCON	Cinco Dias	9.11	30	*e*P	Pn	00 40 54.3	-0.8
GARC	Garzon, Huila	9.48	35	*e*P	Pn	00 40 59.5	-0.3
PAYG	Puerto Ayora	10.53	297		Pn	00 41 14.7	+0.6
ROSC	El Rosal	12.32	33	Lg	Lg	00 45 19.9	
	1.4nm,0.3s,baz=127,slow=20,SNR=1.9						
ROSC				LR	LR	00 46 47.0	
	comp=Z,2µm,19.8s,baz=216,slow=39						
ROSC	El Rosal	12.32	33	Pn	Pn	00 41 37.8	-1.1
RUSC	La Rusia	13.87	35		Pn	00 42 03.3	+3.1
HDC	Heredia	15.83	349	Pn	Pn	00 42 25.2	-0.8
JTS	Las Juntas de	16.30	346	Pn	Pn	00 42 31.6	-0.2
	0.3nm,0.3s,baz=288,slow=22,SNR=1.5						
JTS	Las Juntas de	16.30	346		Pn	00 42 30.9	-0.9
LPAZ	La Paz	16.45	131	Pn	Pn	00 42 35.3	+1.0
	0.8nm,0.3s,baz=312,slow=11,SNR=22						
LPAZ				LR	LR	00 49 48.3	
	comp=Z,583nm,21.3s,baz=304,slow=40						
LPAZ	La Paz	16.45	131	P	P	00 42 36.1	-0.6
LPAZ	La Paz	16.45	131	*e*P	P	00 42 36.2	-0.5
LPAZ				*e*S	S	00 45 47.3	-0.1
PB12	IPOC Station P	16.56	142		P	00 42 39.1	+1.7
PB16	IPOC Station P	16.87	140	Pn	Pn	00 42 40.0	+0.4
PSGCX	Pisagua	17.44	144	Pn	Pn	00 42 45.0	-1.2
SDV	Santo Domingo	17.70	36	P	Pn	00 42 49.6	0.0
	1.1nm,0.3s,baz=250,slow=9.7,SNR=15						
SDV	Santo Domingo	17.70	36	P	Pn	00 42 49.5	0.0
SDV				IAmb	IAmb	00 43 08.8	
	comp=Z,16nm,0.9s						
SDV	Santo Domingo	17.70	36	*e*P	P	00 42 50.4	+0.2
PB11	IPOC Station P	17.85	143	P	P	00 42 52.6	+0.9
SAML	Samuel	17.93	102	P	P	00 42 53.1	+0.6
SAML	Samuel	17.93	102	*e*P	P	00 42 53.1	+0.6
SAML				*e*S	S	00 46 16.2	-0.4
ACON	Acoyapa	17.97	346		Pn	00 42 51.4	-1.2
ESPN	Las Esperanzas	18.00	349	Pn	P	00 42 54.0	+0.8
GO01	Chusmiza	18.06	142	P	P	00 42 54.4	+0.1
PATCX	Punta Patache	18.39	146		Pn	00 42 58.4	+0.5
PB01	IPOC Station P	18.94	145	P	Pn	00 43 04.9	+0.3
PB07	IPOC Station P	19.27	147	Pn	Pn	00 43 09.0	+0.5
URIC	Uribia, Colomb	19.38	27	Pn	P	00 43 08.6	+0.3
CSGN	Cosiguina Volc	19.60	340	P	P	00 43 11.3	+0.4
CSGN				IAmb	IAmb	00 43 17.4	
	comp=Z,67nm,1.1s						
PB04	IPOC Station P	19.63	149	P	Pn	00 43 12.4	-0.5
PB09	IPOC Station P	19.68	146	P	Pn	00 43 13.2	-0.2
PB10	IPOC Station P	20.42	152	P	P	00 43 20.1	+0.4
LVC	Limon Verde	20.51	147	P	P	00 43 22.2	+1.1
	comp=Z,4.9nm,0.5s,baz=321,slow=9.1,SNR=4.3						
LVC	Limon Verde	20.51	147	IAmb	IAmb	00 43 41.3	
	comp=Z,54nm,1.4s						
LVC	Limon Verde	20.51	147	*e*P	Pn	00 43 23.2	-0.3
TGUH	Tegucigalpa,Un	20.53	342	P	P	00 43 21.2	+0.2
TGUH				IAmb	IAmb	00 43 27.5	
	comp=Z,56nm,1.1s						
PB15	IPOC Station P	20.70	149	P	P	00 43 22.9	-0.1
SNET	Serv Nac Est T	20.86	337	P	P	00 43 23.4	-1.3
PB14	IPOC Station P	21.45	153	P	P	00 43 32.0	+0.9
PTGA	Pitinga	21.50	78	P	P	00 43 31.5	0.0
	comp=Z,28nm,0.9s,baz=260,slow=12,SNR=36						
PTGA	Pitinga	21.50	78	P	P	00 43 31.7	+0.3
PTGA	Pitinga	21.50	78	*e*P	P	00 43 31.7	+0.3
PTGA				*e*S	S	00 47 25.7	-2.4
SIV	San Ignacio	22.06	119	P	P	00 43 37.1	-0.3
	comp=Z,7.4nm,0.8s,baz=308,slow=9.4,SNR=29						
GO02	Mina Guanaco	22.28	152	P	P	00 43 42.0	+1.9
GO02				IAmb	IAmb	00 43 56.3	
	comp=Z,40nm,1.1s						
APG	El Apazote	22.55	335	P	P	00 43 43.8	+0.9
	comp=Z,2.8nm,0.6s,baz=234,slow=5.7,SNR=4.1						
PCRV	Puerto La Cruz	22.59	46	P	P	00 43 44.8	+1.7
	comp=Z,33nm,0.7s,baz=270,slow=2.1,SNR=15						
PLCV	Puerto La Cruz	22.61	46	P	P	00 43 44.8	+1.4
MTDJ	Mount Denham	23.93	8	P	P	00 43 56.5	+0.1
GO03	Copiap	24.12	156	P	P	00 44 00.5	+2.4
CCIG	Comitan	24.41	333	P	P	00 44 00.6	-0.4
FSCY	Frank Sound, G	24.77	359	P	P	00 44 04.2	+0.2
LCO	Las Campanas	25.21	159	P	P	00 44 07.7	-0.6
CBCY	The Bluff, Cay	25.22	3	P	P	00 44 06.8	-1.2
LGNH	Logne	25.35	19	P	P	00 44 09.3	+0.1
CLDB	Colider	25.43	103	*e*P	P	00 44 09.6	-0.5
GTBY	Guantanamo Bay	26.02	13	P	P	00 44 15.6	+0.2
GTBY				IAmb	IAmb	00 44 18.5	
	comp=Z,45nm,0.9s						
SDDR	Presa de Saban	26.23	21	P	P	00 44 16.3	-1.0
TOSP	Speyside	26.37	50	P	P	00 44 19.0	+0.4
CMIG	Matias Romero	26.43	329	P	P	00 44 19.2	+0.2
	comp=Z,2.2nm,0.8s,baz=85,slow=13,SNR=3.1						
CMIG				PcP	PcP	00 47 43.8	-0.2
	comp=Z,2.1nm,0.6s,baz=107,slow=4.0,SNR=5.0						
TEIG	Tepich	26.67	345	P	P	00 44 21.9	+0.8
	comp=Z,10nm,0.5s,baz=217,slow=0.0,SNR=6.7						
TEIG	Tepich	26.67	345	P	P	00 44 22.2	+1.0
DR12	Loma Pena Alta	26.80	25	P	P	00 44 23.1	+0.7
SALV	Santo Antonio	26.80	114	*e*P	P	00 44 24.0	+1.5
CRPR	Cabo Rojo, PR	27.16	30	P	P	00 44 25.8	+0.2
MLPR	Magueyes Islan	27.16	30	P	P	00 44 25.4	-0.2
MLPR				IAmb	IAmb	00 44 31.3	
	comp=Z,18nm,0.7s						
MPR	Mayaguez	27.32	30	P	P	00 44 28.1	+1.1
SJG	San Juan	27.73	31	P	P	00 44 31.5	+0.7
	comp=Z,73nm,0.8s,baz=205,slow=6.0,SNR=32						
SJG	San Juan	27.73	31	P	P	00 44 31.7	+0.9
EMPR	Esperanza - Ma	27.85	30	P	P	00 44 30.6	-1.2
GCPR	Guaynabo City	27.93	31	P	P	00 44 32.1	-0.4
GCPR				IAmb	IAmb	00 44 38.9	
	comp=Z,52nm,1.0s						
CDVI	St. Croix	28.19	34	P	P	00 44 34.1	-0.7
CUPR	Culebra, Puert	28.36	33	P	P	00 44 36.2	-0.1
CUPR				IAmb	IAmb	00 44 39.2	
	comp=Z,30nm,0.8s						
STVI	Saint Thomas	28.57	33	P	P	00 44 37.6	-0.6
STVI				IAmb	IAmb	00 44 40.9	
	comp=Z,16nm,0.7s						
AQDB	Aquidauana	28.63	123	*e*P	P	00 44 39.9	+1.1
ARAG	Araguaiana, MT	30.30	112	*e*P	P	00 44 54.4	+0.8
C2SB	Chapadao do Su	30.37	118	*e*P	P	00 44 55.4	+1.2
CPUP	Villa Florida	30.55	135	P	P	00 44 56.6	+0.9
	comp=Z,2.5nm,0.8s,baz=354,slow=6.2,SNR=4.2						
CPUP				LR	LR	00 58 40.6	
	comp=Z,323nm,21.4s,baz=304,slow=39						
CPUP	Villa Florida	30.55	135	*e*P	P	00 44 57.3	+1.6
TRCB	Terra Rica	32.22	125	*e*P	P	00 45 12.0	+1.4
PCMB	Pacaembu	32.84	122	*e*P	P	00 45 16.5	+0.5
PTGB	Pitanga	33.60	127	*e*P	P	00 45 23.3	+0.7
BDFB	Brasilia	33.82	110	P	P	00 45 24.1	-0.6
	comp=Z,1.8nm,0.5s,baz=281,slow=9.5,SNR=4.7						
BDFB				PcP	PcP	00 48 04.4	+1.0
	comp=Z,4.1nm,0.7s,baz=208,slow=4.8,SNR=4.0						
BDFB				LR	LR	01 00 31.8	
	comp=Z,540nm,18.1s,baz=292,slow=39						
BDFB	Brasilia	33.82	110	P	P	00 45 25.2	+0.5
BDFB				IAmb	IAmb	00 45 43.3	
	comp=Z,15nm,1.3s						
IPMB	Ipameri, GO	34.25	114	*e*P	P	00 45 28.7	+0.3
ITAB	Concordia	34.85	131	*e*P	P	00 45 35.1	+1.8
GO06	Curarrehue	34.88	167	P	P	00 45 33.5	-0.2
BB19B	Bebedouro	34.98	119	*e*P	P	00 45 34.7	+0.1
CPSB	Cacapava Do Su	35.75	137	*e*P	P	00 45 42.6	+1.5
553A	Crawfordville	35.76	355	P	P	00 45 42.4	+1.3
PLCA	Paso Flores	36.19	167	P	P	00 45 43.5	-1.3
	comp=Z,6.2nm,1.1s,baz=326,slow=3.6,SNR=3.9						
PLCA				PcP	PcP	00 48 09.8	0.0
	comp=Z,2.6nm,0.6s,baz=350,slow=3.5,SNR=9.1						
PLCA				LR	LR	00 57 27.2	
	comp=Z,137nm,20.9s,baz=9.0,slow=31						
PLCA	Paso Flores	36.19	167	IAmb	IAmb	00 45 47.8	
	comp=Z,9.3nm,1.2s						
PLCA	Paso Flores	36.19	167	*e*P	P	00 45 47.0	+2.2
SPB	Sao Paulo	36.88	122	*e*P	P	00 45 51.2	+0.4
TIGA	Tifton	36.93	356	P	P	00 45 51.1	+0.1
	baz=176						
CNLB	Canela	36.93	133	*e*P	P	00 45 50.8	-0.4
VAO	Valinhos	37.05	121	*e*P	P	00 45 52.5	+0.1
JANB	Januaria	37.19	107	*e*P	P	00 45 53.9	+0.3
250A	Grady	37.73	353	P	P	00 45 57.2	-0.6
250A				IAmb	IAmb	00 45 58.8	
	comp=Z,46nm,1.4s						
344A	Westbrook Farm	38.02	346	P	P	00 46 01.2	+0.9
157A	Early Branch	38.08	360	P	P	00 46 01.5	+0.7
	baz=180						
HKT	Hockley	38.14	339	P	P	00 46 01.9	+0.6
HKT				IAmb	IAmb	00 46 03.8	
	comp=Z,29nm,1.1s						
152A	Waverly Hall	38.24	355		PcP	00 48 16.0	0.0
BSCB	Bom Sucesso	38.25	117	*e*P	P	00 46 02.8	+0.2
PARB	Paraibuna	38.32	121	*e*P	P	00 46 05.3	+2.2
RGRS	Roger Stewart	38.32	1	P	P	00 46 01.3	-1.4
342A	Flagon Creek P	38.35	344	P	P	00 46 02.1	-1.0
342A				IAmb	IAmb	00 46 04.7	
	comp=Z,17nm,0.8s						
CSU	Charleston Sou	38.40	1	P	P	00 46 01.0	-2.4
NHSC	New Hope	38.52	1	P	P	00 46 03.7	-0.7
NHSC	New Hope	38.52	1	P	P	00 46 04.6	+0.1
	baz=181						
Z57A	Bowman	38.70	0	P	P	00 46 06.1	+0.1
	baz=180						
VBMS	Vicksburg	38.71	347	P	P	00 46 05.8	-0.3
Z56A	Williston	38.73	359	P	P	00 46 05.7	-0.6
Z56A	Williston	38.73	359	P	P	00 46 06.2	0.0
	baz=179						
Z58A	St. Stephen	38.75	2	P	P	00 46 06.3	-0.1
	baz=182						
146A	Union	38.81	349	P	P	00 46 06.7	-0.3
LRAL	Lakeview Retre	38.86	352	IAmb	IAmb	00 46 08.2	
	comp=Z,15nm,1.1s						
LRAL	Lakeview Retre	38.86	352	P	P	00 46 07.3	-0.1
	baz=170,SNR=9.4						
GOGA	Godfrey	38.89	357	P	P	00 46 07.1	-0.4
	baz=176,SNR=5.3						
Z51A	Franklin	38.92	354	P	P	00 46 07.3	-0.6
Z50A	Ashland	38.94	353	P	P	00 46 07.8	-0.3
	baz=172,SNR=6.9						
Z47A	Carrollton	39.19	351	IAmb	IAmb	00 46 10.9	
	comp=Z,17nm,0.7s						
Z47A					PcP	00 48 19.1	+0.2
Y58A	Scranton	39.33	2	P	P	00 46 09.6	-1.6
Y58A				IAmb	IAmb	00 46 11.7	
	comp=Z,44nm,1.4s						
Y55A	Saluda	39.35	359	P	P	00 46 11.4	0.0
	baz=179,SNR=11						
Y52A	Lilburn	39.37	356	P	P	00 46 10.3	-1.3
Y52A	Lilburn	39.37	356	P	P	00 46 11.3	-0.4
	baz=175						
143A	Socs Landing,	39.38	346	IAmb	IAmb	00 46 25.4	

	comp=Z,31nm,0.8s						
NATX	Nacogdoches	39.40	341	P	P	00 46 12.1	+0.2
NATX	Nacogdoches	39.40	341	P	P	00 46 13.5	+1.7
	baz=158						
Y57A	Sumter	39.42	1	P	P	00 46 10.3	-1.7
Y57A				IAmb	IAmb	00 46 12.6	
	comp=Z,20nm,0.7s						
Y57A	Sumter	39.42	1	P	P	00 46 12.1	+0.1
	baz=181						
Y59A	Loris	39.44	3	P	P	00 46 12.3	+0.2
	baz=183						
Y60A	Bolivia	39.49	4	P	P	00 46 11.1	-1.4
Y60A				IAmb	IAmb	00 46 13.7	
	comp=Z,36nm,1.0s						
435B	Jarrell	39.54	337	P	P	00 46 14.1	+1.0
435B				IAmb	IAmb	00 46 15.5	
	comp=Z,23nm,0.9s						
435B	Jarrell	39.54	337	P	P	00 46 14.8	+1.7
	baz=154						
HODGE	Hodges	39.65	358	IAmb	IAmb	00 46 14.6	
	comp=Z,15nm,0.9s						
HODGE					PcP	00 48 20.8	+0.4
X55A	Gracelyn & Ava	39.87	359	P	P	00 46 15.7	-0.1
	baz=179,SNR=8.7						
X56A	White Oak	39.89	360	P	P	00 46 15.7	-0.2
	baz=180,SNR=8.5						
X53A	Estanollee	39.96	357	P	P	00 46 16.2	-0.3
	baz=176,SNR=7.1						
X54A	Belton	39.97	358	P	P	00 46 16.6	0.0
	baz=178,SNR=5.9						
X58A	Rowland	39.98	2	P	P	00 46 16.0	-0.7
X58A				IAmb	IAmb	00 46 18.5	
	comp=Z,23nm,1.4s						
237A	Washetta, Mont	40.00	340	P	P	00 46 17.8	+0.9
X59A	McDuffie Farm,	40.03	3	P	P	00 46 17.0	0.0
	baz=184						
Y45A	Yeager Farm, C	40.10	349	P	P	00 46 17.7	0.0
X51A	Calhoun	40.13	355	P	P	00 46 17.7	-0.2
	baz=174						
JCT	Junction City	40.18	334	P	P	00 46 18.5	+0.1
JCT				IAmb	IAmb	00 46 20.8	
	comp=Z,30nm,1.4s						
JCT	Junction City	40.18	334	P	P	00 46 19.9	+1.4
	baz=150,SNR=6.3						
FPAL	Fort Paine	40.18	354	IAmb	IAmb	00 46 18.6	
	comp=Z,22nm,0.7s						
PAULI	Pauline	40.23	359	IAmb	IAmb	00 46 19.4	
	comp=Z,23nm,0.9s						
HPIG		40.24	325	P	P	00 46 19.1	-0.1
Z41A	Richland Creek	40.26	345	P	P	00 46 19.2	+0.2
Z41A				IAmb	IAmb	00 46 21.0	
	comp=Z,31nm,1.1s						
Z41A	Richland Creek	40.26	345	P	P	00 46 20.3	+1.3
	baz=162						
BG3	Lake Jocassee	40.43	357	IAmb	IAmb	00 46 21.4	
	comp=Z,15nm,0.8s						
W58A	Raeford	40.45	2	P	P	00 46 20.1	-0.5
	baz=183						
W54A	Cherokee Point	40.50	358	P	P	00 46 21.0	+0.1
	baz=178,SNR=6.6						
W56A	Indian Trail	40.53	0	P	P	00 46 20.8	-0.5
	baz=181						
KMSC	Kings Mountain	40.54	360	IAmb	IAmb	00 46 22.0	
	comp=Z,26nm,0.9s						
KMSC	Kings Mountain	40.54	360	P	P	00 46 21.1	-0.2
	baz=179,SNR=11						
W57A	Gilead	40.56	1	IAmb	IAmb	00 46 21.7	
	comp=Z,24nm,1.1s						
W57A	Gilead	40.56	1	P	P	00 46 20.9	-0.5
	baz=182,SNR=8.2						
WHTX	Lake Whitney,	40.57	338	P	P	00 46 22.1	+0.5
WHTX				IAmb	IAmb	00 46 24.5	
	comp=Z,27nm,0.9s						
WHTX	Lake Whitney,	40.57	338	P	P	00 46 23.0	+1.4
	baz=154,SNR=7.8						
W52A	Murphy	40.59	356	IAmb	IAmb	00 46 22.4	
	comp=Z,17nm,0.8s						
OXF	Oxford	40.70	349	P	P	00 46 22.5	-0.1
OXF				IAmb	IAmb	00 46 36.6	
	comp=Z,17nm,0.9s						
WLAR	White Oak Lake	40.75	344	P	P	00 46 23.7	+0.6
WLAR				IAmb	IAmb	00 46 25.7	
	comp=Z,40nm,1.1s						
W50A	Signal Mountai	40.80	355	IAmb	IAmb	00 46 23.9	
	comp=Z,11nm,0.7s						
BBSR	BB Station	40.82	21	P	P	00 46 22.9	-0.8
BBSR				IAmb	IAmb	00 46 25.2	
	comp=Z,47nm,1.1s						
SJMB	Sao Joao De Ma	40.88	112	*e*P	P	00 46 24.8	+0.3
SWET	Sewanee	40.88	354	IAmb	IAmb	00 46 24.3	
	comp=Z,12nm,0.7s						
CPCT	Cooper Cave	40.98	356	IAmb	IAmb	00 46 25.6	
	comp=Z,20nm,0.7s						
X43A	Marvell	41.00	347	P	P	00 46 25.8	+0.6
X43A				IAmb	IAmb	00 46 28.2	
	comp=Z,36nm,0.8s						
TXAR	Lajitas Array	41.04	329	P	P	00 46 25.1	-0.5
	comp=Z,1.1nm,0.7s,baz=149,slow=9.9,SNR=13						
TXAR				PcP	PcP	00 48 25.6	+0.4
	comp=Z,3.2nm,0.7s,baz=159,slow=6.2,SNR=16						
TXAR	Lajitas Array	41.04	329	P	P	00 46 24.6	-1.0
TX31	Lajitas Ar. Si	41.04	329	P	P	00 46 25.7	0.0
TX31					PcP	00 48 26.1	+1.0
TX32	Lajitas Array	41.04	329	P	P	00 46 25.1	-0.6
V53A	Saluda	41.10	358	P	P	00 46 24.5	-1.5
TKL	Tuckaleechee C	41.14	357	IAmb	IAmb	00 46 26.7	
	comp=Z,15nm,0.9s						
V54A	Nebo	41.18	359	P	P	00 46 26.6	-0.1
	baz=178,SNR=10						
V56A	Mocksville	41.21	1	P	P	00 46 26.5	-0.3
	baz=181						
BSFB	Barra de Sao F	41.22	112	*e*P	P	00 46 27.2	0.0
V58A	Windy Hill, Pi	41.23	2	P	P	00 46 26.1	-0.8
	baz=183						
V59A	Middlesex	41.24	3	P	P	00 46 26.7	-0.4
	baz=184						
V55A	Taylorsville	41.25	360	P	P	00 46 27.0	-0.1
	baz=180						
W45A	Hickory Valley	41.29	350	P	P	00 46 27.1	-0.4
W45A				IAmb	IAmb	00 46 27.9	
	comp=Z,22nm,0.8s						
V57A	Coltrane Farms	41.30	1	P	P	00 46 27.1	-0.5
	baz=182						
V60A	Jim Taylor Roa	41.31	5	P	P	00 46 27.0	-0.5
V60A				IAmb	IAmb	00 46 28.3	
	comp=Z,22nm,0.6s						
V60A	Jim Taylor Roa	41.31	5	P	P	00 46 27.5	-0.1
	baz=186						
V52A	Sevierville	41.31	357	P	P	00 46 26.2	-1.4
V52A				IAmb	IAmb	00 46 28.1	
	comp=Z,28nm,0.9s						
V51A	Loudon	41.32	356	IAmb	IAmb	00 46 28.2	
	comp=Z,16nm,0.9s						
X40A	Basin Creek Fa	41.44	345	P	P	00 46 29.7	+1.0
	baz=162,SNR=5.0						
V48A	Smith Brothers	41.50	353	IAmb	IAmb	00 46 29.7	
	comp=Z,26nm,1.3s						
UALR	University of	41.59	346	P	P	00 46 30.2	+0.3
UALR				IAmb	IAmb	00 46 31.6	
	comp=Z,35nm,1.3s						
MIAR	Mount Ida	41.69	344	IAmb	IAmb	00 46 32.5	
	comp=Z,17nm,0.9s						
MIAR	Mount Ida	41.69	344	P	P	00 46 31.6	+0.9
	baz=161,SNR=15						
Z35A	Perchaven, San	41.70	339	P	P	00 46 31.7	+0.8
U56A	King	41.74	1	P	P	00 46 31.2	0.0
	baz=181						
U58A	Oxford	41.85	3	P	P	00 46 31.9	-0.1
	baz=184						
U59A	Littleton	41.85	4	P	P	00 46 31.9	-0.1
	baz=185						
U57A	Blanch	41.85	2	P	P	00 46 31.4	-0.6
	baz=182						
U55A	TA2, Sparta	41.90	360	P	P	00 46 32.2	-0.3
	baz=180						
U54A	Nelsons Funny	41.92	359	IAmb	IAmb	00 46 33.3	
	comp=Z,18nm,0.9s						
U54A	Nelsons Funny	41.92	359	P	P	00 46 32.5	-0.2
	baz=179						
W41B	Gary Mavity, V	41.94	346	P	P	00 46 32.4	-0.4
W41B				IAmb	IAmb	00 46 34.4	
	comp=Z,14nm,0.7s						
W41B	Gary Mavity, V	41.94	346	P	P	00 46 33.5	+0.7
	baz=163,SNR=12						
ABTX	Abilene, Hawle	41.98	336	P	P	00 46 33.6	+0.4
ABTX				IAmb	IAmb	00 46 35.3	
	comp=Z,45nm,1.0s						
ABTX	Abilene, Hawle	41.98	336	P	P	00 46 34.4	+1.2
	baz=152,SNR=15						
TZTN	Tazewell	42.01	357	P	P	00 46 33.0	-0.4
	baz=176,SNR=6.3						
U60A	Pendleton	42.02	5	P	P	00 46 33.1	-0.2
	baz=186						
WVT	Waverly	42.02	352	P	P	00 46 32.2	-1.2
WVT					PcP	00 48 27.6	-0.5
WVT	Waverly	42.02	352	P	P	00 46 32.3	-1.2
	baz=170						
WHAR	Wooly Hollow	42.06	346	P	P	00 46 33.9	+0.1
WHAR				IAmb	IAmb	00 46 35.3	
	comp=Z,19nm,0.7s						
U49A	Red Boiling Sp	42.15	354		PcP	00 48 28.4	-0.1
W39A	Magazine	42.35	344	IAmb	IAmb	00 46 38.6	
	comp=Z,30nm,0.9s						
W39A					PcP	00 48 30.6	+1.4
W39A	Magazine	42.35	344	P	P	00 46 37.6	+1.5
	baz=161,SNR=18						
GLAT	Glass	42.39	350	P	P	00 46 35.8	-0.7
GLAT				IAmb	IAmb	00 46 37.6	
	comp=Z,57nm,1.4s						
T58A	Grand View Acr	42.40	3	P	P	00 46 36.2	-0.3
	baz=184						
T53A	Wise	42.40	358	P	P	00 46 36.1	-0.5
	baz=178						
T57A	Hurt	42.42	2	P	P	00 46 36.3	-0.4
	baz=182,SNR=8.5						
T56A	Rocky Mt	42.43	1	P	P	00 46 36.7	-0.1
	baz=181						
T51A	Gray	42.45	356	P	P	00 46 36.6	-0.4
	baz=176,SNR=6.7						
T54A	Tazewell	42.46	359	P	P	00 46 36.4	-0.7
	baz=179						
T59A	Double "B" Far	42.48	4	P	P	00 46 36.8	-0.4
T59A	Double "B" Far	42.48	4	P	P	00 46 36.8	-0.4
	baz=185						
T55A	Pulaski	42.51	0	P	P	00 46 37.6	+0.1
	baz=180						
T52A	Hallie	42.54	358	IAmb	IAmb	00 46 38.1	
	comp=Z,26nm,1.2s						
T52A	Hallie	42.54	358	P	P	00 46 37.1	-0.6
	baz=177						
T50A	Nancy	42.57	355	P	P	00 46 36.8	-1.1
	baz=174						
BLA	Blacksburg	42.61	1	P	P	00 46 36.1	-2.2
HICK	Hickman	42.65	350	P	P	00 46 37.9	-0.7
HICK				IAmb	IAmb	00 46 49.1	
	comp=Z,32nm,0.7s						
T49A	Edmonton	42.71	355	IAmb	IAmb	00 46 39.0	
	comp=Z,11nm,0.6s						
T49A	Edmonton	42.71	355	P	P	00 46 38.2	-0.8
	baz=173,SNR=8.7						
PARMO	Parma	42.86	350	P	P	00 46 39.6	-0.6
X34A	Smith Ranch, M	43.06	339	P	P	00 46 40.3	-1.6
X34A					PcP	00 48 33.2	+1.6
S58A	Poland Farm, P	43.09	3	P	P	00 46 40.7	-1.4
PBMO	Poplar Bluff	43.09	349	P	P	00 46 40.9	-1.2
PBMO				IAmb	IAmb	00 46 42.5	
	comp=Z,11nm,0.6s						
S51A	Beattyville	43.10	357	P	P	00 46 38.8	-3.5
S51A	Beattyville	43.10	357	P	P	00 46 41.5	-0.7
	baz=176						
S55A	Lewisburg	43.17	1	P	P	00 46 42.5	-0.3
	baz=181						
S50A	Richmond	43.19	356	P	P	00 46 42.4	-0.6
	baz=175,SNR=7.1						
S54A	Dingess, Beckl	43.19	360	P	P	00 46 40.5	-2.5
S54A	Dingess, Beckl	43.19	360	P	P	00 46 42.9	-0.1
	baz=180						
S57A	Dark Hollow, R	43.19	2	P	P	00 46 41.8	-1.1
U40A	Yellville	43.22	346	P	P	00 46 44.0	+0.9
	baz=163,SNR=26						
S59A	Mechanicsville	43.29	4	P	P	00 46 43.7	0.0
	baz=185						
S49A	Springfield	43.37	355	P	P	00 46 43.5	-0.8
	baz=174,SNR=6.6						
HHAR	Hobbs	43.42	345	IAmb	IAmb	00 46 58.1	
	comp=Z,38nm,1.4s						
R58B	Mineral	43.45	4	IAmb	IAmb	00 46 45.8	
	comp=Z,17nm,1.0s						
R58B	Mineral	43.45	4	P	P	00 46 45.0	0.0
	baz=184,SNR=6.7						
T42A	Van Buren	43.47	348	IAmb	IAmb	00 46 45.8	
	comp=Z,19nm,0.8s						
FNO	Franklin	43.50	340	P	P	00 46 45.7	+0.2
WMOK	Wichita Mounta	43.52	339	P	P	00 46 45.7	0.0
WMOK				IAmb	IAmb	00 46 47.2	
	comp=Z,30nm,1.1s						
WMOK	Wichita Mounta	43.52	339	P	P	00 46 46.4	+0.7
	baz=154,SNR=6.2						
R54A	Victor	43.57	360	P	P	00 46 45.5	-0.6
	baz=180						
TUL1	Leonard	43.59	342	P	P	00 46 46.9	+0.7
	baz=158,SNR=16						
OKCSW	OKLAHOMA CITY	43.65	340	P	P	00 46 46.6	-0.1
OKCFA	Oklahoma City	43.66	340	P	P	00 46 47.0	+0.2
R55A	Marlinton	43.68	1	P	P	00 46 46.5	-0.4
R55A	Marlinton	43.68	1	P	P	00 46 46.6	-0.4
	baz=181						
U38A	Gravette	43.69	344	IAmb	IAmb	00 46 48.7	
	comp=Z,20nm,1.0s						
CBN	Corbin Frederi	43.72	4	P	P	00 46 46.8	-0.4
CBN				IAmb	IAmb	00 46 48.0	
	comp=Z,13nm,0.8s						
R53A	Hurricane	43.73	359	P	P	00 46 45.1	-2.1
R59A	King George, V	43.74	4	P	P	00 46 47.6	+0.3
	baz=186						
R51A	Hillsboro	43.76	357	P	P	00 46 47.0	-0.5
	baz=176						
S44A	Carbondale	43.77	350	P	P	00 46 47.0	-0.6
S44A				IAmb	IAmb	00 46 48.1	
	comp=Z,19nm,0.8s						
R58A	Rapidan	43.78	3	P	P	00 46 47.8	+0.2
	baz=184,SNR=5.2						
R50A	Paris	43.78	356	P	P	00 46 45.6	-2.1
R50A	Paris	43.78	356	P	P	00 46 47.0	-0.8
	baz=175						
SIUC	Southern Illin	43.79	351	P	P	00 46 47.1	-0.7
SIUC				IAmb	IAmb	00 46 48.2	
	comp=Z,22nm,0.8s						
USIN	University of	43.80	352	P	P	00 46 46.6	-1.2
USIN				IAmb	IAmb	00 46 47.8	
	comp=Z,20nm,0.8s						
MNTX	Cornudas Mount	43.81	329	P	P	00 46 48.8	+0.7
	baz=144,SNR=18						
MGMO	Mountain Grove	43.84	347	P	P	00 46 47.2	-1.0
MGMO				IAmb	IAmb	00 46 49.8	
	comp=Z,26nm,1.0s						
R60A	Leonardtown, M	43.85	5	P	P	00 46 49.0	+0.8
	baz=186						
R49A	Shelbyville	43.86	355	P	P	00 46 47.6	-0.7
	baz=174						
WCI	Wyandotte Cave	43.90	354	P	P	00 46 47.7	-1.0
WCI	Wyandotte Cave	43.90	354	P	P	00 46 47.5	-1.1
	baz=172						
Q53A	Leroy	44.25	359	P	P	00 46 50.6	-0.8
	baz=179						
Q52A	Bidwell	44.37	359	P	P	00 46 52.2	-0.2
	baz=178						
Q54A	Coxs Mills	44.37	0	P	P	00 46 52.0	-0.4
Q54A	Coxs Mills	44.37	0	P	P	00 46 53.8	+1.4
	baz=180						
Q55A	Buckhannon	44.39	1	P	P	00 46 52.9	+0.2
	baz=181,SNR=5.5						
Q59A	Harwood	44.43	5	P	P	00 46 52.9	+0.1
	baz=186						
Q58A	Fox Den Farm,	44.44	4	P	P	00 46 52.9	0.0
	baz=185						
MSTX	Muleshoe	44.45	334	IAmb	IAmb	00 46 55.2	
	comp=Z,26nm,0.8s						
MSTX	Muleshoe	44.45	334	P	P	00 46 54.8	+1.5
	baz=148,SNR=6.7						
Q56A	Snyder Ridge,	44.46	2	P	P	00 46 52.9	-0.3
Q51A	Peebles	44.47	357	IAmb	IAmb	00 46 53.3	
	comp=Z,15nm,1.0s						
Q51A	Peebles	44.47	357	P	P	00 46 52.4	-0.8
	baz=177						
CCM	Cathedral Cave	44.49	348	P	P	00 46 52.7	-0.7
CCM				IAmb	IAmb	00 46 54.9	
	comp=Z,24nm,0.7s						
CCM	Cathedral Cave	44.49	348	P	P	00 46 54.3	+0.9
	baz=165						
Q48A	North Vernon	44.54	355	P	P	00 46 52.5	-1.2
	baz=173						
Q49A	Aurora	44.55	356	P	P	00 46 52.8	-1.0
	baz=174						
OLIL	Olney	44.62	352	IAmb	IAmb	00 46 54.3	
	comp=Z,17nm,0.7s						
Q60A	Greensboro	44.64	6	P	P	00 46 53.9	-0.6
Q60A				IAmb	IAmb	00 46 55.9	
	comp=Z,36nm,1.0s						
Q60A	Greensboro	44.64	6	P	P	00 46 55.6	+1.1
	baz=187						
T35A	Sooner Cattle	44.74	342		PP	00 48 38.1	-2.4
AMTX	Amarillo	44.77	336	IAmb	IAmb	00 46 57.5	
	comp=Z,24nm,1.0s						
AMTX	Amarillo	44.77	336	P	P	00 46 56.6	+0.8
	baz=150						
BLO	Bloomington	44.86	354	P	P	00 46 54.1	-2.2
SLM	Saint Louis	44.86	350	P	P	00 46 55.5	-0.9
SLM				IAmb	IAmb	00 46 56.8	
	comp=Z,16nm,0.7s						
P51A	Williamsport	44.91	358	P	P	00 46 54.8	-1.9
R40A	Maddies Statio	44.93	347	IAmb	IAmb	00 46 57.8	
	comp=Z,14nm,0.8s						
P56A	Dayton Farm, R	44.94	2	P	P	00 46 57.0	+0.1
	baz=183,SNR=5.7						
P57A	Homestead Farm	44.95	3	P	P	00 46 56.6	-0.4
SDMD	Soldier’s Deli	44.96	5	P	P	00 46 55.3	-1.7
P58A	Pank, Wackersv	45.01	4	P	P	00 46 57.5	+0.1
	baz=185						
P52A	Corning	45.04	359	P	P	00 46 56.9	-0.8
	baz=178						
P48A	Milroy	45.04	355	P	P	00 46 56.0	-1.7
	baz=174						
P49A	Miami Univ. Ec	45.06	356	P	P	00 46 56.1	-1.8
	baz=175						
U32A	Winter Ranch,	45.07	339	P	P	00 46 57.6	-0.5
P50A	Jamestown	45.07	357	P	P	00 46 56.8	-1.2
	baz=176						
P59A	Jarrettsville	45.19	5	P	P	00 46 58.9	0.0
	baz=186						
P60A	Greenville	45.47	6	P	P	00 46 59.9	-1.1
P60A				IAmb	IAmb	00 47 01.9	
	comp=Z,15nm,0.9s						
P60A	Greenville	45.47	6	P	P	00 47 01.3	+0.2
	baz=187						
O52A	Adamsville	45.51	359	P	P	00 47 00.0	-1.5
O52A				IAmb	IAmb	00 47 01.5	
	comp=Z,20nm,1.4s						
O52A	Adamsville	45.51	359	P	P	00 47 00.8	-0.7
	baz=179						
O51A	Pataskala	45.56	358	P	P	00 47 00.8	-1.1
	baz=178						
MVL	Millersville	45.59	5	IAmb	IAmb	00 47 02.8	
	comp=Z,12nm,0.9s						
O53A	New Philadelph	45.64	360	P	P	00 47 03.2	+0.7
	baz=180						
319A	Douglas	45.66	325	P	P	00 47 03.1	+0.2
319A				IAmb	IAmb	00 47 05.4	
	comp=Z,36nm,1.2s						
ACSO	Alum Creek Sta	45.66	358	P	P	00 47 01.0	-1.6
ACSO				IAmb	IAmb	00 47 16.2	
	comp=Z,11nm,0.8s						
O58A	Lewisberry	45.66	4	P	P	00 47 03.0	+0.4
	baz=186,SNR=5.8						
O49A	Covington	45.68	356	P	P	00 47 01.2	-1.6
O57A	Amberson	45.70	4	P	P	00 47 02.9	-0.1
	baz=185						
121A	Cookes Peak, D	45.72	328	P	P	00 47 03.6	+0.2
121A				IAmb	IAmb	00 47 06.3	
	comp=Z,13nm,1.1s						
121A	Cookes Peak, D	45.72	328	P	P	00 47 05.4	+1.9
	baz=141,SNR=6.1						
P43A	Skaggs, Pawnee	45.72	351	IAmb	IAmb	00 47 03.5	
	comp=Z,21nm,0.8s						
PAGS	Pennsylvania G	45.78	5	IAmb	IAmb	00 47 04.5	
	comp=Z,25nm,1.3s						
O48A	Farmland	45.81	356	P	P	00 47 02.4	-1.4
	baz=174						
O59A	Robesonia	45.91	5	P	P	00 47 04.7	+0.1
	baz=187						
O60A	Telford	45.99	6	P	P	00 47 05.6	+0.4
	baz=188,SNR=6.5						
O44A	Mansfield	46.06	352	P	P	00 47 04.0	-1.9
O44A				IAmb	IAmb	00 47 05.8	
	comp=Z,9.6nm,0.7s						
SSPA	Standing Stone	46.11	3	P	P	00 47 06.0	-0.1
SSPA				IAmb	IAmb	00 47 06.8	
	comp=Z,30nm,1.4s						
SSPA	Standing Stone	46.11	3	P	P	00 47 05.9	-0.3
	baz=184						
SFIN	Lafayette	46.12	353	IAmb	IAmb	00 47 05.6	
	comp=Z,11nm,0.7s						
SFIN	Lafayette	46.12	353	P	P	00 47 05.0	-1.2
	baz=172						
N55A	Marion Center	46.20	2	P	P	00 47 06.4	-0.6
	baz=183						
LUPA	Lehigh Univers	46.27	6	P	P	00 47 06.7	-0.7
N51A	Ashland	46.32	359	P	P	00 47 07.1	-0.7
N51A				IAmb	IAmb	00 47 25.0	
	comp=Z,15nm,1.1s						
N54A	Moraine State	46.36	1	P	P	00 47 07.3	-0.9
N54A	Moraine State	46.36	1	P	P	00 47 07.7	-0.5
	baz=181						
N58A	Sunbury	46.39	4	P	P	00 47 07.5	-0.9
N58A				IAmb	IAmb	00 47 09.2	
	comp=Z,11nm,0.8s						
N58A	Sunbury	46.39	4	P	P	00 47 08.3	-0.1
	baz=186						
N49A	Columbus Grove	46.40	357	P	P	00 47 07.7	-0.8
	baz=176						
N47A	Urbana	46.47	355	P	P	00 47 08.0	-1.0
N47A				IAmb	IAmb	00 47 11.6	
	comp=Z,12nm,1.1s						
P38A	Dawn	46.49	347	IAmb	IAmb	00 47 10.1	
	comp=Z,13nm,0.8s						
N61A	South Mountain	46.54	7	P	P	00 47 09.2	-0.4
	baz=189						
N59A	State Game Lan	46.55	5	IAmb	IAmb	00 47 10.8	
	comp=Z,20nm,0.8s						
N59A	State Game Lan	46.55	5	P	P	00 47 09.6	-0.1
	baz=187,SNR=6.2						
N60A	Cedar Hill Far	46.57	6	P	P	00 47 09.8	0.0
	baz=188						
HDIL	Hopedale	46.58	351	P	P	00 47 08.7	-1.1
HDIL	Hopedale	46.58	351	P	P	00 47 09.0	-0.8
	baz=169						
KSU1	Kansas State U	46.79	343	P	P	00 47 12.1	+0.6
	baz=158,SNR=6.6						
M50A	Fremont	46.83	358	P	P	00 47 10.2	-1.5
M50A				IAmb	IAmb	00 47 11.3	
	comp=Z,14nm,0.8s						
M50A	Fremont	46.83	358	P	P	00 47 10.8	-1.0
	baz=177						
ODNJ	Ogdensburg	46.83	7	P	P	00 47 10.7	-1.1
M57A	Sunshine Farm,	46.86	4	P	P	00 47 11.8	-0.2
	baz=185						
M55A	Ridgway	46.90	2	P	P	00 47 11.8	-0.6
	baz=183						
M54A	Oil Creek Stat	46.91	1	P	P	00 47 11.8	-0.7
	baz=182						
M56A	Emporium	46.94	3	IAmb	IAmb	00 47 13.6	
	comp=Z,25nm,1.2s						
M56A	Emporium	46.94	3	P	P	00 47 12.0	-0.7
	baz=184						
M58A	Price’s Panora	46.94	5	P	P	00 47 12.6	-0.1
	baz=186,SNR=5.2						
ANMO	Albuquerque	46.96	331	P	P	00 47 13.8	+0.6
ANMO				IAmb	IAmb	00 47 15.4	
	comp=Z,20nm,1.1s						
ANMO	Albuquerque	46.96	331	P	P	00 47 14.6	+1.4
	baz=144						
N41A	Harden Midland	46.98	350	IAmb	IAmb	00 47 13.3	
	comp=Z,20nm,0.8s						
M60A	Port Jervis	47.07	7	P	P	00 47 13.9	+0.2
	baz=189						
KSPA	Keystone Colle	47.18	5	IAmb	IAmb	00 47 15.5	
	comp=Z,19nm,1.0s						
M59A	Waymart	47.20	6	P	P	00 47 14.7	0.0
	baz=188						
TUC	Tucson	47.20	325	P	P	00 47 14.8	-0.2
TUC					PcP	00 48 47.1	+1.0
TUC	Tucson	47.20	325	P	P	00 47 16.1	+1.1
	baz=138						
L53A	Girard	47.34	1	P	P	00 47 14.6	-1.2
	baz=181						
M62A	Hamden	47.41	8	P	P	00 47 16.4	+0.1
	baz=191						
M63A	Gales Ferry	47.50	9	P	P	00 47 17.8	+0.8
	baz=192						
CBKS	Cedar Bluff	47.51	340		PcP	00 48 48.0	+1.0
CBKS	Cedar Bluff	47.51	340	P	P	00 47 18.5	+1.3

	baz=154,SNR=6.6						
ERPA	Erie	47.51	1	P	P	00 47 15.7	-1.4
ERPA				IAmb	IAmb	00 47 17.7	
	comp=Z,16nm,1.1s						
L47A	Sherwood	47.52	356	P	P	00 47 16.0	-1.2
	baz=174,SNR=5.2						
L57A	Andrews Acres	47.53	4	P	P	00 47 16.7	-0.6
	baz=186,SNR=7.0						
N38A	Joes South For	47.54	347	P	P	00 47 16.4	-1.0
L49A	Milan	47.56	357	P	P	00 47 17.0	-0.5
	baz=176						
L56A	Greenwood	47.62	3	P	P	00 47 17.3	-0.8
	baz=185						
L55A	Hinsdale	47.62	3	P	P	00 47 17.4	-0.6
	baz=183						
L54A	Sinclairville	47.64	2	P	P	00 47 17.3	-0.8
	baz=182						
L58A	Harry Jones Me	47.66	5	P	P	00 47 18.4	+0.1
	baz=187,SNR=5.1						
AAM	Ann Arbor	47.75	357	P	P	00 47 18.1	-0.8
AAM				IAmb	IAmb	00 47 19.4	
	comp=Z,20nm,1.1s						
L60A	Shokan	47.77	7	P	P	00 47 19.3	+0.1
	baz=189						
BINY	Binghamton	47.80	5	P	P	00 47 19.2	-0.2
	baz=187,SNR=6.1						
T25A	Trinidad	47.84	335	P	P	00 47 21.7	+1.6
	baz=148,SNR=20						
L59A	Walton	47.88	6	P	P	00 47 20.3	+0.3
	baz=188						
K54A	Basiliko Farm,	48.04	2	P	P	00 47 20.5	-0.7
	baz=183						
L61A	Hillsdale 1, H	48.06	7	P	P	00 47 21.5	+0.2
	baz=190						
214A	Organ Pipe Nat	48.13	323	P	P	00 47 22.3	+0.2
214A				IAmb	IAmb	00 47 24.5	
	comp=Z,12nm,0.9s						
214A	Organ Pipe Nat	48.13	323	P	P	00 47 23.6	+1.4
	baz=135						
K52A	Tillsonburg	48.17	0	P	P	00 47 21.2	-1.0
	baz=180						
N35A	Tabor	48.17	345	P	P	00 47 21.7	-0.6
K50A	Casco	48.19	358	P	P	00 47 22.0	-0.3
	baz=178						
K55A	Perry	48.19	3	P	P	00 47 21.5	-0.9
	baz=184						
K47A	Vermontville	48.20	356	P	P	00 47 21.4	-1.0
	baz=175,SNR=6.0						
K49A	Clarkson	48.22	358	P	P	00 47 21.8	-0.8
	baz=177						
K46A	Dorr	48.27	355	P	P	00 47 21.5	-1.5
	baz=174						
K48A	Perry	48.27	357	P	P	00 47 22.0	-1.0
	baz=176						
K57A	Scipio Center	48.29	4	P	P	00 47 22.4	-0.7
	baz=186,SNR=5.2						
QUA2	Belchertown	48.31	9	P	P	00 47 22.3	-1.0
QUA2				IAmb	IAmb	00 47 24.2	
	comp=Z,20nm,1.1s						
K58A	Earlville	48.39	5	P	P	00 47 22.9	-1.0
K58A				IAmb	IAmb	00 47 24.4	
	comp=Z,13nm,0.9s						
K58A	Earlville	48.39	5	P	P	00 47 23.6	-0.3
	baz=187						
X18A	Snowflake	48.41	328	P	P	00 47 24.7	+0.3
X18A				IAmb	IAmb	00 47 26.7	
	comp=Z,11nm,0.9s						
K60A	Five Rivers En	48.43	7	P	P	00 47 25.1	+0.9
	baz=189						
SCIA	State Center	48.60	348	P	P	00 47 24.3	-1.3
MEDO	Medina	48.60	2	P	P	00 47 23.4	-2.1
MEDO				IAmb	IAmb	00 47 25.4	
	comp=Z,12nm,0.9s						
J52A	Paris	48.63	0	P	P	00 47 24.7	-1.1
	baz=181,SNR=6.3						
J54A	Appleton	48.70	2	P	P	00 47 24.9	-1.4
J54A				IAmb	IAmb	00 47 26.2	
	comp=Z,18nm,1.1s						
KSCO	Kaye Shedlock'	48.73	337	P	P	00 47 28.6	+1.8
	baz=151						
W18A	Petrified Fore	48.74	328	P	P	00 47 27.3	+0.3
W18A	Petrified Fore	48.74	328	P	P	00 47 28.3	+1.3
	baz=140						
J47A	Sunmer	48.75	356	P	P	00 47 25.3	-1.3
	baz=175,SNR=5.9						
J48A	Bridge Port	48.75	357	P	P	00 47 26.0	-0.7
	baz=176,SNR=5.4						
J49A	Marlette	48.79	358	P	P	00 47 25.8	-1.1
	baz=177						
J56A	Wolcott	48.80	4	P	P	00 47 25.7	-1.4
J56A				IAmb	IAmb	00 47 27.0	
	comp=Z,21nm,0.9s						
J56A	Wolcott	48.80	4	P	P	00 47 26.4	-0.7
	baz=185						
SDCO	Great Sand Dun	48.82	334	IAmb	IAmb	00 47 29.8	
	comp=Z,16nm,0.9s						
SDCO	Great Sand Dun	48.82	334	P	P	00 47 28.8	+1.2
	baz=147,SNR=12						
J57A	Williamstown	49.00	5	P	P	00 47 26.3	-2.3
J57A				IAmb	IAmb	00 47 28.0	
	comp=Z,14nm,1.2s						
JFWS	Jewell Farm	49.03	351	IAmb	IAmb	00 47 28.5	
	comp=Z,12nm,0.6s						
JFWS	Jewell Farm	49.03	351	P	P	00 47 28.2	-0.6
	baz=168						
J60A	Lant Hill Farm	49.11	7	P	P	00 47 30.0	+0.6
	baz=190,SNR=5.2						
X16A	Lo Mia Camp, P	49.13	326	IAmb	IAmb	00 47 32.3	
	comp=Z,7.2nm,0.8s						
X16A					PcP	00 48 54.3	+1.1
I51A	Listowel	49.19	360	P	P	00 47 28.9	-1.2
	baz=180,SNR=5.9						
J59A	Piesco	49.20	6	P	P	00 47 29.1	-1.0
J59A				IAmb	IAmb	00 47 30.6	
	comp=Z,15nm,1.1s						
J59A	Piesco	49.20	6	P	P	00 47 29.7	-0.4
	baz=188						
ACCN	Adirondack Com	49.22	7	P	P	00 47 30.6	+0.3
ACCN				IAmb	IAmb	00 47 31.4	
	comp=Z,21nm,1.1s						
J62A	Henniker	49.31	9	P	P	00 47 32.0	+1.0
	baz=192						
I49A	Point Hope	49.35	358	P	P	00 47 29.4	-1.8
I49A				IAmb	IAmb	00 47 42.0	
	comp=Z,18nm,0.8s						
BGNE	Belgrade	49.37	343	P	P	00 47 30.8	-0.7
S22A	4UR Ranch, Cre	49.41	333	P	P	00 47 32.1	-0.1
S22A				IAmb	IAmb	00 47 35.4	
	comp=Z,17nm,1.5s						
S22A	4UR Ranch, Cre	49.41	333	P	P	00 47 33.5	+1.3
	baz=145,SNR=8.7						
I47A	Gladwin	49.51	357	P	P	00 47 31.6	-0.8
	baz=175						
I57A	Carthage	49.55	5	P	P	00 47 32.7	-0.1
	baz=187						
I59A	Olmsteadville	49.60	7	P	P	00 47 32.9	-0.2
	baz=189						
I48A	Sherman Twp	49.63	357	P	P	00 47 32.7	-0.7
	baz=176						
Y14A	Wickenburg	49.66	325	P	P	00 47 34.2	+0.3
Y14A				IAmb	IAmb	00 47 36.0	
	comp=Z,8.5nm,0.8s						
Q24A	Divide	49.69	335	P	P	00 47 34.1	-0.3
Q24A				IAmb	IAmb	00 47 37.1	
	comp=Z,12nm,1.0s						
Q24A	Divide	49.69	335	P	P	00 47 35.7	+1.3
	baz=148						
I60A	Shoreham	49.71	7	P	P	00 47 34.5	+0.5
	baz=190						
MVCO	Mesa Verde	49.76	331	P	P	00 47 34.5	-0.3
MVCO				IAmb	IAmb	00 47 36.2	
	comp=Z,8.2nm,0.8s						
MVCO					PcP	00 48 56.2	+0.7
MVCO	Mesa Verde	49.76	331	P	P	00 47 35.7	+0.9
	baz=143,SNR=8.1						
I42A	Draeger Farm,	49.80	352	P	P	00 47 33.1	-1.5
I42A				IAmb	IAmb	00 47 34.5	
	comp=Z,8.3nm,0.8s						
WUAZ	Wupatki	49.91	327	IAmb	IAmb	00 47 38.5	
	comp=Z,16nm,0.9s						
WUAZ	Wupatki	49.91	327	P	P	00 47 37.6	+1.7
	baz=139,SNR=10						
I61A	Oroboro, Fairl	49.95	8	P	P	00 47 36.4	+0.7
	baz=191						
DELO	Deloro Mine	49.99	3	IAmb	IAmb	00 47 35.6	
	comp=Z,14nm,1.0s						
H53A	Bobcaygeon	50.01	2	P	P	00 47 35.0	-1.2
	baz=183,SNR=5.0						
H52A	Wyevale	50.04	1	P	P	00 47 35.1	-1.4
	baz=181						
I40A	Norwalk	50.05	351	P	P	00 47 35.3	-1.3
I40A				IAmb	IAmb	00 47 37.5	
	comp=Z,16nm,0.9s						
H55A	Tweed	50.05	4	P	P	00 47 35.4	-1.2
	baz=185						
H47A	Mio	50.07	357	P	P	00 47 36.0	-0.7
	baz=176						
H57A	Richville	50.10	5	P	P	00 47 36.0	-0.9
	baz=187						
GLA	Glamis	50.12	322	P	P	00 47 37.6	+0.3
GLA				IAmb	IAmb	00 47 50.9	
	comp=Z,7.5nm,0.8s						
GLA	Glamis	50.12	322	P	P	00 47 38.7	+1.4
	baz=134,SNR=5.2						
H48A	Harrisville	50.13	358	P	P	00 47 34.9	-2.2
H56A	Elgin	50.16	4	P	P	00 47 36.5	-0.8
	baz=186,SNR=6.0						
H58A	Gabriels	50.18	6	P	P	00 47 36.8	-0.8
	baz=189						
OGNE	Ogallala	50.21	339	P	P	00 47 37.4	-0.5
H45A	Beulah	50.22	355	P	P	00 47 36.5	-1.3
	baz=173						
H43A	Windswept, Lux	50.23	354	P	P	00 47 36.7	-1.2
LBNH	Lisbon	50.29	8	P	P	00 47 39.4	+1.0
	baz=192						
GLMI	Grayling	50.32	357	P	P	00 47 36.3	-2.3
Y12C	Blythe	50.42	323	P	P	00 47 40.4	+0.8
Y12C				IAmb	IAmb	00 47 41.9	
	comp=Z,14nm,1.0s						
Y12C	Blythe	50.42	323	P	P	00 47 41.1	+1.6
	baz=135						
H59A	Cadyville	50.46	7	P	P	00 47 39.1	-0.6
	baz=189						
H60A	Morristown	50.50	8	P	P	00 47 40.1	+0.1
	baz=191						
PV01	Paradox Valley	50.53	332	P	P	00 47 40.8	+0.1
PV01				IAmb	IAmb	00 47 43.0	
	comp=Z,18nm,1.2s						
PLVO	Plevna	50.55	4	P	P	00 47 39.2	-1.1
PLVO				IAmb	IAmb	00 47 39.6	
	comp=Z,9.0nm,0.8s						
G53A	Haliburton	50.55	2	P	P	00 47 39.0	-1.3
	baz=183						
H61A	Lyndonville	50.58	8	P	P	00 47 41.1	+0.5
	baz=192						
PDMCI	Parker Dam,Lak	50.58	324	P	P	00 47 42.1	+1.3
	baz=135						
ISCO	Idaho Springs	50.59	335	IAmb	IAmb	00 47 43.1	
	comp=Z,16nm,0.9s						
ISCO					PcP	00 48 59.4	+0.9
ISCO	Idaho Springs	50.59	335	P	P	00 47 42.5	+1.4
	baz=148,SNR=22						
G45A	Suttons Bay	50.60	356	P	P	00 47 39.7	-1.0
	baz=174,SNR=6.2						
G47A	Hillman	50.63	357	P	P	00 47 40.2	-0.7
	baz=176						
IKP	In-Ko-Pah, Jac	50.63	321	P	P	00 47 42.9	+1.6
	baz=132						
SMCO	Snowmass	50.65	334	IAmb	IAmb	00 47 50.2	
	comp=Z,13nm,1.4s						
FRNY	Flat Rock	50.66	7	IAmb	IAmb	00 47 42.4	
	comp=Z,21nm,1.2s						
I37A	Lemond, Waseca	50.66	348	IAmb	IAmb	00 47 41.6	
	comp=Z,20nm,0.8s						
PV02	Paradox Valley	50.67	332	IAmb	IAmb	00 47 43.9	
	comp=Z,22nm,1.0s						
H62A	Milan	50.73	9	P	P	00 47 42.5	+0.8
	baz=193						
PV05	Paradox Valley	50.74	331	IAmb	IAmb	00 47 44.1	
	comp=Z,33nm,1.5s						
PV03	Paradox Valley	50.76	332	IAmb	IAmb	00 47 44.3	
	comp=Z,30nm,1.3s						
G57A	Newington	50.77	5	P	P	00 47 41.0	-0.9
	baz=188						
G55A	Calabogie	50.78	4	P	P	00 47 41.1	-0.9
	baz=185,SNR=5.7						
PV18	Skein Mesa, Pa	50.78	332	IAmb	IAmb	00 47 44.3	
	comp=Z,31nm,1.4s						
PV11	David Mesa, Pa	50.81	332	IAmb	IAmb	00 47 45.4	
	comp=Z,14nm,1.0s						
PV07	Paradox Valley	50.81	332	IAmb	IAmb	00 47 45.0	
	comp=Z,18nm,1.0s						
PV16	Nyswonger Mesa	50.84	332	IAmb	IAmb	00 47 44.9	
	comp=Z,28nm,1.4s						
G54A	Lake Saint Pet	50.85	3	P	P	00 47 41.3	-1.3
	baz=184,SNR=5.7						
PV19	Morning Glory	50.87	332	P	P	00 47 42.0	-1.2
PV20	West Nyswonger	50.88	332	P	P	00 47 42.2	-1.0
PV20				IAmb	IAmb	00 47 45.1	
	comp=Z,18nm,1.4s						
PV04	Paradox Valley	50.90	332	P	P	00 47 43.3	0.0
PV04				IAmb	IAmb	00 47 45.5	
	comp=Z,26nm,1.4s						
BC3	Big Chuckawall	50.91	323	P	P	00 47 44.6	+1.1
	baz=134,SNR=5.6						
PV14	Lion Creek, Pa	50.94	332	P	P	00 47 42.9	-0.8
PV14				IAmb	IAmb	00 47 45.5	
	comp=Z,17nm,1.1s						
G59A	Clarenceville	50.95	7	P	P	00 47 43.1	-0.2
	baz=190						
PV10	Paradox Valley	50.95	332	P	P	00 47 43.5	-0.3
PV10				IAmb	IAmb	00 47 45.1	
	comp=Z,27nm,1.3s						
PV22	Blue Mesa, Par	50.95	332	P	P	00 47 43.6	-0.1
PV22				IAmb	IAmb	00 47 45.9	
	comp=Z,21nm,1.4s						
PV23	Carpenter Ridg	50.99	332	P	P	00 47 43.6	-0.5
W13A	Hualapai Mount	51.00	325	P	P	00 47 44.2	0.0
W13A				IAmb	IAmb	00 47 46.6	
	comp=Z,8.3nm,0.8s						
H63A	New Sharon	51.00	10	P	P	00 47 45.0	+1.2
	baz=194						
BAR	Barrett	51.01	321	P	P	00 47 43.1	-1.0
G60A	Masonville	51.07	8	P	P	00 47 44.8	+0.5
	baz=191						
IRM	Iron Mountain	51.07	323	P	P	00 47 45.7	+1.2
	baz=134,SNR=11						
U15A	North Rim	51.09	327	P	P	00 47 45.4	+0.5
U15A					PcP	00 49 01.4	+1.1
ECSD	EROS Data Cent	51.12	345	IAmb	IAmb	00 47 44.6	
	comp=Z,7.1nm,0.7s						
ECSD	EROS Data Cent	51.12	345	P	P	00 47 44.2	-0.4
	baz=160,SNR=9.2						
F49A	Sandfield	51.16	359	P	P	00 47 43.0	-1.9
	baz=179						
F52A	Sundridge	51.20	1	P	P	00 47 43.3	-1.9
	baz=182						
F45A	CMU Biological	51.23	356	P	P	00 47 44.1	-1.3
	baz=174						
F48A	Evansville	51.23	359	P	P	00 47 43.7	-1.8
	baz=178						
G61A	St-Isidore-de-	51.37	9	P	P	00 47 47.4	+0.9
	baz=192						
ALGO	Algonquin Park	51.41	3	P	P	00 47 45.2	-1.6
	baz=184,SNR=6.4						
109C	Camp Elliot, M	51.42	321	P	P	00 47 46.9	-0.2
109C				IAmb	IAmb	00 47 49.1	
	comp=Z,19nm,1.3s						
G62A	West of Eustis	51.46	9	P	P	00 47 48.2	+1.0
	baz=193,SNR=8.6						
BELC	Belle Mtn. Jos	51.48	322	P	P	00 47 48.6	+0.9
	baz=133						
XPFO	Pion Flat	51.49	322	P	P	00 47 47.6	-0.2
PFO	Pinyon Flats O	51.50	322	P	P	00 47 47.9	0.0
PFO	Pinyon Flats O	51.50	322	P	P	00 47 49.2	+1.4
	baz=132,SNR=5.2						
G63A	Kingsbury	51.51	10	P	P	00 47 48.5	+0.9
	baz=194						
F42A	Maple Grove Fa	51.55	354	P	P	00 47 46.4	-1.4
F42A				IAmb	IAmb	00 47 48.3	
	comp=Z,12nm,0.8s						
N23A	Red Feather La	51.65	336	P	P	00 47 48.7	-0.3
N23A	Red Feather La	51.65	336	P	P	00 47 50.0	+1.0
	baz=148,SNR=6.6						
E52A	Mattawa	51.71	2	P	P	00 47 47.8	-1.2
	baz=183						
SPMN	Marine on St.	51.71	349	P	P	00 47 48.7	-0.4
	baz=165,SNR=7.2						
PKME	Peaks-Kenny Pk	51.72	10	P	P	00 47 50.0	+0.9
	baz=195						
PHWY	Pilot Hill	51.80	337	P	P	00 47 49.7	-0.5
KNB	Kanab	51.81	327	P	P	00 47 50.7	+0.5
KNB					PcP	00 49 04.3	+1.3
GMRC	Granite Mounta	51.81	323	P	P	00 47 51.5	+1.3
	baz=134						
PKCU	Pink Cliffs	51.86	328	P	P	00 47 51.9	+1.2
E48A	Lockeyer	51.88	359	P	P	00 47 49.0	-1.3
	baz=178,SNR=8.5						
E47A	Iron Bridge	51.88	358	P	P	00 47 48.8	-1.5
	baz=177,SNR=6.1						
TRQ	Mont Tremblant	51.92	6	P	P	00 47 49.0	-1.6
E54A	Lac Daplat, Po	51.93	3	P	P	00 47 49.0	-1.6
	baz=185						
E51A	G1948 Merrick	51.94	1	P	P	00 47 49.5	-1.2
	baz=182,SNR=9.3						
F60A	Warwick	51.98	8	P	P	00 47 51.4	+0.4
	baz=191						
O20A	White River Ci	52.00	334	P	P	00 47 51.7	+0.2
O20A				IAmb	IAmb	00 47 53.7	
	comp=Z,16nm,1.2s						
O20A	White River Ci	52.00	334	P	P	00 47 52.8	+1.2
	baz=145,SNR=6.5						
LCMT	Little Creek M	52.03	327	P	P	00 47 51.7	-0.1
E43A	Lone Tree Farm	52.04	355	IAmb	IAmb	00 47 51.7	
	comp=Z,30nm,1.4s						
E57A	Chemin Saint G	52.15	6	P	P	00 47 51.6	-0.7
	baz=189,SNR=9.3						
E44A	Grand Marais A	52.19	356	P	P	00 47 51.4	-1.2
E44A				IAmb	IAmb	00 47 53.2	
	comp=Z,29nm,1.4s						
E44A	Grand Marais A	52.19	356	P	P	00 47 52.1	-0.5
	baz=174						
E56A	St. Veronique	52.20	5	P	P	00 47 51.7	-0.9
	baz=188						
E58A	La Victoria	52.21	7	P	P	00 47 52.3	-0.4
	baz=190						
SRU	San Rafael Swe	52.24	331	P	P	00 47 54.0	+0.6
HEC	Hector,Ludlow	52.25	323	P	P	00 47 55.1	+1.7
	baz=133,SNR=11						
D46A	Sault St. Mari	52.35	357	P	P	00 47 52.0	-1.8
	baz=176						
SUSD	Miller	52.40	344	P	P	00 47 53.5	-0.7
Q16A	Castle Valley	52.40	330	P	P	00 47 55.2	+0.6
TUQ	Turquoise Moun	52.42	324	P	P	00 47 56.2	+1.6
	baz=134						
E60A	Ste Agathe de	52.44	8	P	P	00 47 54.1	-0.3
	baz=192						
F64A	Sherman	52.47	11	P	P	00 47 55.3	+0.7
	baz=196						
D47A	Chapleau	52.48	358	P	P	00 47 53.2	-1.6
	baz=177,SNR=7.6						
D51A	Lot 18 Range I	52.49	1	P	P	00 47 53.3	-1.5
	baz=182						
CCUT	Cedar City	52.50	328		PcP	00 49 07.3	+1.7
D53A	Lac Vacive, Po	52.55	3	P	P	00 47 54.2	-1.0
D53A				IAmb	IAmb	00 47 55.0	
	comp=Z,35nm,1.4s						
D53A	Lac Vacive, Po	52.55	3	P	P	00 47 53.6	-1.6
	baz=184						
D50A	G1974 Best Tow	52.56	1	P	P	00 47 53.8	-1.6
	baz=181						
D48A	Paudash Townsh	52.57	359	P	P	00 47 53.7	-1.7
	baz=179,SNR=8.7						
MSU	Marysvale	52.60	329	P	P	00 47 56.5	+0.5
MSU				PcP	PcP	00 49 06.8	+0.9
D55A	Sainte-Anne-du	52.63	5	P	P	00 47 54.5	-1.3
	baz=187						
E61A	Lac Etchemin	52.65	9	P	P	00 47 56.8	+0.8
	baz=193						
BFSC	Mount Baldy Ra	52.66	321	P	P	00 47 57.5	+1.1
	baz=132,SNR=5.5						
D54A	Lac Fusel, La	52.68	4	P	P	00 47 54.7	-1.5
	baz=185						
D56A	ZEC Mazanza, M	52.72	5	P	P	00 47 55.3	-1.2
	baz=188						
D57A	Chemin Vers le	52.78	6	P	P	00 47 56.3	-0.6
	baz=189						
TCRU	Three Creeks R	52.81	329	P	P	00 47 58.2	+0.5
RWWY	Rawlins	52.84	335	P	P	00 47 57.4	-0.4
E38A	The Farm, Brul	52.84	351	IAmb	IAmb	00 47 58.7	
	comp=Z,20nm,0.9s						
GSC	Goldstone, Bar	52.85	323	P	P	00 47 59.4	+1.5
	baz=133						
MWC	Mount Wilson	52.89	321	P	P	00 47 57.7	-0.6
RDMU	Red Mountain	52.95	333	P	P	00 47 58.0	-0.6
SHOC	Shoshone, Teco	52.95	324	P	P	00 47 59.9	+1.5
	baz=134						
D58A	Chemin du LacG	52.97	7	P	P	00 47 58.1	-0.3
	baz=190,SNR=5.1						
E63A	Oxbow	52.99	11	P	P	00 47 59.1	+0.5
	baz=196						
D60A	Saint Jean D'O	53.05	9	P	P	00 47 59.0	+0.1
	baz=192,SNR=5.7						
LATQ	La Tuque	53.26	7	P	P	00 48 00.2	-0.3
	baz=190,SNR=5.3						
K22A	Casper	53.36	337	IAmb	IAmb	00 48 03.3	
	comp=Z,18nm,0.9s						
K22A	Casper	53.36	337	P	P	00 48 02.3	+0.7
	baz=148,SNR=8.5						
D61A	St Aubert, Com	53.45	9	P	P	00 48 02.5	+0.7
	baz=193,SNR=7.0						
MPU	Maple Canyon	53.48	331	P	P	00 48 02.4	-0.1
PSUT	Pine Spring	53.48	328	P	P	00 48 02.9	+0.3
LRMC	Laurel Mtn Rad	53.50	323	P	P	00 48 04.4	+1.8
	baz=132						
D62A	Allapoint, All	53.52	10	P	P	00 48 02.2	-0.2
D62A	Allapoint, All	53.52	10	P	P	00 48 02.9	+0.6
	baz=195,SNR=9.2						
VLDQ	Val d'Or	53.59	3	P	P	00 48 01.6	-1.3
NLU	North Lily Min	53.65	330	P	P	00 48 02.8	-1.0
TPNV	Topopah Spring	53.66	325	P	P	00 48 03.0	-0.8
TPNV	Topopah Spring	53.66	325	P	P	00 48 05.2	+1.4
	baz=135						
FURC	Furnace Creek,	53.68	324	P	P	00 48 05.4	+1.6
	baz=134,SNR=5.1						
RSSD	Black Hills	53.70	339	P	P	00 48 04.3	+0.2
RSSD				IAmb	IAmb	00 48 06.0	
	comp=Z,16nm,1.1s						
RSSD	Black Hills	53.70	339	P	P	00 48 04.9	+0.9
	baz=151						
MPMC	Manual Prospec	53.77	323	P	P	00 48 05.7	+1.0
	baz=133,SNR=5.6						
CTU	Camp Tracy	54.06	331	P	P	00 48 07.4	+0.7
ISA	Isabella, Lake	54.10	322	P	P	00 48 06.5	-0.5
ISA				IAmb	IAmb	00 48 09.2	
	comp=Z,13nm,1.5s						
ISA	Isabella, Lake	54.10	322	P	P	00 48 08.6	+1.6
	baz=132						
EYMN	Ely	54.13	351	IAmb	IAmb	00 48 07.6	
	comp=Z,22nm,0.9s						
EYMN	Ely	54.13	351	P	P	00 48 06.5	-0.4
	baz=167,SNR=18						
DUG	Dugway, Tooele	54.20	330	P	P	00 48 07.8	+0.1
DUG				IAmb	IAmb	00 48 10.2	
	comp=Z,13nm,0.9s						
DUG	Dugway, Tooele	54.20	330	P	P	00 48 09.2	+1.5
	baz=140,SNR=16						
TCUT	Toone Canyon	54.23	332	P	P	00 48 08.3	+0.3
R11A	Troy Canyon, C	54.28	327	P	P	00 48 08.6	+0.2
R11A	Troy Canyon, C	54.28	327	P	P	00 48 09.8	+1.4
	baz=136,SNR=9.2						
BATG	Bathurst New B	54.29	12	IAmb	IAmb	00 48 09.3	
	comp=Z,23nm,1.0s						
CWC	Cottonwood Cre	54.38	323	P	P	00 48 10.2	+1.1
	baz=132						
LSQQ	Lebel-sur-Quev	54.56	3	P	P	00 48 08.4	-1.5
	baz=185						
BW06	Boulder Array	54.71	334	IAmb	IAmb	00 48 12.6	
	comp=Z,10nm,1.0s						
BW06	Boulder Array	54.71	334	P	P	00 48 11.6	+0.1
	baz=144,SNR=13						
PD31	Pinedale Array	54.71	334	IAmb	IAmb	00 48 12.7	
	comp=Z,8.9nm,0.9s						
PDAR	Pinedale Array	54.71	334	P	P	00 48 11.6	+0.1
	comp=Z,7.2nm,0.8s,baz=129,slow=8.4,SNR=59						
PDAR				pP	pP	00 48 22.8	+0.2
	comp=Z,3.0nm,0.6s,baz=136,slow=11,SNR=9.6						
PDAR				PcP	PcP	00 49 13.7	-0.2
	comp=Z,2.7nm,0.8s,baz=136,slow=6.5,SNR=4.6						
PDAR	Pinedale Array	54.71	334	P	P	00 48 11.2	-0.3
SMMC	Simmler	54.81	321	P	P	00 48 13.8	+1.7
	baz=130						
E28A	Huff	54.84	343	P	P	00 48 12.4	+0.4
BGU	Big Grassy Mou	54.86	331	P	P	00 48 12.6	+0.1
SPUT	South Promonto	54.87	331	P	P	00 48 12.1	-0.5
MATQ	Matagami	55.22	3	P	P	00 48 13.2	-1.5
	baz=184,SNR=6.9						
AGMN	Agassiz Nation	55.26	348	P	P	00 48 15.3	+0.2
	baz=162,SNR=17						
AHID	Auburn Hatcher	55.39	333	P	P	00 48 15.8	-0.5
AHID				IAmb	IAmb	00 48 17.6	

	comp=Z,12nm,0.9s						
HVU	Hansel Valley	55.39	331	P	P	00 48 16.0	-0.3
MDND	Maddock	55.71	345	P	P	00 48 18.1	-0.2
MDND	Maddock	55.71	345	P	P	00 48 19.4	+1.1
	baz=157						
OMMB	Old Mammoth Mi	55.71	324	P	P	00 48 18.6	-0.3
OMMB				IAmb	IAmb	00 48 20.9	
	comp=Z,9.0nm,1.0s						
SNOW	Snow King Moun	55.79	334	P	P	00 48 19.4	+0.1
SNOW				IAmb	IAmb	00 48 21.1	
	comp=Z,14nm,1.3s						
ELK	Elko	55.83	329	P	P	00 48 20.1	+0.5
NVAR	Mina Array Bea	55.86	325	P	P	00 48 21.2	+1.4
	comp=Z,4.4nm,0.7s,baz=131,slow=7.3,SNR=31						
NVAR				pP	pP	00 48 31.5	+0.6
	comp=Z,4.5nm,0.9s,baz=132,slow=7.0,SNR=9.4						
NVAR				PcP	PcP	00 49 19.0	+0.6
	comp=Z,3.9nm,0.8s,baz=139,slow=4.4,SNR=8.4						
NVAR	Mina Array Bea	55.86	325	P	P	00 48 20.9	+1.1
TPAW	Teton Pass	55.90	334	IAmb	IAmb	00 48 22.3	
	comp=Z,12nm,0.9s						
IMW	Indian Meadow	56.22	334	IAmb	IAmb	00 48 36.5	
	comp=Z,9.7nm,1.1s						
FLWY	Flagg Ranch	56.27	335	IAmb	IAmb	00 48 24.6	
	comp=Z,12nm,1.0s						
H17A	Grant Village	56.46	335	P	P	00 48 25.3	+1.2
	baz=144						
RLMT	Red Lodge	56.52	336	P	P	00 48 24.6	+0.2
	baz=146,SNR=8.7						
LKWY	Lake	56.53	335	IAmb	IAmb	00 48 27.2	
	comp=Z,8.4nm,0.9s						
WAKR	Walker	56.56	324	P	P	00 48 25.3	+0.5
WAKR				IAmb	IAmb	00 48 27.2	
	comp=Z,9.1nm,1.0s						
YMP	Mirror Lake Pl	56.57	335	P	P	00 48 25.0	+0.2
LAO	LASA Array	56.70	339	IAmb	IAmb	00 48 27.3	
	comp=Z,26nm,1.4s						
LAO	LASA Array	56.70	339	P	P	00 48 26.4	+0.9
	baz=150						
YNR	Norris Junctio	56.77	335	P	P	00 48 26.1	-0.1
YERR	Yerington	56.77	325	P	P	00 48 26.3	0.0
YERR				IAmb	IAmb	00 48 28.4	
	comp=Z,18nm,1.5s						
ULM	Lac du Bonnet	57.12	349	P	P	00 48 27.8	-0.5
	comp=Z,18nm,0.9s,baz=166,slow=6.9,SNR=40						
ULM				PcP	PcP	00 49 21.8	-0.9
	comp=Z,3.2nm,0.5s,baz=160,slow=4.4,SNR=5.4						
VCNR	Virginia City	57.22	325	P	P	00 48 29.9	+0.4
VCNR				IAmb	IAmb	00 48 42.3	
	comp=Z,8.6nm,0.9s						
DGMT	Dagmar	57.59	342	P	P	00 48 31.8	+0.2
DGMT				IAmb	IAmb	00 48 33.2	
	comp=Z,10.0nm,0.9s						
AFDM	Forest Hills D	57.76	324	P	P	00 48 32.7	-0.4
DLMT	Dillon	58.10	334	IAmb	IAmb	00 48 37.4	
	comp=Z,17nm,1.0s						
DRLN	Deer Lake	58.34	18	P	P	00 48 37.2	+0.3
ORV	Oroville	58.46	324	IAmb	IAmb	00 48 50.9	
	comp=Z,13nm,1.0s						
WVOR	Wild Horse Val	58.82	328	IAmb	IAmb	00 48 42.2	
	comp=Z,17nm,1.1s						
EGMT	Eagleton	59.11	338	P	P	00 48 42.9	+0.5
	baz=146,SNR=13						
MOD	Modoc Plateau	59.35	327	P	P	00 48 44.5	+0.3
MSO	Missoula	59.83	334		pP	00 48 59.4	+0.8
MSO	Missoula	59.83	334	P	P	00 48 48.7	+1.3
	baz=141,SNR=12						
BMO	Blue Mountains	59.88	331	IAmb	IAmb	00 48 48.8	
	comp=Z,8.7nm,1.2s						
M04C	Macdoel	60.12	326	P	P	00 48 50.2	+0.7
	baz=131						
I07A	Izee	60.43	329	P	P	00 48 51.5	-0.1
I07A				IAmb	IAmb	00 48 53.8	
	comp=Z,25nm,1.4s						
K04D	Chiloquin, OR	60.63	326	P	P	00 48 53.7	+0.7
	baz=132						
L04D	Klamath Falls	60.66	326	P	P	00 48 53.2	0.0
	baz=131						
JTMT	Jette	60.69	335	P	P	00 48 53.7	+0.4
JTMT				IAmb	IAmb	00 48 55.4	
	comp=Z,14nm,0.9s						
J05D	Fort Rock, OR	60.79	327	P	P	00 48 55.0	+1.0
	baz=133						
PINE	Pine Mountain	60.98	328	P	P	00 48 54.8	-0.6
PINE				IAmb	IAmb	00 49 13.2	
	comp=Z,13nm,1.0s						
G08A	Pilot Rock	61.01	330	P	P	00 48 55.9	+0.4
J04D	Umpqua Nationa	61.23	327	P	P	00 48 58.2	+1.0
	baz=132						
SCHQ	Schefferville	61.37	9	P	P	00 48 56.7	-0.9
	comp=Z,7.1nm,0.6s,baz=211,slow=5.2,SNR=18						
SCHQ	Schefferville	61.37	9	P	P	00 48 56.7	-0.9
SCHQ				IAmb	IAmb	00 48 57.2	
	comp=Z,8.6nm,0.7s						
I05D	Terrebonne, OR	61.56	328	P	P	00 49 00.9	+1.8
	baz=133						
K02D	Willamette Mer	61.74	325	P	P	00 49 01.4	+1.0
	baz=130						
G06A	Carlson Farm,	61.81	329	IAmb	IAmb	00 49 03.5	
	comp=Z,20nm,1.5s						
E08A	Dider Farm, El	61.91	331	P	P	00 49 01.1	-0.3
E08A				IAmb	IAmb	00 49 13.3	
	comp=Z,6.6nm,0.8s						
HAWA	Hanford	62.07	331	IAmb	IAmb	00 49 05.2	
	comp=Z,8.4nm,1.1s						
G05D	Wamic, OR	62.16	329	P	P	00 49 05.0	+1.8
	baz=133						
H04A	Detroit Lake	62.24	328	P	P	00 49 02.1	-1.6
H04A				IAmb	IAmb	00 49 04.7	
	comp=Z,12nm,1.1s						
NEW	Newport	62.32	334	IAmb	IAmb	00 49 05.7	
	comp=Z,14nm,1.1s						
NEW	Newport	62.32	334	P	P	00 49 04.9	+0.7
	baz=138,SNR=8.4						
E07A	Sunnyside	62.35	331	P	P	00 49 04.6	+0.2
C09A	Chrisman Ranch	62.49	333	P	P	00 49 04.9	-0.5
C09A				IAmb	IAmb	00 49 07.7	
	comp=Z,6.0nm,0.9s						
FFC	Flin Flon	62.63	346	P	P	00 49 06.1	+0.1
F05D	White Salmon	62.68	329	P	P	00 49 08.2	+1.6
	baz=133						
COR	Corvallis	62.77	327	P	P	00 49 06.5	-0.6
F04A	Amboy	63.20	329	P	P	00 49 10.3	+0.3
F04A				IAmb	IAmb	00 49 11.7	
	comp=Z,13nm,0.9s						
LTY	Liberty	63.24	331	IAmb	IAmb	00 49 12.2	
	comp=Z,9.0nm,0.8s						
LON	Longmire	63.45	330	IAmb	IAmb	00 49 13.2	
	comp=Z,8.9nm,0.8s						
E04D	Cinebar	63.70	329	P	P	00 49 13.7	+0.4
	baz=133						
D05A	Enumclaw	63.84	330	P	P	00 49 13.2	-1.0
D05A				IAmb	IAmb	00 49 15.9	
	comp=Z,15nm,0.8s						
E03A	Lebam	64.20	329	P	P	00 49 16.3	-0.3
B06A	Marblemount	64.51	331	P	P	00 49 18.6	0.0
B06A				IAmb	IAmb	00 49 30.8	
	comp=Z,12nm,0.8s						
D03D	Eldon	64.62	330	P	P	00 49 20.2	+0.9
	baz=132						
B05A	Bryant	64.63	331	P	P	00 49 19.6	+0.3
	baz=134						
NLWA	Neilton Lookou	64.92	329	P	P	00 49 20.8	-0.5
NLWA				IAmb	IAmb	00 49 23.8	
	comp=Z,17nm,1.0s						
PGC	Sidney	65.55	331	P	P	00 49 25.7	+0.3
PGC				IAmb	IAmb	00 49 38.5	
	comp=Z,17nm,1.1s						
LLLB	Lillooet	66.16	333	P	P	00 49 29.6	+0.3
LLLB				IAmb	IAmb	00 49 30.8	
	comp=Z,6.1nm,0.8s						
PPT	Papeete	67.96	253	P	P	00 49 40.5	-0.9
	comp=Z,12nm,0.5s,baz=73,slow=14,SNR=1.8						
MACI	Morro de la Ar	70.55	58	P	P	00 49 54.1	-3.4
YKA	Yellowknife Ar	72.63	344	P	P	00 50 08.3	-0.6
	comp=Z,4.6nm,0.9s,baz=137,slow=6.0,SNR=60						
DLBC	Dease Lake	74.91	336	P	P	00 50 22.7	+0.1
DLBC				IAmb	IAmb	00 50 24.6	
	comp=Z,16nm,0.9s						
SFJD	Kangerlussuaq	75.63	12	P	P	00 50 26.0	-0.4
SFJD				IAmb	IAmb	00 50 26.5	
	comp=Z,10nm,0.8s						
LIC	Lamto	76.69	82	*e*P	P	00 50 34.3	+0.7
	comp=Z,5.6nm,0.2s						
TIC	Toumodi	76.75	82	*e*P	P	00 50 34.7	+0.8
DBIC	Dimbokro	76.92	82	P	P	00 50 35.9	+1.1
	comp=Z,13nm,0.7s,baz=234,slow=5.6,SNR=18						
DBIC	Dimbokro	76.92	82	P	P	00 50 34.4	-0.5
DBIC				IAmb	IAmb	00 50 36.9	
	comp=Z,19nm,0.8s						
KIC	Kosan Boka	76.99	82	*e*P	P	00 50 36.1	+0.8
	comp=Z,48nm,1.1s						
VNA3	Neumayer Olymp	78.74	162	P	P	00 50 44.7	+0.8
VNA2	Neumayer--Watz	79.37	161	P	P	00 50 47.9	+0.5
	baz=297,slow=6.0						
MORF	Marmelete	79.48	51	*e*P	P	00 50 49.6	+1.0
MORF				AMS	AMS	01 47 18.2	
	comp=Z,1μm,24.3s						
MORF	Marmelete	79.48	51	*e*P	P	00 50 50.2	+1.6
PNCL	Nicolau / Gran	79.79	50	*e*P	P	00 50 51.5	+1.3
PBDV	Barranco-do-Ve	80.02	51	*e*P	P	00 50 52.8	+1.3
PCVE	Castro Verde	80.03	50	*e*P	P	00 50 53.3	+1.7
PVAQ	Vaqueiros	80.22	51	*e*P	P	00 50 53.8	+1.2
PMTG	Montargil	80.27	49	*e*P	P	00 50 53.8	+1.0
PCAS	Casmilo, Conde	80.33	48	*e*P	P	00 50 54.7	+1.6
COI	Coimbra	80.43	48	*e*P	P	00 50 54.9	+1.3
PVIS	Viseu	80.95	47	*e*P	P	00 50 56.8	+0.3
SNAA	Sanae	80.96	162	P	P	00 50 56.5	+0.5
SNAA	Sanae	80.96	162	P	P	00 50 56.4	+0.4
SNAA				IAmb	IAmb	00 50 57.4	
	comp=Z,17nm,0.9s						
PMRV	Marv??o	80.99	49	*e*P	P	00 50 58.2	+1.5
PCBR	Castelo Branco	81.03	48	*e*P	P	00 50 57.8	+1.0
MTE	Manteigas	81.12	48	*e*P	P	00 50 58.1	+0.7
PVRL	Vila Real	81.23	47	*e*P	P	00 50 58.7	+0.7
MVO	Moncorvo	81.70	47	*e*P	P	00 51 01.5	+1.0
PBRG	Braganca	82.07	47	*e*P	P	00 51 03.1	+0.7
BCAR	Beaver Creek A	82.28	336	P	P	00 51 03.1	+0.1
TULEG	Thule	82.33	3	P	P	00 51 02.6	-0.3
GLB	Gilahina Butte	82.36	334	P	P	00 51 03.2	-0.3
GLB				IAmb	IAmb	00 51 04.8	
	comp=Z,11nm,0.9s						
SUMG	Summit	82.62	12	*i* P	P	00 51 04.9	-0.1
SUMG	Summit	82.62	12	P	P	00 51 05.1	+0.1
SUMG				IAmb	IAmb	00 51 17.1	
	comp=Z,14nm,1.2s						
PAB	San Pablo	83.30	49	P	P	00 51 08.3	-0.5
PAB				IAmb	IAmb	00 51 11.5	
	comp=Z,11nm,1.1s						
SCRK	Sand Creek	83.58	337	P	P	00 51 10.3	+0.5
ESDC	Sonseca Array	83.62	49	P	P	00 51 11.1	+0.6
	comp=Z,8.5nm,0.6s,baz=271,slow=4.4,SNR=14						
PAX	Paxson	83.73	335	P	P	00 51 09.9	-0.6
PAX				IAmb	IAmb	00 51 11.3	
	comp=Z,17nm,1.0s						
RIDG	Independent Ri	83.81	336	P	P	00 51 10.4	-0.5
SCM	Sheep Creek Mo	84.05	334	P	P	00 51 12.4	+0.2
TOA0	Torodi Ar. Sit	84.14	76	IAmb	IAmb	00 51 14.4	
	comp=Z,8.9nm,0.8s						
TORD	Torodi Ar. Bea	84.14	76	P	P	00 51 13.9	+0.3
	comp=Z,7.7nm,0.6s,baz=287,slow=4.9,SNR=83						
TORD	Torodi Ar. Bea	84.14	76	P	P	00 51 13.3	-0.2
QSPA	South Pole Qui	84.47	180	P	P	00 51 15.4	+1.0
HDA	Harding Lake	84.94	337	P	P	00 51 16.4	-0.1
HDA				IAmb	IAmb	00 51 17.1	
	comp=Z,8.0nm,0.7s						
ILAR	Eielson Array	85.06	337	P	P	00 51 17.0	-0.2
	comp=Z,1.4nm,0.5s,baz=132,slow=3.2,SNR=9.9						
ILAR	Eielson Array	85.06	337	P	P	00 51 16.7	-0.4
RND	Reindeer	85.31	335	IAmb	IAmb	00 51 20.4	
	comp=Z,9.5nm,0.9s						
MCK	McKinley	85.47	336	P	P	00 51 18.9	-0.3
MCK				IAmb	IAmb	00 51 20.6	
	comp=Z,9.6nm,1.2s						
MDM	Murphy Dome	85.66	337	P	P	00 51 20.0	-0.2
MDM				IAmb	IAmb	00 51 32.9	
	comp=Z,8.7nm,1.0s						
TRF	Thorofare Moun	85.93	335	P	P	00 51 21.1	-0.7
TRF				IAmb	IAmb	00 51 21.9	
	comp=Z,11nm,1.1s						
KTH	Kantishna Hill	86.23	335	P	P	00 51 22.6	-0.5
KTH				IAmb	IAmb	00 51 23.8	
	comp=Z,10nm,1.0s						
PPLA	Purkeypile	86.55	334	P	P	00 51 24.1	-0.6
MLY	Manley	86.68	336	IAmb	IAmb	00 51 26.0	
	comp=Z,9.6nm,0.9s						
IMAR	Indian Mountai	88.18	337	P	P	00 51 32.0	-0.4
TAM	Tamanrasset	88.91	67	IAmb	IAmb	00 51 39.3	
	comp=Z,6.6nm,1.1s						
DAG	Danmarks Havn	89.31	12	*i* P	P	00 51 37.0	-0.5
	comp=Z,7.1nm,0.9s						
VNDA	Vanda	90.23	191	P	P	00 51 42.0	+0.2
	comp=Z,1.4nm,0.7s,baz=128,slow=3.6,SNR=4.5						
KEST	Kesra	93.48	55	P	P	00 51 58.4	+0.5
	comp=Z,1.9nm,0.7s,baz=243,slow=12,SNR=2.2						
KEST	Kesra	93.48	55	IAmb	IAmb	00 52 05.7	
	comp=Z,7.9nm,1.4s						
DAVA	Damuels	94.65	43	*e*PcP	P	00 52 03.1	0.0
	comp=Z,5.7nm,0.9s						
FETA	Feichten	95.21	43	*e*PcP	P	00 52 06.6	+1.0
	comp=Z,6.5nm,0.9s						
SYO	Syowa Base	95.25	162⇑	*e*P	P	00 52 01.8	-3.3
RETA	Reutte	95.26	43	*i* PcP	P	00 52 05.4	-0.3
	comp=Z,3.4nm,1.2s						
GAMB	Gambell	95.33	334	IAmb	IAmb	00 52 07.3	
	comp=Z,6.8nm,1.2s						
MOTA	Moosalm	95.48	43	*e*PcP	P	00 52 06.8	-0.1
	comp=Z,5.2nm,0.8s						
SQTA	Sankt Quirin	95.55	43	*e*PcP	P	00 52 07.1	0.0
	comp=Z,5.2nm,0.7s						
WATA	Walderalm	95.80	43	*e*PcP	P	00 52 08.1	-0.2
	comp=Z,2.5nm,0.8s						
CTI	Castel Tesino	95.81	44	IAmb	IAmb	00 52 09.7	
	comp=Z,3.7nm,1.0s						
WTTA	Wattenberg	95.84	43	*e*PcP	P	00 52 08.6	0.0
	comp=Z,5.2nm,0.8s						
NOA	NORSAR Array B	95.92	29	P	P	00 52 08.3	-0.1
	comp=Z,2.0nm,1.0s,baz=268,slow=4.7,SNR=3.8						
ABTA	Abfaltersbach	96.43	44	*e*PcP	P	00 52 11.8	+0.7
	comp=Z,4.8nm,1.2s						
GERES	GERESS Array B	97.26	42	P	Pdif	00 52 15.1	+0.2
	comp=Z,1.0nm,0.8s,baz=249,slow=2.3,SNR=8.2						
MOA	Molln	97.63	43	*e*PcP	Pdif	00 52 17.2	+0.7
	comp=Z,4.9nm,1.1s						
OBKA	Obir	97.83	44	*e*PcP	Pdif	00 52 18.1	+0.6
	comp=Z,3.4nm,0.9s						
SOKA	Soboth	98.16	44	*e*PcP	Pdif	00 52 19.4	+0.4
	comp=Z,2.3nm,0.9s						
ARSA	Arzberg	98.49	43	*e*PcP	P	00 52 20.1	-0.1
	comp=Z,2.8nm,0.8s						
CONA	Conrad Observa	98.71	42	*e*Pdiff	Pdif	00 52 21.6	+0.3
	comp=Z,3.1nm,0.8s						
FINES	FINESS Array B	103.02	28	Pdiff	Pdif	00 52 40.0	-0.1
	comp=Z,5.0nm,1.0s,baz=331,slow=6.7,SNR=5.2						
H11N3	WAKE ISLAND Hy	112.70	289	T	T	02 59 33.5	
	baz=78,slow=74,SNR=29						
H11N2	WAKE ISLAND Hy	112.71	289	T	T	02 59 33.8	
	baz=78,slow=74,SNR=16						
H11N1	WAKE ISLAND Hy	112.72	289	T	T	02 59 35.1	
	baz=78,slow=74,SNR=19						
H11S2	WAKE ISLAND Hy	112.94	288	T	T	02 59 56.5	
	baz=97,slow=72,SNR=19						
H11S1	WAKE ISLAND Hy	112.94	288	T	T	02 59 51.8	
	baz=97,slow=72,SNR=11						
H11S3	WAKE ISLAND Hy	112.95	288	T	T	03 00 00.2	
	baz=97,slow=72,SNR=9.0						
KBZ	Khabaz	117.96	43	PKP	PKPdf	00 57 27.2	-1.3
	comp=Z,1.2nm,0.8s,baz=81,slow=19,SNR=1.9						
STKA	Stephens Creek	124.94	225	PKP	PKPdf	00 57 42.1	-0.3
	comp=Z,2.9nm,0.6s,baz=93,slow=3.3,SNR=7.5						
ABKAR	Akbulak array	125.41	30		PKiKP	00 57 43.0	-0.1
BRVK	Borovoye	127.16	21		PKPdf	00 57 46.0	+0.1
ZALV	Zalesovo Beam	130.44	11	PKP	PKPdf	00 57 51.8	-0.4
	comp=Z,6.6nm,0.6s,baz=294,slow=1.5,SNR=35						
ZALV				pPKP	pPKPdf	00 58 03.2	-1.1
	comp=Z,2.2nm,0.5s,baz=256,slow=2.6,SNR=3.8						
ZALV	Zalesovo Beam	130.44	11		PKPdf	00 57 51.5	-0.7
KURK	Kurchatov	131.91	17		PKPdf	00 57 54.7	-0.3
USRK	Ussuriysk Ar.	131.94	328	PKP	PKPdf	00 57 53.8	-1.5
	comp=Z,3.0nm,1.0s,baz=120,slow=3.1,SNR=4.3						
ASAR	Alice Springs	135.24	228	PKhKP	PKPpre	00 57 56.1	
	comp=Z,0.7nm,0.7s,baz=133,slow=3.4,SNR=9.3						
ASAR				PKP	PKPdf	00 58 02.2	0.0
	comp=Z,3.2nm,0.8s,baz=118,slow=2.4,SNR=24						
MAKZ	Makanchi	136.40	17		PKPdf	00 58 03.0	-0.6
MKAR	Makanchi Array	136.50	17	PKhKP	PKPpre	00 57 53.6	
	comp=Z,0.4nm,0.8s,baz=245,slow=2.6,SNR=3.7						
MKAR				PKP	PKPdf	00 58 03.2	-0.6
	comp=Z,3.9nm,0.8s,baz=347,slow=2.0,SNR=26						
MKAR	Makanchi Array	136.50	17		PKPdf	00 58 02.2	-1.7
WRA	Warramunga Arr	136.99	233	PKP	PKPdf	00 58 05.4	-0.2
	comp=Z,6.6nm,0.8s,baz=125,slow=1.5,SNR=7.2						
WB0	Warramunga Arr	137.04	233		PKPdf	00 58 05.8	+0.2
AAK	Ala-Archa	137.19	27		PKiKP	00 58 06.8	-0.5
SONM	Songino Array	137.47	353	PKP	PKPdf	00 58 05.6	-0.1
	comp=Z,3.1nm,0.8s,baz=322,slow=1.0,SNR=12						
SONM	Songino Array	137.47	353		PKPdf	00 58 05.2	-0.5
KSRS	Korea Array	138.80	324	PKP	PKPdf	00 58 06.7	-1.6
	comp=Z,3.6nm,0.8s,baz=12,slow=1.5,SNR=10						
KSAR	Wonju Array Be	138.83	324		PKPdf	00 58 08.0	-0.4
KSH	Kashi	140.34	28	PKP	PKPdf	00 58 12.1	+0.8
KSH				PP	PP	01 01 13.4	+4.7
KSH				PKS		01 01 46.1	
KSH				SKKS		01 08 00.3	
KSH				AMB	AMB		
	comp=Z,340nm,5.1s						
KSH				LR	LR		
	comp=Z,210nm,10.3s						
KSH				LR	LR		
	comp=Z,260nm,12.1s						
KSH				LR	LR		
	comp=Z,580nm,17.2s						
WMQ	Urumqi	140.66	13	*e*PKP	PKPdf	00 58 12.3	+0.7
WMQ				AMB	AMB		
	comp=Z,170nm,6.1s						
WMQ				LR	LR		
	comp=Z,280nm,23.5s						
WMQ				LR	LR		
	comp=Z,310nm,28.5s						
WMQ				LR	LR		
	comp=Z,740nm,25.3s						
HHC	Hu-ho-hao-te	143.17	344	*e*PKP	PKPdf	00 58 16.3	0.0
FITZ	Fitzroy Crossi	144.73	228		PKPdf	00 58 18.9	-0.5
TIA	Tai'an	145.32	334	PKPbc	PKPbc	00 58 18.9	-0.9
PSA00	Pilbara Seismi	146.15	216		PKPab	00 58 23.1	-0.3
GTA	Gaotai	146.35	359	⇑PKPbc	PKPbc	00 58 22.6	-0.4
GTA				pPKP	pPKPdf	00 58 31.6	-2.3
GTA				sPKP		00 58 37.0	
GTA				LR	LR		
	comp=Z,350nm,20.9s						
GTA				LR	LR		
	comp=Z,500nm,20.3s						
GTA				LR	LR		
	comp=Z,770nm,20.3s						
NJ2	Nanjing	147.83	327	*e*PKPbc	PKPdf	00 58 23.3	-1.0
LZH	Lanzhou	149.35	352	*e*PKPbc	PKPbc	00 58 29.8	-1.5
LZH				pPKP	sPKPdf	00 58 42.5	-0.7
LZH				sPKP		00 58 47.3	
LZH				LR	LR		
	comp=Z,140nm,18.0s						
LZH				LR	LR		
	comp=Z,140nm,18.2s						
LZH				LR	LR		
	comp=Z,170nm,20.1s						
XAN	Xi'an	150.27	343	PKPbc	PKPbc	00 58 32.8	-0.6
XAN				pPKP	sPKPdf	00 58 43.4	-1.1
XAN				sPKP		00 58 47.0	
XAN				PP	PP	01 02 12.5	+5.2
XAN				AMB	AMB		
	comp=Z,210nm,6.8s						
XAN				LR	LR		
	comp=Z,350nm,18.4s						
XAN				LR	LR		
	comp=Z,590nm,18.2s						
XAN				LR	LR		
	comp=Z,480nm,18.4s						
XAN	Xi'an	150.27	343		PKPbc	00 58 33.2	-0.2
SOEI	Soe	150.60	239		PKiKP	00 58 36.2	+0.7
WHN	Wuhan	151.32	332	PKPbc	PKPbc	00 58 35.3	-0.6
CD2	Chengdu	154.45	351	PKPbc	PKPdf	00 58 32.8	-1.8
GYA	Guiyang	158.03	341	*e*PKP	PKPdf	00 58 38.0	-1.5
GYA				PKPab	PKPab	00 59 14.3	+1.6
GYA				PKS	PP	01 02 10.8	-40
GYA				PP	PP	01 02 54.6	+3.5
GYA				AMB	AMB		
	comp=Z,120nm,7.8s						
CMAR	Chiang Mai Arr	167.24	0	PKP	PKPdf	00 58 47.5	-1.1
	comp=Z,0.8nm,0.3s,baz=316,slow=3.8,SNR=4.9						
CMAR				PKPab	PKPab	00 59 52.0	-0.9
	comp=Z,2.1nm,0.6s,baz=332,slow=4.4,SNR=8.7						

PGC 22 00:48:52.1±0.0, 67°.42N×135°.80W, h1^{km}, ML3.5/2, 58km west of Fort McPherson, Nt Nw Territories - Nunavut, Canada, Northwest Territories

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INK	Inuvik	1.24	43	P	Pg	00 49 14.2	-1.6
INK				S	Sg	00 49 32.1	+0.3
DAWY	Dawson	3.68	205	Pn	Pn	00 49 48.0	-2.1
DAWY				Sn	Sn	00 50 31.9	-2.3
BVCY	Beaver Creek	5.47	206	Sn	Sn	00 51 14.6	-3.5
COLD	Coldfoot	5.58	275	Pn	Pn	00 50 15.1	-1.0
COLD				Sn	Sn	00 51 15.1	-5.6
YUK1	Sand Pete Hill	5.66	203	Pn	Pn	00 50 15.2	-2.2
YUK1				Sn	Sn	00 51 17.9	-5.1
YUK3	Moose Creek	6.01	202	Pn	Pn	00 50 20.3	-2.0
YUK3				Sg	Sb	00 51 57.2	+7.1
PAX	Paxson	6.04	227	Pn	Pn	00 50 21.1	-1.5
YUK2	White River	6.06	203	Pn	Pn	00 50 20.9	-1.9
YUK2				Sn	Sn	00 51 29.1	-3.7
YUK4	Talbot Arm	6.23	193	Pn	Pn	00 50 22.9	-2.3
YUK4				Sn	Sn	00 51 31.3	-5.7
DHRN	Dharma Camp	6.33	86	Pn	Pn	00 50 25.7	-0.8
DHRN				Sn	Sn	00 51 33.6	-5.7
YUK5	Granite Creek	6.38	189	Pn	Pn	00 50 26.1	-1.2
YUK5				Sg	Sg	00 52 10.4	-6.4
YUK6	Outpost Mounta	6.60	191	Pn	Pn	00 50 29.2	-1.1
YUK6				Sg	Sg	00 52 18.1	-5.8
HYT	Haines Junctio	6.67	187	Sg	Sg	00 52 19.8	-6.1
WHY	Whitehorse	6.80	176	Pn	Pn	00 50 32.4	-0.6
YUK7	Dusty Glacier	7.00	190	Pn	Pn	00 50 35.1	-0.6
KUKN	Kugluktuk,NWT	7.90	78	Pn	Pn	00 50 46.7	-1.2
KUKN				Sn	Sn	00 52 09.7	-8.1
YKW3	Yellowknife Ar	10.17	109	Pn	Pn	00 51 16.0	-3.0
YKW3				Sn	Sn	00 53 04.7	-8.9

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*THE **22** 00:51:34.6, 38°.38N×20°.47E, h8^{km}, ML2.6/11, Error ellipse: s-maj=0.9km s-min=0.2km az=156.0*

*ATH **22** 00:51:34.3, 38°.38N×20°.47E, h11^{km}±1^{km}, ML2.2/13, Error ellipse: s-maj=1.8km s-min=0.5km az=266.0*

ISC 22 00:51:33.5±0.8, 38°.38N±0°.02×20°.44E±0°.03, h15^{km}±4^{km}, n52, σ0^{s}.96/84, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VSK1	VASILIKIADES	0.10	76	P	Pg	00 51 36.6	-0.2
VSK1				S	Sg	00 51 38.1	-0.8
	8μm,0.2s						
KEF1	Kardakata, Kep	0.11	167	P	Pg	00 51 36.9	+0.1
KEF1				S	Sg	00 51 38.9	-0.1
KONA	Konidatara, Ke	0.11	68	P	Pg	00 51 36.8	-0.1
KONA				S	Sg	00 51 38.7	-0.4
KONA				AML	AML	00 51 40.1	
	comp=E,4587μm,0.1s						
KONA				AML	AML	00 51 41.2	
	comp=N,6646μm,0.2s						
FSK	Fiskardo	0.12	52	P	Pg	00 51 36.9	-0.1
FSK				S	Sg	00 51 39.1	-0.2
	comp=N,4μm,0.1s						
FSK	Fiskardo	0.12	52	P	Pg	00 51 37.0	-0.1
FSK				S	Sg	00 51 39.1	-0.2
FSK				AML	AML	00 51 39.2	
	comp=N,6856μm,0.2s						
FSK				AML	AML	00 51 39.8	
	comp=E,10243μm,0.1s						
KEF4	Livadi, Kephal	0.13	186	P	Pg	00 51 37.3	+0.3
KEF4				S	Sg	00 51 40.0	+0.6
AGT1	Agia Thekli	0.14	198	P	Pg	00 51 37.6	+0.4
AGT1				S	Sg	00 51 40.1	+0.4
	comp=E,7μm,0.3s						
LXR1	Lixouri, Cepha	0.18	180	P	Pg	00 51 38.1	+0.3
LXR1				S	Sg	00 51 41.3	+0.6
	comp=E,13μm,0.3s						
LXRA	Lixouri, Kepha	0.18	181	P	Pg	00 51 38.4	+0.6
LXRA				S	Sg	00 51 41.2	+0.5
CHV1	Chavriata, Kef	0.21	193	P	Pg	00 51 38.8	+0.6
CHV1				S	Sg	00 51 42.2	+0.9
	comp=E,5μm,0.2s						
ARG2	Argostoli	0.21	170	P	Pg	00 51 38.6	+0.4
ARG2				S	Sg	00 51 42.0	+0.6
	comp=E,13μm,0.2s						
ARGA	Argostoli. Kep	0.21	172	P	Pg	00 51 38.5	+0.3

ARGA				S	Sg	00 51 42.2	+0.7
KEF2	Argostoli. Kep	0.22	170	P	Pg	00 51 38.8	+0.3
KEF2				S	Sg	00 51 42.1	+0.4
VLS	Valsamata	0.24	150	P	Pg	00 51 38.9	+0.2
VLS				S	Sg	00 51 42.8	+0.5
	comp=E,2µm,0.1s						
VLS	Valsamata	0.24	150	P	Pg	00 51 38.9	+0.2
VLS				S	Sg	00 51 42.4	+0.1
VLS				AML	AML	00 51 44.2	
	comp=E,4078µm,0.1s						
VLS				AML	AML	00 51 44.7	
	comp=N,2954µm,0.1s						
EVGI	Lefkada island	0.29	36	P	Pg	00 51 40.3	+0.6
EVGI				S	Sg	00 51 44.7	+0.9
EVGI	Lefkada island	0.29	36	P	Pg	00 51 40.2	+0.6
EVGI				S	Sg	00 51 44.2	+0.3
MGNA	Meganis	0.39	45	P	Pg	00 51 41.4	0.0
MGNA				S	Sg	00 51 47.2	+0.6
MGNA				AML	AML	00 51 48.3	
	comp=N,1830µm,0.2s						
MGNA				AML	AML	00 51 49.0	
	comp=E,1670µm,0.1s						
KFL	Anninata	0.39	135	P	Pg	00 51 41.4	+0.1
KFL				S	Sg	00 51 47.1	+0.4
	comp=E,1µm,0.2s						
KFL	Anninata	0.39	135	P	Pg	00 51 41.6	+0.2
KFL				S	Sg	00 51 46.9	+0.2
KFL				AML	AML	00 51 49.5	
	comp=E,1811µm,0.2s						
KFL				AML	AML	00 51 49.6	
	comp=N,2256µm,0.2s						
LKD2	Lefkada island	0.44	23	P	Pg	00 51 42.7	+0.4
LKD2				S	Sg	00 51 49.2	+0.9
	comp=N,295nm,0.2s						
LKD2	Lefkada island	0.44	23	P	Pg	00 51 42.8	+0.5
LKD2				S	Sg	00 51 49.4	+1.1
LKD2				AML	AML	00 51 52.3	
	comp=E,696µm,0.2s						
LKD2				AML	AML	00 51 56.1	
	comp=N,529µm,0.3s						
TSLK	Tsoukalades, L	0.47	21	P	Pg	00 51 43.5	+0.6
TSLK				S	Sg	00 51 50.4	+1.1
	comp=N,358nm,0.3s						
TSLK	Tsoukalades, L	0.47	21	P	Pg	00 51 43.5	+0.6
TSLK				S	Sg	00 51 49.6	+0.4
TSLK				AML	AML	00 51 52.8	
	comp=E,680µm,0.3s						
TSLK				AML	AML	00 51 53.9	
	comp=N,820µm,0.3s						
AST1	Astakos	0.53	73	P	Pg	00 51 44.5	+0.5
AST1				S	Sg	00 51 52.1	+0.9
	comp=N,938nm,0.2s						
PDO	Prodromos	0.62	70	P	Pg	00 51 46.1	+0.4
PDO	Prodromos	0.62	70	P	Pg	00 51 46.1	+0.4
VTN	Vitineika	0.75	128	P	Pg	00 51 48.6	+0.5
RLS	Riolos of Patr	0.87	112	P	Pg	00 51 50.2	-0.2
RLS				S	Sb	00 52 02.4	+0.6
RLS				AML	AML	00 52 05.3	
	comp=N,153µm,0.4s						
RLS				AML	AML	00 52 06.3	
	comp=E,118µm,0.2s						
PVO	Paravola	0.88	74	P	Pg	00 51 51.0	+0.4
PVO	Paravola	0.88	74	P	Pg	00 51 51.0	+0.4
PVO				S	Sg	00 52 02.2	0.0
PVO				AML	AML	00 52 07.5	
	comp=N,463µm,0.4s						
PVO				AML	AML	00 52 08.5	
	comp=E,480µm,0.3s						
DRO	Drossia	1.09	113	P	Pg	00 51 54.4	-0.2
IGT	Igoumenitsa	1.15	356	P	Pg	00 51 56.6	+0.9
IGT				AML	AML	00 52 16.1	
	comp=E,115µm,0.3s						
IGT				AML	AML	00 52 17.1	
	comp=N,170µm,0.3s						
EFP	Efpalio	1.15	87	P	Pb	00 51 55.3	+0.2
ANX	Ano Chora	1.18	79	P	Pb	00 51 55.8	+0.1
ANX	Ano Chora	1.18	79	P	Pb	00 51 55.9	+0.2
EVR	Evrytania	1.20	63	P	Pb	00 51 56.2	+0.2
EVR	Evrytania	1.20	63	P	Pb	00 51 56.3	+0.3
LAKA	Lakka	1.22	96	P	Pb	00 51 56.5	+0.2
LAKA				AML	AML	00 52 16.1	
	comp=N,82µm,0.4s						
LAKA				AML	AML	00 52 16.4	
	comp=E,92µm,0.6s						
SERG	Sergoula	1.27	88	P	Pn	00 51 57.2	+0.5
SERG				AML	AML	00 52 21.3	
	comp=E,211µm,0.4s						
SERG				AML	AML	00 52 22.0	
	comp=N,245µm,0.3s						
TRIZ	Trizonia	1.28	90	P	Pn	00 51 57.4	+0.5
KALE	Kalithea	1.34	89	P	Pn	00 51 58.9	+1.2
KLV	Kalavryta, Ach	1.39	104	P	Pn	00 51 59.0	+0.5
KLV	Kalavryta, Ach	1.39	104	P	Pn	00 51 59.4	+0.9
KLV				AML	AML	00 52 24.2	
	comp=N,75µm,0.3s						
KLV				AML	AML	00 52 27.9	
	comp=E,66µm,0.5s						
KEK	Kerkira	1.42	340	P	Pn	00 52 00.7	+1.9
MAKR	Makrakomi, Fth	1.47	64	P	Pb	00 52 01.1	+0.6
DBRK	Dubrovnik	4.62	339	ePn	Pn	00 52 42.9	+0.1
DBRK				Sn	Sn	00 53 35.5	-0.8
STON	Ston	4.94	336	ePn	Pn	00 52 47.7	+0.4
STON				Sn	Sn	00 53 42.6	-1.6
MAKA	Makarska	5.54	333	Sn	Sn	00 53 57.5	-1.4
ZIRJ	Zirje	6.39	327	ePn	Pn	00 53 07.1	-0.1
ZIRJ				Sn	Sn	00 54 15.8	-4.1
MORI	Morici	6.54	328	i Pn	Pn	00 53 10.4	+1.2
MORI				Sn	Sn	00 54 20.4	-3.0
DUGI	Dugi Otok	6.92	326	ePn	Pn	00 53 15.1	+0.7
DUGI				Sn	Sn	00 54 28.5	-4.2

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*ANF **22** 00:58:07.4±1.0, 30°.20N×113°.94W, h8^{km}±5^{km}, ML5.4/21, Error ellipse: s-maj=7.6km s-min=3.4km az=8.0*

*NEIC **22** 00:58:09.4, 30°.44N×114°.06W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-7.62; $M_{\theta\theta}$1.20; $M_{\phi\phi}$6.42; $M_{r\theta}$4.97; $M_{\theta\phi}$3.16; $M_{\phi r}$-2.05; Fault plane solution: $M_0$9.45000×10^{16} NP1:ϕ_s0.57000°, δ50.16000°, λ-127.41000°. NP2:ϕ_s230.62000°, δ52.42000°, λ-53.94000°. Principal axes: T 7.9109, Plg1.0000°, Azm296.0000°; N 2.5463, Plg28.0000°, Azm27.0000°; P -10.4572, Plg62.0000°, Azm204.0000°;*

*ECX **22** 00:58:09.4±0.6, 30°.44N×114°.05W, h12^{km}±8^{km}, MD5.2, ML5.4*

*NEIC **22** 00:58:10.0±5.3, 30°.49N±0°.04×114°.11W±0°.05, h1^{km}±3^{km}, Error ellipse: s-maj=7.4km s-min=4.5km az=216.0*

*IDC **22** 00:58:11.0±0.5, 30°.48N×113°.95W, h0^{km}, mb4.6/32, mb1 4.7/41, mb1mx4.6/52, mbtmp4.5/41, ML4.1/8, MS4.9/38, Ms1 4.9/38, ms1mx4.8/56, Error ellipse: s-maj=12.6km s-min=6.7km az=42.0*

*MOS **22** 00:58:11.7±1.9, 30°.60N×113°.77W, h10^{km}, mb5.4/51, MS5.3/7, Error ellipse: s-maj=6.0km s-min=4.4km az=87.7*

*GCMT **22** 00:58:12.4±0.1, 30°.41N±0°.01×114°.03W±0°.01, h12^{km}, MW5.4/147, Moment Tensor Solution. s92,c141; s147,c297; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.33±.02; $M_{\theta\theta}$0.03±.02; $M_{\phi\phi}$1.30±.02; $M_{r\theta}$-0.26±.07; $M_{\theta\phi}$0.65±.02; $M_{\phi r}$-0.48±.05; Best double couple: $M_0$1.55200×10^{17} NP1:ϕ_s200.00000°, δ35.00000°, λ-94.00000°. NP2:ϕ_s25.00000°, δ55.00000°, λ-87.00000°. Principal axes: T 1.6730, Plg10.0000°, Azm113.0000°; N -0.2420, Plg3.0000°, Azm204.0000°; P -1.4320, Plg79.0000°, Azm307.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MEX **22** 00:58:12.7±0.8, 30°.39N×114°.08W, h17^{km}±25^{km}, MD5.6*

*BJI **22** 00:58:13.3±0.0, 30°.55N×114°.15W, h17^{km}, mB5.5/3, mb5.1/12, Ms5.3/3, Ms7 5.1/6*

*BGR **22** 00:58:22.1±0.0, 31°.40N×114°.67W, h33^{km}, mb5.5, Ms5.2*

ISC 22 00:58:10.4±0.6, **30°.45N**±0°.03×**114°.09W**±0°.03, **h1**^{km}±3^{km}, **n1088**, σ**2^s.18**/1052, **mb5.2**/246, **MS5.0**/48, **9C-15D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAHB	Baha de los	0.68	137	⇑eP	Pn	00 58 35.5	+8.4
SFX	San Felipe	0.88	312	⇓eP	Pg	00 58 25.0	-2.2
PIX	Pinacate	1.23	26	⇓eP	Pg	00 58 30.8	-3.3
ECBX	El Chinero	1.31	321	⇓eP	Pg	00 58 32.1	-3.5
SPX	San Pedro Mart	1.32	297	⇓eP	Pg	00 58 33.3	-2.4
SPX	San Pedro Mart	1.32	297	eP	Pg	00 58 33.3	-2.4
SPX				i S	Sg	00 58 50.3	-2.6
SPX	San Pedro Mart	1.32	297		Pg	00 58 33.3	-2.4
SPX					Sg	00 58 50.3	-2.6
SPIG	San Pedro Mart	1.33	297	⇓eP	Pg	00 58 33.3	-2.5
SPIG	San Pedro Mart	1.33	297	eP	Pg	00 58 33.3	-2.5
SPIG				i S	Sg	00 58 49.5	-3.5
SPIG	San Pedro Mart	1.33	297		Pg	00 58 33.3	-2.5
SPIG					Sg	00 58 49.5	-3.5
SQX	San Quintin	1.55	275	⇓eP	Pn	00 58 36.3	-2.8
214A	Organ Pipe Nat	1.86	36	Pn	Pn	00 58 41.4	-2.0
214A				Sn	Sn	00 59 05.2	-2.4
214A	Organ Pipe Nat	1.86	36	Pn	Pn	00 58 40.7	-2.8
	baz=214,SNR=1000						
214A				Pg	Pg	00 58 46.1	0.0
	baz=214						
214A				Sb	Sg	00 59 10.6	+0.3
	baz=214						
MBIG	Mexicali	2.17	334	eP	Pn	00 58 45.9	-1.7
MBIG				i S	Sn	00 59 11.5	-3.6
MBIG	Mexicali	2.17	334		Pn	00 58 45.9	-1.7
CPBX	Cerro Prieto	2.22	332	IAML		01 00 12.8	
	comp=N,66µm,1.9s						
CPBX				⇓e		01 00 12.8	
ESJX	Sierra Juarez	2.22	315	⇓eP	Pn	00 58 46.0	-2.6
GLA	Glamis	2.67	347	P	Pn	00 58 53.3	-1.3
GLA	Glamis	2.67	347		Pn	00 58 53.3	-1.3
GLA	Glamis	2.67	347	Pn	Pn	00 58 52.8	-1.8
	baz=161,SNR=89						
GLA				Pb	Pb	00 59 00.1	+1.1
	baz=161						
IKP	In-Ko-Pah, Jac	2.79	322	P	Pn	00 58 56.2	-0.1
	baz=136,SNR=31						
IKP				Sb	Sg	00 59 44.2	+4.1
	baz=136						
CBX	Cerro Bola	2.88	311	eP	Pn	00 58 56.5	-1.0
CBX				i S	Sn	00 59 29.6	-3.3
CBX	Cerro Bola	2.88	311		Pn	00 58 56.5	-1.0
CBX					LR	00 59 42.9	
SWSC	Sam W. Stewart	2.88	330	P	Pn	00 58 56.8	-0.6
	baz=144,SNR=38						
HSIG		3.08	117	⇑eP	Pn	00 58 57.2	-3.0
HSIG		3.08	117	eP	Pn	00 58 57.0	-3.1
HSIG				i S	Sn	00 59 32.3	-5.3
HSIG		3.08	117		Pn	00 58 57.0	-3.1
HSIG					Sn	00 59 39.4	+1.8
HSIG		3.08	117	Pn	Pn	00 58 58.4	-1.7
HSIG				Sn	Sn	00 59 37.7	+0.1
BAR	Barrett	3.13	316	Pn	Pn	00 59 00.2	-0.8
MONP2	Monument Peak	3.15	321	P	Pn	00 59 00.7	-0.5
	baz=135,SNR=48						
MONP2				Sb	Sg	00 59 52.4	+0.9
	baz=135						
Y12C	Blythe	3.31	354		Pn	00 59 04.0	+0.6
Y12C				Sn	Sn	00 59 39.5	-3.9
Y12C	Blythe	3.31	354	P	Pn	00 59 02.8	-0.6
	baz=169,SNR=72						
TUC	Tucson	3.38	56	P	Pn	00 59 02.7	-1.7
TUC	Tucson	3.38	56	eP	Pn	00 59 02.1	-2.3
TUC	Tucson	3.38	56		Pn	00 59 02.7	-1.7
TUC	Tucson	3.38	56	P	Pn	00 59 01.8	-2.6
	baz=238						
BC3	Big Chuckawall	3.40	340	P	Pn	00 59 04.2	-0.5
	baz=155,SNR=61						
SRIG	Santa Rosalia	3.51	152		Pn	00 59 06.3	+0.2
109C	Camp Elliot, M	3.54	314		Pn	00 59 05.0	-1.5
109C	Camp Elliot, M	3.54	314	Pn	Pn	00 59 06.5	0.0
	baz=128,SNR=22						
109C				Pg	Pg	00 59 20.5	+2.2
	baz=128						
109C				Sb	Sg	01 00 03.4	-0.7
	baz=128						
Y14A	Wickenburg	3.60	15		Pn	00 59 04.3	-3.1
XPFO	Pion Flat	3.74	328	Pn	Pn	00 59 08.6	-0.8
PFO	Pinyon Flats O	3.74	328	Pn	Pn	00 59 08.5	-0.9
	comp=N,3.0nm,0.3s,baz=149,slow=11,SNR=28						
PFO				Lg	Lg	01 00 13.8	
	comp=N,16nm,0.3s,baz=142,slow=17,SNR=6.4						
PFO				LR	LR	01 00 43.5	
	comp=N,37µm,20.4s,baz=173,slow=40						
PFO	Pinyon Flats O	3.74	328		Pn	00 59 09.4	0.0
PFO	Pinyon Flats O	3.74	328	P	Pn	00 59 08.4	-0.9
	baz=143,SNR=20						
IRM	Iron Mountain	3.81	347	P	Pn	00 59 09.5	-0.7
	baz=162,SNR=94						
PDMCI	Parker Dam,Lak	3.85	359	P	Pn	00 59 10.5	-0.2
	baz=176,SNR=170						
BELC	Belle Mtn. Jos	3.90	336	P	Pn	00 59 12.6	+1.1
	baz=151,SNR=23						
NZIG	Nacozari, Sono	3.92	90	eP	Pn	00 59 09.6	-2.2
MURC	Murrieta	4.10	321	Sb	Sg	01 00 21.6	-0.6
	baz=135						
319A	Douglas	4.24	76		Pn	00 59 14.9	-1.3
NEE2	Needles Airpor	4.33	354	P	Pn	00 59 18.4	+1.0
	baz=171,SNR=9.8						
BBRC	Big Bear Solar	4.50	329	Sg	Sg	01 00 46.1	+11
	baz=144						
GMRC	Granite Mounta	4.52	343	P	Pn	00 59 20.7	+0.6
	baz=159,SNR=17						
X16A	Lo Mia Camp, P	4.55	29		Pn	00 59 21.4	+0.9
SCI2	San Clemente I	4.56	305	Sg	Sg	01 00 45.8	+8.9
	baz=119						
W13A	Hualapai Mount	4.64	2		Pn	00 59 22.4	+0.6
CIS	Catalina Islan	4.71	310	P	Pn	00 59 22.4	-0.2
	baz=124						
CIS				Sb	Sg	01 00 39.5	-2.2
	baz=124						
HEC	Hector,Ludlow	4.76	337	P	Pn	00 59 26.4	+3.0
	baz=153						
BFSC	Mount Baldy Ra	4.84	322	P	Pn	00 59 26.2	+1.7
	baz=137						
BFSC				Sb	Sg	01 00 43.3	-2.6
	baz=137						
MWC	Mount Wilson	5.04	319	P	Pn	00 59 27.8	+0.4
MWC	Mount Wilson	5.04	319		Pn	00 59 27.8	+0.4
PASC	Pasadena Art C	5.08	318		Pn	00 59 29.0	+1.3
TUQ	Turquoise Moun	5.21	343	P	Pn	00 59 32.0	+2.5
	baz=160						
DECC	Green Verdugo	5.22	318	Sb	Sg	01 00 54.9	-3.4
	baz=132						
GSC	Goldstone, Bar	5.35	335	P	Pn	00 59 32.4	+0.9
GSC	Goldstone, Bar	5.35	335		Pn	00 59 32.4	+0.9
GSC	Goldstone, Bar	5.35	335	P	Pn	00 59 32.9	+1.4
	baz=151,SNR=18						
X18A	Snowflake	5.37	40	Pn	Pn	00 59 32.3	+0.5
SNCC	San Nicolas Is	5.40	303	Pn	Pn	00 59 30.0	-2.1
EDW2	Edwards Air Fo	5.51	324	Sb	Sg	01 01 04.2	-3.3
	baz=140						
WUAZ	Wupatki	5.55	24		Pn	00 59 35.2	+1.0
WUAZ	Wupatki	5.55	24	P	Pn	00 59 35.2	+1.0
	baz=204,SNR=165						
BLG	Laguna Peak, P	5.57	312	Sb	Sg	01 01 05.8	-3.7
	baz=127						
OSI	Osito Audit: C	5.71	318		Pn	00 59 37.0	+0.7
OSI	Osito Audit: C	5.71	318	Sb	Sg	01 01 09.0	-4.8
	baz=133						
SHOC	Shoshone, Teco	5.74	342	P	Pn	00 59 39.3	+2.6
	baz=158,SNR=11						
121A	Cookes Peak, D	5.77	67		Pn	00 59 36.4	-1.0
121A				Sn	Sn	01 00 37.6	-6.7
121A	Cookes Peak, D	5.77	67	P	Pn	00 59 36.6	-0.7
	baz=251,SNR=88						
LRMC	Laurel Mtn Rad	5.86	330	P	Pn	00 59 42.0	+3.5
	baz=145,SNR=10						
LRMC				Sg	Sg	01 01 29.4	+11
	baz=145						
W18A	Petrified Fore	5.93	37		Pn	00 59 40.0	+0.5
W18A	Petrified Fore	5.93	37	P	Pn	00 59 40.4	+0.9
	baz=219,SNR=14						
SHPR	Sheep Range	6.11	352		Pn	00 59 42.8	+0.9
U15A	North Rim	6.15	14		Pn	00 59 43.9	+1.2
MPMC	Manual Prospec	6.28	334	P	Pn	00 59 47.0	+2.7
	baz=150,SNR=23						
ISA	Isabella, Lake	6.37	326	P	Pn	00 59 46.4	+0.9
ISA	Isabella, Lake	6.37	326		Pn	00 59 46.4	+0.9
ISA	Isabella, Lake	6.37	326	P	Pn	00 59 47.5	+2.0
	baz=141						
PKM	Mcpherson Peak	6.55	314	P	Pn	00 59 49.6	+1.6
	baz=129						
LCMT	Little Creek M	6.59	6		Pn	00 59 49.8	+1.4
KNB	Kanab	6.64	9	P	Pn	00 59 51.0	+1.8
KNB	Kanab	6.64	9		Pn	00 59 51.0	+1.8
TPNV	Topopah Spring	6.73	345	P	Pn	00 59 51.7	+1.2
TPNV	Topopah Spring	6.73	345		Pn	00 59 51.7	+1.2
TPNV	Topopah Spring	6.73	345	P	Pn	00 59 53.2	+2.8
	baz=162,SNR=28						
VES	Vestal, Richgr	6.82	323	P	Pn	00 59 57.3	+5.8
	baz=138,SNR=6.6						
Y22D	IRIS PASSCAL I	7.07	57		Pn	00 59 55.2	+0.1
Y22D	IRIS PASSCAL I	7.07	57	P	Pn	00 59 55.3	+0.3
	baz=241,SNR=10						
GRAC	Grapevine Rang	7.08	338	P	Pn	00 59 59.5	+4.3
	baz=154,SNR=8.8						
CCUT	Cedar City	7.11	5	Pn	Pn	00 59 56.9	+1.1
PKCU	Pink Cliffs	7.13	11		Pn	00 59 58.6	+2.5
LPIG	La Paz	7.16	151	Pn	Pn	00 59 58.0	+1.8
	baz=27,slow=2.3,SNR=15						
LPIG				Lg	Lg	01 02 07.3	
	comp=N,3.5nm,0.3s,baz=36,slow=8.7,SNR=1.0						
LPIG				LR	LR	01 02 33.9	
	comp=N,20µm,20.9s,baz=338,slow=37						
SZCU	Shurtz Canyon	7.18	6	Pn	Pn	00 59 58.7	+2.0
PAGB	Antelope Grade	7.38	317		Pn	00 59 57.3	-1.9
MNTX	Cornudas Mount	7.57	78		Pn	00 59 57.8	-4.1
MNTX	Cornudas Mount	7.57	78	P	Pn	01 00 01.3	-0.7
	baz=264,SNR=73						
MNTX				Sg	Sg	01 02 15.7	+2.1
	baz=264						
MTPU	Mount Pierson	7.74	11	Pn	Pn	01 00 07.4	+2.9
ANMO	Albuquerque	7.84	53	Pn	Pn	01 00 05.1	-0.7
	comp=N,1.2nm,0.3s,baz=218,slow=12,SNR=42						
ANMO				Sn	Sn	01 01 32.0	-3.3
	comp=N,1.3nm,0.3s,baz=214,slow=16,SNR=1.5						
ANMO				Lg	Lg	01 02 17.9	
	comp=N,1.4nm,0.3s,baz=169,slow=19,SNR=1.4						
ANMO	Albuquerque	7.84	53	P	Pn	01 00 06.0	+0.2
ANMO				pmax	pmax		
	comp=Z,48nm,0.9s						
ANMO	Albuquerque	7.84	53		Pn	01 00 05.6	-0.1
ANMO	Albuquerque	7.84	53	P	Pn	01 00 05.4	-0.4
	baz=237						
R11A	Troy Canyon, C	7.98	352		Pn	01 00 09.2	+1.5
R11A	Troy Canyon, C	7.98	352	P	Pn	01 00 09.1	+1.5
	baz=169,SNR=50						
PMPB	Monarch Peak	8.04	317	Pn	Pn	01 00 08.7	+0.4
PSUT	Pine Spring	8.07	1		Pn	01 00 10.9	+2.0
HPIG		8.18	113		Pn	01 00 08.2	-2.3
MVCO	Mesa Verde	8.19	33		Pn	01 00 07.1	-3.5
MVCO	Mesa Verde	8.19	33	P	Pn	01 00 12.9	+2.3
	baz=216,SNR=38						
MSU	Marysvale	8.20	11		Pn	01 00 14.1	+3.4
OMMB	Old Mammoth Mi	8.23	332	Pn	Pn	01 00 07.3	-3.8
TCRU	Three Creeks R	8.26	9	Pn	Pn	01 00 13.6	+2.1
MDPB	Devils Postpil	8.28	331		Pn	01 00 16.7	+4.9
NV11	Mina Array Sit	8.64	338		Pn	01 00 20.4	+3.7
PV05	Paradox Valley	8.66	27		Pn	01 00 21.9	+4.8
NVAR	Mina Array Bea	8.69	338	Pn	Pn	01 00 21.3	+3.9
	comp=Z,1.3nm,0.3s,baz=163,slow=15,SNR=94						
NVAR				Lg	Lg	01 02 48.5	
	comp=Z,0.0nm,0.3s,baz=114,slow=42,SNR=1.1						
NVAR				LR	LR	01 03 52.0	
	comp=Z,9µm,18.8s,baz=148,slow=39						
NVAR	Mina Array Bea	8.69	338		Pn	01 00 23.5	+6.1
Q16A	Castle Valley	8.79	15	Pn	Pn	01 00 21.6	+2.9
SAO	San Andreas Ge	8.79	318	P	Pn	01 00 19.9	+1.3
SAO	San Andreas Ge	8.79	318	Pn	Pn	01 00 19.9	+1.3
PV13	Radium Mtn., P	8.84	28	Pn	Pn	01 00 22.2	+2.7
PV03	Paradox Valley	8.91	28		Pn	01 00 22.9	+2.4
PV01	Paradox Valley	8.92	29		Pn	01 00 23.1	+2.5
PV16	Nyswonger Mesa	8.93	27		Pn	01 00 23.5	+2.8
RYN	Ryan	8.94	337	Pn	Pn	01 00 21.3	+0.5
PV04	Paradox Valley	9.01	27		Pn	01 00 24.5	+2.8
TX31	Lajitas Ar. Si	9.12	94		Pn	01 00 19.4	-3.7
TX32	Lajitas Array	9.12	94		Pn	01 00 20.6	-2.6
TXAR	Lajitas Array	9.12	94	Pn	Pn	01 00 22.0	-1.2
	comp=Z,0.8nm,0.3s,baz=260,slow=14,SNR=34						
TXAR				Pg		01 00 42.7	
	comp=Z,4.8nm,0.3s,baz=256,slow=14,SNR=22						
TXAR				Sn	Sn	01 02 02.8	-3.7
	comp=Z,0.9nm,0.3s,baz=313,slow=24,SNR=1.3						
TXAR				Lg	Lg	01 02 55.7	
	comp=Z,4.1nm,0.3s,baz=289,slow=3.8,SNR=8.5						
TXAR				LR	LR	01 04 13.8	
	comp=Z,17µm,18.8s,baz=0.0,slow=40						
TXAR	Lajitas Array	9.12	94	P	Pn	01 00 22.4	-0.8
TXAR	Lajitas Array	9.12	94		Pn	01 00 19.6	-3.6
S22A	4UR Ranch, Cre	9.44	38	P	Pn	01 00 31.1	+3.3
	baz=221,SNR=9.9						
DUG	Dugway, Tooele	9.78	6	P	Pn	01 00 37.5	+5.2
	baz=185,SNR=48						
SDCO	Great Sand Dun	10.18	42	P	Pn	01 00 43.7	+5.8
	baz=227,SNR=11						
MSTX	Muleshoe	10.21	67		Pn	01 00 40.9	+2.7
MSTX	Muleshoe	10.21	67	P	Pn	01 00 42.7	+4.5
	baz=253,SNR=15						
ELK	Elko	10.32	355	Pn	Pn	01 00 40.4	+0.6
	comp=Z,0.8nm,0.3s,baz=185,slow=12,SNR=24						
ELK				Lg	Lg	01 03 26.2	
	baz=220,slow=18,SNR=1.1						
ELK	Elko	10.32	355	P	Pn	01 00 42.6	+2.9
ELK	Elko	10.32	355		Pn	01 00 42.6	+2.9
T25A	Trinidad	10.46	48	P	Pn	01 00 46.9	+5.3
	baz=233,SNR=84						
SMCO	Snowmass	10.49	32		Pn	01 00 45.6	+3.4
O20A	White River Ci	10.78	25		Pn	01 00 49.1	+3.2
O20A	White River Ci	10.78	25	P	Pn	01 00 49.2	+3.2
	baz=207,SNR=30						
AMTX	Amarillo	11.35	64		Pn	01 00 57.7	+3.9
ISCO	Idaho Springs	11.62	34	P	Pn	01 01 05.0	+7.3
	baz=219,SNR=25						
O03E	Paynes Creek	11.66	329	P	Pn	01 01 05.4	+7.4
	baz=144						
JCT	Junction City	12.33	86	P	Pn	01 01 04.2	-2.9
JCT	Junction City	12.33	86		Pn	01 01 04.2	-2.9
JCT	Junction City	12.33	86	P	Pn	01 01 11.2	+4.1
	baz=274,SNR=42						
N23A	Red Feather La	12.34	30	P	Pn	01 01 11.8	+4.3
	baz=214,SNR=9.3						
ABTX	Abilene, Hawle	12.52	76		Pn	01 01 06.3	-3.3
ABTX	Abilene, Hawle	12.52	76	P	Pn	01 01 13.6	+3.9
	baz=264,SNR=20						
RWWY	Rawlins	12.52	24		Pn	01 01 06.5	-3.4
N02D	Trinity Center	12.61	329	P	Pn	01 01 17.2	+6.2
	baz=142						
KSCO	Kaye Shedlock’	12.71	45		Pn	01 01 17.4	+5.0
KSCO	Kaye Shedlock’	12.71	45	P	Pn	01 01 17.4	+5.0
	baz=231,SNR=7.6						
BW06	Boulder Array	12.82	15		Pn	01 01 17.8	+3.9
BW06	Boulder Array	12.82	15	P	Pn	01 01 17.8	+3.9
	baz=197,SNR=25						
PD31	Pinedale Array	12.82	15		Pn	01 01 17.7	+3.8
PDAR	Pinedale Array	12.82	15	Pn	Pn	01 01 16.5	+2.5
	comp=Z,0.2nm,0.3s,baz=183,slow=12,SNR=31						
PDAR				Lg	Lg	01 04 51.4	
	comp=Z,0.1nm,0.3s,baz=160,slow=14,SNR=1.6						
PDAR				LR	LR	01 06 27.5	
	comp=Z,4µm,20.2s,baz=208,slow=39						
PDAR	Pinedale Array	12.82	15		Pn	01 01 08.7	-5.3
ZAIG	Zacatecas	12.83	124		Pn	01 01 12.8	-1.4
M04C	Macdoel	12.92	333	P	Pn	01 01 23.2	+7.9
	baz=148,SNR=11						
833A	Chaparral WMA,	12.99	96	P	Pn	01 01 22.1	+5.9
	baz=284						
M02C	Callahan	13.02	329	P	P	01 01 23.4	-3.9
	baz=143,SNR=7.4						
MFID	Camas Ranch	13.02	354		Pn	01 01 21.5	+4.9
REDW	Red Top Meadow	13.15	10		Pn	01 01 23.4	+5.0
YBH	Yreka Blue Hor	13.23	331	Pn	Pn	01 01 23.6	+4.1
	comp=Z,0.1nm,0.3s,baz=175,slow=8.3,SNR=9.0						
YBH				Lg	Lg	01 04 56.5	
	comp=Z,0.1nm,0.3s,baz=226,slow=10,SNR=1.5						
YBH				LR	LR	01 06 52.8	
	comp=Z,2µm,19.0s,baz=154,slow=39						
YBH	Yreka Blue Hor	13.23	331		P	01 01 26.7	-3.0
TPAW	Teton Pass	13.26	10		Pn	01 01 16.2	-3.8
SNOW	Snow King Moun	13.26	11		Pn	01 01 25.0	+5.0
FXWY	Fox Creek	13.39	10		Pn	01 01 17.7	-4.1
L04D	Klamath Falls	13.47	333	P	P	01 01 29.9	-2.5
	baz=147,SNR=15						
WMOK	Wichita Mounta	13.60	68	P	P	01 01 29.2	-4.5
WMOK	Wichita Mounta	13.60	68		P	01 01 29.1	-4.5
K22A	Casper	13.61	24		Pn	01 01 27.9	+3.3
K22A	Casper	13.61	24	P	Pn	01 01 28.8	+4.2
	baz=208,SNR=20						
K04D	Chiloquin, OR	13.62	335	P	P	01 01 31.8	-2.1
	baz=150						
IMW	Indian Meadow	13.66	10		P	01 01 30.2	-4.4
FLWY	Flagg Ranch	13.87	10		P	01 01 33.2	-3.7
J05D	Fort Rock, OR	14.02	338	P	P	01 01 37.6	-0.8
	baz=153,SNR=30						

YPP	Pitchstone Pla	14.04	10	P	P	01 01 36.1	-2.8
H17A	Grant Village	14.20	10	P	P	01 01 38.1	-2.4
H17A	Grant Village	14.20	10	P	P	01 01 38.5	-2.0
	baz=192,SNR=52						
435B	Jarrell	14.22	84	P	P	01 01 37.2	-3.3
435B	Jarrell	14.22	84	P	P	01 01 38.3	-2.3
	baz=274						
735A	Kenedy	14.25	92	P	P	01 01 39.8	-1.1
I07A	Izee	14.27	344		Pn	01 01 30.4	-3.3
J04D	Umpqua Nationa	14.28	336	P	P	01 01 39.5	-1.9
	baz=150,SNR=13						
WHTX	Lake Whitney,	14.32	80		Pn	01 01 31.1	-3.2
WHTX	Lake Whitney,	14.32	80	P	Pn	01 01 36.0	+1.7
	baz=269,SNR=9.9						
OGNE	Ogallala	14.33	40		Pn	01 01 30.4	-4.1
OGNE	Ogallala	14.33	40	P	P	01 01 39.4	-2.4
	baz=226,SNR=7.0						
X34A	Smith Ranch, M	14.33	69	Pn	Pn	01 01 30.7	-3.7
PINE	Pine Mountain	14.39	340	P	P	01 01 43.0	+0.5
LKWY	Lake	14.39	11	P	P	01 01 41.2	-1.5
LKWY	Lake	14.39	11	P	P	01 01 41.2	-1.5
YMR	Madison River	14.41	9		Pn	01 01 32.0	-3.7
K02D	Willamette Mer	14.43	331	P	P	01 01 46.2	+3.3
	baz=144						
CBKS	Cedar Bluff	14.45	51	P	Pn	01 01 31.0	-5.1
CBKS	Cedar Bluff	14.45	51		Pn	01 01 31.0	-5.1
CBKS	Cedar Bluff	14.45	51	P	Pn	01 01 38.6	+2.4
	baz=239						
YHB	Horse Butte	14.46	8		Pn	01 01 33.4	-3.0
YNR	Norris Junctio	14.50	10	P	P	01 01 42.5	-1.3
YNM	Yellowstone No	14.50	10	P	P	01 01 44.9	+1.0
QLMT	Earthquake Lak	14.51	8	P	Pn	01 01 32.1	-5.0
YUF	Upper Falls	14.52	10	P	Pn	01 01 33.0	-4.2
YHH	Holmes Hill	14.54	9		Pn	01 01 36.4	-1.1
YHL	Hebgen Lake	14.56	8		Pn	01 01 33.8	-4.0
Z35A	Perchaven, San	14.59	74	P	Pn	01 01 38.9	+0.9
BMO	Blue Mountains	14.60	351	P	P	01 01 43.3	-1.5
BMO	Blue Mountains	14.60	351	P	P	01 01 43.3	-1.5
YMP	Mirror Lake Pl	14.60	11	P	Pn	01 01 33.7	-4.7
FNO	Franklin	14.82	67	P	P	01 01 47.4	+0.2
OKCFA	Oklahoma City	14.82	66	P	P	01 01 49.9	+2.7
I04A	Tendick Farm,	14.87	336	P	P	01 01 48.5	+0.7
	baz=150,SNR=9.9						
YNE	Yellowstone No	14.89	11		Pn	01 01 36.6	-5.6
DLMT	Dillon	14.94	4	P	P	01 01 48.5	-0.1
R32A	Long Quarter,	14.96	54		Pn	01 01 39.8	-3.3
I05D	Terrebonne, OR	15.01	340	P	P	01 01 51.4	+2.2
	baz=154,SNR=15						
RLMT	Red Lodge	15.13	13	P	P	01 01 49.4	-1.5
RLMT				IAmb	IAmb	01 01 56.3	
	comp=Z,146nm,1.4s						
RLMT	Red Lodge	15.13	13	P	P	01 01 49.4	-1.5
	baz=196,SNR=52						
I03D	Drain, OR	15.13	333	P	P	01 01 54.6	+4.0
	baz=147						
W35A	Tecumseh	15.22	68	P	Pn	01 01 41.7	-4.7
G08A	Pilot Rock	15.30	347	P	P	01 01 54.0	+1.4
G08A				IAmb	IAmb	01 01 58.9	
	comp=Z,121nm,1.4s						
LRM	Limekiln Ridge	15.40	4	P	P	01 01 54.1	+0.2
H04A	Detroit Lake	15.58	338		Pn	01 01 45.1	-6.1
H04A				IAmb	IAmb	01 02 11.4	
	comp=Z,216nm,1.4s						
H04D	Lebanon	15.62	336	P	P	01 01 59.4	+3.4
	baz=150						
G06A	Carlson Farm,	15.63	343	P	Pn	01 01 49.0	-2.9
F10A	Beach Ranch, E	15.69	352	P	P	01 01 57.0	+0.1
GCMT	Greycliff	15.71	12	P	Pn	01 01 46.8	-6.2
237A	Washetta, Mont	15.72	80	P	Pn	01 01 50.1	-3.0
237A				IAmb	IAmb	01 02 21.3	
	comp=Z,151nm,1.4s						
HKT	Hockley	15.80	87	P	Pn	01 01 49.9	-4.1
HKT				pmax	pmax		
	comp=Z,229nm,1.7s						
HKT	Hockley	15.80	87		Pn	01 01 49.9	-4.1
HKT				IAmb	IAmb	01 02 27.1	
	comp=Z,229nm,1.6s						
RSSD	Black Hills	15.80	27	P	Pn	01 01 50.9	-3.4
RSSD				pmax	pmax		
	comp=Z,161nm,1.0s						
RSSD	Black Hills	15.80	27		Pn	01 01 50.9	-3.4
RSSD				IAmb	IAmb	01 02 03.4	
	comp=Z,161nm,0.9s						
RSSD	Black Hills	15.80	27	P	P	01 01 57.3	-1.0
	baz=213						
G05D	Wamic, OR	15.82	341	P	P	01 02 00.4	+2.1
	baz=156,SNR=19						
COR	Corvallis	15.88	335	P	P	01 02 03.6	+4.8
COR				pmax	pmax		
	comp=Z,95nm,1.9s						
T35A	Sooner Cattle	15.98	62		Pn	01 01 52.6	-3.9
F07A	Phinny Hill Vi	16.08	345	P	Pn	01 01 53.5	-4.2
F07A				IAmb	IAmb	01 02 06.7	
	comp=Z,200nm,1.3s						
TUL1	Leonard	16.25	66	P	Pn	01 01 55.2	-4.7
TUL1	Leonard	16.25	66	P	P	01 02 03.1	0.0
	baz=256,SNR=6.0						
HRY	Holter Researc	16.34	6	Pn	Pn	01 01 55.1	-6.0
E09A	Wood Farm, Sta	16.35	350	P	P	01 02 05.9	+1.8
MSO	Missoula	16.36	0	P	P	01 02 03.1	-1.2
MSO				IAmb	IAmb	01 02 10.8	
	comp=Z,297nm,1.6s						
MSO	Missoula	16.36	0	P	P	01 02 05.3	+1.0
	baz=180,SNR=34						
G03D	McMinnville, O	16.41	336	P	P	01 02 06.9	+2.1
	baz=150,SNR=5.3						
F05D	White Salmon	16.45	342	P	P	01 02 07.4	+2.1
	baz=156,SNR=5.6						
HAWA	Hanford	16.48	347		Pn	01 01 57.9	-4.8
Z38A	Mt. Pleasant	16.48	75	P	Pn	01 01 58.9	-3.9
E08A	Dider Farm, El	16.48	348		Pn	01 01 59.5	-3.3
NATX	Nacogdoches	16.70	81	P	Pn	01 02 00.9	-4.7
NATX	Nacogdoches	16.70	81	P	P	01 02 09.9	+1.9
	baz=271						
E07A	Sunnyside	16.70	346	P	Pn	01 02 01.6	-4.0
E07A				IAmb	IAmb	01 02 13.4	
	comp=Z,516nm,2.0s						
KSU1	Kansas State U	16.74	54	P	P	01 02 07.5	-1.0
	baz=244,SNR=9.2						
F04A	Amboy	16.77	339	P	Pn	01 02 03.3	-3.2
BGNE	Belgrade	16.89	45	P	Pn	01 02 08.7	+0.7
BGNE				IAmb	IAmb	01 02 14.8	
	comp=Z,335nm,1.4s						
BGNE	Belgrade	16.89	45	P	P	01 02 11.3	+1.1
	baz=234						
N33A	J Bar K, Exete	16.96	48	P	Pn	01 02 02.8	-6.1
N33A				IAmb	IAmb	01 02 14.4	
	comp=Z,175nm,1.1s						
N33A					S	01 05 27.7	-0.8
D08A	Wollman Farm,	17.00	349	P	P	01 02 13.6	+2.2
F03A	Seaside	17.14	337	Pn	Pn	01 02 04.4	-6.7
F03A				IAmb	IAmb	01 02 51.5	
	comp=Z,138nm,1.1s						
K31A	O'Neill	17.27	41	Pn	Pn	01 02 09.7	-3.1
JTMT	Jette	17.28	360	P	Pn	01 02 09.8	-3.2
LAO	LASA Array	17.33	18		Pn	01 02 10.4	-3.1
LAO	LASA Array	17.33	18	P	P	01 02 16.0	+1.0
	baz=203,SNR=65						
LON	Longmire	17.34	342	P	Pn	01 02 13.2	-0.6
LON				pmax	pmax		
	comp=Z,137nm,1.4s						
LON	Longmire	17.34	342	P	Pn	01 02 13.2	-0.6
E04D	Cinebar	17.38	340	P	P	01 02 18.6	+3.1
	baz=154,SNR=12						
U38A	Gravette	17.49	65		Pn	01 02 12.1	-3.4
LTY	Liberty	17.54	345	P	Pn	01 02 11.2	-5.0
C09A	Chrisman Ranch	17.63	351	P	Pn	01 02 16.1	-1.1
C09A				IAmb	IAmb	01 02 23.6	
	comp=Z,262nm,1.8s						
E03A	Lebam	17.68	338	P	Pn	01 02 14.4	-3.4
E03A				IAmb	IAmb	01 02 25.1	
	comp=Z,337nm,1.4s						
W39A	Magazine	17.71	69	P	Pn	01 02 15.8	-2.5
W39A	Magazine	17.71	69	P	P	01 02 20.1	+1.0
	baz=260,SNR=6.9						
MIAR	Mount Ida	17.78	71	P	Pn	01 02 15.3	-3.8
MIAR				pmax	pmax		
	comp=Z,181nm,1.7s						
MIAR	Mount Ida	17.78	71	P	Pn	01 02 15.3	-3.8
MIAR	Mount Ida	17.78	71	P	P	01 02 21.6	+1.6
	baz=263						
D05A	Enumclaw	17.80	342		P	01 02 20.6	+0.5
D05A				IAmb	IAmb	01 02 27.2	
	comp=Z,496nm,1.7s						
HHAR	Hobbs	17.80	66	P	Pn	01 02 19.4	-0.1
EGMT	Eagleton	17.87	10	P	P	01 02 23.9	+3.0
EGMT				IAmb	IAmb	01 02 26.1	
	comp=Z,395nm,1.4s						
EGMT	Eagleton	17.87	10	P	P	01 02 24.0	+3.0
	baz=192,SNR=102						
NEW	Newport	17.95	353	P	P	01 02 22.9	+1.2
	comp=Z,0.6nm,0.3s,baz=168,slow=12,SNR=35						
NEW				Lg	Lg	01 07 38.8	
	comp=Z,0.2nm,0.3s,baz=134,slow=20,SNR=1.3						
NEW				LR	LR	01 09 46.1	
	comp=Z,5µm,18.5s,baz=178,slow=39						
NEW	Newport	17.95	353	P	P	01 02 23.5	+1.7
NEW				pmax	pmax		
	comp=Z,79nm,1.3s						
NEW	Newport	17.95	353	P	P	01 02 23.4	+1.7
NEW	Newport	17.95	353	P	P	01 02 23.4	+1.7
	baz=171,SNR=26						
441A	DeRidder	18.00	84		P	01 02 23.3	+0.9
WLAR	White Oak Lake	18.07	74		Pn	01 02 21.9	-0.8
WLAR				IAmb	IAmb	01 02 35.6	
	comp=Z,360nm,1.4s						
N35A	Tabor	18.21	50	Pn	Pn	01 02 20.4	-4.0
N35A				IAmb	IAmb	01 02 54.5	
	comp=Z,205nm,1.3s						
Z41A	Richland Creek	18.30	76	Pn	Pn	01 02 24.9	-0.6
Z41A	Richland Creek	18.30	76	P	P	01 02 26.4	+0.7
	baz=267						
B08A	Colville Reser	18.33	349	P	Pn	01 02 22.8	-3.1
X40A	Basin Creek Fa	18.38	72	P	P	01 02 29.0	+2.4
X40A	Basin Creek Fa	18.38	72	P	P	01 02 31.7	+5.1
	baz=264,SNR=5.7						
SUSD	Miller	18.39	36		P	01 02 27.0	+0.3
SUSD				IAmb	IAmb	01 02 31.3	
	comp=Z,171nm,1.0s						
SUSD	Miller	18.39	36	P	P	01 02 29.7	+3.1
	baz=225,SNR=11						
D03D	Eldon	18.42	340	P	P	01 02 31.3	+4.3
	baz=154,SNR=8.8						
NLWA	Neilton Lookou	18.52	339		Pn	01 02 30.8	+2.6
NLWA				IAmb	IAmb	01 02 37.9	
	comp=Z,193nm,1.7s						
WALA	Waterton Lakes	18.59	0	P	P	01 02 28.1	-0.9
WALA				IAmb	IAmb	01 02 36.1	
	comp=Z,213nm,1.4s						
S39A	Bolivar	18.64	62	P	P	01 02 26.9	-2.6
U40A	Yellville	18.67	66	P	P	01 02 29.0	-0.9
U40A	Yellville	18.67	66	P	Pn	01 02 31.4	+1.3
	baz=258,SNR=11						
342A	Flagon Creek P	18.70	82	P	Pn	01 02 32.5	+2.1
UALR	University of	18.82	71	P	Pn	01 02 32.6	+0.8
B05A	Bryant	18.82	343	P	Pn	01 02 36.1	+4.4
	baz=157,SNR=8.2						
B06A	Marblemount	18.91	345	P	Pn	01 02 36.9	+4.0
WHAR	Wooly Hollow	18.93	69	P	Pn	01 02 33.4	+0.2
WHAR				IAmb	IAmb	01 03 09.2	
	comp=Z,185nm,1.7s						
W41B	Gary Mavity, V	18.95	70	P	Pn	01 02 36.0	+2.5
	baz=262						
TLIG	Tlapa	19.09	129		P	01 02 33.6	-1.0
P38A	Dawn	19.13	56	P	Pn	01 02 36.1	+0.5
FCAR	Ozark Folk Cen	19.16	68	P	P	01 02 33.3	-1.9
E28A	Huff	19.17	29	P	Pn	01 02 36.0	0.0
ECSD	EROS Data Cent	19.19	41	P	P	01 02 31.9	-3.5
ECSD	EROS Data Cent	19.19	41	P	Pn	01 02 37.2	+0.8
	baz=232,SNR=43						
MGMO	Mountain Grove	19.31	64	P	Pn	01 02 38.3	+0.4
MGMO				IAmb	IAmb	01 03 05.7	
	comp=Z,222nm,2.0s						
143A	Socs Landing,	19.46	77	P	Pn	01 02 40.2	+0.6
DGMT	Dagmar	19.52	20	P	Pn	01 02 42.0	+1.6
DGMT	Dagmar	19.52	20	P	Pn	01 02 41.9	+1.6
	baz=206,SNR=24						
PGC	Sidney	19.53	341	P	Pn	01 02 43.4	+3.0
PGC				IAmb	IAmb	01 02 46.4	
	comp=Z,269nm,1.6s						
R40A	Maddies Statio	19.61	61	P	Pn	01 02 41.3	-0.1
N38A	Joes South For	19.80	53	P	Pn	01 02 43.0	-0.7
N38A				IAmb	IAmb	01 02 45.5	
	comp=Z,98nm,0.9s						
LCAR	Lake Charles	19.97	68	P	Pn	01 02 47.1	+1.4
X43A	Marvell	19.98	72	P	Pn	01 02 45.3	-0.5
344A	Westbrook Farm	20.06	81	P	Pn	01 02 48.1	+1.4
T42A	Van Buren	20.20	65	P	Pn	01 02 47.5	-0.9
SCIA	State Center	20.31	50	P	P	01 02 48.3	+0.6
SCIA				IAmb	IAmb	01 03 36.0	
	comp=Z,294nm,1.7s						
CCM	Cathedral Cave	20.32	62	P	P	01 02 44.0	-3.9
CCM				pmax	pmax		
	comp=Z,39nm,1.0s						
CCM	Cathedral Cave	20.32	62	P	P	01 02 44.0	-3.9
CCM	Cathedral Cave	20.32	62	P	Pn	01 02 49.4	-0.4
	baz=255						
LPAR	Lepanto	20.58	69	P	Pn	01 02 52.0	-0.9
LPAR				IAmb	IAmb	01 03 21.8	
	comp=Z,104nm,1.3s						
MDND	Maddock	20.63	29	P	P	01 02 51.2	0.0
MDND	Maddock	20.63	29	P	Pn	01 02 53.8	+0.4
	baz=217,SNR=10						
PBMO	Poplar Bluff	20.67	66	P	P	01 02 52.5	+0.8
GNAR	Gosnell	20.86	68	P	P	01 02 52.7	-1.0
K38A	Parkersburg	20.95	49	P	Pn	01 02 56.3	-0.9
K38A				IAmb	IAmb	01 02 58.7	
	comp=Z,201nm,1.4s						
LLLB	Lillooet	20.97	346	P	P	01 02 53.6	-1.2
Y45A	Yeager Farm, C	21.05	74	P	P	01 02 56.9	+1.2
346A	Big Creek Wild	21.14	81	P	P	01 02 52.5	-4.3
PARMO	Parma	21.18	67	P	P	01 02 58.8	+1.6
OXF	Oxford	21.20	72	P	P	01 03 00.1	+2.8
OXF				pmax	pmax		
	comp=Z,124nm,1.2s						
OXF	Oxford	21.20	72	P	P	01 03 00.1	+2.8
OXF				IAmb	IAmb	01 03 14.5	
	comp=Z,124nm,1.1s						
OXF	Oxford	21.20	72	P	P	01 02 59.5	+2.1
	baz=266						
SLM	Saint Louis	21.24	61	P	P	01 02 59.2	+1.4
SLM				pmax	pmax		
	comp=Z,105nm,1.3s						
SLM	Saint Louis	21.24	61	P	P	01 02 59.2	+1.4
SLM				IAmb	IAmb	01 03 26.5	
	comp=Z,105nm,1.2s						
PENMO	Penman	21.25	67	P	P	01 02 56.7	-1.2
PENMO				IAmb	IAmb	01 03 39.4	
	comp=Z,76nm,0.5s						
D32A	Dogwood Acres,	21.25	34	P	P	01 02 58.6	+0.7
D32A				IAmb	IAmb	01 03 04.3	
	comp=Z,102nm,1.2s						
I37A	Lemond, Waseca	21.25	45	P	P	01 02 59.0	+1.1
LNXT	Lenox	21.30	68	P	P	01 02 59.3	+0.9
HALT	Halls	21.40	69	P	P	01 03 00.9	+1.4
HALT				IAmb	IAmb	01 03 24.3	
	comp=Z,164nm,1.3s						
HENM	Henderson Moun	21.41	66	P	P	01 02 59.8	+0.1
HENM				IAmb	IAmb	01 03 21.7	
	comp=Z,179nm,1.4s						
W45A	Hickory Valley	21.43	71	P	P	01 03 01.4	+1.4
W45A				IAmb	IAmb	01 03 26.7	
	comp=Z,94nm,1.3s						
146A	Union	21.44	78	P	P	01 03 02.0	+2.1
N41A	Harden Midland	21.44	55	P	P	01 03 00.9	+1.0
N41A				IAmb	IAmb	01 03 02.5	
	comp=Z,87nm,1.0s						
GLAT	Glass	21.49	68	P	P	01 03 00.0	-0.5
GLAT				IAmb	IAmb	01 03 33.9	
	comp=Z,147nm,1.2s						
HICK	Hickman	21.58	67	P	P	01 03 02.1	+0.7
HICK				IAmb	IAmb	01 03 25.0	
	comp=Z,117nm,1.1s						
L40A	Anamosa	21.71	51	P	P	01 03 03.7	+0.8
L40A				IAmb	IAmb	01 03 05.6	
	comp=Z,106nm,0.9s						
S44A	Carbondale	21.77	64	P	P	01 03 03.4	-0.1
SIUC	Southern Illin	21.80	64	P	P	01 03 04.2	+0.3
UTMT	University of	21.84	68	P	P	01 03 03.8	-0.5
CMIG	Matias Romero	21.99	123	P	P	01 03 06.4	+0.4
	comp=Z,53nm,1.1s,baz=314,slow=9.5,SNR=42						
CMIG				LR	LR	01 11 48.0	
	comp=Z,7µm,20.5s,baz=286,slow=37						
P43A	Skaggs, Pawnee	22.05	59	P	P	01 03 07.7	+1.1
P43A				IAmb	IAmb	01 03 45.1	
	comp=Z,176nm,1.6s						
Q44A	Meyer Farm, Va	22.23	61	P	P	01 03 10.8	+2.3
Q44A				IAmb	IAmb	01 03 13.7	
	comp=Z,104nm,1.2s						
Z47A	Carrollton	22.26	76	P	P	01 03 10.3	+1.5
SPMN	Marine on St.	22.27	43	P	P	01 03 10.2	+1.4
SPMN				IAmb	IAmb	01 03 39.2	
	comp=Z,237nm,1.9s						
SPMN	Marine on St.	22.27	43	P	P	01 03 10.1	+1.2
	baz=236,SNR=8.4						
PLAL	Pickwick Lake	22.33	71	P	P	01 03 10.6	+1.0
HDIL	Hopedale	22.50	57	P	P	01 03 13.2	+1.8
HDIL	Hopedale	22.50	57	P	P	01 03 12.0	+0.7
	baz=251						
AGMN	Agassiz Nation	22.62	33	P	P	01 03 13.6	+1.0
AGMN				IAmb	IAmb	01 03 45.4	
	comp=Z,118nm,1.5s						
AGMN	Agassiz Nation	22.62	33	P	P	01 03 13.5	+0.9
	baz=224,SNR=16						
WVT	Waverly	22.64	69	P	P	01 03 09.4	-3.5
WVT				pmax	pmax		
	comp=Z,162nm,1.5s						
WVT	Waverly	22.64	69	P	P	01 03 09.3	-3.5
WVT				IAmb	IAmb	01 03 36.0	
	comp=Z,162nm,1.5s						
WVT	Waverly	22.64	69	P	P	01 03 14.8	+2.0
	baz=263						
JFWS	Jewell Farm	22.73	50	P	P	01 03 14.6	+0.9
JFWS				pmax	pmax		
	comp=Z,63nm,0.9s						
JFWS	Jewell Farm	22.73	50	P	P	01 03 14.6	+0.9
JFWS				IAmb	IAmb	01 03 45.8	
	comp=Z,63nm,0.9s						
JFWS	Jewell Farm	22.73	50	P	P	01 03 14.4	+0.7
	baz=245,SNR=12						
L42A	Oliver, Polo	22.75	53	P	P	01 03 14.7	+0.7
L42A				IAmb	IAmb	01 03 16.9	
	comp=Z,101nm,1.1s						
OLIL	Olney	22.88	62	P	P	01 03 16.6	+1.2
OLIL				IAmb	IAmb	01 03 19.8	
	comp=Z,93nm,1.1s						
I40A	Norwalk	22.92	48	P	P	01 03 16.9	+1.1
I40A				IAmb	IAmb	01 03 41.4	
	comp=Z,140nm,1.4s						
O44A	Mansfield	22.98	58	P	P	01 03 16.5	+0.2
USIN	University of	23.05	64	P	P	01 03 17.1	-0.1
X48A	Hartselle	23.14	73	P	P	01 03 19.7	+1.6
X48A				IAmb	IAmb	01 03 41.0	
	comp=Z,134nm,1.4s						
LRAL	Lakeview Retre	23.16	77	P	P	01 03 20.4	+2.1
LRAL				IAmb	IAmb	01 03 41.0	
	comp=Z,88nm,1.1s						
LRAL	Lakeview Retre	23.16	77	P	P	01 03 20.7	+2.4
	baz=271,SNR=5.4						
BRAL	Brewton	23.22	81	P	P	01 03 19.4	+0.5
T47A	Sharon Grove	23.33	67	P	P	01 03 22.4	+2.3
V48A	Smith Brothers	23.41	70	P	P	01 03 22.7	+1.9
Y49A	Blount Mountai	23.65	74	P	P	01 03 25.5	+2.2
Y49A				IAmb	IAmb	01 03 45.6	
	comp=Z,84nm,1.4s						
M44A	Midewin, Midew	23.67	55	P	P	01 03 22.7	-0.6
M44A				IAmb	IAmb	01 03 56.6	
	comp=Z,93nm,1.1s						
P46A	Rosedale	23.77	60	P	P	01 03 24.1	-0.2
P46A				IAmb	IAmb	01 03 28.1	
	comp=Z,86nm,1.1s						
E38A	The Farm, Brul	23.77	41	P	P	01 03 24.1	-0.2
250A	Grady	23.82	79	P	P	01 03 26.4	+1.4
CLTN	Cedars of Leba	23.84	69	P	P	01 03 26.8	+1.7
G40A	Rib Lake	23.85	45	P	P	01 03 25.5	+0.4
G40A				IAmb	IAmb	01 03 28.9	
	comp=Z,105nm,1.2s						
K43A	Burlington	23.93	52	P	P	01 03 23.2	-2.7
K43A				IAmb	IAmb	01 03 29.4	
	comp=Z,100nm,1.1s						
I42A	Draeger Farm,	24.02	49	P	P	01 03 25.8	-0.9
L44A	Lake County Fo	24.03	54	P	P	01 03 22.4	-4.4
L44A				IAmb	IAmb	01 03 52.2	
	comp=Z,88nm,1.1s						
SFIN	Lafayette	24.05	58	P	P	01 03 24.6	-2.4
SFIN				IAmb	IAmb	01 04 08.4	
	comp=Z,147nm,1.8s						
SFIN	Lafayette	24.05	58	P	P	01 03 27.7	+0.7
	baz=254,SNR=11						
ULM	Lac du Bonnet	24.05	30	P	P	01 03 26.5	-0.4
	comp=Z,47nm,1.2s,baz=226,slow=9.7,SNR=49						
ULM				Lg	Lg	01 10 28.3	
	comp=Z,0.6nm,0.4s,baz=280,slow=18,SNR=1.3						
ULM	Lac du Bonnet	24.05	30	P	P	01 03 23.0	-3.9
ULM				pmax	pmax		
	comp=Z,266nm,1.7s						
ULM	Lac du Bonnet	24.05	30	P	P	01 03 23.0	-3.9
BBB	Bella Bella	24.05	339	P	P	01 03 29.2	+2.3
	comp=Z,11nm,0.9s,baz=147,slow=4.9,SNR=3.0						
BBB				LR	LR	01 13 15.7	
	comp=Z,4µm,20.4s,baz=162,slow=38						
BBB	Bella Bella	24.05	339	P	P	01 03 24.3	-2.6
BBB				IAmb	IAmb	01 03 32.1	
	comp=Z,125nm,1.4s						
Z50A	Ashland	24.06	76	P	P	01 03 28.0	+0.8
Z50A	Ashland	24.06	76	P	P	01 03 27.9	+0.7
	baz=271,SNR=10.0						
SWET	Sewanee	24.10	71	P	P	01 03 28.9	+1.4
WCI	Wyandotte Cave	24.17	64	P	P	01 03 24.0	-4.2
WCI				pmax	pmax		
	comp=Z,77nm,1.5s						
WCI	Wyandotte Cave	24.17	64	P	P	01 03 23.9	-4.2
WCI				IAmb	IAmb	01 04 05.3	
	comp=Z,77nm,1.5s						
WCI	Wyandotte Cave	24.17	64	P	P	01 03 29.8	+1.6
	baz=260						
BLO	Bloomington	24.18	61	P	P	01 03 28.2	-0.1
BLO				pmax	pmax		
	comp=Z,99nm,1.0s						
BLO	Bloomington	24.18	61	P	P	01 03 28.2	-0.1
U49A	Red Boiling Sp	24.33	68	P	P	01 03 30.1	+0.5
U49A				IAmb	IAmb	01 03 58.7	
	comp=Z,66nm,1.3s						
FPAL	Fort Paine	24.33	73	P	P	01 03 29.3	-0.4
FPAL				IAmb	IAmb	01 03 58.2	
	comp=Z,56nm,1.1s						
451A	Vernon	24.39	82	P	P	01 03 29.8	-0.5
CCIG	Comitan	24.53	120	P	P	01 03 29.4	-2.4
T49A	Edmonton	24.59	67	P	P	01 03 32.5	+0.5
T49A	Edmonton	24.59	67	P	P	01 03 34.3	+2.2
	baz=263,SNR=19						
EYMN	Ely	24.59	38	P	P	01 03 28.6	-3.3
EYMN				IAmb	IAmb	01 04 10.4	
	comp=Z,83nm,1.4s						
EYMN	Ely	24.59	38	P	P	01 03 33.8	+1.8
	baz=233,SNR=20						
W50A	Signal Mountai	24.60	71	P	P	01 03 33.0	+0.7
Z51A	Franklin	24.69	76	P	P	01 03 34.0	+1.1
Q48A	North Vernon	24.73	62	P	P	01 03 33.9	+0.6
	baz=259,SNR=6.2						
COWI	Conover	24.91	44	P	P	01 03 35.6	+0.8
X51A	Calhoun	24.95	73	P	P	01 03 36.1	+0.8
X51A	Calhoun	24.95	73	P	P	01 03 38.4	+3.1
	baz=269,SNR=9.2						
352A	Blakely	25.00	80	P	P	01 03 31.3	-4.5
H43A	Windswept, Lux	25.01	49	P	P	01 03 34.5	-1.2
H43A				IAmb	IAmb	01 03 39.9	
	comp=Z,50nm,0.9s						
R49A	Shelbyville	25.05	64	P	P	01 03 35.4	-0.8
R49A	Shelbyville	25.05	64	P	P	01 03 37.4	+1.2
	baz=261						
P48A	Milroy	25.07	61	P	P	01 03 34.9	-1.5
P48A	Milroy	25.07	61	P	P	01 03 37.6	+1.2
	baz=258,SNR=9.4						
152A	Waverly Hall	25.09	77	P	P	01 03 37.6	+1.0
L46A	Eue Claire	25.11	55	P	P	01 03 35.1	-1.5
L46A				IAmb	IAmb	01 03 41.3	
	comp=Z,60nm,1.1s						
L46A	Eue Claire	25.11	55	P	P	01 03 37.8	+1.2
	baz=252						
T50A	Nancy	25.13	67	P	P	01 03 38.5	+1.6
	baz=264						
N47A	Urbana	25.21	58	P	P	01 03 38.6	+1.0
N47A	Urbana	25.21	58	P	P	01 03 38.6	+1.0
	baz=255						
CPCT	Cooper Cave	25.26	71	P	P	01 03 40.1	+2.0
CPCT				IAmb	IAmb	01 03 59.8	
	comp=Z,112nm,1.9s						
F42A	Maple Grove Fa	25.36	46	P	P	01 03 38.0	-0.9
Q49A	Aurora	25.39	62	P	P	01 03 40.9	+1.7
	baz=259						
M47A	Cromwell	25.39	57	P	P	01 03 40.7	+1.4
	baz=254,SNR=6.8						
TEIG	Tepich	25.40	108	P	P	01 03 38.9	-0.5

TEIG				IAmb	IAmb	01 03 58.7	
	comp=Z,97nm,1.7s						
V51A	Loudon	25.42	70	P	P	01 03 41.4	+1.8
O48A	Farmland	25.45	59	P	P	01 03 40.3	+0.5
	baz=256,SNR=14						
J45A	Montague	25.52	52	P	P	01 03 39.3	-1.1
S50A	Richmond	25.56	66	P	P	01 03 43.1	+2.3
	baz=263						
553A	Crawfordville	25.57	83	P	P	01 03 42.0	+1.1
Y52A	Lilburn	25.61	74	P	P	01 03 40.4	-0.9
Y52A				IAmb	IAmb	01 04 06.8	
	comp=Z,95nm,1.6s						
Y52A	Lilburn	25.61	74	P	P	01 03 43.4	+2.1
	baz=271,SNR=5.4						
P49A	Miami Univ. Ec	25.62	61	P	P	01 03 43.5	+2.1
	baz=258						
K46A	Dorr	25.68	54	P	P	01 03 42.1	+0.2
	baz=251						
N48A	Decatur	25.69	58	P	P	01 03 41.5	-0.5
	baz=255						
R50A	Paris	25.70	64	P	P	01 03 41.5	-0.6
R50A	Paris	25.70	64	P	P	01 03 42.6	+0.6
	baz=261						
W52A	Murphy	25.73	72	P	P	01 03 41.6	-0.8
W52A				IAmb	IAmb	01 04 04.3	
	comp=Z,62nm,1.3s						
D41A	Chassel	25.74	43	P	P	01 03 43.2	+0.8
D41A				IAmb	IAmb	01 04 39.0	
	comp=Z,97nm,1.5s						
FFC	Flin Flon	25.77	16	eP	P	01 03 43.4	+0.8
FFC	Flin Flon	25.77	16	P	P	01 03 39.5	-3.1
FFC				IAmb	IAmb	01 03 45.4	
	comp=Z,43nm,1.1s						
I45A	Fountain	25.85	51	P	P	01 03 42.0	-1.3
I45A				IAmb	IAmb	01 03 46.3	
	comp=Z,58nm,1.1s						
L47A	Sherwood	25.87	56	P	P	01 03 44.9	+1.3
	baz=253						
TKL	Tuckaleechee C	25.88	70	P	P	01 03 44.6	+0.9
	comp=Z,9.4nm,0.9s,baz=257,slow=7.5,SNR=12						
TKL				Lg	Lg	01 11 24.1	
	comp=Z,1.8nm,0.8s,baz=340,slow=22,SNR=1.5						
TKL				LR	LR	01 14 08.3	
	comp=Z,4µm,20.7s,baz=265,slow=37						
TKL	Tuckaleechee C	25.88	70	P	P	01 03 41.7	-2.1
TKL				pmax	pmax		
	comp=Z,109nm,1.7s						
TKL	Tuckaleechee C	25.88	70	P	P	01 03 41.6	-2.1
TKL				IAmb	IAmb	01 04 05.9	
	comp=Z,109nm,1.6s						
J46A	Howard City	26.00	52	P	P	01 03 45.8	+1.1
	baz=250						
V52A	Sevierville	26.03	70	P	P	01 03 45.9	+0.8
V52A				IAmb	IAmb	01 04 24.6	
	comp=Z,65nm,1.5s						
O49A	Covington	26.05	60	P	P	01 03 46.6	+1.4
O49A				IAmb	IAmb	01 04 24.0	
	comp=Z,65nm,1.3s						
O49A	Covington	26.05	60	P	P	01 03 46.1	+0.9
	baz=258,SNR=6.4						
GOGA	Godfrey	26.11	75	P	P	01 03 43.2	-2.6
GOGA				pmax	pmax		
	comp=Z,54nm,1.6s						
GOGA	Godfrey	26.11	75	P	P	01 03 43.2	-2.6
GOGA	Godfrey	26.11	75	P	P	01 03 46.7	+0.8
	baz=272						
TZTN	Tazewell	26.12	68	P	P	01 03 45.7	-0.2
TZTN	Tazewell	26.12	68	P	P	01 03 48.4	+2.5
	baz=266						
TIGA	Tifton	26.14	80	P	P	01 03 45.4	-0.7
TIGA	Tifton	26.14	80	P	P	01 03 50.8	+4.7
	baz=276						
MOBC	Moresby Island	26.16	335	P	P	01 03 43.8	-2.4
S51A	Beattyville	26.19	66	P	P	01 03 45.9	-0.6
S51A				IAmb	IAmb	01 04 40.1	
	comp=Z,79nm,1.9s						
S51A	Beattyville	26.19	66	P	P	01 03 51.3	+4.7
	baz=263						
K47A	Vermontville	26.23	54	P	P	01 03 48.0	+1.2
	baz=252,SNR=7.4						
X53A	Estanollee	26.23	73	P	P	01 03 49.2	+2.2
	baz=270						
R51A	Hillsboro	26.29	64	P	P	01 03 48.7	+1.3
	baz=262						
N49A	Columbus Grove	26.33	58	P	P	01 03 44.5	-3.2
N49A	Columbus Grove	26.33	58	P	P	01 03 48.5	+0.8
	baz=256						
P50A	Jamestown	26.34	61	P	P	01 03 48.7	+0.9
	baz=259,SNR=10						
I46A	Reed City	26.34	51	P	P	01 03 48.9	+1.0
	baz=249						
E43A	Lone Tree Farm	26.35	45	P	P	01 03 48.1	+0.3
L48A	N Adams	26.41	56	P	P	01 03 49.5	+1.0
	baz=254						
154A	Montrose	26.45	77	P	P	01 03 50.1	+1.2
J47A	Sunmer	26.53	53	P	P	01 03 48.2	-1.3
J47A				IAmb	IAmb	01 03 52.0	
	comp=Z,57nm,1.1s						
J47A	Sunmer	26.53	53	P	P	01 03 50.6	+1.1
	baz=251,SNR=8.9						
BG3	Lake Jocassee	26.55	72	P	P	01 03 51.1	+1.3
BG3				IAmb	IAmb	01 04 12.8	
	comp=Z,124nm,1.7s						
O50A	Cable	26.58	60	P	P	01 03 50.9	+0.9
	baz=258,SNR=6.5						
Q51A	Peebles	26.58	63	P	P	01 03 47.9	-2.1
Q51A	Peebles	26.58	63	P	P	01 03 51.0	+0.9
	baz=261						
APG	El Apazote	26.58	120	P	P	01 03 50.6	+0.2
	comp=Z,11nm,0.9s,baz=287,slow=10,SNR=8.0						
APG				LR	LR	01 15 09.7	
	comp=Z,4µm,20.9s,baz=304,slow=38						
T52A	Hallie	26.62	67	P	P	01 03 49.2	-1.2
T52A				IAmb	IAmb	01 04 40.6	
	comp=Z,62nm,1.5s						
M49A	Liberty Center	26.62	57	P	P	01 03 50.7	+0.3
	baz=255						
G45A	Suttons Bay	26.62	49	P	P	01 03 51.0	+0.7
G45A				IAmb	IAmb	01 04 37.1	
	comp=Z,61nm,1.1s						
G45A	Suttons Bay	26.62	49	P	P	01 03 50.9	+0.5
	baz=246,SNR=9.3						
V53A	Saluda	26.66	70	P	P	01 03 53.0	+2.1
P51A	Williamsport	26.87	62	P	P	01 03 53.5	+0.8
P51A				IAmb	IAmb	01 04 22.5	
	comp=Z,133nm,1.9s						
P51A	Williamsport	26.87	62	P	P	01 03 53.5	+0.8
	baz=260						
L49A	Milan	26.93	56	P	P	01 03 54.6	+1.5
	baz=254						
F45A	CMU Biological	26.97	48	P	P	01 03 54.7	+1.2
	baz=246,SNR=5.9						
X54A	Belton	27.00	73	P	P	01 03 55.6	+1.7
	baz=270						
I47A	Gladwin	27.00	52	P	P	01 03 55.3	+1.5
I47A				IAmb	IAmb	01 03 56.0	
	comp=Z,54nm,1.2s						
I47A	Gladwin	27.00	52	P	P	01 03 55.0	+1.2
	baz=250,SNR=5.4						
255A	Hazlehurst	27.04	79	P	P	01 03 54.3	+0.1
N50A	Nevada	27.06	59	P	P	01 03 55.2	+0.9
	baz=258,SNR=11						
AAM	Ann Arbor	27.07	56	P	P	01 03 52.1	-2.3
AAM				pmax	pmax		
	comp=Z,44nm,1.3s						
AAM	Ann Arbor	27.07	56	P	P	01 03 52.1	-2.3
ACSO	Alum Creek Sta	27.07	60	P	P	01 03 55.6	+1.1
ACSO				IAmb	IAmb	01 03 57.1	
	comp=Z,86nm,1.4s						
ACSO	Alum Creek Sta	27.07	60	P	P	01 03 55.4	+1.0
	baz=259,SNR=5.8						
HODGE	Hodges	27.10	74	P	P	01 03 55.8	+1.1
HODGE				IAmb	IAmb	01 04 18.0	
	comp=Z,86nm,1.3s						
E44A	Grand Marais A	27.12	46	P	P	01 03 55.8	+1.0
E44A				IAmb	IAmb	01 03 57.6	
	comp=Z,60nm,1.1s						
E44A	Grand Marais A	27.12	46	P	P	01 03 55.5	+0.7
	baz=243,SNR=16						
W54A	Cherokee Point	27.16	72	P	P	01 03 57.6	+2.3
	baz=270						
GLMI	Grayling	27.22	50	P	P	01 03 54.8	-1.0
GLMI				IAmb	IAmb	01 03 58.2	
	comp=Z,58nm,1.1s						
GLMI	Grayling	27.22	50	P	P	01 03 57.9	+2.1
	baz=248						
J48A	Bridge Port	27.27	54	P	P	01 03 54.3	-1.8
J48A				IAmb	IAmb	01 03 58.5	
	comp=Z,40nm,1.1s						
J48A	Bridge Port	27.27	54	P	P	01 03 56.9	+0.7
	baz=252						
M50A	Fremont	27.28	58	P	P	01 03 56.2	-0.1
M50A				IAmb	IAmb	01 03 58.9	
	comp=Z,53nm,1.4s						
M50A	Fremont	27.28	58	P	P	01 03 57.5	+1.2
	baz=256						
656A	Willston	27.33	84	P	P	01 03 55.9	-1.0
656A				IAmb	IAmb	01 04 16.4	
	comp=Z,43nm,1.1s						
O51A	Pataskala	27.34	61	P	P	01 03 57.9	+1.0
	baz=259						
Q52A	Bidwell	27.40	63	P	P	01 03 59.2	+1.8
	baz=262						
Y55A	Saluda	27.44	74	P	P	01 03 59.3	+1.5
	baz=272,SNR=5.8						
PAULI	Pauline	27.46	72	P	P	01 03 57.2	-0.8
U54A	Nelsons Funny	27.51	69	P	P	01 04 00.3	+1.9
U54A	Nelsons Funny	27.51	69	P	P	01 03 59.0	+0.5
	baz=267						
R53A	Hurricane	27.56	65	P	P	01 03 57.2	-1.7
R53A	Hurricane	27.56	65	P	P	01 04 00.6	+1.7
	baz=263						
L50A	Kingsville	27.61	57	P	P	01 04 00.3	+1.1
	baz=255,SNR=6.1						
P52A	Corning	27.61	62	P	P	01 04 00.1	+0.8
	baz=261						
X55A	Gracelyn & Ava	27.61	73	P	P	01 03 59.8	+0.5
	baz=271						
J49A	Marlette	27.73	54	P	P	01 04 01.5	+1.2
	baz=253						
T54A	Tazewell	27.74	68	P	P	01 04 01.5	+0.9
	baz=266						
G47A	Hillman	27.85	50	P	P	01 04 01.8	+0.4
	baz=248,SNR=5.7						
KMSC	Kings Mountain	27.86	72	P	P	01 04 03.4	+1.8
KMSC				IAmb	IAmb	01 04 39.6	
	comp=Z,51nm,1.2s						
KMSC	Kings Mountain	27.86	72	P	P	01 04 02.7	+1.2
	baz=270						
M51A	Elyria	27.89	58	P	P	01 04 03.3	+1.5
	baz=257						
O52A	Adamsville	27.91	61	P	P	01 04 03.2	+1.2
O52A	Adamsville	27.91	61	P	P	01 04 02.9	+0.9
	baz=260						
JSC	Jenkinsville	27.93	73	P	P	01 04 01.7	-0.5
JSC				pmax	pmax		
	comp=Z,15nm,1.1s						
JSC	Jenkinsville	27.93	73	P	P	01 04 01.7	-0.5
K50A	Casco	27.93	55	P	P	01 04 01.1	-1.0
K50A				IAmb	IAmb	01 04 58.4	
	comp=Z,63nm,1.5s						
Q53A	Leroy	27.96	64	P	P	01 04 04.1	+1.7
	baz=263						
V55A	Taylorsville	27.97	70	P	P	01 04 01.6	-0.9
V55A	Taylorsville	27.97	70	P	P	01 04 03.8	+1.2
	baz=269						
S54A	Dingess, Beckl	28.01	66	P	P	01 04 02.5	-0.4
S54A				IAmb	IAmb	01 04 06.6	
	comp=Z,86nm,2.0s						
E46A	Sault Ste Mari	28.02	47	P	P	01 04 01.1	-1.8
E46A				IAmb	IAmb	01 04 52.2	
	comp=Z,38nm,1.3s						
X56A	White Oak	28.11	73	P	P	01 04 05.2	+1.4
	baz=271,SNR=5.3						
U55A	TA2, Sparta	28.13	69	P	P	01 04 04.6	+0.6
	baz=268,SNR=8.0						
I49A	Point Hope	28.13	53	P	P	01 04 00.7	-3.1
I49A				IAmb	IAmb	01 04 06.0	
	comp=Z,34nm,1.1s						
I49A	Point Hope	28.13	53	P	P	01 04 04.8	+1.0
	baz=252						
P53A	Whipple	28.15	62	P	P	01 04 01.6	-2.6
P53A	Whipple	28.15	62	P	P	01 04 04.8	+0.7
	baz=262						
N52A	McGinn’s Farm,	28.15	60	P	P	01 04 05.5	+1.3
	baz=259						
157A	Early Branch	28.23	77	P	P	01 04 07.3	+2.5
	baz=275						
R54A	Victor	28.30	65	P	P	01 04 07.1	+1.6
	baz=264						
T55A	Pulaski	28.37	67	P	P	01 04 06.9	+0.7
	baz=266						
O53A	New Philadelph	28.41	61	P	P	01 04 07.4	+1.0
	baz=260						
D46A	Sault St. Mari	28.41	46	P	P	01 04 07.0	+0.7
	baz=245,SNR=20						
Z57A	Bowman	28.43	75	P	P	01 04 07.5	+0.9
	baz=274						
Q54A	Coxs Mills	28.51	64	P	P	01 04 08.1	+0.8
Q54A	Coxs Mills	28.51	64	P	P	01 04 08.1	+0.8
	baz=263,SNR=6.7						
M52A	Chesterland	28.55	58	P	P	01 04 08.8	+1.2
M52A				IAmb	IAmb	01 04 09.8	
	comp=Z,37nm,1.2s						
M52A	Chesterland	28.55	58	P	P	01 04 08.4	+0.8
	baz=258						
BIRD	Birdtown, Kers	28.58	73	P	P	01 04 08.9	+1.0
S55A	Lewisburg	28.64	66	P	P	01 04 09.3	+0.7
	baz=266						
Y57A	Sumter	28.65	74	P	P	01 04 07.7	-0.9
Y57A				IAmb	IAmb	01 04 40.4	
	comp=Z,56nm,1.4s						
BLA	Blacksburg	28.67	67	P	P	01 04 06.5	-2.3
BLA				pmax	pmax		
	comp=Z,23nm,1.3s						
BLA	Blacksburg	28.67	67	P	P	01 04 06.5	-2.3
BLA	Blacksburg	28.67	67	P	P	01 04 10.3	+1.5
	baz=267						
E47A	Iron Bridge	28.71	47	P	P	01 04 10.1	+1.0
	baz=247,SNR=9.0						
N53A	Lisbon	28.79	60	P	P	01 04 07.6	-2.1
N53A				IAmb	IAmb	01 04 12.9	
	comp=Z,34nm,1.1s						
N53A	Lisbon	28.79	60	P	P	01 04 10.3	+0.5
	baz=260						
P54A	Burton	28.86	62	P	P	01 04 11.1	+0.6
	baz=262,SNR=9.7						
W57A	Gilead	28.96	72	P	P	01 04 08.5	-2.8
W57A	Gilead	28.96	72	P	P	01 04 12.6	+1.2
	baz=271						
WRAK	Wrangell Islan	28.96	339	P	P	01 04 09.8	-1.3
CSU	Charleston Sou	28.98	76	P	P	01 04 09.2	-2.3
R55A	Marlinton	28.99	65	P	P	01 04 11.1	-0.6
R55A				IAmb	IAmb	01 04 42.0	
	comp=Z,38nm,1.3s						
R55A	Marlinton	28.99	65	P	P	01 04 13.9	+2.2
	baz=265,SNR=5.6						
M53A	WI Miller and	29.03	59	P	P	01 04 12.7	+0.8
	baz=259,SNR=6.9						
O54A	Avella	29.03	61	P	P	01 04 08.8	-3.2
O54A				IAmb	IAmb	01 04 14.3	
	comp=Z,38nm,1.3s						
O54A	Avella	29.03	61	P	P	01 04 12.9	+1.0
	baz=261						
D47A	Chapleau	29.06	46	P	P	01 04 13.0	+0.8
	baz=246,SNR=8.5						
Q55A	Buckhannon	29.09	64	P	P	01 04 14.6	+2.0
	baz=264						
Z58A	St. Stephen	29.17	75	P	P	01 04 15.5	+2.3
	baz=274						
F49A	Sandfield	29.25	49	P	P	01 04 13.9	0.0
	baz=250						
Y58A	Scranton	29.26	74	P	P	01 04 13.6	-0.5
Y58A	Scranton	29.26	74	P	P	01 04 17.2	+3.2
	baz=273						
K52A	Tillsonburg	29.29	56	P	P	01 04 15.5	+1.3
	baz=256						
I51A	Listowel	29.34	54	P	P	01 04 15.7	+1.0
	baz=254						
P55A	Reedsville	29.35	63	P	P	01 04 15.7	+0.8
	baz=263						
MCWV	Mont Chateau	29.36	62	P	P	01 04 12.9	-2.0
MCWV	Mont Chateau	29.36	62	P	P	01 04 15.3	+0.5
	baz=262						
E48A	Lockeyer	29.43	48	P	P	01 04 17.0	+1.5
	baz=248,SNR=6.0						
L53A	Girard	29.43	58	P	P	01 04 17.1	+1.6
	baz=258						
N54A	Moraine State	29.45	60	P	P	01 04 16.6	+1.0
N54A				IAmb	IAmb	01 04 18.3	
	comp=Z,44nm,1.1s						
N54A	Moraine State	29.45	60	P	P	01 04 16.5	+0.9
	baz=260,SNR=9.0						
ALLY	Alegheny Colle	29.46	58	P	P	01 04 13.3	-2.4
U57A	Blanch	29.50	69	P	P	01 04 14.5	-1.7
	baz=269						
R56A	Bull Pasture M	29.56	65	P	P	01 04 16.4	-0.4
	baz=265						
TGUH	Tegucigalpa,Un	29.59	118	P	P	01 04 14.4	-2.8
TGUH				IAmb	IAmb	01 04 21.1	
	comp=Z,79nm,1.4s						
ERPA	Erie	29.67	57	P	P	01 04 14.6	-3.0
ERPA				IAmb	IAmb	01 04 20.1	
	comp=Z,42nm,1.2s						
ERPA	Erie	29.67	57	P	P	01 04 19.1	+1.5
	baz=258						
M54A	Oil Creek Stat	29.78	59	P	P	01 04 17.7	-1.0
M54A	Oil Creek Stat	29.78	59	P	P	01 04 20.7	+2.0
	baz=259						
Q56A	Snyder Ridge,	29.79	64	P	P	01 04 22.2	+3.5
D48A	Paudash Townsh	29.92	47	P	P	01 04 20.1	+0.4
	baz=248,SNR=9.0						
DLBC	Dease Lake	30.05	343	P	P	01 04 23.7	+2.8
	comp=Z,25nm,1.0s,baz=162,slow=8.8,SNR=6.8						
DLBC				LR	LR	01 17 39.2	
	comp=Z,7µm,18.3s,baz=164,slow=39						
DLBC	Dease Lake	30.05	343	IAmb	IAmb	01 04 26.0	
	comp=Z,47nm,1.1s						
P56A	Dayton Farm, R	30.11	63	P	P	01 04 22.7	+1.2
	baz=264						
U58A	Oxford	30.14	69	P	P	01 04 22.3	+0.5
	baz=269						
N55A	Marion Center	30.17	60	P	P	01 04 24.1	+2.0
	baz=261						
L54A	Sinclairville	30.18	57	P	P	01 04 24.1	+1.9
	baz=258						
R57A	Stanardsville	30.24	65	P	P	01 04 25.2	+2.5
	baz=266						
H52A	Wyevale	30.35	53	P	P	01 04 25.6	+2.1
	baz=254						
V59A	Middlesex	30.38	70	P	P	01 04 25.5	+1.5
	baz=270						
O56A	Blue Knob Stat	30.41	61	P	P	01 04 26.3	+2.1
O56A				IAmb	IAmb	01 04 26.6	
	comp=Z,32nm,1.2s						
O56A	Blue Knob Stat	30.41	61	P	P	01 04 25.1	+0.8
	baz=262						
M55A	Ridgway	30.44	59	P	P	01 04 25.2	+0.7
M55A				IAmb	IAmb	01 04 28.2	
	comp=Z,42nm,1.2s						
M55A	Ridgway	30.44	59	P	P	01 04 25.2	+0.7
	baz=260,SNR=8.5						
N56A	West Decatur	30.71	60	P	P	01 04 27.4	+0.6
	baz=262						
F51A	Arnstein	30.71	50	P	P	01 04 28.7	+1.9
	baz=252						
WVNY	West Valley, N	30.73	57	P	P	01 04 26.0	-1.0
WVNY				IAmb	IAmb	01 04 29.6	
	comp=Z,27nm,1.0s						
P57A	Homestead Farm	30.74	63	P	P	01 04 26.6	-0.5
P57A				IAmb	IAmb	01 04 29.4	
	comp=Z,35nm,1.4s						
P57A	Homestead Farm	30.74	63	P	P	01 04 27.7	+0.6
	baz=264						
M56A	Emporium	30.88	59	P	P	01 04 29.7	+1.4
M56A	Emporium	30.88	59	P	P	01 04 29.1	+0.8
	baz=261						
J54A	Appleton	30.88	56	P	P	01 04 27.8	-0.5
J54A				IAmb	IAmb	01 04 31.1	
	comp=Z,39nm,0.9s						
J54A	Appleton	30.88	56	P	P	01 04 29.7	+1.4
	baz=257						
SADO	Sadowa	30.90	53	P	P	01 04 29.1	+0.7
	comp=Z,9.6nm,0.9s,baz=271,slow=9.8,SNR=8.5						
SADO				LR	LR	01 18 51.5	
	comp=Z,2µm,19.5s,baz=257,slow=40						
SADO	Sadowa	30.90	53	P	P	01 04 29.4	+1.0
Q58A	Fox Den Farm,	30.95	64	P	P	01 04 30.4	+1.5
	baz=266						
SSPA	Standing Stone	30.97	61	P	P	01 04 25.6	-3.5
SSPA	Standing Stone	30.97	61	P	P	01 04 30.5	+1.3
	baz=262						
MEDO	Medina	30.99	56	P	P	01 04 28.9	-0.4
MEDO				IAmb	IAmb	01 04 32.0	
	comp=Z,42nm,1.1s						
F52A	Sundridge	31.07	51	P	P	01 04 29.9	0.0
	baz=253						
D50A	G1974 Best Tow	31.17	48	P	P	01 04 31.0	+0.2
	baz=250,SNR=6.3						
E51A	G1948 Merrick	31.18	49	P	P	01 04 29.0	-1.9
	baz=251						
H53A	Bobcaygeon	31.23	53	P	P	01 04 32.7	+1.3
	baz=255						
G53A	Haliburton	31.35	52	P	P	01 04 33.6	+1.2
	baz=254,SNR=5.2						
D51A	Lot 18 Range I	31.44	48	P	P	01 04 33.6	+0.5
	baz=250,SNR=6.4						
L56A	Greenwood	31.45	58	P	P	01 04 32.0	-1.3
L56A				IAmb	IAmb	01 04 36.1	
	comp=Z,24nm,0.9s						
L56A	Greenwood	31.45	58	P	P	01 04 35.0	+1.6
	baz=260,SNR=7.5						
J55A	Hilton	31.47	56	P	P	01 04 32.8	-0.6
J55A	Hilton	31.47	56	P	P	01 04 34.3	+0.9
	baz=258						
BESE	Bessie Mountai	31.52	339	P	P	01 04 35.1	+1.4
T60A	Surry	31.61	68	P	P	01 04 34.5	-0.2
T60A				IAmb	IAmb	01 04 42.1	
	comp=Z,26nm,0.9s						
M57A	Sunshine Farm,	31.64	60	P	P	01 04 33.2	-1.8
M57A				IAmb	IAmb	01 04 42.2	
	comp=Z,24nm,1.1s						
M57A	Sunshine Farm,	31.64	60	P	P	01 04 35.8	+0.8
	baz=262						
SDMD	Soldier’s Deli	31.64	63	P	P	01 04 33.2	-1.8
O58A	Lewisberry	31.64	62	P	P	01 04 36.7	+1.6
	baz=264,SNR=6.0						
E52A	Mattawa	31.65	50	P	P	01 04 35.7	+0.7
	baz=252,SNR=6.8						
I55A	Frankford	31.77	54	P	P	01 04 37.5	+1.4
	baz=257						
G54A	Lake Saint Pet	31.78	52	P	P	01 04 36.9	+0.6
	baz=254,SNR=5.9						
PAGS	Pennsylvania G	31.81	62	P	P	01 04 38.2	+1.7
DELO	Deloro Mine	31.89	54	P	P	01 04 35.7	-1.4
DELO				IAmb	IAmb	01 04 39.8	
	comp=Z,28nm,1.2s						
L57A	Andrews Acres	31.94	58	P	P	01 04 38.7	+1.0
	baz=261						
ALGO	Algonquin Park	31.96	51	P	P	01 04 38.4	+0.6
	baz=254,SNR=8.6						
P59A	Jarrettsville	31.97	63	P	P	01 04 38.4	+0.5
	baz=265						
YKA	Yellowknife Ar	32.06	360	P	P	01 04 40.4	+2.0
	comp=Z,3.3nm,0.9s,baz=175,slow=9.3,SNR=21						
YKA				LR	LR	01 19 26.7	
	comp=Z,4µm,18.7s,baz=0.0,slow=40						
M58A	Price’s Panora	32.14	60	P	P	01 04 41.5	+2.1
	baz=262						
J56A	Wolcott	32.16	56	P	P	01 04 38.6	-0.9
J56A				IAmb	IAmb	01 04 43.0	
	comp=Z,37nm,1.1s						
J56A	Wolcott	32.16	56	P	P	01 04 40.5	+0.9
	baz=259						
PECO	Prince Edward	32.19	55	P	P	01 04 38.6	-1.2
PECO				IAmb	IAmb	01 04 42.7	
	comp=Z,37nm,1.0s						
H55A	Tweed	32.20	54	P	P	01 04 40.8	+0.9
	baz=257						
K57A	Scipio Center	32.31	57	P	P	01 04 42.9	+2.0
	baz=260						
E53A	Dumoine, Ponti	32.34	50	P	P	01 04 42.6	+1.5
	baz=253,SNR=8.6						
SKAG	Skagway	32.38	340	P	P	01 04 39.6	-1.6
PLVO	Plevna	32.39	53	P	P	01 04 40.3	-1.2
PLVO				IAmb	IAmb	01 04 44.4	
	comp=Z,38nm,1.1s						
D53A	Lac Vacive, Po	32.52	49	P	P	01 04 43.7	+1.0
D53A				IAmb	IAmb	01 04 45.4	
	comp=Z,29nm,1.1s						
D53A	Lac Vacive, Po	32.52	49	P	P	01 04 43.6	+1.0
	baz=252,SNR=7.9						
N59A	State Game Lan	32.60	61	P	P	01 04 44.5	+1.0
	baz=264						
BINY	Binghamton	32.61	58	P	P	01 04 41.7	-1.9
BINY	Binghamton	32.61	58	P	P	01 04 45.1	+1.5
	baz=262						
E54A	Lac Daplat, Po	32.67	50	P	P	01 04 45.4	+1.4
	baz=254						
G55A	Calabogie	32.68	53	P	P	01 04 45.8	+1.7

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      baz=256,SNR=5.4
J57A  Williamstown      32.80  56   P      P      01 04 47.6 +2.4
J57A                                IAmb   IAmb   01 04 47.8
      comp=Z,30nm,1.2s
J57A  Williamstown      32.80  56   P      P      01 04 46.3 +1.1
      baz=260
O60A  Telford           32.82  62   P      P      01 04 46.5 +1.1
      baz=265
H56A  Elgin             32.85  54   P      P      01 04 46.2 +0.6
      baz=258
LUPA  Lehigh Univers    32.87  61   P      P      01 04 44.1  -1.7
M59A  Waymart           32.93  60   P      P      01 04 47.8 +1.4
      baz=263
K58A  Earlville         32.94  57   P      P      01 04 45.2  -1.3
K58A  Earlville         32.94  57   P      P      01 04 47.3 +0.8
      baz=261
VLDQ  Val d'Or          33.00  47   P      P      01 04 43.3  -3.5
VLDQ                                IAmb   IAmb   01 04 47.7
      comp=Z,35nm,1.1s
F55A  Otter Lake        33.08  52   P      P      01 04 49.0 +1.5
      baz=256
N60A  Cedar Hill Far    33.10  61   P      P      01 04 48.6 +0.8
      baz=264
I57A  Carthage          33.14  55   P      P      01 04 50.1 +1.9
      baz=259,SNR=6.4
D54A  Lac Fusel, La     33.22  49   P      P      01 04 49.3 +0.4
      baz=253,SNR=7.0
L59A  Walton            33.30  59   P      P      01 04 52.0 +2.4
      baz=262
E55A  Montcerf-Lytto    33.43  51   P      P      01 04 52.8 +2.2
      baz=255
H57A  Richville         33.43  54   P      P      01 04 52.5 +1.8
      baz=259
MATQ  Matagami          33.46  44   P      P      01 04 51.3 +0.5
      baz=248,SNR=9.2
M60A  Port Jervis       33.51  60   P      P      01 04 52.1 +0.7
      baz=264
I58A  Old Forge         33.58  56   P      P      01 04 53.4 +1.4
      baz=260,SNR=6.5
LSQQ  Lebel-sur-Quev    33.62  46   P      P      01 04 52.4 +0.2
      baz=250
JTS   Las Juntas de     33.72 120   LR     LR     01 19 47.1
      comp=Z,2µm,18.7s,baz=12,slow=38
J59A  Piesco            33.88  56   P      P      01 04 51.3  -3.3
J59A                                IAmb   IAmb   01 05 24.9
      comp=Z,22nm,1.0s
J59A  Piesco            33.88  56   P      P      01 04 55.4 +0.8
      baz=261
L60A  Shokan            33.88  59   P      P      01 04 56.4 +1.7
      baz=263
D55A  Sainte-Anne-du    33.97  50   P      P      01 04 56.0 +0.7
      baz=255,SNR=9.3
PAL   Palisades         34.02  61   P      P      01 04 53.1  -2.7
PAL                                 pmax   pmax
      comp=Z,47nm,1.6s
PAL   Palisades         34.02  61   P      P      01 04 53.1  -2.7
PAL                                 IAmb   IAmb   01 04 58.9
      comp=Z,47nm,1.6s
HYT   Haines Junctio    34.12 340   P      P      01 04 56.6   0.0
HYT                                 IAmb   IAmb   01 05 01.8
      comp=Z,36nm,1.3s
E56A  St. Veronique     34.14  51   P      P      01 04 58.9 +2.1
      baz=256,SNR=6.0
NCB   Newcomb           34.16  56   P      P      01 04 56.1  -1.0
TRQ   Mont Tremblant    34.38  52   P      P      01 04 57.6  -1.4
TRY   Troy              34.38  58   P      P      01 04 57.9  -1.1
I59A  Olmsteadville     34.39  56   P      P      01 05 00.3 +1.3
      baz=261
D56A  ZEC Mazanza, M    34.45  50   P      P      01 05 00.7 +1.2
      baz=255
G58A  Ormstown          34.50  53   P      P      01 05 01.8 +1.9
      baz=259,SNR=5.0
H59A  Cadyville         34.66  54   P      P      01 05 03.4 +2.1
      baz=260,SNR=5.3
E57A  Chemin Saint G    34.70  51   P      P      01 05 03.6 +1.9
      baz=257
I60A  Shoreham          34.81  56   P      P      01 05 04.1 +1.5
      baz=261,SNR=5.1
D57A  Chemin Vers le    35.02  50   P      P      01 05 05.5 +1.1
      baz=256
G59A  Clarenceville     35.09  54   P      P      01 05 07.1 +2.1
      baz=260
E58A  La Victoria       35.28  52   P      P      01 05 06.9 +0.2
      baz=258
H60A  Morristown        35.34  55   P      P      01 05 09.7 +2.5
      baz=261
CTGM  Chitina Glacie    35.44 337   P      P      01 05 11.0 +3.0
CTGM                                IAmb   IAmb   01 05 13.5
      comp=Z,57nm,1.2s
BARN  Barnard Glacie    35.62 337   P      P      01 05 07.4  -2.2
BARN                                IAmb   IAmb   01 05 14.9
      comp=Z,35nm,1.1s
G60A  Masonville        35.69  54   P      P      01 05 11.6 +1.4
      baz=260
D58A  Chemin du LacG    35.70  50   P      P      01 05 11.1 +0.8
      baz=257,SNR=6.4
TGL   Tana Glacier      35.80 336   P      P      01 05 10.7  -0.4
TGL                                 IAmb   IAmb   01 05 17.0
      comp=Z,63nm,1.5s
BALM  Baldy             35.83 337   P      P      01 05 10.4  -1.0
LATQ  La Tuque          35.83  50   P      P      01 05 12.7 +1.3
LATQ  La Tuque          35.83  50   P      P      01 05 12.0 +0.6
      baz=257
MCARA McCarthy VSAT     36.31 337   P      P      01 05 18.9 +3.6
MCARA                               IAmb   IAmb   01 05 20.9
      comp=Z,46nm,1.0s
GLB   Gilahina Butte    36.62 336   P      P      01 05 21.5 +3.5
GLB                                 IAmb   IAmb   01 05 23.5
      comp=Z,41nm,1.0s
BCAR  Beaver Creek A    37.15 339   P      P      01 05 18.8  -3.7
DAWY  Dawson            37.23 342   P      P      01 05 24.5 +1.3
D61A  St Aubert, Com    37.52  51   P      P      01 05 26.9 +1.1
      baz=259
KDAK  Kodiak Island     38.02 327   LR     LR     01 18 55.0
      comp=Z,3µm,20.5s,baz=118,slow=33
SCM   Sheep Creek Mo    38.13 335   P      P      01 05 30.8  -0.1
SCM                                 pmax   pmax
      comp=Z,76nm,1.3s
SCM   Sheep Creek Mo    38.13 335   P      P      01 05 30.8  -0.1
SCM                                 IAmb   IAmb   01 05 36.6
      comp=Z,76nm,1.3s
PAX   Paxson            38.25 337   P      P      01 05 32.2 +0.3
PAX                                 pmax   pmax
      comp=Z,65nm,1.8s
PAX   Paxson            38.25 337   P      P      01 05 32.2 +0.3
PAX                                 IAmb   IAmb   01 05 36.6
      comp=Z,64nm,1.8s
D62A  Allapoint, All    38.27  51   P      P      01 05 34.1 +2.0
      baz=261
EGAK  Eagle             38.27 342   P      P      01 05 34.2 +2.3
EGAK                                IAmb   IAmb   01 05 36.8
      comp=Z,50nm,1.1s
KNK   Knik Glacier      38.29 334   P      P      01 05 33.3 +1.2
BRLK  Bradley Lake      38.29 331   P      P      01 05 29.0  -3.2
SCRK  Sand Creek        38.49 339   P      P      01 05 33.9   0.0
SCRK                                IAmb   IAmb   01 05 38.9
      comp=Z,53nm,1.1s
SML   Sawmill           38.49 335   P      P      01 05 33.1  -0.8
SML                                 IAmb   IAmb   01 05 39.3
      comp=Z,47nm,1.1s
EPYK  Eagle Plains      38.49 346   P      P      01 05 31.8  -2.0
EPYK  Eagle Plains      38.49 346   P      P      01 05 36.4 +2.6
      baz=147,SNR=11
RIDG  Independent Ri    38.58 339   P      P      01 05 37.0 +2.4
RIDG                                IAmb   IAmb   01 05 40.3
      comp=Z,97nm,1.6s
RC01  Rabbit Creek A    38.58 333   P      P      01 05 35.4 +0.8
E63A  Oxbow             38.60  52   P      P      01 05 36.8 +1.9
      baz=262
PMR   Palmer            38.65 334   P      P      01 05 36.7 +1.6
PMR                                 pmax   pmax
      comp=Z,53nm,1.0s
PMR   Palmer            38.65 334   P      P      01 05 36.7 +1.6
PMR                                 IAmb   IAmb   01 05 40.1
      comp=Z,53nm,1.0s
GHO   Glory Hole Cre    38.69 334   P      P      01 05 37.1 +1.6
GHO                                 IAmb   IAmb   01 05 40.4
      comp=Z,65nm,1.2s
DHY   Denali Highway    38.96 337   P      P      01 05 40.5 +2.6
DHY                                 IAmb   IAmb   01 05 43.2
      comp=Z,138nm,1.9s
E64A  Bridgewater       39.00  53   P      P      01 05 40.3 +2.0
      baz=262
C36M  Paulatuk          39.36 354   P      P      01 05 43.5 +2.5
C36M  Paulatuk          39.36 354   P      P      01 05 42.7 +1.7
      baz=166,SNR=6.3
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INK   Inuvik            39.57 349   P      P      01 05 43.6 +0.9
      comp=Z,17nm,1.1s,baz=142,slow=9.4,SNR=26
INK   Inuvik            39.57 349   P      P      01 05 45.0 +2.3
INK                                 pmax   pmax
      comp=Z,72nm,1.5s
INK   Inuvik            39.57 349   P      P      01 05 45.0 +2.3
INK                                 IAmb   IAmb   01 05 47.0
      comp=Z,72nm,1.5s
RND   Reindeer          39.69 336   P      P      01 05 46.6 +2.7
RND                                 pmax   pmax
      comp=Z,119nm,1.8s
RND   Reindeer          39.69 336   P      P      01 05 46.6 +2.7
RND                                 IAmb   IAmb   01 05 49.9
      comp=Z,119nm,1.8s
HDA   Harding Lake      39.72 338   P      P      01 05 46.4 +2.3
HDA                                 IAmb   IAmb   01 05 48.4
      comp=Z,82nm,1.7s
HDA   Harding Lake      39.72 338   P      P      01 05 46.3 +2.3
      baz=132,SNR=10
MCK   McKinley          39.92 337   P      P      01 05 48.5 +2.7
MCK                                 pmax   pmax
      comp=Z,41nm,0.9s
MCK   McKinley          39.92 337   P      P      01 05 48.5 +2.7
MCK                                 IAmb   IAmb   01 05 50.4
      comp=Z,41nm,0.9s
IL31                    39.94 339   P      P      01 05 47.8 +1.9
IL31                                IAmb   IAmb   01 05 50.5
      comp=Z,54nm,1.1s
ILAR  Eielson Array     39.94 339   P      P      01 05 46.0 +0.1
      comp=Z,15nm,0.7s,baz=151,slow=7.3,SNR=80
ILAR  Eielson Array     39.94 339   P      P      01 05 43.0  -2.9
ILAR  Eielson Array     39.94 339   P      P      01 05 43.0  -2.9
PRP   Porcupine Dome    40.06 340   P      P      01 05 49.8 +2.8
PRP                                 IAmb   IAmb   01 05 52.0
      comp=Z,100nm,1.5s
WRH   Wood River Hil    40.12 338   P      P      01 05 50.3 +2.9
CCB   Clear Creek Bu    40.15 338   P      P      01 05 49.6 +2.0
TRF   Thorofare Moun    40.22 336   P      P      01 05 50.5 +2.1
COLA  College           40.32 338  eP      P      01 05 51.3 +2.4
COLA  College           40.32 338   P      P      01 05 51.3 +2.4
COLA                                IAmb   IAmb   01 05 54.2
      comp=Z,53nm,1.1s
TCOL  CIGO, UAF Yank    40.32 338   P      P      01 05 53.6 +4.6
      baz=132
POKR  Poker Plat Res    40.35 339   P      P      01 05 51.3 +2.1
      baz=132,SNR=22
KTH   Kantishna Hill    40.51 336   P      P      01 05 52.9 +2.2
KTH                                 IAmb   IAmb   01 05 54.9
      comp=Z,44nm,1.0s
PPLA  Purkeypile        40.58 334   P      P      01 05 53.7 +2.3
FYU   Fort Yukon        40.73 342   P      P      01 05 55.3 +2.9
BPAW  Bear Paw Mtn.     40.86 336   P      P      01 05 55.4 +1.9
BPAW                                IAmb   IAmb   01 05 57.8
      comp=Z,55nm,1.0s
SVW2  Sparrevohn        40.98 331   P      P      01 05 55.6 +1.1
SVW2                                IAmb   IAmb   01 05 59.3
      comp=Z,93nm,1.6s
BMAR  Burnt Mountain    41.20 343   P      P      01 05 57.0 +0.7
MLY   Manley            41.35 337   P      P      01 05 58.3 +0.7
MLY                                 IAmb   IAmb   01 06 02.2
      comp=Z,37nm,0.8s
SCHQ  Schefferville     41.38  40   P      P      01 05 57.8  -0.1
      comp=Z,18nm,1.0s,baz=259,slow=6.9,SNR=16
SCHQ                                LR     LR     01 21 24.4
      comp=Z,308nm,18.4s,baz=262,slow=34
SCHQ  Schefferville     41.38  40   P      P      01 05 53.8  -4.1
SCHQ                                IAmb   IAmb   01 06 00.4
      comp=Z,42nm,1.1s
UREC  San Jos de Ur     42.54 114  eP      P      01 06 09.1 +1.2
COLD  Coldfoot          42.60 340   P      P      01 06 09.7 +1.9
IMAR  Indian Mountai    42.93 337   P      P      01 06 08.4  -2.0
CODC  Agustn Codazz     42.95 110  eP      P      01 06 12.7 +1.5
SMLC  San Martn de      43.09 112  eP      P      01 06 10.9  -1.4
GBN   Guysborough       43.32  55   P      P      01 06 13.2  -0.6
CBOC  Ciudad Bolivar    43.33 117  eP      P      01 06 13.6  -0.9
TOLK  Toolik Lake Re    43.38 342   P      P      01 06 15.8 +1.7
TOLK                                IAmb   IAmb   01 06 19.2
      comp=Z,52nm,1.0s
TOLK  Toolik Lake Re    43.38 342   P      P      01 06 16.1 +2.0
      baz=133,SNR=35
HELC  Santa Helena      43.50 116  eP      P      01 06 16.2 +0.2
GUY2C Guyana, Caldas    44.23 117  eP      P      01 06 20.7  -1.4
NORC  Norcasia          44.40 116  eP      P      01 06 26.0 +3.1
RREF  El Recreo         44.45 117  eP      P      01 06 24.2 +0.3
PAMC  Pamplona, Colo    45.04 112  eP      P      01 06 30.4 +1.9
GCPR  Guaynabo City     45.06  94   P      P      01 06 27.5  -0.6
GCPR                                IAmb   IAmb   01 06 29.9
      comp=Z,44nm,1.3s
BARC  Barichara         45.10 113  eP      P      01 06 28.6  -0.1
ROSC  El Rosal          45.28 116   P      P      01 06 32.0 +1.7
      comp=Z,4.5nm,0.4s,baz=168,slow=19,SNR=4.2
ROSC                                LR     LR     01 28 12.6
      comp=Z,1µm,18.1s,baz=342,slow=40
SOTA  Rioblanco         45.29 121  eP      P      01 06 32.2 +1.6
PCON  Cinco Dias        45.32 121  eP      P      01 06 33.1 +2.2
RES   Resolute Bay      45.35   7   P      P      01 06 30.7 +1.1
      comp=Z,5.1nm,1.1s,baz=212,slow=9.0,SNR=11
RES   Resolute Bay      45.35   7   P      P      01 06 26.3  -3.3
RES                                 pmax   pmax
      comp=Z,45nm,1.6s
RES   Resolute Bay      45.35   7   P      P      01 06 26.3  -3.3
RES                                 IAmb   IAmb   01 06 32.8
      comp=Z,45nm,1.6s
RUSC  La Rusia          45.60 114  eP      P      01 06 33.1 +0.1
RUSC  La Rusia          45.60 114   P      P      01 06 29.6  -3.4
CUPR  Culebra, Puert    45.76  94   P      P      01 06 33.1  -0.5
CUPR                                IAmb   IAmb   01 06 53.4
      comp=Z,31nm,1.0s
SDV   Santo Domingo     45.83 109   P      P      01 06 34.5   0.0
      comp=Z,8.0nm,0.7s,baz=6.6,slow=2.4,SNR=6.6
SDV   Santo Domingo     45.83 109   P      P      01 06 33.3  -1.2
SDV                                 IAmb   IAmb   01 07 08.8
      comp=Z,46nm,1.2s
TAOE  Nuku Hiva Isla    46.40 217  eS      S      01 13 24.5  -3.1
      comp=Z,216nm,23.5s
TAOE                               eLQ     LQ     01 17 38.5
      comp=Z,1µm,25.9s
TAOE                               eLR     LR     01 19 44.3
      comp=Z,727nm,22.9s
ANM   Nome              46.52 332   P      P      01 06 41.0 +1.9
ANM                                 pmax   pmax
      comp=Z,41nm,1.3s
ANM   Nome              46.52 332   P      P      01 06 41.0 +1.9
ANM                                 IAmb   IAmb   01 06 43.4
      comp=Z,41nm,1.3s
RDOG  Red Dog Mine      47.08 337   P      P      01 06 43.7 +0.3
SKI   Saint Kitts       48.36  93   P      P      01 06 52.2  -1.8
SKI                                 pmax   pmax
      comp=Z,83nm,1.1s
SKI   Saint Kitts       48.36  93   P      P      01 06 52.2  -1.8
GAMB  Gambell           48.91 330          pP     01 06 59.7 +1.8
TULEG Thule             50.76  12   P      P      01 07 10.8  -0.6
SFJD  Kangerlussuaq     52.03  26 i P      P      01 07 22.0 +0.9
SFJD  Kangerlussuaq     52.03  26 i P      P      01 07 22.0 +0.9
SFJD  Kangerlussuaq     52.03  26   P      P      01 07 22.4 +1.3
SUMG  Summit            56.95  20 i P      P      01 07 58.0 +0.7
      comp=Z,289nm,1.4s
SUMG  Summit            56.95  20   P      P      01 07 54.2  -3.2
SUMG                                pmax   pmax
      comp=Z,84nm,1.3s
SUMG  Summit            56.95  20   P      P      01 07 54.2  -3.2
BILL  Bilibino          58.29 334⇑iP      P      01 08 09.7 +3.4
BILL                               e              01 10 17.2
BILL                               eS      S      01 16 11.1 +1.9
BILL                               eSS     SS     01 19 55.5  -4.9
BILL                                pmax   pmax
      comp=Z,62nm,1.6s
BILL                                MLR    MLR
      comp=Z,1µm,17.0s
BILL  Bilibino          58.29 334   P      P      01 08 05.0  -1.3
PPT   Papeete           58.70 220   LR     LR     01 27 08.2
      comp=Z,379nm,20.1s,baz=3.5,slow=30
PPT2  Papeete2          58.72 220  eLR     LR     01 25 22.0
      comp=Z,839nm,24.2s,baz=33
PTGA  Pitinga           60.02 111   P      P      01 08 16.8  -2.3
PTGA                                IAmb   IAmb   01 08 39.2
      comp=Z,23nm,1.2s
NOR   Nord              61.16  10 i P      P      01 08 27.8 +1.9
NOR   Nord              61.16  10 i P      P      01 08 27.8 +1.9
DAG   Danmarks Havn     61.85  15 i P      P      01 08 30.6   0.0
      comp=Z,44nm,1.1s
DAG   Danmarks Havn     61.85  15 i P      P      01 08 30.6   0.0
DAG                                 pmax   pmax
      comp=Z,45nm,1.1s
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SCO   Scoresbysund      62.35  22          pP     01 08 35.3 +0.9
SAML  Samuel            62.61 120   P      P      01 08 39.8 +3.2
SAML                                pmax   pmax
      comp=Z,9.0nm,1.3s
SAML  Samuel            62.61 120   P      P      01 08 39.8 +3.2
TBI   Tubuai            63.35 217  eLQ     LQ     01 24 45.7
      comp=Z,501nm,33.8s
TBI                                eLR     LR     01 27 35.0
      comp=Z,397nm,25.0s,baz=33
LPAZ  La Paz            64.15 130   P      P      01 08 48.7 +1.3
      comp=Z,1.2nm,1.0s,baz=297,slow=11,SNR=2.4
LPAZ  La Paz            64.15 130   P      P      01 08 45.9  -1.6
LPAZ                                pmax   pmax
      comp=Z,7.0nm,1.5s
LPAZ  La Paz            64.15 130   P      P      01 08 45.9  -1.6
PB16  IPOC Station P    64.75 133   P      P      01 08 49.8  -1.5
PB16                                IAmb   IAmb   01 08 58.3
      comp=Z,21nm,1.3s
SEY   Seymchan          64.91 330   P      P      01 08 52.2 +1.1
      comp=Z,6.7nm,1.2s,baz=85,slow=8.4,SNR=12
SEY   Seymchan          64.91 330⇑eP      P      01 08 53.7 +2.6
PETK  Petropavlovsk-    65.26 318   LR     LR     01 32 19.0
      comp=Z,472nm,21.9s,baz=60,slow=31
PB11  IPOC Station P    65.71 134   P      P      01 08 53.9  -3.1
GO01  Chusmiza          65.93 133   P      P      01 09 01.0 +2.1
GO01                                IAmb   IAmb   01 09 11.6
      comp=Z,16nm,1.2s
MA2   Magadan           66.76 327   P      P      01 09 04.7 +1.7
      comp=Z,1.6nm,0.3s,baz=80,slow=5.7,SNR=7.5
MA2                                 LR     LR     01 38 21.1
      comp=Z,943nm,18.1s,baz=44,slow=36
MA2   Magadan           66.76 327c iP     P      01 09 05.7 +2.6
MA2                                 pmax   pmax
      comp=Z,33nm,1.7s
MA2   Magadan           66.76 327   P      P      01 09 06.3 +3.3
PB01  IPOC Station P    66.77 134   P      P      01 09 01.0  -2.8
PB01                                IAmb   IAmb   01 09 09.8
      comp=Z,16nm,1.0s
SPA0  Spitsbergen Ar    67.80  10          pP     01 09 12.6 +2.8
PB10  IPOC Station P    68.00 137   P      P      01 09 09.6  -1.7
PB10                                IAmb   IAmb   01 09 23.7
      comp=Z,28nm,1.2s
LVC   Limon Verde       68.30 135   P      P      01 09 12.5  -1.2
LVC                                 pmax   pmax
      comp=Z,32nm,1.8s
LVC   Limon Verde       68.30 135   P      P      01 09 12.5  -1.2
LVC                                 IAmb   IAmb   01 09 20.3
      comp=Z,32nm,1.8s
PB15  IPOC Station P    68.41 136   P      P      01 09 12.9  -1.3
TIXI  Tiksi             69.28 342   P      P      01 09 19.1 +0.4
TIXI                                pmax   pmax
      comp=Z,38nm,1.4s
TIXI  Tiksi             69.28 342   P      P      01 09 19.1 +0.4
GO02  Mina Guanaco      69.82 137   P      P      01 09 23.2 +0.1
H11N3 WAKE ISLAND Hy    71.07 282   T      T      02 26 08.4
      baz=64,slow=74,SNR=7.3
H11N2 WAKE ISLAND Hy    71.08 282   T      T      02 26 08.6
      baz=64,slow=74,SNR=6.0
H11N1 WAKE ISLAND Hy    71.09 282   T      T      02 26 08.3
      baz=64,slow=74,SNR=6.1
YAK   Yakutsk           74.65 334⇓eP      P      01 09 53.8 +2.7
YAK                                 pmax   pmax
      comp=Z,35nm,1.9s
ARCES ARCESS Array B    76.07  14   P      P      01 10 00.2 +1.0
      comp=Z,12nm,0.9s,baz=352,slow=7.4,SNR=9.4
ARCES                               LR     LR     01 46 21.9
      comp=Z,760nm,19.0s,baz=331,slow=38
ARCES ARCESS Array B    76.07  14  eP      P      01 10 00.0 +0.8
ARCES ARCESS Array B    76.07  14   P      P      01 09 56.4  -2.8
YSS   Yuzh-Sakhalins    76.54 317  eP      P      01 09 58.7  -3.5
ASAJ  Asahikawa         78.08 314   LR     LR     01 40 59.6
      comp=Z,542nm,19.8s,baz=63,slow=33
NC204 NORSAR Array S    78.28  24   P      P      01 10 09.2  -2.6
CPUP  Villa Florida     78.33 130   P      P      01 10 11.5  -0.9
      comp=Z,5.5nm,1.1s,baz=305,slow=6.4,SNR=4.8
CPUP                                LR     LR     01 44 58.0
      comp=Z,531nm,21.7s,baz=338,slow=36
CPUP  Villa Florida     78.33 130   P      P      01 10 09.6  -2.8
CPUP                                pmax   pmax
      comp=Z,44nm,1.7s
CPUP  Villa Florida     78.33 130   P      P      01 10 09.6  -2.8
CPUP                                IAmb   IAmb   01 10 18.9
      comp=Z,44nm,1.6s
BDFB  Brasilia          78.33 116   P      P      01 10 14.2 +1.4
      comp=Z,5.5nm,1.0s,baz=295,slow=7.5,SNR=5.1
BDFB                                LR     LR     01 47 35.0
      comp=Z,644nm,19.4s,baz=306,slow=38
BDFB  Brasilia          78.33 116   P      P      01 10 15.8 +3.0
BDFB                                pmax   pmax
      comp=Z,35nm,1.5s
BDFB  Brasilia          78.33 116   P      P      01 10 15.8 +3.0
BDFB                                IAmb   IAmb   01 10 16.4
      comp=Z,35nm,1.5s
NB2   NORSAR Subarra    78.61  24   P      P      01 10 13.9 +0.3
      comp=Z,70nm,1.7s,baz=312,slow=5.6
NB2   NORSAR Subarra    78.61  24   P      P      01 10 13.9 +0.3
      baz=312,slow=5.6
NOA   NORSAR Array B    78.61  24   P      P      01 10 14.5 +0.9
      comp=Z,4.7nm,0.9s,baz=313,slow=5.3,SNR=8.0
KONO  Kongsberg         78.98  25   P      P      01 10 13.8  -1.8
KONO                                pmax   pmax
      comp=Z,57nm,1.3s
KONO  Kongsberg         78.98  25   P      P      01 10 13.8  -1.8
LVZ   Lovozero          79.20  12⇑iP      P      01 10 18.7 +2.0
LVZ                                 pmax   pmax
      comp=Z,123nm,2.5s
LVZ   Lovozero          79.20  12   P      P      01 10 15.5  -1.2
NRIK  Noril'sk          79.25 352   P      P      01 10 17.3 +0.4
      comp=Z,7.1nm,0.7s,baz=30,slow=4.0,SNR=15
NRIK  Noril'sk          79.25 352 i P      P      01 10 18.7 +1.8
NRIK                                pmax   pmax
      comp=Z,23nm,1.1s
PMOZ  Porto Moniz, M    79.36  58  eLR     LR     01 39 19.7
      comp=Z,677nm,16.0s
PMAR  Madeira           79.61  58  eP      P      01 10 23.2 +3.4
      comp=Z,111nm,1.5s
PGAV  Gavieira, Arco    80.78  47  eLQ     LQ     01 36 38.8
PGAV                               eLR     LR     01 39 31.3
      comp=Z,1µm,20.0s
ZEA   Zeya              80.82 328  eP      P      01 10 27.6 +1.9
ZEA                                 pmax   pmax
      comp=Z,42nm,1.6s
KLR   Kul'dur           81.43 323   LR     LR     01 45 05.7
      comp=Z,610nm,20.5s,baz=49,slow=34
KLR   Kul'dur           81.43 323⇑eP      P      01 10 30.6 +1.6
KLR                                 pmax   pmax
      comp=Z,15nm,2.0s
PLCA  Paso Flores       81.49 148   P      P      01 10 30.2 +0.9
      comp=Z,2.2nm,0.9s,baz=305,slow=3.9,SNR=3.4
PLCA                                LR     LR     01 39 45.5
      comp=Z,1µm,19.5s,baz=354,slow=31
PLCA  Paso Flores       81.49 148   P      P      01 10 30.2 +0.9
PLCA                                pmax   pmax
      comp=Z,32nm,1.8s
PLCA  Paso Flores       81.49 148   IAmb   IAmb   01 12 41.0
      comp=Z,32nm,1.8s
PVRL  Vila Real         81.50  47  eP      P      01 10 31.9 +2.3
PCAS  Casmilo, Conde    81.66  48  eP      P      01 10 34.0 +3.6
PVIS  Viseu             81.69  48  eP      P      01 10 32.2 +1.6
      comp=Z,59nm,1.6s
PTOM  Tomar             81.95  49  eP      P      01 10 34.5 +2.5
      comp=Z,42nm,1.2s
MVO   Moncorvo          81.99  47  eLQ     LQ     01 36 32.2
MVO                                eLR     LR     01 40 46.0
      comp=Z,924nm,20.0s
MTE   Manteigas         82.09  48   P      P      01 10 28.5  -4.3
MTE                                 IAmb   IAmb   01 10 37.2
      comp=Z,21nm,1.0s
MTE   Manteigas         82.09  48  eP      P      01 10 35.2 +2.5
      comp=Z,36nm,1.3s
MTE   Manteigas         82.09  48  eLR     LR     01 38 02.8
      comp=Z,1µm,20.0s
PMTG  Montargil         82.37  49  eP      P      01 10 36.2 +2.0
      comp=Z,62nm,1.8s
PCBR  Castelo Branco    82.44  48  eP      P      01 10 36.5 +2.0
      comp=Z,35nm,1.8s
PNCL  Nicolau / Gran    82.69  50  eP      P      01 10 38.3 +2.4
      comp=Z,82nm,1.8s
PMRV  Marv??o           82.72  48  eP      P      01 10 38.0 +2.0
      comp=Z,66nm,1.7s
PMRV  Marv??o           82.72  48  eLQ     LQ     01 36 40.3
PMRV                               eLR     LR     01 41 59.3
      comp=Z,1µm,18.0s
PTEO  Sao Teotonio      82.87  51  eP      P      01 10 39.4 +2.6
      comp=Z,80nm,1.4s
FIA1  FINESS Array S    82.90  18   P      P      01 10 33.6  -2.9
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FINES FINESS Array B   82.90  18  P      P      01 10 37.1 +0.6
      comp=Z,7.5nm,0.7s,baz=322,slow=1.9,SNR=20
FINES FINESS Array B   82.90  18 eP      P      01 10 37.4 +0.9
FINES FINESS Array B   82.90  18  P      P      01 10 33.8 -2.6
SACV  Santiago Islan   82.97  77  P      P      01 10 33.6 -4.1
PFVI  Vila Bisbo       83.03  51 eP      P      01 10 41.1 +3.5
MESJ  Messejana        83.05  50 eP      P      01 10 39.7 +1.9
MESJ                              AMS    AMS    01 40 51.8
      comp=N,651nm,22.4s
MESJ  Messejana        83.05  50 eP      P      01 10 39.6 +1.9
MESJ  Messejana        83.05  50 eP      P      01 10 40.1 +2.4
      comp=N,55nm,1.7s
MORF  Marmelete        83.05  51 eP      P      01 10 39.7 +1.8
MORF                              AMS    AMS    01 47 16.9
      comp=Z,1µm,21.4s
MORF  Marmelete        83.05  51 eP      P      01 10 39.6 +1.8
MORF  Marmelete        83.05  51 eP      P      01 10 40.3 +2.5
      comp=Z,83nm,1.8s
BMRD  Maredsous        83.13  34  pP     P      01 10 40.0 +2.1
PBEJ  Beja             83.18  50 eP      P      01 10 40.7 +2.3
      comp=Z,24nm,1.4s
DOU   Dourbes          83.18  35  pP     P      01 10 41.0 +2.9
TMCR  Tamitsa          83.18  12 eP      P      01 10 38.4 +0.6
TMCR                              pmax   pmax
      comp=Z,46nm,1.1s
IBBN  Ibbenburen       83.21  32 eP      P      01 10 40.6 +2.3
      comp=Z,99nm,1.6s,baz=316,slow=5.0
BSEG  Bad Segeberg     83.22  29 eP      P      01 10 40.6 +2.3
      comp=Z,68nm,1.2s,baz=316,slow=5.0
BGES  Gesves           83.23  34  P      P      01 10 37.8 -0.6
BGES                              pP     sP     01 10 40.4 +1.5
BEBN  Eben Emael       83.25  34  P      P      01 10 38.6 +0.1
BOD   Bodaibo          83.27 336 eP      P      01 10 39.0 +0.6
BOD                               pmax   pmax
      comp=Z,21nm,1.6s
PCVE  Castro Verde     83.28  50 eP      P      01 10 41.5 +2.6
      comp=Z,93nm,1.8s
BCLA  Clavier          83.31  34  pP     P      01 10 41.4 +2.6
BSTI  Sart Tilman      83.33  34  pP     P      01 10 41.7 +2.8
MEM   Membach          83.53  34  pP     P      01 10 42.6 +2.6
PBDV  Barranco-do-Ve   83.57  50 eP      P      01 10 43.2 +2.8
      comp=Z,65nm,1.7s
BUG   Bochum--Univer   83.57  33 eP      P      01 10 42.2 +2.1
      comp=Z,59nm,1.5s,baz=316,slow=5.0
PVAQ  Vaqueiros        83.62  50  P      P      01 10 37.1 -3.5
PVAQ  Vaqueiros        83.62  50 eP      P      01 10 43.3 +2.6
      comp=Z,38nm,1.4s
PVAQ  Vaqueiros        83.62  50 eLQ     LQ     01 36 47.7
PVAQ                             eLR     LR     01 39 17.7
      comp=Z,492nm,20.0s
RETH  Rethem/Aller,    83.64  31 eP      P      01 10 43.1 +2.7
      comp=Z,89nm,1.3s,baz=316,slow=5.0
AHRW  Bad Neuenahr-A   84.08  33 eP      P      01 10 45.2 +2.5
      comp=Z,62nm,1.4s,baz=316,slow=5.0
NRDL  Niedersach Rie   84.13  31 eP      P      01 10 45.6 +2.7
      comp=Z,94nm,1.4s,baz=316,slow=5.0
WLF   Walferdange      84.22  34  pP     P      01 10 46.0 +2.5
WLF   Walferdange      84.22  34 eP      P      01 10 46.0 +2.5
      comp=Z,48nm,1.2s,baz=316,slow=5.0
WLF   Walferdange      84.22  34  P      P      01 10 41.7 -1.8
WLF                               pmax   pmax
      comp=Z,50nm,1.3s
WLF   Walferdange      84.22  34  P      P      01 10 41.7 -1.8
USRK  Ussuriysk Ar.    84.35 319  P      P      01 10 44.2 -0.1
      comp=Z,2.4nm,0.9s,baz=54,slow=1.7,SNR=7.8
USRK                              LR     LR     01 47 53.8
      comp=Z,209nm,18.5s,baz=35,slow=35
USRK  Ussuriysk Ar.    84.35 319  P      P      01 10 42.4 -1.9
USRK  Ussuriysk Ar.    84.35 319  P      P      01 10 42.4 -1.9
PAB   San Pablo        84.59  47  P      P      01 10 48.4 +2.7
PAB                               pmax   pmax
      comp=Z,53nm,1.9s
PAB   San Pablo        84.59  47  P      P      01 10 48.4 +2.7
ASSE  Asse, Remlinge   84.64  31 eP      P      01 10 48.1 +2.6
      comp=Z,85nm,1.5s,baz=316,slow=5.0
CLZ   Clausthal        84.71  31 eP      P      01 10 48.8 +2.8
      comp=Z,207nm,2.5s,baz=316,slow=5.0
GTTG  Gottingen        84.73  31 eP      P      01 10 49.3 +3.3
      comp=Z,37nm,1.6s,baz=316,slow=5.0
ESDC  Sonseca Array    84.76  47  P      P      01 10 46.3 -0.2
      comp=Z,1.9nm,0.6s,baz=317,slow=6.4,SNR=5.3
ESDC                              LR     LR     01 47 41.0
      comp=Z,780nm,19.5s,baz=235,slow=35
TNS   Taunus Mts       84.95  33 eP      P      01 10 49.8 +2.5
      comp=Z,54nm,1.8s,baz=316,slow=5.0
MJAR  Matsushiro Arr   84.98 310  P      P      01 10 48.0 +0.4
      comp=Z,3.0nm,0.7s,baz=63,slow=5.8,SNR=5.0
MJAR                              LR     LR     01 42 09.9
      comp=Z,1µm,20.9s,baz=65,slow=31
MJAR  Matsushiro Arr   84.98 310  P      P      01 10 48.0 +0.4
MJAR                              pmax   pmax
      comp=Z,6.0nm,1.0s
MJAR  Matsushiro Arr   84.98 310  IAmb   IAmb   01 10 50.0
      comp=Z,5.7nm,1.0s
UBBA  Unterbreizbach   85.25  32 eP      P      01 10 51.3 +2.8
      comp=Z,62nm,1.9s,baz=316,slow=5.0
VSU   Vasula           85.58  19⇓iP      P      01 10 52.6 +2.5
VSU                               pmax   pmax
      comp=Z,138nm,2.5s
NEUB  Neuenburg        85.77  31 eP      P      01 10 54.1 +2.8
      comp=Z,23nm,1.4s,baz=316,slow=5.0
JHJ   Hachijo jima 2   85.82 306  LR     LR     01 48 33.8
      comp=Z,514nm,18.5s,baz=62,slow=35
MOX   Moxa             86.11  31 eL      L      01 50 30.1
      comp=Z,1µm,18.1s
CLL   Collm            86.24  30 epP     pP     01 10 55.0 +1.1
      comp=Z,18nm,1.4s
CLL                               LmH           01 52 00.0
      comp=N,500nm,19.6s
CLL                               LmH           01 52 00.0
      comp=E,400nm,18.2s
CLL                               LmH           01 52 00.0
      comp=Z,700nm,21.2s
CLL   Collm            86.24  30 eP      pP     01 10 55.0 +1.1
      comp=Z,12nm,1.3s,baz=316,slow=5.0
CLL   Collm            86.24  30 eP      pP     01 10 55.0 +1.1
CLL                               pmax   pmax
      comp=Z,18nm,1.4s
CLL                               MLR    MLR
      comp=Z,700nm,21.2s
CLL   Collm            86.24  30         pP     01 10 55.7 +1.7
KLMR  Klimovskoe       86.50  13 eP      P      01 10 53.6 -1.1
KLMR                              pmax   pmax
      comp=Z,63nm,1.8s
KLMR                              MLR    MLR
      comp=Z,1µm,18.0s
KLMR  Klimovskoe       86.50  13 eP      P      01 10 53.6 -1.1
KLMR                              AMP           01 10 58.4
      comp=Z,63nm,1.8s
KLMR                              LR     LR     01 44 23.3
KLMR                              AMP           01 51 27.9
      comp=Z,1µm,18.1s
GRF   Grafenberg Arr   86.60  32 eP      P      01 10 58.4 +3.0
      comp=Z,24nm,1.1s,baz=316,slow=5.0
GRF                              eL      L      01 51 06.9
      comp=Z,1µm,20.0s
GUNZ  Gunzen           86.63  31 eP      P      01 10 57.6 +2.1
      comp=Z,10nm,1.2s,baz=316,slow=5.0
FBE   Freiberg         86.67  30 eP      P      01 10 56.9 +1.2
      comp=Z,14nm,1.3s,baz=316,slow=5.0
NKC   Novy Kostel      86.77  31 eP      P      01 10 59.1 +2.8
NKC   Novy Kostel      86.77  31 eP      P      01 10 59.1 +2.8
NKC                               MLR    MLR
      comp=Z,10µm,20.1s
BRG   Berggiesshubel   86.96  30 eP      P      01 10 55.5 -1.6
      comp=Z,19nm,1.5s
JCJ   Chichijima       87.38 300  LR     LR     01 42 35.3
      comp=Z,894nm,19.5s,baz=68,slow=30
DAVA  Damuels          87.66  34 epP     P      01 11 01.8 +1.0
      comp=Z,16nm,1.4s
PRU   Pruhonice        87.87  30 eP      P      01 11 02.3 +0.7
PRU                               AMS    AMS    01 54 40.0
      comp=Z,1µm,15.9s
PRU   Pruhonice        87.87  30 eP      P      01 11 02.3 +0.7
PRU                               MLR    MLR
      comp=Z,1µm,15.9s
RETA  Reutte           87.95  34 epP     P      01 11 03.6 +1.5
      comp=Z,10nm,1.3s
TUE   Stuetta          87.96  35  P      P      01 11 00.5 -1.8
GOPC  GO Pecny, Ondr   88.04  30 eP      P      01 11 03.6 +1.2
GOPC                              AMS    AMS    01 54 40.0
      comp=Z,1µm,17.2s
GOPC  GO Pecny, Ondr   88.04  30 eP      P      01 11 03.6 +1.2
GOPC                              MLR    MLR
      comp=Z,1µm,17.2s
SUW   Suwalki          88.13  24  P      P      01 11 00.6 -2.1
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SUW                               pmax   pmax
      comp=Z,57nm,1.4s
SUW   Suwalki          88.13  24  P      P      01 11 00.6 -2.1
MOTA  Moosalm          88.21  34 epP     P      01 11 04.0 +0.5
      comp=Z,23nm,1.6s
CN2   Changchun        88.24 321 eP      P      01 11 07.3 +3.9
CN2                               pmax   pmax
      comp=Z,10.0nm,0.5s
FETA  Feichten         88.26  34 epP     P      01 11 04.3 +0.7
      comp=Z,10nm,1.3s
GERES GERESS Array B   88.34  31  P      P      01 11 03.5 -0.4
      comp=Z,1.6nm,1.0s,baz=329,slow=4.7,SNR=7.5
GERES GERESS Array B   88.34  31  P      P      01 10 59.5 -4.5
SQTA  Sankt Quirin     88.35  34 epP     P      01 11 05.5 +1.4
      comp=Z,22nm,1.5s
DPC   Dobruska-Polom   88.37  29  AMS    AMS    01 55 10.0
      comp=Z,900nm,21.3s
WATA  Walderalm        88.44  34 epP     P      01 11 04.8 +0.2
      comp=Z,12nm,1.4s
WTTA  Wattenberg       88.53  34 i pP    P      01 11 06.4 +1.5
      comp=Z,11nm,1.4s
KRLC  Kraliky          88.77  29 eP      P      01 11 05.2 -0.7
KRLC                              AMS    AMS    01 56 20.0
      comp=Z,2µm,19.7s
KRLC  Kraliky          88.77  29 eP      P      01 11 05.2 -0.7
KRLC                              MLR    MLR
      comp=Z,2µm,19.7s
ABTA  Abfaltersbach    89.31  34 epP     P      01 11 09.5 +1.0
      comp=Z,7.0nm,1.1s
MOA   Molln            89.33  32 epP     P      01 11 09.5 +0.9
      comp=Z,9.2nm,1.4s
CTI   Castel Tesino    89.40  34  P      P      01 11 11.8 +2.8
CTI                               pmax   pmax
      comp=Z,15nm,1.4s
CTI   Castel Tesino    89.40  34  P      P      01 11 11.8 +2.8
CTI                               IAmb   IAmb   01 11 14.1
      comp=Z,15nm,1.4s
KBA   Koelnbreinsper   89.47  33 eP      P      01 11 10.0 +0.6
      baz=316,slow=5.0
KBA   Koelnbreinsper   89.47  33 epP     P      01 11 10.5 +1.1
      comp=Z,5.2nm,1.2s
TEOL  Teolo            89.90  35  P      P      01 11 10.7 -0.6
TEOL                              IAmb   IAmb   01 11 17.4
      comp=Z,27nm,1.4s
CONA  Conrad Observa   89.99  31 epP     P      01 11 12.5 +0.8
      comp=Z,9.0nm,1.6s
SMOL  Smolenice        90.23  30 eP      P      01 11 14.7 +2.0
SMOL                              pmax   pmax
      comp=Z,12nm,1.5s
SMOL  Smolenice        90.23  30 eP      P      01 11 14.7 +2.0
MODS  Modra-Piesok     90.27  30 eP      P      01 11 13.3 +0.4
MODS                              pmax   pmax
      comp=Z,19nm,1.4s
MODS  Modra-Piesok     90.27  30 eP      P      01 11 13.3 +0.4
ARSA  Arzberg          90.34  32 eP      P      01 11 14.0 +0.7
      baz=316,slow=5.0
ARSA  Arzberg          90.34  32 epP     P      01 11 14.0 +0.7
      comp=Z,6.0nm,1.5s
OBKA  Obir             90.45  33 epP     P      01 11 14.5 +0.7
      comp=Z,8.8nm,1.1s
SOKA  Soboth           90.55  32 epP     P      01 11 14.6 +0.3
      comp=Z,9.8nm,1.0s
MOS   Moscow           90.82  16 eP      P      01 11 11.8 -3.4
VYHS  Vyhne            90.84  29 eP      P      01 11 16.9 +1.3
VYHS  Vyhne            90.84  29 eP      P      01 11 16.9 +1.3
KSRS  Korea Array      90.98 315  LR     LR     01 47 16.8
      comp=Z,337nm,20.1s,baz=62,slow=32
OSSC  Osservatorio P   90.99  36  P      P      01 11 13.1 -3.2
OBN   Obninsk          91.14  16⇑eP      P      01 11 18.2 +1.5
OBN                              e              01 14 54.1
OBN                              eS      SKSac  01 21 53.6 +3.8
OBN                               pmax   pmax
      comp=Z,45nm,2.2s
CRVS  Cervenica-Dubn   91.60  28 eP      P      01 11 20.7 +1.6
CRVS  Cervenica-Dubn   91.60  28 eP      P      01 11 20.7 +1.6
TLY   Talaya           91.76 338  P      P      01 11 22.0 +2.2
      comp=Z,1.4nm,0.5s,baz=83,slow=2.5,SNR=3.6
TLY   Talaya           91.76 338 eP      P      01 11 21.4 +1.7
TLY                              eS      SKSac  01 21 53.0 -0.6
TLY                              e              01 22 22.1
TLY                               pmax   pmax
      comp=Z,42nm,1.6s
TLY                               MLR    MLR
      comp=Z,1µm,17.0s
TLY   Talaya           91.76 338  P      P      01 11 18.8 -0.9
TLY                               IAmb   IAmb   01 11 24.6
      comp=Z,18nm,1.4s
MURB  Monte Urbino     91.83  36  P      P      01 11 16.6 -3.7
MURB                              IAmb   IAmb   01 11 38.1
      comp=Z,18nm,1.4s
JNU   Nakatsue         91.86 310  LR     LR     01 45 49.5
      comp=Z,493nm,21.8s,baz=68,slow=31
LATE  Laterza          91.93  37  P      P      01 11 19.8 -0.9
LATE                              IAmb   IAmb   01 11 22.4
      comp=Z,24nm,1.5s
UZH   Uzhgorod         92.15  27 eP      P      01 11 21.8 +0.3
UZH                              e              01 11 26.2
DZM   Mont Dzumac      92.40 246 eLR     LR     01 41 06.4
      comp=Z,684nm,24.1s
GUMO  Guam             92.47 287  LR     LR     01 44 14.1
      comp=Z,1µm,21.9s,baz=71,slow=30
AKASG Malin Array Be   92.94  22  P      P      01 11 24.9 -0.3
      comp=Z,1.9nm,0.7s,baz=328,slow=3.8,SNR=15
AKASG Malin Array Be   92.94  22  P      P      01 11 21.7 -3.4
AKASG                             pmax   pmax
      comp=Z,4.0nm,1.2s
AKASG Malin Array Be   92.94  22  P      P      01 11 21.7 -3.4
AKBB  Malin Array Si   92.94  22  P      P      01 11 23.1 -2.0
AKBB                              pmax   pmax
      comp=Z,27nm,1.7s
AKBB  Malin Array Si   92.94  22  P      P      01 11 23.1 -2.0
SVE   Sverdlovsk       92.95   3 eP      P      01 11 27.6 +2.5
SVE                               pmax   pmax
      comp=Z,18nm,1.6s
ZAK   Zakamensk        92.98 337 eP      P      01 11 28.3 +2.8
ZAK                               pmax   pmax
      comp=Z,6.0nm,1.6s
ARU   Arti             93.24   4c iP     P      01 11 28.1 +1.7
ARU                                             01 15 10.1
ARU                               S      SKSac  01 22 01.6 -0.1
ARU                               SS     SS     01 28 49.1 +1.2
ARU                               pmax   pmax
      comp=Z,25nm,1.4s
ARU   Arti             93.24   4  P      P      01 11 23.1 -3.3
INTR  Introdacqua      93.44  36         P      01 11 24.3 -3.5
INTR                              IAmb   IAmb   01 11 51.4
      comp=Z,15nm,1.5s
ULN   Ulaanbaatar      93.73 334⇓iP      P      01 11 32.5 +3.4
ULN                               pmax   pmax
      comp=Z,13nm,1.6s
ULN   Ulaanbaatar      93.73 334  P      P      01 11 28.0 -1.1
BURAR Bucovina Array   94.11  26  P      P      01 11 31.4 +0.6
BURAR Bucovina Array   94.11  26  P      P      01 11 27.0 -3.8
ZAA0  Zalesovo Array   94.37 349  P      P      01 11 30.9 -0.7
ZAA0                              IAmb   IAmb   01 11 35.1
      comp=Z,27nm,1.8s
ZALV  Zalesovo Beam    94.37 349  P      P      01 11 33.3 +1.6
      comp=Z,0.7nm,0.4s,baz=4.2,slow=5.5,SNR=10.0
ZALV                              LR     LR     02 00 03.7
      comp=Z,297nm,19.4s,baz=9.5,slow=39
ZALV  Zalesovo Beam    94.37 349  P      P      01 11 31.7  0.0
KEST  Kesra            95.39  43  P      P      01 11 37.5 +0.6
      comp=Z,2.5nm,0.8s,baz=224,slow=1.8,SNR=3.6
KEST                              LR     LR     01 55 01.3
      comp=Z,636nm,18.1s,baz=277,slow=36
KEST  Kesra            95.39  43  P      P      01 11 35.6 -1.2
KEST                              IAmb   IAmb   01 11 53.3
      comp=Z,16nm,1.4s
EFI   East Falkland    95.40 149deP      P      01 11 37.6 +1.5
EFI                               pmax   pmax
      comp=Z,193nm,1.6s
KRVT  Keravat (AS076   95.50 268  LR     LR     01 48 00.2
      comp=Z,802nm,19.7s,baz=50,slow=31
MLR   Muntele Rosu     96.15  27  P      P      01 11 38.3 -1.9
MLR                               pmax   pmax
      comp=Z,19nm,1.6s
MLR   Muntele Rosu     96.15  27  P      P      01 11 38.3 -1.9
MLR                               IAmb   IAmb   01 11 44.0
      comp=Z,19nm,1.6s
BRVK  Borovoye         96.76 357d iP     P      01 11 45.6 +3.0
BRVK                              pmax   pmax
      comp=Z,11nm,1.6s
BRVK  Borovoye         96.76 357  P      P      01 11 45.7 +3.1
BRVK                              IAmb   IAmb   01 11 46.5
      comp=Z,17nm,1.6s
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HHC   Hu-ho-hao-te     97.43 327 eP      Pdif   01 11 46.9 +0.8
HHC                               pmax   pmax
      comp=Z,8.0nm,1.2s
HHC                               LR     LR
      comp=Z,250nm,19.4s
HHC                               LR     LR
      comp=Z,350nm,17.9s
HHC                               LR     LR
      comp=Z,250nm,20.1s
DGZ   Jazzator, Alta   97.94 346⇓eP      Pdif   01 11 51.3 +3.0
DGZ                               pmax   pmax
      comp=Z,4.0nm,1.7s
KURK  Kurchatov        98.41 352⇓iP      Pdif   01 11 52.5 +2.4
KURK                              pmax   pmax
      comp=Z,14nm,2.5s
NJ2   Nanjing         100.11 316 eP      Pdif   01 11 59.0 +0.9
NJ2                               pmax   pmax
      comp=Z,13nm,0.6s
KIV   Kislovodsk      102.97  17 i P     Pdif   01 12 00.0  -11
KIV                               pmax   pmax
      comp=Z,15nm,1.0s
WMQ   Urumqi          103.45 344 eP      Pdif   01 12 16.5 +3.7
BRTR  Keskin Array B  104.02  25  PP     PKiKP  01 16 34.2 +1.4
      comp=Z,0.5nm,0.9s,baz=324,slow=6.1,SNR=4.2
CD2   Chengdu         109.17 326  Pdif   Pdif   01 12 38.4 -0.1
GYA   Guiyang         111.28 321 ePKP    PKiKP  01 16 48.3 +1.6
GYA                               PP     PP     01 17 31.3 +5.9
GYA                               AMB    AMB
      comp=Z,120nm,7.9s
KMI   Kunming         114.44 323  PKP    PKPdf  01 16 58.1 +5.2
KMI   Kunming         114.44 323  SS     SS     01 33 37.8 -3.3
QIZ   Qiongzhong      115.14 314  PKP    PKPdf  01 16 54.4 +0.3
QIZ                               PP     PP     01 17 53.1 +0.1
QIZ                               SS     SS     01 33 51.1 +0.5
QIZ                               LR     LR
      comp=Z,440nm,15.7s
WRA   Warramunga Arr  118.01 262  PKP    PKiKP  01 16 59.7 +0.2
      comp=Z,1.1nm,1.0s,baz=18,slow=0.3,SNR=6.8
WRA   Warramunga Arr  118.01 262  PKIKP  PKPdf  01 16 59.5  0.0
WRA   Warramunga Arr  118.01 262         PKPdf  01 16 59.5  0.0
ASAR  Alice Springs   119.86 259  PKP    PKPdf  01 17 02.2 -0.8
      comp=Z,0.4nm,0.5s,baz=74,slow=2.1,SNR=6.4
ASAR  Alice Springs   119.86 259  PKIKP  PKPdf  01 17 01.7 -1.3
ASAR  Alice Springs   119.86 259         PKPdf  01 17 01.7 -1.3
CMAR  Chiang Mai Arr  121.91 322  PKP    PKPdf  01 17 07.1 -0.1
      comp=Z,2.0nm,0.3s,baz=113,slow=10,SNR=1.4
MAW   Mawson          142.77 178  PKP    PKPdf  01 17 43.6 -1.0
      comp=Z,2.3nm,0.7s,baz=240,slow=16,SNR=2.0
BOSA  Boshof          144.71  97  PKP    PKPab  01 17 47.1 -1.1
      comp=Z,7.2nm,1.0s,baz=297,slow=4.2,SNR=5.2
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*IDC **22** 01:07:43.5±0.7, 7°.49N×94°.48E, h0^{km}, mb4.0/13, mb1 4.0/14, mb1mx3.9/43, mbtmp3.9/14, ML3.4/1, MS3.1/4, Ms1 3.2/4, ms1mx3.0/54, Error ellipse: s-maj=36.1km s-min=15.4km az=48.0*

*NEIC **22** 01:07:44.9±1.4, 7°.40N±0°.09×94°.4E±0°.1, h10^{km}±1^{km}, mb4.3/17, Error ellipse: s-maj=20.5km s-min=14.0km az=240.0*

ISC 22 01:07:47.2±0.6, **7°.4N**±0°.1×**94°.4E**±0°.1, **h24**^{km}, **n41**, σ**0^{s}.97**/35, **mb4.2**/18, **Nicobar Islands region**

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Code  Station Name       Δ°  AZ°     Phase ID        Time     Res
                                  Op     ISC       h  m  s    ISC
LHMI  Lhok Sumawe       3.35 130  Pn     Pn     01 08 38.0 -0.1
PSI   Prapat            6.44 135  Pn     Pn     01 09 22.3 +1.5
      0.9nm,0.3s,baz=306,slow=3.2,SNR=2.0
PSI                               LR     LR     01 12 12.4
      comp=Z,220nm,18.5s,baz=308,slow=41
RPSI  Rantau Prapat     6.52 136         Pn     01 09 22.3 +0.6
RPSI  Rantau Prapat     6.52 136  Pn     Pn     01 09 21.7  0.0
CMAR  Chiang Mai Arr   11.86  22  Pn     Pn     01 10 37.1 +2.2
      0.2nm,0.3s,baz=278,slow=39,SNR=1.4
CMAR                              LR     LR     01 15 01.4
      comp=Z,37nm,19.7s,baz=135,slow=37
PALK  Pallekele        13.55 270  LR     LR     01 15 34.2
      comp=Z,79nm,21.9s,baz=208,slow=34
LSA   Lhasa            22.39 353  P      P      01 12 42.2 -2.2
LSA                               IAmb   IAmb   01 12 47.4
      comp=Z,6.4nm,0.7s
H08S3 Diego Garcia H   26.44 236  T      T      01 40 03.9
      baz=55,slow=75,SNR=6.2
H08S2 Diego Garcia H   26.44 236  T      T      01 39 56.7
      baz=55,slow=75,SNR=11
H08S1 Diego Carcia H   26.46 236  T      T      01 40 10.7
      baz=55,slow=75,SNR=4.0
NIL   Nilore           32.61 326  P      P      01 14 16.5 -0.7
KBL   Kabul            35.68 323  P      P      01 14 42.2 -1.8
KBL                               IAmb   IAmb   01 14 51.3
      comp=Z,12nm,1.8s
ARSB  Arslanbob        38.76 334  P      P      01 15 09.8 -0.2
AAK   Ala-Archa        39.23 337  P      P      01 15 14.5 +0.6
AAK                               IAmb   IAmb   01 15 21.7
      comp=Z,16nm,2.0s
FITZ  Fitzroy Crossi   39.94 130  P      P      01 15 19.5 -0.4
      comp=Z,1.5nm,0.9s,baz=248,slow=5.4,SNR=1.9
MK31  Makanchi Array   40.59 347  P      P      01 15 24.0 -1.0
MKAR  Makanchi Array   40.59 347  P      P      01 15 24.6 -0.4
      comp=Z,3.0nm,0.7s,baz=168,slow=7.8,SNR=42
MKAR  Makanchi Array   40.59 347  P      P      01 15 24.4 -0.7
MAKZ  Makanchi         40.68 347  P      P      01 15 25.5 -0.2
KK31  Karatay Array    41.28 333  P      P      01 15 30.6 -0.1
KK31                              IAmb   IAmb   01 16 53.7
      comp=Z,11nm,2.0s
KKAR  Karatay Array    41.28 333  P      P      01 15 30.3 -0.4
GEYT  Alibeck          44.70 318  P      P      01 15 59.2 +0.6
      comp=Z,3.2nm,0.6s,baz=130,slow=5.8,SNR=12
GEYT  Alibeck          44.70 318  P      P      01 15 59.2 +0.6
KURK  Kurchatov        45.12 346  P      P      01 16 01.7 +0.1
ZAA0  Zalesovo Array   47.05 352  P      P      01 16 16.3 -0.4
ZAA0                              IAmb   IAmb   01 16 17.7
      comp=Z,3.2nm,1.0s
ZALV  Zalesovo Beam    47.05 352  P      P      01 16 17.1 +0.3
      comp=Z,2.6nm,0.7s,baz=178,slow=8.0,SNR=8.1
WRA   Warramunga Arr   47.81 125  P      P      01 16 22.8 -0.4
      comp=Z,0.4nm,0.7s,baz=307,slow=8.6,SNR=4.1
WRA   Warramunga Arr   47.81 125  IAmb   IAmb   01 17 04.4
      comp=Z,0.6nm,1.5s
ASAR  Alice Springs    49.44 130  P      P      01 16 34.4 -1.4
      comp=Z,0.4nm,0.6s,baz=299,slow=7.5,SNR=5.7
ASAR                              PcP    PcP    01 17 58.1 +0.3
      comp=Z,0.3nm,0.7s,baz=328,slow=3.3,SNR=1.8
RAYN  Ar Rayn          49.48 295  P      P      01 16 36.9 +0.8
BRVK  Borovoye         49.57 341  P      P      01 16 35.6 -0.6
ABKAR Akbulak array    50.75 331  P      P      01 16 45.0 -0.2
GNI   Garni            54.92 314  LR     LR     01 41 48.9
      comp=Z,45nm,21.8s,baz=58,slow=37
KMBO  Kilima Mbogo     57.59 264  P      P      01 17 38.0 +1.9
      comp=Z,1.9nm,0.8s,baz=50,slow=11,SNR=6.6
KMBO  Kilima Mbogo     57.59 264  IAmb   IAmb   01 18 19.0
      comp=Z,6.1nm,1.4s
BRTR  Keskin Array B   62.90 311  P      P      01 18 10.3 -1.6
      comp=Z,0.8nm,0.7s,baz=130,slow=7.6,SNR=8.2
FINES FINESS Array B   73.23 332  P      P      01 19 15.7 -0.4
      comp=Z,2.5nm,0.7s,baz=129,slow=5.2,SNR=8.2
ARCES ARCESS Array B   75.78 340  P      P      01 19 31.1 +0.3
      comp=Z,1.9nm,0.8s,baz=102,slow=7.5,SNR=1.8
GERES GERESS Array B   78.32 318  P      P      01 19 45.2 -0.4
      comp=Z,0.9nm,0.8s,baz=79,slow=6.9,SNR=8.1
NOA   NORSAR Array B   80.25 331  P      P      01 19 56.5 +0.6
      comp=Z,0.9nm,0.7s,baz=95,slow=5.1,SNR=3.3
TORD  Torodi Ar. Bea   90.92 283  P      P      01 20 50.4 +0.5
      comp=Z,0.3nm,0.7s,baz=72,slow=4.7,SNR=2.2
TORD                              LR     LR     02 00 12.5
      comp=Z,492nm,19.1s,baz=315,slow=35
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*NEIC **22** 01:11:40.4±1.9, 18°.62N±0°.06×73°.62W±0°.03, h10^{km}±4^{km}, mb4.6/22, Error ellipse: s-maj=9.3km s-min=4.1km az=186.0*

*JSN **22** 01:11:40.9±1.8, 18°.78N×73°.65W, h0^{km}±10^{km}, MD4.8*

*IDC **22** 01:11:43.9±3.8, 18°.57N×73°.60W, h33^{km}±30^{km}, mb3.8/21, mb1 4.1/27, mb1mx3.9/48, mbtmp4.1/27, ML3.7/5, MS4.5/3, Ms1 4.4/3, ms1mx3.5/46, Error ellipse: s-maj=16.8km s-min=12.0km az=38.0*

*OSPL **22** 01:11:43.1±2.5, 18°.60N×73°.64W, h20^{km}, ML3.7*

ISC 22 01:11:42.8±1.7, **18°.55N**±0°.05×**73°.60W**±0°.03, **h26**^{km}±12^{km}, **n116**, σ**1^{s}.83**/128, **mb4.2**/25, **1C-6D**, **Haiti region**

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Code  Station Name       Δ°  AZ°     Phase ID        Time     Res
                                  Op     ISC       h  m  s    ISC
LGNH  Logne             0.94  92 i P     Pn     01 11 58.3 -2.0
LGNH                             eS      Sb     01 12 11.8 -0.9
LGNH                              IAML          01 12 27.1
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	comp=Z,1µm,0.6s						
LGNH	Logne	0.94	92		Pn	01 11 58.2	-2.0
LGNH				Sg	Sb	01 12 11.1	-1.5
LOPE2	Hotel El Peder	1.83	106	iP	Pn	01 12 11.9	-0.6
LOPE2				eS	Sn	01 12 35.9	+0.9
GTBY	Guantanamo Bay	1.98	314	⇓iP	Pn	01 12 12.2	-2.3
GTBY				⇓iS	Sn	01 12 34.2	-4.3
GTBY	Guantanamo Bay	1.98	314	iP	Pn	01 12 12.1	-2.4
GTBY				eS	Sn	01 12 36.4	-2.2
GTBY				IAML		01 12 47.6	
	comp=Z,601nm,0.4s						
GTBY	Guantanamo Bay	1.98	314		Pn	01 12 12.1	-2.4
LONE1	Neyba	2.07	91	iP	Pn	01 12 16.2	+0.5
LONE1				IAML		01 12 47.1	
	comp=Z,773nm,0.5s						
SDDR	Presa de Saban	2.23	78	⇑eP	Pn	01 12 17.5	-0.5
SDDR				iS	Sn	01 12 46.4	+1.6
SDDR	Presa de Saban	2.23	78	iP	Pn	01 12 17.6	-0.5
SDDR				IAML		01 13 04.6	
	comp=Z,478nm,0.5s						
SDDR	Presa de Saban	2.23	78		Pn	01 12 17.6	-0.5
SJM1	San Juan de la	2.27	83	iP	Pn	01 12 18.2	-0.4
GWJ	Greenwich	3.01	261	⇓eP	Pn	01 12 28.7	-0.1
HOJ	Hope	3.04	260	eP	Pn	01 12 29.7	+0.6
BANI	BANI	3.08	92	Pn	Pn	01 12 30.4	+0.5
PCJ	Portland Cotta	3.48	257	eP	Pn	01 12 35.0	-0.1
BBJ	Bamboo Saint A	3.48	268	⇓eP	Pn	01 12 35.9	+0.5
SDD	Santo Domingo	3.50	91	iP	Pn	01 12 36.9	+1.5
SDD	Santo Domingo	3.50	91		Pn	01 12 35.0	-0.5
MTDJ	Mount Denham	3.75	266	eP	Pn	01 12 37.8	-1.2
MTDJ	Mount Denham	3.75	266		Pn	01 12 37.3	-1.7
GRTK	Grand Turk	3.75	38		Pn	01 12 38.1	-0.9
MCJ	Malvern	3.93	262	⇓eP	Pn	01 12 42.6	+1.1
MCJ				⇓iS	Sn	01 13 27.9	+1.0
DR12	Loma Pena Alta	4.01	86		Pn	01 12 42.3	-0.2
CBCY	The Bluff, Cay	5.94	282	Pn	Pn	01 13 07.3	-1.7
CRPR	Cabo Rojo, PR	6.19	94		Pn	01 13 12.2	-0.3
MLPR	Magueyes Islan	6.26	94		Pn	01 13 12.6	-0.8
AOPR	Arecibo Observ	6.50	91		Pn	01 13 16.8	0.0
OBIP	Obispado Ponce	6.66	93		Pn	01 13 18.2	-0.8
URIC	Uribia, Colomb	6.98	167	Pn	Pn	01 13 24.2	+0.8
SJG	San Juan	7.09	92	Pn	Pn	01 13 25.2	+0.4
	comp=Z,3.3nm,0.3s,baz=264,slow=7.8,SNR=9.2						
SJG				Sn	Sn	01 14 39.7	-4.9
	comp=Z,3.7nm,0.3s,baz=282,slow=19,SNR=6.5						
SJG	San Juan	7.09	92		Pn	01 13 24.9	+0.1
PDPR	Patillas Dam,	7.22	93		Pn	01 13 26.4	-0.2
SMRC	Santa Marta, M	7.37	185	eP	Pn	01 13 25.5	-3.1
SJCC	San Jacinto, C	8.73	190	eP	Pn	01 13 44.2	-3.3
SMLC	San Martn de	9.70	183	eP	Pn	01 14 03.9	+3.2
SDV	Santo Domingo	10.03	163	Pn	Pn	01 14 06.2	+0.8
	comp=Z,4.6nm,0.3s,baz=53,slow=0.5,SNR=14						
SDV				Sn	Sn	01 15 50.8	-6.3
	comp=Z,2.6nm,0.3s,baz=66,slow=19,SNR=7.9						
SDV	Santo Domingo	10.03	163	eP	Pn	01 14 08.3	+3.0
UREC	San Jos de Ur	10.89	190	eP	Pn	01 14 18.2	+1.1
PAMC	Pamplona, Colo	11.18	175	eP	Pn	01 14 21.7	+0.4
BARC	Barichara	11.89	178	eP	Pn	01 14 32.5	+1.5
PTBC	PUERTO BERRIO,	11.96	184	eP	Pn	01 14 32.5	+0.8
PCRV	Puerto La Cruz	12.02	133	Pn	Pn	01 14 33.0	+0.4
	comp=Z,4.6nm,0.3s,baz=294,slow=3.0,SNR=16						
PCRV				Sn	Sn	01 16 39.0	-6.9
	comp=Z,0.7nm,0.3s,baz=60,slow=18,SNR=1.8						
PCRV				LR	LR	01 19 17.6	
	comp=Z,544nm,21.1s,slow=38						
PTAC	Punta Ardita,	12.05	200	eP	Pn	01 14 34.2	+1.4
PLCV	Puerto La Cruz	12.06	132		Pn	01 14 33.0	-0.1
HELC	Santa Helena	12.43	189	eP	Pn	01 14 40.5	+2.1
RUSC	La Rusia	12.59	178	eP	Pn	01 14 43.2	+2.5
SOLC	Bahia Solano	12.80	197	eP	Pn	01 14 43.2	+0.1
CBOC	Ciudad Bolivar	12.82	191	eP	Pn	01 14 45.8	+2.2
SPBC	San Pablo de B	12.83	182	eP	Pn	01 14 45.0	+1.4
NORC	Norcasia	12.96	186	eP	Pn	01 14 45.0	-0.5
GUY2C	Guyana, Caldas	13.35	188	eP	Pn	01 14 53.0	+1.8
GUY2C				eP	P	01 14 54.8	-5.7
ROSC	El Rosal	13.64	183	Pn	Pn	01 14 56.6	+1.7
	comp=Z,1.3nm,0.3s,baz=90,slow=20,SNR=1.7						
ROSC				Sn	Sn	01 17 22.1	-3.9
	comp=Z,0.9nm,0.3s,baz=354,slow=22,SNR=1.6						
RREF	El Recreo	13.67	187	eP	Pn	01 14 59.2	+3.6
JTS	Las Juntas de	13.71	235	Pn	Pn	01 14 59.6	+4.0
	comp=Z,0.4nm,0.3s,baz=74,slow=20,SNR=2.8						
PLMC	San Jos del P	13.81	191	eP	Pn	01 15 00.1	+3.1
CHIC	Chingaza	13.83	181	eP	Pn	01 15 01.0	+3.4
TEIG	Tepich	13.95	279	Pn	Pn	01 14 58.7	-0.1
	baz=195,slow=0.0						
ANIL	Santa Ana	14.08	187	eP	Pn	01 15 04.3	+3.4
ORTC	Ortega, Tolima	14.64	187	eP	Pn	01 15 10.8	+2.5
GARC	Garzon, Huila	16.36	187	eP	Pn	01 15 32.3	+1.2
APG	El Apazote	16.53	260	Pn	Pn	01 15 34.0	+0.9
	comp=Z,0.2nm,0.3s,baz=19,slow=23,SNR=3.2						
CMIG	Matias Romero	20.32	269	P	P	01 16 17.6	+0.7
	comp=Z,1.7nm,0.9s,baz=82,slow=11,SNR=2.3						
PTGA	Pitinga	23.38	144	P	P	01 16 49.1	-0.4
	comp=Z,1.8nm,0.5s,baz=340,slow=8.1,SNR=4.5						
MGMO	Mountain Grove	24.74	322	P	P	01 17 01.3	-0.8
MGMO				IAmb	IAmb	01 17 09.7	
	comp=Z,11nm,0.9s						
TXAR	Lajitas Array	29.42	297	P	P	01 17 45.1	+0.7
	comp=Z,1.4nm,1.1s,baz=102,slow=9.1,SNR=4.6						
TXAR				PcP	PcP	01 20 50.4	+0.4
	comp=Z,0.5nm,0.6s,baz=137,slow=3.4,SNR=5.4						
K31A	O'Neill	32.10	324	P	P	01 18 07.4	-0.4
KSCO	Kaye Shedlock'	32.38	315	P	P	01 18 08.4	-2.0
LPAZ	La Paz	35.03	171	P	P	01 18 35.5	+1.3
	comp=Z,2.8nm,1.0s,baz=340,slow=4.7,SNR=7.1						
LPAZ	La Paz	35.03	171	P	P	01 18 34.3	+0.1
LPAZ				IAmb	IAmb	01 18 37.2	
	comp=Z,6.9nm,1.4s						
SCHQ	Schefferville	36.59	7	P	P	01 18 45.6	-0.8
	comp=Z,1.4nm,0.8s,baz=222,slow=12,SNR=2.1						
SCHQ	Schefferville	36.59	7	IAmb	IAmb	01 19 57.6	
	comp=Z,14nm,1.5s						
PDAR	Pinedale Array	38.79	316	P	P	01 19 05.7	+0.1
	comp=Z,0.9nm,0.9s,baz=117,slow=5.2,SNR=4.5						
PDAR				PcP	PcP	01 21 15.6	-1.1
	comp=Z,0.5nm,0.7s,baz=121,slow=5.5,SNR=4.7						
YMP	Mirror Lake Pl	40.10	319	P	P	01 19 17.7	+1.1
FXWY	Fox Creek	40.15	317	P	P	01 19 17.5	+0.7
PSUT	Pine Spring	40.18	308	P	P	01 19 19.0	+1.8
MCMT	McKenzie Canyo	41.85	318	P	P	01 19 31.3	+0.5
ELK	Elko	41.90	311	P	P	01 19 30.7	-0.7
	comp=Z,0.7nm,0.6s,baz=62,slow=10,SNR=4.0						
ELK	Elko	41.90	311	IAmb	IAmb	01 19 38.4	
	comp=Z,2.0nm,1.1s						
BDFB	Brasilia	42.30	142	P	P	01 19 35.0	+0.4
	comp=Z,9.4nm,0.8s,baz=313,slow=10,SNR=10						
BDFB	Brasilia	42.30	142	P	P	01 19 35.0	+0.4
BDFB				IAmb	IAmb	01 19 35.7	
	comp=Z,10nm,0.9s						
NVAR	Mina Array Bea	43.51	307	P	P	01 19 45.1	+0.7
	comp=Z,1.1nm,0.9s,baz=99,slow=6.3,SNR=4.4						
NVAR				PcP	PcP	01 21 33.4	+1.3
	comp=Z,0.3nm,0.5s,baz=103,slow=2.4,SNR=2.8						
NVAR	Mina Array Bea	43.51	307	P	P	01 19 43.9	-0.5
KVN	Kaiserville	43.51	308	P	P	01 19 44.4	+0.1
YERR	Yerington	44.35	307	P	P	01 19 49.6	-1.6
YERR				IAmb	IAmb	01 19 58.5	
	comp=Z,9.9nm,1.2s						
WVOR	Wild Horse Val	44.86	312	P	P	01 19 55.8	+0.7
WVOR				IAmb	IAmb	01 21 29.8	
	comp=Z,16nm,1.8s						
G08A	Pilot Rock	46.01	316	P	P	01 20 03.9	-0.2
G08A				IAmb	IAmb	01 20 10.1	
	comp=Z,5.9nm,1.1s						
YKA	Yellowknife Ar	52.23	337	P	P	01 20 51.1	-0.2
	comp=Z,2.0nm,0.9s,baz=129,slow=8.2,SNR=19						
PLCA	Paso Flores	59.04	177	P	P	01 21 40.4	-0.1
	comp=Z,3.0nm,1.0s,baz=350,slow=6.1,SNR=3.3						
PLCA	Paso Flores	59.04	177	IAmb	IAmb	01 21 42.0	
	comp=Z,22nm,1.6s						
ESDC	Sonseca Array	62.88	54	P	P	01 22 07.6	+0.8
	comp=Z,0.5nm,0.3s,baz=281,slow=7.5,SNR=4.1						
BMAR	Burnt Mountain	65.73	336	P	P	01 22 24.7	-0.2
ILAR	Eielson Array	66.26	333	P	P	01 22 27.1	-1.2
	comp=Z,0.6nm,0.8s,baz=114,slow=4.9,SNR=5.8						
DBIC	Dimbokro	67.78	90	P	P	01 22 38.5	-0.4
	comp=Z,3.3nm,0.8s,baz=280,slow=12,SNR=4.2						
DBIC	Dimbokro	67.78	90	IAmb	IAmb	01 22 39.5	
	comp=Z,27nm,1.9s						
TORD	Torodi Ar. Bea	72.18	82	P	P	01 23 05.6	-0.3
	comp=Z,1.4nm,0.8s,baz=287,slow=5.8,SNR=7.5						
TORD	Torodi Ar. Bea	72.18	82	P	P	01 23 05.9	0.0
TORD				IAmb	IAmb	01 23 06.6	
	comp=Z,1.3nm,0.8s						
KEST	Kesra	73.82	57	P	P	01 23 15.9	+0.6
	comp=Z,5.9nm,0.9s,baz=304,slow=7.3,SNR=6.2						
KEST	Kesra	73.82	57	P	P	01 23 15.8	+0.4
GERES	GERESS Array B	74.52	43	P	P	01 23 19.8	+0.5
	comp=Z,1.6nm,0.8s,baz=274,slow=3.9,SNR=13						
GERES				LR	LR	01 52 42.0	
	comp=Z,497nm,19.6s,baz=306,slow=33						
GERES	GERESS Array B	74.52	43	P	P	01 23 19.4	+0.2
ARCES	ARCESS Array B	75.93	21	P	P	01 23 26.7	-0.1
	comp=Z,1.8nm,0.9s,baz=284,slow=4.9,SNR=3.6						
FINES	FINESS Array B	78.42	29	P	P	01 23 41.4	+0.4
	comp=Z,1.1nm,0.8s,baz=264,slow=14,SNR=3.6						
MLR	Muntele Rosu	83.45	44	P	P	01 24 09.8	+1.6
TIXI	Tiksi	88.73	353	P	P	01 24 33.8	+0.2
TIXI				IAmb	IAmb	01 24 34.4	
	comp=Z,3.7nm,1.0s						
BR131	Keskin Array S	90.89	47	P	P	01 24 45.1	+0.5
BR131				IAmb	IAmb	01 25 31.0	
	comp=Z,7.9nm,1.8s						
BRTR	Keskin Array B	90.89	47	P	P	01 24 45.1	+0.5
	comp=Z,0.7nm,0.8s,baz=279,slow=4.0,SNR=5.3						
BRTR	Keskin Array B	90.89	47	P	P	01 24 44.9	+0.4
SEY	Seymchan	91.17	341	P	P	01 24 46.3	+1.1
	comp=Z,0.5nm,0.3s,baz=43,slow=5.8,SNR=3.8						
KBZ	Khabaz	95.11	41	LR	LR	02 06 54.4	
	comp=Z,412nm,19.0s,baz=352,slow=35						
WMQ	Urumqi	115.61	15	eP	PKPdf	01 30 23.0	+0.1
KSH	Kashi	115.62	26	PKP	PKPdf	01 30 24.0	+0.9
KSH				PP	PP	01 31 30.8	+6.4
KSH				PKS	PKSdf	01 33 59.8	-0.1
KSH	Kashi	115.62	26	SS	SS	01 47 25.9	+3.9
LZH	Lanzhou	125.61	3	ePKP	PKPdf	01 30 41.9	-0.5
LZH				pPKP	PKiKP	01 30 44.1	+1.3
CD2	Chengdu	130.76	3	PKP	PKPdf	01 30 51.0	-1.2
WRA	Warramunga Arr	153.60	262	PKP	PKPdf	01 31 31.9	-0.2
	comp=Z,1.0nm,0.8s,baz=91,slow=1.4,SNR=6.0						
WRA				PKPbc	PKPbc	01 31 38.5	-1.5
	comp=Z,1.2nm,0.7s,baz=95,slow=1.4,SNR=8.1						
ASAR	Alice Springs	153.86	254	PKP	PKPdf	01 31 31.9	-0.6
	comp=Z,0.3nm,0.9s,baz=169,slow=0.5,SNR=1.6						
ASAR				PKPbc	PKPbc	01 31 38.9	-1.5
	comp=Z,0.4nm,0.6s,baz=103,slow=1.8,SNR=4.4						

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*IDC **22** 01:27:17.0±8.1, 32°.92N×75°.57E, h0^{km}, mb3.5/3, mb1 3.5/5, mb1mx3.2/65, mbtmp3.4/5, ML2.8/2, Error ellipse: s-maj=196.3km s-min=37.5km az=122.0*

ISC 22 01:27:18.2±0.8**, 33°.05N**±0°.05×**75°.8E**±0°.2**, h10^{km}, n9, σ2^{s}.61**/13**, 2C-2D, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	0.62	186	ePG	Pg	01 27 30.2	-0.1
BHK	Bhakra	1.72	162	ePN	Pn	01 27 47.8	-0.4
BHK				eSN	Sg	01 28 13.2	-0.2
AAK	Ala-Archa	9.62	354	⇓Pn	Pn	01 29 36.4	-0.6
	1.3nm,0.8s						
AAK				⇑Sn	Sn	01 31 29.7	+4.6
	1.3nm,0.6s						
KK31	Karatay Array	10.86	339	⇑Pn	Pn	01 29 53.0	-0.7
	0.6nm,0.6s,baz=155,slow=13,SNR=7.4						
KK31				⇓Sn	Sn	01 31 52.2	-3.1
	1.0nm,0.3s,baz=159,slow=22,SNR=9.3						
MKAR	Makanchi Array	14.59	18	Pn	Pn	01 30 47.4	+2.6
	0.1nm,0.3s,baz=201,slow=13,SNR=5.7						
MKAR				Sn	Sn	01 33 21.4	-5.1
	0.1nm,0.3s,baz=193,slow=22,SNR=5.5						
KURBB	Kurchatov Arra	17.67	6	P	Pn	01 31 25.0	+0.6
	0.0nm,0.3s,baz=191,slow=11,SNR=2.2						
BVAR	Borovoye Array	20.34	351	P	P	01 31 55.9	+1.5
	0.3nm,0.3s,baz=161,slow=9.2,SNR=5.3						
ARCES	ARCESS Array B	45.82	338	P	P	01 35 40.7	+0.8
	2.1nm,0.9s,baz=116,slow=9.2,SNR=1.3						
TORD	Torodi Ar. Bea	69.70	273	P	P	01 38 27.9	-0.7
	0.2nm,0.5s,baz=49,slow=6.0,SNR=2.0						

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*IDC **22** 01:31:08.4±0.9, 59°.18S×24°.66W, h0^{km}, mb4.2/6, mb1 4.3/6, mb1mx4.0/19, mbtmp4.2/6, Error ellipse: s-maj=33.6km s-min=28.2km az=95.0*

*NEIC **22** 01:31:12.4±0.7, 59°.3S±0°.2×24°.6W±0°.4, h28^{km}±4^{km}, mb4.6/7, Error ellipse: s-maj=30.1km s-min=20.7km az=69.0*

ISC 22 01:31:09.8±0.6**, 59°.2S**±0°.1×**24°.6W**±0°.2**, h10^{km}, n27, σ0^{s}.46**/25**, mb4.5**/8**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.34	156	P	Pn	01 34 19.3	+0.4
VNA3	Neumayer Olymp	13.54	159	P	Pn	01 34 20.8	-0.8
VNA2	Neumayer--Watz	13.73	156	P	Pn	01 34 24.1	-0.2
	baz=314,slow=16						
SNAA	Sanae	15.29	154	P	Pn	01 34 44.7	-0.7
SNAA	Sanae	15.29	154		Pn	01 34 45.0	-0.3
QSPA	South Pole Qui	31.04	180	P	P	01 37 28.0	+0.5
QSPA				IAmb	IAmb	01 37 29.8	
	comp=Z,15nm,1.4s						
PLCA	Paso Flores	34.00	282	P	P	01 37 53.5	0.0
	comp=Z,3.9nm,1.1s,baz=153,slow=14,SNR=3.3						
PLCA	Paso Flores	34.00	282	IAmb	IAmb	01 37 56.2	
	comp=Z,28nm,1.8s						
VNDA	Vanda	43.48	182	P	P	01 39 13.2	+0.8
	comp=Z,2.2nm,0.8s,baz=161,slow=4.9,SNR=4.5						
LPAZ	La Paz	53.34	304	P	P	01 40 29.6	-0.1
	comp=Z,1.3nm,0.7s,baz=178,slow=7.2,SNR=4.9						
LPAZ	La Paz	53.34	304	IAmb	IAmb	01 41 02.1	
	comp=Z,13nm,1.9s						
DBIC	Dimbokro	67.52	21	P	P	01 42 06.0	+0.1
	comp=Z,1.8nm,0.7s,baz=170,slow=11,SNR=2.1						
TOA0	Torodi Ar. Sit	75.18	26	P	P	01 42 52.5	+0.4
TOA0				IAmb	IAmb	01 42 53.8	
	comp=Z,4.6nm,0.8s						
TORD	Torodi Ar. Bea	75.18	26	P	P	01 42 52.9	+0.7
	comp=Z,3.6nm,0.7s,baz=192,slow=5.0,SNR=22						
TORD	Torodi Ar. Bea	75.18	26	P	P	01 42 52.3	+0.2
ASAR	Alice Springs	95.55	160	P	P	01 44 34.5	-0.6
	comp=Z,0.3nm,0.7s,baz=193,slow=2.9,SNR=2.4						
NVAR	Mina Array Bea	123.86	289	PKP	PKPdf	01 50 07.2	-0.2
	comp=Z,0.4nm,0.7s,baz=190,slow=4.5,SNR=4.2						
MKAR	Makanchi Array	136.51	73	PKP	PKiKP	01 50 32.2	-0.4
	comp=Z,0.4nm,0.9s,baz=247,slow=2.3,SNR=2.7						
YKA	Yellowknife Ar	139.43	314	PKP	PKPdf	01 50 35.6	0.0
	comp=Z,1.1nm,0.7s,baz=137,slow=2.7,SNR=6.7						
C36M	Paulatuk	146.28	321		PKPdf	01 50 47.8	+0.3
INK	Inuvik	149.11	317	PKPbc	PKPbc	01 50 55.9	-0.6
	comp=Z,6.1nm,1.0s,baz=104,slow=3.7,SNR=17						
EPYK	Eagle Plains	149.65	312		PKPbc	01 50 57.8	-0.2
DAWY	Dawson	149.89	307		PKPbc	01 50 58.1	-0.5
BCAR	Beaver Creek A	150.52	305		PKPbc	01 50 60.0	-0.2
RIDG	Independent Ri	152.05	305		PKiKP	01 51 04.1	0.0
ILAR	Eielson Array	153.20	307	PKPbc	PKPbc	01 51 05.8	-0.3
	comp=Z,1.1nm,0.9s,baz=148,slow=3.0,SNR=9.0						
ILAR	Eielson Array	153.20	307		PKPbc	01 51 05.5	-0.6

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*GCG **22** 01:33:07.3±1.4, 15°.82N×88°.03W, h33^{km}±999^{km}, MD3.8*

*UCR **22** 01:33:08.4±0.8, 14°.91N×88°.18W, h5^{km}±2^{km}, ML3.5*

*SNET **22** 01:33:08.3±0.7, 14°.90N×88°.19W, h5^{km}±2^{km}, ML3.6*

*INET **22** 01:33:10.7, 15°.02N×88°.12W, h30^{km}, ML2.9*

ISC 22 01:33:07.5±1.6**, 14°.93N**±0°.07×**88°.14W**±0°.04**, h12^{km}**±12^{km}**, n42, σ0^{s}.98**/70**, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLGN	La Laguna	1.09	226	eP	Pg	01 33 28.3	-0.3
LLGN				eS	Sn	01 33 43.4	-0.5
LLGN	La Laguna	1.09	226	eP	Pg	01 33 28.3	-0.3
LLGN				eS	Sn	01 33 43.4	-0.5
TGUH	Tegucigalpa,Un	1.21	136	eP	Pg	01 33 30.0	-0.8
TGUH				eS	Sg	01 33 47.6	+1.2
TGUH	Tegucigalpa,Un	1.21	136	eP	Pg	01 33 30.0	-0.8
TGUH				eS	Sg	01 33 47.6	+1.2
FAGO	Alcalda de S	1.23	179	eP	Pb	01 33 30.1	-0.6
FAGO				eS	Sb	01 33 47.4	+0.9
FAGO	Alcalda de S	1.23	179	eP	Pb	01 33 30.1	-0.6
FAGO				eS	Sb	01 33 47.4	+0.9
MTO3	Montecristo	1.30	246	eP	Pb	01 33 31.7	-0.3
MTO3				eS	Sg	01 33 49.5	+0.1
MTO3	Montecristo	1.30	246	eP	Pb	01 33 31.7	-0.3
MTO3				eS	Sg	01 33 49.5	+0.1
PACA	Pacayal	1.46	187	eP	Pb	01 33 34.4	-0.4
PACA				eS	Sb	01 33 54.4	+1.0
PACA	Pacayal	1.46	187	eP	Pb	01 33 34.4	-0.4
PACA				eS	Sb	01 33 54.4	+1.0
TECA	Tecapa	1.47	194	eP	Pb	01 33 34.5	-0.4
TECA				eS	Sb	01 33 55.1	+1.4
TECA	Tecapa	1.47	194	eP	Pb	01 33 34.5	-0.4
TECA				eS	Sb	01 33 55.1	+1.4
COEB	Comit de Eme	1.47	195	eP	Pb	01 33 35.0	0.0
COEB				eS	Sb	01 33 54.5	+0.8
COEB	Comit de Eme	1.47	195	eP	Pb	01 33 35.0	0.0
COEB				eS	Sb	01 33 54.5	+0.8
LBRS	Las Brisas	1.48	217	eP	Pb	01 33 33.7	-1.2
BLLM	Bellamira	1.48	184	eP	Pb	01 33 34.6	-0.5
BLLM				eS	Sb	01 33 55.0	+1.1
BLLM	Bellamira	1.48	184	eP	Pb	01 33 34.6	-0.5
BLLM				eS	Sb	01 33 55.0	+1.1
RANC	El Ranchito	1.50	186	eP	Pb	01 33 35.1	-0.3
RANC	El Ranchito	1.50	186	eP	Pb	01 33 35.1	-0.3
VSM	San Miguel	1.50	185	eP	Pb	01 33 35.0	-0.5
VSM	San Miguel	1.50	185	eP	Pb	01 33 35.0	-0.5
MRL	Marmol	1.50	276	eP	Pg	01 33 35.5	-0.9
MRL				eS	Sg	01 33 58.5	+2.5
LCY	Lacayo	1.51	186	eP	Pb	01 33 35.3	-0.2
LCY	Lacayo	1.51	186	eP	Pb	01 33 35.3	-0.2
LFRS	El Faro	1.58	215	eP	Pb	01 33 35.7	-1.1
LFRS				eS	Sb	01 33 57.6	+0.8
LOMA	Loma Larga	1.62	218	eP	Pb	01 33 36.4	-1.2
LOMA				eS	Sb	01 33 58.6	+0.5
LOMA	Loma Larga	1.62	218	eP	Pb	01 33 36.4	-1.2
LOMA				eS	Sb	01 33 58.6	+0.5
LCND	La Caada	1.63	172	eP	Pb	01 33 37.3	-0.3
LCND				eS	Sb	01 33 59.0	+0.9
LCND				IAML		01 34 02.7	
	comp=Z,702nm,0.3s						
LCND	La Caada	1.63	172	eP	Pb	01 33 37.3	-0.3
LCND				eS	Sb	01 33 59.0	+0.9
LCND				IAML		01 34 02.7	
	comp=Z,702nm,0.3s						
CNCH	Conchagua	1.67	170	eP	Pb	01 33 37.7	-0.6
CNCH				eS	Sg	01 34 01.0	-0.3
CNCH				IAML		01 34 05.5	
	comp=Z,2µm,0.3s						
CNCH	Conchagua	1.67	170	eP	Pb	01 33 37.7	-0.6
CNCH				eS	Sg	01 34 01.0	-0.3
CNCH				IAML		01 34 05.5	
	comp=Z,2µm,0.3s						
JUCU	Jucuar¡n	1.67	184	eP	Pb	01 33 37.6	-0.7
JUCU				IAML		01 33 42.3	
	comp=Z,281nm,0.4s						
JUCU				eS	Sb	01 34 00.6	+1.2
JUCU	Jucuar¡n	1.67	184	eP	Pb	01 33 37.6	-0.7
JUCU				IAML		01 33 42.3	
	comp=Z,281nm,0.4s						
JUCU				eS	Sb	01 34 00.6	+1.2
SNJE	San Jose	1.77	234	eP	Pb	01 33 38.9	-1.2
SNJE	San Jose	1.77	234	eP	Pb	01 33 38.9	-1.2
RTR	El Retiro	1.79	235	eP	Pb	01 33 39.0	-1.3
RTR	El Retiro	1.79	235	eP	Pb	01 33 39.0	-1.3
SBLS	San Blas	1.80	233	eP	Pb	01 33 39.8	-0.8
SBLS	San Blas	1.80	233	eP	Pb	01 33 39.8	-0.8
NBG	Las Nubes	2.17	261	eP	Pg	01 33 48.0	-1.1
NBG				eS	Sg	01 34 19.7	+2.4
IXG	Ixpaco	2.36	252	eP	Pg	01 33 50.9	-1.8
IXG				eS	Sg	01 34 25.6	+2.3
FUG	Fuego 3	2.66	260	eP	Pb	01 33 54.8	-0.4

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*IDC **22** 01:37:18.8±1.6, 4°.76S×130°.84E, h0^{km}, mb3.6/2, mb1 3.8/6, mb1mx3.6/44, mbtmp3.7/6, ML3.6/4, Error ellipse: s-maj=79.2km s-min=22.8km az=83.0*

ISC 22 01:37:21.8±1.0**, 4°.90S**±0°.06×**131°.1E**±0°.2**, h61^{km}, n6, σ5^{s}.12**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.01	2	Pn	Pn	01 38 19.9	-0.9
	2.7nm,0.3s,baz=180,slow=20,SNR=29						
SIJI				Sn	Sn	01 39 00.9	-5.6
	4.7nm,0.3s,baz=227,slow=22,SNR=7.6						
FITZ	Fitzroy Crossi	14.18	202	Pn	Pn	01 40 39.8	+0.3
	0.2nm,0.3s,baz=32,slow=13,SNR=12						
FITZ				Sn	Sn	01 43 09.6	-5.8
	0.1nm,0.3s,baz=113,slow=18,SNR=1.3						
WRA	Warramunga Arr	15.27	169	Pn	P	01 40 56.6	-0.8
	0.2nm,0.3s,baz=352,slow=13,SNR=7.3						
WRA				Sn	Sn	01 43 36.3	-5.8
	0.1nm,0.3s,baz=77,slow=21,SNR=2.5						
ASAR	Alice Springs	18.84	172	P	Pn	01 41 43.8	+5.7
	0.8nm,0.3s,baz=352,slow=10.0,SNR=58						
MKAR	Makanchi Array	67.12	326	P	P	01 48 12.5	+3.4
	0.4nm,0.5s,baz=113,slow=7.7,SNR=8.9						
KURBB	Kurchatov Arra	71.34	328	P	P	01 48 38.7	+3.7
	0.2nm,0.3s,baz=128,slow=5.4,SNR=4.6						

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*IDC **22** 01:54:27.9±3.5, 20°.90S×70°.14W, h0^{km}, mb4.1/1, mb1 3.9/2, mb1mx3.4/34, mbtmp3.9/2, ML3.3/1, Error ellipse: s-maj=125.9km s-min=43.0km az=101.0*

*GUC **22** 01:54:29.9±0.7, 20°.07S×70°.87W, h18^{km}±3^{km}, ML3.7*

ISC 22 01:54:24.6±1.7**, 20°.10S**±0°.03×**71°.13W**±0°.08**, h10^{km}**±11^{km}**, n24, σ1^{s}.39**/35**, 12C-4D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA01	Diego Aracena	1.00	118	⇓iP	Pg	01 54 44.9	+1.0
TA01				iS	Sb	01 54 56.4	-1.0
TA01				IAML		01 54 59.9	
	comp=N,8µm,0.3s						
PSGC	Pisagua	1.07	63	⇑iP	Pb	01 54 45.0	-0.3
PSGC				iS	Sb	01 54 56.1	-3.3
PATCX	Punta Patache	1.17	128	⇓iP	Pg	01 54 48.1	+1.0
PATCX				iS	Sb	01 55 01.6	-0.6
PATCX				IAML		01 55 04.3	
	comp=E,2µm,0.3s						
PB11	IPOC Station P	1.42	77	⇑iP	Pn	01 54 50.6	-0.1
PB11				iS	Sn	01 55 06.9	-2.7
PB11				IAML		01 55 17.3	
	comp=N,2µm,0.5s						
PB12	IPOC Station P	1.66	27	eP	Pg	01 54 56.3	-0.1
PB12				iS	Sb	01 55 16.8	+0.6
PB02	IPOC Station P	1.68	137	⇓iP	Pg	01 54 56.8	-0.1
PB02				iS	Sb	01 55 16.9	0.0
PB02				IAML		01 55 22.4	
	comp=E,4µm,0.3s						
PB01	IPOC Station P	1.80	122	⇓iP	Pb	01 54 57.8	0.0
PB01				iS	Sn	01 55 19.0	+0.1
PB01				IAML		01 55 23.9	
	comp=N,2µm,0.5s						
PB08	IPOC Station P	1.85	92	⇑iP	Pn	01 54 58.0	+1.1
PB08				iS	Sn	01 55 19.4	-1.2
PB08				IAML		01 55 22.4	
	comp=E,480nm,0.4s						
GO01	Chusmiza	1.87	77	⇑iP	Pn	01 54 58.3	+1.2
GO01				iS	Sn	01 55 20.9	-0.2
AP01	Chacalluta	1.87	24	⇑iP	Pg	01 55 00.2	-0.3
AP01				iS	Sb	01 55 22.4	+0.1
AP01				IAML		01 55 30.6	
	comp=E,3µm,0.8s						
PB07	IPOC Station P	2.00	145	⇑iP	Pb	01 55 01.5	+0.3
PB07				iS	Sb	01 55 27.1	+0.9
PB07				IAML		01 55 35.1	
	comp=E,1µm,0.4s						
PB16	IPOC Station P	2.33	41	⇑iP	Pb	01 55 06.5	-0.6
PB16				iS	Sb	01 55 36.5	+0.4
PB03	IPOC Station P	2.33	147	⇑iP	Pb	01 55 06.1	-0.7
PB03				IAML		01 55 44.4	
	comp=E,449nm,0.3s						
PB04	IPOC Station P	2.41	158	⇑iP	Pb	01 55 07.3	-0.9
PB04				IAML		01 55 55.2	
	comp=N,548nm,0.6s						
PB09	IPOC Station P	2.44	134	⇑iP	Pb	01 55 08.6	-0.2
PB09				iS	Sb	01 55 38.7	-0.4
PB05	IPOC Station P	2.88	163	⇑iP	Pb	01 55 13.4	-2.7
PB06	IPOC Station P	2.98	151	⇑iP	Pb	01 55 14.9	-3.0
LVC	Limon Verde	3.25	141	eP	Pb	01 55 20.2	-2.4
LPAZ	La Paz	4.74	37	Pn	Pb	01 55 46.1	-2.1
	comp=N,0.8nm,0.3s,baz=208,slow=7.5,SNR=14						
LPAZ				Pg	Pg	01 55 56.9	+1.4
	comp=N,1.2nm,0.3s,baz=224,slow=14,SNR=16						
LPAZ				Lg	Lg	01 57 00.5	
	baz=24,slow=20,SNR=1.7						
TORD	Torodi Ar. Bea	78.86	72	P	P	02 06 30.2	+1.6
	comp=N,1.3nm,0.7s,baz=244,slow=5.3,SNR=7.2						
H11S2	WAKE ISLAND Hy	125.63	279	T	T	04 32 57.4	
	baz=106,slow=75,SNR=2.7						

H11S1	WAKE ISLAND Hy	125.64	279	T	T	04 32 57.5	
	baz=106						
H11S3	WAKE ISLAND Hy	125.65	279	T	T	04 32 58.8	
	baz=106,slow=75,SNR=3.3						
MKAR	Makanchi Array	145.66	33	PKPbc	PKiKP	02 14 08.1	+0.7
	comp=N,0.8nm,0.7s,baz=318,slow=3.6,SNR=9.8						

IDC 22 01:59:23.7±3.0, 6°.25S×133°.67E, h0^{km}, mb3.3/1, mb1 3.7/5, mb1mx3.5/39, mbtmp3.5/5, ML3.6/4, Error ellipse: s-maj=106.5km s-min=26.6km az=82.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.86	336	Pn	Pn	02 00 51.6	-0.2
	2.2nm,0.3s,baz=180,slow=19,SNR=23						
SIJI				Sn	Sn	02 01 49.6	-10
	8.0nm,0.3s,baz=250,slow=22,SNR=9.1						
WRA	Warramunga Arr	13.63	177	Pn	Pn	02 02 39.2	+0.8
	0.3nm,0.3s,baz=0.2,slow=22,SNR=8.1						
WRA				Sn	Sn	02 05 01.9	-8.8
	0.5nm,0.3s,baz=1.6,slow=23,SNR=8.4						
FITZ	Fitzroy Crossi	14.14	213	Pn	Pn	02 02 44.5	-1.0
	0.2nm,0.3s,baz=28,slow=9.9,SNR=7.9						
FITZ				Sn	Sn	02 05 10.8	-13
	0.2nm,0.3s,baz=330,slow=18,SNR=1.9						
ASAR	Alice Springs	17.32	179	P	Pn	02 03 27.0	-0.1
	0.2nm,0.3s,baz=356,slow=14,SNR=4.8						
ASAR				S	Sn	02 06 31.7	-8.9
	0.2nm,0.3s,baz=1.4,slow=28,SNR=6.7						
MKAR	Makanchi Array	69.65	325	P	P	02 10 35.3	+0.1
	0.3nm,0.7s,baz=114,slow=7.5,SNR=2.7						

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*SJA **22** 02:09:04.2±1.2, 30°.60S×71°.28W, h69^{km}±21^{km}, ML3.0, MW3.2*

*GUC **22** 02:09:05.9±0.7, 30°.65S×71°.28W, h59^{km}±4^{km}, ML3.8*

ISC 22 02:09:06.9±1.6, 30°.63S±0°.04×71°.30W±0°.09, h45^{km}±19^{km}, n18, σ0^{s}.84/28, 4C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO03	El Pedregal	0.56	112	⇑iP	Pn	02 09 18.1	-0.7
CO03				eS	Sn	02 09 27.3	+0.1
CO03				IAML		02 09 27.9	
	comp=E,12μm,0.2s						
GO04	Tololo Observa	0.62	44	⇑iP	Pn	02 09 19.3	-0.4
GO04				eS	Sn	02 09 29.5	+0.7
GO04				IAML		02 09 31.7	
	comp=N,14μm,0.3s						
GO04	Tololo Observa	0.62	44	iP	Pn	02 09 19.2	-0.4
GO04				eS	Sn	02 09 29.9	+1.1
CO02	Combarbal	0.63	156	eP	Pn	02 09 19.5	-0.1
CO02				iS	Sn	02 09 28.9	+0.1
CO02				IAML		02 09 31.2	
	comp=N,5μm,0.2s						
CO04	Los Peladeros	1.44	169	eP	Pn	02 09 30.2	-0.6
CO04				eS	Sn	02 09 48.4	-0.2
RTLS	Leoncito	2.07	125	iP	Pn	02 09 39.1	-0.4
VA03	San Esteban	2.22	164	⇑iP	Pn	02 09 40.7	-0.6
VA03				iS	Sn	02 10 06.8	-0.8
VA03				IAML		02 10 10.9	
	comp=E,512nm,0.2s						
ROCH	El Roble	2.35	174	⇑iP	Pn	02 09 42.7	-0.5
ROC1	El Roble	2.35	174	iP	Pn	02 09 42.9	-0.4
ROC1				eS	Sn	02 10 12.9	+1.8
ZON	Zonda	2.43	113	iP	Pn	02 09 43.0	-1.0
ZON				eS	Sn	02 10 12.4	-0.2
ZON				IAML		02 10 17.0	
	comp=Z,75nm,0.2s						
RTLL	Cerro Villicun	2.52	107	iP	Pn	02 09 43.9	-1.5
PEL	Peldehue	2.56	168	iP	Pn	02 09 45.6	-0.3
RTCV	Cerro Valdivia	2.66	118	iP	Pn	02 09 46.2	-1.1
RTCV				IAML		02 10 21.8	
	comp=Z,51nm,0.3s						
ASAL	Salagasta	2.87	134	iP	Pn	02 09 50.7	+0.5
ASAL				IAML		02 10 35.2	
	comp=Z,49nm,0.5s						
ARCO	CERRO ARCO	2.99	138	iP	Pn	02 09 52.5	+0.6
ARCO				eS	Sn	02 10 27.8	+1.1
ARCO				IAML		02 10 37.7	
	comp=Z,59nm,0.5s						
GO03	Copiap	3.16	17	iP	Pn	02 09 53.2	-1.0
AAGR	Agrelo	3.23	140	iP	Pn	02 09 56.0	+0.9
AAGR				IAML		02 10 57.5	
	comp=Z,43nm,0.7s						
VCA	Vinchina	3.28	56	eP	Pn	02 09 56.1	+0.1
VCA				iS	Sn	02 10 34.8	+1.0
VCA				IAML		02 10 43.0	
	comp=N,228nm,0.7s						

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*IASPEI **22** 02:14:50.6±0.8, 32°.87N±0°.02×116°.49W±0°.02, h16^{km}±5^{km}, Error ellipse: s-maj=2.8km s-min=2.5km az=58.8, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ANF **22** 02:14:50.2±0.2, 32°.86N×116°.49W, h17^{km}±1^{km}, ML2.5/15, Error ellipse: s-maj=2.5km s-min=1.4km az=12.0*

*NEIC **22** 02:14:50.8±0.5, 32°.87N±0°.01×116°.49W±0°.01, h17^{km}±3^{km}, Error ellipse: s-maj=2.1km s-min=1.3km az=200.0*

*PAS **22** 02:14:51.5±1.1, 32°.86N±0°.01×116°.49W±0°.01, h13^{km}±4^{km}, ML2.7/129, Error ellipse: s-maj=1.9km s-min=1.5km az=216.0*

*SCEDC **22** 02:14:51.6, 32°.86N×116°.49W, h12^{km}*

ISC 22 02:14:50.7±0.8, 32°.87N±0°.02×116°.49W±0°.02, h16^{km}±5^{km}, n68, σ0^{s}.58/102, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MONP2	Monument Peak	0.06	68	P	Pg	02 14 53.7	-0.3
	baz=241,SNR=710						
MONP2				S	Sg	02 14 55.8	-0.5
	baz=241						
CBKC	Canebrake	0.20	81		Pg	02 14 55.8	+0.3
BAR	Barrett	0.24	219	Pg	Pg	02 14 56.4	+0.2
BAR				Sg	Sg	02 15 00.0	+0.2
EML	El Monte Cty P	0.30	274		Pg	02 14 57.4	+0.3
EML					Sg	02 15 01.8	+0.3
TKX	Tecate	0.32	198		Pg	02 14 57.5	+0.1
TKX					Sg	02 15 02.0	0.0
IKP	In-Ko-Pah, Jac	0.39	124		Pg	02 14 58.7	0.0
IKP	In-Ko-Pah, Jac	0.39	124	P	Pg	02 14 58.7	0.0
	baz=304,SNR=83						
IKP				S	Sg	02 15 03.8	-0.3
	baz=304						
BORC	Borrego Spring	0.40	9		Pg	02 14 59.2	+0.3
BORC					Sg	02 15 04.4	-0.1
DPP	Dos Picos Cty	0.40	289		Pg	02 14 59.1	+0.2
DPP					Sg	02 15 04.8	+0.3
SDRC	San Diego Road	0.40	251		Sg	02 15 04.6	+0.1
HWB	Hans Werner Br	0.43	292		Pg	02 14 59.5	+0.1
HWB					Sg	02 15 05.5	+0.3
RMX	La Rumorosa	0.44	127		Pb	02 15 00.8	+0.6
RMX					Sb	02 15 07.2	+0.7
CRR	Carrizo Plain	0.44	88		Pg	02 14 59.9	+0.4
OLP	Otay Lakes Par	0.45	235		Pg	02 15 00.0	+0.2
OLP					Sg	02 15 06.1	+0.1
109C	Camp Elliot, M	0.52	272		Pg	02 15 00.8	-0.2
109C	Camp Elliot, M	0.52	272	P	Pg	02 15 01.0	0.0
	baz=93,SNR=18						
109C				S	Sg	02 15 08.1	+0.1
	baz=93						
CPE	Camp Elliot	0.52	272		Pg	02 15 01.0	0.0
CPE					Sg	02 15 08.2	+0.1
CBX	Cerro Bola	0.57	195		Pg	02 15 02.1	0.0
CBX					Sg	02 15 09.8	0.0
PLM	Palomar	0.57	327		Pg	02 15 02.3	+0.1
SWSC	Sam W. Stewart	0.58	82		Pg	02 15 02.5	+0.2
SWSC	Sam W. Stewart	0.58	82	P	Pg	02 15 02.5	+0.2
	baz=262,SNR=37						
SWSC				S	Sg	02 15 10.3	+0.2
	baz=262						
SALN	Salton City	0.59	46		Pg	02 15 02.9	+0.5
SALN					Sg	02 15 11.0	+0.8
FRD	Ford Ranch, An	0.63	351		Sg	02 15 11.8	+0.2
FRD	Ford Ranch, An	0.63	351		Sg	02 15 11.6	0.0
COK2	Cook Ranch 2	0.64	91		Pg	02 15 03.8	+0.5
WESC	Westside Schoo	0.65	100		Pg	02 15 03.8	+0.4
GORC	Green Oak Ranc	0.68	295		Pg	02 15 03.6	-0.5
GORC					Sg	02 15 12.8	-0.4
SNDA	J Saunders Pla	0.69	351		Pg	02 15 04.7	+0.4
SNDA					Sg	02 15 13.6	+0.2
DNR	Dunn Ranch,Anz	0.71	350		Pg	02 15 05.0	+0.4
CRY	Cary Ranch	0.72	343		Pb	02 15 05.2	+0.1
XPFO	Pion Flat	0.74	2		Pb	02 15 05.3	0.0
XPFO					Sg	02 15 14.9	-0.2
XPFO	Pion Flat	0.74	2		Pb	02 15 05.0	-0.3
PFO	Pinyon Flats O	0.74	2		Pb	02 15 05.3	0.0
PFO					Sb	02 15 15.0	-0.3
PFO	Pinyon Flats O	0.74	2		Pb	02 15 05.0	-0.4
PFO	Pinyon Flats O	0.74	2	P	Pb	02 15 05.3	0.0
	baz=182,SNR=26						
PFO				S	Sb	02 15 14.9	-0.4
	baz=182						
CLIC	Calipatria	0.85	71		Pb	02 15 06.9	-0.3
BACC	Bachelor Mtn.	0.87	328		Pb	02 15 07.1	-0.5
DREC	Desert Rsrch C	0.88	94		Pb	02 15 07.7	+0.1
CTCC	Cactus City	0.89	28		Pb	02 15 07.7	-0.1
CTCC					Sb	02 15 19.9	+0.5
FRK	Frink	0.89	53		Pb	02 15 06.9	-0.9
DGR	Domenigoni Val	0.89	331		Pb	02 15 07.6	-0.3
DGR					Sb	02 15 19.1	-0.5
MURC	Murrieta	0.94	321		Pb	02 15 08.5	-0.2
MURC					Sb	02 15 20.8	-0.2
MURC	Murrieta	0.94	321	P	Pb	02 15 08.4	-0.2
	baz=141,SNR=8.2						
MURC				S	Sb	02 15 20.7	-0.2
	baz=141						
ESJX	Sierra Juarez	0.98	152		Pb	02 15 09.1	-0.3
ESJX					Sb	02 15 21.6	-0.5
CCX	Cicese	1.01	189		Sb	02 15 22.5	-0.3
EW2	E Wide Canyon	1.07	4		Sb	02 15 25.3	+0.6
BC3	Big Chuckawall	1.17	48		Pn	02 15 11.6	-1.0
BC3	Big Chuckawall	1.17	48	P	Pn	02 15 11.6	-1.0
	baz=228,SNR=14						
BC3				S	Sb	02 15 28.1	+0.5
	baz=228						
SME	Santa Rosa Min	1.20	323		Pn	02 15 12.8	0.0
SME					Sb	02 15 27.7	-0.6
BLAC	Blackrock camp	1.20	4		Pn	02 15 12.9	-0.1
BELC	Belle Mtn. Jos	1.20	20	P	Pn	02 15 12.5	-0.5
	baz=200,SNR=27						
BELC				S	Sb	02 15 29.1	+0.5
	baz=200						
TPC	Twentynine Pal	1.29	16		Pn	02 15 13.8	-0.3
GLA	Glamis	1.41	82	Pn	Pn	02 15 14.7	-1.0
GLA	Glamis	1.41	82	P	Pn	02 15 14.8	-1.0
	baz=263,SNR=14						
GLA				S	Sn	02 15 32.4	-1.6
	baz=263						
BBRC	Big Bear Solar	1.44	346	P	Pn	02 15 15.6	-0.7
	baz=166						
BBRC				Sb	Sb	02 15 36.5	+1.1
	baz=166						
CIS	Catalina Islan	1.70	289	Pb	Pn	02 15 21.4	+1.6
	baz=108						
CIS				S	Sn	02 15 41.1	-0.1
	baz=108						
IRM	Iron Mountain	1.71	41	P	Pn	02 15 19.5	-0.3
	baz=221,SNR=12						
IRM				Sb	Sb	02 15 44.2	+1.2
	baz=221						
Y12C	Blythe	1.86	61	Pn	Pn	02 15 22.3	+0.3
MWC	Mount Wilson	1.88	316	Pn	Pn	02 15 22.2	-0.2
HOLC	Holcomb Ridge	1.95	325		Pb	02 15 26.3	+0.4
GMRC	Granite Mounta	2.03	20	Pn	Pn	02 15 24.4	0.0
	baz=200,SNR=5.2						
GMRC				Pg	Pg	02 15 29.5	-0.2
	baz=200						
GMRC				Sb	Sb	02 15 54.5	+2.1
	baz=200						
GSC	Goldstone, Bar	2.44	354	Pn	Pn	02 15 29.8	-0.2
TUQ	Turquoise Moun	2.60	10	Sb	Sg	02 16 12.6	-1.8
	baz=190						
W13A	Hualapai Mount	3.10	43	Pn	Pn	02 15 39.4	+0.2
Y14A	Wickenburg	3.10	69	Pn	Pn	02 15 40.2	+1.1
MPMC	Manual Prospec	3.29	346	Pg	Pg	02 15 54.0	+0.3
	baz=165						
LCMT	Little Creek M	4.92	32	Pn	Pn	02 16 05.1	+1.0
U15A	North Rim	4.96	43	Pn	Pn	02 16 05.9	+1.1

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*DJA **22** 02:17:46.2±0.6, 8°N±9°×9°4E±1°1, h10^{km}, M4.5/7, mb4.5/7, mB4.7/1, MLv4.5/6, Mw(mB)3.9/1*

*IDC **22** 02:17:55.0±0.8, 7°.57N×94°.52E, h0^{km}, mb4.0/12, mb1 4.1/12, mb1mx3.9/41, mbtmp4.0/12, Error ellipse: s-maj=39.2km s-min=17.8km az=52.0*

*NEIC **22** 02:17:56.8±2.0, 7°.50N±0°.09×94°.50E±0°.08, h10^{km}±1^{km}, mb4.3/17, Error ellipse: s-maj=18.2km s-min=10.4km az=38.0*

ISC 22 02:17:56.7±0.5, 7°.47N±0°.09×94°.46E±0°.09, h10^{km}, n57, σ1^{s}.86/54, mb4.2/18, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	3.33	132	P	Pn	02 18 43.1	-5.8
LHMI	Lhok Sumawe	3.33	132	Pn	Pn	02 18 48.7	-0.2
MLSI	Meulaboh, Aceh	3.73	149	P	Pn	02 18 48.8	-5.6
TPTI		4.99	147	P	Pn	02 19 04.2	-7.5
	0.1nm16nm,0.9s						
KCSI	Kotacane, Aceh	5.13	140	P	Pn	02 19 07.8	-5.8
	0.2nm666nm54nm,0.6s						
PSI	Prapat	6.43	136	Pn	Pn	02 19 36.0	+4.4
	1.0nm,0.3s,baz=295,slow=11,SNR=4.8						
PSI				Sn	Sn	02 20 49.5	+4.4
	1.4nm,0.3s,baz=9.6,slow=4.5,SNR=1.6						
RPSI	Rantau Prapat	6.50	137	Pn	Pn	02 19 33.9	+1.4
RPSI	Rantau Prapat	6.50	137		Pn	02 19 36.0	+3.5
RPSI					Sn	02 20 49.5	+2.7
KULM	Kulim	6.52	109	Pn	Pn	02 19 34.2	+1.3
KULM					Sn	02 20 45.6	-1.8
IPM	Ipoh	7.17	114	Pn	Pn	02 19 42.0	+0.2
BKNI	Bangkinang	9.67	137	P	Pn	02 20 17.2	+1.2
PDSI	Padang	10.26	144	P	Pn	02 20 26.0	+1.9
CMAR	Chiang Mai Arr	11.76	21	Pn	Pn	02 20 45.9	+1.3
	0.9nm,0.3s,baz=216,slow=15,SNR=1.9						
MDSI	Maura Dua	15.34	140	P	Pn	02 21 27.9	-5.5
	9.1nm,1.0s						
ODAN	Odare	20.42	342	eP	Pn	02 22 36.1	-0.4
	13nm,0.6s						
RAMN	Ramite	20.76	340	eP	P	02 22 38.9	+0.8
	36nm,0.8s						
TAPN	Taplejung	20.78	343	eP	P	02 22 37.8	-0.6
UWJI	Ujung Watu	21.47	130	P	P	02 22 38.8	-6.8
	109nm,0.7s						
JIRN	Jiri	21.55	340	eP	P	02 22 49.1	+2.3
	38nm,0.8s						
PKI	Pulchoki	21.75	338	eP	P	02 22 48.9	0.0
GUN	Gumba	21.89	339	eP	P	02 22 51.4	+1.0
LSA	Lhasa	22.33	352	P	P	02 22 55.5	+0.3
LSA				IAmb	IAmb	02 23 03.5	
	comp=Z,10nm,0.7s						
DANN	Dangsing	23.10	335	eP	P	02 23 02.4	-0.8
	comp=Z,41nm,0.9s						
H08S3	Diego Garcia H	26.55	236	T	T	02 50 14.8	
	baz=55,slow=76,SNR=26						
H08S2	Diego Garcia H	26.56	236	T	T	02 50 21.3	
	baz=55,slow=76,SNR=20						
H08S1	Diego Carcia H	26.57	236	T	T	02 50 22.4	
	baz=55,slow=76,SNR=10.0						
NIL	Nilore	32.61	326	P	P	02 24 28.0	-0.7
KBL	Kabul	35.68	323	P	P	02 24 55.0	-0.6
KBL				IAmb	IAmb	02 25 00.9	
	comp=Z,2.7nm,0.8s						
KSH	Kashi	35.97	335	P	P	02 24 59.0	+1.1
KSH				pP	pwP	02 25 03.3	-0.4
KSH				PP	PP	02 26 20.1	+0.4
AAK	Ala-Archa	39.20	337	P	P	02 25 26.0	+0.7
MK31	Makanchi Array	40.55	347	P	P	02 25 35.4	-0.9
MK31				IAmb	IAmb	02 25 41.2	
	comp=Z,3.2nm,0.8s						
MKAR	Makanchi Array	40.55	347	P	P	02 25 35.5	-0.7
	comp=Z,2.3nm,0.7s,baz=167,slow=8.2,SNR=17						
MKAR				PcP	PcP	02 27 39.1	+0.6
	comp=Z,0.6nm,1.0s,baz=212,slow=4.6,SNR=2.2						
MKAR	Makanchi Array	40.55	347	P	P	02 25 35.4	-0.8
MAKZ	Makanchi	40.63	347	P	P	02 25 36.2	-0.7
MAKZ				IAmb	IAmb	02 25 41.7	
	comp=Z,4.4nm,0.7s						
KK31	Karatay Array	41.26	333	P	P	02 25 43.9	+1.7
KKAR	Karatay Array	41.26	333	P	P	02 25 41.5	-0.6
GEYT	Alibeck	44.71	318	P	P	02 26 10.2	0.0
	comp=Z,3.6nm,0.7s,baz=122,slow=5.6,SNR=8.6						
GEYT	Alibeck	44.71	318	P	P	02 26 10.8	+0.5
GYA0B	ALIBECK ARRAY	44.71	318	P	P	02 26 11.1	+0.9
KURK	Kurchatov	45.08	346	P	P	02 26 12.8	-0.1
ZAA0	Zalesovo Array	46.99	352	P	P	02 26 28.1	+0.2
ZALV	Zalesovo Beam	46.99	352	P	P	02 26 27.2	-0.7
	comp=Z,2.3nm,0.6s,baz=180,slow=7.4,SNR=7.2						
ZALV	Zalesovo Beam	46.99	352	P	P	02 26 28.0	+0.1
WRA	Warramunga Arr	47.77	125	P	P	02 26 34.4	-0.1
	comp=Z,0.5nm,0.5s,baz=306,slow=8.2,SNR=8.0						
WRAB	Tennant Creek	47.78	125	P	P	02 26 34.0	-0.5
ASAR	Alice Springs	49.42	130	P	P	02 26 47.1	-0.1
	comp=Z,0.6nm,0.8s,baz=299,slow=8.3,SNR=7.5						
ASAR				PcP	PcP	02 28 08.9	-0.7
	comp=Z,0.7nm,0.7s,baz=311,slow=3.6,SNR=5.0						
RAYN	Ar Rayn	49.54	295	P	P	02 26 49.1	+0.9
RAYN				IAmb	IAmb	02 26 54.7	
	comp=Z,3.6nm,1.1s						
ABKAR	Akbulak array	50.73	331	P	P	02 26 56.6	-0.2
BRTR	Keskin Array B	62.93	311	P	P	02 28 22.0	-1.8
	comp=Z,0.4nm,0.7s,baz=84,slow=6.4,SNR=3.2						
TIXI	Tiksi	67.56	11	P	P	02 28 52.8	-0.2
FINES	FINESS Array B	73.21	332	P	P	02 29 26.6	-1.2
	comp=Z,2.1nm,0.8s,baz=196,slow=3.4,SNR=6.0						
BOSA	Boshof	75.64	238	P	P	02 29 43.3	+0.6
	comp=Z,3.0nm,1.0s,baz=115,slow=17,SNR=2.0						
BOSA	Boshof	75.64	238	IAmb	IAmb	02 29 50.4	
	comp=Z,59nm,2.0s						
ARCES	ARCESS Array B	75.75	340	P	P	02 29 42.1	-0.3
	comp=Z,3.3nm,0.8s,baz=104,slow=7.7,SNR=2.8						
GERES	GERESS Array B	78.33	318	P	P	02 29 56.9	-0.6
	comp=Z,0.4nm,0.6s,baz=79,slow=7.1,SNR=6.6						
NOA	NORSAR Array B	80.23	331	P	P	02 30 07.0	-0.5
	comp=Z,0.6nm,0.8s,baz=116,slow=3.3,SNR=3.2						
TORD	Torodi Ar. Bea	91.00	283	P	P	02 31 03.8	+1.8
	comp=Z,0.5nm,0.7s,baz=115,slow=4.9,SNR=1.8						

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*ISU **22** 02:21:23.6, 41°.06N×73°.43E, h5^{km}*

*KRNET **22** 02:21:24.9±0.1, 41°.06N×73°.44E, h20^{km}, mb3.1*

*NNC **22** 02:21:25.7±0.7, 41°.11N×73°.45E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=5.4km s-min=3.6km az=171.0*

*SOME **22** 02:21:25.0, 41°.12N×73°.42E, h15^{km}*

*KNET **22** 02:21:26.0±0.4, 41°.16N×73°.48E, h10^{km}±2^{km}, ml2.5, Error ellipse: s-maj=3.4km s-min=2.4km az=58.0*

ISC 22 02:21:24.5±1.3, 41°.09N±0°.04×73°.54E±0°.02, h5^{km}±11^{km}, n62, σ1^{s}.35/101, 23C-18D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.48	300	⇑iP	Pg	02 21 33.3	-0.5
	baz=7.0						
ARSB				⇑iS	Sg	02 21 40.0	-0.1
	baz=7.0						
ARSB	Arslanbob	0.48	300	eP	Pg	02 21 32.8	-1.0
ARSB				eS	Sg	02 21 39.9	-0.1
AML	Almayashu	1.05	6	⇑iP	Pb	02 21 45.2	-0.2
	baz=10.0						
AML				⇑iS	Sb	02 22 00.2	+0.6
	baz=10.0						
AML	Almayashu	1.05	6	⇓P	Pb	02 21 45.2	-0.2
	25nm,0.1s,SNR=39						
AML				⇑S	Sb	02 22 00.4	+0.8
	286nm,0.4s						
UCH	Uchtor	1.35	32	⇓iP	Pg	02 21 51.0	+0.5
	baz=34						
UCH				⇓iS	Sg	02 22 10.3	+2.2
	baz=34						
UCH	Uchtor	1.35	32	⇑P	Pg	02 21 51.2	+0.7
	17nm,0.1s,SNR=38						
UCH				⇑S	Sg	02 22 10.4	+2.4
	73nm,0.2s						
FRG	Fergana	1.37	256	iP	Pg	02 21 51.3	+0.5
FRG				S	Sg	02 22 10.6	+2.0
ARK	Arkit	1.38	301	eP	Pn	02 21 40.5	-10
ARK				eS	Sn	02 22 07.6	-1.6
EKS2	Erkin-Say	1.58	6	⇑iP	Pg	02 21 54.6	-0.2
	baz=9.0						
EKS2				⇑iS	Sg	02 22 16.4	+1.0
	baz=9.0						
EKS2	Erkin-Say	1.58	6	⇓P	Pg	02 21 54.7	-0.1
	12nm,0.2s,SNR=49						
EKS2				⇑S	Sg	02 22 16.6	+1.2
	31nm,0.3s						
KZA	Kyzart	1.62	52	⇓iP	Pg	02 21 56.0	+0.4
	baz=52						
KZA				⇓iS	Sg	02 22 18.8	+2.1
	baz=52						
KZA	Kyzart	1.62	52	⇓P	Pg	02 21 55.7	+0.1
	15nm,0.2s,SNR=36						
KZA				⇓S	Sg	02 22 20.1	+3.4
	10nm,0.1s						
MRKS	Merke	1.67	352	eP	Pb	02 21 56.1	+0.3
	18nm,0.2s						
MRKS				eS	Sg	02 22 18.5	+0.3
	45nm,0.2s						
MRKS	Merke	1.67	352	P	Pb	02 21 56.1	+0.3
	18nm,0.2s						
MRKS				S	Sg	02 22 18.5	+0.3
	45nm,0.2s						
AAK	Ala-Archa	1.71	25	⇓iP	Pg	02 21 57.1	-0.1
	baz=26						
AAK				⇓iS	Sg	02 22 20.6	+1.2
	baz=26						
AAK	Ala-Archa	1.71	25	⇓P	Pg	02 21 57.3	+0.1
	12nm,0.2s,SNR=37						
AAK				⇑S	Sg	02 22 21.1	+1.8
	28nm,0.2s						
AAK	Ala-Archa	1.71	25	P	Pg	02 21 56.7	-0.5
	16nm,0.5s						
AAK				S	Sg	02 22 20.5	+1.2
	19nm,0.3s						
KBK	Karagaybulak	1.89	33	⇑iP	Pg	02 22 00.1	-0.6
	baz=35						
KBK				⇑iS	Sg	02 22 25.7	+0.5
	baz=35						
KBK	Karagaybulak	1.89	33	⇑P	Pg	02 22 00.8	+0.1
	16nm,0.1s,SNR=32						
KBK				⇓S	Sg	02 22 27.4	+2.2
	102nm,0.3s						
FRU1	Bishkek	1.91	25	⇓iP	Pg	02 22 00.3	-0.7
	baz=26						
FRU1				⇓iS	Sg	02 22 26.1	+0.4
	baz=26						
CHMS	Chumysh	2.11	25	⇑iP	Pb	02 22 03.1	-0.2
	baz=26						
CHMS				⇑iS	Sb	02 22 31.0	+1.1
	baz=26						
CHMS	Chumysh	2.11	25	⇑P	Pb	02 22 03.8	+0.5
	12nm,0.2s,SNR=11						
CHMS	Chumysh	2.11	25	⇓Pn	Pb	02 22 03.3	0.0
	9.6nm,0.6s						
CHMS				⇑Lg	Lg	02 22 33.5	
	16nm,0.4s						
BOOM	Boomskoye usch	2.28	51	⇑iP	Pb	02 22 05.8	-0.4
	baz=52						
BOOM				⇑iS	Sb	02 22 35.4	+0.6
	baz=52						
USP	Ospenovka	2.29	18	⇓iP	Pb	02 22 05.4	-1.0
	baz=19						
USP				⇓iS	Sb	02 22 35.1	+0.1
	baz=19						
ULHL	Ulahol	2.33	59	⇑iP	Pb	02 22 06.5	-0.7
	baz=60						
ULHL				⇑iS	Sb	02 22 36.9	+0.5
	baz=60						
SGDS	Sogindy	2.50	19	Pg	Pb	02 22 10.2	+0.3
	5.0nm,0.4s						
SGDS				Lg	Lg	02 22 42.9	
	11nm,0.5s						
KST	Kastek	2.66	42	eP	Pb	02 22 13.6	+0.9
	3.5nm,0.2s						
KST				eS	Sg	02 22 48.6	-1.4
	16nm,0.4s						
KST	Kastek	2.66	42	Pg	Pg	02 22 14.7	-0.8
	5.9nm,0.3s						
KST				Lg	Lg	02 22 50.8	
	17nm,0.5s						
DGS	Degeres	2.72	37	eP	Pg	02 22 15.7	-0.9
	13nm,0.5s						
DGS				eS	Sg	02 22 52.4	+0.5
	23nm,0.5s						
DGS	Degeres	2.72	37	Pg	Pg	02 22 15.7	-0.9
	13nm,0.5s						
DGS				Lg	Lg	02 22 52.4	
	23nm,0.5s						

IUG	**Iuzhnay**	**2.83**	**293**	*e*P	**Pb**	**02 22 12.8**	**-2.8**
	0.9nm,0.5s						
IUG				*e*S	**Sn**	**02 22 46.5**	**+1.4**
	35nm,0.6s						
MTBS	**Maitube**	**2.97**	**46**	*e*P	**Pg**	**02 22 20.9**	**-0.4**
	5.1nm,0.3s						
MTBS				*e*S	**Sg**	**02 23 00.7**	**+1.0**
	19nm,0.5s						
MTBS	**Maitube**	**2.97**	**46**	Pg	**Pg**	**02 22 20.9**	**-0.4**
	5.1nm,0.3s						
MTBS				Lg	Lg	02 23 00.7	
	19nm,0.5s						
IZV	**Izvestkoviy**	**3.01**	**49**	*e*P	**Pg**	**02 22 21.4**	**-0.7**
	3.6nm,0.3s						
IZV				*e*S	**Sg**	**02 23 01.8**	**+0.7**
	17nm,0.6s						
IZV	**Izvestkoviy**	**3.01**	**49**	Pg	**Pg**	**02 22 21.4**	**-0.7**
	3.6nm,0.3s						
IZV				Lg	Lg	02 23 01.8	
	17nm,0.6s						
KK31	**Karatay Array**	**3.02**	**313**	⇓Pg	**Pb**	**02 22 18.0**	**-0.8**
	0.7nm,0.3s,baz=136,slow=15,SNR=22						
KK31				⇑Lg	Lg	02 22 58.3	
	17nm,0.6s,baz=130,slow=30,SNR=12						
KRBS	**Karabastau**	**3.05**	**31**	*e*P	**Pg**	**02 22 22.0**	**-0.9**
	3.5nm,0.3s						
KRBS				*e*S	**Sg**	**02 23 02.6**	**+0.2**
	7.8nm,0.4s						
KRBS	**Karabastau**	**3.05**	**31**	Pg	**Pg**	**02 22 22.0**	**-0.9**
	3.5nm,0.3s						
KRBS				Lg	Lg	02 23 02.6	
	7.8nm,0.4s						
TNSS	**Tian-Shan**	**3.20**	**51**	*e*P	**Pg**	**02 22 25.4**	**-0.5**
	3.9nm,0.3s						
TNSS				*e*S	**Sg**	**02 23 08.8**	**+1.5**
	16nm,0.4s						
TNSS	**Tian-Shan**	**3.20**	**51**	Pg	**Pg**	**02 22 25.4**	**-0.5**
	3.9nm,0.3s						
TNSS				Lg	Lg	02 23 08.8	
	16nm,0.4s						
MDOK	**Medeo**	**3.34**	**50**	*e*P	**Pg**	**02 22 27.5**	**-0.9**
	2.0nm,0.3s						
MDOK				*e*S	**Sg**	**02 23 12.1**	**+0.5**
	15nm,0.5s						
MDOK	**Medeo**	**3.34**	**50**	Pg	**Pg**	**02 22 27.5**	**-0.9**
	2.0nm,0.3s						
MDOK				Lg	Lg	02 23 12.1	
	15nm,0.5s						
BRLS	**Borolday**	**3.37**	**306**	*e*P	**Pb**	**02 22 24.8**	**+0.1**
	0.3nm,0.2s						
BRLS				*e*S	**Sb**	**02 23 08.3**	**+2.3**
	1.3nm,0.5s						
BRLS	**Borolday**	**3.37**	**306**	Pg	**Pb**	**02 22 25.1**	**+0.4**
	2.2nm,0.3s						
BRLS				Lg	Lg	02 23 08.8	
	11nm,0.5s						
KOTS	**Kotyrbulak**	**3.42**	**50**	*e*P	**Pg**	**02 22 29.1**	**-0.9**
	8.7nm,0.4s						
KOTS				*e*S	**Sg**	**02 23 14.8**	**+0.6**
	31nm,0.5s						
KOTS	**Kotyrbulak**	**3.42**	**50**	Pg	**Pg**	**02 22 29.1**	**-0.9**
	8.7nm,0.4s						
KOTS				Lg	Lg	02 23 14.8	
	31nm,0.5s						
KUU	**Kurty**	**3.49**	**36**	*e*P	**Pg**	**02 22 29.4**	**-1.9**
	3.8nm,0.3s						
KUU				*e*S	**Sg**	**02 23 15.6**	**-0.9**
	16nm,0.6s						
KUU	**Kurty**	**3.49**	**36**	Pg	**Pg**	**02 22 29.4**	**-1.9**
	3.8nm,0.3s						
KUU				Lg	Lg	02 23 15.6	
	16nm,0.6s						
KTBS	**Karatobe**	**3.51**	**41**	*e*P	**Pg**	**02 22 30.1**	**-1.6**
	2.9nm,0.5s						
KTBS				*e*S	**Sg**	**02 23 16.7**	**-0.5**
	21nm,0.5s						
KTBS	**Karatobe**	**3.51**	**41**	Pg	**Pg**	**02 22 30.1**	**-1.6**
	2.9nm,0.5s						
KTBS				Lg	Lg	02 23 16.7	
	21nm,0.5s						
CHKK	**Chushkaly**	**3.76**	**42**	*e*P	**Pg**	**02 22 34.9**	**-1.7**
	1.9nm,0.3s						
CHKK				*e*S	**Sg**	**02 23 25.1**	**-0.3**
	15nm,0.3s						
CHKK	**Chushkaly**	**3.76**	**42**	Pg	**Pg**	**02 22 34.9**	**-1.7**
	1.9nm,0.3s						
CHKK				Lg	Lg	02 23 25.1	
	15nm,0.3s						
SATY	**Saty**	**4.13**	**60**	*e*P	**Pg**	**02 22 41.7**	**-1.8**
	0.9nm,0.2s						
SATY				*e*S	**Sg**	**02 23 37.3**	**+0.3**
	5.1nm,0.3s						
SATY	**Saty**	**4.13**	**60**	Pg	**Pg**	**02 22 42.7**	**-0.8**
	2.3nm,0.1s						
SATY				Lg	Lg	02 23 38.0	
	5.4nm,0.3s						
ARXS	**Arharly**	**4.45**	**44**	*e*P	**Pg**	**02 22 46.7**	**-3.0**
	1.3nm,0.4s						
ARXS				*e*S	**Sg**	**02 23 45.0**	**-2.2**
	8.5nm,0.8s						
ARXS	**Arharly**	**4.45**	**44**	Pg	**Pg**	**02 22 46.7**	**-3.0**
	1.3nm,0.4s						
ARXS				Lg	Lg	02 23 45.0	
	8.5nm,0.8s						
UZB	**Uzynbulak**	**4.57**	**61**	*e*P	**Pg**	**02 22 49.6**	**-2.4**
	0.2nm,0.3s						
UZB				*e*S	**Sg**	**02 23 49.6**	**-1.7**
	6.8nm,0.4s						
UZB	**Uzynbulak**	**4.57**	**61**	Pg	**Pg**	**02 22 49.8**	**-2.3**
	2.2nm,0.4s						
UZB				Lg	Lg	02 23 50.2	
	5.2nm,0.4s						
SHLS	**Shalkode**	**4.87**	**63**	Pg	**Pg**	**02 23 01.6**	**+3.8**
	5.3nm,0.2s						
SHLS				Lg	Lg	02 24 10.3	
	4.4nm,0.4s						
PDGK	**Podgornoye**	**4.96**	**61**	Pg	**Pg**	**02 22 56.5**	**-2.9**
	0.3nm,0.3s						
PDGK				Lg	Lg	02 24 02.1	
	1.5nm,0.6s						
DJR	**Jarkent**	**5.63**	**53**	Pg	**Pg**	**02 23 10.1**	**-2.3**
	0.6nm,0.3s						
DJR				Lg	Lg	02 24 25.0	
	2.0nm,0.5s						

IDC 22 02:28:17.6±11.0,**18°.88S**×**174°.24W,h191**km±54km, **mb3.7**/3,**mb1 3.8**/5,**mb1mx3.4**/26,**mbtmp4.2**/5,**Error ellipse: s-maj=288.6km s-min=21.6km az=142.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**5.48**	**26**	P	Pn	02 29 38.0	-0.1
	1.2nm,0.3s,baz=247,slow=7.7,SNR=1.2						
AFI				S	Sn	02 30 31.8	-10
	10nm,0.3s,baz=184,slow=15,SNR=9.3						
DZM	**Mont Dzumac**	**18.37**	**257**	P	Pn	02 32 19.4	-1.2
	0.2nm,0.3s,baz=108,slow=19,SNR=6.2						
ASAR	**Alice Springs**	**48.35**	**255**	P	P	02 36 40.1	-0.1
	9.2nm,0.6s,baz=90,slow=8.0,SNR=137						
WRA	**Warramunga Arr**	**48.35**	**260**	P	P	02 36 39.4	-0.9
	1.0nm,0.4s,baz=99,slow=6.7,SNR=9.7						
ILAR	**Eielson Array**	**85.99**	**11**	P	P	02 40 35.4	-0.5
	0.4nm,0.6s,baz=229,slow=6.0,SNR=5.9						
BRTR	**Keskin Array B**	**148.23**	**317**	PKPbc	PKPbc	02 47 42.1	+0.7
	0.5nm,0.8s,baz=154,slow=4.9,SNR=4.0						

TUL ***22*** *02:30:33.9±0.0, 35°.90N×97°.27W, h4km, ML3.1, Error ellipse: s-maj=0.0km s-min=0.0km az=90.0*

NEIC ***22*** *02:30:34.0±1.3, 35°.91N±0°.01×97°.246W±0°.007, h2km±7km, Error ellipse: s-maj=2.0km s-min=0.8km az=171.0*

ANF ***22*** *02:30:34.0±0.4, 35°.84N×97°.24W, h0km, ML3.4/7, Error ellipse: s-maj=4.9km s-min=2.8km az=162.0*

ISC 22 02:30:33.3±1.3,**35°.93N**±0°.04×**97°.28W**±0°.04,**h4**km±12km, **n30,**$\sigma 1^{s}.$**04**/35,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK005	**Luther M Schoo**	**0.28**	**165**	Pg	**Pg**	**02 30 39.0**	**+0.2**
OK005				Sg	**Sg**	**02 30 42.8**	**+0.4**
ADOK	**Arcadia Dam**	**0.28**	**195**		**Pg**	**02 30 39.3**	**+0.5**
OKCFA	**Oklahoma City**	**0.53**	**195**		**Pg**	**02 30 43.6**	**+0.2**
OKCSW	**OKLAHOMA CITY**	**0.54**	**194**		**Pg**	**02 30 43.6**	**0.0**
FNO	**Franklin**	**0.68**	**188**		**Pg**	**02 30 46.2**	**-0.1**
W35A	**Tecumseh**	**0.84**	**157**	Pg	**Pg**	**02 30 48.7**	**-0.8**
W35A				Sg	**Sg**	**02 30 59.8**	**-0.5**
T35A	**Sooner Cattle**	**1.17**	**32**	Pg	**Pb**	**02 30 56.0**	**-0.1**
TUL1	**Leonard**	**1.21**	**90**	Pg	**Pb**	**02 30 55.5**	**-1.3**
TUL1				Sg	**Sg**	**02 31 12.1**	**-0.1**
TUL1	**Leonard**	**1.21**	**90**	P	**Pb**	**02 30 55.9**	**-0.9**
	baz=270						
TUL1				S	**Sn**	**02 31 12.6**	**-1.4**
	baz=270						
X34A	**Smith Ranch, M**	**1.40**	**199**		**Pn**	**02 30 59.3**	**-0.4**
U32A	**Winter Ranch,**	**1.46**	**288**	Pn	**Pn**	**02 31 01.2**	**+0.6**
WMOK	**Wichita Mounta**	**1.71**	**226**		**Pn**	**02 31 04.6**	**+0.7**
WMOK	**Wichita Mounta**	**1.71**	**226**	P	**Pn**	**02 31 04.7**	**+0.7**
	baz=46						
WMOK				S	**Sb**	**02 31 27.4**	**+0.2**
	baz=46						
U38A	**Gravette**	**2.40**	**77**		**Pb**	**02 31 15.8**	**-1.3**
Z35A	**Perchaven, San**	**2.59**	**179**		**Pn**	**02 31 17.1**	**+1.1**
W39A	**Magazine**	**2.94**	**103**		**Pn**	**02 31 21.9**	**+1.0**
W39A	**Magazine**	**2.94**	**103**	P	**Pn**	**02 31 21.7**	**+0.8**
	baz=285						
Z38A	**Mt. Pleasant**	**3.27**	**144**	Pn	**Pn**	**02 31 27.6**	**+2.2**
MIAR	**Mount Ida**	**3.33**	**113**		**Pn**	**02 31 28.4**	**+2.1**
MIAR	**Mount Ida**	**3.33**	**113**	P	**Pn**	**02 31 27.6**	**+1.3**
	baz=296						
CBKS	**Cedar Bluff**	**3.48**	**327**	Sb	**Sg**	**02 32 24.9**	**-0.3**
	baz=145						
X40A	**Basin Creek Fa**	**3.92**	**110**	Pn	**Pn**	**02 31 35.4**	**+1.1**
WHTX	**Lake Whitney,**	**3.93**	**182**	Pn	**Pn**	**02 31 34.0**	**-0.5**
WHTX	**Lake Whitney,**	**3.93**	**182**	Sb	**Sb**	**02 32 32.8**	**+1.7**
	baz=2.5						
237A	**Washetta, Mont**	**4.10**	**162**	Pn	**Pn**	**02 31 37.1**	**+0.3**
WHAR	**Wooly Hollow**	**4.12**	**97**	Pn	**Pn**	**02 31 37.7**	**+0.7**
W41B	**Gary Mavity, V**	**4.17**	**99**	Pn	**Pn**	**02 31 38.2**	**+0.3**
W41B	**Gary Mavity, V**	**4.17**	**99**	P	**Pn**	**02 31 38.6**	**+0.7**
	baz=282						
FCAR	**Ozark Folk Cen**	**4.19**	**89**	Pn	**Pn**	**02 31 40.0**	**+2.0**
UALR	**University of**	**4.20**	**104**	Pn	**Pn**	**02 31 39.1**	**+1.0**

PAS ***22*** *02:41:30.1±0.8, 32°.860N±0°.006×116°.49W±0°.01, h13km±3km, ML2.3/90, Error ellipse: s-maj=1.9km s-min=0.7km az=73.0*

NEIC 22 02:41:29.3±0.4,**32°.86N**±0°.02×**116°.49W**±0°.03,**h18**km±2km, **Error ellipse: s-maj=3.4km s-min=1.9km az=65.0, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBKC	**Canebrake**	**0.20**	**80**		Pg	02 41 34.4	+0.1
BAR	**Barrett**	**0.24**	**220**	Pg	Pg	02 41 35.0	0.0
BAR				Sg	Sg	02 41 38.5	-0.2
EML	**El Monte Cty P**	**0.30**	**275**		Pg	02 41 36.0	+0.1
EML					Sg	02 41 40.4	0.0
TKX	**Tecate**	**0.31**	**199**		Pg	02 41 36.1	0.0
TKX					Sg	02 41 40.4	-0.3
IKP	**In-Ko-Pah, Jac**	**0.38**	**124**		Pg	02 41 37.2	-0.1
IKP					Sg	02 41 42.5	-0.4
SDRC	**San Diego Road**	**0.40**	**252**		Sg	02 41 43.2	-0.1
DPP	**Dos Picos Cty**	**0.41**	**289**		Pg	02 41 37.6	-0.1
DPP					Sg	02 41 43.3	-0.1
BORC	**Borrego Spring**	**0.41**	**8**		Pg	02 41 37.8	0.0
HWB	**Hans Werner Br**	**0.43**	**292**		Pg	02 41 38.0	-0.1
HWB					Sg	02 41 44.0	-0.1
RMX	**La Rumorosa**	**0.43**	**127**		Pb	02 41 39.2	+0.6
RMX					Sb	02 41 45.8	+0.9
CRR	**Carrizo Plain**	**0.44**	**87**		Pb	02 41 38.4	-0.1
OLP	**Otay Lakes Par**	**0.45**	**236**		Pg	02 41 38.5	0.0
OLP					Sg	02 41 44.7	-0.1
109C	**Camp Elliot, M**	**0.52**	**273**		Pg	02 41 39.6	-0.2
CPE	**Camp Elliot**	**0.52**	**273**		Sg	02 41 46.7	-0.1
CBX	**Cerro Bola**	**0.57**	**195**		Pg	02 41 40.7	-0.1
CBX					Sg	02 41 48.4	-0.1
SWSC	**Sam W. Stewart**	**0.58**	**82**		Pg	02 41 41.0	+0.1
SWSC					Sg	02 41 48.8	0.0
SALN	**Salton City**	**0.59**	**45**		Pg	02 41 41.4	+0.3
FRD	**Ford Ranch, An**	**0.64**	**351**		Pg	02 41 42.1	+0.1
FRD					Sb	02 41 50.4	-0.1
COK2	**Cook Ranch 2**	**0.64**	**91**		Pg	02 41 42.4	+0.4
BZNA	**Buzz No.'s Pla**	**0.64**	**347**		Pg	02 41 42.2	+0.1
BZNA					Sb	02 41 50.5	-0.3
WESC	**Westside Schoo**	**0.65**	**99**		Pg	02 41 42.5	+0.4
GORC	**Green Oak Ranc**	**0.69**	**295**		Pb	02 41 42.3	-0.5
GORC					Sb	02 41 51.4	-0.5
SNDA	**J Saunders Pla**	**0.69**	**351**		Pg	02 41 43.2	+0.2
CRY	**Cary Ranch**	**0.73**	**343**		Pg	02 41 43.8	0.0
CRY					Sg	02 41 53.4	-0.1
XPFO	**Pion Flat**	**0.74**	**2**		Pb	02 41 43.8	-0.1
XPFO	**Pion Flat**	**0.74**	**2**		Pb	02 41 43.9	0.0
XPFO					Sb	02 41 53.5	-0.2
PFO	**Pinyon Flats O**	**0.75**	**2**		Pb	02 41 43.8	-0.1
PFO	**Pinyon Flats O**	**0.75**	**2**		Pb	02 41 43.9	+0.1
PFO					Sb	02 41 53.6	-0.1
GVDA	**Garner Valley**	**0.82**	**349**		Pg	02 41 45.3	0.0
BACC	**Bachelor Mtn.**	**0.88**	**328**		Pb	02 41 45.9	-0.1
SNR	**Schaffner Ranc**	**0.88**	**90**		Pb	02 41 46.1	0.0
CTCC	**Cactus City**	**0.89**	**28**		Pb	02 41 46.4	+0.1
CTCC					Sg	02 41 58.6	+0.1
FRK	**Frink**	**0.89**	**53**		Pb	02 41 45.5	-0.8
DGR	**Domenigoni Val**	**0.90**	**331**		Pb	02 41 46.1	-0.2
DGR					Sb	02 41 58.0	0.0
MURC	**Murrieta**	**0.94**	**321**		Pb	02 41 47.0	-0.2
MURC					Sb	02 41 59.3	-0.1
ESJX	**Sierra Juarez**	**0.97**	**152**		Pb	02 41 47.6	-0.1
EW2	**E Wide Canyon**	**1.07**	**4**		Pn	02 41 49.5	0.0
EW2					Sn	02 42 04.1	0.0
HAY	**Hayfield**	**1.08**	**38**		Pn	02 41 49.7	+0.1
BC3	**Big Chuckawall**	**1.17**	**47**		Sn	02 42 06.6	+0.1
MWC	**Mount Wilson**	**1.89**	**316**	Pn	Pb	02 42 02.8	-0.6
SPX	**San Pedro Mart**	**2.02**	**154**		Pb	02 42 06.7	+1.0
DSCC	**Desert Studies**	**2.29**	**8**		Pn	02 42 05.5	-0.7
GSC	**Goldstone, Bar**	**2.45**	**354**	Pn	Pn	02 42 10.0	+1.6

IDC ***22*** *03:05:57.8±1.3, 35°.95N×97°.29W, h0km, mb3.8/4, mb1 4.0/9, mb1mx3.6/49, mbtmp3.7/9, ML2.9/3, MS3.1/6, Ms1 3.1/6, ms1mx2.8/54, Error ellipse: s-maj=20.3km s-min=11.8km az=117.0*

ANF ***22*** *03:05:58.5±0.4, 35°.84N×97°.28W, h0km, ML4.8/13, Error ellipse: s-maj=5.0km s-min=3.1km az=173.0*

NEIC ***22*** *03:05:58.6, 35°.90N×97°.28W, h7km, Moment Tensor Solution. Moment tensor: Scale* 10^{14}*Nm;* $M_{rr}0.10$; $M_{\theta\theta}6.83$; $M_{\phi\phi}-6.94$; $M_{r\theta}-2.15$; $M_{\theta\phi}3.91$; $M_{\phi r}-2.91$; *Fault plane solution:* $M_0 8.71000\times10^{14}$ *NP1:*ϕ_s*209.82000°, δ87.85000°, λ155.63000°. NP2:*ϕ_s*300.79000°, δ65.65000°, λ2.36000°. Principal axes: T 8.8148, Plg19.0000°, Azm163.0000°; N -0.2225, Plg66.0000°, Azm25.0000°; P -8.5923, Plg15.0000°, Azm258.0000°;*

TUL ***22*** *03:05:58.3±1.5, 35°.89N±0°.02×97°.30W±0°.05, h4km±5km, ML3.9, Mwr3.9/45(NEIC) Error ellipse: s-maj=5.6km s-min=2.2km az=109.0*

NEIC ***22*** *03:05:58.3±1.5, 35°.90N±0°.03×97°.25W±0°.04, h4km±5km, Error ellipse: s-maj=5.1km s-min=3.9km az=121.0*

ISC 22 03:05:57.4±1.1,**35°.93N**±0°.03×**97°.23W**±0°.03,**h2**km±9km, **n148,**$\sigma 1^{s}.$**52**/164,**mb3.6**/4,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK005	**Luther M Schoo**	**0.28**	**173**		**Pg**	**03 06 03.2**	**+0.4**
ADOK	**Arcadia Dam**	**0.30**	**202**		**Pg**	**03 06 03.4**	**+0.1**
ADOK				Sg	**Sg**	**03 06 07.1**	**-0.1**
OK001	**Jones High Sch**	**0.37**	**187**	Pg	**Pg**	**03 06 04.6**	**0.0**
OK001				Sg	**Sg**	**03 06 10.2**	**+0.7**
OK009	**Oakdale Elemen**	**0.38**	**204**		**Pg**	**03 06 05.1**	**+0.3**
OK009				Sg	**Sg**	**03 06 09.9**	**+0.1**
OKCFA	**Oklahoma City**	**0.55**	**199**		**Pg**	**03 06 07.9**	**0.0**
OKCFA				Sg	**Sg**	**03 06 14.8**	**-0.2**
OKCSW	**OKLAHOMA CITY**	**0.55**	**198**		**Pg**	**03 06 07.7**	**-0.3**
OKCSW				Sg	**Sg**	**03 06 15.0**	**-0.1**
FNO	**Franklin**	**0.69**	**192**		**Pg**	**03 06 10.8**	**+0.2**
FNO				Sg	**Sg**	**03 06 19.4**	**-0.1**
W35A	**Tecumseh**	**0.83**	**159**	Pg	**Pg**	**03 06 13.4**	**+0.1**
W35A				Sg	**Sg**	**03 06 24.5**	**+0.3**
T35A	**Sooner Cattle**	**1.14**	**30**	Pg	**Pn**	**03 06 21.2**	**+0.8**
T35A				Sg	**Sn**	**03 06 37.5**	**+0.8**
TUL1	**Leonard**	**1.17**	**91**		**Pg**	**03 06 20.6**	**+0.7**
TUL1				Sn	**Sb**	**03 06 37.8**	**+1.9**
TUL1	**Leonard**	**1.17**	**91**	P	**Pg**	**03 06 20.6**	**+0.7**
	baz=266						
TUL1				S	**Sb**	**03 06 37.9**	**+1.9**
	baz=266						
X34A	**Smith Ranch, M**	**1.42**	**200**		**Pn**	**03 06 23.6**	**-0.5**
X34A				Sn	**Sb**	**03 06 43.0**	**-0.1**
WMOK	**Wichita Mounta**	**1.74**	**227**		**Pn**	**03 06 28.5**	**-0.1**
WMOK	**Wichita Mounta**	**1.74**	**227**	P	**Pn**	**03 06 28.7**	**0.0**
	baz=48						
WMOK				S	**Sn**	**03 06 50.9**	**-0.5**
	baz=48						
Z35A	**Perchaven, San**	**2.59**	**180**		**Pn**	**03 06 42.0**	**+1.5**
R32A	**Long Quarter,**	**2.75**	**335**		**Pb**	**03 06 45.3**	**-2.1**
W39A	**Magazine**	**2.91**	**104**		**Pn**	**03 06 46.6**	**+1.9**
W39A	**Magazine**	**2.91**	**104**	P	**Pn**	**03 06 46.6**	**+1.9**
	baz=284						
KSU1	**Kansas State U**	**3.20**	**9**	P	**Pn**	**03 06 51.2**	**+2.4**
	baz=189						
KSU1				Sb	**Sg**	**03 07 40.8**	**+0.5**
	baz=189						
Z38A	**Mt. Pleasant**	**3.25**	**145**		**Pn**	**03 06 50.4**	**+1.0**
MIAR	**Mount Ida**	**3.30**	**114**	P	**Pn**	**03 06 52.6**	**+2.6**
	baz=294						
MIAR				S	**Sn**	**03 07 31.6**	**+1.8**
	baz=294						
CBKS	**Cedar Bluff**	**3.50**	**326**		**Pn**	**03 06 54.7**	**+1.7**
CBKS	**Cedar Bluff**	**3.50**	**326**	Pb	**Pb**	**03 07 02.4**	**+2.2**
	baz=146						
CBKS				Sb	**Sg**	**03 07 48.4**	**-1.5**
	baz=146						
S39A	**Bolivar**	**3.59**	**60**		**Pn**	**03 06 56.4**	**+2.3**
AMTX	**Amarillo**	**3.78**	**255**		**Pn**	**03 06 58.4**	**+1.6**
AMTX	**Amarillo**	**3.78**	**255**	P	**Pn**	**03 06 58.8**	**+1.9**
	baz=74						
AMTX				Sb	**Sb**	**03 07 53.8**	**+2.6**
	baz=74						
X40A	**Basin Creek Fa**	**3.88**	**111**		**Pn**	**03 07 00.2**	**+2.1**
X40A	**Basin Creek Fa**	**3.88**	**111**	P	**Pn**	**03 07 00.3**	**+2.3**
	baz=292						
WHTX	**Lake Whitney,**	**3.94**	**183**	Pb	**Pb**	**03 07 06.3**	**-1.2**
	baz=2.4						
WHAR	**Wooly Hollow**	**4.08**	**98**		**Pn**	**03 07 02.8**	**+1.9**
237A	**Washetta, Mont**	**4.09**	**163**		**Pn**	**03 07 00.9**	**-0.1**
W41B	**Gary Mavity, V**	**4.13**	**99**		**Pn**	**03 07 03.2**	**+1.7**
W41B	**Gary Mavity, V**	**4.13**	**99**	P	**Pn**	**03 07 03.5**	**+1.9**
	baz=281						
W41B				S	**Sn**	**03 07 53.4**	**+2.9**
	baz=281						
Z41A	**Richland Creek**	**4.52**	**125**	S	**Sn**	**03 08 00.2**	**+0.2**
	baz=306						
R40A	**Maddies Statio**	**4.61**	**58**		**Pn**	**03 07 10.0**	**+1.8**
N33A	**J Bar K, Exete**	**4.80**	**358**		**Pn**	**03 07 12.1**	**+1.4**
MSTX	**Muleshoe**	**4.95**	**248**		**Pn**	**03 07 12.9**	**0.0**
MSTX	**Muleshoe**	**4.95**	**248**	P	**Pn**	**03 07 13.5**	**+0.6**
	baz=66						
CCM	**Cathedral Cave**	**5.24**	**64**	Pn	**Pn**	**03 07 19.0**	**+2.2**
KSCO	**Kaye Shedlock'**	**5.28**	**307**		**Pn**	**03 07 19.2**	**+1.8**
KSCO	**Kaye Shedlock'**	**5.28**	**307**	P	**Pn**	**03 07 19.9**	**+2.5**
	baz=125						
HBAR	**Harrisburg**	**5.36**	**92**		**Sg**	**03 08 50.3**	**+0.6**
BGNE	**Belgrade**	**5.51**	**353**	Pn	**Pn**	**03 07 22.4**	**+1.8**
BGNE				Pg	**Pg**	**03 07 39.5**	**-3.6**
BGNE					Lg	03 08 59.5	
BGNE	**Belgrade**	**5.51**	**353**	P	**Pn**	**03 07 22.4**	**+1.8**
	baz=173						
PBMO	**Poplar Bluff**	**5.55**	**79**	Pn	**Pn**	**03 07 23.2**	**+2.2**
LPAR	**Lepanto**	**5.65**	**91**	Pn	**Pn**	**03 07 23.2**	**+0.8**
LPAR				Sg	**Sg**	**03 08 56.2**	**-2.6**
143A	**Socs Landing,**	**5.80**	**122**	Pn	**Pn**	**03 07 25.9**	**+1.5**
JCT	**Junction City**	**5.85**	**202**	Pn	**Pn**	**03 07 24.4**	**-0.8**
JCT					LR	03 08 59.6	
T25A	**Trinidad**	**5.90**	**284**	Pn	**Pn**	**03 07 26.4**	**+0.3**
T25A	**Trinidad**	**5.90**	**284**	P	**Pn**	**03 07 26.9**	**+0.8**
	baz=101						
HKT	**Hockley**	**6.08**	**168**	Pn	**Pn**	**03 07 28.9**	**+0.7**
342A	**Flagon Creek P**	**6.12**	**137**	Pn	**Pn**	**03 07 29.8**	**+1.0**
441A	**DeRidder**	**6.18**	**146**	Pn	**Pn**	**03 07 30.4**	**+0.7**
OGNE	**Ogallala**	**6.26**	**324**	Pn	**Pn**	**03 07 31.9**	**+1.0**
OGNE					LR	03 09 14.7	
OXF	**Oxford**	**6.56**	**100**	Pn	**Pn**	**03 07 35.0**	**+0.1**
OXF	**Oxford**	**6.56**	**100**	P	**Pn**	**03 07 35.9**	**+1.0**
	baz=284						
W45A	**Hickory Valley**	**6.61**	**94**	Pn	**Pn**	**03 07 35.5**	**0.0**
S44A	**Carbondale**	**6.64**	**72**	Pn	**Pn**	**03 07 37.0**	**+1.1**
Y45A	**Yeager Farm, C**	**6.65**	**106**	Pn	**Pn**	**03 07 36.6**	**+0.5**
VBMS	**Vicksburg**	**6.69**	**122**	Pn	**Pn**	**03 07 36.4**	**-0.2**
SCIA	**State Center**	**6.74**	**26**	Pn	**Pn**	**03 07 38.9**	**+1.5**
K31A	**O'Neill**	**6.79**	**350**	Pn	**Pn**	**03 07 40.0**	**+2.0**
SDCO	**Great Sand Dun**	**6.87**	**288**	Pn	**Pn**	**03 07 40.5**	**+1.0**
SDCO					LR	03 09 34.1	
SDCO	**Great Sand Dun**	**6.87**	**288**	P	**Pn**	**03 07 41.1**	**+1.6**
	baz=104						
N41A	**Harden Midland**	**6.92**	**45**	Pn	**Pn**	**03 07 41.4**	**+1.6**
Q24A	**Divide**	**6.99**	**298**	Pn	**Pn**	**03 07 41.1**	**0.0**
Q24A	**Divide**	**6.99**	**298**	P	**Pn**	**03 07 42.2**	**+1.2**
	baz=114						
T45A	**Paducah**	**7.00**	**79**	Pn	**Pn**	**03 07 42.4**	**+1.4**
344A	**Westbrook Farm**	**7.02**	**128**	Pn	**Pn**	**03 07 42.9**	**+1.7**
735A	**Kenedy**	**7.07**	**184**	Pn	**Pn**	**03 07 42.4**	**+0.5**
P43A	**Skaggs, Pawnee**	**7.14**	**56**	Pn	**Pn**	**03 07 44.0**	**+1.1**
Q44A	**Meyer Farm, Va**	**7.18**	**63**	Pn	**Pn**	**03 07 45.0**	**+1.6**
Q44A					LR	03 09 45.5	
PLAL	**Pickwick Lake**	**7.53**	**95**	Pn	**Pn**	**03 07 48.1**	**-0.1**
ANMO	**Albuquerque**	**7.59**	**265**	Pn	**Pn**	**03 07 51.1**	**+1.8**
	0.1nm,0.3s,baz=118,slow=16,SNR=1.2						
ANMO				Pg	Pb	03 08 15.0	+5.0
	1.3nm,0.3s,baz=79,slow=6.2,SNR=6.7						
ANMO				Lg	Lg	03 09 51.7	
	3.9nm,0.3s,baz=140,slow=7.9,SNR=2.6						
ANMO				LR	LR	03 10 53.3	
	comp=Z,220nm,20.2s,baz=78,slow=39						
ANMO	**Albuquerque**	**7.59**	**265**	Pn	**Pn**	**03 07 49.4**	**+0.1**
ANMO				Pg	**Pg**	**03 08 19.5**	**-3.4**
WVT	**Waverly**	**7.62**	**86**	Pn	**Pn**	**03 07 50.4**	**+1.0**
ISCO	**Idaho Springs**	**7.67**	**303**	Pn	**Pn**	**03 07 51.0**	**+0.5**
ISCO	**Idaho Springs**	**7.67**	**303**	P	**Pn**	**03 07 51.9**	**+1.5**
	baz=118						
L40A	**Anamosa**	**7.70**	**36**	Pn	**Pn**	**03 07 51.6**	**+1.1**
HDIL	**Hopedale**	**7.77**	**51**	Pn	**Pn**	**03 07 52.5**	**+1.0**
ECSD	**EROS Data Cent**	**7.81**	**3**	Pn	**Pn**	**03 07 52.3**	**+0.3**
MNTX	**Cornudas Mount**	**7.99**	**240**	Pn	**Pn**	**03 07 55.2**	**+0.7**
MNTX	**Cornudas Mount**	**7.99**	**240**	P	**Pn**	**03 07 55.3**	**+0.8**
	baz=56						
Z47A	**Carrollton**	**8.03**	**107**	Pn	**Pn**	**03 07 57.4**	**+2.3**
O44A	**Mansfield**	**8.10**	**56**		LR	03 10 14.0	
T47A	**Sharon Grove**	**8.23**	**80**	Pn	**Pn**	**03 07 58.2**	**+0.4**
PHWY	**Pilot Hill**	**8.38**	**312**	Pn	**Pn**	**03 08 00.3**	**+0.2**
N23A	**Red Feather La**	**8.44**	**309**	Pn	**Pn**	**03 08 02.3**	**+1.3**
N23A	**Red Feather La**	**8.44**	**309**	P	**Pn**	**03 08 02.6**	**+1.6**
	baz=124						
L42A	**Oliver, Polo**	**8.45**	**42**	Pn	**Pn**	**03 08 01.9**	**+1.1**
X48A	**Hartselle**	**8.47**	**97**		LR	03 10 24.9	
TXAR	**Lajitas Array**	**8.53**	**221**	Pn	**Pn**	**03 08 01.0**	**-1.0**
	0.7nm,0.3s,baz=44,slow=11,SNR=6.1						
TXAR				Pg	Pg	03 08 28.1	-13
	1.5nm,0.3s,baz=43,slow=12,SNR=5.7						
TXAR				Lg	Lg	03 10 20.2	
	3.5nm,0.3s,baz=48,slow=22,SNR=4.4						
TXAR				LR	LR	03 11 53.3	
	comp=Z,28nm,18.5s,baz=0.0,slow=42						
TXAR	**Lajitas Array**	**8.53**	**221**	Pn	**Pn**	**03 08 01.3**	**-0.7**
TX31	**Lajitas Ar. Si**	**8.53**	**221**	Pn	**Pn**	**03 08 01.4**	**-0.6**
TX32	**Lajitas Array**	**8.53**	**221**	Pn	**Pn**	**03 08 01.8**	**-0.2**
I37A	**Lemond, Waseca**	**8.59**	**19**	Pn	**Pn**	**03 08 04.2**	**+1.5**
SUSD	**Miller**	**8.60**	**352**	Pn	**Pn**	**03 08 02.8**	**-0.1**
P46A	**Rosedale**	**8.75**	**62**	Pn	**Pn**	**03 08 06.8**	**+1.9**
JFWS	**Jewell Farm**	**8.82**	**36**	Pn	**Pn**	**03 08 06.8**	**+0.9**
LRAL	**Lakeview Retre**	**8.93**	**106**	Pn	**Pn**	**03 08 07.4**	**0.0**
M44A	**Midewin, Midew**	**9.02**	**50**	Pn	**Pn**	**03 08 09.3**	**+0.7**
WCI	**Wyandotte Cave**	**9.04**	**72**	Pn	**Pn**	**03 08 10.1**	**+1.2**
BLO	**Bloomington**	**9.10**	**66**	Pn	**Pn**	**03 08 10.9**	**+1.1**
Y49A	**Blount Mountai**	**9.13**	**100**	Pn	**Pn**	**03 08 11.7**	**+1.6**
PV07	**Paradox Valley**	**9.45**	**289**	Pn	**Pn**	**03 08 14.4**	**-0.3**
PV12	**Saucer Basin,**	**9.54**	**288**	Pn	**Pn**	**03 08 16.3**	**+0.3**
PV22	**Blue Mesa, Par**	**9.57**	**289**	Pn	**Pn**	**03 08 16.4**	**0.0**
PV16	**Nyswonger Mesa**	**9.63**	**288**	Pn	**Pn**	**03 08 18.3**	**+1.1**
K43A	**Burlington**	**9.65**	**43**	Pn	**Pn**	**03 08 19.3**	**+2.0**
RSSD	**Black Hills**	**9.70**	**330**	Pn	**Pn**	**03 08 19.6**	**+1.5**
RSSD	**Black Hills**	**9.70**	**330**	P	**Pn**	**03 08 20.4**	**+2.3**
	baz=146						
Z50A	**Ashland**	**9.70**	**103**	Pn	**Pn**	**03 08 19.7**	**+1.7**
K22A	**Casper**	**9.84**	**316**	Pn	**Pn**	**03 08 20.9**	**+0.9**
K22A	**Casper**	**9.84**	**316**	P	**Pn**	**03 08 21.7**	**+1.6**
	baz=130						
250A	**Grady**	**9.92**	**110**	Pn	**Pn**	**03 08 21.3**	**+0.2**
I42A	**Draeger Farm,**	**10.19**	**36**	Pn	**Pn**	**03 08 25.3**	**+0.6**

Z51A	**Franklin**	**10.27**	**101**	Pn	**Pn**	**03 08 26.5**	**+0.6**
L46A	**Eue Claire**	**10.45**	**51**	Pn	**Pn**	**03 08 29.6**	**+1.4**
G40A	**Rib Lake**	**10.74**	**28**	Pn	**Pn**	**03 08 32.7**	**+0.4**
TKL	**Tuckaleechee C**	**10.94**	**87**	Lg	Lg	03 11 35.7	
	0.8nm,0.3s,baz=30,slow=12,SNR=3.6						
TKL				LR	LR	03 12 50.9	
	comp=Z,130nm,18.5s,baz=288,slow=38						
319A	**Douglas**	**11.02**	**249**	Pn	**Pn**	**03 08 36.2**	**0.0**
E38A	**The Farm, Brul**	**11.48**	**20**	Pn	**Pn**	**03 08 42.9**	**+0.5**
PD31	**Pinedale Array**	**11.72**	**309**	Pn	**Pn**	**03 08 46.0**	**+0.1**
PDAR	**Pinedale Array**	**11.72**	**309**	Pn	**Pn**	**03 08 45.4**	**-0.5**
	0.7nm,0.3s,baz=116,slow=14,SNR=13						
PDAR				Pg		03 09 33.4	
	0.6nm,0.3s,baz=111,slow=16,SNR=7.6						
PDAR				Lg	Lg	03 12 04.3	
	0.5nm,0.3s,baz=118,slow=25,SNR=2.3						
PDAR				LR	LR	03 13 11.9	
	comp=Z,82nm,20.7s,baz=123,slow=37						
PDAR	**Pinedale Array**	**11.72**	**309**	Pn	**Pn**	**03 08 45.3**	**-0.6**
BW06	**Boulder Array**	**11.72**	**309**	Pn	**Pn**	**03 08 45.4**	**-0.5**
MSU	**Marysvale**	**12.19**	**287**	Pn	**Pn**	**03 08 51.3**	**-1.0**
M50A	**Fremont**	**12.36**	**59**	Pn	**Pn**	**03 08 53.2**	**-1.1**
AGMN	**Agassiz Nation**	**12.40**	**4**	Pn	**Pn**	**03 08 54.4**	**-0.4**
J48A	**Bridge Port**	**12.70**	**51**	Pn	**Pn**	**03 08 58.4**	**-0.6**
AHID	**Auburn Hatcher**	**12.71**	**307**	Pn	**Pn**	**03 08 59.5**	**+0.2**
TPAW	**Teton Pass**	**12.97**	**310**	Pn	**Pn**	**03 09 01.8**	**-1.1**
FXWY	**Fox Creek**	**13.10**	**310**	Pn	**Pn**	**03 09 05.2**	**+0.6**
IMW	**Indian Meadow**	**13.18**	**311**	Pn	**Pn**	**03 09 06.7**	**+0.9**
YNE	**Yellowstone No**	**13.28**	**317**	Pn	**Pn**	**03 09 06.9**	**-0.3**
Z56A	**Williston**	**13.32**	**97**	Pn	**Pn**	**03 09 07.0**	**-0.5**
GCMT	**Greycliff**	**13.61**	**320**	Pn	**Pn**	**03 09 11.2**	**-0.3**
E44A	**Grand Marais A**	**13.63**	**35**	Pn	**Pn**	**03 09 11.8**	**0.0**
QLMT	**Earthquake Lak**	**13.99**	**314**	Pn	**Pn**	**03 09 16.4**	**-0.4**
ULM	**Lac du Bonnet**	**14.35**	**4**	Pn	**Pn**	**03 09 17.9**	**-3.6**
	0.8nm,0.3s,baz=187,slow=10,SNR=8.2						
ULM				Sn	Sn	03 11 47.5	-13
	0.5nm,0.3s,baz=198,slow=20,SNR=2.2						
ULM				Lg	Lg	03 13 20.4	
	baz=114,slow=19,SNR=1.8						
MCMT	**McKenzie Canyo**	**14.83**	**312**	Pn	**Pn**	**03 09 26.4**	**-1.9**
SADO	**Sadowa**	**16.35**	**52**	Sn	**Sn**	**03 12 40.3**	**-9.5**
	0.8nm,0.3s,baz=280,slow=6.1,SNR=1.9						
SADO				Lg	Lg	03 14 24.9	
	0.4nm,0.3s,baz=266,slow=1.9,SNR=3.9						
NVAR	**Mina Array Bea**	**16.98**	**285**	Pn	**Pn**	**03 09 56.6**	**+0.4**
	0.1nm,0.3s,baz=104,slow=8.7,SNR=2.7						
JTS	**Las Juntas de**	**27.86**	**153**	LR	LR	03 23 39.2	
	comp=Z,45nm,21.4s,baz=30,slow=38						
SCHQ	**Schefferville**	**28.17**	**38**	P	**P**	**03 11 51.3**	**+0.2**
	1.5nm,0.8s,baz=224,slow=8.8,SNR=3.8						
YKA	**Yellowknife Ar**	**28.71**	**343**	P	**P**	**03 11 55.7**	**0.0**
	0.3nm,0.6s,baz=139,slow=8.6,SNR=6.6						
YKA				LR	LR	03 23 53.7	
	comp=Z,72nm,21.5s,baz=0.0,slow=38						
ILAR	**Eielson Array**	**41.15**	**330**	P	**P**	**03 13 43.9**	**+1.3**
	0.5nm,0.6s,baz=103,slow=6.6,SNR=7.7						
FINES	**FINESS Array B**	**72.65**	**25**	P	**P**	**03 17 26.8**	**+0.6**
	0.9nm,0.7s,baz=260,slow=8.2,SNR=1.1						

IDC 22 03:10:27.3±2.4**, 5°.83S×130°.45E, h0^{km}, mb3.4**/1**, mb1 3.7**/4**, mb1mx3.5**/40**, mbtmp3.5**/4**, ML3.3**/3**, Error ellipse: s-maj=100.2km s-min=29.0km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**13.07**	**201**	Pn	Pn	03 13 34.0	-0.3
	0.1nm,0.3s,baz=23,slow=11,SNR=2.4						
FITZ				Sn	Sn	03 15 43.2	-17
	0.1nm,0.3s,baz=30,slow=20,SNR=1.7						
WRA	**Warramunga Arr**	**14.53**	**165**	Pn	Pn	03 13 53.3	-1.1
	0.2nm,0.3s,baz=348,slow=13,SNR=1.3						
WRA				Sn	Sn	03 16 23.0	-13
	0.1nm,0.3s,baz=341,slow=22,SNR=2.2						
ASAR	**Alice Springs**	**18.04**	**170**	P	P	03 14 40.5	+0.3
	0.1nm,0.3s,baz=352,slow=13,SNR=12						
MKAR	**Makanchi Array**	**67.50**	**326**	P	P	03 21 25.3	0.0
	0.2nm,0.4s,baz=126,slow=6.4,SNR=5.3						

IDC 22 03:11:04.9±1.9**, 6°.85N×93°.41E, h0^{km}, mb3.6**/5**, mb1 3.8**/6**, mb1mx3.5**/48**, mbtmp3.7**/6**, ML4.5**/1**, Error ellipse: s-maj=74.8km s-min=23.8km az=59.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**12.73**	**25**	Pn	Pn	03 14 08.6	+1.2
	0.9nm,0.3s,baz=219,slow=13,SNR=5.5						
H08S3	**Diego Garcia H**	**25.35**	**236**	T	T	03 43 26.4	
	baz=50						
H08S2	**Diego Garcia H**	**25.35**	**236**	T	T	03 43 23.0	
	baz=50						
H08S1	**Diego Carcia H**	**25.36**	**236**	T	T	03 43 23.6	
	baz=50						
MKAR	**Makanchi Array**	**40.93**	**348**	P	P	03 18 48.8	-0.4
	1.2nm,0.7s,baz=172,slow=7.9,SNR=11						
ZALV	**Zalesovo Beam**	**47.47**	**353**	P	P	03 19 40.7	-0.8
	0.5nm,0.4s,baz=168,slow=7.4,SNR=1.7						
WRA	**Warramunga Arr**	**48.27**	**124**	P	P	03 19 47.4	-0.7
	0.3nm,0.9s,baz=306,slow=8.6,SNR=2.0						
ASAR	**Alice Springs**	**49.83**	**129**	P	P	03 20 00.4	+0.3
	0.4nm,0.8s,baz=298,slow=8.0,SNR=4.2						
FINES	**FINESS Array B**	**73.28**	**332**	P	P	03 22 38.6	+0.7
	1.5nm,0.9s,baz=105,slow=11,SNR=1.3						

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*IDC **22** 03:15:39.3±3.7, 30°.09N×114°.27W, h0^{km}, mb3.2/1, mb1 3.4/3, mb1mx3.3/43, mbtmp3.0/3, ML3.3/2, Error ellipse: s-maj=65.0km s-min=13.9km az=34.0*

*MEX **22** 03:15:41.2±0.3, 30°.42N×114°.11W, h6^{km}±6^{km}, MD3.8*

ISC 22 03:15:38.2±2.7**, 29°.9N**±0°.3×**114°.7W**±0°.2**, h10^{km}, n7, σ1^{s}.68**/10**, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPX	**San Pedro Mart**	**1.29**	**329**	*e*P	**Pn**	**03 16 02.5**	**-0.1**
SPX				*e*S	**Sb**	**03 16 19.0**	**-0.6**
SPIG	**San Pedro Mart**	**1.30**	**329**	*e*P	**Pn**	**03 16 02.6**	**-0.1**
SPIG				*e*S	**Sg**	**03 16 19.6**	**-0.5**
CBX	**Cerro Bola**	**2.92**	**325**	*e*P	**Pn**	**03 16 24.9**	**0.0**
CBX				*e*S	**Sn**	**03 16 58.9**	**-1.2**
PFO	**Pinyon Flats O**	**3.97**	**338**	Pg	**Pb**	**03 16 47.6**	**-0.8**
	0.2nm,0.3s,baz=158,slow=16,SNR=2.1						
PFO				Lg	Lg	03 17 43.5	
	0.9nm,0.3s,baz=90,slow=4.0,SNR=2.3						
NVAR	**Mina Array Bea**	**8.99**	**342**	Pn	**Pn**	**03 17 51.8**	**+3.4**
	0.1nm,0.3s,baz=162,slow=15,SNR=1.6						
TXAR	**Lajitas Array**	**9.62**	**91**	Pn	**Pn**	**03 17 55.4**	**-1.5**
	0.2nm,0.3s,baz=277,slow=15,SNR=2.5						
TXAR				Lg	Lg	03 20 29.8	
	0.1nm,0.3s,baz=268,slow=30,SNR=3.7						
ILAR	**Eielson Array**	**40.24**	**339**	P	**P**	**03 23 16.6**	**+1.8**
	0.4nm,0.8s,baz=151,slow=6.8,SNR=5.6						

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*IDC **22** 03:17:15.2±6.6, 5°.41S×152°.74E, h37^{km}±49^{km}, mb3.3/5, mb1 3.6/5, mb1mx3.4/36, mbtmp3.5/5, Error ellipse: s-maj=59.6km s-min=21.0km az=110.0*

ISC 22 03:17:15.4±1.4**, 5°.4S**±0°.1×**152°.7E**±0°.2**, h40^{km}, n7, σ0^{s}.80**/8**, mb3.5**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.31**	**327**	Pn	**Pn**	**03 17 36.5**	**-0.7**
	548nm,0.3s,baz=143,slow=2.5,SNR=167						
KRVT				Sn	**Sn**	**03 17 54.2**	**+0.6**
	340nm,0.3s,baz=163,slow=19,SNR=16						
WRA	**Warramunga Arr**	**22.99**	**229**	P	**P**	**03 22 17.6**	**+0.8**
	0.6nm,0.3s,baz=58,slow=9.4,SNR=18						
ASAR	**Alice Springs**	**25.65**	**223**	P	**P**	**03 22 41.0**	**-0.5**
	0.2nm,0.6s,baz=55,slow=9.7,SNR=4.3						
FITZ	**Fitzroy Crossi**	**29.31**	**242**	P	**P**	**03 23 14.6**	**+0.2**
	1.2nm,0.5s,baz=67,slow=7.0,SNR=2.0						
MKAR	**Makanchi Array**	**80.75**	**319**	P	**P**	**03 29 24.7**	**0.0**
	0.1nm,0.5s,baz=104,slow=6.6,SNR=1.6						
ILAR	**Eielson Array**	**82.76**	**22**	P	**P**	**03 29 35.5**	**+0.7**
	0.4nm,0.6s,baz=245,slow=5.8,SNR=7.7						
TORD	**Torodi Ar. Bea**	**150.43**	**287**	PKPbc	**PKPbc**	**03 37 02.8**	**-1.0**
	0.2nm,0.7s,baz=18,slow=3.6,SNR=1.7						

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*NEIC **22** 03:34:21.8±1.4, 5°.5S±0°.1×152°.6E±0°.2, h42^{km}±9^{km}, mb4.1/7, Error ellipse: s-maj=25.1km s-min=11.5km az=118.0*

*IDC **22** 03:34:23.5±3.5, 5°.49S×152°.35E, h53^{km}±23^{km}, mb3.8/7, mb1 4.1/8, mb1mx3.7/39, mbtmp4.1/8, ML2.2/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/38, Error ellipse: s-maj=44.4km s-min=10.6km az=110.0*

ISC 22 03:34:21.5±1.2**, 5°.52S**±0°.08×**152°.6E**±0°.2**, h40^{km}, n23, σ1^{s}.18**/24**, mb4.1**/10**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.32**	**335**	P	**Pn**	**03 34 44.1**	**+0.6**
	1µm,0.3s,baz=169,slow=1.3,SNR=814						
KRVT				S	**Sn**	**03 34 59.8**	**-0.1**
	1µm,0.3s,baz=196,slow=20,SNR=71						
KRVT				LR	LR	03 35 08.2	
	comp=Z,79nm,19.1s,baz=174,slow=37						
RABL	**Rabaul**	**1.38**	**343**		**Pn**	**03 34 44.7**	**+0.4**
PMG	**Port Moresby**	**6.62**	**234**	P	**Pn**	**03 35 56.9**	**+0.7**
	3.3nm,0.3s,baz=16,slow=5.9,SNR=9.1						
PMG				S	**Sn**	**03 37 08.4**	**-2.0**
	9.0nm,0.3s,baz=81,slow=15,SNR=14						
PMG	**Port Moresby**	**6.62**	**234**		**Sn**	**03 37 12.2**	**+1.7**
SIJI	**Sorong**	**21.77**	**282**	LR	LR	03 49 48.3	
	comp=Z,33nm,18.3s,baz=113,slow=43						
MTN	**Manton Dam**	**22.37**	**250**	P	**P**	**03 39 16.3**	**-0.2**
WB0	**Warramunga Arr**	**22.66**	**230**	P	**P**	**03 39 19.3**	**-0.3**
WB0				IAmb	IAmb	03 39 21.7	
	comp=Z,6.8nm,0.8s						
WR0	**Warramunga Arr**	**22.67**	**229**	P	**P**	**03 39 20.1**	**+0.5**
WR0				IAmb	IAmb	03 39 21.4	
	comp=Z,6.3nm,0.8s						
WRA	**Warramunga Arr**	**22.81**	**229**	P	**P**	**03 39 20.5**	**-0.6**
	comp=Z,8.0nm,0.7s,baz=53,slow=10.0,SNR=49						
KNRA	**Kununurra**	**25.46**	**245**	P	**P**	**03 39 48.5**	**+2.5**
AS31	**Alice Springs**	**25.47**	**223**	P	**P**	**03 39 46.3**	**+0.2**
AS31				IAmb	IAmb	03 39 48.9	
	comp=Z,2.0nm,0.4s						
ASAR	**Alice Springs**	**25.47**	**223**	P	**P**	**03 39 46.2**	**+0.1**
	comp=Z,2.7nm,0.5s,baz=60,slow=8.8,SNR=46						
ASAR	**Alice Springs**	**25.47**	**223**	P	**P**	**03 39 47.2**	**+1.2**
FITZ	**Fitzroy Crossi**	**29.12**	**242**	P	**P**	**03 40 17.8**	**-1.1**
	comp=Z,3.9nm,0.5s,baz=62,slow=7.5,SNR=23						
CMAR	**Chiang Mai Arr**	**57.98**	**296**	P	**P**	**03 44 10.6**	**0.0**
	comp=Z,0.9nm,0.4s,baz=120,slow=5.3,SNR=1.5						
MK31	**Makanchi Array**	**80.72**	**319**	P	**P**	**03 46 29.8**	**-0.9**
MKAR	**Makanchi Array**	**80.72**	**319**	P	**P**	**03 46 31.4**	**+0.8**
	comp=Z,0.4nm,0.8s,baz=101,slow=5.2,SNR=3.0						
ZALV	**Zalesovo Beam**	**81.62**	**326**	P	**P**	**03 46 35.0**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=111,slow=3.2,SNR=1.6						
IL31		**82.90**	**22**	P	**P**	**03 46 42.4**	**+0.7**
ILAR	**Eielson Array**	**82.90**	**22**	P	**P**	**03 46 42.2**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=248,slow=5.5,SNR=6.1						
TORD	**Torodi Ar. Bea**	**150.31**	**287**	PKPbc	**PKPbc**	**03 54 09.1**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=121,slow=3.0,SNR=8.1						
TORD	**Torodi Ar. Bea**	**150.31**	**287**		**PKPbc**	**03 54 09.6**	**0.0**
DBIC	**Dimbokro**	**157.53**	**274**	PKPab	**PKPab**	**03 54 43.5**	**-3.1**
	comp=Z,1.2nm,0.6s,baz=108,slow=4.6,SNR=3.9						

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*IDC **22** 03:44:22.4±2.0, 48°.82N×152°.95E, h195^{km}±20^{km}, mb2.9/9, mb1 3.2/13, mb1mx3.0/36, mbtmp3.5/13, Error ellipse: s-maj=25.2km s-min=12.8km az=141.0*

ISC 22 03:44:20.6±0.8**, 48°.8N**±0°.2×**153°.0E**±0°.1**, h174^{km}, n13, σ1^{s}.14**/13**, mb3.2**/9**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**5.22**	**33**	P	**Pn**	**03 45 38.8**	**+1.6**
	0.6nm,0.3s,baz=200,slow=14,SNR=14						
PETK				S	Sn	03 46 51.4	+14
	0.2nm,0.3s,baz=270,slow=20,SNR=1.9						
ASAJ	**Asahikawa**	**8.57**	**240**	P	**Pn**	**03 46 23.1**	**+1.7**
	0.7nm,0.3s,baz=75,slow=15,SNR=9.8						
KLR	**Kul'dur**	**13.93**	**280**	P	**P**	**03 47 33.4**	**+0.2**
	0.3nm,0.3s,baz=72,slow=7.3,SNR=6.9						
USRK	**Ussuriysk Ar.**	**15.16**	**260**	P	**P**	**03 47 47.8**	**+1.0**
	baz=65,slow=12,SNR=4.9						
KSRS	**Korea Array**	**21.42**	**247**	P	**P**	**03 48 54.8**	**0.0**
	0.9nm,0.5s,baz=50,slow=11,SNR=2.7						
ILAR	**Eielson Array**	**35.00**	**40**	P	**P**	**03 50 55.7**	**-0.2**
	0.3nm,0.5s,baz=254,slow=5.0,SNR=11						
MKAR	**Makanchi Array**	**45.93**	**296**	P	**P**	**03 52 23.5**	**-2.2**
	0.1nm,0.5s,baz=55,slow=7.2,SNR=1.9						
YKA	**Yellowknife Ar**	**49.32**	**38**	P	**P**	**03 52 51.6**	**+0.1**
	0.3nm,0.5s,baz=299,slow=6.4,SNR=6.4						
FINES	**FINESS Array B**	**62.12**	**334**	P	**P**	**03 54 22.4**	**-0.1**
	0.6nm,0.3s,baz=36,slow=6.4,SNR=10						
PDAR	**Pinedale Array**	**63.60**	**55**	P	**P**	**03 54 32.6**	**-0.4**
	0.1nm,0.4s,baz=311,slow=5.9,SNR=1.9						
WRA	**Warramunga Arr**	**70.45**	**199**	P	**P**	**03 55 14.9**	**-1.1**
	0.2nm,0.5s,baz=24,slow=7.0,SNR=0.5						
ASAR	**Alice Springs**	**74.16**	**198**	P	**P**	**03 55 37.3**	**-0.5**
	0.1nm,0.4s,baz=10,slow=5.2,SNR=4.2						
TXAR	**Lajitas Array**	**76.56**	**61**	P	**P**	**03 55 51.7**	**0.0**
	0.2nm,0.4s,baz=309,slow=5.7,SNR=1.1						

IDC 22 03:49:36.5±2.5**, 8°.00S×121°.49E, h0^{km}, mb3.3**/1**, mb1 3.6**/3**, mb1mx3.3**/38**, mbtmp3.4**/3**, ML4.0**/2**, MS4.0**/1**, Ms1 4.0**/1**, ms1mx2.7**/22**, Error ellipse: s-maj=313.9km s-min=30.0km az=54.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.20**	**135**	P	Pn	03 53 37.5	-0.9
	0.8nm,0.3s,baz=307,slow=11,SNR=6.3						
ASAR	**Alice Springs**	**19.61**	**144**	P	P	03 54 07.0	+0.5
	0.1nm,0.3s,baz=327,slow=8.6,SNR=9.6						
RPZ	**Rata Peaks**	**55.88**	**138**	LR	LR	04 25 43.0	
	comp=Z,123nm,18.0s,baz=238,slow=39						
MKAR	**Makanchi Array**	**64.73**	**331**	P	P	04 00 16.6	0.0
	0.2nm,0.4s,baz=132,slow=6.8,SNR=3.6						

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*NEIC **22** 03:49:40.3±1.6, 30°.43N±0°.08×114°.18W±0°.07, h10^{km}±2^{km}, Md4.1/7(MEX), Error ellipse: s-maj=14.2km s-min=8.5km az=202.0*

*MEX **22** 03:49:42.1±0.3, 30°.41N×114°.11W, h8^{km}±10^{km}, MD4.1*

ISC 22 03:49:39.7±1.2**, 30°.48N**±0°.08×**114°.17W**±0°.05**, h10^{km}, n27, σ1^{s}.73**/32**, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPX	**San Pedro Mart**	**1.25**	**297**	*e*P	**Pg**	**03 50 03.4**	**-0.3**
SPX				*e*S	**Sb**	**03 50 19.5**	**-0.3**
SPX	**San Pedro Mart**	**1.25**	**297**		**Pg**	**03 50 03.4**	**-0.3**
SPX					**Sb**	**03 50 19.5**	**-0.3**
SPIG	**San Pedro Mart**	**1.25**	**297**	*e*P	**Pb**	**03 50 03.4**	**-0.3**
SPIG				*e*S	**Sg**	**03 50 20.1**	**+0.1**
SPIG	**San Pedro Mart**	**1.25**	**297**		**Pb**	**03 50 03.4**	**-0.3**
SPIG					**Sg**	**03 50 20.1**	**+0.1**
214A	**Organ Pipe Nat**	**1.88**	**38**		**Pn**	**03 50 11.0**	**-1.0**
GLA	**Glamis**	**2.63**	**348**		**Pn**	**03 50 23.3**	**+1.1**
CBX	**Cerro Bola**	**2.81**	**311**	*e*P	**Pn**	**03 50 25.5**	**+0.7**
CBX				*i* S	**Sn**	**03 50 59.7**	**+0.9**
CBX	**Cerro Bola**	**2.81**	**311**		**Pn**	**03 50 25.5**	**+0.7**
BAR	**Barrett**	**3.06**	**316**		**Pn**	**03 50 28.8**	**+0.5**
HSIG		**3.16**	**117**	Pn	**Pn**	**03 50 29.6**	**+0.1**
Y12C	**Blythe**	**3.28**	**355**	Pn	**Pn**	**03 50 32.6**	**+1.5**
109C	**Camp Elliot, M**	**3.47**	**315**	Pn	**Pb**	**03 50 37.3**	**-3.9**
SRIG	**Santa Rosalia**	**3.57**	**151**	Pn	**Pn**	**03 50 37.5**	**+2.3**
Y14A	**Wickenburg**	**3.59**	**16**		**Pn**	**03 50 36.8**	**+1.2**
XPFO	**Pion Flat**	**3.68**	**329**	Pn	**Pn**	**03 50 39.3**	**+2.5**
PFO	**Pinyon Flats O**	**3.68**	**329**	Pn	**Pn**	**03 50 40.2**	**+3.4**
319A	**Douglas**	**4.30**	**77**		**Pn**	**03 50 45.0**	**-0.3**
X16A	**Lo Mia Camp, P**	**4.56**	**30**		**Pn**	**03 50 49.7**	**+0.7**
W13A	**Hualapai Mount**	**4.62**	**3**	Pn	**Pn**	**03 50 51.5**	**+1.8**
MWC	**Mount Wilson**	**4.98**	**320**	Pn	**Pn**	**03 50 55.7**	**+1.0**
PASC	**Pasadena Art C**	**5.01**	**318**	Pn	**Pn**	**03 50 58.3**	**+3.3**
X18A	**Snowflake**	**5.39**	**40**		**Pn**	**03 51 00.9**	**+0.6**
U15A	**North Rim**	**6.14**	**14**		**Pn**	**03 51 13.5**	**+2.7**
CCUT	**Cedar City**	**7.09**	**5**		**Pn**	**03 51 26.8**	**+3.1**
PKCU	**Pink Cliffs**	**7.12**	**12**		**Pn**	**03 51 26.8**	**+2.6**
TX31	**Lajitas Ar. Si**	**9.19**	**94**	Pn	**Pn**	**03 51 53.0**	**+0.6**
TX32	**Lajitas Array**	**9.19**	**94**	Pn	**Pn**	**03 51 53.0**	**+0.6**

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*IDC **22** 04:00:42.7±1.9, 20°.46S×168°.87E, h0^{km}, mb4.0/6, mb1 4.2/7, mb1mx3.9/38, mbtmp4.0/7, ML3.9/1, MS3.5/4, Ms1 3.5/4, ms1mx3.1/30, Error ellipse: s-maj=85.1km s-min=23.9km az=144.0*

*NEIC **22** 04:00:45.3±1.1, 20°.6S±0°.4×168°.9E±0°.4, h23^{km}±12^{km}, mb4.3/5, Error ellipse: s-maj=78.9km s-min=14.9km az=144.0*

ISC 22 04:00:46.8±1.5**, 20°.7S**±0°.4×**168°.9E**±0°.3**, h31^{km}, n13, σ0^{s}.80**/13**, mb4.0**/8**, MS3.6**/3**, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.70**	**238**	Pn	**Pn**	**04 01 27.8**	**-0.4**
	19nm,0.3s,baz=60,slow=17,SNR=160						
DZM				Sn	**Sn**	**04 01 59.6**	**-0.2**
	61nm,0.3s,baz=112,slow=22,SNR=12						
HNR	**Honiara**	**14.10**	**321**	LR	LR	04 08 28.2	
	comp=Z,98nm,18.6s,baz=124,slow=33						
STKA	**Stephens Creek**	**26.85**	**240**	P	**P**	**04 06 26.6**	**+1.8**
	2.2nm,0.6s,baz=102,slow=11,SNR=7.2						
STKA				LR	LR	04 16 58.3	
	comp=Z,70nm,18.1s,baz=29,slow=36						
STKA	**Stephens Creek**	**26.85**	**240**	P	**P**	**04 06 25.1**	**+0.3**
WRA	**Warramunga Arr**	**32.39**	**265**	P	**P**	**04 07 13.5**	**-0.6**
	0.5nm,0.5s,baz=86,slow=6.9,SNR=1.4						
WRA				LR	LR	04 20 40.7	
	comp=Z,114nm,18.1s,baz=110,slow=37						
AS31	**Alice Springs**	**32.51**	**258**	P	**P**	**04 07 15.3**	**+0.2**
AS31				IAmb	IAmb	04 07 27.2	
	comp=Z,2.1nm,0.7s						
ASAR	**Alice Springs**	**32.51**	**258**	P	**P**	**04 07 15.2**	**+0.1**
	comp=Z,2.7nm,0.7s,baz=86,slow=9.2,SNR=57						
ASAR				LR	LR	04 21 10.3	
	comp=Z,113nm,19.0s,baz=85,slow=38						
KNRA	**Kununurra**	**38.39**	**271**	P	**P**	**04 08 05.2**	**-0.5**
FITZ	**Fitzroy Crossi**	**40.81**	**266**	P	**P**	**04 08 25.1**	**-0.6**
FITZ				IAmb	IAmb	04 08 38.3	
	comp=Z,7.3nm,0.8s						
SONM	**Songino Array**	**88.15**	**323**	P	**P**	**04 13 35.7**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=145,slow=5.3,SNR=2.7						
NVAR	**Mina Array Bea**	**89.96**	**49**	P	**P**	**04 13 43.7**	**+0.2**
	comp=Z,0.8nm,0.9s,baz=218,slow=7.0,SNR=5.4						
NVAR	**Mina Array Bea**	**89.96**	**49**	P	**P**	**04 13 43.1**	**-0.5**
ILAR	**Eielson Array**	**91.66**	**17**	P	**P**	**04 13 49.8**	**-0.7**
	comp=Z,0.4nm,0.8s,baz=224,slow=6.2,SNR=1.8						

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*SJA **22** 04:09:50.3±0.8, 33°.97S×70°.26W, h146^{km}±9^{km}, ML2.8, MW3.0*

*GUC **22** 04:09:51.6±0.8, 33°.91S×70°.33W, h109^{km}±3^{km}, ML3.5*

ISC 22 04:09:52.5±1.6**, 33°.95S**±0°.06×**70°.38W**±0°.06**, h111^{km}**±9^{km}**, n18, σ0^{s}.74**/33**, 6C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMEL	**Las Melosas**	**0.18**	**56**	⇓*e*P	**Pn**	**04 10 07.6**	**-0.6**
LMEL				*i* S	**Sn**	**04 10 19.6**	**-0.3**
LMEL				IAML		04 10 22.6	
	comp=N,2µm,0.2s						
ANTU	**Antumapu**	**0.43**	**331**	⇑*i*P	**Pn**	**04 10 10.0**	**+0.9**
ANTU				*e*S	**Sn**	**04 10 21.5**	**0.0**
ANTU				IAML		04 10 23.4	
	comp=N,2µm,0.4s						
MT03	**Universidad Ad**	**0.46**	**346**	⇑*i*P	**Pn**	**04 10 09.1**	**-0.3**
MT03				*e*S	**Sn**	**04 10 22.0**	**0.0**
MT03				IAML		04 10 23.4	
	comp=N,5µm,0.2s						
CLCH	**Cerro Calan**	**0.56**	**347**	⇑*i*P	**Pn**	**04 10 09.6**	**-0.4**
CLCH				*i* S	**Sn**	**04 10 22.9**	**-0.2**
CLCH				IAML		04 10 24.6	
	comp=E,3µm,0.4s						
FCH	**Farellones**	**0.62**	**7**	⇑*i*P	**Pn**	**04 10 10.3**	**-0.4**
FCH				*i* S	**Sn**	**04 10 24.3**	**-0.1**
FCH				IAML		04 10 25.8	
	comp=N,2µm,0.2s						
ROCH	**El Roble**	**1.11**	**331**	⇑*i*P	**Pn**	**04 10 14.8**	**-0.3**
ROCH				*e*S	**Sn**	**04 10 32.6**	**+0.5**
ROCH				IAML		04 10 33.5	
	comp=N,980nm,0.2s						
VA03	**San Esteban**	**1.19**	**353**	⇑*i*P	**Pn**	**04 10 15.8**	**-0.1**
VA03				*i* S	**Sn**	**04 10 33.9**	**+0.4**
VA03				IAML		04 10 35.0	
	comp=E,2µm,0.1s						
AAGR	**Agrelo**	**1.56**	**57**	*e*P	**Pn**	**04 10 20.0**	**-0.1**
AAGR				*e*S	**Sn**	**04 10 42.6**	**+1.5**
ARCO	**CERRO ARCO**	**1.64**	**48**	*i* P	**Pn**	**04 10 20.8**	**-0.4**
ARCO				*e*S	**Sn**	**04 10 44.3**	**+1.3**
ARCO				IAML		04 10 47.0	
	comp=Z,58nm,0.6s						
GO05	**Huala**	**1.66**	**230**	*e*P	**Pn**	**04 10 21.6**	**+0.3**
GO05				*i* S	**Sn**	**04 10 43.8**	**+0.5**
GO05				IAML		04 10 45.1	
	comp=E,482nm,0.1s						
ASAL	**Salagasta**	**1.87**	**44**	*i* P	**Pn**	**04 10 24.4**	**+0.4**
ASAL				*e*S	**Sn**	**04 10 49.3**	**+1.3**
CO04	**Los Peladeros**	**1.96**	**345**	*e*P	**Pn**	**04 10 24.8**	**-0.5**
CO04				*i* S	**Sn**	**04 10 49.6**	**-0.8**
CO04				IAML		04 10 51.6	
	comp=N,805nm,0.3s						
RTLS	**Leoncito**	**2.33**	**23**	*i* P	**Pn**	**04 10 31.0**	**+1.0**
RTLS				*e*S	**Sn**	**04 11 00.0**	**+1.3**
RTLS				IAML		04 11 03.0	
	comp=Z,37nm,0.5s						
RTLL	**Cerro Villicun**	**3.06**	**32**	*i* P	**Pn**	**04 10 38.9**	**-0.5**
RTLL				*e*S	**Sn**	**04 11 14.8**	**-0.9**
ACCO	**Cerro Coronel**	**3.53**	**19**	*i* P	**Pn**	**04 10 45.7**	**-0.2**
ACCO				*e*S	**Sn**	**04 11 27.1**	**0.0**
AROD	**Rodeo**	**3.85**	**12**	*i* P	**Pn**	**04 10 50.4**	**+0.3**
MRA	**San Martin**	**4.20**	**70**	*i* P	**Pn**	**04 10 52.9**	**-1.6**
AGUA	**GUANDACOL**	**4.73**	**20**	*i* P	**Pn**	**04 11 01.3**	**-0.5**

IDC 22 04:13:18.8±2.4**, 6°.78S×128°.78E, h0^{km}, mb3.4**/1**, mb1 3.3**/3**, mb1mx3.1**/52**, mbtmp3.2**/3**, ML3.1**/2**, MS4.1**/1**, Ms1 4.1**/1**, ms1mx2.8**/22**, Error ellipse: s-maj=148.4km s-min=34.2km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.16**	**158**	Pn	Pn	04 16 40.5	-0.3
	0.1nm,0.3s,baz=336,slow=12,SNR=1.4						
WRA				Sn	Sn	04 19 03.1	-16
	0.2nm,0.3s,baz=335,slow=22,SNR=3.4						
ASAR	**Alice Springs**	**17.50**	**164**	P	Pn	04 17 24.6	+0.1
	0.1nm,0.3s,baz=345,slow=10,SNR=2.0						
RAO	**Raoul Island**	**54.86**	**121**	LR	LR	04 44 43.3	
	comp=Z,191nm,19.5s,baz=96,slow=34						
MKAR	**Makanchi Array**	**67.38**	**327**	P	P	04 24 16.1	+0.1
	0.2nm,0.3s,baz=115,slow=7.6,SNR=2.1						

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*IDC **22** 04:18:25.2±5.0, 37°.33N×72°.11E, h202^{km}±37^{km}, mb3.2/1, mb1 3.1/8, mb1mx2.8/55, mbtmp3.8/8, Error ellipse: s-maj=66.4km s-min=22.4km az=146.0*

*NNC **22** 04:18:29.4±4.8, 37°.84N×72°.07E, h0^{km}, mb4.6, mpv4.1, Error ellipse: s-maj=37.5km s-min=33.4km az=150.0*

ISC 22 04:18:26.3±1.7**, 37°.5N**±0°.1×**72°.0E**±0°.1**, h200^{km}, n19, σ1^{s}.22**/23**, 2C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**4.83**	**15**	P	**Pn**	**04 19 39.7**	**+0.9**
	SNR=217						
UCH	**Uchtor**	**5.12**	**21**	P	**Pn**	**04 19 43.5**	**+0.9**
	SNR=36						
KZA	**Kyzart**	**5.23**	**27**	P	**Pn**	**04 19 44.0**	**+0.1**
	SNR=13						
EKS2	**Erkin-Say**	**5.36**	**14**	P	**Pn**	**04 19 46.5**	**+1.3**
	SNR=30						
AAK	**Ala-Archa**	**5.50**	**19**	P	**Pn**	**04 19 48.4**	**+1.3**
	8.3nm,0.3s,baz=190,slow=3.3,SNR=118						
AAK				S	**Sn**	**04 20 51.1**	**+0.1**
	3.4nm,0.3s,baz=288,slow=20,SNR=12						
AAK	**Ala-Archa**	**5.50**	**19**	P	**Pn**	**04 19 48.5**	**+1.3**
	SNR=46						
AAK	**Ala-Archa**	**5.50**	**19**	P	**Pn**	**04 19 48.1**	**+1.0**
	28nm,0.7s						
AAK				S	**Sn**	**04 20 50.5**	**-0.5**
	24nm,0.9s						
KBK	**Karagaybulak**	**5.64**	**23**	P	**Pn**	**04 19 50.7**	**+1.7**
	SNR=7.5						
KK31	**Karatay Array**	**5.74**	**349**	⇑P	**Pn**	**04 19 51.4**	**+1.3**
	12nm,0.5s,baz=156,slow=10,SNR=114						
KK31				⇑S	**Sn**	**04 20 54.9**	**-1.6**
	17nm,0.4s,baz=157,slow=19,SNR=19						
ULHL	**Ulahol**	**5.77**	**33**	P	**Pn**	**04 19 51.1**	**+0.5**
	SNR=11						
CHMS	**Chumysh**	**5.90**	**20**	⇓P	**Pn**	**04 19 52.5**	**+0.3**
	8.5nm,0.4s						
CHMS				⇓S	**Sn**	**04 20 57.5**	**-2.8**
	14nm,0.7s						

USP	**Ospenovka**	6.09	17	P	Pn	04 19 56.0	+1.4
	SNR=6.5						
GEYT	**Alibeck**	11.02	277	P	Pn	04 20 58.9	+0.2
	0.6nm,0.3s,baz=108,slow=13,SNR=5.3						
MKAR	**Makanchi Array**	12.03	36	P	Pn	04 21 12.6	+1.2
	0.2nm,0.3s,baz=216,slow=12,SNR=5.0						
KURBB	**Kurchatov Arra**	13.95	17	P	Pn	04 21 35.9	+0.6
	0.0nm,0.3s,baz=205,slow=11,SNR=3.4						
BVAR	**Borovoye Array**	15.59	356	P	Pn	04 21 56.3	+0.8
	0.2nm,0.3s,baz=158,slow=10.0,SNR=2.8						
AKTO	**Aktyubinsk**	16.38	327	P	Pn	04 22 05.8	+0.9
	0.2nm,0.3s,baz=147,slow=13,SNR=4.3						
ZALV	**Zalesovo Beam**	18.70	24	P	P	04 22 29.1	-0.2
	0.9nm,0.3s,baz=219,slow=9.7,SNR=13						
TORD	**Torodi Ar. Bea**	66.55	269	P	P	04 28 53.8	-1.3
	0.3nm,0.3s,baz=51,slow=5.4,SNR=6.0						

WEL 22 04:23:05.6,36°S±11°×17°8E±1°6,h12^{km},M3.6/9,ML3.8/9, MLv3.6/9,Error ellipse: s-maj=0.0km s-min=0.0km az=78.2,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	1.80	173	S	Sn	04 23 54.5	-4.7
HAZ	**Te Kaha**	1.99	185	P	Pn	04 23 36.6	-2.4
HAZ				S	Sn	04 24 03.2	-0.6
WMGZ	**Waiomatatini S**	2.07	171	P	Pn	04 23 39.5	-0.5
PKGZ	**Pakihiroa**	2.12	179	P	Pn	04 23 40.0	-0.8
RUGZ	**Raukumara Rang**	2.21	187	P	Pn	04 23 42.4	+0.3
PUZ	**Puketiti**	2.31	175	P	Pn	04 23 44.2	+0.9
PUZ				S	Sn	04 24 12.8	+1.1
URZ	**Urewera**	2.59	196	P	Pn	04 23 48.2	+1.0
URZ				S	Sn	04 24 18.1	-0.5
MWZ	**Matawai**	2.59	189	P	Pn	04 23 46.8	-0.5
MWZ				S	Sn	04 24 18.8	+0.1
CNGZ	**Carnagh Statio**	2.71	177	P	Pn	04 23 50.8	+1.8
RAGZ	**Rawiri**	2.76	190	P	Pb	04 23 53.5	-1.4
MUGZ	**Murupara**	2.88	200	P	Pn	04 23 53.0	+1.7
RIGZ	**Rimuhau**	2.94	184	P	Pn	04 23 53.9	+1.8
RTZ	**Ruatahuna**	2.96	196	P	Pn	04 23 53.9	+1.5
RTZ				S	Sn	04 24 28.4	+0.5
SNGZ	**Shannon Statio**	3.06	190	P	Pb	04 23 57.1	-2.8
SNGZ				S	Sb	04 24 34.9	-2.2
MTHZ	**Maungataniwha**	3.22	197	P	Pn	04 23 57.1	+1.1
RAHZ	**Arahi**	3.23	193	P	Pb	04 23 59.7	-3.1
NMHZ	**Naumai**	3.46	196	P	Pb	04 24 03.4	-3.4
HATZ	**Hinemaiaia**	3.47	206	P	Pb	04 24 04.0	-3.0
BKZ	**Black Stump Fm**	3.60	199	P	Pn	04 24 03.9	+2.7
KWHZ	**Kaweka Forest**	3.86	199	P	Pn	04 24 07.4	+2.6
BHHZ	**Black Hill Sta**	4.03	202	P	Pb	04 24 15.7	-0.7
KAHZ	**Kahuranaki**	4.12	192	P	Pn	04 24 08.9	+0.6
KAHZ				S	Sn	04 24 59.1	+2.7
VRZ	**Vera Road**	4.24	217	P	Pb	04 24 20.5	+0.5
PRWZ	**Pori Road**	5.04	198	S	Sn	04 25 21.5	+2.4

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*ECX **22** 04:47:28.4±0.8,30°.45N×114°.13W,h11^{km}±26^{km},MD3.8, ML4.0*

*NEIC **22** 04:47:31.2±1.6,30°.41N±0°.07×114°.17W±0°.06,h10^{km}±2^{km}, Md4.0/8(MEX),Error ellipse: s-maj=12.8km s-min=6.7km az=212.0*

*IDC **22** 04:47:32.7±2.5,30°.34N×113°.72W,h0^{km},mb3.7/1, mb1 3.5/5,mb1mx3.4/35,mbtmp3.1/5,ML3.1/4,MS3.2/13, Ms1 3.2/13,ms1mx3.1/45,Error ellipse: s-maj=38.2km s-min=12.9km az=26.0*

*MEX **22** 04:47:33.2±0.4,30°.36N×114°.13W,h3^{km}±6^{km},MD4.0*

ISC 22 04:47:30.7±1.0,**30°.37N**±0°.06×**114°.24W**±0°.05,**h10^{km},n57, σ1^{s}71**/49,**MS3.3**/5,**2C-1D,Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BAHB	**Baha de los**	0.72	125	*e*P	Sb	04 47 55.5	+0.1
SFX	**San Felipe**	0.85	322	*e*P	Pg	04 47 43.4	-3.7
SFX				*e*S	Sg	04 47 54.6	-3.7
SFX				⇓*e*		04 48 16.9	
SFX				IAML		04 48 16.9	
	comp=E,2μm,0.5s						
SPX	**San Pedro Mart**	1.25	303	*e*P	Pn	04 47 51.1	-3.5
SPX				IAML		04 48 24.1	
	comp=E,840nm,0.6s						
SPX				*e*		04 48 24.1	
SPX	**San Pedro Mart**	1.25	303	*e*P	Pg	04 47 55.1	+0.4
SPX				*e*S	Sn	04 48 11.7	+0.1
SPX	**San Pedro Mart**	1.25	303		Pg	04 47 55.1	+0.4
SPX					Sn	04 48 11.7	+0.1
SPIG	**San Pedro Mart**	1.25	303	*e*P	Pn	04 47 51.2	-3.5
SPIG	**San Pedro Mart**	1.25	303	*i* P	Pg	04 47 55.1	+0.3
SPIG				*i* S	Sn	04 48 12.6	+0.8
SPIG	**San Pedro Mart**	1.25	303		Pg	04 47 55.1	+0.3
SPIG					Sn	04 48 12.6	+0.8
ECBX	**El Chinero**	1.30	328	*e*P	Pn	04 47 50.1	-4.9
PIX	**Pinacate**	1.37	29	*e*P	Pn	04 47 50.5	-5.4
SQX	**San Quintin**	1.43	279	*e*P	Pn	04 47 54.0	-2.7
SQX				IAML		04 48 21.9	
	comp=E,5μm,0.3s						
SQX				⇑*e*		04 48 21.9	
SQX				IAML		04 48 32.8	
	comp=N,4μm,0.4s						
SQX				⇑*e*		04 48 32.8	
214A	**Organ Pipe Nat**	2.00	37	Pn	Pn	04 48 02.6	-2.1
GLA	**Glamis**	2.72	350		Pn	04 48 15.2	+0.6
CBX	**Cerro Bola**	2.84	314	IAML		04 49 25.0	
	comp=E,485nm,1.0s						
CBX	**Cerro Bola**	2.84	314	*e*P	Pn	04 48 18.5	+2.2
CBX				*i* S	Sn	04 48 52.6	+2.0
CBX	**Cerro Bola**	2.84	314		Pn	04 48 18.5	+2.2
BAR	**Barrett**	3.10	319		Pn	04 48 20.4	+0.6
HSIG		3.16	114	Pn	Pn	04 48 19.1	-1.4
Y12C	**Blythe**	3.38	356		Pn	04 48 23.9	+0.3
SRIG	**Santa Rosalia**	3.50	149	Pn	Pn	04 48 25.9	+0.7
109C	**Camp Elliot, M**	3.51	317	Pn	Pn	04 48 26.4	+1.1
Y14A	**Wickenburg**	3.71	16		Pn	04 48 28.1	-0.1
XPFO	**Pion Flat**	3.74	330	Pn	Pn	04 48 29.4	+0.8
PFO	**Pinyon Flats O**	3.75	330	Pg	Pg	04 48 41.8	-0.7
	comp=E,0.5nm,0.3s,baz=182,slow=15,SNR=4.6						
PFO				Lg	Lg	04 49 32.7	
	comp=E,2.9nm,0.3s,baz=121,slow=8.1,SNR=4.9						
PFO				LR	LR	04 50 03.5	
	comp=E,547nm,20.1s,baz=173,slow=38						
PFO	**Pinyon Flats O**	3.75	330	Pn	Pn	04 48 29.1	+0.4
319A	**Douglas**	4.38	75		Pn	04 48 36.3	-1.2
X16A	**Lo Mia Camp, P**	4.68	30		Pn	04 48 41.3	-0.4
W13A	**Hualapai Mount**	4.73	4	Pn	Pn	04 48 42.6	+0.2
MWC	**Mount Wilson**	5.02	321	Pn	Pn	04 48 46.3	-0.1
MWC					Lg	04 50 15.7	
PASC	**Pasadena Art C**	5.06	320	Pn	Pn	04 48 46.7	+0.1
PASC					LR	04 50 11.6	
GSC	**Goldstone, Bar**	5.38	337	Pn	Pn	04 48 51.7	+0.7
X18A	**Snowflake**	5.51	40		Pn	04 48 51.2	-1.9
WUAZ	**Wupatki**	5.67	24	Pn	Pn	04 48 53.3	-1.9
OSI	**Osito Audit: C**	5.68	319	Pn	Pn	04 48 54.7	-0.5
121A	**Cookes Peak, D**	5.92	67		Pn	04 48 58.0	-0.6
W18A	**Petrified Fore**	6.07	38	Pn	Pn	04 48 59.0	-1.7
U15A	**North Rim**	6.26	15		Pn	04 49 03.4	-0.1
LCMT	**Little Creek M**	6.68	7		Pn	04 49 09.9	+0.8
KNB	**Kanab**	6.74	10		Pn	04 49 09.7	-0.2
LPIG	**La Paz**	7.15	150	LR	LR	04 51 52.4	
	comp=E,264nm,20.5s,baz=348,slow=38						
CCUT	**Cedar City**	7.20	6		Pn	04 49 19.4	+3.1
ANMO	**Albuquerque**	7.99	53	Pn	Pn	04 49 25.7	-1.4
	comp=E,0.1nm,0.3s,baz=228,slow=9.0,SNR=3.7						
ANMO				Lg	Lg	04 51 38.3	
	comp=E,0.1nm,0.3s,baz=219,slow=13,SNR=2.4						
NVAR	**Mina Array Bea**	8.71	338	Pn	Pn	04 49 44.5	+7.5
	comp=E,0.0nm,0.3s,baz=157,slow=12,SNR=3.4						
NVAR				LR	LR	04 53 20.1	
	comp=E,149nm,20.3s,baz=96,slow=39						
TXAR	**Lajitas Array**	9.24	94	Pn	Pn	04 49 43.1	-1.0
	comp=E,0.1nm,0.3s,baz=275,slow=14,SNR=3.1						
TXAR				Pg		04 49 58.5	
	comp=E,0.2nm,0.3s,baz=270,slow=14,SNR=5.8						
TXAR				Lg	Lg	04 52 05.9	
	comp=E,0.1nm,0.3s,baz=277,slow=28,SNR=1.6						
TXAR				LR	LR	04 53 25.9	
	comp=E,111nm,21.9s,baz=0.0,slow=40						
ELK	**Elko**	10.39	356	LR	LR	04 54 16.0	
	comp=E,108nm,19.2s,baz=165,slow=39						
PDAR	**Pinedale Array**	12.93	16	Pn	Pn	04 50 40.2	+5.4
	comp=E,0.0nm,0.3s,baz=193,slow=7.4,SNR=1.5						
PDAR				LR	LR	04 56 02.5	
	comp=E,62nm,18.8s,baz=325,slow=40						
YBH	**Yreka Blue Hor**	13.24	331	LR	LR	04 55 22.8	
	comp=E,119nm,21.3s,baz=164,slow=35						
IMW	**Indian Meadow**	13.76	10		Pn	04 50 45.0	-1.1
FLWY	**Flagg Ranch**	13.98	11		Pn	04 50 46.9	-2.1
YPP	**Pitchstone Pla**	14.14	10	Pn	Pn	04 50 50.1	-1.3
NEW	**Newport**	18.01	354	LR	LR	04 57 59.9	
	comp=E,76nm,20.7s,baz=216,slow=35						
CMIG	**Matias Romero**	22.06	122	LR	LR	05 01 08.5	
	comp=E,100nm,18.9s,baz=312,slow=38						
BBB	**Bella Bella**	24.08	339	LR	LR	05 01 44.2	
	comp=E,58nm,20.0s,baz=202,slow=35						
TEIG	**Tepich**	25.50	107	LR	LR	05 03 27.5	
	comp=E,30nm,19.3s,baz=313,slow=38						
TKL	**Tuckaleechee C**	26.03	70	LR	LR	05 03 17.1	
	comp=E,80nm,19.0s,baz=194,slow=37						
APG	**El Apazote**	26.66	120	LR	LR	05 04 30.1	
	comp=E,90nm,21.0s,baz=284,slow=39						
ILAR	**Eielson Array**	39.97	339	P	P	04 55 09.3	+4.2
	comp=E,1.3nm,1.0s,baz=153,slow=7.0,SNR=11						

KEA 22 04:56:09.9±0.0,**41°.54N**×**123°.13E,h0^{km},ML2.4**/2, **Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUJ	**Sinuiju**	1.77	144	Pg	Pb	04 56 43.4	+0.2
SUJ				Sg	Sb	04 57 06.2	+0.2
KGE	**Kanggye**	2.69	102	Sg	Sg	04 57 35.5	-1.0
PYS	**Pyongsong**	3.09	137	Sg	Sg	04 57 47.6	-1.7
PYAG	**Pyongyang**	3.20	140	Sg	Sg	04 57 50.8	-1.9

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*NIED **22** 05:05:00,34°.10N×135°.10E,h5^{km},Mw3.5 Best double couple: M$_0$1.81000×10^{14} NP1:ϕ$_s$344.00000°,δ68.00000°, λ80.00000°. NP2:ϕ$_s$189.00000°,δ25.00000°,λ113.00000°.*

*JMA **22** 05:05:10.4,34°.05N×135°.16E,h6^{km}±1^{km},M3.6 Broadband fault plane solution: P waves. NP1: ϕ$_s$159.00000°,δ41.00000°,λ58.00000°. NP2:ϕ$_s$18.00000°, δ56.00000°,λ115.00000°. Principal axes: T Plg68.0000°, Azm341.0000°; N Plg20.0000°, Azm184.0000°; P Plg8.0000°, Azm91.0000°;*

JMA Felt III J1.

*IDC **22** 05:05:11.3±2.7,34°.01N×135°.17E,h15^{km}±18^{km},mb3.4/5, mb1 3.4/8,mb1mx3.3/47,mbtmp3.4/8,ML3.0/3 Error ellipse: s-maj=21.5km s-min=14.1km az=151.0*

ISC 22 05:05:10.4±1.1,**34°.04N**±0°.03×**135°.14E**±0°.03,**h8^{km}**±9^{km}, **n23,**σ**0^{s}72**/27,**mb3.4**/5,**1C-6D,Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWM	**Minabe**	0.26	137	⇓P	Pg	05 05 15.7	+0.1
JWM				S	Sg	05 05 19.2	+0.1
JWY	**Kouya**	0.41	65	⇓P	Pg	05 05 18.0	-0.5
JTNC	**Tanabenakahech**	0.45	119	⇓P	Pg	05 05 19.3	+0.1
JTNC				S	Sg	05 05 25.1	0.0
JAWN	**Awajishima-nag**	0.48	336	P	Pg	05 05 19.9	+0.1
JAWN				S	Sg	05 05 26.4	+0.2
JAI	**Aioi**	0.62	247	⇓P	Pg	05 05 22.4	-0.1
JAI				S	Sg	05 05 30.6	0.0
JHE	**Heguri**	0.76	36	⇓P	Pg	05 05 24.7	-0.3
JHE				S	Sg	05 05 34.8	-0.1
JKN2	**Miekihoku**	0.96	78	⇓P	Pg	05 05 27.8	-1.1
JKN2				S	Sg	05 05 41.1	-0.3
JKS	**Kasai**	0.97	346	⇑P	Pg	05 05 28.6	-0.5
JKS				S	Sg	05 05 41.4	-0.3
MAT	**Matsushiro**	3.54	44	P	Pn	05 06 05.9	+0.1
MAT				S	Sb	05 06 58.5	+2.0
MJAR	**Matsushiro Arr**	3.54	44	Pn	Pn	05 06 05.9	+0.2
	0.4nm,0.3s,baz=195,slow=6.1,SNR=15						
MJAR				Pg	Pg	05 06 17.7	-0.6
	0.8nm,0.3s,baz=227,slow=15,SNR=27						
MJAR				Lg	Lg	05 07 02.6	
	baz=231,slow=31,SNR=1.5						
JNU	**Nakatsue**	3.67	257	Pn	Pn	05 06 08.6	+1.0
	2.5nm,0.3s,baz=38,slow=7.9,SNR=12						
JNU				Pg	Pg	05 06 19.2	-1.6
	5.7nm,0.3s,baz=50,slow=5.0,SNR=14						
JNU				Lg	Lg	05 07 07.1	
	1.2nm,0.3s,baz=160,slow=15,SNR=1.7						
KSRS	**Korea Array**	6.78	302	Pn	Pn	05 06 51.2	+0.9
	0.3nm,0.3s,baz=125,slow=14,SNR=2.7						
SONM	**Songino Array**	25.54	311	P	P	05 10 39.9	+0.1
	0.5nm,0.6s,baz=100,slow=9.2,SNR=4.3						
H11N2	**WAKE ISLAND Hy**	31.56	109	T	T	05 44 08.4	
	baz=303,slow=74,SNR=5.9						
H11N1	**WAKE ISLAND Hy**	31.56	109	T	T	05 44 01.9	
	baz=303,slow=74,SNR=5.0						
H11N3	**WAKE ISLAND Hy**	31.58	109	T	T	05 44 07.0	
	baz=303,slow=74,SNR=4.6						
H11S3	**WAKE ISLAND Hy**	32.09	111	T	T	05 44 45.2	
	baz=305,slow=75,SNR=8.1						
H11S1	**WAKE ISLAND Hy**	32.09	111	T	T	05 44 45.8	
	baz=305,slow=75,SNR=5.1						
H11S2	**WAKE ISLAND Hy**	32.10	111	T	T	05 44 46.1	
	baz=305,slow=75,SNR=2.9						
MKAR	**Makanchi Array**	41.46	304	P	P	05 12 57.8	0.0
	0.1nm,0.4s,baz=88,slow=9.0,SNR=2.1						
KURBB	**Kurchatov Arra**	43.89	310	P	P	05 13 17.2	-0.2
	0.3nm,0.6s,baz=95,slow=8.3,SNR=2.9						
WRA	**Warramunga Arr**	53.69	181	P	P	05 14 32.2	-0.7
	0.8nm,0.6s,baz=359,slow=7.7,SNR=9.1						
ASAR	**Alice Springs**	57.40	181	P	P	05 14 58.8	-0.8
	0.3nm,0.6s,baz=14,slow=13,SNR=6.7						

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*AUST **22** 05:15:01.0±0.6,30°.46S×138°.40E,h6^{km}±5^{km},Error ellipse: s-maj=7.7km s-min=4.6km az=178.0*

*IDC **22** 05:15:02.5±2.2,29°.52S×139°.43E,h0^{km},mb1 3.1/3, mb1mx3.0/31,mbtmp2.8/3,ML2.8/3,Error ellipse: s-maj=118.0km s-min=15.7km az=54.0*

ISC 22 05:14:58.3±0.9,**30°.34S**±0°.07×**138°.53E**±0°.05,**h10^{km},n7,** σ**2^{s}01**/12,**South Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCRK	**Leigh Creek**	0.29	248	P	Pg	05 15 04.1	0.0
	baz=0.2						
STKA	**Stephens Creek**	3.04	121	P	Pn	05 15 49.7	+3.2
	baz=3.1,SNR=4.2						
STKA	**Stephens Creek**	3.04	121	Pn	Pb	05 15 50.2	-2.4
	0.5nm,0.3s,baz=294,slow=14,SNR=9.1						
STKA				Pg	Pg	05 15 57.2	+0.6
	1.9nm,0.3s,baz=300,slow=14,SNR=17						
STKA				Sn	Sb	05 16 28.0	-1.8
	1.3nm,0.3s,baz=343,slow=5.6,SNR=4.5						
STKA				Lg	Lg	05 16 39.0	
	2.3nm,0.3s,baz=16,slow=19,SNR=5.5						
BBOO	**Buckleboo**	3.24	220	P	Pn	05 15 50.2	+1.0
	baz=3.1,SNR=18						
BBOO				S	Sn	05 16 28.2	+0.3
	baz=3.1						
MULG	**Mulgathing**	3.86	270	P	Pn	05 15 59.7	+1.9
	baz=3.8						
ASAR	**Alice Springs**	7.82	327	Pn	Pn	05 16 54.2	+2.0
	0.1nm,0.3s,baz=147,slow=12,SNR=3.2						
ASAR				Sn	Sn	05 18 18.4	-2.4
	0.1nm,0.3s,baz=153,slow=21,SNR=2.0						
WRA	**Warramunga Arr**	11.02	339	Pn	Pn	05 17 36.7	+0.6
	0.1nm,0.3s,baz=155,slow=14,SNR=1.4						
WRA				Sn	Sn	05 19 38.3	-1.3
	0.0nm,0.3s,baz=152,slow=21,SNR=3.2						

IDC 22 05:17:49.2±8.3,**7°.06N**×**93°.54E,h0^{km},mb3.5**/4,**mb1 3.7**/4, **mb1mx3.3**/50,**mbtmp3.5**/4,**Error ellipse: s-maj=430.2km s-min=24.6km az=58.0,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S3	**Diego Garcia H**	25.57	236	T	T	05 50 18.3	
	baz=55						
H08S2	**Diego Garcia H**	25.57	236	T	T	05 50 21.9	
	baz=55						
H08S1	**Diego Carcia H**	25.59	236	T	T	05 50 21.4	
	baz=55						
MKAR	**Makanchi Array**	40.75	348	P	P	05 25 32.7	+0.7
	0.5nm,0.7s,baz=162,slow=8.0,SNR=5.2						
KURBB	**Kurchatov Arra**	45.19	347	P	P	05 26 06.7	-1.1
	0.3nm,0.7s,baz=169,slow=7.5,SNR=1.9						
WRA	**Warramunga Arr**	48.29	125	P	P	05 26 32.4	-0.2
	1.0nm,0.5s,baz=305,slow=8.3,SNR=17						
ASAR	**Alice Springs**	49.86	129	P	P	05 26 44.7	0.0
	0.1nm,0.5s,baz=300,slow=7.4,SNR=1.4						

IDC 22 05:23:16.6±1.6,**2°.96S**×**131°.11E,h0^{km},mb3.9**/2, **mb1 4.1**/4,**mb1mx3.6**/34,**mbtmp3.9**/4,**ML3.8**/2,**Error ellipse: s-maj=83.5km s-min=21.9km az=84.0,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	2.09	4	Pn	Pn	05 23 52.6	-0.2
	baz=207,slow=1.5						
SIJI				Sn	Sn	05 24 14.4	-5.1
	baz=162,slow=19						
FITZ	**Fitzroy Crossi**	15.97	199	Pn	Pn	05 27 01.3	-1.4
	0.2nm,0.3s,baz=23,slow=12,SNR=1.5						
FITZ				Sn	Sn	05 29 44.8	-16
	0.1nm,0.3s,baz=20,slow=12,SNR=1.5						
WRA	**Warramunga Arr**	17.17	170	P	Pn	05 27 17.1	-0.9
	0.4nm,0.3s,baz=351,slow=12,SNR=13						
WRA				S	Sn	05 30 12.2	-18
	0.5nm,0.3s,baz=353,slow=23,SNR=5.7						
ASAR	**Alice Springs**	20.76	173	P	P	05 27 59.9	+0.7
	9.1nm,0.7s,baz=355,slow=11,SNR=133						
ASAR				S	S	05 31 39.6	-12
	0.4nm,0.5s,baz=358,slow=23,SNR=4.8						
MKAR	**Makanchi Array**	65.51	325	P	P	05 34 02.0	+0.1
	0.3nm,0.6s,baz=123,slow=8.0,SNR=5.5						

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*IDC **22** 05:47:01.4±3.6,5°.37S×152°.31E,h60^{km}±26^{km},mb3.4/6, mb1 3.7/7,mb1mx3.5/27,mbtmp3.7/7,ML0.9/1,MS3.5/1, Ms1 3.5/1,ms1mx2.5/26,Error ellipse: s-maj=53.3km s-min=11.9km az=115.0*

ISC 22 05:46:58.8±1.2,**5°.44S**±0°.08×**152°.5E**±0°.2,**h40^{km},n10,** σ**1^{s}42**/11,**mb3.7**/6,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	1.23	336	P	Pn	05 47 20.2	+0.7
	624nm,0.3s,baz=170,slow=1.1,SNR=170						
KRVT				S	Sn	05 47 35.2	+0.3
	187nm,0.3s,baz=166,slow=19,SNR=18						
PMG	**Port Moresby**	6.62	233	P	Pn	05 48 36.2	+2.6
	0.2nm,0.3s,baz=20,slow=18,SNR=1.7						
PMG				S	Sn	05 49 45.9	-2.0
	2.0nm,0.3s,baz=66,slow=3.1,SNR=4.3						
DZM	**Mont Dzumac**	21.32	142	LR	LR	05 59 10.4	
	comp=Z,106nm,18.6s,baz=351,slow=34						
WRA	**Warramunga Arr**	22.82	229	P	P	05 51 58.9	+0.4
	1.7nm,0.8s,baz=56,slow=10,SNR=5.4						
ASAR	**Alice Springs**	25.50	223	P	P	05 52 24.1	+0.5
	0.8nm,0.7s,baz=54,slow=8.7,SNR=11						
FITZ	**Fitzroy Crossi**	29.12	242	P	P	05 52 54.5	-1.6
	2.8nm,1.1s,baz=62,slow=10,SNR=2.2						
MKAR	**Makanchi Array**	80.62	319	P	P	05 59 07.8	+0.4
	0.2nm,0.5s,baz=114,slow=3.7,SNR=2.2						
ILAR	**Eielson Array**	82.85	22	P	P	05 59 18.8	+0.1
	0.7nm,0.7s,baz=245,slow=5.5,SNR=11						
YKA	**Yellowknife Ar**	96.11	28	P	P	06 00 21.9	-0.1
	0.3nm,1.0s,baz=284,slow=4.0,SNR=2.8						
TORD	**Torodi Ar. Bea**	150.24	287	PKPbc	PKPbc	06 06 45.5	-1.2
	0.9nm,0.9s,baz=85,slow=3.9,SNR=3.4						

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*IDC **22** 05:56:05.8±0.7,17°.93S×69°.34W,h121^{km}±5^{km},mb4.1/11, mb1 4.1/15,mb1mx4.0/29,mbtmp4.5/15,MS3.1/3, Ms1 3.1/3,ms1mx2.8/25,Error ellipse: s-maj=18.0km s-min=14.1km az=62.0*

*NEIC **22** 05:56:05.4±1.6,18°.06S±0°.05×69°.61W±0°.08,h125^{km}±4^{km}, Error ellipse: s-maj=11.3km s-min=6.9km az=110.0*

*GUC **22** 05:56:06.3±0.7,18°.10S×69°.61W,h124^{km}±3^{km},ML4.3*

*VAO **22** 05:56:08.6±0.9,17°.92S×69°.30W,h149^{km}±7^{km},mb4.6*

ISC 22 05:56:04.7±0.4,**18°.07S**±0°.03×**69°.61W**±0°.05,**h120^{km}**±4^{km}, **h120^{km}:pP-P,n147,**σ**1^{s}50**/170,**mb4.6**/38,**9C-1D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB16	**IPOC Station P**	0.28	160	⇓*e*P	Pn	05 56 24.0	+1.7
PB16				*e*S	Sn	05 56 38.0	+2.4
PB16				IAML		05 56 39.2	
	comp=E,9μm,0.4s						
PB16	**IPOC Station P**	0.28	160		Pn	05 56 24.0	+1.7
PB16				Sn	Sn	05 56 37.5	+1.9
AP01	**Chacalluta**	0.76	247	⇑*i*P	Pn	05 56 25.9	+1.4
AP01				*e*S	Sn	05 56 40.8	+1.3
PB12	**IPOC Station P**	0.87	231	⇑*i*P	Pn	05 56 26.7	+1.1
PB12				*e*S	Sn	05 56 43.0	+1.5
PB12				IAML		05 56 43.8	
	comp=N,15μm,0.2s						
PB12	**IPOC Station P**	0.87	231		Pn	05 56 26.8	+1.1
PB12				Sn	Sn	05 56 42.9	+1.5
PSGC	**Pisagua**	1.59	198	⇑*i*P	Pn	05 56 34.7	+1.3
PSGC				*e*S	Sn	05 56 56.2	+1.0
PSGC				IAML		05 56 57.6	
	comp=N,4μm,0.4s						
PSGCX	**Pisagua**	1.60	198		Pn	05 56 34.6	+1.3
PSGCX				Sn	Sn	05 56 56.1	+0.9
GO01	**Chusmiza**	1.64	166	⇑*i*P	Pn	05 56 36.6	+2.4
GO01				*e*S	Sn	05 56 59.1	+2.4
GO01				IAML		05 57 06.3	
	comp=N,3μm,0.2s						
GO01	**Chusmiza**	1.64	166		Pn	05 56 36.6	+2.4
PB11	**IPOC Station P**	1.68	181	⇑*i*P	Pn	05 56 36.0	+1.5
PB11				*e*S	Sn	05 56 58.4	+1.2
PB11				IAML		05 57 00.9	
	comp=E,3μm,0.3s						
PB11	**IPOC Station P**	1.68	181		Pn	05 56 36.2	+1.7
PB11				Sn	Sn	05 56 58.9	+1.7
PB08	**IPOC Station P**	2.11	168	⇑*i*P	Pn	05 56 42.0	+2.2
PB08				*e*S	Sn	05 57 08.9	+2.1
PB08				IAML		05 57 14.3	
	comp=E,1μm,0.2s						
LPAZ	**La Paz**	2.27	39	P	Pn	05 56 44.2	+2.0
	comp=E,105nm,0.3s,baz=234,slow=4.0,SNR=3226						
LPAZ				S	Sn	05 57 08.3	-2.4
	comp=E,8.0nm,0.3s,baz=162,slow=4.9,SNR=4.4						
LPAZ	**La Paz**	2.27	39		Pn	05 56 44.1	+2.0
LPAZ				Sn	Sn	05 57 12.3	+1.6
LPAZ	**La Paz**	2.27	39	*e*P	Pn	05 56 44.2	+2.0
TA01	**Diego Aracena**	2.54	192	⇑*i*P	Pn	05 56 45.8	+0.8
TA01				*e*S	Sn	05 57 15.9	-0.2
PATCX	**Punta Patache**	2.79	190	⇑*i*P	Pn	05 56 49.3	+1.0
PATCX				*e*S	Sn	05 57 22.6	+0.7
PATCX	**Punta Patache**	2.79	190		Pn	05 56 49.8	+1.5
PATCX				Sn	Sn	05 57 19.2	-2.6
PB01	**IPOC Station P**	2.96	178	⇑*i*P	Pn	05 56 51.9	+1.3
PB01				*e*S	Sn	05 57 26.9	+0.9
PB01				IAML		05 57 28.5	
	comp=E,989nm,0.1s						
PB01	**IPOC Station P**	2.96	178		Pn	05 56 51.9	+1.3
PB01				Sn	Sn	05 57 26.5	+0.6
PB07	**IPOC Station P**	3.65	184		Pn	05 57 01.1	+1.4
PB07				Sn	Sn	05 57 41.0	-1.4
PB09	**IPOC Station P**	3.72	175		Pn	05 57 02.6	+1.9
PB04	**IPOC Station P**	4.27	187		Pn	05 57 08.7	+0.6
PB04				Sn	Sn	05 57 52.8	-4.5
LVC	**Limon Verde**	4.57	172	P	Pn	05 57 14.4	+2.3
	comp=E,31nm,0.3s,baz=21,slow=8.5,SNR=363						
LVC				S	Sn	05 58 04.3	-0.2
	comp=E,35nm,0.3s,baz=190,slow=22,SNR=12						
LVC	**Limon Verde**	4.57	172		Pn	05 57 14.2	+2.1
LVC				Sn	Sn	05 58 03.5	-1.0
PB15	**IPOC Station P**	5.12	179		Pn	05 57 20.1	+0.7
PB15				Sn	Sn	05 58 18.1	+0.5
PB10	**IPOC Station P**	5.49	189		Pn	05 57 23.7	-0.5
PB10				Sn	Sn	05 58 23.6	-2.7
PB14	**IPOC Station P**	6.57	186		Pn	05 57 37.8	-1.3
GO02	**Mina Guanaco**	7.06	180		Pn	05 57 45.2	-0.6
SIV	**San Ignacio**	8.43	77	P	Pn	05 58 01.6	-2.4
	comp=E,12nm,0.3s,baz=274,slow=9.5,SNR=136						
SIV				LR	LR	06 01 31.2	
	comp=E,87nm,19.2s,baz=280,slow=40						
NNA	**Nana**	9.24	310	P	Pn	05 58 13.5	-1.5
	comp=E,2.0nm,0.3s,baz=138,slow=11,SNR=4.6						
NNA				S	Sn	05 59 50.9	-6.4
	comp=E,1.0nm,0.3s,baz=195,slow=18,SNR=1.8						
NNA	**Nana**	9.24	310	Pn	Pn	05 58 14.8	-0.2
GO03	**Copiap**	9.50	183		Pn	05 58 16.1	-2.4
GO04	**Tololo Observa**	12.10	185	Pn	Pn	05 58 49.8	-3.6
SALV	**Santo Antonio**	13.49	83	*e*P	Pn	05 59 09.6	-1.7

ATAH	Atahualpa	13.83	321	LR	LR	06 04 55.2	
	comp=E,76nm,19.8s,baz=72,slow=38						
CPUP	Villa Florida	14.03	128	P	Pn	05 59 16.4	-1.8
	comp=E,0.1nm,0.3s,baz=313,slow=12,SNR=4.2						
CPUP	Villa Florida	14.03	128	P	Pn	05 59 16.8	-1.4
ROC1	El Roble	14.90	185	P	P	05 59 30.9	-1.2
CLDB	Colider	15.16	64	*e*P	Pn	05 59 29.0	-3.7
C2SB	Chapadao do Su	15.93	95	*e*P	Pn	05 59 41.4	-0.8
TRCB	Terra Rica	16.59	109	*e*P	Pn	05 59 50.2	-0.1
ARAG	Araguaiana, MT	17.20	85	*e*P	P	05 59 56.5	-0.9
PCMB	Pacaembu	17.62	105	*e*P	P	06 00 01.8	-0.2
PTGB	Pitanga	17.62	115	*e*P	P	06 00 02.5	+0.4
ITAB	Concordia	18.52	123	*e*P	P	06 00 11.9	+0.2
FRTB	Fartura	19.47	109	*e*P	P	06 00 21.9	-0.4
PTGA	Pitinga	19.66	30	P	P	06 00 23.0	-1.4
	comp=E,3.6nm,0.3s,baz=204,slow=13,SNR=47						
PTGA	Pitinga	19.66	30	P	P	06 00 23.1	-1.2
PTGA	Pitinga	19.66	30	*e*P	P	06 00 23.0	-1.4
PLTB	Pedras Altas	19.88	136	*e*P	P	06 00 26.2	-0.4
IPMB	Ipameri, GO	20.35	93	*e*P	P	06 00 30.6	-1.3
BDFB	Brasilia	20.81	87	P	P	06 00 35.5	-1.3
	comp=E,17nm,0.7s,baz=265,slow=11,SNR=23						
BDFB	Brasilia	20.81	87	P	P	06 00 35.9	-0.9
BDFB				IAmb	IAmb	06 00 39.2	
	comp=Z,15nm,0.6s						
GO06	Curarrehue	21.50	184	P	P	06 00 46.5	+2.5
VAO	Valinhos	21.76	107	*e*P	P	06 00 45.0	-1.9
PLCA	Paso Flores	22.60	182	P	P	06 00 57.4	+2.1
	comp=Z,5.7nm,0.8s,baz=15,slow=13,SNR=10						
PLCA	Paso Flores	22.60	182	P	P	06 00 57.3	+2.0
PLCA	Paso Flores	22.60	182	*e*P	P	06 00 57.5	+2.2
SMTB	Santa Maria do	23.27	70	*e*P	P	06 01 01.1	-0.7
RUSC	La Rusia	24.05	352	P	P	06 01 10.3	+0.8
JANB	Januaria	24.43	87	*e*P	P	06 01 10.9	-1.5
SDV	Santo Domingo	26.80	358	P	P	06 01 32.8	-1.2
	comp=Z,1.2nm,0.5s,baz=132,slow=16,SNR=2.2						
SDV	Santo Domingo	26.80	358	P	P	06 01 32.8	-1.2
MDP	Montagnes des	28.47	38	P	P	06 01 47.0	-1.6
	comp=Z,18nm,1.1s,baz=219,slow=7.8,SNR=4.7						
MDP				LR	LR	06 14 14.1	
	comp=Z,58nm,21.6s,baz=346,slow=39						
RCBR	Riachuelo	35.08	74	P	P	06 02 47.3	+0.7
PDPR	Patillas Dam,	36.03	6	P	P	06 02 53.6	-1.0
PDPR				IAmb	IAmb	06 03 00.3	
	comp=Z,18nm,1.4s						
TEIG	Tepich	42.23	333	P	P	06 03 46.7	+0.6
	comp=Z,8.4nm,1.0s,baz=88,slow=0.0,SNR=2.1						
553A	Crawfordville	50.06	343	P	P	06 04 48.8	+1.5
GOGA	Godfrey	52.87	345	P	P	06 05 08.3	+0.2
Z50A	Ashland	53.36	343	P	P	06 05 12.1	+0.3
Z50A				IAmb	IAmb	06 05 12.4	
	comp=Z,5.4nm,0.8s						
LRAL	Lakeview Retre	53.47	342	P	P	06 05 12.6	+0.1
LRAL				IAmb	IAmb	06 05 29.6	
	comp=Z,7.4nm,1.4s						
Z47A	Carrollton	53.94	341	P	P	06 05 16.2	+0.3
Z47A				IAmb	IAmb	06 05 16.6	
	comp=Z,6.2nm,0.6s						
Y49A	Blount Mountai	54.06	343	P	P	06 05 16.6	-0.3
X48A	Hartselle	54.80	342	P	P	06 05 22.3	+0.1
X48A				IAmb	IAmb	06 05 22.9	
	comp=Z,4.4nm,0.8s						
SWET	Sewanee	55.21	344	P	P	06 05 25.2	+0.1
V48A	Smith Brothers	55.95	343	P	P	06 05 30.2	-0.1
V48A				IAmb	IAmb	06 05 30.9	
	comp=Z,5.6nm,0.7s						
U49A	Red Boiling Sp	56.40	344	P	P	06 05 33.3	-0.2
U49A				IAmb	IAmb	06 05 41.0	
	comp=Z,8.2nm,1.5s						
WVT	Waverly	56.59	342	P	P	06 05 34.6	-0.3
WVT				IAmb	IAmb	06 05 34.9	
	comp=Z,5.0nm,0.6s						
T49A	Edmonton	56.90	345	P	P	06 05 36.7	-0.4
T49A				IAmb	IAmb	06 05 38.0	
	comp=Z,4.3nm,0.7s						
T47A	Sharon Grove	57.20	343	P	P	06 05 39.5	+0.3
T47A				IAmb	IAmb	06 05 40.2	
	comp=Z,7.5nm,1.0s						
Q54A	Coxs Mills	57.72	350	P	P	06 05 43.1	+0.3
PBMO	Poplar Bluff	57.99	340	P	P	06 05 45.3	+0.6
P53A	Whipple	58.30	349	P	P	06 05 47.1	+0.2
P53A				IAmb	IAmb	06 05 53.6	
	comp=Z,9.7nm,1.2s						
T42A	Van Buren	58.43	340	P	P	06 05 48.1	+0.3
T42A				IAmb	IAmb	06 05 48.6	
	comp=Z,3.7nm,0.7s						
HHAR	Hobbs	58.75	337	P	P	06 05 51.3	+1.2
HHAR				IAmb	IAmb	06 05 52.2	
	comp=Z,9.1nm,1.3s						
CCM	Cathedral Cave	59.41	340	P	P	06 05 55.5	+1.0
CCM				IAmb	IAmb	06 05 56.2	
	comp=Z,3.8nm,0.8s						
N53A	Lisbon	59.49	350	P	P	06 05 55.3	+0.2
BRYW	Bryant College	59.71	358	P	P	06 05 56.6	+0.1
M56A	Emporium	59.78	353	P	P	06 05 57.4	+0.4
M56A				IAmb	IAmb	06 06 03.9	
	comp=Z,6.0nm,1.0s						
S39A	Bolivar	59.78	338	P	P	06 05 57.5	+0.4
S39A				IAmb	IAmb	06 05 59.0	
	comp=Z,5.5nm,0.7s						
R40A	Maddies Statio	59.96	340	P	P	06 05 58.6	+0.3
R40A				IAmb	IAmb	06 05 59.8	
	comp=Z,4.4nm,0.7s						
ALLY	Alegheny Colle	60.21	351	P	P	06 06 00.4	+0.4
K58A	Earlville	60.78	355	P	P	06 06 04.0	+0.1
K58A				IAmb	IAmb	06 06 17.7	
	comp=Z,12nm,1.3s						
TRQ	Mont Tremblant	64.14	356	P	P	06 06 26.6	+0.4
G45A	Suttons Bay	64.48	347	P	P	06 06 28.1	-0.3
G45A				IAmb	IAmb	06 06 28.9	
	comp=Z,5.9nm,0.7s						
D62A	Allapoint, All	64.85	0	P	P	06 06 31.1	+0.4
D62A				IAmb	IAmb	06 06 35.8	
	comp=Z,6.4nm,1.1s						
BATG	Bathurst New B	65.12	3	P	P	06 06 32.5	0.0
BATG				IAmb	IAmb	06 06 46.0	
	comp=Z,13nm,1.3s						
E46A	Sault Ste Mari	65.49	349	P	P	06 06 34.6	-0.2
E46A				IAmb	IAmb	06 06 35.6	
	comp=Z,5.0nm,0.9s						
E43A	Lone Tree Farm	66.04	347	P	P	06 06 38.5	+0.1
E43A				IAmb	IAmb	06 06 39.0	
	comp=Z,4.6nm,0.7s						
VLDQ	Val d'Or	66.25	354	P	P	06 06 40.2	+0.6
DRLN	Deer Lake	67.88	9	P	P	06 06 49.4	-0.6
LIC	Lamto	68.12	75	*e*P	P	06 06 51.0	-1.2
	comp=Z,3.1nm,0.3s						
TIC	Toumodi	68.28	75	*e*P	P	06 06 52.2	-1.1
KIC	Kosan Boka	68.43	75	*e*P	P	06 06 53.4	-0.8
	comp=Z,7.0nm,0.4s						
DBIC	Dimbokro	68.44	75	P	P	06 06 53.5	-0.7
	comp=Z,13nm,0.9s,baz=218,slow=5.3,SNR=15						
DBIC	Dimbokro	68.44	75	P	P	06 06 53.6	-0.6
PDAR	Pinedale Array	70.82	330	P	P	06 07 11.5	+3.0
	comp=Z,0.2nm,0.5s,baz=121,slow=8.5,SNR=2.5						
PDAR				pP	pP	06 07 38.6	-1.3
	comp=Z,0.7nm,0.8s,baz=121,slow=5.5,SNR=3.2						
PDAR	Pinedale Array	70.82	330	P	P	06 07 10.6	+2.0
ULM	Lac du Bonnet	71.86	343	P	P	06 07 14.5	+0.2
	comp=Z,1.5nm,0.4s,baz=150,slow=5.9,SNR=7.0						
ULM				pP	pP	06 07 44.0	-1.8
	comp=Z,3.0nm,0.7s,baz=147,slow=6.1,SNR=4.8						
ULM	Lac du Bonnet	71.86	343	P	P	06 07 15.3	+1.0
QSPA	South Pole Qui	72.10	180	P	P	06 07 18.2	+2.4
NVAR	Mina Array Bea	72.40	322	pP	pP	06 07 49.7	+0.6
	comp=Z,0.6nm,0.8s,baz=144,slow=7.2,SNR=3.7						
SCHQ	Schefferville	72.64	2	P	P	06 07 18.4	-0.4
	comp=Z,1.9nm,0.7s,baz=198,slow=3.9,SNR=5.1						
SCHQ	Schefferville	72.64	2	P	P	06 07 18.8	-0.1
YNE	Yellowstone No	72.74	331	P	P	06 07 22.1	+2.0
HOPS	Hopland Field	75.63	320	P	P	06 07 38.0	+1.4
TOA0	Torodi Ar. Sit	76.86	71	P	P	06 07 43.4	-0.6
TORD	Torodi Ar. Bea	76.86	71	P	P	06 07 43.1	-0.9
	comp=Z,11nm,0.6s,baz=250,slow=5.7,SNR=40						
TORD	Torodi Ar. Bea	76.86	71	P	P	06 07 42.7	-1.3
TSUM	Tsumeb	81.67	107	P	P	06 08 11.1	+0.7
PAB	San Pablo	83.55	45	P	P	06 08 20.6	+1.0
PAB				IAmb	IAmb	06 08 21.2	
	comp=Z,12nm,1.5s						
BOSA	Boshof	85.65	119	P	P	06 08 30.7	+0.2
	comp=Z,2.4nm,0.8s,baz=247,slow=5.2,SNR=2.2						
BOSA	Boshof	85.65	119	IAmb	IAmb	06 08 47.0	
	comp=Z,11nm,1.3s						
YKA	Yellowknife Ar	87.75	341	P	P	06 08 40.8	+1.2
	comp=Z,0.9nm,0.6s,baz=134,slow=5.2,SNR=19						
YKA				pP	pP	06 09 12.3	+0.2
	comp=Z,1.8nm,0.9s,baz=135,slow=5.2,SNR=6.4						
H11N3	WAKE ISLAND Hy	126.71	281	T	T	08 34 29.5	
	baz=100,slow=74,SNR=4.3						
H11S2	WAKE ISLAND Hy	126.72	280	T	T	08 34 28.6	
	baz=100,slow=74,SNR=9.4						
H11N2	WAKE ISLAND Hy	126.72	281	T	T	08 34 30.1	
	baz=100,slow=74,SNR=6.1						
H11S1	WAKE ISLAND Hy	126.72	280	T	T	08 34 29.1	
	baz=100,slow=74,SNR=6.3						
H11N1	WAKE ISLAND Hy	126.73	281	T	T	08 34 30.8	
	baz=100,slow=74,SNR=4.8						
H11S3	WAKE ISLAND Hy	126.73	280	T	T	08 34 29.9	
	baz=100,slow=74,SNR=5.8						
ASAR	Alice Springs	132.59	210	PKP	PKPdf	06 15 06.2	+0.2
	comp=Z,0.5nm,0.9s,baz=120,slow=2.3,SNR=3.0						
ASAR	Alice Springs	132.59	210		PKPdf	06 15 06.4	+0.4
WRA	Warramunga Arr	135.51	213	PKP	PKiKP	06 15 12.6	-0.5
	comp=Z,0.9nm,0.2s,baz=158,slow=1.7,SNR=21						
KURBB	Kurchatov Arra	138.79	31	PKP	PKPdf	06 15 16.8	+0.2
	comp=Z,0.2nm,0.3s,baz=291,slow=2.6,SNR=2.0						
ZALV	Zalesovo Beam	139.10	23	PKP	PKPdf	06 15 18.0	+1.0
	comp=Z,0.6nm,0.4s,baz=300,slow=3.2,SNR=2.3						
ZALV				pPKP	pPKPdf	06 15 50.8	-0.2
	comp=Z,1.8nm,0.6s,baz=318,slow=4.5,SNR=4.2						
ZALV	Zalesovo Beam	139.10	23		PKPdf	06 15 17.3	+0.3
MKAR	Makanchi Array	143.18	33	PKP	PKPbc	06 15 23.0	+1.1
	comp=Z,0.2nm,0.5s,baz=325,slow=4.0,SNR=2.4						
MKAR				pPKP	pPKPdf	06 15 59.1	+0.5
	comp=Z,0.5nm,0.7s,baz=293,slow=2.9,SNR=3.2						
MKAR	Makanchi Array	143.18	33	PKPdf	PKPbc	06 15 23.3	+1.3
KSH	Kashi	143.36	47	PKP	PKiKP	06 15 28.1	-0.6
KSH				sPKP		06 16 05.4	
KSH				PP	PP	06 18 42.8	+5.2
KSH				PKS	PKSdf	06 19 02.0	+0.9
KSH				SKKS		06 25 22.3	
USRK	Ussuriysk Ar.	148.25	330	PKPbc	PKPbc	06 15 37.6	+0.8
	comp=Z,0.5nm,0.5s,baz=28,slow=7.3,SNR=4.1						
USRK	Ussuriysk Ar.	148.25	330		PKiKP	06 15 38.1	-0.3
JHJ2	Mitsune	149.66	305	PKPab	PKPab	06 15 46.3	+0.1
SONM	Songino Array	150.13	5	PKPbc	PKiKP	06 15 43.1	+0.8
	comp=Z,0.7nm,0.5s,baz=282,slow=3.0,SNR=4.6						
SONM				pPKPbc	pPKPbc	06 16 14.5	-0.7
	comp=Z,1.4nm,0.9s,baz=318,slow=1.9,SNR=4.0						
SONM	Songino Array	150.13	5	PKPbc	PKiKP	06 15 43.3	+0.9
SONM					pPKPbc	06 16 16.8	+1.5
LZH	Lanzhou	161.14	17	*e*PKP	PKPdf	06 15 51.3	-0.2
LZH				pPKP	pPKPdf	06 16 25.6	+0.1
LZH				PKP	PKPab	06 16 36.5	+1.3
CD2	Chengdu	165.87	24	PKP	PKPdf	06 15 54.1	-1.8

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*IDC **22** 06:11:06.5±1.7, 1°.05N×127°.57E, h0^{km}, mb3.7/4, mb1 3.9/4, mb1mx3.5/46, mbtmp3.7/4, Error ellipse: s-maj=143.7km s-min=21.5km az=67.0*

*DJA **22** 06:11:07.0±0.5, 1°N±4°×12°8E±°, h10^{km}, M3.6/6, mb3.9/1, MLv3.5/6*

ISC 22 06:11:08.4±1.3**, 1°.15N**±0°.10×**128°.09E**±0°.10**, h23**^{km}**, n7, σ1^{s}62**/8**, mb3.9**/4**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.82	243	P	Pn	06 11 23.3	-1.2
LBMI	Labuha	1.87	198	P	Pb	06 11 40.9	-1.0
LBMI				S	Sb	06 12 06.0	+1.1
FAKI	Fak Fak	5.79	134	P	Pn	06 12 31.6	-1.4
WRA	Warramunga Arr	21.84	164	P	P	06 16 00.8	+1.4
	1.7nm,0.2s,baz=342,slow=11,SNR=8.9						
ASAR	Alice Springs	25.30	167	P	P	06 16 35.6	+2.2
	0.6nm,0.6s,baz=351,slow=9.5,SNR=12						
MKAR	Makanchi Array	60.44	326	P	P	06 21 17.1	+0.7
	0.4nm,0.6s,baz=117,slow=8.0,SNR=6.8						
KURBB	Kurchatov Arra	64.64	328	P	P	06 21 44.0	-0.2
	0.7nm,0.6s,baz=126,slow=6.1,SNR=5.8						

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*IDC **22** 06:17:59.8±0.8, 17°.88S×174°.03W, h0^{km}, mb4.2/13, mb1 4.4/14, mb1mx4.2/36, mbtmp4.2/14, ML4.2/1, MS3.5/2, Ms1 3.5/2, ms1mx2.9/28, Error ellipse: s-maj=35.8km s-min=15.2km az=135.0*

*NEIC **22** 06:18:03.6±2.0, 18°.09S±0°.10×173°.8W±0°.1, h27^{km}±3^{km}, mb4.5/22, Error ellipse: s-maj=16.6km s-min=14.1km az=80.0*

ISC 22 06:18:04.5±0.5**, 17°.94S**±0°.08×**173°.8W**±0°.1**, h35**^{km}**, n82, σ1^{s}42**/78**, mb4.4**/21**, 7C-5D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	3.86	108		Pn	06 19 00.4	-0.9
AFI	Afiamalu	4.46	26	Pn	Pn	06 19 10.5	+0.8
	12nm,0.3s,baz=229,slow=18,SNR=13						
AFI				Sn	Sn	06 19 55.1	-5.3
	15nm,0.3s,baz=300,slow=19,SNR=7.8						
AFI	Afiamalu	4.46	26		Pn	06 19 12.0	+2.3
URZ	Urewera	21.75	200	P	P	06 22 53.0	+0.1
	5.4nm,0.4s,baz=330,slow=1.7,SNR=7.8						
URZ	Urewera	21.75	200	P	P	06 22 52.8	0.0
URZ				IAmb	IAmb	06 22 59.8	
	comp=Z,17nm,0.9s						
HIZ	Hauiti	22.76	203	P	P	06 23 05.6	+1.8
BKZ	Black Stump Fm	22.77	200	P	P	06 23 04.4	+0.5
PAE	Paea	23.07	93	*e*T	T	06 46 26.5	
	comp=Z,4.0nm,0.3s						
PPT2	Papeete2	23.08	93	*e*T	T	06 46 28.3	
	comp=Z,3.3nm,0.3s						
TVO	Taravao	23.38	93	*e*T	T	06 46 49.7	
	comp=Z,1.1nm,0.4s						
TBI	Tubuai	23.40	107	*e*T	T	06 47 03.5	
	comp=Z,7.7nm,0.4s						
QRZ	Quartz Range	25.66	204	P	P	06 23 33.7	+2.7
THZ	Tophouse	26.32	203	P	P	06 23 40.9	+3.8
THZ				IAmb	IAmb	06 23 49.2	
	comp=Z,12nm,1.0s						
KHZ	Kahutara	26.67	201	P	P	06 23 44.9	+4.8
KHZ				IAmb	IAmb	06 23 48.4	
	comp=Z,27nm,1.4s						
LTZ	Lake Taylor	27.44	203	P	P	06 23 52.2	+5.1
LTZ				IAmb	IAmb	06 23 53.9	
	comp=Z,13nm,1.2s						
RPZ	Rata Peaks	28.70	203	P	P	06 23 59.2	+1.0
	comp=Z,3.9nm,0.5s,baz=326,slow=3.6,SNR=2.3						
FOZ	Fox Glacier	29.02	205	P	P	06 24 05.0	+3.9
FOZ				IAmb	IAmb	06 24 23.6	
	comp=Z,23nm,1.3s						
EIDS	Eidsvold	33.38	251	P	P	06 24 37.6	-2.2
CTA	Charters Tower	37.76	260	P	P	06 25 17.3	-0.1
	comp=Z,2.3nm,0.5s,baz=114,slow=12,SNR=5.6						
STKA	Stephens Creek	42.47	242	P	P	06 25 55.0	-1.3
	comp=Z,1.9nm,0.9s,baz=134,slow=9.2,SNR=3.9						
STKA	Stephens Creek	42.47	242	P	P	06 25 55.5	-0.9
WB0	Warramunga Arr	48.90	259	P	P	06 26 45.8	-1.5
WB0				IAmb	IAmb	06 26 54.3	
	comp=Z,10nm,1.5s						
WB2	Warramunga Arr	48.91	259	P	P	06 26 45.7	-1.7
WB2				IAmb	IAmb	06 27 02.0	
	comp=Z,3.8nm,1.0s						
WRA	Warramunga Arr	48.92	259	P	P	06 26 45.6	-2.0
	comp=Z,1.1nm,0.5s,baz=98,slow=7.5,SNR=22						
WRA				PcP	PcP	06 28 11.8	+0.2
	comp=Z,0.7nm,0.6s,baz=96,slow=3.3,SNR=3.6						
WRA				LR	LR	06 45 06.1	
	comp=Z,38nm,20.3s,baz=55,slow=33						
WRA	Warramunga Arr	48.92	259	P	P	06 26 46.2	-1.3
AS31	Alice Springs	48.99	254	P	P	06 26 46.7	-1.3
ASAR	Alice Springs	48.99	254	P	P	06 26 46.6	-1.4
	comp=Z,7.0nm,0.8s,baz=86,slow=8.6,SNR=74						
ASAR				PcP	PcP	06 28 11.7	-0.1
	comp=Z,1.5nm,0.7s,baz=105,slow=4.0,SNR=6.5						
ASAR	Alice Springs	48.99	254	P	P	06 26 46.3	-1.8
FITZ	Fitzroy Crossi	57.33	260	P	P	06 27 48.5	-1.0
	comp=Z,0.9nm,0.5s,baz=84,slow=7.4,SNR=1.7						
FITZ	Fitzroy Crossi	57.33	260	P	P	06 27 49.8	+0.4
FITZ				IAmb	IAmb	06 28 03.3	
	comp=Z,7.6nm,1.4s						
QSPA	South Pole Qui	72.12	180	P	P	06 29 26.1	+0.8
PEA0B	Petropavlovsk-	74.92	343	P	P	06 29 42.6	+1.1
PETK	Petropavlovsk-	74.92	343	P	P	06 29 42.3	+0.8
	comp=Z,3.4nm,0.7s,baz=110,slow=8.3,SNR=6.8						
PETK	Petropavlovsk-	74.92	343	P	P	06 29 42.6	+1.1
NVAR	Mina Array Bea	76.47	42	P	P	06 29 52.3	+1.2
	comp=Z,1.5nm,0.8s,baz=229,slow=10,SNR=14						
NVAR	Mina Array Bea	76.47	42	P	P	06 29 53.2	+2.1
NV11	Mina Array Sit	76.57	42	P	P	06 29 53.3	+1.7
NV11				IAmb	IAmb	06 29 54.5	
	comp=Z,5.7nm,1.4s						
TPNV	Topopah Spring	76.95	44	P	P	06 29 55.1	+1.3
MOD	Modoc Plateau	77.35	38	P	P	06 29 57.8	+1.9
NEW	Newport	83.02	34	LR	LR	07 01 50.0	
	comp=Z,39nm,18.1s,baz=316,slow=32						
PDAR	Pinedale Array	84.41	42	P	P	06 30 34.4	+0.7
	comp=Z,0.6nm,0.7s,baz=204,slow=3.5,SNR=5.9						
PDAR	Pinedale Array	84.41	42	P	P	06 30 34.5	+0.8
YHL	Hebgen Lake	84.48	39	P	P	06 30 35.7	+1.6
CCB	Clear Creek Bu	84.72	11	P	P	06 30 35.0	+0.6
CCB				IAmb	IAmb	06 30 35.7	
	comp=Z,3.9nm,1.0s						
ILAR	Eielson Array	85.00	11	P	P	06 30 36.0	+0.2
	comp=Z,1.1nm,1.0s,baz=228,slow=6.4,SNR=6.4						
ILAR	Eielson Array	85.00	11	P	P	06 30 36.0	+0.2
YKA	Yellowknife Ar	92.57	24	P	P	06 31 12.6	+0.7
	comp=Z,0.5nm,0.8s,baz=230,slow=4.3,SNR=8.8						
CMAR	Chiang Mai Arr	93.03	288	P	P	06 31 14.8	-0.2
	comp=Z,0.7nm,0.3s,baz=123,slow=3.3,SNR=1.5						
ARCES	ARCESS Array B	127.05	352	PKP	PKiKP	06 37 04.5	-0.2
	comp=Z,1.0nm,0.7s,baz=348,slow=5.2,SNR=4.1						
ARCES	ARCESS Array B	127.05	352		PKiKP	06 37 05.1	+0.3
FINES	FINESS Array B	134.32	347	PKP	PKiKP	06 37 19.4	-0.2
	comp=Z,1.4nm,0.9s,baz=113,slow=13,SNR=4.1						
FINES	FINESS Array B	134.32	347		PKiKP	06 37 19.9	+0.3
CLL	Collm	146.27	352	⇑*i*PKPbc	PKiKP	06 37 42.9	-1.4
	comp=Z,9.0nm,0.9s						
BURAR	Bucovina Array	146.54	336	⇑P	PKiKP	06 37 43.9	-1.3
BURAR	Bucovina Array	146.54	336	PKPbc	PKPab	06 37 43.4	+0.1
BIZ	Bicaz	146.75	335	⇑P	PKPab	06 37 44.1	0.0
MORC	Moravsky Berou	146.95	346	⇑P	PKPab	06 37 44.4	-0.4
CFR	Carcaliu	147.24	331	⇓P	PKiKP	06 37 46.5	-0.1
VRI	Vrincioaia	147.34	333	⇓P	PKPab	06 37 45.1	-1.2
PLOR	Plostina	147.39	333	⇓P	PKPbc	06 37 45.1	+0.4
BR131	Keskin Array S	147.82	318		PKPbc	06 37 46.0	-0.2
BRTR	Keskin Array B	147.82	318	PKPbc	PKiKP	06 37 46.6	-1.5
	comp=Z,2.1nm,0.8s,baz=90,slow=3.7,SNR=8.5						
BRTR	Keskin Array B	147.82	318		PKPbc	06 37 46.0	-0.2
DRGR		148.16	338	⇓P	PKiKP	06 37 47.7	-0.8
VOIR		148.39	334	⇑P	PKiKP	06 37 48.6	-0.5
GERES	GERESS Array B	148.57	350	PKPbc	PKiKP	06 37 48.8	-0.6
	comp=Z,1.2nm,0.7s,baz=15,slow=3.0,SNR=9.8						
GERES	GERESS Array B	148.57	350		PKiKP	06 37 48.5	-0.9
ARR	Arges	148.62	335	⇑P	PKiKP	06 37 49.6	+0.1
MDUB	Mudurnu	148.88	321	PKPbc	PKiKP	06 37 49.9	-0.3
CONA	Conrad Observa	149.06	347	*e*PKiKP	PKiKP	06 37 50.5	+0.2
	comp=Z,5.8nm,1.2s						
GZR	Gura Zlata	149.33	337	⇑P	PKiKP	06 37 49.9	-1.0
MOA	Molln	149.44	349	*e*PKiKP	PKiKP	06 37 51.0	-0.1
	comp=Z,6.6nm,2.0s						
ELND	Elena	150.01	330	⇓P	PKiKP	06 37 52.2	-0.1
RETA	Reutte	150.29	354	*e*PKiKP	PKiKP	06 37 52.4	-0.5
	comp=Z,3.0nm,0.6s						
KBA	Koelnbreinsper	150.35	350	*e*pPKPdf	PKiKP	06 37 53.9	+0.8
	comp=Z,4.4nm,0.9s						
WATA	Walderalm	150.35	353	*e*pPKPdf	PKiKP	06 37 54.4	+1.3
	comp=Z,2.7nm,0.5s						
WTTA	Wattenberg	150.41	352	*e*PKiKP	PKiKP	06 37 53.1	-0.2
	comp=Z,3.9nm,0.6s						
SOKA	Soboth	150.42	348	*e*pPKPdf	PKiKP	06 37 54.5	+1.3
	comp=Z,4.3nm,1.3s						
SQTA	Sankt Quirin	150.51	353	*i* PKiKP	PKiKP	06 37 53.5	+0.1
	comp=Z,3.6nm,0.8s						
DAVA	Damuels	150.57	355	*i* pPKPdf	PKiKP	06 37 54.3	+0.7
	comp=Z,5.7nm,0.9s						
FETA	Feichten	150.76	354	*i* PKiKP	PKiKP	06 37 54.4	+0.4
	comp=Z,6.0nm,1.1s						
ABTA	Abfaltersbach	150.80	351	*e*PKiKP	PKiKP	06 37 53.7	-0.3
	comp=Z,5.0nm,0.7s						

JMA 22 06:18:12.3±0.1**, 37°.46N×141°.59E, h42**^{km}±2^{km}**, M3.5, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.58	261	P	Pn	06 18 24.1	-0.1
JFK				S	Sn	06 18 32.1	-0.5
JMST	Minamisoumatoc	0.62	296	P	Pn	06 18 24.6	-0.1
JMST				S	Sn	06 18 32.9	-0.6
ONAJ	Iwakimizuishiy	0.73	241	P	Pn	06 18 26.0	-0.2
ONAJ				S	Sn	06 18 35.6	-0.6
JMM	Marumori	0.75	303	P	Pn	06 18 26.6	+0.1
JMM				S	Sn	06 18 36.4	-0.3
JIKH	Ishinomakikobu	0.85	353	P	Pn	06 18 27.9	0.0
JIKH				S	Sn	06 18 38.4	-0.8
JFT	Otama	1.00	274	P	Pn	06 18 30.7	+0.8
JFT				S	Sn	06 18 43.4	+0.6
JIO	Ouri	1.01	349	P	Pn	06 18 30.2	+0.2
JIO				S	Sn	06 18 42.2	-0.8
JOU	Okura	1.16	321	P	Pn	06 18 32.9	+0.8
JOU				S	Sn	06 18 48.3	+1.5
JHO	Hitachi	1.18	224	P	Pn	06 18 31.8	-0.5
JYS	Shirataka	1.43	303	S	Sn	06 18 55.0	+1.7
JFY	Yanaizu	1.50	269	P	Pn	06 18 37.7	+0.9
JFY				*e*S	Sn	06 18 56.2	+1.0
JMK	Ichinoseki	1.52	349	P	Pn	06 18 38.0	+1.0
JMK				*e*S	Sn	06 18 56.3	+0.8
MAT	Matsushiro	2.86	252	P	Pn	06 18 57.9	+2.5
MAT				S	Sn	06 19 31.1	+2.5

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*NEIC **22** 06:23:47.4±1.3, 33°.31N±0°.10×141°.2E±0°.1, h8^{km}±7^{km}, mb4.6/4, Error ellipse: s-maj=17.8km s-min=13.2km az=117.0*

*IDC **22** 06:23:48.5±3.8, 33°.01N×140°.47E, h0^{km}, mb3.5/3, mb1 3.8/4, mb1mx3.4/45, mbtmp3.5/4, ML2.4/1, Error ellipse: s-maj=151.0km s-min=26.7km az=70.0*

*JMA **22** 06:23:52.2±0.1, 33°.47N×140°.92E, h51^{km}, M3.3*

ISC 22 06:23:51.5±1.6**, 33°.34N**±0°.09×**140°.97E**±0°.07**, h35**^{km}±7^{km}**, n31, σ0^{s}77**/37**, mb4.3**/6**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	0.99	257	P	Pb	06 24 10.0	-0.2
JHJ2				S	Sb	06 24 23.2	+0.2
JHJ2	Mitsune	0.99	257		Pb	06 24 10.1	-0.1
JHCJ	Hachijojimakas	1.02	255	P	Pb	06 24 10.3	-0.3
JHCJ				*e*S	Sb	06 24 23.3	-0.4
JMKN	Mikurajimanish	1.27	296	P	Pn	06 24 12.9	+0.1
BSO1	Boso 1	1.31	0	P	Pn	06 24 13.0	+0.2
BSO1				*e*S	Sn	06 24 28.3	-0.5
JAOM	Aogashimamukai	1.34	229	P	Pb	06 24 15.5	-0.6
BSO3	Boso 3	1.50	346	P	Pn	06 24 15.6	-0.1
BSO4	Boso 4	1.72	343	P	Pn	06 24 19.4	+0.5
JKO	Kozu shima	1.74	299	P	Pn	06 24 19.6	+0.4
JKO				*e*S	Sn	06 24 40.2	0.0
JTHY	Toshimahigashi	1.83	311	P	Pn	06 24 20.7	+0.3
JTHY				*e*S	Sn	06 24 41.6	-0.7
JIM2	Oshima 3	1.87	318	P	Pn	06 24 20.7	-0.4
JIM2				*e*S	Sn	06 24 42.0	-1.5
JIZS	Izushimoda	2.21	309	P	Pn	06 24 26.1	+0.4
JIZS				*e*S	Sn	06 24 51.3	-0.5
JOD2	Odawara 2	2.47	321	P	Pn	06 24 28.9	-0.4
TK02	Tokai 2	2.74	284	P	Pn	06 24 34.2	+1.4
MJAR	Matsushiro Arr	3.91	325	Pn	Pn	06 24 50.3	+1.1
	0.3nm,0.3s,baz=149,slow=12,SNR=13						
MJAR				Sn	Sn	06 25 33.5	-0.4
	0.2nm,0.3s,baz=124,slow=23,SNR=1.9						
MJAR	Matsushiro Arr	3.91	325	Pn	Pn	06 24 50.0	+0.8
MAJO	Matsushiro	3.92	325	Pn	Pn	06 24 50.7	+1.5
MAT	Matsushiro	3.92	325	P	Pn	06 24 50.3	+1.1
MAT				S	Sn	06 25 32.7	-1.2
MJB9	Matsu-Tunnel	3.92	325	Pn	Pn	06 24 50.1	+0.9
H11N2	WAKE ISLAND Hy	26.78	114	T	T	06 58 16.6	
	baz=306,slow=75,SNR=7.4						
H11N1	WAKE ISLAND Hy	26.78	114	T	T	06 58 19.4	
	baz=306,slow=75,SNR=8.2						
H11N3	WAKE ISLAND Hy	26.80	114	T	T	06 58 21.1	
	baz=306,slow=75,SNR=8.9						
MKAR	Makanchi Array	45.85	305	P	P	06 32 11.3	+1.1
	0.2nm,0.6s,baz=93,slow=9.6,SNR=2.2						
MKAR	Makanchi Array	45.85	305	P	P	06 32 11.1	+0.8
WB0	Warramunga Arr	53.18	188		P	06 33 05.3	-0.9
WB0				IAmb	IAmb	06 33 18.6	
	comp=Z,9.1nm,1.4s						
WR0	Warramunga Arr	53.36	188	P	P	06 33 06.9	-0.6
WR0				IAmb	IAmb	06 33 14.3	
	comp=Z,8.7nm,1.4s						
WRA	Warramunga Arr	53.36	188	P	P	06 33 06.8	-0.8
	comp=Z,0.6nm,0.3s,baz=4.7,slow=7.6,SNR=1.5						
WRA	Warramunga Arr	53.36	188	P	P	06 33 07.5	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	ISC
MCARA	McCarthy VSAT	54.77	35	P	P	06 33 17.8	+0.4
MCARA				IAmb	IAmb	06 33 29.7	
	comp=Z,14nm,1.4s						
ASAR	Alice Springs	57.09	188	P	P	06 33 33.9	-0.5
	comp=Z,0.3nm,0.5s,baz=2.9,slow=6.7,SNR=8.8						
ASAR	Alice Springs	57.09	188	P	P	06 33 33.7	-0.7

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*NEIC **22** 06:27:31.9±2.5, 20°.7S±0°.1×173°.8W±0°.1, h10^{km}±1^{km}, mb4.5/15, Error ellipse: s-maj=21.4km s-min=17.9km az=166.0*

*IDC **22** 06:27:42.4±14.0, 20°.48S×174°.40W, h75^{km}±129^{km}, mb3.8/5, mb1 3.9/6, mb1mx3.6/31, mbtmp4.1/6, ML4.3/1, Error ellipse: s-maj=61.2km s-min=51.6km az=149.0*

ISC 22 06:27:35.2±0.8**, 20°.5S**±0°.1×**173°.8W**±0°.1**, h27**^{km}**, n29,** σ**1**^{s}**62**/28**, mb4.4**/11**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	3.96	69	Pn	Pn	06 28 33.6	-0.6
AFI	Afiamalu	6.88	17	S	Sn	06 30 21.5	-10
	2.8nm,0.3s,baz=213,slow=17,SNR=2.1						
AFI	Afiamalu	6.88	17	Pn	Pn	06 29 15.1	+0.7
RAR	Rarotonga	13.17	95	Pn	Pn	06 30 37.2	-3.3
MXZ	Matakaoa Point	18.29	200	P	P	06 31 47.0	0.0
DZM	Mont Dzumac	18.43	262	P	P	06 31 50.5	+1.7
	0.1nm,0.3s,baz=127,slow=20,SNR=1.7						
URZ	Urewera	19.32	202	P	Pn	06 32 00.1	+0.5
	1.0nm,0.3s,baz=313,slow=6.8,SNR=6.7						
URZ	Urewera	19.32	202	P	Pn	06 31 60.0	+0.5
URZ				IAmb	IAmb	06 32 00.4	
	comp=Z,26nm,1.2s						
NNZ	Nelson	23.30	205	P	P	06 32 44.2	+3.3
NNZ				IAmb	IAmb	06 32 54.1	
	comp=Z,15nm,1.1s						
QRZ	Quartz Range	23.32	207	P	P	06 32 44.1	+3.0
QRZ				IAmb	IAmb	06 32 56.0	
	comp=Z,38nm,1.3s						
KHZ	Kahutara	24.27	203	P	P	06 32 51.5	+1.4
KHZ				IAmb	IAmb	06 32 57.1	
	comp=Z,20nm,1.3s						
EIDS	Eidsvold	32.60	255	P	P	06 34 04.5	-0.2
EIDS				IAmb	IAmb	06 34 04.9	
	comp=Z,9.5nm,1.1s						
STKA	Stephens Creek	41.29	245	P	P	06 35 16.9	-1.6
	comp=Z,0.7nm,0.5s,baz=58,slow=13,SNR=1.9						
STKA	Stephens Creek	41.29	245	P	P	06 35 18.0	-0.5
WR0	Warramunga Arr	48.26	261	P	P	06 36 13.4	-0.8
AS31	Alice Springs	48.30	256	P	P	06 36 12.7	-1.9
ASAR	Alice Springs	48.30	256	P	P	06 36 12.7	-1.9
	comp=Z,1.5nm,0.6s,baz=103,slow=7.6,SNR=25						
ASAR				PcP	PcP	06 37 41.0	-0.3
	comp=Z,0.4nm,0.7s,baz=104,slow=4.3,SNR=4.3						
ASAR	Alice Springs	48.30	256	P	P	06 36 12.8	-1.7
WB0	Warramunga Arr	48.43	261	P	P	06 36 13.4	-2.2
WB0				IAmb	IAmb	06 36 13.6	
	comp=Z,4.2nm,1.1s						
WB2	Warramunga Arr	48.44	261	P	P	06 36 14.1	-1.5
WB2				IAmb	IAmb	06 36 30.6	
	comp=Z,3.6nm,1.0s						
WRA	Warramunga Arr	48.45	261	P	P	06 36 13.2	-2.5
	comp=Z,1.0nm,0.7s,baz=95,slow=7.8,SNR=8.0						
WRA	Warramunga Arr	48.45	261	P	P	06 36 14.1	-1.6
KNRA	Kununurra	54.54	265	P	P	06 37 01.2	-0.1
FITZ	Fitzroy Crossi	56.88	261	P	P	06 37 16.4	-1.6
	comp=Z,1.8nm,0.9s,baz=102,slow=9.3,SNR=6.4						
FITZ	Fitzroy Crossi	56.88	261	P	P	06 37 16.6	-1.5
FITZ				IAmb	IAmb	06 37 17.5	
	comp=Z,6.5nm,1.4s						
MORW	Morawa	63.41	247	P	P	06 38 02.1	-0.6
PETK	Petropavlovsk-	77.37	343	P	P	06 39 28.1	+0.7
	comp=Z,14nm,1.2s,baz=125,slow=8.8,SNR=1.8						
PETK	Petropavlovsk-	77.37	343	P	P	06 39 29.1	+1.7
AKASG	Malin Array Be	144.83	334	PKP	PKPab	06 47 07.8	-0.7
	comp=Z,0.8nm,0.6s,baz=37,slow=4.2,SNR=5.5						

IDC 22 06:27:48.8±8.2**, 0°.68N**×**92°.66E, h0**^{km}**, mb3.5**/2**, mb1 3.8**/4**, mb1mx3.4**/42**, mbtmp3.6**/4**, ML4.0**/2**, Error ellipse: s-maj=146.3km s-min=50.4km az=12.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	6.61	71	Pn	Pn	06 29 26.7	-0.8
	1.1nm,0.3s,baz=262,slow=7.1,SNR=4.3						
PALK	Pallekele	13.60	299	Sn	Sn	06 33 24.1	-11
	1.6nm,0.3s,baz=188,slow=10,SNR=8.0						
CMAR	Chiang Mai Arr	18.71	19	P	Pn	06 32 09.3	-0.1
	0.5nm,0.3s,baz=208,slow=13,SNR=6.6						
MKAR	Makanchi Array	46.81	350	P	P	06 36 19.9	-0.4
	0.7nm,0.7s,baz=172,slow=8.7,SNR=6.4						
SONM	Songino Array	48.46	12	P	P	06 36 33.4	+0.2
	0.3nm,0.6s,baz=190,slow=7.3,SNR=2.4						

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*IDC **22** 06:54:19.1±0.9, 62°.39N×70°.68W, h0^{km}, mb3.6/4, mb1 3.9/6, mb1mx3.4/54, mbtmp3.5/6, ML2.8/1, Error ellipse: s-maj=19.4km s-min=6.7km az=120.0*

*OTT **22** 06:54:20.6±0.1, 62°.38N×70°.75W, h18^{km}, MN3.6/13, 69km southwest from Kimmirut, Nu*

ISC 22 06:54:18.0±0.6**, 62°.34N**±0°.05×**70°.75W**±0°.06**, h10**^{km}**, n24,** σ**3**^{s}**17**/33**, mb3.3**/4**, Hudson Strait region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNGQ	Kangiqsujuaq	0.94	217	PG	Pn	06 54 38.7	+1.5
KNGQ				SG	Sn	06 54 51.2	+0.5
KNGQ				Trac		06 54 59.9	
	comp=Z,102nm,0.1s						
FRB	Frobisher Bay	1.74	34	Pg	Pb	06 54 50.0	+0.1
	17nm,0.3s,baz=217,slow=14,SNR=301						
FRB				Lg	Lg	06 55 10.8	
	59nm,0.3s,baz=311,slow=20,SNR=49						
FRB	Frobisher Bay	1.74	34	PN	Pb	06 54 50.0	+0.1
FRB				SN	Sb	06 55 11.2	-0.5
FRB				Trac		06 55 12.8	
	comp=Z,198nm,0.1s						
KAJQ	Kangiqsualujju	4.36	145	PN	Pn	06 55 24.9	+0.7
KAJQ				SN	Sn	06 56 14.6	-0.4
KAJQ				Trac		06 56 32.7	
	comp=Z,78nm,0.3s						
KAJQ				LG	Lg	06 56 34.9	
NANL	Nain	7.42	138	PN	Pn	06 56 06.2	0.0
NANL				SN	Sn	06 57 28.4	-1.9
NANL				Trac		06 58 16.8	
	comp=Z,1.8nm,0.0s						
SCHQ	Schefferville	7.80	163	Pn	Pn	06 56 11.7	+0.2
	1.3nm,0.3s,baz=338,slow=8.7,SNR=34						
SCHQ				Sn	Sn	06 57 36.0	-3.6
	2.8nm,0.3s,baz=77,slow=9.1,SNR=8.3						
SCHQ				Lg	Lg	06 58 14.8	
	3.5nm,0.3s,baz=52,slow=19,SNR=3.9						
SCHQ	Schefferville	7.80	163	PN	Pn	06 56 11.8	+0.4
SCHQ				SN	Sn	06 57 36.2	-3.4
SCHQ				Trac		06 57 44.2	
	comp=Z,6.4nm,0.1s						
KJKQ	Kuujjuarapik	7.95	210	PN	Pn	06 56 15.4	+2.0
KJKQ				SN	Sn	06 57 40.1	-3.2
KJKQ				Trac		06 57 47.4	
	comp=Z,6.3nm,0.1s						
CLRN	Clyde River	8.22	5	PN	Pn	06 56 17.1	0.0
CLRN				SN	Sn	06 57 44.1	-5.7
CLRN				LG	Lg	06 58 31.6	
CLRN				Trac		06 58 34.7	
	comp=Z,26nm,0.3s						
ILON	Igloolik, Nuna	8.38	332	PN	Pn	06 56 18.6	-0.6
ILON				SN	Sn	06 57 47.5	-6.2
ILON				Trac		06 58 39.9	
	comp=Z,42nm,0.3s						
ILON				LG	Lg	06 58 44.5	
LG4Q	La Grande 4	8.91	193	PN	Pn	06 56 27.8	+1.2
LG4Q				SN	Sn	06 58 02.6	-4.4
LG4Q				Trac		06 58 07.2	
	comp=Z,5.9nm,0.2s						
LG4Q				LG	Lg	06 58 53.6	
SFJD	Kangerlussuaq	9.78	53	PN	Pn	06 56 41.4	+2.9
SFJD				Trac		06 58 35.2	
	comp=Z,92nm,5.4s						
NMSQ	Nemaska Statio	11.03	197	PN	Pn	06 56 56.5	+0.9
NMSQ				SN	Sn	06 58 51.0	-7.8
NMSQ				Trac		07 00 03.0	
	comp=Z,8.4nm,0.2s						
VIMO	Victor Mine	11.79	222	PN	Pn	06 57 06.9	+0.9
VIMO				SN	Sn	06 59 10.7	-6.7
VIMO				Trac		06 59 26.5	
	comp=Z,7.9nm,0.4s						
SMQ	Clarke City	12.35	168	PN	Pn	06 57 13.6	-0.1
SMQ				SN	Sn	06 59 22.9	-8.3
SMQ				Trac		07 00 46.3	
	comp=Z,16nm,0.5s						
DAQ	Lac Daran	14.41	181	PN	Pn	06 57 39.9	-2.0
DAQ				SN	Sn	07 00 14.0	-7.5
DAQ				Trac		07 01 44.4	
	comp=Z,8.3nm,0.5s						
RES	Resolute Bay	15.03	335	Pn	Pn	06 57 45.3	-4.8
	0.1nm,0.3s,baz=144,slow=11,SNR=6.8						
RES				Sn	Sn	07 00 19.4	-17
	0.1nm,0.3s,baz=220,slow=7.9,SNR=2.4						
RES				Lg	Lg	07 01 59.0	
	0.9nm,0.3s,baz=225,slow=23,SNR=10						
SADO	Sadowa	18.26	199	Sn	Sn	07 01 39.0	-16
	0.2nm,0.3s,baz=88,slow=18,SNR=2.5						
SADO				Lg	Lg	07 03 36.0	
	0.2nm,0.3s,baz=90,slow=20,SNR=2.2						
ULM	Lac du Bonnet	18.31	240	Sn	Sn	07 01 40.0	-16
	0.2nm,0.3s,baz=60,slow=16,SNR=1.9						
ULM				Lg	Lg	07 03 39.5	
	0.2nm,0.3s,baz=128,slow=18,SNR=2.1						
YKA	Yellowknife Ar	20.02	290	Pn	P	06 58 49.2	-1.3
	0.4nm,0.5s,baz=70,slow=12,SNR=6.3						
YKA				Sn	S	07 02 18.2	-17
	0.2nm,0.6s,baz=67,slow=22,SNR=2.5						
YKA				Lg	Lg	07 04 36.9	
	2.4nm,0.8s,baz=76,slow=30,SNR=14						
PDAR	Pinedale Array	29.98	247	P	P	07 00 29.1	+2.6
	0.3nm,0.5s,baz=42,slow=10,SNR=5.5						
ARCES	ARCESS Array B	35.90	37	P	P	07 01 19.2	+1.6
	2.9nm,0.9s,baz=309,slow=12,SNR=1.8						
NVAR	Mina Array Bea	37.36	253	P	P	07 01 34.9	+4.2
	0.3nm,0.7s,baz=28,slow=8.2,SNR=2.6						
TXAR	Lajitas Array	39.36	228	P	P	07 01 51.7	+4.3
	0.4nm,0.6s,baz=57,slow=6.6,SNR=2.4						

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*SKHL **22** 07:01:43.5±1.0, 46°.96N×129°.99E, h8^{km}±4^{km}, mb3.8/3*

*BJI **22** 07:01:46.4±0.0, 46°.96N×129°.91E, h7^{km}, ML3.6/10*

ISC 22 07:01:43.0±0.8**, 47°.01N**±0°.04×**130°.10E**±0°.07**, h10**^{km}**, n9,** σ**2**^{s}**97**/15**, Priamurye-Northeastern China border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDJ	Mudanjiang	2.42	189	Pg	Pg	07 02 28.5	-0.8
GRTR	Gornotajezhnoj	3.60	155	*e*Pn	Pn	07 02 41.2	+2.3
GRTR				Pn	Pb	07 02 44.8	-2.0
GRTR				*e*Sg	Sg	07 03 36.6	-2.1
GRTR				A	A	07 03 40.7	
	61nm,0.4s						
KHBR	Khabarovsk	3.66	64	*e*Sg	Sg	07 03 40.8	+0.4
KHBR				A	A	07 03 44.6	
	69nm,0.4s						
TEY	Ternei	4.94	111	*e*Pn	Pn	07 02 58.2	+0.9
TEY				*e*Sg	Sg	07 04 18.7	-2.9
TEY				A	A	07 04 23.2	
	49nm,0.5s						
EKMR	Ekimchan	6.34	16	*e*Pn	Pn	07 03 19.5	+3.0
EKMR				*e*Pg	Pg	07 03 41.0	-3.4
EKMR				AMB	AMB	07 03 45.9	
	6.0nm,0.8s						
EKMR				*e*Sg	Sg	07 05 03.1	-3.4
EKMR				A	A	07 05 10.0	
	29nm,0.7s						
EKMR				A	A	07 05 10.0	
	18nm,0.7s						
ZEA	Zeya	6.98	346	*e*Sg	Sg	07 05 23.0	-3.9
ZEA				A	A	07 05 27.2	
	50nm,0.9s						
KROS	Kirovskiy	7.70	346	*e*Pn	Pn	07 03 38.0	+2.9
KROS				AMB	AMB	07 03 38.7	
	4.0nm,0.4s						
KROS				*e*Sg	Sg	07 05 45.5	-4.3
KROS				A	A	07 05 50.0	
	12nm,0.4s						
BMKR	Bomnak	7.76	355	*e*Pn	Pn	07 03 38.1	+2.2
BMKR				AMB	AMB	07 03 40.0	
	5.0nm,0.4s						
BMKR				*e*Sg	Sg	07 05 49.0	-2.8
BMKR				A	A	07 05 59.6	
	23nm,0.9s						
WMQ	Urumqi	29.67	280	*e*P	P	07 07 51.3	+2.5

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*SJA **22** 07:22:19.7±0.7, 21°.25S×68°.96W, h110^{km}±11^{km}, ML2.9, MW3.0*

*GUC **22** 07:22:19.3±0.6, 21°.13S×68°.99W, h115^{km}±3^{km}, ML3.3*

ISC 22 07:22:20.4±1.5**, 21°.14S**±0°.03×**69°.08W**±0°.06**, h108**^{km}±12^{km}**, n23,** σ**0**^{s}**70**/37**, 11C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.39	284	⇑*i*P	Pn	07 22 36.0	-0.5
PB01				*i* S	Sn	07 22 48.8	+0.2
PB01				IAML		07 22 49.2	
	comp=N,5µm,0.3s						
PB09	IPOC Station P	0.67	193	⇓*i*P	Pn	07 22 38.2	-0.3
PB09				IAML		07 22 55.4	
	comp=E,558nm,0.3s						
PB09	IPOC Station P	0.67	193	*i* P	Pn	07 22 38.3	-0.3
PB09				IAML		07 22 55.7	
	comp=Z,379nm,0.1s						
PB02	IPOC Station P	0.78	257	⇑*i*P	Pn	07 22 39.5	0.0
PB02				*i* S	Sn	07 22 54.8	+1.0
PB02				IAML		07 22 55.6	
	comp=N,2µm,0.3s						
PB07	IPOC Station P	0.95	232	⇑*i*P	Pn	07 22 41.0	-0.2
PB07				*i* S	Sn	07 22 57.6	+0.8
PB07				IAML		07 22 58.4	
	comp=N,848nm,0.3s						
PB08	IPOC Station P	0.99	356	⇑*i*P	Pn	07 22 41.2	-0.6
PB08				*i* S	Sn	07 22 58.0	0.0
PB08				IAML		07 22 58.6	
	comp=E,598nm,0.3s						
PATCX	Punta Patache	1.05	287	⇑*i*P	Pn	07 22 42.2	+0.1
PATCX				*i* S	Sn	07 22 59.5	+1.1
PATCX				IAML		07 23 01.2	
	comp=N,1µm,0.2s						
PB03	IPOC Station P	1.10	215	⇑*i*P	Pn	07 22 42.4	-0.3
PB03				*i* S	Sn	07 22 59.7	+0.1
PB03				IAML		07 23 01.3	
	comp=E,502nm,0.3s						
TA01	Diego Aracena	1.18	299	⇑*i*P	Pn	07 22 43.0	-0.4
TA01				*i* S	Sn	07 23 01.3	+0.6
GO01	Chusmiza	1.47	356	⇑*i*P	Pn	07 22 46.7	-0.5
GO01				*i* S	Sn	07 23 07.6	+0.1
GO01				IAML		07 23 09.2	
	comp=N,581nm,0.1s						
LVC	Limon Verde	1.47	174	*e*P	Pn	07 22 46.8	-0.3
LVC				*i* S	Sn	07 23 07.5	+0.1
PB11	IPOC Station P	1.47	338	⇑*i*P	Pn	07 22 46.1	-0.9
PB11				*i* S	Sn	07 23 06.9	-0.2
PB11				IAML		07 23 07.9	
	comp=N,527nm,0.4s						
PB04	IPOC Station P	1.55	220	*e*P	Pn	07 22 47.7	-0.2
PB04				*i* S	Sn	07 23 08.8	+0.1
PB04				IAML		07 23 14.3	
	comp=N,271nm,0.3s						
PB04	IPOC Station P	1.55	220	*i* P	Pn	07 22 47.8	-0.1
PB06	IPOC Station P	1.63	196	⇓*i*P	Pn	07 22 48.6	-0.2
PB06				*i* S	Sn	07 23 10.7	+0.3
PB06				IAML		07 23 12.9	
	comp=N,184nm,0.1s						
PB06	IPOC Station P	1.63	196	*i* P	Pn	07 22 48.7	-0.1
PB06				IAML		07 23 13.8	
	comp=Z,99nm,0.3s						
PSGC	Pisagua	1.82	327	⇑*i*P	Pn	07 22 49.7	-1.4
PSGC				*i* S	Sn	07 23 13.6	-1.0
PSGC				IAML		07 23 17.1	
	comp=E,152nm,0.2s						
PB05	IPOC Station P	2.00	211	⇑*i*P	Pn	07 22 52.9	-0.5
PB05				*i* S	Sn	07 23 17.8	-0.9
PB05	IPOC Station P	2.00	211	*i* P	Pn	07 22 53.7	+0.3
PB05				IAML		07 23 20.6	
	comp=Z,69nm,0.5s						
PB15	IPOC Station P	2.09	190	*i* P	Pn	07 22 55.5	+0.8
PB10	IPOC Station P	2.73	210	*i* P	Pn	07 23 01.6	-1.2
YJA	Yavi	3.47	108	*i* P	Pn	07 23 12.4	-0.6
LPAZ	La Paz	4.91	11	*i* P	Pn	07 23 34.5	+2.0

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*NIED **22** 07:24:00, 31°.30N×130°.40E, h150^{km}, Mw4.3 Best double couple: $M_0$3.65000×10^{15} NP1:ϕ_s9.00000°, δ82.00000°, λ81.00000°. NP2:ϕ_s238.00000°, δ13.00000°, λ138.00000°.*

*BGR **22** 07:24:39.5±0.0, 31°.65N×130°.64E, h33^{km}, mb5.1*

*NEIC **22** 07:24:51.4±1.8, 31°.26N±0°.06×130°.3E±0°.1, h157^{km}±2^{km}, mb4.6/82, Error ellipse: s-maj=13.4km s-min=7.3km az=108.0*

*MOS **22** 07:24:51.8±1.0, 31°.28N×130°.34E, h156^{km}, mb4.6/49, Error ellipse: s-maj=9.6km s-min=5.4km az=117.5*

*IDC **22** 07:24:51.7±0.6, 31°.35N×130°.37E, h162^{km}±5^{km}, mb3.9/24, mb1 4.0/26, mb1mx3.9/46, mbtmp4.3/26, Error ellipse: s-maj=12.7km s-min=7.7km az=80.0*

*JMA **22** 07:24:52.3±0.1, 31°.29N×130°.43E, h154^{km}±1^{km}, M4.0*

JMA Felt I J1.

ISC 22 07:24:51.4±0.5**, 31°.29N**±0°.04×**130°.33E**±0°.05**, h161**^{km}±3^{km}**, n330,** σ**1**^{s}**29**/357**, mb4.5**/116**, 31C-18D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSU	Suzuyama	0.24	26	P	Pn	07 25 13.4	+0.3
JSU				*e*S	Sn	07 25 29.4	-0.4
JTSR	Tashiro 2	0.52	104	⇑P	Pn	07 25 14.0	-0.1
JTSR				*e*S	Sn	07 25 30.0	-1.4
JSJ	Shimokoshiki	0.65	306	⇓P	Pn	07 25 15.0	+0.3
JSJ				S	Sn	07 25 32.7	0.0
JTN	Tanegashima 3	0.84	139	⇑P	Pn	07 25 16.0	0.0
JTN				*e*S	Sn	07 25 33.7	-1.2
JTZ	Takazaki	0.89	47	⇑P	Pn	07 25 16.3	0.0
JTZ				S	Sn	07 25 33.6	-1.9
JMTN	Minamitane	1.02	151	⇑P	Pn	07 25 17.3	-0.1
JMTN				S	Sn	07 25 36.6	-0.6
JYAK	Yakushimahirau	1.06	172	⇑P	Pn	07 25 17.7	0.0
JYAK				S	Sn	07 25 36.7	-1.2
JIU3	Izumi3	1.32	18	P	Pn	07 25 20.3	+0.3
JIU3				S	Sn	07 25 41.2	-0.9
JNN	Nakanoshima	1.50	195	P	Pn	07 25 22.3	+0.5
JNU	Nakatsue	1.88	14	P	Pn	07 25 26.1	+0.2
	74nm,0.3s,baz=214,slow=5.2,SNR=340						
JNU				S	Sn	07 25 51.8	-0.8
	32nm,0.3s,baz=250,slow=22,SNR=15						
JOW	Kunigami	4.79	203	P	Pn	07 26 02.3	0.0
	0.6nm,0.3s,baz=113,slow=15,SNR=16						
JOW				S	Sn	07 26 54.0	-3.6
	3.6nm,0.3s,baz=97,slow=18,SNR=10						
JOW	Kunigami	4.79	203	Pn	Pn	07 26 01.5	-0.8
JOW				Sn	Sn	07 26 52.7	-5.0
TJN	Taejon	5.64	335	*i* P	Pn	07 26 00.5	-13
KSRS	Korea Array	6.46	343	P	Pn	07 26 25.8	+1.6
	0.6nm,0.3s,baz=172,slow=15,SNR=13						
INU	Inuyama	6.91	52		Pn	07 26 32.0	+1.8
JHJ	Hachijo jima 2	8.21	75	P	Pn	07 26 51.8	+4.2
	71nm,0.3s,baz=78,slow=22,SNR=8.1						
JHJ2	Mitsune	8.24	75	Pn	Pn	07 26 51.7	+3.8
MJB9	Matsu-Tunnel	8.38	49		Pn	07 26 52.0	+2.2
MAJO	Matsushiro	8.38	49	P	Pn	07 26 52.2	+2.4
MAJO	Matsushiro	8.38	49		Pn	07 26 52.2	+2.4
MAT	Matsushiro	8.38	49	P	Pn	07 26 52.1	+2.3
MAT				S	Sn	07 28 08.0	-15
MJAR	Matsushiro Arr	8.38	49	P	Pn	07 26 52.3	+2.6
	0.7nm,0.3s,baz=237,slow=14,SNR=29						
MJAR				S	Sn	07 28 21.0	-2.2
	0.5nm,0.3s,baz=237,slow=25,SNR=13						
MJAR	Matsushiro Arr	8.38	49	P	Pn	07 26 51.6	+1.8
MJAR	Matsushiro Arr	8.38	49		Pn	07 26 51.5	+1.8
NJ2	Nanjing	9.81	277	*e*P	Pn	07 27 06.8	-1.9
MSHR	Mys Shultsa	11.29	3	*i* P	Pn	07 27 13.0	-15
TPUB	Ta-pu	11.73	230	Pn	Pn	07 27 32.3	-1.7
TIA	Tai'an	12.03	298	P	P	07 27 46.6	+2.8
USA0B	Ussuriysk Arra	12.95	5	*i* P	Pn	07 27 36.1	-13
BJT	Baijiatuau	14.42	311	P	P	07 28 12.7	+2.4
BJT	Baijiatuau	14.42	311	P	P	07 28 12.7	+2.4
BJI	Beijing	14.43	311	P	P	07 28 13.8	+3.4
ASAJ	Asahikawa	16.04	34	P	Pn	07 28 26.1	-1.8
	0.9nm,0.3s,baz=216,slow=6.8,SNR=9.1						
JKA	Kamikawa-asahi	16.04	34	P	Pn	07 28 26.1	-1.9
HHC	Hu-ho-hao-te	17.89	307	*e*P	Pn	07 28 49.8	-0.5
ENH	Enshi	17.94	272	P	Pn	07 28 51.5	+0.7
KLR	Kul'dur	17.95	3	P	P	07 28 48.6	-0.5
	0.3nm,0.3s,baz=204,slow=5.1,SNR=6.2						
KLR	Kul'dur	17.95	3	*i* P	P	07 28 44.8	-4.3
KLR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
XAN	Xi'an	18.23	284	P	Pn	07 28 54.1	-0.2
GYA	Guiyang	21.26	263	⇓*i*P	P	07 29 26.3	+1.1
GYA				PP	pP	07 29 55.8	+2.5
GYA				sP	sP	07 30 15.0	+1.6
GYA				S	S	07 33 06.1	-5.9
GYA				ScP	ScP	07 36 46.5	+1.3
LZH	Lanzhou	22.52	289	⇓P	P	07 29 38.8	+0.9
LZH				pP	pP	07 30 09.3	+2.3
LZH				PP	PnPn	07 30 14.0	+2.2
LZH				sP	sP	07 30 28.1	+1.0
CD2	Chengdu	22.74	276	P	P	07 29 38.5	-1.3
ULN	Ulaanbaatar	24.27	320	P	P	07 29 54.4	+0.7
ULN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ULN	Ulaanbaatar	24.27	320	P	P	07 29 54.4	+0.7
ULN				IAmb	IAmb	07 29 56.3	
	comp=Z,9.1nm,1.2s						
SONM	Songino Array	24.62	319	P	P	07 29 57.3	+0.5
	comp=Z,3.8nm,0.6s,baz=141,slow=9.8,SNR=15						
SONM				ScP	ScP	07 36 52.7	-1.1
	comp=Z,0.8nm,0.8s,baz=144,slow=2.8,SNR=3.6						
SONM	Songino Array	24.62	319	P	P	07 29 56.9	0.0
SONM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONM	Songino Array	24.62	319	P	P	07 29 56.9	0.0
GTA	Gaotai	26.08	297	*e*P	P	07 30 11.0	+0.8
GTA				pP	pP	07 30 48.0	+4.8
GTA				sP	PP	07 31 08.6	-3.7
PBKT	Sadao Pong	30.46	248	P	P	07 30 50.2	+1.2
PBKT				IAmb	IAmb	07 30 51.3	
	comp=Z,13nm,1.0s						
YAK	Yakutsk	30.75	359	*i* P	P	07 30 46.6	-4.5
YAK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CHTO	Chiang Mai	30.92	254	P	P	07 30 54.8	+1.7
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CHTO	Chiang Mai	30.92	254	P	P	07 30 54.8	+1.7
CHTO				IAmb	IAmb	07 30 55.5	
	comp=Z,7.5nm,0.7s						
CMAR	Chiang Mai Arr	31.09	253	P	P	07 30 54.6	-0.1
	comp=Z,2.7nm,0.5s,baz=49,slow=7.7,SNR=6.7						
CMAR	Chiang Mai Arr	31.09	253	*ce*P	P	07 30 56.4	+1.7
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
CMAR	Chiang Mai Arr	31.09	253		P	07 30 56.1	+1.4
H11N2	WAKE ISLAND Hy	34.80	100	T	T	08 07 41.6	
	baz=296,slow=75,SNR=3.9						
H11N1	WAKE ISLAND Hy	34.80	101	T	T	08 07 42.2	
	baz=296,slow=75,SNR=2.8						
H11N3	WAKE ISLAND Hy	34.82	100	T	T	08 07 43.7	
	baz=296,slow=75,SNR=3.4						
WMQ	Urumqi	35.66	303	*e*P	P	07 31 34.5	+0.5
WMQ				PP	PP	07 32 55.5	-2.8
IPM	Ipoh	38.34	232	P	P	07 31 57.5	+0.6
IPM				IAmb	IAmb	07 31 59.1	
	comp=Z,18nm,0.7s						
ZALV	Zalesovo Beam	39.51	318	P	P	07 32 05.1	-1.0
	comp=Z,1.0nm,0.5s,baz=109,slow=8.3,SNR=5.0						
ZALV				PcP	PcP	07 34 09.7	-0.7
	comp=Z,0.6nm,0.3s,baz=107,slow=5.7,SNR=1.8						
ZALV				ScP	ScP	07 37 41.5	-2.4
	comp=Z,1.1nm,0.7s,baz=114,slow=3.6,SNR=4.2						
ZALV	Zalesovo Beam	39.51	318	P	P	07 32 05.6	-0.5
ZALV	Zalesovo Beam	39.51	318	P	P	07 32 05.6	-0.5
ZALV					PcP	07 34 08.9	-1.5
ZALV					ScP	07 37 41.8	-2.1
MK31	Makanchi Array	39.75	307	P	P	07 32 07.7	-0.6
MK31				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MK31	Makanchi Array	39.75	307	P	P	07 32 07.7	-0.6
MKAR	Makanchi Array	39.75	307	P	P	07 32 08.7	+0.4
	comp=Z,2.9nm,0.8s,baz=94,slow=10,SNR=31						
MKAR				PcP	PcP	07 34 11.3	-0.1
	comp=Z,0.7nm,0.4s,baz=78,slow=3.9,SNR=12						
MKAR				ScP	ScP	07 37 43.1	-1.9
	comp=Z,1.9nm,0.7s,baz=85,slow=5.3,SNR=16						
MKAR	Makanchi Array	39.75	307	P	P	07 32 07.9	-0.4

MKAR					PcP	07 34 12.5	+1.2
MKAR					ScP	07 37 43.5	-1.6
MAKZ	Makanchi	39.97	307	P	P	07 32 10.3	+0.3
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MAKZ	Makanchi	39.97	307	P	P	07 32 10.3	+0.3
TIXI	Tiksi	40.42	359	P	P	07 32 12.3	-1.0
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TIXI	Tiksi	40.42	359	P	P	07 32 12.3	-1.0
PSI	Prapat	40.98	233	P	P	07 32 20.0	+1.2
PSI				pmax	pmax		
	comp=Z,12nm,0.8s						
RPSI	Rantau Prapat	41.06	232	P	P	07 32 20.0	+0.7
RPSI				IAmb	IAmb	07 32 21.6	
	comp=Z,12nm,0.8s						
BILL	Bilibino	42.30	19	eP	P	07 32 24.8	-3.9
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KURK	Kurchatov	42.59	313	ceP	P	07 32 31.6	+0.3
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KURK	Kurchatov	42.59	313	P	P	07 32 31.3	0.0
KURBB	Kurchatov Arra	42.64	312	P	P	07 32 31.9	+0.2
	comp=Z,1.4nm,0.4s,baz=95,slow=8.8,SNR=24						
KURBB				pP	pP	07 33 07.3	+0.5
	comp=Z,0.5nm,0.7s,baz=101,slow=8.4,SNR=1.7						
KURBB				PcP	PcP	07 34 19.8	-0.9
	comp=Z,0.6nm,0.5s,baz=102,slow=3.7,SNR=5.3						
GSI	Gunungsitoli	42.99	232	P	P	07 32 34.8	-0.2
PMG	Port Moresby	43.56	156	P	P	07 32 38.9	-0.6
	comp=Z,2.7nm,0.3s,baz=217,slow=10,SNR=3.4						
PMG	Port Moresby	43.56	156	P	P	07 32 39.2	-0.3
PMG				pmax	pmax		
	comp=Z,17nm,1.3s						
PMG	Port Moresby	43.56	156	P	P	07 32 39.1	-0.3
PMG				IAmb	IAmb	07 32 42.0	
	comp=Z,17nm,1.2s						
MTN	Manton Dam	43.89	179	P	P	07 32 41.9	-0.1
MTN				IAmb	IAmb	07 32 42.4	
	comp=Z,14nm,1.0s						
KSH	Kashi	44.48	296	P	P	07 32 49.5	+2.7
KSH				pP	pP	07 33 24.1	+2.0
KSH				PcP	PcP	07 34 29.1	+1.7
KSH				S	S	07 39 12.3	+2.4
KSH				ScS	ScS	07 42 27.8	0.0
NRIK	Noril'sk	45.07	340	P	P	07 32 50.4	-0.4
	comp=Z,2.3nm,0.5s,baz=121,slow=4.8,SNR=5.3						
NRIK				ScP	ScP	07 38 05.2	-0.7
	comp=Z,1.2nm,0.2s,baz=157,slow=4.8,SNR=3.7						
NRIK	Noril'sk	45.07	340	i P	P	07 32 49.5	-1.3
NRIK				pmax	pmax		
	comp=Z,8.0nm,1.9s						
AAK	Ala-Archa	45.29	301	P	P	07 32 52.4	-0.8
	comp=Z,1.0nm,0.3s,baz=128,slow=9.0,SNR=5.6						
AAK	Ala-Archa	45.29	301	ceP	P	07 32 53.2	+0.1
AAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
AAK	Ala-Archa	45.29	301	P	P	07 32 53.7	+0.6
NIL	Nilore	47.69	289	P	P	07 33 12.0	+0.2
NIL				pmax	pmax		
	comp=Z,9.0nm,0.4s						
NIL	Nilore	47.69	289	P	P	07 33 12.0	+0.2
NIL				IAmb	IAmb	07 33 20.5	
	comp=Z,9.5nm,0.4s						
BVAR	Borovoye Array	47.86	315	P	P	07 33 13.4	+0.6
	comp=Z,5.2nm,0.5s,baz=98,slow=9.4,SNR=43						
BVAR				PcP	PcP	07 34 38.4	-0.4
	comp=Z,2.7nm,0.7s,baz=96,slow=3.7,SNR=7.6						
BRVK	Borovoye	47.93	315	ceP	P	07 33 13.8	+0.5
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BRVK	Borovoye	47.93	315	P	P	07 33 13.4	+0.1
BRVK				IAmb	IAmb	07 33 14.8	
	comp=Z,8.1nm,0.6s						
KK31	Karatay Array	48.16	302	P	P	07 33 15.3	+0.1
KK31				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KK31	Karatay Array	48.16	302	P	P	07 33 15.3	+0.1
KKAR	Karatay Array	48.16	302	P	P	07 33 15.3	+0.1
KKAR	Karatay Array	48.16	302	P	P	07 33 15.3	+0.1
FITZ	Fitzroy Crossi	49.31	186	P	P	07 33 24.9	+0.7
	comp=Z,3.8nm,0.5s,baz=14,slow=7.2,SNR=16						
FITZ	Fitzroy Crossi	49.31	186	P	P	07 33 24.8	+0.7
FITZ				IAmb	IAmb	07 33 28.0	
	comp=Z,12nm,1.4s						
WB0	Warramunga Arr	50.91	175	P	P	07 33 36.3	+0.1
WRA	Warramunga Arr	51.09	175	P	P	07 33 37.5	0.0
	comp=Z,0.5nm,0.5s,baz=354,slow=7.6,SNR=5.2						
WRA	Warramunga Arr	51.09	175	ceP	P	07 33 36.4	-1.1
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	Warramunga Arr	51.09	175	P	P	07 33 36.9	-0.6
WB2	Warramunga Arr	51.09	175	P	P	07 33 37.8	+0.3
ANM	Nome	51.21	30	P	P	07 33 40.0	+2.1
ANM				pmax	pmax		
	comp=Z,5.0nm,1.5s						
ANM	Nome	51.21	30	P	P	07 33 40.0	+2.1
RDOG	Red Dog Mine	52.71	26	P	P	07 33 50.2	+1.3
RDOG				IAmb	IAmb	07 33 50.3	
	comp=Z,4.3nm,0.6s						
CTA	Charters Tower	53.32	161	P	P	07 33 54.8	+0.8
	comp=Z,1.7nm,0.4s,baz=0.0,slow=4.0,SNR=1.7						
ABKAR	Akbulak array	54.64	311	P	P	07 34 03.9	+0.6
ARU	Arti	54.65	320	d iP	P	07 34 03.8	+0.6
ARU						07 35 03.9	
ARU						07 36 04.4	
ARU				S	S	07 41 44.6	+14
ARU				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ARU	Arti	54.65	320	P	P	07 34 04.1	+0.8
AS31	Alice Springs	54.75	176	P	P	07 34 04.9	+0.5
ASAR	Alice Springs	54.75	176	P	P	07 34 04.8	+0.5
	comp=Z,0.6nm,0.3s,baz=358,slow=6.0,SNR=21						
SVW2	Sparrevohn	55.54	35	P	P	07 34 11.0	+1.4
SVW2				IAmb	IAmb	07 34 27.7	
	comp=Z,9.6nm,1.3s						
IMAR	Indian Mountai	56.16	29	P	P	07 34 14.5	+0.6
PPLA	Purkeypile	57.01	32	P	P	07 34 21.5	+1.4
PPLA				IAmb	IAmb	07 34 23.0	
	comp=Z,8.4nm,1.4s						
OHAK	Old Harbor	57.09	39	P	P	07 34 20.8	+0.3
KDAK	Kodiak Island	57.39	38	P	P	07 34 23.0	+0.3
KDAK				pmax	pmax		
	comp=Z,39nm,1.3s						
KDAK	Kodiak Island	57.39	38	P	P	07 34 23.0	+0.3
MLY	Manley	57.47	30	P	P	07 34 24.4	+1.2
KTH	Kantishna Hill	57.52	31	P	P	07 34 24.4	+0.8
KTH				IAmb	IAmb	07 34 38.4	
	comp=Z,5.1nm,1.1s						
SUA	Susitna One	57.84	34	P	P	07 34 25.9	+0.1
SUA				IAmb	IAmb	07 34 28.5	
	comp=Z,20nm,1.2s						
MCK	McKinley	58.39	31	P	P	07 34 29.2	-0.3
MCK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MCK	McKinley	58.39	31	P	P	07 34 29.2	-0.3
MCK				IAmb	IAmb	07 34 32.0	
	comp=Z,3.6nm,1.0s						
RND	Reindeer	58.47	31	P	P	07 34 30.6	+0.5
RND				pmax	pmax		
	comp=Z,4.0nm,1.0s						
RND	Reindeer	58.47	31	P	P	07 34 30.6	+0.5
RND				IAmb	IAmb	07 34 31.2	
	comp=Z,4.2nm,1.0s						
SEW	Seward	58.66	35	P	P	07 34 31.1	-0.3
WRH	Wood River Hil	58.66	30	P	P	07 34 33.4	+2.1
CCB	Clear Creek Bu	58.76	30	P	P	07 34 32.6	+0.5
SML	Sawmill	58.93	33	P	P	07 34 35.5	+2.1
SML				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SML	Sawmill	58.93	33	P	P	07 34 35.5	+2.1
SML				IAmb	IAmb	07 34 46.2	
	comp=Z,8.1nm,1.0s						
ILAR	Eielson Array	59.13	30	P	P	07 34 34.8	+0.1
	comp=Z,0.5nm,0.7s,baz=277,slow=6.6,SNR=7.2						
ILAR				pP	pP	07 35 11.5	-0.8
	comp=Z,0.2nm,0.6s,baz=287,slow=8.8,SNR=2.8						
ILAR	Eielson Array	59.13	30	P	P	07 34 33.7	-1.0
HDA	Harding Lake	59.16	30	P	P	07 34 37.1	+2.2
SCM	Sheep Creek Mo	59.40	33	P	P	07 34 37.9	+1.3
SCM				pmax	pmax		
	comp=Z,17nm,1.3s						
SCM	Sheep Creek Mo	59.40	33	P	P	07 34 37.9	+1.3
SCM				IAmb	IAmb	07 34 40.3	
	comp=Z,17nm,1.3s						
BMAR	Burnt Mountain	59.66	26	P	P	07 34 39.8	+1.5
SCRK	Sand Creek	60.51	30	P	P	07 34 44.3	+0.1
GLB	Gilahina Butte	61.12	33	P	P	07 34 49.9	+1.6
GLB				IAmb	IAmb	07 34 50.0	
	comp=Z,18nm,1.4s						
VRDI	Verde Repeater	61.34	33	P	P	07 34 50.8	+0.8
VRDI				IAmb	IAmb	07 35 02.2	
	comp=Z,10nm,1.2s						
MORW	Morawa	61.55	194	P	P	07 34 51.6	+0.2
EPYK	Eagle Plains	62.92	27	P	P	07 35 00.5	+0.3
EPYK				IAmb	IAmb	07 35 01.8	
	comp=Z,5.3nm,1.4s						
TMCR	Tamitsa	63.28	331	eP	P	07 35 00.1	-2.4
TMCR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
DZM	Mont Dzumac	63.36	142	P	P	07 35 05.0	+1.4
	comp=Z,7.9nm,0.9s,baz=181,slow=18,SNR=5.7						
DZM	Mont Dzumac	63.36	142	P	P	07 35 04.9	+1.3
DZM				IAmb	IAmb	07 35 06.0	
	comp=Z,22nm,1.3s						
INK	Inuvik	63.53	24	P	P	07 35 04.6	+0.5
INK				pmax	pmax		
	comp=Z,9.0nm,1.5s						
INK	Inuvik	63.53	24	P	P	07 35 04.6	+0.5
INK				IAmb	IAmb	07 35 05.8	
	comp=Z,9.2nm,1.5s						
KLMR	Klimovskoe	63.59	327	eP	P	07 35 00.0	-4.6
KLMR				pmax	pmax		
	comp=Z,20nm,1.7s						
KLMR	Klimovskoe	63.59	327	eP	P	07 35 00.0	-4.6
KLMR				AMP		07 35 08.3	
	comp=Z,20nm,1.7s						
STKA	Stephens Creek	63.73	169	P	P	07 35 06.3	+0.6
	comp=Z,0.7nm,0.4s,baz=343,slow=11,SNR=1.8						
STKA	Stephens Creek	63.73	169	P	P	07 35 06.2	+0.4
SPA0	Spitsbergen Ar	64.28	348	P	P	07 35 08.9	0.0
KBS	Kingsbay	64.63	349	P	P	07 35 11.6	+0.4
KBS				pmax	pmax		
	comp=Z,23nm,1.0s						
KBS	Kingsbay	64.63	349	P	P	07 35 11.6	+0.4
KEV	Kevo	65.43	338	P	P	07 35 16.2	-0.2
KEV				pmax	pmax		
	comp=Z,54nm,1.5s						
KEV	Kevo	65.43	338	P	P	07 35 16.2	-0.2
VRH	Novokhopyorsk	65.49	316	eP	P	07 35 15.5	-1.6
VRH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ARCES	ARCESS Array B	66.00	338	P	P	07 35 19.8	-0.3
	comp=Z,4.6nm,0.6s,baz=55,slow=6.8,SNR=30						
ARCES	ARCESS Array B	66.00	338	P	P	07 35 19.9	-0.2
ARCES	ARCESS Array B	66.00	338	P	P	07 35 19.9	-0.2
ARE0	ARCESS Array S	66.00	338	P	P	07 35 20.0	-0.1
C36M	Paulatuk	66.33	22	P	P	07 35 22.3	+0.2
JOF	Joensuu	66.54	330	P	P	07 35 22.7	-0.9
JOF				pmax	pmax		
	comp=Z,13nm,0.9s						
LPSR	Galich'ya Gora	66.62	318	eP	P	07 35 23.3	-1.0
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VSR	Storozhevoye	66.99	317	i P	P	07 35 26.0	-0.6
VSR				pmax	pmax		
	comp=Z,19nm,0.9s						
OBN	Obninsk	67.00	321	ceP	P	07 35 25.9	-0.7
OBN				e		07 35 52.2	
OBN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ZEI	Tsey	67.10	307	eP	P	07 35 27.3	-0.5
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KBZ	Khabaz	67.43	308	P	P	07 35 30.8	+1.2
	comp=Z,13nm,0.7s,baz=79,slow=3.7,SNR=27						
KBZ	Khabaz	67.43	308	i P	P	07 35 30.7	+1.2
KBZ				pmax	pmax		
	comp=Z,20nm,0.9s						
ONI	Oni	67.48	307	P	P	07 35 32.2	+2.2
KIV	Kislovodsk	67.49	309	⇑P	P	07 35 32.1	+2.0
KIV	Kislovodsk	67.49	309	eP	P	07 35 31.6	+1.6
KIV				pmax	pmax		
	comp=Z,55nm,1.0s						
KIV	Kislovodsk	67.49	309	P	P	07 35 31.9	+1.9
KIV				IAmb	IAmb	07 35 33.6	
	comp=Z,15nm,0.8s						
SHA1	Shidzhatmaz	67.59	308	i P	P	07 35 31.6	+0.7
BGD	Bogdanovka	67.89	306	P	P	07 35 35.3	+2.5
AKH	Akhalkalaki	67.91	306	⇑P	P	07 35 34.7	+1.8
AKH	Akhalkalaki	67.91	306	P	P	07 35 34.3	+1.5
AKH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
AKH	Akhalkalaki	67.91	306	P	P	07 35 34.3	+1.5
AKH				IAmb	IAmb	07 35 35.5	
	comp=Z,7.7nm,0.8s						
BCA	Borcka	69.19	306	⇑P	P	07 35 41.6	+1.0
FINES	FINESS Array B	69.39	330	P	P	07 35 41.1	-0.3
	comp=Z,14nm,0.6s,baz=69,slow=5.8,SNR=116						
FINES	FINESS Array B	69.39	330	P	P	07 35 40.9	-0.5
RES	Resolute Bay	70.24	12	P	P	07 35 46.6	+0.2
RES				pmax	pmax		
	comp=Z,1.0nm,1.3s						
RES	Resolute Bay	70.24	12	P	P	07 35 46.6	+0.2
DAG	Danmarks Havn	70.49	353	i P	P	07 35 47.1	-0.8
	comp=Z,4.4nm,0.8s						
DAG	Danmarks Havn	70.49	353	i P	P	07 35 47.1	-0.8
DAG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VSU	Vasula	70.49	327	ceP	P	07 35 48.9	+0.7
VSU				pmax	pmax		
	comp=Z,112nm,2.5s						
SOCY	Socotra	72.18	274	P	P	07 35 58.6	-0.6
SOCY				IAmb	IAmb	07 35 59.3	
	comp=Z,21nm,1.0s						
AKASG	Malin Array Be	72.90	319	P	P	07 36 02.5	-0.3
	comp=Z,11nm,0.6s,baz=56,slow=6.5,SNR=53						
AKASG	Malin Array Be	72.90	319	P	P	07 36 03.2	+0.5
AKBB	Malin Array Si	72.90	319	P	P	07 36 02.6	-0.1
AKBB				pmax	pmax		
	comp=Z,13nm,0.8s						
AKBB	Malin Array Si	72.90	319	P	P	07 36 02.6	-0.1
AKBB				IAmb	IAmb	07 36 03.1	
	comp=Z,13nm,0.8s						
YKA	Yellowknife Ar	73.18	26	P	P	07 36 03.2	-0.9
	comp=Z,0.5nm,0.7s,baz=307,slow=5.3,SNR=9.7						
YKA				pP	pP	07 36 43.3	+0.1
	comp=Z,0.8nm,0.8s,baz=303,slow=5.4,SNR=8.6						
YKA	Yellowknife Ar	73.18	26	⇑eP	P	07 36 04.1	0.0
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
RAYN	Ar Rayn	73.98	288	P	P	07 36 10.7	+1.1
RAYN				pmax	pmax		
	comp=Z,15nm,1.1s						
RAYN	Ar Rayn	73.98	288	P	P	07 36 10.7	+1.1
RAYN				IAmb	IAmb	07 36 11.3	
	comp=Z,15nm,1.1s						
GAZ	Gaziantep	74.11	304	P	P	07 36 11.4	+1.3
GAZ				IAmb	IAmb	07 36 12.7	
	comp=Z,15nm,0.8s						
SORM	Soroca	74.65	317	⇓P	P	07 36 12.3	-0.7
SORM	Soroca	74.65	317	P	P	07 36 12.2	-0.7
ILGA	Ilgaz	74.72	309	P	P	07 36 14.9	+1.1
ILGA				IAmb	IAmb	07 36 15.7	
	comp=Z,11nm,0.8s						
BR131	Keskin Array S	75.40	308	P	P	07 36 18.2	+0.6
BR131				pmax	pmax		
	comp=Z,14nm,0.9s						
BR131	Keskin Array S	75.40	308	P	P	07 36 18.1	+0.6
BR131				IAmb	IAmb	07 36 19.4	
	comp=Z,14nm,0.9s						
BRTR	Keskin Array B	75.40	308	P	P	07 36 18.1	+0.6
	comp=Z,10nm,0.8s,baz=98,slow=5.2,SNR=51						
BRTR	Keskin Array B	75.40	308	ceP	P	07 36 18.2	+0.6
BRTR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BRTR	Keskin Array B	75.40	308	P	P	07 36 17.9	+0.3
NC303	NORSAR Array S	75.42	334	P	P	07 36 16.9	-0.2
NB2	NORSAR Subarra	75.59	334	P	P	07 36 17.2	-1.0
	comp=Z,3.0nm,0.5s,baz=47,slow=5.6						
NOA	NORSAR Array B	75.59	334	P	P	07 36 17.4	-0.8
	comp=Z,3.2nm,0.5s,baz=49,slow=5.5,SNR=20						
NC204	NORSAR Array S	75.61	334	P	P	07 36 17.9	-0.4
NORES	NORESS Array B	75.67	334	P	P	07 36 18.3	-0.2
NORES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TLCR		75.84	314	⇑P	P	07 36 20.2	+0.4
TLCR		75.84	314	P	P	07 36 20.2	+0.4
SUMG	Summit	76.12	357	i P	P	07 36 21.6	+0.2
	comp=Z,24nm,0.7s						
SUMG	Summit	76.12	357	i P	P	07 36 21.6	+0.2
SUMG				pmax	pmax		
	comp=Z,24nm,0.7s						
SUMG	Summit	76.12	357	P	P	07 36 22.3	+0.9
SUMG				IAmb	IAmb	07 36 22.9	
	comp=Z,11nm,0.8s						
CFR	Carcaliu	76.26	315	⇓P	P	07 36 22.2	0.0
CFR	Carcaliu	76.26	315	P	P	07 36 22.2	0.0
TOPG	Topolog	76.27	314	⇑P	P	07 36 22.9	+0.7
TIRR	Tirgusor	76.46	314	⇓P	P	07 36 23.8	+0.5
TIRR	Tirgusor	76.46	314	P	P	07 36 23.7	+0.5
TESR	Tescani	76.47	316	⇑P	P	07 36 23.6	+0.3
BIZ	Bicaz	76.57	317	⇑P	P	07 36 24.7	+0.8
BUR08	Bucovina Ar. S	76.72	318	P	P	07 36 26.0	+1.1
BUR08				IAmb	IAmb	07 36 26.6	
	comp=Z,15nm,1.1s						
BURAR	Bucovina Array	76.73	318	⇑P	P	07 36 25.3	+0.4
BURAR	Bucovina Array	76.73	318	P	P	07 36 26.2	+1.3
BURAR	Bucovina Array	76.73	318	P	P	07 36 25.9	+1.0
VRI	Vrincioaia	76.76	316	⇓P	P	07 36 26.2	+1.2
VRI	Vrincioaia	76.76	316	P	P	07 36 25.8	+0.8
VRI				pmax	pmax		
	comp=Z,21nm,0.8s						
PLOR	Plostina	76.81	316	⇑P	P	07 36 25.8	+0.4
PLOR	Plostina	76.81	316	P	P	07 36 25.7	+0.4
KWP	Kalwaria Pacla	77.05	321	P	P	07 36 28.2	+1.6
KWP				pmax	pmax		
	comp=Z,26nm,0.8s						
KWP	Kalwaria Pacla	77.05	321	P	P	07 36 28.1	+1.6
OZUR		77.20	316	⇑P	P	07 36 28.0	+0.5
MLR	Muntele Rosu	77.42	316	⇓P	P	07 36 29.3	+0.5
MLR	Muntele Rosu	77.42	316	P	P	07 36 29.5	+0.6
MLR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MLR	Muntele Rosu	77.42	316	P	P	07 36 29.4	+0.6
MLR				IAmb	IAmb	07 36 30.1	
	comp=Z,4.8nm,0.6s						
DOPR	Dopca	77.50	316	⇓P	P	07 36 30.4	+1.3
TRPA	Tarpa	77.97	319	⇑P	P	07 36 32.6	+1.0
VOIR		77.98	316	⇑P	P	07 36 32.4	+0.5
VOIR		77.98	316	P	P	07 36 32.4	+0.5
ARR	Arges	78.27	316	⇓P	P	07 36 34.4	+0.9
OJC	Ojcow	78.28	322	P	P	07 36 34.3	+1.0
OJC				pmax	pmax		
	comp=Z,22nm,0.7s						
OJC	Ojcow	78.28	322	P	P	07 36 34.3	+1.0
NIE	Niedzica	78.47	321	P	P	07 36 36.0	+1.6
NIE				pmax	pmax		
	comp=Z,10.0nm,1.9s						
DRGR		78.61	318	P	P	07 36 36.2	+0.9
DRGR				pmax	pmax		
	comp=Z,16nm,0.9s						
LOT	Lotru	78.74	317	⇓P	P	07 36 36.5	+0.4
ELND	Elena	78.83	314	⇑P	P	07 36 37.1	+0.6
LANS	Liptovska Anna	79.07	321	eP	P	07 36 39.1	+1.4
LANS				pmax	pmax		
	comp=Z,4.0nm,0.6s						
LANS	Liptovska Anna	79.07	321	eP	P	07 36 39.1	+1.4
GZR	Gura Zlata	79.35	317	⇓P	P	07 36 39.9	+0.6
ELL	Elmali	79.43	307	P	P	07 36 40.4	+0.4
ELL				pmax	pmax		
	comp=Z,45nm,0.6s						
ELL	Elmali	79.43	307	P	P	07 36 40.4	+0.4
PSZ	Piszkesteto	79.55	320	P	P	07 36 42.2	+1.8
MORC	Moravsky Berou	79.71	323	⇓P	P	07 36 41.6	+0.4
MORC	Moravsky Berou	79.71	323	P	P	07 36 41.8	+0.6
MORC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MORC	Moravsky Berou	79.71	323	eP	P	07 36 41.7	+0.6
MORC	Moravsky Berou	79.71	323	P	P	07 36 41.8	+0.6
MORC				IAmb	IAmb	07 36 42.7	
	comp=Z,7.2nm,0.9s						
VYHS	Vyhne	79.79	321	eP	P	07 36 42.7	+1.1
VYHS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VYHS	Vyhne	79.79	321	eP	P	07 36 42.7	+1.1
BZS	Buzias	79.90	318	⇑P	P	07 36 42.4	+0.2
BZS	Buzias	79.90	318	P	P	07 36 42.4	+0.2
KRLC	Kraliky	79.93	323	eP	P	07 36 42.8	+0.4
KRLC	Kraliky	79.93	323	eP	P	07 36 42.8	+0.4
DPC	Dobruska-Polom	80.00	324	eP	P	07 36 43.5	+0.8
DPC	Dobruska-Polom	80.00	324	eP	P	07 36 43.5	+0.8
MDVR	Moldovita	80.32	317	⇓P	P	07 36 44.7	+0.1
VRAC	Vranov	80.49	323	P	P	07 36 47.3	+2.0
VTS	Vitosha	80.62	314	⇓P	P	07 36 46.9	+0.5
VTS	Vitosha	80.62	314	P	P	07 36 46.6	+0.2
VTS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VTS	Vitosha	80.62	314	P	P	07 36 46.5	+0.2
VTS				IAmb	IAmb	07 36 48.1	
	comp=Z,6.3nm,0.8s						
MODS	Modra-Piesok	80.70	322	eP	P	07 36 46.5	0.0
MODS	Modra-Piesok	80.70	322	eP	P	07 36 46.5	0.0
KRUC	Moravsky	80.74	322	P	P	07 36 47.7	+1.0
KRUC				pmax	pmax		
	comp=Z,14nm,2.0s						
KRUC	Moravsky	80.74	322	eP	P	07 36 47.3	+0.6
GOPC	GO Pecny, Ondr	81.04	324	eP	P	07 36 49.2	+0.9
GOPC	GO Pecny, Ondr	81.04	324	eP	P	07 36 49.2	+0.9
CLL	Collm	81.05	326	⇑iP	P	07 36 49.3	+1.1
	comp=Z,15nm,0.8s						
CLL	Collm	81.05	326	eP	P	07 36 49.5	+1.3
	comp=Z,15nm,0.8s,baz=48,slow=5.2						
CLL	Collm	81.05	326	⇑iP	P	07 36 49.3	+1.1
CLL				pmax	pmax		
	comp=Z,15nm,0.8s						
CLL	Collm	81.05	326	P	P	07 36 49.1	+0.9
CLL				IAmb	IAmb	07 36 50.3	
	comp=Z,14nm,0.8s						
PRU	Pruhonice	81.12	324	eP	P	07 36 48.8	+0.2
PRU	Pruhonice	81.12	324	eP	P	07 36 48.8	+0.2
SRS	Serrai	81.24	313	P	P	07 36 49.7	+0.2
SRS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NEUB	Neuenburg	81.70	326	eP	P	07 36 52.1	+0.4
	comp=Z,14nm,0.8s,baz=48,slow=5.2						
CONA	Conrad Observa	81.72	322	i P	P	07 36 53.2	+1.2
	comp=Z,7.1nm,0.6s						
CLZ	Clausthal	81.94	327	eP	P	07 36 53.5	+0.6
	comp=Z,5.7nm,0.7s,baz=48,slow=5.2						
GUNZ	Gunzen	81.98	325	eP	P	07 36 53.6	+0.4
	comp=Z,7.3nm,1.0s,baz=48,slow=5.2						
WERN	Wernitzgruen	82.01	325	eP	P	07 36 54.0	+0.6
	comp=Z,4.9nm,0.7s,baz=48,slow=5.2						
KHC	Kasperske Hory	82.15	324	eP	P	07 36 54.7	+0.6
KHC	Kasperske Hory	82.15	324	eP	P	07 36 54.7	+0.6
GERES	GERESS Array B	82.27	323	P	P	07 36 55.0	+0.2
	comp=Z,2.1nm,0.6s,baz=44,slow=6.0,SNR=19						
GERES	GERESS Array B	82.27	323	P	P	07 36 55.0	+0.2
GERES	GERESS Array B	82.27	323	P	P	07 36 54.3	-0.5
ARSA	Arzberg	82.32	321	eP	P	07 36 56.1	+1.1
	comp=Z,6.4nm,0.9s,baz=48,slow=5.2						
ARSA	Arzberg	82.32	321	i PcP	P	07 36 56.2	+1.2
	comp=Z,3.5nm,0.5s						
ROTZ	Rotzenmuhle	82.43	325	eP	P	07 36 56.1	+0.6
	baz=48,slow=5.2						
LIT	Litokhoron	82.50	313	P	P	07 36 55.2	-0.9
LIT				pmax	pmax		
	comp=Z,9.0nm,0.6s						
LIT	Litokhoron	82.50	313	P	P	07 36 55.2	-0.9
LIT				IAmb	IAmb	07 36 56.9	
	comp=Z,8.6nm,0.6s						
MOA	Molln	82.61	322	i P	P	07 36 56.9	+0.4
	comp=Z,3.3nm,0.7s						
SOKA	Soboth	82.94	321	eP	P	07 36 58.9	+0.6
	comp=Z,7.6nm,0.7s,SNR=6.7						
BLY	Banja Luka	82.94	319	⇑P	P	07 36 59.2	+1.0
BLY	Banja Luka	82.94	319	P	P	07 36 59.1	+0.9
BLY				IAmb	IAmb	07 37 00.4	
	comp=Z,9.9nm,0.7s						
PDG	Podgorica	83.14	316	⇓P	P	07 36 59.3	0.0
PDG	Podgorica	83.14	316	P	P	07 36 59.4	+0.1
PDG				IAmb	IAmb	07 37 00.3	
	comp=Z,11nm,0.7s						
OBKA	Obir	83.30	321	eP	P	07 37 00.5	+0.3
	comp=Z,14nm,0.7s,baz=48,slow=5.2						
OBKA	Obir	83.30	321	i P	P	07 37 00.1	-0.1
	comp=Z,14nm,0.8s						
RJOB	Jochberg	83.44	323	eP	P	07 37 01.6	+0.8
	baz=48,slow=5.2						
KBA	Koelnbreinsper	83.58	322	eP	P	07 37 01.8	+0.1
	comp=Z,9.2nm,0.7s,baz=48,slow=5.2						

KBA	Koelnbreinsper	83.58	322	*i* P	P	07 37 01.8	+0.1
	comp=Z,7.9nm,0.6s						
KBA	Koelnbreinsper	83.58	322	P	P	07 37 02.3	+0.6
KBA				pmax	pmax		
	comp=Z,14nm,0.7s						
MYKA	Terra Mystica	83.71	322	*e*P	P	07 37 01.9	-0.3
	comp=Z,11nm,0.5s,SNR=11						
FUR	Furstenfeldbru	83.94	324	*e*P	P	07 37 04.3	+1.0
	comp=Z,21nm,0.6s,baz=48,slow=5.2						
ABTA	Abfaltersbach	84.23	322	*e*P	P	07 37 04.1	-0.8
	comp=Z,9.4nm,0.7s						
WTTA	Wattenberg	84.35	323	*e*P	P	07 37 05.0	-0.6
	comp=Z,4.4nm,0.7s						
AHRW	Bad Neuenahr-A	84.35	328	*e*P	P	07 37 06.5	+1.2
	comp=Z,33nm,1.4s,baz=48,slow=5.2						
STAL	STALIGIAL	84.44	322	P	P	07 37 05.1	-0.8
ITM	Ithomi	84.54	310	P	P	07 37 05.7	-0.8
STU	Stuttgart	84.56	325	*e*P	P	07 37 06.8	+0.4
	comp=Z,16nm,0.7s,baz=48,slow=5.2						
KVN	Kaiserville	85.45	47	P	P	07 37 11.9	+0.6
KVN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KVN	Kaiserville	85.45	47	P	P	07 37 11.9	+0.6
NVAR	Mina Array Bea	85.70	47	P	P	07 37 13.7	+1.1
	comp=Z,1.0nm,0.5s,baz=302,slow=5.5,SNR=12						
NVAR	Mina Array Bea	85.70	47	P	P	07 37 13.0	+0.4
NRCA	Norcia	86.44	319	P	P	07 37 16.8	+0.9
MURB	Monte Urbino	86.49	320	P	P	07 37 17.2	+1.0
TIP	Timpagrande	86.61	314	⇓P	P	07 37 17.5	+0.7
PDAR	Pinedale Array	88.09	40	pP	pP	07 38 04.5	+0.1
	comp=Z,1.0nm,0.9s,baz=280,slow=2.7,SNR=5.0						
ULM	Lac du Bonnet	89.09	28	pP	pP	07 38 08.5	-0.1
	comp=Z,1.4nm,0.7s,baz=330,slow=5.9,SNR=2.6						
TORD	Torodi Ar. Bea	113.82	304	PKiKP	PKiKP	07 43 10.9	-0.7
	comp=Z,0.4nm,0.4s,baz=16,slow=1.0,SNR=6.2						
DBIC	Dimbokro	122.93	303	PKP	PKPdf	07 43 28.6	-0.5
	comp=Z,0.7nm,0.4s,baz=146,slow=3.6,SNR=1.5						
DBIC	Dimbokro	122.93	303	PKPdf	PKPdf	07 43 28.9	-0.2
PTGA	Pitinga	148.08	20	PKPbc	PKPbc	07 44 19.5	+0.8

DDA 22 07:34:20.0, 39°.04N×28°.14E, h7^{km}±2^{km}, ML1.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKHS	Akhisar	0.30	237	*i* P	Pg	07 34 26.4	+0.5
AKHS				IAML		07 34 31.0	
	comp=E,10.0nm,0.4s						
AKHS				*i* S	Sb	07 34 31.4	-1.5
DEMI	Demirci	0.45	90	*i* P	Pg	07 34 28.8	+0.1
DEMI				*i* S	Sg	07 34 35.3	+0.7
DEMI				IAML		07 34 36.0	
	comp=N,20nm,0.3s						
DEMI				IAML		07 34 36.0	
	comp=E,28nm,0.2s						
MANT	Manisa	0.64	149	*i* P	Pb	07 34 33.7	0.0
MANT				*i* S	Sg	07 34 41.8	+1.0
MANT				IAML		07 34 44.0	
	comp=N,6.8nm,0.2s						
MANT				IAML		07 34 45.0	
	comp=E,8.3nm,0.3s						

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*JMA **22** 07:49:00.6±0.1, 40°.38N×142°.27E, h40^{km}±1^{km}, M3.6*
JMA Felt I J1.

*IDC **22** 07:49:04.2±3.6, 40°.57N×141°.73E, h48^{km}±27^{km}, mb3.4/3, mb1 3.3/6, mb1mx3.0/42, mbtmp3.4/6, ML2.9/2, Error ellipse: s-maj=67.3km s-min=30.6km az=112.0*

ISC 22 07:49:01.9±1.3, **40°.37N**±0°.04×**142°.10E**±0°.08, **h45**^{km}±10^{km}, **n21**, σ**1^{s}34**/25, **mb3.6**/3, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKEN	Kujiedanarisaw	0.34	241	P	Pn	07 49 10.7	-0.3
JKEN				S	Sn	07 49 17.8	+0.4
JANG	Nango	0.45	271	P	Pn	07 49 12.4	+0.1
JANG				S	Sn	07 49 20.6	+1.0
JTH	Tanohata	0.47	203	P	Pn	07 49 11.8	-0.7
JTH				S	Sn	07 49 19.8	-0.2
JKZ	Kuzumaki	0.70	237	P	Pn	07 49 16.0	+0.4
JKZ				S	Sn	07 49 26.7	+1.2
JARK	Aomorirokkasho	0.85	319	P	Pn	07 49 17.0	-0.5
JARK				S	Sn	07 49 28.7	-0.1
JTM	Tenmabayashi	0.89	298	P	Pn	07 49 18.0	0.0
JTM				S	Sn	07 49 30.8	+1.0
JOM	Ohasama	1.09	215	P	Pn	07 49 20.9	+0.1
JOM				S	Sn	07 49 35.5	+0.8
JAH	Hinai	1.14	261	P	Pn	07 49 22.1	+0.7
JAH				S	Sn	07 49 37.7	+1.9
JOT	Ohata	1.29	322	P	Pn	07 49 23.0	-0.5
JOT				*e*S	Sn	07 49 39.7	+0.2
ASAJ	Asahikawa	3.76	5	P	Pn	07 49 57.1	-0.3
	1.6nm,0.3s,baz=205,slow=12,SNR=8.1						
ASAJ				S	Sn	07 50 44.8	+4.3
	0.9nm,0.3s,baz=123,slow=32,SNR=1.5						
MJAR	Matsushiro Arr	4.89	220	P	Pn	07 50 14.9	+1.9
	0.1nm,0.3s,baz=32,slow=14,SNR=5.4						
USRK	Ussuriysk Ar.	8.41	300	P	Pn	07 50 59.4	-1.8
	baz=123,slow=15,SNR=1.5						
H11N2	WAKE ISLAND Hy	29.55	127	T	T	08 25 49.5	
	baz=319,slow=75,SNR=21						
H11N1	WAKE ISLAND Hy	29.57	127	T	T	08 26 02.1	
	baz=319,slow=75,SNR=23						
H11N3	WAKE ISLAND Hy	29.57	127	T	T	08 26 02.9	
	baz=319,slow=75,SNR=17						
H11S1	WAKE ISLAND Hy	30.37	129	T	T	08 27 16.4	
	baz=322,slow=76,SNR=6.4						
H11S3	WAKE ISLAND Hy	30.37	129	T	T	08 27 30.4	
	baz=322,slow=76,SNR=4.4						
H11S2	WAKE ISLAND Hy	30.39	129	T	T	08 27 29.3	
	baz=322,slow=76,SNR=6.4						
MKAR	Makanchi Array	42.88	299	P	P	07 56 55.1	-0.7
	0.4nm,0.6s,baz=81,slow=13,SNR=4.7						
KURBB	Kurchatov Arra	44.44	305	P	P	07 57 07.2	-1.1
	0.7nm,0.6s,baz=80,slow=9.0,SNR=8.8						
BVAR	Borovoye Array	48.78	310	P	P	07 57 41.3	-0.8
	0.5nm,0.4s,baz=77,slow=9.9,SNR=4.5						

IDC 22 07:50:48.1±4.0, **16°.21N**×**145°.31E**, **h0**^{km}, **mb3.8**/7, **mb1 3.8**/7, **mb1mx3.5**/44, **mbtmp3.8**/7, **MS2.0**/1, **Ms1 2.0**/1, **ms1mx1.9**/33, **Error ellipse: s-maj=155.0km s-min=27.1km az=84.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	2.64	189	LR	LR	07 51 46.0	
	comp=Z,26nm,19.6s,baz=128,slow=22						
H11N1	WAKE ISLAND Hy	20.82	77	T	T	08 17 36.9	
	baz=264,slow=74,SNR=41						
H11N2	WAKE ISLAND Hy	20.83	77	T	T	08 17 38.3	
	baz=264,slow=74,SNR=30						
H11N3	WAKE ISLAND Hy	20.84	77	T	T	08 17 42.2	
	baz=264,slow=74,SNR=38						
KSRS	Korea Array	26.16	327	P	P	07 56 24.4	+0.2
	1.0nm,0.8s,baz=150,slow=9.1,SNR=5.0						
KLR	Kul'dur	34.74	344	P	P	07 57 39.8	-0.2
	0.5nm,0.2s,baz=141,slow=13,SNR=4.0						
WRA	Warramunga Arr	37.51	197	P	P	07 58 03.8	-0.1
	0.6nm,0.9s,baz=16,slow=9.3,SNR=4.7						
SONM	Songino Array	44.88	323	P	P	07 59 05.4	+0.9
	0.2nm,0.3s,baz=120,slow=8.7,SNR=2.2						
MKAR	Makanchi Array	59.93	315	P	P	08 00 56.7	+0.5
	0.5nm,0.9s,baz=98,slow=8.3,SNR=3.2						
KURBB	Kurchatov Arra	62.93	319	P	P	08 01 15.3	-1.0
	2.4nm,1.0s,baz=100,slow=6.4,SNR=9.1						
BVAR	Borovoye Array	68.16	321	P	P	08 01 50.3	+0.2
	1.3nm,0.9s,baz=93,slow=5.9,SNR=4.6						

IDC 22 08:18:12.3±2.1, **9°.30S**×**125°.28E**, **h0**^{km}, **mb3.2**/1, **mb1 3.6**/3, **mb1mx3.4**/32, **mbtmp3.4**/3, **ML3.6**/2, **Error ellipse: s-maj=162.6km s-min=33.7km az=57.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	13.73	141	Pn	Pn	08 21 27.2	-1.3
	0.3nm,0.3s,baz=315,slow=13,SNR=19						
WRA				Sn	Sn	08 23 51.7	-10
	0.2nm,0.3s,baz=319,slow=25,SNR=3.8						
ASAR	Alice Springs	16.50	151	Pn	Pn	08 22 06.6	+1.2
	0.2nm,0.3s,baz=322,slow=11,SNR=14						
ASAR				Sn	Sn	08 25 02.2	-7.1
	0.1nm,0.3s,baz=316,slow=17,SNR=2.0						
MKAR	Makanchi Array	67.70	330	P	P	08 29 11.6	0.0
	0.1nm,0.5s,baz=130,slow=8.1,SNR=2.1						

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*NEIC **22** 08:29:27.2±1.6, 24°.6S±0°.1×179°.9E±0°.2, h541^{km}±9^{km}, mb4.3/22, Error ellipse: s-maj=21.3km s-min=20.0km az=104.0*

*IDC **22** 08:29:29.9±4.5, 24°.68S×179°.31E, h511^{km}±28^{km}, mb3.4/3, mb1 3.6/4, mb1mx3.1/27, mbtmp4.4/4, Error ellipse: s-maj=57.1km s-min=39.9km az=58.0*

ISC 22 08:29:28.0±0.9, **24°.58S**±0°.09×**180°.0E**±0°.1, **h550**^{km}, **n36**, σ**1^{s}53**/39, **mb4.4**/13, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	7.04	345	P	P	08 31 15.5	-1.1
DZM	Mont Dzumac	12.66	279	P	P	08 32 13.4	-0.1
	2.0nm,0.3s,baz=74,slow=18,SNR=18						
AFI	Afiamalu	13.17	38		P	08 32 18.0	-0.8
URZ	Urewera	13.85	189	P	P	08 32 23.9	-1.5
	0.5nm,0.3s,baz=12,slow=8.7,SNR=2.8						
URZ				S	S	08 34 49.9	-1.6
	0.4nm,0.3s,baz=78,slow=20,SNR=1.9						
URZ	Urewera	13.85	189	P	P	08 32 24.3	-1.0
BKZ	Black Stump Fm	14.83	191	P	P	08 32 35.3	-0.3
BFZ	Birch Farm	16.35	190	P	P	08 32 49.1	-1.5
QRZ	Quartz Range	17.35	199	P	P	08 32 59.0	-0.7
THZ	Tophouse	18.11	197	P	P	08 33 05.9	-0.8
KHZ	Kahutara	18.56	195	P	P	08 33 12.1	+1.3
LTZ	Lake Taylor	19.23	197	P	P	08 33 16.4	-0.5
LHI	Lord Howe Isla	19.68	245	P	P	08 33 19.9	-1.2
RPZ	Rata Peaks	20.43	199	P	P	08 33 28.6	+0.9
RPZ				IAmb	IAmb	08 33 47.2	
	comp=Z,4.8nm,1.0s						
EIDS	Eidsvold	26.16	262	P	P	08 34 19.2	+0.1
EIDS				IAmb	IAmb	08 34 23.1	
	comp=Z,6.6nm,1.1s						
TOO	Toolangi	32.05	238	P	P	08 35 10.6	+0.7
TOO				IAmb	IAmb	08 35 26.2	
	comp=Z,21nm,1.4s						
STKA	Stephens Creek	34.44	249	P	P	08 35 30.3	+0.2
	comp=Z,3.6nm,0.8s,baz=92,slow=11,SNR=10						
STKA	Stephens Creek	34.44	249	P	P	08 35 30.3	+0.2
COEN	Coen	36.19	280	P	P	08 35 45.2	+0.3
COEN				IAmb	IAmb	08 35 52.9	
	comp=Z,6.9nm,1.1s						
BBOO	Buckleboo	39.14	248	P	P	08 36 08.0	-0.7
BBOO				IAmb	IAmb	08 36 21.1	
	comp=Z,21nm,1.5s						
AS31	Alice Springs	41.89	261	P	P	08 36 30.5	-0.2
ASAR	Alice Springs	41.89	261	P	P	08 36 30.4	-0.4
	comp=Z,2.3nm,0.8s,baz=93,slow=6.4,SNR=31						
ASAR				ScP	ScP	08 41 17.1	+5.3
	comp=Z,0.2nm,0.6s,baz=114,slow=4.3,SNR=2.0						
ASAR	Alice Springs	41.89	261	P	P	08 36 30.1	-0.7
WR0	Warramunga Arr	42.13	267	P	P	08 36 31.9	-0.9
WR0				IAmb	IAmb	08 36 32.2	
	comp=Z,3.5nm,0.6s						
WB2	Warramunga Arr	42.31	267	P	P	08 36 33.4	-0.8
WB2				IAmb	IAmb	08 36 34.0	
	comp=Z,6.9nm,0.6s						
WB0	Warramunga Arr	42.32	267	P	P	08 36 33.4	-0.8
WB0				IAmb	IAmb	08 36 34.0	
	comp=Z,8.0nm,0.6s						
WRA	Warramunga Arr	42.32	267	P	P	08 36 33.4	-0.8
	comp=Z,6.4nm,0.5s,baz=98,slow=8.3,SNR=86						
WRA				ScP	ScP	08 41 19.0	+5.5
	comp=Z,0.3nm,0.7s,baz=99,slow=3.7,SNR=10						
WRA	Warramunga Arr	42.32	267	P	P	08 36 33.1	-1.1
FORT	Forrest	46.04	250	P	P	08 37 01.8	-0.9
MTN	Manton Dam	47.47	275	P	P	08 37 12.8	-0.8
MTN				IAmb	IAmb	08 37 15.4	
	comp=Z,14nm,1.1s						
KNRA	Kununurra	48.65	270	P	P	08 37 22.2	-0.2
KNRA				IAmb	IAmb	08 37 23.0	
	comp=Z,15nm,1.0s						
FITZ	Fitzroy Crossi	50.74	266	P	P	08 37 38.0	+0.3
PSA00	Pilbara Seismi	55.00	260	P	P	08 38 07.7	-0.5
MORW	Morawa	56.60	250	P	P	08 38 18.9	-0.2
MORW				IAmb	IAmb	08 38 32.1	
	comp=Z,18nm,1.5s						
QSPA	South Pole Qui	65.50	180	P	P	08 39 18.7	+1.8
BRTR	Keskin Array B	147.95	306	PKPbc	PKPab	08 48 17.1	+0.4
	comp=Z,0.4nm,0.5s,baz=90,slow=2.9,SNR=2.8						
BRTR	Keskin Array B	147.95	306		PKPab	08 48 16.6	-0.1

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*BJI **22** 08:35:33.5±0.0, 23°.18N×94°.22E, h77^{km}, mB4.8/24, mb4.4/35, Ms4.4/7, Ms7 4.3/2*

*NEIC **22** 08:35:34.2±1.3, 22°.98N±0°.07×94°.25E±0°.07, h86^{km}±6^{km}, mb4.5/46, Error ellipse: s-maj=11.3km s-min=8.2km az=217.0*

*MOS **22** 08:35:34.1±0.9, 22°.98N×94°.31E, h100^{km}, mb4.4/27, Error ellipse: s-maj=13.6km s-min=5.3km az=117.4*

*IDC **22** 08:35:34.5±1.4, 22°.89N×94°.19E, h91^{km}±13^{km}, mb3.9/17, mb1 4.0/19, mb1mx3.8/37, mbtmp4.2/19, MS3.0/2, Ms1 3.0/2, ms1mx2.6/38, Error ellipse: s-maj=16.5km s-min=8.7km az=39.0*

*NDI **22** 08:35:35.1±1.4, 23°.09N×94°.24E, h39^{km}±999^{km}, ML4.3, mb4.5(NEIC)*

ISC 22 08:35:35.2±0.3, **22°.99N**±0°.05×**94°.20E**±0°.04, **h100**^{km}, **n190**, σ**1^{s}94**/205, **mb4.4**/53, **10C-13D, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAIH	SAIHA	1.23	246	*e*P	Pn	08 35 56.6	-1.7
SAIH				*e*S	Sn	08 36 12.8	-3.0
SAIH				IAML		08 36 14.2	
	comp=N,3μm,0.4s						
SAIH				IAML		08 36 16.1	
	comp=E,4μm,0.1s						
BRDH	Bariadhala	2.38	263	P	Pn	08 36 11.3	-1.4
	comp=E,24nm,0.3s,baz=252,slow=20,SNR=1.6						
BRDH				S	Sn	08 36 40.2	-1.3
	comp=E,449nm,0.3s,baz=294,slow=22,SNR=34						
SIMRM	Sittwe	3.10	204	Pn	Pn	08 36 20.9	-1.3
SIMRM				Sn	Sn	08 36 56.1	-2.4
SHL	Shillong	3.33	321	*e*P	Pn	08 36 24.0	-1.5
SHL				*e*S	Sn	08 36 59.2	-5.1
TEZP	TEZPUR	3.83	341	*e*P	Pn	08 36 30.3	-1.8
TEZP				*e*S	Sn	08 37 10.2	-5.9
TEZP				IAML		08 37 12.6	
	comp=E,2μm,0.1s						
TEZP				IAML		08 37 13.4	
	comp=N,1μm,0.1s						
GUWA	GUWAHATI	3.92	325	*e*P	Pn	08 36 31.4	-2.0
GUWA				*e*S	Sn	08 37 13.1	-5.2
CHTO	Chiang Mai	6.08	132	P	Pn	08 37 03.4	+0.9
CHTO				S	Sn	08 38 07.0	-3.7
CHTO	Chiang Mai	6.08	132	Pn	Pn	08 37 03.4	+0.9
CHTO				Sn	Sn	08 38 08.0	-2.7
CM31	Chiang Mai Arr	6.33	135	Pn	Pn	08 37 03.9	-2.1
CMAR	Chiang Mai Arr	6.33	135	P	Pn	08 37 03.6	-2.3
	comp=N,0.5nm,0.3s,baz=313,slow=13,SNR=9.1						
CMAR				S	Sn	08 38 15.4	-1.4
	comp=N,1.4nm,0.3s,baz=314,slow=19,SNR=6.2						
CMAR	Chiang Mai Arr	6.33	135	*i* P	Pn	08 37 03.7	-2.3
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
GTK	Tadong	6.66	311	*e*P	Pn	08 37 10.5	-0.1
GTK				*e*S	Sn	08 38 18.7	-6.3
GTK				IAML		08 38 24.7	
	comp=E,442nm,0.3s						
GTK				IAML		08 38 24.7	
	comp=N,493nm,0.3s						
LSA	Lhasa	7.22	338	P	Pn	08 37 18.1	-0.4
LSA	Lhasa	7.22	338		Pn	08 37 18.1	-0.4
ODAN	Odare	7.29	303	*e*Pn	Pn	08 37 17.3	-1.9
ODAN				*e*Sn	Sn	08 38 33.8	-6.7
	comp=N,534nm,0.3s						
TAPN	Taplejung	7.31	308	*e*Pn	Pn	08 37 18.4	-1.2
TAPN				*e*Sn	Sn	08 38 35.1	-6.0
	comp=N,657nm,0.5s						
RAMN	Ramite	7.94	301	*e*Pn	Pn	08 37 26.1	-2.1
JIRN	Jiri	8.61	304	*e*Pn	Pn	08 37 35.2	-2.1
JIRN				*e*Sn	Sn	08 39 06.3	-6.6
	comp=N,526nm,0.3s						
GUN	Gumba	8.97	305	*e*Pn	Pn	08 37 40.5	-1.8
GUN				*e*Sn	Sn	08 39 14.9	-6.9
	comp=N,680nm,0.5s						
PBKT	Sadao Pong	9.02	134		Pn	08 37 41.5	-1.1
PKI	Pulchoki	9.17	302	*e*Pn	Pn	08 37 42.9	-2.0
PKIN	Phulchoki	9.18	302	*e*Pn	Pn	08 37 42.9	-2.1
PKIN				*e*Sn	Sn	08 39 19.7	-7.0
	comp=N,116nm,0.3s						
KKN	Kakani	9.38	302	*e*Pn	Pn	08 37 46.0	-1.6
DMN	Daman	9.43	301	*e*Pn	Pn	08 37 45.7	-2.6
GKN	Gorkha	9.98	302	*e*Pn	Pn	08 37 53.2	-2.5
GKN				*e*Sn	Sn	08 39 37.1	-8.8
	comp=N,361nm,0.4s						
DANN	Dangsing	10.82	302	*e*Pn	Pn	08 38 04.3	-3.1
DANN				*e*Sn	Sn	08 39 57.5	-9.2
	comp=N,310nm,0.7s						
CD2	Chengdu	11.61	45	P	Pn	08 38 16.4	-1.3
CD2				pmax	pmax		
	comp=N,10.0nm,0.5s						
GYA	Guiyang	11.84	71	P	Pn	08 38 20.3	-0.6
GYA				sP		08 38 45.8	
GYA				S	Sn	08 40 30.0	-1.1
GYA				pmax	pmax		
	comp=N,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=N,110nm,4.3s						
LZH	Lanzhou	15.50	31	*e*P	Pn	08 39 06.3	-2.1
LZH				pP	P	08 39 19.5	+8.9
LZH				*e*PP	pP	08 39 21.8	-7.5
LZH				sP	sP	08 39 32.3	-10
LZH				pmax	pmax		
	comp=N,23nm,1.0s						
LZH				pmax	pmax		
	comp=N,72nm,4.7s						
GTA	Gaotai	17.05	15	*e*P	P	08 39 31.5	+3.8
GTA				pP	pP	08 39 41.9	-4.5
GTA				sP	sP	08 39 46.3	-13
KCSI	Kotacane, Aceh	19.66	169	P	P	08 39 52.1	-4.2
	comp=N,12nm,0.8s						
PALK	Pallekele	20.32	222	P	Pn	08 40 05.5	-0.9
	comp=N,2.9nm,0.6s,baz=34,slow=9.6,SNR=2.2						
PALK	Pallekele	20.32	222	P	Pn	08 40 06.2	-0.2
PALK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PALK	Pallekele	20.32	222	P	Pn	08 40 06.2	-0.2
PSI	Prapat	20.59	166	P	Pn	08 40 07.1	-2.4
	comp=Z,9.6nm,0.9s,baz=315,slow=10.0,SNR=3.4						
PSI	Prapat	20.59	166	P	Pn	08 40 07.1	-2.4
PSI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
RPSI	Rantau Prapat	20.69	167	P	Pn	08 40 07.2	-3.4
RPSI	Rantau Prapat	20.69	167	P	P	08 40 07.1	-0.2
NIL	Nilore	21.24	305	P	P	08 40 13.6	+0.3
NIL				pmax	pmax		
	comp=Z,17nm,1.0s						
NIL	Nilore	21.24	305	P	P	08 40 13.6	+0.3
NIL				IAmb	IAmb	08 40 23.3	
	comp=Z,17nm,0.9s						
WMQ	Urumqi	21.46	347	*e*P	P	08 40 16.4	+0.9
WMQ				pmax	pmax		
	comp=Z,11nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,79nm,4.3s						
WMQ				LR	LR		
	comp=Z,440nm,29.1s						
WMQ				LR	LR		
	comp=Z,950nm,29.3s						
WMQ	Urumqi	21.46	347	P	P	08 40 16.0	+0.5
WMQ				pmax	pmax		
	comp=Z,12nm,0.8s						
WMQ	Urumqi	21.46	347	P	P	08 40 16.0	+0.5
WMQ				IAmb	IAmb	08 40 20.5	
	comp=Z,12nm,0.8s						
KSH	Kashi	22.61	321	P	P	08 40 28.4	+0.7
KSH				pP	pP	08 40 49.6	+1.9
KSH				PP	sP	08 41 01.1	+0.8
KSH				S	S	08 44 24.0	-4.2
KSH				PcS	PcS	08 47 57.3	+1.0
KSH				pmax	pmax		
	comp=Z,34nm,1.2s						
KSH				pmax	pmax		
	comp=Z,430nm,5.7s						
KSH				LR	LR		
	comp=Z,220nm,9.3s						
KSH				LR	LR		
	comp=Z,400nm,10.8s						
HHC	Hu-ho-hao-te	23.04	35	*e*P	P	08 40 30.9	-1.0
NJ2	Nanjing	23.61	62	*e*P	P	08 40 36.3	-0.8
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
PDGK	Podgornoye	23.66	332	*i* P	P	08 40 38.7	+1.0
PDGK				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ULHL	Ulahol	24.35	326	P	P	08 40 46.1	+2.1
	SNR=26						
BOOM	Boomskoye usch	24.68	326	P	P	08 40 49.0	+2.1
BOOM				pmax	pmax		
	comp=Z,17nm,1.1s						
BOOM	Boomskoye usch	24.68	326	P	P	08 40 49.0	+2.1
BOOM				IAmb	IAmb	08 40 51.1	
	comp=Z,17nm,1.1s						
KBL	Kabul	24.81	303	P	P	08 40 49.5	+1.3
KBL				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KBL	Kabul	24.81	303	P	P	08 40 49.5	+1.3
KBL				IAmb	IAmb	08 40 50.7	
	comp=Z,8.8nm,0.6s						
YHNB	Yeheng	24.90	81	P	P	08 40 48.0	-1.0
YHNB				IAmb	IAmb	08 41 02.3	
	comp=Z,46nm,1.3s						
UCH	Uchtor	25.25	324	P	P	08 40 54.5	+2.1
	SNR=10						
KBK	Karagaybulak	25.32	325	P	P	08 40 55.2	+2.5
	SNR=9.5						
ARSB	Arslanbob	25.52	321	P	P	08 40 55.2	+0.7
ARSB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ARSB	Arslanbob	25.52	321	P	P	08 40 55.2	+0.7
AAK	Ala-Archa	25.54	325	P	P	08 40 57.2	+2.4
	comp=Z,11nm,0.7s,baz=125,slow=6.2,SNR=38						
AAK				LR	LR	08 52 11.8	
	comp=Z,55nm,18.5s,baz=170,slow=39						
AAK	Ala-Archa	25.54	325	P	P	08 40 57.3	+2.6
	SNR=14						
AAK	Ala-Archa	25.54	325	*i* P	P	08 40 56.7	+2.0
AAK				pmax	pmax		
	comp=Z,11nm,0.7s						
AAK	Ala-Archa	25.54	325	P	P	08 40 56.8	+2.0
AAK				IAmb	IAmb	08 40 58.1	
	comp=Z,12nm,0.8s						
FRU1	Bishkek	25.59	325	P	P	08 40 57.6	+2.5
FRU1				pmax	pmax		
	comp=Z,35nm,0.3s						
FRU1	Bishkek	25.59	325	P	P	08 40 57.6	+2.5
MK31	Makanchi Array	25.62	341	*i* P	P	08 40 56.1	+0.9
MK31	Makanchi Array	25.62	341	P	P	08 40 55.8	+0.6
MK31				IAmb	IAmb	08 40 57.5	
	comp=Z,18nm,0.9s						
MKAR	Makanchi Array	25.62	341	P	P	08 40 56.6	+1.3
	comp=Z,17nm,0.7s,baz=147,slow=11,SNR=220						
MKAR				ScP	ScP	08 47 54.5	+0.6
	comp=Z,0.6nm,0.8s,baz=128,slow=2.4,SNR=4.4						
MKAR				LR	LR	08 53 49.0	
	comp=Z,21nm,20.6s,baz=223,slow=43						
MKAR	Makanchi Array	25.62	341	P	P	08 40 55.9	+0.7
AML	Almayashu	25.63	323	P	P	08 40 58.0	+2.2
	SNR=18						
MAKZ	Makanchi	25.73	340	P	P	08 40 57.2	+1.0
MAKZ				pmax	pmax		
	comp=Z,28nm,1.5s						
MAKZ	Makanchi	25.73	340	P	P	08 40 57.2	+1.0
MAKZ				IAmb	IAmb	08 40 59.0	
	comp=Z,28nm,1.5s						
EKS2	Erkin-Say	25.95	324	P	P	08 41 01.2	+2.8
	SNR=9.1						
KSM	Kuching	26.50	142	P	P	08 41 03.6	+0.2
KSM				IAmb	IAmb	08 41 05.5	
	comp=Z,29nm,1.3s						
SONM	Songino Array	26.64	19	P	P	08 41 06.2	+1.7
	comp=Z,0.5nm,0.5s,baz=202,slow=11,SNR=3.9						
SONM				pP	pP	08 41 29.0	+2.2
	comp=Z,1.7nm,0.8s,baz=208,slow=11,SNR=5.4						
SONM				ScP	ScP	08 47 57.8	+0.8
	comp=Z,0.9nm,0.8s,baz=199,slow=5.6,SNR=4.3						
SONM	Songino Array	26.64	19	P	P	08 41 05.9	+1.3
SONM				pmax	pmax		
	comp=Z,2.0nm,1.4s						
SONM	Songino Array	26.64	19	P	P	08 41 05.9	+1.3
ULN	Ulaanbaatar	26.86	19	*i* P	P	08 41 08.6	+2.0
ULN				pmax	pmax		

	comp=Z,1.0nm,0.9s						
DGZ	Jazzator, Alta	27.19	350	i P	P	08 41 10.9	+1.5
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KK31	Karatay Array	28.06	321	P	P	08 41 17.7	+0.6
KK31				pmax	pmax		
	comp=Z,4.0nm,1.4s						
KK31	Karatay Array	28.06	321	P	P	08 41 17.7	+0.6
KKAR	Karatay Array	28.06	321	P	P	08 41 18.4	+1.2
KKAR	Karatay Array	28.06	321	P	P	08 41 18.4	+1.2
KURBB	Kurchatov Arra	30.17	340	P	P	08 41 36.2	+0.5
KURK	Kurchatov	30.22	340	ceP	P	08 41 37.3	+1.1
KURK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KURK	Kurchatov	30.22	340	P	P	08 41 36.9	+0.7
KURK				IAmb	IAmb	08 41 38.0	
	comp=Z,6.2nm,0.7s						
ZAA0	Zalesovo Array	31.72	349	P	P	08 41 50.1	+0.9
ZALV	Zalesovo Beam	31.72	349	P	P	08 41 50.5	+1.3
	comp=Z,1.5nm,0.4s,baz=175,slow=7.9,SNR=8.9						
ZALV	Zalesovo Beam	31.72	349	P	P	08 41 49.7	+0.4
ZALV	Zalesovo Beam	31.72	349	P	P	08 41 49.7	+0.4
BRVK	Borovoye	35.11	335	ceP	P	08 42 20.1	+1.4
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BRVK	Borovoye	35.11	335	P	P	08 42 19.4	+0.6
AB31	Akbulak array	37.59	323	eP	P	08 42 40.8	+0.9
ABKAR	Akbulak array	37.59	323	P	P	08 42 41.4	+1.5
ABKAR	Akbulak array	37.59	323	P	P	08 42 41.7	+1.8
ABKAR				IAmb	IAmb	08 42 42.4	
	comp=Z,5.7nm,1.1s						
ARU	Arti	42.36	331	d iP	P	08 43 20.1	+0.9
ARU						08 45 13.2	
ARU				pmax	pmax		
	comp=Z,15nm,1.6s						
FAKI	Fak Fak	45.16	120	P	P	08 43 41.6	-0.6
FAKI				IAmb	IAmb	08 43 42.4	
	comp=Z,9.1nm,0.7s						
NRIK	Noril'sk	46.53	357	P	P	08 43 52.5	+0.2
	comp=Z,2.8nm,0.5s,baz=152,slow=6.0,SNR=7.9						
NRIK	Noril'sk	46.53	357	i P	P	08 43 53.2	+0.9
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KIV	Kislovodsk	46.94	309	eP	P	08 43 56.7	+0.7
KIV				pmax	pmax		
	comp=Z,13nm,1.1s						
KIV				MLR	MLR		
	comp=Z,132nm,16.0s						
GIRL	Giralia	49.37	155	P	P	08 44 15.9	+1.2
VSR	Storozhevoye	50.65	318	i P	P	08 44 26.4	+2.3
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MTN	Manton Dam	50.75	131	P	P	08 44 23.4	-1.9
FITZ	Fitzroy Crossi	51.10	140	P	P	08 44 27.6	-0.2
KNRA	Kununurra	51.19	135	P	P	08 44 27.6	-0.9
TIXI	Tiksi	52.52	13	P	P	08 44 36.8	-0.9
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TIXI	Tiksi	52.52	13	P	P	08 44 36.8	-0.9
TIXI				IAmb	IAmb	08 44 37.9	
	comp=Z,2.1nm,0.6s						
OBN	Obninsk	53.04	323	eP	P	08 44 42.7	+1.0
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRTR	Keskin Array B	53.38	303	P	P	08 44 45.6	+0.8
	comp=Z,0.5nm,0.5s,baz=106,slow=7.7,SNR=2.4						
BRTR	Keskin Array B	53.38	303	P	P	08 44 45.5	+0.7
SEY	Seymchan	55.42	28	i P	P	08 45 00.1	+1.2
MORW	Morawa	55.87	157	P	P	08 45 03.0	+0.5
AKASG	Malin Array Be	56.80	316	P	P	08 45 08.9	+0.1
	comp=Z,3.8nm,0.5s,baz=81,slow=6.3,SNR=19						
AKASG	Malin Array Be	56.80	316	i P	P	08 45 09.0	+0.1
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AKASG	Malin Array Be	56.80	316	P	P	08 45 09.1	+0.2
AKBB	Malin Array Si	56.80	316	P	P	08 45 08.7	-0.2
AKBB				pmax	pmax		
	comp=Z,8.0nm,0.8s						
AKBB	Malin Array Si	56.80	316	P	P	08 45 08.7	-0.2
AKBB				IAmb	IAmb	08 45 09.6	
	comp=Z,7.6nm,0.8s						
WB0	Warramunga Arr	57.83	134	P	P	08 45 15.1	-1.5
WB0				IAmb	IAmb	08 45 17.4	
	comp=Z,3.9nm,0.5s						
WRA	Warramunga Arr	57.92	134	P	P	08 45 16.9	-0.3
	comp=Z,2.1nm,0.5s,baz=322,slow=7.4,SNR=33						
WRA	Warramunga Arr	57.92	134	i P	P	08 45 16.8	-0.4
WRA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WRA	Warramunga Arr	57.92	134	IAmb	IAmb	08 45 25.9	
	comp=Z,0.1nm,0.8s						
WR0	Warramunga Arr	58.06	134	P	P	08 45 17.8	-0.5
WR0				IAmb	IAmb	08 45 36.4	
	comp=Z,5.7nm,1.4s						
VRI	Vrincioaia	58.37	311	⇓P	P	08 45 21.9	+1.9
VRI	Vrincioaia	58.37	311	⇓P	P	08 45 21.9	+1.9
PLOR	Plostina	58.42	311	⇓P	P	08 45 22.6	+2.2
PLOR	Plostina	58.42	311	⇓P	P	08 45 22.6	+2.2
BIZ	Bicaz	58.78	312	⇑P	P	08 45 23.3	+0.4
MLR	Muntele Rosu	58.93	310	⇑P	P	08 45 26.0	+1.9
MLR	Muntele Rosu	58.93	310	⇑P	P	08 45 26.0	+1.9
MLR	Muntele Rosu	58.93	310	P	P	08 45 25.8	+1.7
DOPR	Dopca	59.30	311	⇓P	P	08 45 28.6	+2.1
BURAR	Bucovina Array	59.37	313	⇓P	P	08 45 28.1	+1.1
BURAR	Bucovina Array	59.37	313	⇓P	P	08 45 28.1	+1.1
BURAR	Bucovina Array	59.37	313	P	P	08 45 28.0	+0.9
BUR08	Bucovina Ar. S	59.38	313	P	P	08 45 27.5	+0.4
BUR08				IAmb	IAmb	08 45 28.7	
	comp=Z,1.7nm,0.7s						
FIA1	FINESS Array S	59.63	329	P	P	08 45 29.2	+0.8
FINES	FINESS Array B	59.63	329	P	P	08 45 28.8	+0.4
	comp=Z,1.6nm,0.6s,baz=87,slow=6.1,SNR=12						
FINES	FINESS Array B	59.63	329	i P	P	08 45 28.7	+0.2
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	FINESS Array B	59.63	329	P	P	08 45 29.1	+0.6
NWAO	Narrogin (SRO)	59.79	158	P	P	08 45 30.2	+0.3
NWAO				pmax	pmax		
	comp=Z,20nm,1.2s						
NWAO	Narrogin (SRO)	59.79	158	P	P	08 45 30.2	+0.3
ARR	Arges	59.85	310	⇑P	P	08 45 31.3	+0.9
AS31	Alice Springs	60.33	138	P	P	08 45 33.6	-0.2
AS31				IAmb	IAmb	08 45 35.4	
	comp=Z,1.7nm,0.6s						
ASAR	Alice Springs	60.33	138	P	P	08 45 33.9	+0.1
	comp=Z,4.0nm,0.6s,baz=320,slow=6.9,SNR=76						
ASAR	Alice Springs	60.33	138	P	P	08 45 33.6	-0.2
ASAR	Alice Springs	60.33	138	P	P	08 45 33.6	-0.2
COEN	Coen	60.38	123	P	P	08 45 34.8	+0.5
COEN				IAmb	IAmb	08 45 50.1	
	comp=Z,11nm,1.4s						
KWP	Kalwaria Pacla	60.97	315	P	P	08 45 39.5	+1.7
KWP				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KWP	Kalwaria Pacla	60.97	315	P	P	08 45 39.5	+1.7
VTS	Vitosha	61.06	307	⇑P	P	08 45 39.7	+0.9
VTS	Vitosha	61.06	307	⇑P	P	08 45 39.7	+0.9
DRGR		61.11	312	⇓P	P	08 45 40.2	+1.3
DRGR		61.11	312	⇓P	P	08 45 40.2	+1.3
GZR	Gura Zlata	61.16	310	⇑P	P	08 45 39.8	+0.5
ARCES	ARCESS Array B	61.23	338	P	P	08 45 40.2	+1.0
	comp=Z,2.1nm,0.7s,baz=111,slow=7.4,SNR=13						
ARCES	ARCESS Array B	61.23	338	P	P	08 45 40.6	+1.3
ARCES	ARCESS Array B	61.23	338	P	P	08 45 40.6	+1.3
ARE0	ARCESS Array S	61.23	338	P	P	08 45 40.9	+1.6
MDVR	Moldovita	61.96	310	⇑P	P	08 45 46.1	+1.4
VYHS	Vyhne	63.59	314	eP	P	08 45 56.2	+0.9
VYHS	Vyhne	63.59	314	eP	P	08 45 56.2	+0.9
PDG	Podgorica	64.01	307	⇓P	P	08 45 57.2	-0.9
VRAC	Vranov	64.97	315	⇓P	P	08 46 05.9	+1.6
VRAC	Vranov	64.97	315	⇓P	P	08 46 05.9	+1.6
NC405	NORSAR Array S	66.55	328	P	P	08 46 14.8	+0.6
NORES	NORESS Array B	66.67	328	P	P	08 46 15.6	+0.6
NORES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NB2	NORSAR Subarra	66.80	328	P	P	08 46 15.9	0.0
	comp=Z,0.9nm,0.5s,baz=85,slow=6.5						
NOA	NORSAR Array B	66.80	328	P	P	08 46 15.7	-0.2
	comp=Z,2.1nm,0.8s,baz=85,slow=6.5,SNR=5.6						
GERES	GERESS Array B	66.92	315	P	P	08 46 17.9	+0.9
	comp=Z,2.2nm,0.5s,baz=77,slow=6.1,SNR=15						
GERES	GERESS Array B	66.92	315	P	P	08 46 17.5	+0.6
GERES	GERESS Array B	66.92	315	P	P	08 46 17.5	+0.6
STAL	STALIGIAL	68.02	312	P	P	08 46 23.7	-0.1
STAL				IAmb	IAmb	08 46 24.9	
	comp=Z,14nm,1.4s						
BBOO	Buckleboo	68.37	143	P	P	08 46 25.8	-0.2
NRCA	Norcia	68.40	309	P	P	08 46 27.3	+0.9
NRCA				IAmb	IAmb	08 46 27.9	
	comp=Z,4.2nm,0.7s						
STKA	Stephens Creek	70.94	139	P	P	08 46 41.7	-0.1
	comp=Z,1.2nm,0.5s,baz=3.4,slow=4.6,SNR=4.8						
STKA	Stephens Creek	70.94	139	P	P	08 46 41.7	-0.1
LBTB	Lobatse	81.86	239	P	P	08 47 45.2	+1.4
LBTB				pmax	pmax		
	comp=Z,14nm,1.4s						
LBTB	Lobatse	81.86	239	P	P	08 47 45.2	+1.4
LBTB				IAmb	IAmb	08 47 48.2	
	comp=Z,14nm,1.4s						
RES	Resolute Bay	82.38	2	P	P	08 47 46.3	+0.7
RES	Resolute Bay	82.38	2	P	P	08 47 46.3	+0.7
INK	Inuvik	82.53	16	P	P	08 47 47.0	+0.5
INK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
INK	Inuvik	82.53	16	P	P	08 47 47.0	+0.5
BOSA	Boshof	83.91	236	P	P	08 47 55.1	+0.7
	comp=Z,2.6nm,1.0s,baz=71,slow=3.4,SNR=4.4						
BOSA	Boshof	83.91	236	P	P	08 47 55.5	+1.1
BOSA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BOSA	Boshof	83.91	236	P	P	08 47 55.5	+1.1
BOSA				IAmb	IAmb	08 48 13.4	
	comp=Z,4.6nm,1.2s						
TORD	Torodi Ar. Bea	87.22	283	P	P	08 48 13.8	+2.8
	comp=Z,1.4nm,1.2s,baz=74,slow=5.1,SNR=3.6						
YKA	Yellowknife Ar	91.77	13	P	P	08 48 30.5	-0.9
	comp=Z,0.2nm,0.6s,baz=329,slow=4.1,SNR=4.0						
YKA	Yellowknife Ar	91.77	13	i P	P	08 48 31.1	-0.3
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	Lajitas Array	125.21	19	PKP	PKiKP	08 54 25.2	+0.1
	comp=Z,0.5nm,0.8s,baz=280,slow=2.2,SNR=3.5						
TXAR	Lajitas Array	125.21	19	PKIKP	PKPdf	08 54 24.3	-0.5
TXAR	Lajitas Array	125.21	19		PKPdf	08 54 24.3	-0.5
ESPN	Las Esperanzas	145.00	357		PKPdf	08 55 02.3	+0.7

ROM 22 08:43:01.2±0.1, 43°.372N±0°.002×12°.536E±0°.003, h6^{km}, ML0.7/2, 2C, Error ellipse: s-maj=0.2km s-min=0.1km az=30.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATFO	Monte Foce - G	0.03	102	P	Pg	08 43 02.5	0.0
ATFO				S	Sg	08 43 03.6	+0.1
ATVO	AVT- Monte Val	0.10	276	P	Pg	08 43 03.6	+0.2
ATVO				S	Sg	08 43 05.5	+0.6
MURB	Monte Urbino	0.11	184	P	Pg	08 43 04.1	+0.5
MURB				AML	AML		
	comp=E,81µm,0.3s						
MURB				AML	AML		
	comp=N,87µm,0.3s						
ATPI	Pietralunga -	0.12	309	P	Pg	08 43 04.2	+0.3
ATPI				S	Sg	08 43 06.5	+0.8
PIEI	Pieia	0.16	360	P	Pg	08 43 05.0	+0.5
PIEI				S	Sg	08 43 07.9	+1.1
PIEI				AML	AML		
	comp=E,32µm,0.2s						
PIEI				AML	AML		
	comp=N,28µm,0.2s						
CPGN	Carpegna, Ital	0.46	340	P	Pg	08 43 04.8	-5.3
CPGN				AML	AML		
	comp=N,204µm,0.9s						
CPGN				AML	AML		
	comp=E,359µm,1.6s						
TERO	Teramo	1.08	133	P	Pn	08 43 28.7	+5.7
VVLD	Villa Vallelon	1.70	152	S	Sg	08 44 01.0	+5.1
CAFR	Castel Frentan	1.76	130	⇑P	Pn	08 43 26.9	-5.2
CAFE	Carife	3.08	139	S	Sn	08 44 27.0	-0.7
MGR	Morigerati	3.94	144	⇑P	Pn	08 44 01.0	-1.2
CELI	Celico	4.96	142	P	Pn	08 44 18.2	+1.8

IDC 22 08:55:53.2±11.0, 7°.12N×93°.72E, h0^{km}, mb3.5/4, mb1 3.6/4, mb1mx3.3/37, mbtmp3.5/4, MS3.2/1, Ms1 3.2/1, ms1mx2.4/39, Error ellipse: s-maj=572.2km s-min=25.4km az=59.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEM	Lembang	19.60	135	LR	LR	09 08 37.3	
	comp=Z,59nm,18.0s,baz=262,slow=39						
H08S3	Diego Garcia H	25.75	236	T	T	09 28 11.4	
	baz=55,slow=76,SNR=9.5						
H08S2	Diego Garcia H	25.75	236	T	T	09 28 21.8	
	baz=55,slow=76,SNR=11						
H08S1	Diego Carcia H	25.77	236	T	T	09 28 21.8	
	baz=55,slow=76,SNR=12						
MKAR	Makanchi Array	40.73	348	P	P	09 03 35.5	-0.4
	0.7nm,0.7s,baz=161,slow=7.7,SNR=8.9						
ZALV	Zalesovo Beam	47.25	353	P	P	09 04 28.2	+0.2
	0.7nm,0.5s,baz=171,slow=10,SNR=3.6						
WRA	Warramunga Arr	48.17	125	P	P	09 04 35.6	-0.1
	0.1nm,0.4s,baz=308,slow=8.1,SNR=1.4						
ASAR	Alice Springs	49.76	129	P	P	09 04 47.8	-0.1
	0.3nm,0.8s,baz=300,slow=7.8,SNR=4.1						

IDC 22 09:24:29.3±8.1, 7°.10N×93°.87E, h0^{km}, mb3.7/4, mb1 3.8/4, mb1mx3.4/55, mbtmp3.7/4, Error ellipse: s-maj=390.9km s-min=30.4km az=57.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S3	Diego Garcia H	25.86	236	T	T	09 56 58.0	
	baz=55,slow=75,SNR=5.9						
H08S2	Diego Garcia H	25.86	236	T	T	09 57 00.3	
	baz=55,slow=75,SNR=8.0						
H08S1	Diego Carcia H	25.88	236	T	T	09 56 48.1	
	baz=55,slow=75,SNR=5.7						
MKAR	Makanchi Array	40.79	348	P	P	09 32 11.4	-0.9
	1.1nm,0.8s,baz=173,slow=8.2,SNR=9.9						
KURBB	Kurchatov Arra	45.23	346	P	P	09 32 48.1	-0.1
	1.7nm,0.7s,baz=171,slow=7.1,SNR=15						
ZALV	Zalesovo Beam	47.29	353	P	P	09 33 05.3	+1.0
	1.1nm,0.6s,baz=188,slow=7.2,SNR=5.4						
WRA	Warramunga Arr	48.03	125	P	P	09 33 10.4	-0.3
	0.1nm,0.4s,baz=306,slow=8.2,SNR=0.5						

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*UCR **22** 09:52:03.9±1.1, 12°.32N×90°.31W, h35^{km}±999^{km}, ML3.5*
*SNET **22** 09:52:03.7±0.8, 12°.32N×90°.31W, h35^{km}±62^{km}, ML3.7*

ISC 22 09:52:04.5±3.7, 12°.3N±0°.1×90°.3W±0°.1, h30^{km}, n33, σ0ˢ.75/47, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	1.47	38	eP	Pn	09 52 28.3	-0.6
LALI	Alcalda de L	1.47	38	eP	Pn	09 52 28.3	-0.6
CEVE	Cerro Verde	1.61	22	eP	Pn	09 52 31.0	-0.1
CEVE				eS	Sn	09 52 52.0	+0.9
CEVE				IAML		09 52 53.6	
	comp=Z,718nm,0.3s						
CEVE	Cerro Verde	1.61	22	eP	Pn	09 52 31.0	-0.1
CEVE				eS	Sn	09 52 52.0	+0.9
CEVE				IAML		09 52 53.6	
	comp=Z,718nm,0.3s						
SBLS	San Blas	1.62	22	eP	Pn	09 52 30.9	-0.4
SBLS				eS	Sn	09 52 52.4	+1.0
SBLS	San Blas	1.62	22	eP	Pn	09 52 30.9	-0.4
SBLS				eS	Sn	09 52 52.4	+1.0
SNJE	San Jose	1.66	22	eP	Pn	09 52 31.6	-0.2
SNJE	San Jose	1.66	22	eP	Pn	09 52 31.6	-0.2
RTR	El Retiro	1.67	21	eP	Pn	09 52 31.9	0.0
RTR	El Retiro	1.67	21	eP	Pn	09 52 31.9	0.0
SNET	Serv Nac Est T	1.68	36	eP	Pn	09 52 31.7	-0.2
SNET				IAML		09 52 32.5	
	comp=Z,455nm,0.3s						
SNET	Serv Nac Est T	1.68	36	eP	Pn	09 52 31.7	-0.2
SNET				IAML		09 52 32.5	
	comp=Z,455nm,0.3s						
LOMA	Loma Larga	1.68	39	eP	Pn	09 52 31.8	-0.1
LOMA				IAML		09 52 32.6	
	comp=Z,698nm,0.3s						
LOMA				eS	Sb	09 52 54.2	-1.4
LOMA	Loma Larga	1.68	39	eP	Pn	09 52 31.8	-0.1
LOMA				IAML		09 52 32.6	
	comp=Z,698nm,0.3s						
LOMA				eS	Sb	09 52 54.2	-1.4
BOQS	Boqueron	1.69	34	eP	Pn	09 52 32.2	0.0
UEES	Universidad Ev	1.70	35	eP	Pn	09 52 31.9	-0.3
UEES	Universidad Ev	1.70	35	eP	Pn	09 52 31.9	-0.3
OPAM	Oficina de Pla	1.72	37	eP	Pn	09 52 32.2	-0.2
OPAM	Oficina de Pla	1.72	37	eP	Pn	09 52 32.2	-0.2
LFRS	El Faro	1.73	42	eP	Pn	09 52 32.5	-0.2
LBRS	Las Brisas	1.83	40	eP	Pn	09 52 33.9	-0.1
COEB	Comit de Eme	2.04	55	eP	Pn	09 52 36.4	-0.6
COEB				eS	Sn	09 53 02.8	+1.3
COEB	Comit de Eme	2.04	55	eP	Pn	09 52 36.4	-0.6
COEB				eS	Sn	09 53 02.8	+1.3
JUCU	Jucuar¡n	2.16	65	eP	Pn	09 52 37.9	-0.6
JUCU				eS	Sn	09 53 05.3	+1.0
JUCU	Jucuar¡n	2.16	65	eP	Pn	09 52 37.9	-0.6
JUCU				eS	Sn	09 53 05.3	+1.0
PACA	Pacayal	2.19	59	eP	Pn	09 52 39.0	-0.1
PACA				eS	Sn	09 53 07.2	+1.9
PACA				IAML		09 53 10.8	
	comp=Z,1µm,0.2s						
PACA	Pacayal	2.19	59	eP	Pn	09 52 39.0	-0.1
PACA				eS	Sn	09 53 07.2	+1.9
PACA				IAML		09 53 10.8	
	comp=Z,1µm,0.2s						
LCY	Lacayo	2.20	60	eP	Pn	09 52 39.6	+0.5
LCY	Lacayo	2.20	60	eP	Pn	09 52 39.6	+0.5
BLLM	Bellamira	2.25	60	eP	Pn	09 52 40.2	+0.3
BLLM	Bellamira	2.25	60	eP	Pn	09 52 40.2	+0.3
LCND	La Caada	2.50	67	eP	Pn	09 52 42.6	-0.6
LCND				eS	Sn	09 53 13.1	+0.4
LCND				IAML		09 53 18.7	
	comp=Z,157nm,0.3s						
LCND	La Caada	2.50	67	eP	Pn	09 52 42.6	-0.6
LCND				eS	Sn	09 53 13.1	+0.4
LCND				IAML		09 53 18.7	
	comp=Z,157nm,0.3s						

JMA 22 09:52:20.8±0.4, 36°.40N×143°.86E, h60^{km}, M3.7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	2.53	255	P	Pn	09 53 00.5	+1.1
ONAJ	Iwakimizuishiy	2.56	287	P	Pn	09 53 01.4	+1.5
JFK	Kawauchi	2.58	293	P	Pn	09 53 01.3	+1.1
JFK				S	Sn	09 53 31.4	+1.0
JHYU	Hitachinakayam	2.64	270	P	Pn	09 53 02.2	+1.2
JHYU				S	Sn	09 53 33.1	+1.3
JHO	Hitachi	2.66	276	P	Pn	09 53 02.2	+1.0
BSO1	Boso 1	2.93	234	P	Pn	09 53 03.8	-0.6
JFT	Otama	3.04	293	P	Pn	09 53 08.6	+2.2
JMK	Ichinoseki	3.30	321	P	Pn	09 53 11.0	+1.1
JMK				eS	Sn	09 53 48.8	+0.9
JRY	Ryogami san	4.03	266	P	Pn	09 53 21.0	+1.0
JRY				eS	Sn	09 54 06.1	+0.2
JOD2	Odawara 2	4.04	255	P	Pn	09 53 21.4	+1.3
MAT	Matsushiro	4.56	273	P	Pn	09 53 29.5	+2.3
MAT				S	Sn	09 54 21.6	+2.7

IDC 22 10:02:08.6±2.4, 7°.11N×93°.66E, h0^{km}, mb3.5/4, mb1 3.6/5, mb1mx3.4/44, mbtmp3.5/5, ML4.1/1, MS2.6/1, Ms1 2.6/1, ms1mx2.3/30, Error ellipse: s-maj=91.5km s-min=30.2km az=62.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	6.77	129	LR	LR	10 06 24.4	
	comp=Z,54nm,21.2s,baz=256,slow=37						
CMAR	Chiang Mai Arr	12.40	24	Pn	Pn	10 05 06.3	-0.2
	0.3nm,0.3s,baz=228,slow=13,SNR=2.0						
H08S3	Diego Garcia H	25.69	236	T	T	10 34 32.7	
	baz=59,slow=74,SNR=3.4						
H08S2	Diego Garcia H	25.70	236	T	T	10 34 34.7	
	baz=59,slow=74,SNR=4.5						
H08S1	Diego Carcia H	25.71	236	T	T	10 34 33.9	
	baz=59						
MKAR	Makanchi Array	40.73	348	P	P	10 09 50.3	-0.9
	0.6nm,0.7s,baz=163,slow=7.7,SNR=7.3						
KURBB	Kurchatov Arra	45.17	346	P	P	10 10 27.2	+0.1
	0.7nm,0.7s,baz=167,slow=6.8,SNR=7.7						
ZALV	Zalesovo Beam	47.25	353	P	P	10 10 44.1	+0.7
	0.4nm,0.3s,baz=189,slow=6.6,SNR=2.7						
ASAR	Alice Springs	49.80	129	P	P	10 11 03.5	-0.1
	0.2nm,0.9s,baz=298,slow=8.0,SNR=2.2						

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*IDC **22** 10:03:10.6±1.6, 5°.97N×81°.94W, h0^{km}, mb3.4/3, mb1 3.9/4, mb1mx3.6/27, mbtmp3.6/4, ML4.2/1, MS3.0/4, Ms1 3.1/4, ms1mx2.7/28, Error ellipse: s-maj=162.9km s-min=24.8km az=58.0*

ISC 22 10:03:11.7±1.0, 5°.32N±0°.09×82°.7W±0°.1, h15^{km}, n28, σ1ˢ.83/26, mb3.6/3, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTAC	Punta Ardita,	5.17	69	eP	Pn	10 04 27.7	-1.0
JTS	Las Juntas de	5.42	336	Pn	Pn	10 04 29.8	-2.3
	7.7nm,0.3s,baz=162,slow=6.9,SNR=189						
JTS				Sn	Sn	10 05 30.7	-3.7
	16nm,0.3s,baz=102,slow=23,SNR=25						
MALC	Bahia Malaga	5.49	103	eP	Pn	10 04 31.3	-1.7
PLMC	San Jos del P	6.39	93	eP	Pn	10 04 43.5	-2.0
YOTC	Yotoco, Valle	6.46	102	eP	Pn	10 04 44.5	-1.9
CBOC	Ciudad Bolivar	6.66	85	eP	Pn	10 04 50.0	+0.7
GCUF	Volcan Galeras	6.70	127	eP	Pn	10 04 49.0	-1.2
CRUC	La Cruz	6.83	123	eP	Pn	10 04 49.4	-2.4
SOTA	Rioblanco	6.84	117	eP	Pn	10 04 52.1	+0.1
PCON	Cinco Dias	6.94	115	eP	Pn	10 04 53.5	+0.1
GUY2C	Guyana, Caldas	7.29	90	eP	Pn	10 04 58.4	+0.2
ANIL	Santa Ana	7.30	96	eP	Pn	10 04 57.5	-0.7
RREF	El Recreo	7.32	93	eP	Pn	10 04 58.8	+0.1
RREF				eP	Pn	10 04 59.5	+0.7
UREC	San Jos de Ur	7.50	71	eP	Pn	10 05 01.4	+0.7
ORTC	Ortega, Tolima	7.54	100	eP	Pn	10 05 01.4	0.0
GARC	Garzon, Huila	7.82	113	eP	Pn	10 05 05.2	-0.1
FLOC	Florencia	7.94	118	eP	Pn	10 05 06.6	-0.1
ZARC	Zaragoza, Cauc	8.07	74	eP	Pn	10 05 09.1	+0.6
SMLC	San Martn de	9.22	67	eP	Pn	10 05 24.7	+0.5
MACC	Macarena, Meta	9.36	109	eP	Pn	10 05 23.5	-2.8
APG	El Apazote	12.29	322	LR	LR	10 10 18.0	
	comp=Z,44nm,20.6s,baz=97,slow=35						
ATAH	Atahualpa	13.09	161	LR	LR	10 10 54.2	
	comp=Z,134nm,19.2s,baz=7.1,slow=34						
CMIG	Matias Romero	16.72	315	Pn	P	10 07 12.4	+4.6
	0.3nm,0.3s,baz=152,slow=10,SNR=7.3						
SJG	San Juan	20.55	50	LR	LR	10 15 53.0	
	comp=Z,28nm,18.6s,baz=219,slow=39						
LPAZ	La Paz	25.85	146	P	P	10 08 45.8	+2.2
	0.9nm,0.9s,baz=350,slow=6.1,SNR=2.3						
LPAZ				LR	LR	10 20 24.5	
	comp=Z,42nm,20.4s,baz=55,slow=40						
H06E1	SOCORRO T-PHAS	30.62	298	T	T	10 41 30.3	
	SNR=10						
NVAR	Mina Array Bea	46.15	321	P	P	10 11 37.3	+1.2
	0.2nm,0.3s,baz=138,slow=5.7,SNR=2.7						
YKA	Yellowknife Ar	61.70	344	P	P	10 13 27.7	-1.4
	0.3nm,0.7s,baz=138,slow=6.9,SNR=4.9						

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*DDA **22** 10:14:17.7, 38°.58N×26°.06E, h7^{km}±3^{km}, ML2.3*
*ISK **22** 10:14:17.9, 38°.62N×26°.13E, h14^{km}, ML2.7/18*
*ATH **22** 10:14:17.7, 38°.58N×26°.12E, h28^{km}±2^{km}, ML2.9/6, Error ellipse: s-maj=3.2km s-min=1.4km az=229.0*
*THE **22** 10:14:19.1, 38°.59N×26°.07E, h16^{km}±1^{km}, ML2.8/6, Error ellipse: s-maj=1.5km s-min=0.7km az=86.0*

ISC 22 10:14:18.2±1.1, 38°.59N±0°.02×26°.12E±0°.02, h16^{km}±9^{km}, n44, σ0ˢ.46/64, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOS	Chios island	0.21	195	P	Pb	10 14 23.9	+0.2
CHOS				S	Sb	10 14 27.2	-0.2
	3µm,0.2s						
CHOS	Chios island	0.21	195	P	Pb	10 14 23.9	+0.2
CHOS				S	Sb	10 14 27.0	-0.4
CHOS				AML	AML	10 14 29.0	
	comp=E,6377µm,0.2s						
CHOS				AML	AML	10 14 29.0	
	comp=N,5319µm,0.2s						
CHOS	Chios island	0.21	195	PG	Pb	10 14 23.9	+0.2
CHOS				SG	Sb	10 14 27.4	0.0

CESE	eme	0.30	152	PG	Pb	10 14 24.9	-0.2
CESE				SG	Sb	10 14 29.6	-0.1
KRBN	Karaburun	0.34	90	PG	Pg	10 14 25.2	0.0
URLA	Izmir	0.44	122	PG	Pb	10 14 27.6	+0.1
URLA				SG	Sb	10 14 34.1	+0.3
URLA	Izmir	0.44	122	*i* P	Pb	10 14 27.4	-0.1
URLA				*i* S	Sb	10 14 34.0	+0.1
URLA				IAML		10 14 36.0	
	comp=N,209nm,0.6s						
URLA				IAML		10 14 37.0	
	comp=E,166nm,0.4s						
PSRA	Psara	0.44	264	P	Pb	10 14 28.2	+0.7
PSRA				S	Sb	10 14 34.3	+0.4
PSRA				AML	AML	10 14 36.1	
	comp=E,2338µm,0.1s						
PSRA				AML	AML	10 14 39.9	
	comp=N,2806µm,0.1s						
FOCM	Foa	0.49	76	PG	Pb	10 14 28.2	-0.2
FOCM				SG	Sg	10 14 34.5	-0.1
SIGR	SIGRI	0.65	341	P	Pg	10 14 30.6	-0.4
SIGR				S	Sn	10 14 41.4	-1.3
	comp=N,2µm,0.5s						
SIGR	SIGRI	0.65	341	P	Pg	10 14 30.9	-0.1
SIGR				S	Sb	10 14 40.8	+0.8
SIGR				AML	AML	10 14 42.6	
	comp=N,3770µm,0.5s						
SIGR				AML	AML	10 14 42.7	
	comp=E,2865µm,0.4s						
SIGR	SIGRI	0.65	341	PG	Pg	10 14 30.8	-0.2
PRK	Paraskevi	0.66	10	P	Pn	10 14 32.5	-0.4
PRK				S	Sn	10 14 42.5	-0.4
	comp=E,2µm,0.4s						
PRK	Paraskevi	0.66	10	P	Pb	10 14 31.8	+0.4
PRK				AML	AML	10 14 43.6	
	comp=N,2388µm,0.5s						
PRK				AML	AML	10 14 44.0	
	comp=E,2147µm,0.3s						
BLCB	Balcova	0.75	106	PG	Pb	10 14 33.1	+0.3
DKL	Dikili	0.78	52	PG	Pb	10 14 33.4	+0.1
DGB	zmir	0.81	132	*i* P	Pg	10 14 33.9	0.0
DGB				*i* S	Sn	10 14 45.3	-1.1
DGB				IAML		10 14 46.0	
	comp=N,156nm,0.4s						
DGB				IAML		10 14 48.0	
	comp=E,178nm,0.2s						
ZEDA	zmir-Bergama	0.83	63	*i* P	Pn	10 14 35.0	-0.2
ZEDA				*i* S	Sn	10 14 47.0	-0.2
ZEDA				IAML		10 14 48.0	
	comp=N,222nm,0.4s						
ZEDA				IAML		10 14 48.0	
	comp=E,134nm,0.4s						
AYVA	Ayvalik	0.84	32	*i* P	Pb	10 14 34.0	-0.4
AYVA				IAML		10 14 50.0	
	comp=N,194nm,0.3s						
AYVA				IAML		10 14 55.0	
	comp=E,108nm,0.6s						
SMG	Samos	1.05	147	P	Pg	10 14 38.1	-0.3
SMG				S	Sn	10 14 53.0	+0.6
	comp=E,810nm,0.4s						
SMG	Samos	1.05	147	P	Pg	10 14 38.2	-0.3
SMG				S	Sn	10 14 52.2	-0.2
SMG				AML	AML	10 14 54.8	
	comp=E,1236µm,0.5s						
SMG				AML	AML	10 14 55.2	
	comp=N,2016µm,0.5s						
BAYC	CANAKKALE_Bayr	1.19	16	*i* P	Pn	10 14 39.5	-0.7
BAYC				IAML	Sn	10 14 56.0	-0.1
	comp=E,62nm,0.1s						
BAYC				*i* S	Sn	10 14 56.0	-0.1
BAYC				IAML		10 14 57.0	
	comp=N,84nm,0.2s						
EZN	Ezine	1.24	7	PN	Pb	10 14 41.4	+0.2
BOZC	Bozcaada	1.25	357	PN	Pn	10 14 40.5	-0.4
BOZC	Bozcaada	1.25	357	*i* P	Pn	10 14 40.5	-0.4
BOZC				IAML		10 14 59.0	
	comp=N,44nm,0.3s						
GCAM	G?zelcaml?	1.25	135	PN	Pg	10 14 42.3	0.0
GCAM	G?zelcaml?	1.25	135	*i* P	Pg	10 14 42.9	+0.6
SKY	Skiros Island	1.26	284	P	Pb	10 14 41.8	+0.2
AKHS	Akhisar	1.35	77	*i* P	Pg	10 14 44.5	+0.3
KARY	Karystos	1.44	248	P	Pn	10 14 43.7	+0.1
KARY				S	Sn	10 15 01.4	-0.7
LIA	Limnos Island	1.49	331	P	Pn	10 14 44.6	+0.3
LIA				S	Sn	10 15 03.0	-0.4
	comp=N,128nm,0.3s						
LIA	Limnos Island	1.49	331	P	Pn	10 14 44.6	+0.3
LIA				AML	AML	10 15 03.0	
	comp=E,287µm,0.3s						
LIA				AML	AML	10 15 08.4	
	comp=N,219µm,0.4s						
AYDB	Zeytinkoy-Aydi	1.53	114	PN	Pb	10 14 46.5	+0.2
APE	Apeiranthos	1.59	197	P	Pn	10 14 46.1	+0.4
APE				S	Sn	10 15 05.9	0.0
	comp=N,82nm,0.3s						
APE	Apeiranthos	1.59	197	PN	Pb	10 14 46.2	-1.0
BALB	Balikesir	1.72	52	PN	Pn	10 14 48.0	+0.6
BODT	Bodrum	1.79	148	PN	Pb	10 14 50.1	-0.5
GELI	Tayfur-Gelibol	1.82	8	PN	Pn	10 14 48.9	+0.1
AOS	Alonnisos	1.84	289	PN	Pn	10 14 49.8	+0.7
LPK	Lapseki	1.84	15	PN	Pn	10 14 49.5	+0.4
SMTH	Samothraki Isl	1.93	346	P	Pn	10 14 50.2	-0.1
SMTH	Samothraki Isl	1.93	346	P	Pn	10 14 50.5	+0.2
KRBG	Karabiga-Canak	2.02	26	PN	Pn	10 14 52.4	+1.0
DAT	Datca	2.19	148	PN	Pn	10 14 54.8	+0.8

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*ANF **22** 10:24:24.2±0.9, 36°.97N×97°.96W, h0^{km}, ML3.9/7, Error ellipse: s-maj=16.5km s-min=6.9km az=40.0*

*NEIC **22** 10:24:25.7±0.8, 37°.08N±0°.04×97°.84W±0°.04, h7^{km}±2^{km}, mb_Lg3.0/71, Error ellipse: s-maj=6.3km s-min=3.2km az=149.0*

ISC 22 10:24:25.5±0.9**, 37°.04N**±0°.03×**97°.87W**±0°.03**, h10**^{km}**, n65, σ0^{s}.97**/57**, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T35A	Sooner Cattle	1.09	96	Pg	Pb	10 24 45.7	-0.8
T35A				Sg	Sg	10 25 00.0	-0.7
U32A	Winter Ranch,	1.12	234	Pg	Pn	10 24 47.0	-0.2
U32A				Sg	Sn	10 25 02.5	-0.3
ADOK	Arcadia Dam	1.44	164	Pn	Pb	10 24 52.7	+0.3
R32A	Long Quarter,	1.53	335		Pn	10 24 52.9	-0.1
OKCFA	Oklahoma City	1.66	168		Pb	10 24 56.1	+0.1
OKCFA				IAmb_Lg		10 25 20.6	
	comp=Z,63nm,0.8s						
OKCSW	OKLAHOMA CITY	1.67	168		Pb	10 24 55.6	-0.7
FNO	Franklin	1.82	168	Pn	Pb	10 24 58.4	-0.5
TUL1	Leonard	2.02	123		Pn	10 25 00.9	+1.4
TUL1	Leonard	2.02	123	P	Pb	10 25 01.3	-0.9
	baz=306						
TUL1				S	Sb	10 25 28.6	+1.1
	baz=306						
W35A	Tecumseh	2.05	157		Pn	10 25 01.0	+1.0
KSU1	Kansas State U	2.29	25	P	Pn	10 25 04.6	+1.4
	baz=206						
CBKS	Cedar Bluff	2.31	321		Pn	10 25 04.1	+0.5
CBKS	Cedar Bluff	2.31	321	P	Pn	10 25 05.3	+1.7
	baz=139						
CBKS				S	Sn	10 25 32.9	+0.9
	baz=139						
WMOK	Wichita Mounta	2.41	198	Pn	Pn	10 25 06.1	+1.1
X34A	Smith Ranch, M	2.43	179		Pn	10 25 06.5	+1.2
U38A	Gravette	2.86	101	Pn	Pn	10 25 12.1	+0.9
U38A				IAmb_Lg		10 25 57.1	
	comp=Z,56nm,0.9s						
HHAR	Hobbs	3.25	102	Pn	Pn	10 25 17.1	+0.6
HHAR				IAmb_Lg		10 26 11.4	
	comp=Z,47nm,0.8s						
S39A	Bolivar	3.68	78	Pn	Pn	10 25 23.0	+0.5
N33A	J Bar K, Exete	3.71	5	Pn	Pn	10 25 22.9	0.0
Z35A	Perchaven, San	3.73	172	Pn	Pn	10 25 24.3	+1.1
AMTX	Amarillo	3.77	236	Pn	Pn	10 25 23.8	+0.1
AMTX				IAmb_Lg		10 26 30.8	
	comp=Z,34nm,0.7s						
W39A	Magazine	3.79	118	Pn	Pn	10 25 24.1	+0.2
W39A				IAmb_Lg		10 26 30.3	
	comp=Z,42nm,0.9s						
W39A	Magazine	3.79	118	Pb	Pb	10 25 33.4	+1.0
	baz=301						
U40A	Yellville	4.09	98	Pn	Pn	10 25 28.2	+0.2
U40A	Yellville	4.09	98	S	Sn	10 26 16.2	+0.3
	baz=282						
N35A	Tabor	4.19	24	Pn	Pn	10 25 29.5	+0.1
KSCO	Kaye Shedlock'	4.24	299	Pn	Pn	10 25 31.4	+1.1
KSCO				IAmb_Lg		10 26 40.5	
	comp=Z,30nm,0.7s						
P38A	Dawn	4.28	52	Pn	Pn	10 25 30.9	+0.3
P38A				IAmb_Lg		10 26 41.3	
	comp=Z,23nm,0.7s						
MIAR	Mount Ida	4.29	124	Pn	Pn	10 25 30.6	-0.1
MIAR				IAmb_Lg		10 26 45.2	
	comp=Z,27nm,0.7s						
BGNE	Belgrade	4.37	357	Pn	Pn	10 25 33.6	+1.7
BGNE				IAmb_Lg		10 26 54.9	
	comp=Z,47nm,0.8s						
Z38A	Mt. Pleasant	4.45	147	Pn	Pn	10 25 34.6	+1.6
MGMO	Mountain Grove	4.48	87	Pn	Pn	10 25 34.3	+0.9
R40A	Maddies Statio	4.62	73	Pn	Pn	10 25 36.1	+0.8
R40A				IAmb_Lg		10 26 59.9	
	comp=Z,20nm,0.8s						
ABTX	Abilene, Hawle	4.64	199	Pn	Pn	10 25 36.4	+0.7
FCAR	Ozark Folk Cen	4.77	102	Pn	Pn	10 25 37.9	+0.5
FCAR				IAmb_Lg		10 26 57.3	
	comp=Z,26nm,0.7s						
X40A	Basin Creek Fa	4.82	120	Pn	Pn	10 25 38.5	+0.4
X40A				IAmb_Lg		10 27 01.0	
	comp=Z,20nm,0.7s						
X40A	Basin Creek Fa	4.82	120	S	Sn	10 26 34.8	+0.8
	baz=304						
WHAR	Wooly Hollow	4.84	109	Pn	Pn	10 25 36.6	-1.7
W41B	Gary Mavity, V	4.92	111	Pn	Pn	10 25 39.3	-0.1
W41B				IAmb_Lg		10 27 03.7	
	comp=Z,32nm,0.7s						
UALR	University of	5.02	115	Pn	Pn	10 25 40.6	-0.2
UALR				IAmb_Lg		10 27 08.7	
	comp=Z,23nm,0.7s						
WHTX	Lake Whitney,	5.05	176	Pn	Pn	10 25 42.3	+1.1
WHTX	Lake Whitney,	5.05	176	P	Pn	10 25 42.0	+0.8
	baz=356						
OGNE	Ogallala	5.07	322	Pn	Pn	10 25 42.5	+0.9
WLAR	White Oak Lake	5.13	129	Pn	Pn	10 25 42.4	+0.1
T25A	Trinidad	5.23	273	Pn	Pn	10 25 45.3	+1.4
237A	Washetta, Mont	5.30	161	Pn	Pn	10 25 45.2	+0.5
237A				IAmb_Lg		10 27 27.5	
	comp=Z,22nm,0.8s						
CCM	Cathedral Cave	5.36	77	IAmb_Lg		10 27 12.8	
	comp=Z,18nm,0.8s						
LCAR	Lake Charles	5.49	98	Pn	Pn	10 25 47.2	-0.1
LCAR				IAmb_Lg		10 27 19.9	
	comp=Z,22nm,0.9s						
Z41A	Richland Creek	5.61	131	IAmb_Lg		10 27 35.4	
	comp=Z,23nm,0.9s						
Z41A	Richland Creek	5.61	131	S	Sn	10 26 51.8	-1.6
	baz=314						
K31A	O'Neill	5.62	353	Pn	Pn	10 25 49.9	+0.8
K31A				IAmb_Lg		10 27 37.1	
	comp=Z,35nm,0.8s						
NATX	Nacogdoches	5.90	152	S	Sn	10 26 59.3	-1.2
	baz=335						
PBMO	Poplar Bluff	5.97	90	Pn	Pn	10 25 51.6	-2.2
PBMO				IAmb_Lg		10 27 36.6	
	comp=Z,25nm,0.8s						
Q24A	Divide	6.06	291	S	Sn	10 27 03.2	-1.8
	baz=106						
SDCO	Great Sand Dun	6.12	279	Pn	Pn	10 25 57.0	+0.8
435B	Jarrell	6.25	178	IAmb_Lg		10 27 49.0	
	comp=Z,22nm,0.8s						
N41A	Harden Midland	6.58	54	IAmb_Lg		10 27 54.1	
	comp=Z,23nm,1.0s						
P43A	Skaggs, Pawnee	7.06	66	IAmb_Lg		10 28 13.3	
	comp=Z,24nm,0.7s						
L40A	Anamosa	7.18	44	IAmb_Lg		10 28 20.2	
	comp=Z,12nm,0.8s						
T45A	Paducah	7.38	87	IAmb_Lg		10 28 18.0	
	comp=Z,27nm,0.7s						
HDIL	Hopedale	7.56	60	IAmb_Lg		10 28 33.1	
	comp=Z,23nm,0.7s						
OLIL	Olney	7.91	75	IAmb_Lg		10 28 52.5	
	comp=Z,24nm,0.9s						
Y22D	IRIS PASSCAL I	7.95	251	IAmb_Lg		10 28 52.0	
	comp=Z,20nm,0.9s						
T47A	Sharon Grove	8.61	87	IAmb_Lg		10 28 57.7	
	comp=Z,14nm,1.0s						
K22A	Casper	8.70	313	IAmb_Lg		10 29 11.1	
	comp=Z,10nm,0.9s						

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*NNC **22** 10:32:15.9±0.8, 42°.92N×78°.77E, h0^{km}±3^{km}, mb2.3, mpv2.8, Error ellipse: s-maj=7.0km s-min=3.1km az=167.0*

*KRNET **22** 10:32:16.4±0.1, 42°.92N×78°.80E, h19^{km}, mb2.4*

*SOME **22** 10:32:16.8, 42°.97N×78°.77E, h10^{km}*

ISC 22 10:32:16.1±1.0**, 42°.91N**±0°.03×**78°.78E**±0°.03**, h11**^{km}±9^{km}**, n28, σ0^{s}.54**/54**, 6C-2D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UZB	Uzynbulak	0.30	36	*e*P	Pg	10 32 22.3	+0.1
	baz=36						
UZB				*e*S	Sg	10 32 26.4	+0.1
	baz=36						
UZB	Uzynbulak	0.30	36	*e*P	Pg	10 32 22.3	+0.1
	5.7nm,0.1s						
UZB				*e*S	Sg	10 32 26.4	+0.1
	78nm,0.1s						
UZB	Uzynbulak	0.30	36	P	Pg	10 32 22.3	+0.1
	5.7nm,0.1s						
UZB				S	Sg	10 32 26.4	+0.1
	78nm,0.1s						
SATY	Saty	0.31	299	*e*P	Pg	10 32 22.8	+0.3
	5.3nm,0.1s						
SATY				*e*S	Sg	10 32 26.4	-0.3
	50nm,0.1s						
SATY	Saty	0.31	299	P	Pg	10 32 22.4	-0.1
	5.3nm,0.1s						
SATY				S	Sg	10 32 26.0	-0.8
	50nm,0.1s						
PRZ	Przheval'sk	0.51	214	⇑*i*P	Pg	10 32 26.2	+0.2
	baz=13						
PRZ				⇑*i*S	Sb	10 32 34.3	-0.3
	baz=13						
KPKS	Kokpek	0.56	353	*e*P	Pg	10 32 27.0	-0.1
	baz=50						
KPKS				*e*S	Sg	10 32 34.5	-0.1
	baz=50						
KPKS	Kokpek	0.56	353	*e*P	Pg	10 32 27.0	-0.1
	56nm,0.1s						
KPKS				*e*S	Sg	10 32 34.4	-0.1
	11nm,0.1s						
PDGK	Podgornoye	0.67	51	P	Pg	10 32 28.7	-0.4
	0.7nm,0.2s						
PDGK				S	Sg	10 32 37.2	-0.7
	3.4nm,0.4s						
ANVS	Anan'yevo	0.83	262	⇑*i*P	Pg	10 32 32.0	-0.1
	baz=61						
ANVS				⇑*i*S	Sb	10 32 43.8	0.0
	baz=61						
KOTS	Kotyrbulak	1.27	286	*e*P	Pn	10 32 40.2	+0.4
	baz=85						
KOTS				*e*S	Sg	10 32 56.9	+0.1
	baz=85						
KOTS	Kotyrbulak	1.27	286	*e*P	Pn	10 32 40.2	+0.4
	2.1nm,0.2s						
KOTS				*e*S	Sg	10 32 57.0	+0.1
	5.7nm,0.2s						
KOTS	Kotyrbulak	1.27	286	P	Pn	10 32 40.2	+0.4
	2.1nm,0.2s						
KOTS				S	Sg	10 32 57.0	+0.1
	5.7nm,0.2s						
MDOK	Medeo	1.30	282	*e*P	Pn	10 32 39.7	-0.5
	1.6nm,0.2s						
MDOK				*e*S	Sb	10 32 56.2	-1.0
	4.9nm,0.3s						
MDOK	Medeo	1.30	282	Pg	Pn	10 32 39.9	-0.4
	1.6nm,0.5s						
MDOK				Lg	Lg	10 32 56.3	
	3.7nm,0.2s						
TNSS	Tian-Shan	1.35	276	*e*P	Pn	10 32 41.7	+0.4
	baz=76						
TNSS				*e*S	Sb	10 32 59.4	+0.3
	baz=76						
TNSS	Tian-Shan	1.35	276	*e*P	Pn	10 32 41.7	+0.4
	0.7nm,0.1s						
TNSS				*e*S	Sb	10 32 59.3	+0.3
	2.6nm,0.3s						
TNSS	Tian-Shan	1.35	276	P	Pn	10 32 41.7	+0.4
	0.7nm,0.1s						
TNSS				S	Sb	10 32 59.3	+0.3
	2.6nm,0.3s						
KDJ	Kajisay	1.42	237	⇓*i*P	Pn	10 32 42.1	+0.2
	baz=37						
KDJ				⇓*i*S	Sg	10 33 01.7	+0.1
	baz=37						
ARXS	Arharly	1.48	332	*e*P	Pb	10 32 43.5	-0.1
	1.7nm,0.1s						
ARXS				*e*S	Sg	10 33 03.0	-0.6
	2.7nm,0.1s						
ARXS	Arharly	1.48	332	P	Pb	10 32 43.5	-0.1
	1.7nm,0.1s						
ARXS				S	Sg	10 33 03.0	-0.6
	2.7nm,0.1s						
DJR	Jarkent	1.60	27	*e*P	Pb	10 32 45.9	+0.2
	0.3nm,0.3s						
DJR				*e*S	Sg	10 33 07.0	-0.6
	18nm,0.4s						
KTBS	Karatobe	1.73	298	*e*P	Pb	10 32 48.3	+0.4
	1.0nm,0.2s						
KTBS				*e*S	Sg	10 33 10.8	-0.9
	6.8nm,0.3s						
KTBS	Karatobe	1.73	298	P	Pb	10 32 48.3	+0.4
	1.0nm,0.2s						
KTBS				S	Sg	10 33 10.8	-0.9
	6.8nm,0.3s						
KUU	Kurty	2.03	300	*e*P	Pb	10 32 53.3	+0.3
	0.9nm,0.1s						
KUU				*e*S	Sb	10 33 19.7	+1.4
	4.5nm,0.2s						
KUU	Kurty	2.03	300	Pg	Pb	10 32 53.3	+0.3
	0.8nm,0.2s						
KUU				Lg	Lg	10 33 19.5	
	5.6nm,0.2s						
BOOM	Boomskoye usch	2.13	260	⇑*i*P	Pb	10 32 53.9	-0.9
	baz=60						
BOOM				⇑*i*S	Sb	10 33 21.5	+0.1
	baz=60						
KAPS	Kapalarasan	2.41	10	*e*P	Pb	10 33 00.4	+0.8
	0.2nm,0.2s						
KAPS				*e*S	Sg	10 33 31.8	-1.8
	2.4nm,0.2s						

IDC 22 10:39:28.6±3.6**, 6°.91N**×**93°.56E, h0**^{km}**, mb3.7**/5**, mb1 3.9**/5**, mb1mx3.5**/41**, mbtmp3.7**/5**, Error ellipse: s-maj=145.6km s-min=25.6km az=59.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S3	Diego Garcia H	25.50	236	T	T	11 11 58.2	
	baz=55,slow=75,SNR=6.2						
H08S2	Diego Garcia H	25.50	236	T	T	11 11 59.9	
	baz=55,slow=75,SNR=7.7						
H08S1	Diego Carcia H	25.52	236	T	T	11 12 00.9	
	baz=55,slow=75,SNR=6.4						
MKAR	Makanchi Array	40.90	348	P	P	10 47 12.5	-0.1
	1.1nm,0.7s,baz=169,slow=7.4,SNR=10						
SONM	Songino Array	42.23	13	P	P	10 47 23.7	+0.1
	0.2nm,0.4s,baz=181,slow=7.2,SNR=2.1						
KURBB	Kurchatov Arra	45.34	347	P	P	10 47 48.0	-0.4
	0.4nm,0.5s,baz=173,slow=7.7,SNR=3.5						
ZALV	Zalesovo Beam	47.43	353	P	P	10 48 04.8	0.0
	0.6nm,0.4s,baz=187,slow=7.3,SNR=3.8						
WRA	Warramunga Arr	48.19	124	P	P	10 48 11.0	-0.2
	1.0nm,0.3s,baz=306,slow=8.3,SNR=15						

IDC 22 10:51:51.5±7.8**, 7°.12N**×**93°.88E, h0**^{km}**, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.4**/40**, mbtmp3.5**/4**, MS2.9**/4**, Ms1 2.9**/4**, ms1mx2.7**/31**, Error ellipse: s-maj=392.0km s-min=25.7km az=59.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	6.60	130	LR	LR	10 56 35.8	
	comp=Z,100nm,18.4s,baz=289,slow=43						
CMAR	Chiang Mai Arr	12.30	23	LR	LR	10 59 20.5	
	comp=Z,55nm,20.6s,baz=226,slow=36						
PALK	Pallekele	13.08	272	LR	LR	10 58 22.4	
	comp=Z,27nm,20.7s,baz=223,slow=30						
LEM	Lembang	19.48	135	LR	LR	11 05 05.0	
	comp=Z,53nm,18.6s,baz=218,slow=41						
H08S3	Diego Garcia H	25.88	236	T	T	11 24 24.4	
	baz=55,slow=76,SNR=18						
H08S2	Diego Garcia H	25.88	236	T	T	11 24 22.1	
	baz=55,slow=76,SNR=16						
H08S1	Diego Carcia H	25.90	236	T	T	11 24 25.9	
	baz=55,slow=76,SNR=10						
MKAR	Makanchi Array	40.77	348	P	P	10 59 34.0	-0.4
	0.8nm,0.6s,baz=168,slow=7.2,SNR=12						
ZALV	Zalesovo Beam	47.27	353	P	P	11 00 26.9	+0.5
	0.8nm,0.4s,baz=173,slow=6.6,SNR=2.7						
WRA	Warramunga Arr	48.04	125	P	P	11 00 33.9	+0.9
	0.5nm,1.1s,baz=306,slow=8.3,SNR=1.0						
ASAR	Alice Springs	49.63	129	P	P	11 00 44.1	-1.2
	0.1nm,0.4s,baz=305,slow=8.1,SNR=1.8						

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*NIED **22** 11:05:00, 33°.70N×131°.90E, h80^{km}, Mw4.3 Best double couple: M$_0$3.60000×10^{15} NP1:ϕ_s351.00000°, δ60.00000°, λ80.00000°. NP2:ϕ_s190.00000°, δ31.00000°, λ107.00000°.*

*BJI **22** 11:05:33.2±0.0, 33°.44N×132°.47E, h87^{km}, mB4.8/29, mb4.5/43, Ms4.4/8, Ms7 4.3/3*

*MOS **22** 11:05:37.7±1.0, 33°.62N×131°.74E, h87^{km}, mb4.5/25, Error ellipse: s-maj=8.9km s-min=5.2km az=100.6*

*IDC **22** 11:05:39.1±0.4, 33°.71N×131°.77E, h83^{km}±3^{km}, mb4.0/19, mb1 4.2/24, mb1mx4.1/38, mbtmp4.3/24, MS3.2/8, Ms1 3.2/8, ms1mx2.9/39, Error ellipse: s-maj=10.4km s-min=6.6km az=125.0*

*NEIC **22** 11:05:39.3±2.1, 33°.66N±0°.06×131°.86E±0°.06, h86^{km}±6^{km}, mb4.6/81, Error ellipse: s-maj=9.1km s-min=6.8km az=151.0*

*JMA **22** 11:05:39.0, 33°.68N×131°.90E, h77^{km}±1^{km}, M4.2 Broadband fault plane solution: P waves. NP1: ϕ_s173.00000°, δ17.00000°, λ87.00000°. NP2: ϕ_s356.00000°, δ73.00000°, λ91.00000°. Principal axes: T Plg62.0000°, Azm267.0000°; N Plg1.0000°, Azm175.0000°; P Plg28.0000°, Azm85.0000°;*

JMA Felt III J1.

ISC 22 11:05:38.9±0.4**, 33°.67N**±0°.03×**131°.91E**±0°.03**, h81**^{km}±3^{km}**, n211, σ1^{s}.24**/231**, mb4.5**/75**, 15C-3D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKI	Kunimi	0.28	263	⇑P	Pn	11 05 51.0	-0.2
JKI				S	Sn	11 05 59.6	-0.6
JKD	Kudamatsu	0.38	356	⇑P	Pn	11 05 51.6	-0.2
JKD				S	Sn	11 06 00.7	-0.7
JNA	Nagahama	0.49	103	⇑P	Pn	11 05 52.5	-0.1
JNA				S	Sn	11 06 02.6	-0.2
JBEP	Beppuamama	0.53	232	⇓P	Pn	11 05 52.9	-0.1
JBEP				S	Sn	11 06 03.2	-0.3
JHM	Kurahashi	0.70	48	⇑P	Pn	11 05 54.5	-0.1
JHM				S	Sn	11 06 06.1	-0.1
UWA2	Uwa jima 2	0.75	127	⇑P	Pn	11 05 54.9	-0.3
UWA2				S	Sn	11 06 06.6	-0.7
JET	Tanbara	0.96	83	⇑P	Pn	11 05 57.4	-0.1
JET				S	Sn	11 06 11.0	-0.4
JNU	Nakatsue	1.02	238	P	Pn	11 05 58.4	+0.1
	892nm,0.3s,baz=92,slow=3.7						
JNU				S	Sn	11 06 12.4	-0.3
	535nm,0.3s,baz=161,slow=21,SNR=22						
JNU	Nakatsue	1.02	238		Pn	11 05 58.3	+0.1
JNU				Sn	Sn	11 06 11.9	-0.8
JKU	Kubokawa	1.03	110	⇑P	Pn	11 05 58.1	-0.2
JKU				S	Sn	11 06 12.6	-0.3
JHT	Toyohira	1.08	23	⇑P	Pn	11 05 59.1	+0.2
JHT				S	Sn	11 06 13.7	-0.3
JTO	Tosashimizu	1.10	137	⇓P	Pn	11 05 58.9	-0.3
JTO				S	Sn	11 06 14.1	-0.3
JHGM	Hagimishima	1.28	330	⇓P	Pn	11 06 01.4	0.0
JHGM				*e*S	Sn	11 06 18.1	-0.2
JGT2	ShimaneMisato	1.48	19	P	Pn	11 06 03.8	-0.1
JGT2				S	Sn	11 06 22.7	-0.1
INU	Inuyama	4.54	67	Pn	Pn	11 06 46.2	+1.1
INU				Sn	Sn	11 07 35.8	-0.8
TJN	Taejon	4.60	307	*i* P	Pn	11 06 45.3	-0.7
KSRS	Korea Array	4.98	320	P	Pn	11 06 51.7	+0.6
	10nm,0.3s,baz=140,slow=14,SNR=202						
KSRS				S	Sn	11 07 46.4	-0.9
	5.2nm,0.3s,baz=142,slow=25,SNR=12						
KSRS				LR	LR	11 09 10.1	
	comp=Z,94nm,18.4s,baz=145,slow=43						
KSAR	Wonju Array Be	4.99	320	P	Pn	11 06 51.3	0.0
KSAR	Wonju Array Be	4.99	320		Pn	11 06 51.3	0.0

KS19	**Wonju Array Si**	**5.05**	**320**		**Pn**	**11 06 51.8**	**-0.2**
KS19				Sn	**Sn**	**11 07 47.4**	**-1.6**
INCN	**Inchon**	**5.74**	**313**	P	**Pn**	**11 07 01.8**	**+0.3**
INCN	**Inchon**	**5.74**	**313**		**Pn**	**11 07 01.8**	**+0.3**
MJB9	**Matsu-Tunnel**	**5.90**	**59**	Pn	**Pn**	**11 07 05.2**	**+1.4**
MAJO	**Matsushiro**	**5.91**	**59**	P	**Pn**	**11 07 05.1**	**+1.3**
MAJO	**Matsushiro**	**5.91**	**59**	Pn	**Pn**	**11 07 05.1**	**+1.3**
MAT	**Matsushiro**	**5.91**	**59**	P	**Pn**	**11 07 05.3**	**+1.5**
MAT				S	**Sn**	**11 08 04.2**	**-5.8**
MJAR	**Matsushiro Arr**	**5.91**	**59**	P	**Pn**	**11 07 05.9**	**+2.1**
	4.4nm,0.3s,baz=246,slow=14,SNR=354						
MJAR				S	**Sn**	**11 08 10.1**	**0.0**
	0.4nm,0.3s,baz=296,slow=23,SNR=2.0						
MJAR				LR	LR	11 09 55.1	
	comp=Z,95nm,20.7s,baz=230,slow=43						
MJAR	**Matsushiro Arr**	**5.91**	**59**	Pn	**Pn**	**11 07 05.0**	**+1.2**
JHJ	**Hachijo jima 2**	**6.61**	**93**	P	**Pn**	**11 07 13.8**	**+0.4**
	56nm,0.3s,baz=69,slow=21,SNR=6.3						
JHJ				S	**Sn**	**11 08 24.5**	**-2.7**
	35nm,0.3s,baz=258,slow=20,SNR=4.2						
JHJ				LR	LR	11 09 44.9	
	comp=Z,209nm,21.7s,baz=112,slow=36						
JHJ2	**Mitsune**	**6.64**	**93**	Pn	**Pn**	**11 07 13.1**	**-0.6**
JOW	**Kunigami**	**7.50**	**206**	S	**Sn**	**11 08 45.3**	**-3.9**
	0.8nm,0.3s,baz=85,slow=21,SNR=7.9						
USA0B	**Ussuriysk Arra**	**10.52**	**0**	P	**Pn**	**11 08 08.5**	**+1.9**
USA0B	**Ussuriysk Arra**	**10.52**	**0**	Pn	**Pn**	**11 08 08.5**	**+1.9**
USRK	**Ussuriysk Ar.**	**10.52**	**0**	P	**Pn**	**11 08 08.1**	**+1.5**
	baz=178,slow=15,SNR=6.2						
USRK				S	**Sn**	**11 09 57.3**	**-5.2**
	baz=159,slow=17,SNR=2.1						
USRK	**Ussuriysk Ar.**	**10.52**	**0**	Pn	**Pn**	**11 08 09.0**	**+2.4**
NJ2	**Nanjing**	**11.10**	**265**	*e*P	**Pn**	**11 08 12.3**	**-2.3**
NJ2				pmax	pmax		
	comp=Z,15nm,0.8s						
CN2	**Changchun**	**11.30**	**335**	*e*P	**Pn**	**11 08 17.8**	**+0.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ERM	**Erimo**	**12.18**	**44**	*i* P	**Pn**	**11 08 30.1**	**+1.0**
YHNB	**Yeheng**	**12.84**	**228**	Pn	**Pn**	**11 08 39.6**	**+1.3**
NACB	**Ninganchiao**	**13.07**	**226**	Pn	**Pn**	**11 08 41.7**	**+0.3**
ASAJ	**Asahikawa**	**13.33**	**35**	P	**Pn**	**11 08 45.4**	**+0.7**
	0.6nm,0.3s,baz=200,slow=13,SNR=7.4						
ASAJ				LR	LR	11 13 16.6	
	comp=Z,111nm,19.7s,baz=344,slow=34						
JKA	**Kamikawa-asahi**	**13.33**	**35**		**Pn**	**11 08 45.4**	**+0.7**
BJT	**Baijiatuau**	**14.10**	**301**	P	**P**	**11 08 58.7**	**-1.2**
BJT	**Baijiatuau**	**14.10**	**301**	P	**P**	**11 08 58.7**	**-1.2**
BJI	**Beijing**	**14.10**	**301**	P	**P**	**11 08 57.8**	**-2.1**
BJI				pmax	pmax		
	comp=Z,37nm,0.9s						
TPUB	**Ta-pu**	**14.31**	**227**	Pn	**Pn**	**11 08 58.5**	**+1.0**
KLR	**Kul'dur**	**15.55**	**360**	P	**P**	**11 09 17.3**	**+1.4**
	0.9nm,0.3s,baz=165,slow=8.7,SNR=25						
KLR	**Kul'dur**	**15.55**	**360**	*i* P	**P**	**11 09 15.8**	**-0.1**
KLR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**17.69**	**300**	*e*P	**P**	**11 09 39.3**	**-0.5**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,40nm,6.7s						
HIA	**Hailar**	**18.02**	**333**	P	**Pn**	**11 09 44.0**	**+0.3**
HIA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HIA	**Hailar**	**18.02**	**333**		**Pn**	**11 09 44.0**	**+0.3**
XAN	**Xi'an**	**19.09**	**278**	P	**Pn**	**11 10 00.8**	**+4.0**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
XAN				pmax	pmax		
	comp=Z,140nm,5.2s						
ENH	**Enshi**	**19.32**	**266**	P	**P**	**11 09 57.5**	**-0.1**
ENH				IAmb	IAmb	11 10 02.7	
	comp=Z,21nm,0.9s						
ZEA	**Zeya**	**20.33**	**352**	*e*P	**P**	**11 10 09.6**	**+1.2**
ZEA				pmax	pmax		
	comp=N,21nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,27nm,0.7s						
GYA	**Guiyang**	**22.96**	**258**	*e*P	**P**	**11 10 36.0**	**-0.8**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LZH	**Lanzhou**	**23.12**	**284**	*e*P	**P**	**11 10 37.4**	**-0.8**
LZH				pP	pP	11 10 56.3	+1.3
LZH				sP	sP	11 11 06.9	+1.8
LZH				*e*PP	**PnPn**	**11 11 12.0**	**+4.7**
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
LZH				pmax	pmax		
	comp=Z,75nm,4.7s						
LZH				LR	LR		
	comp=Z,380nm,11.5s						
LZH				LR	LR		
	comp=Z,380nm,12.0s						
LZH				LR	LR		
	comp=Z,550nm,14.5s						
ULN	**Ulaanbaatar**	**23.43**	**315**	*i* P	**P**	**11 10 40.3**	**-0.7**
ULN				pmax	pmax		
	comp=Z,11nm,0.9s						
ULN	**Ulaanbaatar**	**23.43**	**315**	P	**P**	**11 10 40.5**	**-0.6**
SONM	**Songino Array**	**23.81**	**314**	P	**P**	**11 10 43.9**	**-0.5**
	comp=Z,2.7nm,0.6s,baz=121,slow=9.9,SNR=24						
SONM	**Songino Array**	**23.81**	**314**	P	**P**	**11 10 43.9**	**-0.5**
CD2	**Chengdu**	**23.93**	**271**	P	**P**	**11 10 44.1**	**-1.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KMI	**Kunming**	**26.73**	**259**	P	**P**	**11 11 12.8**	**+1.7**
KMI				pmax	pmax		
	comp=Z,11nm,0.8s						
YAK	**Yakutsk**	**28.41**	**358**	P	**P**	**11 11 24.3**	**-1.2**
	comp=Z,7.1nm,0.4s,baz=30,slow=1.4,SNR=6.0						
YAK	**Yakutsk**	**28.41**	**358**⇑	*e*P	**P**	**11 11 24.5**	**-0.9**
YAK				pmax	pmax		
	comp=Z,57nm,0.8s						
YAK	**Yakutsk**	**28.41**	**358**	P	**P**	**11 11 24.1**	**-1.3**
YAK				IAmb	IAmb	11 11 24.8	
	comp=Z,16nm,0.6s						
SEY	**Seymchan**	**31.99**	**18**	*i* P	**P**	**11 11 57.2**	**+0.2**
CMAR	**Chiang Mai Arr**	**33.09**	**251**	LR	LR	11 25 24.3	
	comp=Z,26nm,18.8s,baz=35,slow=36						
WMQ	**Urumqi**	**35.57**	**300**	*e*P	**P**	**11 12 29.3**	**+0.9**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,160nm,4.9s						
WMQ				LR	LR		
	comp=Z,380nm,29.3s						
WMQ				LR	LR		
	comp=Z,710nm,29.3s						
DGZ	**Jazzator, Alta**	**36.29**	**310**	*i* P	**P**	**11 12 34.3**	**-0.3**
FAKI	**Fak Fak**	**36.39**	**179**	P	**P**	**11 12 35.3**	**-0.2**
TIXI	**Tiksi**	**38.08**	**358**	P	**P**	**11 12 48.0**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TIXI	**Tiksi**	**38.08**	**358**	P	**P**	**11 12 48.0**	**-1.2**
TIXI				IAmb	IAmb	11 12 49.7	
	comp=Z,3.7nm,0.7s						
ZALV	**Zalesovo Beam**	**38.67**	**316**	LR	LR	11 28 46.9	
	comp=Z,54nm,18.0s,baz=153,slow=36						
MK31	**Makanchi Array**	**39.45**	**305**	P	**P**	**11 12 59.6**	**-1.5**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MK31	**Makanchi Array**	**39.45**	**305**	P	**P**	**11 12 59.6**	**-1.5**
MKAR	**Makanchi Array**	**39.45**	**305**	P	**P**	**11 12 59.9**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=94,slow=9.8,SNR=12						
MKAR				pP	**pP**	**11 13 19.9**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=90,slow=11,SNR=5.9						
MKAR				LR	LR	11 30 23.4	
	comp=Z,36nm,18.9s,baz=37,slow=38						
BILL	**Bilibino**	**39.62**	**19**	*e*P	**P**	**11 13 03.2**	**+1.0**
BILL				pmax	pmax		
	comp=Z,11nm,1.4s						
BILL	**Bilibino**	**39.62**	**19**	P	**P**	**11 13 03.0**	**+0.8**
BILL				IAmb	IAmb	11 13 04.3	
	comp=Z,17nm,1.5s						
KURK	**Kurchatov**	**42.02**	**310**	*ce*P	**P**	**11 13 21.6**	**-0.5**
KURK				pmax	pmax		
	comp=Z,54nm,2.5s						
KURK	**Kurchatov**	**42.02**	**310**	P	**P**	**11 13 21.2**	**-0.9**
NRIK	**Noril'sk**	**43.32**	**339**	*i* P	**P**	**11 13 32.7**	**+0.4**
NRIK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
PSI	**Prapat**	**43.49**	**232**	LR	LR	11 32 46.2	
	comp=Z,53nm,18.8s,baz=348,slow=37						
BOOM	**Boomskoye usch**	**44.23**	**298**	P	**P**	**11 13 39.6**	**-0.6**
BOOM				pmax	pmax		
	comp=Z,7.0nm,1.5s						
BOOM	**Boomskoye usch**	**44.23**	**298**	P	**P**	**11 13 39.6**	**-0.6**
KSH	**Kashi**	**44.68**	**294**	P	**P**	**11 13 47.1**	**+3.3**
KSH				pP	pP	11 14 05.0	+1.6
KSH				PP	**PP**	**11 15 34.8**	**+5.4**
KSH				PcS	**PcS**	**11 19 17.1**	**-1.7**
KSH				S	**S**	**11 20 17.1**	**+2.7**
KSH				pmax	pmax		
	comp=Z,22nm,0.8s						
KSH				pmax	pmax		
	comp=Z,230nm,4.2s						
KSH				LR	LR		
	comp=Z,170nm,8.9s						
KSH				LR	LR		
	comp=Z,250nm,10.3s						
KSH				LR	LR		
	comp=Z,220nm,13.5s						
AAK	**Ala-Archa**	**45.26**	**299**	*ce*P	**P**	**11 13 48.2**	**-0.3**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.7s						
AAK	**Ala-Archa**	**45.26**	**299**	P	**P**	**11 13 47.6**	**-0.8**
GSI	**Gunungsitoli**	**45.50**	**232**	P	**P**	**11 13 48.9**	**-1.5**
GAMB	**Gambell**	**45.62**	**31**	P	**P**	**11 13 51.5**	**+0.9**
MTN	**Manton Dam**	**46.26**	**181**	P	**P**	**11 13 55.3**	**-0.9**
ARSB	**Arslanbob**	**46.59**	**297**	P	**P**	**11 13 58.3**	**-0.6**
ARSB				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ARSB	**Arslanbob**	**46.59**	**297**	P	**P**	**11 13 58.3**	**-0.6**
ARSB				IAmb	IAmb	11 13 59.5	
	comp=Z,7.3nm,1.2s						
BRVK	**Borovoye**	**47.22**	**314**	*ce*P	**P**	**11 14 02.9**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,11nm,0.6s						
BRVK	**Borovoye**	**47.22**	**314**	P	**P**	**11 14 02.8**	**-0.6**
BRVK				IAmb	IAmb	11 14 04.1	
	comp=Z,5.1nm,0.7s						
KK31	**Karatay Array**	**48.08**	**300**	P	**P**	**11 14 09.0**	**-1.3**
KK31				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KK31	**Karatay Array**	**48.08**	**300**	P	**P**	**11 14 09.0**	**-1.3**
KK31				IAmb	IAmb	11 14 10.3	
	comp=Z,5.6nm,1.0s						
KKAR	**Karatay Array**	**48.08**	**300**	P	**P**	**11 14 09.3**	**-1.0**
KKAR	**Karatay Array**	**48.08**	**300**	P	**P**	**11 14 09.3**	**-1.0**
ANM	**Nome**	**48.49**	**31**	P	**P**	**11 14 13.3**	**+0.2**
ANM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ANM	**Nome**	**48.49**	**31**	P	**P**	**11 14 13.3**	**+0.2**
COEN	**Coen**	**48.56**	**165**	P	**P**	**11 14 14.1**	**0.0**
COEN				IAmb	IAmb	11 14 15.2	
	comp=Z,4.8nm,0.9s						
KNRA	**Kununurra**	**49.16**	**184**	P	**P**	**11 14 18.4**	**-0.3**
FITZ	**Fitzroy Crossi**	**51.82**	**188**	P	**P**	**11 14 38.5**	**-0.2**
WB0	**Warramunga Arr**	**53.19**	**177**	P	**P**	**11 14 48.1**	**-0.7**
WB0				IAmb	IAmb	11 14 49.3	
	comp=Z,15nm,1.2s						
WRAB	**Tennant Creek**	**53.35**	**177**	*ce*P	**P**	**11 14 50.2**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WRA	**Warramunga Arr**	**53.36**	**177**	P	**P**	**11 14 49.8**	**-0.3**
	comp=Z,7.4nm,0.8s,baz=354,slow=7.7,SNR=9.9						
WRA				PcP	**PcP**	**11 15 56.8**	**+0.2**
	comp=Z,2.0nm,0.7s,baz=349,slow=4.2,SNR=1.5						
WB2	**Warramunga Arr**	**53.36**	**177**	P	**P**	**11 14 49.8**	**-0.3**
WB2				IAmb	IAmb	11 14 50.6	
	comp=Z,9.9nm,0.9s						
IMAR	**Indian Mountai**	**53.44**	**29**	P	**P**	**11 14 51.3**	**+1.1**
ARU	**Arti**	**53.73**	**319**	*c i*P	**P**	**11 14 50.8**	**-1.6**
ARU				S	**S**	**11 22 19.8**	**-0.5**
ARU				SS	**SS**	**11 26 02.4**	**+0.9**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.4s						
ABKAR	**Akbulak array**	**54.12**	**310**	P	**P**	**11 14 54.4**	**-1.0**
ABKAR	**Akbulak array**	**54.12**	**310**	P	**P**	**11 14 54.3**	**-1.0**
ABKAR				IAmb	IAmb	11 14 55.3	
	comp=Z,4.9nm,1.1s						
PPLA	**Purkeypile**	**54.30**	**33**	P	**P**	**11 14 58.2**	**+1.6**
PPLA				IAmb	IAmb	11 14 59.2	
	comp=Z,6.3nm,1.0s						
MLY	**Manley**	**54.75**	**30**	P	**P**	**11 15 00.7**	**+1.0**
MLY				IAmb	IAmb	11 15 01.9	
	comp=Z,2.5nm,0.8s						
CTAO	**Charters Tower**	**55.18**	**164**	P	**P**	**11 15 04.3**	**+1.0**
CTAO	**Charters Tower**	**55.18**	**164**	P	**P**	**11 15 04.3**	**+1.0**
PSA00	**Pilbara Seismi**	**56.12**	**194**	P	**P**	**11 15 09.0**	**-1.0**
IL31		**56.41**	**31**	P	**P**	**11 15 11.7**	**+0.1**
IL31				IAmb	IAmb	11 15 14.4	
	comp=Z,3.9nm,0.8s						
ILAR	**Eielson Array**	**56.41**	**31**	P	**P**	**11 15 11.8**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=265,slow=6.1,SNR=19						
ILAR				pP	**pP**	**11 15 32.0**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=290,slow=9.0,SNR=11						
ILAR	**Eielson Array**	**56.41**	**31**	P	**P**	**11 15 11.7**	**+0.1**
BMAR	**Burnt Mountain**	**56.95**	**27**	P	**P**	**11 15 17.1**	**+1.7**
AS31	**Alice Springs**	**57.05**	**178**	P	**P**	**11 15 16.4**	**-0.1**
ASAR	**Alice Springs**	**57.05**	**178**	P	**P**	**11 15 16.6**	**0.0**
	comp=Z,5.1nm,0.8s,baz=11,slow=12,SNR=71						
ASAR				PcP	**PcP**	**11 16 11.2**	**+0.5**
	comp=Z,1.5nm,0.9s,baz=345,slow=3.3,SNR=3.5						
ASAR	**Alice Springs**	**57.05**	**178**	P	**P**	**11 15 16.1**	**-0.4**
SCRK	**Sand Creek**	**57.79**	**31**	IAmb	IAmb	11 15 23.0	
	comp=Z,6.8nm,0.9s						
EGAK	**Eagle**	**58.82**	**30**	P	**P**	**11 15 28.9**	**+0.4**
BCAR	**Beaver Creek A**	**58.95**	**32**	P	**P**	**11 15 30.7**	**+1.2**
INK	**Inuvik**	**60.82**	**25**	P	**P**	**11 15 42.7**	**+0.6**
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
INK	**Inuvik**	**60.82**	**25**	P	**P**	**11 15 42.7**	**+0.6**
INK				IAmb	IAmb	11 15 43.8	
	comp=Z,3.7nm,0.9s						
EIDS	**Eidsvold**	**61.48**	**160**	P	**P**	**11 15 47.4**	**+0.4**
EIDS				IAmb	IAmb	11 15 47.8	
	comp=Z,4.6nm,1.1s						
SPA0	**Spitsbergen Ar**	**62.24**	**348**	P	**P**	**11 15 51.5**	**-0.1**
C36M	**Paulatuk**	**63.62**	**23**	P	**P**	**11 16 01.6**	**+0.8**
KEV	**Kevo**	**63.73**	**338**	P	**P**	**11 16 00.6**	**-0.9**
KEV				pmax	pmax		
	comp=Z,31nm,1.3s						
KEV	**Kevo**	**63.73**	**338**	P	**P**	**11 16 00.6**	**-0.9**
MORW	**Morawa**	**64.18**	**195**	P	**P**	**11 16 03.9**	**-1.1**
MORW				IAmb	IAmb	11 16 16.3	
	comp=Z,6.1nm,1.0s						
ARCES	**ARCESS Array B**	**64.29**	**338**	P	**P**	**11 16 04.2**	**-1.0**
	comp=Z,1.5nm,0.5s,baz=64,slow=8.5,SNR=19						
ARE0	**ARCESS Array S**	**64.29**	**338**	P	**P**	**11 16 04.1**	**-1.1**
DZM	**Mont Dzumac**	**64.46**	**144**	P	**P**	**11 16 08.1**	**+1.1**
MSF	**Maaselka**	**64.72**	**334**	P	**P**	**11 16 07.3**	**-0.8**
SGF	**Sodankyl**	**64.93**	**336**	P	**P**	**11 16 08.5**	**-0.9**
SGF				pmax	pmax		
	comp=Z,21nm,2.3s						
JOF	**Joensuu**	**65.14**	**330**	P	**P**	**11 16 10.0**	**-0.8**
STKA	**Stephens Creek**	**65.83**	**171**	P	**P**	**11 16 15.8**	**+0.2**
	comp=Z,3.5nm,0.6s,baz=347,slow=5.8,SNR=7.9						
STKA	**Stephens Creek**	**65.83**	**171**	P	**P**	**11 16 15.9**	**+0.3**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
STKA	**Stephens Creek**	**65.83**	**171**	P	**P**	**11 16 15.9**	**+0.3**
KBZ	**Khabaz**	**67.01**	**308**	P	**P**	**11 16 22.1**	**-1.0**
	comp=Z,1.6nm,0.9s,baz=90,slow=7.1,SNR=2.4						
KIV	**Kislovodsk**	**67.05**	**308**	*e*P	**P**	**11 16 23.2**	**-0.4**
KIV				pmax	pmax		
	comp=Z,14nm,1.1s						
RES	**Resolute Bay**	**67.65**	**12**	P	**P**	**11 16 26.9**	**+0.2**
RES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
RES	**Resolute Bay**	**67.65**	**12**	P	**P**	**11 16 26.9**	**+0.2**
RES				IAmb	IAmb	11 16 27.7	
	comp=Z,4.2nm,0.7s						
NWAO	**Narrogin (SRO)**	**67.67**	**193**	P	**P**	**11 16 26.2**	**-1.0**
NWAO				pmax	pmax		
	comp=Z,28nm,1.4s						
NWAO	**Narrogin (SRO)**	**67.67**	**193**	P	**P**	**11 16 26.1**	**-1.0**
FIA1	**FINESS Array S**	**68.00**	**330**	P	**P**	**11 16 27.9**	**-1.2**
FIA1				IAmb	IAmb	11 16 28.8	
	comp=Z,5.5nm,0.8s						
FINES	**FINESS Array B**	**68.00**	**330**	P	**P**	**11 16 28.0**	**-1.0**
	comp=Z,2.7nm,0.5s,baz=70,slow=5.8,SNR=28						
FINES				pP	**pP**	**11 16 48.7**	**-1.3**
	comp=Z,2.3nm,0.8s,baz=57,slow=7.0,SNR=1.6						
FINES	**FINESS Array B**	**68.00**	**330**	*i* P	**P**	**11 16 28.0**	**-1.0**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.5s						
FINES	**FINESS Array B**	**68.00**	**330**	P	**P**	**11 16 28.0**	**-1.0**
DAG	**Danmarks Havn**	**68.30**	**353**	*i* P	**P**	**11 16 30.3**	**-0.4**
	comp=Z,3.2nm,0.7s						
DAG	**Danmarks Havn**	**68.30**	**353**	*i* P	**P**	**11 16 30.3**	**-0.4**
DAG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
YKA	**Yellowknife Ar**	**70.46**	**27**	P	**P**	**11 16 45.0**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=304,slow=5.6,SNR=21						
YKA				pP	**pP**	**11 17 05.5**	**+0.2**
	comp=Z,3.0nm,0.8s,baz=303,slow=5.7,SNR=21						
YKA	**Yellowknife Ar**	**70.46**	**27**	*i* P	**P**	**11 16 45.0**	**+0.7**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**71.97**	**319**	P	**P**	**11 16 52.7**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=49,slow=7.1,SNR=7.2						
AKASG	**Malin Array Be**	**71.97**	**319**	*i* P	**P**	**11 16 53.2**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SUMG	**Summit**	**73.83**	**357**	*i* P	**P**	**11 17 05.0**	**+0.3**
	comp=Z,21nm,0.8s						
SUMG	**Summit**	**73.83**	**357**	*i* P	**P**	**11 17 05.0**	**+0.3**
SUMG				pmax	pmax		
	comp=Z,21nm,0.8s						
SUMG	**Summit**	**73.83**	**357**	P	**P**	**11 17 05.0**	**+0.3**
SUMG				IAmb	IAmb	11 17 06.4	
	comp=Z,8.5nm,0.8s						
NB201	**NORSAR Array S**	**74.01**	**334**	P	**P**	**11 17 04.1**	**-1.4**
NB2	**NORSAR Subarra**	**74.05**	**334**	P	**P**	**11 17 04.3**	**-1.4**
	comp=Z,1.2nm,0.6s,baz=50,slow=5.9						
NOA	**NORSAR Array B**	**74.05**	**334**	P	**P**	**11 17 04.4**	**-1.3**
	comp=Z,1.1nm,0.6s,baz=48,slow=5.7,SNR=5.6						
BRTR	**Keskin Array B**	**75.00**	**308**	P	**P**	**11 17 10.8**	**-0.9**
	comp=Z,1.5nm,0.9s,baz=76,slow=5.2,SNR=5.1						
BRTR	**Keskin Array B**	**75.00**	**308**	*i* P	**P**	**11 17 11.1**	**-0.7**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRTR	**Keskin Array B**	**75.00**	**308**	P	**P**	**11 17 10.6**	**-1.2**
B06A	**Marblemount**	**75.30**	**41**	P	**P**	**11 17 13.6**	**+0.5**
BURAR	**Bucovina Array**	**75.86**	**318**		**P**	**11 17 15.8**	**-0.7**
B08A	**Colville Reser**	**76.57**	**40**	P	**P**	**11 17 21.2**	**+0.8**
B08A				IAmb	IAmb	11 17 22.8	
	comp=Z,5.9nm,1.1s						
WALA	**Waterton Lakes**	**78.99**	**38**	P	**P**	**11 17 34.9**	**+0.9**
WALA				IAmb	IAmb	11 17 36.3	
	comp=Z,4.7nm,0.7s						
WVOR	**Wild Horse Val**	**80.48**	**45**	P	**P**	**11 17 44.2**	**+2.0**
WVOR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WVOR	**Wild Horse Val**	**80.48**	**45**	IAmb	IAmb	11 17 44.7	
	comp=Z,5.2nm,0.9s						
FFC	**Flin Flon**	**80.54**	**28**	*ce*P	**P**	**11 17 42.9**	**+0.9**
FFC				pmax	pmax		
	comp=Z,36nm,1.7s						
FFC	**Flin Flon**	**80.54**	**28**	P	**P**	**11 17 42.5**	**+0.5**
FFC				IAmb	IAmb	11 17 43.6	
	comp=Z,6.7nm,0.8s						
GERES	**GERESS Array B**	**81.15**	**324**	P	**P**	**11 17 44.9**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=35,slow=4.9,SNR=4.0						
GERES	**GERESS Array B**	**81.15**	**324**	P	**P**	**11 17 45.2**	**-0.3**
GERES	**GERESS Array B**	**81.15**	**324**	P	**P**	**11 17 45.2**	**-0.3**
MFID	**Camas Ranch**	**81.51**	**43**	IAmb	IAmb	11 17 50.2	
	comp=Z,7.5nm,1.1s						
PAHR	**Pah Rah Range**	**81.67**	**48**	P	**P**	**11 17 49.1**	**+0.5**
PAHR				IAmb	IAmb	11 17 51.0	
	comp=Z,5.9nm,1.0s						
EGMT	**Eagleton**	**81.76**	**37**	IAmb	IAmb	11 17 50.9	
	comp=Z,10nm,0.9s						
DLMT	**Dillon**	**82.05**	**40**	IAmb	IAmb	11 17 52.9	
	comp=Z,11nm,0.8s						
KVN	**Kaiserville**	**82.86**	**48**	P	**P**	**11 17 56.3**	**+1.5**
KVN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KVN	**Kaiserville**	**82.86**	**48**	P	**P**	**11 17 56.3**	**+1.5**
KVN				IAmb	IAmb	11 17 57.4	
	comp=Z,9.6nm,1.1s						
NVAR	**Mina Array Bea**	**83.12**	**48**	P	**P**	**11 17 57.8**	**+1.6**
	comp=Z,3.0nm,0.7s,baz=295,slow=4.9,SNR=23						
NVAR				pP	**pP**	**11 18 18.8**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=296,slow=4.7,SNR=2.6						
NVAR	**Mina Array Bea**	**83.12**	**48**	P	**P**	**11 17 57.2**	**+1.0**
ELK	**Elko**	**83.53**	**45**	IAmb	IAmb	11 18 01.0	
	comp=Z,2.8nm,0.8s						
NNZ	**Nelson**	**83.73**	**150**	P	**P**	**11 17 58.2**	**-0.4**
LKWY	**Lake**	**83.75**	**40**	IAmb	IAmb	11 18 03.4	
	comp=Z,7.6nm,0.9s						
RLMT	**Red Lodge**	**83.97**	**39**	P	**P**	**11 18 01.5**	**+1.0**
RLMT				IAmb	IAmb	11 18 02.8	
	comp=Z,13nm,1.5s						
TUWZ	**Tuamarina**	**84.14**	**150**	P	**P**	**11 18 00.1**	**-0.6**
LAO	**LASA Array**	**84.42**	**36**	IAmb	IAmb	11 18 04.9	
	comp=Z,9.9nm,1.0s						
R11A	**Troy Canyon, C**	**84.84**	**47**	P	**P**	**11 18 06.0**	**+1.1**
DUG	**Dugway, Tooele**	**85.30**	**44**	P	**P**	**11 18 09.0**	**+1.9**
DUG				pmax	pmax		
	comp=Z,8.0nm,1.3s						
DUG	**Dugway, Tooele**	**85.30**	**44**	IAmb	IAmb	11 18 09.3	
	comp=Z,3.4nm,0.8s						
TPNV	**Topopah Spring**	**85.31**	**48**	IAmb	IAmb	11 18 09.5	
	comp=Z,4.2nm,0.8s						
PD31	**Pinedale Array**	**85.41**	**40**	P	**P**	**11 18 08.3**	**+0.5**
PDAR	**Pinedale Array**	**85.41**	**40**	P	**P**	**11 18 08.3**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=302,slow=1.3,SNR=14						
PDAR	**Pinedale Array**	**85.41**	**40**	P	**P**	**11 18 07.7**	**-0.1**
SHPR	**Sheep Range**	**86.27**	**48**	P	**P**	**11 18 12.7**	**+0.6**
ULM	**Lac du Bonnet**	**86.37**	**28**	P	**P**	**11 18 12.2**	**+0.3**
	comp=Z,8.8nm,0.8s,baz=321,slow=5.0,SNR=20						
ULM				pP	**pP**	**11 18 34.4**	**+0.6**
	comp=Z,3.1nm,0.7s,baz=307,slow=3.9,SNR=4.1						
RSSD	**Black Hills**	**87.34**	**37**	P	**P**	**11 18 18.3**	**+1.2**
RSSD				pmax	pmax		
	comp=Z,10.0nm,1.4s						
RSSD	**Black Hills**	**87.34**	**37**	P	**P**	**11 18 18.3**	**+1.2**
RSSD				IAmb	IAmb	11 18 20.0	
	comp=Z,9.7nm,1.4s						
PV17	**East Wray Mesa**	**88.80**	**43**	P	**P**	**11 18 25.3**	**+1.1**
ISCO	**Idaho Springs**	**89.61**	**41**	P	**P**	**11 18 28.7**	**+0.6**
ISCO				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ISCO	**Idaho Springs**	**89.61**	**41**	P	**P**	**11 18 28.7**	**+0.6**
EYMN	**Ely**	**89.93**	**28**	P	**P**	**11 18 29.8**	**+0.7**
G40A	**Rib Lake**	**92.65**	**28**	P	**P**	**11 18 42.5**	**+0.8**
G40A				IAmb	IAmb	11 18 44.1	
	comp=Z,4.5nm,0.8s						
TXAR	**Lajitas Array**	**98.20**	**47**	P	Pdif	11 19 08.5	+1.1
	comp=Z,0.4nm,0.5s,baz=294,slow=3.0,SNR=7.2						
TXAR				pP	pP	11 19 30.7	+1.4
	comp=Z,0.1nm,0.5s,baz=308,slow=4.4,SNR=2.4						
TXAR	**Lajitas Array**	**98.20**	**47**	P	Pdif	11 19 09.2	+1.8

DJA ***22*** *11:24:19.7±0.3, 6˚S±6˚×11˚2E±˚, h556^{km}±7^{km}, M4.2/13, mb4.1/13, mB4.5/6, MLv4.6/11, Mw(mB)3.7/6*

IDC ***22*** *11:24:21.9±1.0, 6°.09S×112°.50E, h534^{km}±13^{km}, mb3.3/6, mb1 3.5/11, mb1mx3.1/29, mbtmp4.4/11, Error ellipse: s-maj=21.5km s-min=13.5km az=9.0*

NEIC ***22*** *11:24:21.1±1.3, 6°.0S±0°.1×112°.4E±0°.1, h529^{km}±10^{km}, mb4.2/24, Error ellipse: s-maj=18.4km s-min=15.9km az=188.0*

ISC 22 11:24:21.4±0.6**, 5°.98S**±0°.09×**112°.35E**±0°.07**, h550**^{km}**, n64, σ1°.52**/68**, mb4.0**/12**, Java Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PWJI	**Pagerwojo**	**2.10**	**195**	P	**P**	**11 25 30.3**	**-1.3**
SMRI	**Semarang**	**2.18**	**241**	P	**P**	**11 25 31.1**	**-0.9**
UGM	**Wanagama**	**2.64**	**223**	P	**P**	**11 25 33.6**	**-0.8**
UGM	**Wanagama**	**2.64**	**223**	P	**P**	**11 25 33.1**	**-1.3**
UGM					**S**	**11 26 29.1**	**-4.6**
JAGI	**Jajag, Banyuwa**	**3.05**	**144**	P	**P**	**11 25 34.8**	**-2.0**
CISI	**Cisompet, Garu**	**4.77**	**251**	P	**P**	**11 25 47.3**	**-2.2**
CISI	**Cisompet, Garu**	**4.77**	**251**	P	**P**	**11 25 47.9**	**-1.6**
CISI					**S**	**11 26 57.9**	**-3.4**
LEM	**Lembang**	**4.78**	**260**	P	**P**	**11 25 49.0**	**-0.7**
	9.4nm,0.3s,baz=353,slow=9.4,SNR=11						
LEM				S	**S**	**11 27 00.7**	**-0.9**
	2.7nm,0.3s,baz=294,slow=20,SNR=1.8						
CBJI	**Citeko**	**5.49**	**265**	P	P	11 26 06.0	+10
PLAI	**Plampang**	**6.08**	**118**	P	**P**	**11 25 57.8**	**-3.0**
	0.3nm712nm40nm,0.7s						
KAPI	**Kappang**	**7.43**	**83**	P	**P**	**11 26 12.4**	**-1.2**
	5.0nm,0.3s,baz=274,slow=9.1,SNR=16						
SPSI	**Sidrap Palu**	**7.66**	**75**	P	**P**	**11 26 14.4**	**-1.4**
	0.1nm31nm,0.7s						
KSM	**Kuching**	**7.68**	**345**	P	**P**	**11 26 16.1**	**0.0**
BKSI	**Bulukumba**	**7.76**	**86**	P	**P**	**11 26 16.1**	**-0.7**

	0.1nm407nm33nm,0.7s						
KASI	Kota Agung	7.83	273	P	P	11 26 15.9	-1.6
WBSI	Waikabubak, Su	7.86	118	P	P	11 26 14.4	-3.5
	0.5nm1µm52nm,0.6s						
BNSI	Bone	7.88	79	P	P	11 26 17.3	-0.7
	0.2nm64nm,1.0s						
XMIS	Christmas Isla	8.00	236	P	P	11 26 18.4	-0.8
LWLI	Liwa	8.31	276	P	P	11 26 22.1	-0.4
	48nm,0.5s						
SBUM	Sibu	8.38	359	P	P	11 26 23.4	+0.4
MNAI	Manna	9.50	279	P	P	11 26 32.7	-1.7
MPSI	Mapaga	9.81	50	P	P	11 26 37.6	+0.1
	26nm,0.6s						
MMRI	Maumere	10.15	106	P	P	11 26 38.3	-2.7
APSI	Ampana	10.56	62	P	P	11 26 49.9	+4.7
SOEI	Soe	12.38	108	P	P	11 27 01.5	-2.6
RPSI	Rantau Prapat	15.94	302	P	P	11 27 41.3	+0.8
PSI	Prapat	16.00	303	P	P	11 27 41.2	0.0
	3.1nm,0.3s,baz=137,slow=8.1,SNR=7.7						
KULM	Kulim	16.18	314	P	P	11 27 42.6	-0.2
KULM				IAmb	IAmb	11 27 49.6	
	comp=Z,7.8nm,1.1s						
TNTI	Ternate	16.42	66	P	P	11 27 44.3	-0.8
GSI	Gunungsitoli	16.43	296	P	P	11 27 35.6	-10
COCO	West Island	16.51	247	P	P	11 27 47.4	+1.6
PSA00	Pilbara Seismi	17.11	156	P	P	11 27 51.4	+0.2
PSA00				IAmb	IAmb	11 27 52.3	
	comp=Z,8.4nm,1.1s						
KCSI	Kotacane, Aceh	17.36	303	P	P	11 27 52.5	-1.1
	comp=Z,857nmcomp=Z,14nm,1.2s						
FITZ	Fitzroy Crossi	17.70	134	P	P	11 27 57.0	+0.4
	comp=Z,0.7nm,0.3s,baz=304,slow=6.5,SNR=29						
FITZ	Fitzroy Crossi	17.70	134	P	P	11 27 57.0	+0.4
FITZ				IAmb	IAmb	11 27 57.9	
	comp=Z,6.9nm,1.1s						
TPTI		17.72	301	P	P	11 27 57.2	+0.3
KNRA	Kununurra	18.76	122	P	P	11 28 06.3	-0.1
KNRA				IAmb	IAmb	11 28 23.1	
	comp=Z,8.6nm,0.9s						
SIJI	Sorong	19.55	76	P	P	11 28 13.8	+0.2
	comp=Z,1.6nm,0.3s,baz=271,slow=6.5,SNR=6.3						
MTN	Manton Dam	19.73	112	P	P	11 28 15.8	+0.6
FAKI	Fak Fak	20.07	82	P	P	11 28 18.5	+0.2
FAKI				IAmb	IAmb	11 28 37.5	
	comp=Z,7.5nm,0.8s						
MORW	Morawa	23.23	172	P	P	11 28 47.7	+1.2
WB0	Warramunga Arr	25.43	125	P	P	11 29 06.1	-0.1
WB0				IAmb	IAmb	11 29 06.7	
	comp=Z,3.4nm,0.9s						
WRA	Warramunga Arr	25.48	125	P	P	11 29 06.9	+0.4
	comp=Z,1.3nm,0.7s,baz=307,slow=9.5,SNR=26						
WRA				PcP	PcP	11 32 20.7	+0.9
	comp=Z,0.2nm,0.6s,baz=299,slow=1.1,SNR=1.2						
WRA				S	S	11 32 51.2	-4.2
	comp=Z,0.6nm,0.7s,baz=294,slow=16,SNR=4.8						
WB2	Warramunga Arr	25.49	125	P	P	11 29 06.7	+0.1
WR0	Warramunga Arr	25.65	125	P	P	11 29 07.7	-0.4
WR0				IAmb	IAmb	11 29 09.1	
	comp=Z,2.7nm,0.6s						
ASAR	Alice Springs	27.18	133	P	P	11 29 22.1	+0.5
	comp=Z,1.9nm,0.6s,baz=304,slow=8.2,SNR=29						
ASAR				PcP	PcP	11 32 24.6	+0.8
	comp=Z,0.3nm,0.5s,baz=321,slow=1.3,SNR=1.9						
ASAR				S	S	11 33 20.6	-1.6
	comp=Z,0.5nm,0.8s,baz=320,slow=21,SNR=5.1						
AS31	Alice Springs	27.19	133	P	P	11 29 22.1	+0.5
NWAO	Narrogin (SRO)	27.19	171	P	P	11 29 22.3	+0.9
	comp=Z,3.2nm,0.4s,baz=349,slow=8.4,SNR=12						
NWAO	Narrogin (SRO)	27.19	171	P	P	11 29 22.4	+0.9
NWAO				IAmb	IAmb	11 29 30.5	
	comp=Z,12nm,1.1s						
COEN	Coen	31.34	107	P	P	11 29 57.2	-0.4
COEN				IAmb	IAmb	11 30 11.0	
	comp=Z,3.2nm,1.1s						
BBOO	Buckleboo	34.64	143	P	P	11 30 25.8	+0.5
BBOO				IAmb	IAmb	11 30 45.1	
	comp=Z,1.6nm,0.6s						
STKA	Stephens Creek	37.55	137	P	P	11 30 50.4	+1.0
	comp=Z,1.9nm,0.3s,baz=306,slow=10,SNR=5.5						
STKA	Stephens Creek	37.55	137	P	P	11 30 50.2	+0.9
TOO	Toolangi	43.56	141	P	P	11 31 38.2	+1.1
TOO				IAmb	IAmb	11 31 53.3	
	comp=Z,9.5nm,1.1s						
ARMA	Armidale	44.17	128	P	P	11 31 43.9	+1.8
CAN	Canberra	44.59	136	P	P	11 31 46.4	+1.3
CAN				IAmb	IAmb	11 31 46.7	
	comp=Z,10nm,1.1s						
BKZ	Black Stump Fm	66.27	130	P	P	11 34 16.2	+0.6
MAW	Mawson	69.92	198	P	P	11 34 38.9	+1.8
	comp=Z,2.3nm,0.6s,baz=39,slow=6.5,SNR=2.2						
MAW	Mawson	69.92	198	P	P	11 34 39.1	+1.9
VNDA	Vanda	76.02	170	P	P	11 35 13.5	+1.5
	comp=Z,1.1nm,0.6s,baz=315,slow=7.2,SNR=6.3						
VNDA	Vanda	76.02	170	P	P	11 35 13.3	+1.3
QSPA	South Pole Qui	84.00	180	P	P	11 35 55.2	+1.2
CPUP	Villa Florida	146.36	197	PKPbc	PKiKP	11 43 03.1	-0.9
	comp=Z,0.8nm,0.4s,baz=160,slow=5.8,SNR=3.7						
CPUP	Villa Florida	146.36	197		PKiKP	11 43 03.2	-0.7

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*KRNET **22** 11:46:12.3±0.1, 40°.59N×77°.24E, h8^{km}, mb3.4*
*SOME **22** 11:46:12.2, 40°.68N×77°.33E, h0^{km}*
*NNC **22** 11:46:14.0±2.1, 40°.52N×77°.78E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=14.7km s-min=10.1km az=166.0*
ISC 22 11:46:12.0±2.0**, 40°.65N**±0°.08×**77°.28E**±0°.03**, h4**^{km}±12^{km}**, n71, σ1^{s}79**/111**, 30C-19D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	Naryn	1.25	309	⇓*i*P	Pn	11 46 35.9	-0.6
	baz=11						
NRN				⇓*i*S	Sn	11 46 53.8	-0.1
	baz=11						
KDJ	Kajisay	1.48	357	⇑*i*P	Pg	11 46 41.0	+0.7
	baz=59						
KDJ				⇑*i*S	Sg	11 47 01.8	+2.3
	baz=59						
ULHL	Ulahol	1.77	334	⇑*i*P	Pg	11 46 46.1	+0.1
	baz=36						
ULHL				⇑*i*S	Sg	11 47 11.5	+2.5
	baz=36						
ULHL	Ulahol	1.77	334	P	Pg	11 46 46.1	+0.1
	SNR=43						
PRZ	Przheval'sk	2.01	24	⇓*i*P	Pg	11 46 50.5	0.0
	baz=25						
PRZ				⇓*i*S	Sg	11 47 18.0	+1.4
	baz=25						
KZA	Kyzart	2.09	314	⇓*i*P	Pb	11 46 50.3	-0.4
	baz=15						
KZA				⇓*i*S	Sg	11 47 18.4	-0.8
	baz=15						
KZA	Kyzart	2.09	314	P	Pg	11 46 51.7	-0.4
	SNR=81						
BOOM	Boomskoye usch	2.09	332	⇑*i*P	Pb	11 46 50.8	+0.2
	baz=33						
BOOM				⇑*i*S	Sg	11 47 19.5	+0.2
	baz=33						
ANVS	Anan'yevo	2.15	8	⇑*i*P	Pg	11 46 52.5	-0.6
	baz=8.0						
ANVS				⇑*i*S	Sg	11 47 21.6	+0.6
	baz=8.0						
TNSS	Tian-Shan	2.40	354	*e*P	Pg	11 46 57.7	-0.2
	62nm,0.5s						
TNSS				*e*S	Sg	11 47 30.8	+1.8
	157nm,0.4s						
TNSS	Tian-Shan	2.40	354	Pg	Pg	11 46 57.7	-0.2
	62nm,0.5s						
TNSS				Lg	Lg	11 47 30.8	
	157nm,0.4s						
MDOK	Medeo	2.52	356	*e*P	Pg	11 47 00.4	+0.3
	28nm,0.5s						
MDOK				*e*S	Sg	11 47 34.8	+2.0
	180nm,0.7s						
MDOK	Medeo	2.52	356	Pn	Pg	11 46 59.4	-0.8
	27nm,0.5s						
MDOK				Sn	Sg	11 47 35.1	+2.3
	186nm,0.7s						
MDOK	Medeo	2.52	356	Pg	Pg	11 47 00.4	+0.3
	28nm,0.5s						
MDOK				Lg	Lg	11 47 34.8	
	180nm,0.7s						
ARLS	Aral	2.54	299	⇓*i*P	Pb	11 46 56.8	-1.4
	baz=1.0						
ARLS				⇓*i*S	Sb	11 47 28.9	-0.9
	baz=1.0						
SATY	Saty	2.55	19	*e*P	Pg	11 47 01.1	+0.4
	26nm,0.5s						
SATY				*e*S	Sg	11 47 35.9	+2.1
	128nm,0.5s						
SATY	Saty	2.55	19	Pg	Pg	11 47 01.1	+0.4
	26nm,0.5s						
SATY				Lg	Lg	11 47 35.9	
	128nm,0.5s						
AAA	Alma-Ata	2.57	354	*e*P	Pg	11 47 01.7	+0.5
	42nm,0.1s						
AAA				*e*S	Sg	11 47 37.3	+2.8
	92nm,0.4s						
AAA	Alma-Ata	2.57	354	Pg	Pg	11 47 01.7	+0.5
	42nm,0.1s						
AAA				Lg	Lg	11 47 37.3	
	92nm,0.4s						
KNDC	Almaty	2.57	355	⇓Pg	Pg	11 47 02.7	+1.4
	40nm,0.6s						
KNDC				⇑Sn	Sg	11 47 36.9	+2.3
	205nm,0.5s						
KOTS	Kotyrbulak	2.58	357	*e*P	Pg	11 47 01.7	+0.2
	97nm,0.3s						
KOTS				*e*S	Sg	11 47 37.6	+2.6
	434nm,0.6s						
KOTS	Kotyrbulak	2.58	357	Pg	Pg	11 47 01.7	+0.2
	97nm,0.3s						
KOTS				Lg	Lg	11 47 37.6	
	434nm,0.6s						
KST	Kastek	2.58	338	*e*P	Pg	11 47 01.5	0.0
	32nm,0.6s						
KST				*e*S	Sg	11 47 36.7	+1.7
	51nm,0.5s						
KST	Kastek	2.58	338	Pg	Pg	11 47 01.5	0.0
	32nm,0.6s						
KST				Lg	Lg	11 47 36.7	
	51nm,0.5s						
UCH	Uchtor	2.61	308	⇑*i*P	Pb	11 46 58.0	-1.6
	baz=9.0						
UCH				⇑*i*S	Sb	11 47 31.2	-1.0
	baz=9.0						
UCH	Uchtor	2.61	308	P	Pg	11 47 01.0	-1.0
	SNR=44						
KBK	Karagaybulak	2.66	320	⇑*i*P	Pb	11 46 58.3	-2.0
	baz=21						
KBK				⇑*i*S	Sb	11 47 32.6	-0.7
	baz=21						
KBK	Karagaybulak	2.66	320	P	Pg	11 47 02.4	-0.6
	SNR=12						
UZB	Uzynbulak	2.81	27	*e*P	Pg	11 47 05.2	-0.6
	16nm,0.7s						
UZB				*e*S	Sg	11 47 43.5	+1.3
	81nm,0.6s						
UZB	Uzynbulak	2.81	27	Pg	Pg	11 47 05.2	-0.6
	16nm,0.7s						
UZB				Lg	Lg	11 47 43.5	
	81nm,0.6s						
DGS	Degeres	2.82	337	*e*P	Pg	11 47 05.7	-0.3
	33nm,0.5s						
DGS				*e*S	Sg	11 47 44.1	+1.4
	62nm,0.5s						
DGS	Degeres	2.82	337	Pg	Pg	11 47 05.7	-0.3
	33nm,0.5s						
DGS				Lg	Lg	11 47 44.1	
	62nm,0.5s						
AAK	Ala-Archa	2.88	314	⇑*i*P	Pb	11 47 01.5	-2.5
	baz=16						
AAK				⇑*i*S	Sb	11 47 37.7	-2.0
	baz=16						
AAK	Ala-Archa	2.88	314	P	Pb	11 47 05.5	+1.5
	SNR=20						
AAK	Ala-Archa	2.88	314	⇓Pn	Pb	11 47 04.9	+0.9
	41nm,0.8s						
AAK				⇓Sn	Sg	11 47 46.9	+2.4
	77nm,1.2s						
FRU1	Bishkek	2.93	318	⇓*i*P	Pb	11 47 02.4	-2.4
	baz=19						
FRU1				⇓*i*S	Sb	11 47 39.1	-1.9
	baz=19						
SHLS	Shalkode	2.98	32	*e*P	Pg	11 47 11.6	+2.4
	24nm,0.6s						
SHLS				*e*S	Sg	11 47 54.4	+6.6
	77nm,0.6s						
SHLS	Shalkode	2.98	32	Pg	Pg	11 47 11.6	+2.4
	24nm,0.6s						
SHLS				Lg	Lg	11 47 54.4	
	77nm,0.6s						
KPKS	Kokpek	3.00	20	*e*P	Pg	11 47 08.2	-1.2
	23nm,0.3s						
KPKS				*e*S	Sg	11 47 48.2	-0.1
	120nm,0.5s						
CHMS	Chumysh	3.01	322	⇑*i*P	Pb	11 47 03.8	-2.4
	baz=23						
CHMS				⇑*i*S	Sb	11 47 40.6	-2.7
	baz=23						
CHMS	Chumysh	3.01	322	P	Pg	11 47 08.0	-1.6
	SNR=7.4						
CHMS	Chumysh	3.01	322	⇓Pn	Pb	11 47 07.2	+1.0
	20nm,0.7s						
CHMS				⇓Sn	Sg	11 47 51.7	+2.9
	22nm,0.5s						
AML	Almayashu	3.08	300	⇑*e*P	Pb	11 47 05.2	-2.3
	baz=1.0						
AML				⇑*i*S	Sb	11 47 42.4	-3.2
	baz=1.0						
AML	Almayashu	3.08	300	P	Pb	11 47 06.4	-1.1
	SNR=5.4						
KTBS	Karatobe	3.09	352	*e*P	Pg	11 47 10.1	-1.1
	49nm,0.5s						
KTBS				*e*S	Sg	11 47 51.8	+0.6
	75nm,0.5s						
KTBS	Karatobe	3.09	352	Pg	Pg	11 47 10.1	-1.1
	49nm,0.5s						
KTBS				Lg	Lg	11 47 51.8	
	75nm,0.5s						
PDGK	Podgornoye	3.14	31	Pg	Pg	11 47 11.3	-0.8
	8.4nm,0.5s						
PDGK				Lg	Lg	11 47 53.4	
	49nm,0.7s						
PDGK	Podgornoye	3.14	31	⇑Pn	Pb	11 47 04.7	-3.7
	1.3nm,0.4s						
PDGK				⇑Pg	Pg	11 47 10.7	-1.5
	12nm,0.6s						
PDGK				⇑Lg	Lg	11 47 53.3	
	105nm,0.7s						
CHKK	Chushkaly	3.21	356	*e*P	Pg	11 47 12.5	-0.9
	22nm,0.5s						
CHKK				*e*S	Sg	11 47 56.0	+1.0
	78nm,0.4s						
CHKK	Chushkaly	3.21	356	Pg	Pg	11 47 12.5	-0.9
	22nm,0.5s						
CHKK				Lg	Lg	11 47 56.0	
	78nm,0.4s						
KRBS	Karabastau	3.27	339	*e*P	Pg	11 47 13.8	-0.8
	12nm,0.5s						
KRBS				*e*S	Sg	11 47 57.6	+0.7
	16nm,0.5s						
KRBS	Karabastau	3.27	339	Pg	Pg	11 47 13.8	-0.8
	12nm,0.5s						
KRBS				Lg	Lg	11 47 57.6	
	16nm,0.5s						
EKS2	Erkin-Say	3.31	309	⇑*e*P	Pn	11 47 07.6	+3.0
	baz=10.0						
EKS2				⇑*i*S	Sb	11 47 48.3	-3.6
	baz=10.0						
EKS2	Erkin-Say	3.31	309	P	Pg	11 47 14.4	-0.9
	SNR=6.8						
KUU	Kurty	3.31	348	*e*P	Pg	11 47 13.6	-1.8
	7.1nm,0.3s						
KUU				*e*S	Sg	11 47 57.3	-1.0
	42nm,0.6s						
KUU	Kurty	3.31	348	Pg	Pg	11 47 13.6	-1.8
	7.1nm,0.3s						
KUU				Lg	Lg	11 47 57.3	
	42nm,0.6s						
ARSB	Arslanbob	3.32	283	⇑*i*P	Pn	11 47 07.5	+2.6
	baz=84						
ARSB				⇑*i*S	Sn	11 47 47.3	+2.4
	baz=84						
USP	Ospenovka	3.34	322	P	Pb	11 47 13.8	+2.0
	SNR=18						
SGDS	Sogindy	3.42	326	Pg	Pg	11 47 16.1	-1.5
	28nm,0.6s						
SGDS				Lg	Lg	11 48 01.6	
	13nm,0.6s						
ARXS	Arharly	3.58	6	*e*P	Pg	11 47 19.0	-1.6
	10nm,0.6s						
ARXS				*e*S	Sg	11 48 06.9	0.0
	38nm,0.5s						
ARXS	Arharly	3.58	6	Pg	Pg	11 47 19.0	-1.6
	10nm,0.6s						
ARXS				Lg	Lg	11 48 06.9	
	38nm,0.5s						
MRKS	Merke	3.69	306	*e*P	Pb	11 47 20.2	+2.5
	9.9nm,0.4s						
MRKS				*e*S	Sg	11 48 09.2	-1.2
	27nm,0.5s						
MRKS	Merke	3.69	306	Pg	Pb	11 47 20.2	+2.5
	9.9nm,0.4s						
MRKS				Lg	Lg	11 48 09.2	
	27nm,0.5s						
DJR	Jarkent	4.12	26	*e*P	Pg	11 47 28.3	-2.5
	2.1nm,0.3s						
DJR				*e*S	Sg	11 48 22.7	-1.5
	18nm,0.4s						
DJR	Jarkent	4.12	26	Pg	Pg	11 47 28.3	-2.5
	2.1nm,0.3s						
DJR				Lg	Lg	11 48 22.7	
	18nm,0.4s						
ARK	Arkit	4.17	288	⇓*i*P	Pn	11 47 18.6	+2.1
	baz=88						
ARK				⇓*i*S	Sn	11 48 07.8	+2.0
	baz=88						
KAPS	Kapalarasan	4.87	17	*e*P	Pg	11 47 43.2	-2.2
	3.6nm,0.4s						
KAPS				*e*S	Sg	11 48 48.1	-0.3
	10nm,0.4s						
KAPS	Kapalarasan	4.87	17	Pg	Pg	11 47 43.2	-2.2
	3.6nm,0.4s						
KAPS				Lg	Lg	11 48 48.1	
	10nm,0.4s						
KK31	Karatay Array	5.62	298	⇑Pn	Pb	11 47 47.3	-3.3
	1.4nm,0.5s,baz=114,slow=15,SNR=15						
KK31				⇓Lg	Lg	11 49 18.3	
	13nm,1.0s,baz=104,slow=27,SNR=11						
MAKZ	Makanchi	7.03	27	⇓Pn	Pn	11 47 56.0	+0.4
	0.7nm,0.7s						
MAKZ				⇑Lg	Lg	11 49 59.4	
	1.3nm,0.7s						
MK31	Makanchi Array	7.13	29	⇑Pn	Pn	11 47 59.2	+2.2
	0.5nm,0.6s,baz=205,slow=13,SNR=8.2						
MK31				⇑Lg	Lg	11 50 01.8	
	2.9nm,0.8s,baz=212,slow=28,SNR=5.2						

IDC 22 11:56:38.1±2.0**, 21°.36N**×**95°.32E, h147**^{km}±24^{km}**, mb3.0**/3**, mb1 3.1**/4**, mb1mx2.8**/33**, mbtmp3.3**/4**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.4**/12**, Error ellipse: s-maj=55.7km s-min=18.1km az=49.0, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRDH	Bariadhala	3.65	292	P	Pn	11 57 32.6	-1.2
	42nm,0.3s,baz=260,slow=22,SNR=12						
CMAR	Chiang Mai Arr	4.47	130	P	Pn	11 57 45.8	+1.2
	0.3nm,0.3s,baz=311,slow=13,SNR=5.4						
MKAR	Makanchi Array	27.49	340	P	P	12 02 11.3	+0.7
	0.9nm,0.7s,baz=149,slow=9.6,SNR=8.3						
TLY	Talaya	30.95	10	LR	LR	12 15 03.1	
	comp=Z,42nm,18.6s,baz=91,slow=36						
WRA	Warramunga Arr	56.05	134	P	P	12 06 01.4	-0.6
	0.3nm,0.7s,baz=323,slow=7.4,SNR=5.1						
ASAR	Alice Springs	58.43	138	P	P	12 06 18.3	-0.4
	0.2nm,0.8s,baz=323,slow=7.3,SNR=2.1						

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*VAO **22** 11:58:31.1±0.7, 22°.13S×69°.34W, h135^{km}±5^{km}, mb4.5*
*SJA **22** 11:58:34.4±0.4, 22°.15S×68°.88W, h121^{km}±4^{km}, ML4.0, MW3.9*
*IDC **22** 11:58:34.7±0.5, 22°.17S×68°.70W, h108^{km}±7^{km}, mb3.7/8, mb1 3.9/10, mb1mx3.7/27, mbtmp4.1/10, Error ellipse: s-maj=23.5km s-min=18.7km az=151.0*
*NEIC **22** 11:58:35.2±1.4, 22°.13S±0°.04×68°.94W±0°.09, h120^{km}±5^{km}, Error ellipse: s-maj=11.9km s-min=4.4km az=76.0*
*GUC **22** 11:58:35.3±0.9, 22°.14S×68°.97W, h125^{km}±4^{km}, ML4.2*
ISC 22 11:58:34.8±0.6**, 22°.16S**±0°.03×**68°.90W**±0°.04**, h119**^{km}±5^{km}**, n90, σ1^{s}10**/119**, mb4.0**/7**, 12C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	0.45	182	P	Pn	11 58 53.1	+0.2
	2µm,0.3s,baz=8.0,slow=6.1						
LVC				S	Sn	11 59 05.8	-0.6
	2µm,0.3s,baz=195,slow=20,SNR=80						
LVC	Limon Verde	0.45	182		Pn	11 58 53.0	+0.1
LVC	Limon Verde	0.45	182	*e*P	Pn	11 58 52.7	-0.1
LVC	Limon Verde	0.45	182	*i* P	Pn	11 58 53.1	+0.2
LVC				⇓*e*S	Sn	11 59 05.9	-0.6
LVC				IAML		11 59 06.2	
	comp=Z,5µm,0.4s						
PB09	IPOC Station P	0.48	318	⇑*i*P	Pn	11 58 53.3	+0.5
PB09				*e*S	Sn	11 59 06.5	+0.2
PB09				IAML		11 59 08.9	
	comp=N,8µm,0.2s						
PB09	IPOC Station P	0.48	318		Pn	11 58 53.0	+0.2
PB09				Sn	Sn	11 59 06.7	+0.4
PB09	IPOC Station P	0.48	318	*i* P	Pn	11 58 53.4	+0.6
PB09				*e*S	Sn	11 59 07.0	+0.7
PB09				IAML		11 59 07.1	
	comp=Z,11µm,0.3s						
PB03	IPOC Station P	0.80	278	⇑*i*P	Pn	11 58 55.6	+0.5
PB03				*e*S	Sn	11 59 10.1	-0.3
PB03				IAML		11 59 11.8	
	comp=N,13µm,0.2s						
PB03	IPOC Station P	0.80	278	*i* P	Pn	11 58 55.6	+0.5
PB03				IAML		11 59 12.3	
	comp=Z,10µm,0.1s						
PB06	IPOC Station P	0.83	229	*i* P	Pn	11 58 56.1	+0.7
PB06				*e*S	Sn	11 59 11.8	+0.9
PB06				IAML		11 59 12.6	
	comp=Z,9µm,0.5s						
PB07	IPOC Station P	1.01	295	⇑*i*P	Pn	11 58 57.6	+0.5
PB07				*e*S	Sn	11 59 13.7	-0.2
PB07				IAML		11 59 14.6	
	comp=N,8µm,0.3s						
PB07	IPOC Station P	1.01	295		Pn	11 58 57.0	-0.1
PB07				Sn	Sn	11 59 13.9	0.0
PB07	IPOC Station P	1.01	295	*i* P	Pn	11 58 57.6	+0.5
PB07				IAML		11 59 16.1	
	comp=Z,4µm,0.1s						
PB15	IPOC Station P	1.17	207	⇑*i*P	Pn	11 58 59.6	+0.8
PB15				*e*S	Sn	11 59 17.6	+0.7
PB15	IPOC Station P	1.17	207	Pn	Pn	11 58 59.4	+0.6
PB15				Sn	Sn	11 59 18.0	+1.0
PB15	IPOC Station P	1.17	207	*i* P	Pn	11 58 59.6	+0.8
PB15				*e*S	Sn	11 59 18.5	+1.6
PB04	IPOC Station P	1.17	261	⇑*i*P	Pn	11 58 58.8	+0.1
PB04				*i* S	Sn	11 59 16.8	-0.1
PB04	IPOC Station P	1.17	261		Pn	11 58 59.0	+0.3
PB04				Sn	Sn	11 59 16.9	+0.1
PB04	IPOC Station P	1.17	261	*i* P	Pn	11 58 59.3	+0.6
PB04				*e*S	Sn	11 59 19.0	+2.1
PB01	IPOC Station P	1.24	334	⇑*i*P	Pn	11 58 59.4	+0.1
PB01				*e*S	Sn	11 59 17.7	-0.2
PB01				IAML		11 59 18.9	
	comp=N,6µm,0.2s						
PB01	IPOC Station P	1.24	334		Pn	11 58 59.0	-0.4
PB01				Sn	Sn	11 59 17.7	-0.2
PB01	IPOC Station P	1.24	334	*i* P	Pn	11 58 59.5	+0.1
PB01				IAML		11 59 18.7	
	comp=Z,2µm,0.3s						
PB02	IPOC Station P	1.25	312	⇑*e*P	Pn	11 58 59.7	+0.3
PB02				*i* S	Sn	11 59 17.7	-0.5
PB02				IAML		11 59 19.4	
	comp=E,8µm,0.4s						
PB02	IPOC Station P	1.25	312	*i* P	Pn	11 58 59.8	+0.3
PB02				IAML		11 59 21.1	
	comp=Z,3µm,0.2s						
PB05	IPOC Station P	1.39	240	⇑*i*P	Pn	11 59 01.1	+0.1
PB05				*e*S	Sn	11 59 20.4	-0.6
PB05				IAML		11 59 25.1	
	comp=E,3µm,0.4s						
PB05	IPOC Station P	1.39	240	*i* P	Pn	11 59 01.8	+0.8
PB05				IAML		11 59 23.6	
	comp=Z,2µm,0.2s						
PATCX	Punta Patache	1.77	318	⇑*i*P	Pn	11 59 05.5	0.0
PATCX				*i* S	Sn	11 59 28.2	-0.7
PATCX				IAML		11 59 30.3	
	comp=N,2µm,0.3s						
PATCX				IAML		11 59 32.3	
	comp=E,2µm,0.2s						
PATCX	Punta Patache	1.77	318		Pn	11 59 05.0	-0.5
PATCX				Sn	Sn	11 59 28.5	-0.4

PATCX	Punta Patache	1.77	318	iP	Pn	11 59 05.5	0.0
PATCX				IAML		11 59 33.8	
	comp=Z,1µm,0.2s						
TA01	Diego Aracena	1.98	323	⇑iP	Pn	11 59 07.5	-0.6
TA01				eS	Sn	11 59 32.8	-0.7
TA01				IAML		11 59 34.4	
	comp=N,2µm,0.4s						
PB08	IPOC Station P	2.02	353	⇓eP	Pn	11 59 09.5	+0.6
PB08				iS	Sn	11 59 35.6	+0.7
PB08				IAML		11 59 36.2	
	comp=E,865nm,0.2s						
PB10	IPOC Station P	2.04	228	⇑iP	Pn	11 59 08.7	0.0
PB10				eS	Sn	11 59 33.9	-0.7
PB10	IPOC Station P	2.04	228		Pn	11 59 08.6	-0.1
PB10				Sn	Sn	11 59 33.5	-1.2
PB10	IPOC Station P	2.04	228	iP	Pn	11 59 08.7	0.0
PB10				eS	Sn	11 59 33.4	-1.3
PB10				IAML		11 59 36.4	
	comp=Z,591nm,0.6s						
PB11	IPOC Station P	2.49	343	⇑iP	Pn	11 59 14.1	-0.5
PB11				iS	Sn	11 59 44.2	-0.9
PB11				IAML		11 59 47.4	
	comp=E,1µm,0.2s						
PB11	IPOC Station P	2.49	343		Pn	11 59 14.1	-0.5
PB11				Sn	Sn	11 59 43.9	-1.2
PB11	IPOC Station P	2.49	343	iP	Pn	11 59 14.2	-0.5
PB11				IAML		11 59 48.3	
	comp=Z,532nm,0.5s						
GO01	Chusmiza	2.49	354		Pn	11 59 15.2	+0.3
GO01				Sn	Sn	11 59 45.6	-0.1
PSGCX	Pisagua	2.79	336	Pn	Pn	11 59 17.0	-1.5
PSGCX	Pisagua	2.79	336	iP	Pn	11 59 17.2	-1.3
PSGCX				IAML		11 59 51.4	
	comp=Z,364nm,0.5s						
PB14	IPOC Station P	2.82	209		Pn	11 59 18.4	-0.6
PB14	IPOC Station P	2.82	209	iP	Pn	11 59 18.9	-0.1
PB14				IAML		11 59 58.2	
	comp=Z,595nm,0.2s						
GO02	Mina Guanaco	3.06	192		Pn	11 59 22.3	+0.2
YJA	Yavi	3.13	91	iP	Pn	11 59 25.0	+1.7
YJA				IAML		12 00 04.3	
	comp=Z,16nm,1.0s						
PB12	IPOC Station P	3.77	339		Pn	11 59 29.9	-1.5
PB16	IPOC Station P	3.85	351		Pn	11 59 33.2	+0.4
AZAP	Zapla	4.08	121	iP	Pn	11 59 36.4	+0.8
AZAP				IAML		12 00 31.5	
	comp=Z,18nm,1.4s						
GO03	Copiap	5.55	192	Pn	Pn	11 59 53.5	-1.6
LPAZ	La Paz	5.88	7	P	Pn	12 00 01.8	+1.5
	comp=Z,1.9nm,0.3s,baz=177,slow=9.0,SNR=43						
LPAZ	La Paz	5.88	7	Pn	Pn	12 00 00.9	+0.6
VCA	Vinchina	6.58	175	iP	Pn	12 00 09.6	+0.4
VCA				IAML		12 01 32.9	
	comp=Z,22nm,0.7s						
GO04	Tololo Observa	8.16	192	Pn	Pn	12 00 27.2	-3.5
SIV	San Ignacio	9.61	52	P	Pn	12 00 46.6	-3.5
	comp=Z,3.8nm,0.3s,baz=244,slow=11,SNR=73						
SIV				S	Sn	12 02 26.6	-10
	comp=Z,0.3nm,0.3s,baz=307,slow=20,SNR=1.7						
AQDB	Aquidauana	12.41	85	eP	Pn	12 01 28.1	+0.6
SALV	Santo Antonio	13.95	66	eP	Pn	12 01 47.5	+0.2
TRCB	Terra Rica	15.05	96	eP	Pn	12 02 01.7	+0.3
C2SB	Chapadao do Su	15.42	80	eP	Pn	12 02 06.4	+0.4
PTGB	Pitanga	15.66	103	eP	P	12 02 10.7	+0.1
ITAB	Concordia	16.05	112	eP	P	12 02 14.3	-0.5
PCMB	Pacaembu	16.38	91	eP	P	12 02 18.4	-0.1
CLDB	Colider	16.83	50	eP	Pn	12 02 22.1	-1.3
ARAG	Araguaiana, MT	17.38	71	eP	P	12 02 29.0	-0.6
FRTB	Fartura	17.87	97	eP	P	12 02 34.6	-0.3
PLCA	Paso Flores	18.57	184	eP	P	12 02 37.2	-5.3
BB19B	Bebedouro	18.97	91	eP	P	12 02 46.1	-0.9
IPMB	Ipameri, GO	19.86	82	eP	P	12 02 55.6	-1.2
VAO	Valinhos	20.27	97	eP	P	12 02 60.0	-1.1
BDFB	Brasilia	20.78	75	P	P	12 03 05.9	-0.7
	comp=Z,3.0nm,0.4s,baz=246,slow=9.8,SNR=8.5						
BDFB	Brasilia	20.78	75	P	P	12 03 06.0	-0.7
BDFB				IAmb	IAmb	12 03 07.6	
	comp=Z,6.0nm,0.7s						
BSCB	Bom Sucesso	22.46	92	eP	P	12 03 23.9	-0.4
PTGA	Pitinga	23.00	23	P	P	12 03 29.2	-0.3
	comp=Z,2.3nm,0.3s,baz=202,slow=7.3,SNR=7.1						
PTGA	Pitinga	23.00	23	P	P	12 03 29.1	-0.4
PTGA				IAmb	IAmb	12 03 34.7	
	comp=Z,13nm,1.3s						
PTGA	Pitinga	23.00	23	eP	P	12 03 26.1	-3.3
JANB	Januaria	24.32	77	eP	P	12 03 40.3	-1.3
SMTB	Santa Maria do	24.37	60	eP	P	12 03 39.5	-2.5
RCBR	Riachuelo	35.77	68	P	P	12 05 22.6	-0.1
	comp=Z,12nm,0.9s,baz=245,slow=7.0,SNR=5.2						
SWET	Sewanee	59.30	344	P	P	12 08 24.4	+0.3
TXAR	Lajitas Array	61.17	325	P	P	12 08 38.8	+1.8
	comp=Z,0.2nm,0.6s,baz=144,slow=6.5,SNR=3.7						
TXAR	Lajitas Array	61.17	325	P	P	12 08 37.6	+0.6
QSPA	South Pole Qui	68.04	180	P	P	12 09 23.3	+2.1
PDAR	Pinedale Array	74.68	330	P	P	12 10 03.6	+2.1
	comp=Z,0.3nm,0.5s,baz=147,slow=5.4,SNR=4.8						
ULM	Lac du Bonnet	75.94	343	P	P	12 10 09.2	+1.1
	comp=Z,1.7nm,0.5s,baz=145,slow=5.6,SNR=7.2						
ULM	Lac du Bonnet	75.94	343	P	P	12 10 08.4	+0.2
ULM				IAmb	IAmb	12 10 09.8	
	comp=Z,2.3nm,0.6s						
TORD	Torodi Ar. Bea	77.56	70	P	P	12 10 18.4	+0.3
	comp=Z,0.9nm,0.4s,baz=257,slow=5.7,SNR=10						
YKA	Yellowknife Ar	91.81	341	P	P	12 11 30.3	+1.7
	comp=Z,0.6nm,0.6s,baz=133,slow=4.9,SNR=15						
ASAR	Alice Springs	129.34	207	PKP	PKiKP	12 17 31.3	+0.6
	comp=Z,0.4nm,1.0s,baz=148,slow=1.1,SNR=4.4						
ASAR	Alice Springs	129.34	207		PKiKP	12 17 31.5	+0.8
WRA	Warramunga Arr	132.40	210	PKP	PKiKP	12 17 36.9	0.0
	comp=Z,0.3nm,0.6s,baz=168,slow=1.7,SNR=5.1						
MKAR	Makanchi Array	146.15	36	PKPbc	PKPab	12 18 01.7	-0.3
	comp=Z,0.5nm,0.7s,baz=301,slow=2.9,SNR=6.5						
MKAR	Makanchi Array	146.15	36		PKPab	12 18 01.9	0.0

*NIC **22** 11:59:15.7±0.0, 33°.60N×31°.89E, h12^{km}±10^{km}, Ml2.6/2*

*GII **22** 11:59:18.9±0.4, 33°.36N×31°.97E, h40^{km}, MD2.4/1*

ISC 22 11:59:15.9±1.9**, 33°.48N**±0°.04×**31°.8E**±0°.1**, h35**^{km}**, n21, σ0^s.99**/33**, 1C, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OSC2	CSNet OBS 4	0.56	135	P	Pn	11 59 27.8	+0.4
OSC2				S	Sn	11 59 36.5	+1.0
SZAC	Souni	1.56	35	⇑P	Pn	11 59 41.2	0.0
SZAC				S	Sn	12 00 00.0	-0.1
SZAC				AML	AML	12 00 02.5	
	0.3nm,0.3s						
SZAC				AML	AML	12 00 02.5	
	0.3nm,0.3s						
SZAC				AML	AML	12 00 06.3	
	0.3nm,0.3s						
SZAC				AML	AML	12 00 06.3	
	0.3nm,0.3s						
AKMS	Akamas	1.60	16	P	Pn	11 59 40.9	-0.8
ASGA	Asgata	1.78	42	P	Pn	11 59 44.1	0.0
ASGA				S	Sn	12 00 05.3	-0.1
ASGA				AML	AML	12 00 07.3	
	0.2nm,0.4s						
ASGA				AML	AML	12 00 07.3	
	0.2nm,0.4s						
ALFC	Alefka	1.80	21	P	Pn	11 59 44.2	-0.3
CSS	Mathiatis	1.95	40	Pn	Pn	11 59 47.5	+1.0
CSS				Sn	Sn	12 00 11.6	+1.8
OFRI	\`Ofer	2.81	107	Sn	Sn	12 00 29.0	-2.1
HNTI	Hanita	2.86	97	Sn	Sn	12 00 31.9	-0.3
MMA0B	Mount Meron ar	3.06	98	Pn	Pn	12 00 02.2	+0.4
MMA0B				Sn	Sn	12 00 36.9	-0.3
MMLI	Mount Malkishu	3.22	108	Sn	Sn	12 00 39.8	-1.4
KSDI	Kefar Szold	3.25	94	Pn	Pn	12 00 04.0	-0.3
KSDI				Sn	Sn	12 00 41.5	-0.2
AMAZ	Amatzia	3.27	126	Sn	Sn	12 00 41.8	-0.6
HMDT	Nahal Hemdat	3.37	110	Sn	Sn	12 00 45.0	+0.2
KZIT	Kziot	3.38	139	Pn	Pn	12 00 07.1	+0.9
KZIT				Sn	Sn	12 00 43.3	-1.8
YTIR	Yattir	3.51	126	Pn	Pn	12 00 08.5	+0.4
YTIR				Sn	Sn	12 00 47.7	-0.7
DSI	Dead Sea	3.58	121	Pn	Pn	12 00 10.3	+1.5
PRNI	Paran	4.14	138	Sn	Sn	12 01 02.4	-1.5
KRMI	Paran Flat	4.18	143	Pn	Pn	12 00 18.0	+0.9
KRMI				Sn	Sn	12 01 04.4	-0.4
HRFI	Mount Harif	4.40	140	Pn	Pn	12 00 21.2	+0.9
HRFI				Sn	Sn	12 01 09.1	-1.3
MBRI	Mt Berech	4.54	143	Pn	Pn	12 00 23.3	+1.2
MBRI				Sn	Sn	12 01 12.7	-0.9
EIL	Elat	4.66	144	Pn	Pn	12 00 24.4	+0.7
EIL				Sn	Sn	12 01 15.4	-1.1

IDC 22 12:02:50.2±2.2**, 6°.99S×128°.02E, h0**^{km}**, mb3.1**/1**, mb1 3.3**/3**, mb1mx3.2**/26**, mbtmp3.1**/3**, ML3.2**/2**, Error ellipse: s-maj=136.4km s-min=33.1km az=65.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.26	155	Pn	Pn	12 06 13.6	-0.1
	0.1nm,0.3s,baz=334,slow=11,SNR=7.9						
WRA				Sn	Sn	12 08 35.1	-18
	0.2nm,0.3s,baz=332,slow=22,SNR=6.5						
ASAR	Alice Springs	17.52	162	P	Pn	12 06 56.0	-0.1
	0.1nm,0.3s,baz=341,slow=11,SNR=8.3						
ASAR				S	Sn	12 09 55.8	-16
	0.1nm,0.3s,baz=350,slow=26,SNR=2.7						
MKAR	Makanchi Array	67.15	328	P	P	12 13 46.0	0.0
	0.1nm,0.4s,baz=116,slow=5.6,SNR=1.7						

*NIED **22** 12:16:00, 38°.30N×144°.60E, h5^{km}, Mw3.8 Best double couple: $M_0$6.58000×10^{14} NP1:ϕ_s203.00000°, δ69.00000°, λ-88.00000°. NP2:ϕ_s18.00000°, δ21.00000°, λ-95.00000°.*

*IDC **22** 12:16:20.0±1.2, 38°.19N×144°.98E, h0^{km}, mb3.5/4, mb1 3.7/7, mb1mx3.5/45, mbtmp3.6/7, ML3.2/3, MS2.7/3, Ms1 2.7/3, ms1mx2.4/35, Error ellipse: s-maj=29.1km s-min=24.1km az=81.0*

*JMA **22** 12:16:24.5±0.1, 38°.29N×144°.60E, h45^{km}, M4.0*

ISC 22 12:16:23.9±1.1**, 38°.32N**±0°.05×**144°.73E**±0°.08**, h26**^{km}**, n33, σ1^s.83**/49**, mb3.5**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.51	289	P	Pn	12 17 03.0	-0.1
OFUJ				S	Sn	12 17 31.7	-1.1
JIKH	Ishinomakikobu	2.57	271	P	Pn	12 17 03.3	-0.5
JIKH				S	Sn	12 17 32.2	-2.0
MIYJ	Miyakonagasawa	2.59	300	P	Pn	12 17 04.2	0.0
MIYJ				S	Sn	12 17 33.3	-1.6
JKMT	Kesennumamotoy	2.60	282	P	Pn	12 17 04.0	-0.2
JKMT				S	Sn	12 17 33.2	-1.8
JIO	Ouri	2.66	274	P	Pn	12 17 04.8	-0.3
JIO				S	Sn	12 17 34.8	-1.6
JMK	Ichinoseki	2.82	284	P	Pn	12 17 07.5	+0.2
JMK				eS	Sn	12 17 39.3	-1.1
JOM	Ohasama	2.92	294	P	Pn	12 17 09.0	+0.4
JOM				S	Sn	12 17 42.5	-0.4
JANG	Nango	3.23	311	P	Pn	12 17 12.8	-0.1
JANG				eS	Sn	12 17 49.5	-1.0
JYK	Kaneyama	3.48	281	P	Pn	12 17 17.0	+0.7
JYK				S	Sn	12 17 56.6	0.0
JFT	Otama	3.56	258	P	Pn	12 17 18.0	+0.5
JFT				S	Sn	12 17 57.7	-1.1
JOT	Ohata	4.17	318	P	Pn	12 17 26.6	+0.8
JOT				eS	Sn	12 18 12.0	-1.7
JCH	Churui	4.42	347	P	Pn	12 17 29.3	+0.1
JCH				eS	Sn	12 18 16.7	-3.1
JKB	Kayabe	4.56	323	P	Pn	12 17 32.7	+1.6
JKB				eS	Sn	12 18 21.4	-1.8
BSO1	Boso 1	4.74	221	P	Pn	12 17 31.6	-1.6
BSO1				eS	Sn	12 18 25.0	-2.1
NEM2	Nemuro 2	5.10	8	P	Pn	12 17 37.5	-1.1
NEM2				eS	Sn	12 18 32.0	-4.6
JRY	Ryogami san	5.19	246	P	Pn	12 17 39.4	-0.5
JRY				S	Sn	12 18 35.1	-3.8
JOD2	Odawara 2	5.46	238	P	Pn	12 17 44.1	+0.6
JOD2				S	Sn	12 18 40.2	-5.3
MJAR	Matsushiro Arr	5.48	253	Pn	Pn	12 17 44.8	+0.9
	0.4nm,0.3s,baz=77,slow=15,SNR=29						
MJAR				Sn	Sn	12 18 48.5	+2.4
	0.2nm,0.3s,baz=330,slow=23,SNR=1.9						
MJAR				LR	LR	12 20 18.0	
	comp=Z,74nm,18.5s,baz=75,slow=42						
MAT	Matsushiro	5.48	253	P	Pn	12 17 45.2	+1.3
MAT				S	Sn	12 18 36.7	-9.5
JOSM	Okushiri--Mats	5.51	315	P	Pn	12 17 45.9	+1.7
JTKR	Abashiri--Toko	5.68	354	P	Pn	12 17 46.9	+0.3
JTKR				eS	Sn	12 18 47.9	-3.1
JHR	Hokuryu	5.88	338	P	Pn	12 17 51.4	+2.1
JHR				eS	Sn	12 18 56.6	+0.8
ASAJ	Asahikawa	6.01	345	Pn	Pn	12 17 52.5	+1.4
	1.8nm,0.3s,baz=204,slow=7.9,SNR=17						
ASAJ				Sn	Sn	12 19 01.5	+2.3
	0.5nm,0.3s,baz=226,slow=30,SNR=3.8						
USRK	Ussuriysk Ar.	11.24	306	Pn	Pn	12 19 05.5	+2.7
	baz=120,slow=13,SNR=5.5						
KSRS	Korea Array	13.31	271	LR	LR	12 23 45.2	
	comp=Z,32nm,20.4s,baz=70,slow=33						
H11N2	WAKE ISLAND Hy	26.69	128	T	T	12 49 49.1	
	baz=319,slow=74						
H11N1	WAKE ISLAND Hy	26.70	128	T	T	12 49 41.9	
	baz=319,slow=74						
H11N3	WAKE ISLAND Hy	26.71	128	T	T	12 49 44.7	
	baz=319						
ZALV	Zalesovo Beam	43.02	311	LR	LR	12 41 36.9	
	comp=Z,11nm,19.0s,baz=350,slow=35						
MKAR	Makanchi Array	45.68	302	P	P	12 24 44.5	+2.1
	0.3nm,0.7s,baz=80,slow=9.1,SNR=3.4						
WRA	Warramunga Arr	58.77	191	P	P	12 26 19.0	-0.7
	0.6nm,0.4s,baz=9.1,slow=7.0,SNR=9.7						
ASAR	Alice Springs	62.49	191	P	P	12 26 45.0	0.0
	0.4nm,0.9s,baz=0.7,slow=5.4,SNR=5.0						
PDAR	Pinedale Array	74.88	47	P	P	12 28 02.1	-0.4
	0.2nm,0.5s,baz=308,slow=4.4,SNR=2.3						

*IDC **22** 12:22:22.6±3.3, 21°.22S×70°.05W, h0^{km}, mb3.7/1, mb1 3.6/2, mb1mx3.4/18, mbtmp3.5/2, ML3.1/1, Error ellipse: s-maj=116.6km s-min=45.4km az=100.0*

*GUC **22** 12:22:25.2±0.6, 20°.00S×70°.78W, h23^{km}±4^{km}, ML3.3*

ISC 22 12:22:24.0±1.9**, 19°.99S**±0°.03×**70°.77W**±0°.09**, h9**^{km}±10^{km}**, n19, σ1^s.10**/28**, 7C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.73	57	⇑iP	Pg	12 22 38.5	+0.5
PSGC				iS	Sg	12 22 48.6	+1.1
PSGC				IAML		12 22 48.9	
	comp=N,4µm,0.3s						
TA01	Diego Aracena	0.80	136	⇑iP	Pg	12 22 39.5	+0.1
TA01				iS	Sg	12 22 50.2	+0.4
TA01				IAML		12 22 54.7	
	comp=E,2µm,0.1s						
PATCX	Punta Patache	1.01	145	⇓iP	Pg	12 22 43.1	-0.3
PATCX				iS	Sg	12 22 56.7	+0.1
PATCX				IAML		12 23 03.1	
	comp=N,1µm,0.5s						
PB11	IPOC Station P	1.08	78	iP	Pg	12 22 44.4	-0.3
PB11				iS	Sg	12 22 58.8	+0.1
PB11				IAML		12 23 00.1	
	comp=N,2µm,0.3s						
PB12	IPOC Station P	1.43	17	⇓iP	Pn	12 22 49.9	-0.4
PB12				iS	Sb	12 23 08.9	-0.5
GO01	Chusmiza	1.52	78	⇑iP	Pn	12 22 52.0	+0.1
GO01				iS	Sg	12 23 12.6	-0.4
PB08	IPOC Station P	1.53	96	⇑iP	Pn	12 22 51.9	-0.1
PB08				iS	Sn	12 23 11.2	-1.0
PB02	IPOC Station P	1.56	148	⇓iP	Pn	12 22 51.8	-0.3
PB02				eS	Sn	12 23 11.9	-0.6
PB01	IPOC Station P	1.60	131	⇑iP	Pn	12 22 52.3	-0.3
PB01				iS	Sn	12 23 12.3	-1.1
PB01				IAML		12 23 17.1	
	comp=N,489nm,0.5s						
PB07	IPOC Station P	1.92	154	eP	Pn	12 22 57.2	+0.1
PB07				iS	Sn	12 23 21.7	+0.3
PB07				IAML		12 23 27.9	
	comp=E,305nm,0.3s						
PB16	IPOC Station P	2.04	36	⇑eP	Pn	12 23 00.5	+1.4
PB16				iS	Sn	12 23 27.1	+2.2
PB16				IAML		12 23 28.8	
	comp=N,333nm,0.3s						
PB03	IPOC Station P	2.26	155	IAML		12 23 39.3	
	comp=E,196nm,0.6s						
PB09	IPOC Station P	2.30	142	⇑eP	Pn	12 23 03.7	+1.4
PB09				iS	Sn	12 23 33.4	+2.6
PB09				IAML		12 23 45.7	
	comp=E,237nm,0.6s						
LPAZ	La Paz	4.46	35	Pn	Pb	12 23 42.9	0.0
	comp=E,0.4nm,0.3s,baz=207,slow=3.9,SNR=6.6						
LPAZ				Sn	Sg	12 24 44.9	-2.5
	comp=E,0.4nm,0.3s,baz=194,slow=21,SNR=1.5						
TORD	Torodi Ar. Bea	78.51	71	P	P	12 34 25.3	-1.0
	comp=E,0.3nm,0.4s,baz=251,slow=4.4,SNR=4.5						
H11S2	WAKE ISLAND Hy	125.94	279	T	T	14 59 55.0	
	baz=102,slow=75,SNR=9.8						
H11S1	WAKE ISLAND Hy	125.95	279	T	T	14 59 56.1	
	baz=102,slow=75,SNR=15						
H11S3	WAKE ISLAND Hy	125.96	279	T	T	14 59 56.6	
	baz=102,slow=75,SNR=10						
MKAR	Makanchi Array	145.39	33	PKPbc	PKPbc	12 42 03.3	+0.9
	comp=E,0.6nm,0.7s,baz=312,slow=4.3,SNR=8.5						

*IDC **22** 12:22:25.4±1.0, 7°.27N×94°.18E, h0^{km}, mb3.9/10, mb1 4.0/10, mb1mx3.8/42, mbtmp3.9/10, MS2.9/4, Ms1 2.9/4, ms1mx2.6/47, Error ellipse: s-maj=50.8km s-min=17.8km az=51.0*

*NEIC **22** 12:22:26.6±1.1, 7°.26N±0°.08×94°.26E±0°.10, h10^{km}±1^{km}, mb4.2/20, Error ellipse: s-maj=16.4km s-min=12.2km az=248.0*

ISC 22 12:22:28.4±0.6**, 7°.30N**±0°.09×**94°.33E**±0°.09**, h20**^{km}**, n60, σ0^s.61**/54**, mb4.2**/20**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	3.32	128	Pn	Pn	12 23 19.7	+0.5
LHMI				Sn	Sn	12 23 57.0	-1.0
RPSI	Rantau Prapat	6.47	135	Pn	Pn	12 24 02.8	+0.2
KULM	Kulim	6.59	107		Pn	12 24 04.2	-0.1
GSI	Gunungsitoli	6.78	151	Pn	Pn	12 24 07.2	+0.4
IPM	Ipoh	7.23	112		Pn	12 24 11.9	-1.2
IPM				Sn	Sn	12 25 33.6	-1.0
PBKT	Sadao Pong	11.28	35	Pn	Pn	12 25 09.2	+0.7
CMAR	Chiang Mai Arr	11.97	22	Pn	Pn	12 25 24.4	+6.3
	0.2nm,0.3s,baz=217,slow=14,SNR=1.7						
CMAR				LR	LR	12 30 03.1	
	comp=Z,39nm,19.8s,baz=60,slow=38						
PALK	Pallekele	13.52	271	LR	LR	12 30 16.7	
	comp=Z,59nm,21.7s,baz=103,slow=35						
LEM	Lembang	19.30	136	LR	LR	12 36 09.0	
	comp=Z,60nm,19.1s,baz=232,slow=42						
RAMN	Ramite	20.88	340	eP	Pn	12 27 10.4	-1.9
	13nm,0.5s						
TAPN	Taplejung	20.91	343	eP	Pn	12 27 10.9	-1.8
	22nm,0.8s						
JIRN	Jiri	21.67	340	eP	P	12 27 19.7	+1.3
	20nm,0.7s						
PKI	Pulchoki	21.87	338	eP	P	12 27 20.5	+0.1
GUN	Gumba	22.01	340	eP	P	12 27 21.2	-0.8
	16nm,0.6s						
DMN	Daman	22.02	338	eP	P	12 27 22.5	+0.6
	16nm,0.8s						
KKN	Kakani	22.11	338	eP	P	12 27 23.2	+0.2
LSA	Lhasa	22.49	353	P	P	12 27 28.0	+0.7
LSA				IAmb	IAmb	12 27 30.1	
	comp=Z,8.7nm,0.6s						
GKN	Gorkha	22.55	337	eP	P	12 27 27.2	-0.4
DANN	Dangsing	23.20	336	eP	P	12 27 33.6	-0.9
	comp=Z,14nm,0.7s						
H08S3	Diego Garcia H	26.35	236	T	T	12 54 49.7	
	baz=55,slow=75,SNR=27						
H08S2	Diego Garcia H	26.35	236	T	T	12 54 37.9	
	baz=55,slow=75,SNR=20						
H08S1	Diego Carcia H	26.36	236	T	T	12 54 55.9	
	baz=55,slow=75,SNR=18						
DAV	Davao City (W)	31.00	88	LR	LR	12 41 20.7	
	comp=Z,12nm,21.7s,baz=152,slow=36						
NIL	Nilore	32.68	326	P	P	12 28 58.8	-0.7
ARSB	Arslanbob	38.84	334	P	P	12 29 51.9	-0.5
ARSB				IAmb	IAmb	12 29 53.2	
	comp=Z,6.1nm,0.8s						
AAK	Ala-Archa	39.31	337	P	P	12 29 56.0	-0.4
HRA	Herat	40.00	317	P	P	12 30 02.8	+0.5
MK31	Makanchi Array	40.69	347	P	P	12 30 06.9	-0.6
MK31				IAmb	IAmb	12 30 07.8	
	comp=Z,2.2nm,0.8s						
MKAR	Makanchi Array	40.69	347	P	P	12 30 07.2	-0.4
	comp=Z,3.1nm,0.6s,baz=168,slow=7.9,SNR=36						
MKAR	Makanchi Array	40.69	347	P	P	12 30 06.8	-0.7
MAKZ	Makanchi	40.77	347	P	P	12 30 07.6	-0.6
MAKZ				IAmb	IAmb	12 30 08.6	
	comp=Z,2.9nm,0.6s						
KK31	Karatay Array	41.36	333	P	P	12 30 13.0	-0.1
KKAR	Karatay Array	41.36	333	P	P	12 30 12.5	-0.7
SONM	Songino Array	41.69	12	P	P	12 30 16.6	+0.7
	comp=Z,0.4nm,0.7s,baz=182,slow=8.4,SNR=2.8						
SONM	Songino Array	41.69	12	P	P	12 30 16.2	+0.3
GEYT	Alibeck	44.75	318	P	P	12 30 41.5	+0.8
	comp=Z,3.2nm,0.6s,baz=142,slow=7.5,SNR=7.4						
GEYT	Alibeck	44.75	318	P	P	12 30 40.6	-0.1
KURK	Kurchatov	45.21	346	P	P	12 30 43.9	-0.2
ZAA0	Zalesovo Array	47.15	352	P	P	12 30 59.4	+0.1
ZALV	Zalesovo Beam	47.15	352	P	P	12 30 59.4	+0.1
	comp=Z,1.3nm,0.4s,baz=120,slow=6.0,SNR=9.3						
ZALV	Zalesovo Beam	47.15	352	P	P	12 30 58.9	-0.4
WB0	Warramunga Arr	47.73	125	P	P	12 31 04.6	+0.2
WB0				IAmb	IAmb	12 31 05.9	
	comp=Z,3.4nm,1.1s						
WRA	Warramunga Arr	47.78	125	P	P	12 31 05.4	+0.7
	comp=Z,0.4nm,0.7s,baz=302,slow=11,SNR=5.9						
AS31	Alice Springs	49.41	130	P	P	12 31 17.2	0.0
ASAR	Alice Springs	49.41	130	P	P	12 31 17.8	+0.6
	comp=Z,0.3nm,0.5s,baz=299,slow=8.1,SNR=12						
ASAR				PcP	PcP	12 32 40.8	+1.3
	comp=Z,0.4nm,0.7s,baz=303,slow=2.7,SNR=6.5						
RAYN	Ar Rayn	49.49	295	P	P	12 31 18.0	0.0
RAYN				IAmb	IAmb	12 31 27.0	
	comp=Z,2.5nm,0.8s						
BRVK	Borovoye	49.66	341	P	P	12 31 18.5	-0.1
BRVK				IAmb	IAmb	12 31 19.2	
	comp=Z,2.0nm,0.7s						
ABKAR	Akbulak array	50.83	331	P	P	12 31 27.6	+0.1
ABKAR	Akbulak array	50.83	331	P	P	12 31 27.8	+0.2
ABKAR				IAmb	IAmb	12 31 28.6	
	comp=Z,1.8nm,0.8s						
BRTR	Keskin Array B	62.95	311	P	P	12 32 52.6	-1.3
	comp=Z,0.7nm,0.6s,baz=113,slow=8.2,SNR=4.4						
TIXI	Tiksi	67.76	11	P	P	12 33 24.2	-0.2
TIXI				IAmb	IAmb	12 33 31.5	
	comp=Z,2.0nm,0.7s						
FIA1	FINESS Array S	73.31	332	P	P	12 33 58.0	-0.3
FINES	FINESS Array B	73.31	332	P	P	12 33 58.3	0.0
	comp=Z,3.7nm,0.7s,baz=90,slow=7.6,SNR=8.7						
FINES	FINESS Array B	73.31	332	P	P	12 33 58.5	+0.2
GERES	GERESS Array B	78.38	318	P	P	12 34 27.3	-0.5
	comp=Z,0.7nm,0.7s,baz=48,slow=2.0,SNR=4.3						
GERES	GERESS Array B	78.38	318	P	P	12 34 26.8	-0.9
NOA	NORSAR Array B	80.32	331	P	P	12 34 38.2	+0.1
	comp=Z,0.7nm,0.7s,baz=90,slow=6.7,SNR=1.8						
GAMB	Gambell	85.27	26	P	P	12 35 04.2	+0.6
GAMB				IAmb	IAmb	12 35 08.4	
	comp=Z,1.4nm,1.1s						
BSWZ	Blackbirch Sta	87.07	133	P	P	12 35 12.9	0.0
TXAR	Lajitas Array	139.67	25	PKP	PKPdf	12 41 56.2	+0.4
	comp=Z,0.1nm,0.7s,baz=338,slow=1.9,SNR=1.6						

IDC 22 12:28:48.5±8.2**, 7°.45N×94°.09E, h0**^{km}**, mb3.3**/4**, mb1 3.5**/4**, mb1mx3.3**/31**, mbtmp3.3**/4**, Error ellipse: s-maj=415.2km s-min=25.4km az=59.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S3	Diego Garcia H	26.24	236	T	T	13 01 01.7	
	baz=56,slow=76,SNR=7.1						
H08S2	Diego Garcia H	26.24	236	T	T	13 01 00.7	
	baz=56,slow=76,SNR=10.0						
H08S1	Diego Carcia H	26.26	236	T	T	13 01 03.1	
	baz=56,slow=76,SNR=7.6						
MKAR	Makanchi Array	40.49	348	P	P	12 36 28.7	-0.4
	0.4nm,0.7s,baz=164,slow=7.3,SNR=7.6						
ZALV	Zalesovo Beam	46.97	353	P	P	12 37 21.3	+0.3
	0.6nm,0.4s,baz=169,slow=8.4,SNR=2.9						
WRA	Warramunga Arr	48.06	125	P	P	12 37 30.1	0.0
	0.3nm,1.0s,baz=306,slow=8.4,SNR=4.8						
ASAR	Alice Springs	49.68	130	P	P	12 37 42.2	-0.3
	0.2nm,0.9s,baz=302,slow=7.6,SNR=1.9						

IDC 22 12:40:15.4±2.2**, 4°.89N×122°.99E, h0**^{km}**, mb3.4**/3**,**

mb1 3.6/3,mb1mx3.2/36,mbtmp3.4/3,Error ellipse: s-maj=307.2km s-min=25.4km az=63.0,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	27.08	156	P	P	12 46 00.1	0.0
	0.3nm,0.3s,baz=334,slow=9.6,SNR=15						
ASAR	Alice Springs	30.31	160	P	P	12 46 28.8	-0.1
	0.1nm,0.3s,baz=342,slow=7.2,SNR=7.1						
MKAR	Makanchi Array	54.51	327	P	P	12 49 45.0	-0.1
	0.2nm,0.3s,baz=124,slow=7.4,SNR=7.4						

SOME ***22*** *12:41:39.9,43.°48N×75.°75E,h15^{km}*
KRNET ***22*** *12:41:39.4±0.1,43.°48N×75.°74E,h26^{km},mb2.3*
NNC ***22*** *12:41:40.3±0.3,43.°49N×75.°82E,h4^{km}±2^{km},mb2.6, mpv2.5,Error ellipse: s-maj=2.3km s-min=1.8km az=77.0*
ISC 22 12:41:39.8±1.0,**43.°48N**±0.°02×**75.°75E**±0.°02,**h17**^{km}±9^{km}, **n30,**σ0.^{s}**39**/60,**8C-2D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBS	Karabastau	0.23	347	eP	Pb	12 41 45.6	+0.1
	2.9nm,0.1s						
KRBS				eS	Sb	12 41 49.6	+0.2
	24nm,0.2s						
KRBS	Karabastau	0.23	347	P	Pb	12 41 45.6	+0.1
	2.9nm,0.1s						
KRBS				S	Sb	12 41 49.6	+0.2
	24nm,0.2s						
DGS	Degeres	0.23	176	eP	Pb	12 41 45.7	0.0
	baz=74						
DGS				eS	Sb	12 41 49.6	+0.1
	baz=74						
DGS	Degeres	0.23	176	eP	Pb	12 41 45.7	0.0
	25nm,0.1s						
DGS				eS	Sb	12 41 49.6	+0.1
	32nm,0.2s						
DGS	Degeres	0.23	176	P	Pb	12 41 45.7	0.0
	25nm,0.1s						
DGS				S	Sb	12 41 49.6	+0.1
	32nm,0.2s						
KST	Kastek	0.46	160	eP	Pg	12 41 49.1	0.0
	baz=59						
KST				eS	Sg	12 41 55.9	+0.5
	baz=59						
KST	Kastek	0.46	160	eP	Pg	12 41 49.1	0.0
	1.9nm,0.2s						
KST				eS	Sg	12 41 55.9	+0.5
	5.3nm,0.2s						
KST	Kastek	0.46	160	P	Pg	12 41 49.5	+0.4
	3.3nm,0.2s						
KST				S	Sb	12 41 56.4	+0.3
	6.8nm,0.2s						
KUU	Kurty	0.60	46	eP	Pg	12 41 51.2	-0.5
	0.5nm,0.2s						
KUU				eS	Sg	12 41 59.3	-0.3
	6.2nm,0.1s						
KUU	Kurty	0.60	46	P	Pg	12 41 51.1	-0.5
	0.9nm,0.2s						
KUU				S	Sg	12 41 59.3	-0.3
	7.1nm,0.2s						
MTBS	Maitube	0.60	125	eP	Pg	12 41 51.6	-0.1
	baz=24						
MTBS				eS	Sg	12 42 00.2	+0.4
	baz=24						
MTBS	Maitube	0.60	125	eP	Pg	12 41 51.6	-0.1
	3.0nm,0.1s						
MTBS				eS	Sg	12 42 00.3	+0.4
	12nm,0.1s						
MTBS	Maitube	0.60	125	P	Pg	12 41 51.6	-0.1
	3.0nm,0.1s						
MTBS				S	Sg	12 42 00.3	+0.4
	12nm,0.1s						
KTBS	Karatobe	0.72	70	eP	Pg	12 41 53.4	-0.4
	1.4nm,0.1s						
KTBS				eS	Sg	12 42 03.1	-0.3
	12nm,0.3s						
KTBS	Karatobe	0.72	70	P	Pg	12 41 53.4	-0.4
	1.4nm,0.1s						
KTBS				S	Sg	12 42 03.1	-0.3
	12nm,0.3s						
CHMS	Chumysh	0.87	237	⇑iP	Pb	12 41 55.8	-0.6
	baz=37						
CHMS				⇑iS	Sb	12 42 07.4	-0.4
	baz=37						
USP	Ospenovka	0.93	258	⇑iP	Pb	12 41 56.9	-0.6
	baz=57						
USP				⇑iS	Sb	12 42 09.4	-0.2
	baz=57						
CHKK	Chushkaly	0.98	67	eP	Pb	12 41 57.9	-0.4
	baz=67						
CHKK				eS	Sb	12 42 10.9	0.0
	baz=67						
CHKK	Chushkaly	0.98	67	eP	Pb	12 41 57.9	-0.4
	2.0nm,0.1s						
CHKK				eS	Sb	12 42 10.8	0.0
	11nm,0.2s						
CHKK	Chushkaly	0.98	67	P	Pb	12 41 57.9	-0.4
	2.0nm,0.1s						
CHKK				S	Sb	12 42 10.8	0.0
	11nm,0.2s						
TNSS	Tian-Shan	0.98	116	eP	Pb	12 41 58.0	-0.5
	baz=16						
TNSS				eS	Sb	12 42 11.2	-0.1
	baz=16						
TNSS	Tian-Shan	0.98	116	eP	Pb	12 41 58.0	-0.5
	1.0nm,0.2s						
TNSS				eS	Sb	12 42 11.2	-0.1
	4.5nm,0.3s						
TNSS	Tian-Shan	0.98	116	P	Pb	12 41 58.2	-0.4
	1.7nm,0.2s						
TNSS				S	Sb	12 42 11.5	+0.2
	6.8nm,0.3s						
BOOM	Boomskoye usch	0.99	172	⇑iP	Pb	12 41 58.1	-0.5
	baz=71						
BOOM				⇑iS	Sb	12 42 11.3	-0.2
	baz=71						
AAK	Ala-Archa	1.24	228	⇑iP	Pn	12 42 02.1	-0.4
	baz=28						
AAK				⇑iS	Sb	12 42 18.7	0.0
	baz=28						
ULHL	Ulahol	1.28	163	⇓iP	Pn	12 42 03.1	0.0
	baz=63						
ULHL				⇓iS	Sb	12 42 19.9	+0.1
	baz=63						
ARXS	Arharly	1.68	63	eP	Pn	12 42 09.4	+1.0
	1.2nm,0.4s						
ARXS				eS	Sb	12 42 30.9	-0.1
	5.7nm,0.3s						
ARXS	Arharly	1.68	63	P	Pn	12 42 09.4	+1.0
	1.2nm,0.4s						
ARXS				S	Sb	12 42 30.9	-0.1
	5.7nm,0.3s						
BTLS	Baital	1.99	323	eP	Pb	12 42 15.3	-0.2
	0.5nm,0.3s						
BTLS				eS	Sb	12 42 40.6	+0.7
	2.1nm,0.2s						
BTLS	Baital	1.99	323	P	Pb	12 42 15.4	-0.1
	0.6nm,0.3s						
BTLS				S	Sb	12 42 40.7	+0.8
	2.0nm,0.2s						

IDC ***22*** *12:58:15.4±0.4,35.°82N×82.°33E,h0^{km},mb4.6/34, mb1 4.7/39,mb1mx4.6/55,mbtmp4.7/39,ML4.2/5,MS4.4/8, Ms1 4.4/8,ms1mx4.1/48,Error ellipse: s-maj=11.4km s-min=8.9km az=46.0*
NEIC ***22*** *12:58:16.8±1.1,35.°85N±0.°07×82.°30E±0.°08,h10^{km}±1^{km}, mb5.1/139,Error ellipse: s-maj=11.6km s-min=10.4km az=212.0*
MOS ***22*** *12:58:16.3±1.1,35.°90N×82.°35E,h17^{km},mb5.1/79, MS4.7/9,Error ellipse: s-maj=5.6km s-min=3.5km az=119.4*
BJI ***22*** *12:58:17.2±0.0,36.°01N×82.°31E,h8^{km},mB4.9/41, mb4.6/52,ML5.2/8,Ms5.0/62,Ms7 4.7/55*
GCMT ***22*** *12:58:19.8±0.2,36.°23N±0.°02×82.°35E±0.°02,h25^{km}±1^{km}, MW5.2/75,Moment Tensor Solution. s26,c33; s75,c120; Duration: 1.^{s}0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.98±.33; M$_{\theta\theta}$-2.72±.23; M$_{\phi\phi}$5.70±.20; M$_{r\theta}$6.69±.63; M$_{\theta\phi}$1.27±.13; M$_{\phi r}$-2.01±.38; Best double couple: M$_{0}$8.02000×10^{16} NP1:ϕ_{s}218.00000°,δ47.00000°, λ-26.00000°. NP2:ϕ_{s}326.00000°,δ71.00000°, λ-134.00000°. Principal axes: T 6.1530, Plg14.0000°, Azm87.0000°; N 3.7360, Plg41.0000°, Azm344.0000°; P -9.8880, Plg45.0000°, Azm192.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NNC ***22*** *12:58:19.8±3.2,36.°11N×82.°30E,h14^{km}±14^{km},mb5.2, mpv5.3 Error ellipse: s-maj=25.3km s-min=14.4km az=107.0*
BGR ***22*** *12:58:29.6±0.0,37.°03N×81.°65E,h33^{km},mb5.1*
ISC 22 12:58:17.1±0.2,**35.°87N**±0.°03×**82.°26E**±0.°03,**h10**^{km}**,n514,** σ**1.^{s}96**/520,**mb5.0**/176,**MS4.7**/23,**44C-24D,Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOSI	Joshimath	5.76	204	eP	Pn	12 59 41.6	-1.3
JOSI				ex	x	13 00 15.6	
DHRM	DHARAMSHALA	6.13	236	eP	Pn	12 59 47.2	-0.6
KSH	Kashi	6.17	308	Pn	Pn	12 59 50.4	+2.0
KSH				Sn	Sn	13 01 02.4	+3.3
KSH				smax	smax		
	comp=N,3µm,0.8s						
KSH				smax	smax		
	comp=E,4µm,0.8s						
KSH				LR	LR		
	comp=N,22µm,12.7s						
KSH				LR	LR		
	comp=E,14µm,16.2s						
KSH				LR	LR		
	comp=Z,6µm,12.7s						
SMLA	Simla	6.36	223	eP	Pn	12 59 49.9	-1.0
SMLA				i x	x	13 02 04.3	
DDI	Dehra Dun	6.56	214	ex	x	13 00 23.6	
DDI				i x	x	13 02 07.0	
DANN	Dangsing	7.61	170	eP	Pn	13 00 09.1	+0.9
	100nm,0.6s						
CHCP	Chirah Chowk	7.73	256	P	Pn	13 00 13.3	+3.6
NIL	Nilore	7.74	256	P	Pn	13 00 10.1	+0.3
NIL	Nilore	7.74	256		Pn	13 00 10.1	+0.3
PDGK	Podgornoye	7.75	345	⇑Pn	Pn	13 00 10.8	+0.8
	110nm,0.7s						
PDGK				⇑Sn	Sn	13 01 35.3	-2.6
	655nm,0.8s						
PDGK				⇓Lg	Lg	13 02 20.5	
	2µm,1.1s						
PDGK	Podgornoye	7.75	345	i P	Pn	13 00 10.8	+0.8
PDGK				pmax	pmax		
	comp=Z,111nm,0.6s						
ULHL	Ulahol	7.90	325	P	Pn	13 00 13.8	+1.6
	SNR=52						
GKN	Gorkha	8.10	165	eP	Pn	13 00 16.8	+1.9
	comp=Z,99nm,0.4s						
KZA	Kyzart	8.26	321	P	Pn	13 00 20.8	+3.5
	SNR=61						
MDOK	Medeo	8.32	333	⇓Pn	Pn	13 00 18.8	+0.9
	comp=Z,96nm,0.6s						
MDOK				⇓Pg	Pb	13 00 47.0	+5.7
	comp=Z,154nm,0.7s						
MDOK				⇑Lg	Lg	13 02 39.3	
	comp=Z,1µm,1.1s						
MDOK	Medeo	8.32	333	P	Pn	13 00 18.8	+0.9
KNDC	Almaty	8.40	332	⇑Pn	Pn	13 00 20.3	+1.4
	comp=Z,74nm,0.6s						
KNDC				⇓Pg	Pg	13 00 50.6	-7.2
	comp=Z,187nm,0.8s						
KNDC				⇓Lg	Lg	13 02 41.7	
	comp=Z,2µm,1.2s						
AAA	Alma-Ata	8.41	332	eP	Pn	13 00 23.4	+4.4
AAA				eS	Sn	13 02 00.0	+6.0
AAA				pmax	pmax		
	comp=Z,200nm,1.3s						
AAA				MLR	MLR		
	comp=Z,2µm,4.0s						
KKN	Kakani	8.46	162	eP	Pn	13 00 21.4	+1.6
	comp=Z,133nm,0.9s						
GUN	Gumba	8.51	158	eP	Pn	13 00 22.1	+1.4
	comp=Z,323nm,0.8s						
DMN	Daman	8.59	163	eP	Pn	13 00 23.5	+1.9
	comp=Z,136nm,0.6s						
PKIN	Phulchoki	8.69	161	eP	Pn	13 00 25.0	+1.9
PKI	Pulchoki	8.70	161	eP	Pn	13 00 24.6	+1.4
	comp=Z,203nm,0.8s						
UCH	Uchtor	8.75	319	P	Pn	13 00 25.4	+1.4
	SNR=78						
CEP	Cherat	8.75	259	P	Pn	13 00 27.2	+3.4
CEP				S	Sn	13 02 05.0	+2.4
KBK	Karagaybulak	8.83	322	P	Pn	13 00 27.4	+2.5
	SNR=32						
JIRN	Jiri	8.84	157	eP	Pn	13 00 27.1	+1.8
WMQ	Urumqi	8.97	26	eP	Pn	13 00 27.0	+0.3
WMQ				S	Sn	13 02 10.3	+2.5
WMQ				smax	smax		
	comp=Z,410nm,1.3s						
WMQ				smax	smax		
	comp=Z,230nm,1.3s						
WMQ	Urumqi	8.97	26	P	Pn	13 00 26.4	-0.3
WMQ	Urumqi	8.97	26		Pn	13 00 26.4	-0.3
AAK	Ala-Archa	9.05	321	Pn	Pn	13 00 30.1	+2.3
	comp=Z,0.8nm,0.3s,baz=147,slow=11,SNR=41						
AAK				Pg		13 01 00.0	
	comp=Z,2.8nm,0.3s,baz=349,slow=16,SNR=3.6						
AAK				Lg	Lg	13 03 05.3	
	comp=Z,3.9nm,0.3s,baz=288,slow=19,SNR=4.4						
AAK	Ala-Archa	9.05	321	P	Pn	13 00 30.4	+2.4
	SNR=19						
AAK	Ala-Archa	9.05	321	i Pn	Pn	13 00 30.3	+2.4
	SNR=40						
AAK	Ala-Archa	9.05	321	⇑Pn	Pn	13 00 29.9	+2.0
	comp=Z,30nm,0.8s						
AAK				Pg		13 01 00.4	
	comp=Z,174nm,1.1s						
AAK				Lg	Lg	13 02 58.9	
	comp=Z,937nm,1.4s						
AAK	Ala-Archa	9.05	321	ceP	Pn	13 00 30.3	+2.4
AAK				pmax	pmax		
	comp=Z,28nm,0.8s						
AAK	Ala-Archa	9.05	321		Pn	13 00 29.5	+1.6
ARSB	Arslanbob	9.08	310	P	Pn	13 00 28.9	+0.7
ARSB	Arslanbob	9.08	310		Pn	13 00 28.9	+0.7
FRU1	Bishkek	9.11	322	P	Pn	13 00 30.2	+1.7
FRU1	Bishkek	9.11	322		Pn	13 00 30.2	+1.7
AML	Almayashu	9.14	316	P	Pn	13 00 30.9	+1.6
	SNR=53						
CHMS	Chumysh	9.19	323	P	Pn	13 00 31.5	+1.9
	SNR=19						
CHMS	Chumysh	9.19	323	⇓Pn	Pn	13 00 30.2	+0.5
	comp=Z,51nm,0.9s						
CHMS				⇑Pg		13 01 01.6	
	comp=Z,94nm,1.1s						
CHMS				⇑Lg	Lg	13 03 05.3	
	comp=Z,432nm,1.4s						
CHMS	Chumysh	9.19	323	i P	Pn	13 00 30.1	+0.5
CHMS				pmax	pmax		
	comp=Z,63nm,0.7s						
THW	Thamme Wali	9.22	254	P	Pn	13 00 33.0	+2.8
EKS2	Erkin-Say	9.44	318	P	Pn	13 00 34.8	+1.5
	SNR=38						
USP	Ospenovka	9.51	323	P	Pn	13 00 36.9	+2.9
	SNR=11						
RAMN	Ramite	9.63	156	eP	Pn	13 00 36.7	+0.7
	comp=Z,345nm,0.8s						
TAPN	Taplejung	9.68	150	eP	Pn	13 00 37.6	+0.9
LSA	Lhasa	9.68	127	P	Pn	13 00 43.6	+6.7
LSA				pmax	pmax		
	comp=Z,54nm,0.9s						
LSA				LR	LR		
	comp=Z,7µm,22.4s						
LSA				LR	LR		
	comp=Z,10µm,21.4s						
LSA				LR	LR		
	comp=Z,10µm,18.5s						
LSA	Lhasa	9.68	127	P	Pn	13 00 36.8	-0.1
LSA	Lhasa	9.68	127	Pn	Pn	13 00 36.8	-0.1
ODAN	Odare	9.99	153	eP	Pn	13 00 41.5	+0.6
	comp=Z,534nm,1.1s						
GTK	Tadong	10.09	146	eP	Pn	13 00 42.6	+0.4
KBL	Kabul	10.90	267	P	Pn	13 00 54.8	+1.5
KBL	Kabul	10.90	267		Pn	13 00 54.8	+1.5
MK31	Makanchi Array	10.91	0	⇓Pn	Pn	13 00 52.6	-0.7
	comp=Z,46nm,0.4s,baz=178,slow=12,SNR=1243						
MK31				⇑Sn	Sn	13 02 51.7	-3.7
	comp=Z,119nm,0.9s,baz=186,slow=23,SNR=5.7						
MK31	Makanchi Array	10.91	0	eP	Pn	13 00 52.6	-0.7
MK31	Makanchi Array	10.91	0		Pn	13 00 52.5	-0.8
MKAR	Makanchi Array	10.91	0	Pn	Pn	13 00 53.2	0.0
	comp=Z,12nm,0.3s,baz=181,slow=12,SNR=268						
MKAR				Sn	Sn	13 02 55.4	+0.1
	comp=Z,4.6nm,0.3s,baz=178,slow=22,SNR=3.8						
MKAR				Lg	Lg	13 04 03.5	
	comp=Z,2.3nm,0.3s,baz=172,slow=29,SNR=3.9						
MKAR				LR	LR	13 05 55.6	
	comp=Z,2µm,19.4s,baz=173,slow=42						
MKAR	Makanchi Array	10.91	0	i P	Pn	13 00 52.4	-0.9
MKAR				pmax	pmax		
	comp=Z,128nm,0.8s						
MKAR	Makanchi Array	10.91	0		Pn	13 00 52.4	-0.9
MAKZ	Makanchi	10.93	359	⇑Pn	Pn	13 00 52.7	-0.8
	comp=Z,197nm,0.6s						
MAKZ				⇓Sn	Sn	13 02 49.9	-5.9
	comp=Z,72nm,0.7s						
MAKZ	Makanchi	10.93	359	i P	Pn	13 00 52.7	-0.8
MAKZ				pmax	pmax		
	comp=Z,206nm,0.7s						
MAKZ	Makanchi	10.93	359		Pn	13 00 53.0	-0.5
TAS	Tashkent	11.51	302	P	Pn	13 01 01.2	-0.2
TAS	Tashkent	11.51	302	Pn	Pn	13 01 01.2	-0.2
KK31	Karatay Array	11.59	312	⇑Pn	Pn	13 01 01.1	-1.4
	comp=Z,5.1nm,0.6s						
KK31				⇓Pg		13 01 46.3	
	comp=Z,25nm,0.8s						
KK31				⇓Lg	Lg	13 04 23.1	
	comp=Z,174nm,1.1s						
KK31	Karatay Array	11.59	312	P	Pn	13 01 01.9	-0.7
KK31	Karatay Array	11.59	312		Pn	13 01 01.9	-0.7
KKAR	Karatay Array	11.59	312	P	Pn	13 01 02.2	-0.4
KKAR	Karatay Array	11.59	312		Pn	13 01 02.2	-0.4
KKAR	Karatay Array	11.59	312		Pn	13 01 02.2	-0.4
BOK	Bokaro	12.44	164	eP	Pn	13 01 13.2	-0.9
BOK				IAmb	IAmb	13 01 19.3	
	comp=Z,50nm,0.6s						
BHPL	Bhopal	13.27	200	eP	Pn	13 01 23.6	-1.9
BHPL				IAmb	IAmb	13 01 38.0	
	comp=Z,22nm,0.8s						
BHPL				i Rg	Rg	13 06 27.3	
DGZ	Jazzator, Alta	14.33	14	c iP	Pn	13 01 38.9	-1.1
GTA	Gaotai	14.35	71	P	Pn	13 01 40.9	+0.6
GTA				pP	P	13 01 44.1	-3.4
GTA				sP		13 01 47.4	
GTA				S	Sn	13 04 21.4	+1.8
GTA				sS	S	13 04 29.6	-10
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,180nm,5.7s						
GTA				LR	LR		
	comp=Z,2µm,15.1s						
GTA				LR	LR		
	comp=Z,3µm,10.7s						
GTA				LR	LR		
	comp=Z,3µm,10.3s						
KURBB	Kurchatov Arra	14.99	351	Pn	Pn	13 01 46.1	-2.8
	comp=Z,0.2nm,0.3s,baz=173,slow=12,SNR=61						
KURBB				Lg	Lg	13 06 13.8	
	comp=Z,0.1nm,0.3s,baz=172,slow=30,SNR=4.4						
KURBB	Kurchatov Arra	14.99	351	⇑P	Pn	13 01 45.7	-3.1
	comp=Z,62nm,1.4s						
KURK	Kurchatov	15.07	351	⇓P	Pn	13 01 47.1	-2.9
	comp=Z,68nm,1.2s						
KURK	Kurchatov	15.07	351	ceP	Pn	13 01 47.0	-2.9
KURK				pmax	pmax		
	comp=Z,40nm,0.8s						
KURK	Kurchatov	15.07	351		Pn	13 01 47.0	-2.9
KURK				IAmb	IAmb	13 01 58.7	
	comp=Z,56nm,1.0s						
BRDH	Bariadhala	15.47	146	LR	LR	13 08 03.7	
	comp=Z,596nm,18.8s,baz=344,slow=38						
HRA	Herat	16.45	271	P	Pn	13 02 08.0	-0.1
RPR	Rampur	17.15	190	eP	Pn	13 02 17.9	+1.1
SRSP	Sriramsagar	17.23	193	eP	Pn	13 02 15.6	-2.3
CHLP	Challavanipeta	17.37	174	eP	Pn	13 02 19.6	-0.1
LZH	Lanzhou	17.47	83	eP	Pn	13 02 21.4	+0.4
LZH				sP	pP	13 02 26.1	-0.3
LZH				eS	Sn	13 05 34.1	-1.4
LZH				SS	SnSn	13 05 58.8	+10
LZH				pmax	pmax		
	comp=Z,45nm,1.0s						
LZH				pmax	pmax		
	comp=Z,320nm,4.6s						
LZH				LR	LR		
	comp=Z,4µm,11.9s						
LZH				LR	LR		
	comp=Z,3µm,12.0s						
LZH				LR	LR		
	comp=Z,3µm,14.1s						
ZAA0	Zalesovo Array	18.16	5	⇑P	Pn	13 02 25.8	-3.4
	comp=Z,19nm,1.1s						
ZAA0	Zalesovo Array	18.16	5	Pn	Pn	13 02 25.8	-3.4
ZAA0				IAmb	IAmb	13 02 32.9	
	comp=Z,99nm,0.9s						
ZALV	Zalesovo Beam	18.16	5	P	Pn	13 02 26.5	-2.7
	comp=Z,1.5nm,0.3s,baz=192,slow=12,SNR=98						
ZALV				S	Sn	13 05 45.6	-6.2
	comp=Z,0.3nm,0.3s,baz=178,slow=26,SNR=2.6						
ZALV				LR	LR	13 10 28.2	
	comp=Z,1µm,19.3s,baz=192,slow=40						
ZALV	Zalesovo Beam	18.16	5		Pn	13 02 26.4	-2.8
KLRI	Killari	18.43	197	eP	P	13 02 32.7	0.0
PVM	Polavaram	18.56	182	eP	P	13 02 33.3	-0.8
CD2	Chengdu	18.61	99	⇑iP	Pn	13 02 35.8	+0.9
CD2				PP	PnPn	13 02 49.4	+2.8
CD2				S	S	13 06 06.8	0.0
CD2				sS	sS	13 06 11.4	-2.0
CD2				SS	SnSn	13 06 26.1	+9.4
CD2				pmax	pmax		
	comp=Z,20nm,0.4s						
CD2				pmax	pmax		
	comp=Z,280nm,3.9s						
CD2				LR	LR		
	comp=Z,4µm,11.3s						
CD2				LR	LR		
	comp=Z,6µm,9.9s						
CD2				LR	LR		
	comp=Z,7µm,9.5s						
HYBB	Hyderabad (bro	18.67	191	eP	P	13 02 35.4	0.0
HYB	Hyderabad	18.67	191	i P	P	13 02 31.0	-4.4
POO	Poona	18.81	206	eP	Pn	13 02 37.8	+0.4
BVAR	Borovoye Array	19.09	338	P	Pn	13 02 40.4	-0.1
	comp=Z,2.1nm,0.3s,baz=134,slow=8.5,SNR=68						
BRVK	Borovoye	19.15	338	⇑P	Pn	13 02 41.6	+0.4
	comp=Z,58nm,0.8s						
BRVK	Borovoye	19.15	338	deP	Pn	13 02 41.8	+0.6
BRVK				pmax	pmax		
	comp=Z,79nm,1.0s						
BRVK	Borovoye	19.15	338	P	Pn	13 02 41.1	-0.1
BRVK				IAmb	IAmb	13 02 47.2	
	comp=Z,61nm,0.7s						
ASHT	Ashkhabad	19.20	283	P	P	13 02 40.8	-0.2
ASHT				pmax	pmax		
	comp=Z,142nm,0.3s						
ASHT	Ashkhabad	19.20	283	P	P	13 02 40.8	-0.2
GEYT	Alibeck	19.41	283	P	P	13 02 43.5	+0.1
	comp=Z,0.4nm,0.3s,baz=96,slow=9.1,SNR=22						
GEYT				LR	LR	13 12 15.1	
	comp=Z,636nm,19.2s,baz=110,slow=43						
GEYT	Alibeck	19.41	283	P	P	13 02 42.8	-0.6
GYA0B	ALIBECK ARRAY	19.41	283	⇓P	P	13 02 43.2	-0.2
GYA0B	ALIBECK ARRAY	19.41	283	P	P	13 02 43.0	-0.3
NJS	Nagarjunasagar	19.42	189	eP	P	13 02 43.7	+0.2
SRLM	Srisailam	19.92	190	eP	P	13 02 48.9	-0.2
ADKI	Addanki	20.05	186	eP	P	13 02 50.6	+0.3
KMI	Kunming	20.60	116	P	P	13 02 56.4	-0.2
KMI				S	S	13 06 43.3	-3.8
KMI				pmax	pmax		
	comp=Z,48nm,1.1s						
KMI				pmax	pmax		
	comp=Z,220nm,3.4s						
KMI				LR	LR		
	comp=Z,2µm,15.9s						
KMI				LR	LR		
	comp=Z,1µm,14.4s						
KMI				LR	LR		
	comp=Z,910nm,9.7s						
KMI	Kunming	20.60	116	P	P	13 02 55.6	-1.0
KMI				pmax	pmax		
	comp=Z,35nm,0.8s						
KMI	Kunming	20.60	116	P	P	13 02 55.6	-1.0
MOY	Mondy	20.70	34	eP	P	13 02 57.9	+0.6
MOY				pmax	pmax		
	comp=Z,179nm,1.9s						
ZAK	Zakamensk	21.01	40	eP	P	13 03 00.6	-0.1
ZAK				pmax	pmax		
	comp=Z,46nm,1.1s						

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AB31  Akbulak array     21.09 316 ⇓P    P       13 03 02.4 +0.9
      comp=Z,39nm,0.7s,baz=118,slow=12,SNR=395
AB31  Akbulak array     21.09 316  P    P       13 03 02.4 +0.9
ABKAR Akbulak array     21.09 316  P    P       13 03 02.1 +0.6
ABKAR Akbulak array     21.09 316  P    P       13 03 02.4 +0.9
ABKAR                              IAmb IAmb    13 03 09.7
      comp=Z,83nm,1.1s
URV   Uravakonda        21.31 193 eP    P       13 03 03.7 -0.4
SONM  Songino Array     21.49  49  P    P       13 03 07.3 +1.3
      comp=Z,72nm,0.9s,baz=241,slow=12,SNR=89
SONM                               LR   LR      13 11 57.9
      comp=Z,2µm,18.6s,baz=242,slow=38
SONM  Songino Array     21.49  49  P    P       13 03 06.2 +0.3
SONM                               pmax pmax
      comp=Z,98nm,0.9s
SONM  Songino Array     21.49  49  P    P       13 03 06.2 +0.3
ULN   Ulaanbaatar       21.90  49ceP    P       13 03 10.4  0.0
ULN                                pmax pmax
      comp=Z,158nm,1.7s
ULN   Ulaanbaatar       21.90  49  P    P       13 03 10.5 +0.1
XAN   Xi'an             21.91  87  P    P       13 03 11.8 +1.4
XAN                                pP   sP      13 03 16.0 -0.7
XAN                                S    S       13 07 15.8 +3.4
XAN                                sS   Sn      13 07 23.0 +0.6
XAN                                pmax pmax
      comp=Z,12nm,1.1s
XAN                                pmax pmax
      comp=Z,240nm,5.7s
XAN                                LR   LR
      comp=Z,1µm,11.9s
XAN                                LR   LR
      comp=Z,2µm,14.6s
XAN                                LR   LR
      comp=Z,2µm,14.6s
XAN   Xi'an             21.91  87  P    P       13 03 10.4  0.0
XAN                                pmax pmax
      comp=Z,22nm,1.1s
XAN   Xi'an             21.91  87  P    P       13 03 10.4  0.0
TLY   Talaya            21.97  37  P    P       13 03 11.8 +0.9
      comp=Z,6.3nm,0.6s,baz=238,slow=11,SNR=12
TLY                                LR   LR      13 12 34.8
      comp=Z,1µm,20.2s,baz=231,slow=39
TLY   Talaya            21.97  37c iP   P       13 03 13.6 +2.7
TLY                               eS    S       13 07 16.4 +3.1
TLY                                pmax pmax
      comp=Z,138nm,1.8s
TLY                                MLR  MLR
      comp=Z,4µm,19.0s
TLY   Talaya            21.97  37  P    P       13 03 10.7 -0.2
TLY                                IAmb IAmb    13 03 19.7
      comp=Z,89nm,1.7s
SKHT  Srikalahasti      22.16 187 eP    P       13 03 12.9 -0.2
BTO   Baotou            22.27  69 eP    P       13 03 11.4 -2.9
CHTO  Chiang Mai        22.49 135  P    P       13 03 15.7 -1.0
CHTO                               pmax pmax
      comp=Z,26nm,1.1s
CHTO  Chiang Mai        22.49 135  P    P       13 03 15.7 -1.0
IRK   Irkutsk           22.62  37 eP    P       13 03 20.0 +2.1
IRK                                pmax pmax
      comp=Z,136nm,1.6s
AKTO  Aktyubinsk        22.77 317  P    P       13 03 20.1 +0.6
      comp=Z,15nm,0.7s,baz=112,slow=8.7,SNR=42
AKTO  Aktyubinsk        22.77 317 ⇑P    P       13 03 19.8 +0.4
      comp=Z,42nm,1.1s
CM31  Chiang Mai Arr    22.77 135  P    P       13 03 20.8 +1.2
      SNR=10
CM31  Chiang Mai Arr    22.77 135  P    P       13 03 19.4 -0.3
CMAR  Chiang Mai Arr    22.77 135  P    P       13 03 20.2 +0.6
      comp=Z,16nm,0.9s,baz=316,slow=10,SNR=71
CMAR                               PcP  PcP     13 07 11.6 +0.2
      comp=Z,0.3nm,0.3s,baz=316,slow=4.0,SNR=4.2
CMAR  Chiang Mai Arr    22.77 135  P    P       13 03 19.0 -0.7
CMAR  Chiang Mai Arr    22.77 135  P    P       13 03 18.9 -0.7
MDRS  Chennai           22.78 185 eP    P       13 03 18.6 -1.2
MDRS                               IAmb IAmb    13 03 26.1
      comp=Z,27nm,0.4s
GYA   Guiyang           22.84 107⇑iP    P       13 03 20.3 -0.2
GYA                                PP   PnPn    13 03 48.3 +3.6
GYA                                S    S       13 07 29.4 -0.7
GYA                                SS   SnSn    13 08 04.9 +4.1
GYA                                pmax pmax
      comp=Z,20nm,0.7s
GYA                                pmax pmax
      comp=Z,120nm,4.3s
GYA                                LR   LR
      comp=Z,830nm,12.4s
GYA                                LR   LR
      comp=Z,890nm,12.6s
GYA                                LR   LR
      comp=Z,920nm,13.1s
ENH   Enshi             23.45  96  P    P       13 03 26.1 -0.5
HHC   Hu-ho-hao-te      23.45  69 eP    P       13 03 24.3 -2.4
HHC                                PP   sP      13 03 54.6  +22
HHC                                S    S       13 07 33.1 -7.0
HHC                                pmax pmax
      comp=Z,7.0nm,0.7s
HHC                                pmax pmax
      comp=Z,48nm,5.9s
HHC                                LR   LR
      comp=Z,410nm,11.6s
HHC                                LR   LR
      comp=Z,350nm,10.8s
HHC                                LR   LR
      comp=Z,610nm,15.5s
SLVN  Son La            23.82 122  P    P       13 03 30.5 +0.1
WSAR  Wadi Sarin        24.03 245  P    P       13 03 33.1 +0.8
      comp=Z,2.6nm,0.5s,baz=63,slow=12,SNR=2.2
WSAR  Wadi Sarin        24.03 245  P    P       13 03 40.2 +7.9
      SNR=6.7
WBK   Wadi Bani Khal    24.17 243  P    P       13 03 41.7 +8.1
WBK                                P    P       13 03 41.7 +8.1
TIY   Taiyuan           24.18  77 eP    P       13 03 33.5 -0.2
BANOM Banah             24.32 253 i P   P       13 03 37.0 +2.0
      SNR=9.4
BANOM Banah             24.32 253  P    P       13 03 41.9 +6.9
      SNR=5.8
SHME  Shamm             24.38 254 i P   P       13 03 36.7 +1.1
      SNR=7.0
MDH   Madha             24.64 252 i P   P       13 03 41.0 +3.1
      SNR=6.7
MDH   Madha             24.64 252  P    P       13 03 43.1 +5.2
      SNR=8.9
MDH                                P    P       13 03 43.1 +5.2
      SNR=8.9
MSFE  Esma-Masafi       24.72 252 i P   P       13 03 40.3 +1.7
      SNR=8.3
UOSS  Minazif           24.90 251  P    P       13 03 42.0 +1.8
UOSS  Minazif           24.90 251  P    P       13 03 40.2  0.0
JMDO  Jabal Madar       24.95 244  P    P       13 03 48.6 +8.0
      SNR=6.9
JMDO                               P    P       13 03 48.6 +8.0
      SNR=6.9
ASHO  Ashiyiah          25.15 251 i P   P       13 03 45.1 +2.6
      SNR=13
ASHO  Ashiyiah          25.15 251  P    P       13 03 51.3 +8.7
      SNR=14
ASHO                               P    P       13 03 51.3 +8.7
      SNR=14
NAZ   Nazwa, Dubai      25.30 252 i P   P       13 03 47.0 +3.3
      SNR=12
NAZ   Nazwa, Dubai      25.30 252  P    P       13 03 50.3 +6.5
      SNR=16
NAZ                                P    P       13 03 50.3 +6.5
      SNR=16
BSY   Bisya             25.39 246  P    P       13 03 56.0  +11
      SNR=5.3
BSY                                P    P       13 03 56.0  +11
      SNR=5.3
PBKT  Sadao Pong        25.43 134  P    P       13 03 44.6 -0.4
SVE   Sverdlovsk        25.53 332⇓eP    P       13 03 46.8 +1.2
SVE                                pmax pmax
      comp=Z,29nm,0.9s
SVE                                MLR  MLR
      comp=Z,923nm,12.0s
ALNE  Al Ain            25.73 250 i P   P       13 03 50.5 +2.8
      SNR=7.2
MHTO  MHTO              25.91 242  P    P       13 03 57.6 +8.2
      SNR=7.4
AJN   Ajban             26.04 252 i P   P       13 03 54.2 +3.6
      SNR=7.1
AJN   Ajban             26.04 252  P    P       13 03 57.6 +7.1
      SNR=7.6
AJN                                P    P       13 03 57.6 +7.1
      SNR=7.6
ARU   Arti              26.07 329  P    P       13 03 51.2 +0.7
      comp=Z,5.6nm,0.6s,baz=156,slow=4.5,SNR=14
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ARU   Arti              26.07 329c iP   P       13 03 51.2 +0.7
ARU                                             13 04 26.6
ARU                                S    S       13 08 26.1 +4.6
ARU                                SS   SnSn    13 09 27.0 +7.9
ARU                                pmax pmax
      comp=Z,47nm,1.5s
ARU   Arti              26.07 329  P    P       13 03 50.7 +0.2
ARU                                IAmb IAmb    13 03 55.6
      comp=Z,58nm,1.4s
BJT   Baijiatuau        26.96  71  P    P       13 03 58.7  0.0
BJT                                pmax pmax
      comp=Z,24nm,1.3s
BJT   Baijiatuau        26.96  71  P    P       13 03 58.7  0.0
BJI   Beijing           26.96  71  P    P       13 04 01.5 +2.8
BJI                                pmax pmax
      comp=Z,14nm,1.2s
BJI                                LR   LR
      comp=Z,1µm,21.6s
BJI                                LR   LR
      comp=Z,730nm,12.4s
BJI                                LR   LR
      comp=Z,490nm,37.9s
WHN   Wuhan             27.29  92  P    P       13 04 04.8 +3.0
WHN                                S    S       13 08 44.0 +2.8
WHN                                pmax pmax
      comp=Z,36nm,0.8s
WHN                                LR   LR
      comp=Z,3µm,9.2s
WHN                                LR   LR
      comp=Z,3µm,12.2s
WHN                                LR   LR
      comp=Z,4µm,11.6s
AKT   Akhty             27.41 292 eP    P       13 04 05.1 +2.2
AKT                               e             13 04 50.3
AKT                                pmax pmax
      comp=Z,27nm,1.1s
CIT   Chita             27.43  44 eP    P       13 04 04.0 +1.1
CIT                               e             13 04 11.0
MAK   Makhachkala       27.63 296 eP    P       13 04 00.3 -4.3
MAK                               eS    S       13 08 38.9 -7.4
MAK                                pmax pmax
      comp=Z,99nm,0.8s
MAK                                MLR  MLR
      comp=Z,1µm,14.0s
PALK  Pallekele         28.50 183  P    P       13 04 12.7  0.0
      comp=Z,6.2nm,0.8s,baz=8.3,slow=11,SNR=4.8
PALK  Pallekele         28.50 183  P    P       13 04 13.1 +0.4
PALK  Pallekele         28.50 183  P    P       13 04 12.5 -0.2
PALK                               pmax pmax
      comp=Z,50nm,2.0s
PALK  Pallekele         28.50 183  P    P       13 04 12.5 -0.2
PALK                               IAmb IAmb    13 04 19.5
      comp=Z,50nm,1.9s
GROC  Groznyy           28.89 296 eP    P       13 04 19.0 +3.1
GROC                              e             13 05 12.2
GROC                              eS    S       13 09 08.3 +2.1
GROC                               pmax pmax
      comp=Z,39nm,1.4s
QIZ   Qiongzhong        29.53 117  P    P       13 04 18.4 -3.4
QIZ                                sP   pP      13 04 24.0 -2.3
QIZ                                S    S       13 09 15.8 -0.8
ZEI   Tsey              30.27 295 eP    P       13 04 33.7 +5.3
ZEI                                pmax pmax
      comp=Z,5.0nm,1.1s
HIA   Hailar            30.34  52  P    P       13 04 29.3 +0.5
HIA                                pmax pmax
      comp=Z,5.0nm,0.6s
HIA   Hailar            30.34  52  P    P       13 04 29.3 +0.5
BOD   Bodaibo           30.41  34 eP    P       13 04 29.6 +0.4
BOD                                pmax pmax
      comp=Z,15nm,1.5s
NJ2   Nanjing           30.47  86 eP    P       13 04 28.6 -1.5
NJ2                                pmax pmax
      comp=Z,10.0nm,0.7s
NJ2                                LR   LR
      comp=Z,1µm,16.6s
NJ2                                LR   LR
      comp=Z,910nm,12.3s
NJ2                                LR   LR
      comp=Z,1µm,16.1s
AKH   Akhalkalaki       30.60 292  P    P       13 04 30.6 -0.7
AKH                                pmax pmax
      comp=Z,20nm,1.4s
AKH   Akhalkalaki       30.60 292  P    P       13 04 30.6 -0.7
ONI   Oni               30.60 295  P    P       13 04 35.0 +3.8
KBZ   Khabaz            31.01 297 i P   P       13 04 37.4 +2.7
KBZ                                pmax pmax
      comp=Z,2.0nm,1.3s
KIV   Kislovodsk        31.17 297 eP    P       13 04 35.5 -0.7
KIV                                pmax pmax
      comp=Z,10.0nm,0.9s
KIV                                MLR  MLR
      comp=Z,2µm,15.0s
VRH   Novokhopyorsk     32.67 311 eP    P       13 04 49.9 +0.7
VRH                                pmax pmax
      comp=Z,10.0nm,0.3s
NRIK  Noril'sk          33.65   3  P    P       13 04 58.1 +0.6
      comp=Z,12nm,1.0s,baz=176,slow=6.2,SNR=16
NRIK  Noril'sk          33.65   3 i P   P       13 04 57.6 +0.1
NRIK                               pmax pmax
      comp=Z,24nm,1.2s
CN2   Changchun         33.78  63 eP    P       13 04 58.3 -0.7
CN2                               esP   sP      13 05 05.0 -0.4
CN2                               eS    S       13 10 19.3 -3.3
CN2                                pmax pmax
      comp=Z,10.0nm,0.7s
CN2                                pmax pmax
      comp=Z,100nm,5.0s
CN2                                LR   LR
      comp=Z,800nm,11.0s
CN2                                LR   LR
      comp=Z,500nm,11.0s
CN2                                LR   LR
      comp=Z,1µm,13.0s
RAYN  Ar Rayn           34.03 259  P    P       13 05 02.3 +0.9
RAYN  Ar Rayn           34.03 259  P    P       13 05 01.8 +0.4
RAYN                               pmax pmax
      comp=Z,18nm,1.3s
RAYN  Ar Rayn           34.03 259  P    P       13 05 01.8 +0.4
VSR   Storozhevoye      34.25 310 eP    P       13 05 02.3 -0.7
VSR                                pmax pmax
      comp=Z,10.0nm,0.6s
PRGR  Permogore         34.53 330 eP    P       13 05 03.8 -1.4
PRGR                               pmax pmax
      comp=Z,13nm,0.8s
LPSR  Galich'ya Gora    34.65 313 eP    P       13 05 07.1 +0.7
LPSR                               pmax pmax
      comp=Z,20nm,0.7s
MALT  Malatya           34.81 287  P    P       13 05 12.6 +4.5
ZEA   Zeya              35.85  46 eP    P       13 05 18.1 +1.4
ZEA                                pmax pmax
      comp=N,24nm,1.0s
ZEA                                pmax pmax
      comp=Z,35nm,1.0s
GAZ   Gaziantep         35.97 286  P    P       13 05 18.5 +0.4
GAZ                                IAmb IAmb    13 05 25.1
      comp=Z,29nm,1.2s
MOS   Moscow            36.10 318 eP    P       13 05 17.7 -1.1
MOS                               e             13 06 38.1
MOS                               e             13 07 48.4
MOS                               eS    S       13 10 52.5 -5.5
MOS                                pmax pmax
      comp=Z,23nm,0.7s
PSI   Prapat            36.34 151  P    P       13 05 20.8 -0.6
PSI                                pmax pmax
      comp=Z,5.0nm,0.8s
KSAR  Wonju Array Be    36.36  74  P    P       13 05 20.7 -0.6
KSAR  Wonju Array Be    36.36  74  P    P       13 05 20.7 -0.6
KSRS  Korea Array       36.39  74  P    P       13 05 20.9 -0.6
      comp=Z,3.2nm,1.0s,baz=273,slow=7.8,SNR=9.8
KSRS                               LR   LR      13 20 58.6
      comp=Z,458nm,19.9s,baz=285,slow=38
RPSI  Rantau Prapat     36.44 151  P    P       13 05 20.8 -1.3
OBN   Obninsk           36.54 316ceP    P       13 05 23.1 +0.5
OBN                               i             13 06 49.1
OBN                               i             13 07 42.3
OBN                               i S   S       13 10 57.7 -7.0
OBN                                pmax pmax
      comp=Z,61nm,1.7s
OBN                                MLR  MLR
      comp=Z,975nm,18.0s
OBN   Obninsk           36.54 316  P    P       13 05 22.3 -0.3
KLMR  Klimovskoe        36.80 326 eP    P       13 05 23.3 -1.5
KLMR                              e             13 06 48.9
KLMR                               pmax pmax
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      comp=Z,39nm,1.3s
KLMR  Klimovskoe        36.80 326 eP    P       13 05 23.3 -1.5
KLMR                               AMP          13 05 26.8
      comp=Z,39nm,1.3s
KLMR                              ePP   PP      13 06 49.0 +0.6
GSI   Gunungsitoli      37.22 154  P    P       13 05 28.2 -0.5
ILGA  Ilgaz             37.97 293  P    P       13 05 35.3 +0.1
KLR   Kul'dur           38.15  54  P    P       13 05 36.2 -0.1
      comp=Z,5.2nm,0.8s,baz=270,slow=7.8,SNR=6.1
KLR   Kul'dur           38.15  54 i P   P       13 05 35.3 -1.0
KLR                                pmax pmax
      comp=Z,12nm,0.9s
BR131 Keskin Array S    38.24 291  P    P       13 05 39.6 +2.2
      SNR=12
BR131 Keskin Array S    38.24 291  P    P       13 05 38.1 +0.7
BR131                              pmax pmax
      comp=Z,54nm,1.7s
BR131 Keskin Array S    38.24 291  P    P       13 05 38.1 +0.7
BR131                              IAmb IAmb    13 05 44.0
      comp=Z,54nm,1.7s
BRTR  Keskin Array B    38.24 291  P    P       13 05 38.7 +1.3
      comp=Z,7.0nm,0.9s,baz=93,slow=6.2,SNR=17
BRTR  Keskin Array B    38.24 291 i P   P       13 05 39.0 +1.6
BRTR                               pmax pmax
      comp=Z,7.0nm,0.9s
BRTR  Keskin Array B    38.24 291  P    P       13 05 38.0 +0.6
USRK  Ussuriysk Ar.     38.47  62  P    P       13 05 38.1 -1.0
      comp=Z,2.5nm,0.8s,baz=255,slow=4.3,SNR=1.9
USRK  Ussuriysk Ar.     38.47  62  P    P       13 05 38.5 -0.6
TMCR  Tamitsa           38.79 331 eP    P       13 05 41.0 -0.5
ANTO  Ankara            38.86 291  P    P       13 05 43.1 +0.6
ANTO                               pmax pmax
      comp=Z,63nm,1.5s
ANTO  Ankara            38.86 291  P    P       13 05 43.1 +0.6
ANTO                               IAmb IAmb    13 05 48.7
      comp=Z,63nm,1.4s
YAK   Yakutsk           39.32  33 i P   P       13 05 45.4 -0.6
YAK                                pmax pmax
      comp=Z,67nm,1.0s
YAK   Yakutsk           39.32  33  P    P       13 05 45.1 -0.9
YAK                                IAmb IAmb    13 05 51.0
      comp=Z,55nm,0.9s
BKNI  Bangkinang        39.44 150  P    P       13 05 46.5 -1.0
BKNI                               IAmb IAmb    13 05 47.2
      comp=Z,73nm,1.2s
JNU   Nakatsue          39.84  79  P    P       13 05 50.3 -0.4
      comp=Z,8.3nm,0.9s,baz=203,slow=2.6,SNR=4.9
JNU   Nakatsue          39.84  79  P    P       13 05 50.0 -0.7
DAMY  Dhamar            39.95 248  P    P       13 05 51.2 -0.8
MDUB  Mudurnu           39.95 292  P    P       13 05 52.0 +0.4
AKASG Malin Array Be    40.47 308  P    P       13 05 56.1 +0.4
      comp=Z,2.2nm,0.6s,baz=75,slow=7.6,SNR=12
AKASG                              PP   PP      13 07 28.1 -0.6
      comp=Z,2.7nm,0.8s,baz=80,slow=9.4,SNR=1.6
AKASG Malin Array Be    40.47 308  P    P       13 05 55.6 -0.1
AKBB  Malin Array Si    40.47 308 i P   P       13 05 56.3 +0.7
AKBB  Malin Array Si    40.47 308  P    P       13 05 55.4 -0.3
SORM  Soroca            41.09 305 ⇑P    P       13 06 01.2 +0.3
SORM  Soroca            41.09 305 ⇑P    P       13 06 01.2 +0.3
JOF   Joensuu           41.16 327  P    P       13 06 02.4 +1.2
JOF                                pmax pmax
      comp=Z,24nm,0.9s
GRNR  Gornyy            41.18  51⇓iP    P       13 06 00.9 -0.7
GRNR                               pmax pmax
      comp=Z,5.0nm,0.9s
GRNR                               MLR  MLR
      comp=Z,270nm,14.0s
CFR   Carcaliu          41.49 300  P    P       13 06 05.7 +1.5
LVZ   Lovozero          41.65 335ceP    P       13 06 04.1 -1.1
LVZ                                pmax pmax
      comp=Z,95nm,2.5s
LVZ   Lovozero          41.65 335  P    P       13 06 05.7 +0.4
LVZ                                IAmb IAmb    13 06 09.0
      comp=Z,31nm,1.0s
ELL   Elmali            41.76 287  P    P       13 06 06.8 +0.1
ELL                                pmax pmax
      comp=Z,130nm,1.2s
ELL   Elmali            41.76 287  P    P       13 06 06.8 +0.1
APA   Apatity           41.95 334⇓iP    P       13 06 06.3 -1.3
APA                                pmax pmax
      comp=Z,11nm,0.8s
APA                                MLR  MLR
      comp=Z,2µm,13.0s
TESR  Tescani           42.38 302 ⇓P    P       13 06 13.0 +1.6
VRI   Vrincioaia        42.40 301 ⇑P    P       13 06 12.2 +0.6
VRI   Vrincioaia        42.40 301 ⇑P    P       13 06 12.2 +0.6
PLOR  Plostina          42.45 301 ⇑P    P       13 06 14.4 +2.3
PLOR  Plostina          42.45 301 ⇑P    P       13 06 14.4 +2.3
BIZ   Bicaz             42.71 303 ⇑P    P       13 06 15.7 +1.6
KSM   Kuching           42.99 136  P    P       13 06 16.3 -0.4
KSM                                IAmb IAmb    13 06 18.0
      comp=Z,29nm,1.0s
MLR   Muntele Rosu      42.99 301 ⇑P    P       13 06 19.1 +2.6
MLR   Muntele Rosu      42.99 301  P    P       13 06 17.5 +0.9
MLR                                pmax pmax
      comp=Z,61nm,1.5s
MLR   Muntele Rosu      42.99 301  P    P       13 06 17.5 +0.9
MLR                                IAmb IAmb    13 06 23.3
      comp=Z,61nm,1.5s
KKM   Kota Kinabalu     43.02 126  P    P       13 06 16.5 -0.6
KKM                                IAmb IAmb    13 06 19.0
      comp=Z,58nm,1.2s
TIXI  Tiksi             43.11  20  P    P       13 06 16.3 -0.6
TIXI                               pmax pmax
      comp=Z,24nm,1.4s
TIXI  Tiksi             43.11  20  P    P       13 06 16.3 -0.6
FIA1  FINESS Array S    43.21 324  P    P       13 06 17.9 -0.1
FIA1                               IAmb IAmb    13 06 22.3
      comp=Z,25nm,1.0s
FINES FINESS Array B    43.21 324  P    P       13 06 18.5 +0.6
      comp=Z,13nm,0.8s,baz=100,slow=10,SNR=14
FINES FINESS Array B    43.21 324  P    P       13 06 18.1 +0.2
BURAR Bucovina Array    43.24 304 ⇓P    P       13 06 19.7 +1.2
BURAR Bucovina Array    43.24 304 ⇓P    P       13 06 19.7 +1.2
BURAR Bucovina Array    43.24 304  P    P       13 06 19.1 +0.6
BUR08 Bucovina Ar. S    43.25 304  P    P       13 06 18.7 +0.1
SBUM  Sibu              43.30 133  P    P       13 06 18.6 -0.5
VOIR                    43.62 301 ⇑P    P       13 06 21.0 -0.6
VOIR                    43.62 301 ⇑P    P       13 06 21.0 -0.6
ALN   Alexandroupoli    43.71 294  P    P       13 06 22.5 +0.2
ALN                                pmax pmax
      comp=Z,6.0nm,1.2s
ALN   Alexandroupoli    43.71 294  P    P       13 06 22.5 +0.2
EZN   Ezine             43.74 293  P    P       13 06 25.3 +2.8
ARCR  ARCALIA           43.88 303 ⇑P    P       13 06 28.1 +4.6
SUW   Suwalki           44.17 313  P    P       13 06 25.7 -0.1
SUW                                pmax pmax
      comp=Z,57nm,1.3s
SUW   Suwalki           44.17 313  P    P       13 06 25.7 -0.1
KARP  Karpathos         44.23 286  P    P       13 06 27.0 +0.5
KARP                               IAmb IAmb    13 06 34.9
      comp=Z,43nm,1.0s
MAT   Matsushiro        44.59  72  P    P       13 06 28.1 -1.3
MAT                               eS    S       13 13 09.2 +3.9
MJAR  Matsushiro Arr    44.59  72  P    P       13 06 29.3 -0.1
      comp=Z,2.7nm,0.7s,baz=288,slow=9.2,SNR=5.8
MJAR  Matsushiro Arr    44.59  72  P    P       13 06 29.1 -0.3
MJAR                               pmax pmax
      comp=Z,3.0nm,0.9s
MJAR  Matsushiro Arr    44.59  72  P    P       13 06 29.1 -0.3
KWP   Kalwaria Pacla    44.70 307  P    P       13 06 30.3 +0.2
KWP                                pmax pmax
      comp=Z,81nm,1.8s
KWP   Kalwaria Pacla    44.70 307  P    P       13 06 30.3 +0.2
KEV   Kevo              44.93 336  P    P       13 06 31.9 +0.3
KEV                                pmax pmax
      comp=Z,119nm,1.8s
KEV   Kevo              44.93 336  P    P       13 06 31.9 +0.3
DRGR                    45.04 303 ⇑P    P       13 06 34.2 +1.3
DRGR                    45.04 303 ⇑P    P       13 06 34.2 +1.3
VAF   Ylistaro          45.04 326  P    P       13 06 35.0 +2.5
VAF                                pmax pmax
      comp=Z,56nm,2.7s
GZR   Gura Zlata        45.21 301 ⇑P    P       13 06 35.7 +1.4
GZR   Gura Zlata        45.21 301 ⇑P    P       13 06 35.7 +1.4
SANT  Santorini         45.30 288  P    P       13 06 35.1 -0.1
SANT                               IAmb IAmb    13 06 40.6
      comp=Z,35nm,1.4s
ARCES ARCESS Array B    45.36 336  P    P       13 06 35.7 +0.7
      comp=Z,17nm,0.8s,baz=105,slow=7.2,SNR=19
ARCES ARCESS Array B    45.36 336  P    P       13 06 35.3 +0.3
ARCES ARCESS Array B    45.36 336  P    P       13 06 35.3 +0.3
VTS   Vitosha           45.41 297  P    P       13 06 35.8 -0.2
VTS                                pmax pmax
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          comp=Z,9.0nm,1.4s
VTS   Vitosha          45.41 297   P      P      13 06 35.8  -0.2
LWLI  Liwa             45.52 149   P      P      13 06 48.5  +11
YSS   Yuzh-Sakhalins   45.65  56⇑eP     P      13 06 39.4  +1.8
YSS                                pmax   pmax
          comp=Z,16nm,1.2s
BZS   Buzias           45.97 302   P      P      13 06 43.2  +3.0
MDVR  Moldovita        46.06 301 ⇓P     P      13 06 42.5  +1.5
GRG   Griva            46.39 295   P      P      13 06 48.6  +5.0
OJC   Ojcow            46.51 308   P      P      13 06 44.5  +0.1
OJC                                pmax   pmax
          comp=Z,48nm,1.8s
OJC   Ojcow            46.51 308   P      P      13 06 44.5  +0.1
OJC                                IAmb   IAmb   13 06 50.3
          comp=Z,48nm,1.8s
LIT   Litokhoron       46.53 294   P      P      13 06 45.2  +0.4
LIT                                pmax   pmax
          comp=Z,20nm,1.6s
LIT   Litokhoron       46.53 294   P      P      13 06 45.2  +0.4
LIT                                IAmb   IAmb   13 06 50.6
          comp=Z,20nm,1.6s
PSZ   Piszkesteto      46.76 305   P      P      13 06 46.7  +0.2
PSZ                                pmax   pmax
          comp=Z,34nm,1.8s
PSZ   Piszkesteto      46.76 305   P      P      13 06 46.7  +0.2
PSZ                                IAmb   IAmb   13 06 53.0
          comp=Z,34nm,1.8s
AGG   Agios Georgios   46.94 293   P      P      13 06 48.0  +0.1
AGG   Agios Georgios   46.94 293   P      P      13 06 48.0  +0.1
AGG                                IAmb   IAmb   13 06 53.4
          comp=Z,30nm,1.7s
FNA   Florina          47.18 295   P      P      13 06 56.3  +6.4
VYHS  Vyhne            47.37 306  eP      P      13 06 53.0  +1.8
VYHS                               pmax   pmax
          comp=Z,18nm,1.3s
VYHS  Vyhne            47.37 306  eP      P      13 06 53.0  +1.8
OKC   Ostrava-Krasne   47.61 308  eP      P      13 06 56.5  +3.5
OKC   Ostrava-Krasne   47.61 308  eP      P      13 06 56.5  +3.5
MORC  Moravsky Berou   48.01 308 ⇓P     P      13 06 58.1  +1.9
MORC  Moravsky Berou   48.01 308 ⇓P     P      13 06 58.1  +1.9
MORC  Moravsky Berou   48.01 308  eP      P      13 06 57.5  +1.3
MORC  Moravsky Berou   48.01 308   P      P      13 06 56.7  +0.5
MORC                               IAmb   IAmb   13 07 01.9
          comp=Z,36nm,1.5s
JAVC  Velka Javorina   48.07 307  eP      P      13 06 59.1  +2.4
KSP   Ksiaz            48.64 310   P      P      13 07 05.5  +4.6
KSP                                pmax   pmax
          comp=Z,15nm,1.9s
VRAC  Vranov           48.69 307 ⇑P     P      13 07 03.2  +1.8
VRAC  Vranov           48.69 307 ⇑P     P      13 07 03.2  +1.8
VRAC  Vranov           48.69 307  eP      P      13 07 03.0  +1.6
DPC   Dobruska-Polom   48.70 309  eP      P      13 07 02.9  +1.5
DPC   Dobruska-Polom   48.70 309  eP      P      13 07 02.9  +1.5
OSTC  Ostas            48.73 309  eP      P      13 07 02.9  +1.2
CHVC  Chvalec          48.83 309  eP      P      13 07 03.3  +0.9
KRUC  Moravsky         48.87 307  eP      P      13 07 04.1  +1.4
UPC   Upice            48.87 309  eP      P      13 07 03.7  +1.0
UPC   Upice            48.87 309  eP      P      13 07 03.7  +1.0
UPC                                MLR    MLR
          comp=Z,8µm,23.7s
SOP   Sopron           49.02 305   P      P      13 07 10.1  +6.2
SOP                                pmax   pmax
          comp=Z,15nm,1.5s
MA2   Magadan          49.18  39 ceP      P      13 07 05.3  +0.3
MA2                                pmax   pmax
          comp=Z,55nm,1.3s
MA2   Magadan          49.18  39   P      P      13 07 04.5  -0.4
CONA  Conrad Observa   49.43 306  epP     P      13 07 08.6  +1.5
          comp=Z,33nm,1.7s,SNR=9.8
MPSI  Mapaga           49.71 127   P      P      13 07 09.5   0.0
          comp=Z,15nm,1.2s
GOPC  GO Pecny, Ondr   49.74 309  eP      P      13 07 14.1  +4.7
GOPC  GO Pecny, Ondr   49.74 309  eP      P      13 07 14.1  +4.7
ARSA  Arzberg          49.79 305  epP     P      13 07 10.9  +1.1
          comp=Z,8.4nm,1.1s
SEY   Seymchan         49.83  34  i P     P      13 07 09.4  -0.4
PRU   Pruhonice        49.88 309  eP      P      13 07 11.4  +0.9
PRU   Pruhonice        49.88 309  eP      P      13 07 11.4  +0.9
BRG   Berggiesshubel   50.10 310  eP      P      13 07 12.4  +0.3
          comp=Z,13nm,1.0s
BRG                               ePCP    PcP    13 08 30.8  -0.8
          comp=Z,3.3nm,0.9s
BRG                               e              13 14 39.5
          comp=Z,15nm,1.3s
BRG   Berggiesshubel   50.10 310  eP      P      13 07 13.4  +1.3
          comp=Z,16nm,1.1s,baz=77,slow=7.6
BRG   Berggiesshubel   50.10 310   P      P      13 07 14.8  +2.7
BRG                                pmax   pmax
          comp=Z,21nm,1.7s
NC405 NORSAR Array S   50.11 323   P      P      13 07 11.8  -0.2
NORES NORESS Array B   50.22 323   P      P      13 07 16.5  +3.7
NORES                              pmax   pmax
          comp=Z,13nm,0.8s
SOKA  Soboth           50.24 304  epP     P      13 07 14.6  +1.2
          comp=Z,28nm,1.0s,SNR=10
NB2   NORSAR Subarra   50.36 323   P      P      13 07 14.0   0.0
          comp=Z,17nm,0.8s,baz=86,slow=7.9
NOA   NORSAR Array B   50.36 323   P      P      13 07 14.2  +0.2
          comp=Z,10nm,0.8s,baz=86,slow=7.4,SNR=21
NOA                                LR     LR     13 28 32.4
          comp=Z,565nm,18.7s,baz=250,slow=36
FBE   Freiberg         50.46 310  eP      P      13 07 16.3  +1.5
          comp=Z,19nm,1.0s,baz=77,slow=7.6
MOA   Molln            50.49 306  epP     P      13 07 15.6  +0.4
          comp=Z,11nm,1.1s
CLL   Collm            50.60 311  eP      P      13 07 17.0  +1.1
          comp=Z,7.0nm,1.3s
CLL                               epP     pP     13 07 19.0  -1.6
          comp=Z,14nm,0.9s
CLL                               i sP    sP     13 07 20.5  -1.9
          comp=Z,14nm,0.9s
CLL   Collm            50.60 311  eP      P      13 07 17.9  +2.0
          comp=Z,14nm,0.9s,baz=77,slow=7.6
CLL   Collm            50.60 311   P      P      13 07 16.2  +0.3
CLL                                pmax   pmax
          comp=Z,12nm,0.9s
CLL   Collm            50.60 311   P      P      13 07 16.2  +0.3
OBKA  Obir             50.61 304  epP     P      13 07 17.7  +1.6
          comp=Z,20nm,1.8s
GEC2  GERESS Array S   50.65 307  eP      P      13 07 17.6  +1.2
          comp=Z,25nm,1.3s,baz=77,slow=7.6
GEC2  GERESS Array S   50.65 307   P      P      13 07 16.8  +0.4
GEC2                               IAmb   IAmb   13 07 21.5
          comp=Z,15nm,0.9s
GERES GERESS Array B   50.65 307   P      P      13 07 17.7  +1.3
          comp=Z,7.7nm,0.8s,baz=74,slow=7.1,SNR=33
GERES GERESS Array B   50.65 307   P      P      13 07 17.1  +0.7
GERES GERESS Array B   50.65 307   P      P      13 07 17.1  +0.7
KHC   Kasperske Hory   50.67 308  eP      P      13 07 17.7  +1.2
KHC   Kasperske Hory   50.67 308  eP      P      13 07 17.7  +1.2
TIP   Timpagrande      51.04 295   P      P      13 07 19.5  +0.1
TIP                                IAmb   IAmb   13 07 27.0
          comp=Z,30nm,1.5s
WET   Wettzell         51.12 308  eP      P      13 07 21.4  +1.5
          comp=Z,27nm,1.4s,baz=77,slow=7.6
WET   Wettzell         51.12 308   P      P      13 07 22.8  +3.0
WET                                pmax   pmax
          comp=Z,14nm,2.0s
GUNZ  Gunzen           51.21 309  eP      P      13 07 21.9  +1.4
          comp=Z,25nm,1.4s,baz=77,slow=7.6
KBA   Koelnbreinsper   51.28 305  epP     P      13 07 21.7  +0.4
          comp=Z,12nm,1.0s
KBA   Koelnbreinsper   51.28 305   P      P      13 07 27.2  +5.9
KBA                                pmax   pmax
          comp=Z,11nm,1.1s
PLN   Plauen           51.29 310  eP      P      13 07 22.3  +1.2
          comp=Z,31nm,1.9s,baz=77,slow=7.6
ROTZ  Rotzenmuhle      51.41 309  eP      P      13 07 23.4  +1.4
          comp=Z,29nm,1.4s,baz=77,slow=7.6
MANZ  Manzenberg       51.42 309  eP      P      13 07 23.5  +1.3
          comp=Z,19nm,1.4s,baz=77,slow=7.6
MOX   Moxa             51.59 310   P      P      13 07 26.7  +3.3
BSEG  Bad Segeberg     51.73 314   P      P      13 07 29.6  +5.3
BSEG                               pmax   pmax
          comp=Z,24nm,1.1s
GRA1  Grafenberg Arr   52.05 309   P      P      13 07 27.3  +0.5
GRA1                               IAmb   IAmb   13 07 35.3
          comp=Z,20nm,0.9s
GRF   Grafenberg Arr   52.05 309  eP      P      13 07 28.7  +1.9
          comp=Z,36nm,1.4s,baz=77,slow=7.6
GRF   Grafenberg Arr   52.05 309   P      P      13 07 27.3  +0.5
GRF                                pmax   pmax
          comp=Z,20nm,0.9s
CLZ   Clausthal        52.11 312  eP      P      13 07 28.4  +1.1
          comp=Z,40nm,1.5s,baz=77,slow=7.6
NRDL  Niedersach Rie   52.13 313  eP      P      13 07 29.0  +1.8
          comp=Z,52nm,1.3s,baz=77,slow=7.6
WTTA  Wattenberg       52.36 306  epP     P      13 07 28.8  -0.5
          comp=Z,16nm,1.3s
FUR   Furstenfeldbru   52.37 307  eP      P      13 07 30.9  +1.7
          comp=Z,36nm,0.8s,baz=77,slow=7.6
GTTG  Gottingen        52.42 311  eP      P      13 07 31.0  +1.5
          comp=Z,58nm,1.5s,baz=77,slow=7.6
NRCA  Norcia           52.57 300   P      P      13 07 31.0  +0.2
SQTA  Sankt Quirin     52.66 306  epP     P      13 07 31.5   0.0
          comp=Z,11nm,1.1s
CTI   Castel Tesino    52.67 304   P      P      13 07 35.1  +3.5
CTI                                pmax   pmax
          comp=Z,15nm,1.4s
RETA  Reutte           52.88 306  epP     P      13 07 33.7  +0.6
          comp=Z,19nm,1.3s
SPSI  Sidrap Palu      52.94 130   P      P      13 07 33.8  +0.1
          comp=Z,6.9nm,1.2s
FETA  Feichten         53.02 306  epP     P      13 07 33.8  -0.4
          comp=Z,11nm,1.0s
UBR   Ueberruh         53.26 307  eP      P      13 07 38.1  +2.3
          comp=Z,47nm,1.5s,baz=77,slow=7.6
DAVA  Damuels          53.51 306   P      P      13 07 37.2  -0.6
          comp=Z,24nm,1.1s
LATE  Laterza          53.55 300   IAmb   IAmb   13 07 42.1
          comp=Z,29nm,1.1s
PEA0B Petropavlovsk-   53.94  46   P      P      13 07 40.5  -0.2
PEA0B                              pmax   pmax
          comp=Z,244nm,2.0s
PEA0B Petropavlovsk-   53.94  46   P      P      13 07 40.5  -0.2
PETK  Petropavlovsk-   53.94  46   P      P      13 07 40.9  +0.2
          comp=Z,9.6nm,0.9s,baz=254,slow=6.0,SNR=9.4
PETK  Petropavlovsk-   53.94  46   P      P      13 07 40.4  -0.3
PETK  Petropavlovsk-   53.94  46   P      P      13 07 40.4  -0.3
ECH   Echery           55.02 308   P      P      13 07 49.0  +0.4
ECH                                pmax   pmax
          comp=Z,25nm,1.4s
ECH   Echery           55.02 308   P      P      13 07 49.0  +0.4
ECH                                IAmb   IAmb   13 07 53.7
          comp=Z,25nm,1.4s
BILL  Bilibino         55.08  27⇑iP     P      13 07 49.5  +0.8
BILL                              i              13 07 57.7
BILL                              e              13 08 50.8
BILL                              e              13 09 54.5
BILL                              eS      S      13 15 19.9  -11
BILL                              eSS     SS     13 19 16.8  +2.7
BILL                               pmax   pmax
          comp=Z,24nm,1.0s
BILL                               MLR    MLR
          comp=Z,1µm,19.0s
BILL  Bilibino         55.08  27   P      P      13 07 49.2  +0.5
BILL                               IAmb   IAmb   13 07 53.4
          comp=Z,22nm,1.0s
KMBO  Kilima Mbogo     55.76 239   P      P      13 07 54.9  +0.3
          comp=Z,1.0nm,0.2s,baz=24,slow=8.2,SNR=11
KMBO  Kilima Mbogo     55.76 239  i P     P      13 07 56.0  +1.4
KMBO                               pmax   pmax
          comp=Z,1.0nm,0.2s
KMBO  Kilima Mbogo     55.76 239   P      P      13 07 54.3  -0.3
KMBO                               IAmb   IAmb   13 07 56.8
          comp=Z,21nm,1.4s
NOR   Nord             56.05 350  i P     P      13 07 55.9  +0.4
          comp=Z,15nm,1.0s
NOR   Nord             56.05 350  i P     P      13 07 55.9  +0.4
NOR                                pmax   pmax
          comp=Z,15nm,1.0s
NOR                                MLR    MLR
          comp=Z,7µm,17.0s
RSL   Roselend         56.13 305   P      P      13 07 59.0  +2.2
BNI   Bardonecchia     56.30 304   P      P      13 07 58.0   0.0
BNI                                pmax   pmax
          comp=Z,40nm,1.5s
BNI   Bardonecchia     56.30 304   P      P      13 07 58.0   0.0
BNI                                IAmb   IAmb   13 08 08.7
          comp=Z,40nm,1.5s
DAG   Danmarks Havn    57.84 345  i P     P      13 08 08.2   0.0
          comp=Z,15nm,0.9s
DAG                               i              13 24 35.2
DAG   Danmarks Havn    57.84 345  i P     P      13 08 08.2   0.0
DAG                                pmax   pmax
          comp=Z,15nm,0.9s
MBAR  Mbarara          60.05 245   P      P      13 08 24.6  -0.1
MBAR                               pmax   pmax
          comp=Z,8.0nm,0.8s
MBAR  Mbarara          60.05 245   P      P      13 08 24.6  -0.1
MBAR                               IAmb   IAmb   13 08 33.6
          comp=Z,7.7nm,0.8s
SOEI  Soe              60.22 131   P      P      13 08 25.3  -0.4
          comp=Z,28nm,1.0s
SOEI  Soe              60.22 131   P      P      13 08 24.4  -1.3
FAKI  Fak Fak          60.52 119   P      P      13 08 26.8  -0.9
FAKI                               IAmb   IAmb   13 08 28.4
          comp=Z,24nm,1.3s
SUMG  Summit           64.45 343  i P     P      13 08 57.0  +3.4
          comp=Z,62nm,1.1s
SUMG  Summit           64.45 343   P      P      13 08 54.2  +0.6
SUMG                               pmax   pmax
          comp=Z,25nm,1.1s
SUMG  Summit           64.45 343   P      P      13 08 54.1  +0.6
RDOG  Red Dog Mine     65.64  22   P      P      13 09 00.9  -0.1
RDOG                               IAmb   IAmb   13 09 05.2
          comp=Z,18nm,1.2s
ESDC  Sonseca Array    65.66 302   P      P      13 09 01.8  +0.2
          comp=Z,2.9nm,0.7s,baz=50,slow=8.6,SNR=2.3
TULEG Thule            66.39 353   IAmb   IAmb   13 09 08.9
          comp=Z,18nm,0.9s
ANM   Nome             66.88  26   P      P      13 09 09.1  +0.2
ANM                                pmax   pmax
          comp=Z,27nm,1.0s
ANM   Nome             66.88  26   P      P      13 09 09.1  +0.2
PSA00 Pilbara Seismi   67.30 142   P      P      13 09 11.7  -0.4
PSA00                              IAmb   IAmb   13 09 11.8
          comp=Z,14nm,1.0s
KNRA  Kununurra        67.55 131   P      P      13 09 13.6  -0.2
KNRA                               IAmb   IAmb   13 09 14.8
          comp=Z,23nm,1.2s
FITZ  Fitzroy Crossi   67.58 135   P      P      13 09 13.2  -0.7
          comp=Z,3.6nm,0.8s,baz=303,slow=4.4,SNR=5.5
FITZ  Fitzroy Crossi   67.58 135   P      P      13 09 13.4  -0.5
FITZ                               IAmb   IAmb   13 09 29.9
          comp=Z,15nm,1.4s
TOLK  Toolik Lake Re   68.96  18   P      P      13 09 22.0  -0.1
RES   Resolute Bay     69.71 359   P      P      13 09 27.2  +0.7
RES                                pmax   pmax
          comp=Z,8.0nm,1.2s
RES   Resolute Bay     69.71 359   P      P      13 09 27.2  +0.7
IMAR  Indian Mountai   69.73  21   P      P      13 09 26.5  -0.2
ILULI Ilulissat        69.77 344   P      P      13 09 26.3  -0.6
ILULI                              pmax   pmax
          comp=Z,24nm,0.9s
ILULI Ilulissat        69.77 344   P      P      13 09 26.3  -0.6
COLD  Coldfoot         69.83  19   IAmb   IAmb   13 09 31.7
          comp=Z,19nm,1.0s
BMAR  Burnt Mountain   71.11  17   P      P      13 09 35.5  +0.2
MLY   Manley           71.29  21   P      P      13 09 36.3  -0.1
MLY                                IAmb   IAmb   13 09 40.7
          comp=Z,21nm,0.9s
SFJD  Kangerlussuaq    71.39 342  i P     P      13 09 39.0  +2.2
SFJD  Kangerlussuaq    71.39 342  i P     P      13 09 39.0  +2.2
SFJD                               MLR    MLR
          comp=Z,500nm,20.0s
SFJD  Kangerlussuaq    71.39 342   P      P      13 09 38.5  +1.6
SFJD                               IAmb   IAmb   13 09 40.6
          comp=Z,13nm,0.9s
BPAW  Bear Paw Mtn.    71.90  22   IAmb   IAmb   13 09 44.0
          comp=Z,17nm,1.0s
MORW  Morawa           72.00 149   IAmb   IAmb   13 09 41.1
          comp=Z,24nm,0.9s
MDM   Murphy Dome      72.06  20   P      P      13 09 41.0  +0.1
MDM                                IAmb   IAmb   13 09 45.1
          comp=Z,31nm,1.2s
COLA  College          72.23  20   P      P      13 09 41.8  -0.1
COLA                               pmax   pmax
          comp=Z,36nm,0.9s
COLA  College          72.23  20   P      P      13 09 41.8  -0.1
PRP   Porcupine Dome   72.37  19   IAmb   IAmb   13 09 47.5
          comp=Z,11nm,1.0s
PPLA  Purkeypile       72.40  23   IAmb   IAmb   13 09 47.4
          comp=Z,13nm,0.7s
CCB   Clear Creek Bu   72.42  20   IAmb   IAmb   13 09 46.6
          comp=Z,24nm,1.1s
WRH   Wood River Hil   72.47  20   IAmb   IAmb   13 09 46.7
          comp=Z,17nm,1.0s
IL31                   72.58  20   IAmb   IAmb   13 09 47.3
          comp=Z,16nm,0.9s
ILAR  Eielson Array    72.58  20   P      P      13 09 43.5  -0.5
          comp=Z,12nm,0.8s,baz=310,slow=5.0,SNR=65
ILAR                               PP     PP     13 12 22.4  -2.4
          comp=Z,0.8nm,0.8s,baz=322,slow=8.4,SNR=4.2
ILAR  Eielson Array    72.58  20   P      P      13 09 42.6  -1.4
ILAR  Eielson Array    72.58  20   P      P      13 09 42.6  -1.4
INK   Inuvik           72.75  13   IAmb   IAmb   13 09 49.0
          comp=Z,25nm,1.1s
RND   Reindeer         73.05  21   IAmb   IAmb   13 09 50.1
          comp=Z,12nm,1.0s
DHY   Denali Highway   73.74  21   IAmb   IAmb   13 09 54.4
          comp=Z,14nm,0.8s
EPYK  Eagle Plains     73.78  15   IAmb   IAmb   13 09 54.7
          comp=Z,21nm,1.1s
SCRK  Sand Creek       73.99  19   IAmb   IAmb   13 09 56.4
          comp=Z,26nm,1.0s
EGAK  Eagle            74.08  18   IAmb   IAmb   13 09 56.9
          comp=Z,21nm,1.1s
WRA   Warramunga Arr   74.23 130   P      P      13 09 54.0  -0.3
          comp=Z,29nm,0.9s,baz=327,slow=5.9,SNR=124
WRA   Warramunga Arr   74.23 130  i P     P      13 09 54.0  -0.3
WRA                                pmax   pmax
          comp=Z,30nm,0.9s
WRA   Warramunga Arr   74.23 130   P      P      13 09 53.6  -0.8
WRAB  Tennant Creek    74.23 130   P      P      13 09 53.9  -0.5
WRAB                               pmax   pmax
          comp=Z,47nm,1.0s
WRAB  Tennant Creek    74.23 130   P      P      13 09 53.9  -0.5
WB2   Warramunga Arr   74.23 130   P      P      13 09 54.0  -0.4
PAX   Paxson           74.37  21   IAmb   IAmb   13 09 59.3
          comp=Z,12nm,0.8s
TOA0  Torodi Ar. Sit   74.84 275   P      P      13 09 57.5  -0.6
TOA0                               IAmb   IAmb   13 10 04.5
          comp=Z,47nm,2.0s
TORD  Torodi Ar. Bea   74.84 275   P      P      13 09 57.7  -0.5
          comp=Z,2.6nm,0.9s,baz=40,slow=5.5,SNR=8.1
TORD  Torodi Ar. Bea   74.84 275   P      P      13 09 57.5  -0.6
DAWY  Dawson           75.10  18   IAmb   IAmb   13 10 02.7
          comp=Z,18nm,1.1s
BCAR  Beaver Creek A   75.31  19   P      P      13 10 00.1   0.0
NWAO  Narrogin (SRO)   75.87 150   P      P      13 10 02.3  -1.2
          comp=Z,20nm,0.8s,baz=318,slow=6.0,SNR=6.7
NWAO  Narrogin (SRO)   75.87 150   P      P      13 10 02.6  -0.9
NWAO                               pmax   pmax
          comp=Z,17nm,0.9s
NWAO  Narrogin (SRO)   75.87 150   P      P      13 10 02.6  -0.9
NWAO                               IAmb   IAmb   13 10 02.8
          comp=Z,17nm,0.8s
COEN  Coen             75.91 119   P      P      13 10 03.3  -0.9
VRDI  Verde Repeater   76.34  21   IAmb   IAmb   13 10 07.3
          comp=Z,11nm,1.0s
AS31  Alice Springs    76.74 132   P      P      13 10 08.1  -0.7
ASAR  Alice Springs    76.75 132   P      P      13 10 08.7  -0.1
          comp=Z,18nm,0.8s,baz=321,slow=6.0,SNR=179
ASAR  Alice Springs    76.75 132   P      P      13 10 08.3  -0.5
ASAR  Alice Springs    76.75 132   P      P      13 10 08.3  -0.5
BARN  Barnard Glacie   76.99  20   IAmb   IAmb   13 10 15.0
          comp=Z,16nm,1.0s
CTGM  Chitina Glacie   77.16  20   P      P      13 10 11.0  +0.2
CTGM                               IAmb   IAmb   13 10 15.3
          comp=Z,24nm,1.1s
HYT   Haines Junctio   78.31  19   IAmb   IAmb   13 10 21.5
          comp=Z,9.1nm,0.8s
LBTB  Lobatse          80.82 230   P      P      13 10 30.9  -0.3
LBTB                               pmax   pmax
          comp=Z,9.0nm,0.9s
LBTB  Lobatse          80.82 230   P      P      13 10 30.9  -0.3
YKA   Yellowknife Ar   81.04   8   P      P      13 10 31.2  -0.6
          comp=Z,6.7nm,0.7s,baz=343,slow=4.9,SNR=65
YKA   Yellowknife Ar   81.04   8  i P     P      13 10 31.0  -0.8
YKA                                pmax   pmax
          comp=Z,7.0nm,0.7s
CTA   Charters Tower   82.21 122   P      P      13 10 38.4  -0.2
          comp=Z,11nm,0.8s,baz=330,slow=6.9,SNR=7.0
BOSA  Boshof           83.63 228   P      P      13 10 45.1  -0.8
          comp=Z,6.2nm,0.8s,baz=32,slow=3.8,SNR=9.0
BOSA  Boshof           83.63 228   P      P      13 10 45.2  -0.7
BOSA                               pmax   pmax
          comp=Z,9.0nm,0.8s
BOSA  Boshof           83.63 228   P      P      13 10 45.2  -0.7
BOSA                               IAmb   IAmb   13 10 45.9
          comp=Z,8.6nm,0.8s
DBIC  Dimbokro         83.81 274   P      P      13 10 48.7  +1.6
          comp=Z,2.3nm,0.7s,baz=109,slow=5.8,SNR=3.3
DBIC  Dimbokro         83.81 274   P      P      13 10 46.6  -0.5
DBIC                               pmax   pmax
          comp=Z,19nm,0.9s
DBIC  Dimbokro         83.81 274   P      P      13 10 46.6  -0.5
BBOO  Buckleboo        84.87 137   P      P      13 10 51.2  -0.7
SCHQ  Schefferville    85.83 343   P      P      13 10 56.6   0.0
          comp=Z,3.2nm,0.9s,baz=45,slow=5.7,SNR=3.5
SCHQ  Schefferville    85.83 343   P      P      13 10 56.2  -0.5
STKA  Stephens Creek   87.37 133   P      P      13 11 02.9  -1.5
          comp=Z,6.0nm,1.1s,baz=34,slow=5.0,SNR=6.0
STKA  Stephens Creek   87.37 133   P      P      13 11 02.3  -2.0
DRLN  Deer Lake        88.03 335   P      P      13 11 06.9  -0.4
FFC   Flin Flon        89.69   2   P      P      13 11 14.0  -1.1
FFC                                pmax   pmax
          comp=Z,11nm,1.0s
FFC   Flin Flon        89.69   2   P      P      13 11 14.0  -1.1
FFC                                IAmb   IAmb   13 11 18.3
          comp=Z,11nm,1.0s
DZM   Mont Dzumac      98.14 111   LR     LR     13 56 11.5
          comp=Z,6µm,20.6s,baz=148,slow=35
SYO   Syowa Base      109.21 195⇓iPdiff Pdif   13 12 44.0  +1.6
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*GUC **22** 12:59:54.6±0.7, 19°.84S×71°.38W, h32^{km}±4^{km}, ML5.8*

*SJA **22** 12:59:55.5±0.7, 19°.85S×71°.38W, h55^{km}±17^{km}, ML5.6, MW5.6*

*IDC **22** 12:59:56.9±0.4, 19°.66S×70°.72W, h0^{km}, mb5.1/23, mb1 5.1/26, mb1mx5.1/35, mbtmp5.1/26, ML4.7/3, MS6.0/20, Ms1 6.0/20, ms1mx5.9/29, Error ellipse: s-maj=12.7km s-min=8.3km az=69.0*

*MOS **22** 12:59:57.5±1.2, 19°.65S×70°.78W, h10^{km}, mb5.8/31, MS6.0/29, Error ellipse: s-maj=16.2km s-min=11.3km az=86.1*

*NEIC **22** 12:59:58.2, 19°.77S×70°.92W, h22^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$1.73; M$_{\theta\theta}$-0.09; M$_{\phi\phi}$-1.63; M$_{r\theta}$0.42; M$_{\theta\phi}$0.41; M$_{\phi r}$-1.33; Fault plane solution: M$_0$2.23000×10^{18} NP1:φ$_s$348.20000°, δ25.58000°, λ93.92000°. NP2:φ$_s$163.86000°, δ64.48000°, λ88.13000°. Principal axes: T 2.2226, Plg70.0000°, Azm70.0000°; N 0.0055, Plg2.0000°, Azm165.0000°; P -2.2281, Plg19.0000°, Azm255.0000°;*

*NEIC **22** 12:59:59.1±1.6, 19°.76S±0°.03×70°.87W±0°.05, h20^{km}±1^{km}, mb5.9/440, Ms_20 6.1/792, Mwb6.2/84, Mwc6.4/44, Mww6.2, ML5.8(GUC), Mwc6.3(GCMT) Error ellipse: s-maj=7.8km s-min=5.2km az=272.0*

*VAO **22** 13:00:00.3±1.6, 19°.65S×70°.72W, h28^{km}±11^{km}, mb5.6*

*BJI **22** 13:00:00.6±0.0, 19°.77S×70°.94W, h20^{km}, mB6.2/63, Ms6.4/69, Ms7 6.4/62*

*NEIC **22** 13:00:06, 19°.92S×70°.90W, h26^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$1.31; M$_{\theta\theta}$-0.19; M$_{\phi\phi}$-1.11; M$_{r\theta}$0.66; M$_{\theta\phi}$0.19; M$_{\phi r}$-2.12; Fault plane solution: M$_0$2.54000×10^{18} NP1:φ$_s$164.00000°, δ75.00000°, λ88.00000°. NP2:φ$_s$352.00000°, δ15.00000°, λ98.00000°. Principal axes: T 2.6186, Plg59.0000°, Azm71.0000°; N -0.1632, Plg2.0000°, Azm164.0000°; P -2.4554, Plg31.0000°, Azm255.0000°;*

*GCMT **22** 13:00:08.2±0.1, 19°.73S×71°.14W, h19^{km}, MW6.2/164, Moment Tensor Solution. s157,c366; s164,c625; Duration: 3^s.2 Moment tensor: Scale 10^{18}Nm; M$_{rr}$1.79±.01; M$_{\theta\theta}$0.05±.01; M$_{\phi\phi}$-1.84±.01; M$_{r\theta}$0.48±.02; M$_{\theta\phi}$0.47±.01; M$_{\phi r}$-2.10±.04; Best double couple: M$_0$2.85400×10^{18} NP1:φ$_s$346.00000°, δ20.00000°, λ90.00000°. NP2:φ$_s$167.00000°, δ70.00000°, λ90.00000°. Principal axes: T 2.7730, Plg65.0000°, Azm77.0000°; N 0.1580, Plg0.0000°, Azm347.0000°; P -2.9350, Plg25.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **22** 13:00:08, 19°.78S×71°.17W, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$1.70; M$_{\theta\theta}$0.06; M$_{\phi\phi}$-1.77; M$_{r\theta}$0.81; M$_{\theta\phi}$0.53; M$_{\phi r}$-2.38; Fault plane solution: M$_0$3.10000×10^{18} NP1:φ$_s$162.00000°, δ72.00000°, λ88.00000°. NP2:φ$_s$349.00000°, δ18.00000°, λ97.00000°. Principal axes: T 2.9953, Plg63.0000°,* *Azm68.0000°; N 0.2009, Plg2.0000°, Azm162.0000°; P -3.1962, Plg27.0000°, Azm254.0000°;*

NEIC **22** *13:00:22.2, 19°.40S×71°.22W, h29km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.97; $M_{\theta\theta}$-0.08; $M_{\phi\phi}$-1.89; $M_{r\theta}$0.42; $M_{\theta\phi}$0.43; $M_{\phi r}$-4.09; Fault plane solution: $M_0$4.56000×10^{18} NP1:ϕ_s341.43000°, δ13.08000°, λ78.24000°. NP2:ϕ_s173.50000°, δ77.20000°, λ92.71000°. Principal axes: T 4.5647, Plg58.0000°, Azm87.0000°; N -0.0048, Plg3.0000°, Azm353.0000°; P -4.5599, Plg32.0000°, Azm261.0000°;*

ISC 22 12:59:57.0±0.6, **19°.82S**±0°.02×**70°.94W**±0°.03, **h4**km±3km, **n1659**, σ**2s.26**/1621, **mb5.9**/261, **MS6.1**/449, **27C-9D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.81	74	⇓iP	Pb	13 00 13.6	0.0
PSGC				iS	Sn	13 00 27.3	-0.4
PSGCX	Pisagua	0.81	74		Pb	13 00 13.3	-0.3
PSGCX				Sn	Sb	13 00 25.7	+0.8
TA01	Diego Aracena	1.03	136	⇑iP	Pn	13 00 18.1	-0.1
TA01				iS	Sn	13 00 35.0	+2.0
TA01				IAML		13 00 41.3	
	comp=E,311µm,0.5s						
PB11	IPOC Station P	1.22	87	⇓iP	Pb	13 00 20.6	-0.1
PB11				iS	Sn	13 00 40.4	+2.5
PB11				IAML		13 00 44.4	
	comp=E,259µm,0.5s						
PB11	IPOC Station P	1.22	87		Pb	13 00 20.6	-0.1
PB11					Sg	13 00 36.3	+0.2
PATCX	Punta Patache	1.24	143	⇑iP	Pb	13 00 21.1	0.0
PATCX				iS	Sn	13 00 40.4	+2.0
PATCX				IAML		13 00 52.0	
	comp=E,205µm,0.7s						
PATCX	Punta Patache	1.24	143		Pb	13 00 21.0	0.0
PATCX					Sn	13 00 39.3	+0.9
PB12	IPOC Station P	1.34	26	⇑iP	Pn	13 00 21.3	-1.2
PB12				iS	Sn	13 00 42.7	+1.9
PB12				IAML		13 00 48.4	
	comp=N,125µm,0.5s						
PB12	IPOC Station P	1.34	26		Pn	13 00 21.2	-1.3
PB12					Sg	13 00 38.7	-1.2
AP01	Chacalluta	1.55	22	eP	Pn	13 00 24.2	-1.2
GO01	Chusmiza	1.66	85	⇑iP	Pn	13 00 27.7	+0.4
GO01				iS	Sg	13 00 52.8	+2.5
GO01				IAML		13 00 58.3	
	comp=E,109µm,0.1s						
GO01	Chusmiza	1.66	85		Pn	13 00 27.6	+0.3
PB08	IPOC Station P	1.71	101	⇑iP	Pn	13 00 28.4	+0.4
PB08				iS	Sg	13 00 52.7	+0.6
PB02	IPOC Station P	1.78	147	⇑iP	Pn	13 00 28.8	+0.1
PB02				iS	Sg	13 00 54.4	0.0
PB01	IPOC Station P	1.83	132	⇑iP	Pn	13 00 29.8	+0.5
PB01				iS	Sg	13 00 57.3	+1.5
PB01	IPOC Station P	1.83	132		Pn	13 00 29.9	+0.7
PB16	IPOC Station P	2.01	43	⇑iP	Pn	13 00 32.0	-0.1
PB16				iS	Sg	13 01 02.0	+0.4
PB16				IAML		13 01 13.4	
	comp=E,130µm,0.7s						
PB16	IPOC Station P	2.01	43		Pn	13 00 31.9	-0.3
PB07	IPOC Station P	2.14	153	eP	Pn	13 00 33.4	-0.2
PB07				iS	Sb	13 01 03.1	-0.2
PB07				IAML		13 01 19.9	
	comp=E,68µm,0.7s						
PB07	IPOC Station P	2.14	153		Pn	13 00 33.3	-0.3
PB09	IPOC Station P	2.53	141		Pn	13 00 39.5	+0.6
PB09	IPOC Station P	2.53	141	iP	Pn	13 00 40.3	+1.3
PB04	IPOC Station P	2.61	164		Pn	13 00 39.6	-0.5
PB04	IPOC Station P	2.61	164	iP	Pn	13 00 39.3	-0.7
PB05	IPOC Station P	3.09	167	iP	Pn	13 00 45.7	-1.1
PB05				IAML		13 01 47.7	
	comp=Z,34µm,1.6s						
PB06	IPOC Station P	3.14	156	iP	Pn	13 00 46.9	-0.5
LVC	Limon Verde	3.36	146	Pn	Pn	13 00 52.4	+1.8
	comp=Z,72nm,0.3s,baz=321,slow=9.6,SNR=212						
LVC				Sn	Sn	13 01 34.3	+3.2
	comp=Z,856nm,0.3s,baz=300,slow=4.7,SNR=6.3						
LVC				LR	LR	13 01 40.5	
	comp=Z,40µm,21.8s,baz=324,slow=30						
LVC				Lg	Lg	13 01 45.5	
	comp=Z,2µm,0.3s,baz=235,slow=17,SNR=10						
LVC	Limon Verde	3.36	146	eP	Pn	13 00 51.0	+0.4
LVC	Limon Verde	3.36	146		Pn	13 00 51.7	+1.1
LVC	Limon Verde	3.36	146	eP	Pn	13 00 51.8	+1.2
PB15	IPOC Station P	3.64	158		Pn	13 00 54.0	-0.3
PB15	IPOC Station P	3.64	158	iP	Pn	13 00 54.7	+0.4
PB10	IPOC Station P	3.69	174		Pn	13 00 53.4	-1.4
PB10	IPOC Station P	3.69	174	iP	Pn	13 00 53.4	-1.4
PB10				IAML		13 02 08.3	
	comp=Z,10µm,1.4s						
I08BO	LAS PENAS INFR	4.30	34	Pn	Pn	13 01 09.1	+5.4
	baz=209,slow=27,SNR=5.1						
I08BO				i		13 23 50.0	
	baz=213,slow=314,SNR=1.4						
LPAZ	La Paz	4.42	38	Pn	Pn	13 01 07.6	+2.2
	comp=Z,1.9nm,0.3s,baz=211,slow=8.1,SNR=58						
LPAZ				LR	LR	13 03 00.2	
	comp=Z,405µm,18.3s,baz=234,slow=44						
LPAZ	La Paz	4.42	38	P	Pn	13 01 06.8	+1.4
LPAZ	La Paz	4.42	38		Pn	13 01 06.8	+1.4
PB14	IPOC Station P	4.81	174		Pn	13 01 09.2	-1.2
PB14	IPOC Station P	4.81	174	iP	Pn	13 01 08.7	-1.8
PB14				IAML		13 02 45.7	
	comp=Z,8µm,1.3s						
GO02	Mina Guanaco	5.46	167		Pn	13 01 18.9	-0.5
YJA	Yavi	5.59	116	iP	Pn	13 01 24.4	+3.1
YJA				IAML		13 01 41.8	
	comp=Z,736nm,0.7s						
YJA				IAML		13 02 54.8	
	comp=Z,2µm,3.4s						
GO03	Copiap	7.76	175		Pn	13 01 50.0	-0.9
NNA	Nana	9.63	323	Pn	Pn	13 02 18.8	+2.2
	comp=Z,5.8nm,0.3s,baz=152,slow=12,SNR=9.4						
NNA				Sn	Sn	13 04 05.9	+0.5
	comp=Z,22nm,0.3s,baz=75,slow=17,SNR=6.6						
NNA				LR	LR	13 06 07.8	
	comp=Z,44µm,20.1s,baz=158,slow=38						
NNA	Nana	9.63	323		Pn	13 02 17.1	+0.6
SIV	San Ignacio	10.14	70	Pn	Pn	13 02 23.4	-0.1
	comp=Z,34nm,0.3s,baz=274,slow=9.1,SNR=132						
GO04	Tololo Observa	10.31	179		Pn	13 02 25.4	-0.5
ROC1	El Roble	13.10	180		Pn	13 03 05.4	+1.3
SAML	Samuel	13.16	36	P	Pn	13 03 01.4	-3.4
SAML	Samuel	13.16	36		Pn	13 03 01.4	-3.4
SAML	Samuel	13.16	36	eP	Pn	13 03 00.6	-4.2
PEL	Peldehue	13.27	179	P	Pn	13 03 07.4	+1.1
PEL	Peldehue	13.27	179		Pn	13 03 07.4	+1.1
CPUP	Villa Florida	14.10	120	Pn	Pn	13 03 18.6	+1.0
	comp=Z,1.1nm,0.3s,baz=300,slow=12,SNR=11						
CPUP				Sn	Sn	13 06 00.5	+6.0
	comp=Z,0.4nm,0.3s,baz=270,slow=20,SNR=1.3						
CPUP				LR	LR	13 09 25.2	
	comp=Z,86µm,20.8s,baz=300,slow=41						
CPUP	Villa Florida	14.10	120		Pn	13 03 17.9	+0.4
CPUP	Villa Florida	14.10	120	eP	Pn	13 03 16.6	-1.0
AQDB	Aquidauana	14.33	95	eP	Pn	13 03 19.7	-1.1
SALV	Santo Antonio	15.03	77	eP	Pn	13 03 27.6	-2.7
GO05	Huala	15.15	183	Pn	Pn	13 03 32.6	+0.7
ITQB	Itaqui	16.27	130	eP	Pn	13 03 45.9	-0.5
CLDB	Colider	17.09	61	eP	Pn	13 03 53.8	-3.1
C2SB	Chapadao do Su	17.13	90	eP	Pn	13 03 55.1	-2.3
TRCB	Terra Rica	17.32	103	eP	Pn	13 03 57.9	-1.8
PTGB	Pitanga	18.14	109	eP	Pn	13 04 08.2	-1.8
PCMB	Pacaembu	18.50	99	eP	P	13 04 11.9	-2.4
ARAG	Araguaiana, MT	18.67	80	eP	P	13 04 14.1	-2.1
ITAB	Concordia	18.75	117	eP	P	13 04 16.0	-0.9
LPA	La Plata	18.93	145	iP	P	13 04 13.5	-5.3
LPA				PPP	PPP	13 04 40.5	
LPA				S	Sn	13 07 47.9	-3.8
LPA				SSS	SSS	13 08 20.0	
LPA				PCP	PcP	13 08 43.8	-1.2
LPA				SCS	ScS	13 15 58.2	-4.8
CPSB	Cacapava Do Su	19.01	127	eP	P	13 04 19.2	-0.6
ITRB	Iturama	19.38	93	eP	P	13 04 22.3	-1.7
PLTB	Pedras Altas	19.59	131	eP	P	13 04 26.6	+0.3
GO06	Curarrehue	19.70	181	P	Pn	13 04 28.7	-0.1
TRQA	Tornquist	19.77	159	eP	Pn	13 04 30.2	+0.6
FRTB	Fartura	20.19	104	eP	P	13 04 30.5	-2.3
CNLB	Canela	20.55	121	eP	P	13 04 35.5	-1.1
PLCA	Paso Flores	20.84	179	P	Pn	13 04 42.0	-0.3
	comp=Z,29nm,1.0s,baz=23,slow=13,SNR=27						
PLCA				S	Sn	13 08 38.2	+0.2
	comp=Z,23nm,1.3s,baz=315,slow=10.0,SNR=1.0						
PLCA	Paso Flores	20.84	179	P	Pn	13 04 41.1	-1.2
PLCA				pmax	pmax		
	comp=Z,442nm,1.3s						
PLCA	Paso Flores	20.84	179	P	P	13 04 41.0	+1.2
PLCA	Paso Flores	20.84	179	eP	Pn	13 04 42.0	-0.3
BB19B	Bebedouro	21.04	97	eP	P	13 04 40.1	-2.0
IPMB	Ipameri, GO	21.58	89	eP	P	13 04 46.6	-1.3
FLOC	Florencia	21.77	347	eP	P	13 04 52.7	+2.8
FLOC	Florencia	21.77	347	P	P	13 04 50.0	+0.1
PTGA	Pitinga	21.81	31	P	P	13 04 48.2	-2.1
PTGA	Pitinga	21.81	31	eP	P	13 04 47.6	-2.7
GCUF	Volcan Galeras	21.84	343	eP	P	13 04 56.5	+5.3
MACC	Macarena, Meta	22.02	352	eP	P	13 04 52.1	-0.4
CRUC	La Cruz	22.06	344	eP	P	13 04 59.3	+6.0
SPB	Sao Paulo	22.16	104	P	P	13 04 53.6	-0.4
SPB				IAMs_20	IAMs_20	13 14 51.0	
	comp=Z,91µm,20.0s						
SPB	Sao Paulo	22.16	104	eP	P	13 04 46.5	-7.6
BDFB	Brasilia	22.23	83	P	P	13 04 53.6	-1.3
	comp=Z,31nm,0.5s,baz=246,slow=14,SNR=13						
BDFB				S	S	13 08 59.0	-1.5
	comp=Z,37nm,1.1s,baz=167,slow=19,SNR=1.1						
BDFB				LR	LR	13 14 31.7	
	comp=Z,45µm,19.2s,baz=268,slow=40						
BDFB	Brasilia	22.23	83	P	P	13 04 53.8	-1.2
BDFB				pmax	pmax		
	comp=Z,332nm,1.3s						
BDFB	Brasilia	22.23	83	P	P	13 04 53.8	-1.2
GARC	Garzon, Huila	22.32	348	eP	P	13 04 59.1	+3.0
SOTA	Rioblanco	22.52	345	eP	P	13 05 01.9	+3.5
VAO	Valinhos	22.54	102	eP	P	13 04 57.2	-1.0
PCON	Cinco Dias	22.65	346	eP	P	13 05 01.8	+1.8
POPC	Popayan, Colom	22.93	345	eP	P	13 05 05.3	+2.9
GO07	Milladeo Hill,	23.34	185	P	P	13 05 07.0	+0.9
GO07				IAmb	IAmb	13 05 57.8	
	comp=Z,508nm,1.4s						
GR1C	Gorgona, Isla	23.77	342	eP	P	13 05 13.4	+2.7
PARB	Paraibuna	23.80	103	eP	P	13 05 10.0	-1.1
PTGC	Puerto Gaitan,	23.90	357	eP	P	13 05 12.4	+0.4
VILC	Villavicencio,	23.94	353	eP	P	13 05 14.3	+1.9
ORTC	Ortega, Tolima	23.96	349	eP	P	13 05 14.4	+1.8
YOTC	Yotoco, Valle	24.25	347	eP	P	13 05 18.6	+3.2
CVER	Cruz Verde, Cu	24.39	352	eP	P	13 05 22.6	+5.6
CHIC	Chingaza	24.45	353	eP	P	13 05 18.8	+1.3
MALC	Bahia Malaga	24.50	344	eP	P	13 05 21.5	+3.9
BSCB	Bom Sucesso	24.55	97	eP	P	13 05 16.5	-1.6
ANIL	Santa Ana	24.56	349	eP	P	13 05 21.4	+3.1
TOLC	Tolima	24.63	349	eP	P	13 05 22.4	+3.3
ROSC	El Rosal	24.73	352	P	P	13 05 20.4	+0.3
	comp=Z,34nm,0.6s,baz=70,slow=18,SNR=10						
ROSC				S	S	13 09 44.2	+1.2
	comp=Z,15nm,0.6s,baz=261,slow=19,SNR=1.5						
ROSC				LR	LR	13 16 02.1	
	comp=Z,66µm,19.3s,baz=201,slow=39						
ROSC	El Rosal	24.73	352	eP	P	13 05 23.5	+3.5
ROSC	El Rosal	24.73	352	P	P	13 05 19.5	-0.6
ROSC				IAmb	IAmb	13 06 02.2	
	comp=Z,351nm,1.1s						
ROSC				IAMs_20	IAMs_20	13 14 32.4	
	comp=Z,63µm,20.0s						
ESAR	Angra dos Reis	24.86	102	eP	P	13 05 19.3	-1.5
RREF	El Recreo	24.95	350	eP	P	13 05 25.8	+3.5
SMTB	Santa Maria do	25.08	68	eP	P	13 05 20.9	-2.0
PLMC	San Jos del P	25.13	347	eP	P	13 05 25.5	+2.3
GUY2C	Guyana, Caldas	25.27	350	eP	P	13 05 28.6	+3.6
PIZC	Pizarro, Choco	25.43	345	eP	P	13 05 29.6	+3.7
SPBC	San Pablo de B	25.50	353	eP	P	13 05 28.3	+1.6
NORC	Norcasia	25.52	351	eP	P	13 05 28.1	+1.3
RUSC	La Rusia	25.64	355	eP	P	13 05 30.5	+2.1
RUSC	La Rusia	25.64	355	P	P	13 05 27.8	-0.6
JANB	Januaria	25.83	84	eP	P	13 05 27.2	-2.5
CBOC	Ciudad Bolivar	26.01	348	eP	P	13 05 33.8	+2.4
TAMC	Tame, Arauca	26.11	358	eP	P	13 05 34.6	+2.4
HELC	Santa Helena	26.24	350	eP	P	13 05 35.7	+2.0
BARC	Barichara	26.34	355	eP	P	13 05 33.6	-0.9
PTBC	PUERTO BERRIO,	26.42	352	eP	P	13 05 35.1	+0.2
SOLC	Bahia Solano	26.66	346	eP	P	13 05 38.6	+1.6
PAYG	Puerto Ayora	26.85	313	P	P	13 05 39.3	+0.5
PAMC	Pamplona, Colo	27.05	356	eP	P	13 05 40.7	-0.4
ZARC	Zaragoza, Cauc	27.41	352	eP	P	13 05 42.2	-1.7
PTAC	Punta Ardita,	27.64	345	eP	P	13 05 49.8	+3.9
UREC	San Jos de Ur	27.77	350	eP	P	13 05 48.5	+1.4
OCAC	Ocana	27.98	355	eP	P	13 05 48.3	-0.8
SJMB	Sao Joao De Ma	28.10	93	eP	P	13 05 48.3	-1.8
BSFB	Barra de Sao F	28.40	93	eP	P	13 05 50.5	-2.2
SDV	Santo Domingo	28.53	1	P	P	13 05 52.3	-1.8
	comp=Z,25nm,1.1s,baz=222,slow=4.4,SNR=6.3						
SDV				S	S	13 10 37.4	-5.4
	comp=Z,7.8nm,0.8s,baz=274,slow=19,SNR=0.9						
SDV				LR	LR	13 16 30.9	
	comp=Z,51µm,20.2s,baz=216,slow=35						
SDV	Santo Domingo	28.53	1	eP	P	13 05 54.8	+0.8
SDV	Santo Domingo	28.53	1	P	P	13 05 52.0	-2.0
SDV				IAmb	IAmb	13 06 47.2	
	comp=Z,511nm,1.8s						
SDV	Santo Domingo	28.53	1	IAMs_20	IAMs_20	13 16 19.6	
	comp=Z,51µm,20.0s						
SDV	Santo Domingo	28.53	1	eP	P	13 05 51.9	-2.2
SMLC	San Martn de	28.61	354	eP	P	13 05 53.7	-0.8
LCBC	Los crdobas,	29.00	349	eP	P	13 06 02.0	+4.0
ORIV	Oritupano	29.65	15	eP	P	13 06 02.5	-1.3
ARGC	Ariguani, Magd	29.67	353	eP	P	13 06 05.4	+1.4
CODC	Agustn Codazz	29.67	355	eP	P	13 06 02.8	-1.2
SJCC	San Jacinto, C	29.82	352	eP	P	13 06 04.5	-0.9
BCIP	Isla Barro Col	30.11	342	eP	P	13 06 10.9	+3.0
BCIP	Isla Barro Col	30.11	342	P	P	13 06 08.3	+0.5
BCIP				pmax	pmax		
	comp=Z,421nm,1.3s						
BCIP				MLR	MLR		
	comp=Z,36µm,22.0s						
BCIP	Isla Barro Col	30.11	342	P	P	13 06 08.3	+0.5
NBIT	Itapeh - BA	30.43	86	eP	P	13 06 08.9	-1.9
MDP	Montagnes des	30.62	38	P	P	13 06 10.9	-1.5
	comp=Z,23nm,0.6s,baz=220,slow=9.8,SNR=13						
NBPN	Ponto Novo - B	30.92	78	eP	P	13 06 12.7	-2.4
SMRC	Santa Marta, M	30.96	354	eP	P	13 06 14.9	-0.5
URIC	Uribia, Colomb	31.34	358	eP	P	13 06 16.4	-2.3
URIC	Uribia, Colomb	31.34	358	P	P	13 06 18.3	-0.4
TPP	Pointe-a-Pierr	31.38	18	eP	P	13 06 20.2	+1.2
GUIV	Guiria	31.47	17	eP	P	13 06 18.2	-1.7
TRN	Trinidad (W)	31.70	18	eP	P	13 06 23.7	+1.8
HDC	Heredia	32.35	335	IAMs_20	IAMs_20	13 19 05.8	
	comp=Z,41µm,21.0s						
NBPS	Pedro II - PI	32.57	66	eP	P	13 06 27.6	-2.2
TOSP	Speyside	32.58	19	eP	P	13 06 28.8	-0.8
TOSP	Speyside	32.58	19	P	P	13 06 28.1	-1.5
JTS	Las Juntas de	32.95	334	P	P	13 06 34.4	+1.4
	comp=Z,3.0nm,0.4s,baz=284,slow=19,SNR=1.8						
JTS	Las Juntas de	32.95	334	iP	P	13 06 33.3	+0.4
JTS				pmax	pmax		
	comp=Z,176nm,2.1s						
JTS	Las Juntas de	32.95	334	P	P	13 06 33.3	+0.4
JTS				IAmb	IAmb	13 06 59.1	
	comp=Z,407nm,1.9s						
GRGR	Grenville	33.05	17	eP	P	13 06 33.7	0.0
GRGR	Grenville	33.05	17	P	P	13 06 33.7	0.0
NBLA	Lagarto - SE	33.09	80	eP	P	13 06 31.7	-2.5
GRSS	Sisters	33.22	17	eP	P	13 06 41.3	+6.1
GO10	Punta Arenas	33.27	180	IAMs_20	IAMs_20	13 20 15.5	
	comp=Z,33µm,20.0s						
EFI	East Falkland	33.36	165	iP	P	13 06 37.5	+1.4
EFI				pmax	pmax		
	comp=Z,243nm,1.4s						
EFI	East Falkland	33.36	165	IAMs_20	IAMs_20	13 20 19.3	
	comp=Z,33µm,20.0s						
GCMP	Grenada, Carri	33.45	17	iP	P	13 06 38.2	+1.0
NBTA	Tacaratu-PE	33.50	76	eP	P	13 06 35.5	-2.4
NBMA	Muriti-CE	33.56	73	eP	P	13 06 36.4	-1.9
NBPB	Pedra_Branca-C	33.64	69	eP	P	13 06 36.4	-2.6
SVB	Belmont	34.24	17	eP	P	13 06 44.9	+0.8
SVB	Belmont	34.24	17	P	P	13 06 43.5	-0.6
SVCV	St. Vincent, C	34.27	17	eP	P	13 06 44.9	+0.5
SVV	Soufriere Volc	34.30	17	eP	P	13 06 45.9	+1.3
SSV	Crater Summit	34.31	17	eP	P	13 06 48.2	+3.4
NBMO	Morrinhos-CE	34.33	65	eP	P	13 06 42.8	-2.2
ESPN	Las Esperanzas	34.43	336	IAMs_20	IAMs_20	13 20 22.8	
	comp=Z,35µm,20.0s						
PRVC	Isla de Provid	34.55	342	eP	P	13 06 50.0	+3.3
ACON	Acoyapa	34.56	335	IAMs_20	IAMs_20	13 20 14.3	
	comp=Z,34µm,21.0s						
MCLT	Moule a Chique	34.74	17	eP	P	13 06 43.4	-5.1
SLB	Belfond	34.83	17	eP	P	13 06 50.0	+0.7
NBAN	Anadia - AL	34.95	78	eP	P	13 06 48.1	-2.2
USHA	Ushuaia	35.00	177	P	P	13 06 51.9	+1.6
	comp=Z,27nm,1.0s,baz=321,slow=3.1,SNR=4.4						
SLBI	Saint Lucia, B	35.03	17	eP	P	13 06 50.3	-0.6
NBCL	Cascavel-CE	35.39	68	eP	P	13 06 51.9	-2.3
FDF	Fort de France	35.66	16	iP	P	13 06 54.5	-1.9
FDF	Fort de France	35.66	16	P	P	13 06 57.2	+0.8
FDF				pmax	pmax		
	comp=Z,202nm,0.8s						
FDF				MLR	MLR		
	comp=Z,58µm,18.0s						
FDF	Fort de France	35.66	16	P	P	13 06 57.2	+0.8
NBPA	Parau_RN	35.73	72	eP	P	13 06 54.8	-2.4
RPN	Rapa Nui	35.85	251	LR	LR	13 18 20.2	
	comp=Z,61µm,18.3s,baz=86,slow=31						
DLPL	La Plaine	36.21	16	eP	P	13 06 57.1	-4.0
NBRF	Rio Formoso -	36.36	77	eP	P	13 07 00.1	-2.3
DWS	Wesley	36.42	16	eP	P	13 07 02.5	-0.4
MDVC	Dominica, Viel	36.44	16	eP	P	13 07 06.6	+3.6
RCBR	Riachuelo	36.79	73	P	P	13 07 05.0	-1.2
	comp=Z,60nm,0.8s,baz=239,slow=11,SNR=14						
RCBR	Riachuelo	36.79	73	P	P	13 07 05.0	-1.2
RCBR	Riachuelo	36.79	73	P	P	13 07 04.7	-1.5
RCBR	Riachuelo	36.79	73	eP	P	13 07 04.4	-1.8
NBPV	Pedro Velho	37.09	74	eP	P	13 07 07.4	-1.3
TGUH	Tegucigalpa,Un	37.30	333	P	P	13 07 10.6	0.0
TGUH				IAmb	IAmb	13 07 42.7	
	comp=Z,169nm,1.1s						
MLYT	Lee's Yard	37.32	14	eP	P	13 07 09.8	-0.7
ICMP	Isla Caja de M	37.72	7		pP	13 07 15.8	+1.5
SKOC	St. Kitts, UWI	37.76	13	eP	P	13 07 12.6	-1.6
CRPR	Cabo Rojo, PR	37.78	6	P	P	13 07 11.0	-3.4
CRPR				IAmb	IAmb	13 07 50.8	
	comp=Z,316nm,1.1s						
SKI	Saint Kitts	37.79	13	eP	P	13 07 14.8	+0.2
OBIP	Obispado Ponce	37.87	7	IAmb	IAmb	13 07 56.8	
	comp=Z,279nm,1.0s						
OBIP				IAMs_20	IAMs_20	13 24 18.3	
	comp=Z,32µm,20.0s						
SEUS	St. Eustatius	37.90	12	iP	P	13 07 13.9	-1.5
PDPR	Patillas Dam,	37.91	8	IAmb	IAmb	13 07 50.6	
	comp=Z,390nm,1.2s						
SABA	Saba	37.97	12	eP	P	13 07 14.8	-1.3
BANI	BANI	37.98	1	P	P	13 07 15.6	-0.6
MPR	Mayaguez	37.98	6	IAmb	IAmb	13 07 31.6	
	comp=Z,199nm,0.8s						
SJG	San Juan	37.99	7	P	P	13 07 12.9	-3.3
SJG				S	S	13 13 09.7	+0.7
SJG				pmax	pmax		
	comp=Z,230nm,1.1s						
SJG				MLR	MLR		
	comp=Z,32µm,18.0s						
SJG	San Juan	37.99	7	P	P	13 07 12.8	-3.3
SJG				IAmb	IAmb	13 07 35.9	
	comp=Z,230nm,1.1s						
SJG					S	13 13 09.7	+0.7
SJG	San Juan	37.99	7	IAMs_20	IAMs_20	13 24 42.5	
	comp=Z,32µm,18.0s						
AOPR	Arecibo Observ	38.15	6	IAmb	IAmb	13 07 33.3	
	comp=Z,228nm,1.0s						
PCDR	Punta Cana, DR	38.18	4	P	P	13 07 17.2	-0.5
CBYP	Canovanas	38.19	8	IAmb	IAmb	13 07 31.7	
	comp=Z,206nm,0.8s						
GCPR	Guaynabo City	38.19	7	IAmb	IAmb	13 07 32.5	
	comp=Z,171nm,0.7s						
AGPR	Aguadilla, PR	38.24	6	P	P	13 07 17.0	-1.2
AGPR				IAmb	IAmb	13 07 53.3	
	comp=Z,316nm,1.2s						
CUPR	Culebra, Puert	38.30	9	IAmb	IAmb	13 07 32.0	
	comp=Z,147nm,0.9s						
ANWB	Willy Bob	38.33	14	eP	P	13 07 16.7	-2.3
STVI	Saint Thomas	38.39	9	P	P	13 07 17.0	-2.5
SMRT	St. Maarten	38.42	12	IAmb	IAmb	13 07 37.0	
	comp=Z,179nm,0.8s						
SDDR	Presa de Saban	38.57	359	P	P	13 07 22.5	+1.4
SDDR				IAMs_20	IAMs_20	13 26 12.6	
	comp=Z,28µm,20.0s						
APG	El Apazote	39.58	330	P	P	13 07 31.9	+2.1
	comp=Z,13nm,0.3s,baz=177,slow=11,SNR=8.4						
GTBY	Guantanamo Bay	39.71	354	P	P	13 07 27.5	-3.1
GTBY				IAMs_20	IAMs_20	13 26 30.2	
	comp=Z,26µm,19.0s						
GRTK	Grand Turk	41.08	360	P	P	13 07 40.1	-1.8
CCIG	Comitan	41.49	328	IAMs_20	IAMs_20	13 23 10.2	
	comp=Z,24µm,20.0s						
HOPE	Hope Point	43.26	151	IAMs_20	IAMs_20	13 24 48.1	
	comp=Z,31µm,20.0s						
TEIG	Tepich	43.27	336	LR	LR	13 27 07.0	
	comp=Z,13µm,18.7s,baz=348,slow=38						
TEIG	Tepich	43.27	336	P	P	13 07 58.7	-1.1
TEIG	Tepich	43.27	336	IAMs_20	IAMs_20	13 28 21.2	
	comp=Z,23µm,18.0s						
PMSA	Palmer Station	45.16	176	P	P	13 08 17.1	+2.6
	comp=Z,60nm,1.0s,baz=354,slow=7.4,SNR=5.0						
PMSA	Palmer Station	45.16	176	P	P	13 08 15.7	+1.3
PMSA	Palmer Station	45.16	176	eP	P	13 08 16.0	+1.5
TLIG	Tlapa	46.00	322	IAMs_20	IAMs_20	13 26 46.0	
	comp=Z,22µm,19.0s						
061Z	Ochoppi	46.44	348	IAMs_20	IAMs_20	13 29 13.5	
	comp=Z,16µm,20.0s						
UNM	Universidad Na	47.75	323	IAMs_20	IAMs_20	13 25 21.4	
	comp=Z,18µm,22.0s						
DWPF	Disney Wildern	48.72	348	P	P	13 08 43.9	+1.2
	baz=167						
DWPF				S	S	13 15 45.8	-0.1
	baz=167						
656A	Willston	50.17	347	IAMs_20	IAMs_20	13 31 17.4	
	comp=Z,16µm,20.0s						
456A	Hilliard	51.37	348	IAMs_20	IAMs_20	13 33 37.3	
	comp=Z,16µm,19.0s						
BBSR	BB Station	52.24	7	P	P	13 09 09.1	-0.2
BBSR	BB Station	52.24	7	IAMs_20	IAMs_20	13 33 41.1	
	comp=Z,13µm,19.0s						
TIGA	Tifton	52.39	346	IAMs_20	IAMs_20	13 32 14.4	
	comp=Z,22µm,21.0s						
TIGA	Tifton	52.39	346	P	P	13 09 10.2	-0.3
	baz=165						
TIGA				S	S	13 16 36.2	-0.7
	baz=165						
ZAIG	Zacatecas	52.39	322	IAMs_20	IAMs_20	13 29 10.4	
	comp=Z,20µm,19.0s						
257A	Skidaway Islan	52.40	349	IAMs_20	IAMs_20	13 34 50.5	
	comp=Z,16µm,20.0s						
255A	Hazlehurst	52.63	348	IAMs_20	IAMs_20	13 35 00.5	
	comp=Z,16µm,18.0s						
352A	Blakely	52.74	345	IAMs_20	IAMs_20	13 32 03.7	
	comp=Z,16µm,22.0s						
158A	Hollywood	53.01	350	P	P	13 09 15.9	+1.0
	baz=169						
545A	Edgard	53.03	339	IAMs_20	IAMs_20	13 32 45.6	
	comp=Z,17µm,21.0s						
157A	Early Branch	53.08	349	P	P	13 09 14.9	-0.6
	baz=168						
NHSC	New Hope	53.37	350	P	P	13 09 17.8	+0.3
	baz=169						
154A	Montrose	53.42	347	IAMs_20	IAMs_20	13 33 28.6	
	comp=Z,14µm,20.0s						
Z58A	St. Stephen	53.53	351	P	P	13 09 18.6	-0.2
	baz=170,SNR=11						
Z57A	Bowman	53.64	350	P	P	13 09 18.5	-1.1
	baz=168,SNR=16						
Z56A	Williston	53.78	349	P	P	13 09 19.9	-0.7
Z56A				IAmb	IAmb	13 09 34.7	
	comp=Z,136nm,0.8s						
Z56A				IAMs_20	IAMs_20	13 36 25.9	
	comp=Z,17µm,18.0s						
Z56A	Williston	53.78	349	P	P	13 09 20.2	-0.4
	baz=168						
152A	Waverly Hall	53.83	346	IAMs_20	IAMs_20	13 33 32.5	
	comp=Z,19µm,21.0s						
Y60A	Bolivia	53.97	353	IAMs_20	IAMs_20	13 33 43.7	
	comp=Z,18µm,20.0s						
Y60A	Bolivia	53.97	353	P	P	13 09 21.9	-0.1
	baz=172						
Y59A	Loris	54.04	352	IAMs_20	IAMs_20	13 33 01.8	
	comp=Z,22µm,21.0s						
Y59A	Loris	54.04	352	P	P	13 09 22.3	-0.2
	baz=171						
Y58A	Scranton	54.07	351	IAMs_20	IAMs_20	13 36 41.6	
	comp=Z,13µm,18.0s						
Y58A	Scranton	54.07	351	P	P	13 09 22.9	+0.1
	baz=170						
GOGA	Godfrey	54.27	347	P	P	13 09 23.0	-1.2
GOGA				pmax	pmax		
	comp=Z,65nm,1.4s						

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GOGA  Godfrey           54.27 347  IAMs_20  IAMs_20  13 32 43.0
      comp=Z,16µm,21.0s
GOGA  Godfrey           54.27 347  P        P        13 09 22.8  -1.3
      baz=165
Y57A  Sumter            54.29 350  IAMs_20  IAMs_20  13 33 18.4
      comp=Z,23µm,20.0s
Y57A  Sumter            54.29 350  P        P        13 09 23.9  -0.5
      baz=169
344A  Westbrook Farm    54.40 339  IAmb     IAmb     13 09 44.8
      comp=Z,94nm,0.9s
Y55A  Saluda            54.46 349  P        P        13 09 25.1  -0.5
      baz=167,SNR=14
X60A  Albert Glenn T    54.51 353  P        P        13 09 25.8  -0.1
      baz=172
Z51A  Franklin          54.56 345  IAMs_20  IAMs_20  13 33 55.8
      comp=Z,21µm,21.0s
X59A  McDuffie Farm,    54.58 352  P        P        13 09 25.8  -0.6
      baz=171
X58A  Rowland           54.66 352  IAMs_20  IAMs_20  13 33 31.2
      comp=Z,21µm,22.0s
X58A  Rowland           54.66 352  P        P        13 09 26.9  -0.1
      baz=170
X57A  Johnson Farm,     54.68 351  P        P        13 09 27.0  -0.2
      baz=169
Z50A  Ashland           54.68 345  IAmb     IAmb     13 09 41.0
      comp=Z,95nm,0.8s
Z50A                               IAMs_20  IAMs_20  13 34 57.1
      comp=Z,14µm,19.0s
Z50A  Ashland           54.68 345  P        P        13 09 26.0  -1.2
      baz=163,SNR=25
LRAL  Lakeview Retre    54.75 343  P        P        13 09 26.3  -1.4
      baz=161
HODGE Hodges            54.82 349  IAMs_20  IAMs_20  13 32 33.6
      comp=Z,15µm,21.0s
Y52A  Lilburn           54.83 347  P        P        13 09 27.4  -0.9
Y52A                               IAMs_20  IAMs_20  13 32 59.9
      comp=Z,15µm,20.0s
Y52A  Lilburn           54.83 347  P        P        13 09 27.4  -0.9
      baz=165
X56A  White Oak         54.86 350  P        P        13 09 28.2  -0.3
      baz=168,SNR=14
BIRD  Birdtown, Kers    54.92 350  IAMs_20  IAMs_20  13 33 26.0
      comp=Z,19µm,22.0s
X55A  Gracelyn & Ava    54.94 349  P        P        13 09 28.3  -0.7
      baz=168,SNR=14
W60A  Pink Hill         54.95 353  P        P        13 09 28.6  -0.4
      baz=172
HKT   Hockley           54.99 334  P        P        13 09 30.2  +0.8
HKT                                pmax     pmax
      comp=Z,212nm,1.5s
HKT                                MLR      MLR
      comp=Z,7µm,20.0s
HKT   Hockley           54.99 334  P        P        13 09 30.2  +0.8
HKT                                IAmb     IAmb     13 09 40.0
      comp=Z,212nm,1.5s
W61A  Ground Anchor     55.00 354  P        P        13 09 31.1  +1.7
      baz=173
VBMS  Vicksburg         55.04 340  P        P        13 09 32.8  +3.0
      baz=157
VBMS                               S        S        13 17 11.5  -1.3
      baz=157
W58A  Raeford           55.11 352  P        P        13 09 29.9  -0.3
      baz=170,SNR=25
W58A                               S        S        13 17 13.7  +0.1
      baz=170
X54A  Belton            55.15 349  P        P        13 09 29.5  -1.1
      baz=167,SNR=14
X54A                               S        S        13 17 12.7  -1.5
      baz=167
CNNC  Cliffs of the     55.15 353  P        P        13 09 30.6   0.0
      baz=172
CNNC                               S        S        13 17 13.5  -0.7
      baz=172
833A  Chaparral WMA,    55.20 329  IAmb     IAmb     13 09 41.3
      comp=Z,295nm,1.6s
833A  Chaparral WMA,    55.20 329  P        P        13 09 31.7  +0.6
      baz=147
833A                               S        S        13 17 15.3  +0.2
      baz=147
X53A  Estanollee        55.29 348  P        P        13 09 30.8  -0.8
      baz=166
X53A                               S        S        13 17 14.1  -2.0
      baz=166
PAULI Pauline           55.31 349  IAmb     IAmb     13 09 45.4
      comp=Z,77nm,0.9s
W57A  Gilead            55.34 351  IAmb     IAmb     13 10 06.9
      comp=Z,159nm,1.1s
W57A                               IAMs_20  IAMs_20  13 34 02.3
      comp=Z,17µm,22.0s
W57A  Gilead            55.34 351  P        P        13 09 30.7  -1.2
      baz=170
W57A                               S        S        13 17 16.3  -0.5
      baz=170
Y49A  Blount Mountai    55.38 344  IAMs_20  IAMs_20  13 35 37.5
      comp=Z,13µm,20.0s
W56A  Indian Trail      55.42 350  P        P        13 09 31.6  -0.9
      baz=169,SNR=14
W56A                               S        S        13 17 16.8  -1.0
      baz=169
KMSC  Kings Mountain    55.55 350  IAmb     IAmb     13 10 14.7
      comp=Z,116nm,1.1s
KMSC                               IAMs_20  IAMs_20  13 34 18.7
      comp=Z,22µm,20.0s
KMSC  Kings Mountain    55.55 350  P        P        13 09 32.4  -1.0
      baz=168,SNR=12
KMSC                               S        S        13 17 18.6  -0.9
      baz=168
V61A  Roper             55.57 354  P        P        13 09 32.4  -1.2
      baz=174
W54A  Cherokee Point    55.64 349  P        P        13 09 33.1  -1.0
      baz=167,SNR=10
W54A                               S        S        13 17 19.8  -1.0
      baz=167
X51A  Calhoun           55.68 346  IAMs_20  IAMs_20  13 33 54.5
      comp=Z,12µm,20.0s
X51A  Calhoun           55.68 346  P        P        13 09 33.6  -0.8
      baz=164
X51A                               S        S        13 17 19.0  -2.4
      baz=164
V59A  Middlesex         55.71 353  P        P        13 09 34.2  -0.3
      baz=172,SNR=16
V59A                               S        S        13 17 21.4  -0.3
      baz=172
FPAL  Fort Paine        55.83 345  IAMs_20  IAMs_20  13 34 00.5
      comp=Z,19µm,22.0s
V58A  Windy Hill, Pi    55.85 352  IAmb     IAmb     13 10 12.3
      comp=Z,174nm,1.2s
V58A                               IAMs_20  IAMs_20  13 34 27.7
      comp=Z,18µm,21.0s
V58A  Windy Hill, Pi    55.85 352  P        P        13 09 34.5  -1.1
      baz=171,SNR=15
V58A                               S        S        13 17 23.4  -0.2
      baz=171
W52A  Murphy            55.99 347  IAmb     IAmb     13 10 05.4
      comp=Z,114nm,1.2s
W52A                               IAMs_20  IAMs_20  13 34 34.5
      comp=Z,15µm,20.0s
V57A  Coltrane Farms    56.03 351  P        P        13 09 35.3  -1.6
      baz=170,SNR=11
V57A                               S        S        13 17 25.1  -0.9
      baz=170
V56A  Mocksville        56.06 351  P        P        13 09 36.6  -0.5
      baz=169,SNR=28
V56A                               S        S        13 17 26.3  -0.1
      baz=169
U61A  Possum Corner     56.09 355  P        P        13 09 37.2  -0.1
      baz=174
U61A                               S        S        13 17 25.9  -0.8
      baz=174
NATX  Nacogdoches       56.10 336  IAmb     IAmb     13 09 53.3
      comp=Z,142nm,0.9s
NATX  Nacogdoches       56.10 336  P        P        13 09 38.0  +0.5
      baz=153
NATX                               S        S        13 17 29.3  +2.2
      baz=153
X48A  Hartselle         56.11 344  P        P        13 09 36.0  -1.5
X48A                               IAmb     IAmb     13 10 26.5
      comp=Z,98nm,1.1s
V55A  Taylorsville      56.22 350  IAmb     IAmb     13 10 19.8
      comp=Z,159nm,1.1s
V55A                               IAMs_20  IAMs_20  13 34 59.5
      comp=Z,15µm,22.0s
V55A  Taylorsville      56.22 350  P        P        13 09 37.8  -0.5
      baz=168,SNR=14
V55A                               S        S        13 17 28.1  -0.4
      baz=168
U59A  Littleton         56.24 353  IAmb     IAmb     13 10 05.2
      comp=Z,114nm,1.2s
U59A  Littleton         56.24 353  P        P        13 09 37.9  -0.5
      baz=172
U59A                               S        S        13 17 28.0  -0.7
      baz=172
Y45A  Yeager Farm, C    56.26 341  IAmb     IAmb     13 10 30.3
      comp=Z,156nm,1.1s
V54A  Nebo              56.27 349  P        P        13 09 37.9  -0.7
      baz=168,SNR=20
V54A                               S        S        13 17 28.2  -1.0
      baz=168
U60A  Pendleton         56.30 354  P        P        13 09 38.4  -0.3
      baz=173
U60A                               S        S        13 17 28.2  -1.2
      baz=173
V53A  Saluda            56.32 348  IAMs_20  IAMs_20  13 33 20.3
      comp=Z,23µm,22.0s
U58A  Oxford            56.37 353  P        P        13 09 38.9  -0.4
      baz=171,SNR=14
U58A                               S        S        13 17 30.7  +0.2
      baz=171
W50A  Signal Mountai    56.40 346  IAmb     IAmb     13 09 52.6
      comp=Z,75nm,0.8s
W50A                               IAMs_20  IAMs_20  13 34 17.3
      comp=Z,16µm,20.0s
435B  Jarrell           56.46 332  P        P        13 09 41.5  +1.5
      baz=150
435B                               S        S        13 17 31.5  -0.3
      baz=150
CPCT  Cooper Cave       56.46 347  IAMs_20  IAMs_20  13 34 11.0
      comp=Z,14µm,20.0s
TKL   Tuckaleechee C    56.50 347  IAmb     IAmb     13 10 09.3
      comp=Z,124nm,1.1s
TKL                                IAMs_20  IAMs_20  13 34 22.1
      comp=Z,12µm,20.0s
U57A  Blanch            56.51 352  P        P        13 09 39.4  -0.9
      baz=170,SNR=17
U57A                               S        S        13 17 32.1  -0.2
      baz=170
SWET  Sewanee           56.55 345  P        P        13 09 38.8  -2.0
SWET                               IAmb     IAmb     13 09 53.9
      comp=Z,71nm,0.6s
SWET                               IAMs_20  IAMs_20  13 34 32.6
      comp=Z,18µm,22.0s
U56A  King              56.57 351  IAMs_20  IAMs_20  13 34 50.9
      comp=Z,18µm,21.0s
U56A  King              56.57 351  P        P        13 09 41.1  +0.3
      baz=169,SNR=9.5
U56A                               S        S        13 17 33.5  +0.4
      baz=169
V52A  Sevierville       56.64 348  IAmb     IAmb     13 10 10.4
      comp=Z,187nm,1.0s
V52A                               IAMs_20  IAMs_20  13 38 20.8
      comp=Z,12µm,18.0s
Z41A  Richland Creek    56.76 338  P        P        13 09 42.6  +0.5
      baz=155
Z41A                               S        S        13 17 36.6  +0.9
      baz=155
237A  Washetta, Mont    56.77 335  P        P        13 09 43.2  +1.0
OXF   Oxford            56.82 342  P        P        13 09 41.0  -1.5
OXF                                pmax     pmax
      comp=Z,193nm,1.1s
OXF                                MLR      MLR
      comp=Z,9µm,20.0s
OXF   Oxford            56.82 342  P        P        13 09 41.0  -1.5
OXF                                IAmb     IAmb     13 10 33.9
      comp=Z,193nm,1.1s
OXF   Oxford            56.82 342  P        P        13 09 41.1  -1.5
      baz=159,SNR=13
OXF                                S        S        13 17 32.3  -4.1
      baz=159
U55A  TA2, Sparta       56.83 350  P        P        13 09 41.8  -0.8
      baz=169
U55A                               S        S        13 17 36.4  -0.3
      baz=169
T59A  Double "B" Far    56.83 354  P        P        13 09 42.0  -0.6
T59A                               IAmb     IAmb     13 10 08.6
      comp=Z,171nm,1.1s
T59A                               IAMs_20  IAMs_20  13 33 43.6
      comp=Z,13µm,20.0s
T59A  Double "B" Far    56.83 354  P        P        13 09 41.9  -0.6
      baz=172,SNR=19
T59A                               S        S        13 17 35.4  -1.1
      baz=172
T58A  Grand View Acr    56.91 353  P        P        13 09 42.8  -0.3
      baz=171,SNR=23
T58A                               S        S        13 17 37.5  -0.1
      baz=171
U54A  Nelsons Funny     56.97 350  IAmb     IAmb     13 10 12.5
      comp=Z,123nm,0.9s
U54A                               IAMs_20  IAMs_20  13 35 03.5
      comp=Z,16µm,20.0s
U54A  Nelsons Funny     56.97 350  P        P        13 09 42.8  -0.9
      baz=168,SNR=13
U54A                               S        S        13 17 37.0  -1.6
      baz=168
T57A  Hurt              57.05 352  IAMs_20  IAMs_20  13 35 36.6
      comp=Z,19µm,21.0s
T57A  Hurt              57.05 352  P        P        13 09 43.7  -0.5
      baz=171,SNR=16
T57A                               S        S        13 17 39.7  +0.2
      baz=171
T56A  Rocky Mt          57.19 351  P        P        13 09 44.7  -0.4
      baz=170,SNR=16
T56A                               S        S        13 17 41.5  +0.2
      baz=170
JCT   Junction City     57.20 330  P        P        13 09 44.8  -0.6
      baz=147
JCT                                S        S        13 17 41.4  -0.4
      baz=147
WLAR  White Oak Lake    57.26 338  P        P        13 09 46.1  +0.5
V48A  Smith Brothers    57.27 345  IAmb     IAmb     13 10 45.0
      comp=Z,104nm,1.0s
V48A                               IAMs_20  IAMs_20  13 35 29.6
      comp=Z,12µm,22.0s
X43A  Marvell           57.27 340  IAmb     IAmb     13 10 00.3
      comp=Z,130nm,0.8s
X43A  Marvell           57.27 340  P        P        13 09 45.5  -0.2
      baz=158
TZTN  Tazewell          57.31 348  IAmb     IAmb     13 10 27.9
      comp=Z,128nm,1.2s
TZTN                               IAMs_20  IAMs_20  13 38 56.6
      comp=Z,14µm,18.0s
TZTN  Tazewell          57.31 348  P        P        13 09 45.2  -0.8
      baz=166
TZTN                               S        S        13 17 40.6  -2.4
      baz=166
S61A  Accomac           57.37 356  IAMs_20  IAMs_20  13 35 39.7
      comp=Z,12µm,21.0s
HPIG                    57.39 323  IAMs_20  IAMs_20  13 33 28.7
      comp=Z,14µm,18.0s
T55A  Pulaski           57.39 351  P        P        13 09 45.9  -0.7
      baz=169,SNR=22
T55A                               S        S        13 17 44.2  +0.2
      baz=169
BLA   Blacksburg        57.43 351  IAmb     IAmb     13 10 09.8
      comp=Z,180nm,1.2s
BLA                                IAMs_20  IAMs_20  13 35 28.4
      comp=Z,16µm,22.0s
BLA   Blacksburg        57.43 351  P        P        13 09 46.3  -0.6
      baz=169
BLA                                S        S        13 17 44.8  +0.4
      baz=169
WHTX  Lake Whitney,     57.44 333  P        P        13 09 47.2  +0.2
WHTX  Lake Whitney,     57.44 333  P        P        13 09 46.7  -0.3
      baz=150,SNR=13
WHTX                               S        S        13 17 44.8   0.0
      baz=150
T54A  Tazewell          57.46 350  P        P        13 09 45.6  -1.5
      baz=168,SNR=12
T54A                               S        S        13 17 43.9  -1.1
      baz=168
S60A  Water View        57.47 355  S        S        13 17 45.1  +0.2
      baz=174
CLTN  Cedars of Leba    57.48 345  IAmb     IAmb     13 10 35.9
      comp=Z,126nm,1.2s
CLTN                               IAMs_20  IAMs_20  13 35 01.2
      comp=Z,15µm,22.0s
S58A  Poland Farm, P    57.52 353  IAmb     IAmb     13 10 39.4
      comp=Z,139nm,1.4s
S58A  Poland Farm, P    57.52 353  P        P        13 09 47.5  +0.1
      baz=172
S58A                               S        S        13 17 45.7  +0.2
      baz=172
T53A  Wise              57.55 349  P        P        13 09 46.4  -1.3
      baz=167,SNR=13
T53A                               S        S        13 17 43.6  -2.5
      baz=167
S59A  Mechanicsville    57.59 354  P        P        13 09 48.2  +0.3
      baz=173
S59A                               S        S        13 17 46.2  -0.2
      baz=173
T52A  Hallie            57.75 349  IAmb     IAmb     13 10 45.1
      comp=Z,96nm,1.1s
T52A                               IAMs_20  IAMs_20  13 35 51.1
      comp=Z,20µm,21.0s
T52A  Hallie            57.75 349  P        P        13 09 47.7  -1.4
      baz=166
T52A                               S        S        13 17 46.1  -2.6
      baz=166
U49A  Red Boiling Sp    57.76 346  IAmb     IAmb     13 10 02.6
      comp=Z,271nm,1.8s
U49A                               IAMs_20  IAMs_20  13 36 16.0
      comp=Z,15µm,21.0s
S56A  Natural Bridge    57.77 352  P        P        13 09 48.8  -0.4
      baz=170
S56A                               S        S        13 17 49.8  +0.9
      baz=170
S57A  Dark Hollow, R    57.77 352  IAmb     IAmb     13 10 15.4
      comp=Z,119nm,1.0s
S57A                               IAMs_20  IAMs_20  13 36 05.4
      comp=Z,18µm,21.0s
S57A  Dark Hollow, R    57.77 352  P        P        13 09 48.9  -0.3
      baz=171,SNR=15
S57A                               S        S        13 17 49.8  +0.9
      baz=171
T51A  Gray              57.80 348  P        P        13 09 48.2  -1.2
      baz=166,SNR=20
T51A                               S        S        13 17 46.4  -2.9
      baz=166
R58B  Mineral           57.85 354  IAmb     IAmb     13 10 12.4
      comp=Z,222nm,1.6s
R58B  Mineral           57.85 354  P        P        13 09 49.5  -0.2
      baz=172,SNR=10
R58B                               S        S        13 17 50.0  +0.1
      baz=172
X40A  Basin Creek Fa    57.89 339  P        P        13 09 49.5  -0.6
      baz=156
X40A                               S        S        13 17 48.6  -1.9
      baz=156
WVT   Waverly           57.90 344  P        P        13 09 47.6  -2.5
WVT                                pmax     pmax
      comp=Z,103nm,0.8s
WVT                                MLR      MLR
      comp=Z,10µm,20.0s
WVT   Waverly           57.90 344  P        P        13 09 47.6  -2.5
WVT                                IAmb     IAmb     13 10 03.0
      comp=Z,103nm,0.8s
WVT   Waverly           57.90 344  P        P        13 09 48.2  -2.0
      baz=161
WVT                                S        S        13 17 46.1  -4.5
      baz=161
UALR  University of     57.98 339  IAmb     IAmb     13 10 42.8
      comp=Z,98nm,1.1s
SACV  Santiago Islan    57.99  57  P        P        13 09 49.5  -1.6
SACV                               IAmb     IAmb     13 10 09.8
      comp=Z,114nm,1.0s
SACV  Santiago Islan    57.99  57  IAMs_20  IAMs_20  13 32 23.6
      comp=Z,13µm,21.0s
S55A  Lewisburg         57.99 351  P        P        13 09 50.5  -0.3
      baz=169,SNR=24
S55A                               S        S        13 17 51.6  -0.2
      baz=169
R61A  Willards          57.99 356  IAMs_20  IAMs_20  13 38 34.2
      comp=Z,12µm,18.0s
R61A  Willards          57.99 356  S        S        13 17 53.7  +2.0
      baz=175
R59A  King George, V    58.00 354  P        P        13 09 53.2  +2.4
      baz=173
R59A                               S        S        13 17 51.7  -0.2
      baz=173
R60A  Leonardtown, M    58.02 355  S        S        13 17 52.9  +0.7
      baz=174
CBN   Corbin Frederi    58.03 354  P        P        13 09 53.5  +2.5
      baz=173
CBN                                S        S        13 17 52.3   0.0
      baz=173
T50A  Nancy             58.04 347  P        P        13 09 49.5  -1.5
      baz=164,SNR=21
T50A                               S        S        13 17 49.4  -3.0
      baz=164
S54A  Dingess, Beckl    58.14 350  IAmb     IAmb     13 10 51.0
      comp=Z,140nm,1.0s
S54A                               IAMs_20  IAMs_20  13 39 07.3
      comp=Z,10µm,18.0s
S54A  Dingess, Beckl    58.14 350  P        P        13 09 51.0  -0.9
      baz=168,SNR=11
S54A                               S        S        13 17 52.7  -1.1
      baz=168
S53A  Williamson        58.16 350  P        P        13 09 51.1  -0.9
      baz=168
S53A                               S        S        13 17 52.0  -2.0
      baz=168
TXAR  Lajitas Array     58.18 326  P        P        13 09 52.5  +0.1
      comp=Z,6.5nm,1.1s,baz=145,slow=6.8,SNR=21
TXAR                               LR       LR       13 34 36.8
      comp=Z,6µm,18.5s,baz=0.0,slow=36
TXAR  Lajitas Array     58.18 326  P        P        13 09 51.9  -0.5
TX31  Lajitas Ar. Si    58.18 326  P        P        13 09 51.7  -0.7
TX32  Lajitas Array     58.18 326  P        P        13 09 51.6  -0.7
R58A  Rapidan           58.19 353  P        P        13 09 51.2  -0.9
      baz=172,SNR=5.7
R58A                               S        S        13 17 54.8  +0.5
      baz=172
MIAR  Mount Ida         58.20 338  P        P        13 09 51.0  -1.3
MIAR                               pmax     pmax
      comp=Z,122nm,1.0s
MIAR                               MLR      MLR
      comp=Z,5µm,20.0s
MIAR  Mount Ida         58.20 338  P        P        13 09 51.0  -1.3
MIAR                               IAmb     IAmb     13 10 25.2
      comp=Z,122nm,1.0s
MIAR  Mount Ida         58.20 338  P        P        13 09 51.2  -1.0
      baz=155,SNR=42
MIAR                               S        S        13 17 53.8  -0.8
      baz=155
R57A  Stanardsville     58.25 353  P        P        13 09 52.5   0.0
      baz=172,SNR=21
R57A                               S        S        13 17 56.4  +1.3
      baz=172
T49A  Edmonton          58.27 346  IAMs_20  IAMs_20  13 35 27.0
      comp=Z,17µm,20.0s
T49A  Edmonton          58.27 346  P        P        13 09 51.2  -1.5
      baz=164,SNR=46
T49A                               S        S        13 17 51.9  -3.6
      baz=164
W41B  Gary Mavity, V    58.31 340  IAmb     IAmb     13 10 02.4
      comp=Z,334nm,1.9s
W41B  Gary Mavity, V    58.31 340  P        P        13 09 51.8  -1.2
      baz=156,SNR=19
W41B                               S        S        13 17 53.8  -2.2
      baz=156
S52A  Salyersville      58.32 349  P        P        13 09 52.1  -1.0
      baz=166
S51A  Beattyville       58.38 348  IAMs_20  IAMs_20  13 36 13.8
      comp=Z,13µm,20.0s
S51A  Beattyville       58.38 348  P        P        13 09 54.3  +0.9
      baz=166
S51A                               S        S        13 17 53.7  -3.2
      baz=166
WHAR  Wooly Hollow      58.43 340  P        P        13 09 53.3  -0.6
WHAR                               IAmb     IAmb     13 10 08.2
      comp=Z,76nm,0.9s
R55A  Marlinton         58.44 352  IAMs_20  IAMs_20  13 35 59.1
      comp=Z,19µm,21.0s
R55A  Marlinton         58.44 352  P        P        13 09 55.7  +1.7
      baz=170
R55A                               S        S        13 17 58.3  +0.6
      baz=170
R54A  Victor            58.46 351  P        P        13 09 53.4  -0.7
      baz=169,SNR=14
R54A                               S        S        13 17 56.8  -1.2
      baz=169
R56A  Bull Pasture M    58.46 352  P        P        13 09 57.8  +3.7
      baz=171,SNR=6.4
R56A                               S        S        13 17 59.9  +1.8
      baz=171
T47A  Sharon Grove      58.53 345  IAmb     IAmb     13 10 07.5
      comp=Z,141nm,0.8s
S50A  Richmond          58.58 348  P        P        13 09 53.6  -1.3
      baz=165,SNR=21
S50A                               S        S        13 17 56.1  -3.4
      baz=165
Q60A  Greensboro        58.69 356  IAMs_20  IAMs_20  13 38 58.8
      comp=Z,12µm,19.0s
R53A  Hurricane         58.76 350  IAMs_20  IAMs_20  13 38 54.8
      comp=Z,16µm,18.0s
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R53A	Hurricane baz=168	58.76	350	P	P	13 09 55.2	-1.0
R53A	baz=168			S	S	13 17 59.9	-1.9
Q58A	Fox Den Farm, baz=172,SNR=12	58.79	354	P	P	13 09 56.6	+0.3
Q58A	baz=172			S	S	13 18 02.7	+0.5
W39A	Magazine comp=Z,168nm,1.1s	58.86	338	IAmb	IAmb	13 10 38.4	
W39A	Magazine baz=155,SNR=27	58.86	338	P	P	13 09 56.9	+0.1
W39A	baz=155			S	S	13 18 03.7	+0.6
S49A	Springfield baz=164	58.87	347	P	P	13 09 55.1	-1.8
S49A	baz=164			S	S	13 17 59.9	-3.3
R52A	Catlettsburg baz=167	58.88	349	P	P	13 09 55.3	-1.7
R52A	baz=167			S	S	13 18 00.8	-2.6
FCAR	Ozark Folk Cen	58.93	340	P	P	13 09 55.4	-2.0
ABTX	Abilene, Hawle	58.94	332	P	P	13 09 57.6	0.0
ABTX	comp=Z,187nm,1.2s			IAmb	IAmb	13 10 31.0	
ABTX	Abilene, Hawle baz=148,SNR=13	58.94	332	P	P	13 09 57.5	0.0
ABTX	baz=148			S	S	13 18 04.2	-0.2
Q57A	Strasburg baz=172,SNR=26	58.96	353	P	P	13 09 56.6	-0.9
Q57A	baz=172			S	S	13 18 06.0	+1.5
R51A	Hillsboro baz=166	59.02	348	P	P	13 09 56.5	-1.5
R51A	baz=166			S	S	13 18 02.4	-2.8
Q56A	Snyder Ridge, baz=171,SNR=19	59.06	353	P	P	13 09 58.3	+0.1
Q56A	baz=171			S	S	13 18 07.7	+1.9
Q55A	Buckhannon baz=170,SNR=9.7	59.13	352	P	P	13 09 59.1	+0.4
Q55A	baz=170			S	S	13 18 08.4	+1.7
R50A	Paris comp=Z,97nm,1.1s	59.15	348	IAmb	IAmb	13 10 53.4	
R50A	comp=Z,15µm,20.0s			IAMs_20	IAMs_20	13 36 41.1	
R50A	Paris baz=165	59.15	348	P	P	13 09 57.3	-1.5
R50A	baz=165			S	S	13 18 03.4	-3.4
Q53A	Leroy baz=168,SNR=12	59.21	350	P	P	13 09 58.4	-0.9
Q53A	baz=168			S	S	13 18 06.1	-1.5
Q54A	Coxs Mills comp=Z,78nm,0.9s	59.23	351	IAmb	IAmb	13 10 47.3	
Q54A	comp=Z,18µm,22.0s			IAMs_20	IAMs_20	13 36 01.1	
Q54A	Coxs Mills baz=169,SNR=13	59.23	351	P	P	13 09 58.4	-1.0
Q54A	baz=169			S	S	13 18 06.2	-1.6
PBMO	Poplar Bluff comp=Z,90nm,0.9s	59.23	342	IAmb	IAmb	13 11 09.8	
P61A	Hammonton comp=Z,11µm,18.0s	59.29	357	IAMs_20	IAMs_20	13 39 54.7	
P58A	Pank, Wackersv baz=173	59.30	354	P	P	13 10 00.2	+0.4
P58A	baz=173			S	S	13 18 09.3	+0.6
R49A	Shelbyville comp=Z,19µm,20.0s	59.33	347	IAMs_20	IAMs_20	13 35 51.0	
R49A	Shelbyville baz=164	59.33	347	P	P	13 09 59.3	-0.8
R49A	baz=164			S	S	13 18 05.7	-3.5
P59A	Jarrettsville baz=174	59.34	355	P	P	13 09 59.8	-0.4
P59A	baz=174			S	S	13 18 09.6	+0.3
P57A	Homestead Farm baz=172,SNR=12	59.36	354	P	P	13 10 00.4	+0.1
P57A	baz=172			S	S	13 18 11.5	+2.0
Q52A	Bidwell baz=168	59.43	350	P	P	13 09 59.9	-0.8
Q52A	baz=168			S	S	13 18 08.2	-2.3
P56A	Dayton Farm, R baz=171,SNR=15	59.48	353	P	P	13 10 00.7	-0.4
P56A	baz=171			S	S	13 18 12.7	+1.7
P60A	Greenville comp=Z,13µm,18.0s	59.48	356	IAMs_20	IAMs_20	13 39 46.7	
P60A	Greenville baz=175	59.48	356	P	P	13 10 00.7	-0.3
P60A	baz=175			S	S	13 18 10.2	-0.9
WCI	Wyandotte Cave	59.52	346	P	P	13 09 59.9	-1.5
WCI	comp=Z,81nm,0.9s			pmax	pmax		
WCI	comp=Z,15µm,20.0s			MLR	MLR		
WCI	Wyandotte Cave	59.52	346	P	P	13 09 59.9	-1.5
WCI	comp=Z,81nm,0.8s			IAmb	IAmb	13 10 14.0	
WCI	Wyandotte Cave comp=Z,15µm,20.0s	59.52	346	IAMs_20	IAMs_20	13 36 59.0	
WCI	Wyandotte Cave baz=163	59.52	346	P	P	13 10 00.0	-1.3
WCI	baz=163			S	S	13 18 08.2	-3.4
PSUB	Penn St. - Bra comp=Z,13µm,20.0s	59.59	356	IAMs_20	IAMs_20	13 36 36.5	
USIN	University of comp=Z,143nm,1.1s	59.59	345	IAmb	IAmb	13 11 01.8	
U40A	Yellville comp=Z,94nm,0.9s	59.59	340	IAmb	IAmb	13 10 16.2	
U40A	Yellville baz=156,SNR=29	59.59	340	P	P	13 10 00.8	-1.2
U40A	baz=156			S	S	13 18 10.6	-2.1
P55A	Reedsville baz=170,SNR=6.4	59.60	352	P	P	13 10 01.3	-0.7
P55A	baz=170			S	S	13 18 13.8	+1.1
Q50A	Georgetown baz=166	59.62	348	P	P	13 10 00.9	-1.2
Q50A	baz=166			S	S	13 18 09.4	-3.6
Q51A	Peebles comp=Z,64nm,0.9s	59.68	349	IAmb	IAmb	13 10 16.2	
Q51A	comp=Z,16µm,20.0s			IAMs_20	IAMs_20	13 36 38.2	
Q51A	Peebles baz=166	59.68	349	P	P	13 10 01.1	-1.4
Q51A	baz=166			S	S	13 18 11.3	-2.4
O61A	Allentown baz=176	59.70	357	P	P	13 10 02.0	-0.5
MVL	Millersville comp=Z,119nm,1.3s	59.72	355	IAmb	IAmb	13 10 33.9	
MVL	comp=Z,11µm,18.0s			IAMs_20	IAMs_20	13 39 31.1	
MCWV	Mont Chateau baz=170,SNR=10	59.75	352	P	P	13 10 02.8	-0.2
MCWV	baz=170			S	S	13 18 15.5	+1.0
P54A	Burton baz=170,SNR=21	59.78	351	P	P	13 10 02.8	-0.4
P54A	baz=170			S	S	13 18 14.3	-0.7
P53A	Whipple baz=169,SNR=13	59.80	351	P	P	13 10 02.6	-0.7
P53A	baz=169			S	S	13 18 13.2	-2.1
X34A	Smith Ranch, M	59.86	334	P	P	13 10 04.0	+0.2
O58A	Lewisberry baz=173	59.89	355	P	P	13 10 03.6	-0.3
O58A	baz=173			S	S	13 18 16.5	+0.1
Q49A	Aurora baz=165	59.96	347	P	P	13 10 02.7	-1.7
Q49A	baz=165			S	S	13 18 13.9	-3.4
O60A	Telford baz=175,SNR=6.1	59.97	356	P	P	13 10 06.3	+1.9
O60A	baz=175			S	S	13 18 17.1	-0.3
PAGS	Pennsylvania G comp=Z,11µm,19.0s	59.98	355	IAMs_20	IAMs_20	13 38 21.9	
O59A	Robesonia baz=174,SNR=6.1	60.02	355	P	P	13 10 08.1	+3.3
O59A	baz=174			S	S	13 18 18.6	+0.5
O57A	Amberson baz=173,SNR=15	60.05	354	P	P	13 10 05.0	0.0
O57A	baz=173			S	S	13 18 19.5	+1.1
P52A	Corning baz=168	60.06	350	P	P	13 10 03.6	-1.5
P52A	baz=168			S	S	13 18 16.0	-2.6
Q48A	North Vernon baz=164	60.06	347	P	P	13 10 03.8	-1.3
Q48A	baz=164			S	S	13 18 14.8	-3.8
P51A	Williamsport comp=Z,61nm,0.8s	60.07	349	IAmb	IAmb	13 10 17.9	
P51A	comp=Z,15µm,21.0s			IAMs_20	IAMs_20	13 36 40.5	
P51A	Williamsport baz=167	60.07	349	P	P	13 10 03.4	-1.8
P51A	baz=167			S	S	13 18 15.9	-2.8
MGMO	Mountain Grove comp=Z,80nm,0.9s	60.13	340	IAmb	IAmb	13 10 30.5	
U38A	Gravette comp=Z,266nm,1.9s	60.19	338	IAmb	IAmb	13 10 15.5	
O56A	Blue Knob Stat baz=172,SNR=19	60.20	353	P	P	13 10 06.1	+0.1
O56A	baz=172			S	S	13 18 21.9	+1.4
TUL1	Leonard baz=153,SNR=21	60.22	337	P	P	13 10 05.7	-0.6
TUL1	baz=153			S	S	13 18 20.9	+0.1
O55A	Ligonier baz=171,SNR=15	60.23	353	P	P	13 10 06.0	-0.2
O55A	baz=171			S	S	13 18 21.3	+0.6
BRNJ	Basking Ridge comp=Z,11µm,19.0s	60.29	357	IAMs_20	IAMs_20	13 38 59.0	
P50A	Jamestown baz=166,SNR=12	60.33	349	P	P	13 10 05.4	-1.5
P50A	baz=166			S	S	13 18 18.6	-3.4
O54A	Avella baz=170	60.34	352	P	P	13 10 06.4	-0.5
O54A	baz=170			S	S	13 18 21.8	-0.4
N61A	South Mountain baz=176	60.34	357	P	P	13 10 08.4	+1.4
N61A	baz=176			S	S	13 18 21.8	-0.3
CPNY	Central Park comp=Z,17µm,19.0s	60.37	357	IAMs_20	IAMs_20	13 39 24.0	
WMOK	Wichita Mounta baz=150	60.37	334	P	P	13 10 10.8	+3.4
WMOK	baz=150			S	S	13 18 22.3	-0.5
OLIL	Olney comp=Z,12µm,18.0s	60.43	345	IAMs_20	IAMs_20	13 40 40.2	
P49A	Miami Univ. Ec baz=165,SNR=9.4	60.43	348	P	P	13 10 05.6	-2.1
P49A	baz=165			S	S	13 18 19.3	-4.1
BLO	Bloomington comp=Z,89nm,1.1s	60.47	346	IAmb	IAmb	13 11 03.9	
BLO	comp=Z,19µm,22.0s			IAMs_20	IAMs_20	13 36 35.2	
O52A	Adamsville comp=Z,73nm,0.9s	60.49	350	IAmb	IAmb	13 11 24.0	
O52A	comp=Z,13µm,19.0s			IAMs_20	IAMs_20	13 38 48.5	
O52A	Adamsville baz=168	60.49	350	P	P	13 10 06.3	-1.6
O52A	baz=168			S	S	13 18 22.0	-2.0
SSPA	Standing Stone	60.49	354	P	P	13 10 07.5	-0.5
SSPA	Standing Stone comp=Z,14µm,22.0s	60.49	354	IAMs_20	IAMs_20	13 37 16.5	
SSPA	Standing Stone baz=172	60.49	354	P	P	13 10 08.5	+0.4
SSPA	baz=172			S	S	13 18 24.6	+0.6
N60A	Cedar Hill Far baz=175	60.50	356	P	P	13 10 08.4	+0.3
N60A	baz=175			S	S	13 18 23.3	-0.9
P48A	Milroy comp=Z,18µm,22.0s	60.51	347	IAMs_20	IAMs_20	13 35 30.2	
P48A	Milroy baz=164	60.51	347	P	P	13 10 05.9	-2.2
P48A	baz=164			S	S	13 18 20.1	-4.3
O53A	New Philadelph baz=169	60.52	351	P	P	13 10 10.8	+2.6
O53A	baz=169			S	S	13 18 22.4	-2.1
PAL	Palisades comp=Z,102nm,1.1s	60.58	357	IAmb	IAmb	13 10 43.9	
PAL	comp=Z,17µm,21.0s			IAMs_20	IAMs_20	13 36 12.5	
PAL	Palisades baz=177	60.58	357	P	P	13 10 08.8	+0.3
PAL	baz=177			S	S	13 18 24.0	-1.1
N58A	Sunbury comp=Z,203nm,1.4s	60.59	355	IAmb	IAmb	13 10 35.1	
N58A	Sunbury baz=174,SNR=9.6	60.59	355	P	P	13 10 08.5	-0.1
N58A	baz=174			S	S	13 18 25.7	+0.4
N59A	State Game Lan comp=Z,194nm,1.8s	60.59	356	IAmb	IAmb	13 10 44.1	
N59A	comp=Z,12µm,18.0s			IAMs_20	IAMs_20	13 40 30.1	
N59A	State Game Lan baz=175	60.59	356	P	P	13 10 08.8	+0.1
N59A	baz=175			S	S	13 18 25.1	-0.3
O51A	Pataskala baz=167	60.64	350	P	P	13 10 08.0	-1.1
O51A	baz=167			S	S	13 18 22.7	-3.4
CCM	Cathedral Cave	60.65	342	P	P	13 10 07.4	-1.8
CCM	comp=Z,149nm,1.4s			pmax	pmax		
CCM	comp=Z,7µm,20.0s			MLR	MLR		
CCM	Cathedral Cave	60.65	342	P	P	13 10 07.4	-1.8
CCM	comp=Z,149nm,1.4s			IAmb	IAmb	13 10 27.2	
CCM	Cathedral Cave baz=158	60.65	342	P	P	13 10 07.7	-1.4
CCM	baz=158			S	S	13 18 22.7	-3.5
ODNJ	Ogdensburg comp=Z,148nm,1.6s	60.69	357	IAmb	IAmb	13 10 36.1	
ODNJ	comp=Z,12µm,21.0s			IAMs_20	IAMs_20	13 36 29.6	
N55A	Marion Center baz=171,SNR=32	60.75	353	P	P	13 10 09.6	-0.2
N55A	baz=171			S	S	13 18 28.1	+0.6
ACSO	Alum Creek Sta comp=Z,96nm,0.8s	60.79	349	IAmb	IAmb	13 10 23.0	
ACSO	comp=Z,15µm,21.0s			IAMs_20	IAMs_20	13 37 13.5	
ACSO	Alum Creek Sta baz=167,SNR=14	60.79	349	P	P	13 10 08.7	-1.3
N56A	West Decatur baz=172,SNR=12	60.81	354	P	P	13 10 10.1	-0.2
N56A	baz=172			S	S	13 18 28.6	+0.4
O50A	Cable baz=166	60.82	349	P	P	13 10 08.6	-1.6
O50A	baz=166			S	S	13 18 24.7	-3.6
Q44A	Meyer Farm, Va comp=Z,93nm,0.8s	60.82	344	IAmb	IAmb	13 10 23.2	
YLE	Yale comp=Z,13µm,20.0s	60.85	358	IAMs_20	IAMs_20	13 36 04.9	
M61A	Granite Spring baz=177	60.88	358	P	P	13 10 12.1	+1.5
M61A	baz=177			S	S	13 18 27.2	-1.7
M63A	Gales Ferry baz=179	60.92	359	P	P	13 10 12.6	+1.7
M63A	baz=179			S	S	13 18 28.2	-1.3
M60A	Port Jervis baz=176	60.93	357	P	P	13 10 13.0	+2.0
M60A	baz=176			S	S	13 18 29.1	-0.6
MNTX	Cornudas Mount baz=142,SNR=53	60.95	327	P	P	13 10 11.1	-0.3
MNTX	baz=142			S	S	13 18 31.0	+0.7
S39A	Bolivar comp=Z,87nm,0.8s	60.96	340	IAmb	IAmb	13 10 24.7	
M62A	Hamden baz=178	60.98	358	P	P	13 10 11.3	+0.1
M62A	baz=178			S	S	13 18 29.0	-1.2
O49A	Covington comp=Z,14µm,20.0s	60.99	348	IAMs_20	IAMs_20	13 39 15.9	
O49A	Covington baz=166,SNR=8.6	60.99	348	P	P	13 10 10.1	-1.3
O49A	baz=166			S	S	13 18 26.6	-3.9
N53A	Lisbon comp=Z,161nm,1.1s	61.02	351	IAmb	IAmb	13 10 52.0	
N53A	comp=Z,20µm,21.0s			IAMs_20	IAMs_20	13 38 09.4	
N53A	Lisbon baz=169	61.02	351	P	P	13 10 11.3	-0.3
N53A	baz=169			S	S	13 18 28.9	-1.9
P46A	Rosedale comp=Z,65nm,0.9s	61.05	346	IAmb	IAmb	13 10 26.1	
P46A	comp=Z,15µm,21.0s			IAMs_20	IAMs_20	13 37 46.6	
N54A	Moraine State comp=Z,16µm,22.0s	61.05	352	IAMs_20	IAMs_20	13 37 17.4	
N54A	Moraine State baz=170,SNR=14	61.05	352	P	P	13 10 11.3	-0.5
N54A	baz=170			S	S	13 18 30.7	-0.6
M64A	Tiverton baz=180	61.06	360	S	S	13 18 29.9	-1.3
M65A	Busby, Falmout comp=Z,12µm,21.0s	61.07	0	IAMs_20	IAMs_20	13 35 39.6	
M58A	Price’s Panora baz=174,SNR=20	61.10	355	P	P	13 10 12.2	0.0
M58A	baz=174			S	S	13 18 32.0	+0.2
M57A	Sunshine Farm, comp=Z,107nm,1.1s	61.12	355	IAmb	IAmb	13 10 29.3	
M57A	comp=Z,12µm,19.0s			IAMs_20	IAMs_20	13 40 36.0	
M57A	Sunshine Farm, baz=173,SNR=10	61.12	355	P	P	13 10 12.5	+0.3
M57A	baz=173			S	S	13 18 32.4	+0.4
N52A	McGinn’s Farm, baz=168	61.15	351	P	P	13 10 11.4	-1.0
N52A	baz=168			S	S	13 18 29.5	-2.9
M59A	Waymart baz=175,SNR=13	61.19	356	P	P	13 10 12.4	-0.4
M59A	baz=175			S	S	13 18 32.9	-0.1
O48A	Farmland baz=165,SNR=9.0	61.22	348	P	P	13 10 11.4	-1.6
O48A	baz=165			S	S	13 18 28.8	-4.6
KSPA	Keystone Colle comp=Z,190nm,1.4s	61.23	356	IAmb	IAmb	13 10 49.3	
KSCT	Kent School, K comp=Z,124nm,1.4s	61.28	358	IAmb	IAmb	13 10 44.1	
KSCT	comp=Z,14µm,20.0s			IAMs_20	IAMs_20	13 37 50.2	
N50A	Nevada baz=167,SNR=10	61.34	349	P	P	13 10 12.4	-1.4
N50A	baz=167			S	S	13 18 30.8	-4.1
N51A	Ashland comp=Z,75nm,0.9s	61.36	350	IAmb	IAmb	13 11 06.3	
N51A	comp=Z,12µm,19.0s			IAMs_20	IAMs_20	13 39 24.5	
N51A	Ashland baz=168	61.36	350	P	P	13 10 12.3	-1.6
N51A	baz=168			S	S	13 18 31.6	-3.6
M56A	Emporium comp=Z,122nm,1.1s	61.36	354	IAmb	IAmb	13 10 25.3	
M56A	comp=Z,13µm,21.0s			IAMs_20	IAMs_20	13 37 42.5	
M56A	Emporium baz=172,SNR=19	61.36	354	P	P	13 10 13.4	-0.5
M56A	baz=172			S	S	13 18 35.6	+0.4
L63A	North Scituate baz=179,SNR=10	61.38	359	P	P	13 10 13.6	-0.4
L63A	baz=179			S	S	13 18 34.1	-1.1
M55A	Ridgway baz=172,SNR=22	61.41	353	P	P	13 10 13.9	-0.4
M55A	baz=172			S	S	13 18 36.2	+0.4
L64A	Middleborough baz=180	61.45	0	P	P	13 10 13.8	-0.6
MSTX	Muleshoe	61.49	330	P	P	13 10 14.1	-1.0
MSTX	comp=Z,139nm,1.0s			IAmb	IAmb	13 10 30.6	
MSTX	Muleshoe baz=146,SNR=26	61.49	330	P	P	13 10 14.7	-0.4
MSTX	baz=146			S	S	13 18 36.7	-0.6
M54A	Oil Creek Stat baz=171,SNR=20	61.55	353	P	P	13 10 14.6	-0.7
M54A	baz=171			S	S	13 18 36.9	-0.7
L60A	Shokan baz=176	61.57	357	P	P	13 10 15.2	-0.2
L60A	baz=176			S	S	13 18 37.3	-0.5
M53A	WI Miller and baz=170,SNR=12	61.61	352	P	P	13 10 14.7	-0.9
M53A	baz=170			S	S	13 18 36.3	-2.1
P43A	Skaggs, Pawnee comp=Z,11µm,19.0s	61.65	344	IAMs_20	IAMs_20	13 40 57.9	
N49A	Columbus Grove comp=Z,11µm,20.0s	61.67	349	IAMs_20	IAMs_20	13 37 29.9	
N49A	Columbus Grove baz=166,SNR=29	61.67	349	P	P	13 10 14.6	-1.5
N49A	baz=166			S	S	13 18 34.7	-4.4
L58A	Harry Jones Me baz=175,SNR=16	61.72	356	P	P	13 10 16.3	-0.1
L58A	baz=175			S	S	13 18 39.5	-0.3
M51A	Elyria baz=168	61.73	350	S	S	13 18 35.9	-3.9
AMTX	Amarillo comp=Z,91nm,1.1s	61.75	332	IAmb	IAmb	13 11 22.3	
AMTX	Amarillo baz=147	61.75	332	P	P	13 10 17.3	+0.5
AMTX	baz=147			S	S	13 18 39.1	-1.4
L61A	Hillsdale 1, H baz=177	61.75	358	P	P	13 10 18.7	+2.2
L61A	baz=177			S	S	13 18 39.2	-0.8
ALLY	Alegheny Colle comp=Z,15µm,22.0s	61.75	352	IAMs_20	IAMs_20	13 38 00.8	
L57A	Andrews Acres baz=174	61.75	355	P	P	13 10 16.6	0.0
L57A	baz=174			S	S	13 18 40.3	+0.2
SFIN	Lafayette comp=Z,19µm,20.0s	61.75	346	IAMs_20	IAMs_20	13 37 36.2	
SFIN	Lafayette baz=163,SNR=17	61.75	346	P	P	13 10 14.3	-2.3
SFIN	baz=163			S	S	13 18 34.0	-6.2
N48A	Decatur	61.77	348	P	P	13 10 15.0	-1.7

	baz=165,SNR=17						
N48A	baz=165			S	S	13 18 35.9	-4.5
QUA2	Belchertown comp=Z,11µm,20.0s	61.80	359	IAMs_20	IAMs_20	13 38 15.0	
M52A	Chesterland comp=Z,76nm,0.8s	61.81	351	IAmb	IAmb	13 10 30.2	
M52A	comp=Z,17µm,21.0s			IAMs_20	IAMs_20	13 38 35.4	
M52A	Chesterland baz=169	61.81	351	P	P	13 10 15.9	-1.0
M52A	baz=169			S	S	13 18 38.2	-2.6
L59A	Walton comp=Z,11µm,20.0s	61.81	357	IAMs_20	IAMs_20	13 37 55.4	
L59A	Walton baz=176,SNR=12	61.81	357	P	P	13 10 17.2	+0.2
L59A	baz=176			S	S	13 18 40.7	-0.2
O44A	Mansfield comp=Z,14µm,20.0s	61.86	345	IAMs_20	IAMs_20	13 38 56.1	
U32A	Winter Ranch, comp=Z,123nm,1.0s	61.87	335	IAmb	IAmb	13 10 56.1	
BINY	Binghamton comp=Z,128nm,1.1s	61.88	356	IAmb	IAmb	13 10 40.1	
BINY	Binghamton baz=175,SNR=8.6	61.88	356	P	P	13 10 17.6	+0.1
BINY	baz=175			S	S	13 18 42.0	+0.2
WES	Weston comp=Z,76nm,1.1s	61.89	360	IAmb	IAmb	13 10 59.7	
WES	comp=Z,11µm,21.0s			IAMs_20	IAMs_20	13 36 07.4	
N47A	Urbana comp=Z,123nm,0.9s	61.93	347	IAmb	IAmb	13 10 31.9	
N47A	comp=Z,15µm,20.0s			IAMs_20	IAMs_20	13 38 24.8	
N47A	Urbana baz=164,SNR=8.7	61.93	347	P	P	13 10 16.0	-1.7
N47A	baz=164			S	S	13 18 37.2	-5.1
M50A	Fremont comp=Z,153nm,1.1s	61.94	350	IAmb	IAmb	13 11 10.4	
M50A	comp=Z,15µm,20.0s			IAMs_20	IAMs_20	13 37 48.9	
M50A	Fremont baz=167	61.94	350	P	P	13 10 16.7	-1.1
M50A	baz=167			S	S	13 18 38.5	-4.0
L56A	Greenwood comp=Z,13µm,19.0s	61.95	354	IAMs_20	IAMs_20	13 41 12.0	
L56A	Greenwood baz=173,SNR=8.2	61.95	354	P	P	13 10 17.8	-0.1
L56A	baz=173			S	S	13 18 42.7	0.0
L61B	Northampton baz=178	61.98	359	P	P	13 10 16.4	-1.6
L61B	baz=178			S	S	13 18 42.0	-1.0
HRV	Adam Dziewonsk	62.02	359	P	P	13 10 17.4	-0.9
HRV	comp=Z,115nm,1.0s			pmax	pmax		
HRV	Adam Dziewonsk	62.02	359	P	P	13 10 17.4	-0.9
HRV	comp=Z,115nm,1.0s			IAmb	IAmb	13 10 41.0	
HRV	Adam Dziewonsk comp=Z,12µm,20.0s	62.02	359	IAMs_20	IAMs_20	13 36 21.7	
HRV	Adam Dziewonsk baz=179	62.02	359	P	P	13 10 17.9	-0.4
HSIG		62.04	320	P	P	13 10 18.2	-0.6
HSIG	comp=Z,238nm,1.9s			IAmb	IAmb	13 10 29.7	
HSIG	comp=Z,10µm,19.0s			IAMs_20	IAMs_20	13 35 30.9	
L53A	Girard baz=170,SNR=14	62.06	352	P	P	13 10 18.1	-0.6
L53A	baz=170			S	S	13 18 42.6	-1.5
L55A	Hinsdale baz=172,SNR=13	62.08	354	P	P	13 10 18.8	0.0
L55A	baz=172			S	S	13 18 43.9	-0.4
M49A	Liberty Center baz=166,SNR=16	62.17	349	P	P	13 10 18.1	-1.3
M49A	baz=166			S	S	13 18 41.8	-3.5
K62A	Royalston comp=Z,11µm,21.0s	62.19	359	IAMs_20	IAMs_20	13 38 26.0	
K62A	Royalston baz=179	62.19	359	P	P	13 10 20.3	+0.9
K62A	baz=179			S	S	13 18 45.0	-0.5
ERPA	Erie baz=170,SNR=12	62.19	352	P	P	13 10 19.0	-0.5
ERPA	baz=170			S	S	13 18 44.3	-1.3
K63A	Dunstable baz=179	62.20	360	P	P	13 10 19.1	-0.4
K61A	Williamstown baz=178	62.22	358	P	P	13 10 19.8	+0.2
K61A	baz=178			S	S	13 18 46.6	+0.7
L54A	Sinclairville baz=171,SNR=30	62.23	353	P	P	13 10 19.3	-0.5
L54A	baz=171			S	S	13 18 45.7	-0.4
VNA3	Neumayer Olymp	62.27	161	P	P	13 10 22.9	+3.2
TRY	Troy comp=Z,13µm,20.0s	62.29	358	IAMs_20	IAMs_20	13 38 40.9	
M48A	Edgerton comp=Z,11µm,18.0s	62.32	348	IAMs_20	IAMs_20	13 42 31.0	
M48A	Edgerton baz=165	62.32	348	S	S	13 18 43.1	-4.2
WVNY	West Valley, N comp=Z,13µm,22.0s	62.32	354	IAMs_20	IAMs_20	13 38 11.8	
M47A	Cromwell baz=164	62.38	348	S	S	13 18 43.1	-4.9
K59A	Cooperstown baz=176,SNR=20	62.39	357	P	P	13 10 20.6	-0.2
K59A	baz=176			S	S	13 18 48.8	+0.7
K58A	Earlville comp=Z,12µm,18.0s	62.42	356	IAMs_20	IAMs_20	13 40 44.5	
K58A	Earlville baz=175,SNR=10	62.42	356	P	P	13 10 19.6	-1.5
K58A	baz=175			S	S	13 18 48.4	-0.1
HDIL	Hopedale comp=Z,102nm,0.8s	62.45	344	IAmb	IAmb	13 10 33.7	
HDIL	comp=Z,11µm,20.0s			IAMs_20	IAMs_20	13 39 26.7	
HDIL	Hopedale baz=160,SNR=11	62.45	344	P	P	13 10 19.5	-1.7
HDIL	baz=160			S	S	13 18 43.7	-5.3
K57A	Scipio Center baz=174	62.45	355	P	P	13 10 19.8	-1.4
K57A	baz=174			S	S	13 18 48.2	-0.7
K56A	Middlesex baz=173	62.48	355	P	P	13 10 20.7	-0.8
K56A	baz=173			S	S	13 18 49.1	-0.3
VNA1	Neumayer--Stat	62.49	160	P	P	13 10 26.9	+5.6
L50A	Kingsville baz=167	62.52	350	P	P	13 10 23.6	+1.9
L50A	baz=167			S	S	13 18 45.9	-3.9
K54A	Basiliko Farm, baz=172,SNR=14	62.53	354	P	P	13 10 21.2	-0.6
K54A	baz=172			S	S	13 18 49.8	-0.1
K55A	Perry baz=172	62.58	354	P	P	13 10 21.4	-0.7
K55A	baz=172			S	S	13 18 50.3	-0.3
L48A	N Adams baz=166,SNR=17	62.71	349	P	P	13 10 21.2	-1.7
L48A	baz=166			S	S	13 18 48.3	-3.9
J62A	Henniker baz=179	62.74	359	P	P	13 10 23.5	+0.4
J62A	baz=179			S	S	13 18 52.3	-0.1
L49A	Milan baz=166	62.75	349	P	P	13 10 22.0	-1.2
L49A	baz=166			S	S	13 18 48.8	-3.8
J63A	Strafford baz=180	62.79	360	P	P	13 10 26.2	+2.8
J63A	baz=180			S	S	13 18 52.7	-0.4
P38A	Dawn comp=Z,85nm,0.9s	62.79	341	IAmb	IAmb	13 10 36.9	
J60A	Lant Hill Farm baz=177	62.79	358	P	P	13 10 23.0	-0.5
J60A	baz=177			S	S	13 18 54.8	+1.6
319A	Douglas comp=Z,98nm,1.0s	62.81	323	IAmb	IAmb	13 10 40.9	
319A	comp=Z,11µm,21.0s			IAMs_20	IAMs_20	13 34 40.2	
121A	Cookes Peak, D baz=141,SNR=19	62.87	325	P	P	13 10 25.5	+1.1
121A	baz=141			S	S	13 18 57.5	+2.6
J61A	Chester baz=178	62.87	359	P	P	13 10 24.6	+0.6
J61A	baz=178			S	S	13 18 55.3	+1.2
L47A	Sherwood baz=165,SNR=20	62.88	348	P	P	13 10 22.4	-1.7
L47A	baz=165			S	S	13 18 49.7	-4.7
AAM	Ann Arbor comp=Z,109nm,1.2s	62.92	349	IAmb	IAmb	13 10 38.7	
AAM	comp=Z,13µm,20.0s			IAMs_20	IAMs_20	13 40 45.8	
AAM	Ann Arbor baz=166	62.92	349	S	S	13 18 50.7	-4.0
M44A	Midewin, Midew comp=Z,15µm,19.0s	62.93	346	IAMs_20	IAMs_20	13 41 51.4	
K52A	Tillsonburg baz=170	62.94	352	P	P	13 10 23.7	-0.8
K52A	baz=170			S	S	13 18 52.3	-2.7
ACCN	Adirondack Com comp=Z,13µm,20.0s	62.94	358	IAMs_20	IAMs_20	13 39 09.2	
K51A	Iona Station baz=169	62.99	351	P	P	13 10 26.0	+1.2
K51A	baz=169			S	S	13 18 52.1	-3.5
J58A	Remsen comp=Z,120nm,1.3s	62.99	356	IAmb	IAmb	13 11 05.5	
J58A	comp=Z,14µm,20.0s			IAMs_20	IAMs_20	13 38 50.6	
J58A	Remsen baz=175	62.99	356	P	P	13 10 25.7	+0.9
J58A	baz=175			S	S	13 18 55.1	-0.6
N41A	Harden Midland comp=Z,117nm,0.8s	63.00	343	IAmb	IAmb	13 10 38.1	
N41A	comp=Z,11µm,19.0s			IAMs_20	IAMs_20	13 41 51.4	
J56A	Wolcott baz=174	63.02	355	P	P	13 10 24.2	-0.7
J56A	baz=174			S	S	13 18 55.0	-0.9
J59A	Piesco comp=Z,14µm,20.0s	63.06	357	IAMs_20	IAMs_20	13 38 58.3	
J59A	Piesco baz=176,SNR=14	63.06	357	P	P	13 10 24.9	-0.4
J59A	baz=176			S	S	13 18 56.9	+0.4
J57A	Williamstown comp=Z,71nm,0.9s	63.09	356	IAmb	IAmb	13 10 41.8	
J57A	comp=Z,11µm,18.0s			IAMs_20	IAMs_20	13 42 16.1	
J57A	Williamstown baz=175	63.09	356	P	P	13 10 25.0	-0.4
J57A	baz=175			S	S	13 18 55.7	-1.1
J55A	Hilton baz=173	63.09	354	P	P	13 10 25.2	-0.2
J55A	baz=173			S	S	13 18 56.1	-0.7
L46A	Eue Claire comp=Z,90nm,0.8s	63.14	347	IAmb	IAmb	13 10 38.0	
L46A	comp=Z,13µm,21.0s			IAMs_20	IAMs_20	13 38 08.4	
L46A	Eue Claire baz=164	63.14	347	P	P	13 10 26.1	+0.3
J54A	Appleton comp=Z,11µm,21.0s	63.18	354	IAMs_20	IAMs_20	13 38 35.6	
J54A	Appleton baz=172	63.18	354	P	P	13 10 26.2	+0.1
J54A	baz=172			S	S	13 18 57.5	-0.4
K50A	Casco comp=Z,18µm,21.0s	63.21	350	IAMs_20	IAMs_20	13 38 49.5	
K50A	Casco baz=168	63.21	350	P	P	13 10 24.5	-1.7
K50A	baz=168			S	S	13 18 54.3	-4.0
I58A	Old Forge baz=176,SNR=7.5	63.31	357	P	P	13 10 23.8	-3.1
I58A	baz=176			S	S	13 18 59.6	0.0
KSU1	Kansas State U baz=153	63.35	338	P	P	13 10 27.2	-0.1
KSU1	baz=153			S	S	13 18 58.8	-1.5
K49A	Clarkson baz=167	63.35	350	P	P	13 10 27.4	+0.2
K49A	baz=167			S	S	13 18 55.7	-4.5
J52A	Paris baz=170,SNR=21	63.36	352	P	P	13 10 26.5	-0.7
J52A	baz=170			S	S	13 18 57.5	-2.7
I59A	Olmsteadville baz=177,SNR=14	63.36	358	P	P	13 10 26.9	-0.3
I59A	baz=177			S	S	13 19 01.2	+0.9
I62A	Tamworth comp=Z,170nm,1.5s	63.38	360	IAmb	IAmb	13 10 43.4	
I62A	comp=Z,11µm,19.0s			IAMs_20	IAMs_20	13 40 04.8	
I62A	Tamworth baz=180	63.38	360	P	P	13 10 27.7	+0.3
I62A	baz=180			S	S	13 19 01.9	+1.4
I60A	Shoreham baz=178,SNR=16	63.39	358	P	P	13 10 27.2	-0.2
I60A	baz=178			S	S	13 19 02.4	+1.8
I64A	Boothbay baz=181	63.44	1	P	P	13 10 28.0	+0.3
I64A	baz=181			S	S	13 19 02.0	+0.9
I61A	Oroboro, Fairl baz=179,SNR=13	63.45	359	P	P	13 10 28.1	+0.2
I61A	baz=179			S	S	13 19 02.6	+1.3
K48A	Perry baz=166,SNR=15	63.48	349	P	P	13 10 26.3	-1.8
K48A	baz=166			S	S	13 18 57.3	-4.5
K47A	Vermontville baz=165	63.52	348	P	P	13 10 26.4	-1.9
K47A	baz=165			S	S	13 18 57.8	-4.5
NCB	Newcomb comp=Z,207nm,1.8s	63.55	357	IAmb	IAmb	13 10 44.2	
NCB	comp=Z,10µm,20.0s			IAMs_20	IAMs_20	13 38 11.3	
I63A	Otisfield comp=Z,11µm,19.0s	63.56	0	IAMs_20	IAMs_20	13 40 41.4	
I63A	Otisfield baz=180	63.56	0	P	P	13 10 28.8	+0.3
I63A	baz=180			S	S	13 19 03.5	+0.8
I57A	Carthage baz=175	63.59	356	P	P	13 10 27.8	-1.0
I57A	baz=175			S	S	13 19 02.3	-0.8
Y22D	IRIS PASSCAL I baz=142	63.61	327	S	S	13 19 07.3	+3.2
L44A	Lake County Fo baz=162	63.65	346	P	P	13 10 29.0	-0.2
L44A	baz=162			S	S	13 18 58.7	-5.2
K46A	Dorr baz=164	63.68	348	P	P	13 10 29.4	0.0
K46A	baz=164			S	S	13 18 59.0	-5.3
LBNH	Lisbon comp=Z,185nm,1.4s	63.75	359	IAmb	IAmb	13 10 46.1	
LBNH	comp=Z,10µm,20.0s			IAMs_20	IAMs_20	13 39 09.6	
LBNH	Lisbon baz=179,SNR=8.1	63.75	359	P	P	13 10 29.8	0.0
LBNH	baz=179			S	S	13 19 06.9	+1.7
I53A	Kortright Cn E baz=171	63.83	353	S	S	13 19 03.7	-2.3
J49A	Marlette baz=167	63.86	350	P	P	13 10 28.9	-1.7
J49A	baz=167			S	S	13 19 02.0	-4.5
L42A	Oliver, Polo comp=Z,66nm,0.9s	63.91	345	IAmb	IAmb	13 10 43.5	
L42A	comp=Z,11µm,22.0s			IAMs_20	IAMs_20	13 38 03.2	
J48A	Bridge Port comp=Z,14µm,21.0s	63.91	350	IAMs_20	IAMs_20	13 39 00.1	
J48A	Bridge Port baz=166,SNR=12	63.91	350	P	P	13 10 29.5	-1.4
J48A	baz=166			S	S	13 19 02.6	-4.5
I51A	Listowel baz=169	63.98	352	P	P	13 10 30.5	-0.9
I51A	baz=169			S	S	13 19 04.2	-3.8
H58A	Gabriels baz=177,SNR=14	63.99	357	P	P	13 10 31.0	-0.5
H58A	baz=177			S	S	13 19 08.1	-0.1
I55A	Frankford baz=173	64.02	355	P	P	13 10 31.1	-0.5
I55A	baz=173			S	S	13 19 07.6	-0.8
J47A	Sunmer comp=Z,10µm,20.0s	64.03	349	IAMs_20	IAMs_20	13 41 31.4	
J47A	Sunmer baz=165	64.03	349	P	P	13 10 30.3	-1.4
J47A	baz=165			S	S	13 19 04.0	-4.6
H61A	Lyndonville baz=179,SNR=15	64.05	359	P	P	13 10 32.0	+0.2
H61A	baz=179			S	S	13 19 10.6	+1.8
ANMO	Albuquerque	64.07	328	P	P	13 10 31.7	-0.7
ANMO	comp=Z,79nm,1.5s			pmax	pmax		
ANMO	comp=Z,6µm,18.0s			MLR	MLR		
ANMO	Albuquerque	64.07	328	P	P	13 10 31.7	-0.7
ANMO	Albuquerque baz=143	64.07	328	P	P	13 10 33.0	+0.6
ANMO	baz=143			S	S	13 19 10.3	+0.5
H62A	Milan comp=Z,121nm,1.4s	64.08	360	IAmb	IAmb	13 10 43.8	
H62A	comp=Z,12µm,19.0s			IAMs_20	IAMs_20	13 40 33.3	
H62A	Milan baz=180	64.08	360	P	P	13 10 32.4	+0.4
H62A	baz=180			S	S	13 19 10.8	+1.6
WVL	Waterville comp=Z,114nm,1.2s	64.08	1	IAmb	IAmb	13 10 54.5	
WVL	comp=Z,15µm,22.0s			IAMs_20	IAMs_20	13 37 27.3	
H60A	Morristown baz=178,SNR=6.4	64.09	359	P	P	13 10 35.8	+3.7
H60A	baz=178			S	S	13 19 11.6	+2.3
H57A	Richville baz=175,SNR=16	64.10	356	P	P	13 10 31.7	-0.4
H57A	baz=175			S	S	13 19 08.7	-0.6
I52A	Shelburne baz=170	64.14	353	P	P	13 10 31.6	-0.8
I52A	baz=170			S	S	13 19 07.6	-2.4
H64A	Troy baz=182	64.17	1	P	P	13 10 32.3	-0.3
H64A	baz=182			S	S	13 19 11.4	+1.1
H63A	New Sharon baz=181,SNR=15	64.17	1	P	P	13 10 32.9	+0.3
H63A	baz=181			S	S	13 19 12.1	+1.8
H59A	Cadyville baz=177,SNR=16	64.20	358	P	P	13 10 32.6	-0.1
H59A	baz=177			S	S	13 19 11.7	+1.1
LONY	Lake Ozonia comp=Z,12µm,20.0s	64.21	357	IAMs_20	IAMs_20	13 38 31.7	
K43A	Burlington comp=Z,18µm,21.0s	64.25	346	IAMs_20	IAMs_20	13 39 00.7	
H65A	Eastbrook baz=183	64.25	2	P	P	13 10 33.2	+0.1
H65A	baz=183			S	S	13 19 11.9	+0.7
CBKS	Cedar Bluff baz=150,SNR=14	64.27	335	P	P	13 10 33.7	+0.3
CBKS	baz=150			S	S	13 19 12.1	+0.3
H56A	Elgin baz=174,SNR=7.0	64.28	356	P	P	13 10 33.1	-0.2
H56A	baz=174			S	S	13 19 10.9	-0.8
J46A	Howard City baz=165	64.30	348	S	S	13 19 06.8	-5.1
EMMW	East Machias	64.30	3	P	P	13 10 32.6	-0.8
EMMW	comp=Z,67nm,1.0s			IAmb	IAmb	13 11 00.4	
EMMW	comp=Z,10µm,19.0s			IAMs_20	IAMs_20	13 42 29.8	
H55A	Tweed baz=173	64.31	355	P	P	13 10 32.9	-0.6
H55A	baz=173			S	S	13 19 11.7	-0.3
DELO	Deloro Mine comp=Z,144nm,1.2s	64.32	355	IAmb	IAmb	13 11 13.4	
DELO	comp=Z,12µm,21.0s			IAMs_20	IAMs_20	13 39 54.6	
L40A	Anamosa comp=Z,13µm,18.0s	64.37	343	IAMs_20	IAMs_20	13 43 24.5	
I49A	Point Hope baz=168	64.38	351	P	P	13 10 32.6	-1.3
I49A	baz=168			S	S	13 19 08.2	-4.6
H66A	Whiting baz=184	64.38	3	P	P	13 10 33.3	-0.6
H66A	baz=184			S	S	13 19 13.1	+0.3
FRNY	Flat Rock comp=Z,10µm,21.0s	64.39	358	IAMs_20	IAMs_20	13 37 51.4	
H53A	Bobcaygeon baz=172,SNR=8.8	64.46	354	P	P	13 10 33.4	-1.0
H53A	baz=172			S	S	13 19 12.3	-1.6
SNAA	Sanae	64.48	161	P	P	13 10 35.5	+1.0
SNAA	Sanae	64.48	161	*i* P	P	13 10 35.2	+0.7
SNAA	Sanae	64.48	161	P	P	13 10 34.0	-0.5
SNAA	comp=Z,114nm,1.1s			IAmb	IAmb	13 11 03.8	
SNAA	comp=Z,12µm,20.0s			IAMs_20	IAMs_20	13 36 26.9	
HAL	Halifax comp=Z,180nm,1.3s	64.50	6	IAmb	IAmb	13 11 10.5	
HAL	comp=Z,13µm,21.0s			IAMs_20	IAMs_20	13 38 09.2	
J45A	Montague comp=Z,10µm,21.0s	64.53	348	IAMs_20	IAMs_20	13 40 01.5	
J45A	Montague baz=164	64.53	348	S	S	13 19 09.7	-5.0
G60A	Masonville baz=178,SNR=12	64.62	359	P	P	13 10 36.0	+0.5
G60A	baz=178			S	S	13 19 17.3	+1.5
G59A	Clarenceville baz=178	64.62	358	P	P	13 10 35.4	0.0
G63A	Kingsbury baz=181	64.63	1	P	P	13 10 35.8	+0.2
G63A	baz=181			S	S	13 19 16.6	+0.6
H52A	Wyevale baz=171	64.67	353	P	P	13 10 34.6	-1.2
H52A	baz=171			S	S	13 19 14.3	-2.1

SADO	**Sadowa** comp=Z,8µm,18.1s,baz=178,slow=41	**64.71**	**354**	LR	LR	13 43 37.4	
SADO	**Sadowa** comp=Z,110nm,0.8s	**64.71**	**354**	IAmb	IAmb	13 10 49.4	
SADO	comp=Z,12µm,18.0s			IAMs_20	IAMs_20	13 43 44.2	
G57A	**Newington** baz=176	**64.72**	**357**	P	**P**	**13 10 35.7**	**-0.4**
G57A	baz=176			S	**S**	**13 19 16.4**	**-0.6**
G58A	**Ormstown** baz=177	**64.72**	**358**	P	**P**	**13 10 36.0**	**-0.1**
G58A	baz=177			S	**S**	**13 19 18.0**	**+1.0**
G62A	**West of Eustis** comp=Z,14µm,21.0s	**64.73**	**0**	IAMs_20	IAMs_20	13 38 00.3	
G62A	**West of Eustis** baz=180,SNR=31	**64.73**	**0**	P	**P**	**13 10 36.2**	**0.0**
G62A	baz=180			S	**S**	**13 19 18.9**	**+1.7**
GGN	**Saint George** comp=Z,183nm,1.4s	**64.73**	**3**	IAmb	IAmb	13 11 16.0	
GGN	comp=Z,15µm,22.0s			IAMs_20	IAMs_20	13 37 29.4	
I47A	**Gladwin** comp=Z,116nm,0.9s	**64.73**	**349**	IAmb	IAmb	13 10 48.9	
I47A	comp=Z,16µm,21.0s			IAMs_20	IAMs_20	13 39 24.9	
I47A	**Gladwin** baz=166	**64.73**	**349**	P	**P**	**13 10 36.5**	**+0.2**
I47A	baz=166			S	**S**	**13 19 12.9**	**-4.4**
I48A	**Sherman Twp** baz=167,SNR=14	**64.76**	**350**	P	**P**	**13 10 35.0**	**-1.4**
I48A	baz=167			S	**S**	**13 19 13.2**	**-4.4**
G65A	**Princeton** comp=Z,10µm,19.0s	**64.78**	**3**	IAMs_20	IAMs_20	13 42 45.7	
G65A	**Princeton** baz=183	**64.78**	**3**	P	**P**	**13 10 36.1**	**-0.4**
G65A	baz=183			S	**S**	**13 19 17.4**	**-0.3**
SCIA	**State Center** comp=Z,10µm,20.0s	**64.78**	**342**	IAMs_20	IAMs_20	13 41 03.6	
PKME	**Peaks-Kenny Pk** comp=Z,150nm,1.1s	**64.79**	**1**	IAmb	IAmb	13 11 15.8	
PKME	comp=Z,16µm,21.0s			IAMs_20	IAMs_20	13 37 58.0	
PKME	**Peaks-Kenny Pk** baz=182,SNR=7.6	**64.79**	**1**	P	**P**	**13 10 36.5**	**-0.1**
PKME	baz=182			S	**S**	**13 19 17.9**	**0.0**
PLVO	**Plevna** comp=Z,164nm,1.4s	**64.79**	**355**	IAmb	IAmb	13 11 25.4	
PLVO	comp=Z,9µm,19.0s			IAMs_20	IAMs_20	13 41 36.2	
G64A	**Maxfield** baz=182	**64.79**	**2**	P	**P**	**13 10 36.1**	**-0.5**
G64A	baz=182			S	**S**	**13 19 18.0**	**+0.1**
G61A	**St-Isidore-de-** baz=179,SNR=24	**64.79**	**360**	P	**P**	**13 10 36.9**	**+0.3**
G61A	baz=179			S	**S**	**13 19 19.9**	**+1.9**
I46A	**Reed City** baz=165	**64.83**	**348**	P	**P**	**13 10 35.0**	**-1.9**
I46A	baz=165			S	**S**	**13 19 13.7**	**-4.8**
T25A	**Trinidad** comp=Z,134nm,1.4s	**64.85**	**331**	IAmb	IAmb	13 10 48.1	
T25A	**Trinidad** baz=145,SNR=19	**64.85**	**331**	P	**P**	**13 10 37.8**	**+0.3**
T25A	baz=145			S	**S**	**13 19 21.8**	**+2.3**
JFWS	**Jewell Farm** comp=Z,123nm,0.9s	**64.91**	**344**	IAmb	IAmb	13 10 52.4	
JFWS	**Jewell Farm** comp=Z,13µm,22.0s	**64.91**	**344**	IAMs_20	IAMs_20	13 38 32.8	
JFWS	**Jewell Farm** baz=160,SNR=17	**64.91**	**344**	P	**P**	**13 10 36.4**	**-1.0**
JFWS	baz=160			S	**S**	**13 19 15.8**	**-3.7**
G55A	**Calabogie** baz=174,SNR=8.5	**64.97**	**356**	P	**P**	**13 10 37.0**	**-0.8**
G55A	baz=174			S	**S**	**13 19 19.9**	**-0.3**
G53A	**Haliburton** baz=172,SNR=25	**65.01**	**354**	P	**P**	**13 10 37.2**	**-0.8**
G53A	baz=172			S	**S**	**13 19 19.5**	**-1.1**
I45A	**Fountain** comp=Z,13µm,21.0s	**65.07**	**348**	IAMs_20	IAMs_20	13 40 38.9	
I45A	**Fountain** baz=164	**65.07**	**348**	S	**S**	**13 19 16.3**	**-5.2**
N33A	**J Bar K, Exete** comp=Z,11µm,20.0s	**65.10**	**338**	IAMs_20	IAMs_20	13 41 45.1	
H48A	**Harrisville** comp=Z,17µm,21.0s	**65.20**	**350**	IAMs_20	IAMs_20	13 39 59.8	
H48A	**Harrisville** baz=167	**65.20**	**350**	P	**P**	**13 10 37.8**	**-1.5**
H48A	baz=167			S	**S**	**13 19 19.2**	**-3.8**
G54A	**Lake Saint Pet** baz=172,SNR=9.5	**65.23**	**354**	P	**P**	**13 10 38.6**	**-0.9**
G54A	baz=172			S	**S**	**13 19 22.4**	**-1.0**
F63A	**Nahmakanta, Br** comp=Z,243nm,1.7s	**65.23**	**1**	IAmb	IAmb	13 11 19.5	
F63A	comp=Z,15µm,21.0s			IAMs_20	IAMs_20	13 38 11.7	
F63A	**Nahmakanta, Br** baz=182	**65.23**	**1**	P	**P**	**13 10 40.1**	**+0.6**
F63A	baz=182			S	**S**	**13 19 23.4**	**0.0**
H47A	**Mio** baz=166	**65.24**	**350**	P	**P**	**13 10 42.1**	**+2.5**
H47A	baz=166			S	**S**	**13 19 19.5**	**-4.1**
214A	**Organ Pipe Nat** comp=Z,144nm,1.4s	**65.27**	**321**	IAmb	IAmb	13 11 32.6	
214A	**Organ Pipe Nat** baz=136,SNR=20	**65.27**	**321**	P	**P**	**13 10 42.5**	**+2.5**
214A	baz=136			S	**S**	**13 19 29.4**	**+5.0**
K38A	**Parkersburg** comp=Z,12µm,20.0s	**65.34**	**342**	IAMs_20	IAMs_20	13 42 40.2	
H46A	**Fife Lake** baz=165	**65.36**	**349**	S	**S**	**13 19 20.4**	**-4.6**
F59A	**Saint Guilaume** baz=178	**65.38**	**359**	P	**P**	**13 10 41.4**	**+1.0**
F59A	baz=178			S	**S**	**13 19 25.4**	**+0.3**
F64A	**Sherman** comp=Z,12µm,22.0s	**65.41**	**2**	IAMs_20	IAMs_20	13 38 05.5	
F64A	**Sherman** baz=183,SNR=9.9	**65.41**	**2**	P	**P**	**13 10 40.4**	**-0.2**
F64A	baz=183			S	**S**	**13 19 26.0**	**+0.4**
F58A	**St-Lin Laurent** baz=177	**65.43**	**358**	S	**S**	**13 19 25.7**	**0.0**
F61A	**St Evariste** baz=180,SNR=5.8	**65.48**	**360**	P	**P**	**13 10 40.2**	**-0.9**
F61A	baz=180			S	**S**	**13 19 26.8**	**+0.4**
F60A	**Warwick** baz=179,SNR=16	**65.48**	**359**	P	**P**	**13 10 40.3**	**-0.8**
F60A	baz=179			S	**S**	**13 19 26.7**	**+0.3**
I42A	**Draeger Farm,** comp=Z,87nm,0.9s	**65.51**	**346**	IAmb	IAmb	13 10 54.5	
F55A	**Otter Lake** baz=174	**65.53**	**356**	P	**P**	**13 10 40.9**	**-0.5**
F55A	baz=174			S	**S**	**13 19 27.1**	**+0.2**
GLMI	**Grayling** comp=Z,17µm,21.0s	**65.53**	**349**	IAMs_20	IAMs_20	13 39 49.1	
GLMI	**Grayling** baz=166	**65.53**	**349**	S	**S**	**13 19 22.5**	**-4.6**
X18A	**Snowflake** comp=Z,268nm,2.0s	**65.56**	**325**	IAmb	IAmb	13 10 53.4	
X18A	comp=Z,17µm,21.0s			IAMs_20	IAMs_20	13 37 36.9	
KSCO	**Kaye Shedlock'** baz=147	**65.62**	**333**	P	**P**	**13 10 43.1**	**+0.7**
G47A	**Hillman** baz=167	**65.74**	**350**	P	**P**	**13 10 41.3**	**-1.5**
G47A	baz=167			S	**S**	**13 19 25.7**	**-3.9**
F52A	**Sundridge** baz=171,SNR=13	**65.75**	**354**	P	**P**	**13 10 41.2**	**-1.6**
F52A	baz=171			S	**S**	**13 19 28.1**	**-1.5**
ALGO	**Algonquin Park** baz=173,SNR=5.4	**65.78**	**355**	P	**P**	**13 10 41.9**	**-1.2**
H43A	**Windswept, Lux** comp=Z,105nm,0.8s	**65.80**	**347**	IAmb	IAmb	13 10 56.6	
SDCO	**Great Sand Dun** comp=Z,154nm,1.2s	**65.85**	**330**	IAmb	IAmb	13 11 00.7	
SDCO	**Great Sand Dun** baz=144,SNR=66	**65.85**	**330**	P	**P**	**13 10 44.6**	**+0.6**
SDCO	baz=144			S	**S**	**13 19 34.0**	**+2.1**
E60A	**Ste Agathe de** baz=179	**65.88**	**360**	P	**P**	**13 10 42.4**	**-1.2**
E60A	baz=179			S	**S**	**13 19 31.6**	**+0.4**
W18A	**Petrified Fore** comp=Z,14µm,19.0s	**65.89**	**326**	IAMs_20	IAMs_20	13 38 53.7	
W18A	**Petrified Fore** baz=140	**65.89**	**326**	S	**S**	**13 19 37.0**	**+4.8**
E58A	**La Victoria** baz=178,SNR=24	**65.91**	**358**	P	**P**	**13 10 43.5**	**-0.4**
E58A	baz=178			S	**S**	**13 19 32.1**	**+0.4**
I40A	**Norwalk** comp=Z,15µm,18.0s	**65.92**	**345**	IAMs_20	IAMs_20	13 43 56.5	
G45A	**Suttons Bay** comp=Z,82nm,0.7s	**65.93**	**349**	IAmb	IAmb	13 11 10.5	
G45A	**Suttons Bay** baz=165	**65.93**	**349**	S	**S**	**13 19 26.9**	**-5.0**
BGNE	**Belgrade** baz=152	**65.94**	**338**	P	**P**	**13 10 43.9**	**-0.3**
BGNE	baz=152			S	**S**	**13 19 31.4**	**-0.8**
E61A	**Lac Etchemin** baz=180,SNR=13	**65.94**	**0**	P	**P**	**13 10 44.2**	**+0.1**
E61A	baz=180			S	**S**	**13 19 33.0**	**+0.9**
F51A	**Arnstein** baz=171,SNR=12	**65.94**	**353**	P	**P**	**13 10 42.8**	**-1.3**
F51A	baz=171			S	**S**	**13 19 30.2**	**-1.8**
E63A	**Oxbow** comp=Z,166nm,1.3s	**65.97**	**2**	IAmb	IAmb	13 11 24.1	
E63A	comp=Z,13µm,22.0s			IAMs_20	IAMs_20	13 38 34.2	
E63A	**Oxbow** baz=182	**65.97**	**2**	P	**P**	**13 10 43.9**	**-0.4**
E63A	baz=182			S	**S**	**13 19 32.1**	**-0.2**
E57A	**Chemin Saint G** baz=177,SNR=12	**65.98**	**358**	P	**P**	**13 10 43.6**	**-0.8**
E57A	baz=177			S	**S**	**13 19 31.7**	**-0.8**
E64A	**Bridgewater** baz=183	**65.99**	**2**	P	**P**	**13 10 43.9**	**-0.4**
E64A	baz=183			S	**S**	**13 19 32.9**	**+0.4**
E59A	**St. Maurice** baz=178	**66.00**	**359**	S	**S**	**13 19 33.4**	**+0.7**
F49A	**Sandfield** baz=168	**66.05**	**352**	P	**P**	**13 10 42.9**	**-1.8**
F49A	baz=168			S	**S**	**13 19 29.0**	**-4.2**
G46A	**Petoskey** baz=166	**66.05**	**349**	S	**S**	**13 19 29.3**	**-4.1**
E55A	**Montcerf-Lytto** baz=175	**66.12**	**356**	P	**P**	**13 10 44.3**	**-0.9**
E55A	baz=175			S	**S**	**13 19 34.5**	**+0.3**
E56A	**St. Veronique** baz=176,SNR=24	**66.16**	**357**	P	**P**	**13 10 44.6**	**-0.8**
E56A	baz=176			S	**S**	**13 19 34.4**	**-0.2**
E52A	**Mattawa** baz=172,SNR=6.5	**66.16**	**354**	P	**P**	**13 10 44.4**	**-1.1**
E52A	baz=172			S	**S**	**13 19 33.7**	**-1.0**
E53A	**Dumoine, Ponti** baz=173	**66.17**	**355**	P	**P**	**13 10 44.6**	**-1.0**
E53A	baz=173			S	**S**	**13 19 34.5**	**-0.3**
E54A	**Lac Daplat, Po** baz=174,SNR=13	**66.18**	**355**	P	**P**	**13 10 44.7**	**-0.9**
E54A	baz=174			S	**S**	**13 19 34.2**	**-0.8**
F48A	**Evansville** baz=168	**66.19**	**351**	P	**P**	**13 10 44.2**	**-1.4**
F48A	baz=168			S	**S**	**13 19 30.4**	**-4.7**
PQI	**Presque Isle** comp=Z,147nm,1.3s	**66.23**	**2**	IAmb	IAmb	13 11 25.1	
PQI	comp=Z,13µm,22.0s			IAMs_20	IAMs_20	13 38 29.1	
X16A	**Lo Mia Camp, P** comp=Z,92nm,1.2s	**66.28**	**324**	IAmb	IAmb	13 10 58.4	
X16A	comp=Z,13µm,19.0s			IAMs_20	IAMs_20	13 38 20.2	
D60A	**Saint Jean D'O** baz=180,SNR=12	**66.42**	**0**	P	**P**	**13 10 46.8**	**-0.3**
D60A	baz=180			S	**S**	**13 19 38.9**	**+1.2**
S22A	**4UR Ranch, Cre** comp=Z,9µm,18.0s	**66.47**	**330**	IAMs_20	IAMs_20	13 41 49.9	
S22A	**4UR Ranch, Cre** baz=143	**66.47**	**330**	P	**P**	**13 10 48.7**	**+0.6**
S22A	baz=143			S	**S**	**13 19 41.7**	**+2.3**
E51A	**G1948 Merrick** baz=171,SNR=6.9	**66.49**	**354**	P	**P**	**13 10 47.1**	**-0.5**
E51A	baz=171			S	**S**	**13 19 37.2**	**-1.5**
F45A	**CMU Biological** baz=165	**66.52**	**349**	P	**P**	**13 10 46.4**	**-1.4**
F45A	baz=165			S	**S**	**13 19 35.3**	**-3.7**
D57A	**Chemin Vers le** baz=177,SNR=21	**66.58**	**358**	P	**P**	**13 10 47.7**	**-0.4**
D57A	baz=177			S	**S**	**13 19 39.6**	**-0.2**
D63A	**Stockholm** baz=183,SNR=9.5	**66.59**	**2**	P	**P**	**13 10 47.9**	**-0.4**
D63A	baz=183			S	**S**	**13 19 40.3**	**+0.4**
D62A	**Allapoint, All** comp=Z,15µm,21.0s	**66.61**	**1**	IAMs_20	IAMs_20	13 38 54.2	
D62A	**Allapoint, All** baz=182,SNR=17	**66.61**	**1**	P	**P**	**13 10 48.0**	**-0.3**
D62A	baz=182			S	**S**	**13 19 40.5**	**+0.4**
D58A	**Chemin du LacG** baz=178,SNR=28	**66.63**	**359**	P	**P**	**13 10 48.2**	**-0.2**
D58A	baz=178			S	**S**	**13 19 40.2**	**-0.1**
D56A	**ZEC Mazanza, M** baz=176,SNR=13	**66.64**	**357**	P	**P**	**13 10 47.7**	**-0.9**
D56A	baz=176			S	**S**	**13 19 40.0**	**-0.6**
D55A	**Sainte-Anne-du** baz=175,SNR=17	**66.65**	**357**	P	**P**	**13 10 47.9**	**-0.7**
D55A	baz=175			S	**S**	**13 19 39.6**	**-1.0**
Q24A	**Divide** baz=145,SNR=11	**66.68**	**331**	P	**P**	**13 10 49.8**	**+0.4**
Q24A	baz=145			S	**S**	**13 19 44.1**	**+2.2**
D61A	**St Aubert, Com** baz=181,SNR=8.4	**66.71**	**1**	P	**P**	**13 10 48.9**	**0.0**
D61A	baz=181			S	**S**	**13 19 42.9**	**+1.6**
E48A	**Lockeyer** baz=168,SNR=16	**66.77**	**352**	P	**P**	**13 10 48.1**	**-1.3**
E48A	baz=168			S	**S**	**13 19 38.6**	**-3.5**
I37A	**Lemond, Waseca** comp=Z,9µm,20.0s	**66.78**	**343**	IAMs_20	IAMs_20	13 43 30.2	
D54A	**Lac Fusel, La** baz=174,SNR=12	**66.86**	**356**	P	**P**	**13 10 48.5**	**-1.4**
D54A	baz=174			S	**S**	**13 19 42.1**	**-1.0**
MVCO	**Mesa Verde** comp=Z,10µm,18.0s	**66.86**	**328**	IAMs_20	IAMs_20	13 39 43.4	
MVCO	**Mesa Verde** baz=141,SNR=15	**66.86**	**328**	P	**P**	**13 10 50.8**	**+0.3**
MVCO	baz=141			S	**S**	**13 19 46.7**	**+2.6**
D53A	**Lac Vacive, Po** comp=Z,106nm,1.1s	**66.87**	**355**	IAmb	IAmb	13 11 33.1	
D53A	comp=Z,13µm,18.0s			IAMs_20	IAMs_20	13 44 41.1	
D53A	**Lac Vacive, Po** baz=173,SNR=13	**66.87**	**355**	P	**P**	**13 10 49.2**	**-0.8**
D53A	baz=173			S	**S**	**13 19 42.2**	**-1.0**
E47A	**Iron Bridge** baz=167	**66.90**	**351**	P	**P**	**13 10 48.9**	**-1.3**
E47A	baz=167			S	**S**	**13 19 39.6**	**-4.1**
LATQ	**La Tuque** comp=Z,111nm,1.5s	**66.91**	**359**	IAmb	IAmb	13 11 30.6	
LATQ	**La Tuque** baz=178,SNR=14	**66.91**	**359**	P	**P**	**13 10 49.8**	**-0.4**
LATQ	baz=178			S	**S**	**13 19 43.5**	**-0.2**
BATG	**Bathurst New B** comp=Z,150nm,1.2s	**66.93**	**4**	IAmb	IAmb	13 11 29.3	
E46A	**Sault Ste Mari** comp=Z,97nm,0.9s	**66.98**	**350**	IAmb	IAmb	13 11 24.8	
OGNE	**Ogallala** baz=148	**67.00**	**335**	P	**P**	**13 10 51.1**	**0.0**
OGNE	baz=148			S	**S**	**13 19 46.5**	**+1.1**
D51A	**Lot 18 Range I** baz=171,SNR=13	**67.03**	**354**	P	**P**	**13 10 50.0**	**-1.0**
D51A	baz=171			S	**S**	**13 19 42.7**	**-2.5**
WUAZ	**Wupatki** comp=Z,11µm,20.0s	**67.07**	**325**	IAMs_20	IAMs_20	13 38 33.9	
WUAZ	**Wupatki** baz=138,SNR=23	**67.07**	**325**	P	**P**	**13 10 53.2**	**+1.5**
WUAZ	baz=138			S	**S**	**13 19 52.2**	**+5.7**
F42A	**Maple Grove Fa** comp=Z,18µm,22.0s	**67.11**	**347**	IAMs_20	IAMs_20	13 40 28.9	
G40A	**Rib Lake** comp=Z,134nm,1.6s	**67.11**	**345**	IAmb	IAmb	13 11 13.9	
D50A	**G1974 Best Tow** baz=171,SNR=24	**67.16**	**353**	P	**P**	**13 10 50.8**	**-1.0**
D50A	baz=171			S	**S**	**13 19 44.3**	**-2.4**
GLA	**Glamis** baz=135	**67.24**	**321**	P	**P**	**13 10 55.2**	**+2.5**
GLA	baz=135			S	**S**	**13 19 53.6**	**+5.2**
D48A	**Paudash Townsh** baz=169	**67.40**	**352**	P	**P**	**13 10 52.0**	**-1.4**
D48A	baz=169			S	**S**	**13 19 45.6**	**-4.1**
D46A	**Sault St. Mari** baz=167	**67.44**	**350**	P	**P**	**13 10 52.0**	**-1.6**
D46A	baz=167			S	**S**	**13 19 45.5**	**-4.7**
D47A	**Chapleau** baz=168	**67.46**	**351**	P	**P**	**13 10 51.9**	**-1.9**
D47A	baz=168			S	**S**	**13 19 45.8**	**-4.6**
E43A	**Lone Tree Farm** comp=Z,60nm,0.9s	**67.47**	**348**	IAmb	IAmb	13 11 06.7	
E43A	comp=Z,12µm,19.0s			IAMs_20	IAMs_20	13 42 19.3	
ECSD	**EROS Data Cent** comp=Z,155nm,1.1s	**67.49**	**340**	IAmb	IAmb	13 11 25.4	
ECSD	**EROS Data Cent** baz=154,SNR=36	**67.49**	**340**	P	**P**	**13 10 52.8**	**-1.2**
ECSD	baz=154			S	**S**	**13 19 49.3**	**-1.6**
E44A	**Grand Marais A** comp=Z,13µm,22.0s	**67.50**	**349**	IAMs_20	IAMs_20	13 40 49.2	
E44A	**Grand Marais A** baz=165	**67.50**	**349**	S	**S**	**13 19 46.9**	**-4.0**
TAOE	**Nuku Hiva Isla** comp=Z,8µm,27.1s	**67.55**	**268**	*e*S	**S**	**13 19 45.7**	**-7.3**
TAOE	**Nuku Hiva Isla** comp=Z,10µm,25.1s,baz=106	**67.55**	**268**	*e*LR	LR	13 31 04.3	
TAOE	**Nuku Hiva Isla** comp=Z,58nm,0.3s	**67.55**	**268**	*e*T	T	14 23 44.0	
TAOE	**Nuku Hiva Isla** comp=Z,11µm,21.0s	**67.55**	**268**	IAMs_20	IAMs_20	13 32 55.8	
Y12C	**Blythe**	**67.55**	**322**	P	**P**	**13 10 54.1**	**-0.5**
Y12C	comp=Z,207nm,1.9s			IAmb	IAmb	13 11 06.3	
Y12C	**Blythe** baz=135,SNR=7.6	**67.55**	**322**	P	**P**	**13 10 57.9**	**+3.3**
Y12C	baz=135			S	**S**	**13 19 57.4**	**+5.4**
ISCO	**Idaho Springs**	**67.57**	**332**	P	**P**	**13 10 54.4**	**-0.6**
ISCO	comp=Z,132nm,1.6s			pmax	pmax		
ISCO	comp=Z,7µm,22.0s			MLR	MLR		
ISCO	**Idaho Springs**	**67.57**	**332**	P	**P**	**13 10 54.4**	**-0.6**
ISCO	comp=Z,132nm,1.6s			IAmb	IAmb	13 11 05.6	
ISCO	**Idaho Springs** baz=145,SNR=23	**67.57**	**332**	P	**P**	**13 10 55.2**	**+0.3**
ISCO	baz=145			S	**S**	**13 19 54.4**	**+1.8**
PV01	**Paradox Valley** comp=Z,76nm,1.1s	**67.62**	**329**	IAmb	IAmb	13 11 56.5	
PV01	comp=Z,11µm,18.0s			IAMs_20	IAMs_20	13 40 39.4	
COWI	**Conover** comp=Z,16µm,20.0s	**67.65**	**346**	IAMs_20	IAMs_20	13 41 14.8	
SMCO	**Snowmass** comp=Z,135nm,1.4s	**67.69**	**330**	IAmb	IAmb	13 11 56.8	
PDMCI	**Parker Dam,Lak** baz=136	**67.72**	**322**	P	**P**	**13 10 57.2**	**+1.5**
SPMN	**Marine on St.** comp=Z,154nm,1.2s	**67.73**	**343**	IAmb	IAmb	13 11 26.2	
SPMN	comp=Z,12µm,18.0s			IAMs_20	IAMs_20	13 45 09.4	
SPMN	**Marine on St.** baz=158	**67.73**	**343**	P	**P**	**13 10 54.5**	**-1.0**
SPMN	baz=158			S	**S**	**13 19 51.2**	**-2.4**
IKP	**In-Ko-Pah, Jac** baz=134,SNR=8.5	**67.73**	**320**	P	**P**	**13 10 59.5**	**+3.6**
IKP	baz=134			S	**S**	**13 20 00.8**	**+6.5**
SWSC	**Sam W. Stewart** baz=134	**67.75**	**320**	P	**P**	**13 10 59.2**	**+3.4**
SWSC	baz=134			S	**S**	**13 20 02.1**	**+7.8**
PV02	**Paradox Valley** comp=Z,12µm,18.0s	**67.76**	**329**	IAMs_20	IAMs_20	13 45 19.0	
PV13	**Radium Mtn., P** comp=Z,10µm,19.0s	**67.76**	**328**	IAMs_20	IAMs_20	13 43 04.2	
PV03	**Paradox Valley** comp=Z,9µm,18.0s	**67.85**	**329**	IAMs_20	IAMs_20	13 43 06.5	
VLDQ	**Val d'Or** comp=Z,103nm,1.1s	**67.87**	**355**	IAmb	IAmb	13 11 43.1	
VLDQ	comp=Z,15µm,20.0s			IAMs_20	IAMs_20	13 41 35.4	
PV18	**Skein Mesa, Pa** comp=Z,9µm,19.0s	**67.88**	**328**	IAMs_20	IAMs_20	13 43 07.1	
PV12	**Saucer Basin,** comp=Z,14µm,18.0s	**67.88**	**329**	IAMs_20	IAMs_20	13 40 37.2	
PV07	**Paradox Valley** comp=Z,12µm,18.0s	**67.90**	**329**	IAMs_20	IAMs_20	13 42 50.7	
PV11	**David Mesa, Pa** comp=Z,13µm,18.0s	**67.90**	**329**	IAMs_20	IAMs_20	13 40 27.7	
PV17	**East Wray Mesa** comp=Z,11µm,20.0s	**67.93**	**328**	IAMs_20	IAMs_20	13 43 08.5	
PV16	**Nyswonger Mesa** comp=Z,8µm,18.0s	**67.93**	**329**	IAMs_20	IAMs_20	13 43 08.6	
PV19	**Morning Glory** comp=Z,8µm,19.0s	**67.96**	**328**	IAMs_20	IAMs_20	13 43 09.4	
PV20	**West Nyswonger** comp=Z,11µm,18.0s	**67.98**	**328**	IAMs_20	IAMs_20	13 40 29.8	
PV04	**Paradox Valley** comp=Z,13µm,18.0s	**67.99**	**329**	IAMs_20	IAMs_20	13 45 26.0	
PV14	**Lion Creek, Pa** comp=Z,13µm,18.0s	**68.03**	**328**	IAMs_20	IAMs_20	13 40 31.2	
BC3	**Big Chuckawall** baz=135,SNR=31	**68.03**	**321**	P	**P**	**13 10 59.2**	**+1.4**
BC3	baz=135			S	**S**	**13 20 05.1**	**+7.1**
PV10	**Paradox Valley** comp=Z,10µm,19.0s	**68.04**	**328**	IAMs_20	IAMs_20	13 39 54.7	
PV22	**Blue Mesa, Par** comp=Z,11µm,18.0s	**68.04**	**329**	IAMs_20	IAMs_20	13 40 52.5	
MONP2	**Monument Peak** baz=134,SNR=9.6	**68.09**	**320**	P	**P**	**13 11 01.4**	**+3.1**
MONP2				S	**S**	**13 20 05.0**	**+6.1**

	baz=134						
PV23	Carpenter Ridg	68.09	329	IAMs_20	IAMs_20	13 41 15.7	
	comp=Z,15µm,18.0s						
BAR	Barrett	68.09	319	IAMs_20	IAMs_20	13 38 35.4	
	comp=Z,8µm,18.0s						
PV21	Cone Mtn., Par	68.15	329	IAMs_20	IAMs_20	13 40 36.5	
	comp=Z,10µm,18.0s						
IRM	Iron Mountain	68.20	321	P	P	13 11 00.4	+1.6
	baz=135,SNR=50						
IRM				S	S	13 20 05.7	+5.7
	baz=135						
U15A	North Rim	68.24	325	IAmb	IAmb	13 11 11.0	
	comp=Z,89nm,1.2s						
U15A				IAMs_20	IAMs_20	13 39 10.0	
	comp=Z,13µm,20.0s						
NEE2	Needles Airpor	68.33	322	S	S	13 20 07.0	+5.7
	baz=136						
D41A	Chassel	68.44	347	IAmb	IAmb	13 11 13.5	
	comp=Z,96nm,0.8s						
D41A				IAMs_20	IAMs_20	13 41 31.1	
	comp=Z,16µm,21.0s						
109C	Camp Elliot, M	68.50	319	S	S	13 20 09.4	+6.0
	baz=133						
BELC	Belle Mtn. Jos	68.60	321	P	P	13 11 03.8	+2.4
	baz=134						
BELC				S	S	13 20 11.4	+6.5
	baz=134						
N23A	Red Feather La	68.61	332	IAmb	IAmb	13 11 18.0	
	comp=Z,202nm,1.6s						
N23A	Red Feather La	68.61	332	P	P	13 11 02.1	+0.6
	baz=145,SNR=26						
N23A				S	S	13 20 06.2	+1.3
	baz=145						
PFO	Pinyon Flats O	68.61	320	*i* P	P	13 11 01.9	+0.5
PFO				pmax	pmax		
	comp=Z,262nm,3.0s						
PFO	Pinyon Flats O	68.61	320	P	P	13 11 03.2	+1.7
	baz=134,SNR=9.4						
PFO				S	S	13 20 12.2	+7.3
	baz=134						
PHWY	Pilot Hill	68.72	333	IAmb	IAmb	13 11 31.7	
	comp=Z,184nm,1.6s						
LSQQ	Lebel-sur-Quev	68.78	356	P	P	13 11 00.8	-1.2
	baz=174						
SUSD	Miller	68.89	339	IAmb	IAmb	13 11 18.1	
	comp=Z,152nm,1.1s						
SUSD	Miller	68.89	339	P	P	13 11 03.2	+0.4
	baz=152						
SUSD				S	S	13 20 06.5	-1.1
	baz=152						
GMRC	Granite Mounta	68.95	322	P	P	13 11 04.9	+1.4
	baz=135,SNR=34						
GMRC				S	S	13 20 15.0	+6.0
	baz=135						
O20A	White River Ci	69.04	330	P	P	13 11 05.1	+1.1
	baz=142,SNR=8.9						
O20A				S	S	13 20 12.9	+3.0
	baz=142						
MURC	Murrieta	69.04	320	P	P	13 11 07.5	+3.4
	baz=133						
MURC				S	S	13 20 16.7	+6.8
	baz=133						
NVL	N'lazarevskaya	69.07	159⇓	*i*P	P	13 11 04.5	+0.9
NVL				*e*		13 13 40.7	
NVL				*i* S	S	13 20 07.3	-1.8
NVL				*e*SS	SS	13 24 37.6	+3.2
NVL				pmax	pmax		
	comp=Z,90nm,1.1s						
BBRC	Big Bear Solar	69.33	320	S	S	13 20 20.3	+6.6
	baz=134						
HEC	Hector,Ludlow	69.38	321	P	P	13 11 07.9	+1.8
	baz=134,SNR=22						
HEC				S	S	13 20 20.1	+6.2
	baz=134						
SCI2	San Clemente I	69.45	318	P	P	13 11 09.9	+3.3
	baz=132						
SCI2				S	S	13 20 22.3	+7.6
	baz=132						
MATQ	Matagami	69.52	355	P	P	13 11 05.1	-1.5
	baz=173,SNR=18						
MATQ				S	S	13 20 12.4	-2.4
	baz=173						
TUQ	Turquoise Moun	69.56	322	P	P	13 11 09.0	+1.7
	baz=135,SNR=18						
TUQ				S	S	13 20 21.2	+5.1
	baz=135						
CIS	Catalina Islan	69.66	319	S	S	13 20 23.6	+6.4
	baz=132						
BFSC	Mount Baldy Ra	69.76	320	P	P	13 11 10.6	+2.1
	baz=133,SNR=12						
BFSC				S	S	13 20 25.7	+7.1
	baz=133						
LIC	Lamto	69.78	75	*e*P	P	13 11 10.4	+1.4
	comp=Z,37nm,0.7s						
FMP	Fort Macarthur	69.79	319	S	S	13 20 25.6	+7.0
	baz=132						
RRX	Edison Barstow	69.80	321	S	S	13 20 25.0	+6.3
	baz=134						
DRLN	Deer Lake	69.80	9	IAMs_20	IAMs_20	13 47 33.6	
	comp=Z,9µm,19.0s						
SHPR	Sheep Range	69.88	323	IAmb	IAmb	13 11 51.2	
	comp=Z,130nm,1.5s						
EYMN	Ely	69.93	345	IAMs_20	IAMs_20	13 42 47.6	
	comp=Z,13µm,21.0s						
EYMN	Ely	69.93	345	P	P	13 11 08.0	-1.2
	baz=159						
EYMN				S	S	13 20 15.6	-4.2
	baz=159						
TIC	Toumodi	69.95	75	*e*P	P	13 11 07.6	-2.5
GSC	Goldstone, Bar	69.98	321	IAmb	IAmb	13 11 51.9	
	comp=Z,235nm,1.8s						
GSC	Goldstone, Bar	69.98	321	P	P	13 11 11.3	+1.4
	baz=134,SNR=13						
GSC				S	S	13 20 26.8	+5.8
	baz=134						
MWC	Mount Wilson	69.99	320	IAmb	IAmb	13 11 21.6	
	comp=Z,233nm,1.6s						
SHOC	Shoshone, Teco	70.09	322	P	P	13 11 12.4	+2.0
	baz=135,SNR=22						
SHOC				S	S	13 20 28.2	+6.1
	baz=135						
KIC	Kosan Boka	70.09	75	*e*P	P	13 11 08.3	-2.6
	comp=Z,16nm,0.8s						
DBIC	Dimbokro	70.11	75	P	P	13 11 09.5	-1.5
	comp=Z,30nm,0.6s,baz=229,slow=5.3,SNR=13						
DBIC				LR	LR	13 40 24.5	
	comp=Z,26µm,20.5s,baz=225,slow=35						
DBIC	Dimbokro	70.11	75	P	P	13 11 09.0	-2.0
DECC	Green Verdugo	70.18	320	P	P	13 11 13.7	+2.6
	baz=133						
DECC				S	S	13 20 30.2	+6.9
	baz=133						
SNCC	San Nicolas Is	70.25	318	S	S	13 20 30.4	+6.4
	baz=131						
K22A	Casper	70.28	333	IAmb	IAmb	13 11 41.3	
	comp=Z,98nm,1.2s						
K22A	Casper	70.28	333	P	P	13 11 12.3	+0.6
	baz=144,SNR=6.4						
K22A				S	S	13 20 26.3	+1.9
	baz=144						
PCAN	Candelaria	70.34	34	*e*P	P	13 11 13.5	+1.6
	comp=Z,161nm,1.2s						
PCED	Cedros	70.35	34	*e*P	P	13 11 08.9	-3.0
	comp=Z,126nm,1.2s						
QSPA	South Pole Qui	70.36	180	P	P	13 11 12.1	+0.3
QSPA				IAmb	IAmb	13 11 23.7	
	comp=Z,120nm,1.1s						
QSPA	South Pole Qui	70.36	180	IAMs_20	IAMs_20	13 44 22.6	
	comp=Z,9µm,20.0s						
EDW2	Edwards Air Fo	70.40	320	P	P	13 11 13.7	+1.3
	baz=133						
EDW2				S	S	13 20 30.0	+4.1
	baz=133						
RSSD	Black Hills	70.48	335	P	P	13 11 12.3	-0.6
RSSD				pmax	pmax		
	comp=Z,59nm,0.8s						
RSSD				MLR	MLR		
	comp=Z,8µm,20.0s						
RSSD	Black Hills	70.48	335	P	P	13 11 12.3	-0.6
RSSD				IAmb	IAmb	13 11 28.4	
	comp=Z,59nm,0.8s						
RSSD	Black Hills	70.48	335	P	P	13 11 12.6	-0.3
	baz=147						
RSSD				S	S	13 20 28.4	+1.7
	baz=147						
BLG	Laguna Peak, P	70.53	319	S	S	13 20 33.2	+5.9
	baz=132						
LRMC	Laurel Mtn Rad	70.62	321	P	P	13 11 15.6	+1.8
	baz=133,SNR=17						
LRMC				S	S	13 20 35.2	+6.6
	baz=133						
ROSA	Rosais	70.66	34	*e*P	P	13 11 19.1	+5.3
	comp=Z,133nm,1.1s						
ROSA				*e*S	S	13 20 30.5	+1.9
OSI	Osito Audit: C	70.66	320	S	S	13 20 35.4	+6.5
	baz=132						
D32A	Dogwood Acres,	70.67	341	IAmb	IAmb	13 11 36.2	
	comp=Z,85nm,0.9s						
TPNV	Topopah Spring	70.81	323	IAmb	IAmb	13 12 41.0	
	comp=Z,137nm,1.3s						
TPNV	Topopah Spring	70.81	323	P	P	13 11 16.7	+1.7
	baz=135,SNR=40						
TPNV				S	S	13 20 38.2	+7.4
	baz=135						
FURC	Furnace Creek,	70.82	322	P	P	13 11 16.7	+1.9
	baz=134,SNR=20						
FURC				S	S	13 20 37.4	+6.8
	baz=134						
MPMC	Manual Prospec	70.90	322	P	P	13 11 16.9	+1.2
	baz=134,SNR=34						
MPMC				S	S	13 20 38.4	+6.4
	baz=134						
PGRA	Graciosa	71.02	34	*e*S	S	13 20 42.4	+10
ARVC	Arvin	71.07	320	P	P	13 11 19.6	+3.2
	baz=132						
ARVC				S	S	13 20 39.7	+6.2
	baz=132						
PSMA	Santa Maria	71.13	37	*e*P	P	13 11 21.0	+4.3
	comp=Z,120nm,1.7s						
ADH	Angra Heroismo	71.15	35	*e*P	P	13 11 20.4	+3.6
	comp=Z,145nm,1.5s						
PSMN	Pico do Norte,	71.17	37	*e*P	P	13 11 19.8	+2.8
	comp=Z,86nm,1.3s						
PSMN				*e*S	S	13 20 37.3	+2.6
ISA	Isabella, Lake	71.22	321	P	P	13 11 19.1	+1.7
	baz=133,SNR=32						
ISA				S	S	13 20 41.8	+6.4
	baz=133						
DUG	Dugway, Tooele	71.32	327	P	P	13 11 19.2	+1.2
DUG				pmax	pmax		
	comp=Z,108nm,1.7s						
DUG	Dugway, Tooele	71.32	327	IAmb	IAmb	13 11 29.4	
	comp=Z,135nm,1.4s						
DUG				IAMs_20	IAMs_20	13 43 55.3	
	comp=Z,9µm,18.0s						
DUG	Dugway, Tooele	71.32	327	P	P	13 11 19.1	+1.1
	baz=138,SNR=34						
DUG				S	S	13 20 41.0	+4.4
	baz=138						
E28A	Huff	71.35	339	IAMs_20	IAMs_20	13 47 53.4	
	comp=Z,9µm,18.0s						
PSET	Sete Cidades	71.38	36	*e*P	P	13 11 20.1	+1.8
	comp=Z,344nm,1.4s						
AGMN	Agassiz Nation	71.39	343	IAmb	IAmb	13 11 33.0	
	comp=Z,194nm,1.6s						
AGMN	Agassiz Nation	71.39	343	P	P	13 11 17.2	-0.8
	baz=155						
AGMN				S	S	13 20 33.5	-3.2
	baz=155						
R11A	Troy Canyon, C	71.43	324	IAmb	IAmb	13 11 30.8	
	comp=Z,206nm,1.8s						
R11A	Troy Canyon, C	71.43	324	P	P	13 11 20.3	+1.5
	baz=136,SNR=22						
R11A				S	S	13 20 44.2	+6.2
	baz=136						
CMLA	Cha da Macela	71.45	37	*e*P	P	13 11 21.8	+3.1
	comp=Z,172nm,1.7s						
CMLA				*e*S	SKiKP	13 20 52.6	-7.0
CMLA	Cha da Macela	71.45	37	IAMs_20	IAMs_20	13 38 51.9	
	comp=Z,12µm,20.0s						
GRAC	Grapevine Rang	71.48	322	P	P	13 11 20.8	+1.8
	baz=134						
GRAC				S	S	13 20 45.5	+7.2
	baz=134						
PKM	Mcpherson Peak	71.51	319	P	P	13 11 21.4	+2.1
	baz=132,SNR=25						
PKM				S	S	13 20 44.7	+5.7
	baz=132						
CWC	Cottonwood Cre	71.51	321	P	P	13 11 20.9	+1.6
	baz=133						
CWC				S	S	13 20 45.7	+6.7
	baz=133						
BART	Pico Bartolome	71.66	37	*e*P	P	13 11 19.9	-0.1
	comp=Z,99nm,1.1s						
BART				*e*S	SKiKP	13 20 50.9	-9.1
VES	Vestal, Richgr	71.70	320	P	P	13 11 21.9	+1.7
	baz=132,SNR=14						
VES				S	S	13 20 46.2	+5.4
	baz=132						
PD31	Pinedale Array	71.72	331	P	P	13 11 20.0	-0.5
PD31				IAmb	IAmb	13 11 36.8	
	comp=Z,155nm,1.8s						
PDAR	Pinedale Array	71.72	331	P	P	13 11 20.9	+0.4
	comp=Z,3.2nm,0.8s,baz=142,slow=7.4,SNR=19						
PDAR				LR	LR	13 44 10.2	
	comp=Z,8µm,18.6s,baz=131,slow=37						
PDAR	Pinedale Array	71.72	331	P	P	13 11 20.0	-0.5
BW06	Boulder Array	71.72	331	IAmb	IAmb	13 11 36.8	
	comp=Z,183nm,1.8s						
BW06				IAMs_20	IAMs_20	13 43 58.7	
	comp=Z,8µm,19.0s						
BW06	Boulder Array	71.72	331	P	P	13 11 21.5	+1.0
	baz=142						
BW06				S	S	13 20 41.5	+0.2
	baz=142						
HWUT	Hardware Ranch	71.77	329	IAMs_20	IAMs_20	13 43 48.0	
	comp=Z,10µm,18.0s						
SMMC	Simmler	71.90	319	P	P	13 11 23.5	+2.0
	baz=132,SNR=26						
SMMC				S	S	13 20 50.5	+7.2
	baz=132						
TIN	Tinemaha, Big	72.02	322	S	S	13 20 52.0	+7.3
	baz=133						
MDND	Maddock	72.10	340	P	P	13 11 22.2	-0.1
	baz=152,SNR=12						
MDND				S	S	13 20 44.5	-0.5
	baz=152						
TBI	Tubuai	72.23	251	*e*S	S	13 20 41.0	-6.6
	comp=Z,3µm,40.2s						
TBI	Tubuai	72.23	251	*e*LR	LR	13 33 18.0	
	comp=Z,31µm,27.5s,baz=108						
PAGB	Antelope Grade	72.33	320	P	P	13 11 24.9	+0.8
PAGB				IAmb	IAmb	13 12 11.4	
	comp=Z,125nm,1.4s						
AHID	Auburn Hatcher	72.43	330	IAMs_20	IAMs_20	13 44 11.6	
	comp=Z,9µm,18.0s						
VAH	Vaihoa	72.70	260	*e*P	P	13 11 26.6	-0.1
	comp=Z,100nm,1.2s						
MLAC	Mammoth, Mammo	72.77	322	P	P	13 11 29.3	+2.4
	baz=133						
MLAC				S	SKiKP	13 20 59.4	-2.5
	baz=133						
REDW	Red Top Meadow	72.78	331	IAmb	IAmb	13 11 56.9	
	comp=Z,124nm,1.3s						
REDW				IAMs_20	IAMs_20	13 44 46.7	
	comp=Z,7µm,18.0s						
SNOW	Snow King Moun	72.81	331	IAmb	IAmb	13 11 46.6	
	comp=Z,177nm,1.6s						
SNOW				IAMs_20	IAMs_20	13 44 58.6	
	comp=Z,7µm,18.0s						
TPAW	Teton Pass	72.92	331	IAmb	IAmb	13 12 07.4	
	comp=Z,198nm,1.6s						
ELK	Elko	72.97	326	IAMs_20	IAMs_20	13 44 05.2	
	comp=Z,9µm,19.0s						
NVAR	Mina Array Bea	73.01	323	P	P	13 11 29.2	+1.0
	comp=Z,8.2nm,0.9s,baz=148,slow=6.5,SNR=26						
NVAR	Mina Array Bea	73.01	323	P	P	13 11 28.4	+0.1
ULM	Lac du Bonnet	73.16	344	P	P	13 11 27.1	-1.6
	comp=Z,13nm,0.9s,baz=146,slow=6.2,SNR=13						
ULM				LR	LR	13 45 36.2	
	comp=Z,14µm,21.3s,baz=140,slow=38						
ULM	Lac du Bonnet	73.16	344	*i* P	P	13 11 29.1	+0.5
ULM	Lac du Bonnet	73.16	344	IAmb	IAmb	13 11 51.7	
	comp=Z,249nm,1.7s						
FLWY	Flagg Ranch	73.27	331	IAmb	IAmb	13 11 46.2	
	comp=Z,118nm,0.9s						
FLWY				IAMs_20	IAMs_20	13 44 54.6	
	comp=Z,7µm,18.0s						
PMOZ	Porto Moniz, M	73.33	45	*e*P	P	13 11 32.4	+2.3
	comp=Z,236nm,1.4s						
PMOZ				*e*S	SKiKP	13 21 08.2	+5.5
PMOZ	Porto Moniz, M	73.33	45	*e*LR	LR	13 39 23.8	
	comp=Z,8µm,18.0s						
FUL	Funchal	73.42	45	*e*P	P	13 11 33.2	+2.7
	comp=Z,195nm,1.6s						
RLMT	Red Lodge	73.45	333	IAmb	IAmb	13 11 47.5	
	comp=Z,291nm,1.8s						
RLMT				IAMs_20	IAMs_20	13 44 16.5	
	comp=Z,8µm,20.0s						
RLMT	Red Lodge	73.45	333	P	P	13 11 31.3	+0.6
	baz=142,SNR=46						
RLMT				S	SKiKP	13 21 02.1	-0.5
	baz=142						
H17A	Grant Village	73.45	332	IAmb	IAmb	13 11 51.2	
	comp=Z,235nm,1.9s						
H17A	Grant Village	73.45	332	P	P	13 11 32.7	+1.9
	baz=141,SNR=10						
H17A				S	SKiKP	13 21 05.7	+2.9
	baz=141						
PMAR	Madeira	73.46	45	*e*P	P	13 11 33.1	+2.1
	comp=Z,188nm,1.3s						
LAO	LASA Array	73.47	335	IAmb	IAmb	13 11 47.0	
	comp=Z,244nm,1.4s						
LAO				IAMs_20	IAMs_20	13 46 56.7	
	comp=Z,8µm,21.0s						
LAO	LASA Array	73.47	335	P	P	13 11 30.8	+0.2
	baz=145,SNR=24						
LAO				S	SKiKP	13 21 02.1	-0.3
	baz=145						
TVO	Taravao	73.49	257	*e*T	T	14 31 13.9	
	comp=Z,1.0nm,0.3s						
TIAR	Tiarei	73.64	257	*e*T	T	14 31 25.0	
	comp=Z,2.6nm,0.3s						
WAKR	Walker	73.71	322	IAmb	IAmb	13 11 44.4	
	comp=Z,222nm,1.8s						
PPT2	Papeete2	73.84	257	*e*P	P	13 11 33.5	0.0
	comp=Z,69nm,1.4s						
PPT2				*e*S	SKiKP	13 20 59.5	-4.4
	comp=Z,9µm,25.2s						
PPT2	Papeete2	73.84	257	*e*LR	LR	13 34 03.3	
	comp=Z,22µm,24.5s,baz=109						
PPT	Papeete	73.85	257	LR	LR	13 36 00.1	
	comp=Z,7µm,20.4s,baz=96,slow=29						
PMPS	Porto Santo	74.05	45	*e*P	P	13 11 36.2	+2.0
	comp=Z,451nm,1.6s						
PMPST	Porto Santo, M	74.06	45	*e*P	P	13 11 36.8	+2.5
	comp=Z,448nm,1.6s						
PMPST				*e*S	S	13 21 18.5	+11
DGMT	Dagmar	74.19	338	IAMs_20	IAMs_20	13 47 17.8	
	comp=Z,7µm,19.0s						
DGMT	Dagmar	74.19	338	P	P	13 11 35.1	+0.3
	baz=148						
DGMT				S	S	13 21 10.7	+1.9
	baz=148						
PNTR	Pine Nut	74.20	323	IAmb	IAmb	13 11 53.0	
	comp=Z,243nm,1.7s						
SCHQ	Schefferville	74.43	2	P	P	13 11 35.4	-0.6
	comp=Z,20nm,0.9s,baz=198,slow=4.6,SNR=16						
SCHQ				LR	LR	13 46 34.7	
	comp=Z,7µm,19.4s,baz=194,slow=38						
SCHQ	Schefferville	74.43	2	IAMs_20	IAMs_20	13 43 43.1	
	comp=Z,9µm,22.0s						
PAHR	Pah Rah Range	74.50	323	IAmb	IAmb	13 11 48.6	
	comp=Z,158nm,1.2s						
DLMT	Dillon	75.11	331	IAmb	IAmb	13 11 57.5	
	comp=Z,116nm,1.3s						
DLMT				IAMs_20	IAMs_20	13 45 46.6	
	comp=Z,9µm,20.0s						
MFID	Camas Ranch	75.21	328	IAmb	IAmb	13 12 31.4	
	comp=Z,161nm,1.3s						
MFID				IAMs_20	IAMs_20	13 46 36.3	
	comp=Z,9µm,18.0s						
ORV	Oroville	75.60	322	IAmb	IAmb	13 11 54.7	
	comp=Z,197nm,1.4s						
EGMT	Eagleton	75.96	334	IAMs_20	IAMs_20	13 47 10.7	
	comp=Z,10µm,20.0s						
EGMT	Eagleton	75.96	334	P	P	13 11 45.1	+0.1
	baz=142,SNR=25						
EGMT				S	S	13 21 29.9	+1.3
	baz=142						
WVOR	Wild Horse Val	75.97	326	P	P	13 11 46.3	+1.1
WVOR				pmax	pmax		
	comp=Z,36nm,2.3s						
O03E	Paynes Creek	76.27	322	P	P	13 11 47.6	+0.6
	baz=131						
O03E				S	S	13 21 35.4	+3.1
	baz=131						
SFNM	Sidi Ifni	76.29	52	P	P	13 11 53.0	+5.8
	SNR=8.8						
SFNM				P	P	13 11 53.0	+5.8
	SNR=8.8						
MOD	Modoc Plateau	76.50	324	IAmb	IAmb	13 12 32.5	
	comp=Z,203nm,1.7s						
O02D	Mt. Diablo Mer	76.76	322	P	P	13 11 50.3	+0.6
	baz=130						
MSO	Missoula	76.84	331	IAMs_20	IAMs_20	13 46 59.1	
	comp=Z,8µm,19.0s						
MSO	Missoula	76.84	331	P	P	13 11 51.3	+1.3
	baz=139,SNR=17						
BMO	Blue Mountains	76.99	328	IAMs_20	IAMs_20	13 45 59.2	
	comp=Z,7µm,18.0s						
N02D	Trinity Center	77.23	322	P	P	13 11 52.5	+0.1
	baz=131,SNR=9.0						
M04C	Macdoel	77.27	323	P	P	13 11 53.6	+1.0
	baz=132,SNR=14						
KMRM	Mail Ridge	77.33	321	P	P	13 11 52.4	-0.5
I07A	Izee	77.56	326	P	P	13 11 54.4	+0.2
I07A				IAMs_20	IAMs_20	13 48 58.6	
	comp=Z,11µm,19.0s						
M02C	Callahan	77.59	323	P	P	13 11 54.9	+0.5
	baz=131						
JTMT	Jette	77.68	332	IAmb	IAmb	13 12 06.1	
	comp=Z,158nm,1.6s						
JTMT				IAMs_20	IAMs_20	13 50 08.4	
	comp=Z,7µm,20.0s						
YBH	Yreka Blue Hor	77.73	323	P	P	13 11 53.8	-1.4
YBH				pmax	pmax		
	comp=Z,106nm,1.8s						
YBH				MLR	MLR		
	comp=Z,5µm,21.0s						
YBH	Yreka Blue Hor	77.73	323	P	P	13 11 53.8	-1.4
F10A	Beach Ranch, E	77.75	329	IAmb	IAmb	13 13 01.0	
	comp=Z,338nm,2.0s						
K04D	Chiloquin, OR	77.78	324	P	P	13 11 57.2	+1.7
	baz=132						
L04D	Klamath Falls	77.82	324	P	P	13 11 58.3	+2.6
	baz=131						
J05D	Fort Rock, OR	77.94	325	P	P	13 11 57.6	+1.2
	baz=132,SNR=16						
EAH	EAH	77.94	50	P	P	13 12 02.0	+5.5
	SNR=9.7						
EAH				P	P	13 12 02.0	+5.5
	SNR=9.7						
PINE	Pine Mountain	78.12	325	IAMs_20	IAMs_20	13 48 38.5	
	comp=Z,6µm,18.0s						
G08A	Pilot Rock	78.12	328	IAMs_20	IAMs_20	13 46 04.4	
	comp=Z,11µm,20.0s						
VNDA	Vanda	78.16	190	P	P	13 11 59.0	+2.1
	comp=Z,7.3nm,1.0s,baz=141,slow=4.9,SNR=3.8						
VNDA	Vanda	78.16	190	P	P	13 11 57.7	+0.7
VNDA				pmax	pmax		
	comp=Z,70nm,1.5s						
VNDA	Vanda	78.16	190	P	P	13 11 57.7	+0.7
TTIG	Tnine Tigouga,	78.20	51	P	P	13 12 03.0	+4.9
	SNR=13						
TTIG				P	P	13 12 03.0	+4.9
	SNR=13						
KRMB	Red Mountain	78.28	322	P	P	13 11 57.4	-0.9
J04D	Umpqua Nationa	78.39	324	P	P	13 11 59.8	+0.9
	baz=132						
HUMO	Hull Mountain	78.44	324	P	P	13 11 59.1	+0.1
WALA	Waterton Lakes	78.51	333	IAmb	IAmb	13 12 23.5	
	comp=Z,96nm,1.1s						
WALA				IAMs_20	IAMs_20	13 48 26.2	
	comp=Z,8µm,22.0s						
TOA0	Torodi Ar. Sit	78.61	72	P	P	13 11 58.6	-1.9
TOA0				IAmb	IAmb	13 12 18.3	
	comp=Z,177nm,1.1s						
TORD	Torodi Ar. Bea	78.61	72	P	P	13 11 58.3	-2.3
	comp=Z,113nm,1.0s,baz=255,slow=5.2,SNR=107						
TORD	Torodi Ar. Bea	78.61	72	P	P	13 11 58.1	-2.5
I05D	Terrebonne, OR	78.70	326	P	P	13 12 02.0	+1.5
	baz=132,SNR=14						
SYO	Syowa Base	78.73	160⇑	*e*P	P	13 11 58.0	-2.2
SYO	Syowa Base	78.73	160⇓	*i*X	P	13 12 01.8	+1.6
SYO	Syowa Base	78.73	160⇓	*i*PcP	PcP	13 12 07.0	-2.1
FFC	Flin Flon	78.85	342	P	P	13 11 59.8	-1.1
FFC				pmax	pmax		
	comp=Z,142nm,1.9s						
FFC				MLR	MLR		
	comp=Z,13µm,22.0s						
FFC	Flin Flon	78.85	342	P	P	13 11 59.8	-1.1
FFC	Flin Flon	78.85	342	IAMs_20	IAMs_20	13 49 10.7	
	comp=Z,13µm,22.0s						

K02D	Willamette Mer	78.89	323	P	P	13 12 04.5	+2.9
	baz=130						
I04A	Tendick Farm,	78.92	325	P	P	13 12 02.5	+0.8
	baz=131						
G06A	Carlson Farm,	78.94	327	IAMs_20	IAMs_20	13 48 14.1	
	comp=Z,9µm,20.0s						
OUK	Oukaimeden	78.96	51	P	P	13 12 06.1	+3.5
	SNR=19						
OUK				P	P	13 12 06.1	+3.5
	SNR=19						
E08A	Dider Farm, El	79.01	328	IAMs_20	IAMs_20	13 47 44.9	
	comp=Z,8µm,18.0s						
F07A	Phinny Hill Vi	79.03	328	IAMs_20	IAMs_20	13 46 42.5	
	comp=Z,7µm,20.0s						
HAWA	Hanford	79.18	328	IAMs_20	IAMs_20	13 46 59.3	
	comp=Z,9µm,19.0s						
G05D	Wamic, OR	79.30	326	P	P	13 12 05.5	+1.8
	baz=132						
J01E	Myrtle Point	79.34	324	P	P	13 12 06.9	+3.0
	baz=130						
D08A	Wollman Farm,	79.34	329	P	P	13 12 03.2	-0.7
NEW	Newport	79.35	331	P	P	13 12 05.7	+1.8
NEW				pmax	pmax		
	comp=Z,70nm,2.6s						
NEW	Newport	79.35	331	IAMs_20	IAMs_20	13 48 03.7	
	comp=Z,6µm,18.0s						
NEW	Newport	79.35	331	P	P	13 12 05.2	+1.3
	baz=136,SNR=6.2						
I03D	Drain, OR	79.37	324	P	P	13 12 05.0	+1.0
	baz=131						
H04A	Detroit Lake	79.39	326	IAMs_20	IAMs_20	13 51 04.9	
	comp=Z,7µm,20.0s						
E07A	Sunnyside	79.46	328	IAMs_20	IAMs_20	13 47 16.6	
	comp=Z,9µm,19.0s						
SRHM	Skhour des Reh	79.59	50	P	P	13 12 09.1	+3.5
	SNR=16						
SRHM				P	P	13 12 09.1	+3.5
	SNR=16						
OUZM	OUZ	79.62	52	P	P	13 12 11.1	+5.2
	SNR=13						
OUZM				P	P	13 12 11.1	+5.2
	SNR=13						
F05D	White Salmon	79.81	327	P	P	13 12 08.6	+2.2
	baz=132						
COR	Corvallis	79.92	325	P	P	13 12 05.9	-1.1
COR				pmax	pmax		
	comp=Z,157nm,1.2s						
COR				MLR	MLR		
	comp=Z,5µm,20.0s						
COR	Corvallis	79.92	325	P	P	13 12 05.8	-1.1
COR				IAmb	IAmb	13 12 53.6	
	comp=Z,157nm,1.2s						
ZGR	Zagora	80.08	53	P	P	13 12 13.1	+4.7
	SNR=15						
ZGR				P	P	13 12 13.1	+4.7
	SNR=15						
G03D	McMinnville, O	80.31	325	P	P	13 12 14.0	+4.9
	baz=131						
F04A	Amboy	80.34	326	IAmb	IAmb	13 12 25.5	
	comp=Z,97nm,0.9s						
LTY	Liberty	80.34	328	IAMs_20	IAMs_20	13 48 43.9	
	comp=Z,10µm,18.0s						
AVE	Averroes	80.37	50⇑	*i*P	P	13 12 11.3	+1.6
AVE				*i* S	S	13 22 17.6	+1.1
LON	Longmire	80.57	327	IAMs_20	IAMs_20	13 50 55.2	
	comp=Z,11µm,18.0s						
E04D	Cinebar	80.83	327	P	P	13 12 14.3	+2.4
	baz=132						
D05A	Enumclaw	80.96	328	IAmb	IAmb	13 12 28.7	
	comp=Z,172nm,0.9s						
D05A				IAMs_20	IAMs_20	13 48 03.3	
	comp=Z,8µm,20.0s						
ZHG	ZHG	81.00	50	P	P	13 12 18.0	+4.8
	SNR=8.1						
ZHG				P	P	13 12 18.0	+4.8
	SNR=8.1						
SUR	Sutherland	81.07	121	P	P	13 12 11.5	-2.4
SUR				IAmb	IAmb	13 12 26.5	
	comp=Z,261nm,1.9s						
RTC	Rabat Centre	81.12	49	P	P	13 12 19.0	+5.2
	SNR=8.1						
RTC	Rabat Centre	81.12	49	P	P	13 12 13.1	-0.7
E03A	Lebam	81.34	326	IAmb	IAmb	13 12 31.7	
	comp=Z,158nm,1.2s						
E03A				IAMs_20	IAMs_20	13 47 45.6	
	comp=Z,8µm,20.0s						
D04E	Lakebay	81.35	327	P	P	13 12 18.0	+3.4
	baz=132						
GOLM	Goulmima	81.36	52	P	P	13 12 20.0	+4.7
	SNR=17						
GOLM				P	P	13 12 20.0	+4.7
	SNR=17						
PFVI	Vila Bisbo	81.42	46	*e*P	P	13 12 17.4	+2.2
	comp=Z,163nm,1.6s						
PFVI	Vila Bisbo	81.42	46	*e*SKS	SKSac	13 22 36.1	+0.5
B06A	Marblemount	81.60	329	IAMs_20	IAMs_20	13 48 17.4	
	comp=Z,7µm,20.0s						
PTEO	Sao Teotonio	81.71	45	*e*P	P	13 12 19.8	+3.0
	comp=Z,312nm,1.7s						
B05A	Bryant	81.73	328	P	P	13 12 16.7	+0.1
	baz=132						
D03D	Eldon	81.75	327	P	P	13 12 17.7	+1.0
	baz=131						
ARF	Arif	81.78	53	P	P	13 12 23.0	+5.6
	SNR=11						
ARF				P	P	13 12 23.0	+5.6
	SNR=11						
CZD	Col de Zad	81.95	51	P	P	13 12 24.0	+5.5
	SNR=10						
NLWA	Neilton Lookou	82.05	327	IAMs_20	IAMs_20	13 51 53.3	
	comp=Z,10µm,18.0s						
LIS	Lisbon	82.06	44	*e*P	P	13 12 18.8	+0.1
LIS				*e*S	S	13 22 33.0	-0.8
LIS				AMS	AMS	13 47 08.5	
	comp=Z,15µm,16.5s						
LIS	Lisbon	82.06	44	*e*P	P	13 12 18.7	+0.1
LIS				*e*S	S	13 22 33.0	-0.8
LIS	Lisbon	82.06	44	*e*P	P	13 12 21.1	+2.5
	comp=Z,182nm,1.2s						
PBDV	Barranco-do-Ve	82.08	46	*e*P	P	13 12 20.8	+2.0
	comp=Z,200nm,1.5s						
PBDV	Barranco-do-Ve	82.08	46	*e*SKS	SKSac	13 22 43.9	+3.8
PMAFR	Mafra	82.10	44	*e*P	P	13 12 21.1	+2.3
	comp=Z,209nm,1.6s						
PMAFR	Mafra	82.10	44	*e*SKS	SKSac	13 22 37.7	-2.5
IFR	Ifrane	82.13	50⇑	*i*P	P	13 12 20.8	+1.4
IFR				*i* S	S	13 22 36.9	+1.7
PNCL	Nicolau / Gran	82.14	45	*e*P	P	13 12 21.8	+2.8
	comp=Z,106nm,1.8s						
PNCL	Nicolau / Gran	82.14	45	*e*SKS	SKSac	13 22 38.1	-2.3
MESJ	Messejana	82.20	45	*e*P	P	13 12 19.6	+0.2
MESJ				*e*SKSac	S	13 22 37.8	+2.5
MESJ				AMS	AMS	13 50 50.4	
	comp=Z,12µm,26.1s						
MESJ	Messejana	82.20	45	*e*P	P	13 12 19.5	+0.2
MESJ				*e*		13 22 37.7	
MESJ	Messejana	82.20	45	*e*P	P	13 12 22.0	+2.6
	comp=Z,140nm,1.7s						
PCVE	Castro Verde	82.21	46	*e*P	P	13 12 22.0	+2.6
	comp=Z,101nm,1.7s						
PCVE	Castro Verde	82.21	46	*e*SKS	SKSac	13 22 42.9	+2.0
SICH	Sidi Chahed	82.28	50	P	P	13 12 25.0	+5.1
	SNR=14						
SICH				P	P	13 12 25.0	+5.1
	SNR=14						
PVAQ	Vaqueiros	82.31	46	P	P	13 12 25.1	+5.1
	SNR=8.2						
PVAQ				P	P	13 12 25.1	+5.1
	SNR=8.2						
PVAQ	Vaqueiros	82.31	46	P	P	13 12 20.1	+0.2
PVAQ	Vaqueiros	82.31	46	*e*P	P	13 12 22.0	+2.1
	comp=Z,119nm,1.9s						
PVAQ	Vaqueiros	82.31	46	*e*SKS	SKSac	13 22 46.3	+4.7
PVAQ	Vaqueiros	82.31	46	*e*LR	LR	13 38 49.5	
	comp=Z,11µm,16.0s						
RSA	Sarsar	82.32	49	P	P	13 12 26.0	+5.9
	SNR=12						
RSA				P	P	13 12 26.0	+5.9
	SNR=12						
A04D	Lummi Island	82.34	328	P	P	13 12 22.2	+2.4
	baz=132						
TSUM	Tsumeb	82.35	108	P	P	13 12 20.2	-0.6
TSUM				IAmb	IAmb	13 12 26.5	
	comp=Z,202nm,1.8s						
TSUM	Tsumeb	82.35	108	IAMs_20	IAMs_20	13 45 24.5	
	comp=Z,11µm,20.0s						
PBEJ	Beja	82.54	45	*e*P	P	13 12 25.0	+3.9
	comp=Z,76nm,1.5s						
CHEFC	Chefchaouen	82.77	49	P	P	13 12 28.0	+5.5
	SNR=7.8						
CHEFC				P	P	13 12 28.0	+5.5
	SNR=7.8						
IVI	Ivigtut	82.80	11	P	P	13 12 20.5	-1.4
IVI				IAmb	IAmb	13 12 37.6	
	comp=Z,100nm,0.9s						
IVI				IAMs_20	IAMs_20	13 50 29.3	
	comp=Z,9µm,20.0s						
SFS	San Fernando	82.85	47⇑	*i*P	P	13 12 25.4	+2.6
SFS				*i* S	S	13 22 55.3	+13
PMTG	Montargil	82.86	44	*e*P	P	13 12 24.9	+2.2
	comp=Z,170nm,1.8s						
PMTG	Montargil	82.86	44	*e*SKS	SKSac	13 22 50.7	+5.5
SMIR	Smir Dam	83.03	48	P	P	13 12 29.0	+5.3
	SNR=9.5						
SMIR				P	P	13 12 29.0	+5.3
	SNR=9.5						
PTOM	Tomar	83.03	44	*e*P	P	13 12 25.2	+1.6
	comp=Z,164nm,1.6s						
CEU	Ceuta	83.15	48⇑	*i*P	P	13 12 26.8	+2.5
CEU				*i* S	S	13 22 51.1	+6.1
PESTR	Estremoz	83.17	45	P	P	13 12 24.9	+0.5
PESTR	Estremoz	83.17	45	*e*SKS	SKSac	13 22 51.0	+3.7
PCAS	Casmilo, Conde	83.21	43	*e*P	P	13 12 27.2	+2.6
	comp=Z,114nm,2.1s						
PCAS	Casmilo, Conde	83.21	43	*e*SKS	S	13 22 46.7	+1.1
LLLB	Lillooet	83.21	330	IAmb	IAmb	13 12 58.6	
	comp=Z,132nm,1.4s						
LLLB				IAMs_20	IAMs_20	13 50 37.8	
	comp=Z,5µm,18.0s						
NRS	Narsarsuaq	83.28	12	IAMs_20	IAMs_20	13 48 39.1	
	comp=Z,11µm,20.0s						
FRB	Frobisher Bay	83.31	1	P	P	13 12 23.3	-1.2
FRB				pmax	pmax		
	comp=Z,39nm,1.3s						
COI	Coimbra	83.35	43	*e*P	P	13 12 28.1	+2.8
	comp=Z,182nm,2.0s						
COI	Coimbra	83.35	43	*e*S	S	13 22 48.4	+1.5
AKLM	AKL	83.53	50	P	P	13 12 31.2	+4.7
	SNR=11						
AKLM				P	P	13 12 31.2	+4.7
	SNR=11						
PVLZ	Peæn de	83.54	49⇑	*i*P	P	13 12 27.7	+1.4
PVLZ				*i* S	S	13 22 51.0	+2.0
PMRV	Marv??o	83.60	44	*e*P	P	13 12 26.4	-0.2
	comp=Z,54nm,1.4s						
PMRV	Marv??o	83.60	44	*e*S	S	13 22 52.7	+3.2
PMRV	Marv??o	83.60	44	*e*LR	LR	13 40 13.5	
	comp=Z,15µm,16.0s						
LIJA	Lijar	83.63	47	*e*P	P	13 12 31.0	+4.1
PCBR	Castelo Branco	83.76	44	*e*P	P	13 12 29.9	+2.5
	comp=Z,92nm,1.8s						
PVIS	Viseu	83.96	43	*e*P	P	13 12 28.9	+0.4
	comp=Z,130nm,2.1s						
MTE	Manteigas	84.01	43	IAmb	IAmb	13 12 48.1	
	comp=Z,102nm,1.2s						
MTE	Manteigas	84.01	43	*e*P	P	13 12 30.4	+1.6
	comp=Z,136nm,1.3s						
MTE	Manteigas	84.01	43	*e*S	S	13 23 03.4	+10
MTE	Manteigas	84.01	43	*e*LR	LR	13 43 13.5	
	comp=Z,26µm,18.0s						
TDRA	Tendrara	84.17	52	P	P	13 12 35.0	+5.1
	SNR=16						
TDRA				P	P	13 12 35.0	+5.1
	SNR=16						
EMAL	Malaga-Limoner	84.24	48⇑	*i*P	P	13 12 32.0	+2.1
EMAL				*i* S	S	13 23 07.6	+12
PVRL	Vila Real	84.37	43	*e*P	P	13 12 30.8	+0.3
	comp=Z,156nm,1.8s						
PGAV	Gavieira, Arco	84.39	42	*e*P	P	13 12 29.6	-1.1
	comp=Z,203nm,2.0s						
PGAV	Gavieira, Arco	84.39	42	*e*S	S	13 23 03.0	+5.4
PGAV	Gavieira, Arco	84.39	42	*e*LR	LR	13 42 24.5	
	comp=Z,26µm,20.0s						
PCAB	Cabril	84.41	42	*e*P	P	13 12 32.1	+1.4
	comp=Z,159nm,1.5s						
GOG	Mont Gurugu	84.50	50	P	P	13 12 36.0	+4.6
	SNR=8.0						
GOG				P	P	13 12 36.0	+4.6
	SNR=8.0						
TAF	Taforalt	84.72	50	P	P	13 12 38.0	+5.4
	SNR=9.6						
TAF				P	P	13 12 38.0	+5.4
	SNR=9.6						
MVO	Moncorvo	84.75	43	*e*P	P	13 12 34.6	+2.1
	comp=Z,176nm,1.9s						
MVO	Moncorvo	84.75	43	*e*S	S	13 22 59.4	-1.7
MVO	Moncorvo	84.75	43	*e*LR	LR	13 43 18.0	
	comp=Z,21µm,18.0s						
PBRG	Braganca	85.27	42	*e*P	P	13 12 34.5	-0.6
	comp=Z,147nm,1.7s						
PAB	San Pablo	85.68	45	P	P	13 12 36.4	-0.8
PAB				pmax	pmax		
	comp=Z,85nm,1.3s						
PAB				MLR	MLR		
	comp=Z,16µm,18.0s						
PAB	San Pablo	85.68	45	P	P	13 12 36.4	-0.8
PAB				IAmb	IAmb	13 13 08.5	
	comp=Z,85nm,1.2s						
TAM	Tamanrasset	85.79	64	P	P	13 12 37.0	-1.2
TAM				pmax	pmax		
	comp=Z,116nm,1.5s						
TAM				MLR	MLR		
	comp=Z,33µm,20.0s						
TAM	Tamanrasset	85.79	64	P	P	13 12 37.0	-1.2
TAM				IAmb	IAmb	13 13 43.0	
	comp=Z,116nm,1.5s						
BOSA	Boshof	85.92	119	*i* P	P	13 12 38.7	-0.1
BOSA	Boshof	85.92	119	P	P	13 12 39.3	+0.5
	comp=Z,16nm,0.8s,baz=256,slow=4.1,SNR=9.5						
BOSA	Boshof	85.92	119	*i* P	P	13 12 38.7	-0.1
BOSA	Boshof	85.92	119	P	P	13 12 38.7	-0.1
BOSA				pmax	pmax		
	comp=Z,51nm,1.1s						
BOSA	Boshof	85.92	119	P	P	13 12 38.7	-0.1
ESDC	Sonseca Array	86.00	45	P	P	13 12 38.2	-0.5
	comp=Z,0.9nm,0.4s,baz=251,slow=3.9,SNR=5.2						
ESDC				LR	LR	13 50 30.5	
	comp=Z,9µm,18.1s,baz=235,slow=35						
MAW	Mawson	86.47	164	P	P	13 12 41.3	+0.7
	comp=Z,35nm,0.9s,baz=244,slow=7.0,SNR=15						
MAW				LR	LR	13 51 45.0	
	comp=Z,7µm,18.6s,baz=239,slow=36						
MAW	Mawson	86.47	164	P	P	13 12 40.3	-0.3
MAW				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MAW				MLR	MLR		
	comp=Z,2µm,19.0s						
MAW	Mawson	86.47	164	P	P	13 12 40.3	-0.3
UCM	Universidad Co	86.79	45⇑	*i*P	P	13 12 42.3	-0.3
UCM				*i* S	S	13 23 14.5	-6.7
CART	Cartagena	87.03	48⇑	*i*P	P	13 12 43.1	-0.6
CART				*i* S	S	13 23 19.8	-3.7
LBTB	Lobatse	87.45	116	*i* P	P	13 12 51.0	+4.6
LBTB	Lobatse	87.45	116	*i* P	P	13 12 51.0	+4.6
LBTB	Lobatse	87.45	116	P	P	13 12 45.4	-1.0
LBTB	Lobatse	87.45	116	P	P	13 12 45.4	-1.0
SFJD	Kangerlussuaq	87.88	8	P	P	13 12 46.4	-0.8
SFJD				pmax	pmax		
	comp=Z,90nm,1.5s						
SFJD				MLR	MLR		
	comp=Z,8µm,20.0s						
SFJD	Kangerlussuaq	87.88	8	P	P	13 12 46.4	-0.8
SFJD				IAmb	IAmb	13 13 31.9	
	comp=Z,90nm,1.4s						
SFJD	Kangerlussuaq	87.88	8	IAMs_20	IAMs_20	13 53 26.8	
	comp=Z,7µm,20.0s						
ANGG	Ammassalik, Gr	88.86	13	IAMs_20	IAMs_20	13 51 21.6	
	comp=Z,9µm,20.0s						
YKA	Yellowknife Ar	88.99	341	P	P	13 12 52.1	-0.3
	comp=Z,51nm,1.0s,baz=138,slow=5.2,SNR=97						
YKA				LR	LR	13 56 17.8	
	comp=Z,16µm,19.9s,baz=0.0,slow=38						
ILULI	Ilulissat	89.93	7	IAMs_20	IAMs_20	13 56 17.9	
	comp=Z,7µm,20.0s						
ITZ	Itezhi-Tezhi	91.08	107	*e*P	P	13 13 05.3	+1.7
ITZ				*e*		13 23 43.2	
DSB	Dublin	91.52	33	IAMs_20	IAMs_20	13 55 22.8	
	comp=Z,9µm,20.0s						
DFRA	Djebel Bou Aff	91.55	52	P	P	13 13 06.3	+1.0
DFRA	Djebel Bou Aff	91.55	52	P	P	13 13 06.3	+1.0
KHU	Kahuku	91.59	290	IAMs_20	IAMs_20	13 46 41.6	
	comp=Z,5µm,20.0s						
MATP	Matopo	91.60	112	*i* P	P	13 13 02.4	-3.6
MATP	Matopo	91.60	112	*i* P	P	13 13 02.4	-3.6
MLOA	Mauna Loa Obse	91.66	290	IAMs_20	IAMs_20	13 47 46.4	
	comp=Z,6µm,20.0s						
POHA	Pohakuloa	91.70	290	IAMs_20	IAMs_20	13 49 07.4	
	comp=Z,5µm,20.0s						
MAHO	Mahon	91.75	48⇑	*i*P	P	13 13 07.4	+1.5
MAHO				*e*S	SKSac	13 23 43.5	+4.0
DLBC	Dease Lake	91.85	333	IAmb	IAmb	13 13 39.1	
	comp=Z,46nm,1.1s						
KHLU	Kahalu`u	91.96	290	IAMs_20	IAMs_20	13 45 49.3	
	comp=Z,6µm,20.0s						
CKFL	Kef-Lekhel	92.11	52	P	P	13 13 09.8	+1.9
CKFL	Kef-Lekhel	92.11	52	P	P	13 13 09.8	+1.9
CMAH	Djebel Manchou	92.72	52	P	P	13 13 12.1	+1.5
CMAH	Djebel Manchou	92.72	52	P	P	13 13 12.1	+1.5
SIT	Sitka	93.43	330	IAMs_20	IAMs_20	13 57 19.2	
	comp=Z,8µm,20.0s						
MXZ	Matakaoa Point	93.46	228	IAMs_20	IAMs_20	13 44 49.5	
	comp=Z,9µm,22.0s						
JIS	Juneau Island	93.66	332	IAMs_20	IAMs_20	13 58 09.9	
	comp=Z,9µm,20.0s						
KEST	Kesra	93.83	53	P	P	13 13 15.0	-0.8
	comp=Z,9.8nm,0.9s,baz=264,slow=3.2,SNR=6.7						
KEST				LR	LR	13 56 04.4	
	comp=Z,15µm,20.7s,baz=208,slow=36						
CASY	Casey	94.16	181	IAMs_20	IAMs_20	13 57 13.4	
	comp=Z,8µm,22.0s						
ESK	Eskdalemuir	94.17	32	IAMs_20	IAMs_20	13 51 47.0	
	comp=Z,8µm,22.0s						
KHZ	Kahutara	94.23	222	IAMs_20	IAMs_20	13 46 16.3	
	comp=Z,7µm,19.0s						
RAO	Raoul Island	94.38	237	IAMs_20	IAMs_20	13 45 17.7	
	comp=Z,7µm,21.0s						
SUMG	Summit	94.71	9	P	P	13 13 18.3	-1.1
SUMG				pmax	pmax		
	comp=Z,85nm,1.1s						
SUMG				MLR	MLR		
	comp=Z,12µm,22.0s						
SUMG	Summit	94.71	9	P	P	13 13 18.3	-1.1
NNZ	Nelson	94.96	223	IAMs_20	IAMs_20	13 50 48.7	
	comp=Z,6µm,18.0s						
THZ	Tophouse	94.98	222	IAMs_20	IAMs_20	13 45 40.0	
	comp=Z,9µm,22.0s						
WHY	Whitehorse	95.14	334	IAMs_20	IAMs_20	13 57 12.1	
	comp=Z,6µm,20.0s						
WHZ	Wether Hill Ro	95.65	217	IAMs_20	IAMs_20	13 46 41.4	
	comp=Z,9µm,20.0s						
QRZ	Quartz Range	95.71	223	IAMs_20	IAMs_20	13 51 12.6	
	comp=Z,6µm,18.0s						
DHAK	Deception Hill	95.79	331	IAMs_20	IAMs_20	14 03 02.4	
	comp=Z,8µm,19.0s						
KEKH	Kekaha	96.12	291	IAMs_20	IAMs_20	14 00 18.5	
	comp=Z,8µm,18.0s						
TULEG	Thule	96.16	0	IAMs_20	IAMs_20	13 56 25.3	
	comp=Z,7µm,20.0s						
PYZ	Puysegur Point	96.20	216	IAMs_20	IAMs_20	13 47 57.8	
	comp=Z,7µm,19.0s						
UCC	Uccle	96.25	38	IAMs_20	IAMs_20	13 57 14.3	
	comp=Z,9µm,20.0s						
SCO	Scoresbysund	96.31	15	IAMs_20	IAMs_20	13 54 33.7	
	comp=Z,9µm,22.0s						
DCZ	Deep Cove	96.35	217	IAMs_20	IAMs_20	13 46 42.9	
	comp=Z,7µm,22.0s						
C36M	Paulatuk	96.59	343	IAMs_20	IAMs_20	13 58 45.5	
	comp=Z,9µm,21.0s						
ECH	Echery	96.94	41	P	P	13 13 28.2	-1.4
ECH				pmax	pmax		
	comp=Z,55nm,1.5s						
ECH	Echery	96.94	41	P	P	13 13 28.2	-1.4
ECH				IAmb	IAmb	13 14 19.4	
	comp=Z,56nm,1.5s						
MSSA	Maissana	97.05	46	IAMs_20	IAMs_20	14 00 29.7	
	comp=Z,8µm,18.0s						
PCA	Pinnacle	97.19	332	IAMs_20	IAMs_20	14 04 06.2	
	comp=Z,6µm,19.0s						
VLC	Villacollemand	97.58	46	IAMs_20	IAMs_20	13 58 09.7	
	comp=Z,8µm,19.0s						
BFO	Black Forest	97.71	41	*e*PP	PP	13 17 29.7	-1.6
	baz=250,slow=7.6						
AHRW	Bad Neuenahr-A	97.75	39	*e*PP	PP	13 17 31.2	-0.3
	baz=250,slow=7.6						
OSSC	Osservatorio P	97.95	47	IAMs_20	IAMs_20	14 00 35.5	
	comp=Z,6µm,18.0s						
CTGM	Chitina Glacie	98.05	332	IAMs_20	IAMs_20	14 02 03.2	
	comp=Z,6µm,22.0s						
BUG	Bochum--Univer	98.19	38	*e*PP	PP	13 17 34.0	-0.8
	baz=250,slow=7.6						
STU	Stuttgart	98.40	41	*e*PP	PP	13 17 34.6	-2.0
	baz=250,slow=7.6						
TNS	Taunus Mts	98.45	40	*e*PP	PP	13 17 36.1	-0.9
	baz=250,slow=7.6						
TNS				*e*SKSac	SKSac	13 24 18.7	+3.6
	baz=247,slow=4.6						
UBR	Ueberruh	98.60	42	*e*PP	PP	13 17 36.8	-1.4
	baz=250,slow=7.6						
TGL	Tana Glacier	98.62	332	IAMs_20	IAMs_20	14 05 16.2	
	comp=Z,6µm,18.0s						
DAWY	Dawson	98.67	336	IAMs_20	IAMs_20	14 00 41.0	
	comp=Z,9µm,20.0s						
CRQM	Cirque	98.76	332	IAMs_20	IAMs_20	14 05 37.3	
	comp=Z,4µm,18.0s						
FETA	Feichten	98.78	43	Pdiff	Pdif	13 13 38.2	+0.1
	comp=Z,14nm,1.6s						
IBBN	Ibbenburen	98.79	38	*e*PP	PP	13 17 39.0	-0.4
	baz=250,slow=7.6						
MCARA	McCarthy VSAT	98.97	332	IAMs_20	IAMs_20	14 02 30.5	
	comp=Z,6µm,20.0s						
VRDI	Verde Repeater	99.10	332	IAMs_20	IAMs_20	14 05 10.7	
	comp=Z,5µm,19.0s						
MOTA	Moosalm	99.12	43	Pdiff	Pdif	13 13 39.7	+0.1
	comp=Z,7.9nm,1.1s						
SQTA	Sankt Quirin	99.15	43	Pdiff	Pdif	13 13 40.9	+1.2
	comp=Z,8.4nm,0.8s						
GLB	Gilahina Butte	99.34	332	IAMs_20	IAMs_20	14 02 41.2	
	comp=Z,5µm,22.0s						
WATA	Walderalm	99.42	43	Pdiff	Pdif	13 13 41.2	+0.3
	comp=Z,7.4nm,1.0s						
WTTA	Wattenberg	99.44	43	*e*Pdiff	Pdif	13 13 40.3	-0.8
	comp=Z,5.9nm,0.7s						
PAOL	Paolisi	99.48	50	IAMs_20	IAMs_20	14 01 32.3	
	comp=Z,7µm,20.0s						
FUR	Furstenfeldbru	99.50	42	*e*PP	PP	13 17 43.5	-1.5
	baz=250,slow=7.6						
UBBA	Unterbreizbach	99.59	39	*e*PP	PP	13 17 44.8	-0.6
	baz=250,slow=7.6						
UBBA				*e*SKSac	SKSac	13 24 26.4	+6.0
	baz=247,slow=4.6						
EGAK	Eagle	99.67	336	IAMs_20	IAMs_20	14 00 37.6	
	comp=Z,7µm,20.0s						
GTTG	Gottingen	99.81	39	*e*SKSac	SKSac	13 24 27.6	+5.9
	baz=247,slow=4.6						
ABTA	Abfaltersbach	99.84	44	*e*Pdiff	Pdif	13 13 44.1	+1.3
	comp=Z,4.4nm,1.0s						
RETH	Rethem/Aller,	99.86	37	*e*PP	PP	13 17 47.2	-0.3
	baz=250,slow=7.6						
GRA1	Grafenberg Arr	99.96	41	IAMs_20	IAMs_20	13 54 43.5	
	comp=Z,8µm,21.0s						
GRF	Grafenberg Arr	99.96	41	*e*Pdiff	Pdif	13 13 45.4	+2.3
	baz=248,slow=5.3						
GRF				*e*PP	PP	13 17 46.7	-1.7
	baz=250,slow=7.6						
GRF				*e*L	L	13 54 34.3	
	comp=Z,7µm,21.2s						
CLZ	Clausthal	100.15	39	*e*SKSac	SKSac	13 24 28.4	+5.0
	baz=247,slow=4.6						
NRDL	Niedersach Rie	100.21	38	*e*PP	PP	13 17 49.9	-0.2
	baz=250,slow=7.6						
RJOB	Jochberg	100.34	43	*e*PP	PP	13 17 49.4	-2.0
	baz=250,slow=7.6						
RJOB				*e*SKSac	SKSac	13 24 26.4	+1.8
	baz=247,slow=4.6						
ASSE	Asse, Remlinge	100.42	38	*e*PP	PP	13 17 51.3	-0.4
	baz=250,slow=7.6						
ASSE				*e*SKSac	SKSac	13 24 29.6	+5.2
	baz=247,slow=4.6						
KBA	Koelnbreinsper	100.49	44	*e*Pdiff	Pdif	13 13 46.6	+0.9
	comp=Z,7.0nm,1.6s						
MOX	Moxa	100.50	40	*e*PP	PP	13 17 51.4	-1.1
	baz=250,slow=7.6						
MOX				*e*L	L	13 55 13.5	
	comp=Z,15µm,21.5s						
MYKA	Terra Mystica	100.55	44	Pdiff	Pdif	13 13 45.1	-0.7
	comp=Z,4.7nm,1.0s						
ROTZ	Rotzenmuhle	100.59	41	*e*PP	PP	13 17 51.7	-1.5
	baz=250,slow=7.6						
MANZ	Manzenberg	100.60	41	*e*PP	PP	13 17 52.1	-1.2
	baz=250,slow=7.6						
MANZ				*e*SKSac	SKSac	13 24 30.4	+4.7

	baz=247,slow=4.6						
PAX	Paxson	100.67	333	IAMs_20	IAMs_20	14 01 28.1	
	comp=Z,7µm,20.0s						
RIDG	Independent Ri	100.71	334	IAMs_20	IAMs_20	14 02 03.1	
	comp=Z,8µm,20.0s						
NEUB	Neuenburg	100.78	39	ePP	PP	13 17 53.2	-1.3
	baz=250,slow=7.6						
MBAR	Mbarara	100.78	95	i P	Pdif	13 13 47.5	-0.4
MBAR				pmax	pmax		
	comp=Z,7.0nm,1.4s						
PLN	Plauen	100.78	40	ePP	PP	13 17 53.4	-1.3
	baz=250,slow=7.6						
BSEG	Bad Segeberg	100.79	37	ePP	PP	13 17 54.1	-0.5
	baz=250,slow=7.6						
BSEG				eSKSac	SKSac	13 24 30.4	+4.1
	baz=247,slow=4.6						
WET	Wettzell	100.82	42	ePP	PP	13 17 53.2	-1.8
	baz=250,slow=7.6						
GUNZ	Gunzen	100.85	40	ePP	PP	13 17 54.0	-1.2
	baz=250,slow=7.6						
WERN	Wernitzgruen	100.86	40	ePP	PP	13 17 54.0	-1.3
	baz=250,slow=7.6						
WERN				eSKSac	SKSac	13 24 30.4	+3.5
	baz=247,slow=4.6						
NKC	Novy Kostel	100.88	41	ePP	PP	13 17 42.6	-13
NKC				eSKS		13 24 33.2	
NKC				AMS	AMS	13 57 20.0	
	comp=Z,10µm,20.1s						
TANN	Tannenbergstha	100.95	40	ePP	PP	13 17 54.7	-1.3
	baz=250,slow=7.6						
OBKA	Obir	101.11	45	Pdiff	Pdif	13 13 49.9	+1.5
	comp=Z,3.3nm,0.8s						
GEC2	GERESS Array S	101.25	42	ePP	PP	13 17 56.5	-1.8
	baz=250,slow=7.6						
GERES	GERESS Array B	101.25	42	P	Pdif	13 13 47.8	-1.1
	comp=Z,1.5nm,0.7s,baz=242,slow=2.9,SNR=9.2						
GERES	GERESS Array B	101.25	42		Pdif	13 13 47.6	-1.3
KHC	Kasperske Hory	101.25	42	ePDIFF	Pdif	13 13 51.0	+2.1
KHC				ex	x	13 14 14.0	
KHC				ex	x	13 17 57.5	
KHC				eSKS		13 24 33.3	
KHC				AMS	AMS	13 56 10.0	
	comp=Z,8µm,21.0s						
KHC	Kasperske Hory	101.25	42	eP	Pdif	13 13 51.0	+2.1
KHC				e		13 17 57.5	
KHC				e		13 24 33.3	
KHC				MLR	MLR		
	comp=Z,8µm,21.0s						
KNK	Knik Glacier	101.40	331	IAMs_20	IAMs_20	14 06 55.7	
	comp=Z,7µm,19.0s						
DHY	Denali Highway	101.51	333	IAMs_20	IAMs_20	14 07 49.5	
	comp=Z,5µm,19.0s						
CLL	Collm	101.54	40	ePdif	Pdif	13 13 52.0	+1.9
CLL				epPdif	pwP	13 13 55.0	0.0
CLL				e		13 14 02.0	
CLL				i PP	PP	13 18 00.3	0.0
CLL				esPP		13 18 11.0	
CLL				esSKSac	sSKSac	13 24 42.0	+11
CLL				esPS		13 27 13.0	
CLL				esPPS		13 27 59.0	
CLL				eSS	SS	13 32 30.0	-3.4
CLL				e		13 42 12.0	
CLL				Lm	MLR	13 55 00.0	
	comp=Z,16µm,21.5s						
CLL	Collm	101.54	40	ePP	PP	13 18 00.1	-0.2
	baz=250,slow=7.6						
CLL				eSKSac	SKSac	13 24 34.9	+4.8
	baz=247,slow=4.6						
CLL	Collm	101.54	40	eP	Pdif	13 13 52.0	+1.9
CLL				i		13 18 00.3	
CLL				MLR	MLR		
	comp=Z,16µm,21.5s						
FBE	Freiberg	101.64	40	ePP	PP	13 17 60.0	-1.1
	baz=250,slow=7.6						
PRP	Porcupine Dome	101.66	336	IAMs_20	IAMs_20	14 03 58.2	
	comp=Z,6µm,20.0s						
HDA	Harding Lake	101.81	334	IAMs_20	IAMs_20	14 03 04.4	
	comp=Z,9µm,21.0s						
RC01	Rabbit Creek A	101.87	331	IAMs_20	IAMs_20	14 03 20.9	
	comp=Z,8µm,20.0s						
ILAR	Eielson Array	101.92	335	P	Pdif	13 13 52.4	+0.9
	comp=Z,0.4nm,0.9s,baz=134,slow=2.6,SNR=2.2						
ILAR				PP	PP	13 18 03.6	+0.8
	comp=Z,0.3nm,0.4s,baz=104,slow=7.5,SNR=5.0						
FYU	Fort Yukon	101.95	337	IAMs_20	IAMs_20	14 02 23.6	
	comp=Z,7µm,21.0s						
BRLK	Bradley Lake	101.98	329	IAMs_20	IAMs_20	14 09 47.0	
	comp=Z,6µm,18.0s						
BRG	Berggiesshubel	101.98	40	ePP	PP	13 18 02.4	-1.2
	baz=250,slow=7.6						
BRG				eSKSac	SKSac	13 24 35.3	+3.1
	baz=247,slow=4.6						
BRG	Berggiesshubel	101.98	40	PDIFF	Pdif	13 13 55.4	+3.3
	comp=Z,15nm,1.7s						
PRA	Prague	102.06	41	AMS	AMS	13 59 00.0	
	comp=Z,5µm,19.3s						
CNPM	China Poot	102.07	329	IAMs_20	IAMs_20	14 02 05.6	
	comp=Z,5µm,19.0s						
PRU	Pruhonice	102.10	41	ePDIFF	Pdif	13 13 54.7	+2.1
PRU				ePP	PP	13 17 51.6	-13
PRU				eSKS	SKSac	13 24 35.6	+2.8
PRU				AMS	AMS	14 03 00.0	
	comp=Z,6µm,18.4s						
PRU	Pruhonice	102.10	41	eP	Pdif	13 13 54.7	+2.1
PRU				e		13 24 35.6	
PRU				MLR	MLR		
	comp=Z,6µm,18.4s						
KDAK	Kodiak Island	102.20	327	IAMs_20	IAMs_20	13 59 52.2	
	comp=Z,5µm,22.0s						
GOPC	GO Pecny, Ondr	102.23	41	ePDIFF	Pdif	13 13 51.6	-1.6
GOPC				ePP	PP	13 17 53.0	-13
GOPC				eSKS	SKSac	13 24 38.5	+5.0
GOPC				AMS	AMS	13 56 50.0	
	comp=Z,7µm,21.2s						
GOPC	GO Pecny, Ondr	102.23	41	eP	Pdif	13 13 51.6	-1.6
GOPC				MLR	MLR		
	comp=Z,7µm,21.2s						
CCB	Clear Creek Bu	102.25	335	IAMs_20	IAMs_20	14 03 27.7	
	comp=Z,6µm,20.0s						
PVCC	Panska Ves	102.27	41	AMS	AMS	13 58 10.0	
	comp=Z,9µm,19.1s						
WRH	Wood River Hil	102.30	334	IAMs_20	IAMs_20	14 03 30.2	
	comp=Z,8µm,21.0s						
HOM	Homer	102.31	329	IAMs_20	IAMs_20	14 04 07.0	
	comp=Z,4µm,19.0s						
RUE	Ruedersdorf	102.34	39	ePP	PP	13 18 05.3	-1.0
	baz=250,slow=7.6						
COLA	College	102.34	335	IAMs_20	IAMs_20	14 05 07.4	
	comp=Z,7µm,20.0s						
OHAK	Old Harbor	102.39	326	IAMs_20	IAMs_20	14 04 14.4	
	comp=Z,5µm,20.0s						
TREC	Trest	102.50	42	AMS	AMS	13 56 50.0	
	comp=Z,8µm,19.8s						
MDM	Murphy Dome	102.52	335	IAMs_20	IAMs_20	14 05 13.1	
	comp=Z,5µm,19.0s						
SII	Sitkinak Islan	102.67	326	IAMs_20	IAMs_20	14 00 29.8	
	comp=Z,6µm,20.0s						
MSVF	Nonsavu	102.69	246	IAMs_20	IAMs_20	13 53 29.0	
	comp=Z,5µm,19.0s						
NEA	Nenana	102.74	334	IAMs_20	IAMs_20	14 03 43.8	
	comp=Z,7µm,21.0s						
BWN	Browne	102.77	334	IAMs_20	IAMs_20	14 01 51.7	
	comp=Z,6µm,21.0s						
PAF	Port-aux-Franc	102.97	155	IAMs_20	IAMs_20	13 55 38.7	
	comp=Z,8µm,21.0s						
KRUC	Moravsky	103.01	42	ePDIFF	Pdif	13 13 57.8	+1.1
KRUC				ePP	PP	13 18 09.4	-2.0
UPC	Upice	103.15	41	ePP	PP	13 18 03.3	-9.1
UPC				AMS	AMS	13 55 10.0	
	comp=Z,8µm,23.7s						
KTH	Kantishna Hill	103.18	333	IAMs_20	IAMs_20	14 07 53.6	
	comp=Z,7µm,18.0s						
CHVC	Chvalec	103.20	41	AMS	AMS	13 58 50.0	
	comp=Z,7µm,18.9s						
VRAC	Vranov	103.20	42	ePDIFF	Pdif	13 13 58.3	+0.8
VRAC				ePP	PP	13 18 10.8	-2.1
PDG	Podgorica	103.24	50	IAMs_20	IAMs_20	14 00 48.9	
	comp=Z,8µm,21.0s						
OSTC	Ostas	103.29	41	AMS	AMS	13 59 00.0	
	comp=Z,6µm,19.3s						
DPC	Dobruska-Polom	103.30	41	ePDIFF	Pdif	13 13 59.9	+1.9
DPC				AMS	AMS	13 58 50.0	
	comp=Z,5µm,19.7s						
DPC	Dobruska-Polom	103.30	41	eP	Pdif	13 13 59.9	+1.9
DPC				MLR	MLR		
	comp=Z,5µm,19.7s						
BPAW	Bear Paw Mtn.	103.38	334	IAMs_20	IAMs_20	14 05 52.7	
	comp=Z,5µm,20.0s						
TIR	Tirane	103.41	51	IAMs_20	IAMs_20	14 03 20.2	
	comp=Z,7µm,21.0s						
KRLC	Kraliky	103.52	41	eSKS	SKSac	13 24 45.2	+5.6
KRLC				AMS	AMS	13 59 50.0	
	comp=Z,14µm,20.3s						
PPLA	Purkeypile	103.53	332	IAMs_20	IAMs_20	14 09 00.0	
	comp=Z,7µm,18.0s						
MLY	Manley	103.56	335	IAMs_20	IAMs_20	14 05 55.4	
	comp=Z,5µm,19.0s						
MORC	Moravsky Berou	103.92	42	ePDIFF	Pdif	13 14 02.6	+1.8
MORC				ePP	PP	13 18 17.1	-1.1
MORC	Moravsky Berou	103.92	42	IAMs_20	IAMs_20	13 58 05.3	
	comp=Z,8µm,20.0s						
COLD	Coldfoot	104.02	337	IAMs_20	IAMs_20	14 06 08.3	
	comp=Z,6µm,19.0s						
TOLK	Toolik Lake Re	104.22	338	IAMs_20	IAMs_20	14 04 43.6	
	comp=Z,8µm,21.0s						
OKC	Ostrava-Krasne	104.31	42	AMS	AMS	13 58 00.0	
	comp=Z,6µm,21.1s						
VYHS	Vyhne	104.44	43	eP	Pdif	13 14 04.7	+1.7
VYHS	Vyhne	104.44	43	ePDIFF	Pdif	13 14 04.7	+1.7
SVW2	Sparrevohn	104.59	330	IAMs_20	IAMs_20	14 04 29.7	
	comp=Z,4µm,19.0s						
CNBA	Chernabura Isl	105.19	323	IAMs_20	IAMs_20	14 11 27.8	
	comp=Z,5µm,20.0s						
KMBO	Kilima Mbogo	106.70	97	PP	PP	13 18 38.5	-1.3
	comp=Z,1.7nm,0.2s,baz=251,slow=12,SNR=4.0						
UZH	Uzhgorod	106.71	44	eP	Pdif	13 14 17.5	+4.4
UZH				i		13 18 43.5	
UZH				i		13 24 49.0	
UZH				e		13 25 35.3	
UZH				i		13 28 02.0	
UZH				i		13 33 50.8	
UZH				e		13 37 50.0	
KWP	Kalwaria Pacla	107.16	43	IAMs_20	IAMs_20	14 00 33.1	
	comp=Z,5µm,20.0s						
ALN	Alexandroupoli	107.86	52	IAMs_20	IAMs_20	14 04 32.3	
	comp=Z,6µm,20.0s						
KBS	Kingsbay	107.95	12	IAMs_20	IAMs_20	14 02 03.6	
	comp=Z,7µm,21.0s						
TAU	Tasmania Unive	108.33	209	IAMs_20	IAMs_20	13 56 30.0	
	comp=Z,6µm,18.0s						
RDOG	Red Dog Mine	108.94	337	IAMs_20	IAMs_20	14 06 44.4	
	comp=Z,7µm,21.0s						
UNV	Unalaska Valle	109.00	321	IAMs_20	IAMs_20	14 05 27.7	
	comp=Z,5µm,22.0s						
ANM	Nome	109.60	333	IAMs_20	IAMs_20	14 13 07.3	
	comp=Z,4µm,18.0s						
DZM	Mont Dzumac	110.17	236	ePP	PP	13 19 03.2	-1.0
	comp=Z,973nm,25.6s						
DZM				eSKSac	SKSac	13 25 03.5	-6.8
	comp=Z,3µm,26.8s						
DZM	Mont Dzumac	110.17	236	ePS	PS	13 28 29.7	-4.3
	comp=Z,3µm,25.9s						
DZM				eSS	SS	13 34 26.4	-5.0
	comp=Z,10µm,28.2s						
DZM	Mont Dzumac	110.17	236	eLR	LR	13 50 55.6	
	comp=Z,14µm,22.6s,baz=137						
ARCES	ARCESS Array B	110.66	22	PKKPbc	PKKPbc	13 29 32.4	+0.7
	comp=Z,1.8nm,0.7s,baz=86,slow=3.8,SNR=8.7						
ISP	Isparta	110.74	56	IAMs_20	IAMs_20	14 11 52.4	
	comp=Z,5µm,19.0s						
KIS	Kishinev	110.80	46	eP	Pdif	13 14 33.0	+1.7
KIS	Kishinev	110.80	46	ePP	PP	13 19 12.0	+3.4
KIS	Kishinev	110.80	46	ePPP	PPP	13 21 21.0	
KIS				eSKS	SKSac	13 25 04.0	-7.4
KIS				eSKKS	SKSdf	13 25 54.0	+10
KIS	Kishinev	110.80	46	ePS	PS	13 28 43.0	+3.7
KIS	Kishinev	110.80	46	ePPS	PPS	13 29 45.0	
KIS				eSS	SS	13 34 28.0	-12
KIS				eL	L	13 54 00.0	
KIS				LRM	MLR	14 10 12.0	
	comp=Z,7µm,20.0s						
KIS	Kishinev	110.80	46	eP	Pdif	13 14 33.0	+1.7
KIS				e		13 19 12.0	
KIS				ePS	PS	13 28 43.0	+3.7
KIS				ePPS	PPS	13 29 45.0	
MICGM	Minsk	110.98	38	ePKP	PKiKP	13 18 43.0	+12
MICGM				ePP	PP	13 19 14.0	+4.3
MICGM				ePPP	PPP	13 21 26.0	
MICGM				eSKS	SKSdf	13 25 28.0	-16
MICGM				eSKKS	SKKSac	13 26 08.0	-5.0
MICGM				eSKKKS		13 27 00.0	
MICGM				ePS	PKKPbc	13 29 00.0	-30
MICGM				eSS	SS	13 34 24.0	-18
MICGM				eSSS	SSS	13 38 34.0	
MICGM				eLQ	LQ	13 56 44.0	
MICGM				eLR	LR	14 00 12.0	
MICGM				LRM	MLR	14 03 54.0	
	comp=Z,27nm,18.0s						
MICGM				LRM	MLR	14 03 56.0	
	comp=Z,26nm,20.0s						
MICGM				LRM	MLR	14 04 08.0	
	comp=E,11nm,18.0s						
MICGM				LRM	MLR	14 04 12.0	
	comp=E,12nm,20.0s						
MNK	Minsk	110.98	38	ePKIKP	PKiKP	13 18 43.0	+12
MNK				e		13 19 14.0	
MNK				e		13 21 26.0	
MNK				MLR	MLR		
	comp=Z,26µm,20.0s						
MNK				MLR	MLR		
	comp=E,12µm,20.0s						
KEV	Kevo	111.18	22	IAMs_20	IAMs_20	14 00 41.3	
	comp=Z,5µm,21.0s						
AKASG	Malin Array Be	111.46	42	PKiKP	PKiKP	13 18 30.4	-1.9
	comp=Z,0.2nm,0.2s,baz=266,slow=3.0,SNR=1.8						
AKASG				PP	PP	13 19 11.6	-1.7
	comp=Z,0.2nm,0.3s,baz=264,slow=6.8,SNR=5.6						
ANKE	Ethiopia-Afar	112.56	88	eP	PP	13 19 23.7	+1.1
ANTO	Ankara	112.79	54	IAMs_20	IAMs_20	14 09 52.7	
	comp=Z,6µm,19.0s						
DESE	Dese	112.92	86	eP	PP	13 19 21.7	-3.3
CAN	Canberra	113.34	215	IAMs_20	IAMs_20	13 55 02.4	
	comp=Z,7µm,21.0s						
TOO	Toolangi	113.40	211	IAMs_20	IAMs_20	13 55 48.5	
	comp=Z,6µm,21.0s						
BRTR	Keskin Array B	113.42	54	PKiKP	PKiKP	13 18 36.1	-0.5
	comp=Z,2.0nm,0.9s,baz=203,slow=0.9,SNR=5.8						
BRTR				PP	PP	13 19 27.5	-0.3
	comp=Z,1.6nm,0.8s,baz=237,slow=6.8,SNR=4.0						
ILGA	Ilgaz	113.62	53	IAMs_20	IAMs_20	14 11 59.8	
	comp=Z,6µm,19.0s						
APA	Apatity	113.63	24	⇓iPKIKP	PKiKP	13 18 35.4	-0.6
APA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ADK	Adak	115.01	319	IAMs_20	IAMs_20	14 08 50.0	
	comp=Z,4µm,20.0s						
ARMA	Armidale	115.41	220	IAMs_20	IAMs_20	13 59 34.7	
	comp=Z,4µm,20.0s						
GAZ	Gaziantep	115.92	58	IAMs_20	IAMs_20	14 13 48.9	
	comp=Z,5µm,20.0s						
OBN	Obninsk	116.02	38	ePKIKP	PKiKP	13 18 41.3	+0.4
OBN				i		13 19 45.9	
OBN				e		13 25 43.6	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MOS	Moscow	116.59	37	i PKIKP	PKiKP	13 18 45.5	+3.5
MOS				e		13 19 45.3	
MOS				ePS	PKKPdf	13 29 36.6	-1.3
MOS				eSS	SS	13 35 47.9	-7.7
ANN	Anapa	116.62	49	eP	Pdif	13 15 04.2	+7.0
ANN				i		13 18 41.4	
ANN				e		13 19 49.0	
ANN				e		13 25 38.6	
ANN				eSS	SS	13 35 55.5	-1.2
ANN				eSSS	SSS	13 40 16.5	
ANN				pmax	pmax		
	comp=Z,22nm,0.5s						
ANN				pmax	pmax		
	comp=Z,29nm,0.9s						
KLMR	Klimovskoe	117.07	31	ePKIKP	PKPdf	13 18 39.3	-3.5
KLMR						13 19 51.4	
KLMR				i SP	SP	13 29 34.8	+0.1
KLMR				SS	SS	13 36 03.8	+2.3
KLMR				pmax	pmax		
	comp=Z,31nm,1.7s						
KLMR	Klimovskoe	117.07	31	ePKPdf	PKPdf	13 18 39.3	-3.5
KLMR				AMP		13 18 52.2	
	comp=Z,31nm,1.7s						
KLMR				PP	PP	13 19 51.5	-1.1
KLMR				PKKPab	PKKPbc	13 28 56.8	-13
KLMR				i SP	SP	13 29 34.9	+0.2
KLMR				PS	PKKPdf	13 29 48.5	+11
KLMR				PS	PKKPdf	13 29 48.5	+11
KLMR				SS	SS	13 36 03.8	+2.3
KLMR				SS	SS	13 36 03.8	+2.3
KLMR				LR	LR	14 00 15.2	
KLMR				AMP		14 04 16.1	
	comp=Z,7µm,20.8s						
SOC	Sochi	118.23	51	i PKIKP	PKPdf	13 18 43.3	-2.2
SOC				e		13 20 01.1	
SOC				ePS	PS	13 29 50.3	+2.8
SOC				eSS	SS	13 36 17.9	+0.2
SOC				eSSS	SSS	13 40 39.5	
EIDS	Eidsvold	119.28	224	IAMs_20	IAMs_20	14 00 15.6	
	comp=Z,5µm,20.0s						
PRGR	Permogore	119.82	29	ePKIKP	PKPdf	13 18 46.4	-1.6
PRGR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
STKA	Stephens Creek	119.87	212	PKP	PKiKP	13 18 50.3	+1.0
	comp=Z,3.1nm,0.7s,baz=126,slow=0.7,SNR=9.4						
STKA	Stephens Creek	119.87	212	PKIKP	PKiKP	13 18 49.3	0.0
STKA	Stephens Creek	119.87	212		PKiKP	13 18 49.3	0.0
BILL	Bilibino	120.27	339	i PKIKP	PKiKP	13 18 49.6	+0.8
BILL				e		13 25 58.7	
BILL				i SS	SS	13 36 44.1	+1.6
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BILL	Bilibino	120.27	339	IAMs_20	IAMs_20	14 16 19.8	
	comp=Z,6µm,20.0s						
SHA1	Shidzhatmaz	120.36	50	i PKIKP	PKiKP	13 18 50.2	+0.1
KIV	Kislovodsk	120.38	50	eP	Pdif	13 15 14.8	+0.6
KIV				i		13 18 50.2	
KIV				e		13 20 17.4	
KIV				ePS	PS	13 30 08.4	+1.4
KIV				eSS	SS	13 36 48.3	+2.6
KIV				pmax	pmax		
	comp=Z,20nm,1.1s						
KIV				MLR	MLR		
	comp=Z,10µm,22.0s						
KIV	Kislovodsk	120.38	50	IAMs_20	IAMs_20	14 10 28.3	
	comp=Z,4µm,22.0s						
KBZ	Khabaz	120.53	50	PKP	PKiKP	13 18 50.1	+0.1
	comp=Z,9.1nm,0.9s,baz=356,slow=0.8,SNR=8.8						
KBZ	Khabaz	120.53	50	i PKIKP	PKiKP	13 18 50.5	+0.5
AKH	Akhalkalaki	121.00	53	IAMs_20	IAMs_20	14 17 20.1	
	comp=Z,4µm,20.0s						
RAYN	Ar Rayn	121.24	74	PKIKP	PKPdf	13 18 51.1	-0.9
RAYN				MLR	MLR		
	comp=Z,16µm,19.0s						
RAYN	Ar Rayn	121.24	74		PKPdf	13 18 51.1	-0.9
ZEI	Tsey	121.29	51	i PKIKP	PKPdf	13 18 50.5	-1.2
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BBOO	Buckleboo	121.64	207	IAMs_20	IAMs_20	14 01 04.3	
	comp=Z,6µm,21.0s						
GNI	Garni	121.96	55	IAMs_20	IAMs_20	14 15 51.5	
	comp=Z,5µm,19.0s						
HNR	Honiara	122.08	245	IAMs_20	IAMs_20	14 01 56.9	
	comp=Z,4µm,20.0s						
MAK	Makhachkala	123.93	51	eP	Pdif	13 15 25.1	-4.7
MAK				ePPP	PPP	13 23 14.2	
MAK				e		13 25 50.4	
MAK				eSS	SS	13 37 30.1	-0.6
MAK				eSSS	SSS	13 41 58.5	
MAK				pmax	pmax		
	comp=Z,155nm,1.0s						
AKT	Akhty	124.19	53	i PKIKP	PKiKP	13 19 05.3	+7.8
AKT				e		13 20 39.8	
AKT				pmax	pmax		
	comp=Z,26nm,1.1s						
H11S2	WAKE ISLAND Hy	125.76	279	T	T	15 38 21.4	
	baz=101,slow=75,SNR=7635						
H11S1	WAKE ISLAND Hy	125.77	279	T	T	15 38 24.0	
	baz=101,slow=75,SNR=698						
H11S3	WAKE ISLAND Hy	125.78	279	T	T	15 38 24.0	
	baz=101,slow=75,SNR=1460						
H11N3	WAKE ISLAND Hy	125.80	280	T	T	15 38 21.8	
	baz=100,slow=75,SNR=586						
H11N2	WAKE ISLAND Hy	125.82	280	T	T	15 38 23.0	
	baz=100,slow=75,SNR=624						
H11N1	WAKE ISLAND Hy	125.82	280	T	T	15 38 37.2	
	baz=100,slow=75,SNR=360						
CTAO	Charters Tower	126.14	225	IAMs_20	IAMs_20	14 05 16.5	
	comp=Z,6µm,20.0s						
FORT	Forrest	126.47	200	IAMs_20	IAMs_20	14 14 54.6	
	comp=Z,4µm,22.0s						
TIXI	Tiksi	126.89	352	PKIKP	PKiKP	13 19 01.7	-0.1
TIXI				MLR	MLR		
	comp=Z,6µm,22.0s						
TIXI	Tiksi	126.89	352		PKiKP	13 19 01.7	-0.1
TIXI				IAMs_20	IAMs_20	14 12 46.0	
	comp=Z,5µm,22.0s						
NWAO	Narrogin (SRO)	126.97	189	IAMs_20	IAMs_20	14 14 56.7	
	comp=Z,6µm,20.0s						
ARU	Arti	127.81	33	i PKIKP	PKPdf	13 19 03.2	-0.3
ARU						13 21 04.7	
ARU						13 26 14.2	
ARU				SP	SP	13 31 07.4	-2.7
ARU				SS	SS	13 38 16.7	-1.5
ARU				MLR	MLR		
	comp=Z,8µm,21.0s						
ARU	Arti	127.81	33		PKPdf	13 19 02.6	-0.9
SEY	Seymchan	127.81	337	i PKIKP	PKiKP	13 19 04.4	+0.5
NRIK	Noril'sk	128.76	10	PKP	PKiKP	13 19 06.8	+1.1
	comp=Z,1.3nm,0.5s,baz=348,slow=1.0,SNR=5.4						
NRIK	Noril'sk	128.76	10	i PKIKP	PKiKP	13 19 06.2	+0.6
AKTO	Aktyubinsk	129.62	40	PKP	PKPdf	13 19 07.4	+0.2
	comp=Z,3.2nm,0.9s,baz=293,slow=4.5,SNR=1.6						
PETK	Petropavlovsk-	130.09	324	PKP	PKiKP	13 19 08.5	-0.3
	comp=Z,5.5nm,0.8s,baz=104,slow=3.1,SNR=5.8						
PETK	Petropavlovsk-	130.09	324	PKIKP	PKPdf	13 19 08.2	+0.2
PETK	Petropavlovsk-	130.09	324		PKPdf	13 19 08.2	+0.2
MA2	Magadan	130.38	334	i PKIKP	PKiKP	13 19 10.5	+1.3
MA2				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MA2	Magadan	130.38	334	IAMs_20	IAMs_20	14 25 51.5	
	comp=Z,4µm,19.0s						
AS31	Alice Springs	130.45	210		PKPdf	13 19 09.2	-0.5
ASAR	Alice Springs	130.45	210	PKhKP	PKPpre	13 18 58.7	
	comp=Z,0.2nm,0.5s,baz=135,slow=2.5,SNR=4.2						
ASAR				PKP	PKPdf	13 19 09.7	0.0
	comp=Z,6.5nm,1.0s,baz=151,slow=1.9,SNR=26						
ASAR	Alice Springs	130.45	210	PKIKP	PKPdf	13 19 09.4	-0.3
ASAR	Alice Springs	130.45	210		PKPdf	13 19 09.4	-0.3
MORW	Morawa	130.93	188	IAMs_20	IAMs_20	14 15 18.6	
	comp=Z,5µm,21.0s						
AB31	Akbulak array	131.18	41	i PKIKP	PKPdf	13 19 09.3	-0.9
ABKAR	Akbulak array	131.18	41		PKPdf	13 19 10.1	-0.1
ABKAR	Akbulak array	131.18	41		PKPdf	13 19 09.8	-0.3
RABL	Rabaul	131.38	245	IAMs_20	IAMs_20	14 07 06.6	
	comp=Z,3µm,21.0s						
GEYT	Alibeck	132.49	56	PKP	PKPdf	13 19 13.2	+0.2
	comp=Z,2.4nm,0.7s,baz=309,slow=4.7,SNR=4.2						
GYA0B	ALIBECK ARRAY	132.49	56	IAMs_20	IAMs_20	14 21 38.5	
	comp=Z,6µm,21.0s						
COEN	Coen	132.53	228		PKPdf	13 19 13.6	-0.1
COEN				IAMs_20	IAMs_20	14 13 09.0	
	comp=Z,4µm,18.0s						
PMG	Port Moresby	132.55	236	IAMs_20	IAMs_20	14 07 28.7	
	comp=Z,5µm,21.0s						
ASHT	Ashkhabad	132.70	56	IAMs_20	IAMs_20	14 27 55.0	
	comp=Z,3µm,18.0s						
WB2	Warramunga Arr	133.35	214		PKPdf	13 19 14.7	-0.5
WR1	Warramunga Arr	133.36	214	IAMs_20	IAMs_20	14 10 52.4	
	comp=Z,5µm,19.0s						
WRA	Warramunga Arr	133.36	214	PKhKP	PKPpre	13 19 06.6	
	comp=Z,0.7nm,0.7s,baz=148,slow=3.7,SNR=8.3						
WRA				PKP	sPKPdf	13 19 16.1	+0.3
	comp=Z,7.9nm,0.7s,baz=154,slow=1.6,SNR=11						
WRA	Warramunga Arr	133.36	214	PKIKP	PKPdf	13 19 15.6	+0.3
WRA	Warramunga Arr	133.36	214		PKPdf	13 19 15.6	+0.3
WRAB	Tennant Creek	133.36	214	c iPKIKP	PKiKP	13 19 17.5	+1.0
WRAB				pmax	pmax		
	comp=Z,28nm,1.7s						
WRAB	Tennant Creek	133.36	214		PKPdf	13 19 14.0	-1.2
WB0	Warramunga Arr	133.48	214		PKPdf	13 19 15.4	-0.1
BRVK	Borovoye	135.38	33	i PKIKP	PKPdf	13 19 18.5	+0.6
YAK	Yakutsk	135.45	346	i PKIKP	PKiKP	13 19 20.8	+1.5
YAK				pmax	pmax		
	comp=Z,11nm,1.0s						
YAK	Yakutsk	135.45	346	IAMs_20	IAMs_20	14 23 40.3	
	comp=Z,4µm,20.0s						
HRA	Herat	136.25	61		PKPdf	13 19 19.9	-0.6
MANU	Manus Island	136.58	244	IAMs_20	IAMs_20	14 09 26.3	
	comp=Z,3µm,21.0s						
PSAA3	Pilbara Seismi	137.52	195	IAMs_20	IAMs_20	14 19 54.7	

	comp=Z,5µm,19.0s						
PSAC2	**Pilbara Seismi**	**137.52**	**195**	IAMs_20	IAMs_20	14 19 54.8	
	comp=Z,5µm,20.0s						
PSAA2	**Pilbara Seismi**	**137.54**	**195**	IAMs_20	IAMs_20	14 20 03.1	
	comp=Z,5µm,20.0s						
NKL	**Nikolayevsk**	**138.76**	**331**	*i* PKIKP	**PKiKP**	**13 19 26.1**	**-0.2**
NKL				*e*		13 22 18.2	
FITZ	**Fitzroy Crossi**	**138.95**	**204**		**PKPdf**	**13 19 24.1**	**-1.6**
KAAM	**Kaadhehdhoo**	**139.81**	**114**	IAMs_20	IAMs_20	14 17 31.9	
	comp=Z,5µm,20.0s						
CHM	**Chimkent**	**139.93**	**47**	PKIKP	**PKiKP**	**13 19 31.1**	**+2.0**
KK31	**Karatay Array**	**140.25**	**46**	PKIKP	**PKPdf**	**13 19 27.4**	**+0.1**
KK31	**Karatay Array**	**140.25**	**46**		**PKPdf**	**13 19 27.4**	**+0.1**
KKAR	**Karatay Array**	**140.25**	**46**	PKIKP	**PKPdf**	**13 19 26.5**	**-0.8**
KKAR	**Karatay Array**	**140.25**	**46**		**PKPdf**	**13 19 26.5**	**-0.8**
KURK	**Kurchatov**	**140.92**	**31**	PKIKP	**PKPdf**	**13 19 26.5**	**-1.7**
KURK	**Kurchatov**	**140.92**	**31**		**PKPdf**	**13 19 28.1**	**-0.1**
KURBB	**Kurchatov Arra**	**140.94**	**31**	PKP	**PKPdf**	**13 19 26.5**	**-1.7**
	comp=Z,1.6nm,0.7s,baz=302,slow=2.7,SNR=16						
KURBB				SKPbc	**SKPbc**	**13 23 04.8**	**-1.0**
	comp=Z,5.0nm,1.0s,baz=316,slow=3.9,SNR=4.0						
KURBB				SKKPbc	**SKKPab**	**13 31 31.4**	**-1.9**
	comp=Z,0.6nm,0.9s,baz=132,slow=4.8,SNR=4.4						
KURBB	**Kurchatov Arra**	**140.94**	**31**	PKIKP	**PKiKP**	**13 19 30.8**	**-0.1**
YUK	**Yuzh-Kuril'sk**	**141.00**	**317**	*i* PKHKP	PKPpre	13 19 19.8	
ZAA0	**Zalesovo Array**	**141.20**	**23**		**PKPdf**	**13 19 27.2**	**-1.4**
ZAA0				IAMs_20	IAMs_20	14 31 30.9	
	comp=Z,5µm,20.0s						
ZALV	**Zalesovo Beam**	**141.20**	**23**	PKP	**PKPdf**	**13 19 27.6**	**-1.0**
	comp=Z,8.4nm,0.7s,baz=316,slow=3.7,SNR=19						
ZALV	**Zalesovo Beam**	**141.20**	**23**	PKIKP	**PKPdf**	**13 19 26.5**	**-2.1**
ZALV	**Zalesovo Beam**	**141.20**	**23**		**PKPdf**	**13 19 26.5**	**-2.1**
YSS	**Yuzh-Sakhalins**	**141.46**	**322**	*e*PKHKP	PKPpre	13 19 11.3	
YSS				*e*		13 22 40.9	
YSS	**Yuzh-Sakhalins**	**141.46**	**322**	IAMs_20	IAMs_20	14 32 47.8	
	comp=Z,5µm,20.0s						
BTLS	**Baital**	**141.67**	**41**	*e*PKP	**PKPdf**	**13 19 27.7**	**-2.0**
BTLS				*e*PP	PP	13 22 43.6	+10
BTLS	**Baital**	**141.67**	**41**	*e*PKIKP	**PKPdf**	**13 19 27.7**	**-2.0**
BOD	**Bodaibo**	**141.88**	**356**	*e*PKIKP	**PKPdf**	**13 19 28.6**	**-1.1**
BOD				pmax	pmax		
	comp=Z,15nm,1.8s						
SEM	**Semipalatinsk**	**141.90**	**30**	*e*PKP	**PKPdf**	**13 19 28.6**	**-1.8**
SEM				*e*PP	**PP**	**13 22 33.8**	**-1.0**
SEM	**Semipalatinsk**	**141.90**	**30**	*e*PKIKP	**PKPdf**	**13 19 28.5**	**-1.8**
SEM				*e*		13 22 33.7	
GRNR	**Gornyy**	**142.31**	**331**	*e*PKIKP	**PKPdf**	**13 19 29.6**	**-1.1**
GRNR				*e*		13 22 41.8	
ARSB	**Arslanbob**	**142.64**	**47**	PKIKP	**PKPdf**	**13 19 30.5**	**-1.3**
ARSB	**Arslanbob**	**142.64**	**47**		**PKPdf**	**13 19 30.5**	**-1.3**
SGDS	**Sogindy**	**142.80**	**43**	*e*PKP	**PKPdf**	**13 19 30.6**	**-1.3**
SGDS				*e*PP	**PP**	**13 22 40.9**	**+0.3**
AAK	**Ala-Archa**	**143.09**	**44**	PKP	**PKPdf**	**13 19 31.1**	**-1.4**
	comp=Z,10nm,0.8s,baz=188,slow=0.6,SNR=25						
AAK	**Ala-Archa**	**143.09**	**44***c*	*i*PKIKP	**PKPdf**	**13 19 32.5**	**-0.1**
AAK	**Ala-Archa**	**143.09**	**44**		PKPbc	13 19 30.8	+1.4
BHUJ	**Bhuj**	**143.27**	**77**	*e*x	PKPab	13 19 27.6	-1.3
BHUJ				IAmb	IAmb	13 19 34.9	
	comp=Z,40nm,0.5s						
BHUJ				*i* PP	**PP**	**13 22 46.9**	**+2.6**
ZEA	**Zeya**	**143.37**	**342**	*i* PKIKP	**PKPdf**	**13 19 31.2**	**-1.3**
ZEA				*e*		13 25 56.0	
ZEA				pmax	pmax		
	comp=Z,1µm,9.0s						
ZEA				pmax	pmax		
	comp=Z,190nm,2.5s						
KUU	**Kurty**	**143.66**	**41**	*e*PKP	PKPbc	13 19 31.9	+1.1
KUU				*e*PP	**PP**	**13 22 48.6**	**+3.0**
KUU	**Kurty**	**143.66**	**41**	*e*PKIKP	PKPbc	13 19 31.8	+1.0
KUU				*e*		13 22 48.5	
AAA	**Alma-Ata**	**144.37**	**42**	*e*PKP	**PKPdf**	**13 19 34.8**	**+0.1**
AAA				*e*PP	**PP**	**13 22 50.6**	**+0.7**
AAA	**Alma-Ata**	**144.37**	**42**	*e*PKIKP	**PKPdf**	**13 19 34.7**	**+0.1**
AAA				*e*		13 22 50.6	
MDOK	**Medeo**	**144.48**	**42**	*e*PKP	PKPbc	13 19 33.5	0.0
MDOK				*e*PP	**PP**	**13 22 49.2**	**-1.5**
MDOK				*e*SS	SS	13 41 38.0	-0.3
MDOK	**Medeo**	**144.48**	**42**	*e*PKIKP	PKPbc	13 19 33.5	0.0
MDOK				*e*		13 22 49.1	
MDOK				*e*SS	SS	13 41 38.0	-0.3
TNSS	**Tian-Shan**	**144.48**	**42**	*e*PKP	**PKPab**	**13 19 33.3**	**-0.3**
TNSS	**Tian-Shan**	**144.48**	**42**	*e*PKIKP	**PKPab**	**13 19 33.3**	**-0.3**
MAKZ	**Makanchi**	**145.16**	**33**	PKIKP	**PKPbc**	**13 19 34.2**	**-1.2**
MAKZ				MLR	MLR		
	comp=Z,9µm,20.0s						
MAKZ	**Makanchi**	**145.16**	**33**		**PKPbc**	**13 19 34.2**	**-1.2**
GUMO	**Guam**	**145.19**	**265**	IAMs_20	IAMs_20	14 17 37.6	
	comp=Z,3µm,19.0s						
KPKS	**Kokpek**	**145.33**	**40**	*e*PKP	**PKPbc**	**13 19 36.0**	**-0.1**
KPKS	**Kokpek**	**145.33**	**40**	*e*PKIKP	**PKPbc**	**13 19 36.0**	**-0.1**
MK31	**Makanchi Array**	**145.33**	**33**	*i* PKP2	**PKPbc**	**13 19 34.1**	**-1.9**
MK31	**Makanchi Array**	**145.33**	**33**		**PKPbc**	**13 19 34.7**	**-1.2**
MKAR	**Makanchi Array**	**145.33**	**33**	PKPbc	**PKPbc**	**13 19 35.1**	**-0.9**
	comp=Z,32nm,1.0s,baz=318,slow=3.4,SNR=52						
MKAR	**Makanchi Array**	**145.33**	**33**	PKIKP	**PKPbc**	**13 19 34.9**	**-1.0**
MKAR	**Makanchi Array**	**145.33**	**33**		**PKPbc**	**13 19 34.9**	**-1.0**
NIL	**Nilore**	**145.37**	**59**	PKIKP	**PKPbc**	**13 19 35.5**	**-1.0**
NIL	**Nilore**	**145.37**	**59**		**PKPbc**	**13 19 35.5**	**-1.0**
SATY	**Saty**	**145.38**	**41**	*e*PKP	**PKPbc**	**13 19 35.4**	**-1.0**
SATY				*e*PP	**PP**	**13 22 58.8**	**+2.8**
SATY	**Saty**	**145.38**	**41**	*e*PKIKP	**PKPbc**	**13 19 35.4**	**-1.0**
SATY				*e*		13 22 58.7	
KSH	**Kashi**	**145.47**	**48**	PKPbc	**PKPab**	**13 19 37.0**	**0.0**
KSH				PP	**PP**	**13 22 59.4**	**+2.6**
KSH				PKS		13 23 14.3	
KSH				SKKS		13 29 48.1	
KSH				AMB	AMB		
	comp=Z,2µm,4.7s						
KSH				LR	LR		
	comp=Z,2µm,16.8s						
KSH				LR	LR		
	comp=Z,780nm,11.2s						
KSH				LR	LR		
	comp=Z,5µm,18.5s						
KLR	**Kul'dur**	**145.48**	**333**	*i* PKP2	**PKPdf**	**13 19 35.0**	**-1.3**
DGZ	**Jazzator, Alta**	**145.55**	**25**	*i* PKIKP	**PKPab**	**13 19 38.2**	**+1.2**
UZB	**Uzynbulak**	**145.71**	**41**	*e*PKP	**PKPdf**	**13 19 36.9**	**-0.3**
UZB	**Uzynbulak**	**145.71**	**41**	*e*PKIKP	**PKPdf**	**13 19 36.8**	**-0.3**
PDGK	**Podgornoye**	**145.90**	**40**	PKP2	**PKPbc**	**13 19 37.9**	**-0.1**
SHLS	**Shalkode**	**145.98**	**40**	*e*PKP	**PKPab**	**13 19 39.4**	**+0.6**
SHLS	**Shalkode**	**145.98**	**40**	*e*PKP2	**PKPab**	**13 19 39.3**	**+0.6**
COCO	**West Island**	**145.99**	**158**	IAMs_20	IAMs_20	14 25 05.4	
	comp=Z,4µm,19.0s						
TEY	**Ternei**	**146.05**	**324**	⇓*e*PKP2	**PKPbc**	**13 19 37.9**	**-0.3**
TEY				pmax	pmax		
	comp=Z,20nm,0.9s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.7s						
ZSN	**Zaisan**	**146.14**	**30**	*e*PKP	**PKPab**	**13 19 39.2**	**+0.1**
ZSN	**Zaisan**	**146.14**	**30**	*e*PKP2	**PKPab**	**13 19 39.1**	**+0.1**
GOA	**Goa**	**146.19**	**92**	⇑*i*P	**PKiKP**	**13 19 41.5**	**-1.2**
GOA				IAMs_20	IAMs_20	14 20 32.2	
	comp=Z,9µm,22.6s						
POO	**Poona**	**146.76**	**86**	⇓*i*P	PKPdf	13 19 29.0	-10
	comp=Z,50nm,1.0s						
TRD	**Trivandrum**	**146.98**	**105**	*i* P	**PKiKP**	**13 19 44.4**	**0.0**
TRD				*e*x	x	13 23 01.2	
TRD				IAMs_20	IAMs_20	14 27 59.6	
	comp=Z,9µm,18.5s						
SOEI	**Soe**	**147.01**	**208**		**PKPbc**	**13 19 42.0**	**0.0**
IRK	**Irkutsk**	**147.43**	**5**	*e*PKP2	**PKPbc**	**13 19 41.5**	**-0.5**
IRK				pmax	pmax		
	comp=Z,490nm,3.2s						
CIT	**Chita**	**147.67**	**355**	*e*PKP2	**PKPbc**	**13 19 43.0**	**+0.3**
CIT				*e*		13 23 07.8	
FAKI	**Fak Fak**	**147.91**	**228**		**PKPbc**	**13 19 44.7**	**+0.3**
FAKI				IAMs_20	IAMs_20	14 18 16.8	
	comp=Z,5µm,21.0s						
TLY	**Talaya**	**147.92**	**6***c*	*i*PKP2	**PKPbc**	**13 19 44.3**	**+0.9**
TLY				*e*		13 23 12.3	
TLY				*e*SS	SS	13 42 10.0	-5.3
TLY				pmax	pmax		
	comp=Z,174nm,2.0s						
TLY	**Talaya**	**147.92**	**6**	IAMs_20	IAMs_20	14 38 43.8	
	comp=Z,4µm,18.0s						
DHRM	**DHARAMSHALA**	**148.20**	**60**	*e*P	**PKPbc**	**13 19 44.1**	**-0.9**
BHK	**Bhakra**	**148.50**	**62**	*e*x	**PKPab**	**13 19 50.0**	**+1.1**
MMRI	**Maumere**	**148.88**	**206**		**PKPbc**	**13 19 46.4**	**-0.5**
MMRI				IAMs_20	IAMs_20	14 17 55.9	
	comp=Z,4µm,21.0s						
USRK	**Ussuriysk Ar.**	**149.07**	**327**	PKPbc	**PKPbc**	**13 19 46.6**	**0.0**
	comp=Z,34nm,1.0s,baz=20,slow=2.0,SNR=18						
USRK	**Ussuriysk Ar.**	**149.07**	**327**		**PKPbc**	**13 19 46.2**	**-0.3**
ZAK	**Zakamensk**	**149.16**	**7**	*e*PKIKP	**PKPdf**	**13 19 42.8**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,52nm,1.1s						
KLRI	**Killari**	**149.28**	**88**	*e*PKPbc	**PKPdf**	**13 19 40.8**	**-2.8**
KLRI				IVMs_BB	IVMs_BB	14 27 26.0	
	comp=Z,2µm,19.4s						
URV	**Uravakonda**	**149.30**	**94**	*e*PKPbc	**PKPdf**	**13 19 40.2**	**-3.5**
URV				IVMs_BB	IVMs_BB	14 24 37.4	
	comp=Z,2µm,17.9s						
HIA	**Hailar**	**149.40**	**346**	PKP2	**PKPbc**	**13 19 46.3**	**-0.9**
HIA	**Hailar**	**149.40**	**346**		**PKPbc**	**13 19 46.3**	**-0.9**
MJAR	**Matsushiro Arr**	**149.54**	**309**	PKPbc	**PKPbc**	**13 19 48.1**	**+0.1**
	comp=Z,14nm,0.9s,baz=124,slow=1.2,SNR=22						
MJAR	**Matsushiro Arr**	**149.54**	**309**		**PKPbc**	**13 19 47.8**	**-0.2**
MAJO	**Matsushiro**	**149.54**	**309**	PKP2	**PKPbc**	**13 19 48.1**	**+0.1**
MAJO	**Matsushiro**	**149.54**	**309**		**PKPbc**	**13 19 48.0**	**+0.1**
MAT	**Matsushiro**	**149.54**	**309**	PKP	**PKPbc**	**13 19 48.1**	**+0.1**
MJB9	**Matsu-Tunnel**	**149.54**	**309**		**PKPbc**	**13 19 47.5**	**-0.5**
NDI	**New Delhi**	**149.74**	**67**	*e*P	**PKPbc**	**13 19 48.0**	**-0.7**
PALK	**Pallekele**	**149.81**	**110**	PKPbc	**PKPbc**	**13 19 49.0**	**-0.3**
	comp=Z,21nm,0.9s,baz=242,slow=2.2,SNR=16						
PALK	**Pallekele**	**149.81**	**110***c*	*i*PKP2	**PKiKP**	**13 19 50.3**	**0.0**
PALK	**Pallekele**	**149.81**	**110**		**PKPbc**	**13 19 48.7**	**-0.6**
MDJ	**Mudanjiang**	**149.95**	**330**	P	**PKiKP**	**13 19 51.0**	**+1.4**
SIJI	**Sorong**	**150.05**	**229**	PKPbc	**PKiKP**	**13 19 50.8**	**-0.1**
	comp=Z,45nm,0.7s,baz=20,slow=3.5,SNR=6.4						
DDI	**Dehra Dun**	**150.13**	**63**	*e*P	**PKPbc**	**13 19 48.4**	**-1.3**
DDI				IAmb	IAmb	13 20 04.5	
	comp=Z,224nm,0.6s						
WMQ	**Urumqi**	**150.14**	**32**	*e*PKPbc	**PKPdf**	**13 19 43.1**	**-1.2**
WMQ				pPKP	PKPab	13 19 53.3	-1.9
WMQ				sPKP		13 19 58.3	
WMQ				PP	**PP**	**13 23 26.3**	**+2.9**
WMQ				AMB	AMB		
	comp=Z,1µm,11.6s						
WMQ				LR	LR		
	comp=Z,3µm,18.3s						
WMQ				LR	LR		
	comp=Z,5µm,20.9s						
WMQ				LR	LR		
	comp=Z,8µm,18.5s						
BHPL	**Bhopal**	**150.41**	**78**	*e*P	**PKPbc**	**13 19 49.6**	**-0.9**
BHPL				IAMs_20	IAMs_20	14 29 16.8	
	comp=Z,9µm,22.0s						
INU	**Inuyama**	**150.92**	**308**	IAMs_20	IAMs_20	14 27 26.4	
	comp=Z,4µm,20.0s						
HYB	**Hyderabad**	**151.01**	**90**	*i* PKP	**PKPdf**	**13 19 45.0**	**-1.3**
HYB	**Hyderabad**	**151.01**	**90**	*e*P	**PKPdf**	**13 19 46.0**	**-0.3**
HYB				IAMs_20	IAMs_20	14 22 56.8	
	comp=Z,11µm,21.2s						
HYBB	**Hyderabad (bro**	**151.01**	**90**	*e*PKPbc	**PKPdf**	**13 19 44.6**	**-1.7**
HYBB				IVMs_BB	IVMs_BB	14 24 26.5	
	comp=Z,2µm,20.0s						
SRSP	**Sriramsagar**	**151.03**	**87**	*e*PKPdf	**PKPdf**	**13 19 38.9**	**-7.3**
SRSP				IVMs_BB	IVMs_BB	14 32 37.7	
	comp=Z,1µm,17.4s						
SRLM	**Srisailam**	**151.09**	**92**	*e*PKPbc	**PKPdf**	**13 19 45.1**	**-1.3**
SRLM				IVMs_BB	IVMs_BB	14 30 10.3	
	comp=Z,1µm,16.0s						
SKHT	**Srikalahasti**	**151.29**	**98**	*e*PKPbc	**PKPdf**	**13 19 45.5**	**-1.2**
SKHT				IVMs_BB	IVMs_BB	14 28 27.1	
	comp=Z,887nm,17.9s						
JAGI	**Jajag, Banyuwa**	**151.44**	**191**		**PKPdf**	**13 19 47.2**	**+0.1**
JAGI				IAMs_20	IAMs_20	14 29 05.2	
	comp=Z,3µm,19.0s						
NJS	**Nagarjunasagar**	**151.57**	**92**	*e*PKiKP	**PKPdf**	**13 19 46.9**	**-0.2**
NJS				IVMs_BB	IVMs_BB	14 30 35.7	
	comp=Z,1µm,17.3s						
MDRS	**Chennai**	**151.59**	**99**	*e*P	**PKPdf**	**13 19 48.4**	**+1.2**
MDRS				*i* PP	**PP**	**13 23 30.9**	**-2.3**
NGP	**Nagpur**	**151.88**	**82**	*e*P	**PKPdf**	**13 19 49.4**	**+1.9**
RPR	**Rampur**	**151.92**	**87**	*e*PKPbc	**PKPdf**	**13 19 47.0**	**-0.6**
SONM	**Songino Array**	**151.97**	**4**	PKP	**PKPdf**	**13 19 46.9**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=227,slow=1.1,SNR=10						
SONM				PKPbc	**PKPbc**	**13 19 53.2**	**-0.3**
	comp=Z,16nm,1.0s,baz=321,slow=1.8,SNR=26						
SONM	**Songino Array**	**151.97**	**4**	PKIKP	**PKPdf**	**13 19 46.1**	**-0.9**
SONM	**Songino Array**	**151.97**	**4**		**PKPdf**	**13 19 46.1**	**-0.9**
ULN	**Ulaanbaatar**	**151.98**	**3**	PKIKP	**PKPdf**	**13 19 47.0**	**-0.1**
ULN	**Ulaanbaatar**	**151.98**	**3**		**PKPdf**	**13 19 47.0**	**-0.1**
ADKI	**Addanki**	**152.05**	**93**	*e*PKPdf	**PKPdf**	**13 19 41.1**	**-6.7**
ADKI				IVMs_BB	IVMs_BB	14 27 47.7	
	comp=Z,1µm,19.1s						
UGM	**Wanagama**	**152.40**	**183**	IAMs_20	IAMs_20	14 25 29.3	
	comp=Z,3µm,20.0s						
CN2	**Changchun**	**152.43**	**334**	*e*PKPbc	**PKPdf**	**13 19 48.0**	**+0.3**
CN2				*e*PP	**PP**	**13 23 41.0**	**+4.7**
CN2				*e*SS	SS	13 43 10.4	+4.2
CN2				AMB	AMB		
	comp=Z,1µm,9.0s						
CN2				LR	LR		
	comp=Z,4µm,21.0s						
CN2				LR	LR		
	comp=Z,1µm,21.0s						
CN2				LR	LR		
	comp=Z,4µm,22.0s						
GGR	**Gangavaram**	**152.63**	**89**	*e*PKiKP	**PKPdf**	**13 19 49.3**	**+0.5**
GGR				IVMs_BB	IVMs_BB	14 31 38.0	
	comp=Z,2µm,17.3s						
CISI	**Cisompet, Garu**	**152.77**	**177**	IAMs_20	IAMs_20	14 22 15.8	
	comp=Z,4µm,22.0s						
MYLAV	**Mylavaram**	**152.85**	**92**	*e*PKPdf	**PKPdf**	**13 19 42.5**	**-6.5**
MYLAV				IVMs_BB	IVMs_BB	14 23 10.4	
	comp=Z,995nm,19.8s						
SMRI	**Semarang**	**153.26**	**183**	IAMs_20	IAMs_20	14 22 01.3	
	comp=Z,4µm,22.0s						
LEM	**Lembang**	**153.48**	**177**	PKPbc	**PKiKP**	**13 19 58.4**	**+0.3**
	comp=Z,19nm,0.5s,baz=179,slow=3.0,SNR=2.2						
PVM	**Polavaram**	**153.88**	**91**	*e*PKPbc	**PKPdf**	**13 19 51.5**	**+1.0**
PVM				IVMs_BB	IVMs_BB	14 30 46.4	
	comp=Z,1µm,18.9s						
SNY	**Shenyang**	**154.84**	**334**	⇑PKPbc	**PKPdf**	**13 19 54.4**	**+3.3**
SNY				PP	PP	13 23 58.4	+8.6
SNY				SKKS		13 30 35.8	
SNY				SS	**SS**	**13 43 34.3**	**+1.9**
SNY				AMB	AMB		
	comp=Z,3µm,17.7s						
SNY				LR	LR		
	comp=Z,4µm,20.6s						
SNY				LR	LR		
	comp=Z,3µm,21.6s						
SNY				LR	LR		
	comp=Z,8µm,23.0s						
MNAI	**Manna**	**155.23**	**165**	IAMs_20	IAMs_20	14 23 10.1	
	comp=Z,4µm,22.0s						
LUWI	**Luwuk**	**155.28**	**215**	PKPdf	**PKPdf**	**13 19 52.0**	**-0.6**
LUWI					**PKPab**	**13 20 17.3**	**-0.1**
LUWI				IAMs_20	IAMs_20	14 22 43.5	
	comp=Z,3µm,21.0s						
DANN	**Dangsing**	**155.43**	**65**	*e*P	**PKPdf**	**13 19 52.6**	**-0.2**
	comp=Z,191nm,0.9s						
KSRS	**Korea Array**	**155.94**	**321**	PKP	**PKPdf**	**13 19 53.1**	**+0.3**
	comp=Z,8.0nm,1.0s,baz=51,slow=0.8,SNR=15						
KSAR	**Wonju Array Be**	**155.97**	**321**	PKIKP	**PKPdf**	**13 19 52.2**	**-0.6**
KSAR	**Wonju Array Be**	**155.97**	**321**		**PKPdf**	**13 19 52.2**	**-0.6**
CHLP	**Challavanipeta**	**156.35**	**89**	*e*PKPdf	**PKPdf**	**13 19 46.2**	**-7.7**
CHLP				IVMs_BB	IVMs_BB	14 27 35.7	
	comp=Z,1µm,18.1s						
INCN	**Inchon**	**156.67**	**323**	IAMs_20	IAMs_20	14 32 53.8	
	comp=Z,4µm,22.0s						
DMN	**Daman**	**156.77**	**66**	*e*P	**PKPdf**	**13 19 56.0**	**+1.5**
PKIN	**Phulchoki**	**157.03**	**66**	*e*P	**PKPdf**	**13 19 55.9**	**+1.0**
PKI	**Pulchoki**	**157.04**	**66**	*e*P	**PKPdf**	**13 19 54.3**	**-0.7**
GUN	**Gumba**	**157.35**	**65**	*e*P	**PKPdf**	**13 19 56.5**	**+1.1**
DL2	**Dalian**	**158.09**	**333**	PKP	**PKPdf**	**13 19 57.1**	**+1.6**
DL2				PP	PP	13 24 16.8	+8.9
DL2				AMB	AMB		
	comp=Z,1µm,9.6s						
DL2				LR	LR		
	comp=Z,2µm,19.6s						
DL2				LR	LR		
	comp=Z,2µm,21.1s						
DL2				LR	LR		
	comp=Z,4µm,20.0s						
BOK	**Bokaro**	**158.13**	**75**	*e*x	**PKPdf**	**13 19 54.9**	**-1.1**
BOK				*i* x	x	13 24 08.9	
BOK				IAMs_20	IAMs_20	14 31 34.0	
	comp=Z,7µm,18.0s						
BWNR	**Bhubaneshwar**	**158.16**	**85**	*e*P	**PKPdf**	**13 19 58.9**	**+2.9**
BWNR				*i* x	x	13 24 08.5	
RAMN	**Ramite**	**158.22**	**67**	*e*P	**PKPdf**	**13 19 55.3**	**-1.0**
	comp=Z,37nm,0.8s						
GTA	**Gaotai**	**158.91**	**20**	PKP	**PKPdf**	**13 19 57.1**	**+0.4**
GTA				PP	**PP**	**13 24 13.8**	**+1.4**
GTA				SS	SS	13 44 18.3	+2.1
GTA				AMB	AMB		
	comp=Z,2µm,8.3s						
GTA				LR	LR		
	comp=Z,4µm,20.6s						
GTA				LR	LR		
	comp=Z,4µm,19.0s						
GTA				LR	LR		
	comp=Z,6µm,19.7s						
ODAN	**Odare**	**158.93**	**67**	*e*P	**PKPdf**	**13 19 57.0**	**-0.2**
HHC	**Hu-ho-hao-te**	**158.93**	**355**	*e*PKP	**PKPdf**	**13 19 53.1**	**-3.5**
HHC				PP	**PP**	**13 24 13.4**	**+1.2**
HHC				SS	SS	13 44 11.8	-4.0
HHC				AMB	AMB		
	comp=Z,1µm,6.3s						
HHC				LR	LR		
	comp=Z,1µm,20.6s						
HHC				LR	LR		
	comp=Z,2µm,20.1s						
HHC				LR	LR		
	comp=Z,2µm,19.4s						
BJI	**Beijing**	**158.94**	**345**	PKP	**PKPdf**	**13 20 00.9**	**+4.5**
BJI				AMB	AMB		
	comp=Z,2µm,8.0s						
TAPN	**Taplejung**	**159.07**	**65**	*e*P	**PKPdf**	**13 19 56.1**	**-1.3**
BTO	**Baotou**	**159.27**	**358**	*e*PKP	**PKPdf**	**13 19 59.3**	**+2.3**
DAV	**Davao City (W)**	**159.56**	**234**	IAMs_20	IAMs_20	14 23 05.3	
	comp=Z,4µm,20.0s						
GTK	**Tadong**	**159.84**	**64**	*e*P	**PKPdf**	**13 19 58.0**	**-0.1**
GTK				*i* x	x	13 24 17.0	
KCP	**Kidapawan**	**159.89**	**233**	⇓*i*P	**PKPdf**	**13 20 00.7**	**+2.3**
RPSI	**Rantau Prapat**	**160.31**	**149**	PKPdf	**PKPdf**	**13 19 58.5**	**-0.3**
RPSI					**PKPab**	**13 20 38.9**	**-0.3**
PSI	**Prapat**	**160.40**	**148**	PKP	**PKPdf**	**13 19 59.9**	**+0.8**
	comp=Z,6.3nm,0.9s,baz=197,slow=2.6,SNR=6.7						
PSI				PKPab	**pPKPab**	**13 20 40.0**	**-0.1**
	comp=Z,25nm,0.9s,baz=194,slow=5.4,SNR=3.9						
PSI	**Prapat**	**160.40**	**148**	PKIKP	**PKPdf**	**13 19 58.5**	**-0.6**
PSI						13 20 38.9	
CMBY	**CAMPBELL BAY**	**160.56**	**129**	*e*P	**PKPdf**	**13 20 00.2**	**+1.2**
LSA	**Lhasa**	**161.02**	**55**	PKIKP	**PKPdf**	**13 19 57.6**	**-2.2**
LSA	**Lhasa**	**161.02**	**55**	PKPdf	**PKPdf**	**13 19 57.6**	**-2.2**
TIY	**Taiyuan**	**161.93**	**351**	*e*PKP	**PKPdf**	**13 20 03.5**	**+3.5**
TIY				PP	**PP**	**13 24 30.5**	**+2.2**
TIY				SS	SS	13 44 46.3	-1.1
TIY				AMB	AMB		
	comp=Z,2µm,8.4s						
TIY				LR	LR		
	comp=Z,4µm,21.8s						
TIY				LR	LR		
	comp=Z,3µm,16.4s						
TIY				LR	LR		
	comp=Z,6µm,20.9s						
TIA	**Tai'an**	**162.20**	**338**	PKP	**PKPdf**	**13 20 00.5**	**+0.3**
TIA				PP	**PP**	**13 24 33.3**	**+3.3**
TIA				SS	SS	13 44 46.6	-3.9
TIA				AMB	AMB		
	comp=Z,1µm,8.6s						
TIA				LR	LR		
	comp=Z,4µm,21.0s						
TIA				LR	LR		
	comp=Z,2µm,21.8s						
TIA				LR	LR		
	comp=Z,3µm,26.7s						
PBA	**Port Blair**	**162.33**	**115**	*e*P	PKPdf	13 20 03.2	+2.4
PBA				*i* x	x	13 24 32.9	
SBUM	**Sibu**	**162.46**	**191**	PKPdf	**PKPdf**	**13 20 00.7**	**-0.4**
SHL	**Shillong**	**163.16**	**67**	*e*P	**PKPdf**	**13 20 02.2**	**+0.5**
SHL				*i* PP	**PP**	**13 24 36.7**	**-0.2**
LZH	**Lanzhou**	**163.16**	**15**	⇑PKP	**PKPdf**	**13 20 05.3**	**+4.0**
LZH				pPKP	sPKPdf	13 20 10.8	+8.9
LZH				PP	**PP**	**13 24 37.3**	**+2.2**
LZH				SS	SS	13 45 03.8	+3.3
LZH				AMB	AMB		
	comp=Z,3µm,9.6s						
LZH				LR	LR		
	comp=Z,5µm,17.9s						
LZH				LR	LR		
	comp=Z,4µm,18.4s						
LZH				LR	LR		
	comp=Z,6µm,19.5s						
DGPR	**DIGLIPUR**	**163.19**	**111**	*e*P	**PKPdf**	**13 20 02.9**	**+1.2**
DGPR				*i* x	x	13 24 41.0	
SSE	**Sheshan**	**164.33**	**318**	PKP	**PKPdf**	**13 19 59.0**	**-3.3**
SSE				SS	SS	13 45 13.8	0.0
SSE				AMB	AMB		
	comp=Z,410nm,9.5s						
SSE				LR	LR		
	comp=Z,2µm,22.3s						
SSE				LR	LR		
	comp=Z,2µm,19.5s						
NJ2	**Nanjing**	**164.98**	**326**	*e*PKP	**PKPdf**	**13 20 02.3**	**-0.6**
XAN	**Xi'an**	**165.84**	**0**	PKP	**PKPdf**	**13 20 05.3**	**+1.7**
XAN				pPKP	sPKPdf	13 20 15.3	+11
XAN				PKPab	**PKPab**	**13 21 02.8**	**-0.1**
XAN				PP	**PP**	**13 24 50.6**	**+1.8**
XAN				SKS	**SKSdf**	**13 27 04.3**	**-4.4**
XAN				SKKS	**SKKSac**	**13 31 32.8**	**-5.7**
XAN				AMB	AMB		
	comp=Z,3µm,10.6s						
XAN				LR	LR		
	comp=Z,2µm,19.0s						
XAN				LR	LR		
	comp=Z,4µm,18.4s						
XAN				LR	LR		
	comp=Z,6µm,24.4s						
CD2	**Chengdu**	**167.97**	**22**	⇑*i*PKP	**PKPdf**	**13 20 09.3**	**+4.0**
CD2				pPKP	sPKPdf	13 20 12.0	+6.2
CD2				PP	**PP**	**13 25 02.0**	**+1.9**
CD2				SKS	**SKSdf**	**13 27 07.8**	**-2.3**
CD2				SS	**SS**	**13 45 51.3**	**+1.7**
CD2				AMB	AMB		
	comp=Z,7µm,9.4s						
CD2				LR	LR		
	comp=Z,9µm,20.2s						
CD2				LR	LR		
	comp=Z,10µm,19.6s						
CD2				LR	LR		
	comp=Z,14µm,20.0s						
WHN	**Wuhan**	**168.30**	**337**	⇑PKP	**PKPdf**	**13 20 10.3**	**+4.9**
WHN				PP	**PP**	**13 25 03.4**	**+1.7**
WHN				AMB	AMB		
	comp=Z,3µm,9.9s						
WHN				LR	LR		
	comp=Z,5µm,15.2s						
WHN				LR	LR		
	comp=Z,7µm,17.4s						
WHN				LR	LR		
	comp=Z,18µm,21.1s						
QZH	**Quanzhou**	**169.81**	**302**	*e*PKP	**PKPdf**	**13 20 04.8**	**-1.8**
QZH				PP	**PP**	**13 25 13.3**	**+2.6**
QZH				SKKS		13 31 59.1	
QZH				SS	**SS**	**13 46 10.3**	**-0.1**
QZH				AMB	AMB		
	comp=Z,2µm,6.2s						
QZH				LR	LR		
	comp=Z,3µm,19.9s						
QZH				LR	LR		
	comp=Z,2µm,17.1s						
QZH				LR	LR		
	comp=Z,4µm,17.9s						
CMAR	**Chiang Mai Arr**	**170.34**	**96**	PKP	**PKPdf**	**13 20 06.9**	**-0.2**
	comp=Z,3.3nm,0.9s,baz=256,slow=2.0,SNR=12						
CMAR				PKPab	**PKPab**	**13 21 23.3**	**-0.2**
	comp=Z,6.6nm,0.8s,baz=253,slow=6.4,SNR=11						
CMAR	**Chiang Mai Arr**	**170.34**	**96**	PKIKP	**PKPdf**	**13 20 06.3**	**-0.8**
CMAR	**Chiang Mai Arr**	**170.34**	**96**		**PKPdf**	**13 20 06.3**	**-0.8**
CHTO	**Chiang Mai**	**170.40**	**94**	PKIKP	**PKPdf**	**13 20 06.8**	**-0.3**
CHTO	**Chiang Mai**	**170.40**	**94**		**PKPdf**	**13 20 06.8**	**-0.3**
PBKT	**Sadao Pong**	**171.66**	**112**		**PKPdf**	**13 20 07.0**	**-0.8**
KMI	**Kunming**	**172.13**	**47**	PKP	**PKPdf**	**13 20 10.8**	**+2.7**
GYA	**Guiyang**	**173.04**	**18**	*i* PKP	**PKPdf**	**13 20 09.3**	**+1.0**
GYA				PKPab	**pPKPab**	**13 21 35.3**	**-0.1**
GYA				PKS	**PKSdf**	**13 23 37.8**	**-3.0**
GYA				PP	**PP**	**13 25 30.1**	**+4.7**
GYA				SKKS		13 32 11.3	
GYA				SS	**SS**	**13 46 42.5**	**+2.9**
GYA				AMB	AMB		
	comp=Z,2µm,7.8s						
GYA				LR	LR		
	comp=Z,2µm,19.5s						
GYA				LR	LR		
	comp=Z,3µm,19.3s						
GYA				LR	LR		
	comp=Z,2µm,20.3s						
GZH	**Guangzhou**	**174.85**	**310**	PKP	**PKPdf**	**13 20 10.8**	**+2.0**

GZH				PP	PP	13 25 37.8	+2.5
GZH				LR	LR		
	comp=Z,5µm,19.6s						
GZH				LR	LR		
	comp=Z,5µm,20.0s						
QIZ	Qiongzhong	178.92	223	PKP	PKPdf	13 20 13.8	+4.1
QIZ				PP	PP	13 25 57.1	+2.8
QIZ				SS	SS	13 47 38.3	+1.2
QIZ				AMB	AMB		
	comp=Z,2µm,6.7s						
QIZ				LR	LR		
	comp=Z,3µm,18.8s						
QIZ				LR	LR		
	comp=Z,4µm,19.4s						
QIZ				LR	LR		
	comp=Z,4µm,21.1s						

GUC ***22*** *13:14:35.6±0.6, 19°.72S×70°.86W, h43^{km}±4^{km}, ML4.0*
IDC ***22*** *13:14:46.3±2.4, 20°.01S×69°.85W, h85^{km}±23^{km}, mb3.4/4, mb1 3.7/7, mb1mx3.5/23, mbtmp3.8/7, Error ellipse: s-maj=37.1km s-min=20.8km az=95.0*
ISC 22 13:14:33.6±1.9**, 19°.70S**±0°.05×**70°.91W**±0°.10**, h18**^{km}±6^{km}**, n20,** σ**0**^{s}**.76**/22**, mb3.9**/3**, 2C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	0.75	82	⇓iP	Pb	13 14 48.5	+0.3
PSGC				i S	Sb	13 14 58.7	+0.6
PSGC				IAML		13 14 59.3	
	comp=N,12µm,0.3s						
TA01	Diego Aracena	1.10	142	eP	Pn	13 14 54.2	+0.1
TA01				eS	Sb	13 15 08.3	+0.2
TA01				IAML		13 15 11.8	
	comp=E,6µm,0.6s						
PB11	IPOC Station P	1.18	93	eP	Pb	13 14 55.9	+0.2
PB11				i S	Sb	13 15 11.2	+0.5
PB11				IAML		13 15 14.6	
	comp=N,11µm,0.2s						
PB12	IPOC Station P	1.21	27	eP	Pb	13 14 56.6	+0.5
PB12				eS	Sg	13 15 13.2	+0.2
PB12				IAML		13 15 15.1	
	comp=N,3µm,0.4s						
PATCX	Punta Patache	1.32	148	⇑iP	Pn	13 14 57.4	+0.1
PATCX				eS	Sn	13 15 13.4	-1.1
AP01	Chacalluta	1.43	22	eP	Pb	13 15 00.1	+0.4
GO01	Chusmiza	1.62	89	eP	Pb	13 15 03.0	-0.2
PB08	IPOC Station P	1.71	105	⇓iP	Pb	13 15 04.2	-0.6
PB02	IPOC Station P	1.87	150	eP	Pn	13 15 05.2	+0.4
PB01	IPOC Station P	1.89	135	⇑iP	Pn	13 15 06.0	+0.9
PB16	IPOC Station P	1.90	45	eP	Pb	13 15 07.4	-0.7
PB07	IPOC Station P	2.23	155	eP	Pn	13 15 10.0	+0.1
LVC	Limon Verde	3.44	148	P	Pn	13 15 27.5	+0.8
	comp=N,5.7nm,0.3s,baz=347,slow=11,SNR=15						
LPAZ	La Paz	4.30	38	P	Pb	13 15 47.1	-2.0
	comp=N,1.7nm,0.3s,baz=210,slow=6.4,SNR=20						
SIV	San Ignacio	10.07	70	P	Pn	13 16 57.4	0.0
	comp=N,2.1nm,0.3s,baz=268,slow=12,SNR=17						
PLCA	Paso Flores	20.97	179	P	Pn	13 19 20.4	+2.1
	comp=N,2.5nm,0.9s,baz=16,slow=10,SNR=5.5						
TXAR	Lajitas Array	58.09	326	P	P	13 24 35.4	+9.2
	comp=N,0.2nm,0.6s,baz=150,slow=9.3,SNR=4.5						
TORD	Torodi Ar. Bea	78.54	72	P	P	13 26 34.0	-0.5
	comp=N,0.9nm,0.7s,baz=248,slow=4.3,SNR=5.2						
YKA	Yellowknife Ar	88.88	341	P	P	13 27 35.3	+9.0
	comp=N,0.5nm,0.6s,baz=138,slow=4.7,SNR=9.6						
MKAR	Makanchi Array	145.22	33	PKP	PKPdf	13 34 11.2	+1.0
	comp=N,0.4nm,0.7s,baz=326,slow=3.9,SNR=3.2						

NNC ***22*** *13:14:38.3±1.9, 41°.42N×78°.93E, h0^{km}, mb3.1, mpv2.7, Error ellipse: s-maj=13.1km s-min=9.8km az=171.0*
SOME ***22*** *13:14:38.6, 41°.53N×78°.95E, h5^{km}*
KRNET ***22*** *13:14:40.7±0.1, 41°.50N×78°.91E, h9^{km}, mb2.3*
ISC 22 13:14:41.3±2.4**, 41°.55N**±0°.08×**78°.93E**±0°.06**, h6**^{km}±13^{km}**, n29,** σ**1**^{s}**.12**/48**, 14C-6D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	Przheval'sk	1.01	337	⇑iP	Pg	13 15 00.9	+0.2
	baz=40						
PRZ				⇑iS	Sb	13 15 15.3	+0.4
	baz=40						
KDJ	Kajisay	1.43	294	⇑iP	Pn	13 15 07.6	-0.3
	baz=97						
KDJ				⇑iS	Sg	13 15 27.5	+0.3
	baz=97						
ANVS	Anan'yevo	1.55	323	⇑iP	Pb	13 15 10.4	0.0
	baz=25						
ANVS				⇑iS	Sg	13 15 32.5	+1.5
	baz=25						
SATY	Saty	1.56	346	eP	Pn	13 15 09.2	-0.4
	2.3nm,0.4s						
SATY				eS	Sg	13 15 31.0	-0.3
	15nm,0.2s						
SATY	Saty	1.56	346	P	Pn	13 15 09.8	+0.2
	2.5nm,0.5s						
SATY				S	Sg	13 15 32.7	+1.4
	12nm,0.1s						
UZB	Uzynbulak	1.60	2	eP	Pn	13 15 09.1	-1.1
	1.1nm,0.5s						
UZB				eS	Sn	13 15 30.8	-0.4
	3.9nm,0.3s						
SHLS	Shalkode	1.65	14	eP	Pb	13 15 11.9	-0.3
	4.0nm,0.2s						
SHLS				eS	Sg	13 15 35.7	+1.3
	30nm,0.6s						
PDGK	Podgornoye	1.82	13	⇑Pg	Pn	13 15 13.8	+0.5
	1.2nm,0.4s						
PDGK				⇑Lg	Lg	13 15 41.5	
	6.8nm,0.4s						
KPKS	Kokpek	1.92	355	eP	Pb	13 15 15.7	-1.1
	6.2nm,0.1s						
KPKS				eS	Sg	13 15 42.2	-0.9
	19nm,0.4s						
TNSS	Tian-Shan	2.09	316	eP	Pb	13 15 19.1	-0.7
	4.6nm,0.4s						
TNSS				eS	Sg	13 15 48.4	0.0
	5.3nm,0.6s						
TNSS	Tian-Shan	2.09	316	Pg	Pb	13 15 19.1	-0.7
	4.6nm,0.4s						
TNSS				Lg	Lg	13 15 48.4	
	5.3nm,0.6s						
ULHL	Ulahol	2.12	290	⇑eP	Pb	13 15 19.3	-0.9
	baz=91						
ULHL				⇑iS	Sg	13 15 48.8	-0.7
	baz=91						
MDOK	Medeo	2.13	320	⇓iP	Pb	13 15 19.4	-0.9
	3.7nm,0.4s						
MDOK				⇓iS	Sg	13 15 49.4	-0.3
	9.1nm,0.8s						
MDOK	Medeo	2.13	320	Pg	Pn	13 15 18.2	+0.7
	2.9nm,0.6s						
MDOK				Lg	Lg	13 15 49.8	
	8.9nm,0.6s						
MDOK	Medeo	2.13	320	Pg	Pb	13 15 19.4	-0.9
	3.7nm,0.4s						
MDOK				Lg	Lg	13 15 49.4	
	9.1nm,0.8s						
KOTS	Kotyrbulak	2.15	322	eP	Pb	13 15 20.6	-0.2
	5.9nm,0.6s						
KOTS				eS	Sg	13 15 51.0	+0.5
	12nm,0.5s						
KOTS	Kotyrbulak	2.15	322	Pg	Pb	13 15 20.6	-0.2
	5.9nm,0.6s						
KOTS				Lg	Lg	13 15 51.0	
	12nm,0.5s						
NRN	Naryn	2.20	268	⇓iP	Pb	13 15 20.8	-0.9
	baz=69						
NRN				⇓iS	Sb	13 15 50.0	+0.7
	baz=69						
BOOM	Boomskoye usch	2.42	294	⇑iP	Pb	13 15 24.0	-1.2
	baz=95						
BOOM				⇑iS	Sb	13 15 55.4	+0.1
	baz=95						
CHKK	Chushkaly	2.71	329	Pg	Pn	13 15 26.2	+0.9
	3.1nm,0.3s						
CHKK				Lg	Lg	13 16 00.6	
	5.9nm,0.5s						
KTBS	Karatobe	2.72	323	Pg	Pb	13 15 29.4	-0.9
	1.6nm,0.6s						
KTBS				Lg	Lg	13 16 07.5	
	7.2nm,0.7s						
ARXS	Arharly	2.78	343	eP	Pb	13 15 30.7	-0.7
	1.9nm,1.1s						
ARXS				eS	Sg	13 16 08.4	-2.1
	9.7nm,0.5s						
ARXS	Arharly	2.78	343	Pg	Pb	13 15 30.7	-0.7
	1.9nm,1.1s						
ARXS				Lg	Lg	13 16 08.4	
	9.7nm,0.5s						
KZA	Kyzart	2.80	282	⇓iP	Pn	13 15 29.0	+2.0
	baz=83						
KZA				⇓iS	Sb	13 16 05.8	-0.8
	baz=83						
DGS	Degeres	2.88	307	eP	Pb	13 15 32.2	-1.0
	1.9nm,0.6s						
DGS				eS	Sb	13 16 11.2	+2.5
	2.7nm,0.6s						
DGS	Degeres	2.88	307	Pg	Pb	13 15 32.2	-1.0
	1.9nm,0.6s						
DGS				Lg	Lg	13 16 11.2	
	2.7nm,0.6s						
KBK	Karagaybulak	3.16	292	⇑iP	Pn	13 15 33.8	+2.1
	baz=93						
KBK				⇑iS	Sb	13 16 13.8	-3.0
	baz=93						
KAPS	Kapalarasan	3.75	5	eP	Pb	13 15 46.6	-1.2
	0.5nm,0.3s						
KAPS				eS	Sb	13 16 35.0	+1.6
	1.8nm,0.5s						
KAPS	Kapalarasan	3.75	5	Pg	Pb	13 15 47.0	-0.8
	0.4nm,0.4s						
KAPS				Lg	Lg	13 16 36.2	
	1.6nm,0.6s						

IDC ***22*** *13:14:55.9±0.4, 19°.66S×70°.60W, h0^{km}, mb4.7/16, mb1 4.9/18, mb1mx4.8/22, mbtmp4.7/18, ML4.1/2, MS4.4/1, Ms1 4.6/1, ms1mx4.4/28, Error ellipse: s-maj=20.9km s-min=11.7km az=63.0*
GUC ***22*** *13:14:56.6±1.8, 19°.82S×70°.88W, h20^{km}±9^{km}, ML5.3*
NEIC ***22*** *13:14:56.6, 19°.74S×70°.95W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}4.76; $M_{\theta\theta}$0.39; $M_{\phi\phi}$-5.16; $M_{r\theta}$2.00; $M_{\theta\phi}$0.51; $M_{\phi r}$-3.28; Fault plane solution: $M_0$6.31000×10^{16} NP1:ϕ_s10.68000°, δ29.58000°, λ118.13000°. NP2:ϕ_s159.10000°, δ64.20000°, λ75.02000°. Principal axes: T 6.2947, Plg67.0000°, Azm41.0000°; N 0.0257, Plg13.0000°, Azm166.0000°; P -6.3204, Plg18.0000°, Azm260.0000°;*
MOS ***22*** *13:14:57.2±1.4, 19°.60S×70°.67W, h16^{km}, mb5.2/27 Error ellipse: s-maj=12.4km s-min=7.1km az=104.0*
NEIC ***22*** *13:14:58.4±2.8, 19°.77S±0°.01×70°.88W±0°.06, h24^{km}±1^{km}, mb5.3/105, Mwr5.1/29, Mww5.2, ML5.2(GUC), Error ellipse: s-maj=9.1km s-min=2.9km az=265.0*
BJI ***22*** *13:15:00.0±0.0, 19°.80S×70°.90W, h20^{km}, mB5.7/17, Ms5.8/2, Ms7 5.6/6*
NEIC ***22*** *13:15:03, 19°.77S×71°.06W, h26^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}5.29; $M_{\theta\theta}$0.82; $M_{\phi\phi}$-6.11; $M_{r\theta}$0.75; $M_{\theta\phi}$2.08; $M_{\phi r}$-5.43; Fault plane solution: $M_0$8.21000×10^{16} NP1:ϕ_s171.00000°, δ66.00000°, λ96.00000°. NP2:ϕ_s336.00000°, δ24.00000°, λ77.00000°. Principal axes: T 7.4643, Plg68.0000°, Azm92.0000°; N 1.3272, Plg5.0000°, Azm348.0000°; P -8.7915, Plg21.0000°, Azm256.0000°;*
VAO ***22*** *13:15:06.9±0.7, 19°.88S×70°.42W, h79^{km}±5^{km}, mb5.1*
ISC 22 13:14:55.8±1.4**, 19°.81S**±0°.02×**70°.87W**±0°.04**, h5**^{km}±8^{km}**, n650,** σ**1**^{s}**.35**/659**, mb5.2**/79**, 22C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	0.73	73	⇑eP	Pg	13 15 10.1	+0.2
PSGC				i S	Sg	13 15 20.3	+0.8
PSGCX	Pisagua	0.73	73		Pb	13 15 12.1	+0.9
TA01	Diego Aracena	0.99	139	⇑iP	Pb	13 15 13.8	-1.7
TA01				i S	Sb	13 15 27.3	-1.6
TA01				IAML		13 15 34.2	
	comp=E,126µm,0.5s						
PB11	IPOC Station P	1.14	88	⇑iP	Pb	13 15 17.2	-1.0
PB11				i S	Sb	13 15 32.5	-0.9
PB11				IAML		13 15 39.0	
	comp=N,116µm,0.4s						
PB11	IPOC Station P	1.14	88	Pn	Pg	13 15 19.2	+1.5
PB11				Sn	Sg	13 15 34.7	+2.1
PATCX	Punta Patache	1.21	146	⇑iP	Pn	13 15 16.9	-2.7
PATCX				i S	Sn	13 15 35.8	-0.5
PATCX				IAML		13 15 42.2	
	comp=E,58µm,0.3s						
PATCX	Punta Patache	1.21	146	Pn	Pg	13 15 20.7	+1.7
PATCX				Sn	Sg	13 15 36.2	+1.5
PB12	IPOC Station P	1.29	23	⇑iP	Pn	13 15 19.9	-0.8
PB12				i S	Sb	13 15 37.3	-0.4
PB12	IPOC Station P	1.29	23	Pn	Pb	13 15 21.2	+0.5
PB12				Sn	Sb	13 15 37.5	-0.2
AP01	Chacalluta	1.52	19	⇑iP	Pn	13 15 22.4	-1.2
AP01				i S	Sn	13 15 42.4	-1.4
AP01				IAML		13 15 46.7	
	comp=E,174µm,0.5s						
GO01	Chusmiza	1.58	85	⇑iP	Pn	13 15 24.7	-0.3
GO01				i S	Sb	13 15 46.2	-0.2
GO01				IAML		13 15 50.3	
	comp=N,104µm,0.3s						
GO01	Chusmiza	1.58	85	Pn	Pn	13 15 24.4	-0.6
PB08	IPOC Station P	1.65	102	⇑eP	Pn	13 15 25.8	0.0
PB08				i S	Sb	13 15 47.7	-0.4
PB08				IAML		13 15 50.8	
	comp=N,43µm,0.4s						
PB02	IPOC Station P	1.76	149	⇑iP	Pn	13 15 26.6	-0.5
PB02				i S	Sn	13 15 49.8	-0.1
PB01	IPOC Station P	1.78	134	⇑iP	Pn	13 15 27.0	-0.4
PB01				i S	Sn	13 15 50.0	-0.6
PB01				IAML		13 15 58.9	
	comp=E,30µm,0.5s						
PB01	IPOC Station P	1.78	134		Pb	13 15 28.9	-0.2
PB01				Sn	Sb	13 15 51.6	-0.2
PB16	IPOC Station P	1.95	41	eP	Pb	13 15 31.8	-0.5
PB16				i S	Sb	13 15 57.7	+0.6
PB16				IAML		13 16 03.3	
	comp=N,48µm,0.5s						
PB16	IPOC Station P	1.95	41	Pn	Pb	13 15 31.5	-0.7
PB07	IPOC Station P	2.12	154	⇑eP	Pn	13 15 32.2	+0.1
PB07				i S	Sn	13 15 59.4	+0.4
PB07				IAML		13 16 20.8	
	comp=E,30µm,0.7s						
PB07	IPOC Station P	2.12	154	Pn	Pb	13 15 34.2	-0.7
PB03	IPOC Station P	2.46	155	⇑eP	Pn	13 15 37.6	+0.8
PB03				i S	Sn	13 16 06.3	-1.1
PB03				IAML		13 16 21.4	
	comp=E,15µm,0.6s						
PB09	IPOC Station P	2.50	143	⇑eP	Pn	13 15 38.5	+1.2
PB09				i S	Sn	13 16 09.9	+1.7
PB09	IPOC Station P	2.50	143	Pn	Pn	13 15 39.1	+1.9
PB09				Sn	Sn	13 16 09.8	+1.5
PB04	IPOC Station P	2.60	165	Pn	Pn	13 15 39.4	+0.7
LVC	Limon Verde	3.33	147	Pn	Pn	13 15 51.5	+2.6
	comp=E,93nm,0.3s,baz=308,slow=8.8,SNR=28						
LVC				Sn	Sn	13 16 31.1	+1.9
	comp=E,305nm,0.3s,baz=121,slow=19,SNR=7.2						
LVC				Lg	Lg	13 16 42.3	
	comp=E,263nm,0.3s,baz=220,slow=23,SNR=3.2						
LVC	Limon Verde	3.33	147	eP	Pn	13 15 50.4	+1.4
LVC	Limon Verde	3.33	147	Sg	Sg	13 16 43.4	+0.5
LVC	Limon Verde	3.33	147	Pn	Pn	13 15 51.2	+2.2
LVC	Limon Verde	3.33	147	eP	Pn	13 15 51.3	+2.3
PB15	IPOC Station P	3.62	159		Pn	13 15 53.0	+0.2
PB15				Sg	Sg	13 16 50.2	-2.1
PB10	IPOC Station P	3.70	176		Pn	13 15 53.4	-0.3
LPAZ	La Paz	4.37	37	Pn	Pn	13 16 07.9	+4.5
	comp=E,21nm,0.3s,baz=206,slow=10,SNR=14						
LPAZ				LR	LR	13 17 42.8	
	comp=E,5µm,19.8s,baz=201,slow=41						
LPAZ	La Paz	4.37	37	P	Pn	13 16 03.2	-0.2
LPAZ	La Paz	4.37	37	Pn	Pn	13 16 03.1	-0.2
LPAZ	La Paz	4.37	37	eP	Pb	13 16 08.8	-4.7
PB14	IPOC Station P	4.81	175		Pn	13 16 08.9	-0.4
GO02	Mina Guanaco	5.46	168		Pn	13 16 18.7	+0.6
GO03	Copiap	7.77	176	Pn	Pn	13 16 48.9	-0.8
NNA	Nana	9.67	323	i P	Pn	13 17 18.1	+2.3
NNA	Nana	9.67	323		Pn	13 17 14.3	-1.5
SIV	San Ignacio	10.07	69	Pn	Pn	13 17 20.6	-0.7
	comp=E,18nm,0.3s,baz=270,slow=9.9,SNR=45						
GO04	Tololo Observa	10.32	180	Pn	Pn	13 17 23.0	-1.8
SAML	Samuel	13.11	36	P	Pn	13 18 00.4	-2.5
SAML	Samuel	13.11	36		Pn	13 18 00.3	-2.5
SAML	Samuel	13.11	36	eP	P	13 18 09.2	-4.0
ROC1	El Roble	13.11	181	Pn	Pn	13 18 01.4	-1.7
CPUP	Villa Florida	14.04	120	Pn	Pn	13 18 12.7	-2.9
	comp=E,0.1nm,0.3s,baz=303,slow=15,SNR=1.3						
CPUP	Villa Florida	14.04	120	P	Pn	13 18 16.1	+0.5
CPUP	Villa Florida	14.04	120		Pn	13 18 16.1	+0.5
SALV	Santo Antonio	14.96	77	eP	Pn	13 18 28.8	+0.7
PCMB	Pacaembu	18.43	99	eP	P	13 19 10.9	-1.3
ITAB	Concordia	18.69	117	eP	P	13 19 15.0	-0.1
PLTB	Pedras Altas	19.55	131	eP	P	13 19 24.9	+0.4
GO06	Curarrehue	19.71	181	P	P	13 19 22.2	-4.2
FRTB	Fartura	20.12	104	eP	P	13 19 31.1	+0.2
CNLB	Canela	20.49	121	eP	P	13 19 34.0	-0.8
PLCA	Paso Flores	20.86	179	P	Pn	13 19 40.5	-0.7
	comp=E,42nm,1.0s,baz=24,slow=12,SNR=18						
PLCA	Paso Flores	20.86	179	P	P	13 19 39.4	+0.7
PLCA				pmax	pmax		
	comp=Z,132nm,1.4s						
PLCA	Paso Flores	20.86	179	P	P	13 19 39.4	+0.7
PLCA				IAmb	IAmb	13 19 52.9	
	comp=Z,132nm,1.4s						
PLCA	Paso Flores	20.86	179	eP	Pn	13 19 41.4	+0.2
BB19B	Bebedouro	20.97	97	eP	P	13 19 39.6	-0.5
IPMB	Ipameri, GO	21.51	89	eP	P	13 19 44.9	-1.0
PTGA	Pitinga	21.76	31	P	P	13 19 46.6	-1.9
PTGA				IAmb	IAmb	13 19 56.4	
	comp=Z,79nm,0.8s						
FLOC	Florencia	21.77	347	eP	P	13 19 50.3	+1.7
FLOC	Florencia	21.77	347	P	P	13 19 49.2	+0.5
GCUF	Volcan Galeras	21.85	342	eP	P	13 19 58.4	+8.4
MACC	Macarena, Meta	22.01	352	eP	P	13 20 02.0	+11
CRUC	La Cruz	22.07	344	eP	P	13 19 59.2	+7.0
SPB	Sao Paulo	22.09	104	P	P	13 19 52.0	-0.1
SPB				IAmb	IAmb	13 19 55.4	
	comp=Z,207nm,1.5s						
SPB	Sao Paulo	22.09	104	eP	P	13 19 51.7	-0.4
BDFB	Brasilia	22.16	83	P	P	13 19 50.5	-2.4
	comp=Z,29nm,0.8s,baz=248,slow=6.8,SNR=12						
BDFB	Brasilia	22.16	83	P	P	13 19 51.1	-1.8
BDFB				pmax	pmax		
	comp=Z,51nm,0.7s						
BDFB	Brasilia	22.16	83	P	P	13 19 51.1	-1.8
GARC	Garzon, Huila	22.33	348	eP	P	13 19 57.2	+2.3
VAO	Valinhos	22.47	102	eP	P	13 19 56.4	+0.1
SOTA	Rioblanco	22.52	345	eP	P	13 20 01.1	+3.8
PCON	Cinco Dias	22.66	346	eP	P	13 20 01.2	+2.4
POPC	Popayan, Colom	22.93	345	eP	P	13 20 04.4	+3.1
PARB	Paraibuna	23.73	103	eP	P	13 20 09.1	-0.1
GR1C	Gorgona, Isla	23.78	342	eP	P	13 20 13.9	+4.4
VILC	Villavicencio,	23.93	353	eP	P	13 20 13.2	+2.1
ORTC	Ortega, Tolima	23.96	349	eP	P	13 20 12.0	+0.7
YOTC	Yotoco, Valle	24.25	347	eP	P	13 20 14.3	+0.1
CHIC	Chingaza	24.45	353	eP	P	13 20 16.2	-0.1
BSCB	Bom Sucesso	24.48	97	eP	P	13 20 14.9	-1.3
ANIL	Santa Ana	24.56	349	eP	P	13 20 21.8	+4.7
TOLC	Tolima	24.63	349	eP	P	13 20 22.4	+4.5
ROSC	El Rosal	24.73	352	P	P	13 20 18.2	-0.6
	comp=Z,10.0nm,0.4s,baz=237,slow=22,SNR=4.0						
ROSC	El Rosal	24.73	352	P	P	13 20 17.7	-1.1
ROSC				IAmb	IAmb	13 20 32.3	
	comp=Z,88nm,1.2s						
ESAR	Angra dos Reis	24.80	102	eP	P	13 20 18.1	-0.9
RREF	El Recreo	24.95	349	eP	P	13 20 23.5	+2.5
SMTB	Santa Maria do	25.01	68	eP	P	13 20 20.6	-0.3
PLMC	San Jos del P	25.13	347	eP	P	13 20 28.4	+6.4
GUY2C	Guyana, Caldas	25.27	349	eP	P	13 20 24.6	+0.9
SPBC	San Pablo de B	25.50	353	eP	P	13 20 25.2	-0.2
NORC	Norcasia	25.52	351	eP	P	13 20 26.2	+0.6
RUSC	La Rusia	25.63	355	eP	P	13 20 27.8	+0.7
RUSC	La Rusia	25.63	355	P	P	13 20 26.7	-0.3
JANB	Januaria	25.76	84	eP	P	13 20 26.2	-1.6
CBOC	Ciudad Bolivar	26.01	348	eP	P	13 20 31.1	+0.9
TAMC	Tame, Arauca	26.10	358	eP	P	13 20 30.7	0.0
HELC	Santa Helena	26.24	349	eP	P	13 20 32.8	+0.4
BARC	Barichara	26.34	355	eP	P	13 20 32.8	-0.3
PTBC	PUERTO BERRIO,	26.42	352	eP	P	13 20 32.2	-1.5
PAMC	Pamplona, Colo	27.04	356	eP	P	13 20 40.7	+0.9
ZARC	Zaragoza, Cauc	27.41	351	eP	P	13 20 42.4	-0.2
UREC	San Jos de Ur	27.77	350	eP	P	13 20 45.9	+0.1
BSFB	Barra de Sao F	28.33	93	eP	P	13 20 49.3	-1.6
SDV	Santo Domingo	28.52	0	P	P	13 20 53.3	+0.6
	comp=Z,25nm,1.2s,baz=278,slow=6.1,SNR=3.9						
SDV	Santo Domingo	28.52	0	P	P	13 20 52.9	+0.2
SDV				IAmb	IAmb	13 21 04.0	
	comp=Z,54nm,1.1s						
SDV	Santo Domingo	28.52	0	eP	P	13 20 55.5	+2.8
SMLC	San Martn de	28.61	353	eP	P	13 20 50.8	-2.5
CODC	Agustn Codazz	29.67	355	eP	P	13 20 57.5	-5.2
SJCC	San Jacinto, C	29.82	351	eP	P	13 21 03.8	-0.3
NBIT	Itapeh - BA	30.36	86	eP	P	13 21 07.3	-1.6
NBPN	Ponto Novo - B	30.85	78	eP	P	13 21 11.9	-1.3
NBPS	Pedro II - PI	32.50	66	eP	P	13 21 26.2	-1.7
TOSP	Speyside	32.54	19	P	P	13 21 25.4	-2.6
JTS	Las Juntas de	32.97	334	i P	P	13 21 32.4	+0.6
JTS				pmax	pmax		
	comp=Z,19nm,1.8s						
GRGR	Grenville	33.01	17	P	P	13 21 30.3	-1.9
NBLA	Lagarto - SE	33.02	80	eP	P	13 21 30.9	-1.5
EFI	East Falkland	33.35	165	i P	P	13 21 35.6	+0.8
EFI				pmax	pmax		
	comp=Z,63nm,1.1s						
NBTA	Tacaratu-PE	33.43	76	eP	P	13 21 34.6	-1.4
NBMA	Muriti-CE	33.49	73	eP	P	13 21 35.2	-1.3
NBPB	Pedra_Branca-C	33.57	69	eP	P	13 21 36.4	-0.7
SVB	Belmont	34.21	17	P	P	13 21 40.0	-2.6
NBMO	Morrinhos-CE	34.26	65	eP	P	13 21 41.4	-1.7
ACON	Acoyapa	34.58	335	P	P	13 21 43.8	-2.0
MCLT	Moule a Chique	34.71	17	P	P	13 21 46.8	-0.2
NBAN	Anadia - AL	34.87	78	eP	P	13 21 47.0	-1.5
NBCL	Cascavel-CE	35.32	68	eP	P	13 21 51.9	-0.4
FDF	Fort de France	35.63	16	P	P	13 21 56.2	+1.3
FDF				pmax	pmax		
	comp=Z,132nm,1.0s						
FDF	Fort de France	35.63	16	P	P	13 21 56.2	+1.3
NBRF	Rio Formoso -	36.28	77	eP	P	13 21 59.4	-1.2
RCBR	Riachuelo	36.72	73	eP	P	13 22 04.0	-0.3
NBPV	Pedro Velho	37.02	74	eP	P	13 22 06.2	-0.7
TGUH	Tegucigalpa,Un	37.33	333	P	P	13 22 08.1	-1.4
TGUH				IAmb	IAmb	13 22 22.3	
	comp=Z,37nm,1.1s						
ICMP	Isla Caja de M	37.70	7	P	P	13 22 10.6	-1.9
MLPR	Magueyes Islan	37.73	6	P	P	13 22 11.0	-1.7
CRPR	Cabo Rojo, PR	37.76	6	P	P	13 22 10.4	-2.6
SKI	Saint Kitts	37.77	13	P	P	13 22 10.7	-2.4
SKI				pmax	pmax		
	comp=Z,100nm,1.0s						
SKI	Saint Kitts	37.77	13	P	P	13 22 10.7	-2.4
CDVI	St. Croix	37.81	10	P	P	13 22 11.4	-1.9
OBIP	Obispado Ponce	37.85	7	P	P	13 22 11.2	-2.5
OBIP				IAmb	IAmb	13 22 22.1	
	comp=Z,56nm,0.9s						
PDPR	Patillas Dam,	37.89	8	P	P	13 22 10.7	-3.3
PDPR				IAmb	IAmb	13 22 21.2	
	comp=Z,50nm,0.8s						
MPR	Mayaguez	37.96	6	P	P	13 22 12.8	-1.9
BANI	BANI	37.97	1	P	P	13 22 12.8	-2.1
SJG	San Juan	37.97	7	P	P	13 22 12.2	-2.5
SJG				pmax	pmax		
	comp=Z,55nm,0.8s						
SJG	San Juan	37.97	7	P	P	13 22 12.2	-2.5
SJG				IAmb	IAmb	13 22 21.9	
	comp=Z,55nm,0.8s						
AOPR	Arecibo Observ	38.13	6	P	P	13 22 14.1	-2.0
AOPR				IAmb	IAmb	13 22 24.3	
	comp=Z,51nm,0.7s						
CBYP	Canovanas	38.16	8	P	P	13 22 14.4	-2.1
PCDR	Punta Cana, DR	38.16	4	P	P	13 22 15.0	-1.4
GCPR	Guaynabo City	38.17	7	P	P	13 22 14.8	-1.6
AGPR	Aguadilla, PR	38.22	6	P	P	13 22 14.9	-1.9
AGPR				IAmb	IAmb	13 22 21.3	
	comp=Z,40nm,0.8s						
ANWB	Willy Bob	38.30	14	P	P	13 22 16.9	-0.7
STVI	Saint Thomas	38.37	9	P	P	13 22 16.0	-2.1
DR12	Loma Pena Alta	38.39	2	P	P	13 22 18.5	+0.1
SMRT	St. Maarten	38.40	12	P	P	13 22 17.1	-1.3
SDDR	Presa de Saban	38.55	359	P	P	13 22 20.1	+0.4
TEIG	Tepich	43.29	336	P	P	13 22 58.0	-0.7
PMSA	Palmer Station	45.17	176	P	P	13 23 13.7	+0.4
TLIG	Tlapa	46.03	322	P	P	13 23 19.3	-1.5
656A	Willston	50.17	347	P	P	13 23 52.3	-0.2
656A				IAmb	IAmb	13 23 53.9	

	comp=Z,31nm,0.8s						
553A	Crawfordville	51.40	345	P	P	13 24 01.6	-0.1
451A	Vernon	52.14	344	P	P	13 24 06.5	-0.7
451A				IAmb	IAmb	13 24 08.8	
	comp=Z,74nm,1.3s						
BBSR	BB Station	52.22	7	P	P	13 24 06.9	-0.9
BBSR				IAmb	IAmb	13 24 17.0	
	comp=Z,21nm,0.7s						
TIGA	Tifton	52.40	346	P	P	13 24 07.4	-1.8
TIGA				IAmb	IAmb	13 24 23.7	
	comp=Z,48nm,1.3s						
ZAIG	Zacatecas	52.43	322	P	P	13 24 07.9	-2.0
352A	Blakely	52.75	345	P	P	13 24 10.6	-1.3
352A				IAmb	IAmb	13 24 27.4	
	comp=Z,32nm,0.6s						
CSU	Charleston Sou	53.23	350	P	P	13 24 14.6	-0.7
Z59A	Georgetown, SC	53.36	351	P	P	13 24 16.8	+0.5
	baz=170						
NHSC	New Hope	53.37	350	P	P	13 24 17.7	+1.4
	baz=169						
Z58A	St. Stephen	53.53	351	P	P	13 24 18.8	+1.3
	baz=170						
Z57A	Bowman	53.64	350	P	P	13 24 19.3	+1.0
	baz=169						
Y60A	Bolivia	53.97	352	P	P	13 24 21.3	+0.6
	baz=172						
GOGA	Godfrey	54.27	347	P	P	13 24 21.5	-1.5
GOGA				pmax	pmax		
	comp=Z,15nm,1.0s						
GOGA	Godfrey	54.27	347	P	P	13 24 22.7	-0.2
	baz=165						
Y55A	Saluda	54.46	349	P	P	13 24 24.8	+0.5
	baz=167						
Z50A	Ashland	54.69	345	P	P	13 24 25.2	-0.9
Z50A				IAmb	IAmb	13 24 36.9	
	comp=Z,14nm,0.7s						
Z50A	Ashland	54.69	345	P	P	13 24 25.8	-0.2
	baz=163,SNR=7.7						
LRAL	Lakeview Retre	54.76	343	P	P	13 24 26.3	-0.2
	baz=161						
Y52A	Lilburn	54.84	347	P	P	13 24 26.9	-0.2
	baz=165						
X56A	White Oak	54.86	350	P	P	13 24 27.4	+0.2
	baz=168						
BIRD	Birdtown, Kers	54.92	350	P	P	13 24 27.3	-0.3
BIRD				IAmb	IAmb	13 24 29.1	
	comp=Z,25nm,1.0s						
X55A	Gracelyn & Ava	54.94	349	P	P	13 24 28.1	+0.3
	baz=168,SNR=5.9						
HKT	Hockley	55.01	333	P	P	13 24 30.1	+1.8
HKT				pmax	pmax		
	comp=Z,11nm,1.4s						
W58A	Raeford	55.10	352	P	P	13 24 29.5	+0.5
	baz=170,SNR=6.3						
X54A	Belton	55.15	348	P	P	13 24 29.7	+0.3
	baz=167						
X53A	Estanollee	55.29	348	P	P	13 24 30.4	+0.1
	baz=166						
PAULI	Pauline	55.32	349	P	P	13 24 30.7	+0.2
PAULI				IAmb	IAmb	13 24 31.8	
	comp=Z,24nm,1.2s						
W57A	Gilead	55.34	351	P	P	13 24 31.6	+0.9
	baz=170						
W56A	Indian Trail	55.41	350	P	P	13 24 31.7	+0.4
	baz=169						
KMSC	Kings Mountain	55.55	350	P	P	13 24 32.2	+0.1
KMSC				IAmb	IAmb	13 24 45.9	
	comp=Z,20nm,1.1s						
KMSC	Kings Mountain	55.55	350	P	P	13 24 32.6	+0.4
	baz=168						
W54A	Cherokee Point	55.64	349	P	P	13 24 33.4	+0.5
	baz=167						
X51A	Calhoun	55.69	346	P	P	13 24 33.4	+0.2
	baz=164						
V59A	Middlesex	55.71	353	P	P	13 24 33.7	+0.4
	baz=172,SNR=6.9						
FPAL	Fort Paine	55.84	345	P	P	13 24 33.6	-0.7
V58A	Windy Hill, Pi	55.85	352	P	P	13 24 34.8	+0.4
	baz=171,SNR=5.2						
W52A	Murphy	55.99	347	P	P	13 24 34.1	-1.4
V57A	Coltrane Farms	56.03	351	P	P	13 24 36.1	+0.4
	baz=170,SNR=5.6						
V56A	Mocksville	56.06	351	P	P	13 24 36.7	+0.8
	baz=169,SNR=7.7						
X48A	Hartselle	56.11	344	P	P	13 24 35.2	-1.1
V55A	Taylorsville	56.22	350	P	P	13 24 36.9	-0.1
V55A				IAmb	IAmb	13 24 50.9	
	comp=Z,29nm,1.0s						
V55A	Taylorsville	56.22	350	P	P	13 24 38.1	+1.1
	baz=168,SNR=6.2						
U59A	Littleton	56.24	353	P	P	13 24 37.4	+0.3
U59A				IAmb	IAmb	13 24 39.4	
	comp=Z,24nm,1.1s						
U59A	Littleton	56.24	353	P	P	13 24 37.6	+0.5
	baz=172						
V54A	Nebo	56.27	349	P	P	13 24 37.8	+0.4
	baz=168,SNR=9.8						
U58A	Oxford	56.37	353	P	P	13 24 39.1	+1.1
	baz=171						
W50A	Signal Mountai	56.40	346	P	P	13 24 37.4	-1.0
CPCT	Cooper Cave	56.46	347	P	P	13 24 38.1	-0.6
CPCT				IAmb	IAmb	13 24 53.0	
	comp=Z,30nm,1.4s						
U57A	Blanch	56.51	352	P	P	13 24 39.5	+0.5
	baz=170						
SWET	Sewanee	56.56	345	P	P	13 24 38.6	-0.8
U56A	King	56.57	351	P	P	13 24 40.0	+0.5
U56A				IAmb	IAmb	13 24 41.4	
	comp=Z,30nm,1.1s						
U56A	King	56.57	351	P	P	13 24 40.7	+1.2
	baz=169,SNR=6.1						
V52A	Sevierville	56.65	348	P	P	13 24 39.8	-0.2
V52A				IAmb	IAmb	13 24 40.7	
	comp=Z,31nm,1.0s						
V51A	Loudon	56.77	347	P	P	13 24 39.8	-1.1
V51A				IAmb	IAmb	13 24 50.4	
	comp=Z,24nm,1.2s						
T59A	Double "B" Far	56.83	354	P	P	13 24 40.9	-0.4
T59A				IAmb	IAmb	13 24 54.8	
	comp=Z,23nm,0.8s						
T59A	Double "B" Far	56.83	354	P	P	13 24 41.9	+0.6
	baz=172,SNR=7.4						
U55A	TA2, Sparta	56.83	350	P	P	13 24 42.0	+0.6
	baz=169						
OXF	Oxford	56.83	342	P	P	13 24 40.4	-1.0
OXF				pmax	pmax		
	comp=Z,46nm,1.2s						
OXF	Oxford	56.83	342	P	P	13 24 40.4	-1.0
OXF				IAmb	IAmb	13 24 42.5	
	comp=Z,46nm,1.2s						
OXF	Oxford	56.83	342	P	P	13 24 41.1	-0.2
	baz=159						
PLAL	Pickwick Lake	56.89	343	P	P	13 24 39.9	-1.9
T58A	Grand View Acr	56.91	353	P	P	13 24 42.8	+0.9
	baz=171,SNR=13						
U54A	Nelsons Funny	56.97	349	P	P	13 24 41.9	-0.6
U54A				IAmb	IAmb	13 24 43.5	
	comp=Z,26nm,1.0s						
U54A	Nelsons Funny	56.97	349	P	P	13 24 42.8	+0.3
	baz=168,SNR=5.3						
T57A	Hurt	57.05	352	P	P	13 24 42.3	-0.6
T57A				IAmb	IAmb	13 24 45.8	
	comp=Z,47nm,1.4s						
T57A	Hurt	57.05	352	P	P	13 24 43.8	+0.9
	baz=171,SNR=6.0						
T56A	Rocky Mt	57.19	351	P	P	13 24 44.9	+1.0
	baz=170						
JCT	Junction City	57.23	330	P	P	13 24 44.5	+0.2
JCT				pmax	pmax		
	comp=Z,8.0nm,0.9s						
JCT	Junction City	57.23	330	P	P	13 24 44.5	+0.2
JCT	Junction City	57.23	330	P	P	13 24 45.3	+1.0
	baz=147						
WLAR	White Oak Lake	57.27	338	P	P	13 24 44.4	-0.1
V48A	Smith Brothers	57.28	345	P	P	13 24 43.6	-1.0
V48A				IAmb	IAmb	13 24 45.8	
	comp=Z,22nm,1.1s						
TZTN	Tazewell	57.32	348	P	P	13 24 44.1	-0.7
TZTN				IAmb	IAmb	13 24 58.8	
	comp=Z,29nm,1.4s						
TZTN	Tazewell	57.32	348	P	P	13 24 44.6	-0.2
	baz=166						
T55A	Pulaski	57.39	351	P	P	13 24 45.8	+0.4
	baz=169,SNR=6.1						
BLA	Blacksburg	57.42	351	P	P	13 24 45.4	-0.2
BLA				pmax	pmax		
	comp=Z,19nm,1.1s						
BLA	Blacksburg	57.42	351	P	P	13 24 45.4	-0.2
BLA	Blacksburg	57.42	351	P	P	13 24 45.6	+0.1
	baz=169						
T54A	Tazewell	57.46	350	P	P	13 24 45.7	-0.1
	baz=168						
WHTX	Lake Whitney,	57.46	333	P	P	13 24 44.2	-1.7
WHTX				IAmb	IAmb	13 24 48.3	
	comp=Z,34nm,1.4s						
WHTX	Lake Whitney,	57.46	333	P	P	13 24 46.9	+1.0
	baz=150						
CLTN	Cedars of Leba	57.49	345	P	P	13 24 44.7	-1.3
S58A	Poland Farm, P	57.51	353	P	P	13 24 45.7	-0.4
S58A				IAmb	IAmb	13 24 47.7	
	comp=Z,38nm,1.5s						
S58A	Poland Farm, P	57.51	353	P	P	13 24 46.9	+0.8
	baz=172						
T53A	Wise	57.55	349	P	P	13 24 46.5	0.0
	baz=167						
T52A	Hallie	57.75	349	P	P	13 24 47.6	-0.3
	baz=167						
S56A	Natural Bridge	57.76	352	P	P	13 24 49.1	+1.2
	baz=170						
S57A	Dark Hollow, R	57.77	352	P	P	13 24 48.5	+0.5
	baz=171,SNR=7.9						
T51A	Gray	57.80	348	P	P	13 24 48.1	-0.1
	baz=166,SNR=5.3						
R58B	Mineral	57.84	353	P	P	13 24 49.3	+0.9
	baz=172						
WVT	Waverly	57.91	344	P	P	13 24 48.5	-0.4
WVT				pmax	pmax		
	comp=Z,19nm,1.0s						
WVT	Waverly	57.91	344	P	P	13 24 48.5	-0.4
WVT	Waverly	57.91	344	P	P	13 24 47.9	-1.0
	baz=161						
S55A	Lewisburg	57.99	351	P	P	13 24 50.3	+0.8
	baz=169,SNR=10.0						
UALR	University of	58.00	339	P	P	13 24 47.7	-1.9
T50A	Nancy	58.04	347	P	P	13 24 49.5	-0.3
	baz=164,SNR=5.4						
S54A	Dingess, Beckl	58.14	350	P	P	13 24 51.2	+0.6
	baz=168						
R58A	Rapidan	58.19	353	P	P	13 24 52.0	+1.1
	baz=172,SNR=6.8						
TXAR	Lajitas Array	58.20	326	P	P	13 24 52.0	+0.7
	comp=Z,3.0nm,1.0s,baz=141,slow=8.1,SNR=12						
TXAR	Lajitas Array	58.20	326	P	P	13 24 52.3	+1.0
TXAR	Lajitas Array	58.20	326	P	P	13 24 52.3	+1.0
MIAR	Mount Ida	58.21	338	P	P	13 24 51.1	0.0
MIAR				pmax	pmax		
	comp=Z,20nm,1.1s						
MIAR	Mount Ida	58.21	338	P	P	13 24 51.1	0.0
MIAR				IAmb	IAmb	13 24 52.5	
	comp=Z,20nm,1.1s						
MIAR	Mount Ida	58.21	338	P	P	13 24 51.7	+0.6
	baz=155,SNR=11						
R57A	Stanardsville	58.24	353	P	P	13 24 52.2	+1.0
	baz=172,SNR=5.5						
T49A	Edmonton	58.27	346	P	P	13 24 50.2	-1.3
T49A				IAmb	IAmb	13 24 52.1	
	comp=Z,36nm,1.0s						
T49A	Edmonton	58.27	346	P	P	13 24 51.2	-0.3
	baz=164,SNR=15						
W41B	Gary Mavity, V	58.33	339	P	P	13 24 52.1	+0.2
	baz=156						
R55A	Marlinton	58.43	351	P	P	13 24 53.8	+1.1
	baz=170						
WHAR	Wooly Hollow	58.45	339	P	P	13 24 50.2	-2.6
R54A	Victor	58.46	351	P	P	13 24 53.2	+0.4
	baz=169						
S50A	Richmond	58.58	347	P	P	13 24 53.4	-0.2
	baz=165,SNR=8.1						
R53A	Hurricane	58.76	350	P	P	13 24 55.7	+0.8
	baz=168						
Q58A	Fox Den Farm,	58.79	354	P	P	13 24 55.7	+0.7
	baz=173,SNR=6.2						
W39A	Magazine	58.87	338	P	P	13 24 56.9	+1.2
	baz=155,SNR=7.6						
S49A	Springfield	58.87	347	P	P	13 24 55.0	-0.7
	baz=164						
ABTX	Abilene, Hawle	58.96	332	P	P	13 24 57.7	+1.3
	baz=148						
Q57A	Strasburg	58.96	353	P	P	13 24 57.5	+1.3
	baz=172,SNR=7.8						
R51A	Hillsboro	59.02	348	P	P	13 24 56.5	-0.1
	baz=166						
Q56A	Snyder Ridge,	59.06	352	IAmb	IAmb	13 24 59.1	
	comp=Z,37nm,1.1s						
Q56A	Snyder Ridge,	59.06	352	P	P	13 24 57.5	+0.6
	baz=171,SNR=7.4						
Q55A	Buckhannon	59.13	352	P	P	13 24 58.6	+1.1
	baz=170,SNR=6.3						
R50A	Paris	59.15	348	P	P	13 24 57.2	-0.4
	baz=165						
Q53A	Leroy	59.21	350	P	P	13 24 58.1	+0.2
	baz=168,SNR=6.4						
Q54A	Coxs Mills	59.22	351	P	P	13 24 58.2	+0.1
	baz=169,SNR=5.5						
P58A	Pank, Wackersv	59.29	354	P	P	13 24 59.5	+1.0
	baz=173						
R49A	Shelbyville	59.33	347	P	P	13 24 58.7	-0.2
	baz=164						
P59A	Jarrettsville	59.34	355	P	P	13 24 59.8	+1.0
	baz=174						
P57A	Homestead Farm	59.36	354	P	P	13 25 00.9	+1.9
	baz=172,SNR=7.0						
Q52A	Bidwell	59.43	350	P	P	13 24 59.7	+0.2
	baz=168						
P56A	Dayton Farm, R	59.47	353	P	P	13 25 01.0	+1.2
	baz=171,SNR=6.8						
P60A	Greenville	59.48	356	P	P	13 25 00.6	+0.8
	baz=175						
WCI	Wyandotte Cave	59.52	346	P	P	13 24 58.8	-1.3
WCI				pmax	pmax		
	comp=Z,13nm,1.0s						
WCI	Wyandotte Cave	59.52	346	P	P	13 24 59.7	-0.5
	baz=163						
P55A	Reedsville	59.60	352	P	P	13 25 00.8	+0.1
	baz=170						
U40A	Yellville	59.61	339	P	P	13 25 00.8	0.0
	baz=156,SNR=6.5						
Q51A	Peebles	59.68	349	P	P	13 25 01.1	-0.1
	baz=166						
MCWV	Mont Chateau	59.75	352	P	P	13 25 02.5	+0.8
	baz=170						
P54A	Burton	59.78	351	P	P	13 25 02.5	+0.5
	baz=170,SNR=8.8						
P53A	Whipple	59.80	351	P	P	13 25 02.8	+0.8
	baz=169						
O58A	Lewisberry	59.89	355	P	P	13 25 04.2	+1.5
	baz=174						
Q49A	Aurora	59.96	347	P	P	13 25 03.1	-0.1
	baz=165						
O57A	Amberson	60.04	354	P	P	13 25 04.8	+1.1
	baz=173,SNR=7.3						
Q48A	North Vernon	60.07	347	P	P	13 25 03.3	-0.6
	baz=164						
O56A	Blue Knob Stat	60.20	353	P	P	13 25 06.0	+1.2
	baz=172,SNR=7.7						
O55A	Ligonier	60.22	353	P	P	13 25 05.8	+0.8
	baz=171,SNR=9.8						
TUL1	Leonard	60.23	337	P	P	13 25 02.8	-2.4
TUL1				IAmb	IAmb	13 25 06.5	
	comp=Z,20nm,0.8s						
TUL1	Leonard	60.23	337	P	P	13 25 06.1	+0.9
	baz=153						
P50A	Jamestown	60.33	349	P	P	13 25 05.4	-0.3
	baz=166						
N61A	South Mountain	60.33	357	P	P	13 25 06.7	+1.0
	baz=176						
P49A	Miami Univ. Ec	60.44	348	P	P	13 25 06.0	-0.4
	baz=165						
O52A	Adamsville	60.49	350	P	P	13 25 06.6	-0.1
	baz=168						
SSPA	Standing Stone	60.49	354	P	P	13 25 06.0	-0.7
SSPA				IAmb	IAmb	13 25 08.6	
	comp=Z,41nm,1.4s						
SSPA	Standing Stone	60.49	354	P	P	13 25 07.6	+0.8
	baz=172						
P48A	Milroy	60.51	347	P	P	13 25 06.0	-0.9
	baz=164						
N58A	Sunbury	60.58	355	P	P	13 25 08.1	+0.7
	baz=174						
O51A	Pataskala	60.64	350	P	P	13 25 07.8	0.0
	baz=167						
CCM	Cathedral Cave	60.66	342	P	P	13 25 05.5	-2.5
CCM				pmax	pmax		
	comp=Z,15nm,0.9s						
CCM	Cathedral Cave	60.66	342	P	P	13 25 05.5	-2.5
CCM				IAmb	IAmb	13 25 24.7	
	comp=Z,15nm,0.9s						
CCM	Cathedral Cave	60.66	342	P	P	13 25 07.8	-0.2
	baz=158						
N55A	Marion Center	60.75	353	P	P	13 25 09.6	+1.0
	baz=171,SNR=12						
ACSO	Alum Creek Sta	60.79	349	P	P	13 25 08.8	0.0
	baz=167,SNR=6.2						
N56A	West Decatur	60.81	354	P	P	13 25 10.0	+1.1
	baz=172						
O50A	Cable	60.82	349	P	P	13 25 08.8	-0.3
	baz=166						
M62A	Hamden	60.97	358	P	P	13 25 10.6	+0.6
	baz=178						
S39A	Bolivar	60.98	340	IAmb	IAmb	13 25 11.1	
	comp=Z,38nm,1.4s						
MNTX	Cornudas Mount	60.98	326	P	P	13 25 10.8	+0.5
MNTX	Cornudas Mount	60.98	326	P	P	13 25 10.7	+0.4
	baz=142,SNR=7.1						
O49A	Covington	60.99	348	P	P	13 25 09.6	-0.6
	baz=166						
N53A	Lisbon	61.01	351	P	P	13 25 10.7	+0.4
	baz=169						
N54A	Moraine State	61.05	352	P	P	13 25 11.4	+0.8
	baz=170,SNR=6.6						
M58A	Price’s Panora	61.09	355	P	P	13 25 12.0	+1.1
	baz=174,SNR=6.5						
M57A	Sunshine Farm,	61.11	355	P	P	13 25 11.8	+0.8
	baz=173,SNR=6.7						
N52A	McGinn’s Farm,	61.14	351	P	P	13 25 11.4	+0.2
	baz=168						
M59A	Waymart	61.19	356	P	P	13 25 11.8	+0.3
	baz=175,SNR=7.3						
O48A	Farmland	61.22	348	P	P	13 25 11.3	-0.5
	baz=165,SNR=7.2						
KSPA	Keystone Colle	61.22	356	P	P	13 25 10.5	-1.2
KSPA				IAmb	IAmb	13 25 14.4	
	comp=Z,18nm,1.2s						
N50A	Nevada	61.34	349	P	P	13 25 12.5	0.0
	baz=167,SNR=6.0						
M56A	Emporium	61.36	354	P	P	13 25 13.4	+0.7
	baz=172,SNR=6.7						
L63A	North Scituate	61.36	359	P	P	13 25 12.7	+0.1
	baz=179,SNR=6.1						
M55A	Ridgway	61.40	353	P	P	13 25 13.5	+0.5
	baz=172,SNR=10						
BRYW	Bryant College	61.42	359	P	P	13 25 13.2	+0.2
M54A	Oil Creek Stat	61.55	352	P	P	13 25 14.2	+0.3
	baz=171,SNR=7.1						
L60A	Shokan	61.56	357	P	P	13 25 14.3	+0.2
	baz=176						
M53A	WI Miller and	61.61	352	P	P	13 25 14.6	+0.3
	baz=170,SNR=5.1						
N49A	Columbus Grove	61.67	349	P	P	13 25 14.5	-0.3
	baz=166,SNR=13						
L58A	Harry Jones Me	61.71	356	P	P	13 25 16.1	+1.1
	baz=175,SNR=6.7						
L57A	Andrews Acres	61.74	355	P	P	13 25 16.0	+0.8
	baz=174						
SFIN	Lafayette	61.76	346	P	P	13 25 14.5	-0.9
	baz=163						
N48A	Decatur	61.78	348	P	P	13 25 14.8	-0.6
	baz=165,SNR=6.0						
L59A	Walton	61.81	356	P	P	13 25 16.7	+0.9
	baz=176,SNR=5.3						
M52A	Chesterland	61.81	351	P	P	13 25 15.8	+0.1
	baz=169						
BINY	Binghamton	61.88	356	P	P	13 25 16.8	+0.7
	baz=175,SNR=6.2						
N47A	Urbana	61.93	347	P	P	13 25 15.7	-0.8
	baz=164,SNR=5.8						
L56A	Greenwood	61.94	354	P	P	13 25 16.7	+0.1
	baz=173						
L61B	Northampton	61.97	358	P	P	13 25 17.3	+0.6
	baz=178						
HRV	Adam Dziewonsk	62.01	359	P	P	13 25 17.8	+0.8
HRV				pmax	pmax		
	comp=Z,39nm,0.9s						
HRV	Adam Dziewonsk	62.01	359	P	P	13 25 17.8	+0.8
	baz=179						
L53A	Girard	62.06	352	P	P	13 25 17.7	+0.3
	baz=170,SNR=6.6						
L55A	Hinsdale	62.08	354	P	P	13 25 18.3	+0.7
	baz=172,SNR=7.9						
M49A	Liberty Center	62.17	349	P	P	13 25 17.9	-0.3
	baz=166,SNR=5.1						
K62A	Royalston	62.17	359	P	P	13 25 18.5	+0.4
	baz=179						
ERPA	Erie	62.19	352	P	P	13 25 18.6	+0.4
	baz=170,SNR=6.5						
L54A	Sinclairville	62.22	353	P	P	13 25 18.9	+0.4
	baz=171,SNR=12						
VNA3	Neumayer Olymp	62.26	161	P	P	13 25 14.9	-3.5
M47A	Cromwell	62.38	348	P	P	13 25 19.2	-0.3
	baz=164						
K59A	Cooperstown	62.38	357	P	P	13 25 20.4	+0.9
	baz=176,SNR=7.2						
K58A	Earlville	62.41	356	P	P	13 25 20.4	+0.7
	baz=175,SNR=6.2						
HDIL	Hopedale	62.46	344	P	P	13 25 19.5	-0.6
	baz=160						
K56A	Middlesex	62.48	355	P	P	13 25 20.6	+0.4
	baz=173						
VNA1	Neumayer--Stat	62.48	161	P	P	13 25 13.1	-6.8
K54A	Basiliko Farm,	62.52	353	P	P	13 25 21.4	+0.9
	baz=172,SNR=5.2						
K55A	Perry	62.58	354	P	P	13 25 21.8	+0.9
	baz=172						
L48A	N Adams	62.71	349	P	P	13 25 21.0	-0.7
	baz=166,SNR=5.1						
L49A	Milan	62.75	349	P	P	13 25 22.0	0.0
	baz=166						
J60A	Lant Hill Farm	62.78	358	P	P	13 25 23.1	+0.9
	baz=177						
J61A	Chester	62.86	359	P	P	13 25 23.3	+0.6
	baz=178						
L47A	Sherwood	62.89	348	P	P	13 25 22.4	-0.6
	baz=165,SNR=9.8						
121A	Cookes Peak, D	62.90	325	P	P	13 25 25.4	+2.0
	baz=141						
J59A	Piesco	63.05	357	P	P	13 25 24.6	+0.7
	baz=176,SNR=9.4						
I58A	Old Forge	63.30	357	P	P	13 25 25.5	-0.1
	baz=176						
I59A	Olmsteadville	63.35	358	P	P	13 25 26.4	+0.5
	baz=177,SNR=5.3						
J52A	Paris	63.36	352	P	P	13 25 26.1	+0.1
	baz=170,SNR=6.8						
I60A	Shoreham	63.38	358	P	P	13 25 26.8	+0.7
	baz=178,SNR=5.6						
I64A	Boothbay	63.42	1	P	P	13 25 27.1	+0.8
	baz=181						
I61A	Oroboro, Fairl	63.44	359	P	P	13 25 27.5	+1.0
	baz=179,SNR=8.3						
K48A	Perry	63.49	349	P	P	13 25 26.0	-0.8
	baz=166,SNR=6.8						
K47A	Vermontville	63.52	348	P	P	13 25 25.9	-1.2
	baz=165						
I63A	Otisfield	63.55	0	P	P	13 25 28.2	+1.0
	baz=180						
K46A	Dorr	63.69	348	P	P	13 25 27.2	-0.9
	baz=164						
LBNH	Lisbon	63.74	359	P	P	13 25 29.9	+1.4
	baz=179,SNR=5.6						
J49A	Marlette	63.86	350	P	P	13 25 28.8	-0.6
	baz=167						
J48A	Bridge Port	63.91	350	P	P	13 25 29.5	-0.1
	baz=166						
I51A	Listowel	63.98	352	P	P	13 25 30.5	+0.4
	baz=169						
H58A	Gabriels	63.98	357	P	P	13 25 30.5	+0.3
	baz=177,SNR=5.4						
J47A	Sunmer	64.03	349	P	P	13 25 30.3	-0.1
	baz=165						
H61A	Lyndonville	64.04	359	P	P	13 25 31.7	+1.2
	baz=179,SNR=5.7						
H62A	Milan	64.07	360	P	P	13 25 31.6	+1.0
	baz=180						
H60A	Morristown	64.08	359	P	P	13 25 31.7	+1.0
	baz=178						
H57A	Richville	64.09	356	P	P	13 25 30.7	-0.1
	baz=175,SNR=7.4						
ANMO	Albuquerque	64.09	328	P	P	13 25 32.5	+1.2
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.8s						
ANMO	Albuquerque	64.09	328	P	P	13 25 32.6	+1.3
	baz=143						

I52A	Shelburne	64.13	353	P	P	13 25 31.2	+0.1
	baz=170						
H64A	Troy	64.15	1	P	P	13 25 31.3	+0.1
	baz=182						
H63A	New Sharon	64.16	1	P	P	13 25 32.8	+1.5
	baz=181						
H59A	Cadyville	64.19	358	P	P	13 25 32.2	+0.7
	baz=177,SNR=5.8						
H65A	Eastbrook	64.24	2	P	P	13 25 32.2	+0.4
	baz=183						
H56A	Elgin	64.28	356	P	P	13 25 32.5	+0.4
	baz=174						
CBKS	Cedar Bluff	64.29	335	P	P	13 25 33.6	+1.3
	baz=150						
H55A	Tweed	64.31	355	P	P	13 25 32.3	+0.1
	baz=174						
H66A	Whiting	64.36	3	P	P	13 25 32.8	+0.2
	baz=184						
I49A	Point Hope	64.38	350	P	P	13 25 32.5	-0.2
	baz=168						
H53A	Bobcaygeon	64.46	354	P	P	13 25 33.3	+0.1
	baz=172						
SNAA	Sanae	64.47	161	P	P	13 25 35.0	+1.9
SNAA	Sanae	64.47	161	i P	P	13 25 34.0	+0.9
SNAA	Sanae	64.47	161	P	P	13 25 35.1	+1.9
SNAA				IAmb	IAmb	13 25 35.7	
	comp=Z,30nm,1.1s						
G60A	Masonville	64.61	359	P	P	13 25 35.4	+1.2
	baz=178,SNR=5.1						
G59A	Clarenceville	64.61	358	P	P	13 25 35.1	+0.9
	baz=178						
G63A	Kingsbury	64.62	1	P	P	13 25 35.2	+0.9
	baz=181						
H52A	Wyevale	64.67	353	P	P	13 25 34.8	+0.2
	baz=171						
G57A	Newington	64.71	357	P	P	13 25 35.7	+0.9
	baz=176,SNR=6.0						
SADO	Sadowa	64.71	353	P	P	13 25 35.1	+0.3
G58A	Ormstown	64.71	358	P	P	13 25 35.6	+0.8
	baz=177						
G62A	West of Eustis	64.71	0	P	P	13 25 35.8	+0.9
G62A	West of Eustis	64.71	0	P	P	13 25 36.3	+1.4
	baz=180,SNR=16						
I47A	Gladwin	64.73	349	P	P	13 25 34.6	-0.4
	baz=166						
I48A	Sherman Twp	64.76	350	P	P	13 25 35.1	-0.1
	baz=167						
G65A	Princeton	64.77	3	P	P	13 25 36.0	+0.8
	baz=184						
PKME	Peaks-Kenny Pk	64.78	1	P	P	13 25 36.1	+0.8
PKME				IAmb	IAmb	13 25 37.0	
	comp=Z,30nm,0.9s						
PKME	Peaks-Kenny Pk	64.78	1	P	P	13 25 35.8	+0.6
	baz=182						
G64A	Maxfield	64.78	2	P	P	13 25 36.2	+0.9
	baz=182						
G61A	St-Isidore-de-	64.78	359	P	P	13 25 36.6	+1.3
	baz=179,SNR=6.8						
I46A	Reed City	64.83	348	P	P	13 25 35.2	-0.5
	baz=165						
T25A	Trinidad	64.88	331	P	P	13 25 38.3	+1.9
	baz=145						
JFWS	Jewell Farm	64.92	344	P	P	13 25 36.1	-0.1
	baz=160						
G55A	Calabogie	64.97	355	P	P	13 25 37.3	+0.8
	baz=174,SNR=5.5						
G53A	Haliburton	65.00	354	P	P	13 25 37.2	+0.5
	baz=172,SNR=10						
H48A	Harrisville	65.20	350	P	P	13 25 37.6	-0.5
	baz=167						
F63A	Nahmakanta, Br	65.22	1	P	P	13 25 39.4	+1.3
	baz=182						
G54A	Lake Saint Pet	65.22	354	P	P	13 25 38.4	+0.1
	baz=173						
H46A	Fife Lake	65.36	349	P	P	13 25 41.9	+2.8
	baz=165						
F64A	Sherman	65.40	2	P	P	13 25 40.1	+0.9
	baz=183,SNR=6.1						
F61A	St Evariste	65.47	360	P	P	13 25 40.1	+0.3
	baz=180,SNR=5.2						
F60A	Warwick	65.47	359	P	P	13 25 40.3	+0.5
	baz=179,SNR=6.4						
F52A	Sundridge	65.74	354	P	P	13 25 41.8	+0.2
	baz=171,SNR=9.3						
G47A	Hillman	65.74	350	P	P	13 25 41.2	-0.4
	baz=167						
ALGO	Algonquin Park	65.77	355	P	P	13 25 41.8	+0.1
	baz=173						
E60A	Ste Agathe de	65.87	360	P	P	13 25 42.4	+0.1
	baz=179						
SDCO	Great Sand Dun	65.87	330	P	P	13 25 44.5	+1.6
	baz=144,SNR=16						
E58A	La Victoria	65.90	358	P	P	13 25 43.0	+0.5
	baz=178,SNR=6.6						
E61A	Lac Etchemin	65.93	0	P	P	13 25 44.0	+1.3
	baz=180						
F51A	Arnstein	65.94	353	P	P	13 25 42.6	-0.2
	baz=171						
E63A	Oxbow	65.95	2	P	P	13 25 43.4	+0.5
	baz=183,SNR=5.4						
E64A	Bridgewater	65.97	2	P	P	13 25 43.6	+0.7
	baz=183,SNR=5.2						
E57A	Chemin Saint G	65.97	358	P	P	13 25 43.3	+0.2
	baz=177						
F49A	Sandfield	66.04	351	P	P	13 25 42.9	-0.6
	baz=169						
E55A	Montcerf-Lytto	66.12	356	P	P	13 25 44.3	+0.4
	baz=175						
E56A	St. Veronique	66.15	357	P	P	13 25 44.5	+0.4
	baz=176,SNR=8.8						
E52A	Mattawa	66.16	354	P	P	13 25 43.8	-0.4
	baz=172						
E53A	Dumoine, Ponti	66.16	355	P	P	13 25 44.4	+0.2
	baz=173						
E54A	Lac Daplat, Po	66.18	355	P	P	13 25 44.2	-0.1
	baz=174						
F48A	Evansville	66.19	351	P	P	13 25 44.5	+0.1
	baz=168						
D60A	Saint Jean D'O	66.41	360	P	P	13 25 45.3	-0.4
	baz=180						
E51A	G1948 Merrick	66.49	354	P	P	13 25 46.2	-0.2
	baz=171						
S22A	4UR Ranch, Cre	66.50	329	P	P	13 25 48.6	+1.6
	baz=143						
F45A	CMU Biological	66.53	349	P	P	13 25 46.2	-0.3
	baz=165						
D57A	Chemin Vers le	66.57	358	P	P	13 25 47.3	+0.5
	baz=177,SNR=14						
D63A	Stockholm	66.58	2	P	P	13 25 47.4	+0.5
	baz=183						
D62A	Allapoint, All	66.60	1	P	P	13 25 47.6	+0.6
D62A	Allapoint, All	66.60	1	P	P	13 25 47.7	+0.7
	baz=182,SNR=8.2						
D58A	Chemin du LacG	66.62	359	P	P	13 25 47.7	+0.6
	baz=178,SNR=13						
D56A	ZEC Mazanza, M	66.64	357	P	P	13 25 47.4	+0.2
	baz=176						
D55A	Sainte-Anne-du	66.64	357	P	P	13 25 47.6	+0.3
	baz=175						
D61A	St Aubert, Com	66.70	1	P	P	13 25 48.5	+0.9
	baz=181						
Q24A	Divide	66.70	331	P	P	13 25 49.3	+1.1
	baz=145						
E48A	Lockeyer	66.77	352	P	P	13 25 47.4	-0.6
	baz=168						
D54A	Lac Fusel, La	66.85	356	P	P	13 25 47.9	-0.8
	baz=174						
D53A	Lac Vacive, Po	66.86	355	P	P	13 25 49.0	+0.3
D53A				IAmb	IAmb	13 25 59.2	
	comp=Z,28nm,1.2s						
D53A	Lac Vacive, Po	66.86	355	P	P	13 25 48.9	+0.2
	baz=173						
MVCO	Mesa Verde	66.89	328	P	P	13 25 50.6	+1.2
	baz=141						
E47A	Iron Bridge	66.90	351	P	P	13 25 48.4	-0.6
	baz=167,SNR=5.3						
LATQ	La Tuque	66.90	359	P	P	13 25 49.4	+0.5
	baz=178						
BATG	Bathurst New B	66.91	4	IAmb	IAmb	13 26 01.6	
	comp=Z,21nm,0.9s						
D51A	Lot 18 Range I	67.03	354	P	P	13 25 48.5	-1.3
	baz=171						
WUAZ	Wupatki	67.10	325	P	P	13 25 52.6	+2.0
	baz=138,SNR=5.8						
D50A	G1974 Best Tow	67.15	353	P	P	13 25 50.4	-0.2
	baz=171,SNR=14						
D48A	Paudash Townsh	67.40	352	P	P	13 25 51.1	-1.0
	baz=169						
D47A	Chapleau	67.46	351	P	P	13 25 51.6	-0.9
	baz=168						
ECSD	EROS Data Cent	67.50	340	P	P	13 25 52.5	-0.3
	baz=154,SNR=13						
ISCO	Idaho Springs	67.59	332	P	P	13 25 54.9	+1.0
ISCO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ISCO	Idaho Springs	67.59	332	P	P	13 25 54.9	+1.0
ISCO	Idaho Springs	67.59	332	P	P	13 25 55.1	+1.2
	baz=145,SNR=7.8						
IKP	In-Ko-Pah, Jac	67.77	320	P	P	13 25 57.7	+2.8
	baz=134						
VLDQ	Val d'Or	67.87	355	P	P	13 25 54.8	-0.2
VLDQ				IAmb	IAmb	13 25 56.5	
	comp=Z,32nm,1.2s						
BC3	Big Chuckawall	68.07	321	P	P	13 25 58.9	+2.1
	baz=135						
MONP2	Monument Peak	68.12	320	P	P	13 25 59.9	+2.6
	baz=134						
IRM	Iron Mountain	68.24	321	P	P	13 25 60.0	+2.2
	baz=135,SNR=6.9						
N23A	Red Feather La	68.63	332	P	P	13 26 01.8	+1.4
	baz=145,SNR=5.8						
BELC	Belle Mtn. Jos	68.63	321	P	P	13 26 03.0	+2.6
	baz=134						
PFO	Pinyon Flats O	68.64	320	ceP	P	13 26 03.4	+3.0
PFO				pmax	pmax		
	comp=Z,14nm,1.7s						
PFO	Pinyon Flats O	68.64	320	P	P	13 26 03.0	+2.6
	baz=134						
LSQQ	Lebel-sur-Quev	68.77	356	P	P	13 26 00.8	+0.1
	baz=174						
GMRC	Granite Mounta	68.98	322	P	P	13 26 05.1	+2.6
	baz=135,SNR=11						
NVL	N'lazarevskaya	69.05	159	eP	P	13 26 02.0	-0.3
NVL				pmax	pmax		
	comp=Z,42nm,1.1s						
O20A	White River Ci	69.06	330	P	P	13 26 04.7	+1.8
	baz=142						
MATQ	Matagami	69.52	355	P	P	13 26 05.1	-0.2
	baz=173,SNR=6.6						
TUQ	Turquoise Moun	69.59	322	P	P	13 26 09.0	+2.7
	baz=135						
DRLN	Deer Lake	69.78	9	P	P	13 26 06.8	-0.1
BFSC	Mount Baldy Ra	69.80	320	P	P	13 26 09.6	+2.0
	baz=133						
GSC	Goldstone, Bar	70.02	321	P	P	13 26 11.6	+2.8
	baz=134,SNR=6.9						
DBIC	Dimbokro	70.04	75	P	P	13 26 08.0	-1.3
	comp=Z,18nm,0.8s,baz=215,slow=6.2,SNR=21						
DBIC	Dimbokro	70.04	75	P	P	13 26 08.0	-1.3
DBIC				pmax	pmax		
	comp=Z,24nm,0.9s						
DBIC	Dimbokro	70.04	75	P	P	13 26 08.0	-1.3
DBIC				IAmb	IAmb	13 26 09.0	
	comp=Z,24nm,0.8s						
SHOC	Shoshone, Teco	70.12	322	P	P	13 26 12.5	+3.1
	baz=135						
K22A	Casper	70.31	333	P	P	13 26 12.2	+1.6
	baz=144						
QSPA	South Pole Qui	70.37	180	P	P	13 26 13.2	+2.5
QSPA				IAmb	IAmb	13 26 13.9	
	comp=Z,30nm,1.1s						
EDW2	Edwards Air Fo	70.43	320	P	P	13 26 13.3	+1.9
	baz=133						
RSSD	Black Hills	70.49	335	P	P	13 26 12.4	+0.6
RSSD				pmax	pmax		
	comp=Z,16nm,1.3s						
RSSD	Black Hills	70.49	335	P	P	13 26 12.4	+0.6
RSSD	Black Hills	70.49	335	P	P	13 26 13.0	+1.2
	baz=147						
BLG	Laguna Peak, P	70.57	319	P	P	13 26 15.1	+3.0
	baz=132						
LRMC	Laurel Mtn Rad	70.66	321	P	P	13 26 15.6	+2.8
	baz=133						
TPNV	Topopah Spring	70.84	323	P	P	13 26 16.8	+2.8
	baz=135,SNR=8.8						
FURC	Furnace Creek,	70.86	322	P	P	13 26 16.9	+3.1
	baz=134,SNR=6.4						
MPMC	Manual Prospec	70.94	321	P	P	13 26 16.7	+2.1
	baz=134,SNR=6.2						
ISA	Isabella, Lake	71.25	321	P	P	13 26 19.1	+2.7
	baz=133,SNR=7.5						
DUG	Dugway, Tooele	71.35	327	P	P	13 26 18.7	+1.8
DUG				pmax	pmax		
	comp=Z,12nm,1.4s						
DUG	Dugway, Tooele	71.35	327	P	P	13 26 18.9	+2.0
	baz=138,SNR=10						
AGMN	Agassiz Nation	71.39	343	P	P	13 26 16.8	0.0
	baz=155						
R11A	Troy Canyon, C	71.46	324	P	P	13 26 20.4	+2.7
	baz=136,SNR=7.2						
GRAC	Grapevine Rang	71.52	322	P	P	13 26 20.7	+2.8
	baz=134						
PKM	Mcpherson Peak	71.55	319	P	P	13 26 21.3	+3.0
	baz=132,SNR=5.7						
CWC	Cottonwood Cre	71.55	321	P	P	13 26 20.9	+2.6
	baz=133						
VES	Vestal, Richgr	71.74	320	P	P	13 26 21.8	+2.6
	baz=132,SNR=6.4						
BW06	Boulder Array	71.74	331	P	P	13 26 17.9	-1.5
BW06	Boulder Array	71.74	331	P	P	13 26 20.7	+1.3
	baz=142						
PDAR	Pinedale Array	71.74	331	P	P	13 26 19.2	-0.2
	comp=Z,1.5nm,0.7s,baz=136,slow=6.4,SNR=11						
PDAR	Pinedale Array	71.74	331	P	P	13 26 18.3	-1.1
SMMC	Simmler	71.94	319	P	P	13 26 23.4	+2.9
	baz=132,SNR=5.3						
MDND	Maddock	72.11	340	P	P	13 26 22.1	+0.9
	baz=152,SNR=6.4						
MLAC	Mammoth, Mammo	72.80	322	P	P	13 26 28.3	+2.5
	baz=133						
NVAR	Mina Array Bea	73.04	323	P	P	13 26 29.6	+2.4
	comp=Z,3.0nm,0.8s,baz=148,slow=6.0,SNR=15						
ULM	Lac du Bonnet	73.17	344	P	P	13 26 27.2	-0.2
	comp=Z,5.6nm,0.8s,baz=155,slow=6.2,SNR=7.8						
ULM	Lac du Bonnet	73.17	344	i P	P	13 26 27.1	-0.3
RLMT	Red Lodge	73.47	333	P	P	13 26 31.2	+1.6
	baz=142,SNR=9.0						
H17A	Grant Village	73.48	331	P	P	13 26 32.1	+2.4
	baz=141						
LAO	LASA Array	73.48	335	P	P	13 26 30.8	+1.4
	baz=146,SNR=5.8						
YHL	Hebgen Lake	74.11	331	P	P	13 26 32.8	-0.6
DGMT	Dagmar	74.21	338	P	P	13 26 35.5	+1.9
	baz=148,SNR=6.1						
SCHQ	Schefferville	74.42	2	P	P	13 26 34.0	-0.6
	comp=Z,7.9nm,0.9s,baz=197,slow=3.3,SNR=8.4						
LRM	Limekiln Ridge	75.42	331	P	P	13 26 42.7	+1.7
EGMT	Eagleton	75.98	334	P	P	13 26 45.1	+1.2
	baz=143,SNR=9.5						
MSO	Missoula	76.86	331	P	P	13 26 51.1	+2.2
	baz=139,SNR=7.4						
M04C	Macdoel	77.30	323	P	P	13 26 53.6	+2.0
	baz=132						
VNDA	Vanda	78.18	190	P	P	13 26 57.2	+1.3
	comp=Z,4.7nm,1.1s,baz=158,slow=2.2,SNR=4.6						
TOA0	Torodi Ar. Sit	78.54	71	P	P	13 26 57.7	-1.2
TORD	Torodi Ar. Bea	78.54	71	P	P	13 26 57.6	-1.3
	comp=Z,32nm,0.8s,baz=253,slow=5.0,SNR=68						
SYO	Syowa Base	78.72	160	⇑iX	P	13 27 00.0	+1.1
SYO	Syowa Base	78.72	160	⇓iPcP	PcP	13 27 05.0	-2.8
I05D	Terrebonne, OR	78.73	326	P	P	13 27 02.0	+2.6
	baz=132						
FFC	Flin Flon	78.86	342	ceP	P	13 27 00.6	+0.8
FFC				pmax	pmax		
	comp=Z,18nm,1.7s						
NEW	Newport	79.38	331	P	P	13 27 04.1	+1.3
	baz=136						
B05A	Bryant	81.76	328	P	P	13 27 16.1	+0.6
	baz=132,SNR=5.1						
TSUM	Tsumeb	82.29	108	P	P	13 27 19.7	+0.4
TSUM				IAmb	IAmb	13 27 20.9	
	comp=Z,25nm,1.1s						
PAB	San Pablo	85.62	45	P	P	13 27 35.5	-0.2
PAB				pmax	pmax		
	comp=Z,18nm,1.1s						
PAB	San Pablo	85.62	45	P	P	13 27 35.5	-0.2
PAB				IAmb	IAmb	13 27 36.8	
	comp=Z,18nm,1.1s						
BOSA	Boshof	85.86	119	P	P	13 27 37.5	+0.2
	comp=Z,10nm,1.1s,baz=244,slow=6.4,SNR=6.1						
BOSA	Boshof	85.86	119	P	P	13 27 39.1	+1.8
ESDC	Sonseca Array	85.94	45	P	P	13 27 36.9	-0.3
	comp=Z,2.7nm,0.7s,baz=303,slow=4.5,SNR=5.5						
MAW	Mawson	86.46	164	P	P	13 27 41.4	+2.1
	comp=Z,14nm,1.1s,baz=229,slow=6.7,SNR=7.4						
YKA	Yellowknife Ar	89.00	341	P	P	13 27 51.6	+0.3
	comp=Z,11nm,0.9s,baz=138,slow=5.4,SNR=58						
SUMG	Summit	94.69	9	i P	P	13 28 18.0	0.0
	comp=Z,19nm,1.0s						
SUMG	Summit	94.69	9	i P	P	13 28 18.0	0.0
SUMG				pmax	pmax		
	comp=Z,19nm,1.0s						
CLL	Collm	101.49	40	ePdif	Pdif	13 28 49.0	+0.4
CLL				ePP	PP	13 33 02.0	+3.4
CLL	Collm	101.49	40	eP	Pdif	13 28 49.0	+0.4
CLL				e		13 33 02.0	
ILAR	Eielson Array	101.94	335	PP	PP	13 32 56.7	-5.0
	comp=Z,1.1nm,1.1s,baz=136,slow=3.5,SNR=4.2						
BRTR	Keskin Array B	113.35	54	PKiKP	PKiKP	13 33 35.7	+0.4
	comp=Z,0.9nm,0.8s,baz=225,slow=0.8,SNR=4.4						
OBN	Obninsk	115.97	38	ePKIKP	PKPdf	13 33 38.7	-0.8
OBN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SHA1	Shidzhatmaz	120.30	50	i PKIKP	PKiKP	13 33 48.6	-0.1
KIV	Kislovodsk	120.32	50	ePKIKP	PKiKP	13 33 48.6	+0.1
KIV				pmax	pmax		
	comp=Z,18nm,1.1s						
KBZ	Khabaz	120.47	50	PKP	PKiKP	13 33 48.7	0.0
	comp=Z,4.4nm,0.9s,baz=242,slow=2.9,SNR=7.5						
KBZ	Khabaz	120.47	50	i PKIKP	PKiKP	13 33 48.9	+0.2
H11S2	WAKE ISLAND Hy	125.83	279	T	T	15 53 18.1	
	baz=101,slow=75,SNR=572						
H11S1	WAKE ISLAND Hy	125.83	279	T	T	15 53 16.1	
	baz=101,slow=75,SNR=364						
H11S3	WAKE ISLAND Hy	125.84	279	T	T	15 53 17.9	
	baz=101,slow=75,SNR=285						
H11N3	WAKE ISLAND Hy	125.87	280	T	T	15 53 18.4	
	baz=100,slow=74,SNR=56						
H11N2	WAKE ISLAND Hy	125.88	280	T	T	15 53 20.8	
	baz=100,slow=74,SNR=76						
H11N1	WAKE ISLAND Hy	125.89	280	T	T	15 53 19.6	
	baz=100,slow=74,SNR=35						
ARU	Arti	127.76	33	PKP	PKiKP	13 34 02.4	-0.3
	comp=Z,0.4nm,0.3s,baz=290,slow=24,SNR=2.1						
ARU	Arti	127.76	33	i PKIKP	PKiKP	13 34 02.8	+0.1
ARU						13 36 01.0	
ARU						13 41 13.8	
ARU				SS	SS	13 53 18.4	+2.1
SEY	Seymchan	127.83	337	i PKIKP	PKiKP	13 34 03.3	+0.6
NRIK	Noril'sk	128.73	10	i PKIKP	PKiKP	13 34 04.8	+0.5
AKTO	Aktyubinsk	129.57	40	PKP	PKiKP	13 34 06.4	-0.2
	comp=Z,2.2nm,0.7s,baz=260,slow=2.4,SNR=4.9						
ASAR	Alice Springs	130.49	210	PKP	PKiKP	13 34 09.0	-0.4
	comp=Z,3.5nm,1.0s,baz=145,slow=2.4,SNR=10						
ABKAR	Akbulak array	131.12	41		PKiKP	13 34 11.1	+1.4
WSAR	Wadi Sarin	133.08	76	PKP	PKPdf	13 34 13.0	-0.3
	comp=Z,11nm,1.0s,baz=265,slow=3.7,SNR=4.4						
WRA	Warramunga Arr	133.41	213	PKP	PKPdf	13 34 14.0	-0.1
	comp=Z,1.7nm,0.7s,baz=154,slow=1.7,SNR=12						
WRA	Warramunga Arr	133.41	213	PKIKP	PKiKP	13 34 15.0	-0.4
WRA	Warramunga Arr	133.41	213		PKiKP	13 34 14.9	-0.4
BVAR	Borovoye Array	135.40	33	PKP	PKiKP	13 34 17.3	-1.0
	comp=Z,1.4nm,0.8s,baz=260,slow=2.7,SNR=5.7						
KKAR	Karatay Array	140.19	46	⇑ePKIKP	PKiKP	13 34 27.4	-1.0
KURK	Kurchatov	140.87	31	c iPKIKP	PKiKP	13 34 30.5	+1.0
KURK				pmax	pmax		
	comp=Z,26nm,1.0s						
KURBB	Kurchatov Arra	140.89	31	PKhKP	PKPpre	13 34 20.7	
	comp=Z,2.1nm,1.1s,baz=304,slow=3.0,SNR=8.2						
KURBB				PKP	PKPdf	13 34 26.8	-0.1
	comp=Z,2.1nm,1.0s,baz=314,slow=2.2,SNR=7.7						
KURBB				PP	PP	13 37 27.7	+0.6
	comp=Z,0.4nm,0.9s,baz=312,slow=5.9,SNR=4.1						
ZALV	Zalesovo Beam	141.16	23	PKhKP	PKPpre	13 34 23.5	
	comp=Z,5.4nm,0.9s,baz=328,slow=5.1,SNR=12						
ZALV				PKP	PKPdf	13 34 27.3	0.0
	comp=Z,5.2nm,0.9s,baz=302,slow=3.1,SNR=9.9						
AAK	Ala-Archa	143.03	44	PKP	PKPdf	13 34 29.6	-1.6
	comp=Z,6.2nm,1.1s,baz=86,slow=1.0,SNR=7.9						
AAK	Ala-Archa	143.03	44	c iPKIKP	PKPdf	13 34 30.6	-0.6
AAK				pmax	pmax		
	comp=Z,25nm,1.3s						
MAKZ	Makanchi	145.11	33	PKIKP	PKPdf	13 34 35.0	+0.5
MAKZ	Makanchi	145.11	33		PKPdf	13 34 35.0	+0.5
MK31	Makanchi Array	145.28	33	i PKIKP	PKPbc	13 34 34.1	-0.5
MK31	Makanchi Array	145.28	33		PKPdf	13 34 35.3	+0.5
MKAR	Makanchi Array	145.28	33	PKPbc	PKPdf	13 34 34.6	-0.2
	comp=Z,19nm,0.9s,baz=323,slow=3.8,SNR=87						
MKAR	Makanchi Array	145.28	33	PKIKP	PKPdf	13 34 35.7	+0.9
MKAR	Makanchi Array	145.28	33		PKPdf	13 34 35.7	+0.9
NIL	Nilore	145.30	59	PKIKP	PKPdf	13 34 35.2	-0.1
KSH	Kashi	145.41	48	PKPbc	PKPab	13 34 36.1	+0.6
KSH				PP	PP	13 37 59.3	+4.1
KSH				PKS		13 38 10.8	
KSH				SKKS		13 44 47.1	
KSH				AMB	AMB		
	comp=Z,380nm,8.4s						
PDGK	Podgornoye	145.84	40	PKIKP	PKPab	13 34 37.2	+0.2
POO	Poona	146.69	86	⇑iP	PKPdf	13 34 29.0	-9.1
	comp=Z,50nm,1.0s						
MOY	Mondy	147.57	9	ePKP2	PKPbc	13 34 41.4	+0.1
MOY				pmax	pmax		
	comp=Z,23nm,1.5s						
TLY	Talaya	147.90	6	PKPbc	PKiKP	13 34 43.8	-0.1
	comp=Z,3.1nm,0.6s,baz=2.1,slow=2.3,SNR=4.1						
TLY	Talaya	147.90	6	c iPKP2	PKPbc	13 34 42.0	-0.1
TLY				pmax	pmax		
	comp=Z,54nm,2.5s						
USRK	Ussuriysk Ar.	149.10	327	PKPbc	PKiKP	13 34 46.6	0.0
	comp=Z,7.5nm,0.9s,baz=25,slow=1.6,SNR=12						
ZAK	Zakamensk	149.14	7	ePKIKP	PKPdf	13 34 41.9	+0.6
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MJAR	Matsushiro Arr	149.59	309	PKPbc	PKiKP	13 34 47.9	0.0
	comp=Z,13nm,1.0s,baz=101,slow=2.5,SNR=18						
MJAR	Matsushiro Arr	149.59	309	PKP2	PKiKP	13 34 48.5	+0.6
MJAR	Matsushiro Arr	149.59	309		PKiKP	13 34 48.5	+0.6
MAJO	Matsushiro	149.59	309	PKP2	PKiKP	13 34 48.6	+0.7
MAJO	Matsushiro	149.59	309		PKiKP	13 34 48.6	+0.7
MAT	Matsushiro	149.59	309	PKP	PKiKP	13 34 47.9	0.0
MJB9	Matsu-Tunnel	149.59	309		PKiKP	13 34 48.6	+0.6
PALK	Pallekele	149.75	110	PKPbc	PKiKP	13 34 48.3	-0.6
	comp=Z,9.2nm,1.0s,baz=199,slow=0.9,SNR=5.9						
PALK	Pallekele	149.75	110	c iPKP2	PKiKP	13 34 49.2	+0.3
WMQ	Urumqi	150.09	32	ePKPbc	PKPdf	13 34 43.3	+0.4
SIJI	Sorong	150.11	229	PKPbc	PKiKP	13 34 50.1	+0.5
	comp=Z,11nm,0.8s,baz=162,slow=3.2,SNR=2.8						
HYB	Hyderabad	150.94	90	i PKP	PKPdf	13 34 46.0	+1.0
SONM	Songino Array	151.96	4	PKP	PKPdf	13 34 46.1	+0.3
	comp=Z,2.7nm,1.2s,baz=244,slow=1.3,SNR=7.8						
SONM				PKPbc	PKiKP	13 34 52.6	0.0
	comp=Z,5.4nm,0.9s,baz=291,slow=1.2,SNR=19						
CN2	Changchun	152.45	334	ePKPbc	PKPdf	13 34 49.0	+2.6
KAPI	Kappang	153.21	204	PKPbc	PKPbc	13 34 54.8	-1.0
	comp=Z,3.2nm,0.7s,baz=243,slow=4.0,SNR=4.2						
KSRS	Korea Array	155.97	321	PKP	PKPdf	13 34 52.6	+1.1
	comp=Z,3.1nm,1.0s,baz=78,slow=1.4,SNR=9.9						
GTA	Gaotai	158.88	20	PKP	PKPdf	13 34 56.6	+1.2
HHC	Hu-ho-hao-te	158.93	355	ePKP	PKPdf	13 34 56.4	+1.1
TIA	Tai'an	162.22	338	PKP	PKPdf	13 35 00.3	+1.4
LZH	Lanzhou	163.13	15	ePKP	PKPdf	13 34 58.6	-1.5
LZH				pPKP	sPKPdf	13 35 06.5	+5.5
LZH				sPKP		13 35 09.3	
LZH				LR	LR		
	comp=Z,190nm,20.1s						
NJ2	Nanjing	165.01	326	ePKP	PKPdf	13 34 59.8	-1.8
XAN	Xi'an	165.82	1	PKP	PKPdf	13 35 02.8	+0.4
XAN				AMB	AMB		
	comp=Z,220nm,5.4s						
CD2	Chengdu	167.93	23	PKP	PKPdf	13 35 03.3	-0.7
WHN	Wuhan	168.32	337	PKP	PKPdf	13 35 07.3	+3.1
CMAR	Chiang Mai Arr	170.28	96	PKP	PKPdf	13 35 06.5	+0.7
	comp=Z,2.8nm,1.1s,baz=259,slow=2.6,SNR=7.3						
CMAR				PKPab	PKPab	13 36 21.9	0.0
	comp=Z,1.6nm,0.7s,baz=251,slow=6.6,SNR=11						

NEIC ***22*** *13:20:55.0±2.5, 19.°90S±0.°03×70.°84W±0.°01, h10km±1km, mb4.6/2, Error ellipse: s-maj=5.6km s-min=2.9km az=0.0*

GUC ***22*** *13:20:55.7±0.7, 19.°79S×70.°88W, h40km±3km, ML3.4*

IDC ***22*** *13:20:57.8±1.5, 19.°82S×70.°55W, h0km, mb4.0/3, mb1 4.2/5, mb1mx3.9/31, mbtmp4.1/5, ML3.4/1, Error ellipse: s-maj=43.2km s-min=18.3km az=71.0*

ISC 22 13:20:54.3±1.8**, 19.°82S**±0.°03×**70.°86W**±0.°06**, h3**km±11km**, n39,** σ1.s**34**/48**, mb4.3**/3**, 4C-2D, Near coast of northern Chile**

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

PSGC	Pisagua	0.73	73	⇓*i*P	Pg	13 21 08.8	+0.5
PSGC				*i* S	Sg	13 21 19.5	+1.7
PSGCX	Pisagua	0.73	73		Pg	13 21 08.9	+0.6
TA01	Diego Aracena	0.98	140	⇑*i*P	Pg	13 21 13.5	+0.3
TA01				*i* S	Sb	13 21 27.3	-0.1
TA01				IAML		13 21 30.1	
	comp=N,1µm,0.6s						
PB11	IPOC Station P	1.14	87	⇑*e*P	Pg	13 21 15.9	-0.2
PB11				*e*S	Sb	13 21 31.9	0.0
PB11				IAML		13 21 33.7	
	comp=E,2µm,0.6s						
PB11	IPOC Station P	1.14	87		Pg	13 21 16.1	0.0
PATCX	Punta Patache	1.20	147	*e*P	Pb	13 21 16.8	-1.0
PATCX	Punta Patache	1.20	147		Pb	13 21 16.9	-0.9
PB12	IPOC Station P	1.30	23	*e*P	Pn	13 21 17.8	-1.6
PB12				*i* S	Sb	13 21 34.4	-2.1
PB12				IAML		13 21 36.9	
	comp=E,863nm,0.5s						
PB12	IPOC Station P	1.30	23		Pn	13 21 18.9	-0.6
AP01	Chacalluta	1.52	19	*e*P	Pn	13 21 21.3	-1.1
AP01				*e*S	Sn	13 21 41.2	-1.5
GO01	Chusmiza	1.58	85	*e*P	Pn	13 21 23.4	-0.3
GO01				*e*S	Sb	13 21 44.9	-0.1
GO01	Chusmiza	1.58	85		Pn	13 21 23.4	-0.3
PB08	IPOC Station P	1.64	102	*e*P	Pn	13 21 24.1	-0.3
PB08				*i* S	Sb	13 21 46.6	-0.1
PB08				IAML		13 21 47.7	
	comp=N,739nm,0.3s						
PB02	IPOC Station P	1.75	149	*e*P	Pn	13 21 24.5	-1.2
PB02				*i* S	Sn	13 21 48.4	-0.2
PB01	IPOC Station P	1.77	134	*e*P	Pn	13 21 25.6	-0.4
PB01				*e*S	Sn	13 21 48.2	-1.0
PB01				IAML		13 21 49.5	
	comp=N,542nm,0.5s						
PB01	IPOC Station P	1.77	134		Pn	13 21 25.7	-0.4
PB01					Sn	13 21 48.5	-0.7
PB16	IPOC Station P	1.95	41	⇓*e*P	Pn	13 21 29.3	+0.4
PB16				*e*S	Sn	13 21 54.3	+0.1
PB16				IAML		13 21 56.8	
	comp=N,999nm,0.5s						
PB16	IPOC Station P	1.95	41	Pn	Pn	13 21 29.3	+0.4
PB07	IPOC Station P	2.11	155	Pn	Pn	13 21 31.9	+1.1
PB09	IPOC Station P	2.48	143	Pn	Pn	13 21 37.4	+1.5
PB04	IPOC Station P	2.59	165	Pn	Pn	13 21 35.2	-2.1
LVC	Limon Verde	3.32	147	Pn	Pn	13 21 48.2	+0.6
	comp=N,4.6nm,0.3s,baz=359,slow=7.4,SNR=8.5						
LVC				Sn	Sn	13 22 27.3	-0.5
	comp=N,9.7nm,0.3s,baz=57,slow=17,SNR=1.8						
LVC				Lg	Lg	13 22 39.0	
	comp=N,13nm,0.3s,baz=136,slow=10,SNR=5.0						
PB15	IPOC Station P	3.62	159	Pn	Pn	13 21 50.4	-1.1
PB10	IPOC Station P	3.69	176	Pn	Pn	13 21 50.9	-1.5
LPAZ	La Paz	4.37	37	Pn	Pn	13 22 07.2	+5.0
	comp=N,0.4nm,0.3s,baz=272,slow=24,SNR=0.9						
LPAZ	La Paz	4.37	37	Pn	Pb	13 22 11.1	-1.0
PB14	IPOC Station P	4.81	175	Pn	Pn	13 22 07.6	-0.4
GO02	Mina Guanaco	5.45	168	Pn	Pn	13 22 15.0	-1.7
NNA	Nana	9.68	323	Pn	Pn	13 23 17.4	+2.8
SIV	San Ignacio	10.06	69	Pn	Pn	13 23 19.7	-0.2
	baz=241,slow=19,SNR=1.4						
CPUP	Villa Florida	14.04	120	Pn	Pn	13 24 12.3	-1.9
PLCA	Paso Flores	20.85	179	P	Pn	13 25 42.1	+2.2
	comp=N,3.1nm,0.9s,baz=39,slow=11,SNR=2.9						
PTGA	Pitinga	21.76	31	P	P	13 25 44.4	-2.9
PTGA				IAmb	IAmb	13 25 50.3	
	comp=Z,27nm,1.1s						
RUSC	La Rusia	25.64	355	P	P	13 26 24.7	-1.2
TORD	Torodi Ar. Bea	78.53	71	P	P	13 33 00.4	+2.7
	comp=Z,2.3nm,0.8s,baz=252,slow=5.3,SNR=5.2						
SYO	Syowa Base	78.71	160	⇑*e*P	P	13 32 53.0	-4.7
SYO	Syowa Base	78.71	160	⇑*e*pP	P	13 32 57.0	-0.7
YKA	Yellowknife Ar	89.01	341	P	P	13 33 53.8	+3.6
	comp=Z,1.0nm,0.8s,baz=139,slow=5.7,SNR=6.6						
MKAR	Makanchi Array	145.28	33	PKPbc	PKiKP	13 40 37.0	-0.6
	comp=Z,1.1nm,0.8s,baz=318,slow=4.4,SNR=4.1						

IDC ***22*** *13:22:44.6±0.7, 19.°73S×70.°92W, h0^{km}, mb4.2/14, mb1 4.3/16, mb1mx4.2/35, mbtmp4.2/16, ML4.0/2, Error ellipse: s-maj=26.8km s-min=13.4km az=56.0*

NEIC ***22*** *13:22:45.3±4.0, 19.°83S±0.°05×71.°07W±0.°07, h25^{km}±8^{km}, Error ellipse: s-maj=10.1km s-min=6.4km az=99.0*

GUC ***22*** *13:22:47.5±0.7, 19.°81S×71.°01W, h42^{km}±3^{km}, ML4.5*

ISC 22 13:22:44.4±1.1**, 19.°81S**±0.°04×**71.°07W**±0.°05**, h5**^{km}±6^{km}**, n59, σ1.^{s}46**/70**, mb4.4**/14**, 4C-1D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.91	77	⇓*i*P	Pb	13 23 02.8	0.0
PSGC				*i* S	Sg	13 23 12.3	-1.5
PSGCX	Pisagua	0.91	77	Pn	Pb	13 23 02.8	0.0
PSGCX				Sn	Sg	13 23 13.2	-0.7
TA01	Diego Aracena	1.12	132	⇑*i*P	Pn	13 23 06.8	0.0
TA01				*i* S	Sg	13 23 20.6	+0.2
TA01				IAML		13 23 36.6	
	comp=E,18µm,0.3s						
PATCX	Punta Patache	1.32	140	*i* P	Pn	13 23 09.6	+0.1
PATCX				*i* S	Sb	13 23 27.2	+0.2
PATCX				IAML		13 23 42.6	
	comp=N,15µm,0.6s						
PATCX	Punta Patache	1.32	140	Pn	Pn	13 23 09.7	+0.1
PB11	IPOC Station P	1.33	88	*i* P	Pn	13 23 09.9	+0.1
PB11				*i* S	Sg	13 23 26.9	-0.2
PB11				IAML		13 23 29.2	
	comp=E,17µm,0.7s						
PB11	IPOC Station P	1.33	88	Pn	Pn	13 23 09.8	+0.1
PB12	IPOC Station P	1.38	30	⇑*i*P	Pb	13 23 10.6	-0.1
PB12				*i* S	Sn	13 23 29.2	+0.2
PB12				IAML		13 23 40.9	
	comp=E,8µm,0.6s						
PB12	IPOC Station P	1.38	30	Pn	Pb	13 23 10.6	-0.1
AP01	Chacalluta	1.59	26	⇑*i*P	Pb	13 23 14.3	+0.1
AP01				*i* S	Sn	13 23 33.7	-0.3
GO01	Chusmiza	1.77	86	*e*P	Pb	13 23 16.9	-0.7
GO01				*i* S	Sb	13 23 40.2	-0.1
GO01				IAML		13 23 42.4	
	comp=N,14µm,0.2s						
GO01	Chusmiza	1.77	86	Pn	Pb	13 23 16.9	-0.7
PB08	IPOC Station P	1.83	101	⇑*i*P	Pb	13 23 17.9	-0.7
PB08				*i* S	Sn	13 23 41.1	+0.6
PB01	IPOC Station P	1.92	130	*e*P	Pn	13 23 18.3	+0.5
PB01				*i* S	Sn	13 23 42.7	+0.3
PB01				IAML		13 24 00.8	
	comp=N,6µm,0.4s						
PB01	IPOC Station P	1.92	130	Pn	Pn	13 23 17.7	-0.1
PB16	IPOC Station P	2.08	45	Pn	Pb	13 23 22.6	-0.4
PB07	IPOC Station P	2.20	150	IAML		13 24 15.6	
	comp=E,6µm,0.7s						
LVC	Limon Verde	3.44	145	Pn	Pn	13 23 40.3	+1.3
	comp=E,18nm,0.3s,baz=320,slow=16,SNR=1.0						
LVC				Sn	Sn	13 24 20.8	+0.6
	comp=E,44nm,0.3s,baz=359,slow=14,SNR=2.1						
LVC				Lg	Lg	13 24 31.2	
	comp=E,88nm,0.3s,baz=24,slow=8.0,SNR=5.2						
LVC	Limon Verde	3.44	145	Pn	Pn	13 23 41.7	+2.7
PB10	IPOC Station P	3.72	173	Pn	Pn	13 23 41.8	-0.6
LPAZ	La Paz	4.48	39	Pn	Pb	13 24 00.9	-3.0
	comp=E,3.4nm,0.3s,baz=279,slow=3.7,SNR=18						
LPAZ	La Paz	4.48	39		Pb	13 24 01.3	-2.6
PB14	IPOC Station P	4.83	173	Pn	Pn	13 23 56.5	-1.6
LCO	Las Campanas	9.17	178	Pn	Pn	13 24 55.4	-2.1
SIV	San Ignacio	10.24	70	Pn	Pn	13 25 13.9	+1.7
	comp=E,4.5nm,0.3s,baz=264,slow=11,SNR=10.0						
CPUP	Villa Florida	14.21	120	Pn	Pn	13 26 07.8	+1.5
	comp=E,0.2nm,0.3s,baz=147,slow=19,SNR=1.7						
CPUP	Villa Florida	14.21	120		Pn	13 26 05.4	-0.9
GO06	Curarrehue	19.71	181	P	P	13 27 11.4	-3.4
PLCA	Paso Flores	20.86	179	P	Pn	13 27 29.6	-0.1
	comp=E,4.1nm,0.7s,baz=14,slow=9.9,SNR=7.9						
PLCA	Paso Flores	20.86	179	P	P	13 27 24.9	-2.4
PLCA				IAmb	IAmb	13 27 42.9	
	comp=Z,12nm,1.0s						
PTGA	Pitinga	21.86	31	P	P	13 27 34.8	-3.3
PTGA				IAmb	IAmb	13 27 45.7	
	comp=Z,38nm,1.3s						
BDFB	Brasilia	22.34	83	P	P	13 27 43.7	+0.3
	comp=Z,7.3nm,0.9s,baz=125,slow=24,SNR=1.5						
BDFB	Brasilia	22.34	83	P	P	13 27 39.4	-4.0
BDFB				IAmb	IAmb	13 27 56.7	
	comp=Z,19nm,1.1s						
ROSC	El Rosal	24.70	352	P	P	13 28 07.8	+0.8
	comp=Z,6.4nm,0.3s,baz=175,slow=23,SNR=2.2						
PAYG	Puerto Ayora	26.75	313	P	P	13 28 23.3	-1.9
RCBR	Riachuelo	36.89	73	P	P	13 29 53.9	-0.4
	comp=Z,7.4nm,0.7s,baz=253,slow=11,SNR=1.9						
RCBR	Riachuelo	36.89	73	P	P	13 29 48.1	-6.2
RCBR				IAmb	IAmb	13 30 04.2	
	comp=Z,12nm,0.8s						
TKL	Tuckaleechee C	56.47	348	P	P	13 32 27.1	-0.1
	comp=Z,2.7nm,0.7s,baz=141,slow=9.9,SNR=2.9						
TKL	Tuckaleechee C	56.47	348	P	P	13 32 23.9	-3.4
TKL				IAmb	IAmb	13 32 28.0	
	comp=Z,5.0nm,0.9s						
TXAR	Lajitas Array	58.10	326	P	P	13 32 40.1	+1.0
	comp=Z,0.4nm,0.6s,baz=148,slow=7.1,SNR=4.9						
SADO	Sadowa	64.69	354	P	P	13 33 23.6	+0.5
	comp=Z,5.3nm,0.6s,baz=250,slow=3.8,SNR=5.9						
DBIC	Dimbokro	70.22	75	P	P	13 33 59.6	+0.7
	comp=Z,2.1nm,0.7s,baz=221,slow=9.3,SNR=1.9						
PDAR	Pinedale Array	71.65	331	P	P	13 34 08.2	+0.9
	comp=Z,0.7nm,0.8s,baz=112,slow=6.6,SNR=4.5						
NVAR	Mina Array Bea	72.93	323	P	P	13 34 16.2	+1.1
	comp=Z,1.0nm,0.7s,baz=152,slow=6.6,SNR=5.9						
ULM	Lac du Bonnet	73.12	344	P	P	13 34 15.9	+0.4
	comp=Z,1.1nm,0.4s,baz=171,slow=10,SNR=2.9						
SCHQ	Schefferville	74.43	3	P	P	13 34 24.0	+0.8
	comp=Z,2.4nm,1.1s,baz=209,slow=10,SNR=1.7						
TORD	Torodi Ar. Bea	78.72	72	P	P	13 34 47.2	-1.1
	comp=Z,3.4nm,0.7s,baz=253,slow=4.9,SNR=7.2						
YKA	Yellowknife Ar	88.94	341	P	P	13 35 40.3	+0.8
	comp=Z,2.0nm,0.8s,baz=137,slow=5.2,SNR=9.7						
SEY	Seymchan	127.75	337	PKP	PKiKP	13 41 52.5	+1.5
	comp=Z,1.7nm,1.0s,baz=94,slow=4.8,SNR=8.6						
ASAR	Alice Springs	130.40	211	PKP	PKiKP	13 41 57.7	0.0
	comp=Z,0.4nm,0.7s,baz=132,slow=1.9,SNR=5.4						
WRA	Warramunga Arr	133.31	214	PKP	PKPdf	13 42 03.0	+0.6
	comp=Z,0.7nm,0.9s,baz=151,slow=1.9,SNR=6.0						
ZALV	Zalesovo Beam	141.23	23	PKP	PKPdf	13 42 17.1	+1.2
	comp=Z,1.4nm,0.6s,baz=293,slow=3.6,SNR=5.3						
MKAR	Makanchi Array	145.38	33	PKPbc	PKPab	13 42 24.0	+0.5
	comp=Z,0.9nm,0.7s,baz=310,slow=3.2,SNR=6.5						
KSH	Kashi	145.55	48	PKPbc	PKPab	13 42 25.8	+1.3
KSH				PP	PP	13 45 47.9	+3.4
KSH				PKS	PKSdf	13 45 57.8	-1.9
WMQ	Urumqi	150.19	32	*e*PKPbc	PKPdf	13 42 33.0	+1.4
WMQ				PP	PP	13 46 21.5	+11
SONM	Songino Array	151.97	4	PKPbc	PKiKP	13 42 41.2	+0.1
	comp=Z,1.1nm,0.6s,baz=318,slow=1.9,SNR=4.0						
LZH	Lanzhou	163.18	14	*e*PKP	PKPdf	13 42 49.5	+0.9
LZH				pPKP	sPKPdf	13 42 54.8	+5.3
LZH				sPKP		13 42 56.8	
LZH				PKP	sPKPab	13 43 41.6	+2.2
NJ2	Nanjing	164.91	326	*e*P	PKPdf	13 42 51.0	+1.0
CD2	Chengdu	168.00	22	PKP	PKPdf	13 42 52.0	-0.5

IDC ***22*** *13:29:56.8±0.4, 19.°61S×70.°69W, h0^{km}, mb5.0/34, mb1 5.1/39, mb1mx5.0/44, mbtmp5.0/39, ML4.3/5, MS5.4/8, Ms1 5.3/8, ms1mx4.9/27, Error ellipse: s-maj=14.2km s-min=9.1km az=64.0*

SJA ***22*** *13:29:56.2±1.2, 19.°72S×71.°02W, h6^{km}±9^{km}, ML5.3, MW5.1*

BJI ***22*** *13:29:57.5±0.0, 20.°01S×70.°57W, h10^{km}, mB5.8/18, Ms6.1/9, Ms7 5.9/12*

MOS ***22*** *13:29:57.2±1.7, 19.°56S×70.°90W, h10^{km}, mb5.5/30, Error ellipse: s-maj=11.5km s-min=7.2km az=104.4*

NEIC ***22*** *13:29:58.1, 19.°76S×70.°96W, h17^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.77; M$_{\theta\theta}$0.04; M$_{\phi\phi}$-0.81; M$_{r\theta}$0.38; M$_{\theta\phi}$0.32; M$_{\phi r}$-1.37; Fault plane solution: M$_0$1.66000×10^{17} NP1:φ$_s$164.21000°, δ74.64000°, λ91.62000°. NP2:φ$_s$338.11000°, δ15.44000°, λ84.12000°. Principal axes: T 1.5830, Plg60.0000°, Azm77.0000°; N 0.1407, Plg2.0000°, Azm344.0000°; P -1.7237, Plg30.0000°, Azm253.0000°;*

NEIC ***22*** *13:29:58.4±2.9, 19.°72S±0.°04×70.°95W±0.°06, h17^{km}±1^{km}, mb5.5/267, Ms_20 5.4/13, Mwr5.4/37, Mww5.6, ML5.2(GUC), Mwc5.6(GCMT) Error ellipse: s-maj=9.3km s-min=6.8km az=264.0*

GUC ***22*** *13:29:59.0±0.7, 19.°76S×70.°99W, h43^{km}±2^{km}, ML5.1*

VAO ***22*** *13:29:59.8±0.3, 19.°66S×70.°75W, h17^{km}, mb5.4*

GCMT ***22*** *13:30:04.4±0.3, 19.°67S±0.°02×71.°20W±0.°02, h23^{km}, MW5.6/117, Moment Tensor Solution. s61,c72; s117,c190; Duration: 1.^{s}5 Moment tensor: Scale 10^{17} Nm; M$_{rr}$2.24±.09; M$_{\theta\theta}$-0.15±.04; M$_{\phi\phi}$-2.10±.06; M$_{r\theta}$0.26±.07; M$_{\theta\phi}$0.38±.03; M$_{\phi r}$-1.65±.09; Best double couple: M$_0$2.76600×10^{17} NP1:φ$_s$349.00000°, δ26.00000°, λ88.00000°. NP2:φ$_s$170.00000°, δ64.00000°, λ91.00000°. Principal axes: T 2.8010, Plg71.0000°, Azm82.0000°; N -0.0770, Plg1.0000°, Azm350.0000°; P -2.7310, Plg19.0000°, Azm260.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***22*** *13:30:04, 19.°72S×71.°15W, h21^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.13; M$_{\theta\theta}$-0.08; M$_{\phi\phi}$-2.04; M$_{r\theta}$0.40; M$_{\theta\phi}$0.50; M$_{\phi r}$-1.55; Fault plane solution: M$_0$2.68000×10^{17} NP1:φ$_s$166.00000°, δ63.00000°, λ90.00000°. NP2:φ$_s$347.00000°, δ27.00000°, λ91.00000°. Principal axes: T 2.6592, Plg72.0000°, Azm75.0000°; N 0.0328, Plg0.0000°, Azm166.0000°; P -2.6921, Plg18.0000°, Azm256.0000°;*

NEIC ***22*** *13:30:04, 19.°77S×70.°97W, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.31; M$_{\theta\theta}$-0.12; M$_{\phi\phi}$-1.19; M$_{r\theta}$1.11; M$_{\theta\phi}$0.43; M$_{\phi r}$-2.53; Fault plane solution: M$_0$3.06000×10^{17} NP1:φ$_s$157.00000°, δ77.00000°, λ88.00000°. NP2:φ$_s$345.00000°, δ13.00000°, λ98.00000°. Principal axes: T 3.0464, Plg58.0000°, Azm64.0000°; N 0.0310, Plg2.0000°, Azm157.0000°; P -3.0773, Plg32.0000°, Azm248.0000°;*

ISC 22 13:29:59.2±0.8**, 19.°69S**±0.°02×**70.°89W**±0.°03**, h17**^{km}±4^{km}**, n871, σ1.^{s}34**/809**, mb5.5**/166**, MS5.5**/15**, 18C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.73	83	⇓*i*P	Pb	13 30 13.9	+0.5
PSGC				*e*S	Sn	13 30 25.3	-0.3
PSGCX	Pisagua	0.73	83		Pb	13 30 13.7	+0.3
PSGCX	Pisagua	0.73	83	*i* P	Pn	13 30 14.1	-0.7
PSGCX				*e*S	Sn	13 30 26.7	+1.1
TA01	Diego Aracena	1.10	143	⇑*i*P	Pb	13 30 18.9	-0.8
TA01				*e*S	Sb	13 30 33.1	-0.6
TA01				IAML		13 30 39.9	
	comp=E,59µm,0.6s						
PB11	IPOC Station P	1.17	94	⇓*i*P	Pb	13 30 21.1	+0.1
PB11				*e*S	Sg	13 30 38.0	+1.0
PB11				IAML		13 30 43.1	
	comp=E,70µm,0.5s						
PB11	IPOC Station P	1.17	94		Pb	13 30 21.1	+0.1
PB11	IPOC Station P	1.17	94	*i* P	Pb	13 30 21.0	+0.1
PB11				*e*S	Sg	13 30 39.5	+2.5
PB12	IPOC Station P	1.20	27	⇑*i*P	Pb	13 30 21.5	+0.1
PB12				*e*S	Sg	13 30 39.0	+1.0
PB12				IAML		13 30 47.3	
	comp=N,60µm,0.4s						
PB12	IPOC Station P	1.20	27		Pn	13 30 20.8	-0.4
PB12	IPOC Station P	1.20	27	*i* P	Pb	13 30 21.7	+0.3
PB12				*e*S	Sg	13 30 39.8	+1.8
PATCX	Punta Patache	1.32	148	⇑*i*P	Pn	13 30 21.9	-1.1
PATCX				*i* S	Sn	13 30 39.7	-0.5
PATCX	Punta Patache	1.32	148		Pn	13 30 21.8	-1.1
PATCX	Punta Patache	1.32	148	*i* P	Pn	13 30 22.1	-0.8
PATCX				*e*S	Sg	13 30 42.7	+0.7
AP01	Chacalluta	1.41	22	⇑*i*P	Pn	13 30 24.4	+0.3
AP01				*e*S	Sg	13 30 44.1	-0.7
GO01	Chusmiza	1.60	89	⇑*i*P	Pb	13 30 28.2	-0.4
GO01				*e*S	Sg	13 30 50.9	-0.1
GO01				IAML		13 30 57.0	
	comp=N,50µm,0.2s						
GO01	Chusmiza	1.60	89	Pn	Pb	13 30 28.1	-0.4
PB08	IPOC Station P	1.70	106	⇑*i*P	Pn	13 30 29.0	+0.6
PB08				*e*S	Sb	13 30 52.3	+1.0
PB08				IAML		13 30 57.3	
	comp=N,23µm,0.5s						
PB08	IPOC Station P	1.70	106	*i* P	Pb	13 30 29.1	-1.0
PB08				*e*S	Sg	13 30 53.8	-0.2
PB02	IPOC Station P	1.87	150	⇑*i*P	Pn	13 30 29.6	-0.8
PB02				*e*S	Sn	13 30 53.2	-0.6
PB02	IPOC Station P	1.87	150	*i* P	Pn	13 30 29.8	-0.7
PB02				*e*S	Sg	13 31 01.9	+2.5
PB16	IPOC Station P	1.88	44	⇑*i*P	Pb	13 30 32.4	-1.0
PB16				*e*S	Sg	13 30 58.9	-1.0
PB16				IAML		13 31 11.8	
	comp=N,38µm,0.6s						
PB16	IPOC Station P	1.88	44		Pb	13 30 32.1	-1.3
PB16	IPOC Station P	1.88	44	*i* P	Pb	13 30 32.9	-0.5
PB16				*e*S	Sg	13 31 00.4	+0.5
PB01	IPOC Station P	1.88	136	⇑*i*P	Pn	13 30 30.5	-0.1
PB01				*e*S	Sn	13 30 54.1	0.0
PB01				IAML		13 31 02.2	
	comp=N,27µm,0.7s						
PB01	IPOC Station P	1.88	136		Pn	13 30 30.6	-0.1
PB01	IPOC Station P	1.88	136	*i* P	Pn	13 30 30.6	0.0
PB01				⇓*e*S	Sg	13 31 03.4	+3.5
PB07	IPOC Station P	2.23	155	⇑*i*P	Pn	13 30 34.3	-1.3
PB07				*i* S	Sn	13 30 59.4	-3.5
PB07	IPOC Station P	2.23	155		Pn	13 30 34.1	-1.4
PB07	IPOC Station P	2.23	155	*i* P	Pn	13 30 36.6	+1.1
PB07				*e*S	Sg	13 31 11.3	+0.2
PB03	IPOC Station P	2.58	156	*i* P	Pn	13 30 39.2	-1.1
PB09	IPOC Station P	2.60	144		Pn	13 30 41.1	+0.5
PB09	IPOC Station P	2.60	144	*i* P	Pn	13 30 41.2	+0.5
PB09				*e*S	Sg	13 31 20.8	-2.1
PB09				IAML		13 31 35.4	
	comp=Z,22µm,0.7s						
PB04	IPOC Station P	2.72	165		Pn	13 30 40.2	-2.1
PB04	IPOC Station P	2.72	165	*i* P	Pn	13 30 40.3	-2.0
PB04				*e*S	Sg	13 31 28.5	+1.8
PB05	IPOC Station P	3.21	169	*i* P	Pn	13 30 46.5	-2.5
PB05				*e*S	Sg	13 31 40.4	-2.0
PB05				IAML		13 31 51.2	
	comp=Z,8µm,0.9s						
PB06	IPOC Station P	3.24	158	*i* P	Pn	13 30 47.7	-1.7
PB06				*e*S	Sg	13 31 40.0	-3.4
PB06				IAML		13 31 47.2	
	comp=Z,16µm,0.8s						
LVC	Limon Verde	3.44	148	Pn	Pn	13 30 52.7	+0.4
	comp=Z,80nm,0.3s,baz=339,slow=7.6,SNR=83						
LVC				Sn	Sn	13 31 33.6	+0.6
	comp=Z,146nm,0.3s,baz=39,slow=17,SNR=4.5						
LVC				Lg	Lg	13 31 45.2	
	comp=Z,384nm,0.3s,baz=33,slow=22,SNR=10						
LVC	Limon Verde	3.44	148	P	Pn	13 30 54.2	+1.8
LVC	Limon Verde	3.44	148		Pn	13 30 52.4	0.0
LVC	Limon Verde	3.44	148	*e*P	Pn	13 30 52.8	+0.4
LVC				*e*S	Sn	13 31 32.9	-0.1
LVC	Limon Verde	3.44	148	*i* P	Pn	13 30 52.7	+0.4
LVC				*e*S	Sb	13 31 45.0	+3.4
LVC				IAML		13 31 52.8	
	comp=Z,5µm,0.8s						
LVC				IAML		13 31 54.2	
	comp=Z,4µm,0.7s						
PB15	IPOC Station P	3.74	160		Pn	13 30 54.4	-1.9
PB15	IPOC Station P	3.74	160	*i* P	Pn	13 30 54.6	-1.7
PB15				*e*S	Sb	13 31 53.7	+3.6
PB10	IPOC Station P	3.82	175		Pn	13 30 54.1	-3.1
PB10	IPOC Station P	3.82	175	*i* P	Pn	13 30 54.3	-2.9
PB10				*e*S	Sg	13 32 02.5	+0.7
PB10				IAML		13 32 08.9	
	comp=Z,2µm,1.0s						
I08BO	LAS PENAS INFR	4.16	34	Pn	Pb	13 31 08.0	-4.3
	baz=219,slow=26,SNR=1.5						
LPAZ	La Paz	4.28	38	Pn	Pn	13 31 08.1	+3.9
	comp=Z,13nm,0.3s,baz=220,slow=6.7,SNR=79						
LPAZ	La Paz	4.28	38	P	Pn	13 31 08.2	+4.0
LPAZ	La Paz	4.28	38	*e*S	Sn	13 31 52.5	-1.6
PB14	IPOC Station P	4.93	175		Pn	13 31 09.1	-3.7
PB14	IPOC Station P	4.93	175	*i* P	Pn	13 31 09.6	-3.2
PB14				*e*S	Sb	13 32 30.8	+6.3
PB14				IAML		13 32 47.2	
	comp=Z,2µm,0.8s						
GO02	Mina Guanaco	5.58	168		Pn	13 31 19.6	-2.1
GO03	Copiap	7.89	176		Pn	13 31 49.9	-3.3
NNA	Nana	9.56	322	Pn	Pn	13 32 16.8	+0.7
	comp=Z,3.5nm,0.3s,baz=153,slow=10,SNR=3.6						
NNA				Sn	Sn	13 34 02.5	-0.8
	comp=Z,8.2nm,0.3s,baz=231,slow=20,SNR=1.4						
NNA	Nana	9.56	322	*i* P	Pn	13 32 15.9	-0.3
NNA	Nana	9.56	322	Pn	Pn	13 32 15.4	-0.7
SIV	San Ignacio	10.05	70	Pn	Pn	13 32 21.0	-1.8
	comp=Z,13nm,0.3s,baz=276,slow=9.3,SNR=60						
SIV				LR	LR	13 37 03.3	
	comp=Z,19µm,19.7s,baz=288,slow=43						
GO04	Tololo Observa	10.44	180		Pn	13 32 25.9	-2.4
SAML	Samuel	13.03	36	P	Pn	13 33 03.8	+0.2
SAML	Samuel	13.03	36		Pn	13 33 03.8	+0.2
SAML	Samuel	13.03	36	*e*P	Pn	13 33 02.6	-1.0
SAML				*e*S	Sn	13 35 27.6	-0.6
CPUP	Villa Florida	14.12	120	Pn	Pn	13 33 17.6	-0.9
	comp=Z,0.1nm,0.3s,baz=303,slow=16,SNR=4.6						
CPUP				LR	LR	13 39 22.4	
	comp=Z,6µm,19.0s,baz=296,slow=40						
CPUP	Villa Florida	14.12	120	P	P	13 33 22.7	-3.4
CPUP	Villa Florida	14.12	120	P	P	13 33 22.7	-3.4
CPUP	Villa Florida	14.12	120	*e*P	Pn	13 33 19.8	+1.3
AQDB	Aquidauana	14.30	96	*e*P	Pn	13 33 19.9	-1.0
ATAH	Atahualpa	14.45	329	Pn	Pn	13 33 24.2	+0.7
	comp=Z,0.4nm,0.3s,baz=108,slow=22,SNR=2.1						
SALV	Santo Antonio	14.96	78	*e*P	Pn	13 33 28.9	-1.0
ITQB	Itaqui	16.32	130	*e*P	Pn	13 33 46.6	-0.9
CLDB	Colider	16.98	61	*e*P	Pn	13 33 55.0	-1.1
C2SB	Chapadao do Su	17.08	90	*e*P	Pn	13 33 57.1	-0.1
TRCB	Terra Rica	17.30	104	*e*P	Pn	13 33 58.3	-1.7
PTGB	Pitanga	18.13	109	*e*P	Pn	13 34 10.2	-0.1
PCMB	Pacaembu	18.47	99	*e*P	P	13 34 12.2	-2.1
ARAG	Araguaiana, MT	18.60	81	*e*P	P	13 34 15.1	-0.7
ITAB	Concordia	18.76	117	*e*P	P	13 34 16.7	-0.8
CPSB	Cacapava Do Su	19.05	127	*e*P	P	13 34 20.8	+0.2
ITRB	Iturama	19.33	94	*e*P	Pn	13 34 24.9	0.0
PLTB	Pedras Altas	19.64	131	*e*P	P	13 34 26.4	-0.7
GO06	Curarrehue	19.83	181	P	Pn	13 34 30.9	+0.1
FRTB	Fartura	20.17	104	*e*P	P	13 34 31.5	-1.5
CNLB	Canela	20.57	122	*e*P	P	13 34 35.7	-1.6
PLCA	Paso Flores	20.98	179	P	P	13 34 42.1	+0.5
	comp=Z,23nm,0.9s,baz=15,slow=10,SNR=30						
PLCA	Paso Flores	20.98	179	P	P	13 34 42.4	+0.8
PLCA				pmax	pmax		
	comp=Z,60nm,1.1s						
PLCA	Paso Flores	20.98	179	P	P	13 34 42.4	+0.8
PLCA	Paso Flores	20.98	179	*e*P	P	13 34 42.0	+0.5
BB19B	Bebedouro	21.01	98	*e*P	P	13 34 41.3	-0.7
IPMB	Ipameri, GO	21.53	89	*e*P	P	13 34 47.4	-0.4
FLOC	Florencia	21.65	347	*e*P	P	13 34 50.6	+1.7
FLOC	Florencia	21.65	347	P	P	13 34 50.2	+1.2
PTGA	Pitinga	21.67	31	P	P	13 34 47.7	-1.4
	comp=Z,101nm,0.7s,baz=207,slow=13,SNR=111						
PTGA	Pitinga	21.67	31	P	P	13 34 47.5	-1.6
PTGA				IAmb	IAmb	13 34 52.9	
	comp=Z,185nm,1.0s						
PTGA	Pitinga	21.67	31	*e*P	P	13 34 47.8	-1.4
GCUF	Volcan Galeras	21.73	342	*e*P	P	13 34 56.0	+5.7
GCUF				*e*P	pwP	13 34 57.5	-1.1
CRUC	La Cruz	21.95	344	*e*P	P	13 34 58.0	+5.5
SPB	Sao Paulo	22.14	104	*e*P	P	13 34 54.2	+0.1
BDFB	Brasilia	22.16	83	P	P	13 34 52.4	-2.2
	comp=Z,32nm,0.8s,baz=244,slow=15,SNR=14						
BDFB				LR	LR	13 44 28.8	
	comp=Z,9µm,19.4s,baz=292,slow=40						
BDFB	Brasilia	22.16	83	P	P	13 34 53.7	-0.9
BDFB				pmax	pmax		
	comp=Z,71nm,0.6s						
BDFB	Brasilia	22.16	83	P	P	13 34 53.7	-0.9
GARC	Garzon, Huila	22.21	348	*e*P	P	13 34 56.0	+0.9
SOTA	Rioblanco	22.40	345	*e*P	P	13 35 00.7	+3.2
VAO	Valinhos	22.52	103	*e*P	P	13 34 56.0	-2.4
PCON	Cinco Dias	22.54	346	*e*P	P	13 35 02.3	+3.2
POPC	Popayan, Colom	22.81	345	*e*P	P	13 35 04.0	+2.4
GR1C	Gorgona, Isla	23.66	342	*e*P	P	13 35 12.0	+2.1
PTGC	Puerto Gaitan,	23.77	357	*e*P	P	13 35 10.1	-0.9
PARB	Paraibuna	23.78	103	*e*P	P	13 35 11.7	+0.6
VILC	Villavicencio,	23.81	353	*e*P	P	13 35 11.0	-0.6
ORTC	Ortega, Tolima	23.84	349	*e*P	P	13 35 12.4	+0.8
YOTC	Yotoco, Valle	24.13	347	*e*P	P	13 35 15.2	+0.7
CHIC	Chingaza	24.33	353	*e*P	P	13 35 16.5	-0.1
ANIL	Santa Ana	24.44	349	*e*P	P	13 35 20.6	+3.1
TOLC	Tolima	24.51	349	*e*P	P	13 35 20.0	+1.7
BSCB	Bom Sucesso	24.52	98	*e*P	P	13 35 17.4	-0.7
ROSC	El Rosal	24.61	352	P	P	13 35 20.2	+1.0
	comp=Z,42nm,0.6s,baz=150,slow=6.4,SNR=10						
ROSC	El Rosal	24.61	352	*e*P	P	13 35 21.1	+1.9
ROSC	El Rosal	24.61	352	P	P	13 35 19.7	+0.5

ROSC				IAmb	IAmb	13 35 33.9	
	comp=Z,151nm,1.1s						
RREF	El Recreo	24.83	349	eP	P	13 35 23.9	+2.5
SMTB	Santa Maria do	24.98	68	eP	P	13 35 21.8	-0.3
PLMC	San Jos del P	25.01	347	eP	P	13 35 24.3	+1.9
PIZC	Pizarro, Choco	25.31	345	eP	P	13 35 24.3	-0.8
SPBC	San Pablo de B	25.38	353	eP	P	13 35 26.2	+0.4
NORC	Norcasia	25.40	351	eP	P	13 35 26.6	+0.7
RUSC	La Rusia	25.51	355	eP	P	13 35 28.2	+0.7
RUSC	La Rusia	25.51	355	P	P	13 35 28.1	+0.7
JANB	Januaria	25.77	84	eP	P	13 35 27.2	-2.2
CBOC	Ciudad Bolivar	25.89	348	eP	P	13 35 32.9	+2.4
TAMC	Tame, Arauca	25.98	358	eP	P	13 35 31.6	+0.5
HELC	Santa Helena	26.12	349	eP	P	13 35 34.5	+1.6
BARC	Barichara	26.21	355	eP	P	13 35 33.1	-0.4
PTBC	PUERTO BERRIO,	26.30	352	eP	P	13 35 32.7	-1.3
BRRC	Barranca, Sant	26.77	354	eP	P	13 35 38.1	-0.2
PAMC	Pamplona, Colo	26.92	356	eP	P	13 35 39.7	-0.5
UREC	San Jos de Ur	27.65	350	eP	P	13 35 46.5	+0.3
OCAC	Ocana	27.86	355	eP	P	13 35 49.3	+1.1
SJMB	Sao Joao De Ma	28.06	93	eP	P	13 35 49.2	-0.7
BSFB	Barra de Sao F	28.36	93	eP	P	13 35 52.7	+0.1
SDV	Santo Domingo	28.40	1	P	P	13 35 52.0	-1.1
	comp=Z,27nm,1.0s,baz=221,slow=2.4,SNR=11						
SDV	Santo Domingo	28.40	1	P	P	13 35 53.6	+0.5
SDV	Santo Domingo	28.40	1	eP	P	13 35 53.4	+0.3
SMLC	San Martn de	28.48	353	eP	P	13 35 52.0	-1.6
LCBC	Los crdobas,	28.88	349	eP	P	13 35 51.6	-5.5
CODC	Agustn Codazz	29.55	355	eP	P	13 35 58.0	-5.1
SJCC	San Jacinto, C	29.70	351	eP	P	13 36 04.8	+0.3
PCRV	Puerto La Cruz	30.31	12	P	P	13 36 09.4	-0.5
	comp=Z,37nm,1.0s,baz=157,slow=4.4,SNR=8.0						
PCRV				LR	LR	13 49 51.5	
	comp=Z,19µm,18.1s,slow=40						
NBIT	Itapeh - BA	30.38	86	eP	P	13 36 10.8	+0.3
MDP	Montagnes des	30.48	38	P	P	13 36 09.7	-1.7
	comp=Z,28nm,0.8s,baz=214,slow=8.2,SNR=12						
NBPN	Ponto Novo - B	30.84	78	eP	P	13 36 14.3	-0.4
TOSP	Speyside	32.44	19	P	P	13 36 26.9	-1.7
NBPS	Pedro II - PI	32.47	66	eP	P	13 36 28.5	-0.6
JTS	Las Juntas de	32.85	334	i P	P	13 36 32.1	-0.2
JTS				pmax	pmax		
	comp=Z,21nm,1.1s						
GRGR	Grenville	32.91	17	P	P	13 36 31.7	-1.0
NBLA	Lagarto - SE	33.02	80	eP	P	13 36 31.3	-2.5
NBTA	Tacaratu-PE	33.42	76	eP	P	13 36 36.7	-0.6
EFI	East Falkland	33.47	165	i P	P	13 36 36.6	-0.7
EFI				pmax	pmax		
	comp=Z,52nm,1.2s						
NBMA	Muriti-CE	33.48	73	eP	P	13 36 36.4	-1.4
NBPB	Pedra_Branca-C	33.54	69	eP	P	13 36 37.3	-1.0
NBMO	Morrinhos-CE	34.23	66	eP	P	13 36 43.3	-1.0
MCLT	Moule a Chique	34.60	17	P	P	13 36 45.9	-1.6
NBAN	Anadia - AL	34.87	78	eP	P	13 36 48.7	-1.2
USHA	Ushuaia	35.13	178	P	P	13 36 52.5	+0.9
	comp=Z,10nm,0.8s,baz=126,slow=4.0,SNR=2.2						
NBCL	Cascavel-CE	35.30	68	eP	P	13 36 53.5	-0.1
FDF	Fort de France	35.52	16	P	P	13 36 53.3	-2.1
FDF				pmax	pmax		
	comp=Z,84nm,0.8s						
FDF	Fort de France	35.52	16	P	P	13 36 53.3	-2.1
FDF				IAmb	IAmb	13 37 06.2	
	comp=Z,84nm,0.8s						
NBPA	Parau_RN	35.65	72	eP	P	13 36 55.7	-0.9
RPN	Rapa Nui	35.94	251	LR	LR	13 48 14.9	
	comp=Z,6µm,18.3s,baz=96,slow=30						
NBRF	Rio Formoso -	36.28	78	eP	P	13 37 01.0	-0.9
RCBR	Riachuelo	36.70	73	P	P	13 37 05.2	-0.4
	comp=Z,96nm,0.8s,baz=237,slow=10,SNR=29						
RCBR				LR	LR	13 53 13.0	
	comp=Z,7µm,20.6s,baz=233,slow=38						
RCBR	Riachuelo	36.70	73	P	P	13 37 04.7	-0.9
RCBR				pmax	pmax		
	comp=Z,110nm,0.9s						
RCBR	Riachuelo	36.70	73	P	P	13 37 04.7	-0.9
RCBR				IAmb	IAmb	13 37 06.8	
	comp=Z,110nm,0.8s						
RCBR	Riachuelo	36.70	73	eP	P	13 37 05.5	-0.2
NBPV	Pedro Velho	37.01	74	eP	P	13 37 07.4	-0.8
ICMP	Isla Caja de M	37.59	7	P	P	13 37 12.3	-0.7
MLPR	Magueyes Islan	37.62	6	P	P	13 37 11.7	-1.4
CRPR	Cabo Rojo, PR	37.65	6	P	P	13 37 11.9	-1.5
OBIP	Obispado Ponce	37.73	7	P	P	13 37 12.1	-2.1
OBIP				IAmb	IAmb	13 37 23.6	
	comp=Z,84nm,1.0s						
SEUS	St. Eustatius	37.76	12	IAMs_20	IAMs_20	13 53 59.9	
	comp=Z,8µm,19.0s						
PDPR	Patillas Dam,	37.78	8	P	P	13 37 12.4	-2.1
PDPR				IAmb	IAmb	13 37 14.2	
	comp=Z,64nm,0.8s						
MPR	Mayaguez	37.85	6	P	P	13 37 14.3	-0.9
MPR				IAmb	IAmb	13 37 15.2	
	comp=Z,96nm,0.8s						
BANI	BANI	37.85	1	P	P	13 37 12.2	-3.1
SJG	San Juan	37.85	7	P	P	13 37 13.8	-1.4
	comp=Z,50nm,0.8s,baz=158,slow=3.0,SNR=16						
SJG	San Juan	37.85	7	P	P	13 37 14.2	-1.0
SJG				pmax	pmax		
	comp=Z,79nm,0.9s						
SJG	San Juan	37.85	7	P	P	13 37 14.2	-1.0
SJG				IAmb	IAmb	13 37 23.8	
	comp=Z,79nm,0.9s						
AOPR	Arecibo Observ	38.02	6	P	P	13 37 15.3	-1.3
AOPR				IAmb	IAmb	13 37 24.8	
	comp=Z,74nm,0.7s						
CBYP	Canovanas	38.05	8	P	P	13 37 15.3	-1.6
CBYP				IAmb	IAmb	13 37 16.4	
	comp=Z,106nm,0.8s						
GCPR	Guaynabo City	38.06	7	IAmb	IAmb	13 37 29.9	
	comp=Z,65nm,0.8s						
CUPR	Culebra, Puert	38.16	9	P	P	13 37 15.3	-2.5
CUPR				IAmb	IAmb	13 37 30.4	
	comp=Z,51nm,0.8s						
DR12	Loma Pena Alta	38.27	2	P	P	13 37 16.4	-2.4
SMRT	St. Maarten	38.28	12	P	P	13 37 16.5	-2.4
SMRT				IAmb	IAmb	13 37 28.7	
	comp=Z,87nm,0.8s						
APG	El Apazote	39.49	329	P	P	13 37 31.2	+2.0
	comp=Z,8.0nm,0.3s,baz=188,slow=16,SNR=4.9						
TEIG	Tepich	43.17	336	P	P	13 37 59.7	+0.5
	comp=Z,22nm,0.8s						
CMIG	Matias Romero	43.49	326	P	P	13 38 02.2	+0.4
	comp=Z,6.0nm,0.9s,baz=131,slow=4.5,SNR=12						
PMSA	Palmer Station	45.29	176	LR	LR	13 56 24.8	
	comp=Z,2µm,20.0s,baz=3.5,slow=35						
PMSA	Palmer Station	45.29	176	eP	P	13 38 16.6	+1.0
TIGA	Tifton	52.28	346	P	P	13 39 10.2	+0.5
	baz=165						
157A	Early Branch	52.96	349	P	P	13 39 15.1	+0.4
	baz=168						
Z59A	Georgetown, SC	53.24	351	P	P	13 39 18.0	+1.2
	baz=170						
NHSC	New Hope	53.24	350	IAMs_20	IAMs_20	14 03 08.5	
	comp=Z,3µm,18.0s						
NHSC	New Hope	53.24	350	P	P	13 39 17.7	+0.9
	baz=169						
Z58A	St. Stephen	53.41	351	P	P	13 39 19.1	+1.1
	baz=170,SNR=7.8						
Z57A	Bowman	53.52	350	P	P	13 39 19.6	+0.8
	baz=169,SNR=13						
Z56A	Williston	53.66	349	P	P	13 39 21.0	+1.1
	baz=168						
Y60A	Bolivia	53.85	352	P	P	13 39 20.6	-0.6
Y60A	Bolivia	53.85	352	P	P	13 39 22.2	+1.0
	baz=172,SNR=11						
Y59A	Loris	53.92	352	P	P	13 39 22.8	+1.1
	baz=171						
Y58A	Scranton	53.95	351	P	P	13 39 22.9	+0.9
	baz=170						
GOGA	Godfrey	54.15	347	P	P	13 39 23.0	-0.4
GOGA				pmax	pmax		
	comp=Z,23nm,1.2s						
GOGA	Godfrey	54.15	347	P	P	13 39 23.0	-0.4
GOGA	Godfrey	54.15	347	P	P	13 39 23.4	-0.1
	baz=166,SNR=6.8						
Y57A	Sumter	54.17	350	P	P	13 39 24.3	+0.8
	baz=169						
Y55A	Saluda	54.34	349	P	P	13 39 24.8	0.0
	baz=167,SNR=11						
X60A	Albert Glenn T	54.39	353	P	P	13 39 25.9	+0.8
	baz=172						
X59A	McDuffie Farm,	54.46	352	P	P	13 39 26.5	+0.8
	baz=171						
X58A	Rowland	54.54	351	P	P	13 39 27.0	+0.8
	baz=170						
X57A	Johnson Farm,	54.56	351	P	P	13 39 27.2	+0.8
	baz=170						
Z50A	Ashland	54.57	345	IAmb	IAmb	13 39 36.5	
	comp=Z,44nm,0.8s						
Z50A	Ashland	54.57	345	P	P	13 39 25.9	-0.6
	baz=163,SNR=16						
LRAL	Lakeview Retre	54.64	343	P	P	13 39 26.7	-0.3
	baz=162,SNR=7.8						
Y52A	Lilburn	54.72	347	P	P	13 39 27.3	-0.3
	baz=165						
X56A	White Oak	54.74	350	P	P	13 39 27.8	+0.1
	baz=168,SNR=16						
BIRD	Birdtown, Kers	54.80	350	IAmb	IAmb	13 39 29.9	
	comp=Z,58nm,0.9s						
X55A	Gracelyn & Ava	54.82	349	P	P	13 39 28.7	+0.4
	baz=168,SNR=15						
W60A	Pink Hill	54.83	353	P	P	13 39 29.3	+1.0
	baz=172						
W61A	Ground Anchor	54.87	354	P	P	13 39 29.9	+1.2
	baz=173						
W58A	Raeford	54.98	352	P	P	13 39 29.7	+0.3
	baz=170,SNR=26						
X54A	Belton	55.03	348	P	P	13 39 29.7	-0.2
	baz=167,SNR=10						
X53A	Estanollee	55.17	348	P	P	13 39 30.4	-0.5
	baz=166,SNR=5.9						
W57A	Gilead	55.22	351	IAmb	IAmb	13 39 32.9	
	comp=Z,38nm,0.9s						
W57A	Gilead	55.22	351	P	P	13 39 31.7	+0.5
	baz=170,SNR=9.7						
W56A	Indian Trail	55.30	350	P	P	13 39 31.7	0.0
	baz=169,SNR=13						
KMSC	Kings Mountain	55.42	350	P	P	13 39 32.7	0.0
	baz=168,SNR=10						
W54A	Cherokee Point	55.52	349	P	P	13 39 33.3	-0.1
	baz=167,SNR=14						
X51A	Calhoun	55.57	346	P	P	13 39 33.7	0.0
	baz=164,SNR=5.4						
V59A	Middlesex	55.59	353	P	P	13 39 34.2	+0.4
	baz=172,SNR=15						
V58A	Windy Hill, Pi	55.73	352	IAmb	IAmb	13 39 36.5	
	comp=Z,38nm,0.9s						
V58A	Windy Hill, Pi	55.73	352	P	P	13 39 34.8	0.0
	baz=171,SNR=13						
V57A	Coltrane Farms	55.91	351	P	P	13 39 36.0	-0.1
	baz=170,SNR=11						
V56A	Mocksville	55.94	351	P	P	13 39 36.7	+0.3
	baz=169,SNR=25						
U61A	Possum Corner	55.97	355	P	P	13 39 37.4	+0.9
	baz=174						
NATX	Nacogdoches	56.01	336	P	P	13 39 38.6	+1.7
	baz=153						
V55A	Taylorsville	56.10	350	IAmb	IAmb	13 39 39.4	
	comp=Z,42nm,0.9s						
V55A	Taylorsville	56.10	350	P	P	13 39 38.0	+0.5
	baz=168,SNR=14						
U59A	Littleton	56.12	353	P	P	13 39 37.9	+0.3
	baz=172,SNR=6.4						
V54A	Nebo	56.15	349	P	P	13 39 37.8	-0.1
	baz=168,SNR=21						
U58A	Oxford	56.25	353	P	P	13 39 39.3	+0.8
	baz=171,SNR=9.7						
W50A	Signal Mountai	56.28	346	IAmb	IAmb	13 39 48.7	
	comp=Z,31nm,0.9s						
TKL	Tuckaleechee C	56.38	347	P	P	13 39 39.1	-0.5
	comp=Z,33nm,0.9s,baz=164,slow=9.3,SNR=32						
TKL	Tuckaleechee C	56.38	347	IAmb	IAmb	13 39 40.5	
	comp=Z,38nm,0.9s						
U57A	Blanch	56.39	352	P	P	13 39 39.4	-0.1
	baz=171,SNR=10						
SWET	Sewanee	56.44	345	IAmb	IAmb	13 39 49.6	
	comp=Z,35nm,0.9s						
U56A	King	56.45	351	P	P	13 39 40.7	+0.7
	baz=169,SNR=11						
V52A	Sevierville	56.52	348	IAmb	IAmb	13 39 41.6	
	comp=Z,67nm,0.9s						
T59A	Double "B" Far	56.71	354	IAmb	IAmb	13 39 52.4	
	comp=Z,63nm,0.8s						
T59A	Double "B" Far	56.71	354	P	P	13 39 42.1	+0.3
	baz=173,SNR=14						
U55A	TA2, Sparta	56.71	350	P	P	13 39 42.0	+0.1
	baz=169,SNR=11						
OXF	Oxford	56.71	342	P	P	13 39 41.4	-0.5
	baz=159,SNR=9.9						
T58A	Grand View Acr	56.79	353	P	P	13 39 42.5	+0.1
	baz=172,SNR=22						
U54A	Nelsons Funny	56.85	349	IAmb	IAmb	13 39 44.4	
	comp=Z,54nm,0.8s						
U54A	Nelsons Funny	56.85	349	P	P	13 39 42.8	-0.2
	baz=168,SNR=11						
T57A	Hurt	56.93	352	IAmb	IAmb	13 39 45.4	
	comp=Z,51nm,1.1s						
T57A	Hurt	56.93	352	P	P	13 39 43.5	+0.1
	baz=171,SNR=17						
T56A	Rocky Mt	57.07	351	P	P	13 39 45.3	+0.9
	baz=170,SNR=9.9						
V48A	Smith Brothers	57.16	345	IAmb	IAmb	13 39 54.8	
	comp=Z,32nm,0.9s						
X43A	Marvell	57.16	340	P	P	13 39 45.4	+0.3
	baz=158						
TZTN	Tazewell	57.20	348	P	P	13 39 45.1	-0.2
	baz=166,SNR=6.4						
T55A	Pulaski	57.27	351	P	P	13 39 46.2	+0.4
	baz=169,SNR=20						
BLA	Blacksburg	57.30	351	P	P	13 39 46.8	+0.7
	baz=170						
T54A	Tazewell	57.34	350	P	P	13 39 46.4	0.0
	baz=168,SNR=11						
WHTX	Lake Whitney,	57.35	333	P	P	13 39 46.6	+0.1
	baz=150,SNR=9.7						
S58A	Poland Farm, P	57.39	353	P	P	13 39 47.3	+0.6
	baz=172,SNR=7.8						
T53A	Wise	57.43	349	P	P	13 39 47.0	0.0
	baz=167,SNR=8.6						
S59A	Mechanicsville	57.46	354	P	P	13 39 47.7	+0.6
	baz=173						
T52A	Hallie	57.63	349	IAmb	IAmb	13 39 49.4	
	comp=Z,38nm,0.9s						
T52A	Hallie	57.63	349	P	P	13 39 48.2	-0.1
	baz=167,SNR=8.0						
S56A	Natural Bridge	57.64	352	P	P	13 39 49.5	+1.1
	baz=170,SNR=6.2						
S57A	Dark Hollow, R	57.65	352	IAmb	IAmb	13 39 50.5	
	comp=Z,50nm,1.1s						
S57A	Dark Hollow, R	57.65	352	P	P	13 39 48.8	+0.4
	baz=171,SNR=16						
T51A	Gray	57.68	348	P	P	13 39 48.2	-0.5
	baz=166,SNR=14						
R58B	Mineral	57.72	353	P	P	13 39 50.0	+1.0
	baz=172,SNR=5.5						
X40A	Basin Creek Fa	57.78	339	P	P	13 39 50.2	+0.7
	baz=156						
WVT	Waverly	57.79	344	P	P	13 39 48.2	-1.3
WVT				pmax	pmax		
	comp=Z,41nm,0.8s						
WVT	Waverly	57.79	344	P	P	13 39 48.2	-1.3
WVT				IAmb	IAmb	13 39 58.6	
	comp=Z,41nm,0.8s						
WVT	Waverly	57.79	344	P	P	13 39 48.3	-1.1
	baz=161						
S55A	Lewisburg	57.87	351	P	P	13 39 50.9	+0.9
	baz=169,SNR=16						
T50A	Nancy	57.92	347	P	P	13 39 49.7	-0.7
	baz=165,SNR=14						
S54A	Dingess, Beckl	58.02	350	P	P	13 39 51.0	-0.1
	baz=169,SNR=11						
R58A	Rapidan	58.07	353	P	P	13 39 52.2	+0.8
	baz=172,SNR=8.1						
MIAR	Mount Ida	58.09	338	P	P	13 39 51.3	-0.3
MIAR				pmax	pmax		
	comp=Z,86nm,1.3s						
MIAR	Mount Ida	58.09	338	P	P	13 39 51.3	-0.3
MIAR				IAmb	IAmb	13 40 02.9	
	comp=Z,86nm,1.3s						
MIAR	Mount Ida	58.09	338	P	P	13 39 51.8	+0.1
	baz=155,SNR=29						
TXAR	Lajitas Array	58.09	326	P	P	13 39 52.0	+0.1
	comp=Z,4.0nm,1.0s,baz=150,slow=7.4,SNR=19						
TXAR	Lajitas Array	58.09	326	P	P	13 39 50.9	-1.0
TXAR	Lajitas Array	58.09	326	P	P	13 39 50.9	-1.0
R57A	Stanardsville	58.12	353	P	P	13 39 52.9	+1.1
	baz=172,SNR=14						
T49A	Edmonton	58.15	346	P	P	13 39 51.3	-0.8
	baz=164,SNR=38						
W41B	Gary Mavity, V	58.21	339	P	P	13 39 52.0	-0.4
	baz=156,SNR=11						
S51A	Beattyville	58.26	348	P	P	13 39 51.8	-0.9
	baz=166						
R55A	Marlinton	58.31	351	IAmb	IAmb	13 39 55.6	
	comp=Z,125nm,1.7s						
R55A	Marlinton	58.31	351	P	P	13 39 53.7	+0.5
	baz=170,SNR=9.7						
WHAR	Wooly Hollow	58.33	339	IAmb	IAmb	13 40 03.5	
	comp=Z,35nm,1.1s						
R56A	Bull Pasture M	58.34	352	P	P	13 39 54.5	+1.1
	baz=171						
R54A	Victor	58.34	351	P	P	13 39 53.5	+0.1
	baz=169,SNR=10						
T47A	Sharon Grove	58.41	345	IAmb	IAmb	13 40 03.6	
	comp=Z,64nm,0.9s						
S50A	Richmond	58.46	347	P	P	13 39 53.6	-0.6
	baz=165,SNR=16						
R53A	Hurricane	58.64	350	P	P	13 39 55.3	-0.1
	baz=168						
Q58A	Fox Den Farm,	58.67	354	P	P	13 39 56.5	+1.0
	baz=173,SNR=9.5						
S49A	Springfield	58.75	347	P	P	13 39 55.6	-0.6
	baz=164,SNR=10						
W39A	Magazine	58.75	338	IAmb	IAmb	13 40 07.4	
	comp=Z,47nm,1.0s						
W39A	Magazine	58.75	338	P	P	13 39 56.8	+0.6
	baz=155,SNR=19						
R52A	Catlettsburg	58.77	349	P	P	13 39 55.8	-0.4
	baz=167						
Q57A	Strasburg	58.84	353	P	P	13 39 57.7	+0.9
	baz=172,SNR=17						
ABTX	Abilene, Hawle	58.84	332	IAmb	IAmb	13 40 08.5	
	comp=Z,59nm,1.1s						
ABTX	Abilene, Hawle	58.84	332	P	P	13 39 57.1	+0.1
	baz=148,SNR=5.6						
R51A	Hillsboro	58.90	348	P	P	13 39 57.1	-0.1
	baz=166,SNR=8.8						
Q56A	Snyder Ridge,	58.94	352	P	P	13 39 58.5	+1.1
	baz=171,SNR=19						
Q55A	Buckhannon	59.01	352	P	P	13 39 58.8	+0.8
	baz=170,SNR=6.6						
R50A	Paris	59.03	348	IAmb	IAmb	13 39 59.0	
	comp=Z,34nm,1.1s						
R50A	Paris	59.03	348	P	P	13 39 57.8	-0.2
	baz=165,SNR=7.3						
Q53A	Leroy	59.09	350	P	P	13 39 58.5	+0.1
	baz=168,SNR=16						
Q54A	Coxs Mills	59.10	351	IAmb	IAmb	13 40 08.8	
	comp=Z,23nm,0.7s						
Q54A	Coxs Mills	59.10	351	P	P	13 39 58.6	0.0
	baz=169,SNR=7.6						
PBMO	Poplar Bluff	59.12	342	IAmb	IAmb	13 40 21.9	
	comp=Z,27nm,0.8s						
P58A	Pank, Wackersv	59.17	354	P	P	13 39 59.9	+0.9
	baz=173						
R49A	Shelbyville	59.21	347	P	P	13 39 59.1	-0.2
	baz=164,SNR=5.2						
P59A	Jarrettsville	59.22	355	P	P	13 40 00.5	+1.1
	baz=174,SNR=8.3						
P57A	Homestead Farm	59.24	354	IAmb	IAmb	13 40 02.3	
	comp=Z,83nm,1.4s						
P57A	Homestead Farm	59.24	354	P	P	13 40 01.2	+1.7
	baz=172,SNR=7.3						
Q52A	Bidwell	59.31	350	P	P	13 39 60.0	0.0
	baz=168,SNR=6.0						
P56A	Dayton Farm, R	59.35	353	P	P	13 40 00.9	+0.6
	baz=171,SNR=7.8						
P60A	Greenville	59.36	356	P	P	13 40 01.2	+0.9
	baz=175						
WCI	Wyandotte Cave	59.40	346	P	P	13 39 59.5	-1.2
WCI				pmax	pmax		
	comp=Z,35nm,0.8s						
WCI	Wyandotte Cave	59.40	346	P	P	13 40 00.2	-0.5
	baz=163						
P55A	Reedsville	59.48	352	P	P	13 40 02.2	+1.0
	baz=170,SNR=9.8						
U40A	Yellville	59.49	339	P	P	13 40 01.3	-0.1
	baz=156,SNR=7.0						
Q50A	Georgetown	59.50	348	P	P	13 40 01.4	0.0
	baz=166,SNR=5.9						
Q51A	Peebles	59.56	349	P	P	13 40 01.9	+0.1
	baz=166,SNR=7.8						
MVL	Millersville	59.60	355	IAmb	IAmb	13 40 04.1	
	comp=Z,91nm,1.6s						
P54A	Burton	59.66	351	P	P	13 40 03.0	+0.6
	baz=170,SNR=15						
P53A	Whipple	59.68	351	IAmb	IAmb	13 40 04.1	
	comp=Z,49nm,0.9s						
P53A	Whipple	59.68	351	P	P	13 40 03.2	+0.6
	baz=169,SNR=9.8						
X34A	Smith Ranch, M	59.76	334	IAmb	IAmb	13 40 14.8	
	comp=Z,60nm,1.1s						
O58A	Lewisberry	59.77	355	P	P	13 40 05.3	+2.1
	baz=174,SNR=5.9						
Q49A	Aurora	59.84	347	P	P	13 40 03.3	-0.4
	baz=165,SNR=6.1						
O60A	Telford	59.84	356	P	P	13 40 04.3	+0.6
	baz=175						
O59A	Robesonia	59.89	355	P	P	13 40 04.8	+0.8
	baz=174						
O57A	Amberson	59.92	354	P	P	13 40 06.3	+2.1
	baz=173,SNR=10.0						
P52A	Corning	59.94	350	P	P	13 40 04.3	-0.1
	baz=168,SNR=5.8						
Q48A	North Vernon	59.95	347	P	P	13 40 03.9	-0.5
	baz=164,SNR=7.5						
P51A	Williamsport	59.95	349	P	P	13 40 04.2	-0.3
	baz=167						
MGMO	Mountain Grove	60.03	340	P	P	13 40 04.3	-0.7
MGMO				IAmb	IAmb	13 40 15.9	
	comp=Z,42nm,1.0s						
O56A	Blue Knob Stat	60.08	353	P	P	13 40 06.6	+1.3
	baz=172,SNR=11						
O55A	Ligonier	60.10	353	P	P	13 40 05.8	+0.3
	baz=171,SNR=13						
TUL1	Leonard	60.12	337	P	P	13 40 05.8	+0.2
	baz=153,SNR=12						
P50A	Jamestown	60.21	349	P	P	13 40 05.9	-0.3
	baz=166,SNR=8.3						
N61A	South Mountain	60.21	357	P	P	13 40 07.9	+1.7
	baz=176						
O54A	Avella	60.22	352	IAmb	IAmb	13 40 07.6	
	comp=Z,23nm,0.8s						
O54A	Avella	60.22	352	P	P	13 40 06.6	+0.3
	baz=170,SNR=5.7						
OKCFA	Oklahoma City	60.32	335	IAMs_20	IAMs_20	14 07 28.3	
	comp=Z,2µm,21.0s						
BLO	Bloomington	60.35	346	IAmb	IAmb	13 40 19.9	
	comp=Z,29nm,0.8s						
BLO				IAMs_20	IAMs_20	14 06 41.6	
	comp=Z,4µm,19.0s						
O52A	Adamsville	60.37	350	IAmb	IAmb	13 40 17.2	
	comp=Z,26nm,0.8s						
O52A	Adamsville	60.37	350	P	P	13 40 06.6	-0.7
	baz=168,SNR=6.9						
SSPA	Standing Stone	60.37	354	P	P	13 40 05.8	-1.5
SSPA	Standing Stone	60.37	354	P	P	13 40 08.0	+0.7
	baz=172						
P48A	Milroy	60.39	347	IAmb	IAmb	13 40 08.3	
	comp=Z,54nm,1.4s						
P48A	Milroy	60.39	347	P	P	13 40 06.5	-0.9
	baz=164						
O53A	New Philadelph	60.40	351	P	P	13 40 07.6	+0.1
	baz=169						
N58A	Sunbury	60.46	355	IAmb	IAmb	13 40 10.1	
	comp=Z,62nm,1.3s						
N58A	Sunbury	60.46	355	P	P	13 40 08.8	+0.9
	baz=174,SNR=6.3						
N59A	State Game Lan	60.47	356	P	P	13 40 09.0	+1.0
	baz=175						
O51A	Pataskala	60.52	350	P	P	13 40 08.2	-0.1
	baz=168						
CCM	Cathedral Cave	60.54	342	P	P	13 40 08.4	-0.1
CCM				pmax	pmax		
	comp=Z,39nm,1.1s						
CCM	Cathedral Cave	60.54	342	P	P	13 40 08.4	-0.1
CCM				IAmb	IAmb	13 40 18.5	
	comp=Z,39nm,1.1s						
CCM	Cathedral Cave	60.54	342	P	P	13 40 08.3	-0.3
	baz=158						
N55A	Marion Center	60.63	353	P	P	13 40 09.4	+0.3
	baz=171,SNR=26						
ACSO	Alum Creek Sta	60.67	349	IAmb	IAmb	13 40 10.3	
	comp=Z,54nm,0.9s						
ACSO	Alum Creek Sta	60.67	349	P	P	13 40 09.1	-0.2
	baz=167,SNR=12						
N56A	West Decatur	60.69	354	P	P	13 40 10.1	+0.6
	baz=172,SNR=7.2						
O50A	Cable	60.70	349	P	P	13 40 09.0	-0.6
	baz=166,SNR=5.9						
Q44A	Meyer Farm, Va	60.71	344	IAmb	IAmb	13 40 18.9	

								comp=Z,47nm,0.8s
M60A	Port Jervis	60.80	357	P	P	13 40 10.9	+0.7	baz=176
M62A	Hamden	60.85	358	P	P	13 40 11.6	+1.1	baz=178
S39A	Bolivar	60.86	340	IAmb	IAmb	13 40 20.9		comp=Z,38nm,0.9s
MNTX	Cornudas Mount	60.87	326	P	P	13 40 10.1	-0.8	
MNTX	Cornudas Mount	60.87	326	P	P	13 40 10.6	-0.3	baz=143,SNR=7.7
O49A	Covington	60.87	348	IAmb	IAmb	13 40 11.4		comp=Z,47nm,1.1s
N53A	Lisbon	60.89	351	IAmb	IAmb	13 40 21.2		comp=Z,27nm,0.8s
N53A	Lisbon	60.89	351	P	P	13 40 11.3	+0.4	baz=169
N54A	Moraine State	60.93	352	P	P	13 40 11.6	+0.5	baz=170,SNR=12
P46A	Rosedale	60.94	346	IAmb	IAmb	13 40 20.4		comp=Z,37nm,0.8s
M58A	Price's Panora	60.97	355	P	P	13 40 12.1	+0.7	baz=174,SNR=9.1
M57A	Sunshine Farm,	60.99	355	IAmb	IAmb	13 40 13.9		comp=Z,84nm,1.4s
M57A	Sunshine Farm,	60.99	355	P	P	13 40 12.7	+1.2	baz=173,SNR=6.4
N52A	McGinn's Farm,	61.02	351	P	P	13 40 11.7	0.0	baz=168
M59A	Waymart	61.06	356	P	P	13 40 13.1	+1.1	baz=175,SNR=7.8
R40A	Maddies Statio	61.07	341	IAmb	IAmb	13 40 22.6		comp=Z,29nm,0.8s
O48A	Farmland	61.10	348	P	P	13 40 11.7	-0.6	baz=165,SNR=12
KSPA	Keystone Colle	61.10	356	IAmb	IAmb	13 40 27.3		comp=Z,40nm,1.2s
KSCT	Kent School, K	61.15	358	IAmb	IAmb	13 40 15.3		comp=Z,82nm,1.6s
N50A	Nevada	61.22	349	P	P	13 40 12.7	-0.4	baz=167,SNR=11
N51A	Ashland	61.23	350	IAmb	IAmb	13 40 22.8		comp=Z,32nm,0.8s
N51A	Ashland	61.23	350	P	P	13 40 12.9	-0.3	baz=168,SNR=6.0
M56A	Emporium	61.24	354	P	P	13 40 13.3	+0.1	baz=172,SNR=15
L63A	North Scituate	61.24	359	P	P	13 40 13.7	+0.5	baz=179,SNR=7.1
M55A	Ridgway	61.28	353	P	P	13 40 13.7	+0.2	baz=172,SNR=22
L64A	Middleborough	61.31	0	P	P	13 40 14.4	+0.8	baz=180
MSTX	Muleshoe	61.40	330	IAmb	IAmb	13 40 17.3		comp=Z,56nm,1.1s
MSTX	Muleshoe	61.40	330	P	P	13 40 15.6	+1.0	baz=146,SNR=14
M54A	Oil Creek Stat	61.43	353	P	P	13 40 14.7	+0.2	baz=171,SNR=16
L60A	Shokan	61.44	357	P	P	13 40 15.2	+0.6	baz=176
M53A	WI Miller and	61.49	352	P	P	13 40 15.2	+0.3	baz=170,SNR=8.4
SRIG	Santa Rosalia	61.55	318	IAMs_20	IAMs_20	14 06 06.4		comp=Z,2μm,18.0s
N49A	Columbus Grove	61.55	349	P	P	13 40 14.6	-0.7	baz=166,SNR=28
L58A	Harry Jones Me	61.59	356	P	P	13 40 16.7	+1.1	baz=175,SNR=10
M51A	Elyria	61.61	350	P	P	13 40 15.5	-0.1	baz=168
L61A	Hillsdale 1, H	61.62	358	P	P	13 40 16.3	+0.6	baz=177
L57A	Andrews Acres	61.62	355	P	P	13 40 15.9	+0.1	baz=174
SFIN	Lafayette	61.64	346	IAmb	IAmb	13 40 24.8		comp=Z,46nm,0.8s
SFIN	Lafayette	61.64	346	P	P	13 40 14.7	-1.2	baz=163,SNR=8.8
N48A	Decatur	61.66	348	P	P	13 40 14.9	-1.1	baz=165,SNR=13
L59A	Walton	61.69	356	P	P	13 40 17.1	+0.8	baz=176,SNR=12
M52A	Chesterland	61.69	351	P	P	13 40 16.4	+0.1	baz=169,SNR=5.5
BINY	Binghamton	61.76	356	IAmb	IAmb	13 40 19.1		comp=Z,61nm,1.1s
BINY	Binghamton	61.76	356	P	P	13 40 17.3	+0.6	baz=175,SNR=9.8
WES	Weston	61.76	360	IAmb	IAmb	13 40 18.6		comp=Z,30nm,1.0s
U32A	Winter Ranch,	61.78	334	IAmb	IAmb	13 40 28.2		comp=Z,43nm,1.1s
N47A	Urbana	61.81	347	IAmb	IAmb	13 40 26.2		comp=Z,47nm,0.8s
N47A	Urbana	61.81	347	P	P	13 40 16.3	-0.8	baz=164,SNR=8.1
M50A	Fremont	61.82	350	IAmb	IAmb	13 40 26.9		comp=Z,42nm,0.9s
M50A	Fremont	61.82	350	P	P	13 40 16.5	-0.6	baz=167,SNR=5.8
L56A	Greenwood	61.82	354	IAmb	IAmb	13 40 19.2		comp=Z,71nm,1.2s
L56A	Greenwood	61.82	354	P	P	13 40 17.6	+0.4	baz=173,SNR=5.5
L61B	Northampton	61.85	358	P	P	13 40 18.1	+0.8	baz=178,SNR=6.3
HRV	Adam Dziewonsk	61.89	359	P	P	13 40 17.3	-0.2	
HRV				pmax	pmax			comp=Z,46nm,0.9s
HRV	Adam Dziewonsk	61.89	359	P	P	13 40 17.2	-0.2	
HRV				IAmb	IAmb	13 40 19.6		comp=Z,46nm,0.9s
HRV	Adam Dziewonsk	61.89	359	P	P	13 40 18.1	+0.6	baz=179
L53A	Girard	61.94	352	P	P	13 40 18.2	+0.3	baz=170,SNR=14
L55A	Hinsdale	61.95	354	P	P	13 40 18.8	+0.7	baz=172,SNR=17
M49A	Liberty Center	62.05	349	P	P	13 40 17.9	-0.7	baz=166,SNR=14
K62A	Royalston	62.05	359	IAMs_20	IAMs_20	14 06 39.6		comp=Z,2μm,18.0s
K62A	Royalston	62.05	359	P	P	13 40 19.1	+0.4	baz=179
ERPA	Erie	62.07	352	P	P	13 40 18.8	+0.1	baz=170,SNR=13
K63A	Dunstable	62.07	359	P	P	13 40 19.7	+1.0	baz=179
K61A	Williamstown	62.09	358	P	P	13 40 20.0	+1.1	baz=178
L54A	Sinclairville	62.10	353	P	P	13 40 19.5	+0.5	baz=171,SNR=24
TRY	Troy	62.16	358	IAmb	IAmb	13 40 30.5		comp=Z,46nm,0.9s
M48A	Edgerton	62.20	348	IAmb	IAmb	13 40 29.1		comp=Z,48nm,0.9s
M48A	Edgerton	62.20	348	P	P	13 40 19.0	-0.7	baz=165,SNR=6.4
M47A	Cromwell	62.26	348	P	P	13 40 19.5	-0.6	baz=164,SNR=6.1
K59A	Cooperstown	62.26	357	P	P	13 40 20.9	+0.8	baz=176,SNR=20
K58A	Earlville	62.30	356	P	P	13 40 20.7	+0.4	baz=175,SNR=11
K57A	Scipio Center	62.33	355	P	P	13 40 20.1	-0.4	baz=174,SNR=5.1
HDIL	Hopedale	62.34	344	IAmb	IAmb	13 40 29.8		comp=Z,44nm,0.8s
HDIL	Hopedale	62.34	344	P	P	13 40 20.0	-0.6	baz=161,SNR=7.0
K56A	Middlesex	62.36	355	P	P	13 40 21.4	+0.6	baz=173
L50A	Kingsville	62.40	350	P	P	13 40 20.7	-0.3	baz=168
K54A	Basiliko Farm,	62.40	354	P	P	13 40 21.5	+0.5	baz=172,SNR=9.5
K55A	Perry	62.46	354	P	P	13 40 22.1	+0.7	baz=172,SNR=6.3
L48A	N Adams	62.59	349	P	P	13 40 21.9	-0.4	baz=166,SNR=9.2
J62A	Henniker	62.61	359	P	P	13 40 23.5	+1.1	baz=179
L49A	Milan	62.63	349	P	P	13 40 22.3	-0.2	baz=166,SNR=7.1
J60A	Lant Hill Farm	62.66	358	P	P	13 40 23.8	+1.1	baz=177
P38A	Dawn	62.69	340	IAmb	IAmb	13 40 33.0		comp=Z,36nm,0.9s
319A	Douglas	62.73	323	IAmb	IAmb	13 40 26.5		comp=Z,26nm,1.1s
J61A	Chester	62.74	359	P	P	13 40 24.6	+1.3	baz=178
L47A	Sherwood	62.77	348	P	P	13 40 22.6	-0.8	baz=165,SNR=19
AAM	Ann Arbor	62.80	349	IAmb	IAmb	13 40 33.4		comp=Z,23nm,0.8s
ACCN	Adirondack Com	62.81	358	IAmb	IAmb	13 40 26.1		comp=Z,78nm,1.4s
K52A	Tillsonburg	62.81	352	P	P	13 40 24.0	+0.3	baz=170
J58A	Remsen	62.87	356	P	P	13 40 25.6	+1.5	baz=176
K51A	Iona Station	62.87	351	P	P	13 40 23.9	-0.2	baz=169
J56A	Wolcott	62.89	355	P	P	13 40 24.6	+0.4	baz=174
J59A	Piesco	62.93	357	P	P	13 40 25.7	+1.1	baz=176,SNR=12
J57A	Williamstown	62.96	356	P	P	13 40 25.4	+0.7	baz=175,SNR=6.1
J55A	Hilton	62.97	354	P	P	13 40 26.0	+1.3	baz=173
J54A	Appleton	63.05	354	P	P	13 40 26.1	+0.8	baz=172
K50A	Casco	63.09	350	P	P	13 40 25.2	-0.3	baz=168
I58A	Old Forge	63.18	357	P	P	13 40 26.5	+0.4	baz=176,SNR=7.9
I59A	Olmsteadville	63.23	358	P	P	13 40 27.0	+0.5	baz=177,SNR=12
J52A	Paris	63.24	352	P	P	13 40 26.7	+0.2	baz=170,SNR=17
I62A	Tamworth	63.25	360	P	P	13 40 28.1	+1.5	baz=180
I60A	Shoreham	63.26	358	P	P	13 40 27.9	+1.3	baz=178,SNR=7.3
I61A	Oroboro, Fairl	63.32	359	P	P	13 40 28.4	+1.3	baz=179,SNR=11
K48A	Perry	63.37	349	P	P	13 40 26.9	-0.5	baz=166,SNR=18
K47A	Vermontville	63.40	348	P	P	13 40 27.0	-0.7	baz=165,SNR=9.0
NCB	Newcomb	63.42	357	IAmb	IAmb	13 40 30.6		comp=Z,33nm,1.1s
I63A	Otisfield	63.43	0	P	P	13 40 29.2	+1.4	baz=180,SNR=5.6
R32A	Long Quarter,	63.43	336	IAmb	IAmb	13 40 29.7		comp=Z,43nm,1.0s
I57A	Carthage	63.47	356	P	P	13 40 28.8	+0.8	baz=175
K46A	Dorr	63.57	348	P	P	13 40 28.1	-0.6	baz=164
LBNH	Lisbon	63.62	359	IAmb	IAmb	13 40 31.7		comp=Z,46nm,0.9s
LBNH	Lisbon	63.62	359	P	P	13 40 30.3	+1.2	baz=179,SNR=8.0
J49A	Marlette	63.74	350	P	P	13 40 28.1	-1.8	baz=167,SNR=6.5
J48A	Bridge Port	63.79	350	P	P	13 40 29.3	-0.9	baz=167,SNR=12
L42A	Oliver, Polo	63.79	344	IAmb	IAmb	13 40 39.6		comp=Z,33nm,0.8s
I51A	Listowel	63.86	352	P	P	13 40 30.0	-0.6	baz=170,SNR=17
H58A	Gabriels	63.87	357	P	P	13 40 31.4	+0.7	baz=177,SNR=12
I55A	Frankford	63.90	355	P	P	13 40 31.5	+0.7	baz=173,SNR=6.5
J47A	Sunmer	63.91	349	P	P	13 40 30.6	-0.4	baz=166,SNR=9.6
H61A	Lyndonville	63.92	359	P	P	13 40 32.4	+1.4	baz=179,SNR=8.6
H62A	Milan	63.95	360	P	P	13 40 32.5	+1.2	baz=180
WVL	Waterville	63.95	1	P	P	13 40 30.6	-0.6	
WVL				IAmb	IAmb	13 40 33.6		comp=Z,39nm,1.0s
H60A	Morristown	63.96	359	P	P	13 40 32.5	+1.1	baz=178
H57A	Richville	63.97	356	P	P	13 40 31.6	+0.3	baz=175,SNR=16
I52A	Shelburne	64.01	353	P	P	13 40 32.1	+0.4	baz=170,SNR=7.4
H64A	Troy	64.04	1	P	P	13 40 32.9	+1.2	baz=182,SNR=5.8
H63A	New Sharon	64.04	1	P	P	13 40 33.3	+1.5	baz=181,SNR=13
H59A	Cadyville	64.07	358	P	P	13 40 33.1	+1.0	baz=177,SNR=12
H65A	Eastbrook	64.12	2	P	P	13 40 32.9	+0.6	baz=183
H56A	Elgin	64.16	356	P	P	13 40 33.3	+0.8	baz=174,SNR=6.6
CBKS	Cedar Bluff	64.17	335	IAmb	IAmb	13 40 35.5		comp=Z,47nm,1.0s
CBKS	Cedar Bluff	64.17	335	P	P	13 40 34.5	+1.6	baz=150,SNR=8.4
H55A	Tweed	64.19	355	P	P	13 40 33.5	+0.7	baz=174
H66A	Whiting	64.25	3	P	P	13 40 34.3	+1.2	baz=184,SNR=5.8
L40A	Anamosa	64.25	343	IAmb	IAmb	13 40 43.6		comp=Z,52nm,0.9s
I49A	Point Hope	64.26	350	P	P	13 40 32.9	-0.4	baz=168,SNR=6.2
H53A	Bobcaygeon	64.34	354	P	P	13 40 34.2	+0.4	baz=172,SNR=13
G60A	Masonville	64.49	359	P	P	13 40 36.2	+1.5	baz=179,SNR=7.9
G59A	Clarenceville	64.49	358	P	P	13 40 35.6	+0.9	baz=178,SNR=6.4
G63A	Kingsbury	64.50	1	P	P	13 40 35.9	+1.0	baz=181,SNR=7.5
H52A	Wyevale	64.55	353	P	P	13 40 35.3	+0.1	baz=171,SNR=5.6
SNAA	Sanae	64.59	161	P	P	13 40 35.6	+0.3	
SNAA	Sanae	64.59	161	*i* P	P	13 40 35.0	-0.2	
SNAA	Sanae	64.59	161	P	P	13 40 35.4	+0.1	
SNAA				IAmb	IAmb	13 40 37.4		comp=Z,48nm,1.2s
SADO	Sadowa	64.59	354	P	P	13 40 35.2	-0.2	comp=Z,59nm,0.8s,baz=214,slow=2.2,SNR=36
G57A	Newington	64.59	357	P	P	13 40 36.3	+0.9	baz=176,SNR=10
G58A	Ormstown	64.59	358	P	P	13 40 36.3	+0.9	baz=177,SNR=7.5
G62A	West of Eustis	64.60	0	P	P	13 40 36.5	+1.0	baz=180,SNR=24
I47A	Gladwin	64.61	349	P	P	13 40 35.2	-0.4	baz=166
I48A	Sherman Twp	64.64	350	P	P	13 40 35.4	-0.3	baz=167,SNR=12
G65A	Princeton	64.65	3	IAmb	IAmb	13 40 37.9		comp=Z,57nm,1.0s
G65A	Princeton	64.65	3	P	P	13 40 36.9	+1.1	baz=184,SNR=7.5
PKME	Peaks-Kenny Pk	64.66	1	P	P	13 40 36.1	+0.2	
PKME				IAmb	IAmb	13 40 38.0		comp=Z,56nm,0.9s
PKME	Peaks-Kenny Pk	64.66	1	P	P	13 40 36.9	+1.1	baz=182,SNR=7.7
G64A	Maxfield	64.66	2	P	P	13 40 36.1	+0.3	baz=182,SNR=5.9
G61A	St-Isidore-de-	64.66	360	P	P	13 40 36.9	+1.0	baz=179,SNR=18
I46A	Reed City	64.71	348	P	P	13 40 35.2	-1.0	baz=165,SNR=7.8
T25A	Trinidad	64.76	331	P	P	13 40 38.3	+1.3	baz=145,SNR=6.7
JFWS	Jewell Farm	64.80	344	P	P	13 40 36.6	-0.2	baz=160,SNR=8.0
G55A	Calabogie	64.85	355	P	P	13 40 37.4	+0.3	baz=174,SNR=9.3
G53A	Haliburton	64.88	354	P	P	13 40 37.8	+0.5	baz=172,SNR=21
H48A	Harrisville	65.08	350	P	P	13 40 38.2	-0.3	baz=167,SNR=6.4
F63A	Nahmakanta, Br	65.10	1	IAmb	IAmb	13 40 42.3		comp=Z,77nm,1.5s
F63A	Nahmakanta, Br	65.10	1	P	P	13 40 40.3	+1.5	baz=182,SNR=6.3
G54A	Lake Saint Pet	65.11	354	P	P	13 40 39.3	+0.5	baz=173,SNR=8.3
H47A	Mio	65.12	350	P	P	13 40 38.7	-0.2	baz=166
214A	Organ Pipe Nat	65.19	321	P	P	13 40 42.0	+2.3	baz=136,SNR=7.0
F59A	Saint Guilaume	65.25	359	P	P	13 40 41.3	+1.6	baz=178
F64A	Sherman	65.28	2	IAmb	IAmb	13 40 42.1		comp=Z,58nm,1.0s
F64A	Sherman	65.28	2	P	P	13 40 41.0	+1.2	baz=183,SNR=9.4
F61A	St Evariste	65.35	360	P	P	13 40 41.3	+0.9	baz=180,SNR=5.1
F60A	Warwick	65.35	359	P	P	13 40 41.0	+0.7	baz=179,SNR=13
I42A	Draeger Farm,	65.39	346	IAmb	IAmb	13 40 50.7		comp=Z,64nm,1.1s
GLMI	Grayling	65.41	349	P	P	13 40 41.4	+0.6	baz=166
KSCO	Kaye Shedlock'	65.52	333	P	P	13 40 43.5	+1.7	baz=147,SNR=5.7
F52A	Sundridge	65.62	354	P	P	13 40 42.4	+0.3	baz=171,SNR=12
G47A	Hillman	65.62	350	P	P	13 40 41.9	-0.2	baz=167,SNR=5.1
ALGO	Algonquin Park	65.65	355	P	P	13 40 42.5	+0.2	baz=173,SNR=7.4
E60A	Ste Agathe de	65.75	360	P	P	13 40 43.3	+0.4	baz=180,SNR=6.3
SDCO	Great Sand Dun	65.76	330	IAmb	IAmb	13 40 55.9		comp=Z,44nm,1.1s
SDCO	Great Sand Dun	65.76	330	P	P	13 40 44.5	+1.0	baz=144,SNR=35
E58A	La Victoria	65.78	358	P	P	13 40 44.0	+0.8	baz=178,SNR=12
I40A	Norwalk	65.81	344	IAmb	IAmb	13 40 53.2		comp=Z,28nm,0.8s
E61A	Lac Etchemin	65.81	0	P	P	13 40 44.7	+1.4	baz=180,SNR=11
G45A	Suttons Bay	65.81	349	IAmb	IAmb	13 40 52.8		comp=Z,36nm,0.8s
G45A	Suttons Bay	65.81	349	P	P	13 40 42.7	-0.6	baz=165
F51A	Arnstein	65.82	353	P	P	13 40 43.0	-0.4	baz=171,SNR=9.9
BGNE	Belgrade	65.84	338	P	P	13 40 44.1	+0.5	baz=152,SNR=6.2
E63A	Oxbow	65.84	2	IAmb	IAmb	13 40 45.8		comp=Z,48nm,1.1s
E63A	Oxbow	65.84	2	P	P	13 40 44.5	+1.1	baz=183,SNR=7.3
E64A	Bridgewater	65.85	2	P	P	13 40 43.8	+0.3	baz=183,SNR=6.5
E57A	Chemin Saint G	65.86	358	P	P	13 40 44.1	+0.5	baz=177,SNR=8.3
F49A	Sandfield	65.92	351	P	P	13 40 42.9	-1.2	baz=169,SNR=9.1
E55A	Montcerf-Lytto	66.00	356	P	P	13 40 45.0	+0.5	baz=175,SNR=6.7
E56A	St. Veronique	66.03	357	P	P	13 40 44.9	+0.2	baz=176,SNR=20
E52A	Mattawa	66.04	354	P	P	13 40 44.8	+0.1	baz=172,SNR=9.9
E53A	Dumoine, Ponti	66.04	355	P	P	13 40 44.7	0.0	baz=173,SNR=6.9
E54A	Lac Daplat, Po	66.06	355	P	P	13 40 45.0	+0.1	baz=174,SNR=12
F48A	Evansville	66.07	351	P	P	13 40 44.3	-0.7	baz=168,SNR=7.1
PQI	Presque Isle	66.10	2	IAmb	IAmb	13 40 47.9		comp=Z,66nm,1.3s
D60A	Saint Jean D'O	66.29	360	P	P	13 40 47.6	+1.2	baz=180,SNR=9.8
E51A	G1948 Merrick	66.37	354	P	P	13 40 47.3	+0.4	baz=171,SNR=11
S22A	4UR Ranch, Cre	66.39	329	P	P	13 40 49.4	+1.8	baz=143,SNR=5.3
F45A	CMU Biological	66.41	349	P	P	13 40 46.7	-0.4	baz=165,SNR=7.2
D57A	Chemin Vers le	66.45	358	P	P	13 40 47.9	+0.5	baz=177,SNR=23
D63A	Stockholm	66.46	2	P	P	13 40 48.5	+1.0	baz=183,SNR=9.7
D62A	Allapoint, All	66.48	1	P	P	13 40 48.2	+0.7	baz=182,SNR=18
D58A	Chemin du LacG	66.50	359	P	P	13 40 48.2	+0.5	baz=178,SNR=28
D56A	ZEC Mazanza, M	66.52	357	P	P	13 40 48.3	+0.4	baz=176,SNR=11
D55A	Sainte-Anne-du	66.53	357	P	P	13 40 47.9	0.0	baz=175
D61A	St Aubert, Com	66.58	1	P	P	13 40 49.5	+1.3	baz=181,SNR=11
Q24A	Divide	66.59	331	P	P	13 40 50.1	+1.3	baz=145,SNR=9.5
E48A	Lockeyer	66.64	352	P	P	13 40 48.3	-0.3	baz=169,SNR=5.5
D54A	Lac Fusel, La	66.73	356	P	P	13 40 48.9	-0.3	baz=174,SNR=13
D53A	Lac Vacive, Po	66.74	355	IAmb	IAmb	13 40 59.7		comp=Z,45nm,0.8s
D53A	Lac Vacive, Po	66.74	355	P	P	13 40 49.1	-0.2	baz=173
E47A	Iron Bridge	66.78	351	P	P	13 40 48.9	-0.6	baz=167,SNR=9.6
MVCO	Mesa Verde	66.78	328	IAmb	IAmb	13 41 02.5		comp=Z,34nm,1.2s
MVCO	Mesa Verde	66.78	328	P	P	13 40 50.9	+0.9	baz=142,SNR=5.1
LATQ	La Tuque	66.78	359	P	P	13 40 49.6	+0.1	baz=178,SNR=10
BATG	Bathurst New B	66.80	4	IAmb	IAmb	13 40 51.6		comp=Z,53nm,1.0s
E46A	Sault Ste Mari	66.86	350	IAmb	IAmb	13 41 00.1		comp=Z,40nm,0.9s
OGNE	Ogallala	66.91	335	IAmb	IAmb	13 40 52.7		comp=Z,33nm,0.9s
D51A	Lot 18 Range I	66.91	354	P	P	13 40 50.2	-0.1	baz=171,SNR=14
WUAZ	Wupatki	66.99	325	P	P	13 40 53.0	+1.7	baz=139,SNR=11
D50A	G1974 Best Tow	67.03	353	P	P	13 40 51.3	+0.1	baz=171,SNR=29
D48A	Paudash Townsh	67.28	352	P	P	13 40 51.9	-0.8	baz=169,SNR=8.7
D46A	Sault St. Mari	67.32	350	P	P	13 40 52.2	-0.8	baz=167
D47A	Chapleau	67.34	351	P	P	13 40 52.1	-1.0	baz=168,SNR=6.2
E43A	Lone Tree Farm	67.35	348	IAmb	IAmb	13 41 02.8		comp=Z,30nm,0.8s
ECSD	EROS Data Cent	67.38	340	IAmb	IAmb	13 41 04.5		comp=Z,50nm,1.2s
ECSD	EROS Data Cent	67.38	340	P	P	13 40 53.2	-0.3	baz=154,SNR=19
ISCO	Idaho Springs	67.47	332	P	P	13 40 54.8	+0.3	
ISCO				pmax	pmax			comp=Z,17nm,1.0s
ISCO	Idaho Springs	67.47	332	P	P	13 40 54.8	+0.3	
ISCO	Idaho Springs	67.47	332	P	P	13 40 55.7	+1.2	baz=145,SNR=10
SPMN	Marine on St.	67.62	343	IAmb	IAmb	13 41 05.4		comp=Z,40nm,1.1s
SPMN	Marine on St.	67.62	343	P	P	13 40 54.6	-0.2	baz=158,SNR=7.9
IKP	In-Ko-Pah, Jac	67.66	320	P	P	13 40 57.9	+2.3	baz=134
PV02	Paradox Valley	67.67	328	P	P	13 40 54.2	-1.5	
BC3	Big Chuckawall	67.96	321	P	P	13 40 59.4	+1.9	baz=135,SNR=6.3
MONP2	Monument Peak	68.02	320	P	P	13 41 00.1	+2.2	baz=134
IRM	Iron Mountain	68.13	321	P	P	13 41 00.5	+2.1	baz=135,SNR=9.5
N23A	Red Feather La	68.51	332	P	P	13 41 02.2	+1.3	baz=145,SNR=12
BELC	Belle Mtn. Jos	68.53	321	P	P	13 41 03.1	+2.0	baz=134
XPFO	Pion Flat	68.53	320	P	P	13 41 01.6	+0.6	
PFO	Pinyon Flats O	68.54	320	P	P	13 41 01.7	+0.7	comp=Z,11nm,1.0s,baz=122,slow=0.9,SNR=6.8
PFO	Pinyon Flats O	68.54	320	*ce*P	P	13 41 02.7	+1.6	
PFO				pmax	pmax			comp=Z,30nm,1.1s
PFO	Pinyon Flats O	68.54	320	P	P	13 41 04.1	+3.1	baz=134,SNR=8.7
LSQQ	Lebel-sur-Quev	68.65	356	P	P	13 41 01.2	-0.1	baz=174
GMRC	Granite Mounta	68.88	322	P	P	13 41 05.1	+1.9	baz=135,SNR=13
PKCU	Pink Cliffs	68.92	326	P	P	13 41 01.6	-2.0	
O20A	White River Ci	68.95	330	P	P	13 41 05.5	+1.8	

	baz=142,SNR=7.4						
NVL	N'lazarevskaya	69.17	159	eP	P	13 41 04.5	+0.2
NVL				pmax	pmax		
	comp=Z,36nm,1.0s						
HEC	Hector,Ludlow	69.30	321	P	P	13 41 08.5	+2.7
	baz=134						
MATQ	Matagami	69.40	355	P	P	13 41 05.6	-0.3
	baz=173,SNR=20						
TUQ	Turquoise Moun	69.49	322	P	P	13 41 08.7	+1.7
	baz=135,SNR=9.8						
CCUT	Cedar City	69.57	325	P	P	13 41 06.8	-0.7
BFSC	Mount Baldy Ra	69.69	320	P	P	13 41 10.6	+2.4
	baz=133,SNR=5.2						
LIC	Lamto	69.70	75	ePKP2	P	13 41 07.6	-1.0
	comp=Z,9.6nm,0.3s						
EYMN	Ely	69.82	345	P	P	13 41 08.5	-0.1
	baz=160,SNR=6.4						
TIC	Toumodi	69.87	75	ePKP2	P	13 41 08.6	-1.1
GSC	Goldstone, Bar	69.91	321	P	P	13 41 08.4	-1.1
GSC				pmax	pmax		
	comp=Z,49nm,1.7s						
GSC	Goldstone, Bar	69.91	321	P	P	13 41 08.4	-1.1
GSC				IAmb	IAmb	13 41 18.8	
	comp=Z,49nm,1.6s						
GSC	Goldstone, Bar	69.91	321	P	P	13 41 11.2	+1.7
	baz=134,SNR=8.1						
MWC	Mount Wilson	69.92	320	P	P	13 41 12.6	+2.8
MWC				pmax	pmax		
	comp=Z,60nm,1.6s						
MWC	Mount Wilson	69.92	320	P	P	13 41 12.6	+2.8
MWC				IAmb	IAmb	13 41 18.7	
	comp=Z,60nm,1.6s						
KIC	Kosan Boka	70.01	75	ePKP2	P	13 41 08.7	-1.8
	comp=Z,19nm,0.7s						
SHOC	Shoshone, Teco	70.02	322	P	P	13 41 12.6	+2.5
	baz=135,SNR=7.5						
DBIC	Dimbokro	70.03	75	P	P	13 41 08.8	-1.7
	comp=Z,28nm,0.8s,baz=218,slow=5.9,SNR=30						
DBIC	Dimbokro	70.03	75	P	P	13 41 09.2	-1.4
DBIC				pmax	pmax		
	comp=Z,48nm,1.0s						
DBIC	Dimbokro	70.03	75	P	P	13 41 09.2	-1.4
DBIC				IAmb	IAmb	13 41 11.0	
	comp=Z,48nm,1.0s						
K22A	Casper	70.19	333	IAmb	IAmb	13 41 22.7	
	comp=Z,25nm,0.8s						
K22A	Casper	70.19	333	P	P	13 41 12.2	+1.0
	baz=144,SNR=8.6						
EDW2	Edwards Air Fo	70.33	320	P	P	13 41 13.8	+1.8
	baz=133						
RSSD	Black Hills	70.38	335	P	P	13 41 12.6	+0.2
RSSD				pmax	pmax		
	comp=Z,23nm,0.9s						
RSSD	Black Hills	70.38	335	P	P	13 41 12.6	+0.2
RSSD	Black Hills	70.38	335	P	P	13 41 13.4	+1.1
	baz=147						
QSPA	South Pole Qui	70.49	180	P	P	13 41 13.2	+0.5
QSPA				IAmb	IAmb	13 41 25.0	
	comp=Z,50nm,1.1s						
LRMC	Laurel Mtn Rad	70.55	321	P	P	13 41 15.8	+2.3
	baz=134,SNR=6.7						
TPNV	Topopah Spring	70.73	323	P	P	13 41 16.5	+1.9
	baz=135,SNR=16						
FURC	Furnace Creek,	70.75	322	P	P	13 41 16.5	+2.1
	baz=134,SNR=16						
MPMC	Manual Prospec	70.83	321	P	P	13 41 16.7	+1.4
	baz=134,SNR=11						
ISA	Isabella, Lake	71.15	321	P	P	13 41 18.9	+1.8
	baz=133,SNR=16						
DUG	Dugway, Tooele	71.23	327	P	P	13 41 18.9	+1.3
	baz=139,SNR=19						
AGMN	Agassiz Nation	71.27	343	P	P	13 41 17.4	0.0
	baz=155						
R11A	Troy Canyon, C	71.36	324	P	P	13 41 20.2	+1.8
	baz=136,SNR=13						
GRAC	Grapevine Rang	71.41	322	P	P	13 41 21.6	+3.0
	baz=134						
CWC	Cottonwood Cre	71.44	321	P	P	13 41 20.7	+1.8
	baz=133						
PKM	Mcpherson Peak	71.44	319	P	P	13 41 21.1	+2.1
	baz=132,SNR=13						
BW06	Boulder Array	71.63	331	P	P	13 41 21.3	+1.3
	baz=142,SNR=6.3						
PDAR	Pinedale Array	71.63	331	P	P	13 41 20.3	+0.3
	comp=Z,3.8nm,0.9s,baz=138,slow=6.8,SNR=21						
PDAR	Pinedale Array	71.63	331	P	P	13 41 19.2	-0.8
VES	Vestal, Richgr	71.63	320	P	P	13 41 21.5	+1.6
	baz=132,SNR=5.4						
SMMC	Simmler	71.84	319	P	P	13 41 23.3	+2.1
	baz=132,SNR=16						
TIN	Tinemaha, Big	71.95	322	P	P	13 41 24.2	+2.3
	baz=133						
MDND	Maddock	72.00	340	P	P	13 41 22.9	+1.1
	baz=152						
REDW	Red Top Meadow	72.69	331	IAmb	IAmb	13 41 38.8	
	comp=Z,47nm,1.3s						
MLAC	Mammoth, Mammo	72.69	322	P	P	13 41 27.8	+1.3
	baz=133,SNR=8.7						
NVAR	Mina Array Bea	72.93	323	P	P	13 41 29.3	+1.4
	comp=Z,7.8nm,0.8s,baz=148,slow=6.4,SNR=32						
NVAR	Mina Array Bea	72.93	323	P	P	13 41 29.0	+1.1
ULM	Lac du Bonnet	73.05	344	P	P	13 41 27.5	-0.5
	comp=Z,10nm,0.8s,baz=153,slow=5.9,SNR=17						
ULM	Lac du Bonnet	73.05	344	eP	P	13 41 27.2	-0.8
IMW	Indian Meadow	73.14	331	IAmb	IAmb	13 41 41.7	
	comp=Z,64nm,1.6s						
FLWY	Flagg Ranch	73.18	331	IAmb	IAmb	13 41 42.1	
	comp=Z,54nm,1.0s						
RLMT	Red Lodge	73.36	333	P	P	13 41 31.0	+0.8
	baz=143,SNR=24						
H17A	Grant Village	73.36	331	P	P	13 41 31.8	+1.4
	baz=141,SNR=11						
LAO	LASA Array	73.37	335	P	P	13 41 31.1	+1.1
	baz=146,SNR=12						
YPP	Pitchstone Pla	73.37	331	P	P	13 41 29.1	-1.4
DGMT	Dagmar	74.09	338	P	P	13 41 35.8	+1.6
	baz=148,SNR=16						
SCHQ	Schefferville	74.30	2	P	P	13 41 34.9	-0.4
	comp=Z,22nm,0.9s,baz=186,slow=4.0,SNR=24						
SCHQ	Schefferville	74.30	2	P	P	13 41 34.7	-0.6
SCHQ				IAmb	IAmb	13 41 45.6	
	comp=Z,38nm,0.9s						
PAHR	Pah Rah Range	74.42	323	IAmb	IAmb	13 41 40.1	
	comp=Z,33nm,0.9s						
ORV	Oroville	75.53	322	IAmb	IAmb	13 41 46.8	
	comp=Z,53nm,1.2s						
EGMT	Eagleton	75.86	334	IAmb	IAmb	13 41 46.8	
	comp=Z,42nm,1.0s						
EGMT	Eagleton	75.86	334	P	P	13 41 44.9	+0.4
	baz=143,SNR=24						
O03E	Paynes Creek	76.19	322	P	P	13 41 46.7	+0.1
	baz=131						
MOD	Modoc Plateau	76.42	324	IAmb	IAmb	13 42 00.9	
	comp=Z,60nm,1.5s						
O02D	Mt. Diablo Mer	76.69	322	P	P	13 41 50.8	+1.4
	baz=131						
MSO	Missoula	76.75	331	P	P	13 41 52.7	+3.1
	baz=139,SNR=13						
N02D	Trinity Center	77.16	322	P	P	13 41 52.0	0.0
	baz=131						
M04C	Macdoel	77.19	323	P	P	13 41 54.0	+1.7
	baz=132,SNR=8.1						
M02C	Callahan	77.51	323	P	P	13 41 54.4	+0.4
	baz=131						
L04D	Klamath Falls	77.74	324	P	P	13 41 55.9	+0.6
	baz=131						
J05D	Fort Rock, OR	77.86	325	P	P	13 41 57.5	+1.5
	baz=132,SNR=11						
PINE	Pine Mountain	78.04	325	IAmb	IAmb	13 42 15.1	
	comp=Z,43nm,1.3s						
TTIG	Tnine Tigouga,	78.08	51	P	P	13 41 60.0	+2.5
	SNR=7.7						
VNDA	Vanda	78.30	190	P	P	13 41 59.1	+1.3
	comp=Z,2.2nm,1.1s,baz=29,slow=10.0,SNR=2.4						
J04D	Umpqua Nationa	78.31	324	P	P	13 41 59.9	+1.3
	baz=132						
WALA	Waterton Lakes	78.41	333	IAmb	IAmb	13 42 11.3	
	comp=Z,57nm,1.1s						
L02E	Cave Junction	78.44	323	P	P	13 42 00.7	+1.7
	baz=130						
TOA0	Torodi Ar. Sit	78.52	72	P	P	13 41 59.0	-1.1
TORD	Torodi Ar. Bea	78.52	72	P	P	13 41 58.7	-1.3
	comp=Z,72nm,0.8s,baz=255,slow=4.6,SNR=214						
TORD				LR	LR	14 14 57.3	
	comp=Z,2μm,21.5s,baz=315,slow=34						
I05D	Terrebonne, OR	78.62	326	P	P	13 42 01.8	+1.8
	baz=132,SNR=8.6						
FFC	Flin Flon	78.74	342c	eP	P	13 42 01.1	+0.8
FFC				pmax	pmax		
	comp=Z,42nm,1.3s						
FFC	Flin Flon	78.74	342	P	P	13 42 01.2	+0.8
K02D	Willamette Mer	78.82	323	P	P	13 42 02.4	+1.2
	baz=130						
SYO	Syowa Base	78.83	160⇓	eP	P	13 41 59.0	-1.9
SYO	Syowa Base	78.83	160⇑	eX	P	13 42 00.0	-0.9
SYO	Syowa Base	78.83	160⇑	isP	P	13 42 04.0	+3.1
I04A	Tendick Farm,	78.84	325	P	P	13 42 02.3	+1.1
	baz=132						
G05D	Wamic, OR	79.22	326	P	P	13 42 05.5	+2.2
	baz=132,SNR=5.7						
NEW	Newport	79.26	331	P	P	13 42 04.8	+1.3
	comp=Z,4.7nm,0.8s,baz=134,slow=8.6,SNR=8.8						
NEW	Newport	79.26	331	P	P	13 42 04.8	+1.3
	baz=136,SNR=6.4						
OUZM	OUZ	79.50	52	P	P	13 42 07.0	+1.7
	SNR=7.6						
F05D	White Salmon	79.73	327	P	P	13 42 08.2	+2.1
	baz=132						
ZGR	Zagora	79.96	53	P	P	13 42 10.0	+2.2
	SNR=8.7						
TZRR	Tazzarine	80.33	52	P	P	13 42 12.0	+2.2
	SNR=8.0						
LON	Longmire	80.49	327	P	P	13 42 10.3	+0.1
LON				pmax	pmax		
	comp=Z,12nm,1.1s						
LON	Longmire	80.49	327	P	P	13 42 10.3	+0.1
E04D	Cinebar	80.75	327	P	P	13 42 13.8	+2.4
	baz=132						
ZHG	ZHG	80.88	50	P	P	13 42 13.0	+0.4
	SNR=9.7						
D04E	Lakebay	81.26	327	P	P	13 42 16.1	+2.0
	baz=132						
PTEO	Sao Teotonio	81.58	45	eP	P	13 42 18.0	+1.9
	comp=Z,82nm,1.3s						
B05A	Bryant	81.65	328	P	P	13 42 16.9	+0.7
	baz=132,SNR=9.6						
D03D	Eldon	81.66	327	P	P	13 42 17.5	+1.2
	baz=131,SNR=7.4						
CZD	Col de Zad	81.83	51	P	P	13 42 20.0	+2.1
	SNR=6.8						
PBDV	Barranco-do-Ve	81.95	46	eP	P	13 42 19.4	+1.2
PNCL	Nicolau / Gran	82.02	45	eP	P	13 42 20.0	+1.6
MDT	Midelt	82.04	51	P	P	13 42 19.6	+0.8
	SNR=16						
MESJ	Messejana	82.08	45	eP	P	13 42 19.1	+0.4
MESJ	Messejana	82.08	45	eP	P	13 42 19.6	+0.9
PCVE	Castro Verde	82.09	46	eP	P	13 42 20.1	+1.3
PVAQ	Vaqueiros	82.18	46	eP	P	13 42 21.0	+1.7
TSUM	Tsumeb	82.35	108	P	P	13 42 20.1	-0.8
TSUM				IAmb	IAmb	13 42 22.8	
	comp=Z,40nm,1.1s						
PBEJ	Beja	82.41	45	eP	P	13 42 21.7	+1.2
PGC	Sidney	82.58	328	P	P	13 42 21.6	+0.6
PGC				IAmb	IAmb	13 42 33.8	
	comp=Z,32nm,1.1s						
PMTG	Montargil	82.73	44	eP	P	13 42 23.3	+1.2
	comp=Z,61nm,1.7s						
PTOM	Tomar	82.90	44	eP	P	13 42 23.9	+0.9
	comp=Z,78nm,1.4s						
FRB	Frobisher Bay	83.18	1	P	P	13 42 23.3	-0.5
	comp=Z,8.1nm,1.0s,baz=198,slow=5.0,SNR=9.2						
PMRV	Marv??o	83.47	44	eP	P	13 42 27.0	+1.0
	comp=Z,34nm,1.6s						
PCBR	Castelo Branco	83.63	44	eP	P	13 42 27.9	+1.1
	comp=Z,36nm,1.4s						
PVIS	Viseu	83.83	43	eP	P	13 42 29.1	+1.3
	comp=Z,86nm,1.6s						
MTE	Manteigas	83.88	43	eP	P	13 42 29.0	+0.9
	comp=Z,72nm,1.3s						
HORN	Hornachuelos	84.08	46	P	P	13 42 29.5	+0.4
	SNR=7.5						
PVRL	Vila Real	84.24	43	eP	P	13 42 31.1	+1.2
	comp=Z,71nm,1.5s						
PCAB	Cabril	84.28	42	eP	P	13 42 29.9	-0.2
MVO	Moncorvo	84.62	43	eP	P	13 42 32.7	+0.8
	comp=Z,69nm,1.7s						
PBRG	Braganca	85.14	42	eP	P	13 42 35.0	+0.6
	comp=Z,62nm,1.3s						
PAB	San Pablo	85.55	45	P	P	13 42 35.6	-1.0
PAB				pmax	pmax		
	comp=Z,30nm,1.0s						
PAB	San Pablo	85.55	45	P	P	13 42 35.6	-1.0
PAB				IAmb	IAmb	13 42 38.4	
	comp=Z,30nm,1.0s						
ESDC	Sonseca Array	85.87	45	P	P	13 42 37.1	-1.0
	comp=Z,2.0nm,0.4s,baz=357,slow=28,SNR=9.2						
BOSA	Boshof	85.94	119	P	P	13 42 38.6	-0.4
	comp=Z,13nm,1.0s,baz=266,slow=4.9,SNR=6.8						
BOSA	Boshof	85.94	119	P	P	13 42 41.5	+2.5
MAW	Mawson	86.58	164	P	P	13 42 41.3	+0.2
	comp=Z,18nm,1.0s,baz=224,slow=6.0,SNR=18						
MAW	Mawson	86.58	164	P	P	13 42 40.5	-0.7
MAW				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MAW	Mawson	86.58	164	P	P	13 42 40.5	-0.7
YKA	Yellowknife Ar	88.88	341	P	P	13 42 51.6	-0.4
	comp=Z,41nm,0.9s,baz=138,slow=5.3,SNR=175						
DLBC	Dease Lake	91.75	333	P	P	13 43 06.2	+0.5
	comp=Z,15nm,0.9s						
KEST	Kesra	93.71	53	P	P	13 43 14.4	-0.9
	comp=Z,6.3nm,0.9s,baz=332,slow=6.8,SNR=4.6						
URZ	Urewera	94.09	227	IAMs_20	IAMs_20	14 16 11.9	
	comp=Z,3μm,19.0s						
SUMG	Summit	94.58	9	i P	P	13 43 19.0	+0.2
	comp=Z,56nm,1.0s						
SUMG	Summit	94.58	9	i P	P	13 43 19.0	+0.2
SUMG				pmax	pmax		
	comp=Z,56nm,1.0s						
RES	Resolute Bay	95.40	354	P	P	13 43 22.1	+0.1
	comp=Z,1.9nm,0.8s,baz=181,slow=8.0,SNR=7.0						
DOU	Dourbes	95.98	39	P	P	13 43 24.4	-0.7
BMRD	Maredsous	96.16	39	P	P	13 43 25.4	-0.6
WLF	Walferdange	96.74	40	P	P	13 43 29.2	+0.6
INK	Inuvik	98.62	340	P	Pdif	13 43 36.8	+0.2
	comp=Z,6.8nm,1.0s,baz=98,slow=5.3,SNR=7.4						
GERES	GERESS Array B	101.12	42	P	Pdif	13 43 48.0	-0.4
	comp=Z,0.9nm,0.7s,baz=259,slow=1.4,SNR=7.1						
CLL	Collm	101.41	40	ePdif	Pdif	13 43 49.0	-0.5
CLL				e(sPdif)		13 43 58.0	
CLL				epPP		13 48 06.0	
CLL	Collm	101.41	40	eP	Pdif	13 44 00.0	+11
CLL				e		13 48 06.0	
ILAR	Eielson Array	101.82	335	P	Pdif	13 43 51.1	0.0
	comp=Z,0.8nm,1.1s,baz=126,slow=2.5,SNR=2.7						
AKASG	Malin Array Be	111.33	42	PP	PP	13 49 08.1	-4.4
	comp=Z,0.2nm,0.3s,baz=261,slow=7.0,SNR=4.8						
BRTR	Keskin Array B	113.30	54	PKiKP	PKiKP	13 48 36.6	+0.2
	comp=Z,1.4nm,0.9s,baz=197,slow=3.8,SNR=6.4						
BRTR				PP	PP	13 49 26.5	-0.6
	comp=Z,1.5nm,0.9s,baz=233,slow=6.0,SNR=4.7						
APA	Apatity	113.49	24⇓	iPKIKP	PKiKP	13 48 39.4	+3.7
APA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
OBN	Obninsk	115.89	38	ePKIKP	PKPdf	13 48 40.0	-0.6
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MOS	Moscow	116.45	37	i PKIKP	PKPdf	13 48 38.0	-3.7
KLMR	Klimovskoe	116.93	31	ePKIKP	PKPdf	13 48 42.1	-0.4
KLMR				pmax	pmax		
	comp=Z,20nm,1.4s						
KLMR	Klimovskoe	116.93	31	ePKPdf	PKPdf	13 48 42.2	-0.3
KLMR				AMP		13 48 49.5	
	comp=Z,20nm,1.4s						
PRGR	Permogore	119.68	29	ePKIKP	PKPdf	13 48 43.0	-4.7
PRGR				pmax	pmax		
	comp=Z,19nm,1.5s						
STKA	Stephens Creek	120.01	212	PKP	PKPdf	13 48 48.5	-0.9
	comp=Z,0.8nm,0.8s,baz=172,slow=9.9,SNR=2.9						
BILL	Bilibino	120.17	339	i PKIKP	PKiKP	13 48 49.1	+0.5
BILL				i		13 50 10.4	
BILL				ePS	SP	13 59 54.7	-6.1
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s						
SHA1	Shidzhatmaz	120.24	50	i PKIKP	PKPdf	13 48 49.2	-0.5
KIV	Kislovodsk	120.26	50	ePKIKP	PKiKP	13 48 50.2	+0.6
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
NEY	Neytrino	120.30	51c	iPKIKP	PKiKP	13 48 50.2	+0.4
KBZ	Khabaz	120.41	50	PKP	PKPdf	13 48 48.1	-1.6
	comp=Z,5.9nm,0.9s,baz=294,slow=3.7,SNR=11						
KBZ	Khabaz	120.41	50	i PKIKP	PKPdf	13 48 49.6	-0.1
ZEI	Tsey	121.17	51	i PKIKP	PKiKP	13 48 51.9	+0.3
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
H11S2	WAKE ISLAND Hy	125.79	279	T	T	16 08 15.8	
	baz=100,slow=74,SNR=50						
H11S1	WAKE ISLAND Hy	125.79	279	T	T	16 08 16.4	
	baz=100,slow=74,SNR=78						
H11S3	WAKE ISLAND Hy	125.80	279	T	T	16 08 17.1	
	baz=100,slow=74,SNR=54						
CTA	Charters Tower	126.27	225	PKP	PKiKP	13 49 02.5	+0.3
	baz=104,slow=4.2						
ARU	Arti	127.67	33	i PKIKP	PKPdf	13 49 03.3	+0.1
ARU						13 51 05.3	
ARU						13 56 14.3	
ARU				SS	SS	14 08 19.0	+3.8
SEY	Seymchan	127.71	337	PKP	PKiKP	13 49 03.8	+0.1
	comp=Z,9.7nm,0.9s,baz=92,slow=2.2,SNR=18						
SEY	Seymchan	127.71	337	i PKIKP	PKPdf	13 49 03.3	+0.2
NRIK	Noril'sk	128.62	10	i PKIKP	PKiKP	13 49 05.2	-0.1
MA2	Magadan	130.28	334c	iPKIKP	PKiKP	13 49 10.2	+1.3
ASAR	Alice Springs	130.59	210	PKP	PKPdf	13 49 09.9	0.0
	comp=Z,4.0nm,0.9s,baz=153,slow=2.3,SNR=18						
WRA	Warramunga Arr	133.50	214	PKP	PKPdf	13 49 15.4	0.0
	comp=Z,4.4nm,0.8s,baz=151,slow=1.8,SNR=6.7						
BVAR	Borovoye Array	135.32	33	PKP	PKiKP	13 49 18.8	-0.5
	comp=Z,1.3nm,0.7s,baz=253,slow=1.5,SNR=3.6						
YAK	Yakutsk	135.34	346	PKP	PKiKP	13 49 18.4	-0.7
	comp=Z,1.4nm,0.3s,baz=2.8,slow=2.6,SNR=1.7						
YAK	Yakutsk	135.34	346	i PKIKP	PKPdf	13 49 17.7	+0.2
KURK	Kurchatov	140.78	31	i PKIKP	PKPdf	13 49 27.6	-0.3
KURBB	Kurchatov Arra	140.80	31	PKhKP	PKPpre	13 49 24.4	
	comp=Z,0.9nm,0.7s,baz=303,slow=2.9,SNR=2.0						
KURBB				PKP	PKPdf	13 49 28.8	+0.8
	comp=Z,3.4nm,0.8s,baz=306,slow=2.9,SNR=8.2						
ZALV	Zalesovo Beam	141.06	23	PKhKP	PKPpre	13 49 26.3	
	comp=Z,13nm,0.9s,baz=292,slow=2.8,SNR=14						
ZALV				PKP	PKPdf	13 49 29.5	+1.2
	comp=Z,13nm,0.9s,baz=292,slow=2.7,SNR=14						
ZALV	Zalesovo Beam	141.06	23	PKIKP	PKPdf	13 49 26.4	-1.9
AAK	Ala-Archa	142.97	44c	iPKIKP	PKiKP	13 49 34.8	-0.7
AAK				pmax	pmax		
	comp=Z,27nm,1.0s						
AAK	Ala-Archa	142.97	44		PKPdf	13 49 31.9	-0.4
ZEA	Zeya	143.26	342	ePKIKP	PKPbc	13 49 30.1	+0.9
ZEA				pmax	pmax		
	comp=Z,18nm,1.2s						
MAKZ	Makanchi	145.03	33	PKIKP	PKPbc	13 49 34.8	-0.1
MAKZ	Makanchi	145.03	33		PKPbc	13 49 34.8	-0.1
MKAR	Makanchi Array	145.20	33	PKPbc	PKPbc	13 49 35.3	-0.2
	comp=Z,24nm,0.8s,baz=323,slow=3.0,SNR=55						
KSH	Kashi	145.35	48	PKPbc	PKPdf	13 49 37.0	+0.5
KSH				PP	PP	13 53 00.4	+4.3
KSH				PKS	PKSdf	13 53 11.1	-1.0
KSH				SKKS		13 59 49.3	
KSH				AMB	AMB		
	comp=Z,220nm,4.5s						
KSH				LR	LR		
	comp=Z,450nm,11.2s						
KSH				LR	LR		
	comp=Z,670nm,12.7s						
KSH				LR	LR		
	comp=Z,540nm,13.0s						
KLR	Kul'dur	145.39	334	PKPbc	PKPab	13 49 36.4	+0.2
	comp=Z,21nm,1.1s,baz=31,slow=3.0,SNR=17						
POO	Poona	146.70	86⇑	iP	PKiKP	13 49 43.0	-0.7
	comp=Z,80nm,1.0s						
IRK	Irkutsk	147.29	6	ePKIKP	PKPdf	13 49 39.7	+0.4
IRK				pmax	pmax		
	comp=Z,84nm,2.3s						
MOY	Mondy	147.46	9	ePKP2	PKPbc	13 49 42.2	0.0
MOY				pmax	pmax		
	comp=Z,64nm,1.6s						
CIT	Chita	147.55	355	ePKP2	PKPbc	13 49 42.1	-0.2
CIT				pmax	pmax		
	comp=Z,64nm,4.0s						
TLY	Talaya	147.79	6	PKPbc	PKiKP	13 49 44.4	-0.6
	comp=Z,4.6nm,0.5s,baz=12,slow=1.3,SNR=7.6						
TLY	Talaya	147.79	6	ePKP2	PKPbc	13 49 43.3	+0.3
TLY				pmax	pmax		
	comp=Z,94nm,2.3s						
BHK	Bhakra	148.40	62	ex	PKPbc	13 49 46.5	+1.3
USRK	Ussuriysk Ar.	148.99	327	PKPbc	PKiKP	13 49 47.5	-0.1
	comp=Z,20nm,0.9s,baz=25,slow=1.8,SNR=19						
USRK	Ussuriysk Ar.	148.99	327	PKP2	PKiKP	13 49 47.9	+0.3
USRK	Ussuriysk Ar.	148.99	327		PKiKP	13 49 47.9	+0.3
ZAK	Zakamensk	149.03	7	ePKIKP	PKPdf	13 49 43.3	+1.0
ZAK				pmax	pmax		
	comp=Z,16nm,1.2s						
KLRI	Killari	149.22	88	ePKPdf	PKPdf	13 49 42.7	-0.8
URV	Uravakonda	149.26	94	ePKPbc	PKPbc	13 49 45.7	-2.1
MJAR	Matsushiro Arr	149.50	310	PKPbc	PKPbc	13 49 47.9	0.0
	comp=Z,22nm,0.9s,baz=124,slow=0.9,SNR=35						
MJAR	Matsushiro Arr	149.50	310	PKP2	PKPbc	13 49 48.2	+0.3
MJAR	Matsushiro Arr	149.50	310		PKPbc	13 49 48.1	+0.3
MAJO	Matsushiro	149.50	310	PKP2	PKiKP	13 49 48.4	-0.6
MAJO	Matsushiro	149.50	310		PKiKP	13 49 48.4	-0.6
MAT	Matsushiro	149.50	310	PKP	PKPbc	13 49 47.7	-0.2
MJB9	Matsu-Tunnel	149.50	310		PKPbc	13 49 48.4	+0.5
WMQ	Urumqi	150.00	32	ePKPbc	PKPdf	13 49 46.1	+2.1
WMQ				pPKP	sPKPdf	13 49 50.6	-0.2
WMQ				AMB	AMB		
	comp=Z,120nm,11.9s						
WMQ				LR	LR		
	comp=Z,740nm,22.1s						
WMQ				LR	LR		
	comp=Z,1μm,19.3s						
WMQ				LR	LR		
	comp=Z,1μm,22.5s						
SIJI	Sorong	150.17	229	PKPbc	PKPbc	13 49 50.0	-0.2
	comp=Z,19nm,0.7s,baz=46,slow=3.5,SNR=7.1						
HYBB	Hyderabad (bro	150.96	89	ePKPdf	PKPdf	13 49 44.9	-1.3
HYB	Hyderabad	150.96	89	i PKP	PKPdf	13 49 47.0	+0.8
SRSP	Sriramsagar	150.97	86	ePKPdf	PKPdf	13 49 45.6	-0.5
SRLM	Srisailam	151.04	92	ePKPdf	PKPdf	13 49 46.1	-0.3
SKHT	Srikalahasti	151.25	97	ePKPdf	PKPdf	13 49 46.2	-0.4
NJS	Nagarjunasagar	151.52	91	ePKPdf	PKPdf	13 49 45.0	-2.0
SONM	Songino Array	151.84	4	PKP	PKPdf	13 49 47.8	+1.0
	comp=Z,2.3nm,1.0s,baz=255,slow=0.2,SNR=10						
SONM				PKPbc	PKiKP	13 49 53.7	+0.2
	comp=Z,14nm,1.0s,baz=313,slow=1.1,SNR=34						
SONM				PKPab	sPKPbc	13 50 00.6	+0.6
	comp=Z,12nm,0.9s,baz=321,slow=1.8,SNR=11						
RPR	Rampur	151.86	87	ePKPdf	PKPdf	13 49 47.6	+0.1
ADKI	Addanki	152.00	93	ePKPdf	PKPdf	13 49 46.8	-1.0
CN2	Changchun	152.34	334	ePKPbc	PKPdf	13 49 48.0	+0.5
GGR	Gangavaram	152.58	89	ePKPdf	PKPdf	13 49 48.4	-0.3
MYLAV	Mylavaram	152.81	92	ePKPdf	PKPdf	13 49 47.7	-1.2
KAPI	Kappang	153.31	204	PKPbc	PKiKP	13 49 58.7	+1.2
	comp=Z,9.0nm,0.7s,baz=92,slow=4.2,SNR=5.2						
PVM	Polavaram	153.83	91	ePKPdf	PKPdf	13 49 50.5	+0.2
KSRS	Korea Array	155.87	321	PKP	PKPdf	13 49 53.8	+1.2
	comp=Z,4.7nm,1.0s,baz=37,slow=0.7,SNR=17						
KSRS				PKPab	PKPab	13 50 19.1	-0.3
	comp=Z,1.9nm,0.8s,baz=58,slow=3.3,SNR=4.6						
CHLP	Challavanipeta	156.30	89	ePKPab	PKPab	13 50 22.2	+0.3
GTA	Gaotai	158.78	20	PKP	PKPdf	13 49 58.0	+1.6
HHC	Hu-ho-hao-te	158.81	355	ePKP	PKPdf	13 49 56.6	+0.2
RPSI	Rantau Prapat	160.39	148		PKPab	13 50 40.3	+0.8
PSI	Prapat	160.49	148	PKPab	PKPab	13 50 40.3	+0.2
	comp=Z,14nm,1.0s,baz=182,slow=8.0,SNR=5.9						
TIA	Tai'an	162.10	338	PKP	PKPdf	13 50 01.6	+1.6
NJ2	Nanjing	164.90	327	ePKP	PKPdf	13 50 02.0	-0.8
CD2	Chengdu	167.83	22	PKP	PKPdf	13 50 03.0	-2.2
WHN	Wuhan	168.20	337	PKP	PKPdf	13 50 07.3	+2.0
CMAR	Chiang Mai Arr	170.31	96	PKP	PKPdf	13 50 07.3	+0.3
	comp=Z,1.7nm,0.8s,baz=267,slow=1.7,SNR=10.0						
CMAR				PKPab	PKPab	13 51 23.4	+0.1
	comp=Z,4.9nm,0.9s,baz=256,slow=6.0,SNR=18						
CMAR				PP	PP	13 55 14.8	+0.8
	comp=Z,2.2nm,1.0s,baz=277,slow=6.8,SNR=4.9						
CHTO	Chiang Mai	170.36	94	PKIKP	PKPdf	13 50 09.1	+2.1
GYA	Guiyang	172.90	18	i PKP	PKPdf	13 50 09.5	+1.3
GYA				PKPab	PKPab	13 51 35.0	+0.6
GYA				PKS		13 53 38.4	
GYA				PP	PP	13 55 28.3	+3.5
GYA				AMB	AMB		
	comp=Z,190nm,7.8s						

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*NIED **22** 13:38:00, 36°.40N×142°.60E, h8^{km}, Mw4.6 Best double couple: $M_0$9.30000×10^{15} NP1:ϕ_s10.00000°, δ52.00000°, λ77.00000°. NP2:ϕ_s210.00000°, δ40.00000°, λ106.00000°.*

*BJI **22** 13:38:40.8±0.0, 36°.37N×142°.50E, h7^{km}, mB5.2/29, mb4.7/49, Ms4.8/18, Ms7 4.6/17*

*IDC **22** 13:38:41.4±0.5, 36°.35N×142°.55E, h0^{km}, mb4.3/34,*

mb1 4.4/41, mb1mx4.3/66, mbtmp4.3/41, ML3.7/6, Error ellipse: s-maj=13.0km s-min=11.4km az=121.0
*JMA **22** 13:38:43.3±0.3, 36°.44N×142°.62E, h76^{km}, M3.9*
*MOS **22** 13:38:44.2±0.9, 36°.54N×142°.57E, h25^{km}, mb4.8/30, Error ellipse: s-maj=9.0km s-min=5.7km az=116.0*
*NEIC **22** 13:38:46.1±1.6, 36°.39N±0°.06×142°.5E±0°.1, h32^{km}±2^{km}, mb4.7/22, Error ellipse: s-maj=13.3km s-min=7.8km az=111.0*
ISC 22 13:38:43.8±0.5, **36°.40N**±0°.05×**142°.57E**±0°.05, **h15**^{km}, **n167**, σ**1**^{s}**83**/174, **mb4.6**/69, **MS4.5**/3, **6C-4D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	1.55	244	P	Pn	13 39 10.4	-0.4
ONAJ	Iwakimizuishiy	1.58	297	P	Pn	13 39 10.5	-0.9
JHYU	Hitachinakayam	1.60	269	P	Pn	13 39 10.8	-0.7
JHYU				S	Sn	13 39 31.5	-0.4
JHO	Hitachi	1.62	278	P	Pn	13 39 10.7	-1.2
JFK	Kawauchi	1.67	306	P	Pn	13 39 11.1	-1.4
JFK				S	Sn	13 39 32.4	-1.2
JYT	Yasato	1.92	266	P	Pn	13 39 15.0	-1.0
JMM	Marumori	2.04	316	P	Pn	13 39 15.9	-1.7
JFT	Otama	2.11	303	P	Pn	13 39 18.2	-0.3
BSO1	Boso 1	2.17	217	P	Pn	13 39 18.5	-0.4
BSO3	Boso 3	2.31	227	P	Pn	13 39 20.9	-0.2
JMK	Ichinoseki	2.77	338	P	Pn	13 39 25.9	-1.6
JMK				S	Sn	13 39 58.6	-2.0
JRY	Ryogami san	2.99	264	P	Pn	13 39 30.2	-0.5
JOD2	Odawara 2	3.04	249	P	Pn	13 39 31.6	+0.2
MJA0	Matsu Arr-Jizo	3.48	274	eP	Pn	13 39 38.5	+1.0
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	Matsushiro Arr	3.52	274	Pn	Pn	13 39 38.6	+0.7
	comp=Z,1.4nm,0.3s,baz=113,slow=8.6,SNR=111						
MJAR	Matsushiro Arr	3.52	274		Pn	13 39 38.2	+0.3
MAJO	Matsushiro	3.52	274	P	Pn	13 39 38.9	+1.0
MAJO	Matsushiro	3.52	274		Pn	13 39 38.9	+1.0
MAT	Matsushiro	3.52	274	P	Pn	13 39 38.7	+0.8
MAT				S	Sn	13 40 18.0	-1.3
MJB9	Matsu-Tunnel	3.52	274		Pn	13 39 38.9	+0.9
JHJ	Hachijo jima 2	3.99	216	Pn	Pn	13 39 44.7	+0.3
	comp=Z,43nm,0.3s,baz=88,slow=18,SNR=5.2						
JHJ				Sn	Sn	13 40 26.3	-4.7
	comp=Z,32nm,0.3s,baz=65,slow=23,SNR=1.9						
INU	Inuyama	4.63	259		Pn	13 39 54.1	+1.0
INU				Sn	Sn	13 40 40.2	-6.4
ERM	Erimo	5.63	4	i P	Pn	13 40 04.0	-2.9
ERM	Erimo	5.63	4		Pn	13 40 03.5	-3.4
ERM				Sn	Sn	13 41 10.7	-0.5
NMR	Nemuro--Hokkai	7.38	18	eP	Pn	13 40 25.3	-5.5
JKA	Kamikawa-asahi	7.71	0		Pn	13 40 33.6	-1.9
JKA					Sn	13 41 58.4	-4.1
ASAJ	Asahikawa	7.71	0	Pn	Pn	13 40 33.6	-1.9
	comp=Z,5.9nm,0.3s,baz=222,slow=6.8,SNR=54						
ASAJ				Sn	Sn	13 41 58.4	-4.1
	comp=Z,1.4nm,0.3s,baz=34,slow=18,SNR=2.0						
JNU	Nakatsue	10.16	255	Pn	Pn	13 41 09.0	-0.1
	comp=Z,0.3nm,0.3s,baz=205,slow=14,SNR=4.2						
JNU	Nakatsue	10.16	255		Pn	13 41 12.8	+3.7
YSS	Yuzh-Sakhalins	10.55	1	eP	Pn	13 41 11.6	-2.7
YSS				eS	Sn	13 43 06.7	-5.5
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				smax	smax		
	comp=N,20nm,0.9s						
YSS				smax	smax		
	comp=E,10.0nm,1.2s						
YSS				MLR	MLR		
	comp=Z,2µm,16.0s						
USA0B	Ussuriysk Arra	11.22	317	i P	Pn	13 41 20.5	-3.0
USRK	Ussuriysk Ar.	11.22	317	Pn	Pn	13 41 23.9	+0.4
	baz=121,slow=15,SNR=7.0						
KSRS	Korea Array	11.77	280	Pn	Pn	13 41 32.2	+1.1
	comp=Z,0.1nm,0.3s,baz=94,slow=13,SNR=26						
KSRS	Korea Array	11.77	280	eP	Pn	13 41 34.2	+3.1
TJN	Taejon	12.26	274	ceP	Pn	13 41 38.6	+0.9
TYV	Tymovskoe	14.46	0	eP	Pn	13 42 06.0	-1.8
TYV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CN2	Changchun	15.03	305	eP	Pn	13 42 17.5	+2.0
GRNR	Gornyy	15.03	345	⇓iP	P	13 42 21.3	+0.4
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GRNR				MLR	MLR		
	comp=Z,1µm,16.0s						
KLR	Kul'dur	15.06	332	Pn	Pn	13 42 16.3	+0.3
	comp=Z,0.1nm,0.3s,baz=159,slow=8.6,SNR=2.1						
KLR	Kul'dur	15.06	332	i P	Pn	13 42 15.3	-0.6
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SNY	Shenyang	15.70	296	⇑P	P	13 42 38.6	+10
SNY				S	S	13 45 41.9	+9.1
NJ2	Nanjing	20.07	264	eP	P	13 43 17.3	+0.8
ZEA	Zeya	20.36	333	eP	P	13 43 19.6	+0.1
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
BJI	Beijing	21.02	288	P	P	13 43 25.0	-1.8
BJI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TPUB	Ta-pu	23.01	241	P	P	13 43 48.0	-0.2
MA2	Magadan	23.80	10	P	P	13 43 55.8	+0.1
	comp=Z,9.6nm,0.8s,baz=198,slow=11,SNR=6.9						
MA2	Magadan	23.80	10	ceP	P	13 43 55.2	-0.5
MA2				pmax	pmax		
	comp=Z,33nm,2.5s						
MA2	Magadan	23.80	10	P	P	13 43 55.4	-0.3
WHN	Wuhan	24.20	264	P	P	13 43 59.3	-0.5
WHN				pP	pwP	13 44 07.8	-0.8
WHN				pmax	pmax		
	comp=Z,50nm,1.0s						
HHC	Hu-ho-hao-te	24.56	290	eP	P	13 44 02.4	-0.7
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,250nm,6.5s						
CIT	Chita	25.78	316	eP	P	13 44 13.9	0.0
CIT				e		13 44 24.6	
CIT				e		13 44 50.1	
CIT				pmax	pmax		
	comp=Z,135nm,2.0s						
YAK	Yakutsk	26.90	347	P	P	13 44 23.7	-0.1
	comp=Z,7.6nm,0.6s,baz=337,slow=21,SNR=10						
YAK	Yakutsk	26.90	347	eP	P	13 44 23.6	-0.2
YAK				pmax	pmax		
	comp=Z,24nm,1.0s						
YAK				pmax	pmax		
	comp=N,31nm,1.4s						
YAK				pmax	pmax		
	comp=E,12nm,1.4s						
YAK	Yakutsk	26.90	347	P	P	13 44 22.4	-1.4
YAK				IAmb	IAmb	13 44 39.2	
	comp=Z,27nm,1.0s						
H11N2	WAKE ISLAND Hy	27.03	121	T	T	14 12 29.5	
	baz=313,slow=75,SNR=15						
H11N1	WAKE ISLAND Hy	27.03	121	T	T	14 12 34.5	
	baz=313,slow=75,SNR=15						
H11N3	WAKE ISLAND Hy	27.04	121	T	T	14 12 35.7	
	baz=313,slow=75,SNR=17						
SEY	Seymchan	27.25	10	P	P	13 44 27.7	+0.7
	comp=Z,5.8nm,0.9s,baz=190,slow=6.6,SNR=13						
SEY	Seymchan	27.25	10	i P	P	13 44 27.1	+0.1
XAN	Xi'an	27.51	275	P	P	13 44 29.5	-0.3
XAN				pP	pwP	13 44 38.3	-0.4
XAN				pmax	pmax		
	comp=Z,17nm,1.4s						
H11S1	WAKE ISLAND Hy	27.74	124	T	T	14 13 33.1	
	baz=315,slow=75,SNR=12						
H11S3	WAKE ISLAND Hy	27.74	124	T	T	14 13 37.4	
	baz=315,slow=75,SNR=11						
H11S2	WAKE ISLAND Hy	27.75	124	T	T	14 13 42.3	
	baz=315,slow=75,SNR=9.5						
ULN	Ulaanbaatar	28.48	305	i P	P	13 44 39.0	+0.6
ULN				pmax	pmax		
	comp=Z,19nm,1.2s						
BOD	Bodaibo	28.56	328	eP	P	13 44 41.8	+3.0
BOD				pmax	pmax		
	comp=Z,43nm,1.5s						
SONM	Songino Array	28.91	305	P	P	13 44 42.4	+0.2
	comp=Z,7.6nm,1.0s,baz=104,slow=9.1,SNR=20						
SONM	Songino Array	28.91	305	eP	P	13 44 43.2	+1.0
SONM				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SONM	Songino Array	28.91	305	P	P	13 44 43.5	+1.3
ZAK	Zakamensk	31.39	309	eP	P	13 45 04.1	0.0
ZAK				pmax	pmax		
	comp=Z,12nm,1.5s						
TLY	Talaya	31.45	311	P	P	13 45 05.3	+0.8
	comp=Z,2.0nm,0.3s,baz=262,slow=7.6,SNR=2.1						
TLY	Talaya	31.45	311	i P	P	13 45 05.2	+0.8
TLY				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TLY	Talaya	31.45	311	IAmb	IAmb	13 45 16.6	
	comp=Z,16nm,1.4s						
GYA	Guiyang	32.04	262	⇓iP	P	13 45 10.6	+0.6
GYA				pP	pwP	13 45 21.3	+2.4
GYA				PP	PnPn	13 46 15.6	+0.2
GYA				S	S	13 50 20.0	-1.6
GYA				SS	SnSn	13 52 10.5	-0.6
GYA				pmax	pmax		
	comp=Z,10.0nm,0.4s						
GYA				pmax	pmax		
	comp=Z,170nm,4.6s						
GYA				LR	LR		
	comp=Z,110nm,16.0s						
GYA				LR	LR		
	comp=Z,370nm,16.3s						
GYA				LR	LR		
	comp=Z,2µm,14.7s						
CD2	Chengdu	32.61	272	P	P	13 45 13.1	-1.8
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
GTA	Gaotai	33.64	288	⇓P	P	13 45 24.6	+0.7
GTA				pP	pwP	13 45 35.3	+3.2
GTA				pmax	pmax		
	comp=Z,10.0nm,1.7s						
KMI	Kunming	35.79	263	P	P	13 45 44.5	+1.7
KMI				pP	pwP	13 45 53.8	+2.1
KMI				pmax	pmax		
	comp=Z,11nm,0.9s						
DGZ	Jazzator, Alta	41.52	307	i P	P	13 46 31.0	+0.5
ANM	Nome	41.66	31	P	P	13 46 31.6	+0.4
ANM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ANM	Nome	41.66	31	P	P	13 46 31.6	+0.4
WMQ	Urumqi	41.95	298	eP	P	13 46 36.4	+2.4
WMQ				pP	sP	13 46 38.0	-0.2
WMQ				S	S	13 52 44.3	-7.8
WMQ				pmax	pmax		
	comp=Z,11nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,510nm,11.6s						
WMQ				LR	LR		
	comp=Z,640nm,20.9s						
WMQ				LR	LR		
	comp=Z,880nm,26.1s						
WMQ				LR	LR		
	comp=Z,800nm,29.0s						
CMAR	Chiang Mai Arr	42.24	257	P	P	13 46 36.0	-0.6
	comp=Z,0.4nm,0.3s,baz=51,slow=7.2,SNR=5.5						
CMAR	Chiang Mai Arr	42.24	257	eP	P	13 46 36.7	+0.1
ZAA0	Zalesovo Array	43.03	313	P	P	13 46 41.3	-1.2
ZAA0				IAmb	IAmb	13 46 54.0	
	comp=Z,10nm,1.1s						
ZALV	Zalesovo Beam	43.03	313	P	P	13 46 42.7	+0.2
	comp=Z,2.9nm,0.6s,baz=96,slow=7.1,SNR=13						
ZALV				PcP	PcP	13 48 32.5	0.0
	comp=Z,2.1nm,0.6s,baz=93,slow=2.6,SNR=3.7						
ZALV	Zalesovo Beam	43.03	313	eP	P	13 46 43.1	+0.6
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZALV	Zalesovo Beam	43.03	313	P	P	13 46 40.8	-1.7
NRIK	Noril'sk	44.23	335	P	P	13 46 52.3	+0.3
	comp=Z,0.9nm,0.4s,baz=43,slow=0.2,SNR=3.9						
NRIK	Noril'sk	44.23	335	i P	P	13 46 52.6	+0.6
NRIK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
MK31	Makanchi Array	45.24	303	P	P	13 47 00.8	+0.4
MK31				pmax	pmax		
	comp=Z,17nm,1.1s						
MK31	Makanchi Array	45.24	303	P	P	13 47 00.8	+0.4
MK31				IAmb	IAmb	13 47 15.0	
	comp=Z,17nm,1.1s						
MKAR	Makanchi Array	45.24	303	P	P	13 47 00.8	+0.3
	comp=Z,6.4nm,0.9s,baz=87,slow=10.0,SNR=19						
MKAR	Makanchi Array	45.24	303	eP	P	13 47 02.5	+2.1
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PMG	Port Moresby	45.76	174	P	P	13 47 04.4	-0.3
	comp=Z,14nm,1.1s,baz=294,slow=17						
PMG	Port Moresby	45.76	174	IAmb	IAmb	13 47 18.0	
	comp=Z,17nm,1.1s						
KAPI	Kappang	46.40	212	P	P	13 47 08.0	-1.8
	comp=Z,3.8nm,0.3s,baz=30,slow=5.9,SNR=4.7						
KURK	Kurchatov	47.05	309	ceP	P	13 47 14.5	-0.1
KURK				pmax	pmax		
	comp=Z,26nm,1.7s						
KURK	Kurchatov	47.05	309	P	P	13 47 14.5	-0.1
KURBB	Kurchatov Arra	47.12	309	P	P	13 47 14.7	-0.5
	comp=Z,6.2nm,0.9s,baz=84,slow=7.9,SNR=44						
MLY	Manley	47.90	32	P	P	13 47 21.9	+0.8
MLY				IAmb	IAmb	13 47 23.7	
	comp=Z,5.9nm,0.8s						
COLA	College	49.12	32	P	P	13 47 32.5	+2.2
COLA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HDA	Harding Lake	49.52	33	P	P	13 47 31.9	-1.5
IL31		49.54	32	P	P	13 47 33.2	-0.3
IL31				IAmb	IAmb	13 47 36.3	
	comp=Z,13nm,1.4s						
ILAR	Eielson Array	49.54	32	P	P	13 47 33.4	-0.2
	comp=Z,4.8nm,0.8s,baz=265,slow=6.4,SNR=44						
ILAR	Eielson Array	49.54	32	P	P	13 47 33.2	-0.4
BMAR	Burnt Mountain	50.44	29	P	P	13 47 42.1	+1.7
SCRK	Sand Creek	50.83	33	P	P	13 47 43.0	-0.5
KSH	Kashi	51.51	295	P	P	13 47 53.8	+4.8
KSH				pP	pwP	13 48 03.3	+4.2
KSH				PcS	PcS	13 53 03.5	+2.5
KSH				S	S	13 55 12.3	+3.4
KSH				pmax	pmax		
	comp=Z,19nm,0.9s						
KSH				pmax	pmax		
	comp=Z,700nm,7.1s						
KSH				LR	LR		
	comp=Z,77nm,10.1s						
KSH				LR	LR		
	comp=Z,320nm,12.2s						
KSH				LR	LR		
	comp=Z,570nm,12.6s						
AAK	Ala-Archa	51.61	299	P	P	13 47 48.7	-1.0
	comp=Z,0.9nm,0.6s,baz=191,slow=6.2,SNR=3.6						
AAK	Ala-Archa	51.61	299	ceP	P	13 47 50.8	+1.1
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BVAR	Borovoye Array	51.69	313	P	P	13 47 49.1	-0.8
	comp=Z,1.2nm,0.8s,baz=79,slow=7.9,SNR=6.4						
BRVK	Borovoye	51.74	313	ceP	P	13 47 50.8	+0.5
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
EPYK	Eagle Plains	53.62	30	P	P	13 48 05.3	+1.3
INK	Inuvik	54.53	27	P	P	13 48 10.8	+0.1
	comp=Z,3.2nm,0.7s,baz=318,slow=7.7,SNR=10						
INK	Inuvik	54.53	27	IAmb	IAmb	13 48 12.8	
	comp=Z,4.1nm,0.8s						
NIL	Nilore	55.70	289	P	P	13 48 20.6	+0.9
NIL				pmax	pmax		
	comp=Z,11nm,1.1s						
SVE	Sverdlovsk	56.24	319	eP	P	13 48 23.6	+0.5
SVE				pmax	pmax		
	comp=Z,22nm,1.3s						
WRAB	Tennant Creek	56.56	189	P	P	13 48 29.3	+3.5
WRAB				pmax	pmax		
	comp=Z,13nm,1.3s						
WB2	Warramunga Arr	56.57	189	P	P	13 48 26.6	+0.7
WRA	Warramunga Arr	56.57	189	P	P	13 48 24.6	-1.2
	comp=Z,3.8nm,0.9s,baz=7.7,slow=7.1,SNR=16						
WRA	Warramunga Arr	56.57	189	P	P	13 48 24.4	-1.5
ARU	Arti	57.45	319	P	P	13 48 31.8	+0.1
	comp=Z,2.7nm,0.8s,baz=27,slow=3.9,SNR=9.6						
ARU	Arti	57.45	319	d iP	P	13 48 32.1	+0.4
ARU						13 49 25.0	
ARU						13 50 38.8	
ARU				S	S	13 56 31.2	+3.1
ARU				SS	SS	14 00 20.6	+3.4
ARU				pmax	pmax		
	comp=Z,28nm,1.8s						
KBL	Kabul	58.51	292	P	P	13 48 39.7	-0.1
KBL				pmax	pmax		
	comp=Z,7.0nm,1.3s						
DLBC	Dease Lake	58.55	38	P	P	13 48 40.9	+1.3
	comp=Z,1.1nm,0.5s,baz=47,slow=0.8,SNR=11						
DLBC	Dease Lake	58.55	38	IAmb	IAmb	13 48 41.7	
	comp=Z,8.4nm,1.3s						
ABKAR	Akbulak array	59.06	311	P	P	13 48 42.6	-0.4
ABKAR	Akbulak array	59.06	311	P	P	13 48 42.5	-0.6
ABKAR				IAmb	IAmb	13 48 54.3	
	comp=Z,5.9nm,0.9s						
AKTO	Aktyubinsk	59.79	313	P	P	13 48 47.8	-0.3
	comp=Z,2.5nm,0.8s,baz=68,slow=12,SNR=7.5						
ASAR	Alice Springs	60.30	189	P	P	13 48 51.8	-0.1
	comp=Z,1.3nm,0.8s,baz=16,slow=6.1,SNR=14						
RES	Resolute Bay	62.98	15	P	P	13 49 09.3	0.0
RES				pmax	pmax		
	comp=Z,9.0nm,1.6s						
TMCR	Tamitsa	63.75	332	eP	P	13 49 13.3	-1.2
TMCR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YKA	Yellowknife Ar	63.89	30	P	P	13 49 15.3	-0.2
	comp=Z,2.4nm,0.7s,baz=299,slow=6.2,SNR=25						
KLMR	Klimovskoe	64.79	328	eP	P	13 49 17.3	-4.1
KLMR				pmax	pmax		
	comp=Z,26nm,1.6s						
KLMR	Klimovskoe	64.79	328	eP	P	13 49 17.3	-4.1
KLMR				AMP		13 49 22.4	
	comp=Z,26nm,1.6s						
GEYT	Alibeck	64.95	300	P	P	13 49 22.6	-0.3
	comp=Z,2.3nm,0.7s,baz=348,slow=2.1,SNR=4.4						
GEYT	Alibeck	64.95	300	IAmb	IAmb	13 49 26.0	
	comp=Z,4.2nm,1.2s						
DAG	Danmarks Havn	66.48	355	P	P	13 49 31.9	-0.2
DAG				pmax	pmax		
	comp=Z,7.0nm,1.4s						
OBN	Obninsk	69.16	324	eP	P	13 49 49.5	+0.2
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
FINES	FINESS Array B	69.81	333	P	P	13 49 54.0	+0.8
	comp=Z,2.6nm,0.7s,baz=29,slow=4.4,SNR=5.0						
FINES	FINESS Array B	69.81	333	eP	P	13 49 54.3	+1.1
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KBZ	Khabaz	72.02	311	P	P	13 50 08.0	+1.1
	comp=Z,4.5nm,0.9s,baz=29,slow=7.6,SNR=5.3						
KBZ	Khabaz	72.02	311	i P	P	13 50 07.8	+0.9
KBZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV	Kislovodsk	72.02	312	eP	P	13 50 08.1	+1.0
KIV				pmax	pmax		
	comp=Z,40nm,1.0s						
SHA1	Shidzhatmaz	72.16	311	i P	P	13 50 08.6	+0.5
FFC	Flin Flon	73.73	33	P	P	13 50 17.6	+0.7
FFC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NVAR	Mina Array Bea	74.62	54	P	P	13 50 24.1	+1.4
	comp=Z,2.0nm,0.7s,baz=292,slow=5.7,SNR=18						
NB2	NORSAR Subarra	75.13	338	P	P	13 50 25.2	+0.2
	comp=Z,20nm,1.7s,baz=39,slow=5.9						
NOA	NORSAR Array B	75.13	338	P	P	13 50 25.6	+0.6
	comp=Z,1.7nm,0.8s,baz=38,slow=5.7,SNR=3.8						
AKASG	Malin Array Be	75.36	323	P	P	13 50 26.3	-0.1
	comp=Z,2.0nm,0.7s,baz=45,slow=6.2,SNR=9.7						
AKASG	Malin Array Be	75.36	323	eP	P	13 50 26.3	-0.1
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKASG	Malin Array Be	75.36	323	IAmb	IAmb	13 50 27.5	
	comp=Z,4.2nm,1.3s						
AKBB	Malin Array Si	75.36	323	i P	P	13 50 27.4	+0.9
FRB	Frobisher Bay	77.18	14	P	P	13 50 36.5	0.0
	comp=Z,3.9nm,0.7s,baz=323,slow=6.6,SNR=10						
PDAR	Pinedale Array	77.45	46	P	P	13 50 38.9	+0.1
	comp=Z,0.6nm,0.7s,baz=254,slow=1.4,SNR=5.4						
BRTR	Keskin Array B	79.97	312	P	P	13 50 53.0	+0.4
	comp=Z,1.7nm,0.9s,baz=103,slow=2.8,SNR=6.1						
VYHS	Vyhne	81.77	326	eP	P	13 51 02.1	+0.2
VYHS	Vyhne	81.77	326	eP	P	13 51 02.0	+0.2
CLL	Collm	82.11	331	eP	P	13 51 04.0	+0.5
	comp=Z,5.0nm,0.8s						
CLL	Collm	82.11	331	eP	P	13 51 04.0	+0.5
CLL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MMAI	Mount Meron Ar	83.09	306	P	P	13 51 10.0	+0.9
	comp=Z,3.3nm,0.9s,baz=44,slow=6.4,SNR=3.9						
KHC	Kasperske Hory	83.57	329	eP	P	13 51 11.8	+0.6
KHC	Kasperske Hory	83.57	329	eP	P	13 51 02.9	-8.3
KHC				e	P	13 51 11.8	+0.6
GERES	GERESS Array B	83.74	329	P	P	13 51 12.3	+0.1
	comp=Z,0.7nm,0.7s,baz=23,slow=4.4,SNR=4.8						
GERES	GERESS Array B	83.74	329	eP	P	13 51 12.8	+0.6
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KNT	Kendrikon	85.08	319	P	P	13 51 22.1	+3.1
TXAR	Lajitas Array	89.77	53	P	P	13 51 42.4	+0.4
	comp=Z,1.1nm,0.7s,baz=300,slow=3.2,SNR=14						
TXAR	Lajitas Array	89.77	53	P	P	13 51 41.6	-0.4

IDC 22 13:40:53.8±2.0, **19°.76S**×**70°.85W**, **h0**^{km}, **mb3.7**/2, **mb1 3.9**/4, **mb1mx3.6**/31, **mbtmp3.8**/4, **ML3.9**/2, **Error ellipse: s-maj=55.2km s-min=19.7km az=64.0, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	3.37	148	Pn	Pn	13 41 47.2	-0.8
	9.7nm,0.3s,baz=311,slow=10,SNR=29						
LVC				Sn	Sn	13 42 29.4	+0.5
	20nm,0.3s,baz=133,slow=22,SNR=8.0						
LVC				Lg	Lg	13 42 42.3	
	33nm,0.3s,baz=182,slow=22,SNR=7.8						
LPAZ	La Paz	4.31	37	Pn	Pn	13 42 05.5	+4.3
	1.3nm,0.3s,baz=221,slow=8.4,SNR=15						
SIV	San Ignacio	10.03	70	Pn	Pn	13 43 21.4	+2.1
	1.0nm,0.3s,baz=248,slow=10,SNR=9.4						
TORD	Torodi Ar. Bea	78.50	71	P	P	13 52 56.1	-1.4
	1.1nm,0.6s,baz=231,slow=6.0,SNR=5.1						
YKA	Yellowknife Ar	88.95	341	P	P	13 53 50.4	+0.5
	0.2nm,0.7s,baz=125,slow=6.4,SNR=2.7						
MKAR	Makanchi Array	145.23	33	PKPbc	PKPbc	14 00 33.2	0.0
	0.4nm,0.6s,baz=308,slow=4.0,SNR=5.2						

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*IDC **22** 13:44:10.9±0.9, 19°.66S×70°.70W, h0^{km}, mb3.9/8, mb1 4.2/10, mb1mx4.1/29, mbtmp4.1/10, ML4.4/2, Error ellipse: s-maj=26.9km s-min=15.1km az=60.0*
*SJA **22** 13:44:11.8±1.4, 19°.80S×70°.87W, h26^{km}±5^{km}, ML4.2, MW4.2*
*NEIC **22** 13:44:12.1±2.9, 19°.79S±0°.02×70°.92W±0°.04, h10^{km}±1^{km}, mb4.9/16, ML4.5(GUC), Error ellipse: s-maj=5.9km s-min=3.3km az=256.0*
*GUC **22** 13:44:14.2±0.6, 19°.79S×70°.83W, h41^{km}±2^{km}, ML4.5*
ISC 22 13:44:13.8±1.2, **19°.76S**±0°.03×**70°.84W**±0°.05, **h22**^{km}±9^{km}, **n76**, σ**1**^{s}**26**/90, **mb4.6**/11, **8C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	0.69	76	⇓eP	Pn	13 44 27.1	-1.2
PSGC				i S	Sb	13 44 35.3	-1.2
PSGCX	Pisagua	0.69	76		Pn	13 44 27.3	-1.1
PSGCX					Sn	13 44 36.7	-1.9
PSGCX	Pisagua	0.69	76	i P	Pn	13 44 27.2	-1.2
PSGCX				eS	Sn	13 44 37.4	-1.2
PSGCX				IAML		13 44 39.6	
	comp=Z,5µm,0.3s						
TA01	Diego Aracena	1.01	142	i P	Pn	13 44 31.9	-0.8
TA01				i S	Sn	13 44 44.7	-1.5
TA01				IAML		13 44 48.5	
	comp=E,18µm,0.3s						
PB11	IPOC Station P	1.11	90	⇓iP	Pb	13 44 33.9	-0.6
PB11				i S	Sb	13 44 48.7	+0.1
PB11				IAML		13 44 54.2	
	comp=N,15µm,0.3s						
PB11	IPOC Station P	1.11	90	Pn	Pb	13 44 34.3	-0.2
PB11	IPOC Station P	1.11	90	i P	Pb	13 44 34.0	-0.4
PB11				eS	Sb	13 44 49.6	+1.0
PB11				IAML		13 44 52.1	
	comp=Z,9µm,0.7s						
PATCX	Punta Patache	1.23	149	⇑iP	Pn	13 44 35.3	-0.5
PATCX				i S	Sn	13 44 51.0	-0.9
PATCX				IAML		13 44 58.3	
	comp=E,13µm,0.4s						
PATCX	Punta Patache	1.23	149	Pn	Pn	13 44 35.7	-0.2
PATCX				Sn	Sb	13 44 53.2	+1.1
PATCX	Punta Patache	1.23	149	i P	Pn	13 44 35.4	-0.5

PATCX				eS	Sb	13 44 52.8	+0.8
PATCX				IAML		13 44 56.2	
	comp=Z,8µm,0.4s						
PB12	IPOC Station P	1.24	23	⇑iP	Pb	13 44 36.3	-0.3
PB12				iS	Sb	13 44 53.2	+1.0
PB12	IPOC Station P	1.24	23	Pn	Pb	13 44 36.5	-0.1
PB12				Sn	Sb	13 44 53.9	+1.7
PB12	IPOC Station P	1.24	23	iP	Pb	13 44 36.3	-0.3
PB12				eS	Sb	13 44 53.6	+1.5
PB12				IAML		13 45 00.6	
	comp=Z,4µm,0.4s						
AP01	Chacalluta	1.46	19	⇑iP	Pb	13 44 39.3	-1.0
AP01				iS	Sb	13 44 58.7	+0.2
AP01				IAML		13 45 02.0	
	comp=E,25µm,0.6s						
GO01	Chusmiza	1.55	87	⇓iP	Pb	13 44 41.6	-0.6
GO01				iS	Sb	13 45 02.4	+0.9
GO01				IAML		13 45 05.6	
	comp=N,20µm,0.3s						
GO01	Chusmiza	1.55	87	Pn	Pb	13 44 41.7	-0.4
PB08	IPOC Station P	1.63	104	⇑iP	Pb	13 44 42.3	-1.1
PB08				iS	Sb	13 45 03.9	+0.2
PB08	IPOC Station P	1.63	104	iP	Pb	13 44 42.4	-1.1
PB08				eS	Sb	13 45 03.9	+0.2
PB08				IAML		13 45 06.8	
	comp=Z,4µm,0.3s						
PB02	IPOC Station P	1.78	151	⇑iP	Pn	13 44 43.2	-0.2
PB02				iS	Sn	13 45 04.9	-0.5
PB01	IPOC Station P	1.80	135	⇑iP	Pn	13 44 44.0	+0.4
PB01				iS	Sn	13 45 06.3	+0.5
PB01				IAML		13 45 13.5	
	comp=E,5µm,0.5s						
PB01	IPOC Station P	1.80	135	Pn	Pn	13 44 44.4	+0.8
PB01	IPOC Station P	1.80	135	iP	Pn	13 44 44.0	+0.4
PB01				eS	Sn	13 45 06.7	+0.9
PB01				IAML		13 45 13.8	
	comp=Z,3µm,0.3s						
PB16	IPOC Station P	1.90	42	⇑iP	Pb	13 44 46.5	-1.6
PB16				iS	Sb	13 45 12.6	+1.0
PB16				IAML		13 45 17.1	
	comp=N,5µm,0.3s						
PB16	IPOC Station P	1.90	42	Pn	Pb	13 44 48.0	-0.1
PB07	IPOC Station P	2.15	156	iP	Pn	13 44 47.9	-0.6
PB07				iS	Sb	13 45 20.2	+1.7
PB07				IAML		13 45 26.4	
	comp=E,4µm,0.7s						
PB07	IPOC Station P	2.15	156	Pn	Pn	13 44 49.5	+1.0
PB09	IPOC Station P	2.52	144	Pn	Pn	13 44 55.2	+1.7
PB09	IPOC Station P	2.52	144	iP	Pn	13 44 54.6	+1.1
PB09				IAML		13 45 39.5	
	comp=Z,4µm,0.5s						
PB04	IPOC Station P	2.64	166	Pn	Pn	13 44 55.3	0.0
PB04	IPOC Station P	2.64	166	iP	Pn	13 44 54.0	-1.3
PB05	IPOC Station P	3.13	169	iP	Pn	13 45 00.5	-1.4
PB05				IAML		13 45 56.3	
	comp=Z,961nm,0.8s						
PB06	IPOC Station P	3.16	158	iP	Pn	13 45 01.4	-1.0
PB06				IAML		13 46 01.4	
	comp=Z,1µm,0.6s						
LVC	Limon Verde	3.36	148	Pn	Pn	13 45 06.8	+1.5
	comp=Z,36nm,0.3s,baz=301,slow=9.6,SNR=3.2						
LVC				Sn	Sn	13 45 46.0	+1.3
	comp=Z,81nm,0.3s,baz=51,slow=23,SNR=5.6						
LVC				Lg	Lg	13 45 56.0	
	comp=Z,186nm,0.3s,baz=217,slow=15,SNR=9.2						
LVC	Limon Verde	3.36	148	iP	Pn	13 45 07.2	+1.9
LVC				IAML		13 46 07.8	
	comp=Z,492nm,1.1s						
PB15	IPOC Station P	3.66	160	Pn	Pn	13 45 09.4	+0.1
PB15	IPOC Station P	3.66	160	iP	Pn	13 45 09.4	+0.1
PB10	IPOC Station P	3.74	176	Pn	Pn	13 45 08.4	-1.9
PB10	IPOC Station P	3.74	176	iP	Pn	13 45 08.1	-2.2
PB10				IAML		13 46 18.9	
	comp=Z,304nm,0.6s						
LPAZ	La Paz	4.31	37	Pn	Pb	13 45 23.0	-6.3
	comp=Z,3.9nm,0.3s,baz=231,slow=3.5,SNR=16						
PB14	IPOC Station P	4.86	175	Pn	Pn	13 45 23.4	-2.5
PB14	IPOC Station P	4.86	175	iP	Pn	13 45 23.6	-2.3
PB14				IAML		13 46 56.0	
	comp=Z,220nm,1.0s						
YJA	Yavi	5.53	117	iP	Pn	13 45 41.4	+6.3
YJA				IAML		13 47 02.1	
	comp=Z,26nm,3.4s						
ASTB	Santa Barbara	7.25	126	iP	Pn	13 46 01.3	+2.7
ASTB				IAML		13 47 58.5	
	comp=Z,10nm,2.4s						
SIV	San Ignacio	10.03	70	Pn	Pn	13 46 35.7	-0.9
	comp=Z,3.4nm,0.3s,baz=264,slow=10,SNR=24						
SIV				Sn	Sn	13 48 29.9	+1.4
	baz=283,slow=18,SNR=1.1						
PLCA	Paso Flores	20.91	179	P	Pn	13 48 57.9	+0.5
	comp=Z,4.4nm,0.9s,baz=18,slow=9.4,SNR=9.9						
PLCA	Paso Flores	20.91	179	P	P	13 48 54.0	-0.8
PTGA	Pitinga	21.70	31	P	P	13 49 01.9	-1.6
BDFB	Brasilia	22.12	83	P	P	13 49 08.3	+0.2
	comp=Z,5.1nm,0.5s,baz=253,slow=7.1,SNR=5.4						
BDFB	Brasilia	22.12	83	P	P	13 49 06.4	-1.7
BDFB				IAmb	IAmb	13 49 28.7	
	comp=Z,58nm,1.9s						
RUSC	La Rusia	25.59	355	P	P	13 49 42.9	+0.8
PAYG	Puerto Ayora	26.88	313	P	P	13 49 54.6	+1.4
PAYG				IAmb	IAmb	13 50 18.0	
	comp=Z,30nm,0.9s						
URIC	Uribia, Colomb	31.29	358	P	P	13 50 33.4	+1.1
GO09	Cerro Castillo	31.47	182	P	P	13 50 34.8	+1.1
ESPN	Las Esperanzas	34.41	336	P	P	13 51 01.1	+1.4
ESPN				IAmb	IAmb	13 51 54.3	
	comp=Z,18nm,0.9s						
PDPR	Patillas Dam,	37.84	7	P	P	13 51 28.3	-0.7
PDPR				IAmb	IAmb	13 51 36.1	
	comp=Z,15nm,0.8s						
PCDR	Punta Cana, DR	38.11	4	P	P	13 51 29.7	-1.5
TXAR	Lajitas Array	58.18	326	P	P	13 54 07.6	+1.3
	comp=Z,0.2nm,0.5s,baz=146,slow=7.7,SNR=2.3						
LONY	Lake Ozonia	64.16	357	P	P	13 54 46.2	-0.3
QSPA	South Pole Qui	70.42	180	P	P	13 55 25.4	-0.8
QSPA				IAmb	IAmb	13 55 57.6	
	comp=Z,14nm,1.6s						
PDAR	Pinedale Array	71.72	331	P	P	13 55 35.8	+1.5
	comp=Z,0.1nm,0.4s,baz=120,slow=7.3,SNR=2.4						
ULM	Lac du Bonnet	73.13	344	P	P	13 55 41.4	-0.9
	comp=Z,1.1nm,0.5s,baz=156,slow=2.3,SNR=3.6						
ULM	Lac du Bonnet	73.13	344	IAmb	IAmb	13 57 30.3	
	comp=Z,13nm,1.8s						
SCHQ	Schefferville	74.37	2	P	P	13 55 49.5	-0.1
	comp=Z,1.5nm,0.6s,baz=227,slow=6.8,SNR=2.1						
SCHQ	Schefferville	74.37	2	IAmb	IAmb	13 56 17.9	
	comp=Z,34nm,1.9s						
TORD	Torodi Ar. Bea	78.50	71	P	P	13 56 12.5	-1.3
	comp=Z,3.4nm,0.6s,baz=254,slow=4.8,SNR=15						
SYO	Syowa Base	78.75	160	⇑epP	P	13 56 14.6	+0.4
MAW	Mawson	86.50	164	P	P	13 56 53.8	-0.8
YKA	Yellowknife Ar	88.96	341	P	P	13 57 06.1	-0.1
	comp=Z,0.8nm,0.8s,baz=134,slow=5.4,SNR=8.6						
H11S2	WAKE ISLAND Hy	125.85	279	T	T	16 22 33.0	
	baz=101,slow=75,SNR=73						
H11S1	WAKE ISLAND Hy	125.86	279	T	T	16 22 33.8	
	baz=101,slow=75,SNR=50						
H11S3	WAKE ISLAND Hy	125.86	279	T	T	16 22 34.6	
	baz=101,slow=75,SNR=45						
H11N3	WAKE ISLAND Hy	125.89	280	T	T	16 22 33.3	
	baz=101,slow=74,SNR=18						
H11N2	WAKE ISLAND Hy	125.90	280	T	T	16 22 34.8	
	baz=101,slow=74,SNR=18						
H11N1	WAKE ISLAND Hy	125.91	280	T	T	16 22 43.4	
	baz=101,slow=74,SNR=3.1						
MKAR	Makanchi Array	145.23	33	PKPbc	PKPdf	14 03 49.6	-0.2
	comp=Z,1.6nm,0.7s,baz=328,slow=4.1,SNR=15						
KSH	Kashi	145.35	48	PKPbc	PKiKP	14 03 51.3	-3.0
KSH				PP	PP	14 07 14.3	+4.3
KSH				PKS	PKSdf	14 07 25.3	-0.6

NEIC ***22*** *13:57:04.8±2.0, 19°.78S±0°.04×70°.97W±0°.03, h10^{km}±1^{km}, mb4.0/3, ML4.1(GUC), Error ellipse: s-maj=7.2km s-min=4.5km az=359.0*

IDC ***22*** *13:57:04.2±1.0, 19°.61S×70°.74W, h0^{km}, mb4.0/6, mb1 4.2/8, mb1mx4.0/25, mbtmp4.1/8, ML4.0/2, Error ellipse: s-maj=28.5km s-min=16.3km az=67.0*

GUC ***22*** *13:57:06.8±0.7, 19°.74S×70°.90W, h40^{km}±1^{km}, ML4.0*

ISC 22 13:57:04.3±1.6**, 19°.76S**±0°.03×**70°.92W**±0°.05**, h6**^{km}±10^{km}**, n41,** σ**1^{s}.21**/51**, mb4.2**/5**, 8C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.77	78	⇓iP	Pn	13 57 20.8	-0.9
PSGC				eS	Sb	13 57 31.4	+0.6
PSGC				IAML		13 57 33.5	
	comp=E,9µm,0.4s						
PSGCX	Pisagua	0.77	78		Pb	13 57 20.3	+0.2
PSGCX					Sb	13 57 31.1	+0.3
TA01	Diego Aracena	1.06	139	⇑iP	Pn	13 57 26.3	+0.6
TA01				eS	Sn	13 57 40.4	-0.4
TA01				IAML		13 57 44.7	
	comp=E,7µm,0.4s						
PB11	IPOC Station P	1.19	90	⇓iP	Pn	13 57 27.9	+0.3
PB11				eS	Sn	13 57 44.5	+0.3
PB11				IAML		13 57 46.9	
	comp=N,10µm,0.3s						
PB11	IPOC Station P	1.19	90		Pn	13 57 28.0	+0.3
PB11					Sn	13 57 43.9	-0.2
PB12	IPOC Station P	1.27	26	⇑iP	Pg	13 57 28.8	+0.1
PB12				eS	Sn	13 57 45.6	-0.5
PB12				IAML		13 57 48.1	
	comp=N,4µm,0.6s						
PB12	IPOC Station P	1.27	26		Pg	13 57 28.8	+0.1
PATCX	Punta Patache	1.28	146	⇑iP	Pg	13 57 29.4	+0.6
PATCX				eS	Sn	13 57 46.8	+0.5
PATCX				IAML		13 57 53.0	
	comp=N,3µm,0.3s						
PATCX	Punta Patache	1.28	146		Pg	13 57 29.5	+0.6
AP01	Chacalluta	1.48	22	⇓iP	Pb	13 57 32.1	-0.2
AP01				eS	Sb	13 57 51.1	-0.2
GO01	Chusmiza	1.62	87	⇑iP	Pb	13 57 34.9	-0.1
GO01				iS	Sg	13 57 56.4	-0.3
GO01	Chusmiza	1.62	87		Pg	13 57 35.3	-0.3
PB08	IPOC Station P	1.70	103	⇑iP	Pb	13 57 36.1	-0.1
PB08				eS	Sg	13 57 58.5	-0.6
PB08				IAML		13 58 09.8	
	comp=E,2µm,0.3s						
PB02	IPOC Station P	1.82	149	⇑iP	Pn	13 57 37.3	+1.0
PB02				eS	Sn	13 58 00.7	+0.8
PB02				IAML		13 58 10.5	
	comp=E,5µm,0.5s						
PB01	IPOC Station P	1.85	134	⇑iP	Pb	13 57 38.0	-0.7
PB01				eS	Sn	13 58 00.4	-0.1
PB01				IAML		13 58 04.8	
	comp=N,2µm,0.3s						
PB01	IPOC Station P	1.85	134		Pb	13 57 38.0	-0.7
PB16	IPOC Station P	1.94	44	⇑iP	Pb	13 57 39.6	-0.8
PB16				iS	Sb	13 58 04.8	-0.4
PB16				IAML		13 58 10.7	
	comp=E,2µm,0.5s						
PB16	IPOC Station P	1.94	44		Pb	13 57 39.7	-0.8
PB07	IPOC Station P	2.18	154	Pn	Pn	13 57 42.3	+1.0
PB09	IPOC Station P	2.56	143		Pn	13 57 48.6	+2.0
PB04	IPOC Station P	2.66	165		Pn	13 57 48.1	+0.2
PB06	IPOC Station P	3.19	157	IAML		13 58 54.8	
	comp=E,560nm,0.4s						
LVC	Limon Verde	3.40	147	Pn	Pn	13 58 00.7	+2.5
	comp=E,11nm,0.3s,baz=344,slow=8.7,SNR=9.0						
LVC				Sn	Sn	13 58 40.5	+1.4
	comp=E,41nm,0.3s,baz=118,slow=14,SNR=5.7						
LVC				Lg	Lg	13 58 52.5	
	comp=E,34nm,0.3s,baz=205,slow=18,SNR=7.0						
LVC	Limon Verde	3.40	147		Pn	13 58 00.3	+2.0
PB15	IPOC Station P	3.69	159	Pn	Pn	13 58 02.5	+0.5
PB10	IPOC Station P	3.75	175		Pn	13 58 02.0	-0.7
LPAZ	La Paz	4.35	38	Pn	Pn	13 58 16.0	+4.4
	comp=E,5.0nm,0.3s,baz=190,slow=4.1,SNR=26						
LPAZ	La Paz	4.35	38		Pn	13 58 15.5	+3.9
PB14	IPOC Station P	4.87	174	Pn	Pn	13 58 17.1	-1.3
GO02	Mina Guanaco	5.52	167	Pn	Pn	13 58 27.1	-0.2
SIV	San Ignacio	10.09	70	Pn	Pn	13 59 29.5	-0.4
	comp=E,1.6nm,0.3s,baz=270,slow=10,SNR=16						
PLCA	Paso Flores	20.91	179	P	Pn	14 01 51.1	+1.0
	comp=E,1.1nm,0.6s,baz=8.4,slow=16,SNR=4.2						
PLCA	Paso Flores	20.91	179	IAmb	IAmb	14 02 08.2	
	comp=Z,13nm,1.4s						
PTGA	Pitinga	21.74	31	P	P	14 01 55.2	-1.4
	comp=Z,13nm,0.3s,baz=132,slow=24,SNR=31						
BDFB	Brasilia	22.19	83	P	P	14 02 01.0	-0.6
	comp=Z,1.5nm,0.3s,baz=234,slow=8.7,SNR=3.8						
BDFB	Brasilia	22.19	83	IAmb	IAmb	14 02 03.0	
	comp=Z,7.8nm,1.3s						
NVAR	Mina Array Bea	72.97	323	P	P	14 08 35.8	+0.7
	comp=Z,0.7nm,0.8s,baz=152,slow=6.7,SNR=3.8						
TORD	Torodi Ar. Bea	78.57	72	P	P	14 09 05.9	-1.4
	comp=Z,1.0nm,0.4s,baz=252,slow=5.2,SNR=11						
YKA	Yellowknife Ar	88.94	341	P	P	14 09 59.7	+0.4
	comp=Z,1.6nm,0.9s,baz=140,slow=5.3,SNR=16						
MKAR	Makanchi Array	145.27	33	PKPbc	PKPdf	14 16 43.0	-0.1
	comp=Z,1.0nm,0.8s,baz=326,slow=4.2,SNR=8.2						
SONM	Songino Array	151.91	4	PKPbc	PKPbc	14 17 00.1	-0.3
	comp=Z,0.4nm,0.4s,baz=30,slow=3.8,SNR=2.0						

IDC ***22*** *13:57:13.7±0.6, 9°.76S×123°.76E, h0^{km}, mb4.2/14, mb1 4.3/16, mb1mx4.1/42, mbtmp4.3/16, ML4.4/2, MS4.4/1, Ms1 4.4/1, ms1mx3.6/52, Error ellipse: s-maj=29.3km s-min=13.2km az=76.0*

NEIC ***22*** *13:57:21.3±2.0, 9°.92S±0°.06×123°.92E±0°.06, h62^{km}±5^{km}, mb4.5/14, Error ellipse: s-maj=9.6km s-min=6.9km az=46.0*

DJA ***22*** *13:57:21.9±0.2, 10°S±2°×12°4E±°, h45^{km}±4^{km}, M4.8/27, mb4.7/27, mB5.1/7, MLv4.7/13, Mw(mB)4.4/7, Mwp6.2/4*

ISC 22 13:57:19.8±0.4**, 9°.96S**±0°.04×**123°.87E**±0°.05**, h36**^{km}**, n99,** σ**2^{s}.26**/106**, mb4.3**/19**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.44	62	P	Pn	13 57 32.6	+3.0
SOEI	Soe	0.44	62		Pn	13 57 32.5	+3.0
SOEI					Sn	13 57 40.0	+3.5
MMRI	Maumere	2.08	309	P	Pn	13 57 54.4	+2.2
MMRI				S	Sn	13 58 19.4	+2.5
MMRI	Maumere	2.08	309		Pn	13 57 54.4	+2.2
BASI	Baing, Sumba	3.25	265	P	Pn	13 58 11.9	+3.6
WSI	Waingapu	3.54	274	P	Pn	13 58 16.2	+4.1
WBSI	Waikabubak, Su	4.43	274	P	Pn	13 58 27.0	+2.5
BBSI	Bau Bau	4.63	344	P	Pn	13 58 29.7	+2.5
BKSI	Bulukumba	5.92	321	P	Pn	13 58 47.1	+2.1
	0.3nm777nm70nm,0.8s						
PLAI	Plampang	6.12	280	P	Pn	13 58 50.6	+2.9
	0.6nm2µm188nm,0.6s						
KAPI	Kappang	6.39	320	Pn	Pn	13 58 53.3	+1.9
	4.6nm,0.3s,baz=140,slow=10.0,SNR=35						
BNSI	Bone	6.67	326	P	Pn	13 58 58.2	+2.9
	0.5nm163nm,0.8s						
SPSI	Sidrap Palu	7.22	325	P	Pn	13 59 06.3	+3.5
	0.2nm49nm,0.8s						
KNRA	Kununurra	7.42	140		Pn	13 59 08.0	+2.5
KNRA				Sn	Sn	14 00 29.1	+0.7
AAI	Ambon	7.57	35	P	Pn	13 59 08.8	+1.2
	0.1nm21nm,1.0s						
MTN	Manton Dam	7.67	113		Pn	13 59 10.1	+1.1
MTN				Sn	Sn	14 00 33.5	-1.2
SANI	Sanana	8.14	15	P	Pn	13 59 17.4	+2.0
	39nm,0.8s						
FITZ	Fitzroy Crossi	8.27	168	Pn	Pn	13 59 19.3	+2.1
	3.5nm,0.3s,baz=6.0,slow=9.8,SNR=46						
FITZ				Sn	Sn	14 00 46.5	-2.8
	21nm,0.3s,baz=109,slow=6.4,SNR=15						
FITZ	Fitzroy Crossi	8.27	168		Pn	13 59 19.2	+2.1
FITZ				Sn	Sn	14 00 48.0	-1.3
LUWI	Luwuk	8.93	353	P	Pn	13 59 30.6	+4.3
	100nm,1.0s						
APSI	Ampana	9.26	346	P	Pn	13 59 33.7	+2.9
	49nm,0.8s						
JAGI	Jajag, Banyuwa	9.71	278	P	Pn	13 59 39.5	+2.5
	24nm,1.1s						
JAGI	Jajag, Banyuwa	9.71	278		Pn	13 59 35.6	-1.3
MRSI	Marisa	10.55	349	P	Pn	13 59 48.9	+0.4
	21nm,0.7s						
FAKI	Fak Fak	10.87	50	P	Pn	13 59 55.1	+2.2
	20nm,0.9s						
MPSI	Mapaga	10.97	339	P	Pn	13 59 56.8	+2.5
	17nm,0.9s						
PSA00	Pilbara Seismi	12.17	198		Pn	14 00 13.3	+2.6
PSA00	Pilbara Seismi	12.17	198		Pn	14 00 10.8	+0.1
PCJI	Pacitan	12.66	277	P	Pn	14 00 19.3	+1.9
	30nm,1.4s						
UGM	Wanagama	13.34	278	P	Pn	14 00 30.2	+3.4
	40nm,0.8s						
WB0	Warramunga Arr	14.08	135		Pn	14 00 34.6	-2.2
WRA	Warramunga Arr	14.16	136	Pn	Pn	14 00 36.1	-1.7
	1.3nm,0.3s,baz=294,slow=9.4,SNR=50						
WRA				Sn	Sn	14 03 01.7	-12
	3.0nm,0.3s,baz=312,slow=23,SNR=24						
WRA				LR	LR	14 07 34.5	
	comp=Z,2µm,18.8s,baz=165,slow=43						
WRA	Warramunga Arr	14.16	136		Pn	14 00 36.0	-1.9
WRAB	Tennant Creek	14.16	136		Pn	14 00 36.0	-1.9
WB2	Warramunga Arr	14.17	136		Pn	14 00 36.5	-1.5
WR0	Warramunga Arr	14.31	135		Pn	14 00 37.4	-2.6
AS31	Alice Springs	16.66	146		Pn	14 01 10.8	+0.2
ASAR	Alice Springs	16.66	146	Pn	Pn	14 01 10.4	-0.1
	1.3nm,0.3s,baz=317,slow=11,SNR=198						
ASAR				Sn	Sn	14 04 06.3	-8.2
	1.8nm,0.3s,baz=318,slow=22,SNR=22						
ASAR	Alice Springs	16.66	146	P	Pn	14 01 11.5	+1.0
CNJI	Cibinong	16.76	278	P	Pn	14 01 12.9	+1.0
	93nm,1.3s						
COEN	Coen	19.29	104	Pn	P	14 01 42.8	+1.1
KASI	Kota Agung	19.69	282	P	P	14 01 46.4	+0.3
	46nm,0.5s						
MDSI	Maura Dua	20.27	284	P	P	14 01 53.1	+0.7
	7.0nm,1.0s						
MORW	Morawa	20.38	200	Pn	Pn	14 01 55.9	+0.3
MORW				IAmb	IAmb	14 01 56.4	
	comp=Z,12nm,0.8s						
FORT	Forrest	21.08	170	P	P	14 02 03.5	+2.5
NWAO	Narrogin (SRO)	23.66	194	P	P	14 02 28.2	+0.3
	comp=Z,6.5nm,0.7s,baz=104,slow=10,SNR=1.7						
NWAO	Narrogin (SRO)	23.66	194	P	P	14 02 29.1	+1.1
NWAO	Narrogin (SRO)	23.66	194	P	P	14 02 29.1	+1.1
NWAO				IAmb	IAmb	14 02 35.3	
	comp=Z,40nm,1.4s						
CTA	Charters Tower	23.82	118	P	P	14 02 29.6	0.0
	comp=Z,9.4nm,0.8s,baz=300,slow=13,SNR=4.5						
CTAO	Charters Tower	23.82	118	P	P	14 02 29.6	0.0
BBOO	Buckleboo	25.37	155	P	P	14 02 45.6	+2.0
BBOO				IAmb	IAmb	14 02 47.4	
	comp=Z,14nm,1.0s						
STKA	Stephens Creek	27.29	146	P	P	14 03 01.5	+0.5
	comp=Z,2.1nm,0.4s,baz=326,slow=9.9,SNR=14						
STKA	Stephens Creek	27.29	146	P	P	14 03 03.5	+2.5
YULB	Yu-li	33.25	356	P	P	14 03 52.9	-0.8
CMAR	Chiang Mai Arr	37.45	319	P	P	14 04 27.1	-2.9
	comp=Z,1.3nm,0.4s,baz=147,slow=6.1,SNR=7.2						
GYA	Guiyang	39.88	336	eP	P	14 04 51.6	+1.2
KMI	Kunming	40.50	330	P	P	14 04 55.4	-0.3
NJ2	Nanjing	42.05	354	eP	P	14 05 07.8	-0.2
CD2	Chengdu	44.99	335	P	P	14 05 31.4	-0.4
XAN	Xi'an	46.01	343	P	P	14 05 37.0	-2.8
KSRS	Korea Array	47.32	4	P	P	14 05 48.4	-1.6
	comp=Z,0.7nm,0.4s,baz=183,slow=8.7,SNR=4.9						
LZH	Lanzhou	49.54	339	eP	P	14 06 08.3	+1.0
LZH				pP	sP	14 06 24.5	+3.3
LZH				sP	pP	14 06 30.8	+13
LZH				ePP	PP	14 08 04.5	+2.5
BJI	Beijing	50.26	352	P	P	14 06 09.6	-2.8
TAPN	Taplejung	51.03	318	eP	P	14 06 17.0	-1.9
	comp=Z,38nm,0.8s						
HHC	Hu-ho-hao-te	51.82	348	eP	P	14 06 26.3	+2.0
JIRN	Jiri	52.25	317	eP	P	14 06 26.0	-2.1
	comp=Z,28nm,0.7s						
GUN	Gumba	52.63	317	eP	P	14 06 28.6	-2.3
	comp=Z,44nm,0.6s						
PKI	Pulchoki	52.73	316	eP	P	14 06 29.3	-2.3
	comp=Z,24nm,0.5s						
PKIN	Phulchoki	52.74	316	eP	P	14 06 29.0	-2.6
	comp=Z,28nm,0.4s						
KKN	Kakani	52.95	316	eP	P	14 06 30.7	-2.4
	comp=Z,21nm,0.7s						
DMN	Daman	52.96	316	eP	P	14 06 30.9	-2.3
	comp=Z,23nm,0.8s						
GKN	Gorkha	53.53	316	eP	P	14 06 35.2	-2.1
	comp=Z,18nm,0.3s						
GTA	Gaotai	53.97	337	P	P	14 06 38.8	-1.5
GTA				pP	sP	14 06 54.1	-0.6
GTA				sP	pP	14 07 00.3	+9.1
DANN	Dangsing	54.35	316	eP	P	14 06 41.0	-2.4
	comp=Z,85nm,0.5s						
USRK	Ussuriysk Ar.	54.41	7	P	P	14 06 41.1	-2.0
	comp=Z,1.5nm,0.4s,baz=196,slow=6.9,SNR=12						
ASAJ	Asahikawa	56.45	16	P	P	14 06 56.8	-1.1
	comp=Z,6.7nm,1.0s,baz=210,slow=20,SNR=1.8						
JKA	Kamikawa-asahi	56.45	16	P	P	14 06 56.8	-1.1
KLR	Kul'dur	59.34	6	P	P	14 07 15.8	-2.3
	comp=Z,0.9nm,0.7s,baz=188,slow=7.1,SNR=2.2						
SONM	Songino Array	59.60	346	P	P	14 07 17.6	-2.4
	comp=Z,1.6nm,0.6s,baz=162,slow=9.1,SNR=9.8						
SONM	Songino Array	59.60	346	P	P	14 07 18.1	-2.0
WMQ	Urumqi	62.81	331	eP	P	14 07 42.4	+0.6
KSH	Kashi	66.30	321	P	P	14 08 05.3	+0.5
KSH				pP	sP	14 08 21.8	+2.6
KSH				PcP	PcP	14 08 34.4	-0.2
KSH				PcS		14 12 35.5	
KSH				S	S	14 16 47.1	-4.9
KSH	Kashi	66.30	321	SS	SS	14 21 06.4	-2.7
MK31	Makanchi Array	67.58	330	P	P	14 08 11.6	-1.1
MK31				IAmb	IAmb	14 08 25.7	
	comp=Z,5.4nm,1.1s						
MKAR	Makanchi Array	67.58	330	P	P	14 08 10.0	-2.7
	comp=Z,3.4nm,0.5s,baz=133,slow=6.8,SNR=63						
MKAR	Makanchi Array	67.58	330	P	P	14 08 11.3	-1.3
MAKZ	Makanchi	67.74	330	P	P	14 08 12.1	-1.6
MAKZ				IAmb	IAmb	14 08 26.6	
	comp=Z,8.3nm,1.4s						
AAK	Ala-Archa	69.07	323	P	P	14 08 21.5	-0.7
AAK				IAmb	IAmb	14 08 23.1	
	comp=Z,4.7nm,0.6s						
MAW	Mawson	70.02	201	P	P	14 08 28.0	+0.6
	comp=Z,1.9nm,0.6s,baz=78,slow=9.9,SNR=6.4						
VNDA	Vanda	70.33	172	P	P	14 08 30.9	+1.6
	comp=Z,0.8nm,0.4s,baz=306,slow=8.2,SNR=2.2						
KKAR	Karatay Array	71.73	322	P	P	14 08 36.8	-1.5
ZALV	Zalesovo Beam	71.73	337	P	P	14 08 35.5	-2.5
	comp=Z,2.3nm,0.5s,baz=141,slow=4.1,SNR=12						
ZALV	Zalesovo Beam	71.73	337	P	P	14 08 35.1	-2.9
KURK	Kurchatov	72.05	332	P	P	14 08 37.3	-2.7
KURK				IAmb	IAmb	14 08 39.8	
	comp=Z,5.6nm,0.7s						
SEY	Seymchan	75.93	13	P	P	14 09 01.3	-1.1
	comp=Z,1.5nm,0.7s,baz=233,slow=2.8,SNR=5.7						
SNAA	Sanae	91.33	195	P	P	14 10 24.0	+2.5
PDAR	Pinedale Array	123.27	45	PKP	PKiKP	14 16 14.3	+0.7
	comp=Z,0.3nm,0.7s,baz=280,slow=2.5,SNR=2.4						
TORD	Torodi Ar. Bea	123.36	279	PKP	PKPdf	14 16 14.6	+0.6
	comp=Z,0.9nm,0.7s,baz=71,slow=1.7,SNR=5.4						
CPUP	Villa Florida	143.91	178	PKP	PKPbc	14 16 51.5	+1.7
	comp=Z,1.5nm,0.5s,baz=172,slow=3.6,SNR=4.7						

IDC ***22*** *14:02:29.2±1.6, 38°.41N×133°.73E, h457^{km}±21^{km}, mb2.5/2, mb1 2.6/7, mb1mx2.5/48, mbtmp3.4/7, Error ellipse: s-maj=35.2km s-min=22.9km az=1.0*

ISC 22 14:02:29.7±1.3**, 38°.5N**±0°.2×**133°.8E**±0°.1**, h447**^{km}**, n8,** σ**0^{s}.89**/8**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAT	Matsushiro	4.03	117	P	P	14 03 45.3	+0.3
MJAR	Matsushiro Arr	4.04	117	P	P	14 03 45.6	+0.7
	0.2nm,0.3s,baz=299,slow=9.7,SNR=14						
KSRS	Korea Array	4.72	259	P	P	14 03 51.1	0.0
	0.2nm,0.3s,baz=70,slow=8.7,SNR=8.1						
USRK	Ussuriysk Ar.	5.87	348	P	P	14 04 03.4	+1.1
	baz=168,slow=9.6,SNR=19						
ASAJ	Asahikawa	8.72	47	P	P	14 04 32.2	-0.5
	0.7nm,0.3s,baz=233,slow=12,SNR=8.8						
KLR	Kul'dur	10.85	353	P	P	14 04 56.5	+0.7
	0.2nm,0.3s,baz=166,slow=8.3,SNR=1.7						
SONM	Songino Array	21.94	304	P	P	14 06 47.8	-1.0
	0.5nm,0.5s,baz=108,slow=11,SNR=3.1						
ILAR	Eielson Array	51.54	33	P	P	14 10 51.6	-0.7
	0.2nm,0.5s,baz=295,slow=8.8,SNR=4.7						

IDC ***22*** *14:15:36.0±0.7, 19°.64S×70°.52W, h0^{km}, mb4.5/14, mb1 4.6/15, mb1mx4.4/36, mbtmp4.5/15, ML3.9/1, MS4.3/2, Ms1 4.4/2, ms1mx4.0/21, Error ellipse: s-maj=24.2km s-min=16.1km az=59.0*

NEIC ***22*** *14:15:37.8±2.2, 19°.82S±0°.03×70°.89W±0°.03, h17^{km}±4^{km}, mb4.9/32, Mwr4.6/38, ML4.4(GUC), Error ellipse: s-maj=5.8km s-min=2.0km az=48.0*

NEIC ***22*** *14:15:37.8, 19°.82S×70°.89W, h21^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$6.66;*

$M_{\theta\theta}$-1.94; $M_{\phi\phi}$-4.72; $M_{r\theta}$3.61; $M_{\theta\phi}$3.22; $M_{\phi r}$-4.47; Fault plane solution: $M_0$8.86000×10^{15} NP1:ϕ_s330.57000°, δ24.97000°, λ96.87000°. NP2:ϕ_s143.00000°, δ65.22000°, λ86.81000°. Principal axes: T 8.7864, Plg70.0000°, Azm47.0000°; N 0.1518, Plg3.0000°, Azm144.0000°; P -8.9382, Plg20.0000°, Azm235.0000°;

*GUC **22** 14:15:39.7±0.8, 19.°79S×70.°83W, h42^{km}±3^{km}, ML4.3*

*VAO **22** 14:15:42.4±0.9, 19.°66S×70.°65W, h43^{km}±7^{km}, mb4.6*

ISC 22 14:15:41.2±0.9, **19.°82S**±0.°03×**70.°80W**±0.°05, **h42**^{km}±8^{km}, **n347**, σ**1^{s}.44**/357, **mb4.8**/26, **8C-4D**, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.67	71	⇓*i*P	Pn	14 15 52.5	-1.9
PSGC				*i* S	Sn	14 16 02.4	-1.5
PSGCX	Pisagua	0.67	71		Pn	14 15 52.7	-1.7
PSGCX				Sg	Sn	14 16 03.2	-0.7
TA01	Diego Aracena	0.94	142	⇓*i*P	Pn	14 15 57.2	-0.8
TA01				*i* S	Sn	14 16 10.5	+0.2
TA01				IAML		14 16 14.0	
	comp=E,10µm,0.5s						
PB11	IPOC Station P	1.08	87	⇓*i*P	Pn	14 15 59.4	-0.6
PB11				*i* S	Sn	14 16 14.5	+0.7
PB11				IAML		14 16 19.3	
	comp=N,13µm,0.4s						
PB11	IPOC Station P	1.08	87	Pn	Pn	14 15 59.4	-0.6
PB11				Sn	Sn	14 16 14.5	+0.7
PATCX	Punta Patache	1.17	149	⇑*i*P	Pn	14 16 00.7	-0.4
PATCX				*i* S	Sn	14 16 16.3	+0.4
PATCX				IAML		14 16 22.9	
	comp=E,9µm,0.3s						
PATCX	Punta Patache	1.17	149	Pn	Pn	14 16 00.8	-0.4
PB12	IPOC Station P	1.28	20	⇑*i*P	Pn	14 16 01.7	-1.0
PB12				*i* S	Sn	14 16 18.9	+0.2
PB12				IAML		14 16 28.2	
	comp=E,9µm,0.5s						
PB12	IPOC Station P	1.28	20	Pn	Pn	14 16 01.9	-0.9
PB12				Sn	Sn	14 16 19.8	+1.1
AP01	Chacalluta	1.50	17	⇑*i*P	Pn	14 16 04.9	-0.8
AP01				*i* S	Sn	14 16 23.7	-0.4
GO01	Chusmiza	1.52	85	⇓*i*P	Pn	14 16 06.9	+0.6
GO01				*i* S	Sn	14 16 28.1	+3.0
GO01				IAML		14 16 30.4	
	comp=E,8µm,0.3s						
GO01	Chusmiza	1.52	85	Pn	Pn	14 16 07.0	+0.7
GO01				Sn	Sn	14 16 28.3	+3.2
PB08	IPOC Station P	1.58	102	⇑*i*P	Pn	14 16 07.6	+0.6
PB08				*i* S	Sn	14 16 29.0	+2.6
PB08				IAML		14 16 33.3	
	comp=N,4µm,0.7s						
PB02	IPOC Station P	1.71	151	⇑*i*P	Pn	14 16 08.6	-0.1
PB02				*i* S	Sn	14 16 29.9	+0.4
PB02				IAML		14 16 43.0	
	comp=E,10µm,0.5s						
PB01	IPOC Station P	1.73	135	⇑*i*P	Pn	14 16 09.4	+0.5
PB01				*i* S	Sn	14 16 31.0	+1.2
PB01				IAML		14 16 38.6	
	comp=E,5µm,0.4s						
PB01	IPOC Station P	1.73	135	Pn	Pn	14 16 09.2	+0.4
PB01				Sn	Sn	14 16 31.7	+1.9
PB16	IPOC Station P	1.92	40	⇑*i*P	Pn	14 16 12.1	+0.2
PB16				*i* S	Sn	14 16 38.5	+3.5
PB16				IAML		14 16 44.9	
	comp=N,7µm,0.5s						
PB16	IPOC Station P	1.92	40	Pn	Pn	14 16 12.7	+0.8
PB09	IPOC Station P	2.45	144	Pn	Pn	14 16 20.0	+1.1
PB04	IPOC Station P	2.57	167	Pn	Pn	14 16 19.0	-1.6
LVC	Limon Verde	3.29	148	Pn	Pn	14 16 31.4	+0.9
	comp=N,12nm,0.3s,baz=312,slow=9.3,SNR=34						
LVC				Sn	Sn	14 17 10.9	+2.3
	comp=N,55nm,0.3s,baz=134,slow=19,SNR=11						
LVC				LR	LR	14 17 27.8	
	comp=N,849nm,18.0s,baz=342,slow=34						
LVC	Limon Verde	3.29	148		Pn	14 16 31.7	+1.1
LVC	Limon Verde	3.29	148	*e*P	Pn	14 16 31.4	+0.9
PB15	IPOC Station P	3.59	160		Pn	14 16 33.8	-0.8
PB10	IPOC Station P	3.68	177		Pn	14 16 33.5	-2.2
LPAZ	La Paz	4.33	36	Pn	Pn	14 16 48.5	+3.3
	comp=N,9.0nm,0.3s,baz=234,slow=7.7,SNR=55						
LPAZ	La Paz	4.33	36		Pn	14 16 48.0	+2.8
PB14	IPOC Station P	4.80	176		Pn	14 16 48.8	-2.5
GO02	Mina Guanaco	5.43	168	Pn	Pn	14 16 58.6	-1.4
NNA	Nana	9.72	322	Pn	Pn	14 18 02.7	+4.2
	comp=N,2.1nm,0.3s,baz=18,slow=2.3,SNR=1.7						
NNA				Sn	Sn	14 19 39.9	-6.6
	comp=N,2.7nm,0.3s,baz=233,slow=15,SNR=1.6						
SIV	San Ignacio	10.01	69	Pn	Pn	14 18 00.8	-1.7
	comp=N,3.9nm,0.3s,baz=267,slow=9.5,SNR=65						
SAML	Samuel	13.08	35		Pn	14 18 42.0	-2.5
SAML	Samuel	13.08	35	*e*P	Pn	14 18 42.4	-2.1
CPUP	Villa Florida	13.98	120	Pn	Pn	14 18 57.4	+0.6
	comp=N,0.1nm,0.3s,baz=295,slow=14,SNR=6.4						
CPUP	Villa Florida	13.98	120		Pn	14 18 57.0	+0.3
CPUP	Villa Florida	13.98	120	*e*P	Pn	14 18 57.7	+1.0
AQDB	Aquidauana	14.20	95	*e*P	Pn	14 19 01.0	+1.3
ATAH	Atahualpa	14.61	329	Pn	Pn	14 19 08.3	+2.7
	comp=N,0.4nm,0.3s,baz=164,slow=18,SNR=1.3						
SALV	Santo Antonio	14.90	77	*e*P	Pn	14 19 07.8	-1.3
CLDB	Colider	16.97	61	*e*P	Pn	14 19 34.2	-1.5
C2SB	Chapadao do Su	16.99	89	*e*P	Pn	14 19 35.7	-0.1
TRCB	Terra Rica	17.18	103	*e*P	Pn	14 19 37.3	-1.0
PTGB	Pitanga	18.00	109	*e*P	P	14 19 49.1	+0.5
PCMB	Pacaembu	18.36	99	*e*P	P	14 19 50.8	-1.7
ARAG	Araguaiana, MT	18.54	80	*e*P	P	14 19 53.5	-1.0
ITAB	Concordia	18.63	117	*e*P	P	14 19 55.6	+0.2
CPSB	Cacapava Do Su	18.90	127	*e*P	P	14 19 58.7	+0.3
PLTB	Pedras Altas	19.49	131	*e*P	Pn	14 20 05.8	-0.5
TRQA	Tornquist	19.72	159	*e*P	Pn	14 20 10.5	+1.5
FRTB	Fartura	20.05	104	*e*P	P	14 20 11.8	+0.7
PLCA	Paso Flores	20.85	179	P	Pn	14 20 21.6	-0.7
	comp=N,8.4nm,1.0s,baz=28,slow=12,SNR=9.0						
PLCA	Paso Flores	20.85	179	P	P	14 20 18.7	-0.8
BB19B	Bebedouro	20.90	97	*e*P	P	14 20 19.3	-1.0
IPMB	Ipameri, GO	21.44	89	*e*P	P	14 20 25.4	-0.7
PTGA	Pitinga	21.73	30	P	P	14 20 27.6	-1.6
	comp=N,13nm,0.3s,baz=220,slow=23,SNR=52						
PTGA	Pitinga	21.73	30	P	P	14 20 27.4	-1.7
PTGA				IAmb	IAmb	14 20 36.2	
	comp=Z,54nm,1.2s						
PTGA	Pitinga	21.73	30	*e*P	P	14 20 27.2	-1.9
FLOC	Florencia	21.80	347	*e*P	P	14 20 30.1	+0.3
GCUF	Volcan Galeras	21.88	342	*e*P	P	14 20 38.9	+7.7
BDFB	Brasilia	22.09	83	P	P	14 20 30.3	-2.8
	comp=Z,3.7nm,0.5s,baz=251,slow=12,SNR=5.4						
BDFB	Brasilia	22.09	83	P	P	14 20 30.5	-2.6
GARC	Garzon, Huila	22.35	348	*e*P	P	14 20 36.7	+0.7
VAO	Valinhos	22.41	102	*e*P	P	14 20 36.4	0.0
PCON	Cinco Dias	22.69	345	*e*P	P	14 20 45.9	+6.0
POPC	Popayan, Colom	22.96	345	*e*P	P	14 20 44.6	+2.2
GR1C	Gorgona, Isla	23.81	341	*e*P	P	14 20 51.2	+0.9
ORTC	Ortega, Tolima	23.98	349	*e*P	P	14 20 52.2	+0.1
YOTC	Yotoco, Valle	24.27	346	*e*P	P	14 20 56.2	+1.3
YOTC				*e*P	P	14 20 57.0	+2.2
YOTC				*e*P	P	14 20 58.2	+3.4
ANIL	Santa Ana	24.58	349	*e*P	P	14 21 03.1	+5.3
ROSC	El Rosal	24.75	352	P	P	14 21 00.6	+1.2
	comp=Z,17nm,0.5s,baz=140,slow=22,SNR=4.7						
SMTB	Santa Maria do	24.95	67	*e*P	P	14 21 00.4	-0.5
PLMC	San Jos del P	25.16	347	*e*P	P	14 21 13.2	+10
GUY2C	Guyana, Caldas	25.29	349	*e*P	P	14 20 54.0	-10
NORC	Norcasia	25.54	351	*e*P	P	14 21 06.6	+0.4
RUSC	La Rusia	25.65	355	P	P	14 21 08.3	+0.6
CBOC	Ciudad Bolivar	26.03	348	*e*P	P	14 21 11.6	+0.8
HELC	Santa Helena	26.26	349	*e*P	P	14 21 14.2	+1.0
PTBC	PUERTO BERRIO,	26.44	352	*e*P	P	14 21 12.9	-1.5
PAMC	Pamplona, Colo	27.05	356	*e*P	P	14 21 20.4	+0.1
SDV	Santo Domingo	28.52	0	P	P	14 21 32.0	-1.2
	comp=Z,5.2nm,0.8s,baz=154,slow=9.8,SNR=4.8						
SDV	Santo Domingo	28.52	0	*e*P	P	14 21 32.5	-0.7
PLCV	Puerto La Cruz	30.41	12	P	P	14 21 48.9	-0.8
PCRV	Puerto La Cruz	30.42	12	P	P	14 21 48.9	-0.9
	comp=Z,9.4nm,0.9s,baz=180,slow=1.0,SNR=2.1						
NBTA	Tacaratu-PE	33.37	76	*e*P	P	14 22 14.6	-1.2
RCBR	Riachuelo	36.65	72	*e*P	P	14 22 44.6	+0.4
PDPR	Patillas Dam,	37.89	7	P	P	14 22 52.2	-2.3
PDPR				IAmb	IAmb	14 23 02.2	
	comp=Z,16nm,0.8s						
NHSC	New Hope	53.39	350	P	P	14 24 57.7	+1.1
	baz=169						
Z58A	St. Stephen	53.55	351	P	P	14 24 59.3	+1.5
	baz=170						
Z57A	Bowman	53.66	350	P	P	14 24 59.5	+0.9
	baz=169						
Y60A	Bolivia	53.99	352	P	P	14 25 02.3	+1.3
	baz=172						
Y55A	Saluda	54.49	349	P	P	14 25 05.2	+0.6
	baz=167						
X60A	Albert Glenn T	54.52	353	P	P	14 25 05.6	+0.7
	baz=172						
Z50A	Ashland	54.72	344	P	P	14 25 06.2	-0.2
Z50A				IAmb	IAmb	14 25 07.0	
	comp=Z,8.8nm,0.8s						
Z50A	Ashland	54.72	344	P	P	14 25 06.3	0.0
	baz=163,SNR=6.0						
LRAL	Lakeview Retre	54.79	343	P	P	14 25 06.8	-0.1
	baz=161						
X56A	White Oak	54.88	350	P	P	14 25 07.9	+0.4
	baz=168						
X55A	Gracelyn & Ava	54.96	349	P	P	14 25 08.8	+0.7
	baz=168						
W58A	Raeford	55.12	352	P	P	14 25 10.1	+0.9
	baz=170,SNR=5.1						
X54A	Belton	55.18	348	P	P	14 25 10.3	+0.6
	baz=167						
W56A	Indian Trail	55.44	350	P	P	14 25 11.9	+0.4
	baz=169						
KMSC	Kings Mountain	55.57	350	P	P	14 25 13.0	+0.6
	baz=168						
W54A	Cherokee Point	55.66	349	P	P	14 25 13.9	+0.8
	baz=167						
V59A	Middlesex	55.73	353	P	P	14 25 14.3	+0.7
	baz=172						
V58A	Windy Hill, Pi	55.87	352	P	P	14 25 15.3	+0.7
	baz=171						
V57A	Coltrane Farms	56.05	351	P	P	14 25 16.3	+0.4
	baz=170						
V56A	Mocksville	56.08	351	P	P	14 25 17.1	+0.9
	baz=169						
V55A	Taylorsville	56.24	350	P	P	14 25 18.3	+1.0
	baz=168						
V54A	Nebo	56.29	349	P	P	14 25 18.3	+0.6
	baz=168,SNR=5.4						
U57A	Blanch	56.52	352	P	P	14 25 20.2	+1.0
	baz=170						
SWET	Sewanee	56.59	345	P	P	14 25 19.7	-0.1
SWET				IAmb	IAmb	14 25 19.8	
	comp=Z,8.1nm,0.8s						
U56A	King	56.59	351	P	P	14 25 21.4	+1.6
	baz=169						
V52A	Sevierville	56.67	348	P	P	14 25 20.2	-0.1
V52A				IAmb	IAmb	14 25 21.1	
	comp=Z,16nm,0.9s						
T59A	Double "B" Far	56.84	354	P	P	14 25 22.4	+0.9
	baz=172						
OXF	Oxford	56.86	342	P	P	14 25 21.5	-0.2
	baz=159						
T58A	Grand View Acr	56.93	353	P	P	14 25 23.1	+1.0
	baz=171,SNR=5.2						
T57A	Hurt	57.07	352	P	P	14 25 24.1	+1.0
	baz=171						
T55A	Pulaski	57.41	351	P	P	14 25 26.7	+1.1
	baz=169						
T54A	Tazewell	57.48	350	P	P	14 25 26.3	+0.2
	baz=168						
T53A	Wise	57.57	349	P	P	14 25 26.7	0.0
	baz=167						
T52A	Hallie	57.78	348	P	P	14 25 28.1	0.0
	baz=167						
S57A	Dark Hollow, R	57.78	352	P	P	14 25 29.2	+1.1
	baz=171						
U49A	Red Boiling Sp	57.79	346	P	P	14 25 27.7	-0.5
T51A	Gray	57.83	348	P	P	14 25 28.4	-0.1
	baz=166						
WVT	Waverly	57.93	344	P	P	14 25 27.5	-1.7
WVT				IAmb	IAmb	14 25 29.2	
	comp=Z,11nm,0.8s						
WVT	Waverly	57.93	344	P	P	14 25 28.5	-0.7
	baz=161						
S55A	Lewisburg	58.01	351	P	P	14 25 30.8	+1.1
	baz=169						
T50A	Nancy	58.07	347	P	P	14 25 29.7	-0.4
	baz=165						
MIAR	Mount Ida	58.25	338	P	P	14 25 30.7	-0.7
MIAR				IAmb	IAmb	14 25 32.9	
	comp=Z,11nm,0.9s						
MIAR	Mount Ida	58.25	338	P	P	14 25 32.2	+0.7
	baz=155,SNR=8.8						
TXAR	Lajitas Array	58.25	326	P	P	14 25 32.6	+0.9
	comp=Z,1.3nm,0.7s,baz=147,slow=9.0,SNR=13						
TXAR	Lajitas Array	58.25	326	P	P	14 25 31.2	-0.5
R57A	Stanardsville	58.26	353	P	P	14 25 32.7	+1.3
	baz=172						
T49A	Edmonton	58.30	346	P	P	14 25 31.8	0.0
	baz=164,SNR=10						
W41B	Gary Mavity, V	58.36	339	P	P	14 25 32.6	+0.3
	baz=156						
R55A	Marlinton	58.45	351	P	P	14 25 34.3	+1.4
	baz=170						
R54A	Victor	58.48	351	P	P	14 25 32.9	-0.1
	baz=169						
S50A	Richmond	58.61	347	P	P	14 25 34.0	+0.1
	baz=165						
Q58A	Fox Den Farm,	58.81	354	P	P	14 25 36.7	+1.5
	baz=173						
W39A	Magazine	58.91	338	P	P	14 25 37.0	+0.9
	baz=155,SNR=5.5						
X37A	Clayton	58.94	336	P	P	14 25 36.4	+0.1
X37A				IAmb	IAmb	14 25 38.2	
	comp=Z,16nm,0.8s						
Q57A	Strasburg	58.98	353	P	P	14 25 37.9	+1.4
	baz=172						
ABTX	Abilene, Hawle	59.00	332	P	P	14 25 37.7	+0.9
	baz=148						
R51A	Hillsboro	59.05	348	P	P	14 25 37.1	+0.2
	baz=166						
Q56A	Snyder Ridge,	59.08	352	P	P	14 25 38.5	+1.3
	baz=171,SNR=6.1						
Q55A	Buckhannon	59.15	352	P	P	14 25 38.9	+1.2
	baz=170						
R50A	Paris	59.17	348	P	P	14 25 38.0	+0.2
	baz=165						
Q53A	Leroy	59.23	350	P	P	14 25 38.6	+0.4
	baz=168						
Q54A	Coxs Mills	59.24	351	IAmb	IAmb	14 25 43.3	
	comp=Z,27nm,1.5s						
Q54A	Coxs Mills	59.24	351	P	P	14 25 38.4	+0.1
	baz=169						
P58A	Pank, Wackersv	59.31	354	P	P	14 25 40.2	+1.5
	baz=173						
P56A	Dayton Farm, R	59.49	353	P	P	14 25 41.5	+1.5
	baz=171						
P55A	Reedsville	59.62	352	P	P	14 25 42.0	+1.1
	baz=170						
U40A	Yellville	59.64	339	P	P	14 25 41.4	+0.3
	baz=156,SNR=5.3						
P54A	Burton	59.80	351	P	P	14 25 43.0	+0.9
	baz=170,SNR=5.2						
P53A	Whipple	59.82	351	P	P	14 25 43.0	+0.8
	baz=169						
O57A	Amberson	60.06	354	P	P	14 25 45.7	+1.8
	baz=173						
O56A	Blue Knob Stat	60.21	353	P	P	14 25 46.5	+1.5
	baz=172						
O55A	Ligonier	60.24	353	P	P	14 25 46.4	+1.2
	baz=171						
TUL1	Leonard	60.27	337	P	P	14 25 46.1	+0.7
	baz=153						
P50A	Jamestown	60.35	348	P	P	14 25 46.0	+0.1
	baz=166						
O52A	Adamsville	60.51	350	P	P	14 25 47.2	+0.2
	baz=168						
N58A	Sunbury	60.60	355	P	P	14 25 48.6	+1.1
	baz=174						
CCM	Cathedral Cave	60.69	342	P	P	14 25 48.6	+0.4
	baz=158						
N55A	Marion Center	60.77	353	P	P	14 25 50.1	+1.4
	baz=171,SNR=8.6						
ACSO	Alum Creek Sta	60.81	349	P	P	14 25 49.3	+0.3
	baz=167						
MNTX	Cornudas Mount	61.02	326	P	P	14 25 51.0	+0.4
	baz=143,SNR=6.8						
N54A	Moraine State	61.07	352	P	P	14 25 51.8	+1.0
	baz=170						
M58A	Price's Panora	61.10	355	P	P	14 25 52.4	+1.4
	baz=174						
M57A	Sunshine Farm,	61.13	355	P	P	14 25 52.3	+1.1
	baz=173						
N52A	McGinn's Farm,	61.16	351	P	P	14 25 51.4	0.0
	baz=168						
M59A	Waymart	61.20	356	P	P	14 25 52.8	+1.1
	baz=175						
O48A	Farmland	61.25	347	P	P	14 25 51.8	-0.1
	baz=165						
N50A	Nevada	61.36	349	P	P	14 25 53.3	+0.5
	baz=167						
L63A	North Scituate	61.37	359	P	P	14 25 54.0	+1.2
	baz=179						
M56A	Emporium	61.37	354	P	P	14 25 53.9	+1.1
	baz=172						
M55A	Ridgway	61.42	353	P	P	14 25 53.9	+0.8
	baz=172,SNR=6.8						
MSTX	Muleshoe	61.56	330	P	P	14 25 55.4	+1.1
	baz=146						
M54A	Oil Creek Stat	61.57	352	P	P	14 25 54.8	+0.7
	baz=171						
M53A	WI Miller and	61.63	352	P	P	14 25 54.9	+0.4
	baz=170						
N49A	Columbus Grove	61.70	349	P	P	14 25 54.9	-0.1
	baz=166,SNR=8.5						
L58A	Harry Jones Me	61.73	356	P	P	14 25 56.2	+1.0
	baz=175						
L57A	Andrews Acres	61.76	355	P	P	14 25 56.4	+0.9
	baz=174						
N48A	Decatur	61.80	348	P	P	14 25 55.2	-0.5
	baz=165						
L59A	Walton	61.82	356	P	P	14 25 57.1	+1.3
	baz=176						
BINY	Binghamton	61.89	356	P	P	14 25 57.5	+1.1
	baz=175						
N47A	Urbana	61.96	347	P	P	14 25 56.3	-0.4
	baz=164						
L56A	Greenwood	61.96	354	P	P	14 25 57.8	+1.0
	baz=173						
HRV	Adam Dziewonsk	62.02	359	P	P	14 25 58.1	+1.0
	baz=179						
L53A	Girard	62.08	352	P	P	14 25 58.2	+0.6
	baz=170,SNR=5.7						
L55A	Hinsdale	62.09	354	P	P	14 25 58.9	+1.2
	baz=172						
M49A	Liberty Center	62.19	349	P	P	14 25 58.3	0.0
	baz=166						
ERPA	Erie	62.21	352	P	P	14 25 59.2	+0.8
	baz=170						
L54A	Sinclairville	62.24	353	P	P	14 25 59.8	+1.1
	baz=171,SNR=7.8						
M48A	Edgerton	62.34	348	P	P	14 25 59.3	-0.1
	baz=165						
K59A	Cooperstown	62.39	357	P	P	14 26 01.0	+1.3
	baz=176,SNR=6.2						
K58A	Earlville	62.43	356	P	P	14 26 00.8	+0.9
	baz=175						
K54A	Basiliko Farm,	62.54	353	P	P	14 26 01.8	+1.1
	baz=172						
L48A	N Adams	62.73	349	P	P	14 26 01.6	-0.4
	baz=166						
L49A	Milan	62.77	349	P	P	14 26 02.1	0.0
	baz=166						
121A	Cookes Peak, D	62.94	325	P	P	14 26 04.9	+1.1
	baz=141						
J59A	Piesco	63.06	357	P	P	14 26 05.3	+1.2
	baz=176						
I58A	Old Forge	63.31	357	P	P	14 26 06.7	+1.0
	baz=176						
I59A	Olmsteadville	63.36	358	P	P	14 26 07.2	+1.2
	baz=177						
J52A	Paris	63.38	352	P	P	14 26 06.7	+0.5
	baz=170						
I60A	Shoreham	63.39	358	P	P	14 26 07.4	+1.2
	baz=178						
I61A	Oroboro, Fairl	63.45	359	P	P	14 26 08.3	+1.7
	baz=179,SNR=5.8						
K48A	Perry	63.51	349	P	P	14 26 06.4	-0.6
	baz=166						
K47A	Vermontville	63.54	348	P	P	14 26 07.0	-0.3
	baz=165						
LBNH	Lisbon	63.75	359	P	P	14 26 09.9	+1.3
	baz=179						
J48A	Bridge Port	63.93	349	P	P	14 26 09.6	-0.2
	baz=166						
H58A	Gabriels	64.00	357	P	P	14 26 11.3	+1.0
	baz=177						
I51A	Listowel	64.00	352	P	P	14 26 10.5	+0.2
	baz=169						
H61A	Lyndonville	64.05	359	P	P	14 26 12.2	+1.7
	baz=179						
H62A	Milan	64.08	360	P	P	14 26 12.4	+1.6
	baz=180						
H57A	Richville	64.11	356	P	P	14 26 11.9	+1.0
	baz=175						
ANMO	Albuquerque	64.14	328	P	P	14 26 13.1	+1.5
	baz=143						
H64A	Troy	64.16	1	P	P	14 26 12.3	+1.0
	baz=182						
H63A	New Sharon	64.17	1	P	P	14 26 13.3	+2.0
	baz=181						
H59A	Cadyville	64.20	358	P	P	14 26 12.9	+1.3
	baz=177						
H53A	Bobcaygeon	64.47	354	P	P	14 26 13.9	+0.6
	baz=172						
G60A	Masonville	64.62	359	P	P	14 26 16.3	+2.0
	baz=178						
G63A	Kingsbury	64.63	1	P	P	14 26 15.7	+1.4
	baz=181						
G57A	Newington	64.72	357	P	P	14 26 15.9	+1.0
	baz=176						
G62A	West of Eustis	64.72	0	P	P	14 26 15.6	+0.6
G62A	West of Eustis	64.72	0	P	P	14 26 16.8	+1.8
	baz=180,SNR=9.1						
G65A	Princeton	64.77	3	P	P	14 26 16.1	+0.8
	baz=183						
G64A	Maxfield	64.78	2	P	P	14 26 16.6	+1.2
	baz=182						
PKME	Peaks-Kenny Pk	64.78	1	P	P	14 26 16.7	+1.4
	baz=182						
G61A	St-Isidore-de-	64.79	359	P	P	14 26 17.3	+1.9
	baz=179						
I46A	Reed City	64.85	348	P	P	14 26 15.2	-0.7
	baz=165						
JFWS	Jewell Farm	64.94	344	P	P	14 26 17.4	+0.9
	baz=160						
G53A	Haliburton	65.02	354	P	P	14 26 17.7	+0.8
	baz=172,SNR=6.5						
F64A	Sherman	65.41	2	P	P	14 26 20.7	+1.4
	baz=183						
F60A	Warwick	65.48	359	P	P	14 26 21.1	+1.2
	baz=179						
F52A	Sundridge	65.76	353	P	P	14 26 22.3	+0.6
	baz=171,SNR=5.4						
ALGO	Algonquin Park	65.79	354	P	P	14 26 22.3	+0.4
	baz=173						
E60A	Ste Agathe de	65.88	360	P	P	14 26 23.3	+0.9
	baz=179						
SDCO	Great Sand Dun	65.91	330	P	P	14 26 24.8	+1.6
	baz=144,SNR=10						
E58A	La Victoria	65.92	358	P	P	14 26 23.8	+1.1
	baz=178						
E61A	Lac Etchemin	65.94	0	P	P	14 26 24.7	+1.9
	baz=180						
F51A	Arnstein	65.95	353	P	P	14 26 23.2	+0.3
	baz=171						
E64A	Bridgewater	65.98	2	P	P	14 26 24.3	+1.3
	baz=183						
E57A	Chemin Saint G	65.99	357	P	P	14 26 23.9	+0.8
	baz=177						
F49A	Sandfield	66.06	351	P	P	14 26 23.4	-0.3
	baz=168						
E55A	Montcerf-Lytto	66.13	356	P	P	14 26 24.8	+0.8
	baz=175						
E56A	St. Veronique	66.16	357	P	P	14 26 25.0	+0.8
	baz=176						
E52A	Mattawa	66.17	354	P	P	14 26 24.4	+0.1
	baz=172						
E53A	Dumoine, Ponti	66.18	355	P	P	14 26 24.9	+0.5
	baz=173						
E54A	Lac Daplat, Po	66.19	355	P	P	14 26 25.0	+0.6
	baz=174						
F48A	Evansville	66.21	351	P	P	14 26 24.3	-0.2
	baz=168						
E51A	G1948 Merrick	66.51	353	P	P	14 26 27.0	+0.5
	baz=171						
S22A	4UR Ranch, Cre	66.54	329	P	P	14 26 28.8	+1.6
	baz=143						
D57A	Chemin Vers le	66.58	358	P	P	14 26 27.7	+0.8
	baz=177						
D63A	Stockholm	66.59	2	P	P	14 26 27.8	+0.8
	baz=183						
D62A	Allapoint, All	66.61	1	P	P	14 26 28.4	+1.3

D62A	Allapoint, All	66.61	1	P	P	14 26 28.3	+1.3
	baz=182,SNR=5.6						
D58A	Chemin du LacG	66.63	358	P	P	14 26 28.3	+1.1
	baz=178,SNR=9.0						
D56A	ZEC Mazanza, M	66.65	357	P	P	14 26 27.5	+0.1
	baz=176						
D55A	Sainte-Anne-du	66.66	357	P	P	14 26 28.2	+0.8
	baz=175,SNR=5.6						
D61A	St Aubert, Com	66.71	0	P	P	14 26 28.9	+1.2
	baz=181						
Q24A	Divide	66.74	331	P	P	14 26 30.1	+1.5
	baz=145						
E48A	Lockeyer	66.78	351	P	P	14 26 27.7	-0.5
	baz=168						
D54A	Lac Fusel, La	66.87	356	P	P	14 26 29.0	+0.3
	baz=174						
D53A	Lac Vacive, Po	66.88	355	P	P	14 26 29.4	+0.6
	baz=173						
LATQ	La Tuque	66.91	359	P	P	14 26 30.0	+1.0
	baz=178						
BATG	Bathurst New B	66.92	4	P	P	14 26 30.3	+1.3
E47A	Iron Bridge	66.92	351	P	P	14 26 29.2	+0.1
	baz=167						
MVCO	Mesa Verde	66.94	328	P	P	14 26 31.3	+1.6
	baz=142						
D51A	Lot 18 Range I	67.04	354	P	P	14 26 30.3	+0.5
	baz=171						
OGNE	Ogallala	67.06	335	P	P	14 26 31.7	+1.5
	baz=148						
WUAZ	Wupatki	67.14	325	P	P	14 26 33.4	+2.4
	baz=139						
D50A	G1974 Best Tow	67.17	353	P	P	14 26 31.2	+0.5
	baz=171,SNR=6.9						
D46A	Sault St. Mari	67.47	350	P	P	14 26 32.3	-0.2
	baz=167						
D47A	Chapleau	67.48	351	P	P	14 26 32.3	-0.4
	baz=168						
ECSD	EROS Data Cent	67.53	340	P	P	14 26 33.6	+0.5
	baz=154,SNR=6.7						
ISCO	Idaho Springs	67.63	332	P	P	14 26 35.6	+1.5
	baz=145						
SPMN	Marine on St.	67.76	343	P	P	14 26 34.9	+0.4
	baz=158						
VLDQ	Val d'Or	67.88	355	P	P	14 26 35.4	+0.3
VLDQ				IAmb	IAmb	14 26 36.8	
	comp=Z,19nm,1.4s						
BC3	Big Chuckawall	68.12	321	P	P	14 26 39.5	+2.4
	baz=135						
MONP2	Monument Peak	68.17	320	P	P	14 26 40.1	+2.6
	baz=134						
IRM	Iron Mountain	68.29	321	P	P	14 26 40.6	+2.6
	baz=135,SNR=6.5						
BELC	Belle Mtn. Jos	68.68	321	P	P	14 26 42.8	+2.2
	baz=134						
PFO	Pinyon Flats O	68.69	320	P	P	14 26 43.4	+2.7
	baz=134						
LSQQ	Lebel-sur-Quev	68.79	356	P	P	14 26 41.3	+0.5
	baz=174						
GMRC	Granite Mounta	69.03	322	P	P	14 26 45.5	+2.7
	baz=135						
O20A	White River Ci	69.11	330	P	P	14 26 45.0	+1.8
	baz=142						
HEC	Hector,Ludlow	69.46	321	P	P	14 26 48.3	+2.9
	baz=134						
MATQ	Matagami	69.53	355	P	P	14 26 45.3	0.0
	baz=173						
TUQ	Turquoise Moun	69.64	322	P	P	14 26 49.1	+2.5
	baz=135,SNR=5.2						
DBIC	Dimbokro	69.98	75	P	P	14 26 46.8	-2.1
	comp=Z,5.1nm,0.8s,baz=220,slow=3.6,SNR=6.2						
DBIC	Dimbokro	69.98	75	P	P	14 26 48.0	-0.9
DBIC				IAmb	IAmb	14 26 49.3	
	comp=Z,7.0nm,0.9s						
GSC	Goldstone, Bar	70.06	321	P	P	14 26 51.9	+2.8
	baz=134						
SHOC	Shoshone, Teco	70.17	322	P	P	14 26 52.9	+3.2
	baz=135						
K22A	Casper	70.35	333	P	P	14 26 52.5	+1.7
	baz=144						
QSPA	South Pole Qui	70.36	180	P	P	14 26 51.0	+0.5
QSPA				IAmb	IAmb	14 26 54.0	
	comp=Z,13nm,1.2s						
EDW2	Edwards Air Fo	70.48	320	P	P	14 26 53.8	+2.2
	baz=133						
RSSD	Black Hills	70.53	335	P	P	14 26 50.6	-1.3
RSSD				IAmb	IAmb	14 26 54.0	
	comp=Z,5.1nm,0.7s						
RSSD	Black Hills	70.53	335	P	P	14 26 53.5	+1.6
	baz=147						
TPNV	Topopah Spring	70.89	323	P	P	14 26 57.0	+2.8
	baz=135,SNR=6.9						
FURC	Furnace Creek,	70.91	322	P	P	14 26 57.1	+3.0
	baz=134,SNR=5.9						
MPMC	Manual Prospec	70.99	321	P	P	14 26 57.1	+2.2
	baz=134						
ISA	Isabella, Lake	71.30	321	P	P	14 26 59.5	+2.8
	baz=133,SNR=6.8						
DUG	Dugway, Tooele	71.39	327	P	P	14 26 59.2	+2.0
	baz=138						
AGMN	Agassiz Nation	71.42	343	P	P	14 26 57.3	+0.3
	baz=155						
R11A	Troy Canyon, C	71.51	324	P	P	14 27 00.5	+2.5
	baz=136,SNR=7.5						
CWC	Cottonwood Cre	71.60	321	P	P	14 27 00.8	+2.3
	baz=133						
PKM	Mcpherson Peak	71.60	319	P	P	14 27 01.2	+2.6
	baz=132						
PDAR	Pinedale Array	71.78	331	P	P	14 26 59.5	-0.1
	comp=Z,0.9nm,0.5s,baz=136,slow=6.5,SNR=13						
PDAR	Pinedale Array	71.78	331	P	P	14 26 59.1	-0.4
HWUT	Hardware Ranch	71.83	329	P	P	14 26 59.5	-0.4
SMMC	Simmler	71.99	319	P	P	14 27 03.7	+3.0
	baz=132						
TPAW	Teton Pass	72.99	331	P	P	14 27 05.7	-1.1
NVAR	Mina Array Bea	73.09	323	P	P	14 27 09.2	+1.8
	comp=Z,2.2nm,0.8s,baz=156,slow=7.1,SNR=15						
NVAR				LR	LR	14 59 10.9	
	comp=Z,998nm,19.3s,baz=354,slow=36						
ULM	Lac du Bonnet	73.20	343	P	P	14 27 06.8	-0.7
	comp=Z,1.7nm,0.5s,baz=152,slow=6.1,SNR=6.0						
RLMT	Red Lodge	73.51	333	P	P	14 27 11.4	+1.6
	baz=142,SNR=8.2						
H17A	Grant Village	73.52	331	P	P	14 27 12.6	+2.7
	baz=141						
LAO	LASA Array	73.52	335	P	P	14 27 11.2	+1.6
	baz=146						
DGMT	Dagmar	74.25	338	P	P	14 27 14.9	+1.2
	baz=148						
SCHQ	Schefferville	74.42	2	P	P	14 27 14.8	+0.2
	comp=Z,5.4nm,0.9s,baz=182,slow=4.3,SNR=5.6						
SCHQ	Schefferville	74.42	2	P	P	14 27 14.3	-0.3
EGMT	Eagleton	76.02	334	P	P	14 27 23.3	-0.7
EGMT				IAmb	IAmb	14 27 26.2	
	comp=Z,10nm,0.9s						
EGMT	Eagleton	76.02	334	P	P	14 27 25.5	+1.5
	baz=143,SNR=7.3						
MSO	Missoula	76.90	331	P	P	14 27 31.7	+2.6
	baz=139						
TOA0	Torodi Ar. Sit	78.48	71	P	P	14 27 37.2	-1.3
TOA0				IAmb	IAmb	14 27 39.1	
	comp=Z,11nm,0.8s						
TORD	Torodi Ar. Bea	78.48	71	P	P	14 27 37.7	-0.7
	comp=Z,9.0nm,0.8s,baz=251,slow=5.3,SNR=40						
SYO	Syowa Base	78.68	160	⇑eP	P	14 27 37.6	-1.0
YKA	Yellowknife Ar	89.03	341	P	P	14 28 31.5	+0.2
	comp=Z,7.9nm,1.1s,baz=137,slow=5.4,SNR=44						
H11S2	WAKE ISLAND Hy	125.89	279	T	T	16 53 58.1	
	baz=101,slow=74,SNR=57						
H11S1	WAKE ISLAND Hy	125.90	279	T	T	16 54 00.1	
	baz=101,slow=74,SNR=53						
H11S3	WAKE ISLAND Hy	125.91	279	T	T	16 53 59.7	
	baz=101,slow=74,SNR=40						
H11N3	WAKE ISLAND Hy	125.94	280	T	T	16 54 02.4	
	baz=101,slow=74,SNR=12						
H11N2	WAKE ISLAND Hy	125.95	280	T	T	16 53 52.1	
	baz=101,slow=74,SNR=11						
H11N1	WAKE ISLAND Hy	125.95	280	T	T	16 54 04.8	
	baz=101,slow=74,SNR=8.6						
ZALV	Zalesovo Beam	141.15	23	PKP	PKPdf	14 35 07.0	+0.1
	comp=Z,3.1nm,0.8s,baz=228,slow=1.7,SNR=3.2						
MKAR	Makanchi Array	145.26	33	PKP	PKPdf	14 35 15.2	+0.8
	comp=Z,5.2nm,0.7s,baz=312,slow=3.5,SNR=9.1						
MKAR	Makanchi Array	145.26	33		PKPdf	14 35 15.6	+1.2
KSH	Kashi	145.37	48	PKPbc	PKPbc	14 35 12.8	-2.1
KSH				pPKP	pPKPab	14 35 23.3	-4.1
KSH				PKS	PKSdf	14 38 47.3	-3.2
KSH				SS	SS	14 57 22.3	-1.5
KSH				LR	LR		
	comp=Z,300nm,11.8s						
KSH				LR	LR		
	comp=Z,240nm,11.6s						
KSH				LR	LR		
	comp=Z,490nm,16.4s						
USRK	Ussuriysk Ar.	149.15	327	PKPbc	PKiKP	14 35 25.9	-0.4
	comp=Z,2.7nm,0.8s,baz=253,slow=2.0,SNR=4.9						
MJAR	Matsushiro Arr	149.65	309	PKPbc	PKiKP	14 35 28.4	+0.7
	comp=Z,5.8nm,0.9s,baz=125,slow=2.0,SNR=6.4						
WMQ	Urumqi	150.06	32	ePKPbc	PKPdf	14 35 22.9	+0.4
WMQ				LR	LR		
	comp=Z,440nm,29.2s						
WMQ				LR	LR		
	comp=Z,2μm,28.8s						
WMQ				LR	LR		
	comp=Z,170nm,25.5s						
HYB	Hyderabad	150.88	90	i PKP	PKiKP	14 35 31.0	+0.2
SONM	Songino Array	151.96	4	PKPbc	PKiKP	14 35 33.0	+0.7
	comp=Z,1.5nm,0.7s,baz=325,slow=2.0,SNR=4.0						
GTA	Gaotai	158.86	21	ePKP	PKPdf	14 35 37.3	+2.4
HHC	Hu-ho-hao-te	158.94	355	ePKP	PKPdf	14 35 32.3	-2.7
LZH	Lanzhou	163.12	15	ePKP	PKPdf	14 35 39.6	-0.1
LZH				pPKP	pPKPdf	14 35 47.3	-4.9
LZH				LR	LR		
	comp=Z,150nm,18.1s						
LZH				LR	LR		
	comp=Z,150nm,18.0s						
LZH				LR	LR		
	comp=Z,170nm,20.3s						
NJ2	Nanjing	165.05	326	ePKP	PKPdf	14 35 40.9	-0.4
CD2	Chengdu	167.91	23	PKP	PKPdf	14 35 42.0	-1.6

INET 22 14:16:45.1, 11°.11N×87°.10W, h15^{km}, ML3.6, Near coast of Nicaragua

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*KEA **22** 14:18:38.3±0.0, 29°.70N×138°.80E, h25^{km}, mB5.8/1*
*BGR **22** 14:18:45.3±0.0, 29°.98N×140°.59E, h400^{km}, mb5.6*
*MOS **22** 14:18:45.8±0.8, 29°.28N×139°.31E, h412^{km}, mb5.6/97, Error ellipse: s-maj=6.4km s-min=3.3km az=112.2*
*JMA **22** 14:18:46.4±0.1, 29°.36N×139°.82E, h434^{km}±3^{km}, M5.3*
JMA Felt II J1.
*BJI **22** 14:18:46.9±0.0, 29°.32N×139°.27E, h423^{km}, mB5.5/43, mb5.8/83*
*NEIC **22** 14:18:47.6±1.8, 29°.27N±0°.08×139°.4E±0°.1, h420^{km}±5^{km}, mb5.4/331, Error ellipse: s-maj=12.7km s-min=11.0km az=80.0*
*IDC **22** 14:18:49.0±0.4, 29°.28N×139°.28E, h438^{km}±4^{km}, mb4.9/54, mb1 4.9/61, mb1mx4.9/68, mbtmp5.7/61, Error ellipse: s-maj=5.5km s-min=3.8km az=84.0*

ISC 22 14:18:47.6±0.3, **29°.33N**±0°.03×**139°.38E**±0°.03, **h425**^{km}±2^{km}, **h425**^{km}**:pP-P, n1398,** $\sigma 1^{s}37$/1500, **mb5.4**/407, **104C-75D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	Aogashimamukai	3.15	6	P	P	14 19 54.5	+0.8
CBIJ	Chichi jima	3.32	131	⇓P	P	14 19 52.8	-2.5
CBIJ				S	S	14 20 45.6	-4.7
JCJ	Chichijima	3.32	131	P	P	14 19 53.4	-1.9
	2μm,0.3s,baz=185,slow=1.5,SNR=232						
JCJ				S	S	14 20 45.5	-4.7
	10μm,0.3s,baz=253,slow=23,SNR=42						
JHH2	Haha-jima-NKT2	3.65	137	⇓P	P	14 19 56.0	-2.0
JHH2				S	S	14 20 51.2	-4.1
JHCJ	Hachijojimakas	3.75	5	P	P	14 19 58.5	-0.3
JHCJ				S	S	14 20 54.2	-2.6
JHJ2	Mitsune	3.79	6	P	P	14 19 59.0	-0.1
JHJ2				S	S	14 20 55.4	-2.0
JHJ2	Mitsune	3.79	6	P	P	14 19 59.5	+0.4
JHJ	Hachijo jima 2	3.80	5	P	P	14 19 59.3	+0.1
	366nm,0.3s,baz=267,slow=22,SNR=59						
JHJ				S	S	14 20 53.3	-4.2
	682nm,0.3s,baz=85,slow=19,SNR=18						
JMKN	Mikurajimanish	4.56	2	P	P	14 20 05.7	-0.5
JMKN				S	S	14 21 08.4	-2.0
TTO1	TONANKAI O.B.S	4.82	333	⇑P	P	14 20 11.5	+3.1
JMMH	Miemihama	5.32	328	⇑P	P	14 20 15.8	+2.1
JIM2	Oshima 3	5.38	0	P	P	14 20 14.2	-0.1
JIZS	Izushimoda	5.39	356	P	P	14 20 14.9	+0.4
JSG	Sagara	5.43	350	P	P	14 20 16.6	+1.8
BSO1	Boso 1	5.48	14	P	P	14 20 14.9	+0.1
JTNC	Tanabenakahech	5.51	325	P	P	14 20 17.8	+2.0
JKKS	Kakegawashinom	5.54	348	P	P	14 20 17.6	+1.7
JIE	Ise	5.54	336	⇑P	P	14 20 18.4	+2.4
JIE				S	S	14 21 29.9	+1.5
BSO3	Boso 3	5.54	10	P	P	14 20 15.3	-0.4
BSO3				S	S	14 21 25.8	-2.1
JAA	Atsumi	5.62	341	⇑P	P	14 20 18.8	+2.0
JHTM	Izuhatsuma	5.63	357	⇑P	P	14 20 17.3	+0.4
HMMJ	Hamamatsu 2	5.69	346	⇑P	P	14 20 18.9	+1.4
BSO4	Boso 4	5.71	8	P	P	14 20 17.4	-0.2
BSO4				S	S	14 21 29.2	-2.1
AJI	Ajiro2	5.71	358	P	P	14 20 17.8	+0.1
JSSY	Shinshiroyabe	5.79	345	⇑P	P	14 20 20.3	+1.7
SHZ3	Shizuoka 3	5.81	350	P	P	14 20 19.7	+0.9
JYZW	Yoshizawa	5.82	347	P	P	14 20 20.1	+1.2
JFNN	Fujinakano	5.88	354	⇑P	P	14 20 20.1	+0.6
JOD2	Odawara 2	5.93	358	P	P	14 20 19.7	-0.3
TSUJ	Tsu 2	5.93	336	⇑P	P	14 20 22.5	+2.5
JNY	Yasuok	6.15	348	⇑P	P	14 20 23.7	+1.3
JAO	Obara	6.19	344	⇑P	P	14 20 24.6	+1.8
JYN	Shimob	6.20	354	⇑P	P	14 20 23.4	+0.5
JSGW	Sagamiharawaka	6.26	359	P	P	14 20 22.7	-0.8
INU	Inuyama	6.33	342	P	P	14 20 26.0	+1.8
JICN	Ichinomiyachia	6.33	341	P	P	14 20 26.4	+2.1
JGF	Kuroka	6.49	345	⇑P	P	14 20 27.1	+1.1
JNT	Takato	6.62	351	P	P	14 20 28.2	+0.4
JYTA	Yamagatataniai	6.64	341	P	P	14 20 29.2	+1.3
JTO	Tosashimizu	6.65	304	P	P	14 20 30.3	+2.2
JTO				S	S	14 21 52.9	+2.9
JRY	Ryogami san	6.69	357	⇑P	P	14 20 28.1	-0.4
JFM	Mihama	6.82	336	P	P	14 20 31.9	+2.0
JHYU	Hitachinakayam	7.07	8	⇑P	P	14 20 31.7	-0.9
JAG	Ashikaga	7.08	0	⇑P	P	14 20 31.1	-1.6
JAG				S	S	14 21 52.0	-6.4
JGN	Niukaw	7.09	346	⇑P	P	14 20 33.5	+0.6
JAD	Aida	7.13	323	P	P	14 20 35.3	+2.0
JNG	Nsakai	7.14	352	⇑P	P	14 20 33.3	-0.2
JNA	Nagahama	7.25	307	⇓P	P	14 20 37.3	+2.7
MJAR	Matsushiro Arr	7.26	353	P	P	14 20 34.6	-0.2
	8.7nm,0.3s,baz=167,slow=11,SNR=719						
MJAR				S	S	14 22 02.1	0.0
	0.9nm,0.3s,baz=142,slow=16,SNR=2.8						
MJAR				ScP	ScP	14 29 21.0	+0.2
	0.1nm,0.3s,baz=192,slow=2.2,SNR=14						
MJAR	Matsushiro Arr	7.26	353	P	P	14 20 32.5	-2.2
MAJO	Matsushiro	7.26	352	P	P	14 20 34.1	-0.6
MAJO	Matsushiro	7.26	352	P	P	14 20 34.1	-0.6
MAT	Matsushiro	7.26	352	P	P	14 20 33.8	-0.9
MAT	Matsushiro	7.26	352	P	P	14 20 34.1	-0.6
MAT				S	S	14 22 01.1	-1.1
MJB9	Matsu-Tunnel	7.27	352	P	P	14 20 34.2	-0.6
JNKG	Nichinankitago	7.29	291	⇓P	P	14 20 38.3	+3.2
JSKE	Saikikamae	7.29	300	⇓P	P	14 20 38.0	+3.0
JHO	Hitachi	7.33	7	P	P	14 20 34.3	-1.2
JHO				S	S	14 21 58.9	-4.6
JHHC	Hyugahichiya	7.35	297	⇓P	P	14 20 38.4	+2.7
JTN	Tanegashima 3	7.41	282	P	P	14 20 38.9	+2.5
JKT	Katashina	7.42	359	⇑P	P	14 20 35.0	-1.5
JTT	Ttatey	7.46	347	P	P	14 20 37.5	+0.7
JUS	Usuki	7.53	302	⇓P	P	14 20 40.7	+3.1
JTSR	Tashiro 2	7.55	286	⇓P	P	14 20 40.5	+2.6
JHS	Saijyo	7.76	318	⇓P	P	14 20 41.8	+1.6
JYAK	Yakushimahirau	7.76	279	⇓P	P	14 20 42.4	+2.1
JFFD	Fukushimafurud	7.81	7	⇑P	P	14 20 39.8	-0.8
JJN	Nakama	7.82	353	⇑P	P	14 20 40.3	-0.5
ONAJ	Iwakimizuishiy	7.85	8	⇑P	P	14 20 40.2	-0.9
JHK	Hiroka	7.91	358	⇑P	P	14 20 40.6	-1.1
JKDJ	Kitadaitoujima	7.92	247	P	P	14 20 43.8	+1.8
JKDJ				S	S	14 22 17.5	+1.9
JKI	Kunimi	7.93	305	⇓P	P	14 20 44.8	+2.7
JIU3	Izumi3	8.03	296	⇓P	P	14 20 46.2	+3.2
JMZ	Minamidaito 2	8.04	246	⇑P	P	14 20 44.7	+1.5
JKC	Kuchinoerabu	8.06	280	P	P	14 20 45.2	+1.9
JZO	Okuchi	8.06	293	⇓P	P	14 20 46.1	+2.7
JFY	Yanaizu	8.06	2	⇑P	P	14 20 42.5	-0.8
JFK	Kawauchi	8.12	8	S	S	14 22 14.6	-4.8
JNU	Nakatsue	8.21	300	P	P	14 20 47.3	+2.3
	76nm,0.3s,baz=110,slow=4.2,SNR=648						
JNU				S	S	14 22 15.8	-5.5
	baz=26,slow=22,SNR=0.7						
JNU	Nakatsue	8.21	300	P	P	14 20 47.7	+2.7
JZK	Kikaishima	8.32	265	P	P	14 20 48.9	+2.6
JTA	Tamana	8.41	298	P	P	14 20 49.7	+2.5
JMST	Minamisoumatoc	8.47	8	P	P	14 20 47.9	+0.1
JFA	Akaike	8.53	303	P	P	14 20 51.0	+2.5
JMM	Marumori	8.60	7	P	P	14 20 49.3	+0.1
JSJ	Shimokoshiki	8.66	288	P	P	14 20 52.0	+2.0
JFI	Itaya	8.71	300	P	P	14 20 52.9	+2.4
JHGM	Hagimishima	8.86	310	P	P	14 20 54.4	+2.3
JUR	Ureshino	8.91	297	P	P	14 20 55.5	+2.8
JAMN	Amaminishikomi	9.02	266	P	P	14 20 55.9	+1.9
JOU	Okura	9.08	6	P	P	14 20 55.3	+0.8
JAW	Awa shima	9.11	359	P	P	14 20 55.0	+0.2
JIKH	Ishinomakikobu	9.13	10	P	P	14 20 55.6	+0.6
JIO	Ouri	9.25	10	P	P	14 20 57.0	+0.7
JMK	Ichinoseki	9.72	9	P	P	14 21 02.4	+0.9
JOKE	Okinoerabujima	9.72	261	P	P	14 21 04.3	+2.5
OFUJ	Ofunato	9.91	10	P	P	14 21 04.5	+0.9
JTU	Tsushima	9.94	304	P	P	14 21 06.4	+2.4
JTU				S	S	14 22 58.8	+2.2
JRG	Rokugo	10.10	6	P	P	14 21 07.1	+1.4
JOW	Kunigami	10.12	258	P	P	14 21 08.5	+2.4
JOW	Kunigami	10.12	258	P	P	14 21 08.4	+2.4
	36nm,0.3s,baz=122,slow=14,SNR=172						
JOW	Kunigami	10.12	258	P	P	14 21 08.6	+2.4
JIH	Iheya	10.33	260	P	P	14 21 10.7	+2.3
JIH				S	S	14 23 07.0	+2.3
MIYJ	Miyakonagasawa	10.42	10	P	P	14 21 10.2	+1.0
JNTH	Nagotoyohara	10.43	257	P	P	14 21 11.9	+2.4
JJT3	Tamagusuku3	10.75	256	P	P	14 21 16.0	+2.9
JKZ	Kuzumaki	10.75	8	P	P	14 21 14.2	+1.3
JTH	Tanohata	10.78	10	P	P	14 21 14.3	+1.1
JAH	Hinai	10.89	5	P	P	14 21 16.0	+1.7
JNTW	Noshirotokiwa	10.94	3	P	P	14 21 17.1	+2.2
JAGN	Aguni-jima	11.07	259	P	P	14 21 18.5	+1.9
JANG	Nango	11.16	8	P	P	14 21 18.4	+1.0
JHHS	Hirosakihyakuz	11.33	4	P	P	14 21 21.6	+2.4
JKE	Kume jima 2	11.54	258	P	P	14 21 23.6	+1.8
JOT	Ohata	12.11	6	P	P	14 21 29.1	+1.4
TJN	Taejon	12.30	308	deP	P	14 21 30.8	+0.9
KSRS	Korea Array	12.54	313	P	P	14 21 33.9	+1.4
	30nm,0.3s,baz=127,slow=10,SNR=993						
KSRS				S	S	14 23 47.9	-0.8
	baz=120,slow=20,SNR=11						
KSRS				ScP	ScP	14 29 27.7	+0.5
	0.3nm,0.3s,baz=166,slow=1.0,SNR=24						
KSAR	Wonju Array Be	12.56	313	P	P	14 21 32.8	+0.1
KSAR	Wonju Array Be	12.56	313	P	P	14 21 32.8	+0.1
KS19	Wonju Array Si	12.60	313	P	P	14 21 33.5	+0.3
JKB	Kayabe	12.61	6	P	P	14 21 34.6	+1.5
ERM	Erimo	13.03	13	ceP	P	14 21 39.6	+1.9
ERM				pmax	pmax		
	comp=Z,1μm,0.8s						
ERM	Erimo	13.03	13	P	P	14 21 40.4	+2.7
JOGS	Gusukube	13.26	253	P	P	14 21 42.9	+2.4
JIKM	Ikemajima	13.33	254	P	P	14 21 43.5	+2.2
JIKM				S	S	14 24 07.8	+3.0
JMJ2	Miyako jima3	13.33	253	P	P	14 21 43.5	+2.2
JMJ2				S	S	14 24 08.9	+4.0
INCN	Inchon	13.39	311	P	P	14 21 42.8	+1.0
INCN	Inchon	13.39	311	P	P	14 21 42.8	+1.0
JIRB	Irabujima	13.43	254	P	P	14 21 44.1	+1.8
JIRB				S	S	14 24 10.5	+3.7
JCH	Churui	13.64	13	P	P	14 21 46.4	+2.0
JTJ	Tarama	13.89	254	P	P	14 21 48.8	+1.4
JTJ				S	S	14 24 16.9	+0.8
WOSN	Wonsan	13.92	318	P	P	14 21 43.5	-4.0
JISG	Ishigakijimahi	14.24	254	P	P	14 21 51.7	+0.5
HJU	Haeju	14.30	311	P	P	14 21 52.2	+0.6
HHU	Hamhung	14.38	320	P	P	14 21 52.5	+0.1
JIJ	Ishigaki jima	14.47	254	P	P	14 21 54.0	+0.3
JHR	Hokuryu	14.51	7	P	P	14 21 56.2	+2.4
JKRS	Kuro-shima	14.63	253	P	P	14 21 56.4	+1.0
CHJN	Chongjin	14.68	331	P	P	14 21 54.0	-1.6
MSHR	Mys Shultsa	14.80	336	i P	P	14 21 58.5	+1.6
IRIF	Iriomote-Funau	14.83	254	P	P	14 21 57.8	+0.3
PYAG	Pyongyang	14.86	314	P	P	14 21 59.0	+1.4
PYAG				pP		14 22 06.0	
PYAG				PPP	PPP	14 22 19.0	
PYAG				S	S	14 24 36.0	+1.2
PYAG				sS		14 24 46.0	
PYAG				SS		14 24 54.0	
HATJ	Hateruma jima	14.88	253	P	P	14 21 58.9	+0.9
NEM2	Nemuro 2	14.91	18	P	P	14 21 59.4	+1.3
NMR	Nemuro--Hokkai	14.91	18	⇓iP	P	14 22 00.1	+2.0
ASAJ	Asahikawa	14.98	9	P	P	14 22 00.9	+2.0
	comp=Z,18nm,0.3s,baz=224,slow=12,SNR=183						
ASAJ				S	S	14 24 36.3	-0.8
	comp=Z,0.4nm,0.3s,baz=321,slow=31,SNR=0.9						
ASAJ				ScP	ScP	14 29 31.8	+0.6
	comp=Z,1.8nm,0.3s,baz=254,slow=6.0,SNR=16						
JKA	Kamikawa-asahi	14.98	9		S	14 24 36.3	-0.8
JKA					ScP	14 29 31.8	+0.6
VLA	Vladivostok	15.03	338	c iP	P	14 22 01.2	+1.8
YOJ	Yonaguni jima	15.39	255	P	P	14 22 03.2	-0.2
YOJ	Yonaguni jima	15.39	255	P	P	14 22 03.3	-0.2
YOJ				pmax	pmax		
	comp=Z,1μm,0.9s						
YOJ	Yonaguni jima	15.39	255	P	P	14 22 03.3	-0.2
JYNG	Yonagunijimaku	15.45	256	P	P	14 22 02.9	-1.2
GRPR	Tuman	15.50	17	⇓iP	P	14 22 06.8	+2.3
GRPR				pmax	pmax		
	comp=Z,554nm,0.5s						
GRPR				pmax	pmax		
	comp=N,655nm,0.7s						
GRPR				pmax	pmax		
	comp=E,102nm,0.6s						
YUK	Yuzh-Kuril'sk	15.56	18	⇑iP	P	14 22 06.9	+1.8
YUK				pmax	pmax		
	comp=Z,934nm,0.5s						
YUK				pmax	pmax		
	comp=N,36nm,0.6s						
YUK				pmax	pmax		
	comp=E,82nm,0.3s						
KGE	Kanggye	15.58	321	P	P	14 22 06.5	+1.1
SSE	Sheshan	15.83	281	P	P	14 22 07.0	-1.2
SSE				pmax	pmax		
	comp=E,84nm,0.5s						
SSE				pmax	pmax		
	comp=E,890nm,10.8s						
SSE	Sheshan	15.83	281	P	P	14 22 07.0	-1.2
TEY	Ternei	15.84	353	⇑iP	P	14 22 09.4	+1.4
TEY				eS	S	14 24 53.8	0.0
TEY				pmax	pmax		
	comp=N,400nm,2.4s						
TEY				pmax	pmax		
	comp=Z,600nm,2.4s						
TEY				pmax	pmax		
	comp=N,390nm,0.7s						
TEY				pmax	pmax		
	comp=E,100nm,0.7s						
TEY				pmax	pmax		
	comp=Z,520nm,0.7s						
TEY				smax	smax		
	comp=N,400nm,3.4s						
USA0B	Ussuriysk Arra	15.97	340	d iP	P	14 22 10.7	+1.2
USA0B	Ussuriysk Arra	15.97	340	P	P	14 22 11.1	+1.6
USRK	Ussuriysk Ar.	15.97	340	P	P	14 22 10.8	+1.3
	baz=143,slow=9.8,SNR=1981						
USRK				S	S	14 24 55.8	-0.7
	baz=158,slow=3.1,SNR=1.8						
USRK				ScP	ScP	14 29 32.5	-0.6
	baz=222,slow=2.6,SNR=9.7						
USRK	Ussuriysk Ar.	15.97	340	P	P	14 22 11.2	+1.7
USRK	Ussuriysk Ar.	15.97	340	P	P	14 22 11.2	+1.7
SUJ	Sinuiju	16.27	315	P	P	14 22 13.0	+0.3
GUMO	Guam	16.46	161	P	P	14 22 15.9	+0.8
	comp=N,86nm,0.3s,baz=128,slow=5.1,SNR=27						
GUMO				S	S	14 25 06.6	-0.2
	comp=N,5.0nm,0.3s,baz=6.6,slow=20,SNR=2.7						
GUMO	Guam	16.46	161	P	P	14 22 15.8	+0.7
TATO	Taipei	16.50	259	P	P	14 22 14.7	-0.7
NACB	Ninganchiao	16.69	256	P	P	14 22 15.7	-1.7
YHNB	Yeheng	16.70	258	P	P	14 22 16.6	-1.0
MDJ	Mudanjiang	17.13	336	P	P	14 22 23.0	+1.2
MDJ				pmax	pmax		
	comp=N,140nm,1.1s						
MDJ	Mudanjiang	17.13	336	P	P	14 22 22.4	+0.6
YULB	Yu-li	17.24	254	P	P	14 22 22.5	-0.9

SSLB	**Suanglung**	**17.38**	**256**	P	**P**	**14 22 24.4**	**-0.3**
DL2	**Dalian**	**17.51**	**308**	P	**P**	**14 22 24.8**	**-1.1**
DL2				sP	**sP**	**14 24 14.9**	**-1.1**
DL2				S	**S**	**14 25 25.3**	**-1.0**
DL2				pmax	pmax		
	comp=N,400nm,0.8s						
DL2				pmax	pmax		
	comp=N,470nm,3.7s						
TWG	**Pinlang**	**17.67**	**253**	P	**P**	**14 22 26.4**	**-1.4**
YSS	**Yuzh-Sakhalins**	**17.80**	**8**α	*i*P	**P**	**14 22 29.5**	**+0.7**
YSS				*e*S	**S**	**14 25 32.9**	**+1.5**
YSS				pmax	pmax		
	comp=Z,2µm,3.1s						
YSS				pmax	pmax		
	comp=N,1µm,3.0s						
YSS				pmax	pmax		
	comp=E,700nm,4.0s						
YSS				pmax	pmax		
	comp=N,160nm,1.0s						
YSS				pmax	pmax		
	comp=Z,360nm,1.0s						
YSS				smax	smax		
	comp=E,40nm,1.5s						
YSS				MLR	MLR		
	comp=E,2µm,15.0s						
YSS	**Yuzh-Sakhalins**	**17.80**	**8**	P	**P**	**14 22 30.2**	**+1.4**
TPUB	**Ta-pu**	**17.84**	**255**	P	**P**	**14 22 29.1**	**-0.6**
NJ2	**Nanjing**	**17.86**	**284**⇓	*i*P	**P**	**14 22 28.5**	**-1.2**
NJ2				S	**S**	**14 25 32.4**	**-0.6**
NJ2				PcP	**PcP**	**14 26 42.3**	**-0.6**
NJ2				ScP	**ScP**	**14 29 38.0**	**+0.8**
NJ2				pmax	pmax		
	comp=E,110nm,0.6s						
SNY	**Shenyang**	**17.88**	**318**	⇓P	**P**	**14 22 30.1**	**+0.4**
SNY				sP	**sP**	**14 24 19.3**	**-0.6**
SNY				S	**S**	**14 25 32.8**	**-0.2**
SNY				PcS	**PcS**	**14 30 14.8**	**-4.5**
SNY				pmax	pmax		
	comp=E,1µm,1.1s						
CN2	**Changchun**	**18.24**	**326**	⇓P	**P**	**14 22 33.3**	**-0.2**
CN2				*e*sP	sP	14 24 26.0	+2.0
CN2				*e*S	**S**	**14 25 34.9**	**-4.4**
CN2				pmax	pmax		
	comp=E,200nm,0.8s						
CN2				pmax	pmax		
	comp=E,1µm,6.0s						
QZH	**Quanzhou**	**19.01**	**262**⇓	*i*P	**P**	**14 22 39.8**	**-1.5**
QZH				S	**S**	**14 25 52.1**	**-0.5**
QZH				pmax	pmax		
	comp=E,730nm,0.6s						
SGCP	**Mt. Cagua**	**19.30**	**239**	*e*P	**P**	**14 22 43.5**	**-0.6**
KNMB	**Chin-men Tao**	**19.33**	**260**	P	**P**	**14 22 43.8**	**-0.6**
PALP	**Palanan**	**19.77**	**236**	*e*P	**P**	**14 22 48.8**	**+0.3**
TIA	**Tai'an**	**19.91**	**296**	P	**P**	**14 22 49.1**	**-0.5**
TIA				pmax	pmax		
	comp=E,320nm,0.7s						
APYP	**Conner**	**20.13**	**239**	*e*P	**P**	**14 22 49.9**	**-1.8**
CAUP	**Cauayan**	**20.28**	**236**	*e*P	**P**	**14 22 54.0**	**+0.8**
ABRA	**Dolores**	**20.66**	**240**	*e*P	**P**	**14 22 55.0**	**-1.6**
KLR	**Kul'dur**	**20.72**	**346**	P	**P**	**14 22 58.2**	**+1.5**
	comp=E,96nm,0.6s,baz=164,slow=8.9,SNR=368						
KLR				S	**S**	**14 26 19.8**	**0.0**
	comp=E,9.7nm,0.9s,baz=65,slow=22,SNR=11						
KLR				ScP	**ScP**	**14 29 43.2**	**-0.3**
	comp=E,22nm,0.7s,baz=185,slow=3.2,SNR=17						
KLR	**Kul'dur**	**20.72**	**346***c*	*i*P	**P**	**14 22 58.2**	**+1.5**
KLR				pmax	pmax		
	comp=Z,112nm,0.7s						
SZP	**Santa**	**20.91**	**240**	P	**P**	**14 22 58.8**	**-0.1**
GRNR	**Gornyy**	**21.54**	**355**⇑	*i*P	**P**	**14 23 05.6**	**+1.4**
GRNR				*e*S	**S**	**14 26 38.1**	**+5.2**
GRNR				pmax	pmax		
	comp=Z,130nm,0.9s						
GRNR				smax	smax		
	comp=N,10.0nm,1.0s						
SMPP	**San Manuel, Pa**	**21.63**	**237**	*e*P	**P**	**14 23 03.4**	**-2.0**
TYV	**Tymovskoe**	**21.65**	**6**	*e*P	**P**	**14 23 07.5**	**+2.3**
TYV				*e*S	**S**	**14 26 39.1**	**+4.4**
TYV				pmax	pmax		
	comp=Z,600nm,1.5s						
TYV				pmax	pmax		
	comp=Z,330nm,0.8s						
TYV				smax	smax		
	comp=E,1µm,4.4s						
TYV				smax	smax		
	comp=N,43nm,2.0s						
POLP	**Polilio Island**	**21.69**	**232**	*e*P	**P**	**14 23 07.2**	**+1.2**
PCPH	**Palayan**	**21.71**	**235**⇓	*e*P	**P**	**14 23 05.4**	**-0.7**
WHN	**Wuhan**	**21.72**	**279**⇓	*i*P	**P**	**14 23 06.6**	**+0.5**
WHN				sP	**sP**	**14 25 04.3**	**+1.9**
BJT	**Baijiatuau**	**21.81**	**305**	P	**P**	**14 23 06.7**	**-0.1**
BJT				pmax	pmax		
	comp=Z,528nm,0.7s						
BJT	**Baijiatuau**	**21.81**	**305**	P	**P**	**14 23 06.7**	**-0.1**
BJI	**Beijing**	**21.81**	**305**	P	**P**	**14 23 06.3**	**-0.5**
BJI				S	**S**	**14 26 40.4**	**+2.9**
BJI				PcP	**PcP**	**14 26 54.6**	**+4.6**
BJI				ScP	**ScP**	**14 29 47.0**	**+0.6**
BJI				ScS	**ScS**	**14 33 30.5**	**-0.8**
BJI				pmax	pmax		
	comp=Z,730nm,0.7s						
BJI				pmax	pmax		
	comp=Z,1µm,3.5s						
BOLP	**Bolinao**	**22.05**	**238**	*e*P	**P**	**14 23 07.3**	**-1.9**
SCZP	**Santa Cruz**	**22.43**	**237**	*e*P	**P**	**14 23 12.7**	**0.0**
BOAC	**Boac**	**22.66**	**230**	*e*P	**P**	**14 23 14.4**	**-0.4**
OCLP	**Ormoc**	**22.82**	**220**	*e*P	**P**	**14 23 16.7**	**+0.5**
TGY	**Tagaytay City**	**22.82**	**232**	P	**P**	**14 23 16.3**	**0.0**
	comp=Z,2µm,0.8s,baz=31,slow=1.3,SNR=25						
PGP	**Puerto Galera**	**23.23**	**231**⇓	*e*P	**P**	**14 23 19.1**	**-0.8**
OTRP	**Odiongan**	**23.36**	**227**	*e*P	**P**	**14 23 21.1**	**0.0**
MSLP	**Maasin**	**23.43**	**218**	*e*P	**P**	**14 23 21.6**	**-0.1**
HKC	**Hong Kong Obse**	**23.72**	**259**	⇓P	**P**	**14 23 25.0**	**+0.8**
HKPS	**Hong Kong Po S**	**23.75**	**259**	P	**P**	**14 23 24.3**	**-0.3**
HKPS				IAmb	IAmb	14 23 28.5	
	comp=Z,216nm,1.0s						
SJMP	**San Jose**	**23.87**	**229**	*e*P	**P**	**14 23 25.8**	**+0.1**
TIY	**Taiyuan**	**23.91**	**298**	*e*P	**P**	**14 23 26.8**	**+0.9**
TIY				pmax	pmax		
	comp=Z,440nm,1.2s						
BUTP	**Butuan**	**24.02**	**215**	*e*P	**P**	**14 23 27.9**	**+0.9**
SKR	**Severo-Kuril's**	**24.78**	**26**	*e*P	**P**	**14 23 34.1**	**+0.8**
SKR				*e*S	**S**	**14 27 34.1**	**+10**
SKR				pmax	pmax		
	comp=Z,172nm,0.8s						
SKR				MLR	MLR		
	comp=Z,2µm,15.0s						
BUSP	**Coron**	**24.82**	**230**	*e*P	**P**	**14 23 33.4**	**-0.7**
HIA	**Hailar**	**24.92**	**328**	P	**P**	**14 23 36.0**	**+1.3**
HIA				pmax	pmax		
	comp=Z,128nm,0.7s						
HIA	**Hailar**	**24.92**	**328**	P	**P**	**14 23 36.0**	**+1.3**
HIA				IAmb	IAmb	14 23 36.7	
	comp=Z,128nm,0.7s						
HHC	**Hu-ho-hao-te**	**25.39**	**304**	*e*P	**P**	**14 23 39.9**	**+0.8**
HHC				pmax	pmax		
	comp=Z,210nm,0.9s						
HHC				pmax	pmax		
	comp=Z,510nm,7.2s						
ENH	**Enshi**	**25.93**	**280**	P	**P**	**14 23 44.3**	**+0.4**
ZEA	**Zeya**	**25.95**	**343**	*e*P	**P**	**14 23 45.0**	**+1.3**
ZEA				*e*S	**S**	**14 27 39.0**	**-3.5**
ZEA				pmax	pmax		
	comp=E,40nm,0.3s						
ZEA				pmax	pmax		
	comp=N,57nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,100nm,0.8s						
ZEA				smax	smax		
	comp=E,800nm,6.0s						
ZEA				smax	smax		
	comp=N,220nm,1.2s						
ZEA				smax	smax		
	comp=E,290nm,1.2s						
KCP	**Kidapawan**	**25.97**	**214**⇑	*e*P	**P**	**14 23 44.3**	**-0.1**
CTBH	**Cotabato--PC H**	**26.21**	**216**⇓	*e*P	**P**	**14 23 46.4**	**0.0**
XAN	**Xi'an**	**26.29**	**288**	P	**P**	**14 23 47.3**	**+0.2**
XAN				sP	sP	14 25 47.3	-2.8
XAN				S	**S**	**14 27 38.8**	**-10**
XAN				pmax	pmax		
	comp=E,1µm,0.5s						
XAN				pmax	pmax		
	comp=E,2µm,3.6s						
XAN	**Xi'an**	**26.29**	**288**	P	**P**	**14 23 47.7**	**+0.6**
XAN				pmax	pmax		
	comp=Z,1µm,0.6s						
XAN	**Xi'an**	**26.29**	**288**	P	**P**	**14 23 47.7**	**+0.6**
BTO	**Baotou**	**26.45**	**303**	*e*P	**P**	**14 23 49.3**	**+0.9**
PEA0B	**Petropavlovsk-**	**27.31**	**24**	*i* P	**P**	**14 23 56.8**	**+1.1**
PEA0B	**Petropavlovsk-**	**27.31**	**24**	P	**P**	**14 23 57.5**	**+1.8**
PEA0B				IAmb	IAmb	14 23 58.3	
	comp=Z,363nm,1.7s						
PETK	**Petropavlovsk-**	**27.31**	**24**	P	**P**	**14 23 57.1**	**+1.4**
	comp=Z,42nm,0.8s,baz=195,slow=4.9,SNR=34						
PETK				ScP	**ScP**	**14 30 00.8**	**-0.8**
	comp=Z,41nm,1.1s,baz=177,slow=3.0,SNR=9.3						
PETK	**Petropavlovsk-**	**27.31**	**24**	P	**P**	**14 23 57.5**	**+1.8**
PETK					**ScP**	**14 30 01.3**	**-0.3**
PET	**Petropavlovsk**	**27.59**	**25**⇑	*i*P	**P**	**14 23 58.7**	**+0.5**
PET				pmax	pmax		
	comp=Z,178nm,1.6s						
PET	**Petropavlovsk**	**27.59**	**25**	P	**P**	**14 23 59.9**	**+1.7**
PET				IAmb	IAmb	14 24 00.7	
	comp=Z,439nm,1.6s						
QIZ	**Qiongzhong**	**28.76**	**256**	P	**P**	**14 24 10.1**	**+1.2**
QIZ				sP	**sP**	**14 26 11.3**	**-0.9**
QIZ				S	**S**	**14 28 28.9**	**+1.6**
QIZ				pmax	pmax		
	comp=Z,140nm,0.7s						
QIZ	**Qiongzhong**	**28.76**	**256**	P	**P**	**14 24 10.5**	**+1.6**
QIZ				IAmb	IAmb	14 24 10.8	
	comp=Z,110nm,0.7s						
GYA	**Guiyang**	**29.01**	**272**	P	**P**	**14 24 12.3**	**+1.1**
GYA				pP	PP	14 25 26.4	-0.7
GYA				PP	**pwP**	**14 25 32.0**	**+0.2**
GYA				sP	sP	14 26 14.4	-0.1
GYA				S	**S**	**14 28 33.3**	**+2.0**
GYA				sS	sS	14 30 46.8	-3.5
GYA				pmax	pmax		
	comp=Z,130nm,4.9s						
CIT	**Chita**	**29.68**	**327**	*e*P	**P**	**14 24 13.4**	**-3.2**
CIT				*e*		14 27 09.3	
CIT				*e*S	**S**	**14 28 40.8**	**-0.1**
CIT				pmax	pmax		
	comp=Z,776nm,1.3s						
LZH	**Lanzhou**	**30.54**	**292**	⇓P	**P**	**14 24 24.6**	**+0.2**
LZH				PcP	**PcP**	**14 27 12.4**	**+1.4**
LZH				S	**S**	**14 28 53.3**	**-1.5**
LZH				ScP	**ScP**	**14 30 14.0**	**+1.5**
LZH				ScS	**ScS**	**14 34 09.9**	**-0.1**
LZH				pmax	pmax		
	comp=Z,660nm,1.1s						
LZH				pmax	pmax		
	comp=Z,2µm,5.2s						
TNTI	**Ternate**	**30.62**	**204**	P	**P**	**14 24 25.0**	**-0.2**
	comp=Z,94nm,1.2s						
CD2	**Chengdu**	**30.78**	**282**⇓	*i*P	**P**	**14 24 26.8**	**+0.3**
CD2				S	**S**	**14 29 02.8**	**+4.3**
SWI	**Sorong**	**31.01**	**196**	P	**P**	**14 24 28.8**	**+0.3**
	comp=Z,107nm,1.0s						
SWI	**Sorong**	**31.01**	**196**	P	**P**	**14 24 29.1**	**+0.6**
SWI				pmax	pmax		
	comp=Z,107nm,1.0s						
ULN	**Ulaanbaatar**	**31.01**	**316***d*	*e*P	**P**	**14 24 29.1**	**+0.7**
ULN				pmax	pmax		
	comp=Z,459nm,0.8s						
ULN	**Ulaanbaatar**	**31.01**	**316**	P	**P**	**14 24 29.7**	**+1.4**
SIJI	**Sorong**	**31.01**	**196**	P	**P**	**14 24 28.8**	**+0.2**
	comp=Z,54nm,0.6s,baz=349,slow=16,SNR=28						
SIJI				S	**S**	**14 28 58.7**	**-3.5**
	comp=Z,7.0nm,0.8s,baz=166,slow=24,SNR=7.2						
SIJI				ScP	**ScP**	**14 30 12.4**	**-1.8**
	comp=Z,11nm,0.8s,baz=22,slow=10,SNR=3.7						
MA2	**Magadan**	**31.23**	**11**	P	**P**	**14 24 30.7**	**+0.8**
	comp=Z,183nm,0.8s,baz=192,slow=8.3,SNR=181						
MA2				S	**S**	**14 29 04.0**	**-0.6**
	comp=Z,11nm,1.1s,baz=291,slow=22,SNR=6.3						
MA2				ScP	**ScP**	**14 30 13.8**	**-0.3**
	comp=Z,31nm,0.8s,baz=147,slow=5.7,SNR=12						
MA2	**Magadan**	**31.23**	**11***c*	*e*P	**P**	**14 24 30.8**	**+0.9**
MA2				pmax	pmax		
	comp=Z,291nm,0.9s						
MA2	**Magadan**	**31.23**	**11**	P	**P**	**14 24 31.2**	**+1.3**
MA2				IAmb	IAmb	14 24 32.1	
	comp=Z,253nm,0.8s						
MA2					**ScP**	**14 30 14.2**	**+0.1**
SONM	**Songino Array**	**31.40**	**315**	P	**P**	**14 24 32.4**	**+0.7**
	comp=Z,398nm,1.1s,baz=125,slow=8.5,SNR=670						
SONM				PcP	**PcP**	**14 27 12.2**	**-0.9**
	comp=Z,12nm,0.5s,baz=136,slow=3.2,SNR=5.1						
SONM				S	**S**	**14 29 05.6**	**-2.2**
	comp=Z,3.3nm,0.9s,baz=48,slow=17,SNR=2.8						
SONM				ScP	**ScP**	**14 30 14.8**	**-0.3**
	comp=Z,12nm,0.6s,baz=138,slow=3.3,SNR=8.2						
SONM	**Songino Array**	**31.40**	**315**	P	**P**	**14 24 32.9**	**+1.2**
SONM					**PcP**	**14 27 13.9**	**+0.9**
SONM					**ScP**	**14 30 15.2**	**0.0**
GENI	**Genyem**	**31.75**	**179**	P	**P**	**14 24 35.5**	**+0.6**
	comp=Z,88nm,0.9s						
KKM	**Kota Kinabalu**	**31.85**	**228**	P	**P**	**14 24 37.0**	**+1.1**
KKM				IAmb	IAmb	14 24 38.0	
	comp=Z,354nm,1.4s						
LBMI	**Labuha**	**31.89**	**203**	P	**P**	**14 24 36.2**	**+0.1**
	comp=Z,108nm,0.6s						
MANU	**Manus Island**	**32.11**	**165**	P	**P**	**14 24 38.0**	**-0.1**
KMSI	**Cibinong**	**32.15**	**210**	P	**P**	**14 24 38.3**	**0.0**
	comp=Z,2µmcomp=Z,206nm,0.8s						
SPMM	**Sapulut**	**32.71**	**226**	P	**P**	**14 24 44.0**	**+0.7**
KMI	**Kunming**	**32.77**	**272**	P	**P**	**14 24 44.5**	**+0.6**
KMI				pP	pP	14 26 01.9	+2.5
KMI				ScP	**ScP**	**14 30 21.4**	**+1.0**
KMI				pmax	pmax		
	comp=Z,570nm,1.1s						
KMI				pmax	pmax		
	comp=Z,1µm,3.1s						
KMI	**Kunming**	**32.77**	**272**	P	**P**	**14 24 45.1**	**+1.2**
KMI				pmax	pmax		
	comp=Z,502nm,0.9s						
KMI	**Kunming**	**32.77**	**272**	P	**P**	**14 24 45.1**	**+1.2**
FAKI	**Fak Fak**	**32.78**	**193**	P	**P**	**14 24 43.8**	**0.0**
	comp=Z,69nm,0.8s						
FAKI	**Fak Fak**	**32.78**	**193**	P	**P**	**14 24 43.6**	**-0.2**
SLVN	**Son La**	**32.94**	**264**	P	**P**	**14 24 46.4**	**+1.2**
MRSI	**Marisa**	**33.16**	**213**	P	**P**	**14 24 47.2**	**+0.1**
	comp=Z,2µmcomp=Z,273nm,1.0s						
YAK	**Yakutsk**	**33.33**	**352**	P	**P**	**14 24 47.8**	**-0.1**
	comp=Z,21nm,0.4s,baz=168,slow=1.2,SNR=44						
YAK				S	**S**	**14 29 34.5**	**-2.2**
	comp=Z,7.4nm,0.6s,baz=50,slow=23,SNR=11						
YAK				ScP	**ScP**	**14 30 20.6**	**-0.7**
	comp=Z,12nm,0.5s,baz=344,slow=1.9,SNR=4.5						
YAK	**Yakutsk**	**33.33**	**352***c*	*i*P	**P**	**14 24 47.9**	**+0.1**
YAK				*e**PP	**pP**	**14 26 00.5**	**-3.7**
YAK				*e*		14 26 20.6	
YAK				*e*		14 27 15.2	
YAK				*e*S	**S**	**14 29 33.9**	**-2.8**
YAK				*e**SS	**sS**	**14 31 50.5**	**-6.7**
YAK				*e*SS	**SS**	**14 32 23.0**	**+0.2**
YAK				*e*		14 34 19.0	
YAK				pmax	pmax		
	comp=Z,113nm,1.0s						
YAK				pmax	pmax		
	comp=Z,65nm,0.9s						
YAK				pmax	pmax		
	comp=N,60nm,1.2s						
YAK				pmax	pmax		
	comp=E,38nm,1.0s						
YAK				smax	smax		
	comp=E,275nm,1.6s						
YAK				smax	smax		
	comp=N,130nm,1.3s						
YAK	**Yakutsk**	**33.33**	**352**	P	**P**	**14 24 48.5**	**+0.7**
YAK				IAmb	IAmb	14 26 01.9	
	comp=Z,132nm,0.9s						
BOD	**Bodaibo**	**33.50**	**335**⇑	*i*P	**P**	**14 24 49.8**	**+0.4**
BOD				*e*		14 29 40.6	
BOD				pmax	pmax		
	comp=Z,59nm,1.0s						
DLV	**T Lat**	**33.54**	**245**	P	**P**	**14 24 50.3**	**-0.2**
SANI	**Sanana**	**33.73**	**205**	P	**P**	**14 24 50.4**	**-1.5**
	comp=Z,2µmcomp=Z,214nm,0.8s						
GTA	**Gaotai**	**33.94**	**298**	⇓P	**P**	**14 24 53.8**	**+0.2**
GTA				pP	pwP	14 26 13.5	-1.9
GTA				sP	sP	14 26 56.8	-1.7
GTA				ScP	**ScP**	**14 30 23.9**	**-0.3**
GTA				ScS	**ScS**	**14 34 24.8**	**-2.6**
GTA				pmax	pmax		
	comp=Z,490nm,1.1s						
MSAI	**Masohi**	**34.00**	**199**	P	**P**	**14 24 55.4**	**+1.3**
	comp=Z,31nm,1.5s						
LUWI	**Luwuk**	**34.12**	**211**	P	**P**	**14 24 53.4**	**-1.8**
	comp=Z,2µmcomp=Z,119nm,0.4s						
LUWI	**Luwuk**	**34.12**	**211**	P	**P**	**14 24 53.4**	**-1.8**
LUWI				IAmb	IAmb	14 24 54.7	
	comp=Z,97nm,0.5s						
MPSI	**Mapaga**	**34.30**	**216**	P	**P**	**14 24 56.3**	**-0.4**
	comp=Z,36nm,0.8s						
ZAK	**Zakamensk**	**34.31**	**318**	*e*P	**P**	**14 24 56.9**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,284nm,1.2s						
APSI	**Ampana**	**34.52**	**213**	P	**P**	**14 24 57.8**	**-0.7**
	comp=Z,3µmcomp=Z,326nm,0.7s						
AAI	**Ambon**	**34.53**	**200**	P	**P**	**14 24 59.0**	**+0.3**
	comp=Z,192nm,0.7s						
AAI	**Ambon**	**34.53**	**200**	P	**P**	**14 24 59.4**	**+0.7**
AAI				pmax	pmax		
	comp=Z,192nm,0.7s						
IRK	**Irkutsk**	**34.56**	**321**	*e*P	**P**	**14 24 58.4**	**-0.1**
IRK				*e*S	**S**	**14 29 58.0**	**+2.2**
IRK				pmax	pmax		
	comp=Z,386nm,1.6s						
TLY	**Talaya**	**34.65**	**320**	P	**P**	**14 25 00.3**	**+1.1**
	comp=Z,198nm,0.5s,baz=143,slow=5.6,SNR=131						
TLY				PcP	**PcP**	**14 27 21.4**	**-0.7**
	comp=Z,18nm,0.7s,baz=227,slow=2.8,SNR=3.2						
TLY				S	**S**	**14 29 57.3**	**0.0**
	comp=Z,1.7nm,0.6s,baz=230,slow=21,SNR=1.0						
TLY				ScP	**ScP**	**14 30 25.0**	**-1.4**
	comp=Z,7.8nm,0.7s,baz=260,slow=9.9,SNR=3.1						
TLY	**Talaya**	**34.65**	**320***d*	*i*P	**P**	**14 25 00.5**	**+1.2**
TLY				pmax	pmax		
	comp=Z,565nm,0.7s						
TLY	**Talaya**	**34.65**	**320**	P	**P**	**14 25 01.0**	**+1.7**
SEY	**Seymchan**	**34.66**	**10**	P	**P**	**14 25 00.4**	**+1.3**
	comp=Z,121nm,1.0s,baz=200,slow=7.1,SNR=188						
SEY				ScP	**ScP**	**14 30 24.3**	**-1.8**
	comp=Z,17nm,0.8s,baz=198,slow=3.8,SNR=8.6						
SEY	**Seymchan**	**34.66**	**10***c*	*i*P	**P**	**14 25 00.3**	**+1.2**
BNDI	**Bandanaira**	**34.86**	**197**	P	**P**	**14 25 01.3**	**-0.1**
	comp=Z,18µmcomp=Z,138nm,0.7s						
RABL	**Rabaul**	**35.51**	**158**	P	**P**	**14 25 06.2**	**-0.7**
SBUM	**Sibu**	**37.16**	**229**	P	**P**	**14 25 21.5**	**+0.9**
SBUM	**Sibu**	**37.16**	**229**	P	**P**	**14 25 22.0**	**+1.3**
BKB	**Balikpapan**	**37.25**	**219**	P	**P**	**14 25 21.4**	**0.0**
	comp=Z,3µmcomp=Z,221nm,0.8s						
PBKT	**Sadao Pong**	**37.41**	**259**	P	**P**	**14 25 23.5**	**+0.8**
SPSI	**Sidrap Palu**	**38.08**	**213**	P	**P**	**14 25 26.9**	**-1.3**
	comp=Z,111nm,0.8s						
BBSI	**Bau Bau**	**38.20**	**208**	P	**P**	**14 25 29.6**	**+0.4**
	comp=Z,399nmcomp=Z,18nm,1.9s						
CHTO	**Chiang Mai**	**38.21**	**263**	P	**P**	**14 25 30.0**	**+0.7**
CHTO				pmax	pmax		
	comp=Z,508nm,0.8s						
CHTO	**Chiang Mai**	**38.21**	**263**	P	**P**	**14 25 30.0**	**+0.7**
BNSI	**Bone**	**38.30**	**212**	P	**P**	**14 25 30.3**	**+0.3**
	comp=Z,102nm,0.9s						
CM31	**Chiang Mai Arr**	**38.35**	**263**	P	**P**	**14 25 31.2**	**+0.7**
	SNR=90						
CM31	**Chiang Mai Arr**	**38.35**	**263**	P	**P**	**14 25 31.2**	**+0.7**
CM31				IAmb	IAmb	14 25 32.2	
	comp=Z,228nm,0.8s						
CMAR	**Chiang Mai Arr**	**38.35**	**263**	P	**P**	**14 25 30.9**	**+0.4**
	comp=Z,103nm,0.7s,baz=82,slow=4.5,SNR=740						
CMAR				PcP	**PcP**	**14 27 34.0**	**+0.1**
	comp=Z,20nm,0.7s,baz=50,slow=2.0,SNR=6.5						
CMAR				ScP	**ScP**	**14 30 39.0**	**-1.7**
	comp=Z,19nm,1.1s,baz=39,slow=2.1,SNR=14						
CMAR				P3KPbc		14 55 31.1	
	comp=Z,0.3nm,0.4s,baz=276,slow=7.0,SNR=4.3						
CMAR	**Chiang Mai Arr**	**38.35**	**263**	*i* P	**P**	**14 25 30.8**	**+0.3**
CMAR				pmax	pmax		
	comp=Z,144nm,0.7s						
CMAR	**Chiang Mai Arr**	**38.35**	**263**	P	**P**	**14 25 31.5**	**+1.0**
CMAR					**sP**	**14 27 35.4**	**-1.0**
KAPI	**Kappang**	**39.01**	**212**	ScP	**ScP**	**14 30 43.5**	**+0.3**
	comp=Z,47nm,1.0s,baz=58,slow=4.1,SNR=14						
KAPI				S	S	14 30 48.1	-15
	comp=Z,16nm,0.8s,baz=243,slow=8.7,SNR=4.7						
BKSI	**Bulukumba**	**39.11**	**211**	P	**P**	**14 25 36.0**	**-0.6**
	comp=Z,42nm,0.8s						
KSM	**Kuching**	**39.16**	**230**	P	**P**	**14 25 38.2**	**+1.2**
KSM	**Kuching**	**39.16**	**230**	P	**P**	**14 25 38.0**	**+0.9**
PMG	**Port Moresby**	**39.23**	**168**	P	**P**	**14 25 37.4**	**-0.2**
	comp=Z,34nm,0.5s,baz=51,slow=5.0,SNR=34						
PMG				PP	**PP**	**14 27 19.5**	**+0.3**
	comp=Z,7.8nm,0.6s,baz=353,slow=17,SNR=3.1						
PMG				ScP	**ScP**	**14 30 43.3**	**-0.7**
	comp=Z,16nm,0.8s,baz=258,slow=6.8,SNR=3.6						
PMG				S	S	14 30 54.5	-12
	comp=Z,31nm,1.0s,baz=1.0,slow=14,SNR=4.6						
PMG	**Port Moresby**	**39.23**	**168***d*	*i*P	**P**	**14 25 38.1**	**+0.5**
PMG				pmax	pmax		
	comp=Z,80nm,0.8s						
PMG	**Port Moresby**	**39.23**	**168**	P	**P**	**14 25 38.1**	**+0.5**
ADK	**Adak**	**39.45**	**43**	P	**P**	**14 25 39.8**	**+0.8**
ADK				pmax	pmax		
	comp=Z,239nm,1.0s						
ADK	**Adak**	**39.45**	**43**	P	**P**	**14 25 39.8**	**+0.8**
ADK				IAmb	IAmb	14 25 41.0	
	comp=Z,239nm,1.0s						
GSTR	**Great Sitkin T**	**39.88**	**42**	P	**P**	**14 25 43.7**	**+1.2**
ATKA	**Atka Island**	**41.02**	**43**	P	**P**	**14 25 52.6**	**+1.0**
ATKA				IAmb	IAmb	14 25 53.2	
	comp=Z,230nm,0.9s						
TEZP	**TEZPUR**	**41.02**	**278**	*e*P	**P**	**14 25 52.5**	**+0.4**
MMRI	**Maumere**	**41.20**	**206**	P	**P**	**14 25 53.2**	**-0.3**
	comp=Z,136nm,0.9s						
MMRI	**Maumere**	**41.20**	**206**	P	**P**	**14 25 54.0**	**+0.4**
MMRI				IAmb	IAmb	14 25 55.1	
	comp=Z,113nm,0.9s						
SOEI	**Soe**	**41.50**	**203**	P	**P**	**14 25 55.6**	**-0.4**
	comp=Z,147nm,1.1s						
SOEI				pP	**pP**	**14 27 15.3**	**0.0**
	comp=Z,147nm,1.1s						
SOEI	**Soe**	**41.50**	**203**	P	**P**	**14 25 57.2**	**+1.2**
SOEI				IAmb	IAmb	14 26 14.1	
	comp=Z,145nm,1.0s						
LSA	**Lhasa**	**41.73**	**283**	*i* P	**P**	**14 25 59.5**	**+1.3**
	SNR=144						
LSA	**Lhasa**	**41.73**	**283**	P	**P**	**14 25 59.9**	**+1.6**
LSA				pmax	pmax		
	comp=Z,232nm,0.6s						
LSA	**Lhasa**	**41.73**	**283**	P	**P**	**14 25 59.9**	**+1.6**
BILL	**Bilibino**	**41.89**	**15***c*	*i*P	**P**	**14 25 58.9**	**+0.5**
BILL				*i*		14 27 54.1	
BILL				*i* S	**S**	**14 31 46.6**	**+2.6**
BILL				*e*SS	**ScS**	**14 35 12.5**	**+0.3**
BILL				pmax	pmax		
	comp=Z,222nm,1.0s						
BILL	**Bilibino**	**41.89**	**15**	P	**P**	**14 25 59.7**	**+1.4**
BILL				IAmb	IAmb	14 26 00.7	
	comp=Z,254nm,1.0s						
SHL	**Shillong**	**42.10**	**277**	*e*P	**P**	**14 26 00.4**	**-0.5**
MTN	**Manton Dam**	**42.67**	**192**	P	**P**	**14 26 05.2**	**0.0**
MTN				IAmb	IAmb	14 26 05.7	
	comp=Z,148nm,0.8s						
TIXI	**Tiksi**	**42.77**	**355**	P	**P**	**14 26 06.0**	**+0.8**
TIXI				pmax	pmax		
	comp=Z,51nm,0.8s						
TIXI	**Tiksi**	**42.77**	**355**	P	**P**	**14 26 06.0**	**+0.8**
SIMRM	**Sittwe**	**42.98**	**269**	P	**P**	**14 26 09.2**	**+1.5**
BRDH	**Bariadhala**	**43.18**	**273**	P	**P**	**14 26 10.0**	**+0.8**
	comp=Z,2µm,0.6s,baz=93,slow=7.8,SNR=78						
COEN	**Coen**	**43.18**	**175**	P	**P**	**14 26 09.9**	**+0.7**
PLAI	**Plampang**	**43.27**	**212**	P	**P**	**14 26 08.4**	**-1.6**
	comp=Z,237nm,1.0s						
WBSI	**Waikabubak, Su**	**43.27**	**209**	P	**P**	**14 26 09.6**	**-0.4**
	comp=Z,61nm,1.1s						
WMQ	**Urumqi**	**43.28**	**304**	*e*P	**P**	**14 26 11.1**	**+1.3**
WMQ				PcP	**PcP**	**14 27 50.5**	**+0.7**
WMQ				PP	**PP**	**14 27 58.4**	**-1.7**
WMQ				pmax	pmax		
	comp=Z,240nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,4µm,11.6s						
WMQ	**Urumqi**	**43.28**	**304**	P	**P**	**14 26 11.1**	**+1.3**
WMQ				pmax	pmax		
	comp=Z,424nm,1.2s						
WMQ	**Urumqi**	**43.28**	**304**	P	**P**	**14 26 11.1**	**+1.3**
BASI	**Baing, Sumba**	**43.30**	**208**	P	**P**	**14 26 12.5**	**+2.3**
	comp=Z,111nm,0.7s						
MYKOM	**Kota Tinggi**	**43.50**	**238**	P	**P**	**14 26 12.7**	**+0.9**
MYKOM				IAmb	IAmb	14 26 14.2	
	comp=Z,453nm,1.7s						
MYKOM	**Kota Tinggi**	**43.50**	**238**	P	**P**	**14 26 13.0**	**+1.2**

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TPRI  Tanjung Pinang   43.59 236    P       P      14 26 13.8 +1.2
      comp=Z,10µmcomp=Z,95nm,1.4s
KULM  Kulim            43.70 244    P       P      14 26 14.2 +0.8
KULM  Kulim            43.70 244    P       P      14 26 14.0 +0.6
SRBI  Singaraja        43.88 216    P       P      14 26 14.9 +0.2
      comp=Z,204nm,0.7s
IPM   Ipoh             43.90 243    P       P      14 26 15.3 +0.2
IPM   Ipoh             43.90 243    P       P      14 26 15.0  0.0
DGZ   Jazzator, Alta   43.94 313d iP        P      14 26 15.8 +0.8
DGZ                                 pmax    pmax
      comp=Z,287nm,1.0s
GRJI  Gresik           44.37 220    P       P      14 26 19.1 +0.5
      comp=Z,1µmcomp=Z,119nm,1.1s
DNP   Denpasar         44.38 215    P       P      14 26 18.5 -0.2
      comp=Z,411nm,1.1s
DNP   Denpasar         44.38 215    P       P      14 26 18.8 +0.1
DNP                                 pmax    pmax
      comp=Z,409nm,1.1s
GTK   Tadong           44.46 280   eP       P      14 26 19.3 -0.1
IGBI  Denpasar         44.54 215    P       P      14 26 18.9 -1.0
      comp=Z,131nm,1.0s
JAGI  Jajag, Banyuwa   44.75 217    P       P      14 26 20.5 -1.1
      comp=Z,124nm,1.3s
JAGI  Jajag, Banyuwa   44.75 217    P       P      14 26 20.0 -1.6
GMJI  Gumukmas         44.96 218    P       P      14 26 23.4 +0.2
      comp=Z,42nm,1.3s
TAPN  Taplejung        45.22 281   eP       P      14 26 26.1 +0.6
      comp=Z,516nm,0.4s
ODAN  Odare            45.63 280   eP       P      14 26 29.2 +0.6
SMRI  Semarang         45.65 222    P       P      14 26 29.4 +0.9
      comp=Z,295nm,1.0s
PWJI  Pagerwojo        45.65 220    P       P      14 26 26.9 -1.6
      comp=Z,231nm,0.8s
KNRA  Kununurra        45.90 194    P       P      14 26 30.8 +0.4
KNRA                                IAmb    IAmb   14 26 31.3
      comp=Z,109nm,0.8s
UNV   Unalaska Valle   45.91  42    P       P      14 26 30.7 +0.7
WOJI  Wonogiri, Jawa   46.00 221    P       P      14 26 30.6 -0.6
      comp=Z,36nm,0.8s
RGRI  Rengat           46.05 237    P       P      14 26 33.1 +1.4
      comp=Z,23µmcomp=Z,153nm,0.5s
PMBI  Palembang        46.13 232    P       P      14 26 34.8 +2.6
      comp=Z,379nm,0.8s
PCJI  Pacitan          46.15 220    P       P      14 26 31.7 -0.6
      comp=Z,130nm,1.0s
ZAA0  Zalesovo Array   46.19 318    P       P      14 26 32.4 +0.3
ZAA0                                IAmb    IAmb   14 26 33.1
      comp=Z,171nm,0.9s
ZALV  Zalesovo Beam    46.19 318    P       P      14 26 32.0 -0.2
      comp=Z,79nm,0.4s,baz=93,slow=7.1,SNR=456
ZALV                                PcP     pwP    14 27 58.7 -0.6
      comp=Z,56nm,0.6s,baz=115,slow=3.3,SNR=12
ZALV                                ScP     ScP    14 31 10.0 -1.6
      comp=Z,54nm,0.6s,baz=122,slow=4.2,SNR=25
ZALV                                S       S      14 32 43.0 -2.8
      comp=Z,15nm,0.9s,baz=110,slow=12,SNR=7.1
ZALV  Zalesovo Beam    46.19 318    P       P      14 26 32.5 +0.4
ZALV  Zalesovo Beam    46.19 318    P       P      14 26 32.5 +0.4
ZALV                                        ScP    14 31 11.2 -0.5
GAMB  Gambell          46.25  28    P       P      14 26 33.9 +1.5
GAMB                                IAmb    IAmb   14 26 35.1
      comp=Z,263nm,1.9s
RAMN  Ramite           46.28 280   eP       P      14 26 34.1 +0.5
      comp=Z,717nm,0.4s
UGM   Wanagama         46.29 221    P       P      14 26 32.9 -0.6
      comp=Z,4µmcomp=Z,371nm,1.4s
UGM   Wanagama         46.29 221    P       P      14 26 32.9 -0.6
AKUT  Akutan           46.38  42    P       P      14 26 34.9 +1.3
AKUT                                IAmb    IAmb   14 27 04.4
      comp=Z,409nm,1.8s
JIRN  Jiri             46.44 281   eP       P      14 26 35.1 +0.1
      comp=Z,1µm,0.6s
BKNI  Bangkinang       46.56 239    P       P      14 26 36.1 +0.6
      comp=Z,4µmcomp=Z,301nm,1.3s
PSI   Prapat           46.58 243    P       P      14 26 36.0 +0.1
      comp=Z,219nm,0.9s,baz=23,slow=4.4,SNR=106
PSI                                 PcP     PcP    14 28 01.9  0.0
      comp=Z,40nm,0.7s,baz=6.3,slow=9.2,SNR=6.4
PSI                                 ScP     ScP    14 31 13.4 -0.8
      comp=Z,15nm,0.6s,baz=51,slow=2.3,SNR=6.3
PSI   Prapat           46.58 243    P       P      14 26 36.3 +0.4
PSI                                 pmax    pmax
      comp=Z,226nm,0.9s
GUN   Gumba            46.64 282   eP       P      14 26 37.3 +0.8
RPSI  Rantau Prapat    46.65 243    P       P      14 26 36.3 +0.1
RPSI                                IAmb    IAmb   14 26 37.3
      comp=Z,226nm,0.9s
RPSI  Rantau Prapat    46.65 243            PcP    14 28 01.9 -0.1
RPSI                                        ScP    14 31 13.4 -0.9
LHMI  Lhok Sumawe      46.69 247    P       P      14 26 37.9 +1.4
      comp=Z,508nm,0.9s
PBA   Port Blair       46.75 258   eP       P      14 26 36.4 -0.6
PBA                                 IAmb    IAmb   14 26 39.4
      comp=Z,114nm,0.5s
KCSI  Kotacane, Aceh   47.05 245    P       P      14 26 37.8 -1.5
      comp=Z,154nm,1.4s
SDSI  Sungai Dareh     47.11 237    P       P      14 26 40.1 +0.4
      comp=Z,149nm,1.4s
PKI   Pulchoki         47.13 282   eP       P      14 26 40.5 +0.3
      comp=Z,1µm,0.9s
PKIN  Phulchoki        47.14 282   eP       P      14 26 40.3 +0.1
      comp=Z,222nm,0.4s
MK31  Makanchi Array   47.16 308  i P       P      14 26 39.9 +0.2
MK31  Makanchi Array   47.16 308    P       P      14 26 40.3 +0.6
MK31                                IAmb    IAmb   14 26 41.0
      comp=Z,98nm,0.8s
MKAR  Makanchi Array   47.16 308    P       P      14 26 39.9 +0.2
      comp=Z,154nm,0.7s,baz=86,slow=9.6,SNR=1555
MKAR                                PcP     PcP    14 28 02.8 -0.5
      comp=Z,52nm,0.8s,baz=79,slow=6.3,SNR=8.0
MKAR                                ScP     ScP    14 31 14.0 -1.9
      comp=Z,19nm,0.8s,baz=81,slow=5.0,SNR=8.7
MKAR                                S       S      14 32 56.5 -3.1
      comp=Z,0.9nm,0.6s,baz=282,slow=28,SNR=1.3
MKAR  Makanchi Array   47.16 308  i P       P      14 26 39.9 +0.2
MKAR                                pmax    pmax
      comp=Z,157nm,0.7s
MKAR  Makanchi Array   47.16 308    P       P      14 26 40.2 +0.5
MKAR                                        PcP    14 28 03.9 +0.5
MKAR                                        ScP    14 31 16.2 +0.2
LEM   Lembang          47.18 225    P       P      14 26 40.6 +0.2
LEM                                 pmax    pmax
      comp=Z,673nm,0.9s
KKN   Kakani           47.19 282   eP       P      14 26 41.1 +0.6
CBJI  Citeko           47.35 227    P       P      14 26 42.9 +1.4
      comp=Z,214nm,0.9s
MAKZ  Makanchi         47.37 308    P       P      14 26 42.1 +0.7
MAKZ                                pmax    pmax
      comp=Z,132nm,0.7s
MAKZ  Makanchi         47.37 308    P       P      14 26 42.1 +0.7
MAKZ                                IAmb    IAmb   14 26 43.5
      comp=Z,132nm,0.7s
DMN   Daman            47.38 282   eP       P      14 26 42.5 +0.5
      comp=Z,625nm,0.5s
DBJI  Dramaga          47.51 227    P       P      14 26 42.6 -0.2
      comp=Z,126nm,1.4s
CISI  Cisompet, Garu   47.62 225    P       P      14 26 41.7 -2.0
      comp=Z,171nm,0.9s
CISI  Cisompet, Garu   47.62 225    P       P      14 26 42.6 -1.0
CISI                                IAmb    IAmb   14 26 42.9
      comp=Z,242nm,1.2s
MDSI  Maura Dua        47.66 231    P       P      14 26 43.3 -0.6
      comp=Z,5µmcomp=Z,560nm,1.3s
TPTI                   47.67 245    P       P      14 26 41.9 -2.1
      comp=Z,443nmcomp=Z,35nm,1.1s
GKN   Gorkha           47.68 282   eP       P      14 26 44.6 +0.5
      comp=Z,2µm,0.9s
MLSI  Meulaboh, Aceh   47.69 247    P       P      14 26 42.9 -1.3
      comp=Z,344nm,0.6s
PDSI  Padang           47.81 238    P       P      14 26 44.2 -0.9
      comp=Z,88nm,1.0s
BOK   Bokaro           47.83 277   eP       P      14 26 46.2 +1.1
CNJI  Cibinong         47.85 226    P       P      14 26 43.8 -1.5
      comp=Z,198nm,1.0s
KRJI  Kerinci          47.87 236    P       P      14 26 46.8 +1.2
      comp=Z,8µmcomp=Z,674nm,1.1s
LWLI  Liwa             48.13 231    P       P      14 26 46.6 -1.0
      comp=Z,6µmcomp=Z,87nm,0.8s
KASI  Kota Agung       48.21 230    P       P      14 26 46.4 -1.6
      comp=Z,2µmcomp=Z,219nm,1.0s
DANN  Dangsing         48.34 283   eP       P      14 26 49.6 +0.4
      comp=Z,808nm,0.4s
MNAI  Manna            48.41 232    P       P      14 26 49.9 +0.4
      comp=Z,7µmcomp=Z,504nm,1.2s
GSI   Gunungsitoli     48.56 243    P       P      14 26 50.2 -0.5
      comp=Z,48µmcomp=Z,4µm,1.1s
GSI   Gunungsitoli     48.56 243    P       P      14 26 51.2 +0.4
SNSI  Sinabang, Aceh   48.86 245    P       P      14 26 53.3 +0.3
      comp=Z,9µmcomp=Z,713nm,1.2s
PBSI  Pulau Batu       48.89 241    P       P      14 26 53.2 +0.1
      comp=Z,340nm,1.5s
FITZ  Fitzroy Crossi   48.98 197    P       P      14 26 54.0 +0.3
      comp=Z,107nm,0.7s,baz=19,slow=8.1,SNR=403
FITZ                                PcP     pP     14 28 16.8 +0.5
      comp=Z,9.7nm,0.7s,baz=34,slow=3.6,SNR=3.8
FITZ                                ScP     ScP    14 31 23.4 -0.5
      comp=Z,15nm,0.8s,baz=357,slow=1.6,SNR=4.8
FITZ                                S       S      14 33 23.2 -2.1
      comp=Z,12nm,0.9s,baz=142,slow=17,SNR=8.6
FITZ  Fitzroy Crossi   48.98 197    P       P      14 26 54.4 +0.8
FITZ                                IAmb    IAmb   14 26 54.9
      comp=Z,108nm,0.7s
WB0   Warramunga Arr   49.04 186    P       P      14 26 54.0 -0.1
SISI  Saibi            49.10 239    P       P      14 26 53.9 -0.8
      comp=Z,133nm,0.9s
ANM   Nome             49.12  28    P       P      14 26 56.2 +2.1
ANM                                 pmax    pmax
      comp=Z,77nm,1.0s
ANM   Nome             49.12  28    P       P      14 26 56.2 +2.1
WRAB  Tennant Creek    49.21 186ceP         P      14 26 54.9 -0.5
WRAB                                pmax    pmax
      comp=Z,41nm,0.7s
WRAB  Tennant Creek    49.21 186    P       P      14 26 55.3 -0.1
WRAB                                IAmb    IAmb   14 26 55.8
      comp=Z,360nm,1.6s
WR0   Warramunga Arr   49.22 186    P       P      14 26 55.5  0.0
WB2   Warramunga Arr   49.22 186    P       P      14 26 55.4  0.0
WB2                                 IAmb    IAmb   14 26 56.0
      comp=Z,98nm,0.7s
WRA   Warramunga Arr   49.22 186    P       P      14 26 54.2 -1.3
      comp=Z,131nm,0.5s,baz=2.0,slow=7.7,SNR=643
WRA                                 PcP     PcP    14 28 10.8 -0.3
      comp=Z,18nm,0.5s,baz=359,slow=3.8,SNR=5.8
WRA                                 ScP     ScP    14 31 24.4 -0.5
      comp=Z,14nm,0.6s,baz=357,slow=4.4,SNR=9.8
WRA                                 S       S      14 33 24.9 -3.8
      comp=Z,15nm,0.7s,baz=8.4,slow=14,SNR=8.9
WRA   Warramunga Arr   49.22 186    P       P      14 26 54.4 -1.1
WRA                                 pmax    pmax
      comp=Z,8.0nm,0.6s
WRA   Warramunga Arr   49.22 186    P       P      14 26 54.4 -1.1
PDGK  Podgornoye       49.25 304  i P       P      14 26 55.0 -0.6
PDGK                                pmax    pmax
      comp=Z,302nm,0.6s
PPSI  Pulau Pagai      49.39 237    P       P      14 26 56.7 -0.2
      comp=Z,4µmcomp=Z,385nm,1.1s
CTA   Charters Tower   49.57 172    P       P      14 26 57.9 -0.2
      comp=Z,8.0nm,0.6s,baz=7.9,slow=9.2,SNR=13
SDPT  Sand Point       49.59  41    P       P      14 26 57.8  0.0
SDPT                                IAmb    IAmb   14 26 58.6
      comp=Z,92nm,0.7s
KURK  Kurchatov        49.66 313ceP         P      14 26 58.2 -0.2
KURK                                pmax    pmax
      comp=Z,353nm,1.0s
KURK  Kurchatov        49.66 313            ScP    14 31 25.4 -1.1
KURK  Kurchatov        49.66 313    P       P      14 26 58.8 +0.4
NRIK  Noril'sk         49.68 339    P       P      14 26 59.0 +0.8
      comp=Z,41nm,0.5s,baz=110,slow=8.8,SNR=106
NRIK                                ScP     ScP    14 31 25.8 -0.4
      comp=Z,57nm,0.8s,baz=120,slow=3.8,SNR=14
NRIK                                S       S      14 33 34.0 +0.3
      comp=Z,7.5nm,0.9s,baz=208,slow=23,SNR=39
NRIK  Noril'sk         49.68 339  i P       P      14 26 58.8 +0.6
NRIK                                pmax    pmax
      comp=Z,47nm,0.8s
KURBB Kurchatov Arra   49.72 313    P       P      14 26 58.8  0.0
      comp=Z,375nm,0.6s,baz=92,slow=8.0,SNR=5566
KURBB                               PP      PP     14 28 57.1 -1.2
      comp=Z,23nm,0.9s,baz=92,slow=8.5,SNR=4.2
KURBB                               ScP     ScP    14 31 25.4 -1.4
      comp=Z,10.0nm,0.8s,baz=100,slow=3.5,SNR=5.0
KURBB                               S       S      14 33 32.5 -2.3
      comp=Z,9.1nm,0.8s,baz=91,slow=13,SNR=8.1
PTH   Pithoragarh      51.02 286   eP       P      14 27 04.9 -4.1
KNDC  Almaty           51.09 304    P       P      14 27 10.3 +1.1
RDOG  Red Dog Mine     51.18  24    IAmb    IAmb   14 27 12.1
      comp=Z,136nm,1.0s
ULHL  Ulahol           51.73 302    P       P      14 27 14.9 +0.9
      SNR=46
KSH   Kashi            52.33 299    P       P      14 27 22.4 +4.1
KSH                                 pP      pwP    14 28 47.9 -0.3
KSH                                 pmax    pmax
      comp=Z,300nm,0.6s
KSH                                 pmax    pmax
      comp=Z,1µm,8.8s
KZA   Kyzart           52.49 302    P       P      14 27 20.9 +1.2
      SNR=171
DDI   Dehra Dun        52.62 287   eP       P      14 27 20.8 +0.3
KBK   Karagaybulak     52.63 303    P       P      14 27 21.3 +0.8
      SNR=170
CHMS  Chumysh          52.73 304    P       P      14 27 21.5 +0.5
      SNR=61
CHMS  Chumysh          52.73 304  i P       P      14 27 21.4 +0.4
CHMS                                pmax    pmax
      comp=Z,147nm,1.2s
SVW2  Sparrevohn       52.77  34    IAmb    IAmb   14 27 24.2
      comp=Z,208nm,1.1s
FRU1  Bishkek          52.84 303    IAmb    IAmb   14 27 23.6
      comp=Z,140nm,0.7s
USP   Ospenovka        52.88 304    P       P      14 27 22.5 +0.4
      SNR=102
AS31  Alice Springs    52.95 186    P       P      14 27 22.8  0.0
ASAR  Alice Springs    52.95 186    P       P      14 27 22.4 -0.4
      comp=Z,26nm,0.5s,baz=3.5,slow=7.7,SNR=877
ASAR                                PcP     PcP    14 28 24.8 -0.2
      comp=Z,12nm,0.8s,baz=14,slow=3.3,SNR=6.6
ASAR                                S       S      14 34 16.3 -2.8
      comp=Z,8.3nm,0.7s,baz=27,slow=21,SNR=10.0
ASAR  Alice Springs    52.95 186    P       P      14 27 22.6 -0.1
ASAR  Alice Springs    52.95 186    P       P      14 27 22.6 -0.1
AAK   Ala-Archa        52.96 303    P       P      14 27 23.2 +0.3
      comp=Z,80nm,0.5s,baz=109,slow=5.3,SNR=280
AAK                                 ScP     ScP    14 31 40.3 -0.9
      comp=Z,21nm,0.8s,baz=148,slow=4.2,SNR=6.9
AAK   Ala-Archa        52.96 303    P       P      14 27 23.5 +0.5
      SNR=24
AAK   Ala-Archa        52.96 303  i P       P      14 27 23.4 +0.5
      SNR=171
AAK   Ala-Archa        52.96 303    P       P      14 27 23.7 +0.8
AAK                                 pmax    pmax
      comp=Z,90nm,0.6s
AAK   Ala-Archa        52.96 303    P       P      14 27 23.7 +0.8
AAK                                 IAmb    IAmb   14 27 24.0
      comp=Z,90nm,0.6s
UCH   Uchtor           53.01 303    P       P      14 27 24.8 +1.2
      SNR=267
SII   Sitkinak Islan   53.20  39    IAmb    IAmb   14 27 26.1
      comp=Z,177nm,0.8s
EKS2  Erkin-Say        53.48 303    P       P      14 27 27.2 +0.6
      SNR=14
DHRM  DHARAMSHALA      53.58 290   eP       P      14 27 27.4 -0.1
AML   Almayashu        53.62 303    P       P      14 27 29.1 +1.2
      SNR=397
OHAK  Old Harbor       53.70  39    P       P      14 27 28.2 +0.5
NDI   New Delhi        53.78 286   eP       P      14 27 27.0 -1.7
PSA00 Pilbara Seismi   53.99 203    P       P      14 27 29.9 -0.3
PSA00 Pilbara Seismi   53.99 203    P       P      14 27 30.5 +0.3
PSA00                               IAmb    IAmb   14 27 31.2
      comp=Z,217nm,0.7s
THN   Thein Dam        54.01 290  i P       P      14 27 30.0 -0.3
THN                                eS       S      14 34 31.5 -1.6
KDAK  Kodiak Island    54.09  38    P       P      14 27 31.2 +0.7
      comp=Z,97nm,0.6s,baz=196,slow=0.6,SNR=105
KDAK                                pP      pwP    14 29 01.0  0.0
      comp=Z,25nm,0.9s,baz=270,slow=5.5,SNR=2.8
KDAK  Kodiak Island    54.09  38    P       P      14 27 31.2 +0.7
KDAK                                IAmb    IAmb   14 27 32.3
      comp=Z,210nm,1.0s
IMAR  Indian Mountai   54.20  28    P       P      14 27 32.5 +1.4
BVAR  Borovoye Array   54.73 316    P       P      14 27 35.4 +0.3
      comp=Z,287nm,0.5s,baz=92,slow=7.6,SNR=2421
BVAR                                PcP     PcP    14 28 30.5 -1.1
      comp=Z,59nm,0.6s,baz=85,slow=3.1,SNR=8.8
BVAR                                ScP     ScP    14 31 47.7 -0.9
      comp=Z,27nm,0.6s,baz=92,slow=4.7,SNR=9.9
BVAR                                S       S      14 34 41.1 -1.0
      comp=Z,12nm,0.8s,baz=90,slow=11,SNR=9.7
BRVK  Borovoye         54.79 316deP         P      14 27 35.8 +0.3
BRVK                                pmax    pmax
      comp=Z,240nm,0.7s
BRVK  Borovoye         54.79 316    P       P      14 27 36.2 +0.7
CNPM  China Poot       54.83  36    P       P      14 27 36.3 +0.6
BRLK  Bradley Lake     55.02  35    P       P      14 27 37.4 +0.4
SUA   Susitna One      55.13  33    IAmb    IAmb   14 27 41.0
      comp=Z,353nm,2.0s
BHPL  Bhopal           55.33 279   eP       P      14 27 39.7 -0.2
BHPL                               i x      x      14 27 54.1
MLY   Manley           55.34  29    IAmb    IAmb   14 27 42.2
      comp=Z,149nm,1.0s
NIL   Nilore           55.70 293    P       P      14 27 43.6 +1.3
NIL                                 pmax    pmax
      comp=Z,807nm,1.5s
NIL   Nilore           55.70 293    P       P      14 27 43.6 +1.3
SEW   Seward           55.74  35    IAmb    IAmb   14 27 43.8
      comp=Z,305nm,1.5s
KK31  Karatay Array    55.78 304  i P       P      14 27 43.2 +0.5
KKAR  Karatay Array    55.78 304    P       P      14 27 43.6 +0.9
KKAR  Karatay Array    55.78 304    P       P      14 27 43.5 +0.9
KKAR  Karatay Array    55.78 304    IAmb    IAmb   14 27 44.1
      comp=Z,345nm,0.7s
BWN   Browne           55.83  30    IAmb    IAmb   14 27 46.7
      comp=Z,211nm,1.0s
GHO   Glory Hole Cre   56.01  33    IAmb    IAmb   14 27 47.1
      comp=Z,139nm,1.1s
MCK   McKinley         56.05  31    IAmb    IAmb   14 27 46.8
      comp=Z,295nm,1.0s
RND   Reindeer         56.08  31    IAmb    IAmb   14 27 46.2
      comp=Z,164nm,0.9s
TOLK  Toolik Lake Re   56.13  25    P       P      14 27 46.2 +1.5
      baz=264
SML   Sawmill          56.29  33    IAmb    IAmb   14 27 48.0
      comp=Z,148nm,0.9s
MDM   Murphy Dome      56.40  29    IAmb    IAmb   14 27 49.2
      comp=Z,157nm,1.1s
HYB   Hyderabad        56.54 272  i P       P      14 27 48.5 +0.1
HYB                                e                14 28 43.0
HYB   Hyderabad        56.54 272   eP       P      14 27 48.6 +0.1
TCOL  CIGO, UAF Yank   56.55  29    P       P      14 27 49.2 +1.6
      baz=268,SNR=56
COLA  College          56.56  29    P       P      14 27 49.3 +1.7
POKR  Poker Plat Res   56.74  29    P       P      14 27 49.8 +0.9
      baz=268,SNR=70
SCM   Sheep Creek Mo   56.77  33    IAmb    IAmb   14 27 51.5
      comp=Z,176nm,0.8s
MDRS  Chennai          56.91 267   eP       P      14 27 51.9 +1.0
HDA   Harding Lake     56.94  30    IAmb    IAmb   14 27 51.7
      comp=Z,144nm,0.8s
HDA   Harding Lake     56.94  30    P       P      14 27 50.5 +0.1
      baz=269,SNR=110
IL31                   56.97  29    IAmb    IAmb   14 27 51.8
      comp=Z,136nm,1.1s
ILAR  Eielson Array    56.97  29    P       P      14 27 50.4 -0.2
      comp=Z,64nm,0.9s,baz=278,slow=5.3,SNR=321
ILAR                                pP      pwP    14 29 20.4 -0.5
      comp=Z,6.0nm,0.9s,baz=274,slow=5.2,SNR=3.5
ILAR                                ScP     ScP    14 31 56.5 -1.7
      comp=Z,3.6nm,0.8s,baz=314,slow=5.2,SNR=6.2
ILAR                                S       S      14 35 14.5 +3.6
      comp=Z,0.7nm,1.1s,baz=271,slow=9.6,SNR=4.4
ILAR                                PKPPKP  P'P'df 14 57 30.8 -8.0
      comp=Z,0.7nm,0.8s,baz=99,slow=4.4,SNR=8.1
ILAR  Eielson Array    56.97  29    P       P      14 27 50.6 +0.1
ILAR  Eielson Array    56.97  29    P       P      14 27 50.6 +0.1
GIRL  Giralia          57.06 208    IAmb    IAmb   14 27 53.8
      comp=Z,184nm,0.9s
HIN   Hinchinbrook I   57.20  35    P       P      14 27 53.1 +0.9
DZM   Mont Dzumac      57.36 150    P       P      14 27 55.5 +1.6
      comp=Z,17nm,0.8s,baz=279,slow=8.9,SNR=14
FYU   Fort Yukon       57.67  27    IAmb    IAmb   14 27 58.7
      comp=Z,295nm,1.3s
RIDG  Independent Ri   57.87  31    P       P      14 27 57.8 +1.0
RIDG                                IAmb    IAmb   14 27 59.6
      comp=Z,117nm,1.0s
BMAR  Burnt Mountain   57.94  26    P       P      14 27 59.5 +2.3
RAGM  Ragged Mountai   58.11  35    P       P      14 27 59.9 +1.4
RAGM                                IAmb    IAmb   14 28 01.1
      comp=Z,188nm,1.3s
SCRK  Sand Creek       58.24  30    P       P      14 28 00.5 +1.0
SCRK                                IAmb    IAmb   14 28 01.2
      comp=Z,136nm,0.8s
MENT  Mentasta         58.41  32    IAmb    IAmb   14 28 03.2
      comp=Z,89nm,0.7s
GLB   Gilahina Butte   58.46  33    IAmb    IAmb   14 28 03.3
      comp=Z,135nm,1.0s
KBL   Kabul            58.83 295    P       P      14 28 04.2 +0.2
      SNR=61
KBL   Kabul            58.83 295    P       P      14 28 03.7 -0.4
KBL                                 pmax    pmax
      comp=Z,587nm,1.9s
KBL   Kabul            58.83 295    P       P      14 28 03.7 -0.4
CRQM  Cirque           58.84  34    IAmb    IAmb   14 28 06.5
      comp=Z,220nm,1.0s
MCARA McCarthy VSAT    58.84  33    P       P      14 28 04.9 +1.5
MCARA                               IAmb    IAmb   14 28 06.4
      comp=Z,204nm,1.0s
TGL   Tana Glacier     58.99  34    IAmb    IAmb   14 28 06.8
      comp=Z,135nm,1.0s
BALM  Baldy            59.20  34    IAmb    IAmb   14 28 08.0
      comp=Z,93nm,0.8s
PALK  Pallekele        59.23 261    P       P      14 28 07.1 +0.3
      comp=Z,106nm,0.5s,baz=39,slow=6.2,SNR=157
PALK  Pallekele        59.23 261  i P       P      14 28 07.3 +0.5
      SNR=57
PALK  Pallekele        59.23 261    P       P      14 28 07.4 +0.5
PALK                                pmax    pmax
      comp=Z,215nm,1.1s
PALK  Pallekele        59.23 261    P       P      14 28 07.4 +0.5
PALK                                IAmb    IAmb   14 28 08.2
      comp=Z,215nm,1.1s
BCAR  Beaver Creek A   59.28  31    P       P      14 28 08.0 +1.6
POHA  Pohakuloa        59.32  83    P       P      14 28 08.9 +1.3
POHA                                IAmb    IAmb   14 28 10.4
      comp=Z,136nm,0.9s
CTGM  Chitina Glacie   59.70  34    P       P      14 28 10.7 +1.4
SVE   Sverdlovsk       59.95 321c iP        P      14 28 11.7 +0.8
SVE                                eS       S      14 35 48.8 -0.3
SVE                                 pmax    pmax
      comp=Z,324nm,0.8s
POO   Poona            60.19 276   eP       P      14 28 12.8 -0.5
DAWY  Dawson           60.25  30    P       P      14 28 14.3 +1.4
FORT  Forrest          60.74 191    P       P      14 28 17.0 +0.6
STKA  Stephens Creek   60.90 178    P       P      14 28 17.5 -0.1
      comp=Z,9.4nm,0.6s,baz=347,slow=7.6,SNR=46
STKA                                S       S      14 35 59.5 -2.0
      comp=Z,3.5nm,0.8s,baz=126,slow=20,SNR=9.8
EPYK  Eagle Plains     61.10  27    P       P      14 28 20.5 +2.0
EPYK  Eagle Plains     61.10  27    P       P      14 28 19.9 +1.5
      baz=277
ARU   Arti             61.15 321d iP        P      14 28 19.1 +0.2
ARU                                                14 28 52.4
ARU                                 *PP     pwP    14 29 49.5 -2.4
ARU                                                14 30 36.8
ARU                                eS       S      14 36 04.0 -0.1
ARU                                                14 37 22.7
ARU                                 pmax    pmax
      comp=Z,477nm,0.8s
ARU   Arti             61.15 321    P       P      14 28 19.5 +0.6
GOA   Goa              61.46 272   eP       P      14 28 21.6 -0.1
DHAK  Deception Hill   61.52  36    IAmb    IAmb   14 28 24.2
      comp=Z,162nm,0.9s
AB31  Akbulak array    61.77 313  i P       P      14 28 23.2  0.0
ABKAR Akbulak array    61.77 313    P       P      14 28 23.6 +0.4
TRD   Trivandrum       61.87 264   eP       P      14 28 24.7 +0.3
BHUJ  Bhuj             61.99 282   eP       P      14 28 25.8 +0.8
INK   Inuvik           62.04  25    P       P      14 28 25.4 +0.8
      comp=Z,67nm,0.5s,baz=275,slow=5.1,SNR=265
INK                                 S       S      14 36 16.2 +1.4
      comp=Z,5.9nm,1.1s,baz=137,slow=24,SNR=14
INK   Inuvik           62.04  25    P       P      14 28 25.4 +0.8
INK                                 IAmb    IAmb   14 28 26.3
      comp=Z,83nm,0.8s
MORW  Morawa           62.20 203    IAmb    IAmb   14 28 27.0
      comp=Z,121nm,0.7s
AKTO  Aktyubinsk       62.71 315  i P       P      14 28 29.1 -0.2
AKTO                                pmax    pmax
      comp=Z,211nm,0.7s
WHY   Whitehorse       62.87  33    IAmb    IAmb   14 28 33.1
      comp=Z,140nm,0.9s
SKAG  Skagway          62.90  35    IAmb    IAmb   14 28 33.2
      comp=Z,130nm,1.1s
BESE  Bessie Mountai   63.33  36    IAmb    IAmb   14 28 36.0
      comp=Z,118nm,1.2s
JIS   Juneau Island    63.64  36    IAmb    IAmb   14 28 38.1
      comp=Z,109nm,0.9s
HRA   Herat            64.23 296    IAmb    IAmb   14 28 41.4
      comp=Z,146nm,0.9s
C36M  Paulatuk         65.15  23    P       P      14 28 45.3 +0.7
C36M  Paulatuk         65.15  23    P       P      14 28 45.3 +0.7
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	baz=287						
NWAO	**Narrogin (SRO)**	**65.38**	**200**	P	**P**	**14 28 47.0**	**+0.5**
NWAO				pmax	pmax		
	comp=Z,389nm,0.6s						
NWAO	**Narrogin (SRO)**	**65.38**	**200**	P	**P**	**14 28 47.0**	**+0.5**
NWAO	**Narrogin (SRO)**	**65.38**	**200**	IAmb	IAmb	14 28 47.6	
	comp=Z,309nm,0.6s						
MNCY	**Minicoy**	**65.40**	**266**	*e*P	**P**	**14 28 46.3**	**-0.8**
KIRV	**Kirov**	**65.46**	**325**	P	**P**	**14 28 47.3**	**+0.6**
	comp=Z,413nm,0.8s,baz=78,slow=2.0,SNR=145						
KIRV				S	**S**	**14 36 55.9**	**-0.8**
	comp=Z,8.1nm,0.6s,baz=338,slow=24,SNR=12						
DLBC	**Dease Lake**	**65.81**	**35**	P	**P**	**14 28 50.2**	**+1.1**
	comp=Z,55nm,1.0s,baz=293,slow=6.1,SNR=42						
DLBC	**Dease Lake**	**65.81**	**35**	IAmb	IAmb	14 28 52.2	
	comp=Z,105nm,1.1s						
DIB	**Dawson Inlet,**	**66.03**	**41**	IAmb	IAmb	14 28 54.2	
	comp=Z,125nm,1.1s						
GEYT	**Alibeck**	**66.23**	**301**	P	**P**	**14 28 52.5**	**+0.5**
	comp=Z,63nm,0.8s,baz=14,slow=3.1,SNR=102						
GEYT	**Alibeck**	**66.23**	**301**	P	**P**	**14 28 52.8**	**+0.7**
GYA0B	**ALIBECK ARRAY**	**66.23**	**301**	IAmb	IAmb	14 28 58.0	
	comp=Z,91nm,0.8s						
PRGR	**Permogore**	**66.37**	**329**	⇓*i*P	**P**	**14 28 52.9**	**+0.5**
PRGR				*e*		14 29 16.8	
PRGR				*e*S	**S**	**14 37 07.0**	**-0.4**
PRGR				*e*		14 37 59.6	
PRGR				pmax	pmax		
	comp=Z,258nm,0.9s						
SPITS	**Spitsbergen Ar**	**67.75**	**349**	P	**P**	**14 29 01.8**	**+1.1**
SPITS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
LVZ	**Lovozero**	**68.47**	**337**	*ce*P	**P**	**14 29 05.0**	**-0.3**
LVZ				pmax	pmax		
	comp=Z,87nm,1.1s						
LVZ	**Lovozero**	**68.47**	**337**	P	**P**	**14 29 05.6**	**+0.3**
LVZ				IAmb	IAmb	14 29 06.7	
	comp=Z,72nm,1.1s						
NOR	**Nord**	**68.62**	**356**	⇑*i*P	**P**	**14 29 06.8**	**+0.8**
	comp=Z,16nm,1.1s						
NOR	**Nord**	**68.62**	**356**	⇑*i*P	**P**	**14 29 06.8**	**+0.8**
NOR				pmax	pmax		
	comp=Z,16nm,1.1s						
HSPB	**Hornsund (broa**	**68.62**	**348**	*e*P	**P**	**14 29 07.6**	**+1.5**
TMCR	**Tamitsa**	**68.73**	**333**	*e*P	**P**	**14 29 05.8**	**-1.1**
TMCR				pmax	pmax		
	comp=Z,139nm,0.9s						
BBB	**Bella Bella**	**68.87**	**41**	P	**P**	**14 29 08.3**	**+0.4**
	comp=Z,36nm,1.0s,baz=315,slow=5.1,SNR=4.1						
APA	**Apatity**	**69.04**	**337**	⇓*i*P	**P**	**14 29 08.3**	**-0.4**
APA				*i*		14 29 28.7	
APA				pmax	pmax		
	comp=Z,86nm,0.8s						
KLMR	**Klimovskoe**	**69.41**	**329**	*d i*P	**P**	**14 29 10.8**	**-0.3**
KLMR				*e*S	**S**	**14 37 40.2**	**-2.9**
KLMR				pmax	pmax		
	comp=Z,161nm,1.0s						
KLMR	**Klimovskoe**	**69.41**	**329**	⇓*i*P	**P**	**14 29 10.9**	**-0.2**
KLMR				*e*P	**P**	**14 29 10.9**	**-0.2**
KLMR				⇑*i*P	**P**	**14 29 10.9**	**-0.2**
KLMR				AMP		14 29 12.3	
	comp=Z,161nm,1.0s						
KLMR				*e*S	**S**	**14 37 40.2**	**-2.9**
KLMR				*e*S	**S**	**14 37 40.2**	**-2.9**
KEV	**Kevo**	**70.06**	**340**	P	**P**	**14 29 15.7**	**+0.9**
KEV				pmax	pmax		
	comp=Z,88nm,1.0s						
KEV	**Kevo**	**70.06**	**340**	P	**P**	**14 29 15.7**	**+0.9**
KEV				IAmb	IAmb	14 29 16.7	
	comp=Z,88nm,1.0s						
RES	**Resolute Bay**	**70.47**	**13**	IAmb	IAmb	14 29 19.3	
	comp=Z,67nm,0.8s						
HAMF	**Hammerfest**	**70.54**	**341**	*e*P	**P**	**14 29 18.0**	**+0.3**
ARCES	**ARCESS Array B**	**70.62**	**340**	P	**P**	**14 29 19.2**	**+0.9**
	comp=Z,52nm,0.7s,baz=69,slow=8.8,SNR=242						
ARCES	**ARCESS Array B**	**70.62**	**340**	P	**P**	**14 29 19.4**	**+1.1**
ARCES	**ARCESS Array B**	**70.62**	**340**	P	**P**	**14 29 19.4**	**+1.1**
ARE0	**ARCESS Array S**	**70.62**	**340**	*e*P	**P**	**14 29 19.3**	**+1.1**
JLN	**Jalan Bani Buh**	**71.12**	**285**	P	**P**	**14 29 22.6**	**+0.6**
WBK	**Wadi Bani Khal**	**71.30**	**286**	P	**P**	**14 29 23.8**	**+0.7**
	SNR=35						
WSAR	**Wadi Sarin**	**71.32**	**287**	P	**P**	**14 29 23.3**	**+0.1**
	comp=Z,59nm,0.9s,baz=133,slow=4.2,SNR=36						
WSAR	**Wadi Sarin**	**71.32**	**287**	P	**P**	**14 29 23.7**	**+0.4**
	SNR=11						
MSF	**Maaselka**	**71.35**	**336**	P	**P**	**14 29 24.0**	**+1.4**
MSF				pmax	pmax		
	comp=Z,90nm,1.1s						
YKA	**Yellowknife Ar**	**71.35**	**28**	P	**P**	**14 29 22.9**	**+0.2**
	comp=Z,38nm,0.7s,baz=293,slow=5.4,SNR=251						
YKA				S	**S**	**14 38 04.9**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=344,slow=5.5,SNR=3.8						
YKA				PKP2bc		14 57 02.6	
	comp=Z,0.8nm,1.0s,baz=120,slow=4.1,SNR=5.6						
SGF	**Sodankyl**	**71.42**	**338**	P	**P**	**14 29 24.7**	**+1.8**
SGF				pmax	pmax		
	comp=Z,235nm,1.0s						
KTK1	**Kautokeino**	**71.58**	**340**	*e*P	**P**	**14 29 24.7**	**+0.8**
BIDO	**Bidbid**	**71.63**	**287**	P	**P**	**14 29 25.5**	**+0.5**
	SNR=22						
SMDO	**Samad**	**71.88**	**287**	P	**P**	**14 29 26.8**	**+0.2**
	SNR=17						
JMDO	**Jabal Madar**	**72.12**	**286**	P	**P**	**14 29 28.0**	**0.0**
	SNR=15						
BANOM	**Banah**	**72.15**	**290**	*i* P	**P**	**14 29 28.7**	**+0.7**
	SNR=10.0						
BANOM	**Banah**	**72.15**	**290**	P	**P**	**14 29 29.0**	**+0.9**
	SNR=9.7						
VRH	**Novokhopyorsk**	**72.21**	**319**	*e*P	**P**	**14 29 27.4**	**-0.5**
VRH				*e*S	**S**	**14 38 12.2**	**-3.1**
VRH				pmax	pmax		
	comp=Z,430nm,0.6s						
VRH				pmax	pmax		
	comp=Z,430nm,0.6s						
VRH				smax	smax		
	comp=E,560nm,1.9s						
SHME	**Shamm**	**72.23**	**290**	*i* P	**P**	**14 29 29.1**	**+0.5**
	SNR=87						
HOQ	**Hoqain**	**72.28**	**287**	P	**P**	**14 29 29.1**	**+0.2**
	SNR=48						
HOQ				P	**P**	**14 29 30.0**	**+1.1**
	SNR=28						
AKT	**Akhty**	**72.39**	**308**	⇓*i*P	**P**	**14 29 29.7**	**+0.4**
AKT				*e*		14 29 45.3	
AKT				*e**PP	**pP**	**14 31 02.0**	**+1.6**
AKT				*e*		14 32 18.6	
AKT				*e*S	**S**	**14 38 15.9**	**-2.0**
AKT				pmax	pmax		
	comp=Z,595nm,0.9s						
MDH	**Madha**	**72.41**	**289**	*i* P	**P**	**14 29 28.9**	**-0.6**
	SNR=9.8						
MDH	**Madha**	**72.41**	**289**	P	**P**	**14 29 29.1**	**-0.4**
	SNR=6.6						
TRO	**Tromso**	**72.45**	**342**	*e*P	**P**	**14 29 29.8**	**+0.8**
MOS	**Moscow**	**72.47**	**325**	*e*P	**P**	**14 29 28.8**	**-0.5**
MOS				*e*		14 29 53.2	
MOS				*e*S	**S**	**14 38 14.9**	**-3.1**
MOS				pmax	pmax		
	comp=Z,282nm,1.0s						
MOS				smax	smax		
	comp=E,400µm,1.5s						
MSFE	**Esma-Masafi**	**72.50**	**290**	*i* P	**P**	**14 29 30.7**	**+0.6**
	SNR=38						
UOSS	**Minazif**	**72.63**	**289**	*i* P	**P**	**14 29 30.7**	**-0.2**
	SNR=32						
UOSS	**Minazif**	**72.63**	**289**	P	**P**	**14 29 30.6**	**-0.2**
UOSS	**Minazif**	**72.63**	**289**	P	**P**	**14 29 30.6**	**-0.2**
SOHO	**SOHO**	**72.70**	**288**	P	**P**	**14 29 31.5**	**+0.2**
	SNR=128						
SOHO				P	**P**	**14 29 32.0**	**+0.7**
	SNR=62						
BSY	**Bisya**	**72.72**	**287**	P	**P**	**14 29 31.9**	**+0.4**
	SNR=26						
HATD	**Hatta, Dubai**	**72.74**	**289**	*i* P	**P**	**14 29 32.0**	**+0.5**
	SNR=60						
HATD	**Hatta, Dubai**	**72.74**	**289**	P	**P**	**14 29 32.1**	**+0.6**
	SNR=47						
LKRN	**Lenkeran, Azer**	**72.77**	**305**	P	**P**	**14 29 31.9**	**+0.5**
MHTO	**MHTO**	**72.82**	**285**	P	**P**	**14 29 32.2**	**+0.2**
	SNR=32						
ASHO	**Ashiyiah**	**72.86**	**289**	*i* P	**P**	**14 29 32.6**	**+0.4**
	SNR=33						
ASHO	**Ashiyiah**	**72.86**	**289**	P	**P**	**14 29 32.6**	**+0.4**
	SNR=33						
SEKA	**Sheki**	**72.86**	**308**	P	**P**	**14 29 32.0**	**0.0**
OUL	**Oulu**	**72.90**	**336**	P	**P**	**14 29 33.0**	**+1.4**
OUL				pmax	pmax		
	comp=Z,100nm,1.1s						
PGC	**Sidney**	**72.99**	**43**	P	**P**	**14 29 34.6**	**+2.1**
PGC				IAmb	IAmb	14 29 35.2	
	comp=Z,79nm,0.9s						
GROC	**Groznyy**	**73.00**	**310**	*e*P	**P**	**14 29 32.5**	**-0.1**
GROC				*e*		14 29 46.9	
GROC				*e**PP	**pP**	**14 31 06.2**	**+2.3**
GROC				*e*		14 32 20.0	
GROC				*e*S	**S**	**14 38 22.8**	**-1.6**
GROC				pmax	pmax		
	comp=Z,180nm,0.8s						
ARQ	**Araqi**	**73.04**	**288**	P	**P**	**14 29 34.0**	**+0.7**
	SNR=78						
NAZ	**Nazwa, Dubai**	**73.06**	**289**	*i* P	**P**	**14 29 33.6**	**+0.3**
	SNR=15						
NAZ	**Nazwa, Dubai**	**73.06**	**289**	P	**P**	**14 29 34.2**	**+0.8**
	SNR=18						
LLLB	**Lillooet**	**73.08**	**41**	P	**P**	**14 29 34.5**	**+1.5**
LLLB				IAmb	IAmb	14 29 35.6	
	comp=Z,86nm,1.1s						
MNGR	**Mingechevir, A**	**73.12**	**308**	P	**P**	**14 29 33.9**	**+0.5**
LPSR	**Galich'ya Gora**	**73.17**	**321**	*e*P	**P**	**14 29 33.5**	**+0.1**
LPSR				*e*S	**S**	**14 38 23.5**	**-2.5**
LPSR				pmax	pmax		
	comp=Z,300nm,0.8s						
LPSR				pmax	pmax		
	comp=Z,330nm,0.8s						
LPSR				smax	smax		
	comp=E,690nm,1.3s						
FAQ	**Al Faqa, Dubai**	**73.22**	**289**	*i* P	**P**	**14 29 34.4**	**+0.2**
	SNR=8.6						
FAQ	**Al Faqa, Dubai**	**73.22**	**289**	P	**P**	**14 29 34.7**	**+0.4**
	SNR=5.9						
LGD	**Lagodekhi**	**73.26**	**309**	P	**P**	**14 29 34.2**	**0.0**
NLWA	**Neilton Lookou**	**73.27**	**45**	IAmb	IAmb	14 29 37.5	
	comp=Z,106nm,1.1s						
DAG	**Danmarks Havn**	**73.28**	**355**	*i* P	**P**	**14 29 34.4**	**+0.7**
DAG	**Danmarks Havn**	**73.28**	**355**	*i* P	**P**	**14 29 34.4**	**+0.7**
OBN	**Obninsk**	**73.29**	**324**	S	**S**	**14 38 25.0**	**-2.1**
	comp=Z,2.3nm,0.4s,baz=84,slow=22,SNR=1.2						
OBN	**Obninsk**	**73.29**	**324**	*d i*P	**P**	**14 29 34.0**	**0.0**
OBN				*i*		14 29 46.2	
OBN				*e*		14 32 25.0	
OBN				*i* S	**S**	**14 38 25.7**	**-1.4**
OBN				pmax	pmax		
	comp=Z,293nm,0.9s						
OBN	**Obninsk**	**73.29**	**324**	P	**P**	**14 29 34.4**	**+0.3**
ALNE	**Al Ain**	**73.38**	**289**	*i* P	**P**	**14 29 35.7**	**+0.5**
	SNR=28						
A04D	**Lummi Island**	**73.41**	**43**	P	**P**	**14 29 36.7**	**+1.8**
	baz=296						
VORR	**Voronezh**	**73.43**	**320**	*e*P	P	14 29 23.0	-12
VORR				pmax	pmax		
	comp=Z,500nm,1.2s						
DQM	**DQM**	**73.64**	**284**	P	**P**	**14 29 36.9**	**+0.2**
	SNR=8.0						
VSR	**Storozhevoye**	**73.66**	**320**	*e*P	**P**	**14 29 36.1**	**-0.2**
VSR				*e*S	**S**	**14 38 28.7**	**-2.7**
VSR				pmax	pmax		
	comp=Z,550nm,1.0s						
VSR				pmax	pmax		
	comp=Z,570nm,1.1s						
VSR				smax	smax		
	comp=N,630nm,1.2s						
D03D	**Eldon**	**73.69**	**44**	P	**P**	**14 29 38.7**	**+2.2**
	baz=296,SNR=58						
GANJ	**Ganja**	**73.70**	**308**	P	**P**	**14 29 37.2**	**+0.4**
AJN	**Ajban**	**73.80**	**289**	*i* P	**P**	**14 29 37.6**	**0.0**
	SNR=11						
AJN	**Ajban**	**73.80**	**289**	P	**P**	**14 29 38.0**	**+0.4**
	SNR=10.0						
E03A	**Lebam**	**73.83**	**45**	IAmb	IAmb	14 29 40.4	
	comp=Z,125nm,1.0s						
DGAR	**Diego Garcia**	**73.92**	**252**	P	**P**	**14 29 39.3**	**+0.9**
DGAR				pmax	pmax		
	comp=Z,378nm,0.8s						
DGAR	**Diego Garcia**	**73.92**	**252**	P	**P**	**14 29 39.3**	**+0.9**
B05A	**Bryant**	**73.97**	**43**	P	**P**	**14 29 39.7**	**+1.6**
	baz=296						
PUL	**Pulkovo**	**73.98**	**330**	*ce*P	**P**	**14 29 38.9**	**+1.0**
PUL				pmax	pmax		
	comp=Z,185nm,0.9s						
GOF	**Gofitskoye**	**74.01**	**313**	⇓*i*P	**P**	**14 29 39.0**	**+0.5**
GOF				*e*S	**S**	**14 38 34.0**	**-1.6**
GOF				pmax	pmax		
	comp=Z,246nm,0.9s						
GOF				smax	smax		
	comp=N,38nm,0.6s						
GOF				smax	smax		
	comp=E,137nm,0.9s						
D04E	**Lakebay**	**74.04**	**45**	P	**P**	**14 29 40.9**	**+2.4**
	baz=296,SNR=9.7						
SUF	**Sumiainen**	**74.11**	**334**	P	**P**	**14 29 39.6**	**+1.0**
SUF				pmax	pmax		
	comp=Z,209nm,0.8s						
TBLG	**Delisi**	**74.32**	**309**	P	**P**	**14 29 40.8**	**+0.5**
TBLG	**Delisi**	**74.32**	**309**	IAmb	IAmb	14 29 42.0	
	comp=Z,115nm,0.9s						
NCK	**Nalchik**	**74.33**	**311**	*i* P	**P**	**14 29 39.6**	**-0.7**
NCK				pmax	pmax		
	comp=Z,80nm,0.8s						
F04D	**Rainier, OR**	**74.37**	**46**	P	**P**	**14 29 42.2**	**+1.7**
	baz=296						
ZEI	**Tsey**	**74.43**	**310**	*e*P	**P**	**14 29 38.8**	**-2.3**
ZEI				pmax	pmax		
	comp=Z,143nm,0.6s						
E04D	**Cinebar**	**74.44**	**45**	P	**P**	**14 29 42.6**	**+1.8**
	baz=296						
STEI	**Steigen**	**74.58**	**341**	*e*P	**P**	**14 29 42.0**	**+0.9**
G03D	**McMinnville, O**	**74.59**	**47**	P	**P**	**14 29 43.6**	**+1.8**
	baz=296,SNR=15						
KBZ	**Khabaz**	**74.68**	**312**	P	**P**	**14 29 43.0**	**+0.8**
	comp=Z,312nm,0.8s,baz=80,slow=4.1,SNR=606						
KBZ				S	**S**	**14 38 42.8**	**-0.1**
	comp=Z,2.3nm,0.9s,baz=20,slow=23,SNR=11						
KBZ	**Khabaz**	**74.68**	**312**	*d i*P	**P**	**14 29 42.8**	**+0.6**
KBZ				pmax	pmax		
	comp=Z,288nm,0.8s						
KZRT	**Kazreti**	**74.70**	**309**	P	**P**	**14 29 42.7**	**+0.2**
I02D	**Swisshome**	**74.70**	**48**	P	**P**	**14 29 44.3**	**+1.9**
	baz=296						
KIV	**Kislovodsk**	**74.72**	**312**	⇑P	**P**	**14 29 44.9**	**+2.2**
KIV	**Kislovodsk**	**74.72**	**312**	*i* P	**P**	**14 29 44.1**	**+1.5**
	SNR=26						
KIV	**Kislovodsk**	**74.72**	**312**	*e*P	**P**	**14 29 44.2**	**+1.6**
KIV				*e*S	**S**	**14 38 45.2**	**+1.6**
KIV				pmax	pmax		
	comp=Z,733nm,1.0s						
KIV				pmax	pmax		
	comp=Z,142nm,4.8s						
KIV	**Kislovodsk**	**74.72**	**312**	P	**P**	**14 29 45.3**	**+2.7**
F04A	**Amboy**	**74.81**	**46**	IAmb	IAmb	14 29 45.6	
	comp=Z,130nm,0.9s						
ONI	**Oni**	**74.81**	**310**	P	**P**	**14 29 44.0**	**+0.9**
SHA1	**Shidzhatmaz**	**74.84**	**312**	*d i*P	**P**	**14 29 43.9**	**+0.4**
COR	**Corvallis**	**74.84**	**47**	P	**P**	**14 29 44.6**	**+1.4**
COR				pmax	pmax		
	comp=Z,222nm,1.1s						
COR	**Corvallis**	**74.84**	**47**	P	**P**	**14 29 44.6**	**+1.4**
C06D	**Leavenworth**	**74.85**	**43**	P	**P**	**14 29 44.5**	**+1.3**
	baz=297,SNR=8.6						
FIA1	**FINESS Array S**	**74.85**	**333**	P	**P**	**14 29 43.3**	**+0.5**
FINES	**FINESS Array B**	**74.85**	**333**	P	**P**	**14 29 43.1**	**+0.3**
	comp=Z,93nm,0.7s,baz=64,slow=5.6,SNR=376						
FINES				S	**S**	**14 38 41.8**	**-2.3**
	comp=Z,14nm,0.9s,baz=70,slow=16,SNR=15						
FINES	**FINESS Array B**	**74.85**	**333**	*i* P	**P**	**14 29 43.0**	**+0.1**
FINES				pmax	pmax		
	comp=Z,93nm,0.7s						
FINES	**FINESS Array B**	**74.85**	**333**	P	**P**	**14 29 43.3**	**+0.5**
NAX	**Nakhchivan**	**74.90**	**307**	P	**P**	**14 29 44.1**	**+0.4**
GNI	**Garni**	**75.00**	**308**	P	**P**	**14 29 44.9**	**+0.5**
	comp=Z,95nm,0.8s,baz=49,slow=1.3,SNR=32						
GNI	**Garni**	**75.00**	**308**	*i* P	**P**	**14 29 45.8**	**+1.4**
	SNR=23						
NEY	**Neytrino**	**75.01**	**311**	*i* P	**P**	**14 29 44.8**	**+0.4**
NEY				pmax	pmax		
	comp=Z,21nm,0.9s						
J01E	**Myrtle Point**	**75.06**	**49**	P	**P**	**14 29 46.3**	**+1.9**
	baz=296,SNR=7.7						
I03D	**Drain, OR**	**75.21**	**48**	P	**P**	**14 29 47.2**	**+2.0**
	baz=296,SNR=43						
H04D	**Lebanon**	**75.23**	**47**	P	**P**	**14 29 47.3**	**+1.9**
	baz=297,SNR=18						
VAF	**Ylistaro**	**75.24**	**335**	P	**P**	**14 29 46.2**	**+1.2**
VAF				pmax	pmax		
	comp=Z,166nm,0.8s						
LTY	**Liberty**	**75.29**	**44**	P	**P**	**14 29 47.1**	**+1.3**
BGD	**Bogdanovka**	**75.30**	**309**	P	**P**	**14 29 47.3**	**+1.2**
AKH	**Akhalkalaki**	**75.31**	**309**	⇑P	**P**	**14 29 47.4**	**+1.3**
AKH	**Akhalkalaki**	**75.31**	**309**	P	**P**	**14 29 47.1**	**+1.0**
F05D	**White Salmon**	**75.43**	**45**	P	**P**	**14 29 48.1**	**+1.7**
	baz=297						
K02D	**Willamette Mer**	**75.45**	**49**	P	**P**	**14 29 48.2**	**+1.5**
	baz=296,SNR=23						
B08A	**Colville Reser**	**75.58**	**42**	IAmb	IAmb	14 29 49.6	
	comp=Z,106nm,0.9s						
L02E	**Cave Junction**	**75.73**	**50**	P	**P**	**14 29 50.0**	**+1.8**
	baz=297,SNR=12						
I04A	**Tendick Farm,**	**75.77**	**48**	P	**P**	**14 29 49.8**	**+1.4**
	baz=297,SNR=50						
KULLO	**Kullorsuaq**	**75.78**	**5**	⇑*i*P	**P**	**14 29 48.5**	**+0.6**
	comp=Z,46nm,0.8s						
KULLO	**Kullorsuaq**	**75.78**	**5**	⇑*i*P	**P**	**14 29 48.5**	**+0.6**
KULLO				pmax	pmax		
	comp=Z,46nm,0.8s						
G05D	**Wamic, OR**	**75.81**	**46**	P	**P**	**14 29 50.2**	**+1.6**
	baz=297						
URZ	**Urewera**	**75.92**	**150**	P	**P**	**14 29 48.1**	**-1.0**
	comp=Z,4.6nm,0.5s,baz=261,slow=2.5,SNR=7.3						
HUMO	**Hull Mountain**	**75.95**	**49**	P	**P**	**14 29 51.4**	**+1.9**
HUMO				IAmb	IAmb	14 29 52.5	
	comp=Z,103nm,1.6s						
MOR8	**Moi Rana**	**75.99**	**340**	*e*P	**P**	**14 29 48.7**	**-0.5**
PKVZ	**Pokaka**	**76.04**	**152**	P	**P**	**14 29 50.9**	**+1.1**
FWVZ	**Far West T-bar**	**76.10**	**152**	P	**P**	**14 29 51.4**	**+1.0**
SHAO	**Shalim**	**76.10**	**283**	*i* P	**P**	**14 29 51.0**	**+0.3**
	SNR=21						
E07A	**Sunnyside**	**76.11**	**44**	IAmb	IAmb	14 29 53.0	
	comp=Z,103nm,1.1s						
I05D	**Terrebonne, OR**	**76.21**	**47**	P	**P**	**14 29 52.4**	**+1.4**
	baz=298,SNR=24						
KHMM	**Horse Mountain**	**76.22**	**51**	IAmb	IAmb	14 29 54.3	
	comp=Z,100nm,1.0s						
J04D	**Umpqua Nationa**	**76.22**	**48**	P	**P**	**14 29 52.8**	**+1.7**
	baz=297,SNR=40						
G06A	**Carlson Farm,**	**76.24**	**46**	IAmb	IAmb	14 29 53.8	
	comp=Z,102nm,1.1s						
VSU	**Vasula**	**76.24**	**330**	*e*P	**P**	**14 29 51.1**	**+0.4**
VSU	**Vasula**	**76.24**	**330**	*ce*P	**P**	**14 29 51.2**	**+0.5**
VSU				pmax	pmax		
	comp=Z,600nm,1.0s						
WAZ	**Wanganui**	**76.29**	**152**	P	**P**	**14 29 52.7**	**+1.6**
F07A	**Phinny Hill Vi**	**76.37**	**45**	IAmb	IAmb	14 29 54.5	
	comp=Z,91nm,0.9s						
HAWA	**Hanford**	**76.38**	**44**	IAmb	IAmb	14 29 54.3	
	comp=Z,97nm,1.3s						
BATM	**Batumi**	**76.43**	**310**	⇓P	**P**	**14 29 53.0**	**+0.9**
BATM	**Batumi**	**76.43**	**310**	P	**P**	**14 29 52.7**	**+0.6**
D08A	**Wollman Farm,**	**76.44**	**44**	IAmb	IAmb	14 29 54.4	
	comp=Z,101nm,0.8s						
C09A	**Chrisman Ranch**	**76.47**	**43**	IAmb	IAmb	14 29 54.6	
	comp=Z,94nm,0.8s						
BHHZ	**Black Hill Sta**	**76.51**	**152**	P	**P**	**14 29 53.0**	**+0.6**
YBH	**Yreka Blue Hor**	**76.51**	**50**	P	**P**	**14 29 53.3**	**+0.6**
	comp=Z,43nm,0.9s,baz=326,slow=1.5,SNR=58						
YBH	**Yreka Blue Hor**	**76.51**	**50**	IAmb	IAmb	14 29 55.6	
	comp=Z,58nm,0.9s						
BCA	**Borcka**	**76.55**	**310**	⇓P	**P**	**14 29 53.4**	**+0.6**
L04D	**Klamath Falls**	**76.56**	**49**	P	**P**	**14 29 54.4**	**+1.3**
	baz=297,SNR=15						
M02C	**Callahan**	**76.57**	**50**	P	**P**	**14 29 54.7**	**+1.7**
	baz=297,SNR=21						
E08A	**Dider Farm, El**	**76.62**	**44**	IAmb	IAmb	14 29 55.6	
	comp=Z,61nm,0.8s						
K04D	**Chiloquin, OR**	**76.73**	**49**	P	**P**	**14 29 55.5**	**+1.5**
	baz=298,SNR=16						
KRHZ	**Kereru**	**76.77**	**151**	P	**P**	**14 29 54.3**	**+0.5**
J05D	**Fort Rock, OR**	**76.77**	**48**	P	**P**	**14 29 55.9**	**+1.8**
	baz=298,SNR=88						
DUWZ	**D’Urville Isla**	**76.77**	**154**	P	**P**	**14 29 54.1**	**+0.4**
SOC	**Sochi**	**76.81**	**313**	*d i*P	**P**	**14 29 54.3**	**+0.1**
SOC				*e**SP	**sP**	**14 32 12.4**	**+1.7**
SOC				*e*		14 32 49.6	
SOC				*e*S	**S**	**14 39 04.4**	**-1.6**
SOC				*e*SS	**SS**	**14 44 13.1**	**+0.8**
SOC				*e*SSS	SSS	14 47 35.2	
SOC				pmax	pmax		
	comp=Z,228nm,0.8s						
DMTO	**DMTO**	**76.81**	**283**	P	**P**	**14 29 54.7**	**+0.1**
KCPM	**Cahto Peak**	**76.86**	**52**	IAmb	IAmb	14 29 57.5	
	comp=Z,96nm,0.9s						
N02D	**Trinity Center**	**76.86**	**50**	P	**P**	**14 29 56.2**	**+1.5**
	baz=297,SNR=19						
NEW	**Newport**	**76.92**	**42**	P	**P**	**14 29 55.0**	**+0.3**
	comp=Z,80nm,0.9s,baz=296,slow=4.3,SNR=101						
NEW	**Newport**	**76.92**	**42**	IAmb	IAmb	14 29 57.1	
	comp=Z,91nm,0.9s						
NEW	**Newport**	**76.92**	**42**	P	**P**	**14 29 55.9**	**+1.1**
	baz=299						
NNZ	**Nelson**	**76.92**	**154**	P	**P**	**14 29 54.5**	**0.0**
PNHZ	**Pukenui**	**76.92**	**152**	P	**P**	**14 29 54.8**	**+0.1**
M04C	**Macdoel**	**77.07**	**49**	P	**P**	**14 29 57.3**	**+1.5**
	baz=298,SNR=40						
WDC	**Whiskeytown Da**	**77.16**	**51**	IAmb	IAmb	14 29 58.7	
	comp=Z,70nm,1.2s						
E09A	**Wood Farm, Sta**	**77.16**	**44**	IAmb	IAmb	14 29 58.7	
	comp=Z,102nm,0.9s						
O02D	**Mt. Diablo Mer**	**77.17**	**51**	P	**P**	**14 29 58.1**	**+1.7**
	baz=298,SNR=13						
KIW	**Kapiti Island**	**77.20**	**153**	P	**P**	**14 29 56.1**	**-0.1**
MRZ	**Mangatainoka R**	**77.30**	**153**	P	**P**	**14 29 56.9**	**+0.2**
CAW	**Cannon Point**	**77.48**	**153**	P	**P**	**14 29 57.6**	**0.0**
HOWZ	**Holdsworth Sta**	**77.48**	**153**	P	**P**	**14 29 57.3**	**-0.3**
ANWZ	**Angora Road**	**77.50**	**152**	P	**P**	**14 29 58.2**	**+0.5**
RBK	**Rabkut**	**77.54**	**283**	P	**P**	**14 29 58.5**	**-0.2**
	SNR=7.8						
BFZ	**Birch Farm**	**77.59**	**152**	P	**P**	**14 29 58.9**	**+0.7**
ANN	**Anapa**	**77.67**	**315**	*d i*P	**P**	**14 29 58.9**	**+0.1**
ANN				*e*PPP	PPP	14 34 49.0	
ANN				*e*S	**S**	**14 39 12.9**	**-2.2**
ANN				*e*SS	**SS**	**14 44 31.6**	**+6.5**
ANN				*e*SSS	SSS	14 47 54.3	
ANN				pmax	pmax		
	comp=Z,318nm,1.0s						
MTW	**Mount Morrison**	**77.69**	**153**	P	**P**	**14 29 58.5**	**-0.3**
WHFO	**Wadi Hawf**	**77.72**	**284**	P	**P**	**14 29 59.2**	**-0.5**
	SNR=9.3						
O03E	**Paynes Creek**	**77.79**	**51**	P	**P**	**14 30 00.3**	**+0.6**
	baz=298,SNR=17						
TMWZ	**Te Maipa**	**77.80**	**153**	P	**P**	**14 29 59.5**	**+0.1**
NSS	**Namsos**	**77.88**	**339**	*e*P	**P**	**14 29 59.8**	**+0.3**
MICGM	**Minsk**	**77.93**	**326**	⇑*e*P	**P**	**14 30 00.0**	**0.0**
MICGM				PM		14 30 01.0	
	comp=Z,1.2nm,1.0s						
MICGM				PM		14 30 02.0	
	comp=N,0.4nm,1.0s						
MICGM				P M		14 30 02.0	
	comp=E,0.7nm,1.0s						
MICGM				*e*pP	**pP**	**14 31 27.0**	**-5.8**
MICGM				*e*PP	sP	14 32 38.0	+21
MICGM				*e*S	**S**	**14 39 16.0**	**-1.4**
MICGM				*e*sS	sS	14 41 06.0	-57
MNK	**Minsk**	**77.93**	**326**	⇑*e*P	**P**	**14 30 00.0**	**0.0**
MNK				*e*S	**S**	**14 39 16.0**	**-1.4**
MNK				pmax	pmax		
	comp=Z,1µm,1.0s						
MNK				pmax	pmax		
	comp=N,410nm,1.0s						
MNK				pmax	pmax		
	comp=E,650nm,1.0s						
PLWZ	**Palliser**	**77.94**	**153**	P	**P**	**14 30 00.2**	**0.0**
KTUT	**Trabzon**	**78.00**	**310**	⇓P	**P**	**14 30 00.8**	**+0.1**
IZAR	**Zarasai**	**78.00**	**328**	*e*P	**P**	**14 30 00.9**	**+0.5**
IDID	**Didziasalis**	**78.02**	**327**	*e*P	**P**	**14 30 01.8**	**+1.3**
ISAL	**Salakas**	**78.16**	**328**	*e*P	**P**	**14 30 01.7**	**+0.4**
NACGM	**Naroch**	**78.23**	**327**	*e*P	**P**	**14 30 01.0**	**-0.7**
NACGM				PM		14 30 02.0	
	comp=Z,0.6nm,1.0s						
NACGM				*e*S	**S**	**14 39 18.0**	**-2.6**
RPZ	**Rata Peaks**	**78.27**	**157**	P	**P**	**14 30 01.8**	**0.0**
	comp=Z,10nm,0.6s,baz=276,slow=2.9,SNR=7.1						
RPZ	**Rata Peaks**	**78.27**	**157**	IAmb	IAmb	14 30 08.1	
	comp=Z,101nm,1.9s						
ORV	**Oroville**	**78.34**	**51**	IAmb	IAmb	14 30 04.5	
	comp=Z,73nm,0.9s						
WALA	**Waterton Lakes**	**78.35**	**40**	IAmb	IAmb	14 30 05.2	
	comp=Z,61nm,0.8s						
SUMG	**Summit**	**78.36**	**359**	*i* P	**P**	**14 30 04.0**	**+1.4**
	comp=Z,32nm,0.9s						

SUMG	Summit	78.36	359	*i* P	P	14 30 04.0	+1.4
SUMG				pmax	pmax		
	comp=Z,32nm,0.9s						
ABTO	Aybut	78.38	283	P	P	14 30 03.1	-0.1
	SNR=24						
BMO	Blue Mountains	78.49	45	IAmb	IAmb	14 30 05.9	
	comp=Z,62nm,0.8s						
J08A	Circle Bar Ran	78.50	47	IAmb	IAmb	14 30 06.3	
	comp=Z,111nm,0.8s						
SLIT	Slitere, Latvi	78.65	331	*e*P	P	14 30 03.6	-0.2
JTMT	Jette	78.83	41	IAmb	IAmb	14 30 07.7	
	comp=Z,80nm,0.9s						
WVOR	Wild Horse Val	78.85	48	IAmb	IAmb	14 30 08.0	
	comp=Z,52nm,0.9s						
BEKR	Beckworth	78.97	50	IAmb	IAmb	14 30 08.3	
	comp=Z,104nm,0.9s						
PABE	Paberze	79.19	328	*e*P	P	14 30 06.3	-0.5
AKASG	Malin Array Be	79.36	323	P	P	14 30 07.2	-0.6
	comp=Z,99nm,0.6s,baz=48,slow=6.1,SNR=57						
AKASG				S	S	14 39 26.5	-6.0
	comp=Z,0.2nm,0.2s,baz=51,slow=9.3,SNR=5.1						
AKASG				PKP2bc		14 56 44.9	
	comp=Z,0.4nm,0.4s,baz=92,slow=4.8,SNR=4.4						
AKASG	Malin Array Be	79.36	323	*i* P	P	14 30 06.3	-1.5
AKASG				pmax	pmax		
	comp=Z,114nm,0.7s						
AKASG	Malin Array Be	79.36	323	P	P	14 30 07.5	-0.3
AKBB	Malin Array Si	79.36	323	*d i*P	P	14 30 07.5	-0.3
RUBR	Rubicon Trail	79.50	51	IAmb	IAmb	14 30 11.4	
	comp=Z,94nm,0.8s						
MSO	Missoula	79.50	42	P	P	14 30 09.4	+0.5
	baz=302						
PAHR	Pah Rah Range	79.70	50	IAmb	IAmb	14 30 12.3	
	comp=Z,60nm,1.0s						
PBUR	Paburge	79.79	330	*e*P	P	14 30 09.6	-0.4
CMB	Columbia Colle	79.83	52	P	P	14 30 12.3	+1.6
CMB				pmax	pmax		
	comp=Z,75nm,0.9s						
CMB	Columbia Colle	79.83	52	P	P	14 30 12.3	+1.6
CMB				IAmb	IAmb	14 30 12.9	
	comp=Z,75nm,0.8s						
PNTR	Pine Nut	79.86	51	IAmb	IAmb	14 30 13.5	
	comp=Z,77nm,0.9s						
MFID	Camas Ranch	80.14	46	IAmb	IAmb	14 30 14.9	
	comp=Z,77nm,1.0s						
YERR	Yerington	80.15	51	IAmb	IAmb	14 30 14.9	
	comp=Z,83nm,1.0s						
SOCY	Socotra	80.17	278	P	P	14 30 11.3	-1.5
	SNR=28						
WAKR	Walker	80.25	51	IAmb	IAmb	14 30 15.7	
	comp=Z,53nm,0.8s						
KVT	Kavak	80.40	312	P	P	14 30 14.7	+1.1
NC303	NORSAR Array S	80.43	337	P	P	14 30 13.5	+0.2
SUW	Suwalki	80.46	328	*e*P	P	14 30 13.6	+0.1
SUW	Suwalki	80.46	328	*e*P	P	14 30 13.6	+0.1
DOMB	Dombas	80.59	339	*e*P	P	14 30 14.6	+0.4
NB2	NORSAR Subarra	80.62	337	P	P	14 30 14.1	-0.2
	comp=Z,54nm,0.6s,baz=45,slow=5.3						
NB2	NORSAR Subarra	80.62	337	P	P	14 30 14.1	-0.2
	baz=45,slow=5.3						
NOA	NORSAR Array B	80.62	337	P	P	14 30 14.1	-0.2
	comp=Z,86nm,0.9s,baz=46,slow=4.9,SNR=131						
NOA				PP	PP	14 33 26.3	+1.9
	comp=Z,2.3nm,0.7s,baz=53,slow=8.0,SNR=3.9						
DIKM	Dikmen	80.62	313	⇑P	P	14 30 15.9	+1.2
MOL	Molde	80.67	340	*e*P	P	14 30 15.3	+0.8
NORES	NORESS Array B	80.72	337	P	P	14 30 18.7	+3.9
NORES				pmax	pmax		
	comp=Z,3.0nm,0.3s						
NBO00	NORSAR Array S	80.77	337	IAmb	IAmb	14 30 16.1	
	comp=Z,165nm,1.1s						
RYN	Ryan	80.81	51	IAmb	IAmb	14 30 18.4	
	comp=Z,67nm,0.9s						
NAO01	NORSAR Array S	80.87	337	*e*P	P	14 30 15.4	-0.2
NAO01	NORSAR Array S	80.87	337	IAmb	IAmb	14 30 18.3	
	comp=Z,118nm,1.3s						
KVN	Kaiserville	80.89	50	IAmb	IAmb	14 30 18.8	
	comp=Z,68nm,0.9s						
NVAR	Mina Array Bea	81.06	51	P	P	14 30 18.5	+1.1
	comp=Z,58nm,0.8s,baz=282,slow=5.4,SNR=274						
NVAR				pP	pwP	14 31 54.7	-0.9
	comp=Z,6.5nm,0.8s,baz=306,slow=6.6,SNR=4.9						
MLAC	Mammoth, Mammo	81.10	52	P	P	14 30 19.0	+1.5
	baz=300,SNR=16						
FFC	Flin Flon	81.14	31	P	P	14 30 17.2	+0.1
FFC				pmax	pmax		
	comp=Z,47nm,1.0s						
FFC	Flin Flon	81.14	31	P	P	14 30 17.2	+0.1
NV11	Mina Array Sit	81.16	51	P	P	14 30 18.6	+0.9
EGMT	Eagleton	81.23	39	IAmb	IAmb	14 30 20.0	
	comp=Z,106nm,1.0s						
EGMT	Eagleton	81.23	39	P	P	14 30 18.8	+1.0
	baz=304						
SORM	Soroca	81.27	321	⇑P	P	14 30 17.7	-0.2
SORM	Soroca	81.27	321	P	P	14 30 17.7	-0.2
BZK	Bozkurt	81.27	313	⇑P	P	14 30 18.6	+0.6
VOG	Valley Oaks Go	81.38	53	P	P	14 30 19.7	+1.0
	baz=300						
SMMC	Simmler	81.44	54	P	P	14 30 21.0	+1.8
	baz=300						
ILULI	Ilulissat	81.45	4	*i* P	P	14 30 18.9	+0.5
ILULI	Ilulissat	81.45	4	*i* P	P	14 30 18.9	+0.5
OSL	Oslo	81.58	337	*e*P	P	14 30 19.9	+0.7
KIS	Kishinev	81.65	320	⇓*i*P	P	14 30 20.0	+0.1
	comp=Z,600nm,0.8s						
KIS	Kishinev	81.65	320	⇑P	P	14 30 19.2	-0.7
KIS	Kishinev	81.65	320	⇓*i*P	P	14 30 20.0	+0.1
KIS				pmax	pmax		
	comp=Z,600nm,0.8s						
PKM	Mcpherson Peak	81.78	55	P	P	14 30 22.5	+1.4
	baz=300						
TIN	Tinemaha, Big	81.81	52	P	P	14 30 22.4	+1.4
	baz=301						
VES	Vestal, Richgr	81.83	54	P	P	14 30 21.4	+0.4
	baz=300,SNR=15						
SKAR	Skarslia	81.85	338	*e*P	P	14 30 21.4	+0.7
RAYN	Ar Rayn	82.00	292	*i* P	P	14 30 22.8	+0.5
	SNR=302						
RAYN	Ar Rayn	82.00	292	P	P	14 30 22.7	+0.5
RAYN				pmax	pmax		
	comp=Z,878nm,1.6s						
RAYN	Ar Rayn	82.00	292	P	P	14 30 22.7	+0.5
SBC	Santa Barbara	82.08	55	P	P	14 30 23.7	+1.4
	baz=300						
CWC	Cottonwood Cre	82.22	53	P	P	14 30 24.0	+0.7
	baz=301						
IAS	Iasi	82.24	320	⇓P	P	14 30 23.2	+0.3
IAS	Iasi	82.24	320	P	P	14 30 23.2	+0.3
LEOM	Leova	82.27	319	⇓P	P	14 30 23.4	+0.3
LEOM	Leova	82.27	319	P	P	14 30 23.4	+0.3
ISA	Isabella, Lake	82.34	53	P	P	14 30 23.9	+0.1
	baz=301,SNR=14						
SCZ2	Santa Cruz Isl	82.36	55	P	P	14 30 24.2	+0.3
	baz=300						
ARVC	Arvin	82.36	54	P	P	14 30 24.6	+0.7
	baz=300,SNR=6.1						
GRAC	Grapevine Rang	82.43	52	P	P	14 30 25.4	+1.2
	baz=301,SNR=28						
LVV	L'vov	82.59	324	*e*P	P	14 30 24.6	0.0
LVV				*e*S	S	14 40 02.0	-3.5
TLCR		82.67	318	⇑P	P	14 30 25.8	+0.7
TLCR		82.67	318	P	P	14 30 26.6	+1.5
BR131	Keskin Array S	82.68	312	P	P	14 30 25.9	+0.4
	SNR=114						
BRTR	Keskin Array B	82.68	312	P	P	14 30 25.6	+0.1
	comp=Z,128nm,0.8s,baz=100,slow=4.1,SNR=435						
BRTR	Keskin Array B	82.68	312	P	P	14 30 24.6	-0.9
OSI	Osito Audit: C	82.70	54	P	P	14 30 26.8	+1.2
	baz=301						
BLG	Laguna Peak, P	82.71	55	P	P	14 30 26.1	+0.5
	baz=300						
BIR	Birlad	82.74	319	⇑P	P	14 30 26.7	+1.2
BIR	Birlad	82.74	319	P	P	14 30 27.5	+2.0
H17A	Grant Village	82.81	43	IAmb	IAmb	14 30 30.7	
	comp=Z,131nm,1.1s						
H17A	Grant Village	82.81	43	P	P	14 30 29.4	+3.1
	baz=304						
SNCC	San Nicolas Is	82.81	56	P	P	14 30 27.1	+1.0
	baz=300						
MPMC	Manual Prospec	82.83	53	P	P	14 30 27.3	+0.8
	baz=301,SNR=40						
GIUM	Giurgiulesti	82.85	319	⇑P	P	14 30 27.0	+1.0
IMW	Indian Meadow	82.87	43	IAmb	IAmb	14 30 29.7	
	comp=Z,60nm,0.9s						
JURR	Jurilovca	82.87	318	⇑P	P	14 30 26.5	+0.3
FLWY	Flagg Ranch	82.91	43	IAmb	IAmb	14 30 30.2	
	comp=Z,90nm,1.0s						
R11A	Troy Canyon, C	82.94	50	IAmb	IAmb	14 30 29.3	
	comp=Z,63nm,0.9s						
R11A	Troy Canyon, C	82.94	50	P	P	14 30 28.1	+1.2
	baz=302						
BEL	Belsk	82.95	327	*e*P	P	14 30 27.0	+0.6
BEL	Belsk	82.95	327	*e*P	P	14 30 27.0	+0.6
FXWY	Fox Creek	82.96	44	IAmb	IAmb	14 30 30.1	
	comp=Z,70nm,1.3s						
GIRR	Girov	82.97	321	P	P	14 30 27.4	+0.7
ODD1	Odda	82.98	338	*e*P	P	14 30 27.3	+0.8
LRMC	Laurel Mtn Rad	82.99	53	P	P	14 30 28.2	+1.0
	baz=301,SNR=29						
FURC	Furnace Creek,	83.05	52	P	P	14 30 28.5	+1.3
	baz=301,SNR=40						
CFR	Carcaliu	83.07	318	⇓P	P	14 30 27.3	+0.1
CFR	Carcaliu	83.07	318	P	P	14 30 27.2	+0.1
EDW2	Edwards Air Fo	83.08	54	P	P	14 30 28.7	+1.2
	baz=301,SNR=43						
TPAW	Teton Pass	83.09	44	IAmb	IAmb	14 30 29.7	
	comp=Z,51nm,0.9s						
TOPG	Topolog	83.10	318	⇓P	P	14 30 27.7	+0.4
TESR	Tescani	83.15	320	⇑P	P	14 30 27.7	+0.1
ANTO	Ankara	83.15	312	⇓P	P	14 30 28.1	+0.4
ANTO	Ankara	83.15	312	P	P	14 30 29.4	+1.6
ANTO	Ankara	83.15	312	P	P	14 30 28.2	+0.4
DECC	Green Verdugo	83.16	55	P	P	14 30 28.7	+0.8
	baz=301						
RLMT	Red Lodge	83.16	42	IAmb	IAmb	14 30 30.7	
	comp=Z,67nm,0.8s						
RLMT	Red Lodge	83.16	42	P	P	14 30 29.6	+1.6
	baz=305						
BIZ	Bicaz	83.20	321	⇑P	P	14 30 28.8	+1.0
TPNV	Topopah Spring	83.22	51	P	P	14 30 29.3	+1.0
	baz=302,SNR=119						
BUR08	Bucovina Ar. S	83.28	322	IAmb	IAmb	14 30 29.8	
	comp=Z,103nm,0.9s						
PETR	Petresti	83.28	319	⇑P	P	14 30 29.3	+1.1
BURAR	Bucovina Array	83.28	322	⇓P	P	14 30 28.7	+0.3
BURAR	Bucovina Array	83.28	322	P	P	14 30 30.0	+1.6
BURAR	Bucovina Array	83.28	322	P	P	14 30 24.9	-3.4
TIRR	Tirgusor	83.32	318	⇑P	P	14 30 29.2	+0.7
TIRR	Tirgusor	83.32	318	P	P	14 30 29.0	+0.6
ODBI	Odobesti	83.35	319	⇑P	P	14 30 30.0	+1.4
MWC	Mount Wilson	83.37	55	IAmb	IAmb	14 30 31.1	
	comp=Z,73nm,0.9s						
KWP	Kalwaria Pacla	83.38	324	*e*P	P	14 30 29.2	+0.5
KWP	Kalwaria Pacla	83.38	324	*e*P	P	14 30 29.2	+0.5
BSD	Bornholm Skovb	83.40	332	⇓*i*P	P	14 30 28.1	-0.5
	comp=Z,121nm,0.8s						
BSD	Bornholm Skovb	83.40	332	⇓*i*P	P	14 30 28.1	-0.5
BSD				pmax	pmax		
	comp=Z,120nm,0.8s						
AHID	Auburn Hatcher	83.41	44	IAmb	IAmb	14 30 31.7	
	comp=Z,50nm,0.9s						
EFOR	EFORIE	83.41	317	⇑P	P	14 30 30.1	+1.2
FMP	Fort Macarthur	83.46	55	P	P	14 30 30.4	+1.0
	baz=301						
HARR	Harsova	83.47	318	⇑P	P	14 30 30.2	+1.0
HARR	Harsova	83.47	318	P	P	14 30 30.6	+1.4
MFTR	Murfatlar	83.47	317	⇑P	P	14 30 29.0	-0.2
VRI	Vrincioaia	83.48	320	⇓P	P	14 30 30.4	+1.1
VRI	Vrincioaia	83.48	320	P	P	14 30 30.0	+0.7
PLOR	Plostina	83.53	320	⇓P	P	14 30 29.7	+0.1
PLOR	Plostina	83.53	320	P	P	14 30 29.7	+0.1
CIS	Catalina Islan	83.53	55	P	P	14 30 30.5	+0.7
	baz=301,SNR=10						
MANR	Mangalia	83.58	317	⇑P	P	14 30 30.5	+0.7
CVDA	Cernavoda	83.61	318	⇑P	P	14 30 31.0	+1.1
GRER		83.62	319	⇑P	P	14 30 32.3	+2.4
BFSC	Mount Baldy Ra	83.65	54	P	P	14 30 31.0	+0.5
	baz=301,SNR=22						
GKP	Gorka Klasztor	83.66	329	*e*P	P	14 30 30.0	+0.1
GKP	Gorka Klasztor	83.66	329	*e*P	P	14 30 30.0	+0.1
SCI2	San Clemente I	83.66	56	P	P	14 30 31.4	+1.0
	baz=301						
BISRR	Bisoca	83.68	319	⇑P	P	14 30 31.5	+1.1
SFJD	Kangerlussuaq	83.68	4	*i* P	P	14 30 30.0	+0.2
SFJD	Kangerlussuaq	83.68	4	P	P	14 30 30.6	+0.8
SFJD				pmax	pmax		
	comp=Z,28nm,0.8s						
SFJD	Kangerlussuaq	83.68	4	P	P	14 30 30.6	+0.8
GSC	Goldstone, Bar	83.70	53	IAmb	IAmb	14 30 32.9	
	comp=Z,96nm,0.9s						
GSC	Goldstone, Bar	83.70	53	P	P	14 30 31.7	+1.1
	baz=302,SNR=55						
SHOC	Shoshone, Teco	83.75	52	P	P	14 30 32.0	+1.1
	baz=302,SNR=19						
DUG	Dugway, Tooele	83.76	47	IAmb	IAmb	14 30 33.5	
	comp=Z,93nm,0.8s						
DUG	Dugway, Tooele	83.76	47	P	P	14 30 32.2	+1.3
	baz=303,SNR=92						
RRX	Edison Barstow	83.78	53	P	P	14 30 32.4	+1.3
	baz=302						
OZUR		83.88	320	⇑P	P	14 30 32.4	+1.1
ICOR	Ion Corvin	83.88	318	⇑P	P	14 30 32.7	+1.4
PGOR	Pogoanele	83.89	319	⇑P	P	14 30 33.4	+2.1
PSN	Preselentsi	83.90	317	*i* P	P	14 30 32.5	+1.1
LAO	LASA Array	83.96	39	IAmb	IAmb	14 30 34.1	
	comp=Z,66nm,1.0s						
LAO	LASA Array	83.96	39	P	P	14 30 32.9	+1.2
	baz=307						
DGMT	Dagmar	83.97	37	P	P	14 30 32.1	+0.4
	baz=308						
COP	Copenhagen	84.01	333	*i* P	P	14 30 31.6	0.0
	comp=Z,117nm,0.7s						
COP	Copenhagen	84.01	333	*i* P	P	14 30 31.6	0.0
COP				pmax	pmax		
	comp=Z,120nm,0.7s						
ISR	Istrita	84.02	319	⇑P	P	14 30 32.9	+0.9
ISR	Istrita	84.02	319	P	P	14 30 32.9	+0.9
STAV	Stavanger	84.04	338	*e*P	P	14 30 31.4	-0.2
ARCR	ARCALIA	84.07	322	⇑P	P	14 30 33.5	+1.3
MLR	Muntele Rosu	84.14	320	S	S	14 40 14.3	-7.1
	comp=Z,3.1nm,0.8s,baz=108,slow=23,SNR=2.3						
MLR	Muntele Rosu	84.14	320	⇑P	P	14 30 33.1	+0.3
MLR	Muntele Rosu	84.14	320	P	P	14 30 33.4	+0.7
MLR				pmax	pmax		
	comp=Z,40nm,0.9s						
MLR	Muntele Rosu	84.14	320	IAmb	IAmb	14 30 55.1	
	comp=Z,55nm,0.8s						
BBRC	Big Bear Solar	84.16	54	P	P	14 30 34.0	+0.8
	baz=302,SNR=6.9						
DOPR	Dopca	84.17	320	⇓P	P	14 30 33.5	+0.8
BMR	Baia Mare	84.17	322	⇑P	P	14 30 33.9	+1.3
SHPR	Sheep Range	84.20	51	IAmb	IAmb	14 30 35.7	
	comp=Z,58nm,0.9s						
UZH	Uzhgorod	84.22	324	⇑*i*P	P	14 30 31.7	-1.1
UZH				*i* S	S	14 40 18.7	-2.9
TUQ	Turquoise Moun	84.24	53	P	P	14 30 34.5	+1.1
	baz=302,SNR=37						
LEHL	Lehliu	84.24	318	⇑P	P	14 30 33.1	+0.1
GOET	G??ttrup	84.25	335	*i* P	P	14 30 33.0	+0.2
	comp=Z,300nm,0.9s						
HEC	Hector,Ludlow	84.27	53	P	P	14 30 34.6	+1.1
	baz=302,SNR=35						
MURC	Murrieta	84.31	55	P	P	14 30 34.3	+0.6
	baz=302,SNR=19						
BW06	Boulder Array	84.34	44	P	P	14 30 34.6	+0.7
	baz=305						
PDAR	Pinedale Array	84.34	44	P	P	14 30 34.5	+0.5
	comp=Z,32nm,1.0s,baz=299,slow=3.1,SNR=111						
PDAR				PP	PP	14 33 54.8	-0.6
	comp=Z,7.8nm,1.1s,baz=297,slow=4.8,SNR=5.7						
PDAR	Pinedale Array	84.34	44	P	P	14 30 33.6	-0.3
ORH	Orhaniye	84.35	314	P	P	14 30 45.2	+12
BHL	Bhannes	84.37	306	*e*P	P	14 30 33.7	-0.3
TRPA	Tarpa	84.40	323	⇓P	P	14 30 34.0	+0.3
PLAR	PLOIESTI	84.44	319	⇑P	P	14 30 34.0	0.0
OJC	Ojcow	84.46	326	*e*P	P	14 30 34.1	0.0
OJC	Ojcow	84.46	326	*e*P	P	14 30 34.1	0.0
OJC	Ojcow	84.46	326	IAmb	IAmb	14 30 36.0	
	comp=Z,180nm,1.6s						
SHBL	Chebaa	84.59	305	*e*P	P	14 30 35.0	-0.2
MDB	Medias	84.63	321	⇑P	P	14 30 35.4	+0.4
MDB	Medias	84.63	321	P	P	14 30 36.9	+1.9
PRD	Provadia	84.64	317	*i* P	P	14 30 35.5	+0.4
VOIR		84.68	320	⇑P	P	14 30 35.7	+0.4
VOIR		84.68	320	P	P	14 30 35.7	+0.4
CJR	Cluj-Napoca	84.71	322	⇓P	P	14 30 36.0	+0.6
CJR	Cluj-Napoca	84.71	322	P	P	14 30 36.0	+0.6
NIE	Niedzica	84.73	325	*e*P	P	14 30 35.8	+0.4
NIE	Niedzica	84.73	325	*e*P	P	14 30 35.8	+0.4
109C	Camp Elliot, M	84.74	55	P	P	14 30 36.6	+0.9
	baz=302,SNR=7.6						
GMRC	Granite Mounta	84.77	53	P	P	14 30 37.1	+1.0
	baz=302,SNR=28						
MTUR	Matau	84.80	320	⇑P	P	14 30 36.3	+0.4
PFO	Pinyon Flats O	84.82	54	P	P	14 30 37.2	+0.9
	comp=Z,81nm,0.8s,baz=302,slow=4.6,SNR=64						
PFO	Pinyon Flats O	84.82	54	P	P	14 30 37.2	+0.9
PFO				IAmb	IAmb	14 30 38.4	
	comp=Z,100nm,0.8s						
PFO	Pinyon Flats O	84.82	54	P	P	14 30 37.3	+0.9
	baz=302,SNR=68						
XPFO	Pion Flat	84.83	54	P	P	14 30 37.2	+0.9
XPFO				IAmb	IAmb	14 30 38.4	
	comp=Z,100nm,0.8s						
BELC	Belle Mtn. Jos	84.94	54	P	P	14 30 37.4	+0.5
	baz=302,SNR=34						
ARR	Arges	84.96	320	⇑P	P	14 30 37.6	+0.9
RAZG	Razgrad	84.96	318	⇑P	P	14 30 36.9	+0.2
MMAI	Mount Meron Ar	85.01	305	P	P	14 30 36.7	-0.5
	comp=Z,81nm,0.7s,baz=48,slow=6.8,SNR=137						
DRGR		85.14	322	⇓P	P	14 30 37.5	-0.1
BAR	Barrett	85.16	55	IAmb	IAmb	14 30 39.8	
	comp=Z,60nm,0.9s						
MONP2	Monument Peak	85.23	55	P	P	14 30 39.3	+0.9
	baz=302,SNR=31						
KECS	Kecovo	85.24	324	*e*P	P	14 30 38.2	+0.3
KECS				pmax	pmax		
	comp=Z,11nm,1.0s						
KECS	Kecovo	85.24	324	*e*P	P	14 30 38.2	+0.3
HUMR	Humele	85.27	319	⇑P	P	14 30 37.7	-0.4
LANS	Liptovska Anna	85.32	325	*e*P	P	14 30 39.1	+0.8
LANS				pmax	pmax		
	comp=Z,18nm,1.3s						
LANS	Liptovska Anna	85.32	325	*e*P	P	14 30 39.1	+0.8
COPA	Copaceanca	85.37	319	⇓P	P	14 30 38.0	-0.6
LOT	Lotru	85.39	320	⇑P	P	14 30 39.0	+0.1
IRM	Iron Mountain	85.46	53	P	P	14 30 40.3	+0.9
	baz=302,SNR=22						
SZH	Strazhica	85.47	318	*i* P	P	14 30 38.9	-0.3
NEE2	Needles Airpor	85.50	53	P	P	14 30 40.7	+1.2
	baz=303						
BC3	Big Chuckawall	85.51	54	P	P	14 30 40.7	+1.0
	baz=302,SNR=36						
OKC	Ostrava-Krasne	85.52	326	*e*P	P	14 30 38.8	-0.4
OKC	Ostrava-Krasne	85.52	326	*e*P	P	14 30 38.8	-0.4
ZIMR		85.57	318	⇑P	P	14 30 39.8	+0.2
IKP	In-Ko-Pah, Jac	85.58	55	P	P	14 30 41.1	+1.1
	baz=302,SNR=19						
DEV	Deva	85.60	321	⇑P	P	14 30 40.0	+0.3
DEV	Deva	85.60	321	P	P	14 30 40.0	+0.3
SWSC	Sam W. Stewart	85.64	55	P	P	14 30 41.0	+0.8
	baz=302,SNR=8.0						
LEF	Lefka	85.65	308	⇓P	P	14 30 39.0	-1.2
ELND	Elena	85.71	318	⇓P	P	14 30 40.4	+0.1
RUE	Ruedersdorf	85.72	330	*e*P	P	14 30 39.8	-0.3
RUE	Ruedersdorf	85.72	330	*e*P	P	14 30 40.0	-0.1
	comp=Z,43nm,0.8s,baz=42,slow=4.7						
KSP	Ksiaz	85.72	328	*e*P	P	14 30 40.3	+0.1
KSP	Ksiaz	85.72	328	*e*P	P	14 30 40.3	+0.1
MORC	Moravsky Berou	85.85	326	⇑P	P	14 30 41.1	+0.2
MORC	Moravsky Berou	85.85	326	P	P	14 30 41.4	+0.5
MORC	Moravsky Berou	85.85	326	*e*P	P	14 30 40.8	-0.1
MORC				*e*PP	PP	14 34 06.9	0.0
MORC				*e*S	S	14 40 35.7	-1.9
MORC	Moravsky Berou	85.85	326	IAmb	IAmb	14 30 41.9	
	comp=Z,75nm,1.6s						
PSZ	Piszkesteto	85.91	324	⇑P	P	14 30 41.4	+0.2
PSZ	Piszkesteto	85.91	324	P	P	14 30 42.4	+1.1
VLAD	Vladila	85.92	319	⇓P	P	14 30 40.9	-0.4
OSTC	Ostas	85.95	328	*e*P	P	14 30 41.3	-0.1
GZR	Gura Zlata	85.97	321	⇑P	P	14 30 41.4	-0.2
CHVC	Chvalec	86.01	328	*e*P	P	14 30 41.6	0.0
KRLC	Kraliky	86.02	327	*e*P	P	14 30 41.3	-0.4
KRLC	Kraliky	86.02	327	*e*P	P	14 30 41.3	-0.4
SIRR	Siria	86.03	322	⇑P	P	14 30 42.1	+0.3
DPC	Dobruska-Polom	86.05	327	*e*P	P	14 30 41.9	+0.1
DPC	Dobruska-Polom	86.05	327	*e*P	P	14 30 41.9	+0.1
VYHS	Vyhne	86.07	325	*e*P	P	14 30 42.0	+0.1
VYHS				pmax	pmax		
	comp=Z,98nm,1.5s						
VYHS	Vyhne	86.07	325	*e*P	P	14 30 42.0	+0.1
PDMCI	Parker Dam,Lak	86.08	53	P	P	14 30 43.4	+1.1
	baz=303,SNR=7.7						
Y12C	Blythe	86.11	53	P	P	14 30 43.7	+1.2
	baz=303,SNR=9.7						
BSEG	Bad Segeberg	86.13	333	*e*P	P	14 30 41.6	-0.4
	comp=Z,21nm,0.8s,baz=42,slow=4.7						
PLVB	Pleven	86.17	318	⇑P	P	14 30 42.6	+0.1
SRE	Strehaia	86.19	320	⇓P	P	14 30 42.9	+0.3
SRE	Strehaia	86.19	320	P	P	14 30 42.9	+0.3
K22A	Casper	86.22	42	P	P	14 30 43.6	+0.6
	baz=307						
GLA	Glamis	86.28	54	IAmb	IAmb	14 30 45.8	
	comp=Z,88nm,1.0s						
GLA	Glamis	86.28	54	P	P	14 30 44.6	+1.3
	baz=303,SNR=22						
JAVC	Velka Javorina	86.40	326	*e*P	P	14 30 44.5	+0.9
BZS	Buzias	86.47	322	⇑P	P	14 30 43.6	-0.3
BZS	Buzias	86.47	322	P	P	14 30 42.9	-1.0
BZS				pmax	pmax		
	comp=Z,59nm,0.8s						
PUNG	Punghina	86.58	320	⇑P	P	14 30 45.2	+0.8
VRAC	Vranov	86.62	327	⇓P	P	14 30 44.7	+0.1
VRAC	Vranov	86.62	327	P	P	14 30 45.7	+1.1
VRAC	Vranov	86.62	327	*e*P	P	14 30 44.6	+0.1
VRAC				*e*PP	PP	14 34 13.0	-0.1
BUD	Budapest	86.64	324	P	P	14 30 45.2	+0.6
BUD				pmax	pmax		
	comp=Z,57nm,1.5s						
O20A	White River Ci	86.67	45	P	P	14 30 46.1	+0.8
	baz=306,SNR=22						
MPEP	Malo Peshtene	86.69	319	*i* P	P	14 30 45.0	0.0
MDND	Maddock	86.73	35	P	P	14 30 46.1	+1.0
	baz=312						
PVCC	Panska Ves	86.74	328	*e*P	P	14 30 45.1	0.0
PVCC	Panska Ves	86.74	328	*e*P	P	14 30 45.1	0.0
KDZ	Kurdzhali	86.75	317	*i* P	P	14 30 45.2	-0.1
SMOL	Smolenice	86.75	326	*e*P	P	14 30 45.7	+0.5
SMOL				pmax	pmax		
	comp=Z,23nm,0.8s						
SMOL	Smolenice	86.75	326	*e*P	P	14 30 45.7	+0.5
RSSD	Black Hills	86.75	40	P	P	14 30 46.0	+0.4
RSSD				pmax	pmax		
	comp=Z,31nm,0.9s						
RSSD	Black Hills	86.75	40	P	P	14 30 46.0	+0.4
RSSD	Black Hills	86.75	40	P	P	14 30 46.2	+0.6
	baz=309						
ELL	Elmali	86.76	311	P	P	14 30 45.0	-0.6
SRO	Srobarova	86.78	325	*e*P	P	14 30 45.8	+0.5
SRO				pmax	pmax		
	comp=Z,33nm,0.9s						
SRO	Srobarova	86.78	325	*e*P	P	14 30 45.8	+0.5
BRG	Berggiesshubel	86.78	329	*i* P	P	14 30 44.6	-0.6
	comp=Z,33nm,1.0s						
BRG				*e*PP	PP	14 34 13.0	-1.3
	comp=Z,8.6nm,0.9s						
BRG	Berggiesshubel	86.78	329	*e*P	P	14 30 44.8	-0.4
	comp=Z,43nm,1.0s,baz=42,slow=4.7						
BRG	Berggiesshubel	86.78	329	P	P	14 30 45.6	+0.4
BRG				pmax	pmax		
	comp=Z,44nm,0.9s						
ALN	Alexandroupoli	86.81	316	P	P	14 30 44.5	-1.1
KRUC	Moravsky	86.89	326	P	P	14 30 45.6	-0.2
KRUC	Moravsky	86.89	326	*e*P	P	14 30 45.7	-0.1
KRUC				*e*PP	PP	14 34 15.0	-0.1
KRUC				*e*S	S	14 40 47.6	+0.2
CLL	Collm	86.89	330	⇓*i*P	P	14 30 46.2	+0.4
	comp=Z,43nm,1.0s						
CLL				*e*		14 34 07.0	
CLL				*e*PP	PP	14 34 13.0	-2.1
CLL				*e*S	S	14 40 46.0	-1.3
CLL				*e*PKPPKPdf	P'P'df	14 56 43.0	-3.9
CLL	Collm	86.89	330	*e*P	P	14 30 46.2	+0.4
	comp=Z,43nm,1.0s,baz=42,slow=4.7						
CLL	Collm	86.89	330	⇓*i*P	P	14 30 46.2	+0.4
CLL				*e*		14 34 13.0	
CLL				*e*S	S	14 40 46.0	-1.3
CLL				pmax	pmax		
	comp=Z,43nm,1.0s						
PLD	Plovdiv	86.89	317	*i* P	P	14 30 45.6	-0.4
PLD	Plovdiv	86.89	317	P	P	14 30 45.9	-0.1
PLD				pmax	pmax		
	comp=Z,122nm,1.2s						
ULM	Lac du Bonnet	86.90	32	P	P	14 30 46.3	+0.5

	comp=Z,19nm,0.9s,baz=310,slow=6.0,SNR=35						
MODS	Modra-Piesok	86.92	326	eP	P	14 30 45.5	-0.5
MODS				pmax	pmax		
	comp=Z,71nm,1.3s						
MODS	Modra-Piesok	86.92	326	eP	P	14 30 45.5	-0.5
MDVR	Moldovita	86.95	321	⇑P	P	14 30 45.7	-0.5
MSEY	Mahe Island	86.96	263	i P	P	14 30 47.2	+0.4
	SNR=8.4						
MSEY	Mahe Island	86.96	263	P	P	14 30 47.3	+0.4
MSEY				pmax	pmax		
	comp=Z,194nm,1.3s						
MSEY	Mahe Island	86.96	263	P	P	14 30 47.3	+0.4
RDO	Rodhopi	86.97	316	P	P	14 30 45.8	-0.6
FBE	Freiberg	87.01	329	eP	P	14 30 46.3	-0.1
	comp=Z,75nm,1.1s,baz=42,slow=4.7						
GOPC	GO Pecny, Ondr	87.06	328	eP	P	14 30 46.3	-0.3
GOPC	GO Pecny, Ondr	87.06	328	eP	P	14 30 46.3	-0.3
PRA	Prague	87.12	328	eP	P	14 30 46.7	-0.2
PRA	Prague	87.12	328	eP	P	14 30 46.7	-0.2
PRU	Pruhonice	87.13	328	eP	P	14 30 46.7	-0.2
PRU	Pruhonice	87.13	328	eP	P	14 30 46.7	-0.2
ZST	Bratislava	87.13	326	eP	P	14 30 46.4	-0.5
ZST				pmax	pmax		
	comp=Z,42nm,1.3s						
ZST	Bratislava	87.13	326	eP	P	14 30 46.4	-0.5
TREC	Trest	87.16	327	eP	P	14 30 46.8	-0.3
TREC	Trest	87.16	327	eP	P	14 30 46.8	-0.3
DAMY	Dhamar	87.23	285	P	P	14 30 49.7	+1.3
	SNR=9.3						
NRDL	Niedersach Rie	87.27	332	eP	P	14 30 47.0	-0.4
	comp=Z,18nm,1.2s,baz=42,slow=4.7						
EZN	Ezine	87.28	315	P	P	14 30 47.0	-0.8
ASSE	Asse, Remlinge	87.30	331	eP	P	14 30 47.2	-0.4
	comp=Z,26nm,1.3s,baz=42,slow=4.7						
WUAZ	Wupatki	87.31	50	P	P	14 30 49.4	+1.1
	baz=304						
KSL	Kastellorizon	87.32	310	P	P	14 30 46.8	-1.3
PV05	Paradox Valley	87.34	47	IAmb	IAmb	14 30 50.7	
	comp=Z,84nm,1.5s						
PV11	David Mesa, Pa	87.35	47	IAmb	IAmb	14 30 50.8	
	comp=Z,112nm,1.5s						
PV18	Skein Mesa, Pa	87.36	47	IAmb	IAmb	14 30 50.7	
	comp=Z,70nm,1.5s						
RETH	Rethem/Aller,	87.40	332	eP	P	14 30 47.6	-0.5
	comp=Z,32nm,1.0s,baz=42,slow=4.7						
VTS	Vitosha	87.44	318	⇑P	P	14 30 49.2	+0.5
VTS	Vitosha	87.44	318	i P	P	14 30 48.5	-0.2
VTS	Vitosha	87.44	318	P	P	14 30 49.9	+1.2
PV13	Radium Mtn., P	87.47	47	IAmb	IAmb	14 30 51.2	
	comp=Z,104nm,1.7s						
PV02	Paradox Valley	87.49	47	IAmb	IAmb	14 30 51.4	
	comp=Z,84nm,1.8s						
NEUB	Neuenburg	87.50	330	eP	P	14 30 48.4	-0.3
	comp=Z,43nm,0.9s,baz=42,slow=4.7						
PBCC	Pribram	87.59	328	eP	P	14 30 48.8	-0.3
N23A	Red Feather La	87.63	44	P	P	14 30 51.4	+1.6
	baz=308,SNR=18						
CLZ	Clausthal	87.64	331	eP	P	14 30 49.1	-0.2
	comp=Z,55nm,1.6s,baz=42,slow=4.7						
PRK	Paraskevi	87.66	314	P	P	14 30 49.9	+0.3
KAVA	Kavala	87.68	317	P	P	14 30 49.1	-0.6
SOP	Sopron	87.75	325	P	P	14 30 50.1	+0.2
SOP				pmax	pmax		
	comp=Z,50nm,1.0s						
TANN	Tannenbergstha	87.77	329	eP	P	14 30 49.6	-0.4
	comp=Z,110nm,1.8s,baz=42,slow=4.7						
THAS	Thassos island	87.80	316	P	P	14 30 48.9	-1.3
NVR	Nevrokopi	87.85	317	P	P	14 30 49.7	-0.9
PLN	Plauen	87.86	329	eP	P	14 30 50.0	-0.4
	comp=Z,15nm,1.1s,baz=42,slow=4.7						
GUNZ	Gunzen	87.87	329	eP	P	14 30 50.2	-0.2
	comp=Z,29nm,1.0s,baz=42,slow=4.7						
MCD	Coleburn Disti	87.90	341	eP	P	14 30 50.0	-0.3
WERN	Wernitzgruen	87.90	329	eP	P	14 30 50.5	-0.1
	comp=Z,24nm,0.8s,baz=42,slow=4.7						
NKC	Novy Kostel	87.91	329	eP	P	14 30 50.1	-0.5
NKC	Novy Kostel	87.91	329	eP	P	14 30 50.1	-0.5
CONA	Conrad Observa	87.92	326	i PcP	P	14 30 51.0	+0.2
	comp=Z,41nm,0.8s,SNR=19						
CONA				ePP	PP	14 34 21.9	-1.6
	comp=Z,16nm,1.2s						
SIGR	SIGRI	87.94	315	P	P	14 30 50.0	-0.9
LIA	Limnos Island	87.94	315	P	P	14 30 49.7	-1.2
MOX	Moxa	87.98	330	eP	P	14 30 50.5	-0.4
	comp=Z,18nm,1.1s,baz=42,slow=4.7						
MOX	Moxa	87.98	330	P	P	14 30 51.7	+0.8
MOX				pmax	pmax		
	comp=Z,21nm,1.4s						
KKB	Krupnik	87.99	318	i P	P	14 30 51.0	-0.2
GTTG	Gottingen	88.03	331	eP	P	14 30 50.6	-0.5
	comp=Z,16nm,1.0s,baz=42,slow=4.7						
SRS	Serrai	88.16	317	P	P	14 30 51.0	-1.0
KHC	Kasperske Hory	88.17	328	eP	P	14 30 51.3	-0.6
KHC				ex	x	14 31 10.5	
KHC	Kasperske Hory	88.17	328	eP	P	14 30 51.3	-0.6
SMG	Samos	88.21	313	P	P	14 30 51.3	-1.0
MVCO	Mesa Verde	88.23	48	P	P	14 30 53.4	+0.8
	baz=306						
MANZ	Manzenberg	88.24	329	eP	P	14 30 52.0	-0.2
	baz=42,slow=4.7						
ARG	Arkhangelos	88.25	311	P	P	14 30 53.0	+0.6
AGMN	Agassiz Nation	88.26	33	P	P	14 30 52.3	0.0
	baz=314						
214A	Organ Pipe Nat	88.30	54	P	P	14 30 54.2	+1.3
	baz=304						
GEC2	GERESS Array S	88.32	328	eP	P	14 30 51.9	-0.8
	comp=Z,29nm,0.8s,baz=42,slow=4.7						
GERES	GERESS Array B	88.32	328	P	P	14 30 52.1	-0.6
	comp=Z,21nm,0.7s,baz=39,slow=5.1,SNR=126						
GERES				PP	PP	14 34 24.2	-2.4
	comp=Z,2.5nm,0.8s,baz=54,slow=6.9,SNR=3.6						
GERES	GERESS Array B	88.32	328	P	P	14 30 51.8	-0.9
DIVS	Divibare	88.33	321	eP	P	14 30 52.1	-0.7
ROTZ	Rotzenmuhle	88.35	329	eP	P	14 30 52.6	0.0
	comp=Z,48nm,1.2s,baz=42,slow=4.7						
IBBN	Ibbenburen	88.37	333	eP	P	14 30 52.1	-0.5
	comp=Z,74nm,0.9s,baz=42,slow=4.7						
WET	Wettzell	88.49	328	eP	P	14 30 53.1	-0.3
	comp=Z,20nm,1.1s,baz=42,slow=4.7						
WET	Wettzell	88.49	328	P	P	14 30 53.9	+0.5
WET				pmax	pmax		
	comp=Z,23nm,1.6s						
ISCO	Idaho Springs	88.49	44	P	P	14 30 55.2	+1.2
	baz=308,SNR=14						
KAC	Achnashellach	88.54	342	eP	P	14 30 53.5	+0.1
KNT	Kendrikon	88.54	317	P	P	14 30 52.8	-0.9
ARSA	Arzberg	88.55	326	i PcP	P	14 30 53.4	-0.3
	comp=Z,32nm,0.9s,SNR=16						
UBBA	Unterbreizbach	88.55	331	eP	P	14 30 53.4	0.0
	comp=Z,12nm,0.7s,baz=42,slow=4.7						
W18A	Petrified Fore	88.63	50	P	P	14 30 53.8	-0.7
	baz=305						
VAY	Valandovo	88.64	318	i P	P	14 30 53.6	-0.5
VAY	Valandovo	88.64	318	P	P	14 30 53.6	-0.5
VAY				pmax	pmax		
	comp=Z,82nm,1.0s						
EDU	Dundee	88.71	340	eP	P	14 30 54.4	+0.3
MOA	Molln	88.75	327	i PcP	P	14 30 54.5	-0.1
	comp=Z,29nm,0.9s,SNR=11						
KPL	Plockton	88.78	342	eP	P	14 30 54.6	+0.1
KPL				IAmb	IAmb	14 30 54.9	
	comp=Z,169nm,1.4s						
BBLS	Lazići	88.80	321	eP	P	14 30 54.1	-0.9
GRF	Grafenberg Arr	88.85	329	eP	P	14 30 55.1	+0.1
	comp=Z,63nm,1.0s,baz=42,slow=4.7						
SKO	Skopje	88.88	319	i P	P	14 30 55.4	+0.1
HAPS	Han Pijesak,Bl	88.91	322	eP	P	14 30 56.9	+1.4
S22A	4UR Ranch, Cre	88.98	47	P	P	14 30 57.7	+1.5
	baz=307						
RUDO	Rudo	88.98	321	eP	P	14 30 54.7	-1.1
GROS	Grobnik	89.11	325	i P	P	14 30 55.4	-1.0
INVG	Invergeldie, C	89.11	341	eP	P	14 30 55.6	-0.5
INVG				IAmb	IAmb	14 30 55.9	
	comp=Z,121nm,0.9s						
ESY	Stoneypath	89.12	340	eP	P	14 30 55.9	-0.2
PERS	Pernice	89.18	325	eP	P	14 30 55.9	-0.8
SOKA	Soboth	89.19	325	i PcP	P	14 30 56.2	-0.6
	comp=Z,84nm,1.1s,SNR=25						
SOKA				ePP	PP	14 34 30.2	-3.4
	comp=Z,5.3nm,0.9s						
BUG	Bochum--Univer	89.23	332	eP	P	14 30 55.9	-0.7
	comp=Z,31nm,0.9s,baz=42,slow=4.7						
BUG	Bochum--Univer	89.23	332	P	P	14 30 57.3	+0.6
BUG				pmax	pmax		
	comp=Z,36nm,0.9s						
KARP	Karpathos	89.27	311	P	P	14 30 55.7	-1.6
KARP	Karpathos	89.27	311	IAmb	IAmb	14 30 57.2	
	comp=Z,52nm,0.7s						
Q24A	Divide	89.29	45	P	P	14 30 58.7	+1.1
	baz=308,SNR=5.4						
SUSD	Miller	89.33	38	P	P	14 30 57.4	0.0
	baz=312						
EAB	Aberfoyle	89.40	341	eP	P	14 30 57.2	-0.2
LIT	Litokhoron	89.45	317	P	P	14 30 56.8	-1.2
XOR	Xorichti	89.48	316	P	P	14 30 56.3	-1.9
KTI	Kastanea	89.48	317	P	P	14 30 57.5	-0.8
UPM	Unac-Piva	89.51	321	eP	P	14 30 57.3	-1.2
RJOB	Jochberg	89.53	327	eP	P	14 30 58.1	-0.2
	comp=Z,80nm,0.9s,baz=42,slow=4.7						
OBKA	Obir	89.55	325	i PcP	P	14 30 57.6	-0.9
	comp=Z,24nm,0.9s,SNR=6.5						
OBKA				ePP	PP	14 34 34.7	-1.7
	comp=Z,20nm,0.9s						
CRES	Cresnjev	89.57	325	eP	P	14 30 57.9	-0.5
TNS	Taunus Mts	89.66	331	eP	P	14 30 58.2	-0.7
	comp=Z,15nm,0.8s,baz=42,slow=4.7						
TNS	Taunus Mts	89.66	331	P	P	14 31 00.4	+1.6
TNS				pmax	pmax		
	comp=Z,17nm,0.9s						
KBA	Koelnbreinsper	89.74	326	i PcP	P	14 30 58.4	-1.0
	comp=Z,28nm,0.9s,SNR=10.0						
KBA	Koelnbreinsper	89.74	326	P	P	14 30 59.5	+0.1
KBA				pmax	pmax		
	comp=Z,31nm,0.8s						
KZN	Kozani	89.75	317	P	P	14 30 58.2	-1.3
PGBU	Glenifferbraes	89.77	341	eP	P	14 30 59.4	+0.3
EKA	Eskdalemuir Ar	89.78	340	P	P	14 30 58.6	-0.6
OHR	Ohrid	89.80	318	i P	P	14 30 58.9	-0.8
SDCO	Great Sand Dun	89.82	46	P	P	14 31 01.4	+1.2
	baz=308						
PDG	Podgorica	89.83	320	⇑P	P	14 30 58.9	-0.7
PDG	Podgorica	89.83	320	eP	P	14 30 58.7	-0.9
EDMD	Edmundbyers	89.84	339	eP	P	14 30 59.1	-0.4
EDMD				IAmb	IAmb	14 30 59.3	
	comp=Z,54nm,1.0s						
LJU	Ljubljana	89.88	325	eP	P	14 30 59.1	-0.8
LJU	Ljubljana	89.88	325	eP	P	14 30 58.3	-1.6
OGNE	Ogallala	89.91	42	IAmb	IAmb	14 31 01.9	
	comp=Z,49nm,0.8s						
OGNE	Ogallala	89.91	42	P	P	14 31 00.8	+0.6
	baz=310,SNR=13						
MYKA	Terra Mystica	89.91	326	i P	P	14 30 58.9	-1.2
	comp=Z,28nm,0.7s,SNR=11						
MYKA				ePP	PP	14 34 38.8	-0.3
	comp=Z,14nm,1.0s						
BRY	Bratogost	89.91	321	eP	P	14 30 57.6	-2.7
FUR	Furstenfeldbru	89.93	328	eP	P	14 31 00.1	0.0
	comp=Z,124nm,0.8s,baz=42,slow=4.7						
FUR	Furstenfeldbru	89.93	328	P	P	14 31 01.1	+1.0
FUR				pmax	pmax		
	comp=Z,159nm,1.0s						
AHRW	Bad Neuenahr-A	89.99	332	eP	P	14 30 59.9	-0.3
	comp=Z,22nm,1.1s,baz=42,slow=4.7						
DRME	Dracevica, Mon	90.03	320	eP	P	14 30 59.9	-0.7
ATD	Arta Tunnel	90.04	283	P	P	14 31 00.5	-0.7
	comp=Z,3.4nm,0.3s,baz=21,slow=2.0,SNR=7.5						
LKR	Lokris	90.04	315	P	P	14 30 58.6	-2.2
CEY	Cerknica	90.15	325	eP	P	14 30 59.5	-1.6
ZKR	Zakros	90.15	311	P	P	14 31 00.5	-0.8
AXAR	Agios Charalam	90.18	316	P	P	14 31 00.0	-1.4
KPRO	Kipourio	90.21	317	P	P	14 30 59.9	-1.7
AGG	Agios Georgios	90.22	316	P	P	14 30 59.4	-2.2
AGG	Agios Georgios	90.22	316	IAmb	IAmb	14 31 00.5	
	comp=Z,44nm,0.9s						
MAKR	Makrakomi, Fth	90.34	316	P	P	14 31 00.2	-2.0
ABTA	Abfaltersbach	90.37	327	i P	P	14 31 00.8	-1.5
	comp=Z,71nm,0.9s,SNR=23						
ABTA				ePP	PP	14 34 41.1	-1.7
	comp=Z,6.6nm,1.0s						
MEM	Membach	90.38	332	P	P	14 31 01.0	-1.1
WATA	Walderalm	90.39	327	i PcP	P	14 31 01.6	-0.9
	comp=Z,26nm,0.9s,SNR=9.1						
MEV	Metsovon	90.40	317	P	P	14 31 01.5	-1.1
WTTA	Wattenberg	90.42	327	i PcP	P	14 31 01.9	-0.7
	comp=Z,49nm,1.3s,SNR=11						
WTTA				ePP	PP	14 34 41.8	-1.4
	comp=Z,11nm,0.9s						
STU	Stuttgart	90.42	330	eP	P	14 31 02.0	-0.3
	comp=Z,83nm,1.0s,baz=42,slow=4.7						
STU	Stuttgart	90.42	330	P	P	14 31 03.1	+0.8
STU				pmax	pmax		
	comp=Z,78nm,1.0s						
LTK	Loutraki	90.45	315	P	P	14 30 59.6	-3.1
DSF	Desfina	90.48	316	P	P	14 31 00.4	-2.5
SKDS	Skadanscina	90.49	325	i P	P	14 31 01.5	-1.2
EYMN	Ely	90.56	31	P	P	14 31 03.2	+0.2
	baz=317						
BSTI	Sart Tilman	90.57	333	P	P	14 31 02.9	-0.1
LAST	Lasithi	90.61	311	P	P	14 31 02.4	-1.2
DID	Didima	90.61	314	P	P	14 31 00.3	-3.1
MOTA	Moosalm	90.61	328	i PcP	P	14 31 02.6	-0.8
	comp=Z,38nm,1.1s,SNR=11						
MOTA				ePP	PP	14 34 45.0	+0.3
	comp=Z,13nm,1.2s						
STAL	STALIGIAL	90.63	326	IAmb	IAmb	14 31 02.6	
	comp=Z,63nm,0.8s						
GAL1	Galloway	90.65	340	eP	P	14 31 03.0	-0.2
GAL1				IAmb	IAmb	14 31 04.2	
	comp=Z,49nm,0.8s						
SQTA	Sankt Quirin	90.65	328	i PcP	P	14 31 02.6	-1.0
	comp=Z,31nm,0.8s,SNR=10						
RETA	Reutte	90.66	328	i PcP	P	14 31 03.1	-0.5
	comp=Z,52nm,1.3s,SNR=14						
JAN	Janina	90.70	317	P	P	14 31 03.0	-0.8
KALE	Kalithea	90.73	316	P	P	14 31 01.8	-2.2
ANX	Ano Chora	90.74	316	P	P	14 31 01.4	-2.7
SERG	Sergoula	90.77	316	P	P	14 31 02.3	-1.9
KSCO	Kaye Shedlock'	90.79	43	P	P	14 31 05.8	+1.4
	baz=310						
BCLA	Clavier	90.81	333	P	P	14 31 03.7	-0.4
BCLA				x	x	14 31 05.6	
UBR	Ueberruh	90.82	328	eP	P	14 31 03.7	-0.5
	comp=Z,30nm,0.8s,baz=42,slow=4.7						
EFP	Efpalio	90.85	316	P	P	14 31 03.1	-1.4
CLGH	Cloghs, Cushen	90.86	341	eP	P	14 31 04.2	0.0
CLGH				IAmb	IAmb	14 31 04.6	
	comp=Z,213nm,1.0s						
T25A	Trinidad	90.87	46	P	P	14 31 06.0	+1.1
	baz=308						
ANMO	Albuquerque	90.90	49	P	P	14 31 05.7	+0.6
ANMO				pmax	pmax		
	comp=Z,39nm,0.9s						
ANMO	Albuquerque	90.90	49	P	P	14 31 05.7	+0.6
ANMO				IAmb	IAmb	14 31 08.1	
	comp=Z,39nm,0.9s						
ANMO	Albuquerque	90.90	49	P	P	14 31 06.3	+1.2
	baz=307						
IDI	Anoyia	90.91	312	P	P	14 31 02.7	-2.2
IDI	Anoyia	90.91	312	P	P	14 31 03.3	-1.7
	comp=Z,8.1nm,0.5s,baz=30,slow=9.3,SNR=14						
IDI				S	SKSac	14 40 48.5	-7.2
	comp=Z,10nm,0.9s,baz=294,slow=1.9,SNR=5.8						
LAKA	Lakka	90.92	316	P	P	14 31 03.5	-1.4
KLV	Kalavryta, Ach	90.94	315	P	P	14 31 03.0	-2.0
LBWR	Ladybower, Pea	90.96	338	eP	P	14 31 04.8	+0.1
LBWR				IAmb	IAmb	14 31 05.4	
	comp=Z,114nm,1.2s						
FETA	Feichten	91.02	328	i PcP	P	14 31 04.7	-0.6
	comp=Z,48nm,1.0s,SNR=16						
WLF	Walferdange	91.05	332	P	P	14 31 04.8	-0.4
	comp=Z,40nm,1.2s						
WLF	Walferdange	91.05	332	eP	P	14 31 05.2	0.0
	comp=Z,81nm,1.2s,baz=42,slow=4.7						
WLF	Walferdange	91.05	332	P	P	14 31 06.5	+1.3
WLF				pmax	pmax		
	comp=Z,60nm,1.2s						
ECSD	EROS Data Cent	91.05	37	P	P	14 31 05.5	+0.2
	baz=314						
IGT	Igoumenitsa	91.09	317	P	P	14 31 04.5	-1.1
319A	Douglas	91.11	53	IAmb	IAmb	14 31 08.6	
	comp=Z,55nm,0.9s						
BMRD	Maredsous	91.11	333	P	P	14 31 05.1	-0.3
Y22D	IRIS PASSCAL I	91.12	49	P	P	14 31 08.2	+2.1
	baz=307						
BFO	Black Forest	91.14	330	eP	P	14 31 05.1	-0.6
	comp=Z,79nm,1.2s,baz=42,slow=4.7						
BFO	Black Forest	91.14	330	P	P	14 31 04.4	-1.3
BFO				pmax	pmax		
	comp=Z,61nm,1.0s						
BFO	Black Forest	91.14	330	P	P	14 31 04.4	-1.3
BFO				IAmb	IAmb	14 31 06.2	
	comp=Z,61nm,1.0s						
SNF	Seneffe	91.14	333	P	P	14 31 05.0	-0.6
PDO	Prodromos	91.18	316	P	P	14 31 05.3	-0.7
DAVA	Damuels	91.22	328	i PcP	P	14 31 05.6	-0.6
	comp=Z,81nm,1.0s,SNR=15						
DRO	Drossia	91.27	316	P	P	14 31 05.5	-1.0
VLI	Veliai	91.28	314	P	P	14 31 04.2	-2.3
KEK	Kerkira	91.29	318	P	P	14 31 05.0	-1.5
VAM	Vamos	91.29	312	P	P	14 31 06.0	-0.6
CTI	Castel Tesino	91.29	327	P	P	14 31 05.2	-1.3
CTI				pmax	pmax		
	comp=Z,39nm,1.1s						
DOU	Dourbes	91.34	333	P	P	14 31 06.2	-0.3
DOU				x	x	14 31 07.4	
RLS	Riolos of Patr	91.35	316	P	P	14 31 06.1	-0.7
TSLK	Tsoukalades, L	91.35	317	P	P	14 31 06.0	-0.8
LKD2	Lefkada island	91.37	317	P	P	14 31 05.0	-2.0
IMMV	Iera Moni Meta	91.40	312	P	P	14 31 06.1	-1.0
121A	Cookes Peak, D	91.46	51	IAmb	IAmb	14 31 10.6	
	comp=Z,66nm,1.0s						
121A	Cookes Peak, D	91.46	51	P	P	14 31 09.3	+1.6
	baz=306						
SLE	Schleitheim	91.49	329	P	P	14 31 07.5	+0.2
SLE				pmax	pmax		
	comp=Z,45nm,1.9s						
KTHA	Kythira Island	91.49	314	P	P	14 31 05.5	-2.0
KTHR	Kythira	91.53	314	P	P	14 31 06.3	-1.4
AMT	Artemida-Makis	91.54	315	P	P	14 31 06.8	-0.9
ITM	Ithomi	91.63	315	P	P	14 31 07.0	-1.1
DYR	Agios Nikonas	91.64	314	P	P	14 31 06.8	-1.4
KFL	Anninata	91.73	316	P	P	14 31 07.4	-1.2
ECH	Echery	91.73	330	P	P	14 31 08.0	-0.4
ECH				pmax	pmax		
	comp=Z,40nm,1.1s						
ECH	Echery	91.73	330	IAmb	IAmb	14 31 08.8	
	comp=Z,35nm,1.0s						
BGNE	Belgrade	91.81	39	P	P	14 31 09.3	+0.4
	baz=313						
VLS	Valsamata	91.81	316	P	P	14 31 08.0	-1.0
SPMN	Marine on St.	91.93	34	P	P	14 31 10.3	+1.0
	baz=316						
TUE	Stuetta	92.07	328	IAmb	IAmb	14 31 10.8	
	comp=Z,41nm,1.0s						
SALO	Salr	92.14	327	IAmb	IAmb	14 31 10.4	
	comp=Z,54nm,0.8s						
STRD	Stroud	92.47	337	eP	P	14 31 11.4	-0.3
STRD				IAmb	IAmb	14 31 11.8	
	comp=Z,82nm,1.0s						
MONM	Monmouth	92.63	338	eP	P	14 31 12.2	-0.2
MONM				IAmb	IAmb	14 31 13.3	
	comp=Z,55nm,1.0s						
CBKS	Cedar Bluff	92.64	42	P	P	14 31 12.5	-0.3
	baz=312						
AQU	L'Aquila	93.05	323	P	P	14 31 15.2	+0.6
AQU				pmax	pmax		
	comp=Z,56nm,1.0s						
SCHQ	Schefferville	93.20	15	P	P	14 31 13.6	-1.4
	comp=Z,6.8nm,0.9s,baz=13,slow=5.1,SNR=7.8						
SCHQ				PKKPbc	PKKPdf	14 48 19.4	+1.7
	comp=Z,3.7nm,0.6s,baz=217,slow=2.6,SNR=6.6						
TIP	Timpagrande	93.40	319	⇓P	P	14 31 16.2	-0.2
TIP	Timpagrande	93.40	319	IAmb	IAmb	14 31 17.3	
	comp=Z,52nm,1.4s						
MNTX	Cornudas Mount	93.59	51	IAmb	IAmb	14 31 19.6	
	comp=Z,31nm,1.2s						
MNTX	Cornudas Mount	93.59	51	P	P	14 31 18.3	+1.0
	baz=308						
MSTX	Muleshoe	93.90	47	P	P	14 31 19.6	+0.9
	baz=309						
RSL	Roselend	93.90	329	P	P	14 31 17.8	-0.8
CLF	Chambon-Foret	93.92	333	IAmb	IAmb	14 31 18.9	
	comp=Z,34nm,0.7s						
AMTX	Amarillo	94.01	46	P	P	14 31 20.1	+0.9
	baz=310						
KSU1	Kansas State U	94.24	40	P	P	14 31 20.7	+0.7
	baz=314						
BNI	Bardonecchia	94.36	329	P	P	14 31 20.9	+0.2
BNI				pmax	pmax		
	comp=Z,19nm,0.8s						
D46A	Sault St. Mari	94.61	28	P	P	14 31 21.8	+0.2
	baz=323						
D47A	Chapleau	94.86	28	P	P	14 31 23.0	+0.3
	baz=324						
JFWS	Jewell Farm	94.87	34	P	P	14 31 23.1	+0.2
	baz=318						
SSB	Saint Sauveur	95.14	330	P	P	14 31 24.1	0.0
SSB				pmax	pmax		
	comp=Z,24nm,2.5s						
SSB	Saint Sauveur	95.14	330	IAmb	IAmb	14 31 24.4	
	comp=Z,18nm,0.7s						
E47A	Iron Bridge	95.27	28	P	P	14 31 25.0	+0.4
	baz=324						
E48A	Lockeyer	95.70	27	P	P	14 31 26.7	+0.2
	baz=324						
D50A	G1974 Best Tow	96.05	26	P	P	14 31 27.9	-0.2
	baz=326						
G47A	Hillman	96.06	29	P	P	14 31 28.8	+0.6
	baz=323						
TXAR	Lajitas Array	96.20	52	P	P	14 31 30.8	+1.5
	comp=Z,17nm,0.9s,baz=292,slow=2.8,SNR=65						
TXAR				pP	pP	14 33 05.0	-1.3
	comp=Z,4.5nm,0.8s,baz=298,slow=1.9,SNR=8.1						
TXAR				PP	PP	14 35 26.8	-1.7
	comp=Z,1.8nm,0.9s,baz=297,slow=4.1,SNR=4.2						
TXAR				PKKPbc	PKKPbc	14 48 13.3	0.0
	comp=Z,0.5nm,0.8s,baz=124,slow=6.7,SNR=3.5						
D51A	Lot 18 Range I	96.29	25	P	P	14 31 29.0	-0.2
	baz=327						
D53A	Lac Vacive, Po	96.92	25	P	P	14 31 32.2	+0.3
	baz=328						
D55A	Sainte-Anne-du	97.75	23	Pdiff	Pdif	14 31 36.0	+0.2
	baz=330						
CCM	Cathedral Cave	97.94	38	Pdiff	Pdif	14 31 37.1	+0.4
	baz=317						
D56A	ZEC Mazanza, M	97.97	23	Pdiff	Pdif	14 31 37.0	+0.3
	baz=330						
U40A	Yellville	98.29	40	Pdiff	Pdif	14 31 38.8	+0.4
	baz=316						
D57A	Chemin Vers le	98.29	22	Pdiff	Pdif	14 31 38.8	+0.7
	baz=331						
MIAR	Mount Ida	99.16	42	Pdiff	Pdif	14 31 43.0	+0.7
	baz=315						
KEST	Kesra	100.00	321	P	Pdif	14 31 46.4	+0.2
	comp=Z,4.4nm,0.7s,baz=209,slow=17,SNR=5.7						
KEST				PP	PP	14 35 56.0	-0.9
	comp=Z,4.5nm,0.9s,baz=352,slow=7.0,SNR=4.6						
OPO	Ambohidratompo	100.72	255	P	Pdif	14 31 49.5	-0.1
	comp=Z,5.1nm,0.7s,baz=341,slow=4.7,SNR=3.7						
KMBO	Kilima Mbogo	101.13	275	P	Pdif	14 31 51.1	-0.6
	comp=Z,2.4nm,0.6s,baz=60,slow=7.5,SNR=8.9						
KMBO				PP	PP	14 36 05.7	-1.0
	comp=Z,9.4nm,1.0s,baz=40,slow=11,SNR=6.9						
KMBO	Kilima Mbogo	101.13	275	i P	Pdif	14 31 52.0	+0.3
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MBAR	Mbarara	106.51	279	PP	PP	14 36 45.0	-1.3
	comp=Z,4.2nm,0.2s,baz=42,slow=8.7,SNR=7.7						
VNDA	Vanda	107.46	175	PP	PP	14 36 51.2	-0.6
	comp=Z,1.6nm,0.8s,baz=354,slow=5.1,SNR=3.8						
MAW	Mawson	111.84	204	PP	PP	14 37 20.2	-3.0
	comp=Z,3.3nm,0.7s,baz=71,slow=8.8,SNR=5.0						
MATP	Matopo	117.45	261	i P	PKPdf	14 36 41.9	-2.6
MATP	Matopo	117.45	261	i P	PKPdf	14 36 41.9	-2.6
QSPA	South Pole Qui	119.09	180		PKPdf	14 36 45.8	-0.4
TOA0	Torodi Ar. Sit	121.26	310		PKPdf	14 36 51.2	-0.6
TORD	Torodi Ar. Bea	121.26	310	PKP	PKPdf	14 36 51.2	-0.6
	comp=Z,16nm,0.8s,baz=12,slow=3.0,SNR=58						
TORD				PP	PP	14 38 16.3	-12
	comp=Z,6.2nm,0.8s,baz=29,slow=6.3,SNR=4.0						
TORD				PKKPbc	PKKPbc	14 46 54.9	+0.6
	comp=Z,0.9nm,0.4s,baz=220,slow=3.2,SNR=10						
LBTB	Lobatse	121.63	257	i P	PKPdf	14 36 51.2	-1.2
LBTB	Lobatse	121.63	257	i P	PKPdf	14 36 51.2	-1.2
LBTB	Lobatse	121.63	257	PKIKP	PKiKP	14 36 53.1	+0.5
LBTB	Lobatse	121.63	257		PKiKP	14 36 53.1	+0.5
BOSA	Boshof	123.09	253	i P	PKiKP	14 36 56.3	+0.9
BOSA	Boshof	123.09	253	PKP	PKPdf	14 36 54.9	-0.2
	comp=Z,11nm,0.8s,baz=87,slow=1.4,SNR=15						
BOSA				PP	pPKPdf	14 38 38.3	+1.0
	comp=Z,7.5nm,1.0s,baz=72,slow=7.5,SNR=3.6						
BOSA	Boshof	123.09	253	i P	PKiKP	14 36 56.3	+0.9
DBIC	Dimbokro	130.37	310	PKP	PKPdf	14 37 09.6	+0.3
	comp=Z,12nm,0.6s,baz=32,slow=2.8,SNR=22						
DBIC				PP	PP	14 39 28.8	+0.4
	comp=Z,8.2nm,0.8s,baz=8.6,slow=7.2,SNR=5.4						

DBIC				SKPbc	SKPbc	14 39 51.1	-1.2
	comp=Z,34nm,0.7s,baz=21,slow=4.8,SNR=22						
TIC	Toumodi	130.49	311	ePKP1	PKPdf	14 37 09.2	-0.4
KIC	Kosan Boka	130.52	310	ePKP1	PKPdf	14 37 09.1	-0.5
	comp=Z,15nm,0.7s						
LIC	Lamto	130.81	310	ePKP1	PKPdf	14 37 10.0	-0.2
	comp=Z,23nm,0.7s						
SDV	Santo Domingo	132.25	42	PKP	PKPdf	14 37 13.7	+0.5
	comp=Z,7.0nm,0.6s,baz=288,slow=6.1						
SDV				SKPbc	SKPbc	14 39 58.7	-0.6
	comp=Z,53nm,0.8s,baz=307,slow=4.0,SNR=35						
SDV	Santo Domingo	132.25	42	eP	PKPdf	14 37 12.8	-0.3
SNAA	Sanae	132.89	195	PKPdf	PKPdf	14 37 12.0	-0.4
ROSC	El Rosal	133.09	49	PP	PP	14 39 46.7	+0.5
	comp=Z,5.0nm,0.3s,baz=356,slow=5.4,SNR=4.4						
ROSC				SKPbc	SKPbc	14 40 03.0	+0.6
	comp=Z,16nm,0.8s,baz=106,slow=14,SNR=5.1						
PCRV	Puerto La Cruz	134.41	34	SKPbc	SKPbc	14 40 05.3	-1.0
	comp=Z,14nm,0.8s,baz=9.4,slow=6.8,SNR=4.5						
ATAH	Atahualpa	138.16	66	SKPbc	SKPbc	14 40 17.7	-0.3
	comp=Z,20nm,0.8s,baz=320,slow=2.3,SNR=11						
NNA	Nana	142.17	71	PKhKP	PKPpre	14 37 27.1	
	comp=Z,13nm,0.8s,baz=306,slow=3.0,SNR=5.8						
NNA				SKPbc	SKPbc	14 40 27.5	-0.4
	comp=Z,22nm,0.7s,baz=315,slow=1.4,SNR=7.2						
NNA	Nana	142.17	71	PKIKP	PKPdf	14 37 29.1	-2.0
SHEL	Horse Pasture	145.32	285	PKP2	PKPab	14 37 39.3	+1.1
SHEL	Horse Pasture	145.32	285		PKPab	14 37 39.3	+1.1
PTGA	Pitinga	146.10	36	PKPbc	PKPbc	14 37 39.1	-0.6
	comp=Z,29nm,0.8s,baz=332,slow=2.2,SNR=26						
PTGA				pPKPbc	pPKPdf	14 39 22.0	+1.8
	comp=Z,12nm,0.9s,baz=0.0,slow=3.0,SNR=3.7						
PTGA				SKPbc	SKPbc	14 40 36.8	-0.4
	comp=Z,26nm,0.8s,baz=270,slow=1.0,SNR=8.2						
PTGA	Pitinga	146.10	36	eP	PKPdf	14 37 37.9	-0.1
SAML	Samuel	150.69	51	PKIKP	PKPdf	14 37 46.2	+0.9
SAML	Samuel	150.69	51		PKPdf	14 37 46.2	+0.9
LPAZ	La Paz	151.60	69	PKP	PKPdf	14 37 48.3	+0.9
	comp=Z,1.5nm,0.7s,baz=354,slow=3.0,SNR=5.1						
LPAZ				PKPbc	PKiKP	14 37 55.1	+0.8
	comp=Z,9.4nm,0.6s,baz=303,slow=3.6,SNR=25						
LPAZ				PKPab	PKPab	14 38 04.8	+0.3
	comp=Z,17nm,0.9s,baz=342,slow=5.9,SNR=12						
PLCA	Paso Flores	153.10	123	PKPbc	PKiKP	14 37 57.0	+0.9
	comp=Z,3.2nm,0.6s,baz=263,slow=2.7,SNR=22						
PLCA				PKPab	PKPab	14 38 09.5	-0.2
	comp=Z,6.1nm,1.0s,baz=282,slow=6.1,SNR=4.7						
LVC	Limon Verde	153.74	82	PKPbc	PKPbc	14 37 58.2	0.0
	comp=Z,3.6nm,0.7s,baz=221,slow=21,SNR=1.8						
LVC				PKPab	PKPab	14 38 13.4	+0.2
	comp=Z,14nm,0.9s,baz=275,slow=1.8,SNR=9.5						
SIV	San Ignacio	156.97	59	PKP	PKPdf	14 37 55.3	+1.2
	comp=Z,1.4nm,0.7s,baz=94,slow=1.6,SNR=5.6						
SIV				PKPab	PKPab	14 38 26.5	-0.2
	comp=Z,24nm,0.9s,baz=318,slow=3.9,SNR=40						
NBMA	Muriti-CE	158.09	355	eP	PKPdf	14 37 55.4	-0.2
SMTB	Santa Maria do	158.62	19	eP	PKPdf	14 37 55.9	-0.2
NBRF	Rio Formoso -	158.82	345	eP	PKPdf	14 37 56.0	-0.4
NBTA	Tacaratu-PE	159.76	353	eP	PKPdf	14 37 57.0	-0.5
NBAN	Anadia - AL	160.03	347	eP	PKPdf	14 37 57.8	+0.1
TRQA	Tornquist	160.24	122	eP	PKPdf	14 37 56.4	-0.9
SALV	Santo Antonio	160.74	49	eP	PKPdf	14 37 57.9	-0.5
NBLA	Lagarto - SE	161.57	351	eP	PKPdf	14 37 59.0	-0.3
NBPN	Ponto Novo - B	161.61	359	eP	PKPdf	14 37 59.4	-0.1
ARAG	Araguaiana, MT	162.97	40	eP	PKPdf	14 38 00.6	-0.1
AQDB	Aquidauana	163.74	61	eP	PKPdf	14 38 01.2	-0.1
BDFB	Brasilia	164.77	28	PKP	PKPdf	14 38 03.6	+1.1
	comp=Z,3.8nm,0.8s,baz=128,slow=8.2,SNR=4.0						
BDFB				PKPab	PKPab	14 39 01.5	+0.7
	comp=Z,1.7nm,0.3s,baz=295,slow=18,SNR=3.4						
CPUP	Villa Florida	164.92	83	PKP	PKPdf	14 38 02.7	+0.6
	comp=Z,2.4nm,0.8s,baz=36,slow=4.3,SNR=4.5						
CPUP				PKPab	PKPab	14 39 01.7	+0.3
	comp=Z,7.7nm,0.8s,baz=298,slow=4.5,SNR=12						
CPUP				pPKPab	pPKPab	14 40 42.8	+4.8
	comp=Z,4.2nm,0.8s,baz=268,slow=4.4,SNR=5.0						
CPUP	Villa Florida	164.92	83	eP	PKPdf	14 38 02.1	0.0
JANB	Januaria	165.40	14	eP	PKPdf	14 38 02.7	-0.2
NBIT	Itapeh - BA	165.63	355	eP	PKPdf	14 38 02.9	-0.1
IPMB	Ipameri, GO	166.74	33	eP	PKPdf	14 38 03.5	-0.4
ITRB	Iturama	166.96	45	eP	PKPdf	14 38 03.6	-0.4
TRCB	Terra Rica	167.40	62	eP	PKPdf	14 38 03.9	-0.4
PCMB	Pacaembu	167.70	54	eP	PKPdf	14 38 04.3	-0.2
PLTB	Pedras Altas	168.54	105	eP	PKPdf	14 38 04.2	-0.5
CPSB	Cacapava Do Su	168.82	99	eP	PKPdf	14 38 04.4	-0.5
BB19B	Bebedouro	169.10	43	eP	PKPdf	14 38 05.3	-0.1
SJMB	Sao Joao De Ma	169.41	3	eP	PKPdf	14 38 05.3	-0.3
BSFB	Barra de Sao F	169.55	1	eP	PKPdf	14 38 05.6	0.0
ITAB	Concordia	169.64	81	eP	PKPdf	14 38 05.6	+0.1
FRTB	Fartura	170.01	55	eP	PKPdf	14 38 05.5	-0.4
BSCB	Bom Sucesso	170.90	25	eP	PKPdf	14 38 05.9	-0.6
CNLB	Canela	171.06	92	eP	PKPdf	14 38 05.9	-0.4
VAO	Valinhos	171.51	44	eP	PKPdf	14 38 06.9	+0.1
SPB	Sao Paulo	171.64	48	eP	PKPdf	14 38 07.4	+0.7
PARB	Paraibuna	172.54	38	eP	PKPdf	14 38 07.5	+0.3

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*SJA **22** 14:37:44.1±0.6, 19°.75S×70°.94W, h23^{km}±2^{km}, ML4.0, MW4.0*

*IDC **22** 14:37:44.0±1.1, 19°.60S×70°.53W, h0^{km}, mb3.8/7, mb1 4.1/9, mb1mx3.9/32, mbtmp3.9/9, ML3.2/2, Error ellipse: s-maj=28.1km s-min=23.1km az=59.0*

*NEIC **22** 14:37:46.7±3.0, 19°.79S±0°.03×70°.82W±0°.06, h22^{km}±4^{km}, mb4.6/6, Error ellipse: s-maj=8.0km s-min=4.4km az=80.0*

*GUC **22** 14:37:46.3±0.7, 19°.76S×70°.91W, h41^{km}±2^{km}, ML4.0*

ISC 22 14:37:45.2±1.5, **19°.78S**±0°.03×**70°.86W**±0°.05, **h14**^{km}±9^{km}, **n68**, σ**1^s.34**/82, **mb4.2**/7, **7C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.72	75	⇓iP	Pb	14 38 00.0	+0.4
PSGC				i S	Sn	14 38 10.7	-1.2
PSGC				IAML		14 38 12.2	
	comp=N,7μm,0.3s						
PSGCX	Pisagua	0.72	75		Pb	14 38 00.0	+0.4
PSGCX				Sn	Sn	14 38 10.8	-1.1
PSGCX	Pisagua	0.72	75	eP	Pb	14 37 60.0	+0.4
PSGCX				eS	Sn	14 38 10.6	-1.3
PSGCX				IAML		14 38 11.2	
	comp=Z,6μm,0.4s						
TA01	Diego Aracena	1.01	141	⇑iP	Pn	14 38 05.6	+0.7
TA01				i S	Sn	14 38 19.8	+1.0
TA01				IAML		14 38 24.3	
	comp=E,10μm,0.5s						
PB11	IPOC Station P	1.13	89	⇓iP	Pn	14 38 07.2	+0.4
PB11				i S	Sn	14 38 23.2	+0.9
PB11				IAML		14 38 25.2	
	comp=N,6μm,0.4s						
PB11	IPOC Station P	1.13	89		Pn	14 38 07.2	+0.4
PB11	IPOC Station P	1.13	89	eP	Pn	14 38 07.3	+0.5
PB11				eS	Sn	14 38 23.1	+0.9
PB11				IAML		14 38 24.2	
	comp=Z,3μm,1.5s						
PATCX	Punta Patache	1.23	147	⇑iP	Pb	14 38 08.7	+0.5
PATCX				i S	Sn	14 38 25.0	+0.5
PATCX				IAML		14 38 34.4	
	comp=E,4μm,0.4s						
PATCX	Punta Patache	1.23	147		Pb	14 38 08.8	+0.5
PATCX	Punta Patache	1.23	147	eP	Pb	14 38 08.6	+0.3
PATCX				IAML		14 38 36.5	
	comp=Z,3μm,0.7s						
PB12	IPOC Station P	1.27	23	⇑iP	Pn	14 38 07.9	-0.6
PB12				i S	Sb	14 38 24.7	-0.4
PB12				IAML		14 38 29.8	
	comp=N,3μm,0.5s						
PB12	IPOC Station P	1.27	23	Pn	Pn	14 38 08.3	-0.3
PB12				Sn	Sb	14 38 24.4	-0.7
PB12	IPOC Station P	1.27	23	eP	Pn	14 38 08.0	-0.6
PB12				⇓eS	Sb	14 38 24.5	-0.6
PB12				IAML		14 38 25.1	
	comp=Z,2μm,1.0s						
AP01	Chacalluta	1.49	19	eP	Pn	14 38 11.5	-0.1
AP01				i S	Sb	14 38 31.1	-0.3
GO01	Chusmiza	1.57	86	⇑iP	Pg	14 38 14.5	-1.0
GO01				i S	Sg	14 38 36.4	+0.4
GO01				IAML		14 38 38.8	
	comp=E,5μm,0.4s						
GO01	Chusmiza	1.57	86		Pg	14 38 14.6	-1.0
PB08	IPOC Station P	1.64	103	⇑iP	Pb	14 38 15.4	-0.1
PB08				i S	Sg	14 38 37.8	-0.5
PB08				IAML		14 38 40.8	
	comp=N,1μm,0.6s						
PB08	IPOC Station P	1.64	103	eP	Pb	14 38 15.5	-0.1
PB08				eS	Sg	14 38 38.1	-0.2
PB08				IAML		14 38 38.8	
	comp=Z,2μm,0.7s						
PB02	IPOC Station P	1.77	150	⇑iP	Pn	14 38 16.6	+1.0
PB02				i S	Sn	14 38 38.0	0.0
PB02				IAML		14 38 48.1	
	comp=E,6μm,0.4s						
PB02	IPOC Station P	1.77	150	eP	Pn	14 38 16.9	+1.3
PB02				IAML		14 38 48.9	
	comp=Z,3μm,0.4s						
PB01	IPOC Station P	1.80	134	⇑iP	Pb	14 38 17.2	-0.7
PB01				i S	Sb	14 38 39.9	-0.4
PB01				IAML		14 38 53.0	
	comp=N,3μm,0.5s						
PB01	IPOC Station P	1.80	134	Pn	Pb	14 38 17.2	-0.7
PB01	IPOC Station P	1.80	134	eP	Pb	14 38 17.2	-0.7
PB01				IAML		14 38 52.2	
	comp=Z,2μm,0.7s						
PB16	IPOC Station P	1.93	42		Pn	14 38 18.8	+0.7
PB16	IPOC Station P	1.93	42	eP	Pn	14 38 18.8	+0.7
PB16				⇓eS	Sb	14 38 45.0	+0.4
PB16				IAML		14 38 50.2	
	comp=Z,2μm,0.3s						
PB07	IPOC Station P	2.14	155	eP	Pn	14 38 21.4	+0.7
PB07				IAML		14 39 05.0	
	comp=E,2μm,0.8s						
PB07	IPOC Station P	2.14	155		Pn	14 38 21.3	+0.7
PB07	IPOC Station P	2.14	155	eP	Pn	14 38 21.6	+0.9
PB07				eS	Sg	14 38 53.3	-0.8
PB07				IAML		14 39 00.3	
	comp=Z,2μm,0.6s						
PB03	IPOC Station P	2.48	156	eP	Pn	14 38 26.2	+0.8
PB03				IAML		14 39 15.3	
	comp=Z,1μm,1.2s						
PB09	IPOC Station P	2.51	143	Pn	Pn	14 38 28.0	+2.2
PB09	IPOC Station P	2.51	143	i P	Pn	14 38 27.9	+2.2
PB09				eS	Sg	14 39 09.7	+3.7
PB09				IAML		14 39 11.5	
	comp=Z,1μm,0.5s						
PB04	IPOC Station P	2.62	165		Pn	14 38 27.7	+0.3
PB04	IPOC Station P	2.62	165	i P	Pn	14 38 27.4	+0.1
PB04				eS	Sg	14 39 14.0	+4.4
PB05	IPOC Station P	3.12	169	i P	Pn	14 38 33.6	-0.4
PB05				eS	Sg	14 39 27.0	+1.6
PB05				IAML		14 39 37.2	
	comp=Z,327nm,0.6s						
PB06	IPOC Station P	3.15	158	i P	Pn	14 38 34.8	+0.3
PB06				eS	Sg	14 39 25.1	-1.3
PB06				IAML		14 39 33.3	
	comp=Z,626nm,0.7s						
LVC	Limon Verde	3.35	147	Pn	Pn	14 38 38.8	+1.3
	comp=Z,6.7nm,0.3s,baz=345,slow=8.2,SNR=40						
LVC				Sn	Sn	14 39 16.5	-0.8
	comp=Z,20nm,0.3s,baz=330,slow=7.1,SNR=3.8						
LVC	Limon Verde	3.35	147	Pn	Pn	14 38 39.9	+2.4
PB15	IPOC Station P	3.65	159		Pn	14 38 41.6	+0.3
PB15	IPOC Station P	3.65	159	i P	Pn	14 38 41.7	+0.3
PB10	IPOC Station P	3.72	176		Pn	14 38 41.5	-0.8
PB10	IPOC Station P	3.72	176	i P	Pn	14 38 41.5	-0.8
PB10				IAML		14 39 56.0	
	comp=Z,125nm,0.8s						
LPAZ	La Paz	4.34	37	Pn	Pn	14 38 55.0	+3.7
	comp=Z,1.6nm,0.3s,baz=169,slow=2.7,SNR=20						
LPAZ	La Paz	4.34	37		Pn	14 38 55.4	+4.1
PB14	IPOC Station P	4.84	175		Pn	14 38 55.9	-2.1
PB14	IPOC Station P	4.84	175	i P	Pn	14 38 56.7	-1.3
PB14				IAML		14 40 38.8	
	comp=Z,118nm,1.0s						
GO02	Mina Guanaco	5.48	168		Pn	14 39 06.9	+0.1
YJA	Yavi	5.53	116	i P	Pb	14 39 14.8	-7.1
YJA				IAML		14 39 39.1	
	comp=Z,9.2nm,0.7s						
YJA				IAML		14 41 00.7	
	comp=Z,11nm,2.4s						
SIV	San Ignacio	10.05	70	Pn	Pn	14 40 04.2	-5.0
	comp=Z,0.1nm,0.3s,baz=315,slow=4.2,SNR=5.9						
PLCA	Paso Flores	20.88	179	P	Pn	14 42 29.9	+0.3
	comp=Z,5.0nm,1.0s,baz=15,slow=14,SNR=2.8						
PLCA	Paso Flores	20.88	179	P	P	14 42 26.4	-0.6
PLCA				IAmb	IAmb	14 43 01.5	
	comp=Z,33nm,1.8s						
PTGA	Pitinga	21.73	31	P	P	14 42 34.3	-1.9
	comp=Z,3.8nm,0.3s,baz=225,slow=14,SNR=11						
PTGA	Pitinga	21.73	31	P	P	14 42 34.0	-2.3
BDFB	Brasilia	22.14	83	P	P	14 42 39.9	-1.0
	comp=Z,1.8nm,0.4s,baz=214,slow=9.6,SNR=2.3						
RUSC	La Rusia	25.61	355	P	P	14 43 14.8	0.0
PAYG	Puerto Ayora	26.88	313	P	P	14 43 27.4	+1.6
PAYG				IAmb	IAmb	14 43 30.9	
	comp=Z,20nm,0.9s						
TXAR	Lajitas Array	58.19	326	P	P	14 47 40.8	+1.7
	comp=Z,0.5nm,0.6s,baz=152,slow=8.1,SNR=1.8						
NVAR	Mina Array Bea	73.03	323	P	P	14 49 17.2	+2.3
	comp=Z,0.3nm,0.6s,baz=195,slow=6.5,SNR=2.7						
TORD	Torodi Ar. Bea	78.52	71	P	P	14 49 45.1	-1.5
	comp=Z,2.6nm,0.7s,baz=258,slow=5.0,SNR=11						
SYO	Syowa Base	78.74	160	⇓eP	P	14 49 45.4	-1.4
YKA	Yellowknife Ar	88.98	341	P	P	14 50 39.3	+0.2
	comp=Z,1.3nm,0.9s,baz=136,slow=5.4,SNR=12						
H11S2	WAKE ISLAND Hy	125.83	279	T	T	17 16 05.6	
	baz=101,slow=74,SNR=32						
H11S1	WAKE ISLAND Hy	125.84	279	T	T	17 16 03.4	
	baz=101,slow=74,SNR=22						
H11S3	WAKE ISLAND Hy	125.85	279	T	T	17 16 04.5	
	baz=101,slow=74,SNR=21						
H11N3	WAKE ISLAND Hy	125.87	280	T	T	17 16 11.7	
	baz=100,slow=74,SNR=3.2						
H11N2	WAKE ISLAND Hy	125.89	280	T	T	17 16 06.9	
	baz=100,slow=74,SNR=2.9						
H11N1	WAKE ISLAND Hy	125.89	280	T	T	17 16 09.3	
	baz=100,slow=74,SNR=2.5						
MKAR	Makanchi Array	145.26	33	PKP	PKPbc	14 57 21.8	-0.5
	comp=Z,1.1nm,0.8s,baz=320,slow=4.4,SNR=10						
MKAR	Makanchi Array	145.26	33		PKPbc	14 57 22.4	+0.2

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*IDC **22** 14:40:25.8±1.3, 5°.45N×126°.43E, h0^{km}, mb3.8/9, mb1 3.8/9, mb1mx3.5/48, mbtmp3.8/9, Error ellipse: s-maj=160.1km s-min=18.3km az=68.0*

*MAN **22** 14:40:29.3, 5°.36N×126°.53E, h9^{km}, mb5.0, ML3.9, MS3.9*

ISC 22 14:40:27.9±2.2, **5°.4N**±0°.1×**126°.74E**±0°.10, **h16**^{km}±12^{km}, **n17**, σ**1^s.42**/25, **mb4.0**/9, **3C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	1.23	303	eP	Pn	14 40 50.0	-0.6
DDMP				eS	Sb	14 41 07.2	+0.8
MATI	Mati	1.59	342	eP	Pg	14 40 58.5	0.0
MATI				eS	Sg	14 41 20.1	+0.9
GSPH	General Santos	1.90	290	⇑iP	Pn	14 40 59.0	-0.9
DMPH	Davao City--Mi	2.06	323	⇑eP	Pg	14 41 06.6	-0.8
DMPH				eS	Sg	14 41 34.1	0.0
KCP	Kidapawan	2.28	314	⇓eP	Pb	14 41 08.7	-0.1
KCP				i S	Sb	14 41 35.8	-1.0
SKMP	Bagumbayan, Su	2.44	297	eP	Pn	14 41 09.3	+2.0
SKMP				eS	Sn	14 41 39.8	+2.9
BUKP	Musuan	2.96	326	eP	Pn	14 41 17.3	+3.0
BUKP				eS	Sb	14 41 54.1	-2.2
CTBH	Cotabato--PC H	3.06	306	⇑iP	Pn	14 41 16.9	+1.2
WRA	Warramunga Arr	26.29	164	P	P	14 46 04.6	+1.7
	0.3nm,0.7s,baz=342,slow=10,SNR=6.4						
ASAR	Alice Springs	29.75	167	P	P	14 46 35.0	+1.1
	0.2nm,0.5s,baz=349,slow=7.3,SNR=5.7						
ASAR				PcP	PcP	14 49 38.0	+0.3
	0.2nm,0.8s,baz=356,slow=2.2,SNR=4.5						
SONM	Songino Array	45.71	341	P	P	14 48 48.7	+0.3
	0.3nm,0.6s,baz=118,slow=5.2,SNR=1.9						
MKAR	Makanchi Array	56.19	325	P	P	14 50 06.3	-0.9
	0.9nm,0.5s,baz=122,slow=8.2,SNR=20						
MKAR				PcP	PcP	14 51 04.4	-0.5
	0.3nm,0.7s,baz=123,slow=3.8,SNR=3.9						
ZALV	Zalesovo Beam	59.10	333	P	P	14 50 26.3	-1.1
	0.3nm,0.3s,baz=120,slow=8.5,SNR=2.3						
KURBB	Kurchatov Arra	60.33	327	P	P	14 50 35.1	-1.0
	1.0nm,0.6s,baz=123,slow=7.1,SNR=16						
AKTO	Aktyubinsk	72.35	321	P	P	14 51 52.0	-1.1
	1.0nm,0.6s,baz=157,slow=3.4,SNR=4.2						
ARCES	ARCESS Array B	88.87	340	P	P	14 53 20.4	-0.8
	2.3nm,0.9s,baz=64,slow=5.5,SNR=5.6						
FINES	FINESS Array B	90.36	332	P	P	14 53 27.3	-0.9
	0.7nm,0.8s,baz=46,slow=4.0,SNR=4.8						

SJA 22 15:02:47.6±0.9, **33°.06S**×**69°.54W**, **h126**^{km}±4^{km}, **ML3.4, MW3.5, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARCO	CERRO ARCO	0.55	67	i P	Pn	15 03 07.4	+0.7
ARCO				i S	Sn	15 03 21.6	+0.5
ARCO				IAML		15 03 24.1	
	comp=Z,587nm,0.3s						
AAGR	Agrelo	0.59	93	i P	Pn	15 03 07.9	+1.0
AAGR				eS	Sn	15 03 22.3	+0.9
AAGR				IAML		15 03 23.2	
	comp=Z,493nm,0.2s						
ASAL	Salagasta	0.75	52	i P	Pn	15 03 08.9	+0.8
ASAL				i S	Sn	15 03 25.1	+1.6
PEL	Peldehue	0.97	265	i P	Pn	15 03 10.7	+0.9
PEL				i S	Sn	15 03 27.8	+1.1
ROC1	El Roble	1.25	274	i P	Pn	15 03 13.4	+0.5
ROC1				i S	Sn	15 03 32.4	+0.4
RTLS	Leoncito	1.27	9	i P	Pn	15 03 15.0	+1.7
RTLS				i S	Sn	15 03 34.2	+1.5
RTLS				IAML		15 03 36.9	
	comp=Z,421nm,0.4s						
RTCV	Cerro Valdivia	1.46	35	i P	Pn	15 03 15.6	+0.6
RTCV				i S	Sn	15 03 36.2	+0.4
RTCV				IAML		15 03 37.6	
	comp=Z,407nm,0.4s						
ZON	Zonda	1.68	26	i P	Pn	15 03 18.4	+0.8
ZON				i S	Sn	15 03 41.4	+1.1
SJA	San Juan	1.74	29	i P	Pn	15 03 19.4	+1.1
SJA				i S	Sn	15 03 42.4	+0.9
LAMA	Las Malvinas	1.89	172	i P	Pn	15 03 20.6	+0.7
LAMA				i S	Sn	15 03 46.8	+2.1
RTLL	Cerro Villicun	1.95	28	i P	Pn	15 03 21.5	+0.7
RTLL				i S	Sn	15 03 46.4	+0.3
RTLL				IAML		15 03 59.5	
	comp=Z,215nm,0.3s						
ACCO	Cerro Coronel	2.50	9	i P	Pn	15 03 29.4	+1.5
ACCO				i S	Sn	15 03 59.8	+1.0
GO05	Huala	2.78	225	eP	Pn	15 03 30.2	-1.0
GO05				eS	Sn	15 04 02.0	-2.8
AROD	Rodeo	2.89	1	i P	Pn	15 03 34.8	+1.8
AROD				i S	Sn	15 04 09.5	+1.7
ACDV	Cuesta del Vie	2.90	7	i P	Pn	15 03 34.5	+1.5
ACDV				i S	Sn	15 04 09.2	+1.2
CYA	Choya	5.61	36	eP	Pn	15 04 06.9	-2.0
CYA				eS	Sn	15 04 55.9	-16
CYA				IAML		15 05 09.8	
	comp=Z,25nm,0.3s						

MAN 22 15:05:42.0, 15°.09N×**122°.92E, h5**^{km}**, mb4.3, ML3.2, MS2.9, 1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
POLP	Polilio Island	1.02	249	eP	Pb	15 06 01.9	-0.2
POLP				eS	Sb	15 06 16.2	+0.4
BALP	Baler	1.45	297	eP	Pn	15 06 07.3	-1.6
BALP				eS	Sg	15 06 28.8	+0.2
LQP	Lukban	1.66	234	eP	Pg	15 06 27.0	+13
LQP				eS	Sg	15 06 35.5	+0.3
PCPH	Palayan	1.82	285	⇑eP	Pn	15 06 13.9	-0.1
PCPH				eS	Sb	15 06 38.4	-0.6
PVCP	Virac	1.91	141	eP	Pn	15 06 15.3	+0.1
BOAC	Boac	1.93	213	eP	Pg	15 06 19.0	0.0
BOAC				eS	Sg	15 06 43.9	-0.2
CAUP	Cauayan	2.12	330	eP	Pn	15 06 18.8	+0.6
APYP	Conner	3.19	330	eP	Pn	15 06 33.5	+0.7
ABRA	Dolores	3.31	320	eP	Pn	15 06 35.5	+1.1

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*IDC **22** 15:07:06.8±3.0, 8°.78S×111°.48E, h0^{km}, mb3.3/3, mb1 3.5/3, mb1mx3.2/53, mbtmp3.3/3, Error ellipse: s-maj=165.5km s-min=27.1km az=48.0*

*DJA **22** 15:07:12.4±0.5, 9°S±3°×11°1E±°, h10^{km}, M3.8/13, mb4.0/1, MLv3.6/13*

ISC 22 15:07:14.4±1.4, **9°.0S**±0°.1×**111°.39E**±0°.07, **h58**^{km}, **n17**, σ**0^s.92**/17, **mb3.1**/3, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCJI	Pacitan	0.87	346	P	Pn	15 07 29.8	-0.8
PCJI				S	Sn	15 07 41.3	-1.3
PWJI	Pagerwojo	1.09	22	P	Pn	15 07 33.5	-0.1
PWJI				S	Sn	15 07 48.3	+0.5
WOJI	Wonogiri, Jawa	1.28	339	P	Pn	15 07 36.5	+0.4
WOJI				S	Sn	15 07 54.1	+1.8
UGM	Wanagama	1.41	323	P	Pn	15 07 38.0	+0.1
GMJI	Gumukmas	2.17	70	P	Pn	15 07 48.0	-0.1
SMRI	Semarang	2.19	335	P	Pn	15 07 50.2	+1.8
GRJI	Gresik	2.37	27	P	Pn	15 07 51.5	+0.6
JAGI	Jajag, Banyuwa	2.79	78	P	Pn	15 07 57.2	+0.6
CISI	Cisompet, Garu	3.83	292	P	Pn	15 08 11.1	+0.2
SRBI	Singaraja	3.90	76	P	Pn	15 08 12.5	+0.7
PLAI	Plampang	6.31	89	P	Pn	15 08 45.2	+0.3
WRA	Warramunga Arr	24.68	119	P	P	15 12 30.1	0.0
	0.3nm,0.8s,baz=293,slow=11,SNR=8.4						
ASAR	Alice Springs	25.98	127	P	P	15 12 42.3	+0.4
	0.3nm,0.4s,baz=302,slow=9.2,SNR=13						
H08S2	Diego Garcia H	38.50	269	T	T	15 55 40.6	
	baz=75						
H08S3	Diego Garcia H	38.51	269	T	T	15 55 44.4	
H08S1	Diego Carcia H	38.52	269	T	T	15 55 44.8	
	baz=105						
MKAR	Makanchi Array	61.34	338	P	P	15 17 22.9	-1.2
	0.4nm,0.6s,baz=146,slow=7.8,SNR=5.5						

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*IDC **22** 15:09:42.0±1.9, 20°.11S×71°.01W, h0^{km}, mb3.8/3, mb1 4.0/5, mb1mx3.7/34, mbtmp3.9/5, ML3.6/2, Error ellipse: s-maj=47.4km s-min=27.5km az=63.0*

*NEIC **22** 15:09:45.6±2.1, 20°.16S±0°.03×70°.94W±0°.08, h28^{km}±7^{km}, mb4.6/4, Error ellipse: s-maj=10.9km s-min=4.7km az=93.0*

*GUC **22** 15:09:45.6±1.0, 20°.13S×70°.92W, h33^{km}±5^{km}, ML3.6*

ISC 22 15:09:44.8±0.8, **20°.14S**±0°.03×**70°.94W**±0°.07, **h22**^{km}±4^{km}, **n40**, σ**1^s.08**/54, **mb4.0**/4, **5C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TA01	Diego Aracena	0.83	121	⇓iP	Pn	15 10 00.3	-0.9
TA01				eS	Sn	15 10 11.3	-1.6
TA01				IAML		15 10 12.6	
	comp=N,3μm,0.5s						
PSGC	Pisagua	0.94	55	⇓iP	Pn	15 10 01.9	-0.9
PSGC				eS	Sn	15 10 14.5	-1.1
PSGC				IAML		15 10 16.5	
	comp=N,3μm,0.5s						
PSGCX	Pisagua	0.94	55		Pn	15 10 01.8	-0.9
PSGCX					Sb	15 10 15.6	+1.2
PATCX	Punta Patache	1.01	133	⇑iP	Pn	15 10 03.5	-0.2
PATCX				eS	Sn	15 10 16.7	-0.6
PATCX				IAML		15 10 21.1	
	comp=N,2μm,0.3s						
PATCX	Punta Patache	1.01	133		Pn	15 10 03.5	-0.2
PATCX					Sb	15 10 17.1	+0.8
PB11	IPOC Station P	1.27	73	⇓iP	Pn	15 10 07.2	-0.2
PB11				eS	Sb	15 10 24.3	+0.4
PB11				IAML		15 10 26.1	
	comp=N,4μm,0.3s						
PB11	IPOC Station P	1.27	73		Pn	15 10 06.8	-0.5
PB02	IPOC Station P	1.53	140	⇑iP	Pn	15 10 11.3	+0.4
PB02				eS	Sb	15 10 32.2	+0.6
PB02				IAML		15 10 36.4	
	comp=E,3μm,0.3s						
PB12	IPOC Station P	1.62	21	⇑iP	Pn	15 10 12.4	+0.3
PB12				eS	Sb	15 10 34.4	+0.3
PB12				IAML		15 10 46.1	
	comp=E,705nm,0.3s						
PB12	IPOC Station P	1.62	21		Pn	15 10 12.6	+0.4
PB01	IPOC Station P	1.64	124	⇑iP	Pn	15 10 12.9	+0.6
PB01				eS	Sb	15 10 34.6	+0.1
PB01				IAML		15 10 40.0	
	comp=E,1μm,0.5s						
PB01	IPOC Station P	1.64	124		Pn	15 10 13.0	+0.6
PB08	IPOC Station P	1.68	90	⇓iP	Pn	15 10 14.3	+1.1
PB08				eS	Sb	15 10 36.5	+0.4
PB08				IAML		15 10 40.8	
	comp=N,694nm,0.3s						
GO01	Chusmiza	1.71	75	⇑iP	Pn	15 10 14.3	+0.6

GO01				*i* S	Sb	15 10 36.7	-0.3
GO01	Chusmiza	1.71	75		Pn	15 10 14.6	+0.9
AP01	Chacalluta	1.84	18	*e*P	Pn	15 10 16.6	+1.5
AP01				*i* S	Sb	15 10 40.4	-0.1
AP01				*e*S	Sn	15 10 40.8	+3.0
AP01				IAML		15 10 46.8	
	comp=E,2µm,0.4s						
PB07	IPOC Station P	1.87	148	*e*P	Pn	15 10 15.8	+0.2
PB07				*e*S	Sb	15 10 41.6	+0.4
PB07	IPOC Station P	1.87	148		Pn	15 10 15.8	+0.2
PB16	IPOC Station P	2.25	37	*e*P	Pn	15 10 22.0	+0.8
PB16				*i* S	Sb	15 10 52.0	-0.6
PB16				IAML		15 10 58.0	
	comp=E,486nm,0.7s						
PB16	IPOC Station P	2.25	37		Pb	15 10 23.9	-1.1
PB09	IPOC Station P	2.29	136		Pn	15 10 23.1	+1.6
PB04	IPOC Station P	2.31	161		Pn	15 10 21.6	0.0
LVC	Limon Verde	3.11	143	Pn	Pn	15 10 34.6	+1.8
	comp=E,5.0nm,0.3s,baz=44,slow=9.5,SNR=20						
LVC				Sn	Sn	15 11 12.8	+3.3
	comp=E,14nm,0.3s,baz=337,slow=9.4,SNR=3.7						
LVC	Limon Verde	3.11	143		Pn	15 10 34.5	+1.7
PB15	IPOC Station P	3.35	156		Pn	15 10 35.9	-0.1
PB10	IPOC Station P	3.38	174	Pn	Pn	15 10 35.4	-0.9
PB14	IPOC Station P	4.50	174		Pn	15 10 50.8	-1.1
LPAZ	La Paz	4.67	35	Pn	Pb	15 11 01.4	-4.9
	comp=E,0.3nm,0.3s,baz=296,slow=5.1,SNR=15						
LPAZ	La Paz	4.67	35		Pb	15 11 01.3	-5.0
GO02	Mina Guanaco	5.16	166		Pn	15 11 01.0	0.0
SIV	San Ignacio	10.25	68	Pn	Pn	15 12 11.9	+1.2
	comp=E,0.8nm,0.3s,baz=270,slow=10,SNR=20						
PTGA	Pitinga	22.07	30	P	P	15 14 39.8	+1.4
	comp=E,1.2nm,0.3s,baz=325,slow=23,SNR=5.0						
PTGA	Pitinga	22.07	30	P	P	15 14 37.7	-0.7
JTS	Las Juntas de	33.23	334	P	P	15 16 20.4	-0.1
JTS				IAmb	IAmb	15 16 37.4	
	comp=Z,7.9nm,1.2s						
STVI	Saint Thomas	38.70	9	P	P	15 17 05.8	-1.4
DR12	Loma Pena Alta	38.71	2	P	P	15 17 07.8	+0.3
TORD	Torodi Ar. Bea	78.71	71	P	P	15 21 45.8	-0.2
	comp=Z,1.3nm,0.6s,baz=254,slow=5.0,SNR=6.5						
YKA	Yellowknife Ar	89.28	341	P	P	15 22 39.4	+0.6
	comp=Z,0.6nm,0.9s,baz=134,slow=4.5,SNR=5.1						
MKAR	Makanchi Array	145.59	33	PKPbc	PKPab	15 29 22.5	+0.6
	comp=Z,0.9nm,0.8s,baz=321,slow=3.6,SNR=9.5						
MKAR	Makanchi Array	145.59	33		PKiKP	15 29 23.5	-1.9

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*NEIC **22** 15:11:59.1±2.3, 19°.8S±0°.2×169°.6E±0°.2, h132^{km}±12^{km}, mb4.2/11, Error ellipse: s-maj=38.7km s-min=9.9km az=142.0*

*IDC **22** 15:12:01.5±5.5, 19°.48S×169°.04E, h108^{km}±49^{km}, mb3.6/5, mb1 3.8/6, mb1mx3.4/37, mbtmp3.9/6, Error ellipse: s-maj=76.9km s-min=39.2km az=151.0*

ISC 22 15:11:59.7±2.1**, 19°.5S**±0°.3×**169°.1E**±0°.4**, h100**^{km}**, n20, σ1§38**/17**, mb4.0**/10**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	3.60	224	P	Pn	15 12 55.3	+1.7
	4.5nm,0.3s,baz=83,slow=11,SNR=186						
DZM				S	Sn	15 13 36.0	+0.7
	45nm,0.3s,baz=116,slow=23,SNR=24						
DZM	Mont Dzumac	3.60	224		Pn	15 12 55.3	+1.7
DZM					Sn	15 13 35.3	0.0
TOO	Toolangi	27.38	224	P	P	15 17 33.4	-2.2
TOO				IAmb	IAmb	15 17 38.0	
	comp=Z,7.5nm,1.1s						
STKA	Stephens Creek	27.63	238	P	P	15 17 39.2	+1.2
	comp=Z,1.9nm,0.8s,baz=83,slow=11,SNR=7.8						
STKA	Stephens Creek	27.63	238	IAmb	IAmb	15 17 45.1	
	comp=Z,0.5nm,1.1s						
BBOO	Buckleboo	32.38	239	P	P	15 18 17.7	-2.2
WR0	Warramunga Arr	32.53	263	P	P	15 18 17.9	-3.5
WB0	Warramunga Arr	32.69	264	P	P	15 18 22.2	-0.6
WB0				IAmb	IAmb	15 18 30.1	
	comp=Z,2.8nm,1.1s						
WRAB	Tennant Creek	32.72	263	P	P	15 18 20.8	-2.2
WRAB				IAmb	IAmb	15 18 24.2	
	comp=Z,5.0nm,0.8s						
WRA	Warramunga Arr	32.73	263	P	P	15 18 22.2	-0.8
	comp=Z,0.6nm,0.7s,baz=101,slow=7.7,SNR=5.5						
AS31	Alice Springs	32.97	256	P	P	15 18 25.3	+0.1
AS31				IAmb	IAmb	15 18 25.8	
	comp=Z,3.4nm,0.4s						
ASAR	Alice Springs	32.97	256	P	P	15 18 25.2	0.0
	comp=Z,5.4nm,0.5s,baz=84,slow=8.8,SNR=150						
KNRA	Kununurra	38.61	269	P	P	15 19 13.0	-0.4
KNRA				IAmb	IAmb	15 19 15.2	
	comp=Z,7.0nm,1.1s						
FITZ	Fitzroy Crossi	41.12	265	P	P	15 19 35.1	+1.0
	comp=Z,0.7nm,0.5s,baz=66,slow=12,SNR=1.9						
FITZ	Fitzroy Crossi	41.12	265	IAmb	IAmb	15 19 44.3	
	comp=Z,2.0nm,1.1s						
TAOE	Nuku Hiva Isla	50.13	85	P	P	15 20 38.8	-6.6
SONM	Songino Array	87.35	323	P	P	15 24 36.7	+1.2
	comp=Z,0.2nm,0.4s,baz=145,slow=5.3,SNR=3.0						
SONM	Songino Array	87.35	323	IAmb	IAmb	15 24 37.1	
	comp=Z,1.2nm,1.2s						
ARCES	ARCESS Array B	125.27	345	PKP	PKPdf	15 30 48.0	0.0
	comp=Z,8.9nm,1.1s,baz=44,slow=2.4,SNR=10						
GERES	GERESS Array B	144.66	332	PKP	PKPab	15 31 24.3	+0.8
	comp=Z,0.5nm,0.6s,baz=46,slow=3.9,SNR=4.1						

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*IDC **22** 15:13:55.9±0.7, 29°.30N×139°.66E, h420^{km}±13^{km}, mb3.1/8, mb1 3.2/13, mb1mx2.9/48, mbtmp3.9/13, Error ellipse: s-maj=36.9km s-min=10.6km az=69.0*

*JMA **22** 15:13:56.1, 29°.45N×140°.07E, h433^{km}, M3.4*

ISC 22 15:13:56.3±0.7**, 29°.30N**±0°.10×**140°.0E**±0°.1**, h450**^{km}**, n29, σ1§31**/32**, mb3.5**/8**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	2.93	138	P	P	15 15 02.1	-0.8
CBIJ				*e*S	S	15 15 54.9	-1.9
JCJ	Chichijima	2.93	138	P	P	15 15 01.8	-1.0
	47nm,0.3s,baz=284,slow=23,SNR=10						
JCJ				S	S	15 15 55.2	-1.6
	65nm,0.3s,baz=239,slow=22,SNR=9.8						
JHH2	Haha-jima-NKT2	3.29	144	P	P	15 15 05.0	-0.6
JHH2				S	S	15 16 00.3	-1.5
TTO1	TONANKAI O.B.S	5.11	328	P	P	15 15 20.8	-0.4
JIE	Ise	5.79	332	P	P	15 15 27.9	-0.5
JKN2	Miekihoku	5.85	328	P	P	15 15 27.6	-1.4
JNY	Yasuok	6.30	344	P	P	15 15 32.6	-1.1
JAO	Obara	6.38	339	P	P	15 15 33.6	-0.9
JHU	Hanno	6.56	355	P	P	15 15 34.6	-1.6
JRY	Ryogami san	6.76	352	P	P	15 15 37.3	-1.1
JAG	Ashikaga	7.12	356	P	P	15 15 40.5	-1.6
JHO	Hitachi	7.30	4	P	P	15 15 43.9	-0.2
MJAR	Matsushiro Arr	7.37	349	P	P	15 15 42.8	-2.0
	0.1nm,0.3s,baz=170,slow=11,SNR=16						
JNU	Nakatsue	8.68	298	P	P	15 15 57.6	-1.4
	0.4nm,0.3s,baz=162,slow=6.8,SNR=4.8						
KSRS	Korea Array	12.95	312	P	P	15 16 43.5	-1.7
	0.2nm,0.3s,baz=129,slow=10,SNR=7.0						
USRK	Ussuriysk Ar.	16.18	339	P	P	15 17 19.8	+0.1
	baz=144,slow=9.3,SNR=14						
SONM	Songino Array	31.79	315	P	P	15 19 41.7	-0.5
	0.6nm,0.4s,baz=133,slow=10,SNR=4.7						
TAPN	Taplejung	45.75	281	*e*P	P	15 21 35.3	-1.1
	2.5nm,0.4s						
ODAN	Odare	46.16	280	*e*P	P	15 21 38.7	-0.7
	3.4nm,0.4s						
ZALV	Zalesovo Beam	46.56	318	P	P	15 21 41.5	-0.3
	0.6nm,0.4s,baz=114,slow=7.8,SNR=3.7						
JIRN	Jiri	46.97	282	*e*P	P	15 21 45.3	-0.5
GUN	Gumba	47.17	282	*e*P	P	15 21 46.6	-0.7
	5.3nm,0.4s						
MKAR	Makanchi Array	47.59	308	P	P	15 21 49.2	-0.6
	0.4nm,0.3s,baz=82,slow=10,SNR=14						
DANN	Dangsing	48.86	283	*e*P	P	15 21 59.4	-0.5
WRA	Warramunga Arr	49.26	187	P	P	15 22 04.1	+1.6
	1.0nm,0.4s,baz=1.2,slow=7.7,SNR=48						
ASAR	Alice Springs	52.99	187	P	P	15 22 31.4	+1.7
	0.3nm,0.5s,baz=2.8,slow=7.3,SNR=16						
ARCES	ARCESS Array B	70.82	340	P	P	15 24 28.4	+2.5
	3.1nm,1.0s,baz=80,slow=10.0,SNR=5.3						
KBZ	Khabaz	75.10	312	P	P	15 24 52.3	+1.3
	1.1nm,0.7s,baz=51,slow=6.5,SNR=4.2						
FINES	FINESS Array B	75.12	333	P	P	15 24 52.5	+1.7
	2.3nm,1.0s,baz=70,slow=6.2,SNR=8.1						

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*SJA **22** 15:14:36.5±1.2, 19°.94S×71°.47W, h10^{km}±11^{km}, ML3.7, MW3.9*

*NEIC **22** 15:14:38.5±1.8, 19°.96S±0°.06×71°.39W±0°.09, h35^{km}±8^{km}, Error ellipse: s-maj=12.3km s-min=7.2km az=116.0*

*NEIC **22** 15:14:40.0±2.0, 19°.95S±0°.04×71°.29W±0°.06, h10^{km}±2^{km}, mb4.0/2, Error ellipse: s-maj=11.3km s-min=3.1km az=301.0*

*IDC **22** 15:14:41.1±1.0, 19°.97S×71°.15W, h0^{km}, mb3.7/5, mb1 3.9/7, mb1mx3.8/29, mbtmp3.7/7, ML3.5/2, Error ellipse: s-maj=32.3km s-min=22.0km az=69.0*

*GUC **22** 15:14:42.4±0.6, 19°.96S×71°.17W, h41^{km}±2^{km}, ML3.6*

ISC 22 15:14:41.1±1.2**, 19°.96S**±0°.03×**71°.21W**±0°.05**, h10**^{km}±7^{km}**, n58, σ1§29**/74**, mb3.9**/4**, 5C-1D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	1.09	71	⇑*i*P	Pb	15 15 01.4	-0.6
PSGC				*i* S	Sn	15 15 15.9	-1.8
PSGC				IAML		15 15 20.1	
	comp=N,2µm,0.5s						
PSGCX	Pisagua	1.09	71		Pb	15 15 01.4	-0.7
PSGCX				Sg	Sn	15 15 16.5	-1.2
PSGCX	Pisagua	1.09	71	*i* P	Pb	15 15 01.4	-0.7
PSGCX				*e*S	Sn	15 15 15.9	-1.8
PSGCX				IAML		15 15 18.7	
	comp=Z,1µm,1.1s						
TA01	Diego Aracena	1.14	122	⇑*i*P	Pb	15 15 02.5	-0.5
TA01				*i* S	Sg	15 15 16.7	-1.2
TA01				IAML		15 15 23.4	
	comp=N,1µm,0.5s						
PATCX	Punta Patache	1.31	131	⇑*i*P	Pn	15 15 05.0	-0.7
PATCX				*i* S	Sg	15 15 24.6	+1.1
PATCX				IAML		15 15 33.1	
	comp=E,1µm,0.7s						
PATCX	Punta Patache	1.31	131		Pn	15 15 04.6	-1.1
PATCX	Punta Patache	1.31	131	*i* P	Pn	15 15 05.0	-0.7
PATCX				IAML		15 15 31.9	
	comp=Z,976nm,0.8s						
PB11	IPOC Station P	1.48	83	⇑*i*P	Pn	15 15 07.5	-0.4
PB11				*i* S	Sb	15 15 26.7	-1.0
PB11				IAML		15 15 31.9	
	comp=N,2µm,0.7s						
PB11	IPOC Station P	1.48	83		Pn	15 15 06.8	-1.2
PB11					Sg	15 15 27.9	-0.8
PB11	IPOC Station P	1.48	83	*i* P	Pn	15 15 07.6	-0.4
PB11				*e*S	Sg	15 15 32.4	+3.7
PB11				IAML		15 15 39.8	
	comp=Z,1µm,0.8s						
PB12	IPOC Station P	1.57	32	*e*P	Pn	15 15 08.9	-0.3
PB12				*i* S	Sg	15 15 32.0	+0.3
PB12				IAML		15 15 36.9	
	comp=E,2µm,0.6s						
PB12	IPOC Station P	1.57	32		Pn	15 15 09.2	0.0
PB12	IPOC Station P	1.57	32	*i* P	Pn	15 15 09.0	-0.3
PB12				*e*S	Sg	15 15 31.7	0.0
PB12				IAML		15 15 38.7	
	comp=Z,931nm,0.6s						
AP01	Chacalluta	1.78	28	*e*P	Pg	15 15 15.4	+0.2
AP01				*i* S	Sg	15 15 38.2	0.0
PB02	IPOC Station P	1.83	138	⇓*i*P	Pg	15 15 17.4	+1.1
PB02				*i* S	Sg	15 15 40.6	+0.6
PB02				IAML		15 15 46.5	
	comp=E,1µm,0.7s						
PB02	IPOC Station P	1.83	138	*i* P	Pn	15 15 12.6	-0.2
PB02				IAML		15 15 49.1	
	comp=Z,2µm,0.6s						
GO01	Chusmiza	1.92	82	*e*P	Pb	15 15 15.8	-0.7
GO01				*i* S	Sb	15 15 40.4	-0.5
GO01				IAML		15 15 42.4	
	comp=N,1µm,0.3s						
GO01	Chusmiza	1.92	82		Pb	15 15 15.5	-1.1
PB08	IPOC Station P	1.94	96	⇑*i*P	Pn	15 15 14.5	-0.1
PB08				*i* S	Sb	15 15 40.8	-0.6
PB08				IAML		15 15 49.3	
	comp=N,1µm,0.7s						
PB08	IPOC Station P	1.94	96	*i* P	Pb	15 15 16.6	-0.3
PB08				IAML		15 15 50.8	
	comp=Z,691nm,0.7s						
PB01	IPOC Station P	1.95	124	*e*P	Pn	15 15 14.5	+0.1
PB01				*i* S	Sn	15 15 37.1	-1.8
PB01				IAML		15 15 48.7	
	comp=N,881nm,0.7s						
PB01	IPOC Station P	1.95	124		Pn	15 15 14.7	+0.3
PB01	IPOC Station P	1.95	124	*i* P	Pn	15 15 14.7	+0.3
PB01				IAML		15 15 53.9	
	comp=Z,995nm,0.7s						
PB07	IPOC Station P	2.15	145		Pn	15 15 16.9	-0.4
PB07	IPOC Station P	2.15	145	*i* P	Pn	15 15 16.9	-0.4
PB07				IAML		15 16 03.1	
	comp=Z,454nm,0.8s						
PB16	IPOC Station P	2.28	45		Pb	15 15 22.5	-0.2
PB16	IPOC Station P	2.28	45	*i* P	Pb	15 15 22.1	-0.6
PB16				IAML		15 16 07.0	
	comp=Z,711nm,1.3s						
PB03	IPOC Station P	2.49	147	*i* P	Pn	15 15 22.3	+0.4
PB03				IAML		15 16 10.7	
	comp=Z,320nm,0.6s						
PB04	IPOC Station P	2.57	157		Pn	15 15 22.4	-0.6
PB04	IPOC Station P	2.57	157	*i* P	Pn	15 15 22.5	-0.5
PB09	IPOC Station P	2.60	135	Pn	Pn	15 15 24.3	+0.9
PB09	IPOC Station P	2.60	135	*i* P	Pn	15 15 24.8	+1.4
PB09				IAML		15 16 11.3	
	comp=Z,856nm,0.7s						
PB05	IPOC Station P	3.03	162	*i* P	Pn	15 15 28.4	-1.0
PB05				IAML		15 16 33.4	
	comp=Z,176nm,0.9s						
PB06	IPOC Station P	3.13	151	*i* P	Pn	15 15 30.1	-0.7
PB06				IAML		15 16 39.2	
	comp=Z,400nm,1.0s						
LVC	Limon Verde	3.40	141	Pn	Pn	15 15 36.0	+1.3
	comp=Z,2.8nm,0.3s,baz=323,slow=11,SNR=6.6						
LVC				Sn	Sn	15 16 15.3	0.0
	comp=Z,4.0nm,0.3s,baz=291,slow=7.9,SNR=3.3						
LVC	Limon Verde	3.40	141	Pn	Pn	15 15 35.7	+1.1
LVC	Limon Verde	3.40	141	*i* P	Pn	15 15 35.9	+1.3
LVC				IAML		15 16 37.7	
	comp=Z,124nm,0.8s						
PB10	IPOC Station P	3.59	170	Pn	Pn	15 15 35.7	-1.2
PB10	IPOC Station P	3.59	170	*i* P	Pn	15 15 35.7	-1.2
PB10				IAML		15 16 59.6	
	comp=Z,46nm,0.8s						
PB15	IPOC Station P	3.62	154	*i* P	Pn	15 15 37.6	+0.1
LPAZ	La Paz	4.68	39	Pn	Pb	15 15 59.1	-4.5
	comp=Z,0.9nm,0.3s,baz=243,slow=3.8,SNR=9.6						
PB14	IPOC Station P	4.71	171		Pn	15 15 50.4	-2.2
PB14	IPOC Station P	4.71	171	*i* P	Pn	15 15 53.2	+0.7
PB14				IAML		15 16 52.7	
	comp=Z,46nm,0.6s						
GO02	Mina Guanaco	5.39	164		Pn	15 16 01.6	-0.4
YJA	Yavi	5.76	114	*i* P	Pb	15 16 18.2	-3.8
YJA				IAML		15 16 22.1	
	comp=Z,6.8nm,0.6s						
YJA				IAML		15 17 36.1	
	comp=Z,11nm,2.2s						
SIV	San Ignacio	10.42	69	Pn	Pn	15 17 13.0	+2.2
	comp=Z,0.5nm,0.3s,baz=280,slow=10,SNR=12						
PLCA	Paso Flores	20.72	179	P	Pn	15 19 23.3	-0.9
	comp=Z,2.3nm,0.9s,baz=348,slow=9.4,SNR=4.6						
PLCA	Paso Flores	20.72	179	P	P	15 19 19.4	-2.4
PLCA				IAmb	IAmb	15 19 36.7	
	comp=Z,3.7nm,0.7s						
PTGA	Pitinga	22.05	31	P	P	15 19 37.8	+1.5
	comp=Z,3.5nm,0.9s,baz=208,slow=15,SNR=4.7						
PTGA	Pitinga	22.05	31	P	P	15 19 35.4	-0.9
PTGA				IAmb	IAmb	15 19 40.6	
	comp=Z,10nm,1.3s						
TXAR	Lajitas Array	58.15	327	P	P	15 24 37.4	+2.0
	comp=Z,0.1nm,0.4s,baz=135,slow=9.0,SNR=2.6						
TORD	Torodi Ar. Bea	78.89	72	P	P	15 26 45.4	+0.1
	comp=Z,1.6nm,0.8s,baz=249,slow=5.2,SNR=7.2						
YKA	Yellowknife Ar	89.03	341	P	P	15 27 37.1	+1.2
	comp=Z,0.4nm,0.7s,baz=137,slow=5.1,SNR=5.8						
WRA	Warramunga Arr	133.11	214	PKP	PKiKP	15 33 59.7	+0.5
	comp=Z,0.4nm,0.8s,baz=167,slow=1.8,SNR=2.2						
ZALV	Zalesovo Beam	141.42	23	PKP	PKiKP	15 34 14.1	-0.9
	comp=Z,0.4nm,0.4s,baz=65,slow=31,SNR=2.6						
MKAR	Makanchi Array	145.58	33	PKPbc	PKPab	15 34 21.4	+1.2
	comp=Z,0.5nm,0.7s,baz=345,slow=2.8,SNR=7.1						
MKAR	Makanchi Array	145.58	33	PKPdf	PKPab	15 34 21.7	+1.5
SONM	Songino Array	152.12	3	PKPbc	PKiKP	15 34 38.4	+1.0
	comp=Z,0.4nm,0.7s,baz=141,slow=3.0,SNR=2.8						
SONM				PKPab	pPKPab	15 34 48.1	+0.3
	comp=Z,1.0nm,0.9s,baz=26,slow=0.9,SNR=4.9						

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*IDC **22** 15:34:08.3±10.0, 34°.61N×141°.79E, h0^{km}, mb3.4/1, mb1 3.6/3, mb1mx3.3/44, mbtmp3.4/3, ML2.0/2, Error ellipse: s-maj=204.6km s-min=34.1km az=13.0*

*JMA **22** 15:34:22.4±0.1, 36°.91N×141°.41E, h34^{km}±1^{km}, M3.8*

JMA Felt I J1.

ISC 22 15:34:24.4±1.8**, 36°.96N**±0°.05×**141°.32E**±0°.08**, h34**^{km}±4^{km}**, n13, σ1§62**/23**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	Iwakimizuishiy	0.44	289	P	Pb	15 34 33.0	-1.2
ONAJ				S	Sb	15 34 40.9	-0.1
JFK	Kawauchi	0.54	319	P	Pn	15 34 34.6	-1.1
JFK				S	Sn	15 34 43.1	-0.5
JFFD	Fukushimafurud	0.62	282	P	Pn	15 34 35.6	-1.1
JFFD				S	Sn	15 34 45.1	-0.4
JHO	Hitachi	0.70	240	P	Pn	15 34 36.3	-1.5
JHO				S	Sn	15 34 46.5	-0.8
JHYU	Hitachinakayam	0.85	224	P	Pn	15 34 38.3	-1.6
JHYU				S	Sn	15 34 50.1	-1.1
JFT	Otama	0.96	306	P	Pb	15 34 41.9	-0.8
JFT				S	Sb	15 34 55.7	+0.5
JMM	Marumori	1.00	335	P	Pn	15 34 41.4	-0.5
JMM				S	Sn	15 34 55.1	+0.3
JFY	Yanaizu	1.36	290	P	Pb	15 34 48.1	-1.3
JFY				S	Sb	15 35 07.0	+0.4
JIO	Ouri	1.49	1	P	Pn	15 34 48.2	-0.5
JIO				S	Sn	15 35 07.3	+0.3
JOU	Okura	1.50	340	P	Pb	15 34 49.8	-1.9
JOU				S	Sb	15 35 09.8	-0.6
MJAR	Matsushiro Arr	2.53	261	Pn	Pn	15 35 03.4	+0.3
	0.3nm,0.3s,baz=91,slow=14,SNR=26						
MJAR				Sn	Sb	15 35 45.0	+5.1
	1.8nm,0.3s,baz=253,slow=33,SNR=2.8						
USRK	Ussuriysk Ar.	10.13	318	Pn	Pn	15 37 04.3	+17
	baz=132,slow=15,SNR=4.7						
ILAR	Eielson Array	49.60	32	P	P	15 43 14.2	+2.4
	0.4nm,0.8s,baz=266,slow=6.0,SNR=5.4						

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*DJA **22** 15:36:07.6±0.4, 2°N±3°×12°9E±°, h10^{km}, M4.6/12, mB5.0/4, mb4.7/10, MLv4.5/12, MLv4.9/2, Mw(mB)4.3/4*

*NEIC **22** 15:36:08.9±2.2, 1°.69N±0°.07×128°.68E±0°.07, h55^{km}±10^{km}, mb4.5/26, Error ellipse: s-maj=14.3km s-min=4.1km az=223.0*

*IDC **22** 15:36:09.8±2.6, 1°.66N×128°.77E, h62^{km}±29^{km}, mb3.8/10, mb1 4.0/13, mb1mx3.7/41, mbtmp4.2/13, ML4.2/3, MS3.7/2, Ms1 3.7/2, ms1mx3.1/41, Error ellipse: s-maj=21.2km s-min=14.3km az=69.0*

*MAN **22** 15:36:21.6, 2°.28N×127°.51E, h1^{km}, mb4.9, ML3.9, MS3.9*

ISC 22 15:36:09.9±0.5**, 1°.61N**±0°.05×**128°.61E**±0°.06**, h61**^{km}**, n94, σ1§70**/90**, mb4.4**/22**, 3C, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.49	236	P	Pn	15 36 32.1	-2.4
TNTI				S	Sn	15 36 51.5	-1.6
TNTI	Ternate	1.49	236		Pn	15 36 32.6	-1.9
LBMI	Labuha	2.49	206	P	Pn	15 36 46.9	-1.2
LBMI				S	Sn	15 37 16.5	-0.8
SWI	Sorong	3.61	133	P	Pn	15 37 02.6	-0.8
SIJI	Sorong	3.62	133	P	Pn	15 37 03.4	-0.2
	17nm,0.3s,baz=140,slow=23,SNR=78						
SIJI				S	Sn	15 37 43.3	-1.7
	14nm,0.3s,baz=164,slow=18,SNR=4.7						
SIJI				LR	LR	15 38 42.3	
	comp=Z,697nm,19.9s,baz=358,slow=43						
SANI	Sanana	4.48	216	P	Pn	15 37 12.9	-2.4
KMSI	Cibinong	4.74	258	P	Pn	15 37 16.2	-2.7
MSAI	Masohi	4.93	176	P	Pn	15 37 22.0	+0.5
NLAI	Namlea	5.04	197	P	Pn	15 37 21.7	-1.3
DDMP	Don Marcelino,	5.32	327	*e*P	Pn	15 37 28.6	+1.7
FAKI	Fak Fak	5.78	141	P	Pn	15 37 33.2	+0.1
	0.3nm863nm47nm,0.6s						
FAKI	Fak Fak	5.78	141		Pn	15 37 33.3	+0.1
FAKI					Sn	15 38 35.8	-2.4
MATI	Mati	5.80	336	*e*P	Pn	15 37 36.7	+3.3
SKMP	Bagumbayan, Su	6.35	320	*e*P	Pn	15 37 41.7	+0.8
LUWI	Luwuk	6.40	246	P	Pn	15 37 39.9	-1.8
	0.4nm0.4nm2µm78nm,0.7s						
LUWI	Luwuk	6.40	246		Pn	15 37 44.7	+3.1
KCP	Kidapawan	6.41	327	⇑*i*P	Pn	15 37 45.2	+3.4
KCP				*e*S	Sn	15 38 46.4	-7.4
MRSI	Marisa	6.76	261	P	Pn	15 37 47.2	+0.6
	0.2nm40nm,0.8s						
CTBH	Cotabato--PC H	7.07	322	⇑*i*P	Pn	15 37 51.7	+0.9
BUKP	Musuan	7.17	331	*e*P	Pn	15 37 55.2	+3.0
APSI	Ampana	7.40	250	P	Pn	15 37 54.1	-1.2
	0.2nm560nm32nm,0.9s						
BAKI	Biak	7.99	110	P	Pn	15 38 06.3	+2.8
	104nm,0.8s						
MPSI	Mapaga	8.80	262	P	Pn	15 38 14.5	0.0
	9.0nm,0.8s						
BNSI	Bone	10.38	235	P	Pn	15 38 34.8	-1.3
	27nm,0.8s						
SPSI	Sidrap Palu	10.43	238	P	Pn	15 38 36.9	+0.2
	936nm57nm,0.5s						
BKSI	Bulukumba	10.92	231	P	Pn	15 38 43.5	0.0
	24nm,0.7s						
KAPI	Kappang	11.03	233	P	Pn	15 38 46.5	+1.5
	3.2nm,0.3s,baz=75,slow=7.1,SNR=6.5						
KKM	Kota Kinabalu	13.13	290	Pn	Pn	15 39 13.6	-0.1
KNRA	Kununurra	17.17	180	Pn	Pn	15 40 04.2	-1.6
KSM	Kuching	18.30	270	P	P	15 40 17.6	-1.5
KSM				IAmb	IAmb	15 40 28.4	
	comp=Z,42nm,1.5s						
FITZ	Fitzroy Crossi	19.80	188	P	P	15 40 35.2	-0.2
	comp=Z,0.4nm,0.3s,baz=16,slow=7.7,SNR=14						
FITZ	Fitzroy Crossi	19.80	188	P	P	15 40 35.1	-0.2
WB0	Warramunga Arr	21.98	165	P	P	15 40 59.5	+0.5
WB0				IAmb	IAmb	15 41 04.3	
	comp=Z,21nm,0.7s						
WRAB	Tennant Creek	22.13	166	P	P	15 41 01.2	+0.6
WRA	Warramunga Arr	22.14	166	P	P	15 40 59.8	-0.9
	comp=Z,7.1nm,0.6s,baz=343,slow=11,SNR=68						
WRA	Warramunga Arr	22.14	166	P	P	15 41 00.0	-0.7
WB2	Warramunga Arr	22.14	166	P	P	15 41 01.2	+0.4
WR0	Warramunga Arr	22.21	165	P	P	15 41 01.6	+0.1
WR0				IAmb	IAmb	15 41 07.0	
	comp=Z,23nm,1.2s						
YULB	Yu-li	22.79	342	P	P	15 41 06.3	-1.3
YULB				IAmb	IAmb	15 41 24.8	
	comp=Z,25nm,1.5s						
KRVT	Keravat (AS076	24.12	104	LR	LR	15 48 53.5	
	comp=Z,220nm,19.5s,baz=280,slow=32						
AS31	Alice Springs	25.64	169	P	P	15 41 34.5	+0.5
ASAR	Alice Springs	25.64	169	P	P	15 41 34.4	+0.4
	comp=Z,2.6nm,0.7s,baz=347,slow=8.9,SNR=38						
ASAR	Alice Springs	25.64	169	P	P	15 41 34.5	+0.5
RPSI	Rantau Prapat	29.68	273	P	P	15 42 12.5	+2.2
PSI	Prapat	29.69	273	P	P	15 42 12.5	+2.0
	comp=Z,4.3nm,0.8s,baz=207,slow=2.0,SNR=5.8						
GSI	Gunungsitoli	31.03	270	P	P	15 42 19.9	-2.3
GSI				IAmb	IAmb	15 42 25.4	
	comp=Z,8.8nm,0.8s						
WHN	Wuhan	31.80	336	P	P	15 42 35.3	+6.6
FORT	Forrest	32.21	181	P	P	15 42 32.5	+0.2
CMAR	Chiang Mai Arr	33.57	302	P	P	15 42 45.6	+1.2
	comp=Z,0.5nm,0.8s,baz=100,slow=7.1,SNR=4.3						
KMI	Kunming	34.20	315	P	P	15 42 54.1	+4.0
BBOO	Buckleboo	34.95	169	P	P	15 42 55.2	-0.9
BBOO				IAmb	IAmb	15 43 06.6	
	comp=Z,12nm,1.2s						
STKA	Stephens Creek	35.50	161	P	P	15 43 01.3	+0.4
	comp=Z,6.7nm,0.8s,baz=339,slow=7.5,SNR=13						
STKA	Stephens Creek	35.50	161	P	P	15 43 01.3	+0.4
KSRS	Korea Array	35.68	359	P	P	15 43 01.0	-1.3
	comp=Z,0.6nm,0.6s,baz=176,slow=10.0,SNR=2.7						
MJAR	Matsushiro Arr	35.88	13	P	P	15 43 03.5	-0.6
	comp=Z,4.2nm,0.8s,baz=186,slow=10.0,SNR=13						
MJAR	Matsushiro Arr	35.88	13	P	P	15 43 02.5	-1.7
MAJO	Matsushiro	35.88	13	P	P	15 43 02.8	-1.3
MAJO				IAmb	IAmb	15 43 05.5	
	comp=Z,11nm,1.1s						
MJB9	Matsu-Tunnel	35.88	13	P	P	15 43 02.8	-1.3
XAN	Xi'an	37.15	332	P	P	15 43 15.3	+0.3
ARMA	Armidale	38.67	147	P	P	15 43 29.2	+1.2
ARMA				IAmb	IAmb	15 43 30.8	

	comp=Z,12nm,1.2s						
H11S3	WAKE ISLAND Hy	40.93	63	T	T	16 27 30.9	
	SNR=11						
H11S2	WAKE ISLAND Hy	40.95	63	T	T	16 27 46.8	
H11S1	WAKE ISLAND Hy	40.95	63	T	T	16 27 36.4	
H11N1	WAKE ISLAND Hy	41.53	62	T	T	16 28 14.6	
	baz=248,slow=75,SNR=14						
H11N2	WAKE ISLAND Hy	41.54	62	T	T	16 28 17.1	
	baz=248,slow=75,SNR=7.5						
H11N3	WAKE ISLAND Hy	41.55	62	T	T	16 28 14.1	
	baz=248,slow=75,SNR=23						
LSA	Lhasa	45.24	312	P	P	15 44 22.9	+0.8
LSA				IAmb	IAmb	15 44 24.4	
	comp=Z,4.2nm,0.8s						
GTA	Gaotai	45.87	329	*e*P	P	15 44 27.3	+0.8
GTA				pP	pP	15 44 30.3	-12
GTA				sP	sP	15 44 33.3	-15
TAPN	Taplejung	46.78	307	*e*P	P	15 44 34.4	+0.4
	comp=Z,11nm,0.6s						
ODAN	Odare	46.83	306	*e*P	P	15 44 34.7	+0.4
	comp=Z,28nm,0.6s						
RAMN	Ramite	47.50	306	*e*P	P	15 44 40.2	+0.6
	comp=Z,35nm,0.7s						
JIRN	Jiri	48.13	307	*e*P	P	15 44 44.9	+0.3
	comp=Z,31nm,0.6s						
GUN	Gumba	48.49	307	*e*P	P	15 44 47.5	+0.2
	comp=Z,31nm,0.7s						
PKI	Pulchoki	48.73	306	*e*P	P	15 44 48.8	-0.3
	comp=Z,5.5nm,0.5s						
PKIN	Phulchoki	48.74	306	*e*P	P	15 44 48.7	-0.4
	comp=Z,4.3nm,0.4s						
KKN	Kakani	48.92	306	*e*P	P	15 44 50.2	-0.2
	comp=Z,8.4nm,0.5s						
DMN	Daman	48.99	306	*e*P	P	15 44 51.0	0.0
	comp=Z,17nm,0.9s						
GKN	Gorkha	49.53	306	*e*P	P	15 44 55.0	0.0
	comp=Z,12nm,0.7s						
SONM	Songino Array	49.91	341	P	P	15 44 57.6	+0.1
	comp=Z,0.9nm,0.6s,baz=156,slow=8.1,SNR=7.0						
SONM	Songino Array	49.91	341	P	P	15 44 56.3	-1.1
DANN	Dangsing	50.37	306	*e*P	P	15 45 01.6	0.0
	comp=Z,39nm,0.6s						
MK31	Makanchi Array	60.36	325	P	P	15 46 12.9	+0.1
MK31				IAmb	IAmb	15 46 13.4	
	comp=Z,2.7nm,0.8s						
MKAR	Makanchi Array	60.36	325	P	P	15 46 12.6	-0.2
	comp=Z,2.7nm,0.4s,baz=115,slow=8.1,SNR=64						
MKAR	Makanchi Array	60.36	325	P	P	15 46 12.7	0.0
MAKZ	Makanchi	60.55	325	P	P	15 46 13.9	-0.1
MAKZ				IAmb	IAmb	15 46 14.6	
	comp=Z,4.2nm,0.9s						
KSH	Kashi	60.86	315	P	P	15 46 21.3	+4.9
KSH				pP	pP	15 46 34.8	+2.3
KSH				PcS	PcS	15 51 05.8	+3.4
KSH				S	S	15 54 33.8	+3.9
KSH	Kashi	60.86	315	SS	SS	15 58 36.8	+6.8
ZALV	Zalesovo Beam	63.32	333	P	P	15 46 30.7	-1.7
	comp=Z,0.6nm,0.5s,baz=141,slow=4.8,SNR=3.7						
KURK	Kurchatov	64.53	327	P	P	15 46 40.3	-0.1
KK31	Karatay Array	66.06	317	P	P	15 46 48.9	-1.6
KK31				IAmb	IAmb	15 46 50.9	
	comp=Z,4.1nm,1.1s						
KKAR	Karatay Array	66.06	317	P	P	15 46 49.7	-0.9
KKAR	Karatay Array	66.06	317	P	P	15 46 48.8	-1.7
KKAR				IAmb	IAmb	15 46 50.9	
	comp=Z,4.1nm,1.1s						
BRVK	Borovoye	70.19	327	P	P	15 47 14.0	-2.1
SYO	Syowa Base	91.13	201⇑	*e*pP	pP	15 49 22.0	-3.0

IDC ***22*** *15:43:42.2±1.0, 24°.09N×122°.41E, h0^{km}, mb3.8/7, mb1 3.9/7, mb1mx3.6/38, mbtmp3.8/7, MS3.0/1, Ms1 3.0/1, ms1mx2.7/38, Error ellipse: s-maj=58.4km s-min=19.1km az=65.0*

TAP ***22*** *15:43:45.2, 23°.92N×122°.34E, h9^{km}±1^{km}, ML3.9, D*

JMA ***22*** *15:43:45.6±0.1, 23°.92N×122°.30E, h24^{km}±4^{km}, M3.7*

ISC 22 15:43:44.6±0.6**, 23°.92N**±0°.02×**122°.36E**±0°.02**, h20**^{km}±3^{km}**, n121,** σ**0^s.83**/174**, mb3.6**/7**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.66	342	*i* P	Pb	15 43 58.0	+0.4
	baz=342						
EOS1				*i* S	Sb	15 44 06.7	+0.4
	baz=342						
HWA	Hwalien	0.69	275	P	Pn	15 43 58.8	-0.4
	baz=274						
HWA				S	Sn	15 44 09.1	-0.2
	baz=274						
ENLB	Shoufeng	0.69	269	P	Pb	15 43 58.0	0.0
	baz=268						
ENLB				*i* S	Sb	15 44 07.7	+0.6
	baz=268						
TWD	Chiawan	0.71	283	*i* P	Pb	15 43 58.4	+0.1
	baz=283						
TWD				*i* S	Sb	15 44 07.7	0.0
	baz=283						
NACB	Ninganchiao	0.74	290	P	Pb	15 43 58.9	+0.1
	baz=290						
NACB				S	Sb	15 44 09.2	+0.7
	baz=290						
JYNG	Yonagunijimaku	0.76	45	P	Pn	15 44 00.5	+0.4
JYNG				S	Sn	15 44 10.0	-1.0
ENA	Nanau	0.76	312	P	Pb	15 43 58.9	-0.2
	baz=313						
YOJ	Yonaguni jima	0.81	48	*e*P	Pn	15 44 02.0	+1.2
	baz=47						
YOJ				*e*S	Sn	15 44 11.8	-0.4
	baz=47						
YOJ	Yonaguni jima	0.81	48	P	Pn	15 44 01.4	+0.6
YOJ				*e*S	Sn	15 44 11.4	-0.8
TWC	Suao	0.83	326	*i* P	Pb	15 43 60.0	-0.4
	baz=327						
TWC				*e*S	Sb	15 44 10.8	-0.3
	baz=327						
ETLH	Xiulin Townshi	0.85	290	P	Pb	15 44 00.8	+0.1
	baz=290						
ETLH				S	Sb	15 44 11.4	-0.3
	baz=290						
ESL	Shilin	0.85	263	*i* P	Pb	15 44 00.3	-0.4
	baz=262						
ESL				*e*S	Sb	15 44 11.5	-0.2
	baz=262						
EGFH	Guangfu	0.89	254	P	Pb	15 44 01.6	+0.3
	baz=253						
EGFH				S	Sn	15 44 13.8	-0.3
	baz=253						
HGSD	Ruisui	0.95	244	*e*P	Pb	15 44 02.6	+0.2
	baz=243						
ILA	Ilan	1.01	327	P	Pn	15 44 04.1	+0.5
	baz=327						
TWE	Neicheng	1.02	322	P	Pn	15 44 03.8	+0.1
	baz=322						
TWE				*e*S	Sn	15 44 17.9	+0.5
	baz=322						
ENTT	Nioudou	1.02	315	P	Pn	15 44 03.9	+0.2
	baz=315						
WHF	Hehuan Shan	1.02	283	P	Pb	15 44 03.6	-0.3
	baz=282						
WHF				*e*S	Sb	15 44 16.6	-0.5
	baz=282						
NNSB	Datong	1.02	300	P	Pb	15 44 03.8	0.0
	baz=300						
NNSB				*e*S	Sn	15 44 17.6	-0.2
	baz=300						
NNSH	Datong	1.02	300	P	Pn	15 44 03.9	0.0
	baz=300						
NNSH				*e*S	Sb	15 44 17.0	+0.3
	baz=300						
NDT	Datong Townshi	1.03	312	P	Pn	15 44 04.0	+0.1
	baz=312						
NDT				*e*S	Sn	15 44 18.1	+0.5
	baz=312						
EHY	Hungye	1.03	247	P	Pb	15 44 03.8	0.0
	baz=245						
EHY				S	Sb	15 44 16.7	-0.2
	baz=245						
NNS	Nan Shan	1.04	300	P	Pb	15 44 03.9	0.0
	baz=300						
NNS				*e*S	Sn	15 44 17.9	-0.2
	baz=300						
NTC	Toucheng	1.05	333	P	Pn	15 44 04.2	0.0
	baz=333						
SLBB	Yuanshan	1.06	322	P	Pb	15 44 04.0	-0.4
	baz=322						
OWD	Renai	1.08	272	P	Pb	15 44 04.4	-0.3
	baz=271						
OWD				*i* S	Sb	15 44 17.7	-0.7
	baz=271						
CHGB	Renai	1.09	278	P	Pb	15 44 04.8	-0.1
	baz=277						
CHGB				S	Sn	15 44 19.3	-0.2
	baz=277						
YULB	Yu-li	1.10	242	P	Pb	15 44 05.1	+0.1
	baz=241						
YULB				S	Sb	15 44 19.1	+0.1
	baz=241						
TWF1	Yuli	1.12	240	P	Pn	15 44 05.3	+0.1
	baz=239						
VWDT	VWDT	1.12	262	P	Pb	15 44 05.5	+0.1
	baz=261						
VWDT				S	Sn	15 44 20.4	+0.4
	baz=261						
TWT	Tachien	1.13	287	P	Pb	15 44 05.8	+0.2
	baz=286						
TWT				*e*S	Sn	15 44 21.2	+0.8
	baz=286						
TWB1	Santiao Chiao	1.14	343	P	Pb	15 44 05.6	0.0
	baz=343						
TDCB	Techi	1.14	287	P	Pn	15 44 05.6	0.0
	baz=287						
TDCB				*e*S	Sn	15 44 20.5	-0.3
	baz=287						
TIPB	Shuangxi	1.16	335	P	Pb	15 44 06.1	+0.2
	baz=335						
TIPB				*e*S	Sn	15 44 21.3	+0.5
	baz=335						
NWLT	Wulai	1.16	318	*e*P	Pb	15 44 05.9	-0.1
	baz=318						
YHNB	Yeheng	1.17	310	*e*P	Pb	15 44 06.0	-0.1
	baz=310						
NSK	Sanguang	1.18	310	P	Pb	15 44 06.3	-0.1
	baz=310						
FULB	Fuli	1.21	234	*e*P	Pn	15 44 06.1	-0.3
	baz=233						
NWF	Wu-fen Shan	1.26	336	*e*P	Pn	15 44 07.0	-0.1
	baz=336						
NWF				*e*S	Sb	15 44 23.6	0.0
	baz=336						
WFSB	Wu-fen Shan	1.26	336	*e*P	Pn	15 44 06.7	-0.4
	baz=336						
WFSB				*e*S	Sb	15 44 23.4	-0.1
	baz=336						
TWA	Mucha	1.27	327	*i* P	Pb	15 44 08.7	+0.8
	baz=327						
NHDH	Xindian Distri	1.29	324	P	Pb	15 44 08.8	+0.6
	baz=324						
NHDH				S	Sb	15 44 26.0	+1.8
	baz=324						
SSLB	Suanglung	1.29	265	*e*P	Pn	15 44 07.8	+0.3
	baz=264						
DPDB	Guoxing	1.31	275	*e*P	Pb	15 44 08.4	-0.2
	baz=275						
IRIF	Iriomote-Funau	1.32	71	P	Pb	15 44 10.6	+1.9
IRIF				*e*S	Sb	15 44 28.1	+2.8
HATJ	Hateruma jima	1.33	84	P	Pb	15 44 10.2	+1.3
HATJ				*e*S	Sb	15 44 28.1	+2.5
SMLT	Sun Moon Lake	1.33	269	*e*P	Pb	15 44 08.8	-0.2
	baz=268						
WHP	Taichung City	1.34	286	*e*P	Pb	15 44 09.3	+0.2
	baz=285						
TAP1	Taipei	1.35	326	*e*P	Pb	15 44 09.7	+0.5
	baz=325						
YUS	Yu-Shan	1.35	252	*e*P	Pb	15 44 09.6	0.0
	baz=251						
YUS				*e*S	Sn	15 44 26.1	-0.4
	baz=251						
TAP	Taipei	1.36	325	*e*P	Pb	15 44 08.9	-0.4
	baz=325						
WLTB	Daxi	1.37	313	*e*P	Pb	15 44 09.9	+0.3
	baz=313						
TYC	Yuchr	1.37	270	*e*P	Pb	15 44 09.2	-0.4
	baz=269						
WHYT	Xinyi Township	1.39	261	*e*P	Pb	15 44 10.0	0.0
	baz=260						
YM01	YM01	1.42	330	*e*P	Pb	15 44 10.4	0.0
	baz=330						
LIOB	Emei	1.42	301	P	Pb	15 44 10.9	+0.5
	baz=300						
LIOB				*e*S	Sb	15 44 28.8	+0.6
	baz=300						
NSTT	Nanjuang	1.43	300	P	Pb	15 44 10.9	+0.4
	baz=300						
NSTT				S	Sb	15 44 28.7	+0.4
	baz=300						
YM10	YM10	1.43	330	*e*P	Pb	15 44 10.1	-0.5
	baz=330						
YM11	YM11	1.43	330	*e*P	Pb	15 44 10.1	-0.6
	baz=330						
YM05	YM05	1.43	330	*e*P	Pn	15 44 10.0	+0.4
	baz=330						
YM04	YM04	1.44	329	*e*P	Pb	15 44 10.2	-0.6
	baz=329						
TWS1	Kuangyinshan	1.46	324	*e*P	Pb	15 44 10.7	-0.3
	baz=324						
ANP	Anpu	1.47	329	*e*P	Pb	15 44 11.0	-0.4
	baz=329						
ALS	Alishan	1.48	254	*e*P	Pb	15 44 11.4	-0.2
	baz=253						
WJS	Zhushan	1.49	267	*e*P	Pb	15 44 11.9	+0.2
	baz=266						
NCUH	Zhongli	1.49	315	*e*P	Pb	15 44 11.6	-0.1
	baz=314						
TWQ1	Liyutan	1.51	287	P	Pb	15 44 12.4	+0.5
	baz=286						
TWQ1				S	Sb	15 44 31.4	+0.8
	baz=286						
TWY	Chenhua	1.52	333	*e*P	Pb	15 44 12.4	+0.3
	baz=333						
SBCB	Hsinchu	1.52	305	*e*P	Pb	15 44 12.2	0.0
	baz=305						
WNT	Mingjian	1.53	269	*e*P	Pb	15 44 12.6	+0.3
	baz=268						
WNT				*e*S	Sb	15 44 31.8	+0.5
	baz=268						
NSY	Sanyi	1.54	289	*e*P	Pb	15 44 12.8	+0.3
	baz=288						
NSY				*e*S	Sb	15 44 32.5	+1.0
	baz=288						
HSN	Hsinchu	1.54	305	*e*P	Pb	15 44 12.2	-0.3
	baz=306						
JKRS	Kuro-shima	1.54	78	P	Pb	15 44 13.4	+0.9
JKRS				*e*S	Sb	15 44 33.0	+1.4
TCU	Taichung	1.55	279	P	Pb	15 44 13.1	+0.4
	baz=278						
TCU				S	Sb	15 44 33.2	+1.3
	baz=278						
NMLH	Miaoli	1.56	294	*e*P	Pb	15 44 12.4	-0.3
	baz=293						
CHN5	Tsauling	1.57	259	P	Pb	15 44 13.3	+0.2
	baz=258						
CHN5				*e*S	Sb	15 44 33.2	+0.7
	baz=258						
TWGBT	Beinan	1.60	227	*e*P	Pn	15 44 12.3	+0.5
	baz=226						
TWGBT				*e*S	Sn	15 44 31.7	-0.2
	baz=226						
TWG	Pinlang	1.61	227	*e*P	Pn	15 44 12.3	+0.5
	baz=226						
TWG				*e*S	Sn	15 44 32.0	0.0
	baz=226						
WDJ	Dajia District	1.62	286	*e*P	Pb	15 44 13.5	-0.4
	baz=285						
WDJ				*e*S	Sb	15 44 34.2	+0.2
	baz=285						
STYT	Tauyuan	1.65	243	*e*P	Pb	15 44 13.6	-0.7
	baz=242						
WCHH	Zhanghua	1.65	276	*e*P	Pb	15 44 14.6	+0.2
	baz=275						
WCHH				*e*S	Sb	15 44 36.3	+1.6
	baz=275						
WDLH	Douliu	1.68	263	*e*P	Pb	15 44 14.9	0.0
	baz=262						
JIJ	Ishigaki jima	1.69	74	P	Pb	15 44 14.8	-0.3
JIJ				S	Sb	15 44 38.3	+2.4
TPUB	Ta-pu	1.70	249	*e*P	Pb	15 44 15.0	-0.2
	baz=248						
TPUB				*e*S	Sb	15 44 36.9	+0.8
	baz=248						
WTP	Ta-pu	1.73	248	*e*P	Pb	15 44 15.8	0.0
	baz=246						
SLGT	Liugui	1.82	240	*e*P	Pb	15 44 16.6	-0.6
	baz=239						
RLNB	Erlin	1.83	270	*e*P	Pb	15 44 17.3	0.0
	baz=269						
RLNB				*e*S	Sb	15 44 40.3	+0.5
	baz=269						
TWK	Hsinying	1.83	250	*e*P	Pb	15 44 17.2	-0.3
	baz=248						
TWK				*e*S	Sb	15 44 40.7	+0.7
	baz=248						
SNST	Tainan City	1.84	248	*e*S	Sb	15 44 40.4	+0.2
	baz=247						
WTCT	Ta-ch'eng	1.90	269	*e*P	Pb	15 44 17.9	-0.7
	baz=268						
WTCT				*e*S	Sb	15 44 42.6	+0.7
	baz=268						
JISG	Ishigakijimahi	1.91	69	P	Pb	15 44 17.5	-1.2
SSD	Sandimen	1.97	234	*e*P	Pb	15 44 18.7	-1.1
	baz=233						
SSD				*e*S	Sb	15 44 43.8	0.0
	baz=233						
WSF	Szhu	1.97	262	*e*P	Pb	15 44 18.8	-1.0
	baz=261						
CHN8	Yiju	2.05	254	*e*S	Sb	15 44 45.6	-0.5
	baz=253						
MASBT	Mashibuluo	2.05	231	*e*P	Pn	15 44 19.5	+1.5
	baz=230						
EAST	Anshuo	2.06	223	*e*P	Pn	15 44 19.0	+0.9
	baz=221						
SCLT	Jiali	2.12	250	*e*S	Sb	15 44 47.4	-0.7
	baz=249						
SCZT	Fangliau	2.22	226	*e*P	Pb	15 44 22.7	-1.3
	baz=225						
SCZT				*e*S	Sb	15 44 50.1	-1.0
	baz=225						
JTJ	Tarama	2.26	71	P	Pb	15 44 23.4	-1.3
JTJ				*e*S	Sb	15 44 51.0	-1.2
TWK1	Hengchun	2.43	216	*e*P	Pb	15 44 25.8	-1.9
	baz=215						
PHUB	P'eng-hu	2.58	262	*e*P	Pn	15 44 26.6	+1.4
	baz=260						
PHUB				*e*S	Sn	15 44 56.9	+0.9
	baz=260						
PNG	Penghu	2.59	263	P	Pn	15 44 26.9	+1.5
	baz=262						
PNG				S	Sn	15 44 57.3	+1.0
	baz=262						
JIRB	Irabujima	2.72	70	S	Sb	15 45 03.6	-2.0
VCHM	Qimei	2.78	256	*e*S	Sn	15 45 01.8	+0.9
	baz=255						
JIKM	Ikemajima	2.82	69	S	Sb	15 45 05.8	-2.6
PTTC	Pingtan	2.83	304	*e*P	Pn	15 44 28.5	-0.1
	baz=303						
JMJ2	Miyako jima3	2.83	73	*e*S	Sb	15 45 05.6	-3.1
VWUC	VWUC	2.86	293	*e*P	Pn	15 44 29.1	+0.1
	baz=292						
MATB	Ma-tsu	3.12	316	*e*P	Pn	15 44 32.4	-0.2
	baz=315						
PTMZ	Houxiangcun	3.15	291	*e*P	Pn	15 44 33.2	+0.1
	baz=290						
KNMB	Chin-men Tao	3.66	279	*e*P	Pn	15 44 40.2	0.0
	baz=278						
ZPLA	Ao Xicun	4.21	271	*e*P	Pn	15 44 47.9	+0.2
	baz=270						
KSRS	Korea Array	14.31	18	Pn	P	15 47 10.3	-2.7
	0.1nm,0.3s,baz=196,slow=11,SNR=9.4						
GUMO	Guam	23.63	112	LR	LR	15 56 10.1	
	comp=Z,38nm,21.1s,baz=144,slow=32						
SONM	Songino Array	27.04	336	P	P	15 49 25.5	-0.1
	4.7nm,0.8s,baz=151,slow=10.0,SNR=31						
MKAR	Makanchi Array	39.27	316	P	P	15 51 12.1	+0.1
	0.4nm,0.4s,baz=103,slow=10,SNR=15						
ZALV	Zalesovo Beam	41.05	327	P	P	15 51 25.6	-0.9
	2.3nm,0.7s,baz=114,slow=7.4,SNR=7.6						
WRA	Warramunga Arr	45.13	164	P	P	15 52 01.3	+1.5
	0.7nm,0.8s,baz=343,slow=8.7,SNR=6.2						
ASAR	Alice Springs	48.61	166	P	P	15 52 29.2	+2.2
	0.2nm,0.6s,baz=351,slow=11,SNR=7.1						
BRTR	Keskin Array B	74.19	307	P	P	15 55 20.6	+0.4
	0.8nm,0.7s,baz=96,slow=3.7,SNR=4.1						
YKA	Yellowknife Ar	82.80	23	P	P	15 56 07.0	0.0
	0.4nm,0.7s,baz=310,slow=5.1,SNR=6.3						

IDC ***22*** *15:47:47.3±1.1, 2°.50S×79°.51W, h0^{km}, mb3.6/6, mb1 3.9/9, mb1mx3.8/39, mbtmp3.8/9, ML3.9/3, MS3.9/2, Ms1 3.9/2, ms1mx3.3/34, Error ellipse: s-maj=54.3km s-min=15.9km az=67.0*

IGQ ***22*** *15:47:50.2±0.3, 3°S±2°×8°0W±°, h9^{km}, M4.7*

NEIC ***22*** *15:47:54.4±2.4, 2°.73S±0°.06×79°.5W±0°.2, h63^{km}±8^{km}, mb4.2/10, Error ellipse: s-maj=23.2km s-min=7.8km az=77.0*

ISC 22 15:47:49.4±0.6**, 2°.71S**±0°.04×**79°.60W**±0°.03**, h14**^{km}**, n63,** σ**1^s.74**/58**, mb3.6**/6**, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COHC	Cochancay	0.42	55	S	Sn	15 48 06.6	-1.9
COHC	Cochancay	0.42	55	P	Pb	15 47 60.0	+1.4
AMIL	Milagro (Trans	0.57	0	P	Pg	15 48 01.7	+1.2
AMIL	Milagro (Trans	0.57	0	S	Sb	15 48 10.7	+1.7
AGUAY	Guayaquil	0.74	331	S	Sg	15 48 13.7	+0.2
AGUAY	Guayaquil	0.74	331	P	Pg	15 48 03.7	0.0
MORR	Playas El Morr	0.74	275	S	Sg	15 48 15.4	+1.8
MORR	Playas El Morr	0.74	275	P	Pg	15 48 04.6	+0.8
ARIO	Riobamba	1.38	41	P	Pn	15 48 14.8	+0.2
SALI	Salinas	1.49	290	P	Pn	15 48 15.7	+0.1
GONZ	Gonzanam	1.53	172	S	Sn	15 48 37.1	+0.4
GONZ	Gonzanam	1.53	172	P	Pn	15 48 17.5	+0.8
BMAS	Trigal station	1.64	43	P	Pb	15 48 19.5	-0.1
PPLP	Puerto Lpez	1.65	314	P	Pn	15 48 14.9	-3.1
BIL2	Estacion Bilba	1.66	41	P	Pg	15 48 22.6	+1.3
BPAT	Tungurahua Vol	1.67	44	P	Pb	15 48 19.9	-0.2
BBIL	Ulba Tungurahu	1.67	42	P	Pb	15 48 19.9	-0.2
RETU	Refugio	1.70	43	P	Pn	15 48 20.3	+1.3
BULB	Ulba Tungurahu	1.73	43	P	Pb	15 48 20.9	-0.3
BULB	Ulba Tungurahu	1.73	43	S	Sg	15 48 45.1	-0.2
BRUN	Tungurahua Vol	1.74	43	P	Pb	15 48 21.1	-0.3
APUY	Puyo	2.02	52	P	Pg	15 48 27.4	-0.9
PISA	Pisayambo	2.04	36	P	Pb	15 48 26.2	-0.3
BMOR	Cotopaxi Volca	2.27	30	P	Pb	15 48 29.7	-0.7
BNAS	Cotopaxi Volca	2.31	29	P	Pb	15 48 30.8	-0.3
BREF	Cotopaxi Volca	2.33	30	P	Pb	15 48 32.0	+0.4
TAMB	Tambo	2.35	32	P	Pb	15 48 31.6	-0.2
BTAM	Cotopaxi Volca	2.35	31	P	Pb	15 48 31.3	-0.6
VC1	Cotopaxi 1	2.37	30	P	Pb	15 48 32.3	0.0
ANTM	Antisana-La Mi	2.56	33	P	Pb	15 48 34.3	-1.1
ANTG	Antisana-Guama	2.57	32	P	Pb	15 48 34.2	-1.4
ANTS	Antisana-Sarah	2.62	33	P	Pb	15 48 35.5	-0.9
MAG1	Magdalena	2.62	356	P	Pn	15 48 31.6	+0.2
GGPC	Guagua Pichinc	2.70	22	P	Pn	15 48 35.9	+2.9
TERV	Terraza Guagua	2.71	22	P	Pn	15 48 36.1	+3.1
PINO	Pino	2.72	21	P	Pn	15 48 36.0	+2.8
YANA	Yana	2.77	22	P	Pn	15 48 36.7	+2.9
PULU	Pululahua	2.92	22	P	Pn	15 48 39.0	+3.2
PAC1	Pacto, Paraso	3.06	15	P	Pn	15 48 38.9	+1.3
CUIC	Cuicocha-Domo	3.24	22	P	Pn	15 48 43.1	+3.0
COTA	Cotacachi	3.27	23	P	Pn	15 48 44.7	+4.0
IMBA	Imbabura, San	3.28	25	P	Pn	15 48 44.7	+4.0
URCU	Urcuqui	3.40	23	P	Pn	15 48 45.4	+2.9
ATAH	Atahualpa	4.56	165	Pn	Pn	15 49 01.6	+3.3
	2.8nm,0.3s,baz=15,slow=11,SNR=18						
ATAH				Lg	Lg	15 50 15.6	
	10nm,0.3s,baz=24,slow=24,SNR=6.2						
ATAH				LR	LR	15 51 01.7	
	comp=Z,640nm,19.3s,baz=339,slow=41						
FLOC	Florencia	5.81	43	Pn	Pn	15 49 17.6	+2.4
NNA	Nana	9.62	164	Pn	Pn	15 50 10.0	+2.5
	1.8nm,0.3s,baz=342,slow=19,SNR=2.7						
NNA				Sn	Sn	15 51 55.8	+0.3
	2.3nm,0.3s,baz=221,slow=17,SNR=2.3						
NNA				Lg	Lg	15 52 50.9	
	1.9nm,0.3s,baz=300,slow=21,SNR=7.3						
ACON	Acoyapa	15.60	339	Pn	Pn	15 51 29.6	+0.6
SAML	Samuel	17.46	111	P	Pn	15 51 50.0	-2.7
LPAZ	La Paz	17.59	141	P	P	15 51 57.5	+1.6
	0.2nm,0.3s,baz=338,slow=11,SNR=3.9						
LPAZ	La Paz	17.59	141	P	Pn	15 51 52.1	-2.8
PB12	IPOC Station P	18.23	151	P	Pn	15 51 55.4	-6.8
PB12				IAmb	IAmb	15 52 06.2	
	comp=Z,11nm,0.6s						
TGUH	Tegucigalpa,Un	18.31	336	P	Pn	15 52 02.8	-0.5
TGUH				IAmb	IAmb	15 52 04.1	
	comp=Z,29nm,0.8s						
PB16	IPOC Station P	18.41	148		Pn	15 51 51.0	-14
PB16				IAmb	IAmb	15 51 53.8	
	comp=Z,4.3nm,0.7s						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
GO01	Chusmiza	19.68	150		P	15 52 08.1	-11
PTGA	Pitinga	19.72	85	P	P	15 52 18.2	-0.5
PTGA				IAmb	IAmb	15 52 37.0	
	comp=Z,13nm,1.4s						
SIV	San Ignacio	22.51	127	P	P	15 52 49.7	+0.8
	comp=Z,0.9nm,0.6s,baz=302,slow=11,SNR=2.7						
PDAR	Pinedale Array	52.73	332	P	P	15 57 04.1	0.0
	comp=Z,0.2nm,0.6s,baz=122,slow=10,SNR=1.7						
ULM	Lac du Bonnet	54.58	347	P	P	15 57 15.8	-1.4
	comp=Z,1.4nm,0.5s,baz=161,slow=6.0,SNR=4.1						
ULM	Lac du Bonnet	54.58	347	IAmb	IAmb	15 57 18.8	
	comp=Z,4.4nm,1.3s						
YKA	Yellowknife Ar	70.23	344	P	P	15 59 00.6	-1.0
	comp=Z,0.4nm,0.7s,baz=143,slow=6.0,SNR=5.2						
RAR	Rarotonga	79.87	249	LR	LR	16 26 48.9	
	comp=Z,185nm,21.7s,baz=164,slow=29						
TORD	Torodi Ar. Bea	82.14	76	P	P	16 00 09.6	-0.9
	comp=Z,0.6nm,1.0s,baz=282,slow=4.7,SNR=4.2						
ILAR	Eielson Array	82.94	337	P	P	16 00 12.3	-1.4
	comp=Z,0.3nm,0.8s,baz=126,slow=2.5,SNR=3.1						

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*IDC **22** 15:52:27.3±0.7, 19°.55S×70°.69W, h0^{km}, mb4.1/10, mb1 4.4/11, mb1mx4.2/35, mbtmp4.2/11, ML3.8/1, MS4.0/2, Ms1 4.0/2, ms1mx3.4/26, Error ellipse: s-maj=25.7km s-min=19.7km az=53.0*

*NEIC **22** 15:52:29.5, 19°.76S×70°.99W, h19^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$3.88; M$_{\theta\theta}$0.11; M$_{\phi\phi}$-3.99; M$_{r\theta}$1.13; M$_{\theta\phi}$1.37; M$_{\phi r}$-1.87; Fault plane solution: M$_0$4.70000×10^{15} NP1:φ$_s$351.36000°, δ31.98000°, λ103.31000°. NP2:φ$_s$155.78000°, δ58.97000°, λ81.82000°. Principal axes: T 4.4583, Plg75.0000°, Azm43.0000°; N 0.4564, Plg7.0000°, Azm160.0000°; P -4.9147, Plg14.0000°, Azm252.0000°;*

*NEIC **22** 15:52:29.1±2.3, 19°.75S±0°.04×70°.99W±0°.05, h16^{km}±4^{km}, mb4.7/17, Mwr4.4/39, ML4.5(GUC) Error ellipse: s-maj=7.4km s-min=5.5km az=102.0*

*GUC **22** 15:52:30.5±0.8, 19°.72S×70°.96W, h19^{km}±5^{km}, ML4.5*

*VAO **22** 15:52:30.5±1.1, 19°.71S×71°.02W, h35^{km}, mb4.6*

*SJA **22** 15:52:41.9±0.5, 20°.76S×70°.91W, h74^{km}±13^{km}, ML3.9, MW3.8*

ISC 22 15:52:30.6±1.0, **19°.73S**±0°.03×**70°.95W**±0°.05, **h27**^{km}±7^{km}, **n102,** σ1^{s}**38**/109, **mb4.6**/15, **6C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	0.79	80	⇓iP	Pb	15 52 44.8	-0.9
PSGC				i S	Sb	15 52 56.1	-0.1
PSGC				IAML		15 52 58.3	
	comp=N,20μm,0.6s						
PSGCX	Pisagua	0.79	80		Pb	15 52 44.9	-0.9
PSGCX					Sb	15 52 56.1	0.0
TA01	Diego Aracena	1.10	139	i P	Pn	15 52 50.2	0.0
TA01				eS	Sb	15 53 04.8	-0.1
TA01				IAML		15 53 09.4	
	comp=E,19μm,0.4s						
PB11	IPOC Station P	1.22	92	⇓iP	Pn	15 52 52.1	+0.1
PB11				eS	Sb	15 53 09.0	+0.6
PB11				IAML		15 53 10.3	
	comp=N,21μm,0.7s						
PB11	IPOC Station P	1.22	92		Pn	15 52 52.1	+0.1
PB11				Sn	Sb	15 53 09.0	+0.6
PB12	IPOC Station P	1.26	28	⇑iP	Pn	15 52 52.5	0.0
PB12				eS	Sb	15 53 09.4	-0.1
PB12	IPOC Station P	1.26	28		Pn	15 52 52.5	0.0
PB12				Sn	Sb	15 53 09.6	+0.1
PATCX	Punta Patache	1.31	146	⇑iP	Pn	15 52 53.2	-0.1
PATCX				eS	Sb	15 53 11.7	+0.5
PATCX				IAML		15 53 22.4	
	comp=E,8μm,0.5s						
PATCX	Punta Patache	1.31	146		Pn	15 52 53.3	-0.1
AP01	Chacalluta	1.47	23	⇑iP	Pn	15 52 55.4	0.0
AP01				eS	Sb	15 53 14.8	-0.7
AP01				IAML		15 53 17.0	
	comp=N,20μm,0.4s						
GO01	Chusmiza	1.65	88	⇑iP	Pn	15 52 59.3	+1.0
GO01				eS	Sb	15 53 21.8	+0.5
GO01	Chusmiza	1.65	88	Pn	Pn	15 52 59.3	+1.0
PB08	IPOC Station P	1.74	104	eP	Pb	15 53 00.8	-1.2
PB08				eS	Sb	15 53 23.4	-0.2
PB08				IAML		15 53 26.8	
	comp=N,4μm,0.6s						
PB02	IPOC Station P	1.86	148	eP	Pn	15 53 01.4	+0.6
PB02				eS	Sb	15 53 27.4	+0.4
PB02				IAML		15 53 33.6	
	comp=E,13μm,0.5s						
PB01	IPOC Station P	1.89	134	⇑iP	Pn	15 53 01.8	+0.6
PB01				i S	Sb	15 53 26.8	-1.0
PB01	IPOC Station P	1.89	134		Pn	15 53 01.8	+0.6
PB16	IPOC Station P	1.94	45	⇑iP	Pn	15 53 03.4	+1.0
PB16				i S	Sb	15 53 28.7	-1.1
PB16				IAML		15 53 34.9	
	comp=N,4μm,0.3s						
PB16	IPOC Station P	1.94	45		Pn	15 53 03.5	+1.0
PB07	IPOC Station P	2.22	154	eP	Pn	15 53 06.3	+0.5
PB07				eS	Sb	15 53 37.7	+0.4
PB07				IAML		15 53 49.8	
	comp=E,4μm,0.6s						
PB07	IPOC Station P	2.22	154		Pn	15 53 06.0	+0.1
PB09	IPOC Station P	2.60	142		Pn	15 53 12.4	+1.3
PB04	IPOC Station P	2.69	164		Pn	15 53 11.8	-0.5
PB04	IPOC Station P	2.69	164	i P	Pn	15 53 11.7	-0.7
PB05	IPOC Station P	3.18	168	i P	Pn	15 53 18.0	-1.1
PB05				IAML		15 54 21.9	
	comp=Z,864nm,0.7s						
PB06	IPOC Station P	3.23	157	i P	Pn	15 53 19.3	-0.4
PB06				IAML		15 54 21.8	
	comp=Z,2μm,0.7s						
LVC	Limon Verde	3.44	147	Pn	Pn	15 53 24.2	+1.4
	comp=Z,7.8nm,0.3s,baz=340,slow=7.3,SNR=36						
LVC				Sn	Sb	15 54 16.7	+4.2
	comp=Z,76nm,0.3s,baz=114,slow=11,SNR=5.1						
LVC	Limon Verde	3.44	147		Pn	15 53 24.8	+2.1
LVC	Limon Verde	3.44	147	eP	Pn	15 53 22.7	-0.1
LVC	Limon Verde	3.44	147	i P	Pn	15 53 24.3	+1.6
LVC				IAML		15 54 32.2	
	comp=Z,528nm,0.7s						
PB15	IPOC Station P	3.72	159		Pn	15 53 26.3	-0.2
PB15	IPOC Station P	3.72	159	i P	Pn	15 53 26.4	-0.2
PB15				IAML		15 54 30.1	
	comp=Z,2μm,0.8s						
PB10	IPOC Station P	3.78	175		Pn	15 53 25.8	-1.3
PB10	IPOC Station P	3.78	175	i P	Pn	15 53 25.8	-1.3
PB10				IAML		15 54 45.2	
	comp=Z,230nm,0.7s						
LPAZ	La Paz	4.35	38	Pn	Pn	15 53 39.0	+3.5
	comp=Z,5.0nm,0.3s,baz=211,slow=6.1,SNR=22						
LPAZ	La Paz	4.35	38		Pn	15 53 39.3	+3.8
LPAZ	La Paz	4.35	38	eP	Pn	15 53 34.8	-0.7
PB14	IPOC Station P	4.90	174		Pn	15 53 41.1	-1.7
PB14	IPOC Station P	4.90	174	i P	Pn	15 53 41.1	-1.7
PB14				IAML		15 55 09.7	
	comp=Z,156nm,1.5s						
GO02	Mina Guanaco	5.55	167		Pn	15 53 51.1	-0.6
YJA	Yavi	5.63	117	i P	Pn	15 53 59.3	+6.3
YJA				IAML		15 55 23.7	
	comp=Z,27nm,2.2s						
ASTB	Santa Barbara	7.35	126	i P	Pn	15 54 23.9	+7.6
ASTB				IAML		15 55 54.6	
	comp=Z,11nm,1.8s						
SIV	San Ignacio	10.11	70	Pn	Pn	15 54 56.2	+2.0
	comp=Z,6.8nm,0.3s,baz=261,slow=9.5,SNR=63						
SIV				LR	LR	15 59 13.5	
	comp=Z,560nm,18.9s,baz=264,slow=41						
SAML	Samuel	13.09	36	eP	Pn	15 55 34.9	0.0
CPUP	Villa Florida	14.15	120	Pn	P	15 55 53.5	-3.1
	comp=Z,0.3nm,0.3s,baz=308,slow=11,SNR=6.1						
CPUP	Villa Florida	14.15	120	eP	Pn	15 55 51.2	+1.9
AQDB	Aquidauana	14.34	96	eP	Pn	15 55 53.4	+1.4
SALV	Santo Antonio	15.02	78	eP	Pn	15 56 01.8	+0.6
CLDB	Colider	17.05	61	eP	Pn	15 56 26.2	-1.0
C2SB	Chapadao do Su	17.13	90	eP	Pn	15 56 27.8	-0.4
TRCB	Terra Rica	17.34	103	eP	Pn	15 56 29.4	-1.4
PTGB	Pitanga	18.17	109	eP	P	15 56 41.8	+0.6
PCMB	Pacaembu	18.52	99	eP	P	15 56 45.0	-0.1
ARAG	Araguaiana, MT	18.66	81	eP	P	15 56 45.2	-1.4
FRTB	Fartura	20.21	104	eP	P	15 57 04.2	+0.6
PLCA	Paso Flores	20.94	179	P	Pn	15 57 14.1	+0.1
	comp=Z,3.5nm,0.8s,baz=12,slow=12,SNR=7.3						
PLCA	Paso Flores	20.94	179	IAmb	IAmb	15 57 20.7	
	comp=Z,8.2nm,1.1s						
IPMB	Ipameri, GO	21.58	89	eP	P	15 57 17.1	-1.4
PTGA	Pitinga	21.73	31	P	P	15 57 18.6	-1.4
	comp=Z,8.2nm,0.3s,baz=208,slow=13,SNR=26						
PTGA	Pitinga	21.73	31	P	P	15 57 18.5	-1.5
PTGA	Pitinga	21.73	31	eP	P	15 57 18.9	-1.1
SPB	Sao Paulo	22.18	104	eP	P	15 57 23.5	-1.3
BDFB	Brasilia	22.22	83	P	P	15 57 24.2	-1.2
	comp=Z,3.7nm,0.5s,baz=256,slow=11,SNR=6.6						
BDFB	Brasilia	22.22	83	P	P	15 57 25.0	-0.4
BDFB				IAmb	IAmb	15 57 32.9	
	comp=Z,13nm,0.6s						
SMTB	Santa Maria do	25.05	68	eP	P	15 57 51.1	-1.7
RUSC	La Rusia	25.55	355	P	P	15 57 58.7	+0.8
JANB	Januaria	25.82	84	eP	P	15 57 58.7	-1.3
RCBR	Riachuelo	36.76	73	P	P	15 59 33.3	-2.9
RCBR				IAmb	IAmb	15 59 36.9	
	comp=Z,11nm,0.8s						
PDPR	Patillas Dam,	37.83	8	P	P	15 59 44.0	-1.0
PDPR				IAmb	IAmb	15 59 44.4	
	comp=Z,8.7nm,0.8s						
MTDJ	Mount Denham	38.27	350	P	P	15 59 47.6	-1.3
Z50A	Ashland	54.59	345	P	P	16 01 56.9	+0.2
Z50A				IAmb	IAmb	16 01 57.8	
	comp=Z,4.8nm,0.8s						
WVT	Waverly	57.81	344	P	P	16 02 19.2	-0.4
WVT				IAmb	IAmb	16 02 35.4	
	comp=Z,7.0nm,0.9s						
TXAR	Lajitas Array	58.10	326	P	P	16 02 23.3	+1.4
	comp=Z,0.6nm,0.7s,baz=188,slow=6.3,SNR=4.8						
T49A	Edmonton	58.18	346	P	P	16 02 21.6	-0.7
T49A				IAmb	IAmb	16 02 23.3	
	comp=Z,14nm,1.1s						
G62A	West of Eustis	64.64	0	P	P	16 03 07.0	+1.3
DBIC	Dimbokro	70.09	75	P	P	16 03 38.4	-2.6
	comp=Z,3.8nm,1.0s,baz=149,slow=12,SNR=3.1						
PDAR	Pinedale Array	71.64	331	P	P	16 03 49.3	-0.7
	comp=Z,0.3nm,0.6s,baz=110,slow=6.5,SNR=3.9						
NVAR	Mina Array Bea	72.94	323	P	P	16 03 59.7	+1.8
	comp=Z,1.2nm,0.9s,baz=106,slow=6.4,SNR=6.7						
ULM	Lac du Bonnet	73.08	344	P	P	16 03 57.8	-0.3
	comp=Z,1.6nm,0.7s,baz=105,slow=4.8,SNR=3.1						
ULM	Lac du Bonnet	73.08	344	IAmb	IAmb	16 04 04.8	
	comp=Z,6.1nm,1.3s						
RLMT	Red Lodge	73.37	333	P	P	16 04 02.0	+1.8
YNE	Yellowstone No	73.60	332	P	P	16 04 03.6	+1.9
TOA0	Torodi Ar. Sit	78.58	72	P	P	16 04 30.0	-0.4
TOA0				IAmb	IAmb	16 04 30.7	
	comp=Z,8.1nm,0.8s						
TORD	Torodi Ar. Bea	78.58	72	P	P	16 04 29.8	-0.6
	comp=Z,5.6nm,0.6s,baz=253,slow=4.9,SNR=30						
TORD				LR	LR	16 39 07.1	
	comp=Z,100nm,18.2s,baz=320,slow=36						
YKA	Yellowknife Ar	88.90	341	P	P	16 05 23.2	+1.1
	comp=Z,4.9nm,1.0s,baz=138,slow=5.3,SNR=42						
H11S2	WAKE ISLAND Hy	125.74	279	T	T	18 30 49.3	
	baz=100,slow=74,SNR=55						
H11S1	WAKE ISLAND Hy	125.75	279	T	T	18 30 49.9	
	baz=100,slow=74,SNR=56						
H11S3	WAKE ISLAND Hy	125.76	279	T	T	18 30 50.1	
	baz=100,slow=74,SNR=50						
H11N3	WAKE ISLAND Hy	125.78	280	T	T	18 30 46.2	
	baz=100,slow=74,SNR=15						
H11N2	WAKE ISLAND Hy	125.80	281	T	T	18 30 52.6	
	baz=100,slow=74,SNR=14						
H11N1	WAKE ISLAND Hy	125.80	280	T	T	18 30 56.3	
	baz=100,slow=74,SNR=9.9						
ASAR	Alice Springs	130.52	210	PKP	PKiKP	16 11 40.2	-0.4
	comp=Z,0.7nm,0.9s,baz=143,slow=1.9,SNR=4.4						
WRA	Warramunga Arr	133.43	214	PKP	PKPdf	16 11 45.2	0.0
	comp=Z,0.5nm,0.7s,baz=154,slow=1.8,SNR=5.8						
ZALV	Zalesovo Beam	141.12	23	PKP	PKiKP	16 11 59.8	-1.2
	comp=Z,1.4nm,0.8s,baz=8.1,slow=2.1,SNR=5.0						
MAKZ	Makanchi	145.09	33		PKPdf	16 12 06.0	+0.4
MK31	Makanchi Array	145.26	33		PKPdf	16 12 06.5	+0.6
MKAR	Makanchi Array	145.26	33	PKP	PKPdf	16 12 06.1	+0.2
	comp=Z,2.5nm,0.8s,baz=322,slow=3.9,SNR=29						
MKAR	Makanchi Array	145.26	33		PKPdf	16 12 06.4	+0.5
KSH	Kashi	145.41	48	PKPbc	PKPab	16 12 08.3	+1.6
KSH				pPKP	sPKPbc	16 12 18.1	+1.1
KSH				PP	PP	16 15 30.8	+4.3
KSH				PKS	PKSdf	16 15 46.3	+4.2
KSH	Kashi	145.41	48	SKKS		16 22 20.0	
MJAR	Matsushiro Arr	149.48	309	PKPbc	PKiKP	16 12 19.7	+0.9
	comp=Z,2.7nm,1.0s,baz=139,slow=1.0,SNR=6.8						
SONM	Songino Array	151.88	4	PKPbc	PKiKP	16 12 23.6	0.0
	comp=Z,1.8nm,0.9s,baz=330,slow=0.9,SNR=7.8						
LZH	Lanzhou	163.07	15	ePKP	PKPdf	16 12 31.1	0.0
LZH				pPKP	pPKPdf	16 12 37.6	-1.4
LZH				sPKP		16 12 39.8	
LZH				PKP	sPKPab	16 13 32.5	+1.3

IDC 22 15:53:48.0±9.6, **39°.13N**×**128°.25E, h0**^{km}**, Error ellipse: s-maj=54.4km s-min=29.5km az=10.0, North Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	1.69	189	Pg	Pn	15 54 19.1	+0.4
	0.4nm,0.3s,baz=10,slow=17,SNR=9.5						
KSRS				Lg	Lg	15 54 42.0	
	0.4nm,0.3s,baz=8.9,slow=30,SNR=5.2						
I45RU	USSURIYSK INFR	5.79	28	i		16 28 29.9	
	baz=211,slow=333,SNR=2.9						
I30JP	ISUMI INFRASON	10.35	108	i		16 52 30.0	
	baz=294,slow=321,SNR=1.1						

IDC 22 15:57:49.4±2.5, **19°.86S**×**70°.94W, h0**^{km}**, mb3.4**/2, **mb1 3.7**/4, **mb1mx3.5**/34, **mbtmp3.6**/4, **ML3.3**/2, **Error ellipse: s-maj=63.4km s-min=34.3km az=103.0, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	3.33	146	Pn	Pn	15 58 45.0	+1.9
	1.5nm,0.3s,baz=238,slow=18,SNR=2.0						
LPAZ	La Paz	4.44	37	Pn	Pn	15 59 02.0	+3.4
	0.9nm,0.3s,baz=206,slow=7.4,SNR=3.4						
SIV	San Ignacio	10.14	69	Pn	Pn	16 00 15.9	-0.5
	0.5nm,0.3s,baz=228,slow=18,SNR=2.8						
PLCA	Paso Flores	20.81	179	P	P	16 02 31.2	-1.2
	1.3nm,0.9s,baz=294,slow=12,SNR=1.8						
TORD	Torodi Ar. Bea	78.61	72	P	P	16 09 52.8	-0.9
	0.3nm,0.6s,baz=264,slow=3.9,SNR=1.8						
MKAR	Makanchi Array	145.36	33	PKPbc	PKPdf	16 17 29.7	+0.3
	0.2nm,0.5s,baz=295,slow=2.5,SNR=2.3						

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*NEIC **22** 15:58:26.3±2.8, 19°.68S±0°.03×71°.03W±0°.04, h15^{km}±4^{km}, mb4.8/12, Error ellipse: s-maj=6.1km s-min=3.7km az=90.0*

*IDC **22** 15:58:26.3±1.3, 19°.39S×70°.58W, h0^{km}, mb4.0/3, mb1 4.2/5, mb1mx3.8/32, mbtmp4.1/5, ML4.1/2, Error ellipse: s-maj=49.0km s-min=23.2km az=70.0*

*GUC **22** 15:58:29.3±0.7, 19°.73S×70°.91W, h41^{km}±2^{km}, ML3.8*

ISC 22 15:58:26.9±1.4, **19°.71S**±0°.03×**70°.95W**±0°.05, **h15**^{km}±9^{km}, **n46,** σ1^{s}**66**/47, **mb4.3**/8, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	0.78	82	eP	Pn	15 58 42.9	-0.6
PSGC				eS	Sn	15 58 53.8	-1.2
PSGC				IAML		15 58 58.7	
	comp=N,4μm,0.5s						
PSGCX	Pisagua	0.78	82		Pn	15 58 43.1	-0.4
PSGCX					Sn	15 58 54.2	-0.9
TA01	Diego Aracena	1.12	140	eP	Pb	15 58 47.7	-0.2
TA01				i S	Sn	15 59 03.0	-0.1
TA01				IAML		15 59 07.0	
	comp=N,5μm,0.5s						
PB11	IPOC Station P	1.22	93	eP	Pg	15 58 50.2	-0.2
PB11				eS	Sg	15 59 06.4	0.0
PB11	IPOC Station P	1.22	93	Pn	Pg	15 58 50.2	-0.2
PB11				Sn	Sg	15 59 07.2	+0.8
PB12	IPOC Station P	1.23	28	eP	Pg	15 58 51.1	+0.4
PB12				eS	Sg	15 59 07.1	+0.3
PB12				IAML		15 59 12.1	
	comp=N,2μm,0.5s						
PB12	IPOC Station P	1.23	28	Pn	Pn	15 58 48.6	-1.0
PATCX	Punta Patache	1.34	146	eP	Pb	15 58 51.9	+0.1
PATCX				eS	Sn	15 59 08.9	+0.3
PATCX				IAML		15 59 17.9	
	comp=E,2μm,0.7s						
PATCX	Punta Patache	1.34	146	Pn	Pn	15 58 49.8	-1.3
PATCX				Sn	Sg	15 59 09.7	-0.5
AP01	Chacalluta	1.45	23	eS	Sg	15 59 13.4	-0.2
AP01				IAML		15 59 18.2	
	comp=N,5μm,0.4s						
GO01	Chusmiza	1.65	89	eP	Pb	15 58 57.5	+0.1
GO01				eS	Sg	15 59 19.5	-0.8
GO01	Chusmiza	1.65	89	Pn	Pb	15 58 56.5	-0.9
PB08	IPOC Station P	1.74	105	eP	Pb	15 58 58.5	-0.3
PB08				eS	Sb	15 59 21.0	+0.3
PB08				IAML		15 59 25.7	
	comp=E,1μm,0.3s						
PB01	IPOC Station P	1.91	134	eS	Sb	15 59 24.0	-1.2
PB01				IAML		15 59 30.4	
	comp=E,1μm,0.4s						
PB01	IPOC Station P	1.91	134		Pn	15 58 48.0	-11
PB16	IPOC Station P	1.93	45		Pn	15 58 49.4	-10
PB07	IPOC Station P	2.24	154	Pn	Pn	15 59 04.0	+0.4
LVC	Limon Verde	3.46	147	Pn	Pn	15 59 23.6	+3.0
	comp=E,20nm,0.3s,baz=352,slow=5.2,SNR=3.6						
LVC				Sn	Sb	16 00 08.4	-1.7
	comp=E,6.5nm,0.3s,baz=48,slow=23,SNR=1.2						
LVC	Limon Verde	3.46	147		Pn	15 59 21.0	+0.4
PB10	IPOC Station P	3.81	175		Pn	15 59 23.9	-1.1
LPAZ	La Paz	4.33	39	Pn	Pn	15 59 33.5	+0.8
	comp=E,3.1nm,0.3s,baz=246,slow=12,SNR=2.3						
NNA	Nana	9.54	323	Pn	Pn	16 00 45.2	+1.3
	comp=E,1.9nm,0.3s,baz=216,slow=14,SNR=2.1						
SIV	San Ignacio	10.10	70	Pn	Pn	16 00 53.8	+2.3
	comp=E,3.0nm,0.3s,baz=285,slow=7.5,SNR=10						
PLCA	Paso Flores	20.96	179	P	Pn	16 03 14.2	+2.1
	comp=E,2.0nm,0.9s,baz=26,slow=8.8,SNR=7.4						
PLCA	Paso Flores	20.96	179	P	Pn	16 03 10.9	-1.1
PTGA	Pitinga	21.71	31	P	P	16 03 15.5	-2.0
PTGA				IAmb	IAmb	16 03 19.3	
	comp=Z,14nm,1.4s						
BDFB	Brasilia	22.21	83	P	P	16 03 29.3	+6.1
	comp=Z,3.2nm,0.4s,baz=271,slow=9.3,SNR=6.1						
BDFB	Brasilia	22.21	83	P	P	16 03 22.5	-0.6
RUSC	La Rusia	25.52	355	P	P	16 03 57.1	+1.5
PAYG	Puerto Ayora	26.77	313	P	P	16 04 04.4	-1.9
PAYG				IAmb	IAmb	16 04 23.1	
	comp=Z,24nm,1.1s						
SDV	Santo Domingo	28.41	1	P	P	16 04 21.3	+0.1
SDV				IAmb	IAmb	16 04 27.9	
	comp=Z,11nm,1.5s						
BCIP	Isla Barro Col	30.00	342	P	P	16 04 35.2	+0.1
BCIP				IAmb	IAmb	16 04 44.6	
	comp=Z,76nm,1.3s						
GO09	Cerro Castillo	31.52	182	P	P	16 04 43.9	-4.3
GO09				IAmb	IAmb	16 04 45.4	
	comp=Z,38nm,1.1s						
GRGR	Grenville	32.93	17	P	P	16 04 58.2	-2.8
SNAA	Sanae	64.59	161	P	P	16 09 05.7	+2.4
QSPA	South Pole Qui	70.48	180	P	P	16 09 42.9	+2.2
TORD	Torodi Ar. Bea	78.58	72	P	P	16 10 28.1	-0.4
	comp=Z,1.6nm,0.6s,baz=256,slow=5.0,SNR=8.1						
YKA	Yellowknife Ar	88.88	341	P	P	16 11 21.1	+1.1
	comp=Z,1.1nm,0.9s,baz=139,slow=5.1,SNR=8.5						
H11S2	WAKE ISLAND Hy	125.74	279	T	T	18 36 12.8	
	baz=101,slow=74						
H11S1	WAKE ISLAND Hy	125.75	279	T	T	18 36 13.9	
	baz=101,slow=74						
H11S3	WAKE ISLAND Hy	125.75	279	T	T	18 36 14.3	
	baz=101,slow=74						
H11N3	WAKE ISLAND Hy	125.78	281	T	T	18 36 14.0	
	baz=100,slow=74						
H11N2	WAKE ISLAND Hy	125.79	281	T	T	18 36 11.8	
	baz=100,slow=74						
H11N1	WAKE ISLAND Hy	125.79	281	T	T	18 36 15.1	
	baz=100,slow=74						
MKAR	Makanchi Array	145.24	33	PKP	PKPdf	16 18 04.4	+0.4
	comp=Z,0.8nm,0.7s,baz=325,slow=4.2,SNR=6.5						
MKAR	Makanchi Array	145.24	33		PKPdf	16 18 04.6	+0.5

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*SJA **22** 16:03:29.3±0.9, 19°.72S×71°.17W, h15^{km}, ML3.5, MW3.7*

*IDC **22** 16:03:31.6±1.6, 19°.50S×70°.83W, h0^{km}, mb3.5/3, mb1 3.7/5, mb1mx3.6/22, mbtmp3.6/5, ML3.4/2, Error ellipse: s-maj=46.8km s-min=31.3km az=89.0*

*GUC **22** 16:03:34.9±0.6, 19°.72S×70°.91W, h44^{km}±2^{km}, ML3.5*

ISC 22 16:03:33.1±1.4, **19°.68S**±0°.03×**70°.87W**±0°.06, **h12**^{km}±9^{km}, **n29,** σ1^{s}**01**/44, **6C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	0.71	84	⇓iP	Pn	16 03 48.4	-0.7
PSGC				eS	Sn	16 03 59.2	-0.8
PSGC				IAML		16 04 00.8	
	comp=E,2μm,0.5s						
TA01	Diego Aracena	1.09	144	⇑iP	Pb	16 03 54.2	+0.1
TA01				eS	Sg	16 04 08.5	-0.1
TA01				IAML		16 04 13.2	
	comp=E,3μm,0.6s						
PB11	IPOC Station P	1.15	94	⇓iP	Pn	16 03 55.7	+0.5
PB11				eS	Sn	16 04 11.5	+0.5
PB11				IAML		16 04 13.8	
	comp=N,2μm,0.4s						
PB11	IPOC Station P	1.15	94	eP	Pn	16 03 55.9	+0.7
PB11				eS	Sn	16 04 11.4	+0.5
PB11				IAML		16 04 12.4	
	comp=Z,1μm,0.3s						
PB12	IPOC Station P	1.17	26	⇑iP	Pg	16 03 56.2	+0.5
PB12				eS	Sn	16 04 12.8	+1.2
PB12				IAML		16 04 20.2	
	comp=N,992nm,0.6s						
PB12	IPOC Station P	1.17	26	eP	Pg	16 03 56.2	+0.5
PB12				eS	Sn	16 04 13.1	+1.6
PB12				IAML		16 04 20.3	
	comp=Z,487nm,0.6s						
PATCX	Punta Patache	1.32	150	⇑iP	Pn	16 03 57.3	-0.2
PATCX				eS	Sb	16 04 14.4	-0.5
PATCX				IAML		16 04 18.9	
	comp=E,920nm,0.2s						
PATCX	Punta Patache	1.32	150	eP	Pn	16 03 57.4	-0.2
PATCX				eS	Sg	16 04 16.6	+0.8
PATCX				IAML		16 04 25.1	
	comp=Z,664nm,1.4s						
AP01	Chacalluta	1.39	21	eP	Pb	16 03 59.3	+0.2
AP01				eS	Sg	16 04 18.0	0.0
GO01	Chusmiza	1.58	90	⇓iP	Pg	16 04 03.2	-0.3
GO01				eS	Sg	16 04 24.7	+0.7
PB08	IPOC Station P	1.68	106	⇑iP	Pb	16 04 04.1	-0.1
PB08				eS	Sg	16 04 26.4	-0.8
PB16	IPOC Station P	1.85	44	⇑iP	Pb	16 04 06.9	-0.4
PB16				i S	Sg	16 04 32.5	-0.4
PB16				IAML		16 04 36.3	
	comp=N,716nm,0.4s						
PB02	IPOC Station P	1.87	151	⇓iP	Pn	16 04 05.3	+0.2
PB02				eS	Sn	16 04 29.0	+0.2
PB02				IAML		16 04 39.1	
	comp=E,1μm,0.6s						
PB02	IPOC Station P	1.87	151	eP	Pn	16 04 05.3	+0.2
PB02				eS	Sg	16 04 33.2	-0.2
PB02				IAML		16 04 40.8	
	comp=Z,1μm,0.5s						
PB01	IPOC Station P	1.88	137	⇑iP	Pn	16 04 05.8	+0.6
PB01				eS	Sn	16 04 28.7	-0.2
PB01				IAML		16 04 41.0	
	comp=N,485nm,0.5s						
PB01	IPOC Station P	1.88	137	eP	Pn	16 04 05.8	+0.6
PB01				eS	Sn	16 04 29.0	+0.1
PB01				IAML		16 04 38.5	
	comp=Z,224nm,0.2s						
PB07	IPOC Station P	2.24	156	IAML		16 04 51.1	
	comp=E,340nm,0.7s						
PB04	IPOC Station P	2.73	166	i P	Pn	16 04 15.9	-1.0
PB05	IPOC Station P	3.22	169	i P	Pn	16 04 22.3	-1.5
PB05				IAML		16 05 20.5	
	comp=Z,65nm,0.8s						
PB06	IPOC Station P	3.25	158	i P	Pn	16 04 23.5	-0.7
PB06				IAML		16 05 29.1	
	comp=Z,183nm,0.7s						
LVC	Limon Verde	3.44	148	Pn	Pn	16 04 28.6	+1.6
	comp=Z,1.6nm,0.3s,baz=314,slow=10.0,SNR=3.1						
PB15	IPOC Station P	3.75	160	i P	Pn	16 04 30.8	-0.2
PB10	IPOC Station P	3.83	176	i P	Pn	16 04 30.2	-1.8
PB10				IAML		16 05 50.1	
	comp=Z,24nm,1.5s						
LPAZ	La Paz	4.26	38	Pn	Pb	16 04 46.0	-2.4
	comp=Z,0.7nm,0.3s,baz=137,slow=4.1,SNR=8.1						
SIV	San Ignacio	10.02	70	Pn	Pn	16 05 57.6	+0.5
	comp=Z,0.6nm,0.3s,baz=276,slow=9.2,SNR=6.2						
PLCA	Paso Flores	20.99	179	P	P	16 08 19.7	+3.3
	comp=Z,2.1nm,1.0s,baz=297,slow=14,SNR=2.5						

TORD	Torodi Ar. Bea	78.50	72	P	P	16 15 32.9	-2.0
	comp=Z,0.6nm,0.6s,baz=252,slow=5.4,SNR=3.5						
YKA	Yellowknife Ar	88.87	341	P	P	16 16 27.0	+0.1
	comp=Z,0.1nm,0.6s,baz=135,slow=5.2,SNR=2.0						
MKAR	Makanchi Array	145.17	33	PKPbc	PKPbc	16 23 10.2	-0.1
	comp=Z,0.4nm,0.8s,baz=327,slow=4.3,SNR=2.6						

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*ISK **22** 16:06:21.9, 36°.01N×28°.97E, h10^{km}, ML2.9/10*
*NIC **22** 16:06:22.2±0.0, 35°.86N×29°.09E, h25^{km}, Ml2.9/4*
*DDA **22** 16:06:22.1, 36°.00N×28°.98E, h26^{km}±1^{km}, ML2.5*
ISC 22 16:06:21.1±1.5, **35°.92N**±0°.05×**29°.00E**±0°.03, **h17**^{km}±10^{km}, **n31**, σ**1^{s}.19**/50, **Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSL	Kastellorizon	0.53	64	P	Pb	16 06 32.5	+0.6
KSL				S	Sb	16 06 40.6	+1.4
KSL				AML	AML	16 06 40.8	
	1.8nm,0.5s						
KSL				AML	AML	16 06 40.8	
	1.8nm,0.5s						
KSL				AML	AML	16 06 43.1	
	4.1nm,0.4s						
KSL				AML	AML	16 06 43.1	
	4.1nm,0.4s						
AKAS	Kas	0.58	57	PG	Pb	16 06 33.2	+0.2
AKAS				SG	Sb	16 06 41.7	+0.7
AKAS	Kas	0.58	57	*i* P	Pb	16 06 33.0	0.0
AKAS				*i* S	Sb	16 06 42.5	+1.5
AKAS				IAML		16 06 45.0	
	comp=E,391nm,0.7s						
AKAS				IAML		16 06 53.0	
	comp=N,356nm,0.6s						
FETY	Fethiye	0.72	5	PG	Pb	16 06 34.3	-0.9
FETY				SG	Sb	16 06 43.7	-1.2
FETY	Fethiye	0.72	5	*i* P	Pb	16 06 34.4	-0.9
FETY				*i* S	Sb	16 06 43.9	-1.0
FETY				IAML		16 06 46.0	
	comp=N,492nm,0.3s						
ARG	Arkhangelos	0.77	293	P	Pn	16 06 38.4	+1.2
ARG				S	Sn	16 06 51.1	+2.7
DALY	Dalyan (Mula)	0.94	343	PG	Pb	16 06 38.4	-0.6
DALY				SG	Sb	16 06 50.9	-0.3
DALY	Dalyan (Mula)	0.94	343	*i* P	Pb	16 06 38.4	-0.6
DALY				*i* S	Sn	16 06 51.5	-1.1
DALY				IAML		16 06 52.0	
	comp=E,219nm,0.9s						
DALY				IAML		16 06 52.0	
	comp=N,207nm,0.4s						
TURN	Turunc	1.01	342	PG	Pn	16 06 41.2	+0.8
TURN	Turunc	1.01	342	*i* P	Pn	16 06 41.3	+0.8
TURN				*i* S	Sn	16 06 56.5	+2.3
TURN				IAML		16 06 59.0	
	comp=N,94nm,0.4s						
ELL	Elmali	1.11	41	PG	Pb	16 06 42.0	+0.1
ELL	Elmali	1.11	41	P	Pg	16 06 41.6	-1.0
ELL				S	Sn	16 06 57.4	+0.5
AKUM	Antalya-Kumluc	1.16	69	*i* P	Pb	16 06 43.5	+0.7
AKUM				*i* S	Sn	16 07 00.4	+2.3
AKUM				IAML		16 07 02.0	
	comp=N,115nm,0.4s						
AKUM				IAML		16 07 06.0	
	comp=E,76nm,0.7s						
YER	Yerkesik	1.35	335	PN	Pn	16 06 46.1	+0.9
GOLH	Golhisar	1.39	19	*i* P	Pb	16 06 46.5	-0.3
DAT	Datca	1.41	306	PN	Pg	16 06 47.6	-0.6
DAT	Datca	1.41	306	*i* P	Pg	16 06 47.6	-0.6
KORT	Korkueli	1.53	45	PN	Pg	16 06 49.9	-0.8
KORT	Korkueli	1.53	45	*i* P	Pg	16 06 50.1	-0.6
KORT				*i* S	Sg	16 07 12.8	+2.2
KORT				IAML		16 07 19.0	
	comp=N,53nm,0.5s						
KORT				IAML		16 07 27.0	
	comp=E,77nm,0.6s						
TAVA	DENIZLI_Tavas	1.55	357	*i* P	Pb	16 06 48.8	-0.6
TAVA				*i* S	Sb	16 07 07.4	-1.4
TAVA				IAML		16 07 12.0	
	comp=N,103nm,0.4s						
BODT	Bodrum	1.78	310	PN	Pn	16 06 51.9	+0.8
AYDN	Tasoluk	1.96	333	*i* P	Pn	16 06 55.1	+1.4
AYDN				IAML		16 07 24.0	
	comp=E,87nm,0.4s						
AYDN				IAML		16 07 24.0	
	comp=N,66nm,0.5s						
BRDR	BURDUR-Merkez	1.97	25	*i* P	Pb	16 06 56.2	-0.4
BRDR				*i* S	Sb	16 07 21.0	+0.1
BRDR				IAML		16 07 24.0	
	comp=E,49nm,0.6s						
BRDR				IAML		16 07 30.0	
	comp=N,40nm,0.8s						
AYDB	Zeytinkoy-Aydi	2.21	337	PN	Pn	16 06 57.7	+0.5
GCAM	G?zelcaml?	2.28	322	*i* P	Pn	16 06 58.8	+0.8
GCAM				*i* S	Sn	16 07 25.0	-0.6
GCAM				IAML		16 07 35.0	
	comp=E,28nm,0.4s						
GCAM				IAML		16 07 41.0	
	comp=N,32nm,0.7s						
KEPZ	Antalya-Kepez	2.32	64	*i* P	Pn	16 06 59.6	+1.0
KEPZ				IAML		16 07 45.0	
	comp=E,18nm,0.8s						
KHAL	Karahalli	2.48	9	*i* P	Pb	16 07 04.3	-1.0
KHAL				*i* S	Sb	16 07 33.5	-2.2
KHAL				IAML		16 07 37.0	
	comp=E,24nm,0.5s						
KHAL				IAML		16 07 37.0	
	comp=N,22nm,1.2s						
GAZI	Gazipasa	2.70	82	*i* P	Pn	16 07 03.8	-0.1
GAZI				*i* S	Sn	16 07 33.8	-2.5
GAZI				IAML		16 07 52.0	
	comp=E,17nm,0.6s						
GAZI				IAML		16 08 01.0	
	comp=N,14nm,0.7s						
AKMS	Akamas	2.87	107	P	Pn	16 07 05.4	-0.6
AKMS				AML	AML	16 07 40.4	
	comp=N,0.2nm,0.3s						
AKMS				AML	AML	16 07 42.5	
	comp=N,0.1nm,0.3s						
ALFC	Alefka	3.03	103	P	Pn	16 07 08.2	-0.2
ALFC				S	Sn	16 07 42.5	-1.8
ALFC				AML	AML	16 07 51.0	
	comp=N,0.1nm,0.4s						
ALFC				AML	AML	16 07 51.0	
	comp=N,0.1nm,0.4s						
ALFC				AML	AML	16 07 55.2	
	comp=N,0.1nm,0.3s						
ALFC				AML	AML	16 07 55.2	
	comp=N,0.1nm,0.3s						
SZAC	Souni	3.38	109	P	Pn	16 07 13.3	+0.2
SZAC				S	Sn	16 07 51.6	-1.3
SZAC				AML	AML	16 07 52.7	
	comp=N,0.1nm,0.6s						
SZAC				AML	AML	16 07 52.7	
	comp=N,0.1nm,0.6s						
SZAC				AML	AML	16 07 56.1	
	comp=N,0.1nm,0.3s						
SZAC				AML	AML	16 07 56.1	
	comp=N,0.1nm,0.3s						

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*NEIC **22** 16:16:10.4±2.1, 4°.2S±0°.1×142°.4E±0°.1, h106^{km}±8^{km}, mb4.2/15, Error ellipse: s-maj=19.2km s-min=14.6km az=122.0*
*IDC **22** 16:16:16.2±4.4, 4°.40S×142°.48E, h157^{km}±46^{km}, mb3.4/5, mb1 3.6/7, mb1mx3.2/50, mbtmp3.9/7, Error ellipse: s-maj=44.0km s-min=19.5km az=125.0*
ISC 22 16:16:09.8±0.6, **4°.29S**±0°.07×**142°.48E**±0°.08, **h105**^{km}, **n26**, σ**1^{s}.00**/28, **mb3.9**/6, **New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.89	138	P	Pn	16 17 54.2	+6.0
	1.6nm,0.3s,baz=17,slow=4.6,SNR=7.0						
PMG				S	Sn	16 19 04.7	-0.4
	0.5nm,0.3s,baz=111,slow=16,SNR=1.7						
RABL	Rabaul	9.66	90	Pn	Pn	16 18 25.8	-0.1
MTN	Manton Dam	14.07	232		Pn	16 19 23.7	-0.8
WB0	Warramunga Arr	17.29	206	P	Pn	16 20 05.9	+1.1
WB0				IAmb	IAmb	16 20 09.1	
	comp=Z,4.5nm,0.4s						
WR0	Warramunga Arr	17.39	206	P	Pn	16 20 06.7	+0.6
WR0				IAmb	IAmb	16 20 10.8	
	comp=Z,9.8nm,0.7s						
WRAB	Tennant Creek	17.45	206	P	P	16 20 06.6	+0.2
WRAB				IAmb	IAmb	16 20 11.4	
	comp=Z,7.1nm,0.6s						
WRAB					S	16 23 22.3	-0.3
WB2	Warramunga Arr	17.46	206	P	Pn	16 20 08.0	+1.2
WRA	Warramunga Arr	17.47	206	P	Pn	16 20 07.3	+0.4
	comp=Z,1.1nm,0.3s,baz=25,slow=12,SNR=43						
WRA				S	Sn	16 23 19.5	-2.1
	comp=Z,0.1nm,0.3s,baz=300,slow=46,SNR=3.6						
WRA	Warramunga Arr	17.47	206	P	P	16 20 05.8	-0.8
KNRA	Kununurra	17.61	229	P	P	16 20 08.2	+0.1
KNRA				IAmb	IAmb	16 20 12.8	
	comp=Z,8.7nm,0.7s						
SOEI	Soe	18.87	252	P	Pn	16 20 23.6	-0.2
SOEI				IAmb	IAmb	16 20 32.7	
	comp=Z,22nm,0.7s						
MMRI	Maumere	20.57	257	P	P	16 20 40.3	-0.1
MMRI				IAmb	IAmb	16 20 59.9	
	comp=Z,13nm,1.0s						
AS31	Alice Springs	20.97	202	P	P	16 20 45.9	+1.3
ASAR	Alice Springs	20.97	202	P	P	16 20 46.1	+1.5
	comp=Z,1.7nm,0.5s,baz=40,slow=13,SNR=24						
FITZ	Fitzroy Crossi	21.45	229	P	P	16 20 51.5	+1.8
	comp=Z,4.5nm,0.7s,baz=42,slow=8.7,SNR=16						
FITZ	Fitzroy Crossi	21.45	229	P	P	16 20 51.0	+1.2
PSA00	Pilbara Seismi	27.89	230	P	P	16 21 50.0	+0.1
PSA00				IAmb	IAmb	16 21 53.6	
	comp=Z,12nm,1.2s						
TOO	Toolangi	33.24	176	P	P	16 22 36.2	-0.8
TOO				IAmb	IAmb	16 22 44.9	
	comp=Z,4.4nm,1.2s						
MORW	Morawa	35.16	223	P	P	16 22 54.3	+0.6
YHNB	Yeheng	35.35	326	P	P	16 22 54.8	-0.6
JHJ2	Mitsune	37.28	356	P	P	16 23 09.9	-1.7
MKAR	Makanchi Array	73.34	322	P	P	16 27 30.9	+0.6
	comp=Z,0.2nm,0.4s,baz=94,slow=9.6,SNR=4.5						
BVAR	Borovoye Array	82.76	325	P	P	16 28 23.0	+0.9
	comp=Z,0.5nm,0.5s,baz=105,slow=7.4,SNR=8.4						
ILAR	Eielson Array	85.72	24	P	P	16 28 36.8	0.0
	comp=Z,0.9nm,0.6s,baz=261,slow=4.6,SNR=8.2						
TORD	Torodi Ar. Bea	140.30	285	PKP	PKPdf	16 35 28.4	+0.9
	comp=Z,0.4nm,0.7s,baz=98,slow=1.1,SNR=2.4						
DBIC	Dimbokro	147.40	276	PKPbc	PKPbc	16 35 43.5	+1.0
	comp=Z,4.4nm,0.7s,baz=41,slow=2.3,SNR=8.1						

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*IDC **22** 16:16:27.6±2.0, 33°.28N×79°.34E, h0^{km}, mb3.5/6, mb1 3.7/9, mb1mx3.5/61, mbtmp3.6/9, ML3.4/3, Error ellipse: s-maj=48.7km s-min=21.4km az=58.0*
ISC 22 16:16:34.9±0.9, **33°.56N**±0°.07×**79°.95E**±0°.09, **h35**^{km}, **n12**, σ**3^{s}.37**/15, **mb3.5**/4, **Kashmir-Xizang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DHRM	DHARAMSHALA	3.33	248	*e*P	Pn	16 17 21.4	-3.4
DHRM				*e*S	Sn	16 18 09.5	+6.3
SMLA	Simla	3.38	225	*e*P	Pn	16 17 21.1	-4.0
SMLA				*e*S	Sn	16 18 09.3	+5.3
THN	Thein Dam	3.73	254	*e*PN	Pn	16 17 36.5	+6.6
THN				*e*SN	Sn	16 18 14.5	+1.9
AAK	Ala-Archa	10.03	336	Pn	Pn	16 18 57.6	+1.1
	0.4nm,0.3s,baz=340,slow=22,SNR=10						
AAK				Sn	Sn	16 20 46.8	-1.0
	0.0nm,0.3s,baz=145,slow=23,SNR=1.1						
AAK				Lg	Lg	16 21 39.5	
	0.1nm,0.3s,baz=44,slow=20,SNR=2.0						
MKAR	Makanchi Array	13.34	7	Pn	Pn	16 19 42.4	+0.7
	0.1nm,0.3s,baz=188,slow=13,SNR=5.0						
MKAR				Sn	Sn	16 22 11.6	+3.0
	0.1nm,0.3s,baz=243,slow=11,SNR=3.0						
KURBB	Kurchatov Arra	17.08	357	P	P	16 20 30.8	-1.5
	0.2nm,0.3s,baz=185,slow=12,SNR=15						
BVAR	Borovoye Array	20.63	343	P	P	16 21 09.8	-1.3
	1.1nm,0.5s,baz=154,slow=11,SNR=14						
ZALV	Zalesovo Beam	20.67	8	P	Pn	16 21 11.5	-2.5
	1.8nm,0.8s,baz=204,slow=13,SNR=7.9						
CMAR	Chiang Mai Arr	22.69	127	P	P	16 21 33.3	-0.2
	0.8nm,0.8s,baz=310,slow=9.5,SNR=6.4						
SONM	Songino Array	24.45	46	P	P	16 21 54.3	+3.9
	0.4nm,0.6s,baz=257,slow=5.8,SNR=2.7						
FINES	FINESS Array B	44.02	326	P	P	16 24 36.2	-2.5
	3.1nm,1.0s,baz=125,slow=12,SNR=2.2						
YKA	Yellowknife Ar	83.57	7	P	P	16 28 58.5	-0.4
	0.4nm,0.7s,baz=348,slow=4.7,SNR=6.5						

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*IDC **22** 16:22:27.1±2.9, 51°.12N×176°.36W, h0^{km}, mb3.2/5, mb1 3.5/5, mb1mx3.3/55, mbtmp3.3/5, Error ellipse: s-maj=73.1km s-min=26.2km az=177.0*
*AEIC **22** 16:22:30.9±1.9, 51°.26N±0°.07×176°.35W±0°.05, h20^{km}±3^{km}, ML3.4/26, mb3.9/3(NEIC), Error ellipse: s-maj=10.1km s-min=4.8km az=181.0*
*NEIC **22** 16:22:31.2±0.8, 51°.28N±0°.08×176°.40W±0°.07, h28^{km}±9^{km}, Error ellipse: s-maj=11.2km s-min=6.1km az=170.0*
ISC 22 16:22:29.8±2.2, **51°.22N**±0°.09×**176°.39W**±0°.04, **h18**^{km}±6^{km}, **n36**, σ**1^{s}.18**/34, **mb3.2**/3, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETKA	Kagalaska Isla	0.64	359		Pg	16 22 43.2	+0.8
ADK	Adak	0.69	345		Pb	16 22 43.6	+0.4
KIMD	Kanaga Island	0.76	316		Pb	16 22 44.6	+0.3
KIWB	Kanaga Island	0.79	323		Pn	16 22 46.9	+0.9
GSCK	Great Sitkin C	0.80	10		Pg	16 22 45.9	+0.4
GSCK					Sg	16 22 56.1	0.0
KIRH	Kanaga Island	0.81	327		Pb	16 22 45.7	+0.5
KIKV	Kanaga Island	0.82	324		Pb	16 22 45.8	+0.4
KINC	Kanaga Island	0.84	327		Pb	16 22 46.3	+0.4
GSMY	Great Sitkin M	0.85	14		Pg	16 22 46.5	+0.2
GSTD	Great Sitkin T	0.85	10		Pg	16 22 46.6	+0.3
GSTD					Sg	16 22 57.3	-0.2
KICM	Kanaga Island	0.86	324		Pb	16 22 46.5	+0.4
GSSP	Great Sitkin S	0.88	9		Pb	16 22 47.0	+0.6
GSSP					Sg	16 22 58.2	-0.3
GSTR	Great Sitkin T	0.90	13		Pg	16 22 47.5	+0.3
TAPA	Tanaga Point A	1.07	304		Pb	16 22 49.5	-0.3
TASE	Tanaga Southea	1.20	301		Pn	16 22 51.8	+0.1
TAFP	Tanaga Falls P	1.20	305		Pn	16 22 51.4	-0.3
TAFP					Sn	16 23 08.6	+1.0
GAEA	Gareloi East	1.58	292		Pn	16 22 58.0	+1.2
ATKA	Atka Island	1.68	53		Pn	16 22 57.8	-0.4
ATKA					Sn	16 23 19.5	+0.3
KOFP	Korovin Flat P	1.77	53		Pn	16 22 59.7	+0.2
NIKH	Nikolski High	4.96	66		Pn	16 23 45.8	+2.5
GAMB	Gambell	12.83	9	Pn	Pn	16 25 31.3	+0.3
OHAK	Old Harbor	14.74	57	Pn	Pn	16 25 57.1	0.0
SKT	Skwentna	17.29	42	Pn	Pn	16 26 27.0	-2.9
SKT				IAmb	IAmb	16 26 28.2	
	comp=Z,6.6nm,0.8s						
PMR	Palmer	18.16	45	Pn	Pn	16 26 37.9	-2.7
PMR				IAmb	IAmb	16 26 50.7	
	comp=Z,13nm,1.4s						
KNK	Knik Glacier	18.39	46	P	P	16 26 40.6	-2.9
KNK				IAmb	IAmb	16 26 57.8	
	comp=Z,22nm,1.4s						
SEY	Seymchan	20.38	317	P	Pn	16 27 07.8	+0.6
	comp=Z,0.8nm,0.7s,baz=94,slow=22,SNR=5.1						
ILAR	Eielson Array	20.43	37	P	P	16 27 06.3	+0.6
	comp=Z,0.7nm,0.6s,baz=230,slow=9.9,SNR=12						
KLR	Kul'dur	32.67	287	P	P	16 29 00.2	-0.4
	comp=Z,0.9nm,0.6s,baz=47,slow=11,SNR=5.0						
H11N2	WAKE ISLAND Hy	34.08	209	T	T	17 05 45.2	
	baz=18,slow=76,SNR=74						
H11N3	WAKE ISLAND Hy	34.09	209	T	T	17 05 44.8	
	baz=18,slow=76,SNR=81						
H11N1	WAKE ISLAND Hy	34.10	209	T	T	17 05 48.9	
	baz=18,slow=76,SNR=85						
YKA	Yellowknife Ar	34.24	47	P	P	16 29 12.7	-1.3
	comp=Z,0.1nm,0.4s,baz=275,slow=7.1,SNR=1.2						
H11S1	WAKE ISLAND Hy	35.29	209	T	T	17 07 07.2	
	baz=17,slow=76,SNR=32						
H11S2	WAKE ISLAND Hy	35.30	209	T	T	17 07 18.9	
	baz=17,slow=76,SNR=15						
H11S3	WAKE ISLAND Hy	35.31	209	T	T	17 07 15.5	
	baz=17,slow=76,SNR=11						
PDAR	Pinedale Array	44.91	74	P	P	16 30 45.1	+1.7
	comp=Z,0.1nm,0.3s,baz=350,slow=4.6,SNR=2.0						

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*IDC **22** 16:22:37.0±4.4, 5°.33S×153°.01E, h40^{km}±33^{km}, mb3.6/11, mb1 3.7/12, mb1mx3.6/44, mbtmp3.8/12, ML1.7/1, MS2.9/1, Ms1 2.9/1, ms1mx2.6/31, Error ellipse: s-maj=33.1km s-min=12.3km az=94.0*
ISC 22 16:22:36.5±1.1, **5°.31S**±0°.08×**153°.0E**±0°.1, **h37**^{km}, **n15**, σ**0^{s}.73**/16, **mb3.8**/11, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.41	315	P	Pn	16 22 59.5	-0.1
	344nm,0.3s,baz=173,slow=1.5,SNR=414						
KRVT				S	Sn	16 23 17.6	+0.6
	329nm,0.3s,baz=136,slow=20,SNR=8.5						
PMG	Port Moresby	7.10	235	P	Pn	16 24 19.0	+1.1
	0.9nm,0.3s,baz=280,slow=20,SNR=2.6						
PMG				S	Sn	16 25 36.4	-1.0
	2.0nm,0.3s,baz=356,slow=14,SNR=5.5						
GUMO	Guam	20.45	337	LR	LR	16 33 55.0	
	comp=Z,37nm,19.8s,baz=109,slow=33						
WRA	Warramunga Arr	23.28	230	P	P	16 27 41.7	+0.5
	1.2nm,0.6s,baz=55,slow=9.9,SNR=6.2						
ASAR	Alice Springs	25.93	223	P	P	16 28 05.8	+0.3
	0.8nm,0.5s,baz=58,slow=9.6,SNR=11						
FITZ	Fitzroy Crossi	29.62	242	P	P	16 28 37.5	-1.1
	1.3nm,0.7s,baz=86,slow=5.2,SNR=1.2						
JNU	Nakatsue	43.62	333	P	P	16 30 37.1	-0.3
	6.5nm,0.8s,baz=17,slow=11,SNR=4.2						
KSRS	Korea Array	48.55	333	P	P	16 31 15.3	-0.9
	0.8nm,0.8s,baz=140,slow=6.0,SNR=3.0						
CMAR	Chiang Mai Arr	58.30	295	P	P	16 32 28.1	0.0
	0.3nm,0.3s,baz=122,slow=4.9,SNR=4.6						
SONM	Songino Array	66.87	328	P	P	16 33 25.9	+0.9
	0.2nm,0.5s,baz=119,slow=3.3,SNR=2.2						
SEY	Seymchan	68.05	360	P	P	16 33 32.4	+0.5
	0.6nm,0.3s,baz=226,slow=12,SNR=6.6						
MKAR	Makanchi Array	80.86	319	P	P	16 34 47.1	+0.3
	0.3nm,0.7s,baz=103,slow=4.7,SNR=4.1						
ZALV	Zalesovo Beam	81.70	326	P	P	16 34 50.5	-0.5
	1.3nm,0.8s,baz=88,slow=4.6,SNR=5.3						
ILAR	Eielson Array	82.54	22	P	P	16 34 54.9	-0.4
	0.4nm,0.7s,baz=250,slow=5.0,SNR=5.7						
TORD	Torodi Ar. Bea	150.68	287	PKPbc	PKPbc	16 42 25.8	0.0
	0.9nm,0.7s,baz=88,slow=3.5,SNR=5.5						

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*IDC **22** 16:50:07.0±1.1, 1°.58N×128°.24E, h0^{km}, mb3.7/5, mb1 3.8/7, mb1mx3.5/52, mbtmp3.7/7, ML3.6/2, Error ellipse: s-maj=62.2km s-min=17.2km az=67.0*
*DJA **22** 16:50:11.4±0.5, 2°N±6°×12°9E±°, h10^{km}, M3.9/12, mb4.1/3, MLv3.8/12*
ISC 22 16:50:14.0±0.9, **1°.5N**±0°.1×**128°.56E**±0°.09, **h61**^{km}, **n24**, σ**0^{s}.67**/25, **mb3.5**/5, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.41	238	P	Pn	16 50 36.8	-0.7
LBMI	Labuha	2.40	206	P	Pn	16 50 50.6	-0.3
SWI	Sorong	3.60	131	P	Pn	16 51 07.3	0.0
SIJI	Sorong	3.61	131	Pn	Pn	16 51 07.5	+0.1
	6.8nm,0.3s,baz=107,slow=20,SNR=61						
SIJI				Sn	Sn	16 51 47.0	-1.8
	8.3nm,0.3s,baz=328,slow=22,SNR=14						
SANI	Sanana	4.38	216	P	Pn	16 51 17.1	-1.0
MSAI	Masohi	4.86	176	P	Pn	16 51 24.4	-0.1
NLAI	Namlea	4.95	197	P	Pn	16 51 26.1	+0.2
FAKI	Fak Fak	5.76	140	P	Pn	16 51 37.2	+0.3
	0.1nm17nm,0.7s						
APSI	Ampana	7.32	251	P	Pn	16 51 58.4	+0.1
FITZ	Fitzroy Crossi	19.71	188	P	P	16 54 38.6	+0.1
	0.1nm,0.3s,baz=336,slow=15,SNR=1.6						
WRA	Warramunga Arr	22.08	165	P	P	16 55 05.0	+0.9
	1.9nm,0.8s,baz=346,slow=12,SNR=15						
ASAR	Alice Springs	25.58	169	P	P	16 55 39.3	+1.8
	0.3nm,0.5s,baz=345,slow=11,SNR=12						
TAPN	Taplejung	46.79	307	*e*P	P	16 58 38.4	+0.3
	2.5nm,0.5s						
ODAN	Odare	46.83	306	*e*P	P	16 58 38.7	+0.3
	5.5nm,0.5s						
RAMN	Ramite	47.51	306	*e*P	P	16 58 43.9	+0.2
	7.7nm,0.5s						
JIRN	Jiri	48.14	307	*e*P	P	16 58 49.0	+0.3
	8.7nm,0.5s						
GUN	Gumba	48.49	307	*e*P	P	16 58 51.7	+0.3
	5.1nm,0.5s						
PKI	Pulchoki	48.73	306	*e*P	P	16 58 52.9	-0.3
	1.5nm,0.4s						
PKIN	Phulchoki	48.74	306	*e*P	P	16 58 52.9	-0.3
	1.4nm,0.4s						
KKN	Kakani	48.92	306	*e*P	P	16 58 54.6	+0.1
SONM	Songino Array	49.96	341	P	P	16 59 02.1	+0.2
	0.2nm,0.5s,baz=148,slow=8.2,SNR=2.0						
DANN	Dangsing	50.38	306	*e*P	P	16 59 05.8	+0.1
	9.0nm,0.6s						
MKAR	Makanchi Array	60.39	325	P	P	17 00 16.6	-0.5
	0.9nm,0.4s,baz=116,slow=7.9,SNR=22						
KURBB	Kurchatov Arra	64.57	327	P	P	17 00 44.5	-0.2
	1.4nm,0.6s,baz=127,slow=6.0,SNR=5.6						

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*NIED **22** 16:57:00, 38°.30N×144°.60E, h5^{km}, Mw4.2 Best double couple: $M_0$2.50000×10^{15} NP1:ϕ_s208.00000°, δ73.00000°, λ-90.00000°. NP2:ϕ_s28.00000°, δ17.00000°, λ-91.00000°.*
*IDC **22** 16:57:27.0±0.7, 38°.07N×144°.92E, h0^{km}, mb3.8/15, mb1 4.0/19, mb1mx3.9/56, mbtmp3.9/19, ML3.3/4, MS3.3/7, Ms1 3.3/7, ms1mx2.9/45, Error ellipse: s-maj=19.2km s-min=15.3km az=112.0*
*NEIC **22** 16:57:29.4±2.8, 38°.15N±0°.06×144°.9E±0°.2, h19^{km}±5^{km}, mb4.4/6, Error ellipse: s-maj=19.7km s-min=6.1km az=108.0*
*JMA **22** 16:57:30.4±0.2, 38°.28N×144°.62E, h46^{km}, M4.3*
ISC 22 16:57:31.3±4.1, **38°.24N**±0°.05×**144°.69E**±0°.08, **h29**^{km}±29^{km}, **n57**, σ**1^{s}.77**/70, **mb3.9**/16, **MS3.5**/3, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.51	290	P	Pn	16 58 09.3	-0.9
OFUJ				*e*S	Sn	16 58 38.0	-1.8
JIKH	Ishinomakikobu	2.54	273	P	Pn	16 58 09.5	-1.1
JIKH				*e*S	Sn	16 58 38.3	-2.2
JKMT	Kesennumamotoy	2.59	284	P	Pn	16 58 10.3	-0.9
JKMT				*e*S	Sn	16 58 40.0	-1.7
MIYJ	Miyakonagasawa	2.61	302	P	Pn	16 58 10.3	-1.2
MIYJ				*e*S	Sn	16 58 39.7	-2.5
JIO	Ouri	2.64	276	P	Pn	16 58 11.1	-0.8
JIO				*e*S	Sn	16 58 40.9	-2.0
JMK	Ichinoseki	2.81	286	P	Pn	16 58 13.6	-0.7
JMK				*e*S	Sn	16 58 46.2	-1.0
JOM	Ohasama	2.92	296	P	Pn	16 58 15.3	-0.6
JOM				S	Sn	16 58 49.0	-1.0
JANG	Nango	3.26	312	P	Pn	16 58 18.9	-1.5
JANG				S	Sn	16 58 55.9	-2.3
JYK	Kaneyama	3.46	283	P	Pn	16 58 23.5	+0.2
JYK				S	Sn	16 59 02.8	-0.5
JFT	Otama	3.52	260	P	Pn	16 58 24.1	0.0
JFT				S	Sn	16 59 03.7	-1.1
ERM	Erimo	3.95	343		Pn	16 58 29.3	-0.6
JOT	Ohata	4.21	319	P	Pn	16 58 32.5	-1.0
JOT				*e*S	Sn	16 59 18.5	-3.2
JCH	Churui	4.48	347	P	Pn	16 58 35.8	-1.5
JKB	Kayabe	4.60	324	P	Pn	16 58 39.2	+0.4
BSO1	Boso 1	4.67	221	P	Pn	16 58 37.7	-1.6
BSO1				S	Sn	16 59 31.2	-1.1
JRY	Ryogami san	5.13	246	P	Pn	16 58 45.7	-0.6
JRY				*e*S	Sn	16 59 40.4	-4.1
NEM2	Nemuro 2	5.18	9	P	Pn	16 58 43.2	-3.6
NEM2				*e*S	Sn	16 59 38.6	-7.0
JOD2	Odawara 2	5.39	238	P	Pn	16 58 49.4	-0.4
JOD2				*e*S	Sn	16 59 46.5	-4.4
MJAR	Matsushiro Arr	5.43	254	Pn	Pn	16 58 50.6	+0.3
	0.5nm,0.3s,baz=76,slow=15,SNR=61						
MJAR				Sn	Sn	16 59 51.3	-0.7
	0.2nm,0.3s,baz=102,slow=16,SNR=1.5						
MJAR				LR	LR	17 01 26.1	
	comp=Z,149nm,20.4s,baz=40,slow=43						
MJAR	Matsushiro Arr	5.43	254	Pn	Pn	16 58 50.8	+0.4
MAT	Matsushiro	5.43	254	P	Pn	16 58 51.4	+1.0
MAT				S	Sn	16 59 39.4	-13
JOSM	Okushiri--Mats	5.54	315	P	Pn	16 58 52.0	+0.2
JTKR	Abashiri--Toko	5.75	354	P	Pn	16 58 52.5	-2.2
JTKR				*e*S	Sn	16 59 53.9	-5.8
JHR	Hokuryu	5.94	339	P	Pn	16 58 57.2	0.0
JHR				*e*S	Sn	17 00 02.2	-2.0
JKA	Kamikawa-asahi	6.08	346		Pn	16 58 58.5	-0.6
ASAJ	Asahikawa	6.08	346	Pn	Pn	16 58 58.5	-0.7
	1.5nm,0.3s,baz=209,slow=17,SNR=23						
ASAJ				Sn	Sn	17 00 03.0	-4.7
	0.0nm,0.3s,baz=264,slow=26,SNR=1.2						
JHJ	Hachijo jima 2	6.49	219	Pn	Pn	16 59 02.3	-2.5

	19nm,0.3s,baz=53,slow=23,SNR=2.1						
JHJ				Sn	Sn	17 00 10.9	-7.0
	21nm,0.3s,baz=92,slow=22,SNR=1.9						
USRK	**Ussuriysk Ar.**	**11.26**	**306**	Pn	**Pn**	**17 00 11.4**	**+1.1**
	baz=110,slow=14,SNR=17						
USRK				LR	LR	17 04 18.7	
	comp=Z,140nm,21.3s,baz=131,slow=36						
KSRS	**Korea Array**	**13.28**	**272**	Pn	**Pn**	**17 00 39.5**	**+1.7**
	0.1nm,0.3s,baz=84,slow=14,SNR=4.4						
KSRS				LR	LR	17 04 41.9	
	comp=Z,101nm,21.9s,baz=90,slow=32						
KLR	**Kul'dur**	**14.40**	**324**	Pn	**Pn**	**17 00 52.2**	**-0.9**
	0.1nm,0.3s,baz=151,slow=13,SNR=2.6						
KLR				LR	LR	17 06 30.0	
	comp=Z,82nm,18.4s,baz=134,slow=37						
MA2	**Magadan**	**21.70**	**8**	P	**P**	**17 02 20.4**	**+0.7**
	1.8nm,0.3s,baz=159,slow=12,SNR=2.4						
MA2	**Magadan**	**21.70**	**8**	IAmb	IAmb	17 02 31.5	
	comp=Z,9.4nm,0.8s						
SEY	**Seymchan**	**25.16**	**8**	P	**P**	**17 02 55.3**	**+1.6**
	comp=Z,4.3nm,0.8s,baz=182,slow=7.2,SNR=16						
YAK	**Yakutsk**	**25.55**	**344**	P	**P**	**17 02 59.1**	**+1.8**
	comp=Z,2.8nm,0.5s,baz=77,slow=0.8,SNR=4.1						
YAK	**Yakutsk**	**25.55**	**344**	IAmb	IAmb	17 03 07.7	
	comp=Z,14nm,0.6s						
SONM	**Songino Array**	**29.32**	**302**	P	**P**	**17 03 35.2**	**+3.8**
	comp=Z,0.6nm,0.6s,baz=76,slow=6.1,SNR=3.6						
SONM	**Songino Array**	**29.32**	**302**	P	**P**	**17 03 30.9**	**-0.5**
TLY	**Talaya**	**31.56**	**309**	LR	LR	17 17 04.3	
	comp=Z,78nm,21.7s,baz=108,slow=37						
ZALV	**Zalesovo Beam**	**43.05**	**311**	P	**P**	**17 05 30.2**	**+2.1**
	comp=Z,0.4nm,0.4s,baz=62,slow=7.4,SNR=3.9						
ZALV				LR	LR	17 24 47.0	
	comp=Z,50nm,18.2s,baz=16,slow=38						
ZALV	**Zalesovo Beam**	**43.05**	**311**	P	**P**	**17 05 28.8**	**+0.6**
MK31	**Makanchi Array**	**45.69**	**302**	P	**P**	**17 05 51.1**	**+1.6**
MKAR	**Makanchi Array**	**45.69**	**302**	P	**P**	**17 05 51.2**	**+1.7**
	comp=Z,0.9nm,0.8s,baz=88,slow=8.8,SNR=10						
MKAR	**Makanchi Array**	**45.69**	**302**	P	**P**	**17 05 51.7**	**+2.2**
ILAR	**Eielson Array**	**47.07**	**33**	P	**P**	**17 05 59.8**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=258,slow=6.7,SNR=7.5						
KURBB	**Kurchatov Arra**	**47.32**	**308**	P	**P**	**17 06 03.6**	**+1.5**
	comp=Z,1.0nm,0.6s,baz=81,slow=8.2,SNR=10						
WB0	**Warramunga Arr**	**58.51**	**191**	P	**P**	**17 07 23.9**	**-1.1**
WB0				IAmb	IAmb	17 07 25.5	
	comp=Z,5.9nm,1.0s						
WRA	**Warramunga Arr**	**58.69**	**191**	P	**P**	**17 07 24.7**	**-1.5**
	comp=Z,2.8nm,0.7s,baz=12,slow=7.3,SNR=22						
WRA	**Warramunga Arr**	**58.69**	**191**	P	**P**	**17 07 24.4**	**-1.8**
YKA	**Yellowknife Ar**	**61.44**	**31**	P	**P**	**17 07 44.6**	**0.0**
	comp=Z,0.4nm,0.8s,baz=299,slow=6.5,SNR=7.1						
ASAR	**Alice Springs**	**62.41**	**191**	P	**P**	**17 07 51.2**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=10,slow=6.3,SNR=14						
ASAR	**Alice Springs**	**62.41**	**191**	P	**P**	**17 07 49.7**	**-1.9**
FINES	**FINESS Array B**	**68.94**	**333**	LR	LR	17 45 22.8	
	comp=Z,36nm,18.1s,baz=352,slow=42						
KBZ	**Khabaz**	**72.07**	**312**	P	**P**	**17 08 54.8**	**+2.2**
	comp=Z,1.9nm,0.9s,baz=51,slow=4.8,SNR=5.7						
AKASG	**Malin Array Be**	**74.91**	**324**	P	**P**	**17 09 10.0**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=44,slow=6.0,SNR=2.0						
PDAR	**Pinedale Array**	**74.95**	**47**	P	**P**	**17 09 10.2**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=267,slow=3.0,SNR=3.8						
PDAR	**Pinedale Array**	**74.95**	**47**	P	**P**	**17 09 09.5**	**-0.4**
TXAR	**Lajitas Array**	**87.31**	**54**	P	**P**	**17 10 17.2**	**+1.4**
	comp=Z,0.5nm,0.8s,baz=321,slow=1.6,SNR=3.4						

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*IDC **22** 16:57:48.3±1.1, 4°.94S×149°.10E, h0^{km}, mb3.9/6, mb1 4.1/8, mb1mx3.7/48, mbtmp3.9/8, ML1.7/1, MS3.3/4, Ms1 3.3/4, ms1mx2.8/36, Error ellipse: s-maj=37.6km s-min=19.0km az=122.0*

ISC 22 16:57:53.3±0.9**, 4°.9S**±0°.1×**149°.2E**±0°.1**, h35^{km}, n13, σ1^{s}07**/10**, mb3.7**/5**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.92**	**78**	Pn	**Pn**	**16 58 37.5**	**+0.1**
	11nm,0.3s,baz=124,slow=2.2,SNR=5.4						
PMG	**Port Moresby**	**4.88**	**204**	Pn	**Pn**	**16 59 04.3**	**+0.1**
	2.2nm,0.3s,baz=71,slow=8.6,SNR=8.2						
PMG				Sn	**Sn**	**17 00 00.9**	**+1.4**
	6.8nm,0.3s,baz=23,slow=16,SNR=9.1						
HNR	**Honiara**	**11.60**	**113**	LR	LR	17 04 16.2	
	comp=Z,57nm,21.4s,baz=302,slow=33						
WRA	**Warramunga Arr**	**20.76**	**223**	P	**P**	**17 02 29.7**	**-1.7**
	7.6nm,0.6s,baz=48,slow=11,SNR=92						
ASAR	**Alice Springs**	**23.74**	**217**	P	**P**	**17 03 01.2**	**-1.3**
	4.2nm,0.6s,baz=52,slow=9.0,SNR=138						
DZM	**Mont Dzumac**	**23.89**	**137**	LR	LR	17 10 20.1	
	comp=Z,147nm,21.3s,baz=200,slow=31						
FITZ	**Fitzroy Crossi**	**26.46**	**238**	P	**P**	**17 03 26.8**	**-0.6**
	3.8nm,0.5s,baz=48,slow=9.5,SNR=11						
KAPI	**Kappang**	**29.30**	**269**	LR	LR	17 16 42.7	
	comp=Z,26nm,19.7s,baz=234,slow=39						
SONM	**Songino Array**	**64.54**	**330**	P	**P**	**17 08 27.8**	**+0.8**
	0.6nm,0.8s,baz=140,slow=7.0,SNR=3.6						
MKAR	**Makanchi Array**	**78.05**	**320**	P	**P**	**17 09 49.0**	**+0.4**
	0.3nm,0.8s,baz=100,slow=5.1,SNR=2.6						
ILAR	**Eielson Array**	**83.66**	**23**	P	**P**	**17 10 17.6**	**-0.5**
	0.3nm,0.8s,baz=224,slow=5.0,SNR=2.2						
ARU	**Arti**	**94.39**	**326**	LR	LR	17 53 33.0	
	comp=Z,35nm,18.7s,baz=177,slow=35						
TORD	**Torodi Ar. Bea**	**146.88**	**287**	PKPbc	**PKPbc**	**17 17 33.3**	**+0.2**
	0.5nm,0.8s,baz=46,slow=4.2,SNR=3.0						

IDC 22 17:00:45.9±1.9**, 19°.04S**×**70°.82W, h0^{km}, mb3.9**/2**, mb1 3.9**/4**, mb1mx3.6**/32**, mbtmp3.7**/4**, ML3.4**/2**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.6**/22**, Error ellipse: s-maj=54.3km s-min=38.3km az=53.0, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.75**	**44**	Pn	Pg	17 02 00.9	+3.1
	1.0nm,0.3s,baz=192,slow=6.6,SNR=17						
LVC	**Limon Verde**	**3.98**	**154**	Pn	Pn	17 01 49.1	+0.6
	6.1nm,0.3s,baz=318,slow=9.1,SNR=7.0						
LVC				Lg	Lg	17 02 39.4	
	13nm,0.3s,baz=205,slow=16,SNR=8.2						
LVC				LR	LR	17 03 21.9	
	comp=Z,205nm,20.4s,baz=326,slow=39						
SIV	**San Ignacio**	**9.78**	**73**	Pn	Pn	17 03 10.0	+2.1
	0.2nm,0.3s,baz=257,slow=16,SNR=1.8						
TORD	**Torodi Ar. Bea**	**78.25**	**72**	P	P	17 12 47.1	-1.0
	1.0nm,0.7s,baz=241,slow=4.6,SNR=4.9						
YKA	**Yellowknife Ar**	**88.29**	**341**	P	P	17 13 39.6	+0.7
	0.5nm,0.7s,baz=138,slow=5.4,SNR=6.0						
MKAR	**Makanchi Array**	**144.61**	**32**	PKP	PKPbc	17 20 23.4	+0.1
	0.7nm,0.8s,baz=346,slow=4.0,SNR=5.7						

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*IDC **22** 17:07:58.9±7.1, 9°.78N×92°.52E, h0^{km}, mb3.8/7, mb1 3.9/8, mb1mx3.5/49, mbtmp3.8/8, ML3.2/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/38, Error ellipse: s-maj=148.9km s-min=40.6km az=153.0*

ISC 22 17:07:46.8±3.6**, 7°.7N**±0°.4×**93°.9E**±0°.3**, h20^{km}, n19, σ1^{s}29**/13**, mb3.8**/7**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**11.76**	**24**	Pn	**Pn**	**17 10 33.9**	**+0.4**
	0.1nm,0.3s,baz=211,slow=15,SNR=1.8						
BRDH	**Bariadhala**	**15.07**	**352**	LR	LR	17 17 39.1	
	comp=Z,72nm,18.1s,baz=158,slow=45						
RAMN	**Ramite**	**20.39**	**341**	*e*P	**P**	**17 12 22.5**	**-0.3**
	19nm,0.7s						
TAPN	**Taplejung**	**20.43**	**344**	*e*P	**P**	**17 12 22.9**	**-0.4**
	7.5nm,0.4s						
PKI	**Pulchoki**	**21.36**	**339**	*e*P	**P**	**17 12 33.9**	**+0.5**
	3.0nm,0.5s						
PKIN	**Phulchoki**	**21.38**	**339**	*e*P	**P**	**17 12 33.9**	**+0.5**
	3.7nm,0.6s						
DMN	**Daman**	**21.51**	**338**	*e*P	**P**	**17 12 35.8**	**+0.9**
	2.5nm,0.3s						
GUN	**Gumba**	**21.51**	**340**	*e*P	**P**	**17 12 35.7**	**+0.7**
	12nm,0.8s						
DANN	**Dangsing**	**22.69**	**336**	*e*P	**P**	**17 12 48.8**	**+1.2**
	7.2nm,0.5s						
H08S3	**Diego Garcia H**	**26.25**	**235**	T	T	17 39 52.0	
	baz=55,slow=75,SNR=26						
H08S2	**Diego Garcia H**	**26.25**	**235**	T	T	17 39 54.2	
	baz=55,slow=75,SNR=16						
H08S1	**Diego Carcia H**	**26.27**	**235**	T	T	17 39 53.4	
	baz=55,slow=75,SNR=14						
MKAR	**Makanchi Array**	**40.23**	**348**	P	P	17 15 18.1	-4.0
	0.7nm,0.7s,baz=159,slow=7.3,SNR=9.7						
SONM	**Songino Array**	**41.39**	**13**	P	**P**	**17 15 33.1**	**+1.3**
	1.0nm,1.0s,baz=191,slow=6.9,SNR=5.9						
GEYT	**Alibeck**	**44.21**	**318**	P	P	17 15 49.3	-5.5
	0.7nm,0.6s,baz=156,slow=7.3,SNR=3.0						
ZALV	**Zalesovo Beam**	**46.72**	**353**	P	**P**	**17 16 11.0**	**-3.2**
	0.9nm,0.4s,baz=182,slow=7.9,SNR=6.1						
BRTR	**Keskin Array B**	**62.40**	**311**	P	**P**	**17 18 09.3**	**+0.6**
	0.6nm,0.8s,baz=100,slow=7.5,SNR=3.2						
FINES	**FINESS Array B**	**72.78**	**332**	P	**P**	**17 19 13.3**	**-0.3**
	1.3nm,0.5s,baz=101,slow=8.0,SNR=10.0						
ARCES	**ARCESS Array B**	**75.37**	**340**	P	**P**	**17 19 29.3**	**+0.6**
	1.5nm,0.8s,baz=23,slow=14,SNR=3.7						

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*IDC **22** 17:08:00.8±1.6, 19°.59S×70°.73W, h0^{km}, mb4.2/3, mb1 4.2/5, mb1mx3.8/28, mbtmp4.1/5, ML3.4/2, MS3.5/3, Ms1 3.5/3, ms1mx2.9/28, Error ellipse: s-maj=43.7km s-min=19.3km az=68.0*

*NEIC **22** 17:08:03.6, 19°.77S×70°.84W, h23^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$4.70; M$_{\theta\theta}$-1.24; M$_{\phi\phi}$-3.46; M$_{r\theta}$4.17; M$_{\theta\phi}$2.32; M$_{\phi r}$-7.39; Fault plane solution: M$_{0}$9.76000×10^{14} NP1:φ$_{s}$325.12000°, δ14.82000°, λ85.02000°. NP2:φ$_{s}$150.26000°, δ75.24000°, λ91.31000°. Principal axes: T 9.6483, Plg60.0000°, Azm62.0000°; N 0.2116, Plg1.0000°, Azm330.0000°; P -9.8599, Plg30.0000°, Azm239.0000°;*

*NEIC **22** 17:08:03.3±2.5, 19°.78S±0°.04×70°.88W±0°.05, h22^{km}±4^{km}, mb4.2/4, Mwr3.9/37 Error ellipse: s-maj=6.9km s-min=5.6km az=53.0*

*GUC **22** 17:08:04.6±0.8, 19°.75S×70°.80W, h44^{km}±3^{km}, ML3.9*

ISC 22 17:08:02.7±0.7**, 19°.75S**±0°.03×**70°.87W**±0°.06**, h21^{km}**±4^{km}**, n51, σ1^{s}17**/55**, mb4.3**/4**, 5C-6D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.72**	**78**	⇓*i*P	**Pn**	**17 08 16.9**	**-0.8**
PSGC				*i* S	**Sn**	**17 08 26.4**	**-1.9**
PSGCX	**Pisagua**	**0.72**	**78**		**Pb**	**17 08 16.4**	**-0.3**
TA01	**Diego Aracena**	**1.04**	**141**	*e*P	**Pn**	**17 08 22.4**	**+0.5**
TA01				⇑*i*S	**Sn**	**17 08 36.0**	**+0.2**
PB11	**IPOC Station P**	**1.15**	**91**	⇓*i*P	**Pb**	**17 08 23.9**	**0.0**
PB11				*i* S	**Sn**	**17 08 38.5**	**-0.3**
PB11				IAML		17 08 41.7	
	comp=N,5μm,0.6s						
PB11	**IPOC Station P**	**1.15**	**91**		**Pb**	**17 08 23.9**	**0.0**
PB11					**Sn**	**17 08 38.9**	**+0.2**
PB12	**IPOC Station P**	**1.25**	**24**	⇓*i*P	**Pb**	**17 08 25.6**	**0.0**
PB12				*i* S	**Sb**	**17 08 41.9**	**+0.7**
PB12				IAML		17 08 49.1	
	comp=E,3μm,0.5s						
PB12	**IPOC Station P**	**1.25**	**24**		**Pb**	**17 08 25.7**	**+0.1**
PATCX	**Punta Patache**	**1.26**	**148**	⇑*i*P	**Pb**	**17 08 25.7**	**-0.1**
PATCX				*i* S	**Sb**	**17 08 42.2**	**+0.6**
PATCX				IAML		17 08 44.3	
	comp=E,1μm,0.5s						
PATCX	**Punta Patache**	**1.26**	**148**		**Pb**	**17 08 26.2**	**+0.5**
AP01	**Chacalluta**	**1.46**	**20**	⇑*i*P	**Pb**	**17 08 28.9**	**-0.3**
AP01				*i* S	**Sb**	**17 08 47.1**	**-0.3**
AP01				IAML		17 08 51.3	
	comp=E,11μm,0.3s						
GO01	**Chusmiza**	**1.58**	**87**	⇓*e*P	**Pb**	**17 08 31.4**	**-0.1**
GO01				*i* S	**Sb**	**17 08 51.5**	**+0.3**
GO01				IAML		17 08 54.1	
	comp=N,8μm,0.2s						
GO01	**Chusmiza**	**1.58**	**87**		**Pb**	**17 08 31.4**	**-0.1**
PB08	**IPOC Station P**	**1.66**	**104**	⇓*i*P	**Pb**	**17 08 32.5**	**-0.3**
PB08				*i* S	**Sb**	**17 08 53.5**	**0.0**
PB08				IAML		17 09 00.6	
	comp=E,809nm,0.5s						
PB02	**IPOC Station P**	**1.81**	**150**	⇓*i*P	**Pn**	**17 08 34.1**	**+1.4**
PB02				*i* S	**Sn**	**17 08 56.1**	**+1.1**
PB02				IAML		17 09 09.6	
	comp=E,2μm,0.6s						
PB01	**IPOC Station P**	**1.83**	**135**	⇑*i*P	**Pb**	**17 08 34.5**	**-0.9**
PB01				*i* S	**Sb**	**17 08 56.9**	**-1.1**
PB01	**IPOC Station P**	**1.83**	**135**		**Pb**	**17 08 34.3**	**-1.2**
PB16	**IPOC Station P**	**1.91**	**43**	⇑*i*P	**Pb**	**17 08 36.4**	**-0.8**
PB16				*i* S	**Sb**	**17 09 01.5**	**+0.6**
PB16				IAML		17 09 03.6	
	comp=N,3μm,0.3s						
PB16	**IPOC Station P**	**1.91**	**43**		**Pb**	**17 08 36.2**	**-1.0**
PB07	**IPOC Station P**	**2.17**	**155**	*e*P	**Pn**	**17 08 39.0**	**+1.2**
PB07				*i* S	**Sn**	**17 09 04.2**	**+0.1**
PB07				IAML		17 09 19.8	
	comp=N,564nm,0.6s						
PB07	**IPOC Station P**	**2.17**	**155**		**Pn**	**17 08 39.0**	**+1.2**
PB09	**IPOC Station P**	**2.54**	**143**		**Pn**	**17 08 44.9**	**+2.0**
PB04	**IPOC Station P**	**2.66**	**165**		**Pn**	**17 08 44.9**	**+0.5**
LVC	**Limon Verde**	**3.38**	**148**	Pn	**Pn**	**17 08 57.3**	**+2.7**
	comp=N,1.8nm,0.3s,baz=24,slow=7.0,SNR=14						
LVC				Lg	Lg	17 09 50.0	
	comp=N,22nm,0.3s,baz=228,slow=22,SNR=14						
LVC	**Limon Verde**	**3.38**	**148**		**Pn**	**17 08 57.0**	**+2.5**
PB15	**IPOC Station P**	**3.68**	**159**		**Pn**	**17 08 58.8**	**+0.3**
PB10	**IPOC Station P**	**3.75**	**176**		**Pn**	**17 08 59.0**	**-0.4**
LPAZ	**La Paz**	**4.32**	**38**	Pn	Pn	17 09 12.6	+4.9
	comp=N,1.6nm,0.3s,baz=218,slow=8.8,SNR=21						
LPAZ	**La Paz**	**4.32**	**38**		**Pn**	**17 09 12.3**	**+4.6**
PB14	**IPOC Station P**	**4.87**	**175**		**Pn**	**17 09 14.2**	**-0.8**
GO02	**Mina Guanaco**	**5.51**	**168**		**Pn**	**17 09 24.1**	**+0.3**
GO03	**Copiap**	**7.83**	**176**	Pn	**Pn**	**17 09 55.1**	**-0.2**
SIV	**San Ignacio**	**10.05**	**70**	Pn	**Pn**	**17 10 26.0**	**+0.1**
	comp=N,0.8nm,0.3s,baz=260,slow=9.3,SNR=10						
SIV				LR	LR	17 14 53.8	
	comp=N,198nm,18.9s,baz=289,slow=42						
SAML	**Samuel**	**13.07**	**36**	Pn	**Pn**	**17 11 08.6**	**+1.4**
PLCA	**Paso Flores**	**20.91**	**179**	P	**P**	**17 12 42.3**	**-1.6**
PLCA				IAmb	IAmb	17 12 47.8	
	comp=Z,7.6nm,1.3s						
PTGA	**Pitinga**	**21.71**	**31**	P	**P**	**17 12 51.3**	**-1.2**
	comp=Z,8.3nm,0.3s,baz=325,slow=23,SNR=28						
PTGA	**Pitinga**	**21.71**	**31**	P	**P**	**17 12 51.6**	**-0.9**
PTGA				IAmb	IAmb	17 12 52.2	
	comp=Z,6.6nm,0.7s						
RUSC	**La Rusia**	**25.58**	**355**	P	**P**	**17 13 30.6**	**-0.3**
RCBR	**Riachuelo**	**36.70**	**73**	P	**P**	**17 15 07.3**	**-1.3**
RCBR				IAmb	IAmb	17 15 17.4	
	comp=Z,13nm,1.0s						
TEIG	**Tepich**	**43.24**	**336**	LR	LR	17 33 17.5	
	comp=Z,48nm,18.7s,baz=127,slow=35						
PDAR	**Pinedale Array**	**71.69**	**331**	LR	LR	17 51 18.0	
	comp=Z,34nm,19.0s,baz=5.5,slow=36						
TORD	**Torodi Ar. Bea**	**78.53**	**72**	P	**P**	**17 20 02.5**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=256,slow=4.5,SNR=6.4						
YKA	**Yellowknife Ar**	**88.94**	**341**	P	**P**	**17 20 56.1**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=131,slow=5.6,SNR=7.2						
H11S2	**WAKE ISLAND Hy**	**125.81**	**279**	T	T	19 46 18.9	
	baz=100,slow=74,SNR=23						
H11S1	**WAKE ISLAND Hy**	**125.82**	**279**	T	T	19 46 22.7	
	baz=100,slow=74,SNR=15						
H11S3	**WAKE ISLAND Hy**	**125.83**	**279**	T	T	19 46 20.2	
	baz=100,slow=74,SNR=14						
H11N3	**WAKE ISLAND Hy**	**125.86**	**280**	T	T	19 46 19.8	
	baz=100,slow=74,SNR=7.7						
H11N2	**WAKE ISLAND Hy**	**125.87**	**280**	T	T	19 46 24.4	
	baz=100,slow=74,SNR=7.3						
H11N1	**WAKE ISLAND Hy**	**125.87**	**280**	T	T	19 46 22.0	
	baz=100,slow=74,SNR=4.2						
MKAR	**Makanchi Array**	**145.24**	**33**	PKPbc	**PKPdf**	**17 27 40.0**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=293,slow=3.5,SNR=11						
MKAR	**Makanchi Array**	**145.24**	**33**		**PKPdf**	**17 27 39.7**	**+0.9**
SONM	**Songino Array**	**151.90**	**4**	PKPab	**PKPab**	**17 28 05.8**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=5.7,slow=5.8,SNR=1.9						

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*JMA **22** 17:09:54.2, 37°.59N×141°.73E, h47^{km}±1^{km}, M3.7*

*IDC **22** 17:09:57.5±3.8, 37°.62N×141°.64E, h84^{km}±35^{km}, mb3.1/5, mb1 3.3/7, mb1mx3.1/44, mbtmp3.4/7, Error ellipse: s-maj=36.6km s-min=23.7km az=115.0*

ISC 22 17:09:53.5±1.8**, 37°.57N**±0°.06×**141°.8E**±0°.1**, h46^{km}**±16^{km}**, n27, σ0^{s}96**/35**, mb3.4**/5**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
JMST	**Minamisoumatoc**	**0.75**	**282**	P	**Pn**	**17 10 07.6**	**-0.1**
JMST				S	**Sn**	**17 10 17.1**	**-0.9**
JFK	**Kawauchi**	**0.77**	**255**	P	**Pn**	**17 10 08.1**	**0.0**
JFK				S	**Sn**	**17 10 17.9**	**-0.7**
JIKH	**Ishinomakikobu**	**0.79**	**340**	P	**Pn**	**17 10 08.6**	**+0.3**
JIKH				S	**Sn**	**17 10 18.6**	**-0.4**
JMM	**Marumori**	**0.86**	**291**	P	**Pn**	**17 10 09.2**	**0.0**
JMM				*e*S	**Sn**	**17 10 19.9**	**-0.8**
ONAJ	**Iwakimizuishiy**	**0.93**	**240**	P	**Pn**	**17 10 10.3**	**+0.1**
ONAJ				S	**Sn**	**17 10 21.8**	**-0.7**
JIO	**Ouri**	**0.96**	**338**	P	**Pn**	**17 10 10.9**	**+0.4**
JIO				S	**Sn**	**17 10 22.5**	**-0.6**
JFT	**Otama**	**1.17**	**268**	P	**Pn**	**17 10 14.2**	**+0.7**
JFT				S	**Sn**	**17 10 28.6**	**+0.3**
JOU	**Okura**	**1.21**	**312**	P	**Pn**	**17 10 14.2**	**+0.2**
JOU				S	**Sn**	**17 10 29.4**	**+0.2**
JKMT	**Kesennumamotoy**	**1.27**	**348**	P	**Pn**	**17 10 15.4**	**+0.6**
JMK	**Ichinoseki**	**1.46**	**342**	P	**Pn**	**17 10 18.2**	**+0.8**
JMK				*e*S	**Sn**	**17 10 35.9**	**+0.6**
JYS	**Shirataka**	**1.53**	**296**	P	**Pn**	**17 10 19.1**	**+0.8**
JYS				S	**Sn**	**17 10 38.1**	**+1.1**
JFY	**Yanaizu**	**1.68**	**265**	P	**Pn**	**17 10 20.9**	**+0.4**
JFY				S	**Sn**	**17 10 40.7**	**-0.1**
JYK	**Kaneyama**	**1.77**	**320**	P	**Pn**	**17 10 22.3**	**+0.7**
JYK				*e*S	**Sn**	**17 10 43.5**	**+0.6**
MJAR	**Matsushiro Arr**	**3.06**	**252**	P	**Pn**	**17 10 40.2**	**+0.8**
	0.3nm,0.3s,baz=80,slow=16,SNR=21						
MJAR				S	**Sn**	**17 11 17.5**	**+2.9**
	0.3nm,0.3s,baz=247,slow=30,SNR=4.6						
MAT	**Matsushiro**	**3.06**	**252**	P	**Pn**	**17 10 41.2**	**+1.9**
MAT				S	**Sn**	**17 11 14.1**	**-0.6**
USRK	**Ussuriysk Ar.**	**9.96**	**315**	P	**Pn**	**17 12 15.2**	**+1.3**
	baz=123,slow=14,SNR=4.7						
H11N2	**WAKE ISLAND Hy**	**28.16**	**122**	T	T	17 46 04.9	
	baz=315,slow=76,SNR=22						
H11N1	**WAKE ISLAND Hy**	**28.16**	**122**	T	T	17 46 05.0	
	baz=315,slow=76,SNR=18						
H11N3	**WAKE ISLAND Hy**	**28.17**	**122**	T	T	17 46 05.7	
	baz=315,slow=76,SNR=21						
H11S1	**WAKE ISLAND Hy**	**28.89**	**124**	T	T	17 47 06.1	
	baz=129,slow=74,SNR=8.1						
H11S3	**WAKE ISLAND Hy**	**28.89**	**124**	T	T	17 47 03.9	
	baz=317,slow=74,SNR=6.8						
H11S2	**WAKE ISLAND Hy**	**28.91**	**124**	T	T	17 47 06.8	
	SNR=7.3						
MKAR	**Makanchi Array**	**44.11**	**302**	P	**P**	**17 17 56.1**	**-1.0**
	0.3nm,0.7s,baz=86,slow=8.9,SNR=4.2						
ILAR	**Eielson Array**	**48.88**	**33**	P	**P**	**17 18 35.2**	**+1.0**
	0.3nm,0.7s,baz=285,slow=7.2,SNR=2.1						
WRA	**Warramunga Arr**	**57.63**	**188**	P	**P**	**17 19 38.8**	**-0.2**
	0.4nm,0.7s,baz=8.0,slow=7.7,SNR=2.7						
YKA	**Yellowknife Ar**	**63.19**	**30**	P	**P**	**17 20 17.0**	**+0.5**
	0.1nm,0.5s,baz=297,slow=5.5,SNR=3.9						
FINES	**FINESS Array B**	**68.49**	**332**	P	**P**	**17 20 48.7**	**-1.9**
	1.2nm,0.7s,baz=39,slow=9.0,SNR=3.4						

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*IDC **22** 17:10:41.5±5.5, 1°.97N×127°.02E, h75^{km}±58^{km}, mb3.4/5, mb1 3.6/7, mb1mx3.3/40, mbtmp3.7/7, ML3.6/2, Error ellipse: s-maj=71.4km s-min=18.8km az=75.0*

*DJA **22** 17:10:41.5±0.9, 2°N±4°×12°7E±°, h26^{km}±11^{km}, M3.9/9, mb4.1/2, MLv3.9/9*

ISC 22 17:10:37.1±1.1**, 2°.37N**±0°.09×**127°.5E**±0°.1**, h35^{km}, n14, σ1^{s}88**/14**, mb3.7**/5**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.60**	**186**	P	**Pn**	**17 11 04.3**	**+1.4**
TNTI				S	**Sn**	**17 11 23.3**	**+1.0**
LBMI	**Labuha**	**2.99**	**181**	P	**Pn**	**17 11 24.1**	**+2.0**
KMSI	**Cibinong**	**3.97**	**243**	P	**Pn**	**17 11 36.2**	**+0.6**
SANI	**Sanana**	**4.65**	**199**	P	**Pn**	**17 11 44.6**	**-0.4**
SIJI	**Sorong**	**4.93**	**131**	P	Pn	17 11 55.7	+6.9
	0.7nm,0.3s,baz=260,slow=22,SNR=7.2						
NLAI	**Namlea**	**5.59**	**184**	P	**Pn**	**17 12 01.2**	**+3.4**
	0.2nm20nm,1.3s						
LUWI	**Luwuk**	**5.84**	**235**	P	**Pn**	**17 12 02.9**	**+1.6**
	0.2nm19nm,0.7s						
APSI	**Ampana**	**6.72**	**241**	P	**Pn**	**17 12 15.0**	**+1.5**
FITZ	**Fitzroy Crossi**	**20.43**	**185**	P	**P**	**17 15 09.0**	**-2.5**
	0.3nm,0.3s,baz=18,slow=9.9,SNR=8.7						
WRA	**Warramunga Arr**	**23.16**	**164**	P	**P**	**17 15 39.0**	**-1.8**
	1.5nm,0.5s,baz=340,slow=11,SNR=26						
ASAR	**Alice Springs**	**26.61**	**167**	P	**P**	**17 16 10.8**	**-1.7**
	0.5nm,0.3s,baz=347,slow=7.6,SNR=24						
STKA	**Stephens Creek**	**36.58**	**160**	P	**P**	**17 17 39.0**	**-1.0**
	1.3nm,0.4s,baz=340,slow=8.0,SNR=8.1						
SONM	**Songino Array**	**48.83**	**341**	P	**P**	**17 19 20.8**	**+1.5**
	0.2nm,0.5s,baz=168,slow=9.9,SNR=2.2						
MKAR	**Makanchi Array**	**59.12**	**325**	P	**P**	**17 20 34.0**	**-0.3**
	0.3nm,0.5s,baz=121,slow=6.5,SNR=5.0						

PRU 22 17:10:46.8±0.0**, 51°.47N**×**16°.13E, h0^{km}, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.64**	**171**	*e*Pg	Pg	17 10 58.8	-0.1
KSP				*e*Sg	Sg	17 11 07.9	+0.7
CHVC	**Chvalec**	**0.88**	**183**	*e*PG	Pg	17 11 03.7	0.0
CHVC				*e*SG	Sg	17 11 16.1	+0.9
OSTC	**Ostas**	**0.92**	**177**	*e*PG	Pg	17 11 04.3	0.0
OSTC				*e*SG	Sg	17 11 17.1	+0.9
UPC	**Upice**	**0.97**	**184**	*e*PG	Pg	17 11 05.5	+0.2
UPC				*e*SG	Sg	17 11 18.3	+0.5
	comp=Z,12nm,0.8s						
DPC	**Dobruska-Polom**	**1.13**	**174**	*e*PG	Pg	17 11 07.6	-0.8
DPC				*e*SG	Sg	17 11 22.6	-0.4
	comp=Z,2.7nm,0.3s						
PVCC	**Panska Ves**	**1.36**	**227**	*e*PG	Pg	17 11 12.2	-0.7
PVCC				*e*SG	Sb	17 11 30.9	-0.3
	comp=Z,14nm,0.2s						
KRLC	**Kraliky**	**1.46**	**163**	*e*PG	Pn	17 11 13.5	-0.9
KRLC				*e*SG	Sg	17 11 32.8	-0.7
BRG	**Berggiesshubel**	**1.50**	**247**	PG	Pn	17 11 14.3	-0.6
BRG				SG	Sg	17 11 34.8	-0.2
	4.8nm,0.4s						
GOPC	**GO Pecny, Ondr**	**1.78**	**209**	*e*SG	Sg	17 11 43.7	-0.1
PRU	**Pruhonice**	**1.79**	**215**	*e*SG	Sb	17 11 43.7	+0.2
MORC	**Moravsky Berou**	**1.92**	**151**	*e*PN	Pn	17 11 19.6	-1.2
MORC				*e*SG	Sn	17 11 45.2	-0.4
CLL	**Collm**	**1.97**	**266**	*e*Pg	Pg	17 11 24.0	-0.5
CLL				*e*Sg	Sb	17 11 49.0	+0.5
VRAC	**Vranov**	**2.19**	**172**	*e*SG	Sb	17 11 54.8	0.0
NKC	**Novy Kostel**	**2.64**	**243**	*e*SG	Sg	17 12 12.1	+0.5
	comp=Z,5.0nm,0.5s						
KHC	**Kasperske Hory**	**2.86**	**216**	*e*PG	Pb	17 11 38.6	-0.1
KHC				*e*SG	Sg	17 12 17.1	-1.4

BUC 22 17:12:45.5±0.3**, 45°.51N**×**24°.59E, h5^{km}, ml1.0**/2**, 12C-10D, Error ellipse: s-maj=2.9km s-min=1.5km az=173.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
ARR	**Arges**	**0.15**	**168**	⇑P	Pg	17 12 48.5	+0.1
ARR				⇑S	Sg	17 12 51.2	+0.8
ARR	**Arges**	**0.15**	**168**	⇑P	Pg	17 12 48.5	+0.1
ARR				⇑S	Sg	17 12 51.2	+0.8
VOIR		**0.33**	**103**	⇓P	Pg	17 12 51.5	-0.5
VOIR				⇑S	Sg	17 12 56.1	-0.2
VOIR		**0.33**	**103**	⇓P	Pg	17 12 51.5	-0.5
VOIR				⇑S	Sg	17 12 56.1	-0.2
LOT	**Lotru**	**0.58**	**264**	⇓P	Pg	17 12 56.6	0.0
LOT				⇑S	Sg	17 13 04.0	-0.2
LOT	**Lotru**	**0.58**	**264**	⇓P	Pg	17 12 56.6	0.0
LOT				⇑S	Sg	17 13 04.0	-0.2
DOPR	**Dopca**	**0.72**	**50**	⇑P	Pb	17 12 60.0	-0.6
DOPR				⇓S	Sg	17 13 09.2	+0.5
DOPR	**Dopca**	**0.72**	**50**	⇑P	Pb	17 12 60.0	-0.6
DOPR				⇓S	Sg	17 13 09.2	+0.5
MLR	**Muntele Rosu**	**0.95**	**91**	⇑S	Sb	17 13 17.6	+0.1
MLR	**Muntele Rosu**	**0.95**	**91**	⇑S	Sb	17 13 17.6	+0.1
GZR	**Gura Zlata**	**1.28**	**265**	⇓P	Pb	17 13 10.8	+0.7
GZR				⇓S	Sn	17 13 28.2	+0.5
GZR	**Gura Zlata**	**1.28**	**265**	⇓P	Pb	17 13 10.8	+0.7
GZR				⇓S	Sn	17 13 28.2	+0.5

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*SJA **22** 17:21:49.7±0.7, 19°.72S×71°.02W, h20^{km}, ML3.5, MW3.8*

*IDC **22** 17:21:50.0±2.1, 19°.56S×70°.71W, h0^{km}, mb3.7/3, mb1 3.8/4, mb1mx3.6/27, mbtmp3.6/4, MS3.4/1, Ms1 3.4/1, ms1mx2.6/35, Error ellipse: s-maj=63.0km s-min=20.7km az=71.0*

*GUC **22** 17:21:53.5±0.8, 19°.72S×70°.91W, h43^{km}±3^{km}, ML3.4*

ISC 22 17:21:50.8±2.1**, 19°.70S**±0°.03×**70°.99W**±0°.07**, h13^{km}**±13^{km}**, n36, σ0^{s}99**/49**, mb3.7**/3**, 7C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.83	83	⇓iP	Pb	17 22 06.9	-0.1
PSGC				eS	Sb	17 22 17.5	-0.6
PSGC				IAML		17 22 19.6	
	comp=E,1µm,0.7s						
PSGCX	Pisagua	0.83	83	i P	Pb	17 22 07.0	-0.1
PSGCX				IAML		17 22 20.2	
	comp=Z,897nm,0.5s						
TA01	Diego Aracena	1.15	139	⇑iP	Pn	17 22 12.7	0.0
TA01				eS	Sb	17 22 27.2	-0.3
TA01				IAML		17 22 31.8	
	comp=E,2µm,0.6s						
PB12	IPOC Station P	1.25	30	⇑iP	Pb	17 22 14.7	+0.5
PB12				i S	Sg	17 22 31.4	+0.3
PB12				IAML		17 22 35.0	
	comp=N,1µm,0.5s						
PB12	IPOC Station P	1.25	30	i P	Pb	17 22 14.7	+0.5
PB12				⇓eS	Sn	17 22 30.7	0.0
PB12				IAML		17 22 34.6	
	comp=Z,625nm,0.5s						
PB11	IPOC Station P	1.26	93	⇓iP	Pn	17 22 14.3	+0.1
PB11				i S	Sb	17 22 30.6	-0.1
PB11				IAML		17 22 32.4	
	comp=N,2µm,0.4s						
PB11	IPOC Station P	1.26	93	i P	Pn	17 22 14.3	+0.1
PB11				eS	Sb	17 22 30.4	-0.4
PB11				IAML		17 22 31.4	
	comp=Z,1µm,0.4s						
PATCX	Punta Patache	1.37	145	⇑iP	Pn	17 22 15.8	+0.1
PATCX				eS	Sb	17 22 34.0	+0.2
PATCX	Punta Patache	1.37	145	i P	Pn	17 22 15.8	+0.1
PATCX				eS	Sg	17 22 35.6	+0.6
PATCX				IAML		17 22 43.1	
	comp=Z,513nm,0.5s						
AP01	Chacalluta	1.46	25	⇑iP	Pb	17 22 18.4	+0.7
AP01				eS	Sb	17 22 37.1	+1.0
GO01	Chusmiza	1.70	89	⇓iP	Pb	17 22 21.9	-0.3
GO01				eS	Sb	17 22 43.4	-0.2
GO01				IAML		17 22 45.2	
	comp=N,2µm,0.2s						
PB08	IPOC Station P	1.79	105	⇑iP	Pn	17 22 22.5	+0.8
PB08				i S	Sb	17 22 45.4	-0.8
PB08				IAML		17 22 56.9	
	comp=E,538nm,0.8s						
PB08	IPOC Station P	1.79	105	i P	Pn	17 22 22.5	+0.8
PB08				IAML		17 22 54.8	
	comp=Z,358nm,0.6s						
PB02	IPOC Station P	1.92	148	⇓iP	Pn	17 22 23.9	+0.7
PB02				eS	Sn	17 22 47.6	+0.3
PB02				IAML		17 22 57.7	
	comp=N,734nm,0.6s						
PB02	IPOC Station P	1.92	148	i P	Pn	17 22 23.7	+0.5
PB02				IAML		17 22 59.7	
	comp=Z,498nm,0.9s						
PB01	IPOC Station P	1.95	134	⇑iP	Pn	17 22 24.3	+0.7
PB01				eS	Sn	17 22 47.7	-0.3
PB01				IAML		17 22 59.7	
	comp=E,486nm,0.8s						
PB01	IPOC Station P	1.95	134	i P	Pn	17 22 24.4	+0.8
PB01				IAML		17 22 59.4	
	comp=Z,247nm,0.8s						
PB16	IPOC Station P	1.95	46	⇑iP	Pb	17 22 25.6	-1.0
PB16				i S	Sb	17 22 50.9	-0.1
PB16				IAML		17 22 54.8	
	comp=N,775nm,0.5s						
PB16	IPOC Station P	1.95	46	i P	Pb	17 22 25.6	-1.0
PB16				IAML		17 22 57.0	
	comp=Z,972nm,0.4s						
PB07	IPOC Station P	2.27	153	i P	Pn	17 22 28.5	+0.4
PB07				IAML		17 23 09.4	
	comp=Z,317nm,0.7s						
PB03	IPOC Station P	2.61	154	i P	Pn	17 22 33.1	+0.3
PB03				IAML		17 23 23.0	
	comp=Z,166nm,0.8s						
PB09	IPOC Station P	2.66	142	i P	Pn	17 22 35.2	+1.7
PB09				IAML		17 23 21.1	
	comp=Z,239nm,0.6s						
PB04	IPOC Station P	2.74	163	i P	Pn	17 22 35.0	+0.3
PB05	IPOC Station P	3.23	167	i P	Pn	17 22 41.2	-0.1
PB06	IPOC Station P	3.27	156	i P	Pn	17 22 41.9	-0.1
PB06				IAML		17 23 48.0	
	comp=Z,167nm,0.8s						
LVC	Limon Verde	3.49	147	Pn	Pn	17 22 47.2	+2.0
	baz=308,slow=11,SNR=0.7						
LVC				Lg	Lg	17 23 40.0	
	comp=Z,7.0nm,0.3s,baz=138,slow=11,SNR=4.6						
LVC	Limon Verde	3.49	147	i P	Pn	17 22 47.4	+2.2
PB15	IPOC Station P	3.77	158	i P	Pn	17 22 48.7	-0.2
PB15				IAML		17 24 01.3	
	comp=Z,130nm,0.7s						
PB10	IPOC Station P	3.82	174	i P	Pn	17 22 48.6	-0.7
LPAZ	La Paz	4.35	39	Pn	Pb	17 23 03.8	-3.7
	comp=Z,0.6nm,0.3s,baz=171,slow=3.9,SNR=11						
SIV	San Ignacio	10.14	70	Pn	Pn	17 24 18.2	+2.0
	baz=261,slow=12						
PTGA	Pitinga	21.72	31	P	P	17 26 40.9	-1.0
	comp=Z,1.2nm,0.3s,baz=253,slow=13						
TEIG	Tepich	43.14	336	LR	LR	17 46 55.6	
	comp=Z,46nm,18.7s,baz=334,slow=35						
TORD	Torodi Ar. Bea	78.62	72	P	P	17 33 52.0	-0.8
	comp=Z,0.7nm,0.8s,baz=261,slow=4.9,SNR=3.1						
YKA	Yellowknife Ar	88.85	341	P	P	17 34 45.7	+1.5
	comp=Z,0.2nm,0.6s,baz=139,slow=5.7,SNR=4.0						
MKAR	Makanchi Array	145.25	33	PKP	PKPbc	17 41 27.6	-0.4
	comp=Z,0.3nm,0.8s,baz=336,slow=4.5,SNR=3.6						

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*NEIC **22** 17:27:19.4, 19°.82S×71°.14W, h21^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$4.74; M$_{\theta\theta}$-1.24; M$_{\phi\phi}$-3.51; M$_{r\theta}$-2.81; M$_{\theta\phi}$0.78; M$_{\phi r}$5.57; Fault plane solution: M$_0$7.60000×10^{14} NP1:φ$_s$335.04000°, δ72.93000°, λ86.90000°. NP2:φ$_s$165.48000°, δ17.34000°, λ99.98000°. Principal axes: T 8.0642, Plg62.0000°, Azm240.0000°; N -1.0465, Plg3.0000°, Azm336.0000°; P -7.0177, Plg28.0000°, Azm68.0000°;*

*IDC **22** 17:27:19.8±1.4, 19°.57S×70°.82W, h0^{km}, mb4.0/4, mb1 4.1/6, mb1mx3.8/28, mbtmp4.0/6, ML3.8/2 Error ellipse: s-maj=41.2km s-min=25.7km az=92.0*

*NEIC **22** 17:27:21.0±2.8, 19°.79S±0°.04×70°.97W±0°.07, h16^{km}±4^{km}, mb3.9/3, Mwr3.9/34, ML3.9(GUC), Error ellipse: s-maj=8.9km s-min=5.9km az=93.0*

*GUC **22** 17:27:23.4±0.8, 19°.72S×70°.89W, h39^{km}±3^{km}, ML3.8*

ISC 22 17:27:21.4±2.2, **19°.76S**±0°.03×**70°.91W**±0°.07, **h17**^{km}±13^{km}, **n46**, σ**1^s.32**/51, **mb4.1**/3, **5C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.76	78	i P	Pb	17 27 36.6	+0.4
PSGC				i S	Sn	17 27 47.0	-1.5
PSGC				IAML		17 27 49.1	
	comp=N,6µm,0.5s						
PSGCX	Pisagua	0.76	78		Pb	17 27 36.6	+0.4
PSGCX					Sn	17 27 47.2	-1.4
TA01	Diego Aracena	1.06	140	⇓iP	Pb	17 27 42.1	+0.8
TA01				i S	Sn	17 27 56.8	+1.0
TA01				IAML		17 28 00.5	
	comp=N,3µm,0.3s						
PB11	IPOC Station P	1.18	90	⇓iP	Pn	17 27 43.7	+0.4
PB11				i S	Sg	17 27 59.4	-0.4
PB11				IAML		17 28 02.0	
	comp=N,9µm,0.2s						
PB11	IPOC Station P	1.18	90		Pb	17 27 43.6	+0.1
PB12	IPOC Station P	1.26	26	⇓iP	Pn	17 27 44.4	+0.1
PB12				i S	Sn	17 28 01.1	+0.1
PB12				IAML		17 28 03.1	
	comp=N,3µm,0.4s						
PB12	IPOC Station P	1.26	26		Pn	17 27 44.4	+0.1
PATCX	Punta Patache	1.27	146	⇑iP	Pn	17 27 45.5	+1.0
PATCX				i S	Sg	17 28 03.2	+0.4
PATCX				IAML		17 28 15.2	
	comp=N,2µm,0.4s						
PATCX	Punta Patache	1.27	146		Pn	17 27 45.5	+1.0
AP01	Chacalluta	1.48	21	eP	Pn	17 27 48.1	+0.9
AP01				i S	Sb	17 28 06.9	0.0
GO01	Chusmiza	1.62	87	⇓iP	Pb	17 27 51.3	+0.2
GO01				i S	Sg	17 28 12.7	-1.1
GO01	Chusmiza	1.62	87		Pb	17 27 51.1	0.0
PB08	IPOC Station P	1.69	103	⇑iP	Pb	17 27 52.2	-0.2
PB08				i S	Sg	17 28 15.1	-1.2
PB08				IAML		17 28 19.1	
	comp=N,2µm,0.4s						
PB02	IPOC Station P	1.82	149	⇑iP	Pn	17 27 53.4	+1.2
PB02				i S	Sb	17 28 18.2	+1.2
PB02				IAML		17 28 28.4	
	comp=E,2µm,0.5s						
PB01	IPOC Station P	1.85	134	⇑iP	Pn	17 27 54.0	+1.5
PB01				i S	Sb	17 28 18.6	+0.8
PB01				IAML		17 28 26.3	
	comp=N,1µm,0.3s						
PB01	IPOC Station P	1.85	134		Pn	17 27 54.0	+1.5
PB16	IPOC Station P	1.94	43	⇑iP	Pn	17 27 55.5	+1.4
PB16				i S	Sb	17 28 21.5	+0.8
PB16				IAML		17 28 26.8	
	comp=N,1µm,0.5s						
PB16	IPOC Station P	1.94	43		Pn	17 27 55.2	+1.1
PB07	IPOC Station P	2.18	154	eP	Pn	17 27 57.1	0.0
PB07				i S	Sb	17 28 27.1	-0.4
PB07				IAML		17 28 38.8	
	comp=E,1µm,0.3s						
PB07	IPOC Station P	2.18	154		Pn	17 27 57.0	-0.1
PB09	IPOC Station P	2.56	143		Pn	17 28 04.6	+2.3
PB04	IPOC Station P	2.66	165		Pn	17 27 59.2	-4.5
LVC	Limon Verde	3.40	147	Pn	Pn	17 28 16.2	+2.2
	comp=E,5.0nm,0.3s,baz=3.4,slow=7.2,SNR=15						
LVC	Limon Verde	3.40	147		Pn	17 28 13.6	-0.5
PB15	IPOC Station P	3.69	159	Pn	Pn	17 28 15.9	-1.9
PB10	IPOC Station P	3.75	175	Pn	Pn	17 28 17.4	-1.1
LPAZ	La Paz	4.34	38	Pn	Pn	17 28 31.6	+4.3
	comp=E,2.2nm,0.3s,baz=226,slow=5.5,SNR=20						
LPAZ	La Paz	4.34	38		Pn	17 28 30.2	+3.0
PB14	IPOC Station P	4.87	175		Pn	17 28 34.0	-0.3
SIV	San Ignacio	10.09	70	Pn	Pn	17 29 46.2	+0.6
	comp=E,1.5nm,0.3s,baz=260,slow=11,SNR=20						
GO04	Tololo Observa	10.37	179	Pn	Pn	17 29 48.1	-1.6
PLCA	Paso Flores	20.91	179	P	Pn	17 32 06.2	+0.5
	comp=E,1.3nm,0.8s,baz=23,slow=12,SNR=1.9						
PLCA	Paso Flores	20.91	179	P	P	17 32 03.5	+0.4
PLCA				IAmb	IAmb	17 32 28.2	
	comp=Z,3.8nm,1.1s						
PTGA	Pitinga	21.73	31	P	P	17 32 10.6	-1.4
	comp=Z,5.8nm,0.3s,baz=332,slow=22,SNR=16						
PTGA	Pitinga	21.73	31	P	P	17 32 10.8	-1.3
PTGA				IAmb	IAmb	17 32 14.9	
	comp=Z,9.0nm,1.1s						
RUSC	La Rusia	25.58	355	P	P	17 32 51.4	+1.1
TORD	Torodi Ar. Bea	78.56	72	P	P	17 39 21.8	-0.8
	comp=Z,1.2nm,0.6s,baz=246,slow=5.4,SNR=7.0						
YKA	Yellowknife Ar	88.94	341	P	P	17 40 15.3	+0.7
	comp=Z,1.1nm,1.0s,baz=136,slow=5.3,SNR=9.2						
H11S2	WAKE ISLAND Hy	125.78	279	T	T	20 05 41.2	
	baz=101,slow=74,SNR=21						
H11S1	WAKE ISLAND Hy	125.79	279	T	T	20 05 43.1	
	baz=101,slow=74,SNR=5.4						
H11S3	WAKE ISLAND Hy	125.80	279	T	T	20 05 42.5	
	baz=101,slow=74,SNR=4.9						
H11N3	WAKE ISLAND Hy	125.82	280	T	T	20 05 43.3	
	baz=101,slow=74,SNR=6.5						
H11N2	WAKE ISLAND Hy	125.84	280	T	T	20 05 43.6	
	baz=101,slow=74,SNR=8.8						
H11N1	WAKE ISLAND Hy	125.84	280	T	T	20 05 44.6	
	baz=101,slow=74,SNR=4.4						
MKAR	Makanchi Array	145.26	33	PKPbc	PKPbc	17 46 58.3	+0.3
	comp=Z,0.6nm,0.6s,baz=326,slow=4.9,SNR=6.9						
MKAR	Makanchi Array	145.26	33		PKPbc	17 46 55.6	-2.3

IDC 22 17:30:54.2±21.0, **39°.03N×128°.51E, h0**^{km}**, Error ellipse: s-maj=157.9km s-min=57.8km az=18.0, North Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	1.64	197	Pg	Pn	17 31 24.4	+0.1
	0.5nm,0.3s,baz=16,slow=17,SNR=5.0						
I45RU	USSURIYSK INFR	5.78	26	i		18 06 30.0	
	baz=209,slow=330,SNR=2.1						
I30JP	ISUMI INFRASON	10.12	108	i		18 27 11.8	
	baz=294,slow=319,SNR=0.9						

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*IDC **22** 17:35:22.8±1.1, 19°.51S×70°.79W, h0^{km}, mb4.0/4, mb1 4.2/6, mb1mx3.8/32, mbtmp4.1/6, ML3.9/2, MS2.9/5, Ms1 2.9/5, ms1mx2.8/26, Error ellipse: s-maj=37.4km s-min=24.8km az=96.0*

*NEIC **22** 17:35:23, 19°.77S×71°.02W, h23^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.61; M$_{\theta\theta}$0.00; M$_{\phi\phi}$-1.61; M$_{r\theta}$-0.10; M$_{\theta\phi}$0.67; M$_{\phi r}$-0.48; Fault plane solution: M$_0$1.81000×10^{15} NP1:φ$_s$329.94000°, δ39.14000°, λ74.49000°. NP2:φ$_s$169.62000°, δ52.54000°, λ102.27000°. Principal axes: T 1.6996, Plg78.0000°, Azm126.0000°; N 0.1997, Plg10.0000°, Azm342.0000°; P -1.8992, Plg7.0000°, Azm251.0000°;*

*NEIC **22** 17:35:24.3±2.5, 19°.73S±0°.04×70°.97W±0°.06, h17^{km}±1^{km}, mb4.0/3, Mwr4.1/39, ML4.1(GUC) Error ellipse: s-maj=7.7km s-min=5.5km az=86.0*

*GUC **22** 17:35:26.2±0.9, 19°.71S×70°.89W, h44^{km}±3^{km}, ML4.1*

ISC 22 17:35:23.6±1.5, **19°.71S**±0°.03×**70°.93W**±0°.06, **h12**^{km}±9^{km}, **n48**, σ**1^s.23**/60, **mb4.2**/3, **8C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.77	81	⇓iP	Pn	17 35 39.5	-0.8
PSGC				eS	Sn	17 35 50.2	-1.6
PSGCX	Pisagua	0.77	81		Pn	17 35 39.5	-0.8
PSGCX				Sg	Sn	17 35 50.5	-1.4
TA01	Diego Aracena	1.10	140	⇑iP	Pg	17 35 45.2	+0.4
TA01				i S	Sn	17 35 59.4	-0.5
TA01				IAML		17 36 04.2	
	comp=E,8µm,0.6s						
PB11	IPOC Station P	1.20	92	⇓iP	Pg	17 35 46.9	+0.2
PB11				eS	Sg	17 36 03.0	+0.6
PB11				IAML		17 36 04.8	
	comp=N,8µm,0.5s						
PB11	IPOC Station P	1.20	92		Pg	17 35 47.0	+0.3
PB11				Sn	Sg	17 36 02.5	+0.1
PB12	IPOC Station P	1.23	28	⇑iP	Pb	17 35 47.3	+0.5
PB12				eS	Sg	17 36 03.5	+0.1
PB12	IPOC Station P	1.23	28		Pb	17 35 47.3	+0.5
PB12				Sn	Sg	17 36 04.0	+0.6
PATCX	Punta Patache	1.32	147	⇑iP	Pb	17 35 48.4	+0.1
PATCX				eS	Sb	17 36 04.9	-0.4
PATCX				IAML		17 36 10.0	
	comp=E,2µm,0.4s						
PATCX	Punta Patache	1.32	147		Pn	17 35 48.2	+0.3
AP01	Chacalluta	1.45	23	⇑iP	Pb	17 35 50.6	+0.2
AP01				eS	Sg	17 36 09.6	-0.7
AP01				IAML		17 36 15.9	
	comp=E,13µm,0.6s						
GO01	Chusmiza	1.64	89	⇑iP	Pb	17 35 54.0	+0.1
GO01				i S	Sg	17 36 15.6	-0.8
GO01				IAML		17 36 17.8	
	comp=N,10µm,0.2s						
GO01	Chusmiza	1.64	89		Pb	17 35 54.2	+0.3
PB08	IPOC Station P	1.73	105	⇑iP	Pb	17 35 55.1	-0.3
PB08				eS	Sg	17 36 17.9	-1.2
PB08				IAML		17 36 26.1	
	comp=N,2µm,0.6s						
PB02	IPOC Station P	1.87	149	⇓iP	Pn	17 35 56.6	+1.2
PB02				eS	Sb	17 36 20.8	-0.3
PB02				IAML		17 36 30.2	
	comp=E,5µm,0.6s						
PB01	IPOC Station P	1.89	135	⇑iP	Pn	17 35 56.9	+1.1
PB01				i S	Sn	17 36 19.7	+0.1
PB01				IAML		17 36 30.1	
	comp=E,2µm,0.8s						
PB01	IPOC Station P	1.89	135		Pb	17 35 57.0	-1.0
PB16	IPOC Station P	1.92	45	⇑iP	Pb	17 35 58.1	-0.8
PB16				i S	Sb	17 36 22.7	-0.4
PB16				IAML		17 36 26.3	
	comp=N,2µm,0.3s						
PB16	IPOC Station P	1.92	45		Pb	17 35 58.4	-0.5
PB16				Sn	Sb	17 36 23.6	+0.6
PB07	IPOC Station P	2.23	154	⇓iP	Pn	17 36 01.1	+0.7
PB07				i S	Sn	17 36 27.4	-0.6
PB07				IAML		17 36 46.0	
	comp=E,1µm,0.4s						
PB07	IPOC Station P	2.23	154		Pn	17 36 00.9	+0.5
PB09	IPOC Station P	2.61	143		Pn	17 36 07.5	+1.9
PB04	IPOC Station P	2.71	164		Pn	17 36 06.7	-0.3
LVC	Limon Verde	3.44	147	Pn	Pn	17 36 19.9	+2.5
	comp=E,6.1nm,0.3s,baz=0.5,slow=8.3,SNR=53						
LVC				LR	LR	17 37 14.4	
	comp=E,70nm,18.8s,baz=328,slow=32						
LVC	Limon Verde	3.44	147		Pn	17 36 19.0	+1.6
PB15	IPOC Station P	3.73	159		Pn	17 36 20.6	-0.6
PB10	IPOC Station P	3.80	175		Pn	17 36 21.1	-0.8
LPAZ	La Paz	4.33	38	Pn	Pb	17 36 36.6	-3.3
	comp=E,1.9nm,0.3s,baz=205,slow=4.7,SNR=16						
LPAZ				LR	LR	17 37 43.3	
	comp=E,39nm,20.9s,baz=224,slow=34						
LPAZ	La Paz	4.33	38		Pn	17 36 33.8	+4.1
PB14	IPOC Station P	4.91	174		Pn	17 36 36.3	-1.2
GO02	Mina Guanaco	5.56	167		Pn	17 36 46.0	-0.4
SIV	San Ignacio	10.09	70	Pn	Pn	17 37 48.5	+0.2
	comp=E,1.5nm,0.3s,baz=273,slow=8.9,SNR=26						
GO04	Tololo Observa	10.41	179	Pn	Pn	17 37 49.2	-3.8
CPUP	Villa Florida	14.14	120	LR	LR	17 45 21.0	
	comp=E,50nm,21.0s,baz=290,slow=42						
PLCA	Paso Flores	20.95	179	P	Pn	17 40 09.8	+0.8
	comp=E,3.3nm,0.9s,baz=9.4,slow=12,SNR=4.6						
PLCA	Paso Flores	20.95	179	P	P	17 40 07.7	+1.3
PLCA				IAmb	IAmb	17 40 15.7	
	comp=Z,7.4nm,1.2s						
PTGA	Pitinga	21.71	31	P	P	17 40 13.1	-1.5
	comp=Z,4.4nm,0.3s,baz=330,slow=22,SNR=17						
PTGA	Pitinga	21.71	31	P	P	17 40 13.1	-1.5
PTGA				IAmb	IAmb	17 40 22.3	
	comp=Z,5.1nm,0.8s						
BDFB	Brasilia	22.20	83	LR	LR	17 50 36.4	
	comp=Z,131nm,18.8s,baz=106,slow=41						
RUSC	La Rusia	25.53	355	P	P	17 40 54.2	+1.5
SDV	Santo Domingo	28.42	1	LR	LR	17 53 34.4	
	comp=Z,48nm,20.7s,baz=356,slow=39						
TORD	Torodi Ar. Bea	78.56	72	P	P	17 47 24.8	-0.7
	comp=Z,1.9nm,0.6s,baz=256,slow=4.9,SNR=9.6						
YKA	Yellowknife Ar	88.89	341	P	P	17 48 18.2	+0.9
	comp=Z,0.7nm,0.8s,baz=133,slow=5.1,SNR=9.2						
ASAR	Alice Springs	130.55	210	PKP	PKiKP	17 54 36.2	+0.3
	comp=Z,0.2nm,0.8s,baz=126,slow=1.6,SNR=1.8						
ASAR	Alice Springs	130.55	210	PKPdf	PKPdf	17 54 34.7	-0.4
MKAR	Makanchi Array	145.24	33	PKP	PKPdf	17 55 01.6	+0.4
	comp=Z,0.8nm,0.7s,baz=328,slow=4.4,SNR=9.3						
MKAR	Makanchi Array	145.24	33		PKPdf	17 55 01.1	-0.1
SONM	Songino Array	151.87	4	PKPbc	PKiKP	17 55 19.5	+0.7
	comp=Z,0.3nm,0.7s,baz=196,slow=2.1,SNR=2.7						
SONM	Songino Array	151.87	4		PKiKP	17 55 18.8	0.0

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*IDC **22** 17:43:01.3±1.9, 33°.31N×79°.49E, h0^{km}, mb3.3/4, mb1 3.5/7, mb1mx3.3/43, mbtmp3.4/7, ML3.0/3, MS3.8/2, Ms1 3.8/2, ms1mx2.8/34, Error ellipse: s-maj=60.6km s-min=19.0km az=69.0*

ISC 22 17:43:07.8±1.0, **33°.50N**±0°.09×**79°.8E**±0°.1, **h35**^{km}, **n11**, σ**1^s.18**/10, **mb3.4**/3, **Kashmir-Xizang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DHRM	DHARAMSHALA	3.22	248	eP	Pn	17 43 55.2	-0.9
DHRM				eS	Sn	17 44 43.4	+10
SMLA	Simla	3.27	224	eP	Pn	17 43 56.8	+0.3
SMLA				eS	Sn	17 44 42.5	+8.4
AAK	Ala-Archa	10.04	337	Pn	Pn	17 45 31.5	+1.8
	0.2nm,0.3s,baz=173,slow=9.6,SNR=4.3						
AAK				Lg	Lg	17 48 21.5	
	0.1nm,0.3s,baz=80,slow=20,SNR=2.1						
MKAR	Makanchi Array	13.41	7	Pn	Pn	17 46 15.8	+0.2
	0.1nm,0.3s,baz=188,slow=13,SNR=5.7						
MKAR				Sn	Sn	17 48 42.4	-1.0
	0.0nm,0.3s,baz=196,slow=26,SNR=3.0						
KURBB	Kurchatov Arra	17.14	357	P	Pn	17 47 03.7	-0.7
	0.0nm,0.3s,baz=185,slow=11,SNR=13						
BVAR	Borovoye Array	20.66	344	P	P	17 47 43.5	-0.8
	0.5nm,0.4s,baz=163,slow=12,SNR=8.6						
SONM	Songino Array	24.57	46	P	P	17 48 26.1	+1.7
	0.1nm,0.3s,baz=253,slow=10,SNR=1.6						
TGY	Tagaytay City	41.94	107	LR	LR	18 08 45.3	
	comp=Z,103nm,18.6s,baz=103,slow=37						
TORD	Torodi Ar. Bea	73.05	275	LR	LR	18 30 43.6	
	comp=Z,59nm,18.1s,baz=120,slow=39						
WRA	Warramunga Arr	74.33	127	P	P	17 54 41.5	-0.4
	0.3nm,0.7s,baz=313,slow=6.8,SNR=1.9						
ASAR	Alice Springs	76.69	130	P	P	17 54 54.9	-0.5
	0.3nm,0.6s,baz=315,slow=6.2,SNR=9.3						

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*SJA **22** 17:44:29.1±0.8, 31°.33S×68°.64W, h118^{km}±6^{km}, ML3.6, MW3.8*

*IDC **22** 17:44:30.6±0.7, 31°.39S×68°.66W, h113^{km}±5^{km}, mb3.9/9, mb1 3.9/12, mb1mx3.7/30, mbtmp4.1/12, Error ellipse: s-maj=26.6km s-min=15.6km az=85.0*

ISC 22 17:44:29.9±0.7, **31°.29S**±0°.05×**68°.58W**±0°.07, **h110**^{km}±5^{km}, **n34**, σ**1^s.23**/41, **mb4.1**/9, **San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLL	Cerro Villicun	0.10	116	i P	Pn	17 44 45.8	+0.6
RTLL				IAML		17 45 00.6	
	comp=Z,4µm,0.2s						
ZON	Zonda	0.27	198	i P	Pn	17 44 46.0	+0.3
ZON				IAML		17 44 59.4	
	comp=Z,939nm,0.2s						
RTCV	Cerro Valdivia	0.58	177	i P	Pn	17 44 47.7	+0.3
RTCV				IAML		17 45 03.7	
	comp=Z,668nm,0.8s						
RTLS	Leoncito	0.80	230	i P	Pn	17 44 49.6	+0.1
RTLS				IAML		17 45 05.4	
	comp=Z,1µm,0.3s						
ACCO	Cerro Coronel	0.81	329	i P	Pn	17 44 50.7	+1.0
ACDV	Cuesta del Vie	1.20	337	i P	Pn	17 44 55.2	+1.7
ACDV				IAML		17 45 16.3	
	comp=Z,613nm,0.5s						
ASAL	Salagasta	1.32	189	i P	Pn	17 44 55.0	+0.2
ASAL				IAML		17 45 14.9	
	comp=Z,898nm,0.6s						
AROD	Rodeo	1.35	325	i P	Pn	17 44 56.6	+1.2
AROD				IAML		17 45 17.8	
	comp=Z,325nm,0.5s						
ARCO	CERRO ARCO	1.58	191	i P	Pn	17 44 57.9	0.0
ARCO				IAML		17 45 20.4	
	comp=Z,970nm,0.3s						
AAGR	Agrelo	1.81	187	i P	Pn	17 45 01.1	+0.5
AAGR				IAML		17 45 27.9	
	comp=Z,508nm,0.5s						
PEL	Peldehue	2.57	223	i P	Pn	17 45 09.7	-0.7
MRA	San Martin	2.69	116	i P	Pn	17 45 12.9	+1.0
MRA				IAML		17 46 13.2	
	comp=Z,198nm,0.8s						
LAMA	Las Malvinas	3.68	188	i P	Pn	17 45 24.6	-0.4
CYA	Choya	3.72	41	i P	Pn	17 45 26.6	+1.0
CYA				IAML		17 46 12.8	
	comp=Z,203nm,0.5s						
EDS3	Malargue	4.53	188	i P	Pn	17 45 35.7	-0.8
LVC	Limon Verde	8.65	358	P	Pn	17 46 31.8	-0.7
	comp=Z,0.9nm,0.3s,baz=36,slow=20,SNR=2.5						
LVC				S	Sn	17 48 04.3	-4.2
	comp=Z,0.6nm,0.3s,baz=69,slow=21,SNR=1.2						
PLCA	Paso Flores	9.56	189	P	Pn	17 46 41.8	-2.8
	comp=Z,0.2nm,0.3s,baz=355,slow=11,SNR=6.4						
CPUP	Villa Florida	11.03	66	P	Pn	17 47 02.6	-1.8
	comp=Z,1.0nm,0.3s,baz=250,slow=11,SNR=14						
CPUP				S	Sn	17 49 04.4	-1.5
	comp=Z,0.5nm,0.3s,baz=266,slow=17,SNR=1.5						
LPAZ	La Paz	14.94	2	P	P	17 47 58.1	-0.8
	comp=Z,0.5nm,0.3s,baz=116,slow=7.4,SNR=8.0						
SIV	San Ignacio	16.70	26	P	P	17 48 18.5	+0.7
	comp=Z,0.3nm,0.3s,baz=216,slow=11,SNR=12						
QSPA	South Pole Qui	58.95	180	P	P	17 54 17.9	+0.4
	comp=Z,3.5nm,0.7s,baz=159,slow=1.8,SNR=24						
TXAR	Lajitas Array	68.91	327	P	P	17 55 24.3	+1.2
	comp=Z,0.8nm,0.6s,baz=157,slow=9.8,SNR=10						
MAW	Mawson	74.92	163	P	P	17 55 58.8	+0.5
	comp=Z,2.0nm,0.6s,baz=158,slow=5.4,SNR=2.4						
BOSA	Boshof	78.71	117	P	P	17 56 20.5	-0.1
	comp=Z,4.4nm,0.9s,baz=249,slow=2.9,SNR=4.2						
TORD	Torodi Ar. Bea	80.52	68	P	P	17 56 31.0	+0.7
	comp=Z,2.8nm,0.7s,baz=262,slow=4.8,SNR=13						
TORD				pP	pP	17 57 01.0	+2.3
	comp=Z,0.6nm,0.7s,baz=208,slow=7.5,SNR=1.9						
PDAR	Pinedale Array	82.74	331	P	P	17 56 42.2	+0.6
	comp=Z,0.6nm,0.6s,baz=130,slow=8.5,SNR=6.9						
NVAR	Mina Array Bea	83.41	323	P	P	17 56 46.0	+0.9
	comp=Z,0.1nm,0.4s,baz=165,slow=6.2,SNR=4.0						
ULM	Lac du Bonnet	84.71	343	P	P	17 56 51.0	-0.1
	comp=Z,2.2nm,0.7s,baz=190,slow=2.7,SNR=5.0						
SCHQ	Schefferville	85.78	1	P	P	17 56 56.4	0.0
	comp=Z,2.3nm,1.0s,baz=173,slow=8.1,SNR=2.2						
ASAR	Alice Springs	121.27	204	PKP	PKPdf	18 03 09.2	-1.4

	comp=Z,0.3nm,0.7s,baz=150,slow=1.6,SNR=2.4						
WRA	Warramunga Arr	124.52	206	PKP	PKPdf	18 03 15.6	-1.3
	comp=Z,0.6nm,0.8s,baz=139,slow=1.5,SNR=5.2						
WRA				pPKP	pPKPdf	18 03 46.8	-0.3
	comp=Z,0.3nm,0.6s,baz=173,slow=1.7,SNR=1.7						
ZALV	Zalesovo Beam	150.38	32	PKPbc	PKiKP	18 04 08.6	0.0
	comp=Z,3.7nm,0.6s,baz=300,slow=3.2,SNR=16						
ZALV				pPKPbc	pPKPbc	18 04 38.4	+0.4
	comp=Z,1.8nm,0.6s,baz=299,slow=4.1,SNR=4.5						
MKAR	Makanchi Array	152.78	47	PKPbc	PKiKP	18 04 13.9	0.0
	comp=Z,1.2nm,0.8s,baz=302,slow=2.2,SNR=10						
MKAR				PKPab	PKPab	18 04 25.8	+0.7
	comp=Z,1.2nm,0.6s,baz=303,slow=3.9,SNR=11						
MKAR				pPKPbc	pPKPbc	18 04 44.6	+0.8
	comp=Z,0.5nm,0.7s,baz=332,slow=1.3,SNR=3.9						
SONM	Songino Array	163.03	12	PKPab	PKPab	18 05 09.9	+0.6
	comp=Z,0.2nm,0.4s,baz=123,slow=41,SNR=4.1						

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*RHSSO **22** 17:48:59.4±0.7, 42°.31N×20°.10E, h6^{km}±2^{km}, ML2.8/11*
*TIR **22** 17:48:59.4, 42°.37N×19°.97E, h4^{km}, Md3.0/4*
*BEO **22** 17:49:00.4±0.3, 42°.37N×20°.06E, h0^{km}, ML2.7/14*
*IASPEI **22** 17:49:00.2±1.0, 42°.40N±0°.03×20°.03E±0°.03, h4^{km}±7^{km}, Error ellipse: s-maj=4.2km s-min=3.4km az=55.0, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*SKO **22** 17:49:01.0, 42°.43N×19°.99E, h12^{km}*
PDG 22 17:48:59.9±0.2**, 42°.39N×20°.05E, h14**^{km}**, MD3.0**/2**, ML2.9**/13**, Error ellipse: s-maj=0.3km s-min=0.4km az=0.0, Northwestern Balkan Peninsula**
ISC 22 17:49:00.1±0.9**, 42°.41N**±0°.02×**20°.05E**±0°.02**, h3**^{km}±7^{km}**, n58,** σ1^{s}**.22**/96**, 5C-8D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BCI	Bajram Curri	0.04	158	i PG	Pg	17 49 01.1	0.0
BCI				i SG	Sg	17 49 02.1	+0.3
PUK	Puka	0.38	197	i PG	Pg	17 49 07.0	-0.5
PUK				i SG	Sg	17 49 12.8	+0.4
PDG	Podgorica	0.59	273	ePg	Pg	17 49 10.5	-0.8
PDG				eSg	Sb	17 49 20.1	-1.5
PDG	Podgorica	0.59	273	⇓P	Pg	17 49 10.5	-0.8
PDG				⇑S	Sg	17 49 19.3	+0.4
PDG	Podgorica	0.59	273	ePg	Pg	17 49 10.6	-0.8
PDG				eSg	Sg	17 49 19.6	+0.7
DRME	Dracevica, Mon	0.68	251	ePg	Pg	17 49 11.8	-1.2
DRME				eSg	Sg	17 49 21.4	-0.4
PHP	Peshkopia	0.78	158	i PG	Pg	17 49 14.4	-0.6
PHP				i SG	Sb	17 49 26.9	-0.4
SJES	Sjenica	0.85	356	ePg	Pg	17 49 16.6	+0.1
SJES				eSg	Sb	17 49 29.3	-0.3
TIR	Tirane	1.07	187	ePg	Pg	17 49 19.9	-0.6
TIR	Tirane	1.07	187	i PG	Pg	17 49 20.3	-0.2
TIR				i SG	Sn	17 49 36.6	-0.6
SKO	Skopje	1.12	112	i Pg	Pb	17 49 22.2	0.0
SKO				i Sg	Sn	17 49 39.2	+0.5
SKO				eLg	Lg	17 49 40.9	
	comp=E,8.9nm,0.6s						
SELS	Selova	1.13	44	ePg	Pg	17 49 21.2	-0.6
SELS				eSg	Sb	17 49 38.1	+0.6
UPM	Unac-Piva	1.16	314	ePg	Pg	17 49 22.4	+0.1
UPM				eSg	Sn	17 49 39.1	-0.6
IVAS	Ivanjica	1.17	4	ePg	Pg	17 49 22.0	-0.5
IVAS				eSg	Sb	17 49 38.7	+0.1
BRY	Bratogost	1.22	294	ePg	Pg	17 49 22.6	-0.8
BRY				eSg	Sn	17 49 40.1	-1.0
TREB	Trebinje	1.29	284	ePn	Pn	17 49 25.8	+0.8
TREB	Trebinje	1.29	284	ePg	Pg	17 49 23.4	-1.4
TREB				eSg	Sn	17 49 42.8	0.0
RUDO	Rudo	1.31	338	ePg	Pn	17 49 24.7	-0.6
RUDO				eSg	Sn	17 49 44.7	+1.5
BARS	Barje	1.37	72	ePg	Pn	17 49 25.3	-0.8
BARS				eSg	Sb	17 49 44.3	+0.1
OHR	Ohrid	1.41	156	⇓iPg	Pg	17 49 27.6	+0.5
OHR				i Sg	Sn	17 49 46.9	+1.0
OHR				eLg	Lg	17 49 48.1	
	comp=N,57nm,0.5s						
DBRK	Dubrovnik	1.43	281	ePn	Pn	17 49 26.4	-0.5
DBRK				Sn	Sn	17 49 51.1	+5.0
BBLS	Lazići	1.53	342	ePn	Pb	17 49 29.0	-0.1
BBLS	Lazići	1.53	342	ePn	Pn	17 49 28.3	-0.1
BBLS				eSn	Sg	17 49 49.7	+0.4
GRUS	Gruza	1.56	18	ePn	Pn	17 49 28.8	+0.1
GRUS				eSg	Sg	17 49 51.6	+1.4
DIVS	Divibare	1.69	359	ePn	Pn	17 49 30.7	+0.1
DIVS	Divibare	1.69	359	ePn	Pn	17 49 30.6	0.0
DIVS				eSn	Sb	17 49 53.8	+0.2
BOVS	Bovan	1.73	44	ePn	Pn	17 49 30.8	-0.2
STON	Ston	1.79	286	ePn	Pb	17 49 33.4	-0.1
STON				eSg	Sg	17 49 57.4	-0.2
STON	Ston	1.79	286	i Pn	Pb	17 49 33.0	-0.5
STON				Sn	Sg	17 50 00.4	+2.8
STON	Ston	1.79	286	ePn	Pn	17 49 31.5	-0.3
STON				eSn	Sb	17 49 56.3	0.0
BOSS	Bosilegrad	1.80	86	ePn	Pn	17 49 31.6	-0.5
TRUS	Trudelj	1.83	8	ePn	Pn	17 49 33.0	+0.5
HAPS	Han Pijesak,Bl	1.86	335	ePn	Pb	17 49 35.2	+0.4
HAPS	Han Pijesak,Bl	1.86	335	ePn	Pn	17 49 33.1	+0.2
HAPS				eSn	Sb	17 49 58.0	-0.4
ZAPS	Zavoj	2.09	65	ePn	Pn	17 49 36.8	+0.8
ZAGS	Zajecar	2.13	48	ePn	Pn	17 49 36.1	-0.4
VAY	Valandovo	2.18	119	i Pn	Pn	17 49 38.2	+1.0
BLKB	Belogradchik	2.28	57	⇓S	Sn	17 50 06.0	-1.2
VTS	Vitosha	2.37	84	⇑P	Pn	17 49 39.3	-0.6
VTS				⇓S	Sn	17 50 09.2	-0.3
VTS	Vitosha	2.37	84	i P	Pn	17 49 39.6	-0.3
MAKA	Makarska	2.39	293	ePn	Pb	17 49 42.5	-1.2
MAKA				Sn	Sg	17 50 15.5	-1.5
RICI	Ricice	2.40	298	i Pn	Pb	17 49 43.6	-0.2
RICI				Sn	Sg	17 50 16.1	-1.0
MDVR	Moldovita	2.67	26	⇑P	Pn	17 49 43.6	-0.4
MDVR				⇑S	Sn	17 50 15.4	-1.4
MMB	Musomiste	2.86	105	i P	Pn	17 49 47.1	+0.4
MPEP	Malo Peshtene	2.88	70	i P	Pg	17 49 54.1	-1.1
MGRS	Mrkonjic Grad	2.95	314	ePn	Pn	17 49 48.5	+0.7
MGRS				eSn	Sn	17 50 24.9	+1.2
MATE	Matera	3.06	236	⇓P	Pn	17 49 49.2	-0.1
BLY	Banja Luka	3.13	319	ePn	Pn	17 49 50.5	+0.2
BLY				eSn	Sn	17 50 28.8	+0.6
BZS	Buzias	3.40	19	⇓P	Pn	17 49 53.8	-0.2
BZS				⇓S	Sn	17 50 34.4	-0.5
ZIRJ	Zirje	3.46	293	ePn	Pn	17 49 57.1	+2.4
ZIRJ				Sn	Sb	17 50 40.6	-3.8
MORI	Morici	3.49	296	ePn	Pn	17 49 56.9	+1.7
PLVB	Pleven	3.50	72	⇑P	Pn	17 49 55.6	+0.3
GZR	Gura Zlata	3.58	33	⇓P	Pn	17 49 56.7	+0.2
DUGI	Dugi Otok	3.98	295	ePn	Pn	17 50 03.9	+2.0
DUGI				Sn	Sn	17 50 51.9	+2.9
NVLJ	Novalja	4.34	302	ePn	Pn	17 50 08.9	+2.1
NVLJ				Sn	Sn	17 51 01.7	+3.8
CRES	Cresnjev	4.75	318	ePn	Pn	17 50 12.6	0.0
CRES				eSn	Sn	17 51 06.8	-1.4
CEY	Cerknica	5.24	311	ePn	Pn	17 50 19.5	+0.2
CEY				eSn	Sn	17 51 18.9	-1.3
VYHS	Vyhne	6.15	352	ePN	Pn	17 50 34.7	+3.0

ROM 22 17:50:59.8±0.0**, 43°.497N**±0°.003×**12°.375E**±0°.003**, h9**^{km}**, ML1.2**/12**, 1C-1D, Error ellipse: s-maj=0.2km s-min=0.1km az=169.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATPI	Pietralunga -	0.05	157	P	Pg	17 51 01.9	+0.1
ATPI				S	Sg	17 51 03.1	0.0
ATPI				AML	AML		
	comp=E,506µm,0.1s						
ATPI				AML	AML		
	comp=N,338µm,0.1s						
BADI	Badiali	0.10	278	P	Pg	17 51 02.6	+0.3
BADI				S	Sg	17 51 04.6	+0.6
BADI				AML	AML		
	comp=N,360µm,1.2s						
BADI				AML	AML		
	comp=E,373µm,0.4s						
CDCA	Citt‘ di Caste	0.11	250	P	Pg	17 51 02.9	+0.5
CDCA				S	Sg	17 51 05.1	+0.8
CDCA				AML	AML		
	comp=N,1860µm,0.1s						
CDCA				AML	AML		
	comp=E,2068µm,1.3s						
ATVO	AVT- Monte Val	0.12	169	⇓P	Pg	17 51 03.1	+0.6
ATVO				S	Sg	17 51 05.4	+0.9
ATVO				AML	AML		
	comp=E,192µm,0.1s						
ATVO				AML	AML		
	comp=N,219µm,0.1s						
ATVO				AML	AML		
	comp=E,193µm,0.1s						
PIEI	Pieia	0.12	71	P	Pg	17 51 03.2	+0.5
PIEI				S	Sg	17 51 05.7	+1.0
PIEI				AML	AML		
	comp=N,164µm,0.9s						
PIEI				AML	AML		
	comp=E,257µm,1.1s						
ATMI	Monte Miggiano	0.18	206	P	Pg	17 51 04.4	+0.8
ATMI				S	Sg	17 51 07.7	+1.5
ATMI				AML	AML		
	comp=E,134µm,0.3s						
ATMI				AML	AML		
	comp=N,85µm,0.2s						
ATMI				AML	AML		
	comp=E,134µm,0.3s						
PARC	Parchiule	0.18	327	P	Pg	17 51 04.4	+0.7
PARC				S	Sg	17 51 07.8	+1.5
PARC				AML	AML		
	comp=N,54µm,1.4s						
PARC				AML	AML		
	comp=E,57µm,0.7s						
NARO	Abbazia di Nar	0.19	53	P	Pg	17 51 04.2	+0.5
NARO				S	Sg	17 51 07.6	+1.2
NARO				AML	AML		
	comp=E,79µm,0.6s						
NARO				AML	AML		
	comp=N,81µm,0.1s						
ATFO	Monte Foce - G	0.19	132	P	Pg	17 51 04.4	+0.5
ATFO				S	Sg	17 51 07.9	+1.3
ATFO				AML	AML		
	comp=E,125µm,0.6s						
ATFO				AML	AML		
	comp=E,124µm,0.6s						
ATFO				AML	AML		
	comp=N,78µm,0.2s						
FRON	Frontone	0.26	85	P	Pg	17 51 05.5	+0.5
FRON				S	Sb	17 51 09.9	-1.2
FRON				AML	AML		
	comp=N,83µm,0.5s						
FRON				AML	AML		
	comp=E,36µm,1.4s						
MURB	Monte Urbino	0.26	155	S	Sb	17 51 11.0	-0.3
CRE	Caprese Michel	0.33	292	P	Pg	17 51 07.0	+0.5
CRE				S	Sb	17 51 12.4	-1.1
CAFI	Castiglion Fio	0.34	241	P	Pg	17 51 07.0	+0.5
CAFI				S	Sb	17 51 12.7	-0.9
FSSB	Fossombrone	0.35	56	P	Pg	17 51 07.4	+0.6
FSSB				S	Sb	17 51 13.5	-0.4
FSSB				AML	AML		
	comp=E,50µm,1.5s						
FSSB				AML	AML		
	comp=N,61µm,0.3s						
ATCC	AVT- Casa Cast	0.37	148	P	Pg	17 51 07.8	+0.7
ATCC				S	Sb	17 51 13.8	-0.5
ATCC				AML	AML		
	comp=N,52µm,1.2s						
ATCC				AML	AML		
	comp=E,40µm,0.6s						
PP3	Marolino	0.91	97	⇑P	Pb	17 51 17.6	-0.1
ARRO	Arrone	0.96	163	S	Sg	17 51 31.0	+0.2

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*IDC **22** 18:02:37.0±4.0, 31°.16N×140°.53E, h0^{km}, mb3.2/2, mb1 3.4/3, mb1mx3.1/38, mbtmp3.1/3, ML2.1/1, MS2.9/1, Ms1 2.9/1, ms1mx2.2/19, Error ellipse: s-maj=234.3km s-min=35.0km az=80.0*
*JMA **22** 18:02:40.3±0.4, 32°.18N×142°.54E, h55^{km}, M3.4*
ISC 22 18:02:36.0±1.6**, 31°.9N**±0°.1×**142°.7E**±0°.3**, h40**^{km}**, n10,** σ1^{s}**.14**/9**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	Boso 1	3.16	333	P	Pn	18 03 23.8	+1.0
JHO	Hitachi	5.08	340	P	Pn	18 03 50.8	+1.2
JRY	Ryogami san	5.24	324	P	Pn	18 03 53.0	+1.2
JAG	Ashikaga	5.31	330	eS	Sn	18 04 51.8	-1.0
JFK	Kawauchi	5.71	345	P	Pn	18 03 59.2	+0.8
MJAR	Matsushiro Arr	6.00	323	Pn	Pn	18 04 02.6	+0.4
	0.1nm,0.3s,baz=159,slow=11,SNR=1.6						
JMK	Ichinoseki	7.19	351	eS	Sn	18 05 37.7	-1.3
DAV	Davao City (W)	29.39	217	LR	LR	18 17 14.1	
	comp=Z,29nm,21.3s,baz=340,slow=32						
WRA	Warramunga Arr	52.12	190	P	P	18 11 42.2	-0.2
	0.2nm,0.4s,baz=6.1,slow=7.9,SNR=6.7						
ASAR	Alice Springs	55.84	190	P	P	18 12 09.0	-0.5
	0.1nm,0.5s,baz=360,slow=5.3,SNR=4.9						

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*IDC **22** 18:06:47.4±1.8, 19°.46S×70°.75W, h0^{km}, mb3.9/3, mb1 3.9/5, mb1mx3.6/29, mbtmp3.7/5, ML3.2/2, Error ellipse: s-maj=46.9km s-min=34.8km az=71.0*
*NEIC **22** 18:06:48.2±1.7, 19°.71S±0°.05×71°.04W±0°.03, h11^{km}±4^{km}, mb4.1/3, Error ellipse: s-maj=6.9km s-min=4.4km az=174.0*
ISC 22 18:06:49.0±1.0**, 19°.72S**±0°.05×**71°.08W**±0°.08**, h22**^{km}**, n28,** σ1^{s}**.96**/29**, mb4.0**/3**, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGCX	Pisagua	0.91	82		Pb	18 07 04.9	-1.3
PSGCX				Sg	Sb	18 07 16.2	-1.8
PB12	IPOC Station P	1.31	33		Pn	18 07 11.7	-0.4
PB11	IPOC Station P	1.35	92	Pn	Pn	18 07 12.0	-0.6
PB11					Sn	18 07 29.8	-0.1
PATCX	Punta Patache	1.40	142		Pn	18 07 13.7	+0.5
GO01	Chusmiza	1.78	89		Pn	18 07 19.4	+0.5
PB01	IPOC Station P	1.99	132		Pn	18 07 22.5	+1.0
PB16	IPOC Station P	2.03	47		Pn	18 07 23.2	+0.8
PB07	IPOC Station P	2.29	151	Pn	Pn	18 07 27.1	+1.5
PB09	IPOC Station P	2.69	140	Pn	Pn	18 07 32.9	+1.8
PB04	IPOC Station P	2.74	162		Pn	18 07 31.9	+0.1
LVC	Limon Verde	3.52	145	Pn	Pn	18 07 45.2	+2.6
	3.9nm,0.3s,baz=353,slow=10,SNR=6.9						
LVC	Limon Verde	3.52	145		Pn	18 07 43.9	+1.2
PB15	IPOC Station P	3.78	157	Pn	Pn	18 07 45.5	-0.6
PB10	IPOC Station P	3.81	173		Pn	18 07 46.1	-0.2
PB10				Sn	Sn	18 08 27.9	-2.5
LPAZ	La Paz	4.42	40	Pn	Pn	18 08 00.4	+5.1
	0.4nm,0.3s,baz=175,slow=10,SNR=5.9						
LPAZ	La Paz	4.42	40		Pn	18 07 59.8	+4.5
PB14	IPOC Station P	4.92	173	Pn	Pn	18 08 01.2	-0.8
GO02	Mina Guanaco	5.59	166		Pn	18 08 11.7	+0.6
GO03	Copiap	7.88	174	Pn	Pn	18 08 43.2	+0.9
GO03					Sn	18 10 08.6	-2.2
SIV	San Ignacio	10.23	70	Pn	Pn	18 09 10.7	-3.8
	0.1nm,0.3s,baz=275,slow=18,SNR=1.9						
CPUP	Villa Florida	14.26	120	Pn	Pn	18 10 14.3	+4.7
	0.1nm,0.3s,baz=227,slow=20,SNR=3.1						
GO06	Curarrehue	19.80	181	P	P	18 11 15.1	-2.9
GO06				IAmb	IAmb	18 11 43.9	
	comp=Z,7.4nm,1.2s						
PLCA	Paso Flores	20.95	179	P	P	18 11 29.2	-1.2
PLCA				IAmb	IAmb	18 11 50.8	
	comp=Z,12nm,1.4s						
PTGA	Pitinga	21.79	31	P	P	18 11 37.8	-1.8
	comp=Z,1.0nm,0.2s,baz=318,slow=22,SNR=2.4						
PTGA	Pitinga	21.79	31	P	P	18 11 38.4	-1.2
PTGA				IAmb	IAmb	18 11 54.6	
	comp=Z,12nm,1.4s						
TORD	Torodi Ar. Bea	78.70	72	P	P	18 18 49.4	-0.7
	comp=Z,1.0nm,0.7s,baz=252,slow=5.0,SNR=7.2						
YKA	Yellowknife Ar	88.85	341	P	P	18 19 42.4	+1.5
	comp=Z,0.4nm,0.7s,baz=131,slow=5.4,SNR=6.3						
MKAR	Makanchi Array	145.32	33	PKP	PKPbc	18 26 26.1	+1.2
	comp=Z,0.4nm,0.7s,baz=328,slow=3.8,SNR=5.4						

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*IDC **22** 18:08:39.1±2.2, 24°.38S×179°.99W, h486^{km}±24^{km}, mb3.3/8, mb1 3.5/10, mb1mx3.3/31, mbtmp4.2/10, Error ellipse: s-maj=24.7km s-min=17.0km az=139.0*
*NEIC **22** 18:08:41.7±1.9, 24°.5S±0°.1×179°.9E±0°.2, h517^{km}±8^{km}, mb4.6/24, Error ellipse: s-maj=21.8km s-min=17.6km az=106.0*
ISC 22 18:08:40.4±0.5**, 24°.44S**±0°.07×**179°.9W**±0°.1**, h505**^{km}**, n91,** σ1^{s}**.78**/100**, mb4.3**/17**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	6.93	344	P	P	18 10 27.8	+1.6
OUZ	Omahuta	12.12	206	P	P	18 11 20.7	+0.7
DZM	Mont Dzumac	12.75	278	P	P	18 11 29.0	+2.0
	1.0nm,0.3s,baz=317,slow=23,SNR=9.3						
DZM	Mont Dzumac	12.75	278	P	P	18 11 27.6	+0.7
AFI	Afiamalu	12.99	38	P	P	18 11 28.2	-1.4
	2.4nm,0.3s,baz=59,slow=21,SNR=2.3						
AFI	Afiamalu	12.99	38	P	P	18 11 28.5	-1.1
HAZ	Te Kaha	13.42	188	P	P	18 11 36.3	+2.7
PKGZ	Pakihiroa	13.52	187	P	P	18 11 38.2	+3.4
PKGZ				S	S	18 13 59.7	+1.1
RUGZ	Raukumara Rang	13.64	188	P	P	18 11 38.0	+1.9
RUGZ				S	S	18 14 01.5	+0.4
TOZ	Tahuroa Road	13.81	195	P	P	18 11 43.8	+5.9
URZ	Urewera	14.01	190	P	P	18 11 38.0	-1.9
	1.5nm,0.3s,baz=330,slow=1.0,SNR=10						
URZ				S	S	18 14 08.2	+0.3
	1.0nm,0.3s,baz=92,slow=20,SNR=7.5						
URZ	Urewera	14.01	190	P	P	18 11 38.2	-1.7
URZ					S	18 14 07.9	0.0
URZ	Urewera	14.01	190	P	P	18 11 40.9	+1.0
URZ				S	S	18 14 06.8	-1.1
MWZ	Matawai	14.02	188	P	P	18 11 41.2	+1.2
MWZ				S	S	18 14 07.2	-1.1
MUGZ	Murupara	14.28	191	P	P	18 11 44.9	+2.1
SNGZ	Shannon Statio	14.49	189	P	P	18 11 48.4	+3.5
MTHZ	Maungataniwha	14.63	190	P	P	18 11 50.6	+4.2
MTHZ				S	S	18 14 14.1	-5.9
HIZ	Hauiti	14.71	196	P	P	18 11 48.8	+1.4
HIZ	Hauiti	14.71	196	P	P	18 11 52.5	+5.1
NMHZ	Naumai	14.87	190	P	P	18 11 51.9	+2.9
NMHZ				S	S	18 14 22.0	-2.7
BKZ	Black Stump Fm	14.99	191	P	P	18 11 50.5	+0.2
BKZ	Black Stump Fm	14.99	191	P	P	18 11 50.5	+0.2
BKZ	Black Stump Fm	14.99	191	S	S	18 14 22.1	-4.8
WTVZ	West Tongariro	15.12	193	P	P	18 11 54.8	+3.1
NGZ	Ngauruhoe	15.17	193	P	P	18 11 55.2	+2.9
MCHZ	McNeill Hill	15.23	190	P	P	18 11 53.5	+0.8
MCHZ	McNeill Hill	15.23	190	S	S	18 14 30.2	-1.2
TUVZ	Tukino	15.25	193	P	P	18 11 53.5	+0.4
KWHZ	Kaweka Forest	15.26	191	P	P	18 11 54.4	+1.4
FWVZ	Far West T-bar	15.26	193	P	P	18 11 55.1	+1.8
VRZ	Vera Road	15.32	196	P	P	18 11 58.2	+4.6
PKVZ	Pokaka	15.34	194	P	P	18 11 54.0	+0.1
MOVZ	Moawhango	15.36	193	P	P	18 11 55.6	+1.4
BHHZ	Black Hill Sta	15.38	192	S	S	18 14 35.3	+0.9
KAHZ	Kahuranaki	15.55	189	P	P	18 11 57.5	+1.5
PKE	Pukeiti	15.59	198	P	P	18 12 02.0	+5.5
PXZ	Pawanui	15.78	189	P	P	18 11 59.3	+0.9
PXZ				S	S	18 14 37.6	-4.1
SNZO	South Karori	17.41	194	P	P	18 12 14.8	0.0
BHW	Baring Head	17.47	193	P	P	18 12 15.1	-0.3
QRZ	Quartz Range	17.52	199	P	P	18 12 15.8	-0.1
QRZ	Quartz Range	17.52	199	P	P	18 12 16.0	+0.1
TUWZ	Tuamarina	17.70	195	P	P	18 12 16.6	-0.9
THZ	Tophouse	18.28	197	P	P	18 12 22.1	-0.7
THZ	Tophouse	18.28	197	P	P	18 12 22.1	-0.8
LTZ	Lake Taylor	19.40	198	P	P	18 12 31.6	-1.5
LTZ				IAmb	IAmb	18 12 35.8	
	comp=Z,15nm,0.6s						
OXZ	Oxford	19.97	197	P	P	18 12 37.5	-0.7
RPZ	Rata Peaks	20.60	199	P	P	18 12 43.9	-0.1
	comp=Z,9.6nm,0.5s,baz=230,slow=2.1,SNR=8.1						
RPZ	Rata Peaks	20.60	199	P	P	18 12 42.5	-1.5
RPZ				IAmb	IAmb	18 12 47.0	
	comp=Z,11nm,0.7s						
FOZ	Fox Glacier	20.83	201	P	P	18 12 45.3	-0.7
FOZ				IAmb	IAmb	18 12 46.1	
	comp=Z,35nm,1.4s						
DCZ	Deep Cove	23.44	203	P	P	18 13 09.4	0.0
DCZ				IAmb	IAmb	18 13 29.0	
	comp=Z,19nm,1.1s						
CAN	Canberra	28.93	241	P	P	18 13 59.0	+0.9
TOO	Toolangi	32.21	238	P	P	18 14 26.9	+0.5
TOO				IAmb	IAmb	18 14 28.7	
	comp=Z,42nm,1.8s						
STKA	Stephens Creek	34.59	249	P	P	18 14 46.6	+0.1
	comp=Z,2.4nm,0.5s,baz=101,slow=12,SNR=12						
STKA	Stephens Creek	34.59	249	P	P	18 14 46.8	+0.3
BBOO	Buckleboo	39.30	248	P	P	18 15 24.7	-0.6
AS31	Alice Springs	42.01	261	P	P	18 15 46.5	-0.7
ASAR	Alice Springs	42.01	261	P	P	18 15 46.9	-0.3
	comp=Z,0.5nm,0.3s,baz=93,slow=7.1,SNR=43						
ASAR	Alice Springs	42.01	261	P	P	18 15 46.2	-1.0
WR0	Warramunga Arr	42.25	267	P	P	18 15 47.9	-1.2
WR0				IAmb	IAmb	18 17 09.9	
	comp=Z,21nm,1.9s						
WB2	Warramunga Arr	42.43	267	P	P	18 15 49.7	-0.7
WRAB	Tennant Creek	42.43	267	P	P	18 15 49.6	-0.8
WRAB				IAmb	IAmb	18 17 28.9	
	comp=Z,40nm,2.0s						
WB0	Warramunga Arr	42.43	267	P	P	18 15 49.6	-0.9
WRA	Warramunga Arr	42.44	267	P	P	18 15 49.8	-0.7
	comp=Z,2.0nm,0.5s,baz=100,slow=8.1,SNR=49						
WRA				ScP	ScP	18 20 36.1	+1.5
	comp=Z,0.3nm,0.6s,baz=128,slow=5.0,SNR=7.6						
FORT	Forrest	46.19	250	P	P	18 16 18.4	-0.9
FORT				IAmb	IAmb	18 16 31.1	
	comp=Z,25nm,1.1s						
MTN	Manton Dam	47.56	275	P	P	18 16 29.1	-0.9
MTN				IAmb	IAmb	18 18 21.7	
	comp=Z,20nm,1.3s						
KNRA	Kununurra	48.75	270	P	P	18 16 38.8	-0.1
KNRA				IAmb	IAmb	18 17 01.7	
	comp=Z,20nm,1.4s						
FITZ	Fitzroy Crossi	50.85	266	P	P	18 16 54.5	+0.2
MORW	Morawa	56.75	250	P	P	18 17 34.8	-1.2
QSPA	South Pole Qui	65.65	180	P	P	18 18 35.7	+1.8
PETK	Petropavlovsk-	79.64	347	P	P	18 19 54.7	+0.2
	comp=Z,2.5nm,0.8s,baz=134,slow=6.2,SNR=1.3						
USRK	Ussuriysk Ar.	81.25	327	P	P	18 20 02.9	-0.3
	comp=Z,0.6nm,0.8s,baz=157,slow=4.4,SNR=4.8						
NVAR	Mina Array Bea	85.09	44	P	P	18 20 20.9	-1.9
	comp=Z,0.4nm,0.6s,baz=176,slow=5.7,SNR=4.2						
NVAR	Mina Array Bea	85.09	44	P	P	18 20 20.7	-2.1
TX31	Lajitas Ar. Si	90.66	58	P	P	18 20 50.7	+1.7
TX31				IAmb	IAmb	18 23 18.4	
	comp=Z,15nm,2.0s						
TX32	Lajitas Array	90.66	58	P	P	18 20 51.0	+1.9
TX32				IAmb	IAmb	18 24 15.8	
	comp=Z,7.7nm,1.6s						
TXAR	Lajitas Array	90.66	58	P	P	18 20 50.7	+1.7
	comp=Z,0.9nm,0.7s,baz=216,slow=6.5,SNR=10						
TXAR	Lajitas Array	90.66	58	P	P	18 20 50.8	+1.8
ILAR	Eielson Array	92.54	14	P	P	18 20 56.4	-0.3
	comp=Z,0.3nm,0.8s,baz=217,slow=4.4,SNR=1.8						
PB15	IPOC Station P	97.58	120		pwP	18 23 19.4	+3.4
MKAR	Makanchi Array	112.56	313	PKiKP	PKiKP	18 26 18.0	-0.8
	comp=Z,0.1nm,0.4s,baz=57,slow=1.9,SNR=4.3						
MKAR	Makanchi Array	112.56	313		PKiKP	18 26 17.2	-1.7
ARCES	ARCESS Array B	132.42	348	PKP	PKPdf	18 26 55.9	-0.2
	comp=Z,2.1nm,0.7s,baz=86,slow=2.0,SNR=7.2						
ARCES	ARCESS Array B	132.42	348		PKPdf	18 26 55.4	-0.8
FINES	FINESS Array B	138.97	341	PKhKP	PKPpre	18 26 59.5	
	comp=Z,1.4nm,0.8s,baz=69,slow=6.3,SNR=7.9						
FINES				PKP	PKPdf	18 27 09.3	+0.9
	comp=Z,0.7nm,0.5s,baz=139,slow=4.1,SNR=6.1						
FINES	FINESS Array B	138.97	341		PKPdf	18 27 08.9	+0.4
AKASG	Malin Array Be	145.46	327	PKPbc	PKPbc	18 27 20.7	-0.8
	comp=Z,1.2nm,0.4s,baz=44,slow=3.9,SNR=11						
AKASG	Malin Array Be	145.46	327		PKPdf	18 27 20.5	+0.2
BRTR	Keskin Array B	147.95	307	PKPbc	PKPbc	18 27 28.4	-0.4
	comp=Z,0.9nm,0.7s,baz=146,slow=4.8,SNR=6.5						
BRTR				PKPab	PKPab	18 27 33.1	-0.2
	comp=Z,0.9nm,0.6s,baz=97,slow=2.7,SNR=5.3						
BRTR	Keskin Array B	147.95	307		PKPdf	18 27 25.8	+0.8
BRTR				PKPbc	PKPbc	18 27 28.7	-0.1
BURAR	Bucovina Array	149.45	326		PKiKP	18 27 33.3	+0.3
CLL	Collm	151.39	343	i PKPbc	PKiKP	18 27 37.9	+1.2
	comp=Z,5.0nm,0.7s						

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*IDC **22** 18:08:46.9±0.9, 19°.65S×70°.60W, h0^{km}, mb3.7/7, mb1 4.0/9, mb1mx3.9/29, mbtmp3.8/9, ML3.5/2, MS3.3/7, Ms1 3.3/7, ms1mx3.1/31, Error ellipse: s-maj=27.3km s-min=15.6km az=68.0*

*NEIC **22** 18:08:49.7, 19°.78S×70°.84W, h20^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.60; M$_{\theta\theta}$0.32; M$_{\phi\phi}$0.29; M$_{r\theta}$0.44; M$_{\theta\phi}$-0.30; M$_{\phi r}$-1.19; Fault plane solution: M$_{0}$1.41000×10^{15} NP1:φ$_{s}$336.68000°, δ78.06000°, λ-80.66000°. NP2:φ$_{s}$118.18000°, δ15.11000°, λ-127.52000°. Principal axes: T 1.3563, Plg32.0000°, Azm59.0000°; N 0.0951, Plg9.0000°, Azm155.0000°; P -1.4514, Plg56.0000°, Azm259.0000°;*

*NEIC **22** 18:08:49.5±2.0, 19°.78S±0°.02×70°.85W±0°.07, h18^{km}±4^{km}, mb4.1/7, Mwr4.0/30 Error ellipse: s-maj=8.9km s-min=2.8km az=86.0*

*GUC **22** 18:08:51.3±0.8, 19°.78S×70°.79W, h44^{km}±2^{km}, ML4.0*

ISC 22 18:08:49.1±1.4**, 19°.78S**±0°.02×**70°.80W**±0°.05**, h18**^{km}±8^{km}**, n63, σ1^{s}.23**/69**, mb3.7**/6**, MS3.2**/5**, 7C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.66	75	⇓iP	Pn	18 09 03.2	-0.6
PSGC				eS	Sn	18 09 12.8	-1.1
PSGC				IAML		18 09 14.6	
	comp=N,7μm,0.3s						
PSGCX	Pisagua	0.66	75		Pn	18 09 03.4	-0.4
PSGCX				Sg	Sn	18 09 12.9	-1.0
TA01	Diego Aracena	0.98	144	⇓iP	Pg	18 09 08.6	+0.4
TA01				eS	Sn	18 09 21.6	+0.1
TA01				IAML		18 09 25.5	
	comp=E,5μm,0.6s						
PB11	IPOC Station P	1.08	89	⇑iP	Pg	18 09 10.7	+0.6
PB11				eS	Sn	18 09 24.9	+0.7
PB11				IAML		18 09 28.9	
	comp=N,6μm,0.6s						
PB11	IPOC Station P	1.08	89	Pn	Pg	18 09 10.2	+0.1
PATCX	Punta Patache	1.21	150	⇓iP	Pb	18 09 11.9	+0.4
PATCX				eS	Sg	18 09 28.1	-0.2
PATCX	Punta Patache	1.21	150	Pn	Pb	18 09 12.1	+0.6
PATCX					Sg	18 09 28.7	+0.4
PB12	IPOC Station P	1.24	21	⇑iP	Pb	18 09 12.7	+0.6
PB12				eS	Sg	18 09 29.5	+0.2
PB12				IAML		18 09 31.0	
	comp=N,6μm,0.4s						
PB12	IPOC Station P	1.24	21	Pn	Pb	18 09 12.7	+0.6
AP01	Chacalluta	1.46	17	⇑iP	Pb	18 09 16.3	+0.4
AP01				eS	Sb	18 09 35.4	+1.3
GO01	Chusmiza	1.52	86	⇑iP	Pb	18 09 17.8	+0.7
GO01				eS	Sg	18 09 38.4	+0.1
GO01				IAML		18 09 40.7	
	comp=N,6μm,0.3s						
GO01	Chusmiza	1.52	86	Pn	Pb	18 09 17.6	+0.5
PB08	IPOC Station P	1.59	104	⇑iP	Pb	18 09 18.7	+0.4
PB08				eS	Sg	18 09 39.6	-1.0
PB08				IAML		18 09 42.0	
	comp=N,2μm,0.5s						
PB02	IPOC Station P	1.76	151	⇓iP	Pn	18 09 19.9	+1.0
PB02				eS	Sb	18 09 42.5	-0.3
PB02				IAML		18 09 52.0	
	comp=E,4μm,0.7s						
PB01	IPOC Station P	1.77	136	eP	Pb	18 09 20.6	-0.5
PB01				eS	Sb	18 09 42.4	-0.6
PB01				IAML		18 09 48.1	
	comp=E,2μm,0.5s						
PB01	IPOC Station P	1.77	136	Pn	Pb	18 09 20.9	-0.2
PB16	IPOC Station P	1.88	41	⇑iP	Pb	18 09 23.1	-0.3
PB16				i S	Sb	18 09 47.8	+1.0
PB16				IAML		18 09 52.1	
	comp=N,4μm,0.5s						
PB16	IPOC Station P	1.88	41	Pn	Pb	18 09 23.4	0.0
PB07	IPOC Station P	2.12	156	⇑iP	Pn	18 09 24.7	+0.7
PB07				i S	Sn	18 09 51.3	+1.3
PB07	IPOC Station P	2.12	156	Pn	Pn	18 09 24.5	+0.6
PB09	IPOC Station P	2.48	144	Pn	Pb	18 09 31.4	-2.0
PB04	IPOC Station P	2.62	167	Pn	Pn	18 09 31.1	+0.3
LVC	Limon Verde	3.33	148	Pn	Pn	18 09 42.9	+2.2
	comp=N,6.5nm,0.3s,baz=319,slow=9.9,SNR=1.0						
LVC				Sn	Sn	18 10 21.6	+1.6
	comp=N,19nm,0.3s,baz=349,slow=19,SNR=2.0						
LVC				Lg	Lg	18 10 33.6	
	comp=N,45nm,0.3s,baz=188,slow=13,SNR=6.8						
LVC	Limon Verde	3.33	148		Pn	18 09 43.5	+2.8
PB15	IPOC Station P	3.63	160	Pn	Pn	18 09 45.3	+0.5
PB10	IPOC Station P	3.73	176	Pn	Pn	18 09 44.9	-1.0
LPAZ	La Paz	4.30	37	Pn	Pb	18 10 02.8	-1.8
	comp=N,7.9nm,0.3s,baz=124,slow=1.5,SNR=24						
LPAZ				LR	LR	18 11 19.5	
	comp=N,56nm,18.7s,baz=215,slow=37						
LPAZ	La Paz	4.30	37		Pb	18 10 02.5	-2.1
PB14	IPOC Station P	4.84	176	Pn	Pn	18 10 00.2	-1.3
GO02	Mina Guanaco	5.48	168	Pn	Pn	18 10 10.3	+0.1
GO03	Copiap	7.80	176	Pn	Pn	18 10 40.5	-1.4
SIV	San Ignacio	10.00	69	Pn	Pn	18 11 09.6	-2.5
	comp=N,0.3nm,0.3s,baz=264,slow=12,SNR=2.3						
GO04	Tololo Observa	10.35	180	Pn	Pn	18 11 15.0	-2.1
SAML	Samuel	13.04	35		Pn	18 11 53.0	-0.8
CPUP	Villa Florida	14.01	120	Pn	Pn	18 12 10.9	+4.0
	comp=N,0.1nm,0.3s,baz=288,slow=10,SNR=3.1						
CPUP				LR	LR	18 18 27.0	
	comp=N,77nm,18.6s,baz=274,slow=42						
CPUP	Villa Florida	14.01	120		Pn	18 12 07.7	+0.9
GO06	Curarrehue	19.75	182	P	P	18 13 17.6	-0.6
PLCA	Paso Flores	20.89	179	P	P	18 13 32.1	+1.5
	comp=N,5.2nm,0.9s,baz=20,slow=11,SNR=12						
PLCA	Paso Flores	20.89	179	P	P	18 13 30.7	+0.1
PLCA				IAmb	IAmb	18 13 32.8	
	comp=Z,12nm,1.3s						
PTGA	Pitinga	21.70	31	P	P	18 13 38.0	-1.3
	comp=Z,4.5nm,0.3s,baz=206,slow=18,SNR=9.9						
PTGA				LR	LR	18 22 40.8	
	comp=Z,104nm,19.9s,baz=240,slow=39						
PTGA	Pitinga	21.70	31	P	P	18 13 38.4	-1.0
BDFB	Brasilia	22.09	83	P	P	18 13 42.1	-1.6
	comp=Z,1.9nm,0.6s,baz=209,slow=13,SNR=1.7						
BDFB				LR	LR	18 23 51.9	
	comp=Z,93nm,19.6s,baz=290,slow=41						
BDFB	Brasilia	22.09	83	P	P	18 13 42.7	-1.0
BDFB				IAmb	IAmb	18 13 51.5	
	comp=Z,8.6nm,1.1s						
RUSC	La Rusia	25.60	355	P	P	18 14 18.6	+0.4
SDV	Santo Domingo	28.48	0	LR	LR	18 27 12.9	
	comp=Z,55nm,20.5s,baz=30,slow=39						
MDP	Montagnes des	30.50	38	LR	LR	18 28 02.4	
	comp=Z,120nm,20.4s,baz=206,slow=38						
TXAR	Lajitas Array	58.21	326	P	P	18 18 43.5	+0.9
	comp=Z,0.5nm,0.7s,baz=148,slow=7.2,SNR=5.0						
PDAR	Pinedale Array	71.74	331	P	P	18 20 11.8	+1.2
	comp=Z,0.2nm,0.5s,baz=149,slow=9.5,SNR=2.5						
YNE	Yellowstone No	73.70	332	P	P	18 20 24.5	+2.3
TORD	Torodi Ar. Bea	78.47	71	P	P	18 20 48.0	-1.7
	comp=Z,0.7nm,0.8s,baz=237,slow=7.5,SNR=2.9						
YKA	Yellowknife Ar	88.98	341	P	P	18 21 42.7	+0.3
	comp=Z,0.3nm,0.7s,baz=134,slow=5.3,SNR=3.4						
AFI	Afiamalu	95.38	253	LR	LR	18 55 58.8	
	comp=Z,104nm,21.3s,baz=206,slow=30						
H11S2	WAKE ISLAND Hy	125.88	279	T	T	20 47 08.3	
	baz=101,slow=75,SNR=14						
H11S1	WAKE ISLAND Hy	125.89	279	T	T	20 47 09.4	
	baz=101,slow=75,SNR=9.8						
H11S3	WAKE ISLAND Hy	125.90	279	T	T	20 47 10.1	
	baz=101,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	125.92	280	T	T	20 47 11.3	
	baz=100,slow=74,SNR=7.1						
H11N2	WAKE ISLAND Hy	125.94	280	T	T	20 47 13.4	
	baz=100,slow=74,SNR=8.1						
H11N1	WAKE ISLAND Hy	125.94	280	T	T	20 47 12.5	
	baz=100,slow=74,SNR=4.1						
ASAR	Alice Springs	130.56	210	PKP	PKPdf	18 28 00.1	+0.3
	comp=Z,0.4nm,0.9s,baz=138,slow=1.2,SNR=3.3						
ASAR	Alice Springs	130.56	210		PKPdf	18 27 59.5	-0.2
WRA	Warramunga Arr	133.47	213	PKP	PKPdf	18 28 06.0	+0.7
	comp=Z,0.3nm,0.7s,baz=150,slow=1.5,SNR=1.9						
MKAR	Makanchi Array	145.22	33	PKPbc	PKPbc	18 28 24.3	-1.2
	comp=Z,0.8nm,1.0s,baz=320,slow=3.9,SNR=5.3						
MKAR	Makanchi Array	145.22	33		PKPbc	18 28 23.8	-1.7

WEL 22 18:11:33.0, 40°S±32°×**17°6E**±7°5**, h96**^{km}±171^{km}**, M2.1**/18**, ML2.3**/16**, MLv2.1**/18**, Error ellipse: s-maj=0.1km s-min=0.0km az=88.3, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
POWZ	Post Office Ro	0.15	91	P	Pn	18 11 46.9	+0.3
MRZ	Mangatainoka R	0.27	179	P	Pn	18 11 46.7	-0.4
PRWZ	Pori Road	0.35	119	P	Pn	18 11 45.4	-2.0
TIWZ	Tintock	0.46	148	P	Pn	18 11 46.0	-2.1
DVHZ	Dannevirke	0.46	79	P	Pn	18 11 48.7	+0.5
HOWZ	Holdsworth Sta	0.51	185	P	Pn	18 11 49.2	+0.7
OGWZ	Otaki Gorge	0.53	215	P	Pn	18 11 52.0	+3.4
BFZ	Birch Farm	0.59	120	P	Pn	18 11 47.4	-1.8
KIW	Kapiti Island	0.69	227	P	Pn	18 11 55.4	+5.4
ANWZ	Angora Road	0.69	96	P	Pn	18 11 50.4	+0.4
TMWZ	Te Maipa	0.76	161	P	Pn	18 11 50.9	+0.2
CAW	Cannon Point	0.81	208	P	Pn	18 11 55.3	+4.1
PRHZ	Porangahau	0.82	82	P	Pn	18 11 53.6	+2.4
KRHZ	Kereru	0.96	40	P	Pn	18 11 55.5	+2.7
BHHZ	Black Hill Sta	0.97	23	P	Pn	18 11 53.7	+0.7

OTT 22 18:31:58.6±0.1**, 62°.37N×70°.73W, h18**^{km}**, MN3.5**/12**, 69km southwest from Kimmirut, Nu, Hudson Strait region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNGQ	Kangiqsujuaq	0.98	217	PG	Pb	18 32 16.6	-0.3
KNGQ				SG	Sb	18 32 29.1	-0.3
KNGQ				Trac		18 32 37.3	
	comp=Z,129nm,0.1s						
FRB	Frobisher Bay	1.70	35	PN	Pn	18 32 27.9	+0.7
FRB				SN	Sn	18 32 48.8	+0.3
FRB				Trac		18 32 50.8	
	comp=Z,179nm,0.1s						
KAJQ	Kangiqsualujju	4.39	145	PN	Pn	18 33 03.1	-1.1
KAJQ				SN	Sn	18 33 51.7	-3.0
KAJQ				LG	Lg	18 34 14.9	
KAJQ				Trac		18 34 15.6	
	comp=Z,24nm,0.2s						
NANL	Nain	7.44	138	PN	Pn	18 33 45.2	-0.9
NANL				SN	Sn	18 35 04.2	-5.7
NANL				Trac		18 35 50.5	
	comp=Z,2.1nm,0.0s						
SCHQ	Schefferville	7.83	163	PN	Pn	18 33 50.4	-1.1
SCHQ				SN	Sn	18 35 13.2	-6.3
SCHQ				Trac		18 36 05.8	
	comp=Z,21nm,0.5s						
KJKQ	Kuujjuarapik	7.99	210	PN	Pn	18 33 52.8	-0.8
KJKQ				SN	Sn	18 35 18.0	-5.3
KJKQ				Trac		18 35 34.6	
	comp=Z,6.6nm,0.2s						
CLRN	Clyde River	8.18	5	PN	Pn	18 33 52.0	-4.1
CLRN				SN	Sn	18 35 21.9	-6.1
CLRN				LG	Lg	18 36 08.6	
CLRN				Trac		18 36 12.6	
	comp=Z,14nm,0.2s						
ILON	Igloolik, Nuna	8.35	332	PN	Pn	18 33 56.8	-1.7
ILON				SN	Sn	18 35 25.8	-6.4
ILON				Trac		18 36 17.9	
	comp=Z,31nm,0.4s						
ILON				LG	Lg	18 36 18.9	
LG4Q	La Grande 4	8.95	193	PN	Pn	18 34 06.0	-0.8
LG4Q				Trac		18 36 44.2	
	comp=Z,1.9nm,0.0s						
SFJD	Kangerlussuaq	9.75	53	PN	Pn	18 34 17.9	+0.2
VIMO	Victor Mine	11.82	222	PN	Pn	18 34 44.7	-1.3
VIMO				SN	Sn	18 36 48.7	-8.6
VIMO				Trac		18 37 02.7	
	comp=Z,12nm,0.7s						
SMQ	Clarke City	12.38	168	PN	Pn	18 34 51.8	-1.9
SMQ				SN	Sn	18 37 01.6	-9.4
SMQ				Trac		18 38 24.2	
	comp=Z,4.3nm,0.3s						
CNQ	Baie Comeau	13.19	172	PN	Pn	18 35 02.7	-2.0
CNQ				SN	Sn	18 37 20.4	-10
CNQ				Trac		18 38 50.3	
	comp=Z,4.6nm,0.3s						

IDC 22 18:36:46.9±2.0**, 6°.38S×129°.34E, h0**^{km}**, mb3.7**/1**, mb1 3.5**/3**, mb1mx3.3**/23**, mbtmp3.4**/3**, ML3.4**/2**, Error ellipse: s-maj=121.9km s-min=30.6km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.33	161	Pn	Pn	18 40 10.1	-1.2
	0.2nm,0.3s,baz=339,slow=13,SNR=14						
WRA				Sn	Sn	18 42 36.5	-15
	0.6nm,0.3s,baz=339,slow=18,SNR=8.0						
ASAR	Alice Springs	17.74	166	P	P	18 40 56.4	-0.1
	0.1nm,0.3s,baz=342,slow=8.8,SNR=16						
ASAR				S	Sn	18 43 57.7	-16
	0.1nm,0.3s,baz=358,slow=18,SNR=2.2						
MKAR	Makanchi Array	67.35	327	P	P	18 47 44.0	0.0
	0.4nm,0.4s,baz=125,slow=7.6,SNR=9.0						

*IDC **22** 18:51:01.9±1.1, 21°.38S×174°.34W, h0^{km}, mb4.0/9, mb1 4.2/9, mb1mx4.0/28, mbtmp4.0/9, MS3.2/5, Ms1 3.2/5, ms1mx3.0/25, Error ellipse: s-maj=41.9km s-min=24.0km az=136.0*

*NEIC **22** 18:51:02.5±2.3, 22°.1S±0°.2×173°.6W±0°.1, h35^{km}±4^{km}, mb4.7/12, Error ellipse: s-maj=28.7km s-min=10.5km az=159.0*

ISC 22 18:51:03.6±1.0**, 22°.0S**±0°.2×**173°.8W**±0°.1**, h35**^{km}**, n43, σ1^{s}.21**/33**, mb4.4**/16**, MS3.3**/7**, 1C, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.63	51		Pn	18 52 04.6	-6.5
MSVF	Nonsavu	8.81	298		Pn	18 53 09.1	+0.5
DZM	Mont Dzumac	18.36	266	eLR	LR	18 59 31.9	
	comp=Z,148nm,25.4s						
DZM	Mont Dzumac	18.36	266	LR	LR	19 00 32.7	
	comp=Z,95nm,19.0s,baz=176,slow=32						
TBI	Tubuai	22.45	98	eLR	LR	19 01 23.6	
	comp=Z,156nm,26.2s						
PPT2	Papeete2	23.16	83	eLR	LR	19 01 34.1	
	comp=Z,150nm,25.8s						
PPT	Papeete	23.17	83	LR	LR	19 03 50.8	
	comp=Z,111nm,18.5s,baz=239,slow=32						
HNR	Honiara	28.18	292	LR	LR	19 06 15.1	
	comp=Z,50nm,20.3s,baz=171,slow=33						
TAOE	Nuku Hiva Isla	34.84	73	eLR	LR	19 06 51.0	
	comp=Z,103nm,25.5s						
STKA	Stephens Creek	40.75	246	P	P	18 58 42.0	+0.6
	2.0nm,0.9s,baz=113,slow=8.9,SNR=4.1						
STKA				LR	LR	19 13 44.0	
	comp=Z,30nm,19.8s,baz=41,slow=34						
STKA	Stephens Creek	40.75	246	P	P	18 58 41.0	-0.3
BBOO	Buckleboo	45.46	245	P	P	18 59 20.5	+1.0
AS31	Alice Springs	48.04	257	P	P	18 59 39.7	-0.1
ASAR	Alice Springs	48.04	257	P	P	18 59 40.0	+0.2
	3.6nm,0.9s,baz=91,slow=8.3,SNR=30						
ASAR	Alice Springs	48.04	257	P	P	18 59 38.6	-1.2
WR0	Warramunga Arr	48.13	262	P	P	18 59 40.0	-0.6
WR0				IAmb	IAmb	18 59 54.2	
	comp=Z,3.6nm,1.0s						
WB0	Warramunga Arr	48.31	263	P	P	18 59 41.8	-0.1
WB0				IAmb	IAmb	19 00 08.2	
	comp=Z,4.9nm,1.1s						
WB2	Warramunga Arr	48.31	262	P	P	18 59 41.3	-0.6
WB2				IAmb	IAmb	18 59 42.4	
	comp=Z,7.4nm,1.1s						
WRAB	Tennant Creek	48.31	262	P	P	18 59 40.8	-1.2
WRAB				IAmb	IAmb	18 59 42.3	
	comp=Z,7.2nm,1.1s						
WRA	Warramunga Arr	48.32	262	P	P	18 59 41.5	-0.5
	comp=Z,3.0nm,0.9s,baz=99,slow=7.7,SNR=15						
WRA	Warramunga Arr	48.32	262	P	P	18 59 40.9	-1.1
KNRA	Kununurra	54.51	266	P	P	19 00 29.8	+1.4
KNRA				IAmb	IAmb	19 00 56.9	
	comp=Z,23nm,1.6s						
FAKI	Fak Fak	55.70	282	P	P	19 00 35.7	-1.2
FITZ	Fitzroy Crossi	56.75	262	P	P	19 00 43.7	-0.8
FITZ				IAmb	IAmb	19 00 55.2	
	comp=Z,11nm,1.6s						
VNDA	Vanda	56.79	186	P	P	19 00 52.0	+8.2
	comp=Z,0.4nm,0.4s,baz=97,slow=3.2,SNR=1.7						
SOEI	Soe	60.50	271	P	P	19 01 11.2	+0.5
SOEI				IAmb	IAmb	19 01 39.3	
	comp=Z,12nm,1.0s						
PETK	Petropavlovsk-	78.82	343	P	P	19 03 02.4	-0.2
	comp=Z,4.3nm,0.9s,baz=133,slow=8.1,SNR=2.1						
PETK	Petropavlovsk-	78.82	343	P	P	19 03 01.7	-0.9
NVAR	Mina Array Bea	79.48	41	P	P	19 03 09.5	+2.6
	comp=Z,0.5nm,0.6s,baz=226,slow=7.3,SNR=2.8						
NVAR	Mina Array Bea	79.48	41	P	P	19 03 05.5	-1.3
KSRS	Korea Array	80.68	317	P	P	19 03 12.9	-0.1
	comp=Z,1.3nm,1.0s,baz=133,slow=7.0,SNR=4.8						
SYO	Syowa Base	86.07	191	⇑epP	pP	19 03 47.0	-2.0
ILAR	Eielson Array	88.97	11	P	P	19 03 54.8	+0.6
	comp=Z,0.6nm,1.0s,baz=229,slow=5.6,SNR=4.2						
ILAR	Eielson Array	88.97	11	P	P	19 03 54.3	+0.2
BMAR	Burnt Mountain	91.78	11	P	P	19 04 07.1	-0.1
CMAR	Chiang Mai Arr	94.35	288	P	P	19 04 21.7	+1.5
	comp=Z,0.6nm,0.7s,baz=117,slow=2.8,SNR=6.3						
CMAR				LR	LR	19 42 40.8	
	comp=Z,7.1nm,21.9s,baz=230,slow=33						
CMAR	Chiang Mai Arr	94.35	288	P	P	19 04 19.9	-0.3
AKASG	Malin Array Be	146.20	333	PKPbc	PKPab	19 10 40.9	+0.1
	comp=Z,0.5nm,0.2s,baz=41,slow=4.3,SNR=11						
AKASG	Malin Array Be	146.20	333		PKPab	19 10 40.7	0.0
BRTR	Keskin Array B	150.77	313	PKPbc	PKiKP	19 10 54.5	+1.3
	comp=Z,1.2nm,0.8s,baz=145,slow=4.5,SNR=8.0						
BRTR	Keskin Array B	150.77	313		PKiKP	19 10 52.6	-0.7
GERES	GERESS Array B	152.58	349	PKPbc	PKiKP	19 10 58.5	+1.9
	comp=Z,1.2nm,1.0s,baz=53,slow=5.2,SNR=5.1						
GERES	GERESS Array B	152.58	349		PKPbc	19 10 52.6	-3.8

*SJA **22** 18:52:42.6±1.3, 20°.00S×70°.89W, h24^{km}±4^{km}, ML3.4, MW3.5*

*GUC **22** 18:52:44.5±0.8, 19°.99S×70°.88W, h43^{km}±2^{km}, ML3.5*

*IDC **22** 18:52:48.8±5.4, 20°.92S×68°.61W, h0^{km}, mb3.6/1, mb1 3.6/2, mb1mx3.4/20, mbtmp3.5/2, ML3.3/1, Error ellipse: s-maj=168.2km s-min=57.6km az=75.0*

ISC 22 18:52:41.1±2.3**, 20°.00S**±0°.03×**70°.99W**±0°.07**, h7**^{km}±15^{km}**, n29, σ0^{s}.92**/46**, 5C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.91	64	⇓iP	Pb	18 52 59.1	-0.2
PSGC				eS	Sb	18 53 10.6	-1.0
PSGCX	Pisagua	0.91	64	i P	Pb	18 52 59.1	-0.1
PSGCX				eS	Sb	18 53 10.1	-1.5
PSGCX				IAML		18 53 12.5	
	comp=Z,1μm,0.7s						
TA01	Diego Aracena	0.94	127	⇓iP	Pb	18 53 00.1	+0.4
TA01				eS	Sb	18 53 12.4	0.0
TA01				IAML		18 53 14.0	
	comp=E,3μm,0.3s						
PATCX	Punta Patache	1.13	136	eP	Pn	18 53 03.4	0.0
PATCX				i S	Sb	18 53 18.0	+0.1
PATCX				IAML		18 53 19.7	
	comp=E,1μm,0.5s						
PATCX	Punta Patache	1.13	136	i P	Pn	18 53 03.5	0.0
PATCX				eS	Sn	18 53 18.9	-0.3
PATCX				IAML		18 53 22.4	
	comp=Z,609nm,0.3s						
PB11	IPOC Station P	1.28	79	⇑iP	Pn	18 53 05.3	-0.2
PB11				eS	Sb	18 53 21.2	-1.0
PB11				IAML		18 53 22.6	
	comp=N,2μm,0.4s						
PB11	IPOC Station P	1.28	79	i P	Pn	18 53 05.3	-0.2
PB11				eS	Sb	18 53 21.0	-1.3
PB11				IAML		18 53 22.5	
	comp=Z,814nm,0.2s						
PB12	IPOC Station P	1.52	24	⇓iP	Pn	18 53 09.1	+0.4
PB12				eS	Sb	18 53 29.0	-0.1
PB12				IAML		18 53 33.2	
	comp=E,757nm,0.2s						
PB12	IPOC Station P	1.52	24	i P	Pn	18 53 09.0	+0.3
PB12				eS	Sg	18 53 30.8	+0.9
PB12				IAML		18 53 31.2	
	comp=Z,516nm,0.6s						
PB02	IPOC Station P	1.66	142	⇑iP	Pn	18 53 11.2	+0.4
PB02				eS	Sn	18 53 32.5	+0.1
PB02				IAML		18 53 41.7	
	comp=E,1μm,0.3s						
PB02	IPOC Station P	1.66	142	i P	Pn	18 53 11.2	+0.4
PB02				eS	Sn	18 53 32.8	+0.3
PB02				IAML		18 53 39.8	
	comp=Z,1μm,0.3s						
GO01	Chusmiza	1.72	79	i P	Pn	18 53 12.5	+0.6
GO01				eS	Sn	18 53 34.6	+0.2
GO01				IAML		18 53 36.3	
	comp=N,3μm,0.1s						
PB08	IPOC Station P	1.73	95	⇓iP	Pn	18 53 12.9	+0.9
PB08				eS	Sn	18 53 34.1	-0.4
PB08				IAML		18 53 36.1	
	comp=N,924nm,0.3s						
PB08	IPOC Station P	1.73	95	i P	Pn	18 53 12.7	+0.8
PB08				eS	Sn	18 53 34.7	+0.2
PB08				IAML		18 53 37.8	
	comp=Z,435nm,0.3s						
AP01	Chacalluta	1.73	21	⇑eP	Pn	18 53 12.9	+1.3
AP01				i S	Sn	18 53 34.6	+0.5
AP01				IAML		18 53 39.9	
	comp=E,2μm,0.5s						
PB01	IPOC Station P	1.75	127	⇑iP	Pn	18 53 12.7	+0.8
PB01				i S	Sn	18 53 34.1	-0.4
PB01				IAML		18 53 40.4	
	comp=N,969nm,0.5s						
PB01	IPOC Station P	1.75	127	i P	Pn	18 53 12.8	+0.9
PB01				eS	Sn	18 53 34.8	+0.3
PB01				IAML		18 53 40.1	
	comp=Z,652nm,0.2s						
PB07	IPOC Station P	2.00	149	IAML		18 53 51.9	
	comp=E,430nm,0.3s						
PB16	IPOC Station P	2.17	40	⇑iP	Pn	18 53 19.3	+1.1
PB16				i S	Sn	18 53 46.0	+0.3
PB16				IAML		18 53 50.2	
	comp=N,401nm,0.4s						
PB09	IPOC Station P	2.42	138	i P	Pn	18 53 22.8	+1.6
PB09				IAML		18 54 02.8	
	comp=Z,347nm,0.7s						
PB04	IPOC Station P	2.45	162	i P	Pn	18 53 21.5	-0.2
PB05	IPOC Station P	2.93	166	i P	Pn	18 53 27.7	-0.5
PB05				IAML		18 54 28.9	
	comp=Z,90nm,0.6s						
PB06	IPOC Station P	3.00	154	i P	Pn	18 53 29.1	-0.1
PB06				IAML		18 54 22.8	
	comp=Z,169nm,0.9s						
LVC	Limon Verde	3.24	144	i P	Pn	18 53 34.7	+2.0
LVC				IAML		18 54 30.5	
	comp=Z,56nm,0.3s						
PB15	IPOC Station P	3.49	156	i P	Pn	18 53 36.0	0.0
PB10	IPOC Station P	3.52	174	i P	Pn	18 53 35.4	-0.9
PB10				IAML		18 54 53.3	
	comp=Z,20nm,0.6s						
LPAZ	La Paz	4.58	37	Pn	Pb	18 54 00.4	-1.9
	comp=Z,0.9nm,0.3s,baz=180,slow=7.1,SNR=14						
TORD	Torodi Ar. Bea	78.71	72	P	P	19 04 43.4	-1.4
	comp=Z,0.4nm,0.7s,baz=242,slow=6.3,SNR=1.2						
MKAR	Makanchi Array	145.51	33	PKPbc	PKiKP	19 12 26.9	+2.7
	comp=Z,0.2nm,0.5s,baz=312,slow=4.6,SNR=4.2						

*IDC **22** 19:02:59.3±0.9, 19°.66S×70°.74W, h0^{km}, mb3.8/7, mb1 4.1/9, mb1mx3.9/23, mbtmp3.9/9, ML3.9/2, MS3.1/3, Ms1 3.1/3, ms1mx2.8/28, Error ellipse: s-maj=29.5km s-min=15.4km az=70.0*

*NEIC **22** 19:03:02.0±1.6, 19°.80S±0°.01×70°.89W±0°.06, h18^{km}±4^{km}, mb4.1/8, Mwr4.0/28, ML4.0(GUC), Error ellipse: s-maj=8.1km s-min=2.2km az=92.0*

*NEIC **22** 19:03:02, 19°.79S×70°.87W, h19^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.55; M$_{\theta\theta}$0.02; M$_{\phi\phi}$-0.57; M$_{r\theta}$0.32; M$_{\theta\phi}$0.12; M$_{\phi r}$-0.85; Fault plane solution: M$_{0}$1.08000×10^{15} NP1:φ$_{s}$357.70000°, δ16.62000°, λ106.23000°. NP2:φ$_{s}$160.80000°, δ74.06000°, λ85.23000°. Principal axes: T 1.0592, Plg61.0000°, Azm64.0000°; N 0.0322, Plg5.0000°, Azm162.0000°; P -1.0915, Plg29.0000°, Azm255.0000°;*

*GUC **22** 19:03:02.3±0.8, 19°.80S×70°.91W, h40^{km}±3^{km}, ML4.0*

ISC 22 19:03:01.2±2.4**, 19°.80S**±0°.03×**70°.90W**±0°.06**, h14**^{km}±15^{km}**, n57, σ1^{s}.08**/72**, mb4.1**/7**, 8C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.76	75	⇓iP	Pb	19 03 16.2	0.0
PSGC				i S	Sb	19 03 26.5	0.0
PSGC				IAML		19 03 27.1	
	comp=E,3μm,0.6s						
PSGCX	Pisagua	0.76	75		Pb	19 03 16.0	-0.3
PSGCX				Sg	Sb	19 03 26.2	-0.3
TA01	Diego Aracena	1.02	139	⇓iP	Pn	19 03 21.2	+0.1
TA01				i S	Sn	19 03 35.1	-0.1
PB11	IPOC Station P	1.17	88	⇓iP	Pn	19 03 23.2	-0.2

PB11				iS	Sn	19 03 39.2	0.0
PB11				IAML		19 03 43.5	
	comp=E,6µm,0.3s						
PB11	IPOC Station P	1.17	88	Pn	Pn	19 03 23.1	-0.2
PB11					Sg	19 03 39.4	+0.2
PATCX	Punta Patache	1.24	146	⇑iP	Pn	19 03 23.9	-0.2
PATCX				iS	Sn	19 03 40.3	-0.4
PATCX				IAML		19 03 51.6	
	comp=E,2µm,0.6s						
PATCX	Punta Patache	1.24	146	Pn	Pn	19 03 24.3	+0.2
PATCX				Sn	Sn	19 03 40.3	-0.4
PB12	IPOC Station P	1.30	25	⇑iP	Pn	19 03 25.0	0.0
PB12				iS	Sn	19 03 41.8	-0.4
PB12				IAML		19 03 48.5	
	comp=N,3µm,0.5s						
PB12	IPOC Station P	1.30	25	Pn	Pn	19 03 24.9	0.0
PB12				Sn	Sn	19 03 41.8	-0.4
AP01	Chacalluta	1.52	21	⇑iP	Pn	19 03 28.0	+0.1
AP01				iS	Sb	19 03 48.7	+0.5
AP01				IAML		19 03 49.9	
	comp=N,9µm,0.4s						
GO01	Chusmiza	1.61	86	⇓iP	Pb	19 03 30.7	-0.4
GO01				iS	Sb	19 03 52.4	+1.0
GO01				IAML		19 03 54.8	
	comp=N,8µm,0.2s						
GO01	Chusmiza	1.61	86	Pn	Pb	19 03 30.6	-0.4
PB08	IPOC Station P	1.68	102	⇑iP	Pb	19 03 31.5	-0.7
PB08				iS	Sb	19 03 54.0	+0.7
PB08				IAML		19 03 55.9	
	comp=N,2µm,0.3s						
PB02	IPOC Station P	1.78	148	⇑iP	Pn	19 03 32.0	+0.3
PB02				iS	Sn	19 03 54.5	+0.3
PB02				IAML		19 04 01.2	
	comp=E,4µm,0.4s						
PB01	IPOC Station P	1.81	133	⇑iP	Pn	19 03 32.7	+0.6
PB01				iS	Sb	19 03 55.9	-1.0
PB01				IAML		19 03 56.6	
	comp=N,2µm,0.5s						
PB01	IPOC Station P	1.81	133	Pn	Pn	19 03 33.0	+0.9
PB16	IPOC Station P	1.96	42	⇑iP	Pn	19 03 35.5	+0.9
PB16				iS	Sb	19 04 02.1	+0.4
PB16				IAML		19 04 06.2	
	comp=E,2µm,0.3s						
PB16	IPOC Station P	1.96	42	Pn	Pn	19 03 35.5	+0.9
PB07	IPOC Station P	2.14	154	⇑iP	Pn	19 03 37.1	+0.4
PB07				iS	Sb	19 04 06.8	+0.4
PB07	IPOC Station P	2.14	154	Pn	Pn	19 03 36.9	+0.2
PB09	IPOC Station P	2.52	142	Pn	Pn	19 03 43.1	+1.2
PB04	IPOC Station P	2.62	165		Pn	19 03 43.9	+0.6
LVC	Limon Verde	3.36	147	Pn	Pn	19 03 55.8	+2.2
	comp=E,11nm,0.3s,baz=323,slow=8.3,SNR=11						
LVC				Sn	Sn	19 04 34.5	+1.0
	comp=E,22nm,0.3s,baz=10,slow=5.8,SNR=4.7						
LVC				Lg	Lg	19 04 45.8	
	comp=E,50nm,0.3s,baz=202,slow=7.5,SNR=7.2						
LVC				LR	LR	19 05 15.3	
	comp=E,165nm,20.2s,baz=332,slow=40						
LVC	Limon Verde	3.36	147		Pn	19 03 55.2	+1.6
PB15	IPOC Station P	3.65	159		Pn	19 03 59.1	+1.7
PB10	IPOC Station P	3.71	175		Pn	19 03 57.2	-0.9
LPAZ	La Paz	4.37	37	Pn	Pn	19 04 11.9	+4.1
	comp=E,2.4nm,0.3s,baz=277,slow=4.8,SNR=19						
LPAZ	La Paz	4.37	37		Pn	19 04 11.7	+3.9
PB14	IPOC Station P	4.83	175		Pn	19 04 12.4	-1.3
GO02	Mina Guanaco	5.47	167		Pn	19 04 22.9	+0.2
GO03	Copiap	7.78	176	Pn	Pn	19 04 53.4	-0.8
SIV	San Ignacio	10.09	70	Pn	Pn	19 05 25.2	-0.7
	comp=E,1.2nm,0.3s,baz=270,slow=10.0,SNR=17						
SIV				LR	LR	19 09 54.0	
	comp=E,226nm,18.5s,baz=287,slow=42						
SIV	San Ignacio	10.09	70		Pn	19 05 25.2	-0.7
SAML	Samuel	13.12	36	Pn	Pn	19 06 07.3	+0.1
ROC1	El Roble	13.12	180	Pn	Pn	19 06 06.6	-0.8
CPUP	Villa Florida	14.08	120	LR	LR	19 12 12.6	
	comp=E,65nm,20.0s,baz=267,slow=40						
PLCA	Paso Flores	20.87	179	P	Pn	19 07 46.0	+0.6
	comp=E,1.9nm,0.9s,baz=13,slow=9.5,SNR=8.5						
PLCA	Paso Flores	20.87	179	P	P	19 07 43.8	+0.9
PLCA				IAmb	IAmb	19 08 01.1	
	comp=Z,5.5nm,1.2s						
PTGA	Pitinga	21.77	31	P	P	19 07 50.6	-2.1
	comp=Z,5.9nm,0.3s,baz=302,slow=23,SNR=20						
PTGA	Pitinga	21.77	31	P	P	19 07 50.5	-2.2
RUSC	La Rusia	25.62	355	P	P	19 08 31.1	+0.2
TXAR	Lajitas Array	58.18	326	P	P	19 12 55.8	+0.8
	comp=Z,0.1nm,0.5s,baz=126,slow=4.6,SNR=2.0						
TXAR	Lajitas Array	58.18	326	P	P	19 12 56.1	+1.1
QSPA	South Pole Qui	70.38	180	P	P	19 14 15.3	+0.7
PDAR	Pinedale Array	71.72	331	P	P	19 14 22.3	-0.8
	comp=Z,0.2nm,0.6s,baz=159,slow=2.7,SNR=2.7						
PDAR	Pinedale Array	71.72	331	P	P	19 14 23.3	+0.2
YNE	Yellowstone No	73.68	332	P	P	19 14 36.2	+1.5
TOA0	Torodi Ar. Sit	78.56	72	P	P	19 15 00.9	-1.9
TOA0				IAmb	IAmb	19 15 12.1	
	comp=Z,3.0nm,1.2s						
TORD	Torodi Ar. Bea	78.56	72	P	P	19 15 01.4	-1.5
	comp=Z,1.1nm,0.6s,baz=258,slow=4.9,SNR=6.3						
MAW	Mawson	86.48	164	P	P	19 15 43.4	+0.2
	comp=Z,3.2nm,1.0s,baz=229,slow=9.3,SNR=2.3						
MAW	Mawson	86.48	164	P	P	19 15 43.0	-0.2
MAW				IAmb	IAmb	19 16 01.8	
	comp=Z,1.8nm,1.4s						
YKA	Yellowknife Ar	88.98	341	P	P	19 15 55.1	+0.1
	comp=Z,0.4nm,0.8s,baz=135,slow=5.4,SNR=6.8						
YKA	Yellowknife Ar	88.98	341	P	P	19 15 55.1	+0.1
ASAR	Alice Springs	130.49	210	PKP	PKPdf	19 22 12.5	+0.2
	comp=Z,0.2nm,0.8s,baz=126,slow=1.2,SNR=1.7						
WRA	Warramunga Arr	133.40	214	PKP	PKPdf	19 22 17.8	-0.1
	comp=Z,0.3nm,1.0s,baz=166,slow=4.7,SNR=1.3						
MKAR	Makanchi Array	145.29	33	PKPbc	PKPbc	19 22 38.4	0.0
	comp=Z,0.7nm,0.7s,baz=327,slow=4.5,SNR=8.6						
MKAR	Makanchi Array	145.29	33		PKPbc	19 22 38.2	-0.2

IDC 22 19:23:26.4±2.0**,6°.62S**×**129°.72E,h0**^{km}**,mb3.5**/2**, mb1 3.7**/4**,mb1mx3.4**/21**,mbtmp3.5**/4**,ML3.4**/2**,Error ellipse: s-maj=148.8km s-min=29.1km az=66.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	13.99	162	Pn	Pn	19 26 47.7	+1.7
	0.2nm,0.3s,baz=343,slow=13,SNR=3.0						
WRA				Sn	Sn	19 29 12.2	-10
	0.5nm,0.3s,baz=331,slow=22,SNR=5.7						
ASAR	Alice Springs	17.42	167	P	P	19 27 32.2	-0.3
	0.2nm,0.3s,baz=341,slow=11,SNR=6.5						
ASAR				S	Sn	19 30 32.7	-13
	0.2nm,0.3s,baz=317,slow=22,SNR=3.7						
STKA	Stephens Creek	27.47	158	P	P	19 29 13.2	-1.1
	1.6nm,0.9s,baz=304,slow=7.3,SNR=2.5						
MKAR	Makanchi Array	67.75	327	P	P	19 34 26.2	+0.2
	0.1nm,0.5s,baz=120,slow=5.2,SNR=1.2						

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*TAP **22** 19:25:23.6,22°.36N×121°.33E,h17^{km},ML3.1,D*

*JMA **22** 19:25:23.0,22°.42N×121°.50E,h6^{km}±2^{km},M2.9*

ISC 22 19:25:20.8±1.4**,22°.26N**±0°.04×**121°.36E**±0°.03**,h10**^{km}±9^{km}**, n84,**σ**0^{s}.86**/148**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAW	Tawu	0.44	283	P	Pn	19 25 31.9	-1.4
	baz=270						
TAW				iS	Sb	19 25 37.8	+0.4
	baz=270						
TWH	Lutao	0.46	13	iP	Pb	19 25 31.3	+0.2
	baz=36						
TWH				iS	Sg	19 25 37.0	+1.1
	baz=36						
EAST	Anshuo	0.49	285	iP	Pn	19 25 32.6	-1.3
	baz=273						
EAST				S	Sb	19 25 39.2	+0.3
	baz=273						
ECL	Taimali	0.51	312	iP	Pb	19 25 32.2	+0.4
	baz=305						
ECL				S	Sb	19 25 38.5	-0.7
	baz=305						
TTN	Taitung	0.53	338	eP	Pn	19 25 34.2	-0.3
	baz=345						
TTN				eS	Sn	19 25 42.5	-1.0
	baz=345						
TSEB	Hengchuen, Pin	0.56	230	S	Sn	19 25 45.1	+0.9
	baz=223						
TWKBT	Hengchun	0.60	238	iP	Pn	19 25 35.7	+0.3
	baz=229						
TWKBT				S	Sn	19 25 44.8	-0.4
	baz=229						
TWK1	Hengchun	0.60	239	iP	Pn	19 25 35.7	+0.3
	baz=228						
TWK1				S	Sn	19 25 44.6	-0.7
	baz=228						
TWGBT	Beinan	0.61	335	iP	Pb	19 25 34.0	+0.3
	baz=320						
TWGBT				iS	Sb	19 25 42.1	-0.3
	baz=320						
TWG	Pinlang	0.62	335	P	Pb	19 25 34.0	+0.2
	baz=320						
TWG				S	Sb	19 25 41.7	-0.8
	baz=320						
SCZT	Fangliau	0.69	279	iP	Pn	19 25 36.0	-0.7
	baz=280						
SCZT				S	Sb	19 25 45.2	+0.5
	baz=280						
MASBT	Mashibuluo	0.76	298	P	Pn	19 25 36.5	-1.1
	baz=283						
MASBT				S	Sb	19 25 46.9	+0.4
	baz=283						
SSPT	Xinbi	0.77	287	P	Pn	19 25 37.7	0.0
	baz=289						
SSPT				eS	Sn	19 25 47.9	-1.4
	baz=289						
SSD	Sandimen	0.83	306	P	Pb	19 25 37.5	+0.1
	baz=301						
CHKT	Chengkung	0.84	0	P	Pn	19 25 38.5	-0.2
	baz=12						
CHKT				eS	Sb	19 25 48.4	-0.4
	baz=12						
WLCH	Liuqiu	0.91	276	P	Pn	19 25 40.1	+0.4
	baz=255						
WLCH				eS	Sn	19 25 53.0	+0.1
	baz=255						
SGLT	Jiouru	0.93	300	eP	Pn	19 25 41.8	+1.9
	baz=306						
TWP	Hsiaoliuchiu	0.93	276	eP	Pn	19 25 41.6	+1.6
	baz=255						
TWP				eS	Sn	19 25 53.5	+0.2
	baz=255						
FULB	Fuli	0.94	356	iP	Pn	19 25 40.1	0.0
	baz=342						
FULB				S	Sb	19 25 52.0	+0.2
	baz=342						
ELDTW	Lidau	0.98	341	eP	Pn	19 25 41.8	+1.1
	baz=342						
SLGT	Liugui	0.98	318	eP	Pn	19 25 40.8	+0.1
	baz=321						
SLGT				eS	Sn	19 25 53.9	-0.9
	baz=321						
TWM1	Shoushan	1.03	303	eP	Pn	19 25 42.9	+1.5
	baz=300						
TWM1				eS	Sn	19 25 55.3	-0.6
	baz=300						
STYT	Tauyuan	1.06	328	eP	Pb	19 25 41.2	-0.1
	baz=338						
WSSB	Gushan	1.09	291	eP	Pn	19 25 45.1	+2.9
	baz=286						
WSSB				eS	Sn	19 25 57.7	+0.5
	baz=286						
SGST	Jiashian	1.09	319	eP	Pn	19 25 42.7	+0.5
	baz=320						
SGST				eS	Sn	19 25 56.6	-0.7
	baz=320						
TWF1	Yuli	1.09	357	eP	Pn	19 25 42.8	+0.6
	baz=346						
TWF1				eS	Sg	19 25 55.9	-0.1
	baz=346						
YULB	Yu-li	1.13	357	P	Pn	19 25 43.2	+0.4
	baz=347						
CHN1	Nanshi	1.20	320	eP	Pn	19 25 45.6	+1.8
	baz=319						
CHN1				eS	Sn	19 26 01.2	+1.1
	baz=319						
WTP	Ta-pu	1.20	325	eP	Pn	19 25 44.8	+1.0
	baz=334						
WTP				eS	Sn	19 26 00.6	+0.5
	baz=334						
HGSD	Ruisui	1.23	3	eP	Pg	19 25 45.4	+0.9
	baz=13						
TPUB	Ta-pu	1.24	327	eP	Pg	19 25 45.4	+0.8
	baz=326						
TPUB				eS	Sn	19 26 02.1	+1.1
	baz=326						
EHY	Hungye	1.24	358	eP	Pg	19 25 45.4	+0.7
	baz=348						
SNST	Tainan City	1.25	320	eP	Pg	19 25 44.9	+0.2
	baz=319						
SNST				eS	Sn	19 26 01.4	+0.2
	baz=319						
YUS	Yu-Shan	1.28	343	eP	Pn	19 25 45.8	+0.6
	baz=344						
YUS				eS	Sn	19 26 02.5	-0.3
	baz=344						
TWK	Hsinying	1.29	321	eP	Pg	19 25 46.4	+0.9
	baz=321						
TWK				eS	Sn	19 26 03.5	+1.2
	baz=321						
CHN4	Tsaushan	1.30	327	P	Pg	19 25 46.2	+0.5
	baz=339						
CHN4				eS	Sn	19 26 04.3	+1.8
	baz=339						
ALS	Alishan	1.35	338	P	Pg	19 25 46.7	0.0
	baz=338						
ALS				eS	Sn	19 26 04.2	+0.1
	baz=338						
EGFH	Guangfu	1.40	2	eP	Pg	19 25 47.7	-0.1
	baz=352						
CHN5	Tsauling	1.47	335	eP	Pg	19 25 49.0	-0.2
	baz=335						
CHN5				eS	Sg	19 26 08.0	-0.3
	baz=335						
VWDT	VWDT	1.50	352	eP	Pg	19 25 50.2	+0.5
	baz=9.0						
VWDT				eS	Sg	19 26 08.8	-0.4
	baz=9.0						
CHY	Chiayi	1.50	325	eP	Pg	19 25 49.6	-0.1
	baz=324						
CHY				eS	Sg	19 26 08.7	-0.6
	baz=324						
WHYT	Xinyi Township	1.50	342	eP	Pg	19 25 49.2	-0.5
	baz=352						
WHYT				eS	Sn	19 26 07.3	-0.3
	baz=352						
WLGB	Puzi	1.56	321	eP	Pg	19 25 49.9	-0.9
	baz=320						
WLGB				eS	Sg	19 26 09.8	-1.1
	baz=320						
SSLB	Suanglung	1.57	346	eP	Pb	19 25 50.0	+0.1
	baz=358						
SSLB				eS	Sn	19 26 09.1	-0.1
	baz=358						
WDLH	Douliu	1.61	332	eP	Pb	19 25 50.4	-0.3
	baz=332						
WDLH				eS	Sg	19 26 11.3	-1.4
	baz=332						
WJS	Zhushan	1.66	340	eP	Pg	19 25 52.0	-0.8
	baz=340						
WJS				eS	Sb	19 26 12.8	+0.2
	baz=340						
SMLT	Sun Moon Lake	1.67	345	eP	Pg	19 25 52.4	-0.5
	baz=358						
SMLT				eS	Sn	19 26 12.2	+0.3
	baz=358						
OWD	Renai	1.70	354	eP	Pb	19 25 52.0	-0.2
	baz=8.0						
OWD				eS	Sn	19 26 13.0	+0.5
	baz=8.0						
TYC	Yuchr	1.70	344	eP	Pg	19 25 52.8	-0.7
	baz=346						
TYC				eS	Sn	19 26 12.7	+0.3
	baz=346						
WNT	Mingjian	1.73	339	eP	Pg	19 25 53.5	-0.5
	baz=340						
WSF	Szhu	1.73	323	eS	Sb	19 26 13.5	-0.9
	baz=322						
CHGB	Renai	1.80	355	eP	Pb	19 25 53.4	-0.7
	baz=10.0						
CHGB				eS	Sb	19 26 16.8	0.0
	baz=10.0						
DPDB	Guoxing	1.81	347	eP	Pb	19 25 53.8	-0.3
	baz=359						
DPDB				eS	Sb	19 26 16.1	-0.8
	baz=359						
RLNB	Erlin	1.87	331	eS	Sn	19 26 16.3	-0.2
	baz=330						
WHF	Hehuan Shan	1.88	357	eP	Pn	19 25 54.5	+1.0
	baz=12						
WHF				eS	Sn	19 26 16.2	-1.2
	baz=12						
NACB	Ninganchiao	1.92	6	eP	Pb	19 25 55.1	-0.8
	baz=357						
NACB				eS	Sn	19 26 16.5	-1.3
	baz=357						
ETLH	Xiulin Townshi	1.94	3	eP	Pb	19 25 55.5	-0.8
	baz=5.0						
WCHH	Zhanghua	1.96	338	eS	Sn	19 26 19.3	+0.6
	baz=322						
TCU	Taichung	1.98	342	eS	Sn	19 26 20.0	+0.7
	baz=342						
VCHM	Qimei	2.02	298	eP	Pn	19 25 55.3	+0.3
	baz=297						
WHP	Taichung City	2.04	349	eP	Pb	19 25 57.9	-0.2
	baz=3.0						
WHP				eS	Sn	19 26 21.6	+0.5
	baz=3.0						
TWQ1	Liyutan	2.15	346	eP	Pb	19 25 59.5	-0.4
	baz=347						
TWQ1				eS	Sn	19 26 24.2	+0.7
	baz=347						
NNSB	Datong	2.16	1	eP	Pb	19 25 59.9	-0.3
	baz=3.0						
NNSB				eS	Sn	19 26 24.1	+0.2
	baz=3.0						
NNSH	Datong	2.16	1	eP	Pb	19 26 00.1	0.0
	baz=3.0						
NNSH				eS	Sn	19 26 23.9	-0.1
	baz=3.0						
NNS	Nan Shan	2.17	0	eP	Pb	19 26 00.9	+0.6
	baz=3.0						
NNS				eS	Sb	19 26 27.0	-0.3
	baz=3.0						
ENA	Nanau	2.19	9	eP	Pb	19 25 59.8	-0.7
	baz=359						
ENA				eS	Sn	19 26 24.2	-0.2
	baz=359						
NSY	Sanyi	2.22	346	eS	Sb	19 26 28.0	-0.6
	baz=347						
NDT	Datong Townshi	2.34	3	eP	Pb	19 26 02.2	-0.9
	baz=6.0						
NDT				eS	Sn	19 26 28.5	+0.3
	baz=6.0						
ENTT	Nioudou	2.38	5	eP	Pb	19 26 02.7	-1.1
	baz=7.0						
ENTT				eS	Sn	19 26 28.1	-1.0
	baz=7.0						
NSTT	Nanjuang	2.38	352	eP	Pb	19 26 02.5	-1.3
	baz=337						
NSTT				eS	Sn	19 26 30.0	+0.7
	baz=337						
EOS1	EOS1	2.39	17	eP	Pn	19 26 01.1	+1.2
	baz=31						
EOS1				eS	Sn	19 26 28.2	-1.0
	baz=31						
LIOB	Emei	2.40	352	eP	Pb	19 26 02.9	-1.2
	baz=337						
LIOB				eS	Sn	19 26 31.5	+1.8
	baz=337						
YHNB	Yeheng	2.40	0	eP	Pb	19 26 03.3	-0.9
	baz=17						
YHNB				eS	Sn	19 26 29.4	-0.4
	baz=17						
NSK	Sanguang	2.41	360	eP	Pb	19 26 02.9	-1.4
	baz=17						
NSK				eS	Sn	19 26 30.7	+0.8
	baz=17						
TWE	Neicheng	2.47	6	eP	Pn	19 26 03.0	+1.9
	baz=10.0						
TWE				eS	Sn	19 26 31.9	+0.6
	baz=10.0						
NWLT	Wulai	2.51	3	eP	Pb	19 26 05.2	-0.8
	baz=5.0						
NWLT				eS	Sn	19 26 32.7	+0.3
	baz=5.0						
YOJ	Yonaguni jima	2.67	34	S	Sn	19 26 37.1	+0.9
TIPB	Shuangxi	2.73	9	eP	Pn	19 26 07.0	+2.2
	baz=1.0						
TIPB				eS	Sn	19 26 38.7	+0.8
	baz=1.0						
YM10	YM10	2.89	4	eS	Sn	19 26 41.5	-0.3
	baz=6.0						
YM05	YM05	2.90	4	eS	Sn	19 26 41.4	-0.7
	baz=6.0						
IRIF	Iriomote-Funau	3.00	46	P	Pn	19 26 10.0	+1.5
IRIF				eS	Sn	19 26 44.2	-0.3
JKRS	Kuro-shima	3.13	51	P	Pn	19 26 11.7	+1.4
JKRS				eS	Sn	19 26 46.4	-1.3
JIJ	Ishigaki jima	3.31	50	P	Pn	19 26 13.5	+0.8
JIJ				S	Sn	19 26 50.8	-1.2
JISG	Ishigakijimahi	3.56	49	P	Pn	19 26 17.0	+0.8
JISG				eS	Sn	19 26 56.9	-1.5

JMA 22 19:41:20.1,38°.22N×**141°.81E,h17**^{km}**,M3.8,5C-5D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.29	289	⇑P	Pg	19 41 26.3	0.0
JIKH				S	Sg	19 41 30.4	-0.2
JIO	Ouri	0.43	303	⇓P	Pg	19 41 28.8	-0.1
JIO				S	Sg	19 41 34.6	-0.2
JKMT	Kesennumamotoy	0.65	336	⇓P	Pg	19 41 32.4	-0.4
JKMT				S	Sg	19 41 40.7	-0.8
JMK	Ichinoseki	0.86	328	⇓P	Pb	19 41 36.2	-0.5
JMK				S	Sb	19 41 47.5	-0.5
OFUJ	Ofunato	0.87	353	⇓P	Pb	19 41 36.0	-0.7
OFUJ				S	Sb	19 41 47.3	-0.7
JMM	Marumori	0.88	247	⇑P	Pb	19 41 36.0	-0.9
JMM				S	Sb	19 41 47.7	-0.6
JOU	Okura	0.91	280	⇑P	Pb	19 41 37.4	-0.1
JOU				S	Sg	19 41 50.0	+0.1
JFK	Kawauchi	1.13	221	P	Pn	19 41 40.0	-1.2
JFK				S	Sb	19 41 54.8	-0.8
JOM	Ohasama	1.31	342	⇓P	Pn	19 41 43.3	-0.4
JOM				S	Sb	19 42 00.9	0.0
JYK	Kaneyama	1.33	302	⇑P	Pn	19 41 44.0	+0.1
JYK				S	Sb	19 42 01.6	+0.1
JFT	Otama	1.36	239	⇑P	Pb	19 41 44.8	-0.3
JFT				S	Sg	19 42 03.3	-0.8
JYS	Shirataka	1.37	271	P	Pb	19 41 45.0	-0.3
JYS				S	Sb	19 42 03.2	+0.6
MAT	Matsushiro	3.32	241	P	Pn	19 42 13.1	+1.8
MAT				S	Sn	19 42 52.1	+1.7

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*ANF **22** 19:42:11.1±0.4,36°.86N×97°.60W,h0^{km},ML3.9/10,Error ellipse: s-maj=4.8km s-min=3.4km az=54.0*

*TUL **22** 19:42:11.5±2.5,36°.85N±0°.01×97°.62W±0°.02,h5^{km}±1^{km}, Error ellipse: s-maj=3.2km s-min=2.9km az=80.0*

*NEIC **22** 19:42:12.2±0.6,36°.812N±0°.006×97°.59W±0°.02,h4^{km}±6^{km}, ML3.3(TUL),Error ellipse: s-maj=2.4km s-min=0.7km az=74.0*

*IDC **22** 19:42:12.2±1.6,36°.95N×97°.79W,h0^{km},mb3.8/2, mb1 3.7/5,mb1mx3.4/49,mbtmp3.3/5,ML3.5/3,Error ellipse: s-maj=23.8km s-min=15.1km az=102.0*

ISC 22 19:42:12.2±0.7**,36°.83N**±0°.04×**97°.61W**±0°.04**,h10**^{km}**,n67,** σ**0^{s}.73**/72**,Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T35A	Sooner Cattle	0.88	84		Pg	19 42 28.6	-0.6
T35A				Sg	Sg	19 42 40.0	-0.7
ADOK	Arcadia Dam	1.19	171	Pg	Pn	19 42 34.1	-0.9
U32A	Winter Ranch,	1.21	249		Pn	19 42 34.4	-0.8
U32A				Sg	Sb	19 42 50.9	0.0
OKCFA	Oklahoma City	1.42	175		Pn	19 42 38.0	0.0
OKCFA				Sn	Sn	19 42 57.5	+0.8
OKCSW	OKLAHOMA CITY	1.43	174		Pn	19 42 38.2	0.0
FNO	Franklin	1.58	174		Pn	19 42 41.0	+0.7
TUL1	Leonard	1.73	121		Pn	19 42 43.0	+0.7
TUL1	Leonard	1.73	121	P	Pn	19 42 43.0	+0.7
	baz=303						
TUL1				S	Sb	19 43 06.3	+0.5
	baz=303						
W35A	Tecumseh	1.77	160		Pn	19 42 43.6	+0.6
R32A	Long Quarter,	1.82	331		Pb	19 42 44.8	-0.8
X34A	Smith Ranch, M	2.23	185		Pn	19 42 50.4	+1.1
WMOK	Wichita Mounta	2.29	205		Pn	19 42 50.5	+0.4
WMOK	Wichita Mounta	2.29	205	P	Pn	19 42 50.5	+0.4

	baz=24						
KSU1	Kansas State U	2.40	19	Sb	Sb	19 43 25.8	+0.5
	baz=200						
CBKS	Cedar Bluff	2.60	320		Pn	19 42 55.3	+0.9
CBKS	Cedar Bluff	2.60	320	Sb	Sb	19 43 32.3	+1.2
	baz=139						
U38A	Gravette	2.62	98		Pn	19 42 55.5	+0.9
X37A	Clayton	2.88	140		Pn	19 42 58.9	+0.7
HHAR	Hobbs	3.00	99		Pn	19 43 00.4	+0.5
W39A	Magazine	3.50	117		Pn	19 43 07.8	+1.1
Z35A	Perchaven, San	3.50	175		Pn	19 43 07.3	+0.5
S39A	Bolivar	3.52	75		Pn	19 43 07.6	+0.6
AMTX	Amarillo	3.84	241		Pn	19 43 12.6	+1.1
U40A	Yellville	3.85	96		Pn	19 43 12.2	+0.6
U40A	Yellville	3.85	96	P	Pn	19 43 12.2	+0.6
	baz=279						
U40A				S	Sn	19 43 57.2	+0.3
	baz=279						
MIAR	Mount Ida	3.99	124		Pn	19 43 13.9	+0.4
MIAR	Mount Ida	3.99	124	S	Sn	19 44 00.8	+0.5
	baz=306						
P38A	Dawn	4.25	48		Pn	19 43 16.4	-0.7
MGMO	Mountain Grove	4.29	84		Pn	19 43 18.0	+0.5
N35A	Tabor	4.31	20		Pn	19 43 18.8	+0.9
R40A	Maddies Statio	4.49	69		Pn	19 43 20.7	+0.5
ABTX	Abilene, Hawle	4.52	202		Pn	19 43 21.0	+0.3
FCAR	Ozark Folk Cen	4.52	100		Pn	19 43 20.8	+0.1
KSCO	Kaye Shedlock’	4.53	300		Pn	19 43 22.0	+1.0
X40A	Basin Creek Fa	4.53	120		Pn	19 43 21.8	+0.9
X40A	Basin Creek Fa	4.53	120	P	Pn	19 43 21.6	+0.7
	baz=303						
WHAR	Wooly Hollow	4.57	108		Pn	19 43 20.8	-0.6
BGNE	Belgrade	4.59	355		Pn	19 43 22.6	+0.9
BGNE	Belgrade	4.59	355	P	Pn	19 43 22.3	+0.5
	baz=175						
WHTX	Lake Whitney,	4.83	178	P	Pn	19 43 25.3	+0.3
	baz=358						
WLAR	White Oak Lake	4.83	129		Pn	19 43 24.2	-0.8
MSTX	Muleshoe	5.09	237		Pn	19 43 29.1	+0.3
CCM	Cathedral Cave	5.21	74		Pn	19 43 29.8	-0.4
CCM	Cathedral Cave	5.21	74	P	Pn	19 43 30.3	+0.2
	baz=259						
OGNE	Ogallala	5.37	321		Pn	19 43 33.6	+1.1
K31A	O'Neill	5.86	352		Pn	19 43 40.4	+1.3
435B	Jarrell	6.03	180	Pn	Pn	19 43 40.7	-0.8
SCIA	State Center	6.11	32		Pn	19 43 43.6	+1.1
SDCO	Great Sand Dun	6.36	281		Pn	19 43 47.5	+1.2
JCT	Junction City	6.59	197		Pn	19 43 48.6	-0.7
ECSD	EROS Data Cent	6.94	6		Pn	19 43 53.3	-0.7
ISCO	Idaho Springs	6.96	298		Pn	19 43 55.1	+0.6
Q44A	Meyer Farm, Va	7.10	70	Pn	Pn	19 43 56.6	+0.4
L40A	Anamosa	7.19	41		Pn	19 43 57.6	+0.2
ANMO	Albuquerque	7.42	258	Pn	Pn	19 43 59.2	-1.6
	0.1nm,0.3s,baz=129,slow=18,SNR=1.7						
ANMO				Lg	Lg	19 46 01.1	
	0.4nm,0.3s,baz=94,slow=14,SNR=2.4						
HDIL	Hopedale	7.49	58		Pn	19 44 01.9	+0.3
PHWY	Pilot Hill	7.56	309		Pn	19 44 03.5	+0.6
N23A	Red Feather La	7.67	305		Pn	19 44 04.7	+0.5
L42A	Oliver, Polo	8.03	47	Pn	Pn	19 44 08.1	-0.8
MNTX	Cornudas Mount	8.22	234	Pn	Pn	19 44 12.0	+0.4
JFWS	Jewell Farm	8.30	41	Pn	Pn	19 44 12.4	-0.2
T47A	Sharon Grove	8.41	86	Pn	Pn	19 44 15.1	+0.9
TXAR	Lajitas Array	9.04	216	Pn	Pn	19 44 22.5	-0.4
	0.2nm,0.3s,baz=39,slow=11,SNR=8.8						
TXAR				Pg		19 44 54.5	
	0.3nm,0.3s,baz=34,slow=15,SNR=4.7						
TXAR				Lg	Lg	19 46 52.4	
	0.2nm,0.3s,baz=53,slow=21,SNR=3.9						
TXAR	Lajitas Array	9.04	216		Pn	19 44 22.2	-0.6
PDAR	Pinedale Array	10.94	307	Pn	Pn	19 44 49.0	+0.1
	0.1nm,0.3s,baz=74,slow=42,SNR=2.1						
PDAR				Lg	Lg	19 47 47.0	
	0.1nm,0.3s,baz=318,slow=22,SNR=1.8						
ILAR	Eielson Array	40.22	330	P	P	19 49 49.7	+1.1
	0.3nm,0.6s,baz=106,slow=7.2,SNR=5.4						
ARCES	ARCESS Array B	66.14	19	P	P	19 52 59.2	-0.1
	3.4nm,0.9s,baz=334,slow=6.0,SNR=1.9						

IDC ***22*** *19:44:24.5±1.6, 4°.11N×126°.45E, h0^{km}, mb3.5/5, mb1 3.7/5, mb1mx3.3/44, mbtmp3.6/5, Error ellipse: s-maj=106.5km s-min=26.1km az=75.0*

DJA ***22*** *19:45:09.1±0.6, 1°N±5°×12°7E±°, h139^{km}±7^{km}, M3.9/10, mb4.1/3, MLv3.9/10*

ISC 22 19:45:08.3±1.9**, 1°.2N**±0°.2×**127°.5E**±0°.1**, h150**^{km}**, n12, σ0^{s}65**/13**, mb3.7**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.41	193	P	Pn	19 45 29.5	+0.2
LBMI	Labuha	1.80	179	P	Pn	19 45 42.3	+1.1
LBMI				S	Sn	19 46 06.9	+0.4
SANI	Sanana	3.53	205	P	Pn	19 46 01.9	-0.5
KMSI	Cibinong	3.53	260	P	Pn	19 46 03.2	+0.7
NLAI	Namlea	4.40	185	P	Pn	19 46 14.3	+0.5
LUWI	Luwuk	5.18	245	P	Pn	19 46 24.4	+0.3
	0.3nm25nm,1.1s						
MRSI	Marisa	5.56	263	P	Pn	19 46 29.3	+0.1
	0.1nm12nm,0.5s						
APSI	Ampana	6.17	250	P	Pn	19 46 37.8	+0.5
FITZ	Fitzroy Crossi	19.24	185	P	P	19 49 20.5	-0.6
	0.5nm,0.5s,baz=6.4,slow=12,SNR=1.5						
WRA	Warramunga Arr	22.04	163	P	P	19 49 50.2	-0.9
	1.7nm,0.3s,baz=343,slow=10,SNR=48						
ASAR	Alice Springs	25.48	166	P	P	19 50 22.4	-0.3
	0.4nm,0.3s,baz=346,slow=12,SNR=14						
STKA	Stephens Creek	35.50	159	P	P	19 51 50.6	-0.1
	0.5nm,0.3s,baz=347,slow=7.1,SNR=7.8						

IDC ***22*** *19:49:09.1±0.7, 21°.02N×106°.20W, h0^{km}, mb4.5/19, mb1 4.6/24, mb1mx4.5/41, mbtmp4.5/24, ML4.2/6, MS4.0/26, Ms1 4.0/26, ms1mx3.9/40, Error ellipse: s-maj=21.1km s-min=11.9km az=56.0*

NEIC ***22*** *19:49:11.8±1.5, 21°.16N±0°.08×106°.20W±0°.07, h10^{km}±1^{km}, mb4.8/228, Md4.7/17(MEX), Error ellipse: s-maj=15.6km s-min=8.5km az=218.0*

MEX ***22*** *19:49:13.4±0.7, 21°.15N×106°.37W, h16^{km}±33^{km}, MD4.5*

GCMT ***22*** *19:49:13.9±0.4, 21°.21N±0°.03×106°.10W±0°.03, h19^{km}±1^{km}, MW4.8/78, Moment Tensor Solution. s13,c13; s78,c89; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.86±.15; $M_{\theta\theta}$-0.61±.12; $M_{\phi\phi}$1.47±.14; $M_{r\theta}$0.00±.24; $M_{\theta\phi}$1.78±.10; $M_{\phi r}$-0.71±.23; Best double couple: $M_0$2.19300×10^{16} NP1:ϕ_s254.00000°, δ66.00000°, λ-10.00000°. NP2: ϕ_s348.00000°, δ81.00000°, λ-156.00000°. Principal axes: T 2.6020, Plg10.0000°, Azm119.0000°; N -0.8170, Plg64.0000°, Azm7.0000°; P -1.7830, Plg23.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 19:49:11.5±0.4**, 21°.18N**±0°.05×**106°.20W**±0°.06**, h10**^{km}**, n485, σ1^{s}46**/397**, mb4.8**/87**, MS3.9**/26**, Off coast of central Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANIG	Ahuacatlan	1.57	94	*e*P	Pn	19 49 36.9	-2.7
ANIG				*i* S	Sn	19 49 56.6	-3.4
ANIG	Ahuacatlan	1.57	94		Pn	19 49 36.9	-2.7
ANIG					Sn	19 49 56.6	-3.4
CJM	Chamela	1.99	147	*e*P	Pn	19 49 43.5	-1.7
CJM				*i* S	Sn	19 50 08.7	-1.5
MAIG	Mazatlaan	2.01	354	*i* P	Pn	19 49 43.3	-2.3
MAIG				*e*S	Sn	19 50 07.0	-3.8
MAIG	Mazatlaan	2.01	354		Pn	19 49 43.3	-2.3
MAIG					Sn	19 50 07.0	-3.8
R15V		2.88	133	*e*P	Pn	19 49 57.4	-0.2
R15V				*i* S	Sn	19 50 31.6	-0.8
R15V		2.88	133		Pn	19 49 57.4	-0.2
EZ5V		2.96	124	*e*P	Pn	19 49 59.5	+0.6
EZ5V		2.96	124		Pn	19 49 59.5	+0.6
COIG	Colima	3.08	130	*e*P	Pn	19 50 00.9	+0.6
COIG				*i* S	Sn	19 50 36.3	-1.0
ZAIG	Zacatecas	3.72	64		Pn	19 50 09.0	-0.4
LPIG	La Paz	4.79	308	Pn	Pn	19 50 24.6	+0.9
	41nm,0.3s,baz=221,slow=1.0,SNR=7.4						
LPIG				LR	LR	19 51 58.5	
	comp=Z,3μm,19.4s,baz=120,slow=35						
MOIG	Morelia	4.93	107		Pn	19 50 27.9	+2.0
H06E1	SOCORRO T-PHAS	5.05	243	T	T	19 55 37.2	
	SNR=3007						
H06N1	SOCORRO T-PHAS	5.06	244	T	T	19 55 37.9	
	SNR=180						
H06S1	SOCORRO T	5.09	242	T	T	19 55 37.9	
	SNR=295						
HPIG		5.75	5		Pn	19 50 38.3	+1.0
UNM	Universidad Na	6.84	104	Pn	Pn	19 50 53.5	+1.3
TLIG	Tlapa	8.05	115		Pn	19 51 12.2	+3.5
SRIG	Santa Rosalia	8.23	319		Pn	19 51 13.5	+2.4
TX31	Lajitas Ar. Si	8.44	15		Pn	19 51 14.3	+0.3
TX32	Lajitas Array	8.44	15		Pn	19 51 14.3	+0.3
TXAR	Lajitas Array	8.44	15	Pn	Pn	19 51 14.7	+0.7
	2.2nm,0.3s,baz=196,slow=14,SNR=62						
TXAR				Lg	Lg	19 53 25.3	
	1.1nm,0.3s,baz=205,slow=14,SNR=2.2						
TXAR	Lajitas Array	8.44	15		Pn	19 51 14.2	+0.2
HSIG		8.92	332	Pn	Pn	19 51 21.0	+0.5
833A	Chaparral WMA,	9.42	40		Pn	19 51 27.9	+0.5
833A	Chaparral WMA,	9.42	40	P	Pn	19 51 28.8	+1.4
	baz=222						
MNTX	Cornudas Mount	10.51	4		Pn	19 51 43.2	+0.9
MNTX	Cornudas Mount	10.51	4	P	Pn	19 51 43.4	+1.2
	baz=184,SNR=11						
319A	Douglas	10.53	345		Pn	19 51 44.7	+2.1
735A	Kenedy	10.78	43	Pn	Pn	19 51 46.7	+0.7
JCT	Junction City	10.90	31		Pn	19 51 48.7	+1.0
JCT	Junction City	10.90	31	P	Pn	19 51 49.4	+1.6
	baz=213,SNR=5.9						
121A	Cookes Peak, D	11.40	353	Pn	Pn	19 51 56.6	+1.9
121A	Cookes Peak, D	11.40	353	P	Pn	19 51 56.8	+2.1
	baz=172,SNR=42						
CMIG	Matias Romero	11.44	109	Pn	Pn	19 51 54.1	-1.0
	0.2nm,0.3s,baz=291,slow=9.8,SNR=4.9						
CMIG				Lg	Lg	19 55 14.2	
	0.1nm,0.3s,baz=174,slow=22,SNR=8.7						
CMIG				LR	LR	19 56 23.5	
	comp=Z,2μm,18.3s,baz=274,slow=38						
214A	Organ Pipe Nat	12.26	333	Pn	Pn	19 52 06.8	+0.6
214A	Organ Pipe Nat	12.26	333	P	Pn	19 52 10.8	+4.6
	baz=150						
435B	Jarrell	12.30	37	Pn	Pn	19 52 07.9	+1.1
HKT	Hockley	12.79	45		Pn	19 52 14.6	+1.2
ABTX	Abilene, Hawle	12.81	26		Pn	19 52 15.0	+1.2
ABTX	Abilene, Hawle	12.81	26	P	Pn	19 52 16.8	+3.0
	baz=209						
MSTX	Muleshoe	13.10	13		Pn	19 52 18.9	+1.1
MSTX	Muleshoe	13.10	13	P	Pn	19 52 21.0	+3.1
	baz=194						
WHTX	Lake Whitney,	13.30	34	P	Pn	19 52 25.1	+4.6
	baz=218						
ANMO	Albuquerque	13.72	359	Pn	Pn	19 52 29.0	+2.6
	0.2nm,0.3s,baz=185,slow=12,SNR=8.7						
ANMO				Lg	Lg	19 56 28.9	
	0.1nm,0.3s,baz=248,slow=20,SNR=3.4						
ANMO	Albuquerque	13.72	359		Pn	19 52 28.5	+2.1
ANMO	Albuquerque	13.72	359	P	Pn	19 52 30.6	+4.2
	baz=179						
GLA	Glamis	14.10	329	P	P	19 52 35.6	-3.6
	baz=145,SNR=13						
CCIG	Comitan	14.18	108		Pn	19 52 35.1	+2.4
237A	Washetta, Mont	14.22	39		Pn	19 52 33.5	+0.4
AMTX	Amarillo	14.22	15		Pn	19 52 33.0	-0.2
IKP	In-Ko-Pah, Jac	14.44	324	P	P	19 52 39.9	-3.1
	baz=140,SNR=10						
SWSC	Sam W. Stewart	14.50	326	P	P	19 52 41.8	-1.8
	baz=142,SNR=12						
Y12C	Blythe	14.53	331		Pn	19 52 39.4	+2.1
Y12C	Blythe	14.53	331	P	P	19 52 41.4	-2.6
	baz=148						
NATX	Nacogdoches	14.74	42		Pn	19 52 41.5	+1.3
NATX	Nacogdoches	14.74	42	P	P	19 52 44.4	-1.9
	baz=227						
BAR	Barrett	14.77	323		Pn	19 52 42.3	+1.7
MONP2	Monument Peak	14.79	324	P	P	19 52 44.8	-2.3
	baz=140,SNR=13						
PDMCI	Parker Dam,Lak	14.84	333	P	P	19 52 45.0	-2.4
	baz=150,SNR=16						
BC3	Big Chuckawall	14.89	329	P	P	19 52 45.8	-2.3
	baz=144,SNR=22						
WUAZ	Wupatki	14.99	343	P	P	19 52 48.4	-0.9
	baz=161,SNR=32						
WMOK	Wichita Mounta	15.01	24	IAmb	IAmb	19 52 51.6	
	comp=Z,30nm,1.1s						
WMOK	Wichita Mounta	15.01	24	P	Pn	19 52 45.0	+1.2
	baz=208,SNR=16						
IRM	Iron Mountain	15.16	330	P	P	19 52 49.0	-2.0
	baz=146,SNR=30						
109C	Camp Elliot, M	15.17	323	Pn	Pn	19 52 47.3	+1.4
109C				IAmb	IAmb	19 52 54.8	
	comp=Z,101nm,1.9s						
X34A	Smith Ranch, M	15.27	27		Pn	19 52 48.2	+0.9
X34A				IAmb	IAmb	19 52 54.9	
	comp=Z,32nm,0.9s						
XPFO	Pion Flat	15.36	326		Pn	19 52 50.8	+2.2
XPFO				IAmb	IAmb	19 52 53.7	
	comp=Z,138nm,1.7s						
PFO	Pinyon Flats O	15.37	326	Pn	Pn	19 52 51.0	+2.3
	comp=Z,0.2nm,0.3s,baz=148,slow=12,SNR=24						
PFO	Pinyon Flats O	15.37	326		Pn	19 52 50.8	+2.1
PFO				IAmb	IAmb	19 52 53.7	
	comp=Z,137nm,1.7s						
PFO	Pinyon Flats O	15.37	326	P	P	19 52 52.5	-0.9
	baz=141,SNR=18						
BELC	Belle Mtn. Jos	15.44	328	P	P	19 52 53.4	-0.7
	baz=143,SNR=16						
NEE2	Needles Airpor	15.44	333	P	P	19 52 53.2	-0.9
	baz=149						
MURC	Murrieta	15.75	324	P	P	19 52 57.3	-0.3
	baz=139						
GMRC	Granite Mounta	15.91	330	P	P	19 52 59.4	-0.1
	baz=146,SNR=30						
T25A	Trinidad	15.98	5	P	P	19 53 00.2	-0.1
	baz=186,SNR=8.5						
342A	Flagon Creek P	16.04	48		Pn	19 52 58.5	+1.2
342A				IAmb	IAmb	19 53 03.8	
	comp=Z,147nm,1.1s						
MVCO	Mesa Verde	16.10	353		Pn	19 52 57.9	-0.4
MVCO	Mesa Verde	16.10	353	P	P	19 53 04.9	+3.2
	baz=172,SNR=6.5						
APG	El Apazote	16.16	110	Pn	Pn	19 52 57.9	-1.3
	comp=Z,4.3nm,0.3s,baz=305,slow=6.2,SNR=3.8						
APG				LR	LR	19 59 11.1	
	comp=Z,2μm,19.9s,baz=292,slow=37						
HEC	Hector,Ludlow	16.27	329	P	P	19 53 04.0	+0.6
	baz=144,SNR=48						
U32A	Winter Ranch,	16.40	21	IAmb	IAmb	19 53 08.8	
	comp=Z,141nm,1.3s						
X37A	Clayton	16.42	33		Pn	19 53 02.8	+0.7
X37A				IAmb	IAmb	19 53 08.1	
	comp=Z,65nm,0.8s						
BFSC	Mount Baldy Ra	16.48	325	P	P	19 53 06.4	+0.6
	baz=139						
S22A	4UR Ranch, Cre	16.52	358	P	P	19 53 05.5	-0.9
S22A	4UR Ranch, Cre	16.52	358	P	P	19 53 08.4	+2.1
	baz=178,SNR=13						
SDCO	Great Sand Dun	16.52	2	P	P	19 53 05.6	-0.7
SDCO	Great Sand Dun	16.52	2	P	P	19 53 07.6	+1.2
	baz=182,SNR=18						
TUQ	Turquoise Moun	16.57	331	P	P	19 53 08.1	+1.3
	baz=146,SNR=41						
MWC	Mount Wilson	16.69	324		Pn	19 53 04.6	-1.2
SNCC	San Nicolas Is	16.86	318		P	19 53 09.2	-0.7
SNCC				IAmb	IAmb	19 53 22.0	
	comp=Z,72nm,1.2s						
GSC	Goldstone, Bar	16.88	329	IAmb	IAmb	19 53 14.6	
	comp=Z,68nm,1.4s						
GSC	Goldstone, Bar	16.88	329	P	P	19 53 11.6	+1.5
	baz=144,SNR=24						
Z41A	Richland Creek	16.91	42		Pn	19 53 08.8	+0.5
Z41A				IAmb	IAmb	19 53 14.0	
	comp=Z,96nm,1.1s						
Z41A	Richland Creek	16.91	42	P	P	19 53 11.5	+1.2
	baz=228						
WLAR	White Oak Lake	17.01	40		Pn	19 53 09.7	+0.1
WLAR				IAmb	IAmb	19 53 19.3	
	comp=Z,196nm,1.7s						
PV13	Radium Mtn., P	17.08	353	P	P	19 53 12.2	-0.2
SHOC	Shoshone, Teco	17.12	331	P	P	19 53 14.8	+2.2
	baz=146						
EDW2	Edwards Air Fo	17.15	325	P	P	19 53 14.6	+1.5
	baz=140,SNR=13						
SHPR	Sheep Range	17.16	335	P	P	19 53 13.2	0.0
344A	Westbrook Farm	17.21	50		Pn	19 53 12.8	+0.6
344A				IAmb	IAmb	19 53 17.1	
	comp=Z,98nm,0.9s						
TUL1	Leonard	17.27	30		Pn	19 53 13.1	+0.2
TUL1				IAmb	IAmb	19 53 17.9	
	comp=Z,138nm,1.6s						
TUL1	Leonard	17.27	30	P	P	19 53 14.0	-0.3
	baz=214						
OSI	Osito Audit: C	17.35	323	P	P	19 53 15.2	-0.1
MIAR	Mount Ida	17.35	37		Pn	19 53 13.8	0.0
MIAR	Mount Ida	17.35	37	P	P	19 53 14.9	-0.4
	baz=223,SNR=9.4						
LRMC	Laurel Mtn Rad	17.45	327	P	P	19 53 18.3	+1.8
	baz=142,SNR=17						
143A	Socs Landing,	17.46	46	P	P	19 53 16.9	+0.4
W39A	Magazine	17.72	35	P	P	19 53 19.9	+0.6
	baz=221,SNR=22						
X40A	Basin Creek Fa	17.74	39	IAmb	IAmb	19 53 21.1	
	comp=Z,151nm,2.0s						
X40A	Basin Creek Fa	17.74	39	P	P	19 53 19.6	+0.1
	baz=225,SNR=15						
VBMS	Vicksburg	17.79	49	P	P	19 53 21.0	+0.9
VBMS				IAmb	IAmb	19 53 23.7	
	comp=Z,71nm,0.9s						
VBMS	Vicksburg	17.79	49	P	P	19 53 22.1	+2.0
	baz=236						
ARVC	Arvin	17.79	324	P	P	19 53 23.2	+3.1
	baz=138						
T35A	Sooner Cattle	17.80	26	IAmb	IAmb	19 53 22.1	
	comp=Z,145nm,1.8s						
MPMC	Manual Prospec	17.81	329	P	P	19 53 23.2	+2.7
	baz=143,SNR=28						
FURC	Furnace Creek,	17.85	331	P	P	19 53 23.8	+3.1
	baz=146,SNR=9.5						
SMCO	Snowmass	17.95	358	P	P	19 53 24.0	+1.7
TPNV	Topopah Spring	17.99	333	P	P	19 53 26.1	+3.6
	baz=148,SNR=32						
ISA	Isabella, Lake	18.00	326	P	P	19 53 23.7	+1.2
ISA	Isabella, Lake	18.00	326	P	P	19 53 25.1	+2.6
	baz=140,SNR=11						
KSCO	Kaye Shedlock’	18.04	9	P	P	19 53 26.6	+3.7
	baz=191						
346A	Big Creek Wild	18.10	52	P	P	19 53 24.4	+0.9
346A				IAmb	IAmb	19 53 26.5	
	comp=Z,86nm,1.1s						
PKM	Mcpherson Peak	18.17	322	P	P	19 53 27.0	+2.6
	baz=135,SNR=9.7						
UALR	University of	18.23	39	IAmb	IAmb	19 53 26.9	
	comp=Z,78nm,1.4s						
R32A	Long Quarter,	18.36	19	IAmb	IAmb	19 53 31.0	
	comp=Z,64nm,1.1s						
U38A	Gravette	18.37	32	IAmb	IAmb	19 53 28.4	
	comp=Z,190nm,1.9s						
CWC	Cottonwood Cre	18.41	328	P	Pn	19 53 30.1	+3.1
	baz=143						
CBKS	Cedar Bluff	18.44	16	P	Pn	19 53 28.2	+0.9
CBKS				IAmb	IAmb	19 53 34.3	
	comp=Z,47nm,1.0s						
CBKS	Cedar Bluff	18.44	16	P	Pn	19 53 29.9	+2.6
	baz=199						
VES	Vestal, Richgr	18.46	325	P	Pn	19 53 31.4	+3.9
	baz=139,SNR=6.4						
HHAR	Hobbs	18.47	33	IAmb	IAmb	19 53 29.8	
	comp=Z,69nm,1.2s						
GRAC	Grapevine Rang	18.52	331	P	Pn	19 53 31.5	+3.3
	baz=145						
W41B	Gary Mavity, V	18.56	38	P	Pn	19 53 29.2	+0.5
	baz=225,SNR=13						
ISCO	Idaho Springs	18.57	1	P	Pn	19 53 31.0	+1.8
ISCO	Idaho Springs	18.57	1	P	Pn	19 53 32.5	+3.3
	baz=182,SNR=10						
SMMC	Simmler	18.58	322	P	Pn	19 53 32.1	+3.1
	baz=136						
R11A	Troy Canyon, C	18.94	337	P	Pn	19 53 35.5	+2.0
	baz=152,SNR=15						
TIN	Tinemaha, Big	18.97	329	P	Pn	19 53 36.6	+2.8
	baz=143						
O20A	White River Ci	18.98	355	P	Pn	19 53 37.6	+3.6
	baz=174,SNR=8.2						
U40A	Yellville	19.09	35	P	Pn	19 53 35.9	+0.7
	baz=221,SNR=24						
FCAR	Ozark Folk Cen	19.14	37	IAmb	IAmb	19 53 37.8	
	comp=Z,59nm,1.1s						
TGUH	Tegucigalpa,Un	19.36	108	P	P	19 53 37.9	+0.3
TGUH				IAmb	IAmb	19 53 38.6	
	comp=Z,35nm,0.3s						
RDMU	Red Mountain	19.55	352	P	Pn	19 53 41.3	+0.4
N23A	Red Feather La	19.66	1	P	Pn	19 53 44.5	+2.2
	baz=181,SNR=8.1						
KSU1	Kansas State U	19.67	23	P	Pn	19 53 42.9	+0.8
	baz=207,SNR=11						
MLAC	Mammoth, Mammo	19.72	329	P	Pn	19 53 44.9	+1.9
	baz=143						
DUG	Dugway, Tooele	19.78	345	P	Pn	19 53 45.4	+1.8
	baz=162,SNR=12						
LCAR	Lake Charles	19.82	38	IAmb	IAmb	19 53 46.5	
	comp=Z,60nm,1.0s						
BRAL	Brewton	19.83	56	P	Pn	19 53 44.3	+0.2
MDPB	Devils Postpil	19.84	329	P	Pn	19 53 44.2	-0.2
JLU	Jordanelle	19.88	348	P	P	19 53 44.0	+0.8
OXF	Oxford	19.88	45	IAmb	IAmb	19 54 00.7	
	comp=Z,56nm,1.1s						
OXF	Oxford	19.88	45	P	Pn	19 53 44.4	-0.2
	baz=232,SNR=5.7						
LPAR	Lepanto	20.01	41	P	P	19 53 45.2	+0.7
OGNE	Ogallala	20.02	9	P	P	19 53 45.1	+0.5
OGNE	Ogallala	20.02	9	P	Pn	19 53 48.8	+2.4
	baz=191						
NV11	Mina Array Sit	20.05	332	IAmb	IAmb	19 53 49.4	
	comp=Z,35nm,1.1s						
NVAR	Mina Array Bea	20.12	331	P	Pn	19 53 47.7	0.0
	comp=Z,17nm,0.8s,baz=154,slow=11,SNR=74						
NVAR				LR	LR	20 01 12.2	
	comp=Z,436nm,21.0s,baz=174,slow=36						
NVAR	Mina Array Bea	20.12	331	P	P	19 53 46.3	+0.5
T42A	Van Buren	20.54	36	P	Pn	19 53 51.3	-1.1
T42A				IAmb	IAmb	19 53 53.6	
	comp=Z,82nm,1.3s						
KVN	Kaiserville	20.54	333	P	P	19 53 51.5	+1.1
LRAL	Lakeview Retre	20.74	51	P	P	19 53 53.2	+0.9
LRAL				IAmb	IAmb	19 53 57.7	
	comp=Z,36nm,0.9s						
LRAL	Lakeview Retre	20.74	51	P	Pn	19 53 54.1	-0.6
	baz=240,SNR=20						
PBMO	Poplar Bluff	20.74	38	P	P	19 53 52.8	+0.5
PBMO				IAmb	IAmb	19 54 00.4	
	comp=Z,33nm,1.1s						
250A	Grady	20.78	55	P	Pn	19 53 54.0	-1.3
R40A	Maddies Statio	20.86	32	IAmb	IAmb	19 53 58.7	
	comp=Z,48nm,0.9s						
ELK	Elko	20.97	341	P	Pn	19 53 57.1	-0.6
	comp=Z,22nm,0.9s,baz=168,slow=7.8,SNR=85						
ELK				LR	LR	20 02 17.6	
	comp=Z,527nm,18.2s,baz=166,slow=37						
ELK	Elko	20.97	341	IAmb	IAmb	19 53 59.0	
	comp=Z,29nm,0.9s						
PLAL	Pickwick Lake	21.04	45	IAmb	IAmb	19 53 57.7	
	comp=Z,46nm,0.9s						
CCM	Cathedral Cave	21.21	34	P	P	19 53 58.3	+0.9
CCM				IAmb	IAmb	19 54 02.1	
	comp=Z,35nm,0.8s						
CCM	Cathedral Cave	21.21	34	P	P	19 53 59.0	+1.6
	baz=222						
BGNE	Belgrade	21.29	17	P	P	19 53 57.2	-1.1
BGNE	Belgrade	21.29	17	P	P	19 54 00.7	+2.4
	baz=201,SNR=6.5						
P38A	Dawn	21.35	28	IAmb	IAmb	19 54 03.6	
	comp=Z,24nm,0.8s						
K22A	Casper	21.41	359	P	P	19 54 02.5	+2.7
	baz=179,SNR=16						
X48A	Hartselle	21.44	48	IAmb	IAmb	19 54 09.9	
	comp=Z,40nm,0.9s						
Y49A	Blount Mountai	21.57	50	IAmb	IAmb	19 54 11.4	
	comp=Z,34nm,1.1s						
N35A	Tabor	21.57	22	P	P	19 54 01.7	+0.4
N35A				IAmb	IAmb	19 54 18.7	
	comp=Z,48nm,0.9s						
352A	Blakely	21.61	57	P	P	19 54 02.1	+0.3
352A				IAmb	IAmb	19 54 05.9	
	comp=Z,35nm,0.8s						
Z50A	Ashland	21.63	52	IAmb	IAmb	19 54 12.9	
	comp=Z,57nm,0.9s						
Z50A	Ashland	21.63	52	P	P	19 54 03.1	+1.1
	baz=241,SNR=17						
PAHR	Pah Rah Range	21.64	331	P	P	19 54 04.2	+1.9
BW06	Boulder Array	21.71	353	P	P	19 54 04.8	+1.7
	baz=172,SNR=13						
PD31	Pinedale Array	21.71	353	P	P	19 54 03.5	+0.5
PDAR	Pinedale Array	21.71	353	P	P	19 54 04.7	+1.6
	comp=Z,2.7nm,0.6s,baz=162,slow=12,SNR=37						

PDAR				LR	LR	20 02 53.3	
	comp=Z,340nm,19.5s,baz=183,slow=38						
PDAR	Pinedale Array	21.71	353	P	P	19 54 03.8	+0.8
WVT	Waverly	21.89	43	P	P	19 54 04.8	0.0
WVT	Waverly	21.89	43	P	P	19 54 05.5	+0.7
	baz=232						
ACON	Acoyapa	22.11	111	P	P	19 54 09.4	+2.1
ACON				IAmb	IAmb	19 54 18.5	
	comp=Z,42nm,0.8s						
SLM	Saint Louis	22.17	35	IAmb	IAmb	19 54 11.8	
	comp=Z,72nm,1.1s						
152A	Waverly Hall	22.26	55	IAmb	IAmb	19 54 11.7	
	comp=Z,23nm,0.8s						
V48A	Smith Brothers	22.32	45	IAmb	IAmb	19 54 21.0	
	comp=Z,26nm,1.0s						
REDW	Red Top Meadow	22.46	351	IAmb	IAmb	19 54 16.1	
	comp=Z,38nm,1.2s						
FPAL	Fort Paine	22.49	49	P	P	19 54 11.6	+0.3
FPAL				IAmb	IAmb	19 54 14.1	
	comp=Z,43nm,0.9s						
ORV	Oroville	22.52	328	P	P	19 54 13.5	+2.0
ORV				IAmb	IAmb	19 54 16.2	
	comp=Z,25nm,1.0s						
SWET	Sewanee	22.62	47	IAmb	IAmb	19 54 23.4	
	comp=Z,27nm,1.0s						
TIGA	Tifton	22.66	59	P	P	19 54 13.7	+0.7
	baz=249,SNR=9.3						
CLTN	Cedars of Leba	22.84	45	IAmb	IAmb	19 54 17.6	
	comp=Z,28nm,1.1s						
656A	Willston	22.87	64	P	P	19 54 15.7	+0.4
RSSD	Black Hills	22.95	4	P	P	19 54 17.9	+1.6
RSSD	Black Hills	22.95	4	P	P	19 54 18.1	+1.8
	baz=185						
X51A	Calhoun	23.04	50	P	P	19 54 17.8	+0.7
	baz=240,SNR=7.6						
W50A	Signal Mountai	23.05	48	IAmb	IAmb	19 54 19.7	
	comp=Z,37nm,0.8s						
JTS	Las Juntas de	23.10	115	LR	LR	20 02 28.8	
	comp=Z,216nm,19.8s,baz=357,slow=35						
O03E	Paynes Creek	23.24	329	P	P	19 54 21.5	+2.4
	baz=141,SNR=7.5						
Y52A	Lilburn	23.29	52	IAmb	IAmb	19 54 35.5	
	comp=Z,35nm,0.8s						
Y52A	Lilburn	23.29	52	P	P	19 54 20.5	+1.0
	baz=243,SNR=5.6						
SCIA	State Center	23.39	25	P	P	19 54 21.6	+1.1
H17A	Grant Village	23.44	352	P	P	19 54 23.9	+2.6
	baz=170,SNR=7.2						
DWPF	Disney Wildern	23.52	68	P	P	19 54 22.2	+0.3
	baz=258						
GOGA	Godfrey	23.53	54	IAmb	IAmb	19 54 22.9	
	comp=Z,66nm,1.5s						
GOGA	Godfrey	23.53	54	P	P	19 54 22.1	+0.1
	baz=244,SNR=11						
456A	Hilliard	23.68	61	P	P	19 54 23.8	+0.3
CPCT	Cooper Cave	23.73	49	IAmb	IAmb	19 54 25.1	
	comp=Z,33nm,0.9s						
ECSD	EROS Data Cent	23.87	17	P	P	19 54 25.8	+0.6
ECSD	EROS Data Cent	23.87	17	P	P	19 54 26.4	+1.2
	baz=202,SNR=8.3						
T49A	Edmonton	23.95	44	P	P	19 54 26.9	+0.8
	baz=234,SNR=8.6						
SUSD	Miller	23.97	13	P	P	19 54 26.1	0.0
RLMT	Red Lodge	24.02	355	IAmb	IAmb	19 54 39.6	
	comp=Z,25nm,1.4s						
RLMT	Red Lodge	24.02	355	P	P	19 54 28.3	+1.5
	baz=173,SNR=9.3						
HDIL	Hopedale	24.08	33	P	P	19 54 27.9	+0.7
	baz=222,SNR=17						
X53A	Estanollee	24.14	52	P	P	19 54 28.9	+1.1
	baz=243,SNR=12						
WCI	Wyandotte Cave	24.16	41	P	P	19 54 28.4	+0.5
WCI				IAmb	IAmb	19 54 46.1	
	comp=Z,33nm,0.8s						
WCI	Wyandotte Cave	24.16	41	P	P	19 54 28.6	+0.7
	baz=231						
TKL	Tuckaleechee C	24.36	49	P	P	19 54 29.4	-0.4
	comp=Z,13nm,0.7s,baz=208,slow=10,SNR=16						
TKL				LR	LR	20 05 53.2	
	comp=Z,149nm,21.8s,baz=226,slow=41						
TKL	Tuckaleechee C	24.36	49	IAmb	IAmb	19 54 31.1	
	comp=Z,19nm,0.8s						
T50A	Nancy	24.36	45	P	P	19 54 30.0	+0.2
	baz=235,SNR=10						
M04C	Macdoel	24.42	331	P	P	19 54 31.5	+1.1
	baz=143,SNR=17						
S49A	Springfield	24.51	43	P	P	19 54 31.8	+0.6
	baz=233,SNR=36						
V52A	Sevierville	24.57	49	IAmb	IAmb	19 54 33.4	
	comp=Z,25nm,0.8s						
BG3	Lake Jocassee	24.64	51	IAmb	IAmb	19 54 34.9	
	comp=Z,35nm,0.9s						
YBH	Yreka Blue Hor	24.79	330	P	P	19 54 33.5	-0.2
	comp=Z,3.7nm,0.7s,baz=141,slow=5.5,SNR=6.7						
YBH				LR	LR	20 04 21.1	
	comp=Z,242nm,18.6s,baz=150,slow=37						
HODGE	Hodges	24.79	53	IAmb	IAmb	19 54 35.6	
	comp=Z,17nm,1.1s						
X54A	Belton	24.84	53	P	P	19 54 34.5	+0.3
	baz=244,SNR=19						
R49A	Shelbyville	24.89	42	IAmb	IAmb	19 54 37.1	
	comp=Z,27nm,1.3s						
R49A	Shelbyville	24.89	42	P	P	19 54 35.5	+0.9
	baz=233						
T51A	Gray	24.92	46	P	P	19 54 35.7	+0.8
	baz=237,SNR=18						
Q48A	North Vernon	24.94	40	P	P	19 54 36.5	+1.4
	baz=231,SNR=15						
TZTN	Tazewell	24.97	47	P	P	19 54 36.0	+0.7
	baz=238,SNR=12						
Y55A	Saluda	24.97	54	P	P	19 54 35.8	+0.5
	baz=246,SNR=12						
L04D	Klamath Falls	24.98	331	P	P	19 54 35.5	0.0
	baz=142						
S50A	Richmond	25.02	44	P	P	19 54 36.1	+0.3
	baz=235,SNR=5.9						
Z56A	Williston	25.10	56	P	P	19 54 37.6	+1.0
	baz=247						
SFIN	Lafayette	25.11	36	P	P	19 54 37.3	+0.7
	baz=226,SNR=27						
157A	Early Branch	25.15	58	P	P	19 54 38.2	+1.2
	baz=249						
W54A	Cherokee Point	25.22	52	P	P	19 54 38.5	+0.8
	baz=243,SNR=9.3						
BMO	Blue Mountains	25.33	341	P	P	19 54 39.6	+0.9
X55A	Gracelyn & Ava	25.36	53	P	P	19 54 39.2	+0.4
	baz=245						
J05D	Fort Rock, OR	25.37	334	P	P	19 54 41.0	+1.9
	baz=146,SNR=12						
PAULI	Pauline	25.38	52	IAmb	IAmb	19 54 40.3	
	comp=Z,28nm,1.1s						
R50A	Paris	25.42	43	P	P	19 54 41.9	+2.5
	baz=234,SNR=5.5						
LAO	LASA Array	25.45	360	IAmb	IAmb	19 54 48.6	
	comp=Z,18nm,0.9s						
LAO	LASA Array	25.45	360	P	P	19 54 40.9	+1.2
	baz=180,SNR=8.2						
JFWS	Jewell Farm	25.46	28	P	P	19 54 40.2	+0.6
	baz=217,SNR=8.4						
P48A	Milroy	25.46	40	P	P	19 54 41.2	+1.4
	baz=230						
Q49A	Aurora	25.50	41	P	P	19 54 42.4	+2.3
	baz=232,SNR=10						
S51A	Beattyville	25.53	45	IAmb	IAmb	19 54 52.3	
	comp=Z,28nm,1.1s						
S51A	Beattyville	25.53	45	P	P	19 54 40.8	+0.4
	baz=236						
Z57A	Bowman	25.61	57	P	P	19 54 41.7	+0.6
	baz=248,SNR=7.2						
T52A	Hallie	25.65	47	P	P	19 54 41.9	+0.4
T52A	Hallie	25.65	47	P	P	19 54 41.9	+0.4
	baz=238						
J04D	Umpqua Nationa	25.71	332	P	P	19 54 44.1	+2.0
	baz=144,SNR=9.0						
V54A	Nebo	25.71	50	P	P	19 54 42.7	+0.6
	baz=242,SNR=6.3						
E28A	Huff	25.73	9	IAmb	IAmb	19 54 44.5	
	comp=Z,34nm,0.9s						
X56A	White Oak	25.82	54	P	P	19 54 43.4	+0.3
	baz=246						
KMSC	Kings Mountain	25.87	52	IAmb	IAmb	19 54 44.6	
	comp=Z,20nm,0.9s						
KMSC	Kings Mountain	25.87	52	P	P	19 54 43.9	+0.3
	baz=244,SNR=6.3						
T53A	Wise	25.89	47	P	P	19 54 44.6	+0.8
	baz=239,SNR=6.3						
R51A	Hillsboro	25.91	44	P	P	19 54 44.2	+0.4
	baz=235						
P49A	Miami Univ. Ec	25.93	40	P	P	19 54 45.3	+1.2
	baz=231,SNR=6.1						
NHSC	New Hope	25.95	57	P	P	19 54 44.7	+0.5
	baz=249,SNR=6.6						
I40A	Norwalk	26.09	26	IAmb	IAmb	19 54 46.3	
	comp=Z,15nm,0.9s						
O48A	Farmland	26.13	39	P	P	19 54 46.0	+0.2
	baz=230,SNR=5.4						
U54A	Nelsons Funny	26.16	49	IAmb	IAmb	19 55 05.0	
	comp=Z,54nm,1.5s						
U54A	Nelsons Funny	26.16	49	P	P	19 54 46.1	-0.1
	baz=241						
N47A	Urbana	26.24	37	P	P	19 54 49.0	+2.3
	baz=228,SNR=8.0						
V55A	Taylorsville	26.27	51	IAmb	IAmb	19 54 59.8	
	comp=Z,39nm,1.5s						
V55A	Taylorsville	26.27	51	P	P	19 54 47.5	+0.3
	baz=243						
I05D	Terrebonne, OR	26.29	335	P	P	19 54 49.6	+2.4
	baz=147						
Z58A	St. Stephen	26.32	57	P	P	19 54 48.6	+1.0
	baz=249						
MSO	Missoula	26.36	348	P	P	19 54 49.2	+1.3
	baz=164						
SPMN	Marine on St.	26.40	22	IAmb	IAmb	19 54 50.1	
	comp=Z,29nm,1.4s						
SPMN	Marine on St.	26.40	22	P	P	19 54 49.0	+0.8
	baz=209						
W56A	Indian Trail	26.43	53	P	P	19 54 48.5	0.0
	baz=245						
J01E	Myrtle Point	26.46	330	P	P	19 54 51.3	+2.6
	baz=140						
Q51A	Peebles	26.48	43	IAmb	IAmb	19 55 02.3	
	comp=Z,16nm,0.9s						
Q51A	Peebles	26.48	43	P	P	19 54 49.3	+0.3
	baz=234						
P50A	Jamestown	26.54	41	P	P	19 54 50.2	+0.6
	baz=233,SNR=10						
R52A	Catlettsburg	26.54	45	P	P	19 54 50.0	+0.5
	baz=236						
O49A	Covington	26.57	40	IAmb	IAmb	19 54 54.0	
	comp=Z,32nm,0.9s						
O49A	Covington	26.57	40	P	P	19 54 50.2	+0.4
	baz=231,SNR=6.7						
T54A	Tazewell	26.59	48	P	P	19 54 50.6	+0.4
	baz=240						
N48A	Decatur	26.60	38	P	P	19 54 51.0	+0.9
	baz=229						
M47A	Cromwell	26.60	36	P	P	19 54 50.4	+0.3
	baz=227						
I03D	Drain, OR	26.61	331	P	P	19 54 51.4	+1.3
	baz=142						
Y58A	Scranton	26.64	56	P	P	19 54 51.2	+0.8
	baz=248						
U55A	TA2, Sparta	26.70	50	P	P	19 54 51.2	+0.1
	baz=242						
V56A	Mocksville	26.78	51	P	P	19 54 51.9	+0.1
	baz=244						
P51A	Williamsport	26.92	42	IAmb	IAmb	19 55 11.3	
	comp=Z,18nm,0.8s						
EGMT	Eagleton	26.94	355	P	P	19 54 54.8	+1.7
	baz=173						
R53A	Hurricane	26.99	45	IAmb	IAmb	19 54 55.9	
	comp=Z,21nm,0.8s						
R53A	Hurricane	26.99	45	P	P	19 54 54.6	+1.0
	baz=238,SNR=5.4						
H04D	Lebanon	27.01	333	P	P	19 54 54.6	+0.9
	baz=144						
G05D	Wamic, OR	27.04	336	P	P	19 54 53.6	-0.4
	baz=148						
U56A	King	27.10	51	IAmb	IAmb	19 54 57.1	
	comp=Z,48nm,1.4s						
U56A	King	27.10	51	P	P	19 54 55.4	+0.8
	baz=243						
N49A	Columbus Grove	27.13	39	P	P	19 54 58.4	+3.6
	baz=230,SNR=7.2						
Q52A	Bidwell	27.13	44	P	P	19 54 55.3	+0.5
	baz=236						
MDND	Maddock	27.14	10	P	P	19 54 55.9	+1.1
	baz=194						
T55A	Pulaski	27.17	49	P	P	19 54 56.2	+0.9
	baz=241						
DGMT	Dagmar	27.28	3	P	P	19 54 56.1	0.0
DGMT				IAmb	IAmb	19 54 58.2	
	comp=Z,11nm,0.7s						
DGMT	Dagmar	27.28	3	P	P	19 54 57.6	+1.5
	baz=184						
Y59A	Loris	27.28	56	P	P	19 54 57.0	+0.8
	baz=249						
V57A	Coltrane Farms	27.34	52	P	P	19 54 56.8	0.0
	baz=245						
W58A	Raeford	27.39	54	P	P	19 54 57.4	+0.2
	baz=247						
BLA	Blacksburg	27.47	49	P	P	19 54 58.8	+0.7
	baz=242						
R54A	Victor	27.56	47	P	P	19 54 59.3	+0.5
	baz=239						
M49A	Liberty Center	27.60	38	P	P	19 54 59.8	+0.8
	baz=230						
F05D	White Salmon	27.64	337	P	P	19 55 02.0	+2.7
	baz=148						
N50A	Nevada	27.64	40	P	P	19 55 02.7	+3.3
	baz=232						
L48A	N Adams	27.65	37	P	P	19 54 59.7	+0.2
	baz=228						
S55A	Lewisburg	27.69	48	P	P	19 55 01.6	+1.7
	baz=240						
U57A	Blanch	27.89	51	P	P	19 55 02.1	+0.4
	baz=244						
P53A	Whipple	27.99	44	IAmb	IAmb	19 55 03.5	
	comp=Z,12nm,0.8s						
P53A	Whipple	27.99	44	P	P	19 55 02.8	+0.3
	baz=236						
Q54A	Coxs Mills	28.08	45	IAmb	IAmb	19 55 03.8	
	comp=Z,11nm,0.8s						
Q54A	Coxs Mills	28.08	45	P	P	19 55 03.4	+0.1
	baz=238						
R55A	Marlinton	28.20	47	P	P	19 55 05.1	+0.6
	baz=240						
AGMN	Agassiz Nation	28.31	15	IAmb	IAmb	19 55 07.6	
	comp=Z,19nm,0.8s						
AGMN	Agassiz Nation	28.31	15	P	P	19 55 07.0	+1.8
	baz=201,SNR=14						
AAM	Ann Arbor	28.32	37	P	P	19 55 06.4	+0.9
	baz=229						
NEW	Newport	28.42	345	LR	LR	20 06 33.5	
	comp=Z,281nm,19.9s,baz=170,slow=37						
U58A	Oxford	28.45	52	P	P	19 55 07.0	+0.3
	baz=245						
COWI	Conover	28.51	25	IAmb	IAmb	19 55 08.5	
	comp=Z,16nm,0.9s						
O53A	New Philadelph	28.52	43	P	P	19 55 07.2	-0.1
	baz=236						
Q55A	Buckhannon	28.59	46	P	P	19 55 08.4	+0.5
	baz=239						
E04D	Cinebar	28.62	336	P	P	19 55 10.0	+1.9
	baz=147						
L50A	Kingsville	28.64	38	P	P	19 55 09.1	+0.8
	baz=231						
P54A	Burton	28.64	44	P	P	19 55 08.6	+0.2
	baz=238,SNR=5.8						
T58A	Grand View Acr	28.70	51	P	P	19 55 09.2	+0.3
	baz=244						
J48A	Bridge Port	28.92	35	P	P	19 55 12.0	+1.3
	baz=227						
P55A	Reedsville	29.02	45	P	P	19 55 11.9	+0.1
	baz=239						
M52A	Chesterland	29.18	40	IAmb	IAmb	19 55 16.3	
	comp=Z,19nm,1.1s						
Q56A	Snyder Ridge,	29.21	46	P	P	19 55 13.9	+0.4
	baz=240						
EYMN	Ely	29.22	20	P	P	19 55 13.6	+0.2
EYMN				IAmb	IAmb	19 55 15.1	
	comp=Z,26nm,1.1s						
EYMN	Ely	29.22	20	P	P	19 55 13.8	+0.4
	baz=209,SNR=16						
T59A	Double "B" Far	29.42	51	P	P	19 55 15.5	+0.2
	baz=246						
D41A	Chassel	29.52	25	IAmb	IAmb	19 55 18.4	
	comp=Z,26nm,0.9s						
I48A	Sherman Twp	29.57	34	P	P	19 55 17.1	+0.6
	baz=226						
E43A	Lone Tree Farm	29.62	27	IAmb	IAmb	19 55 18.1	
	comp=Z,33nm,1.7s						
P56A	Dayton Farm, R	29.68	46	P	P	19 55 17.8	+0.2
	baz=240						
O55A	Ligonier	29.73	44	P	P	19 55 17.9	-0.1
	baz=238						
I49A	Point Hope	29.86	35	P	P	19 55 18.7	-0.4
	baz=228						
ULM	Lac du Bonnet	30.14	13	P	P	19 55 21.4	-0.1
	comp=Z,4.7nm,0.5s,baz=191,slow=8.3,SNR=13						
ULM				LR	LR	20 07 59.7	
	comp=Z,291nm,20.7s,baz=224,slow=37						
ULM	Lac du Bonnet	30.14	13	IAmb	IAmb	19 55 22.6	
	comp=Z,22nm,1.3s						
N55A	Marion Center	30.24	44	P	P	19 55 22.6	+0.1
	baz=238,SNR=5.0						
N56A	West Decatur	30.75	44	P	P	19 55 27.0	-0.1
	baz=239						
I51A	Listowel	30.77	37	P	P	19 55 27.5	+0.4
	baz=231						
O57A	Amberson	30.83	46	P	P	19 55 28.0	+0.2
	baz=240						
O58A	Lewisberry	31.27	46	P	P	19 55 31.5	-0.1
	baz=242						
D46A	Sault St. Mari	31.33	30	P	P	19 55 32.5	+0.4
	baz=223						
E47A	Iron Bridge	31.38	31	P	P	19 55 33.1	+0.6
	baz=224						
M57A	Sunshine Farm,	31.73	44	P	P	19 55 35.3	-0.3
	baz=240						
N58A	Sunbury	31.75	45	P	P	19 55 35.1	-0.7
	baz=241						
O59A	Robesonia	31.85	46	P	P	19 55 37.0	+0.2
	baz=242						
D47A	Chapleau	31.89	31	P	P	19 55 37.4	+0.4
	baz=224						
K56A	Middlesex	32.31	42	P	P	19 55 40.5	-0.3
	baz=237						
SADO	Sadowa	32.42	37	LR	LR	20 09 22.2	
	comp=Z,173nm,21.1s,baz=338,slow=37						
D48A	Paudash Townsh	32.60	32	P	P	19 55 43.6	+0.3
	baz=226						
BINY	Binghamton	32.90	44	P	P	19 55 46.5	+0.6
	baz=240						
L58A	Harry Jones Me	32.91	44	P	P	19 55 46.6	+0.6
	baz=240						
E51A	G1948 Merrick	33.34	34	P	P	19 55 49.9	+0.1
	baz=230						
G54A	Lake Saint Pet	33.40	37	P	P	19 55 50.5	+0.2
	baz=233						
L59A	Walton	33.50	44	P	P	19 55 52.0	+0.8
	baz=241						
D50A	G1974 Best Tow	33.58	33	P	P	19 55 51.8	0.0
	baz=228						
E52A	Mattawa	33.63	35	P	P	19 55 52.4	+0.1
	baz=231						
FFC	Flin Flon	33.65	4	P	P	19 55 52.4	+0.1
FFC				IAmb	IAmb	19 55 53.5	
	comp=Z,12nm,0.8s						
PAL	Palisades	33.71	47	P	P	19 55 52.9	-0.1
	baz=244						
D51A	Lot 18 Range I	33.77	34	P	P	19 55 53.7	+0.3
	baz=229,SNR=8.6						
G55A	Calabogie	34.09	38	P	P	19 55 56.5	+0.2
	baz=235						
E53A	Dumoine, Ponti	34.23	36	P	P	19 55 57.8	+0.3
	baz=232,SNR=5.0						
E54A	Lac Daplat, Po	34.52	36	P	P	19 56 00.1	+0.1
	baz=233						
D53A	Lac Vacive, Po	34.64	35	P	P	19 56 01.3	+0.3
	baz=232						
F55A	Otter Lake	34.64	38	P	P	19 56 01.5	+0.5
	baz=235						
ROSC	El Rosal	34.93	113	LR	LR	20 09 56.2	
	comp=Z,197nm,19.9s,baz=322,slow=36						
D54A	Lac Fusel, La	35.25	36	P	P	19 56 06.5	+0.2
	baz=233						
VLDQ	Val d'Or	35.42	34	IAmb	IAmb	19 56 08.7	
	comp=Z,29nm,1.6s						
RUSC	La Rusia	35.48	111	P	P	19 56 09.2	+0.1
FLOC	Florencia	35.58	119	P	P	19 56 10.4	+1.0
G58A	Ormstown	35.61	40	P	P	19 56 09.5	+0.1
	baz=238						
D55A	Sainte-Anne-du	35.82	37	P	P	19 56 11.7	+0.5
	baz=234,SNR=8.2						
E57A	Chemin Saint G	36.23	38	P	P	19 56 15.0	+0.2
	baz=237,SNR=5.8						
D56A	ZEC Mazanza, M	36.24	37	P	P	19 56 14.6	-0.2
	baz=235						
LSQQ	Lebel-sur-Quev	36.26	33	P	P	19 56 15.1	+0.2
	baz=230						
SDV	Santo Domingo	36.36	104	P	P	19 56 16.2	-0.2
SDV				IAmb	IAmb	19 56 17.0	
	comp=Z,13nm,0.8s						
D57A	Chemin Vers le	36.72	38	P	P	19 56 18.7	-0.1
	baz=236						
F60A	Warwick	37.30	40	P	P	19 56 23.7	-0.1
	baz=240						
D58A	Chemin du LacG	37.34	38	P	P	19 56 23.9	-0.2
	baz=238						
LATQ	La Tuque	37.55	38	P	P	19 56 26.2	+0.4
	baz=237						
SJG	San Juan	37.77	87	P	P	19 56 27.7	-0.4
	comp=Z,14nm,0.8s,baz=255,slow=5.5,SNR=4.6						
E60A	Ste Agathe de	37.81	40	P	P	19 56 28.2	+0.2
	baz=240						
MTP	Monte Pirata	38.33	87	P	P	19 56 33.1	+0.3
D62A	Allapoint, All	39.59	40	IAmb	IAmb	19 56 44.4	
	comp=Z,16nm,0.9s						
D62A	Allapoint, All	39.59	40	P	P	19 56 43.5	+0.4
	baz=242						
YKA	Yellowknife Ar	41.69	354	P	P	19 57 00.4	+0.2
	comp=Z,11nm,0.8s,baz=165,slow=8.6,SNR=118						
YKA				LR	LR	20 14 10.6	
	comp=Z,364nm,18.4s,baz=0.0,slow=36						
NNA	Nana	43.79	136	P	P	19 57 18.1	+0.2
SCHQ	Schefferville	44.73	31	P	P	19 57 25.1	+0.2
	comp=Z,12nm,0.9s,baz=234,slow=5.4,SNR=12						
SCHQ	Schefferville	44.73	31	P	P	19 57 25.3	+0.4
SCHQ				IAmb	IAmb	19 57 26.1	
	comp=Z,14nm,1.0s						
TAOE	Nuku Hiva Isla	44.75	232	eT	T	20 45 03.3	
	comp=Z,199nm,0.2s						
DAWY	Dawson	48.24	341	P	P	19 57 53.4	+1.0
DAWY				IAmb	IAmb	19 57 54.6	
	comp=Z,11nm,0.9s						
BCAR	Beaver Creek A	48.29	339	P	P	19 57 54.3	+1.6
EPYK	Eagle Plains	49.25	344	IAmb	IAmb	19 58 02.3	
	comp=Z,11nm,0.8s						
EPYK	Eagle Plains	49.25	344	P	P	19 58 01.5	+1.5
	baz=141,SNR=9.3						
EGAK	Eagle	49.29	341	IAmb	IAmb	19 58 02.5	
	comp=Z,13nm,0.9s						
C36M	Paulatuk	49.39	352	IAmb	IAmb	19 58 03.0	
	comp=Z,9.1nm,0.8s						
C36M	Paulatuk	49.39	352	P	P	19 58 01.9	+0.9
	baz=158,SNR=13						
FRB	Frobisher Bay	49.44	21	LR	LR	20 20 03.9	
	comp=Z,228nm,19.3s,baz=226,slow=37						
PAX	Paxson	49.49	338	IAmb	IAmb	19 58 04.2	
	comp=Z,8.3nm,1.0s						
INK	Inuvik	50.09	347	LR	LR	20 20 08.5	
	comp=Z,242nm,20.6s,baz=146,slow=37						
INK	Inuvik	50.09	347	IAmb	IAmb	19 58 08.8	
	comp=Z,15nm,0.9s						
PTGA	Pitinga	50.13	110	P	P	19 58 07.3	-0.1
PTGA				IAmb	IAmb	19 58 11.0	
	comp=Z,22nm,1.6s						
HDA	Harding Lake	50.91	339	P	P	19 58 13.7	+1.0
	baz=128						
IL31		51.12	339	P	P	19 58 15.1	+1.0
IL31				IAmb	IAmb	19 58 16.6	
	comp=Z,14nm,0.8s						
ILAR	Eielson Array	51.12	339	P	P	19 58 15.1	+0.9
	comp=Z,13nm,1.0s,baz=149,slow=6.5,SNR=82						
ILAR				LR	LR	20 20 26.0	
	comp=Z,219nm,18.6s,baz=137,slow=37						
POKR	Poker Plat Res	51.51	339	P	P	19 58 18.3	+1.1
	baz=128,SNR=8.7						
SAML	Samuel	51.78	121	P	P	19 58 20.3	+0.5
KTH	Kantishna Hill	51.83	336	IAmb	IAmb	19 58 21.3	
	comp=Z,17nm,1.1s						
BMAR	Burnt Mountain	52.14	342	P	P	19 58 22.9	+1.1
LPAZ	La Paz	52.73	132	P	P	19 58 26.2	-1.3
	comp=Z,1.0nm,0.5s,baz=286,slow=7.4,SNR=2.6						
LPAZ				LR	LR	20 18 57.1	
	comp=Z,114nm,19.0s,baz=318,slow=34						
LPAZ	La Paz	52.73	132	P	P	19 58 26.4	-1.2
RES	Resolute Bay	53.88	4	LR	LR	20 22 36.9	
	comp=Z,332nm,19.2s,baz=196,slow=37						
RES	Resolute Bay	53.88	4	P	P	19 58 34.3	-0.2
IMAR	Indian Mountai	54.16	338	P	P	19 58 36.5	-0.2
TOLK	Toolik Lake Re	54.36	342	P	P	19 58 39.4	+1.2
	baz=128,SNR=14						

PPT2	Papeete2	57.38	231	eLR	LR	20 15 21.8	
	comp=Z,108nm,26.5s						
ANM	Nome	57.97	334	IAmb	IAmb	19 59 05.7	
	comp=Z,9.0nm,1.3s						
GO02	Mina Guanaco	58.19	141	P	P	19 59 06.8	+0.4
GO02				IAmb	IAmb	19 59 10.0	
	comp=Z,10nm,1.2s						
RDOG	Red Dog Mine	58.31	338	P	P	19 59 06.6	+0.2
RDOG				IAmb	IAmb	19 59 07.8	
	comp=Z,18nm,1.3s						
TBI	Tubuai	61.11	226	eLR	LR	20 17 16.3	
	comp=Z,123nm,25.2s						
TBI	Tubuai	61.11	226	eT	T	21 05 29.0	
	comp=Z,7.8nm,0.2s						
SUMG	Summit	63.32	18	i P	P	19 59 40.8	-0.1
	comp=Z,23nm,1.0s						
SUMG	Summit	63.32	18	P	P	19 59 40.4	-0.5
SUMG				IAmb	IAmb	19 59 41.7	
	comp=Z,7.7nm,0.9s						
CPUP	Villa Florida	66.89	133	P	P	20 00 02.9	-1.3
	comp=Z,1.4nm,0.6s,baz=316,slow=8.2,SNR=3.5						
CPUP				LR	LR	20 28 31.5	
	comp=Z,106nm,19.1s,baz=26,slow=35						
CPUP	Villa Florida	66.89	133	P	P	20 00 04.3	+0.2
CPUP				IAmb	IAmb	20 00 23.2	
	comp=Z,21nm,1.6s						
BDFB	Brasilia	67.80	118	P	P	20 00 07.5	-2.8
	comp=Z,2.8nm,0.7s,baz=231,slow=8.4,SNR=4.9						
BDFB				LR	LR	20 29 06.8	
	comp=Z,132nm,21.7s,baz=296,slow=35						
BDFB	Brasilia	67.80	118	P	P	20 00 10.1	-0.2
BDFB				IAmb	IAmb	20 00 15.3	
	comp=Z,6.2nm,1.0s						
DAG	Danmarks Havn	68.98	14	i P	P	20 00 16.0	-0.6
	comp=Z,5.3nm,0.8s						
NOR	Nord	69.12	9	i P	P	20 00 17.7	+0.3
	comp=Z,2.6nm,0.8s						
BILL	Bilibino	69.64	336	P	P	20 00 20.5	-0.4
PLCA	Paso Flores	69.95	152	P	P	20 00 22.7	-0.4
	comp=Z,3.8nm,0.9s,baz=340,slow=6.8,SNR=8.9						
PLCA				LR	LR	20 26 34.0	
	comp=Z,60nm,18.4s,baz=13,slow=32						
PLCA	Paso Flores	69.95	152	P	P	20 00 23.0	-0.1
PLCA				IAmb	IAmb	20 00 24.9	
	comp=Z,16nm,1.4s						
PEA0B	Petropavlovsk-	76.90	322	P	P	20 01 04.2	+0.2
PETK	Petropavlovsk-	76.90	322	P	P	20 01 02.6	-1.4
	comp=Z,3.0nm,0.7s,baz=77,slow=6.5,SNR=2.4						
PETK	Petropavlovsk-	76.90	322	P	P	20 01 02.7	-1.3
TIXI	Tiksi	80.13	345	P	P	20 01 20.7	-0.7
H11N3	WAKE ISLAND Hy	80.32	287	T	T	21 29 54.1	
	baz=64,slow=74,SNR=14						
H11N2	WAKE ISLAND Hy	80.33	287	T	T	21 29 55.5	
	baz=64,slow=74,SNR=10						
H11N1	WAKE ISLAND Hy	80.34	287	T	T	21 29 46.9	
	baz=64,slow=74,SNR=13						
H11S1	WAKE ISLAND Hy	80.91	286	T	T	21 30 47.2	
	baz=101,slow=75,SNR=13						
H11S2	WAKE ISLAND Hy	80.91	286	T	T	21 30 43.5	
	baz=101,slow=75,SNR=17						
H11S3	WAKE ISLAND Hy	80.92	286	T	T	21 30 43.5	
	baz=101,slow=75,SNR=13						
ARCES	ARCESS Array B	83.23	15	P	P	20 01 38.0	+0.1
	comp=Z,4.0nm,0.9s,baz=316,slow=3.3,SNR=7.3						
ARCES	ARCESS Array B	83.23	15	P	P	20 01 37.4	-0.5
NB2	NORSAR Subarra	84.00	26	P	P	20 01 43.1	+1.1
	comp=Z,1.1nm,0.7s,baz=302,slow=5.3						
NOA	NORSAR Array B	84.00	26	P	P	20 01 41.2	-0.8
	comp=Z,2.2nm,0.8s,baz=310,slow=5.2,SNR=5.5						
NOA				LR	LR	20 38 29.2	
	comp=Z,43nm,20.1s,baz=0.0,slow=35						
YAK	Yakutsk	85.99	337	P	P	20 01 51.2	-0.7
YAK				IAmb	IAmb	20 02 03.8	
	comp=Z,11nm,1.1s						
NRIK	Noril'sk	89.20	355	P	P	20 02 07.4	+0.2
	comp=Z,2.6nm,0.7s,baz=36,slow=3.8,SNR=5.6						
FINES	FINESS Array B	89.24	21	P	P	20 02 07.5	0.0
	comp=Z,2.5nm,0.9s,baz=319,slow=5.5,SNR=3.8						
FINES				LR	LR	20 42 01.2	
	comp=Z,164nm,19.3s,baz=316,slow=36						
CLL	Collm	90.36	33	eP	P	20 02 11.0	-2.0
GERES	GERESS Array B	92.16	35	LR	LR	20 43 42.2	
	comp=Z,82nm,18.2s,baz=293,slow=36						
DZM	Mont Dzumac	95.41	249	eLR	LR	20 33 31.7	
	comp=Z,154nm,25.9s						
AKASG	Malin Array Be	98.37	27	LR	LR	20 50 53.2	
	comp=Z,35nm,18.6s,baz=275,slow=38						
LZH	Lanzhou	116.35	333	ePKP	PKiKP	20 07 50.1	-6.0
LZH				pPKP	PKPdf	20 07 53.3	-2.8
LZH				sPKP		20 07 54.9	
KSH	Kashi	119.59	358	PKP	PKiKP	20 08 04.3	+2.1
KSH				PP	PP	20 09 31.5	+8.6
KSH				PKS	PKSdf	20 11 39.1	+0.1
KSH				SKKS		20 16 23.0	
WB2	Warramunga Arr	123.61	260	PKPdf	PKPdf	20 08 08.4	-1.8
WRA	Warramunga Arr	123.62	260	PKP	PKPdf	20 08 08.2	-1.9
	comp=Z,2.1nm,1.0s,baz=77,slow=2.1,SNR=14						
AS31	Alice Springs	124.74	255	PKPdf	PKPdf	20 08 11.0	-1.3
ASAR	Alice Springs	124.74	255	PKP	PKPdf	20 08 10.6	-1.7
	comp=Z,1.1nm,0.8s,baz=84,slow=2.1,SNR=11						
ASAR	Alice Springs	124.74	255		PKPdf	20 08 10.3	-2.0
CMAR	Chiang Mai Arr	133.55	326	PKP	PKiKP	20 08 30.1	-0.3
	comp=Z,0.3nm,0.3s,baz=343,slow=1.9,SNR=1.7						
CMAR	Chiang Mai Arr	133.55	326	PKPdf	PKPdf	20 08 29.7	+0.5
RPSI	Rantau Prapat	145.82	311		PKPdf	20 08 50.8	-0.7
GSI	Gunungsitoli	147.75	311		PKPdf	20 08 54.7	-0.1

MAN 22 20:05:48.0, 9°.90N×126°.18E, h4^{km}, mb4.3, ML3.1, MS2.9, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	Butuan	1.07	211	eP	Pg	20 06 08.5	-0.1
BUTP				eS	Sn	20 06 32.1	+6.9
MSLP	Maasin	1.32	280	eP	Pn	20 06 12.8	-0.5
MSLP				eS	Sn	20 06 31.9	+0.6
OCLP	Ormoc	1.92	307	eP	Pn	20 06 21.7	+0.1
LLP	Lapu-Lapu	2.22	281⇑	eP	Pn	20 06 25.7	0.0
LLP				eS	Sn	20 06 53.9	+0.4
BUKP	Musuan	2.29	209	eP	Pb	20 06 30.5	+0.5
BUKP				eS	Sg	20 07 04.6	+3.0
TBP	Tagbilaran	2.29	265	eP	Pn	20 06 28.2	+1.6
TBP				i S	Sb	20 06 58.5	-0.2

IDC 22 20:19:04.3±2.8, 7°.58N×93°.57E, h0^{km}, mb3.1/3, mb1 3.3/4, mb1mx3.1/31, mbtmp3.1/4, ML3.3/1, MS3.2/1, Ms1 3.2/1, ms1mx2.4/13, Error ellipse: s-maj=91.2km s-min=29.5km az=66.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	12.01	25	Pn	Pn	20 21 57.0	+0.1
	0.1nm,0.3s,baz=215,slow=13,SNR=1.0						
LEM	Lembang	20.03	135	LR	LR	20 32 26.0	
	comp=Z,57nm,18.1s,baz=204,slow=40						
H08S3	Diego Garcia H	25.89	235	T	T	20 52 03.9	
	baz=52						
H08S2	Diego Garcia H	25.89	235	T	T	20 51 55.0	
	baz=52						
H08S1	Diego Carcia H	25.91	235	T	T	20 51 59.3	
	baz=52						
MKAR	Makanchi Array	40.25	348	P	P	20 26 42.8	-0.1
	0.1nm,0.5s,baz=161,slow=6.4,SNR=1.7						
WRA	Warramunga Arr	48.55	125	P	P	20 27 49.2	-0.5
	0.4nm,0.8s,baz=306,slow=8.4,SNR=4.7						
ASAR	Alice Springs	50.16	129	P	P	20 28 02.4	+0.3
	0.1nm,0.5s,baz=302,slow=8.1,SNR=1.2						

MAN 22 20:29:53.4, 7°.06N×125°.56E, h44^{km}, mb3.8, ML2.5, MS2.5, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUKP	Musuan	0.95	329	eP	Pn	20 30 11.2	+0.8
BUKP				eS	Sn	20 30 21.7	-1.2
DDMP	Don Marcelino,	0.96	171	eP	Pn	20 30 11.3	+0.7
SKMP	Bagumbayan, Su	1.15	242	eP	Pn	20 30 13.7	+0.6
SKMP				eS	Sn	20 30 26.1	-1.5
CTBH	Cotabato--PC H	1.32	277⇓	eP	Pn	20 30 10.7	-4.7
CGP	Cagayan de Oro	1.63	328⇑	iP	Pn	20 30 20.3	+0.6
CGP				i S	Sn	20 30 35.9	-3.5

IDC 22 20:36:11.1±1.1, 3°.65S×151°.31E, h0^{km}, mb3.5/5, mb1 3.8/5, mb1mx3.5/42, mbtmp3.5/5, MS3.6/1, Ms1 3.6/1, ms1mx2.9/21, Error ellipse: s-maj=28.9km s-min=10.8km az=39.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	0.96	132	Pg	Pg	20 36 29.4	-0.2
	22nm,0.3s,baz=272,slow=3.6,SNR=14						
KRVT				Lg	Lg	20 36 43.3	
	62nm,0.3s,baz=262,slow=22,SNR=12						
WRA	Warramunga Arr	23.16	224	P	P	20 41 18.8	-0.6
	1.8nm,1.1s,baz=50,slow=10,SNR=8.4						
DZM	Mont Dzumac	23.47	143	LR	LR	20 48 40.2	
	comp=Z,146nm,18.6s,baz=220,slow=32						
ASAR	Alice Springs	26.05	219	P	P	20 41 47.0	+0.6
	1.4nm,1.0s,baz=53,slow=8.4,SNR=3.0						
CMAR	Chiang Mai Arr	56.05	295	P	P	20 45 52.9	+0.6
	0.9nm,0.8s,baz=116,slow=6.3,SNR=5.0						
MKAR	Makanchi Array	78.49	319	P	P	20 48 14.4	+0.2
	0.2nm,0.6s,baz=112,slow=7.0,SNR=2.3						
ILAR	Eielson Array	81.67	22	P	P	20 48 30.0	-1.0
	0.2nm,0.7s,baz=246,slow=6.6,SNR=1.8						

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*IDC **22** 20:46:39.7±0.8, 45°.21N×143°.91E, h278^{km}±12^{km}, mb3.1/7, mb1 3.3/11, mb1mx3.0/55, mbtmp3.7/11, Error ellipse: s-maj=28.8km s-min=15.4km az=165.0*

*JMA **22** 20:46:39.7±0.4, 45°.16N×143°.78E, h284^{km}±3^{km}, M3.1*

ISC 22 20:46:39.4±0.7, 45°.08N±0°.07×143°.81E±0°.07, h285^{km}±6^{km}, n30, σ1^{s}28/43, mb3.4/7, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSE	Soyaes	0.88	262	P	Pn	20 47 17.7	+0.1
JSE				eS	S	20 47 46.7	-1.1
JTKR	Abashiri--Toko	1.11	176	P	Pn	20 47 19.9	+1.1
JTKR				eS	S	20 47 50.7	+0.6
JMP	Maruseppu	1.12	197	P	Pn	20 47 19.6	+0.7
JMP				eS	S	20 47 50.3	+0.1
ASAJ	Asahikawa	1.30	222	P	Pn	20 47 20.9	+1.1
ASAJ				eS	S	20 47 52.7	+0.8
ASAJ	Asahikawa	1.30	222	P	Pn	20 47 21.0	+1.1
	20nm,0.3s,baz=43,slow=3.6,SNR=248						
ASAJ				S	S	20 47 52.4	+0.5
	baz=200,slow=33,SNR=1.4						
JWK2	Keihoku	1.37	280	P	Pn	20 47 20.6	+0.4
JWK2				eS	S	20 47 51.5	-1.1
JKK2	Kamakawa 2	1.43	212	P	Pn	20 47 21.5	+0.8
JRA	Rausu	1.48	140	P	Pn	20 47 22.2	+1.2
JAR	Ashorobuto	1.79	181	P	Pn	20 47 24.3	+1.1
JAR				eS	S	20 47 58.6	+0.6
JRBN	Rebuntou	1.97	281	P	Pn	20 47 23.5	-1.0
JRBN				eS	S	20 47 57.0	-3.4
JHR	Hokuryu	2.01	229	P	Pn	20 47 26.0	+1.1
JFR	Furan	2.11	205	P	Pn	20 47 27.3	+1.4
JAK	Akkeshi	2.18	163	P	Pn	20 47 26.5	+0.1
JAK				eS	S	20 48 03.0	-0.8
NEM2	Nemuro 2	2.21	140	P	Pn	20 47 25.8	-0.9
NEM2				eS	S	20 48 02.0	-2.2
JCH	Churui	2.49	188	P	Pn	20 47 29.3	+0.1
JCH				eS	S	20 48 06.9	-1.9
JEW	Eniwo	2.81	218	P	Pn	20 47 34.2	+1.9
JNBK	Urakawa-nobuka	2.91	196	P	Pn	20 47 33.5	+0.3
JKB	Kayabe	3.78	213	P	Pn	20 47 42.7	+0.3
JKB				eS	S	20 48 30.2	-2.6
JOT	Ohata	4.21	210	P	Pn	20 47 47.4	+0.1
JOT				eS	S	20 48 38.6	-3.0
USRK	Ussuriysk Ar.	8.48	268	P	Pn	20 48 39.8	+1.1
	baz=68,slow=13,SNR=3.6						
KLR	Kul'dur	9.20	301	P	Pn	20 48 47.4	-0.2
	0.3nm,0.3s,baz=115,slow=13,SNR=7.0						
MJAR	Matsushiro Arr	9.53	208	P	Pn	20 48 53.5	+1.7
	0.1nm,0.3s,baz=26,slow=12,SNR=9.4						
SEY	Seymchan	18.55	12	P	P	20 50 34.8	-0.7
	0.2nm,0.3s,baz=190,slow=10,SNR=7.5						
SONM	Songino Array	25.76	290	P	P	20 51 45.9	+1.4
	1.3nm,0.5s,baz=84,slow=8.4,SNR=9.8						
ILAR	Eielson Array	41.84	37	P	P	20 54 00.7	-0.8
	0.5nm,0.7s,baz=257,slow=5.5,SNR=6.7						
MKAR	Makanchi Array	41.85	295	P	P	20 54 02.8	+1.0
	1.2nm,0.5s,baz=80,slow=8.4,SNR=17						
INK	Inuvik	46.47	31	P	P	20 54 37.8	0.0
	1.2nm,0.5s,baz=261,slow=7.3,SNR=3.0						
YKA	Yellowknife Ar	56.01	33	P	P	20 55 48.3	0.0
	0.4nm,0.6s,baz=303,slow=6.1,SNR=8.4						
FINES	FINESS Array B	62.58	331	P	P	20 56 32.8	-0.2
	0.7nm,0.5s,baz=55,slow=7.1,SNR=7.6						
TXAR	Lajitas Array	83.86	54	P	P	20 58 37.8	+0.3
	0.2nm,0.5s,baz=327,slow=4.8,SNR=1.9						

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*IDC **22** 20:46:43.6±0.4, 3°.62N×127°.12E, h0^{km}, mb4.8/33, mb1 4.9/33, mb1mx4.9/39, mbtmp4.8/33, MS4.4/29, Ms1 4.4/29, ms1mx4.3/37, Error ellipse: s-maj=15.8km s-min=9.6km az=81.0*

*BJI **22** 20:46:47.8±0.0, 3°.33N×127°.06E, h57^{km}, mB5.2/63, mb5.0/76, Ms4.8/71, Ms7 4.6/69*

*KLM **22** 20:46:47.0, 3°.71N×127°.64E, h37^{km}, mb5.2*

*GCMT **22** 20:46:49.9±0.1, 3°.71N±0°.01×127°.16E±0°.01, h24^{km}, MW5.3/125, Moment Tensor Solution. s94,c134; s125,c207; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.22±.01; $M_{\theta\theta}$0.01±.01; $M_{\phi\phi}$-0.22±.01; $M_{r\theta}$0.01±.01; $M_{\theta\phi}$-0.15±.01; $M_{\phi r}$1.00±.01; Best double couple: $M_0$1.03500×10^{17} NP1:ϕ_s234.00000°, δ10.00000°, λ142.00000°. NP2:ϕ_s1.00000°, δ84.00000°, λ82.00000°. Principal axes: T 1.0270, Plg51.0000°, Azm262.0000°; N 0.0160, Plg8.0000°, Azm2.0000°; P -1.0430, Plg38.0000°, Azm99.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **22** 20:46:50.9±1.3, 3°.56N±0°.05×127°.07E±0°.05, h53^{km}±5^{km}, mb5.2/165 Error ellipse: s-maj=7.8km s-min=6.9km az=75.0*

*MOS **22** 20:46:51.0±0.9, 3°.63N×127°.11E, h67^{km}, mb5.4/28, Error ellipse: s-maj=7.9km s-min=4.4km az=112.6*

*DJA **22** 20:46:53.3±0.3, 4°N±2°×12°7E±°, h62^{km}±3^{km}, M5.0/95, mb5.1/95, mB5.5/56, MLv5.5/17, Mw(mB)5.0/56, Mwp5.2/13*

*MAN **22** 20:46:54.8, 3°.60N×126°.01E, h228^{km}, mb5.6, ML4.6, MS4.9*

ISC 22 20:46:51.2±0.4, 3°.55N±0°.03×127°.08E±0°.04, h54^{km}±3^{km}, h55^{km}:pP-P, n567, σ1^{s}45/604, mb5.2/158, MS4.5/51, 36C-12D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	2.78	174	P	Pn	20 47 35.2	+1.9
TNTI				S	Sn	20 48 08.0	+2.4
TNTI	Ternate	2.78	174		Pn	20 47 34.4	+1.2
TNTI				Sn	Sn	20 48 06.8	+1.2
DDMP	Don Marcelino,	2.88	332	eP	Pn	20 47 33.7	-1.0
DDMP				eS	Sn	20 48 08.2	+0.1
GSPH	General Santos	3.29	320⇑	iP	Pn	20 47 39.7	-0.7
GSPH				i S	Sn	20 48 16.5	-2.0
MATI	Mati	3.47	346	eP	Pn	20 47 43.4	+0.6
DAV	Davao City (W)	3.80	337	Pn	Pn	20 47 48.0	+0.7
	39nm,0.3s,baz=90,slow=2.0,SNR=2.1						
DAV				Sn	Sn	20 48 39.1	+8.3
	127nm,0.3s,baz=280,slow=22,SNR=7.2						
DAV				LR	LR	20 48 46.0	
	comp=Z,2μm,18.3s,baz=150,slow=33						
DAV	Davao City (W)	3.80	337⇓	eP	Pn	20 47 49.2	+1.9
DAV	Davao City (W)	3.80	337		Pn	20 47 48.8	+1.5
DAV				Sn	Sn	20 48 29.5	-1.3
DMPH	Davao City--Mi	3.84	336⇑	iP	Pn	20 47 49.0	+1.1
DMPH				eS	Sn	20 48 34.9	+3.1
SKMP	Bagumbayan, Su	3.88	320	eP	Pn	20 47 48.9	+0.5
SKMP				eS	Sn	20 48 32.0	-0.7
KCP	Kidapawan	3.96	330⇓	eP	Pn	20 47 51.8	+2.2
KCP				i S	Sn	20 48 41.9	+7.0
LBMI	Labuha	4.18	174	P	Pn	20 47 55.2	+2.6
KMSI	Cibinong	4.28	226	P	Pn	20 47 57.1	+3.2
CTBH	Cotabato--PC H	4.61	322⇑	eP	Pn	20 47 58.7	+0.4
BUKP	Musuan	4.74	335	eP	Pn	20 48 01.2	+0.9
BUKP				eS	Sn	20 48 58.0	+4.0
CGP	Cagayan de Oro	5.42	334⇓	eP	Pn	20 48 11.6	+2.2
BUTP	Butuan	5.57	345	eP	Pn	20 48 14.2	+2.6
BUTP				eS	Sn	20 49 18.2	+3.8
PAGZ	Pagadian	5.63	319	eP	Pn	20 48 11.8	-0.7
SANI	Sanana	5.67	191	P	Pn	20 48 12.4	-0.5
	2.0nm7μm133nm,0.6s						
MRSI	Marisa	5.97	239	P	Pn	20 48 20.3	+3.2
	3.2nm5μm10μm902nm,0.9s						
SWI	Sorong	6.06	136	P	Pn	20 48 19.3	+1.0
	1.4nm4μm6μm285nm,0.8s						
SIJI	Sorong	6.07	136	Pn	Pn	20 48 18.9	+0.5
	29nm,0.3s,baz=282,slow=23,SNR=191						
SIJI				Sn	Sn	20 49 26.2	-0.4
	15nm,0.3s,baz=210,slow=24,SNR=8.3						
LUWI	Luwuk	6.27	223	P	Pn	20 48 26.1	+4.9
	6.1nm6μm10μm1μm,1.0s						
LUWI	Luwuk	6.27	223		Pn	20 48 23.6	+2.4
NLAI	Namlea	6.75	180	P	Pn	20 48 29.6	+1.9
	3.5nm4μm130nm,0.7s						
TBP	Tagbilaran	6.88	333	eP	Pn	20 48 30.3	+0.7
MSLP	Maasin	6.90	342	eP	Pn	20 48 32.5	+2.7
APSI	Ampana	7.00	231	P	Pn	20 48 35.6	+4.3
	2.2nm6μm632nm,0.9s						
MSAI	Masohi	7.10	165	P	Pn	20 48 37.8	+5.3
	0.3nm898nm65nm,1.4s						
AAI	Ambon	7.28	171	P	Pn	20 48 37.5	+2.5
	0.8nm3μm195nm,1.1s						
LLP	Lapu-Lapu	7.40	336	eP	Pn	20 48 36.0	-0.6
LLP				eS	Sn	20 49 53.5	-5.8
MPSI	Mapaga	7.85	246	P	Pn	20 48 45.8	+2.9
	0.6nm6μm2μm141nm,0.8s						
FAKI	Fak Fak	8.25	141	P	Pn	20 48 51.1	+2.8
	1.2nm3μm3μm308nm,1.2s						
FAKI	Fak Fak	8.25	141	Pn	Pn	20 48 49.6	+1.2
FAKI				Sn	Sn	20 50 20.1	-0.1
BNDI	Bandanaira	8.50	161	P	Pn	20 48 53.0	+1.2
	10μm483nm,1.2s						
RKPI	Ransiki, Papua	8.70	125	P	Pn	20 48 57.3	+2.8
	9μm200nm,0.8s						
RCP	Roxas	9.04	332⇑	eP	Pn	20 49 04.0	+4.9
BBSI	Bau Bau	10.04	207	P	Pn	20 49 23.6	+11
BAKI	Biak	10.18	117	P	Pn	20 49 19.0	+4.2
	7μm435nm,1.4s						
SPSI	Sidrap Palu	10.44	224	P	Pn	20 49 19.1	+0.8
	966nm121nm,0.8s						
BNSI	Bone	10.53	221	P	Pn	20 49 20.8	+1.3
	1μm83nm,0.7s						
SMKI	Samarinda	10.63	248	P	Pn	20 49 26.9	+6.0
	4μm7μm128nm,0.8s						
KKM	Kota Kinabalu	11.10	283		Pn	20 49 30.0	+2.5
BKSI	Bulukumba	11.22	218	P	Pn	20 49 31.9	+2.9
	826nm55nm,1.0s						
KAPI	Kappang	11.22	221	Pn	Pn	20 49 29.6	+0.6
	4.0nm,0.3s,baz=24,slow=7.8,SNR=12						
KAPI				Sn	Sn	20 51 32.9	-0.2
	3.7nm,0.3s,baz=164,slow=15,SNR=1.6						
KAPI				LR	LR	20 54 20.2	
	comp=Z,1μm,21.8s,baz=52,slow=40						
BKB	Balikpapan	11.24	245	P	Pn	20 49 31.0	+1.7
	3μm2μm148nm,1.0s						
BKB	Balikpapan	11.24	245		Pn	20 49 30.1	+0.8
TGY	Tagaytay City	12.11	330	LR	LR	20 54 59.6	
	comp=Z,3μm,19.3s,baz=134,slow=41						
SAUI	Saumlaki	12.21	160	P	Pn	20 49 44.8	+2.3
	4μm405nm,1.0s						
SAUI	Saumlaki	12.21	160		Pn	20 49 42.8	+0.3
MMRI	Maumere	13.03	202	P	P	20 50 00.2	-2.3
	2μm136nm,0.8s						
MMRI	Maumere	13.03	202		Pn	20 49 54.2	+0.5
SOEI	Soe	13.51	192	P	Pn	20 50 04.2	+3.8
	2μm190nm,1.0s						
SOEI	Soe	13.51	192		Pn	20 50 00.3	-0.1
GENI	Genyem	14.44	115	P	P	20 50 17.6	-0.6
	4μm8μm636nm,1.1s						
SBUM	Sibu	14.88	266		Pn	20 50 19.6	+1.2
SBUM	Sibu	14.88	266	P	P	20 50 21.0	-2.0
BASI	Baing, Sumba	15.13	205	P	Pn	20 50 22.1	+0.3
	2μm144nm,1.8s						
WBSI	Waikabubak, Su	15.18	210	P	Pn	20 50 24.2	+1.8
	4μm349nm,1.0s						
SZP	Santa	15.35	335	P	P	20 50 27.0	-1.3
SZP				IAmb	IAmb	20 50 53.3	
	comp=Z,215nm,1.3s						
PLAI	Plampang	15.40	217	P	P	20 50 27.2	-1.6
	comp=Z,2μmcomp=Z,6μmcomp=Z,628nm,0.9s						
SRBI	Singaraja	16.54	226	P	P	20 50 41.5	0.0
	comp=Z,3μmcomp=Z,4μmcomp=Z,361nm,1.5s						
MTN	Manton Dam	16.78	166	P	Pn	20 50 41.5	-1.1
	baz=17,SNR=39						
MTN	Manton Dam	16.78	166		Pn	20 50 41.7	-0.9
MTN				IAmb	IAmb	20 50 46.2	
	comp=Z,172nm,0.8s						
KMMI	Kalianget	16.80	231	P	P	20 50 48.7	+4.4
	comp=Z,2μmcomp=Z,104nm,0.9s						
KSM	Kuching	16.88	263	P	P	20 50 45.3	+0.1
KSM	Kuching	16.88	263	P	P	20 50 47.0	+1.8
DNP	Denpasar	16.96	224	P	P	20 50 48.2	+2.1
	comp=Z,324nm,1.4s						
DNP	Denpasar	16.96	224	P	P	20 50 47.5	+1.4
DNP				pmax	pmax		
	comp=Z,250nm,1.0s						
KDU	Kakadu	17.00	162	P	Pn	20 50 43.7	-1.7
	baz=17,SNR=67						
IGBI	Denpasar	17.10	224	P	P	20 50 49.6	+1.9
	comp=Z,2μmcomp=Z,132nm,0.7s						
JAGI	Jajag, Banyuwa	17.57	227	P	P	20 50 55.3	+2.4
	comp=Z,2μmcomp=Z,2μmcomp=Z,127nm,0.9s						
JAGI	Jajag, Banyuwa	17.57	227	P	P	20 50 53.4	+0.5
JAGI				IAmb	IAmb	20 50 56.1	
	comp=Z,150nm,1.1s						
KNRA	Kununurra	19.18	175	P	P	20 51 11.0	+0.5
	baz=19,SNR=145						
KNRA	Kununurra	19.18	175	P	P	20 51 10.6	0.0
SMRI	Semarang	19.66	238	P	Pn	20 51 25.6	+7.9
PCJI	Pacitan	19.69	234	P	Pn	20 51 18.0	0.0
	comp=Z,2μmcomp=Z,165nm,1.0s						
WOJI	Wonogiri, Jawa	19.69	235	P	P	20 51 16.4	+0.2
	comp=Z,66nm,1.6s						
UGM	Wanagama	20.06	235	P	P	20 51 19.6	-0.6
UGM				IAmb	IAmb	20 52 06.2	
	comp=Z,184nm,1.4s						
DLV	T Lat	20.20	295	P	P	20 51 22.1	+0.1
DLV				IAmb	IAmb	20 51 37.7	
	comp=Z,89nm,0.9s						
GUMO	Guam	20.20	59	P	P	20 51 19.5	-2.2
	comp=Z,71nm,0.8s,baz=191,slow=19,SNR=2.3						
GUMO				LR	LR	20 57 46.9	
	comp=Z,2μm,21.4s,baz=218,slow=33						
GUMO	Guam	20.20	59	P	P	20 51 21.4	-0.4
GUMO				pmax	pmax		
	comp=Z,260nm,1.3s						
GUMO	Guam	20.20	59	P	P	20 51 21.4	-0.4
GUMO				IAmb	IAmb	20 52 12.3	
	comp=Z,260nm,1.2s						
YULB	Yu-li	20.50	345	P	P	20 51 22.5	-2.4
YULB				IAmb	IAmb	20 51 30.1	
	comp=Z,85nm,1.0s						
TPUB	Ta-pu	20.60	343	P	P	20 51 24.2	-1.8
SSLB	Suanglung	20.97	344	P	P	20 51 27.9	-2.1
SSLB				IAmb	IAmb	20 51 32.5	
	comp=Z,115nm,0.8s						
YOJ	Yonaguni jima	21.16	350	P	P	20 51 30.4	-1.5
YOJ				pmax	pmax		
	comp=Z,488nm,1.9s						
YOJ	Yonaguni jima	21.16	350	P	P	20 51 30.4	-1.5
NACB	Ninganchiao	21.17	346	P	P	20 51 30.5	-1.7
FITZ	Fitzroy Crossi	21.56	184	P	P	20 51 35.6	-0.7
	baz=22,SNR=5.7						
FITZ	Fitzroy Crossi	21.56	184	P	P	20 51 35.4	-0.9
	comp=Z,28nm,0.8s,baz=24,slow=8.7,SNR=41						
FITZ				S	S	20 55 27.9	-4.6
	comp=Z,17nm,0.8s,baz=143,slow=19,SNR=12						
FITZ	Fitzroy Crossi	21.56	184	P	P	20 51 35.2	-1.1
YHNB	Yeheng	21.70	346	P	P	20 51 37.4	-0.5
YHNB				IAmb	IAmb	20 51 38.4	
	comp=Z,79nm,0.7s						
TATO	Taipei	21.97	346	P	P	20 51 40.0	-0.6
TATO				IAmb	IAmb	20 52 20.3	
	comp=Z,140nm,1.2s						
LEM	Lembang	21.99	242	P	P	20 51 41.1	0.0
	comp=Z,49nm,0.8s,baz=344,slow=14,SNR=6.5						
LEM				LR	LR	21 01 42.4	
	comp=Z,2μm,20.0s,baz=38,slow=41						
CISI	Cisompet, Garu	22.16	240	P	P	20 51 46.9	+4.0
	comp=Z,91nm,1.2s						
CISI	Cisompet, Garu	22.16	240	P	P	20 51 41.7	-1.2
CISI				IAmb	IAmb	20 51 55.9	
	comp=Z,200nm,1.5s						
KNMB	Chin-men Tao	22.41	339	P	P	20 51 45.6	+0.1
KNMB				IAmb	IAmb	20 51 47.4	
	comp=Z,130nm,0.7s						

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HKPS  Hong Kong Po S   22.45 327  P      P       20 51 44.1 -1.8
DBJI  Dramaga          22.64 244  P      P       20 51 49.8 +1.8
      comp=Z,2µmcomp=Z,42nm,1.6s
QZH   Quanzhou         22.78 340⇑iP      P       20 51 47.3 -2.0
QZH                               S      S       20 55 52.0 -2.5
QZH                               pmax   pmax
      comp=Z,770nm,3.9s
QZH                               LR     LR
      comp=Z,1µm,19.4s
QZH                               LR     LR
      comp=Z,580nm,19.4s
QZH                               LR     LR
      comp=Z,2µm,21.8s
QIZ   Qiongzhong       22.81 314  P      P       20 51 49.1 -0.6
QIZ                               S      S       20 55 46.5 -8.6
QIZ                               LR     LR
      comp=Z,1µm,14.9s
QIZ                               LR     LR
      comp=Z,750nm,22.6s
QIZ                               LR     LR
      comp=Z,1µm,23.7s
QIZ   Qiongzhong       22.81 314  P      P       20 51 47.4 -2.3
QIZ                               IAmb   IAmb    20 51 51.4
      comp=Z,162nm,1.7s
JOW   Kunigami         23.18   3  P      P       20 51 52.1 -1.2
      comp=Z,2.7nm,0.8s,baz=180,slow=14,SNR=6.3
JOW   Kunigami         23.18   3  P      P       20 51 52.4 -0.9
PMBI  Palembang        23.20 254  P      P       20 51 53.9 +0.2
MYKOM Kota Tinggi      23.27 266  P      P       20 51 53.3 -1.0
MYKOM                             IAmb   IAmb    20 51 57.5
      comp=Z,94nm,1.4s
MYKOM Kota Tinggi      23.27 266  P      P       20 51 55.0 +0.7
COEN  Coen             23.61 138  P      P       20 51 56.4 -1.2
      baz=24,SNR=13
COEN  Coen             23.61 138  P      P       20 51 56.1 -1.5
PMG   Port Moresby     23.80 123  P      P       20 51 57.5 -1.7
      comp=Z,9.1nm,0.8s,baz=347,slow=9.1,SNR=5.2
PMG                               LR     LR      21 02 13.2
      comp=Z,2µm,20.7s,baz=342,slow=39
PMG   Port Moresby     23.80 123ceP      P       20 51 57.6 -1.7
PMG                               pmax   pmax
      comp=Z,53nm,1.0s
PMG   Port Moresby     23.80 123  P      P       20 51 56.9 -2.4
MDSI  Maura Dua        24.23 251  P      P       20 52 05.1 +1.9
      comp=Z,710nmcomp=Z,65nm,0.9s
WRAB  Tennant Creek    24.41 163ceP      P       20 52 04.4 -0.4
WRAB                              pmax   pmax
      comp=Z,154nm,1.0s
WRAB  Tennant Creek    24.41 163  P      P       20 52 03.7 -1.0
LWLI  Liwa             24.52 250  P      P       20 52 08.3 +2.3
      comp=Z,5µmcomp=Z,84nm,0.9s
MNAI  Manna            25.35 252  P      P       20 52 12.4 -1.0
XMIS  Christmas Isla   25.48 237  P      P       20 52 14.2 -0.4
PSA00 Pilbara Seismi   25.95 196  P      P       20 52 19.0 +0.2
PSA00                             IAmb   IAmb    20 52 35.8
      comp=Z,60nm,0.8s
PSA00 Pilbara Seismi   25.95 196  P      P       20 52 18.7  0.0
PSA00                             IAmb   IAmb    20 52 22.5
      comp=Z,21nm,0.8s
IPM   Ipoh             26.00 273  P      P       20 52 18.5 -0.9
IPM   Ipoh             26.00 273  P      P       20 52 20.0 +0.6
KRVT  Keravat (AS076   26.12 107  LR     LR      21 00 37.0
      comp=Z,4µm,21.3s,baz=287,slow=32
BKNI  Bangkinang       26.21 264  P      P       20 52 20.7 -0.6
BKNI                              IAmb   IAmb    20 52 53.0
      comp=Z,67nm,1.0s
RABL  Rabaul           26.22 107  P      P       20 52 20.6 -0.8
RABL                              IAmb   IAmb    20 53 15.4
      comp=Z,39nm,0.8s
KULM  Kulim            26.40 275  P      P       20 52 21.6 -1.4
KULM  Kulim            26.40 275  P      P       20 52 24.0 +1.0
QIS   Mount Isa        26.93 153  P      P       20 52 27.4 -0.2
      baz=27,SNR=29
PDSI  Padang           26.97 261  P      P       20 52 26.6 -1.5
      comp=Z,13nm,0.9s
MTSU  Mount Surprise   27.45 142  P      P       20 52 32.5 +0.2
      baz=28,SNR=15
JCJ   Chichijima       27.51  30  LR     LR      21 01 15.8
      comp=Z,1µm,21.0s,baz=264,slow=32
AS31  Alice Springs    27.86 167  P      P       20 52 35.4 -0.6
ASAR  Alice Springs    27.86 167  P      P       20 52 35.6 -0.3
      comp=Z,11nm,0.6s,baz=346,slow=7.0,SNR=66
ASAR                              PcP    PcP     20 55 52.2 +1.2
      comp=Z,2.3nm,0.7s,baz=343,slow=1.2,SNR=2.6
ASAR                              S      S       20 57 21.9 +6.2
      comp=Z,6.7nm,1.0s,baz=351,slow=19,SNR=5.2
SSE   Sheshan          27.95 349  P      P       20 52 38.8 +2.1
SSE                               S      S       20 57 19.3 +2.4
SSE                               pmax   pmax
      comp=Z,10.0nm,0.5s
SSE                               pmax   pmax
      comp=Z,180nm,4.3s
SSE                               LR     LR
      comp=Z,300nm,20.4s
SSE                               LR     LR
      comp=Z,230nm,22.7s
PSI   Prapat           28.12 269  P      P       20 52 37.2 -1.3
      comp=Z,2.9nm,0.4s,baz=86,slow=8.8,SNR=10
PSI                               LR     LR      21 04 49.2
      comp=Z,1µm,21.7s,baz=72,slow=38
PSI   Prapat           28.12 269  P      P       20 52 37.5 -1.0
PSI                               pmax   pmax
      comp=Z,17nm,1.1s
RPSI  Rantau Prapat    28.12 269  P      P       20 52 37.5 -0.9
WRKA  Warakurna        28.44 178  P      P       20 52 41.6 +0.5
      baz=29,SNR=70
SLVN  Son La           28.63 310  P      P       20 52 41.8 -1.1
PBKT  Sadao Pong       28.72 299  P      P       20 52 42.8 -0.9
GIRL  Giralia          28.90 205  P      P       20 52 47.5 +2.4
      baz=29,SNR=6.4
GIRL  Giralia          28.90 205  P      P       20 52 45.8 +0.6
NJ2   Nanjing          29.39 346 eP      P       20 52 50.1 +0.7
NJ2                               S      S       20 57 44.4 +5.0
NJ2                               pmax   pmax
      comp=Z,50nm,1.0s
NJ2                               pmax   pmax
      comp=Z,400nm,3.5s
NJ2                               LR     LR
      comp=Z,500nm,17.5s
NJ2                               LR     LR
      comp=Z,670nm,18.4s
NJ2                               LR     LR
      comp=Z,950nm,22.7s
WHN   Wuhan            29.42 337 ⇑P      P       20 52 51.3 +1.6
WHN                               LR     LR
      comp=Z,3µm,17.9s
WHN                               LR     LR
      comp=Z,670nm,13.5s
WHN                               LR     LR
      comp=Z,6µm,24.7s
GSI   Gunungsitoli     29.56 266  P      P       20 52 50.4 -0.8
      comp=Z,158nm,0.8s
GSI   Gunungsitoli     29.56 266  P      P       20 52 50.1 -1.0
JNU   Nakatsue         29.63   6  P      P       20 52 50.1 -1.5
      comp=Z,9.5nm,0.7s,baz=205,slow=4.4,SNR=8.4
JNU                               LR     LR      21 05 17.6
      comp=Z,250nm,21.3s,baz=171,slow=38
JNU   Nakatsue         29.63   6  P      P       20 52 50.5 -1.2
GYA   Guiyang          30.02 321  P      P       20 52 57.8 +2.5
GYA                               pP     pP      20 53 10.0 +1.1
GYA                               PP     PnPn    20 53 57.5 +3.5
GYA                               PcP    PcP     20 55 58.3 +1.8
GYA                               S      S       20 57 51.8 +2.0
GYA                               sS     sS      20 58 13.0 +0.9
GYA                               SS     ScP     20 59 31.8 -2.5
GYA                               pmax   pmax
      comp=Z,20nm,1.0s
GYA                               pmax   pmax
      comp=Z,130nm,4.8s
GYA                               LR     LR
      comp=Z,510nm,16.8s
GYA                               LR     LR
      comp=Z,470nm,16.5s
GYA                               LR     LR
      comp=Z,610nm,17.2s
LHMI  Lhok Sumawe      30.08 274  P      P       20 52 54.8 -1.1
LHMI                              IAmb   IAmb    20 52 58.0
      comp=Z,36nm,0.9s
CTAO  Charters Tower   30.11 142  P      P       20 52 54.0 -2.0
MEEK  Meekatharra      31.11 195  P      P       20 53 05.1 +0.4
      baz=31,SNR=19
CM31  Chiang Mai Arr   31.26 300  P      P       20 53 05.9 -0.3
CMAR  Chiang Mai Arr   31.26 300  P      P       20 53 05.8 -0.4
      comp=Z,9.0nm,0.8s,baz=115,slow=7.2,SNR=60
CMAR                              ScP    ScP     20 59 42.9 +4.5
      comp=Z,2.0nm,1.0s,baz=141,slow=3.1,SNR=8.8
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CMAR                              LR     LR      21 07 40.9
      comp=Z,428nm,19.3s,baz=132,slow=40
CMAR  Chiang Mai Arr   31.26 300 iP      P       20 53 06.3 +0.2
CMAR                              pmax   pmax
      comp=Z,10.0nm,0.8s
CMAR  Chiang Mai Arr   31.26 300  P      P       20 53 05.3 -0.9
ENH   Enshi            31.35 330  P      P       20 53 06.1 -0.8
ENH                               IAmb   IAmb    20 53 13.0
      comp=Z,30nm,0.8s
CHTO  Chiang Mai       31.41 301  P      P       20 53 06.4 -1.0
CHTO                              pmax   pmax
      comp=Z,20nm,0.7s
CHTO  Chiang Mai       31.41 301  P      P       20 53 06.4 -1.0
CHTO                              IAmb   IAmb    20 53 08.7
      comp=Z,20nm,0.7s
KMI   Kunming          31.75 315  P      P       20 53 11.1 +0.5
KMI                               pP     pP      20 53 24.6 +0.4
KMI                               sP     sP      20 53 30.5 -0.1
KMI                               S      S       20 58 15.5 -1.6
KMI                               sS     sS      20 58 40.8 +1.4
KMI                               SS     SnSn    21 00 10.8 +2.4
KMI                               pmax   pmax
      comp=Z,19nm,1.4s
KMI                               pmax   pmax
      comp=Z,220nm,3.7s
KMI                               LR     LR
      comp=Z,570nm,23.6s
KMI                               LR     LR
      comp=Z,650nm,19.9s
KMI                               LR     LR
      comp=Z,1µm,23.8s
KMI   Kunming          31.75 315  P      P       20 53 10.1 -0.5
KMI                               pmax   pmax
      comp=Z,22nm,1.1s
KMI   Kunming          31.75 315  P      P       20 53 10.1 -0.5
TJN   Taejon           32.67   0ceP      P       20 53 18.7 +0.5
INU   Inuyama          32.95  15  P      P       20 53 20.1 -0.6
KSAR  Wonju Array Be   33.74   1  P      P       20 53 27.3 -0.2
KSAR  Wonju Array Be   33.74   1  P      P       20 53 27.3 -0.2
KSRS  Korea Array      33.75   1  P      P       20 53 27.3 -0.3
      comp=Z,5.4nm,0.7s,baz=178,slow=9.7,SNR=31
KSRS                              PcP    PcP     20 56 06.7 +0.5
      comp=Z,1.3nm,0.6s,baz=185,slow=2.9,SNR=6.2
KSRS                              LR     LR      21 11 57.5
      comp=Z,411nm,18.7s,baz=182,slow=45
TIA   Tai'an           33.77 345  P      P       20 53 28.3 +0.4
TIA                               S      S       20 58 47.8 -0.1
TIA                               pmax   pmax
      comp=Z,310nm,5.1s
TIA                               LR     LR
      comp=Z,420nm,19.1s
TIA                               LR     LR
      comp=Z,460nm,21.2s
TIA                               LR     LR
      comp=Z,370nm,17.1s
KS19  Wonju Array Si   33.80   1  P      P       20 53 27.8 -0.3
MORW  Morawa           34.12 197  P      P       20 53 31.6 +0.6
      baz=34,SNR=10
MORW  Morawa           34.12 197  P      P       20 53 30.8 -0.2
MORW                              IAmb   IAmb    20 53 47.9
      comp=Z,64nm,1.6s
FORT  Forrest          34.15 178  P      P       20 53 31.5 +0.3
      baz=34,SNR=35
FORT  Forrest          34.15 178  P      P       20 53 31.2  0.0
QLP   Quilpie          34.25 152  P      P       20 53 31.6 -0.5
      baz=34,SNR=4.9
MAJO  Matsushiro       34.40  16  P      P       20 53 31.0 -2.3
MAJO                              pmax   pmax
      comp=Z,71nm,2.0s
MAJO  Matsushiro       34.40  16  P      P       20 53 31.0 -2.3
MAJO                              IAmb   IAmb    20 53 50.6
      comp=Z,71nm,2.0s
MAT   Matsushiro       34.40  16  P      P       20 53 28.7 -4.6
MJAR  Matsushiro Arr   34.40  16  P      P       20 53 30.1 -3.2
      comp=Z,2.1nm,0.7s,baz=190,slow=8.3,SNR=9.0
MJAR                              LR     LR      21 05 37.4
      comp=Z,685nm,21.9s,baz=200,slow=33
MJAR  Matsushiro Arr   34.40  16  P      P       20 53 31.7 -1.6
MJAR                              pmax   pmax
      comp=Z,14nm,1.8s
MJAR  Matsushiro Arr   34.40  16  P      P       20 53 31.7 -1.6
XAN   Xi'an            34.73 333  P      P       20 53 34.8 -1.5
XAN                               pP     pwP     20 53 52.3 +0.3
XAN                               sP     sP      20 53 58.6 +2.8
XAN                               PP     PP      20 54 58.0 +2.1
XAN                               pmax   pmax
      comp=Z,27nm,1.0s
XAN                               pmax   pmax
      comp=Z,180nm,5.7s
XAN                               LR     LR
      comp=Z,440nm,17.3s
XAN                               LR     LR
      comp=Z,440nm,18.4s
XAN                               LR     LR
      comp=Z,780nm,18.7s
XAN   Xi'an            34.73 333  P      P       20 53 34.8 -1.5
XAN                               pmax   pmax
      comp=Z,110nm,1.6s
XAN   Xi'an            34.73 333  P      P       20 53 34.8 -1.5
CD2   Chengdu          34.99 324  P      P       20 53 38.6  0.0
CD2                               pmax   pmax
      comp=Z,40nm,0.5s
HNR   Honiara          35.20 112  P      P       20 53 39.6 -1.0
HNR                               pmax   pmax
      comp=Z,42nm,0.5s
HNR   Honiara          35.20 112  P      P       20 53 39.6 -1.0
BLDU  Ballidu          35.39 196  P      P       20 53 42.5 +0.6
      baz=36,SNR=14
KLBR  Kellerberrin     36.06 194  P      P       20 53 48.3 +0.7
      baz=36,SNR=15
RMQ   Roma             36.49 146  P      P       20 53 52.1 +0.6
      baz=37,SNR=12
TIY   Taiyuan          36.55 340 eP      P       20 53 53.1 +1.2
MUN   Mundaring        36.81 196  P      P       20 53 54.8 +0.8
      baz=37,SNR=14
EIDS  Eidsvold         37.00 142  P      P       20 53 55.9 +0.1
      baz=37,SNR=16
EIDS  Eidsvold         37.00 142  P      P       20 53 55.2 -0.5
EIDS                              IAmb   IAmb    20 53 57.1
      comp=Z,61nm,1.1s
BBOO  Buckleboo        37.15 167  P      P       20 53 57.1 +0.1
      baz=37,SNR=42
BBOO  Buckleboo        37.15 167  P      P       20 53 56.3 -0.7
BBOO                              IAmb   IAmb    20 53 58.4
      comp=Z,59nm,1.1s
NWAO  Narrogin (SRO)   37.46 194  P      P       20 54 00.6 +1.1
      baz=38,SNR=21
NWAO  Narrogin (SRO)   37.46 194  P      P       20 54 00.3 +0.8
NWAO                              pmax   pmax
      comp=Z,135nm,1.8s
NWAO  Narrogin (SRO)   37.46 194  P      P       20 54 00.1 +0.5
NWAO  Narrogin (SRO)   37.46 194  P      P       20 54 00.3 +0.8
NWAO                              IAmb   IAmb    20 54 02.7
      comp=Z,134nm,1.8s
BJT   Baijiatuau       37.62 346  P      P       20 54 01.3 +0.5
BJT                               pmax   pmax
      comp=Z,196nm,1.5s
BJT   Baijiatuau       37.62 346  P      P       20 54 01.3 +0.5
BJI   Beijing          37.64 346  P      P       20 54 01.3 +0.3
BJI                               pP     pP      20 54 15.0 +0.6
BJI                               S      S       20 59 45.4 -1.6
BJI                               pmax   pmax
      comp=Z,87nm,1.2s
BJI                               pmax   pmax
      comp=Z,400nm,4.3s
BJI                               LR     LR
      comp=Z,220nm,6.1s
BJI                               LR     LR
      comp=Z,520nm,19.8s
STKA  Stephens Creek   37.84 160  P      P       20 54 02.9  0.0
      baz=38,SNR=104
STKA  Stephens Creek   37.84 160  P      P       20 54 02.8  0.0
      comp=Z,60nm,0.6s,baz=335,slow=8.6,SNR=158
STKA                              LR     LR      21 12 39.9
      comp=Z,516nm,20.3s,baz=335,slow=41
STKA  Stephens Creek   37.84 160  P      P       20 54 02.7 -0.1
SNY   Shenyang         38.24 356 ⇑P      P       20 54 06.6 +0.6
SNY                               S      S       20 59 59.4 +3.4
SNY                               pmax   pmax
      comp=Z,17nm,0.6s
SNY                               LR     LR
      comp=Z,370nm,9.8s
SNY                               LR     LR
      comp=Z,220nm,10.2s
SNY                               LR     LR
      comp=Z,530nm,16.7s
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HTT   Hallett          38.45 164  P      P       20 54 08.4 +0.4
      baz=39,SNR=11
KOHI  KOHIMA           38.56 308 eP      P       20 54 07.4 -1.8
LZH   Lanzhou          38.83 329 eP      P       20 54 12.0 +0.7
LZH                               sS     sS      21 00 29.8 +1.7
LZH                               SS     SS      21 02 54.6 -3.8
LZH                               pmax   pmax
      comp=Z,61nm,1.2s
LZH                               pmax   pmax
      comp=Z,260nm,5.0s
LZH                               LR     LR
      comp=Z,1µm,12.8s
LZH                               LR     LR
      comp=Z,640nm,13.3s
LZH                               LR     LR
      comp=Z,1µm,16.3s
RKGY  Rocky Gully      39.13 193  P      P       20 54 15.8 +2.3
      baz=39,SNR=9.8
CMSA  Cobar Meteorol   39.14 154  P      P       20 54 14.1 +0.4
      baz=39,SNR=21
HHC   Hu-ho-hao-te     39.67 341 eP      P       20 54 20.0 +1.8
HHC                               pmax   pmax
      comp=Z,27nm,1.1s
HHC                               pmax   pmax
      comp=Z,200nm,5.8s
HHC                               LR     LR
      comp=Z,400nm,18.4s
HHC                               LR     LR
      comp=Z,92nm,17.8s
HHC                               LR     LR
      comp=Z,440nm,19.4s
BTO   Baotou           39.97 340 eP      P       20 54 17.8 -2.8
TEZP  TEZPUR           40.02 308 eP      P       20 54 20.5 -0.7
CN2   Changchun        40.11 358 eP      P       20 54 23.0 +1.4
CN2                               pmax   pmax
      comp=Z,10.0nm,0.7s
USA0B Ussuriysk Arra   40.71   5  P      P       20 54 25.9 -0.7
USA0B                             pmax   pmax
      comp=Z,12nm,0.8s
USA0B Ussuriysk Arra   40.71   5  P      P       20 54 25.9 -0.7
USRK  Ussuriysk Ar.    40.71   5  P      P       20 54 26.0 -0.6
      comp=Z,9.1nm,0.7s,baz=177,slow=6.1,SNR=25
USRK  Ussuriysk Ar.    40.71   5  P      P       20 54 26.5 -0.1
USRK  Ussuriysk Ar.    40.71   5  P      P       20 54 26.5 -0.1
MDJ   Mudanjiang       40.96   3  P      P       20 54 28.4 -0.2
ARMA  Armidale         41.13 147  P      P       20 54 30.6 +0.2
      baz=41,SNR=23
ARMA  Armidale         41.13 147  P      P       20 54 30.3 -0.1
ARMA                              IAmb   IAmb    20 54 32.4
      comp=Z,41nm,0.8s
H11S3 WAKE ISLAND Hy   41.49  66  T      T       21 37 57.1
      baz=253,slow=75,SNR=19
H11S1 WAKE ISLAND Hy   41.50  66  T      T       21 37 60.0
      baz=253,slow=75,SNR=11
H11S2 WAKE ISLAND Hy   41.50  66  T      T       21 37 53.2
      baz=253,slow=75,SNR=16
TEY   Ternei           42.16  10⇑eP      P       20 54 38.7 +0.3
TEY                               pmax   pmax
      comp=Z,30nm,0.6s
TEY                               pmax   pmax
      comp=N,20nm,0.7s
ARPS  Mount Arapiles   42.41 162  P      P       20 54 41.4 +0.8
      baz=42,SNR=13
LSA   Lhasa            42.81 311  P      P       20 54 44.5 -0.1
LSA                               pmax   pmax
      comp=Z,116nm,1.7s
LSA   Lhasa            42.81 311  P      P       20 54 44.5 -0.1
LSA                               IAmb   IAmb    20 54 46.3
      comp=Z,116nm,1.7s
GTA   Gaotai           43.43 329  P      P       20 54 48.4 -0.6
GTA                               pP     pP      20 55 01.4 -1.2
GTA                               sP     pwP     20 55 06.5 +1.5
GTA                               S      S       21 01 18.5 +4.9
GTA                               sS     sS      21 01 40.0 +3.5
GTA                               pmax   pmax
      comp=Z,18nm,0.8s
GTA                               pmax   pmax
      comp=Z,190nm,4.9s
GTA                               LR     LR
      comp=Z,550nm,18.7s
GTA                               LR     LR
      comp=Z,770nm,19.0s
GTA                               LR     LR
      comp=Z,1µm,19.0s
CAN   Canberra         43.80 154  P      P       20 54 51.9  0.0
CAN                               pmax   pmax
      comp=Z,99nm,1.9s
CAN   Canberra         43.80 154  P      P       20 54 51.9  0.0
CAN                               IAmb   IAmb    20 56 04.3
      comp=Z,99nm,1.9s
CNB   Canberra Magne   43.96 153  P      P       20 54 55.3 +2.1
      baz=44,SNR=5.1
TOO   Toolangi         44.35 159  P      P       20 54 58.6 +2.3
      baz=44,SNR=6.4
TOO   Toolangi         44.35 159  P      P       20 54 56.4 +0.2
TOO                               pmax   pmax
      comp=Z,107nm,1.9s
TOO   Toolangi         44.35 159  P      P       20 54 56.4 +0.2
TOO                               IAmb   IAmb    20 55 10.0
      comp=Z,107nm,1.9s
TAPN  Taplejung        44.40 306 eP      P       20 54 56.2 -1.0
      comp=Z,95nm,1.0s
ODAN  Odare            44.45 305 eP      P       20 54 56.5 -1.0
      comp=Z,75nm,0.7s
RAMN  Ramite           45.13 305 eP      P       20 55 02.2 -0.8
      comp=Z,79nm,0.9s
YSS   Yuzh-Sakhalins   45.32  15  P      P       20 55 03.1 -0.7
YSS                               pmax   pmax
      comp=Z,32nm,1.3s
YSS   Yuzh-Sakhalins   45.32  15  P      P       20 55 03.1 -0.7
YSS                               IAmb   IAmb    20 55 50.1
      comp=Z,32nm,1.3s
MILA  Mila             45.33 155  P      P       20 55 05.9 +1.8
      baz=45,SNR=4.3
KLR   Kul'dur          45.69   4 iP      P       20 55 06.1 -0.5
KLR                               pmax   pmax
      comp=Z,22nm,1.5s
JIRN  Jiri             45.76 306 eP      P       20 55 07.0 -1.0
      comp=Z,107nm,0.9s
HIA   Hailar           45.98 353  P      P       20 55 08.7 -0.3
HIA                               pmax   pmax
      comp=Z,24nm,1.0s
HIA   Hailar           45.98 353  P      P       20 55 08.7 -0.3
HIA                               IAmb   IAmb    20 55 16.1
      comp=Z,24nm,1.0s
GUN   Gumba            46.11 306 eP      P       20 55 09.7 -1.1
      comp=Z,72nm,0.8s
DZM   Mont Dzumac      46.15 125 eP      P       20 55 11.6 +0.7
      comp=Z,72nm,1.1s
DZM   Mont Dzumac      46.15 125 eLR     LR      21 08 11.4
      comp=Z,873nm,24.9s
DZM   Mont Dzumac      46.15 125  P      P       20 55 10.3 -0.5
DZM                               IAmb   IAmb    20 55 13.1
      comp=Z,62nm,1.3s
PALK  Pallekele        46.30 277  P      P       20 55 11.2 -0.9
PALK                              pmax   pmax
      comp=Z,53nm,1.5s
PALK  Pallekele        46.30 277  P      P       20 55 11.2 -0.9
PALK                              IAmb   IAmb    20 55 13.5
      comp=Z,53nm,1.4s
PKI   Pulchoki         46.35 305 eP      P       20 55 11.0 -1.7
PKIN  Phulchoki        46.37 305 eP      P       20 55 11.0 -1.7
      comp=Z,16nm,0.8s
KKN   Kakani           46.55 306 eP      P       20 55 12.6 -1.4
      comp=Z,31nm,0.8s
DMN   Daman            46.61 305 eP      P       20 55 13.3 -1.3
      comp=Z,50nm,1.0s
GKN   Gorkha           47.15 306 eP      P       20 55 17.3 -1.4
ULN   Ulaanbaatar      47.39 342ceP      P       20 55 20.8 +0.5
ULN                               pmax   pmax
      comp=Z,83nm,1.3s
ULN   Ulaanbaatar      47.39 342  P      P       20 55 20.4 +0.1
SONM  Songino Array    47.58 341  P      P       20 55 21.8 +0.1
      comp=Z,16nm,0.7s,baz=158,slow=7.2,SNR=82
SONM                              LR     LR      21 16 32.6
      comp=Z,534nm,20.9s,baz=160,slow=38
SONM  Songino Array    47.58 341  P      P       20 55 21.9 +0.2
SONM                              pmax   pmax
      comp=Z,59nm,1.4s
SONM  Songino Array    47.58 341  P      P       20 55 21.9 +0.2
GRNR  Gornyy           47.71   8⇑iP      P       20 55 23.3 +0.8
GRNR                              pmax   pmax
      comp=Z,10.0nm,0.7s
DANN  Dangsing         48.00 306 eP      P       20 55 24.3 -1.2
      comp=Z,174nm,0.6s
HYB   Hyderabad        49.50 290 iP      P       20 55 35.0 -1.8
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ZEA	Zeya	50.03	0	*e*P	P	20 55 39.8	-0.3
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
TRD	Trivandrum	50.05	278	*e*P	P	20 55 40.9	-0.1
ZAK	Zakamensk	50.81	341	*e*P	P	20 55 46.3	+0.1
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BHPL	Bhopal	51.79	297	*e*P	P	20 55 52.8	-1.2
TLY	Talaya	51.80	342	P	P	20 55 53.7	+0.1
	comp=Z,27nm,0.6s,baz=202,slow=2.9,SNR=25						
TLY	Talaya	51.80	342	*e*P	P	20 55 54.9	+1.3
TLY				*e*S	S	21 03 12.0	+0.2
TLY				pmax	pmax		
	comp=Z,175nm,1.4s						
TLY				MLR	MLR		
	comp=Z,1µm,19.0s						
TLY	Talaya	51.80	342	P	P	20 55 53.9	+0.3
IRK	Irkutsk	52.10	342	*e*P	P	20 55 56.2	+0.4
IRK				pmax	pmax		
	comp=Z,83nm,1.8s						
MOY	Mondy	52.67	340	*e*P	P	20 56 00.9	+0.8
MOY				pmax	pmax		
	comp=Z,127nm,2.3s						
WMQ	Urumqi	53.07	325	*e*P	P	20 56 03.3	+0.1
WMQ				pP	pwP	20 56 18.9	-0.5
WMQ				pmax	pmax		
	comp=Z,17nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,120nm,3.7s						
WMQ				LR	LR		
	comp=Z,350nm,29.1s						
WMQ				LR	LR		
	comp=Z,370nm,26.3s						
WMQ				LR	LR		
	comp=Z,610nm,22.9s						
WMQ	Urumqi	53.07	325	P	P	20 56 02.8	-0.4
WMQ				pmax	pmax		
	comp=Z,48nm,1.4s						
WMQ	Urumqi	53.07	325	P	P	20 56 02.8	-0.4
WMQ				IAmb	IAmb	20 56 06.8	
	comp=Z,48nm,1.4s						
SMLA	Simla	54.35	306	*e*P	P	20 56 11.3	-1.3
MSVF	Nonsavu	54.52	115	P	P	20 56 14.7	+0.5
MSVF				pmax	pmax		
	comp=Z,57nm,1.1s						
MSVF	Nonsavu	54.52	115	P	P	20 56 14.7	+0.5
BOD	Bodaibo	55.09	352	*e*P	P	20 56 17.5	0.0
BOD				pmax	pmax		
	comp=Z,13nm,0.9s						
DHRM	DHARAMSHALA	55.42	307	*e*P	P	20 56 19.4	-1.3
PEA0B	Petropavlovsk-	55.47	22	P	P	20 56 20.0	-0.3
PEA0B				pmax	pmax		
	comp=Z,49nm,1.1s						
PEA0B	Petropavlovsk-	55.47	22	P	P	20 56 20.0	-0.3
PETK	Petropavlovsk-	55.47	22	P	P	20 56 20.1	-0.2
	comp=Z,23nm,0.7s,baz=185,slow=5.0,SNR=34						
PETK				LR	LR	21 16 36.7	
	comp=Z,151nm,21.9s,baz=236,slow=32						
PETK	Petropavlovsk-	55.47	22	P	P	20 56 20.3	0.0
PETK	Petropavlovsk-	55.47	22	P	P	20 56 20.3	0.0
DGZ	Jazzator, Alta	56.92	330	*c i*P	P	20 56 31.6	+0.6
MK31	Makanchi Array	57.90	325	P	P	20 56 37.1	-0.7
MK31				pmax	pmax		
	comp=Z,39nm,1.7s						
MK31	Makanchi Array	57.90	325	P	P	20 56 37.1	-0.7
MK31				IAmb	IAmb	20 56 41.0	
	comp=Z,39nm,1.6s						
MKAR	Makanchi Array	57.90	325	P	P	20 56 37.5	-0.3
	comp=Z,6.3nm,0.4s,baz=123,slow=8.3,SNR=52						
MKAR				LR	LR	21 22 27.4	
	comp=Z,701nm,20.6s,baz=112,slow=37						
MKAR	Makanchi Array	57.90	325	P	P	20 56 37.1	-0.7
MAKZ	Makanchi	58.08	325	P	P	20 56 38.6	-0.5
MAKZ				pmax	pmax		
	comp=Z,15nm,0.8s						
MAKZ	Makanchi	58.08	325	P	P	20 56 38.6	-0.5
MAKZ				IAmb	IAmb	20 56 57.4	
	comp=Z,15nm,0.8s						
OUZ	Omahuta	58.20	136	P	P	20 56 39.5	-0.5
NIL	Nilore	58.31	308	P	P	20 56 40.4	-0.5
NIL				pmax	pmax		
	comp=Z,36nm,1.3s						
NIL	Nilore	58.31	308	P	P	20 56 40.4	-0.5
NIL				IAmb	IAmb	20 56 41.9	
	comp=Z,36nm,1.3s						
YAK	Yakutsk	58.38	1	*c i*P	P	20 56 41.3	+0.6
YAK				*e**PP	pwP	20 56 58.0	+0.6
YAK				*e*S	S	21 04 37.7	-1.6
YAK				*e**SS	pS	21 04 58.9	+2.9
YAK				*e*SS	SS	21 08 31.6	-0.6
YAK				pmax	pmax		
	comp=Z,68nm,0.9s						
YAK				pmax	pmax		
	comp=N,29nm,1.1s						
YAK				smax	smax		
	comp=E,130nm,3.2s						
YAK				smax	smax		
	comp=N,291nm,4.6s						
YAK	Yakutsk	58.38	1	P	P	20 56 41.0	+0.3
KSH	Kashi	58.41	315	P	P	20 56 43.8	+2.2
KSH				pP	pP	20 56 56.6	+0.3
KSH				PcP	PcP	20 57 33.8	+1.9
KSH				PcS	PcS	21 01 31.3	-2.4
KSH				S	S	21 04 40.5	-0.4
KSH				SS	SS	21 08 35.1	+1.1
KSH				pmax	pmax		
	comp=N,19nm,0.9s						
KSH				pmax	pmax		
	comp=N,530nm,4.5s						
KSH				LR	LR		
	comp=N,1µm,18.5s						
KSH				LR	LR		
	comp=N,350nm,8.6s						
KSH				LR	LR		
	comp=N,770nm,13.9s						
MA2	Magadan	58.79	14	*ce*P	P	20 56 44.9	+1.2
MA2				pmax	pmax		
	comp=Z,22nm,1.5s						
MA2	Magadan	58.79	14	P	P	20 56 43.9	+0.2
MA2				IAmb	IAmb	20 57 59.1	
	comp=Z,54nm,1.8s						
ULHL	Ulahol	59.38	318	P	P	20 56 48.7	+0.2
	SNR=12						
KZA	Kyzart	59.98	317	P	P	20 56 52.5	-0.2
	SNR=13						
DCZ	Deep Cove	60.41	149	P	P	20 56 55.0	-0.1
DCZ				IAmb	IAmb	20 57 01.8	
	comp=Z,42nm,1.2s						
UCH	Uchtor	60.54	317	P	P	20 56 56.9	+0.3
	SNR=21						
QRZ	Quartz Range	60.58	142	P	P	20 56 56.3	0.0
FOZ	Fox Glacier	60.60	145	P	P	20 56 56.7	+0.3
FOZ				IAmb	IAmb	20 56 59.5	
	comp=Z,48nm,1.3s						
CHMS	Chumysh	60.70	318	P	P	20 56 58.2	+1.0
	SNR=6.1						
FRU1	Bishkek	60.70	318	P	P	20 56 57.2	-0.1
FRU1				pmax	pmax		
	comp=Z,7.0nm,0.7s						
FRU1	Bishkek	60.70	318	P	P	20 56 57.1	-0.1
AAK	Ala-Archa	60.72	318	P	P	20 56 57.2	-0.4
	SNR=6.0						
AAK	Ala-Archa	60.72	318	*ce*P	P	20 56 57.6	+0.1
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AAK	Ala-Archa	60.72	318	P	P	20 56 57.1	-0.4
AAK				IAmb	IAmb	20 57 20.8	
	comp=Z,19nm,1.5s						
HIZ	Hauiti	60.79	138	P	P	20 56 57.7	-0.1
ZAA0	Zalesovo Array	60.90	333	P	P	20 56 57.8	-0.5
ZAA0				IAmb	IAmb	20 56 59.5	
	comp=Z,24nm,1.1s						
ZALV	Zalesovo Beam	60.90	333	P	P	20 56 57.6	-0.7
	comp=Z,14nm,0.8s,baz=123,slow=6.5,SNR=50						
ZALV				LR	LR	21 26 06.0	
	comp=Z,236nm,18.8s,baz=131,slow=39						
USP	Ospenovka	60.98	318	P	P	20 56 58.7	-0.4
	SNR=20						
AML	Almayashu	61.05	317	P	P	20 57 00.4	+0.3
	SNR=21						
WHZ	Wether Hill Ro	61.11	149	P	P	20 56 59.9	0.0
EKS2	Erkin-Say	61.21	318	P	P	20 57 01.2	+0.4
	SNR=22						
ARSB	Arslanbob	61.23	316	P	P	20 57 00.4	-0.6
ARSB				pmax	pmax		
	comp=Z,68nm,2.0s						
ARSB	Arslanbob	61.23	316	P	P	20 57 00.4	-0.6
ARSB				IAmb	IAmb	20 57 30.8	
	comp=Z,68nm,1.9s						
LBZ	Lake Benmore	61.34	146	P	P	20 57 01.6	+0.1
THZ	Tophouse	61.35	142	P	P	20 57 01.9	+0.3
RPZ	Rata Peaks	61.42	145	P	P	20 57 02.3	+0.3
LTZ	Lake Taylor	61.56	144	P	P	20 57 03.3	+0.3
WTVZ	West Tongariro	61.59	139	P	P	20 57 06.1	+2.7
OXZ	Oxford	61.75	144	P	P	20 57 04.7	+0.5
OXZ				IAmb	IAmb	20 57 05.5	
	comp=Z,36nm,1.1s						
TUWZ	Tuamarina	61.80	141	P	P	20 57 04.4	-0.1
KBL	Kabul	61.90	307	P	P	20 57 04.7	-1.0
KBL				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KBL	Kabul	61.90	307	P	P	20 57 04.7	-1.0
KBL				IAmb	IAmb	20 57 06.9	
	comp=Z,9.7nm,0.7s						
KURK	Kurchatov	62.08	327	*ce*P	P	20 57 06.2	-0.1
KURK				pmax	pmax		
	comp=Z,32nm,0.9s						
KURK	Kurchatov	62.08	327	P	P	20 57 06.1	-0.2
BHHZ	Black Hill Sta	62.10	139	P	P	20 57 07.8	+1.1
KHZ	Kahutara	62.11	143	P	P	20 57 06.3	-0.3
SEY	Seymchan	62.13	13	*i* P	P	20 57 06.1	-0.3
URZ	Urewera	62.18	137	P	P	20 57 07.5	+0.4
URZ	Urewera	62.18	137	P	P	20 57 08.0	+0.9
BKZ	Black Stump Fm	62.22	138	P	P	20 57 07.3	-0.2
BKZ	Black Stump Fm	62.22	138	P	P	20 57 08.2	+0.6
KWHZ	Kaweka Forest	62.31	138	P	P	20 57 08.8	+0.6
KRHZ	Kereru	62.39	139	P	P	20 57 09.6	+1.0
HAZ	Te Kaha	62.39	136	P	P	20 57 09.8	+1.3
NMHZ	Naumai	62.40	138	P	P	20 57 10.4	+1.7
RUGZ	Raukumara Rang	62.42	136	P	P	20 57 09.1	+0.1
MWZ	Matawai	62.50	137	P	P	20 57 09.0	-0.4
MCHZ	McNeill Hill	62.50	138	P	P	20 57 10.9	+1.5
SNGZ	Shannon Statio	62.59	137	P	P	20 57 11.2	+1.2
KAHZ	Kahuranaki	62.80	139	P	P	20 57 12.9	+1.5
RIGZ	Rimuhau	62.84	137	P	P	20 57 13.0	+1.3
WMGZ	Waiomatatini S	62.86	136	P	P	20 57 13.1	+1.4
KK31	Karatay Array	63.60	317	P	P	20 57 16.1	-0.5
KK31				pmax	pmax		
	comp=Z,20nm,1.2s						
KK31	Karatay Array	63.60	317	P	P	20 57 16.1	-0.5
KK31				IAmb	IAmb	20 57 18.5	
	comp=Z,20nm,1.2s						
KKAR	Karatay Array	63.60	317	P	P	20 57 16.0	-0.6
KKAR	Karatay Array	63.60	317	P	P	20 57 16.0	-0.6
KKAR	Karatay Array	63.60	317	P	P	20 57 15.9	-0.7
KKAR				IAmb	IAmb	20 57 18.5	
	comp=Z,20nm,1.2s						
TAS	Tashkent	63.81	315	P	P	20 57 18.3	+0.2
TAS				pmax	pmax		
	comp=Z,39nm,0.8s						
TAS	Tashkent	63.81	315	P	P	20 57 18.3	+0.2
TAS				IAmb	IAmb	20 57 19.9	
	comp=Z,38nm,0.8s						
HRA	Herat	67.32	306	P	P	20 57 40.0	-1.1
BRVK	Borovoye	67.73	327	*ce*P	P	20 57 43.1	+0.1
BRVK				pmax	pmax		
	comp=Z,26nm,0.8s						
BRVK	Borovoye	67.73	327	P	P	20 57 42.7	-0.3
BRVK				IAmb	IAmb	20 57 45.9	
	comp=Z,24nm,0.8s						
TIXI	Tiksi	68.02	1	P	P	20 57 43.9	-0.5
TIXI				pmax	pmax		
	comp=Z,22nm,1.2s						
TIXI	Tiksi	68.02	1	P	P	20 57 43.9	-0.5
TIXI				IAmb	IAmb	20 57 58.8	
	comp=Z,22nm,1.2s						
BILL	Bilibino	69.64	15	⇓*e*P	P	20 57 55.1	+0.5
BILL				*e*		20 58 18.0	
BILL				*e*S	S	21 06 58.0	-0.7
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BILL	Bilibino	69.64	15	P	P	20 57 54.7	+0.1
CASY	Casey	70.68	187	P	P	20 58 01.9	+0.9
CASY				IAmb	IAmb	20 58 19.3	
	comp=Z,91nm,1.8s						
NRIK	Noril'sk	70.68	346	P	P	20 58 00.8	-0.2
	comp=Z,25nm,0.7s,baz=128,slow=5.7,SNR=46						
NRIK				LR	LR	21 31 20.6	
	comp=Z,471nm,21.3s,baz=142,slow=38						
NRIK	Noril'sk	70.68	346	*i* P	P	20 58 01.5	+0.5
NRIK				pmax	pmax		
	comp=Z,18nm,0.8s						
GEYT	Alibeck	71.27	309	P	P	20 58 05.5	+0.3
	comp=Z,9.0nm,0.8s,baz=146,slow=2.9,SNR=23						
GEYT				LR	LR	21 34 11.4	
	comp=Z,127nm,18.6s,baz=40,slow=40						
GEYT	Alibeck	71.27	309	P	P	20 58 04.8	-0.5
GYA0B	ALIBECK ARRAY	71.27	309	P	P	20 58 04.6	-0.7
ABKAR	Akbulak array	72.50	321	P	P	20 58 11.8	-0.5
ABKAR	Akbulak array	72.50	321	P	P	20 58 11.8	-0.5
ABKAR				IAmb	IAmb	20 58 13.1	
	comp=Z,9.0nm,0.7s						
SOCY	Socotra	72.73	282	P	P	20 58 12.5	-2.0
SOCY				IAmb	IAmb	20 58 15.1	
	comp=Z,18nm,0.8s						
SVE	Sverdlovsk	74.29	328	*de*P	P	20 58 23.0	+0.3
SVE				pmax	pmax		
	comp=Z,118nm,1.1s						
GAMB	Gambell	74.42	24	P	P	20 58 23.4	+0.2
GAMB				IAmb	IAmb	20 58 25.7	
	comp=Z,16nm,0.8s						
ARU	Arti	75.27	328	*c i*P	P	20 58 27.9	-0.4
ARU				S	S	21 08 07.4	+4.0
ARU				SS	SS	21 12 58.5	+4.5
ARU				pmax	pmax		
	comp=Z,102nm,0.9s						
ARU	Arti	75.27	328	P	P	20 58 28.0	-0.3
ANM	Nome	77.29	24	P	P	20 58 39.8	+0.2
ANM				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ANM	Nome	77.29	24	P	P	20 58 39.8	+0.2
RDOG	Red Dog Mine	79.33	21	P	P	20 58 51.4	+0.6
SVW2	Sparrevohn	80.79	29	P	P	20 58 59.8	+1.0
RAYN	Ar Rayn	80.87	293	P	P	20 58 59.7	-0.5
RAYN				pmax	pmax		
	comp=Z,17nm,0.9s						
RAYN	Ar Rayn	80.87	293	P	P	20 58 59.6	-0.5
GROC	Groznyy	81.22	313	*e*P	P	20 59 00.0	-1.5
GROC				*e**SP	sP	20 59 19.7	-2.6
GROC				pmax	pmax		
	comp=Z,12nm,1.0s						
ABPO	Ambohimpanom	81.58	250	P	P	20 59 03.3	-0.8
ABPO				pmax	pmax		
	comp=Z,36nm,1.2s						
ABPO	Ambohimpanom	81.58	250	P	P	20 59 03.3	-0.8
ABPO				IAmb	IAmb	20 59 16.1	
	comp=Z,36nm,1.2s						
GNI	Garni	81.86	310	P	P	20 59 05.5	+0.3
GNI				pmax	pmax		
	comp=Z,61nm,1.8s						
GNI	Garni	81.86	310	P	P	20 59 05.5	+0.3
GNI				IAmb	IAmb	20 59 45.5	
	comp=Z,61nm,1.8s						
TBLG	Delisi	81.93	311	P	P	20 59 05.3	0.0
TBLG				pmax	pmax		
	comp=Z,14nm,0.9s						
TBLG	Delisi	81.93	311	P	P	20 59 05.3	0.0
TBLG				IAmb	IAmb	20 59 09.3	
	comp=Z,14nm,0.9s						
DAMY	Dhamar	82.04	284	P	P	20 59 06.5	-0.3
DAMY				IAmb	IAmb	20 59 09.5	
	comp=Z,9.8nm,0.6s						
TASB	TASBURUN-IGDIR	82.24	310	*e*P	P	20 59 08.5	+1.4
IMAR	Indian Mountai	82.36	24	P	P	20 59 07.5	+0.5
CLDR	Caldiran	82.46	309	*e*P	P	20 59 08.9	+0.4
ZEI	Tsey	82.59	313	*e*P	P	20 59 09.0	0.0
ZEI				pmax	pmax		
	comp=Z,25nm,1.5s						
PPLA	Purkeypile	82.63	27	P	P	20 59 08.9	+0.2
PPLA				IAmb	IAmb	20 59 22.1	
	comp=Z,81nm,1.8s						
CUKT	Cukurca	82.66	307	*e*P	P	20 59 09.9	+0.5
PRGR	Permogore	82.82	332	*e*P	P	20 59 09.5	0.0
PRGR				pmax	pmax		
	comp=Z,56nm,1.1s						
SKT	Skwentna	82.83	28	P	P	20 59 08.9	-0.7
SKT				IAmb	IAmb	20 59 25.1	
	comp=Z,19nm,1.0s						
AKH	Akhalkalaki	82.85	311	P	P	20 59 11.9	+1.5
AKH	Akhalkalaki	82.85	311	P	P	20 59 10.6	+0.2
AKH				pmax	pmax		
	comp=Z,18nm,0.9s						
AKH	Akhalkalaki	82.85	311	P	P	20 59 10.6	+0.2
AKH				IAmb	IAmb	20 59 14.1	
	comp=Z,18nm,0.9s						
SUA	Susitna One	83.15	29	P	P	20 59 10.9	-0.5
SUA				IAmb	IAmb	20 59 12.5	
	comp=Z,21nm,0.7s						
AKDM	Akdamar-Van	83.18	308	*e*P	P	20 59 12.2	+0.1
AGRB	Hanur-Agry	83.19	309	*e*P	P	20 59 13.5	+1.3
VNDA	Vanda	83.21	173	P	P	20 59 12.0	+0.8
	comp=Z,7.4nm,0.8s,baz=316,slow=6.2,SNR=21						
VNDA	Vanda	83.21	173	P	P	20 59 12.5	+1.3
VNDA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
VNDA	Vanda	83.21	173	P	P	20 59 12.5	+1.3
KTH	Kantishna Hill	83.27	27	P	P	20 59 12.1	+0.2
KTH				IAmb	IAmb	20 59 29.4	
	comp=Z,42nm,1.3s						
GOF	Gofitskoye	83.28	315	⇑*e*P	P	20 59 13.4	+1.1
GOF				pmax	pmax		
	comp=Z,12nm,0.9s						
BPAW	Bear Paw Mtn.	83.30	26	P	P	20 59 12.4	+0.4
KBZ	Khabaz	83.35	313	P	P	20 59 13.1	+0.5
	comp=Z,3.8nm,0.9s,baz=129,slow=4.1,SNR=11						
KBZ				LR	LR	21 41 53.3	
	comp=Z,167nm,18.8s,baz=86,slow=40						
KBZ	Khabaz	83.35	313	*i* P	P	20 59 12.2	-0.4
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NEY	Neytrino	83.47	313	*i* P	P	20 59 12.8	-0.7
NEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MLY	Manley	83.49	25	P	P	20 59 13.5	+0.5
MLY				IAmb	IAmb	20 59 30.9	
	comp=Z,28nm,1.2s						
KIV	Kislovodsk	83.51	314	*e*P	P	20 59 13.0	-0.6
KIV				pmax	pmax		
	comp=Z,21nm,1.1s						
KIV				MLR	MLR		
	comp=Z,283nm,19.0s						
KIV	Kislovodsk	83.51	314	P	P	20 59 13.8	+0.2
TRF	Thorofare Moun	83.54	27	P	P	20 59 13.0	-0.5
TRF				IAmb	IAmb	20 59 34.4	
	comp=Z,18nm,1.0s						
SIRT	Sirnak	83.60	307	*e*P	P	20 59 15.3	+1.1
RC01	Rabbit Creek A	83.61	29	P	P	20 59 13.3	-0.3
RC01				IAmb	IAmb	20 59 30.4	
	comp=Z,33nm,1.2s						
ATD	Arta Tunnel	83.65	281	P	P	20 59 15.1	+0.2
ATD				IAmb	IAmb	20 59 17.9	
	comp=Z,16nm,0.9s						
SENK	Senkaya-Erzuru	83.70	310	*e*P	P	20 59 14.2	-0.6
MAW	Mawson	83.71	200	P	P	20 59 15.5	+1.6
	comp=Z,3.1nm,0.8s,baz=153,slow=4.2,SNR=3.1						
MAW	Mawson	83.71	200	P	P	20 59 15.0	+1.2
COLD	Coldfoot	83.92	23	P	P	20 59 15.9	+0.8
GURO	Guroymak-BITLI	83.93	308	*e*P	P	20 59 16.5	+0.6
PMR	Palmer	83.94	29	P	P	20 59 15.0	-0.2
PMR				pmax	pmax		
	comp=Z,41nm,1.3s						
PMR	Palmer	83.94	29	P	P	20 59 15.0	-0.2
PMR				IAmb	IAmb	20 59 32.1	
	comp=Z,41nm,1.3s						
MCK	McKinley	84.17	26	P	P	20 59 16.3	-0.1
MCK				pmax	pmax		
	comp=Z,29nm,1.2s						
MCK	McKinley	84.17	26	P	P	20 59 16.3	-0.1
MCK				IAmb	IAmb	20 59 33.4	
	comp=Z,28nm,1.2s						
BATM	Batumi	84.20	311	P	P	20 59 18.3	+1.2
BATM	Batumi	84.20	311	P	P	20 59 18.2	+1.2
KNK	Knik Glacier	84.25	29	P	P	20 59 17.1	+0.2
BCA	Borcka	84.26	311	P	P	20 59 17.7	+0.3
BCA	Borcka	84.26	311	*e*P	P	20 59 17.5	+0.1
TOLK	Toolik Lake Re	84.28	21	P	P	20 59 17.6	+0.6
TOLK				IAmb	IAmb	20 59 34.3	
	comp=Z,22nm,1.1s						
SML	Sawmill	84.33	28	P	P	20 59 17.3	0.0
VRH	Novokhopyorsk	84.34	321	*e*P	P	20 59 16.8	-0.7
VRH				pmax	pmax		
	comp=Z,120nm,1.3s						
CCB	Clear Creek Bu	84.72	26	P	P	20 59 18.9	-0.3
CCB				IAmb	IAmb	20 59 36.4	
	comp=Z,27nm,1.5s						
PPT2	Papeete2	84.73	108	*e*S	S	21 09 43.9	-0.6
	comp=Z,91nm,24.8s						
PPT2	Papeete2	84.73	108	*e*LR	LR	21 26 04.8	
	comp=Z,722nm,26.5s						
DHY	Denali Highway	84.83	27	P	P	20 59 19.8	-0.2
BNGB	Bingl	84.98	309	*e*P	P	20 59 22.9	+1.7
HDA	Harding Lake	85.08	26	P	P	20 59 20.1	-0.9
YEDI	Yedisu-Bingol	85.08	309	*e*P	P	20 59 23.3	+1.5
IL31		85.11	25	P	P	20 59 21.2	+0.1
ILAR	Eielson Array	85.11	25	P	P	20 59 20.9	-0.2
	comp=Z,1.7nm,0.6s,baz=243,slow=5.6,SNR=27						
ILAR				LR	LR	21 36 10.8	
	comp=Z,99nm,19.3s,baz=256,slow=35						
ILAR	Eielson Array	85.11	25	P	P	20 59 21.0	-0.2
ILAR	Eielson Array	85.11	25	P	P	20 59 20.6	-0.6
MAZI	Mazidag	85.18	307	*e*P	P	20 59 22.9	+0.6
TBI	Tubuai	85.40	114	*e*LR	LR	21 26 22.9	
	comp=Z,996nm,27.5s						
DYBB	Diyarbakir	85.42	308	*e*P	P	20 59 23.7	+0.3
KTUT	Trabzon	85.66	311	P	P	20 59 25.6	+1.2
SOC	Sochi	85.66	313	*e*P	P	20 59 23.7	-0.6
SOC				*e*PPP	PPP	21 04 40.3	
SOC				*e*S	SKSac	21 09 43.4	-2.0
SOC				*e*SS	SS	21 15 32.7	+3.0
SOC				*e*SSS	SSS	21 19 04.2	
SOC				pmax	pmax		
	comp=Z,29nm,0.7s						
SOC				MLR	MLR		
	comp=Z,267nm,19.0s						
PAX	Paxson	85.70	27	P	P	20 59 24.3	0.0
PAX				pmax	pmax		
	comp=Z,43nm,1.8s						
PAX	Paxson	85.70	27	P	P	20 59 24.3	0.0
PAX				IAmb	IAmb	20 59 27.5	
	comp=Z,43nm,1.8s						
KLMR	Klimovskoe	85.73	331	*e*P	P	20 59 23.1	-1.2
KLMR				pmax	pmax		
	comp=Z,57nm,1.4s						
KLMR	Klimovskoe	85.73	331	*e*P	P	20 59 23.1	-1.2
KLMR				AMP		20 59 26.9	
	comp=Z,57nm,1.4s						
VSR	Storozhevoye	85.94	321	*e*P	P	20 59 25.4	-0.1
VSR				pmax	pmax		
	comp=Z,80nm,1.0s						
RIDG	Independent Ri	85.99	26	P	P	20 59 25.4	-0.1
RIDG				IAmb	IAmb	20 59 31.9	
	comp=Z,54nm,2.0s						
PTK	Pertek	85.99	309	*e*P	P	20 59 27.8	+1.5
SVRC	Sivrice-ELAZID	86.07	308	*e*P	P	20 59 28.1	+1.4
LPSR	Galich'ya Gora	86.08	322	*e*P	P	20 59 26.6	+0.4
LPSR				pmax	pmax		
	comp=Z,100nm,1.2s						
BMAR	Burnt Mountain	86.11	23	P	P	20 59 27.1	+0.9
TMCR	Tamitsa	86.41	334	*e*P	P	20 59 25.9	-1.6
TMCR				pmax	pmax		
	comp=Z,11nm,0.8s						
ESPY	Espiye-Giresun	86.45	311	*e*P	P	20 59 28.4	+0.1
URFA	Urfa	86.48	307	*e*P	P	20 59 29.8	+1.2
GLB	Gilahina Butte	86.48	29	P	P	20 59 28.4	+0.4
GLB				IAmb	IAmb	20 59 47.3	
	comp=Z,35nm,1.5s						
MALT	Malatya	86.76	308	*e*P	P	20 59 31.3	+1.3
MOS	Moscow	86.78	325	*e*P	P	20 59 28.7	-0.8
MOS				pmax	pmax		
	comp=Z,73nm,1.2s						
BALM	Baldy	87.20	29	P	P	20 59 33.3	+1.6
ANN	Anapa	87.27	315	*e*P	P	20 59 31.8	-0.4
ANN				*e**PP	pP	20 59 45.9	-1.3
ANN				*e*S	SKSac	21 09 53.8	-1.5
ANN				pmax	pmax		
	comp=Z,74nm,1.1s						
BCAR	Beaver Creek A	87.38	27	P	P	20 59 32.6	+0.2
OBN	Obninsk	87.40	325	⇑P	P	20 59 32.9	+0.3
OBN	Obninsk	87.40	325	⇓*i*P	P	20 59 32.4	-0.2
OBN				*e*		21 02 56.9	
OBN				*e*S	SKSac	21 09 53.7	-1.9
OBN				pmax	pmax		
	comp=Z,49nm,1.2s						

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OBN                                  MLR      MLR
       comp=Z,418nm,21.0s
OBN    Obninsk          87.40 325    P        P         20 59 32.3 -0.2
RSDY   Resadiye-TOKAT   87.53 310   eP        P         20 59 34.4 +0.8
EGAK   Eagle            87.57  25    P        P         20 59 33.4 +0.2
GAZ    Gaziantep        87.77 307   eP        P         20 59 35.7 +0.8
GAZ    Gaziantep        87.77 307    P        P         20 59 34.7 -0.2
SVSK   Karacayir        87.81 310   eP        P         20 59 36.4 +1.6
KMRS   Kahramanmaras    88.00 307   eP        P         20 59 35.1 -0.8
TOKT   Tokat            88.13 310   eP        P         20 59 37.6 +1.1
SARI   SarD1z-Kayseri   88.33 308   eP        P         20 59 36.5 -1.2
KVT    Kavak            88.47 311   eP        P         20 59 38.2 +0.1
TAHT   Tahtakopru-Hat   88.64 306   eP        P         20 59 40.9 +2.0
KMBO   Kilima Mbogo     89.89 269    P        P         20 59 46.0 +0.4
       comp=Z,6.2nm,0.9s,baz=56,slow=7.1,SNR=15
KMBO                                 LR       LR        21 37 10.3
       comp=Z,175nm,21.7s,baz=96,slow=34
KMBO   Kilima Mbogo     89.89 269    P        P         20 59 46.0 +0.4
KMBO   Kilima Mbogo     89.89 269    P        P         20 59 44.7 -0.9
KMBO                                 IAmb     IAmb      20 59 48.3
       comp=Z,12nm,1.1s
MERS   Mersin           89.94 307   eP        P         20 59 44.7 -0.4
INK    Inuvik           90.20  22    P        P         20 59 44.8 -0.7
       comp=Z,1.1nm,0.7s,baz=324,slow=0.6,SNR=4.7
INK    Inuvik           90.20  22    P        P         20 59 45.5  0.0
INK                                  pmax     pmax
       comp=Z,17nm,1.7s
INK    Inuvik           90.20  22    P        P         20 59 45.5  0.0
INK                                  IAmb     IAmb      21 00 08.0
       comp=Z,17nm,1.7s
BR131  Keskin Array S   90.40 310    P        P         20 59 46.5 -0.8
BR131                                pmax     pmax
       comp=Z,7.0nm,0.9s
BR131  Keskin Array S   90.40 310    P        P         20 59 46.5 -0.8
BR131                                IAmb     IAmb      20 59 49.3
       comp=Z,7.3nm,0.8s
BRTR   Keskin Array B   90.40 310    P        P         20 59 46.2 -1.1
       comp=Z,6.2nm,0.9s,baz=120,slow=3.7,SNR=27
BRTR                                 PP       PP        21 03 21.4 -0.7
       comp=Z,0.7nm,0.7s,baz=352,slow=7.5,SNR=3.7
BRTR                                 LR       LR        21 43 20.1
       comp=Z,55nm,21.7s,baz=54,slow=38
BRTR   Keskin Array B   90.40 310  i P        P         20 59 46.9 -0.4
BRTR                                 pmax     pmax
       comp=Z,7.0nm,0.9s
BRTR   Keskin Array B   90.40 310    P        P         20 59 46.4 -0.9
ARCES  ARCESS Array B   90.73 340    P        P         20 59 47.9 -0.1
       comp=Z,10.0nm,0.6s,baz=82,slow=7.0,SNR=47
ARCES                                LR       LR        21 43 38.1
       comp=Z,316nm,21.6s,baz=114,slow=38
ARCES  ARCESS Array B   90.73 340    P        P         20 59 47.3 -0.7
CSS    Mathiatis        91.06 305    P        P         20 59 50.0 -0.2
CSS                                  IAmb     IAmb      20 59 51.7
       comp=Z,18nm,1.1s
FINES  FINESS Array B   92.15 332    P        P         20 59 53.8 -0.8
       comp=Z,2.0nm,0.5s,baz=64,slow=4.4,SNR=20
FINES                                LR       LR        21 44 41.4
       comp=Z,332nm,19.3s,baz=76,slow=38
FINES  FINESS Array B   92.15 332  i P        P         20 59 54.9 +0.2
FINES                                pmax     pmax
       comp=Z,2.0nm,0.5s
AKASG  Malin Array Be   92.25 321    P        P         20 59 54.6 -0.7
       comp=Z,3.2nm,0.6s,baz=70,slow=4.3,SNR=18
AKASG                                LR       LR        21 44 08.6
       comp=Z,178nm,21.2s,baz=50,slow=37
AKBB   Malin Array Si   92.25 321    P        P         20 59 54.3 -1.1
AKBB                                 pmax     pmax
       comp=Z,9.0nm,1.1s
AKBB   Malin Array Si   92.25 321    P        P         20 59 54.3 -1.1
AKBB                                 IAmb     IAmb      20 59 56.1
       comp=Z,8.5nm,1.1s
KIEV   Kiev             92.26 321    P        P         20 59 54.0 -1.4
SYO    Syowa Base       92.39 201⇑ePcP      PcP       20 59 57.4 +1.1
C36M   Paulatuk         93.26  20    P        P         20 59 59.3 -0.3
TAOE   Nuku Hiva Isla   93.28  99   eLR       LR        21 29 57.7
       comp=Z,928nm,23.2s
QSPA   South Pole Qui   93.46 180    P        P         21 00 00.2 -0.6
QSPA                                 IAmb     IAmb      21 00 25.2
       comp=Z,16nm,1.1s
ELL    Elmali           93.63 307    P        P         21 00 00.9 -1.4
ELL                                  pmax     pmax
       comp=Z,27nm,1.1s
ELL    Elmali           93.63 307    P        P         21 00 00.9 -1.4
DLBC   Dease Lake       93.72  31    P        P         21 00 01.1 -1.0
       comp=Z,1.3nm,0.3s,baz=337,slow=15,SNR=2.0
DLBC   Dease Lake       93.72  31    P        P         21 00 02.1  0.0
KMPD   K-Podol'skiy     94.37 319    P        P         21 00 05.0 -0.2
TESR   Tescani          94.60 317  ⇑P        P         21 00 06.2 -0.2
VRI    Vrincioaia       94.66 316  ⇑P        P         21 00 07.5 +0.9
VRI    Vrincioaia       94.66 316    P        P         21 00 07.5 +0.9
PLOR   Plostina         94.72 316  ⇑P        P         21 00 07.2 +0.3
PLOR   Plostina         94.72 316    P        P         21 00 07.2 +0.3
BISRR  Bisoca           94.73 316  ⇑P        P         21 00 07.2 +0.2
BIZ    Bicaz            94.90 318  ⇑P        P         21 00 08.3 +0.6
MLR    Muntele Rosu     95.27 316  ⇓P        P         21 00 09.8 +0.2
MLR    Muntele Rosu     95.27 316    P        P         21 00 09.3 -0.3
MLR                                  pmax     pmax
       comp=Z,13nm,0.9s
MLR    Muntele Rosu     95.27 316    P        P         21 00 09.3 -0.3
MLR                                  IAmb     IAmb      21 00 11.1
       comp=Z,13nm,0.9s
BURAR  Bucovina Array   95.36 318  ⇑P        P         21 00 10.9 +1.0
BURAR  Bucovina Array   95.36 318    P        P         21 00 10.9 +1.0
BURAR  Bucovina Array   95.36 318    P        P         21 00 10.0 +0.1
BUR08  Bucovina Ar. S   95.37 318    P        P         21 00 10.0  0.0
BUR08                                IAmb     IAmb      21 00 12.3
       comp=Z,5.1nm,0.8s
DOPR   Dopca            95.56 317  ⇑P        P         21 00 10.6 -0.1
ELND   Elena            95.78 314  ⇓P        P         21 00 11.4 -0.4
VOIR                    95.90 316  ⇑P        P         21 00 12.2 -0.2
KARP   Karpathos        96.00 306    P        P         21 00 12.8 -0.2
ARCR   ARCALIA          96.04 318  ⇑P        P         21 00 13.7 +0.8
ARR    Arges            96.20 316  ⇑P        P         21 00 13.4 -0.3
CJR    Cluj-Napoca      96.63 318  ⇑P        P         21 00 16.6 +1.0
LOT    Lotru            96.78 316  ⇓P        P         21 00 16.5 +0.1
TRPA   Tarpa            97.02 319  ⇓P        P         21 00 17.3 +0.1
UZH    Uzhgorod         97.06 320   eP        P         21 00 16.6 -0.8
UZH                                 i                   21 00 36.1
UZH                                 i                   21 00 41.9
DEV    Deva             97.28 317  ⇑P        P         21 00 17.1 -1.4
DEV    Deva             97.28 317    P        P         21 00 17.1 -1.4
GZR    Gura Zlata       97.47 316  ⇑P        Pdif      21 00 19.7 +0.1
GZR    Gura Zlata       97.47 316    P        Pdif      21 00 19.6  0.0
DAG    Danmarks Havn    97.47 352  i P        P         21 00 18.0 -0.7
       comp=Z,4.3nm,0.6s
DAG    Danmarks Havn    97.47 352  i P        P         21 00 18.0 -0.7
DAG                                  pmax     pmax
       comp=Z,4.0nm,0.6s
VTS    Vitosha          97.74 314  ⇓P        P         21 00 20.0 -0.9
VTS    Vitosha          97.74 314    P        Pdif      21 00 21.6 +0.7
RES    Resolute Bay     97.92  10    P        P         21 00 19.6 -1.1
       comp=Z,2.2nm,0.8s,baz=277,slow=4.7,SNR=12
BZS    Buzias           98.22 317  ⇓P        P         21 00 22.2 -0.5
BZS    Buzias           98.22 317    P        P         21 00 22.2 -0.5
NOA    NORSAR Array B   99.10 334    P        Pdif      21 00 25.2 -1.2
       comp=Z,0.6nm,0.6s,baz=66,slow=4.5,SNR=2.6
NOA                                  LR       LR        21 50 17.6
       comp=Z,253nm,18.9s,baz=60,slow=38
YKA    Yellowknife Ar   99.52  24    P        Pdif      21 00 28.3 +0.1
       comp=Z,0.6nm,0.6s,baz=132,slow=7.2,SNR=6.0
YKA                                  LR       LR        21 50 30.3
       comp=Z,30nm,19.1s,baz=0.0,slow=38
BRG    Berggiesshubel  101.59 324   eP        Pdif      21 00 39.6 +2.0
       comp=Z,3.4nm,1.0s
CLL    Collm           101.98 324   ePKiKP    PKiKP     21 05 02.0 +0.1
CLL                                 i pPP               21 05 07.5
CLL                                  Lm       MLR       21 50 00.0
       comp=N,100nm,20.8s
CLL                                  Lm       MLR       21 50 00.0
       comp=E,200nm,21.0s
CLL                                  Lm       MLR       21 50 00.0
       comp=Z,300nm,20.8s
TXAR   Lajitas Array   121.43  52    PKP      PKPdf     21 05 39.0 -0.4
       comp=Z,0.1nm,0.4s,baz=204,slow=1.8,SNR=1.7
TXAR   Lajitas Array   121.43  52    PKIKP    PKPdf     21 05 39.0 -0.4
TOA0   Torodi Ar. Sit  123.30 288             PKiKP     21 05 43.7 +0.2
TORD   Torodi Ar. Bea  123.30 288    PKP      PKiKP     21 05 43.7 +0.3
       comp=Z,2.2nm,0.7s,baz=61,slow=1.4,SNR=11
S39A   Bolivar         124.44  39             PKiKP     21 05 45.2 +0.1
TKL    Tuckaleechee C  131.46  34    PKP      PKPdf     21 05 58.3  0.0
       comp=Z,1.7nm,0.6s,baz=344,slow=13,SNR=1.9
PLCA   Paso Flores     139.72 159    PKP      PKPdf     21 06 13.8 +0.2
       comp=Z,2.1nm,0.9s,baz=205,slow=4.1,SNR=3.5
JTS    Las Juntas de   145.27  66    PKPbc    PKPbc     21 06 23.7 -0.2
       comp=Z,10nm,0.7s,baz=360,slow=2.8,SNR=7.3
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NEIC ***22*** *20:48:52±1.6, 6°.75N±0°.06×72°.96W±0°.07, h162^{km}±5^{km}, mb4.4/100, Error ellipse: s-maj=10.5km s-min=7.8km az=127.0*

IDC ***22*** *20:48:52.8±0.5, 6°.71N×72°.98W, h173^{km}±6^{km}, mb3.8/23, mb1 4.0/31, mb1mx3.9/48, mbtmp4.4/31, Error ellipse: s-maj=9.4km s-min=8.8km az=100.0*

RSNC ***22*** *20:48:53.3±1.0, 6°.81N×73°.14W, h152^{km}±4^{km}, ML4.6, Mw4.5, Fault plane solution: NP1:φ$_s$72.00000°, δ71.00000°, λ-180.00000°.*

ISC 22 20:48:52.4±0.5**, 6°.83N**±0°.03×**73°.06W**±0°.03**, h162**^{km}±4^{km}**,**
n329, σ1^{s}82/358**, mb4.3**/68**, 24C-11D, Northern Colombia**

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Code   Station Name      Δ°   AZ°    Phase ID              Time      Res
                                   Op        ISC        h  m  s     ISC
BARC   Barichara         0.27 207⇑iP       Pn         20 49 13.8 -0.7
BARC                               eS        Sn         20 49 29.0 -2.5
BARC                               i                    20 49 30.8
       comp=Z,16µm,0.3s
PAMC   Pamplona, Colo    0.62  36⇓iP       Pn         20 49 16.6 +0.3
PAMC                               eS        Sn         20 49 33.5 -1.1
PAMC                               i                    20 49 36.0
       comp=Z,9µm,0.5s
BRRC   Barranca, Sant    0.70 293⇓iP       Pn         20 49 15.7 -0.4
BRRC                               eS        Sn         20 49 33.0 -1.3
BRRC                               i                    20 49 36.4
       comp=Z,4µm,0.4s
RUSC   La Rusia          0.93 181⇑iP       Pn         20 49 17.8 -0.6
RUSC                               eS        Sn         20 49 36.6 -1.7
RUSC                               i                    20 49 39.1
       comp=Z,6µm,0.5s
RUSC   La Rusia          0.93 181            Pn         20 49 17.3 -1.0
RUSC                                Sn       Sn         20 49 35.9 -2.4
TAMC   Tame, Arauca      1.32 107⇓iP       Pn         20 49 22.0 +0.8
TAMC                               eS        Sn         20 49 43.5 +0.3
PTBC   PUERTO BERRIO,    1.42 258⇑iP       Pn         20 49 20.3 -1.7
PTBC                               eS        Sn         20 49 41.9 -2.9
PTBC                               i                    20 49 43.5
       comp=Z,6µm,0.3s
OCAC   Ocana             1.42 350⇑iP       Pn         20 49 21.8 -0.4
OCAC                               eS        Sn         20 49 44.2 -1.1
OCAC                               i                    20 49 49.5
       comp=Z,5µm,0.2s
SPBC   San Pablo de B    1.54 221⇑iP       Pn         20 49 22.6 -0.8
SPBC                               eS        Sn         20 49 44.9 -2.5
SPBC                               i                    20 49 49.9
       comp=Z,8µm,0.2s
ZARC   Zaragoza, Cauc    1.90 290⇓eP       Pn         20 49 25.9 -1.2
ZARC                               eS        Sn         20 49 52.2 -1.7
ZARC                               i                    20 49 58.7
       comp=Z,5µm,0.4s
NORC   Norcasia          2.19 235⇑iP       Pn         20 49 29.4 -1.1
NORC                               eS        Sn         20 49 58.1 -1.9
NORC                               i                    20 50 02.2
       comp=Z,4µm,0.2s
SMLC   San Martn de      2.20 333  eP       Pn         20 49 29.5 -1.0
SMLC                               eS        Sn         20 50 00.1  0.0
CHIC   Chingaza          2.29 197⇑iP       Pn         20 49 31.5 -0.5
CHIC                               eS        Sn         20 50 00.8 -1.8
CHIC                               i                    20 50 07.3
       comp=Z,2µm,0.6s
ROSC   El Rosal          2.34 212   P        Pn         20 49 33.4 +0.8
       comp=Z,978nm,0.3s,baz=100,slow=4.1,SNR=380
ROSC                                S        Sn         20 50 04.7 +1.0
       comp=Z,2µm,0.3s,baz=14,slow=23,SNR=21
ROSC   El Rosal          2.34 212⇑iP       Pn         20 49 33.4 +0.8
ROSC                               eS        Sn         20 50 04.6 +0.9
ROSC                               i                    20 50 08.6
       comp=Z,5µm,0.3s
ROSC   El Rosal          2.34 212            Pn         20 49 33.3 +0.7
ROSC                                Sn       Sn         20 50 04.5 +0.9
CVER   Cruz Verde, Cu    2.51 204⇑iP       Pn         20 49 36.0 +1.3
CVER                               eS        Sn         20 50 06.1 -1.3
HELC   Santa Helena      2.53 256⇑eP       Pn         20 49 33.9 -0.9
HELC                               eS        Sn         20 50 05.3 -2.3
HELC                               i                    20 50 12.2
       comp=Z,3µm,0.3s
UREC   San Jos de Ur     2.62 291  eP       Pn         20 49 33.2 -2.3
UREC                               eS        Sn         20 50 04.6 -4.3
UREC                               i                    20 50 18.9
       comp=Z,3µm,0.2s
PTGC   Puerto Gaitan,    2.77 161⇓iP       Pn         20 49 36.7 -0.8
PTGC                               eS        Sn         20 50 08.8 -3.6
PTGC                               i                    20 50 14.9
       comp=Z,2µm,0.3s
VILC   Villavicencio,    2.77 193⇓eP       Pn         20 49 36.7 -0.9
VILC                               eS        Sn         20 50 11.4 -1.3
VILC                               i                    20 50 17.1
       comp=Z,3µm,0.5s
GUY2C  Guyana, Caldas    2.79 235⇑eP       Pn         20 49 37.4 -0.7
GUY2C                              eS        Sn         20 50 15.5 +2.0
GUY2C                              i                    20 50 19.7
       comp=Z,3µm,0.5s
RREF   El Recreo         2.98 230  eP       Pn         20 49 39.8 -0.7
RREF                               eS        Sn         20 50 19.8 +2.0
RREF                               i                    20 50 24.6
       comp=Z,3µm,0.3s
CBOC   Ciudad Bolivar    3.09 252  eP       Pn         20 49 41.1 -0.3
CBOC                               eS        Sn         20 50 17.9 -1.6
CBOC                               i                    20 50 24.4
       comp=Z,1µm,0.4s
CODC   Agustn Codazz     3.10 353⇑iP       Pn         20 49 40.9 -0.6
CODC                               eS        Sn         20 50 19.5 -0.3
CODC                               i                    20 50 26.6
       comp=Z,847nm,0.4s
SDV    Santo Domingo     3.15  50   P        Pn         20 49 43.4 +1.1
       comp=Z,206nm,0.3s,baz=218,slow=3.5,SNR=678
SDV                                 S        Sn         20 50 20.1 -1.1
       comp=Z,368nm,0.3s,baz=190,slow=7.2,SNR=11
SDV    Santo Domingo     3.15  50⇑iP       Pn         20 49 43.0 +0.6
SDV                                eS        Sn         20 50 19.9 -1.2
SDV                                i                    20 50 22.4
       comp=Z,1µm,0.4s
SDV    Santo Domingo     3.15  50            Pn         20 49 42.7 +0.4
SDV                                 Sn       Sn         20 50 19.9 -1.2
ARGC   Ariguani, Magd    3.23 339  eP       Pn         20 49 43.8 +0.7
ARGC                               eS        Sn         20 50 22.7 +0.2
ARGC                               i                    20 50 29.9
       comp=Z,1µm,0.2s
ANIL   Santa Ana         3.29 225  eP       Pn         20 49 43.5 -0.7
ANIL                               eS        Sn         20 50 24.4  0.0
ORTC   Ortega, Tolima    3.63 217⇑eP       Pn         20 49 47.4 -0.9
ORTC                               eS        Sn         20 50 30.3 -1.4
ORTC                               i                    20 50 37.7
       comp=Z,1µm,0.4s
SJCC   San Jacinto, C    3.69 326⇓eP       Pn         20 49 47.4 -1.7
SJCC                               eS        Sn         20 50 28.8 -4.5
SJCC                               i                    20 50 33.6
       comp=Z,1µm,0.4s
PLMC   San Jos del P     3.73 239  eP       Pn         20 49 48.7 -0.9
PLMC                               eS        Sn         20 50 33.4 -0.7
PLMC                               i                    20 50 35.6
       comp=Z,1µm,0.2s
LCBC   Los crdobas,      3.84 302  eP       Pn         20 49 49.5 -1.5
LCBC                               eS        Sn         20 50 36.5  0.0
LCBC                               i                    20 50 38.9
       comp=Z,730nm,0.4s
GUVC   San Jose del G    4.28 174  eP       Pn         20 49 56.4 -0.2
GUVC                               eS        Sn         20 50 44.3 -2.6
GUVC                               i                    20 50 50.7
       comp=Z,2µm,0.2s
YOTC   Yotoco, Valle     4.32 229⇑eP       Pn         20 49 55.8 -1.5
YOTC                               eS        Sn         20 50 42.5 -5.4
SOLC   Bahia Solano      4.36 262  eP       Pn         20 49 56.9 -0.7
SOLC                               eS        Sn         20 50 44.6 -3.9
SMRC   Santa Marta, M    4.45 345  eP       Pn         20 49 58.0 -0.9
SMRC                               eS        Sn         20 50 46.9 -4.0
SMRC                               i                    20 50 50.4
       comp=Z,765nm,0.3s
CAPC   Capurgana         4.61 293  eP       Pn         20 49 57.8 -3.1
CAPC                               eS        Sn         20 50 49.1 -5.4
CAPC                               i                    20 50 52.0
       comp=Z,303nm,0.3s
PIZC   Pizarro, Choco    4.66 247  eP       Pn         20 50 02.1 +0.5
PIZC                               eS        Sn         20 50 55.5  0.0
PIZC                               i                    20 51 08.7
       comp=Z,555nm,0.5s
MACC   Macarena, Meta    4.72 190⇑iP       Pn         20 50 00.3 -2.1
MACC                               eS        Sn         20 50 52.1 -5.1
MACC                               i                    20 50 58.7
       comp=Z,1µm,0.9s
PTAC   Punta Ardita,     4.72 274  eP       Pn         20 50 00.7 -1.7
PTAC                               eS        Sn         20 50 53.8 -3.2
PTAC                               i                    20 50 56.6
       comp=Z,1µm,0.3s
URIC   Uribia, Colomb    4.95  12⇑eP       Pn         20 50 03.9 -1.5
URIC                               eS        Sn         20 50 57.6 -4.9
URIC   Uribia, Colomb    4.95  12            Pn         20 50 03.6 -1.8
MALC   Bahia Malaga      5.09 237  eP       Pn         20 50 07.5 +0.2
MALC                               eS        Sn         20 51 07.8 +2.0
MALC                               i                    20 51 16.1
       comp=Z,234nm,0.5s
GARC   Garzon, Huila     5.21 208  eP       Pn         20 50 07.3 -1.8
GARC                               eS        Sn         20 51 04.6 -4.4
GARC                               i                    20 51 11.6
       comp=Z,430nm,0.3s
PCON   Cinco Dias        5.57 217  eP       Pn         20 50 13.8 -0.4
PCON                               eS        Sn         20 51 20.2 +2.1
PCON                               i                    20 51 26.6
       comp=Z,165nm,0.4s
POPC   Popayan, Colom    5.58 220⇑iP       Pn         20 50 13.1 -0.9
POPC                               eS        Sn         20 51 14.6 -3.2
FLOC   Florencia         5.82 206⇑iP       Pn         20 50 15.7 -1.2
FLOC                               eS        Sn         20 51 21.1 -2.0
FLOC   Florencia         5.82 206            Pn         20 50 15.5 -1.4
SOTA   Rioblanco         5.85 217⇑eP       Pn         20 50 17.8  0.0
SOTA                               eS        Sn         20 51 29.1 +4.5
SOTA                               i                    20 51 35.7
       comp=Z,177nm,0.7s
GR1C   Gorgona, Isla     6.35 233  eP       Pn         20 50 22.5 -1.4
GR1C                               eS        Sn         20 51 32.5 -3.2
CRUC   La Cruz           6.51 217  eP       Pn         20 50 27.2 +0.8
CRUC                               eS        Sn         20 51 41.3 +1.2
CRUC                               i                    20 51 45.3
       comp=Z,117nm,0.4s
GCUF   Volcan Galeras    7.02 218  eP       Pn         20 50 33.6 +0.4
GCUF                               eS        Sn         20 51 49.8 -2.6
GCUF                               i                    20 51 58.6
       comp=Z,82nm,0.8s
BCIP   Isla Barro Col    7.10 290            Pn         20 50 31.4 -2.4
PCRV   Puerto La Cruz    8.97  68   P        Pn         20 50 57.9 -0.8
       comp=Z,5.1nm,0.3s,baz=336,slow=3.4,SNR=20
PCRV                                S        Sn         20 52 35.1 -3.5
       comp=Z,3.4nm,0.3s,baz=11,slow=19,SNR=1.7
PLCV   Puerto La Cruz    9.01  68            Pn         20 50 57.9 -1.3
PLCV                                         Sn         20 52 35.1 -4.4
HDC    Heredia          11.38 287   Pn       Pn         20 51 31.1 +0.6
PCJ    Portland Cotta   11.55 340  i P       P          20 51 37.0 -2.5
STH    Stony Hill       11.76 342  i P       Pn         20 51 36.9 +1.6
STH    Stony Hill       11.76 342  i P       Pn         20 51 36.8 +1.6
BANI   BANI             11.79  13   Pn       Pn         20 51 36.5 +0.7
MCJ    Malvern          11.91 338⇓iP       Pn         20 51 39.9 +2.6
MCJ                                i S       Sn         20 53 39.4  -10
BNJ    Bonny Gate       12.03 342  i P       Pn         20 51 40.8 +2.0
BNJ    Bonny Gate       12.03 342⇓iP       Pn         20 51 41.8 +3.0
MTDJ   Mount Denham     12.13 339⇑eP       P          20 51 43.6 -2.4
MTDJ   Mount Denham     12.13 339            Pn         20 51 42.9 +2.7
BBJ    Bamboo Saint A   12.19 341⇑iP       P          20 51 44.0 -2.6
BBJ    Bamboo Saint A   12.19 341⇑iP       P          20 51 44.1 -2.6
SDDR   Presa de Saban   12.20   8  eP       P          20 51 44.2 -2.5
SDDR                             ⇑eP       Pn         20 51 44.4 +3.4
SDDR   Presa de Saban   12.20   8            Pn         20 51 42.6 +1.7
JTS    Las Juntas de    12.25 287   P        Pn         20 51 43.6 +2.0
       comp=Z,8.2nm,0.3s,baz=285,slow=2.2,SNR=19
JTS    Las Juntas de    12.25 287            Pn         20 51 44.0 +2.3
DR12   Loma Pena Alta   12.41  16   Pn       Pn         20 51 41.6 -2.1
GRGR   Grenville        12.42  64   Pn       Pn         20 51 43.2 -0.7
MPR    Mayaguez         12.70  26            Pn         20 51 44.6 -2.7
IGPR   InterUniversit   12.98  31            Pn         20 51 48.4 -2.5
ACON   Acoyapa          12.99 294            Pn         20 51 51.3 +0.1
AOPR   Arecibo Observ   12.99  28            Pn         20 51 49.0 -2.1
SJG    San Juan         13.08  30   P        Pn         20 51 51.2 -1.0
       comp=Z,14nm,0.3s,baz=202,slow=12,SNR=30
SJG                                 S        Sn         20 54 08.1 -9.2
       comp=Z,0.6nm,0.3s,baz=26,slow=23,SNR=1.3
SJG    San Juan         13.08  30            Pn         20 51 51.4 -0.8
GTBY   Guantanamo Bay   13.17 352⇓eP       P          20 51 56.5 -0.9
MCLT   Moule a Chique   13.74  59  e         Pn         20 52 01.2 +0.6
FDF    Fort de France   14.09  55  e         P          20 52 11.9 +4.2
FDF    Fort de France   14.09  55   Pn       Pn         20 52 04.3 -0.7
FSCY   Frank Sound, G   14.71 328   Pn       Pn         20 52 13.2 +0.6
ATAH   Atahualpa        14.86 201   P        Pn         20 52 13.1 -1.9
       baz=22,slow=11,SNR=1.7
PTGA   Pitinga          15.07 119   P        Pn         20 52 15.7 -1.6
       comp=Z,2.9nm,0.3s,baz=307,slow=20,SNR=12
PTGA   Pitinga          15.07 119   P        Pn         20 52 16.2 -1.0
CSGN   Cosiguina Volc   15.53 294   P        P          20 52 23.7 -0.1
TGUH   Tegucigalpa,Un   15.70 298   Pn       Pn         20 52 24.4 -0.8
SAML   Samuel           18.51 148   P        P          20 52 55.3 -1.2
PAYG   Puerto Ayora     18.73 247   P        P          20 52 59.7 +0.7
APG    El Apazote       18.91 297   P        P          20 53 00.7 -0.4
       comp=Z,4.4nm,0.3s,baz=54,slow=4.9,SNR=7.9
TEIG   Tepich           19.88 314   P        P          20 53 12.9 +1.7
       comp=Z,34nm,0.4s,baz=205,slow=0.0,SNR=29
TEIG   Tepich           19.88 314   P        P          20 53 12.5 +1.3
CCIG   Comitan          20.89 298   P        P          20 53 22.7 +0.3
LPAZ   La Paz           23.48 168   P        P          20 53 46.6 -1.7
       comp=Z,0.9nm,0.4s,baz=280,slow=2.6,SNR=3.2
LPAZ                                pP       pP         20 54 20.0 +0.6
       comp=Z,3.7nm,0.7s,baz=346,slow=14,SNR=4.4
LPAZ   La Paz           23.48 168   P        P          20 53 46.6 -1.7
CMIG   Matias Romero    23.63 298   P        P          20 53 46.2 -2.7
       comp=Z,1.4nm,0.4s,baz=102,slow=8.2,SNR=5.9
SIV    San Ignacio      25.60 152   P        P          20 54 05.0 -1.8
       comp=Z,1.0nm,0.8s,baz=306,slow=12,SNR=4.2
SIV                                 pP       pP         20 54 39.2 -1.7
       comp=Z,1.5nm,0.6s,baz=353,slow=10,SNR=3.0
Y52A   Lilburn          28.76 341   P        P          20 54 37.3 +2.5
       baz=157
Z50A   Ashland          28.87 337   IAmb     IAmb       20 54 38.8
       comp=Z,6.4nm,0.7s
Z50A   Ashland          28.87 337   P        P          20 54 38.3 +2.4
       baz=153,SNR=5.3
LRAL   Lakeview Retre   29.11 335   P        P          20 54 40.2 +2.2
       baz=151
T59A   Double "B" Far   30.28 353   P        P          20 54 49.8 +1.6
       baz=171
X48A   Hartselle        30.37 337   IAmb     IAmb       20 54 51.3
       comp=Z,13nm,1.2s
PLAL   Pickwick Lake    31.24 336   P        P          20 54 57.5 +0.8
PLAL                                IAmb     IAmb       20 54 59.4
       comp=Z,6.5nm,1.1s
PB14   IPOC Station P   31.38 175   P        P          20 54 57.5 -0.9
PB14                                IAmb     IAmb       20 55 08.6
       comp=Z,16nm,1.3s
WVT    Waverly          32.14 337   P        P          20 55 05.8 +1.2
WVT                                 IAmb     IAmb       20 55 06.7
       comp=Z,14nm,1.3s
WVT    Waverly          32.14 337   P        P          20 55 06.0 +1.4
       baz=152
T49A   Edmonton         32.21 341   P        P          20 55 06.9 +1.7
       baz=156
S49A   Springfield      32.75 342   P        P          20 55 11.8 +1.9
       baz=157
X40A   Basin Creek Fa   33.02 329   IAmb     IAmb       20 55 13.9
       comp=Z,5.5nm,0.7s
X40A   Basin Creek Fa   33.02 329   P        P          20 55 13.5 +1.3
       baz=142,SNR=6.5
435B   Jarrell          33.10 319   P        P          20 55 14.3 +1.3
       baz=131
W41B   Gary Mavity, V   33.27 331   P        P          20 55 15.4 +1.0
       baz=144
O58A   Lewisberry       33.33 355   P        P          20 55 18.2 +3.3
       baz=173
WHAR   Wooly Hollow     33.38 331   P        P          20 55 16.2 +0.8
WHAR                                IAmb     IAmb       20 55 17.1
       comp=Z,7.2nm,0.6s
MIAR   Mount Ida        33.45 328   P        P          20 55 16.6 +0.7
       baz=141
WCI    Wyandotte Cave   33.48 341   P        P          20 55 17.8 +1.7
       baz=156
PBMO   Poplar Bluff     33.76 334   IAmb     IAmb       20 55 20.8
       comp=Z,7.8nm,0.7s
FCAR   Ozark Folk Cen   33.79 332   IAmb     IAmb       20 55 20.3
       comp=Z,12nm,1.0s
N60A   Cedar Hill Far   33.94 357   P        P          20 55 22.6 +2.5
       baz=176
N59A   State Game Lan   34.02 356   P        P          20 55 23.6 +2.7
       baz=175
P50A   Jamestown        34.03 345   P        P          20 55 23.2 +2.2
       baz=161
W39A   Magazine         34.06 329   P        P          20 55 22.7 +1.5
       baz=141,SNR=9.4
T42A   Van Buren        34.26 334   IAmb     IAmb       20 55 24.7
       comp=Z,7.3nm,0.6s
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N56A	West Decatur	34.26	353	P	P	20 55 25.7	+2.8
	baz=171						
O50A	Cable	34.50	346	P	P	20 55 28.8	+3.8
	baz=161						
U40A	Yellville	34.51	331	P	P	20 55 26.4	+1.2
	baz=144,SNR=21						
M58A	Price's Panora	34.53	355	P	P	20 55 28.0	+2.7
	baz=174						
M57A	Sunshine Farm,	34.55	355	P	P	20 55 28.6	+3.3
	baz=173						
M59A	Waymart	34.63	357	P	P	20 55 28.6	+2.5
	baz=176						
KSPA	Keystone Colle	34.66	356	P	P	20 55 28.2	+1.9
M56A	Emporium	34.80	353	P	P	20 55 30.2	+2.6
	baz=171						
M55A	Ridgway	34.86	352	P	P	20 55 30.3	+2.2
	baz=170						
M54A	Oil Creek Stat	35.03	351	P	P	20 55 33.0	+3.5
	baz=168						
L58A	Harry Jones Me	35.15	356	P	P	20 55 33.2	+2.6
	baz=175						
L57A	Andrews Acres	35.18	355	P	P	20 55 33.4	+2.6
	baz=173						
CCM	Cathedral Cave	35.19	335	P	P	20 55 31.6	+0.7
CCM	Cathedral Cave	35.19	335	P	P	20 55 32.1	+1.3
	baz=148						
BINY	Binghamton	35.32	356	P	P	20 55 34.3	+2.3
	baz=175						
L56A	Greenwood	35.38	354	P	P	20 55 35.4	+2.8
	baz=172						
L53A	Girard	35.55	351	P	P	20 55 36.4	+2.4
	baz=168						
ABTX	Abilene, Hawle	35.63	320	P	P	20 55 35.3	+0.5
ABTX				IAmb	IAmb	20 55 36.5	
	comp=Z,11nm,0.8s						
ABTX	Abilene, Hawle	35.63	320	P	P	20 55 35.9	+1.1
	baz=130						
TUL1	Leonard	35.66	327	P	P	20 55 35.4	+0.5
	baz=139						
SFIN	Lafayette	35.69	341	P	P	20 55 36.8	+1.7
	baz=156,SNR=7.0						
S39A	Bolivar	35.81	332	IAmb	IAmb	20 55 38.2	
	comp=Z,5.0nm,0.6s						
K58A	Earlville	35.86	357	P	P	20 55 38.8	+2.2
	baz=176						
K57A	Scipio Center	35.88	356	P	P	20 55 38.6	+1.9
	baz=174						
J58A	Remsen	36.43	357	P	P	20 55 43.5	+2.1
	baz=176						
TX31	Lajitas Ar. Si	36.50	312	IAmb	IAmb	20 55 44.0	
	comp=Z,5.1nm,0.7s						
TX32	Lajitas Array	36.50	312	IAmb	IAmb	20 55 43.9	
	comp=Z,5.2nm,0.7s						
TXAR	Lajitas Array	36.50	312	P	P	20 55 43.3	+1.0
	comp=Z,4.7nm,0.6s,baz=126,slow=9.2,SNR=50						
TXAR	Lajitas Array	36.50	312	P	P	20 55 42.8	+0.5
WMOK	Wichita Mounta	36.51	323	IAmb	IAmb	20 55 42.9	
	comp=Z,5.7nm,0.6s						
WMOK	Wichita Mounta	36.51	323	P	P	20 55 42.4	+0.2
	baz=134,SNR=7.0						
J57A	Williamstown	36.52	356	P	P	20 55 44.3	+2.1
	baz=175						
I58A	Old Forge	36.75	358	P	P	20 55 46.1	+2.0
	baz=177						
L46A	Eue Claire	36.95	344	P	P	20 55 47.3	+1.5
	baz=158						
I55A	Frankford	37.45	355	P	P	20 55 52.5	+2.4
	baz=172						
I51A	Listowel	37.48	351	P	P	20 55 53.5	+3.2
	baz=167						
H57A	Richville	37.54	357	P	P	20 55 52.8	+2.1
	baz=176						
H56A	Elgin	37.72	356	P	P	20 55 54.2	+2.0
	baz=175						
H55A	Tweed	37.74	355	P	P	20 55 54.8	+2.3
	baz=173,SNR=5.0						
H63A	New Sharon	37.77	4	P	P	20 55 55.0	+2.3
	baz=185						
H52A	Wyevale	38.13	352	P	P	20 55 58.5	+2.8
	baz=169						
G57A	Newington	38.16	358	P	P	20 55 57.8	+1.9
	baz=177						
SADO	Sadowa	38.16	353	P	P	20 55 57.5	+1.6
	comp=Z,5.2nm,0.5s,baz=203,slow=3.5,SNR=11						
SADO	Sadowa	38.16	353	IAmb	IAmb	20 56 03.0	
	comp=Z,7.6nm,0.9s						
G58A	Ormstown	38.18	359	P	P	20 55 58.6	+2.6
	baz=178						
G62A	West of Eustis	38.30	3	P	P	20 55 58.9	+1.7
G62A	West of Eustis	38.30	3	P	P	20 55 59.6	+2.4
	baz=184						
AMTX	Amarillo	38.38	321	P	P	20 55 59.3	+1.2
	baz=130						
G55A	Calabogie	38.41	356	P	P	20 55 59.5	+1.6
	baz=174						
PKME	Peaks-Kenny Pk	38.42	4	P	P	20 56 00.1	+2.0
	baz=186						
G53A	Haliburton	38.45	354	P	P	20 56 00.0	+1.7
	baz=171						
G64A	Maxfield	38.46	5	P	P	20 56 00.2	+1.8
	baz=187						
KSU1	Kansas State U	38.51	330	P	P	20 55 58.8	-0.1
	baz=140						
MSTX	Muleshoe	38.51	319	IAmb	IAmb	20 56 00.5	
	comp=Z,15nm,1.2s						
MSTX	Muleshoe	38.51	319	P	P	20 55 59.6	+0.4
	baz=128,SNR=5.2						
G65A	Princeton	38.52	6	P	P	20 56 00.8	+1.9
	baz=189						
G54A	Lake Saint Pet	38.67	354	P	P	20 56 02.0	+1.8
	baz=172						
JFWS	Jewell Farm	39.00	340	P	P	20 56 03.7	+0.7
	baz=152						
MNTX	Cornudas Mount	39.01	314	P	P	20 56 04.2	+1.0
MNTX				IAmb	IAmb	20 56 05.7	
	comp=Z,9.6nm,0.8s						
MNTX	Cornudas Mount	39.01	314	P	P	20 56 04.2	+1.0
	baz=123,SNR=20						
F64A	Sherman	39.10	5	P	P	20 56 05.3	+1.6
	baz=187						
F52A	Sundridge	39.19	353	P	P	20 56 07.0	+2.4
	baz=170						
ALGO	Algonquin Park	39.21	354	P	P	20 56 06.4	+1.8
	baz=172						
E57A	Chemin Saint G	39.44	359	P	P	20 56 08.5	+1.9
	baz=178,SNR=6.3						
E55A	Montcerf-Lytto	39.56	357	P	P	20 56 09.4	+1.9
	baz=175						
E53A	Dumoine, Ponti	39.60	355	P	P	20 56 09.5	+1.6
	baz=173						
E56A	St. Veronique	39.60	358	P	P	20 56 09.7	+1.8
	baz=177						
E52A	Mattawa	39.60	354	P	P	20 56 09.3	+1.4
	baz=171						
E54A	Lac Daplat, Po	39.61	356	P	P	20 56 09.8	+1.8
	baz=174						
E63A	Oxbow	39.65	5	P	P	20 56 10.1	+1.8
	baz=187						
E64A	Bridgewater	39.70	6	P	P	20 56 10.5	+1.8
	baz=188						
D60A	Saint Jean D'O	39.98	2	P	P	20 56 13.0	+2.0
	baz=183						
D57A	Chemin Vers le	40.04	359	P	P	20 56 13.6	+2.0
	baz=179						
D55A	Sainte-Anne-du	40.09	357	P	P	20 56 13.9	+1.9
	baz=176						
D56A	ZEC Mazanza, M	40.10	358	P	P	20 56 13.5	+1.5
	baz=177						
D58A	Chemin du LacG	40.12	0	P	P	20 56 14.3	+2.2
	baz=180						
D62A	Allapoint, All	40.25	4	P	P	20 56 14.5	+1.3
D62A	Allapoint, All	40.25	4	P	P	20 56 15.3	+2.0
	baz=186,SNR=9.8						
E48A	Lockeyer	40.27	350	P	P	20 56 15.2	+1.8
	baz=166						
D63A	Stockholm	40.28	5	P	P	20 56 15.5	+2.0
	baz=188,SNR=5.3						
D54A	Lac Fusel, La	40.29	356	P	P	20 56 15.0	+1.4
	baz=174,SNR=5.1						
D53A	Lac Vacive, Po	40.30	355	IAmb	IAmb	20 56 16.9	
	comp=Z,5.6nm,0.7s						
D53A	Lac Vacive, Po	40.30	355	P	P	20 56 15.8	+2.1
	baz=173						
D61A	St Aubert, Com	40.30	3	P	P	20 56 16.3	+2.7
	baz=184,SNR=11						
LATQ	La Tuque	40.41	0	P	P	20 56 15.8	+1.4
LATQ	La Tuque	40.41	0	P	P	20 56 16.8	+2.3
	baz=180						
BATG	Bathurst New B	40.74	7	P	P	20 56 18.4	+1.1
D48A	Paudash Townsh	40.89	351	P	P	20 56 20.2	+1.7
	baz=167						
121A	Cookes Peak, D	41.18	313	P	P	20 56 22.9	+1.6
121A				IAmb	IAmb	20 56 24.2	
	comp=Z,7.5nm,1.1s						
121A	Cookes Peak, D	41.18	313	P	P	20 56 23.4	+2.0
	baz=121						
T25A	Trinidad	41.52	321	P	P	20 56 25.3	+1.2
T25A				IAmb	IAmb	20 56 26.5	
	comp=Z,4.4nm,0.6s						
T25A	Trinidad	41.52	321	P	P	20 56 26.0	+1.9
	baz=129						
ANMO	Albuquerque	41.54	317	P	P	20 56 24.9	+0.6
	comp=Z,1.4nm,0.5s,baz=133,slow=10,SNR=4.0						
ANMO	Albuquerque	41.54	317	P	P	20 56 25.7	+1.4
ANMO	Albuquerque	41.54	317	P	P	20 56 25.5	+1.2
	baz=125						
ECSD	EROS Data Cent	42.16	334	P	P	20 56 29.5	+0.5
	baz=144,SNR=6.7						
LSQQ	Lebel-sur-Quev	42.21	356	P	P	20 56 30.7	+1.5
	baz=174						
SDCO	Great Sand Dun	42.58	321	IAmb	IAmb	20 56 35.3	
	comp=Z,4.1nm,0.7s						
SDCO	Great Sand Dun	42.58	321	P	P	20 56 34.5	+1.8
	baz=128,SNR=5.1						
MATQ	Matagami	42.95	356	P	P	20 56 36.7	+1.6
	baz=173						
S22A	4UR Ranch, Cre	43.41	320	P	P	20 56 41.1	+1.7
	baz=127,SNR=6.4						
SUSD	Miller	43.75	333	P	P	20 56 42.1	+0.4
	baz=141						
EYMN	Ely	43.88	342	P	P	20 56 43.0	+0.4
EYMN				IAmb	IAmb	20 56 45.7	
	comp=Z,7.8nm,0.9s						
EYMN	Ely	43.88	342	P	P	20 56 43.4	+0.7
	baz=153						
ISCO	Idaho Springs	43.93	323	P	P	20 56 45.1	+1.6
	baz=130,SNR=7.0						
MVCO	Mesa Verde	44.19	318	P	P	20 56 47.2	+1.6
	baz=124						
214A	Organ Pipe Nat	44.66	309	P	P	20 56 51.0	+1.8
	baz=116						
PV01	Paradox Valley	44.76	319	IAmb	IAmb	20 56 52.8	
	comp=Z,5.3nm,0.8s						
PV15	Paradox Valley	44.82	320	IAmb	IAmb	20 56 53.3	
	comp=Z,13nm,0.8s						
N23A	Red Feather La	44.83	324	P	P	20 56 52.4	+1.8
	baz=130,SNR=5.3						
WUAZ	Wupatki	45.25	315	P	P	20 56 55.5	+1.5
WUAZ				IAmb	IAmb	20 56 57.0	
	comp=Z,14nm,0.9s						
WUAZ	Wupatki	45.25	315	P	P	20 56 55.9	+1.9
	baz=120,SNR=13						
AGMN	Agassiz Nation	45.63	339	P	P	20 56 57.1	+0.6
	baz=147						
Y14A	Wickenburg	45.68	312	IAmb	IAmb	20 56 59.4	
	comp=Z,8.8nm,0.8s						
O20A	White River Ci	45.72	322	IAmb	IAmb	20 57 04.8	
	comp=Z,4.4nm,0.7s						
O20A	White River Ci	45.72	322	P	P	20 56 57.3	-0.3
	baz=127						
RSSD	Black Hills	45.96	329	P	P	20 57 00.9	+1.5
	baz=135						
U15A	North Rim	46.35	315	IAmb	IAmb	20 57 05.4	
	comp=Z,8.2nm,1.0s						
GLA	Glamis	46.67	310	P	P	20 57 06.6	+1.7
	baz=115						
ULM	Lac du Bonnet	47.29	340	P	P	20 57 09.2	-0.1
	comp=Z,3.1nm,0.3s,baz=142,slow=7.5,SNR=14						
ULM	Lac du Bonnet	47.29	340	P	P	20 57 09.3	-0.1
ULM				IAmb	IAmb	20 57 10.3	
	comp=Z,4.3nm,0.5s						
IRM	Iron Mountain	47.38	311	P	P	20 57 11.7	+1.4
	baz=115						
PLCA	Paso Flores	47.39	177	P	P	20 57 07.9	-2.4
	comp=Z,1.8nm,1.1s,baz=6.3,slow=9.2,SNR=1.6						
PLCA	Paso Flores	47.39	177	P	P	20 57 07.5	-2.9
BC3	Big Chuckawall	47.40	310	P	P	20 57 12.3	+1.7
	baz=115						
PDAR	Pinedale Array	48.10	324	P	P	20 57 15.5	-0.5
	comp=Z,1.8nm,0.5s,baz=119,slow=9.0,SNR=18						
PDAR	Pinedale Array	48.10	324	P	P	20 57 16.4	+0.3
SCHQ	Schefferville	48.12	5	P	P	20 57 17.0	+1.2
	comp=Z,24nm,0.7s,baz=194,slow=6.7,SNR=78						
SCHQ	Schefferville	48.12	5	P	P	20 57 16.9	+1.2
TUQ	Turquoise Moun	48.50	312	P	P	20 57 20.5	+1.3
	baz=116						
HEC	Hector,Ludlow	48.55	311	P	P	20 57 19.1	-0.3
	baz=115						
HWUT	Hardware Ranch	48.63	322	IAmb	IAmb	20 57 21.9	
	comp=Z,4.1nm,0.6s						
DUG	Dugway, Tooele	48.64	319	P	P	20 57 21.4	+1.2
	baz=122,SNR=5.8						
GSC	Goldstone, Bar	49.10	312	P	P	20 57 25.2	+1.6
	baz=115,SNR=6.1						
DGMT	Dagmar	49.17	333	P	P	20 57 25.5	+1.7
	baz=137						
REDW	Red Top Meadow	49.22	324	IAmb	IAmb	20 57 26.4	
	comp=Z,7.7nm,0.6s						
SNOW	Snow King Moun	49.22	324	IAmb	IAmb	20 57 27.6	
	comp=Z,7.2nm,0.6s						
TPAW	Teton Pass	49.35	324	IAmb	IAmb	20 57 26.7	
	comp=Z,4.2nm,0.6s						
TPNV	Topopah Spring	49.40	314	P	P	20 57 27.9	+1.9
	baz=117,SNR=5.2						
RLMT	Red Lodge	49.40	327	P	P	20 57 26.9	+0.9
	baz=130						
R11A	Troy Canyon, C	49.58	316	P	P	20 57 28.8	+1.5
	baz=118,SNR=6.0						
IMW	Indian Meadow	49.59	324	IAmb	IAmb	20 57 29.0	
	comp=Z,4.5nm,0.6s						
EDW2	Edwards Air Fo	49.82	311	P	P	20 57 30.2	+1.2
	baz=113						
LRMC	Laurel Mtn Rad	49.82	311	P	P	20 57 30.2	+1.1
	baz=114						
MPMC	Manual Prospec	49.92	312	P	P	20 57 30.8	+0.8
	baz=115						
ELK	Elko	50.51	319	P	P	20 57 34.8	+0.4
	comp=Z,1.8nm,0.7s,baz=182,slow=10,SNR=5.0						
SMMC	Simmler	51.50	310	P	P	20 57 43.3	+1.7
	baz=112						
NVAR	Mina Array Bea	51.52	315	P	P	20 57 42.5	+0.6
	comp=Z,1.8nm,0.6s,baz=125,slow=7.0,SNR=18						
NVAR	Mina Array Bea	51.52	315	P	P	20 57 42.8	+0.8
EGMT	Eagleton	51.53	329	P	P	20 57 42.9	+1.2
	baz=131						
MFID	Camas Ranch	52.26	321	IAmb	IAmb	20 57 49.7	
	comp=Z,4.4nm,0.7s						
YERR	Yerington	52.42	315	IAmb	IAmb	20 57 50.6	
	comp=Z,5.0nm,0.7s						
PNTR	Pine Nut	52.71	315	IAmb	IAmb	20 57 57.3	
	comp=Z,4.8nm,0.7s						
PAHR	Pah Rah Range	52.83	316	P	P	20 57 52.4	+0.9
WVOR	Wild Horse Val	53.56	319	IAmb	IAmb	20 57 59.3	
	comp=Z,5.1nm,0.9s						
F10A	Beach Ranch, E	54.45	323	IAmb	IAmb	20 58 05.0	
	comp=Z,4.3nm,0.6s						
O03E	Paynes Creek	54.76	315	P	P	20 58 05.2	-0.2
	baz=114						
I07A	Izee	54.90	320	IAmb	IAmb	20 58 08.2	
	comp=Z,3.9nm,0.9s						
G08A	Pilot Rock	55.14	322	IAmb	IAmb	20 58 09.4	
	comp=Z,5.8nm,0.6s						
J05D	Fort Rock, OR	55.65	319	P	P	20 58 12.9	+1.1
	baz=116						
PINE	Pine Mountain	55.68	319	IAmb	IAmb	20 58 14.4	
	comp=Z,8.7nm,0.8s						
YBH	Yreka Blue Hor	55.97	317	P	P	20 58 13.3	-0.7
	comp=Z,2.5nm,0.5s,baz=119,slow=4.3,SNR=15						
YBH	Yreka Blue Hor	55.97	317	IAmb	IAmb	20 58 14.9	
	comp=Z,2.7nm,0.8s						
J04D	Umpqua Nationa	56.20	318	P	P	20 58 16.9	+1.1
	baz=116						
H04A	Detroit Lake	56.88	320	IAmb	IAmb	20 58 24.1	
	comp=Z,5.3nm,0.8s						
FRB	Frobisher Bay	56.90	2	P	P	20 58 20.0	0.0
	comp=Z,7.7nm,0.4s,baz=197,slow=7.2,SNR=47						
I03D	Drain, OR	57.21	318	P	P	20 58 23.6	+0.9
	baz=115						
YKA	Yellowknife Ar	63.27	340	P	P	20 59 03.8	+0.4
	comp=Z,2.3nm,0.7s,baz=133,slow=7.0,SNR=49						
YKA				pP	pP	20 59 44.5	+2.7
	comp=Z,0.5nm,0.5s,baz=132,slow=6.7,SNR=1.7						
TIC	Toumodi	67.52	86	*e*P	P	20 59 29.5	-2.2
LIC	Lamto	67.54	86	*e*P	P	20 59 30.5	-1.4
	comp=Z,22nm,0.6s						
DBIC	Dimbokro	67.68	86	P	P	20 59 31.2	-1.4
	comp=Z,4.2nm,0.6s,baz=282,slow=7.0,SNR=8.7						
DBIC	Dimbokro	67.68	86	P	P	20 59 31.3	-1.4
DBIC				IAmb	IAmb	20 59 32.0	
	comp=Z,4.6nm,0.7s						
KIC	Kosan Boka	67.81	86	*e*P	P	20 59 32.3	-1.3
	comp=Z,13nm,0.6s						
SUMG	Summit	68.97	11	*i* P	P	20 59 40.6	+0.5
	comp=Z,42nm,0.7s						
SUMG	Summit	68.97	11	P	P	20 59 40.4	+0.3
RES	Resolute Bay	68.97	354	P	P	20 59 39.3	-0.2
	comp=Z,0.3nm,0.3s,baz=178,slow=9.4,SNR=6.7						
RES	Resolute Bay	68.97	354	P	P	20 59 40.3	+0.8
INK	Inuvik	73.04	340	P	P	21 00 05.1	+0.9
	comp=Z,1.4nm,0.5s,baz=104,slow=5.1,SNR=5.5						
INK	Inuvik	73.04	340	P	P	21 00 05.0	+0.9
INK				IAmb	IAmb	21 00 07.1	
	comp=Z,7.7nm,1.4s						
TOA0	Torodi Ar. Sit	73.68	78	P	P	21 00 07.4	-1.6
TORD	Torodi Ar. Bea	73.68	78	P	P	21 00 07.6	-1.4
	comp=Z,0.7nm,0.3s,baz=287,slow=6.6,SNR=12						
TORD				pP	pP	21 00 50.2	+1.4
	comp=Z,0.4nm,0.3s,baz=292,slow=6.0,SNR=2.9						
NB2	NORSAR Subarra	81.29	29	P	P	21 00 50.7	+0.3
	comp=Z,2.2nm,0.6s,baz=269,slow=5.6						
NOA	NORSAR Array B	81.29	29	P	P	21 00 50.9	+0.5
	comp=Z,1.1nm,0.6s,baz=268,slow=5.3,SNR=4.9						
GERES	GERESS Array B	82.78	42	P	P	21 00 58.0	-0.5
	comp=Z,0.6nm,0.6s,baz=289,slow=3.0,SNR=3.2						
GERES	GERESS Array B	82.78	42	P	P	21 00 57.7	-0.8
ARCES	ARCESS Array B	86.64	20	P	P	21 01 17.2	-0.1
	comp=Z,3.5nm,0.8s,baz=287,slow=4.5,SNR=5.4						
ARCES	ARCESS Array B	86.64	20	P	P	21 01 17.4	+0.1
ARE0	ARCESS Array S	86.64	20	P	P	21 01 17.2	-0.1
FINES	FINESS Array B	88.40	28	P	P	21 01 26.0	+0.2
	comp=Z,1.4nm,0.8s,baz=282,slow=1.3,SNR=1.5						
FINES	FINESS Array B	88.40	28	P	P	21 01 25.5	-0.3
ZALV	Zalesovo Beam	116.64	14	PKP	PKPdf	21 07 16.8	-0.4
	comp=Z,1.0nm,0.4s,baz=297,slow=2.5,SNR=6.8						
ZALV	Zalesovo Beam	116.64	14		PKPdf	21 07 16.9	-0.3
MKAR	Makanchi Array	122.29	20	PKP	PKPdf	21 07 28.0	-0.4
	comp=Z,0.5nm,0.4s,baz=300,slow=2.7,SNR=21						
SONM	Songino Array	125.57	0	PKP	PKPdf	21 07 34.3	-0.4
	comp=Z,0.6nm,0.6s,baz=327,slow=1.7,SNR=4.2						
SONM	Songino Array	125.57	0		PKPdf	21 07 34.8	0.0
KSH	Kashi	125.71	29	PKP	PKPdf	21 07 34.8	-0.5
KSH				sPKP		21 08 34.3	
KSH				PP	PP	21 09 31.4	+3.0
KSH				PKS	PKSdf	21 11 10.5	-1.5
KSH				SKKS		21 16 08.3	
LZH	Lanzhou	137.21	4	⇓PKP	PKPdf	21 07 56.8	-0.3
LZH				pPKP	pPKPdf	21 08 36.9	-3.6
LZH				sPKP		21 08 54.5	
ASAR	Alice Springs	149.16	234	PKPbc	PKPbc	21 08 21.6	-1.0
	comp=Z,2.2nm,0.6s,baz=105,slow=1.5,SNR=7.4						
ASAR	Alice Springs	149.16	234		PKPdf	21 08 17.8	-0.4
CMAR	Chiang Mai Arr	153.66	17	PKPbc	PKPbc	21 08 32.6	-0.4
	comp=Z,1.2nm,0.6s,baz=321,slow=3.7,SNR=7.3						
CMAR				PKPab	PKPab	21 08 44.9	-1.1
	comp=Z,0.8nm,0.6s,baz=338,slow=5.6,SNR=4.6						
CMAR	Chiang Mai Arr	153.66	17		PKPbc	21 08 32.8	-0.2
CMAR					PKPab	21 08 45.6	-0.5

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*NEIC **22** 20:51:20.4±1.9, 3°.6N±0°.1×127°.13E±0°.09, h56^{km}±11^{km}, mb4.1/13, Error ellipse: s-maj=17.6km s-min=13.5km az=188.0*

*IDC **22** 20:51:23.1±6.2, 3°.13N×126°.96E, h111^{km}±87^{km}, mb3.5/5, mb1 3.6/6, mb1mx3.3/39, mbtmp3.8/6, ML3.8/1, Error ellipse: s-maj=87.9km s-min=32.2km az=15.0*

ISC 22 20:51:19.7±0.6**, 3°.61N**±0°.07×**127°.15E**±0°.09**, h48^{km}, n25, σ1^{s}11**/27**, mb4.1**/10**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.83	176	Pn	Pn	20 52 02.5	0.0
TNTI				Sn	Sn	20 52 34.6	-0.7
SIJI	Sorong	6.06	137	P	Pn	20 52 47.5	+0.6
	2.8nm,0.3s,baz=343,slow=22,SNR=4.1						
SIJI				S	Sn	20 53 54.0	-1.0
	0.7nm,0.3s,baz=36,slow=24,SNR=1.3						
LUWI	Luwuk	6.36	223	Pn	Pn	20 52 51.8	+0.9
FAKI	Fak Fak	8.25	142	Pn	Pn	20 53 17.9	+1.0
KSM	Kuching	16.95	263		Pn	20 55 14.3	+0.6
KSM				IAmb	IAmb	20 55 19.6	
	comp=Z,17nm,1.4s						
YHNB	Yeheng	21.66	346	P	P	20 56 06.4	0.0
YHNB				IAmb	IAmb	20 56 15.3	
	comp=Z,12nm,0.9s						
CM31	Chiang Mai Arr	31.29	300	P	P	20 57 33.2	-2.3
CM31				IAmb	IAmb	20 57 42.2	
	comp=Z,2.9nm,0.9s						
CMAR	Chiang Mai Arr	31.29	300	P	P	20 57 32.7	-2.8
	comp=Z,0.5nm,0.7s,baz=108,slow=8.6,SNR=2.4						
CMAR	Chiang Mai Arr	31.29	300	P	P	20 57 34.9	-0.6
CHTO	Chiang Mai	31.44	301	P	P	20 57 35.6	-1.2
SONM	Songino Array	47.54	341	P	P	20 59 51.7	+1.2
	comp=Z,0.6nm,0.7s,baz=152,slow=9.5,SNR=2.6						
SONM	Songino Array	47.54	341	P	P	20 59 52.1	+1.6
PETK	Petropavlovsk-	55.38	22	P	P	21 00 48.7	-0.2
	comp=Z,3.3nm,0.8s,baz=195,slow=11,SNR=2.2						
MK31	Makanchi Array	57.89	325	P	P	21 01 06.3	-0.6
MKAR	Makanchi Array	57.89	325	P	P	21 01 05.6	-1.2
	comp=Z,0.6nm,0.4s,baz=115,slow=7.4,SNR=7.5						
MAKZ	Makanchi	58.08	325	P	P	21 01 07.3	-0.9
MAKZ				IAmb	IAmb	21 01 11.0	
	comp=Z,1.6nm,1.1s						
KURK	Kurchatov	62.06	327	P	P	21 01 35.4	0.0
KURK				IAmb	IAmb	21 01 35.5	
	comp=Z,1.7nm,0.8s						
BRVK	Borovoye	67.72	327	P	P	21 02 12.0	-0.1
BRVK				IAmb	IAmb	21 02 14.0	
	comp=Z,2.3nm,0.8s						
TIXI	Tiksi	67.96	1	P	P	21 02 14.2	+1.0
ABKAR	Akbulak array	72.50	321	P	P	21 02 41.0	-0.5
ARU	Arti	75.26	328	P	P	21 02 57.5	0.0
IMAR	Indian Mountai	82.28	24	P	P	21 03 36.1	+0.2
PPLA	Purkeypile	82.54	27	P	P	21 03 37.8	+0.3
SUA	Susitna One	83.07	29	P	P	21 03 40.5	+0.3
ILAR	Eielson Array	85.03	25	P	P	21 03 48.5	-1.5
	comp=Z,0.4nm,0.8s,baz=270,slow=4.9,SNR=1.8						

IDC 22 21:03:55.3±2.2**, 31°.93N**×**41°.07W, h0^{km}, mb3.4**/4**, mb1 3.8**/4**, mb1mx3.4**/45**, mbtmp3.4**/4**, Error ellipse: s-maj=138.1km s-min=31.4km az=25.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	43.36	106	P	P	21 11 59.4	-0.1
	0.8nm,1.2s,baz=317,slow=6.6,SNR=1.7						
H10N2	ASCENSION HYDR	46.98	143	T	T	22 01 59.0	
	baz=328,slow=75,SNR=24						
H10N3	ASCENSION HYDR	46.98	143	T	T	22 01 55.2	
	baz=328,slow=75,SNR=22						
H10N1	ASCENSION HYDR	47.00	143	T	T	22 01 55.3	
	baz=328,slow=75,SNR=28						
H10S3	ASCENSION HYDR	47.85	144	T	T	22 02 57.5	
	baz=328,slow=74,SNR=33						
H10S2	ASCENSION HYDR	47.86	144	T	T	22 02 58.6	
	baz=252,slow=74,SNR=24						
PDAR	Pinedale Array	54.15	302	P	P	21 13 22.7	+0.2
	0.6nm,0.8s,baz=82,slow=9.6,SNR=4.4						
NVAR	Mina Array Bea	61.75	300	P	P	21 14 15.7	-0.3
	0.3nm,0.7s,baz=67,slow=6.9,SNR=1.8						
ILAR	Eielson Array	67.91	334	P	P	21 14 55.4	0.0
	0.3nm,0.9s,baz=53,slow=5.0,SNR=2.7						

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*NEIC **22** 21:30:27.8±1.8, 33°.58S±0°.03×177°.4W±0°.1, h36^{km}±3^{km}, mb4.8/57, Error ellipse: s-maj=15.0km s-min=4.1km az=98.0*

*BJI **22** 21:30:27.2±0.0, 34°.17S×177°.74W, h34^{km}, mB5.5/3, mb5.2/7, Ms7 4.6/3*

*WEL **22** 21:30:30.9±0.6, 33°S±5°×17°8W±1°3, h33^{km}, M5.1/13, mB5.5/9, ML5.5/13, MLv5.2/13, Mw(mB)5.0/9*

*IDC **22** 21:30:31.0±0.6, 33°.17S×178°.50W, h0^{km}, mb4.7/19, mb1 4.7/22, mb1mx4.5/40, mbtmp4.7/22, ML4.7/3, MS4.3/16, Ms1 4.3/16, ms1mx4.1/38, Error ellipse: s-maj=19.2km s-min=16.3km az=88.0*

*MOS **22** 21:30:34.9±2.5, 33°.15S×178°.62W, h39^{km}, mb5.3/5, Error ellipse: s-maj=13.1km s-min=11.1km az=119.3*

GCMT **22** *21:30:35.8±0.3, 33.°25S±0.°02×178.°05W±0.°02, h22km±1km, MW5.0/91, Moment Tensor Solution. s58,c75; s91,c130; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.32±.17; $M_{\theta\theta}$-0.79±.12; $M_{\phi\phi}$-2.53±.11; $M_{r\theta}$0.69±.19; $M_{\theta\phi}$-1.05±.08; $M_{\phi r}$3.32±.20; Best double couple: $M_0$4.63800×10^{16} NP1:ϕ_s212.00000°,δ22.00000°,λ105.00000°. NP2: ϕ_s16.00000°,δ69.00000°,λ84.00000°. Principal axes: T 4.8260, Plg66.0000°, Azm275.0000°; N -0.3790, Plg6.0000°, Azm18.0000°; P -4.4500, Plg23.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 21:30:29.1±0.5**, 33.°55S**±0.°05×**177.°51W**±0.°08**, h35km, n243,** σ**2.ˢ55**/226**, mb4.8**/50**, MS4.3**/21**, 3C-1D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.29	355	P	Pn	21 31 29.3	-2.5
GLKZ				S	Sn	21 32 16.2	-4.5
RAO	Raoul Island	4.30	355	Pn	Pn	21 31 33.0	+1.0
	155nm,0.3s,baz=59,slow=23,SNR=2.5						
RAO				Sn	Sn	21 32 16.8	-4.1
	298nm,0.3s,baz=14,slow=23,SNR=4.4						
RAO	Raoul Island	4.30	355	P	Pn	21 31 33.0	+1.0
RAO	Raoul Island	4.30	355	Pn	Pn	21 31 31.3	-0.7
RAO					Sn	21 32 18.9	-2.0
RIZ	Raoul Island	4.31	355	P	Pn	21 31 26.4	-5.7
RIZ				S	Sn	21 32 16.2	-4.9
MXZ	Matakaoa Point	5.26	219		Pn	21 31 45.1	0.0
MXZ	Matakaoa Point	5.26	219	P	Pn	21 31 46.6	+1.5
MXZ				S	Sn	21 32 46.5	+2.0
WMGZ	Waiomatatini S	5.40	217	P	Pn	21 31 48.2	+1.2
WMGZ				S	Sn	21 32 51.2	+3.3
PUZ	Puketiti	5.67	216	P	Pn	21 31 53.1	+2.2
PUZ				S	Sn	21 32 55.2	+0.5
HAZ	Te Kaha	5.68	221	P	Pn	21 31 52.7	+1.8
HAZ				S	Sn	21 32 58.3	+3.4
RUGZ	Raukumara Rang	5.89	220	P	Pn	21 31 56.2	+2.2
RUGZ				S	Sn	21 33 01.1	+0.8
TWGZ	Tauwhareparae	5.89	217	P	Pn	21 31 55.9	+2.1
TWGZ				S	Sn	21 33 02.5	+2.4
TKGZ	Te Karaka	6.16	216	P	Pn	21 31 60.0	+2.5
TKGZ				S	Sn	21 33 07.0	+0.3
MWZ	Matawai	6.24	219	P	Pn	21 32 00.2	+1.5
MWZ				S	Sn	21 33 09.1	+0.3
RIGZ	Rimuhau	6.41	215	P	Pn	21 32 02.8	+1.9
URZ	Urewera	6.41	221	Pn	Pn	21 32 03.3	+2.3
	28nm,0.3s,baz=25,slow=4.0,SNR=134						
URZ				Sn	Sn	21 33 10.9	-2.0
	6.9nm,0.3s,baz=80,slow=1.1,SNR=4.6						
URZ	Urewera	6.41	221		Pn	21 32 02.0	+1.0
URZ					Sn	21 33 13.0	+0.1
URZ	Urewera	6.41	221	P	Pn	21 32 01.6	+0.7
URZ				S	Sn	21 33 12.0	-0.9
RAGZ	Rawiri	6.42	218	P	Pn	21 32 02.6	+1.4
OPRZ	Ohinepanea	6.45	227	P	Pn	21 32 03.2	+1.7
MARZ	Manawahe	6.47	225	P	Pn	21 32 04.3	+2.4
PRGZ	Paritu Road	6.53	213	P	Pn	21 32 04.5	+1.9
SNGZ	Shannon Statio	6.68	217	P	Pn	21 32 07.7	+3.0
MUGZ	Murupara	6.75	222	P	Pn	21 32 06.9	+1.2
BKZ	Black Stump Fm	7.40	219		Pn	21 32 15.3	+0.7
OUZ	Omahuta	7.54	255		Pn	21 32 16.6	+0.2
HIZ	Hauiti	7.92	229		Pn	21 32 20.6	-1.1
BFZ	Birch Farm	8.69	213	Pn	Pn	21 32 32.1	-0.1
BFZ				Sn	Sn	21 34 07.2	-1.7
MSWZ	Moikau Station	9.73	214	Pn	Pn	21 32 45.8	-0.6
PLWZ	Palliser	9.85	214	Pn	Pn	21 32 47.2	-0.9
BHW	Baring Head	9.90	215	Pn	Pn	21 32 47.0	-1.8
SNZO	South Karori	9.91	216	Pn	Pn	21 32 47.9	-1.0
TUWZ	Tuamarina	10.38	218	Pn	Pn	21 32 54.5	-1.0
CMWZ	Cape Campbell	10.48	216	Pn	Pn	21 32 57.4	+0.6
NNZ	Nelson	10.53	221	Pn	Pn	21 32 57.3	-0.1
BSWZ	Blackbirch Sta	10.63	217	Pn	Pn	21 32 58.0	-0.8
QRZ	Quartz Range	10.76	225	Pn	Pn	21 32 57.9	-2.7
THZ	Tophouse	11.17	220	Pn	Pn	21 33 02.9	-3.3
KHZ	Kahutara	11.31	216	Pn	Pn	21 33 06.9	-1.2
LTZ	Lake Taylor	12.22	218		Pn	21 33 18.1	-2.5
MQZ	McQueen's Vall	12.71	214	Pn	Pn	21 33 24.7	-2.6
OXZ	Oxford	12.73	217		Pn	21 33 25.6	-1.9
RPZ	Rata Peaks	13.51	218	Pn	Pn	21 33 33.7	-4.4
	1.7nm,0.3s,baz=37,slow=1.4,SNR=9.9						
RPZ				Sn	Sn	21 35 51.9	-15
	2.2nm,0.3s,baz=82,slow=12,SNR=2.3						
RPZ	Rata Peaks	13.51	218		Pn	21 33 35.6	-2.5
FOZ	Fox Glacier	14.04	221	Pn	Pn	21 33 44.7	-0.7
LBZ	Lake Benmore	14.43	218	Pn	Pn	21 33 49.1	-1.5
ODZ	Otahua Downs	14.67	215	Pn	Pn	21 33 53.0	-0.9
WKZ	Wanaka	15.33	219	Pn	Pn	21 34 00.8	-2.0
NIUE	Niue	15.93	27		P	21 34 11.2	-2.6
MLZ	Mavora Lakes	16.17	219	P	Pn	21 34 13.4	-0.2
MSVF	Nonsavu	16.25	345	P	Pn	21 34 14.9	+0.2
MSVF				pmax	pmax		
	comp=Z,21nm,0.9s						
MSVF	Nonsavu	16.25	345	P	Pn	21 34 14.9	+0.2
WHZ	Wether Hill Ro	16.61	218	Pn	Pn	21 34 17.9	-1.3
DCZ	Deep Cove	16.75	220	Pn	Pn	21 34 18.9	-1.9
PYZ	Puysegur Point	17.45	219	Pn	Pn	21 34 28.2	-1.4
PYZ				IAmb	IAmb	21 34 40.3	
	comp=Z,87nm,1.2s						
DZM	Mont Dzumac	18.20	305	eP	Pn	21 34 40.0	+1.0
	comp=Z,102nm,1.5s						
DZM				eLR	LR	21 39 03.3	
	comp=Z,3µm,22.6s						
DZM	Mont Dzumac	18.20	305	P	P	21 34 36.0	-3.1
	comp=Z,0.5nm,0.3s,baz=8.4,slow=22,SNR=9.7						
DZM				LR	LR	21 40 31.2	
	comp=Z,4µm,18.1s,baz=184,slow=35						
DZM	Mont Dzumac	18.20	305	P	P	21 34 38.8	-0.3
RAR	Rarotonga	19.94	56	LR	LR	21 43 01.0	
	comp=Z,280nm,19.5s,baz=243,slow=37						
AFI	Afiamalu	20.24	16	P	Pn	21 35 07.5	+4.0
	comp=Z,14nm,0.2s,baz=117,slow=4.5,SNR=2.9						
AFI	Afiamalu	20.24	16	P	P	21 35 00.7	-0.7
AFI				pmax	pmax		
	comp=Z,41nm,1.1s						
AFI	Afiamalu	20.24	16	P	P	21 35 00.7	-0.7
AFI				IAmb	IAmb	21 35 16.3	
	comp=Z,41nm,1.1s						
ARMA	Armidale	26.31	268	P	P	21 36 01.1	-0.6
TBI	Tubuai	26.60	75	eLQ	LQ	21 41 33.1	
	comp=Z,789nm,24.0s						
TBI				eLR	LR	21 42 52.9	
	comp=Z,695nm,28.8s,baz=240						
TBI	Tubuai	26.60	75	eT	T	22 03 28.9	
	comp=Z,9.4nm,0.4s						
MCQ	Macquarie Isla	26.69	211	P	P	21 36 04.3	-0.4
MCQ				pmax	pmax		
	comp=Z,70nm,1.1s						
MCQ	Macquarie Isla	26.69	211	P	P	21 36 04.3	-0.4
MCQ				IAmb	IAmb	21 36 04.6	
	comp=Z,70nm,1.1s						
CAN	Canberra	27.61	257	P	P	21 36 14.0	+0.8
CAN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CAN	Canberra	27.61	257	P	P	21 36 14.0	+0.8
EIDS	Eidsvold	28.45	278	P	P	21 36 21.1	+0.3
EIDS				IAmb	IAmb	21 36 31.9	
	comp=Z,16nm,1.0s						
TAU	Tasmania Unive	28.98	241	P	P	21 36 22.8	-2.5
TAU				pmax	pmax		
	comp=Z,34nm,1.1s						
TAU	Tasmania Unive	28.98	241	P	P	21 36 22.8	-2.5
TAU				IAmb	IAmb	21 36 23.2	
	comp=Z,34nm,1.1s						
PAE	Paea	29.62	65	eT	T	22 07 17.1	
	comp=Z,2.0nm,0.3s						
PPT2	Papeete2	29.66	65	eLR	LR	21 44 21.8	
	comp=Z,621nm,24.5s,baz=233						
PPT	Papeete	29.68	65	LR	LR	21 49 22.1	
	comp=Z,577nm,18.1s,baz=242,slow=37						
TOO	Toolangi	30.23	252	P	P	21 36 35.7	-0.8
TOO				pmax	pmax		
	comp=Z,12nm,1.2s						
TOO	Toolangi	30.23	252	P	P	21 36 35.7	-0.8
HNR	Honiara	31.72	314	P	P	21 36 49.1	-0.6
	comp=Z,27nm,0.3s,baz=196,slow=3.0,SNR=4.7						
HNR	Honiara	31.72	314	P	P	21 36 49.0	-0.8
VAH	Vaihoa	32.59	63	eT	T	22 11 00.0	
	comp=Z,4.9nm,0.3s						
STKA	Stephens Creek	34.29	261	P	P	21 37 12.5	+0.4
	comp=Z,2.1nm,0.6s,baz=99,slow=7.4,SNR=5.8						
STKA				PcP	PcP	21 39 52.4	+4.5
	comp=Z,3.6nm,0.6s,baz=133,slow=7.1,SNR=7.0						
STKA				LR	LR	21 50 29.7	
	comp=Z,2µm,18.1s,baz=89,slow=36						
STKA	Stephens Creek	34.29	261	P	P	21 37 10.9	-1.1
CTA	Charters Tower	34.82	283	P	P	21 37 17.5	+0.8
	comp=Z,15nm,0.5s,baz=118,slow=10,SNR=30						
CTAO	Charters Tower	34.82	283	P	P	21 37 17.5	+0.8
CTAO				pmax	pmax		
	comp=Z,27nm,0.6s						
BBOO	Buckleboo	38.61	258	P	P	21 37 48.8	-0.1
PMG	Port Moresby	40.39	298	P	P	21 38 03.9	+0.1
	comp=Z,3.0nm,0.3s,baz=20,slow=7.5,SNR=3.5						
PMG	Port Moresby	40.39	298	eP	P	21 38 04.1	+0.2
PMG				pmax	pmax		
	comp=Z,34nm,1.0s						
COEN	Coen	40.61	289	P	P	21 38 06.7	+0.9
COEN				IAmb	IAmb	21 38 24.3	
	comp=Z,13nm,0.8s						
RABL	Rabaul	40.63	309	P	P	21 38 05.6	-0.3
KRVT	Keravat (AS076	40.63	309	P	P	21 38 05.5	-0.4
	comp=Z,106nm,0.6s,baz=354,slow=1.1,SNR=7.2						
TAOE	Nuku Hiva Isla	42.27	63	eLR	LR	21 50 00.9	
	comp=Z,268nm,23.1s,baz=216						
AS31	Alice Springs	43.44	270	IAmb	IAmb	21 38 30.4	
	comp=Z,15nm,0.6s						
ASAR	Alice Springs	43.44	270	P	P	21 38 29.0	+0.2
	comp=Z,36nm,0.6s,baz=110,slow=7.4,SNR=513						
ASAR				PcP	PcP	21 40 20.8	+4.1
	comp=Z,3.7nm,0.7s,baz=116,slow=3.6,SNR=6.3						
ASAR				S	S	21 44 47.5	-7.5
	comp=Z,1.1nm,0.8s,baz=116,slow=15,SNR=6.2						
ASAR				LR	LR	21 55 37.4	
	comp=Z,286nm,19.3s,baz=120,slow=35						
ASAR	Alice Springs	43.44	270	P	P	21 38 28.5	-0.3
WRAB	Tennant Creek	44.70	275	eP	P	21 38 38.5	-0.4
WRAB				pmax	pmax		
	comp=Z,11nm,0.7s						
WRAB	Tennant Creek	44.70	275	P	P	21 38 38.8	-0.2
VNDA	Vanda	45.02	186	LR	LR	21 55 17.4	
	comp=Z,336nm,19.4s,baz=16,slow=33						
FORT	Forrest	45.72	258	IAmb	IAmb	21 38 56.8	
	comp=Z,23nm,0.7s						
PATS	Pohnpei	46.25	326	P	P	21 38 50.7	-0.4
MTN	Manton Dam	50.94	281	P	P	21 39 25.7	-1.5
MTN				IAmb	IAmb	21 39 28.3	
	comp=Z,9.5nm,0.7s						
KNRA	Kununurra	51.41	277	P	P	21 39 30.1	-0.7
KNRA				IAmb	IAmb	21 39 31.6	
	comp=Z,9.7nm,0.8s						
CASY	Casey	52.57	209	P	P	21 39 38.3	-0.5
FITZ	Fitzroy Crossi	52.83	272	P	P	21 39 41.9	+0.6
	comp=Z,9.9nm,0.6s,baz=147,slow=7.1,SNR=49						
FITZ	Fitzroy Crossi	52.83	272	P	P	21 39 41.3	0.0
FITZ				IAmb	IAmb	21 39 42.6	
	comp=Z,12nm,0.7s						
NWAO	Narrogin (SRO)	53.73	251	P	P	21 39 47.4	-0.4
NWAO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NWAO	Narrogin (SRO)	53.73	251	P	P	21 39 47.3	-0.4
NWAO				IAmb	IAmb	21 39 51.9	
	comp=Z,18nm,1.1s						
NWAO	Narrogin (SRO)	53.73	251	P	P	21 39 47.4	-0.4
NWAO				IAmb	IAmb	21 40 00.4	
	comp=Z,9.0nm,0.9s						
FAKI	Fak Fak	55.85	292	P	P	21 40 02.5	-0.8
PSAD2	Pilbara Seismi	55.94	265	P	P	21 40 03.2	-0.8
PSAD2				IAmb	IAmb	21 40 09.1	
	comp=Z,8.3nm,1.1s						
PSAC2	Pilbara Seismi	56.02	265	P	P	21 40 04.3	-0.2
PSAC2				IAmb	IAmb	21 40 14.6	
	comp=Z,9.3nm,1.1s						
PSAB3	Pilbara Seismi	56.04	265	P	P	21 40 04.4	-0.3
PSAA3	Pilbara Seismi	56.05	265	P	P	21 40 04.3	-0.5
PSAA3				IAmb	IAmb	21 40 15.1	
	comp=Z,15nm,1.1s						
PSAC3	Pilbara Seismi	56.05	265	P	P	21 40 03.3	-1.5
PSAC3				IAmb	IAmb	21 40 05.6	
	comp=Z,7.6nm,0.8s						
PSAB2	Pilbara Seismi	56.06	265	P	P	21 40 04.3	-0.5
PSAB2				IAmb	IAmb	21 40 05.9	
	comp=Z,6.5nm,0.8s						
PSA00	Pilbara Seismi	56.06	265	P	P	21 40 04.2	-0.5
PSA00				IAmb	IAmb	21 40 05.3	
	comp=Z,6.3nm,0.8s						
PSA00	Pilbara Seismi	56.06	265	P	P	21 40 04.3	-0.5
PSA00				IAmb	IAmb	21 40 10.2	
	comp=Z,1.5nm,0.8s						
PSAA2	Pilbara Seismi	56.06	265	P	P	21 40 03.9	-0.9
PSAA2				IAmb	IAmb	21 40 05.7	
	comp=Z,5.2nm,0.8s						
PSAA1	Pilbara Seismi	56.07	265	P	P	21 40 04.2	-0.6
PSAA1				IAmb	IAmb	21 40 08.7	
	comp=Z,13nm,1.1s						
MORW	Morawa	56.08	255	P	P	21 40 04.9	0.0
PSAB1	Pilbara Seismi	56.08	265	P	P	21 40 04.6	-0.4
PSAB1				IAmb	IAmb	21 40 08.5	
	comp=Z,6.6nm,0.9s						
PSAD3	Pilbara Seismi	56.08	265	P	P	21 40 03.7	-1.3
PSAD3				IAmb	IAmb	21 40 10.5	
	comp=Z,6.7nm,0.8s						
PSAC1	Pilbara Seismi	56.11	265	P	P	21 40 04.2	-1.0
PSAC1				IAmb	IAmb	21 40 12.3	
	comp=Z,9.6nm,1.1s						
PSAD1	Pilbara Seismi	56.13	265	P	P	21 40 04.5	-0.8
PSAD1				IAmb	IAmb	21 40 11.7	
	comp=Z,10.0nm,1.0s						
KHU	Kahuku	56.51	25	P	P	21 40 04.6	-3.5
QSPA	South Pole Qui	56.57	180	P	P	21 40 18.9	+11
	comp=Z,13nm,1.0s,baz=29,slow=0.9,SNR=38						
SIJI	Sorong	57.91	293	P	P	21 40 17.9	-0.1
	comp=Z,5.8nm,0.6s,baz=172,slow=4.8,SNR=5.4						
SOEI	Soe	58.25	280	P	P	21 40 19.9	-0.6
GIRL	Giralia	60.24	261	P	P	21 40 31.7	-2.3
KAPI	Kappang	64.60	281	P	P	21 41 04.4	+1.2
	comp=Z,4.7nm,0.6s,baz=148,slow=11,SNR=5.3						
KAPI				LR	LR	22 09 39.7	
	comp=Z,253nm,18.5s,baz=164,slow=37						
JAGI	Jajag, Banyuwa	67.33	275	P	P	21 41 20.3	-0.5
JAGI				IAmb	IAmb	21 41 28.7	
	comp=Z,8.8nm,0.8s						
MAW	Mawson	69.52	201	P	P	21 41 41.6	+8.0
	comp=Z,2.2nm,0.6s,baz=115,slow=17,SNR=2.2						
JCJ	Chichijima	71.42	323	LR	LR	22 08 07.2	
	comp=Z,74nm,19.2s,baz=72,slow=32						
CISI	Cisompet, Garu	73.10	272	P	P	21 41 56.6	+0.4
CISI				IAmb	IAmb	21 41 59.9	
	comp=Z,24nm,1.0s						
XMIS	Christmas Isla	73.35	268	P	P	21 41 55.4	-2.3
KKM	Kota Kinabalu	73.94	289	P	P	21 42 00.6	-0.6
KKM				IAmb	IAmb	21 42 06.3	
	comp=Z,22nm,1.1s						
SYO	Syowa Base	74.15	193	⇓ eP	P	21 41 57.2	-4.2
SYO	Syowa Base	74.15	193	⇑ epP	pP	21 42 08.4	-1.7
SYO	Syowa Base	74.15	193	⇑ ePcP	PcP	21 42 12.6	-3.7
SNAA	Sanae	75.00	178	P	P	21 42 15.8	+9.3
VNA3	Neumayer Olymp	75.14	176	P	P	21 42 17.0	+10
PAF	Port-aux-Franc	77.93	218	P	P	21 42 20.8	-2.5
PAF				pmax	pmax		
	comp=Z,137nm,1.1s						
MJAR	Matsushiro Arr	81.06	325	P	P	21 42 42.5	+2.1
	comp=Z,1.8nm,0.8s,baz=122,slow=5.1,SNR=4.2						
JNU	Nakatsue	82.18	318	LR	LR	22 13 47.1	
	comp=Z,55nm,20.0s,baz=94,slow=32						
ASAJ	Asahikawa	85.42	332	P	P	21 43 06.4	+3.8
	comp=Z,4.9nm,0.6s,baz=217,slow=6.9,SNR=9.1						
LPIG	La Paz	85.86	58	LR	LR	22 16 23.9	
	comp=Z,269nm,18.3s,baz=242,slow=32						
HOPE	Hope Point	86.28	158	P	P	21 43 02.9	-4.0
KSRS	Korea Array	87.01	320	P	P	21 43 14.1	+3.5
	comp=Z,1.6nm,0.7s,baz=144,slow=5.7,SNR=8.4						
KSRS				LR	LR	22 20 36.6	
	comp=Z,87nm,18.2s,baz=126,slow=35						
YSS	Yuzh-Sakhalins	87.75	334	eP	P	21 43 19.2	+5.3
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
PFO	Pinyon Flats O	88.04	47	LR	LR	22 17 24.1	
	comp=Z,240nm,18.8s,baz=222,slow=32						
NJ2	Nanjing	88.60	310	eP	P	21 43 19.5	+1.2
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.7s						
PEA0B	Petropavlovsk-	88.96	345	P	P	21 43 19.5	0.0
PEA0B				pmax	pmax		
	comp=Z,32nm,1.1s						
PEA0B	Petropavlovsk-	88.96	345	P	P	21 43 19.5	0.0
PETK	Petropavlovsk-	88.96	345	P	P	21 43 24.5	+5.0
	comp=Z,8.0nm,0.8s,baz=121,slow=6.4,SNR=7.5						
PETK				LR	LR	22 19 20.2	
	comp=Z,187nm,20.8s,baz=236,slow=33						
PETK	Petropavlovsk-	88.96	345	P	P	21 43 19.7	+0.2
PETK	Petropavlovsk-	88.96	345	P	P	21 43 19.7	+0.2
USRK	Ussuriysk Ar.	90.00	326	P	P	21 43 28.6	+4.0
	comp=Z,1.3nm,0.6s,baz=105,slow=6.7,SNR=6.5						
NVAR	Mina Array Bea	90.27	42	P	P	21 43 36.4	+10
	comp=Z,0.7nm,0.7s,baz=241,slow=5.0,SNR=5.7						
NVAR	Mina Array Bea	90.27	42		sP	21 43 37.8	-0.7
ELK	Elko	93.58	42	LR	LR	22 18 32.5	
	comp=Z,158nm,19.9s,baz=223,slow=31						
KLR	Kul'dur	93.95	329	P	P	21 43 47.1	+4.4
	comp=Z,0.7nm,0.5s,baz=143,slow=5.1,SNR=1.9						
KLR	Kul'dur	93.95	329	i P	P	21 43 43.7	+0.9
KLR				pmax	pmax		
	comp=Z,12nm,3.5s						
G08A	Pilot Rock	94.71	37	P	P	21 43 43.2	-3.3
CMAR	Chiang Mai Arr	94.82	289	LR	LR	22 28 17.9	
	comp=Z,69nm,19.9s,baz=160,slow=37						
BBB	Bella Bella	95.67	28	LR	LR	22 21 18.6	
	comp=Z,113nm,19.5s,baz=200,slow=32						
LPAZ	La Paz	96.48	114	LR	LR	22 18 28.8	
	comp=Z,3µm,21.9s,baz=232,slow=30						
GAMB	Gambell	97.11	3	P	Pdif	21 43 56.3	-0.6
CD2	Chengdu	98.10	302	P	Pdif	21 44 02.1	-0.1
HHC	Hu-ho-hao-te	98.70	314	eP	Pdif	21 44 07.0	+2.2
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,43nm,6.3s						
SEY	Seymchan	99.13	347	P	Pdif	21 44 10.8	+4.9
	comp=Z,1.1nm,0.8s,baz=43,slow=17,SNR=4.9						
SEY	Seymchan	99.13	347	i P	Pdif	21 44 06.0	+0.1
LZH	Lanzhou	100.92	306	eP	Pdif	21 44 17.0	+2.2
LZH				pP	pwP	21 44 29.1	-4.0
LZH				sP	sPdif	21 44 33.3	+6.6
LZH				ePP	PP	21 48 29.6	+6.0
LZH				pmax	pmax		
	comp=Z,83nm,9.5s						
LZH				LR	LR		
	comp=Z,180nm,19.6s						
YKA	Yellowknife Ar	108.10	26	PKKPbc	PKKPbc	22 00 11.6	+5.7
	comp=Z,0.3nm,0.7s,baz=53,slow=3.2,SNR=5.7						
WMQ	Urumqi	115.47	307	ePKP	PKiKP	21 49 06.3	-0.7
WMQ				LR	LR		
	comp=Z,120nm,29.0s						
MK31	Makanchi Array	120.08	309	i PKIKP	PKPdf	21 49 12.8	-3.0
ZALV	Zalesovo Beam	120.63	317	PKP	PKiKP	21 49 22.5	+5.8
	comp=Z,1.0nm,0.4s,baz=107,slow=3.6,SNR=5.6						
KSH	Kashi	122.16	299	PKP	PKiKP	21 49 19.8	-0.5
KSH				sPKP		21 49 35.3	
KSH				PP	PP	21 51 02.3	+6.4
KSH				PKS		21 52 56.1	
KSH				SKKS		21 57 50.8	
KSH				LR	LR		
	comp=Z,290nm,15.0s						
NRIK	Noril'sk	122.67	335	i PKIKP	PKiKP	21 49 20.2	0.0
KURK	Kurchatov	123.49	312	i PKIKP	PKiKP	21 49 25.1	+2.8
KURBB	Kurchatov Arra	123.53	312	PKP	PKiKP	21 49 27.4	+5.0
	comp=Z,2.7nm,0.6s,baz=116,slow=1.9,SNR=40						
BVAR	Borovoye Array	128.91	314	PKP	PKiKP	21 49 38.0	+4.9
	comp=Z,2.9nm,0.6s,baz=103,slow=1.5,SNR=24						
BVAR	Borovoye Array	128.91	314	PKIKP	PKiKP	21 49 38.0	+4.9
ARU	Arti	135.75	319	i PKIKP	PKiKP	21 49 44.9	-1.9
AKTO	Aktyubinsk	136.48	310	PKP	PKiKP	21 49 53.0	+4.5
	comp=Z,1.7nm,0.6s,baz=108,slow=4.1,SNR=11						
ARCES	ARCESS Array B	141.75	347	PKhKP	PKPpre	21 49 56.9	
	comp=Z,2.3nm,0.7s,baz=20,slow=3.9,SNR=11						
CLDR	Caldiran	146.38	292	eP	PKiKP	21 50 10.5	+1.0
ZEI	Tsey	146.44	298	i PKIKP	PKiKP	21 50 09.8	+0.4
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
CUKT	Cukurca	146.46	288	eP	PKiKP	21 50 09.9	+0.3
VRH	Novokhopyorsk	146.57	314	ePKP2	PKiKP	21 50 10.3	+1.2
VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
GOF	Gofitskoye	146.90	302	⇑ ePKP2	PKiKP	21 50 12.4	+2.4
GOF				pmax	pmax		
	comp=Z,29nm,0.8s						
AKDM	Akdamar-Van	147.06	290	eP	PKiKP	21 50 12.6	+1.8
AGRB	Hanur-Agry	147.12	292	eP	PKiKP	21 50 13.9	+3.0
KBZ	Khabaz	147.13	300	PKPbc	PKiKP	21 50 12.9	+2.4
	comp=Z,4.5nm,0.8s,baz=132,slow=5.4,SNR=17						
KBZ	Khabaz	147.13	300	i PKIKP	PKPab	21 50 09.0	-0.8
MOS	Moscow	147.13	323	i PKP2	PKiKP	21 50 11.8	+1.7
MOS				pmax	pmax		
	comp=Z,49nm,0.6s						
KIV	Kislovodsk	147.26	300	i PKHKP	PKPpre	21 50 07.4	
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
SENK	Senkaya-Erzuru	147.64	294	eP	PKPab	21 50 14.9	+2.6
LPSR	Galich'ya Gora	147.74	317	ePKP2	PKPab	21 50 14.1	+2.1
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
GURO	Guroymak-BITLI	147.81	290	eP	PKPab	21 50 15.6	+2.7
OBN	Obninsk	147.95	323	ePKHKP	PKPpre	21 50 06.3	
OBN				e		21 53 36.2	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VSR	Storozhevoye	148.09	315	ePKP2	PKPab	21 50 15.2	+1.8
VSR				pmax	pmax		
	comp=Z,70nm,1.9s						
FINES	FINESS Array B	148.23	339	PKPbc	PKPab	21 50 15.7	+2.1
	comp=Z,15nm,0.7s,baz=45,slow=4.3,SNR=74						
BNGB	Bingl	148.89	291	eP	PKPab	21 50 17.7	+0.5
YEDI	Yedisu-Bingol	149.01	292	eP	PKPab	21 50 18.9	+1.1
SOC	Sochi	149.44	300	i PKP2	PKPab	21 50 16.8	-2.3
SOC				e		21 53 48.8	
SOC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PTK	Pertek	149.89	291	eP	PKPab	21 50 21.7	+0.3
SVRC	Sivrice-ELAZID	149.94	290	eP	PKPab	21 50 21.5	-0.1
URFA	Urfa	150.28	288	eP	PKPab	21 50 20.9	-2.0
ESPY	Espiye-Giresun	150.38	295	eP	PKPab	21 50 20.7	-2.4
MALT	Malatya	150.63	290	eP	PKPab	21 50 22.9	-1.5
ANN	Anapa	150.88	303	i PKP2	PKPab	21 50 22.4	-2.6
ANN				pmax	pmax		
	comp=Z,30nm,0.6s						
DARE	Darende-Malaty	151.38	290	eP	PKPab	21 50 24.8	-2.7
RSDY	Resadiye-TOKAT	151.47	294	eP	PKPab	21 50 24.9	-2.8
GAZ	Gaziantep	151.55	287	eP	PKPab	21 50 25.0	-3.2
SVSK	Karacayir	151.74	293	eP	PKPab	21 50 25.8	-3.0
KMRS	Kahramanmaras	151.81	288	eP	PKPab	21 50 25.0	-4.2
NB2	NORSAR Subarra	151.92	351	PKP	PKPab	21 50 25.4	-3.5
	comp=Z,7.6nm,1.0s,baz=17,slow=2.6						
NOA	NORSAR Array B	151.92	351	PKPbc	PKPab	21 50 25.8	-3.1
	comp=Z,1.7nm,0.7s,baz=19,slow=4.7,SNR=5.3						
TOKT	Tokat	152.07	294	eP	PKiKP	21 50 23.8	+2.9
SARI	SarD1z-Kayseri	152.21	290	eP	PKPab	21 50 26.8	-4.3
TAHT	Tahtakopru-Hat	152.32	285	eP	PKPab	21 50 26.9	-4.4
DBIC	Dimbokro	152.40	164	PKPbc	PKPab	21 50 29.1	-2.9
	comp=Z,1.6nm,0.7s,baz=63,slow=3.6,SNR=3.5						
BNN	Bunyan	152.66	291	eP	PKPab	21 50 27.1	-5.8
YOZ	Yozgat	153.04	293	eP	PKiKP	21 50 27.8	+4.7
KARA	Karaisali	153.27	287	eP	PKiKP	21 50 27.7	+4.2
CORM	Corum	153.54	294	eP	PKPab	21 50 29.7	-6.9
KIZK	Mersin	153.97	285	eP	PKiKP	21 50 30.1	+5.2
AKASG	Malin Array Be	154.00	319	PKPbc	PKiKP	21 50 29.9	+5.4
	comp=Z,4.4nm,0.6s,baz=52,slow=2.7,SNR=25						
BRTR	Keskin Array B	154.34	293	PKPbc	PKiKP	21 50 30.9	+5.1
	comp=Z,4.6nm,0.6s,baz=127,slow=3.6,SNR=32						
TORD	Torodi Ar. Bea	159.68	178	PKPab	PKPab	21 51 11.9	+8.8
	comp=Z,2.5nm,0.6s,baz=176,slow=4.5,SNR=16						
DPC	Dobruska-Polom	160.37	333	ePKPAB	PKPab	21 51 09.7	+4.3
DPC	Dobruska-Polom	160.37	333	ePKP2	PKPab	21 51 09.7	+4.3
KRLC	Kraliky	160.41	332	ePKPAB	PKPab	21 51 09.3	+3.7
KRLC	Kraliky	160.41	332	ePKP2	PKPab	21 51 09.3	+3.7
CLL	Collm	160.67	340	ePKPdf	PKPdf	21 50 29.0	+4.3
CLL				ePKPab	pPKPab	21 51 11.0	-4.5
	comp=Z,7.0nm,0.7s						
CLL				epPKPab	sPKPab	21 51 18.0	-0.7
CLL	Collm	160.67	340	ePKIKP	PKPdf	21 50 29.0	+4.3
CLL				e		21 51 11.0	
CLL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
VYHS	Vyhne	160.70	325	ePKP2	PKPab	21 51 10.5	+3.6
VYHS	Vyhne	160.70	325	ePKP	PKPab	21 51 10.5	+3.6
BRG	Berggiesshubel	160.76	338	ePKP	PKPab	21 51 11.0	+4.0
	comp=Z,8.2nm,1.0s						
PVCC	Panska Ves	160.85	336	ePKPAB	PKPab	21 51 12.2	+4.8
PVCC	Panska Ves	160.85	336	ePKP2	PKPab	21 51 12.2	+4.8
KHC	Kasperske Hory	162.38	335	ePKPAB	PKPab	21 51 18.3	+4.1

KHC	Kasperske Hory	162.38	335	*e*PKP2	PKPab	21 51 18.3	+4.1
GERES	GERESS Array B	162.57	335	PKPab	PKPab	21 51 18.3	+3.1
	comp=Z,1.0nm,0.7s,baz=57,slow=4.9,SNR=8.3						

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*IDC **22** 21:32:38.8±1.7, 7°.37N×94°.03E, h0^{km}, mb3.8/8, mb1 3.8/10, mb1mx3.6/54, mbtmp3.7/10, ML3.5/2, MS3.1/1, Ms1 3.1/1, ms1mx2.6/42, Error ellipse: s-maj=42.7km s-min=33.6km az=49.0*

*NEIC **22** 21:32:40.8±2.3, 7°.46N±0°.09×94°.3E±0°.1, h10^{km}±1^{km}, mb4.2/14, Error ellipse: s-maj=21.7km s-min=14.0km az=244.0*

ISC 22 21:32:40.3±0.7**, 7°.46N**±0°.10×**94°.3E**±0°.1**, h10^{km}, n45, σ1^{s}.53**/39**, mb4.0**/14**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	3.43	130	Pn	Pn	21 33 35.4	+1.5
PSI	Prapat	6.52	135	Pn	Pn	21 34 19.4	+3.0
	0.6nm,0.3s,baz=318,slow=16,SNR=1.6						
RPSI	Rantau Prapat	6.59	136		Pn	21 34 19.4	+2.0
KULM	Kulim	6.66	108	Pn	Pn	21 34 19.1	+0.8
GSI	Gunungsitoli	6.92	152	Pn	Pn	21 34 24.5	+2.6
IPM	Ipoh	7.30	113	Pn	Pn	21 34 26.4	-0.8
PBKT	Sadao Pong	11.16	35	Pn	Pn	21 35 22.8	+2.9
CMAR	Chiang Mai Arr	11.83	22	Pn	Pn	21 35 30.8	+1.6
	0.1nm,0.3s,baz=210,slow=15,SNR=2.0						
PALK	Pallekele	13.50	270	LR	LR	21 40 29.2	
	comp=Z,82nm,19.9s,baz=111,slow=36						
RAMN	Ramite	20.73	340	*e*P	Pn	21 37 23.8	+0.1
	14nm,1.0s						
TAPN	Taplejung	20.75	343	*e*P	Pn	21 37 23.6	-0.4
	19nm,1.2s						
JIRN	Jiri	21.52	340	*e*P	P	21 37 31.1	+1.1
	19nm,1.0s						
PKI	Pulchoki	21.71	338	*e*P	P	21 37 33.3	+1.3
	9.0nm,0.9s						
PKIN	Phulchoki	21.72	338	*e*P	P	21 37 33.3	+1.2
	3.6nm,0.5s						
GUN	Gumba	21.86	340	*e*P	P	21 37 34.8	+1.2
	6.8nm,0.6s						
LSA	Lhasa	22.33	353	P	P	21 37 39.7	+0.9
LSA				IAmb	IAmb	21 37 50.7	
	comp=Z,3.3nm,0.7s						
GKN	Gorkha	22.39	337	*e*P	P	21 37 39.7	+0.5
	comp=Z,4.6nm,0.5s						
H08S3	Diego Garcia H	26.42	236	T	T	22 04 54.6	
	baz=56,slow=76,SNR=8.7						
H08S2	Diego Garcia H	26.42	236	T	T	22 04 52.0	
	baz=56,slow=76,SNR=9.6						
H08S1	Diego Carcia H	26.44	236	T	T	22 04 51.2	
	baz=56,slow=76,SNR=6.0						
YULB	Yu-li	30.37	56	P	P	21 38 51.2	-1.4
NIL	Nilore	32.54	326	P	P	21 39 12.2	+0.5
NIL				IAmb	IAmb	21 39 19.9	
	comp=Z,3.6nm,0.5s						
KBL	Kabul	35.60	323	P	P	21 39 38.4	-0.1
KBL				IAmb	IAmb	21 39 56.6	
	comp=Z,2.2nm,1.1s						
WMQ	Urumqi	36.68	352	P	P	21 39 47.0	-0.4
MK31	Makanchi Array	40.53	347	P	P	21 40 20.3	+0.6
MKAR	Makanchi Array	40.53	347	P	P	21 40 20.2	+0.6
	comp=Z,1.5nm,0.7s,baz=166,slow=7.8,SNR=18						
MKAR	Makanchi Array	40.53	347	P	P	21 40 20.1	+0.5
MAKZ	Makanchi	40.61	347	P	P	21 40 20.8	+0.5
SONM	Songino Array	41.53	12	P	P	21 40 30.1	+2.1
	comp=Z,0.4nm,0.8s,baz=200,slow=8.8,SNR=2.4						
SONM	Songino Array	41.53	12	P	P	21 40 25.6	-2.4
GEYT	Alibeck	44.62	318	P	P	21 40 52.9	-0.2
	comp=Z,1.7nm,0.6s,baz=167,slow=7.2,SNR=7.0						
GEYT	Alibeck	44.62	318	P	P	21 40 53.7	+0.6
KURK	Kurchatov	45.05	346	P	P	21 40 57.4	+1.2
KURK				IAmb	IAmb	21 41 00.9	
	comp=Z,2.4nm,0.9s						
ZAA0	Zalesovo Array	46.99	352	P	P	21 41 11.3	-0.2
ZAA0				IAmb	IAmb	21 41 19.5	
	comp=Z,1.9nm,0.8s						
ZALV	Zalesovo Beam	46.99	352	P	P	21 41 11.0	-0.5
	comp=Z,1.1nm,0.7s,baz=187,slow=11,SNR=5.3						
ZALV	Zalesovo Beam	46.99	352	P	P	21 41 12.7	+1.3
WRAB	Tennant Creek	47.89	125	P	P	21 41 15.8	-3.1
ABKAR	Akbulak array	50.68	331	P	P	21 41 41.1	+1.2
ABKAR	Akbulak array	50.68	331	P	P	21 41 40.2	+0.3
ABKAR				IAmb	IAmb	21 41 41.6	
	comp=Z,0.7nm,0.8s						
GNI	Garni	54.85	314	P	P	21 42 09.3	-1.8
GNI				IAmb	IAmb	21 42 11.8	
	comp=Z,7.0nm,1.3s						
BRTR	Keskin Array B	62.83	311	P	P	21 43 05.7	-0.9
	comp=Z,0.4nm,0.8s,baz=101,slow=7.5,SNR=1.7						
FINES	FINESS Array B	73.16	332	P	P	21 44 10.1	-0.8
	comp=Z,1.6nm,0.8s,baz=104,slow=6.1,SNR=5.7						
GERES	GERESS Array B	78.25	318	P	P	21 44 40.0	-0.5
	comp=Z,0.4nm,0.8s,baz=96,slow=6.0,SNR=4.0						
NOA	NORSAR Array B	80.17	331	P	P	21 44 50.7	-0.1
	comp=Z,0.5nm,0.7s,baz=93,slow=5.1,SNR=1.6						
NAO01	NORSAR Array S	80.33	330	P	P	21 44 48.5	-3.0

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*IDC **22** 21:41:21.8±2.6, 5°.41N×94°.57E, h52^{km}±23^{km}, mb4.1/24, mb1 4.2/26, mb1mx4.0/57, mbtmp4.4/26, ML4.2/2, MS3.4/3, Ms1 3.5/3, ms1mx3.0/38, Error ellipse: s-maj=22.3km s-min=10.8km az=46.0*

*NEIC **22** 21:41:22.5±1.7, 5°.28N±0°.08×94°.54E±0°.09, h66^{km}±6^{km}, mb4.6/66, Error ellipse: s-maj=14.1km s-min=10.1km az=49.0*

*DJA **22** 21:41:23.7±0.4, 5°N±4°×9°5E±°, h84^{km}±15^{km}, M4.5/9, mb4.5/9, mB5.0/4, MLv4.5/8, Mw(mB)4.3/4*

ISC 22 21:41:20.5±0.4**, 5°.30N**±0°.05×**94°.49E**±0°.05**, h46^{km}, n190, σ1^{s}.24**/188**, mb4.5**/62**, 8C-13D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSI	Meulaboh, Aceh	2.16	118	P	Pn	21 41 55.9	+1.8
MLSI				S	Sn	21 42 21.3	+1.6
LHMI	Lhok Sumawe	2.45	91	P	Pn	21 42 00.2	+2.2
LHMI				S	Sn	21 42 29.1	+2.4
LHMI	Lhok Sumawe	2.45	91		Pn	21 42 00.0	+2.0
SNSI	Sinabang, Aceh	3.40	147	P	Pn	21 42 12.6	+1.5
SNSI				S	Sn	21 42 51.0	+0.8
GSI	Gunungsitoli	5.02	142	P	Pn	21 42 34.2	+0.8
GSI	Gunungsitoli	5.02	142		Pn	21 42 34.5	+1.1
PSI	Prapat	5.07	119	P	Pn	21 42 37.4	+3.3
	12nm,0.3s,baz=298,slow=10.0,SNR=37						
PSI				S	Sn	21 43 33.6	+2.2
	4.7nm,0.3s,baz=296,slow=18,SNR=1.9						
RPSI	Rantau Prapat	5.12	120		Pn	21 42 37.6	+2.9
RPSI	Rantau Prapat	5.12	120		Pn	21 42 37.4	+2.7
RPSI					Sn	21 43 33.6	+1.0
KULM	Kulim	6.13	90		Pn	21 42 49.9	+1.2
PBSI	Pulau Batu	6.52	144	P	Pn	21 42 55.2	+1.2
	0.3nm40nm,1.3s						
IPM	Ipoh	6.56	97		Pn	21 42 55.8	+1.2
SISI	Saibi	8.02	145	P	Pn	21 43 16.0	+1.4
	0.1nm8.6nm,0.6s						
BKNI	Bangkinang	8.19	127	Pn	Pn	21 43 18.0	+1.1
MNAI	Manna	12.79	138	Pn	Pn	21 44 20.1	+0.3
PBKT	Sadao Pong	12.88	29		Pn	21 44 23.1	+2.0
MDSI	Maura Dua	13.71	135	P	Pn	21 44 31.9	-0.5
	8.1nm,1.0s						
CM31	Chiang Mai Arr	13.79	18	P	P	21 44 37.7	-3.1
CMAR	Chiang Mai Arr	13.79	18	P	P	21 44 37.2	-3.6
	2.2nm,0.3s,baz=209,slow=14,SNR=44						
CMAR				LR	LR	21 49 28.0	
	comp=Z,69nm,19.3s,baz=202,slow=36						
CMAR	Chiang Mai Arr	13.79	18		Pn	21 44 35.9	+2.5
PALK	Pallekele	13.85	279	P	Pn	21 44 36.5	+2.1
	0.7nm,0.3s,baz=98,slow=14,SNR=6.2						
PALK				S	Sn	21 46 55.6	-11
	1.4nm,0.3s,baz=191,slow=22,SNR=11						
PALK	Pallekele	13.85	279		Pn	21 44 37.1	+2.8
PALK					Sn	21 46 56.5	-10
CHTO	Chiang Mai	14.12	18		Pn	21 44 40.6	+2.6
DLV	T Lat	15.33	64	Pn	Pn	21 44 54.1	0.0
DLV				IAmb	IAmb	21 45 03.7	
	comp=Z,42nm,1.1s						
XMIS	Christmas Isla	19.21	145	P	P	21 45 40.5	-0.4
XMIS				IAmb	IAmb	21 45 43.4	
	comp=Z,64nm,1.1s						
UGM	Wanagama	20.68	129	P	P	21 45 55.7	-1.2
KMI	Kunming	21.25	21	P	P	21 46 07.8	+4.7
RAMN	Ramite	22.81	342	*e*P	P	21 46 17.6	-2.3
	comp=Z,15nm,0.4s						
TAPN	Taplejung	22.86	344	*e*P	P	21 46 20.8	+0.3
	comp=Z,27nm,0.4s						
JIRN	Jiri	23.60	341	*e*P	P	21 46 26.1	-1.7
	comp=Z,79nm,0.6s						
PKI	Pulchoki	23.78	340	*e*P	P	21 46 27.7	-1.7
	comp=Z,8.7nm,0.3s						
PKIN	Phulchoki	23.79	340	*e*P	P	21 46 27.8	-1.7
	comp=Z,13nm,0.5s						
JAGI	Jajag, Banyuwa	23.90	125	P	P	21 46 30.1	-0.2
JAGI				IAmb	IAmb	21 46 38.4	
	comp=Z,14nm,1.1s						
DMN	Daman	23.92	339	*e*P	P	21 46 28.9	-1.8
	comp=Z,16nm,0.5s						
GUN	Gumba	23.94	341	*e*P	P	21 46 29.6	-1.3
	comp=Z,40nm,0.6s						
KKN	Kakani	24.03	340	*e*P	P	21 46 30.3	-1.3
	comp=Z,14nm,0.4s						
GKN	Gorkha	24.45	339	*e*P	P	21 46 35.0	-0.4
	comp=Z,27nm,0.3s						
LSA	Lhasa	24.48	353	P	P	21 46 35.4	-0.6
LSA				IAmb	IAmb	21 46 38.8	
	comp=Z,13nm,0.6s						
DANN	Dangsing	25.09	337	*e*P	P	21 46 41.5	+0.1
	comp=Z,57nm,0.6s						
H08S2	Diego Garcia H	25.43	240	T	T	22 12 43.5	
	baz=59,slow=74						
H08S3	Diego Garcia H	25.43	240	T	T	22 12 53.4	
	baz=59,slow=74						
H08S1	Diego Carcia H	25.45	240	T	T	22 12 47.1	
	baz=59						
CD2	Chengdu	26.93	18	P	P	21 46 58.6	+0.9
KAPI	Kappang	27.23	112	P	P	21 47 01.6	+1.1
	comp=Z,3.8nm,0.4s,baz=340,slow=5.4,SNR=7.9						
ENH	Enshi	28.58	28	P	P	21 47 11.5	-1.0
ENH				IAmb	IAmb	21 47 12.2	
	comp=Z,7.1nm,0.9s						
LUWI	Luwuk	28.94	102	P	P	21 47 15.7	-0.1
WHN	Wuhan	31.31	34	P	P	21 47 34.5	-2.0
XAN	Xi'an	31.58	23	P	P	21 47 38.0	-0.9
XAN	Xi'an	31.58	23	P	P	21 47 38.2	-0.7
XAN				IAmb	IAmb	21 47 39.5	
	comp=Z,14nm,0.9s						
LZH	Lanzhou	31.83	14	*e*P	P	21 47 44.1	+2.9
LZH				pP	sP	21 48 00.8	+2.8
LZH				sP	pwP	21 48 09.3	+14
LZH				*e*PP	PP	21 48 53.3	-0.5
YOJ	Yonaguni jima	33.38	52	P	P	21 47 52.7	-2.0
GTA	Gaotai	34.30	7	⇑P	P	21 48 02.0	-0.7
GTA				pP	sP	21 48 19.8	+0.2
GTA				sP	pwP	21 48 29.4	+12
NIL	Nilore	34.44	328	P	P	21 48 03.4	-0.4
NJ2	Nanjing	35.04	38	*e*P	P	21 48 10.0	+0.9
PSA00	Pilbara Seismi	36.48	138	P	P	21 48 21.1	-0.4
FITZ	Fitzroy Crossi	38.53	128	P	P	21 48 39.0	+0.1
	comp=Z,2.0nm,0.5s,baz=290,slow=5.2,SNR=9.0						
FITZ	Fitzroy Crossi	38.53	128	P	P	21 48 38.4	-0.5
HHC	Hu-ho-hao-te	38.57	21	*e*P	P	21 48 41.1	+2.0
FAKI	Fak Fak	38.59	101	P	P	21 48 39.4	-0.2
WMQ	Urumqi	38.83	352	*e*P	P	21 48 43.0	+1.8
WMQ	Urumqi	38.83	352	P	P	21 48 42.0	+0.8
BJI	Beijing	39.72	26	P	P	21 48 50.5	+1.9
KNRA	Kununurra	39.82	122	P	P	21 48 48.4	-1.3
KNRA				IAmb	IAmb	21 48 55.5	
	comp=Z,8.5nm,1.1s						
ULHL	Ulahol	40.22	339	P	P	21 48 53.8	+0.8
	SNR=7.7						
MTN	Manton Dam	40.62	117	P	P	21 48 56.1	-0.2
MTN				IAmb	IAmb	21 49 03.8	
	comp=Z,9.6nm,0.9s						
KBK	Karagaybulak	41.05	338	P	P	21 49 01.1	+1.3
	SNR=12						
AML	Almayashu	41.09	336	P	P	21 49 01.2	+0.9
	SNR=18						
AAK	Ala-Archa	41.20	337	P	P	21 49 02.0	+1.0
EKS2	Erkin-Say	41.50	337	P	P	21 49 04.3	+0.9
	SNR=6.4						
UOSS	Minazif	41.59	302	P	P	21 49 05.0	+0.7
UOSS				IAmb	IAmb	21 49 21.5	
	comp=Z,13nm,1.1s						
USP	Ospenovka	41.74	338	P	P	21 49 05.9	+0.7
	SNR=8.6						
MK31	Makanchi Array	42.66	348	IAmb	IAmb	21 49 13.8	
	comp=Z,11nm,0.8s						
MKAR	Makanchi Array	42.66	348	P	P	21 49 13.0	+0.3
	comp=Z,13nm,0.6s,baz=171,slow=8.3,SNR=159						
MKAR				PcP	PcP	21 51 04.2	+0.1
	comp=Z,0.3nm,0.3s,baz=171,slow=3.1,SNR=1.8						
MKAR				LR	LR	22 09 25.3	
	comp=Z,42nm,18.5s,baz=246,slow=40						
MKAR	Makanchi Array	42.66	348	P	P	21 49 12.5	-0.2
MAKZ	Makanchi	42.75	347	P	P	21 49 13.5	+0.2
KKAR	Karatay Array	43.22	334	P	P	21 49 17.0	-0.2
SONM	Songino Array	43.59	12	P	P	21 49 19.8	-0.6
	comp=Z,3.9nm,0.6s,baz=190,slow=8.2,SNR=35						
SONM				PcP	PcP	21 51 07.6	+0.3
	comp=Z,1.2nm,0.4s,baz=196,slow=4.1,SNR=9.4						
SONM	Songino Array	43.59	12	P	P	21 49 19.7	-0.6
NWAO	Narrogin (SRO)	43.72	152	P	P	21 49 21.2	-0.1
NWAO				IAmb	IAmb	21 49 30.1	
	comp=Z,17nm,1.1s						
ULN	Ulaanbaatar	43.76	12	P	P	21 49 21.0	-0.7
ULN				IAmb	IAmb	21 49 21.7	
	comp=Z,4.1nm,0.7s						
H01W3	Cape Leeuwin H	44.04	157	T	T	22 37 14.8	
	baz=330						
H01W2	Cape Leeuwin H	44.05	157	T	T	22 37 11.5	
	baz=330						
H01W1	Cape Leeuwin H	44.06	157	T	T	22 37 30.2	
	baz=330						
KSRS	Korea Array	44.20	39	P	P	21 49 24.3	-0.9
	comp=Z,1.2nm,0.7s,baz=212,slow=9.2,SNR=7.5						
GEYT	Alibeck	46.36	320	P	P	21 49 43.0	+0.6
	comp=Z,3.1nm,0.4s,baz=138,slow=8.9,SNR=15						
GEYT	Alibeck	46.36	320		P	21 49 43.4	+1.0
GEYT	Alibeck	46.36	320	P	P	21 49 43.4	+1.0
GYA0B	ALIBECK ARRAY	46.36	320	P	P	21 49 43.4	+1.0
GYA0B				IAmb	IAmb	21 49 44.9	
	comp=Z,4.7nm,0.6s						
WRAB	Tennant Creek	46.52	124	P	P	21 49 40.4	-3.4
WRAB				IAmb	IAmb	21 49 45.6	
	comp=Z,8.3nm,0.7s						
KURBB	Kurchatov Arra	47.12	346	P	P	21 49 48.6	+0.6
	comp=Z,6.5nm,0.3s,baz=197,slow=6.7,SNR=77						
KURBB				PcP	PcP	21 51 20.2	+1.0
	comp=Z,0.7nm,0.5s,baz=153,slow=2.2,SNR=2.1						
KURK	Kurchatov	47.18	346	P	P	21 49 49.2	+0.7
ASAR	Alice Springs	48.02	128	P	P	21 49 56.3	+0.8
	comp=Z,1.5nm,0.4s,baz=298,slow=7.6,SNR=33						
ASAR				PcP	PcP	21 51 24.3	+1.2
	comp=Z,0.9nm,0.5s,baz=313,slow=4.0,SNR=2.5						
ASAR	Alice Springs	48.02	128	P	P	21 49 56.2	+0.6
ZALV	Zalesovo Beam	49.14	352	P	P	21 50 03.8	+0.2
	comp=Z,8.7nm,0.5s,baz=184,slow=6.7,SNR=40						
ZALV	Zalesovo Beam	49.14	352	P	P	21 50 03.6	0.0
RAYN	Ar Rayn	50.49	296	P	P	21 50 14.7	+0.3
USRK	Ussuriysk Ar.	50.81	34	P	P	21 50 15.9	-0.5
	comp=Z,1.6nm,0.6s,baz=250,slow=6.9,SNR=7.7						
USRK	Ussuriysk Ar.	50.81	34	P	P	21 50 16.3	-0.1
BVAR	Borovoye Array	51.53	342	P	P	21 50 21.5	-0.1
	comp=Z,2.4nm,0.4s,baz=139,slow=10,SNR=20						
BRVK	Borovoye	51.59	342	P	P	21 50 22.5	+0.4
BRVK				IAmb	IAmb	21 50 37.1	
	comp=Z,6.1nm,0.8s						
ABKAR	Akbulak array	52.65	332	P	P	21 50 30.2	+0.2
ABKAR	Akbulak array	52.65	332	IAmb	IAmb	21 50 46.1	
	comp=Z,6.8nm,1.0s						
KLR	Kul'dur	53.93	29	P	P	21 50 39.0	-0.5
	comp=Z,0.7nm,0.4s,baz=190,slow=19,SNR=3.0						
AKTO	Aktyubinsk	54.37	332	P	P	21 50 42.8	+0.1
	comp=Z,1.1nm,0.3s,baz=93,slow=0.6,SNR=8.8						
BBOO	Buckleboo	54.69	137	P	P	21 50 44.7	-0.6
STKA	Stephens Creek	58.10	133	P	P	21 51 09.8	+0.2
	comp=Z,0.9nm,0.5s,baz=298,slow=4.4,SNR=6.0						
STKA				LR	LR	22 18 56.7	
	comp=Z,99nm,18.5s,baz=24,slow=39						
STKA	Stephens Creek	58.10	133	P	P	21 51 09.5	0.0
YAK	Yakutsk	62.32	18	P	P	21 51 36.1	-1.8
CSS	Mathiatis	63.46	306	P	P	21 51 46.8	+0.7
CSS				IAmb	IAmb	21 52 04.0	
	comp=Z,8.4nm,1.1s						
NRIK	Noril'sk	64.12	357	P	P	21 51 49.5	-0.2
	comp=Z,2.9nm,0.4s,baz=149,slow=6.7,SNR=5.4						
BR131	Keskin Array S	64.38	312	P	P	21 51 51.8	-0.4
BRTR	Keskin Array B	64.38	312	P	P	21 51 51.9	-0.4
	comp=Z,1.8nm,0.7s,baz=128,slow=7.4,SNR=5.4						
CAN	Canberra	65.16	133	P	P	21 51 56.1	-1.1
CAN				IAmb	IAmb	21 52 15.7	
	comp=Z,4.5nm,0.9s						
ELL	Elmali	66.55	308	P	P	21 52 07.3	+1.0
KARP	Karpathos	68.53	306	P	P	21 52 19.7	+1.0
MA2	Magadan	68.88	27	P	P	21 52 19.9	-0.4
MA2				IAmb	IAmb	21 52 20.6	
	comp=Z,6.3nm,1.0s						
TIRR	Tirgusor	69.32	316	P	P	21 52 21.8	-1.5
TIXI	Tiksi	69.68	11	P	P	21 52 23.6	-1.4
TIXI				IAmb	IAmb	21 52 24.6	
	comp=Z,4.8nm,0.5s						
SANT	Santorini	70.02	307	P	P	21 52 27.3	-0.6
SANT				IAmb	IAmb	21 52 28.5	
	comp=Z,6.3nm,0.6s						
SORM	Soroca	70.25	319	⇓P	P	21 52 28.7	-0.3
ALN	Alexandroupoli	70.30	312	P	P	21 52 27.5	-1.9
AKASG	Malin Array Be	70.39	322	P	P	21 52 28.7	-1.1
	comp=Z,2.0nm,0.5s,baz=89,slow=5.0,SNR=6.5						
AKASG	Malin Array Be	70.39	322	P	P	21 52 28.4	-1.3
RAZG	Razgrad	70.47	314	⇓P	P	21 52 31.3	+0.9
BISRR	Bisoca	70.74	316	⇑P	P	21 52 32.9	+0.8
VRI	Vrincioaia	70.80	317	⇓P	P	21 52 33.5	+1.1
ELND	Elena	70.80	314	⇓P	P	21 52 32.2	-0.3
PLOR	Plostina	70.85	317	⇑P	P	21 52 33.7	+1.0
TESR	Tescani	70.99	317	⇑P	P	21 52 34.0	+0.4
SECR		71.08	316	⇓P	P	21 52 35.6	+1.5
SEY	Seymchan	71.12	24	P	P	21 52 33.0	-1.0
	comp=Z,4.4nm,0.3s,baz=290,slow=3.1,SNR=9.1						
MLR	Muntele Rosu	71.26	316	⇓P	P	21 52 35.9	+0.6
MLR	Muntele Rosu	71.26	316	P	P	21 52 35.3	0.0
MLR				IAmb	IAmb	21 52 36.9	
	comp=Z,3.7nm,0.7s						
PLVB	Pleven	71.79	314	⇓P	P	21 52 39.2	+0.8
VOIR		71.86	316	⇓P	P	21 52 38.9	0.0
ARR	Arges	72.14	316	⇑P	P	21 52 40.6	0.0
BURAR	Bucovina Array	72.19	318	⇓P	P	21 52 42.1	+1.2
BURAR	Bucovina Array	72.19	318	P	P	21 52 41.4	+0.5
BUR08	Bucovina Ar. S	72.20	318	P	P	21 52 40.2	-0.7
ARCR	ARCALIA	72.66	318	⇑P	P	21 52 45.1	+1.5
VTS	Vitosha	72.66	313	⇑P	P	21 52 44.1	+0.3
VTS	Vitosha	72.66	313	P	P	21 52 43.0	-0.9
LOT	Lotru	72.75	316	⇓P	P	21 52 44.4	+0.1
AGG	Agios Georgios	72.84	309	P	P	21 52 43.2	-1.6
AGG				IAmb	IAmb	21 52 48.2	
	comp=Z,4.9nm,1.1s						
LIT	Litokhoron	72.85	310	P	P	21 52 44.0	-0.9
ITM	Ithomi	72.94	307	P	P	21 52 45.1	-0.3
ITM				IAmb	IAmb	21 53 01.1	
	comp=Z,6.5nm,1.0s						
TRPA	Tarpa	74.06	319	⇓P	P	21 52 52.3	+0.6
BZS	Buzias	74.27	316	⇑P	P	21 52 52.8	-0.3
FIA1	FINESS Array S	75.14	332	P	P	21 52 58.0	+0.3
FIA1				IAmb	IAmb	21 53 16.1	
	comp=Z,7.1nm,1.0s						
FINES	FINESS Array B	75.14	332	P	P	21 52 57.4	-0.3
	comp=Z,1.3nm,0.3s,baz=107,slow=6.5,SNR=8.2						
FINES	FINESS Array B	75.14	332	P	P	21 52 57.9	+0.1
PSZ	Piszkesteto	75.78	318	P	P	21 53 00.9	-0.8
PSZ				IAmb	IAmb	21 53 03.0	
	comp=Z,3.8nm,0.8s						
OJC	Ojcow	76.17	320	IAmb	IAmb	21 53 05.2	
	comp=Z,7.8nm,0.7s						
VYHS	Vyhne	76.55	318	*e*P	P	21 53 06.4	+0.3
MORC	Moravsky Berou	77.55	320	⇓P	P	21 53 12.9	+1.1
MORC	Moravsky Berou	77.55	320	P	P	21 53 11.8	+0.1
MORC				IAmb	IAmb	21 53 13.5	
	comp=Z,2.9nm,0.8s						
ARCES	ARCESS Array B	77.80	340	P	P	21 53 12.6	-0.1
	comp=Z,1.2nm,0.3s,baz=99,slow=6.9,SNR=28						
ARCES	ARCESS Array B	77.80	340	P	P	21 53 12.9	+0.2
ARE0	ARCESS Array S	77.80	340	P	P	21 53 12.8	+0.1
SOKA	Soboth	78.94	316	*i* P	P	21 53 20.4	+0.9
	comp=Z,1.7nm,0.6s						
OBKA	Obir	79.26	316	*e*P	P	21 53 21.3	0.0
	comp=Z,2.7nm,0.8s						
GEC2	GERESS Array S	79.97	319	IAmb	IAmb	21 53 26.9	
	comp=Z,4.0nm,0.7s						
GERES	GERESS Array B	79.97	319	P	P	21 53 25.7	+0.5
	comp=Z,3.4nm,0.7s,baz=100,slow=5.6,SNR=26						
GERES	GERESS Array B	79.97	319	P	P	21 53 25.8	+0.7
KHC	Kasperske Hory	80.07	319	P	P	21 53 25.6	+0.1
STAL	STALIGIAL	80.52	316	P	P	21 53 28.5	+0.4
STAL				IAmb	IAmb	21 53 29.2	
	comp=Z,4.3nm,0.5s						
ABTA	Abfaltersbach	80.67	316	*i* P	P	21 53 29.3	+0.3
	comp=Z,1.2nm,0.6s						
CTI	Castel Tesino	81.25	316	P	P	21 53 32.4	+0.3
CTI				IAmb	IAmb	21 53 33.3	
	comp=Z,3.1nm,0.7s						
WTTA	Wattenberg	81.29	317	*i* P	P	21 53 32.4	0.0
	comp=Z,2.7nm,0.4s						
WATA	Walderalm	81.33	317	*i* P	P	21 53 32.4	-0.1
	comp=Z,2.4nm,0.5s						
SQTA	Sankt Quirin	81.58	317	*i* P	P	21 53 34.0	+0.2
	comp=Z,2.5nm,0.4s						
MOTA	Moosalm	81.65	317	*i* P	P	21 53 34.2	0.0
	comp=Z,1.3nm,0.5s						
RETA	Reutte	81.89	317	*i* P	P	21 53 35.5	+0.2
	comp=Z,2.9nm,0.4s						
NC405	NORSAR Array S	81.90	331	P	P	21 53 35.4	+0.4
FETA	Feichten	81.90	317	*i* P	P	21 53 36.0	+0.5
	comp=Z,0.8nm,0.5s						
DAVA	Damuels	82.48	317	*i* P	P	21 53 38.9	+0.3
	comp=Z,2.2nm,0.6s						
KEST	Kesra	83.00	305	P	P	21 53 43.0	+1.6
	comp=Z,1.1nm,0.4s,baz=95,slow=2.2,SNR=6.3						
KEST	Kesra	83.00	305	P	P	21 53 41.3	-0.1
SYO	Syowa Base	83.06	197	⇓*e*X	P	21 53 49.6	+8.8
FOZ	Fox Glacier	83.07	135		P	21 53 39.0	-2.5
AKUT	Akutan	91.43	35	P	P	21 54 19.2	-2.5
IMAR	Indian Mountai	93.87	22	P	P	21 54 33.1	+0.3
ILAR	Eielson Array	96.98	22	P	P	21 54 47.0	0.0
	comp=Z,0.1nm,0.5s,baz=280,slow=3.8,SNR=1.5						
RES	Resolute Bay	99.94	3	P	Pdif	21 55 00.4	+0.3
	comp=Z,1.0nm,0.6s,baz=351,slow=4.1						
RES	Resolute Bay	99.94	3	IAmb	IAmb	21 55 02.2	
	comp=Z,2.2nm,0.9s						
SCHQ	Schefferville	118.10	348	PKP	PKiKP	22 00 02.7	+0.2
	comp=Z,0.7nm,0.4s,baz=288,slow=2.4,SNR=5.5						
ULM	Lac du Bonnet	123.96	8	PKP	PKPdf	22 00 13.3	-0.5
	comp=Z,1.9nm,0.6s,baz=245,slow=1.8,SNR=5.8						
NVAR	Mina Array Bea	126.92	32	PKP	PKiKP	22 00 21.3	+0.6
	comp=Z,0.6nm,0.5s,baz=299,slow=2.6,SNR=8.9						
PDAR	Pinedale Array	127.42	22	PKP	PKPdf	22 00 21.2	+0.1
	comp=Z,0.7nm,0.5s,baz=98,slow=2.8,SNR=11						
TXAR	Lajitas Array	141.40	26	PKP	PKPdf	22 00 47.8	+0.4
	comp=Z,0.8nm,0.4s,baz=195,slow=0.2,SNR=13						

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*IDC **22** 21:42:46.1±2.1, 33°.61S×178°.33W, h0^{km}, mb4.3/3, mb1 4.3/4, mb1mx3.9/37, mbtmp4.2/4, ML3.9/1, Error ellipse: s-maj=57.1km s-min=34.0km az=129.0*

ISC 22 21:42:51.6±2.2**, 33°.6S**±0°.2×**178°.3W**±0°.3**, h41^{km}, n6, σ0^{s}.85**/8**, mb4.3**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	5.93	218	Pn	Pn	21 44 16.2	-0.7
	2.9nm,0.3s,baz=354,slow=9.2,SNR=32						
URZ				Sn	Sn	21 45 24.5	+0.9
	7.0nm,0.3s,baz=103,slow=18,SNR=10						
CTA	Charters Tower	34.21	284	P	P	21 49 34.3	+0.9
	3.1nm,0.7s,baz=108,slow=10,SNR=5.1						
ASAR	Alice Springs	42.79	271	P	P	21 50 45.2	-0.3
	3.2nm,0.7s,baz=112,slow=7.6,SNR=22						
ASAR				PcP	PcP	21 52 36.5	+0.2
	0.6nm,0.8s,baz=123,slow=3.6,SNR=2.8						
FITZ	Fitzroy Crossi	52.18	273	P	P	21 51 57.4	-1.0
	2.6nm,0.8s,baz=125,slow=11,SNR=4.3						
FINES	FINESS Array B	148.07	338	PKPbc	PKPbc	22 02 32.4	+0.5
	1.7nm,0.7s,baz=64,slow=3.2,SNR=13						
BRTR	Keskin Array B	153.77	293	PKPbc	PKiKP	22 02 46.8	+0.4
	0.5nm,0.8s,baz=74,slow=2.7,SNR=3.0						

JMA 22 21:42:56.9±0.2**, 38°.29N**×**144°.59E, h48^{km}, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.42	290	P	Pn	21 43 35.2	+1.3
OFUJ				*e*S	Sn	21 44 03.6	+1.3
JIKH	Ishinomakikobu	2.46	271	P	Pn	21 43 35.4	+0.9
JIKH				*e*S	Sn	21 44 04.2	+0.9

JKMT	Kesennumamotoy	2.50	283	P	Pn	21 43 36.1	+1.1
JKMT				eS	Sn	21 44 05.5	+1.2
MIYJ	Miyakonagasawa	2.51	302	P	Pn	21 43 36.3	+1.0
MIYJ				S	Sn	21 44 05.4	+0.7
JIO	Ouri	2.55	275	P	Pn	21 43 36.9	+1.1
JIO				S	Sn	21 44 06.6	+1.0
JMK	Ichinoseki	2.72	285	P	Pn	21 43 39.7	+1.6
JMK				eS	Sn	21 44 11.5	+1.8
JOM	Ohasama	2.83	296	P	Pn	21 43 41.2	+1.6
JOM				eS	Sn	21 44 15.1	+2.6
JANG	Nango	3.16	312	P	Pn	21 43 45.5	+1.3
JANG				eS	Sn	21 44 22.1	+1.4
JYK	Kaneyama	3.37	282	P	Pn	21 43 49.1	+2.1
JFT	Otama	3.45	258	P	Pn	21 43 50.1	+2.0
JFT				S	Sn	21 44 29.6	+1.8
JOT	Ohata	4.12	320	eS	Sn	21 44 44.0	-0.1
JCH	Churui	4.42	348	P	Pn	21 44 02.0	+0.6
JCH				eS	Sn	21 44 49.7	-1.8
JKB	Kayabe	4.51	324	P	Pn	21 44 04.9	+2.3
JKB				eS	Sn	21 44 53.3	-0.5
JRY	Ryogami san	5.08	245	P	Pn	21 44 11.6	+1.1
NEM2	Nemuro 2	5.14	9	P	Pn	21 44 09.9	-1.4
NEM2				eS	Sn	21 45 05.0	-4.3
JOSM	Okushiri--Mats	5.45	316	P	Pn	21 44 17.9	+2.4
JTKR	Abashiri--Toko	5.70	355	P	Pn	21 44 18.4	-0.5
JTKR				eS	Sn	21 45 19.0	-4.0

*INET **22** 21:52:48.2, 12°.42N×87°.80W, h70^{km}, ML3.5*

SNET 22 21:52:50.1±0.7**, 12°.53N×87°.88W, h56**^{km}±25^{km}**, ML3.4, 1D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.75	3⇓	eP	Pn	21 53 04.7	-0.2
CNCH				eS	Sn	21 53 17.0	+1.3
CNCH				IAML		21 53 19.7	
	comp=Z,2µm,0.1s						
LCND	La Caada	0.78	359	eP	Pn	21 53 05.1	-0.1
LCND				eS	Sn	21 53 17.3	+1.1
LCND				IAML		21 53 23.0	
	comp=Z,786nm,0.2s						
JUCU	Jucuar¡n	0.81	334	eP	Pn	21 53 05.6	-0.1
JUCU				eS	Sn	21 53 18.0	+1.0
JUCU				IAML		21 53 19.4	
	comp=Z,665nm,0.3s						
PACA	Pacayal	1.03	335	eP	Pn	21 53 09.1	+0.5
TECA	Tecapa	1.14	328	eP	Pn	21 53 10.8	+0.8
TECA				eS	Sn	21 53 26.1	+1.2
FAGO	Alcalda de S	1.18	349	eP	Pn	21 53 10.4	-0.1
LOMA	Loma Larga	1.68	312	eP	Pn	21 53 18.1	+0.8
LOMA				IAML		21 53 40.2	
	comp=Z,441nm,0.2s						

*IDC **22** 21:52:55.2±0.9, 56°.26N×163°.28E, h0^{km}, mb3.8/16, mb1 4.0/18, mb1mx3.8/51, mbtmp3.9/18, ML3.7/2, MS4.4/1, Ms1 4.4/1, ms1mx2.8/39, Error ellipse: s-maj=26.5km s-min=15.1km az=157.0*

*KRSC **22** 21:52:56.0±0.8, 56°.15N×163°.68E, h25^{km}±12^{km}, ML4.3, FELT [II-III] at cape Afrika.*

*MOS **22** 21:52:56.8±0.8, 56°.21N×163°.62E, h19^{km}, mb4.2/4, Error ellipse: s-maj=8.5km s-min=5.3km az=54.5*

*NEIC **22** 21:52:59.3±1.2, 56°.16N±0°.09×163°.4E±0°.2, h32^{km}±4^{km}, mb4.0/32, Error ellipse: s-maj=15.3km s-min=11.5km az=128.0*

ISC 22 21:52:57.3±1.8**, 56°.15N**±0°.04×**163°.55E**±0°.03**, h16**^{km}±12^{km}**, n140,** σ1^{s}.**36**/154**, mb4.0**/32**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.41	279	eP	Pb	21 53 06.2	0.0
KBTR	Krutoberegovo	0.41	279	PN	Pb	21 53 06.2	0.0
KBG	Krutoberegovo	0.48	283	eP	Pb	21 53 07.3	-0.1
KBG				eS	Sb	21 53 14.5	+0.2
KBG	Krutoberegovo	0.48	283	PN	Pb	21 53 07.3	-0.1
KBG				S	Sb	21 53 14.5	+0.2
BDR	Baidarnaya	1.37	289	eP	Pb	21 53 22.3	-0.3
BDR	Baidarnaya	1.37	289	PN	Pb	21 53 22.3	-0.3
SRKR	Sorokina	1.42	292	eP	Pb	21 53 22.9	-0.5
SRKR	Sorokina	1.42	292	PN	Pb	21 53 22.9	-0.5
ZLN	Zelenaya	1.54	266	eP	Pn	21 53 24.8	+0.6
ZLN				eS	Sg	21 53 46.1	-1.0
ZLN	Zelenaya	1.54	266	PN	Pn	21 53 24.8	+0.6
ZLN				S	Sg	21 53 46.1	-1.0
CIRR	Tsirk	1.57	270	eP	Pn	21 53 25.1	+0.5
CIRR	Tsirk	1.57	270	PN	Pn	21 53 25.1	+0.5
LGNR	Loginova	1.60	269	eP	Pn	21 53 25.8	+0.6
LGNR	Loginova	1.60	269	PN	Pn	21 53 25.8	+0.6
BZGR	Bezymyannyi-Gr	1.61	264	eP	Pn	21 53 25.5	+0.3
BZGR				eS	Sn	21 53 45.7	0.0
BZGR	Bezymyannyi-Gr	1.61	264	PN	Pn	21 53 25.5	+0.3
BZGR				S	Sn	21 53 45.7	0.0
KLY	Klyuchi	1.63	277	eP	Pn	21 53 24.1	-1.1
KLY				eS	Sn	21 53 44.7	-1.1
KLY	Klyuchi	1.63	277	PN	Pn	21 53 24.1	-1.1
KLY				S	Sn	21 53 44.7	-1.1
BKI	Bering	1.67	124	eP	Pn	21 53 25.0	-0.8
BKI				eS	Sn	21 53 45.6	-1.2
BKI	Bering	1.67	124	PN	Pn	21 53 25.0	-0.8
BKI				S	Sn	21 53 45.6	-1.2
KRSR	Krestovskiy	1.67	274	eP	Pn	21 53 26.0	0.0
KRSR	Krestovskiy	1.67	274	PN	Pn	21 53 26.0	0.0
BZMR	Bezymyannaya	1.73	264	eP	Pn	21 53 27.6	+0.8
BZMR	Bezymyannaya	1.73	264	PN	Pn	21 53 27.6	+0.8
KIRR	Kirishev	1.81	265	eP	Pn	21 53 28.6	+0.7
KIRR				eS	Sb	21 53 52.4	-0.2
KIRR	Kirishev	1.81	265	PN	Pn	21 53 28.6	+0.7
KIRR				S	Sb	21 53 52.4	-0.2
KMNR	Kamenistaya	1.90	260	eP	Pn	21 53 30.0	+0.8
KMNR				eS	Sb	21 53 54.8	-0.4
KMNR	Kamenistaya	1.90	260	PN	Pn	21 53 30.0	+0.8
KMNR				S	Sb	21 53 54.8	-0.4
TUMD	Tumrok D	2.02	243	eP	Pn	21 53 31.0	+0.3
TUMD				eS	Sn	21 53 56.3	+0.7
KOZ	Kozyrevsk	2.06	269	eP	Pn	21 53 32.7	+1.4
KOZ				eS	Sb	21 53 59.4	-0.3
KOZ	Kozyrevsk	2.06	269	PN	Pn	21 53 32.7	+1.4
KOZ				S	Sb	21 53 59.4	-0.3
TUMR	Tumrok	2.11	247	eP	Pn	21 53 32.7	+0.7
TUMR				eS	Sn	21 53 59.4	+1.4
TUMR	Tumrok	2.11	247	PN	Pn	21 53 32.7	+0.7
TUMR				S	Sn	21 53 59.4	+1.4
KZV	Kizimen	2.12	242	eP	Pn	21 53 32.5	+0.4
KZV	Kizimen	2.12	242	PN	Pn	21 53 32.5	+0.4
SRDR	Sredinnyy	2.15	276	eP	Pn	21 53 33.6	+1.1
SRDR	Sredinnyy	2.15	276	PN	Pn	21 53 33.6	+1.1
ESO	Esso	2.73	267	eP	Pn	21 53 42.0	+1.6
ESO	Esso	2.73	267	PN	Pn	21 53 42.0	+1.6
OSSR	Ossora	3.12	355	eP	Pn	21 53 46.7	+0.9
OSSR				eS	Sn	21 54 22.4	-0.3
OSSR	Ossora	3.12	355	PN	Pn	21 53 46.7	+0.9
OSSR				S	Sn	21 54 22.4	-0.3
SDLR	Sedlovina	3.95	225	eP	Pn	21 53 58.5	+1.2
SDLR	Sedlovina	3.95	225	PN	Pn	21 53 58.5	+1.2
KRER	Koryakskii	3.98	226	eP	Pn	21 54 00.0	+2.2
KRER	Koryakskii	3.98	226	PN	Pn	21 54 00.0	+2.2
KRX	Arik	3.98	227	eP	Pn	21 53 59.9	+2.1
KRX	Arik	3.98	227	PN	Pn	21 53 59.9	+2.1
SMAR	Somma	3.99	226	eP	Pn	21 53 59.9	+1.9
SMAR	Somma	3.99	226	PN	Pn	21 53 59.9	+1.9
AVH	Avacha	4.01	226	eP	Pn	21 54 00.2	+2.0
AVH	Avacha	4.01	226	PN	Pn	21 54 00.2	+2.0
UGLR	Uglovaya	4.02	225	eP	Pn	21 54 02.7	+4.4
UGLR	Uglovaya	4.02	225	PN	Pn	21 54 02.7	+4.4
KOK	Koryaka	4.04	227	eP	Pn	21 54 01.7	+3.2
KOK	Koryaka	4.04	227	PN	Pn	21 54 01.7	+3.2
PET	Petropavlovsk	4.23	224	eP	Pn	21 54 04.1	+3.1
PET	Petropavlovsk	4.23	224	ePN	Pn	21 54 02.8	+1.8
PET				pmax	pmax		
	comp=Z,42nm,0.5s						
PET	Petropavlovsk	4.23	224	Pn	Pn	21 54 01.1	+0.1
PEA0B	Petropavlovsk-	4.56	231	PN	Pn	21 54 05.4	-0.2
PEA0B	Petropavlovsk-	4.56	231	Pn	Pn	21 54 05.4	-0.2
PETK	Petropavlovsk-	4.56	231	Pn	Pn	21 54 07.0	+1.4
	comp=Z,2.6nm,0.3s,baz=61,slow=15,SNR=11						
PETK				Sn	Sn	21 54 56.3	-2.0
	baz=55,slow=14,SNR=1.1						
KRMR	Karymshinskiy	4.58	226	eP	Pn	21 54 08.9	+3.0
KRMR	Karymshinskiy	4.58	226	PN	Pn	21 54 08.9	+3.0
GRL	Gorelyy	4.82	224	eP	Pn	21 54 11.9	+2.7
GRL	Gorelyy	4.82	224	PN	Pn	21 54 11.9	+2.7
ASAK	Asacha	5.02	224	eP	Pn	21 54 15.7	+3.8
ASAK	Asacha	5.02	224	PN	Pn	21 54 15.7	+3.8
KMSK	Kamenskaya	6.48	11	eP	Pn	21 54 34.5	+2.6
KMSK	Kamenskaya	6.48	11	PN	Pn	21 54 34.5	+2.6
MA2	Magadan	7.63	302	LR	LR	21 57 08.1	
	comp=Z,25nm,19.6s,baz=98,slow=34						
GAMB	Gambell	14.48	48	Pn	Pn	21 56 23.1	+1.9
ANM	Nome	17.36	48	P	P	21 56 59.8	0.0
ANM	Nome	17.36	48		P	21 56 59.8	0.0
JKA	Kamikawa-asahi	17.95	237	P	Pn	21 57 06.2	+0.3
ASAJ	Asahikawa	17.95	237	P	Pn	21 57 06.2	+0.3
	comp=Z,1.1nm,0.3s,baz=73,slow=9.8,SNR=11						
RDOG	Red Dog Mine	19.39	39	P	Pn	21 57 23.5	+0.2
TIXI	Tiksi	21.28	330	P	P	21 57 42.0	-0.6
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TIXI	Tiksi	21.28	330	P	P	21 57 42.0	-0.6
TIXI				IAmb	IAmb	21 57 56.4	
	comp=Z,3.5nm,0.8s						
SVW2	Sparrevohn	21.57	60	P	P	21 57 44.8	-1.1
SVW2				IAmb	IAmb	21 57 48.6	
	comp=Z,4.6nm,1.1s						
IMAR	Indian Mountai	22.41	47	P	P	21 57 55.5	+0.8
RSO	Redoubt South	23.03	61	P	P	21 58 02.2	+0.7
PPLA	Purkeypile	23.04	55	P	P	21 58 03.2	+1.6
PPLA				IAmb	IAmb	21 58 08.0	
	comp=Z,11nm,1.2s						
OHAK	Old Harbor	23.45	69	P	P	21 58 04.9	-0.6
BPAW	Bear Paw Mtn.	23.52	52	P	P	21 58 06.5	+0.3
BPAW				IAmb	IAmb	21 58 08.3	
	comp=Z,5.8nm,1.0s						
KTH	Kantishna Hill	23.57	53	P	P	21 58 08.1	+1.2
KTH				IAmb	IAmb	21 58 09.5	
	comp=Z,6.8nm,1.0s						
MLY	Manley	23.62	49	P	P	21 58 07.5	+0.3
TRF	Thorofare Moun	23.86	53	P	P	21 58 10.8	+1.1
TRF				IAmb	IAmb	21 58 12.8	
	comp=Z,8.0nm,0.9s						
CNPM	China Poot	23.94	63	P	P	21 58 10.8	+0.4
BRLK	Bradley Lake	24.07	62	P	P	21 58 10.8	-0.7
TOLK	Toolik Lake Re	24.32	40	P	P	21 58 14.7	+0.9
MCK	McKinley	24.45	52	P	P	21 58 13.0	-2.0
MCK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MCK	McKinley	24.45	52	P	P	21 58 13.0	-2.0
MCK				IAmb	IAmb	21 58 17.1	
	comp=Z,4.1nm,1.1s						
RND	Reindeer	24.51	53	P	P	21 58 15.6	0.0
RND				pmax	pmax		
	comp=Z,3.0nm,1.2s						
RND	Reindeer	24.51	53	P	P	21 58 15.6	0.0
WRH	Wood River Hil	24.77	51	P	P	21 58 18.6	+0.7
WRH				IAmb	IAmb	21 58 20.7	
	comp=Z,4.5nm,1.0s						
CCB	Clear Creek Bu	24.88	50	P	P	21 58 19.4	+0.6
CCB				IAmb	IAmb	21 58 22.0	
	comp=Z,2.0nm,0.7s						
SML	Sawmill	24.94	57	P	P	21 58 20.0	+0.5
DHY	Denali Highway	25.21	54	P	P	21 58 21.7	-0.3
DHY				IAmb	IAmb	21 58 37.0	
	comp=Z,2.5nm,0.9s						
HDA	Harding Lake	25.27	51	P	P	21 58 22.7	+0.3
IL31		25.27	50	P	P	21 58 22.9	+0.7
ILAR	Eielson Array	25.27	50	P	P	21 58 22.2	-0.2
	comp=Z,0.9nm,0.6s,baz=273,slow=9.8,SNR=16						
SCM	Sheep Creek Mo	25.41	57	P	P	21 58 24.1	+0.3
SCM				pmax	pmax		
	comp=Z,17nm,0.8s						
SCM	Sheep Creek Mo	25.41	57	P	P	21 58 24.1	+0.3
PRP	Porcupine Dome	25.80	48	P	P	21 58 27.6	+0.2
BMAR	Burnt Mountain	26.12	44	P	P	21 58 30.9	+0.8
RIDG	Independent Ri	26.25	52	P	P	21 58 30.8	-0.5
SCRK	Sand Creek	26.60	51	P	P	21 58 33.4	-1.2
SCRK				IAmb	IAmb	21 58 49.0	
	comp=Z,2.2nm,0.7s						
BCAR	Beaver Creek A	27.72	53	P	P	21 58 43.8	-0.8
BARN	Barnard Glacie	28.23	57	P	P	21 58 50.9	+1.6
BARN				IAmb	IAmb	21 59 00.2	
	comp=Z,2.8nm,1.0s						
INK	Inuvik	30.23	41	P	P	21 59 07.2	+0.5
	comp=Z,1.0nm,0.4s,baz=296,slow=6.9,SNR=6.6						
INK	Inuvik	30.23	41	IAmb	IAmb	21 59 08.4	
	comp=Z,1.3nm,0.8s						
C36M	Paulatuk	33.39	38	P	P	21 59 35.2	+0.8
SONM	Songino Array	35.22	281	P	P	21 59 49.5	-1.2
	comp=Z,0.4nm,0.7s,baz=60,slow=8.5,SNR=3.2						
H11N2	WAKE ISLAND Hy	36.45	175	T	T	22 38 47.3	
	baz=356,slow=76,SNR=2257						
H11N3	WAKE ISLAND Hy	36.46	175	T	T	22 38 52.4	
	baz=356,slow=76,SNR=2871						
H11N1	WAKE ISLAND Hy	36.46	175	T	T	22 38 51.9	
	baz=356,slow=76,SNR=3605						
YKA	Yellowknife Ar	39.57	46	P	P	22 00 27.4	+0.2
	comp=Z,0.4nm,0.6s,baz=299,slow=7.8,SNR=7.1						
RES	Resolute Bay	39.72	24	P	P	22 00 28.6	+0.4
	comp=Z,1.0nm,0.9s,baz=318,slow=8.0,SNR=7.0						
RES	Resolute Bay	39.72	24	IAmb	IAmb	22 00 29.7	
	comp=Z,2.1nm,1.0s						
SPITS	Spitsbergen Ar	44.44	351	P	P	22 01 07.2	+0.4
	comp=Z,5.3nm,0.8s,baz=41,slow=7.7,SNR=14						
NEW	Newport	46.70	64	LR	LR	22 22 07.4	
	comp=Z,415nm,19.6s,baz=208,slow=38						
MWH	Moku‘aweowe	47.61	123	P	P	22 01 33.3	+0.4
KRMB	Red Mountain	47.67	76	P	P	22 01 32.1	-0.7
KRMB				IAmb	IAmb	22 01 36.9	
	comp=Z,2.6nm,1.0s						
KURK	Kurchatov	47.84	301	P	P	22 01 32.9	-0.9
KURK	Kurchatov	47.84	301	P	P	22 01 32.9	-0.9
KURK	Kurchatov	47.84	301	IAmb	IAmb	22 01 41.7	
	comp=Z,3.1nm,1.1s						
KURBB	Kurchatov Arra	47.95	301	P	P	22 01 32.9	-1.7
	comp=Z,2.1nm,0.2s,baz=56,slow=8.1,SNR=1.9						
MKAR	Makanchi Array	48.66	295	P	P	22 01 37.6	-2.6
	comp=Z,0.5nm,0.5s,baz=55,slow=6.3,SNR=15						
ARCES	ARCESS Array B	50.99	342	P	P	22 01 56.9	-0.8
	comp=Z,1.9nm,0.9s,baz=26,slow=9.2,SNR=1.1						
PDAR	Pinedale Array	54.34	65	P	P	22 02 24.1	+1.1
	comp=Z,0.3nm,0.6s,baz=300,slow=7.2,SNR=2.6						
NOA	NORSAR Array B	61.14	345	P	P	22 03 10.0	-0.3
	comp=Z,0.3nm,0.5s,baz=32,slow=7.4,SNR=1.2						
NOA	NORSAR Array B	61.14	345	P	P	22 03 10.0	-0.3
SCHQ	Schefferville	62.00	30	P	P	22 03 16.4	+0.2
	comp=Z,2.3nm,0.7s,baz=341,slow=7.5,SNR=7.9						
SCHQ	Schefferville	62.00	30	P	P	22 03 15.7	-0.4
AKASG	Malin Array Be	66.99	330	P	P	22 03 48.1	-0.6
	comp=Z,0.5nm,0.5s,baz=24,slow=6.8,SNR=2.4						
TXAR	Lajitas Array	67.66	71	P	P	22 03 54.7	+1.2
	comp=Z,0.8nm,0.7s,baz=301,slow=4.5,SNR=9.0						
BRTR	Keskin Array B	75.49	322	P	P	22 04 40.3	-0.2
	comp=Z,0.4nm,0.7s,baz=38,slow=7.3,SNR=2.9						
ASAR	Alice Springs	83.39	207	P	P	22 05 23.6	+0.2
	comp=Z,0.6nm,1.0s,baz=21,slow=6.2,SNR=3.2						
ASAR	Alice Springs	83.39	207	P	P	22 05 23.2	-0.2
ASAR	Alice Springs	83.39	207	P	P	22 05 23.1	-0.2

IDC 22 22:01:53.5±2.2**, 8°.07N×94°.21E, h0**^{km}**, mb3.6**/5**, mb1 3.6**/5**, mb1mx3.3**/47**, mbtmp3.6**/5**, Error ellipse: s-maj=106.5km s-min=29.3km az=56.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S3	Diego Garcia H	26.69	235	T	T	22 34 33.4	
	baz=52						
H08S2	Diego Garcia H	26.69	235	T	T	22 34 33.1	
	baz=52						
H08S1	Diego Carcia H	26.71	235	T	T	22 34 17.3	
	baz=52						
MKAR	Makanchi Array	39.92	347	P	P	22 09 29.0	-0.3
	0.7nm,0.7s,baz=165,slow=7.9,SNR=12						
GEYT	Alibeck	44.10	318	P	P	22 10 03.6	-0.1
	0.9nm,0.6s,baz=114,slow=1.7,SNR=3.0						
KURBB	Kurchatov Arra	44.38	346	P	P	22 10 05.4	-0.2
	0.9nm,0.7s,baz=168,slow=7.4,SNR=13						
ZALV	Zalesovo Beam	46.38	352	P	P	22 10 21.7	+0.3
	0.3nm,0.3s,baz=166,slow=7.4,SNR=2.2						
ASAR	Alice Springs	49.98	130	P	P	22 10 49.7	-0.1
	0.2nm,0.7s,baz=313,slow=7.5,SNR=1.6						

*NEIC **22** 22:02:09.6±2.7, 7°.0N±0°.1×94°.7E±0°.1, h10^{km}±1^{km}, mb4.1/10, Error ellipse: s-maj=23.3km s-min=15.5km az=40.0*

*IDC **22** 22:02:09.5±10.0, 7°.11N×94°.72E, h0^{km}, mb3.8/6, mb1 3.8/6, mb1mx3.5/45, mbtmp3.8/6, Error ellipse: s-maj=209.9km s-min=95.3km az=142.0*

ISC 22 22:02:11.9±0.7**, 6°.9N**±0°.1×**94°.7E**±0°.1**, h26**^{km}**, n23,** σ1^{s}.**18**/23**, mb4.0**/11**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.82	127	Pn	Pn	22 02 56.9	+1.6
RPSI	Rantau Prapat	5.96	135	Pn	Pn	22 03 41.1	+2.5
KULM	Kulim	6.15	105	Pn	Pn	22 03 41.5	+0.4
GSI	Gunungsitoli	6.29	153	Pn	Pn	22 03 41.4	-1.6
IPM	Ipoh	6.76	111	Pn	Pn	22 03 48.7	-0.9
BKNI	Bangkinang	9.12	136	Pn	Pn	22 04 23.0	+1.0
ARSB	Arslanbob	39.32	334	P	P	22 09 38.1	-0.9
ARSB				IAmb	IAmb	22 09 44.5	
	comp=Z,2.1nm,0.7s						
SOCY	Socotra	40.44	281	P	P	22 09 48.3	-0.3
SOCY				IAmb	IAmb	22 09 52.1	
	comp=Z,5.0nm,0.9s						
MSEY	Mahe Island	40.79	255	P	P	22 09 51.1	-0.4
MK31	Makanchi Array	41.12	347	P	P	22 09 54.0	+0.3
MKAR	Makanchi Array	41.12	347	P	P	22 09 53.9	+0.1
	comp=Z,1.0nm,0.6s,baz=169,slow=7.9,SNR=13						
MTN	Manton Dam	41.20	118	P	P	22 09 52.1	-2.7
MAKZ	Makanchi	41.21	347	P	P	22 09 54.5	+0.1
MORW	Morawa	41.28	151	P	P	22 09 56.3	+1.1
MORW				IAmb	IAmb	22 10 00.1	
	comp=Z,7.3nm,1.1s						
KKAR	Karatay Array	41.84	333	P	P	22 09 59.2	-0.6
GEYT	Alibeck	45.26	318	P	P	22 10 28.1	+0.8
	comp=Z,1.0nm,0.5s,baz=141,slow=9.6,SNR=4.7						
GEYT	Alibeck	45.26	318	P	P	22 10 27.7	+0.3
GYA0B	ALIBECK ARRAY	45.26	318	P	P	22 10 26.6	-0.8
GYA0B				IAmb	IAmb	22 10 30.9	
	comp=Z,2.6nm,0.7s						
KURBB	Kurchatov Arra	45.59	346	P	P	22 10 30.0	+0.4
	comp=Z,1.1nm,0.7s,baz=171,slow=7.3,SNR=14						
ZALV	Zalesovo Beam	47.56	352	P	P	22 10 45.3	+0.2
	comp=Z,0.8nm,0.7s,baz=183,slow=7.2,SNR=2.5						
RAYN	Ar Rayn	49.96	295	P	P	22 11 05.4	+1.3
RAYN				IAmb	IAmb	22 11 07.1	
	comp=Z,1.3nm,0.7s						
BVAR	Borovoye Array	50.05	341	P	P	22 11 03.8	-0.5
	comp=Z,0.5nm,0.7s,baz=146,slow=10,SNR=2.4						
FINES	FINESS Array B	73.79	332	P	P	22 13 44.8	+1.0
	comp=Z,1.1nm,0.7s,baz=102,slow=8.0,SNR=4.1						

IDC 22 22:10:01.9±650.0**, 4°.37N×54°.66W, h0**^{km}**, Error ellipse: s-maj=401.1km s-min=247.7km az=128.0, Suriname**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I09BR	BRASILIA INFRA	20.94	162	i		00 15 50.0	
	baz=347,slow=320,SNR=1.9						
I50GB	ASCENSION ISLA	42.00	107	i		02 30 20.0	
	baz=294,slow=313,SNR=1.7						
I26DE	FREYUNG INFRAS	72.56	40	i		05 37 14.4	
	baz=257,slow=323,SNR=1.9						

*SJA **22** 22:14:47.2±0.6, 19°.44S×71°.52W, h10^{km}, ML4.9, MW4.6*

*IDC **22** 22:14:55.5±0.5, 19°.61S×70°.70W, h0^{km}, mb4.6/20, mb1 4.7/22, mb1mx4.6/40, mbtmp4.6/22, ML4.6/2, MS4.4/22, Ms1 4.4/22, ms1mx4.3/28, Error ellipse: s-maj=19.2km s-min=11.1km az=65.0*

*NEIC **22** 22:14:56.2, 19°.70S×71°.03W, h21^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.77; M$_{\theta\theta}$0.08; M$_{\phi\phi}$-2.85; M$_{r\theta}$0.68; M$_{\theta\phi}$0.57; M$_{\phi r}$-2.17; Fault plane solution: M$_0$3.66000×10^{16} NP1:ϕ_s354.30000°, δ26.04000°, λ98.34000°. NP2:ϕ_s165.03000°, δ64.25000°, λ85.94000°. Principal axes: T 3.5678, Plg70.0000°, Azm66.0000°; N 0.1718, Plg4.0000°, Azm167.0000°; P -3.7396, Plg19.0000°, Azm258.0000°;*

*MOS **22** 22:14:56.6±1.2, 19°.55S×70°.86W, h19^{km}, mb5.2/6 Error ellipse: s-maj=12.7km s-min=5.9km az=111.3*

*BJI **22** 22:14:56.0±0.0, 19°.70S×71°.00W, h5^{km}, mB5.5/10, Ms5.4/5, Ms7 5.1/5*

*VAO **22** 22:14:57.1±0.7, 19°.58S×70°.80W, h10^{km}, mb4.8*

*NEIC **22** 22:14:58.0±1.8, 19°.70S±0°.04×71°.01W±0°.06, h21^{km}±1^{km}, mb5.1/166, Mwr5.0/42, ML4.7(GUC), Error ellipse: s-maj=9.6km s-min=7.4km az=83.0*

*GUC **22** 22:14:58.3±0.7, 19°.69S×70°.98W, h41^{km}±3^{km}, ML4.8*

*GCMT **22** 22:15:02.0±0.3, 19°.70S±0°.02×71°.22W±0°.02, h27^{km}, MW5.1/93, Moment Tensor Solution. s52,c57; s93,c129; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.66±.21; M$_{\theta\theta}$0.03±.12; M$_{\phi\phi}$-4.69±.15; M$_{r\theta}$0.63±.18; M$_{\theta\phi}$0.91±.09; M$_{\phi r}$-3.31±.23; Best double couple: M$_0$5.83100×10^{16} NP1:ϕ_s350.00000°, δ27.00000°, λ90.00000°. NP2: ϕ_s169.00000°, δ63.00000°, λ90.00000°. Principal axes: T 5.7320, Plg72.0000°, Azm79.0000°; N 0.1970, Plg0.0000°, Azm169.0000°; P -5.9300, Plg18.0000°, Azm259.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 22:14:57.3±0.7**, 19°.73S**±0°.02×**71°.00W**±0°.04**, h19**^{km}±2^{km}**, n852,** σ1^{s}.**34**/858**, mb5.0**/100**, MS4.5**/25**, 13C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.84	81⇓	iP	Pb	22 15 12.8	-0.5
PSGC				i S	Sg	22 15 24.4	-0.4
PSGCX	Pisagua	0.84	81	Pn	Pb	22 15 12.7	-0.7
TA01	Diego Aracena	1.14	138⇑	iP	Pb	22 15 18.6	+0.2
TA01				i S	Sn	22 15 33.3	0.0
TA01				IAML		22 15 39.0	
	comp=Z,32µm,0.6s						
PB11	IPOC Station P	1.27	92⇓	iP	Pn	22 15 20.1	-0.1
PB11				i S	Sn	22 15 37.1	+0.3
PB11				IAML		22 15 41.0	
	comp=E,29µm,0.7s						
PB11	IPOC Station P	1.27	92	Pn	Pb	22 15 20.6	-0.1
PB11	IPOC Station P	1.27	92	i P	Pn	22 15 20.3	+0.1
PB11				eS	Sn	22 15 36.9	0.0
PB12	IPOC Station P	1.27	30⇑	iP	Pn	22 15 20.1	-0.2
PB12				i S	Sb	22 15 36.2	-0.6
PB12				IAML		22 15 40.0	
	comp=E,20µm,0.7s						
PB12	IPOC Station P	1.27	30	Pn	Pb	22 15 20.4	-0.4
PB12	IPOC Station P	1.27	30	i P	Pn	22 15 20.1	-0.2
PB12				eS	Sb	22 15 36.1	-0.8
PB12				IAML		22 15 38.2	
	comp=Z,19µm,0.5s						
PATCX	Punta Patache	1.35	144⇑	iP	Pn	22 15 21.7	+0.4
PATCX				i S	Sn	22 15 38.4	-0.3
PATCX				IAML		22 15 49.9	
	comp=E,13µm,0.5s						
PATCX	Punta Patache	1.35	144	Pn	Pn	22 15 21.5	+0.3
PATCX	Punta Patache	1.35	144	i P	Pn	22 15 21.7	+0.4
PATCX				eS	Sb	22 15 39.6	+0.6
PATCX				IAML		22 15 49.1	
	comp=Z,9µm,1.6s						
AP01	Chacalluta	1.48	25⇑	iP	Pn	22 15 23.0	0.0
AP01				i S	Sb	22 15 42.2	-0.6
GO01	Chusmiza	1.70	88⇑	iP	Pb	22 15 27.4	-0.9
GO01				i S	Sb	22 15 49.5	-0.1
GO01				IAML		22 15 52.4	
	comp=N,25µm,0.3s						
GO01	Chusmiza	1.70	88	Pn	Pb	22 15 27.6	-0.8
PB08	IPOC Station P	1.79	104⇑	iP	Pn	22 15 28.4	+0.9
PB08				i S	Sb	22 15 52.1	+0.2
PB08				IAML		22 16 00.0	
	comp=N,11µm,0.5s						
PB08	IPOC Station P	1.79	104	i P	Pn	22 15 28.5	+0.9
PB08				eS	Sb	22 15 52.9	+1.0
PB08				IAML		22 15 53.5	
	comp=Z,7µm,0.6s						
PB02	IPOC Station P	1.89	147⇑	iP	Pn	22 15 29.5	+0.7
PB02				i S	Sb	22 15 55.9	+1.1
PB02				IAML		22 16 03.4	
	comp=E,25µm,0.5s						
PB02	IPOC Station P	1.89	147	i P	Pn	22 15 29.5	+0.7
PB02				eS	Sg	22 15 59.2	+0.7
PB01	IPOC Station P	1.93	133⇑	iP	Pn	22 15 30.1	+0.8
PB01				i S	Sb	22 15 57.6	+1.8

PB01				IAML		22 16 00.8	
	comp=N,6µm,0.5s						
PB01	IPOC Station P	1.93	133	Pn	Pn	22 15 30.4	+1.0
PB01	IPOC Station P	1.93	133	iP	Pn	22 15 30.3	+1.0
PB01				eS	Sn	22 15 54.2	+1.0
PB01				IAML		22 16 04.3	
	comp=Z,7µm,1.4s						
PB16	IPOC Station P	1.98	46	⇑iP	Pn	22 15 31.0	+0.6
PB16				iS	Sb	22 15 57.2	-0.4
PB16				IAML		22 16 10.4	
	comp=N,33µm,0.9s						
PB16	IPOC Station P	1.98	46	Pn	Pn	22 15 30.9	+0.6
PB07	IPOC Station P	2.25	153	⇑iP	Pn	22 15 34.1	+0.4
PB07				iS	Sg	22 16 08.8	-0.9
PB07				IAML		22 16 21.5	
	comp=E,6µm,0.7s						
PB07	IPOC Station P	2.25	153	Pn	Pn	22 15 34.4	+0.7
PB03	IPOC Station P	2.59	153	⇑iP	Pn	22 15 38.8	+0.4
PB03				iS	Sg	22 16 18.5	-2.1
PB03				IAML		22 16 27.3	
	comp=E,3µm,0.5s						
PB03	IPOC Station P	2.59	153	iP	Pn	22 15 38.9	+0.4
PB03				eS	Sg	22 16 21.0	+0.4
PB03				IAML		22 16 26.7	
	comp=Z,3µm,1.4s						
PB09	IPOC Station P	2.64	142	IAML		22 16 22.8	
	comp=E,4µm,0.7s						
PB09	IPOC Station P	2.64	142	Pn	Pn	22 15 40.2	+1.1
PB09	IPOC Station P	2.64	142	iP	Pn	22 15 40.8	+1.7
PB09				IAML		22 16 30.1	
	comp=Z,5µm,0.6s						
PB04	IPOC Station P	2.71	163		Pn	22 15 40.2	0.0
PB04	IPOC Station P	2.71	163	iP	Pn	22 15 40.1	0.0
PB05	IPOC Station P	3.20	167	iP	Pn	22 15 46.4	-0.4
PB05				IAML		22 16 50.9	
	comp=Z,2µm,1.0s						
PB06	IPOC Station P	3.25	156	iP	Pn	22 15 47.6	+0.1
PB06				IAML		22 16 50.5	
	comp=Z,4µm,0.8s						
LVC	Limon Verde	3.47	146	Pn	Pn	22 15 52.0	+1.3
	comp=Z,31nm,0.3s,baz=330,slow=11,SNR=67						
LVC				Sn	Sn	22 16 33.7	+2.2
	comp=Z,76nm,0.3s,baz=325,slow=16,SNR=4.1						
LVC				Lg	Lg	22 16 43.9	
	comp=Z,79nm,0.3s,baz=59,slow=23,SNR=7.7						
LVC	Limon Verde	3.47	146	eP	Pn	22 15 52.3	+1.6
LVC	Limon Verde	3.47	146	iP	Pn	22 15 52.5	+1.8
LVC				IAML		22 16 55.1	
	comp=Z,1µm,1.8s						
PB15	IPOC Station P	3.75	158		Pn	22 15 54.4	0.0
PB15	IPOC Station P	3.75	158	iP	Pn	22 15 54.4	0.0
PB10	IPOC Station P	3.79	174		Pn	22 15 54.3	-0.5
PB10	IPOC Station P	3.79	174	iP	Pn	22 15 54.3	-0.5
PB10				IAML		22 17 14.1	
	comp=Z,827nm,1.5s						
LPAZ	La Paz	4.38	39	Pn	Pn	22 16 06.8	+3.4
	comp=Z,1.7nm,0.3s,baz=212,slow=9.1,SNR=57						
LPAZ	La Paz	4.38	39	P	Pn	22 16 06.0	+2.6
LPAZ	La Paz	4.38	39		Pn	22 16 05.5	+2.2
PB14	IPOC Station P	4.91	174		Pn	22 16 09.8	-0.6
PB14	IPOC Station P	4.91	174	iP	Pn	22 16 09.8	-0.6
PB14				IAML		22 17 39.9	
	comp=Z,438nm,1.5s						
NNA	Nana	9.53	323	Pn	Pn	22 17 18.8	+5.1
	comp=Z,2.5nm,0.3s,baz=132,slow=14,SNR=2.8						
NNA				Sn	Sn	22 19 04.3	+4.0
	comp=Z,3.5nm,0.3s,baz=266,slow=19,SNR=2.4						
NNA				LR	LR	22 20 37.8	
	comp=Z,1µm,19.5s,baz=162,slow=36						
NNA	Nana	9.53	323	eP	Pn	22 17 12.7	-0.9
NNA	Nana	9.53	323	Pn	Pn	22 17 12.7	-0.9
SIV	San Ignacio	10.15	70	Pn	Pn	22 17 20.4	-1.9
	comp=Z,10nm,0.3s,baz=270,slow=9.8,SNR=53						
SIV				LR	LR	22 21 51.0	
	comp=Z,6µm,18.0s,baz=272,slow=42						
GO04	Tololo Observa	10.40	179		Pn	22 17 25.5	-0.3
SAML	Samuel	13.11	36	P	Pn	22 18 01.9	-0.8
SAML	Samuel	13.11	36		Pn	22 18 01.9	-0.8
ROC1	El Roble	13.20	180	Pn	Pn	22 18 03.8	-0.3
PEL	Peldehue	13.37	179	P	Pn	22 18 07.5	+1.3
PEL	Peldehue	13.37	179	Pn	Pn	22 18 07.5	+1.3
CPUP	Villa Florida	14.19	120	Pn	Pn	22 18 18.6	+1.2
	comp=Z,0.7nm,0.3s,baz=284,slow=15,SNR=3.5						
CPUP				LR	LR	22 24 22.5	
	comp=Z,2µm,20.1s,baz=299,slow=40						
CPUP	Villa Florida	14.19	120	P	Pn	22 18 16.0	-1.4
CPUP	Villa Florida	14.19	120	Pn	Pn	22 18 16.0	-1.4
ATAH	Atahualpa	14.43	329	Pn	P	22 18 24.8	-3.1
	comp=Z,0.3nm,0.3s,baz=146,slow=9.1,SNR=1.7						
SALV	Santo Antonio	15.06	78	eP	Pn	22 18 27.8	-1.5
CLDB	Colider	17.09	61	eP	Pn	22 18 52.8	-2.6
TRCB	Terra Rica	17.39	103	eP	Pn	22 18 57.6	-1.5
PCMB	Pacaembu	18.57	99	eP	P	22 19 11.8	-1.5
ARAG	Araguaiana, MT	18.71	81	eP	P	22 19 13.5	-1.4
ITAB	Concordia	18.84	117	eP	P	22 19 14.5	-1.8
GO06	Curarrehue	19.80	181		P	22 19 26.9	+0.2
FRTB	Fartura	20.26	104	eP	P	22 19 32.0	+0.2
PLCA	Paso Flores	20.94	179	P	Pn	22 19 41.9	+0.1
	comp=Z,4.4nm,0.5s,baz=13,slow=10,SNR=23						
PLCA				LR	LR	22 28 08.2	
	comp=Z,419nm,19.2s,baz=20,slow=38						
PLCA	Paso Flores	20.94	179	P	Pn	22 19 42.0	+0.2
IPMB	Ipameri, GO	21.63	89	eP	P	22 19 46.0	-0.8
FLOC	Florencia	21.66	347	eP	P	22 19 51.2	+4.2
FLOC				eP	P	22 19 51.2	+4.2
FLOC	Florencia	21.66	347	P	P	22 19 47.4	+0.4
PTGA	Pitinga	21.75	31	P	P	22 19 46.1	-1.8
	comp=Z,32nm,0.7s,baz=209,slow=11,SNR=37						
PTGA	Pitinga	21.75	31	P	P	22 19 46.2	-1.8
PTGA				IAmb	IAmb	22 19 58.6	
	comp=Z,51nm,0.8s						
PTGA	Pitinga	21.75	31	eP	P	22 19 46.2	-1.8
CRUC	La Cruz	21.95	344	eP	P	22 19 57.5	+7.0
GARC	Garzon, Huila	22.22	348	eP	P	22 19 54.7	+1.5
SPB	Sao Paulo	22.23	104	P	P	22 19 53.4	+0.4
BDFB	Brasilia	22.27	83	P	P	22 19 52.1	-1.5
	comp=Z,7.7nm,0.7s,baz=249,slow=13,SNR=9.5						
BDFB				LR	LR	22 30 01.9	
	comp=Z,2µm,20.8s,baz=274,slow=41						
BDFB	Brasilia	22.27	83	P	P	22 19 52.9	-0.8
BDFB	Brasilia	22.27	83	P	P	22 19 52.9	-0.8
PCON	Cinco Dias	22.55	346	eP	P	22 20 06.6	+9.5
VAO	Valinhos	22.61	103	eP	P	22 19 56.6	-0.7
POPC	Popayan, Colom	22.82	345	eP	P	22 20 05.2	+5.6
GR1C	Gorgona, Isla	23.66	342	eP	P	22 20 10.1	+2.3
GR1C				eP	P	22 20 13.6	+5.8
PTGC	Puerto Gaitan,	23.80	357	eP	P	22 20 19.2	+10
ORTC	Ortega, Tolima	23.85	349	eP	P	22 20 12.2	+2.4
ORTC				eP	P	22 20 12.2	+2.4
YOTC	Yotoco, Valle	24.14	347	eP	P	22 20 16.4	+3.9
YOTC				eP	sP	22 20 18.5	-0.7
CHIC	Chingaza	24.35	353	eP	P	22 20 17.1	+2.3
ROSC	El Rosal	24.63	352	P	P	22 20 18.8	+1.5
	comp=Z,21nm,0.8s,baz=183,slow=15,SNR=4.5						
ROSC				LR	LR	22 30 20.7	
	comp=Z,1µm,20.8s,baz=200,slow=38						
ROSC	El Rosal	24.63	352	eP	P	22 20 21.9	+4.7
ROSC	El Rosal	24.63	352	P	P	22 20 17.1	-0.1
ROSC				IAmb	IAmb	22 20 34.1	
	comp=Z,31nm,0.8s						
RREF	El Recreo	24.84	350	eP	P	22 20 21.9	+2.5
PLMC	San Jos del P	25.02	347	eP	P	22 20 23.4	+2.9
SMTB	Santa Maria do	25.09	68	eP	P	22 20 19.9	-1.1
GUY2C	Guyana, Caldas	25.16	350	eP	P	22 20 24.8	+2.6
GUY2C				eP	P	22 20 26.9	+4.7
PIZC	Pizarro, Choco	25.32	345	eP	P	22 20 12.2	-11
SPBC	San Pablo de B	25.40	353	eP	P	22 20 24.8	+0.9
NORC	Norcasia	25.42	351	eP	P	22 20 24.8	+0.7
RUSC	La Rusia	25.54	355	eP	P	22 20 26.1	+0.5
RUSC	La Rusia	25.54	355	P	P	22 20 26.1	+0.5
JANB	Januaria	25.87	84	eP	P	22 20 26.6	-1.7
CBOC	Ciudad Bolivar	25.90	349	eP	P	22 20 31.7	+3.2
CBOC				eP	P	22 20 32.4	+3.9
HELC	Santa Helena	26.14	350	eP	P	22 20 31.7	+0.9
BARC	Barichara	26.24	355	eP	P	22 20 33.1	+1.5
PTBC	PUERTO BERRIO,	26.32	352	eP	P	22 20 31.0	-1.1
PAYG	Puerto Ayora	26.74	313	P	P	22 20 36.0	-0.1
ZARC	Zaragoza, Cauc	27.31	352	eP	P	22 20 41.5	+0.4
ZARC				eP	P	22 20 42.2	+1.1
SDV	Santo Domingo	28.43	1	P	P	22 20 51.1	-0.2
	comp=Z,8.7nm,0.9s,baz=212,slow=3.8,SNR=6.9						
SDV	Santo Domingo	28.43	1	P	P	22 20 51.3	0.0
SDV	Santo Domingo	28.43	1	eP	P	22 20 51.0	-0.4
BSFB	Barra de Sao F	28.46	93	eP	P	22 20 50.5	-0.9
SMLC	San Martn de	28.51	354	eP	P	22 20 49.9	-1.8
BCIP	Isla Barro Col	30.00	342	P	P	22 21 02.3	-2.7
BCIP	Isla Barro Col	30.00	342	P	P	22 21 02.3	-2.7
TOSP	Speyside	32.51	19	P	P	22 21 26.8	-0.3
JTS	Las Juntas de	32.84	334	iP	P	22 21 31.0	+0.9
JTS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GRGR	Grenville	32.97	17	P	P	22 21 30.1	-1.0
EFI	East Falkland	33.47	165	iP	P	22 21 33.1	-2.0
EFI				pmax	pmax		
	comp=Z,61nm,1.2s						
SVB	Belmont	34.16	17	P	P	22 21 41.1	-0.5
FDF	Fort de France	35.59	17	P	P	22 21 52.6	-1.3
FDF				pmax	pmax		
	comp=Z,45nm,0.9s						
FDF	Fort de France	35.59	17	P	P	22 21 52.5	-1.3
RPN	Rapa Nui	35.83	251	LR	LR	22 32 55.7	
	comp=Z,1µm,18.3s,baz=101,slow=30						
RPN	Rapa Nui	35.83	251	P	P	22 21 52.1	-3.9
RPN				pmax	pmax		
	comp=Z,206nm,1.4s						
RPN	Rapa Nui	35.83	251	P	P	22 21 52.1	-3.9
RCBR	Riachuelo	36.81	73	P	P	22 22 04.2	-0.2
RCBR				pmax	pmax		
	comp=Z,42nm,1.0s						
RCBR	Riachuelo	36.81	73	P	P	22 22 04.2	-0.2
RCBR				IAmb	IAmb	22 22 05.0	
	comp=Z,42nm,1.0s						
RCBR	Riachuelo	36.81	73	eP	P	22 22 04.4	-0.1
MLPR	Magueyes Islan	37.66	6	P	P	22 22 09.6	-1.9
CRPR	Cabo Rojo, PR	37.69	6	P	P	22 22 10.8	-0.9
OBIP	Obispado Ponce	37.78	7	P	P	22 22 10.0	-2.5
PDPR	Patillas Dam,	37.83	8	P	P	22 22 11.3	-1.6
PDPR				IAmb	IAmb	22 22 25.2	
	comp=Z,24nm,0.8s						
BANI	BANI	37.89	1	P	P	22 22 12.3	-1.2
SJG	San Juan	37.90	8	P	P	22 22 11.9	-1.6
SJG				pmax	pmax		
	comp=Z,30nm,1.0s						
SJG	San Juan	37.90	8	P	P	22 22 11.9	-1.6
SJG				IAmb	IAmb	22 22 12.8	
	comp=Z,30nm,0.9s						
CBYP	Canovanas	38.10	8	P	P	22 22 13.6	-1.6
GCPR	Guaynabo City	38.10	8	P	P	22 22 12.5	-2.8
CUPR	Culebra, Puert	38.21	9	P	P	22 22 14.2	-1.9
CUPR				IAmb	IAmb	22 22 20.1	
	comp=Z,30nm,1.1s						
STVI	Saint Thomas	38.30	9	P	P	22 22 16.0	-0.8
STVI				IAmb	IAmb	22 22 21.7	
	comp=Z,38nm,1.4s						
DR12	Loma Pena Alta	38.31	2	P	P	22 22 15.6	-1.4
SMRT	St. Maarten	38.34	12	P	P	22 22 14.3	-2.9
SMRT				IAmb	IAmb	22 22 28.8	
	comp=Z,48nm,0.9s						
CCIG	Comitan	41.38	328	P	P	22 22 43.0	+0.2
TEIG	Tepich	43.16	336	P	P	22 22 58.4	+1.4
	comp=Z,5.6nm,0.5s,baz=133,slow=0.0,SNR=5.4						
TEIG	Tepich	43.16	336	P	P	22 22 57.2	+0.2
CMIG	Matias Romero	43.46	326	P	P	22 23 01.9	+2.4
	comp=Z,1.6nm,0.2s,baz=159,slow=5.7,SNR=4.9						
451A	Vernon	52.02	344	P	P	22 24 03.9	-1.8
BBSR	BB Station	52.15	7	P	P	22 24 06.8	+0.2
ZAIG	Zacatecas	52.28	322	P	P	22 24 07.5	-0.7
352A	Blakely	52.64	345	P	P	22 24 09.6	-0.7
BRAL	Brewton	52.90	343	P	P	22 24 11.8	-0.4
CSU	Charleston Sou	53.13	350	P	P	22 24 15.4	+1.6
NHSC	New Hope	53.26	350	P	P	22 24 15.5	+0.7
NHSC	New Hope	53.26	350	P	P	22 24 16.3	+1.4
	baz=169						
154A	Montrose	53.32	347	P	P	22 24 14.7	-0.5
154A				IAmb	IAmb	22 24 25.6	
	comp=Z,34nm,1.1s						
Z58A	St. Stephen	53.43	351	P	P	22 24 17.9	+1.9
	baz=170						
250A	Grady	53.45	344	P	P	22 24 15.3	-1.0
250A				IAmb	IAmb	22 24 26.5	
	comp=Z,22nm,1.1s						
Z57A	Bowman	53.53	350	P	P	22 24 18.0	+1.2
	baz=169						
Z56A	Williston	53.67	349	P	P	22 24 18.4	+0.5
152A	Waverly Hall	53.73	346	P	P	22 24 18.2	-0.1
152A				IAmb	IAmb	22 24 28.8	
	comp=Z,26nm,1.5s						
346A	Big Creek Wild	53.82	340	P	P	22 24 17.7	-1.3
346A				IAmb	IAmb	22 24 33.2	
	comp=Z,28nm,0.9s						
Y60A	Bolivia	53.87	353	P	P	22 24 19.6	+0.4
Y60A	Bolivia	53.87	353	P	P	22 24 20.4	+1.2
	baz=172						
Y58A	Scranton	53.97	351	P	P	22 24 19.8	-0.2
GOGA	Godfrey	54.16	347	P	P	22 24 21.4	0.0
GOGA	Godfrey	54.16	347	P	P	22 24 21.4	0.0
Y57A	Sumter	54.19	350	P	P	22 24 21.5	0.0
344A	Westbrook Farm	54.30	339	P	P	22 24 22.4	-0.1
Y55A	Saluda	54.36	349	P	P	22 24 23.4	+0.5
	baz=168						
Z51A	Franklin	54.45	345	P	P	22 24 22.6	-1.0
441A	DeRidder	54.53	336	P	P	22 24 24.1	-0.1
441A				IAmb	IAmb	22 24 27.5	
	comp=Z,31nm,1.1s						
X58A	Rowland	54.56	352	P	P	22 24 24.4	+0.1
Z50A	Ashland	54.58	345	P	P	22 24 23.6	-0.9
Z50A				IAmb	IAmb	22 24 34.4	
	comp=Z,12nm,0.8s						
Z50A	Ashland	54.58	345	P	P	22 24 24.8	+0.3
	baz=163,SNR=7.8						
JSC	Jenkinsville	54.59	350	P	P	22 24 24.7	+0.2
JSC				pmax	pmax		
	comp=Z,20nm,1.4s						
JSC	Jenkinsville	54.59	350	P	P	22 24 24.7	+0.2
JSC				IAmb	IAmb	22 24 34.4	
	comp=Z,20nm,1.4s						
LRAL	Lakeview Retre	54.65	344	P	P	22 24 24.5	-0.4
LRAL	Lakeview Retre	54.65	344	P	P	22 24 25.2	+0.2
	baz=162						
HODGE	Hodges	54.72	349	P	P	22 24 24.0	-1.4
Y52A	Lilburn	54.73	347	P	P	22 24 24.8	-0.8
Y52A	Lilburn	54.73	347	P	P	22 24 25.7	+0.1
	baz=165						
X56A	White Oak	54.76	350	P	P	22 24 26.7	+1.0
	baz=168,SNR=5.3						
342A	Flagon Creek P	54.78	338	P	P	22 24 25.9	-0.1
BIRD	Birdtown, Kers	54.81	350	P	P	22 24 26.7	+0.5
X55A	Gracelyn & Ava	54.84	349	P	P	22 24 27.2	+0.9
	baz=168						
146A	Union	54.86	341	P	P	22 24 27.7	+1.2
HKT	Hockley	54.88	334	P	P	22 24 27.5	+0.9
HKT	Hockley	54.88	334	P	P	22 24 27.5	+0.9
W58A	Raeford	55.00	352	P	P	22 24 28.7	+1.2
	baz=171,SNR=6.0						
X54A	Belton	55.05	349	P	P	22 24 28.3	+0.4
	baz=167						
CNNC	Cliffs of the	55.05	353	P	P	22 24 28.1	+0.3
833A	Chaparral WMA,	55.09	329	P	P	22 24 28.8	+0.5
833A				IAmb	IAmb	22 24 45.6	
	comp=Z,10.0nm,0.8s						
X53A	Estanollee	55.18	348	P	P	22 24 29.3	+0.5
	baz=166						
PAULI	Pauline	55.21	349	P	P	22 24 28.8	-0.2
W57A	Gilead	55.24	351	P	P	22 24 28.9	-0.3
W57A	Gilead	55.24	351	P	P	22 24 29.9	+0.7
	baz=170						
Y49A	Blount Mountai	55.27	344	P	P	22 24 28.9	-0.6
W56A	Indian Trail	55.31	350	P	P	22 24 30.5	+0.7
	baz=169						
KMSC	Kings Mountain	55.44	350	P	P	22 24 30.2	-0.5
KMSC	Kings Mountain	55.44	350	P	P	22 24 31.6	+0.9
	baz=168						
W54A	Cherokee Point	55.53	349	P	P	22 24 32.5	+1.1
	baz=167						
X51A	Calhoun	55.58	346	P	P	22 24 31.9	+0.2
X51A	Calhoun	55.58	346	P	P	22 24 32.4	+0.7
	baz=164						
BG3	Lake Jocassee	55.58	348	P	P	22 24 30.7	-1.1
V59A	Middlesex	55.61	353	P	P	22 24 32.5	+0.6
	baz=172						
V58A	Windy Hill, Pi	55.75	352	P	P	22 24 33.2	+0.4
V58A				IAmb	IAmb	22 24 34.5	
	comp=Z,13nm,1.0s						
V58A	Windy Hill, Pi	55.75	352	P	P	22 24 33.8	+0.9
	baz=171						
W52A	Murphy	55.88	347	P	P	22 24 33.2	-0.7
V57A	Coltrane Farms	55.93	351	P	P	22 24 34.9	+0.7
	baz=170						
V56A	Mocksville	55.96	351	P	P	22 24 35.4	+1.0
	baz=169						
U61A	Possum Corner	55.99	355	P	P	22 24 34.4	-0.1
NATX	Nacogdoches	55.99	336	P	P	22 24 35.5	+0.8
X48A	Hartselle	56.00	344	P	P	22 24 34.4	-0.3
V55A	Taylorsville	56.11	350	P	P	22 24 35.5	0.0
V55A	Taylorsville	56.11	350	P	P	22 24 36.5	+1.0
	baz=168						
U59A	Littleton	56.14	353	P	P	22 24 35.8	+0.1
V54A	Nebo	56.16	349	P	P	22 24 36.4	+0.5
	baz=168						
V53A	Saluda	56.22	348	P	P	22 24 35.9	-0.4
U58A	Oxford	56.27	353	P	P	22 24 37.1	+0.5
	baz=172						
W50A	Signal Mountai	56.29	346	P	P	22 24 36.8	0.0
W50A				IAmb	IAmb	22 24 46.8	
	comp=Z,10nm,0.8s						
435B	Jarrell	56.35	332	P	P	22 24 37.2	-0.1
CPCT	Cooper Cave	56.35	347	P	P	22 24 36.1	-1.1
TKL	Tuckaleechee C	56.40	348	P	P	22 24 37.6	+0.1
	comp=Z,12nm,1.0s,baz=165,slow=9.5,SNR=9.3						
TKL	Tuckaleechee C	56.40	348	P	P	22 24 36.9	-0.6
TKL				IAmb	IAmb	22 24 38.6	
	comp=Z,16nm,1.0s						
U57A	Blanch	56.41	352	P	P	22 24 38.6	+1.0
	baz=171						
SWET	Sewanee	56.45	345	P	P	22 24 38.4	+0.5
U56A	King	56.47	351	P	P	22 24 38.2	+0.2
U56A	King	56.47	351	P	P	22 24 39.7	+1.7
	baz=170						
V52A	Sevierville	56.54	348	P	P	22 24 38.3	-0.2
Z41A	Richland Creek	56.65	338	P	P	22 24 39.4	0.0
Z41A	Richland Creek	56.65	338	P	P	22 24 41.0	+1.7
	baz=155						
V51A	Loudon	56.66	347	P	P	22 24 38.4	-1.0
237A	Washetta, Mont	56.66	335	P	P	22 24 40.2	+0.7
OXF	Oxford	56.71	342	P	P	22 24 39.1	-0.7
OXF	Oxford	56.71	342	P	P	22 24 39.1	-0.7
OXF	Oxford	56.71	342	P	P	22 24 40.4	+0.7
	baz=159						
U55A	TA2, Sparta	56.72	350	P	P	22 24 40.1	+0.2
	baz=169						
T59A	Double "B" Far	56.73	354	P	P	22 24 39.6	-0.2
T59A				IAmb	IAmb	22 24 41.7	
	comp=Z,14nm,0.8s						
T59A	Double "B" Far	56.73	354	P	P	22 24 41.0	+1.1
	baz=173						
PLAL	Pickwick Lake	56.77	343	P	P	22 24 38.5	-1.7
T58A	Grand View Acr	56.81	353	P	P	22 24 41.6	+1.1
	baz=172						
U54A	Nelsons Funny	56.87	350	P	P	22 24 40.9	0.0
U54A	Nelsons Funny	56.87	350	P	P	22 24 41.6	+0.6
	baz=168						
T57A	Hurt	56.95	352	P	P	22 24 41.8	+0.4
T57A	Hurt	56.95	352	P	P	22 24 42.3	+0.9
	baz=171						
T56A	Rocky Mt	57.09	351	P	P	22 24 43.5	+1.1
	baz=170						
JCT	Junction City	57.09	330	P	P	22 24 43.3	+0.7
JCT				pmax	pmax		
	comp=Z,4.0nm,0.7s						
JCT	Junction City	57.09	330	P	P	22 24 43.2	+0.7
WLAR	White Oak Lake	57.15	338	P	P	22 24 44.1	+1.2
V48A	Smith Brothers	57.16	345	P	P	22 24 42.7	-0.2
TZTN	Tazewell	57.21	348	P	P	22 24 43.3	+0.1
TZTN				IAmb	IAmb	22 24 52.8	
	comp=Z,17nm,1.1s						
W45A	Hickory Valley	57.25	342	P	P	22 24 43.5	-0.1
T55A	Pulaski	57.28	351	P	P	22 24 45.2	+1.3
	baz=169						
BLA	Blacksburg	57.32	351	P	P	22 24 44.9	+0.8
BLA				pmax	pmax		
	comp=Z,26nm,1.4s						
BLA	Blacksburg	57.32	351	P	P	22 24 44.9	+0.8
BLA				IAmb	IAmb	22 24 58.9	
	comp=Z,26nm,1.4s						
WHTX	Lake Whitney,	57.33	333	P	P	22 24 45.0	+0.8
T54A	Tazewell	57.35	350	P	P	22 24 44.9	+0.5
	baz=168						
CLTN	Cedars of Leba	57.38	345	P	P	22 24 44.0	-0.5
S58A	Poland Farm, P	57.41	353	P	P	22 24 45.0	+0.3
S58A				IAmb	IAmb	22 25 03.0	
	comp=Z,17nm,1.1s						
T53A	Wise	57.44	349	P	P	22 24 45.3	+0.3
	baz=167,SNR=5.9						
T52A	Hallie	57.65	349	P	P	22 24 45.7	-0.7
T52A				IAmb	IAmb	22 24 47.5	
	comp=Z,13nm,1.0s						
T52A	Hallie	57.65	349	P	P	22 24 46.2	-0.2
	baz=167						
U49A	Red Boiling Sp	57.65	346	P	P	22 24 45.3	-1.1
S57A	Dark Hollow, R	57.67	353	P	P	22 24 46.3	-0.2
S57A	Dark Hollow, R	57.67	353	P	P	22 24 47.4	+0.9
	baz=171						
T51A	Gray	57.69	348	P	P	22 24 47.0	+0.3
	baz=166,SNR=5.1						
R58B	Mineral	57.74	354	P	P	22 24 47.6	+0.6
R58B	Mineral	57.74	354	P	P	22 24 47.9	+0.9
	baz=172						
WVT	Waverly	57.79	344	P	P	22 24 47.1	-0.3
WVT				pmax	pmax		
	comp=Z,13nm,0.8s						
WVT	Waverly	57.79	344	P	P	22 24 47.1	-0.3
WVT				IAmb	IAmb	22 24 56.7	
	comp=Z,13nm,0.8s						
WVT	Waverly	57.79	344	P	P	22 24 47.1	-0.3
	baz=161						
UALR	University of	57.87	339	P	P	22 24 47.7	-0.2
S55A	Lewisburg	57.88	351	P	P	22 24 49.3	+1.2
	baz=170,SNR=5.8						
T50A	Nancy	57.93	347	P	P	22 24 48.5	+0.1
	baz=165						
CBN	Corbin Frederi	57.93	354	P	P	22 24 48.7	+0.4
CBN				IAmb	IAmb	22 24 51.1	
	comp=Z,14nm,0.9s						
SACV	Santiago Islan	57.98	57	P	P	22 24 48.3	-0.8
S54A	Dingess, Beckl	58.03	350	P	P	22 24 49.3	+0.2
S54A	Dingess, Beckl	58.03	350	P	P	22 24 49.7	+0.6
	baz=169						
TX31	Lajitas Ar. Si	58.07	326	P	P	22 24 49.8	+0.2
TX32	Lajitas Array	58.07	326	P	P	22 24 49.1	-0.5
TXAR	Lajitas Array	58.07	326	P	P	22 24 50.1	+0.5
	comp=Z,0.6nm,0.7s,baz=153,slow=8.4,SNR=7.7						
TXAR				LR	LR	22 47 13.5	
	comp=Z,94nm,21.4s,baz=0.0,slow=33						
TXAR	Lajitas Array	58.07	326	P	P	22 24 50.7	+1.1
TXAR	Lajitas Array	58.07	326	P	P	22 24 50.7	+1.1
MIAR	Mount Ida	58.09	338	P	P	22 24 50.5	+1.0
MIAR				pmax	pmax		
	comp=Z,24nm,1.3s						
MIAR	Mount Ida	58.09	338	IAmb	IAmb	22 25 00.9	
	comp=Z,28nm,1.2s						
MIAR	Mount Ida	58.09	338	P	P	22 24 50.4	+1.0
	baz=155,SNR=9.8						
R57A	Stanardsville	58.15	353	P	P	22 24 51.2	+1.4
	baz=172						
T49A	Edmonton	58.16	346	P	P	22 24 50.0	0.0
	baz=164,SNR=14						
W41B	Gary Mavity, V	58.20	340	P	P	22 24 49.8	-0.5
W41B	Gary Mavity, V	58.20	340	P	P	22 24 51.1	+0.8
	baz=156						
GNAR	Gosnell	58.24	342	P	P	22 24 50.3	-0.2
S51A	Beattyville	58.28	348	P	P	22 24 52.6	+1.8
WHAR	Wooly Hollow	58.33	340	P	P	22 24 50.9	-0.2
R55A	Marlinton	58.33	352	P	P	22 24 52.3	+1.0
R55A				IAmb	IAmb	22 25 07.3	
	comp=Z,26nm,1.4s						
R55A	Marlinton	58.33	352	P	P	22 24 52.8	+1.6
	baz=170						
R54A	Victor	58.36	351	P	P	22 24 52.3	+0.9
	baz=169						
Z35A	Perchaven, San	58.41	334	P	P	22 24 52.7	+0.9
T47A	Sharon Grove	58.42	345	P	P	22 24 51.1	-0.6
S50A	Richmond	58.47	348	P	P	22 24 52.5	+0.4
	baz=165,SNR=5.1						
HICK	Hickman	58.55	343	P	P	22 24 51.0	-1.7
R53A	Hurricane	58.66	350	P	P	22 24 54.1	+0.7
	baz=168						
LCAR	Lake Charles	58.68	341	P	P	22 24 53.4	-0.2
LCAR				IAmb	IAmb	22 25 03.5	
	comp=Z,9.8nm,0.9s						
Q58A	Fox Den Farm,	58.69	354	P	P	22 24 53.7	+0.1
	baz=173						
W39A	Magazine	58.75	338	P	P	22 24 55.3	+1.2

W39A	Magazine	58.75	338	P	P	22 24 55.8	+1.7
	baz=155,SNR=9.6						
S49A	Springfield	58.76	347	P	P	22 24 54.0	-0.1
	baz=164						
FCAR	Ozark Folk Cen	58.82	340	P	P	22 24 54.1	-0.5
ABTX	Abilene, Hawle	58.83	332	P	P	22 24 56.1	+1.4
ABTX	Abilene, Hawle	58.83	332	P	P	22 24 56.2	+1.5
	baz=148						
T45A	Paducah	58.84	344	P	P	22 24 54.6	-0.1
Q57A	Strasburg	58.86	353	P	P	22 24 56.6	+1.8
	baz=172						
R51A	Hillsboro	58.91	348	P	P	22 24 55.5	+0.3
	baz=166						
Q56A	Snyder Ridge,	58.96	353	P	P	22 24 55.6	+0.1
Q56A	Snyder Ridge,	58.96	353	P	P	22 24 57.4	+1.9
	baz=171						
Q55A	Buckhannon	59.03	352	P	P	22 24 57.5	+1.5
	baz=170						
R50A	Paris	59.04	348	P	P	22 24 55.8	-0.3
R50A	Paris	59.04	348	P	P	22 24 56.2	+0.1
	baz=165						
Q53A	Leroy	59.10	350	P	P	22 24 57.4	+0.9
	baz=168						
PBMO	Poplar Bluff	59.12	342	P	P	22 24 55.0	-1.7
Q54A	Coxs Mills	59.12	351	P	P	22 24 56.2	-0.5
Q54A				IAmb	IAmb	22 25 07.5	
	comp=Z,29nm,1.4s						
Q54A	Coxs Mills	59.12	351	P	P	22 24 57.0	+0.4
	baz=169						
R49A	Shelbyville	59.22	347	P	P	22 24 57.6	+0.3
	baz=164						
P57A	Homestead Farm	59.26	354	P	P	22 24 56.3	-1.3
P57A				IAmb	IAmb	22 24 59.8	
	comp=Z,16nm,1.1s						
P57A	Homestead Farm	59.26	354	P	P	22 24 59.4	+1.8
	baz=172						
WCI	Wyandotte Cave	59.41	346	P	P	22 24 58.2	-0.5
WCI	Wyandotte Cave	59.41	346	P	P	22 24 58.2	-0.5
WCI	Wyandotte Cave	59.41	346	P	P	22 24 58.1	-0.5
	baz=163						
U40A	Yellville	59.48	340	P	P	22 24 58.2	-1.0
U40A	Yellville	59.48	340	P	P	22 24 59.9	+0.7
	baz=156,SNR=6.2						
USIN	University of	59.48	345	P	P	22 24 58.7	-0.5
USIN				IAmb	IAmb	22 25 08.9	
	comp=Z,17nm,0.9s						
P55A	Reedsville	59.50	352	P	P	22 25 00.7	+1.4
	baz=170						
T42A	Van Buren	59.55	341	P	P	22 24 59.1	-0.5
Q51A	Peebles	59.58	349	P	P	22 24 59.3	-0.5
Q51A				IAmb	IAmb	22 25 10.0	
	comp=Z,11nm,0.9s						
Q51A	Peebles	59.58	349	P	P	22 25 00.3	+0.5
	baz=167						
S44A	Carbondale	59.64	343	P	P	22 24 59.6	-0.6
MCWV	Mont Chateau	59.65	352	P	P	22 24 59.8	-0.4
SIUC	Southern Illin	59.65	343	P	P	22 24 60.0	-0.3
P54A	Burton	59.68	352	P	P	22 25 01.4	+0.9
	baz=170,SNR=5.1						
P53A	Whipple	59.70	351	P	P	22 25 00.9	+0.3
P53A	Whipple	59.70	351	P	P	22 25 01.6	+1.0
	baz=169						
X34A	Smith Ranch, M	59.75	334	P	P	22 25 01.4	+0.3
HHAR	Hobbs	59.78	339	P	P	22 25 01.3	0.0
W35A	Tecumseh	59.85	336	P	P	22 25 01.9	+0.2
Q49A	Aurora	59.85	348	P	P	22 25 02.3	+0.6
	baz=165						
Q48A	North Vernon	59.96	347	P	P	22 25 02.3	-0.1
	baz=164						
P52A	Corning	59.96	350	P	P	22 25 02.6	+0.2
	baz=168						
P51A	Williamsport	59.97	349	P	P	22 25 01.6	-0.9
P51A				IAmb	IAmb	22 25 03.3	
	comp=Z,18nm,1.1s						
MGMO	Mountain Grove	60.02	340	P	P	22 25 03.4	+0.5
MGMO				IAmb	IAmb	22 25 13.2	
	comp=Z,19nm,1.1s						
U38A	Gravette	60.08	338	P	P	22 25 03.8	+0.5
U38A				IAmb	IAmb	22 25 13.9	
	comp=Z,16nm,1.4s						
O56A	Blue Knob Stat	60.10	353	P	P	22 25 03.8	+0.4
O56A				IAmb	IAmb	22 25 05.9	
	comp=Z,17nm,1.1s						
O56A	Blue Knob Stat	60.10	353	P	P	22 25 05.0	+1.6
	baz=172						
TUL1	Leonard	60.11	337	P	P	22 25 03.8	+0.3
TUL1	Leonard	60.11	337	P	P	22 25 04.7	+1.2
	baz=153						
O55A	Ligonier	60.12	353	P	P	22 25 04.9	+1.4
	baz=171						
FNO	Franklin	60.15	335	P	P	22 25 03.8	0.0
BRNJ	Basking Ridge	60.19	357	P	P	22 25 03.7	-0.2
P50A	Jamestown	60.22	349	P	P	22 25 04.3	+0.1
	baz=166						
O54A	Avella	60.23	352	P	P	22 25 04.3	0.0
O54A				IAmb	IAmb	22 25 15.2	
	comp=Z,9.0nm,0.9s						
OLIL	Olney	60.32	345	P	P	22 25 04.0	-0.9
OLIL				IAmb	IAmb	22 25 04.8	
	comp=Z,16nm,1.1s						
BLO	Bloomington	60.36	346	P	P	22 25 04.4	-0.8
BLO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BLO	Bloomington	60.36	346	P	P	22 25 04.4	-0.8
BLO				IAmb	IAmb	22 25 14.2	
	comp=Z,9.6nm,0.8s						
O52A	Adamsville	60.38	350	P	P	22 25 04.3	-1.0
O52A				IAmb	IAmb	22 25 05.9	
	comp=Z,11nm,0.9s						
O52A	Adamsville	60.38	350	P	P	22 25 05.7	+0.4
	baz=168						
P48A	Milroy	60.40	347	P	P	22 25 04.8	-0.6
	baz=164						
O53A	New Philadelph	60.42	351	P	P	22 25 06.0	+0.5
	baz=169						
O51A	Pataskala	60.54	350	P	P	22 25 06.6	+0.2
	baz=168						
CCM	Cathedral Cave	60.54	342	P	P	22 25 06.1	-0.3
CCM	Cathedral Cave	60.54	342	P	P	22 25 06.1	-0.3
CCM	Cathedral Cave	60.54	342	P	P	22 25 06.7	+0.3
	baz=158						
ODNJ	Ogdensburg	60.59	357	P	P	22 25 06.0	-0.7
N55A	Marion Center	60.65	353	P	P	22 25 08.4	+1.3
	baz=171,SNR=7.8						
ACSO	Alum Creek Sta	60.68	349	P	P	22 25 07.1	-0.3
ACSO	Alum Creek Sta	60.68	349	P	P	22 25 07.5	+0.2
	baz=167						
N56A	West Decatur	60.71	354	P	P	22 25 08.9	+1.4
	baz=172						
O50A	Cable	60.71	349	P	P	22 25 07.6	0.0
	baz=166						
Q44A	Meyer Farm, Va	60.72	344	P	P	22 25 06.1	-1.4
Q44A				IAmb	IAmb	22 25 17.4	
	comp=Z,15nm,0.9s						
MNTX	Cornudas Mount	60.84	327	P	P	22 25 09.1	+0.5
MNTX	Cornudas Mount	60.84	327	P	P	22 25 09.6	+1.0
	baz=143,SNR=6.9						
S39A	Bolivar	60.85	340	P	P	22 25 07.9	-0.6
O49A	Covington	60.89	348	P	P	22 25 08.2	-0.5
O49A	Covington	60.89	348	P	P	22 25 08.5	-0.3
	baz=166						
N53A	Lisbon	60.91	351	P	P	22 25 09.5	+0.6
N53A				IAmb	IAmb	22 25 24.3	
	comp=Z,13nm,0.9s						
P46A	Rosedale	60.95	346	P	P	22 25 08.6	-0.5
N54A	Moraine State	60.95	352	P	P	22 25 09.5	+0.3
N54A	Moraine State	60.95	352	P	P	22 25 10.1	+0.9
	baz=170						
M57A	Sunshine Farm,	61.02	355	P	P	22 25 10.6	+1.0
M57A				IAmb	IAmb	22 25 11.5	
	comp=Z,18nm,1.1s						
N52A	McGinn’s Farm,	61.04	351	P	P	22 25 10.2	+0.4
	baz=169						
R40A	Maddies Statio	61.07	341	P	P	22 25 09.5	-0.5
M59A	Waymart	61.09	356	P	P	22 25 11.6	+1.5
	baz=175						
O48A	Farmland	61.11	348	P	P	22 25 09.8	-0.5
	baz=165						
N50A	Nevada	61.24	349	P	P	22 25 10.5	-0.6
	baz=167						
N51A	Ashland	61.25	350	P	P	22 25 11.1	-0.1
N51A				IAmb	IAmb	22 25 20.5	
	comp=Z,11nm,0.8s						
M56A	Emporium	61.26	354	P	P	22 25 12.4	+1.2
M56A	Emporium	61.26	354	P	P	22 25 12.5	+1.2
	baz=172						
T35A	Sooner Cattle	61.27	337	P	P	22 25 12.0	+0.6
M55A	Ridgway	61.31	353	P	P	22 25 12.1	+0.5
M55A	Ridgway	61.31	353	P	P	22 25 12.8	+1.3
	baz=172,SNR=6.3						
MSTX	Muleshoe	61.38	330	P	P	22 25 12.7	+0.3
MSTX	Muleshoe	61.38	330	P	P	22 25 13.6	+1.2
	baz=146,SNR=6.2						
M54A	Oil Creek Stat	61.45	353	P	P	22 25 12.8	+0.3
M54A	Oil Creek Stat	61.45	353	P	P	22 25 13.6	+1.0
	baz=171						
M53A	WI Miller and	61.51	352	P	P	22 25 13.5	+0.6
	baz=170						
P43A	Skaggs, Pawnee	61.54	344	P	P	22 25 12.4	-0.7
N49A	Columbus Grove	61.57	349	P	P	22 25 13.5	+0.2
	baz=166,SNR=8.7						
L58A	Harry Jones Me	61.62	356	P	P	22 25 15.2	+1.5
	baz=175						
AMTX	Amarillo	61.64	332	P	P	22 25 14.8	+0.8
SFIN	Lafayette	61.65	346	P	P	22 25 12.9	-1.0
SFIN	Lafayette	61.65	346	P	P	22 25 13.3	-0.5
	baz=163						
ALLY	Alegheny Colle	61.65	352	P	P	22 25 13.1	-0.8
N48A	Decatur	61.67	348	P	P	22 25 13.8	-0.2
	baz=165						
M52A	Chesterland	61.70	351	P	P	22 25 13.7	-0.5
M52A	Chesterland	61.70	351	P	P	22 25 14.8	+0.6
	baz=169						
L59A	Walton	61.72	357	P	P	22 25 14.5	+0.2
L59A				IAmb	IAmb	22 25 16.0	
	comp=Z,25nm,1.1s						
L59A	Walton	61.72	357	P	P	22 25 15.7	+1.3
	baz=176						
O44A	Mansfield	61.76	345	P	P	22 25 14.0	-0.5
O44A				IAmb	IAmb	22 25 23.5	
	comp=Z,15nm,1.1s						
U32A	Winter Ranch,	61.76	335	P	P	22 25 15.1	+0.3
U32A				IAmb	IAmb	22 25 25.6	
	comp=Z,12nm,0.9s						
BINY	Binghamton	61.78	356	P	P	22 25 15.1	+0.4
BINY	Binghamton	61.78	356	P	P	22 25 16.2	+1.4
	baz=175						
N47A	Urbana	61.82	347	P	P	22 25 14.5	-0.5
N47A	Urbana	61.82	347	P	P	22 25 14.6	-0.4
	baz=164						
M50A	Fremont	61.83	350	P	P	22 25 15.0	-0.1
M50A	Fremont	61.83	350	P	P	22 25 15.4	+0.3
	baz=167						
L56A	Greenwood	61.85	354	P	P	22 25 15.8	+0.6
L56A	Greenwood	61.85	354	P	P	22 25 16.1	+0.9
	baz=173						
L53A	Girard	61.96	352	P	P	22 25 16.7	+0.8
	baz=170						
L55A	Hinsdale	61.98	354	P	P	22 25 17.4	+1.3
	baz=172						
M49A	Liberty Center	62.06	349	P	P	22 25 16.7	+0.1
	baz=166						
ERPA	Erie	62.09	352	P	P	22 25 16.3	-0.5
ERPA	Erie	62.09	352	P	P	22 25 17.6	+0.8
	baz=170,SNR=7.9						
L54A	Sinclairville	62.12	353	P	P	22 25 18.4	+1.3
	baz=171,SNR=12						
WVNY	West Valley, N	62.22	354	P	P	22 25 18.5	+0.8
K59A	Cooperstown	62.29	357	P	P	22 25 19.5	+1.3
	baz=176						
K58A	Earlville	62.32	356	P	P	22 25 18.9	+0.5
K58A				IAmb	IAmb	22 25 20.5	
	comp=Z,20nm,1.0s						
K58A	Earlville	62.32	356	P	P	22 25 19.7	+1.3
	baz=175						
HDIL	Hopedale	62.34	344	P	P	22 25 16.5	-2.0
HDIL				IAmb	IAmb	22 25 27.9	
	comp=Z,17nm,1.0s						
L50A	Kingsville	62.42	350	P	P	22 25 20.0	+1.0
	baz=168						
K54A	Basiliko Farm,	62.43	354	P	P	22 25 20.4	+1.3
	baz=172						
K55A	Perry	62.48	354	P	P	22 25 20.3	+0.8
	baz=172						
L48A	N Adams	62.60	349	P	P	22 25 20.2	0.0
	baz=166						
L49A	Milan	62.64	349	P	P	22 25 21.1	+0.6
	baz=166						
P38A	Dawn	62.68	341	P	P	22 25 21.0	+0.2
P38A				IAmb	IAmb	22 25 31.0	
	comp=Z,10nm,0.9s						
319A	Douglas	62.70	323	P	P	22 25 22.8	+1.5
121A	Cookes Peak, D	62.76	325	P	P	22 25 22.8	+1.1
121A	Cookes Peak, D	62.76	325	P	P	22 25 25.5	+3.7
	baz=141						
K52A	Tillsonburg	62.83	352	P	P	22 25 22.4	+0.7
	baz=170						
J58A	Remsen	62.90	356	P	P	22 25 21.6	-0.6
J58A				IAmb	IAmb	22 25 22.3	
	comp=Z,9.8nm,1.1s						
N41A	Harden Midland	62.90	343	P	P	22 25 22.1	-0.1
J56A	Wolcott	62.92	355	P	P	22 25 22.2	-0.1
MEDO	Medina	62.95	354	P	P	22 25 22.5	-0.1
J59A	Piesco	62.96	357	P	P	22 25 23.7	+1.1
J59A	Piesco	62.96	357	P	P	22 25 23.6	+1.0
	baz=176						
J57A	Williamstown	62.99	356	P	P	22 25 23.2	+0.4
J57A				IAmb	IAmb	22 25 24.6	
	comp=Z,24nm,1.1s						
J55A	Hilton	62.99	354	P	P	22 25 22.1	-0.7
L46A	Eue Claire	63.03	347	P	P	22 25 21.0	-2.1
J54A	Appleton	63.08	354	P	P	22 25 20.6	-2.8
K50A	Casco	63.10	350	P	P	22 25 21.6	-1.9
I58A	Old Forge	63.21	357	P	P	22 25 25.2	+0.9
	baz=176						
J52A	Paris	63.26	352	P	P	22 25 25.1	+0.6
	baz=170,SNR=8.1						
I59A	Olmsteadville	63.26	358	P	P	22 25 25.7	+1.1
	baz=177						
I61A	Oroboro, Fairl	63.35	359	P	P	22 25 27.0	+1.8
	baz=179						
K48A	Perry	63.38	349	P	P	22 25 25.2	-0.2
	baz=166						
K47A	Vermontville	63.41	348	P	P	22 25 25.2	-0.4
	baz=165						
R32A	Long Quarter,	63.42	336	P	P	22 25 26.5	+0.7
NCB	Newcomb	63.45	357	P	P	22 25 27.0	+1.1
L42A	Oliver, Polo	63.80	345	P	P	22 25 28.1	-0.1
L42A				IAmb	IAmb	22 25 46.6	
	comp=Z,24nm,1.3s						
J48A	Bridge Port	63.80	350	P	P	22 25 27.6	-0.6
J48A	Bridge Port	63.80	350	P	P	22 25 28.2	0.0
	baz=167						
I51A	Listowel	63.88	352	P	P	22 25 29.2	+0.5
	baz=170,SNR=5.5						
J47A	Sunmer	63.93	349	P	P	22 25 27.8	-1.2
J47A	Sunmer	63.93	349	P	P	22 25 28.9	-0.1
	baz=166						
H61A	Lyndonville	63.95	359	P	P	22 25 30.9	+1.8
	baz=179						
ANMO	Albuquerque	63.96	328	P	P	22 25 30.3	+0.7
ANMO	Albuquerque	63.96	328	P	P	22 25 30.3	+0.7
ANMO	Albuquerque	63.96	328	P	P	22 25 32.2	+2.5
	baz=143						
H62A	Milan	63.98	360	P	P	22 25 30.0	+0.6
H57A	Richville	64.00	357	P	P	22 25 30.4	+1.0
	baz=175						
I52A	Shelburne	64.03	353	P	P	22 25 30.5	+0.8
	baz=170						
H59A	Cadyville	64.10	358	P	P	22 25 31.5	+1.3
	baz=177						
CBKS	Cedar Bluff	64.16	335	P	P	22 25 31.0	+0.3
CBKS	Cedar Bluff	64.16	335	P	P	22 25 31.0	+0.3
CBKS	Cedar Bluff	64.16	335	P	P	22 25 32.6	+1.9
	baz=150						
DELO	Deloro Mine	64.22	355	P	P	22 25 30.0	-0.9
L40A	Anamosa	64.26	343	P	P	22 25 30.7	-0.5
I49A	Point Hope	64.27	351	P	P	22 25 30.5	-0.7
FRNY	Flat Rock	64.29	358	P	P	22 25 31.7	+0.3
H53A	Bobcaygeon	64.36	354	P	P	22 25 32.4	+0.6
	baz=172,SNR=5.8						
N35A	Tabor	64.48	339	P	P	22 25 32.9	+0.2
G60A	Masonville	64.52	359	P	P	22 25 35.0	+2.2
	baz=179						
G59A	Clarenceville	64.52	358	P	P	22 25 34.2	+1.4
	baz=178						
H52A	Wyevale	64.57	353	P	P	22 25 33.7	+0.6
	baz=171						
SNAA	Sanae	64.59	161	*i* P	P	22 25 34.1	+0.9
SNAA	Sanae	64.59	161	P	P	22 25 34.0	+0.9
SNAA				IAmb	IAmb	22 25 36.2	
	comp=Z,16nm,1.2s						
SADO	Sadowa	64.61	354	P	P	22 25 33.5	+0.1
	comp=Z,15nm,0.8s,baz=212,slow=3.0,SNR=3.2						
SADO	Sadowa	64.61	354	P	P	22 25 34.2	+0.7
G57A	Newington	64.62	357	P	P	22 25 34.5	+1.1
	baz=176,SNR=6.2						
G58A	Ormstown	64.62	358	P	P	22 25 34.7	+1.2
	baz=177						
I47A	Gladwin	64.63	349	P	P	22 25 32.1	-1.5
I47A				IAmb	IAmb	22 25 42.7	
	comp=Z,17nm,0.8s						
G62A	West of Eustis	64.63	0	P	P	22 25 34.8	+1.2
G62A	West of Eustis	64.63	0	P	P	22 25 35.5	+1.9
	baz=180,SNR=6.7						
I48A	Sherman Twp	64.65	350	P	P	22 25 33.4	-0.3
	baz=167						
SCIA	State Center	64.68	342	P	P	22 25 33.6	-0.4
PLVO	Plevna	64.69	355	P	P	22 25 33.9	0.0
PLVO				IAmb	IAmb	22 25 35.3	
	comp=Z,14nm,1.1s						
G61A	St-Isidore-de-	64.69	360	P	P	22 25 36.0	+2.0
	baz=180,SNR=5.2						
I46A	Reed City	64.72	349	P	P	22 25 33.8	-0.4
	baz=165						
T25A	Trinidad	64.74	331	P	P	22 25 35.4	+0.7
T25A	Trinidad	64.74	331	P	P	22 25 36.2	+1.4
	baz=145						
JFWS	Jewell Farm	64.80	344	P	P	22 25 34.8	+0.1
JFWS	Jewell Farm	64.80	344	P	P	22 25 34.8	+0.1
JFWS	Jewell Farm	64.80	344	P	P	22 25 35.2	+0.4
	baz=160						
G55A	Calabogie	64.87	356	P	P	22 25 36.4	+1.3
	baz=174						
G53A	Haliburton	64.91	354	P	P	22 25 36.3	+0.9
	baz=172,SNR=10.0						
H48A	Harrisville	65.09	350	P	P	22 25 34.9	-1.7
G54A	Lake Saint Pet	65.13	354	P	P	22 25 37.7	+0.8
	baz=173						
214A	Organ Pipe Nat	65.16	321	P	P	22 25 38.0	+0.6
214A	Organ Pipe Nat	65.16	321	P	P	22 25 41.4	+4.1
	baz=136						
K38A	Parkersburg	65.23	342	P	P	22 25 36.7	-0.8
F64A	Sherman	65.32	2	P	P	22 25 38.8	+0.8
F60A	Warwick	65.39	359	P	P	22 25 39.4	+1.0
	baz=179						
GBN	Guysborough	65.39	7	P	P	22 25 38.1	-0.4
GLMI	Grayling	65.43	349	P	P	22 25 38.3	-0.5
X18A	Snowflake	65.45	325	P	P	22 25 40.0	+0.6
LMN	Caledonia Moun	65.50	5	P	P	22 25 39.7	+0.5
LMN				IAmb	IAmb	22 25 40.7	
	comp=Z,13nm,0.8s						
KSCO	Kaye Shedlock’	65.51	333	P	P	22 25 40.2	+0.7
F52A	Sundridge	65.64	354	P	P	22 25 40.8	+0.6
	baz=171,SNR=7.7						
ALGO	Algonquin Park	65.68	355	P	P	22 25 40.4	0.0
	baz=173						
H43A	Windswept, Lux	65.70	347	P	P	22 25 39.9	-0.6
TRQ	Mont Tremblant	65.71	357	P	P	22 25 40.4	-0.2
SDCO	Great Sand Dun	65.74	330	P	P	22 25 41.5	+0.1
SDCO	Great Sand Dun	65.74	330	P	P	22 25 43.5	+2.2
	baz=144,SNR=18						
W18A	Petrified Fore	65.78	326	P	P	22 25 42.7	+1.2
W18A				IAmb	IAmb	22 25 57.6	
	comp=Z,20nm,1.4s						
E60A	Ste Agathe de	65.78	360	P	P	22 25 42.1	+1.1
	baz=180						
I40A	Norwalk	65.81	345	P	P	22 25 40.6	-0.7
E58A	La Victoria	65.81	358	P	P	22 25 42.4	+1.2
	baz=178						
G45A	Suttons Bay	65.82	349	P	P	22 25 40.6	-0.7
BGNE	Belgrade	65.83	338	P	P	22 25 41.6	+0.1
BGNE	Belgrade	65.83	338	P	P	22 25 42.9	+1.4
	baz=152						
F51A	Arnstein	65.84	353	P	P	22 25 41.7	+0.3
	baz=171						
E61A	Lac Etchemin	65.84	0	P	P	22 25 43.4	+2.0
	baz=181						
E63A	Oxbow	65.87	2	P	P	22 25 43.2	+1.6
	baz=183						
E57A	Chemin Saint G	65.88	358	P	P	22 25 42.6	+0.9
	baz=177						
E55A	Montcerf-Lytto	66.02	356	P	P	22 25 43.5	+0.9
	baz=175						
E56A	St. Veronique	66.06	357	P	P	22 25 43.7	+0.9
	baz=176,SNR=8.0						
E52A	Mattawa	66.06	354	P	P	22 25 43.5	+0.7
	baz=172						
E53A	Dumoine, Ponti	66.07	355	P	P	22 25 43.7	+0.8
	baz=173						
E54A	Lac Daplat, Po	66.08	355	P	P	22 25 43.7	+0.8
	baz=174						
PQI	Presque Isle	66.14	2	P	P	22 25 44.1	+0.8
PQI				IAmb	IAmb	22 25 46.1	
	comp=Z,24nm,1.2s						
X16A	Lo Mia Camp, P	66.17	324	P	P	22 25 44.3	+0.2
S22A	4UR Ranch, Cre	66.36	330	P	P	22 25 46.4	+1.0
S22A	4UR Ranch, Cre	66.36	330	P	P	22 25 47.6	+2.3
	baz=143						
E51A	G1948 Merrick	66.39	354	P	P	22 25 45.7	+0.8
	baz=171,SNR=5.8						
F45A	CMU Biological	66.42	349	P	P	22 25 45.1	0.0
	baz=165						
D57A	Chemin Vers le	66.48	358	P	P	22 25 46.7	+1.2
	baz=177,SNR=7.4						
D63A	Stockholm	66.50	2	P	P	22 25 47.0	+1.4
	baz=183						
D62A	Allapoint, All	66.52	1	P	P	22 25 47.0	+1.3
D62A	Allapoint, All	66.52	1	P	P	22 25 47.1	+1.4
	baz=182,SNR=7.0						
D58A	Chemin du LacG	66.53	359	P	P	22 25 46.9	+1.1
	baz=178,SNR=11						
D56A	ZEC Mazanza, M	66.55	357	P	P	22 25 46.2	+0.3
	baz=176						
D55A	Sainte-Anne-du	66.55	357	P	P	22 25 46.7	+0.8
	baz=175,SNR=7.2						
Q24A	Divide	66.57	332	P	P	22 25 47.7	+1.0
Q24A				IAmb	IAmb	22 25 49.6	
	comp=Z,9.4nm,1.0s						
Q24A	Divide	66.57	332	P	P	22 25 49.2	+2.5
	baz=145						
D61A	St Aubert, Com	66.62	1	P	P	22 25 47.6	+1.3
	baz=181						
E48A	Lockeyer	66.66	352	P	P	22 25 47.0	+0.3
	baz=169						
I37A	Lemond, Waseca	66.67	343	P	P	22 25 46.5	-0.2
Y14A	Wickenburg	66.70	323	P	P	22 25 48.1	+0.8
MVCO	Mesa Verde	66.75	328	P	P	22 25 48.1	+0.3
D54A	Lac Fusel, La	66.76	356	P	P	22 25 47.2	-0.1
	baz=174						
D53A	Lac Vacive, Po	66.77	355	P	P	22 25 47.5	+0.2
D53A	Lac Vacive, Po	66.77	355	P	P	22 25 48.2	+0.9
	baz=173,SNR=7.2						
LATQ	La Tuque	66.81	359	P	P	22 25 47.4	-0.2
LATQ	La Tuque	66.81	359	P	P	22 25 48.8	+1.2
	baz=178						
BATG	Bathurst New B	66.84	4	P	P	22 25 48.2	+0.5
BATG				IAmb	IAmb	22 25 49.6	
	comp=Z,20nm,1.0s						
E46A	Sault Ste Mari	66.87	350	P	P	22 25 47.4	-0.6
E46A				IAmb	IAmb	22 25 57.2	
	comp=Z,13nm,0.8s						
OGNE	Ogallala	66.89	335	P	P	22 25 48.6	+0.2
OGNE	Ogallala	66.89	335	P	P	22 25 50.1	+1.7
	baz=148						
D51A	Lot 18 Range I	66.93	354	P	P	22 25 49.0	+0.6
	baz=172						
WUAZ	Wupatki	66.96	325	P	P	22 25 50.0	+1.0
WUAZ	Wupatki	66.96	325	P	P	22 25 51.2	+2.2
	baz=139						
G40A	Rib Lake	67.00	345	P	P	22 25 48.1	-0.8
F42A	Maple Grove Fa	67.00	347	P	P	22 25 49.0	+0.1
D50A	G1974 Best Tow	67.05	353	P	P	22 25 49.8	+0.7
	baz=171,SNR=8.7						
K31A	O'Neill	67.11	338	P	P	22 25 50.2	+0.6
GLA	Glamis	67.13	321	P	P	22 25 49.8	-0.2
GLA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
D48A	Paudash Townsh	67.30	352	P	P	22 25 50.4	-0.3
	baz=169						
E43A	Lone Tree Farm	67.36	348	P	P	22 25 50.4	-0.7
ECSD	EROS Data Cent	67.38	340	P	P	22 25 51.2	-0.1
ECSD	EROS Data Cent	67.38	340	P	P	22 25 52.0	+0.7
	baz=154,SNR=11						
Y12C	Blythe	67.44	322	P	P	22 25 52.3	+0.4
Y12C				IAmb	IAmb	22 26 03.9	
	comp=Z,17nm,1.5s						
ISCO	Idaho Springs	67.46	332	P	P	22 25 52.7	+0.4

ISCO	Idaho Springs	67.46	332	P	P	22 25 52.7	+0.4
ISCO	Idaho Springs	67.46	332	P	P	22 25 54.5	+2.2
	baz=145,SNR=6.7						
TAOE	Nuku Hiva Isla	67.50	268	eLR	LR	22 46 13.9	
	comp=Z,194nm,25.4s						
PV01	Paradox Valley	67.51	329	P	P	22 25 53.3	+0.7
COWI	Conover	67.55	346	P	P	22 25 52.1	-0.2
SMCO	Snowmass	67.58	330	P	P	22 25 53.9	+0.8
SPMN	Marine on St.	67.62	344	P	P	22 25 52.3	-0.5
PV15	Paradox Valley	67.63	329	P	P	22 25 53.8	+0.5
PV02	Paradox Valley	67.65	329	P	P	22 25 54.2	+0.8
PV13	Radium Mtn., P	67.65	328	P	P	22 25 53.8	+0.4
PV05	Paradox Valley	67.73	328	P	P	22 25 54.7	+0.7
PV03	Paradox Valley	67.74	329	P	P	22 25 54.7	+0.7
PV18	Skein Mesa, Pa	67.77	328	P	P	22 25 55.6	+1.5
PV12	Saucer Basin,	67.77	329	P	P	22 25 54.6	+0.4
VLDQ	Val d'Or	67.77	355	IAmb	IAmb	22 25 55.5	
	comp=Z,21nm,1.2s						
PV07	Paradox Valley	67.79	329	P	P	22 25 55.6	+1.4
PV11	David Mesa, Pa	67.79	329	P	P	22 25 55.3	+1.0
PV17	East Wray Mesa	67.82	328	P	P	22 25 55.1	+0.6
PV16	Nyswonger Mesa	67.82	329	P	P	22 25 53.4	-1.1
PV14	Lion Creek, Pa	67.92	329	P	P	22 25 55.7	+0.6
BC3	Big Chuckawall	67.92	321	P	P	22 25 57.8	+2.7
	baz=135						
PV22	Blue Mesa, Par	67.93	329	P	P	22 25 55.4	+0.3
BAR	Barrett	67.98	319	P	P	22 25 55.1	-0.3
U15A	North Rim	68.13	325	P	P	22 25 58.1	+1.6
D41A	Chassel	68.34	347	P	P	22 25 57.3	0.0
N23A	Red Feather La	68.49	332	P	P	22 25 59.1	+0.4
N23A	Red Feather La	68.49	332	P	P	22 26 00.9	+2.1
	baz=145,SNR=8.1						
XPFO	Pion Flat	68.49	320	P	P	22 25 59.0	+0.3
PFO	Pinyon Flats O	68.50	320	i P	P	22 26 00.5	+1.8
PFO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PFO	Pinyon Flats O	68.50	320	P	P	22 25 59.5	+0.8
PFO	Pinyon Flats O	68.50	320	P	P	22 26 02.5	+3.8
	baz=134						
E38A	The Farm, Brul	68.58	345	P	P	22 25 58.8	0.0
PHWY	Pilot Hill	68.61	333	P	P	22 26 00.9	+1.4
LSQQ	Lebel-sur-Quev	68.68	356	P	P	22 25 60.0	+0.6
	baz=174						
SUSD	Miller	68.78	339	P	P	22 26 00.3	+0.2
GMRC	Granite Mounta	68.84	322	P	P	22 26 04.2	+3.3
	baz=135,SNR=6.6						
KNB	Kanab	68.85	325	P	P	22 26 03.1	+2.2
KNB	Kanab	68.85	325	P	P	22 26 03.1	+2.2
PKCU	Pink Cliffs	68.89	326	P	P	22 26 02.6	+1.2
O20A	White River Ci	68.93	330	P	P	22 26 02.0	+0.6
O20A	White River Ci	68.93	330	P	P	22 26 03.7	+2.3
	baz=142						
LCMT	Little Creek M	69.08	325	P	P	22 26 03.6	+1.3
NVL	N'lazarevskaya	69.18	159	eP	P	22 26 04.3	+2.0
NVL				pmax	pmax		
	comp=Z,16nm,0.8s						
SRU	San Rafael Swe	69.23	328	P	P	22 26 04.7	+1.4
SRU	San Rafael Swe	69.23	328	P	P	22 26 04.7	+1.4
MTPU	Mount Pierson	69.27	326	P	P	22 26 05.3	+1.5
Q16A	Castle Valley	69.41	327	P	P	22 26 04.8	+0.4
SZCU	Shurtz Canyon	69.42	325	P	P	22 26 05.2	+0.7
MATQ	Matagami	69.42	355	P	P	22 26 04.2	+0.2
	baz=173,SNR=6.5						
TUQ	Turquoise Moun	69.45	322	P	P	22 26 07.6	+3.0
	baz=135						
CCUT	Cedar City	69.54	325	P	P	22 26 07.0	+1.8
P17A	Butcher Ranch,	69.62	328	P	P	22 26 06.6	+1.0
MSU	Marysvale	69.62	327	P	P	22 26 07.3	+1.6
MSU	Marysvale	69.62	327	P	P	22 26 07.3	+1.6
RWWY	Rawlins	69.70	332	P	P	22 26 06.3	+0.1
DRLN	Deer Lake	69.71	9	P	P	22 26 06.0	+0.3
TMUT	Trail Mountain	69.72	328	P	P	22 26 08.3	+1.9
SHPR	Sheep Range	69.77	323	P	P	22 26 07.5	+0.8
LIC	Lamto	69.81	75	eP	P	22 26 05.7	-1.4
	comp=Z,2.7nm,0.2s						
EYMN	Ely	69.83	345	P	P	22 26 05.8	-0.7
EYMN				IAmb	IAmb	22 26 16.3	
	comp=Z,10nm,1.0s						
EYMN	Ely	69.83	345	P	P	22 26 11.5	+5.0
	baz=160						
GSC	Goldstone, Bar	69.87	321	P	P	22 26 10.7	+3.5
	baz=134						
MWC	Mount Wilson	69.88	320	P	P	22 26 07.2	-0.2
MWC	Mount Wilson	69.88	320	P	P	22 26 07.2	-0.2
RDMU	Red Mountain	69.90	330	P	P	22 26 07.8	+0.4
PASC	Pasadena Art C	69.92	320	P	P	22 26 08.4	+1.0
PASC				IAmb	IAmb	22 26 26.0	
	comp=Z,22nm,1.2s						
TIC	Toumodi	69.98	75	eP	P	22 26 06.8	-1.4
KIC	Kosan Boka	70.12	75	eP	P	22 26 07.8	-1.3
	comp=Z,4.3nm,0.5s						
DBIC	Dimbokro	70.14	75	P	P	22 26 08.0	-1.2
	comp=Z,17nm,1.1s,baz=218,slow=5.2,SNR=9.4						
DBIC				LR	LR	22 54 58.0	
	comp=Z,446nm,20.7s,baz=218,slow=34						
DBIC	Dimbokro	70.14	75	P	P	22 26 08.0	-1.2
K22A	Casper	70.17	333	P	P	22 26 10.3	+1.4
K22A				IAmb	IAmb	22 26 20.8	
	comp=Z,9.0nm,0.8s						
K22A	Casper	70.17	333	P	P	22 26 11.0	+2.0
	baz=144						
RSSD	Black Hills	70.37	335	P	P	22 26 10.7	+0.5
RSSD	Black Hills	70.37	335	P	P	22 26 10.7	+0.5
RSSD	Black Hills	70.37	335	P	P	22 26 11.8	+1.6
	baz=147						
QSPA	South Pole Qui	70.46	180	P	P	22 26 12.9	+2.5
	comp=Z,4.6nm,0.6s,baz=152,slow=4.4,SNR=37						
QSPA	South Pole Qui	70.46	180	P	P	22 26 13.0	+2.6
QSPA				IAmb	IAmb	22 26 23.1	
	comp=Z,16nm,1.1s						
MPU	Maple Canyon	70.48	328	P	P	22 26 12.7	+1.8
LRMC	Laurel Mtn Rad	70.51	321	P	P	22 26 13.9	+2.7
	baz=134						
PSUT	Pine Spring	70.52	326	P	P	22 26 12.0	+0.8
D32A	Dogwood Acres,	70.56	341	P	P	22 26 11.2	+0.2
NLU	North Lily Min	70.65	328	P	P	22 26 12.8	+0.8
TPNV	Topopah Spring	70.70	323	P	P	22 26 13.7	+1.4
TPNV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TPNV	Topopah Spring	70.70	323	P	P	22 26 13.7	+1.4
TPNV	Topopah Spring	70.70	323	P	P	22 26 15.3	+3.0
	baz=135,SNR=9.3						
FURC	Furnace Creek,	70.72	322	P	P	22 26 15.4	+3.2
	baz=134						
MPMC	Manual Prospec	70.80	322	P	P	22 26 15.6	+2.6
	baz=134						
JLU	Jordanelle	70.83	328	P	P	22 26 14.1	+0.9
ISA	Isabella, Lake	71.11	321	P	P	22 26 15.3	+0.6
ISA	Isabella, Lake	71.11	321	P	P	22 26 15.3	+0.6
ISA	Isabella, Lake	71.11	321	P	P	22 26 18.2	+3.5
	baz=133						
TCUT	Toone Canyon	71.21	329		P	22 26 15.4	0.0
DUG	Dugway, Tooele	71.21	327	P	P	22 26 17.5	+2.2
DUG	Dugway, Tooele	71.21	327	P	P	22 26 17.5	+2.2
DUG	Dugway, Tooele	71.21	327	P	P	22 26 18.2	+2.9
	baz=139,SNR=11						
E28A	Huff	71.24	339	P	P	22 26 15.7	+0.5
AGMN	Agassiz Nation	71.28	343	P	P	22 26 15.0	-0.3
AGMN	Agassiz Nation	71.28	343	P	P	22 26 16.1	+0.8
	baz=155						
R11A	Troy Canyon, C	71.32	324	P	P	22 26 19.2	+3.1
	baz=136						
PKM	Mcpherson Peak	71.40	319	P	P	22 26 20.3	+3.7
	baz=132,SNR=5.5						
CWC	Cottonwood Cre	71.41	321	P	P	22 26 20.1	+3.5
	baz=133						
BW06	Boulder Array	71.61	331	P	P	22 26 17.4	-0.4
PD31	Pinedale Array	71.61	331	P	P	22 26 17.8	0.0
PDAR	Pinedale Array	71.61	331	P	P	22 26 19.4	+1.6
	comp=Z,1.0nm,0.7s,baz=134,slow=6.4,SNR=9.3						
PDAR				LR	LR	22 58 54.4	
	comp=Z,112nm,18.2s,baz=105,slow=37						
PDAR	Pinedale Array	71.61	331	P	P	22 26 19.0	+1.3
HWUT	Hardware Ranch	71.66	329	P	P	22 26 18.1	+0.1
BGU	Big Grassy Mou	71.86	328	P	P	22 26 20.3	+1.0
MDND	Maddock	71.99	340	P	P	22 26 20.4	+0.7
MDND	Maddock	71.99	340	P	P	22 26 21.7	+2.0
	baz=152						
TBI	Tubuai	72.22	251	eS	S	22 35 37.3	-6.5
	comp=Z,131nm,27.8s						
TBI	Tubuai	72.22	251	eLR	LR	22 48 26.6	
	comp=Z,572nm,27.5s						
AHID	Auburn Hatcher	72.32	330	P	P	22 26 22.8	+0.7
HVU	Hansel Valley	72.38	328	P	P	22 26 22.8	+0.5
HVU				pmax	pmax		
	comp=Z,14nm,1.1s						
HVU	Hansel Valley	72.38	328	P	P	22 26 22.8	+0.5
REDW	Red Top Meadow	72.67	331	P	P	22 26 25.1	+1.0
SNOW	Snow King Moun	72.70	331	P	P	22 26 24.3	0.0
OMMB	Old Mammoth Mi	72.74	322	P	P	22 26 25.2	+0.5
TPAW	Teton Pass	72.81	331	P	P	22 26 25.3	+0.3
NV11	Mina Array Sit	72.82	323	P	P	22 26 26.1	+1.1
ELK	Elko	72.86	326	P	P	22 26 25.8	+0.4
ELK	Elko	72.86	326	P	P	22 26 25.8	+0.4
NVAR	Mina Array Bea	72.90	323	P	P	22 26 28.4	+2.8
	comp=Z,1.9nm,0.8s,baz=148,slow=6.2,SNR=14						
NVAR	Mina Array Bea	72.90	323	P	P	22 26 27.1	+1.5
FXWY	Fox Creek	72.96	331	P	P	22 26 26.3	+0.4
ULM	Lac du Bonnet	73.06	344	P	P	22 26 26.2	+0.3
	comp=Z,2.9nm,0.8s,baz=172,slow=5.6,SNR=6.4						
ULM				LR	LR	23 00 38.6	
	comp=Z,242nm,20.1s,baz=134,slow=38						
ULM	Lac du Bonnet	73.06	344	i P	P	22 26 26.6	+0.7
ULM	Lac du Bonnet	73.06	344	P	P	22 26 25.7	-0.2
IMW	Indian Meadow	73.12	331	P	P	22 26 27.4	+0.5
FLWY	Flagg Ranch	73.16	331	P	P	22 26 29.1	+2.1
RYN	Ryan	73.16	323	P	P	22 26 28.5	+1.4
KVN	Kaiserville	73.21	323	P	P	22 26 27.7	+0.3
KVN	Kaiserville	73.21	323	P	P	22 26 27.7	+0.3
RLMT	Red Lodge	73.34	333	P	P	22 26 29.2	+1.2
RLMT	Red Lodge	73.34	333	P	P	22 26 30.3	+2.3
	baz=143,SNR=9.5						
H17A	Grant Village	73.34	332	P	P	22 26 30.4	+2.3
YPP	Pitchstone Pla	73.35	331	P	P	22 26 30.2	+2.0
LAO	LASA Array	73.36	336	P	P	22 26 29.1	+1.2
LAO	LASA Array	73.36	336	P	P	22 26 30.1	+2.2
	baz=146						
LKWY	Lake	73.40	332	P	P	22 26 29.9	+1.5
LKWY	Lake	73.40	332	P	P	22 26 29.9	+1.5
YMP	Mirror Lake Pl	73.43	332	P	P	22 26 30.8	+2.1
YUF	Upper Falls	73.56	332	P	P	22 26 30.4	+1.0
YNE	Yellowstone No	73.57	332	P	P	22 26 30.4	+1.0
WAKR	Walker	73.60	322	P	P	22 26 31.1	+1.4
YMR	Madison River	73.73	331	P	P	22 26 32.7	+2.4
YHH	Holmes Hill	73.77	332	P	P	22 26 33.0	+2.4
YERR	Yerington	73.81	323	P	P	22 26 32.5	+1.6
PPT2	Papeete2	73.81	257	eS	SKiKP	22 35 54.0	-6.1
	comp=Z,183nm,24.2s						
PPT2	Papeete2	73.81	257	eLR	LR	22 49 05.3	
	comp=Z,385nm,24.8s						
PPT	Papeete	73.82	257	LR	LR	22 50 42.1	
	comp=Z,175nm,20.1s,baz=120,slow=29						
CMB	Columbia Colle	73.84	321	P	P	22 26 32.5	+1.6
CMB	Columbia Colle	73.84	321	P	P	22 26 32.5	+1.6
YHB	Horse Butte	73.90	331	P	P	22 26 32.2	+0.9
YHL	Hebgen Lake	73.97	331	P	P	22 26 33.3	+1.5
GCMT	Greycliff	74.04	333	P	P	22 26 33.4	+1.3
QLMT	Earthquake Lak	74.07	331	P	P	22 26 34.0	+1.7
DGMT	Dagmar	74.09	338	P	P	22 26 32.8	+0.7
DGMT	Dagmar	74.09	338	P	P	22 26 34.3	+2.2
	baz=148,SNR=5.5						
PNTR	Pine Nut	74.09	323	P	P	22 26 33.5	+0.9
SCHQ	Schefferville	74.34	3	P	P	22 26 34.0	+0.6
	comp=Z,7.6nm,1.1s,baz=194,slow=5.0,SNR=6.9						
SCHQ	Schefferville	74.34	3	P	P	22 26 34.1	+0.7
PAHR	Pah Rah Range	74.39	323	P	P	22 26 35.4	+1.2
MCMT	McKenzie Canyo	74.72	331	P	P	22 26 37.4	+1.3
DLMT	Dillon	75.00	331	P	P	22 26 39.4	+1.7
DLMT				IAmb	IAmb	22 26 50.8	
	comp=Z,17nm,1.2s						
MFID	Camas Ranch	75.10	328	P	P	22 26 39.5	+1.3
LRM	Limekiln Ridge	75.29	331	P	P	22 26 40.9	+1.5
ORV	Oroville	75.50	322	P	P	22 26 41.5	+1.1
ORV	Oroville	75.50	322	P	P	22 26 41.5	+1.1
EGMT	Eagleton	75.85	334	P	P	22 26 42.5	+0.2
EGMT	Eagleton	75.85	334	P	P	22 26 43.9	+1.6
	baz=143,SNR=8.7						
WVOR	Wild Horse Val	75.86	326	P	P	22 26 43.2	+0.6
WVOR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
WVOR	Wild Horse Val	75.86	326	P	P	22 26 43.2	+0.6
MOD	Modoc Plateau	76.39	324	P	P	22 26 46.9	+1.2
MSO	Missoula	76.73	331	P	P	22 26 47.5	+0.1
MSO	Missoula	76.73	331	P	P	22 26 50.3	+2.9
	baz=139						
BMO	Blue Mountains	76.88	328	P	P	22 26 49.4	+1.1
BMO	Blue Mountains	76.88	328	P	P	22 26 49.4	+1.1
M04C	Macdoel	77.16	324	P	P	22 26 52.9	+2.9
	baz=132						
I07A	Izee	77.45	326	P	P	22 26 52.9	+1.3
JTMT	Jette	77.57	332	P	P	22 26 53.5	+1.4
J05D	Fort Rock, OR	77.83	325	P	P	22 26 56.8	+3.1
	baz=132						
PINE	Pine Mountain	78.01	325	P	P	22 26 55.3	+0.5
WALA	Waterton Lakes	78.40	333	P	P	22 26 58.6	+1.9
WALA				IAmb	IAmb	22 27 08.8	
	comp=Z,21nm,1.0s						
E09A	Wood Farm, Sta	78.47	329	P	P	22 26 57.4	+0.4
TOA0	Torodi Ar. Sit	78.63	72	P	P	22 26 57.6	-1.0
TORD	Torodi Ar. Bea	78.63	72	P	P	22 26 57.8	-0.8
	comp=Z,19nm,0.8s,baz=253,slow=5.2,SNR=81						
TORD				LR	LR	23 00 05.9	
	comp=Z,429nm,21.7s,baz=290,slow=35						
TORD	Torodi Ar. Bea	78.63	72	IAmb	IAmb	22 26 58.4	
	comp=Z,40nm,1.1s						
FFC	Flin Flon	78.74	342	P	P	22 26 57.9	-0.4
FFC	Flin Flon	78.74	342	P	P	22 26 57.9	-0.4
SYO	Syowa Base	78.84	160⇑	eP	P	22 26 55.0	-3.8
SYO	Syowa Base	78.84	160⇑	esP	sP	22 27 09.0	+3.6
E08A	Dider Farm, El	78.90	328	P	P	22 26 59.8	+0.4
F07A	Phinny Hill Vi	78.92	328	P	P	22 27 00.5	+1.0
HAWA	Hanford	79.07	328	P	P	22 27 01.6	+1.3
D08A	Wollman Farm,	79.23	329	P	P	22 27 02.2	+1.0
NEW	Newport	79.24	331	P	P	22 27 01.5	+0.2
NEW				pmax	pmax		
	comp=Z,6.0nm,1.2s						
NEW	Newport	79.24	331	P	P	22 27 01.5	+0.2
H04A	Detroit Lake	79.28	326	P	P	22 27 01.8	+0.3
E07A	Sunnyside	79.35	328	P	P	22 27 02.9	+1.1
C09A	Chrisman Ranch	79.45	330	P	P	22 27 03.8	+1.4
F04A	Amboy	80.23	326	P	P	22 27 07.0	+0.4
LTY	Liberty	80.23	328	P	P	22 27 07.6	+0.9
B08A	Colville Reser	80.34	330	P	P	22 27 08.3	+1.1
D05A	Enumclaw	80.85	328	P	P	22 27 11.3	+1.4
B06A	Marblemount	81.49	329	P	P	22 27 13.4	+0.1
B06A				IAmb	IAmb	22 27 24.9	
	comp=Z,15nm,0.8s						
RAR	Rarotonga	81.98	250	LR	LR	22 55 31.8	
	comp=Z,423nm,19.7s,baz=116,slow=30						
MDT	Midelt	82.14	51	LR	LR	23 05 02.2	
	comp=Z,148nm,18.2s,baz=236,slow=37						
TSUM	Tsumeb	82.43	108	P	P	22 27 20.4	+1.2
TSUM				IAmb	IAmb	22 27 21.4	
	comp=Z,24nm,1.4s						
LLLB	Lillooet	83.10	330	P	P	22 27 22.4	+0.7
FRB	Frobisher Bay	83.22	1	LR	LR	23 04 08.4	
	comp=Z,228nm,21.8s,baz=192,slow=36						
TAM	Tamanrasset	85.79	64	P	P	22 27 37.3	+1.1
TAM	Tamanrasset	85.79	64	P	P	22 27 37.3	+1.1
ESDC	Sonseca Array	85.97	45	P	P	22 27 36.7	+0.1
	comp=Z,2.2nm,0.8s,baz=254,slow=3.8,SNR=4.7						
ESDC				LR	LR	23 05 33.3	
	comp=Z,140nm,18.0s,baz=205,slow=36						
BOSA	Boshof	86.01	119	LR	LR	23 03 07.9	
	comp=Z,294nm,19.1s,baz=256,slow=34						
MAW	Mawson	86.58	164	P	P	22 27 39.0	0.0
	comp=Z,7.0nm,1.1s,baz=228,slow=7.4,SNR=4.9						
MAW				LR	LR	23 04 56.8	
	comp=Z,117nm,21.8s,baz=240,slow=35						
MAW	Mawson	86.58	164	P	P	22 27 39.0	0.0
YKA	Yellowknife Ar	88.88	341	P	P	22 27 50.7	+0.8
	comp=Z,14nm,1.0s,baz=138,slow=5.3,SNR=119						
YKA				LR	LR	23 11 10.5	
	comp=Z,197nm,19.8s,baz=0.0,slow=38						
AFI	Afiamalu	95.22	253	LR	LR	23 00 31.8	
	comp=Z,231nm,20.4s,baz=138,slow=29						
DAVOX	Davos/Dischmat	98.11	43	LR	LR	23 10 09.7	
	comp=Z,130nm,20.0s,baz=261,slow=34						
GERES	GERESS Array B	101.21	42	P	Pdif	22 28 46.4	-0.4
	comp=Z,0.4nm,0.7s,baz=62,slow=3.2,SNR=3.9						
DZM	Mont Dzumac	110.17	236	eLR	LR	23 06 04.9	
	comp=Z,279nm,23.6s						
BRTR	Keskin Array B	113.40	54	i PKIKP	PKiKP	22 33 34.7	+0.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,1.1s						
BILL	Bilibino	120.16	339	i PKIKP	PKPdf	22 33 45.3	-1.1
BILL				e		22 35 14.2	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.2s						
KIV	Kislovodsk	120.36	50	ePKIKP	PKiKP	22 33 49.7	+2.0
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KBZ	Khabaz	120.51	50	PKP	PKPdf	22 33 47.5	-0.2
	comp=Z,1.3nm,1.0s,baz=268,slow=1.2,SNR=2.5						
H11S2	WAKE ISLAND Hy	125.69	279	T	T	00 53 17.3	
	baz=101,slow=75,SNR=122						
H11S1	WAKE ISLAND Hy	125.70	279	T	T	00 53 21.7	
	baz=101,slow=75,SNR=66						
H11S3	WAKE ISLAND Hy	125.71	279	T	T	00 53 18.9	
	baz=101,slow=75,SNR=50						
H11N3	WAKE ISLAND Hy	125.73	281	T	T	00 53 20.7	
	baz=100,slow=75,SNR=33						
H11N2	WAKE ISLAND Hy	125.75	281	T	T	00 53 21.9	
	baz=100,slow=75,SNR=46						
H11N1	WAKE ISLAND Hy	125.75	280	T	T	00 53 21.8	
	baz=100,slow=75,SNR=20						
SEY	Seymchan	127.70	337	i PKIKP	PKiKP	22 34 01.6	+0.1
ARU	Arti	127.75	33	i PKIKP	PKiKP	22 34 01.8	0.0
ARU						22 36 01.0	
ARU						22 41 12.8	
ARU				SS	SS	22 53 11.6	-2.4
ASAR	Alice Springs	130.50	211	PKP	PKiKP	22 34 08.3	-0.2
	comp=Z,2.2nm,1.1s,baz=160,slow=3.0,SNR=8.2						
KURK	Kurchatov	140.86	31	i PKIKP	PKPdf	22 34 25.4	-0.5
ZALV	Zalesovo Beam	141.13	23	PKP	PKPdf	22 34 24.8	-1.5
	comp=Z,1.9nm,0.8s,baz=304,slow=2.7,SNR=4.2						
AAK	Ala-Archa	143.06	44	i PKIKP	PKPdf	22 34 30.3	-0.1
MAKZ	Makanchi	145.11	33	PKIKP	PKPdf	22 34 33.7	+0.1
MKAR	Makanchi Array	145.28	33	PKPbc	PKPdf	22 34 34.2	+0.2
	comp=Z,9.0nm,0.8s,baz=319,slow=3.4,SNR=76						
NIL	Nilore	145.37	59	PKIKP	PKPab	22 34 34.8	+0.3
KSH	Kashi	145.44	48	PKPbc	PKPab	22 34 35.5	+0.7
KSH				PP	PP	22 37 58.3	+3.7
KSH				PKS	PKSdf	22 38 09.8	-0.3
KSH				SKKS		22 44 46.9	
KSH				AMB	AMB		
	comp=Z,180nm,5.0s						
KSH				LR	LR		
	comp=Z,100nm,9.4s						
KSH				LR	LR		
	comp=Z,38nm,9.0s						
KSH				LR	LR		
	comp=Z,220nm,14.3s						
MOY	Mondy	147.51	9	ePKP2	PKPab	22 34 42.3	0.0
TLY	Talaya	147.83	6	ePKP2	PKPbc	22 34 41.5	+0.5
TLY				pmax	pmax		
	comp=Z,11nm,1.1s						
USRK	Ussuriysk Ar.	148.96	327	PKPbc	PKiKP	22 34 45.5	+0.1
	comp=Z,4.0nm,0.9s,baz=18,slow=0.2,SNR=7.7						
ZAK	Zakamensk	149.07	7	ePKP2	PKiKP	22 34 45.2	-0.4
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MJAR	Matsushiro Arr	149.44	309	PKPbc	PKiKP	22 34 46.9	+0.2
	comp=Z,6.5nm,0.9s,baz=178,slow=1.3,SNR=13						
PALK	Pallekele	149.89	110	PKP2	PKiKP	22 34 48.8	+0.5
WMQ	Urumqi	150.09	32	ePKPbc	PKPdf	22 34 41.9	-0.1
WMQ				LR	LR		
	comp=Z,490nm,29.1s						
WMQ				LR	LR		
	comp=Z,880nm,29.2s						
WMQ				LR	LR		
	comp=Z,150nm,19.1s						
HYB	Hyderabad	151.06	90	i PKP	PKPbc	22 34 50.0	-0.1
SONM	Songino Array	151.88	4	PKP	PKPdf	22 34 45.9	+1.1
	comp=Z,0.9nm,1.0s,baz=316,slow=1.2,SNR=5.3						
SONM				PKPbc	PKiKP	22 34 52.2	+0.6
	comp=Z,3.8nm,0.9s,baz=320,slow=1.4,SNR=18						
SONM				PKPab	PKPab	22 35 01.8	+1.6
	comp=Z,7.0nm,0.8s,baz=332,slow=1.0,SNR=22						
ULN	Ulaanbaatar	151.88	3	PKIKP	PKiKP	22 34 52.8	+1.2
ULN	Ulaanbaatar	151.88	3	PKPab	PKPab	22 35 01.9	+1.7
CN2	Changchun	152.32	334	ePKPbc	PKPdf	22 34 47.3	+2.0
KSRS	Korea Array	155.83	321	PKP	PKPdf	22 34 51.7	+1.3
	comp=Z,0.8nm,0.7s,baz=209,slow=1.3,SNR=5.0						
KSAR	Wonju Array Be	155.86	321	PKIKP	PKPdf	22 34 52.0	+1.5
KSAR	Wonju Array Be	155.86	321		PKPdf	22 35 01.6	+11
HHC	Hu-ho-hao-te	158.83	355	ePKP	PKPdf	22 34 55.5	+1.2
GTA	Gaotai	158.84	20	eP	PKPab	22 35 30.8	+0.6
GTA				pP	pPKPab	22 35 34.8	-0.6
GTA				sP	sPKPab	22 35 37.8	+1.0
GTA	Gaotai	158.84	20	ePKP	PKPdf	22 34 55.8	+1.4
LZH	Lanzhou	163.08	14	ePKP	PKPdf	22 35 00.3	+1.2
LZH				pPKP	pPKPdf	22 35 03.5	-1.1
LZH				sPKP		22 35 04.8	
LZH				LR	LR		
	comp=Z,160nm,18.0s						
LZH				LR	LR		
	comp=Z,170nm,17.9s						
LZH				LR	LR		
	comp=Z,190nm,20.1s						
CD2	Chengdu	167.90	22	PKP	PKPdf	22 35 02.0	-1.1
CMAR	Chiang Mai Arr	170.41	96	PKP	PKPdf	22 35 06.0	+1.1
	comp=Z,0.6nm,0.3s,baz=267,slow=2.5,SNR=4.4						
CMAR				PKPab	PKPab	22 36 21.3	-0.4
	comp=Z,0.7nm,0.3s,baz=266,slow=6.6,SNR=8.9						
GYA	Guiyang	172.96	17	PKP	PKPdf	22 35 05.0	-1.1
GYA				PKPab	PKPab	22 36 33.6	+1.0
GYA				PKS	PKSdf	22 38 36.5	-2.1
GYA				PP	PP	22 40 26.8	+3.8
GYA				AMB	AMB		
	comp=Z,120nm,8.2s						

WEL 22 22:18:25.8±0.3, 33˚S±10˚×18˚0W±2˚4, h33^{km}, M4.3/8, mB4.6/3, ML4.5/8, MLv4.3/8, Mw(mB)3.8/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.99	21	P	Pn	22 19 27.0	+2.4
GLKZ				S	Sn	22 20 08.1	-2.1
WMGZ	Waiomatatini S	5.08	198	P	Pn	22 19 40.9	+1.3
WMGZ				S	Sn	22 20 38.7	+1.6
HAZ	Te Kaha	5.21	204	P	Pn	22 19 42.7	+1.3
HAZ				S	Sn	22 20 42.8	+2.4
PUZ	Puketiti	5.36	198	P	Pn	22 19 43.7	+0.2
RUGZ	Raukumara Rang	5.44	203	P	Pn	22 19 45.5	+0.9
RUGZ				S	Sn	22 20 46.6	+0.5
TWGZ	Tauwhareparae	5.54	200	P	Pn	22 19 46.6	+0.7
TWGZ				S	Sn	22 20 48.6	+0.2
MWZ	Matawai	5.82	203	P	Pn	22 19 49.6	-0.2
MWZ				S	Sn	22 20 55.8	+0.4
URZ	Urewera	5.90	206	P	Pn	22 19 51.4	+0.6
URZ				S	Sn	22 20 55.7	-1.5
RIGZ	Rimuhau	6.09	200	P	Pn	22 19 53.0	-0.5
RIGZ				S	Sn	22 21 00.5	-1.5
MUGZ	Murupara	6.22	207	P	Pn	22 19 56.2	+0.9
MUGZ				S	Sn	22 21 06.8	+1.6
SNGZ	Shannon Statio	6.29	202	P	Pn	22 19 57.1	+0.9
SNGZ				S	Sn	22 21 06.0	-0.9

THE ***22*** *22:25:59.9, 35˚.06N×22˚.96E, h14^{km}±1^{km}, ML1.9/8, Error ellipse: s-maj=1.5km s-min=0.7km az=104.0*

ATH 22 22:25:59.3, 35˚.05N×23˚.03E, h30^{km}±3^{km}, ML2.0/4, Error ellipse: s-maj=7.5km s-min=2.0km az=54.0, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNDR	Palaiochora Ch	0.57	71	P	Pb	22 26 10.8	0.0
KNDR				S	Sn	22 26 19.8	+0.2
	105nm,0.5s						
RODP	Rodopos	0.78	49	P	Pb	22 26 15.3	+0.9
RODP				S	Sn	22 26 27.9	+2.9
	22nm,0.5s						
ANKY	Antikythira Is	0.84	15	P	Pb	22 26 15.9	+0.5
ANKY				S	Sn	22 26 28.3	+1.8
	138nm,0.8s						
ANKY	Antikythira Is	0.84	15	P	Pb	22 26 15.7	+0.2
ANKY				S	Sn	22 26 28.2	+1.7
ANKY				AML	AML	22 26 28.7	
	comp=N,297μm,0.7s						
ANKY				AML	AML	22 26 29.1	
	comp=E,234μm,0.8s						
ANKY	Antikythira Is	0.84	15	P	Pb	22 26 16.0	+0.6
ANKY				S	Sb	22 26 26.0	-0.5
ANKY				AML	AML	22 26 28.7	
	comp=N,297μm,0.7s						
ANKY				AML	AML	22 26 29.1	
	comp=E,234μm,0.8s						
IMMV	Iera Moni Meta	0.88	62	P	Pb	22 26 16.6	+0.6

IMMV				S	Sb	22 26 30.6	+3.2
	comp=E,88nm,0.5s						
IMMV	**Iera Moni Meta**	**0.88**	**62**	P	Pb	22 26 16.6	+0.6
IMMV				AML	AML	22 26 32.7	
	comp=E,192µm,0.6s						
IMMV				AML	AML	22 26 37.9	
	comp=N,151µm,0.5s						
IMMV	**Iera Moni Meta**	**0.88**	**62**	P	Pb	22 26 16.7	+0.8
IMMV				S	Sb	22 26 28.1	+0.7
IMMV				AML	AML	22 26 29.8	
	comp=N,131µm,0.7s						
IMMV				AML	AML	22 26 32.7	
	comp=E,192µm,0.6s						
GVD	**Gavdhos**	**0.89**	**103**	P	Pb	22 26 17.5	+1.3
GVD				S	Sb	22 26 31.6	+3.8
	comp=E,80nm,0.4s						
GVD	**Gavdhos**	**0.89**	**103**	P	Pb	22 26 16.9	+0.7
GVD				AML	AML	22 26 34.9	
	comp=E,152µm,0.4s						
GVD				AML	AML	22 26 39.0	
	comp=N,174µm,0.4s						
GVD	**Gavdhos**	**0.89**	**103**	P	Pb	22 26 18.9	+2.7
GVD				S	Sb	22 26 32.2	+4.5
GVD				AML	AML	22 26 34.9	
	comp=E,152µm,0.4s						
GVD				AML	AML	22 26 35.1	
	comp=N,169µm,0.4s						
GVDS	**Gavdos**	**0.89**	**103**	P	Pb	22 26 17.4	+1.2
GVDS				S	Sb	22 26 30.8	+3.0
	comp=N,50nm,0.5s						
VAM	**Vamos**	**1.02**	**69**	P	Pb	22 26 19.3	+0.9
VAM	**Vamos**	**1.02**	**69**	P	Pb	22 26 19.0	+0.6
VAM				AML	AML	22 26 36.2	
	comp=N,186µm,0.7s						
VAM				AML	AML	22 26 39.3	
	comp=E,137µm,0.4s						
VAM	**Vamos**	**1.02**	**69**	P	Pb	22 26 19.1	+0.8
VAM				AML	AML	22 26 36.2	
	comp=N,186µm,0.7s						
VAM				AML	AML	22 26 37.5	
	comp=E,121µm,0.4s						
KTHA	**Kythira Island**	**1.21**	**1**	P	Pb	22 26 21.7	+0.2
KTHA				S	Sb	22 26 37.6	+0.9
	comp=E,48nm,0.7s						
KTHA	**Kythira Island**	**1.21**	**1**	P	Pb	22 26 21.7	+0.2
KTHA	**Kythira Island**	**1.21**	**1**	P	Pb	22 26 20.9	-0.6
KTHR	**Kythira**	**1.21**	**359**	P	Pb	22 26 21.7	+0.1
KTHR				S	Sb	22 26 37.4	+0.6
	comp=E,42nm,0.5s						
IDI	**Anoyia**	**1.54**	**81**	P	Pb	22 26 26.2	-1.0
IDI	**Anoyia**	**1.54**	**81**	P	Pb	22 26 26.5	-0.7
VLI	**Veliai**	**1.67**	**357**	P	Pb	22 26 28.8	-0.5
VLI	**Veliai**	**1.67**	**357**	P	Pn	22 26 26.7	+0.2
LAST	**Lasithi**	**2.01**	**86**	P	Pb	22 26 33.4	-1.8
LAST	**Lasithi**	**2.01**	**86**	P	Pn	22 26 33.1	+1.9
IOSP	**Ios island**	**2.48**	**47**	P	Pn	22 26 37.5	-0.1
ANAF	**Anafi Island**	**2.58**	**59**	P	Pn	22 26 39.4	+0.3

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*SJA **22** 22:51:15.3±1.2, 19°.74S×71°.14W, h42^{km}±40^{km}, ML4.0, MW3.9*

*IDC **22** 22:51:15.2±1.1, 19°.51S×70°.80W, h0^{km}, mb3.8/5, mb1 4.1/7, mb1mx3.8/35, mbtmp3.9/7, ML3.8/2, Error ellipse: s-maj=32.8km s-min=16.7km az=70.0*

*NEIC **22** 22:51:16.9, 19°.74S×71°.00W, h20^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.10; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$-1.09; $M_{r\theta}$0.16; $M_{\theta\phi}$0.38; $M_{\phi r}$-0.61; Fault plane solution: $M_0$1.32000×10^{15} NP1:ϕ_s340.61000°, δ30.71000°, λ87.27000°. NP2:ϕ_s163.79000°, δ59.33000°, λ91.62000°. Principal axes: T 1.2607, Plg76.0000°, Azm78.0000°; N 0.1122, Plg1.0000°, Azm343.0000°; P -1.3730, Plg14.0000°, Azm253.0000°;*

*NEIC **22** 22:51:16.9±1.6, 19°.74S±0°.04×71°.00W±0°.07, h19^{km}±7^{km}, Mwr4.0/38 Error ellipse: s-maj=9.9km s-min=6.5km az=90.0*

*GUC **22** 22:51:17.6±0.9, 19°.72S×70°.98W, h42^{km}±3^{km}, ML3.9*

ISC 22 22:51:15.8±1.6**, 19°.69S**±0°.03×**71°.02W**±0°.06**, h13**^{km}±9^{km}**, n57, σ1^{s}.24**/70**, mb4.1**/4**, 8C-3D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.85**	**84**	⇓*i*P	**Pb**	**22 51 32.0**	**-0.4**
PSGC				*i* S	**Sg**	**22 51 43.7**	**+0.3**
PSGC				IAML		22 51 47.1	
	comp=E,3µm,0.5s						
PSGCX	**Pisagua**	**0.85**	**84**		**Pg**	**22 51 32.1**	**-0.2**
TA01	**Diego Aracena**	**1.17**	**138**	⇑*i*P	**Pn**	**22 51 37.7**	**-0.2**
TA01				*i* S	**Sb**	**22 51 52.3**	**-0.7**
PB12	**IPOC Station P**	**1.25**	**31**	⇑*i*P	**Pb**	**22 51 39.4**	**0.0**
PB12				*i* S	**Sg**	**22 51 56.1**	**-0.3**
PB12				IAML		22 52 01.1	
	comp=E,2µm,0.7s						
PB12	**IPOC Station P**	**1.25**	**31**		**Pb**	**22 51 39.4**	**0.0**
PB12	**IPOC Station P**	**1.25**	**31**	*i* P	**Pb**	**22 51 39.4**	**0.0**
PB12				*e*S	**Sg**	**22 51 56.3**	**-0.1**
PB12				IAML		22 52 01.8	
	comp=Z,2µm,0.5s						
PB11	**IPOC Station P**	**1.28**	**93**	⇓*i*P	**Pn**	**22 51 39.4**	**-0.2**
PB11				*i* S	**Sn**	**22 51 56.2**	**-0.5**
PB11				IAML		22 51 58.7	
	comp=N,7µm,0.2s						
PB11	**IPOC Station P**	**1.28**	**93**		**Pb**	**22 51 39.5**	**-0.5**
PB11	**IPOC Station P**	**1.28**	**93**	*i* P	**Pb**	**22 51 39.5**	**-0.5**
PB11				*e*S	**Sg**	**22 51 56.3**	**-1.0**
PB11				IAML		22 51 57.2	
	comp=Z,4µm,0.4s						
PATCX	**Punta Patache**	**1.38**	**144**	⇑*i*P	**Pn**	**22 51 40.8**	**0.0**
PATCX				*i* S	**Sn**	**22 51 58.5**	**-0.6**
PATCX				IAML		22 52 08.2	
	comp=E,3µm,0.4s						
PATCX	**Punta Patache**	**1.38**	**144**		**Pn**	**22 51 40.9**	**0.0**
PATCX	**Punta Patache**	**1.38**	**144**	*i* P	**Pn**	**22 51 40.9**	**0.0**
PATCX				*e*S	**Sg**	**22 52 04.6**	**+4.0**
PATCX				IAML		22 52 05.1	
	comp=Z,2µm,0.4s						
AP01	**Chacalluta**	**1.46**	**26**	⇑*i*P	**Pn**	**22 51 42.0**	**+0.2**
AP01				*i* S	**Sg**	**22 52 02.5**	**-0.5**
AP01				IAML		22 52 08.1	
	comp=E,6µm,0.4s						
GO01	**Chusmiza**	**1.72**	**89**	⇑*i*P	**Pb**	**22 51 46.6**	**-0.9**
GO01				*i* S	**Sb**	**22 52 08.9**	**-0.3**
GO01				IAML		22 52 11.7	
	comp=N,6µm,0.1s						
GO01	**Chusmiza**	**1.72**	**89**		**Pb**	**22 51 46.7**	**-0.9**
PB08	**IPOC Station P**	**1.81**	**105**	⇑*i*P	**Pn**	**22 51 47.6**	**+0.6**
PB08				*i* S	**Sb**	**22 52 11.1**	**-0.6**
PB08				IAML		22 52 14.4	
	comp=N,2µm,0.5s						
PB08	**IPOC Station P**	**1.81**	**105**	*i* P	**Pn**	**22 51 47.7**	**+0.6**
PB08				⇓*e*S	**Sb**	**22 52 11.3**	**-0.4**
PB08				IAML		22 52 19.5	
	comp=Z,1µm,0.7s						
PB02	**IPOC Station P**	**1.93**	**147**	*i* P	**Pn**	**22 51 48.7**	**+0.3**
PB02				*e*S	**Sb**	**22 52 15.9**	**+1.0**
PB02				IAML		22 52 27.9	
	comp=Z,3µm,0.6s						
PB01	**IPOC Station P**	**1.96**	**133**	⇑*i*P	**Pn**	**22 51 49.4**	**+0.5**
PB01				*i* S	**Sn**	**22 52 12.7**	**-0.8**
PB01				IAML		22 52 22.6	
	comp=N,1µm,0.3s						
PB01	**IPOC Station P**	**1.96**	**133**		**Pn**	**22 51 49.4**	**+0.5**
PB01	**IPOC Station P**	**1.96**	**133**	*i* P	**Pn**	**22 51 49.5**	**+0.6**
PB01				*e*S	**Sn**	**22 52 12.9**	**-0.5**
PB01				IAML		22 52 23.2	
	comp=Z,804nm,0.8s						
PB16	**IPOC Station P**	**1.96**	**47**	*i* P	**Pb**	**22 51 50.3**	**-1.4**
PB16				*i* S	**Sb**	**22 52 16.7**	**+0.3**
PB16				IAML		22 52 18.9	
	comp=E,869nm,0.4s						
PB16	**IPOC Station P**	**1.96**	**47**		**Pb**	**22 51 50.3**	**-1.4**
PB16	**IPOC Station P**	**1.96**	**47**	*i* P	**Pb**	**22 51 50.4**	**-1.4**
PB16				*e*S	**Sb**	**22 52 16.7**	**+0.3**
PB16				IAML		22 52 26.8	
	comp=Z,1µm,0.6s						
PB07	**IPOC Station P**	**2.28**	**153**	⇑*e*P	**Pn**	**22 51 53.5**	**+0.1**
PB07				*i* S	**Sb**	**22 52 26.2**	**+1.0**
PB07				IAML		22 52 39.9	
	comp=E,2µm,0.8s						
PB07	**IPOC Station P**	**2.28**	**153**		**Pn**	**22 51 53.4**	**+0.1**
PB09	**IPOC Station P**	**2.67**	**142**		**Pn**	**22 52 00.0**	**+1.3**
PB09	**IPOC Station P**	**2.67**	**142**	*i* P	**Pn**	**22 51 60.0**	**+1.3**
PB09				IAML		22 52 49.1	
	comp=Z,955nm,0.7s						
PB04	**IPOC Station P**	**2.75**	**163**		**Pn**	**22 51 59.6**	**-0.2**
PB04	**IPOC Station P**	**2.75**	**163**	*i* P	**Pn**	**22 51 59.3**	**-0.4**
PB05	**IPOC Station P**	**3.23**	**167**	*i* P	**Pn**	**22 52 05.6**	**-0.8**
PB05				IAML		22 53 10.3	
	comp=Z,298nm,0.7s						
PB06	**IPOC Station P**	**3.29**	**156**	*i* P	**Pn**	**22 52 06.8**	**-0.4**
PB06				IAML		22 53 09.8	
	comp=Z,488nm,0.6s						
LVC	**Limon Verde**	**3.50**	**146**	Pn	**Pn**	**22 52 12.3**	**+1.9**
	comp=Z,5.1nm,0.3s,baz=335,slow=9.5,SNR=20						
LVC				Sn	**Sn**	**22 52 55.7**	**+3.9**
	comp=Z,16nm,0.3s,baz=288,slow=23,SNR=6.5						
LVC				Lg	Lg	22 53 08.3	
	comp=Z,39nm,0.3s,baz=102,slow=16,SNR=11						
LVC	**Limon Verde**	**3.50**	**146**		**Pn**	**22 52 10.5**	**+0.2**
LVC	**Limon Verde**	**3.50**	**146**	*i* P	**Pn**	**22 52 11.8**	**+1.5**
LVC				IAML		22 53 13.8	
	comp=Z,154nm,0.6s						
PB15	**IPOC Station P**	**3.78**	**158**		**Pn**	**22 52 13.8**	**-0.2**
PB15	**IPOC Station P**	**3.78**	**158**	*i* P	**Pn**	**22 52 13.7**	**-0.4**
PB10	**IPOC Station P**	**3.83**	**174**		**Pn**	**22 52 13.6**	**-0.8**
PB10	**IPOC Station P**	**3.83**	**174**	*i* P	**Pn**	**22 52 13.4**	**-1.0**
PB10				IAML		22 53 26.4	
	comp=Z,71nm,0.6s						
LPAZ	**La Paz**	**4.36**	**39**	Pn	**Pn**	**22 52 26.4**	**+4.1**
	comp=Z,2.2nm,0.3s,baz=233,slow=3.7,SNR=25						
LPAZ	**La Paz**	**4.36**	**39**		**Pn**	**22 52 23.8**	**+1.5**
PB14	**IPOC Station P**	**4.94**	**174**		**Pn**	**22 52 28.9**	**-1.2**
PB14				Sn	**Sn**	**22 53 23.4**	**-3.8**
PB14	**IPOC Station P**	**4.94**	**174**	*i* P	**Pn**	**22 52 29.9**	**-0.2**
PB14				IAML		22 54 00.4	
	comp=Z,75nm,0.8s						
GO02	**Mina Guanaco**	**5.60**	**167**		**Pn**	**22 52 38.7**	**-0.4**
SIV	**San Ignacio**	**10.16**	**70**	Pn	**Pn**	**22 53 40.4**	**-1.0**
	comp=Z,1.5nm,0.3s,baz=260,slow=12,SNR=16						
PLCA	**Paso Flores**	**20.98**	**179**	P	Pn	22 56 03.2	+1.9
	comp=Z,0.9nm,0.7s,baz=13,slow=12,SNR=3.6						
PTGA	**Pitinga**	**21.73**	**31**	P	**P**	**22 56 05.5**	**-1.5**
	comp=Z,2.3nm,0.3s,baz=200,slow=15,SNR=8.6						
NVAR	**Mina Array Bea**	**72.86**	**323**	P	**P**	**23 02 46.2**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=144,slow=7.7,SNR=2.3						
TORD	**Torodi Ar. Bea**	**78.64**	**72**	P	**P**	**23 03 17.2**	**-0.8**
	comp=Z,1.8nm,0.6s,baz=254,slow=5.0,SNR=9.7						
YKA	**Yellowknife Ar**	**88.84**	**341**	P	**P**	**23 04 09.8**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=134,slow=5.5,SNR=12						
H11S2	**WAKE ISLAND Hy**	**125.67**	**279**	T	T	01 29 41.1	
	baz=101,slow=74,SNR=24						
H11S1	**WAKE ISLAND Hy**	**125.68**	**279**	T	T	01 29 35.6	
	baz=101,slow=74,SNR=16						
H11S3	**WAKE ISLAND Hy**	**125.69**	**279**	T	T	01 29 36.9	
	baz=101,slow=74,SNR=3.3						
H11N3	**WAKE ISLAND Hy**	**125.71**	**281**	T	T	01 29 39.0	
	baz=101,slow=74,SNR=2.8						
H11N2	**WAKE ISLAND Hy**	**125.73**	**281**	T	T	01 29 39.1	
	baz=101,slow=74,SNR=2.7						
H11N1	**WAKE ISLAND Hy**	**125.73**	**281**	T	T	01 29 40.0	
	baz=101						
MKAR	**Makanchi Array**	**145.26**	**33**	PKPbc	**PKPdf**	**23 10 53.8**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=329,slow=4.5,SNR=11						

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*SJA **22** 23:00:33.4±0.9, 20°.25S×71°.27W, h10^{km}, ML3.0, MW3.0*

*IDC **22** 23:00:34.0±4.1, 20°.96S×70°.34W, h0^{km}, mb3.6/1, mb1 3.4/2, mb1mx3.2/24, mbtmp3.3/2, ML2.9/1, Error ellipse: s-maj=148.8km s-min=68.8km az=102.0*

ISC 22 23:00:35.0±1.5**, 20°.30S**±0°.06×**71°.2W**±0°.1**, h10**^{km}**, n11, σ2^{s}.12**/13**, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**IPOC Station P**	**2.23**	**155**	*i* P	**Pb**	**23 01 14.4**	**-1.1**
PB09	**IPOC Station P**	**2.33**	**130**	*i* P	**Pb**	**23 01 16.2**	**-1.1**
PB09				*e*S	**Sb**	**23 01 46.9**	**+0.7**
PB09				IAML		23 01 53.5	
	comp=Z,157nm,0.6s						
PB05	**IPOC Station P**	**2.69**	**161**	*i* P	**Pn**	**23 01 20.5**	**+2.0**
PB05				IAML		23 02 11.4	
	comp=Z,38nm,0.5s						
PB06	**IPOC Station P**	**2.82**	**149**	*i* P	**Pn**	**23 01 21.9**	**+1.7**
PB06				*e*S	**Sg**	**23 02 06.8**	**+1.3**
PB06				IAML		23 02 10.5	
	comp=Z,97nm,0.7s						
LVC	**Limon Verde**	**3.11**	**138**	*i* P	**Pb**	**23 01 27.7**	**-3.0**
LVC				IAML		23 02 22.7	
	comp=Z,30nm,0.9s						
PB10	**IPOC Station P**	**3.25**	**170**	*i* P	**Pn**	**23 01 28.3**	**+2.3**
PB10				IAML		23 02 50.8	
	comp=Z,19nm,0.9s						
PB14	**IPOC Station P**	**4.36**	**171**	*i* P	**Pn**	**23 01 43.5**	**+1.9**
PB14				IAML		23 03 18.0	
	comp=Z,11nm,1.4s						
LPAZ	**La Paz**	**4.92**	**36**	Pn	**Pn**	**23 01 52.3**	**+2.7**
	comp=Z,0.3nm,0.3s,baz=199,slow=5.1,SNR=2.9						
LPAZ	**La Paz**	**4.92**	**36**	*i* P	**Pn**	**23 01 51.6**	**+2.0**
TORD	**Torodi Ar. Bea**	**78.96**	**72**	P	**P**	**23 12 37.4**	**-2.1**
	comp=Z,0.3nm,0.4s,baz=244,slow=7.2,SNR=1.9						
MKAR	**Makanchi Array**	**145.84**	**33**	PKPbc	**PKPab**	**23 20 14.8**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=322,slow=4.6,SNR=4.5						

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*IDC **22** 23:13:24.8±1.7, 19°.32S×71°.02W, h0^{km}, mb4.1/3, mb1 4.1/5, mb1mx3.8/31, mbtmp4.0/5, ML3.6/2, MS2.9/1, Ms1 3.0/1, ms1mx2.4/33, Error ellipse: s-maj=43.7km s-min=20.8km az=67.0*

ISC 22 23:13:29.2±1.5**, 19°.3S**±0°.1×**71°.1W**±0°.2**, h35**^{km}**, n10, σ1^{s}.55**/6**, mb4.2**/3**, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**3.86**	**148**	Pn	**Pn**	**23 14 26.6**	**+0.2**
	3.3nm,0.3s,baz=335,slow=11,SNR=28						
LVC				Lg	Lg	23 15 25.0	
	10nm,0.3s,baz=135,slow=19,SNR=6.8						
LPAZ	**La Paz**	**4.13**	**44**	Pn	Pn	23 14 37.0	+6.6
	1.1nm,0.3s,baz=168,slow=4.5,SNR=19						
LPAZ				LR	LR	23 16 18.1	
	comp=Z,134nm,18.2s,baz=214,slow=42						
SIV	**San Ignacio**	**10.11**	**72**	Pn	**Pn**	**23 15 52.2**	**+0.2**
	0.5nm,0.3s,baz=253,slow=9.5,SNR=7.0						
PTGA	**Pitinga**	**21.45**	**32**	P	**P**	**23 18 14.4**	**-0.2**
	2.9nm,0.3s,baz=184,slow=11,SNR=8.1						
TORD	**Torodi Ar. Bea**	**78.59**	**72**	P	**P**	**23 25 27.8**	**0.0**
	0.8nm,0.5s,baz=251,slow=5.2,SNR=7.1						
YKA	**Yellowknife Ar**	**88.47**	**341**	P	**P**	**23 26 18.6**	**+1.2**
	0.3nm,0.2s,baz=137,slow=5.5,SNR=16						
H11S2	**WAKE ISLAND Hy**	**125.53**	**279**	T	T	01 51 43.5	
	baz=101,SNR=10						
H11S1	**WAKE ISLAND Hy**	**125.54**	**279**	T	T	01 51 42.3	
	baz=101						
H11S3	**WAKE ISLAND Hy**	**125.55**	**279**	T	T	01 51 51.1	
	baz=101						
MKAR	**Makanchi Array**	**144.99**	**32**	PKP	**PKiKP**	**23 33 04.2**	**-2.4**
	0.5nm,0.8s,baz=310,slow=0.8,SNR=5.9						

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*CNRM **23** 00:03:11.4±1.0, 36°.50N×12°.79W, h0^{km}, Error ellipse: s-maj=12.8km s-min=7.4km az=150.0*

*IDC **23** 00:03:13.8±2.6, 36°.66N×12°.57W, h0^{km}, mb3.6/6, mb1 3.8/8, mb1mx3.5/51, mbtmp3.6/8, ML4.4/2, Error ellipse: s-maj=58.1km s-min=27.3km az=80.0*

*MDD **23** 00:03:15.9±0.9, 36°.62N×12°.85W, h37^{km}±39^{km}, mb4.7/1, mbLg3.3/27, Error ellipse: s-maj=11.3km s-min=8.5km az=115.0, PRXIMO*

*IGIL **23** 00:03:16.8, 36°.69N×12°.77W, h26^{km}, ML3.6*

*LDG **23** 00:03:18.2±0.2, 36°.73N×12°.63W, h15^{km}, Ml3.5/11, Error ellipse: s-maj=3.4km s-min=2.8km az=54.0*

*INMG **23** 00:03:18.5±1.3, 36°.58N×12°.83W, h10^{km}, ML3.4, Error ellipse: s-maj=4.1km s-min=2.0km az=123.0*

*NEIC **23** 00:03:18.1±1.6, 36°.82N±0°.07×12°.4W±0°.1, h10^{km}±2^{km}, mb4.2/3, Error ellipse: s-maj=17.2km s-min=10.5km az=247.0*

ISC 23 00:03:14.6±0.8**, 36°.64N**±0°.05×**12°.61W**±0°.05**, h10**^{km}**, n165, σ1^{s}.54**/168**, mb3.9**/9**, 6C, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.08**	**80**	P	**Pn**	**00 04 03.7**	**+0.5**
	40nm,0.1s,SNR=42						
PFVI				S	**Sn**	**00 04 37.2**	**-2.8**
	71nm,0.5s,SNR=8.1						
PFVI	**Vila Bisbo**	**3.08**	**80**	P	**Pn**	**00 04 03.3**	**+0.1**
	SNR=43						
PFVI	**Vila Bisbo**	**3.08**	**80**		**Sn**	**00 04 39.3**	**-0.8**
PFVI	**Vila Bisbo**	**3.08**	**80**		**Pn**	**00 04 03.7**	**+0.5**
PFVI	**Vila Bisbo**	**3.08**	**80**	⇑*e*Pn	**Pn**	**00 04 03.7**	**+0.5**
PFVI				*e*Sn	**Sn**	**00 04 37.3**	**-2.8**
PFVI				A	A	00 04 39.8	
	75nm,0.5s						
PTEO	**Sao Teotonio**	**3.24**	**73**	Pn	**Pn**	**00 04 06.0**	**+0.5**
PTEO				Sn	**Sn**	**00 04 41.1**	**-3.0**
	29nm,0.5s						
PTEO	**Sao Teotonio**	**3.24**	**73**	⇑*e*Pn	**Pn**	**00 04 06.0**	**+0.5**
PTEO				*e*Sn	**Sn**	**00 04 41.1**	**-3.0**
PTEO				A	A	00 04 43.7	
	57nm,0.5s						
LIS	**Lisbon**	**3.44**	**52**	*e*S	**Sn**	**00 04 46.1**	**-3.1**
LIS				AML	AML	00 04 48.5	
	comp=N,355nm,0.3s						
LIS	**Lisbon**	**3.44**	**52**	Sn	**Sn**	**00 04 46.7**	**-2.5**
	comp=N,101nm,0.2s						
LIS	**Lisbon**	**3.44**	**52**	*e*Sn	**Sn**	**00 04 46.7**	**-2.5**
LIS				A	A	00 04 51.5	
	comp=N,101nm,0.2s						
PMAFR	**Mafra**	**3.51**	**48**	P	**Pn**	**00 04 09.6**	**+0.4**
	comp=N,15nm,0.2s,SNR=13						
PMAFR				S	**Sn**	**00 04 47.7**	**-3.1**
	comp=N,253nm,0.3s,SNR=51						
PMAFR	**Mafra**	**3.51**	**48**		**Pn**	**00 04 09.6**	**+0.4**
PMAFR					**Sn**	**00 04 47.7**	**-3.1**
PMAFR	**Mafra**	**3.51**	**48**	⇑*e*Pn	**Pn**	**00 04 09.6**	**+0.4**
PMAFR				*e*Sn	**Sn**	**00 04 48.2**	**-2.6**
PMAFR				A	A	00 04 49.3	
	comp=N,275nm,0.3s						
PNCL	**Nicolau / Gran**	**3.57**	**64**	Pn	**Pn**	**00 04 10.3**	**+0.3**
PNCL				Sn	**Sn**	**00 04 49.7**	**-2.6**
	comp=N,50nm,0.3s						
PNCL	**Nicolau / Gran**	**3.57**	**64**	⇑*e*Pn	**Pn**	**00 04 10.3**	**+0.3**
PNCL				*e*Sn	**Sn**	**00 04 49.7**	**-2.6**
PNCL				A	A	00 04 50.6	
	comp=N,50nm,0.3s						
MESJ	**Messejana**	**3.71**	**70**	*e*P	**Pn**	**00 04 12.2**	**+0.4**
MESJ				*e*S	**Sn**	**00 04 52.8**	**-2.8**
MESJ				AML	AML	00 04 55.0	
	comp=N,63nm,0.2s						
MESJ	**Messejana**	**3.71**	**70**	Pn	**Pn**	**00 04 12.3**	**+0.4**
MESJ				Sn	**Sn**	**00 04 53.3**	**-2.3**
	comp=N,35nm,0.3s						
MESJ	**Messejana**	**3.71**	**70**	*e*Pn	**Pn**	**00 04 12.3**	**+0.4**
MESJ				*e*Sn	**Sn**	**00 04 53.3**	**-2.3**
MESJ				A	A	00 04 56.3	
	comp=N,35nm,0.3s						
PBDV	**Barranco-do-Ve**	**3.80**	**79**	Pn	**Pn**	**00 04 14.0**	**+0.8**
PBDV				Sn	**Sn**	**00 04 56.4**	**-1.6**
	comp=N,27nm,0.3s						
PBDV	**Barranco-do-Ve**	**3.80**	**79**	*e*Pn	**Pn**	**00 04 14.0**	**+0.8**
PBDV				*e*Sn	**Sn**	**00 04 56.4**	**-1.6**
PBDV				A	A	00 05 02.2	
	comp=N,27nm,0.3s						
PVAQ	**Vaqueiros**	**3.99**	**77**	Pn	**Pn**	**00 04 16.6**	**+0.8**
PVAQ				Sn	**Sn**	**00 05 00.3**	**-2.4**
	comp=N,40nm,0.3s						
PVAQ	**Vaqueiros**	**3.99**	**77**	P	**Pn**	**00 04 16.2**	**+0.3**
	SNR=44						
PVAQ	**Vaqueiros**	**3.99**	**77**		**Pn**	**00 04 16.8**	**+1.0**
PVAQ					**Sn**	**00 05 01.6**	**-1.1**
PVAQ	**Vaqueiros**	**3.99**	**77**	⇑*e*Pn	**Pn**	**00 04 16.6**	**+0.8**
PVAQ				*e*Sn	**Sn**	**00 05 00.3**	**-2.4**
PVAQ				A	A	00 05 04.8	
	comp=N,40nm,0.3s						
PBEJ	**Beja**	**4.03**	**68**	Pn	**Pn**	**00 04 17.1**	**+0.7**
PBEJ				Sn	Sn	00 04 59.6	-4.0
	comp=N,14nm,0.3s						
PBEJ	**Beja**	**4.03**	**68**	*e*Pn	**Pn**	**00 04 17.1**	**+0.7**
PBEJ				*e*Sn	Sn	00 04 59.6	-4.0
PBEJ				A	A	00 05 02.0	
	comp=N,28nm,0.3s						
EGRO	**El Granado**	**4.20**	**76**	P	**Pn**	**00 04 19.5**	**+0.8**
	comp=N,3.1nm,0.1s,SNR=11						
EGRO				S	**Sn**	**00 05 04.9**	**-2.9**
	comp=N,22nm,0.3s,SNR=9.0						
EGRO	**El Granado**	**4.20**	**76**		**Pn**	**00 04 19.5**	**+0.8**
EGRO					**Sn**	**00 05 04.9**	**-2.9**
PMTG	**Montargil**	**4.24**	**54**	Pn	**Pn**	**00 04 19.1**	**-0.1**
PMTG				Sn	**Sn**	**00 05 05.1**	**-3.6**
	comp=N,23nm,0.1s						
PMTG	**Montargil**	**4.24**	**54**	⇑*e*Pn	**Pn**	**00 04 19.1**	**-0.1**
PMTG				*e*Sn	**Sn**	**00 05 05.1**	**-3.6**
PMTG				A	A	00 05 07.7	
	comp=N,23nm,0.1s						
PTOM	**Tomar**	**4.46**	**47**	Pn	**Pn**	**00 04 22.9**	**+0.7**
PTOM				Sn	**Sn**	**00 05 11.1**	**-3.0**
	comp=N,25nm,0.4s						
PTOM	**Tomar**	**4.46**	**47**	*e*Pn	**Pn**	**00 04 22.9**	**+0.7**
PTOM				*e*Sn	**Sn**	**00 05 11.1**	**-3.0**
PTOM				A	A	00 05 14.4	
	comp=N,50nm,0.4s						
PESTR	**Estremoz**	**4.56**	**59**	P	**Pn**	**00 04 23.8**	**+0.1**
PESTR	**Estremoz**	**4.56**	**59**	Pn	**Pn**	**00 04 24.3**	**+0.6**
PESTR					Sn	00 05 12.8	-4.0
PESTR	**Estremoz**	**4.56**	**59**	*e*Pn	**Pn**	**00 04 24.1**	**+0.4**
PESTR				*e*Sn	Sn	00 05 12.2	-4.6
PESTR				A	A	00 05 19.2	
	comp=N,18nm,0.3s						
PMPST	**Porto Santo, M**	**4.68**	**222**	*e*Pn	Pn	00 04 21.2	-4.2
PMPST				*e*Sn	Sn	00 05 07.5	-12
PMPST				A	A	00 05 11.9	
	comp=N,61nm,0.4s						
PBAR	**Barrancos**	**4.70**	**69**	Pn	**Pn**	**00 04 26.8**	**+1.3**
PBAR				Sn	Sn	00 05 16.7	-3.4
	comp=N,25nm,0.6s						
PBAR	**Barrancos**	**4.70**	**69**	*e*Pn	**Pn**	**00 04 26.8**	**+1.3**
PBAR				*e*Sn	Sn	00 05 16.7	-3.4
PBAR				A	A	00 05 25.6	
	comp=N,25nm,0.6s						
PCAS	**Casmilo, Conde**	**4.70**	**42**	Pn	**Pn**	**00 04 25.7**	**+0.1**
PCAS				Sn	Sn	00 05 15.6	-4.6
	comp=N,33nm,0.4s						
PCAS	**Casmilo, Conde**	**4.70**	**42**	*e*Pn	**Pn**	**00 04 25.7**	**+0.1**
PCAS				*e*Sn	Sn	00 05 15.6	-4.6
PCAS				A	A	00 05 22.0	
	comp=N,33nm,0.4s						
PMPS	**Porto Santo**	**4.70**	**222**	Pn	Pn	00 04 21.2	-4.4
PMPS				Sn	Sn	00 05 07.5	-13
	comp=N,30nm,0.4s						
PMPS	**Porto Santo**	**4.70**	**222**	*e*Pn	**Pn**	**00 04 21.6**	**-4.0**
PMPS				*e*Sn	Sn	00 05 07.2	-13
PMPS				A	A	00 05 10.2	
	comp=N,37nm,0.3s						
COI	**Coimbra**	**4.86**	**41**	Sn	**Sn**	**00 05 19.8**	**-4.2**
	comp=N,28nm,0.1s						
COI	**Coimbra**	**4.86**	**41**	*e*Sn	**Sn**	**00 05 19.8**	**-4.2**
COI				A	A	00 05 23.2	
	comp=N,57nm,0.1s						
EMIN	**Mina Concepcio**	**4.88**	**75**	P	**Pn**	**00 04 28.2**	**+0.2**
	comp=N,2.9nm,0.1s,SNR=49						
EMIN				S	Sn	00 05 20.3	-4.2
	comp=N,12nm,0.3s,SNR=8.8						
EMIN	**Mina Concepcio**	**4.88**	**75**		**Pn**	**00 04 28.2**	**+0.2**
EMIN					Sn	00 05 20.3	-4.2
EBAD	**Badajoz**	**4.92**	**63**	P	**Pn**	**00 04 28.7**	**+0.1**
	comp=N,6.2nm,0.1s,SNR=49						
EBAD				S	Sn	00 05 21.6	-4.0
	comp=N,15nm,0.4s,SNR=9.1						
EBAD	**Badajoz**	**4.92**	**63**		**Pn**	**00 04 28.7**	**+0.1**
EBAD					Sn	00 05 21.6	-4.0
PMRV	**Marv??o**	**4.98**	**54**	Pn	**Pn**	**00 04 28.6**	**-0.8**
PMRV				Sn	Sn	00 05 21.9	-5.1
	comp=N,31nm,0.5s						
PMRV	**Marv??o**	**4.98**	**54**	*e*Pn	**Pn**	**00 04 28.6**	**-0.8**
PMRV				*e*Sn	Sn	00 05 21.9	-5.1
PMRV				A	A	00 05 25.0	
	comp=N,31nm,0.5s						
PCBR	**Castelo Branco**	**5.16**	**50**	Pn	**Pn**	**00 04 32.0**	**+0.2**
PCBR				Sn	Sn	00 05 26.5	-4.9
	comp=N,7.2nm,0.4s						
PCBR	**Castelo Branco**	**5.16**	**50**	*e*Pn	**Pn**	**00 04 32.0**	**+0.2**
PCBR				*e*Sn	Sn	00 05 26.5	-4.9
PCBR				A	A	00 05 28.3	
	comp=N,14nm,0.4s						
PMAR	**Madeira**	**5.27**	**223**	Pn	Pn	00 04 29.5	-4.1
PMAR				Sn	Sn	00 05 19.1	-15
	comp=N,26nm,0.3s						
PMAR	**Madeira**	**5.27**	**223**	P	Pn	00 04 29.1	-4.5
PMAR	**Madeira**	**5.27**	**223**	*e*Pn	Pn	00 04 29.5	-4.1

PMAR				*e*Sn	Sn	00 05 19.1	-15
PMAR				A	A	00 05 33.5	
	comp=N,52nm,0.3s						
FUL	**Funchal**	**5.32**	**223**	Sn	Sn	00 05 23.1	-12
	comp=N,26nm,0.3s						
FUL	**Funchal**	**5.32**	**223**	*e*Sn	Sn	00 05 23.1	-12
FUL				A	A	00 05 25.2	
	comp=N,52nm,0.3s						
PMOZ	**Porto Moniz, M**	**5.36**	**226**	P	Pn	00 04 30.4	-4.4
PMOZ	**Porto Moniz, M**	**5.36**	**226**	*e*Pn	**Pn**	**00 04 30.9**	**-3.8**
PMOZ				*e*Sn	Sn	00 05 25.0	-12
PMOZ				A	A	00 05 25.5	
	comp=N,72nm,0.6s						
AVE	**Averroes**	**5.41**	**126**	P	Pn	00 04 33.8	-1.6
AVE	**Averroes**	**5.41**	**126**	*e*P	**Pn**	**00 04 34.5**	**-0.9**
AVE				*e*S	Sn	00 05 31.4	-6.4
ESPR	**Espera**	**5.43**	**86**	P	**Pn**	**00 04 36.3**	**+0.7**
	comp=N,17nm,0.2s,SNR=58						
ESPR				S	**Sn**	**00 05 35.3**	**-2.9**
	comp=N,19nm,0.3s,SNR=73						
ESPR	**Espera**	**5.43**	**86**		**Pn**	**00 04 36.3**	**+0.7**
ESPR					**Sn**	**00 05 36.2**	**-1.9**
MTE	**Manteigas**	**5.47**	**45**	Pn	**Pn**	**00 04 36.1**	**-0.1**
MTE				Sn	Sn	00 05 34.2	-5.0
	comp=N,21nm,0.2s						
MTE	**Manteigas**	**5.47**	**45**	*e*Pn	**Pn**	**00 04 36.1**	**-0.1**
MTE				*e*Sn	Sn	00 05 34.2	-5.0
MTE				A	A	00 05 38.9	
	comp=N,41nm,0.2s						
PVIS	**Viseu**	**5.50**	**41**	Pn	**Pn**	**00 04 36.6**	**0.0**
PVIS				Sn	Sn	00 05 34.3	-5.6
	comp=N,22nm,0.2s						
PVIS	**Viseu**	**5.50**	**41**	*e*Pn	**Pn**	**00 04 36.6**	**0.0**
PVIS				*e*Sn	Sn	00 05 34.3	-5.6
PVIS				A	A	00 05 37.7	
	comp=N,45nm,0.2s						
EAH	**EAH**	**5.57**	**152**	P	Pn	00 04 35.2	-2.4
SRHM	**Skhour des Reh**	**5.69**	**136**	P	Pn	00 04 37.2	-2.1
RSA	**Sarsar**	**5.79**	**106**	P	**Pn**	**00 04 40.4**	**-0.3**
ZHG	**ZHG**	**5.84**	**121**	P	Pn	00 04 39.0	-2.3
CEU	**Ceuta**	**5.89**	**95**	P	**Pn**	**00 04 44.4**	**+2.5**
CEU				S	**Sn**	**00 05 50.1**	**+0.6**
CEU	**Ceuta**	**5.89**	**95**	*e*P	**Pn**	**00 04 44.4**	**+2.5**
CEU				*e*S	**Sn**	**00 05 50.1**	**+0.6**
ECAB	**El Cabril**	**5.91**	**74**	P	**Pn**	**00 04 42.4**	**+0.2**
	comp=N,5.4nm,0.2s,SNR=79						
ECAB				S	Sn	00 05 45.3	-4.7
	comp=N,6.5nm,0.3s,SNR=8.3						
ECAB	**El Cabril**	**5.91**	**74**		**Pn**	**00 04 42.4**	**+0.2**
ECAB					Sn	00 05 46.1	-3.9
HORN	**Hornachuelos**	**5.99**	**76**	P	**Pn**	**00 04 43.1**	**-0.2**
	SNR=7.2						
PVRL	**Vila Real**	**6.00**	**38**	Pn	**Pn**	**00 04 43.2**	**-0.3**
PVRL				Sn	Sn	00 05 45.8	-6.5
	comp=N,12nm,0.1s						
PVRL	**Vila Real**	**6.00**	**38**	*e*Pn	**Pn**	**00 04 43.2**	**-0.3**
PVRL				*e*Sn	Sn	00 05 45.8	-6.5
PVRL				A	A	00 05 49.5	
	comp=N,24nm,0.1s						
CHEFC	**Chefchaouen**	**6.10**	**102**	P	**Pn**	**00 04 45.4**	**+0.5**
EPLA	**Plasencia**	**6.17**	**54**	P	**Pn**	**00 04 46.1**	**+0.3**
	comp=N,10nm,0.3s,SNR=36						
EPLA				S	Sn	00 05 51.6	-4.8
	comp=N,12nm,0.3s,SNR=11						
PCAB	**Cabril**	**6.19**	**34**	Pn	**Pn**	**00 04 45.9**	**-0.2**
PCAB				Sn	Sn	00 05 51.0	-6.0
	comp=N,13nm,0.1s						
PCAB	**Cabril**	**6.19**	**34**	*e*Pn	**Pn**	**00 04 45.9**	**-0.2**
PCAB				*e*Sn	Sn	00 05 51.0	-6.0
PCAB				A	A	00 05 53.4	
	comp=N,27nm,0.1s						
MVO	**Moncorvo**	**6.28**	**42**	P	**Pn**	**00 04 47.0**	**-0.3**
	comp=N,1.5nm,0.1s,SNR=8.2						
MVO				S	Sn	00 05 52.5	-6.6
	comp=N,27nm,0.3s,SNR=16						
MVO	**Moncorvo**	**6.28**	**42**	*e*Pn	**Pn**	**00 04 47.0**	**-0.3**
MVO				*e*Sn	Sn	00 05 52.4	-6.7
MVO				A	A	00 05 58.0	
	comp=N,33nm,0.3s						
EZAM	**Zamans**	**6.29**	**28**	P	**Pn**	**00 04 46.7**	**-0.7**
	comp=N,1.3nm,0.1s,SNR=7.9						
EZAM				S	Sn	00 05 51.4	-7.8
	comp=N,81nm,1.2s,SNR=7.9						
PGAV	**Gavieira, Arco**	**6.30**	**31**	Pn	**Pn**	**00 04 47.3**	**-0.3**
PGAV				Sn	Sn	00 05 52.9	-6.8
	comp=N,17nm,0.2s						
PGAV	**Gavieira, Arco**	**6.30**	**31**	*e*Pn	**Pn**	**00 04 47.3**	**-0.3**
PGAV				*e*Sn	Sn	00 05 52.9	-6.8
PGAV				A	A	00 05 56.5	
	comp=N,17nm,0.2s						
ELOB	**Lobios**	**6.31**	**33**	P	**Pn**	**00 04 47.7**	**-0.1**
	comp=N,4.1nm,0.3s,SNR=15						
ELOB				S	Sn	00 05 52.0	-7.8
	comp=N,8.8nm,0.4s,SNR=8.6						
EMIJ	**Mijas**	**6.31**	**88**	P	**Pn**	**00 04 48.7**	**+1.0**
	comp=N,2.2nm,0.3s,SNR=7.9						
EMIJ				S	**Sn**	**00 05 56.9**	**-2.9**
	comp=N,4.7nm,1.2s,SNR=6.2						
EMIJ	**Mijas**	**6.31**	**88**		**Pn**	**00 04 48.7**	**+1.0**
EADA	**Adamuz**	**6.58**	**74**	P	**Pn**	**00 04 51.8**	**+0.4**
	comp=N,11nm,0.2s,SNR=46						
EADA				S	Sn	00 06 01.1	-5.4
	comp=N,6.0nm,0.3s,SNR=5.0						
OUK	**Oukaimeden**	**6.70**	**143**	P	**Pn**	**00 04 52.4**	**-0.9**
IFR	**Ifrane**	**6.88**	**115**	*e*P	Pn	00 04 46.6	-9.1
IFR				*e*S	Sn	00 06 04.0	-10
PBRG	**Braganca**	**6.88**	**40**	Pn	**Pn**	**00 04 55.3**	**-0.3**
PBRG				Sn	Sn	00 06 07.1	-7.0
	comp=N,8.2nm,0.2s						
PBRG	**Braganca**	**6.88**	**40**	*e*Pn	**Pn**	**00 04 55.3**	**-0.3**
PBRG				*e*Sn	Sn	00 06 07.1	-7.0
PBRG				A	A	00 06 09.9	
	comp=N,16nm,0.2s						
EMAZ	**Mazaricos**	**6.90**	**23**	P	**Pn**	**00 04 55.2**	**-0.5**
	comp=N,2.9nm,0.3s,SNR=7.9						
EMAZ				S	Sn	00 06 04.5	-10
	comp=N,2.8nm,0.9s,SNR=7.9						
EMAZ	**Mazaricos**	**6.90**	**23**		**Pn**	**00 04 55.2**	**-0.5**
ECAL	**Calabor**	**6.99**	**39**	P	**Pn**	**00 04 57.1**	**0.0**
	comp=N,3.6nm,0.2s,SNR=6.4						
ECAL				S	Sn	00 06 10.0	-6.6
	comp=N,63nm,1.1s,SNR=7.9						
ECAL	**Calabor**	**6.99**	**39**		**Pn**	**00 04 57.1**	**0.0**
TTIG	**Tnine Tigouga,**	**7.00**	**149**	P	Pn	00 04 52.3	-5.0
EAGO	**Agolada(Pontev**	**7.08**	**28**	P	**Pn**	**00 04 57.8**	**-0.4**
	comp=N,1.4nm,0.1s,SNR=7.9						
EAGO				S	Sn	00 06 09.6	-9.1
	comp=N,8.1nm,0.5s,SNR=7.9						
PAB	**San Pablo**	**7.13**	**63**	P	**Pn**	**00 04 59.0**	**-0.1**
	comp=N,5.0nm,0.4s,SNR=7.9						
PAB				S	Sn	00 06 14.9	-5.4
	comp=N,6.1nm,0.7s,SNR=7.9						
PAB	**San Pablo**	**7.13**	**63**		**Pn**	**00 04 59.0**	**-0.1**
CZD	**Col de Zad**	**7.19**	**118**	P	Pn	00 04 58.6	-1.4
ESDC	**Sonseca Array**	**7.46**	**63**	Pn	**Pn**	**00 05 03.0**	**-0.5**
	comp=N,4.6nm,0.3s,baz=250,slow=13,SNR=22						
ESDC				Sn	Sn	00 06 20.2	-8.0
	comp=N,4.7nm,0.3s,baz=255,slow=23,SNR=16						
ESDC	**Sonseca Array**	**7.46**	**63**	P	**Pn**	**00 05 03.8**	**+0.3**
	comp=N,2.2nm,0.2s,baz=250,slow=13,SNR=119						
ESDC				S	Sn	00 06 22.4	-5.8
	baz=251,slow=22,SNR=7.9						
MD31	**MD31**	**7.48**	**118**	P	**Pn**	**00 05 02.9**	**-0.9**
OUZM	**OUZ**	**7.50**	**138**	P	**Pn**	**00 05 02.6**	**-1.6**
EFAM	**Famara**	**7.53**	**186**	P	**Pn**	**00 05 02.2**	**-2.2**
	comp=N,2.3nm,0.1s,SNR=7.9						
EFAM				S	Sn	00 06 16.9	-13
	comp=N,18nm,0.5s,SNR=7.9						
MDT	**Midelt**	**7.61**	**118**	Pn	**Pn**	**00 05 04.8**	**-0.9**
	comp=N,0.7nm,0.3s,baz=300,slow=5.5,SNR=26						
MDT				Sn	Sn	00 06 23.3	-8.8
	comp=N,6.7nm,0.3s,baz=131,slow=9.2,SNR=21						
MDT	**Midelt**	**7.61**	**118**	P	Pn	00 05 04.3	-1.4
	SNR=19						
GORA	**Gorafe**	**7.70**	**81**	S	**Sn**	**00 06 32.2**	**-1.9**
	comp=N,7.5nm,0.3s,SNR=7.9						
EQES	**Quesada**	**7.70**	**78**	P	**Pn**	**00 05 07.6**	**+0.7**
	comp=N,1.3nm,0.2s,SNR=27						
EQES				S	Sn	00 06 29.7	-4.6
	comp=N,4.2nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**7.73**	**56**	S	Sn	00 06 29.4	-5.6
	comp=N,7.0nm,0.3s,SNR=7.5						
EBER	**Berja**	**7.81**	**85**	P	**Pn**	**00 05 09.1**	**+0.6**
	comp=N,1.1nm,0.3s,SNR=7.9						
EBER				S	Sn	00 06 33.0	-4.0
	comp=N,1.0nm,0.2s,SNR=7.9						
EPON	**Pontenova**	**7.89**	**30**	P	**Pn**	**00 05 09.3**	**-0.1**
	comp=N,1.6nm,0.3s,SNR=7.9						
EPON				S	Sn	00 06 29.7	-9.0
	comp=N,0.1nm,0.4s,SNR=7.9						
EPON	**Pontenova**	**7.89**	**30**		**Pn**	**00 05 09.3**	**-0.1**
GOLM	**Goulmima**	**8.03**	**126**	P	**Pn**	**00 05 13.4**	**+2.0**
CFUE	**Fuerteventura**	**8.04**	**188**	P	Pn	00 05 07.0	-4.5
	comp=N,4.4nm,0.2s,SNR=7.9						
CFUE				S	Sn	00 06 26.8	-16
	comp=N,0.6nm,0.3s,SNR=7.9						
SESP	**Santiago Espad**	**8.15**	**77**	S	Sn	00 06 38.8	-6.6
	comp=N,4.3nm,0.3s,SNR=7.9						
TZRR	**Tazzarine**	**8.27**	**133**	P	**Pn**	**00 05 14.2**	**-0.5**
JBK	**JBK**	**8.51**	**103**	P	Pn	00 05 15.9	-2.2
EARI	**Arriondas**	**8.75**	**38**	S	Sn	00 06 53.8	-6.1
	comp=N,6.7nm,0.6s,SNR=7.9						
ETOB	**Tobarra**	**9.00**	**74**	P	**Pn**	**00 05 24.1**	**-0.6**
	comp=N,1.7nm,0.3s,SNR=8.1						
ETOB				S	Sn	00 07 01.6	-4.6
	comp=N,1.6nm,0.5s,SNR=7.9						
EMUR	**La Murta**	**9.15**	**79**	S	**Sn**	**00 07 06.9**	**-2.8**
	comp=N,0.3nm,0.2s,SNR=7.9						
ETOR	**Torete**	**9.25**	**60**	P	**Pn**	**00 05 28.2**	**+0.1**
	comp=N,24nm,0.2s,SNR=40						
ETOR				S	Sn	00 07 04.3	-7.9
	comp=N,9.9nm,0.4s,SNR=7.9						
ELAN	**Lanestosa**	**9.64**	**44**	S	Sn	00 07 15.3	-6.6
	comp=N,1.5nm,0.4s,SNR=7.9						
SJPF	**Ste Jean**	**10.88**	**50**	*e*Pn	**Pn**	**00 05 50.6**	**+0.3**
SJPF				*e*Sn	Sn	00 07 43.4	-8.7
	comp=N,1.6nm,0.3s						
SJPF	**Ste Jean**	**10.88**	**50**	Pn	**Pn**	**00 05 50.6**	**+0.3**
SJPF				Sn	Sn	00 07 43.4	-8.7
	comp=N,0.8nm,0.3s						
ETSF	**Etsaut**	**11.18**	**52**	*e*Pn	**Pn**	**00 05 54.6**	**0.0**
ETSF				*e*Sn	Sn	00 07 51.0	-8.6
	comp=N,2.4nm,0.4s						
ETSF	**Etsaut**	**11.18**	**52**	Pn	**Pn**	**00 05 54.6**	**0.0**
ETSF				Sn	Sn	00 07 51.0	-8.6
	comp=N,1.2nm,0.4s						
EPF	**Esparros**	**11.82**	**53**	*e*Pn	**Pn**	**00 06 03.3**	**0.0**
EPF				*e*Sn	Sn	00 08 06.5	-8.8
	comp=N,1.6nm,0.3s						
EPF	**Esparros**	**11.82**	**53**	Pn	**Pn**	**00 06 03.3**	**0.0**
EPF				Sn	Sn	00 08 06.5	-8.8
	comp=N,0.8nm,0.3s						
LFF	**La Frestale**	**13.07**	**46**	*e*Pn	**Pn**	**00 06 19.8**	**-0.5**
LFF				*e*Sn	Sn	00 08 36.5	-9.2
	comp=N,1.6nm,0.4s						
LFF	**La Frestale**	**13.07**	**46**	Pn	**Pn**	**00 06 19.8**	**-0.5**
LFF				Sn	Sn	00 08 36.5	-9.2
	comp=N,0.8nm,0.4s						
MTLF	**Montolieu**	**13.19**	**55**	*e*Pn	**Pn**	**00 06 21.0**	**-0.9**
MTLF	**Montolieu**	**13.19**	**55**	Pn	**Pn**	**00 06 21.0**	**-0.9**
QUIF	**Quistinic**	**13.25**	**29**	*e*Pn	**Pn**	**00 06 21.9**	**-0.8**
QUIF				*e*Sn	Sn	00 08 39.9	-10
	comp=N,0.9nm,0.2s						
QUIF	**Quistinic**	**13.25**	**29**	Pn	**Pn**	**00 06 21.9**	**-0.8**
QUIF				Sn	Sn	00 08 39.9	-10
	comp=N,0.4nm,0.2s						
ROSF	**Rostrenen**	**13.56**	**28**	*e*Pn	**Pn**	**00 06 26.4**	**-0.5**
ROSF				*e*Sn	Sn	00 08 47.2	-10
	comp=N,1.1nm,0.4s						
ROSF	**Rostrenen**	**13.56**	**28**	Pn	**Pn**	**00 06 26.4**	**-0.5**
ROSF				Sn	Sn	00 08 47.2	-10
	comp=N,0.6nm,0.4s						
MFF	**Saint Martin d**	**13.63**	**39**	*e*Pn	**Pn**	**00 06 27.6**	**-0.2**
MFF				*e*Sn	Sn	00 08 48.7	-11
	comp=N,0.8nm,0.4s						
MFF	**Saint Martin d**	**13.63**	**39**	Pn	**Pn**	**00 06 27.6**	**-0.2**
MFF				Sn	Sn	00 08 48.7	-11
	comp=N,0.4nm,0.4s						
RJF	**Les Rejaudoux**	**13.73**	**47**	*e*Pn	**Pn**	**00 06 28.6**	**-0.7**
RJF				*e*Sn	Sn	00 08 50.9	-11
	comp=N,2.1nm,0.4s						
RJF	**Les Rejaudoux**	**13.73**	**47**	Pn	**Pn**	**00 06 28.6**	**-0.7**
RJF				Sn	Sn	00 08 50.9	-11
	comp=N,1.1nm,0.4s						
CAF	**Calviac**	**13.85**	**49**	*e*Pn	**Pn**	**00 06 29.8**	**-1.2**
CAF				*e*Sn	Sn	00 08 54.2	-11
	comp=N,1.4nm,0.6s						
CAF	**Calviac**	**13.85**	**49**	Pn	**Pn**	**00 06 29.8**	**-1.2**
CAF				Sn	Sn	00 08 54.2	-11
	comp=N,0.7nm,0.6s						
GRR	**Gorron**	**14.58**	**33**	*e*Sn	Sn	00 09 11.6	-11
	comp=N,0.6nm,0.2s						
GRR	**Gorron**	**14.58**	**33**	Sn	Sn	00 09 11.6	-11
	comp=N,0.3nm,0.2s						
TCF	**Toulx Ste Croi**	**14.69**	**44**	*e*Pn	**Pn**	**00 06 41.6**	**-0.9**
TCF	**Toulx Ste Croi**	**14.69**	**44**	Pn	**Pn**	**00 06 41.6**	**-0.9**
LDF	**La Druitiere**	**15.05**	**34**	*e*Sn	Sn	00 09 22.8	-11
	comp=N,0.1nm,0.2s						
BGF	**Bois d'Agland**	**15.21**	**45**	*e*Pn	**Pn**	**00 06 48.6**	**-0.8**
BGF	**Bois d'Agland**	**15.21**	**45**	Pn	**Pn**	**00 06 48.6**	**-0.8**
SSF	**Saint Saulge**	**15.87**	**44**	*e*Pn	**Pn**	**00 06 57.2**	**-0.8**
SSF	**Saint Saulge**	**15.87**	**44**	Pn	**Pn**	**00 06 57.2**	**-0.8**
GERES	**GERESS Array B**	**22.73**	**49**	P	**P**	**00 08 18.6**	**+1.9**
	comp=N,0.3nm,0.6s,baz=251,slow=9.2,SNR=2.1						
TORD	**Torodi Ar. Bea**	**26.68**	**148**	P	**P**	**00 08 55.2**	**+1.3**
	comp=N,0.4nm,0.7s,baz=331,slow=13,SNR=2.1						
FINES	**FINESS Array B**	**34.64**	**32**	P	**P**	**00 10 03.5**	**-0.2**
	comp=N,2.4nm,0.8s,baz=249,slow=8.0,SNR=9.5						
FIA1	**FINESS Array S**	**34.64**	**32**	P	**P**	**00 10 04.3**	**+0.5**
FIA1				IAmb	IAmb	00 10 12.4	
	comp=Z,2.3nm,1.1s						
ARCES	**ARCESS Array B**	**38.85**	**20**	P	**P**	**00 10 40.2**	**+0.6**
	comp=Z,1.3nm,0.7s,baz=234,slow=8.2,SNR=7.9						
LMN	**Caledonia Moun**	**39.69**	**300**	P	**P**	**00 10 50.8**	**+3.9**
LMN				IAmb	IAmb	00 10 51.8	
	comp=Z,11nm,1.1s						
BATG	**Bathurst New B**	**40.42**	**302**	P	**P**	**00 10 56.9**	**+4.0**
BATG				IAmb	IAmb	00 11 12.1	
	comp=Z,4.8nm,1.0s						
KURBB	**Kurchatov Arra**	**63.40**	**45**	P	**P**	**00 13 44.3**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=298,slow=8.1,SNR=5.0						
MKAR	**Makanchi Array**	**67.39**	**48**	P	**P**	**00 14 10.2**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=307,slow=5.2,SNR=4.4						

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*NEIC **23** 00:09:36.1±2.5, 7°.80S±0°.05×105°.99E±0°.05, h22^{km}±5^{km}, mb4.4/23, Error ellipse: s-maj=8.6km s-min=5.0km az=141.0*

*DJA **23** 00:09:36.8±0.3, 8°S±3°×10°6E±°, h10^{km}, M4.5/13, mB5.6/2, mb4.7/3, MLv4.4/13, Mw(mB)5.0/2*

*IDC **23** 00:09:45.4±3.3, 7°.38S×106°.17E, h81^{km}±26^{km}, mb3.7/17, mb1 3.7/17, mb1mx3.5/52, mbtmp4.0/17, MS3.0/2, Ms1 3.1/2, ms1mx2.7/43, Error ellipse: s-maj=33.5km s-min=14.8km az=50.0*

ISC 23 00:09:36.8±1.7**, 7°.72S**±0°.05×**106°.00E**±0°.05**, h24**^{km}±12^{km}**, n76, σ1^{s}.48**/71**, mb4.2**/24**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKJI	**Sukabumi**	**0.91**	**38**	P	**Pn**	**00 09 53.7**	**-0.3**
SKJI				S	**Sn**	**00 10 04.7**	**-1.7**
CNJI	**Cibinong**	**1.20**	**70**	P	**Pn**	**00 09 57.7**	**-0.4**
CNJI				S	**Sn**	**00 10 12.0**	**-1.6**
DBJI	**Dramaga**	**1.38**	**33**	P	**Pb**	**00 10 01.8**	**-0.2**
DBJI				S	**Sb**	**00 10 19.4**	**+0.2**
TNG	**Tangerang**	**1.67**	**23**	P	**Pb**	**00 10 06.6**	**-0.3**
CISI	**Cisompet, Garu**	**1.81**	**85**	P	**Pn**	**00 10 06.8**	**+0.3**
CISI	**Cisompet, Garu**	**1.81**	**85**		**Pn**	**00 10 06.9**	**+0.3**
CISI				Sn	**Sn**	**00 10 25.9**	**-3.0**
LEM	**Lembang**	**1.84**	**61**	P	**Pb**	**00 10 10.1**	**+0.2**
	127nm,0.3s,baz=3.5,slow=0.7,SNR=92						
LEM				S	**Sb**	**00 10 31.9**	**-0.7**
	105nm,0.3s,baz=140,slow=16,SNR=4.8						
LEM				LR	LR	00 10 55.4	
	comp=Z,692nm,18.1s,baz=255,slow=45						
LEM	**Lembang**	**1.84**	**61**	P	**Pb**	**00 10 09.1**	**-0.8**
XMIS	**Christmas Isla**	**2.76**	**187**	Pn	**Pn**	**00 10 19.0**	**-0.6**
XMIS				Sn	**Sn**	**00 10 49.3**	**-2.9**
LWLI	**Liwa**	**3.31**	**324**	P	**Pn**	**00 10 28.0**	**+0.8**
MDSI	**Maura Dua**	**3.69**	**331**	P	**Pn**	**00 10 34.9**	**+2.5**
SMRI	**Semarang**	**4.46**	**82**	Pn	**Pn**	**00 10 44.5**	**+1.5**
UGM	**Wanagama**	**4.49**	**93**		**Pn**	**00 10 45.2**	**+1.7**
MNAI	**Manna**	**4.50**	**318**	P	**Pn**	**00 10 45.6**	**+2.0**
MNAI	**Manna**	**4.50**	**318**	Pn	**Pn**	**00 10 45.1**	**+1.5**
WOJI	**Wonogiri, Jawa**	**4.88**	**92**	P	**Pn**	**00 10 50.7**	**+1.9**
PCJI	**Pacitan**	**5.15**	**96**	P	**Pn**	**00 10 53.7**	**+1.2**
	0.3nm48nm,1.1s						
JAGI	**Jajag, Banyuwa**	**8.11**	**96**		**Pn**	**00 11 33.5**	**+0.4**
SRBI	**Singaraja**	**9.14**	**93**	P	**Pn**	**00 11 48.1**	**+0.8**
	27nm,0.6s						
BKNI	**Bangkinang**	**9.40**	**328**	P	Pn	00 12 03.6	+13
GSI	**Gunungsitoli**	**12.29**	**317**	Pn	**Pn**	**00 12 29.6**	**-0.8**
LHMI	**Lhok Sumawe**	**15.72**	**325**	Pn	**Pn**	**00 13 17.1**	**+0.3**
LHMI				IAmb	IAmb	00 13 22.8	
	comp=Z,16nm,0.5s						
MMRI	**Maumere**	**16.10**	**94**	P	**Pn**	**00 13 23.1**	**+1.3**
MMRI	**Maumere**	**16.10**	**94**	P	**P**	**00 13 25.1**	**+0.1**
MMRI				IAmb	IAmb	00 13 27.1	
	comp=Z,26nm,0.7s						
GIRL	**Giralia**	**16.82**	**153**		**Pn**	**00 13 30.4**	**-0.4**
FITZ	**Fitzroy Crossi**	**21.72**	**120**	P	**P**	**00 14 30.0**	**+3.5**
	comp=Z,1.2nm,0.6s,baz=314,slow=4.8,SNR=6.4						
FITZ				LR	LR	00 22 57.2	
	comp=Z,48nm,18.5s,baz=291,slow=36						
FITZ	**Fitzroy Crossi**	**21.72**	**120**	P	**P**	**00 14 25.4**	**-1.1**
MTN	**Manton Dam**	**25.24**	**104**	P	**P**	**00 15 03.5**	**+2.2**
MTN				IAmb	IAmb	00 15 13.0	
	comp=Z,5.9nm,0.8s						
SIJI	**Sorong**	**26.09**	**76**	P	**P**	**00 15 08.2**	**-0.8**
	comp=Z,5.3nm,0.6s						
FAKI	**Fak Fak**	**26.57**	**81**	P	**P**	**00 15 12.5**	**-0.8**
CMAR	**Chiang Mai Arr**	**26.93**	**345**	P	**P**	**00 15 15.8**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=174,slow=9.1,SNR=1.3						
CMAR				LR	LR	00 27 58.1	
	comp=Z,25nm,18.7s,baz=355,slow=41						
NWAO	**Narrogin (SRO)**	**27.16**	**159**	P	**P**	**00 15 14.4**	**-4.0**
NWAO				IAmb	IAmb	00 15 19.4	
	comp=Z,8.4nm,0.8s						
H01W3	**Cape Leeuwin H**	**28.05**	**166**	T	T	00 45 10.7	
	baz=345,slow=76,SNR=56						
H01W1	**Cape Leeuwin H**	**28.06**	**166**	T	T	00 45 04.7	
	baz=345,slow=76,SNR=54						
H01W2	**Cape Leeuwin H**	**28.06**	**166**	T	T	00 45 11.7	
	baz=345,slow=76,SNR=56						
ASAR	**Alice Springs**	**31.10**	**124**	P	**P**	**00 15 56.1**	**+2.5**
	comp=Z,0.3nm,0.5s,baz=305,slow=8.0,SNR=10						
ASAR	**Alice Springs**	**31.10**	**124**	P	**P**	**00 15 53.7**	**+0.1**
H08S2	**Diego Garcia H**	**33.20**	**268**	T	T	00 51 33.4	
	baz=92,slow=76,SNR=26						
H08S3	**Diego Garcia H**	**33.21**	**268**	T	T	00 51 35.1	
	baz=92,slow=76,SNR=53						
H08S1	**Diego Carcia H**	**33.22**	**268**	T	T	00 51 38.7	
	baz=92,slow=76,SNR=22						
STKA	**Stephens Creek**	**40.91**	**131**	P	**P**	**00 17 21.0**	**+3.6**
	comp=Z,1.1nm,0.5s,baz=304,slow=7.3,SNR=1.9						
STKA	**Stephens Creek**	**40.91**	**131**	P	**P**	**00 17 19.2**	**+1.8**
KSRS	**Korea Array**	**49.40**	**23**	P	**P**	**00 18 23.0**	**-1.7**
	comp=Z,0.5nm,0.4s,baz=218,slow=8.7,SNR=2.3						
SONM	**Songino Array**	**55.32**	**0**	P	**P**	**00 19 08.1**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=182,slow=9.6,SNR=5.3						
SONM				PcP	**PcP**	**00 20 10.6**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=184,slow=4.5,SNR=8.0						
SONM	**Songino Array**	**55.32**	**0**	IAmb	IAmb	00 19 11.9	
	comp=Z,0.9nm,1.1s						
ARSB	**Arslanbob**	**57.45**	**331**	P	**P**	**00 19 24.1**	**+0.1**
ARSB				IAmb	IAmb	00 19 25.4	
	comp=Z,2.8nm,0.8s						
MK31	**Makanchi Array**	**58.23**	**341**	P	**P**	**00 19 26.8**	**-2.5**
MKAR	**Makanchi Array**	**58.23**	**341**	P	**P**	**00 19 28.7**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=156,slow=8.8,SNR=9.7						
KKAR	**Karatay Array**	**59.99**	**331**	P	**P**	**00 19 41.1**	**-0.4**
KURBB	**Kurchatov Arra**	**62.79**	**341**	P	**P**	**00 20 00.3**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=155,slow=6.1,SNR=9.8						
KURK	**Kurchatov**	**62.84**	**341**	P	**P**	**00 20 00.3**	**-0.3**
KURK	**Kurchatov**	**62.84**	**341**	IAmb	IAmb	00 20 01.2	
	comp=Z,3.1nm,0.9s						
GEYT	**Alibeck**	**63.65**	**319**	P	**P**	**00 20 07.3**	**+1.1**
	comp=Z,2.1nm,0.7s,baz=94,slow=9.2,SNR=6.4						
GEYT	**Alibeck**	**63.65**	**319**	P	**P**	**00 20 05.3**	**-0.9**
GYA0B	**ALIBECK ARRAY**	**63.65**	**319**	P	**P**	**00 20 05.5**	**-0.8**
ZAA0	**Zalesovo Array**	**63.99**	**346**	P	**P**	**00 20 07.7**	**-0.4**
ZAA0				IAmb	IAmb	00 20 14.1	
	comp=Z,1.4nm,0.7s						
ZALV	**Zalesovo Beam**	**63.99**	**346**	P	**P**	**00 20 06.5**	**-1.5**
	comp=Z,0.7nm,0.4s,baz=154,slow=7.0,SNR=3.6						
BVAR	**Borovoye Array**	**67.65**	**338**	P	**P**	**00 20 32.1**	**+0.4**
	comp=Z,1.8nm,0.5s,baz=147,slow=9.4,SNR=26						
BRVK	**Borovoye**	**67.71**	**338**	P	**P**	**00 20 32.6**	**+0.5**
BRVK				IAmb	IAmb	00 20 33.1	
	comp=Z,2.0nm,0.6s						
ABKAR	**Akbulak array**	**69.53**	**330**	P	**P**	**00 20 44.2**	**+0.7**
ABKAR	**Akbulak array**	**69.53**	**330**	IAmb	IAmb	00 20 45.5	
	comp=Z,5.1nm,0.8s						
ARU	**Arti**	**74.84**	**335**	P	**P**	**00 21 16.1**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=21,slow=5.3,SNR=5.2						
ARU	**Arti**	**74.84**	**335**	IAmb	IAmb	00 21 17.5	
	comp=Z,4.5nm,1.0s						
MBAR	**Mbarara**	**75.31**	**271**	P	**P**	**00 21 17.9**	**-1.0**
KBZ	**Khabaz**	**76.52**	**318**	P	**P**	**00 21 26.7**	**+1.7**
	comp=Z,1.5nm,0.8s,baz=131,slow=6.9,SNR=6.1						
NRIK	**Noril'sk**	**77.94**	**353**	P	**P**	**00 21 32.2**	**-0.3**
	comp=Z,1.2nm,0.4s,baz=91,slow=4.0,SNR=3.5						
CSS	**Mathiatis**	**80.42**	**307**	P	**P**	**00 21 46.0**	**-0.8**
CSS				IAmb	IAmb	00 21 50.4	
	comp=Z,4.6nm,1.0s						
TIXI	**Tiksi**	**80.64**	**7**	P	**P**	**00 21 45.6**	**-1.5**
BR131	**Keskin Array S**	**81.56**	**312**	IAmb	IAmb	00 21 54.8	
	comp=Z,2.6nm,0.8s						
BRTR	**Keskin Array B**	**81.56**	**312**	P	**P**	**00 21 54.0**	**+1.0**
	comp=Z,1.8nm,0.8s,baz=137,slow=6.7,SNR=14						
BRTR	**Keskin Array B**	**81.56**	**312**	P	**P**	**00 21 53.9**	**+0.9**
SANT	**Santorini**	**86.98**	**307**	P	**P**	**00 22 19.9**	**-0.5**
BURAR	**Bucovina Array**	**89.48**	**318**	P	**P**	**00 22 30.9**	**-1.2**
FINES	**FINESS Array B**	**91.93**	**332**	P	**P**	**00 22 44.6**	**+1.5**
	comp=Z,1.4nm,0.8s,baz=276,slow=3.6,SNR=3.5						
YKA	**Yellowknife Ar**	**117.88**	**20**	PKP	**PKiKP**	**00 28 23.0**	**+1.9**
	comp=Z,0.1nm,0.4s,baz=322,slow=1.9,SNR=2.2						
TXAR	**Lajitas Array**	**144.79**	**49**	PKP	**PKPdf**	**00 29 13.6**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=298,slow=1.1,SNR=5.8						

MAN 23 00:12:15.0, 7°.23N×124°.85E, h14^{km}, mb4.5, ML3.4, MS3.2, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	**Kidapawan**	**0.33**	**132**	⇑*e*P	Pb	00 12 23.9	+1.1
KCP				*i* S	Sn	00 12 55.3	+23
CTBH	**Cotabato--PC H**	**0.59**	**269**	⇓*i*P	Pb	00 12 27.1	-0.1
CTBH				*i* S	Sb	00 12 36.2	+0.7
DMPH	**Davao City--Mi**	**0.68**	**103**	⇑*e*P	Pn	00 12 30.8	+0.6
DMPH				*e*S	Sn	00 12 41.1	+0.6
BUKP	**Musuan**	**0.68**	**19**	*e*P	Pg	00 12 27.2	-1.1
BUKP				*e*S	Sb	00 12 37.8	-0.1
SKMP	**Bagumbayan, Su**	**0.77**	**203**	*e*P	Pg	00 12 29.1	-0.9
SKMP				*e*S	Sn	00 12 42.4	-0.4
CGP	**Cagayan de Oro**	**1.22**	**353**	⇑*i*P	Pn	00 12 37.5	-0.3
CGP				*i* S	Sb	00 12 52.5	-1.1
DDMP	**Don Marcelino,**	**1.41**	**142**	*e*P	Pn	00 12 39.9	-0.4
DDMP				*e*S	Sg	00 13 05.4	+4.8
MATI	**Mati**	**1.43**	**101**	*e*P	Pn	00 12 39.3	-1.3
MATI				*e*S	Sb	00 13 00.1	+0.5
PAGZ	**Pagadian**	**1.57**	**293**	*e*P	Pn	00 12 41.6	-0.9
PAGZ				*e*S	Sb	00 13 04.3	+0.6

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*IDC **23** 00:16:14.8±0.6, 4°.73S×151°.92E, h147^{km}±4^{km}, mb3.5/12, mb1 3.6/13, mb1mx3.5/33, mbtmp4.0/13, Error ellipse: s-maj=21.4km s-min=14.6km az=98.0*

*NEIC **23** 00:16:15.3±1.1, 4°.81S±0°.10×152°.0E±0°.1, h158^{km}±7^{km}, mb4.1/15, Error ellipse: s-maj=19.8km s-min=12.0km az=118.0*

ISC 23 00:16:15.0±0.7**, 4°.82S**±0°.08×**152°.0E**±0°.1**, h150**^{km}**, n35, σ0^{s}.81**/33**, mb3.9**/18**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**0.52**	**9**	P	**Pn**	**00 16 37.0**	**+0.6**
	63nm,0.3s,baz=197,slow=1.3,SNR=36						
KRVT				S	**Sn**	**00 16 52.7**	**-0.1**
	226nm,0.3s,baz=346,slow=20,SNR=60						
RABL	**Rabaul**	**0.66**	**19**	Pn	**Pn**	**00 16 38.4**	**+1.1**
PMG	**Port Moresby**	**6.58**	**226**	S	**Sn**	**00 19 03.2**	**-0.3**
	3.1nm,0.3s,baz=180,slow=20,SNR=2.7						
COEN	**Coen**	**12.54**	**223**	Pn	**Pn**	**00 19 08.8**	**+0.5**
CTA	**Charters Tower**	**16.16**	**200**	P	**P**	**00 19 55.1**	**+1.1**
	0.3nm,0.3s,baz=11,slow=13,SNR=2.0						
SIJI	**Sorong**	**21.02**	**280**	P	**P**	**00 20 47.5**	**+0.4**
	8.0nm,0.6s,baz=113,slow=10.0,SNR=7.4						
MTN	**Manton Dam**	**22.04**	**247**		**P**	**00 20 58.8**	**+1.0**
MTN				IAmb	IAmb	00 20 59.5	
	comp=Z,9.4nm,1.1s						
DZM	**Mont Dzumac**	**22.16**	**142**	P	**P**	**00 21 00.7**	**+1.7**
	comp=Z,4.6nm,0.6s,baz=329,slow=23,SNR=9.0						

DZM	Mont Dzumac	22.16	142	IAmb	IAmb	00 21 12.4	
	comp=Z,9.2nm,1.1s						
WB0	Warramunga Arr	22.65	228	P	P	00 21 04.0	+0.3
WB0				IAmb	IAmb	00 21 06.5	
	comp=Z,3.1nm,0.7s						
WR0	Warramunga Arr	22.66	227	P	P	00 21 04.2	+0.4
WR0				IAmb	IAmb	00 21 08.6	
	comp=Z,3.2nm,0.6s						
WB2	Warramunga Arr	22.79	227	P	P	00 21 05.0	+0.1
WB2				IAmb	IAmb	00 21 05.9	
	comp=Z,6.7nm,0.5s						
WRA	Warramunga Arr	22.80	227	P	P	00 21 05.3	+0.3
	comp=Z,3.3nm,0.4s,baz=50,slow=10,SNR=19						
WRA	Warramunga Arr	22.80	227	P	P	00 21 04.1	-1.0
KNRA	Kununurra	25.20	243	P	P	00 21 26.6	-0.3
ARMA	Armidale	25.46	181	P	P	00 21 27.4	-1.9
ARMA				IAmb	IAmb	00 21 30.8	
	comp=Z,5.7nm,1.1s						
AS31	Alice Springs	25.57	221	P	P	00 21 29.8	-0.4
ASAR	Alice Springs	25.57	221	P	P	00 21 30.9	+0.7
	comp=Z,0.5nm,0.4s,baz=52,slow=8.9,SNR=25						
ASAR	Alice Springs	25.57	221	P	P	00 21 29.9	-0.3
STKA	Stephens Creek	28.61	199	P	P	00 21 57.6	+0.3
	comp=Z,1.2nm,0.6s,baz=23,slow=7.7,SNR=3.1						
FITZ	Fitzroy Crossi	28.90	241	P	P	00 21 59.2	-0.8
	comp=Z,1.2nm,0.5s,baz=49,slow=6.6,SNR=7.8						
FITZ	Fitzroy Crossi	28.90	241	IAmb	IAmb	00 22 06.1	
	comp=Z,3.2nm,1.1s						
CAN	Canberra	30.47	185	P	P	00 22 13.8	0.0
CAN				IAmb	IAmb	00 22 16.7	
	comp=Z,4.3nm,0.9s						
BBOO	Buckleboo	31.55	206	P	P	00 22 22.0	-1.2
FORT	Forrest	34.24	218	P	P	00 22 45.8	-0.8
TUWZ	Tuamarina	41.42	155	P	P	00 23 46.1	-0.6
CMAR	Chiang Mai Arr	57.12	295	P	P	00 25 47.0	+0.7
	comp=Z,0.9nm,0.4s,baz=132,slow=5.3,SNR=4.4						
SONM	Songino Array	65.89	328	P	P	00 26 45.3	+0.5
	comp=Z,0.6nm,0.6s,baz=152,slow=6.3,SNR=5.1						
SONM	Songino Array	65.89	328	IAmb	IAmb	00 26 47.5	
	comp=Z,1.5nm,1.2s						
MKAR	Makanchi Array	79.78	319	P	P	00 28 06.0	-0.6
	comp=Z,0.8nm,0.8s,baz=109,slow=6.3,SNR=8.3						
MAKZ	Makanchi	79.99	319	P	P	00 28 07.5	-0.2
ZALV	Zalesovo Beam	80.70	327	P	P	00 28 10.8	-0.5
	comp=Z,0.6nm,0.5s,baz=128,slow=4.3,SNR=3.8						
ILAR	Eielson Array	82.50	22	P	P	00 28 19.6	-0.9
	comp=Z,0.4nm,0.8s,baz=242,slow=5.3,SNR=5.4						
BVAR	Borovoye Array	88.75	323	P	P	00 28 50.7	-0.9
	comp=Z,0.4nm,0.5s,baz=117,slow=5.6,SNR=4.2						
TORD	Torodi Ar. Bea	149.51	288	PKPbc	PKPbc	00 35 47.0	-0.6
	comp=Z,1.5nm,1.0s,baz=69,slow=1.9,SNR=6.2						

MAN 23 00:21:36.9, 7°.31N×124°.77E, h1^{km}, mb4.4, ML3.2, MS3.0, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	0.43	133	⇑eP	Pg	00 21 46.0	+0.8
KCP				*i* S	Sb	00 22 17.2	+23
CTBH	Cotabato--PC H	0.53	261	⇓*i*P	Pb	00 21 49.4	+0.5
CTBH				*i* S	Sb	00 21 58.5	+1.4
BUKP	Musuan	0.64	27	*e*P	Pg	00 21 49.5	+0.4
BUKP				*e*S	Sb	00 22 00.5	+0.2
DMPH	Davao City--Mi	0.77	107	⇑*e*P	Pg	00 21 51.0	-0.5
DMPH				*e*S	Sg	00 22 02.5	+1.0
SKMP	Bagumbayan, Su	0.81	196	*e*P	Pg	00 21 52.7	+0.2
SKMP				*e*S	Sb	00 22 05.0	-0.3
CGP	Cagayan de Oro	1.14	356	⇑*i*P	Pg	00 21 59.0	+0.2
CGP				*i* S	Sb	00 22 14.5	-0.3
PAGZ	Pagadian	1.48	291	*e*P	Pn	00 22 04.0	-0.6
PAGZ				*e*S	Sn	00 22 25.1	+0.5
DDMP	Don Marcelino,	1.52	142	*e*P	Pn	00 22 04.2	-0.9
DDMP				*e*S	Sg	00 22 26.5	+0.8
MATI	Mati	1.52	104	*e*P	Pn	00 22 05.1	-0.1
MATI				*e*S	Sg	00 22 36.3	+11

ROM 23 00:29:22.4±0.3, 38°.654N±0°.010×15°.57E±0°.02, h160^{km}±1^{km}, ML2.4/13, 3C-6D, Error ellipse: s-maj=1.9km s-min=0.8km az=105.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOPP	Joppolo	0.25	101	P	Pn	00 29 44.2	+0.2
JOPP				S	Sn	00 30 00.1	-0.4
JOPP				AML	AML		
	comp=E,117µm,0.1s						
JOPP				AML	AML		
	comp=N,151µm,0.2s						
JOPP				AML	AML		
	comp=E,117µm,0.1s						
JOPP				AML	AML		
	comp=E,117µm,0.1s						
MSRU	Castanea	0.39	187	⇓P	Pn	00 29 44.6	+0.2
MSRU				S	Sn	00 30 00.8	-0.4
MSRU				AML	AML		
	comp=E,108µm,0.2s						
MSRU				AML	AML		
	comp=N,120µm,0.9s						
MSRU				AML	AML		
	comp=N,120µm,0.9s						
MCSR	Castroreale	0.64	203	⇑P	Pn	00 29 46.6	+0.8
MCSR				AML	AML		
	comp=N,136µm,0.3s						
MCSR				AML	AML		
	comp=E,86µm,1.4s						
MTTG	Motta San Giov	0.66	171	P	Pn	00 29 46.2	+0.4
MTTG				S	Sn	00 30 03.9	+0.3
PLAC	Placanica	0.71	106	⇓P	Pn	00 29 46.2	+0.1
PLAC				S	Sn	00 30 03.5	-0.6
PLAC				AML	AML		
	comp=E,78µm,0.2s						
PLAC				AML	AML		
	comp=N,65µm,0.3s						
PLAC				AML	AML		
	comp=E,78µm,0.2s						
CAR1	CAROLEI	0.78	40	⇓P	Pn	00 29 46.5	0.0
CAR1				S	Sn	00 30 04.2	-0.8
CAR1				AML	AML		
	comp=E,65µm,1.1s						
CAR1				AML	AML		
	comp=E,65µm,1.1s						
CAR1				AML	AML		
	comp=N,61µm,0.9s						
CAR1				AML	AML		
	comp=N,61µm,0.9s						
MPAZ	Palizzi	0.78	154	⇓P	Pn	00 29 46.8	+0.3
MPAZ				S	Sn	00 30 04.4	-0.5
MPAZ				AML	AML		
	comp=E,76µm,0.4s						
MPAZ				AML	AML		
	comp=N,94µm,0.3s						
MPAZ				AML	AML		
	comp=E,76µm,0.4s						
MPAZ				AML	AML		
	comp=E,76µm,0.4s						
MPAZ				AML	AML		
	comp=N,94µm,0.3s						
MPAZ				AML	AML		
	comp=N,94µm,0.3s						
CET2	Cetraro	0.92	19	⇑P	Pn	00 29 47.9	+0.4
CET2				S	Sn	00 30 06.7	-0.2
CET2				AML	AML		
	comp=E,105µm,0.4s						
CET2				AML	AML		
	comp=N,126µm,1.0s						
CET2				AML	AML		
	comp=E,104µm,0.4s						
SERS	Sersale	0.95	66	⇓P	Pn	00 29 48.1	+0.3
SERS				S	Sn	00 30 07.2	-0.2
TIP	Timpagrande	1.07	60	⇓P	Pn	00 29 49.0	+0.3
TIP				S	Sn	00 30 09.0	+0.1
T0702	Acquaformosa (	1.14	20	P	Pn	00 29 49.7	+0.3
T0702				S	Sn	00 30 09.4	-0.7
T0702				AML	AML		
	comp=E,60µm,1.6s						
T0702				AML	AML		
	comp=N,54µm,1.6s						
LADO	San Nicola del	1.27	60	P	Pn	00 29 50.3	-0.2
LADO				S	Sn	00 30 11.4	-0.6
LADO				AML	AML		
	comp=E,20µm,0.9s						
LADO				AML	AML		
	comp=E,19µm,0.9s						
LADO				AML	AML		
	comp=N,15µm,1.2s						
LADO				AML	AML		
	comp=N,14µm,1.2s						
SALB	San Lorenzo Be	1.36	26	P	Pn	00 29 52.2	+0.8
SALB				AML	AML		
	comp=E,25µm,1.0s						
SALB				AML	AML		
	comp=N,14µm,0.8s						
SALB				AML	AML		
	comp=N,14µm,0.8s						
ORI	Oriolo Calabro	1.56	26	P	Pn	00 29 55.0	+1.7
ORI				AML	AML		
	comp=E,288µm,0.4s						
ORI				AML	AML		
	comp=N,174µm,0.2s						
MCEL	Monticello	1.68	6	S	Sn	00 30 29.0	+9.4
CDRU	Civita di Ruta	1.84	354	P	Pn	00 29 58.8	+2.3
CDRU				AML	AML		
	comp=E,118µm,0.1s						
CDRU				AML	AML		
	comp=N,36µm,0.1s						
MCRV	Calabrutti - M	2.15	352	P	Pn	00 30 09.2	+9.3
MTGR	Montagna Grand	2.34	252	S	Sn	00 30 36.0	+3.3
NOCI	Noci	2.42	28	S	Sn	00 30 33.0	-1.6
SCTE	Santa Cesarea	2.66	57	⇑P	Pn	00 30 04.4	-1.5
SACR	S. Croce Del S	2.82	347	P	Pn	00 30 12.3	+4.3
SACR				AML	AML		
	comp=E,49µm,1.5s						
SACR				AML	AML		
	comp=N,41µm,1.6s						
LAV9	Lanuvio	3.73	325	S	Sn	00 31 06.0	+2.1

ROM 23 00:30:43.3±0.1, 43°.499N±0°.003×12°.373E±0°.004, h9^{km}, ML1.5/10, 7C-4D, Error ellipse: s-maj=0.3km s-min=0.2km az=340.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATPI	Pietralunga -	0.05	156	P	Pg	00 30 45.3	0.0
ATPI	Pietralunga -	0.05	156	P	Pg	00 30 45.4	+0.2
ATPI				S	Sg	00 30 46.8	+0.1
ATPI				AML	AML		
	comp=E,1106µm,0.1s						
ATPI				AML	AML		
	comp=N,1225µm,0.1s						
ATPI				AML	AML		
	comp=E,1106µm,0.1s						
BADI	Badiali	0.09	277	P	Pg	00 30 46.0	+0.3
BADI	Badiali	0.09	277	P	Pg	00 30 46.1	+0.4
BADI				S	Sg	00 30 47.8	+0.4
BADI				AML	AML		
	comp=N,1104µm,0.3s						
BADI				AML	AML		
	comp=N,1106µm,0.3s						
BADI				AML	AML		
	comp=E,658µm,0.2s						
CDCA	Citt‘ di Caste	0.11	248	⇓P	Pg	00 30 44.1	-1.8
CDCA	Citt‘ di Caste	0.11	248	P	Pg	00 30 46.4	+0.5
CDCA				S	Sg	00 30 48.5	+0.8
ATVO	AVT- Monte Val	0.12	168	P	Pg	00 30 46.0	-0.1
ATVO	AVT- Monte Val	0.12	168	P	Pg	00 30 46.6	+0.6
ATVO				S	Sg	00 30 49.1	+1.0
ATVO				AML	AML		
	comp=E,726µm,0.5s						
ATVO				AML	AML		
	comp=N,405µm,0.2s						
ATVO				AML	AML		
	comp=E,726µm,0.5s						
ATVO				AML	AML		
	comp=N,404µm,0.2s						
PIEI	Pieia	0.12	73	⇑P	Pg	00 30 46.6	+0.5
PIEI	Pieia	0.12	73	S	Sg	00 30 49.3	+1.1
PIEI				AML	AML		
	comp=E,588µm,0.3s						
PIEI				AML	AML		
	comp=N,537µm,0.4s						
PARC	Parchiule	0.18	327	P	Pg	00 30 48.0	+0.9
PARC	Parchiule	0.18	327	P	Pg	00 30 47.8	+0.7
PARC				S	Sg	00 30 50.9	+1.2
PARC				AML	AML		
	comp=E,154µm,0.6s						
PARC				AML	AML		
	comp=N,293µm,0.4s						
PARC				AML	AML		
	comp=N,292µm,0.4s						
PARC				AML	AML		
	comp=E,154µm,0.6s						
ATMI	Monte Miggiano	0.18	205	⇓P	Pg	00 30 47.7	+0.6
ATMI	Monte Miggiano	0.18	205	P	Pg	00 30 47.7	+0.6
ATMI				S	Sg	00 30 51.1	+1.4
ATMI				AML	AML		
	comp=N,310µm,0.9s						
ATMI				AML	AML		
	comp=E,237µm,0.4s						
NARO	Abbazia di Nar	0.19	53	⇑P	Pg	00 30 47.7	+0.4
NARO	Abbazia di Nar	0.19	53	AML	AML		
	comp=N,162µm,0.4s						
NARO				AML	AML		
	comp=E,156µm,0.6s						
NARO				AML	AML		
	comp=E,156µm,0.6s						
SSP9	Sansepolcro	0.19	293	⇑P	Pg	00 30 48.0	+0.7
SSP9	Sansepolcro	0.19	293	P	Pg	00 30 47.9	+0.6
PE3	Peglio	0.22	24	⇓P	Pg	00 30 48.5	+0.8
PE3	Peglio	0.22	24	P	Pg	00 30 48.6	+0.8
PE3				AML	AML		
	comp=E,327µm,0.3s						
PE3				AML	AML		
	comp=N,238µm,0.4s						
FRON	Frontone	0.26	86	⇑P	Pg	00 30 49.0	+0.5
FRON	Frontone	0.26	86	S	Sb	00 30 53.4	-1.3
FRON				AML	AML		
	comp=E,85µm,0.5s						
FRON				AML	AML		
	comp=N,158µm,0.5s						
FRON				AML	AML		
	comp=E,85µm,0.5s						
FRON				AML	AML		
	comp=N,158µm,0.5s						
MURB	Monte Urbino	0.26	155	P	Pb	00 30 49.5	-0.7
MURB				P	Sb	00 30 55.6	+0.8
MURB	Monte Urbino	0.26	155	S	Sb	00 30 56.0	+1.2
MURB				AML	AML		
	comp=E,304µm,0.4s						
MURB				AML	AML		
	comp=N,282µm,0.3s						
CAFI	Castiglion Fio	0.34	240	P	Pg	00 30 50.6	+0.6
CAFI	Castiglion Fio	0.34	240	S	Sb	00 30 56.3	-0.8
ATCC	AVT- Casa Cast	0.37	148	P	Pb	00 30 51.4	-0.7
ATCC				AML	AML		
	comp=N,75µm,0.7s						
ATCC				AML	AML		
	comp=E,102µm,1.0s						
ARVD	Arcevia	0.41	90	P	Pg	00 30 51.8	+0.4
COR1	Corinaldo	0.47	74	P	Pb	00 30 53.5	-0.3
EL6	Elcito	0.56	107	P	Pg	00 30 53.7	-0.4
FDMO	Fiordimonte	0.70	131	⇑P	Pg	00 30 52.4	-4.3
FDMO	Fiordimonte	0.70	131	S	Sn	00 31 09.0	-1.3
CSP1	Cessapalombo	0.73	124	⇑P	Pg	00 30 50.5	-6.8
CSP1	Cessapalombo	0.73	124	S	Sg	00 31 06.0	-0.9
TRIF	Trifonti	1.14	251	S	Pg	00 31 02.0	-3.2
AQU	L'Aquila	1.37	146	⇓P	Pn	00 31 03.5	-5.1
NDIM	Novi di Modena	1.75	323	⇑P	Sn	00 31 32.6	-3.5
NDIM	Novi di Modena	1.75	323	S	Sn	00 31 33.0	-3.1

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*IDC **23** 00:31:55.0±7.2, 17°.59S×178°.72W, h579^{km}±88^{km}, mb3.1/8, mb1 3.4/8, mb1mx3.1/33, mbtmp4.0/8, Error ellipse: s-maj=81.0km s-min=27.0km az=155.0*

*NEIC **23** 00:31:55.9±1.4, 17°.8S±0°.3×178°.7W±0°.2, h601^{km}±8^{km}, mb4.4/21, Error ellipse: s-maj=49.0km s-min=17.0km az=151.0*

ISC 23 00:31:55.6±0.9, 18°.0S±0°.3×178°.6W±0°.2, h600^{km}, n40, σ0^{s}.73/39, mb4.2/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.21	273	P	P	00 33 16.7	+0.6
AFI	Afiamalu	7.68	59	P	P	00 33 51.3	-0.9
DZM	Mont Dzumac	14.65	251	P	P	00 35 01.4	+0.6
EIDS	Eidsvold	29.09	250	P	P	00 37 09.5	-0.2
EIDS				IAmb	IAmb	00 38 43.0	
	comp=Z,20nm,1.6s						
ARMA	Armidale	29.77	240	P	P	00 37 15.6	0.0
CAN	Canberra	33.54	232	P	P	00 37 47.8	+0.3
COEN	Coen	36.94	271	P	P	00 38 14.8	-0.9
COEN				IAmb	IAmb	00 39 24.7	
	comp=Z,40nm,1.9s						
TOO	Toolangi	37.01	231	P	P	00 38 14.0	-2.0
TOO				IAmb	IAmb	00 39 51.3	
	comp=Z,24nm,1.4s						
STKA	Stephens Creek	38.46	241	P	P	00 38 28.7	+0.9
	comp=Z,2.5nm,0.7s,baz=71,slow=9.4,SNR=6.3						
STKA	Stephens Creek	38.46	241	IAmb	IAmb	00 38 30.3	
	comp=Z,1.5nm,1.1s						
BBOO	Buckleboo	43.24	241	P	P	00 39 05.9	+0.3
WB0	Warramunga Arr	44.42	260	P	P	00 39 15.7	+0.7
WB0				IAmb	IAmb	00 39 16.2	
	comp=Z,8.7nm,1.4s						
WB2	Warramunga Arr	44.45	260	P	P	00 39 15.3	+0.2
WRA	Warramunga Arr	44.46	260	P	P	00 39 15.2	0.0
	comp=Z,1.6nm,0.5s,baz=94,slow=8.0,SNR=20						
WRA	Warramunga Arr	44.46	260	IAmb	IAmb	00 39 16.0	
	comp=Z,0.2nm,0.7s						
AS31	Alice Springs	44.62	254	P	P	00 39 17.2	+0.8
AS31				IAmb	IAmb	00 39 18.0	
	comp=Z,3.3nm,0.5s						
ASAR	Alice Springs	44.62	254	P	P	00 39 17.1	+0.7
	comp=Z,11nm,0.7s,baz=87,slow=8.6,SNR=138						
ASAR				PcP	PcP	00 40 46.0	+0.1
	comp=Z,0.4nm,0.5s,baz=104,slow=3.7,SNR=2.9						
ASAR	Alice Springs	44.62	254	P	P	00 39 16.7	+0.3
FORT	Forrest	49.84	245	P	P	00 39 54.2	-1.0
FORT				IAmb	IAmb	00 39 55.9	
	comp=Z,18nm,0.9s						
KNRA	Kununurra	50.32	264	P	P	00 39 58.1	-0.8
KNRA				IAmb	IAmb	00 41 33.7	
	comp=Z,37nm,1.9s						
FITZ	Fitzroy Crossi	52.85	261	P	P	00 40 17.7	+0.6
	comp=Z,1.3nm,0.7s,baz=111,slow=8.6,SNR=2.9						
FITZ	Fitzroy Crossi	52.85	261	P	P	00 40 17.9	+0.8
FITZ				IAmb	IAmb	00 40 20.6	
	comp=Z,13nm,1.7s						
GIRL	Giralia	62.72	253	P	P	00 41 23.5	-0.2
UGM	Wanagama	69.48	268	P	P	00 42 05.5	-0.2
OMMB	Old Mammoth Mi	78.67	44	P	P	00 42 57.2	-0.1
PNTR	Pine Nut	79.09	43	P	P	00 42 59.9	+0.6
NVAR	Mina Array Bea	79.57	44	P	P	00 43 02.5	+0.6
	comp=Z,0.3nm,0.6s,baz=223,slow=9.6,SNR=3.8						
NVAR	Mina Array Bea	79.57	44	P	P	00 43 01.8	-0.1
I07A	Izee	81.94	39	P	P	00 43 13.7	-0.2
TRF	Thorofare Moun	84.09	12	P	P	00 43 23.3	-0.8
TRF				IAmb	IAmb	00 45 17.6	
	comp=Z,32nm,1.8s						
CCB	Clear Creek Bu	85.66	13	P	P	00 43 30.7	-0.8
CCB				IAmb	IAmb	00 44 42.4	
	comp=Z,19nm,2.0s						
IMAR	Indian Mountai	85.75	10	P	P	00 43 31.9	0.0
ILAR	Eielson Array	85.97	13	P	P	00 43 32.1	-0.8
	comp=Z,0.3nm,0.5s,baz=221,slow=4.8,SNR=6.7						
ILAR	Eielson Array	85.97	13	P	P	00 43 32.3	-0.7
TXAR	Lajitas Array	86.16	58	P	P	00 43 36.0	+1.2
	comp=Z,0.5nm,0.7s,baz=223,slow=5.1,SNR=8.6						
TXAR	Lajitas Array	86.16	58	P	P	00 43 36.2	+1.3
PDAR	Pinedale Array	87.50	43	P	P	00 43 40.6	-0.3
	comp=Z,0.4nm,0.6s,baz=224,slow=2.9,SNR=5.0						
PDAR	Pinedale Array	87.50	43	P	P	00 43 40.9	0.0
BMAR	Burnt Mountain	88.74	12	P	P	00 43 46.7	+0.8
MMAI	Mount Meron Ar	146.02	303	PKPbc	PKPbc	00 50 30.5	+0.6
	comp=Z,0.4nm,0.5s,baz=72,slow=4.7,SNR=2.0						

IDC 23 00:40:47.1±13.0, 1°.68N×126°.75E, h291^{km}±152^{km}, mb2.9/6, mb1 3.0/7, mb1mx2.8/57, mbtmp3.6/7, Error ellipse: s-maj=97.8km s-min=24.2km az=59.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.68	183	P	P	00 44 55.6	+0.3
	0.1nm,0.3s,baz=7.1,slow=8.1,SNR=2.0						
WRA	Warramunga Arr	22.74	161	P	P	00 45 24.2	-0.4
	0.9nm,0.5s,baz=337,slow=11,SNR=6.6						
ASAR	Alice Springs	26.14	165	P	P	00 45 55.9	+0.6
	0.2nm,0.5s,baz=349,slow=7.2,SNR=5.1						
STKA	Stephens Creek	36.22	158	P	P	00 47 22.4	-0.5
	1.3nm,0.6s,baz=336,slow=6.8,SNR=3.8						
SONM	Songino Array	49.24	342	P	P	00 49 06.1	-0.7
	0.3nm,0.9s,baz=140,slow=7.0,SNR=2.1						
MKAR	Makanchi Array	59.25	326	P	P	00 50 18.6	+0.2
	0.6nm,0.6s,baz=120,slow=7.8,SNR=11						
KURBB	Kurchatov Arra	63.47	328	P	P	00 50 46.4	0.0
	0.7nm,0.7s,baz=129,slow=6.2,SNR=12						

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*IDC **23** 00:44:25.7±2.7, 5°.70S×130°.93E, h90^{km}±28^{km}, mb3.5/8, mb1 3.8/12, mb1mx3.5/47, mbtmp4.0/12, Error ellipse: s-maj=38.1km s-min=14.6km az=74.0*

*NEIC **23** 00:44:26.7±2.4, 5°.62S±0°.06×131°.0E±0°.1, h129^{km}±14^{km}, mb4.1/5, Error ellipse: s-maj=18.3km s-min=8.1km az=100.0*

*DJA **23** 00:44:26.4±0.3, 6°S±3°×13°1E±°, h138^{km}±8^{km}, M4.5/13, mB5.2/4, mb4.2/7, MLv4.7/13, Mw(mB)4.5/4*

ISC 23 00:44:25.7±0.6, 5°.68S±0°.05×131°.21E±0°.07, h100^{km}, n40, σ2^{s}.30/39, mb3.8/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.73	311	P	Pn	00 44 57.3	+2.4
BNDI				S	Sn	00 45 19.4	+2.3
SAUI	Saumlaki	2.29	178	P	Pn	00 45 06.1	+4.0
SAUI	Saumlaki	2.29	178	Pn	Pn	00 45 05.1	+3.0
FAKI	Fak Fak	2.93	21	P	Pn	00 45 13.1	+2.5
FAKI	Fak Fak	2.93	21	Pn	Pn	00 45 12.9	+2.3
MSAI	Masohi	3.24	315	P	Pn	00 45 16.4	+1.6
AAI	Ambon	3.59	303	P	Pn	00 45 21.0	+1.5
NLAI	Namlea	4.76	300	P	Pn	00 45 38.0	+2.8
SIJI	Sorong	4.78	1	P	Pn	00 45 36.2	+0.7
	15nm,0.3s,baz=50,slow=8.1,SNR=85						
SIJI				S	Sn	00 46 26.7	-3.1
	64nm,0.3s,baz=251,slow=23,SNR=12						
SWI	Sorong	4.78	1	P	Pn	00 45 36.0	+0.4
RKPI	Ransiki, Papua	5.09	36	P	Pn	00 45 40.6	+0.9
	1.6nm8µm126nm,0.7s						
LBMI	Labuha	6.22	323	P	Pn	00 45 56.7	+1.6
	0.5nm42nm,0.7s						
SANI	Sanana	6.33	305	P	Pn	00 45 57.7	+1.1
	0.2nm758nm30nm,0.4s						
MTN	Manton Dam	7.12	181		Pn	00 46 09.3	+2.0
SOEI	Soe	7.98	239	P	Pn	00 46 21.1	+2.0
	0.1nm16nm,1.0s						
SOEI	Soe	7.98	239	Pn	Pn	00 46 18.4	-0.7
KNRA	Kununurra	10.22	193	Pn	Pn	00 46 49.3	-0.2
FITZ	Fitzroy Crossi	13.49	203	P	Pn	00 47 30.0	-3.0
	1.5nm,0.3s,baz=26,slow=11,SNR=36						
FITZ				S	Sn	00 49 49.7	-12
	2.4nm,0.3s,baz=221,slow=15,SNR=10						
FITZ	Fitzroy Crossi	13.49	203	P	Pn	00 47 30.4	-2.7
WB0	Warramunga Arr	14.34	168	Pn	Pn	00 47 44.8	+0.7
COEN	Coen	14.37	126	Pn	Pn	00 47 46.7	+2.2
WRA	Warramunga Arr	14.50	168	P	Pn	00 47 45.2	-1.0
	1.7nm,0.3s,baz=352,slow=13,SNR=25						
WRA				S	Sn	00 50 14.9	-11
	2.4nm,0.3s,baz=356,slow=22,SNR=10						
WRA	Warramunga Arr	14.50	168	Pn	Pn	00 47 46.1	-0.1
WB2	Warramunga Arr	14.51	168	Pn	Pn	00 47 47.9	+1.7
WR0	Warramunga Arr	14.56	167	Pn	Pn	00 47 47.7	+0.7
PMG	Port Moresby	16.24	104		Pn	00 48 10.1	+2.0
PMG				IAmb	IAmb	00 48 12.8	
	comp=Z,14nm,1.1s						
AS31	Alice Springs	18.07	172	P	Pn	00 48 31.8	+1.4
AS31				IAmb	IAmb	00 48 33.9	
	comp=Z,2.5nm,0.6s						
ASAR	Alice Springs	18.07	172	P	Pn	00 48 32.1	+1.7
	comp=Z,1.0nm,0.3s,baz=351,slow=11,SNR=39						
ASAR				S	S	00 51 42.7	-8.9
	comp=Z,0.6nm,0.3s,baz=353,slow=28,SNR=11						
ASAR	Alice Springs	18.07	172	P	Pn	00 48 31.9	+1.5
CTA	Charters Tower	20.47	136	P	Pn	00 48 59.3	+0.6
	comp=Z,2.5nm,0.5s,baz=316,slow=13,SNR=2.3						
GUMO	Guam	23.46	35	P	P	00 49 22.8	-3.7
BBOO	Buckleboo	27.37	171	P	P	00 50 02.6	+1.0
BBOO				IAmb	IAmb	00 50 17.5	
	comp=Z,8.2nm,1.1s						
STKA	Stephens Creek	27.82	161	P	P	00 50 07.3	+1.6
	comp=Z,0.9nm,0.4s,baz=342,slow=8.4,SNR=3.6						

STKA	Stephens Creek	27.82	161	P	P	00 50 07.0	+1.3
CMAR	Chiang Mai Arr	39.84	308	P	P	00 51 49.5	-0.3
	comp=Z,1.0nm,0.7s,baz=140,slow=6.6,SNR=5.4						
MJAR	Matsushiro Arr	42.51	8	P	P	00 52 11.2	-0.1
	comp=Z,1.7nm,0.9s,baz=186,slow=8.6,SNR=2.9						
SONM	Songino Array	57.59	340	P	P	00 54 05.7	+0.4
	comp=Z,0.4nm,0.4s,baz=148,slow=8.5,SNR=2.9						
MKAR	Makanchi Array	67.80	326	P	P	00 55 13.2	+0.2
	comp=Z,0.7nm,0.3s,baz=118,slow=7.7,SNR=13						
KURBB	Kurchatov Arra	72.03	328	P	P	00 55 39.2	+0.4
	comp=Z,0.2nm,0.5s,baz=90,slow=7.1,SNR=4.3						
QSPA	South Pole Qui	84.29	180	P	P	00 56 46.7	+0.3
	comp=Z,1.4nm,0.9s,baz=269,slow=1.8,SNR=2.4						

*NORS **23** 00:46:18.8±0.0, 43°.18N×46°.33E, h2^{km}, MPVA3.8*
*TIF **23** 00:46:19.7, 43°.37N×46°.37E, h12^{km}±1^{km}*
*DRS **23** 00:46:20.2±0.0, 43°.37N×46°.32E, h14^{km}*
ISC 23 00:46:20.1±1.2, **43°.34N**±0°.04×**46°.50E**±0°.03, **h12**^{km}±9^{km}, **n32**, σ**1**^{s}.**49**/65, **1C-2D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLMR	Dylym	0.29	160	*e*Pg	Pn	00 46 30.0	-0.1
DLMR				*e*Sg	Sb	00 46 43.5	+12
	1μm,0.3s						
DBC	Dubki	0.40	143	*i* Pg	Pn	00 46 30.2	-1.5
	136nm,0.1s						
DBC				*e*Sg	Sb	00 46 37.0	+1.8
	311nm,0.4s						
GROC	Groznyy	0.53	255	*i* Pg	Pg	00 46 29.7	-0.8
GROC				*e*Sg	Sg	00 46 36.9	-0.6
KRNR	Karanay	0.59	150	*e*Pg	Pb	00 46 32.0	-0.4
	26nm,0.1s						
KRNR				*i* Sg	Sn	00 46 43.0	-1.0
	107nm,0.2s						
UNCR	Uncukul	0.66	161	*e*Pg	Pn	00 46 34.0	-1.3
	107nm,0.2s						
UNCR				*e*Sg	Sn	00 46 44.0	-1.6
	480nm,0.3s						
BTLR	Botlikh	0.70	197	*i* Pg	Pg	00 46 32.5	-1.3
BTLR				*e*Sg	Sg	00 46 41.6	-1.4
XNZR	Khunzakh	0.81	169	*e*Pg	Pn	00 46 36.5	-1.0
XNZR				*e*Sg	Sb	00 46 47.8	+0.6
ARKR	Arakani	0.82	154	*i* Pg	Pn	00 46 38.0	+0.5
ARKR				*e*Sg	Sn	00 46 51.0	+1.4
	169nm,0.4s						
KMGR	Komgaron	1.23	257	*i* Pg	Pg	00 46 43.0	-0.7
KMGR				*e*Sg	Sn	00 47 00.4	+0.8
TRKR	Terskaya	1.34	287	*e*Pg	Pg	00 46 45.7	-0.1
TRKR				*e*Sg	Sn	00 47 03.3	+1.0
VLKR	Vladikavkaz	1.36	258	*e*Pg	Pb	00 46 45.4	-0.1
VLKR				*e*Pg	Pb	00 46 45.4	-0.1
VLKR				*e*Sg	Sn	00 47 04.1	+1.2
VLKR				*e*Sg	Sn	00 47 04.2	+1.2
BTKR	Batakoyurt	1.43	272	*i* Pg	Pb	00 46 46.4	-0.2
BTKR				*e*Sg	Sg	00 47 06.9	+0.9
PRTR	Priterechnaya	1.66	285	*e*Pg	Pg	00 46 51.5	-0.5
PRTR				*e*Sg	Sg	00 47 13.1	-0.4
LACR	Lac	1.69	253	*e*Pg	Pn	00 46 48.6	-0.9
LACR				*e*Sg	Sn	00 47 10.0	-1.2
STDR	Stavd-Durt	1.78	272	*e*Pg	Pb	00 46 52.7	+0.1
STDR				*e*Sg	Sg	00 47 17.2	0.0
KORR	Kora	1.79	263	*e*Pg	Pb	00 46 52.6	-0.3
KORR				*e*Sg	Sn	00 47 14.4	+0.8
DRN	Derbent	1.88	133	*e*Pg	Pg	00 46 56.2	0.0
DRN				*e*Sg	Sg	00 47 23.3	+2.8
LSNR	Lesken	1.95	269	*e*Pg	Pn	00 46 54.0	+0.9
LSNR				*e*Sg	Sb	00 47 21.1	+1.3
ZEI	Tsey	1.98	255	*e*Pg	Pn	00 46 53.8	+0.2
ZEI				*e*Sg	Sn	00 47 18.4	-0.1
DGRG	David-gareji	2.06	204	P	Pb	00 46 57.2	-0.3
DGRG				S	Sg	00 47 26.6	+0.2
TBLG	Delisi	2.07	220	P	Pn	00 46 55.8	+1.2
TBLG				S	Sb	00 47 23.2	0.0
BTNK	Botanikuri	2.08	218	P	Pb	00 46 56.4	-1.3
BTNK				S	Sb	00 47 23.3	-0.2
KSMR	Kasumkent	2.11	145	*e*Pg	Pg	00 47 01.0	+0.4
KSMR				*e*Sg	Sg	00 47 30.0	+2.0
	131nm,0.2s						
NCK	Nalchik	2.12	275	*e*Pg	Pb	00 46 57.7	-0.8
NCK				*e*Sg	Sb	00 47 24.6	-0.1
DIGR	Digorskoe uzhe	2.18	259	*e*Pg	Pn	00 46 56.7	+0.3
DIGR				*e*Sg	Sn	00 47 24.3	+0.9
KBTC	Kuba-Taba	2.30	283	*e*Pg	Pb	00 46 59.9	-1.5
KBTC				*e*Sg	Sn	00 47 28.8	+2.8
KZRT	Kazreti	2.50	219	P	Pn	00 47 02.5	+2.0
KZRT				S	Sb	00 47 34.3	-1.2
TRLG	Trialeti	2.53	225	P	Pn	00 47 02.3	+1.2
TRLG				S	Sn	00 47 34.4	+2.6
BKRG	Bakuriani	2.71	235	P	Pn	00 47 04.2	+0.7
BKRG				S	Sb	00 47 40.5	-1.2
NEY	Neytrino	2.76	269	*e*Pn	Pn	00 47 04.7	+0.4
NEY				*e*Sn	Sn	00 47 39.6	+2.1
AKTO	Aktyubinsk	10.60	44	⇓P	Pn	00 48 53.6	+2.0
	3.5nm,1.6s						
AKTO				⇓S	Sn	00 50 43.4	-6.8
	2.7nm,0.9s						
AB31	Akbulak array	11.02	53	P	Pn	00 48 59.3	+1.9
	0.3nm,0.4s,baz=246,slow=12,SNR=10.0						
AB31				⇑S	Sn	00 50 58.7	-1.7
	0.9nm,0.6s,baz=252,slow=30,SNR=6.0						

*IDC **23** 00:46:35.7±1.1, 30°.79N×139°.83E, h117^{km}±10^{km}, mb3.7/25, mb1 3.8/32, mb1mx3.7/62, mbtmp4.0/32, Error ellipse: s-maj=16.0km s-min=9.2km az=64.0*
*JMA **23** 00:46:36.3±0.4, 31°.01N×140°.42E, h154^{km}±4^{km}, M3.8*
*NEIC **23** 00:46:39.0±1.3, 31°.1N±0°.1×140°.0E±0°.1, h145^{km}±7^{km}, mb4.2/18, Error ellipse: s-maj=17.7km s-min=14.0km az=65.0*
ISC 23 00:46:38.9±0.5, **31°.01N**±0°.05×**140°.22E**±0°.08, **h150**^{km}, **n104**, σ**2**^{s}.**12**/115, **mb4.0**/33, **10C-5D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	2.09	350	P	Pn	00 47 13.9	-1.2
JHCJ				*e*S	Sn	00 47 40.6	-2.4
JHJ2	Mitsune	2.13	351	P	Pn	00 47 14.4	-1.1
JHJ2	Mitsune	2.13	351	Pn	Pn	00 47 15.1	-0.4
JHJ2					Sn	00 47 41.3	-2.5
JHJ	Hachijo jima 2	2.14	350	P	Pn	00 47 14.7	-1.0
	38nm,0.3s,baz=110,slow=24,SNR=10						
JHJ				S	Sn	00 47 41.1	-2.9
	85nm,0.3s,baz=247,slow=21,SNR=8.1						
JMKN	Mikurajimanish	2.93	350	P	Pn	00 47 23.7	-1.6
JMKN				*e*S	Sn	00 47 58.7	-2.6
BSO1	Boso 1	3.69	10	P	Pn	00 47 32.5	-2.1
BSO1				*e*S	Sn	00 48 14.6	-3.4
BSO3	Boso 3	3.79	4	P	Pn	00 47 34.2	-2.0
BSO3				*e*S	Sn	00 48 16.7	-4.1
TTO1	TONANKAI O.B.S	3.91	313	P	Pn	00 47 37.1	-0.5
BSO4	Boso 4	3.98	1	P	Pn	00 47 37.0	-1.7
BSO4				*e*S	Sn	00 48 22.1	-3.1
CBIJ	Chichi jima	4.26	156	P	Pn	00 47 38.4	-4.2
CBIJ				*e*S	Sn	00 48 25.1	-7.0
JCJ	Chichijima	4.26	156	P	Pn	00 47 38.4	-4.2
	22nm,0.3s,baz=4.5,slow=20,SNR=19						
JCJ				S	Sn	00 48 25.1	-7.0
	18nm,0.3s,baz=323,slow=14,SNR=1.6						
JOD2	Odawara 2	4.35	348	P	Pn	00 47 42.6	-1.2
JOD2				*e*S	Sn	00 48 32.7	-1.6
HMMJ	Hamamatsu 2	4.38	332	P	Pn	00 47 43.6	-0.5
JKN2	Miekihoku	4.63	315	P	Pn	00 47 46.7	-0.8
JTNC	Tanabenakahech	4.80	307	P	Pn	00 47 49.2	-0.5
INU	Inuyama	5.10	329		Pn	00 47 51.6	-1.9
JRY	Ryogami san	5.12	348	P	Pn	00 47 52.5	-1.4
JRY				S	Sn	00 48 48.4	-4.0
MJAR	Matsushiro Arr	5.77	344	P	Pn	00 48 01.8	-0.8
	0.5nm,0.3s,baz=153,slow=10,SNR=37						
MJAR				S	Sn	00 49 06.4	-1.5
	0.2nm,0.3s,baz=262,slow=38,SNR=1.5						
MJAR	Matsushiro Arr	5.77	344		Pn	00 48 01.1	-1.4
MAJO	Matsushiro	5.77	344		Pn	00 48 02.3	-0.2
MAT	Matsushiro	5.77	344	P	Pn	00 47 59.8	-2.7
MAT				S	Sn	00 49 05.5	-2.5
MJB9	Matsu-Tunnel	5.78	344		Pn	00 48 02.3	-0.3
JMK	Ichinoseki	7.97	6	P	Pn	00 48 28.7	-3.1
JMK				S	Sn	00 49 53.2	-7.4
JNU	Nakatsue	8.21	287	P	Pn	00 48 27.4	-7.7
	0.1nm,0.3s,baz=107,slow=17,SNR=2.4						
JNU	Nakatsue	8.21	287		Pn	00 48 33.3	-1.8
ERM	Erimo	11.24	11	Pn	Pn	00 49 12.3	-2.7
KSRS	Korea Array	12.03	306	P	Pn	00 49 22.9	-2.6
	0.1nm,0.3s,baz=116,slow=14,SNR=2.4						
ASAJ	Asahikawa	13.22	8	P	Pn	00 49 37.8	-3.0
	1.0nm,0.3s,baz=201,slow=12,SNR=9.3						
USRK	Ussuriysk Ar.	14.69	336	P	Pn	00 49 57.4	-1.8
	baz=153,slow=7.5,SNR=8.9						
USRK	Ussuriysk Ar.	14.69	336	Pn	Pn	00 49 57.9	-1.4
YSS	Yuzh-Sakhalins	16.05	6	P	P	00 50 16.1	-0.5
KLR	Kul'dur	19.30	343	P	P	00 50 52.2	+0.1
	0.6nm,0.3s,baz=130,slow=9.5,SNR=12						
HHC	Hu-ho-hao-te	25.10	301	*e*P	P	00 51 49.3	-0.5
H11N2	WAKE ISLAND Hy	26.52	109	T	T	01 19 48.2	
	baz=302						
H11N1	WAKE ISLAND Hy	26.52	109	T	T	01 19 48.4	
	baz=302						
H11N3	WAKE ISLAND Hy	26.54	109	T	T	01 19 52.5	
	baz=302						
H11S3	WAKE ISLAND Hy	26.99	111	T	T	01 21 02.0	
	baz=304,slow=75,SNR=3.6						
H11S1	WAKE ISLAND Hy	27.00	111	T	T	01 21 09.1	
	baz=304,slow=75,SNR=6.8						
H11S2	WAKE ISLAND Hy	27.01	111	T	T	01 21 12.0	
	baz=304,slow=75,SNR=4.6						
MA2	Magadan	29.44	11	P	P	00 52 31.5	+3.3
	2.8nm,0.5s,baz=172,slow=14,SNR=2.4						
LZH	Lanzhou	30.62	289	⇓P	P	00 52 38.1	-1.0
LZH				pP	pP	00 53 06.5	-3.9
LZH				sP	sP	00 53 22.3	-5.2
SONM	Songino Array	30.75	313	P	P	00 52 38.5	-1.6
	0.8nm,0.6s,baz=122,slow=9.1,SNR=9.0						
SONM	Songino Array	30.75	313	P	P	00 52 38.9	-1.2
SEY	Seymchan	32.88	10	P	P	00 53 00.6	+2.3
	1.0nm,0.5s,baz=11,slow=13,SNR=5.5						
WMQ	Urumqi	42.96	303	*e*P	P	00 54 23.9	+0.8
ZAA0	Zalesovo Array	45.44	317	P	P	00 54 41.4	-1.2
ZALV	Zalesovo Beam	45.44	317	P	P	00 54 41.4	-1.1
	1.3nm,0.4s,baz=97,slow=7.8,SNR=11						
ZALV				PcP	PcP	00 56 19.8	+0.8
	2.6nm,0.6s,baz=106,slow=3.9,SNR=9.2						
MK31	Makanchi Array	46.71	307	P	P	00 54 51.9	-0.8
MKAR	Makanchi Array	46.71	307	P	P	00 54 51.7	-1.0
	1.2nm,0.5s,baz=87,slow=9.3,SNR=24						
MKAR				PcP	PcP	00 56 24.6	+0.8
	1.0nm,0.5s,baz=78,slow=5.5,SNR=7.1						
MKAR				ScP	ScP	01 00 04.5	+1.2
	0.6nm,0.7s,baz=98,slow=4.3,SNR=4.6						
MKAR	Makanchi Array	46.71	307	P	P	00 54 51.4	-1.3
MAKZ	Makanchi	46.93	307	P	P	00 54 53.2	-1.2
MAKZ				IAmb	IAmb	00 54 54.0	
	comp=Z,2.2nm,0.5s						
NRIK	Noril'sk	48.39	338	P	P	00 55 05.9	+0.7
	comp=Z,2.0nm,0.4s,baz=117,slow=9.1,SNR=7.1						
KURK	Kurchatov	49.06	312	P	P	00 55 09.6	-1.0
KURK				IAmb	IAmb	00 55 10.6	
	comp=Z,3.2nm,0.8s						
KURBB	Kurchatov Arra	49.12	312	P	P	00 55 10.0	-1.1
	comp=Z,1.6nm,0.5s,baz=91,slow=9.6,SNR=38						
KURBB				PcP	PcP	00 56 32.6	+0.4
	comp=Z,0.9nm,0.7s,baz=98,slow=4.1,SNR=6.8						
WRA	Warramunga Arr	50.97	187	P	P	00 55 24.1	-1.2
	comp=Z,0.7nm,0.4s,baz=3.2,slow=7.4,SNR=4.9						
AAK	Ala-Archa	52.67	302	P	P	00 55 37.1	-0.8
	comp=Z,0.8nm,0.5s,baz=76,slow=3.1,SNR=5.8						
BVAR	Borovoye Array	54.03	316	P	P	00 55 47.0	-0.5
	comp=Z,1.4nm,0.4s,baz=99,slow=8.4,SNR=18						
BVAR				PcP	PcP	00 56 51.6	+1.0
	comp=Z,1.9nm,0.6s,baz=104,slow=2.7,SNR=11						
ASAR	Alice Springs	54.70	187	P	P	00 55 51.3	-1.3
	comp=Z,0.2nm,0.4s,baz=13,slow=14,SNR=2.7						
ILAR	Eielson Array	55.15	30	P	P	00 55 56.6	+1.2
	comp=Z,0.3nm,0.8s,baz=270,slow=5.4,SNR=2.7						
HIN	Hinchinbrook I	55.42	35	P	P	00 55 59.0	+1.6
KK31	Karatay Array	55.45	303	P	P	00 55 57.1	-0.8
KK31				IAmb	IAmb	00 55 57.7	
	comp=Z,3.1nm,0.6s						
KKAR	Karatay Array	55.45	303	P	P	00 55 56.7	-1.2
KKAR	Karatay Array	55.45	303	P	P	00 55 57.3	-0.6
KKAR				IAmb	IAmb	00 55 57.7	
	comp=Z,3.1nm,0.6s						
ABKAR	Akbulak array	61.17	313	P	P	00 56 37.0	-0.5
ABKAR				IAmb	IAmb	00 56 38.9	
	comp=Z,1.5nm,0.4s						
ABKAR	Akbulak array	61.17	313	P	P	00 56 36.1	-1.3
ARCES	ARCESS Array B	69.29	340	P	P	00 57 30.4	+0.9
	comp=Z,3.0nm,0.8s,baz=65,slow=7.1,SNR=17						
YKA	Yellowknife Ar	69.53	29	P	P	00 57 34.2	+3.2
	comp=Z,0.2nm,0.6s,baz=294,slow=5.9,SNR=3.8						
FINES	FINESS Array B	73.69	333	P	P	00 57 56.3	+0.4
	comp=Z,1.2nm,0.4s,baz=89,slow=3.8,SNR=38						
KBZ	Khabaz	74.11	312	P	P	00 57 59.4	+0.7
	comp=Z,1.4nm,0.5s,baz=84,slow=3.3,SNR=12						
KIV	Kislovodsk	74.14	312	⇑P	P	00 58 01.8	+2.8
AKH	Akhalkalaki	74.81	309	⇑P	P	00 58 16.4	+13
NNZ	Nelson	78.12	155	P	P	00 58 22.4	+1.3
SAO	San Andreas Ge	78.14	54	P	P	00 58 21.7	+0.1
SAO				IAmb	IAmb	00 58 35.4	
	comp=Z,8.2nm,1.1s						
PNTR	Pine Nut	78.24	51	P	P	00 58 22.9	+0.5
AKASG	Malin Array Be	78.47	323	P	P	00 58 23.2	+0.1
	comp=Z,2.9nm,0.3s,baz=49,slow=5.8,SNR=30						
AKASG	Malin Array Be	78.47	323	P	P	00 58 23.6	+0.5
AKBB	Malin Array Si	78.47	323	P	P	00 58 23.2	+0.1
HFS	Hagfors	79.17	336	P	P	00 58 27.1	+0.3
	comp=Z,1.0nm,0.4s,baz=106,slow=3.2,SNR=8.6						
NB2	NORSAR Subarra	79.35	337	P	P	00 58 28.3	+0.5
	comp=Z,0.9nm,0.7s,baz=43,slow=5.3						
NOA	NORSAR Array B	79.35	337	P	P	00 58 28.4	+0.5
	comp=Z,0.4nm,0.7s,baz=55,slow=6.5,SNR=5.5						
NVAR	Mina Array Bea	79.45	52	P	P	00 58 31.1	+2.1
	comp=Z,1.1nm,0.8s,baz=288,slow=5.6,SNR=7.1						
SORM	Soroca	80.42	321	⇑P	P	00 58 33.9	+0.1
TPNV	Topopah Spring	81.61	52	P	P	00 58 43.5	+3.0
TPNV				IAmb	IAmb	00 58 43.9	
	comp=Z,2.1nm,0.7s						
RAYN	Ar Rayn	82.03	293	P	P	00 58 42.9	+0.1
RAYN				IAmb	IAmb	00 58 43.3	
	comp=Z,2.5nm,0.6s						
BRTR	Keskin Array B	82.11	312	P	P	00 58 43.5	+0.5
	comp=Z,1.5nm,0.7s,baz=107,slow=3.8,SNR=12						
BRTR	Keskin Array B	82.11	312	P	P	00 58 43.3	+0.3
CFR	Carcaliu	82.30	319	⇓P	P	00 58 39.8	-3.8
TESR	Tescani	82.33	320	⇑P	P	00 58 44.6	+0.7
BURAR	Bucovina Array	82.42	322	⇑P	P	00 58 45.5	+1.0
BURAR	Bucovina Array	82.42	322	P	P	00 58 45.0	+0.5
PDAR	Pinedale Array	82.63	44	P	P	00 58 48.0	+2.3
	comp=Z,0.3nm,0.6s,baz=303,slow=3.0,SNR=3.8						
VRI	Vrincioaia	82.67	320	⇓P	P	00 58 46.7	+1.0
PLOR	Plostina	82.73	320	⇓P	P	00 58 47.6	+1.6
BISRR	Bisoca	82.88	320	⇓P	P	00 58 48.7	+1.9
MLR	Muntele Rosu	83.34	320	⇑P	P	00 58 50.6	+1.3
DOPR	Dopca	83.35	320	⇑P	P	00 58 50.7	+1.6
TRPA	Tarpa	83.49	323	⇑P	P	00 58 50.9	+1.2
VOIR		83.86	320	⇑P	P	00 58 52.5	+0.6
ARR	Arges	84.14	320	⇑P	P	00 58 54.8	+1.6
GERES	GERESS Array B	87.29	328	P	P	00 59 09.0	+0.2
	comp=Z,0.3nm,0.6s,baz=45,slow=4.7,SNR=1.6						
DAVOX	Davos/Dischmat	90.55	328	P	P	00 59 25.0	+0.8
	comp=Z,1.0nm,0.5s,baz=61,slow=19,SNR=1.5						
TXAR	Lajitas Array	94.60	52	P	P	00 59 46.4	+3.3
	comp=Z,0.7nm,0.7s,baz=294,slow=2.9,SNR=11						
TORD	Torodi Ar. Bea	120.72	311	PKP	PKiKP	01 05 14.6	+0.7
	comp=Z,0.4nm,0.9s,baz=11,slow=2.2,SNR=1.7						
LPAZ	La Paz	150.29	67	PKPbc	PKPab	01 06 16.9	-3.6
	comp=Z,1.3nm,0.7s,baz=354,slow=8.8,SNR=4.1						

IDC 23 00:54:12.3±5.1, **7°.26N**×**94°.12E**, **h78**^{km}±57^{km}, **mb3.4**/6, **mb1 3.5**/8, **mb1mx3.2**/55, **mbtmp3.7**/8, **ML3.8**/2, **MS3.1**/5, **Ms1 3.1**/5, **ms1mx2.8**/38, **Error ellipse: s-maj=67.4km s-min=38.3km az=85.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	6.52	133	P	Pn	00 55 46.7	+1.0
	1.0nm,0.3s,baz=301,slow=17,SNR=2.5						
PSI				LR	LR	00 58 38.3	
	comp=Z,122nm,19.2s,baz=295,slow=40						
CMAR	Chiang Mai Arr	12.08	22	P	Pn	00 57 01.3	-0.2
	0.3nm,0.3s,baz=215,slow=14,SNR=2.6						
CMAR				LR	LR	01 01 36.1	
	comp=Z,54nm,18.9s,baz=216,slow=37						
PALK	Pallekele	13.31	271	LR	LR	01 02 04.8	
	comp=Z,89nm,20.1s,baz=85,slow=36						
LEM	Lembang	19.41	136	LR	LR	01 06 45.6	
	comp=Z,70nm,19.9s,baz=232,slow=39						
H08S3	Diego Garcia H	26.16	236	T	T	01 26 25.8	
	baz=55,slow=76,SNR=16						
H08S2	Diego Garcia H	26.16	236	T	T	01 26 32.3	
	baz=55,slow=76,SNR=5.4						
H08S1	Diego Carcia H	26.18	236	T	T	01 26 27.3	
	baz=55,slow=76,SNR=3.0						
MKAR	Makanchi Array	40.68	348	P	P	01 01 44.6	-0.4
	0.3nm,0.5s,baz=157,slow=7.8,SNR=4.5						
SONM	Songino Array	41.76	12	P	P	01 01 54.2	+0.1
	0.3nm,0.4s,baz=180,slow=5.9,SNR=3.7						
GEYT	Alibeck	44.65	319	P	P	01 02 17.5	+0.2
	1.1nm,0.7s,baz=117,slow=5.2,SNR=4.2						
ZALV	Zalesovo Beam	47.16	353	P	P	01 02 36.8	0.0
	0.4nm,0.4s,baz=167,slow=7.0,SNR=6.2						
KBZ	Khabaz	57.53	318	LR	LR	01 31 16.0	
	comp=Z,18nm,18.2s,baz=147,slow=39						
FINES	FINESS Array B	73.24	332	P	P	01 05 34.7	-0.2
	1.9nm,1.0s,baz=99,slow=8.7,SNR=3.5						
ARCES	ARCESS Array B	75.84	340	P	P	01 05 49.7	0.0
	1.4nm,0.8s,baz=113,slow=6.9,SNR=1.5						

*IDC **23** 00:56:14.4±1.2, 19°.43S×70°.88W, h0^{km}, mb3.9/5, mb1 4.1/7, mb1mx3.8/30, mbtmp4.0/7, ML3.7/2, MS2.8/4, Ms1 2.8/4, ms1mx2.7/30, Error ellipse: s-maj=32.6km s-min=25.5km az=91.0*
*NEIC **23** 00:56:15.9±2.0, 19°.70S±0°.04×71°.10W±0°.06, h16^{km}±6^{km}, mb4.0/6, Error ellipse: s-maj=8.6km s-min=6.3km az=96.0*
*GUC **23** 00:56:16.7±0.7, 19°.70S×71°.09W, h43^{km}±3^{km}, ML3.8*
ISC 23 00:56:14.1±2.2, **19°.70S**±0°.03×**71°.17W**±0°.06, **h13**^{km}±13^{km}, **n53**, σ**1**^{s}.**42**/58, **mb4.1**/4, **10C, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.99	84	⇑*e*P	Pb	00 56 33.0	-0.3
PSGC				*e*S	Sb	00 56 45.5	-0.7
PSGC				IAML		00 56 47.2	
	comp=E,2μm,0.4s						
PSGCX	Pisagua	0.99	84		Pb	00 56 33.3	+0.1
PSGCX					Sg	00 56 46.5	+0.2
TA01	Diego Aracena	1.27	133	⇑*i*P	Pn	00 56 37.7	+0.2
TA01				*i* S	Sb	00 56 53.6	-0.5
TA01				IAML		00 57 00.7	
	comp=E,3μm,0.4s						
PB12	IPOC Station P	1.34	37	*i* P	Pn	00 56 39.0	+0.4
PB12				*e*S	Sn	00 56 56.6	+0.2
PB12				IAML		00 56 58.0	
	comp=N,5μm,0.5s						
PB12	IPOC Station P	1.34	37		Pn	00 56 39.0	+0.4
PB12				Sn	Sg	00 56 57.5	+0.1
PB11	IPOC Station P	1.43	93	⇑*i*P	Pn	00 56 40.5	+0.6
PB11				*e*S	Sb	00 56 58.1	-0.8
PB11				IAML		00 56 59.9	
	comp=N,3μm,0.4s						
PB11	IPOC Station P	1.43	93		Pn	00 56 40.5	+0.6
PATCX	Punta Patache	1.47	140	⇑*i*P	Pn	00 56 41.1	+0.7
PATCX				*e*S	Sn	00 56 59.7	+0.1
PATCX				IAML		00 57 11.0	
	comp=N,2μm,0.5s						
PATCX	Punta Patache	1.47	140		Pn	00 56 41.2	+0.8
AP01	Chacalluta	1.54	31	⇑*i*P	Pn	00 56 41.8	+0.6
AP01				*e*S	Sn	00 57 01.5	+0.4
AP01				IAML		00 57 11.0	
	comp=E,5μm,0.5s						
GO01	Chusmiza	1.86	89	⇑*i*P	Pn	00 56 47.2	+1.0
GO01				*e*S	Sb	00 57 10.5	-1.2
GO01				IAML		00 57 12.9	
	comp=N,3μm,0.5s						
GO01	Chusmiza	1.86	89	Pn	Pn	00 56 47.1	+1.0
PB08	IPOC Station P	1.95	103	⇑*i*P	Pn	00 56 48.3	+1.0
PB08				*i* S	Sb	00 57 12.6	-1.5
PB08				IAML		00 57 17.3	
	comp=N,1μm,0.6s						
PB02	IPOC Station P	2.01	144	⇑*i*P	Pn	00 56 48.5	+0.6
PB02				*i* S	Sn	00 57 11.2	-1.7
PB02				IAML		00 57 22.0	
	comp=E,2μm,0.5s						
PB01	IPOC Station P	2.07	131	⇑*i*P	Pn	00 56 49.7	+1.0
PB01				*e*S	Sn	00 57 14.1	-0.3
PB01				IAML		00 57 21.1	
	comp=N,720nm,0.1s						
PB01	IPOC Station P	2.07	131		Pn	00 56 50.0	+1.4
PB16	IPOC Station P	2.08	49	⇑*i*P	Pn	00 56 50.3	+1.1
PB16				*i* S	Sn	00 57 15.7	+0.4
PB16				IAML		00 57 25.2	
	comp=E,950nm,0.4s						
PB16	IPOC Station P	2.08	49		Pn	00 56 50.3	+1.1
PB07	IPOC Station P	2.35	149		Pn	00 56 53.7	+1.1
PB09	IPOC Station P	2.76	139		Pn	00 56 59.9	+1.7
PB04	IPOC Station P	2.79	160		Pn	00 56 59.8	+1.1
LVC	Limon Verde	3.58	144	Pn	Pn	00 57 12.1	+2.4
	comp=E,7.0nm,0.3s,baz=328,slow=12,SNR=43						
LVC				Sn	Sn	00 57 53.0	+0.9
	comp=E,13nm,0.3s,baz=92,slow=23,SNR=7.8						
LVC				LR	LR	00 58 20.2	
	comp=E,36nm,20.3s,baz=322,slow=34						
LVC	Limon Verde	3.58	144		Pn	00 57 11.6	+1.8
PB15	IPOC Station P	3.83	156		Pn	00 57 13.5	+0.4
PB10	IPOC Station P	3.84	172	Pn	Pn	00 57 13.6	+0.6
LPAZ	La Paz	4.46	41	Pn	Pn	00 57 26.4	+4.4
	comp=E,1.7nm,0.3s,baz=218,slow=5.8,SNR=27						
LPAZ	La Paz	4.46	41		Pn	00 57 23.6	+1.6
PB14	IPOC Station P	4.95	172		Pn	00 57 29.0	+0.5
GO02	Mina Guanaco	5.63	165		Pn	00 57 39.0	+1.2
GO03	Copiap	7.91	174	Pn	Pn	00 58 10.8	+1.9
NNA	Nana	9.41	324	Sn	Sn	01 00 11.5	-3.8
	comp=E,1.0nm,0.3s,baz=280,slow=17,SNR=1.6						
SIV	San Ignacio	10.30	71	Pn	Pn	00 58 41.0	-0.7
	comp=E,0.6nm,0.3s,baz=254,slow=15,SNR=15						
CPUP	Villa Florida	14.35	120	LR	LR	01 06 21.7	
	comp=E,69nm,18.2s,baz=283,slow=43						
GO05	Huala	15.27	182	Pn	Pn	00 59 45.8	-3.6
PLCA	Paso Flores	20.97	179	P	Pn	01 01 03.1	+3.5
	comp=E,1.9nm,0.8s,baz=12,slow=12,SNR=5.0						
PLCA	Paso Flores	20.97	179	P	P	01 00 58.0	+0.9
FLOC	Florencia	21.60	348	P	P	01 01 05.1	+1.1
PTGA	Pitinga	21.81	32	P	P	01 01 04.6	-1.6
	comp=E,2.0nm,0.3s,baz=318,slow=22,SNR=5.5						
PTGA				LR	LR	01 09 50.7	
	comp=E,27nm,20.6s,baz=208,slow=38						
PTGA	Pitinga	21.81	32	P	P	01 01 05.5	-0.7
PTGA				IAmb	IAmb	01 01 23.6	
	comp=Z,7.4nm,1.1s						
BDFB	Brasilia	22.42	83	P	P	01 01 11.7	-1.3
	comp=Z,1.9nm,0.8s,baz=265,slow=12,SNR=1.9						
BDFB	Brasilia	22.42	83	P	P	01 01 12.2	-0.8
BDFB				IAmb	IAmb	01 01 24.1	
	comp=Z,6.8nm,1.1s						
ROSC	El Rosal	24.58	352	LR	LR	01 11 48.0	
	comp=Z,60nm,21.6s,baz=156,slow=38						
RUSC	La Rusia	25.50	356	P	P	01 01 43.8	+0.8
TORD	Torodi Ar. Bea	78.77	72	P	P	01 08 17.1	0.0
	comp=Z,2.8nm,0.6s,baz=251,slow=4.9,SNR=16						
YKA	Yellowknife Ar	88.80	341	P	P	01 09 09.7	+2.4
	comp=Z,0.9nm,0.6s,baz=135,slow=5.1,SNR=20						
H11S2	WAKE ISLAND Hy	125.53	279	T	T	03 34 33.0	
	baz=100,slow=74,SNR=6.5						
H11S1	WAKE ISLAND Hy	125.54	279	T	T	03 34 37.6	
	baz=100,slow=74,SNR=5.3						
H11S3	WAKE ISLAND Hy	125.55	279	T	T	03 34 38.2	
	baz=100,slow=74,SNR=4.9						
H11N3	WAKE ISLAND Hy	125.57	281	T	T	03 34 39.8	
	baz=95,slow=74						
H11N2	WAKE ISLAND Hy	125.58	281	T	T	03 34 40.3	
	baz=95,slow=74						
H11N1	WAKE ISLAND Hy	125.59	281	T	T	03 34 36.3	
	baz=95						
MKAR	Makanchi Array	145.35	33	PKP	PKPdf	01 15 53.5	+1.7
	comp=Z,0.9nm,0.6s,baz=335,slow=4.5,SNR=11						
SONM	Songino Array	151.86	3	PKPbc	PKPbc	01 16 08.9	0.0
	comp=Z,0.4nm,0.7s,baz=343,slow=1.5,SNR=3.2						

IDC 23 00:59:27.2±29.0, **18°.84N**×**146°.15E**, **h355**^{km}±313^{km}, **mb2.9**/6, **mb1 3.1**/6, **mb1mx2.8**/46, **mbtmp3.6**/6, **Error ellipse: s-maj=67.6km s-min=35.1km az=49.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	40.25	197	P	P	01 06 31.8	+0.8
	0.3nm,0.5s,baz=20,slow=8.4,SNR=1.7						
FITZ	Fitzroy Crossi	41.88	210	P	P	01 06 43.3	-0.8
	1.1nm,0.8s,baz=19,slow=8.8,SNR=7.1						

MKAR	Makanchi Array	58.67	314	P	P	01 08 48.5	0.0
	0.4nm,0.7s,baz=94,slow=7.6,SNR=5.4						
YKA	Yellowknife Ar	77.66	28	P	P	01 10 44.6	-0.3
	0.4nm,0.8s,baz=286,slow=5.3,SNR=4.0						
NVAR	Mina Array Bea	82.72	52	P	P	01 11 12.7	+0.1
	0.1nm,0.3s,baz=273,slow=3.4,SNR=2.3						
FINES	FINESS Array B	86.93	335	P	P	01 11 32.8	+0.3
	1.5nm,0.9s,baz=69,slow=5.1,SNR=3.8						

IDC 23 01:15:28.7±3.1, 4°.47S×133°.60E, h0^{km}, mb3.2/1, mb1 3.6/5, mb1mx3.4/41, mbtmp3.4/5, ML3.4/3, Error ellipse: s-maj=111.9km s-min=26.9km az=78.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.27	327	Pn	Pn	01 16 34.1	-0.9
	0.7nm,0.3s,baz=139,slow=19,SNR=1.9						
SIJI				Sn	Sn	01 17 15.8	-10
	1.7nm,0.3s,baz=126,slow=14,SNR=6.0						
WRA	Warramunga Arr	15.40	177	Pn	Pn	01 19 06.9	-0.5
	baz=356,slow=13,SNR=0.7						
FITZ	Fitzroy Crossi	15.62	209	Pn	Pn	01 19 10.2	-0.1
	0.3nm,0.3s,baz=36,slow=13,SNR=9.7						
FITZ				Sn	Sn	01 21 55.4	-8.9
	0.2nm,0.3s,baz=167,slow=18,SNR=2.1						
ASAR	Alice Springs	19.09	179	P	P	01 19 53.1	0.0
	0.1nm,0.3s,baz=357,slow=11,SNR=3.7						
MKAR	Makanchi Array	68.16	325	P	P	01 26 31.3	+0.4
	0.1nm,0.5s,baz=106,slow=5.2,SNR=2.0						

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*NEIC **23** 01:15:32.6±1.3, 20°.8S±0°.2×178°.6W±0°.1, h597^{km}±8^{km}, mb4.2/14, Error ellipse: s-maj=25.0km s-min=17.0km az=144.0*

*IDC **23** 01:15:36.4±2.5, 20°.75S×178°.77W, h631^{km}±30^{km}, mb3.3/13, mb1 3.6/14, mb1mx3.3/45, mbtmp4.3/14, Error ellipse: s-maj=23.7km s-min=13.0km az=152.0*

ISC 23 01:15:30.9±0.5, 20°.9S±0°.1×178°.5W±0°.1, h579^{km}, n65, σ1^s.50/64, mb3.9/15, 10C-4D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.55	313	P	P	01 17 01.5	+2.3
AFI	Afiamalu	9.45	44	P	P	01 17 41.0	-3.0
	4.3nm,0.3s,baz=32,slow=17,SNR=4.7						
AFI				S	S	01 19 23.8	-9.4
	0.8nm,0.3s,baz=188,slow=23,SNR=1.4						
AFI	Afiamalu	9.45	44	P	P	01 17 44.4	+0.3
DZM	Mont Dzumac	14.08	263	P	P	01 18 31.8	+0.8
	0.9nm,0.3s,baz=289,slow=20,SNR=9.6						
OUZ	Omahuta	15.87	204	P	P	01 18 52.8	+4.9
URZ	Urewera	17.71	191	P	P	01 19 04.4	-0.2
	1.2nm,0.3s,baz=6.0,slow=1.7,SNR=9.3						
URZ				S	S	01 21 51.7	-6.6
	0.2nm,0.3s,baz=152,slow=17,SNR=1.5						
URZ	Urewera	17.71	191	IAmb	IAmb	01 19 05.2	
	comp=Z,40nm,1.4s						
STKA	Stephens Creek	37.21	245	P	P	01 21 55.6	+1.4
	comp=Z,3.9nm,0.5s,baz=96,slow=10,SNR=12						
STKA	Stephens Creek	37.21	245	P	P	01 21 55.0	+0.7
WR0	Warramunga Arr	43.91	263	P	P	01 22 47.2	-0.4
AS31	Alice Springs	43.99	257	P	P	01 22 48.0	-0.2
ASAR	Alice Springs	43.99	257	P	P	01 22 48.7	+0.5
	comp=Z,10nm,0.6s,baz=95,slow=7.7,SNR=143						
ASAR				S	S	01 28 35.7	-3.4
	comp=Z,1.7nm,0.8s,baz=94,slow=16,SNR=11						
ASAR	Alice Springs	43.99	257	P	P	01 22 47.5	-0.7
WB0	Warramunga Arr	44.08	263	P	P	01 22 48.6	-0.3
WRA	Warramunga Arr	44.10	263	P	P	01 22 48.9	-0.2
	comp=Z,4.4nm,0.3s,baz=97,slow=7.8,SNR=23						
FITZ	Fitzroy Crossi	52.53	263	P	P	01 23 51.1	-0.5
	comp=Z,2.1nm,0.6s,baz=90,slow=5.1,SNR=1.8						
FITZ	Fitzroy Crossi	52.53	263	IAmb	IAmb	01 23 55.0	
	comp=Z,27nm,1.9s						
VNDA	Vanda	57.46	185	P	P	01 24 27.7	+2.8
	comp=Z,0.7nm,0.5s,baz=328,slow=10,SNR=3.5						
MJAR	Matsushiro Arr	70.27	324	P	P	01 25 46.6	-0.2
	comp=Z,1.4nm,0.5s,baz=138,slow=6.4,SNR=5.6						
PETK	Petropavlovsk-	76.55	346	P	P	01 26 22.4	+0.3
	comp=Z,2.2nm,0.7s,baz=134,slow=8.3,SNR=2.0						
NVAR	Mina Array Bea	81.63	44	P	P	01 26 51.1	+1.6
	comp=Z,1.1nm,0.6s,baz=224,slow=7.7,SNR=10						
NVAR	Mina Array Bea	81.63	44	P	P	01 26 50.8	+1.2
PINE	Pine Mountain	83.18	38	P	P	01 26 57.0	-0.2
PINE				IAmb	IAmb	01 26 59.9	
	comp=Z,4.6nm,0.8s						
F10A	Beach Ranch, E	86.60	38	P	P	01 27 13.7	+0.1
F10A				IAmb	IAmb	01 27 15.7	
	comp=Z,4.2nm,0.8s						
SEY	Seymchan	86.67	347	P	P	01 27 13.4	+0.1
	comp=Z,0.8nm,0.5s,baz=120,slow=6.7,SNR=5.6						
TRF	Thorofare Moun	86.94	12	P	P	01 27 14.0	-0.9
RND	Reindeer	87.19	13	P	P	01 27 15.8	-0.2
RND				IAmb	IAmb	01 27 17.0	
	comp=Z,6.9nm,0.9s						
TXAR	Lajitas Array	87.65	58	P	P	01 27 20.9	+2.0
	comp=Z,1.0nm,0.8s,baz=215,slow=5.9,SNR=12						
TXAR	Lajitas Array	87.65	58	P	P	01 27 20.6	+1.7
WRH	Wood River Hil	88.30	13	P	P	01 27 20.2	-0.8
MCMT	McKenzie Canyo	88.56	40	P	P	01 27 23.2	+0.2
IMAR	Indian Mountai	88.63	10	P	P	01 27 22.0	-0.5
ILAR	Eielson Array	88.81	13	P	P	01 27 22.6	-0.8
	comp=Z,1.0nm,0.7s,baz=223,slow=5.4,SNR=12						
PD31	Pinedale Array	89.57	43	P	P	01 27 28.4	+0.6
PDAR	Pinedale Array	89.57	43	P	P	01 27 28.6	+0.9
	comp=Z,1.2nm,0.7s,baz=216,slow=3.9,SNR=13						
PDAR	Pinedale Array	89.57	43	P	P	01 27 28.3	+0.6
YKA	Yellowknife Ar	97.07	25	P	Pdif	01 28 00.7	-0.4
	comp=Z,0.1nm,0.7s,baz=262,slow=4.2,SNR=2.1						
BVAR	Borovoye Array	119.10	320	PKP	PKPdf	01 33 13.6	-0.8
	comp=Z,0.6nm,0.4s,baz=54,slow=2.6,SNR=6.6						
ARU	Arti	125.28	325	PKP	PKPdf	01 33 25.8	-0.4
	comp=Z,0.9nm,0.6s,baz=1.6,slow=9.3,SNR=5.3						
ARCES	ARCESS Array B	129.24	349	PKP	PKPdf	01 33 32.9	-0.5
	comp=Z,2.1nm,0.7s,baz=11,slow=2.3,SNR=5.0						
FINES	FINESS Array B	136.03	343	PKP	PKiKP	01 33 47.6	-0.5
	comp=Z,1.7nm,0.9s,baz=261,slow=5.0,SNR=3.5						
HFS	Hagfors	139.87	351	PKhKP	PKPpre	01 33 45.5	
	comp=Z,2.2nm,0.9s,baz=64,slow=3.4,SNR=7.3						
AKASG	Malin Array Be	143.15	330	PKP	PKPdf	01 33 56.7	-2.8
	comp=Z,2.9nm,0.5s,baz=41,slow=4.4,SNR=14						
SORM	Soroca	145.31	328	⇑P	PKPbc	01 34 04.2	-0.4
EKA	Eskdalemuir Ar	145.45	5	PKPbc	PKPbc	01 34 04.6	-0.1
	comp=Z,2.3nm,0.8s,baz=349,slow=2.7,SNR=3.3						
BRTR	Keskin Array B	146.78	312	PKPbc	PKPbc	01 34 08.7	-0.5
	comp=Z,0.7nm,0.6s,baz=136,slow=5.6,SNR=6.1						
BURAR	Bucovina Array	147.19	330	⇑P	PKPbc	01 34 10.1	+0.2
BIZ	Bicaz	147.24	328	⇓P	PKPbc	01 34 10.6	+0.7
TESR	Tescani	147.27	327	⇑P	PKPbc	01 34 09.3	-0.7
TOPG	Topolog	147.41	323	⇑P	PKiKP	01 34 11.1	-0.9
TRPA	Tarpa	148.00	333	⇓P	PKPbc	01 34 11.6	-0.1
DOPR	Dopca	148.28	328	⇑P	PKiKP	01 34 13.3	-0.5
MLR	Muntele Rosu	148.32	326	PKPbc	PKPbc	01 34 12.6	-0.2
	comp=Z,1.2nm,0.4s,baz=117,slow=23,SNR=3.6						
MLR	Muntele Rosu	148.32	326	⇑P	PKPbc	01 34 12.9	0.0
CLL	Collm	148.35	346	*e*PKPbc	PKPbc	01 34 13.0	+0.5
VOIR		148.81	327	⇑P	PKiKP	01 34 14.4	-0.5
ARR	Arges	149.07	327	⇑P	PKiKP	01 34 15.4	-0.1
GZR	Gura Zlata	149.97	329	⇑P	PKPbc	01 34 16.4	-0.3
KHC	Kasperske Hory	150.24	344	⇑*e*PKP	PKPbc	01 34 16.0	-1.2
KHC				*e*PKPAB	PKPab	01 34 25.0	-1.0
BZS	Buzias	150.34	331	⇓P	PKPbc	01 34 17.1	-0.4
GERES	GERESS Array B	150.47	344	PKPbc	PKPbc	01 34 17.7	-0.1
	comp=Z,0.7nm,0.6s,baz=45,slow=2.5,SNR=6.4						
VTS	Vitosha	151.70	325	⇓P	PKPbc	01 34 20.8	-0.1
DAVOX	Davos/Dischmat	153.31	347	PKPbc	PKPbc	01 34 24.0	-0.3
	baz=163,slow=19						
MURB	Monte Urbino	155.88	340		PKPdf	01 34 18.4	-1.3
TORD	Torodi Ar. Bea	172.28	181	PKPab	PKPab	01 36 03.2	+0.4
	comp=Z,1.1nm,1.1s,baz=191,slow=1.5,SNR=3.2						

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*MAN **23** 01:17:58.7, 7°.22N×124°.82E, h2^{km}, mb5.4, ML4.3, MS4.5*

MAN Intensity IV - Carmen North Cotabato; Intensity III - Kabacan and Midsayap North Cotabato; Intensity II - Pikit North Cotabato; Intensity I - Kidapawan City.

*IDC **23** 01:18:01.4±3.9, 7°.20N×124°.92E, h31^{km}±29^{km}, mb3.8/10, mb1 4.0/10, mb1mx3.7/51, mbtmp3.9/10, MS3.5/23, Ms1 3.5/23, ms1mx3.3/59, Error ellipse: s-maj=42.0km s-min=15.1km az=79.0*

*NEIC **23** 01:18:03.4±1.9, 7°.21N±0°.09×125°.12E±0°.09, h44^{km}±8^{km}, mb4.5/22, Error ellipse: s-maj=13.8km s-min=12.0km az=158.0*

*DJA **23** 01:18:03.7±0.5, 7°N±5°×12°5E±°, h47^{km}±7^{km}, M4.7/11, mb4.5/11, mB5.5/2, MLv4.8/4, Mw(mB)4.9/2, Mwp5.0/1*

ISC 23 01:17:58.9±1.2, 7°.24N±0°.03×124°.87E±0°.03, h4^{km}±8^{km}, n87, σ1^s.96/81, mb4.2/15, MS3.5/22, 3C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	Kidapawan	0.32	136	⇓*e*P	Pg	01 18 06.6	+1.5
KCP				*i* S	Sb	01 18 12.7	0.0
CTBH	Cotabato--PC H	0.62	268	⇓*i*P	Pg	01 18 10.4	-0.5
CTBH				*i* S	Sn	01 18 24.8	-0.1
DMPH	Davao City--Mi	0.65	104	⇑*e*P	Pg	01 18 12.5	+1.1
DMPH				*i* S	Sn	01 18 23.9	-1.8
BUKP	Musuan	0.66	17	*e*P	Pg	01 18 11.3	-0.5
BUKP				*e*S	Sg	01 18 21.2	+0.9
DAV	Davao City (W)	0.72	103	Pg	Pg	01 18 14.3	+1.5
	360nm,0.3s,baz=302,slow=2.6,SNR=153						
DAV				Lg	Lg	01 18 24.5	
	545nm,0.3s,baz=336,slow=20,SNR=14						
DAV	Davao City (W)	0.72	103	P	Pg	01 18 11.9	-1.0
DAV	Davao City (W)	0.72	103		Pg	01 18 14.0	+1.2
SKMP	Bagumbayan, Su	0.79	205	*e*P	Pg	01 18 13.1	-0.9
SKMP				*e*S	Sg	01 18 25.0	+0.7
GSPH	General Santos	1.15	176	⇓*i*P	Pb	01 18 20.5	-0.9
CGP	Cagayan de Oro	1.22	352	⇑*e*P	Pn	01 18 20.1	-2.7
CGP				*i* S	Sb	01 18 35.9	-2.8
MATI	Mati	1.41	102	*e*P	Pn	01 18 24.7	-0.6
PAGZ	Pagadian	1.59	292	*e*P	Pn	01 18 25.7	-2.2
PAGZ				*e*S	Sn	01 18 47.5	-1.5
BUTP	Butuan	1.87	23	*e*P	Pn	01 18 32.8	+1.1
BUTP				*e*S	Sb	01 18 58.0	+0.5
DCPH	Dipolog City	2.01	312	⇑*e*P	Pn	01 18 34.5	+0.8
TBP	Tagbilaran	2.63	338	*e*P	Pn	01 18 42.3	+0.1
TBP				*i* S	Sn	01 19 08.5	-6.1
MSLP	Maasin	2.88	360	*e*P	Pn	01 18 46.3	+0.7
MSLP				*e*S	Sn	01 19 21.4	+0.8
GUIM	Jordan	4.05	326	*e*P	Pn	01 19 02.4	+0.7
GUIM				*e*S	Sn	01 19 45.9	-3.7
MRSI	Marisa	7.33	204	P	Pn	01 19 47.0	+0.2
	0.4nm44nm,1.0s						
LBMI	Labuha	8.25	161	P	Pn	01 19 58.4	-1.1
	2µm31nm,1.4s						
LUWI	Luwuk	8.49	194	P	Pn	01 20 03.5	+0.8
	135nm,1.0s						
LUWI	Luwuk	8.49	194		Pn	01 20 04.2	+1.5
SANI	Sanana	9.29	173	P	Pn	01 20 12.3	-1.5
	2µm33nm,0.9s						
KAPI	Kappang	13.20	203	LR	LR	01 26 10.7	
	comp=Z,360nm,21.7s,baz=42,slow=37						
KSM	Kuching	15.60	249	Pn	P	01 21 43.3	-0.9
KSM				IAmb	IAmb	01 21 52.2	
	comp=Z,31nm,1.1s						
MMRI	Maumere	15.99	189	Pn	Pn	01 21 46.1	+1.3
MMRI				IAmb	IAmb	01 22 19.6	
	comp=Z,18nm,0.7s						
SOEI	Soe	16.89	182		P	01 21 58.0	-0.6
SOEI				IAmb	IAmb	01 22 35.1	
	comp=Z,47nm,1.1s						
QIZ	Qiongzhong	18.73	310	P	Pn	01 22 20.3	+1.2
QIZ				S	S	01 25 55.8	+3.2
KNRA	Kununurra	23.09	170	P	P	01 23 05.2	-0.7
KNRA				IAmb	IAmb	01 23 44.2	
	comp=Z,18nm,0.9s						
MDSI	Maura Dua	23.71	241	P	P	01 23 13.7	+1.5
FITZ	Fitzroy Crossi	25.19	178	P	P	01 23 24.2	-1.5
	comp=Z,4.9nm,0.8s,baz=19,slow=6.5,SNR=6.7						
FITZ				LR	LR	01 35 31.7	
	comp=Z,25nm,18.5s,baz=6.0,slow=42						
FITZ	Fitzroy Crossi	25.19	178	P	P	01 23 24.9	-0.7
NJ2	Nanjing	25.32	348	*e*P	P	01 23 29.1	+2.4
JCJ	Chichijima	25.70	38	LR	LR	01 33 52.7	
	comp=Z,94nm,19.8s,baz=56,slow=37						
PSI	Prapat	26.21	262	LR	LR	01 35 25.7	
	comp=Z,88nm,19.0s,baz=90,slow=40						
JNU	Nakatsue	26.35	11	LR	LR	01 32 44.7	
	comp=Z,94nm,21.8s,baz=188,slow=34						
CMAR	Chiang Mai Arr	27.58	296	LR	LR	01 35 16.7	
	comp=Z,137nm,18.6s,baz=114,slow=38						
GSI	Gunungsitoli	27.84	259	P	P	01 23 52.0	+2.2
GSI	Gunungsitoli	27.84	259	P	P	01 23 50.5	+0.7
WRA	Warramunga Arr	28.57	161	P	P	01 23 52.5	-3.7
	comp=Z,1.5nm,0.3s,baz=336,slow=9.8,SNR=4.0						
JHJ	Hachijo jima 2	29.23	26	LR	LR	01 35 22.7	
	comp=Z,111nm,20.2s,baz=147,slow=36						
KRVT	Keravat (AS076	29.43	112	LR	LR	01 34 53.6	
	comp=Z,82nm,19.0s,baz=292,slow=34						
KSRS	Korea Array	30.20	5	LR	LR	01 36 40.9	
	comp=Z,86nm,20.6s,baz=201,slow=37						
MJAR	Matsushiro Arr	31.61	21	LR	LR	01 35 49.2	
	comp=Z,113nm,21.7s,baz=235,slow=34						
ASAR	Alice Springs	31.96	164	P	P	01 24 24.9	-1.2
	comp=Z,0.8nm,0.5s,baz=337,slow=6.9,SNR=5.5						
BJI	Beijing	33.58	348	P	P	01 24 46.3	+6.2
LZH	Lanzhou	34.56	329	*e*P	P	01 24 52.0	+3.1
LZH				pP	sP	01 24 59.3	+8.4
LZH				sP	pP	01 25 03.3	+13
LZH				*e*PP	PP	01 26 10.3	+3.1
HHC	Hu-ho-hao-te	35.51	343	*e*P	P	01 25 00.5	+3.5
USRK	Ussuriysk Ar.	37.34	8	P	P	01 25 11.1	-1.3
	comp=Z,1.5nm,0.7s,baz=195,slow=9.8,SNR=5.5						
USRK	Ussuriysk Ar.	37.34	8	P	P	01 25 10.9	-1.5
GTA	Gaotai	39.16	329	*e*P	P	01 25 33.3	+5.3
GTA				pP	sP	01 25 40.9	+11
GTA				sP	pP	01 25 44.8	+15
ASAJ	Asahikawa	39.87	20	LR	LR	01 40 39.4	
	comp=Z,45nm,21.3s,baz=169,slow=34						
STKA	Stephens Creek	42.05	159	P	P	01 25 50.9	-0.9
	comp=Z,3.7nm,0.7s,baz=337,slow=7.6,SNR=5.7						
STKA				LR	LR	01 47 15.1	
	comp=Z,66nm,18.2s,baz=15,slow=42						
STKA	Stephens Creek	42.05	159	P	P	01 25 50.7	-1.1
KLR	Kul'dur	42.25	7	LR	LR	01 45 36.1	
	comp=Z,72nm,19.8s,baz=240,slow=39						
ULN	Ulaanbaatar	43.23	342	P	P	01 26 01.4	-0.1
ULN				IAmb	IAmb	01 26 12.9	
	comp=Z,6.6nm,1.2s						
SONM	Songino Array	43.41	342	P	P	01 26 02.3	-0.5
	comp=Z,1.9nm,1.0s,baz=166,slow=8.4,SNR=12						
SONM				LR	LR	01 44 57.6	
	comp=Z,167nm,20.8s,baz=158,slow=37						
SONM	Songino Array	43.41	342	P	P	01 26 02.3	-0.5
WMQ	Urumqi	48.81	324	*e*P	P	01 26 46.8	+1.4
WMQ				pP	sP	01 26 55.3	+7.9
PETK	Petropavlovsk-	52.95	24	LR	LR	01 48 50.9	
	comp=Z,50nm,21.2s,baz=239,slow=35						
MK31	Makanchi Array	53.64	325	P	P	01 27 21.2	-0.4
MKAR	Makanchi Array	53.64	325	P	P	01 27 20.9	-0.7
	comp=Z,0.6nm,0.7s,baz=120,slow=7.2,SNR=6.9						
MKAR				LR	LR	01 50 28.7	
	comp=Z,47nm,19.4s,baz=84,slow=36						
KSH	Kashi	54.28	314	P	P	01 27 31.8	+5.3
KSH				pP	sP	01 27 38.9	+10
KSH				PP	PP	01 29 36.1	+7.7
KSH				S	S	01 35 09.6	+4.6
KSH				sS	sS	01 35 21.9	+14
NIL	Nilore	54.35	306	P	P	01 27 27.4	+0.4
YAK	Yakutsk	54.80	3	P	P	01 27 28.8	-0.9
MA2	Magadan	55.81	16	LR	LR	01 49 47.3	
	comp=Z,27nm,20.9s,baz=4.0,slow=34						
ZALV	Zalesovo Beam	56.64	333	P	P	01 27 40.8	-2.3
	comp=Z,0.5nm,0.6s,baz=139,slow=9.6,SNR=1.8						
ZALV				LR	LR	01 51 50.7	
	comp=Z,16nm,19.4s,baz=82,slow=36						
KURK	Kurchatov	57.81	327	P	P	01 27 51.8	+0.4
KURK				IAmb	IAmb	01 28 31.0	
	comp=Z,8.1nm,1.4s						
KBL	Kabul	57.95	306	P	P	01 27 52.6	-0.4
KBL				IAmb	IAmb	01 28 24.2	
	comp=Z,8.8nm,1.6s						
KK31	Karatay Array	59.43	316	P	P	01 28 01.8	-1.1
KKAR	Karatay Array	59.43	316	P	P	01 28 01.8	-1.1
BRVK	Borovoye	63.46	327	P	P	01 28 30.5	+0.5
BRVK				IAmb	IAmb	01 28 45.5	
	comp=Z,3.8nm,0.9s						
GEYT	Alibeck	67.28	308	LR	LR	02 01 24.3	
	comp=Z,44nm,18.1s,baz=280,slow=39						
ABKAR	Akbulak array	68.28	320	P	P	01 29 01.5	+0.4
IMAR	Indian Mountai	79.92	24	P	P	01 30 07.8	-1.0
BPAW	Bear Paw Mtn.	80.97	26	P	P	01 30 13.9	-0.6
MLY	Manley	81.11	25	P	P	01 30 14.7	-0.6
MCK	McKinley	81.87	27	P	P	01 30 18.4	-1.0
ILAR	Eielson Array	82.75	26	P	P	01 30 21.9	-1.9
	comp=Z,0.9nm,1.0s,baz=235,slow=4.7,SNR=7.3						
ILAR	Eielson Array	82.75	26	P	P	01 30 23.5	-0.4
SCRK	Sand Creek	84.05	26	P	P	01 30 31.1	+0.3
BCAR	Beaver Creek A	85.12	27	P	P	01 30 35.3	-0.8
BRTR	Keskin Array B	86.38	309	LR	LR	02 15 05.5	
	comp=Z,21nm,18.0s,baz=64,slow=40						
SBA	Scott Base	88.05	172	P	P	01 30 47.0	-2.9
MLR	Muntele Rosu	91.11	316	LR	LR	02 15 07.8	
	comp=Z,36nm,18.2s,baz=307,slow=38						
NOA	NORSAR Array B	94.84	333	LR	LR	02 16 32.2	
	comp=Z,46nm,19.2s,baz=5.0,slow=37						
YKA	Yellowknife Ar	97.07	24	P	P	01 31 29.8	-2.3
	comp=Z,0.2nm,0.8s,baz=290,slow=3.6,SNR=3.2						
GERES	GERESS Array B	98.20	322	LR	LR	02 19 18.7	
	comp=Z,30nm,18.1s,baz=330,slow=37						

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*TAP **23** 01:52:21.6, 23°.95N×122°.27E, h9^{km}, ML3.5, D*

*JMA **23** 01:52:22.3±0.2, 23°.92N×122°.30E, h21^{km}±4^{km}, M3.2*

ISC 23 01:52:22.1±1.0, 23°.88N±0°.02×122°.31E±0°.02, h29^{km}±11^{km}, n106, σ0^s.79/195, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENLB	Shoufeng	0.64	272	*e*P	Pb	01 52 34.4	-0.5
	baz=265						
ENLB				*e*S	Sb	01 52 43.7	+0.1
	baz=265						
HWA	Hwalien	0.65	279	*e*S	Sn	01 52 44.2	-0.4
	baz=272						
TWD	Chiawan	0.68	287	*e*P	Pn	01 52 35.1	-0.7
	baz=281						
TWD				S	Sb	01 52 44.4	-0.1
	baz=281						
EOS1	EOS1	0.69	346	P	Pn	01 52 34.6	-1.3
	baz=347						
EOS1				S	Sb	01 52 43.3	-1.5
	baz=347						
NACB	Ninganchiao	0.71	295	P	Pn	01 52 35.3	-0.9
	baz=289						
NACB				S	Sb	01 52 45.5	0.0
	baz=289						
ENA	Nanau	0.75	317	*e*P	Pn	01 52 35.5	-1.3
	baz=314						
ENA				*e*S	Sn	01 52 47.0	-0.3
	baz=314						
ESL	Shilin	0.80	266	*e*P	Pn	01 52 37.0	-0.4
	baz=259						
ESL				*e*S	Sn	01 52 47.9	-0.5
	baz=259						
JYNG	Yonagunijimaku	0.82	46	P	Pn	01 52 37.1	-0.6
JYNG				S	Sn	01 52 46.6	-2.2
ETLH	Xiulin Townshi	0.82	294	P	Pn	01 52 37.0	-0.8
	baz=289						
ETLH				*e*S	Sn	01 52 48.0	-1.1
	baz=289						
EGFH	Guangfu	0.83	256	*e*P	Pb	01 52 38.0	0.0
	baz=249						
EGFH				*e*S	Sb	01 52 49.9	+1.1
	baz=249						
TWC	Suao	0.84	330	P	Pn	01 52 36.5	-1.4
	baz=330						
TWC				*e*S	Sn	01 52 47.0	-2.3
	baz=330						
YOJ	Yonaguni jima	0.87	48	*e*P	Pn	01 52 37.8	-0.6
	baz=52						
YOJ				*e*S	Sn	01 52 48.3	-1.8
	baz=52						
YOJ	Yonaguni jima	0.87	48	P	Pn	01 52 38.3	-0.1
YOJ				S	Sn	01 52 48.2	-1.8
HGSD	Ruisui	0.89	245	*e*P	Pb	01 52 38.7	-0.4
	baz=239						
EHY	Hungye	0.97	248	*e*P	Pb	01 52 40.7	+0.3
	baz=242						
EHY				*e*S	Sb	01 52 53.8	+0.8
	baz=242						
WHF	Hehuan Shan	0.99	286	*e*P	Pn	01 52 40.0	-0.4
	baz=281						
WHF				*e*S	Sn	01 52 52.6	-1.0
	baz=281						
NNSB	Datong	1.00	303	P	Pn	01 52 40.2	-0.1
	baz=300						
NNSB				*e*S	Sn	01 52 53.4	-0.3
	baz=300						
NNSH	Datong	1.00	303	*e*P	Pn	01 52 40.2	-0.2
	baz=300						
NNSH				S	Sn	01 52 53.5	-0.2
	baz=300						
ENTT	Nioudou	1.02	319	*e*P	Pn	01 52 40.5	+0.1
	baz=316						
ENTT				*e*S	Sn	01 52 54.0	+0.3
	baz=316						
NNS	Nan Shan	1.02	304	P	Pn	01 52 40.4	-0.2
	baz=300						
NNS				*e*S	Sn	01 52 53.1	-0.9
	baz=300						
ILA	Ilan	1.02	330	*e*P	Pn	01 52 40.5	0.0
	baz=329						
NDT	Datong Townshi	1.02	315	P	Pn	01 52 40.5	0.0
	baz=313						
NDT				*e*S	Sn	01 52 54.5	+0.6
	baz=313						
TWE	Neicheng	1.02	325	P	Pn	01 52 40.8	+0.3
	baz=324						
TWE				S	Sn	01 52 53.4	-0.5
	baz=324						
OWD	Renai	1.04	274	*e*P	Pn	01 52 40.7	-0.1
	baz=270						
OWD				*e*S	Sn	01 52 54.4	0.0
	baz=270						
YULB	Yu-li	1.04	243	*e*P	Pb	01 52 41.5	-0.1
	baz=237						
YULB				*e*S	Sb	01 52 55.3	+0.4
	baz=237						
CHGB	Renai	1.05	280	*e*P	Pn	01 52 41.0	-0.1
	baz=276						
CHGB				*e*S	Sn	01 52 55.0	+0.2
	baz=276						
TWF1	Yuli	1.06	241	*e*P	Pb	01 52 42.1	+0.2
	baz=235						
TWF1				*e*S	Sb	01 52 56.1	+0.7
	baz=235						
NTC	Toucheng	1.06	336	*e*P	Pn	01 52 41.0	-0.1
	baz=335						
NTC				*e*S	Sn	01 52 55.5	+0.6
	baz=335						
SLBB	Yuanshan	1.06	325	P	Pn	01 52 40.7	-0.5
	baz=324						
SLBB				*e*S	Sn	01 52 54.9	-0.1
	baz=324						
VWDT	VWDT	1.07	264	*e*P	Pb	01 52 41.8	-0.3
	baz=259						
VWDT				*e*S	Sb	01 52 55.9	+0.2
	baz=259						
TDCB	Techi	1.11	290	*e*P	Pn	01 52 42.4	+0.5
	baz=286						
TDCB				*e*S	Sb	01 52 56.9	-0.2
	baz=286						
FULB	Fuli	1.15	234	*e*P	Pb	01 52 42.7	-0.7
	baz=230						
FULB				*e*S	Sb	01 52 58.4	+0.5
	baz=230						
NWLT	Wulai	1.16	321	P	Pn	01 52 42.5	+0.1
	baz=319						
NWLT				*e*S	Sn	01 52 57.8	+0.5
	baz=319						
YHNB	Yeheng	1.16	313	*e*P	Pn	01 52 42.6	+0.1
	baz=311						
YHNB				*e*S	Sn	01 52 57.1	-0.2
	baz=311						
CHKT	Chengkung	1.16	228	*e*S	Sb	01 52 58.4	+0.2
	baz=224						
TWB1	Santiao Chiao	1.16	346	*e*P	Pn	01 52 42.3	-0.1
	baz=346						
TWB1				*e*S	Sn	01 52 57.6	+0.3
	baz=346						
NSK	Sanguang	1.17	313	*e*P	Pn	01 52 42.7	+0.1
	baz=311						
NSK				*e*S	Sn	01 52 57.7	0.0
	baz=311						
TIPB	Shuangxi	1.17	338	*e*P	Pn	01 52 42.4	-0.2
	baz=338						
TIPB				*e*S	Sn	01 52 57.2	-0.5
	baz=338						
SSLB	Suanglung	1.24	266	*e*P	Pb	01 52 44.6	-0.4
	baz=262						
SSLB				*e*S	Sb	01 53 00.5	0.0
	baz=262						

DPDB	**Guoxing** baz=273	**1.27**	**277**	*e*P	**Pb**	**01 52 44.7**	**-0.7**
DPDB	baz=273			*e*S	**Sb**	**01 53 02.3**	**+0.8**
TWA	**Mucha** baz=328	**1.28**	**329**	*e*P	**Pn**	**01 52 44.8**	**+0.8**
TWA	baz=328			*e*S	**Sn**	**01 53 01.4**	**+1.1**
NWF	**Wu-fen Shan** baz=338	**1.28**	**338**	*e*P	**Pn**	**01 52 44.3**	**+0.1**
NWF	baz=338			S	**Sn**	**01 53 00.6**	**+0.2**
WFSB	**Wu-fen Shan** baz=338	**1.28**	**338**	*e*P	**Pn**	**01 52 44.3**	**+0.3**
WFSB	baz=338			*e*S	**Sn**	**01 53 00.3**	**0.0**
SMLT	**Sun Moon Lake** baz=266	**1.29**	**271**	*e*P	**Pn**	**01 52 44.9**	**+0.7**
SMLT	baz=266			*e*S	**Sb**	**01 53 01.5**	**-0.5**
NHDH	**Xindian Distri** baz=325	**1.29**	**327**	*e*P	**Pn**	**01 52 45.2**	**+1.0**
NHDH	baz=325			*e*S	**Sb**	**01 53 02.1**	**+0.1**
WHP	**Taichung City** baz=284	**1.30**	**288**	*e*P	**Pb**	**01 52 45.9**	**-0.1**
WHP	baz=284			*e*S	**Sb**	**01 53 02.2**	**-0.3**
TATO	**Taipei** baz=325	**1.32**	**326**	*e*P	**Pn**	**01 52 45.3**	**+0.7**
TATO	baz=325			S	**Sn**	**01 53 01.6**	**+0.3**
TYC	**Yuchr** baz=267	**1.33**	**271**	*e*P	**Pn**	**01 52 45.4**	**+0.7**
TYC	baz=267			*e*S	**Sb**	**01 53 04.0**	**+1.1**
WHYT	**Xinyi Township** baz=258	**1.34**	**263**	*e*P	**Pb**	**01 52 46.7**	**0.0**
WHYT	baz=258			*e*S	**Sb**	**01 53 04.9**	**+1.4**
TAP1	**Taipei** baz=327	**1.36**	**329**	*e*P	**Pn**	**01 52 46.3**	**+1.2**
TAP1	baz=327			*e*S	**Sn**	**01 53 02.6**	**+0.5**
WLTB	**Daxi** baz=313	**1.36**	**316**	*e*P	**Pb**	**01 52 46.5**	**-0.5**
WLTB	baz=313			*e*S	**Sb**	**01 53 04.4**	**+0.3**
ELDTW	**Lidau** baz=236	**1.37**	**240**	*e*P	**Pn**	**01 52 45.7**	**+0.4**
ELDTW	baz=236			*e*S	**Sb**	**01 53 03.6**	**-0.6**
TAP	**Taipei** baz=327	**1.37**	**328**	*e*P	**Pb**	**01 52 46.5**	**-0.5**
IRIF	**Iriomote-Funau**	**1.38**	**70**	P	**Pb**	**01 52 47.3**	**+0.1**
IRIF				S	**Sb**	**01 53 04.3**	**-0.2**
HATJ	**Hateruma jima**	**1.38**	**82**	P	**Pb**	**01 52 46.8**	**-0.5**
HATJ				*e*S	**Sb**	**01 53 04.4**	**-0.2**
TWH	**Lutao** baz=209	**1.39**	**213**	*e*P	**Pb**	**01 52 46.8**	**-0.6**
LIOB	**Emei** baz=301	**1.40**	**303**	*e*P	**Pb**	**01 52 47.7**	**0.0**
LIOB	baz=301			S	**Sb**	**01 53 05.4**	**+0.2**
NSTT	**Nanjuang** baz=300	**1.41**	**302**	*e*P	**Pb**	**01 52 47.6**	**-0.1**
NSTT	baz=300			*e*S	**Sb**	**01 53 05.1**	**-0.2**
ALS	**Alishan** baz=251	**1.42**	**255**	*e*P	**Pb**	**01 52 48.0**	**-0.2**
ALS	baz=251			*e*S	**Sb**	**01 53 06.7**	**+0.7**
YM01	**YM01** baz=331	**1.43**	**332**	*e*P	**Pn**	**01 52 47.2**	**+1.0**
YM01	baz=331			*e*S	**Sb**	**01 53 06.2**	**+0.2**
YM10	**YM10** baz=331	**1.44**	**332**	*e*P	**Pn**	**01 52 46.5**	**+0.2**
YM10	baz=331			*e*S	**Sb**	**01 53 06.2**	**-0.2**
WJS	**Zhushan** baz=264	**1.45**	**268**	*e*P	**Pb**	**01 52 48.7**	**+0.3**
WJS	baz=264			*e*S	**Sb**	**01 53 07.5**	**+1.2**
YM11	**YM11** baz=332	**1.45**	**333**	*e*P	**Pb**	**01 52 47.8**	**-0.7**
YM11	baz=332			*e*S	**Sn**	**01 53 05.6**	**+1.2**
YM05	**YM05** baz=331	**1.45**	**332**	*e*P	**Pn**	**01 52 46.8**	**+0.3**
YM04	**YM04** baz=330	**1.45**	**331**	*e*P	**Pn**	**01 52 46.9**	**+0.4**
YM04	baz=330			*e*S	**Sb**	**01 53 06.4**	**-0.2**
TWS1	**Kuangyinshan** baz=325	**1.46**	**327**	*e*P	**Pn**	**01 52 47.2**	**+0.6**
TWS1	baz=325			*e*S	**Sn**	**01 53 06.2**	**+1.5**
TWQ1	**Liyutan** baz=285	**1.48**	**289**	*e*P	**Pb**	**01 52 48.9**	**-0.1**
TWQ1	baz=285			*e*S	**Sb**	**01 53 08.3**	**+1.0**
WNT	**Mingjian** baz=266	**1.48**	**270**	*e*P	**Pb**	**01 52 48.7**	**-0.3**
WNT	baz=266			*e*S	**Sb**	**01 53 08.5**	**+1.0**
ANP	**Anpu** baz=331	**1.49**	**331**	*e*P	**Pn**	**01 52 47.6**	**+0.6**
NCUH	**Zhongli** baz=315	**1.49**	**317**	*e*P	**Pn**	**01 52 47.7**	**+0.8**
NCUH	baz=315			*e*S	**Sb**	**01 53 07.1**	**-0.6**
NCU	**National Centr** baz=315	**1.49**	**317**	*e*P	**Pn**	**01 52 47.9**	**+0.9**
NCU	baz=315			*e*S	**Sb**	**01 53 07.7**	**+0.1**
SBCB	**Hsinchu** baz=305	**1.51**	**307**	*e*P	**Pb**	**01 52 49.1**	**-0.4**
SBCB	baz=305			*e*S	**Sb**	**01 53 08.6**	**+0.3**
TCU	**Taichung** baz=277	**1.51**	**281**	*e*P	**Pb**	**01 52 49.4**	**-0.1**
TCU	baz=277			*e*S	**Sb**	**01 53 08.9**	**+0.6**
CHN5	**Tsauling** baz=256	**1.52**	**260**	*e*P	**Pb**	**01 52 49.5**	**-0.2**
CHN5	baz=256			*e*S	**Sb**	**01 53 09.3**	**+0.8**
NMLH	**Miaoli** baz=293	**1.53**	**296**	*e*P	**Pb**	**01 52 49.2**	**-0.6**
NMLH	baz=293			*e*S	**Sb**	**01 53 09.3**	**+0.5**
TWY	**Chenhua** baz=335	**1.53**	**335**	*e*P	**Pn**	**01 52 48.6**	**+1.1**
TWY	baz=335			*e*S	**Sb**	**01 53 08.4**	**-0.5**
TWGBT	**Beinan** baz=224	**1.54**	**227**	*e*P	**Pb**	**01 52 49.2**	**-0.8**
TWGBT	baz=224			*e*S	**Sb**	**01 53 09.2**	**0.0**
TWG	**Pinlang** baz=224	**1.55**	**227**	*e*P	**Pb**	**01 52 49.1**	**-1.0**
TWG	baz=224			*e*S	**Sb**	**01 53 08.6**	**-0.7**
PTSB	**Yuanli** baz=288	**1.57**	**292**	*e*P	**Pb**	**01 52 49.9**	**-0.6**
PTSB	baz=288			*e*S	**Sb**	**01 53 09.8**	**-0.1**
WDJ	**Dajia District** baz=284	**1.59**	**287**	*e*S	**Sb**	**01 53 10.8**	**+0.2**
JKRS	**Kuro-shima**	**1.60**	**77**	P	**Pb**	**01 52 50.6**	**-0.4**
JKRS				*e*S	**Sb**	**01 53 11.0**	**+0.2**
WCHH	**Zhanghua** baz=274	**1.61**	**278**	*e*P	**Pb**	**01 52 50.9**	**-0.3**
WCHH	baz=274			*e*S	**Sb**	**01 53 11.5**	**+0.4**
WDLH	**Douliu** baz=260	**1.63**	**264**	*e*P	**Pb**	**01 52 51.2**	**-0.3**
WDLH	baz=260			*e*S	**Sb**	**01 53 12.3**	**+0.7**
TPUB	**Ta-pu** baz=246	**1.64**	**250**	*e*P	**Pb**	**01 52 51.5**	**-0.3**
TPUB	baz=246			*e*S	**Sb**	**01 53 12.9**	**+0.9**
CHN4	**Tsaushan** baz=248	**1.66**	**252**	*e*P	**Pb**	**01 52 52.5**	**+0.6**
CHN4	baz=248			*e*S	**Sb**	**01 53 13.4**	**+1.0**
WTP	**Ta-pu** baz=244	**1.67**	**248**	*e*S	**Sb**	**01 53 13.4**	**+0.4**
CHN2	**Minshiung** baz=255	**1.71**	**259**	*e*S	**Sb**	**01 53 15.0**	**+1.0**
JIJ	**Ishigaki jima**	**1.75**	**74**	P	**Pn**	**01 52 51.5**	**+1.0**
JIJ				S	**Sn**	**01 53 13.0**	**+1.2**
PCYT	**Pengchaiyu** baz=354	**1.76**	**353**	*e*P	**Pn**	**01 52 52.3**	**+1.7**
SLGT	**Liugui** baz=237	**1.76**	**240**	*e*P	**Pb**	**01 52 53.3**	**-0.5**
SLGT	baz=237			*e*S	**Sb**	**01 53 15.9**	**+0.5**
CHY	**Chiayi** baz=254	**1.77**	**258**	*e*S	**Sb**	**01 53 15.8**	**+0.2**
SGST	**Jiashian** baz=240	**1.77**	**244**	*e*P	**Pb**	**01 52 53.4**	**-0.5**
SGST	baz=240			*e*S	**Sb**	**01 53 15.8**	**+0.1**
CHN1	**Nanshi** baz=244	**1.77**	**247**	*e*P	**Pb**	**01 52 53.8**	**-0.1**
CHN1	baz=244			*e*S	**Sb**	**01 53 16.1**	**+0.4**
TWK	**Hsinying** baz=247	**1.77**	**250**	*e*P	**Pb**	**01 52 53.6**	**-0.4**
TWK	baz=247			*e*S	**Sb**	**01 53 15.7**	**-0.2**
RLNB	**Erlin** baz=267	**1.78**	**271**	*e*P	**Pb**	**01 52 53.5**	**-0.6**
RLNB	baz=267			*e*S	**Sb**	**01 53 16.1**	**+0.1**
SNST	**Tainan City** baz=245	**1.78**	**249**	*e*P	**Pb**	**01 52 53.4**	**-0.7**
SNST	baz=245			*e*S	**Sb**	**01 53 16.4**	**+0.4**
SSD	**Sandimen** baz=231	**1.91**	**234**	*e*P	**Pb**	**01 52 55.3**	**-0.9**
SSD	baz=231			*e*S	**Sb**	**01 53 19.6**	**-0.1**
JISG	**Ishigakijimahi**	**1.96**	**68**	P	**Pn**	**01 52 54.6**	**+1.2**
MASBT	**Mashibuluo** baz=228	**1.99**	**231**	*e*P	**Pb**	**01 52 56.4**	**-1.3**
MASBT	baz=228			*e*S	**Sb**	**01 53 20.5**	**-1.5**
EAST	**Anshuo** baz=219	**2.00**	**222**	*e*P	**Pb**	**01 52 56.9**	**-1.0**
EAST	baz=219			*e*S	**Sb**	**01 53 21.8**	**-0.7**
TWM1	**Shoushan** baz=236	**2.02**	**239**	*e*S	**Sb**	**01 53 23.1**	**+0.1**
SSPT	**Xinbi** baz=226	**2.12**	**229**	*e*S	**Sb**	**01 53 25.0**	**-0.6**
SCZT	**Fangliau** baz=223	**2.16**	**226**	*e*P	**Pb**	**01 52 58.4**	**-2.1**
SCZT	baz=223			*e*S	**Sb**	**01 53 26.3**	**-0.5**
JTJ	**Tarama**	**2.32**	**70**	P	**Pn**	**01 53 00.3**	**+2.0**
JTJ				*e*S	**Sn**	**01 53 28.3**	**+2.5**
HEN	**Hengchun** baz=215	**2.36**	**218**	*e*S	**Sb**	**01 53 30.2**	**-2.4**
TWKBT	**Hengchun** baz=213	**2.37**	**216**	*e*P	**Pn**	**01 53 01.0**	**+2.0**
TWKBT	baz=213			*e*S	**Sb**	**01 53 30.4**	**-2.5**

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*IDC **23** 01:55:03.8±3.7, 36°.23N×71°.19E, h128^{km}±30^{km}, mb3.4/7, mb1 3.4/11, mb1mx3.1/58, mbtmp3.8/11, MS3.3/1, Ms1 3.3/1, ms1mx2.4/31, Error ellipse: s-maj=33.8km s-min=22.8km az=169.0*

*NNC **23** 01:55:07.7±3.4, 36°.98N×70°.85E, h0^{km}, mb4.3, mpv4.0, Error ellipse: s-maj=32.8km s-min=15.5km az=149.0*

ISC 23 01:55:07.5±0.6, 36°.49N±0°.05×71°.20E±0°.05, h188^{km}, n42, σ2^{s}.66/53, mb3.3/6, 3C-9D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.72**	**168**	P	**Pn**	**01 55 52.1**	**-1.3**
CEP				S	**Sn**	**01 56 25.0**	**-4.1**
CHCP	**Chirah Chowk**	**3.29**	**148**	P	**Pn**	**01 55 59.7**	**-0.4**
THW	**Thamme Wali**	**3.71**	**173**	P	**Pn**	**01 56 03.9**	**-1.4**
THN	**Thein Dam**	**5.50**	**136**	*e*P	**Pn**	**01 56 27.5**	**-0.6**
THN				*e*S	**Sn**	**01 57 27.5**	**-4.1**
AML	**Almayashu** SNR=38	**5.96**	**18**	P	**Pn**	**01 56 33.8**	**-0.5**
DHRM	**DHARAMSHALA**	**5.97**	**134**	*e*P	**Pn**	**01 56 33.2**	**-1.2**
DHRM				*e*S	**Sn**	**01 57 38.9**	**-4.1**
DHRM	comp=N,136nm,0.2s			IAML		01 57 41.6	
DHRM	comp=E,185nm,0.4s			IAML		01 57 42.9	
UCH	**Uchtor** SNR=10	**6.28**	**23**	P	**Pn**	**01 56 39.6**	**+0.9**
EKS2	**Erkin-Say** SNR=9.9	**6.48**	**17**	P	**Pn**	**01 56 42.6**	**+1.7**
KK31	**Karatay Array** comp=E,7.1nm,0.4s,baz=183,slow=13,SNR=170	**6.63**	**356**	⇓P	**Pn**	**01 56 38.9**	**-3.9**
KK31	comp=E,4.4nm,0.3s,baz=194,slow=22,SNR=16			⇑S	**Sn**	**01 57 53.0**	**-5.1**
AAK	**Ala-Archa** comp=E,2.8nm,0.3s,baz=195,slow=8.4,SNR=39	**6.65**	**21**	P	**Pn**	**01 56 42.7**	**-0.4**
AAK	comp=E,0.6nm,0.3s,baz=198,slow=14,SNR=4.1			S	**Sn**	**01 57 54.5**	**-4.2**
AAK	**Ala-Archa** SNR=15	**6.65**	**21**	P	**Pn**	**01 56 45.1**	**+2.0**
AAK	**Ala-Archa** comp=E,6.2nm,0.5s	**6.65**	**21**	⇑P	**Pn**	**01 56 44.1**	**+1.0**
AAK	comp=E,30nm,0.8s			⇓S	**Sn**	**01 57 54.6**	**-4.2**
KBK	**Karagaybulak** SNR=10	**6.81**	**24**	P	**Pn**	**01 56 47.4**	**+2.2**
CHMS	**Chumysh** SNR=5.5	**7.05**	**22**	P	**Pn**	**01 56 50.2**	**+1.9**
CHMS	**Chumysh** comp=E,9.1nm,0.8s	**7.05**	**22**	⇓P	**Pn**	**01 56 49.7**	**+1.4**
CHMS	comp=E,12nm,0.8s			⇑S	**Sn**	**01 58 04.7**	**-3.5**
SMLA	**Simla**	**7.29**	**135**	*e*P	**Pn**	**01 56 50.6**	**-0.9**
SMLA				*e*S	**Sn**	**01 58 08.6**	**-5.3**
JOSI	**Joshimath**	**9.14**	**128**	*e*P	**Pn**	**01 57 15.7**	**-0.2**
KUDL	**Kundal**	**9.44**	**150**	*e*P	Pn	01 57 04.5	-15
KUDL				*e*S	Sn	01 58 43.1	-22
GEYT	**Alibeck** comp=E,0.7nm,0.3s,baz=94,slow=12,SNR=7.5	**10.54**	**282**	P	**Pn**	**01 57 32.0**	**-1.9**
GEYT	comp=E,0.5nm,0.3s,baz=102,slow=18,SNR=3.3			S	**Sn**	**01 59 24.6**	**-6.6**
GYA0B	**ALIBECK ARRAY**	**10.54**	**282**	⇓P	**Pn**	**01 57 33.4**	**-0.5**
GYA0B				⇓S	**S**	**01 59 32.1**	**+0.3**
MKAR	**Makanchi Array** comp=E,0.1nm,0.3s,baz=211,slow=9.3,SNR=6.1	**13.21**	**35**	P	**Pn**	**01 58 08.9**	**+1.0**
DANN	**Dangsing** comp=E,21nm,0.3s	**13.35**	**124**	*e*P	**Pn**	**01 58 09.0**	**-1.0**
DMN	**Daman** comp=E,20nm,0.5s	**14.73**	**123**	*e*P	**Pn**	**01 58 27.6**	**+0.4**
PKIN	**Phulchoki** comp=E,17nm,0.5s	**14.95**	**122**	*e*P	**Pn**	**01 58 30.5**	**+0.6**
PKI	**Pulchoki** comp=E,20nm,0.5s	**14.96**	**122**	*e*P	**Pn**	**01 58 30.2**	**+0.1**
KURBB	**Kurchatov Arra** comp=E,0.0nm,0.3s,baz=206,slow=10.0,SNR=5.4	**15.08**	**18**	P	**Pn**	**01 58 30.3**	**-0.8**
AB31	**Akbulak array** comp=E,1.5nm,0.6s,baz=148,slow=12,SNR=39	**15.17**	**331**	⇓P	**P**	**01 58 34.1**	**+1.2**
AB31	comp=E,3.2nm,0.7s,baz=148,slow=23,SNR=12			⇓S	**S**	**02 01 18.7**	**-2.9**
JIRN	**Jiri** comp=E,85nm,0.4s	**15.44**	**121**	*e*P	**P**	**01 58 36.8**	**+0.4**
RAMN	**Ramite** comp=E,16nm,0.4s	**16.17**	**122**	*e*P	**Pn**	**01 58 45.1**	**+0.4**
BVAR	**Borovoye Array** comp=E,0.2nm,0.3s,baz=155,slow=11,SNR=4.6	**16.55**	**358**	P	**Pn**	**01 58 48.8**	**+0.1**
TAPN	**Taplejung** comp=E,23nm,0.5s	**16.70**	**118**	*e*P	**Pn**	**01 58 52.5**	**+1.4**
ODAN	**Odare** comp=E,29nm,0.8s	**16.77**	**120**	*e*P	**Pn**	**01 58 53.2**	**+1.3**
AKTO	**Aktyubinsk** comp=E,0.3nm,0.3s,baz=127,slow=8.3,SNR=8.8	**16.87**	**330**	P	**Pn**	**01 58 54.5**	**+1.8**
AKTO	comp=E,0.1nm,0.3s,baz=127,slow=14,SNR=3.9			S	**S**	**02 01 54.8**	**-3.0**
AKTO	**Aktyubinsk** comp=E,5.5nm,1.1s	**16.87**	**330**	⇓P	**Pn**	**01 58 54.6**	**+1.9**
AKTO	comp=E,10.0nm,1.5s			⇓S	**Sn**	**02 02 02.1**	**-0.1**
ZALV	**Zalesovo Beam** comp=E,4.2nm,0.6s,baz=224,slow=12,SNR=16	**19.86**	**24**	P	**Pn**	**01 59 26.8**	**-1.1**
FINES	**FINESS Array B** comp=E,2.4nm,1.0s,baz=114,slow=9.6,SNR=1.9	**37.59**	**326**	P	**P**	**02 02 07.7**	**+4.2**
HFS	**Hagfors** comp=E,1.5nm,0.7s,baz=96,slow=13,SNR=1.9	**43.18**	**322**	P	**P**	**02 02 53.5**	**+4.1**
NOA	**NORSAR Array B** comp=E,0.5nm,0.6s,baz=102,slow=7.7,SNR=1.2	**44.49**	**323**	P	**P**	**02 03 03.4**	**+3.5**
ASAJ	**Asahikawa** comp=E,28nm,19.0s,baz=107,slow=38	**53.42**	**58**	LR	LR	02 29 12.3	
TORD	**Torodi Ar. Bea** comp=E,0.3nm,0.7s,baz=60,slow=4.6,SNR=1.5	**65.88**	**269**	P	**P**	**02 05 35.5**	**+2.1**
YKA	**Yellowknife Ar** comp=E,0.3nm,0.7s,baz=352,slow=4.8,SNR=6.8	**81.25**	**3**	P	**P**	**02 07 06.5**	**+4.4**
ASAR	**Alice Springs** comp=E,0.3nm,0.3s,baz=308,slow=6.7,SNR=2.7	**84.11**	**125**	P	**P**	**02 07 20.3**	**+2.8**

THE 23 02:01:14.1, 38°.23N×20°.38E, h9^{km}, ML2.3/9, Error ellipse: s-maj=1.0km s-min=0.3km az=242.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGT1	**Agia Thekli**	**0.02**	**3**	P	Pg	02 01 15.6	-0.1
AGT1	20μm,0.1s			S	Sg	02 01 16.6	-0.2
CHV1	**Chavriata, Kef**	**0.04**	**181**	P	Pg	02 01 16.0	+0.2
CHV1	13μm,0.1s			S	Sg	02 01 17.4	+0.4
LXR1	**Lixouri, Cepha**	**0.05**	**121**	P	Pg	02 01 15.9	0.0
LXR1				S	Sg	02 01 17.2	0.0
ARG2	**Argostoli**	**0.10**	**121**	P	Pg	02 01 16.5	0.0
ARG2	10μm,0.1s			S	Sg	02 01 18.2	+0.1
VLS	**Valsamata**	**0.17**	**107**	P	Pg	02 01 17.4	-0.3
VLS	3μm,0.1s			S	Sg	02 01 20.1	-0.1
VSK1	**VASILIKIADES**	**0.23**	**38**	P	Pg	02 01 18.8	0.0
VSK1	1μm,0.2s			S	Sg	02 01 22.6	+0.6
FSK	**Fiskardo**	**0.27**	**31**	P	Pg	02 01 19.4	-0.1
FSK	618nm,0.1s			S	Sg	02 01 23.7	+0.5
KFL	**Anninata**	**0.34**	**110**	P	Pg	02 01 20.6	-0.2
KFL	348nm,0.3s			S	Sg	02 01 26.1	+0.8
EVGI	**Lefkada island**	**0.45**	**29**	P	Pg	02 01 22.7	-0.1
EVGI				S	Sg	02 01 29.6	+0.9
LKD2	**Lefkada island**	**0.60**	**21**	P	Pg	02 01 25.1	-0.6
LKD2	52nm,0.2s			S	Sg	02 01 34.4	+0.8
TSLK	**Tsoukalades, L**	**0.63**	**20**	P	Pg	02 01 25.9	-0.5
TSLK	62nm,0.4s			S	Sg	02 01 35.1	+0.4
PVO	**Paravola**	**0.98**	**66**	P	Pg	02 01 32.6	-0.3
DRO	**Drossia**	**1.08**	**104**	P	Pg	02 01 34.2	-0.7

ATH 23 02:02:10.4, 38°.39N×22°.45E, h6^{km}±3^{km}, ML1.5/8, Error ellipse: s-maj=3.5km s-min=0.8km az=52.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DSF	**Desfina**	**0.06**	**71**	P	Pg	02 02 12.3	+0.2
DSF				S	Sg	02 02 13.3	-0.1
DSF	comp=N,8738μm,0.1s			AML	AML	02 02 13.6	
DSF	comp=E,3537μm,0.1s			AML	AML	02 02 14.6	
DLFA	**Delphi**	**0.09**	**21**	P	Pg	02 02 12.5	-0.1
DLFA				S	Sg	02 02 13.6	-0.5
DLFA	comp=E,1000μm,0.1s			AML	AML	02 02 14.0	
DLFA	comp=N,614μm,0.1s			AML	AML	02 02 14.4	
KALE	**Kalithea**	**0.25**	**270**	P	Pg	02 02 15.4	+0.1
KALE				S	Sg	02 02 19.6	+1.0
KALE	comp=N,204μm,0.2s			AML	AML	02 02 20.2	
KALE	comp=E,178μm,0.2s			AML	AML	02 02 20.5	
TRIZ	**Trizonia**	**0.30**	**265**	P	Pg	02 02 15.9	-0.4
TRIZ				S	Sg	02 02 20.4	+0.1
SERG	**Sergoula**	**0.31**	**274**	P	Pg	02 02 16.4	-0.1
SERG				S	Sg	02 02 21.4	+0.7
SERG	comp=N,432μm,0.2s			AML	AML	02 02 22.2	
SERG	comp=E,211μm,0.2s			AML	AML	02 02 22.3	
PROD	**Prodromos**	**0.38**	**110**	P	Pg	02 02 18.0	+0.3
PROD				S	Sg	02 02 22.7	0.0
AXAR	**Agios Charalam**	**0.41**	**23**	P	Pg	02 02 18.6	+0.2
AXAR				S	Sg	02 02 24.6	+0.9
AXAR	comp=E,548μm,0.4s			AML	AML	02 02 26.0	
AXAR	comp=N,326μm,0.4s			AML	AML	02 02 28.1	
EFP	**Efpalio**	**0.43**	**275**	P	Pg	02 02 18.5	-0.2
EFP				S	Sg	02 02 25.6	+1.2
EFP	comp=E,62μm,0.2s			AML	AML	02 02 26.4	
EFP	comp=N,93μm,0.3s			AML	AML	02 02 28.3	
ANX	**Ano Chora**	**0.46**	**296**	P	Pg	02 02 19.6	+0.2
ANX				S	Sg	02 02 26.4	+0.9
ANX	comp=N,220μm,0.4s			AML	AML	02 02 28.2	
ANX	comp=E,151μm,0.2s			AML	AML	02 02 29.1	
LKR	**Lokris**	**0.50**	**59**	P	Pg	02 02 19.8	-0.3
LKR				S	Sg	02 02 27.2	+0.6
LKR	comp=E,268μm,0.1s			AML	AML	02 02 28.4	
LKR	comp=N,181μm,0.2s			AML	AML	02 02 28.5	
EVR	**Evrytania**	**0.73**	**316**	P	Pg	02 02 23.7	-0.7

ISC 23 02:14:13.6±0.9, 45°.21N±0°.04×14°.63E±0°.07, h11^{km}, n10, σ2^{s}.19/14, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIY	**Rijeka**	**0.15**	**318**	*i* Pg	**Pg**	**02 14 18.2**	**+1.2**
RIY				Sg	**Sg**	**02 14 22.1**	**+2.5**
GBRS	**Gornja Briga**	**0.34**	**22**	*i* Pg	**Pn**	**02 14 22.8**	**-1.8**
KNDS	**Knezji Dol**	**0.36**	**331**	*i* Pg	**Pb**	**02 14 22.1**	**0.0**
BOJS	**Bojanci**	**0.53**	**56**	*i* Pg	**Pn**	**02 14 25.6**	**-1.4**
SKDS	**Skadanscina**	**0.55**	**308**	*i* Pg	**Pn**	**02 14 24.1**	**-3.3**
NVLJ	**Novalja**	**0.67**	**165**	*i* Pg	**Pg**	**02 14 24.4**	**-2.1**
NVLJ				Sg	**Sg**	**02 14 33.5**	**-1.9**
OZLJ	**Ozalj**	**0.71**	**55**	Sg	**Sn**	**02 14 41.5**	**+0.9**
DUGI	**Dugi Otok**	**1.26**	**166**	*e*Pg	**Pn**	**02 14 38.0**	**+0.9**
DUGI				Sg	**Sn**	**02 14 53.2**	**-0.8**
MORI	**Morici**	**1.55**	**150**	*e*Pn	**Pn**	**02 14 42.4**	**+1.3**
MORI				Sg	**Sn**	**02 15 04.1**	**+3.0**
ZIRJ	**Zirje**	**1.72**	**155**	Sg	**Sn**	**02 15 08.1**	**+2.8**

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*IDC **23** 02:20:46.6±0.7, 7°.02S×156°.02E, h56^{km}±4^{km}, mb3.9/15, mb1 4.0/16, mb1mx3.8/40, mbtmp4.2/16, MS3.3/9, Ms1 3.3/9, ms1mx3.1/25, Error ellipse: s-maj=21.3km s-min=13.6km az=128.0*

*NEIC **23** 02:20:51.4±1.3, 7°.02S±0°.09×155°.93E±0°.06, h95^{km}±6^{km}, mb4.3/14, Error ellipse: s-maj=15.8km s-min=4.4km az=211.0*

ISC 23 02:20:47.8±0.5, 6°.97S±0°.07×155°.96E±0°.06, h62^{km}, n51, σ2^{s}.00/58, mb4.2/20, 1C, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara** 3.8nm,0.3s,baz=236,slow=3.6,SNR=1.5	**4.64**	**122**	P	**Pn**	**02 21 57.4**	**+1.9**
HNR	baz=117,slow=11,SNR=2.5			S	**Sn**	**02 22 54.4**	**+6.3**
HNR	comp=Z,186nm,18.9s,baz=304,slow=42			LR	LR	02 23 56.9	
HNR	**Honiara**	**4.64**	**122**		Pn	02 22 09.1	+14
RABL	**Rabaul**	**4.68**	**306**	Pn	Pn	02 22 01.7	+5.7
KRVT	**Keravat (AS076** 3.3nm,0.3s,baz=146,slow=23,SNR=2.2	**4.72**	**304**	P	**Pn**	**02 22 01.2**	**+4.7**
KRVT	5.0nm,0.3s,baz=246,slow=19,SNR=1.5			S	**Sn**	**02 22 55.5**	**+5.4**
PMG	**Port Moresby** 6.5nm,0.3s,baz=64,slow=9.7,SNR=16	**9.04**	**254**	P	**Pn**	**02 22 56.6**	**+1.0**
PMG	0.9nm,0.3s,baz=180,slow=18,SNR=2.5			S	**Sn**	**02 24 38.4**	**+2.5**
PMG				LR	LR	02 26 13.5	

	comp=Z,202nm,20.7s,baz=50,slow=36						
PMG	**Port Moresby**	**9.04**	**254**		**Pn**	**02 23 00.1**	**+4.4**
CTA	**Charters Tower**	**16.08**	**215**	P	**P**	**02 24 32.3**	**-0.1**
	0.3nm,0.3s,baz=28,slow=12,SNR=7.1						
DZM	**Mont Dzumac**	**18.10**	**147**	P	**Pn**	**02 24 57.0**	**+1.8**
	0.4nm,0.3s,baz=289,slow=18,SNR=2.6						
DZM				LR	LR	02 29 58.4	
	comp=Z,89nm,18.7s,baz=32,slow=31						
DZM	**Mont Dzumac**	**18.10**	**147**	IAmb	IAmb	02 25 23.6	
	comp=Z,51nm,1.7s						
WR0	**Warramunga Arr**	**24.46**	**236**	P	**P**	**02 26 01.4**	**+0.3**
WR0				IAmb	IAmb	02 26 03.1	
	comp=Z,6.5nm,0.8s						
WB0	**Warramunga Arr**	**24.49**	**237**	P	**P**	**02 26 01.6**	**+0.2**
WB0				IAmb	IAmb	02 26 22.1	
	comp=Z,16nm,1.2s						
WB2	**Warramunga Arr**	**24.61**	**236**	P	**P**	**02 26 02.4**	**-0.1**
WB2				IAmb	IAmb	02 26 22.7	
	comp=Z,6.4nm,0.8s						
WRA	**Warramunga Arr**	**24.62**	**236**	P	**P**	**02 26 02.6**	**0.0**
	comp=Z,5.0nm,0.9s,baz=62,slow=9.5,SNR=5.0						
WRA				pP	**pP**	**02 26 16.1**	**-1.3**
	comp=Z,3.2nm,0.5s,baz=60,slow=9.4,SNR=4.9						
WRA				PcP	**PcP**	**02 29 38.6**	**-0.5**
	comp=Z,1.2nm,0.8s,baz=59,slow=2.4,SNR=4.9						
WRA				LR	LR	02 35 44.4	
	comp=Z,71nm,19.1s,baz=70,slow=36						
SIJI	**Sorong**	**25.36**	**283**	P	**P**	**02 26 09.3**	**-0.1**
	comp=Z,3.7nm,0.5s,baz=108,slow=20,SNR=1.9						
ASAR	**Alice Springs**	**26.91**	**230**	P	**P**	**02 26 22.5**	**-0.8**
	comp=Z,1.4nm,0.5s,baz=59,slow=9.7,SNR=15						
ASAR				PcP	**PcP**	**02 29 44.0**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=65,slow=2.9,SNR=6.9						
ASAR				pPcP		02 29 57.9	
	comp=Z,0.3nm,0.3s,baz=331,slow=38,SNR=3.1						
ASAR				LR	LR	02 36 02.2	
	comp=Z,60nm,20.2s,baz=64,slow=34						
H11S3	**WAKE ISLAND Hy**	**27.43**	**23**	T	T	02 54 55.4	
	baz=203,slow=76,SNR=123						
H11S2	**WAKE ISLAND Hy**	**27.44**	**23**	T	T	02 54 54.6	
	baz=203,slow=76,SNR=107						
H11S1	**WAKE ISLAND Hy**	**27.45**	**23**	T	T	02 54 56.7	
	baz=203,slow=76,SNR=75						
STKA	**Stephens Creek**	**28.17**	**207**	P	**P**	**02 26 33.9**	**-0.6**
	comp=Z,3.4nm,0.8s,baz=36,slow=13,SNR=6.0						
STKA				LR	LR	02 37 09.3	
	comp=Z,119nm,18.9s,baz=25,slow=35						
FITZ	**Fitzroy Crossi**	**31.53**	**247**	P	**P**	**02 27 03.6**	**-0.8**
	comp=Z,5.7nm,0.6s,baz=79,slow=6.7,SNR=19						
FITZ				pP	**pP**	**02 27 17.6**	**-1.9**
	comp=Z,5.7nm,0.5s,baz=77,slow=7.3,SNR=9.2						
FITZ				LR	LR	02 39 53.0	
	comp=Z,44nm,18.4s,baz=78,slow=36						
FITZ	**Fitzroy Crossi**	**31.53**	**247**	P	**P**	**02 27 03.8**	**-0.6**
RAO	**Raoul Island**	**33.12**	**135**		pP	02 27 38.0	+4.9
DAV	**Davao City (W)**	**33.36**	**294**	LR	LR	02 40 02.5	
	comp=Z,20nm,18.9s,baz=349,slow=35						
MBWA	**Marble Bar**	**37.74**	**244**		**PcP**	**02 30 11.5**	**-2.5**
KSRS	**Korea Array**	**51.37**	**331**	P	**P**	**02 29 46.6**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=86,slow=9.4,SNR=2.0						
KSRS				pP	**pP**	**02 30 00.8**	**-1.6**
	comp=Z,0.7nm,0.7s,baz=154,slow=9.5,SNR=2.5						
USRK	**Ussuriysk Ar.**	**55.34**	**339**	P	**P**	**02 30 16.1**	**+0.8**
	comp=Z,1.5nm,0.8s,baz=126,slow=9.7,SNR=4.9						
GSI	**Gunungsitoli**	**58.83**	**276**	P	**P**	**02 30 38.2**	**-2.4**
CMAR	**Chiang Mai Arr**	**61.64**	**295**	P	**P**	**02 30 59.8**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=182,slow=16,SNR=1.3						
CMAR				pP	**pP**	**02 31 13.8**	**-2.4**
	comp=Z,1.5nm,0.4s,baz=118,slow=5.1,SNR=2.6						
CMAR	**Chiang Mai Arr**	**61.64**	**295**	P	**P**	**02 30 59.1**	**-0.5**
HHC	**Hu-ho-hao-te**	**62.64**	**323**	*e*P	**P**	**02 31 09.1**	**+3.0**
LZH	**Lanzhou**	**64.97**	**315**	⇑P	**P**	**02 31 23.4**	**+1.8**
LZH				pP	PcP	02 31 55.3	+1.1
LZH				sP	sP	02 32 09.8	+25
LZH				*e*PP	**PP**	**02 33 49.5**	**+4.2**
ULN	**Ulaanbaatar**	**69.50**	**327**	P	**P**	**02 31 50.0**	**0.0**
ULN				IAmb	IAmb	02 32 13.5	
	comp=Z,6.2nm,1.4s						
SONM	**Songino Array**	**69.84**	**327**	P	**P**	**02 31 52.3**	**+0.2**
	comp=Z,2.8nm,1.0s,baz=134,slow=5.8,SNR=10						
SONM	**Songino Array**	**69.84**	**327**	P	**P**	**02 31 51.9**	**-0.1**
WMQ	**Urumqi**	**79.46**	**317**	*e*P	**P**	**02 32 48.8**	**+1.0**
IMAR	**Indian Mountai**	**81.40**	**19**	P	**P**	**02 32 57.6**	**0.0**
QSPA	**South Pole Qui**	**83.00**	**180**	P	**P**	**02 33 06.9**	**+0.6**
ILAR	**Eielson Array**	**83.01**	**21**	P	**P**	**02 33 05.5**	**-0.5**
	comp=Z,0.5nm,1.0s,baz=260,slow=3.6,SNR=2.4						
ILAR				pP	**pP**	**02 33 21.3**	**-2.1**
	comp=Z,0.9nm,1.0s,baz=275,slow=4.1,SNR=4.4						
ILAR				LR	LR	03 12 15.1	
	comp=Z,20nm,18.1s,baz=264,slow=37						
MK31	**Makanchi Array**	**84.02**	**318**	P	**P**	**02 33 11.5**	**-0.2**
MKAR	**Makanchi Array**	**84.02**	**318**	P	**P**	**02 33 12.1**	**+0.3**
	comp=Z,2.7nm,0.8s,baz=102,slow=5.9,SNR=21						
MKAR				pP	**pP**	**02 33 28.1**	**-1.0**
	comp=Z,1.7nm,0.7s,baz=102,slow=5.8,SNR=11						
MKAR	**Makanchi Array**	**84.02**	**318**	P	**P**	**02 33 11.6**	**-0.1**
MAKZ	**Makanchi**	**84.23**	**318**	P	**P**	**02 33 12.9**	**+0.1**
MAKZ				IAmb	IAmb	02 33 15.0	
	comp=Z,2.7nm,0.8s						
ZALV	**Zalesovo Beam**	**84.70**	**326**	P	**P**	**02 33 13.7**	**-1.2**
	comp=Z,1.1nm,0.7s,baz=120,slow=5.2,SNR=2.6						
ZALV				pP	**pP**	**02 33 31.1**	**-1.1**
	comp=Z,1.3nm,0.5s,baz=121,slow=4.9,SNR=3.8						
AAK	**Ala-Archa**	**88.43**	**313**	P	**P**	**02 33 33.4**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=50,slow=18,SNR=3.9						
AAK	**Ala-Archa**	**88.43**	**313**	IAmb	IAmb	02 36 38.5	
	comp=Z,6.7nm,1.9s						
BVAR	**Borovoye Array**	**92.85**	**323**	P	**P**	**02 33 51.9**	**-1.9**
	comp=Z,1.1nm,0.8s,baz=114,slow=1.7,SNR=5.7						
YKA	**Yellowknife Ar**	**95.87**	**28**	P	**P**	**02 34 06.5**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=266,slow=6.8,SNR=1.4						
YKA				pP	**pP**	**02 34 22.5**	**-2.4**
	comp=Z,0.2nm,0.8s,baz=258,slow=4.3,SNR=4.7						
FINES	**FINESS Array B**	**114.31**	**336**	pPKP	PKPdf	02 39 35.0	+15
	comp=Z,1.4nm,0.8s,baz=101,slow=4.4,SNR=1.8						
GERES	**GERESS Array B**	**127.52**	**329**	PKP	**PKPdf**	**02 39 45.2**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=107,slow=1.4,SNR=4.6						
GERES				pPKP	**pPKPdf**	**02 40 00.7**	**-3.5**
	comp=Z,0.4nm,0.5s,baz=146,slow=1.0,SNR=4.1						
BDFB	**Brasilia**	**147.31**	**134**	PKPbc	**PKPbc**	**02 40 24.4**	**-1.2**
	comp=Z,3.3nm,0.8s,baz=317,slow=3.0,SNR=4.7						
BDFB				pPKPbc	**pPKPbc**	**02 40 41.9**	**-1.5**
	comp=Z,1.7nm,0.6s,baz=180,slow=9.5,SNR=2.3						
TORD	**Torodi Ar. Bea**	**153.94**	**286**	PKPbc	**PKPbc**	**02 40 40.2**	**-1.2**
	comp=Z,1.0nm,1.0s,baz=116,slow=2.9,SNR=3.4						
TORD				PKPab	**PKPab**	**02 40 54.4**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=199,slow=22,SNR=3.8						

ASRS ***23*** *02:22:16.6±0.4, 50°N±2°×9°0E±°, h10^{km}, MLh3.2/15,*
smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID
smi:org.gfz-potsdam.de/geofon/iasp91 confirmed
NNC ***23*** *02:22:21.1±1.8, 50°.11N×89°.40E, h0^{km}, mb3.5, mpv3.1,*
Error ellipse: s-maj=17.4km s-min=11.3km az=116.0
ISC 23 02:22:18.9±1.1**, 50°.06N**±0°.04×**89°.71E**±0°.04**, h10^{km}, n22,**
σ**1^{s}71**/40**, 8C-3D, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLNR	**Muhor-Tarhata,**	**0.85**	**251**	Pg	**Pg**	**02 22 34.2**	**-1.1**
SLNR				Sg	**Sb**	**02 22 46.5**	**-1.0**
CUR	**Chagan-Uzun**	**0.88**	**273**	Pg	**Pb**	**02 22 35.3**	**-0.9**
CUR				Sg	**Sn**	**02 22 48.2**	**-2.1**
ULGR	**Ulagan, Altay**	**1.25**	**297**	Pg	**Pn**	**02 22 43.0**	**+0.5**
ULGR				Sg	**Sn**	**02 23 00.8**	**+1.3**
AKAR	**Aktash**	**1.37**	**282**	Pg	**Pg**	**02 22 44.4**	**-0.7**
AKAR				Sg	**Sn**	**02 23 04.7**	**+2.3**
CHBI	**Chibit, Altay**	**1.44**	**281**	Pg	**Pg**	**02 22 46.0**	**-0.5**
CHBI				Sg	**Sg**	**02 23 07.5**	**+2.4**
DGZ	**Jazzator, Alta**	**1.52**	**257**	Pg	**Pg**	**02 22 46.8**	**-1.2**
DGZ				Sg	**Sg**	**02 23 07.7**	**+0.1**
TUNR	**Tungur**	**2.18**	**274**	Pg	**Pg**	**02 22 59.6**	**-1.0**
TUNR				Sg	**Sg**	**02 23 30.7**	**+1.9**
ARTR	**Artybash**	**2.32**	**319**	Pg	**Pg**	**02 23 02.1**	**-1.1**
ARTR				Sg	**Sg**	**02 23 34.5**	**+1.2**
DJO	**Djoy, Khakassi**	**2.88**	**19**	Pg	**Pb**	**02 23 11.6**	**+1.3**
DJO				Sg	**Sg**	**02 23 49.8**	**-1.5**
DJOS	**Djoyskaya Sosn**	**2.93**	**20**	Pg	**Pb**	**02 23 11.8**	**+0.6**
DJOS				Sg	**Sg**	**02 23 51.5**	**-1.4**
TASR	**Tashtagol**	**2.93**	**338**	Pg	**Pg**	**02 23 13.9**	**-1.1**
TASR				Sg	**Sg**	**02 23 52.8**	**-0.2**
CERR	**Cheremushki**	**2.99**	**20**	Pg	**Pb**	**02 23 13.4**	**+1.2**
CERR				Sg	**Sg**	**02 23 53.4**	**-1.4**
GALT	**Gorno-Altaysk,**	**3.04**	**310**	Pg	**Pg**	**02 23 15.5**	**-1.6**
GALT				Sg	**Sg**	**02 23 57.7**	**+1.2**
UKR	**Ust'-Kan**	**3.27**	**287**	Pg	**Pg**	**02 23 20.5**	**-1.0**
UKR				Sg	**Sg**	**02 24 02.0**	**-1.8**
KZLR	**Kyzyl**	**3.42**	**60**	Sg	**Sb**	**02 24 04.9**	**+3.7**
LUZB	**Luzhba, Kemero**	**3.64**	**352**	Pg	**Pg**	**02 23 25.6**	**-2.9**
LUZB				Sg	**Sg**	**02 24 14.1**	**-1.4**
ABNR	**Abakan**	**3.82**	**16**	Sg	**Sg**	**02 24 19.9**	**-1.5**
ELT	**Eltsovka**	**3.86**	**327**	Pg	**Pg**	**02 23 30.7**	**-2.1**
ELT				Sg	**Sg**	**02 24 21.9**	**-0.9**
MK31	**Makanchi Array**	**5.92**	**239**	⇑Pn	**Pn**	**02 23 48.2**	**+1.5**
	0.1nm,0.2s,baz=157,slow=20,SNR=16						
MK31				⇑Pg	Pg	02 24 06.8	-5.5
	1.4nm,0.7s,baz=59,slow=15,SNR=7.1						
MK31				⇑Sn	**Sn**	**02 24 55.6**	**+1.0**
	1.3nm,0.4s						
MK31				⇑Lg	Lg	02 25 24.0	
	2.2nm,0.5s,baz=49,slow=29,SNR=4.3						
MAKZ	**Makanchi**	**6.09**	**241**	⇑Pn	**Pn**	**02 23 50.5**	**+1.6**
	3.2nm,1.2s						
MAKZ				⇓Pg	**Pg**	**02 24 11.0**	**-4.5**
	1.5nm,0.8s						
MAKZ				⇑Lg	Lg	02 25 30.5	
	5.6nm,0.8s						
KURK	**Kurchatov**	**7.12**	**279**	⇑Pn	**Pn**	**02 24 02.8**	**-0.2**
	1.7nm,0.8s						
KURK				⇑Lg	Lg	02 26 02.1	
	6.4nm,0.8s						
KURBB	**Kurchatov Arra**	**7.18**	**279**	⇓Pn	**Pn**	**02 24 04.6**	**+0.8**
	1.3nm,0.4s						
KURBB				⇓Lg	Lg	02 26 04.8	
	12nm,0.6s						

UCR ***23*** *02:30:07.6±1.0, 12°.42N×87°.91W, h19^{km}±11^{km}, ML3.5*
SNET ***23*** *02:30:07.7±1.1, 12°.44N×87°.92W, h20^{km}±11^{km}, ML3.5*
INET ***23*** *02:30:08.2, 12°.50N×87°.72W, h65^{km}, ML3.6*
ISC 23 02:30:05.5±3.3**, 12°.4N**±0°.2×**87°.9W**±0°.1**, h10^{km}, n21,**
σ**0^{s}46**/27**, 2C-10D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.89**	**2**	⇓*i*P	**Pg**	**02 30 23.2**	**+0.5**
CNCH				*e*S	**Sb**	**02 30 35.9**	**+0.7**
CNCH	**Conchagua**	**0.89**	**2**	⇓*i*P	**Pg**	**02 30 23.2**	**+0.5**
CNCH				*e*S	**Sb**	**02 30 35.9**	**+0.7**
LCND	**La Caada**	**0.92**	**358**	⇓*e*P	**Pg**	**02 30 23.7**	**+0.4**
LCND				IAML		02 30 38.5	
	comp=Z,2μm,0.3s						
LCND	**La Caada**	**0.92**	**358**	⇓*e*P	**Pg**	**02 30 23.7**	**+0.4**
LCND				IAML		02 30 38.5	
	comp=Z,2μm,0.3s						
JUCU	**Jucuar¡n**	**0.95**	**337**	⇓*e*P	**Pg**	**02 30 24.1**	**+0.4**
JUCU				*e*S	**Sb**	**02 30 37.0**	**+0.3**
JUCU				IAML		02 30 41.3	
	comp=Z,2μm,0.3s						
JUCU	**Jucuar¡n**	**0.95**	**337**	⇓*e*P	**Pg**	**02 30 24.1**	**+0.4**
JUCU				*e*S	**Sb**	**02 30 37.0**	**+0.3**
JUCU				IAML		02 30 41.3	
	comp=Z,2μm,0.3s						
LCY	**Lacayo**	**1.12**	**338**	*e*P	**Pg**	**02 30 27.0**	**0.0**
LCY	**Lacayo**	**1.12**	**338**	*e*P	**Pg**	**02 30 27.0**	**0.0**
ALJI	**Alcalda de J**	**1.17**	**324**	⇓*i*P	**Pb**	**02 30 27.7**	**0.0**
ALJI				IAML		02 30 44.7	
	comp=Z,1μm,0.2s						
ALJI	**Alcalda de J**	**1.17**	**324**	⇓*i*P	**Pb**	**02 30 27.7**	**0.0**
ALJI				IAML		02 30 44.7	
	comp=Z,1μm,0.2s						
PACA	**Pacayal**	**1.17**	**338**	*e*P	**Pb**	**02 30 27.7**	**-0.2**
PACA	**Pacayal**	**1.17**	**338**	*e*P	**Pb**	**02 30 27.7**	**-0.2**
TECA	**Tecapa**	**1.27**	**331**	*e*P	**Pb**	**02 30 29.3**	**-0.4**
TECA				*e*S	**Sb**	**02 30 45.9**	**-0.3**
TECA	**Tecapa**	**1.27**	**331**	*e*P	**Pb**	**02 30 29.3**	**-0.4**
TECA				*e*S	**Sb**	**02 30 45.9**	**-0.3**
COEB	**Comit de Eme**	**1.29**	**330**	*e*P	**Pn**	**02 30 29.3**	**-0.3**
COEB				IAML		02 30 48.7	
	comp=Z,429nm,0.2s						
COEB	**Comit de Eme**	**1.29**	**330**	*e*P	**Pn**	**02 30 29.3**	**-0.3**
COEB				IAML		02 30 48.7	
	comp=Z,429nm,0.2s						
FAGO	**Alcalda de S**	**1.33**	**350**	⇓*i*P	**Pn**	**02 30 29.2**	**-0.9**
FAGO	**Alcalda de S**	**1.33**	**350**	⇓*i*P	**Pn**	**02 30 29.2**	**-0.9**
LFRS	**El Faro**	**1.70**	**317**	*e*P	**Pn**	**02 30 35.5**	**+0.1**
LOMA	**Loma Larga**	**1.79**	**315**	⇑*e*P	**Pn**	**02 30 36.9**	**+0.3**
LOMA				IAML		02 31 00.1	
	comp=Z,1μm,0.2s						
LOMA	**Loma Larga**	**1.79**	**315**	⇑*e*P	**Pn**	**02 30 36.9**	**+0.3**
LOMA				IAML		02 31 00.1	
	comp=Z,1μm,0.2s						

IDC ***23*** *02:32:40.8±1.0, 3°.84S×151°.32E, h0^{km}, mb3.7/6,*
mb1 4.0/6, mb1mx3.7/33, mbtmp3.7/6, MS3.1/5, Ms1 3.1/5,
ms1mx2.9/21, Error ellipse: s-maj=25.5km s-min=15.9km
az=24.0
ISC 23 02:32:44.2±0.9**, 3°.9S**±0°.2×**151°.3E**±0°.1**, h21^{km}, n12,**
σ**1^{s}09**/8**, mb3.5**/6**, MS2.9**/4**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.87**	**121**	Pn	**Pb**	**02 33 00.1**	**-0.6**
	28nm,0.3s,baz=165,slow=1.3,SNR=9.4						
KRVT				Sn	**Sn**	**02 33 14.5**	**+1.2**
	77nm,0.3s,baz=72,slow=15,SNR=21						
PMG	**Port Moresby**	**6.86**	**216**	Pn	Pn	02 34 29.2	+5.6
	0.7nm,0.3s,baz=9.4,slow=13,SNR=4.1						
HNR	**Honiara**	**10.23**	**123**	LR	LR	02 39 31.0	
	comp=Z,188nm,18.8s,baz=314,slow=40						
WRA	**Warramunga Arr**	**22.98**	**225**	P	**P**	**02 37 47.8**	**+0.1**
	1.4nm,0.7s,baz=48,slow=10,SNR=8.2						
WRA				LR	LR	02 47 56.6	
	comp=Z,40nm,18.1s,baz=65,slow=40						
ASAR	**Alice Springs**	**25.87**	**219**	P	**P**	**02 38 14.8**	**+0.2**
	0.7nm,0.6s,baz=52,slow=9.1,SNR=5.7						
FITZ	**Fitzroy Crossi**	**28.81**	**239**	P	**P**	**02 38 40.0**	**-1.0**
	1.4nm,0.7s,baz=59,slow=5.9,SNR=1.9						
MJAR	**Matsushiro Arr**	**42.01**	**344**	LR	LR	02 56 30.0	
	comp=Z,21nm,21.6s,baz=185,slow=34						
KSRS	**Korea Array**	**46.49**	**334**	LR	LR	02 58 53.0	
	comp=Z,14nm,21.3s,baz=285,slow=34						
CMAR	**Chiang Mai Arr**	**56.10**	**295**	P	**P**	**02 42 23.6**	**+1.1**
	1.3nm,0.3s,baz=102,slow=5.9,SNR=4.7						
PETK	**Petropavlovsk-**	**57.02**	**5**	LR	LR	03 07 14.9	
	comp=Z,15nm,18.4s,baz=60,slow=36						
MKAR	**Makanchi Array**	**78.62**	**319**	P	**P**	**02 44 45.4**	**+0.8**
	0.3nm,0.6s,baz=101,slow=4.6,SNR=3.6						
ILAR	**Eielson Array**	**81.87**	**22**	P	**P**	**02 45 00.6**	**-1.1**
	0.4nm,0.8s,baz=234,slow=5.0,SNR=4.8						

IDC 23 02:36:03.5±1.3**, 3°.77S**×**151°.29E, h0^{km}, mb3.5**/4**,**
mb1 3.7/4**, mb1mx3.5**/32**, mbtmp3.5**/4**, Error ellipse:**
s-maj=29.3km s-min=19.6km az=29.0, New Ireland
region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.91**	**126**	Pn	Pn	02 36 23.7	+0.2
	38nm,0.3s,baz=297,slow=4.3,SNR=4.9						
KRVT				Sn	Sn	02 36 37.7	+0.4
	37nm,0.3s,baz=100,slow=24,SNR=5.8						
PMG	**Port Moresby**	**6.95**	**216**	Pn	Pn	02 37 51.4	+4.8
	0.5nm,0.3s,baz=33,slow=12,SNR=5.2						
WRA	**Warramunga Arr**	**23.06**	**224**	P	P	02 41 09.9	-0.9
	0.8nm,0.3s,baz=49,slow=10,SNR=2.2						
ASAR	**Alice Springs**	**25.95**	**219**	P	P	02 41 38.5	+0.6
	0.6nm,0.6s,baz=48,slow=7.9,SNR=7.1						
MKAR	**Makanchi Array**	**78.57**	**319**	P	P	02 48 07.4	+0.3
	0.1nm,0.4s,baz=104,slow=6.1,SNR=1.8						
ILAR	**Eielson Array**	**81.78**	**22**	P	P	02 48 23.6	-0.3
	0.3nm,0.8s,baz=243,slow=6.0,SNR=1.8						

NEIC ***23*** *02:46:18.6±2.2, 16°.77N±0°.03×98°.39W±0°.03, h20^{km}±13^{km},*
Error ellipse: s-maj=4.9km s-min=4.3km az=121.0
MEX ***23*** *02:46:19.7±0.7, 16°.56N×98°.42W, h12^{km}±7^{km}, MD3.9*
ISC 23 02:46:14.6±1.7**, 16°.59N**±0°.07×**98°.42W**±0°.03**, h5^{km}**±17^{km}**,**
n15, σ**1^{s}02**/27**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOIG	**Yosondua**	**0.88**	**72**	*e*P	**Pn**	**02 46 34.3**	**+0.4**
YOIG				*i* S	**Sb**	**02 46 45.2**	**+0.7**
TLIG	**Tlapa**	**0.98**	**352**	*e*P	**Pn**	**02 46 35.2**	**+0.1**
TLIG				*i* S	**Sb**	**02 46 48.4**	**+1.1**
TLIG	**Tlapa**	**0.98**	**352**		**Pn**	**02 46 35.0**	**-0.1**
TLIG	**Tlapa**	**0.98**	**352**		**Sn**	**02 46 45.8**	**-3.7**
FTIG	**Fresnillo de T**	**1.34**	**12**	*e*P	**Pb**	**02 46 41.2**	**+1.0**
FTIG				*i* S	**Sb**	**02 46 58.1**	**+0.3**
PEIG	**Puerto Escondi**	**1.35**	**116**	*e*P	**Pg**	**02 46 40.8**	**+0.2**
PEIG				*i* S	**Sg**	**02 46 57.1**	**-1.1**
HLIG	**Huajuapan de L**	**1.36**	**25**	*e*P	**Pb**	**02 46 41.7**	**+0.9**
HLIG				*e*S	**Sn**	**02 46 59.2**	**+0.1**
VHO	**Vista Hermosa**	**1.68**	**73**	*e*P	**Pb**	**02 46 46.2**	**0.0**
MEIG	**Mezcala**	**1.76**	**319**	*e*P	**Pb**	**02 46 46.9**	**-0.5**
MEIG				*e*S	**Sn**	**02 47 07.8**	**-0.8**
MEIG	**Mezcala**	**1.76**	**319**		**Pb**	**02 46 46.9**	**-0.5**
MEIG					**Sn**	**02 47 07.8**	**-0.8**
CAIG	**El Cayaco**	**1.83**	**285**	*e*P	**Pn**	**02 46 47.7**	**+1.0**
CAIG				*i* S	**Sn**	**02 47 10.0**	**-0.3**
CAIG	**El Cayaco**	**1.83**	**285**		**Pn**	**02 46 46.5**	**-0.2**
CAIG					**Sb**	**02 47 12.7**	**+0.9**
TOIG	**Toxpalan**	**1.98**	**41**	*e*P	**Pb**	**02 46 50.4**	**-0.8**
TOIG				*i* S	**Sn**	**02 47 13.5**	**-0.6**
PLIG	**Platanillo**	**2.07**	**330**	*i* P	**Pb**	**02 46 52.2**	**-0.5**
PLIG				*e*S	**Sn**	**02 47 17.0**	**+0.7**
PLIG	**Platanillo**	**2.07**	**330**		**Pb**	**02 46 52.8**	**0.0**
PLIG					**Sn**	**02 47 17.0**	**+0.7**

JMA ***23*** *03:08:52.6±0.1, 24°.52N×122°.54E, h99^{km}±2^{km}, M2.9*
TAP ***23*** *03:08:53.1, 24°.54N×122°.56E, h96^{km}±1^{km}, ML3.6, C*
ISC 23 03:08:52.7±1.3**, 24°.55N**±0°.04×**122°.57E**±0°.02**, h99^{km}**±7^{km}**,**
n101, σ**0^{s}66**/182**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.35**	**105**	P	**Pn**	**03 09 07.6**	**+0.2**
JYNG				S	**Sn**	**03 09 18.3**	**-0.1**
EOS1	**EOS1**	**0.40**	**271**	P	**Pn**	**03 09 08.0**	**+0.4**
	baz=271						
EOS1				*e*S	**Sn**	**03 09 19.1**	**+0.2**
	baz=271						
YOJ	**Yonaguni jima**	**0.41**	**102**	P	**Pn**	**03 09 07.8**	**0.0**
	baz=99						
YOJ				*e*S	**Sn**	**03 09 18.8**	**-0.2**
	baz=99						
YOJ	**Yonaguni jima**	**0.41**	**102**	P	**Pn**	**03 09 07.9**	**+0.2**
YOJ				S	**Sn**	**03 09 19.2**	**+0.2**
TWC	**Suao**	**0.66**	**276**	*e*P	**Pn**	**03 09 09.4**	**-0.2**
	baz=276						
TWC				S	**Sn**	**03 09 21.4**	**-0.9**
	baz=276						
TWB1	**Santiao Chiao**	**0.70**	**311**	*e*P	**Pn**	**03 09 09.7**	**-0.3**
	baz=312						
TWB1				*e*S	**Sn**	**03 09 23.1**	**+0.1**
	baz=312						
NTC	**Toucheng**	**0.74**	**295**	*e*P	**Pn**	**03 09 10.5**	**+0.2**
	baz=295						
NTC				*e*S	**Sn**	**03 09 23.1**	**-0.5**
	baz=295						
ENA	**Nanau**	**0.77**	**261**	*e*P	**Pn**	**03 09 10.9**	**+0.3**
	baz=261						
ENA				*e*S	**Sn**	**03 09 24.4**	**+0.4**
	baz=261						
ILA	**Ilan**	**0.78**	**286**	*e*P	**Pn**	**03 09 10.7**	**0.0**
	baz=287						
ILA				*e*S	**Sn**	**03 09 24.4**	**+0.2**
	baz=287						
TIPB	**Shuangxi**	**0.80**	**302**	P	**Pn**	**03 09 11.0**	**0.0**
	baz=302						
TIPB				S	**Sn**	**03 09 23.9**	**-0.9**
	baz=302						
TWE	**Neicheng**	**0.84**	**282**	P	**Pn**	**03 09 11.5**	**+0.2**
	baz=282						
TWE				S	**Sn**	**03 09 24.9**	**-0.4**
	baz=282						
SLBB	**Yuanshan**	**0.88**	**284**	*e*P	**Pn**	**03 09 11.1**	**-0.7**
	baz=284						
SLBB				*e*S	**Sn**	**03 09 24.9**	**-1.2**
	baz=284						
NWF	**Wu-fen Shan**	**0.89**	**306**	*e*P	**Pn**	**03 09 12.2**	**+0.3**
	baz=306						
NWF				*e*S	**Sn**	**03 09 26.1**	**-0.3**
	baz=306						
WFSB	**Wu-fen Shan**	**0.89**	**306**	*e*P	**Pn**	**03 09 12.1**	**+0.3**
	baz=306						
WFSB				S	**Sn**	**03 09 26.2**	**0.0**
	baz=306						
ENTT	**Nioudou**	**0.92**	**276**	*e*P	**Pn**	**03 09 12.9**	**+0.7**
	baz=276						
ENTT				S	**Sn**	**03 09 27.2**	**+0.3**
	baz=276						
NACB	**Ninganchiao**	**0.96**	**248**	P	**Pn**	**03 09 12.5**	**-0.1**
	baz=247						
NACB				S	**Sn**	**03 09 27.0**	**-0.6**
	baz=247						
NDT	**Datong Townshi**	**0.97**	**274**	*e*P	**Pn**	**03 09 13.5**	**+0.9**
	baz=273						
NDT				S	**Sn**	**03 09 28.4**	**+0.7**
	baz=273						
TWA	**Mucha**	**1.00**	**296**	*e*P	**Pn**	**03 09 13.3**	**+0.3**
	baz=296						
TWA				*e*S	**Sn**	**03 09 27.6**	**-0.7**
	baz=296						
NWLT	**Wulai**	**1.00**	**284**	*e*P	**Pn**	**03 09 13.3**	**+0.2**
	baz=283						
NWLT				S	**Sn**	**03 09 28.3**	**-0.1**
	baz=283						
TWD	**Chiawan**	**1.00**	**243**	*e*P	**Pn**	**03 09 12.8**	**-0.2**
	baz=242						
TWD				S	**Sn**	**03 09 28.0**	**-0.4**
	baz=242						
NHDH	**Xindian Distri**	**1.04**	**294**	*e*P	**Pn**	**03 09 13.2**	**-0.2**
	baz=294						
NHDH				*e*S	**Sn**	**03 09 28.0**	**-1.0**
	baz=294						
HWA	**Hwalien**	**1.05**	**237**	*e*S	**Sn**	**03 09 29.8**	**+0.5**
	baz=237						
ETLH	**Xiulin Townshi**	**1.05**	**251**	*e*P	**Pn**	**03 09 14.3**	**+0.7**
	baz=251						
ETLH				*e*S	**Sn**	**03 09 28.6**	**-0.8**
	baz=251						
TATO	**Taipei**	**1.07**	**294**	*e*P	**Pn**	**03 09 13.9**	**+0.1**
	baz=294						
TATO				*e*S	**Sn**	**03 09 29.2**	**-0.6**
	baz=294						
IRIF	**Iriomote-Funau**	**1.08**	**101**	P	**Pn**	**03 09 14.0**	**+0.2**
IRIF				S	**Sn**	**03 09 29.8**	**0.0**
NNSB	**Datong**	**1.09**	**264**	*e*P	**Pn**	**03 09 14.6**	**+0.5**
	baz=264						
NNSB				*e*S	**Sn**	**03 09 30.2**	**-0.1**
	baz=264						
NNSH	**Datong**	**1.09**	**264**	*e*P	**Pn**	**03 09 14.7**	**+0.5**
	baz=264						
NNSH				*e*S	**Sn**	**03 09 30.2**	**-0.1**
	baz=264						
YM01	**YM01**	**1.09**	**304**	*e*P	**Pn**	**03 09 14.0**	**-0.1**
	baz=303						
YM01				*e*S	**Sn**	**03 09 29.5**	**-0.7**
	baz=303						
ENLB	**Shoufeng**	**1.09**	**234**	*e*P	**Pn**	**03 09 14.5**	**+0.5**
	baz=234						
ENLB				*e*S	**Sn**	**03 09 29.2**	**-0.9**
	baz=234						
YHNB	**Yeheng**	**1.09**	**277**	P	**Pn**	**03 09 14.7**	**+0.5**
	baz=277						
YHNB				S	**Sn**	**03 09 30.1**	**-0.2**
	baz=277						
NNS	**Nan Shan**	**1.10**	**265**	*e*P	**Pn**	**03 09 14.7**	**+0.5**
	baz=264						
NNS				*e*S	**Sn**	**03 09 30.2**	**-0.3**
	baz=264						
YM10	**YM10**	**1.10**	**304**	*e*P	**Pn**	**03 09 14.2**	**0.0**
	baz=304						
YM10				*e*S	**Sn**	**03 09 29.7**	**-0.7**
	baz=304						
YM05	**YM05**	**1.10**	**304**	*e*P	**Pn**	**03 09 14.2**	**0.0**
	baz=304						
NSK	**Sanguang**	**1.11**	**277**	P	**Pn**	**03 09 14.8**	**+0.5**
	baz=277						
NSK				S	**Sn**	**03 09 30.5**	**-0.2**
	baz=277						
YM04	**YM04**	**1.12**	**303**	*e*P	**Pn**	**03 09 14.3**	**-0.1**
	baz=303						
YM04				*e*S	**Sn**	**03 09 30.0**	**-0.7**
	baz=303						
TWY	**Chenhua**	**1.14**	**310**	*e*P	**Pn**	**03 09 15.0**	**+0.4**
	baz=310						
HATJ	**Hateruma jima**	**1.23**	**113**	P	**Pn**	**03 09 16.3**	**+0.7**
HATJ				S	**Sn**	**03 09 33.3**	**+0.4**
WLTB	**Daxi**	**1.24**	**285**	*e*S	**Sn**	**03 09 34.0**	**+0.9**
	baz=284						
ESL	**Shilin**	**1.27**	**235**	*e*P	**Pn**	**03 09 15.9**	**-0.3**

	baz=234						
ESL				S	Sn	03 09 32.6	-1.2
	baz=234						
TWT	Tachien	1.31	257	eP	Pn	03 09 17.5	+0.8
	baz=257						
TWT				eS	Sn	03 09 35.3	+0.5
	baz=257						
TDCB	Techi	1.32	258	eP	Pn	03 09 18.0	+1.1
	baz=257						
TDCB				eS	Sn	03 09 34.9	-0.2
	baz=257						
NCU	National Centr	1.33	289	eS	Sn	03 09 35.6	+0.6
	baz=289						
NCUH	Zhongli	1.33	289	eS	Sn	03 09 34.8	-0.2
	baz=288						
JKRS	Kuro-shima	1.35	103	P	Pn	03 09 17.8	+0.8
JKRS				eS	Sn	03 09 35.9	+0.5
EGFH	Guangfu	1.36	230	eP	Pn	03 09 17.0	-0.2
	baz=230						
EGFH				eS	Sn	03 09 35.5	-0.3
	baz=230						
CHGB	Renai	1.36	250	eP	Pn	03 09 18.0	+0.6
	baz=249						
CHGB				S	Sn	03 09 35.8	-0.3
	baz=249						
OWD	Renai	1.40	245	eP	Pn	03 09 18.2	+0.3
	baz=245						
OWD				eS	Sn	03 09 35.9	-1.0
	baz=245						
LIOB	Emei	1.42	274	eP	Pn	03 09 19.0	+1.1
	baz=274						
LIOB				eS	Sn	03 09 37.0	-0.1
	baz=274						
NSTT	Nanjuang	1.43	274	eS	Sn	03 09 37.0	-0.2
	baz=273						
JIJ	Ishigaki jima	1.44	97	P	Pn	03 09 18.3	+0.1
JIJ				S	Sn	03 09 36.5	-1.0
NHW	Xinwu Township	1.46	289	eS	Sn	03 09 38.6	+0.7
	baz=288						
SBCB	Hsinchu	1.46	280	eS	Sn	03 09 38.1	+0.2
	baz=280						
HGSD	Ruisui	1.48	225	eP	Pn	03 09 18.2	-0.5
	baz=225						
HGSD				S	Sn	03 09 37.9	-0.5
	baz=225						
WHP	Taichung City	1.51	260	eP	Pn	03 09 20.1	+1.1
	baz=260						
WHP				eS	Sn	03 09 39.7	+0.6
	baz=260						
VWDT	VWDT	1.53	239	eP	Pn	03 09 19.8	+0.6
	baz=239						
VWDT				S	Sn	03 09 39.2	-0.1
	baz=239						
EHY	Hungye	1.54	228	eP	Pn	03 09 19.2	-0.2
	baz=227						
EHY				eS	Sn	03 09 39.1	-0.6
	baz=227						
JISG	Ishigakijimahi	1.58	88	P	Pn	03 09 20.2	+0.3
JISG				S	Sn	03 09 40.0	-0.6
DPDB	Guoxing	1.59	252	eP	Pn	03 09 21.1	+1.1
	baz=251						
DPDB				eS	Sn	03 09 41.1	+0.3
	baz=251						
NMLH	Miaoli	1.62	270	eS	Sn	03 09 42.0	+0.6
	baz=270						
YULB	Yu-li	1.64	226	eP	Pn	03 09 20.4	-0.2
	baz=225						
YULB				eS	Sn	03 09 40.9	-0.9
	baz=225						
NSY	Sanyi	1.66	266	eS	Sn	03 09 42.6	+0.4
	baz=265						
SSLB	Suanglung	1.66	243	eP	Pn	03 09 21.8	+0.9
	baz=243						
SSLB				eS	Sn	03 09 42.4	0.0
	baz=243						
SMLT	Sun Moon Lake	1.66	247	eP	Pn	03 09 21.9	+0.9
	baz=246						
SMLT				eS	Sn	03 09 42.9	+0.3
	baz=246						
TWF1	Yuli	1.67	225	eP	Pn	03 09 20.8	-0.2
	baz=224						
TWF1				eS	Sn	03 09 41.4	-1.0
	baz=224						
WDJ	Dajia District	1.77	264	eS	Sn	03 09 45.3	+0.5
	baz=263						
FULB	Fuli	1.78	221	eP	Pn	03 09 22.2	-0.2
	baz=221						
FULB				S	Sn	03 09 44.5	-0.6
	baz=221						
WHYT	Xinyi Township	1.78	242	eP	Pn	03 09 23.6	+1.1
	baz=241						
WHYT				eS	Sn	03 09 45.8	+0.6
	baz=241						
CHKT	Chengkung	1.81	218	eP	Pn	03 09 22.9	0.0
	baz=217						
CHKT				eS	Sn	03 09 44.4	-1.4
	baz=217						
YUS	Yu-Shan	1.82	235	eP	Pn	03 09 23.9	+0.6
	baz=234						
YUS				eS	Sn	03 09 46.1	-0.5
	baz=234						
WJS	Zhushan	1.83	247	eP	Pn	03 09 24.2	+1.2
	baz=246						
WJS				eS	Sn	03 09 46.6	+0.4
	baz=246						
WNT	Mingjian	1.85	249	eP	Pn	03 09 24.1	+0.8
	baz=248						
WNT				eS	Sn	03 09 47.1	+0.6
	baz=248						
ALS	Alishan	1.92	238	eP	Pn	03 09 25.2	+0.8
	baz=237						
ALS				eS	Sn	03 09 48.4	-0.2
	baz=237						
JTJ	Tarama	1.94	87	P	Pn	03 09 25.1	+0.7
JTJ				S	Sn	03 09 48.7	0.0
ELDTW	Lidau	1.96	227	eP	Pn	03 09 24.8	-0.1
	baz=226						
ELDTW				eS	Sn	03 09 48.3	-1.1
	baz=226						
CHN5	Tsauling	1.97	242	eP	Pn	03 09 26.0	+1.0
	baz=241						
CHN5				eS	Sn	03 09 50.1	+0.6
	baz=241						
WDLH	Douliu	2.04	246	eS	Sn	03 09 51.3	+0.2
	baz=245						
TWH	Lutao	2.08	209	eP	Pn	03 09 26.6	+0.3
	baz=208						
TWH				eS	Sn	03 09 51.4	-0.6
	baz=208						
RLNB	Erlin	2.12	253	eP	Pn	03 09 26.8	0.0
	baz=252						
RLNB				eS	Sn	03 09 53.2	+0.4
	baz=252						
STYT	Tauyuan	2.16	231	eP	Pn	03 09 28.4	+1.0
	baz=230						
STYT				eS	Sn	03 09 53.6	-0.2
	baz=230						
CHN4	Tsaushan	2.17	237	eP	Pn	03 09 28.7	+1.3
	baz=236						
CHN4				eS	Sn	03 09 54.7	+0.8
	baz=236						
TPUB	Ta-pu	2.17	235	eP	Pn	03 09 28.3	+0.8
	baz=235						
TPUB				eS	Sn	03 09 54.5	+0.5
	baz=235						
TWGBT	Beinan	2.20	219	eP	Pn	03 09 27.7	-0.1
	baz=218						
TWGBT				eS	Sn	03 09 54.1	-0.6
	baz=218						
TWG	Pinlang	2.20	219	eP	Pn	03 09 27.8	0.0
	baz=218						
TWG				eS	Sn	03 09 54.0	-0.8
	baz=218						
WTP	Ta-pu	2.21	235	eP	Pn	03 09 29.0	+1.0
	baz=234						
WTP				eS	Sn	03 09 55.0	0.0
	baz=234						
CHY	Chiayi	2.22	242	eS	Sn	03 09 55.3	0.0
	baz=242						
TWK	Hsinying	2.29	237	eP	Pn	03 09 30.5	+1.4
	baz=236						
TWK				eS	Sn	03 09 57.1	+0.2
	baz=236						
CHN1	Nanshi	2.31	234	eP	Pn	03 09 30.4	+1.1
	baz=234						
CHN1				eS	Sn	03 09 57.7	+0.4
	baz=234						
SNST	Tainan City	2.31	236	eP	Pn	03 09 30.3	+1.0
	baz=235						
SNST				eS	Sn	03 09 57.5	+0.2
	baz=235						
SGST	Jiashian	2.33	232	eP	Pn	03 09 29.7	+0.1
	baz=231						
SGST				eS	Sn	03 09 58.2	+0.4
	baz=231						
JIRB	Irabujima	2.38	83	eS	Sn	03 09 58.1	-0.9
JIKM	Ikemajima	2.46	81	eS	Sn	03 10 00.8	0.0
JMJ2	Miyako jima3	2.52	85	P	Pn	03 09 32.7	+0.8
JMJ2				eS	Sn	03 10 00.6	-1.5
MASBT	Mashibuluo	2.62	223	eP	Pn	03 09 34.0	+0.6
	baz=222						
MASBT				eS	Sn	03 10 04.4	-0.2
	baz=222						
EAST	Anshuo	2.67	217	eP	Pn	03 09 34.0	-0.1
	baz=216						
VWUC	VWUC	2.87	280	eP	Pn	03 09 36.7	0.0
	baz=279						
VWUC				eS	Sn	03 10 08.8	-1.8
	baz=279						
PNG	Penghu	2.92	251	eP	Pn	03 09 36.6	-0.8
	baz=250						
PNG				eS	Sn	03 10 10.2	-1.7
	baz=250						
PHUB	P'eng-hu	2.93	250	eP	Pn	03 09 36.8	-0.7
	baz=249						
PHUB				eS	Sn	03 10 10.0	-2.0
	baz=249						
WDGT	Dungji	2.96	245	eP	Pn	03 09 37.9	+0.1
	baz=244						
PTMZ	Houxiangcun	3.17	280	eP	Pn	03 09 40.3	-0.4
	baz=279						
PTMZ				eS	Sn	03 10 16.3	-1.5
	baz=279						
MHZQ	Yeshan	3.56	297	eP	Pn	03 09 46.0	+0.1
	baz=295						
AXDP	Jialang	4.20	276	eP	Pn	03 09 56.1	+1.6
	baz=274						

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*IDC **23** 04:00:51.0±1.9, 19°.66S×70°.81W, h0^{km}, mb3.5/2, mb1 3.6/4, mb1mx3.4/45, mbtmp3.5/4, ML3.2/2, MS2.3/1, Ms1 2.4/1, ms1mx2.2/23, Error ellipse: s-maj=54.6km s-min=19.8km az=64.0*

*GUC **23** 04:00:53.1±0.7, 19°.68S×70°.97W, h43^{km}±2^{km}, ML3.6*

ISC 23 04:00:50.6±1.8**, 19°.64S**±0°.03×**70°.91W**±0°.07**, h2**^{km}±10^{km}**, n19, σ1^{s}.15**/33**, 11C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.74	87	⇑iP	Pn	04 01 07.4	-0.9
PSGC				eS	Sn	04 01 19.1	-1.1
TA01	Diego Aracena	1.15	143	⇑iP	Pb	04 01 13.3	+0.1
TA01				eS	Sg	04 01 28.2	+0.6
TA01				IAML		04 01 33.4	
	comp=E,2μm,0.6s						
PB12	IPOC Station P	1.16	28	⇑iP	Pn	04 01 14.2	+0.3
PB12				eS	Sn	04 01 31.2	+0.7
PB11	IPOC Station P	1.19	96	⇓eP	Pn	04 01 14.7	+0.3
PB11				eS	Sn	04 01 31.7	+0.4
PB11				IAML		04 01 33.1	
	comp=N,3μm,0.4s						
AP01	Chacalluta	1.37	23	⇑iP	Pb	04 01 17.3	+0.3
AP01				eS	Sn	04 01 35.9	+0.3
AP01				IAML		04 01 38.0	
	comp=N,2μm,0.4s						
PATCX	Punta Patache	1.37	149	⇑iP	Pg	04 01 16.5	-0.5
PATCX				eS	Sg	04 01 34.8	0.0
GO01	Chusmiza	1.62	91	⇑iP	Pg	04 01 21.9	+0.2
GO01				eS	Sb	04 01 44.1	+1.5
GO01				IAML		04 01 45.8	
	comp=N,2μm,0.2s						
PB08	IPOC Station P	1.73	107	⇑iP	Pb	04 01 23.0	-0.3
PB08				eS	Sg	04 01 46.0	-0.2
PB08				IAML		04 01 52.8	
	comp=N,593nm,0.5s						
PB16	IPOC Station P	1.86	46	eP	Pb	04 01 25.6	0.0
PB16				eS	Sg	04 01 51.4	+1.1
PB02	IPOC Station P	1.92	150	⇑eP	Pn	04 01 24.3	-0.2
PB02				i S	Sn	04 01 47.1	-2.2
PB02				IAML		04 01 58.7	
	comp=E,1μm,0.4s						
PB01	IPOC Station P	1.93	136	⇑iP	Pn	04 01 25.0	+0.4
PB01				eS	Sn	04 01 48.5	-1.0
PB01				IAML		04 01 48.9	
	comp=N,450nm,0.3s						
PB07	IPOC Station P	2.29	155	⇑iP	Pn	04 01 29.6	0.0
PB07				i S	Sn	04 01 57.9	-0.5
PB07				IAML		04 02 12.8	
	comp=E,357nm,0.7s						
PB09	IPOC Station P	2.65	144	⇑eP	Pn	04 01 35.5	+0.9
PB09				eS	Sn	04 02 08.0	+0.5
PB09				IAML		04 02 24.7	
	comp=E,226nm,0.6s						
LVC	Limon Verde	3.50	148	Pn	Pn	04 01 48.0	+1.6
	comp=E,1.5nm,0.3s,baz=356,slow=8.1,SNR=22						
LVC				Sn	Sn	04 02 28.2	-0.3
	comp=E,5.8nm,0.3s,baz=181,slow=11,SNR=4.2						
LVC				Lg	Lg	04 02 39.2	
	comp=E,15nm,0.3s,baz=211,slow=14,SNR=7.2						
LPAZ	La Paz	4.26	39	Pn	Pb	04 02 02.7	-3.9
	comp=E,0.7nm,0.3s,baz=243,slow=8.4,SNR=14						
LPAZ				LR	LR	04 03 17.3	
	comp=E,36nm,18.7s,baz=296,slow=35						
SIV	San Ignacio	10.05	70	Pn	Pn	04 03 17.2	+1.1
	comp=E,0.4nm,0.3s,baz=253,slow=11,SNR=7.7						
TORD	Torodi Ar. Bea	78.53	72	P	P	04 12 52.5	-1.6
	comp=E,0.3nm,0.6s,baz=263,slow=4.1,SNR=2.5						
YKA	Yellowknife Ar	88.83	341	P	P	04 13 46.0	+0.3
	comp=E,0.1nm,0.2s,baz=141,slow=4.7,SNR=4.5						
MKAR	Makanchi Array	145.16	33	PKPbc	PKPdf	04 20 31.4	+1.5
	comp=E,0.1nm,0.5s,baz=333,slow=3.3,SNR=1.3						

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*IDC **23** 04:04:47.3±0.7, 19°.56N×120°.35E, h0^{km}, mb3.8/15, mb1 4.0/16, mb1mx3.8/53, mbtmp3.8/16, ML3.4/1, MS2.9/2, Ms1 3.0/2, ms1mx2.5/63, Error ellipse: s-maj=31.0km s-min=16.0km az=67.0*

*MAN **23** 04:04:51.0, 19°.32N×120°.29E, h114^{km}, mb4.7, ML3.6, MS3.5*

*NEIC **23** 04:04:51.5±1.2, 19°.51N±0°.05×120°.3E±0°.1, h28^{km}±5^{km}, mb4.3/10, Error ellipse: s-maj=16.4km s-min=7.8km az=95.0*

ISC 23 04:04:50.6±0.6**, 19°.49N**±0°.05×**120°.3E**±0°.1**, h23**^{km}**, n33, σ0^{s}.72**/32**, mb4.0**/17**, 1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	1.56	175	⇑eP	Pn	04 05 17.1	+0.2
SIPP				eS	Sn	04 05 33.6	-2.9
SZP	Santa	1.93	176	Pn	Pn	04 05 22.3	+0.2
TWG	Pinlang	3.39	12	Pn	Pn	04 05 42.2	+0.1
TPUB	Ta-pu	3.80	4	Pn	Pn	04 05 47.3	-0.5
YULB	Yu-li	3.99	13	Pn	Pn	04 05 50.5	+0.1
SSLB	Suanglung	4.32	8	Pn	Pn	04 05 54.5	-0.4
NACB	Ninganchiao	4.81	14	Pn	Pn	04 06 01.6	0.0
DAV	Davao City (W)	13.36	157	LR	LR	04 13 48.9	
	comp=Z,83nm,19.2s,baz=350,slow=40						
KSRS	Korea Array	19.09	19	P	P	04 09 11.1	-0.5
	0.1nm,0.3s,baz=205,slow=11,SNR=6.2						
CMAR	Chiang Mai Arr	20.25	271	P	P	04 09 25.1	+0.6
	1.1nm,0.4s,baz=83,slow=8.3,SNR=4.8						
CMAR				LR	LR	04 17 59.8	
	comp=Z,21nm,18.1s,baz=110,slow=39						
SONM	Songino Array	30.46	341	P	P	04 11 01.4	-0.2
	0.4nm,0.6s,baz=168,slow=7.6,SNR=3.7						
MK31	Makanchi Array	41.28	320	P	P	04 12 34.5	+0.3
MKAR	Makanchi Array	41.28	320	P	P	04 12 34.4	+0.2
	1.4nm,0.6s,baz=118,slow=9.4,SNR=14						
MKAR	Makanchi Array	41.28	320	P	P	04 12 34.8	+0.6
MAKZ	Makanchi	41.48	320	P	P	04 12 36.1	+0.3
WRA	Warramunga Arr	41.52	160	P	P	04 12 36.5	+0.1
	1.0nm,0.5s,baz=342,slow=9.7,SNR=2.2						
WR0	Warramunga Arr	41.61	160	P	P	04 12 37.6	+0.6
WR0				IAmb	IAmb	04 12 39.2	
	comp=Z,14nm,1.5s						
ZAA0	Zalesovo Array	43.83	330	P	P	04 12 54.2	-0.5
ZAA0				IAmb	IAmb	04 12 55.5	
	comp=Z,2.7nm,0.8s						
ZALV	Zalesovo Beam	43.83	330	P	P	04 12 54.9	+0.2
	comp=Z,1.4nm,0.7s,baz=117,slow=7.6,SNR=6.7						
NIL	Nilore	44.04	299	P	P	04 12 56.2	-0.6
ASAR	Alice Springs	44.89	162	P	P	04 13 04.5	+1.0
	comp=Z,0.7nm,0.3s,baz=340,slow=6.7,SNR=14						
KURK	Kurchatov	45.27	323	P	P	04 13 06.3	0.0
KURK				IAmb	IAmb	04 13 08.2	
	comp=Z,4.2nm,1.0s						
KKAR	Karatay Array	47.81	311	P	P	04 13 26.4	0.0
NRIK	Noril'sk	53.73	346	P	P	04 14 11.0	+0.5
	comp=Z,1.0nm,0.4s,baz=124,slow=1.0,SNR=4.0						
STKA	Stephens Creek	54.99	158	P	P	04 14 21.3	+1.1
	comp=Z,1.7nm,0.7s,baz=335,slow=7.4,SNR=4.0						
STKA	Stephens Creek	54.99	158	IAmb	IAmb	04 14 23.8	
	comp=Z,5.2nm,1.8s						
KBZ	Khabaz	67.83	310	P	P	04 15 47.3	+0.3
	comp=Z,1.8nm,0.9s,baz=235,slow=1.4,SNR=4.6						
ILAR	Eielson Array	73.74	26	P	P	04 16 22.0	-0.6
	comp=Z,0.2nm,0.5s,baz=284,slow=5.9,SNR=4.0						
FINES	FINESS Array B	75.09	330	P	P	04 16 30.4	-0.1
	comp=Z,1.2nm,0.6s,baz=57,slow=5.1,SNR=10						
AKASG	Malin Array Be	75.85	319	P	P	04 16 34.3	-0.8
	comp=Z,0.2nm,0.3s,baz=61,slow=6.0,SNR=4.4						
HFS	Hagfors	81.26	331	P	P	04 17 05.1	+0.5
	comp=Z,2.7nm,0.9s,baz=64,slow=3.4,SNR=2.2						
GERES	GERESS Array B	85.95	321	P	P	04 17 29.1	0.0
	comp=Z,0.4nm,0.7s,baz=57,slow=4.9,SNR=4.9						
YKA	Yellowknife Ar	87.59	22	P	P	04 17 37.1	+0.4
	comp=Z,0.2nm,0.6s,baz=309,slow=3.3,SNR=4.1						

TRN 23 04:06:54.9, 14°.72N×59°.41W, h82^{km}, MD3.6, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPOM	Morne Pois Mar	1.43	259	eP	Pn	04 07 20.1	+0.7
LPMF	Morne Lapointe	1.52	265	eP	Pn	04 07 21.0	+0.5
ZAM	Aeronautique	1.58	265	eP	Pn	04 07 22.9	+1.6
TRMF	Trois Ilets	1.60	264	eP	Pn	04 07 22.9	+1.2
BIM	Bigot	1.62	263	eP	Pn	04 07 23.4	+1.4
SLBI	Saint Lucia, B	1.67	246	eP	Pn	04 07 24.4	+1.9
SLBI				eS	Sn	04 07 44.9	+1.5
BAMF	Morne Balai	1.69	273	eP	Pn	04 07 24.6	+1.7
FDF	Fort de France	1.69	271	eS	Sn	04 07 46.1	+2.2
GBMF	Grand Be	1.70	273	eP	Pn	04 07 24.5	+1.5
PCM	Pelee Case Pet	1.75	273	eP	Pn	04 07 24.7	+1.1
MCLT	Moule a Chique	1.80	236	eP	Pn	04 07 26.2	+2.0
MCLT				eS	Sn	04 07 46.6	+0.2
SLB	Belfond	1.82	241	eP	Pn	04 07 26.3	+1.8
SVCV	St. Vincent, C	2.22	230	eP	Pn	04 07 31.1	+1.2
SVCV				eS	Sn	04 07 57.8	+1.3
SVV	Soufriere Volc	2.24	232	eP	Pn	04 07 31.3	+1.2
SVV				eS	Sn	04 07 57.2	+0.1
SVB	Belmont	2.30	231	eP	Pn	04 07 32.4	+1.5
SVB				eS	Sn	04 07 59.7	+1.3
CBE	Ff, Capester	2.51	303	eP	Pn	04 07 35.3	+1.6

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*IDC **23** 04:21:48.0±3.2, 4°.85S×153°.60E, h122^{km}±23^{km}, mb3.5/9, mb1 3.7/10, mb1mx3.5/33, mbtmp3.9/10, Error ellipse: s-maj=37.4km s-min=15.8km az=103.0*

ISC 23 04:21:44.4±1.0**, 4°.89S**±0°.10×**153°.9E**±0°.1**, h100**^{km}**, n12, σ1^{s}.41**/14**, mb3.6**/9**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.93	287	P	Pn	04 22 16.9	+0.7
	80nm,0.3s,baz=132,slow=1.1,SNR=31						
KRVT				S	Sn	04 22 39.9	-0.4
	98nm,0.3s,baz=189,slow=21,SNR=16						
PMG	Port Moresby	8.03	236	P	Pn	04 23 40.4	+2.0
	7.9nm,0.3s,baz=47,slow=6.8,SNR=15						
PMG				S	Sn	04 25 07.1	-0.5
	2.3nm,0.3s,baz=36,slow=15,SNR=1.3						
WRA	Warramunga Arr	24.20	230	P	P	04 26 51.9	+0.1
	3.7nm,0.6s,baz=54,slow=9.7,SNR=37						
ASAR	Alice Springs	26.82	224	P	P	04 27 16.1	+0.5
	1.5nm,0.6s,baz=56,slow=9.0,SNR=16						
ASAR				pP	pwP	04 27 37.6	-3.7
	1.0nm,0.8s,baz=56,slow=10.0,SNR=7.7						
STKA	Stephens Creek	29.21	202	P	P	04 27 37.0	+0.2
	0.9nm,0.6s,baz=320,slow=17,SNR=3.2						
SONM	Songino Array	66.98	327	P	P	04 32 26.4	-0.2
	0.2nm,0.4s,baz=130,slow=2.3,SNR=2.5						
MKAR	Makanchi Array	81.10	319	P	P	04 33 49.3	+0.5
	0.3nm,0.5s,baz=98,slow=7.5,SNR=5.6						
ZALV	Zalesovo Beam	81.82	326	P	P	04 33 53.2	+0.9
	0.5nm,0.4s,baz=101,slow=5.3,SNR=2.0						
ILAR	Eielson Array	81.84	22	P	P	04 33 52.6	+0.4
	0.3nm,0.8s,baz=252,slow=5.6,SNR=2.6						
MAW	Mawson	85.90	203	P	P	04 34 12.9	+0.1
	2.9nm,0.8s,baz=103,slow=12,SNR=2.3						
NVAR	Mina Array Bea	91.30	52	P	P	04 34 43.0	+3.6
	0.1nm,0.3s,baz=257,slow=3.6,SNR=1.9						
TORD	Torodi Ar. Bea	151.35	289	PKPbc	PKiKP	04 41 26.7	-1.4
	0.8nm,0.6s,baz=86,slow=2.1,SNR=8.3						

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*BJI **23** 04:31:00.7±0.0, 20°.31S×178°.41W, h610^{km}, mB5.8/60, mb5.6/76*

*MOS **23** 04:31:01.0±0.8, 20°.65S×178°.82W, h609^{km}, mb5.7/35, Error ellipse: s-maj=8.3km s-min=7.4km az=124.5*

*NEIC **23** 04:31:01.6±1.5, 20°.67S±0°.08×178°.81W±0°.09, h607^{km}±4^{km}, mb5.7/402, Mwb5.9/27, Mwc5.9/62, Mwc5.9(GCMT), Error ellipse: s-maj=12.2km s-min=11.4km az=100.0*

*NEIC **23** 04:31:01.6, 20°.67S×178°.81W, h611^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-3.47; M$_{\theta\theta}$2.09; M$_{\phi\phi}$1.38; M$_{r\theta}$-6.19; M$_{\theta\phi}$1.80; M$_{\phi r}$-5.00; Fault plane solution: M$_0$8.70000×10^{17} NP1:ϕ_s229.98000°, δ11.94000°, λ-91.04000°. NP2:ϕ_s51.04000°, δ78.06000°, λ-89.78000°. Principal axes: T 8.7505, Plg33.0000°, Azm141.0000°; N -0.1042, Plg0.0000°, Azm231.0000°; P -8.6463, Plg57.0000°, Azm321.0000°;*

*IDC **23** 04:31:02.6±0.5, 20°.67S×178°.84W, h612^{km}±5^{km}, mb4.9/36, mb1 5.0/39, mb1mx5.0/39, mbtmp5.8/39 Error ellipse: s-maj=7.8km s-min=7.0km az=29.0*

*BGR **23** 04:31:03.1±0.0, 21°.15S×178°.93W, h629^{km}±3^{km}*

*GCMT **23** 04:31:04.6±0.1, 20°.63S±0°.01×178°.83W±0°.01, h621^{km}, MW5.8/148, Moment Tensor Solution. s148,c278; s89,c94; Duration: 2^{s}.0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-3.58±.05; M$_{\theta\theta}$-0.80±.09; M$_{\phi\phi}$4.37±.09; M$_{r\theta}$-4.69±.08; M$_{\theta\phi}$1.99±.08; M$_{\phi r}$-3.22±.08; Best double couple: M$_0$7.25300×10^{17} NP1:ϕ_s170.00000°, δ28.00000°, λ-144.00000°. NP2:ϕ_s47.00000°, δ74.00000°, λ-67.00000°. Principal axes: T 7.2380, Plg25.0000°, Azm119.0000°; N 0.0210, Plg22.0000°, Azm221.0000°; P -7.2670, Plg55.0000°, Azm347.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

*NEIC **23** 04:31:06, 20°.67S×178°.76W, h625^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-3.69; M$_{\theta\theta}$-0.50; M$_{\phi\phi}$4.19; M$_{r\theta}$-4.79; M$_{\theta\phi}$2.21; M$_{\phi r}$-3.70; Fault plane solution: M$_0$7.57000×10^{17} NP1:ϕ_s47.00000°, δ74.00000°, λ-70.00000°. NP2:ϕ_s174.00000°, δ25.00000°, λ-139.00000°. Principal axes: T 7.6911, Plg26.0000°, Azm121.0000°; N -0.2589, Plg19.0000°, Azm221.0000°; P -7.4323, Plg57.0000°, Azm342.0000°;*

*NEIC **23** 04:31:15.4, 21°.59S×179°.44W, h631^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-3.45; M$_{\theta\theta}$1.21; M$_{\phi\phi}$2.24; M$_{r\theta}$-5.79; M$_{\theta\phi}$-0.59; M$_{\phi r}$-6.67; Fault plane solution: M$_0$9.16000×10^{17} NP1:ϕ_s38.87000°, δ82.52000°, λ-85.84000°. NP2:ϕ_s189.65000°, δ8.55000°, λ-118.94000°. Principal axes: T 8.0552, Plg37.0000°, Azm125.0000°; N 2.2111, Plg4.0000°, Azm218.0000°; P -10.2663, Plg52.0000°, Azm314.0000°;*

ISC 23 04:31:01.9±0.2**, 20°.70S**±0°.03×**178°.79W**±0°.03**, h615**^{km}±2^{km}**, h616**^{km}**:pP-P, n1607, σ1^{s}.49**/1776**, mb5.7**/305**, 84C-81D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.20	314	c iP	P	04 32 30.0	-0.1
MSVF	Nonsavu	4.20	314	P	P	04 32 30.6	+0.6
NIUE	Niue	8.49	81	P	P	04 33 06.1	-0.4
RIZ	Raoul Island	8.54	175	P	P	04 33 05.8	-1.0
RAO	Raoul Island	8.55	175	P	P	04 33 06.1	-0.7
	251nm,0.3s,baz=117,slow=4.3,SNR=5.8						
RAO				S	S	04 34 48.4	-0.9
	167nm,0.3s,baz=61,slow=20,SNR=3.6						
GLKZ	Green Lake	8.56	175	P	P	04 33 05.8	-1.1

GLKZ				S	S	04 34 46.3	-3.1
AFI	Afiamalu	9.51	46	P	P	04 33 14.2	-2.3
	216nm,0.3s,baz=50,slow=0.6,SNR=106						
AFI				S	S	04 35 02.1	-4.6
	181nm,0.3s,baz=198,slow=23,SNR=9.1						
FUNA	Funafuti	12.26	351	P	P	04 33 42.6	-0.8
DZM	Mont Dzumac	13.82	262	*e*P	P	04 33 58.6	-0.2
	472nm,1.2s						
DZM	Mont Dzumac	13.82	262	P	P	04 33 58.7	-0.2
	24nm,0.3s,baz=93,slow=13,SNR=57						
NFK	Norfolk Island	14.62	233	P	P	04 34 06.8	+0.8
	baz=15,SNR=6.0						
OUZ	Omahuta	15.94	203	P	P	04 34 20.2	+2.3
OUZ	Omahuta	15.94	203	P	P	04 34 21.4	+3.5
WCZ	Waipu Caves	16.33	200	P	P	04 34 23.3	+1.8
KUZ	Kuaotunu	16.69	196	P	P	04 34 27.4	+2.7
MXZ	Matakaoa Point	16.99	188	P	P	04 34 27.8	+0.3
MXZ				IAmb	IAmb	04 34 31.3	
	comp=Z,96nm,0.5s						
HAZ	Te Kaha	17.25	189	P	P	04 34 28.6	-1.2
HAZ				S	S	04 37 15.3	-3.5
KMRZ	Kaimai	17.68	194	P	P	04 34 35.9	+2.1
EDRZ	Edgecumbe	17.77	192	P	P	04 34 35.1	+0.4
RAR	Rarotonga	17.77	95	P	P	04 34 35.4	+0.6
	comp=Z,9.8nm,0.3s,baz=249,slow=5.8,SNR=46						
RAR	Rarotonga	17.77	95	P	P	04 34 35.0	+0.2
URZ	Urewera	17.85	191	P	P	04 34 32.6	-2.8
	comp=Z,48nm,0.3s,baz=275,slow=2.4,SNR=139						
URZ				S	S	04 37 24.6	-3.9
	comp=Z,9.1nm,0.3s,baz=231,slow=22,SNR=7.7						
URZ				ScP	ScP	04 41 16.1	+0.1
	comp=Z,2.1nm,0.3s,baz=341,slow=6.9,SNR=3.7						
URZ	Urewera	17.85	191	P	P	04 34 32.5	-2.8
URZ				S	S	04 37 23.5	-5.0
MWZ	Matawai	17.86	189	P	P	04 34 33.6	-1.9
MWZ				S	S	04 37 24.6	-4.2
NGRZ	Ngongotaha	17.88	193	P	P	04 34 39.1	+3.4
TKGZ	Te Karaka	17.91	189	P	P	04 34 36.0	+0.2
TKGZ				S	S	04 37 27.9	-1.6
TARZ	Mount Tarawera	17.94	192	P	P	04 34 36.5	+0.2
HLRZ	Highlands Stat	17.99	192	P	P	04 34 37.4	+0.8
RAGZ	Rawiri	18.03	190	P	P	04 34 35.8	-1.3
RAGZ				S	S	04 37 27.7	-4.0
RRRZ	Republican Roa	18.04	192	P	P	04 34 37.3	+0.2
HSRZ	Hossack Road	18.07	193	P	P	04 34 38.6	+1.2
MUGZ	Murupara	18.12	191	P	P	04 34 36.9	-1.0
HRRZ	Handcock Road	18.13	193	P	P	04 34 37.8	-0.1
RIGZ	Rimuhau	18.19	189	P	P	04 34 37.4	-1.0
ALRZ	Allen Road	18.29	192	P	P	04 34 38.9	-0.4
KNZ	Kokohu	18.51	189	P	P	04 34 40.0	-1.3
HIZ	Hauiti	18.58	196	P	P	04 34 43.0	+1.0
HIZ				IAmb	IAmb	04 34 45.8	
	comp=Z,459nm,1.4s						
HIZ	Hauiti	18.58	196	P	P	04 34 43.8	+1.8
WHHZ	Waihua	18.63	190	P	P	04 34 41.6	-0.9
RATZ	Rangitukua	18.70	193	P	P	04 34 43.1	-0.1
KATZ	Kakaramea	18.82	193	P	P	04 34 44.5	+0.2
KRVZ	Karewarewa	18.95	193	P	P	04 34 45.2	-0.2
TWVZ	Taurewa	18.97	194	P	P	04 34 45.0	-0.6
WTVZ	West Tongariro	18.98	194	P	P	04 34 44.8	-0.9
NGZ	Ngauruhoe	19.03	193	P	P	04 34 45.7	-0.5
MCHZ	McNeill Hill	19.08	191	P	P	04 34 45.5	-1.0
KNTN	Kanton	19.11	22	P	P	04 34 46.6	-0.5
TUVZ	Tukino	19.11	193	P	P	04 34 45.9	-1.0
FWVZ	Far West T-bar	19.12	194	P	P	04 34 46.3	-0.8
WHVZ	Whangaehu Hut	19.14	193	P	P	04 34 47.1	-0.2
PKVZ	Pokaka	19.20	194	P	P	04 34 47.2	-0.5
MOVZ	Moawhango	19.22	193	P	P	04 34 46.4	-1.5
BHHZ	Black Hill Sta	19.24	192	P	P	04 34 45.1	-3.0
MTVZ	Mangateitei	19.26	194	P	P	04 34 48.6	+0.4
KRHZ	Kereru	19.33	191	P	P	04 34 47.4	-1.4
KAHZ	Kahuranaki	19.39	190	P	P	04 34 48.3	-1.0
KHEZ	Kahui Hut	19.54	197	P	P	04 34 53.9	+3.2
PXZ	Pawanui	19.62	190	P	P	04 34 50.8	-0.6
PNHZ	Pukenui	19.62	192	P	P	04 34 50.3	-1.2
WAZ	Wanganui	19.73	194	P	P	04 34 52.2	-0.2
TSZ	Takapari Road	19.81	192	P	P	04 34 52.4	-0.8
ANWZ	Angora Road	20.10	191	P	P	04 34 54.5	-1.2
BFZ	Birch Farm	20.36	191	P	P	04 34 57.4	-0.6
MSWZ	Moikau Station	21.26	192	P	P	04 35 05.8	-0.3
SNZO	South Karori	21.27	194	P	P	04 35 05.3	-0.8
SNZO				IAmb	IAmb	04 35 06.8	
	comp=Z,114nm,0.7s						
BHW	Baring Head	21.33	193	P	P	04 35 05.6	-1.1
QRZ	Quartz Range	21.38	198	IAmb	IAmb	04 35 45.0	
	comp=Z,84nm,0.7s						
THZ	Tophouse	22.14	197	IAmb	IAmb	04 35 17.0	
	comp=Z,93nm,0.5s						
LHI	Lord Howe Isla	22.57	237	IAmb	IAmb	04 35 20.6	
	comp=Z,188nm,0.8s						
LTZ	Lake Taylor	23.26	197	IAmb	IAmb	04 36 02.9	
	comp=Z,115nm,0.5s						
HNR	Honiara	23.36	296	P	P	04 35 25.2	+0.1
	comp=Z,154nm,0.7s,baz=212,slow=7.1,SNR=7.2						
HNR	Honiara	23.36	296	*e*P	P	04 35 25.0	-0.1
HNR	Honiara	23.36	296	P	P	04 35 24.8	-0.3
TARA	Tarawa	23.38	339	P	P	04 35 25.2	-0.1
RPZ	Rata Peaks	24.46	198	P	P	04 35 34.6	+0.2
	comp=Z,26nm,0.4s,baz=70,slow=1.4,SNR=33						
RPZ				ScP	ScP	04 41 33.5	+1.0
	comp=Z,8.1nm,0.6s,baz=12,slow=10.0,SNR=3.1						
RPZ	Rata Peaks	24.46	198	P	P	04 35 35.2	+0.8
FOZ	Fox Glacier	24.68	200	IAmb	IAmb	04 35 38.4	
	comp=Z,132nm,1.0s						
MLZ	Mavora Lakes	26.86	201	IAmb	IAmb	04 35 58.8	
	comp=Z,152nm,0.8s						
DCZ	Deep Cove	27.28	202	IAmb	IAmb	04 36 01.2	
	comp=Z,141nm,0.9s						
TBI	Tubuai	27.30	101	⇑*i*P	P	04 36 00.8	+1.2
	comp=Z,750nm,1.0s						
WHZ	Wether Hill Ro	27.38	200	P	P	04 36 00.9	+0.8
PAE	Paea	27.74	89	⇑*i*P	P	04 36 04.2	+0.7
	comp=Z,86nm,1.1s						
PAE				*e*pP	pP	04 37 37.6	+0.2
	comp=Z,37nm,1.3s						
PAE				*e*ScP	ScP	04 41 42.0	-0.7
	comp=Z,15nm,1.1s						
PPT2	Papeete2	27.75	89	⇑*i*P	P	04 36 04.7	+0.9
	comp=Z,690nm,1.2s						
PPT2				*e*pP	pP	04 37 36.8	-0.9
	comp=Z,308nm,1.4s						
PPT2				*e*ScP	ScP	04 41 42.4	-0.5
	comp=Z,129nm,1.2s						
PPT	Papeete	27.76	89	P	P	04 36 04.7	+0.9
	comp=Z,536nm,0.9s,baz=51,slow=3.9,SNR=88						
PPT				ScP	ScP	04 41 45.5	+2.7
	comp=Z,90nm,0.9s,baz=324,slow=4.1,SNR=6.7						
PPT	Papeete	27.76	89	P	P	04 36 04.5	+0.8
TIAR	Tiarei	27.98	89	⇑*i*P	P	04 36 06.6	+1.0
	comp=Z,170nm,1.0s						
TIAR				*e*pP	pP	04 37 38.6	-1.1
	comp=Z,63nm,1.4s						
TIAR				*e*ScP	ScP	04 41 42.8	-0.7
	comp=Z,21nm,0.8s						
TVO	Taravao	28.02	89	⇑*i*P	P	04 36 06.8	+0.7
	comp=Z,60nm,0.8s						
TVO				*e*ScP	ScP	04 41 43.1	-0.6
	comp=Z,20nm,0.9s						
EIDS	Eidsvold	28.08	255	P	P	04 36 06.8	+0.3
	baz=28,SNR=68						
EIDS	Eidsvold	28.08	255	P	P	04 36 07.0	+0.6
EIDS				IAmb	IAmb	04 36 33.7	
	comp=Z,118nm,0.6s						
ARMA	Armidale	28.31	244	P	P	04 36 10.1	+1.6
	baz=28,SNR=165						
ARMA	Armidale	28.31	244	P	P	04 36 09.6	+1.1
ARMA				IAmb	IAmb	04 36 10.9	
	comp=Z,127nm,0.7s						
MEH	Mehetia	29.11	90	⇑*i*P	P	04 36 15.7	+0.2
	comp=Z,240nm,1.0s						
MEH				*e*ScP	ScP	04 41 46.3	-0.9
	comp=Z,32nm,1.3s						
MGCD	Mangrove Creek	29.47	239	P	P	04 36 19.7	+1.4
	baz=30,SNR=38						
RIV	Riverview	29.62	238	P	P	04 36 20.7	+1.2
	baz=30,SNR=4.9						
RIV	Riverview	29.62	238	P	P	04 36 20.8	+1.2
RIV				pmax	pmax		
	comp=Z,126nm,1.2s						
PMOR	Pomariorio Ree	29.92	84	⇑*i*P	P	04 36 23.0	+0.6
	comp=Z,1µm,1.1s						
PMOR				*e*ScP	ScP	04 41 49.5	-0.3
	comp=Z,179nm,1.2s						
VAH	Vaihoa	30.11	85	⇑*i*P	P	04 36 24.5	+0.5
	comp=Z,887nm,1.0s						
VAH				*e*ScP	ScP	04 41 49.9	-0.5
	comp=Z,92nm,1.3s						
RMQ	Roma	30.24	253	P	P	04 36 26.5	+1.5
	baz=30,SNR=84						
XMAS	Kiritimati	30.80	45	P	P	04 36 30.7	+0.8
CNB	Canberra Magne	31.50	236	P	P	04 36 37.0	+1.3
	baz=32,SNR=93						
CAN	Canberra	31.78	236	P	P	04 36 39.0	+0.9
CAN				pmax	pmax		
	comp=Z,92nm,0.9s						
CAN	Canberra	31.78	236	P	P	04 36 39.0	+0.9
YNG	Young	31.95	238	P	P	04 36 40.4	+1.0
	baz=32,SNR=12						
KWAJ	Kwajalein Atol	32.23	334	P	P	04 36 42.6	+0.6
KWAJ				pmax	pmax		
	comp=Z,682nm,1.1s						
KWAJ	Kwajalein Atol	32.23	334	P	P	04 36 42.6	+0.6
MILA	Mila	32.26	233	P	P	04 36 42.9	+0.9
	baz=32,SNR=4.1						
KRVT	Keravat (AS076	32.72	296	P	P	04 36 45.8	-0.4
	comp=Z,268nm,0.6s,baz=237,slow=0.5,SNR=7.7						
CTA	Charters Tower	32.73	265	P	P	04 36 47.2	+0.9
	comp=Z,244nm,0.5s,baz=93,slow=10,SNR=697						
CTA				PcP	PcP	04 39 13.4	+0.7
	comp=Z,30nm,0.6s,baz=159,slow=2.4,SNR=4.0						
CTA				ScP	ScP	04 42 02.2	+2.8
	comp=Z,18nm,0.9s,baz=94,slow=3.3,SNR=4.8						
CTAO	Charters Tower	32.73	265	P	P	04 36 46.7	+0.4
CMSA	Cobar Meteorol	33.53	244	P	P	04 36 53.6	+0.8
	baz=34,SNR=239						
QLP	Quilpie	34.29	253	P	P	04 36 59.9	+0.7
	baz=34,SNR=68						
PMG	Port Moresby	34.67	284	P	P	04 37 03.2	+0.8
	comp=Z,372nm,0.7s,baz=82,slow=5.8,SNR=164						
PMG				PcP	PcP	04 39 19.4	+1.0
	comp=Z,52nm,0.9s,baz=79,slow=5.2,SNR=3.7						
PMG				ScP	ScP	04 42 08.1	+1.7
	comp=Z,15nm,0.7s,baz=22,slow=5.4,SNR=3.4						
PMG	Port Moresby	34.67	284	*de*P	P	04 37 03.0	+0.6
PMG				pmax	pmax		
	comp=Z,2µm,0.9s						
PMG	Port Moresby	34.67	284	P	P	04 37 02.8	+0.4
MTSU	Mount Surprise	34.84	268	P	P	04 37 04.0	+0.2
	baz=35,SNR=534						
TOO	Toolangi	35.18	234	P	P	04 37 07.4	+1.0
	baz=35,SNR=134						
TOO	Toolangi	35.18	234	P	P	04 37 07.1	+0.7
TOO				pmax	pmax		
	comp=Z,154nm,0.7s						
TOO	Toolangi	35.18	234	P	P	04 37 07.1	+0.7
TOO				IAmb	IAmb	04 37 08.3	
	comp=Z,154nm,0.7s						
PATS	Pohnpei	35.43	318	P	P	04 37 10.2	+1.5
	baz=36,SNR=8.9						
PATS	Pohnpei	35.43	318	P	P	04 37 09.8	+1.1
MOO	Moorlands	35.84	225	P	P	04 37 12.6	+0.9
	baz=36,SNR=7.8						
TAU	Tasmania Unive	35.96	224	P	P	04 37 13.4	+0.7
TAU				pmax	pmax		
	comp=Z,40nm,0.7s						
TAU	Tasmania Unive	35.96	224	P	P	04 37 13.4	+0.7
COEN	Coen	36.86	274	P	P	04 37 21.3	+0.8
	baz=37,SNR=107						
COEN	Coen	36.86	274	P	P	04 37 21.1	+0.7
STKA	Stephens Creek	37.03	244	P	P	04 37 22.8	+1.2
	baz=37,SNR=293						
STKA	Stephens Creek	37.03	244	P	P	04 37 22.9	+1.2
	comp=Z,128nm,0.5s,baz=92,slow=10,SNR=341						
STKA				ScP	ScP	04 42 17.0	+2.1
	comp=Z,14nm,0.7s,baz=82,slow=7.8,SNR=3.6						
STKA				P3KPbc		05 07 33.6	
	comp=Z,3.1nm,0.8s,baz=280,slow=12,SNR=5.0						
STKA	Stephens Creek	37.03	244	P	P	04 37 22.9	+1.2
ARPS	Mount Arapiles	37.76	236	P	P	04 37 28.0	+0.6
	baz=38,SNR=50						
JOHN	Johnston Islan	38.30	14	P	P	04 37 32.6	+0.7
QIS	Mount Isa	38.86	263	P	P	04 37 36.6	0.0
	baz=39,SNR=46						
TAOE	Nuku Hiva Isla	39.07	78	⇑*i*P	P	04 37 39.3	+0.9
	comp=Z,1µm,1.1s						
TAOE	Nuku Hiva Isla	39.07	78	P	P	04 37 38.8	+0.3
HTT	Hallett	39.48	242	P	P	04 37 42.2	+0.8
	baz=40,SNR=163						
BBOO	Buckleboo	41.79	244	P	P	04 38 00.1	+0.4
	baz=42,SNR=1000						
BBOO	Buckleboo	41.79	244	P	P	04 37 59.9	+0.3
WAKE	Wake Island	42.22	339	P	P	04 38 03.4	+0.4
H11N3	WAKE ISLAND Hy	42.54	340	P	P	04 38 05.6	+0.3
	baz=179,slow=11,SNR=9.5						
H11N1	WAKE ISLAND Hy	42.54	340	P	P	04 38 06.0	+0.7
	baz=179,slow=11,SNR=4.3						
H11N2	WAKE ISLAND Hy	42.56	340	P	P	04 38 05.9	+0.5
	baz=179,slow=11,SNR=10						
AS31	Alice Springs	43.75	257	P	P	04 38 15.3	+0.2
AS31				IAmb	IAmb	04 38 16.3	
	comp=Z,170nm,0.7s						
ASAR	Alice Springs	43.75	257	P	P	04 38 15.1	0.0
	comp=Z,520nm,0.6s,baz=96,slow=7.5,SNR=7347						
ASAR				PcP	PcP	04 39 48.4	+0.6
	comp=Z,77nm,0.7s,baz=105,slow=3.9,SNR=8.7						
ASAR				ScP	ScP	04 42 44.6	+2.8
	comp=Z,23nm,0.7s,baz=98,slow=5.0,SNR=5.0						
ASAR				S	S	04 44 00.7	-1.8
	comp=Z,61nm,0.9s,baz=94,slow=15,SNR=29						
ASAR				P3KPbc		05 07 06.2	
	comp=Z,0.5nm,0.9s,baz=285,slow=3.3,SNR=4.2						
ASAR	Alice Springs	43.75	257	P	P	04 38 14.6	-0.5
WRAB	Tennant Creek	43.83	262	*de*P	P	04 38 15.3	-0.4
WRAB				pmax	pmax		
	comp=Z,320nm,1.0s						
WRAB	Tennant Creek	43.83	262	P	P	04 38 14.8	-0.9
WRA	Warramunga Arr	43.84	262	P	P	04 38 15.5	-0.3
	comp=Z,228nm,0.5s,baz=98,slow=8.4,SNR=431						
WRA				PcP	PcP	04 39 48.8	+0.6
	comp=Z,34nm,0.8s,baz=94,slow=4.3,SNR=5.1						
WRA				S	S	04 44 01.8	-2.0
	comp=Z,25nm,0.8s,baz=95,slow=14,SNR=8.6						
WRA				ScS	ScS	04 47 08.0	+1.0
	comp=Z,2.3nm,0.7s,baz=96,slow=8.7,SNR=4.8						
WRA	Warramunga Arr	43.84	262	P	P	04 38 14.6	-1.2
GENI	Genyem	43.85	289	P	P	04 38 16.7	+0.9
	comp=Z,12µmcomp=Z,1µm,1.1s						
AIN	Ainahou	45.92	31	P	P	04 38 33.1	+1.4
MWH	Moku‘aweowe	45.95	31	IAmb	IAmb	04 38 43.1	
	comp=Z,312nm,1.3s						
MLOA	Mauna Loa Obse	46.00	31	IAmb	IAmb	04 38 39.7	
	comp=Z,267nm,1.0s						
HUH	Hualalai	46.00	31	IAmb	IAmb	04 38 34.2	
	comp=Z,214nm,0.8s						
KKO	Keanakako`i	46.03	32	IAmb	IAmb	04 38 34.2	
	comp=Z,437nm,1.2s						
POHA	Pohakuloa	46.21	31	P	P	04 38 34.7	+0.8
POHA				IAmb	IAmb	04 38 44.5	
	comp=Z,271nm,0.9s						
KIP	Kipapa	46.53	27	P	P	04 38 36.4	+0.4
KIP				pmax	pmax		
	comp=Z,1µm,1.7s						
KIP	Kipapa	46.53	27	P	P	04 38 36.4	+0.4
KDU	Kakadu	47.22	272	P	P	04 38 40.9	-0.4
	baz=47,SNR=367						
BAKI	Biak	48.09	288	P	P	04 38 49.0	+1.1
	comp=Z,687nm,1.1s						
MTN	Manton Dam	48.42	271	P	P	04 38 50.1	-0.2
	baz=48,SNR=37						
FORT	Forrest	48.53	247	P	P	04 38 51.0	+0.1
	baz=49,SNR=389						
FORT	Forrest	48.53	247	P	P	04 38 51.0	+0.1
MIDW	Midway	48.65	2	P	P	04 38 51.7	+0.1
MIDW				IAmb	IAmb	04 38 52.8	
	comp=Z,418nm,1.1s						
WRKA	Warakurna	48.70	254	P	P	04 38 52.0	-0.3
	baz=49,SNR=948						
GUMO	Guam	49.37	311	P	P	04 38 57.3	+0.2
	comp=Z,379nm,0.7s,baz=148,slow=7.6,SNR=22						
GUMO	Guam	49.37	311	P	P	04 38 57.5	+0.3
GUMO				pmax	pmax		
	comp=Z,677nm,1.0s						
GUMO	Guam	49.37	311	P	P	04 38 57.5	+0.3
RKPI	Ransiki, Papua	49.68	286	P	P	04 39 02.2	+2.6
	comp=Z,17µmcomp=Z,195nm,1.5s						
SAUI	Saumlaki	49.79	277	P	P	04 39 01.7	+1.3
	comp=Z,13µmcomp=Z,1µm,1.3s						
KNRA	Kununurra	49.91	267	P	P	04 39 00.9	-0.3
	baz=50,SNR=267						
KNRA	Kununurra	49.91	267	P	P	04 39 01.2	0.0
FAKI	Fak Fak	50.83	284	P	P	04 39 07.8	-0.1
	comp=Z,3µmcomp=Z,4µmcomp=Z,266nm,1.5s						
FAKI	Fak Fak	50.83	284	P	P	04 39 07.8	-0.1
FAKI				IAmb	IAmb	04 39 09.3	
	comp=Z,337nm,1.2s						
FITZ	Fitzroy Crossi	52.27	263	P	P	04 39 18.3	+0.1
	baz=52,SNR=342						
FITZ	Fitzroy Crossi	52.27	263	P	P	04 39 18.3	+0.1
FITZ				IAmb	IAmb	04 39 19.3	
	comp=Z,153nm,0.7s						
BNDI	Bandanaira	52.34	281	P	P	04 39 19.0	+0.3
	comp=Z,13µmcomp=Z,958nm,1.3s						
SWI	Sorong	52.58	285	P	P	04 39 20.7	+0.2
	comp=Z,13µmcomp=Z,2µm,1.0s						
MSAI	Masohi	53.69	281	P	P	04 39 28.3	0.0
	comp=Z,118nm,0.6s						
KMBL	Kambalda	53.80	246	P	P	04 39 28.7	-0.2
	baz=54,SNR=38						
AAI	Ambon	54.23	281	P	P	04 39 32.5	+0.4
	comp=Z,436nm,1.3s						
NLAI	Namlea	55.41	281	P	P	04 39 40.5	+0.2
	comp=Z,6µmcomp=Z,416nm,0.8s						
SOEI	Soe	55.77	272	P	P	04 39 44.0	+1.1
LBMI	Labuha	56.08	284	P	P	04 39 45.8	+0.9
	comp=Z,5µmcomp=Z,566nm,0.9s						
TNTI	Ternate	56.80	285	P	P	04 39 50.2	+0.4
	comp=Z,6µmcomp=Z,579nm,1.1s						
TNTI	Ternate	56.80	285	P	P	04 39 50.3	+0.5
TNTI				IAmb	IAmb	04 39 51.4	
	comp=Z,516nm,1.0s						
SANI	Sanana	56.90	282	P	P	04 39 50.2	-0.3
	comp=Z,3µmcomp=Z,5µmcomp=Z,502nm,1.1s						
PSA00	Pilbara Seismi	56.90	257	IAmb	IAmb	04 39 51.3	
	comp=Z,442nm,0.8s						
MEEK	Meekatharra	57.15	251	P	P	04 39 51.5	-0.6
	baz=57,SNR=118						
KLBR	Kellerberrin	57.30	245	P	P	04 39 53.2	+0.2
	baz=57,SNR=34						
NWAO	Narrogin (SRO)	57.62	244	P	P	04 39 55.5	+0.4
	baz=58,SNR=77						
NWAO	Narrogin (SRO)	57.62	244	P	P	04 39 55.5	+0.4
NWAO				pmax	pmax		
	comp=Z,455nm,1.5s						
NWAO	Narrogin (SRO)	57.62	244	P	P	04 39 55.5	+0.4
NWAO				IAmb	IAmb	04 39 56.5	
	comp=Z,456nm,1.4s						
SBA	Scott Base	57.62	184	P	P	04 39 56.7	+2.4
SBA				pmax	pmax		
	comp=Z,112nm,1.2s						
SBA	Scott Base	57.62	184	P	P	04 39 56.7	+2.4
VNDA	Vanda	57.64	185	P	P	04 39 56.7	+2.2
	comp=Z,8.6nm,0.3s,baz=16,slow=7.3,SNR=59						
VNDA				ScP	ScP	04 43 42.1	+1.6
	comp=Z,13nm,1.0s,baz=6.1,slow=4.5,SNR=7.5						
VNDA	Vanda	57.64	185	P	P	04 39 56.1	+1.7
RKGY	Rocky Gully	57.70	242	P	P	04 39 56.4	+0.8
	baz=58,SNR=57						
MMRI	Maumere	58.02	273	P	P	04 39 58.7	+0.6
MMRI	Maumere	58.02	273	P	P	04 39 57.6	-0.5
MMRI				IAmb	IAmb	04 39 59.1	
	comp=Z,548nm,1.1s						
BLDU	Ballidu	58.30	246	P	P	04 39 59.7	0.0
	baz=58,SNR=182						
MUN	Mundaring	58.57	245	P	P	04 40 01.9	+0.4
	baz=59,SNR=84						
MORW	Morawa	59.07	248	P	P	04 40 05.0	+0.1
	baz=59,SNR=85						
MORW	Morawa	59.07	248	IAmb	IAmb	04 40 06.1	
	comp=Z,384nm,1.3s						
KMSI	Cibinong	59.79	283	P	P	04 40 10.6	+0.8
	comp=Z,9µmcomp=Z,432nm,0.6s						
H01W1	Cape Leeuwin H	59.99	241	P	P	04 40 12.1	+1.5
	baz=348,slow=74,SNR=11						
H01W2	Cape Leeuwin H	60.01	241	P	P	04 40 12.6	+1.9
	baz=155,slow=74,SNR=10.0						
H01W3	Cape Leeuwin H	60.01	241	P	P	04 40 12.7	+2.0
LUWI	Luwuk	60.24	281	P	P	04 40 13.7	+0.8
	comp=Z,9µmcomp=Z,786nm,1.2s						
LUWI	Luwuk	60.24	281	P	P	04 40 13.4	+0.6
LUWI				IAmb	IAmb	04 40 14.9	
	comp=Z,760nm,1.1s						
MATI	Mati	60.56	291	*e*P	P	04 40 13.6	-1.3
DDMP	Don Marcelino,	60.65	290	*e*P	P	04 40 13.6	-1.9
JCJ	Chichijima	60.72	320	P	P	04 40 15.8	+0.1
	comp=Z,137nm,0.5s,baz=297,slow=20,SNR=13						
BKSI	Bulukumba	61.11	275	P	P	04 40 18.6	0.0
	comp=Z,2µmcomp=Z,144nm,1.0s						
DAV	Davao City (W)	61.21	291	P	P	04 40 20.1	+1.0
	comp=Z,318nm,0.6s,baz=78,slow=0.9,SNR=13						
DAV	Davao City (W)	61.21	291	P	P	04 40 19.6	+0.4
DAV				IAmb	IAmb	04 40 20.7	
	comp=Z,339nm,0.7s						
BNSI	Bone	61.45	276	P	P	04 40 20.0	-0.8
	comp=Z,279nm,0.8s						
MRSI	Marisa	61.61	282	P	P	04 40 20.0	-1.8
	comp=Z,2µmcomp=Z,212nm,1.2s						
KCP	Kidapawan	61.61	290	⇓*i*P	P	04 40 22.4	+0.6
GIRL	Giralia	61.78	255	P	P	04 40 23.8	+1.1
	baz=62,SNR=55						
GIRL	Giralia	61.78	255	P	P	04 40 23.5	+0.7
SKMP	Bagumbayan, Su	61.87	290	*e*P	P	04 40 23.4	0.0
SPSI	Sidrap Palu	61.92	277	P	P	04 40 22.9	-0.9
	comp=Z,215nm,0.9s						
BUKP	Musuan	62.04	291	*e*P	P	04 40 24.1	-0.5
BUTP	Butuan	62.08	293	*e*P	P	04 40 25.0	+0.2
PLAI	Plampang	62.13	271	P	P	04 40 24.9	-0.3
	comp=Z,2µmcomp=Z,10µmcomp=Z,951nm,0.9s						
CTBH	Cotabato--PC H	62.45	290	⇓*i*P	P	04 40 27.8	+0.6
RPN	Rapa Nui	63.12	111	P	P	04 40 33.6	+2.3
	comp=Z,76nm,0.6s,baz=280,slow=6.4,SNR=9.0						
RPN	Rapa Nui	63.12	111	P	P	04 40 33.2	+1.9
MSLP	Maasin	63.30	293	*e*P	P	04 40 32.7	+0.1
MPSI	Mapaga	63.43	281	P	P	04 40 33.1	-0.4
	comp=Z,6µmcomp=Z,420nm,0.8s						
CASY	Casey	63.46	205	P	P	04 40 33.7	+0.9
PAGZ	Pagadian	63.50	290	*e*P	P	04 40 34.5	+0.6
TBP	Tagbilaran	63.95	292	*e*P	P	04 40 36.8	+0.1
OCLP	Ormoc	63.96	294	*e*P	P	04 40 37.1	+0.3
CNP	Catarman	64.64	296	*e*P	P	04 40 41.7	+0.6
GUIM	Jordan	65.49	293	*e*P	P	04 40 44.4	-2.0
BKB	Balikpapan	65.58	278	P	P	04 40 49.6	+2.6
	comp=Z,2µmcomp=Z,4µmcomp=Z,229nm,1.8s						
BKB	Balikpapan	65.58	278	IAmb	IAmb	04 40 50.0	
	comp=Z,142nm,0.7s						
JAGI	Jajag, Banyuwa	65.64	270	P	P	04 40 46.3	-1.2
	comp=Z,5µmcomp=Z,461nm,0.9s						
JAGI	Jajag, Banyuwa	65.64	270	P	P	04 40 46.2	-1.2
JAGI				IAmb	IAmb	04 40 47.5	
	comp=Z,351nm,0.9s						
GMJI	Gumukmas	66.37	270	P	P	04 40 51.3	-0.6
	comp=Z,3µmcomp=Z,202nm,1.0s						
JHJ2	Mitsune	66.52	323	P	P	04 40 53.0	+0.6
OTRP	Odiongan	66.81	294	*e*P	P	04 40 53.6	-0.9
CUYO	Cuyo Island	66.96	292	*e*P	P	04 40 55.4	-0.1
BOAC	Boac	67.49	295	*e*P	P	04 40 59.2	+0.6
SJMP	San Jose	67.63	294	*e*P	P	04 40 60.0	+0.5
GRJI	Gresik	67.72	271	P	P	04 41 01.0	+0.9
	comp=Z,4µmcomp=Z,354nm,0.9s						
BUSP	Coron	68.20	293	*e*P	P	04 41 02.9	-0.1
SPMM	Sapulut	68.32	284	P	P	04 41 04.0	+0.2
ENPP	El Nido	68.50	292	*e*P	P	04 41 04.3	-0.5
PCJI	Pacitan	68.52	269	P	P	04 41 05.1	+0.1
	comp=Z,13µmcomp=Z,2µm,0.7s						
BALP	Baler	68.84	297	*e*P	P	04 41 07.4	+0.6
WOJI	Wonogiri, Jawa	68.87	269	P	P	04 41 07.1	0.0
	comp=Z,5µmcomp=Z,356nm,1.3s						
LUBP	Lubang	68.98	294	*e*P	P	04 41 06.7	-0.9
KKM	Kota Kinabalu	69.10	285	P	P	04 41 08.7	+0.1
KKM				IAmb	IAmb	04 41 09.9	
	comp=Z,226nm,0.8s						
CAUP	Cauayan	69.24	298	*e*P	P	04 41 14.9	+5.8
UWJI	Ujung Watu	69.31	271	P	P	04 41 10.3	+0.6
	comp=Z,4µmcomp=Z,385nm,0.7s						
QSPA	South Pole Qui	69.36	180	P	P	04 41 10.4	+1.1
	comp=Z,58nm,0.7s,baz=85,slow=1.9,SNR=313						
QSPA	South Pole Qui	69.36	180	P	P	04 41 10.4	+1.1
SMRI	Semarang	69.58	270	P	P	04 41 12.0	+0.7
	comp=Z,5µmcomp=Z,449nm,0.9s						
SMRI	Semarang	69.58	270	P	P	04 41 11.6	+0.3
SMRI				IAmb	IAmb	04 41 12.7	
	comp=Z,262nm,0.7s						
SGCP	Mt. Cagua	69.71	300	*e*P	P	04 41 12.8	+0.9
SMPP	San Manuel, Pa	69.79	297	*e*P	P	04 41 12.7	+0.3
MJAR	Matsushiro Arr	69.94	324	P	P	04 41 13.0	0.0
	comp=Z,94nm,0.7s,baz=141,slow=6.2,SNR=288						
MJAR	Matsushiro Arr	69.94	324	P	P	04 41 13.0	0.0
MJAR	Matsushiro Arr	69.94	324	P	P	04 41 12.6	-0.4

MAJO	Matsushiro	69.94	324	P	P	04 41 13.0	0.0
MAJO				pmax	pmax		
	comp=Z,117nm,0.8s						
MAJO	Matsushiro	69.94	324	P	P	04 41 13.0	0.0
MAJO				IAmb	IAmb	04 41 13.9	
	comp=Z,117nm,0.8s						
MAT	Matsushiro	69.94	324	P	P	04 41 13.1	+0.1
MAT				S	S	04 49 38.4	+2.9
MJB9	Matsu-Tunnel	69.94	324	P	P	04 41 13.3	+0.4
MJB9				IAmb	IAmb	04 41 13.9	
	comp=Z,118nm,0.7s						
APYP	Conner	70.18	299	*e*P	P	04 41 15.0	+0.3
SBUM	Sibu	71.31	280	P	P	04 41 21.9	+0.4
SBUM	Sibu	71.31	280	P	P	04 41 23.0	+1.5
ERM	Erimo	71.64	331	*ce*P	P	04 41 23.8	+1.1
ERM				pmax	pmax		
	comp=Z,113nm,1.3s						
ERM	Erimo	71.64	331	P	P	04 41 23.2	+0.5
CISI	Cisompet, Garu	71.87	269	P	P	04 41 24.1	-0.7
	comp=Z,6µmcomp=Z,446nm,1.2s						
JNU	Nakatsue	71.92	317	IAmb	IAmb	04 41 26.5	
	comp=Z,318nm,1.1s						
YOJ	Yonaguni jima	72.25	306	P	P	04 41 26.3	-0.3
YOJ				pmax	pmax		
	comp=Z,284nm,0.8s						
YOJ	Yonaguni jima	72.25	306	P	P	04 41 26.3	-0.3
YOJ				IAmb	IAmb	04 41 28.1	
	comp=Z,284nm,0.8s						
ADK	Adak	72.30	1	P	P	04 41 25.9	-0.4
ADK				pmax	pmax		
	comp=Z,2µm,1.7s						
ADK	Adak	72.30	1	P	P	04 41 25.9	-0.4
GSTR	Great Sitkin T	72.52	2	P	P	04 41 27.8	+0.1
CNJI	Cibinong	72.59	269	P	P	04 41 28.4	-0.5
	comp=Z,5µmcomp=Z,534nm,1.1s						
ATKA	Atka Island	72.70	3	P	P	04 41 28.4	-0.2
KSM	Kuching	72.71	278	P	P	04 41 29.9	+0.4
KSM	Kuching	72.71	278	P	P	04 41 31.0	+1.4
XMIS	Christmas Isla	72.95	265	IAmb	IAmb	04 41 32.5	
	comp=Z,232nm,1.1s						
DBJI	Dramaga	73.20	269	P	P	04 41 32.5	+0.1
	comp=Z,11µmcomp=Z,621nm,1.4s						
SKJI	Sukabumi	73.23	269	P	P	04 41 32.4	-0.1
	comp=Z,5µmcomp=Z,570nm,0.8s						
SSLB	Suanglung	73.47	304	IAmb	IAmb	04 41 34.0	
	comp=Z,162nm,0.7s						
ASAJ	Asahikawa	73.56	332	P	P	04 41 35.8	+2.1
	comp=Z,199nm,0.9s,baz=214,slow=6.4,SNR=110						
YHNB	Yeheng	73.61	305	IAmb	IAmb	04 41 35.8	
	comp=Z,210nm,0.9s						
TATO	Taipei	73.69	305	P	P	04 41 35.3	+0.4
TATO				IAmb	IAmb	04 41 35.9	
	comp=Z,314nm,0.8s						
UNV	Unalaska Valle	74.99	8	IAmb	IAmb	04 41 42.1	
	comp=Z,260nm,1.0s						
YSS	Yuzh-Sakhalins	75.75	334	⇓*i*P	P	04 41 47.4	+1.6
YSS				*e**PP	pwP	04 43 58.0	+3.1
YSS				*e*		04 44 51.1	
YSS				*e*S	S	04 50 41.0	+2.1
YSS				*e*		04 51 00.0	
YSS				*e*SS	SS	04 55 46.3	-3.1
YSS				pmax	pmax		
	comp=Z,1µm,4.6s						
YSS	Yuzh-Sakhalins	75.75	334	P	P	04 41 46.8	+1.0
KNMB	Chin-men Tao	75.82	303	IAmb	IAmb	04 41 48.2	
	comp=Z,136nm,0.8s						
QZH	Quanzhou	75.91	304	⇓*i*P	P	04 41 48.1	+0.9
QZH				sP	sP	04 44 55.8	-0.4
QZH				S	S	04 50 42.8	+1.3
QZH				ScS	ScS	04 51 07.5	+1.8
QZH				pmax	pmax		
	comp=Z,170nm,0.9s						
PET	Petropavlovsk	75.98	346	*e*P	P	04 41 46.8	-0.2
PET				*e**SP	sP	04 44 57.6	+2.3
PET				*e*S	SKSac	04 50 57.3	-2.1
PET				pmax	pmax		
	comp=Z,160nm,0.9s						
PET				pmax	pmax		
	comp=Z,300nm,12.6s						
PET				MLR	MLR		
	comp=Z,200nm,19.0s						
PET	Petropavlovsk	75.98	346	P	P	04 41 46.7	-0.2
TJN	Taejon	76.22	318	*ce*P	P	04 41 48.8	+0.1
LWLI	Liwa	76.23	270	P	P	04 41 48.9	-0.5
	comp=Z,11µmcomp=Z,299nm,0.8s						
PEA0B	Petropavlovsk-	76.28	346	*i* P	P	04 41 49.2	+0.6
PEA0B	Petropavlovsk-	76.28	346	P	P	04 41 49.3	+0.6
PETK	Petropavlovsk-	76.28	346	P	P	04 41 49.0	+0.4
	comp=Z,170nm,0.8s,baz=222,slow=2.2,SNR=170						
PETK	Petropavlovsk-	76.28	346	P	P	04 41 49.0	+0.4
PETK	Petropavlovsk-	76.28	346	P	P	04 41 49.0	+0.4
PMBI	Palembang	76.29	272	P	P	04 41 47.7	-1.9
	comp=Z,61µmcomp=Z,1µm,0.6s						
PMBI	Palembang	76.29	272	P	P	04 41 49.7	+0.1
MDSI	Maura Dua	76.30	270	P	P	04 41 48.4	-1.3
	comp=Z,4µmcomp=Z,347nm,0.9s						
FALS	False Pass	76.40	9	IAmb	IAmb	04 41 51.5	
	comp=Z,213nm,0.9s						
KSRS	Korea Array	76.55	319	P	P	04 41 51.7	+1.3
	comp=Z,37nm,0.7s,baz=129,slow=6.1,SNR=141						
KSAR	Wonju Array Be	76.57	319	P	P	04 41 50.7	+0.2
KSAR	Wonju Array Be	76.57	319	P	P	04 41 50.7	+0.2
KS19	Wonju Array Si	76.62	319	IAmb	IAmb	04 41 53.4	
	comp=Z,611nm,2.0s						
CNBA	Chernabura Isl	76.99	11	P	P	04 41 52.6	+0.2
CNBA				IAmb	IAmb	04 41 53.7	
	comp=Z,443nm,1.3s						
TEY	Ternei	77.01	329	⇓*e*P	P	04 41 53.9	+1.2
TEY				pmax	pmax		
	comp=Z,300nm,3.5s						
TEY				pmax	pmax		
	comp=E,20nm,1.8s						
TEY				pmax	pmax		
	comp=Z,50nm,1.6s						
INCN	Inchon	77.37	318	P	P	04 41 55.6	+0.7
INCN				pmax	pmax		
	comp=Z,563nm,1.8s						
INCN	Inchon	77.37	318	P	P	04 41 55.6	+0.7
INCN				IAmb	IAmb	04 41 57.5	
	comp=Z,563nm,1.8s						
MNAI	Manna	77.49	270	P	P	04 41 56.2	+0.1
	comp=Z,14µmcomp=Z,891nm,0.8s						
TPRI	Tanjung Pinang	77.88	276	P	P	04 41 59.4	+1.2
	comp=Z,24µmcomp=Z,212nm,1.3s						
SNCC	San Nicolas Is	77.93	47	P	P	04 41 60.0	+2.0
	baz=235						
VLA	Vladivostok	78.03	325	*d i*P	P	04 41 59.2	+0.9
VLA				pmax	pmax		
	comp=Z,133nm,1.1s						
MSHR	Mys Shultsa	78.05	325	*d i*P	P	04 41 59.5	+1.1
HKPS	Hong Kong Po S	78.15	299	IAmb	IAmb	04 42 02.3	
	comp=Z,246nm,0.9s						
SCZ2	Santa Cruz Isl	78.28	47	P	P	04 42 01.9	+2.0
	baz=235						
SCI2	San Clemente I	78.45	48	P	P	04 42 02.5	+1.7
	baz=236						
DLV	T Lat	78.47	288	IAmb	IAmb	04 42 04.2	
	comp=Z,168nm,0.9s						
SBC	Santa Barbara	78.48	46	P	P	04 42 03.0	+2.1
	baz=235						
MCCM	Marconi Confer	78.61	42	IAmb	IAmb	04 42 29.5	
	comp=Z,316nm,1.6s						
PKM	Mcpherson Peak	78.67	46	P	P	04 42 04.1	+1.9
	baz=235,SNR=13						
USA0B	Ussuriysk Arra	78.72	326	*i* P	P	04 42 02.5	+0.6
USA0B	Ussuriysk Arra	78.72	326	IAmb	IAmb	04 42 04.8	
	comp=Z,220nm,0.9s						
USRK	Ussuriysk Ar.	78.72	326	P	P	04 42 03.2	+1.3
	comp=Z,97nm,0.7s,baz=123,slow=3.2,SNR=223						
USRK	Ussuriysk Ar.	78.72	326	P	P	04 42 02.7	+0.8
BLG	Laguna Peak, P	78.73	47	P	P	04 42 04.9	+2.6
	baz=236						
CIS	Catalina Islan	78.78	48	P	P	04 42 03.8	+1.2
	baz=236,SNR=7.0						
SMMC	Simmler	78.79	45	P	P	04 42 04.7	+2.1
	baz=235,SNR=11						
MYKOM	Kota Tinggi	78.82	276	P	P	04 42 03.8	+0.6
MYKOM				IAmb	IAmb	04 42 05.3	
	comp=Z,233nm,0.8s						
MYKOM	Kota Tinggi	78.82	276	P	P	04 42 04.0	+0.8
PAGB	Antelope Grade	78.86	45	IAmb	IAmb	04 42 06.4	
	comp=Z,374nm,2.0s						
TYV	Tymovskoe	78.92	336	*e*P	P	04 42 05.1	+2.3
TYV				*e*S	S	04 51 09.2	-2.8
TYV				pmax	pmax		
	comp=Z,281nm,1.5s						
TYV				pmax	pmax		
	comp=Z,2µm,4.1s						
TYV				smax	smax		
	comp=E,700nm,7.2s						
HOPS	Hopland Field	79.01	41	IAmb	IAmb	04 42 06.7	
	comp=Z,197nm,0.9s						
FMP	Fort Macarthur	79.04	48	P	P	04 42 05.5	+1.6
	baz=236						
GDXM	Geysers	79.06	41	IAmb	IAmb	04 43 14.1	
	comp=Z,202nm,0.5s						
KCPM	Cahto Peak	79.12	40	IAmb	IAmb	04 42 07.6	
	comp=Z,184nm,1.0s						
OSI	Osito Audit: C	79.25	47	P	P	04 42 06.8	+1.7
	baz=236						
DECC	Green Verdugo	79.31	47	P	P	04 42 06.6	+1.2
	baz=236						
109C	Camp Elliot, M	79.42	49	P	P	04 42 07.4	+1.5
	baz=237,SNR=9.5						
NJ2	Nanjing	79.44	310	⇓*i*P	P	04 42 07.0	+1.0
NJ2				PP	PP	04 45 21.9	+3.5
NJ2				S	S	04 51 20.0	+1.9
NJ2				SKS	SKSac	04 51 26.0	+1.3
NJ2				pmax	pmax		
	comp=Z,140nm,1.1s						
ARVC	Arvin	79.46	46	P	P	04 42 07.7	+1.6
	baz=236,SNR=13						
RGRI	Rengat	79.47	274	P	P	04 42 08.5	+1.9
	comp=Z,25µmcomp=Z,344nm,1.2s						
JCC	Jacoby Creek,	79.56	39	IAmb	IAmb	04 42 09.9	
	comp=Z,256nm,1.4s						
BAR	Barrett	79.61	49	P	P	04 42 07.6	+0.7
KRJI	Kerinci	79.67	272	P	P	04 42 08.2	+0.4
	comp=Z,6µmcomp=Z,362nm,0.7s						
VES	Vestal, Richgr	79.70	45	P	P	04 42 08.6	+1.4
	baz=235,SNR=32						
SII	Sitkinak Islan	79.71	14	P	P	04 42 07.5	+0.6
MURC	Murrieta	79.74	48	P	P	04 42 09.2	+1.6
	baz=237,SNR=29						
BFSC	Mount Baldy Ra	79.77	47	P	P	04 42 09.2	+1.3
	baz=236,SNR=21						
VOG	Valley Oaks Go	79.77	45	P	P	04 42 08.9	+1.3
	baz=235						
EDW2	Edwards Air Fo	79.89	47	P	P	04 42 10.1	+1.6
	baz=236,SNR=53						
MONP2	Monument Peak	79.90	49	P	P	04 42 10.6	+1.9
	baz=237,SNR=42						
O02D	Mt. Diablo Mer	79.91	40	P	P	04 42 10.9	+2.5
	baz=232,SNR=92						
IKP	In-Ko-Pah, Jac	79.99	50	P	P	04 42 11.0	+2.0
	baz=238,SNR=20						
ISA	Isabella, Lake	80.01	46	P	P	04 42 10.7	+1.7
	baz=236,SNR=71						
SDSI	Sungai Dareh	80.11	273	P	P	04 42 09.4	-0.6
	comp=Z,2µmcomp=Z,133nm,1.1s						
LPIG	La Paz	80.15	60	P	P	04 42 12.4	+2.5
	comp=Z,11nm,0.4s,baz=306,slow=6.0,SNR=3.6						
PFO	Pinyon Flats O	80.26	49	P	P	04 42 12.0	+1.5
	comp=Z,21nm,0.9s,baz=261,slow=3.6,SNR=26						
PFO	Pinyon Flats O	80.26	49	*i* P	P	04 42 10.6	+0.1
PFO				pmax	pmax		
	comp=Z,45nm,1.0s						
PFO	Pinyon Flats O	80.26	49	P	P	04 42 11.7	+1.2
PFO	Pinyon Flats O	80.26	49	P	P	04 42 11.9	+1.5
	baz=237,SNR=18						
MDJ	Mudanjiang	80.26	325	P	P	04 42 11.5	+1.5
MDJ				pP	pP	04 44 18.6	+0.5
MDJ				sP	sP	04 45 20.8	+1.5
MDJ				S	S	04 51 31.9	+5.9
MDJ				pmax	pmax		
	comp=Z,250nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,2µm,8.1s						
MDJ	Mudanjiang	80.26	325	P	P	04 42 11.0	+1.0
MDJ				IAmb	IAmb	04 42 12.8	
	comp=Z,179nm,0.9s						
XPFO	Pion Flat	80.26	49	P	P	04 42 11.4	+0.9
QIZ	Qiongzhong	80.27	295	P	P	04 42 11.1	+0.5
QIZ				pP	pP	04 44 14.8	-3.5
QIZ				sP	sP	04 45 18.5	-1.5
QIZ				S	S	04 51 32.3	+5.2
QIZ				sS	sS	04 55 14.1	-1.6
QIZ				pmax	pmax		
	comp=Z,52nm,1.6s						
QIZ				pmax	pmax		
	comp=Z,1µm,3.5s						
BBRC	Big Bear Solar	80.29	48	P	P	04 42 12.2	+1.4
	baz=237						
WDC	Whiskeytown Da	80.30	40	IAmb	IAmb	04 42 13.5	
	comp=Z,231nm,1.1s						
ORV	Oroville	80.32	41	P	P	04 42 11.6	+1.2
ORV				pmax	pmax		
	comp=Z,124nm,1.1s						
ORV	Oroville	80.32	41	P	P	04 42 11.6	+1.2
SWSC	Sam W. Stewart	80.37	49	P	P	04 42 12.7	+1.8
	baz=238,SNR=36						
LRMC	Laurel Mtn Rad	80.44	46	P	P	04 42 12.8	+1.4
	baz=236,SNR=30						
N02D	Trinity Center	80.45	40	P	P	04 42 13.5	+2.3
	baz=232,SNR=63						
OHAK	Old Harbor	80.52	14	IAmb	IAmb	04 42 13.1	
	comp=Z,454nm,1.5s						
RRX	Edison Barstow	80.57	47	P	P	04 42 13.3	+1.4
	baz=237,SNR=6.1						
O03E	Paynes Creek	80.58	41	P	P	04 42 13.4	+1.5
	baz=233,SNR=100						
COCO	West Island	80.59	261	P	P	04 42 13.2	+0.8
COCO				pmax	pmax		
	comp=Z,263nm,1.0s						
COCO	West Island	80.59	261	P	P	04 42 13.2	+0.8
COCO				IAmb	IAmb	04 42 15.1	
	comp=Z,263nm,0.9s						
M02C	Callahan	80.62	39	P	P	04 42 14.5	+2.5
	baz=232,SNR=89						
L02E	Cave Junction	80.66	38	P	P	04 42 14.3	+2.2
	baz=231,SNR=16						
CWC	Cottonwood Cre	80.71	45	P	P	04 42 14.2	+1.5
	baz=236						
BELC	Belle Mtn. Jos	80.79	48	P	P	04 42 14.9	+1.7
	baz=237,SNR=57						
PPSI	Pulau Pagai	80.80	271	P	P	04 42 15.1	+1.6
	comp=Z,5µmcomp=Z,303nm,1.3s						
RUBR	Rubicon Trail	80.86	42	IAmb	IAmb	04 42 16.5	
	comp=Z,266nm,1.4s						
MLAC	Mammoth, Mammo	80.88	44	P	P	04 42 15.5	+1.8
	baz=235,SNR=19						
MPMC	Manual Prospec	80.89	46	P	P	04 42 15.2	+1.5
	baz=236,SNR=98						
YBH	Yreka Blue Hor	80.91	39	IAmb	IAmb	04 42 16.9	
	comp=Z,179nm,0.9s						
BKNI	Bangkinang	80.92	274	P	P	04 42 14.6	+0.5
	comp=Z,2µmcomp=Z,5µmcomp=Z,356nm,1.5s						
BKNI	Bangkinang	80.92	274	P	P	04 42 14.1	-0.1
GSC	Goldstone, Bar	80.94	47	P	P	04 42 15.2	+1.4
	baz=237,SNR=71						
TIN	Tinemaha, Big	80.95	45	P	P	04 42 15.7	+1.8
	baz=236,SNR=44						
K02D	Willamette Mer	80.96	38	P	P	04 42 15.7	+2.0
	baz=231,SNR=26						
BC3	Big Chuckawall	80.99	49	P	P	04 42 16.1	+1.9
	baz=238,SNR=44						
WAKR	Walker	81.00	43	IAmb	IAmb	04 42 17.4	
	comp=Z,258nm,1.2s						
HEC	Hector,Ludlow	81.00	48	P	P	04 42 15.6	+1.4
	baz=237,SNR=35						
PDSI	Padang	81.02	272	P	P	04 42 13.2	-1.5
	comp=Z,1µmcomp=Z,115nm,0.9s						
J01E	Myrtle Point	81.10	37	P	P	04 42 16.3	+2.0
	baz=231,SNR=10						
GLA	Glamis	81.12	50	IAmb	IAmb	04 42 18.2	
	comp=Z,136nm,0.9s						
GLA	Glamis	81.12	50	P	P	04 42 17.0	+2.2
	baz=238,SNR=38						
MAW	Mawson	81.12	200	P	P	04 42 14.9	+0.8
	baz=81,SNR=50						
MAW	Mawson	81.12	200	P	P	04 42 14.9	+0.8
	comp=Z,31nm,0.9s,baz=147,slow=5.4,SNR=44						
MAW	Mawson	81.12	200	P	P	04 42 14.5	+0.4
BEKR	Beckworth	81.21	42	IAmb	IAmb	04 42 18.1	
	comp=Z,208nm,1.3s						
PNTR	Pine Nut	81.23	43	IAmb	IAmb	04 42 18.4	
	comp=Z,264nm,0.9s						
HUMO	Hull Mountain	81.31	38	IAmb	IAmb	04 42 19.1	
	comp=Z,253nm,1.1s						
GRNR	Gornyy	81.35	333	⇓*i*P	P	04 42 17.0	+1.5
GRNR				*e*S	S	04 51 33.3	-3.4
GRNR				pmax	pmax		
	comp=Z,120nm,1.1s						
GRNR				smax	smax		
	comp=N,3.0nm,1.0s						
GRNR				MLR	MLR		
	comp=Z,160nm,12.0s						
DL2	Dalian	81.37	317	P	P	04 42 16.6	+0.8
DL2				pP	pP	04 44 25.0	+0.9
DL2				S	S	04 51 36.5	-0.9
DL2				pmax	pmax		
	comp=Z,120nm,1.0s						
DL2				pmax	pmax		
	comp=Z,700nm,5.3s						
PMSA	Palmer Station	81.39	157	P	P	04 42 16.9	+1.3
	comp=Z,64nm,0.6s,baz=216,slow=2.4,SNR=23						
PMSA	Palmer Station	81.39	157	IAmb	IAmb	04 42 18.4	
	comp=Z,111nm,0.8s						
YERR	Yerington	81.40	43	IAmb	IAmb	04 42 43.6	
	comp=Z,113nm,0.6s						
L04D	Klamath Falls	81.45	39	P	P	04 42 18.2	+1.8
	baz=232,SNR=58						
GMRC	Granite Mounta	81.45	48	P	P	04 42 18.1	+1.5
	baz=238,SNR=51						
M04C	Macdoel	81.46	39	P	P	04 42 18.3	+1.9
	baz=232,SNR=63						
IRM	Iron Mountain	81.48	49	P	P	04 42 18.5	+1.9
	baz=238,SNR=86						
GRAC	Grapevine Rang	81.49	45	P	P	04 42 18.5	+1.9
	baz=236,SNR=36						
FURC	Furnace Creek,	81.54	46	P	P	04 42 18.2	+1.5
	baz=237,SNR=42						
TUQ	Turquoise Moun	81.62	47	P	P	04 42 19.0	+1.6
	baz=237,SNR=71						
SHOC	Shoshone, Teco	81.63	47	P	P	04 42 18.7	+1.4
	baz=237,SNR=9.8						
NVAR	Mina Array Bea	81.68	44	P	P	04 42 19.2	+1.4
	comp=Z,58nm,0.8s,baz=223,slow=8.5,SNR=377						
NVAR				PKKPbc	PKKPbc	05 00 46.2	+0.5
	comp=Z,2.7nm,0.7s,baz=81,slow=3.2,SNR=14						
NVAR				PKPPKP	P'P'df	05 08 52.8	+4.5
	comp=Z,3.9nm,0.9s,baz=88,slow=3.0,SNR=16						
NVAR	Mina Array Bea	81.68	44	P	P	04 42 17.9	+0.1
Y12C	Blythe	81.70	49	IAmb	IAmb	04 42 46.2	
	comp=Z,285nm,1.6s						
Y12C	Blythe	81.70	49	P	P	04 42 19.6	+2.0
	baz=238,SNR=23						
PAHR	Pah Rah Range	81.72	42	IAmb	IAmb	04 42 20.6	
	comp=Z,146nm,1.0s						
I02D	Swisshome	81.74	37	P	P	04 42 19.6	+2.0
	baz=231,SNR=5.2						
I03D	Drain, OR	81.77	37	P	P	04 42 19.6	+1.9
	baz=231,SNR=30						
NV11	Mina Array Sit	81.78	44	IAmb	IAmb	04 42 20.9	
	comp=Z,172nm,1.2s						
SNY	Shenyang	81.89	320	⇓P	P	04 42 19.0	+0.6
SNY				S	S	04 51 40.9	-1.5
SNY				pmax	pmax		
	comp=Z,110nm,0.8s						
SNY				pmax	pmax		
	comp=Z,1µm,2.6s						
WHN	Wuhan	81.97	307	⇓P	P	04 42 20.4	+1.3
WHN				pP	pP	04 44 27.5	-0.2
WHN				sP	sP	04 45 27.6	-1.6
WHN				S	S	04 51 41.4	-2.3
WHN				pmax	pmax		
	comp=Z,590nm,1.5s						
HSIG		81.97	55	P	P	04 42 20.5	+1.3
HSIG				IAmb	IAmb	04 42 47.3	
	comp=Z,292nm,1.6s						
CN2	Changchun	82.01	323	⇓P	P	04 42 19.6	+0.6
CN2				pmax	pmax		
	comp=Z,220nm,1.3s						
CN2				pmax	pmax		
	comp=Z,1µm,4.0s						
214A	Organ Pipe Nat	82.02	52	IAmb	IAmb	04 42 48.1	
	comp=Z,286nm,1.7s						
214A	Organ Pipe Nat	82.02	52	P	P	04 42 21.5	+2.1
	baz=240,SNR=33						
K04D	Chiloquin, OR	82.02	39	P	P	04 42 20.9	+1.7
	baz=232,SNR=38						
SISI	Saibi	82.16	272	P	P	04 42 20.2	-0.3
	comp=Z,2µmcomp=Z,89nm,0.7s						
NEE2	Needles Airpor	82.17	48	P	P	04 42 21.9	+1.9
	baz=238,SNR=14						
J04D	Umpqua Nationa	82.19	38	P	P	04 42 22.1	+1.9
	baz=232,SNR=108						
TPNV	Topopah Spring	82.21	46	P	P	04 42 21.9	+1.5
	baz=237,SNR=139						
PDMCI	Parker Dam,Lak	82.26	49	P	P	04 42 22.3	+1.8
	baz=239,SNR=66						
KLR	Kul'dur	82.33	330	*d i*P	P	04 42 21.5	+1.1
KLR				pmax	pmax		
	comp=Z,126nm,1.1s						
COR	Corvallis	82.35	36	P	P	04 42 21.8	+1.1
COR				pmax	pmax		
	comp=Z,147nm,1.1s						
COR	Corvallis	82.35	36	P	P	04 42 21.8	+1.1
I04A	Tendick Farm,	82.36	37	P	P	04 42 22.2	+1.4
	baz=232,SNR=41						
IPM	Ipoh	82.42	278	IAmb	IAmb	04 42 23.9	
	comp=Z,230nm,0.7s						
IPM	Ipoh	82.42	278	P	P	04 42 23.0	+1.2
MOD	Modoc Plateau	82.45	40	IAmb	IAmb	04 42 24.2	
	comp=Z,156nm,0.9s						
H04D	Lebanon	82.62	37	P	P	04 42 23.9	+1.8
	baz=232,SNR=41						
J05D	Fort Rock, OR	82.72	38	P	P	04 42 24.7	+1.9
	baz=233,SNR=312						
G03D	McMinnville, O	82.76	36	P	P	04 42 24.6	+1.9
	baz=231,SNR=18						
TIA	Tai'an	82.87	313	P	P	04 42 24.3	+0.8
TIA				S	SKSac	04 51 45.5	-1.8
TIA				pmax	pmax		
	comp=Z,100nm,0.9s						
TIA				pmax	pmax		
	comp=Z,1µm,3.5s						
H04A	Detroit Lake	83.03	37	IAmb	IAmb	04 42 26.6	
	comp=Z,299nm,1.4s						
F03A	Seaside	83.06	35	IAmb	IAmb	04 42 27.2	
	comp=Z,238nm,1.1s						
KULM	Kulim	83.07	278	P	P	04 42 26.0	+1.0
KULM				IAmb	IAmb	04 42 26.9	
	comp=Z,140nm,0.7s						
KULM	Kulim	83.07	278	P	P	04 42 26.0	+1.0
CNPM	China Poot	83.07	14	IAmb	IAmb	04 42 25.6	
	comp=Z,274nm,1.0s						
PINE	Pine Mountain	83.20	38	IAmb	IAmb	04 42 28.4	
	comp=Z,324nm,0.9s						
I05D	Terrebonne, OR	83.30	38	P	P	04 42 27.2	+1.7
	baz=233,SNR=58						
BRLK	Bradley Lake	83.36	14	IAmb	IAmb	04 42 26.9	
	comp=Z,266nm,0.9s						
PBSI	Pulau Batu	83.36	272	P	P	04 42 27.8	+1.3
	comp=Z,4µmcomp=Z,212nm,1.1s						
R11A	Troy Canyon, C	83.42	45	P	P	04 42 27.4	+1.0
	baz=237,SNR=31						
F04D	Rainier, OR	83.45	35	P	P	04 42 28.3	+2.2
	baz=231,SNR=9.2						
F04A	Amboy	83.68	36	IAmb	IAmb	04 42 29.9	
	comp=Z,527nm,1.6s						
RPSI	Rantau Prapat	83.74	275	P	P	04 42 28.0	-0.3
RPSI				IAmb	IAmb	04 42 29.5	
	comp=Z,180nm,0.9s						
WVOR	Wild Horse Val	83.76	40	IAmb	IAmb	04 42 30.9	
	comp=Z,136nm,1.1s						
PSI	Prapat	83.77	275	P	P	04 42 28.0	-0.6
PSI				pmax	pmax		
	comp=Z,180nm,0.9s						
DIB	Dawson Inlet,	83.78	26	IAmb	IAmb	04 42 29.9	
	comp=Z,160nm,1.2s						
H02S1	DAWSON INLET T	83.78	26	P	P	04 42 28.7	+1.2
	SNR=12						
MA2	Magadan	83.79	345	P	P	04 42 27.2	-0.3
	comp=Z,76nm,0.8s,baz=139,slow=4.9,SNR=46						
MA2	Magadan	83.79	345	*ce*P	P	04 42 27.2	-0.3
MA2				pmax	pmax		
	comp=Z,269nm,1.6s						
MA2	Magadan	83.79	345	P	P	04 42 27.0	-0.5
H02N1	VAN INLET T-PH	83.80	26	P	P	04 42 29.6	+1.9
	SNR=4.6						
NLWA	Neilton Lookou	83.82	34	IAmb	IAmb	04 42 31.0	
	comp=Z,173nm,1.0s						
G05D	Wamic, OR	83.86	37	P	P	04 42 29.8	+1.5
	baz=232,SNR=20						
E04D	Cinebar	83.98	35	P	P	04 42 30.6	+1.9
	baz=232,SNR=38						
SEW	Seward	83.99	14	IAmb	IAmb	04 42 29.7	
	comp=Z,170nm,0.9s						

F05D	**White Salmon**	**84.17**	**36**	P	**P**	**04 42 31.1**	**+1.4**
	baz=232,SNR=18						
I07A	**Izee**	**84.21**	**39**	IAmb	IAmb	04 42 33.0	
	comp=Z,133nm,1.0s						
G06A	**Carlson Farm,**	**84.24**	**37**	IAmb	IAmb	04 42 32.9	
	comp=Z,159nm,1.3s						
X16A	**Lo Mia Camp, P**	**84.24**	**50**	P	**P**	**04 42 31.9**	**+1.4**
D04E	**Lakebay**	**84.26**	**35**	P	**P**	**04 42 32.4**	**+2.4**
	baz=231,SNR=12						
D03D	**Eldon**	**84.32**	**34**	P	**P**	**04 42 32.1**	**+1.8**
	baz=231,SNR=26						
USHA	**Ushuaia**	**84.36**	**147**	P	**P**	**04 42 31.8**	**+1.2**
	comp=Z,14nm,0.6s,baz=204,slow=6.1,SNR=8.8						
319A	**Douglas**	**84.36**	**54**	IAmb	IAmb	04 42 60.0	
	comp=Z,336nm,1.4s						
GAMB	**Gambell**	**84.38**	**3**	P	**P**	**04 42 30.3**	**+0.1**
GAMB				IAmb	IAmb	04 42 32.6	
	comp=Z,219nm,1.2s						
J08A	**Circle Bar Ran**	**84.39**	**40**	IAmb	IAmb	04 42 33.9	
	comp=Z,205nm,1.2s						
GSI	**Gunungsitoli**	**84.50**	**273**	P	**P**	**04 42 33.1**	**+1.0**
	comp=Z,33µmcomp=Z,3µm,1.2s						
GSI	**Gunungsitoli**	**84.50**	**273**	P	**P**	**04 42 33.0**	**+1.0**
WUAZ	**Wupatki**	**84.83**	**49**	P	**P**	**04 42 35.1**	**+1.7**
	baz=240,SNR=40						
PGC	**Sidney**	**84.83**	**33**	P	**P**	**04 42 33.8**	**+1.0**
PGC				IAmb	IAmb	04 42 35.5	
	comp=Z,148nm,1.0s						
SUA	**Susitna One**	**84.92**	**13**	IAmb	IAmb	04 42 34.2	
	comp=Z,159nm,0.8s						
BBB	**Bella Bella**	**84.93**	**29**	IAmb	IAmb	04 42 35.8	
	comp=Z,140nm,1.2s						
HIN	**Hinchinbrook I**	**84.96**	**15**	IAmb	IAmb	04 42 34.7	
	comp=Z,263nm,1.2s						
KCSI	**Kotacane, Aceh**	**85.11**	**276**	P	**P**	**04 42 34.8**	**-0.2**
	comp=Z,2µmcomp=Z,97nm,0.8s						
HPIG		**85.17**	**59**	P	**P**	**04 42 35.6**	**+0.3**
CRAG	**Craig**	**85.20**	**24**	IAmb	IAmb	04 42 37.3	
	comp=Z,140nm,1.0s						
SKT	**Skwentna**	**85.23**	**13**	IAmb	IAmb	04 42 34.8	
	comp=Z,191nm,1.5s						
G08A	**Pilot Rock**	**85.23**	**38**	IAmb	IAmb	04 42 37.8	
	comp=Z,182nm,1.1s						
A04D	**Lummi Island**	**85.26**	**33**	P	**P**	**04 42 36.7**	**+1.9**
	baz=231,SNR=26						
EYAK	**Cordova Ski Ar**	**85.28**	**16**	IAmb	IAmb	04 42 36.3	
	comp=Z,219nm,1.2s						
B05A	**Bryant**	**85.30**	**34**	P	**P**	**04 42 36.5**	**+1.5**
	baz=232,SNR=32						
KNK	**Knik Glacier**	**85.38**	**14**	IAmb	IAmb	04 42 36.7	
	comp=Z,159nm,0.9s						
RAGM	**Ragged Mountai**	**85.42**	**16**	IAmb	IAmb	04 42 37.4	
	comp=Z,286nm,1.2s						
E07A	**Sunnyside**	**85.47**	**36**	P	**P**	**04 42 37.2**	**+1.2**
E07A				IAmb	IAmb	04 42 38.9	
	comp=Z,170nm,1.0s						
BJT	**Baijiatuau**	**85.51**	**316**	P	**P**	**04 42 36.6**	**+0.3**
BJT				pmax	pmax		
	comp=Z,509nm,1.9s						
BJT	**Baijiatuau**	**85.51**	**316**	P	**P**	**04 42 36.6**	**+0.3**
BJT				IAmb	IAmb	04 42 38.9	
	comp=Z,509nm,1.9s						
BJI	**Beijing**	**85.52**	**316**	P	**P**	**04 42 36.9**	**+0.6**
BJI				sP	**sP**	**04 45 49.4**	**+2.0**
BJI				sS	**sS**	**04 56 09.1**	**-0.2**
BJI				pmax	pmax		
	comp=Z,92nm,1.3s						
BJI				pmax	pmax		
	comp=Z,1µm,3.5s						
ENH	**Enshi**	**85.54**	**305**	P	**P**	**04 42 36.7**	**0.0**
HAWA	**Hanford**	**85.55**	**37**	IAmb	IAmb	04 42 39.2	
	comp=Z,198nm,1.0s						
TPTI		**85.56**	**275**	P	**P**	**04 42 37.5**	**+0.3**
	comp=Z,710nmcomp=Z,36nm,0.6s						
C06D	**Leavenworth**	**85.72**	**35**	P	**P**	**04 42 38.2**	**+1.1**
	baz=233,SNR=9.1						
SML	**Sawmill**	**85.76**	**14**	P	**P**	**04 42 36.7**	**-0.3**
SML				IAmb	IAmb	04 42 39.5	
	comp=Z,130nm,1.2s						
B06A	**Marblemount**	**85.77**	**34**	IAmb	IAmb	04 42 39.5	
	comp=Z,104nm,1.0s						
W18A	**Petrified Fore**	**85.81**	**50**	P	**P**	**04 42 39.5**	**+1.4**
	baz=241,SNR=18						
E08A	**Dider Farm, El**	**85.87**	**37**	IAmb	IAmb	04 42 40.6	
	comp=Z,135nm,1.0s						
MOIG	**Morelia**	**85.88**	**67**	P	**P**	**04 42 39.3**	**+0.5**
MOIG				IAmb	IAmb	04 43 06.5	
	comp=Z,331nm,1.6s						
ZAIG	**Zacatecas**	**85.95**	**64**	P	**P**	**04 42 41.0**	**+1.8**
ZAIG				IAmb	IAmb	04 43 07.8	
	comp=Z,159nm,1.7s						
MFID	**Camas Ranch**	**86.02**	**41**	IAmb	IAmb	04 42 41.5	
	comp=Z,118nm,1.1s						
121A	**Cookes Peak, D**	**86.03**	**53**	P	**P**	**04 42 41.2**	**+2.1**
	baz=242						
SNSI	**Sinabang, Aceh**	**86.06**	**274**	P	**P**	**04 42 41.7**	**+2.2**
	comp=Z,4µmcomp=Z,252nm,1.4s						
WRAK	**Wrangell Islan**	**86.20**	**24**	IAmb	IAmb	04 42 41.9	
	comp=Z,177nm,1.0s						
DUG	**Dugway, Tooele**	**86.22**	**45**	P	**P**	**04 42 40.8**	**+1.0**
	baz=239						
TGL	**Tana Glacier**	**86.22**	**17**	IAmb	IAmb	04 42 41.3	
	comp=Z,274nm,1.2s						
D08A	**Wollman Farm,**	**86.28**	**36**	IAmb	IAmb	04 42 42.6	
	comp=Z,142nm,0.9s						
SLVN	**Son La**	**86.29**	**294**	P	**P**	**04 42 41.6**	**+1.1**
SYO	**Syowa Base**	**86.36**	**193**	⇑*i*P	**P**	**04 42 38.4**	**-1.4**
SYO	**Syowa Base**	**86.36**	**193**	⇓*i*PcP	**P**	**04 42 40.2**	**+0.4**
E09A	**Wood Farm, Sta**	**86.40**	**37**	IAmb	IAmb	04 42 42.8	
	comp=Z,218nm,1.2s						
SEY	**Seymchan**	**86.41**	**347**	*i* P	**P**	**04 42 40.7**	**+0.7**
LHMI	**Lhok Sumawe**	**86.48**	**277**	P	**P**	**04 42 42.8**	**+1.3**
	comp=Z,6µmcomp=Z,577nm,0.9s						
LHMI	**Lhok Sumawe**	**86.48**	**277**	P	**P**	**04 42 42.3**	**+0.8**
GO07	**Milladeo Hill,**	**86.53**	**135**	P	**P**	**04 42 42.5**	**+1.3**
GO07				IAmb	IAmb	04 42 44.7	
	comp=Z,279nm,1.4s						
BALM	**Baldy**	**86.58**	**17**	P	**P**	**04 42 41.1**	**+0.1**
BALM				IAmb	IAmb	04 42 42.9	
	comp=Z,153nm,0.9s						
MLSI	**Meulaboh, Aceh**	**86.64**	**276**	P	**P**	**04 42 42.8**	**+0.5**
	comp=Z,5µmcomp=Z,384nm,1.4s						
MCARA	**McCarthy VSAT**	**86.69**	**16**	IAmb	IAmb	04 42 43.5	
	comp=Z,276nm,1.2s						
KTH	**Kantishna Hill**	**86.77**	**12**	IAmb	IAmb	04 42 42.2	
	comp=Z,164nm,0.9s						
CTGM	**Chitina Glacie**	**86.80**	**17**	IAmb	IAmb	04 42 44.1	
	comp=Z,183nm,0.9s						
B08A	**Colville Reser**	**86.82**	**35**	IAmb	IAmb	04 42 44.3	
	comp=Z,145nm,0.9s						
JIS	**Juneau Island**	**86.85**	**22**	IAmb	IAmb	04 42 44.7	
	comp=Z,141nm,1.3s						
LLLB	**Lillooet**	**86.86**	**32**	IAmb	IAmb	04 42 44.9	
	comp=Z,140nm,1.1s						
TIY	**Taiyuan**	**86.86**	**312**	*e*P	**P**	**04 42 44.1**	**+1.3**
TIY				SKS	**SKSac**	**04 52 12.1**	**0.0**
TIY				S	**S**	**04 52 31.0**	**+0.2**
TIY				sS	**sS**	**04 56 20.1**	**-2.9**
TIY				pmax	pmax		
	comp=Z,89nm,1.2s						
TIY				pmax	pmax		
	comp=Z,700nm,7.7s						
BESE	**Bessie Mountai**	**86.92**	**21**	P	**P**	**04 42 43.7**	**+1.1**
BESE				IAmb	IAmb	04 42 45.2	
	comp=Z,181nm,1.1s						
PBKT	**Sadao Pong**	**86.99**	**289**	P	**P**	**04 42 44.8**	**+1.1**
C09A	**Chrisman Ranch**	**87.07**	**36**	IAmb	IAmb	04 42 45.9	
	comp=Z,139nm,0.9s						
DHY	**Denali Highway**	**87.09**	**14**	IAmb	IAmb	04 42 44.8	
	comp=Z,252nm,1.4s						
BPAW	**Bear Paw Mtn.**	**87.25**	**12**	IAmb	IAmb	04 42 44.5	
	comp=Z,338nm,2.0s						
MCK	**McKinley**	**87.33**	**13**	P	**P**	**04 42 44.2**	**-0.1**
MCK				pmax	pmax		
	comp=Z,293nm,1.1s						
MCK	**McKinley**	**87.33**	**13**	P	**P**	**04 42 44.2**	**-0.1**
Y22D	**IRIS PASSCAL I**	**87.37**	**52**	P	**P**	**04 42 47.4**	**+2.0**
	baz=243						
PAX	**Paxson**	**87.43**	**15**	IAmb	IAmb	04 42 46.1	
	comp=Z,120nm,1.2s						
ZEA	**Zeya**	**87.45**	**331**	*de*P	**P**	**04 42 46.4**	**+1.3**
ZEA				*e*S	**SKSac**	**04 52 16.0**	**+1.3**
ZEA				pmax	pmax		
	comp=N,94nm,1.0s						
ZEA				pmax	pmax		
	comp=E,21nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,140nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,800nm,4.0s						
ZEA				smax	smax		
	comp=E,500nm,6.0s						
MNTX	**Cornudas Mount**	**87.47**	**55**	IAmb	IAmb	04 43 14.1	
	comp=Z,236nm,1.7s						
MNTX	**Cornudas Mount**	**87.47**	**55**	P	**P**	**04 42 47.4**	**+1.7**
	baz=244,SNR=94						
XAN	**Xi'an**	**87.67**	**308**	P	**P**	**04 42 47.5**	**+0.8**
XAN				pP	pP	04 44 55.4	-1.8
XAN				sP	sP	04 45 56.4	-1.9
XAN				pmax	pmax		
	comp=Z,190nm,1.1s						
XAN				pmax	pmax		
	comp=Z,970nm,5.2s						
XAN	**Xi'an**	**87.67**	**308**	P	**P**	**04 42 47.9**	**+1.2**
XAN				pmax	pmax		
	comp=Z,164nm,0.9s						
XAN	**Xi'an**	**87.67**	**308**	P	**P**	**04 42 47.9**	**+1.2**
XAN				IAmb	IAmb	04 42 49.2	
	comp=Z,164nm,0.9s						
PV05	**Paradox Valley**	**87.67**	**48**	IAmb	IAmb	04 43 15.0	
	comp=Z,173nm,1.6s						
MVCO	**Mesa Verde**	**87.68**	**49**	P	**P**	**04 42 47.9**	**+1.0**
	baz=242						
TX31	**Lajitas Ar. Si**	**87.79**	**58**	IAmb	IAmb	04 43 15.9	
	comp=Z,211nm,1.6s						
TX32	**Lajitas Array**	**87.79**	**58**	P	**P**	**04 42 49.3**	**+1.9**
TX32				IAmb	IAmb	04 43 15.9	
	comp=Z,215nm,1.6s						
TXAR	**Lajitas Array**	**87.79**	**58**	P	**P**	**04 42 49.4**	**+1.9**
	comp=Z,44nm,0.8s,baz=220,slow=5.8,SNR=365						
TXAR				pP	**pwP**	**04 45 00.6**	**-0.7**
	comp=Z,12nm,1.1s,baz=222,slow=5.0,SNR=6.7						
TXAR				PKKPbc	**PKKPbc**	**05 00 31.9**	**+1.1**
	comp=Z,3.8nm,0.8s,baz=101,slow=2.8,SNR=13						
TXAR				PKPPKP	**P'P'df**	**05 08 39.5**	**+1.6**
	comp=Z,0.5nm,0.8s,baz=98,slow=3.8,SNR=5.4						
TXAR	**Lajitas Array**	**87.79**	**58**	P	**P**	**04 42 48.5**	**+1.1**
HYT	**Haines Junctio**	**87.80**	**19**	IAmb	IAmb	04 42 49.0	
	comp=Z,118nm,0.9s						
SNAA	**Sanae**	**87.83**	**179**	P	**P**	**04 42 46.7**	**0.0**
SNAA	**Sanae**	**87.83**	**179**	*i* P	**P**	**04 42 46.9**	**+0.1**
SNAA	**Sanae**	**87.83**	**179**	P	**P**	**04 42 46.4**	**-0.4**
SNAA				IAmb	IAmb	04 45 02.4	
	comp=Z,178nm,1.8s						
MENT	**Mentasta**	**87.83**	**15**	IAmb	IAmb	04 42 48.6	
	comp=Z,85nm,0.8s						
PV10	**Paradox Valley**	**87.86**	**48**	IAmb	IAmb	04 43 15.2	
	comp=Z,263nm,2.0s						
NEW	**Newport**	**87.97**	**36**	P	**P**	**04 42 48.5**	**+0.7**
	baz=236,SNR=50						
VNA3	**Neumayer Olymp**	**87.99**	**176**	P	**P**	**04 42 47.5**	**0.0**
ANMO	**Albuquerque**	**88.11**	**52**	P	**P**	**04 42 50.1**	**+1.2**
ANMO				pmax	pmax		
	comp=Z,60nm,1.1s						
ANMO	**Albuquerque**	**88.11**	**52**	P	**P**	**04 42 50.1**	**+1.2**
ANMO	**Albuquerque**	**88.11**	**52**	P	**P**	**04 42 50.1**	**+1.2**
	baz=243						
MLY	**Manley**	**88.14**	**12**	IAmb	IAmb	04 42 48.7	
	comp=Z,157nm,1.1s						
RIDG	**Independent Ri**	**88.24**	**14**	IAmb	IAmb	04 42 50.2	
	comp=Z,187nm,1.1s						
HDA	**Harding Lake**	**88.35**	**13**	IAmb	IAmb	04 42 50.1	
	comp=Z,130nm,0.7s						
HDA	**Harding Lake**	**88.35**	**13**	P	**P**	**04 42 49.0**	**-0.1**
	baz=210,SNR=158						
VNA2	**Neumayer--Watz**	**88.42**	**177**	P	**P**	**04 42 50.3**	**+0.8**
	baz=174,slow=2.8						
BCAR	**Beaver Creek A**	**88.42**	**16**	P	**P**	**04 42 48.0**	**-1.4**
HIA	**Hailar**	**88.43**	**325**	P	**P**	**04 42 50.3**	**+0.5**
HIA				pmax	pmax		
	comp=Z,53nm,0.8s						
HIA	**Hailar**	**88.43**	**325**	P	**P**	**04 42 50.3**	**+0.5**
NVL	**N'lazarevskaya**	**88.47**	**184**	⇑*i*P	**P**	**04 42 48.9**	**-0.8**
NVL				*e*S	**SKSac**	**04 52 17.2**	**-3.3**
NVL				pmax	pmax		
	comp=Z,105nm,0.8s						
IMAR	**Indian Mountai**	**88.48**	**10**	P	**P**	**04 42 49.6**	**0.0**
WHY	**Whitehorse**	**88.49**	**20**	IAmb	IAmb	04 42 52.3	
	comp=Z,98nm,0.9s						
DLBC	**Dease Lake**	**88.53**	**23**	P	**P**	**04 42 51.1**	**+1.0**
DLBC				IAmb	IAmb	04 42 52.7	
	comp=Z,96nm,1.1s						
TCOL	**CIGO, UAF Yank**	**88.56**	**13**	P	**P**	**04 42 49.8**	**-0.2**
	baz=209,SNR=82						
COLA	**College**	**88.57**	**13**	P	**P**	**04 42 49.7**	**-0.3**
COLA				pmax	pmax		
	comp=Z,292nm,0.9s						
COLA	**College**	**88.57**	**13**	P	**P**	**04 42 49.7**	**-0.3**
AHID	**Auburn Hatcher**	**88.63**	**43**	IAmb	IAmb	04 42 53.9	
	comp=Z,123nm,1.2s						
SCRK	**Sand Creek**	**88.64**	**15**	IAmb	IAmb	04 42 53.5	
	comp=Z,89nm,1.0s						
VNA1	**Neumayer--Stat**	**88.65**	**177**	P	**P**	**04 42 51.1**	**+0.6**
ILAR	**Eielson Array**	**88.68**	**13**	P	**P**	**04 42 50.2**	**-0.4**
	comp=Z,66nm,0.8s,baz=217,slow=5.1,SNR=557						
ILAR				pP	**pwP**	**04 45 03.6**	**-0.6**
	comp=Z,16nm,1.1s,baz=227,slow=5.8,SNR=4.9						
ILAR				PP	**PP**	**04 46 34.5**	**+3.0**
	comp=Z,4.5nm,0.9s,baz=219,slow=8.1,SNR=4.2						
ILAR				PKiKP	**PKiKP**	**04 47 45.4**	**-0.5**
	comp=Z,2.0nm,0.8s,baz=264,slow=3.3,SNR=5.4						
ILAR				PKKPbc	**PKKPdf**	**05 00 27.2**	**+2.4**
	comp=Z,0.5nm,0.4s,baz=327,slow=2.0,SNR=6.4						
ILAR	**Eielson Array**	**88.68**	**13**	P	**P**	**04 42 48.4**	**-2.2**
KMI	**Kunming**	**88.78**	**297**	P	**P**	**04 42 54.1**	**+1.8**
KMI				pP	pP	04 45 02.4	-0.7
KMI				sP	sP	04 46 02.3	-1.5
KMI				SKS	**SKSac**	**04 52 24.3**	**0.0**
KMI				S	**S**	**04 52 48.5**	**-0.8**
KMI				sS	sS	04 56 39.6	-3.1
KMI				pmax	pmax		
	comp=Z,140nm,1.0s						
KMI				pmax	pmax		
	comp=Z,790nm,3.1s						
KMI	**Kunming**	**88.78**	**297**	P	**P**	**04 42 53.4**	**+1.1**
KMI				pmax	pmax		
	comp=Z,121nm,1.0s						
KMI	**Kunming**	**88.78**	**297**	P	**P**	**04 42 53.4**	**+1.1**
KMI				IAmb	IAmb	04 42 54.8	
	comp=Z,121nm,1.0s						
POKR	**Poker Plat Res**	**88.86**	**13**	P	**P**	**04 42 51.0**	**-0.4**
	baz=209,SNR=43						
HHC	**Hu-ho-hao-te**	**88.97**	**315**	*e*P	**P**	**04 42 53.6**	**+1.0**
HHC				pP	pwP	04 45 08.5	+1.9
HHC				sP	sP	04 46 08.1	+3.3
HHC				pmax	pmax		
	comp=Z,53nm,1.2s						
MSO	**Missoula**	**88.99**	**38**	P	**P**	**04 42 53.0**	**+0.4**
	baz=238,SNR=13						
DLMT	**Dillon**	**89.02**	**40**	IAmb	IAmb	04 42 55.5	
	comp=Z,146nm,1.5s						
REDW	**Red Top Meadow**	**89.08**	**43**	IAmb	IAmb	04 42 55.9	
	comp=Z,157nm,1.1s						
TPAW	**Teton Pass**	**89.08**	**42**	IAmb	IAmb	04 42 55.1	
	comp=Z,80nm,1.1s						
S22A	**4UR Ranch, Cre**	**89.11**	**49**	P	**P**	**04 42 55.0**	**+1.5**
	baz=243,SNR=70						
FXWY	**Fox Creek**	**89.11**	**42**	IAmb	IAmb	04 42 56.3	
	comp=Z,144nm,1.6s						
BILL	**Bilibino**	**89.16**	**354**	*e*P	**P**	**04 42 53.2**	**+0.5**
BILL				*e**PP	**pP**	**04 45 05.5**	**+0.9**
BILL				*e**SP	**sP**	**04 46 05.3**	**-0.2**
BILL				*e*		04 46 36.2	
BILL				pmax	pmax		
	comp=Z,58nm,1.0s						
BILL	**Bilibino**	**89.16**	**354**	P	**P**	**04 42 53.0**	**+0.2**
BILL				IAmb	IAmb	04 42 53.9	
	comp=Z,69nm,1.0s						
SNOW	**Snow King Moun**	**89.19**	**42**	IAmb	IAmb	04 42 56.6	
	comp=Z,131nm,1.0s						
O20A	**White River Ci**	**89.23**	**46**	IAmb	IAmb	04 42 56.4	
	comp=Z,76nm,0.9s						
O20A	**White River Ci**	**89.23**	**46**	P	**P**	**04 42 55.2**	**+1.2**
	baz=242,SNR=52						
RDOG	**Red Dog Mine**	**89.27**	**6**	IAmb	IAmb	04 42 55.1	
	comp=Z,90nm,0.9s						
IMW	**Indian Meadow**	**89.29**	**42**	IAmb	IAmb	04 42 57.1	
	comp=Z,103nm,1.0s						
CM31	**Chiang Mai Arr**	**89.49**	**290**	P	**P**	**04 42 57.5**	**+2.1**
CMAR	**Chiang Mai Arr**	**89.49**	**290**	P	**P**	**04 42 57.4**	**+2.0**
	comp=Z,88nm,0.9s,baz=126,slow=3.0,SNR=327						
CMAR				PKKPbc	**PKKPbc**	**05 00 27.9**	**+1.7**
	comp=Z,2.9nm,0.7s,baz=286,slow=4.5,SNR=7.4						
CMAR	**Chiang Mai Arr**	**89.49**	**290**	*ce*P	**P**	**04 42 57.4**	**+2.0**
CMAR				pmax	pmax		
	comp=Z,94nm,0.9s						
CMAR	**Chiang Mai Arr**	**89.49**	**290**	P	**P**	**04 42 56.5**	**+1.1**
FLWY	**Flagg Ranch**	**89.54**	**42**	IAmb	IAmb	04 42 58.4	
	comp=Z,107nm,1.1s						
GO06	**Curarrehue**	**89.56**	**132**	P	**P**	**04 42 56.5**	**+1.0**
PRP	**Porcupine Dome**	**89.61**	**13**	IAmb	IAmb	04 42 57.0	
	comp=Z,148nm,1.3s						
BW06	**Boulder Array**	**89.62**	**44**	IAmb	IAmb	04 42 57.7	
	comp=Z,56nm,0.8s						
BW06	**Boulder Array**	**89.62**	**44**	P	**P**	**04 42 56.5**	**+0.7**
	baz=241,SNR=55						
PD31	**Pinedale Array**	**89.62**	**44**	IAmb	IAmb	04 42 57.7	
	comp=Z,54nm,0.9s						
PDAR	**Pinedale Array**	**89.62**	**44**	P	**P**	**04 42 56.3**	**+0.5**
	comp=Z,35nm,0.7s,baz=209,slow=3.1,SNR=295						
PDAR				PKKPbc	**PKKPbc**	**05 00 26.4**	**-0.7**
	comp=Z,2.3nm,0.7s,baz=87,slow=4.1,SNR=11						
PDAR				PKPPKP	**P'P'df**	**05 08 33.7**	**+0.1**
	comp=Z,1.2nm,1.0s,baz=113,slow=3.4,SNR=4.1						
PDAR	**Pinedale Array**	**89.62**	**44**	P	**P**	**04 42 55.7**	**-0.1**
CHTO	**Chiang Mai**	**89.62**	**290**	P	**P**	**04 42 57.1**	**+1.1**
CHTO				pmax	pmax		
	comp=Z,121nm,0.8s						
CHTO	**Chiang Mai**	**89.62**	**290**	P	**P**	**04 42 57.1**	**+1.1**
SMCO	**Snowmass**	**89.66**	**48**	IAmb	IAmb	04 43 24.0	
	comp=Z,121nm,1.6s						
PLCA	**Paso Flores**	**89.67**	**134**	P	**P**	**04 42 57.5**	**+1.5**
	comp=Z,26nm,0.6s,baz=258,slow=5.1,SNR=126						
PLCA				PKKPbc	**PKKPbc**	**05 00 26.4**	**-0.1**
	comp=Z,6.0nm,0.9s,baz=94,slow=1.6,SNR=11						
PLCA				PKPPKP	**P'P'df**	**05 08 30.1**	**-5.3**
	comp=Z,3.5nm,1.1s,baz=17,slow=6.9,SNR=4.4						
PLCA	**Paso Flores**	**89.67**	**134**	P	**P**	**04 42 56.9**	**+0.9**
H17A	**Grant Village**	**89.77**	**42**	P	**P**	**04 42 58.9**	**+2.5**
	baz=240,SNR=34						
BTO	**Baotou**	**89.89**	**314**	*e*P	**P**	**04 42 57.5**	**+0.6**
EGAK	**Eagle**	**89.99**	**15**	P	**P**	**04 42 56.9**	**+0.3**
SDCO	**Great Sand Dun**	**90.05**	**49**	P	**P**	**04 42 58.8**	**+0.9**
	baz=244,SNR=31						
WALA	**Waterton Lakes**	**90.19**	**37**	IAmb	IAmb	04 43 00.2	
	comp=Z,50nm,0.9s						
CD2	**Chengdu**	**90.28**	**303**	⇓*i*P	**P**	**04 43 00.1**	**+1.3**
CD2				sP	sP	04 46 11.3	+0.8
CD2				PP	**PP**	**04 46 43.3**	**-1.5**
CD2				SKS	**SKSac**	**04 52 30.0**	**-2.2**
CD2				S	**S**	**04 52 55.9**	**-6.2**
CD2				SS	**SS**	**04 59 26.3**	**+4.3**
CD2				pmax	pmax		
	comp=Z,60nm,0.5s						
CD2				pmax	pmax		
	comp=Z,700nm,5.0s						
MSTX	**Muleshoe**	**90.43**	**54**	P	**P**	**04 42 59.9**	**+0.3**
MSTX				IAmb	IAmb	04 43 26.2	
	comp=Z,38nm,0.6s						
MSTX	**Muleshoe**	**90.43**	**54**	P	**P**	**04 43 00.4**	**+0.8**
	baz=245,SNR=22						
T25A	**Trinidad**	**90.56**	**50**	P	**P**	**04 43 01.1**	**+0.8**
	baz=244,SNR=23						
RWWY	**Rawlins**	**90.65**	**45**	IAmb	IAmb	04 43 01.6	
	comp=Z,94nm,1.1s						
833A	**Chaparral WMA,**	**90.80**	**60**	P	**P**	**04 43 02.5**	**+1.3**
	baz=247						
Q24A	**Divide**	**90.83**	**48**	P	**P**	**04 43 02.7**	**+1.1**
	baz=244,SNR=6.5						
ISCO	**Idaho Springs**	**90.88**	**48**	P	**P**	**04 43 02.8**	**+1.0**
	baz=244,SNR=22						
RLMT	**Red Lodge**	**90.94**	**42**	P	**P**	**04 43 03.2**	**+1.5**
	baz=241,SNR=18						
N23A	**Red Feather La**	**91.14**	**46**	P	**P**	**04 43 04.2**	**+1.3**
	baz=243,SNR=47						
GO05	**Huala**	**91.27**	**128**	P	**P**	**04 43 04.3**	**+0.9**
JCT	**Junction City**	**91.32**	**58**	P	**P**	**04 43 04.1**	**+0.4**
	baz=247						
BMAR	**Burnt Mountain**	**91.45**	**13**	P	**P**	**04 43 03.6**	**+0.2**
K22A	**Casper**	**91.54**	**45**	IAmb	IAmb	04 43 06.7	
	comp=Z,54nm,1.1s						
K22A	**Casper**	**91.54**	**45**	P	**P**	**04 43 05.4**	**+0.9**
	baz=243,SNR=24						
TOLK	**Toolik Lake Re**	**91.59**	**10**	IAmb	IAmb	04 43 05.9	
	comp=Z,179nm,1.6s						
TOLK	**Toolik Lake Re**	**91.59**	**10**	P	**P**	**04 43 04.4**	**+0.4**
	baz=207,SNR=34						
AMTX	**Amarillo**	**91.63**	**53**	P	**P**	**04 43 05.6**	**+0.5**
	baz=246						
YAK	**Yakutsk**	**92.03**	**338**	*e*P	**P**	**04 43 05.4**	**-0.6**
YAK				*e*PPP	PPP	04 49 01.1	
YAK				*e*S	**SKSac**	**04 52 38.4**	**-1.9**
YAK				pmax	pmax		
	comp=Z,130nm,0.8s						
YAK				pmax	pmax		
	comp=N,31nm,1.2s						
YAK				pmax	pmax		
	comp=E,47nm,1.4s						
YAK				smax	smax		
	comp=N,179nm,1.9s						
YAK				smax	smax		
	comp=E,63nm,1.8s						
YAK	**Yakutsk**	**92.03**	**338**	P	**P**	**04 43 05.8**	**-0.2**
EGMT	**Eagleton**	**92.04**	**39**	IAmb	IAmb	04 43 08.8	
	comp=Z,73nm,1.5s						
EGMT	**Eagleton**	**92.04**	**39**	P	**P**	**04 43 07.5**	**+0.9**
	baz=241						
ABTX	**Abilene, Hawle**	**92.28**	**56**	IAmb	IAmb	04 45 26.7	
	comp=Z,222nm,1.9s						
ABTX	**Abilene, Hawle**	**92.28**	**56**	P	**P**	**04 43 08.8**	**+0.7**
	baz=247,SNR=12						
LZH	**Lanzhou**	**92.31**	**308**	⇓P	**P**	**04 43 09.8**	**+1.6**
LZH				sP	sP	04 46 21.3	+1.1
LZH				SKS	**SKSac**	**04 52 43.6**	**+0.1**
LZH				S	**ScS**	**04 53 25.4**	**+4.4**
LZH				sS	sS	04 57 14.0	-2.2
LZH				pmax	pmax		
	comp=Z,190nm,1.3s						
LZH				pmax	pmax		
	comp=Z,720nm,7.1s						
EPYK	**Eagle Plains**	**92.38**	**16**	IAmb	IAmb	04 43 09.1	
	comp=Z,83nm,0.9s						
EPYK	**Eagle Plains**	**92.38**	**16**	P	**P**	**04 43 08.0**	**+0.3**
	baz=219						
KSCO	**Kaye Shedlock’**	**92.63**	**49**	IAmb	IAmb	04 43 11.8	
	comp=Z,86nm,1.0s						
KSCO	**Kaye Shedlock’**	**92.63**	**49**	P	**P**	**04 43 10.7**	**+1.1**
	baz=246,SNR=24						
ROC1	**El Roble**	**92.86**	**127**	P	**P**	**04 43 11.6**	**+0.5**
PEL	**Peldehue**	**93.03**	**127**	P	**P**	**04 43 12.0**	**+0.4**
PEL				pmax	pmax		
	comp=Z,184nm,1.8s						
PEL	**Peldehue**	**93.03**	**127**	P	**P**	**04 43 12.0**	**+0.4**
PEL				IAmb	IAmb	04 43 39.0	
	comp=Z,184nm,1.8s						
435B	**Jarrell**	**93.20**	**58**	P	**P**	**04 43 13.3**	**+1.1**
	baz=248						
LAO	**LASA Array**	**93.55**	**41**	IAmb	IAmb	04 43 16.3	
	comp=Z,35nm,0.9s						
LAO	**LASA Array**	**93.55**	**41**	P	**P**	**04 43 15.1**	**+1.6**
	baz=244						
WHTX	**Lake Whitney,**	**93.75**	**57**	P	**P**	**04 43 15.2**	**+0.5**
	baz=248						
WMOK	**Wichita Mounta**	**93.76**	**54**	P	**P**	**04 43 15.2**	**+0.5**
	baz=248						
RSSD	**Black Hills**	**93.81**	**44**	P	**P**	**04 43 15.2**	**+0.2**
RSSD				pmax	pmax		
	comp=Z,24nm,0.9s						
RSSD	**Black Hills**	**93.81**	**44**	P	**P**	**04 43 15.2**	**+0.2**
RSSD	**Black Hills**	**93.81**	**44**	P	**P**	**04 43 15.4**	**+0.4**
	baz=245						
OGNE	**Ogallala**	**93.84**	**48**	P	**P**	**04 43 15.7**	**+0.7**
	baz=246						
U32A	**Winter Ranch,**	**94.22**	**53**	IAmb	IAmb	04 45 34.9	
	comp=Z,77nm,1.6s						
HKT	**Hockley**	**94.30**	**60**	P	**P**	**04 43 17.4**	**+0.3**
HKT				pmax	pmax		
	comp=Z,46nm,1.6s						
HKT	**Hockley**	**94.30**	**60**	P	**P**	**04 43 17.4**	**+0.3**
HKT				IAmb	IAmb	04 43 45.2	
	comp=Z,46nm,1.6s						
X34A	**Smith Ranch, M**	**94.43**	**55**	IAmb	IAmb	04 46 01.8	
	comp=Z,37nm,1.2s						
CBKS	**Cedar Bluff**	**94.62**	**50**	P	**P**	**04 43 19.3**	**+0.8**
	baz=247,SNR=6.8						
INK	**Inuvik**	**94.66**	**15**	P	**P**	**04 43 17.6**	**-0.3**
	comp=Z,39nm,1.0s,baz=221,slow=4.5,SNR=79						
INK				pP	**pP**	**04 45 32.4**	**+2.1**
	comp=Z,6.1nm,1.0s,baz=232,slow=6.1,SNR=3.5						

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INK                                PP        PP        04 47 13.5  -4.0
       comp=Z,8.1nm,0.9s,baz=229,slow=11,SNR=3.9
INK    Inuvik            94.66  15  IAmb      IAmb      04 43 19.0
       comp=Z,74nm,1.2s
ULN    Ulaanbaatar       95.03 319  P         P         04 43 20.2  -0.1
ULN                                pmax      pmax
       comp=Z,25nm,1.2s
ULN    Ulaanbaatar       95.03 319  P         P         04 43 20.2  -0.1
R32A   Long Quarter,     95.21  51  IAmb      IAmb      04 43 24.0
       comp=Z,61nm,0.9s
SONM   Songino Array     95.42 319  P         P         04 43 21.7  -0.4
       comp=Z,3.2nm,0.7s,baz=102,slow=2.0,SNR=24
SONM                               PP        PP        04 47 19.2  -4.8
       comp=Z,4.4nm,1.0s,baz=134,slow=5.9,SNR=7.0
SONM                               PKiKP     PKiKP     04 47 58.1   0.0
       comp=Z,4.1nm,0.9s,baz=123,slow=1.7,SNR=4.9
SONM                               PKKPbc    PKKPbc    05 00 11.2  -1.1
       comp=Z,2.9nm,0.9s,baz=271,slow=3.4,SNR=7.6
SONM   Songino Array     95.42 319  P         P         04 43 21.8  -0.3
SONM                               pmax      pmax
       comp=Z,9.0nm,1.1s
SONM   Songino Array     95.42 319  P         P         04 43 21.8  -0.3
DGMT   Dagmar            95.56  40  P         P         04 43 23.7  +1.2
       baz=245
BOD    Bodaibo           95.90 330 eP         P         04 43 21.9  -1.9
BOD                                pmax      pmax
       comp=Z,25nm,1.7s
GTA    Gaotai            96.53 310 ⇓P         P         04 43 28.0  +0.8
GTA                                pP        pwP       04 45 44.5  +1.5
GTA                                sP        sP        04 46 44.6  +4.9
GTA                                SKS       SKSac     04 53 04.5  -1.1
GTA                                SS        SS        05 00 51.3  +1.5
GTA                                pmax      pmax
       comp=Z,26nm,1.3s
GTA                                pmax      pmax
       comp=Z,220nm,6.1s
BGNE   Belgrade          96.72  48  Pdiff     P         04 43 29.7  +1.7
       baz=248
KSU1   Kansas State U    96.99  51  Pdiff     P         04 43 31.3  +2.1
       baz=249
YKA    Yellowknife Ar    97.01  25  P         P         04 43 28.7  +0.1
       comp=Z,10nm,0.8s,baz=238,slow=4.3,SNR=196
YKA                                pP        pP        04 45 42.2  +1.3
       comp=Z,3.0nm,0.9s,baz=235,slow=4.4,SNR=4.1
YKA                                PP        PP        04 47 27.9  -7.5
       comp=Z,5.0nm,1.1s,baz=237,slow=6.0,SNR=5.3
YKA                                PKiKP     PKiKP     04 47 60.0  -0.3
       comp=Z,1.1nm,0.6s,baz=210,slow=1.1,SNR=6.2
YKA                                PKKPbc    PKKPbc    05 00 04.7  -3.6
       comp=Z,0.6nm,0.5s,baz=48,slow=2.2,SNR=14
YKA                                PKPPKP              05 08 21.8
       comp=Z,0.9nm,0.9s,baz=67,slow=3.9,SNR=7.3
SUSD   Miller            97.29  45  Pdiff     P         04 43 30.8  +0.4
       baz=248
C36M   Paulatuk          97.86  17  Pdiff     Pdif      04 43 32.1  -0.2
       baz=230
ZAK    Zakamensk         98.32 321 eP         Pdif      04 43 34.5  -0.4
ZAK                                pmax      pmax
       comp=Z,8.0nm,1.2s
IRK    Irkutsk           98.46 323 eP         Pdif      04 43 32.3  -3.0
IRK                                e                   04 47 45.4
IRK                                pmax      pmax
       comp=Z,28nm,0.8s
TLY    Talaya            98.60 322  P         P         04 43 36.1   0.0
       comp=Z,2.1nm,0.5s,baz=180,slow=5.4,SNR=5.1
TLY    Talaya            98.60 322d iP        Pdif      04 43 35.5  -0.5
TLY                                pmax      pmax
       comp=Z,10.0nm,1.5s
TLY    Talaya            98.60 322            Pdif      04 43 35.8  -0.2
ECSD   EROS Data Cent    98.61  47  Pdiff     P         04 43 36.7  +0.5
       baz=250
U40A   Yellville         98.85  55  Pdiff     P         04 43 38.2  +0.7
       baz=251
MOY    Mondy            100.13 321 eP         Pdif      04 43 43.8  +0.9
ULM    Lac du Bonnet    101.26  41  P         Pdif      04 43 48.5  +0.7
       comp=Z,2.0nm,0.8s,baz=294,slow=3.0,SNR=3.4
ULM                                PP        PP        04 48 03.2  -4.3
       comp=Z,4.3nm,0.8s,baz=247,slow=7.7,SNR=6.5
ULM                                PKiKP     PKiKP     04 48 10.1  +1.8
       comp=Z,3.4nm,0.6s,baz=218,slow=2.1,SNR=6.0
ULM                                PKKPbc    PKKPbc    04 59 54.0  -2.1
       comp=Z,2.1nm,0.7s,baz=1.7,slow=3.5,SNR=5.1
ULM    Lac du Bonnet    101.26  41 i P        Pdif      04 43 49.2  +1.4
TAPN   Taplejung        102.21 295 eP         PKiKP     04 48 10.7  -0.4
       comp=Z,105nm,1.5s
PALK   Pallekele        102.33 273  PP        PKiKP     04 48 12.8  +1.4
       comp=Z,7.3nm,0.8s,baz=122,slow=5.4,SNR=5.4
ODAN   Odare            102.34 294 eP         PKiKP     04 48 10.9  -0.4
       comp=Z,46nm,0.9s
LPAZ   La Paz           102.67 113  P         Pdif      04 43 57.3  +1.6
       comp=Z,3.7nm,0.9s,baz=271,slow=4.5,SNR=11
LPAZ                               PP        PP        04 48 17.2  -1.6
       comp=Z,14nm,1.3s,baz=229,slow=10.0,SNR=7.5
LPAZ                               PKKPbc    PKKPbc    04 59 51.2  -0.8
       comp=Z,4.2nm,0.7s,baz=36,slow=2.9,SNR=13
LPAZ                               PKPPKP    P'P'df    05 08 11.2  -1.0
       comp=Z,1.4nm,1.0s,baz=38,slow=2.7,SNR=3.5
LPAZ   La Paz           102.67 113            Pdif      04 43 59.0  +3.3
CHLP   Challavanipeta   102.80 285 ePdif      Pdif      04 43 55.8  +0.4
CHLP                              ePP        PP        04 48 18.0  -1.5
CHLP                              eSKSac     SKSac     04 53 36.2  -0.3
CHLP                              e                    04 54 43.5
RAMN   Ramite           103.04 294 eP         PKiKP     04 48 12.3  -0.3
       comp=Z,39nm,0.7s
JIRN   Jiri             103.59 295 eP         PKiKP     04 48 12.9  -0.8
       comp=Z,40nm,0.4s
GUN    Gumba            103.92 295 eP         PKiKP     04 48 13.4  -0.9
       comp=Z,34nm,0.7s
PKI    Pulchoki         104.23 294 eP         PKiKP     04 48 13.9  -1.0
       comp=Z,40nm,0.6s
PKIN   Phulchoki        104.24 294 eP         PKiKP     04 48 13.9  -0.9
       comp=Z,27nm,0.6s
DMN    Daman            104.50 294 eP         PKiKP     04 48 14.7  -0.6
       comp=Z,20nm,0.6s
PVM    Polavaram        104.63 283 ePdif      Pdif      04 44 00.7  -2.8
PVM                               epPdif     pPdif     04 46 14.0  -1.7
PVM                               eSKSac     SKSac     04 53 44.9  +0.1
PVM                               eSKSdf     SKKSac    04 54 27.4  -5.8
GKN    Gorkha           105.01 295 eP         PKiKP     04 48 14.8  -1.3
       comp=Z,13nm,0.3s
S49A   Springfield      105.06  55  PKiKP     PKiKP     04 48 14.7  -0.9
       baz=255
ROSC   El Rosal         105.22  91  PKKPbc    PKKPbc    04 59 44.0   0.0
       comp=Z,6.8nm,0.5s,baz=69,slow=20,SNR=4.3
SKHT   Srikalahasti     105.33 279 ePdif      Pdif      04 44 06.5  -0.2
SKHT                              ePP        PP        04 48 40.1  +2.1
SKHT                              eSKSac     SKSac     04 53 49.1  +1.1
SKHT                              e                    04 55 04.3
MYLAV  Mylavaram        105.38 282 ePdif      Pdif      04 44 07.0  +0.1
MYLAV                             epPdif     pPdif     04 46 20.7  +1.8
MYLAV                             ePKiKP     PKiKP     04 48 16.7  -0.1
MYLAV                             ePP        PP        04 48 37.3  -1.0
MYLAV                             eSKSac     SKSac     04 53 48.9  +0.7
MYLAV                             e                    04 55 08.8
ADKI   Addanki          105.72 281 ePdif      Pdif      04 44 08.4  -0.1
ADKI                              epPdif     pPdif     04 46 20.8  +0.2
ADKI                              esPdif     sPdif     04 47 20.8   0.0
ADKI                              ePP        PP        04 48 43.4  +2.5
ADKI                              eSKSac     SKSac     04 53 51.0  +1.3
ADKI                              e                    04 55 06.7
DANN   Dangsing         105.84 295 eP         PKiKP     04 48 16.8  -1.0
       comp=Z,69nm,0.6s
GGR    Gangavaram       106.09 283 ePdif      Pdif      04 44 10.5  +0.3
GGR                               e                    04 46 12.7
GGR                               esPdif     sPdif     04 47 21.3  -1.2
GGR                               ePP        PP        04 48 45.9  +2.3
GGR                               eSKSac     SKSac     04 53 50.9  -0.5
CPUP   Villa Florida    106.47 127  PKKPbc    PKKPbc    04 59 39.9  -0.5
       comp=Z,1.6nm,0.9s,baz=43,slow=19,SNR=3.8
NJS    Nagarjunasagar   106.54 282 ePdif      Pdif      04 44 07.8  -4.2
NJS                               ePKiKP     PKiKP     04 48 18.6  -0.4
NJS                               eSKSac     SKSac     04 53 49.7  -3.5
NJS                               e                    04 55 10.1
J47A   Sunmer           106.69  50  PKiKP     PKiKP     04 48 18.4  -0.1
       baz=257
SRLM   Srisailam        106.79 281 ePdif      Pdif      04 44 13.5  +0.2
SRLM                              ePP        PP        04 48 42.9  -5.7
SRLM                              eSKSac     SKSac     04 53 54.0  -0.4
SRLM                              e                    04 55 13.6
Q51A   Peebles          106.83  54  PKiKP     PKiKP     04 48 18.3  -0.6
       baz=257
T53A   Wise             106.99  56  PKiKP     PKiKP     04 48 19.7  +0.4
       baz=257
G46A   Petoskey         107.12  47  PKiKP     PKiKP     04 48 18.6  -0.6
       baz=258
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V54A   Nebo             107.17  58  PKiKP     PKiKP     04 48 19.6  -0.1
       baz=257
J48A   Bridge Port      107.45  50  PKiKP     PKiKP     04 48 19.6  -0.3
       baz=258
HYBB   Hyderabad (bro   107.48 282 ePdif      Pdif      04 44 13.9  -2.4
HYBB                              ePKiKP     PKiKP     04 48 19.4  -1.4
HYBB                              ePP        PP        04 48 49.2  -4.4
T54A   Tazewell         107.75  56  PKiKP     PKiKP     04 48 18.3  -2.5
       baz=257
P52A   Corning          107.89  54  PKiKP     PKiKP     04 48 20.0  -0.9
       baz=258
URV    Uravakonda       107.95 280 ePKiKP     PKiKP     04 48 20.7  -1.0
URV                               ePP        PP        04 48 50.6  -6.3
URV                               eSKSac     SKSac     04 53 54.2  -5.3
SRSP   Sriramsagar      108.10 284 ePdif      Pdif      04 44 17.2  -1.7
SRSP                              ePP        PP        04 48 56.9  -1.1
SRSP                              eSKSac     SKSac     04 53 57.3  -2.6
SRSP                              eSKKSac    SKKSac    04 54 55.0  -2.4
SRSP                              e                    04 55 19.7
W57A   Gilead           108.59  59  PKiKP     PKiKP     04 48 22.3   0.0
       baz=258
D47A   Chapleau         108.66  46  PKiKP     PKiKP     04 48 21.5  -0.6
       baz=260
O53A   New Philadelph   108.70  53  PKiKP     PKiKP     04 48 22.0  -0.4
       baz=258
Q54A   Coxs Mills       108.73  55  PKiKP     PKiKP     04 48 22.1  -0.4
       baz=258
V57A   Coltrane Farms   108.92  58  PKiKP     PKiKP     04 48 22.7  -0.3
       baz=258
R55A   Marlinton        109.14  55  PKiKP     PKiKP     04 48 23.1  -0.3
       baz=258
O54A   Avella           109.32  53  PKiKP     PKiKP     04 48 23.8  +0.3
       baz=259
M53A   WI Miller and    109.33  52  PKiKP     PKiKP     04 48 23.1  -0.4
       baz=259
KLRI   Killari          109.45 283 ePdif      Pdif      04 44 24.5  -0.6
KLRI                              ePKiKP     PKiKP     04 48 23.1  -1.4
KLRI                              ePP        PP        04 49 10.7  +3.1
D48A   Paudash Townsh   109.55  46  PKiKP     PKiKP     04 48 22.9  -0.9
       baz=260
T57A   Hurt             109.56  57  PKiKP     PKiKP     04 48 23.4  -0.7
       baz=258
N54A   Moraine State    109.75  53  PKiKP     PKiKP     04 48 23.8  -0.6
       baz=259
ERPA   Erie             109.96  51  PKiKP     PKiKP     04 48 24.2  -0.5
       baz=260
M54A   Oil Creek Stat   110.09  52  PKiKP     PKiKP     04 48 25.0   0.0
       baz=260
O55A   Ligonier         110.13  54  PKiKP     PKiKP     04 48 24.7  -0.4
       baz=260
ZALV   Zalesovo Beam    110.19 321  Pdiff     Pdif      04 44 29.1  +1.6
       comp=Z,0.4nm,0.3s,baz=108,slow=4.7,SNR=1.9
ZALV                               PKiKP     PKiKP     04 48 23.8  -0.9
       comp=Z,26nm,0.6s,baz=165,slow=1.0,SNR=84
NRIK   Noril'sk         110.47 338  PKiKP     PKiKP     04 48 24.6  -0.2
       comp=Z,9.9nm,0.7s,baz=118,slow=1.7,SNR=15
L54A   Sinclairville    110.47  51  PKiKP     PKiKP     04 48 25.4  -0.3
       baz=260
O56A   Blue Knob Stat   110.70  54  PKiKP     PKiKP     04 48 26.3  +0.1
       baz=260
M55A   Ridgway          110.75  52  PKiKP     PKiKP     04 48 26.0  -0.2
       baz=260
MK31   Makanchi Array   110.80 313 i PKIKP    PKiKP     04 48 24.9  -1.3
MKAR   Makanchi Array   110.80 313  Pdiff     Pdif      04 44 31.3  +0.9
       comp=Z,3.4nm,0.7s,baz=92,slow=6.1,SNR=30
MKAR                               PKiKP     PKiKP     04 48 25.4  -0.8
       comp=Z,10nm,0.4s,baz=119,slow=0.7,SNR=96
MKAR                               PKKPbc    PKKPbc    04 59 27.1   0.0
       comp=Z,1.1nm,0.6s,baz=281,slow=3.4,SNR=5.1
MKAR                               PKKPab    PKKPab    04 59 38.9  +1.0
       comp=Z,2.2nm,0.6s,baz=274,slow=3.4,SNR=7.3
MKAR   Makanchi Array   110.80 313c iPKIKP    PKiKP     04 48 25.3  -0.9
MKAR                               pmax      pmax
       comp=Z,10.0nm,0.4s
D50A   G1974 Best Tow   110.87  46  PKiKP     PKiKP     04 48 25.3  -1.0
       baz=262
K54A   Basiliko Farm,   110.99  51  PKiKP     PKiKP     04 48 26.1  -0.6
       baz=261
MAKZ   Makanchi         111.02 313  PKIKP     PKiKP     04 48 24.6  -2.0
E51A   G1948 Merrick    111.02  47  PKiKP     PKiKP     04 48 25.9  -0.7
       baz=262
L55A   Hinsdale         111.11  52  PKiKP     PKiKP     04 48 26.5  -0.5
       baz=261
D51A   Lot 18 Range I   111.18  46  PKiKP     PKiKP     04 48 25.9  -0.9
       baz=262
O57A   Amberson         111.39  54  PKiKP     PKiKP     04 48 27.0  -0.5
       baz=261
NDI    New Delhi        111.51 294 eP         PKiKP     04 48 27.0  -1.1
E52A   Mattawa          111.56  47  PKiKP     PKiKP     04 48 26.9  -0.6
       baz=262
L56A   Greenwood        111.75  52  PKiKP     PKiKP     04 48 27.6  -0.5
       baz=261
G54A   Lake Saint Pet   111.83  48  PKiKP     PKiKP     04 48 28.1   0.0
       baz=262
ALGO   Algonquin Park   111.93  48  PKiKP     PKiKP     04 48 27.5  -0.8
       baz=263
M57A   Sunshine Farm,   111.95  53  PKiKP     PKiKP     04 48 28.3  -0.2
       baz=261
N58A   Sunbury          112.18  53  PKiKP     PKiKP     04 48 28.6  -0.4
       baz=261
E53A   Dumoine, Ponti   112.25  47  PKiKP     PKiKP     04 48 28.2  -0.7
       baz=263
PDGK   Podgornoye       112.28 309  PKIKP     PKiKP     04 48 27.8  -1.4
D53A   Lac Vacive, Po   112.31  46  PKiKP     PKiKP     04 48 27.9  -1.1
       baz=263
M58A   Price's Panora   112.45  53  PKiKP     PKiKP     04 48 29.3  -0.2
       baz=262
E54A   Lac Daplat, Po   112.59  47  PKiKP     PKiKP     04 48 28.8  -0.7
       baz=263
K57A   Scipio Center    112.60  51  PKiKP     PKiKP     04 48 29.3  -0.4
       baz=262
MATQ   Matagami         112.64  44  PKiKP     PKiKP     04 48 28.2  -1.3
       baz=264
L58A   Harry Jones Me   113.00  52  P         PKiKP     04 48 30.3  -0.2
       baz=262
LSQQ   Lebel-sur-Quev   113.00  44  P         PKiKP     04 48 29.3  -0.9
       baz=265
D54A   Lac Fusel, La    113.03  46  P         PKiKP     04 48 29.4  -1.0
       baz=264,SNR=5.7
M59A   Waymart          113.24  53  P         PKiKP     04 48 30.8  -0.2
       baz=262
I57A   Carthage         113.37  50  P         PKiKP     04 48 30.5  -0.6
       baz=263
N60A   Cedar Hill Far   113.40  53  P         PKiKP     04 48 31.0  -0.3
       baz=262
J58A   Remsen           113.57  51  P         PKiKP     04 48 31.3  -0.2
       baz=263
KURK   Kurchatov        113.64 317c iPKIKP    PKiKP     04 48 30.7  -0.7
KURK                               pmax      pmax
       comp=Z,62nm,1.3s
KURBB  Kurchatov Arra   113.69 317  Pdiff     Pdif      04 44 47.2  +4.1
       comp=Z,0.2nm,0.4s,baz=98,slow=4.3,SNR=2.8
KURBB                              PKiKP     PKiKP     04 48 30.6  -0.9
       comp=Z,28nm,0.7s,baz=93,slow=1.8,SNR=154
KURBB                              PP        PP        04 49 34.0  -2.5
       comp=Z,4.0nm,1.0s,baz=96,slow=7.5,SNR=9.7
KURBB                              PKKPbc    PKKPbc    04 59 17.5  -0.1
       comp=Z,3.9nm,0.7s,baz=272,slow=4.0,SNR=4.0
KURBB                              PKKPab    PKKPab    04 59 26.1  +1.2
       comp=Z,3.6nm,0.7s,baz=275,slow=4.9,SNR=4.3
KURBB  Kurchatov Arra   113.69 317  PKIKP     PKiKP     04 48 30.4  -1.1
D55A   Sainte-Anne-du   113.82  47  P         PKiKP     04 48 31.3  -0.6
       baz=265,SNR=5.1
K59A   Cooperstown      113.82  51  P         PKiKP     04 48 31.7  -0.4
       baz=263
E56A   St. Veronique    114.08  47  P         PKPdf     04 48 31.5  -0.9
       baz=265
J59A   Piesco           114.15  51  P         PKPdf     04 48 32.2  -0.5
       baz=264
D56A   ZEC Mazanza, M   114.31  47  P         PKPdf     04 48 32.0  -0.8
       baz=265
KSH    Kashi            114.40 305  PKP       PKiKP     04 48 34.3  +0.9
KSH                                PP        PP        04 49 50.3  +8.3
KSH                                sPKP                04 51 50.3
KSH                                PKS       PKSdf     04 52 09.0  -1.2
KSH                                SKKS                04 55 39.9
KSH                                AMB       AMB
       comp=Z,330nm,6.1s
M61A   Granite Spring   114.45  53  P         PKPdf     04 48 33.0  -0.2
       baz=263
ULHL   Ulahol           114.52 308  P         PKPdf     04 48 33.7   0.0
       SNR=23
G58A   Ormstown         114.64  49  P         PKPdf     04 48 32.8  -0.6
       baz=265
E57A   Chemin Saint G   114.68  47  P         PKPdf     04 48 33.0  -0.6
       baz=266
D57A   Chemin Vers le   114.90  47  P         PKPdf     04 48 33.3  -0.7
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       baz=266
J60A   Lant Hill Farm   114.91  51  P         PKiKP     04 48 34.1   0.0
       baz=264
I60A   Shoreham         115.06  50  P         PKiKP     04 48 34.4   0.0
       baz=265
KZA    Kyzart           115.23 308  P         PKiKP     04 48 35.5  +0.2
       SNR=16
E58A   La Victoria      115.27  48  P         PKPdf     04 48 34.4  -0.3
       baz=266
L61B   Northampton      115.38  52  P         PKPdf     04 48 35.0  -0.1
       baz=265
KBK    Karagaybulak     115.51 308  P         PKPdf     04 48 35.2  -0.3
       SNR=19
J61A   Chester          115.55  51  P         PKiKP     04 48 35.5  +0.1
       baz=265
F59A   Saint Guilaume   115.58  48  P         PKPdf     04 48 34.9  -0.4
       baz=266
D58A   Chemin du LacG   115.59  47  P         PKPdf     04 48 34.6  -0.7
       baz=267
LATQ   La Tuque         115.68  46  P         PKPdf     04 48 34.7  -0.7
       baz=267
CHMS   Chumysh          115.69 309  P         PKPdf     04 48 35.3  -0.4
       SNR=16
NIL    Nilore           115.76 298  PKIKP     PKPdf     04 48 35.0  -1.1
NIL    Nilore           115.76 298            PKPdf     04 48 35.0  -1.1
UCH    Uchtor           115.79 308  P         PKiKP     04 48 36.6  +0.1
       SNR=28
AAK    Ala-Archa        115.84 308  PKP       PKPdf     04 48 35.8  -0.3
       comp=Z,12nm,0.7s,baz=121,slow=3.1,SNR=35
AAK                                PKKPbc    PKKPbc    04 59 10.8  +0.4
       comp=Z,1.0nm,0.3s,baz=204,slow=5.3,SNR=5.3
AAK                                PKKPab    PKKPab    04 59 16.8  +0.9
       comp=Z,6.0nm,0.7s,baz=203,slow=3.4,SNR=11
AAK    Ala-Archa        115.84 308  P         PKPdf     04 48 35.9  -0.3
       SNR=12
AAK    Ala-Archa        115.84 308 i PKPdf    PKPdf     04 48 35.9  -0.3
       SNR=15
AAK    Ala-Archa        115.84 308c iPKIKP    PKPdf     04 48 35.9  -0.3
AAK                                pmax      pmax
       comp=Z,13nm,0.7s
AAK    Ala-Archa        115.84 308            PKPdf     04 48 35.3  -0.9
I61A   Oroboro, Fairl   115.85  50  P         PKiKP     04 48 36.1  +0.2
       baz=266
USP    Ospenovka        115.89 309  P         PKPdf     04 48 35.7  -0.4
       SNR=24
LBNH   Lisbon           116.08  50  P         PKiKP     04 48 36.4  +0.1
       baz=266
F60A   Warwick          116.17  48  P         PKPdf     04 48 36.2  -0.2
       baz=267
K63A   Dunstable        116.25  52  P         PKiKP     04 48 36.8  +0.1
       baz=266
D59A   Saint-Raymond    116.30  47  P         PKPdf     04 48 36.3  -0.3
       baz=267
EKS2   Erkin-Say        116.37 308  P         PKPdf     04 48 36.9  -0.2
       SNR=19
AML    Almayashu        116.39 308  P         PKPdf     04 48 37.4  -0.1
       SNR=44
E60A   Ste Agathe de    116.54  48  P         PKPdf     04 48 36.9  -0.2
       baz=267
H62A   Milan            116.65  50  P         PKiKP     04 48 37.7  +0.3
       baz=267
SJG    San Juan         116.83  80  PKIKP     PKPdf     04 48 37.7  -0.8
SJG    San Juan         116.83  80            PKPdf     04 48 37.7  -0.8
F61A   St Evariste      116.84  48  P         PKiKP     04 48 38.0  +0.2
       baz=268
D60A   Saint Jean D'O   116.92  47  P         PKPdf     04 48 37.3  -0.5
       baz=268
I63A   Otisfield        117.03  50  P         PKiKP     04 48 38.4  +0.2
       baz=267
G62A   West of Eustis   117.12  49  P         PKPdf     04 48 38.2  -0.2
       baz=267
E61A   Lac Etchemin     117.20  48  P         PKiKP     04 48 38.8  +0.3
       baz=268
I64A   Boothbay         117.70  50  P         PKiKP     04 48 39.6  +0.1
       baz=267
G63A   Kingsbury        117.77  49  P         PKPdf     04 48 39.5  -0.1
       baz=268
PKME   Peaks-Kenny Pk   118.00  49  P         PKPdf     04 48 39.9  -0.1
       baz=268
KULLO  Kullorsuaq       118.02  15⇓iP         PKPdf     04 48 38.6  -0.6
KULLO                             i                    04 49 03.7
KULLO  Kullorsuaq       118.02  15⇓iPKIKP     PKPdf     04 48 38.6  -0.6
H64A   Troy             118.03  50  P         PKPdf     04 48 39.9  -0.1
       baz=268
F63A   Nahmakanta, Br   118.15  48  P         PKiKP     04 48 40.4  +0.1
       baz=269
D62A   Allapoint, All   118.21  47  P         PKPdf     04 48 39.9  -0.5
       baz=270
G64A   Maxfield         118.38  49  P         PKiKP     04 48 40.8  +0.1
       baz=269
NOR    Nord             118.60   3 i P        PKPdf     04 48 39.7  -0.5
       comp=Z,9.1nm,1.0s
NOR    Nord             118.60   3 i PKIKP    PKPdf     04 48 39.7  -0.5
NOR                                pmax      pmax
       comp=Z,9.0nm,1.0s
E63A   Oxbow            118.63  48  P         PKPdf     04 48 40.7  -0.4
       baz=270
F64A   Sherman          118.68  48  P         PKPdf     04 48 41.0  -0.3
       baz=269
BVAR   Borovoye Array   118.76 320  Pdiff     Pdif      04 45 11.6  +6.0
       comp=Z,0.7nm,0.7s,baz=76,slow=6.1,SNR=3.4
BVAR                               PKP       PKPdf     04 48 40.7  -0.5
       comp=Z,43nm,0.4s,baz=107,slow=2.6,SNR=327
BVAR                               PKKPbc    PKKPbc    04 58 59.9  -0.3
       comp=Z,2.0nm,0.6s,baz=248,slow=1.6,SNR=5.0
KK31   Karatay Array    118.79 309 i PKIKP    PKPdf     04 48 41.2  -0.4
KKAR   Karatay Array    118.79 309  PKIKP     PKPdf     04 48 40.8  -0.8
KKAR   Karatay Array    118.79 309            PKPdf     04 48 40.8  -0.8
BRVK   Borovoye         118.82 320c iPKIKP    PKPdf     04 48 40.6  -0.7
BRVK                               pmax      pmax
       comp=Z,85nm,1.0s
BRVK   Borovoye         118.82 320            PKPdf     04 48 40.6  -0.7
D63A   Stockholm        118.85  47  P         PKPdf     04 48 40.9  -0.6
       baz=270
E64A   Bridgewater      119.04  48  P         PKPdf     04 48 41.6  -0.3
       baz=270
G65A   Princeton        119.22  49  P         PKPdf     04 48 42.3   0.0
       baz=270
SCHQ   Schefferville    119.29  38  PKP       PKPdf     04 48 41.5  -0.7
       comp=Z,12nm,0.9s,baz=330,slow=1.2,SNR=15
SCHQ                               PKKPbc    PKKPbc    04 58 57.9  -0.5
       comp=Z,3.9nm,0.8s,baz=92,slow=1.4,SNR=5.9
KBL    Kabul            119.34 299  PKIKP     PKPdf     04 48 43.1  -0.1
KBL    Kabul            119.34 299            PKPdf     04 48 43.1  -0.1
CHM    Chimkent         119.44 308  PKIKP     PKPdf     04 48 34.7  -8.2
BDFB   Brasilia         119.66 123  PKP       PKPdf     04 48 43.3  -1.0
       comp=Z,7.8nm,0.7s,baz=197,slow=3.9,SNR=11
BDFB                               PKKPbc    PKKPbc    04 58 57.4  +0.4
       comp=Z,11nm,0.8s,baz=82,slow=3.0,SNR=16
BDFB   Brasilia         119.66 123  PKIKP     PKPdf     04 48 44.0  -0.2
BDFB   Brasilia         119.66 123            PKPdf     04 48 44.0  -0.2
MSEY   Mahe Island      121.10 251  PKiKP     PKiKP     04 48 47.3  +0.1
KBS    Kingsbay         121.51 358 ePKPdf     PKPdf     04 48 45.2  -0.7
SPA0   Spitsbergen Ar   122.02 356 ePKPdf     PKPdf     04 48 46.7  -0.2
SPA0   Spitsbergen Ar   122.02 356            PKPdf     04 48 46.5  -0.3
SPITS  Spitsbergen Ar   122.02 356  PKP       PKPdf     04 48 46.7  -0.2
       comp=Z,68nm,0.7s,baz=79,slow=4.3,SNR=54
SPITS                              PKKPbc    PKKPab    04 58 47.8  +0.1
       comp=Z,14nm,0.9s,baz=150,slow=6.8,SNR=6.5
ILULI  Ilulissat        122.18  20 i P        PKPdf     04 48 46.7  -0.6
ILULI  Ilulissat        122.18  20 i PKIKP    PKPdf     04 48 46.7  -0.6
JANB   Januaria         122.89 125 eP         PKiKP     04 48 54.9  +4.3
SJMB   Sao Joao De Ma   122.91 130 eP         PKiKP     04 48 56.4  +5.9
DAG    Danmarks Havn    123.01   5⇓iP         PKPdf     04 48 47.6  -1.1
DAG    Danmarks Havn    123.01   5⇓iPKIKP     PKPdf     04 48 47.6  -1.1
BSFB   Barra de Sao F   123.07 131 eP         PKiKP     04 48 56.6  +5.8
HSPB   Hornsund (broa   123.21 356 ePKPdf     PKPdf     04 48 49.1   0.0
SFJD   Kangerlussuaq    123.41  22 i P        PKPdf     04 48 49.0  -0.7
SFJD   Kangerlussuaq    123.41  22  PKIKP     PKPdf     04 48 49.2  -0.5
SFJD   Kangerlussuaq    123.41  22            PKPdf     04 48 49.2  -0.5
SUMG   Summit           123.52  13 i P        PKPdf     04 48 50.4  +0.1
       comp=Z,152nm,1.0s
SUMG   Summit           123.52  13 i PKIKP    PKPdf     04 48 50.4  +0.1
SUMG                               pmax      pmax
       comp=Z,150nm,1.0s
SVE    Sverdlovsk       123.74 325 ePKIKP     PKPdf     04 48 50.7  +0.1
SVE                                pmax      pmax
       comp=Z,125nm,0.9s
SMTB   Santa Maria do   123.75 117 eP         PKiKP     04 48 57.7  +5.4
SUR    Sutherland       123.98 200            PKPdf     04 48 52.4  +0.1
ARU    Arti             124.95 325  PKP       PKPdf     04 48 53.0  +0.1
       comp=Z,39nm,0.5s,baz=82,slow=1.2,SNR=170
ARU                                PKKPbc    PKKPbc    04 58 36.7  -0.6
       comp=Z,2.3nm,0.6s,baz=289,slow=6.1,SNR=7.4
ARU                                SKKPbc    SKKPbc    05 01 26.6  -3.8
       comp=Z,1.2nm,0.4s,baz=299,slow=4.2,SNR=5.8
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ARU	Arti	124.95	325	i PKIKP	PKPdf	04 48 52.6	-0.4
ARU						04 55 06.7	
ARU	Arti	124.95	325		PKPdf	04 48 52.6	-0.4
BJO1	Bjornoya	125.32	354	ePKPdf	PKPdf	04 48 52.8	-0.4
AB31	Akbulak array	125.72	316	i PKIKP	PKPdf	04 48 54.5	-0.2
ABKAR	Akbulak array	125.72	316		PKPdf	04 48 54.4	-0.3
BOSA	Boshof	125.75	206	i P	PKiKP	04 48 56.3	+0.2
BOSA	Boshof	125.75	206	PKP	PKiKP	04 48 56.5	+0.3
	comp=Z,20nm,0.9s,baz=151,slow=3.1,SNR=18						
BOSA				PKKPbc	PKKPbc	04 58 34.8	+0.1
	comp=Z,1.7nm,0.6s,baz=258,slow=2.1,SNR=6.2						
BOSA	Boshof	125.75	206	i P	PKiKP	04 48 56.3	+0.2
BOSA	Boshof	125.75	206		PKiKP	04 48 56.1	0.0
AKTO	Aktyubinsk	126.72	318	PKP	PKiKP	04 48 57.0	-0.1
	comp=Z,45nm,0.7s,baz=88,slow=3.1,SNR=100						
AKTO				PKKPbc	PKKPbc	04 58 29.9	-0.3
	comp=Z,2.5nm,0.6s,baz=227,slow=2.4,SNR=6.7						
WSAR	Wadi Sarin	126.98	284	PKP	PKiKP	04 48 58.4	-0.1
	comp=Z,25nm,1.1s,baz=172,slow=2.5,SNR=12						
MHTO	MHTO	127.21	281	P	PKPdf	04 48 57.7	-0.6
	SNR=8.7						
JMDO	Jabal Madar	127.32	283	P	PKPdf	04 48 58.0	-0.6
	SNR=6.4						
BIDO	Bidbid	127.48	284	P	PKiKP	04 48 59.3	-0.2
	SNR=6.1						
SMDO	Samad	127.48	284	P	PKPdf	04 48 58.7	-0.3
	SNR=9.4						
BSY	Bisya	128.21	283	P	PKPdf	04 48 59.4	-0.8
	SNR=7.5						
HOQ	Hoqain	128.23	284	P	PKPdf	04 48 59.4	-0.9
	SNR=5.5						
NRS	Narsarsuaq	128.25	27	i P	PKPdf	04 48 58.8	-0.3
NRS	Narsarsuaq	128.25	27	ePKIKP	PKPdf	04 48 58.8	-0.3
GEYT	Alibeck	128.27	302	PKhKP	PKPpre	04 48 48.1	
	comp=Z,4.6nm,0.7s,baz=328,slow=5.3,SNR=8.2						
GEYT				PKP	PKPdf	04 49 00.0	0.0
	comp=Z,34nm,0.7s,baz=253,slow=1.5,SNR=52						
GEYT				PP	PP	04 51 12.6	-1.9
	comp=Z,13nm,1.1s,baz=35,slow=5.4,SNR=7.3						
GEYT				SKPbc	SKPbc	04 51 24.6	
	comp=Z,14nm,0.8s,baz=302,slow=2.8,SNR=7.3						
HAMF	Hammerfest	128.30	351	ePKPdf	PKPdf	04 48 58.5	-0.5
SCO	Scoresbysund	128.34	10	i P	PKPdf	04 48 59.4	+0.4
	comp=Z,94nm,1.4s						
SCO	Scoresbysund	128.34	10	i PKIKP	PKPdf	04 48 59.4	+0.4
SCO				pmax	pmax		
	comp=Z,94nm,1.4s						
LVZ	Lovozero	128.39	345	c iPKIKP	PKiKP	04 48 59.7	-0.3
LVZ				pmax	pmax		
	comp=Z,167nm,2.5s						
LVZ	Lovozero	128.39	345		PKPdf	04 48 59.0	-0.3
KEV	Kevo	128.53	349	PKIKP	PKiKP	04 49 00.1	-0.1
LBTB	Lobatse	128.74	209	i P	PKiKP	04 49 02.3	+0.1
LBTB	Lobatse	128.74	209	i P	PKiKP	04 49 02.3	+0.1
KIRV	Kirov	128.77	330	PKP	PKPdf	04 49 00.2	0.0
	comp=Z,111nm,0.7s,baz=85,slow=1.1,SNR=41						
KIRV				SKPbc	SKPbc	04 51 25.8	
	comp=Z,30nm,0.6s,baz=65,slow=2.9,SNR=11						
SHAO	Shalim	128.79	277	PKPdf	PKPdf	04 49 00.7	-0.8
SOCY	Socotra	128.86	269		PKPdf	04 49 01.6	-0.2
PRGR	Permogore	128.91	335	ePKIKP	PKPdf	04 48 58.1	-2.3
PRGR				pmax	pmax		
	comp=Z,67nm,0.9s						
APA	Apatity	128.95	345	⇓iPKIKP	PKPdf	04 48 59.1	-1.2
APA				i		04 51 19.7	
APA				pmax	pmax		
	comp=Z,31nm,0.6s						
ARCES	ARCESS Array B	128.98	349	PKhKP	PKPpre	04 48 47.2	
	comp=Z,5.1nm,0.8s,baz=286,slow=1.1,SNR=19						
ARCES				PKP	PKPdf	04 49 00.1	-0.3
	comp=Z,44nm,0.6s,baz=56,slow=0.9,SNR=75						
ARCES				SKPbc	SKiKP	04 51 27.3	-12
	comp=Z,14nm,0.8s,baz=20,slow=3.9,SNR=5.2						
ARCES				PKKP	PKKPdf	04 59 06.6	-2.5
	comp=Z,3.0nm,0.8s,baz=224,slow=2.8,SNR=6.0						
ARE0	ARCESS Array S	128.98	349	ePKPdf	PKPdf	04 49 00.1	-0.2
SOHO	SOHO	129.02	285	P	PKPdf	04 49 00.8	-0.9
	SNR=15						
MDH	Madha	129.37	286	PKPdf	PKPdf	04 49 01.9	-0.4
UOSS	Minazif	129.42	286	PKPdf	PKPdf	04 49 01.8	-0.7
UOSS	Minazif	129.42	286	P	PKPdf	04 49 01.3	-1.2
HATD	Hatta, Dubai	129.47	286	i PKPdf	PKPdf	04 49 02.4	-0.2
	SNR=12						
HATD	Hatta, Dubai	129.47	286	P	PKPdf	04 49 03.0	+0.4
MSFE	Esma-Masafi	129.50	286	i PKPdf	PKPdf	04 49 02.0	-0.7
	SNR=8.7						
ASHO	Ashiyiah	129.52	285	i PKPdf	PKPdf	04 49 03.0	+0.3
	SNR=7.6						
ASHO	Ashiyiah	129.52	285	P	PKPdf	04 49 03.1	+0.3
SHME	Shamm	129.60	287	PKPdf	PKPdf	04 49 03.2	+0.4
ALNE	Al Ain	129.71	285	i PKiKP	PKPdf	04 49 03.5	+0.4
	SNR=6.5						
KTK1	Kautokeino	129.83	350	ePKPdf	PKPdf	04 49 01.5	-0.4
TRO	Tromso	129.90	352	ePKPdf	PKPdf	04 49 01.5	-0.5
NAZ	Nazwa, Dubai	129.91	286	i PKPdf	PKPdf	04 49 03.4	0.0
	SNR=7.2						
RBK	Rabkut	130.00	276	P	PKPdf	04 49 03.6	-0.2
	SNR=5.7						
TMCR	Tamitsa	130.11	340	ePKIKP	PKPdf	04 49 00.3	-2.3
TMCR				pmax	pmax		
	comp=Z,48nm,1.0s						
ABTO	Aybut	130.81	275	P	PKPdf	04 49 05.2	-0.1
	SNR=7.3						
MATP	Matopo	131.18	215	i P	PKPdf	04 49 04.2	-2.0
MATP	Matopo	131.18	215	i P	PKPdf	04 49 04.2	-2.0
KLMR	Klimovskoe	131.77	336	ePKIKP	PKPdf	04 49 03.8	-2.0
KLMR				pmax	pmax		
	comp=Z,156nm,1.5s						
KLMR	Klimovskoe	131.77	336	ePKPdf	PKPdf	04 49 03.8	-2.0
KLMR				AMP		04 49 07.6	
	comp=Z,156nm,1.5s						
KLMR				ePP	PP	04 51 31.4	-4.2
LOF	Lofoten	131.95	354	ePKPdf	PKPdf	04 49 02.6	-3.3
STEI	Steigen	131.96	353	ePKPdf	PKPdf	04 49 05.6	-0.4
KONS	Konsvik	133.58	353	ePKPdf	PKPdf	04 49 08.6	-0.4
MAK	Makhachkala	135.52	311	eP	Pdif	04 46 19.4	-0.9
MAK				pmax	pmax		
	comp=Z,181nm,1.1s						
NSS	Namsos	135.61	353	e	PKPdf	04 49 12.2	-0.6
MOS	Moscow	135.72	331	i PKIKP	PKPdf	04 49 11.7	-1.6
MOS				ePPP	PPP	04 55 07.8	
MOS				pmax	pmax		
	comp=Z,79nm,0.9s						
FIA1	FINESS Array S	135.75	343	PKPdf	PKPdf	04 49 12.7	-0.5
FINES	FINESS Array B	135.75	343	PKhKP	PKPpre	04 49 00.0	
	comp=Z,2.5nm,0.4s,baz=64,slow=3.9,SNR=20						
FINES				PKP	PKiKP	04 49 14.4	-0.6
	comp=Z,26nm,0.6s,baz=79,slow=3.0,SNR=21						
FINES				SKPbc	SKPbc	04 51 49.6	+1.5
	comp=Z,18nm,0.6s,baz=64,slow=4.4,SNR=18						
FINES				SKKPbc	SKKPbc	05 00 49.4	-3.0
	comp=Z,1.5nm,0.8s,baz=183,slow=3.4,SNR=3.4						
PUL	Pulkovo	135.81	339	c iPKIKP	PKiKP	04 49 15.8	+0.7
PUL				pmax	pmax		
	comp=Z,89nm,0.6s						
VRH	Novokhopyorsk	136.14	324	ePKIKP	PKPdf	04 49 14.0	-0.3
VRH				pmax	pmax		
	comp=Z,120nm,0.6s						
OBN	Obninsk	136.58	331	i PKIKP	PKPdf	04 49 14.5	-0.4
OBN				pmax	pmax		
	comp=Z,257nm,1.7s						
OBN	Obninsk	136.58	331		PKPdf	04 49 15.1	+0.2
GROC	Groznyy	136.66	312	ePKIKP	PKPdf	04 49 15.7	+0.2
GROC				e		04 55 27.4	
GROC				pmax	pmax		
	comp=Z,70nm,0.8s						
LPSR	Galich'ya Gora	136.90	327	ePKIKP	PKPdf	04 49 15.4	-0.2
LPSR				pmax	pmax		
	comp=Z,80nm,1.1s						
TBLU	Trondheim	137.03	354	e	PKPdf	04 49 08.0	-7.6
TSUM	Tsumeb	137.22	203	PKPdf	PKPdf	04 49 17.1	-0.4
VORR	Voronezh	137.26	326	PKIKP	PKPdf	04 49 15.0	-1.3
VORR				pmax	pmax		
	comp=Z,250nm,1.0s						
VSR	Storozhevoye	137.52	325	i PKIKP	PKPdf	04 49 16.3	-0.5
GOF	Gofitskoye	137.93	315	⇑ePKHKP	PKPpre	04 49 10.6	
GOF				pmax	pmax		
	comp=Z,54nm,0.7s						
VSU	Vasula	137.99	340	eP	PKPdf	04 49 08.2	-9.3
ZEI	Tsey	138.11	312	i PKHKP	PKPpre	04 49 07.8	
ZEI				pmax	pmax		
	comp=Z,18nm,0.9s						
GNI	Garni	138.24	308	PKP	PKPdf	04 49 19.3	+0.5
	comp=Z,24nm,0.7s,baz=192,slow=2.0,SNR=14						
GNI	Garni	138.24	308	i PKPdf	PKPdf	04 49 13.6	-5.1
	SNR=5.5						
GNI	Garni	138.24	308		PKPdf	04 49 19.0	+0.3
DOMB	Dombas	138.34	354	e	PKPdf	04 49 09.8	-8.3
KBZ	Khabaz	138.50	313	PKhKP	PKPpre	04 49 10.3	
	comp=Z,5.7nm,0.8s,baz=143,slow=2.8,SNR=18						
KBZ				PKP	PKiKP	04 49 20.8	-0.4
	comp=Z,14nm,0.9s,baz=162,slow=6.4,SNR=11						
KBZ				SKPbc	SKPbc	04 51 57.3	+0.8
	comp=Z,4.3nm,0.7s,baz=44,slow=4.7,SNR=4.2						
KBZ				SKKPbc	SKKPbc	05 00 43.2	+2.2
	comp=Z,1.6nm,0.7s,baz=236,slow=8.5,SNR=3.7						
KIV	Kislovodsk	138.56	314	⇑P	PKPdf	04 49 13.7	-5.4
KIV	Kislovodsk	138.56	314	i PKPdf	PKPdf	04 49 18.1	-1.0
	SNR=5.5						
KIV	Kislovodsk	138.56	314	i PKIKP	PKiKP	04 49 21.6	+0.2
KIV				e		04 52 18.5	
KIV				eSS	SS	05 09 46.0	+0.6
KIV				pmax	pmax		
	comp=Z,72nm,1.0s						
KMBO	Kilima Mbogo	138.59	243	PKhKP	PKPpre	04 49 11.5	
	comp=Z,3.2nm,0.7s,baz=121,slow=2.1,SNR=12						
KMBO				PKP	PKiKP	04 49 22.1	-0.5
	comp=Z,17nm,0.8s,baz=44,slow=3.7,SNR=16						
KMBO				SKPbc	SKiKP	04 51 59.9	-1.5
	comp=Z,14nm,0.9s,baz=67,slow=1.8,SNR=8.2						
AKH	Akhalkalaki	138.81	310	⇑P	PKPdf	04 49 14.1	-5.7
RAYN	Ar Rayn	138.99	282	i PKPdf	PKPdf	04 49 15.2	-5.3
	SNR=7.1						
RAYN	Ar Rayn	138.99	282	PKIKP	PKPdf	04 49 20.7	+0.3
RAYN	Ar Rayn	138.99	282	PKPdf	PKPdf	04 49 20.7	+0.3
FOO	Floro	139.05	357	ePKPdf	PKPdf	04 49 15.7	-3.6
ATD	Arta Tunnel	139.07	264	SKPbc	SKiKP	04 52 01.8	-0.2
	comp=Z,22nm,0.7s,baz=96,slow=1.6,SNR=13						
NB2	NORSAR Subarra	139.09	353	PKP	PKPdf	04 49 10.5	-9.0
	comp=Z,3.9nm,0.5s,baz=16,slow=3.2						
NOA	NORSAR Array B	139.09	353	PKhKP	PKPpre	04 49 10.8	
	comp=Z,18nm,0.7s,baz=11,slow=2.3,SNR=52						
NOA				PKP	PKPdf	04 49 20.3	+0.9
	comp=Z,7.6nm,0.6s,baz=45,slow=2.4,SNR=13						
NOA				SKPbc	SKPbc	04 51 59.0	+1.4
	comp=Z,14nm,0.9s,baz=14,slow=4.3,SNR=7.9						
NOA				PKKP	PKKPdf	04 58 45.5	-3.9
	comp=Z,2.2nm,1.1s,baz=198,slow=5.1,SNR=3.4						
CLDR	Caldiran	139.11	306	eP	PKPdf	04 49 12.8	-7.7
NC602	NORSAR Array S	139.34	352	e	PKPdf	04 49 11.8	-8.1
HYA	Hoyanger	139.42	356	e	PKPdf	04 49 13.3	-6.6
VANB	Van	139.64	306	eP	PKPdf	04 49 15.8	-5.5
AGRB	Hanur-Agry	139.69	307	eP	PKPdf	04 49 15.8	-5.7
SKAR	Skarslia	139.75	355	e	PKPdf	04 49 13.7	-7.0
SENK	Senkaya-Erzuru	139.89	309	eP	PKPdf	04 49 15.6	-6.2
SLIT	Slitere, Latvi	140.01	342	eP	PKPdf	04 49 13.5	-7.7
AKDM	Akdamar-Van	140.02	305	eP	PKPdf	04 49 15.7	-6.3
BCA	Borcka	140.14	310	⇓P	PKPdf	04 49 16.4	-5.6
BCA	Borcka	140.14	310	eP	PKPdf	04 49 15.4	-6.6
ASK	Askoy	140.16	357	ePKPdf	PKPdf	04 49 19.1	-2.2
OSL	Oslo	140.22	353	e	PKPdf	04 49 14.5	-6.9
IZAR	Zarasai	140.31	338	eP	PKPdf	04 49 15.8	-5.9
IZAR				ePP	PP	04 52 28.0	-0.2
KOPR	Koprukoy-ERZUR	140.42	308	eP	PKPdf	04 49 17.3	-5.4
IDID	Didziasalis	140.47	337	eP	PKPdf	04 49 16.6	-5.5
ISAL	Salakas	140.49	338	eP	PKPdf	04 49 16.2	-5.8
ISAL				ePP	PP	04 52 28.9	-0.4
SIRT	Sirnak	140.63	304	eP	PKPdf	04 49 16.9	-6.2
KONO	Kongsberg	140.63	353	e	PKPdf	04 49 15.8	-6.4
KONO	Kongsberg	140.63	353	PKHKP	PKPpre	04 49 16.4	
KONO	Kongsberg	140.63	353		PKPpre	04 49 16.4	
GURO	Guroymak-BITLI	140.68	306	eP	PKPdf	04 49 17.9	-5.3
SOC	Sochi	140.70	314	ePKIKP	PKPdf	04 49 21.6	-1.3
SOC				e		04 52 28.2	
SOC				ePPP	PPP	04 55 33.2	
SOC				eSS	SS	05 10 40.7	+31
SOC				pmax	pmax		
	comp=Z,36nm,0.8s						
SOC				pmax	pmax		
	comp=Z,37nm,0.8s						
NACGM	Naroch	140.77	337	e	PKPdf	04 49 18.0	-4.6
CHOM	Cayeli-Rize	140.87	310	eP	PKPdf	04 49 17.0	-6.3
VRTB	Varto-Mus	140.95	307	eP	PKPdf	04 49 19.2	-4.5
BLS5	Blasjo	141.14	356	e	PKPdf	04 49 18.7	-4.5
KARO	Karliova-Bingo	141.21	307	eP	PKPdf	04 49 19.9	-4.3
PABE	Paberze	141.28	339	eP	PKPdf	04 49 18.6	-4.9
ANKE	Ethiopia-Afar	141.31	259	eP	PKPdf	04 49 21.9	-3.4
SVAN	Silvan-Diyarba	141.42	306	eP	PKPdf	04 49 20.5	-3.9
KMY	Karmoy	141.42	357	ePKPdf	PKPdf	04 49 19.9	-3.8
PBUR	Paburge	141.49	341	eP	PKPdf	04 49 19.5	-4.3
BNGB	Bingl	141.58	307	eP	PKPdf	04 49 21.4	-3.3
KTUT	Trabzon	141.62	311	⇑P	PKPdf	04 49 20.3	-4.2
KTUT	Trabzon	141.62	311	eP	PKPdf	04 49 19.5	-5.1
STAV	Stavanger	141.67	356	ePKPdf	PKPdf	04 49 20.4	-3.7
ANN	Anapa	141.68	317	ePKHKP	PKPpre	04 49 20.2	
ANN				i		04 49 27.3	
ANN				e		04 51 45.7	
ANN				i		04 52 45.9	
ANN				pmax	pmax		
	comp=Z,99nm,0.8s						
ANN				pmax	pmax		
	comp=E,20nm,0.9s						
ANN				pmax	pmax		
	comp=N,17nm,0.7s						
ANN				pmax	pmax		
	comp=Z,50nm,0.8s						
DESE	Dese	141.92	262	eP	PKPdf	04 49 20.7	-5.6
FURI	Furi	142.02	258		PKPdf	04 49 26.2	-0.3
HOMB	Homborsund	142.10	354	ePKPdf	PKPdf	04 49 21.7	-3.1
LEWI	Lewis, Hebride	142.14	7	eP	PKPdf	04 49 21.7	-3.3
SNART	Snartemo	142.16	355	ePKPdf	PKPdf	04 49 21.7	-3.2
MAZI	Mazidag	142.17	305	eP	PKPdf	04 49 22.7	-3.2
DYBB	Diyarbakir	142.28	306	eP	PKPdf	04 49 23.5	-2.5
MLA1	Latheron	142.30	4	eP	PKPdf	04 49 21.8	-3.4
ESPY	Espiye-Giresun	142.38	311	eP	PKPdf	04 49 21.8	-4.2
PTK	Pertek	142.57	307	eP	PKPdf	04 49 24.5	-2.1
SUW	Suwalki	142.76	339	ePKPdf	PKPdf	04 49 23.5	-2.7
SVRC	Sivrice-ELAZID	142.78	307	eP	PKPdf	04 49 24.9	-2.1
AKASG	Malin Array Be	142.83	330	PKhKP	PKPpre	04 49 23.6	
	comp=Z,115nm,0.3s,baz=42,slow=4.5,SNR=1535						
AKASG				SKPbc	SKiKP	04 52 09.0	+0.5
	comp=Z,7.5nm,0.7s,baz=37,slow=3.0,SNR=10						
AKASG				SKKPbc	SKKPab	05 00 21.4	-2.3
	comp=Z,0.6nm,0.5s,baz=237,slow=3.7,SNR=5.4						
SHEL	Horse Pasture	142.93	169	PKIKP	PKPdf	04 49 27.7	0.0
SHEL	Horse Pasture	142.93	169		PKPdf	04 49 27.7	0.0
KAC	Achnashellach	142.94	6	eP	PKPdf	04 49 24.3	-2.1
MCD	Coleburn Disti	143.02	4	eP	PKPab	04 49 24.0	-0.4
KPL	Plockton	143.06	6	eP	PKPab	04 49 24.1	-0.5
MDO	Dochfour	143.08	5	eP	PKPab	04 49 24.2	-0.4
GOET	G??ttrup	143.24	353	i P	PKPbc	04 49 25.6	+0.1
	comp=Z,1µm,0.8s						
GOET				i		04 49 51.7	
URFA	Urfa	143.42	305	eP	PKPbc	04 49 27.0	+0.1
MALT	Malatya	143.46	307	eP	PKPab	04 49 26.5	-0.4
RSDY	Resadiye-TOKAT	143.56	311	eP	PKPab	04 49 27.0	-0.1
SIM	Simferopol'	143.67	319	d iPKIKP	PKPdf	04 49 27.8	-0.3
SIM				pmax	pmax		
	comp=Z,779nm,0.7s						
DRUM	Mains of Drumt	143.74	3	eP	PKPbc	04 49 25.8	-1.2
SVSK	Karacayir	143.97	310	eP	PKPdf	04 49 29.7	+1.0
EDU	Dundee	144.07	4	eP	PKPbc	04 49 27.8	-0.3
COP	Copenhagen	144.07	349	⇓iP	PKPbc	04 49 28.2	+0.1
	comp=Z,397nm,1.1s						
COP				i		04 49 53.0	
COP	Copenhagen	144.07	349	⇓iPKIKP	PKPbc	04 49 28.2	+0.1
COP				pmax	pmax		
	comp=Z,400nm,1.1s						
INVG	Invergeldie, C	144.11	5	eP	PKPbc	04 49 27.8	-0.4
BSD	Bornholm Skovb	144.12	347	⇓iP	PKPbc	04 49 28.1	-0.2
	comp=Z,631nm,0.9s						
BSD				i		04 49 53.3	
BSD	Bornholm Skovb	144.12	347	⇓iPKIKP	PKPbc	04 49 28.1	-0.2
BSD				pmax	pmax		
	comp=Z,630nm,0.9s						
TOKT	Tokat	144.14	311	eP	PKPab	04 49 29.7	+0.3
LAWE	Loch Awe, Argy	144.15	6	eP	PKPbc	04 49 28.2	-0.1
MBAR	Mbarara	144.18	237	PKIKP	PKPab	04 49 30.5	+0.1
MBAR	Mbarara	144.18	237		PKPab	04 49 30.5	+0.1
KVT	Kavak	144.19	312	eP	PKPab	04 49 29.6	+0.1
EAB	Aberfoyle	144.32	5	eP	PKPdf	04 49 28.6	-0.2
DIKM	Dikmen	144.49	314	⇓P	PKPab	04 49 30.4	-0.2
EDI	Edinburgh	144.68	4	eP	PKPdf	04 49 28.9	-0.5
PGBU	Glenifferbraes	144.69	6	eP	PKPdf	04 49 29.0	-0.5
ESY	Stoneypath	144.72	4	eP	PKPdf	04 49 29.2	-0.3
GAZ	Gaziantep	144.73	306	eP	PKPdf	04 49 30.5	+0.2
EBL	Broad Law	144.84	4	eP	PKPdf	04 49 29.7	-0.1
KMRS	Kahramanmaras	144.86	306	eP	PKPdf	04 49 30.4	0.0
SARI	SarD1z-Kayseri	144.93	308	eP	PKPdf	04 49 31.0	+0.3
RGN	Rugen	144.98	348	eP	PKPbc	04 49 31.0	+0.1
RGN	Rugen	144.98	348	ePKP	PKPbc	04 49 30.5	-0.4
SORM	Soroca	144.99	328	⇑P	PKPdf	04 49 29.9	-0.3
SORM	Soroca	144.99	328	⇑PKIKP	PKPdf	04 49 29.9	-0.3
BNN	Bunyan	145.19	309	eP	PKPdf	04 49 31.1	0.0
BZK	Bozkurt	145.19	315	⇓P	PKPab	04 49 32.6	-0.6
BZK	Bozkurt	145.19	315	eP	PKPbc	04 49 31.6	-0.3
GKP	Gorka Klasztor	145.23	343	ePKP	PKPbc	04 49 31.2	-0.5
GKP	Gorka Klasztor	145.23	343	ePKIKP	PKPbc	04 49 31.2	-0.5
EKA	Eskdalemuir Ar	145.27	4	SKKPbc	SKKPbc	05 00 13.1	-1.8
	comp=Z,3.3nm,0.8s,baz=152,slow=3.8,SNR=4.0						
YOZ	Yozgat	145.27	311	eP	PKPdf	04 49 31.0	-0.2
ESK	Eskdalemuir	145.28	4	PKIKP	PKPbc	04 49 31.3	-0.5
ESK	Eskdalemuir	145.28	4		PKPbc	04 49 31.3	-0.5
BEL	Belsk	145.38	339	ePKP	PKPbc	04 49 31.7	-0.5
BEL	Belsk	145.38	339	ePKIKP	PKPbc	04 49 31.7	-0.5
KIS	Kishinev	145.49	326	⇓iPKP	PKPbc	04 49 33.0	+0.3
	comp=Z,1µm,1.6s						
KIS				epPKP	pPKPab	04 51 48.0	-1.7
KIS	Kishinev	145.49	326	ePP	PP	04 52 50.0	-9.2
KIS				eSKS	SKSdf	04 55 20.0	-23
KIS	Kishinev	145.49	326	⇓P	PKPbc	04 49 32.5	-0.2
KIS	Kishinev	145.49	326	⇓iPKP2	PKPbc	04 49 33.0	+0.3
KIS				pmax	pmax		
	comp=Z,1µm,1.6s						
CORM	Corum	145.54	312	eP	PKPdf	04 49 32.1	+0.5
GAL1	Galloway	145.60	6	eP	PKPdf	04 49 31.6	+0.5
TAHT	Tahtakopru-Hat	145.75	305	eP	PKPbc	04 49 33.0	-0.8
LVV	L'vov	145.76	333	ePKIKP	PKPdf	04 49 30.3	-1.2
LVV				e		04 52 48.8	
EDMD	Edmundbyers	145.84	3	eP	PKPbc	04 49 33.1	-0.3
CEYT	Ceyhan	145.89	306	eP	PKPbc	04 49 33.9	-0.2
IAS	Iasi	146.01	327	⇑P	PKPbc	04 49 34.2	+0.1
IAS	Iasi	146.01	327	⇑PKP2	PKPbc	04 49 34.2	+0.1
YURE	YUREGIR	146.04	306	eP	PKPbc	04 49 35.3	+0.7
CANT	Cankiri	146.06	313	eP	PKPdf	04 49 32.7	+0.3
GMM	Mts of Mourne	146.08	8	eP	PKPbc	04 49 33.8	-0.3
KURC	Kurucasile-Bar	146.08	316	eP	PKPbc	04 49 33.9	-0.6
BSEG	Bad Segeberg	146.10	350	ePKPdf	PKPdf	04 49 32.4	+0.5
	baz=20,slow=1.5						
BSEG				ePKPbc	PKPbc	04 49 34.7	+0.6
	baz=16,slow=2.4						
LEOM	Leova	146.13	326	⇑P	PKPbc	04 49 34.8	+0.3
LEOM	Leova	146.13	326	⇑PKP2	PKPbc	04 49 34.8	+0.3
HLG	Helgoland	146.19	353	ePKPdf	PKPdf	04 49 32.8	+0.7
	baz=20,slow=1.5						
HLG				ePKPbc	PKPbc	04 49 35.2	+0.8
	baz=16,slow=2.4						
IOMK	Kirk Michael	146.21	6	eP	PKPbc	04 49 34.3	-0.1
ASF	Jabal al Asfar	146.21	297	PKP	PKPdf	04 49 33.2	+0.2
	comp=Z,102nm,0.8s,baz=54,slow=1.5,SNR=98						
ASF				PKPbc	PKPbc	04 49 35.8	+0.5
	comp=Z,102nm,0.8s,baz=47,slow=1.6,SNR=121						
GDLE	Glaisdale, N Y	146.30	2	eP	PKPbc	04 49 34.1	-0.6
WIM	Isle of Man	146.31	6	eP	PKPbc	04 49 33.9	-0.8
KRTS	Karatas	146.31	305	eP	PKPbc	04 49 35.5	+0.2
KARA	Karaisali	146.33	307	eP	PKPdf	04 49 33.6	+0.7
BRTR	Keskin Array B	146.42	312	PKP	PKPdf	04 49 32.8	-0.4
	comp=Z,84nm,0.7s,baz=126,slow=1.2,SNR=161						
BRTR				PKPbc	PKPbc	04 49 35.5	-0.2
	comp=Z,91nm,0.7s,baz=133,slow=3.3,SNR=166						
BRTR				pPKPbc	pPKPdf	04 51 54.5	+0.1
	comp=Z,3.2nm,0.8s,baz=94,slow=6.3,SNR=1.7						
BRTR				SKKPbc	SKKPbc	05 00 08.4	-0.9
	comp=Z,3.8nm,0.7s,baz=244,slow=5.5,SNR=11						
BRTR	Keskin Array B	146.42	312		PKPdf	04 49 32.6	-0.5
BRTR				PKPbc	PKPbc	04 49 36.0	+0.3
KWP	Kalwaria Pacla	146.45	334	ePKP	PKPdf	04 49 33.2	+0.5
KWP	Kalwaria Pacla	146.45	334	ePKIKP	PKPdf	04 49 33.2	+0.5
HWQ	Hawqa	146.52	301	eP	PKPbc	04 49 36.4	+0.3
GULA	Gulagac	146.55	309	eP	PKPbc	04 49 36.1	+0.1
BIR	Birlad	146.59	326	⇑P	PKiKP	04 49 37.0	-0.7
BIR	Birlad	146.59	326	⇑PKP2	PKiKP	04 49 37.0	-0.7
YAYX	Yaylak	146.62	310	eP	PKPdf	04 49 32.9	-0.6
TLCR		146.64	323	⇑P	PKPdf	04 49 33.7	+0.6
TLCR		146.64	323	⇑PKIKP	PKPdf	04 49 33.7	+0.6
H10S2	ASCENSION HYDR	146.65	151	PKPbc	PKPbc	04 49 37.2	+0.7
	SNR=3.3						
SERE	Sereflikochisa	146.80	310	eP	PKPbc	04 49 35.9	-0.8
RCY	Rachaya	146.81	300	eP	PKPbc	04 49 37.6	+0.7
RUE	Ruedersdorf	146.82	346	eP	PKPbc	04 49 36.5	+0.4
RUE	Ruedersdorf	146.82	346	ePKPdf	PKPdf	04 49 33.4	+0.3
	baz=20,slow=1.5						
RUE				ePKPbc	PKPbc	04 49 36.6	+0.5
	baz=16,slow=2.4						
GHRR		146.84	326	⇓P	PKiKP	04 49 37.6	-0.7
BHL	Bhannes	146.85	301	eP	PKPbc	04 49 37.5	+0.5
MERS	Mersin	146.87	306	eP	PKPbc	04 49 36.2	-0.7
BURAR	Bucovina Array	146.87	330	⇓P	PKPdf	04 49 33.9	+0.3
BURAR	Bucovina Array	146.87	330	⇓PKIKP	PKPdf	04 49 33.9	+0.3
BURAR	Bucovina Array	146.87	330		PKPdf	04 49 33.7	+0.1
BURAR				PKPbc	PKiKP	04 49 37.9	-0.5
SHBL	Chebaa	146.91	300	eP	PKPbc	04 49 38.0	+0.8
BIZ	Bicaz	146.92	328	⇑P	PKPdf	04 49 34.5	+0.9
QRWL	Qaraoun	146.92	300	eP	PKPbc	04 49 38.0	+0.9
TESR	Tescani	146.94	327	⇑P	PKPdf	04 49 33.6	0.0
AFSR	Afar-Bala (An	146.94	311	eP	PKPbc	04 49 36.9	-0.1
ANTO	Ankara	146.95	312	⇓P	PKPdf	04 49 33.6	-0.3
ANTO	Ankara	146.95	312	⇓PKIKP	PKPdf	04 49 33.6	-0.3
ANTO	Ankara	146.95	312		PKPdf	04 49 34.2	+0.3
ANTO				PKPbc	PKPbc	04 49 37.7	+0.7
LOD	Lodumlu	146.96	312	eP	PKPbc	04 49 35.6	-1.4
DQRL	Deir Qamar	146.97	300	eP	PKPbc	04 49 37.9	+0.6
BEYL	Beirut	146.99	301	eP	PKPbc	04 49 37.5	+0.3
DSB	Dublin	146.99	8		PKPbc	04 49 37.2	+0.6
CFR	Carcaliu	147.02	324	⇑P	PKPdf	04 49 33.8	+0.1
CFR	Carcaliu	147.02	324	⇑PKIKP	PKPdf	04 49 33.8	+0.1
WPS	Cemaes, Angles	147.07	6	eP	PKPbc	04 49 35.8	-0.9
TOPG	Topolog	147.07	323	⇓P	PKPdf	04 49 34.5	+0.7
OJC	Ojcow	147.07	338	ePKP	PKPdf	04 49 34.2	+0.5
OJC	Ojcow	147.07	338	ePKIKP	PKPdf	04 49 34.2	+0.5
WME	Myndd Eilian	147.09	6	eP	PKPbc	04 49 36.3	-0.5
YESY	Yesilyurt	147.12	308	eP	PKPbc	04 49 37.3	-0.3
SULT	Sultanhani-AKS	147.13	309	eP	PKPdf	04 49 35.8	+1.5
PETR	Petresti	147.16	325	⇓P	PKPbc	04 49 38.0	+0.8
WLF1	Llynfaes	147.19	6	eP	PKPbc	04 49 36.1	-0.9
YRC	Rhoscolyn	147.21	6	eP	PKPbc	04 49 36.4	-0.7
ODBI	Odobesti	147.22	326	⇓P	PKiKP	04 49 38.6	-0.4
MMAI	Mount Meron Ar	147.27	299	PKPbc	PKPbc	04 49 38.5	+0.4
	comp=Z,366nm,0.8s,baz=66,slow=4.1,SNR=270						
MMAI				PKPab	PKPab	04 49 43.1	+1.1
	comp=Z,140nm,0.7s,baz=57,slow=5.3,SNR=18						
KIZK	Mersin	147.28	306	eP	PKPbc	04 49 36.8	-1.1
LMK	Market Rasen	147.28	2	eP	PKPbc	04 49 37.1	-0.2
TIRR	Tirgusor	147.31	323	⇓P	PKPdf	04 49 34.7	+0.5
TIRR	Tirgusor	147.31	323	i P	PKPbc	04 49 37.9	+0.2
TIRR	Tirgusor	147.31	323	⇓PKIKP	PKPdf	04 49 34.7	+0.5
TIRR	Tirgusor	147.31	323		PKPdf	04 49 33.2	-1.0
TIRR				PKPbc	PKPbc	04 49 37.9	+0.2
VRI	Vrincioaia	147.33	326	⇑P	PKPdf	04 49 33.8	-0.5
VRI	Vrincioaia	147.33	326	⇑PKIKP	PKPdf	04 49 33.8	-0.5
YLL	Llanberis	147.36	6	eP	PKPbc	04 49 36.5	-1.0
PLOR	Plostina	147.38	326	⇓P	PKPbc	04 49 37.9	0.0
PLOR	Plostina	147.38	326	⇓PKP2	PKPbc	04 49 37.9	0.0
UZH	Uzhgorod	147.40	334	i PKIKP	PKPdf	04 49 34.2	0.0
UZH				e		04 49 41.8	
RETH	Rethem/Aller,	147.41	351	ePKPdf	PKPdf	04 49 34.5	+0.4
	baz=20,slow=1.5						
RETH				ePKPbc	PKPbc	04 49 38.3	+0.7
	baz=16,slow=2.4						
EFOR	EFORIE	147.41	322	⇓P	PKPbc	04 49 38.6	+0.7
CHBY	Cihanbeyli	147.43	310	eP	PKPbc	04 49 37.3	-1.0
HARR	Harsova	147.44	323	⇓P	PKPdf	04 49 34.9	+0.5
HARR	Harsova	147.44	323	⇓PKIKP	PKPdf	04 49 34.9	+0.5
MFTR	Murfatlar	147.47	322	⇓P	PKPdf	04 49 35.4	+0.9
SILI	Silifke-Mersin	147.49	306	eP	PKPbc	04 49 37.5	-0.9
NRDL	Niedersach Rie	147.53	350	ePKPdf	PKPdf	04 49 34.6	+0.4
	baz=20,slow=1.5						
NRDL				ePKPbc	PKPbc	04 49 38.5	+0.7
	baz=16,slow=2.4						
NRDL				ePKPab	PKPab	04 49 42.0	-0.2
	baz=16,slow=4.2						
NRDL				epPKPbc	pPKPab	04 52 00.2	+2.5
NRDL				ePP	PP	04 53 08.1	-2.1
	baz=18,slow=5.6						
NIE	Niedzica	147.56	337	ePKPdf	PKPdf	04 49 35.6	+1.0
NIE	Niedzica	147.56	337	⇓ePKIKP	PKPdf	04 49 35.6	+1.0
EREN	Erenkoy	147.57	304	eP	PKPbc	04 49 38.9	+0.3
MANR	Mangalia	147.59	322	⇓P	PKPbc	04 49 38.1	-0.3
BMR	Baia Mare	147.62	331	⇑P	PKPbc	04 49 38.7	+0.3
BMR	Baia Mare	147.62	331	⇑PKP2	PKPbc	04 49 38.7	+0.3

KEBE	Keben-Mersin	147.62	306	*e*P	PKPbc	04 49 38.6	-0.2
ARCR	ARCALIA	147.66	330	⇓P	PKiKP	04 49 39.2	-0.7
KSP	Ksiaz	147.66	342	*e*PKP	PKPdf	04 49 34.7	+0.1
KSP	Ksiaz	147.66	342	*e*PKIKP	PKPdf	04 49 34.7	+0.1
ASCN	Ascension	147.69	150		PKPbc	04 49 40.2	+0.7
TRPA	Tarpa	147.69	333	⇓P	PKPdf	04 49 35.1	+0.3
H10N3	ASCENSION HYDR	147.70	150	PKPbc	PKiKP	04 49 40.5	-0.1
	baz=200,slow=4.4,SNR=7.3						
H10N1	ASCENSION HYDR	147.71	150	PKPbc	PKiKP	04 49 40.8	+0.2
	baz=200,slow=4.4,SNR=11						
IKL	Isikli	147.71	306	*e*P	PKPbc	04 49 37.7	-1.3
H10N2	ASCENSION HYDR	147.72	150	PKPbc	PKiKP	04 49 40.5	-0.1
	baz=200,slow=4.4,SNR=6.9						
MDUB	Mudurnu	147.76	314	*e*P	PKPbc	04 49 38.6	-0.5
MDUB	Mudurnu	147.76	314		PKPdf	04 49 35.1	-0.2
MDUB				PKPbc	PKPbc	04 49 39.3	+0.2
ASSE	Asse, Remlinge	147.78	349	*e*PKPdf	PKPdf	04 49 34.9	+0.3
	baz=20,slow=1.5						
ASSE				*e*PKPbc	PKiKP	04 49 39.3	-0.6
	baz=16,slow=2.4						
TEVE	Tevekalti-Mers	147.83	306	*e*P	PKPbc	04 49 38.9	-0.5
AKKU	Akkuyu-Mersin	147.84	306	*e*P	PKPbc	04 49 37.9	-1.4
ICOR	Ion Corvin	147.86	323	⇑P	PKPdf	04 49 35.7	+0.6
PSN	Preselentsi	147.91	322	*i* P	PKiKP	04 49 40.0	-0.5
ISR	Istrita	147.92	325	⇑P	PKPbc	04 49 39.3	0.0
ISR	Istrita	147.92	325	⇑PKP2	PKPbc	04 49 39.3	0.0
OSTC	Ostas	147.94	342	*e*PKPDF	PKPdf	04 49 35.3	+0.2
OSTC				⇑*e*PKP	PKiKP	04 49 40.4	0.0
OSTC				*e*PKPAB	PKPab	04 49 45.6	+1.5
DOPR	Dopca	147.95	327	⇑P	PKPbc	04 49 39.8	+0.6
CHVC	Chvalec	147.96	342	*e*PKPDF	PKPdf	04 49 35.7	+0.5
CHVC				⇑*e*PKP	PKPbc	04 49 39.5	+0.3
LADK	Ladik-KONYA	147.96	310	*e*P	PKPbc	04 49 38.9	-0.8
OKC	Ostrava-Krasne	147.97	339	*e*PKPDF	PKPdf	04 49 35.4	+0.3
OKC				⇑*e*PKP	PKPbc	04 49 39.7	+0.5
OKC				*e*PKPAB	PKPab	04 49 44.8	+0.6
MLR	Muntele Rosu	147.99	326	⇓P	PKPdf	04 49 34.9	-0.6
MLR	Muntele Rosu	147.99	326	⇓PKIKP	PKPdf	04 49 34.9	-0.6
SVRH	Sivrihisar-ESK	148.02	312	*e*P	PKPbc	04 49 38.7	-1.1
KIZT	Kizilcal	148.02	311	*e*P	PKPbc	04 49 38.9	-0.9
WACR	West Acre	148.03	1	*e*P	PKPbc	04 49 38.3	-0.9
UPC	Upice	148.04	342	*e*PKPDF	PKPdf	04 49 35.9	+0.6
UPC				⇑*e*PKP	PKiKP	04 49 40.0	-0.6
UPC				*e*PKPAB	PKPab	04 49 45.2	+0.7
IBBN	Ibbenburen	148.05	352	*e*PKPdf	PKPdf	04 49 35.9	+0.7
	baz=20,slow=1.5						
IBBN				*e*PKPbc	PKiKP	04 49 40.0	-0.5
	baz=16,slow=2.4						
KONT	Konya--Tatoy	148.06	309	*e*P	PKPbc	04 49 38.3	-1.6
CLL	Collm	148.09	346	*e*PKPdf	PKPdf	04 49 36.0	+0.7
CLL				⇓*i*PKPbc	PKiKP	04 49 40.8	+0.2
	comp=Z,357nm,0.8s						
CLL				*i* PKPab	PKPab	04 49 45.3	+0.7
	comp=Z,187nm,0.9s						
CLL				*e*pPKPbc	pPKPab	04 52 00.0	+0.5
CLL				*i*		04 52 07.1	
	comp=Z,72nm,1.2s						
CLL				*e*PP	PP	04 53 12.0	-1.6
CLL	Collm	148.09	346	*e*PKPdf	PKPdf	04 49 36.2	+0.9
	baz=20,slow=1.5						
CLL				*e*PKPbc	PKiKP	04 49 40.9	+0.3
	baz=16,slow=2.4						
CLL				*e*PKPab	PKPab	04 49 45.7	+1.1
	baz=16,slow=4.2						
CLL	Collm	148.09	346		PKPdf	04 49 36.4	+1.1
HLM1	Long Mynd	148.09	5	*e*P	PKPdf	04 49 35.2	0.0
LANS	Liptovska Anna	148.09	337	*e*PKP	PKPdf	04 49 36.4	+1.0
LANS				*e*		04 49 41.2	
LANS				*e*		04 49 46.5	
DPC	Dobruska-Polom	148.09	342	*e*PKPDF	PKPdf	04 49 35.8	+0.4
DPC				⇑*e*PKP	PKPbc	04 49 39.8	+0.3
DPC				*e*PKPAB	PKPab	04 49 45.1	+0.3
CLZ	Clausthal	148.11	349	*e*PKPdf	PKPdf	04 49 35.7	+0.3
	baz=20,slow=1.5						
CLZ				*e*PKPbc	PKiKP	04 49 40.4	-0.4
	baz=16,slow=2.4						
CLZ				*e*PKPab	PKPab	04 49 45.3	+0.5
	baz=16,slow=4.2						
RASA	Rasa	148.17	323	⇓P	PKPbc	04 49 40.0	+0.2
TEKE	Tekeli-Mersin	148.18	306	*e*P	PKPbc	04 49 38.9	-1.2
LEHL	Lehliu	148.19	324	⇑P	PKPbc	04 49 39.7	-0.1
KRLC	Kraliky	148.19	341	*e*PKPDF	PKPdf	04 49 35.6	0.0
KRLC				⇑*e*PKP	PKPbc	04 49 40.2	+0.4
KRLC				*e*PKPAB	PKPab	04 49 46.3	+1.1
SAUV	Serdivan-Sakar	148.21	315	*e*P	PKPbc	04 49 38.9	-1.2
MORC	Moravsky Berou	148.22	340	⇓P	PKPdf	04 49 35.7	0.0
MORC	Moravsky Berou	148.22	340	*e*PKP	PKPdf	04 49 35.6	0.0
MORC				*e*		04 49 40.1	
SECR		148.23	326	⇓P	PKPdf	04 49 36.5	+0.8
GULT	Gulveren	148.24	315	*e*P	PKPbc	04 49 39.5	-0.8
SPNC	Sapanca-Adapaz	148.25	315	*e*P	PKPbc	04 49 40.1	-0.1
KECS	Kecovo	148.25	335	*e*PKP	PKPdf	04 49 36.2	+0.5
KECS				*e*		04 49 40.9	
KECS				*e*		04 49 46.4	
BRG	Berggiesshubel	148.26	345	*i* PKP	PKPdf	04 49 35.8	+0.2
	comp=Z,133nm,1.9s						
BRG	Berggiesshubel	148.26	345	*i* PKP	PKPbc	04 49 40.3	+0.4
	comp=Z,884nm,1.9s						
BRG	Berggiesshubel	148.26	345	*i* PKP	PKPab	04 49 45.7	+0.3
	comp=Z,114nm,0.9s						
BRG				*i*		04 50 06.1	
	comp=Z,98nm,1.1s						
BRG				*e*pPKP	pPKPab	04 52 01.1	+1.0
	comp=Z,17nm,1.0s						
BRG	Berggiesshubel	148.26	345	*e*PKPdf	PKPdf	04 49 35.9	+0.2
	baz=20,slow=1.5						
BRG				*e*PKPbc	PKiKP	04 49 40.6	-0.4
	baz=16,slow=2.4						
BRG				*e*PKPab	PKPab	04 49 45.7	+0.3
	baz=16,slow=4.2						
CJR	Cluj-Napoca	148.28	330	⇑P	PKPdf	04 49 36.4	+0.6
ORH	Orhaniye	148.31	316	P	PKPab	04 49 45.3	-0.7
PLAR	PLOIESTI	148.33	325	⇓P	PKPbc	04 49 40.5	+0.3
SRCK	Saricakaya, Es	148.35	314	*e*P	PKPbc	04 49 39.5	-1.0
HDMB	Hadim	148.35	308	*e*P	PKPbc	04 49 39.5	-1.4
FBE	Freiberg	148.36	345	*e*PKPdf	PKPdf	04 49 35.9	+0.2
	baz=20,slow=1.5						
FBE				*e*PKPbc	PKiKP	04 49 41.1	-0.1
	baz=16,slow=2.4						
FBE				*e*PKPab	PKPab	04 49 46.7	+0.9
	baz=16,slow=4.2						
FBE				*e*pPKPbc	pPKPab	04 52 04.1	+3.5
FBE				*e*PP	PP	04 53 13.0	-2.3
	baz=18,slow=5.6						
CIFT	Cifteler, Eski	148.37	313	*e*P	PKPbc	04 49 39.5	-1.1
PVCC	Panska Ves	148.42	344	*e*PKPDF	PKPdf	04 49 36.0	+0.1
PVCC				⇑*e*PKP	PKiKP	04 49 41.0	-0.4
PVCC				*e*PKPAB	PKPab	04 49 47.0	+1.0
SILT	Sile	148.44	317	*e*P	PKPbc	04 49 40.9	+0.3
NEUB	Neuenburg	148.44	347	*e*PKPdf	PKPdf	04 49 35.8	-0.1
	baz=20,slow=1.5						
NEUB				*e*PKPbc	PKiKP	04 49 41.0	-0.4
	baz=16,slow=2.4						
NEUB				*e*PKPab	PKPab	04 49 46.6	+0.5
	baz=16,slow=4.2						
GTTG	Gottingen	148.47	350	*e*PKPdf	PKPdf	04 49 35.9	0.0
	baz=20,slow=1.5						
GTTG				*e*PKPbc	PKiKP	04 49 41.0	-0.4
	baz=16,slow=2.4						
GTTG				*e*PKPab	PKPab	04 49 46.8	+0.7
	baz=16,slow=4.2						
VOIR		148.49	327	⇑P	PKPdf	04 49 37.0	+0.8
HRT	Hereke	148.60	316	*e*P	PKPbc	04 49 39.9	-1.2
DRGR		148.63	331	⇓P	PKPbc	04 49 41.3	+0.3
DRGR		148.63	331	*i* P	PKPbc	04 49 41.1	+0.1
PRD	Provadia	148.66	322	*i* P	PKiKP	04 49 41.8	-0.2
NEF	NEVSHA	148.69	322	*i* P	PKiKP	04 49 41.8	-0.4
LEF	Lefka	148.69	304	⇑P	PKPdf	04 49 36.7	0.0
LEF	Lefka	148.69	304	*e*P	PKPbc	04 49 40.9	-0.5
ARR	Arges	148.74	327	⇓P	PKPdf	04 49 37.0	+0.3
GAZI	Gazipasa	148.75	306	*e*P	PKPbc	04 49 39.5	-2.1
MONM	Monmouth	148.77	5	*e*P	PKPbc	04 49 40.2	-0.8
KLYT	Kilyos	148.77	317	*e*P	PKPbc	04 49 40.5	-0.9
ISK	Istanbul-Kandi	148.86	317	*e*P	PKPbc	04 49 40.3	-1.3
KAVV	Kandilli-Istan	148.86	317	*e*P	PKPbc	04 49 40.9	-0.7
VYHS	Vyhne	148.86	337	*e*PKP	PKPdf	04 49 36.6	-0.1
VYHS				*e*		04 49 42.1	
VYHS				*e*		04 49 49.4	
PRA	Prague	148.88	343	⇑*e*PKP	PKPbc	04 49 41.7	+0.3
STRD	Stroud	148.88	4	*e*P	PKPbc	04 49 40.3	-1.0
PRU	Pruhonice	148.92	343	*e*PKPDF	PKPdf	04 49 36.8	+0.1
PRU				⇑*e*PKP	PKPbc	04 49 41.5	0.0
PRU				*e*PKPAB	PKPab	04 49 48.1	0.0
YLV	Yalova	148.92	316	*e*P	PKPbc	04 49 40.0	-1.9
VRAC	Vranov	148.93	340	PKPbc	PKPbc	04 49 42.0	+0.4
VRAC				PKPab	PKPab	04 49 49.2	+1.0
	baz=44,slow=6.9						
VRAC	Vranov	148.93	340	⇓P	PKPdf	04 49 37.5	+0.8
VRAC	Vranov	148.93	340	*e*PKP	PKPdf	04 49 37.0	+0.3
VRAC				*e*		04 49 41.7	
PSZ	Piszkesteto	148.94	335	⇑P	PKPdf	04 49 36.8	-0.1
PSZ	Piszkesteto	148.94	335	⇑PKIKP	PKPdf	04 49 36.8	-0.1
RAZG	Razgrad	148.94	323	⇑P	PKPbc	04 49 42.0	+0.2
ROSA	Rosais	148.94	48		PKiKP	04 49 42.6	-0.2
BUG	Bochum--Univer	148.96	353	*e*PKPdf	PKPdf	04 49 36.8	+0.1
	baz=20,slow=1.5						
BUG				*e*PKPbc	PKPbc	04 49 41.9	+0.4
	baz=16,slow=2.4						
BGKT	Bogazkoy	148.98	317	*e*P	PKPbc	04 49 41.0	-0.9
MOX	Moxa	149.01	347	*e*PKPdf	PKPdf	04 49 36.9	0.0
	baz=20,slow=1.5						
MOX				*e*PKPbc	PKiKP	04 49 42.4	-0.2
	baz=16,slow=2.4						
MOX				*e*PKPab	PKPab	04 49 48.6	+0.1
	baz=16,slow=4.2						
MOX				*e*PP	PP	04 53 16.6	-2.3
	baz=18,slow=5.6						
TANN	Tannenbergstha	149.04	346	*e*PKPdf	PKPdf	04 49 37.0	+0.1
	baz=20,slow=1.5						
TANN				*e*PKPbc	PKiKP	04 49 42.5	-0.2
	baz=16,slow=2.4						
TANN				*e*PKPab	PKPab	04 49 49.0	+0.2
	baz=16,slow=4.2						
PLN	Plauen	149.05	346	*e*PKPdf	PKPdf	04 49 37.3	+0.4
	baz=20,slow=1.5						
PLN				*e*PKPbc	PKiKP	04 49 42.4	-0.3
	baz=16,slow=2.4						
PLN				*e*PKPab	PKPab	04 49 49.0	+0.3
	baz=16,slow=4.2						
SHUT	Suhut-Afyon	149.09	312	*e*P	PKPbc	04 49 40.3	-2.2
CTKS	Kestanelik-??a	149.12	318	*e*P	PKPbc	04 49 41.4	-0.8
GUNZ	Gunzen	149.12	346	*e*PKPdf	PKPdf	04 49 37.1	+0.1
	baz=20,slow=1.5						
GUNZ				*e*PKPbc	PKiKP	04 49 42.8	-0.1
	baz=16,slow=2.4						
GUNZ				*e*PKPab	PKPab	04 49 49.6	+0.6
	baz=16,slow=4.2						
UBBA	Unterbreizbach	149.16	349	*e*PKPdf	PKPdf	04 49 37.1	+0.2
	baz=20,slow=1.5						
UBBA				*e*PKPbc	PKiKP	04 49 42.7	-0.1
	baz=16,slow=2.4						
UBBA				*e*PP	PP	04 53 16.7	-2.9
	baz=18,slow=5.6						
WERN	Wernitzgruen	149.18	346	*e*PKPdf	PKPdf	04 49 37.8	+0.6
	baz=20,slow=1.5						
WERN				*e*PKPbc	PKiKP	04 49 43.1	+0.1
	baz=16,slow=2.4						
WERN				*e*PKPab	PKPab	04 49 50.1	+0.9
	baz=16,slow=4.2						
KRUC	Moravsky	149.21	340	PKIKP	PKPdf	04 49 36.7	-0.4
KRUC	Moravsky	149.21	340	*e*PKP	PKPdf	04 49 36.8	-0.4
KRUC				*e*		04 49 42.4	
NKC	Novy Kostel	149.22	346	*e*PKPDF	PKPdf	04 49 36.8	-0.4
NKC				⇑*e*PKP	PKiKP	04 49 42.7	-0.4
NKC				*e*PKPAB	PKPab	04 49 49.7	+0.3
NKC	Novy Kostel	149.22	346	*e*PKIKP	PKPdf	04 49 36.8	-0.4
NKC				*e*		04 49 49.7	
DEV	Deva	149.22	330	⇓P	PKiKP	04 49 43.0	-0.2
ARMT	Armutlu	149.25	316	*e*P	PKPbc	04 49 41.6	-1.0
TREC	Trest	149.28	342	*e*PKPDF	PKPdf	04 49 37.3	0.0
TREC				⇑*e*PKP	PKPbc	04 49 42.8	+0.4
TREC				*e*PKPAB	PKPab	04 49 50.0	+0.3
TREC	Trest	149.28	342	*e*PKIKP	PKPdf	04 49 37.3	0.0
TREC				*e*		04 49 50.0	
COPA	Copaceanca	149.28	325	⇓P	PKPbc	04 49 41.8	-0.8
SLVT	Silivri	149.31	318	*e*P	PKPbc	04 49 41.9	-0.8
MDNY	Mudanya-Bursa	149.34	316	*e*P	PKPbc	04 49 42.2	-0.6
PBCC	Pribram	149.34	344	*e*PKPDF	PKPdf	04 49 37.6	+0.2
PBCC				⇑*e*PKP	PKPbc	04 49 42.4	-0.2
PBCC				*e*PKPAB	PKPab	04 49 50.0	+0.1
SMOL	Smolenice	149.34	339	*e*PKP	PKPdf	04 49 37.9	+0.5
SMOL				*e*		04 49 44.0	
SMOL				*e*		04 49 51.7	
WOL	Wolverton	149.39	3	*e*P	PKPbc	04 49 42.3	-0.2
TVSB	Tavsanli	149.42	314	*e*P	PKPbc	04 49 42.5	-0.7
HTL	Hartland	149.44	7	*e*P	PKPbc	04 49 42.5	-0.2
SZH	Strazhica	149.45	323	*i* P	PKPbc	04 49 43.3	+0.3
SIRR	Siria	149.50	331	⇓P	PKPdf	04 49 38.4	+0.6
MODS	Modra-Piesok	149.52	339	*e*PKIKP	PKPdf	04 49 37.4	-0.3
MODS				*e*		04 49 51.4	
MODS	Modra-Piesok	149.52	339	*e*PKP	PKPdf	04 49 37.4	-0.3
MODS				*e*		04 49 43.2	
MODS				*e*		04 49 51.4	
MANZ	Manzenberg	149.53	346	*e*PKPdf	PKPdf	04 49 37.7	0.0
	baz=20,slow=1.5						
MANZ				*e*PKPbc	PKiKP	04 49 43.7	0.0
	baz=16,slow=2.4						
MANZ				*e*PKPab	PKPab	04 49 50.7	+0.1
	baz=16,slow=4.2						
BCK	Bucak	149.54	310	*e*P	PKPbc	04 49 42.2	-1.3
JMB	Yambol	149.58	321	*i* P	PKiKP	04 49 43.8	-0.2
ELSH	Elham, Standar	149.62	0	*e*P	PKPbc	04 49 43.0	-0.1
SRO	Srobarova	149.63	337	*e*PKP	PKiKP	04 49 43.9	0.0
SRO				*e*		04 49 52.4	
GZR	Gura Zlata	149.64	329	⇑P	PKPdf	04 49 37.8	-0.3
GZR	Gura Zlata	149.64	329	⇑PKIKP	PKPdf	04 49 37.8	-0.3
GEDZ	Gediz	149.66	313	*e*P	PKPbc	04 49 43.4	-0.3
CRLT	Corlu	149.66	318	*e*P	PKPbc	04 49 43.2	-0.4
ROTZ	Rotzenmuhle	149.71	346	*e*PKPdf	PKPdf	04 49 38.2	+0.2
	baz=20,slow=1.5						
ROTZ				*e*PKPbc	PKiKP	04 49 44.0	0.0
	baz=16,slow=2.4						
ROTZ				*e*PKPab	PKPab	04 49 52.1	+0.7
	baz=16,slow=4.2						
ROTZ				*e*PP	PP	04 53 20.3	-2.6
	baz=18,slow=5.6						
ZST	Bratislava	149.73	339	*e*PKIKP	PKPdf	04 49 37.6	-0.4
ZST				*e*		04 49 52.0	
ZST	Bratislava	149.73	339	*e*PKP	PKPdf	04 49 37.6	-0.4
ZST				*e*		04 49 43.4	
ZST				*e*		04 49 52.0	
KCTX	Karacabey (Bur	149.74	316	*e*P	PKPbc	04 49 43.3	-0.5
VLAD	Vladila	149.81	326	⇑P	PKPdf	04 49 38.6	+0.4
PVL	Pavlikeni	149.82	324	*i* P	PKiKP	04 49 44.7	+0.2
EDRB	Edirne	149.86	320	*e*P	PKPbc	04 49 43.7	-0.3
AHRW	Bad Neuenahr-A	149.87	353	*e*PKPdf	PKPdf	04 49 38.5	+0.4
	baz=20,slow=1.5						
AHRW				*e*PKPbc	PKiKP	04 49 44.3	-0.1
	baz=16,slow=2.4						
HMNX	Herstmonceux	149.89	1	*e*P	PKiKP	04 49 44.4	+0.1
KORT	Korkueli	149.91	309	*e*P	PKPbc	04 49 44.2	-0.3
SIMA	Simav-Kutahya	149.93	314	*e*P	PKPbc	04 49 43.7	-0.7
KHC	Kasperske Hory	149.96	344	*e*PKPDF	PKPdf	04 49 38.8	+0.4
KHC				⇑*e*PKP	PKPbc	04 49 43.9	-0.2
KHC				*e*PKPAB	PKPab	04 49 53.2	+0.7
KHC	Kasperske Hory	149.96	344	*e*PKIKP	PKPdf	04 49 38.8	+0.4
KHC				*e*		04 49 53.2	
SRE	Strehaia	149.96	328	⇑P	PKiKP	04 49 44.7	0.0
TNS	Taunus Mts	149.99	351	*e*PKPdf	PKPdf	04 49 38.5	+0.1
	baz=20,slow=1.5						
TNS				*e*PKPbc	PKiKP	04 49 44.5	-0.2
	baz=16,slow=2.4						
TNS				*e*PKPab	PKPab	04 49 52.8	+0.2
	baz=16,slow=4.2						
GRF	Grafenberg Arr	150.00	347	*e*PKPdf	PKPdf	04 49 38.2	-0.2
	baz=20,slow=1.5						
GRF				*e*PKPbc	PKiKP	04 49 44.7	0.0
	baz=16,slow=2.4						
GRF				*e*PKPab	PKPab	04 49 53.2	+0.5
	baz=16,slow=4.2						
EDC	Edincik	150.01	317	*e*P	PKPbc	04 49 43.4	-1.0
BZS	Buzias	150.02	331	⇑P	PKPdf	04 49 38.2	-0.3
BZS	Buzias	150.02	331	⇑PKIKP	PKPdf	04 49 38.2	-0.3
MRMT	Marmara Adasi	150.04	317	*e*P	PKPbc	04 49 43.7	-0.9
PLVB	Pleven	150.10	324	⇑P	PKPdf	04 49 38.3	-0.4
TIM	Timisoara	150.11	331	⇑P	PKPdf	04 49 40.2	+1.6
TIM	Timisoara	150.11	331	⇑PKIKP	PKPdf	04 49 40.2	+1.6
WET	Wettzell	150.13	345	*e*PKPdf	PKPdf	04 49 38.4	-0.2
	baz=20,slow=1.5						
WET				*e*PKPbc	PKiKP	04 49 45.2	+0.2
	baz=16,slow=2.4						
WET				*e*PKPab	PKPab	04 49 54.1	+0.9
	baz=16,slow=4.2						
WET	Wettzell	150.13	345	PKIKP	PKPdf	04 49 39.1	+0.5
CCA1	Carnmenellis	150.14	8	*e*P	PKPbc	04 49 44.3	0.0
GEC2	GERESS Array S	150.19	343	*e*PKPdf	PKPdf	04 49 38.5	-0.4
	baz=20,slow=1.5						
GEC2				*e*PKPbc	PKiKP	04 49 45.1	-0.1
	baz=16,slow=2.4						
GEC2				*e*PKPab	PKPab	04 49 54.2	+0.6
	baz=16,slow=4.2						
GERES	GERESS Array B	150.19	343	PKP	PKPdf	04 49 39.0	+0.2
	comp=Z,5.4nm,0.8s,baz=70,slow=1.6,SNR=53						
GERES				PKPbc	PKPbc	04 49 44.9	+0.2
	comp=Z,77nm,0.8s,baz=21,slow=3.0,SNR=147						
GERES				PKPab	PKPab	04 49 54.1	+0.6
	comp=Z,22nm,0.9s,baz=35,slow=4.9,SNR=12						
GERES				pPKPbc	pPKPbc	04 52 05.7	+1.3
	comp=Z,13nm,1.1s,baz=46,slow=7.4,SNR=2.6						
GERES	GERESS Array B	150.19	343	PKIKP	PKPdf	04 49 38.4	-0.4
GERES						04 49 54.2	
GERES	GERESS Array B	150.19	343		PKPdf	04 49 38.4	-0.5
GERES				PKPbc	PKiKP	04 49 45.3	+0.1
RKY	Sarkoy-Tekirda	150.26	318	*e*P	PKPbc	04 49 43.8	-1.3
ELL	Elmali	150.34	309	*e*P	PKPbc	04 49 44.5	-1.0
BAIL	Bailesti	150.34	327	⇑P	PKiKP	04 49 45.9	+0.4
KRBG	Karabiga-Canak	150.35	317	*e*P	PKPbc	04 49 44.6	-0.6
PUNG	Punghina	150.37	327	⇑P	PKPbc	04 49 45.0	-0.1
CONA	Conrad Observa	150.37	340	*e*PKPdf	PKPdf	04 49 38.9	-0.2
	comp=Z,21nm,1.2s,SNR=26						
CONA				*e*PKPbc	PKiKP	04 49 45.8	+0.2
	comp=Z,158nm,0.8s						
CONA				*e*PKPab	PKPab	04 49 55.5	+1.1
	comp=Z,117nm,0.9s						
BALB	Balikesir	150.38	315	*e*P	PKPbc	04 49 44.1	-1.2
BANR	Banloc	150.42	331	⇓P	PKiKP	04 49 46.5	+0.9
KULA	Kula-Manisa	150.42	313	*e*P	PKPbc	04 49 44.7	-0.8
DIM	Dimitrovgrad	150.45	322	*i* P	PKiKP	04 49 45.8	0.0
MDVR	Moldovita	150.60	329	⇓P	PKPdf	04 49 38.6	-1.0
ERIK	Erikli-Kesan	150.69	318	*e*P	PKPbc	04 49 44.4	-1.5
LPK	Lapseki	150.70	318	*e*P	PKPbc	04 49 45.4	-0.6
KDZ	Kurdzhali	150.76	321	*i* P	PKPbc	04 49 46.3	+0.2
AKAS	Kas	150.77	308	*e*P	PKPbc	04 49 45.4	-1.1
KSL	Kastellorizon	150.82	308	P	PKPdf	04 49 39.1	-1.0
WLF	Walferdange	150.84	353	*e*PKPdf	PKPdf	04 49 40.3	+0.6
	baz=20,slow=1.5						
WLF				*e*PKPbc	PKiKP	04 49 47.0	+0.6
	baz=16,slow=2.4						
WLF				*e*PKPab	PKPab	04 49 56.8	+0.7
	baz=16,slow=4.2						
WLF	Walferdange	150.84	353	PKIKP	PKiKP	04 49 46.8	+0.4
WLF	Walferdange	150.84	353		PKPdf	04 49 40.3	+0.6
WLF				PKPbc	PKiKP	04 49 46.8	+0.4
ALN	Alexandroupoli	150.84	319	P	PKPbc	04 49 45.6	-0.7
GELI	Tayfur-Gelibol	150.87	318	*e*P	PKPbc	04 49 45.7	-0.7
ENEZ	Enez	150.87	319	*e*P	PKPbc	04 49 45.5	-0.9
PLD	Plovdiv	150.89	322	*i* P	PKPbc	04 49 46.2	-0.2
PGB	Panagyurishte	150.91	324	*i* P	PKPbc	04 49 46.5	0.0
MOA	Molln	150.93	342	*e*PKPdf	PKPdf	04 49 39.3	-0.6
	comp=Z,12nm,1.0s,SNR=6.7						
MOA				*e*PKPbc	PKiKP	04 49 46.6	-0.1
	comp=Z,70nm,0.9s						
MOA				*e*PKPab	PKPab	04 49 57.2	+0.6
	comp=Z,74nm,1.2s						
FETY	Fethiye	150.99	309	*e*P	PKPbc	04 49 46.3	-0.5
RDO	Rodhopi	151.00	320	P	PKPdf	04 49 39.1	-1.1
ARSA	Arzberg	151.08	340	*e*PKPdf	PKPdf	04 49 39.3	-0.8
	comp=Z,16nm,1.9s						
ARSA				*e*PKPbc	PKPbc	04 49 46.5	-0.2
	comp=Z,26nm,0.9s						
ARSA				*e*PKPab	PKPab	04 49 57.8	+0.5
	comp=Z,45nm,0.9s						
RZN	Rozhen	151.15	322	*i* P	PKPbc	04 49 47.0	-0.2
DALY	Dalyan (Mula)	151.22	310	*e*P	PKPbc	04 49 46.9	-0.3
TURN	Turunc	151.23	310	*e*P	PKiKP	04 49 47.7	+0.1
AYDB	Zeytinkoy-Aydi	151.23	312	*e*P	PKPbc	04 49 46.4	-1.1
STU	Stuttgart	151.27	349	*e*PKPdf	PKPdf	04 49 40.4	0.0
	baz=20,slow=1.5						
STU				*e*PKPbc	PKiKP	04 49 47.5	+0.2
	baz=16,slow=2.4						
STU				*e*PKPab	PKPab	04 49 58.2	+0.2
	baz=16,slow=4.2						
EZN	Ezine	151.28	317	*e*P	PKPbc	04 49 46.7	-0.6
DKL	Dikili	151.32	315	*e*P	PKPbc	04 49 46.4	-1.0
BEHE	Becsehely	151.32	337	⇓*i*P	PKPbc	04 49 47.1	-0.1
YER	Yerkesik	151.34	311	*e*P	PKPbc	04 49 47.3	-0.3
VTS	Vitosha	151.37	325	⇑P	PKPdf	04 49 40.8	-0.1
VTS	Vitosha	151.37	325	*i* P	PKPbc	04 49 47.7	+0.1
VTS	Vitosha	151.37	325	⇑PKIKP	PKPdf	04 49 40.8	-0.1
SMTH	Samothraki Isl	151.41	319	P	PKPdf	04 49 41.6	+0.8
JVM	Valle D.L. Mar	151.42	5	*e*P	PKPbc	04 49 47.3	0.0
FUR	Furstenfeldbru	151.42	346	*e*PKPdf	PKPdf	04 49 40.1	-0.6
	baz=20,slow=1.5						
FUR				*e*PKPbc	PKiKP	04 49 47.7	0.0
	baz=16,slow=2.4						
FUR				*e*PKPab	PKPab	04 49 59.6	+0.9
	baz=16,slow=4.2						
FUR				*e*PP	PP	04 53 30.2	-2.4
	baz=18,slow=5.6						
FUR	Furstenfeldbru	151.42	346	PKIKP	PKPdf	04 49 40.9	+0.3
RJOB	Jochberg	151.45	344	*e*PKPdf	PKPdf	04 49 39.9	-0.8
	baz=20,slow=1.5						
RJOB				*e*PKPbc	PKPbc	04 49 47.5	-0.1
	baz=16,slow=2.4						
RJOB				*e*PKPab	PKPab	04 49 59.8	+1.0
	baz=16,slow=4.2						
JSA	Saint Aubin	151.45	5	*e*P	PKPbc	04 49 47.0	-0.3
BLCB	Balcova	151.59	314	*e*P	PKPbc	04 49 47.0	-1.1
PRK	Paraskevi	151.64	316	P	PKPdf	04 49 40.9	-0.3
KAVA	Kavala	151.70	321	P	PKPdf	04 49 39.9	-1.3
SOKA	Soboth	151.74	340	*e*PKPdf	PKPdf	04 49 40.6	-0.6
	comp=Z,23nm,1.4s,SNR=6.7						
SOKA				*e*PKPbc	PKPbc	04 49 48.0	-0.3
	comp=Z,35nm,0.6s						
SOKA				*e*PKPab	PKPab	04 49 59.8	-0.4
	comp=Z,49nm,0.9s						
PERS	Pernice	151.75	340	*e*PKPdf	PKPdf	04 49 40.4	-0.8
PERS				*e*PKPbc	PKPbc	04 49 47.9	-0.3
PERS				*i* PKPab	PKPab	04 50 00.1	-0.1
PERS				*i*		04 50 12.9	
TEKS	Tekeris	151.78	332	⇓*i*P	PKiKP	04 49 48.7	+0.2
GCAM	G?zelcaml?	151.80	313	*e*P	PKPbc	04 49 47.7	-0.8
THAS	Thassos island	151.82	320	P	PKPdf	04 49 39.4	-2.0
BFO	Black Forest	151.85	350	*e*PKPdf	PKPdf	04 49 40.6	-0.6
	baz=20,slow=1.5						
BFO				*e*PKPbc	PKiKP	04 49 48.5	-0.1
	baz=16,slow=2.4						
BFO				*e*PKPab	PKPab	04 50 00.7	+0.2
	baz=16,slow=4.2						
BFO	Black Forest	151.85	350	PKIKP	PKiKP	04 49 48.5	-0.1
BFO						04 50 00.2	
BFO	Black Forest	151.85	350		PKPdf	04 49 40.6	-0.6
BFO				PKPbc	PKiKP	04 49 48.5	-0.1
BFO					PKPab	04 50 00.2	-0.2
NVR	Nevrokopi	151.86	322	P	PKPdf	04 49 40.1	-1.4
ARG	Arkhangelos	151.86	309	P	PKPbc	04 49 48.7	0.0
KBA	Koelnbreinsper	151.90	342	*e*PKPdf	PKPdf	04 49 40.5	-1.0
	comp=Z,18nm,1.3s,SNR=6.4						
KBA				*e*PKPbc	PKPbc	04 49 48.1	-0.6
	comp=Z,93nm,0.9s						
KBA				*e*PKPab	PKPab	04 50 01.1	+0.1
	comp=Z,47nm,0.8s						
KBA	Koelnbreinsper	151.90	342	PKIKP	PKPdf	04 49 40.9	-0.7
URLA	Izmir	151.90	314	*e*P	PKPbc	04 49 47.8	-1.0
DIVS	Divibare	151.92	330	*e*P	PKPdf	04 49 41.4	-0.2
SIGR	SIGRI	151.93	316	P	PKPdf	04 49 40.1	-1.5
KKB	Krupnik	151.96	324	*i* P	PKPbc	04 49 48.8	0.0
LIA	Limnos Island	151.96	318	P	PKPdf	04 49 40.0	-1.6
OBKA	Obir	152.05	340	*e*PKPdf	PKPdf	04 49 40.9	-0.8
	comp=Z,8.1nm,0.9s						
OBKA				*e*PKPbc	PKPbc	04 49 48.5	-0.4
	comp=Z,17nm,0.7s,SNR=5.8						
OBKA				*e*PKPab	PKPab	04 50 01.4	-0.1
	comp=Z,36nm,0.8s						
MOSL	Moslavina	152.06	336	*i* P	PKPbc	04 49 48.9	0.0
SMG	Samos	152.07	313	P	PKPdf	04 49 40.7	-1.2
PTJ	Puntijarka	152.09	338	P	PKPbc	04 49 49.1	0.0
WATA	Walderalm	152.13	345	*e*PKPdf	PKPdf	04 49 41.4	-0.5
	comp=Z,20nm,1.0s,SNR=9.1						
WATA				*e*PKPbc	PKPbc	04 49 49.2	0.0
	comp=Z,38nm,0.5s						
WATA				*e*PKPab	PKPab	04 50 02.4	+0.6
	comp=Z,94nm,0.8s						
UBR	Ueberruh	152.14	347	*e*PKPdf	PKPdf	04 49 41.2	-0.5
	baz=20,slow=1.5						
UBR				*e*PKPbc	PKPbc	04 49 49.1	0.0
	baz=16,slow=2.4						
ZAG	Zagreb	152.16	338	P	PKiKP	04 49 49.6	+0.4
ZAG	Zagreb	152.16	338	⇓*i*P	PKiKP	04 49 49.3	+0.1
SRS	Serrai	152.16	322	P	PKPdf	04 49 40.1	-1.8
RETA	Reutte	152.18	346	*e*PKPdf	PKPdf	04 49 41.5	-0.3

	comp=Z,14nm,1.0s						
RETA				i PKPbc	PKPbc	04 49 49.2	+0.1
	comp=Z,25nm,0.7s,SNR=7.2						
RETA				ePKPab	PKPab	04 50 02.1	+0.1
	comp=Z,73nm,0.7s						
WTTA	Wattenberg	152.18	345	ePKPdf	PKPdf	04 49 41.5	-0.5
	comp=Z,36nm,1.0s,SNR=11						
WTTA				ePKPbc	PKiKP	04 49 49.5	0.0
	comp=Z,61nm,0.4s						
WTTA				ePKPab	PKPab	04 50 02.9	+0.7
	comp=Z,101nm,0.7s						
MYKA	Terra Mystica	152.22	341	i PKPdf	PKPdf	04 49 41.1	-0.8
	comp=Z,14nm,1.2s						
MYKA				i PKPbc	PKPbc	04 49 48.6	-0.6
	comp=Z,36nm,0.5s,SNR=11						
MYKA				ePKPab	PKPab	04 50 02.3	+0.1
	comp=Z,40nm,0.7s						
MOTA	Moosalm	152.24	345	ePKPdf	PKPdf	04 49 41.5	-0.6
	comp=Z,35nm,1.0s,SNR=8.3						
MOTA				ePKPbc	PKPbc	04 49 49.3	-0.1
	comp=Z,63nm,0.9s						
MOTA				ePKPab	PKPab	04 50 03.0	+0.7
	comp=Z,112nm,0.8s						
CHOS	Chios island	152.25	315	P	PKPdf	04 49 40.4	-1.8
SQTA	Sankt Quirin	152.33	345	ePKPdf	PKPdf	04 49 41.7	-0.4
	comp=Z,31nm,0.9s,SNR=9.2						
SQTA				ePKPbc	PKiKP	04 49 49.7	0.0
	comp=Z,47nm,0.6s						
SQTA				ePKPab	PKPab	04 50 03.0	+0.4
	comp=Z,86nm,1.0s						
CRES	Cresnjev	152.34	338	⇑iP	PKiKP	04 49 49.6	0.0
CRES				⇓iP	PKPbc	04 49 48.9	-0.6
BBLS	Lazići	152.37	331	eP	PKPdf	04 49 42.4	+0.2
HAPS	Han Pijesak,BI	152.41	332	eP	PKPbc	04 49 49.0	-0.8
OUR	Ouranopolis	152.43	320	P	PKPbc	04 49 48.7	-1.1
ABTA	Abfaltersbach	152.43	343	ePKPdf	PKPdf	04 49 41.5	-0.8
	comp=Z,46nm,1.0s,SNR=12						
ABTA				ePKPbc	PKPbc	04 49 49.2	-0.5
	comp=Z,134nm,0.7s						
ABTA				ePKPab	PKPab	04 50 03.3	+0.2
	comp=Z,41nm,0.6s						
KOSK	Kos Island	152.44	311	P	PKPbc	04 49 49.0	-1.0
LJU	Ljubljana	152.47	340	ePKPdf	PKPdf	04 49 42.1	-0.2
LJU				i PKPbc	PKPbc	04 49 49.8	0.0
LJU				ePKPab	PKPab	04 50 03.4	+0.2
LJU				i		04 50 15.1	
LJU				epPKPbc	pPKPbc	04 52 13.1	+3.0
LJU	Ljubljana	152.47	340	eP	PKPdf	04 49 42.0	-0.2
SOH	Sokhos	152.49	322	P	PKPbc	04 49 48.5	-1.5
OZLJ	Ozalj	152.52	338	i P	PKiKP	04 49 49.9	0.0
KNT	Kendrikon	152.53	323	P	PKPbc	04 49 48.8	-1.3
DAVA	Damuels	152.56	347	ePKPdf	PKPdf	04 49 42.5	0.0
	comp=Z,22nm,1.0s,SNR=5.6						
DAVA				ePKPbc	PKPbc	04 49 50.2	+0.1
	comp=Z,81nm,1.0s						
DAVA				ePKPab	PKPab	04 50 04.0	+0.2
	comp=Z,69nm,0.8s,SNR=4.8						
RUDO	Rudo	152.58	331	eP	PKPdf	04 49 41.9	-0.6
VAY	Valandovo	152.61	323	i Pg	PKPdf	04 49 41.8	-0.8
BLY	Banja Luka	152.61	335	⇑P	PKiKP	04 49 50.8	+0.6
BLY	Banja Luka	152.61	335	eP	PKPdf	04 49 42.4	-0.1
FETA	Feichten	152.63	346	ePKPdf	PKPdf	04 49 42.4	-0.3
	comp=Z,47nm,1.0s,SNR=12						
FETA				ePKPbc	PKiKP	04 49 50.4	0.0
	comp=Z,112nm,0.9s						
FETA				ePKPab	PKPab	04 50 04.3	+0.3
	comp=Z,56nm,0.9s						
CLF	Chambon-Foret	152.73	358		PKPdf	04 49 42.5	0.0
CLF				PKPbc	PKiKP	04 49 50.9	+0.6
CLF				PKPab	PKPab	04 50 04.8	+0.7
SKO	Skopje	152.78	326	i Pg	PKPdf	04 49 42.7	-0.1
HORT	Hortiatis	152.79	322	P	PKPbc	04 49 49.3	-1.4
KARP	Karpathos	152.86	309	P	PKPdf	04 49 41.7	-1.5
MGRS	Mrkonjic Grad	152.93	334	⇓iP	PKiKP	04 49 51.0	+0.1
GRG	Griva	152.95	323	P	PKiKP	04 49 51.5	+0.4
SKY	Skiros Island	152.96	317	P	PKPbc	04 49 50.1	-0.9
RIY	Rijeka	153.11	339	eP	PKPbc	04 49 50.1	-1.0
AMGA	Amorgos Island	153.16	312	P	PKPbc	04 49 50.0	-1.6
AOS	Alonnisos	153.20	318	P	PKPbc	04 49 50.3	-1.3
APE	Apeiranthos	153.29	313	P	PKPbc	04 49 50.4	-1.5
APE	Apeiranthos	153.29	313	⇓P	PKPbc	04 49 50.4	-1.5
APE	Apeiranthos	153.29	313	⇓PKIKP	PKPbc	04 49 50.4	-1.5
UDBI	Udbina	153.35	336	i P	PKPbc	04 49 51.7	-0.1
TUE	Stuetta	153.45	347		PKPdf	04 49 44.1	+0.2
TUE				PKPbc	PKiKP	04 49 52.8	+0.6
TUE				PKPab	PKPab	04 50 07.2	-0.4
LIT	Litokhoron	153.46	321	P	PKPdf	04 49 41.8	-2.1
SKIA	Skiathos	153.46	319	P	PKPbc	04 49 51.1	-1.0
ANAF	Anafi Island	153.48	311	P	PKPbc	04 49 51.3	-1.0
PHP	Peshkopia	153.50	326	P	PKPdf	04 49 40.2	-3.7
XOR	Xorichti	153.51	319	P	PKPdf	04 49 41.6	-2.4
BRY	Bratogost	153.52	331	eP	PKPbc	04 49 50.4	-1.9
NEO	Neokhori	153.53	319	P	PKPdf	04 49 42.5	-1.5
PDG	Podgorica	153.54	329	⇑P	PKPbc	04 49 50.1	-2.0
PDG	Podgorica	153.54	329	⇓iP	PKPbc	04 49 51.1	-1.0
IOSP	Ios island	153.64	312	P	PKPdf	04 49 42.1	-2.1
FNA	Florina	153.64	324	P	PKPdf	04 49 42.8	-1.3
THR8	Santorini-Mono	153.66	312	P	PKPdf	04 49 42.6	-1.6
MRKA	Markates	153.66	318	P	PKPdf	04 49 42.4	-1.8
RICI	Ricice	153.67	333	P	PKPbc	04 49 52.0	-0.4
CMBO	Columbo, Santo	153.68	312	P	PKPbc	04 49 51.8	-0.8
SANT	Santorini	153.69	312	P	PKPdf	04 49 42.2	-2.2
SANT	Santorini	153.69	312		PKPdf	04 49 42.7	-1.6
SANT				PKPbc	PKPbc	04 49 51.4	-1.4
SANT				PKPab	PKPab	04 50 07.2	-1.7
THR3	Thira Island,	153.72	312	P	PKPdf	04 49 42.8	-1.5
STAX	Taxiarchis Har	153.72	312	P	PKPdf	04 49 42.6	-1.7
OHR	Ohrid	153.72	325	i Pg	PKPdf	04 49 44.1	-0.1
KZN	Kozani	153.74	323	P	PKPab	04 50 09.7	+0.8
ZKR	Zakros	153.74	308	P	PKPdf	04 49 43.1	-1.3
THR6	Thira Island,	153.75	312	P	PKPdf	04 49 42.9	-1.4
THR5	Thira Island,	153.75	312	P	PKPdf	04 49 43.7	-0.6
TREB	Trebinje	153.75	331	eP	PKPbc	04 49 51.8	-0.8
DRME	Dracevica, Mon	153.76	329	eP	PKPbc	04 49 51.5	-1.2
PTL	Penteli	153.87	316	P	PKPbc	04 49 52.6	-0.5
MAKA	Makarska	153.88	333	i P	PKPbc	04 49 52.2	-0.6
STON	Ston	153.92	332	i P	PKPbc	04 49 51.7	-1.2
STON	Ston	153.92	332	eP	PKPbc	04 49 51.6	-1.3
MORI	Morici	153.93	336	i P	PKPbc	04 49 52.5	-0.4
ATHU	Athens Univers	153.97	316	P	PKPbc	04 49 51.1	-2.1
SALO	Salr	154.00	345		PKPbc	04 49 52.7	-0.4
SALO					PKPab	04 50 09.9	+0.1
ATH	Athens Observa	154.01	316	P	PKPbc	04 49 52.2	-1.1
VLY	Voula,Athens	154.03	316	P	PKPbc	04 49 51.8	-1.6
LKR	Lokris	154.06	318	P	PKPdf	04 49 42.7	-2.0
NEST	Nestorio	154.07	324	P	PKPbc	04 49 53.4	-0.1
THL	Klokotos Trika	154.09	321	P	PKPdf	04 49 43.1	-1.6
NPS	Neapolis	154.12	309	P	PKPdf	04 49 44.1	-0.8
ZIRJ	Zirje	154.14	335	i P	PKPbc	04 49 52.7	-0.6
VILL	Villia	154.16	317	P	PKPbc	04 49 52.3	-1.4
AXAR	Agios Charalam	154.21	319	P	PKPdf	04 49 44.0	-0.9
KPRO	Kipourio	154.21	323	P	PKPdf	04 49 43.8	-1.2
AGG	Agios Georgios	154.25	320	P	PKiKP	04 49 52.8	-1.0
LAST	Lasithi	154.26	309	P	PKPdf	04 49 44.3	-0.9
PROD	Prodromos	154.36	318	P	PKiKP	04 49 52.6	-1.5
MAKR	Makrakomi, Fth	154.37	320	P	PKPdf	04 49 44.9	-0.3
LTK	Loutraki	154.46	317	P	PKPdf	04 49 43.5	-1.8
DSF	Desfina	154.50	318	P	PKiKP	04 49 53.3	-1.1
DID	Didima	154.59	316	P	PKiKP	04 49 53.2	-1.4
IDI	Anoyia	154.63	310	P	PKPdf	04 49 44.3	-1.4
IDI	Anoyia	154.63	310	PKP	PKPdf	04 49 45.4	-0.2
	comp=Z,25nm,0.8s						
IDI				PKPbc	PKPbc	04 49 55.2	+0.4
	comp=Z,18nm,0.5s,baz=68,slow=2.2,SNR=2.6						
EVR	Evrytania	154.63	320	P	PKiKP	04 49 54.7	0.0
JAN	Janina	154.70	323	P	PKPdf	04 49 45.0	-0.6
KRND	KRANIDI	154.72	316	P	PKPdf	04 49 45.8	+0.2
KALE	Kalithea	154.76	319	P	PKiKP	04 49 54.1	-0.8
ANX	Ano Chora	154.76	319	P	PKPdf	04 49 44.6	-1.2
SERG	Sergoula	154.79	319	P	PKPdf	04 49 44.9	-0.8
SIVA	Sivas	154.81	309	P	PKPdf	04 49 45.8	0.0
PRMA	PARMA	154.85	345	PKPdf	PKPdf	04 49 46.0	+0.5
PRMA					PKPab	04 50 13.8	+0.4
EFP	Efpalio	154.88	319	P	PKPdf	04 49 45.1	-0.7
KLV	Kalavryta, Ach	154.96	318	P	PKPdf	04 49 44.6	-1.4
PVO	Paravola	154.99	320	P	PKPdf	04 49 45.7	-0.3
SRN	Sarande	155.02	324	P	PKPdf	04 49 44.7	-1.2
VAM	Vamos	155.06	311	P	PKPdf	04 49 45.5	-0.7
IGT	Igoumenitsa	155.08	323	P	PKPdf	04 49 45.0	-1.1
IMMV	Iera Moni Meta	155.19	311	P	PKPdf	04 49 45.7	-0.6
VLX	Vlachokerasia	155.22	317	P	PKPdf	04 49 45.4	-1.1
VLI	Veliai	155.23	315	P	PKPdf	04 49 53.6	+7.2
SSB	Saint Sauveur	155.34	354	PKIKP	PKPdf	04 49 46.0	-0.3
SSB						04 50 14.9	
SSB	Saint Sauveur	155.34	354		PKPdf	04 49 46.0	-0.3
SSB				PKPab	PKPab	04 50 14.9	-0.6
TSLK	Tsoukalades, L	155.37	321	P	PKPdf	04 49 56.5	+10
RLS	Riolos of Patr	155.38	319	P	PKPdf	04 49 47.1	+0.6
LKD2	Lefkada island	155.39	321	P	PKPdf	04 49 45.5	-1.0
GVDS	Gavdos	155.41	310	P	PKPdf	04 49 45.7	-0.9
GVD	Gavdhos	155.42	310	P	PKPdf	04 49 45.6	-1.0
KTHR	Kythira	155.44	314	P	PKPdf	04 49 56.2	+10
EVGI	Lefkada island	155.50	321	P	PKPdf	04 49 56.5	+10
MURB	Monte Urbino	155.59	340		PKPdf	04 49 47.0	+0.3
MURB				PKPab	PKPab	04 50 17.9	+1.1
DYR	Agios Nikonas	155.61	316	P	PKPdf	04 49 45.4	-1.5
ITM	Ithomi	155.63	317	P	PKPdf	04 49 45.4	-1.5
ITM	Ithomi	155.63	317		PKPdf	04 49 47.4	+0.5
ITM				PKPab	PKPab	04 50 17.0	-0.1
FSK	Fiskardo	155.67	321	P	PKPdf	04 49 55.9	+9.1
SGRT	San Giovanni R	155.68	333	PKPdf	PKPdf	04 49 46.5	-0.4
SGRT					PKPab	04 50 17.3	+0.1
OSSC	Osservatorio P	155.75	342	PKPdf	PKPdf	04 49 47.1	+0.2
OSSC					PKPab	04 50 17.3	0.0
VLS	Valsamata	155.83	320	P	PKPdf	04 49 46.0	-1.1
PYL	PYLOS	155.91	316	P	PKPdf	04 49 56.2	+9.0
AQU	L'Aquila	156.09	337	eP	PKPdf	04 49 46.5	-0.9
INTR	Introdacqua	156.21	336		PKPdf	04 49 46.6	-1.0
INTR					PKPab	04 50 19.5	0.0
TIP	Timpagrande	157.25	327	⇓P	PKPdf	04 49 48.1	-0.8
TIP	Timpagrande	157.25	327		PKPdf	04 49 48.9	-0.1
TIP				PKPab	PKPab	04 50 24.8	+0.7
PGAV	Gavieira, Arco	157.34	19	ePKPdf	PKPdf	04 49 50.0	+1.0
PCAB	Cabril	157.65	18	ePKPab	PKPab	04 50 26.2	+0.6
PCAB				i LQ	LQ	04 50 43.0	
PBRG	Braganca	157.91	16	ePKPab	PKPab	04 50 27.8	+1.0
PBRG				i LQ	LQ	04 50 52.9	
PVRL	Vila Real	158.14	18	ePKPdf	PKPdf	04 49 50.6	+0.7
PVRL	Vila Real	158.14	18	ePKPab	PKPab	04 50 28.5	+0.7
PVRL				i LQ	LQ	04 50 53.7	
MVO	Moncorvo	158.44	17	ePKPdf	PKPdf	04 49 50.2	-0.1
MVO	Moncorvo	158.44	17	ePKPab	PKPab	04 50 29.8	+0.7
MVO				i LQ	LQ	04 50 55.2	
PVIS	Viseu	158.60	19	ePKPab	PKPab	04 50 30.1	+0.3
PVIS				i LQ	LQ	04 50 55.2	
COI	Coimbra	158.89	21	ePKPab	PKPab	04 50 31.5	+0.5
MTE	Manteigas	158.99	19	ePKPdf	PKPdf	04 49 51.5	+0.5
MTE	Manteigas	158.99	19	ePKPab	PKPab	04 50 32.0	+0.4
MTE				i LQ	LQ	04 50 57.4	
PCAS	Casmilo, Conde	159.00	21	ePKPdf	PKPdf	04 49 50.7	-0.2
PCAS	Casmilo, Conde	159.00	21	ePKPab	PKPab	04 50 31.8	+0.2
PCAS				i LQ	LQ	04 50 57.2	
PTOM	Tomar	159.42	22	ePKPdf	PKPdf	04 49 51.9	+0.5
PTOM	Tomar	159.42	22	ePKPab	PKPab	04 50 33.8	+0.4
PTOM				i LQ	LQ	04 50 59.0	
PCBR	Castelo Branco	159.53	19	ePKPdf	PKPdf	04 49 52.2	+0.7
PCBR	Castelo Branco	159.53	19	ePKPab	PKPab	04 50 33.5	-0.3
PCBR				i LQ	LQ	04 50 59.4	
PMAFR	Mafra	159.69	24	ePKPab	PKPab	04 50 35.1	+0.5
PMAFR				i LQ	LQ	04 51 00.3	
PMRV	Marv??o	159.93	20	ePKPdf	PKPdf	04 49 51.9	-0.1
PMRV	Marv??o	159.93	20	ePKPab	PKPab	04 50 35.9	+0.3
PMRV				i LQ	LQ	04 51 01.3	
PMTG	Montargil	159.97	22	ePKPab	PKPab	04 50 35.8	0.0
PMTG				i LQ	LQ	04 51 01.2	
ESDC	Sonseca Array	160.58	12	PKP	PKPdf	04 49 52.5	-0.2
	comp=Z,3.1nm,0.7s,baz=329,slow=1.5,SNR=7.0						
ESDC				PKPab	PKPab	04 50 39.0	+0.5
	comp=Z,43nm,1.0s,baz=359,slow=5.3,SNR=36						
ESDC				PP	PP	04 54 23.3	+0.8
	comp=Z,4.0nm,0.9s,baz=350,slow=6.2,SNR=4.4						
PAB	San Pablo	160.62	13	PKP2	PKPab	04 50 38.4	-0.3
PAB						05 49 53.0	
PAB	San Pablo	160.62	13		PKPdf	04 49 53.0	+0.2
PAB				PKPab	PKPab	04 50 38.4	-0.3
PNCL	Nicolau / Gran	160.71	24	ePKPdf	PKPdf	04 49 54.0	+1.2
PNCL	Nicolau / Gran	160.71	24	ePKPab	PKPab	04 50 39.5	+0.4
PNCL				i LQ	LQ	04 51 04.7	
PBEJ	Beja	161.03	23	ePKPdf	PKPdf	04 49 54.0	+0.8
PBEJ	Beja	161.03	23	ePKPab	PKPab	04 50 40.8	+0.3
PBEJ				i LQ	LQ	04 51 06.0	
MESJ	Messejana	161.07	24	ePKPdf	PKPdf	04 49 53.9	+0.7
MESJ	Messejana	161.07	24	ePKPdf	PKPdf	04 49 54.4	+1.2
MESJ	Messejana	161.07	24	ePKPab	PKPab	04 50 41.1	+0.5
MESJ				i LQ	LQ	04 51 06.4	
PTEO	Sao Teotonio	161.13	25	ePKPdf	PKPdf	04 49 54.2	+0.9
PTEO	Sao Teotonio	161.13	25	ePKPab	PKPab	04 50 41.3	+0.4
PTEO				i LQ	LQ	04 51 07.0	
PCVE	Castro Verde	161.32	23	ePKPdf	PKPdf	04 49 54.7	+1.2
PCVE	Castro Verde	161.32	23	ePKPab	PKPab	04 50 42.3	+0.5
PCVE				i LQ	LQ	04 51 07.5	
PFVI	Vila Bisbo	161.44	26	ePKPdf	PKPdf	04 49 55.1	+1.4
PFVI	Vila Bisbo	161.44	26	ePKPab	PKPab	04 50 43.0	+0.7
PVAQ	Vaqueiros	161.64	23	PKPdf	PKPdf	04 49 54.2	+0.4
PVAQ					PKPab	04 50 43.2	+0.1
PVAQ	Vaqueiros	161.64	23	ePKPdf	PKPdf	04 49 55.8	+2.0
PVAQ	Vaqueiros	161.64	23	ePKPab	PKPab	04 50 43.8	+0.6
PVAQ				i LQ	LQ	04 51 09.1	
PBDV	Barranco-do-Ve	161.70	24	ePKPdf	PKPdf	04 49 55.4	+1.4
PBDV				i LQ	LQ	04 51 09.8	
KEST	Kesra	163.41	336	PKP	PKPdf	04 49 55.7	0.0
	comp=Z,8.6nm,0.9s,baz=90,slow=1.4,SNR=8.2						
KEST				PKPab	PKPab	04 50 51.9	+0.7
	comp=Z,48nm,0.8s,baz=252,slow=1.4,SNR=26						
KEST				PP	PP	04 54 39.6	+2.1
	comp=Z,7.8nm,1.1s,baz=335,slow=6.7,SNR=4.0						
LIC	Lamto	164.39	156	ePKIKP	PKPdf	04 49 56.1	-1.0
	comp=Z,157nm,0.9s						
KIC	Kosan Boka	164.62	157	ePKIKP	PKPdf	04 49 56.3	-1.0
	comp=Z,155nm,1.0s						
TIC	Toumodi	164.78	156	ePKIKP	PKPdf	04 49 56.2	-1.3
DBIC	Dimbokro	164.86	156	PKP	PKPdf	04 49 57.1	-0.4
	comp=Z,43nm,1.0s,baz=172,slow=1.3,SNR=25						
DBIC				PKPab	PKPab	04 50 58.9	+1.1
	comp=Z,28nm,0.7s,baz=181,slow=6.9,SNR=12						
DBIC	Dimbokro	164.86	156		PKPdf	04 49 57.1	-0.4
DBIC				PKPab	PKPab	04 50 58.4	+0.6
TOA0	Torodi Ar. Sit	172.47	184		PKPdf	04 50 01.6	-0.7
TOA0				PKPab	PKPab	04 51 31.7	+0.2
TORD	Torodi Ar. Bea	172.47	184	PKP	PKPdf	04 50 01.5	-0.8
	comp=Z,24nm,0.8s,baz=330,slow=0.6,SNR=108						
TORD				PKPab	PKPab	04 51 31.3	-0.2
	comp=Z,10.0nm,0.9s,baz=178,slow=3.5,SNR=7.8						
TORD				PP	PP	04 55 25.7	+3.4
	comp=Z,6.1nm,1.0s,baz=174,slow=4.0,SNR=5.3						
TORD	Torodi Ar. Bea	172.47	184		PKPdf	04 50 01.6	-0.8
TORD				PKPab	PKPab	04 51 31.7	+0.2
TAM	Tamanrasset	175.48	298	PKP2	PKPab	04 51 46.2	+0.9
TAM						05 50 03.2	
TAM	Tamanrasset	175.48	298		PKPdf	04 50 03.2	-0.1
TAM					PKPab	04 51 46.2	+0.9

IDC ***23*** *04:31:26.4±0.8, 20°.66S×178°.78W, h597km±8km, mb4.8/32, mb1 4.9/35, mb1mx4.8/39, mbtmp5.8/35, Error ellipse: s-maj=9.2km s-min=8.2km az=25.0*

NEIC ***23*** *04:31:28.5±1.9, 20°.67S±0°.09×178°.78W±0°.09, h622km±5km, mb5.4/111, Error ellipse: s-maj=13.1km s-min=12.8km az=156.0*

ISC 23 04:31:30.2±0.2**, 20°.70S**±0°.06×**178°.81W**±0°.05**, h645**km**, n254, σ1s.62**/279**, mb5.4**/75**, 1C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	8.51	81	P	P	04 33 30.8	-5.0
RAO	Raoul Island	8.56	175	P	P	04 33 29.7	-6.4
	329nm,0.3s,baz=144,slow=22,SNR=4.3						
RAO	Raoul Island	8.56	175	P	P	04 33 32.1	-4.0
FUNA	Funafuti	12.25	351	P	P	04 34 10.2	-1.1
DZM	Mont Dzumac	13.81	262	eP	P	04 34 23.8	-2.0
	269nm,1.0s						
DZM	Mont Dzumac	13.81	262	P	P	04 34 23.5	-2.2
	24nm,0.3s,baz=121,slow=12,SNR=24						
DZM	Mont Dzumac	13.81	262	P	P	04 34 23.5	-2.2
OUZ	Omahuta	15.94	203	P	P	04 34 45.1	+0.2
OUZ				IAmb	IAmb	04 34 46.6	
	comp=Z,256nm,0.9s						
URZ	Urewera	17.85	191	P	P	04 34 59.4	-3.0
	comp=Z,17nm,0.3s,baz=92,slow=6.2,SNR=3.4						
URZ	Urewera	17.85	191	P	P	04 34 59.4	-3.0
URZ	Urewera	17.85	191	IAmb	IAmb	04 35 08.5	
	comp=Z,98nm,0.7s						
HIZ	Hauiti	18.58	196	P	P	04 35 09.0	0.0
HIZ				IAmb	IAmb	04 35 11.1	
	comp=Z,184nm,1.1s						
HNR	Honiara	23.34	296	P	P	04 35 50.4	-1.4
	comp=Z,176nm,0.6s,baz=237,slow=7.2,SNR=5.9						
HNR	Honiara	23.34	296	P	P	04 35 50.4	-1.4
TARA	Tarawa	23.36	339	P	P	04 35 51.1	-1.0
TBI	Tubuai	27.31	101	eP	P	04 36 26.2	-0.3
	comp=Z,444nm,1.1s						
PAE	Paea	27.75	89	eScP	ScP	04 42 07.4	+1.8
	comp=Z,10.0nm,1.1s						
PPT2	Papeete2	27.77	89	eP	P	04 36 29.8	-0.9
	comp=Z,336nm,1.3s						
PPT2				eScP	ScP	04 42 07.6	+1.8
	comp=Z,113nm,1.1s						
PPT	Papeete	27.77	89	P	P	04 36 29.1	-1.5
	comp=Z,325nm,1.1s,baz=303,slow=5.5,SNR=4.1						
PPT				ScP	ScP	04 42 10.6	+4.9
	comp=Z,98nm,1.0s,baz=291,slow=6.6,SNR=5.1						
PPT	Papeete	27.77	89	P	P	04 36 29.1	-1.5
PPT					ScP	04 42 10.6	+4.9
TIAR	Tiarei	27.99	89	eP	P	04 36 31.6	-0.9
	comp=Z,88nm,1.0s						
TIAR				eScP	ScP	04 42 08.2	+1.8
	comp=Z,19nm,1.0s						
TVO	Taravao	28.04	89	eScP	ScP	04 42 08.4	+1.8
	comp=Z,14nm,1.0s						
EIDS	Eidsvold	28.07	255	P	P	04 36 32.6	-0.4
ARMA	Armidale	28.30	244	P	P	04 36 34.5	-0.6
ARMA				IAmb	IAmb	04 36 36.6	
	comp=Z,67nm,0.7s						
MEH	Mehetia	29.13	90	eP	P	04 36 41.2	-1.1
	comp=Z,85nm,1.0s						
MEH				eScP	ScP	04 42 11.8	+1.7
	comp=Z,25nm,1.2s						
PMOR	Pomariorio Ree	29.93	84	eP	P	04 36 48.3	-0.9
	comp=Z,736nm,1.1s						
PMOR				eScP	ScP	04 42 14.3	+1.6
	comp=Z,108nm,1.1s						
VAH	Vaihoa	30.12	85	eP	P	04 36 49.5	-1.3
	comp=Z,394nm,1.1s						
VAH				eScP	ScP	04 42 15.0	+1.7
	comp=Z,85nm,1.2s						
XMAS	Kiritimati	30.80	45	P	P	04 36 55.2	-1.5
CAN	Canberra	31.77	236	P	P	04 37 04.5	-0.2
CAN				IAmb	IAmb	04 37 06.4	
	comp=Z,76nm,1.2s						
RABL	Rabaul	32.65	296	P	P	04 37 10.4	-1.9
KRVT	Keravat (AS076	32.70	296	P	P	04 37 11.8	-0.9
	comp=Z,233nm,0.6s,baz=273,slow=5.4,SNR=7.9						
CTA	Charters Tower	32.72	265	P	P	04 37 12.3	-0.4
	comp=Z,237nm,0.6s,baz=100,slow=11,SNR=26						
CTA				ScP	ScP	04 42 26.8	+4.6
	comp=Z,47nm,1.2s,baz=130,slow=1.4,SNR=9.1						
CTA	Charters Tower	32.72	265	P	P	04 37 12.3	-0.4
CTA					ScP	04 42 26.8	+4.6
PMG	Port Moresby	34.65	284	P	P	04 37 28.4	-0.5
	comp=Z,255nm,0.8s,baz=92,slow=6.6,SNR=19						
PMG	Port Moresby	34.65	284	P	P	04 37 28.4	-0.5
PMG	Port Moresby	34.65	284	IAmb	IAmb	04 37 30.3	
	comp=Z,330nm,0.9s						
TOO	Toolangi	35.17	234	P	P	04 37 32.8	-0.1
TOO				IAmb	IAmb	04 37 34.0	
	comp=Z,61nm,0.8s						
COEN	Coen	36.84	274	P	P	04 37 46.2	-0.6
STKA	Stephens Creek	37.02	244	P	P	04 37 47.0	-1.0
	comp=Z,74nm,0.5s,baz=87,slow=7.4,SNR=9.6						
STKA	Stephens Creek	37.02	244	P	P	04 37 47.0	-1.0
STKA	Stephens Creek	37.02	244	IAmb	IAmb	04 37 48.5	
	comp=Z,19nm,0.8s						
MANU	Manus Island	37.84	295	P	P	04 37 54.8	-0.1
TAOE	Nuku Hiva Isla	39.09	78	eP	P	04 38 03.6	-1.4
	comp=Z,940nm,1.1s						
TAOE	Nuku Hiva Isla	39.09	78	P	P	04 38 04.4	-0.6
BBOO	Buckleboo	41.78	244	P	P	04 38 25.4	-0.6
WR0	Warramunga Arr	43.63	262	P	P	04 38 39.0	-1.5
AS31	Alice Springs	43.73	257	P	P	04 38 40.3	-0.9
AS31				IAmb	IAmb	04 38 41.5	
	comp=Z,80nm,0.7s						
ASAR	Alice Springs	43.74	257	P	P	04 38 39.7	-1.5
	comp=Z,265nm,0.6s,baz=82,slow=12,SNR=5.0						
ASAR				ScP	ScP	04 43 09.7	+5.0
	comp=Z,16nm,0.7s,baz=103,slow=4.9,SNR=5.4						
ASAR				S	S	04 44 26.4	-0.6
	comp=Z,58nm,0.7s,baz=93,slow=16,SNR=11						
ASAR				PKPPKP	P'P'df	05 10 12.5	-3.3
	comp=Z,2.9nm,1.1s,baz=280,slow=3.8,SNR=8.1						
ASAR	Alice Springs	43.74	257	P	P	04 38 39.7	-1.5
WRAB	Tennant Creek	43.81	262	P	P	04 38 40.3	-1.6
WRA	Warramunga Arr	43.82	262	P	P	04 38 40.8	-1.1
	comp=Z,113nm,0.3s,baz=97,slow=7.7,SNR=27						
WRA				ScP	ScP	04 43 09.6	+4.6
	comp=Z,13nm,0.8s,baz=99,slow=4.0,SNR=8.3						
WRA				S	S	04 44 27.6	-0.8
	comp=Z,11nm,0.6s,baz=97,slow=14,SNR=3.7						
WRA				ScS	ScS	04 47 32.5	+2.6
	comp=Z,7.2nm,1.0s,baz=93,slow=7.6,SNR=7.2						
WRA	Warramunga Arr	43.82	262	P	P	04 38 40.8	-1.1
WRA	Warramunga Arr	43.82	262		ScP	04 43 09.6	+4.6
WRA	Warramunga Arr	43.82	262	IAmb	IAmb	04 38 42.2	
	comp=Z,20nm,0.5s						
KHLU	Kahalu`u	45.90	31	P	P	04 38 57.2	-0.5
PUH	Pauahi	46.04	32	P	P	04 38 58.4	-0.4
KEKH	Kekaha	46.34	25	P	P	04 39 01.0	+0.2
KHLH	Kahului Airpor	46.77	29	P	P	04 39 04.7	+0.6
MTN	Manton Dam	48.41	271	P	P	04 39 15.5	-0.9
GUMO	Guam	49.35	311	P	P	04 39 22.3	-0.9
	comp=Z,202nm,0.7s,baz=167,slow=13,SNR=5.8						
GUMO				ScP	ScP	04 43 32.0	+3.8
	comp=Z,133nm,1.1s,baz=260,slow=8.3,SNR=4.0						
GUMO	Guam	49.35	311	P	P	04 39 23.4	+0.2
GUMO	Guam	49.35	311		ScP	04 43 32.0	+3.8
SAUI	Saumlaki	49.77	277	IAmb	IAmb	04 39 27.2	
	comp=Z,484nm,1.0s						
KNRA	Kununurra	49.89	267	P	P	04 39 26.9	-0.3
FAKI	Fak Fak	50.81	284	P	P	04 39 32.9	-1.0
FITZ	Fitzroy Crossi	52.25	263	P	P	04 39 43.9	-0.3
	comp=Z,80nm,0.5s						
FITZ				ScP	ScP	04 43 45.6	+4.8
	comp=Z,11nm,0.6s,baz=111,slow=4.7,SNR=4.0						
FITZ				S	S	04 46 28.6	+5.4
	comp=Z,9.9nm,1.1s,baz=150,slow=21,SNR=3.1						
FITZ	Fitzroy Crossi	52.25	263	P	P	04 39 43.9	-0.3
FITZ	Fitzroy Crossi	52.25	263		ScP	04 43 45.6	+4.8
FITZ	Fitzroy Crossi	52.25	263	IAmb	IAmb	04 39 45.3	
	comp=Z,102nm,0.7s						
TNTI	Ternate	56.78	285	P	P	04 40 15.5	-0.2
TNTI				IAmb	IAmb	04 40 17.4	
	comp=Z,289nm,1.1s						
NWAO	Narrogin (SRO)	57.60	243	P	P	04 40 20.0	-1.1
SBA	Scott Base	57.63	184	P	P	04 40 21.4	+1.1
VNDA	Vanda	57.65	185	P	P	04 40 21.5	+1.0
	comp=Z,17nm,0.8s,baz=3.7,slow=6.9,SNR=12						
VNDA				ScP	ScP	04 44 07.3	+3.9
	comp=Z,5.3nm,1.0s,baz=354,slow=4.8,SNR=3.6						
VNDA	Vanda	57.65	185	P	P	04 40 21.9	+1.4
JCJ	Chichijima	60.70	320	P	P	04 40 41.1	-0.4
	comp=Z,123nm,0.7s,baz=242,slow=15,SNR=4.2						
JCJ	Chichijima	60.70	320	P	P	04 40 41.1	-0.4
GIRL	Giralia	61.77	255	P	P	04 40 48.5	-0.1
GIRL				IAmb	IAmb	04 40 49.9	
	comp=Z,200nm,0.8s						
RPN	Rapa Nui	63.13	111	P	P	04 40 57.1	-0.2
	comp=Z,79nm,0.8s,baz=146,slow=20,SNR=7.0						
RPN	Rapa Nui	63.13	111	P	P	04 40 57.1	-0.2
RPN	Rapa Nui	63.13	111	IAmb	IAmb	04 41 00.0	
	comp=Z,419nm,1.4s						
QSPA	South Pole Qui	69.37	180	P	P	04 41 35.6	+0.5
	comp=Z,48nm,0.6s,baz=327,slow=1.7,SNR=16						
QSPA	South Pole Qui	69.37	180	P	P	04 41 35.6	+0.5
QSPA	South Pole Qui	69.37	180	IAmb	IAmb	04 41 37.2	
	comp=Z,90nm,1.0s						
JOW	Kunigami	69.72	311	P	P	04 41 38.1	+0.4
JOW				IAmb	IAmb	04 41 39.5	
	comp=Z,140nm,1.5s						
MJAR	Matsushiro Arr	69.92	324	P	P	04 41 38.2	-0.5
	comp=Z,40nm,0.9s,baz=161,slow=6.4,SNR=11						
MJAR	Matsushiro Arr	69.92	324	P	P	04 41 38.2	-0.5
MJAR	Matsushiro Arr	69.92	324	IAmb	IAmb	04 41 42.6	
	comp=Z,33nm,1.3s						
CISI	Cisompet, Garu	71.85	269	P	P	04 41 49.1	-1.4
KSM	Kuching	72.69	278	P	P	04 41 55.4	+0.1
ASAJ	Asahikawa	73.54	332	P	P	04 41 59.8	+0.5
	comp=Z,95nm,0.9s,baz=278,slow=3.2,SNR=7.0						
YHNB	Yeheng	73.60	305	P	P	04 42 00.2	0.0
PEA0B	Petropavlovsk-	76.27	346	P	P	04 42 14.5	+0.3
PEA0B				IAmb	IAmb	04 42 15.6	

	comp=Z,159nm,0.8s						
PETK	Petropavlovsk-	76.27	346	P	P	04 42 14.9	+0.6
	comp=Z,80nm,0.7s,baz=151,slow=6.8,SNR=12						
PETK	Petropavlovsk-	76.27	346	P	P	04 42 14.9	+0.6
KSRS	Korea Array	76.54	319	P	P	04 42 17.3	+1.2
	comp=Z,52nm,1.2s,baz=138,slow=6.1,SNR=9.8						
KSRS	Korea Array	76.54	319	P	P	04 42 17.3	+1.2
KSAR	Wonju Array Be	76.55	319	P	P	04 42 17.2	+1.0
INCN	Inchon	77.35	318	P	P	04 42 21.9	+1.4
INCN				IAmb	IAmb	04 42 22.7	
	comp=Z,127nm,1.2s						
SAO	San Andreas Ge	78.69	44	P	P	04 42 28.7	+1.0
SAO				IAmb	IAmb	04 42 29.6	
	comp=Z,87nm,1.0s						
USRK	Ussuriysk Ar.	78.70	326	P	P	04 42 29.0	+1.4
	comp=Z,94nm,1.0s,baz=131,slow=3.5,SNR=13						
USRK	Ussuriysk Ar.	78.70	326	P	P	04 42 29.0	+1.4
MYKOM	Kota Tinggi	78.80	276	P	P	04 42 29.4	+0.7
PAGB	Antelope Grade	78.87	45	P	P	04 42 30.4	+1.7
OSI	Osito Audit: C	79.26	47	IAmb	IAmb	04 42 32.7	
	comp=Z,46nm,1.1s						
BAR	Barrett	79.62	49	P	P	04 42 33.2	+0.5
KHMM	Horse Mountain	79.78	39	IAmb	IAmb	04 42 35.9	
	comp=Z,76nm,0.6s						
LPIG	La Paz	80.16	60	P	P	04 42 35.9	+0.3
	comp=Z,28nm,0.3s,baz=37,slow=3.4,SNR=7.8						
SRIG	Santa Rosalia	80.16	56	IAmb	IAmb	04 42 38.0	
	comp=Z,280nm,1.4s						
MDJ	Mudanjiang	80.25	325	P	P	04 42 37.1	+1.5
MDJ				IAmb	IAmb	04 42 38.0	
	comp=Z,135nm,1.1s						
PFO	Pinyon Flats O	80.27	49	P	P	04 42 37.2	+1.0
	comp=Z,21nm,0.9s,baz=235,slow=4.7,SNR=12						
PFO	Pinyon Flats O	80.27	49	P	P	04 42 37.2	+1.0
PFO	Pinyon Flats O	80.27	49	IAmb	IAmb	04 42 37.9	
	comp=Z,37nm,1.0s						
MAW	Mawson	81.12	200	P	P	04 42 40.8	+1.0
	comp=Z,14nm,0.6s,baz=124,slow=9.2,SNR=6.9						
MAW	Mawson	81.12	200	P	P	04 42 40.8	+1.0
MAW	Mawson	81.12	200	IAmb	IAmb	04 42 43.5	
	comp=Z,3.4nm,0.7s						
GLA	Glamis	81.13	50	P	P	04 42 41.6	+1.2
GLA				IAmb	IAmb	04 42 42.8	
	comp=Z,94nm,0.8s						
PMSA	Palmer Station	81.41	157	P	P	04 42 42.1	+0.9
	comp=Z,40nm,0.6s,baz=227,slow=3.8,SNR=8.8						
PMSA	Palmer Station	81.41	157	P	P	04 42 42.1	+0.9
PMSA	Palmer Station	81.41	157	IAmb	IAmb	04 42 43.4	
	comp=Z,74nm,0.8s						
NVAR	Mina Array Bea	81.69	44	P	P	04 42 44.5	+1.1
	comp=Z,39nm,0.5s,baz=229,slow=7.2,SNR=66						
NVAR				PKKPbc	PKKPbc	05 01 11.6	+0.6
	comp=Z,1.3nm,0.7s,baz=76,slow=3.9,SNR=5.5						
NVAR				PKPPKP	P'P'df	05 09 21.5	+8.0
	comp=Z,1.3nm,0.8s,baz=116,slow=1.4,SNR=4.3						
NVAR	Mina Array Bea	81.69	44	P	P	04 42 44.5	+1.1
HSIG		81.98	55	P	P	04 42 45.5	+0.7
HSIG				IAmb	IAmb	04 42 46.5	
	comp=Z,69nm,0.6s						
KULM	Kulim	83.05	278	P	P	04 42 51.2	+0.7
RPSI	Rantau Prapat	83.72	275	P	P	04 42 53.1	-0.7
RPSI				IAmb	IAmb	04 42 54.8	
	comp=Z,177nm,1.3s						
MA2	Magadan	83.78	345	P	P	04 42 52.6	-0.4
	comp=Z,40nm,0.8s,baz=147,slow=11,SNR=4.2						
MA2	Magadan	83.78	345	P	P	04 42 52.6	-0.4
MA2	Magadan	83.78	345	IAmb	IAmb	04 42 53.9	
	comp=Z,63nm,0.9s						
U15A	North Rim	84.66	48	P	P	04 42 59.4	+1.2
U15A				IAmb	IAmb	04 43 00.7	
	comp=Z,104nm,0.6s						
BJT	Baijiatuau	85.50	316	P	P	04 43 02.4	+0.6
BJT				IAmb	IAmb	04 43 03.2	
	comp=Z,78nm,1.2s						
ENH	Enshi	85.53	305	P	P	04 43 03.2	+1.0
MOIG	Morelia	85.90	67	P	P	04 43 04.7	+0.2
MOIG				IAmb	IAmb	04 43 05.8	
	comp=Z,72nm,0.8s						
SYO	Syowa Base	86.37	193	*e*SH	SKSac	04 52 19.0	-12
SYO	Syowa Base	86.37	193	⇓*i*P	P	04 43 03.0	-2.4
SYO	Syowa Base	86.37	193	⇑*e*PcP	PcP	04 43 06.4	-0.6
MPU	Maple Canyon	86.91	45	P	P	04 43 09.2	+0.4
PBKT	Sadao Pong	86.97	289	P	P	04 43 10.2	+1.0
PBKT				IAmb	IAmb	04 43 12.3	
	comp=Z,138nm,1.3s						
TLIG	Tlapa	87.36	70	P	P	04 43 11.9	+0.7
TLIG				IAmb	IAmb	04 43 14.2	
	comp=Z,136nm,1.4s						
Y22D	IRIS PASSCAL I	87.38	52	IAmb	IAmb	04 43 13.1	
	comp=Z,120nm,1.3s						
UNM	Universidad Na	87.50	68	P	P	04 43 13.2	+1.1
XAN	Xi'an	87.65	308	P	P	04 43 13.0	+0.9
PV05	Paradox Valley	87.68	48	IAmb	IAmb	04 43 14.2	
	comp=Z,37nm,1.0s						
HWUT	Hardware Ranch	87.76	44	P	P	04 43 12.7	0.0
TXAR	Lajitas Array	87.80	58	P	P	04 43 14.5	+1.5
	comp=Z,36nm,0.8s,baz=237,slow=2.6,SNR=31						
TXAR				PKKPbc	PKKPbc	05 00 57.2	+1.2
	comp=Z,1.1nm,0.6s,baz=89,slow=2.0,SNR=4.3						
TXAR	Lajitas Array	87.80	58	P	P	04 43 14.5	+1.5
SNAA	Sanae	87.83	179	P	P	04 43 12.6	+0.2
PV10	Paradox Valley	87.87	48	IAmb	IAmb	04 43 15.8	
	comp=Z,34nm,0.8s						
PV18	Skein Mesa, Pa	87.89	48	IAmb	IAmb	04 43 15.2	
	comp=Z,84nm,1.5s						
PV02	Paradox Valley	88.00	48	P	P	04 43 14.2	+0.3
PV02				IAmb	IAmb	04 43 15.9	
	comp=Z,74nm,1.5s						
PAYG	Puerto Ayora	88.38	90	P	P	04 43 18.3	+2.3
PAYG				IAmb	IAmb	04 43 19.4	
	comp=Z,107nm,1.4s						
HIA	Hailar	88.42	325	P	P	04 43 15.8	+0.5
ILAR	Eielson Array	88.67	13	P	P	04 43 15.3	-0.8
	comp=Z,22nm,0.5s,baz=218,slow=5.4,SNR=6.1						
ILAR				PKiKP	PKiKP	04 48 10.3	-0.8
	comp=Z,1.4nm,0.5s,baz=269,slow=3.0,SNR=8.9						
ILAR				PKKPbc	PKKPdf	05 00 52.0	+1.8
	comp=Z,0.7nm,0.6s,baz=357,slow=2.1,SNR=6.3						
ILAR	Eielson Array	88.67	13	P	P	04 43 15.3	-0.8
BILL	Bilibino	89.16	354	P	P	04 43 19.2	+0.9
CM31	Chiang Mai Arr	89.47	290	P	P	04 43 22.6	+1.8
CMAR	Chiang Mai Arr	89.47	290	P	P	04 43 22.4	+1.5
	comp=Z,66nm,1.1s,baz=122,slow=2.8,SNR=5.6						
CMAR				PKKPbc	PKKPbc	05 00 52.5	+1.0
	comp=Z,3.5nm,0.6s,baz=282,slow=4.5,SNR=7.2						
CMAR	Chiang Mai Arr	89.47	290	P	P	04 43 22.4	+1.5
GO06	Curarrehue	89.58	132	P	P	04 43 22.0	+0.8
GO06				IAmb	IAmb	04 43 24.2	
	comp=Z,41nm,1.1s						
CHTO	Chiang Mai	89.60	290	P	P	04 43 22.5	+1.0
CHTO				IAmb	IAmb	04 43 24.2	
	comp=Z,80nm,1.1s						
PDAR	Pinedale Array	89.62	44	P	P	04 43 21.7	+0.3
	comp=Z,29nm,0.6s,baz=210,slow=3.8,SNR=44						
PDAR				PKKPbc	PKKPbc	05 00 51.6	-0.7
	comp=Z,1.5nm,0.8s,baz=73,slow=3.4,SNR=5.4						
PDAR	Pinedale Array	89.62	44	P	P	04 43 21.7	+0.3
PLCA	Paso Flores	89.69	134	P	P	04 43 22.6	+1.0
	comp=Z,16nm,0.6s,baz=244,slow=4.0,SNR=12						
PLCA				PKKPbc	PKKPbc	05 00 51.0	-0.8
	comp=Z,2.6nm,1.0s,baz=53,slow=4.6,SNR=4.7						
PLCA	Paso Flores	89.69	134	P	P	04 43 22.6	+1.0
PLCA	Paso Flores	89.69	134	IAmb	IAmb	04 43 23.3	
	comp=Z,23nm,0.8s						
GO05	Huala	91.29	128	P	P	04 43 29.2	+0.2
GO05				IAmb	IAmb	04 43 30.6	
	comp=Z,84nm,1.4s						
JCT	Junction City	91.33	58	IAmb	IAmb	04 43 30.0	
	comp=Z,22nm,0.8s						
AMTX	Amarillo	91.64	53	IAmb	IAmb	04 43 31.4	
	comp=Z,15nm,0.8s						
YAK	Yakutsk	92.01	338	P	P	04 43 31.5	0.0
ABTX	Abilene, Hawle	92.29	56	IAmb	IAmb	04 43 35.2	
	comp=Z,32nm,0.7s						
CCIG	Comitan	92.62	74	IAmb	IAmb	04 43 37.3	
	comp=Z,43nm,1.5s						
LAO	LASA Array	93.55	41	IAmb	IAmb	04 43 41.0	
	comp=Z,22nm,0.7s						
HKT	Hockley	94.31	60	P	P	04 43 43.5	+0.8
X34A	Smith Ranch, M	94.44	55	IAmb	IAmb	04 43 46.1	
	comp=Z,42nm,1.3s						
CBKS	Cedar Bluff	94.63	50	IAmb	IAmb	04 43 46.5	
	comp=Z,48nm,1.1s						
INK	Inuvik	94.66	15	P	P	04 43 41.9	-1.6
	comp=Z,6.9nm,0.5s,baz=230,slow=4.0,SNR=11						
INK	Inuvik	94.66	15	P	P	04 43 41.9	-1.6
INK	Inuvik	94.66	15	IAmb	IAmb	04 43 45.6	
	comp=Z,8.3nm,0.7s						
SONM	Songino Array	95.41	319	PKKPbc	PKKPbc	05 00 36.6	-1.0
	comp=Z,1.2nm,0.6s,baz=280,slow=1.6,SNR=4.2						
DGMT	Dagmar	95.56	40	IAmb	IAmb	04 43 49.5	
	comp=Z,22nm,0.7s						
K31A	O'Neill	96.76	47	IAmb	IAmb	04 43 54.6	
	comp=Z,23nm,0.7s						
YKA	Yellowknife Ar	97.01	25	P	P	04 43 54.1	-0.1
	comp=Z,4.1nm,0.6s,baz=236,slow=4.4,SNR=13						
YKA				PKKPbc	PKKPdf	05 00 39.0	+4.1
	comp=Z,2.1nm,1.1s,baz=61,slow=4.8,SNR=6.4						
YKA	Yellowknife Ar	97.01	25	P	P	04 43 54.1	-0.1
ULM	Lac du Bonnet	101.27	41	P	Pdif	04 44 13.1	-0.3
	comp=Z,1.9nm,0.5s,baz=289,slow=4.3,SNR=6.2						
ULM				PKiKP	PP	04 48 35.0	+1.2
	comp=Z,2.1nm,0.5s,baz=276,slow=4.2,SNR=4.4						
ULM	Lac du Bonnet	101.27	41		Pdif	04 44 13.1	-0.3
LPAZ	La Paz	102.68	113	P	Pdif	04 44 21.8	+0.5
	comp=Z,2.9nm,0.6s,baz=212,slow=3.5,SNR=6.4						
LPAZ	La Paz	102.68	113		Pdif	04 44 21.8	+0.5
CPUP	Villa Florida	106.48	127	PKiKP	PKiKP	04 48 42.8	-1.2
	comp=Z,2.7nm,1.1s,baz=261,slow=2.5,SNR=4.0						
CPUP				PKKPbc	PKKPbc	05 00 05.8	+0.1
	comp=Z,3.7nm,1.0s,baz=54,slow=6.7,SNR=3.4						
ZALV	Zalesovo Beam	110.17	321	PKiKP	PKiKP	04 48 49.0	-1.0
	comp=Z,15nm,0.6s,baz=125,slow=0.8,SNR=12						
NRIK	Noril'sk	110.46	338	PKiKP	PKiKP	04 48 49.2	-0.9
	comp=Z,4.5nm,0.5s,baz=94,slow=9.4,SNR=3.8						
MKAR	Makanchi Array	110.78	313	Pdiff	Pdif	04 44 57.8	+1.9
	comp=Z,2.7nm,1.0s,baz=106,slow=4.9,SNR=4.5						
MKAR				PKiKP	PKiKP	04 48 50.7	-0.8
	comp=Z,6.6nm,0.5s,baz=135,slow=0.8,SNR=12						
MKAR				PKKPbc	PKKPbc	04 59 52.0	-0.5
	comp=Z,2.5nm,0.6s,baz=272,slow=4.0,SNR=7.6						
MKAR				PKKPab	PKKPab	05 00 04.1	+0.6
	comp=Z,2.0nm,0.6s,baz=297,slow=2.9,SNR=4.3						
MKAR	Makanchi Array	110.78	313		Pdif	04 44 57.8	+1.9
KURK	Kurchatov	113.63	317		PKiKP	04 48 55.8	-0.9
KURK					PKKPbc	04 59 42.5	-0.7
KURBB	Kurchatov Arra	113.68	317	PKiKP	PKiKP	04 48 55.8	-1.0
	comp=Z,10nm,0.6s,baz=112,slow=2.0,SNR=9.3						
KURBB				PKKPbc	PKKPbc	04 59 42.5	-0.5
	comp=Z,2.4nm,0.7s,baz=274,slow=4.4,SNR=8.3						
KURBB				PKKPab	PKKPab	04 59 51.4	+0.8
	comp=Z,2.6nm,0.8s,baz=284,slow=5.4,SNR=6.2						
AAK	Ala-Archa	115.83	308	PKP	PKPdf	04 49 01.0	-0.4
	comp=Z,6.2nm,0.8s,baz=111,slow=6.4,SNR=4.4						
AAK				PKKPbc	PKKPab	04 59 39.7	-1.8
	comp=Z,5.4nm,0.8s,baz=233,slow=3.6,SNR=6.4						
AAK	Ala-Archa	115.83	308		PKPdf	04 49 01.1	-0.4
SJG	San Juan	116.85	80		PKPdf	04 49 03.1	-0.7
GCPR	Guaynabo City	116.96	79		PKPdf	04 49 03.0	-1.0
BVAR	Borovoye Array	118.74	320	PKP	PKPdf	04 49 05.9	-0.5
	comp=Z,33nm,0.5s,baz=129,slow=1.6,SNR=24						
BVAR				PKKPbc	PKKPab	04 59 28.5	+0.3
	comp=Z,0.6nm,0.5s,baz=270,slow=1.7,SNR=4.1						
SCHQ	Schefferville	119.29	38	PKP	PKPdf	04 49 06.3	-1.2
	comp=Z,3.7nm,0.5s,baz=272,slow=4.7,SNR=11						
SCHQ	Schefferville	119.29	38		PKPdf	04 49 06.3	-1.2
BDFB	Brasilia	119.68	123	PKP	PKPdf	04 49 09.1	-0.5
	comp=Z,5.6nm,0.7s,baz=251,slow=3.1,SNR=7.0						
BDFB	Brasilia	119.68	123		PKPdf	04 49 09.1	-0.5
SPITS	Spitsbergen Ar	122.01	356	PKP	PKPdf	04 49 12.1	-0.1
	comp=Z,30nm,0.6s,baz=116,slow=1.9,SNR=17						
ILULI	Ilulissat	122.18	19	*i*	PKPdf	04 49 12.4	-0.2
DAG	Danmarks Havn	123.01	5	*i*	PKPdf	04 49 12.7	-1.3
SFJD	Kangerlussuaq	123.41	22	*i*	PKPdf	04 49 14.6	-0.4
ARU	Arti	124.93	325	PKP	PKPdf	04 49 18.4	+0.2
	comp=Z,26nm,0.5s,baz=67,slow=1.5,SNR=17						
ARU				PKKPbc	PKKPbc	04 59 02.1	-0.6
	comp=Z,1.5nm,0.5s,baz=278,slow=5.5,SNR=6.3						
ARU	Arti	124.93	325		PKPdf	04 49 18.4	+0.2
BOSA	Boshof	125.75	206	PKP	PKiKP	04 49 21.7	+0.3
	comp=Z,4.7nm,0.6s,baz=176,slow=2.1,SNR=7.5						
BOSA				PKKPbc	PKKPbc	04 58 59.5	-0.7
	comp=Z,2.0nm,0.5s,baz=330,slow=6.1,SNR=6.8						
BOSA	Boshof	125.75	206		PKiKP	04 49 21.7	+0.3
AKTO	Aktyubinsk	126.71	318	PKP	PKPdf	04 49 22.1	+0.3
	comp=Z,20nm,0.6s,baz=109,slow=5.3,SNR=10						
AKTO				PKKPbc	PKKPab	04 58 54.5	+0.8
	comp=Z,2.1nm,0.5s,baz=175,slow=3.1,SNR=4.6						
AKTO	Aktyubinsk	126.71	318		PKPdf	04 49 22.1	+0.3
WSAR	Wadi Sarin	126.97	284	PKP	PKiKP	04 49 23.5	-0.3
	comp=Z,4.8nm,0.4s,baz=128,slow=3.2,SNR=3.8						
GEYT	Alibeck	128.25	302	PKP	PKiKP	04 49 25.9	-0.1
	comp=Z,14nm,0.7s,baz=260,slow=2.7,SNR=7.3						
GEYT				SKPbc	SKiKP	04 51 49.6	-12
	comp=Z,23nm,1.1s,baz=318,slow=2.0,SNR=6.3						
GEYT	Alibeck	128.25	302		PKiKP	04 49 25.9	-0.1
GEYT					pPKPdf	04 51 49.6	-2.1
SCO	Scoresbysund	128.34	10	*i*	PKiKP	04 49 24.8	-0.2
KIRV	Kirov	128.76	330	PKP	PKiKP	04 49 26.0	-0.2
	comp=Z,46nm,0.5s,baz=88,slow=2.5,SNR=12						
KIRV				SKPbc	SKiKP	04 51 50.8	-11
	comp=Z,26nm,0.6s,baz=63,slow=2.3,SNR=5.7						
KIRV	Kirov	128.76	330		PKiKP	04 49 26.0	-0.2
KIRV					pPKPdf	04 51 50.8	-1.6
ARCES	ARCESS Array B	128.97	349	PKP	PKPdf	04 49 25.5	-0.1
	comp=Z,29nm,0.5s,baz=9.3,slow=1.3,SNR=21						
ARCES				SKPbc	SKiKP	04 51 51.9	-11
	comp=Z,7.8nm,0.7s,baz=28,slow=2.9,SNR=4.4						
ARCES				PKKP	PKKPdf	04 59 32.5	-1.8
	comp=Z,1.7nm,0.8s,baz=212,slow=1.3,SNR=4.9						
ARCES	ARCESS Array B	128.97	349		PKPdf	04 49 25.5	-0.1
FINES	FINESS Array B	135.75	343	PKP	PKPdf	04 49 38.5	0.0
	comp=Z,15nm,0.5s,baz=29,slow=3.7,SNR=11						
FINES				SKPbc	SKiKP	04 52 14.8	-1.6
	comp=Z,48nm,0.8s,baz=46,slow=5.5,SNR=13						
FINES	FINESS Array B	135.75	343		PKPdf	04 49 38.5	0.0
KBZ	Khabaz	138.48	313	PKP	PKiKP	04 49 45.5	-0.9
	comp=Z,11nm,0.9s,baz=32,slow=1.3,SNR=4.0						
KBZ				SKPbc	SKiKP	04 52 22.8	+0.2
	comp=Z,7.7nm,1.1s,baz=83,slow=2.7,SNR=3.8						
KMBO	Kilima Mbogo	138.58	243	PKP	PKiKP	04 49 47.4	-0.5
	comp=Z,7.0nm,0.7s,baz=83,slow=3.2,SNR=4.6						
KMBO				SKPbc	SKiKP	04 52 25.4	+1.3
	comp=Z,18nm,1.1s,baz=63,slow=2.2,SNR=8.6						
KMBO	Kilima Mbogo	138.58	243		PKiKP	04 49 47.4	-0.5
ATD	Arta Tunnel	139.06	264	SKPbc	SKiKP	04 52 28.1	+3.4
	comp=Z,24nm,0.8s,baz=64,slow=2.1,SNR=13						
NOA	NORSAR Array B	139.08	353	PKhKP	PKPpre	04 49 36.3	
	comp=Z,13nm,0.8s,baz=14,slow=4.5,SNR=6.2						
NOA				PKP	PKiKP	04 49 46.5	-0.7
	comp=Z,5.7nm,0.7s,baz=14,slow=4.1,SNR=6.5						
NOA				SKPbc	SKiKP	04 52 24.9	+1.6
	comp=Z,22nm,1.0s,baz=14,slow=4.4,SNR=5.1						
AKASG	Malin Array Be	142.81	330	PKhKP	PKPpre	04 49 48.8	
	comp=Z,103nm,0.5s,baz=44,slow=4.2,SNR=22						
AKASG				SKPbc	SKiKP	04 52 34.1	+2.8
	comp=Z,31nm,1.1s,baz=43,slow=3.0,SNR=8.5						
AKASG				SKKPbc	SKKPab	05 00 46.7	0.0
	comp=Z,2.0nm,0.9s,baz=242,slow=4.6,SNR=5.7						
SHEL	Horse Pasture	142.94	169		PKPdf	04 49 52.6	-0.3
ASF	Jabal al Asfar	146.19	297	PKPbc	PKPbc	04 50 00.6	0.0
	comp=Z,54nm,0.8s,baz=360,slow=1.9,SNR=7.9						
BRTR	Keskin Array B	146.41	312	PKPbc	PKPbc	04 50 01.2	+0.3
	comp=Z,37nm,0.6s,baz=144,slow=5.8,SNR=11						
BRTR				SKKPbc	SKKPbc	05 00 33.8	+1.5
	comp=Z,3.6nm,1.0s,baz=242,slow=2.7,SNR=6.8						
BRTR	Keskin Array B	146.41	312		PKPbc	04 50 01.2	+0.3
MMAI	Mount Meron Ar	147.25	299	PKPbc	PKiKP	04 50 04.5	-0.4
	comp=Z,66nm,0.5s,baz=69,slow=5.7,SNR=15						
MMAI				PKPab	PKPab	04 50 09.3	+1.9
	comp=Z,45nm,0.6s,baz=54,slow=4.2,SNR=5.8						
OSTC	Ostas	147.93	342	*e*x	PKPbc	04 50 04.9	+0.5
MLR	Muntele Rosu	147.97	326	PKPbc	PKPbc	04 50 05.0	+0.2
	comp=Z,63nm,0.6s,baz=356,slow=12,SNR=5.5						
MLR	Muntele Rosu	147.97	326		PKPbc	04 50 05.0	+0.2
CLL	Collm	148.08	346	*i* PKPbc	PKiKP	04 50 06.3	+0.4
	comp=Z,171nm,1.0s						
CLL				*e*PKPab	PKPab	04 50 11.0	+0.9
	comp=Z,71nm,0.7s						
CLL				*e*		04 50 17.0	
CLL				*e*pPKPbc	pPKPdf	04 52 24.0	-4.0
CLL				*e*(SKPdf)		04 52 33.0	
DPC	Dobruska-Polom	148.08	342	*e*x	PKPbc	04 50 05.4	+0.6
KRLC	Kraliky	148.18	341	*e*x	PKPbc	04 50 05.6	+0.5
EIL	Elat	148.26	293	PKPbc	PKiKP	04 50 06.6	-0.4
	comp=Z,56nm,0.7s,baz=299,slow=2.4,SNR=4.6						
EIL				PKPab	PKPab	04 50 12.6	+0.9
	comp=Z,41nm,0.7s,baz=347,slow=5.3,SNR=4.1						
EIL	Elat	148.26	293		PKiKP	04 50 06.6	-0.4
EIL					PKPab	04 50 12.6	+0.9
PVCC	Panska Ves	148.41	344	*e*x	PKPbc	04 50 06.5	+0.9
PRA	Prague	148.86	343	*e*x	PKPbc	04 50 06.7	0.0
NKC	Novy Kostel	149.21	346	*e*x	PKPbc	04 50 07.2	-0.3
KHC	Kasperske Hory	149.95	344	*e*x	PKPbc	04 50 09.4	+0.1
KHC				*e*x	x	04 50 19.0	
KHC				*e*pPKP	pPKPdf	04 52 05.0	-26
KHC				*e*x	x	04 52 27.0	
GERES	GERESS Array B	150.18	343	PKPbc	PKiKP	04 50 10.2	-0.2
	comp=Z,28nm,0.6s,baz=22,slow=2.7,SNR=21						
GERES	GERESS Array B	150.18	343		PKiKP	04 50 10.2	-0.2
ESDC	Sonseca Array	160.57	12	PKP	PKPdf	04 50 17.7	-0.3
	comp=Z,2.4nm,0.8s,baz=341,slow=3.1,SNR=4.1						
ESDC				PKPab	PKPab	04 51 03.6	-0.4
	comp=Z,6.8nm,0.7s,baz=348,slow=5.4,SNR=7.0						
ESDC	Sonseca Array	160.57	12		PKPdf	04 50 17.7	-0.3
ESDC					PKPab	04 51 03.6	-0.4
KEST	Kesra	163.40	336	PKPab	PKPab	04 51 16.2	-0.4
	comp=Z,25nm,0.9s,baz=184,slow=5.3,SNR=4.9						
KEST	Kesra	163.40	336		PKPab	04 51 16.2	-0.4
DBIC	Dimbokro	164.87	156	PKP	PKPdf	04 50 22.6	-0.2
	comp=Z,12nm,0.6s,baz=111,slow=1.6,SNR=12						
DBIC				PKPab	PKPab	04 51 24.2	+0.8
	comp=Z,17nm,0.6s,baz=156,slow=7.5,SNR=6.9						
DBIC	Dimbokro	164.87	156		PKPdf	04 50 22.6	-0.2
DBIC					PKPab	04 51 24.2	+0.8
TORD	Torodi Ar. Bea	172.48	184	PKP	PKPdf	04 50 26.9	-0.6
	comp=Z,9.2nm,0.7s,baz=35,slow=0.3,SNR=9.6						
TORD				PKPab	PKPab	04 51 57.9	+0.9
	comp=Z,5.7nm,0.6s,baz=173,slow=2.9,SNR=7.4						
TORD	Torodi Ar. Bea	172.48	184		PKPdf	04 50 26.9	-0.6
TORD					PKPab	04 51 57.9	+0.9

DJA 23 04:37:50.1±0.9**, 9°S**±6°×**12°4E**±°**, h61**^{km}±12^{km}**, M4.0**/3**, mB4.7**/1**, mb4.5**/1**, MLv3.7**/3**, Mw(mB)3.9**/1**, Mwp4.9**/1**,**
Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SOEI	Soe	0.34	158	P	Pn	04 38 02.4	+1.6
SOEI				S	Sn	04 38 11.5	+3.0
MMRI	Maumere	2.04	293	P	Pn	04 38 22.6	+0.4
MMRI				S	Sn	04 38 47.1	+0.5
EDFI	Ende, Flores	2.52	286	P	Pn	04 38 29.2	+0.5
WBSI	Waikabubak, Su	4.69	267	P	Pn	04 38 58.2	-0.2
PLAI	Plampang	6.31	275	P	Pn	04 39 19.8	-0.8

BJI ***23*** *04:45:57.3±0.0, 20.°47S×178.°36W, h614^{km}, mB5.0/28, mb5.1/43*
MOS ***23*** *04:45:57.4±0.7, 20.°65S×178.°79W, h605^{km}, mb4.8/21, Error ellipse: s-maj=10.7km s-min=10.6km az=19.9*
NEIC ***23*** *04:45:59.5±1.6, 20.°65S±0.°10×178.°8W±0.°1, h620^{km}±5^{km}, mb4.8/262, Error ellipse: s-maj=15.0km s-min=13.6km az=119.0*
BGR ***23*** *04:46:00.3±0.0, 20.°87S×178.°52W, h630^{km}*
IDC ***23*** *04:46:00.3±0.5, 20.°72S×178.°81W, h626^{km}±4^{km}, mb4.3/28, mb1 4.4/29, mb1mx4.4/34, mbtmp5.2/29, Error ellipse: s-maj=10.6km s-min=8.0km az=136.0*
ISC 23 04:45:58.2±0.4**, 20.°79S**±0.°04×**178.°68W**±0.°05**,**
h610^{km}±4^{km}**, h611**^{km}**:pP-P, n935,** σ1^{s}**21**/930**, mb4.9**/204**,**
59C-64D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.34	314	*c i*P	P	04 47 27.7	+0.8
MSVF	Nonsavu	4.34	314	P	P	04 47 28.1	+1.2
NIUE	Niue	8.41	80	P	P	04 48 02.1	+0.4
RIZ	Raoul Island	8.44	176	P	P	04 48 01.8	-0.2
RAO	Raoul Island	8.45	175	S	S	04 49 39.7	-3.8
	170nm,0.3s,baz=47,slow=23,SNR=7.0						
GLKZ	Green Lake	8.46	175	P	P	04 48 00.9	-1.2
GLKZ				S	S	04 49 35.8	-7.9
AFI	Afiamalu	9.50	45	P	P	04 48 10.8	-1.6
	4.8nm,0.3s,baz=194,slow=3.0,SNR=5.3						
AFI				S	S	04 49 56.1	-6.5
	9.6nm,0.3s,baz=51,slow=23,SNR=8.7						
AFI	Afiamalu	9.50	45	P	P	04 48 11.5	-1.0
AFI	Afiamalu	9.50	45	P	P	04 48 11.5	-1.0
FUNA	Funafuti	12.37	350	P	P	04 48 39.4	-1.3
DZM	Mont Dzumac	13.91	262	*e*P	P	04 48 56.0	-0.1
	100nm,1.4s						
DZM	Mont Dzumac	13.91	262	P	P	04 48 56.3	+0.2
	9.2nm,0.3s,baz=97,slow=9.7,SNR=75						
DZM	Mont Dzumac	13.91	262	P	P	04 48 56.0	-0.1
OUZ	Omahuta	15.90	204	P	P	04 49 16.5	+2.5
GRZ	Great Barrier	16.23	197	P	P	04 49 20.1	+3.1
WCZ	Waipu Caves	16.28	201	P	P	04 49 22.7	+5.2
KUZ	Kuaotunu	16.63	196	P	P	04 49 23.6	+2.9
MXZ	Matakaoa Point	16.91	188	P	P	04 49 24.2	+0.9
WMGZ	Waiomatatini S	17.15	188	P	P	04 49 26.3	+0.8
WMGZ				S	S	04 52 11.7	-2.2
HAZ	Te Kaha	17.18	190	P	P	04 49 25.7	+0.1
HAZ				S	S	04 52 11.1	-3.2
RUGZ	Raukumara Rang	17.40	190	P	P	04 49 27.4	-0.5
RUGZ				S	S	04 52 17.1	-1.1
PUZ	Puketiti	17.42	188	P	P	04 49 28.7	+0.8
PUZ				S	S	04 52 17.6	-0.8
TGRZ	Tauranga	17.44	193	P	P	04 49 30.5	+2.4
MARZ	Manawahe	17.60	192	P	P	04 49 31.0	+1.4
TOZ	Tahuroa Road	17.62	195	P	P	04 49 32.4	+2.7
RAR	Rarotonga	17.66	95	P	P	04 49 27.0	-3.3
	4.2nm,0.3s,baz=258,slow=22,SNR=9.4						
EDRZ	Edgecumbe	17.70	192	P	P	04 49 31.8	+1.2
KARZ	Kaharoa	17.72	193	P	P	04 49 31.7	+1.0
OMRZ	Omania	17.78	193	P	P	04 49 32.9	+1.7
URZ	Urewera	17.78	191	P	P	04 49 30.1	-1.1
	26nm,0.3s,baz=289,slow=2.9,SNR=89						
URZ				S	S	04 52 17.5	-6.7
	2.1nm,0.3s,baz=225,slow=23,SNR=12						
URZ	Urewera	17.78	191	P	P	04 49 30.2	-1.0
URZ	Urewera	17.78	191	P	P	04 49 29.5	-1.7
URZ				S	S	04 52 18.4	-5.7
MWZ	Matawai	17.79	190	P	P	04 49 30.5	-0.7
MWZ				S	S	04 52 19.4	-4.8
MKRZ	Makatiti	17.79	193	P	P	04 49 34.7	+3.3
TKGZ	Te Karaka	17.84	189	P	P	04 49 32.8	+1.1
TKGZ				S	S	04 52 21.7	-3.4
TARZ	Mount Tarawera	17.87	192	P	P	04 49 33.3	+1.2
HLRZ	Highlands Stat	17.92	193	P	P	04 49 34.4	+1.9
RAGZ	Rawiri	17.96	190	P	P	04 49 32.8	-0.1
MUGZ	Murupara	18.06	192	P	P	04 49 33.1	-0.6
HRRZ	Handcock Road	18.07	193	P	P	04 49 35.1	+1.3
RIGZ	Rimuhau	18.11	189	P	P	04 49 34.0	-0.2
PRRZ	Plateau Road	18.15	192	P	P	04 49 35.2	+0.7
RTZ	Ruatahuna	18.15	191	P	P	04 49 34.3	-0.3
TLZ	Tolley Road	18.18	195	P	P	04 49 38.1	+3.2
SNGZ	Shannon Statio	18.25	190	P	P	04 49 35.8	+0.3
MTHZ	Maungataniwha	18.41	191	P	P	04 49 35.2	-1.8
RAHZ	Arahi	18.43	190	P	P	04 49 37.1	0.0
MRHZ	Matea Rd	18.47	192	P	P	04 49 37.3	-0.2
WATZ	Wairara	18.49	194	P	P	04 49 39.6	+1.9
HIZ	Hauiti	18.52	196	P	P	04 49 40.8	+2.9
RATZ	Rangitukua	18.64	194	P	P	04 49 40.2	+1.2
RITZ	Rihia Road	18.72	193	P	P	04 49 40.7	+0.9
KATZ	Kakaramea	18.76	194	P	P	04 49 41.7	+1.5
BKZ	Black Stump Fm	18.77	192	P	P	04 49 39.6	-0.7
BKZ				IAmb	IAmb	04 49 45.9	
	comp=Z,31nm,0.7s						
BKZ	Black Stump Fm	18.77	192	P	P	04 49 39.3	-1.0
ARHZ	Aropaoanui	18.78	190	P	P	04 49 41.4	+1.2
TWVZ	Taurewa	18.91	194	P	P	04 49 41.8	+0.2
WTVZ	West Tongariro	18.91	194	P	P	04 49 42.9	+1.2
MCHZ	McNeill Hill	19.01	191	P	P	04 49 42.6	+0.3
KWHZ	Kaweka Forest	19.04	192	P	P	04 49 42.4	-0.3
BFZ	Birch Farm	20.29	191	P	P	04 49 54.2	+0.3
BFZ				IAmb	IAmb	04 49 54.6	
	comp=Z,53nm,0.8s						
MSWZ	Moikau Station	21.19	193	P	P	04 50 02.6	+0.6
SNZO	South Karori	21.21	194	P	P	04 50 01.8	-0.2
BHW	Baring Head	21.27	193	P	P	04 50 02.4	-0.2
QRZ	Quartz Range	21.32	199	P	P	04 50 04.5	+1.3
PLWZ	Palliser	21.34	193	P	P	04 50 03.0	-0.4
NNZ	Nelson	21.45	197	P	P	04 50 04.7	+0.5
NNZ				IAmb	IAmb	04 50 06.3	
	comp=Z,32nm,0.5s						
TUWZ	Tuamarina	21.50	195	P	P	04 50 03.9	-0.8
BSWZ	Blackbirch Sta	21.79	195	P	P	04 50 08.7	+1.4
KHZ	Kahutara	22.53	195	P	P	04 50 13.7	-0.2
LTZ	Lake Taylor	23.20	197	P	P	04 50 19.4	-0.5
LTZ				IAmb	IAmb	04 50 22.3	
	comp=Z,38nm,0.6s						
RPZ	Rata Peaks	24.41	198	P	P	04 50 30.5	0.0

	comp=Z,17nm,0.5s,baz=32,slow=5.0,SNR=18						
RPZ	Rata Peaks	24.41	198	IAmb	IAmb	04 50 45.6	
	comp=Z,32nm,1.1s						
FOZ	Fox Glacier	24.63	200	IAmb	IAmb	04 50 35.4	
	comp=Z,40nm,0.7s						
DCZ	Deep Cove	27.23	202	P	P	04 50 57.1	+1.9
DCZ				IAmb	IAmb	04 50 57.3	
	comp=Z,43nm,0.8s						
PAE	Paea	27.64	89	eP	P	04 50 59.0	-0.1
	comp=Z,2.9nm,0.8s						
PPT2	Papeete2	27.65	88	eP	P	04 50 59.7	+0.3
	comp=Z,36nm,1.1s						
PPT	Papeete	27.66	88	P	P	04 51 00.8	+1.5
	comp=Z,26nm,0.7s,baz=88,slow=21,SNR=4.3						
TIAR	Tiarei	27.88	88	eP	P	04 51 01.4	+0.1
	comp=Z,7.8nm,0.8s						
TVO	Taravao	27.92	89	eP	P	04 51 01.6	-0.1
	comp=Z,10nm,0.8s						
ARMA	Armidale	28.37	244	P	P	04 51 06.3	+0.8
MEH	Mehetia	29.01	90	eP	P	04 51 11.0	-0.1
	comp=Z,15nm,1.0s						
PMOR	Pomariorio Ree	29.82	84	eP	P	04 51 17.9	-0.2
	comp=Z,52nm,1.1s						
VAH	Vaihoa	30.01	85	eP	P	04 51 19.3	-0.4
	comp=Z,40nm,1.0s						
CAN	Canberra	31.82	236	P	P	04 51 35.3	+0.4
CAN				pmax	pmax		
	comp=Z,27nm,0.9s						
CAN	Canberra	31.82	236	P	P	04 51 35.3	+0.4
CAN				IAmb	IAmb	04 51 37.0	
	comp=Z,27nm,0.9s						
CTA	Charters Tower	32.83	265	P	P	04 51 44.1	+0.5
	comp=Z,106nm,0.5s,baz=93,slow=11,SNR=244						
CTA				PcP	PcP	04 54 09.4	-0.3
	comp=Z,10nm,0.7s,baz=88,slow=5.8,SNR=3.8						
CTAO	Charters Tower	32.83	265	P	P	04 51 44.2	+0.6
CTAO				pmax	pmax		
	comp=Z,181nm,0.9s						
PMG	Port Moresby	34.79	284	P	P	04 52 00.1	+0.1
	comp=Z,135nm,0.8s,baz=87,slow=5.7,SNR=59						
PMG	Port Moresby	34.79	284	deP	P	04 51 59.9	-0.1
PMG	Port Moresby	34.79	284	P	P	04 51 59.6	-0.4
TOO	Toolangi	35.21	234	P	P	04 52 03.8	+0.6
TOO				pmax	pmax		
	comp=Z,45nm,0.7s						
TOO	Toolangi	35.21	234	P	P	04 52 03.8	+0.6
COEN	Coen	36.97	274	P	P	04 52 17.7	-0.2
STKA	Stephens Creek	37.09	244	P	P	04 52 19.7	+1.1
	comp=Z,46nm,0.5s,baz=92,slow=10,SNR=133						
STKA				PcP	PcP	04 54 22.9	+0.7
	comp=Z,6.1nm,0.4s,baz=90,slow=7.1,SNR=2.6						
STKA	Stephens Creek	37.09	244	P	P	04 52 19.1	+0.4
STKA						04 54 23.0	
STKA				pmax	pmax		
	comp=Z,23nm,1.2s						
STKA	Stephens Creek	37.09	244	P	P	04 52 19.1	+0.4
STKA				IAmb	IAmb	04 52 20.6	
	comp=Z,23nm,1.1s						
TAOE	Nuku Hiva Isla	38.99	78	eP	P	04 52 33.3	-1.0
	comp=Z,154nm,1.2s						
BBOO	Buckleboo	41.85	244	P	P	04 52 56.4	-0.2
WR0	Warramunga Arr	43.74	263	P	P	04 53 11.0	-0.6
AS31	Alice Springs	43.83	257	P	P	04 53 12.2	-0.1
AS31				IAmb	IAmb	04 53 13.2	
	comp=Z,58nm,0.8s						
ASAR	Alice Springs	43.83	257	P	P	04 53 12.4	+0.2
	comp=Z,170nm,0.5s,baz=95,slow=7.6,SNR=2299						
ASAR				PcP	PcP	04 54 45.0	+0.3
	comp=Z,20nm,0.5s,baz=106,slow=3.7,SNR=8.7						
ASAR				ScP	ScP	04 57 39.5	+0.3
	comp=Z,3.6nm,0.7s,baz=126,slow=3.8,SNR=4.8						
ASAR				S	S	04 58 57.6	-2.9
	comp=Z,25nm,0.8s,baz=93,slow=15,SNR=40						
ASAR	Alice Springs	43.83	257	P	P	04 53 11.4	-0.9
WRAB	Tennant Creek	43.92	263	deP	P	04 53 12.3	-0.7
WRAB				pmax	pmax		
	comp=Z,126nm,1.0s						
WRAB	Tennant Creek	43.92	263	P	P	04 53 12.4	-0.5
WRA	Warramunga Arr	43.93	262	P	P	04 53 12.2	-0.9
	comp=Z,110nm,0.5s,baz=98,slow=7.9,SNR=378						
WRA				PcP	PcP	04 54 45.0	-0.1
	comp=Z,7.6nm,0.6s,baz=92,slow=4.0,SNR=7.5						
WRA				S	S	04 58 59.4	-2.5
	comp=Z,19nm,0.7s,baz=120,slow=16,SNR=17						
MTN	Manton Dam	48.53	271	P	P	04 53 46.9	-0.8
FORT	Forrest	48.59	247	P	P	04 53 47.7	-0.2
SAUI	Saumlaki	49.90	277	P	P	04 53 57.5	-0.3
KNRA	Kununurra	50.01	267	P	P	04 53 57.6	-0.9
FAKI	Fak Fak	50.95	284	P	P	04 54 05.1	-0.3
	comp=Z,70nm,1.2s						
FAKI	Fak Fak	50.95	284	P	P	04 54 04.5	-0.9
FAKI				IAmb	IAmb	04 54 06.5	
	comp=Z,60nm,1.1s						
FITZ	Fitzroy Crossi	52.36	263	P	P	04 54 15.5	+0.1
	comp=Z,45nm,0.5s,baz=104,slow=4.3,SNR=261						
FITZ	Fitzroy Crossi	52.36	263	P	P	04 54 15.3	-0.1
FITZ				IAmb	IAmb	04 54 16.1	
	comp=Z,45nm,0.7s						
BNDI	Bandanaira	52.45	281	P	P	04 54 15.5	-0.7
	comp=Z,256nm,0.9s						
MSAI	Masohi	53.81	281	P	P	04 54 25.1	-0.6
	comp=Z,2µmcomp=Z,42nm,0.5s						
NLAI	Namlea	55.53	281	P	P	04 54 37.5	-0.2
	comp=Z,166nm,0.7s						
SOEI	Soe	55.87	272	P	P	04 54 41.0	+0.7
	comp=Z,5µmcomp=Z,545nm,0.8s						
SOEI	Soe	55.87	272	P	P	04 54 40.9	+0.7
LBMI	Labuha	56.21	284	P	P	04 54 42.4	0.0
	comp=Z,1µmcomp=Z,128nm,1.0s						
TNTI	Ternate	56.92	285	P	P	04 54 46.6	-0.7
	comp=Z,1µmcomp=Z,165nm,0.8s						
TNTI	Ternate	56.92	285	P	P	04 54 47.2	0.0
SANI	Sanana	57.02	282	P	P	04 54 47.2	-0.7
	comp=Z,1µmcomp=Z,146nm,0.9s						
VNDA	Vanda	57.56	185	P	P	04 54 53.5	+2.9
	comp=Z,3.2nm,0.6s,baz=5.4,slow=6.6,SNR=14						
VNDA				ScP	ScP	04 58 38.5	+1.1
	comp=Z,4.2nm,1.0s,baz=21,slow=3.5,SNR=7.1						
VNDA	Vanda	57.56	185	P	P	04 54 52.5	+1.9
VNDA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
VNDA	Vanda	57.56	185	P	P	04 54 52.5	+1.9
NWAO	Narrogin (SRO)	57.67	244	P	P	04 54 52.2	+0.1
	comp=Z,34nm,0.7s,baz=126,slow=7.1,SNR=32						
NWAO	Narrogin (SRO)	57.67	244	P	P	04 54 52.3	+0.3
NWAO				pmax	pmax		
	comp=Z,36nm,0.7s						
NWAO	Narrogin (SRO)	57.67	244	P	P	04 54 52.3	+0.3
NWAO				IAmb	IAmb	04 54 52.8	
	comp=Z,36nm,0.7s						
MMRI	Maumere	58.13	273	P	P	04 54 55.5	+0.1
	comp=Z,2µmcomp=Z,202nm,0.9s						
MMRI	Maumere	58.13	273	P	P	04 54 54.6	-0.8
MORW	Morawa	59.13	248	IAmb	IAmb	04 55 02.3	
	comp=Z,38nm,0.7s						
LUWI	Luwuk	60.36	281	P	P	04 55 10.3	0.0
	comp=Z,3µmcomp=Z,208nm,1.0s						
LUWI	Luwuk	60.36	281	P	P	04 55 10.4	0.0
WBSI	Waikabubak, Su	60.47	271	P	P	04 55 10.3	-0.8
	comp=Z,993nmcomp=Z,105nm,0.7s						
DDMP	Don Marcelino,	60.77	290	eP	P	04 55 12.1	-0.9
BKSI	Bulukumba	61.22	275	P	P	04 55 14.5	-1.4
	comp=Z,48nm,0.9s						
APSI	Ampana	61.45	281	P	P	04 55 16.4	-1.0
	comp=Z,1µmcomp=Z,127nm,1.0s						
BNSI	Bone	61.57	276	P	P	04 55 18.2	0.0
	comp=Z,99nm,0.8s						
MRSI	Marisa	61.73	282	P	P	04 55 18.7	-0.5
	comp=Z,1µmcomp=Z,52nm,0.6s						
KCP	Kidapawan	61.74	290	⇓iP	P	04 55 18.9	-0.4
GIRL	Giralia	61.86	255	P	P	04 55 20.6	+0.7
SKMP	Bagumbayan, Su	61.99	290	eP	P	04 55 19.4	-1.5
BUKP	Musuan	62.17	291	eP	P	04 55 22.9	+0.8
BUTP	Butuan	62.21	293	eP	P	04 55 21.6	-0.7
PLAI	Plampang	62.24	271	P	P	04 55 20.6	-1.9
	comp=Z,2µmcomp=Z,278nm,0.8s						
CASY	Casey	63.43	205	P	P	04 55 30.4	+1.3
MSLP	Maasin	63.43	293	eP	P	04 55 30.1	0.0
MPSI	Mapaga	63.55	281	P	P	04 55 29.9	-1.0
	comp=Z,1µmcomp=Z,129nm,0.9s						
PAGZ	Pagadian	63.63	290	eP	P	04 55 31.6	+0.2
SRBI	Singaraja	64.88	271	P	P	04 55 38.2	-1.1
	comp=Z,2µmcomp=Z,147nm,0.8s						
KBKI	Kotabaru	65.63	276	P	P	04 55 44.3	+0.3
	comp=Z,490nmcomp=Z,25nm,0.8s						
JAGI	Jajag, Banyuwa	65.75	270	P	P	04 55 42.9	-1.8
	comp=Z,131nm,0.9s						
JAGI	Jajag, Banyuwa	65.75	270	P	P	04 55 43.2	-1.5
GMJI	Gumukmas	66.47	270	P	P	04 55 48.5	-0.7
	comp=Z,60nm,0.8s						
GRJI	Gresik	67.82	271	P	P	04 55 56.8	-0.6
	comp=Z,1µmcomp=Z,139nm,0.6s						
PWJI	Pagerwojo	68.09	270	P	P	04 55 57.8	-1.2
	comp=Z,77nm,0.6s						
PCJI	Pacitan	68.62	269	P	P	04 56 01.5	-0.7
	comp=Z,5µmcomp=Z,491nm,0.7s						
ENPP	El Nido	68.63	292	eP	P	04 56 00.4	-1.8
WOJI	Wonogiri, Jawa	68.97	269	P	P	04 56 04.1	-0.2
	comp=Z,108nm,1.0s						
LUBP	Lubang	69.11	294	eP	P	04 56 02.4	-2.7
KKM	Kota Kinabalu	69.22	285	P	P	04 56 05.8	-0.1
QSPA	South Pole Qui	69.28	180	P	P	04 56 07.0	+1.6
SMRI	Semarang	69.68	270	P	P	04 56 08.6	0.0
	comp=Z,127nm,0.8s						
INU	Inuyama	69.87	323	P	P	04 56 09.1	-0.1
MJAR	Matsushiro Arr	70.07	324	P	P	04 56 09.9	-0.5
	comp=Z,19nm,0.7s,baz=141,slow=6.2,SNR=69						
MJAR	Matsushiro Arr	70.07	324	P	P	04 56 09.6	-0.8
MJAR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MJAR	Matsushiro Arr	70.07	324	P	P	04 56 09.6	-0.8
MAJO	Matsushiro	70.07	324	P	P	04 56 09.9	-0.5
MAJO				pmax	pmax		
	comp=Z,22nm,0.7s						
MAJO	Matsushiro	70.07	324	P	P	04 56 09.9	-0.5
MAJO				IAmb	IAmb	04 56 11.0	
	comp=Z,22nm,0.7s						
MAT	Matsushiro	70.07	324	P	P	04 56 10.0	-0.4
MJB9	Matsu-Tunnel	70.08	324	IAmb	IAmb	04 56 11.0	
	comp=Z,23nm,0.7s						
SBUM	Sibu	71.43	280	P	P	04 56 18.6	-0.3
CISI	Cisompet, Garu	71.97	269	P	P	04 56 21.2	-0.9
	comp=Z,169nm,1.1s						
CISI	Cisompet, Garu	71.97	269	P	P	04 56 21.2	-0.9
JNU	Nakatsue	72.06	317	P	P	04 56 21.6	-0.5
JNU				IAmb	IAmb	04 56 23.1	
	comp=Z,56nm,1.1s						
CNJI	Cibinong	72.69	269	P	P	04 56 25.3	-0.8
	comp=Z,129nm,1.0s						
KSM	Kuching	72.82	278	P	P	04 56 26.9	0.0
YULB	Yu-li	73.13	304	IAmb	IAmb	04 56 28.0	
	comp=Z,26nm,0.6s						
DBJI	Dramaga	73.30	269	P	P	04 56 29.0	-0.6
	comp=Z,169nm,1.0s						
NACB	Ninganchiao	73.32	305	IAmb	IAmb	04 56 30.2	
	comp=Z,38nm,0.7s						
TPUB	Ta-pu	73.60	303	P	P	04 56 29.8	-1.3
YHNB	Yeheng	73.75	305	IAmb	IAmb	04 56 32.4	
	comp=Z,72nm,1.1s						
NIKH	Nikolski High	73.95	6	P	P	04 56 31.7	-0.6
BLSI	Bandar Lampung	75.11	270	P	P	04 56 39.0	-0.8
	comp=Z,125nm,0.4s						
PPBI	Pangkal Pinang	75.39	273	P	P	04 56 41.4	+0.1
	comp=Z,20µmcomp=Z,30nm,0.6s						
KASI	Kota Agung	75.76	269	P	P	04 56 42.4	-0.9
	comp=Z,2µmcomp=Z,156nm,0.9s						
YSS	Yuzh-Sakhalins	75.88	334	⇓iP	P	04 56 44.1	+0.9
YSS	Yuzh-Sakhalins	75.88	334	P	P	04 56 43.7	+0.5
YSS				IAmb	IAmb	04 56 44.6	
	comp=Z,27nm,0.8s						
LWLI	Liwa	76.34	270	P	P	04 56 46.1	-0.6
	comp=Z,85nm,0.4s						
TJN	Taejon	76.36	318	ceP	P	04 56 44.0	-2.1
PEA0B	Petropavlovsk-	76.39	346	i P	P	04 56 45.3	-0.6
PEA0B	Petropavlovsk-	76.39	346	P	P	04 56 45.5	-0.4
PEA0B				IAmb	IAmb	04 56 46.9	
	comp=Z,34nm,0.8s						
PETK	Petropavlovsk-	76.39	346	P	P	04 56 46.1	+0.2
	comp=Z,24nm,0.7s,baz=148,slow=7.0,SNR=35						
PETK	Petropavlovsk-	76.39	346	P	P	04 56 45.8	-0.1
PETK	Petropavlovsk-	76.39	346	P	P	04 56 45.8	-0.1
MDSI	Maura Dua	76.41	270	P	P	04 56 45.4	-1.5
	comp=Z,860nmcomp=Z,98nm,0.8s						
KSRS	Korea Array	76.69	319	P	P	04 56 48.5	+0.7
	comp=Z,8.5nm,0.8s,baz=130,slow=6.1,SNR=35						
KSAR	Wonju Array Be	76.70	319	P	P	04 56 48.0	0.0
KSAR	Wonju Array Be	76.70	319	P	P	04 56 48.0	0.0
KS19	Wonju Array Si	76.75	319	P	P	04 56 48.3	0.0
MNAI	Manna	77.59	270	P	P	04 56 53.9	+0.5
	comp=Z,4µmcomp=Z,322nm,0.7s						
VLA	Vladivostok	78.16	325	i P	P	04 56 54.7	-1.0
VLA				pmax	pmax		
	comp=Z,22nm,1.0s						
MSHR	Mys Shultsa	78.18	325	i P	P	04 56 54.8	-1.0
PKM	Mcpherson Peak	78.65	46	P	P	04 57 00.9	+2.1
	baz=235						
SAO	San Andreas Ge	78.68	44	P	P	04 56 59.7	+1.1
SAO				pmax	pmax		
	comp=Z,14nm,0.9s						
SAO	San Andreas Ge	78.68	44	P	P	04 56 59.7	+1.1
USA0B	Ussuriysk Arra	78.85	326	i P	P	04 56 58.3	-1.0
USA0B	Ussuriysk Arra	78.85	326	IAmb	IAmb	04 57 01.3	
	comp=Z,36nm,0.9s						
USRK	Ussuriysk Ar.	78.85	326	P	P	04 57 00.6	+1.3
	comp=Z,24nm,0.7s,baz=133,slow=3.1,SNR=45						
USRK	Ussuriysk Ar.	78.85	326	P	P	04 56 59.9	+0.6
USRK	Ussuriysk Ar.	78.85	326	P	P	04 56 59.9	+0.6
MYKOM	Kota Tinggi	78.93	276	P	P	04 57 00.7	+0.2
KMRM	Mail Ridge	79.39	40	P	P	04 57 04.2	+1.8
KMRM				IAmb	IAmb	04 57 05.7	
	comp=Z,71nm,0.9s						
MWC	Mount Wilson	79.47	47	P	P	04 57 04.2	+1.1
MWC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MWC	Mount Wilson	79.47	47	P	P	04 57 04.2	+1.1
NJ2	Nanjing	79.58	310	eP	P	04 57 04.1	+0.7
NJ2				pmax	pmax		
	comp=Z,33nm,1.0s						
VES	Vestal, Richgr	79.69	45	P	P	04 57 06.0	+2.1
	baz=235,SNR=6.8						
MURC	Murrieta	79.72	48	P	P	04 57 05.8	+1.6
	baz=237						
BFSC	Mount Baldy Ra	79.75	47	P	P	04 57 06.0	+1.5
	baz=236,SNR=5.9						
EDW2	Edwards Air Fo	79.88	47	P	P	04 57 06.9	+1.9
	baz=236,SNR=6.3						
MONP2	Monument Peak	79.88	49	P	P	04 57 07.3	+2.0
	baz=237,SNR=7.1						
O02D	Mt. Diablo Mer	79.91	40	P	P	04 57 07.7	+2.6
	baz=232,SNR=9.3						
IKP	In-Ko-Pah, Jac	79.97	49	P	P	04 57 07.6	+2.0
	baz=238						
ISA	Isabella, Lake	80.00	46	P	P	04 57 07.7	+2.1
	baz=236,SNR=9.7						
ORV	Oroville	80.32	41	P	P	04 57 07.8	+0.7
ORV				pmax	pmax		
	comp=Z,15nm,1.0s						
ORV	Oroville	80.32	41	P	P	04 57 07.8	+0.7
SWSC	Sam W. Stewart	80.35	49	P	P	04 57 09.4	+2.0
	baz=238						
MDJ	Mudanjiang	80.39	325	P	P	04 57 08.8	+1.4
MDJ				pmax	pmax		
	comp=Z,44nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,230nm,5.2s						
MDJ	Mudanjiang	80.39	325	IAmb	IAmb	04 57 09.4	
	comp=Z,33nm,0.9s						
LRMC	Laurel Mtn Rad	80.43	46	P	P	04 57 09.7	+1.8
	baz=236						
N02D	Trinity Center	80.45	40	P	P	04 57 10.4	+2.5
	baz=232,SNR=8.7						
O03E	Paynes Creek	80.58	40	P	P	04 57 10.2	+1.6
	baz=233,SNR=10						
M02C	Callahan	80.62	39	P	P	04 57 11.2	+2.5
	baz=232,SNR=11						
L02E	Cave Junction	80.66	38	P	P	04 57 10.9	+2.1
	baz=231						
CWC	Cottonwood Cre	80.70	45	P	P	04 57 11.0	+1.6
	baz=236						
BELC	Belle Mtn. Jos	80.78	48	P	P	04 57 11.9	+2.1
	baz=237,SNR=9.5						
MPMC	Manual Prospec	80.88	46	P	P	04 57 12.0	+1.6
	baz=236,SNR=15						
YBH	Yreka Blue Hor	80.92	39	IAmb	IAmb	04 57 13.3	
	comp=Z,21nm,0.8s						
GSC	Goldstone, Bar	80.92	47	P	P	04 57 12.2	+1.8
	baz=237,SNR=6.9						
TIN	Tinemaha, Big	80.94	45	P	P	04 57 12.8	+2.3
	baz=236,SNR=10						
K02D	Willamette Mer	80.96	38	P	P	04 57 12.7	+2.2
	baz=231						
BC3	Big Chuckawall	80.97	49	P	P	04 57 13.1	+2.3
	baz=238,SNR=6.8						
HEC	Hector,Ludlow	80.99	48	P	P	04 57 12.7	+1.9
	baz=237						
WAKR	Walker	80.99	43	IAmb	IAmb	04 57 13.8	
	comp=Z,27nm,1.1s						
BKNI	Bangkinang	81.03	274	P	P	04 57 11.2	-0.2
MAW	Mawson	81.07	200	P	P	04 57 11.3	+0.7
	comp=Z,5.1nm,0.5s,baz=128,slow=6.3,SNR=22						
MAW	Mawson	81.07	200	P	P	04 57 11.7	+1.1
MAW				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MAW	Mawson	81.07	200	P	P	04 57 11.7	+1.1
GLA	Glamis	81.10	50	IAmb	IAmb	04 57 14.6	
	comp=Z,23nm,0.8s						
GLA	Glamis	81.10	50	P	P	04 57 14.1	+2.7
	baz=238,SNR=6.3						
J01E	Myrtle Point	81.11	37	P	P	04 57 13.6	+2.5
	baz=231						
PDSI	Padang	81.13	272	P	P	04 57 11.0	-1.0
	comp=Z,27nm,0.9s						
PNTR	Pine Nut	81.23	42	IAmb	IAmb	04 57 14.8	
	comp=Z,37nm,0.8s						
HUMO	Hull Mountain	81.32	38	IAmb	IAmb	04 57 15.5	
	comp=Z,28nm,1.1s						
YERR	Yerington	81.39	43	IAmb	IAmb	04 57 15.4	
	comp=Z,18nm,0.6s						
GMRC	Granite Mounta	81.43	48	P	P	04 57 14.8	+1.7
	baz=238,SNR=9.7						
L04D	Klamath Falls	81.45	39	P	P	04 57 15.1	+2.0
	baz=232,SNR=9.6						
IRM	Iron Mountain	81.46	49	P	P	04 57 15.5	+2.4
	baz=238,SNR=11						
M04C	Macdoel	81.46	39	P	P	04 57 15.3	+2.1
	baz=232,SNR=9.2						
GRAC	Grapevine Rang	81.48	45	P	P	04 57 15.7	+2.4
	baz=236						
FURC	Furnace Creek,	81.53	46	P	P	04 57 15.3	+1.9
	baz=237,SNR=7.1						
TUQ	Turquoise Moun	81.60	47	P	P	04 57 15.9	+1.9
	baz=237,SNR=16						
SHOC	Shoshone, Teco	81.61	47	P	P	04 57 15.6	+1.7
	baz=237						
NVAR	Mina Array Bea	81.67	44	P	P	04 57 15.8	+1.4
	comp=Z,10nm,0.7s,baz=225,slow=7.9,SNR=80						
NVAR				pP	pwP	04 59 27.2	+2.0
	comp=Z,1.9nm,0.9s,baz=227,slow=9.0,SNR=5.7						
NVAR				PKKPbc	PKKPbc	05 15 43.0	+0.6
	comp=Z,0.7nm,0.7s,baz=92,slow=3.3,SNR=7.1						
NVAR				PKPPKP	P'P'df	05 23 50.2	+5.2
	comp=Z,1.0nm,0.9s,baz=178,slow=4.0,SNR=5.5						
NVAR	Mina Array Bea	81.67	44	P	P	04 57 15.7	+1.3
Y12C	Blythe	81.68	49	P	P	04 57 16.4	+2.1
	baz=238						
PAHR	Pah Rah Range	81.72	42	IAmb	IAmb	04 57 17.1	
	comp=Z,19nm,0.9s						
I03D	Drain, OR	81.77	37	P	P	04 57 16.6	+2.1
	baz=231						
214A	Organ Pipe Nat	81.99	52	P	P	04 57 18.4	+2.4
	baz=240						
K04D	Chiloquin, OR	82.03	39	P	P	04 57 18.1	+2.1
	baz=232						
WHN	Wuhan	82.11	307	⇑P	P	04 57 17.4	+0.9
WHN				pmax	pmax		
	comp=Z,590nm,1.5s						
CN2	Changchun	82.15	323	eP	P	04 57 16.5	+0.1
CN2				pmax	pmax		
	comp=Z,30nm,1.3s						
KVN	Kaiserville	82.16	43	IAmb	IAmb	04 57 19.1	
	comp=Z,18nm,0.9s						
J04D	Umpqua Nationa	82.20	38	P	P	04 57 19.1	+2.2
	baz=232,SNR=16						
TPNV	Topopah Spring	82.20	46	P	P	04 57 18.1	+1.0
TPNV				pmax	pmax		
	comp=Z,16nm,0.8s						
TPNV	Topopah Spring	82.20	46	P	P	04 57 18.1	+1.0
TPNV				IAmb	IAmb	04 57 19.6	
	comp=Z,16nm,0.8s						
TPNV	Topopah Spring	82.20	46	P	P	04 57 19.0	+1.9
	baz=237,SNR=25						
PDMCI	Parker Dam,Lak	82.24	49	P	P	04 57 19.4	+2.3
	baz=239,SNR=12						
I04A	Tendick Farm,	82.37	37	P	P	04 57 19.2	+1.6
	baz=232,SNR=6.3						
MOD	Modoc Plateau	82.45	40	IAmb	IAmb	04 57 20.7	
	comp=Z,22nm,0.7s						
KLR	Kul'dur	82.46	330	P	P	04 57 17.8	0.0
	comp=Z,10nm,0.9s,baz=100,slow=3.1,SNR=28						
KLR	Kul'dur	82.46	330	i P	P	04 57 18.1	+0.3
KLR				pmax	pmax		
	comp=Z,19nm,1.0s						
IPM	Ipoh	82.54	278	P	P	04 57 18.9	-0.2
H04D	Lebanon	82.64	37	P	P	04 57 20.8	+2.0
	baz=232						
J05D	Fort Rock, OR	82.73	38	P	P	04 57 21.5	+2.0
	baz=233,SNR=42						
G03D	McMinnville, O	82.78	36	P	P	04 57 21.5	+2.1
	baz=231						
TIA	Tai'an	83.00	313	P	P	04 57 21.3	+0.4
TIA				pmax	pmax		
	comp=Z,15nm,0.6s						
H04A	Detroit Lake	83.04	37	P	P	04 57 21.9	+1.1
H04A				IAmb	IAmb	04 57 22.9	
	comp=Z,24nm,1.1s						
KULM	Kulim	83.18	278	IAmb	IAmb	04 57 24.0	
	comp=Z,40nm,0.8s						
PINE	Pine Mountain	83.21	38	IAmb	IAmb	04 57 24.9	
	comp=Z,38nm,0.8s						
I05D	Terrebonne, OR	83.31	37	P	P	04 57 24.3	+2.0
	baz=233,SNR=9.7						
R11A	Troy Canyon, C	83.41	45	P	P	04 57 24.3	+1.2
	baz=237						
BRLK	Bradley Lake	83.43	14	IAmb	IAmb	04 57 23.4	
	comp=Z,45nm,0.9s						
E03A	Lebam	83.46	35	IAmb	IAmb	04 57 25.5	
	comp=Z,42nm,1.0s						
F04D	Rainier, OR	83.46	35	P	P	04 57 25.4	+2.5
	baz=231						
F04A	Amboy	83.69	36	IAmb	IAmb	04 57 25.8	
	comp=Z,16nm,0.7s						
WVOR	Wild Horse Val	83.76	40	IAmb	IAmb	04 57 27.3	
	comp=Z,16nm,1.0s						
NLWA	Neilton Lookou	83.83	34	IAmb	IAmb	04 57 27.4	
	comp=Z,14nm,0.9s						
RPSI	Rantau Prapat	83.85	275	IAmb	IAmb	04 57 26.2	
	comp=Z,42nm,0.8s						
PSI	Prapat	83.89	275	P	P	04 57 25.3	-0.6
	comp=Z,38nm,0.8s,baz=136,slow=2.5,SNR=28						
MA2	Magadan	83.90	345	ceP	P	04 57 23.9	-0.8
MA2				pmax	pmax		
	comp=Z,18nm,0.9s						
MA2	Magadan	83.90	345	P	P	04 57 24.5	-0.2
MA2				IAmb	IAmb	04 57 24.6	
	comp=Z,14nm,0.8s						
E04D	Cinebar	84.00	35	P	P	04 57 27.4	+1.9
	baz=231						
SEW	Seward	84.06	14	IAmb	IAmb	04 57 26.2	
	comp=Z,43nm,1.1s						
F05D	White Salmon	84.19	36	P	P	04 57 28.1	+1.6
	baz=232						
I07A	Izee	84.21	38	IAmb	IAmb	04 57 29.5	
	comp=Z,17nm,0.9s						
319A	Douglas	84.33	54	IAmb	IAmb	04 57 31.1	
	comp=Z,21nm,0.8s						
D03D	Eldon	84.33	34	P	P	04 57 29.2	+2.0
	baz=231						
GAMB	Gambell	84.47	3	P	P	04 57 27.7	+0.4
GAMB				IAmb	IAmb	04 57 29.1	
	comp=Z,23nm,1.2s						
GSI	Gunungsitoli	84.61	273	P	P	04 57 30.2	+0.9
	comp=Z,799nm,0.8s						
GSI	Gunungsitoli	84.61	273	P	P	04 57 29.7	+0.4
U15A	North Rim	84.63	48	IAmb	IAmb	04 57 32.1	
	comp=Z,21nm,0.7s						
D05A	Enumclaw	84.70	35	IAmb	IAmb	04 57 31.9	
	comp=Z,23nm,1.0s						
WUAZ	Wupatki	84.81	49	P	P	04 57 32.0	+2.0
	baz=240						
RC01	Rabbit Creek A	84.87	14	IAmb	IAmb	04 57 30.4	
	comp=Z,17nm,0.9s						
SUA	Susitna One	84.99	13	IAmb	IAmb	04 57 30.7	
	comp=Z,26nm,0.7s						
HPIG		85.12	59	P	P	04 57 32.3	+0.5
KCSI	Kotacane, Aceh	85.22	276	P	P	04 57 32.3	+0.1
	comp=Z,26nm,1.0s						
G08A	Pilot Rock	85.24	38	IAmb	IAmb	04 57 34.2	
	comp=Z,18nm,0.9s						
A04D	Lummi Island	85.28	33	P	P	04 57 33.7	+2.1
	baz=231						

B05A	Bryant	85.31	34	P	P	04 57 33.5	+1.7
	baz=232						
KNK	Knik Glacier	85.44	14	IAmb	IAmb	04 57 33.2	
	comp=Z,27nm,0.8s						
PMR	Palmer	85.45	14	IAmb	IAmb	04 57 33.8	
	comp=Z,14nm,0.9s						
E07A	Sunnyside	85.48	36	P	P	04 57 34.0	+1.3
E07A				IAmb	IAmb	04 57 35.3	
	comp=Z,22nm,1.0s						
HAWA	Hanford	85.56	37	IAmb	IAmb	04 57 35.7	
	comp=Z,19nm,0.8s						
TCRU	Three Creeks R	85.64	46	P	P	04 57 35.5	+1.6
BJT	Baijiatuau	85.65	316	P	P	04 57 33.7	+0.1
BJT				pmax	pmax		
	comp=Z,13nm,0.7s						
BJT	Baijiatuau	85.65	316	P	P	04 57 33.7	+0.1
BJT				IAmb	IAmb	04 57 34.6	
	comp=Z,13nm,0.7s						
BJI	Beijing	85.66	316	P	P	04 57 34.1	+0.5
BJI				S	S	05 07 15.4	-0.7
BJI				pmax	pmax		
	comp=Z,19nm,0.7s						
TPTI		85.67	275	P	P	04 57 34.6	+0.2
	comp=Z,12nm,0.8s						
E08A	Dider Farm, El	85.88	37	IAmb	IAmb	04 57 37.1	
	comp=Z,17nm,0.8s						
ZAIG	Zacatecas	85.90	64	P	P	04 57 37.4	+1.8
BMO	Blue Mountains	85.94	39	IAmb	IAmb	04 57 37.2	
	comp=Z,10nm,0.8s						
121A	Cookes Peak, D	86.00	53	P	P	04 57 37.9	+2.1
	baz=242						
MFID	Camas Ranch	86.02	41	IAmb	IAmb	04 57 37.9	
	comp=Z,12nm,0.9s						
CRQM	Cirque	86.19	17	IAmb	IAmb	04 57 37.4	
	comp=Z,30nm,1.2s						
DUG	Dugway, Tooele	86.21	44	P	P	04 57 37.7	+1.2
	baz=239						
TGL	Tana Glacier	86.28	17	IAmb	IAmb	04 57 37.7	
	comp=Z,21nm,1.0s						
D08A	Wollman Farm,	86.29	36	IAmb	IAmb	04 57 39.0	
	comp=Z,27nm,1.0s						
SYO	Syowa Base	86.30	193	⇓*e*P	P	04 57 35.2	-1.0
SYO	Syowa Base	86.30	193	⇓*e*PcP	PcP	04 57 38.0	+0.2
SYO	Syowa Base	86.30	193	⇓*e*pP	pP	04 59 48.0	+2.3
E09A	Wood Farm, Sta	86.41	37	P	P	04 57 37.8	+0.7
E09A				IAmb	IAmb	04 57 39.3	
	comp=Z,24nm,1.1s						
SLVN	Son La	86.42	294	P	P	04 57 38.2	+0.4
VRDI	Verde Repeater	86.51	16	IAmb	IAmb	04 57 38.3	
	comp=Z,10nm,0.8s						
SEY	Seymchan	86.52	347	P	P	04 57 37.4	+0.2
	comp=Z,16nm,0.5s,baz=155,slow=5.3,SNR=71						
SEY	Seymchan	86.52	347	*i* P	P	04 57 36.8	-0.4
LHMI	Lhok Sumawe	86.59	277	P	P	04 57 40.4	+1.7
	comp=Z,158nm,0.9s						
GLB	Gilahina Butte	86.60	16	IAmb	IAmb	04 57 38.8	
	comp=Z,15nm,0.6s						
BALM	Baldy	86.64	17	IAmb	IAmb	04 57 39.3	
	comp=Z,22nm,0.8s						
MCARA	McCarthy VSAT	86.75	16	P	P	04 57 38.5	+0.1
MCARA				IAmb	IAmb	04 57 41.1	
	comp=Z,27nm,1.2s						
MLSI	Meulaboh, Aceh	86.76	276	P	P	04 57 40.0	+0.5
	comp=Z,98nm,1.3s						
B08A	Colville Reser	86.84	35	IAmb	IAmb	04 57 40.8	
	comp=Z,22nm,0.8s						
KTH	Kantishna Hill	86.84	12	IAmb	IAmb	04 57 39.2	
	comp=Z,21nm,0.9s						
BARN	Barnard Glacie	86.85	17	IAmb	IAmb	04 57 40.7	
	comp=Z,27nm,0.8s						
CTGM	Chitina Glacie	86.86	17	IAmb	IAmb	04 57 40.5	
	comp=Z,25nm,0.8s						
LLLB	Lillooet	86.88	32	IAmb	IAmb	04 57 41.4	
	comp=Z,19nm,1.1s						
C09A	Chrisman Ranch	87.08	36	IAmb	IAmb	04 57 42.3	
	comp=Z,20nm,0.9s						
PBKT	Sadao Pong	87.11	289	P	P	04 57 42.0	+1.0
PBKT				IAmb	IAmb	04 57 43.7	
	comp=Z,40nm,1.2s						
DHY	Denali Highway	87.15	14	IAmb	IAmb	04 57 41.2	
	comp=Z,17nm,1.2s						
MCK	McKinley	87.40	13	P	P	04 57 41.0	-0.3
MCK				pmax	pmax		
	comp=Z,27nm,0.8s						
MCK	McKinley	87.40	13	P	P	04 57 41.0	-0.3
MCK				IAmb	IAmb	04 57 42.9	
	comp=Z,26nm,0.8s						
MNTX	Cornudas Mount	87.44	55	P	P	04 57 44.3	+2.0
	baz=244						
SNAA	Sanae	87.73	179	P	P	04 57 43.1	+0.1
TX31	Lajitas Ar. Si	87.75	58	IAmb	IAmb	04 57 47.1	
	comp=Z,12nm,0.9s						
TX32	Lajitas Array	87.75	58	IAmb	IAmb	04 57 47.1	
	comp=Z,12nm,0.9s						
TXAR	Lajitas Array	87.75	58	P	P	04 57 46.2	+2.3
	comp=Z,9.2nm,0.8s,baz=221,slow=6.0,SNR=83						
TXAR				pP	pwP	04 59 60.0	+3.0
	comp=Z,1.7nm,0.9s,baz=234,slow=4.3,SNR=5.2						
TXAR				PKKPbc	PKKPbc	05 15 28.6	+0.9
	comp=Z,1.1nm,0.7s,baz=114,slow=2.3,SNR=10						
TXAR	Lajitas Array	87.75	58	P	P	04 57 45.8	+1.9
TXAR	Lajitas Array	87.75	58	P	P	04 57 45.8	+1.9
XAN	Xi'an	87.81	308	P	P	04 57 44.8	+0.8
XAN				pmax	pmax		
	comp=Z,47nm,1.0s						
XAN				pmax	pmax		
	comp=Z,140nm,4.6s						
XAN	Xi'an	87.81	308	P	P	04 57 44.3	+0.3
XAN				pmax	pmax		
	comp=Z,41nm,0.9s						
XAN	Xi'an	87.81	308	P	P	04 57 44.3	+0.3
HYT	Haines Junctio	87.86	19	IAmb	IAmb	04 57 45.5	
	comp=Z,17nm,0.9s						
MENT	Mentasta	87.89	15	IAmb	IAmb	04 57 45.1	
	comp=Z,26nm,1.1s						
VNA3	Neumayer Olymp	87.89	176	P	P	04 57 44.4	+0.6
NEW	Newport	87.98	36	P	P	04 57 45.1	+0.6
	baz=236						
ANMO	Albuquerque	88.08	52	P	P	04 57 46.3	+0.8
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ANMO	Albuquerque	88.08	52	P	P	04 57 46.3	+0.8
ANMO	Albuquerque	88.08	52	P	P	04 57 47.0	+1.5
	baz=243						
MLY	Manley	88.21	11	IAmb	IAmb	04 57 45.2	
	comp=Z,13nm,0.6s						
RIDG	Independent Ri	88.30	14	IAmb	IAmb	04 57 46.6	
	comp=Z,18nm,1.0s						
VNA2	Neumayer--Watz	88.32	177	P	P	04 57 46.5	+0.7
HDA	Harding Lake	88.41	13	P	P	04 57 46.0	0.0
	baz=210						
BCAR	Beaver Creek A	88.48	16	P	P	04 57 46.0	-0.4
IMAR	Indian Mountai	88.55	10	P	P	04 57 46.6	0.0
HIA	Hailar	88.56	325	P	P	04 57 46.8	-0.3
HIA				pmax	pmax		
	comp=Z,12nm,0.9s						
HIA	Hailar	88.56	325	P	P	04 57 46.8	-0.3
HIA				IAmb	IAmb	04 57 48.0	
	comp=Z,12nm,0.9s						
DLBC	Dease Lake	88.57	23	IAmb	IAmb	04 57 49.2	
	comp=Z,10nm,0.9s						
AHID	Auburn Hatcher	88.62	43	IAmb	IAmb	04 57 50.8	
	comp=Z,12nm,0.9s						
TCOL	CIGO, UAF Yank	88.63	13	P	P	04 57 46.7	-0.3
	baz=209						
COLA	College	88.63	13	P	P	04 57 46.8	-0.2
COLA				pmax	pmax		
	comp=Z,40nm,0.8s						
COLA	College	88.63	13	P	P	04 57 46.8	-0.2
SCRK	Sand Creek	88.70	15	IAmb	IAmb	04 57 48.8	
	comp=Z,13nm,0.9s						
IL31		88.74	13	IAmb	IAmb	04 57 48.0	
	comp=Z,18nm,1.1s						
ILAR	Eielson Array	88.74	13	P	P	04 57 46.9	-0.7
	comp=Z,9.6nm,0.6s,baz=217,slow=5.2,SNR=122						
ILAR				pP	pwP	05 00 01.1	+0.4
	comp=Z,2.3nm,1.1s,baz=229,slow=5.4,SNR=5.4						
ILAR				PKiKP	PKiKP	05 02 42.0	-0.7
	comp=Z,0.4nm,0.4s,baz=275,slow=2.6,SNR=9.7						
ILAR				PKKPbc	PKKPdf	05 15 22.4	+0.9
	comp=Z,0.3nm,0.5s,baz=342,slow=2.3,SNR=6.1						
ILAR	Eielson Array	88.74	13	P	P	04 57 46.6	-0.9
ILAR	Eielson Array	88.74	13	P	P	04 57 46.6	-0.9
KMI	Kunming	88.92	297	P	P	04 57 51.0	+1.4
KMI				pmax	pmax		
	comp=Z,42nm,0.9s						
POKR	Poker Plat Res	88.93	13	P	P	04 57 47.7	-0.7
	baz=209						
MSO	Missoula	88.99	38	P	P	04 57 50.0	+0.7
	baz=238						
DLMT	Dillon	89.02	40	IAmb	IAmb	04 57 51.9	
	comp=Z,7.3nm,0.8s						
REDW	Red Top Meadow	89.08	42	IAmb	IAmb	04 57 52.4	
	comp=Z,21nm,1.1s						
TPAW	Teton Pass	89.08	42	IAmb	IAmb	04 57 51.5	
	comp=Z,8.0nm,0.8s						
S22A	4UR Ranch, Cre	89.09	49	P	P	04 57 51.6	+1.4
	baz=243						
HHC	Hu-ho-hao-te	89.10	315	*e*P	P	04 57 51.1	+1.1
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,7.6s						
FXWY	Fox Creek	89.11	42	P	P	04 57 51.0	+0.9
SNOW	Snow King Moun	89.19	42	IAmb	IAmb	04 57 53.0	
	comp=Z,19nm,0.9s						
O20A	White River Ci	89.22	46	IAmb	IAmb	04 57 52.8	
	comp=Z,11nm,0.8s						
O20A	White River Ci	89.22	46	P	P	04 57 52.1	+1.5
	baz=242						
BILL	Bilibino	89.26	354	*e*P	P	04 57 49.6	-0.3
BILL				*e**PP	pP	04 59 58.8	-2.1
BILL				*e**SP	sP	05 00 58.7	-2.6
BILL				*e*		05 01 31.0	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BILL	Bilibino	89.26	354	P	P	04 57 50.0	0.0
BILL				IAmb	IAmb	04 57 51.0	
	comp=Z,9.4nm,1.0s						
IMW	Indian Meadow	89.29	42	IAmb	IAmb	04 57 53.5	
	comp=Z,14nm,0.9s						
RDOG	Red Dog Mine	89.35	6	IAmb	IAmb	04 57 51.6	
	comp=Z,14nm,0.9s						
PLCA	Paso Flores	89.53	134	P	P	04 57 53.6	+1.5
	comp=Z,1.2nm,0.8s,baz=266,slow=7.9,SNR=3.2						
FLWY	Flagg Ranch	89.53	42	IAmb	IAmb	04 57 54.8	
	comp=Z,14nm,1.0s						
BW06	Boulder Array	89.61	43	IAmb	IAmb	04 57 54.1	
	comp=Z,9.6nm,0.7s						
BW06	Boulder Array	89.61	43	P	P	04 57 53.5	+1.1
	baz=241						
PD31	Pinedale Array	89.61	43	IAmb	IAmb	04 57 54.1	
	comp=Z,8.4nm,0.8s						
PDAR	Pinedale Array	89.61	43	P	P	04 57 53.4	+1.0
	comp=Z,7.4nm,0.7s,baz=212,slow=3.7,SNR=72						
PDAR				pP	pwP	05 00 08.1	+2.0
	comp=Z,0.6nm,0.8s,baz=207,slow=1.7,SNR=3.4						
PDAR				PKKPbc	PKKPbc	05 15 23.1	-0.8
	comp=Z,0.5nm,0.6s,baz=89,slow=5.4,SNR=6.2						
PDAR	Pinedale Array	89.61	43	P	P	04 57 52.5	+0.1
CMAR	Chiang Mai Arr	89.61	290	P	P	04 57 54.2	+1.5
	comp=Z,28nm,0.9s,baz=126,slow=3.0,SNR=88						
CMAR	Chiang Mai Arr	89.61	290	P	P	04 57 54.1	+1.4
CMAR	Chiang Mai Arr	89.61	290	P	P	04 57 54.1	+1.4
PRP	Porcupine Dome	89.68	13	IAmb	IAmb	04 57 54.0	
	comp=Z,8.2nm,0.9s						
CHTO	Chiang Mai	89.75	290	P	P	04 57 54.0	+0.7
CHTO				pmax	pmax		
	comp=Z,34nm,0.7s						
CHTO	Chiang Mai	89.75	290	P	P	04 57 54.0	+0.7
H17A	Grant Village	89.77	42	IAmb	IAmb	04 57 56.7	
	comp=Z,9.9nm,1.1s						
H17A	Grant Village	89.77	42	P	P	04 57 56.0	+2.8
	baz=240						
DAWY	Dawson	89.92	16	IAmb	IAmb	04 57 54.5	
	comp=Z,20nm,0.9s						
EGAK	Eagle	90.05	15	IAmb	IAmb	04 57 54.8	
	comp=Z,17nm,0.8s						
WALA	Waterton Lakes	90.20	37	P	P	04 57 55.0	+0.2
WALA				IAmb	IAmb	04 57 56.6	
	comp=Z,7.2nm,0.8s						
MSTX	Muleshoe	90.40	54	IAmb	IAmb	04 57 57.9	
	comp=Z,6.7nm,0.7s						
MSTX	Muleshoe	90.40	54	P	P	04 57 57.1	+1.0
	baz=245						
T25A	Trinidad	90.54	50	P	P	04 57 58.4	+1.5
	baz=244						
RWWY	Rawlins	90.64	45	IAmb	IAmb	04 57 57.9	
	comp=Z,20nm,1.1s						
833A	Chaparral WMA,	90.76	60	P	P	04 57 59.4	+1.6
	baz=247						
ISCO	Idaho Springs	90.86	47	P	P	04 57 59.5	+1.1
	baz=244						
RLMT	Red Lodge	90.94	42	P	P	04 58 00.1	+1.6
	baz=241						
N23A	Red Feather La	91.13	46	P	P	04 58 01.4	+1.9
	baz=243						
JCT	Junction City	91.28	58	P	P	04 58 01.2	+1.0
	baz=247						
BMAR	Burnt Mountain	91.52	13	P	P	04 58 00.2	-0.2
K22A	Casper	91.53	45	IAmb	IAmb	04 58 03.1	
	comp=Z,6.9nm,1.0s						
K22A	Casper	91.53	45	P	P	04 58 02.4	+1.2
	baz=243						
TOLK	Toolik Lake Re	91.66	10	P	P	04 58 01.4	+0.4
	baz=207						
YAK	Yakutsk	92.15	338	P	P	04 58 02.4	-0.8
	comp=Z,13nm,0.5s,baz=76,slow=1.2,SNR=8.3						
YAK	Yakutsk	92.15	338	*e*P	P	04 58 02.3	-1.0
YAK				pmax	pmax		
	comp=Z,31nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.2s						
YAK	Yakutsk	92.15	338	P	P	04 58 02.5	-0.8
ABTX	Abilene, Hawle	92.25	56	P	P	04 58 05.2	+0.6
ABTX				IAmb	IAmb	04 58 05.8	
	comp=Z,5.0nm,0.8s						
EPYK	Eagle Plains	92.44	16	IAmb	IAmb	04 58 05.6	
	comp=Z,12nm,0.8s						
EPYK	Eagle Plains	92.44	16	P	P	04 58 05.0	+0.3
	baz=219						
LZH	Lanzhou	92.44	308	⇓P	P	04 58 06.5	+0.9
LZH				pP	pwP	05 00 19.0	-1.4
LZH				sP	sP	05 01 18.3	+2.1
LZH				PP	PP	05 02 01.6	+3.5
LZH				pmax	pmax		
	comp=Z,23nm,1.4s						
LZH				pmax	pmax		
	comp=Z,100nm,4.6s						
KSCO	Kaye Shedlock’	92.61	49	IAmb	IAmb	04 58 08.3	
	comp=Z,11nm,0.8s						
KSCO	Kaye Shedlock’	92.61	49	P	P	04 58 07.9	+1.7
	baz=245						
LAO	LASA Array	93.55	41	IAmb	IAmb	04 58 12.8	
	comp=Z,5.5nm,0.8s						
LAO	LASA Array	93.55	41	P	P	04 58 12.0	+1.8
	baz=244						
RSSD	Black Hills	93.81	44	P	P	04 58 12.4	+0.8
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.6s						
RSSD	Black Hills	93.81	44	P	P	04 58 12.4	+0.8
RSSD				IAmb	IAmb	04 58 13.4	
	comp=Z,4.6nm,0.6s						
RSSD	Black Hills	93.81	44	P	P	04 58 12.2	+0.6
	baz=245						
INK	Inuvik	94.72	15	P	P	04 58 14.0	-0.9
	comp=Z,4.5nm,0.9s,baz=220,slow=5.5,SNR=10						
INK	Inuvik	94.72	15	IAmb	IAmb	04 58 15.6	
	comp=Z,8.4nm,1.1s						
ULN	Ulaanbaatar	95.17	319	P	P	04 58 17.5	-0.2
ULN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ULN	Ulaanbaatar	95.17	319	P	P	04 58 17.5	-0.2
ULN				IAmb	IAmb	04 58 18.1	
	comp=Z,3.5nm,0.6s						
R32A	Long Quarter,	95.19	51	IAmb	IAmb	04 58 20.4	
	comp=Z,11nm,0.8s						
SONM	Songino Array	95.56	319	P	P	04 58 18.4	-1.0
	comp=Z,1.1nm,0.8s,baz=107,slow=1.5,SNR=5.8						
SONM	Songino Array	95.56	319	P	P	04 58 19.0	-0.4
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	95.56	319	P	P	04 58 19.0	-0.4
GTA	Gaotai	96.67	310	*e*P	P	04 58 24.4	-0.2
GTA				pP	pP	05 00 32.9	-2.9
GTA				sP	sP	05 01 34.4	-1.3
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
YKA	Yellowknife Ar	97.05	25	P	P	04 58 25.6	+0.2
	comp=Z,1.7nm,0.7s,baz=239,slow=4.3,SNR=29						
YKA				PKiKP	PKiKP	05 02 56.2	-0.9
	comp=Z,0.3nm,0.6s,baz=187,slow=1.8,SNR=4.8						
TLY	Talaya	98.73	322	*i* P	P	04 58 34.0	+0.6
TLY				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LVC	Limon Verde	99.06	118	PKKPbc	PKKPbc	05 14 58.4	-0.3
	comp=Z,3.2nm,0.5s,baz=79,slow=1.5,SNR=7.4						
CPUP	Villa Florida	106.33	127	PKKPbc	PKKPbc	05 14 36.6	-0.9
	comp=Z,3.1nm,1.0s,baz=287,slow=4.0,SNR=3.5						
SIV	San Ignacio	108.69	116	PKKPbc	PKKPbc	05 14 29.8	-0.2
	comp=Z,2.2nm,0.8s,baz=120,slow=4.0,SNR=9.5						
ZALV	Zalesovo Beam	110.32	321	PKiKP	PKiKP	05 03 20.6	-1.1
	comp=Z,5.5nm,0.5s,baz=131,slow=0.3,SNR=5.9						
MKAR	Makanchi Array	110.94	313	PKiKP	PKiKP	05 03 22.4	-0.8
	comp=Z,3.4nm,0.4s,baz=160,slow=0.4,SNR=20						
MKAR				PKKPbc	PKKPbc	05 14 22.9	-0.4
	comp=Z,0.5nm,0.7s,baz=270,slow=4.8,SNR=6.4						
MKAR	Makanchi Array	110.94	313		PKiKP	05 03 22.1	-1.0
KURK	Kurchatov	113.78	317*c*	*i*PKIKP	PKiKP	05 03 27.7	-0.7
KURK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KURBB	Kurchatov Arra	113.83	317	PKiKP	PKiKP	05 03 27.6	-0.9
	comp=Z,6.0nm,0.7s,baz=92,slow=1.8,SNR=27						
KSH	Kashi	114.53	305	PKP	PKiKP	05 03 32.5	+2.1
KSH				PP	PP	05 04 48.1	+8.6
KSH				sPKP		05 06 48.1	
KSH				PKS		05 07 08.9	
KSH				SKKS		05 10 38.1	
KSH				AMB	AMB		
	comp=Z,200nm,4.7s						
BOOM	Boomskoye usch	114.90	308	PKIKP	PKPdf	05 03 30.3	-0.8
BOOM	Boomskoye usch	114.90	308		PKPdf	05 03 30.3	-0.8
AAK	Ala-Archa	115.98	308	PKP	PKPdf	05 03 32.6	-0.6
	comp=Z,3.4nm,0.8s,baz=114,slow=3.3,SNR=6.3						
AAK	Ala-Archa	115.98	308*c*	*i*PKIKP	PKPdf	05 03 33.1	-0.1
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KULLO	Kullorsuaq	118.08	15	*i* P	PKPdf	05 03 35.3	-0.8
KULLO	Kullorsuaq	118.08	15	*i* PKIKP	PKPdf	05 03 35.3	-0.8
BVAR	Borovoye Array	118.89	320	PKP	PKPdf	05 03 37.5	-0.8
	comp=Z,20nm,0.4s,baz=120,slow=2.2,SNR=132						
KKAR	Karatay Array	118.93	309	PKIKP	PKPdf	05 03 37.6	-1.1
KKAR	Karatay Array	118.93	309		PKPdf	05 03 37.6	-1.1
BRVK	Borovoye	118.95	320*c*	*i*PKIKP	PKPdf	05 03 37.7	-0.7
BRVK				pmax	pmax		
	comp=Z,18nm,1.0s						
BRVK	Borovoye	118.95	320		PKPdf	05 03 37.6	-0.7
SCHQ	Schefferville	119.30	38	PKP	PKPdf	05 03 37.7	-1.2
	comp=Z,1.2nm,0.5s,baz=300,slow=2.8,SNR=5.3						
KBL	Kabul	119.47	299	PKIKP	PKPdf	05 03 40.1	-0.1
KBL	Kabul	119.47	299		PKPdf	05 03 40.1	-0.1
SPITS	Spitsbergen Ar	122.12	356	PKP	PKPdf	05 03 43.5	-0.3
	comp=Z,20nm,0.7s,baz=77,slow=3.8,SNR=16						
ILULI	Ilulissat	122.23	20	*i* P	PKPdf	05 03 43.5	-0.6
ILULI	Ilulissat	122.23	20	PKIKP	PKPdf	05 03 43.8	-0.4
ILULI	Ilulissat	122.23	20		PKPdf	05 03 43.8	-0.4
DAG	Danmarks Havn	123.09	5	*i* P	PKPdf	05 03 44.4	-1.2
DAG	Danmarks Havn	123.09	5	*i* PKIKP	PKPdf	05 03 44.4	-1.2
SFJD	Kangerlussuaq	123.45	22	*i* P	PKPdf	05 03 45.8	-0.7
SFJD	Kangerlussuaq	123.45	22	*i* PKIKP	PKPdf	05 03 45.8	-0.7
SUMG	Summit	123.59	13	*i* P	PKPdf	05 03 47.0	-0.2
SUMG	Summit	123.59	13	PKIKP	PKPdf	05 03 47.2	0.0
SUMG	Summit	123.59	13		PKPdf	05 03 47.2	0.0
SVE	Sverdlovsk	123.87	325	*e*PKIKP	PKPdf	05 03 46.5	-1.1
SVE				pmax	pmax		
	comp=Z,29nm,0.9s						
SUR	Sutherland	123.93	200	PKP	PKPdf	05 03 48.8	-0.1
	comp=Z,15nm,0.8s,baz=168,slow=1.7,SNR=18						
ARU	Arti	125.08	325	PKP	PKPdf	05 03 50.1	+0.1
	comp=Z,11nm,0.4s,baz=119,slow=1.5,SNR=41						
ARU	Arti	125.08	325	*i* PKIKP	PKPdf	05 03 49.5	-0.5
ARU						05 05 47.6	
ARU						05 10 03.5	
ARU				SP	SP	05 14 49.0	-1.2
ARU				SS	SS	05 21 54.0	-6.0
ARU	Arti	125.08	325		PKPdf	05 03 49.6	-0.4
BOSA	Boshof	125.71	206	PKP	PKPdf	05 03 52.5	+0.1
	comp=Z,2.5nm,0.7s,baz=127,slow=1.9,SNR=7.3						
ABKAR	Akbulak array	125.86	316		PKPdf	05 03 51.0	-0.7
AKTO	Aktyubinsk	126.86	318	PKP	PKPdf	05 03 53.3	-0.3
	comp=Z,12nm,0.7s,baz=84,slow=2.8,SNR=31						
GEYT	Alibeck	128.40	302	PKP	PKPdf	05 03 57.0	0.0
	comp=Z,9.9nm,0.7s,baz=248,slow=1.6,SNR=16						
GEYT				PP	PP	05 06 11.3	-0.7
	comp=Z,1.4nm,0.7s,baz=350,slow=4.5,SNR=4.3						
GEYT				SKPbc	SKPbc	05 06 20.7	
	comp=Z,2.1nm,0.7s,baz=343,slow=4.6,SNR=4.2						
LBTB	Lobatse	128.71	209	PKP	PKiKP	05 03 58.7	-0.2
	comp=Z,2.7nm,0.6s,baz=162,slow=3.1,SNR=8.0						
KIRV	Kirov	128.90	330	PKP	PKPdf	05 03 57.5	+0.3
	comp=Z,32nm,0.5s,baz=70,slow=1.7,SNR=8.4						
SOCY	Socotra	128.96	269		PKPdf	05 03 58.5	-0.3
PRGR	Permogore	129.04	335	*e*PKIKP	PKPdf	05 03 54.3	-3.0
PRGR				pmax	pmax		
	comp=Z,13nm,0.7s						
ARCES	ARCESS Array B	129.09	349	PKhKP	PKPpre	05 03 45.6	
	comp=Z,6.0nm,1.1s,baz=305,slow=1.4,SNR=5.2						
ARCES				PKP	PKPdf	05 03 57.0	-0.3
	comp=Z,11nm,0.5s,baz=29,slow=1.2,SNR=43						
MATP	Matopo	131.16	215	PKhKP	PKPpre	05 03 59.0	
	comp=Z,3.7nm,0.5s,baz=167,slow=1.6,SNR=10						
LSZ	Lusaka	135.49	218	PKP	PKiKP	05 04 12.2	-0.6
	comp=Z,6.3nm,0.5s,baz=100,slow=3.0,SNR=14						
FINES	FINESS Array B	135.87	343	PKhKP	PKPpre	05 03 59.0	
	comp=Z,1.4nm,0.5s,baz=37,slow=3.6,SNR=14						
FINES				PKP	PKiKP	05 04 11.3	-0.7
	comp=Z,1.5nm,0.3s,baz=127,slow=3.0,SNR=7.6						
FINES				SKPbc	SKPbc	05 06 45.6	0.0
	comp=Z,2.7nm,0.6s,baz=90,slow=5.7,SNR=5.2						
FINES	FINESS Array B	135.87	343*c*	*i*PKIKP	PKiKP	05 04 14.0	+2.0
FINES				pmax	pmax		
	comp=Z,2.0nm,0.3s						
FINES	FINESS Array B	135.87	343		PKPdf	05 04 09.6	-0.7
VRH	Novokhopyorsk	136.27	324	*e*PKIKP	PKPdf	05 04 11.3	0.0
VRH				pmax	pmax		
	comp=Z,30nm,0.6s						
OBN	Obninsk	136.71	331	PKP	PKPdf	05 04 12.5	+0.6
	comp=Z,4.2nm,0.6s,baz=156,slow=14,SNR=4.6						
OBN	Obninsk	136.71	331	*e*PKIKP	PKPdf	05 04 10.7	-1.2
OBN				pmax	pmax		
	comp=Z,16nm,0.9s						
GROC	Groznyy	136.80	312	*e*PKIKP	PKPdf	05 04 11.9	-0.6
GROC				pmax	pmax		
	comp=Z,19nm,0.5s						
LPSR	Galich'ya Gora	137.04	327	*e*PKIKP	PKPdf	05 04 12.9	+0.3
LPSR				pmax	pmax		
	comp=Z,20nm,1.2s						
TSUM	Tsumeb	137.18	203	PKP	PKPdf	05 04 15.0	+0.8
	comp=Z,4.4nm,0.7s,baz=130,slow=3.9,SNR=13						
TSUM	Tsumeb	137.18	203		PKiKP	05 04 15.2	-1.0
VSR	Storozhevoye	137.65	325	*e*PKIKP	PKPdf	05 04 14.7	+0.9
VSR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KBZ	Khabaz	138.63	313	PKhKP	PKPpre	05 04 07.8	
	comp=Z,1.4nm,0.9s,baz=76,slow=11,SNR=3.6						
KBZ				PKP	PKiKP	05 04 17.3	-0.9
	comp=Z,3.4nm,0.9s,baz=206,slow=1.9,SNR=6.1						
KMBO	Kilima Mbogo	138.64	243	PKhKP	PKPpre	05 04 08.8	
	comp=Z,0.9nm,0.3s,baz=55,slow=7.9,SNR=4.0						
KMBO				PKP	PKPdf	05 04 18.3	+1.2
	comp=Z,3.7nm,0.6s,baz=73,slow=3.1,SNR=9.2						
KMBO				SKPbc	SKPbc	05 06 56.1	+0.7
	comp=Z,3.3nm,0.9s,baz=71,slow=7.3,SNR=5.6						
KIV	Kislovodsk	138.70	314	*e*PKIKP	PKPdf	05 04 14.9	-1.2
KIV				pmax	pmax		
	comp=Z,16nm,1.0s						
RAYN	Ar Rayn	139.11	282	PKIKP	PKPdf	05 04 16.9	-0.5
RAYN	Ar Rayn	139.11	282	PKPdf	PKPdf	05 04 16.9	-0.5
ATD	Arta Tunnel	139.17	264	SKPbc	SKPbc	05 06 57.4	+0.8
	comp=Z,2.5nm,0.4s,baz=17,slow=5.5,SNR=4.2						
NB2	NORSAR Subarra	139.19	353	PKP	PKPdf	05 04 07.5	-8.9
	comp=Z,2.5nm,0.6s,baz=12,slow=3.1						
NOA	NORSAR Array B	139.19	353	PKhKP	PKPpre	05 04 08.1	
	comp=Z,0.8nm,0.5s,baz=33,slow=1.1,SNR=18						
NOA				PKP	PKPdf	05 04 17.0	+0.5
	comp=Z,0.9nm,0.5s,baz=39,slow=1.3,SNR=5.1						
HFS	Hagfors	139.73	350	PKhKP	PKPpre	05 04 09.1	
	comp=Z,12nm,0.3s,baz=61,slow=3.7,SNR=120						
HFS				PKP	PKPdf	05 04 17.0	-0.3
	comp=Z,7.3nm,0.7s,baz=111,slow=3.3,SNR=6.8						
BATM	Batumi	140.18	311	⇑P	PKPdf	05 04 11.0	-7.8
BATM	Batumi	140.18	311	⇑PKHKP	PKPpre	05 04 11.0	
BCA	Borcka	140.28	310	⇓P	PKPdf	05 04 13.2	-5.8
SOC	Sochi	140.84	314	*e*PKHKP	PKPpre	05 04 13.0	
SOC				*e*		05 04 18.6	
SOC				pmax	pmax		

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      comp=Z,9.0nm,0.6s
SOC                                   pmax      pmax
      comp=Z,10.0nm,0.7s
YEDI  Yedisu-Bingol     141.68 308 eP       PKPdf     05 04 17.6 -4.1
KTUT  Trabzon           141.75 311 ⇓P       PKPdf     05 04 17.7 -3.9
ANN   Anapa             141.81 317 ePKHKP   PKPpre    05 04 17.7
ANN                                pmax     pmax
      comp=Z,23nm,0.9s
MAZI  Mazidag           142.31 305 eP       PKPdf     05 04 19.2 -3.7
PTK   Pertek            142.70 307 eP       PKPdf     05 04 21.4 -2.2
SVRC  Sivrice-ELAZID    142.92 307 eP       PKPdf     05 04 22.0 -2.0
AKASG Malin Array Be    142.96 330  PKhKP   PKPpre    05 04 20.4
      comp=Z,38nm,0.4s,baz=42,slow=4.4,SNR=483
AKASG                               SKPbc   SKPbc     05 07 05.0  0.0
      comp=Z,3.7nm,1.0s,baz=47,slow=2.7,SNR=6.9
KAC   Achnashellach     143.02   6 eP       PKPbc     05 04 21.4 -0.2
MCD   Coleburn Disti    143.10   4 eP       PKPab     05 04 21.1 -0.3
KPL   Plockton          143.14   6 eP       PKPab     05 04 21.6 +0.1
MDO   Dochfour          143.16   5 eP       PKPab     05 04 21.6 -0.1
GOET  G??ttrup          143.34 353 i P      PKPbc     05 04 23.0 +0.5
URFA  Urfa              143.56 305 eP       PKPab     05 04 23.4 -0.6
MALT  Malatya           143.60 307 eP       PKPbc     05 04 23.9 -0.2
RSDY  Resadiye-TOKAT    143.70 311 eP       PKPbc     05 04 24.3  0.0
SIM   Simferopol'       143.80 319d iPKIKP  PKPab     05 04 24.7 +0.1
SIM                                 pmax    pmax
      comp=Z,171nm,0.9s
DRUM  Mains of Drumt    143.82   4 eP       PKPbc     05 04 23.2 -0.9
SVSK  Karacayir         144.11 310 eP       PKPdf     05 04 25.8 +0.1
EDU   Dundee            144.15   4 eP       PKPbc     05 04 25.0 -0.1
COP   Copenhagen        144.18 349 i P      PKPbc     05 04 24.6 -0.5
COP   Copenhagen        144.18 349 i PKIKP  PKPbc     05 04 24.6 -0.5
INVG  Invergeldie, C    144.19   5 eP       PKPbc     05 04 24.9 -0.3
DARE  Darende-Malaty    144.22 308 eP       PKPab     05 04 26.5  0.0
MBAR  Mbarara           144.22 237  PKP     PKPab     05 04 27.2 -0.1
      comp=Z,26nm,0.6s,baz=129,slow=4.3,SNR=27
MBAR  Mbarara           144.22 237  PKIKP   PKPab     05 04 27.8 +0.5
MBAR  Mbarara           144.22 237          PKPab     05 04 27.8 +0.5
BSD   Bornholm Skovb    144.23 347 i P      PKPbc     05 04 24.9 -0.4
BSD   Bornholm Skovb    144.23 347 i PKIKP  PKPbc     05 04 24.9 -0.4
LAWE  Loch Awe, Argy    144.23   6 eP       PKPbc     05 04 25.2 -0.1
TOKT  Tokat             144.28 311 eP       PKPbc     05 04 25.7 -0.4
KVT   Kavak             144.33 312 eP       PKPab     05 04 26.6 -0.2
PGBU  Glenifferbraes    144.76   6 eP       PKPbc     05 04 26.8 -0.2
GAZ   Gaziantep         144.87 306 eP       PKPbc     05 04 28.1 +0.1
EBL   Broad Law         144.92   4 eP       PKPbc     05 04 27.6 +0.1
SORM  Soroca            145.12 328 ⇑P       PKPdf     05 04 27.7 +0.5
SORM  Soroca            145.12 328 ⇑PKIKP   PKPdf     05 04 27.7 +0.5
BNN   Bunyan            145.33 309 eP       PKPbc     05 04 28.9 -0.5
BZK   Bozkurt           145.33 315 ⇓P       PKPbc     05 04 29.4 +0.3
BZK   Bozkurt           145.33 315 eP       PKPbc     05 04 28.5 -0.6
EKA   Eskdalemuir Ar    145.35   5  PKPbc   PKPbc     05 04 28.4 -0.3
      comp=Z,18nm,0.7s,baz=355,slow=2.7,SNR=33
YOZ   Yozgat            145.41 310 eP       PKPdf     05 04 28.8 +0.6
KIS   Kishinev          145.63 326 i PS     PKPbc     05 04 30.0 +0.2
GAL1  Galloway          145.68   6 eP       PKPbc     05 04 29.6  0.0
CORM  Corum             145.68 312 eP       PKPbc     05 04 30.4 +0.1
LVV   L'vov             145.89 334 ePKIKP   PKPdf     05 04 28.0 -0.5
TAHT  Tahtakopru-Hat    145.89 305 eP       PKPbc     05 04 30.8 -0.1
EDMD  Edmundbyers       145.93   3 eP       PKPbc     05 04 30.4  0.0
ILGA  Ilgaz             145.93 314          PKPbc     05 04 31.8 +0.7
CEYT  Ceyhan            146.03 306 eP       PKPbc     05 04 30.5 -0.7
IAS   Iasi              146.15 327 ⇓P       PKPbc     05 04 31.3 +0.1
IAS   Iasi              146.15 327 ⇓PKP2    PKPbc     05 04 31.3 +0.1
CANT  Cankiri           146.20 313 eP       PKPbc     05 04 31.8 +0.1
BSEG  Bad Segeberg      146.21 350 ePKPdf   PKPdf     05 04 29.2 +0.4
      baz=16,slow=1.6
BSEG                               ePKPbc   PKPbc     05 04 31.1  0.0
      baz=16,slow=2.4
LEOM  Leova             146.27 326 ⇑P       PKPbc     05 04 31.8 +0.2
LEOM  Leova             146.27 326 ⇑PKP2    PKPbc     05 04 31.8 +0.2
IOMK  Kirk Michael      146.29   6 eP       PKPbc     05 04 31.5 +0.1
ASF   Jabal al Asfar    146.34 297  PKPbc   PKPbc     05 04 32.8 +0.4
      comp=Z,29nm,0.8s,baz=64,slow=2.3,SNR=40
GDLE  Glaisdale, N Y    146.39   2 eP       PKPbc     05 04 31.9 +0.3
WIM   Isle of Man       146.39   6 eP       PKPbc     05 04 31.9 +0.2
BR131 Keskin Array S    146.56 312  PKIKP   PKPdf     05 04 29.8 -0.3
BR131 Keskin Array S    146.56 312          PKPdf     05 04 29.8 -0.3
BRTR  Keskin Array B    146.56 312  PKPbc   PKPbc     05 04 32.0 -0.8
      comp=Z,22nm,0.7s,baz=119,slow=2.2,SNR=100
BRTR                                pPKPbc  pPKPdf    05 06 54.6 +4.3
      comp=Z,3.1nm,1.1s,baz=101,slow=2.5,SNR=4.4
BRTR                                SKKPbc  SKKPbc    05 15 04.8 -1.1
      comp=Z,0.8nm,0.7s,baz=232,slow=6.1,SNR=5.4
BRTR  Keskin Array B    146.56 312  PKIKP   PKPbc     05 04 31.9 -0.9
BRTR  Keskin Array B    146.56 312  PKPbc   PKPbc     05 04 31.9 -0.9
KWP   Kalwaria Pacla    146.58 335  PKP2    PKPbc     05 04 32.2 -0.1
KWP   Kalwaria Pacla    146.58 335          PKPbc     05 04 32.2 -0.1
TLCR                    146.77 323 ⇑P       PKPbc     05 04 33.1 +0.1
TLCR                    146.77 323 ⇑PKP2    PKPbc     05 04 33.1 +0.1
RUE   Ruedersdorf       146.93 346 ePKPbc   PKPbc     05 04 33.0 -0.1
      baz=16,slow=2.4
GHRR                    146.98 326 ⇓P       PKPbc     05 04 34.4 +0.9
BUR08 Bucovina Ar. S    146.99 330          PKPbc     05 04 33.8 +0.2
BHL   Bhannes           146.99 301 eP       PKPbc     05 04 34.2 +0.2
JURR  Jurilovca         146.99 323 ⇑P       PKPbc     05 04 33.8 +0.3
BURAR Bucovina Array    147.00 330 ⇓P       PKPbc     05 04 34.0 +0.4
BURAR Bucovina Array    147.00 330 ⇓PKP2    PKPbc     05 04 34.0 +0.4
BURAR Bucovina Array    147.00 330          PKPdf     05 04 30.1 -0.4
BURAR                               PKPbc   PKPbc     05 04 34.3 +0.6
MERS  Mersin            147.00 306 eP       PKPbc     05 04 33.2 -0.8
BIZ   Bicaz             147.05 328 ⇑P       PKiKP     05 04 34.8 -0.7
SHBL  Chebaa            147.05 300 eP       PKPbc     05 04 34.8 +0.4
TESR  Tescani           147.07 327 ⇓P       PKPbc     05 04 33.6 -0.1
AFSR  Afar-Bala (An     147.08 311 eP       PKPbc     05 04 33.6 -0.5
ANTO  Ankara            147.09 312 ⇓P       PKPbc     05 04 34.2 +0.1
ANTO  Ankara            147.09 312 ⇓PKP2    PKPbc     05 04 34.2 +0.1
ANTO  Ankara            147.09 312          PKPdf     05 04 30.3 -0.6
ANTO                                PKPbc   PKPbc     05 04 34.6 +0.5
LOD   Lodumlu           147.10 312 eP       PKPbc     05 04 33.8 -0.3
CFR   Carcaliu          147.15 324 ⇑P       PKPbc     05 04 33.8 -0.1
CFR   Carcaliu          147.15 324 ⇑PKP2    PKPbc     05 04 33.8 -0.1
WME   Myndd Eilian      147.17   6 eP       PKPbc     05 04 33.7  0.0
TOPG  Topolog           147.21 323 ⇓P       PKPbc     05 04 34.5 +0.4
WLF1  Llynfaes          147.26   6 eP       PKPbc     05 04 33.9 -0.1
PETR  Petresti          147.29 325 ⇑P       PKiKP     05 04 35.5 -0.4
ODBI  Odobesti          147.36 326 ⇑P       PKiKP     05 04 35.7 -0.4
LBWR  Ladybower, Pea    147.37   3 eP       PKPbc     05 04 34.2 -0.1
MMAI  Mount Meron Ar    147.40 299  PKPbc   PKPbc     05 04 35.7 +0.5
      comp=Z,41nm,0.5s,baz=62,slow=4.1,SNR=69
MMAI                                pPKPbc  pPKPab    05 06 55.6 +2.7
      comp=Z,1.3nm,0.5s,baz=96,slow=2.9,SNR=1.7
KIZK  Mersin            147.42 306 eP       PKPbc     05 04 34.3 -0.7
TIRR  Tirgusor          147.44 323 ⇓P       PKPbc     05 04 35.0 +0.3
TIRR  Tirgusor          147.44 323 ⇓PKP2    PKPbc     05 04 35.0 +0.3
VRI   Vrincioaia        147.46 326 ⇑P       PKPbc     05 04 35.0 +0.2
VRI   Vrincioaia        147.46 326 ⇑PKP2    PKPbc     05 04 35.0 +0.2
PLOR  Plostina          147.51 326 ⇑P       PKPbc     05 04 34.9  0.0
PLOR  Plostina          147.51 326 ⇑PKP2    PKPbc     05 04 34.9  0.0
RETH  Rethem/Aller,     147.51 351 ePKPbc   PKPbc     05 04 34.7 +0.1
      baz=16,slow=2.4
UZH   Uzhgorod          147.53 334 ePKIKP   PKPdf     05 04 31.4 +0.2
UZH                                i                  05 04 35.2
UZH                                e                  05 04 38.5
UZH                                e                  05 06 51.0
HARR  Harsova           147.57 323 ⇑P       PKPbc     05 04 35.4 +0.3
HARR  Harsova           147.57 323 ⇑PKP2    PKPbc     05 04 35.4 +0.3
SILI  Silifke-Mersin    147.62 306 eP       PKPbc     05 04 34.8 -0.7
NRDL  Niedersach Rie    147.63 350 ePKPbc   PKPbc     05 04 35.0 +0.1
      baz=16,slow=2.4
NRDL                               ePKPab   PKPab     05 04 39.3 -0.1
      baz=16,slow=4.3
BISRR Bisoca            147.68 326 ⇑P       PKPbc     05 04 35.9 +0.5
EREN  Erenkoy           147.71 304 eP       PKPbc     05 04 34.9 -0.8
MANR  Mangalia          147.73 322 ⇓P       PKPbc     05 04 36.1 +0.6
CVDA  Cernavoda         147.73 323 ⇑P       PKPbc     05 04 36.1 +0.7
BMR   Baia Mare         147.75 331 ⇑P       PKPbc     05 04 35.8 +0.4
BMR   Baia Mare         147.75 331 ⇑PKP2    PKPbc     05 04 35.8 +0.4
KEBE  Keben-Mersin      147.76 306 eP       PKPbc     05 04 35.7 -0.2
FOEL  Foel Wylfa        147.77   5 eP       PKPbc     05 04 35.6 +0.3
ARCR  ARCALIA           147.79 330 ⇓P       PKPbc     05 04 36.0 +0.4
OZUR                    147.79 327 ⇓P       PKPbc     05 04 35.9 +0.2
TRPA  Tarpa             147.82 333 ⇓P       PKPbc     05 04 35.5  0.0
IKL   Isikli            147.85 306 eP       PKPbc     05 04 35.1 -0.9
ASSE  Asse, Remlinge    147.89 349 ePKPbc   PKPbc     05 04 35.7 +0.1
      baz=16,slow=2.4
MDUB  Mudurnu           147.90 314 eP       PKPbc     05 04 35.5 -0.7
ICOR  Ion Corvin        148.00 323 ⇓P       PKPbc     05 04 36.8 +0.6
PSN   Preselentsi       148.04 322 i P      PKPbc     05 04 36.6 +0.3
ISR   Istrita           148.05 325 ⇑P       PKPbc     05 04 36.8 +0.4
ISR   Istrita           148.05 325 ⇑PKP2    PKPbc     05 04 36.8 +0.4
OSTC  Ostas             148.06 342 ePKPDF   PKPdf     05 04 32.4 +0.3
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OSTC                              ⇑ePKP     PKPbc     05 04 36.4 +0.2
OSTC                               ePKPAB   PKPab     05 04 42.0 +0.7
CHVC  Chvalec           148.07 342⇑ePKP     PKPdf     05 04 32.3 +0.2
CHVC                               ePKPAB   PKPbc     05 04 36.6 +0.4
DOPR  Dopca             148.08 327 ⇓P       PKiKP     05 04 37.1 -0.5
OKC   Ostrava-Krasne    148.09 339⇑ePKP     PKPbc     05 04 36.1 -0.1
OKC                                ePKPAB   PKPab     05 04 41.5 +0.1
OKC   Ostrava-Krasne    148.09 339 ePKP2    PKPbc     05 04 36.1 -0.1
LADK  Ladik-KONYA       148.10 310 eP       PKPbc     05 04 34.9 -1.9
MLR   Muntele Rosu      148.12 326  PKPbc   PKPbc     05 04 36.1 -0.5
      comp=Z,30nm,0.6s,baz=357,slow=5.2,SNR=56
MLR   Muntele Rosu      148.12 326 ⇑P       PKPbc     05 04 36.1 -0.5
MLR   Muntele Rosu      148.12 326  PKHKP   PKPbc     05 04 35.9 -0.7
MLR   Muntele Rosu      148.12 326          PKPbc     05 04 35.9 -0.7
WACR  West Acre         148.12   1 eP       PKPbc     05 04 36.0 -0.1
IBBN  Ibbenburen        148.15 353 ePKPbc   PKPbc     05 04 36.3  0.0
      baz=16,slow=2.4
KIZT  Kizilcal          148.16 311 eP       PKPbc     05 04 36.2 -0.7
UPC   Upice             148.16 342⇑ePKP     PKPbc     05 04 36.3 -0.1
UPC                                ePKPAB   PKPab     05 04 41.8 +0.1
UPC   Upice             148.16 342 ePKP2    PKPbc     05 04 36.3 -0.1
HLM1  Long Mynd         148.17   5 eP       PKPbc     05 04 36.4  0.0
CLL   Collm             148.20 346 ePKPdf   PKPdf     05 04 33.0 +0.8
CLL                               ⇓iPKPbc   PKiKP     05 04 37.4 -0.2
      comp=Z,80nm,1.0s
CLL                                i PKPab  PKPab     05 04 42.3 +0.5
      comp=Z,30nm,0.7s
CLL                                epPKPbc  pPKPab    05 06 59.0 +3.2
CLL                                e(SKPbc)           05 07 19.0
CLL   Collm             148.20 346⇓ePKHKP   PKPdf     05 04 33.0 +0.8
CLL                                i                  05 04 42.3
CLL                                 pmax    pmax
      comp=Z,80nm,1.0s
CLL                                 pmax    pmax
      comp=Z,30nm,0.7s
CLL   Collm             148.20 346          PKPdf     05 04 32.7 +0.5
CLL                                 PKPbc   PKiKP     05 04 38.0 +0.4
DPC   Dobruska-Polom    148.21 342⇑ePKP     PKiKP     05 04 37.3 -0.5
DPC                                ePKPAB   PKPab     05 04 42.5 +0.5
DPC   Dobruska-Polom    148.21 342 ePKP2    PKiKP     05 04 37.3 -0.5
LANS  Liptovska Anna    148.21 337 ePKHKP   PKPdf     05 04 33.1 +0.7
LANS                               e                  05 04 43.0
LANS  Liptovska Anna    148.21 337 ePKP     PKPdf     05 04 33.1 +0.7
LANS                               e                  05 04 38.1
LANS                               e                  05 04 43.0
LANS                               e                  05 38 28.8
CLZ   Clausthal         148.22 349 ePKPdf   PKPdf     05 04 32.4 +0.1
      baz=16,slow=1.6
CLZ                                ePKPbc   PKPbc     05 04 36.8 +0.2
      baz=16,slow=2.4
KRLC  Kraliky           148.31 341⇑ePKP     PKPbc     05 04 37.2 +0.4
KRLC                               ePKPAB   PKPab     05 04 42.6 +0.2
KRLC  Kraliky           148.31 341 ePKP2    PKPbc     05 04 37.2 +0.4
TEKE  Tekeli-Mersin     148.31 306 eP       PKPbc     05 04 36.2 -1.0
LEHL  Lehliu            148.32 324 ⇓P       PKPbc     05 04 37.3 +0.3
MORC  Moravsky Berou    148.34 340 ⇓P       PKPbc     05 04 37.2 +0.3
MORC  Moravsky Berou    148.34 340 ⇓PKP2    PKPbc     05 04 37.2 +0.3
MORC  Moravsky Berou    148.34 340 ePKP     PKPbc     05 04 37.1 +0.3
MORC                               e                  05 04 42.9
SECR                    148.36 326 ⇓P       PKPbc     05 04 37.4 +0.3
KECS  Kecovo            148.38 335 ePKP2    PKiKP     05 04 37.8 -0.3
KECS  Kecovo            148.38 335 ePKP     PKiKP     05 04 37.8 -0.3
KECS                               e                  05 04 43.1
BRG   Berggiesshubel    148.38 345 i PKP    PKPdf     05 04 32.9 +0.4
      comp=Z,21nm,1.6s
BRG   Berggiesshubel    148.38 345 i PKP    PKPbc     05 04 37.1 +0.2
      comp=Z,34nm,0.7s
BRG                                i                  05 04 42.5
      comp=Z,18nm,0.7s
BRG                                epPKP    pPKPab    05 06 59.1 +2.4
      comp=Z,7.2nm,1.1s
BRG   Berggiesshubel    148.38 345 ePKPbc   PKPbc     05 04 37.0 +0.1
      baz=16,slow=2.4
BRG                                ePKPab   PKPab     05 04 42.4 -0.2
      baz=16,slow=4.3
EIL   Elat              148.41 293  PKPbc   PKPbc     05 04 37.1 -0.5
      comp=Z,29nm,0.7s,baz=297,slow=8.2,SNR=4.1
CJR   Cluj-Napoca       148.41 330 ⇓P       PKPbc     05 04 37.6 +0.4
CJR   Cluj-Napoca       148.41 330 ⇓PKP2    PKPbc     05 04 37.6 +0.4
ORH   Orhaniye          148.45 316 i P      PKPab     05 04 42.8 -0.5
MDB   Medias            148.46 329 ⇓P       PKiKP     05 04 38.1 -0.2
MDB   Medias            148.46 329 ⇓PKP2    PKiKP     05 04 38.1 -0.2
FBE   Freiberg          148.48 345 ePKPbc   PKPbc     05 04 37.5 +0.4
      baz=16,slow=2.4
FBE                                ePKPab   PKPab     05 04 43.2 +0.2
      baz=16,slow=4.3
SRCK  Saricakaya, Es    148.49 314 eP       PKPbc     05 04 36.6 -0.9
HDMB  Hadim             148.49 308 eP       PKPbc     05 04 36.5 -1.4
CIFT  Cifteler, Eski    148.51 313 eP       PKPbc     05 04 36.9 -0.8
PVCC  Panska Ves        148.54 344⇑ePKP     PKPbc     05 04 37.4 +0.1
PVCC  Panska Ves        148.54 344 ePKP2    PKPbc     05 04 37.4 +0.1
NEUB  Neuenburg         148.56 347 ePKPdf   PKPdf     05 04 33.2 +0.4
      baz=16,slow=1.6
NEUB                               ePKPbc   PKPbc     05 04 37.3  0.0
      baz=16,slow=2.4
GTTG  Gottingen         148.57 350 ePKPbc   PKPbc     05 04 37.4 +0.1
      baz=16,slow=2.4
GTTG                               ePKPab   PKPab     05 04 43.2 -0.2
      baz=16,slow=4.3
VOIR                    148.62 327 ⇑P       PKPbc     05 04 37.9 +0.1
VOIR                    148.62 327 ⇑PKP2    PKPbc     05 04 37.9 +0.1
DRGR                    148.76 331 ⇓P       PKPbc     05 04 38.1  0.0
DRGR                    148.76 331 ⇓PKHKP   PKPbc     05 04 38.1  0.0
PRD   Provadia          148.79 322 i P      PKPbc     05 04 38.5 +0.4
NEF   NEVSHA            148.82 322 i P      PKPbc     05 04 38.5 +0.2
LEF   Lefka             148.83 304 ⇑P       PKPbc     05 04 38.1 -0.4
MONM  Monmouth          148.85   5 eP       PKPbc     05 04 37.7 -0.3
ARR   Arges             148.88 327 ⇓P       PKiKP     05 04 39.1 -0.2
GAZI  Gazipasa          148.89 306 eP       PKPbc     05 04 37.1 -1.6
VYHS  Vyhne             148.99 337 ePKIKP   PKPdf     05 04 33.3 -0.3
VYHS                               e                  05 04 38.9
VYHS                               e                  05 04 45.8
VYHS  Vyhne             148.99 337 ePKP     PKPdf     05 04 33.3 -0.3
VYHS                               e                  05 04 38.9
VYHS                               e                  05 04 45.8
PRA   Prague            148.99 344⇑ePKP     PKiKP     05 04 39.0 -0.3
PRA   Prague            148.99 344 ePKP2    PKiKP     05 04 39.0 -0.3
PRU   Pruhonice         149.04 343⇑ePKP     PKPbc     05 04 38.3 -0.2
PRU                                ePKPAB   PKPab     05 04 45.1 -0.2
PRU   Pruhonice         149.04 343 ePKHKP   PKPbc     05 04 38.3 -0.2
PRU                                e                  05 04 45.1
VRAC  Vranov            149.05 340  PKPbc   PKPbc     05 04 38.8 +0.2
      comp=Z,13nm,0.9s,baz=18,slow=0.7,SNR=23
VRAC                                PKPab   PKPab     05 04 45.7 +0.3
      comp=Z,21nm,1.0s,baz=43,slow=5.4,SNR=14
VRAC  Vranov            149.05 340 ⇓P       PKPbc     05 04 38.9 +0.3
VRAC  Vranov            149.05 340 ePKP     PKPbc     05 04 38.7 +0.1
VRAC                               e                  05 04 46.0
BUG   Bochum--Univer    149.06 353 ePKPbc   PKPbc     05 04 38.4 -0.1
      baz=16,slow=2.4
PSZ   Piszkesteto       149.06 335 ⇓P       PKPbc     05 04 38.9 +0.1
PSZ   Piszkesteto       149.06 335 ⇓PKHKP   PKPbc     05 04 38.9 +0.1
RAZG  Razgrad           149.07 323 ⇓P       PKPbc     05 04 38.9  0.0
MOX   Moxa              149.12 347 ePKPbc   PKPbc     05 04 38.8  0.0
      baz=16,slow=2.4
MOX                                ePKPab   PKPab     05 04 45.5 -0.2
      baz=16,slow=4.3
TANN  Tannenbergstha    149.16 346 ePKPbc   PKPbc     05 04 38.9  0.0
      baz=16,slow=2.4
TANN                               ePKPab   PKPab     05 04 46.0 +0.1
      baz=16,slow=4.3
PLN   Plauen            149.16 346 ePKPbc   PKPbc     05 04 38.8 -0.1
      baz=16,slow=2.4
GUNZ  Gunzen            149.23 346 ePKPbc   PKPbc     05 04 39.2 +0.2
      baz=16,slow=2.4
GUNZ                               ePKPab   PKPab     05 04 46.4 +0.2
      baz=16,slow=4.3
SHUT  Suhut-Afyon       149.23 312 eP       PKPbc     05 04 38.9 -0.6
SWN1  Swindon           149.24   4 eP       PKPbc     05 04 39.0 +0.1
LOT   Lotru             149.25 328 ⇑P       PKPbc     05 04 38.9 -0.5
UBBA  Unterbreizbach    149.27 349 ePKPbc   PKPbc     05 04 39.2 +0.3
      baz=16,slow=2.4
HUMR  Humele            149.28 326 ⇓P       PKPbc     05 04 39.0 -0.3
BATH  Bath              149.28   4 eP       PKPbc     05 04 38.8 -0.3
WERN  Wernitzgruen      149.29 346 ePKPbc   PKPbc     05 04 39.5 +0.3
      baz=16,slow=2.4
WERN                               ePKPab   PKPab     05 04 46.7 +0.3
      baz=16,slow=4.3
KRUC  Moravsky          149.33 340 ePKP     PKPbc     05 04 39.3  0.0
KRUC                               e                  05 04 47.0
NKC   Novy Kostel       149.33 346⇑ePKP     PKPbc     05 04 39.5 +0.2
NKC                                ePKPAB   PKPab     05 04 46.2 -0.4
NKC   Novy Kostel       149.33 346 ePKHKP   PKPbc     05 04 39.5 +0.2
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NKC                                e                  05 04 46.2
DEV   Deva              149.35 330 ⇓P       PKPbc     05 04 39.5 +0.1
DEV   Deva              149.35 330 ⇓PKHKP   PKPbc     05 04 39.5 +0.1
ARMT  Armutlu           149.39 316 eP       PKPbc     05 04 39.0 -0.7
TREC  Trest             149.40 342⇑ePKP     PKPbc     05 04 39.7 +0.2
TREC                               ePKPAB   PKPab     05 04 47.1 +0.2
TREC  Trest             149.40 342 ePKHKP   PKPbc     05 04 39.7 +0.2
TREC                               e                  05 04 47.1
PBCC  Pribram           149.46 344⇑ePKP     PKPbc     05 04 39.8 +0.2
PBCC                               ePKPAB   PKPab     05 04 47.2 +0.1
SMOL  Smolenice         149.47 339 ePKP2    PKiKP     05 04 40.7 +0.3
SMOL  Smolenice         149.47 339 ePKP     PKiKP     05 04 40.6 +0.2
SMOL                               e                  05 04 48.3
SMOL                               e                  05 38 31.6
WOL   Wolverton         149.48   3 eP       PKPbc     05 04 39.4 -0.1
TVSB  Tavsanli          149.56 314 eP       PKPbc     05 04 39.2 -1.1
ISP   Isparta           149.57 310  PKHKP   PKPbc     05 04 38.6 -1.8
ISP   Isparta           149.57 310  PKPbc   PKPbc     05 04 38.6 -1.8
SZH   Strazhica         149.59 323 i P      PKPbc     05 04 39.8 -0.3
SIRR  Siria             149.63 332 ⇓P       PKPbc     05 04 40.4 +0.3
MANZ  Manzenberg        149.64 346 ePKPdf   PKPdf     05 04 34.7 +0.1
      baz=16,slow=1.6
MANZ                               ePKPbc   PKPbc     05 04 40.1 +0.1
      baz=16,slow=2.4
MODS  Modra-Piesok      149.64 339 ePKHKP   PKPdf     05 04 34.9 +0.2
MODS                               e                  05 04 48.4
MODS  Modra-Piesok      149.64 339 ePKP     PKPdf     05 04 34.9 +0.2
MODS                               e                  05 04 40.0
MODS                               e                  05 04 48.4
MODS                               e                  05 38 31.0
ZIMR                    149.65 324 ⇑P       PKPbc     05 04 40.9 +0.7
ZIMR                    149.65 324 ⇑PKHKP   PKPbc     05 04 40.9 +0.7
JMB   Yambol            149.71 321 i P      PKPbc     05 04 40.5 +0.1
GZR   Gura Zlata        149.77 329 ⇓P       PKPbc     05 04 40.4 -0.1
GZR   Gura Zlata        149.77 329 ⇓PKIKP   PKPbc     05 04 40.4 -0.1
ROTZ  Rotzenmuhle       149.82 346 ePKPbc   PKPbc     05 04 40.4  0.0
      baz=16,slow=2.4
ROTZ                               ePKPab   PKPab     05 04 48.9 +0.3
      baz=16,slow=4.3
ELND  Elena             149.83 323 ⇓P       PKiKP     05 04 41.0 -0.3
ZST   Bratislava        149.85 339 ePKHKP   PKPbc     05 04 40.3 -0.2
ZST                                e                  05 04 48.9
ZST   Bratislava        149.85 339 ePKP     PKPbc     05 04 40.3 -0.2
ZST                                e                  05 04 48.9
BEBN  Eben Emael        149.86 354  PKPdf   PKPdf     05 04 34.6 -0.2
BEBN                                PKPbc   PKPbc     05 04 40.3 -0.1
BEBN                                PKPab   PKPab     05 04 48.6 -0.1
VLAD  Vladila           149.94 326 ⇑P       PKiKP     05 04 41.3 -0.2
UCC   Uccle             149.96 356  PKPbc   PKPbc     05 04 40.8 +0.1
AHRW  Bad Neuenahr-A    149.97 353 ePKPbc   PKPbc     05 04 40.7  0.0
      baz=16,slow=2.4
MEM   Membach           150.02 354  x       PKPdf     05 04 35.8 +0.6
MEM                                 PKPbc   PKPbc     05 04 40.9  0.0
MEM                                 PKPab   PKPab     05 04 49.2 -0.2
BLCH  La Chartreuse     150.03 355  PKPbc   PKiKP     05 04 41.2 -0.2
BLCH                                PKPab   PKPab     05 04 49.2 -0.2
BTNL  Ternell           150.03 354  PKPbc   PKPbc     05 04 41.0 +0.1
KHC   Kasperske Hory    150.08 344 ePKPDF   PKPdf     05 04 35.4 +0.1
KHC                               ⇑ePKP     PKPbc     05 04 41.1  0.0
KHC                                ePKPAB   PKPab     05 04 50.1 +0.4
KHC   Kasperske Hory    150.08 344 ePKIKP   PKPdf     05 04 35.4 +0.1
KHC                                e                  05 04 41.1
KHC                                e                  05 04 50.1
BSTI  Sart Tilman       150.08 355  PKPbc   PKPbc     05 04 41.2 +0.3
BSTI                                PKPab   PKPab     05 04 49.0 -0.6
SRE   Strehaia          150.09 328 ⇑P       PKPbc     05 04 41.4 +0.2
SRE   Strehaia          150.09 328 ⇑PKHKP   PKPbc     05 04 41.4 +0.2
TNS   Taunus Mts        150.10 351 ePKPbc   PKPbc     05 04 41.0 -0.1
      baz=16,slow=2.4
TNS                                ePKPab   PKPab     05 04 49.5 -0.3
      baz=16,slow=4.3
GRF   Grafenberg Arr    150.11 347 ePKPbc   PKPbc     05 04 41.2 +0.1
      baz=16,slow=2.4
GRF                                ePKPab   PKPab     05 04 50.2 +0.4
      baz=16,slow=4.3
BSKQ  Steenkerk         150.13 356  PKPbc   PKPbc     05 04 41.3 +0.2
BSKQ                                PKPab   PKPab     05 04 49.6 -0.1
BZS   Buzias            150.15 331 ⇓P       PKPbc     05 04 41.1 -0.2
BZS   Buzias            150.15 331 ⇓PKHKP   PKPbc     05 04 41.1 -0.2
BRQR  Ronquire          150.16 356  PKPbc   PKiKP     05 04 41.6 -0.1
BRQR                                PKPab   PKPab     05 04 50.0 +0.1
MRMT  Marmara Adasi     150.18 317 eP       PKPbc     05 04 40.8 -0.8
PLVB  Pleven            150.23 324 ⇓P       PKPbc     05 04 41.8 +0.2
TIM   Timisoara         150.24 331 ⇓P       PKiKP     05 04 42.5 +0.5
TIM   Timisoara         150.24 331 ⇓PKIKP   PKiKP     05 04 42.5 +0.5
WET   Wettzell          150.24 345 ePKPbc   PKPbc     05 04 41.5 +0.1
      baz=16,slow=2.4
WET                                ePKPab   PKPab     05 04 50.8 +0.4
      baz=16,slow=4.3
SNF   Seneffe           150.25 356  PKPbc   PKPbc     05 04 41.6 +0.3
BCLA  Clavier           150.27 355  PKPdf   PKPdf     05 04 35.8 +0.3
BCLA                                PKPbc   PKPbc     05 04 41.0 -0.4
BCLA                                PKPab   PKPab     05 04 49.9 -0.5
BHOU  Houvegnez         150.27 354  PKPbc   PKiKP     05 04 41.9  0.0
BHOU                                PKPab   PKPab     05 04 50.8 +0.4
GEC2  GERESS Array S    150.31 343 ePKPbc   PKPbc     05 04 41.5 -0.2
      baz=16,slow=2.4
GERES GERESS Array B    150.31 343  PKP     PKPdf     05 04 35.5 -0.3
      comp=Z,1.4nm,0.8s,baz=52,slow=2.2,SNR=10
GERES                               PKPbc   PKPbc     05 04 41.4 -0.4
      comp=Z,17nm,0.7s,baz=21,slow=2.8,SNR=81
GERES                               pPKPbc  pPKPab    05 07 04.5 +0.3
      comp=Z,2.0nm,0.9s,baz=325,slow=2.1,SNR=4.6
GERES GERESS Array B    150.31 343          pPKPab    05 07 05.5 +1.3
GERES GERESS Array B    150.31 343          PKPdf     05 04 35.2 -0.6
BGES  Gesves            150.32 355  PKPbc   PKPbc     05 04 41.6 +0.1
BGES                                PKPab   PKPab     05 04 50.2 -0.5
BBOU  Bougnies          150.39 357  PKPbc   PKiKP     05 04 42.3 +0.1
BMRD  Maredsous         150.43 356  PKPbc   PKPbc     05 04 41.9 +0.1
CONA  Conrad Observa    150.49 340 ePKiKP   PKPbc     05 04 42.3 +0.1
      comp=Z,18nm,0.5s,SNR=13
PUNG  Punghina          150.50 328 ⇑P       PKPbc     05 04 42.1  0.0
BALB  Balikesir         150.52 315 eP       PKPbc     05 04 41.2 -1.1
RCHB  Rochefort         150.54 355  PKPbc   PKPbc     05 04 41.7 -0.4
BANR  Banloc            150.55 331 ⇓P       PKiKP     05 04 43.0 +0.4
MANT  Manisa            150.64 313          PKPbc     05 04 42.9  0.0
DOU   Dourbes           150.65 356  PKPbc   PKPbc     05 04 42.4 +0.2
DOU                                 PKPab   PKPab     05 04 52.0  0.0
LVIA  Vianden           150.66 354  PKPbc   PKiKP     05 04 43.0 +0.2
MDVR  Moldovita         150.73 329 ⇓P       PKPbc     05 04 42.4 -0.4
ERIK  Erikli-Kesan      150.82 318 eP       PKPbc     05 04 41.8 -1.2
LPK   Lapseki           150.84 318 eP       PKPbc     05 04 42.2 -0.9
KDZ   Kurdzhali         150.90 321 i P      PKPbc     05 04 42.8 -0.4
AKAS  Kas               150.91 308 eP       PKPbc     05 04 42.2 -1.3
WLF   Walferdange       150.94 354  PKPdf   PKiKP     05 04 43.5 +0.2
WLF                                 PKPab   PKPab     05 04 53.2  0.0
WLF   Walferdange       150.94 354 ePKPbc   PKiKP     05 04 43.4 +0.1
      baz=16,slow=2.4
WLF                                ePKPab   PKPab     05 04 53.7 +0.4
      baz=16,slow=4.3
KSL   Kastellorizon     150.96 308  P       PKPbc     05 04 42.8 -0.7
ALN   Alexandroupoli    150.98 319  P       PKPbc     05 04 42.4 -0.9
PLD   Plovdiv           151.03 322 i P      PKPbc     05 04 42.8 -0.6
PGB   Panagyurishte     151.04 324 i P      PKPbc     05 04 43.2 -0.3
MOA   Molln             151.05 342 ePKiKP   PKPbc     05 04 43.1 -0.2
      comp=Z,8.9nm,0.5s,SNR=5.4
FETY  Fethiye           151.12 309 eP       PKPbc     05 04 43.2 -0.7
RDO   Rodhopi           151.14 320  P       PKPbc     05 04 43.3 -0.4
ARSA  Arzberg           151.20 340 i PKiKP  PKPbc     05 04 43.3 -0.4
      comp=Z,5.1nm,0.5s
RZN   Rozhen            151.28 322 i P      PKPbc     05 04 43.8 -0.5
AYDB  Zeytinkoy-Aydi    151.37 312 eP       PKPbc     05 04 43.9 -0.6
STU   Stuttgart         151.38 349 ePKPbc   PKPbc     05 04 43.9 -0.1
      baz=16,slow=2.4
STU                                ePKPab   PKPab     05 04 55.0 -0.2
      baz=16,slow=4.3
STU   Stuttgart         151.38 349  PKIKP   PKPdf     05 04 37.0 -0.3
STU                                                   05 04 44.2
STU   Stuttgart         151.38 349          PKPdf     05 04 37.0 -0.3
STU                                 PKPbc   PKiKP     05 04 44.2 -0.1
VTS   Vitosha           151.50 325 ⇓P       PKPbc     05 04 44.6 -0.1
VTS   Vitosha           151.50 325 i P      PKPbc     05 04 44.4 -0.3
VTS   Vitosha           151.50 325 ⇓PKIKP   PKPbc     05 04 44.6 -0.1
FUR   Furstenfeldbru    151.54 346 ePKPbc   PKPbc     05 04 44.4  0.0
      baz=16,slow=2.4
FUR                                ePKPab   PKPab     05 04 56.3 +0.4
      baz=16,slow=4.3
SMTH  Samothraki Isl    151.54 319  P       PKPbc     05 04 43.6 -1.1
RJOB  Jochberg          151.56 344 ePKPbc   PKPbc     05 04 44.2 -0.4
      baz=16,slow=2.4
RJOB                               ePKPab   PKPab     05 04 56.9 +0.8
      baz=16,slow=4.3
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PRK	Paraskevi	151.78	316	P	PKiKP	05 04 45.7	+0.3
KAVA	Kavala	151.84	321	P	PKPbc	05 04 44.7	-0.6
SOKA	Soboth	151.86	340	ePKiKP	PKPbc	05 04 44.7	-0.6
	comp=Z,6.0nm,0.5s						
SOKA				ePKPab	PKPab	05 04 57.4	-0.1
	comp=Z,14nm,1.1s						
PERS	Pernice	151.87	340	i PKPbc	PKPbc	05 04 44.5	-0.7
PERS				e		05 04 57.4	
GCAM	G?zelcaml?	151.94	313	eP	PKPbc	05 04 44.8	-0.8
BFO	Black Forest	151.95	350	ePKPbc	PKPbc	05 04 45.0	-0.4
	baz=16,slow=2.4						
BFO	Black Forest	151.95	350	PKIKP	PKiKP	05 04 45.6	+0.1
BFO	Black Forest	151.95	350		PKiKP	05 04 45.6	+0.1
THAS	Thassos island	151.96	320	P	PKPbc	05 04 44.9	-0.6
NVR	Nevrokopi	151.99	322	P	PKPbc	05 04 44.5	-1.2
KBA	Koelnbreinsper	152.02	342	ePKiKP	PKPbc	05 04 44.8	-0.9
	comp=Z,8.8nm,0.3s,SNR=7.4						
URLA	Izmir	152.04	314	eP	PKPbc	05 04 44.6	-1.3
SIGR	SIGRI	152.07	316	P	PKPbc	05 04 45.3	-0.5
KKB	Krupnik	152.09	324	i P	PKPbc	05 04 45.5	-0.3
LIA	Limnos Island	152.10	318	P	PKPbc	05 04 45.0	-0.9
OBKA	Obir	152.17	340	i PKPbc	PKPbc	05 04 44.9	-1.0
	comp=Z,2.0nm,0.3s						
MOSL	Moslavina	152.18	336	i P	PKPbc	05 04 45.9	0.0
BODT	Bodrum	152.20	311	eP	PKPbc	05 04 44.9	-1.3
SMG	Samos	152.21	313	P	PKPbc	05 04 45.4	-0.8
WATA	Walderalm	152.25	345	ePKiKP	PKPbc	05 04 45.8	-0.4
	comp=Z,8.3nm,0.5s,SNR=6.8						
WATA				i PKPab	PKPab	05 04 59.2	+0.1
	comp=Z,16nm,0.8s						
UBR	Ueberruh	152.25	347	ePKPbc	PKPbc	05 04 45.5	-0.5
	baz=16,slow=2.4						
RETA	Reutte	152.29	346	i PKiKP	PKPbc	05 04 46.1	-0.1
	comp=Z,8.8nm,0.7s						
RETA				ePKPab	PKPab	05 04 59.4	+0.2
	comp=Z,10.0nm,0.5s						
WTTA	Wattenberg	152.30	345	ePKiKP	PKPbc	05 04 46.2	-0.2
	comp=Z,26nm,0.7s,SNR=8.8						
WTTA				ePKPab	PKPab	05 04 59.7	+0.4
	comp=Z,16nm,0.5s						
SRS	Serrai	152.30	322	P	PKPbc	05 04 45.2	-1.1
MYKA	Terra Mystica	152.34	342	ePKPbc	PKPbc	05 04 45.4	-0.9
	comp=Z,13nm,0.5s,SNR=5.2						
MYKA				ePKPab	PKPab	05 04 58.9	-0.5
	comp=Z,8.2nm,0.6s						
MOTA	Moosalm	152.35	346	ePKiKP	PKPbc	05 04 45.8	-0.6
	comp=Z,22nm,0.8s,SNR=5.4						
MOTA				ePKPab	PKPab	05 04 59.5	0.0
	comp=Z,14nm,0.6s						
CHOS	Chios island	152.38	315	P	PKPbc	05 04 46.1	-0.6
SQTA	Sankt Quirin	152.44	345	ePKiKP	PKPbc	05 04 46.5	-0.1
	comp=Z,21nm,0.7s,SNR=5.9						
SQTA				ePKPab	PKPab	05 05 00.0	+0.1
	comp=Z,9.7nm,0.9s						
ABTA	Abfaltersbach	152.55	343	ePKiKP	PKPbc	05 04 46.2	-0.6
	comp=Z,26nm,0.6s,SNR=7.2						
OUR	Ouranopolis	152.57	320	P	PKPbc	05 04 45.8	-1.1
LJU	Ljubljana	152.59	340	i PKPbc	PKPbc	05 04 46.6	-0.2
CRNS	Crni Vrh	152.64	340	i PKPbc	PKPbc	05 04 46.3	-0.7
KNT	Kendrikon	152.67	323	P	PKPbc	05 04 46.0	-1.1
DAVA	Damuels	152.67	347	i PKiKP	PKPbc	05 04 47.1	0.0
	comp=Z,5.1nm,0.6s						
DAVA				i PKPab	PKPab	05 05 00.9	0.0
	comp=Z,11nm,0.6s						
BLY	Banja Luka	152.74	335	⇑P	PKiKP	05 04 47.7	+0.5
FETA	Feichten	152.74	346	ePKiKP	PKPbc	05 04 47.0	-0.3
	comp=Z,19nm,0.8s						
KARP	Karpathos	153.00	308	P	PKPbc	05 04 47.5	-0.5
GRG	Griva	153.08	323	P	PKPbc	05 04 46.8	-1.2
DAVOX	Davos/Dischmat	153.16	347	PKP	PKPdf	05 04 40.5	+0.3
	comp=Z,4.7nm,0.8s						
DAVOX				PKPbc	PKPbc	05 04 47.8	-0.4
DAVOX				PKPab	PKPab	05 05 03.4	+0.4
	comp=Z,17nm,0.8s,baz=114,slow=3.7,SNR=8.3						
AMGA	Amorgos Island	153.30	312	P	PKPbc	05 04 47.3	-1.3
AOS	Alonnisos	153.34	318	P	PKPbc	05 04 47.4	-1.2
CTI	Castel Tesino	153.43	344	PKIKP	PKPdf	05 04 39.7	-0.8
CTI						05 04 48.4	
CTI						05 05 03.3	
CTI	Castel Tesino	153.43	344		PKPdf	05 04 39.7	-0.8
CTI				PKPbc	PKPbc	05 04 48.4	-0.3
CTI					PKPab	05 05 03.3	-0.8
LIT	Litokhoron	153.60	321	P	PKPbc	05 04 47.8	-1.4
ANAF	Anafi Island	153.62	311	P	PKPbc	05 04 48.1	-1.2
PHP	Peshkopia	153.64	326	P	PKPbc	05 04 48.4	-0.8
XOR	Xorichti	153.65	319	P	PKPbc	05 04 48.3	-1.0
PDG	Podgorica	153.68	329	⇓P	PKPbc	05 04 48.8	-0.4
FNA	Florina	153.77	324	P	PKPbc	05 04 49.0	-0.5
IOSP	Ios island	153.77	312	P	PKPbc	05 04 48.1	-1.5
RICI	Ricice	153.79	333	P	PKPbc	05 04 48.8	-0.7
SANT	Santorini	153.83	312	PKPdf	PKPdf	05 04 39.1	-2.2
SANT					PKPbc	05 04 48.4	-1.4
SANT					PKPab	05 05 04.7	-1.5
THR3	Thira Island,	153.85	312	P	PKPbc	05 04 48.7	-1.0
THR6	Thira Island,	153.88	312	P	PKPbc	05 04 48.8	-1.0
PTL	Penteli	154.01	316	P	PKPbc	05 04 48.7	-1.4
MORI	Morici	154.06	336	i P	PKPbc	05 04 48.9	-1.0
ATHU	Athens Univers	154.11	316	P	PKPbc	05 04 49.0	-1.3
LKR	Lokris	154.20	318	P	PKiKP	05 04 49.3	-1.1
PENT	Pentalofos	154.31	323	P	PKiKP	05 04 49.5	-1.2
AXAR	Agios Charalam	154.34	319	P	PKiKP	05 04 50.3	-0.4
KPRO	Kipourio	154.34	323	P	PKPdf	05 04 42.0	+0.1
AGG	Agios Georgios	154.38	320	P	PKiKP	05 04 49.7	-1.1
LAST	Lasithi	154.40	309	P	PKPdf	05 04 41.6	-0.5
DSF	Desfina	154.64	318	P	PKiKP	05 04 49.7	-1.7
DID	Didima	154.73	316	P	PKiKP	05 04 50.0	-1.6
EVR	Evrytania	154.76	320	P	PKiKP	05 04 51.4	-0.3
IDI	Anoyia	154.76	310	PKP	PKPdf	05 04 42.1	-0.5
	comp=Z,5.5nm,0.9s,baz=79,slow=3.7,SNR=6.3						
IDI				PKPbc	PKiKP	05 04 49.9	-1.9
	comp=Z,4.4nm,0.5s,baz=139,slow=6.7,SNR=13						
JAN	Janina	154.84	323	P	PKPbc	05 04 51.9	+0.1
KALE	Kalithea	154.89	319	P	PKiKP	05 04 49.0	-3.0
ANX	Ano Chora	154.90	319	P	PKPbc	05 04 52.1	0.0
PVO	Paravola	155.12	320	P	PKPdf	05 04 52.6	+10
VAM	Vamos	155.20	311	P	PKPdf	05 04 52.8	+10
IGT	Igoumenitsa	155.21	323	P	PKPdf	05 04 52.1	+9.1
MATE	Matera	156.26	330	⇓P	PKPab	05 05 16.1	-0.2
TIP	Timpagrande	157.38	327		PKPdf	05 04 45.6	-0.3
TIP					PKPab	05 05 21.1	-0.2
ESDC	Sonseca Array	160.64	12	PKPab	PKPab	05 05 35.4	-0.1
	comp=Z,4.5nm,0.8s,baz=5.2,slow=4.3,SNR=7.2						
KEST	Kesra	163.54	336	PKPab	PKPab	05 05 47.9	-0.5
	comp=Z,8.4nm,0.8s,baz=62,slow=0.5,SNR=10						
LIC	Lamto	164.26	156	ePKIKP	PKPdf	05 04 52.7	-1.1
	comp=Z,31nm,0.7s						
KIC	Kosan Boka	164.50	157	ePKIKP	PKPdf	05 04 53.3	-0.7
	comp=Z,51nm,1.1s						
TIC	Toumodi	164.65	156	ePKIKP	PKPdf	05 04 53.3	-0.8
DBIC	Dimbokro	164.74	156	PKP	PKPdf	05 04 53.7	-0.4
	comp=Z,10nm,0.9s,baz=128,slow=0.8,SNR=8.4						
MDT	Midelt	166.91	23	PKP	PKPdf	05 04 54.7	-0.8
	comp=Z,3.1nm,0.8s,baz=31,slow=8.1,SNR=4.9						
MDT				PKPab	PKPab	05 06 03.2	-0.2
	comp=Z,2.7nm,0.8s,baz=320,slow=2.8,SNR=5.4						
TORD	Torodi Ar. Bea	172.39	183	PKP	PKPdf	05 04 58.1	-0.9
	comp=Z,5.3nm,0.8s,baz=335,slow=0.8,SNR=19						
TORD				PKPab	PKPab	05 06 27.5	-0.3
	comp=Z,0.5nm,0.6s,baz=160,slow=3.1,SNR=5.6						
TORD				PP	PP	05 10 25.6	+7.1
	comp=Z,1.3nm,1.0s,baz=155,slow=3.4,SNR=3.8						
TAM	Tamanrasset	175.62	298	PKIKP	PKPdf	05 05 00.2	+0.1
TAM	Tamanrasset	175.62	298		PKPdf	05 05 00.2	+0.1

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*IDC **23** 04:55:37.0±1.1, 34°.58N×33°.84E, h0km, mb3.9/6, mb1 4.0/11, mb1mx3.6/58, mbtmp3.9/11, ML4.1/5, MS3.8/2, Ms1 3.8/2, ms1mx2.8/62, Error ellipse: s-maj=36.6km s-min=16.1km az=62.0*
*ISK **23** 04:55:41.7, 34°.60N×33°.84E, h86km, ML3.9/20*
*GRAL **23** 04:55:41.5±0.4, 34°.50N×34°.13E, h0km±6km, MD3.8*
*HLW **23** 04:55:42.8, 34°.26N×33°.88E, h12km±17km, Md3.8, Ml4.0*
*NIC **23** 04:55:42.5±0.0, 34°.47N×33°.89E, h18km, Ml3.7/9*
*DDA **23** 04:55:42.9, 34°.55N×34°.00E, h36km±4km, MW3.8*
*GII **23** 04:55:43.9±0.0, 34°.39N×34°.01E, h30km, MD3.6/10, Mm3.4/18*
ISC 23 04:55:42.0±0.9, **34°.49N**±0°.02×**33°.98E**±0°.03, **h46**km±10km, **n121**, σ**1s.25**/164, **mb3.9**/5, **9D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PARAL	Paralimni	0.51	5	⇓iP	Pn	04 55 53.3	+0.1
PARAL				AML	AML	04 56 01.4	
	16nm,0.7s						
PARAL				AML	AML	04 56 01.4	
	16nm,0.7s						
PARAL				AML	AML	04 56 01.5	
	37nm,0.6s						
PARAL				AML	AML	04 56 01.5	
	37nm,0.6s						
PARAL				S	Sn	04 56 01.8	+0.8
MVOU	Mavrovouni	0.60	331	⇓iP	Pn	04 55 53.7	-0.6
MVOU				AML	AML	04 56 02.7	
	16nm,0.3s						
MVOU				AML	AML	04 56 02.7	
	16nm,0.3s						
MVOU				AML	AML	04 56 02.8	
	17nm,0.6s						
MVOU				AML	AML	04 56 02.8	
	17nm,0.6s						
MVOU				S	Sn	04 56 03.1	0.0
ASGA	Asgata	0.68	296	⇓iP	Pn	04 55 55.0	-0.3
ASGA				S	Sn	04 56 04.4	-0.4
ASGA				AML	AML	04 56 04.8	
	12nm,0.3s						
ASGA				AML	AML	04 56 04.8	
	12nm,0.3s						
ASGA				AML	AML	04 56 07.7	
	13nm,0.5s						
ASGA				AML	AML	04 56 07.7	
	13nm,0.5s						
CSS	Mathiatis	0.72	312	Pg	Pn	04 55 55.2	-0.6
CSS	Mathiatis	0.72	312	⇓iP	Pn	04 55 55.5	-0.3
CSS				S	Sn	04 56 05.5	-0.3
CSS				AML	AML	04 56 06.2	
	4.5nm,0.6s						
CSS				AML	AML	04 56 06.2	
	4.5nm,0.6s						
CSS				AML	AML	04 56 07.1	
	4.1nm,0.5s						
CSS				AML	AML	04 56 07.1	
	4.1nm,0.5s						
ATHAL	Athalassa	0.81	324	⇓iP	Pn	04 55 57.3	+0.2
ATHAL				S	Sn	04 56 07.9	-0.2
ATHAL				AML	AML	04 56 14.2	
	15nm,0.4s						
ATHAL				AML	AML	04 56 14.2	
	15nm,0.4s						
ATHAL				AML	AML	04 56 16.8	
	15nm,0.5s						
ATHAL				AML	AML	04 56 16.8	
	15nm,0.5s						
SZAC	Souni	0.95	287	⇓iP	Pn	04 55 59.4	+0.5
SZAC				AML	AML	04 56 12.0	
	40nm,0.3s						
SZAC				AML	AML	04 56 12.0	
	40nm,0.3s						
SZAC				AML	AML	04 56 12.0	
	16nm,0.4s						
SZAC				AML	AML	04 56 12.0	
	16nm,0.4s						
SZAC				S	Sn	04 56 12.2	+0.9
EREN	Erenkoy	1.05	8	PG	Pn	04 56 00.9	+0.6
EREN				SG	Sn	04 56 15.9	+2.0
EREN	Erenkoy	1.05	8	i P	Pn	04 56 00.7	+0.4
EREN				i S	Sn	04 56 16.2	+2.3
EREN				IAML		04 56 17.0	
	comp=E,2µm,0.5s						
EREN				IAML		04 56 24.0	
	comp=N,960nm,0.4s						
LEF	Lefka	1.10	305	PG	Pn	04 56 01.5	+0.5
LEF	Lefka	1.10	305	i P	Pn	04 56 01.5	+0.5
NATA	Nata	1.20	284	⇓eP	Pn	04 56 03.0	+0.6
NATA				S	Sn	04 56 19.9	+2.4
NATA				AML	AML	04 56 22.6	
	comp=N,22nm,0.4s						
NATA				AML	AML	04 56 22.6	
	comp=N,22nm,0.4s						
NATA				AML	AML	04 56 27.0	
	comp=N,22nm,0.8s						
NATA				AML	AML	04 56 27.0	
	comp=N,22nm,0.8s						
ALFC	Alefka	1.32	301	⇓iP	Pn	04 56 04.1	+0.1
ALFC				AML	AML	04 56 21.9	
	comp=N,4.6nm,0.4s						
ALFC				AML	AML	04 56 21.9	
	comp=N,4.6nm,0.4s						
ALFC				S	Sn	04 56 22.4	+1.9
ALFC				AML	AML	04 56 23.5	
	comp=N,7.5nm,0.6s						
ALFC				AML	AML	04 56 23.5	
	comp=N,7.5nm,0.6s						
BEYL	Beirut	1.39	116	eP	Pn	04 56 04.5	-0.5
AKMS	Akamas	1.46	292	⇓iP	Pn	04 56 06.6	+0.7
AKMS				S	Sn	04 56 26.2	+2.4
AKMS				AML	AML	04 56 27.9	
	comp=N,3.9nm,0.2s						
AKMS				AML	AML	04 56 27.9	
	comp=N,3.9nm,0.2s						
AKMS				AML	AML	04 56 28.2	
	comp=N,3.9nm,0.5s						
AKMS				AML	AML	04 56 28.2	
	comp=N,3.9nm,0.5s						
BHL	Bhannes	1.50	112	eP	Pn	04 56 06.1	-0.5
DQRL	Deir Qamar	1.53	120	eP	Pn	04 56 06.7	-0.3
DQRL				eS	Sn	04 56 25.6	-0.1
HWQ	Hawqa	1.64	97	eP	Pn	04 56 08.3	-0.2
HWQ				eS	Sn	04 56 28.2	-0.2
AKK2	Akkuyu-Mersin	1.69	348	PN	Pn	04 56 09.0	0.0
AKK2				SN	Sn	04 56 28.9	-0.5
TISA	Tisan-Mersin	1.69	352	PN	Pn	04 56 09.1	0.0
TISA				SN	Sn	04 56 29.1	-0.4
AKK1	Akkuyu-Mersin	1.69	348	PN	Pn	04 56 09.1	0.0
AKK1				SN	Sn	04 56 29.1	-0.4
QRWL	Qaraoun	1.69	123	eP	Pn	04 56 09.6	+0.4
QRWL				eS	Sn	04 56 30.4	+0.6
AKKU	Akkuyu-Mersin	1.71	348	PN	Pn	04 56 09.2	-0.1
AKKU				SN	Sn	04 56 29.4	-0.5
HNTI	Hanita	1.71	144	Pn	Pn	04 56 09.9	+0.5
HNTI				Sn	Sn	04 56 30.2	0.0
KARG	Kargicak-Mersi	1.73	353	PN	Pn	04 56 09.4	-0.2
YESI	Yesilovacik-Me	1.73	351	PN	Pn	04 56 09.6	0.0
YORU	Yoruktepe-Mers	1.73	344	PN	Pn	04 56 09.4	-0.2
GULN	MERSIN_Gulnar	1.73	348	i P	Pn	04 56 09.2	-0.4
GULN				i S	Sn	04 56 29.9	-0.6
GULN				IAML		04 56 31.0	
	comp=N,465nm,0.4s						
GULN				IAML		04 56 32.0	
	comp=E,546nm,0.6s						
IKL	Isikli	1.77	352	PN	Pn	04 56 10.2	+0.1
OREN	Orenkoy-Mersin	1.77	346	PN	Pn	04 56 10.1	0.0
TEPK	Tepekoy-MERSIN	1.77	348	PN	Pn	04 56 09.9	-0.3
TEKE	Tekeli-Mersin	1.80	337	PN	Pn	04 56 10.3	-0.3
RCY	Rachaya	1.83	122	eP	Pn	04 56 11.9	+0.8
SHBL	Chebaa	1.85	127	eP	Pn	04 56 12.1	+0.6
SILI	Silifke-Mersin	1.88	359	PN	Pn	04 56 11.9	+0.3
MMA0B	Mount Meron ar	1.89	141	Pn	Pn	04 56 12.3	+0.5
MMA0B				Sn	Sn	04 56 34.4	0.0
MMAI	Mount Meron Ar	1.89	141	Pn	Pn	04 56 12.4	+0.6
	comp=E,217nm,0.3s,baz=333,slow=12,SNR=691						
MMAI				Sn	Sn	04 56 33.8	-0.6
	comp=E,360nm,0.3s,baz=330,slow=23,SNR=10						
KSDI	Kefar Szold	1.90	132	Pn	Pn	04 56 12.9	+0.9
KSDI				Sn	Sn	04 56 35.3	+0.6
KSDI	Kefar Szold	1.90	132	P	Pn	04 56 12.8	+0.9
NATI	Neve Ativ	1.90	129	Pn	Pn	04 56 12.9	+0.9
NATI				Sn	Sn	04 56 35.1	+0.4
KEBE	Keben-Mersin	1.97	354	PN	Pn	04 56 13.1	+0.1
KIZK	Mersin	1.99	4	PN	Pn	04 56 13.6	+0.4
KIZK	Mersin	1.99	4	i P	Pn	04 56 13.2	0.0
KIZK				i S	Sn	04 56 36.1	-0.9
TEVE	Tevekalti-Mers	1.99	347	PN	Pn	04 56 13.4	+0.1
OSC2	CSNet OBS 4	2.01	226	P	Pn	04 56 15.4	+2.0
OSC2				S	Sn	04 56 41.5	+4.3
BLGI	Bet Lehem HaGe	2.02	150	Pn	Pn	04 56 14.3	+0.7
BLGI				Sn	Sn	04 56 37.3	-0.3
OFRI	`Ofer	2.04	156	Pn	Pn	04 56 14.4	+0.5
OFRI				Sn	Sn	04 56 38.0	-0.2
GAZI	Gazipasa	2.21	322	PN	Pn	04 56 15.8	-0.5
GAZI	Gazipasa	2.21	322	i P	Pn	04 56 16.4	+0.1
GAZI				i S	Sn	04 56 42.1	-0.3
GAZI				IAML		04 56 45.0	
	comp=E,481nm,0.7s						
GAZI				IAML		04 56 46.0	
	comp=N,602nm,0.3s						
ERMK	Ermenek	2.32	338	i P	Pn	04 56 19.0	+1.1
ERMK				i S	Sn	04 56 47.0	+1.7
ERMK				IAML		04 56 50.0	
	comp=N,279nm,0.2s						
ERMK				IAML		04 56 50.0	
	comp=E,321nm,0.5s						
YAYL	Yayladag	2.33	48	i P	Pn	04 56 18.1	+0.2
YAYL				i S	Sn	04 56 43.6	-1.7
YAYL				IAML		04 56 51.0	
	comp=N,225nm,0.6s						
YAYL				IAML		04 57 08.0	
	comp=E,140nm,0.6s						
KRTS	Karatas	2.37	28	PN	Pn	04 56 19.6	+1.2
MMLI	Mount Malkishu	2.37	149	Pn	Pn	04 56 19.6	+1.2
MMLI				Sn	Sn	04 56 46.5	+0.2
MMLI	Mount Malkishu	2.37	149	P	Pn	04 56 19.6	+1.2
SLTI	Sal'it	2.41	158	Pn	Pn	04 56 19.2	+0.3
SLTI				Sn	Sn	04 56 46.6	-0.6
MERS	Mersin	2.42	10	PN	Pn	04 56 19.9	+0.8
DED	Mersin	2.56	15	i P	Pn	04 56 21.4	+0.4
HMDT	Nahal Hemdat	2.57	149	Pn	Pn	04 56 22.7	+1.5
HMDT				Sn	Sn	04 56 52.5	+1.2
YURE	YUREGIR	2.69	29	PN	Pn	04 56 24.0	+1.1
HDMB	Hadim	2.76	334	PN	Pn	04 56 23.4	-0.5
KARA	Karaisali	2.90	17	PN	Pn	04 56 26.4	+0.7
KERG	Konya-Eregli	2.92	2	i P	Pn	04 56 27.6	+1.5
KERG				i S	Sn	04 57 01.2	+1.1
KERG				IAML		04 57 06.0	
	comp=N,187nm,0.4s						
KERG				IAML		04 57 07.0	
	comp=E,89nm,0.3s						
AMAZ	Amatzia	3.05	165	Pn	Pn	04 56 29.1	+1.4
AMAZ				Sn	Sn	04 57 03.5	+0.5
KEPZ	Antalya-Kepez	3.09	322	i P	Pn	04 56 30.1	+1.8
KEPZ				i S	Sn	04 57 06.2	+2.1
KEPZ				IAML		04 57 08.0	
	comp=N,140nm,0.7s						
KEPZ				IAML		04 57 10.0	
	comp=E,80nm,0.6s						
DSI	Dead Sea	3.14	158	Pn	Pn	04 56 29.9	+1.0
DSI				Sn	Sn	04 57 05.8	+0.7
YTIR	Yattir	3.26	163	Pn	Pn	04 56 32.1	+1.4
YTIR				Sn	Sn	04 57 08.2	0.0
ASF	Jabal al Asfar	3.36	133	Pn	Pn	04 56 34.2	+2.1
	comp=E,8.3nm,0.3s,baz=265,slow=12,SNR=124						
ASF				Sn	Sn	04 57 14.0	+3.3
	comp=E,14nm,0.3s,baz=75,slow=14,SNR=12						
KUZU	Kuzuini	3.40	47	i P	Pn	04 56 33.0	+0.4
KUZU				IAML		04 57 24.0	
	comp=E,87nm,0.4s						
KUZU				IAML		04 57 24.0	
	comp=N,113nm,0.3s						
GHAJ	Ghor Haditha	3.44	157	Pn	Pn	04 56 34.4	+1.3
KAMA	Osmaniye	3.47	38	i P	Pn	04 56 34.1	+0.6
KZIT	Kziot	3.59	174	Pn	Pn	04 56 36.1	+1.0
KZIT				Sn	Sn	04 57 16.3	+0.1
KZIT	Kziot	3.59	174	P	Pn	04 56 36.2	+1.1
KARJ	KARJ	3.64	157	Pn	Pn	04 56 25.6	-10
ZFRI	Zfri	4.05	165	Pn	Pn	04 56 42.2	+0.8
PRNI	Paran	4.21	168	Pn	Pn	04 56 44.8	+1.1
KRMI	Paran Flat	4.40	172	Pn	Pn	04 56 47.2	+0.9
GOLH	Golhisar	4.52	309	i P	Pn	04 56 50.0	+2.0
GOLH				IAML		04 57 44.0	
	comp=N,72nm,0.3s						
HRFI	Mount Harif	4.53	168	Pn	Pn	04 56 49.2	+1.2
FETY	Fethiye	4.53	300	i P	Pn	04 56 48.3	+0.2
FETY				IAML		04 57 39.0	
	comp=E,36nm,0.4s						
FETY				IAML		04 57 42.0	
	comp=N,38nm,0.5s						
SUZ	Suez	4.73	192	P	Pn	04 56 51.5	+0.6
	baz=192						
MBRI	Mt Berech	4.75	170	Pn	Pn	04 56 52.2	+1.1
HHAG	Hagoal	4.79	200	P	Pn	04 56 52.0	+0.3
	baz=200						
HHAG				AMP		04 57 00.0	
	baz=200						
HHAG				S	Sn	04 57 42.3	-3.7
	baz=200						
AQBJ	Aqaba	4.83	169	Pn	Pn	04 56 53.6	+1.4
EIL	Elat	4.87	170	Pn	Pn	04 56 53.7	+0.9
	comp=N,4.8nm,0.3s,baz=319,slow=3.5,SNR=56						
EIL				Sn	Sn	04 57 47.6	-0.3
	comp=N,14nm,0.3s,baz=172,slow=22,SNR=13						
EIL	Elat	4.87	170	Pn	Pn	04 56 53.5	+0.7
EIL				Sn	Sn	04 57 47.5	-0.3
KOT	Kottamia	4.90	202	P	Pn	04 56 53.5	+0.3
	baz=203						
KOT				AMP		04 57 00.0	
	baz=203						
KOT				S	Sn	04 57 44.8	-3.8
	baz=203						
BRTR	Keskin Array B	5.24	357	Pn	Pn	04 56 58.5	+0.6
	comp=N,0.2nm,0.3s,baz=174,slow=16,SNR=2.4						
GLL	Jalalah	5.26	202	P	Pn	04 56 58.3	+0.1
	baz=203						
HSAF	As Saff	5.27	204	P	Pn	04 56 58.4	+0.1
	baz=204						
HBST	Basata	5.29	173	P	Pn	04 56 59.5	+0.9
	baz=171						
KARP	Karpathos	5.70	283	P	Pn	04 57 02.4	-1.7
HDHB	Dhahab	5.77	174	P	Pn	04 57 05.9	+0.8
	baz=173						
HRDS	Abu Rudays	5.79	186	P	Pn	04 57 05.5	+0.2
	baz=186						
NBNS	Bani Suef	6.28	202	P	Pn	04 57 11.1	-1.0
	baz=203						
GRB	Gharib	6.28	190	P	Pn	04 57 12.2	0.0
	baz=190						
ZKR	Zakros	6.42	278	P	Pn	04 57 12.5	-1.5
STIA	Sitia Lasithi	6.53	279	P	Pn	04 57 14.4	-1.1
SMG	Samos	6.62	301	P	Pn	04 57 15.0	-1.7
NPS	Neapolis	6.92	279	P	Pn	04 57 19.9	-1.0
AMGA	Amorgos Island	6.99	292	P	Pn	04 57 19.3	-2.5
LAST	Lasithi	7.03	278	P	Pn	04 57 20.8	-1.6
HHRG	Al Ghardaqah	7.25	183	P	Pn	04 57 28.1	+2.6
	baz=182						
THR6	Thira Island,	7.25	287	P	Pn	04 57 23.2	-2.2
THR3	Thira Island,	7.26	288	P	Pn	04 57 22.9	-2.6
APE	Apeiranthos	7.34	293	P	Pn	04 57 24.7	-1.9
IOSP	Ios island	7.42	290	P	Pn	04 57 25.6	-2.2
IDI	Anoyia	7.51	279	P	Pn	04 57 27.4	-1.7
IDI	Anoyia	7.51	279	Pn	Pn	04 57 27.2	-1.9
	comp=N,4.4nm,0.3s,baz=103,slow=13,SNR=39						
IDI				Sn	Sn	04 58 47.8	-5.2
	comp=N,6.8nm,0.3s,baz=206,slow=23,SNR=15						
SLUM	Salum	7.95	250	P	Pn	04 57 34.6	-0.4
	baz=252						
IMMV	Iera Moni Meta	8.27	280	P	Pn	04 57 37.5	-1.8
AKASG	Malin Array Be	16.57	349	Pn	Pn	04 59 29.5	-1.5
	comp=N,0.4nm,0.3s,baz=170,slow=11,SNR=2.8						
VYHS	Vyhne	17.97	326	eP	P	04 59 50.7	+2.3
VYHS				e		05 38 30.0	
GERES	GERESS Array B	20.77	320	P	P	05 00 19.2	+0.1
	comp=N,0.4nm,0.4s,baz=133,slow=8.5,SNR=6.7						
FINES	FINESS Array B	27.45	352	P	P	05 01 22.7	-0.6
	comp=N,1.0nm,0.3s,baz=159,slow=10,SNR=19						
HFS	Hagfors	28.87	339	P	P	05 01 36.4	+0.4
	comp=N,3.2nm,1.0s,baz=128,slow=11,SNR=1.5						
HFS	Hagfors	28.87	339	P	P	05 01 36.4	+0.4
MBAR	Mbarara	35.04	186	LR	LR	05 16 43.5	
	comp=N,149nm,18.8s,baz=326,slow=36						
ARCES	ARCESS Array B	35.42	355	P	P	05 02 33.0	-0.2
	comp=N,2.8nm,0.6s,baz=172,slow=9.6,SNR=16						
ZALV	Zalesovo Beam	40.27	45	LR	LR	05 23 01.5	
	comp=N,135nm,19.7s,baz=154,slow=41						
SCHQ	Schefferville	68.28	322	P	P	05 06 37.4	-0.7
	comp=N,1.1nm,0.7s,baz=26,slow=6.6,SNR=3.8						
YKA	Yellowknife Ar	80.10	346	P	P	05 07 46.6	0.0
	comp=N,0.2nm,0.6s,baz=29,slow=5.0,SNR=3.4						

IDC 23 05:07:49.2±47.0, **15°.92S**×**176°.14W**, **h0**km, **mb4.4**/3, **mb1 4.5**/3, **mb1mx3.7**/40, **mbtmp4.4**/3, **Error ellipse: s-maj=891.7km s-min=168.4km az=78.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.50	240	P	P	05 15 38.1	-0.2
	1.3nm,0.4s,baz=80,slow=6.1,SNR=5.5						
WRA	Warramunga Arr	47.16	257	P	P	05 16 24.0	+0.2
	1.4nm,0.7s,baz=91,slow=7.5,SNR=7.5						
ASAR	Alice Springs	47.44	252	P	P	05 16 25.8	-0.3
	5.5nm,0.5s,baz=89,slow=8.3,SNR=95						

BGR ***23*** *05:19:48.3±0.0, 20°.84S×178°.22W, h600^{km}*
IDC ***23*** *05:19:48.7±0.9, 20°.66S×178°.80W, h596^{km}±10^{km}, mb3.9/26, mb1 4.0/30, mb1mx4.0/42, mbtmp4.9/30, Error ellipse: s-maj=11.6km s-min=8.3km az=153.0*
MOS ***23*** *05:19:50.5±0.9, 20°.53S×179°.01W, h621^{km}, mb4.7/32, Error ellipse: s-maj=13.0km s-min=9.7km az=45.1*
NEIC ***23*** *05:19:50.7±1.3, 20°.66S±0°.08×178°.9W±0°.1, h619^{km}±6^{km}, mb4.6/236, Error ellipse: s-maj=15.1km s-min=11.3km az=118.0*
ISC 23 05:19:49.1±0.2**, 20°.70S**±0°.05×**178°.84W**±0°.05**, h600^{km}, n661,** σ1^{s}.**23**/725**, mb4.6**/162**, 54C-25D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.17	315	*c i*P	P	05 21 18.1	+2.1
MSVF	Nonsavu	4.17	315	P	P	05 21 19.2	+3.2
NIUE	Niue	8.54	81	P	P	05 21 53.5	-0.1
NIUE				S	S	05 23 42.1	+6.5
GLKZ	Green Lake	8.56	175	P	P	05 21 54.9	+1.2
GLKZ				S	S	05 23 39.9	+4.0
AFI	Afiamalu	9.54	46	P	P	05 22 02.1	-1.5
	28nm,0.3s,baz=35,slow=1.6,SNR=37						
AFI				S	S	05 23 49.4	-4.4
	7.2nm,0.3s,baz=56,slow=22,SNR=7.2						
DZM	Mont Dzumac	13.78	262	*e*P	P	05 22 46.0	0.0
	59nm,0.9s						
DZM	Mont Dzumac	13.78	262	P	P	05 22 45.6	-0.4
	3.4nm,0.3s,baz=80,slow=18,SNR=28						
DZM	Mont Dzumac	13.78	262	P	P	05 22 46.7	+0.7
OUZ	Omahuta	15.92	203	P	P	05 23 08.4	+2.8
KUZ	Kuaotunu	16.68	195	P	P	05 23 15.4	+3.0
WIAZ	Waiheke Island	16.87	197	P	P	05 23 16.5	+2.2
MKAZ	Moumakai	17.16	196	P	P	05 23 18.7	+1.9
HAZ	Te Kaha	17.25	189	P	P	05 23 17.1	-0.5
HAZ				S	S	05 25 59.7	-7.4
RUGZ	Raukumara Rang	17.46	189	P	P	05 23 18.8	-1.1
RUGZ				S	S	05 26 08.3	-2.8
RAR	Rarotonga	17.81	95	P	P	05 23 22.1	-1.0
	0.5nm,0.3s,baz=55,slow=20,SNR=4.5						
URZ	Urewera	17.84	190	P	P	05 23 21.6	-1.5
	5.0nm,0.3s,baz=287,slow=2.7,SNR=44						
URZ				S	S	05 26 13.0	-3.9
	0.4nm,0.3s,baz=62,slow=22,SNR=6.3						
URZ	Urewera	17.84	190	P	P	05 23 20.5	-2.6
URZ				S	S	05 26 09.1	-7.8
MWZ	Matawai	17.85	189	P	P	05 23 21.7	-1.5
RAGZ	Rawiri	18.02	190	P	P	05 23 26.1	+1.2
MUGZ	Murupara	18.11	191	P	P	05 23 25.1	-0.5
RIGZ	Rimuhau	18.18	189	P	P	05 23 26.1	-0.2
NMHZ	Naumai	18.71	191	P	P	05 23 30.8	-0.3
TUVZ	Tukino	19.10	193	P	P	05 23 33.9	-0.8
TUVZ				S	S	05 26 35.5	-2.0
KNTN	Kanton	19.12	22	P	P	05 23 34.6	-0.5
BFZ	Birch Farm	20.35	191	P	P	05 23 45.6	-0.2
SNZO	South Karori	21.26	194	P	P	05 23 53.9	-0.1
SNZO				IAmb	IAmb	05 23 54.2	
	comp=Z,26nm,1.0s						
QRZ	Quartz Range	21.36	198	P	P	05 23 55.5	+0.6
RPZ	Rata Peaks	24.45	198	P	P	05 24 23.4	+1.2
PAE	Paea	27.78	89	*e*P	P	05 24 51.1	-0.7
	comp=Z,4.9nm,1.0s						
PPT2	Papeete2	27.80	89	*e*P	P	05 24 51.8	-0.3
	comp=Z,42nm,1.2s						
PPT	Papeete	27.80	89	P	P	05 24 51.2	-0.8
	comp=Z,43nm,1.1s,baz=64,slow=9.7,SNR=3.7						
TIAR	Tiarei	28.02	89	*e*P	P	05 24 53.5	-0.4
	comp=Z,7.8nm,0.9s						
EIDS	Eidsvold	28.04	255	P	P	05 24 55.2	+1.1
TVO	Taravao	28.06	89	*e*P	P	05 24 53.8	-0.6
	comp=Z,7.2nm,0.8s						
ARMA	Armidale	28.27	244	P	P	05 24 57.5	+1.4
MEH	Mehetia	29.16	90	*e*P	P	05 25 03.2	-0.6
	comp=Z,16nm,0.9s						
PMOR	Pomariorio Ree	29.96	84	*e*P	P	05 25 10.1	-0.6
	comp=Z,33nm,0.9s						
VAH	Vaihoa	30.15	85	*e*P	P	05 25 11.4	-0.9
	comp=Z,44nm,1.0s						
CAN	Canberra	31.75	236	P	P	05 25 25.7	-0.1
CAN				pmax	pmax		
	comp=Z,12nm,1.1s						
CAN	Canberra	31.75	236	P	P	05 25 25.7	-0.1
CTA	Charters Tower	32.69	265	P	P	05 25 34.7	+0.8
	comp=Z,11nm,0.5s,baz=96,slow=10,SNR=24						
CTA				PcP	PcP	05 28 00.7	-0.5
	comp=Z,3.8nm,0.8s,baz=88,slow=6.0,SNR=3.0						
CTAO	Charters Tower	32.69	265	P	P	05 25 34.8	+0.8
CTAO				pmax	pmax		
	comp=Z,24nm,0.9s						
PMG	Port Moresby	34.63	284	P	P	05 25 50.6	+0.5
	comp=Z,17nm,0.7s,baz=315,slow=22,SNR=7.3						
PMG	Port Moresby	34.63	284	*i* P	P	05 25 49.8	-0.3
PMG				pmax	pmax		
	comp=Z,87nm,1.0s						
PMG	Port Moresby	34.63	284	P	P	05 25 50.0	-0.1
PMG				IAmb	IAmb	05 25 51.7	
	comp=Z,26nm,1.0s						
TOO	Toolangi	35.15	234	P	P	05 25 55.0	+0.8
TOO				pmax	pmax		
	comp=Z,16nm,0.8s						
TOO	Toolangi	35.15	234	P	P	05 25 55.0	+0.8
TOO				IAmb	IAmb	05 25 55.8	
	comp=Z,16nm,0.8s						
COEN	Coen	36.81	274	P	P	05 26 08.5	+0.3
COEN				IAmb	IAmb	05 26 10.1	
	comp=Z,17nm,1.0s						
STKA	Stephens Creek	36.99	244	P	P	05 26 10.3	+0.9
	comp=Z,10nm,0.6s,baz=93,slow=9.9,SNR=24						
STKA				ScP	ScP	05 31 04.8	+0.2
	comp=Z,3.1nm,0.9s,baz=28,slow=9.9,SNR=4.9						
STKA	Stephens Creek	36.99	244	P	P	05 26 10.4	+0.9
STKA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
STKA	Stephens Creek	36.99	244	P	P	05 26 09.7	+0.3
BBOO	Buckleboo	41.76	244	P	P	05 26 47.1	-0.4
WR0	Warramunga Arr	43.61	262	P	P	05 27 01.5	-0.6
WR0				IAmb	IAmb	05 27 03.4	
	comp=Z,23nm,1.1s						
AS31	Alice Springs	43.71	257	P	P	05 27 03.1	+0.2
ASAR	Alice Springs	43.71	257	P	P	05 27 03.1	+0.2
	comp=Z,38nm,0.7s,baz=96,slow=7.5,SNR=447						
ASAR				PcP	PcP	05 28 35.9	-0.3
	comp=Z,5.6nm,0.7s,baz=102,slow=3.7,SNR=10						
ASAR				ScP	ScP	05 31 31.1	-0.4
	comp=Z,1.7nm,0.9s,baz=97,slow=5.6,SNR=4.5						
ASAR				S	S	05 32 48.2	-2.6
	comp=Z,4.6nm,0.6s,baz=91,slow=15,SNR=30						
ASAR	Alice Springs	43.71	257	P	P	05 27 02.8	-0.1
ASAR				S	S	05 32 47.7	-3.1
ASAR	Alice Springs	43.71	257	P	P	05 27 02.8	-0.1
WB0	Warramunga Arr	43.78	263	P	P	05 27 02.7	-0.7
WB2	Warramunga Arr	43.79	262	P	P	05 27 02.9	-0.6
WRAB	Tennant Creek	43.79	262	*d i*P	P	05 27 02.7	-0.8
WRAB				pmax	pmax		
	comp=Z,29nm,1.0s						
WRAB	Tennant Creek	43.79	262	P	P	05 27 02.9	-0.6
WRA	Warramunga Arr	43.80	262	P	P	05 27 03.1	-0.4
	comp=Z,15nm,0.7s,baz=99,slow=8.2,SNR=64						
WRA				PcP	PcP	05 28 36.2	-0.3
	comp=Z,2.4nm,0.8s,baz=91,slow=3.9,SNR=5.6						
WRA				S	S	05 32 49.2	-2.8
	comp=Z,2.7nm,0.8s,baz=98,slow=13,SNR=5.0						
WRA	Warramunga Arr	43.80	262	P	P	05 27 03.6	0.0
WRA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
WRA	Warramunga Arr	43.80	262	P	P	05 27 02.7	-0.9
MTN	Manton Dam	48.38	271	P	P	05 27 37.7	-0.5
MTN				IAmb	IAmb	05 27 38.5	
	comp=Z,24nm,0.8s						
FORT	Forrest	48.49	247	P	P	05 27 38.4	-0.4
KNRA	Kununurra	49.86	267	P	P	05 27 48.9	-0.2
KNRA				IAmb	IAmb	05 27 49.5	
	comp=Z,18nm,0.7s						
FAKI	Fak Fak	50.78	284	P	P	05 27 55.3	-0.5
FAKI				IAmb	IAmb	05 27 56.8	
	comp=Z,32nm,1.2s						
FITZ	Fitzroy Crossi	52.22	263	P	P	05 28 06.2	+0.1
	comp=Z,7.2nm,0.5s,baz=108,slow=4.1,SNR=59						
FITZ	Fitzroy Crossi	52.22	263	P	P	05 28 06.2	+0.1
SIJI	Sorong	52.53	286	P	P	05 28 08.7	+0.3
	comp=Z,54nm,0.8s,baz=90,slow=7.2,SNR=20						
SWI	Sorong	52.54	286	P	P	05 28 08.8	+0.4
	comp=Z,93nm,0.9s						
SOEI	Soe	55.73	272	P	P	05 28 32.4	+1.5
	comp=Z,6µmcomp=Z,1µmcomp=Z,101nm,0.9s						
SOEI	Soe	55.73	272	P	P	05 28 31.9	+1.0
LBMI	Labuha	56.04	284	P	P	05 28 33.7	+0.8
	comp=Z,62nm,0.5s						
PSA00	Pilbara Seismi	56.86	257	P	P	05 28 37.9	-0.5
PSA00				IAmb	IAmb	05 28 38.9	
	comp=Z,34nm,0.8s						
PSA00	Pilbara Seismi	56.86	257	P	P	05 28 36.9	-1.5
PSA00				IAmb	IAmb	05 28 37.9	
	comp=Z,15nm,0.8s						
NWAO	Narrogin (SRO)	57.58	244	P	P	05 28 43.2	+0.1
	comp=Z,9.7nm,0.7s,baz=113,slow=7.0,SNR=8.1						
NWAO	Narrogin (SRO)	57.58	244	P	P	05 28 43.0	-0.1
NWAO				IAmb	IAmb	05 28 44.0	
	comp=Z,61nm,1.4s						
NWAO	Narrogin (SRO)	57.58	244	P	P	05 28 42.9	-0.2
NWAO				IAmb	IAmb	05 28 44.0	
	comp=Z,45nm,1.4s						
VNDA	Vanda	57.64	185	P	P	05 28 43.7	+1.0
	comp=Z,3.6nm,0.9s,baz=357,slow=6.8,SNR=13						
VNDA				ScP	ScP	05 32 29.2	-1.1
	comp=Z,3.2nm,1.1s,baz=28,slow=4.0,SNR=4.9						
VNDA	Vanda	57.64	185	P	P	05 28 43.8	+1.1
MMRI	Maumere	57.98	273	P	P	05 28 45.2	-0.9
MMRI				IAmb	IAmb	05 28 46.6	
	comp=Z,58nm,1.3s						
MORW	Morawa	59.03	248	P	P	05 28 52.7	-0.2
LUWI	Luwuk	60.20	281	P	P	05 29 00.6	-0.3
KCP	Kidapawan	61.57	291	⇑*i*P	P	05 29 10.1	+0.2
GIRL	Giralia	61.74	255	P	P	05 29 09.5	-1.3
PLAI	Plampang	62.09	271	P	P	05 29 13.0	-0.2
	comp=Z,566nmcomp=Z,63nm,0.9s						
MPSI	Mapaga	63.38	281	P	P	05 29 22.5	+1.0
	comp=Z,27nm,1.2s						
CASY	Casey	63.45	205	P	P	05 29 21.4	+0.4
JAGI	Jajag, Banyuwa	65.60	270	P	P	05 29 34.2	-1.3
JAGI				IAmb	IAmb	05 29 35.1	
	comp=Z,26nm,0.9s						
PWJI	Pagerwojo	67.94	270	P	P	05 29 54.1	+4.2
PCJI	Pacitan	68.47	269	P	P	05 29 53.2	+0.1
	comp=Z,102nm,0.8s						
QSPA	South Pole Qui	69.36	180	P	P	05 29 58.3	+0.6
SMRI	Semarang	69.54	270	P	P	05 29 59.1	-0.3
MJAR	Matsushiro Arr	69.91	324	P	P	05 30 00.8	-0.4
	comp=Z,2.5nm,0.4s,baz=139,slow=6.1,SNR=6.8						
MJAR	Matsushiro Arr	69.91	324	P	P	05 30 00.1	-1.1
MAJO	Matsushiro	69.91	324	P	P	05 30 01.0	-0.2
MAT	Matsushiro	69.92	324	P	P	05 30 00.9	-0.3
MJB9	Matsu-Tunnel	69.92	324	P	P	05 30 00.8	-0.4
JNU	Nakatsue	71.89	317	P	P	05 30 13.0	+0.2
JNU				IAmb	IAmb	05 30 14.0	
	comp=Z,32nm,1.2s						
ADK	Adak	72.30	1	P	P	05 30 14.3	-0.4
ADK				pmax	pmax		
	comp=Z,34nm,1.0s						
ADK	Adak	72.30	1	P	P	05 30 14.3	-0.4
KSM	Kuching	72.67	278	P	P	05 30 17.6	-0.2
KSM				IAmb	IAmb	05 30 19.1	
	comp=Z,29nm,1.0s						
XMIS	Christmas Isla	72.91	265	P	P	05 30 18.4	-0.8
NACB	Ninganchiao	73.14	305	P	P	05 30 18.9	-1.3
SSLB	Suanglung	73.44	304	P	P	05 30 20.3	-1.6
SSLB				IAmb	IAmb	05 30 21.5	
	comp=Z,29nm,1.2s						
NIKH	Nikolski High	73.88	6	P	P	05 30 23.2	-0.4
UNV	Unalaska Valle	75.00	8	P	P	05 30 28.9	-1.0
UNV				IAmb	IAmb	05 30 29.8	
	comp=Z,22nm,0.8s						
KASI	Kota Agung	75.61	269	P	P	05 30 34.5	+0.2
MDSI	Maura Dua	76.26	270	P	P	05 30 36.4	-1.5
	comp=Z,25nm,0.9s						
PETK	Petropavlovsk-	76.27	346	P	P	05 30 36.6	-0.4
	comp=Z,10.0nm,0.9s,baz=205,slow=6.6,SNR=11						
PETK	Petropavlovsk-	76.27	346	P	P	05 30 37.3	+0.3
PETK	Petropavlovsk-	76.27	346	P	P	05 30 36.8	-0.2
KSRS	Korea Array	76.52	319	P	P	05 30 39.1	+0.4
	comp=Z,2.5nm,0.9s,baz=150,slow=5.8,SNR=10						
KSAR	Wonju Array Be	76.54	319	P	P	05 30 39.0	+0.2
SDPT	Sand Point	77.35	11	P	P	05 30 42.1	-0.6
MNAI	Manna	77.45	270	P	P	05 30 45.0	+0.6
KSI	Kapahiang	78.03	271	P	P	05 30 46.8	-0.7
	comp=Z,71nm,0.8s						
USA0B	Ussuriysk Arra	78.69	326	*i* P	P	05 30 48.9	-1.4
USA0B	Ussuriysk Arra	78.69	326	P	P	05 30 49.8	-0.4
USA0B				IAmb	IAmb	05 30 52.4	
	comp=Z,24nm,1.1s						
USRK	Ussuriysk Ar.	78.69	326	P	P	05 30 50.1	-0.2
	comp=Z,8.3nm,0.8s,baz=116,slow=4.4,SNR=20						
USRK	Ussuriysk Ar.	78.69	326	P	P	05 30 49.7	-0.6
USRK	Ussuriysk Ar.	78.69	326	P	P	05 30 50.0	-0.2
KMRM	Mail Ridge	79.41	40	P	P	05 30 55.8	+1.5
MWC	Mount Wilson	79.52	47	P	P	05 30 55.6	+0.5
MWC				pmax	pmax		
	comp=Z,11nm,1.0s						
MWC	Mount Wilson	79.52	47	P	P	05 30 55.6	+0.5
VES	Vestal, Richgr	79.73	46	P	P	05 30 56.5	+0.6
	baz=235,SNR=5.9						
MURC	Murrieta	79.77	48	P	P	05 30 57.3	+1.1
	baz=237						
KHMM	Horse Mountain	79.80	39	P	P	05 30 58.2	+1.8
KHMM				IAmb	IAmb	05 31 06.9	
	comp=Z,48nm,1.4s						
EDW2	Edwards Air Fo	79.93	47	P	P	05 30 58.3	+1.3
	baz=236,SNR=6.0						
MONP2	Monument Peak	79.93	49	P	P	05 30 58.8	+1.5
	baz=238,SNR=5.8						
O02D	Mt. Diablo Mer	79.94	40	P	P	05 30 58.9	+1.9
	baz=232,SNR=6.9						
IKP	In-Ko-Pah, Jac	80.03	50	P	P	05 30 59.0	+1.4
	baz=238						
ISA	Isabella, Lake	80.04	46	P	P	05 30 58.9	+1.3
ISA				pmax	pmax		
	comp=Z,17nm,1.1s						
ISA	Isabella, Lake	80.04	46	P	P	05 30 58.5	+0.8
ISA	Isabella, Lake	80.04	46	P	P	05 30 58.9	+1.3
	baz=236,SNR=10						
CMB	Columbia Colle	80.14	43	P	P	05 30 59.0	+0.9
CMB				pmax	pmax		
	comp=Z,22nm,1.3s						
CMB	Columbia Colle	80.14	43	P	P	05 30 58.9	+0.8
CMB				IAmb	IAmb	05 30 59.9	
	comp=Z,22nm,1.3s						
MDJ	Mudanjiang	80.24	325	P	P	05 30 58.2	-0.2
MDJ				IAmb	IAmb	05 31 00.4	
	comp=Z,22nm,1.1s						
PFO	Pinyon Flats O	80.29	49	P	P	05 30 59.4	+0.4
	comp=Z,2.4nm,0.9s,baz=218,slow=8.8,SNR=4.0						
PFO	Pinyon Flats O	80.29	49	*ce*P	P	05 30 58.3	-0.8
PFO				pmax	pmax		
	comp=Z,12nm,1.3s						
PFO	Pinyon Flats O	80.29	49	P	P	05 30 59.1	0.0
PFO	Pinyon Flats O	80.29	49	P	P	05 31 00.2	+1.1
	baz=237						
XPFO	Pion Flat	80.30	49	P	P	05 30 58.9	-0.2
WDC	Whiskeytown Da	80.33	40	P	P	05 30 59.7	+0.8
WDC				pmax	pmax		
	comp=Z,21nm,1.0s						
WDC	Whiskeytown Da	80.33	40	P	P	05 30 59.0	+0.1
WDC				IAmb	IAmb	05 31 01.2	
	comp=Z,21nm,1.1s						
ORV	Oroville	80.34	41	P	P	05 30 59.8	+0.8
ORV				pmax	pmax		
	comp=Z,13nm,1.0s						
ORV	Oroville	80.34	41	P	P	05 30 58.9	-0.1
SWSC	Sam W. Stewart	80.40	49	P	P	05 31 00.7	+1.2
	baz=238,SNR=5.9						
LRMC	Laurel Mtn Rad	80.47	46	P	P	05 31 01.0	+1.0
	baz=236						
N02D	Trinity Center	80.47	40	P	P	05 31 01.8	+2.0
	baz=232,SNR=7.1						
O03E	Paynes Creek	80.61	41	P	P	05 31 01.5	+1.1
	baz=233,SNR=10						
M02C	Callahan	80.64	39	P	P	05 31 02.9	+2.3
	baz=232,SNR=7.5						
CWC	Cottonwood Cre	80.74	45	P	P	05 31 02.4	+1.0
	baz=236						
MDPB	Devils Postpil	80.75	44	P	P	05 31 02.1	+0.6
MDPB				IAmb	IAmb	05 31 03.5	
	comp=Z,16nm,1.0s						
OMMB	Old Mammoth Mi	80.79	44	P	P	05 31 02.2	+0.4
BELC	Belle Mtn. Jos	80.83	48	P	P	05 31 03.1	+1.2
	baz=238,SNR=7.3						
RUBR	Rubicon Trail	80.89	42	P	P	05 31 01.6	-0.5
RUBR				IAmb	IAmb	05 31 04.2	
	comp=Z,27nm,1.3s						
MLAC	Mammoth, Mammo	80.91	44	P	P	05 31 04.2	+1.8
	baz=235						
MPMC	Manual Prospec	80.92	46	P	P	05 31 03.4	+1.0
	baz=236,SNR=14						
YBH	Yreka Blue Hor	80.94	39	P	P	05 31 02.3	+0.1
	comp=Z,15nm,0.9s,baz=229,slow=2.7,SNR=19						
YBH	Yreka Blue Hor	80.94	39	P	P	05 31 02.8	+0.6
YBH				pmax	pmax		
	comp=Z,20nm,0.9s						
YBH	Yreka Blue Hor	80.94	39	P	P	05 31 02.1	-0.1
YBH				IAmb	IAmb	05 31 04.6	
	comp=Z,20nm,0.9s						
GSC	Goldstone, Bar	80.97	47	P	P	05 31 02.6	+0.1
GSC	Goldstone, Bar	80.97	47	P	P	05 31 03.3	+0.8
	baz=237,SNR=12						
K02D	Willamette Mer	80.98	38	P	P	05 31 03.5	+1.1
	baz=231						
TIN	Tinemaha, Big	80.98	45	P	P	05 31 04.2	+1.7
	baz=236,SNR=6.3						
WAKR	Walker	81.02	43	P	P	05 31 04.2	+1.4
WAKR				IAmb	IAmb	05 31 05.1	
	comp=Z,33nm,1.2s						
BC3	Big Chuckawall	81.03	49	P	P	05 31 04.1	+1.2
	baz=238,SNR=5.4						
HEC	Hector,Ludlow	81.04	48	P	P	05 31 03.7	+0.8
	baz=237,SNR=7.5						
MAW	Mawson	81.11	200	P	P	05 31 02.9	+0.4
	comp=Z,3.2nm,0.6s,baz=150,slow=5.2,SNR=6.7						
MAW	Mawson	81.11	200	P	P	05 31 02.2	-0.3
J01E	Myrtle Point	81.12	37	P	P	05 31 02.6	-0.3
	baz=231						
GLA	Glamis	81.15	50	P	P	05 31 05.2	+1.8
GLA				pmax	pmax		
	comp=Z,18nm,0.9s						
GLA	Glamis	81.15	50	P	P	05 31 04.8	+1.4
GLA				IAmb	IAmb	05 31 05.9	
	comp=Z,18nm,0.9s						
GLA	Glamis	81.15	50	P	P	05 31 05.2	+1.8
	baz=238,SNR=5.9						
BEKR	Beckworth	81.24	42	P	P	05 31 03.9	+0.1
BEKR				IAmb	IAmb	05 31 05.8	
	comp=Z,19nm,1.2s						
PNTR	Pine Nut	81.26	43	P	P	05 31 04.3	+0.3
HUMO	Hull Mountain	81.34	38	P	P	05 31 04.1	0.0
HUMO				IAmb	IAmb	05 31 07.3	
	comp=Z,26nm,1.1s						
VCNR	Virginia City	81.35	42	P	P	05 31 04.1	-0.4
VCNR				IAmb	IAmb	05 31 06.5	
	comp=Z,16nm,1.1s						
YERR	Yerington	81.43	43	P	P	05 31 04.8	-0.1
YERR				IAmb	IAmb	05 31 06.7	
	comp=Z,24nm,1.1s						
L04D	Klamath Falls	81.48	39	P	P	05 31 06.5	+1.5
	baz=232,SNR=6.0						
GMRC	Granite Mounta	81.48	48	P	P	05 31 06.1	+0.9
	baz=238,SNR=6.4						
M04C	Macdoel	81.48	39	P	P	05 31 06.3	+1.3
	baz=233,SNR=8.7						
IRM	Iron Mountain	81.51	49	P	P	05 31 06.2	+1.0
	baz=238,SNR=10						
GRAC	Grapevine Rang	81.52	45	P	P	05 31 06.6	+1.4
	baz=236						
FURC	Furnace Creek,	81.57	46	P	P	05 31 06.4	+1.0
	baz=237,SNR=5.3						
TUQ	Turquoise Moun	81.65	47	P	P	05 31 06.9	+0.9
	baz=237,SNR=11						
SHOC	Shoshone, Teco	81.66	47	P	P	05 31 06.8	+0.9
	baz=237						
RYN	Ryan	81.68	43	P	P	05 31 05.9	-0.2
NVAR	Mina Array Bea	81.71	44	P	P	05 31 07.0	+0.6
	comp=Z,6.8nm,0.8s,baz=226,slow=7.8,SNR=53						
NVAR	Mina Array Bea	81.71	44	P	P	05 31 06.3	0.0
Y12C	Blythe	81.73	49	P	P	05 31 06.8	+0.5
Y12C	Blythe	81.73	49	P	P	05 31 07.7	+1.4
	baz=238						
PAHR	Pah Rah Range	81.75	42	P	P	05 31 06.7	+0.2
PAHR				IAmb	IAmb	05 31 08.3	
	comp=Z,20nm,1.1s						
I03D	Drain, OR	81.79	37	P	P	05 31 07.5	+1.2
	baz=231						
NV11	Mina Array Sit	81.81	44	P	P	05 31 07.1	+0.3
NV11				IAmb	IAmb	05 31 08.5	
	comp=Z,26nm,1.2s						
CN2	Changchun	81.99	323	*e*P	P	05 31 07.9	+0.6
HSIG		82.01	55	P	P	05 31 07.6	-0.2
214A	Organ Pipe Nat	82.05	52	P	P	05 31 08.5	+0.5
214A	Organ Pipe Nat	82.05	52	P	P	05 31 09.5	+1.5
	baz=240						
KVN	Kaiserville	82.19	43	P	P	05 31 09.2	+0.4
KVN				pmax	pmax		
	comp=Z,18nm,1.0s						
KVN	Kaiserville	82.19	43	P	P	05 31 09.2	+0.4
KVN				IAmb	IAmb	05 31 10.3	
	comp=Z,18nm,1.0s						
J04D	Umpqua Nationa	82.22	38	P	P	05 31 10.2	+1.4
	baz=232,SNR=10						
TPNV	Topopah Spring	82.24	46	P	P	05 31 09.4	+0.3
TPNV				IAmb	IAmb	05 31 10.8	
	comp=Z,13nm,0.8s						
TPNV	Topopah Spring	82.24	46	P	P	05 31 10.0	+1.0
	baz=237,SNR=18						
PDMCI	Parker Dam,Lak	82.29	49	P	P	05 31 10.4	+1.3
	baz=239,SNR=9.1						
KLR	Kul'dur	82.31	330	P	P	05 31 08.4	-0.4
	comp=Z,4.4nm,0.9s,baz=101,slow=6.4						
KLR	Kul'dur	82.31	330	*i* P	P	05 31 09.3	+0.5
KLR				pmax	pmax		
	comp=Z,14nm,1.3s						
IPM	Ipoh	82.38	278	P	P	05 31 09.6	-0.5
IPM				IAmb	IAmb	05 31 11.0	
	comp=Z,19nm,0.8s						
I04A	Tendick Farm,	82.38	37	P	P	05 31 10.2	+0.8
	baz=232						
MOD	Modoc Plateau	82.47	40	P	P	05 31 10.3	+0.2
MOD				IAmb	IAmb	05 31 11.9	
	comp=Z,15nm,0.8s						
H04D	Lebanon	82.65	37	P	P	05 31 12.2	+1.6
	baz=232						
SHPR	Sheep Range	82.74	47	P	P	05 31 11.7	+0.2
J05D	Fort Rock, OR	82.75	38	P	P	05 31 12.7	+1.3
	baz=233,SNR=27						
W13A	Hualapai Mount	82.89	48	P	P	05 31 12.9	+0.5
Y14A	Wickenburg	82.91	50	P	P	05 31 12.3	0.0
H04A	Detroit Lake	83.06	37	P	P	05 31 12.6	-0.1
H04A				IAmb	IAmb	05 31 14.3	
	comp=Z,41nm,1.4s						
PINE	Pine Mountain	83.23	38	P	P	05 31 14.6	+0.8
I05D	Terrebonne, OR	83.33	38	P	P	05 31 15.3	+1.2
	baz=233						
BRLK	Bradley Lake	83.37	14	P	P	05 31 12.9	-1.1
R11A	Troy Canyon, C	83.44	45	P	P	05 31 15.3	+0.3
	baz=237						
E03A	Lebam	83.47	35	P	P	05 31 15.2	+0.5
RSO	Redoubt South	83.61	13	P	P	05 31 14.5	-0.8
RPSI	Rantau Prapat	83.69	275	P	P	05 31 15.7	-0.9
RPSI				IAmb	IAmb	05 31 17.1	
	comp=Z,15nm,0.9s						
F04A	Amboy	83.70	36	P	P	05 31 15.7	-0.2
F04A				IAmb	IAmb	05 31 16.9	
	comp=Z,19nm,1.1s						
PSI	Prapat	83.73	275	P	P	05 31 16.0	-0.9
PSI				pmax	pmax		
	comp=Z,15nm,0.9s						
MA2	Magadan	83.78	345	*i* P	P	05 31 14.6	-1.3
MA2				pmax	pmax		
	comp=Z,20nm,1.3s						
WVOR	Wild Horse Val	83.79	40	P	P	05 31 17.3	+0.8
WVOR				pmax	pmax		
	comp=Z,18nm,1.1s						
WVOR	Wild Horse Val	83.79	40	P	P	05 31 16.7	+0.1
WVOR				IAmb	IAmb	05 31 18.5	
	comp=Z,18nm,1.1s						
NLWA	Neilton Lookou	83.84	34	P	P	05 31 16.9	+0.3
NLWA				IAmb	IAmb	05 31 18.7	
	comp=Z,17nm,1.1s						
E04D	Cinebar	84.01	35	P	P	05 31 18.8	+1.5
	baz=232						
I07A	Izee	84.23	39	P	P	05 31 19.4	+0.7
I07A				IAmb	IAmb	05 31 20.7	
	comp=Z,15nm,1.0s						
G06A	Carlson Farm,	84.27	37	P	P	05 31 18.6	-0.2
G06A				IAmb	IAmb	05 31 20.5	
	comp=Z,24nm,1.4s						
X16A	Lo Mia Camp, P	84.28	50	P	P	05 31 19.6	+0.4
LCMT	Little Creek M	84.32	47	P	P	05 31 18.9	-0.4
D03D	Eldon	84.34	34	P	P	05 31 20.2	+1.3

	baz=231						
GAMB	Gambell	84.39	3	P	P	05 31 18.9	+0.2
GAMB				IAmb	IAmb	05 31 20.2	
	comp=Z,20nm,1.2s						
319A	Douglas	84.40	54	P	P	05 31 20.5	+0.7
319A				IAmb	IAmb	05 31 22.4	
	comp=Z,21nm,0.9s						
J08A	Circle Bar Ran	84.42	40	P	P	05 31 20.0	+0.4
J08A				IAmb	IAmb	05 31 21.5	
	comp=Z,26nm,1.3s						
GSI	Gunungsitoli	84.46	273	P	P	05 31 21.1	+0.8
GSI	Gunungsitoli	84.46	273	P	P	05 31 19.7	-0.6
CCUT	Cedar City	84.52	47	P	P	05 31 20.2	-0.2
LON	Longmire	84.54	35	P	P	05 31 20.0	0.0
KNB	Kanab	84.61	47	P	P	05 31 21.0	+0.2
KNB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KNB	Kanab	84.61	47	P	P	05 31 20.4	-0.4
U15A	North Rim	84.68	48	P	P	05 31 21.4	+0.1
U15A				IAmb	IAmb	05 31 23.4	
	comp=Z,12nm,0.7s						
PSUT	Pine Spring	84.69	46	P	P	05 31 21.7	+0.5
D05A	Enumclaw	84.71	35	P	P	05 31 22.2	+1.5
SZCU	Shurtz Canyon	84.72	47	P	P	05 31 20.6	-0.7
RC01	Rabbit Creek A	84.82	14	P	P	05 31 20.6	-0.4
RC01				IAmb	IAmb	05 31 21.7	
	comp=Z,25nm,1.1s						
WUAZ	Wupatki	84.87	49	P	P	05 31 22.6	+0.5
WUAZ	Wupatki	84.87	49	P	P	05 31 23.2	+1.1
	baz=240						
SUA	Susitna One	84.93	13	P	P	05 31 21.0	-0.7
SUA				IAmb	IAmb	05 31 21.9	
	comp=Z,12nm,0.8s						
ELK	Elko	84.96	43	P	P	05 31 23.1	+0.6
ELK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ELK	Elko	84.96	43	P	P	05 31 22.3	-0.2
F07A	Phinny Hill Vi	85.06	37	P	P	05 31 23.4	+0.9
F07A				IAmb	IAmb	05 31 24.4	
	comp=Z,14nm,1.1s						
KCSI	Kotacane, Aceh	85.06	276	P	P	05 31 26.9	+3.6
PKCU	Pink Cliffs	85.18	47	P	P	05 31 25.0	+1.3
HPIG		85.20	59	P	P	05 31 23.9	0.0
G08A	Pilot Rock	85.25	38	P	P	05 31 23.5	-0.1
G08A				IAmb	IAmb	05 31 25.4	
	comp=Z,20nm,1.0s						
B05A	Bryant	85.32	34	P	P	05 31 25.0	+1.4
	baz=232						
PMR	Palmer	85.40	14	P	P	05 31 22.7	-1.0
PMR				IAmb	IAmb	05 31 24.3	
	comp=Z,25nm,1.2s						
X18A	Snowflake	85.40	51	P	P	05 31 24.8	+0.1
LTY	Liberty	85.47	35	P	P	05 31 24.5	0.0
LTY				IAmb	IAmb	05 31 25.9	
	comp=Z,21nm,1.4s						
BJI	Beijing	85.49	316	P	P	05 31 25.0	+0.4
E07A	Sunnyside	85.50	36	P	P	05 31 25.2	+0.6
E07A				IAmb	IAmb	05 31 26.6	
	comp=Z,18nm,1.0s						
ENH	Enshi	85.51	305	P	P	05 31 25.8	+0.7
MTPU	Mount Pierson	85.57	47	P	P	05 31 25.6	0.0
HAWA	Hanford	85.58	37	P	P	05 31 24.9	-0.1
HAWA				IAmb	IAmb	05 31 26.9	
	comp=Z,23nm,1.1s						
GHO	Glory Hole Cre	85.61	14	P	P	05 31 24.6	-0.2
ANM	Nome	85.63	6	P	P	05 31 24.8	0.0
ANM				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ANM	Nome	85.63	6	P	P	05 31 24.6	-0.1
B06A	Marblemount	85.80	34	P	P	05 31 25.9	0.0
B06A				IAmb	IAmb	05 31 27.1	
	comp=Z,14nm,1.2s						
MSU	Marysvale	85.81	46	P	P	05 31 27.9	+1.3
MSU	Marysvale	85.81	46	P	P	05 31 27.6	+1.0
E08A	Dider Farm, El	85.90	37	P	P	05 31 27.1	+0.6
E08A				IAmb	IAmb	05 31 28.3	
	comp=Z,15nm,1.0s						
BMO	Blue Mountains	85.96	39	P	P	05 31 27.2	+0.2
BMO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BMO	Blue Mountains	85.96	39	P	P	05 31 27.1	+0.2
SCM	Sheep Creek Mo	86.02	14	P	P	05 31 26.6	-0.2
MFID	Camas Ranch	86.05	41	P	P	05 31 27.7	+0.3
MFID				IAmb	IAmb	05 31 29.2	
	comp=Z,12nm,1.0s						
121A	Cookes Peak, D	86.06	53	P	P	05 31 28.0	+0.2
121A				IAmb	IAmb	05 31 30.3	
	comp=Z,13nm,1.2s						
121A	Cookes Peak, D	86.06	53	P	P	05 31 30.0	+2.1
	baz=243						
TGL	Tana Glacier	86.23	17	P	P	05 31 27.7	-0.1
D08A	Wollman Farm,	86.31	36	P	P	05 31 28.9	+0.5
SYO	Syowa Base	86.35	193	⇓*e*P	P	05 31 26.0	-2.3
SYO	Syowa Base	86.35	193	⇓*e*PcP	P	05 31 28.8	+0.5
SYO	Syowa Base	86.35	193	⇑*e*pP	pP	05 33 39.7	+3.7
SEY	Seymchan	86.40	347	*i* P	P	05 31 29.3	+0.9
E09A	Wood Farm, Sta	86.43	37	P	P	05 31 28.9	-0.1
E09A				IAmb	IAmb	05 31 30.5	
	comp=Z,21nm,1.1s						
VRDI	Verde Repeater	86.46	16	P	P	05 31 28.7	-0.4
VRDI				IAmb	IAmb	05 31 30.1	
	comp=Z,19nm,1.2s						
GLB	Gilahina Butte	86.55	16	P	P	05 31 28.9	-0.3
GLB				IAmb	IAmb	05 31 29.6	
	comp=Z,15nm,1.1s						
BALM	Baldy	86.60	17	P	P	05 31 29.7	+0.1
BALM				pmax	pmax		
	comp=Z,26nm,1.2s						
BALM	Baldy	86.60	17	P	P	05 31 28.9	-0.7
F10A	Beach Ranch, E	86.64	38	P	P	05 31 29.9	-0.2
Q16A	Castle Valley	86.69	46	P	P	05 31 30.6	0.0
MCARA	McCarthy VSAT	86.71	16	P	P	05 31 29.6	-0.4
KTH	Kantishna Hill	86.78	12	P	P	05 31 29.0	-1.3
KTH				IAmb	IAmb	05 31 29.8	
	comp=Z,12nm,0.9s						
BARN	Barnard Glacie	86.81	17	P	P	05 31 30.3	-0.4
TRF	Thorofare Moun	86.81	12	P	P	05 31 29.4	-1.1
CTGM	Chitina Glacie	86.82	17	P	P	05 31 30.2	-0.4
CTGM				IAmb	IAmb	05 31 31.7	
	comp=Z,17nm,0.9s						
B08A	Colville Reser	86.85	35	P	P	05 31 30.6	-0.4
B08A				IAmb	IAmb	05 31 32.0	
	comp=Z,15nm,0.8s						
TMUT	Trail Mountain	86.86	46	P	P	05 31 32.9	+1.3
LLLB	Lillooet	86.88	32	P	P	05 31 30.0	-1.1
LLLB				IAmb	IAmb	05 31 32.5	
	comp=Z,21nm,1.1s						
PBKT	Sadao Pong	86.94	289	P	P	05 31 28.8	-3.3
PBKT				IAmb	IAmb	05 31 34.6	
	comp=Z,13nm,1.2s						
RND	Reindeer	87.07	13	P	P	05 31 31.0	-0.7
RND				pmax	pmax		
	comp=Z,52nm,1.1s						
RND	Reindeer	87.07	13	P	P	05 31 31.3	-0.4
C09A	Chrisman Ranch	87.10	36	P	P	05 31 31.6	-0.5
C09A				IAmb	IAmb	05 31 33.5	
	comp=Z,18nm,1.0s						
DHY	Denali Highway	87.10	14	P	P	05 31 30.9	-1.1
DHY				IAmb	IAmb	05 31 32.5	
	comp=Z,14nm,1.2s						
CTU	Camp Tracy	87.20	45	P	P	05 31 33.4	+0.4
SRU	San Rafael Swe	87.23	46	P	P	05 31 34.0	+0.8
SRU				pmax	pmax		
	comp=Z,13nm,1.1s						
SRU	San Rafael Swe	87.23	46	P	P	05 31 33.3	+0.1
P17A	Butcher Ranch,	87.26	46	P	P	05 31 33.1	-0.2
MCK	McKinley	87.34	13	P	P	05 31 32.0	-0.9
MCK				pmax	pmax		
	comp=Z,20nm,1.0s						
MCK	McKinley	87.34	13	P	P	05 31 31.6	-1.3
JLU	Jordanelle	87.35	45	P	P	05 31 32.3	-1.5
ZEA	Zeya	87.43	331	*e*P	P	05 31 33.8	+0.3
ZEA				pmax	pmax		
	comp=Z,17nm,1.0s						
PAX	Paxson	87.44	15	P	P	05 31 32.9	-0.6
PAX				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PAX	Paxson	87.44	15	P	P	05 31 31.9	-1.5
MNTX	Cornudas Mount	87.51	55	P	P	05 31 34.2	-0.2
MNTX				IAmb	IAmb	05 31 36.4	
	comp=Z,12nm,1.1s						
MNTX	Cornudas Mount	87.51	55	P	P	05 31 35.4	+1.0
	baz=244						
BWN	Browne	87.62	12	P	P	05 31 33.6	-0.5
TCUT	Toone Canyon	87.64	44	P	P	05 31 35.5	+0.4
XAN	Xi'an	87.64	308	P	P	05 31 35.8	+0.8
XAN	Xi'an	87.64	308	P	P	05 31 35.7	+0.7
XAN				IAmb	IAmb	05 31 36.8	
	comp=Z,18nm,1.1s						
PV05	Paradox Valley	87.71	48	P	P	05 31 36.5	+1.0
HWUT	Hardware Ranch	87.78	44	P	P	05 31 34.7	-1.0
HYT	Haines Junctio	87.82	19	P	P	05 31 34.4	-0.9
HYT				IAmb	IAmb	05 31 36.7	
	comp=Z,12nm,1.0s						
TX31	Lajitas Ar. Si	87.83	58	P	P	05 31 36.8	+0.7
TX31				IAmb	IAmb	05 31 38.3	
	comp=Z,11nm,0.9s						
TX32	Lajitas Array	87.83	58	P	P	05 31 36.4	+0.3
TX32				IAmb	IAmb	05 31 38.3	
	comp=Z,11nm,0.9s						
TXAR	Lajitas Array	87.83	58	P	P	05 31 37.3	+1.3
	comp=Z,7.7nm,0.9s,baz=221,slow=5.6,SNR=65						
TXAR	Lajitas Array	87.83	58	P	P	05 31 36.8	+0.7
TXAR	Lajitas Array	87.83	58	P	P	05 31 36.4	+0.3
MENT	Mentasta	87.84	15	P	P	05 31 35.0	-0.2
MENT				IAmb	IAmb	05 31 36.1	
	comp=Z,18nm,1.1s						
PV09	Paradox Valley	87.88	47	P	P	05 31 36.6	+0.2
PV19	Morning Glory	87.90	48	P	P	05 31 36.8	+0.4
PV19				IAmb	IAmb	05 31 38.5	
	comp=Z,11nm,1.2s						
PV14	Lion Creek, Pa	87.90	48	P	P	05 31 36.7	+0.3
PV14				IAmb	IAmb	05 31 39.0	
	comp=Z,10nm,1.3s						
PV20	West Nyswonger	87.92	48	P	P	05 31 36.0	-0.5
PV20				IAmb	IAmb	05 31 39.0	
	comp=Z,12nm,1.4s						
PV13	Radium Mtn., P	87.94	48	P	P	05 31 35.8	-0.8
PV16	Nyswonger Mesa	87.94	48	P	P	05 31 36.6	0.0
PV23	Carpenter Ridg	87.94	48	P	P	05 31 35.9	-0.7
PV23				IAmb	IAmb	05 31 38.0	
	comp=Z,7.5nm,0.9s						
PV03	Paradox Valley	87.96	48	P	P	05 31 36.7	0.0
PV11	David Mesa, Pa	87.97	48	P	P	05 31 36.0	-0.6
PV11				IAmb	IAmb	05 31 38.1	
	comp=Z,12nm,1.2s						
VNA3	Neumayer Olymp	87.99	177	P	P	05 31 35.1	-0.9
PV04	Paradox Valley	87.99	48	P	P	05 31 36.8	+0.1
NEW	Newport	88.00	36	P	P	05 31 36.2	-0.1
NEW	Newport	88.00	36	P	P	05 31 36.5	+0.1
	baz=236						
PV02	Paradox Valley	88.02	48	P	P	05 31 37.1	+0.1
PV02				IAmb	IAmb	05 31 38.1	
	comp=Z,9.3nm,1.2s						
PV21	Cone Mtn., Par	88.02	47	P	P	05 31 36.5	-0.4
PV12	Saucer Basin,	88.03	48	P	P	05 31 36.4	-0.5
PV01	Paradox Valley	88.10	48	P	P	05 31 36.5	-0.8
PV22	Blue Mesa, Par	88.14	48	P	P	05 31 37.5	+0.1
PV22				IAmb	IAmb	05 31 38.9	
	comp=Z,11nm,1.3s						
ANMO	Albuquerque	88.14	52	P	P	05 31 38.2	+0.6
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ANMO	Albuquerque	88.14	52	P	P	05 31 38.0	+0.4
ANMO				IAmb	IAmb	05 31 39.1	
	comp=Z,8.5nm,1.1s						
ANMO	Albuquerque	88.14	52	P	P	05 31 38.1	+0.6
	baz=243						
MLY	Manley	88.15	12	P	P	05 31 35.2	-1.5
MLY				IAmb	IAmb	05 31 36.9	
	comp=Z,18nm,1.2s						
WRH	Wood River Hil	88.17	13	P	P	05 31 35.7	-1.0
PV07	Paradox Valley	88.19	48	P	P	05 31 36.9	-0.8
RIDG	Independent Ri	88.25	14	P	P	05 31 36.6	-0.5
RIDG				IAmb	IAmb	05 31 37.9	
	comp=Z,14nm,1.1s						
PV15	Paradox Valley	88.26	48	P	P	05 31 36.8	-1.2
HDA	Harding Lake	88.36	13	P	P	05 31 36.5	-1.1
HDA				IAmb	IAmb	05 31 38.8	
	comp=Z,14nm,1.1s						
HDA	Harding Lake	88.36	13	P	P	05 31 36.8	-0.8
	baz=210						
CCB	Clear Creek Bu	88.39	13	P	P	05 31 36.6	-1.1
BCAR	Beaver Creek A	88.43	16	P	P	05 31 37.5	-0.5
IMAR	Indian Mountai	88.49	10	P	P	05 31 37.4	-0.7
MDM	Murphy Dome	88.57	13	P	P	05 31 37.7	-0.9
COLA	College	88.58	13	P	P	05 31 37.5	-1.1
COLA				pmax	pmax		
	comp=Z,37nm,1.1s						
COLA	College	88.58	13	P	P	05 31 37.5	-1.1
RDMU	Red Mountain	88.58	45	P	P	05 31 39.3	-0.2
MCMT	McKenzie Canyo	88.61	41	P	P	05 31 40.7	+1.1
VNA1	Neumayer--Stat	88.65	177	P	P	05 31 39.1	+0.1
SCRK	Sand Creek	88.65	15	P	P	05 31 39.1	0.0
SCRK				IAmb	IAmb	05 31 39.9	
	comp=Z,7.2nm,1.0s						
AHID	Auburn Hatcher	88.66	43	P	P	05 31 39.5	-0.3
IL31		88.69	13	P	P	05 31 38.0	-1.1
ILAR	Eielson Array	88.69	13	P	P	05 31 37.9	-1.2
	comp=Z,3.1nm,0.4s,baz=216,slow=5.1,SNR=102						
ILAR	Eielson Array	88.69	13	P	P	05 31 37.7	-1.4
ILAR	Eielson Array	88.69	13	P	P	05 31 37.7	-1.4
POKR	Poker Plat Res	88.88	13	P	P	05 31 39.0	-1.0
	baz=209						
HHC	Hu-ho-hao-te	88.94	315	*e*P	P	05 31 43.8	+2.8
MSO	Missoula	89.01	38	P	P	05 31 41.2	0.0
	baz=238						
REDW	Red Top Meadow	89.11	43	P	P	05 31 42.3	+0.4
TPAW	Teton Pass	89.11	42	P	P	05 31 41.3	-0.6
TPAW				IAmb	IAmb	05 31 42.7	
	comp=Z,8.6nm,1.0s						
FXWY	Fox Creek	89.14	42	P	P	05 31 41.7	-0.3
FXWY				IAmb	IAmb	05 31 44.6	
	comp=Z,7.8nm,1.1s						
S22A	4UR Ranch, Cre	89.14	49	P	P	05 31 42.7	+0.5
	baz=243						
BILL	Bilibino	89.16	354	*e*P	P	05 31 40.6	-0.6
BILL				*e**PP	pP	05 33 52.5	+2.1
BILL				*e*		05 35 25.1	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SNOW	Snow King Moun	89.22	42	P	P	05 31 42.5	+0.1
O20A	White River Ci	89.27	46	P	P	05 31 42.0	-0.6
O20A				IAmb	IAmb	05 31 44.0	
	comp=Z,8.2nm,0.9s						
O20A	White River Ci	89.27	46	P	P	05 31 43.1	+0.5
	baz=242						
RDOG	Red Dog Mine	89.27	6	P	P	05 31 41.2	-0.5
RDOG				IAmb	IAmb	05 31 42.8	
	comp=Z,10nm,1.1s						
IMW	Indian Meadow	89.32	42	P	P	05 31 43.2	+0.3
CMAR	Chiang Mai Arr	89.45	290	P	P	05 31 44.3	+0.6
	comp=Z,9.8nm,1.0s,baz=117,slow=3.1,SNR=34						
CMAR	Chiang Mai Arr	89.45	290	*i* P	P	05 31 45.4	+1.7
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CMAR	Chiang Mai Arr	89.45	290	P	P	05 31 44.4	+0.7
QLMT	Earthquake Lak	89.48	41	P	P	05 31 44.3	+0.7
FLWY	Flagg Ranch	89.56	42	P	P	05 31 43.8	-0.1
FLWY				IAmb	IAmb	05 31 46.0	
	comp=Z,14nm,1.1s						
CHTO	Chiang Mai	89.58	290	P	P	05 31 45.5	+1.2
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CHTO	Chiang Mai	89.58	290	P	P	05 31 44.6	+0.3
CHTO				IAmb	IAmb	05 31 45.9	
	comp=Z,10.0nm,0.8s						
YHB	Horse Butte	89.59	41	P	P	05 31 43.8	-0.3
YPP	Pitchstone Pla	89.59	42	P	P	05 31 46.1	+1.9
PRP	Porcupine Dome	89.62	13	P	P	05 31 42.6	-1.0
PRP				IAmb	IAmb	05 31 44.5	
	comp=Z,16nm,1.3s						
BW06	Boulder Array	89.65	44	P	P	05 31 44.1	-0.3
BW06				IAmb	IAmb	05 31 45.4	
	comp=Z,8.1nm,0.9s						
BW06	Boulder Array	89.65	44	P	P	05 31 44.6	+0.2
	baz=241						
PD31	Pinedale Array	89.65	44	P	P	05 31 44.0	-0.3
PD31				IAmb	IAmb	05 31 45.4	
	comp=Z,7.1nm,0.9s						
PDAR	Pinedale Array	89.65	44	P	P	05 31 44.5	+0.1
	comp=Z,5.3nm,0.8s,baz=211,slow=3.0,SNR=39						
PDAR	Pinedale Array	89.65	44	P	P	05 31 43.9	-0.5
YHL	Hebgen Lake	89.65	41	P	P	05 31 44.9	+0.5
SMCO	Snowmass	89.69	48	P	P	05 31 43.7	-1.2
SMCO				IAmb	IAmb	05 31 46.9	
	comp=Z,7.9nm,1.2s						
YMR	Madison River	89.69	41	P	P	05 31 45.6	+1.1
PLCA	Paso Flores	89.70	134	P	P	05 31 45.1	+0.5
	comp=Z,2.0nm,0.8s,baz=254,slow=4.5,SNR=4.5						
PLCA	Paso Flores	89.70	134	P	P	05 31 44.2	-0.4
H17A	Grant Village	89.80	42	P	P	05 31 44.0	-1.0
H17A				IAmb	IAmb	05 31 47.9	
	comp=Z,9.1nm,1.1s						
H17A	Grant Village	89.80	42	P	P	05 31 47.4	+2.3
	baz=240						
YHH	Holmes Hill	89.82	41	P	P	05 31 44.2	-1.1
DAWY	Dawson	89.87	16	P	P	05 31 43.6	-1.0
LKWY	Lake	89.99	42	P	P	05 31 45.9	-0.1
LKWY				IAmb	IAmb	05 31 49.0	
	comp=Z,8.9nm,1.2s						
EGAK	Eagle	90.00	15	P	P	05 31 44.5	-0.6
SDCO	Great Sand Dun	90.08	49	P	P	05 31 46.4	-0.2
SDCO	Great Sand Dun	90.08	49	P	P	05 31 46.8	+0.2
	baz=244						
COLD	Coldfoot	90.22	11	P	P	05 31 45.2	-0.9
COLD				IAmb	IAmb	05 31 52.5	
	comp=Z,8.0nm,1.4s						
YNE	Yellowstone No	90.45	41	P	P	05 31 48.2	+0.1
MSTX	Muleshoe	90.46	54	P	P	05 31 47.9	-0.4
MSTX				IAmb	IAmb	05 31 49.2	
	comp=Z,5.5nm,0.8s						
MSTX	Muleshoe	90.46	54	P	P	05 31 48.2	0.0
	baz=245						
T25A	Trinidad	90.60	50	P	P	05 31 48.7	-0.2
T25A	Trinidad	90.60	50	P	P	05 31 49.4	+0.5
	baz=244						
RWWY	Rawlins	90.68	45	P	P	05 31 48.3	-0.9
ISCO	Idaho Springs	90.91	48	P	P	05 31 51.3	+0.9
	baz=244						
RLMT	Red Lodge	90.97	42	P	P	05 31 51.3	+0.9
	baz=241						
N23A	Red Feather La	91.17	46	P	P	05 31 51.7	+0.2
N23A				IAmb	IAmb	05 31 53.1	
	comp=Z,9.8nm,1.1s						
N23A	Red Feather La	91.17	46	P	P	05 31 52.6	+1.1
	baz=244						
JCT	Junction City	91.35	58	P	P	05 31 52.2	-0.1
	baz=247						
BMAR	Burnt Mountain	91.46	13	P	P	05 31 52.3	+0.4
K22A	Casper	91.57	45	P	P	05 31 53.5	+0.3
	baz=243						
YAK	Yakutsk	92.01	338	*i* P	P	05 31 52.9	-1.6
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LZH	Lanzhou	92.27	308	⇓P	P	05 31 58.3	+1.7
LZH				pP	pwP	05 34 11.5	+2.1
LZH				sP	sP	05 35 11.3	+6.5
LZH				PP	PP	05 35 52.4	+4.0
ABTX	Abilene, Hawle	92.32	56	P	P	05 31 56.7	0.0
ABTX				IAmb	IAmb	05 31 57.6	
	comp=Z,12nm,1.3s						
ABTX	Abilene, Hawle	92.32	56	P	P	05 31 57.0	+0.3
	baz=247						
EPYK	Eagle Plains	92.39	16	P	P	05 31 56.1	-0.2
EPYK				IAmb	IAmb	05 31 56.8	
	comp=Z,8.1nm,0.9s						
EPYK	Eagle Plains	92.39	16	P	P	05 31 56.0	-0.2
	baz=219						
KSCO	Kaye Shedlock’	92.66	49	P	P	05 31 58.8	+0.6
	baz=246						
LAO	LASA Array	93.57	41	P	P	05 32 03.2	+1.1
	baz=244						
RSSD	Black Hills	93.84	44	P	P	05 32 03.1	-0.5
RSSD				pmax	pmax		
	comp=Z,5.0nm,1.0s						
RSSD	Black Hills	93.84	44	P	P	05 32 03.1	-0.5
RSSD				IAmb	IAmb	05 32 04.2	
	comp=Z,4.8nm,1.1s						
RSSD	Black Hills	93.84	44	P	P	05 32 03.4	-0.2
	baz=245						
INK	Inuvik	94.67	15	P	P	05 32 05.0	-1.4
	comp=Z,4.0nm,1.0s,baz=201,slow=5.5,SNR=7.7						
INK	Inuvik	94.67	15	P	P	05 32 05.9	-0.5
INK				IAmb	IAmb	05 32 06.8	
	comp=Z,7.6nm,1.2s						
YKA	Yellowknife Ar	97.03	25	P	P	05 32 16.6	-0.6
	comp=Z,1.0nm,0.8s,baz=234,slow=4.3,SNR=14						
TLY	Talaya	98.57	322	*i* P	P	05 32 26.1	+1.6
TLY				pmax	pmax		
	comp=Z,11nm,3.5s						
ZALV	Zalesovo Beam	110.16	321	PKiKP	PKiKP	05 37 11.4	-1.9
	comp=Z,0.6nm,0.3s,baz=90,slow=0.3,SNR=5.2						
MKAR	Makanchi Array	110.77	313	PKiKP	PKiKP	05 37 13.0	-1.8
	comp=Z,0.8nm,0.3s,baz=150,slow=0.7,SNR=31						
MKAR	Makanchi Array	110.77	313		PKiKP	05 37 12.9	-1.8
KURK	Kurchatov	113.61	317	*i* PKIKP	PKiKP	05 37 17.7	-2.3
KURK	Kurchatov	113.61	317		PKiKP	05 37 18.5	-1.5
KURBB	Kurchatov Arra	113.66	317	PKiKP	PKiKP	05 37 17.9	-2.2
	comp=Z,1.0nm,0.5s,baz=98,slow=1.9,SNR=8.9						
KSH	Kashi	114.36	305	PKP	PKPdf	05 37 22.8	+0.8
KSH				PP	PP	05 38 36.9	+6.9
KSH				PKS	PKSdf	05 40 58.4	-0.4
KSH				SKKS		05 44 28.3	
BOOM	Boomskoye usch	114.73	308	PKIKP	PKPdf	05 37 22.5	-0.2
BOOM	Boomskoye usch	114.73	308		PKPdf	05 37 21.6	-1.1
AAK	Ala-Archa	115.81	308*c*	*i*PKIKP	PKPdf	05 37 24.5	-0.2
AAK				pmax	pmax		
	comp=Z,7.0nm,2.5s						
BVAR	Borovoye Array	118.73	320	PKP	PKPdf	05 37 28.5	-1.3
	comp=Z,3.1nm,0.3s,baz=119,slow=2.2,SNR=24						
KKAR	Karatay Array	118.76	309	⇑*e*PKIKP	PKPdf	05 37 29.2	-1.0
KKAR	Karatay Array	118.76	309		PKPdf	05 37 28.8	-1.4
BRVK	Borovoye	118.79	320*c*	*i*PKIKP	PKPdf	05 37 28.8	-1.1
BRVK				pmax	pmax		
	comp=Z,32nm,2.5s						
BRVK	Borovoye	118.79	320		PKPdf	05 37 28.4	-1.5
DAG	Danmarks Havn	123.01	5	*i* P	PKPdf	05 37 35.1	-2.3
DAG	Danmarks Havn	123.01	5	*i* PKIKP	PKPdf	05 37 35.1	-2.3
SUMG	Summit	123.53	13	*i* P	PKPdf	05 37 38.9	-0.1
SUMG	Summit	123.53	13	*i* PKIKP	PKPdf	05 37 38.9	-0.1
ARU	Arti	124.92	325	PKP	PKPdf	05 37 40.9	-0.6
	comp=Z,2.0nm,0.4s,baz=336,slow=1.5,SNR=13						
ARU	Arti	124.92	325	*i* PKIKP	PKPdf	05 37 40.9	-0.6
ARU						05 39 38.3	
ARU						05 43 54.8	
ARU				SS	SS	05 55 44.9	-5.4
ABKAR	Akbulak array	125.69	316		PKPdf	05 37 42.5	-0.8
AKTO	Aktyubinsk	126.70	318	PKP	PKPdf	05 37 44.1	-1.0
	comp=Z,3.7nm,0.8s,baz=335,slow=1.3,SNR=11						
GEYT	Alibeck	128.23	302	PKP	PKPdf	05 37 48.2	-0.4
	comp=Z,2.7nm,0.8s,baz=320,slow=4.4,SNR=6.6						
GEYT	Alibeck	128.23	302		PKPdf	05 37 47.3	-1.2
ARCES	ARCESS Array B	128.98	349	PKhKP	PKPpre	05 37 40.0	
	comp=Z,2.8nm,0.8s,baz=332,slow=0.4,SNR=5.7						
ARCES				PKP	sPdif	05 37 47.8	-0.7
	comp=Z,2.7nm,0.8s,baz=99,slow=1.8,SNR=19						
FINES	FINESS Array B	135.74	343	PKhKP	PKPpre	05 37 49.7	
	comp=Z,0.4nm,0.4s,baz=52,slow=3.0,SNR=6.2						
FINES				PKP	PKPdf	05 38 01.6	-0.3
	comp=Z,1.7nm,0.6s,baz=124,slow=3.6,SNR=9.5						
FINES				SKPbc	SKPbc	05 40 37.6	-0.3
	comp=Z,9.6nm,0.9s,baz=29,slow=4.4,SNR=14						
OBN	Obninsk	136.56	331	*i* PKIKP	PKPdf	05 38 03.0	-0.5
OBN				pmax	pmax		
	comp=Z,11nm,1.0s						
VSR	Storozhevoye	137.50	325	*i* PKIKP	PKPdf	05 38 04.9	-0.5
KIV	Kislovodsk	138.53	314	*e*PKIKP	PKPdf	05 38 07.6	-0.1
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
KMBO	Kilima Mbogo	138.55	243	PKP	PKPdf	05 38 10.6	+1.8
	comp=Z,1.8nm,0.8s,baz=324,slow=6.8,SNR=3.9						
KMBO				SKPbc	SKPbc	05 40 48.7	+0.8
	comp=Z,2.9nm,0.9s,baz=72,slow=2.0,SNR=5.5						
NB2	NORSAR Subarra	139.09	353	PKP	PKPdf	05 37 59.3	-8.8
	comp=Z,0.2nm,0.3s,baz=16,slow=3.2						
NOA	NORSAR Array B	139.09	353	PKhKP	PKPpre	05 37 59.5	
	comp=Z,1.3nm,0.9s,baz=42,slow=1.2,SNR=7.1						
NOA				PKP	PKPdf	05 38 09.1	+1.0
	comp=Z,1.0nm,0.7s,baz=14,slow=4.1,SNR=4.0						
NOA				SKPbc	SKPbc	05 40 47.4	-0.1
	comp=Z,3.3nm,0.9s,baz=16,slow=4.3,SNR=5.8						
HFS	Hagfors	139.61	350	PKhKP	PKPpre	05 38 00.6	
	comp=Z,4.3nm,0.3s,baz=66,slow=3.8,SNR=56						
AKASG	Malin Array Be	142.81	330	PKhKP	PKPpre	05 38 11.3	
	comp=Z,6.5nm,0.3s,baz=42,slow=4.7,SNR=61						
AKASG				SKPbc	SKPbc	05 40 57.3	+0.1
	comp=Z,2.4nm,0.8s,baz=43,slow=3.2,SNR=9.9						
SIM	Simferopol'	143.64	319*d*	*i*PKIKP	PKPbc	05 38 15.5	-0.3
SIM				pmax	pmax		
	comp=Z,51nm,0.8s						
BSD	Bornholm Skovb	144.11	347	*i* P	PKPbc	05 38 15.0	-1.8
BSD	Bornholm Skovb	144.11	347	*i* PKIKP	PKPbc	05 38 15.0	-1.8

MBAR	Mbarara	144.15	237	PKIKP	PKPbc	05 38 19.1	+0.6
MBAR	Mbarara	144.15	237		PKPbc	05 38 18.9	+0.5
GAZ	Gaziantep	144.69	306		PKPdf	05 38 18.2	-0.6
SORM	Soroca	144.97	328	⇓P	PKPdf	05 38 18.4	-0.4
SORM	Soroca	144.97	328	⇓PKIKP	PKPdf	05 38 18.4	-0.4
LVV	L'vov	145.74	333	*e*PKIKP	PKPdf	05 38 20.5	+0.4
ILGA	Ilgaz	145.77	314		PKPdf	05 38 22.2	+1.5
BSEG	Bad Segeberg	146.09	350	*e*PKPbc	PKPdf	05 38 22.1	+1.6
	baz=16,slow=2.4						
LEOM	Leova	146.11	326	⇑P	PKPdf	05 38 22.8	+2.0
LEOM	Leova	146.11	326	⇑PKP2	PKPdf	05 38 22.8	+2.0
BR131	Keskin Array S	146.39	312		PKPdf	05 38 20.3	-1.5
BR131				PKPbc	PKPbc	05 38 23.4	-0.8
BRTR	Keskin Array B	146.39	312	PKPbc	PKPdf	05 38 22.1	+0.4
	comp=Z,4.7nm,0.8s,baz=28,slow=5.6,SNR=35						
BRTR	Keskin Array B	146.39	312	PKIKP	PKPdf	05 38 20.0	-1.7
BRTR	Keskin Array B	146.39	312		PKPdf	05 38 20.4	-1.3
BRTR				PKPbc	PKPbc	05 38 23.5	-0.7
KWP	Kalwaria Pacla	146.43	334	PKP2	PKPdf	05 38 23.5	+2.2
KWP	Kalwaria Pacla	146.43	334		PKPdf	05 38 20.6	-0.7
KWP				PKPbc	PKPbc	05 38 23.9	0.0
KWP				PKPab	PKiKP	05 38 27.0	+1.1
TLCR		146.61	323	⇓P	PKPdf	05 38 24.0	+2.3
TLCR		146.61	323	⇓PKP2	PKPdf	05 38 24.0	+2.3
RUE	Ruedersdorf	146.81	346	*e*PKPbc	PKPdf	05 38 24.4	+2.7
	baz=16,slow=2.4						
BUR08	Bucovina Ar. S	146.84	330		PKPbc	05 38 25.2	+0.1
BURAR	Bucovina Array	146.85	330	⇑P	PKPbc	05 38 25.5	+0.4
BURAR	Bucovina Array	146.85	330	⇑PKP2	PKPbc	05 38 25.5	+0.4
BURAR	Bucovina Array	146.85	330		PKPbc	05 38 25.5	+0.4
BIZ	Bicaz	146.90	328	⇓P	PKPbc	05 38 25.2	+0.1
TESR	Tescani	146.91	327	⇑P	PKPdf	05 38 24.5	+2.3
ANTO	Ankara	146.92	312	⇓P	PKPdf	05 38 25.1	+2.6
ANTO	Ankara	146.92	312	⇓PKP2	PKPdf	05 38 25.1	+2.6
ANTO	Ankara	146.92	312		PKPdf	05 38 22.1	-0.4
ANTO				PKPbc	PKPbc	05 38 25.6	0.0
BR231	Keskin MP Arra	146.94	312		PKPdf	05 38 25.6	+2.9
CFR	Carcaliu	146.99	324	⇑P	PKPbc	05 38 25.3	-0.1
CFR	Carcaliu	146.99	324	⇑PKP2	PKPbc	05 38 25.3	-0.1
TOPG	Topolog	147.04	323	⇑P	PKPbc	05 38 25.6	+0.1
OJC	Ojcow	147.06	338	PKP2	PKPbc	05 38 25.5	0.0
OJC	Ojcow	147.06	338		PKPdf	05 38 21.6	-0.8
OJC				PKPbc	PKPbc	05 38 25.2	-0.3
TIRR	Tirgusor	147.28	323	⇑P	PKPdf	05 38 24.7	+1.9
TIRR	Tirgusor	147.28	323	⇑PKIKP	PKPdf	05 38 24.7	+1.9
VRI	Vrincioaia	147.30	326	⇓P	PKPdf	05 38 25.6	+2.7
VRI	Vrincioaia	147.30	326	⇓PKP2	PKPdf	05 38 25.6	+2.7
PLOR	Plostina	147.35	326	⇑P	PKPdf	05 38 25.9	+2.9
PLOR	Plostina	147.35	326	⇑PKP2	PKPdf	05 38 25.9	+2.9
UZH	Uzhgorod	147.38	334	*e*PKIKP	PKPdf	05 38 22.5	-0.4
UZH				*e*		05 38 29.6	
UZH				*e*		05 40 44.7	
RETH	Rethem/Aller,	147.40	351	*e*PKPbc	PKPdf	05 38 25.8	+3.0
	baz=16,slow=2.4						
HARR	Harsova	147.41	323	⇓P	PKPbc	05 38 26.4	-0.1
HARR	Harsova	147.41	323	⇓PKP2	PKPbc	05 38 26.4	-0.1
NRDL	Niedersach Rie	147.52	350	*e*PKPbc	PKPdf	05 38 25.9	+3.1
	baz=16,slow=2.4						
BISRR	Bisoca	147.52	326	⇑P	PKPbc	05 38 27.1	+0.2
MANR	Mangalia	147.57	322	⇑P	PKPbc	05 38 26.8	-0.2
BMR	Baia Mare	147.60	331	⇑P	PKPbc	05 38 26.7	-0.2
BMR	Baia Mare	147.60	331	⇑PKP2	PKPbc	05 38 26.7	-0.2
OZUR		147.63	327	⇓P	PKPbc	05 38 26.9	-0.3
TRPA	Tarpa	147.67	333	⇑P	PKPbc	05 38 26.9	-0.1
MDUB	Mudurnu	147.73	314		PKPbc	05 38 27.4	-0.3
MDUB				PKPab	PKPab	05 38 33.0	+0.7
ASSE	Asse, Remlinge	147.77	349	*e*PKPbc	PKPbc	05 38 26.9	-0.2
	baz=16,slow=2.4						
DOPR	Dopca	147.92	327	⇓P	PKPbc	05 38 28.0	+0.2
OSTC	Ostas	147.93	342	*e*PKPDF	PKPdf	05 38 23.4	-0.3
OSTC				⇑*e*PKP	PKPbc	05 38 27.7	0.0
CHVC	Chvalec	147.94	342	⇑*e*PKP	PKPdf	05 38 27.2	+3.4
OKC	Ostrava-Krasne	147.95	339	*e*PKPAB	PKiKP	05 38 32.2	+3.2
OKC	Ostrava-Krasne	147.95	339	*e*PKP2	PKiKP	05 38 32.2	+3.2
MLR	Muntele Rosu	147.96	326	⇑P	PKPdf	05 38 27.6	+3.5
MLR	Muntele Rosu	147.96	326	⇑PKP2	PKPdf	05 38 27.6	+3.5
MLR	Muntele Rosu	147.96	326		PKPdf	05 38 23.0	-1.1
MLR				PKPbc	PKPbc	05 38 27.8	-0.3
UPC	Upice	148.03	342	⇑*e*PKP	PKPbc	05 38 27.7	-0.2
UPC	Upice	148.03	342	*e*PKP2	PKPbc	05 38 27.7	-0.2
IBBN	Ibbenburen	148.04	352	*e*PKPbc	PKPbc	05 38 27.4	-0.5
	baz=16,slow=2.4						
CLL	Collm	148.08	346	*e*PKPdf	PKPdf	05 38 24.0	+0.1
CLL				⇓*i*PKPbc	PKPbc	05 38 28.4	+0.4
	comp=Z,40nm,1.1s						
CLL				*i* PKPab	PKPab	05 38 32.8	-0.3
	comp=Z,18nm,1.1s						
CLL				*e*pPKPbc	pPKPab	05 40 47.0	+1.7
CLL	Collm	148.08	346	PKPdf	PKPdf	05 38 23.1	-0.8
CLL					PKPbc	05 38 28.8	+0.8
DPC	Dobruska-Polom	148.08	342	⇑*e*PKP	PKPbc	05 38 27.7	-0.4
DPC				*e*PKPAB	PKPab	05 38 33.6	+0.4
DPC	Dobruska-Polom	148.08	342	*e*PKP2	PKPbc	05 38 27.7	-0.4
CLZ	Clausthal	148.10	349	*e*PKPbc	PKPbc	05 38 27.8	-0.3
	baz=16,slow=2.4						
KRLC	Kraliky	148.18	341	⇑*e*PKP	PKPdf	05 38 27.6	+3.4
KRLC				*e*PKPAB	PKPab	05 38 33.7	0.0
MORC	Moravsky Berou	148.20	340	PKIKP	PKPdf	05 38 23.0	-1.3
MORC	Moravsky Berou	148.20	340	*e*PKP	PKPbc	05 38 28.4	0.0
MORC				*e*		05 38 33.9	
MORC	Moravsky Berou	148.20	340		PKPdf	05 38 22.1	-2.1
MORC				PKPbc	PKPbc	05 38 28.7	+0.2
SECR		148.20	325	⇑P	PKPbc	05 38 28.4	-0.1
BRG	Berggiesshubel	148.25	345	*e*PKP	PKPdf	05 38 23.9	-0.4
	comp=Z,8.6nm,1.8s						
BRG	Berggiesshubel	148.25	345	*i* PKP	PKPbc	05 38 28.2	-0.3
	comp=Z,47nm,1.4s						
BRG	Berggiesshubel	148.25	345	*e*PKPbc	PKPbc	05 38 28.0	-0.4
	baz=16,slow=2.4						
CJR	Cluj-Napoca	148.26	330	⇓P	PKPbc	05 38 28.8	+0.1
CJR	Cluj-Napoca	148.26	330	⇓PKP2	PKPbc	05 38 28.8	+0.1
FBE	Freiberg	148.35	345	*e*PKPbc	PKPbc	05 38 28.5	-0.2
	baz=16,slow=2.4						
FBE				*e*PKPab	PKPab	05 38 34.2	0.0
	baz=16,slow=4.4						
CSS	Mathiatis	148.36	304	PKPdf	PKPdf	05 38 23.9	-1.0
CSS					PKPbc	05 38 28.7	-0.6
PVCC	Panska Ves	148.41	344	⇑*e*PKP	PKPbc	05 38 28.6	-0.3
PVCC	Panska Ves	148.41	344	*e*PKP2	PKPbc	05 38 28.6	-0.3
NEUB	Neuenburg	148.44	347	*e*PKPbc	PKPbc	05 38 28.3	-0.6
	baz=16,slow=2.4						
GTTG	Gottingen	148.46	349	*e*PKPbc	PKPbc	05 38 28.4	-0.5
	baz=16,slow=2.4						
VOIR		148.46	327	⇑P	PKPbc	05 38 29.0	-0.3
VOIR		148.46	327	⇑PKP2	PKPbc	05 38 29.0	-0.3
LEF	Lefka	148.66	304	⇑P	PKPdf	05 38 29.0	+3.7
ARR	Arges	148.72	327	⇑P	PKPbc	05 38 30.0	+0.1
PRA	Prague	148.86	343	⇑*e*PKP	PKPbc	05 38 30.2	+0.2
PRA	Prague	148.86	343	*e*PKP2	PKPbc	05 38 30.2	+0.2
PRU	Pruhonice	148.91	343	⇑*e*PKP	PKPbc	05 38 29.4	-0.7
PRU				*e*PKPAB	PKPab	05 38 36.7	+0.1
VRAC	Vranov	148.91	340	⇑P	PKPbc	05 38 30.1	0.0
VRAC	Vranov	148.91	340	*e*PKP	PKPbc	05 38 30.1	0.0
VRAC				*e*		05 38 36.8	
PSZ	Piszkesteto	148.92	335	⇓P	PKPbc	05 38 30.7	+0.4
PSZ	Piszkesteto	148.92	335	⇓PKP2	PKPbc	05 38 30.7	+0.4
PSZ	Piszkesteto	148.92	335		PKPbc	05 38 30.1	-0.2
BUG	Bochum--Univer	148.95	353	*e*PKPbc	PKPbc	05 38 29.3	-0.8
	baz=16,slow=2.4						
MOX	Moxa	149.00	347	*e*PKPbc	PKPbc	05 38 29.5	-0.8
	baz=16,slow=2.4						
TANN	Tannenbergstha	149.03	346	*e*PKPbc	PKPbc	05 38 29.6	-0.8
	baz=16,slow=2.4						
TANN				*e*PKPab	PKPab	05 38 36.8	-0.3
	baz=16,slow=4.4						
PLN	Plauen	149.04	346	*e*PKPbc	PKPbc	05 38 29.5	-0.9
	baz=16,slow=2.4						
LOT	Lotru	149.10	328	⇑P	PKPbc	05 38 30.0	-0.9
GUNZ	Gunzen	149.11	346	*e*PKPbc	PKPbc	05 38 30.2	-0.4
	baz=16,slow=2.4						
GUNZ				*e*PKPab	PKPab	05 38 37.4	-0.1
	baz=16,slow=4.4						
UBBA	Unterbreizbach	149.15	349	*e*PKPbc	PKPbc	05 38 29.8	-0.7
	baz=16,slow=2.4						
WERN	Wernitzgruen	149.17	346	*e*PKPbc	PKPbc	05 38 30.5	-0.3
	baz=16,slow=2.4						
WERN				*e*PKPab	PKPab	05 38 37.7	0.0
	baz=16,slow=4.4						
KRUC	Moravsky	149.19	340	*e*PKP	PKPbc	05 38 30.3	-0.5
KRUC				*e*		05 38 37.6	
DEV	Deva	149.20	330	⇑P	PKPbc	05 38 30.8	-0.2
NKC	Novy Kostel	149.21	346	⇑*e*PKP	PKPbc	05 38 30.1	-0.8
NKC				*e*PKPAB	PKPab	05 38 37.7	-0.2
PBCC	Pribram	149.33	344	⇑*e*PKP	PKPbc	05 38 30.8	-0.3
PBCC				*e*PKPAB	PKPab	05 38 38.1	-0.3
ISP	Isparta	149.41	310		PKPdf	05 38 30.2	+3.6
SIRR	Siria	149.48	331	⇑P	PKPbc	05 38 31.3	-0.4
MANZ	Manzenberg	149.51	346	*e*PKPbc	PKPbc	05 38 30.8	-0.8
	baz=16,slow=2.4						
GZR	Gura Zlata	149.62	329	⇑P	PKPbc	05 38 31.5	-0.5
GZR	Gura Zlata	149.62	329	⇑PKIKP	PKPbc	05 38 31.5	-0.5
ELND	Elena	149.67	323	⇑P	PKPbc	05 38 32.1	-0.1
ROTZ	Rotzenmuhle	149.70	346	*e*PKPbc	PKPbc	05 38 31.3	-0.7
	baz=16,slow=2.4						
AHRW	Bad Neuenahr-A	149.86	352	*e*PKPbc	PKPbc	05 38 31.6	-0.7
	baz=16,slow=2.4						
MEM	Membach	149.91	354	PKPbc	PKPbc	05 38 32.0	-0.5
MEM				PKiKP	PKiKP	05 38 32.4	-0.7
SRE	Strehaia	149.94	328	⇓P	PKPbc	05 38 32.5	-0.3
KHC	Kasperske Hory	149.95	344	*e*PKPDF	PKPdf	05 38 26.4	-0.6
KHC				⇑*e*PKP	PKPbc	05 38 32.3	-0.4
KHC				*e*PKPAB	PKPab	05 38 41.1	+0.1
KHC	Kasperske Hory	149.95	344	*e*PKIKP	PKPdf	05 38 26.4	-0.6
KHC				*e*		05 38 41.1	
KHC	Kasperske Hory	149.95	344		PKPdf	05 38 26.5	-0.5
KHC				PKPbc	PKPbc	05 38 32.3	-0.4
KHC				PKPab	PKPab	05 38 41.3	+0.3
TNS	Taunus Mts	149.98	351	*e*PKPbc	PKPbc	05 38 31.8	-0.9
	baz=16,slow=2.4						
TNS				*e*PKPab	PKPab	05 38 40.5	-0.6
	baz=16,slow=4.4						
GRA1	Grafenberg Arr	149.99	347		PKPbc	05 38 32.9	+0.2
GRF	Grafenberg Arr	149.99	347	*e*PKPbc	PKPbc	05 38 32.3	-0.4
	baz=16,slow=2.4						
GRF				*e*PKPab	PKPab	05 38 40.9	-0.2
	baz=16,slow=4.4						
BZS	Buzias	150.00	331	⇑P	PKPbc	05 38 32.1	-0.7
PLVB	Pleven	150.08	324	⇑P	PKPbc	05 38 33.0	0.0
WET	Wettzell	150.12	344	*e*PKPbc	PKPbc	05 38 32.8	-0.2
	baz=16,slow=2.4						
GEC2	GERESS Array S	150.18	343	*e*PKPbc	PKPbc	05 38 32.7	-0.6
	baz=16,slow=2.4						
GEC2	GERESS Array S	150.18	343		PKPbc	05 38 32.8	-0.5
GERES	GERESS Array B	150.18	343	PKP	PKPdf	05 38 26.6	-0.8
	comp=Z,0.8nm,0.8s,baz=48,slow=2.0,SNR=6.4						
GERES				PKPbc	PKPbc	05 38 32.6	-0.6
	comp=Z,5.5nm,0.8s,baz=38,slow=2.4,SNR=42						
GERES	GERESS Array B	150.18	343		PKPdf	05 38 25.8	-1.7
GERES					PKPbc	05 38 32.9	-0.4
GERES				PKPab	PKPab	05 38 41.6	-0.4
BGES	Gesves	150.22	355	PKPbc	PKPbc	05 38 32.9	-0.3
ELL	Elmali	150.30	309	PKIKP	PKPbc	05 38 33.2	-0.8
ELL	Elmali	150.30	309	PKPdf	PKPdf	05 38 26.7	-1.4
ELL					PKPbc	05 38 33.1	-0.8
BMRD	Maredsous	150.33	355	PKPbc	PKPbc	05 38 33.1	-0.3
CONA	Conrad Observa	150.36	340	*e*PKiKP	PKPbc	05 38 33.4	-0.3
	comp=Z,18nm,1.1s,SNR=6.9						
CONA				*i* PKPab	PKPab	05 38 43.1	+0.3
	comp=Z,14nm,1.2s						
BANR	Banloc	150.40	331	⇑P	PKPbc	05 38 34.2	+0.5
MANT	Manisa	150.47	313		PKPbc	05 38 33.6	-0.8
DOU	Dourbes	150.54	356	PKPbc	PKPbc	05 38 33.5	-0.5
DOU				PKiKP	PKiKP	05 38 33.9	-0.5
MDVR	Moldovita	150.58	329	⇓P	PKPbc	05 38 33.5	-0.8
ALN	Alexandroupoli	150.81	319	PKIKP	PKPbc	05 38 33.5	-1.3
ALN	Alexandroupoli	150.81	319		PKPbc	05 38 33.8	-1.1
WLF	Walferdange	150.83	353	PKPbc	PKPbc	05 38 34.6	0.0
WLF	Walferdange	150.83	353	*e*PKPbc	PKPbc	05 38 34.6	0.0
	baz=16,slow=2.4						
WLF	Walferdange	150.83	353	PKIKP	PKPbc	05 38 35.0	+0.4
WLF	Walferdange	150.83	353		PKPbc	05 38 34.7	0.0
MOA	Molln	150.92	342	*i* PKiKP	PKPbc	05 38 34.0	-0.9
	comp=Z,2.3nm,0.5s						
MOA				*i* PKPab	PKPab	05 38 46.0	+0.8
	comp=Z,15nm,1.7s						
ARSA	Arzberg	151.06	340	*i* PKiKP	PKPbc	05 38 34.4	-0.9
	comp=Z,7.0nm,1.4s						
STU	Stuttgart	151.26	349	*e*PKPbc	PKPbc	05 38 35.2	-0.5
	baz=16,slow=2.4						
VTS	Vitosha	151.34	325	⇑P	PKPbc	05 38 36.0	-0.2
VTS	Vitosha	151.34	325	⇑PKIKP	PKPbc	05 38 36.0	-0.2
VTS	Vitosha	151.34	325	PKPdf	PKPdf	05 38 28.1	-1.4
VTS					PKPbc	05 38 35.8	-0.5
VTS				PKPab	PKPab	05 38 47.7	+0.4
FUR	Furstenfeldbru	151.41	346	*e*PKPab	PKPab	05 38 47.2	0.0
	baz=16,slow=4.4						
SOKA	Soboth	151.73	340	*e*PKiKP	PKPbc	05 38 36.0	-0.8
	comp=Z,7.5nm,0.9s						
SOKA				*i* PKPab	PKPab	05 38 48.5	-0.1
	comp=Z,9.4nm,0.9s						
BFO	Black Forest	151.84	350	*e*PKPbc	PKPbc	05 38 36.3	-0.7
	baz=16,slow=2.4						
BFO				*e*PKPab	PKPab	05 38 49.0	+0.1
	baz=16,slow=4.4						
KBA	Koelnbreinsper	151.89	342	*i* PKPbc	PKPbc	05 38 35.7	-1.6
	comp=Z,3.5nm,0.5s						
WATA	Walderalm	152.12	345	*e*PKiKP	PKPbc	05 38 36.7	-1.1
	comp=Z,6.6nm,0.6s						
WATA				*e*PKPab	PKPab	05 38 50.3	0.0
	comp=Z,14nm,1.0s						
RETA	Reutte	152.17	346	*e*PKiKP	PKPbc	05 38 37.1	-0.7
	comp=Z,6.6nm,1.1s						
RETA				*e*PKPab	PKPab	05 38 50.1	-0.4
	comp=Z,6.4nm,0.6s						
WTTA	Wattenberg	152.17	345	*e*PKiKP	PKPbc	05 38 37.0	-0.9
	comp=Z,7.5nm,0.4s						
WTTA				*e*PKPab	PKPab	05 38 50.5	-0.1
	comp=Z,16nm,1.1s						
MYKA	Terra Mystica	152.20	341	*e*PKPbc	PKPbc	05 38 36.2	-1.6
	comp=Z,3.6nm,0.5s						
MOTA	Moosalm	152.22	345	*e*PKiKP	PKPbc	05 38 37.0	-1.0
	comp=Z,9.8nm,1.0s						
MOTA				*e*PKPab	PKPab	05 38 50.5	-0.3
	comp=Z,12nm,1.0s						
SQTA	Sankt Quirin	152.32	345	*i* PKiKP	PKPbc	05 38 37.2	-1.0
	comp=Z,9.6nm,1.0s						
SQTA				*e*PKPab	PKPab	05 38 50.8	-0.3
	comp=Z,8.8nm,1.3s						
ABTA	Abfaltersbach	152.42	343	*i* PKPbc	PKPbc	05 38 36.9	-1.5
	comp=Z,12nm,1.1s						
KARP	Karpathos	152.83	308	PKPdf	PKPdf	05 38 29.7	-2.0
KARP					PKPbc	05 38 38.4	-1.2
KARP				PKPab	PKPab	05 38 52.7	-1.0
LIT	Litokhoron	153.44	321	PKP2	PKPab	05 38 55.8	-0.3
LIT	Litokhoron	153.44	321		PKPab	05 38 55.5	-0.6
FNA	Florina	153.61	324	PKIKP	PKPbc	05 38 40.0	-1.1
FNA	Florina	153.61	324		PKPbc	05 38 40.0	-1.1
SANT	Santorini	153.66	312	PKPbc	PKPbc	05 38 39.5	-1.8
SANT					PKPab	05 38 55.3	-2.0
TIP	Timpagrande	157.22	327		PKPdf	05 38 36.6	-1.0
ESDC	Sonseca Array	160.59	12	PKPab	PKPab	05 39 27.1	+0.1
	comp=Z,0.6nm,0.3s,baz=355,slow=4.0,SNR=6.3						
KEST	Kesra	163.40	336	PKPab	PKPab	05 39 38.6	-0.9
	comp=Z,2.4nm,0.5s,baz=246,slow=6.2,SNR=4.4						
KEST	Kesra	163.40	336		PKPab	05 39 39.3	-0.3
TORD	Torodi Ar. Bea	172.47	184	PKP	PKPdf	05 38 48.4	-2.5
	comp=Z,2.9nm,1.0s,baz=301,slow=1.6,SNR=10						
TORD				PKPab	PKPab	05 40 19.2	-0.8
	comp=Z,0.6nm,0.8s,baz=171,slow=3.2,SNR=4.7						
TORD				PP	PP	05 44 15.4	+4.7
	comp=Z,1.0nm,1.0s,baz=177,slow=3.0,SNR=3.6						

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*IDC **23** 05:26:29.8±2.8, 39°.59N×141°.03E, h0^{km}, mb4.0/5, mb1 4.1/6, mb1mx3.6/48, mbtmp4.0/6, ML2.6/1, Error ellipse: s-maj=78.0km s-min=25.8km az=73.0*

*JMA **23** 05:26:36.4±0.1, 38°.82N×141°.53E, h104^{km}±1^{km}, M3.4 Broadband fault plane solution: P waves. NP1: ϕ_s87.00000°, δ46.00000°, λ-112.00000°. NP2: ϕ_s298.00000°, δ48.00000°, λ-68.00000°. Principal axes: T Plg1.0000°, Azm13.0000°; N Plg16.0000°, Azm103.0000°; P Plg74.0000°, Azm280.0000°;*

JMA Felt I J1.

ISC 23 05:26:35.6±1.2**, 38°.80N**±0°.05×**141°.59E**±0°.08**, h107**^{km}±7^{km}**, n21, σ0^s.49**/34**, mb3.8**/5**, 3C-6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKMT	Kesennumamotoy	0.09	277	⇓P	Pn	05 26 50.9	+0.5
JKMT				S	Sn	05 27 01.6	+0.1
OFUJ	Ofunato	0.29	13	⇓P	Pn	05 26 51.5	+0.5
OFUJ				S	Sn	05 27 02.4	-0.1
JMK	Ichinoseki	0.33	298	⇓P	Pn	05 26 51.2	+0.1
JMK				S	Sn	05 27 02.2	-0.6
JIO	Ouri	0.39	209	⇓P	Pn	05 26 51.9	+0.4
JIO				*i* S	Sn	05 27 03.3	-0.1
JOM	Ohasama	0.71	341	⇓P	Pn	05 26 54.0	+0.2
JOM				S	Sn	05 27 06.9	-0.6
JOU	Okura	0.84	239	⇓P	Pn	05 26 55.5	+0.5
JOU				*e*S	Sn	05 27 09.8	+0.2
JRG	Rokugo	0.95	309	P	Pn	05 26 56.3	+0.3
JRG				*e*S	Sn	05 27 12.0	+0.5
JYK	Kaneyama	0.97	277	P	Pn	05 26 56.3	+0.1
JYK				S	Sn	05 27 11.5	-0.2
JMM	Marumori	1.12	214	P	Pn	05 26 58.0	+0.1
JMM				S	Sn	05 27 14.1	-0.6
JYS	Shirataka	1.33	245	P	Pn	05 27 00.6	+0.4
JYS				S	Sn	05 27 18.9	+0.1
JYA	Atsumi	1.48	263	⇑P	Pn	05 27 02.3	+0.3
JYA				S	Sn	05 27 21.9	-0.1
JFK	Kawauchi	1.54	202	⇑P	Pn	05 27 03.0	+0.3
JFK				S	Sn	05 27 23.4	+0.1
JAH	Hinai	1.57	332	⇑P	Pn	05 27 03.5	+0.5
JAH				S	Sn	05 27 24.2	+0.3
MAT	Matsushiro	3.50	231	P	Pn	05 27 29.2	+1.0
MAT				S	Sn	05 28 08.1	-0.8
MJAR	Matsushiro Arr	3.50	231	Pn	Pn	05 27 29.4	+1.2
	0.5nm,0.3s,baz=34,slow=15,SNR=49						
MJAR				Sn	Sn	05 28 20.0	+11
	0.1nm,0.3s,baz=78,slow=17,SNR=1.5						
NJ2	Nanjing	19.69	257	*e*P	P	05 30 55.3	-0.9
ZALV	Zalesovo Beam	40.85	311	P	P	05 34 06.7	+0.2
	0.8nm,0.4s,baz=80,slow=7.2,SNR=3.7						
MKAR	Makanchi Array	43.32	301	P	P	05 34 26.8	0.0
	0.3nm,0.5s,baz=84,slow=9.9,SNR=5.4						
KURBB	Kurchatov Arra	45.04	307	P	P	05 34 40.5	+0.2
	3.1nm,0.3s,baz=83,slow=8.3,SNR=11						
BVAR	Borovoye Array	49.50	311	P	P	05 35 14.8	-0.1
	0.4nm,0.4s,baz=77,slow=12,SNR=2.8						
WRA	Warramunga Arr	58.83	188	P	P	05 36 35.0	+12
	2.1nm,0.4s,baz=4.0,slow=7.1,SNR=5.4						

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*IDC **23** 06:18:27.1±0.8, 6°.65N×72°.84W, h169^{km}±8^{km}, mb3.4/7, mb1 3.8/12, mb1mx3.4/32, mbtmp4.1/12, Error ellipse: s-maj=24.1km s-min=7.9km az=133.0*

*NEIC **23** 06:18:27.7±1.6, 6°.76N±0°.08×72°.96W±0°.09, h158^{km}±5^{km}, mb4.2/23, Error ellipse: s-maj=16.1km s-min=8.5km az=129.0*

*RSNC **23** 06:18:28.4±1.1, 6°.83N×73°.11W, h151^{km}±4^{km}, ML3.8, Mw4.1*

ISC 23 06:18:27.9±0.6**, 6°.84N**±0°.03×**73°.09W**±0°.04**, h154**^{km}±5^{km}**, n85, σ1^s.47**/121**, mb4.1**/15**, 7C-7D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.26	201	⇑*i*P	Pn	06 18 49.0	-0.1
BARC				*e*S	Sn	06 19 04.2	-1.1
BARC				*i*		06 19 06.6	
	comp=Z,2μm,0.3s						
PAMC	Pamplona, Colo	0.63	38	⇑*i*P	Pn	06 18 51.8	+0.9
PAMC				*e*S	Sn	06 19 08.8	+0.3
PAMC				*i*		06 19 11.0	
	comp=Z,1μm,0.3s						
RUSC	La Rusia	0.94	180	⇓*i*P	Pn	06 18 52.9	-0.3
RUSC				*i*		06 19 12.8	
	comp=Z,633nm,0.5s						
RUSC	La Rusia	0.94	180		Pn	06 18 52.8	-0.3
RUSC				Sn	Sn	06 19 11.8	-0.6
PTBC	PUERTO BERRIO,	1.39	258	*e*P	Pn	06 18 55.5	-1.2
PTBC				*e*S	Sn	06 19 17.2	-1.4
PTBC				*i*		06 19 22.6	
	comp=Z,1μm,0.4s						
OCAC	Ocana	1.41	351	*e*P	Pn	06 18 57.0	0.0
OCAC				*e*S	Sn	06 19 19.1	-0.2
OCAC				*i*		06 19 25.2	
	comp=Z,973nm,0.3s						
SPBC	San Pablo de B	1.53	220	*e*P	Pn	06 18 57.9	-0.3
SPBC				*e*S	Sn	06 19 20.7	-0.8
SPBC				*i*		06 19 24.9	
	comp=Z,929nm,0.3s						
ZARC	Zaragoza, Cauc	1.87	290	*e*P	Pn	06 19 01.2	-0.6
ZARC				*e*S	Sn	06 19 27.0	-0.8
ZARC				*i*		06 19 33.2	
	comp=Z,850nm,0.3s						
SMLC	San Martn de	2.18	333	*e*P	Pn	06 19 05.2	-0.1
SMLC				*e*S	Sn	06 19 33.4	-0.8
SMLC				*i*		06 19 35.9	
	comp=Z,470nm,0.2s						
NORC	Norcasia	2.18	234	⇑*e*P	Pn	06 19 04.8	-0.6
NORC				*e*S	Sn	06 19 33.1	-1.2
NORC				*i*		06 19 40.2	
	comp=Z,446nm,0.2s						
CHIC	Chingaza	2.29	196	⇓*i*P	Pn	06 19 06.7	-0.4
CHIC				*e*S	Sn	06 19 36.1	-1.2
CHIC				*i*		06 19 42.2	
	comp=Z,310nm,0.4s						
ROSC	El Rosal	2.34	212	P	Pn	06 19 08.7	+1.1
	comp=Z,145nm,0.3s,baz=243,slow=6.7,SNR=182						
ROSC				S	Sn	06 19 38.9	+0.6
	comp=Z,183nm,0.3s,baz=111,slow=21,SNR=10						
ROSC	El Rosal	2.34	212	⇓*i*P	Pn	06 19 08.7	+1.1
ROSC				*e*S	Sn	06 19 39.5	+1.3
ROSC				*i*		06 19 47.0	
	comp=Z,906nm,0.5s						
ROSC	El Rosal	2.34	212		Pn	06 19 08.8	+1.1
ROSC					Sn	06 19 40.4	+2.2
CVER	Cruz Verde, Cu	2.50	203	*e*P	Pn	06 19 11.2	+1.4
CVER				*i*		06 19 53.7	
	comp=Z,4μm,0.5s						
HELC	Santa Helena	2.51	255	*e*P	Pn	06 19 08.9	-0.8
HELC				*i*		06 19 47.7	
	comp=Z,455nm,0.4s						
UREC	San Jos de Ur	2.59	291	*e*P	Pn	06 19 08.9	-1.4
UREC				*e*S	Sn	06 19 40.2	-2.8
UREC				*i*		06 19 49.9	
	comp=Z,359nm,0.3s						
GUY2C	Guyana, Caldas	2.78	235	⇑*e*P	Pn	06 19 12.9	-0.1
GUY2C				*e*S	Sn	06 19 51.4	+3.5
GUY2C				*i*		06 19 55.6	
	comp=Z,574nm,0.4s						
VILC	Villavicencio,	2.78	193	⇓*e*P	Pn	06 19 11.9	-0.8
VILC				*i*		06 19 52.2	
	comp=Z,480nm,0.5s						
PTGC	Puerto Gaitan,	2.79	160	⇓*e*P	Pn	06 19 11.9	-0.9
PTGC				*e*S	Sn	06 19 45.2	-2.4
PTGC				*i*		06 19 52.1	
	comp=Z,118nm,0.3s						
RREF	El Recreo	2.96	230	*e*P	Pn	06 19 14.8	-0.7
RREF				*e*S	Sn	06 19 53.9	+1.6
RREF				*i*		06 19 58.4	
	comp=Z,341nm,0.3s						
CBOC	Ciudad Bolivar	3.06	252	*e*P	Pn	06 19 16.5	0.0
CBOC				*e*S	Sn	06 19 53.6	-0.3
CBOC				*i*		06 20 01.7	
	comp=Z,164nm,0.6s						
CODC	Agustn Codazz	3.10	353	⇑*e*P	Pn	06 19 16.2	-0.4
CODC				⇑*e*S	Sn	06 19 54.1	-0.3
CODC				*i*		06 19 59.7	
	comp=Z,165nm,0.3s						
TOLC	Tolima	3.16	225	*e*P	Pn	06 19 17.7	-0.1
TOLC				*e*S	Sn	06 19 56.8	+0.6
TOLC				*i*		06 20 02.9	
	comp=Z,257nm,0.3s						
SDV	Santo Domingo	3.17	50	P	Pn	06 19 18.4	+0.6
	comp=Z,112nm,0.3s,baz=220,slow=8.4,SNR=379						
SDV				S	Sn	06 19 55.4	-0.9
	comp=Z,32nm,0.3s,baz=56,slow=15,SNR=6.3						
SDV	Santo Domingo	3.17	50	⇑*e*P	Pn	06 19 18.2	+0.5
SDV				*e*S	Sn	06 19 57.1	+0.8
SDV				*i*		06 19 57.7	
	comp=Z,67nm,0.3s						
SDV	Santo Domingo	3.17	50		Pn	06 19 18.2	+0.5
SDV				Sn	Sn	06 19 57.2	+0.8
ARGC	Ariguani, Magd	3.21	339	*e*P	Pn	06 19 18.9	+0.8
ARGC				*e*S	Sn	06 19 56.7	-0.4
ARGC				*i*		06 20 07.1	
	comp=Z,165nm,0.3s						
ANIL	Santa Ana	3.28	225	*e*P	Pn	06 19 19.8	+0.5
ANIL				*e*S	Sn	06 19 59.7	+0.6
ANIL				*i*		06 20 03.4	
	comp=Z,973nm,0.4s						
ANIL				*i*		06 20 05.4	
	comp=Z,949nm,0.4s						
ORTC	Ortega, Tolima	3.62	217	*e*P	Pn	06 19 23.0	-0.4
ORTC				*e*S	Sn	06 20 06.5	0.0
ORTC				*i*		06 20 11.6	

	comp=Z,222nm,0.5s						
SJCC	San Jacinto, C	3.67	326	⇓*i*P	Pn	06 19 22.6	-1.5
SJCC				*e*S	Sn	06 20 04.0	-3.8
SJCC				*i*		06 20 17.9	
	comp=Z,130nm,0.7s						
PLMC	San Jos del P	3.72	239	*e*P	Pn	06 19 24.5	-0.2
PLMC				*e*S	Sn	06 20 08.2	-0.6
PLMC				*i*		06 20 12.6	
	comp=Z,124nm,0.5s						
GUVC	San Jose del G	4.29	174	*e*P	Pn	06 19 30.4	-1.7
GUVC				*e*S	Sn	06 20 19.6	-2.5
GUVC				*i*		06 20 25.5	
	comp=Z,115nm,0.7s						
YOTC	Yotoco, Valle	4.31	229	*e*P	Pn	06 19 31.5	-0.9
YOTC				*i*		06 20 33.5	
	comp=Z,33nm,1.2s						
SOLC	Bahia Solano	4.34	262	*e*P	Pn	06 19 31.2	-1.5
SMRC	Santa Marta, M	4.44	345	*e*P	Pn	06 19 34.1	0.0
SMRC				*e*S	Sn	06 20 22.0	-3.6
SMRC				*i*		06 20 27.9	
	comp=Z,143nm,0.4s						
PIZC	Pizarro, Choco	4.64	247	*e*P	Pn	06 19 34.9	-1.8
MACC	Macarena, Meta	4.73	189	⇓*e*P	Pn	06 19 35.5	-2.3
MACC				*e*S	Sn	06 20 26.8	-5.6
MACC				*i*		06 20 35.2	
	comp=Z,67nm,0.7s						
URIC	Uribia, Colomb	4.95	13	*e*P	Pn	06 19 39.4	-1.4
URIC				*i*		06 20 38.6	
	comp=Z,49nm,0.8s						
URIC	Uribia, Colomb	4.95	13		Pn	06 19 39.2	-1.6
URIC					Sn	06 20 34.9	-2.7
MALC	Bahia Malaga	5.08	237	*e*P	Pn	06 19 43.1	+0.7
MALC				*e*S	Sn	06 20 39.7	-0.9
MALC				*i*		06 20 52.2	
	comp=Z,36nm,0.7s						
GARC	Garzon, Huila	5.21	208	*e*P	Pn	06 19 43.0	-1.4
GARC				*e*S	Sn	06 20 39.2	-5.0
GARC				*i*		06 20 47.7	
	comp=Z,57nm,0.3s						
PCON	Cinco Dias	5.57	217	*e*P	Pn	06 19 49.5	+0.1
PCON				*i*		06 21 11.4	
	comp=Z,32nm,1.0s						
FLOC	Florencia	5.82	206	*e*P	Pn	06 19 51.1	-1.1
FLOC				*e*S	Sn	06 20 56.2	-2.1
FLOC				*i*		06 21 03.3	
	comp=Z,32nm,1.2s						
FLOC	Florencia	5.82	206		Pn	06 19 51.2	-1.1
FLOC				Sn	Sn	06 20 57.8	-0.5
PCRV	Puerto La Cruz	8.99	68	P	Pn	06 20 32.7	-1.9
	comp=Z,1.2nm,0.3s,baz=222,slow=10,SNR=2.0						
PLCV	Puerto La Cruz	9.03	68		Pn	06 20 32.7	-2.4
MTDJ	Mount Denham	12.12	339	Pn	Pn	06 21 18.3	+2.5
SDDR	Presa de Saban	12.20	8	Pn	Pn	06 21 20.0	+3.3
SJG	San Juan	13.09	30	P	Pn	06 21 26.3	-1.8
	comp=Z,0.9nm,0.3s,baz=22,slow=20,SNR=6.8						
SJG	San Juan	13.09	30		Pn	06 21 27.0	-1.1
GCPR	Guaynabo City	13.29	30	Pn	Pn	06 21 29.6	-1.1
APG	El Apazote	18.88	297	P	P	06 22 39.1	+2.3
	comp=Z,0.1nm,0.3s,baz=313,slow=14,SNR=3.6						
TEIG	Tepich	19.85	314	P	P	06 22 47.9	+0.8
	comp=Z,8.4nm,0.5s,baz=246,slow=0.0,SNR=7.2						
LCAR	Lake Charles	33.47	333	P	P	06 24 53.3	+0.9
LCAR				IAmb	IAmb	06 24 53.5	
	comp=Z,2.6nm,0.6s						
FCAR	Ozark Folk Cen	33.77	332	P	P	06 24 55.3	+0.2
FCAR				IAmb	IAmb	06 24 55.6	
	comp=Z,4.8nm,1.1s						
U40A	Yellville	34.49	331	P	P	06 25 02.0	+0.6
M56A	Emporium	34.80	353	P	P	06 25 05.6	+1.8
M56A				IAmb	IAmb	06 25 14.5	
	comp=Z,6.5nm,1.0s						
CCM	Cathedral Cave	35.17	335	P	P	06 25 07.7	+0.6
R40A	Maddies Statio	35.81	334	P	P	06 25 12.6	+0.1
R40A				IAmb	IAmb	06 25 12.9	
	comp=Z,3.8nm,0.5s						
TXAR	Lajitas Array	36.47	312	P	P	06 25 18.2	-0.2
	comp=Z,0.4nm,0.4s,baz=130,slow=9.5,SNR=2.7						
TX31	Lajitas Ar. Si	36.48	312	P	P	06 25 19.1	+0.7
MNTX	Cornudas Mount	38.98	314	P	P	06 25 40.0	+0.6
JFWS	Jewell Farm	38.99	340	P	P	06 25 39.2	0.0
E46A	Sault Ste Mari	40.55	348	P	P	06 25 53.0	+1.0
E46A				IAmb	IAmb	06 25 54.5	
	comp=Z,6.1nm,0.9s						
BATG	Bathurst New B	40.74	7	P	P	06 25 54.3	+0.7
EYMN	Ely	43.86	342	P	P	06 26 18.5	-0.3
EYMN				IAmb	IAmb	06 26 18.7	
	comp=Z,5.5nm,0.6s						
PV15	Paradox Valley	44.80	320	P	P	06 26 28.5	+1.7
PV15				IAmb	IAmb	06 26 28.6	
	comp=Z,4.3nm,1.0s						
WUAZ	Wupatki	45.23	315	P	P	06 26 31.0	+0.8
MTPU	Mount Pierson	47.07	317	P	P	06 26 45.7	+1.0
ULM	Lac du Bonnet	47.28	340	P	P	06 26 44.6	-1.1
	comp=Z,2.2nm,0.4s,baz=145,slow=6.2,SNR=6.2						
ULM	Lac du Bonnet	47.28	340	P	P	06 26 45.0	-0.7
ULM				IAmb	IAmb	06 26 51.9	
	comp=Z,5.2nm,1.4s						
PDAR	Pinedale Array	48.08	324	P	P	06 26 52.1	-0.2
	comp=Z,0.5nm,0.5s,baz=123,slow=8.9,SNR=5.4						
PDAR	Pinedale Array	48.08	324	P	P	06 26 52.3	0.0
BGU	Big Grassy Mou	49.15	320	P	P	06 27 00.8	+0.4
REDW	Red Top Meadow	49.20	324	P	P	06 27 01.1	+0.3
REDW				IAmb	IAmb	06 27 01.7	
	comp=Z,3.7nm,1.1s						
NVAR	Mina Array Bea	51.49	315	P	P	06 27 18.9	+0.8
	comp=Z,0.4nm,0.6s,baz=128,slow=7.7,SNR=4.2						
MFID	Camas Ranch	52.23	321	P	P	06 27 23.7	+0.3
G08A	Pilot Rock	55.12	322	P	P	06 27 44.6	+0.2
G08A				IAmb	IAmb	06 27 44.7	
	comp=Z,1.9nm,0.6s						
YBH	Yreka Blue Hor	55.95	317	P	P	06 27 49.3	-1.0
YKA	Yellowknife Ar	63.26	340	P	P	06 28 39.0	-0.8
	comp=Z,1.6nm,0.6s,baz=133,slow=7.1,SNR=37						
PRP	Porcupine Dome	76.56	336	P	P	06 30 01.6	+0.4
ILAR	Eielson Array	76.96	335	P	P	06 30 01.7	-1.5
	comp=Z,0.3nm,0.6s,baz=86,slow=5.8,SNR=4.4						
ASAR	Alice Springs	149.15	234	PKPbc	PKPdf	06 37 54.8	+0.1
	comp=Z,0.2nm,0.4s,baz=128,slow=3.7,SNR=5.7						
WRA	Warramunga Arr	150.38	241	PKPbc	PKPbc	06 38 00.2	-1.9
	comp=Z,1.0nm,0.4s,baz=109,slow=2.5,SNR=7.8						

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*NEIC **23** 07:02:38.9±1.8, 5°.63S±0°.08×153°.1E±0°.1, h51^{km}±6^{km}, mb4.2/15, Error ellipse: s-maj=17.2km s-min=11.8km az=91.0*

*IDC **23** 07:02:38.9±2.4, 5°.68S×153°.02E, h53^{km}±19^{km}, mb3.8/13, mb1 3.9/14, mb1mx3.8/31, mbtmp4.1/14, ML2.2/1, MS3.1/5, Ms1 3.1/5, ms1mx2.7/37, Error ellipse: s-maj=21.4km s-min=10.8km az=92.0*

ISC 23 07:02:38.6±0.6, **5°.65S**±0°.06×**153°.05E**±0°.09, **h50**^{km}**, n44, σ1^{s}.01**/43, **mb4.2**/16, **MS3.0**/4, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.68	322	P	Pn	07 03 04.5	-1.2
	35nm,0.3s,baz=166,slow=2.5,SNR=22						
KRVT				S	Sn	07 03 26.7	+0.7
	256nm,0.3s,baz=90,slow=21,SNR=26						
KRVT				LR	LR	07 03 45.9	
	comp=Z,279nm,21.2s,baz=354,slow=40						
RABL	Rabaul	1.70	328		Pn	07 03 05.2	-0.7
PMG	Port Moresby	6.93	237	P	Pn	07 04 16.7	-1.0
	2.6nm,0.3s,baz=32,slow=7.5,SNR=8.5						
PMG				S	Sn	07 05 35.6	+0.3
	2.3nm,0.3s,baz=262,slow=19,SNR=1.5						
PMG				LR	LR	07 06 42.9	
	comp=Z,114nm,21.6s,baz=20,slow=35						
PMG	Port Moresby	6.93	237		Pn	07 04 17.7	0.0
DZM	Mont Dzumac	20.84	143	P	P	07 07 18.0	+1.6
	6.3nm,0.6s,baz=293,slow=6.8,SNR=12						
DZM	Mont Dzumac	20.84	143	P	Pn	07 07 19.7	+0.4
DZM				IAmb	IAmb	07 07 24.4	
	comp=Z,28nm,1.5s						
FAKI	Fak Fak	20.92	277	P	Pn	07 07 22.1	+1.8
FAKI				IAmb	IAmb	07 07 24.1	
	comp=Z,7.3nm,0.8s						
MTN	Manton Dam	22.77	250	P	P	07 07 40.2	+3.1
WB0	Warramunga Arr	22.94	231	P	P	07 07 37.2	-1.6
WB2	Warramunga Arr	23.08	230	P	P	07 07 38.4	-1.8
WB2				IAmb	IAmb	07 07 56.4	
	comp=Z,12nm,1.5s						
WRA	Warramunga Arr	23.09	230	P	P	07 07 40.2	-0.1
	comp=Z,1.0nm,0.9s,baz=55,slow=10,SNR=5.1						
WRA				LR	LR	07 16 52.4	
	comp=Z,54nm,19.2s,baz=90,slow=37						
WRA	Warramunga Arr	23.09	230	P	P	07 07 40.8	+0.5
ASAR	Alice Springs	25.71	224	P	P	07 08 03.4	-1.1
	comp=Z,1.4nm,0.9s,baz=60,slow=8.5,SNR=12						
ASAR	Alice Springs	25.71	224	P	P	07 08 03.9	-0.5
FITZ	Fitzroy Crossi	29.48	243	P	P	07 08 37.1	-1.2
	comp=Z,2.0nm,0.6s,baz=48,slow=7.9,SNR=8.2						
FITZ				LR	LR	07 21 24.1	
	comp=Z,32nm,18.1s,baz=352,slow=38						
FITZ	Fitzroy Crossi	29.48	243	P	P	07 08 37.1	-1.2
FITZ				IAmb	IAmb	07 08 52.2	
	comp=Z,4.6nm,0.9s						
KAPI	Kappang	33.16	269	LR	LR	07 24 05.3	
	comp=Z,24nm,21.7s,baz=24,slow=39						
NWAO	Narrogin (SRO)	42.98	226	LR	LR	07 28 51.5	
	comp=Z,67nm,18.1s,baz=121,slow=37						
KSRS	Korea Array	48.87	333	P	P	07 11 19.3	-0.1
	comp=Z,0.8nm,0.5s,baz=168,slow=8.9,SNR=2.4						
CMAR	Chiang Mai Arr	58.47	296	P	P	07 12 30.2	+0.2
	comp=Z,0.8nm,0.3s,baz=122,slow=4.4,SNR=1.1						
PEA0B	Petropavlovsk-	58.67	3	P	P	07 12 30.6	-0.1
PETK	Petropavlovsk-	58.67	3	P	P	07 12 30.5	-0.2
	comp=Z,2.5nm,0.6s,baz=174,slow=7.3,SNR=10						
PETK	Petropavlovsk-	58.67	3	P	P	07 12 30.8	+0.1
SONM	Songino Array	67.17	328	P	P	07 13 28.5	+0.9
	comp=Z,1.4nm,0.6s,baz=148,slow=6.6,SNR=12						
SONM	Songino Array	67.17	328	P	P	07 13 28.9	+1.3
IMAR	Indian Mountai	81.09	19	P	P	07 14 48.2	0.0
MK31	Makanchi Array	81.13	319	P	P	07 14 50.8	+1.9
MKAR	Makanchi Array	81.13	319	P	P	07 14 49.6	+0.8
	comp=Z,1.6nm,0.8s,baz=103,slow=5.5,SNR=16						
MAKZ	Makanchi	81.34	319	P	P	07 14 50.9	+1.0
MAKZ				IAmb	IAmb	07 14 51.5	
	comp=Z,3.1nm,1.1s						
MLY	Manley	81.58	21	P	P	07 14 50.9	0.0
ZAA0	Zalesovo Array	81.99	326	P	P	07 14 53.6	+0.4
ZALV	Zalesovo Beam	81.99	326	P	P	07 14 53.1	-0.1
	comp=Z,3.4nm,0.7s,baz=112,slow=5.6,SNR=14						
ZALV	Zalesovo Beam	81.99	326	P	P	07 14 53.3	+0.1
ILAR	Eielson Array	82.85	22	P	P	07 14 55.6	-1.8
	comp=Z,0.8nm,0.9s,baz=249,slow=4.8,SNR=5.8						
ILAR	Eielson Array	82.85	22	P	P	07 14 56.9	-0.5
QSPA	South Pole Qui	84.32	180	P	P	07 15 04.8	-0.4
QSPA				IAmb	IAmb	07 15 06.5	
	comp=Z,4.2nm,1.1s						
KURK	Kurchatov	84.59	322	P	P	07 15 06.7	+0.1
KURK				IAmb	IAmb	07 15 07.7	
	comp=Z,3.6nm,0.9s						
NRIK	Noril'sk	86.84	341	P	P	07 15 16.8	-0.6
	comp=Z,2.4nm,0.6s,baz=138,slow=8.8,SNR=7.8						
NVAR	Mina Array Bea	92.41	52	P	P	07 15 45.2	+0.7
	comp=Z,0.1nm,0.6s,baz=292,slow=4.8,SNR=2.0						
GERES	GERESS Array B	124.90	328	PKP	PKPdf	07 21 33.5	+0.1
	comp=Z,0.4nm,0.6s,baz=38,slow=2.4,SNR=5.1						
BDFB	Brasilia	150.29	136	PKPbc	PKPbc	07 22 25.5	0.0
	comp=Z,2.6nm,0.6s,baz=236,slow=1.1,SNR=6.1						
BDFB	Brasilia	150.29	136	PKPbc	PKPbc	07 22 25.4	0.0
BDFB				PKPab	PKPab	07 22 31.2	-0.5
TORD	Torodi Ar. Bea	150.80	287	PKPbc	PKPbc	07 22 25.4	-1.2
	comp=Z,4.3nm,0.7s,baz=70,slow=2.5,SNR=21						
TORD	Torodi Ar. Bea	150.80	287		PKPbc	07 22 26.0	-0.6

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*NEIC **23** 07:18:55.2±0.8, 2°.79N±0°.10×128°.65E±0°.07, h219^{km}±9^{km}, mb4.2/21, Error ellipse: s-maj=14.6km s-min=8.8km az=160.0*

*IDC **23** 07:18:55.9±2.0, 2°.79N×128°.75E, h228^{km}±19^{km}, mb3.6/13, mb1 3.7/13, mb1mx3.4/49, mbtmp4.1/13, Error ellipse: s-maj=25.7km s-min=9.2km az=79.0*

ISC 23 07:18:53.4±0.5, **2°.84N**±0°.07×**128°.8E**±0°.1, **h200**^{km}**, n51, σ1^{s}.40**/53, **mb4.0**/20, **1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.48	214		Pn	07 19 39.7	+2.7
DDMP	Don Marcelino,	4.44	317	*e*P	Pn	07 20 02.9	+2.2
KCP	Kidapawan	5.52	319	⇓*i*P	Pn	07 20 18.0	+3.4
SKMP	Bagumbayan, Su	5.57	311	*e*P	Pn	07 20 16.0	+1.0
BUKP	Musuan	6.21	324	*e*P	Pn	07 20 25.6	+2.1
FAKI	Fak Fak	6.70	149	Pn	Pn	07 20 33.0	+3.2
LUWI	Luwuk	7.11	237	Pn	Pn	07 20 36.8	+1.6
PAGZ	Pagadian	7.30	313	*e*P	Pn	07 20 37.9	+0.3
TBP	Tagbilaran	8.37	325	*e*P	Pn	07 20 53.0	+1.6
MTN	Manton Dam	15.76	171	P	P	07 22 24.8	+0.1
MTN				IAmb	IAmb	07 22 30.4	
	comp=Z,14nm,1.1s						
FITZ	Fitzroy Crossi	21.03	188	P	P	07 23 21.1	-0.7
	comp=Z,2.2nm,0.4s,baz=24,slow=12,SNR=18						
FITZ	Fitzroy Crossi	21.03	188	P	P	07 23 20.9	-0.9
FITZ				IAmb	IAmb	07 23 24.1	
	comp=Z,9.4nm,1.4s						
TPUB	Ta-pu	21.81	340	P	P	07 23 29.5	-0.3
WB0	Warramunga Arr	23.14	166	P	P	07 23 42.1	0.0
WRA	Warramunga Arr	23.29	167	P	P	07 23 43.4	-0.2
	comp=Z,1.4nm,0.4s,baz=343,slow=10,SNR=8.1						
WRA				ScP	ScP	07 30 40.1	-4.1
	comp=Z,3.1nm,0.3s,baz=336,slow=3.1,SNR=3.1						
WB2	Warramunga Arr	23.30	167	P	P	07 23 43.4	-0.1
WB2				IAmb	IAmb	07 23 46.5	
	comp=Z,8.9nm,1.3s						
WR0	Warramunga Arr	23.36	166	P	P	07 23 44.9	+0.8
WR0				IAmb	IAmb	07 24 01.5	
	comp=Z,7.7nm,1.4s						
AS31	Alice Springs	26.82	169	P	P	07 24 15.1	-0.2
ASAR	Alice Springs	26.82	169	P	P	07 24 15.4	+0.1
	comp=Z,2.5nm,0.4s,baz=351,slow=7.3,SNR=92						
ASAR				ScP	ScP	07 30 49.8	-4.4
	comp=Z,0.4nm,0.6s,baz=339,slow=2.8,SNR=8.2						
ASAR	Alice Springs	26.82	169	P	P	07 24 15.0	-0.4
CMAR	Chiang Mai Arr	33.06	300	P	P	07 25 11.2	+0.9
	comp=Z,1.2nm,0.3s,baz=116,slow=6.6,SNR=8.5						
CMAR	Chiang Mai Arr	33.06	300	P	P	07 25 11.6	+1.2
FORT	Forrest	33.44	181	P	P	07 25 12.6	-0.8
KSRS	Korea Array	34.46	359	P	P	07 25 23.4	+1.3
	comp=Z,2.0nm,0.6s,baz=174,slow=9.3,SNR=7.8						
MJAR	Matsushiro Arr	34.66	13	P	P	07 25 23.3	-0.6
	comp=Z,2.6nm,0.6s,baz=186,slow=9.6,SNR=9.6						
MJAR	Matsushiro Arr	34.66	13	P	P	07 25 23.4	-0.4
BBOO	Buckleboo	36.12	170	P	P	07 25 36.4	0.0
BBOO				IAmb	IAmb	07 25 54.7	
	comp=Z,12nm,1.2s						
STKA	Stephens Creek	36.62	162	P	P	07 25 40.5	-0.1
	comp=Z,1.8nm,0.4s,baz=345,slow=8.9,SNR=16						
STKA	Stephens Creek	36.62	162	P	P	07 25 40.6	0.0
NWAO	Narrogin (SRO)	37.20	196	P	P	07 25 45.0	-0.6
NWAO	Narrogin (SRO)	37.20	196	P	P	07 25 45.1	-0.4
NWAO				IAmb	IAmb	07 25 52.9	
	comp=Z,11nm,1.1s						
ARMA	Armidale	39.63	148	P	P	07 26 06.8	+0.8
ARMA				IAmb	IAmb	07 26 24.2	
	comp=Z,11nm,1.4s						
USRK	Ussuriysk Ar.	41.29	4	P	P	07 26 19.7	+0.6
	comp=Z,1.5nm,0.7s,baz=183,slow=5.8,SNR=4.6						
SONM	Songino Array	48.80	340	P	P	07 27 18.6	+0.3
	comp=Z,0.7nm,0.6s,baz=154,slow=6.4,SNR=4.3						
SONM	Songino Array	48.80	340	P	P	07 27 18.7	+0.3
MK31	Makanchi Array	59.44	325	P	P	07 28 35.1	0.0
MKAR	Makanchi Array	59.44	325	P	P	07 28 35.1	0.0
	comp=Z,1.8nm,0.5s,baz=117,slow=8.3,SNR=29						
MKAR	Makanchi Array	59.44	325	P	P	07 28 35.0	-0.2
MAKZ	Makanchi	59.63	325	P	P	07 28 36.1	-0.3
MAKZ				IAmb	IAmb	07 28 36.7	
	comp=Z,2.1nm,0.5s						
ZALV	Zalesovo Beam	62.30	332	P	P	07 28 53.0	-1.2
	comp=Z,0.8nm,0.3s,baz=134,slow=8.5,SNR=4.6						
ZALV	Zalesovo Beam	62.30	332	P	P	07 28 53.2	-1.0
KURK	Kurchatov	63.58	327	P	P	07 29 02.2	-0.5
KK31	Karatay Array	65.26	317	P	P	07 29 12.8	-1.0
KKAR	Karatay Array	65.26	317	P	P	07 29 13.2	-0.6
TIXI	Tiksi	68.72	0	P	P	07 29 35.2	+0.2
TIXI				IAmb	IAmb	07 29 35.4	
	comp=Z,1.9nm,0.5s						
BRVK	Borovoye	69.24	327	P	P	07 29 38.5	-0.1
BRVK				IAmb	IAmb	07 29 45.6	
	comp=Z,1.7nm,0.6s						
ABKAR	Akbulak array	74.12	321	P	P	07 30 07.1	-0.6
ARCES	ARCESS Array B	91.97	340	P	P	07 31 37.4	-1.6
	comp=Z,2.4nm,0.8s,baz=75,slow=5.3,SNR=8.7						
RES	Resolute Bay	98.32	11	P	P	07 32 07.8	+0.1
	comp=Z,0.3nm,0.4s,baz=280,slow=6.1,SNR=2.0						
TORD	Torodi Ar. Bea	125.11	288	PKP	PKPdf	07 37 29.9	-1.1
	comp=Z,0.1nm,0.3s,baz=102,slow=2.4,SNR=1.6						
PLCA	Paso Flores	138.44	158	PKP	PKPdf	07 37 56.4	+0.9
	comp=Z,1.3nm,0.9s,baz=326,slow=12,SNR=2.9						

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*IDC **23** 08:05:15.0±4.2, 10°.46S×113°.17E, h0^{km}, mb2.9/3, mb1 3.2/3, mb1mx3.1/26, mbtmp3.0/3, Error ellipse: s-maj=235.7km s-min=28.9km az=45.0*

*DJA **23** 08:05:23.0±1.0, 10°S±4°×11°4E±°, h17^{km}±8^{km}, M3.9/9, mb4.7/1, MLv3.4/9*

ISC 23 08:05:23.9±1.3, **9°.74S**±0°.10×**114°.16E**±0°.06, **h35**^{km}**, n10, σ1^{s}.25**/13, **mb3.1**/3, **South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	1.26	360	P	Pn	08 05 44.5	-0.6
JAGI				S	Sn	08 06 01.1	+0.3
DNP	Denpasar	1.48	45	P	Pn	08 05 48.5	+0.4
DNP				S	Sn	08 06 08.4	+2.2
GMJI	Gumukmas	1.62	334	P	Pn	08 05 49.6	-0.4
GMJI				S	Sn	08 06 10.6	+1.0
SRBI	Singaraja	1.95	32	P	Pn	08 05 53.7	-0.8
PWJI	Pagerwojo	2.89	306	P	Pn	08 06 07.9	+0.5
PWJI				S	Sn	08 06 43.1	+2.2
PCJI	Pacitan	3.32	297	P	Pn	08 06 14.8	+1.4
PLAI	Plampang	3.68	76	P	Pn	08 06 18.5	+0.1
WRA	Warramunga Arr	21.96	120	P	P	08 10 15.6	+0.8
	2.7nm,0.8s,baz=295,slow=12,SNR=7.3						
ASAR	Alice Springs	23.39	129	P	P	08 10 29.2	-0.6
	0.2nm,0.5s,baz=299,slow=8.5,SNR=6.0						
MKAR	Makanchi Array	63.06	336	P	P	08 15 46.0	-1.6
	0.1nm,0.6s,baz=160,slow=6.9,SNR=2.0						

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*IDC **23** 08:42:21.8±1.9, 12°.83N×87°.42W, h66^{km}±38^{km}, mb3.2/5, mb1 3.4/8, mb1mx3.2/37, mbtmp3.4/8, ML2.8/3, MS3.2/1, Ms1 3.1/1, ms1mx2.2/18, Error ellipse: s-maj=72.3km s-min=14.6km az=40.0*

*INET **23** 08:42:22.2, 12°.57N×87°.74W, h71^{km}, MD3.5*

*UCR **23** 08:42:22.4±1.1, 12°.50N×87°.83W, h51^{km}±26^{km}, ML3.8*

*SNET **23** 08:42:22.4±0.8, 12°.50N×87°.84W, h49^{km}±22^{km}, ML3.7*

ISC 23 08:42:20.9±1.2, **12°.51N**±0°.09×**87°.76W**±0°.07, **h72**^{km}±9^{km}**, n30, σ0^{s}.90**/41, **mb3.1**/5, **5C-8D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.77	354	⇓*i*P	Pn	08 42 37.1	+0.1
CNCH				*e*S	Sn	08 42 49.3	+0.5
CNCH				IAML		08 42 53.7	
	comp=Z,7µm,0.2s						
CNCH	Conchagua	0.77	354	⇓*i*P	Pn	08 42 37.1	+0.1
CNCH				*e*S	Sn	08 42 49.3	+0.5
CNCH				IAML		08 42 53.7	
	comp=Z,7µm,0.2s						
LCND	La Caada	0.81	351	⇓*i*P	Pn	08 42 37.5	+0.2
LCND				*e*S	Sn	08 42 49.8	+0.4
LCND				IAML		08 42 51.5	
	comp=Z,3µm,0.4s						
LCND	La Caada	0.81	351	⇓*i*P	Pn	08 42 37.5	+0.2
LCND				*e*S	Sn	08 42 49.8	+0.4
LCND				IAML		08 42 51.5	
	comp=Z,3µm,0.4s						
JUCU	Jucuar¡n	0.88	327	*e*P	Pn	08 42 37.9	-0.4
JUCU				*e*S	Sn	08 42 50.1	-1.0
JUCU				IAML		08 42 52.7	
	comp=Z,2µm,0.2s						
JUCU	Jucuar¡n	0.88	327	*e*P	Pn	08 42 37.9	-0.4
JUCU				*e*S	Sn	08 42 50.1	-1.0
JUCU				IAML		08 42 52.7	
	comp=Z,2µm,0.2s						
LCY	Lacayo	1.05	330	⇑*i*P	Pn	08 42 41.0	+0.7
LCY	Lacayo	1.05	330	⇑*i*P	Pn	08 42 41.0	+0.7
PACA	Pacayal	1.10	330	*e*P	Pn	08 42 41.5	+0.5
PACA				*e*S	Sn	08 42 56.8	+0.8
PACA	Pacayal	1.10	330	*e*P	Pn	08 42 41.5	+0.5
PACA				*e*S	Sn	08 42 56.8	+0.8
ALJI	Alcalda de J	1.14	316	*e*P	Pn	08 42 41.3	0.0
ALJI				IAML		08 42 57.6	
	comp=Z,972nm,0.2s						
ALJI	Alcalda de J	1.14	316	*e*P	Pn	08 42 41.3	0.0
ALJI				IAML		08 42 57.6	
	comp=Z,972nm,0.2s						
TECA	Tecapa	1.22	324	⇑*e*P	Pn	08 42 43.3	+0.8
TECA	Tecapa	1.22	324	⇑*e*P	Pn	08 42 43.3	+0.8
FAGO	Alcalda de S	1.23	344	⇓*e*P	Pn	08 42 42.8	+0.3
FAGO				*e*S	Sn	08 42 58.8	+0.1
FAGO	Alcalda de S	1.23	344	⇓*e*P	Pn	08 42 42.8	+0.3
FAGO				*e*S	Sn	08 42 58.8	+0.1
TGUH	Tegucigalpa,Un	1.61	17	⇓*i*P	Pn	08 42 48.9	+1.3
TGUH	Tegucigalpa,Un	1.61	17	⇓*i*P	Pn	08 42 48.9	+1.3
LFRS	El Faro	1.69	311	⇑*e*P	Pn	08 42 49.4	+0.8
LOMA	Loma Larga	1.78	310	*e*P	Pn	08 42 50.6	+0.7
LOMA	Loma Larga	1.78	310	*e*P	Pn	08 42 50.6	+0.7
JTS	Las Juntas de	3.52	128	P	Pn	08 43 15.1	+1.8
	comp=Z,1.5nm,0.3s,baz=22,slow=17,SNR=11						
JTS				S	Sn	08 43 54.0	+0.1
	comp=Z,0.7nm,0.3s,baz=338,slow=22,SNR=1.3						
APG	El Apazote	3.62	314	P	Pn	08 43 16.5	+1.7
	comp=Z,0.3nm,0.3s,baz=126,slow=9.5,SNR=5.3						
CMIG	Matias Romero	8.26	304	P	Pn	08 44 20.0	+1.9
	comp=Z,0.2nm,0.3s,baz=142,slow=12,SNR=2.2						
TXAR	Lajitas Array	22.34	321	P	P	08 47 13.6	+0.5
	comp=Z,0.4nm,0.6s,baz=140,slow=9.9,SNR=4.4						
PDAR	Pinedale Array	35.58	332	P	P	08 49 12.9	+1.3
	comp=Z,0.1nm,0.4s,baz=133,slow=12,SNR=3.7						
ULM	Lac du Bonnet	38.22	352	P	P	08 49 31.7	-1.9
	comp=Z,1.2nm,0.7s,baz=146,slow=3.6,SNR=3.1						
ULM				LR	LR	09 08 09.0	
	comp=Z,30nm,18.8s,baz=298,slow=41						
SCHQ	Schefferville	45.31	17	P	P	08 50 30.3	-1.2
	comp=Z,2.1nm,0.7s,baz=214,slow=7.4,SNR=5.9						
YKA	Yellowknife Ar	53.48	345	P	P	08 51 32.8	-0.7
	comp=Z,0.1nm,0.7s,baz=148,slow=6.9,SNR=4.2						
WRA	Warramunga Arr	139.00	254	PKP	PKiKP	09 01 42.9	+0.6
	comp=Z,0.2nm,0.7s,baz=89,slow=2.7,SNR=1.6						

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*IDC **23** 09:02:27.3±1.0, 2°.55S×141°.45E, h0^{km}, mb3.9/7, mb1 4.2/8, mb1mx3.8/27, mbtmp4.0/8, ML4.2/1, MS2.8/3, Ms1 2.8/3, ms1mx2.5/23, Error ellipse: s-maj=38.4km s-min=20.7km az=100.0*

ISC 23 09:02:31.6±1.0, **2°.6S**±0°.1×**141°.4E**±0°.2, **h29**^{km}**, n14, σ0^{s}.40**/10, **mb3.7**/7, **Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.59	201	P	Pn	09 06 47.1	+0.1
	0.7nm,0.3s,baz=21,slow=12,SNR=15						
WRA				LR	LR	09 13 50.7	
	comp=Z,47nm,19.4s,baz=130,slow=37						
FITZ	Fitzroy Crossi	21.83	224	P	P	09 07 21.4	-0.5
	2.5nm,0.9s,baz=29,slow=16,SNR=7.7						
ASAR	Alice Springs	22.18	198	P	P	09 07 26.0	+0.3
	1.8nm,0.8s,baz=29,slow=10,SNR=23						
ASAR				LR	LR	09 15 55.5	
	comp=Z,25nm,19.7s,baz=40,slow=36						
H11S3	WAKE ISLAND Hy	32.53	49	T	T	09 43 37.9	
	baz=232,slow=75,SNR=88						
H11S2	WAKE ISLAND Hy	32.55	49	T	T	09 43 32.0	
	baz=232,slow=75,SNR=68						
H11S1	WAKE ISLAND Hy	32.55	49	T	T	09 43 40.0	
	baz=232,slow=75,SNR=62						
KSRS	Korea Array	41.75	344	LR	LR	09 24 26.6	
	comp=Z,10.0nm,21.1s,baz=85,slow=32						
CMAR	Chiang Mai Arr	46.72	298	P	P	09 10 59.0	+0.5
	0.9nm,0.4s,baz=110,slow=7.8,SNR=4.0						
MKAR	Makanchi Array	71.34	322	P	P	09 13 48.8	-0.1
	0.3nm,0.6s,baz=98,slow=9.1,SNR=4.7						
VNDA	Vanda	75.69	175	P	P	09 14 14.0	+0.2
	0.8nm,0.3s,baz=315,slow=1.4,SNR=9.9						
ILAR	Eielson Array	84.61	24	P	P	09 15 02.1	0.0
	1.4nm,0.8s,baz=253,slow=4.4,SNR=12						
YKA	Yellowknife Ar	98.73	27	P	P	09 16 08.2	+0.1
	0.1nm,0.7s,baz=271,slow=4.6,SNR=5.5						
TORD	Torodi Ar. Bea	138.79	287	PKP	PKiKP	09 21 57.8	-0.6
	1.0nm,1.0s,baz=122,slow=1.9,SNR=3.1						
DBIC	Dimbokro	146.12	278	PKPbc	PKPab	09 22 10.5	-0.3
	4.4nm,1.1s,baz=55,slow=4.0,SNR=4.0						

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*THE **23** 09:04:40.2, 34°.80N×24°.90E, h3^{km}±3^{km}, ML2.8/5, Error ellipse: s-maj=3.1km s-min=0.5km az=82.0*

*ATH **23** 09:04:40.2, 34°.84N×24°.91E, h16^{km}±1^{km}, ML2.9/15, Error ellipse: s-maj=2.3km s-min=1.0km az=3.0*

ISC 23 09:04:40.2±1.2, **34°.81N**±0°.05×**24°.91E**±0°.02, **h9**^{km}±9^{km}**, n31, σ0^{s}.67**/46, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.22**	**339**	P	**Pg**	**09 04 45.2**	**+0.5**
SIVA				S	**Sg**	**09 04 48.8**	**+1.1**
SIVA				AML	AML	09 04 50.1	
	comp=N,23433μm,0.3s						
SIVA				AML	AML	09 04 50.9	
	comp=E,29883μm,0.5s						
TMBK	**Timbaki Herakl**	**0.28**	**336**	P	**Pb**	**09 04 46.6**	**-0.8**
TMBK				S	**Sb**	**09 04 51.0**	**-1.3**
	comp=E,3μm,0.3s						
IDI	**Anoyia**	**0.47**	**358**	P	**Pg**	**09 04 49.3**	**-0.1**
IDI				S	**Sg**	**09 04 55.1**	**-0.6**
IDI				AML	AML	09 04 57.5	
	comp=E,3050μm,0.3s						
IDI				AML	AML	09 04 59.0	
	comp=N,3237μm,0.3s						
KSTL	**Kastelli Herak**	**0.51**	**15**	P	**Pb**	**09 04 50.9**	**-0.4**
KSTL				S	**Sb**	**09 04 58.9**	**+0.2**
IACM	**Heraklion**	**0.51**	**15**	P	**Pg**	**09 04 50.4**	**+0.3**
HRKL	**Herakleio**	**0.52**	**18**	P	**Pg**	**09 04 50.7**	**+0.3**
HRKL				S	**Sb**	**09 04 59.0**	**-0.2**
	comp=N,3μm,0.5s						
LAST	**Lasithi**	**0.58**	**53**	P	**Pg**	**09 04 51.5**	**0.0**
LAST				S	**Sg**	**09 04 58.2**	**-1.0**
LAST				AML	AML	09 05 01.7	
	comp=N,1848μm,0.3s						
LAST				AML	AML	09 05 01.8	
	comp=E,2387μm,0.6s						
PRNS	**Prines Rethymn**	**0.64**	**329**	P	**Pg**	**09 04 52.8**	**+0.2**
PRNS				S	**Sb**	**09 05 02.8**	**+0.2**
GVDS	**Gavdos**	**0.67**	**273**	P	**Pg**	**09 04 53.3**	**+0.1**
GVDS				S	**Sb**	**09 05 03.9**	**+0.4**
	comp=E,1μm,0.5s						
GVD	**Gavdhos**	**0.67**	**272**	P	**Pg**	**09 04 52.6**	**-0.6**
GVD				S	**Sg**	**09 05 02.6**	**+0.5**
GVD				AML	AML	09 05 14.2	
	comp=N,3033μm,0.6s						
GVD				AML	AML	09 05 15.0	
	comp=E,3973μm,0.4s						
NPS	**Neapolis**	**0.73**	**52**	P	**Pg**	**09 04 54.0**	**-0.4**
NPS				AML	AML	09 05 08.0	
	comp=E,1956μm,0.3s						
NPS				AML	AML	09 05 11.4	
	comp=N,1540μm,0.6s						
VAM	**Vamos**	**0.83**	**316**	P	**Pg**	**09 04 55.7**	**-0.5**
VAM				S	**Sg**	**09 05 06.1**	**-0.8**
VAM				AML	AML	09 05 09.0	
	comp=N,3410μm,0.3s						
VAM				AML	AML	09 05 10.1	
	comp=E,4142μm,0.3s						
IMMV	**Iera Moni Meta**	**1.00**	**311**	P	**Pg**	**09 04 58.4**	**-0.9**
IMMV				S	**Sb**	**09 05 12.8**	**0.0**
IMMV				AML	AML	09 05 14.1	
	comp=N,2159μm,0.4s						
IMMV				AML	AML	09 05 15.2	
	comp=E,3596μm,0.3s						
STIA	**Sitia Lasithi**	**1.05**	**68**	P	**Pg**	**09 05 00.2**	**-0.1**
KNDR	**Palaiochora Ch**	**1.09**	**293**	P	**Pn**	**09 05 01.5**	**0.0**
KNDR				S	**Sn**	**09 05 17.7**	**+1.0**
	comp=E,302nm,0.3s						
ZKR	**Zakros**	**1.12**	**74**	P	**Pb**	**09 05 00.9**	**-0.8**
ZKR				S	**Sb**	**09 05 16.8**	**+0.5**
ZKR				AML	AML	09 05 24.9	
	comp=E,865μm,0.5s						
ZKR				AML	AML	09 05 27.2	
	comp=N,331μm,0.6s						
RODP	**Rodopos**	**1.20**	**309**	P	**Pb**	**09 05 02.4**	**-0.7**
RODP				S	**Sn**	**09 05 19.6**	**+0.1**
	comp=N,130nm,0.5s						
THR9	**Santorini-Faro**	**1.58**	**13**	P	**Pb**	**09 05 09.6**	**-0.1**
THR6	**Thira Island,**	**1.59**	**14**	P	**Pb**	**09 05 09.8**	**+0.1**
SANT	**Santorini**	**1.62**	**16**	P	**Pb**	**09 05 10.6**	**+0.4**
SANT				AML	AML	09 05 34.2	
	comp=E,681μm,0.6s						
SANT				AML	AML	09 05 34.9	
	comp=N,303μm,0.6s						
STAX	**Taxiarchis Har**	**1.63**	**14**	P	**Pb**	**09 05 10.0**	**-0.5**
THR5	**Thira Island,**	**1.64**	**13**	P	**Pb**	**09 05 09.8**	**-0.8**
THR3	**Thira Island,**	**1.64**	**14**	P	**Pb**	**09 05 09.8**	**-0.8**
ANKY	**Antikythira Is**	**1.68**	**309**	P	**Pb**	**09 05 11.4**	**+0.1**
ANKY				AML	AML	09 05 39.6	
	comp=E,386μm,0.7s						
ANKY				AML	AML	09 05 40.9	
	comp=N,358μm,0.4s						
ANAF	**Anafi Island**	**1.69**	**24**	P	**Pn**	**09 05 10.4**	**+0.4**
ANAF				S	**Sg**	**09 05 34.0**	**-0.7**
ANAF				AML	AML	09 05 39.6	
	comp=N,1471μm,0.3s						
ANAF				AML	AML	09 05 43.3	
	comp=E,1263μm,0.3s						
IOSP	**Ios island**	**1.93**	**9**	P	**Pb**	**09 05 14.3**	**-1.2**
IOSP				AML	AML	09 05 46.8	
	comp=N,338μm,0.3s						
IOSP				AML	AML	09 05 48.6	
	comp=E,325μm,0.6s						
KARP	**Karpathos**	**1.99**	**68**	P	**Pb**	**09 05 16.1**	**-0.4**
KARP				AML	AML	09 05 55.8	
	comp=E,234μm,0.7s						
KARP				AML	AML	09 05 58.5	
	comp=N,264μm,0.7s						
KTHA	**Kythira Island**	**2.08**	**314**	P	**Pb**	**09 05 17.3**	**-0.8**
KTHA				AML	AML	09 05 50.3	
	comp=N,149μm,0.3s						
KTHA				AML	AML	09 05 52.1	
	comp=E,216μm,0.4s						
AMGA	**Amorgos Island**	**2.17**	**21**	P	**Pn**	**09 05 17.1**	**+0.6**
AMGA				AML	AML	09 05 56.0	
	comp=E,157μm,0.3s						
AMGA				AML	AML	09 05 56.2	
	comp=N,200μm,0.6s						
APE	**Apeiranthos**	**2.31**	**13**	P	**Pn**	**09 05 19.4**	**+1.0**
SERI	**Serifos**	**2.37**	**352**	P	**Pn**	**09 05 20.6**	**+1.4**

IDC ***23*** *09:23:49.3±1.4, 5°.70S×153°.25E, h0^{km}, mb3.7/8, mb1 3.8/9, mb1mx3.7/33, mbtmp3.7/9, ML1.8/1, Error ellipse: s-maj=33.6km s-min=19.8km az=107.0*

ISC 23 09:23:55.4±1.2**, 5°.68S**±0°.08×**153°.3E**±0°.1**, h43^{km}, n11, σ1§27**/14**, mb3.7**/8**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.83**	**318**	Pn	**Pn**	**09 24 22.1**	**-2.3**
	58nm,0.3s,baz=183,slow=1.5,SNR=58						
KRVT				Sn	**Sn**	**09 24 48.3**	**+2.0**
	91nm,0.3s,baz=353,slow=22,SNR=7.4						
PMG	**Port Moresby**	**7.08**	**238**	Pn	**Pn**	**09 25 35.8**	**-0.7**
	1.1nm,0.3s,baz=6.7,slow=10,SNR=2.7						
PMG				Sn	**Sn**	**09 26 56.8**	**+1.1**
	4.4nm,0.3s,baz=60,slow=19,SNR=11						
WRA	**Warramunga Arr**	**23.21**	**231**	P	**P**	**09 28 58.9**	**0.0**
	0.6nm,0.9s,baz=57,slow=10,SNR=3.4						
ASAR	**Alice Springs**	**25.82**	**224**	P	**P**	**09 29 21.2**	**-1.7**
	0.3nm,0.7s,baz=58,slow=8.3,SNR=3.2						
ASAR				PcP	**PcP**	**09 32 53.4**	**+1.6**
	0.3nm,0.8s,baz=71,slow=2.5,SNR=4.4						
FITZ	**Fitzroy Crossi**	**29.64**	**243**	P	**P**	**09 29 56.6**	**-0.5**
	0.9nm,0.5s,baz=65,slow=6.6,SNR=6.0						
CMAR	**Chiang Mai Arr**	**58.65**	**295**	P	**P**	**09 33 49.0**	**+0.1**
	0.5nm,0.3s,baz=128,slow=2.3,SNR=4.0						
PETK	**Petropavlovsk-**	**58.69**	**3**	P	**P**	**09 33 49.1**	**+0.7**
	3.7nm,0.9s,baz=162,slow=8.1,SNR=4.7						
SONM	**Songino Array**	**67.30**	**328**	P	**P**	**09 34 46.5**	**+0.5**
	0.4nm,0.5s,baz=140,slow=5.2,SNR=4.0						
MKAR	**Makanchi Array**	**81.28**	**319**	P	**P**	**09 36 07.7**	**+0.5**
	0.5nm,0.9s,baz=120,slow=4.6,SNR=4.5						
ZALV	**Zalesovo Beam**	**82.13**	**326**	P	**P**	**09 36 11.2**	**-0.2**
	0.6nm,0.4s,baz=125,slow=9.0,SNR=4.1						
TORD	**Torodi Ar. Bea**	**150.99**	**287**	PKPbc	**PKPbc**	**09 43 44.3**	**-0.4**
	1.1nm,0.8s,baz=142,slow=0.9,SNR=4.3						

DDA ***23*** *09:33:39.9, 38°.52N×45°.17E, h7^{km}±5^{km}, ML2.4*

NSSP ***23*** *09:33:39.0, 38°.55N×45°.13E, h10^{km}, Ms3.1*

TEH ***23*** *09:33:42.3, 38°.50N×45°.22E, h7^{km}, ML2.8*

ISC 23 09:33:40.6±1.2**, 38°.52N**±0°.03×**45°.17E**±0°.02**, h12^{km}**±14^{km}**, n50, σ1§13**/55**, 2C-2D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMRD	**Marand**	**0.46**	**65**	*e*Pg	**Pb**	**09 33 50.9**	**+0.1**
NAX	**Nakhchivan**	**0.70**	**21**	*e*Pg	**Pb**	**09 33 55.0**	**+0.1**
ORD	**Ordubad**	**0.76**	**57**	*e*Pg	**Pn**	**09 33 56.7**	**-0.6**
ITBZ	**Tabriz**	**0.82**	**110**	*e*Pg	**Pn**	**09 33 57.3**	**-0.8**
SBZ	**Shahbuz**	**0.93**	**19**	*e*Pg	**Pb**	**09 33 58.7**	**0.0**
BASK	**Baskale_VAN**	**1.03**	**243**	*i* P	**Pn**	**09 34 00.9**	**-0.1**
BASK				IAML		09 34 21.0	
	comp=E,90nm,1.1s						
BASK				IAML		09 34 23.0	
	comp=N,74nm,0.5s						
CLDR	**Caldiran**	**1.16**	**303**	*i* P	**Pg**	**09 34 01.6**	**-1.4**
CLDR				IAML		09 34 22.0	
	comp=E,106nm,0.8s						
CLDR				IAML		09 34 24.0	
	comp=N,70nm,0.6s						
YOVA	**Hakkari_Yksek**	**1.16**	**217**	*i* P	**Pg**	**09 34 02.2**	**-0.8**
YOVA				IAML		09 34 24.0	
	comp=E,104nm,1.1s						
YOVA				IAML		09 34 29.0	
	comp=N,82nm,1.0s						
TVRZ	**Varzaqan**	**1.18**	**90**	*e*Pg	**Pn**	**09 34 04.2**	**+1.2**
HYR	**Heyderabad**	**1.22**	**348**	*e*Pg	**Pg**	**09 34 03.1**	**-1.1**
VMUR	**Van-Muradiye**	**1.33**	**291**	*i* P	**Pn**	**09 34 04.2**	**-1.0**
VMUR				IAML		09 34 28.0	
	comp=E,47nm,0.4s						
VMUR				IAML		09 34 29.0	
	comp=N,75nm,0.6s						
TVAN	**Van**	**1.38**	**271**	*i* P	**Pg**	**09 34 08.6**	**+1.3**
TVAN				IAML		09 34 32.0	
	comp=N,53nm,0.4s						
AHAR	**Ahar**	**1.48**	**91**	*e*		09 34 33.6	
AHAR				*e*Pn	**Pg**	**09 34 09.1**	**+0.1**
IHRS	**Heris**	**1.48**	**97**	*e*		09 34 14.3	
IHRS				*e*Pn	**Pg**	**09 34 09.5**	**+0.3**
HAKT	**HAKKARI**	**1.50**	**231**	*i* P	**Pb**	**09 34 08.3**	**-0.2**
HAKT				IAML		09 34 39.0	
	comp=E,26nm,0.9s						
DYDN	**Diyadin**	**1.54**	**312**	*i* P	**Pg**	**09 34 10.0**	**-0.3**
DYDN				*i* S	**Sg**	**09 34 31.7**	**+1.4**
DYDN				IAML		09 34 35.0	
	comp=E,82nm,0.8s						
DYDN				IAML		09 34 38.0	
	comp=N,117nm,0.9s						
IGDI	**IGDIR**	**1.59**	**328**	*i* P	**Pb**	**09 34 09.4**	**-0.6**
TASB	**TASBURUN-IGDIR**	**1.63**	**334**	*e*Pn	**Pg**	**09 34 13.0**	**+1.0**
IHSH	**Hashtrud**	**1.66**	**97**	*e*Pn	Pg	09 34 19.2	+6.7
IHSH				*e*		09 34 23.2	
GNI	**Garni**	**1.66**	**349**	⇓*i*P	**Pb**	**09 34 10.8**	**-0.5**
GNI				⇓*i*S	**Sg**	**09 34 33.4**	**-0.7**
GNI	**Garni**	**1.66**	**349**	*e*Pg	**Pb**	**09 34 11.1**	**-0.2**
GEVA	**Gevas**	**1.67**	**264**	*i* P	**Pn**	**09 34 10.1**	**+0.3**
GEVA				*i* S	**Sg**	**09 34 35.1**	**+0.7**
GEVA				IAML		09 34 39.0	
	comp=E,42nm,0.9s						
GEVA				IAML		09 34 41.0	
	comp=N,32nm,0.3s						
AKDM	**Akdamar-Van**	**1.73**	**264**	*e*Pn	**Pg**	**09 34 15.6**	**+1.8**
CUKT	**Cukurca**	**1.77**	**225**	*i* P	**Pg**	**09 34 15.7**	**+1.1**
CUKT				IAML		09 34 53.0	
	comp=E,82nm,0.6s						
CUKT				IAML		09 34 55.0	
	comp=N,46nm,1.0s						
MAHB	**Mahabad**	**1.80**	**166**	*e*Pn	**Pg**	**09 34 13.9**	**-1.3**
KAPZ	**Kaputan**	**1.84**	**349**	⇑*i*P	**Pg**	**09 34 15.0**	**-0.9**
KAPZ				⇑*i*S	**Sg**	**09 34 40.4**	**+0.6**
QRD	**Qoradiz**	**1.92**	**60**	*e*Pn	**Pg**	**09 34 17.4**	**-0.1**
ADCV	**BITLIS_Adilcev**	**1.94**	**279**	*i* P	**Pb**	**09 34 15.7**	**-0.2**
ADCV				IAML		09 34 47.0	
	comp=E,37nm,1.1s						
ARUZ	**Aruch**	**1.95**	**335**	*e*P	**Pg**	**09 34 17.6**	**-0.5**
ARUZ				*e*S	**Sg**	**09 34 44.7**	**+1.3**
AGRB	**Hanur-Agry**	**2.00**	**303**	*e*Pn	**Pg**	**09 34 18.0**	**-1.0**
ISRB	**Sarab**	**2.09**	**109**	*e*Pn	**Pg**	**09 34 19.9**	**-0.8**
ISRB				*e*		09 34 33.2	
BLQ	**Beylaqan**	**2.21**	**56**	*e*Pn	**Pb**	**09 34 21.0**	**+0.4**
GDB	**GEDABAY**	**2.25**	**11**	*e*Pn	**Pb**	**09 34 19.7**	**-1.5**
GANJ	**Ganja**	**2.30**	**22**	*e*Pn	**Pb**	**09 34 20.5**	**-1.6**
DIGO	**Kars**	**2.35**	**324**	*i* P	**Pg**	**09 34 25.9**	**+0.2**
GURO	**Guroymak-BITLI**	**2.46**	**272**	*e*Pn	**Pg**	**09 34 28.5**	**+0.7**
EATA	**Eleskirt**	**2.48**	**304**	*i* P	**Pb**	**09 34 24.8**	**-0.4**
EATA				*i* S	**Sg**	**09 35 00.7**	**+0.5**
EATA				IAML		09 35 07.0	
	comp=N,10.0nm,0.5s						
EATA				IAML		09 35 12.0	
	comp=E,10.0nm,0.3s						
EAK	**Akyaka**	**2.48**	**331**	*i* P	**Pn**	**09 34 19.8**	**-1.1**
LRK	**Lerik**	**2.49**	**86**	*e*Pn	**Pb**	**09 34 26.1**	**+0.8**
QZX	**Qazax, Azerbai**	**2.54**	**3**	*e*Pn	**Pn**	**09 34 23.2**	**+1.5**
STE	**Stepanavan**	**2.55**	**346**	*e*P	**Pn**	**09 34 24.0**	**+2.1**
SRTM	**Siirt_Merkez**	**2.61**	**259**	*i* P	**Pb**	**09 34 25.1**	**-2.2**
SRTM				IAML		09 35 11.0	
	comp=E,31nm,0.9s						
SRTM				IAML		09 35 12.0	
	comp=N,44nm,1.2s						
ZRD	**Zardab**	**2.62**	**47**	*e*Pn	**Pb**	**09 34 26.6**	**-0.9**
LKRN	**Lenkeran, Azer**	**2.83**	**85**	*e*Pn	**Pb**	**09 34 30.8**	**-0.3**
ASTR	**Astara**	**2.84**	**88**	*e*Pn	**Pb**	**09 34 30.8**	**-0.4**
MUSM	**Mu-Merkez**	**2.87**	**275**	*i* P	**Pg**	**09 34 34.8**	**-0.8**
SENK	**Senkaya-Erzuru**	**2.98**	**314**	*e*Pn	**Pb**	**09 34 33.5**	**-0.3**
SEKA	**Sheki**	**3.11**	**30**	*e*Pn	**Pb**	**09 34 33.5**	**-2.3**
QBL	**Gabala**	**3.18**	**39**	*e*Pn	**Pb**	**09 34 34.5**	**-2.6**
ZKT	**Zaqatala**	**3.34**	**20**	*e*Pn	**Pn**	**09 34 35.2**	**+2.6**

IDC ***23*** *09:42:30.1±0.7, 8°.68S×157°.52E, h0^{km}, mb4.1/9, mb1 4.3/11, mb1mx4.1/27, mbtmp4.1/11, ML3.8/2, MS3.2/6, Ms1 3.1/6, ms1mx2.9/24, Error ellipse: s-maj=23.7km s-min=18.2km az=156.0*

NEIC ***23*** *09:42:32.3±2.0, 8°.7S±0°.1×157°.70E±0°.09, h14^{km}±4^{km}, mb4.4/22, Error ellipse: s-maj=16.1km s-min=12.5km az=177.0*

ISC 23 09:42:32.6±0.5**, 8°.62S**±0°.10×**157°.63E**±0°.07**, h16^{km}, n44, σ1§30**/44**, mb4.3**/20**, MS3.1**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.43**	**110**	Pn	**Pn**	**09 43 10.7**	**-1.1**
	41nm,0.3s,baz=279,slow=5.7,SNR=11						
HNR				Sn	**Sb**	**09 43 46.0**	**+0.3**
	75nm,0.3s,baz=275,slow=23,SNR=11						
HNR				LR	LR	09 44 07.0	
	comp=Z,330nm,20.4s,baz=172,slow=39						
HNR	**Honiara**	**2.43**	**110**		**Pn**	**09 43 10.1**	**-1.6**
PMG	**Port Moresby**	**10.37**	**265**	LR	LR	09 48 37.5	
	comp=Z,138nm,20.7s,baz=92,slow=36						
DZM	**Mont Dzumac**	**15.84**	**149**	P	**P**	**09 46 21.9**	**+2.9**
CTA	**Charters Tower**	**15.84**	**223**	Pn	**Pn**	**09 46 15.1**	**-0.1**
	0.2nm,0.3s,baz=48,slow=14,SNR=2.9						
EIDS	**Eidsvold**	**17.79**	**200**	P	**P**	**09 46 40.2**	**-0.2**
ARMA	**Armidale**	**22.40**	**194**	P	**P**	**09 47 35.2**	**+4.5**
WR0	**Warramunga Arr**	**25.01**	**241**	P	**P**	**09 47 54.9**	**-1.2**
WR0				IAmb	IAmb	09 48 01.3	
	comp=Z,6.2nm,0.8s						
WB0	**Warramunga Arr**	**25.07**	**241**	P	**P**	**09 47 55.5**	**-1.1**
WB0				IAmb	IAmb	09 47 58.0	
	comp=Z,11nm,1.1s						
WRAB	**Tennant Creek**	**25.17**	**241**	P	**P**	**09 47 55.5**	**-2.1**
WRAB				IAmb	IAmb	09 48 00.4	
	comp=Z,8.2nm,0.7s						
WB2	**Warramunga Arr**	**25.17**	**241**	P	**P**	**09 47 56.5**	**-1.1**
WB2				IAmb	IAmb	09 48 00.2	
	comp=Z,6.9nm,0.7s						
WRA	**Warramunga Arr**	**25.18**	**241**	P	**P**	**09 47 55.4**	**-2.3**
	comp=Z,6.4nm,0.3s,baz=68,slow=9.5,SNR=52						
WRA				PcP	**PcP**	**09 51 31.9**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=70,slow=2.5,SNR=9.9						
WRA				LR	LR	09 56 53.5	
	comp=Z,59nm,20.7s,baz=65,slow=34						
MTN	**Manton Dam**	**26.36**	**259**	P	**P**	**09 48 07.8**	**-0.6**
MTN				IAmb	IAmb	09 48 14.1	
	comp=Z,9.5nm,1.1s						
ASAR	**Alice Springs**	**27.19**	**234**	P	**P**	**09 48 13.6**	**-2.3**
	comp=Z,1.4nm,0.9s,baz=62,slow=9.2,SNR=9.0						
ASAR				PcP	**PcP**	**09 51 36.1**	**0.0**
	comp=Z,0.6nm,0.5s,baz=74,slow=2.6,SNR=8.3						
ASAR				LR	LR	09 57 41.8	
	comp=Z,58nm,21.0s,baz=96,slow=34						
ASAR	**Alice Springs**	**27.19**	**234**	P	**P**	**09 48 15.9**	**0.0**
STKA	**Stephens Creek**	**27.53**	**211**	P	**P**	**09 48 18.6**	**0.0**
	comp=Z,3.2nm,0.7s,baz=42,slow=15,SNR=7.5						
STKA				LR	LR	09 58 28.2	
	comp=Z,33nm,19.5s,baz=36,slow=35						
STKA	**Stephens Creek**	**27.53**	**211**	P	**P**	**09 48 20.4**	**+1.7**
KNRA	**Kununurra**	**29.05**	**253**	P	**P**	**09 48 32.1**	**-0.4**
KNRA				IAmb	IAmb	09 48 38.0	
	comp=Z,5.4nm,1.0s						
FITZ	**Fitzroy Crossi**	**32.47**	**250**	LR	LR	10 00 18.0	
	comp=Z,41nm,20.8s,baz=68,slow=33						
BKZ	**Black Stump Fm**	**34.81**	**154**	P	**P**	**09 49 21.7**	**-1.1**
CMAR	**Chiang Mai Arr**	**63.83**	**295**	P	**P**	**09 53 04.4**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=113,slow=5.3,SNR=5.0						
VNDA	**Vanda**	**68.91**	**179**	P	**P**	**09 53 36.1**	**-0.2**
VNDA				IAmb	IAmb	09 53 41.0	
	comp=Z,2.3nm,1.2s						
SONM	**Songino Array**	**72.11**	**326**	P	**P**	**09 53 57.5**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=130,slow=3.9,SNR=5.3						
SONM	**Songino Array**	**72.11**	**326**	IAmb	IAmb	09 54 01.9	
	comp=Z,1.7nm,1.2s						
PPLA	**Purkeypile**	**80.93**	**21**	P	**P**	**09 54 46.1**	**0.0**
PMR	**Palmer**	**81.24**	**23**	P	**P**	**09 54 48.4**	**+0.8**
PMR				IAmb	IAmb	09 54 54.8	
	comp=Z,5.0nm,1.0s						
QSPA	**South Pole Qui**	**81.37**	**180**	P	**P**	**09 54 48.0**	**-0.5**
QSPA				IAmb	IAmb	09 54 54.3	
	comp=Z,7.8nm,1.2s						
KTH	**Kantishna Hill**	**81.79**	**21**	P	**P**	**09 54 50.7**	**+0.1**
TRF	**Thorofare Moun**	**81.95**	**21**	P	**P**	**09 54 52.9**	**+1.4**
IMAR	**Indian Mountai**	**82.43**	**18**	P	**P**	**09 54 54.7**	**+0.9**
RND	**Reindeer**	**82.43**	**21**	P	**P**	**09 54 54.2**	**+0.3**
RND				IAmb	IAmb	09 54 55.6	
	comp=Z,7.8nm,1.4s						
MCK	**McKinley**	**82.60**	**21**	P	**P**	**09 54 55.2**	**+0.4**
CCB	**Clear Creek Bu**	**83.54**	**21**	P	**P**	**09 55 01.7**	**+2.1**
CCB				IAmb	IAmb	09 55 05.1	
	comp=Z,3.1nm,1.1s						
ILAR	**Eielson Array**	**83.94**	**21**	P	**P**	**09 55 02.0**	**+0.4**
	comp=Z,1.2nm,0.9s,baz=260,slow=4.8,SNR=6.6						
ILAR	**Eielson Array**	**83.94**	**21**	P	**P**	**09 55 02.6**	**+1.0**
MK31	**Makanchi Array**	**86.34**	**318**	P	**P**	**09 55 14.3**	**+0.2**
MKAR	**Makanchi Array**	**86.34**	**318**	P	**P**	**09 55 13.9**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=99,slow=5.9,SNR=10						
MKAR	**Makanchi Array**	**86.34**	**318**	P	**P**	**09 55 14.6**	**+0.5**
NVAR	**Mina Array Bea**	**90.68**	**51**	P	**P**	**09 55 35.3**	**+0.1**
	comp=Z,1.8nm,0.9s,baz=242,slow=7.4,SNR=9.7						
NVAR	**Mina Array Bea**	**90.68**	**51**	P	**P**	**09 55 33.9**	**-1.3**
YKA	**Yellowknife Ar**	**96.54**	**28**	P	**P**	**09 56 01.6**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=258,slow=4.5,SNR=4.3						
BDFB	**Brasilia**	**144.99**	**133**	PKPbc	**PKPdf**	**10 02 09.9**	**-0.4**
	comp=Z,3.0nm,0.7s,baz=220,slow=4.2,SNR=4.7						
BDFB	**Brasilia**	**144.99**	**133**		**PKPdf**	**10 02 09.5**	**-0.9**
SFS	**San Fernando**	**148.62**	**334**	PKPdf	**PKPdf**	**10 02 15.8**	**+0.1**

SJA ***23*** *10:10:50.8±0.6, 20°.18S×68°.98W, h192^{km}±18^{km}, ML4.2, MW3.9*

NEIC ***23*** *10:10:52.8±3.0, 20°.10S±0°.04×68°.72W±0°.08, h117^{km}±4^{km}, mb4.5/35, Mwr4.1/13, ML4.1(GUC), Error ellipse: s-maj=10.4km s-min=6.1km az=84.0*

VAO ***23*** *10:10:52.1±0.4, 19°.93S×68°.76W, h110^{km}±3^{km}, mb4.5*

NEIC ***23*** *10:10:53, 20°.09S×68°.83W, h111^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.22; M$_{\theta\theta}$0.08; M$_{\phi\phi}$1.15; M$_{r\theta}$0.85; M$_{\theta\phi}$-0.45; M$_{\phi r}$-1.31; Fault plane solution: M$_0$2.02000×10^{15} NP1:φ$_s$329.72000°, δ70.74000°, λ-97.27000°. NP2:φ$_s$170.87000°, δ20.54000°, λ-70.09000°. Principal axes: T 2.0374, Plg25.0000°, Azm65.0000°; N -0.0434, Plg7.0000°, Azm332.0000°; P -1.9940, Plg64.0000°, Azm228.0000°;*

IDC ***23*** *10:10:53.3±0.5, 20°.12S×68°.62W, h125^{km}±4^{km}, mb3.9/14, mb1 4.0/18, mb1mx3.8/37, mbtmp4.3/18, MS3.0/1, Ms1 2.9/1, ms1mx2.4/27 Error ellipse: s-maj=15.5km s-min=7.2km az=95.0*

GUC ***23*** *10:10:53.7±0.7, 20°.09S×68°.83W, h119^{km}±3^{km}, ML4.1*

ISC 23 10:10:52.7±0.4**, 20°.10S**±0°.03×**68°.81W**±0°.05**, h121^{km}**±4^{km}**, n148, σ1§29**/179**, mb4.4**/25**, 13C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.33**	**263**	⇑*i*P	**Pn**	**10 11 10.8**	**+0.4**
PB08				*i* S	**Sn**	**10 11 23.9**	**+0.3**
PB08				IAML		10 11 24.5	
	comp=N,32μm,0.3s						
GO01	**Chusmiza**	**0.56**	**320**	⇑*i*P	**Pn**	**10 11 12.0**	**+0.3**
GO01				*i* S	**Sn**	**10 11 26.0**	**0.0**
GO01				IAML		10 11 27.1	
	comp=E,12μm,0.4s						
GO01	**Chusmiza**	**0.56**	**320**		**Pn**	**10 11 12.0**	**+0.3**
GO01				Sn	**Sn**	**10 11 26.0**	**0.0**
PB11	**IPOC Station P**	**0.87**	**293**	⇑*i*P	**Pn**	**10 11 14.0**	**+0.2**
PB11				*i* S	**Sn**	**10 11 29.6**	**-0.1**
PB11				IAML		10 11 30.7	
	comp=E,11μm,0.3s						
PB11	**IPOC Station P**	**0.87**	**293**		**Pn**	**10 11 14.0**	**+0.2**
PB11				Sn	**Sn**	**10 11 29.6**	**-0.1**
PB01	**IPOC Station P**	**1.14**	**214**	⇑*i*P	**Pn**	**10 11 16.8**	**+0.6**
PB01				*i* S	**Sn**	**10 11 34.6**	**+0.5**
PB01				IAML		10 11 36.5	
	comp=N,9μm,0.1s						
PB01	**IPOC Station P**	**1.14**	**214**		**Pn**	**10 11 16.9**	**+0.6**
PB01				Sn	**Sn**	**10 11 34.4**	**+0.3**
PSGC	**Pisagua**	**1.34**	**292**	⇑*i*P	**Pn**	**10 11 18.5**	**+0.1**
PSGC				*i* S	**Sn**	**10 11 37.3**	**-0.7**
PSGC				IAML		10 11 39.8	
	comp=E,4μm,0.3s						
PSGCX	**Pisagua**	**1.34**	**292**		**Pn**	**10 11 18.4**	**0.0**
PSGCX				Sn	**Sn**	**10 11 37.1**	**-0.9**
TA01	**Diego Aracena**	**1.37**	**250**	⇑*i*P	**Pn**	**10 11 18.6**	**-0.1**
TA01				*i* S	**Sn**	**10 11 38.4**	**0.0**
TA01				IAML		10 11 43.1	
	comp=E,2μm,0.5s						
PATCX	**Punta Patache**	**1.45**	**240**	⇑*i*P	**Pn**	**10 11 19.9**	**+0.2**
PATCX				*i* S	**Sn**	**10 11 40.7**	**+0.4**
PATCX				IAML		10 11 48.0	
	comp=N,3μm,0.4s						
PATCX	**Punta Patache**	**1.45**	**240**		**Pn**	**10 11 19.9**	**+0.2**
PATCX				Sn	**Sn**	**10 11 40.3**	**0.0**
PB02	**IPOC Station P**	**1.59**	**220**	⇑*i*P	**Pn**	**10 11 21.8**	**+0.5**
PB02				*i* S	**Sn**	**10 11 43.4**	**+0.3**
PB02				IAML		10 11 47.4	
	comp=N,4μm,0.5s						
PB09	**IPOC Station P**	**1.74**	**193**	⇑*i*P	**Pn**	**10 11 24.2**	**+1.0**
PB09				*i* S	**Sn**	**10 11 47.8**	**+1.4**
PB09				IAML		10 11 50.5	
	comp=E,1μm,0.3s						
PB09	**IPOC Station P**	**1.74**	**193**		**Pn**	**10 11 24.1**	**+1.0**
PB09				Sn	**Sn**	**10 11 48.2**	**+1.8**
PB16	**IPOC Station P**	**1.88**	**339**	⇓*i*P	**Pn**	**10 11 26.9**	**+1.6**
PB16				*i* S	**Sn**	**10 11 51.9**	**+1.9**
PB16				IAML		10 11 55.0	
	comp=N,442nm,0.6s						
PB16	**IPOC Station P**	**1.88**	**339**		**Pn**	**10 11 26.9**	**+1.6**
PB16				Sn	**Sn**	**10 11 51.6**	**+1.6**
PB07	**IPOC Station P**	**1.91**	**212**	⇑*i*P	**Pn**	**10 11 25.4**	**+0.2**
PB07				*i* S	**Sn**	**10 11 49.9**	**-0.2**
PB07	**IPOC Station P**	**1.91**	**212**		**Pn**	**10 11 25.5**	**+0.2**
PB07				Sn	**Sn**	**10 11 49.5**	**-0.7**
PB12	**IPOC Station P**	**2.06**	**316**	⇑*e*P	**Pn**	**10 11 27.0**	**-0.1**
PB12				*i* S	**Sn**	**10 11 51.6**	**-1.7**
PB12				IAML		10 11 60.0	
	comp=E,1μm,0.5s						
PB12	**IPOC Station P**	**2.06**	**316**		**Pn**	**10 11 27.0**	**-0.1**
PB12				Sn	**Sn**	**10 11 52.0**	**-1.3**
PB03	**IPOC Station P**	**2.13**	**204**	⇑*i*P	**Pn**	**10 11 28.2**	**+0.2**
PB03				*i* S	**Sn**	**10 11 54.8**	**-0.3**
LVC	**Limon Verde**	**2.50**	**182**	P	**Pn**	**10 11 34.7**	**+1.8**
	comp=E,44nm,0.3s,baz=36,slow=13,SNR=242						
LVC				S	**Sn**	**10 12 03.6**	**-0.1**
	comp=E,150nm,0.3s,baz=58,slow=9.3,SNR=16						
LVC	**Limon Verde**	**2.50**	**182**		**Pn**	**10 11 34.2**	**+1.3**
LVC	**Limon Verde**	**2.50**	**182**	*e*P	**Pn**	**10 11 34.1**	**+1.2**
PB04	**IPOC Station P**	**2.55**	**209**		**Pn**	**10 11 33.8**	**+0.4**
PB04				Sn	**Sn**	**10 12 03.6**	**-1.0**
PB04	**IPOC Station P**	**2.55**	**209**	*i* P	**Pn**	**10 11 33.9**	**+0.6**
PB05	**IPOC Station P**	**3.03**	**205**	*i* P	**Pn**	**10 11 39.6**	**0.0**
PB05				IAML		10 12 28.5	
	comp=Z,631nm,0.6s						
PB15	**IPOC Station P**	**3.15**	**191**		**Pn**	**10 11 42.3**	**+1.0**
YJA	**Yavi**	**3.70**	**124**	*i* P	**Pn**	**10 11 51.3**	**+2.6**
PB10	**IPOC Station P**	**3.77**	**205**		**Pn**	**10 11 48.3**	**-0.8**
PB10	**IPOC Station P**	**3.77**	**205**	*i* P	**Pn**	**10 11 48.4**	**-0.8**
PB10				IAML		10 12 50.9	
	comp=Z,180nm,0.8s						
LPAZ	**La Paz**	**3.84**	**10**	P	**Pn**	**10 11 53.1**	**+2.3**
	comp=Z,7.8nm,0.3s,baz=196,slow=2.3,SNR=215						
LPAZ				S	**Sn**	**10 12 35.6**	**-0.1**
	comp=Z,3.0nm,0.3s,baz=180,slow=12,SNR=4.0						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LPAZ	La Paz	3.84	10		Pn	10 11 52.9	+2.0
LPAZ	La Paz	3.84	10	*i* P	Pn	10 11 53.1	+2.3
PB14	IPOC Station P	4.74	198		Pn	10 12 00.9	-1.6
PB14	IPOC Station P	4.74	198	*i* P	Pn	10 12 00.9	-1.6
PB14				IAML		10 13 11.7	
	comp=Z,209nm,0.8s						
GO02	Mina Guanaco	5.09	188		Pn	10 12 06.4	-0.8
AZAP	Zapla	5.37	141	*i* P	Pn	10 12 12.2	+1.3
GO03	Copiap	7.57	190		Pn	10 12 37.9	-2.6
GO03	Copiap	7.57	190	*i* P	Pn	10 12 37.8	-2.6
SIV	San Ignacio	8.41	62	P	Pn	10 12 49.6	-2.3
	comp=Z,11nm,0.3s,baz=264,slow=9.9,SNR=332						
VCA	Vinchina	8.62	176	*i* P	Pn	10 12 53.9	-0.8
GO04	Tololo Observa	10.19	190		Pn	10 13 12.2	-3.8
CPUP	Villa Florida	12.24	123	P	Pn	10 13 42.0	-0.9
	comp=Z,0.2nm,0.3s,baz=312,slow=12,SNR=8.3						
CPUP	Villa Florida	12.24	123	Pn	Pn	10 13 42.3	-0.7
CPUP	Villa Florida	12.24	123	*e*P	Pn	10 13 42.9	-0.1
SAML	Samuel	12.35	27		Pn	10 13 44.2	-0.3
SAML	Samuel	12.35	27	*e*P	Pn	10 13 41.9	-2.6
ROC1	El Roble	12.97	188	P	P	10 13 57.9	-0.9
SALV	Santo Antonio	13.15	74	*e*P	Pn	10 13 53.3	-1.7
C2SB	Chapadao do Su	15.12	88	*e*P	Pn	10 14 19.4	-0.7
TRCB	Terra Rica	15.29	103	*e*P	Pn	10 14 22.7	+0.4
CLDB	Colider	15.53	56	*e*P	Pn	10 14 24.3	-0.9
PTGB	Pitanga	16.14	110	*e*P	P	10 14 33.2	-0.6
PCMB	Pacaembu	16.47	98	*e*P	P	10 14 37.2	-0.1
ARAG	Araguaiana, MT	16.75	78	*e*P	P	10 14 40.7	+0.3
ITAB	Concordia	16.84	118	*e*P	P	10 14 42.3	+1.0
FRTB	Fartura	18.17	104	*e*P	Pn	10 14 56.4	-0.9
CNLB	Canela	18.69	123	*e*P	Pn	10 15 02.8	-0.8
BB19B	Bebedouro	19.01	96	*e*P	P	10 15 05.3	0.0
GO06	Curarrehue	19.55	186	P	Pn	10 15 12.8	-0.8
GO06				IAmb	IAmb	10 15 14.3	
	comp=Z,22nm,1.2s						
IPMB	Ipameri, GO	19.58	87	*e*P	P	10 15 11.0	-0.5
SPB	Sao Paulo	20.14	104	*e*P	P	10 15 17.4	0.0
BDFB	Brasilia	20.27	81	P	P	10 15 17.0	-2.1
	comp=Z,3.3nm,0.4s,baz=249,slow=12,SNR=7.6						
BDFB				LR	LR	10 22 42.7	
	comp=Z,50nm,21.5s,baz=259,slow=35						
BDFB	Brasilia	20.27	81	P	P	10 15 19.0	0.0
BDFB				IAmb	IAmb	10 15 22.6	
	comp=Z,7.7nm,0.8s						
VAO	Valinhos	20.52	102	*e*P	P	10 15 21.2	-0.4
PLCA	Paso Flores	20.62	184	P	P	10 15 24.0	+1.5
	comp=Z,7.0nm,0.8s,baz=22,slow=10,SNR=13						
PLCA	Paso Flores	20.62	184	P	P	10 15 23.1	+0.6
PLCA	Paso Flores	20.62	184	*e*P	Pn	10 15 24.6	-1.4
PTGA	Pitinga	21.10	25	P	P	10 15 25.5	-2.4
	comp=Z,3.5nm,0.3s,baz=191,slow=17,SNR=14						
PTGA	Pitinga	21.10	25	P	P	10 15 25.6	-2.2
PTGA	Pitinga	21.10	25	*e*P	P	10 15 25.5	-2.4
BSCB	Bom Sucesso	22.52	96	*e*P	P	10 15 42.1	-0.6
SMTB	Santa Maria do	23.35	64	*e*P	P	10 15 49.9	-0.7
JANB	Januaria	23.87	82	*e*P	P	10 15 54.4	-1.0
SJMB	Sao Joao De Ma	26.08	92	*e*P	P	10 16 14.3	-0.9
RUSC	La Rusia	26.17	350	P	P	10 16 18.6	+2.0
SDV	Santo Domingo	28.86	356	P	P	10 16 38.9	-1.3
	comp=Z,4.4nm,0.9s,baz=164,slow=2.8,SNR=3.3						
SDV	Santo Domingo	28.86	356	*e*P	P	10 16 40.1	-0.2
PLCV	Puerto La Cruz	30.36	8	P	P	10 16 53.6	+0.3
PCRV	Puerto La Cruz	30.36	8	P	P	10 16 53.6	+0.2
	comp=Z,5.7nm,0.8s,baz=191,slow=19,SNR=1.4						
RCBR	Riachuelo	34.97	71	*e*pP	pP	10 17 56.9	-4.6
CRPR	Cabo Rojo, PR	37.91	3	P	P	10 17 57.2	-1.1
OBIP	Obispado Ponce	37.97	3	P	P	10 17 58.1	-0.7
PDPR	Patillas Dam,	37.98	4	P	P	10 17 57.3	-1.7
PDPR				IAmb	IAmb	10 17 57.6	
	comp=Z,7.5nm,0.7s						
SJG	San Juan	38.06	4	P	P	10 17 58.1	-1.6
	comp=Z,5.0nm,0.6s,baz=106,slow=15,SNR=2.4						
SJG	San Juan	38.06	4	P	P	10 17 59.1	-0.6
SJG				IAmb	IAmb	10 18 11.9	
	comp=Z,11nm,0.8s						
AOPR	Arecibo Observ	38.26	3	P	P	10 18 01.1	-0.3
APG	El Apazote	40.87	327	P	P	10 18 22.9	-0.4
	comp=Z,1.3nm,0.4s,baz=156,slow=20,SNR=5.2						
553A	Crawfordville	52.21	343	P	P	10 19 52.8	+1.5
Z50A	Ashland	55.52	343	P	P	10 20 15.1	-0.2
Z50A				IAmb	IAmb	10 20 18.8	
	comp=Z,12nm,1.4s						
SWET	Sewanee	57.36	343	P	P	10 20 28.5	+0.1
SWET				IAmb	IAmb	10 20 35.9	
	comp=Z,16nm,1.5s						
T52A	Hallie	58.45	347	P	P	10 20 36.0	+0.1
T52A				IAmb	IAmb	10 20 45.4	
	comp=Z,14nm,1.4s						
WVT	Waverly	58.75	342	P	P	10 20 38.0	0.0
WVT				IAmb	IAmb	10 20 52.5	
	comp=Z,7.7nm,1.4s						
TXAR	Lajitas Array	59.55	325	P	P	10 20 43.7	-0.1
	comp=Z,0.3nm,0.6s,baz=151,slow=5.7,SNR=3.9						
TXAR	Lajitas Array	59.55	325	P	P	10 20 44.0	+0.2
BGNE	Belgrade	66.97	336	P	P	10 21 33.5	+1.0
SDCO	Great Sand Dun	67.10	329	P	P	10 21 35.5	+1.9
SDCO				IAmb	IAmb	10 21 36.1	
	comp=Z,4.3nm,1.3s						
LIC	Lamto	67.91	74	*e*P	P	10 21 37.7	-1.2
	comp=Z,4.6nm,0.4s						
TIC	Toumodi	68.09	74	*e*P	P	10 21 39.0	-1.0
KIC	Kosan Boka	68.23	74	*e*P	P	10 21 40.0	-0.9
	comp=Z,2.4nm,0.4s						
DBIC	Dimbokro	68.25	74	P	P	10 21 40.4	-0.6
	comp=Z,8.6nm,0.6s,baz=219,slow=6.9,SNR=13						
DBIC	Dimbokro	68.25	74	P	P	10 21 39.6	-1.4
DBIC				IAmb	IAmb	10 21 41.1	
	comp=Z,8.9nm,0.8s						
SMCO	Snowmass	68.94	329	P	P	10 21 47.1	+1.8
U15A	North Rim	69.64	324	P	P	10 21 52.0	+2.6
QSPA	South Pole Qui	70.08	180	P	P	10 21 54.0	+2.3
QSPA				IAmb	IAmb	10 21 54.9	
	comp=Z,3.5nm,1.1s						
SRU	San Rafael Swe	70.66	327	P	P	10 21 57.6	+2.1
Q16A	Castle Valley	70.85	326	P	P	10 21 59.3	+2.5
CCUT	Cedar City	71.04	324	P	P	10 22 00.9	+3.0
MSU	Marysvale	71.09	325	P	P	10 22 00.9	+2.7
TMUT	Trail Mountain	71.15	326	P	P	10 22 01.0	+2.3
RDMU	Red Mountain	71.28	328	P	P	10 22 01.1	+1.8
E28A	Huff	72.35	338	P	P	10 22 06.4	+1.1
E28A				IAmb	IAmb	10 22 06.6	
	comp=Z,14nm,0.8s						
PDAR	Pinedale Array	72.95	330	P	P	10 22 10.2	+1.0
	comp=Z,0.2nm,0.5s,baz=131,slow=9.6,SNR=3.9						
PDAR	Pinedale Array	72.95	330	P	P	10 22 10.0	+0.7
MDND	Maddock	73.07	339	P	P	10 22 07.9	-1.6
ULM	Lac du Bonnet	74.02	342	P	P	10 22 14.9	-0.1
	comp=Z,1.2nm,0.5s,baz=156,slow=5.0,SNR=4.7						
ULM	Lac du Bonnet	74.02	342	P	P	10 22 14.2	-0.7
FXWY	Fox Creek	74.31	330	P	P	10 22 18.7	+1.6
NVAR	Mina Array Bea	74.46	322	P	P	10 22 19.9	+1.7
	comp=Z,0.6nm,0.9s,baz=147,slow=4.5,SNR=4.6						
NVAR	Mina Array Bea	74.46	322	P	P	10 22 19.5	+1.4
FLWY	Flagg Ranch	74.49	330	P	P	10 22 19.9	+1.7
FLWY				IAmb	IAmb	10 22 20.9	
	comp=Z,3.4nm,0.7s						
YHL	Hebgen Lake	75.30	330	P	P	10 22 25.8	+2.9
MCMT	McKenzie Canyo	76.07	329	P	P	10 22 29.9	+2.7
TOA0	Torodi Ar. Sit	76.80	71	P	P	10 22 31.6	0.0
TOA0				IAmb	IAmb	10 22 31.9	
	comp=Z,14nm,1.4s						
TORD	Torodi Ar. Bea	76.80	71	P	P	10 22 31.2	-0.4
	comp=Z,2.7nm,0.5s,baz=251,slow=5.2,SNR=34						
TORD				pP	pP	10 23 01.9	-1.5
	comp=Z,1.4nm,0.8s,baz=253,slow=5.3,SNR=2.3						
TORD	Torodi Ar. Bea	76.80	71	P	P	10 22 30.5	-1.1
H04A	Detroit Lake	80.76	325	P	P	10 22 54.5	+1.8
H04A				IAmb	IAmb	10 23 12.1	
	comp=Z,5.9nm,1.3s						
LON	Longmire	81.90	326	P	P	10 23 00.4	+1.6
YKA	Yellowknife Ar	89.91	341	P	P	10 23 38.6	+1.0
	comp=Z,2.6nm,0.8s,baz=134,slow=5.1,SNR=46						
YKA				pP	pP	10 24 11.5	+1.3
	comp=Z,1.4nm,0.7s,baz=135,slow=5.2,SNR=8.1						
YKA				sP	sP	10 24 23.7	+0.3
	comp=Z,0.5nm,0.7s,baz=135,slow=4.8,SNR=2.7						
ASAR	Alice Springs	131.19	208	PKP	PKiKP	10 29 52.1	-0.1
	comp=Z,0.4nm,0.5s,baz=128,slow=1.8,SNR=8.6						
ASAR	Alice Springs	131.19	208	PKPdf	PKiKP	10 29 52.0	-0.3
AS31	Alice Springs	131.19	208	PKPdf	PKiKP	10 29 52.2	-0.1
WRA	Warramunga Arr	134.20	211	PKP	PKPdf	10 29 57.5	+0.5
	comp=Z,0.4nm,0.4s,baz=152,slow=1.8,SNR=6.4						
WRA	Warramunga Arr	134.20	211		PKPdf	10 29 56.6	-0.4
WB0	Warramunga Arr	134.32	211	PKPdf	PKiKP	10 29 58.1	-0.6
KSH	Kashi	144.14	50	PKP	PKiKP	10 30 16.6	-1.6
KSH				pPKP	pPKPdf	10 30 42.6	-6.2
KSH				PP	PP	10 33 34.6	+4.3
KSH				PKS	PKSdf	10 33 50.4	+0.1
KSH				SKKS		10 40 13.8	
MKAR	Makanchi Array	144.44	35	PKP	PKPab	10 30 13.0	-0.3
	comp=Z,0.1nm,0.5s,baz=302,slow=3.2,SNR=2.0						
MKAR				pPKP	pPKPdf	10 30 48.7	-0.1
	comp=Z,0.5nm,0.7s,baz=300,slow=4.1,SNR=3.5						
MKAR	Makanchi Array	144.44	35		PKPab	10 30 13.2	-0.1
TLY	Talaya	147.93	9		PKPbc	10 30 22.7	-1.0
USRK	Ussuriysk Ar.	150.38	329	PKPbc	PKPbc	10 30 30.4	+0.4
	comp=Z,2.7nm,0.8s,baz=21,slow=1.5,SNR=4.7						
USRK	Ussuriysk Ar.	150.38	329	PKPbc	PKiKP	10 30 30.9	+0.2
MJAR	Matsushiro Arr	151.26	310	PKPbc	PKiKP	10 30 33.4	+0.6
	comp=Z,0.6nm,0.5s,baz=86,slow=1.2,SNR=2.8						
MJAR				pPKPbc	pPKPbc	10 31 06.4	+0.1
	comp=Z,1.3nm,0.7s,baz=91,slow=1.9,SNR=3.6						
MJAR	Matsushiro Arr	151.26	310	PKPbc	PKiKP	10 30 33.6	+0.8
SONM	Songino Array	152.06	7	PKPbc	PKiKP	10 30 35.2	+0.9
	comp=Z,0.4nm,0.6s,baz=346,slow=3.0,SNR=2.2						
SONM				pPKPbc	pPKPbc	10 31 08.6	+0.7
	comp=Z,0.5nm,0.6s,baz=357,slow=2.9,SNR=2.2						
SONM	Songino Array	152.06	7		PKiKP	10 30 34.8	+0.6
LZH	Lanzhou	162.81	21	⇑PKP	PKPdf	10 30 41.5	+0.4
LZH				pPKP	pPKPdf	10 31 14.0	-1.3
LZH				sPKP		10 31 36.8	

IDC ***23*** *10:23:02.7±0.8, 19.°61S×70.°63W, h0^{km}, mb4.1/13, mb1 4.2/17, mb1mx4.1/36, mbtmp4.1/17, ML3.5/4, MS3.5/4, Ms1 3.5/4, ms1mx3.1/27, Error ellipse: s-maj=23.4km s-min=15.7km az=47.0*

NEIC ***23*** *10:23:05.7±1.9, 19.°76S±0.°03×70.°83W±0.°02, h21^{km}±4^{km}, mb4.7/31, Mwr4.3/34, ML4.3(GUC), Error ellipse: s-maj=4.3km s-min=2.6km az=186.0*

NEIC ***23*** *10:23:05.5, 19.°77S×70.°83W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.91; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$-1.90; $M_{r\theta}$0.05; $M_{\theta\phi}$0.15; $M_{\phi r}$-2.37; Fault plane solution: $M_0$3.04000×10^{15} NP1:ϕ_s352.99000°, δ19.46000°, λ85.14000°. NP2:ϕ_s178.14000°, δ70.61000°, λ91.72000°. Principal axes: T 3.0473, Plg64.0000°, Azm91.0000°; N -0.0058, Plg2.0000°, Azm358.0000°; P -3.0415, Plg26.0000°, Azm267.0000°;*

GUC ***23*** *10:23:06.6±0.7, 19.°73S×70.°80W, h43^{km}±2^{km}, ML4.3*

VAO ***23*** *10:23:07.4±1.1, 19.°64S×70.°71W, h30^{km}, mb4.4*

ISC 23 10:23:06.2±1.3**, 19.°71S**±0.°03×**70.°78W**±0.°05**, h26**^{km}±9^{km}**, n132, σ1.^{s}40**/147**, mb4.6**/23**, 6C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.63	80	⇓*i*P	Pn	10 23 18.8	-0.7
PSGC				*i* S	Sn	10 23 28.2	-0.7
PSGC				IAML		10 23 31.1	
	comp=N,9µm,0.7s						
PSGCX	Pisagua	0.63	80		Pn	10 23 18.6	-0.9
PSGCX					Sn	10 23 28.1	-0.7
TA01	Diego Aracena	1.02	146	⇓*i*P	Pn	10 23 24.5	-0.3
TA01				*i* S	Sn	10 23 38.5	+0.2
TA01				IAML		10 23 41.9	
	comp=E,8µm,0.4s						
PB11	IPOC Station P	1.06	93	⇓*i*P	Pb	10 23 25.9	-0.2
PB11				*i* S	Sb	10 23 40.8	+1.2
PB11				IAML		10 23 43.3	
	comp=N,17µm,0.3s						
PB11	IPOC Station P	1.06	93		Pb	10 23 25.8	-0.2
PB11				Sn	Sb	10 23 40.2	+0.6
PB12	IPOC Station P	1.17	22	⇑*i*P	Pb	10 23 27.6	-0.3
PB12				*i* S	Sb	10 23 43.7	+1.0
PB12				IAML		10 23 46.2	
	comp=E,8µm,0.6s						
PB12	IPOC Station P	1.17	22		Pb	10 23 27.6	-0.3
PB12				Sn	Sb	10 23 43.9	+1.3
PATCX	Punta Patache	1.25	152	⇑*i*P	Pn	10 23 28.0	-0.1
PATCX				*i* S	Sn	10 23 45.0	+0.8
PATCX				IAML		10 23 50.5	
	comp=N,3µm,0.6s						
PATCX	Punta Patache	1.25	152		Pn	10 23 28.0	-0.1
PATCX				Sn	Sn	10 23 44.1	-0.1
AP01	Chacalluta	1.40	17	*e*P	Pb	10 23 30.8	-0.8
AP01				*i* S	Sb	10 23 49.1	+0.2
AP01				IAML		10 23 52.7	
	comp=E,27µm,0.6s						
GO01	Chusmiza	1.50	89	⇓*i*P	Pb	10 23 33.3	-0.3
GO01				*i* S	Sb	10 23 54.0	+1.6
GO01				IAML		10 23 56.1	
	comp=N,23µm,0.3s						
GO01	Chusmiza	1.50	89		Pb	10 23 33.4	-0.2
GO01				Sn	Sb	10 23 53.7	+1.3
PB08	IPOC Station P	1.59	106	⇓*i*P	Pb	10 23 34.5	-0.7
PB08				*i* S	Sb	10 23 55.5	+0.5
PB08				IAML		10 23 59.3	
	comp=E,3µm,0.3s						
PB01	IPOC Station P	1.80	138	⇑*i*P	Pn	10 23 36.5	+0.8
PB01				*i* S	Sn	10 23 58.9	+1.2
PB01				IAML		10 24 08.3	
	comp=N,3µm,0.5s						
PB01	IPOC Station P	1.80	138		Pn	10 23 36.4	+0.8
PB01				Sn	Sn	10 23 58.5	+0.8
PB02	IPOC Station P	1.80	153	⇑*i*P	Pn	10 23 35.9	+0.2
PB02				*i* S	Sn	10 23 57.6	-0.2
PB02				IAML		10 24 08.8	
	comp=E,7µm,0.6s						
PB16	IPOC Station P	1.82	42	⇑*i*P	Pb	10 23 38.2	-1.0
PB16				*i* S	Sb	10 24 03.2	+1.3
PB16				IAML		10 24 08.6	
	comp=N,7µm,0.4s						
PB16	IPOC Station P	1.82	42		Pb	10 23 38.2	-1.0
PB16					Sb	10 24 03.3	+1.4
PB07	IPOC Station P	2.17	157	IAML		10 24 28.7	
	comp=N,3µm,0.8s						
PB07	IPOC Station P	2.17	157		Pn	10 23 40.5	-0.3
PB09	IPOC Station P	2.53	145	⇑*i*P	Pn	10 23 47.0	+1.3
PB09				*i* S	Sn	10 24 16.2	+0.5
PB09	IPOC Station P	2.53	145		Pn	10 23 47.1	+1.3
PB04	IPOC Station P	2.68	167		Pn	10 23 46.9	-0.9
LVC	Limon Verde	3.37	149	Pn	Pn	10 23 58.9	+1.4
	comp=N,10nm,0.3s,baz=349,slow=7.0,SNR=64						
LVC				Sn	Sn	10 24 37.6	+0.7
	comp=N,62nm,0.3s,baz=100,slow=23,SNR=6.8						
LVC	Limon Verde	3.37	149	*e*P	Pn	10 23 58.8	+1.4
LVC				*i* S	Sn	10 24 38.5	+1.6
LVC	Limon Verde	3.37	149		Pn	10 23 58.7	+1.2
LVC				Sn	Sn	10 24 37.4	+0.5
LVC	Limon Verde	3.37	149	*e*P	Pn	10 23 58.9	+1.4
PB15	IPOC Station P	3.69	161		Pn	10 24 01.2	-0.5
PB10	IPOC Station P	3.79	177		Pn	10 24 01.3	-1.7
LPAZ	La Paz	4.24	37	Pn	Pb	10 24 14.3	-6.1
	comp=N,1.7nm,0.3s,baz=234,slow=7.2,SNR=56						
LPAZ				Lg	Lg	10 25 24.0	
	comp=N,2.3nm,0.3s,baz=195,slow=16,SNR=1.3						
LPAZ				LR	LR	10 25 59.7	
	comp=N,433nm,21.1s,baz=232,slow=44						
LPAZ	La Paz	4.24	37		Pb	10 24 14.4	-6.0
PB14	IPOC Station P	4.91	176		Pn	10 24 16.4	-2.2
GO02	Mina Guanaco	5.54	169		Pn	10 24 26.2	-1.0
NNA	Nana	9.64	322	Pn	Pn	10 25 22.4	-0.9
	comp=N,0.4nm,0.3s,baz=141,slow=14,SNR=1.3						
NNA	Nana	9.64	322		Pn	10 25 23.3	0.0
SIV	San Ignacio	9.96	70	Pn	Pn	10 25 26.7	-1.0
	comp=N,3.3nm,0.3s,baz=276,slow=9.3,SNR=35						
SIV				LR	LR	10 30 04.4	
	comp=N,363nm,18.8s,baz=290,slow=43						
GO04	Tololo Observa	10.42	180	Pn	Pn	10 25 32.1	-2.0
SAML	Samuel	12.98	36		Pn	10 26 10.1	+1.0
ROC1	El Roble	13.21	181	Pn	Pn	10 26 08.9	-3.5
CPUP	Villa Florida	14.02	121	Pn	Pn	10 26 22.9	-0.3
	comp=N,0.0nm,0.3s,baz=308,slow=13,SNR=4.8						
CPUP				LR	LR	10 32 48.1	
	comp=N,153nm,18.1s,slow=42						
CPUP	Villa Florida	14.02	121		Pn	10 26 22.1	-1.1
SALV	Santo Antonio	14.86	78	*e*P	Pn	10 26 35.4	+0.7
CLDB	Colider	16.91	61	*e*P	Pn	10 27 00.8	-0.4
TRCB	Terra Rica	17.19	103	*e*P	Pn	10 27 03.8	-0.9
ARAG	Araguaiana, MT	18.50	81	*e*P	Pn	10 27 21.2	+0.3
BB19B	Bebedouro	20.91	98	*e*P	P	10 27 46.7	-0.1
PLCA	Paso Flores	20.95	180	P	P	10 27 48.0	+0.8
	comp=N,4.2nm,0.8s,baz=12,slow=11,SNR=5.5						
PLCA	Paso Flores	20.95	180	P	P	10 27 47.5	+0.3
IPMB	Ipameri, GO	21.43	89	*e*P	P	10 27 51.1	-1.4
PTGA	Pitinga	21.63	31	P	P	10 27 53.0	-1.6
	comp=N,15nm,0.3s,baz=221,slow=15,SNR=38						
PTGA	Pitinga	21.63	31	P	P	10 27 53.3	-1.3
PTGA				IAmb	IAmb	10 27 54.0	
	comp=Z,16nm,0.3s						
PTGA	Pitinga	21.63	31	*e*P	P	10 27 53.3	-1.3
FLOC	Florencia	21.69	347	*e*P	P	10 28 00.9	+5.6
FLOC	Florencia	21.69	347	P	P	10 27 57.4	+2.1
BDFB	Brasilia	22.06	83	P	P	10 27 57.4	-2.0
	comp=Z,3.5nm,0.6s,baz=260,slow=11,SNR=5.7						
BDFB				LR	LR	10 38 05.5	
	comp=Z,184nm,18.6s,baz=243,slow=41						
BDFB	Brasilia	22.06	83	P	P	10 27 58.3	-1.1
GARC	Garzon, Huila	22.25	347	*e*P	P	10 28 02.6	+1.2
PCON	Cinco Dias	22.59	345	*e*P	P	10 28 15.1	+10
ORTC	Ortega, Tolima	23.88	349	*e*P	P	10 28 18.5	+0.6
YOTC	Yotoco, Valle	24.17	346	*e*P	P	10 28 21.0	+0.3
CHIC	Chingaza	24.36	353	*e*P	P	10 28 17.3	-5.4
RREF	El Recreo	24.87	349	*e*P	P	10 28 30.5	+2.9
SMTB	Santa Maria do	24.89	68	*e*P	P	10 28 27.8	+0.6
PLMC	San Jos del P	25.05	347	*e*P	P	10 28 32.3	+3.7
GUY2C	Guyana, Caldas	25.18	349	*e*P	P	10 28 31.6	+1.4
SPBC	San Pablo de B	25.41	352	*e*P	P	10 28 32.3	+0.4
NORC	Norcasia	25.43	350	*e*P	P	10 28 33.1	+1.0
RUSC	La Rusia	25.54	355	*e*P	P	10 28 33.7	+0.2
RUSC	La Rusia	25.54	355	P	P	10 28 34.1	+0.6
JANB	Januaria	25.67	84	*e*P	P	10 28 33.2	-1.0
CBOC	Ciudad Bolivar	25.93	348	*e*P	P	10 28 38.4	+1.7
HELC	Santa Helena	26.16	349	*e*P	P	10 28 38.8	-0.2
BARC	Barichara	26.24	355	*e*P	P	10 28 39.0	-0.6
PTBC	PUERTO BERRIO,	26.33	352	*e*P	P	10 28 39.3	-0.9
ZARC	Zaragoza, Cauc	27.33	351	*e*P	P	10 28 48.1	-1.0
SDV	Santo Domingo	28.42	0	P	P	10 28 59.4	+0.4
	comp=Z,0.9nm,0.4s,baz=202,slow=11,SNR=1.8						
SMLC	San Martn de	28.52	353	*e*P	P	10 28 57.9	-1.8
RCBR	Riachuelo	36.61	73	P	P	10 30 10.5	-0.1
	comp=Z,7.6nm,0.9s,baz=207,slow=2.3,SNR=1.7						
RCBR	Riachuelo	36.61	73	P	P	10 30 10.5	-0.1
RCBR				IAmb	IAmb	10 30 17.6	
	comp=Z,13nm,1.0s						
PDPR	Patillas Dam,	37.78	7		P	10 30 19.3	-1.1
PDPR				IAmb	IAmb	10 30 28.2	
	comp=Z,9.8nm,0.9s						
BANI	BANI	37.87	1	P	P	10 30 23.8	+2.6
656A	Willston	50.09	347	P	P	10 31 59.9	+0.9
Z50A	Ashland	54.62	344	P	P	10 32 32.4	-0.2
Z50A				IAmb	IAmb	10 32 49.0	
	comp=Z,11nm,1.4s						
V55A	Taylorsville	56.13	350	P	P	10 32 44.7	+1.2
V55A				IAmb	IAmb	10 32 59.0	
	comp=Z,8.6nm,1.3s						
SWET	Sewanee	56.49	345	P	P	10 32 45.6	-0.4
SWET				IAmb	IAmb	10 32 55.7	
	comp=Z,13nm,1.3s						
U49A	Red Boiling Sp	57.69	346	P	P	10 32 54.3	-0.1
MIAR	Mount Ida	58.15	338	P	P	10 32 58.4	+0.7
MIAR				IAmb	IAmb	10 33 00.6	
	comp=Z,9.7nm,1.4s						
TXAR	Lajitas Array	58.17	326	P	P	10 32 58.3	+0.2
	comp=Z,0.3nm,0.8s,baz=142,slow=8.0,SNR=2.6						
TXAR	Lajitas Array	58.17	326	P	P	10 32 57.7	-0.4
T49A	Edmonton	58.20	346	P	P	10 32 57.8	-0.2
T49A				IAmb	IAmb	10 33 03.9	
	comp=Z,20nm,1.4s						
Q56A	Snyder Ridge,	58.97	352	P	P	10 33 05.1	+1.8
Q56A				IAmb	IAmb	10 33 12.1	
	comp=Z,6.3nm,0.9s						
M56A	Emporium	61.27	354	P	P	10 33 20.2	+1.1
M56A				IAmb	IAmb	10 33 38.8	
	comp=Z,8.0nm,1.0s						
BRYW	Bryant College	61.32	359	P	P	10 33 20.5	+1.1
M54A	Oil Creek Stat	61.46	352	P	P	10 33 21.2	+0.8
M54A				IAmb	IAmb	10 33 22.8	
	comp=Z,7.7nm,1.1s						
F64A	Sherman	65.30	2	P	P	10 33 46.2	+0.6
D62A	Allapoint, All	66.50	1	P	P	10 33 54.4	+1.0
D53A	Lac Vacive, Po	66.77	355	P	P	10 33 56.0	+0.9
D53A				IAmb	IAmb	10 34 05.9	
	comp=Z,8.1nm,1.1s						
BATG	Bathurst New B	66.81	3	P	P	10 33 56.4	+1.0
VLDQ	Val d'Or	67.77	355	P	P	10 34 02.4	+1.0
DRLN	Deer Lake	69.67	9	P	P	10 34 13.6	+0.4
DBIC	Dimbokro	69.94	75	P	P	10 34 14.0	-1.7
	comp=Z,3.7nm,0.7s,baz=168,slow=3.6,SNR=4.0						
DBIC	Dimbokro	69.94	75	P	P	10 34 14.9	-0.8
DBIC				IAmb	IAmb	10 34 16.9	
	comp=Z,6.1nm,0.9s						
QSPA	South Pole Qui	70.47	180	P	P	10 34 20.2	+2.0
TPNV	Topopah Spring	70.81	323	P	P	10 34 23.5	+2.7
PDAR	Pinedale Array	71.70	331	P	P	10 34 27.5	+1.4
	comp=Z,0.3nm,0.6s,baz=141,slow=5.8,SNR=2.6						
NVAR	Mina Array Bea	73.01	323	P	P	10 34 35.6	+1.6
	comp=Z,0.2nm,0.5s,baz=167,slow=4.4,SNR=3.7						
NVAR	Mina Array Bea	73.01	323	P	P	10 34 35.2	+1.2
ULM	Lac du Bonnet	73.10	343	P	P	10 34 33.6	-0.3
	comp=Z,0.9nm,0.5s,baz=196,slow=2.9,SNR=2.3						
ULM	Lac du Bonnet	73.10	343	P	P	10 34 34.2	+0.3
TOA0	Torodi Ar. Sit	78.43	71	P	P	10 35 04.7	-0.5
TOA0				IAmb	IAmb	10 35 05.0	
	comp=Z,5.5nm,0.8s						
TORD	Torodi Ar. Bea	78.43	71	P	P	10 35 04.4	-0.8
	comp=Z,4.4nm,0.7s,baz=254,slow=5.0,SNR=20						
TORD	Torodi Ar. Bea	78.43	71	P	P	10 35 04.3	-0.9
TSUM	Tsumeb	82.24	108	P	P	10 35 26.6	+0.7
	comp=Z,2.0nm,0.8s,baz=233,slow=5.9,SNR=3.6						
TSUM	Tsumeb	82.24	108	P	P	10 35 26.1	+0.2
YKA	Yellowknife Ar	88.93	341	P	P	10 35 58.3	+0.4
	comp=Z,1.6nm,0.8s,baz=135,slow=5.1,SNR=31						
H11S2	WAKE ISLAND Hy	125.89	279	T	T	13 01 23.7	
	baz=101,slow=75,SNR=103						
H11S1	WAKE ISLAND Hy	125.90	279	T	T	13 01 24.3	
	baz=101,slow=75,SNR=70						
H11S3	WAKE ISLAND Hy	125.91	279	T	T	13 01 23.4	
	baz=101,slow=75,SNR=59						
H11N3	WAKE ISLAND Hy	125.93	280	T	T	13 01 24.9	
	baz=100,slow=74,SNR=16						
H11N2	WAKE ISLAND Hy	125.95	280	T	T	13 01 25.9	
	baz=100,slow=74,SNR=21						
H11N1	WAKE ISLAND Hy	125.95	280	T	T	13 01 26.1	
	baz=100,slow=74,SNR=7.2						
MAKZ	Makanchi	144.99	33		PKPdf	10 42 40.7	-0.4
MK31	Makanchi Array	145.16	33		PKPdf	10 42 41.1	-0.3
MKAR	Makanchi Array	145.16	33	PKP	PKPdf	10 42 41.5	+0.1
	comp=Z,3.0nm,0.8s,baz=324,slow=4.1,SNR=31						
MKAR	Makanchi Array	145.16	33		PKPdf	10 42 41.0	-0.4
KSH	Kashi	145.28	48	PKPbc	PKPbc	10 42 38.8	-3.0
KSH				pPKP	pPKPab	10 42 49.9	-0.2
KSH				PP	PP	10 46 01.6	+0.2
KSH				PKS	PKSdf	10 46 13.1	-4.5
MJAR	Matsushiro Arr	149.59	310	PKPbc	PKiKP	10 42 54.9	+0.2
	comp=Z,0.8nm,0.6s,baz=78,slow=0.2,SNR=4.8						
MJAR	Matsushiro Arr	149.59	310		PKiKP	10 42 54.7	-0.1
SONM	Songino Array	151.85	4	PKPbc	PKPbc	10 42 58.3	-0.6
	comp=Z,0.4nm,0.5s,baz=70,slow=1.7,SNR=3.8						
SONM	Songino Array	151.85	4		PKiKP	10 42 59.5	+0.3
LZH	Lanzhou	163.01	15	*e*PKP	PKPdf	10 43 07.8	+1.1
LZH				pPKP	pPKPdf	10 43 14.3	-0.6
LZH				sPKP		10 43 16.8	
LZH				PKP	PKPab	10 44 00.3	+4.1
CD2	Chengdu	167.81	23	PKP	PKPdf	10 43 09.3	-1.4

IDC 23 10:33:03.0±8.9**, 2.°14S**×**138.°28E, h0**^{km}**, mb3.4**/2**, mb1 3.6**/3**, mb1mx3.4**/24**, mbtmp3.4**/3**, ML3.5**/1**, Error ellipse: s-maj=384.7km s-min=31.8km az=84.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.11	192	P	Pn	10 37 15.8	-0.4
	0.2nm,0.3s,baz=11,slow=13,SNR=5.8						
WRA				Sn	Sn	10 40 27.0	-12
	baz=15,slow=22,SNR=4.8						
ASAR	Alice Springs	21.82	191	P	P	10 37 57.4	+0.3
	0.6nm,0.6s,baz=22,slow=11,SNR=12						
ASAR				S	S	10 41 54.8	-4.5
	1.5nm,0.9s,baz=15,slow=18,SNR=8.6						
MKAR	Makanchi Array	69.08	322	P	P	10 44 10.9	0.0
	0.4nm,0.7s,baz=114,slow=6.5,SNR=2.0						

ISC 23 10:40:20.4±2.0**, 51.°37N**±0.°09×**16.°26E**±0.°06**, h0**^{km}**, n14, σ1.^{s}15**/27**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.52	177	*e*Pg	Pg	10 40 31.5	+1.1
KSP				*e*Sg	Sb	10 40 40.0	-0.5
CHVC	Chvalec	0.79	189	*e*PG	Pg	10 40 36.3	+0.8
CHVC				*e*SG	Sb	10 40 48.0	-0.2
	comp=Z,8.9nm,0.7s						
OSTC	Ostas	0.81	182	*e*PG	Pg	10 40 37.0	+1.1
OSTC				*e*SG	Sb	10 40 49.1	+0.3
	comp=Z,6.8nm,0.3s						
UPC	Upice	0.87	190	*e*PG	Pg	10 40 37.4	+0.3
UPC				*e*SG	Sb	10 40 50.4	-0.2
	comp=Z,11nm,0.3s						
DPC	Dobruska-Polom	1.02	178	*e*PG	Pg	10 40 40.4	+0.6
DPC				*e*SG	Sb	10 40 54.9	+0.1
	comp=Z,7.5nm,0.5s						
KRLC	Kraliky	1.33	165	*e*PG	Pg	10 40 45.6	-0.3
KRLC				*e*SG	Sn	10 41 05.0	+0.2
	comp=Z,7.8nm,0.7s						
PVCC	Panska Ves	1.36	233	*e*PG	Pg	10 40 45.2	-1.1
PVCC				*e*SG	Sg	10 41 02.9	-1.0
	comp=Z,21nm,0.2s						
BRG	Berggiesshubel	1.54	252	PG	Pn	10 40 47.7	-1.3
BRG				SG	Sg	10 41 07.7	-2.0
	8.2nm,0.3s						
PRU	Pruhonice	1.76	219	*e*PG	Pn	10 40 52.3	+0.2
PRU				*e*SG	Sg	10 41 17.2	+0.4
	comp=Z,5.2nm,0.7s						
MORC	Moravsky Berou	1.79	152	*e*PN	Pn	10 40 52.1	-0.4
MORC				*e*SG	Sn	10 41 16.1	+0.1
CLL	Collm	2.04	270	*e*Pg	Pn	10 40 56.0	0.0
CLL				*e*Sg	Sn	10 41 23.0	+0.9
	comp=Z,4.0nm,0.4s						
VRAC	Vranov	2.07	174	*e*PN	Pn	10 40 56.4	0.0
NKC	Novy Kostel	2.67	246	*e*PG	Pn	10 41 08.2	+3.6
NKC				*e*SG	Sb	10 41 44.1	+1.8
	comp=Z,8.2nm,0.3s						
KHC	Kasperske Hory	2.82	219	*e*PG	Pb	10 41 10.9	-0.7
KHC				*e*SG	Sg	10 41 49.8	-1.1

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*IDC **23** 10:48:16.8±3.3, 21°.51S×176°.52W, h102^{km}±29^{km}, mb4.0/14, mb1 4.2/15, mb1mx4.1/24, mbtmp4.4/15, Error ellipse: s-maj=22.1km s-min=15.0km az=131.0*

*NEIC **23** 10:48:20.1±2.1, 21°.6S±0°.1×176°.4W±0°.1, h138^{km}±5^{km}, mb4.7/45, Error ellipse: s-maj=18.0km s-min=13.1km az=139.0*

ISC 23 10:48:25.6±0.4, 21°.73S±0°.06×176°.35W±0°.09, h183^{km}, n185, σ1^{s}17/185, mb4.5/32, 28C-2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	6.57	67	P	Pn	10 49 56.2	-4.0
	baz=6.4						
NIUE	Niue	6.57	67	Pn	Pn	10 49 56.4	-3.8
NIUE				Sn	Sn	10 51 06.0	-8.8
MSVF	Nonsavu	6.61	306	Pn	Pn	10 50 00.9	+0.2
GLKZ	Green Lake	7.63	190	S	Sn	10 51 38.5	-1.4
AFI	Afiamalu	8.91	30	P	Pn	10 50 19.8	-11
	0.6nm,0.3s,baz=79,slow=19,SNR=2.5						
AFI				S	Sn	10 51 53.8	-17
	2.0nm,0.3s,baz=85,slow=22,SNR=1.8						
AFI	Afiamalu	8.91	30		Pn	10 50 24.5	-6.4
DZM	Mont Dzumac	15.98	266	P	P	10 52 03.3	+2.8
	0.5nm,0.3s,baz=82,slow=17,SNR=7.1						
DZM	Mont Dzumac	15.98	266	P	P	10 52 03.8	+3.3
OUZ	Omahuta	16.07	211	P	P	10 52 01.1	-0.2
OUZ				IAmb	IAmb	10 52 05.4	
	comp=Z,42nm,1.4s						
HAZ	Te Kaha	16.76	196	P	P	10 52 09.2	+0.4
HAZ				S	S	10 55 02.2	-12
RUGZ	Raukumara Rang	16.98	196	P	Pn	10 52 12.4	-0.1
RUGZ				S	S	10 55 04.6	-15
MWZ	Matawai	17.37	196	P	Pn	10 52 16.6	-0.5
MWZ				S	S	10 55 16.3	-11
URZ	Urewera	17.41	197	P	P	10 52 15.4	-0.6
	comp=Z,3.0nm,0.3s,baz=326,slow=1.5,SNR=28						
URZ				S	S	10 55 15.7	-12
	comp=Z,1.9nm,0.3s,baz=317,slow=10,SNR=8.9						
URZ	Urewera	17.41	197	P	P	10 52 14.9	-1.1
URZ				IAmb	IAmb	10 52 18.6	
	comp=Z,39nm,1.3s						
URZ	Urewera	17.41	197	P	P	10 52 15.5	-0.6
TOZ	Tahuroa Road	17.43	202	P	Pn	10 52 19.3	+1.6
RAGZ	Rawiri	17.55	196	P	Pn	10 52 18.8	-0.4
MUGZ	Murupara	17.71	198	P	P	10 52 19.4	0.0
MTHZ	Maungataniwha	18.04	197	P	P	10 52 24.1	+1.1
HIZ	Hauiti	18.36	202	P	P	10 52 27.5	+1.1
HIZ				IAmb	IAmb	10 52 30.2	
	comp=Z,16nm,0.6s						
HIZ	Hauiti	18.36	202	P	Pn	10 52 29.4	+0.8
BKZ	Black Stump Fm	18.43	198	P	P	10 52 25.6	-1.6
BKZ	Black Stump Fm	18.43	198	P	P	10 52 25.7	-1.5
BHHZ	Black Hill Sta	18.86	198	P	P	10 52 30.3	-1.5
BFZ	Birch Farm	19.91	197	P	P	10 52 41.6	-1.5
BFZ				IAmb	IAmb	10 52 47.0	
	comp=Z,20nm,0.8s						
MSWZ	Moikau Station	20.87	198	P	P	10 52 51.0	-2.3
BHW	Baring Head	20.98	199	P	P	10 52 51.2	-3.1
PLWZ	Palliser	21.01	198	P	P	10 52 53.7	-1.2
QRZ	Quartz Range	21.25	204	P	P	10 52 56.0	-1.3
QRZ				IAmb	IAmb	10 52 59.9	
	comp=Z,22nm,0.7s						
NNZ	Nelson	21.28	202	P	P	10 52 55.2	-2.4
NNZ				IAmb	IAmb	10 53 13.0	
	comp=Z,31nm,1.2s						
TUWZ	Tuamarina	21.28	200	P	P	10 52 56.3	-1.3
BSWZ	Blackbirch Sta	21.56	200	P	P	10 52 58.3	-2.3
THZ	Tophouse	21.93	202	P	P	10 53 01.9	-2.5
KHZ	Kahutara	22.30	200	P	P	10 53 05.9	-2.0
LTZ	Lake Taylor	23.05	202	P	P	10 53 14.6	-0.2
LTZ				IAmb	IAmb	10 53 19.4	
	comp=Z,19nm,0.7s						
OXZ	Oxford	23.61	202	P	P	10 53 19.6	-0.3
OXZ				IAmb	IAmb	10 53 24.6	
	comp=Z,28nm,0.8s						
RPZ	Rata Peaks	24.30	203	P	P	10 53 26.2	+0.1
	comp=Z,14nm,0.7s,baz=301,slow=3.2,SNR=8.0						
RPZ	Rata Peaks	24.30	203	P	P	10 53 27.3	+1.2
RPZ				IAmb	IAmb	10 53 31.5	
	comp=Z,17nm,0.8s						
FOZ	Fox Glacier	24.60	205	P	P	10 53 28.1	-0.7
LBZ	Lake Benmore	25.19	203	P	P	10 53 33.9	-0.3
LBZ				IAmb	IAmb	10 53 49.4	
	comp=Z,20nm,1.2s						
WKZ	Wanaka	26.00	204	P	P	10 53 42.5	+1.0
WKZ				IAmb	IAmb	10 53 59.0	
	comp=Z,38nm,1.2s						
WHZ	Wether Hill Ro	27.31	204	P	P	10 53 54.7	+1.6
WHZ				IAmb	IAmb	10 54 11.8	
	comp=Z,27nm,1.3s						
ARMA	Armidale	29.96	247	P	P	10 54 18.1	+1.1
	baz=30,SNR=4.5						
ARMA	Armidale	29.96	247	P	P	10 54 16.8	-0.1
EIDS	Eidsvold	30.04	257	P	P	10 54 17.7	+0.1
	baz=30,SNR=7.5						
EIDS	Eidsvold	30.04	257	P	P	10 54 17.8	+0.3
EIDS				IAmb	IAmb	10 54 18.3	
	comp=Z,14nm,0.8s						
MGCD	Mangrove Creek	30.94	241	P	P	10 54 25.4	+0.1
	baz=31						
RMQ	Roma	32.14	255	P	P	10 54 36.3	+0.3
	baz=32,SNR=12						
CMSA	Cobar Meteorol	35.16	246	P	P	10 55 01.8	-0.3
	baz=35,SNR=8.0						
QLP	Quilpie	36.19	254	P	P	10 55 10.7	-0.1
	baz=36,SNR=20						
PMG	Port Moresby	37.13	284	P	P	10 55 16.5	-2.3
	comp=Z,21nm,0.8s,baz=74,slow=5.5,SNR=7.0						
PMG	Port Moresby	37.13	284	P	P	10 55 18.2	-0.6
STKA	Stephens Creek	38.67	246	P	P	10 55 31.3	-0.3
	baz=39,SNR=8.2						
STKA	Stephens Creek	38.67	246	P	P	10 55 30.1	-1.6
	comp=Z,4.6nm,0.8s,baz=103,slow=9.6,SNR=10						
STKA				PcP	PcP	10 57 40.2	+0.4
	comp=Z,1.1nm,0.7s,baz=38,slow=5.0,SNR=3.4						
STKA	Stephens Creek	38.67	246	P	P	10 55 31.3	-0.3
COEN	Coen	39.21	274	P	P	10 55 35.7	-0.6
	baz=39,SNR=4.7						
COEN	Coen	39.21	274	P	P	10 55 36.6	+0.3
COEN				IAmb	IAmb	10 55 36.9	
	comp=Z,14nm,1.0s						
HTT	Hallett	41.04	244	P	P	10 55 50.3	-0.9
	baz=41,SNR=5.0						
BBOO	Buckleboo	43.40	245	P	P	10 56 08.8	-1.4
	baz=44,SNR=5.0						
BBOO	Buckleboo	43.40	245	P	P	10 56 08.9	-1.4
AS31	Alice Springs	45.75	258	P	P	10 56 28.2	-0.8
ASAR	Alice Springs	45.75	258	P	P	10 56 27.6	-1.4
	comp=Z,17nm,1.0s,baz=88,slow=8.3,SNR=79						
ASAR				PcP	PcP	10 58 03.8	+0.1
	comp=Z,1.6nm,0.9s,baz=123,slow=3.9,SNR=5.3						
SDHHI	Sand Hill	45.76	28	P	P	10 56 23.1	-5.9
WRMHI	West Rim	45.77	28	P	P	10 56 22.7	-6.4
RIM	Rim	45.77	28	P	P	10 56 27.9	-1.2
WR0	Warramunga Arr	45.78	263	P	P	10 56 27.0	-2.2
WR0				IAmb	IAmb	10 56 28.3	
	comp=Z,14nm,1.2s						
UWE	Uwekahuna	45.79	28	P	P	10 56 23.3	-6.0
SBLHI	Steaming Bluff	45.80	28	P	P	10 56 24.2	-5.2
WB0	Warramunga Arr	45.96	263	P	P	10 56 28.6	-2.0
WB0				IAmb	IAmb	10 56 29.7	
	comp=Z,14nm,0.9s						
WB2	Warramunga Arr	45.96	263	P	P	10 56 29.2	-1.4
WB2				IAmb	IAmb	10 56 29.8	
	comp=Z,16nm,0.9s						
WRAB	Tennant Creek	45.96	263	P	P	10 56 28.3	-2.3
WRAB				IAmb	IAmb	10 56 29.7	
	comp=Z,15nm,1.0s						
WRA	Warramunga Arr	45.97	263	P	P	10 56 28.7	-2.0
	comp=Z,11nm,0.9s,baz=97,slow=7.9,SNR=54						
WRA				PcP	PcP	10 58 04.7	+0.3
	comp=Z,1.1nm,0.9s,baz=92,slow=4.2,SNR=3.3						
WRA	Warramunga Arr	45.97	263	P	P	10 56 29.4	-1.3
FORT	Forrest	50.24	247	P	P	10 57 01.6	-1.7
	baz=50,SNR=12						
FORT	Forrest	50.24	247	P	P	10 57 01.9	-1.4
WRKA	Warakurna	50.63	255	P	P	10 57 04.8	-1.5
	baz=51,SNR=46						
KNRA	Kununurra	52.12	267	P	P	10 57 15.9	-1.5
	baz=52,SNR=6.1						
KNRA	Kununurra	52.12	267	P	P	10 57 16.0	-1.5
KNRA				IAmb	IAmb	10 57 17.0	
	comp=Z,16nm,0.9s						
FITZ	Fitzroy Crossi	54.40	263	P	P	10 57 32.8	-1.2
	baz=54,SNR=7.9						
FITZ	Fitzroy Crossi	54.40	263	P	P	10 57 33.6	-0.4
FITZ				IAmb	IAmb	10 57 34.1	
	comp=Z,17nm,1.3s						
SOEI	Soe	58.08	272	P	P	10 57 59.9	-0.5
KLBR	Kellerberrin	58.94	245	P	P	10 58 05.3	-0.6
	baz=59,SNR=6.1						
MEEK	Meekatharra	58.98	251	P	P	10 58 05.6	-0.7
	baz=59,SNR=3.4						
NWAO	Narrogin (SRO)	59.21	244	P	P	10 58 08.1	+0.4
BLDU	Ballidu	59.97	246	P	P	10 58 12.1	-0.8
	baz=60,SNR=8.6						
MUN	Mundaring	60.19	245	P	P	10 58 13.6	-0.9
	baz=60,SNR=3.2						
MORW	Morawa	60.80	248	P	P	10 58 18.2	-0.3
	baz=61,SNR=5.7						
MORW	Morawa	60.80	248	P	P	10 58 18.3	-0.3
CASY	Casey	63.52	206	P	P	10 58 37.7	+1.7
CASY				IAmb	IAmb	10 58 44.0	
	comp=Z,12nm,1.1s						
QSPA	South Pole Qui	68.35	180	P	P	10 59 09.3	+2.4
QSPA				IAmb	IAmb	10 59 11.0	
	comp=Z,17nm,1.5s						
MJAR	Matsushiro Arr	72.11	323	P	P	10 59 27.5	-2.5
	comp=Z,0.9nm,0.5s,baz=144,slow=5.9,SNR=6.1						
MJAR	Matsushiro Arr	72.11	323	P	P	10 59 28.6	-1.5
KSRS	Korea Array	78.83	318	P	P	11 00 07.9	-0.3
	comp=Z,1.3nm,1.0s,baz=131,slow=5.6,SNR=4.5						
KSAR	Wonju Array Be	78.84	318	P	P	11 00 08.1	-0.2
USRK	Ussuriysk Ar.	80.85	325	P	P	11 00 18.7	-0.2
	comp=Z,2.2nm,0.8s,baz=159,slow=4.5,SNR=4.7						
USRK	Ussuriysk Ar.	80.85	325	P	P	11 00 18.6	-0.3
NVAR	Mina Array Bea	80.87	42	P	P	11 00 20.1	+0.7
	comp=Z,0.3nm,0.7s,baz=221,slow=8.8,SNR=4.3						
NVAR	Mina Array Bea	80.87	42	P	P	11 00 19.8	+0.3
MAW	Mawson	80.93	199	P	P	11 00 19.8	+0.7
	comp=Z,7.6nm,0.9s,baz=150,slow=4.5,SNR=3.6						
MAW	Mawson	80.93	199	P	P	11 00 19.3	+0.2
NJ2	Nanjing	81.85	309	*e*P	P	11 00 27.8	+3.3
GAMB	Gambell	85.30	2	P	P	11 00 41.4	+0.1
GAMB				IAmb	IAmb	11 00 42.9	
	comp=Z,17nm,1.1s						
SYO	Syowa Base	85.87	192	⇑*e*P	P	11 00 43.0	-1.2
SYO	Syowa Base	85.87	192	⇑*e*PcP	P	11 00 44.8	+0.6
TXAR	Lajitas Array	86.43	57	P	P	11 00 50.0	+2.3
	comp=Z,1.0nm,1.0s,baz=224,slow=6.9,SNR=5.2						
TXAR	Lajitas Array	86.43	57	P	P	11 00 49.1	+1.4
ILAR	Eielson Array	89.17	12	P	P	11 00 59.0	-0.9
	comp=Z,0.9nm,0.9s,baz=213,slow=7.3,SNR=4.7						
ILAR	Eielson Array	89.17	12	P	P	11 00 58.9	-1.0
HHC	Hu-ho-hao-te	91.31	314	*e*P	P	11 01 11.1	+0.6
CMAR	Chiang Mai Arr	91.98	289	P	P	11 01 13.4	-0.6
	comp=Z,0.8nm,0.3s,baz=112,slow=3.3,SNR=6.8						
CMAR	Chiang Mai Arr	91.98	289	P	P	11 01 12.7	-1.3
LZH	Lanzhou	94.74	307	⇑P	P	11 01 28.0	+1.5
LZH				pP	pwP	11 02 13.9	+0.1
LZH				sP	sP	11 02 33.3	+2.8
LZH				PP	PP	11 05 22.1	+4.3
YKA	Yellowknife Ar	96.98	24	P	P	11 01 36.1	+0.3
	comp=Z,0.4nm,0.9s,baz=224,slow=3.5,SNR=5.4						
ZALV	Zalesovo Beam	112.42	321	PKiKP	PKiKP	11 06 38.2	-1.3
	comp=Z,1.2nm,0.8s,baz=263,slow=1.2,SNR=4.2						
ZALV	Zalesovo Beam	112.42	321		PKiKP	11 06 38.6	-0.8
MKAR	Makanchi Array	113.16	313	PKiKP	PKiKP	11 06 40.1	-1.0
	comp=Z,0.6nm,0.8s,baz=66,slow=3.0,SNR=7.1						
MKAR	Makanchi Array	113.16	313		PKiKP	11 06 39.6	-1.5
KSH	Kashi	116.85	304	PKP	PKiKP	11 06 50.3	+1.7
KSH				sPKP		11 07 49.3	
KSH				PP	PP	11 08 08.1	+7.8
KSH				PKS		11 10 25.1	
KSH	Kashi	116.85	304	SS	SS	11 24 02.4	+8.8
BRVK	Borovoye	121.07	320		PKPdf	11 06 55.1	-1.0
KK31	Karatay Array	121.22	308	PKPdf	PKPdf	11 06 55.4	-1.4
KKAR	Karatay Array	121.22	308		PKPdf	11 06 55.7	-1.1
KBL	Kabul	121.83	298	PKPdf	PKPdf	11 06 58.2	-0.3
ABKAR	Akbulak array	128.04	316		PKPdf	11 07 09.2	-0.3
ARCES	ARCESS Array B	130.40	350	PKP	PKiKP	11 07 14.1	-0.3
	comp=Z,3.5nm,1.0s,baz=56,slow=3.1,SNR=4.1						
ARCES	ARCESS Array B	130.40	350		PKiKP	11 07 14.4	0.0
AKASG	Malin Array Be	144.83	332	PKP	PKPab	11 07 38.6	-1.4
	comp=Z,1.1nm,0.4s,baz=41,slow=4.8,SNR=26						
AKASG	Malin Array Be	144.83	332		PKPab	11 07 37.9	-2.1
AKBB	Malin Array Si	144.83	332		PKPab	11 07 38.5	-1.5
MBAR	Mbarara	145.48	233		PKPab	11 07 44.2	+0.4
SORM	Soroca	147.05	329	⇑P	PKPbc	11 07 46.3	-0.4
GAZ	Gaziantep	147.18	305		PKPbc	11 07 47.5	0.0
ILGA	Ilgaz	148.15	314		PKPbc	11 07 50.3	+0.1
TLCR		148.80	325	⇑P	PKPbc	11 07 51.5	+0.1
BR131	Keskin Array S	148.81	312		PKPbc	11 07 51.2	-0.6
BRTR	Keskin Array B	148.81	312	PKPbc	PKPbc	11 07 51.1	-0.7
	comp=Z,3.5nm,0.9s,baz=129,slow=4.0,SNR=17						
BRTR	Keskin Array B	148.81	312		PKPbc	11 07 50.9	-0.9
OJC	Ojcow	148.85	340	*e*PKP	PKiKP	11 07 51.8	-0.9
OJC	Ojcow	148.85	340		PKPbc	11 07 51.5	+0.1
BURAR	Bucovina Array	148.88	331	⇑P	PKiKP	11 07 52.3	-0.6
BURAR	Bucovina Array	148.88	331		PKPbc	11 07 51.8	+0.2
GHRR		148.96	327	⇑P	PKiKP	11 07 53.4	+0.5
BIZ	Bicaz	148.97	329	⇑P	PKiKP	11 07 52.5	-0.5
CFR	Carcaliu	149.17	325	⇑P	PKPbc	11 07 52.0	-0.3
TOPG	Topolog	149.24	324	⇓P	PKPbc	11 07 52.1	-0.4
KSP	Ksiaz	149.30	344	*e*PKP	PKPbc	11 07 52.7	+0.3
NIE	Niedzica	149.37	338	*e*PKP	PKiKP	11 07 53.6	-0.2
PLOR	Plostina	149.48	327	⇑P	PKPbc	11 07 52.9	-0.2
OSTC	Ostas	149.58	344	⇑*e*PKP	PKiKP	11 07 53.9	-0.3
CLL	Collm	149.59	348	*e*PKPbc	PKPdf	11 07 50.0	+1.6
	comp=Z,27nm,1.2s						
CLL				*i* PKPab	PKPab	11 07 58.6	-0.1
	comp=Z,10.0nm,1.1s						
CLL	Collm	149.59	348		PKiKP	11 07 54.6	+0.5
CHVC	Chvalec	149.59	344	⇑*e*PKP	PKiKP	11 07 53.8	-0.4
HARR	Harsova	149.60	325	⇑P	PKPbc	11 07 53.1	-0.3
TRPA	Tarpa	149.61	335	⇑P	PKiKP	11 07 53.6	-0.6
UPC	Upice	149.68	344	⇑*e*PKP	PKiKP	11 07 54.3	0.0
DPC	Dobruska-Polom	149.74	344	⇑*e*PKP	PKiKP	11 07 54.6	+0.1
DPC				*e*PKPAB	PKPab	11 07 59.2	-0.3
BRG	Berggiesshubel	149.81	347	*e*PKP	PKiKP	11 07 54.1	-0.5
	comp=Z,18nm,1.1s						
BRG				*e*		11 07 59.1	
	comp=Z,4.2nm,0.9s						
KRLC	Kraliky	149.87	343	⇑*e*PKP	PKiKP	11 07 54.5	-0.3
LANS	Liptovska Anna	149.88	339	*e*PKP	PKiKP	11 07 56.1	+1.3
MORC	Moravsky Berou	149.93	342	⇑P	PKiKP	11 07 55.0	0.0
MORC	Moravsky Berou	149.93	342	*e*PKP	PKiKP	11 07 54.6	-0.3
MORC	Moravsky Berou	149.93	342		PKiKP	11 07 54.8	-0.1
DOPR	Dopca	150.02	329	⇑P	PKiKP	11 07 54.7	-0.5
MLR	Muntele Rosu	150.09	328	⇑P	PKPbc	11 07 54.7	0.0
MDUB	Mudurnu	150.10	315		PKPbc	11 07 54.9	0.0
PRU	Pruhonice	150.52	346	⇑*e*PKP	PKiKP	11 07 55.7	-0.4
DRGR		150.61	333	⇓P	PKPbc	11 07 55.1	-0.7
VRAC	Vranov	150.62	343	⇑P	PKiKP	11 07 55.9	-0.3
VRAC	Vranov	150.62	343	*e*PKP	PKiKP	11 07 56.0	-0.3
VYHS	Vyhne	150.66	339	*e*PKP	PKiKP	11 07 56.1	-0.3
ARR	Arges	150.82	329	⇑P	PKiKP	11 07 57.5	+0.5
CSS	Mathiatis	150.87	303		PKPbc	11 07 56.4	-0.4
KRUC	Moravsky	150.90	343	*e*PKP	PKiKP	11 07 56.6	-0.3
KHC	Kasperske Hory	151.54	346	⇑*e*PKP	PKiKP	11 07 58.5	+0.2
KHC				*e*PKPAB	PKPab	11 08 06.5	-0.5
GZR	Gura Zlata	151.66	331	⇑P	PKiKP	11 07 58.3	-0.4
GERES	GERESS Array B	151.78	346	PKPbc	PKiKP	11 07 59.4	+0.5
	comp=Z,0.5nm,0.4s,baz=56,slow=2.4,SNR=9.0						
GERES	GERESS Array B	151.78	346		PKPbc	11 07 58.5	0.0
ISP	Isparta	151.84	311		PKPbc	11 07 57.5	-1.5
ELND	Elena	151.88	324	⇑P	PKiKP	11 07 59.1	0.0
BZS	Buzias	152.00	333	⇑P	PKiKP	11 07 59.1	-0.2
MDVR	Moldovita	152.62	331	⇑P	PKiKP	11 08 00.4	-0.3
MANT	Manisa	152.87	314		PKPbc	11 08 01.0	-0.4
ALN	Alexandroupoli	153.09	320	PKPbc	PKPbc	11 08 00.9	-0.6
TORD	Torodi Ar. Bea	171.26	167	PKP	PKPdf	11 08 12.1	-0.7
	comp=Z,0.8nm,0.8s,baz=209,slow=1.5,SNR=3.5						
TORD				PKPab	PKPab	11 09 34.4	+0.9
	comp=Z,1.5nm,1.0s,baz=177,slow=5.7,SNR=4.0						
TORD	Torodi Ar. Bea	171.26	167		PKPdf	11 08 11.1	-1.7
TORD					PKPab	11 09 35.0	+1.4

IDC 23 11:10:15.5±2.6, 6°.19S×130°.17E, h0^{km}, mb4.0/1, mb1 3.9/3, mb1mx3.5/30, mbtmp3.7/3, ML3.5/2, MS2.4/1, Ms1 2.4/1, ms1mx2.1/32, Error ellipse: s-maj=185.0km s-min=31.3km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	10.43	276	LR	LR	11 16 28.7	
	comp=Z,22nm,21.8s,baz=92,slow=36						
WRA	Warramunga Arr	14.26	164	Pn	Pn	11 13 38.0	-0.9
	0.2nm,0.3s,baz=346,slow=13,SNR=7.5						
WRA				Sn	Sn	11 16 05.5	-13
	0.9nm,0.3s,baz=328,slow=23,SNR=7.7						
ASAR	Alice Springs	17.75	169	P	P	11 14 24.8	-0.3
	0.2nm,0.3s,baz=351,slow=12,SNR=19						
ASAR				S	Sn	11 17 27.7	-15
	0.1nm,0.3s,baz=354,slow=26,SNR=5.4						
MKAR	Makanchi Array	67.64	327	P	P	11 21 14.3	0.0
	0.8nm,0.5s,baz=131,slow=6.4,SNR=6.3						

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*ISK **23** 11:12:20.9, 33°.89N×25°.50E, h56^{km}, ML3.9/16*

*NIC **23** 11:12:23.7±0.0, 33°.80N×25°.90E, h12^{km}±8^{km}, Ml4.5/5*

*THE **23** 11:12:24.9, 34°.11N×25°.60E, h0^{km}±1^{km}, ML3.1/5, Error ellipse: s-maj=3.8km s-min=0.6km az=169.0*

*MOS **23** 11:12:24.8±1.0, 34°.11N×25°.56E, h45^{km}, mb4.6/31, Error ellipse: s-maj=6.0km s-min=2.9km az=90.8*

*NEIC **23** 11:12:25.1±2.6, 33°.93N±0°.07×25°.60E±0°.07, h37^{km}±6^{km}, mb4.4/46, ML3.7(THE), ML3.6(ATH), Error ellipse: s-maj=10.2km s-min=7.7km az=194.0*

*MED_RC **23** 11:12:25.0±1.5, 34°.00N×25°.61E, h25^{km}±4^{km}, MW4.3/4, Moment Tensor Solution.Mantle waves: s4,c5; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M_{rr}1.16±2.62; $M_{\theta\theta}$-2.70±.79; $M_{\phi\phi}$1.54±3.03; $M_{r\theta}$2.41±.89; $M_{\theta\phi}$-1.17±2.08; $M_{\phi r}$-1.57±.91; Best double couple: $M_0$3.89000×10^{15} NP1:ϕ_s218.00000°, δ39.00000°, λ18.00000°. NP2: ϕ_s114.00000°, δ79.00000°, λ128.00000°. Principal axes: T 3.9000, Plg43.0000°, Azm60.0000°; N -0.0100, Plg37.0000°, Azm285.0000°; P -3.8900, Plg24.0000°, Azm175.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*ATH **23** 11:12:26.0, 34°.18N×25°.57E, h36^{km}±2^{km}, ML3.3/15 Error ellipse: s-maj=5.4km s-min=1.5km az=346.0*

*HLW **23** 11:12:26.6, 33°.62N×25°.86E, h31^{km}±18^{km}, Md4.3, Ml4.0*

*IDC **23** 11:12:26.1±1.9, 34°.02N×25°.53E, h46^{km}±17^{km}, mb3.9/20, mb1 4.1/30, mb1mx4.0/49, mbtmp4.2/30, ML3.9/9, MS3.4/10, Ms1 3.4/10, ms1mx3.0/53, Error ellipse: s-maj=17.1km s-min=12.5km az=156.0*

*GII **23** 11:12:28.6±0.0, 33°.68N×26°.32E, h8^{km}, MD3.5/2, Mm3.6/6*

ISC 23 11:12:23.9±1.2, 33°.82N±0°.04×25°.67E±0°.04, h32^{km}±8^{km}, n412, σ1^{s}70/438, mb4.3/59, MS3.3/6, 35C-7D, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRMA	Ierapetra Chan	1.19	2	P	Pn	11 12 43.0	-1.3
FRMA				S	Sn	11 12 57.6	-1.8
	755nm,0.8s						
LAST	Lasithi	1.34	353	P	Pn	11 12 44.8	-1.7
LAST				S	Sn	11 13 00.8	-2.6
	640nm,0.8s						
LAST	Lasithi	1.34	353	P	Pn	11 12 44.8	-1.7
LAST				AML	AML	11 13 17.8	
	comp=E,2513µm,1.0s						
LAST				AML	AML	11 13 25.1	
	comp=N,2415µm,0.7s						
ZKR	Zakros	1.37	19	P	Pn	11 12 46.2	-0.5
ZKR				S	Sn	11 13 03.0	-0.8
	comp=N,1µm,1.1s						
ZKR	Zakros	1.37	19	P	Pn	11 12 45.8	-0.9
ZKR				S	Sn	11 13 01.6	-2.1
ZKR				AML	AML	11 13 12.1	
	comp=E,3932µm,1.1s						
ZKR				AML	AML	11 13 12.3	
	comp=N,1747µm,1.1s						
ZKR	Zakros	1.37	19	⇑P	Pn	11 12 47.2	+0.5
ZKR				S	Sb	11 13 06.8	+0.8
ZKR				AML	AML	11 13 11.7	
	comp=N,4.0nm,1.1s						
ZKR				AML	AML	11 13 11.7	
	comp=N,4.0nm,1.1s						
SIVA	Sivas	1.39	329	P	Pn	11 12 45.9	-1.2
SIVA				S	Sn	11 13 02.4	-1.9
	comp=N,5µm,0.8s						
SIVA	Sivas	1.39	329	P	Pn	11 12 45.8	-1.2
SIVA				AML	AML	11 13 07.7	
	comp=N,5517µm,0.8s						
SIVA				AML	AML	11 13 09.8	
	comp=E,10141µm,0.8s						
STIA	Sitia Lasithi	1.42	14	P	Pn	11 12 47.3	-0.2
NPS	Neapolis	1.44	358	P	Pn	11 12 46.9	-0.8
NPS	Neapolis	1.44	358	P	Pn	11 12 46.7	-1.0
NPS				AML	AML	11 13 17.9	
	comp=N,1865µm,0.9s						
NPS				AML	AML	11 13 23.2	
	comp=E,2831µm,0.8s						
NPS	Neapolis	1.44	358	P	Pn	11 12 47.5	-0.2
IDI	Anoyia	1.60	336	P	Pn	11 12 49.7	-0.3
IDI				S	Sn	11 13 07.8	-1.8
	comp=E,555nm,0.6s						
IDI	Anoyia	1.60	336	P	Pn	11 12 49.9	-0.1
	comp=E,27nm,0.3s,baz=161,slow=15,SNR=299						
IDI	Anoyia	1.60	336	P	Pn	11 12 49.9	-0.1
IDI				AML	AML	11 13 28.6	
	comp=N,963µm,0.6s						
IDI				AML	AML	11 13 31.9	
	comp=E,1268µm,0.7s						
GVD	Gavdhos	1.66	308	P	Pn	11 12 50.4	-0.3
GVD				AML	AML	11 13 24.3	
	comp=N,2181µm,0.6s						
GVD				AML	AML	11 13 25.7	
	comp=E,2955µm,0.5s						
GVDS	Gavdos	1.66	308	P	Pn	11 12 51.1	+0.4
VAM	Vamos	1.99	323	P	Pn	11 12 55.4	+0.1
VAM	Vamos	1.99	323	P	Pn	11 12 55.5	+0.1
VAM				AML	AML	11 13 21.3	
	comp=N,1656µm,0.7s						
VAM				AML	AML	11 13 22.1	
	comp=E,1721µm,0.5s						
VAM	Vamos	1.99	323	P	Pn	11 12 56.0	+0.6
KARP	Karpathos	2.11	35	P	Pn	11 12 58.0	+1.0
KARP	Karpathos	2.11	35	P	Pn	11 12 58.2	+1.1
KARP				S	Sn	11 13 21.3	-0.9
KARP				AML	AML	11 13 27.9	
	comp=E,1388µm,0.6s						
KARP				AML	AML	11 13 28.0	
	comp=N,1361µm,1.0s						
KARP	Karpathos	2.11	35		Pn	11 12 58.1	+1.0

KARP	Karpathos	2.11	35	⇑P	Pn	11 12 58.2	+1.1
KARP				S	Sb	11 13 24.8	-2.7
KARP				AML	AML	11 13 27.4	
	comp=N,1.3nm,0.5s						
KARP				AML	AML	11 13 27.4	
	comp=N,1.3nm,0.5s						
KARP				AML	AML	11 13 27.5	
	comp=N,1.4nm,0.6s						
KARP				AML	AML	11 13 27.5	
	comp=N,1.4nm,0.6s						
IMMV	Iera Moni Meta	2.15	320	P	Pn	11 12 57.9	+0.4
IMMV	Iera Moni Meta	2.15	320	P	Pn	11 12 57.7	+0.2
IMMV				AML	AML	11 13 53.3	
	comp=N,1287µm,0.8s						
IMMV				AML	AML	11 13 54.0	
	comp=E,1660µm,0.9s						
CHAN	Chania	2.16	322	P	Pn	11 12 57.6	0.0
RODP	Rodopos	2.34	318	P	Pn	11 13 00.0	-0.2
SLUM	Salum	2.36	190	S	Sn	11 13 26.0	-2.2
	baz=195						
SLUM				AMP		11 13 00.0	
	baz=195						
ANAF	Anafi Island	2.53	2	P	Pn	11 13 01.7	-1.0
ANAF	Anafi Island	2.53	2	P	Pn	11 13 01.7	-1.0
ANAF				AML	AML	11 13 37.3	
	comp=N,1699µm,0.4s						
ANAF				AML	AML	11 13 39.0	
	comp=E,1764µm,0.4s						
THR6	Thira Island,	2.54	355	P	Pn	11 13 02.0	-0.8
SAP1	Santorini-Akro	2.54	355	P	Pn	11 13 02.2	-0.7
THR9	Santorini-Faro	2.54	354	P	Pn	11 13 02.0	-0.9
THR9	Santorini-Faro	2.54	354	P	Pn	11 13 01.8	-1.1
SANT	Santorini	2.55	356	P	Pn	11 13 01.7	-1.3
SANT	Santorini	2.55	356	⇑P	Pn	11 13 01.9	-1.2
SANT	Santorini	2.55	356		Pn	11 13 01.5	-1.6
STAX	Taxiarchis Har	2.58	355	P	Pn	11 13 02.2	-1.2
THR8	Santorini-Mono	2.58	357	P	Pn	11 13 02.2	-1.2
THR3	Thira Island,	2.59	355	P	Pn	11 13 02.4	-1.1
THR3	Thira Island,	2.59	355	P	Pn	11 13 02.5	-1.1
THR5	Thira Island,	2.60	354	P	Pn	11 13 02.8	-0.9
THR5	Thira Island,	2.60	354	P	Pn	11 13 02.7	-1.1
THR2	Thira island,	2.63	356	P	Pn	11 13 02.6	-1.5
ANKY	Antikythira Is	2.82	317	P	Pn	11 13 07.0	+0.3
ANKY	Antikythira Is	2.82	317	P	Pn	11 13 07.2	+0.4
ANKY				AML	AML	11 14 18.6	
	comp=E,552µm,0.9s						
ANKY				AML	AML	11 14 19.8	
	comp=N,600µm,1.1s						
IOSP	Ios island	2.91	354	P	Pn	11 13 07.0	-1.0
IOSP	Ios island	2.91	354	P	Pn	11 13 07.0	-1.0
IOSP				AML	AML	11 13 40.6	
	comp=E,807µm,0.5s						
IOSP				AML	AML	11 13 47.7	
	comp=N,641µm,0.7s						
AMGA	Amorgos Island	3.01	3	P	Pn	11 13 08.0	-1.3
AMGA	Amorgos Island	3.01	3	P	Pn	11 13 07.8	-1.5
MHLO	Agia Marina, M	3.04	340	P	Pn	11 13 09.1	-0.7
MHLO	Agia Marina, M	3.04	340	P	Pn	11 13 08.8	-1.0
MHLA	Plaka, Milos I	3.09	341	P	Pn	11 13 09.7	-0.7
ARG	Arkhangelos	3.12	39	P	Pn	11 13 12.2	+1.3
ARG	Arkhangelos	3.12	39	P	Pn	11 13 12.1	+1.3
ARG				AML	AML	11 13 50.6	
	comp=E,430µm,0.5s						
ARG				AML	AML	11 13 52.9	
	comp=N,487µm,0.6s						
ARG	Arkhangelos	3.12	39	PN	Pn	11 13 10.9	0.0
ARG				SN	Sn	11 13 45.9	-1.2
ARG	Arkhangelos	3.12	39	P	Pn	11 13 12.4	+1.5
ARG	Arkhangelos	3.12	39	⇑P	Pn	11 13 11.7	+0.8
ARG				S	Sn	11 13 48.1	+1.0
KTHA	Kythira Island	3.24	319	P	Pn	11 13 12.0	-0.4
APE	Apeiranthos	3.24	358	P	Pn	11 13 10.7	-1.8
APE				AML	AML	11 13 49.5	
	comp=E,175µm,0.5s						
APE				AML	AML	11 13 49.5	
	comp=N,252µm,0.4s						
APE	Apeiranthos	3.24	358	⇑P	Pn	11 13 10.8	-1.8
APE	Apeiranthos	3.24	358	PN	Pn	11 13 10.5	-2.1
APE				SN	Sn	11 13 45.9	-4.2
APE	Apeiranthos	3.24	358	⇑P	Pn	11 13 10.8	-1.8
DAT	Datca	3.29	28	P	Pn	11 13 12.9	-0.4
DAT	Datca	3.29	28	PN	Pn	11 13 12.5	-0.8
SERI	Serifos	3.47	344	P	Pn	11 13 14.5	-1.2
BODT	Bodrum	3.50	22	PN	Pn	11 13 14.8	-1.3
VLI	Veliai	3.65	323	P	Pn	11 13 17.3	-0.9
VLI	Veliai	3.65	323	P	Pn	11 13 17.7	-0.5
DALY	Dalyan (Mula)	3.86	38	PN	Pn	11 13 20.4	-0.5
TURN	Turunc	3.87	37	PN	Pn	11 13 17.0	-4.2
YER	Yerkesik	3.93	32	P	Pn	11 13 22.2	+0.1
YER	Yerkesik	3.93	32	PN	Pn	11 13 21.6	-0.5
YER	Yerkesik	3.93	32	P	Pn	11 13 22.1	0.0
FETY	Fethiye	3.96	44	PN	Pn	11 13 22.1	-0.3
KSL	Kastellorizon	3.96	53	P	Pn	11 13 22.8	+0.3
KSL				AML	AML	11 14 13.9	
	comp=N,226µm,0.5s						
KSL				AML	AML	11 14 14.8	
	comp=E,239µm,0.5s						
KSL	Kastellorizon	3.96	53	⇑P	Pn	11 13 22.4	0.0
KSL				S	Sn	11 14 08.8	+1.0
SMG	Samos	3.99	13	P	Pn	11 13 21.7	-1.1
AKAS	Kas	4.03	52	PN	Pn	11 13 23.3	-0.1
KRND	KRANIDI	4.10	331	P	Pn	11 13 23.4	-1.0
DID	Didima	4.18	332	P	Pn	11 13 23.9	-1.5
VLY	Voula,Athens	4.30	340	P	Pn	11 13 26.6	-0.4
KARY	Karystos	4.32	347	P	Pn	11 13 26.5	-0.8
PYL	PYLOS	4.44	315	P	Pn	11 13 29.7	+0.7
PTL	Penteli	4.46	341	P	Pn	11 13 28.4	-1.0
PTL	Penteli	4.46	341	P	Pn	11 13 28.4	-1.0
AYDB	Zeytinkoy-Aydi	4.49	23	PN	Pn	11 13 28.9	-0.9
ELL	Elmali	4.53	49	PN	Pn	11 13 30.6	+0.2
ELL	Elmali	4.53	49	P	Pn	11 13 31.2	+0.8
ELL	Elmali	4.53	49		Pn	11 13 31.2	+0.8
ELL	Elmali	4.53	49	P	Pn	11 13 31.1	+0.8
ITM	Ithomi	4.53	319	P	Pn	11 13 29.6	-0.8
ITM	Ithomi	4.53	319		Pn	11 13 29.5	-0.8
CHOS	Chios island	4.57	4	P	Pn	11 13 29.5	-1.3
CHOS	Chios island	4.57	4	PN	Pn	11 13 28.8	-2.0
SWA2		4.57	182	P	Pn	11 13 32.2	+1.4
	baz=185						
SWA2				AMP		11 14 00.0	
	baz=185						
SWA2				S	Sn	11 14 17.4	-5.4
	baz=185						
URLA	Izmir	4.59	9	PN	Pn	11 13 29.6	-1.5
LTK	Loutraki	4.73	333	P	Pn	11 13 31.8	-1.2
VIL2	Platees	4.79	337	P	Pn	11 13 32.1	-1.8
KORT	Korkueli	4.96	49	PN	Pn	11 13 36.3	0.0
KLV	Kalavryta, Ach	5.09	327	P	Pn	11 13 36.9	-1.1
ANTB	Antalya	5.10	52	PN	Pn	11 13 38.2	+0.2
MRKA	Markates	5.16	342	P	Pn	11 13 37.7	-1.1
MANT	Manisa	5.21	26		Pn	11 13 39.1	-0.7
KULA	Kula-Manisa	5.27	26	PN	Pn	11 13 39.6	-0.9
LAKA	Lakka	5.33	327	P	Pn	11 13 41.4	+0.2
KALE	Kalithea	5.38	329	P	Pn	11 13 42.2	+0.2
OSC2	CSNet OBS 4	5.56	96	P	Pn	11 13 44.8	+0.4
OSC2				S	Sn	11 14 47.5	+0.2
ISP	Isparta	5.61	43	P	Pn	11 13 46.4	+1.2
ISP	Isparta	5.61	43		Pn	11 13 46.4	+1.2
AKMS	Akamas	5.63	76	P	Pn	11 13 44.8	-0.6
AKMS				AML	AML	11 14 46.9	
	comp=E,0.6nm,0.3s						
AKMS				AML	AML	11 14 49.1	
	comp=E,0.9nm,0.4s						
NATA	Nata	5.79	79	P	Pn	11 13 47.9	+0.4
AGG	Agios Georgios	5.85	334	P	Pn	11 13 47.4	-0.9
AGG	Agios Georgios	5.85	334		Pn	11 13 47.4	-0.9
ALFC	Alefka	5.87	75	⇑P	Pn	11 13 48.0	-0.7
ALFC				AML	AML	11 14 54.9	
	comp=E,0.9nm,0.5s						
ALFC				AML	AML	11 14 56.6	
	comp=E,1.0nm,0.3s						
GAZI	Gazipasa	5.96	64	PN	Pn	11 13 49.3	-0.6
SZAC	Souni	6.04	79	⇑P	Pn	11 13 51.4	+0.4
SZAC				AML	AML	11 15 02.2	
	comp=E,0.7nm,0.6s						
SZAC				AML	AML	11 15 02.7	
	comp=E,0.8nm,0.5s						
LEF	Lefka	6.10	76	PN	Pn	11 13 51.7	-0.1
SEYD	Seydisehir-KON	6.17	53	PN	Pn	11 13 52.6	-0.2
ASGA	Asgata	6.34	79	P	Pn	11 13 55.2	0.0
HDMB	Hadim	6.39	59	PN	Pn	11 13 55.6	-0.3
CSS	Mathiatis	6.43	78	PN	Pn	11 13 56.6	+0.2
CSS	Mathiatis	6.43	78	Pn	Pn	11 13 57.3	+0.9
CSS				Sn	Sn	11 15 04.5	-4.2
CSS	Mathiatis	6.43	78		Pn	11 13 57.6	+1.2
CSS	Mathiatis	6.43	78	⇑P	Pn	11 13 57.0	+0.6
KOT	Kottamia	6.52	125	AMP		11 15 00.0	
	baz=124						
TEKE	Tekeli-Mersin	6.53	67	PN	Pn	11 13 57.7	0.0
OUR	Ouranopolis	6.64	349	P	Pn	11 13 59.2	0.0
GLL	Jalalah	6.66	128	P	Pn	11 13 59.9	+0.3
	baz=127						
MVOU	Mavrovouni	6.69	78	⇑P	Pn	11 14 01.3	+1.5
HHAG	Hagoal	6.69	123	S	Sn	11 15 08.6	-6.5
	baz=122						
EDC	Edincik	6.74	14	P	Pn	11 14 00.8	+0.2
LIT	Litokhoron	6.76	339	P	Pn	11 13 59.8	-1.1
LIT	Litokhoron	6.76	339		Pn	11 13 59.8	-1.1
KONT	Konya--Tatoy	6.81	51	PN	Pn	11 14 01.3	-0.3
AKKU	Akkuyu-Mersin	6.87	68	PN	Pn	11 14 02.3	-0.1
TEVE	Tevekalti-Mers	6.88	66	PN	Pn	11 14 02.6	0.0
IKL	Isikli	7.00	68	PN	Pn	11 14 03.9	-0.3
HFRF	Wahat Farafira	7.03	160	P	Pn	11 14 05.7	+1.1
	baz=161						
ALN	Alexandroupoli	7.07	2	P	Pn	11 14 05.2	+0.1
ALN	Alexandroupoli	7.07	2	Pn	Pn	11 14 05.2	+0.1
KEBE	Keben-Mersin	7.09	66	PN	Pn	11 14 05.4	-0.1
KIZT	Kizilcal	7.11	43	PN	Pn	11 14 04.9	-0.9
IGT	Igoumenitsa	7.13	325	P	Pn	11 14 08.8	+2.8
SUZ	Suez	7.27	121	P	Pn	11 14 08.3	+0.4
	baz=120						
RSH		7.38	111	P	Pn	11 14 08.8	-0.7
	baz=109						
SRS	Serrai	7.47	348	P	Pn	11 14 09.5	-1.1
SRS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GRG	Griva	7.58	341	P	Pn	11 14 11.5	-0.7
GRG				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KNT	Kendrikon	7.65	344	P	Pn	11 14 12.1	-1.0
KNT				pmax	pmax		
	comp=Z,10.0nm,0.7s						
FNA	Florina	7.75	335	P	Pn	11 14 14.6	+0.2
FNA	Florina	7.75	335		Pn	11 14 14.6	+0.2
KZIT	Kziot	7.93	109	Pn	Pn	11 14 16.6	-0.4
KZIT				Sn	Sn	11 15 40.8	-4.8
SLTI	Sal'it	8.02	99	Pn	Pn	11 14 17.6	-0.6
MMA0B	Mount Meron ar	8.18	93	Pn	Pn	11 14 20.6	+0.2
MMA0B				Sn	Sn	11 15 48.2	-3.5
MMAI	Mount Meron Ar	8.18	93	P	Pn	11 14 18.8	-1.6
	comp=Z,3.8nm,0.3s,baz=271,slow=12,SNR=9.7						
MMAI				S	Sn	11 15 48.5	-3.2
	comp=Z,7.9nm,0.3s,baz=258,slow=23,SNR=8.6						
GRB	Gharib	8.24	130	P	Pn	11 14 21.5	+0.3
	baz=130						
MMLI	Mount Malkishu	8.29	97	Pn	Pn	11 14 22.8	+0.8
MMLI				Sn	Sn	11 15 49.1	-5.5
PLD	Plovdiv	8.30	355	P	Pn	11 14 22.6	+0.6
PLD				pmax	pmax		
	comp=Z,1.0nm,1.2s						
YTIR	Yattir	8.34	105	Pn	Pn	11 14 22.3	-0.3
YTIR				Sn	Sn	11 15 50.9	-4.8
NATI	Neve Ativ	8.42	91	Sn	Sn	11 15 54.0	-3.6
DSI	Dead Sea	8.48	103	Pn	Pn	11 14 24.1	-0.5
DSI				Sn	Sn	11 15 54.3	-4.9
SCTE	Santa Cesarea	8.49	319	Pn	Pn	11 14 22.6	-2.0
KRMI	Paran Flat	8.53	113	Pn	Pn	11 14 25.8	+0.6
KRMI				Sn	Sn	11 15 55.6	-4.8
PRNI	Paran	8.64	111	Pn	Pn	11 14 27.1	+0.4
PRNI				Sn	Sn	11 15 58.7	-4.4
BR131	Keskin Array S	8.69	45c	iP	Pn	11 14 27.8	+0.3
BR131	Keskin Array S	8.69	45		Pn	11 14 28.2	+0.8
BRTR	Keskin Array B	8.69	45	P	Pn	11 14 27.6	+0.1
	comp=Z,0.3nm,0.3s,baz=228,slow=14,SNR=23						
BRTR				S	Sn	11 16 00.5	-3.9
	comp=Z,0.0nm,0.3s,baz=209,slow=25,SNR=4.0						
BRTR				LR	LR	11 18 59.5	
	comp=Z,236nm,19.7s,baz=202,slow=46						
BRTR	Keskin Array B	8.69	45	i P	Pn	11 14 28.0	+0.5
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BRTR	Keskin Array B	8.69	45		Pn	11 14 28.9	+1.5
GHAJ	Ghor Haditha	8.72	104	Pn	Pn	11 14 27.9	+0.1
HRFI	Mount Harif	8.81	113	Pn	Pn	11 14 29.6	+0.6
MBRI	Mt Berech	8.83	115	Pn	Pn	11 14 28.8	-0.6
MBRI				Sn	Sn	11 16 03.6	-4.2
EIL	Elat	8.92	115	P	Pn	11 14 30.5	0.0
	comp=Z,0.9nm,0.3s,baz=315,slow=3.1,SNR=7.2						
EIL				S	Sn	11 16 03.9	-6.0
	comp=Z,0.7nm,0.3s,baz=351,slow=13,SNR=2.0						
EIL	Elat	8.92	115	Pn	Pn	11 14 29.8	-0.7
TIP	Timpagrande	8.95	309	⇑P	Pn	11 14 28.8	-2.1
TIP	Timpagrande	8.95	309		Pn	11 14 28.8	-2.1
VTS	Vitosha	8.99	348	⇑P	Pn	11 14 28.7	-2.8
VTS	Vitosha	8.99	348	⇑P	Pn	11 14 28.7	-2.8
VTS	Vitosha	8.99	348	Pn	Pn	11 14 30.9	-0.7
CEL	Celeste	9.07	302	Pn	Pn	11 14 31.8	-0.8
ELND	Elena	9.09	1	⇓P	Pn	11 14 33.2	+0.3
ASF	Jabal al Asfar	9.57	97	P	Pn	11 14 39.9	+0.4
	comp=Z,0.3nm,0.3s,baz=220,slow=7.9,SNR=2.3						
ASF				S	Sn	11 16 20.9	-5.1
	comp=Z,0.4nm,0.3s,baz=308,slow=19,SNR=1.7						
RAZG	Razgrad	9.75	4	⇑P	Pn	11 14 41.2	-0.7
VAE	Valguarnera	9.86	295	P	Pn	11 14 43.0	-0.4
	comp=Z,1.3nm,0.3s,baz=37,slow=20,SNR=3.9						
VAE				S	Sn	11 16 25.8	-7.3
	comp=Z,1.4nm,0.3s,baz=195,slow=12,SNR=2.2						
PDG	Podgorica	9.97	331	⇓P	Pn	11 14 38.4	-6.3
PDG	Podgorica	9.97	331	Pn	Pn	11 14 42.3	-2.5
MDVR	Moldovita	11.36	346	⇑P	Pn	11 15 02.6	-1.3
MLR	Muntele Rosu	11.66	1	P	Pn	11 15 06.8	-1.2
	comp=Z,0.2nm,0.3s,baz=230,slow=4.4,SNR=3.3						
MLR				LR	LR	11 20 23.6	
	comp=Z,255nm,19.9s,baz=120,slow=42						
MLR	Muntele Rosu	11.66	1		Pn	11 15 06.2	-1.8
GZR	Gura Zlata	11.77	350	⇑P	Pn	11 15 11.6	+2.1
GZR	Gura Zlata	11.77	350	⇑P	Pn	11 15 11.6	+2.1
BZS	Buzias	12.18	346	⇑P	Pn	11 15 13.3	-1.8
BZS	Buzias	12.18	346	⇑P	Pn	11 15 13.3	-1.8
BLY	Banja Luka	12.73	331	⇑P	Pn	11 15 19.0	-3.6
NRCA	Norcia	13.33	316	Pn	Pn	11 15 30.9	0.0
KEST	Kesra	13.56	283	P	Pn	11 15 34.5	+0.5
	comp=Z,0.4nm,0.3s,baz=227,slow=10,SNR=1.8						
KEST	Kesra	13.56	283		Pn	11 15 35.6	+1.6
LZRR	Lazarevskoye	14.68	43	⇑eP	Pn	11 15 48.6	-0.5
BCA	Borcka	14.74	54	⇑P	P	11 15 57.5	+1.8
SOKA	Soboth	15.17	331	ePn	Pn	11 15 50.8	-5.0
	comp=Z,2.7nm,0.5s,SNR=5.1						
ARSA	Arzberg	15.45	333	Pn	Pn	11 15 55.8	-3.6
	comp=Z,3.2nm,0.7s						
VYHS	Vyhne	15.53	343	eP	Pn	11 15 58.0	-2.4
VYHS	Vyhne	15.53	343	ePN	Pn	11 15 58.0	-2.4
ARXR	Arkhyz	15.56	47	⇑eP	Pn	11 16 00.9	-0.1
DOMR	Dombai	15.63	48	⇓iP	Pn	11 16 02.1	+0.2
FVI	Forni Avoltri	16.09	326	P	P	11 16 11.7	+1.0
FVI				pmax	pmax		
	comp=Z,11nm,1.2s						
KBA	Koelnbreinsper	16.20	328	P	P	11 16 14.2	+2.1
KBA				pmax	pmax		
	comp=Z,16nm,0.7s						
CTI	Castel Tesino	16.24	323	P	Pn	11 16 06.9	-2.7
CTI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CTI	Castel Tesino	16.24	323	Pn	Pn	11 16 06.9	-2.7
NEY	Neytrino	16.30	50	⇑iP	Pn	11 16 11.9	+1.4
ABTA	Abfaltersbach	16.32	326	i P	P	11 16 13.4	+0.1
	comp=Z,11nm,0.7s						
MOA	Molln	16.43	332	eP	P	11 16 14.1	-0.3
	comp=Z,11nm,0.8s						
ONI	Oni	16.47	53	P	P	11 16 16.2	+1.3
SHA1	Shidzhatmaz	16.51	48	⇑eP	Pn	11 16 13.0	-0.2
SALO	Salr	16.54	320	P	P	11 16 16.6	+0.9
SALO				IAmb	IAmb	11 16 17.1	
	comp=Z,22nm,0.8s						
KIV	Kislovodsk	16.64	48	eP	P	11 16 18.8	+1.9
KIV				pmax	pmax		
	comp=Z,60nm,1.1s						
KIV				MLR	MLR		
	comp=Z,67nm,13.0s						
KIV	Kislovodsk	16.64	48	P	P	11 16 18.8	+1.9
KIV				IAmb	IAmb	11 16 21.1	
	comp=Z,16nm,0.9s						
KVAR	Kislovodsk Arr	16.64	48	P	P	11 16 16.7	-0.2
	baz=104,slow=19,SNR=2.4						
KBZ	Khabaz	16.65	49	P	Pn	11 16 16.3	+1.5
	comp=Z,0.1nm,0.3s,baz=261,slow=7.0,SNR=15						
KBZ	Khabaz	16.65	49	⇓eP	Pn	11 16 15.4	+0.7
KRUC	Moravsky	16.72	338	P	Pn	11 16 16.4	+0.8
KRUC				pmax	pmax		
	comp=Z,6.0nm,1.5s						
KRUC	Moravsky	16.72	338	ePN	Pn	11 16 16.4	+0.8
ZEI	Tsey	16.85	53	eP	Pn	11 16 17.7	+0.2
ZEI				pmax	pmax		
	comp=Z,19nm,0.9s						
VRAC	Vranov	16.88	339	P	Pn	11 16 14.9	-2.7
	comp=Z,0.3nm,0.3s,baz=169,slow=5.2,SNR=2.2						
VRAC				LR	LR	11 24 17.6	
	comp=Z,92nm,19.7s,baz=165,slow=43						
VRAC	Vranov	16.88	339	ePN	Pn	11 16 17.8	+0.2
NCK	Nalchik	16.98	50	⇑eP	Pn	11 16 20.1	+1.2
MORC	Moravsky Berou	17.04	342	P	Pn	11 16 16.7	-2.9
MORC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MORC	Moravsky Berou	17.04	342	ePN	Pn	11 16 16.9	-2.7
MORC	Moravsky Berou	17.04	342		Pn	11 16 16.7	-2.9
KIEV	Kiev	17.06	8	P	Pn	11 16 18.0	-1.8
AKASG	Malin Array Be	17.07	8	P	Pn	11 16 17.1	-2.8
	comp=Z,3.3nm,0.3s,baz=199,slow=11,SNR=34						
AKASG	Malin Array Be	17.07	8c	eP	Pn	11 16 17.6	-2.3
AKASG				pmax	pmax		
	comp=Z,20nm,0.6s						
AKASG	Malin Array Be	17.07	8	P	Pn	11 16 17.8	-2.1
AKBB	Malin Array Si	17.07	8	P	Pn	11 16 17.7	-2.2
AKBB				pmax	pmax		
	comp=Z,27nm,0.8s						
AKBB	Malin Array Si	17.07	8		Pn	11 16 17.7	-2.2
AKBB				IAmb	IAmb	11 16 20.5	
	comp=Z,27nm,0.8s						
WTTA	Wattenberg	17.11	326	ePn	Pn	11 16 19.0	-1.7
	comp=Z,4.4nm,0.7s						
WTTA	Wattenberg	17.11	326	P	Pn	11 16 18.8	-1.9
WTTA				pmax	pmax		
	comp=Z,15nm,1.1s						
WATA	Walderalm	17.19	326	eP	Pn	11 16 20.4	-1.2
	comp=Z,5.5nm,0.6s,SNR=7.6						
SQTA	Sankt Quirin	17.28	325	eP	Pn	11 16 22.1	-0.6
	comp=Z,5.6nm,0.5s						
FETA	Feichten	17.37	324	eP	P	11 16 24.9	-0.2
	comp=Z,4.3nm,0.5s,SNR=4.5						
MOTA	Moosalm	17.42	325	ePn	Pn	11 16 22.7	-1.8
	comp=Z,5.9nm,0.9s						
GEC2	GERESS Array S	17.46	333	eP	Pn	11 16 25.3	+0.3
	comp=Z,13nm,0.8s,baz=134,slow=11						
GEC2	GERESS Array S	17.46	333	P	Pn	11 16 22.3	-2.6
GEC2				pmax	pmax		
	comp=Z,16nm,1.0s						
GEC2	GERESS Array S	17.46	333		Pn	11 16 21.6	-3.4
GERES	GERESS Array B	17.46	333	P	Pn	11 16 21.9	-3.0
	comp=Z,0.6nm,0.3s,baz=150,slow=11,SNR=26						
GERES				LR	LR	11 23 54.2	
	comp=Z,58nm,21.9s,baz=114,slow=40						
GERES	GERESS Array B	17.46	333	P	Pn	11 16 21.7	-3.3
GERES	GERESS Array B	17.46	333	P	Pn	11 16 21.6	-3.3
KRLC	Kraliky	17.51	341	eP	Pn	11 16 24.1	-1.4
KRLC	Kraliky	17.51	341	eP	Pn	11 16 24.1	-1.4
DAVOX	Davos/Dischmat	17.64	322	P	Pn	11 16 25.2	-2.0
	comp=Z,0.2nm,0.3s,baz=145,slow=12,SNR=12						
RETA	Reutte	17.68	325	eP	Pn	11 16 26.7	-1.0
	comp=Z,3.5nm,0.6s,SNR=4.7						
KHC	Kasperske Hory	17.74	333	eP	Pn	11 16 26.2	-2.1
KHC				ex	x	11 16 29.2	
KHC				epP	pP	11 16 37.1	+0.5
KHC	Kasperske Hory	17.74	333	eP	Pn	11 16 26.2	-2.1
KHC	Kasperske Hory	17.74	333		Pn	11 16 26.4	-1.9
DPC	Dobruska-Polom	17.89	340	eP	Pn	11 16 29.3	-0.9
DPC	Dobruska-Polom	17.89	340	eP	Pn	11 16 29.3	-0.9
FUR	Furstenfeldbru	17.94	327	eP	Pn	11 16 29.8	-1.0
	comp=Z,34nm,1.0s,baz=134,slow=11						
FUR	Furstenfeldbru	17.94	327	P	Pn	11 16 30.3	-0.5
FUR				pmax	pmax		
	comp=Z,41nm,0.8s						
WET	Wettzell	18.02	332	eP	P	11 16 32.1	+0.1
	comp=Z,29nm,1.4s,baz=134,slow=11						
WET	Wettzell	18.02	332	P	Pn	11 16 28.9	-2.9
WET				pmax	pmax		
	comp=Z,20nm,1.3s						
OSTC	Ostas	18.10	340	eP	Pn	11 16 30.6	-2.2
PRU	Pruhonice	18.12	336	eP	Pn	11 16 29.8	-3.1
PRU	Pruhonice	18.12	336	eP	Pn	11 16 29.8	-3.1
BEL	Belsk	18.35	350	P	P	11 16 33.1	-2.4
BEL				pmax	pmax		
	comp=Z,43nm,0.7s						
GRB1	Grafenberg Arr	18.71	330	P	P	11 16 39.1	-0.5
GRB1				pmax	pmax		
	comp=Z,34nm,1.0s						
SENIN	Lac Senin/Sane	18.77	317	P	P	11 16 39.2	-1.3
ROTZ	Rotzenmuhle	18.78	332	eP	P	11 16 39.4	-1.0
	comp=Z,5.9nm,1.1s,baz=134,slow=11						
MANZ	Manzenberg	19.00	332	eP	P	11 16 40.8	-1.9
	comp=Z,9.2nm,0.9s,baz=134,slow=11						
SLE	Schleitheim	19.00	322	P	P	11 16 41.6	-1.2
SLE				pmax	pmax		
	comp=Z,15nm,1.3s						
NKC	Novy Kostel	19.07	333	P	P	11 16 41.8	-1.7
NKC				pmax	pmax		
	comp=Z,3.0nm,1.5s						
GRA1	Grafenberg Arr	19.12	330	P	P	11 16 42.4	-1.6
GRA1				IAmb	IAmb	11 16 46.0	
	comp=Z,22nm,0.9s						
GRF	Grafenberg Arr	19.12	330	eP	Pn	11 16 44.9	-0.1
	comp=Z,24nm,0.9s,baz=134,slow=11						
GRF	Grafenberg Arr	19.12	330	P	P	11 16 42.7	-1.4
GRF				pmax	pmax		
	comp=Z,28nm,0.9s						
TANN	Tannenbergstha	19.21	334	eP	P	11 16 44.2	-0.9
	comp=Z,20nm,0.8s,baz=134,slow=11						
PLN	Plauen	19.38	333	eP	P	11 16 46.1	-0.8
	comp=Z,7.5nm,0.8s,baz=134,slow=11						
BFO	Black Forest	19.45	323	P	P	11 16 48.0	+0.2
BFO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BFO	Black Forest	19.45	323	P	P	11 16 48.0	+0.2
MOX	Moxa	19.71	333	P	P	11 16 49.3	-1.2
MOX				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CLL	Collm	19.76	336	eP	P	11 16 50.0	-1.0
	comp=Z,10.0nm,0.9s						
CLL				ePP	PnPn	11 17 07.0	+0.2
CLL	Collm	19.76	336	eP	P	11 16 50.0	-1.0
CLL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CLL	Collm	19.76	336		P	11 16 51.4	+0.4
VSR	Storozhevoye	19.97	25	eP	P	11 16 53.6	+0.3
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SUW	Suwalki	20.26	356	P	P	11 16 54.8	-1.6
SUW				pmax	pmax		
	comp=Z,53nm,0.8s						
SUW	Suwalki	20.26	356	P	P	11 16 54.8	-1.6
UBBA	Unterbreizbach	20.49	331	eP	Pn	11 17 01.0	-0.1
	comp=Z,17nm,1.4s,baz=134,slow=11						
TNS	Taunus Mts	20.71	327	eP	Pn	11 17 02.9	-1.0
	comp=Z,36nm,1.3s,baz=134,slow=11						
TNS	Taunus Mts	20.71	327	P	Pn	11 17 04.3	+0.4
TNS				pmax	pmax		
	comp=Z,30nm,1.1s						
TAM	Tamanrasset	20.83	243	P	Pn	11 17 06.9	+1.3
TAM				pmax	pmax		
	comp=Z,4.0nm,0.4s						
VRH	Novokhopyorsk	20.94	29	eP	P	11 17 02.8	-0.9
VRH				pmax	pmax		
	comp=Z,40nm,0.6s						
LPSR	Galich'ya Gora	21.05	23	eP	P	11 17 02.6	-2.3
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GTTG	Gottingen	21.06	332	eP	P	11 17 04.7	-0.4
	comp=Z,36nm,0.9s,baz=134,slow=11						
CLZ	Clausthal	21.14	333	eP	P	11 17 04.7	-1.3
	comp=Z,8.6nm,0.8s,baz=134,slow=11						
WLF	Walferdange	21.41	324	P	P	11 17 12.6	+3.7
WLF	Walferdange	21.41	324	eP	P	11 17 12.2	+3.3
	comp=Z,29nm,1.0s,baz=134,slow=11						
WLF	Walferdange	21.41	324	P	P	11 17 11.9	+3.0
WLF				pmax	pmax		
	comp=Z,25nm,0.9s						
WLF	Walferdange	21.41	324	P	P	11 17 11.9	+3.0
MEM	Membach	22.10	325	P	P	11 17 16.0	-0.2
MEM	Membach	22.10	325	P	P	11 17 16.1	-0.2
MEM				pmax	pmax		
	comp=Z,16nm,1.3s						

BUG	Bochum--Univer	22.10	328	eP	P	11 17 19.4	+3.1
	comp=Z,27nm,0.9s,baz=134,slow=11						
BSTI	Sart Tilman	22.30	325	P	P	11 17 17.1	-1.3
DOU	Dourbes	22.46	323	P	P	11 17 19.5	-0.7
OBN	Obninsk	22.61	16	LR	LR	11 27 13.2	
	comp=Z,47nm,18.0s,baz=119,slow=40						
OBN	Obninsk	22.61	16	⇓eP	P	11 17 22.2	+0.5
OBN				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BSEG	Bad Segeberg	22.86	336	eP	P	11 17 21.4	-2.8
	comp=Z,14nm,0.9s,baz=134,slow=11						
BSEG	Bad Segeberg	22.86	336	P	P	11 17 21.8	-2.5
BSEG				pmax	pmax		
	comp=Z,17nm,1.2s						
ESDC	Sonseca Array	24.39	292	P	P	11 17 39.7	+0.4
	comp=Z,0.5nm,0.5s,baz=92,slow=9.0,SNR=1.3						
VSU	Vasula	24.66	1	⇑eP	P	11 17 39.7	-1.7
VSU				pmax	pmax		
	comp=Z,132nm,2.5s						
GEYT	Alibeck	26.53	72	P	P	11 18 01.0	+2.3
	comp=Z,2.2nm,0.8s,baz=255,slow=10,SNR=2.3						
GEYT	Alibeck	26.53	72	P	P	11 17 58.9	+0.2
HFS	Hagfors	27.47	347	P	P	11 18 05.4	-1.4
	comp=Z,4.3nm,0.7s,baz=140,slow=7.2,SNR=6.9						
HFS				LR	LR	11 30 34.0	
	comp=Z,59nm,18.8s,baz=130,slow=40						
FINES	FINESS Array B	27.64	0	P	P	11 18 06.2	-2.1
	comp=Z,4.7nm,0.6s,baz=162,slow=11,SNR=27						
FINES	FINESS Array B	27.64	0	P	P	11 18 05.5	-2.8
FIA1	FINESS Array S	27.64	0	P	P	11 18 06.3	-2.0
FIA1				IAmb	IAmb	11 18 06.9	
	comp=Z,7.3nm,0.8s						
KLMR	Klimovskoe	28.50	14	eP	P	11 18 13.0	-3.0
KLMR				pmax	pmax		
	comp=Z,22nm,0.8s						
KLMR	Klimovskoe	28.50	14	eP	P	11 18 13.0	-3.0
KLMR				AMP		11 18 15.2	
	comp=Z,22nm,0.8s						
NAO01	NORSAR Array S	28.69	345	P	P	11 18 16.5	-1.2
NB2	NORSAR Subarra	28.80	345	P	P	11 18 16.5	-2.2
	comp=Z,0.1nm,0.4s,baz=156,slow=9.3						
NOA	NORSAR Array B	28.80	345	P	P	11 18 16.9	-1.7
	comp=Z,0.8nm,0.8s,baz=166,slow=6.2,SNR=5.1						
NOA				LR	LR	11 30 12.6	
	comp=Z,29nm,18.2s,baz=160,slow=37						
NOA	NORSAR Array B	28.80	345	P	P	11 18 17.0	-1.7
AKTO	Aktyubinsk	28.87	45	P	P	11 18 19.0	-0.4
	comp=Z,4.3nm,0.6s,baz=251,slow=8.8,SNR=20						
NBO00	NORSAR Array S	28.88	345	P	P	11 18 18.9	-0.6
SUF	Sumiainen	28.92	0	P	P	11 18 17.6	-2.1
SUF				pmax	pmax		
	comp=Z,19nm,1.8s						
EKA	Eskdalemuir Ar	29.38	326	P	P	11 18 22.2	-1.7
	comp=Z,2.8nm,0.7s,baz=140,slow=9.5,SNR=6.9						
ABKAR	Akbulak array	29.62	48	P	P	11 18 27.1	+1.0
TOA0	Torodi Ar. Sit	29.98	232	P	P	11 18 30.9	+1.4
TOA0				IAmb	IAmb	11 18 31.3	
	comp=Z,5.1nm,0.8s						
TORD	Torodi Ar. Bea	29.98	232	P	P	11 18 30.0	+0.4
	comp=Z,2.9nm,0.7s,baz=36,slow=7.9,SNR=19						
TORD	Torodi Ar. Bea	29.98	232	P	P	11 18 30.4	+0.8
PRGR	Permogore	30.63	19	eP	P	11 18 32.7	-2.1
PRGR				pmax	pmax		
	comp=Z,13nm,0.9s						
OUL	Oulu	31.29	0	P	P	11 18 38.3	-2.3
OUL				pmax	pmax		
	comp=Z,19nm,2.2s						
ARU	Arti	31.89	35	⇑eP	P	11 18 46.3	+0.3
ARU				pmax	pmax		
	comp=Z,3.0nm,1.6s						
MSF	Maaselka	32.19	3	P	P	11 18 46.3	-2.2
MSF				pmax	pmax		
	comp=Z,21nm,2.7s						
ARCES	ARCESS Array B	35.76	360	P	P	11 19 17.4	-2.1
	comp=Z,3.8nm,0.8s,baz=175,slow=7.8,SNR=11						
ARCES				LR	LR	11 35 10.8	
	comp=Z,64nm,20.9s,baz=248,slow=38						
ARCES	ARCESS Array B	35.76	360	P	P	11 19 17.7	-1.8
ARCES	ARCESS Array B	35.76	360	P	P	11 19 17.6	-1.8
KKAR	Karatay Array	35.95	62	P	P	11 19 23.2	+1.8
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KKAR	Karatay Array	35.95	62	P	P	11 19 23.2	+1.8
KKAR	Karatay Array	35.95	62	P	P	11 19 22.3	+0.8
KKAR				IAmb	IAmb	11 19 23.2	
	comp=Z,2.2nm,0.8s						
BRVK	Borovoye	36.92	45	ceP	P	11 19 30.0	+0.4
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRVK	Borovoye	36.92	45	P	P	11 19 29.0	-0.6
BRVK				IAmb	IAmb	11 19 31.7	
	comp=Z,3.3nm,0.9s						
DBIC	Dimbokro	39.08	233	P	P	11 19 47.8	-0.4
	comp=Z,1.6nm,0.6s,baz=53,slow=10,SNR=1.5						
DBIC				LR	LR	11 38 43.7	
	comp=Z,122nm,18.1s,baz=40,slow=40						
DBIC	Dimbokro	39.08	233	P	P	11 19 48.3	+0.1
DBIC				pmax	pmax		
	comp=Z,12nm,1.3s						
DBIC	Dimbokro	39.08	233	P	P	11 19 48.3	+0.1
DBIC				IAmb	IAmb	11 19 55.4	
	comp=Z,12nm,1.2s						
KSH	Kashi	40.32	67	P	P	11 19 59.3	+0.8
KSH				pP	sP	11 20 09.5	-1.1
KSH				PP	PnPn	11 21 35.8	+0.5
KSH				PcS	PcS	11 25 54.1	+2.0
KSH				S	S	11 26 02.5	-1.7
KURK	Kurchatov	41.71	50	⇑eP	P	11 20 10.1	+0.6
KURK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KURK	Kurchatov	41.71	50	P	P	11 20 09.8	+0.2
KURK				IAmb	IAmb	11 20 10.7	
	comp=Z,4.1nm,0.8s						
MK31	Makanchi Array	44.17	55	P	P	11 20 30.1	+0.5
MK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MK31	Makanchi Array	44.17	55	P	P	11 20 30.1	+0.5
MKAR	Makanchi Array	44.17	55	P	P	11 20 30.3	+0.7
	comp=Z,2.9nm,0.7s,baz=277,slow=6.6,SNR=20						
MKAR	Makanchi Array	44.17	55	ceP	P	11 20 30.1	+0.5
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	Makanchi Array	44.17	55	P	P	11 20 30.5	+0.9
ZAA0	Zalesovo Array	45.63	45	P	P	11 20 40.8	-0.3
ZALV	Zalesovo Beam	45.63	45	P	P	11 20 41.0	-0.1
	comp=Z,5.5nm,0.5s,baz=266,slow=9.0,SNR=23						
ZALV	Zalesovo Beam	45.63	45	P	P	11 20 41.2	+0.1
DGZ	Jazzator, Alta	47.38	51	ceP	P	11 20 55.0	-0.1
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
DAG	Danmarks Havn	47.45	347	P	P	11 20 54.2	-0.8
DAG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
WMQ	Urumqi	48.32	59	eP	P	11 21 05.9	+3.6
WMQ				pP	pwP	11 21 15.3	+0.6
NRIK	Noril'sk	48.91	25	P	P	11 21 06.7	+0.3
	comp=Z,1.3nm,0.3s,baz=229,slow=6.1,SNR=4.1						
NRIK	Noril'sk	48.91	25	⇓eP	P	11 21 06.4	0.0
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SUMG	Summit	50.38	339	P	P	11 21 18.6	+0.6
SUMG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SUMG	Summit	50.38	339	P	P	11 21 18.6	+0.6
SUMG				IAmb	IAmb	11 21 19.3	
	comp=Z,4.9nm,0.9s						
TSUM	Tsumeb	53.29	190	LR	LR	11 46 12.7	
	comp=Z,126nm,19.9s,baz=334,slow=38						
TLY	Talaya	57.21	46	⇓eP	P	11 22 09.7	+1.9
TLY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SONM	Songino Array	60.01	50	P	P	11 22 28.4	+0.9
	comp=Z,1.0nm,0.7s,baz=289,slow=9.6,SNR=8.6						
SONM	Songino Array	60.01	50	P	P	11 22 27.9	+0.4
FRB	Frobisher Bay	62.03	330	P	P	11 22 40.8	+0.1
FRB				pmax	pmax		
	comp=Z,7.0nm,1.8s						
BOSA	Boshof	62.10	180	P	P	11 22 43.8	+2.1
	comp=Z,2.2nm,0.8s,baz=320,slow=11,SNR=3.5						
BOSA	Boshof	62.10	180	P	P	11 22 43.5	+1.8
TIXI	Tiksi	62.27	20	P	P	11 22 41.5	-0.7
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TIXI	Tiksi	62.27	20	P	P	11 22 41.5	-0.7
TIXI				IAmb	IAmb	11 22 42.7	
	comp=Z,2.2nm,0.8s						
LZH	Lanzhou	62.41	63	eP	P	11 22 45.8	+1.8
LZH				pP	sP	11 22 56.3	-0.1
LZH				sP	pwP	11 23 00.5	+3.9
LZH				ePP	PP	11 25 04.9	+3.6
SCHQ	Schefferville	64.48	320	P	P	11 22 56.9	-0.3
	comp=Z,2.4nm,0.7s,baz=52,slow=5.1,SNR=6.9						
SCHQ	Schefferville	64.48	320	P	P	11 22 57.7	+0.5
RES	Resolute Bay	65.06	345	P	P	11 22 59.5	-1.1
RES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
RES	Resolute Bay	65.06	345	P	P	11 22 59.5	-1.1
RES				IAmb	IAmb	11 23 01.7	
	comp=Z,3.0nm,0.9s						
SUR	Sutherland	66.01	184	P	P	11 23 10.3	+2.9
HHC	Hu-ho-hao-te	66.03	56	eP	P	11 23 09.0	+1.4
CMAR	Chiang Mai Arr	66.31	83	P	P	11 23 10.1	+0.6
	comp=Z,0.6nm,0.3s,baz=303,slow=8.3,SNR=2.1						
BILL	Bilibino	74.25	14	eP	P	11 23 57.1	-0.2
BILL				e		11 24 09.6	
BILL				e		11 26 43.6	
BILL				ePPP	PPP	11 28 27.9	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
C36M	Paulatuk	74.76	349	P	P	11 24 00.6	+0.4
C36M				IAmb	IAmb	11 24 00.9	
	comp=Z,3.6nm,0.6s						
INK	Inuvik	77.00	352	P	P	11 24 13.0	0.0
INK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
INK	Inuvik	77.00	352	P	P	11 24 12.9	0.0
INK				IAmb	IAmb	11 24 16.9	
	comp=Z,6.4nm,1.4s						
USRK	Ussuriysk Ar.	77.48	45	P	P	11 24 16.7	+0.5
USRK	Ussuriysk Ar.	77.48	45	P	P	11 24 16.7	+0.5
TOLK	Toolik Lake Re	77.78	358	P	P	11 24 18.9	+1.4
TOLK				IAmb	IAmb	11 24 34.3	
	comp=Z,2.5nm,1.1s						
KSAR	Wonju Array Be	78.74	52	P	P	11 24 24.5	+1.2
KSAR	Wonju Array Be	78.74	52	P	P	11 24 24.5	+1.2
KSRS	Korea Array	78.76	52	P	P	11 24 23.1	-0.3
	comp=Z,1.2nm,0.7s,baz=309,slow=4.4,SNR=7.0						
BMAR	Burnt Mountain	78.79	356	P	P	11 24 24.6	+1.5
YKA	Yellowknife Ar	78.85	342	P	P	11 24 23.4	0.0
	comp=Z,0.3nm,0.7s,baz=37,slow=5.5,SNR=8.1						
EPYK	Eagle Plains	79.21	353	P	P	11 24 25.6	+0.2
EPYK				IAmb	IAmb	11 24 33.7	
	comp=Z,4.7nm,1.1s						
IMAR	Indian Mountai	80.51	360	P	P	11 24 33.9	+1.5
EGAK	Eagle	81.18	354	P	P	11 24 37.4	+1.5
MLY	Manley	81.43	358	P	P	11 24 38.7	+1.3
ILAR	Eielson Array	81.56	357	P	P	11 24 38.2	+0.3
	comp=Z,0.6nm,0.7s,baz=341,slow=3.2,SNR=9.4						
ILAR	Eielson Array	81.56	357	P	P	11 24 38.5	+0.5
DAWY	Dawson	81.73	353	P	P	11 24 39.7	+0.8
DAWY				IAmb	IAmb	11 24 40.5	
	comp=Z,2.2nm,0.7s						
WRH	Wood River Hil	81.91	357	P	P	11 24 40.2	+0.3
HDA	Harding Lake	81.92	357	P	P	11 24 40.7	+0.8
HDA				IAmb	IAmb	11 24 41.2	
	comp=Z,3.1nm,0.7s						
SCRK	Sand Creek	82.19	355	P	P	11 24 42.8	+1.3
SCRK				IAmb	IAmb	11 24 53.7	
	comp=Z,5.0nm,1.4s						
KTH	Kantishna Hill	82.92	358	P	P	11 24 46.5	+1.3
KTH				IAmb	IAmb	11 24 58.5	
	comp=Z,4.9nm,1.2s						
BCAR	Beaver Creek A	82.92	354	P	P	11 24 46.8	+1.6
RND	Reindeer	83.00	358	P	P	11 24 45.6	-0.1
RND				pmax	pmax		
	comp=Z,3.0nm,0.9s						
RND	Reindeer	83.00	358	P	P	11 24 45.6	-0.1
RND				IAmb	IAmb	11 24 46.3	
	comp=Z,2.8nm,0.9s						
TRF	Thorofare Moun	83.01	358	P	P	11 24 46.5	+0.7
TRF				IAmb	IAmb	11 24 54.9	
	comp=Z,4.8nm,1.1s						
PPLA	Purkeypile	83.60	359	P	P	11 24 49.7	+0.9
SML	Sawmill	84.58	357	P	P	11 24 54.8	+1.0
SML				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SML	Sawmill	84.58	357	P	P	11 24 54.8	+1.0
ASAR	Alice Springs	117.39	101	PKIKP	PKPdf	11 31 06.7	+0.1
ASAR	Alice Springs	117.39	101	PKPdf	PKPdf	11 31 06.7	+0.1
LHI	Lord Howe Isla	140.96	100	PKPdf	PKPdf	11 31 48.5	-2.3
LTZ	Lake Taylor	152.45	119	PKPbc	PKPbc	11 32 17.7	+1.0

IDC ***23*** *11:20:00.7±5.8, 9°.25S×118°.74E, h83^{km}±47^{km}, mb3.4/3, mb1 3.5/6, mb1mx3.3/39, mbtmp3.7/6, ML3.6/3, Error ellipse: s-maj=112.3km s-min=20.2km az=66.0*
DJA ***23*** *11:20:04.9±0.3, 9°S±4°×11°9E±°, h86^{km}±5^{km}, M4.1/13, mB5.0/1, mb4.2/7, MLv4.1/13, Mw(mB)4.3/1, Mwp5.6/2*
ISC 23 11:20:02.8±0.8**, 9°.05S**±0°.05×**119°.47E**±0°.05**, h94^{km}, n19, σ2^{s}.90**/24**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.59	187	P	Pn	11 20 21.3	+2.5
WBSI				S	Sn	11 20 32.3	+1.6
BASI	Baing, Sumba	1.59	137	P	Pn	11 20 33.5	+3.6
PLAI	Plampang	1.69	277	P	Pn	11 20 33.1	+2.0
PLAI				S	Sn	11 20 53.1	+0.5
MMRI	Maumere	2.77	82	P	Pn	11 20 49.6	+4.3
MMRI				S	Sn	11 21 20.9	+2.9
BKSI	Bulukumba	3.76	10	P	Pn	11 21 00.7	+2.0
KAPI	Kappang	4.02	4	P	Pn	11 21 04.3	+2.1
	2.5nm,0.3s,baz=177,slow=5.2,SNR=9.0						
KAPI				S	Sn	11 21 47.7	-0.6
	9.6nm,0.3s,baz=206,slow=14,SNR=17						
DNP	Denpasar	4.22	275	P	Pn	11 21 06.6	+1.7
BNSI	Bone	4.66	8	P	Pn	11 21 15.8	+4.9
SOEI	Soe	4.79	99	P	Pn	11 21 14.8	+2.1
SPSI	Sidrap Palu	5.06	3	P	Pn	11 21 18.9	+2.5
	0.1nm11nm,0.7s						
JAGI	Jajag, Banyuwa	5.29	276	P	Pn	11 21 19.9	+0.5
	0.4nm2µm51nm,0.4s						
GMJI	Gumukmas	6.01	277	P	Pn	11 21 31.0	+1.8
PWJI	Pagerwojo	7.65	277	P	Pn	11 21 54.2	+2.6
	0.2nm33µm16nm,1.8s						
PCJI	Pacitan	8.24	275	P	Pn	11 22 01.7	+2.0
	7µm31nm,1.0s						
FITZ	Fitzroy Crossi	10.81	147	P	Pn	11 22 35.2	+0.7
	0.5nm,0.3s,baz=328,slow=13,SNR=19						
FITZ				S	Sn	11 24 28.6	-5.0
	0.6nm,0.3s,baz=249,slow=16,SNR=9.2						
WRA	Warramunga Arr	18.00	129	P	Pn	11 24 08.7	+1.7
	0.2nm,0.3s,baz=303,slow=13,SNR=1.8						
WRA				S	S	11 27 20.2	-7.4
	0.3nm,0.3s,baz=301,slow=24,SNR=6.3						
ASAR	Alice Springs	20.05	138	P	Pn	11 24 32.0	+0.8
	0.7nm,0.5s,baz=314,slow=10.0,SNR=26						
ASAR				S	S	11 28 09.8	+0.8
	0.8nm,0.7s,baz=318,slow=24,SNR=4.5						
SONM	Songino Array	57.81	350	P	P	11 29 44.0	-0.4
	0.5nm,0.6s,baz=169,slow=7.9,SNR=4.6						
ZALV	Zalesovo Beam	69.25	339	P	P	11 30 57.8	-1.8
	0.8nm,0.5s,baz=152,slow=6.5,SNR=2.4						

NEIC ***23*** *11:51:19.4±0.3, 15°.7N±0°.1×95°.56W±0°.04, h12^{km}±16^{km}, Error ellipse: s-maj=16.5km s-min=3.9km az=193.0*
MEX ***23*** *11:51:20.6±0.4, 15°.46N×95°.61W, h16^{km}±11^{km}, MD4.0*
ISC 23 11:51:12.1±1.9**, 15°.3N**±0°.1×**95°.57W**±0°.05**, h10^{km}, n11, σ1^{s}.73**/20**, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.73	315	eP	Pn	11 51 30.1	+1.6
HUIG				eS	Sb	11 51 37.0	0.0
HUIG	Huatulco	0.73	315		Pn	11 51 30.1	+1.6
HUIG					Sb	11 51 37.0	0.0
PEIG	Puerto Escondi	1.69	296	eP	Pg	11 51 44.4	-0.1
PEIG				eS	Sn	11 52 03.1	-0.4
CMIG	Matias Romero	1.95	20	eP	Pb	11 51 47.1	-0.6
CMIG				i S	Sn	11 52 08.1	-1.7
CMIG	Matias Romero	1.95	20		Pb	11 51 47.1	-0.6
CMIG					Sn	11 52 08.1	-1.7
YOIG	Yosondua	2.48	310	eP	Pb	11 51 55.6	-1.3
YOIG				eS	Sn	11 52 22.8	-0.6
TOIG	Toxpalan	3.17	333	i P	Pn	11 52 05.2	+3.0
TOIG				eS	Sn	11 52 39.4	-0.8
HLIG	Huajuapan de L	3.34	321	eP	Pn	11 52 07.7	+3.1
HLIG				i S	Sn	11 52 44.0	-0.5
CCIG	Comitan	3.46	72	Pn	Pb	11 52 12.1	-1.5
FTIG	Fresnillo de T	3.61	318	i P	Pn	11 52 10.9	+2.7
FTIG				eS	Sn	11 52 50.4	-0.5
TLIG	Tlapa	3.68	309	Pn	Pb	11 52 14.4	-2.9

KRNET ***23*** *12:03:48.9±0.1, 41°.13N×69°.67E, mb2.5*
SOME ***23*** *12:03:48.0, 40°.92N×70°.35E, h10^{km}*
NNC ***23*** *12:03:49.8±4.6, 40°.90N×70°.28E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=31.9km s-min=24.1km az=17.0*
ISC 23 12:03:47.8±1.9**, 41°.06N**±0°.06×**69°.6E**±0°.1**, h10^{km}, n13, σ1^{s}.42**/23**, 11C-4D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	1.38	136	⇑iP	Pn	12 04 13.9	+0.7
	baz=40						
BTK				⇑iS	Sb	12 04 32.2	+0.8
	baz=40						
JBG	Jabagly	1.54	28	P	Pg	12 04 18.7	+1.2
	10nm,0.1s						
JBG				S	Sg	12 04 41.0	+3.5
	8.4nm,0.2s						
ARK	Arkit	1.94	67	⇓iP	Pn	12 04 20.8	-0.2
	baz=69						
ARK				⇓iS	Sn	12 04 44.4	-1.0
	baz=69						
BRLS	Borolday	1.98	5	eP	Pb	12 04 23.7	-0.3
	0.3nm,0.2s						
BRLS				eS	Sg	12 04 49.6	-1.8
	2.7nm,0.1s						
BRLS	Borolday	1.98	5	Pg	Pb	12 04 24.0	0.0
	0.3nm,0.2s						
BRLS				Lg	Lg	12 04 50.2	
	0.6nm,0.2s						
KK31	Karatay Array	2.16	18	Pn	Pg	12 04 28.4	-0.8
	0.7nm,0.3s,baz=185,slow=15,SNR=23						
KK31				⇑Lg	Lg	12 04 56.0	
	0.4nm,0.2s,baz=186,slow=30						
ARSB	Arslanbob	2.58	83	⇑iP	Pn	12 04 29.6	-0.2
	baz=85						
ARSB				⇑iS	Sn	12 04 59.9	-1.4
	baz=85						
MRKS	Merke	3.20	57	eP	Pn	12 04 39.2	+0.9
	2.1nm,0.3s						
MRKS				eS	Sn	12 05 16.9	+0.4
	2.5nm,0.4s						
MRKS	Merke	3.20	57	Pg	Pn	12 04 40.2	+1.9
	2.1nm,0.3s						
MRKS				Lg	Lg	12 05 18.3	
	2.5nm,0.4s						
AML	Almayashu	3.27	70	⇑eP	Pn	12 04 39.4	-0.1
	baz=70						
AML				⇑iS	Sn	12 05 17.4	-1.2
	baz=70						
EKS2	Erkin-Say	3.52	62	⇑iP	Pn	12 04 43.0	+0.3
	baz=62						
EKS2				⇑iS	Sn	12 05 23.4	-1.1
	baz=62						
UCH	Uchtor	3.88	71	⇑iP	Pn	12 04 47.9	0.0
	baz=72						
UCH				⇑iS	Sn	12 05 31.5	-2.2
	baz=72						
KZA	Kyzart	4.37	75	⇓eP	Pn	12 04 54.5	-0.2
	baz=75						
KZA				⇓iS	Sn	12 05 43.6	-2.3
	baz=75						

SOME ***23*** *12:07:58.5, 41°.00N×70°.97E, h10^{km}*
KRNET ***23*** *12:07:60.0±0.1, 41°.28N×70°.85E, h12^{km}, mb2.6*
NNC ***23*** *12:08:02.6±3.4, 41°.19N×71°.21E, h0^{km}, mb3.3, mpv2.8, Error ellipse: s-maj=25.1km s-min=12.3km az=14.0*
ISC 23 12:08:01.3±1.7**, 41°.16N**±0°.06×**71°.06E**±0°.04**, h11^{km}**±12^{km}**, n18, σ2^{s}.12**/31**, 16C-4D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	Arkit	0.93	47	⇑iP	Pg	12 08 19.1	-0.2
	baz=59						
ARK				⇑iS	Sg	12 08 32.7	+1.2
	baz=59						
BTK	Batken	1.11	189	⇑iP	Pn	12 08 23.2	+0.2
	baz=81						
BTK				⇑iS	Sn	12 08 40.2	+1.8
	baz=81						
JBG	Jabagly	1.32	343	P	Pg	12 08 26.5	-0.1
	2.3nm,0.1s						
JBG				S	Sg	12 08 45.2	+1.4
	9.2nm,0.6s						
ARSB	Arslanbob	1.46	83	⇑iP	Pg	12 08 30.0	+0.6
	baz=88						
ARSB				⇑iS	Sg	12 08 52.4	+4.0
	baz=88						
KK31	Karatay Array	1.98	348	⇑Pn	Pb	12 08 37.1	-0.3
	6.1nm,0.5s,baz=153,slow=14,SNR=43						
KK31				⇑Sn	Sb	12 09 04.5	+2.3
	26nm,0.8s,baz=160,slow=24,SNR=20						
BRLS	Borolday	2.08	335	eP	Pb	12 08 36.8	-2.3
	5.4nm,0.4s						
BRLS				eS	Sn	12 09 02.7	+0.6
	16nm,0.6s						
BRLS	Borolday	2.08	335	Pg	Pb	12 08 36.7	-2.3
	0.8nm,0.2s						
BRLS				Lg	Lg	12 09 02.7	
	3.0nm,0.7s						
AML	Almayashu	2.20	63	⇑eP	Pb	12 08 41.2	-0.2
	baz=67						
AML				⇑iS	Sb	12 09 11.4	+2.5
	baz=67						
MRKS	Merke	2.27	45	eP	Pb	12 08 43.0	+0.7
	4.0nm,0.3s						
MRKS				eS	Sb	12 09 13.6	+3.2
	3.9nm,0.3s						
MRKS	Merke	2.27	45	Pg	Pb	12 08 43.0	+0.7
	4.0nm,0.5s						
MRKS				Lg	Lg	12 09 13.6	
	3.9nm,0.3s						
EKS2	Erkin-Say	2.52	53	⇑iP	Pb	12 08 45.4	-1.4
	baz=57						
EKS2				⇑iS	Sb	12 09 19.1	+1.2
	baz=57						
ARLS	Aral	2.55	73	⇑iP	Pb	12 08 46.3	-0.9
	baz=76						
ARLS				⇑iS	Sb	12 09 20.3	+1.6
	baz=76						
UCH	Uchtor	2.80	66	⇓iP	Pb	12 08 49.4	-2.2
	baz=70						
UCH				⇓iS	Sb	12 09 25.9	-0.2
	baz=70						
AAK	Ala-Archa	2.96	59	Pg	Pb	12 08 53.9	-0.3
	2.5nm,0.5s						
AAK				Lg	Lg	12 09 33.1	
	7.8nm,1.4s						
KBK	Karagaybulak	3.27	61	⇑eP	Pb	12 08 55.9	-3.5
	baz=64						
KBK				⇑iS	Sb	12 09 36.7	-2.6
	baz=64						
KZA	Kyzart	3.27	72	⇓iP	Pb	12 08 55.9	-3.8
	baz=75						
KZA				⇓iS	Sb	12 09 36.7	-3.0
	baz=75						
KRBS	Karabastau	4.26	52	eP	Pg	12 09 20.6	-2.2
	1.4nm,0.5s						
KRBS				eS	Sg	12 10 18.4	+0.4
	0.9nm,0.6s						
BTLS	Baital	4.45	28	Pg	Pg	12 09 24.5	-2.1
	0.8nm,0.4s						
BTLS				Lg	Lg	12 10 24.4	
	4.0nm,0.9s						

IDC ***23*** *12:16:35.5±2.5, 10°.87S×123°.39E, h0^{km}, mb3.3/1, mb1 3.6/3, mb1mx3.3/33, mbtmp3.4/3, ML3.5/2, Error ellipse: s-maj=208.2km s-min=34.8km az=52.0*
DJA ***23*** *12:16:41.8±0.3, 11°S±3°×12°4E±°, h53^{km}±17^{km}, M3.9/6, mb4.2/3, MLv3.8/6*
ISC 23 12:16:39.2±0.9**, 10°.69S**±0°.06×**123°.81E**±0°.06**, h29^{km}, n9, σ1^{s}.66**/16**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.03	26	P	Pb	12 16 59.3	+0.7
SOEI				S	Sb	12 17 12.5	+0.7
MMRI	Maumere	2.56	323	P	Pn	12 17 17.9	-0.9

MMRI				S	Sn	12 17 47.0	-2.1
EDFI	Ende, Flores	2.84	312	P	Pn	12 17 23.1	+0.3
EDFI				S	Sn	12 17 54.5	-1.6
BASI	Baing, Sumba	3.21	278	P	Pn	12 17 28.8	+1.0
BASI				S	Sn	12 18 05.2	0.0
WBSI	Waikabubak, Su	4.47	283	P	Pn	12 17 45.4	+0.2
PLAI	Plampang	6.23	287	P	Pn	12 18 10.0	+0.7
	0.1nm17nm,0.6s						
PLAI				S	Sn	12 19 17.5	-2.1
	0.1nm17nm,0.6s						
WRA	Warramunga Arr	13.70	133	Pn	Pn	12 19 52.9	+1.3
	0.2nm,0.3s,baz=312,slow=13,SNR=4.0						
WRA				Sn	Sn	12 22 19.9	-3.0
	0.4nm,0.3s,baz=306,slow=23,SNR=5.4						
ASAR	Alice Springs	16.10	145	Pn	Pn	12 20 25.4	+1.8
	0.2nm,0.3s,baz=317,slow=12,SNR=23						
ASAR				Sn	Sn	12 23 18.8	-2.7
	0.1nm,0.3s,baz=320,slow=22,SNR=9.3						
MKAR	Makanchi Array	68.18	331	P	P	12 27 37.4	+0.5
	0.2nm,0.5s,baz=133,slow=7.5,SNR=2.6						

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*TIR **23** 12:34:44.2, 42°.00N×20°.59E, h5^{km}, Md3.1/5*
*PDG **23** 12:34:45.4±0.3, 42°.00N×20°.60E, h5^{km}, MD3.1/1, ML3.1/14, Error ellipse: s-maj=0.4km s-min=0.4km az=0.0*
*THE **23** 12:34:46.7, 41°.95N×20°.62E, h0^{km}±1^{km}, ML2.9/3, Error ellipse: s-maj=2.2km s-min=0.8km az=310.0*
*BEO **23** 12:34:46.4±0.2, 42°.05N×20°.64E, h0^{km}, ML2.9/11*
*SKO **23** 12:34:46.8, 42°.00N×20°.59E, h9^{km}*
ISC 23 12:34:45.4±1.1**, 42°.02N**±0°.02×**20°.62E**±0°.02**, h1**^{km}±10^{km}**,**
n68, σ1^{s}19/96**, 6C-7D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	Peshkopia	0.36	201	P	Pg	12 34 52.0	-0.4
PHP				S	Sg	12 34 57.0	0.0
PHP	Peshkopia	0.36	201	*i* PG	Pg	12 34 51.3	-1.1
PHP				*i* SG	Sg	12 34 56.2	-0.8
BCI	Bajram Curri	0.53	310	*i* PG	Pg	12 34 55.3	-0.3
PUK	Puka	0.54	272	*i* PG	Pg	12 34 54.8	-1.0
PUK				*i* SG	Sg	12 35 03.1	+0.3
SKO	Skopje	0.62	94	*e*Pg	Pg	12 34 57.7	+0.5
SKO				*e*Sg	Sg	12 35 05.3	+0.1
SKO	Skopje	0.62	94	*i* Pg	Pg	12 34 57.9	+0.6
SKO				*i* Sg	Sb	12 35 07.6	-0.6
SKO				*e*Lg	Lg	12 35 08.0	
	comp=E,74nm,0.4s						
SKO				*e*Lg	Lg	12 35 08.1	
	comp=N,105nm,0.3s						
TIR	Tirane	0.88	220	*e*Pg	Pb	12 35 03.8	+0.3
TIR				*e*Sg	Sb	12 35 15.3	-0.5
TIR	Tirane	0.88	220	⇑P	Pb	12 35 04.2	+0.7
TIR				⇓S	Sb	12 35 15.3	-0.5
OHR	Ohrid	0.92	171	⇓*i*Pg	Pg	12 35 02.5	-0.6
OHR				*i* Sg	Sb	12 35 16.6	-0.4
OHR				*e*Lg	Lg	12 35 16.8	
	comp=N,912nm,0.6s						
OHR				*e*Lg	Lg	12 35 17.0	
	comp=E,1µm,0.7s						
DRME	Dracevica, Mon	1.08	279	*e*Pn	Pg	12 35 05.2	-0.9
PDG	Podgorica	1.09	292	*e*Pg	Pg	12 35 05.2	-1.1
PDG				*e*Sg	Sg	12 35 20.9	+0.5
PDG	Podgorica	1.09	292	⇑P	Pg	12 35 05.7	-0.6
PDG				⇑S	Sb	12 35 21.3	-0.5
PDG	Podgorica	1.09	292	*e*Pn	Pg	12 35 05.0	-1.3
BARS	Barje	1.19	48	*e*Pg	Pg	12 35 07.3	-1.0
BARS				*e*Sg	Sg	12 35 24.5	+0.8
BARS	Barje	1.19	48	*e*Pn	Sg	12 35 25.6	+1.9
SELS	Selova	1.25	17	*e*Pg	Pg	12 35 09.2	-0.2
SELS				*e*Sg	Sg	12 35 24.9	-0.8
SJES	Sjenica	1.33	339	*e*Pg	Pg	12 35 10.5	-0.3
SJES				*e*Sg	Sb	12 35 29.3	+0.5
FNA	Florina	1.36	155	P	Pg	12 35 10.6	-0.9
FNA				S	Sb	12 35 30.1	+0.3
	comp=E,862nm,0.5s						
BOSS	Bosilegrad	1.46	70	*e*Pg	Pn	12 35 12.9	-0.1
BOSS				*e*Sg	Sg	12 35 32.3	-0.1
IVAS	Ivanjica	1.59	348	*e*Pg	Pn	12 35 13.8	-1.0
IVAS				*e*Sg	Sg	12 35 37.2	+0.7
VAY	Valandovo	1.62	115	*e*Pn	Pn	12 35 14.9	-0.3
VAY	Valandovo	1.62	115	*i* Pn	Pn	12 35 15.1	-0.1
HCY	Herceg Novi	1.63	286	*e*Pn	Pn	12 35 14.7	-0.7
NEST	Nestorio	1.64	168	P	Pn	12 35 15.5	0.0
NEST				S	Sn	12 35 36.9	-0.4
	comp=E,280nm,0.9s						
GRG	Griva	1.71	128	P	Pn	12 35 16.8	+0.3
BRY	Bratogost	1.77	300	*e*Pn	Pn	12 35 17.8	+0.4
BOVS	Bovan	1.80	26	*e*Pg	Pn	12 35 16.9	-0.8
BOVS				*e*Sg	Sb	12 35 42.3	0.0
TREB	Trebinje	1.82	293	*e*Pn	Pb	12 35 19.7	+0.2
TREB	Trebinje	1.82	293	*e*Pn	Pb	12 35 19.4	-0.1
RUDO	Rudo	1.84	331	*e*Pn	Pn	12 35 17.8	-0.4
GRUS	Gruza	1.87	2	*e*Pg	Pn	12 35 18.6	0.0
GRUS				*e*Sg	Sb	12 35 44.5	+0.3
KNT	Kendrikon	1.92	116	P	Pn	12 35 19.1	-0.2
KNT				S	Sn	12 35 44.7	+0.7
	comp=E,102nm,0.4s						
KZN	Kozani	1.92	153	P	Pn	12 35 19.5	+0.1
DBRK	Dubrovnik	1.94	290	*e*Pn	Pb	12 35 21.9	+0.2
DBRK				Sn	Sg	12 35 49.8	+2.0
ZAPS	Zavoj	1.94	49	*e*Pg	Pn	12 35 20.5	+0.8
ZAPS				*e*Sg	Sn	12 35 46.1	+1.3
VTS	Vitosha	2.03	72	P	Pn	12 35 21.3	+0.3
VTS				S	Sb	12 35 48.9	-0.2
VTS	Vitosha	2.03	72	*e*Pn	Pn	12 35 21.2	+0.3
VTS	Vitosha	2.03	72	⇓P	Pb	12 35 22.6	-0.6
VTS				⇑S	Sn	12 35 47.0	-0.1
BBLS	Lazići	2.05	335	*e*Pg	Pn	12 35 21.5	+0.4
DIVS	Divibare	2.12	348	*e*Pn	Pn	12 35 21.5	-0.8
DIVS	Divibare	2.12	348	*e*Pn	Pn	12 35 21.4	-0.8
ZAGS	Zajecar	2.15	33	*e*Pg	Pn	12 35 23.1	+0.7
ZAGS				*e*Sg	Sg	12 35 54.8	+0.4
TRUS	Trudelj	2.21	356	*e*Pn	Pn	12 35 23.8	+0.6
TRUS				*e*Sg	Sb	12 35 55.5	+1.5
STON	Ston	2.32	292	*i* Pn	Pn	12 35 26.5	+1.7
STON				Sn	Sb	12 35 57.9	+0.6
STON	Ston	2.32	292	*e*Pn	Pn	12 35 26.5	+1.7
HORT	Hortiatis	2.35	126	P	Pn	12 35 25.6	+0.3
HAPS	Han Pijesak,Bl	2.40	330	*e*Pn	Pn	12 35 26.9	+0.9
HAPS	Han Pijesak,Bl	2.40	330	*e*Pn	Pn	12 35 28.0	+2.0
SRS	Serrai	2.41	111	P	Pn	12 35 26.3	+0.3
MDVR	Moldovita	2.87	16	⇓P	Pg	12 35 39.9	-0.6
RICI	Ricice	2.96	301	*e*Pn	Pn	12 35 36.0	+2.5
FRGS	Fruska Gora	3.19	350	*e*Pn	Pn	12 35 38.4	+1.6
BZS	Buzias	3.67	11	⇓P	Pb	12 35 49.9	-1.1
BLY	Banja Luka	3.70	319	⇑P	Pn	12 35 47.3	+3.6
GZR	Gura Zlata	3.72	24	⇓P	Pb	12 35 49.6	-2.3
ELND	Elena	3.99	75	⇑P	Pb	12 35 56.8	+0.2
MORI	Morici	4.05	299	*e*Pn	Pn	12 35 48.5	0.0
DRGR		5.00	17	⇓P	Pn	12 36 07.9	+6.2
CRES	Cresnjev	5.32	317	*e*Pn	Pn	12 36 07.8	+1.7
CEY	Cerknica	5.81	312	*e*Pn	Pn	12 36 14.1	+1.3
ARSA	Arzberg	6.36	327	*e*Pn	Pn	12 36 22.3	+1.9
	comp=E,1.5nm,0.5s						
ARSA				*e*Sn	Sn	12 37 30.6	-3.2
	comp=E,1.0nm,0.4s						
VYHS	Vyhne	6.59	350	*e*PN	Pn	12 36 24.4	+0.9
VYHS				*e*SN	Sn	12 37 36.6	-2.7
KBA	Koelnbreinsper	7.25	317	*e*Pn	Pn	12 36 35.4	+2.7
	comp=E,3.2nm,0.6s						
ABTA	Abfaltersbach	7.48	312	*e*Pn	Pn	12 36 37.0	+1.2
	comp=E,5.8nm,0.6s						
WTTA	Wattenberg	8.27	312	*e*Pn	Pn	12 36 48.4	+1.7
	comp=E,2.1nm,0.4s						
WATA	Walderalm	8.35	313	*e*Pn	Pn	12 36 50.7	+3.0
	comp=E,2.5nm,0.5s						
SQTA	Sankt Quirin	8.48	311	*e*Pn	Pn	12 36 52.4	+2.9
	comp=E,2.0nm,0.4s						
MOTA	Moosalm	8.61	311	*e*Pn	Pn	12 36 52.8	+1.4
	comp=E,2.9nm,0.6s						

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*SOME **23** 12:44:59.4, 40°.00N×71°.70E, h5^{km}*
*KRNET **23** 12:45:00.2±0.1, 40°.02N×71°.58E, h26^{km}, mb2.7*
*NNC **23** 12:45:03.1±3.7, 40°.20N×71°.86E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=27.5km s-min=14.0km az=8.0*
ISC 23 12:45:02.0±1.8**, 40°.24N**±0°.06×**71°.30E**±0°.05**, h11**^{km}±13^{km}**,**
n22, σ2^{s}03/39**, 15C-13D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	Batken	0.41	245	⇑*i*P	Pb	12 45 11.7	+0.3
	baz=74						
BTK				⇑*i*S	Sb	12 45 20.3	+2.6
	baz=74						
ARK	Arkit	1.64	17	⇑*i*P	Pn	12 45 31.5	+0.6
	baz=10.0						
ARK				⇑*i*S	Sg	12 45 54.7	0.0
	baz=10.0						
ARSB	Arslanbob	1.68	49	⇓*i*P	Pn	12 45 30.3	-1.1
	baz=39						
ARSB				⇓*i*S	Sn	12 45 52.6	-0.3
	baz=39						
JBG	Jabagly	2.26	346	Pg	Pg	12 45 47.4	+2.1
	3.9nm,0.2s						
JBG				Lg	Lg	12 46 21.7	
	33nm,0.2s						
AML	Almayashu	2.62	43	⇑*e*P	Pn	12 45 44.4	-0.1
	baz=36						
AML				⇑*i*S	Sn	12 46 15.1	-1.4
	baz=36						
ARLS	Aral	2.80	54	⇓*i*P	Pn	12 45 45.4	-1.5
	baz=48						
ARLS				⇓*i*S	Sn	12 46 18.2	-2.5
	baz=48						
MRKS	Merke	2.89	29	*e*P	Pb	12 45 53.7	0.0
	3.6nm,0.4s						
MRKS				*e*S	Sg	12 46 33.0	-1.9
	11nm,0.3s						
MRKS	Merke	2.89	29	Pg	Pb	12 45 53.7	0.0
	3.6nm,0.4s						
MRKS				Lg	Lg	12 46 33.0	
	11nm,0.3s						
KK31	Karatay Array	2.93	349	⇑Pn	Pb	12 45 53.1	-1.1
	0.3nm,0.3s,baz=183,slow=15,SNR=7.9						
KK31				⇑Pg	Pg	12 45 58.0	-0.1
	0.7nm,0.3s,baz=145,slow=14,SNR=16						
KK31				⇓Sn	Sb	12 46 31.6	+1.6
	1.1nm,0.3s						
KK31				⇓Lg	Lg	12 46 40.9	
	6.2nm,0.5s,baz=149,slow=32,SNR=9.7						
BRLS	Borolday	3.00	339	*e*P	Pg	12 45 57.4	-2.1
	0.3nm,0.1s						
BRLS				*e*S	Sg	12 46 39.1	+0.7
	5.7nm,0.2s						
BRLS	Borolday	3.00	339	Pg	Pg	12 45 57.4	-2.1
	0.3nm,0.2s						
BRLS				Lg	Lg	12 46 39.1	
	8.3nm,0.2s						
EKS2	Erkin-Say	3.05	37	⇓*e*P	Pn	12 45 50.2	-0.1
	baz=31						
EKS2				⇓*i*S	Sn	12 46 25.8	-1.1
	baz=31						
UCH	Uchtor	3.13	50	⇓*i*P	Pn	12 45 51.0	-0.7
	baz=44						
UCH				⇓*i*S	Sn	12 46 27.0	-2.3
	baz=44						
AAK	Ala-Archa	3.39	44	⇑*i*P	Pn	12 45 54.6	-0.4
	baz=39						
AAK				⇑*i*S	Sn	12 46 33.5	-1.8
	baz=39						
AAK	Ala-Archa	3.39	44	⇓Pg	Pb	12 46 00.6	-1.6
	1.5nm,0.5s						
AAK				⇑Lg	Lg	12 46 42.4	
	3.4nm,0.4s						
KZA	Kyzart	3.50	57	⇓*e*P	Pn	12 45 56.1	-0.6
	baz=52						
KZA				⇓*e*S	Sn	12 46 35.6	-2.8
	baz=52						
KBK	Karagaybulak	3.65	47	⇑*i*P	Pn	12 45 58.3	-0.3
	baz=43						
KBK				⇑*i*S	Sn	12 46 39.4	-2.4
	baz=43						
CHMS	Chumysh	3.78	42	⇑Pg	Pb	12 46 07.0	-1.7
	2.4nm,0.7s						
CHMS				⇑Lg	Lg	12 46 54.6	
	3.0nm,0.6s						
KST	Kastek	4.48	50	*e*P	Pb	12 46 21.0	+0.3
	4.0nm,0.4s						
KST				*e*S	Sb	12 47 19.5	+4.8
	4.4nm,0.7s						
KST	Kastek	4.48	50	Pg	Pb	12 46 21.0	+0.3
	3.9nm,0.5s						
KST				Lg	Lg	12 47 19.5	
	4.4nm,0.7s						
DGS	Degeres	4.49	47	*e*P	Pb	12 46 21.1	+0.1
	2.6nm,0.6s						
DGS				*e*S	Sb	12 47 19.9	+4.7
	3.5nm,0.4s						
KRBS	Karabastau	4.75	42	*e*P	Pb	12 46 25.9	+0.6
	1.4nm,0.3s						
KRBS				*e*S	Sb	12 47 27.8	+5.3
	0.9nm,0.7s						

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*IDC **23** 12:48:03.4±0.7, 19°.55S×70°.74W, h0^{km}, mb4.0/10, mb1 4.2/11, mb1mx4.0/35, mbtmp4.1/11, ML4.3/1, MS3.7/8, Ms1 3.7/8, ms1mx3.4/25, Error ellipse: s-maj=25.8km s-min=18.3km az=60.0*
*VAO **23** 12:48:04.7±0.5, 19°.64S×71°.19W, h30^{km}, mb4.3*
*GUC **23** 12:48:05.4±0.6, 19°.67S×71°.03W, h41^{km}±2^{km}, ML4.2*
*NEIC **23** 12:48:05.5±2.0, 19°.76S±0°.04×71°.01W±0°.05, h17^{km}±1^{km}, mb4.7/33, Mwr4.3/36, ML4.2(GUC), Error ellipse: s-maj=7.3km s-min=4.9km az=105.0*
*NEIC **23** 12:48:05.9, 19°.74S×70°.99W, h20^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}3.38; $M_{\theta\theta}$0.09; $M_{\phi\phi}$-3.48; $M_{r\theta}$-0.07; $M_{\theta\phi}$1.07; $M_{\phi r}$-1.82; Fault plane solution: $M_0$4.03000×10^{15} NP1:ϕ_s335.02000°, δ32.76000°, λ74.56000°. NP2:ϕ_s173.21000°, δ58.56000°, λ99.73000°. Principal axes: T 3.8671, Plg74.0000°, Azm110.0000°; N 0.3064, Plg8.0000°, Azm348.0000°; P -4.1735, Plg13.0000°, Azm256.0000°;*
ISC 23 12:48:03.8±1.0**, 19°.72S**±0°.03×**71°.01W**±0°.04**, h7**^{km}±6^{km}**,**
n140, σ1^{s}44/161**, mb4.6**/21**, MS3.7**/5**, 9C-2D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	0.84	82	⇓*i*P	Pb	12 48 20.6	-0.1
PSGC				*i* S	Sb	12 48 32.3	+0.1
PSGCX	Pisagua	0.84	82		Pb	12 48 20.8	+0.1
PSGCX					Sb	12 48 32.6	+0.4
TA01	Diego Aracena	1.15	138	⇑*i*P	Pn	12 48 26.5	+0.3
TA01				*i* S	Sb	12 48 41.6	+0.7
PB12	IPOC Station P	1.27	30	⇑*i*P	Pg	12 48 27.6	-0.6
PB12				*i* S	Sn	12 48 44.2	-1.2
PB12				IAML		12 48 46.1	
	comp=N,4µm,0.6s						
PB12	IPOC Station P	1.27	30		Pg	12 48 27.6	-0.6
PB12				Sn	Sb	12 48 44.0	-0.7
PB11	IPOC Station P	1.27	92	⇓*i*P	Pn	12 48 28.0	-0.1
PB11				*i* S	Sn	12 48 45.3	-0.2
PB11				IAML		12 48 53.0	
	comp=N,11µm,0.8s						
PB11	IPOC Station P	1.27	92		Pn	12 48 28.2	+0.1
PB11					Sn	12 48 45.3	-0.2
PATCX	Punta Patache	1.36	144	⇑*i*P	Pn	12 48 29.6	+0.4
PATCX				*i* S	Sn	12 48 48.4	+0.8
PATCX				IAML		12 48 54.1	
	comp=E,5µm,0.5s						
PATCX	Punta Patache	1.36	144		Pn	12 48 29.8	+0.6
AP01	Chacalluta	1.48	25	*e*P	Pn	12 48 29.9	-0.9
AP01				*i* S	Sb	12 48 49.2	-1.4
GO01	Chusmiza	1.71	89	⇑*i*P	Pb	12 48 35.2	-0.6
GO01				*i* S	Sg	12 48 58.4	-0.4
GO01	Chusmiza	1.71	89		Pb	12 48 35.4	-0.4
PB08	IPOC Station P	1.79	104	⇑*i*P	Pb	12 48 36.3	-0.8
PB08				*i* S	Sg	12 49 00.5	-1.0
PB08				IAML		12 49 03.8	
	comp=N,3µm,0.3s						
PB02	IPOC Station P	1.90	147	⇑*i*P	Pn	12 48 37.5	+0.7
PB02				*i* S	Sn	12 49 02.1	+1.1
PB01	IPOC Station P	1.94	133	⇑*i*P	Pn	12 48 38.3	+1.0
PB01				*i* S	Sn	12 49 02.0	+0.1
PB01				IAML		12 49 11.8	
	comp=E,3µm,0.5s						
PB01	IPOC Station P	1.94	133		Pn	12 48 38.3	+1.0
PB01					Sn	12 49 01.6	-0.4
PB16	IPOC Station P	1.98	46	⇑*e*P	Pn	12 48 38.6	+0.4
PB16				*i* S	Sn	12 49 02.9	-0.6
PB16				IAML		12 49 09.8	
	comp=N,2µm,0.7s						
PB16	IPOC Station P	1.98	46		Pn	12 48 38.6	+0.4
PB16					Sg	12 49 05.4	-2.0
PB07	IPOC Station P	2.26	153	⇑*i*P	Pn	12 48 42.2	+0.5
PB07				*i* S	Sn	12 49 11.4	+1.5
PB07				IAML		12 49 22.5	
	comp=E,3µm,0.4s						
PB07	IPOC Station P	2.26	153		Pn	12 48 42.2	+0.5
PB09	IPOC Station P	2.65	142		Pn	12 48 48.0	+1.0
PB04	IPOC Station P	2.72	163		Pn	12 48 48.4	+0.3
PB04					Sn	12 49 18.5	-2.9
LVC	Limon Verde	3.48	146	Pn	Pn	12 49 00.6	+1.9
	comp=E,26nm,0.3s,baz=337,slow=9.3,SNR=86						
LVC				Sn	Sn	12 49 41.9	+1.6
	comp=E,32nm,0.3s,baz=250,slow=18,SNR=4.1						
LVC	Limon Verde	3.48	146	*e*P	Pn	12 49 00.6	+1.9
PB15	IPOC Station P	3.75	158		Pn	12 49 02.5	+0.1
PB15				Sn	Sn	12 49 47.1	+0.2
PB10	IPOC Station P	3.80	174		Pn	12 49 02.1	-0.6
PB10				Sn	Sn	12 49 43.4	-4.3
LPAZ	La Paz	4.37	39	Pn	Pn	12 49 14.6	+3.4
	comp=E,0.5nm,0.3s,baz=214,slow=7.3,SNR=18						
LPAZ				LR	LR	12 51 01.4	
	comp=E,777nm,18.7s,baz=245,slow=44						
PB14	IPOC Station P	4.92	174		Pn	12 49 17.7	-0.7
PB14				Sn	Sn	12 50 10.9	-4.8
GO02	Mina Guanaco	5.57	167		Pn	12 49 27.9	+0.4
GO02				Sn	Sn	12 50 31.5	-0.4
SIV	San Ignacio	10.16	70	Pn	Pn	12 50 28.8	-1.3
	comp=E,1.1nm,0.3s,baz=266,slow=10,SNR=11						
SIV				LR	LR	12 54 58.7	
	comp=E,651nm,18.4s,baz=284,slow=42						
GO04	Tololo Observa	10.41	179	Pn	Pn	12 50 31.8	-1.9
SAML	Samuel	13.11	36		Pn	12 51 13.1	+2.6
SAML	Samuel	13.11	36	*e*P	Pn	12 51 11.2	+0.7
CPUP	Villa Florida	14.20	120	LR	LR	12 58 02.4	
	comp=E,191nm,19.1s,baz=303,slow=43						
CPUP	Villa Florida	14.20	120	*e*P	Pn	12 51 28.1	+2.7
AQDB	Aquidauana	14.40	96	*e*P	Pn	12 51 27.8	-0.4
SALV	Santo Antonio	15.06	78	*e*P	Pn	12 51 37.8	+0.6
CLDB	Colider	17.09	61	*e*P	Pn	12 52 02.2	-1.1
C2SB	Chapadao do Su	17.18	90	*e*P	Pn	12 52 04.7	+0.3
TRCB	Terra Rica	17.39	103	*e*P	Pn	12 52 05.8	-1.4
PTGB	Pitanga	18.22	109	*e*P	P	12 52 18.1	+0.4
PCMB	Pacaembu	18.57	99	*e*P	Pn	12 52 21.7	0.0
ARAG	Araguaiana, MT	18.71	81	*e*P	P	12 52 20.8	-2.2
ITAB	Concordia	18.85	117	*e*P	Pn	12 52 25.3	+0.4
CPSB	Cacapava Do Su	19.12	127	*e*P	P	12 52 27.0	-0.3
ITRB	Iturama	19.44	93	*e*P	P	12 52 30.9	-0.1
PLTB	Pedras Altas	19.70	131	*e*P	P	12 52 34.5	+0.7
TRQA	Tornquist	19.89	159	*e*P	P	12 52 34.5	-1.3
FRTB	Fartura	20.27	104	*e*P	P	12 52 39.9	-0.1
CNLB	Canela	20.65	121	*e*P	P	12 52 44.2	0.0
PLCA	Paso Flores	20.95	179	P	Pn	12 52 50.2	+0.4
	comp=E,2.3nm,0.5s,baz=14,slow=10,SNR=20						
PLCA	Paso Flores	20.95	179	P	Pn	12 52 51.6	+1.8
BB19B	Bebedouro	21.11	98	*e*P	P	12 52 48.7	-0.5
IPMB	Ipameri, GO	21.64	89	*e*P	P	12 52 53.3	-1.6
FLOC	Florencia	21.65	347	*e*P	P	12 52 55.9	+0.9
FLOC	Florencia	21.65	347	P	P	12 52 55.7	+0.7
PTGA	Pitinga	21.75	31	P	P	12 52 53.9	-2.1
	comp=E,5.5nm,0.5s,baz=207,slow=13,SNR=17						
PTGA				LR	LR	13 02 34.6	
	comp=E,146nm,21.2s,baz=178,slow=41						
PTGA	Pitinga	21.75	31	P	P	12 52 53.7	-2.3
PTGA				IAmb	IAmb	12 53 06.1	
	comp=Z,10nm,0.7s						
PTGA	Pitinga	21.75	31	*e*P	P	12 52 54.3	-1.7
SPB	Sao Paulo	22.24	104	*e*P	P	12 53 01.3	0.0
BDFB	Brasilia	22.27	83	P	P	12 52 58.9	-2.9
	comp=Z,3.2nm,0.7s,baz=252,slow=16,SNR=3.1						
BDFB				LR	LR	13 03 09.9	
	comp=Z,182nm,19.5s,baz=290,slow=41						
BDFB	Brasilia	22.27	83	P	P	12 53 00.8	-1.0
SOTA	Rioblanco	22.40	345	*e*P	P	12 53 07.5	+4.0
ORTC	Ortega, Tolima	23.85	349	*e*P	P	12 53 17.9	+0.1
PARB	Paraibuna	23.88	103	*e*P	P	12 53 17.4	-0.8
BSCB	Bom Sucesso	24.62	98	*e*P	P	12 53 23.2	-1.9
PLMC	San Jos del P	25.01	347	*e*P	P	12 53 30.7	+2.1
SMTB	Santa Maria do	25.09	68	*e*P	P	12 53 28.3	-1.0
GUY2C	Guyana, Caldas	25.15	350	*e*P	P	12 53 31.7	+1.4
SPBC	San Pablo de B	25.39	353	*e*P	P	12 53 31.8	-0.2
NORC	Norcasia	25.41	351	*e*P	P	12 53 32.0	-0.2
RUSC	La Rusia	25.53	355	*e*P	P	12 53 33.6	-0.1
RUSC	La Rusia	25.53	355	P	P	12 53 33.4	-0.3
JANB	Januaria	25.88	84	*e*P	P	12 53 34.3	-2.1
HELC	Santa Helena	26.13	350	*e*P	P	12 53 37.1	-1.9
BARC	Barichara	26.23	355	*e*P	P	12 53 38.9	-1.0
UREC	San Jos de Ur	27.66	350	*e*P	P	12 53 52.5	+0.1
SJMB	Sao Joao De Ma	28.16	93	*e*P	P	12 53 56.2	-0.8
SDV	Santo Domingo	28.43	1	*e*P	P	12 53 56.5	-2.9
SMLC	San Martn de	28.50	354	*e*P	P	12 53 57.7	-2.2
SJCC	San Jacinto, C	29.71	352	*e*P	P	12 54 09.9	-0.8
EMPR	Esperanza - Ma	38.21	7	P	P	12 55 26.4	+2.1
PMSA	Palmer Station	45.27	176	*e*P	P	12 56 19.5	-2.1
Z50A	Ashland	54.57	345	P	P	12 57 32.6	-0.1
Z50A				IAmb	IAmb	12 57 32.7	
	comp=Z,5.1nm,0.9s						
TKL	Tuckaleechee C	56.39	348	P	P	12 57 46.5	+0.7
TKL				IAmb	IAmb	12 58 01.4	
	comp=Z,8.0nm,1.1s						
SWET	Sewanee	56.44	345	P	P	12 57 45.9	-0.3
V52A	Sevierville	56.53	348	P	P	12 57 45.6	-1.2
V52A				IAmb	IAmb	12 57 48.9	
	comp=Z,18nm,1.4s						
TXAR	Lajitas Array	58.06	326	P	P	12 57 58.4	+0.5
	comp=Z,0.3nm,0.7s,baz=154,slow=4.9,SNR=2.0						
TXAR	Lajitas Array	58.06	326	P	P	12 57 57.7	-0.1
MIAR	Mount Ida	58.08	338	P	P	12 57 58.3	+0.6
T49A	Edmonton	58.16	346	P	P	12 57 58.1	-0.2
T49A				IAmb	IAmb	12 58 07.5	
	comp=Z,11nm,1.2s						
M57A	Sunshine Farm,	61.01	355	P	P	12 58 18.6	+0.8
M57A				IAmb	IAmb	12 58 33.5	
	comp=Z,16nm,1.3s						
M55A	Ridgway	61.30	353	P	P	12 58 21.1	+1.3
M55A				IAmb	IAmb	12 58 39.0	
	comp=Z,18nm,1.2s						
BRYW	Bryant College	61.33	360	P	P	12 58 20.9	+0.9
NCB	Newcomb	63.44	357	P	P	12 58 34.8	+0.6
SADO	Sadowa	64.60	354	P	P	12 58 41.6	-0.1
G62A	West of Eustis	64.62	0	P	P	12 58 43.2	+1.4
SDCO	Great Sand Dun	65.73	330	P	P	12 58 51.0	+1.4
D62A	Allapoint, All	66.51	1	P	P	12 58 54.7	+0.7
D53A	Lac Vacive, Po	66.76	355	P	P	12 58 55.4	-0.2
D53A				IAmb	IAmb	12 58 59.5	
	comp=Z,9.1nm,1.4s						
BATG	Bathurst New B	66.83	4	P	P	12 58 56.6	+0.5
BATG				IAmb	IAmb	12 59 06.5	
	comp=Z,8.2nm,1.0s						
DRLN	Deer Lake	69.71	9	P	P	12 59 13.8	-0.2
DRLN				IAmb	IAmb	12 59 30.1	
	comp=Z,11nm,1.1s						
DBIC	Dimbokro	70.14	75	P	P	12 59 15.8	-1.7
	comp=Z,2.5nm,0.8s,baz=217,slow=6.7,SNR=2.0						
DBIC				LR	LR	13 28 06.2	
	comp=Z,46nm,20.8s,baz=218,slow=34						
DBIC	Dimbokro	70.14	75	P	P	12 59 15.1	-2.4
DBIC				IAmb	IAmb	12 59 25.4	
	comp=Z,5.0nm,0.8s						
QSPA	South Pole Qui	70.46	180	P	P	12 59 21.0	+2.2
QSPA				IAmb	IAmb	12 59 21.6	
	comp=Z,6.7nm,1.4s						
PDAR	Pinedale Array	71.60	331	P	P	12 59 26.8	+0.7
	comp=Z,0.4nm,0.7s,baz=141,slow=9.6,SNR=4.1						
PDAR	Pinedale Array	71.60	331	P	P	12 59 26.4	+0.3
HWUT	Hardware Ranch	71.65	329	P	P	12 59 27.8	+1.5
HWUT				IAmb	IAmb	12 59 29.2	
	comp=Z,4.6nm,1.3s						
NVAR	Mina Array Bea	72.89	323	P	P	12 59 35.3	+1.5
	comp=Z,0.5nm,0.7s,baz=161,slow=6.2,SNR=5.0						
NVAR	Mina Array Bea	72.89	323	P	P	12 59 35.5	+1.6
ULM	Lac du Bonnet	73.05	344	P	P	12 59 34.0	-0.2
	comp=Z,0.7nm,0.4s,baz=129,slow=6.5,SNR=2.5						
ULM	Lac du Bonnet	73.05	344	P	P	12 59 34.1	-0.1
ULM				IAmb	IAmb	12 59 42.7	
	comp=Z,6.0nm,1.4s						
YNE	Yellowstone No	73.56	332	P	P	12 59 38.5	+0.8
YHH	Holmes Hill	73.77	332	P	P	12 59 40.2	+1.3
GCMT	Greycliff	74.03	333	P	P	12 59 41.5	+1.2
ORV	Oroville	75.49	322	P	P	12 59 51.1	+2.3
TOA0	Torodi Ar. Sit	78.63	72	P	P	13 00 05.9	-1.1
TOA0				IAmb	IAmb	13 00 06.5	
	comp=Z,8.3nm,0.8s						
TORD	Torodi Ar. Bea	78.63	72	P	P	13 00 05.6	-1.4
	comp=Z,6.4nm,0.7s,baz=253,slow=5.0,SNR=27						

TORD				LR	LR	13 33 23.1	
	comp=Z,65nm,20.1s,baz=300,slow=35						
TORD	Torodi Ar. Bea	78.63	72	P	P	13 00 05.5	-1.5
YKA	Yellowknife Ar	88.87	341	P	P	13 00 58.6	+0.4
	comp=Z,2.5nm,0.7s,baz=136,slow=5.2,SNR=52						
URZ	Urewera	93.99	227	LR	LR	13 33 08.8	
	comp=Z,113nm,20.9s,baz=2.0,slow=29						
ASAR	Alice Springs	130.51	211	PKP	PKPdf	13 07 16.4	+0.3
	comp=Z,0.5nm,0.8s,baz=143,slow=2.0,SNR=7.9						
ASAR	Alice Springs	130.51	211	PKPdf	PKiKP	13 07 17.7	+0.7
WRA	Warramunga Arr	133.41	214	PKP	PKPdf	13 07 21.0	-0.6
	comp=Z,0.6nm,0.7s,baz=156,slow=1.8,SNR=7.4						
WRA	Warramunga Arr	133.41	214		PKPdf	13 07 21.3	-0.4
KK31	Karatay Array	140.22	45	PKPpre	PKPpre	13 07 27.5	
KKAR	Karatay Array	140.22	45	PKPpre	PKPpre	13 07 26.8	
ZALV	Zalesovo Beam	141.13	23	PKP	PKPdf	13 07 35.5	+0.8
	comp=Z,0.7nm,0.5s,baz=276,slow=3.9,SNR=2.7						
MAKZ	Makanchi	145.11	33		PKPbc	13 07 41.7	+0.2
MK31	Makanchi Array	145.28	33		PKPbc	13 07 41.8	-0.3
MKAR	Makanchi Array	145.28	33	PKPbc	PKPab	13 07 42.4	+0.2
	comp=Z,2.3nm,0.7s,baz=325,slow=4.1,SNR=25						
MKAR	Makanchi Array	145.28	33		PKPbc	13 07 41.7	-0.4
KSH	Kashi	145.44	48	PKPbc	PKPab	13 07 44.0	+0.8
KSH				sPKP		13 07 54.0	
KSH				PP	PP	13 11 08.1	+5.2
KSH				PKS	PKSdf	13 11 22.8	+4.2
MJAR	Matsushiro Arr	149.43	309	PKPbc	PKiKP	13 07 55.1	-0.1
	comp=Z,2.1nm,0.9s,baz=125,slow=2.3,SNR=4.9						
MJAR	Matsushiro Arr	149.43	309		PKPbc	13 07 54.4	+0.4
SONM	Songino Array	151.87	4	PKPbc	PKPbc	13 08 00.1	+0.5
	comp=Z,0.3nm,0.4s,baz=47,slow=1.0,SNR=5.7						
SONM	Songino Array	151.87	4		PKPbc	13 07 59.3	-0.3
SONM				PKPab	PKPab	13 08 09.1	+0.5
HHC	Hu-ho-hao-te	158.82	355	*e*P	PKPdf	13 07 59.1	-3.7
LZH	Lanzhou	163.07	14	*e*PKP	PKPdf	13 08 07.8	+0.3
LZH				pPKP	sPKPdf	13 08 13.5	+4.4
LZH				sPKP		13 08 15.3	
LZH				PKP	sPKPab	13 09 00.1	+1.5
CD2	Chengdu	167.90	22	PKP	PKPdf	13 08 09.8	-1.7

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*IDC **23** 13:02:03.8±1.3, 39°.13N×72°.29E, h0^{km}, mb3.5/5, mb1 3.6/11, mb1mx3.4/54, mbtmp3.5/11, ML3.1/6, MS3.6/1, Ms1 3.6/1, ms1mx2.3/46, Error ellipse: s-maj=22.7km s-min=16.8km az=106.0*
*SOME **23** 13:02:03.3, 39°.42N×72°.40E, h10^{km}*
*KRNET **23** 13:02:08.4±0.1, 39°.42N×72°.27E, mb3.5*
*NNC **23** 13:02:09.9±1.9, 39°.43N×72°.16E, h0^{km}, mb3.9, mpv3.4, Error ellipse: s-maj=14.5km s-min=8.5km az=177.0*
*ISU **23** 13:02:09.0, 39°.50N×72°.10E, h5^{km}*
ISC 23 13:02:06.3±2.8**, 39°.18N**±0°.07×**72°.26E**±0°.04**, h12**^{km}±18^{km}**, n52, σ2^{s}.46**/81**, mb3.5**/5**, 33C-14D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	1.42	309	⇓*i*P	Pn	13 02 32.2	+0.1
	baz=0.0						
BTK				⇓*i*S	Sb	13 02 50.3	-0.7
	baz=0.0						
BTK	Batken	1.42	309	*i* P	Pn	13 02 30.5	-1.6
BTK				*i* S	Sb	13 02 51.0	0.0
ARSB	Arslanbob	2.21	14	⇑*i*P	Pn	13 02 45.1	+2.1
	baz=16						
ARSB				⇑*i*S	Sb	13 03 11.8	-2.0
	baz=16						
ARSB	Arslanbob	2.21	14	*e*P	Pn	13 02 44.8	+1.8
ARSB				*e*S	Sb	13 03 12.4	-1.4
ARK	Arkit	2.63	355	⇑*i*P	Pn	13 02 51.1	+2.4
	baz=55						
ARK				⇑*i*S	Sn	13 03 21.4	+0.8
	baz=55						
ARK	Arkit	2.63	355	*e*P	Pn	13 02 50.1	+1.4
ARK				*e*S	Sb	13 03 24.5	-1.2
ARLS	Aral	3.11	30	⇑*i*P	Pn	13 02 57.8	+2.5
	baz=32						
ARLS				⇑*i*S	Sn	13 03 33.2	+0.7
	baz=32						
TAS	Tashkent	3.12	314	⇑*i*P	Pn	13 02 58.9	+3.5
	baz=11						
TAS				⇑*i*S	Sn	13 03 36.0	+3.3
	baz=11						
AML	Almayashu	3.15	20	⇑*i*P	Pn	13 02 58.4	+2.3
	baz=21						
AML				⇑*i*S	Sn	13 03 34.6	+0.8
	baz=21						
AML	Almayashu	3.15	20	P	Pn	13 02 58.6	+2.5
	SNR=95						
UCH	Uchtor	3.49	29	⇓*i*P	Pn	13 03 03.4	+2.5
	baz=31						
UCH				⇓*i*S	Sn	13 03 43.3	+0.8
	baz=31						
UCH	Uchtor	3.49	29	P	Pn	13 03 03.4	+2.5
	SNR=32						
MRKS	Merke	3.64	11	*e*P	Pn	13 03 05.7	+3.1
	37nm,0.4s						
MRKS				*e*S	Sb	13 03 49.7	-5.1
	26nm,0.5s						
NRN	Naryn	3.64	51	⇓*i*P	Pn	13 03 05.2	+2.4
	baz=54						
NRN				⇓*i*S	Sn	13 03 47.2	+1.4
	baz=54						
EKS2	Erkin-Say	3.67	18	⇑*i*P	Pn	13 03 05.4	+2.4
	baz=19						
EKS2				⇑*i*S	Sn	13 03 46.8	+0.6
	baz=19						
EKS2	Erkin-Say	3.67	18	P	Pn	13 03 06.7	+3.7
	SNR=16						
KZA	Kyzart	3.68	37	⇓*e*P	Pn	13 03 06.1	+2.6
	baz=40						
KZA				⇓*i*S	Sn	13 03 48.3	+1.3
	baz=40						
KZA	Kyzart	3.68	37	P	Pn	13 03 06.2	+2.7
	SNR=10						
AAK	Ala-Archa	3.85	25	Pn	Pn	13 03 08.5	+3.0
	3.7nm,0.3s,baz=166,slow=5.4,SNR=44						
AAK				Sn	Sn	13 03 54.7	+3.9
	1.7nm,0.3s,baz=324,slow=20,SNR=7.6						
AAK				Lg	Lg	13 04 03.0	
	4.2nm,0.3s,baz=0.9,slow=9.7,SNR=7.1						
AAK	Ala-Archa	3.85	25	⇑*e*P	Pn	13 03 08.0	+2.5
	baz=27						
AAK				⇑*i*S	Sn	13 03 51.4	+0.6
	baz=27						
AAK	Ala-Archa	3.85	25	P	Pn	13 03 09.0	+3.5
	SNR=14						
AAK	Ala-Archa	3.85	25	⇑Pn	Pn	13 03 08.8	+3.3
	2.9nm,0.3s						
AAK				⇓Pg	Pb	13 03 14.9	+0.7
	9.5nm,0.6s						
AAK				⇓Sn	Sn	13 03 54.1	+3.3
	17nm,0.5s						
AAK				⇑Lg	Lg	13 04 03.7	
	12nm,0.4s						
KBK	Karagaybulak	4.03	29	⇑*i*P	Pn	13 03 10.6	+2.6
	baz=31						
KBK				⇑*e*S	Sn	13 03 55.6	+0.4
	baz=31						
FRU1	Bishkek	4.05	26	⇑*i*P	Pn	13 03 10.8	+2.6
	baz=27						
FRU1				⇑*i*S	Sn	13 03 56.0	+0.5
	baz=27						
KK31	Karatay Array	4.14	342	Pn	Pn	13 03 11.7	+2.3
	2.6nm,0.2s,baz=145,slow=11,SNR=362						
KK31				⇓Sn	Sn	13 03 58.3	+0.6
	10nm,0.4s,baz=136,slow=22,SNR=7.1						
KK31				⇑Lg	Lg	13 04 13.9	
	8.6nm,0.3s						
CHMS	Chumysh	4.25	25	P	Pn	13 03 14.3	+3.4
	SNR=21						
CHMS	Chumysh	4.25	25	⇓Pn	Pn	13 03 14.1	+3.1
	16nm,0.5s						
CHMS				⇑Sn	Sn	13 04 03.1	+2.5
	9.6nm,0.5s						
CHMS				⇓Lg	Lg	13 04 19.8	
	17nm,0.6s						
BRLS	Borolday	4.26	335	*e*P	Pn	13 03 15.4	+4.3
	0.7nm,0.2s						
BRLS				*e*S	Sn	13 04 05.9	+5.1
	15nm,0.3s						
BRLS	Borolday	4.26	335	Pg	Pb	13 03 19.3	-2.0
	0.9nm,0.2s						
BRLS				Lg	Lg	13 04 12.6	
	3.8nm,0.3s						
ULHL	Ulahol	4.30	43	⇑*i*P	Pn	13 03 14.9	+3.1
	baz=46						
ULHL				⇑*i*S	Sn	13 04 03.1	+1.0
	baz=46						
ULHL	Ulahol	4.30	43	P	Pn	13 03 14.8	+2.9
	SNR=7.3						
BOOM	Boomskoye usch	4.33	39	⇑*i*P	Pn	13 03 14.9	+2.8
	baz=41						
BOOM				⇑*i*S	Sn	13 04 03.7	+1.1
	baz=41						
USP	Ospenovka	4.42	22	P	Pn	13 03 16.2	+3.0
	SNR=12						
KDJ	Kajisay	4.76	50	⇑*i*P	Pn	13 03 21.9	+3.8
	baz=53						
KDJ				⇑*i*S	Sn	13 04 16.0	+2.7
	baz=53						
KST	Kastek	4.77	35	*e*P	Pb	13 03 26.5	-3.3
	4.7nm,0.6s						
KST				*e*S	Sb	13 04 25.0	-2.3
	7.5nm,0.5s						
DGS	Degeres	4.85	32	*e*P	Pb	13 03 27.6	-3.6
	5.3nm,0.5s						
DGS				*e*S	Sb	13 04 26.5	-3.0
	16nm,0.7s						
DGS	Degeres	4.85	32	Pg	Pb	13 03 32.8	+1.6
DGS				Lg	Lg	13 04 36.5	
MDOK	Medeo	5.38	41	⇑Pg	Pb	13 03 43.4	+3.2
	2.6nm,0.4s						
MDOK				⇑Lg	Lg	13 04 58.1	
	10nm,0.6s						
BTLS	Baital	6.01	12	Pg	Pb	13 03 53.8	+2.9
	0.9nm,0.4s						
BTLS				Lg	Lg	13 05 10.8	
	6.5nm,0.5s						
MKAR	Makanchi Array	10.57	41	Pn	Pn	13 04 39.6	+2.0
	0.1nm,0.3s,baz=226,slow=14,SNR=7.3						
KURBB	Kurchatov Arra	12.27	19	Pn	Pn	13 04 59.5	-1.3
	0.1nm,0.3s,baz=212,slow=13,SNR=2.7						
KURBB				Lg	Lg	13 08 34.9	
	0.0nm,0.3s,baz=263,slow=12,SNR=2.0						
AB31	Akbulak array	13.38	323	⇑Pn	Pn	13 05 16.9	+1.0
	0.6nm,0.4s,baz=129,slow=14,SNR=21						
AB31				⇓Sn	Sn	13 07 43.9	-0.8
	1.0nm,0.6s,baz=123,slow=27,SNR=4.1						
BVAR	Borovoye Array	13.91	355	Pn	Pn	13 05 21.9	-1.3
	0.1nm,0.3s,baz=178,slow=7.2,SNR=2.1						
AKTO	Aktyubinsk	15.10	323	Pn	Pn	13 05 36.0	-3.4
	0.1nm,0.3s,baz=133,slow=15,SNR=2.1						
AKTO	Aktyubinsk	15.10	323	⇑Pn	Pn	13 05 40.3	+1.0
	4.1nm,1.1s						
AKTO				⇑Sn	Sn	13 08 26.3	-0.1
	2.6nm,1.1s						
ZALV	Zalesovo Beam	17.07	26	P	Pn	13 06 03.1	-1.6
	0.4nm,0.3s,baz=222,slow=10,SNR=5.7						
FINES	FINESS Array B	35.87	324	P	P	13 09 05.7	-0.1
	1.4nm,1.0s,baz=116,slow=9.7,SNR=1.1						
ARCES	ARCESS Array B	39.08	336	P	P	13 09 32.7	-0.2
	1.6nm,0.9s,baz=113,slow=9.1,SNR=1.2						
JCJ	Chichijima	58.47	79	LR	LR	13 39 14.9	
	comp=Z,46nm,18.8s,baz=332,slow=38						
YKA	Yellowknife Ar	78.53	3	P	P	13 14 05.5	-1.5
	0.2nm,0.9s,baz=28,slow=3.2,SNR=5.0						
WRA	Warramunga Arr	82.58	123	P	P	13 14 28.4	-1.0
	0.4nm,1.0s,baz=328,slow=4.9,SNR=4.7						
ASAR	Alice Springs	84.99	126	P	P	13 14 41.0	-0.7
	0.2nm,0.7s,baz=316,slow=5.2,SNR=2.1						

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*IDC **23** 13:12:57.2±1.7, 0°.87N×124°.46E, h0^{km}, mb3.4/4, mb1 3.6/4, mb1mx3.2/46, mbtmp3.5/4, Error ellipse: s-maj=199.2km s-min=23.6km az=63.0*
*DJA **23** 13:13:15.7±0.6, 0°N±5°×12°3E±°, h129^{km}±10^{km}, M3.4/8, MLv3.3/8, MLv3.4/4*
ISC 23 13:13:14.8±0.9**, 0°.09N**±0°.09×**123°.50E**±0°.04**, h150**^{km}**, n12, σ0^{s}.95**/16**, mb3.4**/4**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	0.68	45	P	Pn	13 13 37.3	+0.1
LUWI	Luwuk	1.34	213	P	Pn	13 13 42.3	-0.4
MRSI	Marisa	1.60	284	P	Pn	13 13 45.0	-0.5
MRSI				S	Sn	13 14 07.1	-1.8
APSI	Ampana	2.10	242	P	Pn	13 13 52.0	+0.9
APSI				S	Sn	13 14 18.3	-0.7
SANI	Sanana	3.27	131	P	Pn	13 14 04.5	-1.1
MPSI	Mapaga	3.61	274	P	Pn	13 14 11.3	+1.3
MPSI				S	Sn	13 14 52.1	-0.7
TNTI	Ternate	3.93	80	P	Pn	13 14 14.4	+0.3
TNTI				S	Sn	13 14 59.9	-0.3
LBMI	Labuha	4.07	100	P	Pn	13 14 16.3	+0.4
WRA	Warramunga Arr	22.56	153	P	P	13 18 02.4	-0.2
	0.5nm,0.3s,baz=334,slow=10.0,SNR=23						
ASAR	Alice Springs	25.69	158	P	P	13 18 32.0	+1.0
	0.2nm,0.4s,baz=338,slow=9.6,SNR=8.2						
STKA	Stephens Creek	36.11	153	P	P	13 20 03.6	+1.2
	0.8nm,0.7s,baz=342,slow=13,SNR=1.6						
MKAR	Makanchi Array	58.80	328	P	P	13 22 56.6	-0.8
	0.2nm,0.3s,baz=123,slow=8.5,SNR=6.9						

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*IDC **23** 13:16:54.1±5.8, 9°.21S×118°.02E, h94^{km}±49^{km}, mb3.2/4, mb1 3.3/7, mb1mx3.1/47, mbtmp3.6/7, Error ellipse: s-maj=94.0km s-min=17.7km az=64.0*
*DJA **23** 13:16:57.0±0.3, 9°S±4°×11°8E±°, h71^{km}±5^{km}, M4.0/10, mb4.3/1, MLv3.9/10*
ISC 23 13:16:55.5±0.8**, 9°.11S**±0°.06×**118°.40E**±0°.06**, h100**^{km}**, n17, σ1^{s}.47**/21**, mb3.6**/3**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.68	295	P	Pn	13 17 13.1	+0.4
PLAI				S	Sn	13 17 25.8	+0.2
WBSI	Waikabubak, Su	1.11	118	P	Pn	13 17 16.7	-0.5
WBSI				S	Sn	13 17 31.9	-1.7
BASI	Baing, Sumba	2.41	117	P	Pn	13 17 34.4	+0.9
EDFI	Ende, Flores	3.27	84	P	Pn	13 17 46.8	+1.8
SRBI	Singaraja	3.31	288	P	Pn	13 17 46.6	+1.2
MMRI	Maumere	3.82	83	P	Pn	13 17 53.2	+0.9
BKSI	Bulukumba	4.14	25	P	Pn	13 17 57.1	+0.6
JAGI	Jajag, Banyuwa	4.25	278	P	Pn	13 17 58.6	+0.6
KAPI	Kappang	4.29	18	P	Pn	13 18 01.3	+2.7
	2.1nm,0.3s,baz=122,slow=6.4,SNR=4.6						
KAPI				S	Sn	13 18 44.8	-2.7
	7.4nm,0.3s,baz=98,slow=22,SNR=13						
GMJI	Gumukmas	4.97	279	P	Pn	13 18 09.3	+1.5
SOEI	Soe	5.83	97	P	Pn	13 18 20.4	+0.9
FITZ	Fitzroy Crossi	11.37	143	P	Pn	13 19 33.8	-1.0
	0.3nm,0.3s,baz=330,slow=11,SNR=15						
FITZ				S	Sn	13 21 32.1	-7.8
	0.6nm,0.3s,baz=182,slow=21,SNR=11						
WRA	Warramunga Arr	18.80	127	P	P	13 21 08.0	+0.7
	0.4nm,0.3s,baz=302,slow=12,SNR=20						
WRA				S	S	13 24 23.8	-12
	0.0nm,0.3s,baz=304,slow=12,SNR=1.9						
ASAR	Alice Springs	20.72	136	P	P	13 21 29.4	+1.4
	0.6nm,0.4s,baz=317,slow=9.2,SNR=35						
ASAR				S	S	13 25 13.7	-0.4
	0.5nm,0.9s,baz=302,slow=21,SNR=2.2						
STKA	Stephens Creek	31.25	140	P	P	13 23 07.6	+1.9
	1.1nm,0.7s,baz=320,slow=11,SNR=4.1						
SONM	Songino Array	57.69	350	P	P	13 26 35.0	-0.6
	0.3nm,0.5s,baz=175,slow=9.5,SNR=4.0						
MKAR	Makanchi Array	64.29	333	P	P	13 27 18.4	-1.8
	0.2nm,0.5s,baz=155,slow=6.0,SNR=4.7						

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*DDA **23** 13:20:45.9, 40°.52N×40°.89E, h7^{km}±3^{km}, ML1.9*
*ISK **23** 13:20:45.6, 40°.47N×40°.94E, h11^{km}, ML2.6/8*
ISC 23 13:20:46.1±0.9**, 40°.49N**±0°.02×**40°.91E**±0°.03**, h15**^{km}±7^{km}**, n24, σ0^{s}.54**/35**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRIK	Erzurum-spir	0.16	176	*i* P	Pg	13 20 50.8	+0.5
KRIK				*i* S	Sg	13 20 52.5	-0.4
EMRE	Erzurum,Aziziy	0.47	174	*i* P	Pb	13 20 55.8	-0.4
EMRE				IAML		13 21 05.0	
	comp=N,237nm,0.7s						
EMRE				IAML		13 21 07.0	
	comp=E,188nm,0.4s						
AKDA	Akdag	0.52	138	*i* P	Pb	13 20 56.7	-0.4
BAYB	BAYBURT	0.55	245	*i* P	Pg	13 20 57.0	0.0
BAYB				*i* S	Sg	13 21 04.7	+0.3
BAYB				IAML		13 21 07.0	
	comp=N,60nm,0.4s						
BAYB				IAML		13 21 08.0	
	comp=E,76nm,0.3s						
KOPT	Kop Dagi	0.57	214	*i* P	Pb	13 20 57.8	-0.2
KOPT				*i* S	Sb	13 21 07.8	+1.7
KOPT				IAML		13 21 09.0	
	comp=E,70nm,0.5s						
KOPT				IAML		13 21 10.0	
	comp=N,67nm,0.5s						
BAYT	Aydıntepe-Bayb	0.60	261	PG	Pb	13 20 57.9	-0.5
BAYT				SG	Sb	13 21 06.9	+0.2
CHAY	Cayeli-Rize	0.61	347	PG	Pb	13 20 58.4	0.0
CHAY				SG	Sb	13 21 07.8	+1.0
CHOM	Cayeli-Rize	0.61	349	PG	Pb	13 20 58.6	0.0
CHOM				SG	Sb	13 21 08.0	+1.0
DDEM	Demirkent	0.75	58	*i* P	Pg	13 21 00.5	-0.2
DDEM				IAML		13 21 13.0	
	comp=N,91nm,0.4s						
DDEM				IAML		13 21 15.0	
	comp=E,69nm,0.4s						
DBAD	Bademkaya	0.79	48	*i* P	Pg	13 21 01.2	-0.3
DBAD				*i* S	Sg	13 21 11.5	-0.5
DBAD				IAML		13 21 17.0	
	comp=N,33nm,0.3s						
DBAD				IAML		13 21 17.0	
	comp=E,30nm,0.3s						
KOPR	Koprukoy-ERZUR	0.88	125	PG	Pg	13 21 02.6	-0.5
HOMI	Horasan	0.88	120	*i* P	Pb	13 21 03.3	0.0
HOMI				*i* S	Sn	13 21 17.1	+0.2
HOMI				IAML		13 21 21.0	
	comp=N,70nm,0.5s						
HOMI				IAML		13 21 23.0	
	comp=E,48nm,0.4s						
DAGI	Agillar	0.96	52	*i* P	Pg	13 21 04.3	-0.3
DAGI				*i* S	Sb	13 21 17.4	+0.3
KTUT	Trabzon	1.00	300	PG	Pb	13 21 05.2	+0.1
DBOC	Borcka	1.02	34	*i* P	Pg	13 21 05.3	-0.5
DBOC				IAML		13 21 23.0	
	comp=E,28nm,0.3s						
BCA	Borcka	1.09	29	PN	Pg	13 21 06.8	-0.4
YEDI	Yedisu-Bingol	1.09	195	PG	Pg	13 21 06.7	-0.5
BATM	Batumi	1.26	28	PN	Pb	13 21 09.7	+0.2
BATM	Batumi	1.26	28	*i* P	Pb	13 21 09.7	+0.2
BATM				*i* S	Sg	13 21 26.2	-0.5
KELT	Kelkit	1.31	255	*i* P	Pn	13 21 10.2	+0.1
KELT				*i* S	Sb	13 21 26.4	-0.9
KELT				IAML		13 21 28.0	
	comp=E,25nm,0.2s						
KELT				IAML		13 21 29.0	
	comp=N,19nm,0.4s						
EATA	Eleskirt	1.36	117	*i* P	Pg	13 21 12.7	+0.3
BNGL	BINGOL	1.55	173	*i* P	Pg	13 21 15.7	-0.2
EPOS	Posof	1.71	53	*i* P	Pb	13 21 17.1	-0.1
ESPY	Espiye-Giresun	1.71	285	PN	Pb	13 21 16.7	-0.6

IDC 23 13:28:51.0±2.9**, 6°.75S**×**129°.75E, h142**^{km}±39^{km}**, mb3.5**/1**, mb1 3.1**/5**, mb1mx2.9**/37**, mbtmp3.5**/5**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.3**/27**, Error ellipse: s-maj=71.0km s-min=21.0km az=88.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.04	15	P	Pn	13 30 18.6	+0.4
	0.5nm,0.3s,baz=161,slow=23,SNR=6.6						
SIJI				S	Sn	13 31 19.5	-6.9
	1.2nm,0.3s,baz=180,slow=22,SNR=9.2						
FITZ	Fitzroy Crossi	11.97	199	P	Pn	13 31 36.2	-0.9
	0.1nm,0.3s,baz=37,slow=10,SNR=1.8						
FITZ				S	Sn	13 33 42.6	-6.6
	0.1nm,0.3s,baz=296,slow=16,SNR=1.6						
WRA	Warramunga Arr	13.85	162	P	Pn	13 32 00.0	-1.3
	0.1nm,0.3s,baz=347,slow=13,SNR=2.1						
WRA				S	Sn	13 34 26.7	-7.9
	0.3nm,0.3s,baz=351,slow=23,SNR=9.0						
ASAR	Alice Springs	17.28	167	P	Pn	13 32 44.8	+1.0
	0.1nm,0.3s,baz=347,slow=9.4,SNR=24						
ASAR				S	S	13 35 52.0	-4.1
	0.1nm,0.3s,baz=357,slow=27,SNR=4.0						
BRDH	Bariadhala	47.39	309	LR	LR	13 58 49.6	
	comp=Z,46nm,20.1s,baz=254,slow=38						
MKAR	Makanchi Array	67.88	327	P	P	13 39 34.0	-0.1
	0.6nm,0.5s,baz=119,slow=8.3,SNR=9.8						

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*JMA **23** 13:41:43.0±0.2, 38°.46N×144°.34E, h53^{km}, M3.9*
*IDC **23** 13:41:48.5±1.4, 38°.93N×143°.25E, h0^{km}, mb3.8/11, mb1 3.9/13, mb1mx3.7/64, mbtmp3.8/13, ML3.7/2, MS2.7/4, Ms1 2.7/4, ms1mx2.4/45, Error ellipse: s-maj=32.3km s-min=17.7km az=153.0*
*NEIC **23** 13:41:50.1±2.6, 38°.8N±0°.1×143°.6E±0°.2, h27^{km}±8^{km}, mb4.4/6, Error ellipse: s-maj=20.2km s-min=11.1km az=125.0*
ISC 23 13:41:43.5±1.3**, 38°.47N**±0°.06×**144°.4E**±0°.1**, h29**^{km}**, n58, σ2^{s}.08**/65**, mb3.8**/14**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.23	287	P	Pn	13 42 18.1	-0.3
MIYJ	Miyakonagasawa	2.30	300	P	Pn	13 42 18.9	-0.5
JIKH	Ishinomakikobu	2.32	267	P	Pn	13 42 18.8	-0.9
JIKH				*e*S	Sn	13 42 45.4	-1.8
JKMT	Kesennumamotoy	2.32	279	P	Pn	13 42 19.2	-0.5
JIO	Ouri	2.40	271	P	Pn	13 42 20.3	-0.5
JIO				*e*S	Sn	13 42 47.3	-2.0
JMK	Ichinoseki	2.54	282	P	Pn	13 42 22.7	0.0
JOM	Ohasama	2.63	293	P	Pn	13 42 23.8	-0.1
JANG	Nango	2.94	311	P	Pn	13 42 27.4	-0.8
JYK	Kaneyama	3.20	279	P	Pn	13 42 32.0	+0.2
JFT	Otama	3.35	255	P	Pn	13 42 34.0	0.0
JFT				*e*S	Sn	13 43 12.2	-0.6
ERM	Erimo	3.67	345		Pn	13 42 37.2	-1.0
JOT	Ohata	3.89	319	P	Pn	13 42 41.0	-0.3
JCH	Churui	4.21	349	P	Pn	13 42 44.5	-1.3
JCH				*e*S	Sn	13 43 30.8	-3.2
JKB	Kayabe	4.28	324	P	Pn	13 42 47.8	+1.1
BSO1	Boso 1	4.70	217	P	Pn	13 42 50.3	-1.7
BSO1				*e*S	Sn	13 43 42.8	-2.5
NEM2	Nemuro 2	4.99	11	P	Pn	13 42 53.6	-2.8
NEM2				*e*S	Sn	13 43 47.2	-5.9
JRY	Ryogami san	5.03	243	P	Pn	13 42 56.4	-0.6
JRY				S	Sn	13 43 50.5	-3.7
JOSM	Okushiri--Mats	5.22	315	P	Pn	13 43 00.6	+1.1
MJAR	Matsushiro Arr	5.29	251	Pn	Pn	13 43 01.3	+0.7
	1.0nm,0.3s,baz=59,slow=9.8,SNR=98						
MJAR				Sn	Sn	13 43 57.0	-3.6
	baz=79,slow=16,SNR=0.7						
MJAR				LR	LR	13 45 16.5	
	comp=Z,62nm,20.0s,baz=75,slow=45						
MJAR	Matsushiro Arr	5.29	251		Pn	13 43 00.8	+0.2
MAJO	Matsushiro	5.29	251		Pn	13 43 01.6	+1.0
MAT	Matsushiro	5.29	251	P	Pn	13 43 01.7	+1.1
MAT				*e*S	Sn	13 44 00.0	-0.6
MJB9	Matsu-Tunnel	5.29	251		Pn	13 43 01.6	+1.0
JOD2	Odawara 2	5.33	235	P	Pn	13 43 00.8	-0.4
JOD2				*e*S	Sn	13 43 57.2	-4.4
JTKR	Abashiri--Toko	5.51	356	P	Pn	13 43 02.2	-1.3
JTKR				*e*S	Sn	13 44 01.0	-4.8
JHR	Hokuryu	5.64	340	P	Pn	13 43 06.1	+0.7
JHR				*e*S	Sn	13 44 08.7	-0.5
JKA	Kamikawa-asahi	5.80	347		Pn	13 43 06.8	-0.7
JKA					Sn	13 44 10.2	-2.9
ASAJ	Asahikawa	5.80	347	Pn	Pn	13 43 06.8	-0.7
	4.2nm,0.3s,baz=191,slow=12,SNR=54						
ASAJ				Sn	Sn	13 44 10.2	-2.9
	1.5nm,0.3s,baz=113,slow=31,SNR=1.8						
JHJ2	Mitsune	6.52	216	Pn	Pn	13 43 17.8	+0.4
JHJ	Hachijo jima 2	6.53	217	Pn	Pn	13 43 15.4	-2.2
	14nm,0.3s,baz=38,slow=18,SNR=1.6						
JHJ				Sn	Sn	13 44 23.3	-7.7
	24nm,0.3s,baz=274,slow=21,SNR=6.0						
INU	Inuyama	6.69	245		Pn	13 43 20.6	+0.8
USRK	Ussuriysk Ar.	10.95	305	Pn	Pn	13 44 18.4	+0.3
	baz=116,slow=13,SNR=12						
USRK	Ussuriysk Ar.	10.95	305		Pn	13 44 18.1	0.0
MDJ	Mudanjiang	12.68	304		Pn	13 44 42.1	+0.4
KSRS	Korea Array	13.05	271	Pn	Pn	13 44 48.6	+1.8
	0.1nm,0.3s,baz=81,slow=14,SNR=4.5						
KSRS				LR	LR	13 48 21.9	
	comp=Z,13nm,18.4s,baz=55,slow=32						
KLR	Kul'dur	14.09	324	Pn	Pn	13 44 59.8	-1.1
	0.0nm,0.3s,baz=128,slow=10,SNR=4.5						
HIA	Hailar	20.71	309	Pn	Pn	13 46 23.2	-0.6
GUMO	Guam	24.79	179	LR	LR	13 55 36.8	
	comp=Z,14nm,21.4s,baz=126,slow=33						
SEY	Seymchan	24.97	9	P	P	13 47 06.4	+2.2

	1.8nm,0.7s,baz=177,slow=8.3,SNR=5.9						
YAK	**Yakutsk**	**25.27**	**344**	P	**P**	**13 47 08.9**	**+2.0**
	3.9nm,0.4s,baz=144,slow=4.2,SNR=5.8						
YAK	**Yakutsk**	**25.27**	**344**	P	**P**	**13 47 08.5**	**+1.6**
SONM	**Songino Array**	**29.01**	**301**	P	**P**	**13 47 41.7**	**+0.8**
	1.2nm,0.7s,baz=95,slow=9.6,SNR=9.4						
SONM	**Songino Array**	**29.01**	**301**	P	**P**	**13 47 40.8**	**-0.1**
ZALV	**Zalesovo Beam**	**42.73**	**311**	P	**P**	**13 49 39.3**	**+1.6**
	0.6nm,0.5s,baz=67,slow=8.2,SNR=3.8						
ZALV				LR	LR	14 09 04.1	
	comp=Z,28nm,18.0s,baz=345,slow=39						
ZALV	**Zalesovo Beam**	**42.73**	**311**	P	**P**	**13 49 38.9**	**+1.1**
CMAR	**Chiang Mai Arr**	**44.15**	**256**	P	**P**	**13 49 51.1**	**+1.5**
	0.4nm,0.7s,baz=46,slow=6.4,SNR=1.6						
MK31	**Makanchi Array**	**45.38**	**301**	P	**P**	**13 50 00.3**	**+1.1**
MK31				IAmb	IAmb	13 50 44.6	
	comp=Z,2.8nm,0.6s						
MKAR	**Makanchi Array**	**45.38**	**301**	P	**P**	**13 50 00.8**	**+1.5**
	comp=Z,1.2nm,0.8s,baz=85,slow=9.2,SNR=13						
MKAR	**Makanchi Array**	**45.38**	**301**	P	**P**	**13 50 00.2**	**+0.9**
KURK	**Kurchatov**	**46.93**	**307**	P	**P**	**13 50 12.1**	**+0.8**
KURK				IAmb	IAmb	13 50 24.7	
	comp=Z,2.8nm,0.7s						
KURBB	**Kurchatov Arra**	**47.00**	**307**	P	**P**	**13 50 13.1**	**+1.2**
	comp=Z,2.2nm,0.7s,baz=80,slow=8.0,SNR=23						
ILAR	**Eielson Array**	**47.01**	**33**	P	P	13 50 22.4	+11
	comp=Z,0.2nm,0.5s,baz=240,slow=7.2,SNR=4.4						
BVAR	**Borovoye Array**	**51.37**	**312**	P	**P**	**13 50 46.8**	**+1.6**
	comp=Z,1.2nm,0.6s,baz=73,slow=9.9,SNR=10.0						
INK	**Inuvik**	**52.02**	**28**	P	P	13 51 00.8	+11
	comp=Z,0.5nm,0.4s,baz=317,slow=3.5,SNR=2.4						
INK	**Inuvik**	**52.02**	**28**	IAmb	IAmb	13 51 02.0	
	comp=Z,8.0nm,1.6s						
YKA	**Yellowknife Ar**	**61.36**	**31**	P	P	13 52 06.1	+10
	comp=Z,0.2nm,0.7s,baz=297,slow=5.9,SNR=4.8						
PDAR	**Pinedale Array**	**74.96**	**47**	P	P	13 53 33.1	+11
	comp=Z,0.4nm,0.5s,baz=282,slow=1.5,SNR=6.3						
KEST	**Kesra**	**95.27**	**325**	LR	LR	14 40 32.2	
	comp=Z,114nm,20.3s,baz=322,slow=37						

NNC ***23*** *13:47:37.9±3.2, 36°.82N×70°.72E, h0^{km}, mb4.8, mpv4.7, Error ellipse: s-maj=25.8km s-min=21.8km az=5.0*

IDC ***23*** *13:47:37.7±2.1, 36°.28N×71°.09E, h186^{km}±19^{km}, mb3.5/23, mb1 3.6/28, mb1mx3.4/62, mbtmp4.0/28, Error ellipse: s-maj=13.4km s-min=9.6km az=12.0*

BJI ***23*** *13:47:39.1±0.0, 36°.64N×71°.07E, h209^{km}, mB4.6/13, mb4.4/23*

NEIC ***23*** *13:47:40.1±1.6, 36°.43N±0°.04×71°.14E±0°.07, h207^{km}±7^{km}, mb4.5/42, Error ellipse: s-maj=10.1km s-min=2.1km az=126.0*

ISC 23 13:47:39.2±0.4, **36°.41N**±0°.04×**71°.14E**±0°.04, **h200**^{km}, **n130**, σ**1^{s}67**/142, **mb4.2**/42, **7C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.53**	**223**		**Pn**	**13 48 26.1**	**+2.4**
CEP	**Cherat**	**2.66**	**166**	P	**Pn**	**13 48 27.6**	**+2.5**
CEP				S	**Sn**	**13 49 03.0**	**+2.1**
CHCP	**Chirah Chowk**	**3.26**	**147**	P	**Pn**	**13 48 34.9**	**+2.9**
NIL	**Nilore**	**3.26**	**147**		**Pn**	**13 48 34.6**	**+2.6**
THW	**Thamme Wali**	**3.65**	**172**	P	**Pn**	**13 48 38.8**	**+2.1**
SARP	**Sargodha**	**4.66**	**164**	P	**Pn**	**13 48 50.6**	**+1.3**
JMU	**Jammu**	**4.82**	**139**	*e*x	**Sn**	**13 49 43.5**	**-4.6**
JMU				*e*x	x	13 49 51.0	
KSH	**Kashi**	**4.92**	**50**	P	**Pn**	**13 48 48.8**	**-3.8**
KSH				sP		13 49 29.0	
KSH				S	Sn	13 49 40.3	-10
KSH				pmax	pmax		
	comp=Z,100nm,0.7s						
KSH				pmax	pmax		
	comp=Z,630nm,4.0s						
KSH				smax	smax		
	comp=N,800nm,0.5s						
KSH				smax	smax		
	comp=E,480nm,0.5s						
TAS	**Tashkent**	**5.11**	**344**		**Pn**	**13 48 56.3**	**+1.4**
DHRM	**DHARAMSHALA**	**5.96**	**133**	*e*P	**Pn**	**13 49 07.4**	**+1.3**
DHRM				*e*S	**Sn**	**13 50 13.2**	**-1.7**
DHRM				IAML		13 50 37.5	
	comp=E,124nm,0.4s						
DHRM				IAML		13 50 39.8	
	comp=N,134nm,0.6s						
AML	**Almayashu**	**6.04**	**18**	P	**Pn**	**13 49 07.8**	**+0.5**
	SNR=851						
UCH	**Uchtor**	**6.37**	**23**	P	**Pn**	**13 49 12.0**	**+0.5**
	SNR=81						
KZA	**Kyzart**	**6.49**	**28**	P	**Pn**	**13 49 13.0**	**-0.2**
	SNR=30						
EKS2	**Erkin-Say**	**6.56**	**17**	P	**Pn**	**13 49 14.5**	**+0.7**
	SNR=82						
BHK	**Bhakra**	**6.64**	**137**	*e*x	Sn	13 50 19.0	-12
KK31	**Karatay Array**	**6.70**	**356**	⇑P	**Pn**	**13 49 13.2**	**-2.3**
	comp=N,21nm,0.3s,baz=182,slow=13,SNR=629						
KK31				⇓S	**Sn**	**13 50 25.3**	**-6.5**
	comp=N,15nm,0.5s,baz=186,slow=18,SNR=8.9						
KK31	**Karatay Array**	**6.70**	**356**		**Pn**	**13 49 15.7**	**+0.3**
KKAR	**Karatay Array**	**6.70**	**356**		**Pn**	**13 49 15.5**	**0.0**
KKAR	**Karatay Array**	**6.70**	**356**		**Pn**	**13 49 15.6**	**+0.2**
AAK	**Ala-Archa**	**6.74**	**22**	P	**Pn**	**13 49 16.9**	**+0.8**
	comp=N,32nm,0.3s,baz=191,slow=8.3,SNR=363						
AAK				S	**Sn**	**13 50 31.7**	**-1.2**
	comp=N,0.4nm,0.3s,baz=314,slow=22,SNR=12						
AAK	**Ala-Archa**	**6.74**	**22**	P	**Pn**	**13 49 16.9**	**+0.8**
	SNR=96						
AAK	**Ala-Archa**	**6.74**	**22**	P	**Pn**	**13 49 16.8**	**+0.7**
	comp=N,19nm,0.6s						
AAK				⇑S	**Sn**	**13 50 31.9**	**-1.0**
	comp=N,32nm,0.7s						
AAK	**Ala-Archa**	**6.74**	**22**		**Pn**	**13 49 16.7**	**+0.7**
KBK	**Karagaybulak**	**6.89**	**24**	P	**Pn**	**13 49 19.2**	**+1.0**
	SNR=74						
FRU1	**Bishkek**	**6.93**	**22**		**Pn**	**13 49 19.4**	**+0.8**
ULHL	**Ulahol**	**7.04**	**33**	P	**Pn**	**13 49 20.0**	**0.0**
	SNR=35						
CHMS	**Chumysh**	**7.14**	**22**	P	**Pn**	**13 49 21.6**	**+0.4**
	SNR=48						
CHMS	**Chumysh**	**7.14**	**22**	⇑P	**Pn**	**13 49 21.4**	**+0.2**
	comp=N,75nm,0.8s						
CHMS				⇓S	**Sn**	**13 50 39.6**	**-2.7**
	comp=N,21nm,0.7s						
SMLA	**Simla**	**7.28**	**135**	*e*P	**Pn**	**13 49 23.5**	**+0.4**
SMLA				*e*S	**Sn**	**13 50 42.0**	**-3.6**
SMLA				IAML		13 50 44.4	
	comp=N,88nm,0.2s						
SMLA				IAML		13 50 45.1	
	comp=E,132nm,0.3s						
USP	**Ospenovka**	**7.32**	**20**	P	**Pn**	**13 49 23.2**	**-0.2**
	SNR=39						
TKM2	**Tokmak 2**	**7.35**	**27**	P	**Pn**	**13 49 24.6**	**+0.4**
	SNR=114						
MDOK	**Medeo**	**8.13**	**32**	⇓P	**Pn**	**13 49 35.1**	**+0.9**
	comp=E,30nm,0.6s						
JOSI	**Joshimath**	**9.14**	**127**	*e*P	**Pn**	**13 49 48.5**	**+1.0**
JOSI				*e*S	**Sn**	**13 51 22.9**	**-7.2**
JOSI				IAML		13 51 29.8	
	comp=E,78nm,0.5s						
JOSI				IAML		13 51 30.1	
	comp=N,115nm,0.7s						
NDI	**New Delhi**	**9.26**	**145**	*e*P	**Pn**	**13 49 48.0**	**-0.9**
NDI				*e*S	**Sn**	**13 51 26.0**	**-6.6**
PDGK	**Podgornoye**	**9.43**	**40**	⇑P	**Pn**	**13 49 50.8**	**-0.2**
	comp=N,8.1nm,0.8s						
GEYT	**Alibeck**	**10.50**	**282**	P	**Pn**	**13 50 04.0**	**-0.8**
	comp=N,0.1nm,0.3s,baz=119,slow=12,SNR=2.0						
GEYT				S	**Sn**	**13 51 57.1**	**-4.9**
	comp=N,0.3nm,0.3s,baz=182,slow=40,SNR=1.4						
MAKZ	**Makanchi**	**13.16**	**35**		**Pn**	**13 50 37.8**	**-0.8**
MK31	**Makanchi Array**	**13.30**	**35**	Pn	**Pn**	**13 50 40.3**	**+0.1**
MKAR	**Makanchi Array**	**13.30**	**35**	P	**Pn**	**13 50 40.2**	**-0.1**
	comp=N,0.6nm,0.3s,baz=212,slow=14,SNR=28						
MKAR				S	**Sn**	**13 53 13.3**	**+4.7**
	baz=230,slow=17,SNR=5.0						
MKAR	**Makanchi Array**	**13.30**	**35**	Pn	**Pn**	**13 50 40.1**	**-0.2**
DANN	**Dangsing**	**13.35**	**123**	*e*P	**Pn**	**13 50 41.9**	**+0.5**
	comp=N,13nm,0.4s						
DANN				*e*S	S	13 53 00.1	-10
WMQ	**Urumqi**	**14.66**	**55**	*e*P	**P**	**13 50 59.3**	**+1.1**
WMQ				pmax	pmax		
	comp=N,10.0nm,0.7s						
KKN	**Kakani**	**14.74**	**122**	*e*P	**P**	**13 50 59.2**	**-0.3**
	comp=N,8.2nm,0.3s						
PKIN	**Phulchoki**	**14.95**	**122**	*e*P	**P**	**13 51 02.4**	**+0.5**
	comp=N,10nm,0.4s						
PKI	**Pulchoki**	**14.97**	**122**	*e*P	**P**	**13 51 02.5**	**+0.4**
	comp=N,6.8nm,0.3s						
GUN	**Gumba**	**15.08**	**120**	*e*P	**Pn**	**13 51 02.6**	**-0.2**
	comp=N,12nm,0.6s						
KURBB	**Kurchatov Arra**	**15.17**	**18**	P	**Pn**	**13 51 02.2**	**-1.0**
	comp=N,0.2nm,0.3s,baz=210,slow=11,SNR=16						
AB31	**Akbulak array**	**15.21**	**331**	⇑P	**P**	**13 51 06.4**	**+2.2**
	comp=N,4.7nm,0.6s,baz=148,slow=12,SNR=110						
AB31				⇓S	**S**	**13 53 50.3**	**-2.3**
	comp=N,5.8nm,0.8s,baz=151,slow=23,SNR=8.4						
ABKAR	**Akbulak array**	**15.21**	**331**		**Pn**	**13 51 03.4**	**-0.4**
ABKAR	**Akbulak array**	**15.21**	**331**		**Pn**	**13 51 03.4**	**-0.4**
ABKAR				IAmb	IAmb	13 51 07.5	
	comp=Z,7.8nm,0.6s						
KURK	**Kurchatov**	**15.28**	**18**		**Pn**	**13 51 03.3**	**-1.3**
JIRN	**Jiri**	**15.45**	**120**	*e*P	**P**	**13 51 08.0**	**+0.5**
	comp=Z,32nm,0.3s						
RAMN	**Ramite**	**16.18**	**121**	*e*P	**Pn**	**13 51 17.2**	**+1.2**
	comp=Z,8.5nm,0.3s						
BVAR	**Borovoye Array**	**16.62**	**358**	P	**Pn**	**13 51 20.9**	**+0.2**
	comp=Z,1.5nm,0.3s,baz=160,slow=11,SNR=24						
BRVK	**Borovoye**	**16.65**	**358**	P	**P**	**13 51 20.5**	**+0.5**
TAPN	**Taplejung**	**16.71**	**118**	*e*P	**Pn**	**13 51 23.1**	**+0.7**
	comp=Z,5.8nm,0.3s						
AKTO	**Aktyubinsk**	**16.91**	**330**	P	**Pn**	**13 51 24.5**	**+0.3**
	comp=Z,1.1nm,0.3s,baz=136,slow=11,SNR=18						
AKTO				S	**S**	**13 54 26.8**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=61,slow=21,SNR=2.5						
AKTO	**Aktyubinsk**	**16.91**	**330**	⇑P	**Pn**	**13 51 27.4**	**+3.2**
	comp=Z,3.8nm,0.6s						
AKTO				⇑S	**Sn**	**13 54 32.7**	**-1.8**
	comp=Z,4.3nm,0.7s						
LSA	**Lhasa**	**18.05**	**106**	P	**P**	**13 51 34.6**	**-1.4**
ZAA0	**Zalesovo Array**	**19.95**	**24**	P	**P**	**13 51 56.0**	**+0.3**
ZALV	**Zalesovo Beam**	**19.95**	**24**	P	**P**	**13 51 56.6**	**+0.9**
	comp=Z,3.3nm,0.4s,baz=216,slow=10,SNR=17						
ZALV	**Zalesovo Beam**	**19.95**	**24**	P	**P**	**13 51 55.8**	**+0.1**
ARU	**Arti**	**21.75**	**341**	P	**P**	**13 52 15.5**	**+0.9**
	comp=Z,1.0nm,0.4s,baz=138,slow=11,SNR=4.0						
ARU	**Arti**	**21.75**	**341**	IAmb	IAmb	13 52 18.3	
	comp=Z,26nm,1.8s						
KBZ	**Khabaz**	**22.74**	**297**	P	**P**	**13 52 25.1**	**+1.1**
	comp=Z,1.9nm,0.9s,baz=120,slow=6.0,SNR=3.7						
GTA	**Gaotai**	**22.78**	**74**	P	**P**	**13 52 27.1**	**+2.4**
GTA				pP	pP	13 53 07.3	+5.7
GTA				sP	sP	13 53 32.5	+5.2
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
LZH	**Lanzhou**	**26.32**	**81**	⇓P	**P**	**13 52 55.6**	**-1.0**
LZH				pP	pP	13 53 38.3	+0.3
LZH				PP	**PnPn**	**13 53 48.5**	**-0.5**
LZH				sP	sP	13 54 02.8	+0.8
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				pmax	pmax		
	comp=Z,68nm,4.8s						
KIRV	**Kirov**	**26.36**	**334**	P	**P**	**13 52 57.7**	**+1.2**
	comp=Z,9.0nm,0.5s,baz=93,slow=4.6,SNR=4.4						
SONM	**Songino Array**	**28.30**	**55**	P	**P**	**13 53 15.9**	**+1.8**
	comp=Z,0.7nm,0.5s,baz=263,slow=8.9,SNR=5.9						
SONM	**Songino Array**	**28.30**	**55**	P	**P**	**13 53 14.7**	**+0.6**
BRTR	**Keskin Array B**	**29.56**	**288**	P	**P**	**13 53 26.2**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=113,slow=10.0,SNR=6.2						
CMAR	**Chiang Mai Arr**	**30.32**	**119**	P	**P**	**13 53 31.2**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=301,slow=7.5,SNR=4.6						
HHC	**Hu-ho-hao-te**	**31.69**	**69**	*e*P	**P**	**13 53 45.5**	**+1.5**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,44nm,6.6s						
AKASG	**Malin Array Be**	**33.08**	**309**	P	**P**	**13 53 56.0**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=84,slow=7.0,SNR=2.3						
NRIK	**Noril'sk**	**34.19**	**10**	P	**P**	**13 54 05.9**	**+0.7**
	comp=Z,2.4nm,0.6s,baz=181,slow=5.2,SNR=4.6						
KARP	**Karpathos**	**35.37**	**282**	P	**P**	**13 54 14.8**	**-0.9**
KARP				IAmb	IAmb	13 54 17.7	
	comp=Z,10nm,0.8s						
FIA1	**FINESS Array S**	**37.61**	**326**	P	**P**	**13 54 35.0**	**+0.7**
FINES	**FINESS Array B**	**37.62**	**326**	P	**P**	**13 54 35.2**	**+0.9**
	comp=Z,2.6nm,0.6s,baz=122,slow=8.6,SNR=19						
FINES	**FINESS Array B**	**37.62**	**326**	P	**P**	**13 54 35.0**	**+0.7**
NJ2	**Nanjing**	**39.38**	**82**	*e*P	**P**	**13 54 50.0**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
ARCES	**ARCESS Array B**	**41.27**	**338**	P	**P**	**13 55 05.6**	**+1.2**
	comp=Z,1.9nm,0.4s,baz=116,slow=7.9,SNR=45						
ARCES	**ARCESS Array B**	**41.27**	**338**	P	**P**	**13 55 05.4**	**+1.0**
ARE0	**ARCESS Array S**	**41.27**	**338**	P	**P**	**13 55 05.5**	**+1.2**
GSI	**Gunungsitoli**	**42.66**	**139**	P	**P**	**13 55 17.7**	**+1.4**
NC602	**NORSAR Array S**	**44.33**	**323**	P	**P**	**13 55 29.1**	**+0.1**
NB2	**NORSAR Subarra**	**44.51**	**323**	P	**P**	**13 55 30.6**	**0.0**
	comp=Z,0.6nm,0.3s,baz=93,slow=8.6						
NOA	**NORSAR Array B**	**44.51**	**323**	P	**P**	**13 55 30.8**	**+0.2**
	comp=Z,0.3nm,0.2s,baz=144,slow=3.6,SNR=14						
KS19	**Wonju Array Si**	**44.75**	**71**	P	**P**	**13 55 33.6**	**+0.9**
KS19				IAmb	IAmb	13 56 03.9	
	comp=Z,20nm,1.4s						
NC204	**NORSAR Array S**	**44.75**	**323**	P	**P**	**13 55 32.9**	**+0.4**
NACB	**Ninganchiao**	**44.79**	**91**	P	**P**	**13 55 33.0**	**-0.2**
NACB				IAmb	IAmb	13 55 42.6	
	comp=Z,21nm,1.0s						
KSRS	**Korea Array**	**44.80**	**71**	P	**P**	**13 55 33.9**	**+0.8**
	comp=Z,0.5nm,0.4s,baz=277,slow=7.1,SNR=6.0						
KEST	**Kesra**	**49.16**	**289**	P	**P**	**13 56 07.0**	**0.0**
	comp=Z,2.7nm,0.8s,baz=18,slow=3.2,SNR=2.0						
KEST	**Kesra**	**49.16**	**289**	IAmb	IAmb	13 57 40.8	
	comp=Z,56nm,2.0s						
MJB9	**Matsu-Tunnel**	**52.88**	**68**	P	**P**	**13 56 34.8**	**+0.2**
MJB9				IAmb	IAmb	13 58 22.3	
	comp=Z,34nm,1.6s						
MAJO	**Matsushiro**	**52.88**	**68**	P	**P**	**13 56 34.8**	**+0.2**
MAJO				IAmb	IAmb	13 58 22.3	
	comp=Z,30nm,1.6s						
ESDC	**Sonseca Array**	**57.59**	**298**	P	**P**	**13 57 08.0**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=55,slow=7.4,SNR=2.2						
SUMG	**Summit**	**61.18**	**341**	P	**P**	**13 57 32.8**	**+0.2**
SUMG				IAmb	IAmb	13 57 33.6	
	comp=Z,29nm,1.8s						
TOA0	**Torodi Ar. Sit**	**65.82**	**269**	P	**P**	**13 58 01.7**	**-1.7**
TOA0				IAmb	IAmb	13 58 12.1	
	comp=Z,20nm,1.9s						
TORD	**Torodi Ar. Bea**	**65.82**	**269**	P	**P**	**13 58 01.9**	**-1.5**
	comp=Z,1.6nm,0.5s,baz=49,slow=5.9,SNR=26						
TORD	**Torodi Ar. Bea**	**65.82**	**269**	P	**P**	**13 58 01.6**	**-1.7**
RES	**Resolute Bay**	**68.79**	**356**	P	**P**	**13 58 20.0**	**-1.1**
RES				IAmb	IAmb	14 00 11.2	
	comp=Z,12nm,1.9s						
TOLK	**Toolik Lake Re**	**70.98**	**15**	P	**P**	**13 58 35.1**	**+0.6**
TOLK				IAmb	IAmb	13 59 27.4	
	comp=Z,14nm,1.8s						
IMAR	**Indian Mountai**	**72.22**	**18**	P	**P**	**13 58 42.0**	**+0.1**
BMAR	**Burnt Mountain**	**73.00**	**14**	P	**P**	**13 58 47.3**	**+0.8**
C36M	**Paulatuk**	**73.95**	**6**	P	**P**	**13 58 52.0**	**0.0**
INK	**Inuvik**	**73.97**	**9**	P	**P**	**13 58 52.8**	**+0.6**
	comp=Z,1.3nm,0.4s,baz=318,slow=4.8,SNR=14						
INK	**Inuvik**	**73.97**	**9**	P	**P**	**13 58 52.7**	**+0.6**
INK				IAmb	IAmb	14 00 25.5	
	comp=Z,14nm,1.9s						
LBTB	**Lobatse**	**74.69**	**222**	P	**P**	**13 58 56.6**	**-0.3**
FITZ	**Fitzroy Crossi**	**74.75**	**127**	P	**P**	**13 58 58.4**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=307,slow=5.1,SNR=1.7						
FITZ	**Fitzroy Crossi**	**74.75**	**127**	P	**P**	**13 58 58.3**	**+1.0**
IL31		**74.83**	**16**	P	**P**	**13 58 57.1**	**0.0**
IL31				IAmb	IAmb	14 01 27.5	
	comp=Z,14nm,1.7s						
ILAR	**Eielson Array**	**74.83**	**16**	P	**P**	**13 58 57.0**	**-0.2**
	comp=Z,0.5nm,0.9s,baz=331,slow=6.4,SNR=5.0						
ILAR	**Eielson Array**	**74.83**	**16**	P	**P**	**13 58 56.4**	**-0.7**
KTH	**Kantishna Hill**	**74.91**	**18**	P	**P**	**13 58 58.0**	**+0.3**
TSUM	**Tsumeb**	**74.95**	**232**	P	**P**	**13 58 58.6**	**0.0**
KNRA	**Kununurra**	**75.09**	**123**	P	**P**	**13 58 59.3**	**0.0**
KNRA				IAmb	IAmb	14 01 01.7	
	comp=Z,12nm,1.4s						
PPLA	**Purkeypile**	**75.13**	**19**	P	**P**	**13 58 59.5**	**+0.4**
PPLA				IAmb	IAmb	14 00 53.7	
	comp=Z,20nm,1.4s						
MCK	**McKinley**	**75.25**	**17**	P	**P**	**13 58 59.6**	**0.0**
MCK				IAmb	IAmb	14 01 25.7	
	comp=Z,20nm,1.6s						
RND	**Reindeer**	**75.54**	**17**	P	**P**	**13 59 01.3**	**0.0**
SCRK	**Sand Creek**	**76.15**	**15**	P	**P**	**13 59 05.0**	**+0.1**
GHO	**Glory Hole Cre**	**76.91**	**18**	P	**P**	**13 59 09.5**	**+0.4**
GHO				IAmb	IAmb	14 00 24.6	
	comp=Z,24nm,1.5s						
DAWY	**Dawson**	**76.98**	**13**	P	**P**	**13 59 09.9**	**+0.5**
DAWY				IAmb	IAmb	13 59 56.8	
	comp=Z,11nm,1.6s						
SML	**Sawmill**	**77.03**	**18**	P	**P**	**13 59 09.8**	**0.0**
BCAR	**Beaver Creek A**	**77.42**	**15**	P	**P**	**13 59 12.6**	**+0.7**
BOSA	**Boshof**	**77.75**	**220**	P	**P**	**13 59 14.0**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=25,slow=7.6,SNR=1.8						
BOSA	**Boshof**	**77.75**	**220**	P	**P**	**13 59 14.3**	**+0.1**
BALM	**Baldy**	**79.12**	**16**	P	**P**	**13 59 22.3**	**+1.0**
BALM				IAmb	IAmb	13 59 51.1	
	comp=Z,16nm,1.5s						
YKA	**Yellowknife Ar**	**81.33**	**3**	P	**P**	**13 59 33.3**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=353,slow=5.1,SNR=27						
WRA	**Warramunga Arr**	**81.85**	**122**	P	**P**	**13 59 35.5**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=325,slow=4.9,SNR=39						
ASAR	**Alice Springs**	**84.12**	**125**	P	**P**	**13 59 47.0**	**-0.9**
	comp=Z,1.5nm,0.6s,baz=310,slow=4.8,SNR=46						

IDC ***23*** *13:48:50.3±5.4, 5°.64S×147°.34E, h187^{km}±59^{km}, mb3.1/3, mb1 3.4/5, mb1mx3.0/35, mbtmp3.6/5, Error ellipse: s-maj=89.8km s-min=27.9km az=135.0*

ISC 23 13:48:51.4±1.4, **5°.7S**±0°.1×**147°.2E**±0°.3, **h200**^{km}, **n6**, σ**1^{s}70**/7, **mb3.7**/3, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.69**	**181**	P	**Pn**	**13 49 50.4**	**+1.0**
	4.7nm,0.3s,baz=38,slow=12,SNR=21						
PMG				S	**Sn**	**13 50 33.5**	**-1.5**
	5.8nm,0.3s,baz=21,slow=10,SNR=7.7						
WRA	**Warramunga Arr**	**18.90**	**220**	P	**Pn**	**13 52 58.6**	**-1.6**
	0.4nm,0.3s,baz=38,slow=11,SNR=20						
ASAR	**Alice Springs**	**21.99**	**214**	P	**P**	**13 53 31.6**	**+2.0**
	1.4nm,0.6s,baz=48,slow=8.2,SNR=24						
FITZ	**Fitzroy Crossi**	**24.41**	**238**	P	**P**	**13 53 52.4**	**+0.7**
	0.9nm,0.5s,baz=59,slow=14,SNR=7.6						
ILAR	**Eielson Array**	**85.12**	**23**	P	**P**	**14 01 04.4**	**-0.2**
	0.5nm,1.0s,baz=206,slow=7.9,SNR=2.1						
TORD	**Torodi Ar. Bea**	**145.22**	**285**	PKPbc	**PKPab**	**14 08 05.4**	**-1.2**
	0.3nm,0.6s,baz=104,slow=2.5,SNR=1.4						

IDC ***23*** *13:55:29.1±0.9, 56°.69S×25°.57W, h0^{km}, mb4.2/4, mb1 4.3/4, mb1mx3.9/27, mbtmp4.2/4, MS4.1/3, Ms1 4.1/3, ms1mx3.3/18, Error ellipse: s-maj=43.0km s-min=28.0km az=78.0*

NEIC ***23*** *13:55:37.1±0.8, 56°.7S±0°.1×25°.7W±0°.2, h58^{km}±7^{km}, mb4.4/5, Error ellipse: s-maj=18.2km s-min=14.6km az=139.0*

ISC 23 13:55:33.9±0.8, **56°.6S**±0°.1×**25°.4W**±0°.2, **h29**^{km}, **n19**, σ**1^{s}38**/16, **mb4.2**/4, **MS4.0**/3, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.71**	**286**	Pn	**Pn**	**13 57 11.6**	**+1.4**
VNA1	**Neumayer--Stat**	**15.93**	**159**	P	**Pn**	**13 59 17.3**	**+1.6**
VNA3	**Neumayer Olymp**	**16.16**	**162**	P	**Pn**	**13 59 19.7**	**+1.0**
SNAA	**Sanae**	**17.85**	**157**	P	**P**	**13 59 43.5**	**+3.1**
SNAA	**Sanae**	**17.85**	**157**	P	**P**	**13 59 40.7**	**+0.4**
QSPA	**South Pole Qui**	**33.66**	**180**	P	**P**	**14 02 10.7**	**-1.2**
BDFB	**Brasilia**	**44.33**	**328**	LR	LR	14 17 48.3	
	comp=Z,210nm,21.5s,baz=111,slow=30						
BOSA	**Boshof**	**45.16**	**74**	LR	LR	14 17 28.6	
	comp=Z,207nm,21.2s,baz=242,slow=29						
VNDA	**Vanda**	**46.08**	**182**	P	**P**	**14 03 53.7**	**-0.8**
	2.9nm,0.7s,baz=182,slow=7.2,SNR=14						
VNDA	**Vanda**	**46.08**	**182**	P	**P**	**14 03 53.4**	**-1.0**
VNDA				IAmb	IAmb	14 03 54.4	
	comp=Z,3.8nm,0.8s						
LPAZ	**La Paz**	**51.49**	**304**	P	**P**	**14 04 37.1**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=206,slow=5.7,SNR=14						
LPAZ	**La Paz**	**51.49**	**304**	P	**P**	**14 04 36.8**	**-0.6**
LPAZ				IAmb	IAmb	14 04 38.1	
	comp=Z,3.2nm,0.7s						
ROSC	**El Rosal**	**72.98**	**308**	LR	LR	14 37 52.2	
	comp=Z,232nm,21.5s,baz=178,slow=35						
TORD	**Torodi Ar. Bea**	**73.06**	**28**	P	**P**	**14 07 02.1**	**+1.1**
	comp=Z,1.1nm,0.7s,baz=198,slow=6.5,SNR=6.9						
ASAR	**Alice Springs**	**98.17**	**161**	P	**P**	**14 09 06.4**	**-1.6**
	comp=Z,0.5nm,1.0s,baz=186,slow=4.3,SNR=2.2						
INK	**Inuvik**	**146.85**	**320**	PKPbc	**PKPbc**	**14 15 10.5**	**-1.1**
	comp=Z,1.0nm,0.5s,baz=82,slow=5.9,SNR=4.5						
INK	**Inuvik**	**146.85**	**320**		**PKPbc**	**14 15 11.9**	**+0.3**
SONM	**Songino Array**	**149.78**	**86**	PKPbc	**PKPbc**	**14 15 19.6**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=230,slow=3.8,SNR=3.6						
ILAR	**Eielson Array**	**151.21**	**311**	PKPbc	**PKPbc**	**14 15 22.1**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=149,slow=4.2,SNR=10						

GCMT 23 13:59:18.0±0.3, **35°.31S**±0°.02×**15°.52W**±0°.02, **h26**^{km}±1^{km}, **MW5.0**/89, **Moment Tensor Solution. s18,c21; s89,c121; Duration: 0 Moment tensor: Scale** 10^{16} **Nm;** M_{rr}-0.73±.20; $M_{\theta\theta}$-0.82±.17; $M_{\phi\phi}$1.55±.15; $M_{r\theta}$0.15±.29; $M_{\theta\phi}$3.40±.10; $M_{\phi r}$0.68±.25; **Best double couple:** $M_0$3.65800×10^{16} **NP1:**ϕ_s81.00000°, δ80.00000°, λ1.00000°. **NP2:**ϕ_s350.00000°, δ89.00000°, λ170.00000°. **Principal axes:** T 4.0520, Plg8.0000°, Azm305.0000°; N -0.7910, Plg80.0000°, Azm165.0000°; P -3.2640, Plg6.0000°, Azm36.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Tristan da Cunha region**

SKHL ***23*** *14:04:38.9±0.6, 44°.22N×146°.47E, h128^{km}±2^{km}, mb4.2/3, msh5.1/3*

JMA ***23*** *14:04:40.3±0.3, 44°.23N×146°.54E, h109^{km}±3^{km}, M2.7*

ISC 23 14:04:41.1±1.9, **44°.21N**±0°.08×**146°.51E**±0°.08, **h109**^{km}±12^{km}, **n16**, σ**0^{s}65**/24, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**0.50**	**250**	*i* P	**Pn**	**14 04 57.4**	**-0.4**
YUK				AMB	AMB	14 04 58.0	
	110nm,0.3s						
YUK				*e*S	**Sn**	**14 05 10.8**	**+0.5**
YUK				A	A	14 05 12.0	
	350nm,0.3s						
YUK				A	A	14 05 12.0	
	300nm,0.3s						
GRPR	**Tuman**	**0.57**	**248**	*e*P	**Pn**	**14 04 58.0**	**-0.3**
GRPR				AMB	AMB	14 04 59.0	
	100nm,0.3s						
GRPR				*e*S	**Sn**	**14 05 12.6**	**+1.3**
GRPR				A	A	14 05 13.0	
	370nm,0.3s						
GRPR				A	A	14 05 13.0	
	190nm,0.3s						
NEM2	**Nemuro 2**	**1.01**	**214**	P	**Pn**	**14 05 01.8**	**-0.5**
NEM2				*e*S	**Sn**	**14 05 17.6**	**-0.6**
NMR	**Nemuro--Hokkai**	**1.01**	**214**	*e*P	**Pn**	**14 05 01.9**	**-0.4**
NMR				*e*S	**Sn**	**14 05 17.9**	**-0.4**
JRA	**Rausu**	**1.04**	**255**	P	**Pn**	**14 05 02.1**	**-0.4**
JRA				*e*S	**Sn**	**14 05 18.7**	**0.0**
JNSB	**Nemuroshibetsu**	**1.17**	**249**	P	**Pn**	**14 05 04.0**	**0.0**
KUR	**Kuril'sk**	**1.41**	**43**	AMB	AMB	14 05 06.0	
	30nm,0.3s						
KUR				*i* P	**Pn**	**14 05 06.3**	**-0.4**
KUR				*e*S	**Sn**	**14 05 27.1**	**+0.9**
KUR				A	A	14 05 32.0	
	60nm,0.2s						
KUR				A	A	14 05 32.0	
	180nm,0.2s						
JNK	**Nakash**	**1.44**	**245**	P	**Pn**	**14 05 06.8**	**-0.3**
JAK	**Akkeshi**	**1.79**	**228**	P	**Pn**	**14 05 10.9**	**-0.5**
JTKR	**Abashiri--Toko**	**1.89**	**264**	P	**Pn**	**14 05 11.7**	**-0.9**
JAR	**Ashorobuto**	**2.19**	**246**	P	**Pn**	**14 05 16.8**	**+0.4**
JOB	**Onbets**	**2.34**	**237**	P	**Pn**	**14 05 18.6**	**+0.2**
JOB				*e*S	**Sn**	**14 05 48.3**	**+1.3**
JKK2	**Kamakawa 2**	**2.73**	**264**	P	**Pn**	**14 05 23.5**	**0.0**
JCH	**Churui**	**2.79**	**236**	P	**Pn**	**14 05 24.4**	**+0.1**
JCH				*e*S	**Sn**	**14 05 57.3**	**-0.2**
ASAJ	**Asahikawa**	**2.82**	**270**	P	**Pn**	**14 05 24.6**	**0.0**
JSE	**Soyaes**	**2.90**	**286**	P	**Pn**	**14 05 24.8**	**-0.9**

TIR ***23*** *14:07:02.7, 42°.02N×20°.59E, h16^{km}, Md2.7/5*

PDG ***23*** *14:07:03.9±0.2, 41°.99N×20°.55E, h10^{km}, ML2.7/12, Error ellipse: s-maj=0.3km s-min=0.3km az=0.0*

SKO ***23*** *14:07:05.0, 42°.00N×20°.55E, h1^{km}*

BEO 23 14:07:05.7±0.3, 42°.03N×20°.64E, h8^{km}±3^{km}, ML2.4/9

ISC 23 14:07:03.2±1.0, 41°.99N±0°.02×20°.65E±0°.02, h12^{km}±9^{km}, n32, σ1^{s}.02/51, 1C-2D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHP	Peshkopia	0.35	207	i PG	Pg	14 07 10.4	+0.2
PHP				i SG	Sg	14 07 15.2	+0.3
PUK	Puka	0.57	275	i PG	Pg	14 07 13.1	-1.2
PUK				i SG	Sg	14 07 21.5	-0.3
BCI	Bajram Curri	0.57	311	i PG	Pg	14 07 13.6	-0.8
BCI				i SG	Sg	14 07 21.2	-0.8
SKO	Skopje	0.59	92	ePg	Pn	14 07 16.1	-1.3
SKO				eSg	Sn	14 07 25.5	-1.4
SKO	Skopje	0.59	92	i Pg	Pn	14 07 16.3	-1.1
SKO				i Sg	Sn	14 07 26.6	-0.4
SKO				eLg	Lg	14 07 26.7	
	comp=E,15nm,0.3s						
SKO				eLg	Lg	14 07 27.7	
	comp=N,22nm,0.3s						
TIR	Tirane	0.87	223	eSg	Sn	14 07 34.1	+0.2
TIR	Tirane	0.87	223	i PG	Pg	14 07 20.0	-0.1
TIR				i SG	Sb	14 07 32.7	+0.8
OHR	Ohrid	0.89	173	i Pg	Pn	14 07 20.9	-0.7
OHR				i Sg	Sn	14 07 34.3	-0.1
OHR				eLg	Lg	14 07 35.1	
	comp=N,173nm,0.5s						
OHR				eLg	Lg	14 07 35.1	
	comp=E,233nm,0.7s						
PDG	Podgorica	1.12	293	ePg	Pb	14 07 24.3	-0.3
PDG				eSg	Sn	14 07 41.0	+0.8
PDG	Podgorica	1.12	293	⇑P	Pb	14 07 19.8	-4.8
BARS	Barje	1.19	46	ePg	Pg	14 07 27.5	+1.3
BARS				eSg	Sn	14 07 43.0	+1.1
SELS	Selova	1.27	16	ePg	Pg	14 07 28.2	+0.5
SELS				eSg	Sn	14 07 45.8	+1.9
FNA	Florina	1.32	155	i SG	Sg	14 07 48.4	+2.5
SJES	Sjenica	1.36	339	ePg	Pg	14 07 29.8	+0.4
SJES				eSg	Sg	14 07 48.1	+0.9
BOSS	Bosilegrad	1.45	69	ePg	Pg	14 07 31.9	+0.9
BOSS				eSg	Sg	14 07 52.2	+2.4
VAY	Valandovo	1.59	114	i Pn	Pg	14 07 34.2	+0.6
IVAS	Ivanjica	1.62	347	ePg	Pg	14 07 34.8	+0.4
IVAS				eSg	Sg	14 07 56.4	+0.9
TREB	Trebinje	1.85	294	ePn	Pb	14 07 38.0	+1.0
GRUS	Gruza	1.90	1	ePn	Pb	14 07 37.6	-0.1
GRUS				eSg	Sg	14 08 03.9	-0.3
ZAPS	Zavoj	1.94	48	ePn	Pb	14 07 38.0	-0.6
ZAPS				eSg	Sg	14 08 05.9	+0.2
DBRK	Dubrovnik	1.98	291	i Pn	Pb	14 07 40.0	+0.9
DBRK				Sn	Sb	14 08 04.6	+0.9
VTS	Vitosha	2.02	71	ePn	Pb	14 07 39.3	-0.6
VTS	Vitosha	2.02	71	eP	Pg	14 07 41.1	-0.8
VTS				eS	Sg	14 08 05.9	-2.1
BBLS	Lazići	2.08	334	ePn	Pb	14 07 40.0	-1.0
ZAGS	Zajecar	2.16	32	ePn	Pb	14 07 41.5	-0.7
ZAGS				eSg	Sg	14 08 13.4	+0.8
DIVS	Divibare	2.16	347	ePn	Pb	14 07 41.5	-0.8
TRUS	Trudelj	2.24	355	ePn	Pb	14 07 43.7	+0.1
MMB	Musomiste	2.34	99	eP	Pb	14 07 44.3	-1.0
STON	Ston	2.35	293	ePn	Pb	14 07 45.5	-0.1
STON				Sn	Sb	14 08 16.3	+1.8
MDVR	Moldovita	2.89	15	⇓P	Pg	14 07 57.8	-0.9
RICI	Ricice	3.00	301	ePn	Pb	14 07 55.7	-0.8
RICI				Sn	Sb	14 08 32.8	-0.2
BZS	Buzias	3.69	11	⇓P	Pb	14 08 08.5	+0.2

IDC 23 14:09:26.2±7.9, 6°.31S×154°.86E, h72^{km}±50^{km}, mb3.3/4, mb1 3.6/6, mb1mx3.3/45, mbtmp3.7/6, ML2.5/2, MS3.6/1, Ms1 3.6/1, ms1mx2.4/22, Error ellipse: s-maj=73.8km s-min=23.8km az=84.0

ISC 23 14:09:23.7±1.9, 6°.4S±0°.1×155°.0E±0°.2, h56^{km}, n7, σ0^{s}.89/8, mb3.4/4, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.60	304	P	Pn	14 10 18.0	+0.9
	2.0nm,0.3s,baz=174,slow=16,SNR=1.3						
KRVT				S	Sn	14 10 57.7	-0.8
	6.3nm,0.3s,baz=30,slow=20,SNR=2.5						
PMG	Port Moresby	8.35	248	P	Pn	14 11 23.0	+0.8
	1.0nm,0.3s,baz=69,slow=9.5,SNR=7.7						
PMG				S	Sn	14 12 54.5	-0.6
	0.2nm,0.3s,baz=302,slow=11,SNR=3.4						
WRA	Warramunga Arr	24.20	234	P	P	14 14 34.8	-0.5
	0.9nm,0.7s,baz=56,slow=9.7,SNR=8.1						
ASAR	Alice Springs	26.61	227	P	P	14 14 57.0	-0.1
	0.4nm,0.7s,baz=56,slow=9.4,SNR=7.4						
ASAJ	Asahikawa	51.47	349	LR	LR	14 37 42.2	
	comp=Z,69nm,21.4s,baz=344,slow=33						
CMAR	Chiang Mai Arr	60.53	295	P	P	14 19 29.4	+0.6
	0.8nm,0.5s,baz=127,slow=5.5,SNR=7.1						
MKAR	Makanchi Array	82.94	319	P	P	14 21 41.9	-0.9
	0.3nm,0.6s,baz=95,slow=4.8,SNR=4.9						

DDA 23 14:16:01.9, 42°.37N×43°.06E, h6^{km}±3^{km}, ML2.4
TIF 23 14:16:02.0, 42°.33N×43°.08E, h0^{km}±1^{km}
NORS 23 14:16:02.7±0.0, 42°.32N×42°.97E, h6^{km}, MPVA3.4

ISC 23 14:16:02.7±0.9, 42°.32N±0°.02×43°.06E±0°.02, h4^{km}±7^{km}, n40, σ0^{s}.72/75, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TKB	Tkibuli	0.06	299	P	Pg	14 16 04.0	-0.1
TKB				S	Sg	14 16 04.8	-0.1
ONI	Oni	0.39	47	P	Pg	14 16 10.8	+0.4
ONI				S	Sb	14 16 17.2	-1.6
ONI	Oni	0.39	47	ePg	Pg	14 16 10.8	+0.4
ONI				eSg	Sb	14 16 17.2	-1.6
BKRG	Bakuriani	0.66	148	P	Pb	14 16 16.6	-0.4
BKRG				S	Sb	14 16 27.1	+0.5
DIGR	Digorskoe uzhe	0.69	34	ePg	Pg	14 16 16.2	+0.1
DIGR				eSg	Sb	14 16 26.8	-0.8
ZEI	Tsey	0.78	53	ePg	Pb	14 16 18.4	-0.6
ZEI				eSg	Sb	14 16 29.3	-0.7
EPOS	Posof	0.86	197	i P	Pb	14 16 20.2	0.0
NEY	Neytrino	0.96	345	ePg	Pg	14 16 20.9	-0.2
NEY				eSg	Sb	14 16 34.9	-0.3
AKH	Akhalkalaki	0.97	160	P	Pb	14 16 22.3	+0.1
AKH				S	Sn	14 16 37.3	-0.3
AKH	Akhalkalaki	0.97	160	ePg	Pb	14 16 22.3	+0.1
AKH				eSg	Sn	14 16 36.3	-1.3
LACR	Lac	1.04	61	ePg	Pg	14 16 22.8	+0.1
LACR				eSg	Sn	14 16 38.6	-0.8
KORR	Kora	1.06	44	ePg	Pn	14 16 24.6	0.0
KORR				eSg	Sn	14 16 39.1	-0.7
TRLG	Trialeti	1.10	135	P	Pn	14 16 24.6	-0.6
TRLG				S	Sn	14 16 40.8	-0.1
LSNR	Lesken	1.11	30	ePg	Pb	14 16 24.1	-0.4
LSNR				eSg	Sb	14 16 39.4	+0.1
BGD	Bogdanovka	1.13	159	P	Pn	14 16 25.3	-0.3
BGD				S	Sn	14 16 41.6	-0.1
BATM	Batumi	1.25	235	P	Pg	14 16 26.5	-0.1
BATM				S	Sn	14 16 44.7	+0.5
BATM	Batumi	1.25	235	ePg	Pg	14 16 26.5	-0.1
BATM				eSg	Sn	14 16 44.7	+0.5
BATM	Batumi	1.25	235	i P	Pg	14 16 26.2	-0.4
BATM				i S	Sn	14 16 44.2	0.0
STDR	Stavd-Durt	1.28	35	ePg	Pn	14 16 27.8	+0.4
STDR				eSg	Sn	14 16 46.6	+1.5
KZRT	Kazreti	1.37	133	P	Pg	14 16 29.1	+0.2
KZRT				S	Sn	14 16 47.6	+0.2
KZRT	Kazreti	1.37	133	ePg	Pg	14 16 29.1	+0.2
KZRT				eSg	Sn	14 16 48.1	+0.8
KZRT	Kazreti	1.37	133	i P	Pn	14 16 28.4	-0.3
KZRT				i S	Sn	14 16 47.2	-0.1
TBLG	Delisi	1.38	115	P	Pg	14 16 29.0	-0.2
TBLG				S	Sn	14 16 48.9	+1.2
TBLG	Delisi	1.38	115	ePg	Pg	14 16 29.0	-0.2
TBLG				eSg	Sn	14 16 48.9	+1.2
TBLG	Delisi	1.38	115	i P	Pn	14 16 28.6	-0.3
TBLG				i S	Sn	14 16 48.0	+0.4
DBOC	Borcka	1.43	227	i P	Pb	14 16 29.5	-0.5
DBOC				i S	Sn	14 16 49.7	+1.0
DBOC				IAML		14 16 52.0	
	comp=E,110nm,0.4s						
DOMR	Dombai	1.43	313	ePg	Pg	14 16 30.4	+0.3
DOMR				eSg	Sn	14 16 50.2	+1.2
SHA1	Shidzhatmaz	1.44	348	i Pg	Pg	14 16 30.5	+0.1
SHA1				eSg	Sn	14 16 50.1	+0.7
BTNK	Botanikuri	1.45	116	P	Pg	14 16 30.1	-0.3
BTNK	Botanikuri	1.45	116	ePg	Pg	14 16 30.1	-0.3
BTNK	Botanikuri	1.45	116	i P	Pb	14 16 29.9	-0.3
BTNK				i S	Sg	14 16 49.2	+0.1
DAGI	Agillar	1.51	215	i P	Sg	14 16 52.6	+1.3
DBAD	Bademkaya	1.66	219	i P	Pb	14 16 33.7	-0.2
DBAD				i S	Sg	14 16 56.0	0.0
DBAD				IAML		14 17 00.0	
	comp=E,118nm,0.8s						
DBAD				IAML		14 17 05.0	
	comp=N,107nm,0.6s						
EAK	Akyaka	1.69	166	i P	Pg	14 16 35.0	-0.1
EAK				i S	Sg	14 16 57.9	+0.9
EAK				IAML		14 16 58.0	
	comp=N,37nm,0.5s						
EAK				IAML		14 17 01.0	
	comp=E,35nm,0.5s						
DDEM	Demirkent	1.73	215	i P	Pb	14 16 34.8	-0.5
DDEM				i S	Sg	14 16 58.6	+0.1
DDEM				IAML		14 17 05.0	
	comp=E,137nm,0.6s						
DDEM				IAML		14 17 06.0	
	comp=N,142nm,0.4s						
ARXR	Arkhyz	1.80	314	ePg	Pg	14 16 37.1	-0.2
ARXR				eSg	Sg	14 17 01.3	+0.7
DIGO	Kars	1.92	173	i P	Pb	14 16 38.8	+0.3
DIGO				IAML		14 17 08.0	
	comp=E,32nm,0.7s						
DGRG	David-gareji	1.94	116	P	Pg	14 16 39.3	-0.5
DGRG				S	Sg	14 17 07.9	+3.0
DGRG	David-gareji	1.94	116	ePg	Pg	14 16 39.3	-0.5
DGRG				eSg	Sg	14 17 04.9	0.0
DGRG	David-gareji	1.94	116	i P	Pg	14 16 39.3	-0.5
DGRG				i S	Sg	14 17 06.2	+1.4
DGRG				IAML		14 17 10.0	
	comp=E,20nm,0.6s						

IDC 23 14:17:45.9±1.1, 2°.19S×125°.07E, h0^{km}, mb3.5/4, mb1 3.6/7, mb1mx3.4/49, mbtmp3.5/7, ML3.4/3, Error ellipse: s-maj=33.3km s-min=20.8km az=62.0

ISC 23 14:17:49.7±0.9, 2°.2S±0°.1×125°.17E±0°.09, h26^{km}, n7, σ1^{s}.32/8, mb3.6/4, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	6.09	242	Pn	Pn	14 19 18.1	0.0
	1.5nm,0.3s,baz=46,slow=6.8,SNR=5.0						
SIJI	Sorong	6.24	78	Pn	Pn	14 19 22.2	+2.0
	0.2nm,0.3s,baz=106,slow=5.5,SNR=6.5						
SIJI				Sn	Sn	14 20 28.7	-2.0
	0.3nm,0.3s,baz=247,slow=22,SNR=1.5						
WRA	Warramunga Arr	19.79	154	P	P	14 22 17.6	-0.6
	0.1nm,0.3s,baz=330,slow=12,SNR=11						
ASAR	Alice Springs	22.96	159	P	P	14 22 52.3	-0.1
	0.4nm,0.8s,baz=332,slow=7.6,SNR=6.7						
SONM	Songino Array	52.46	344	P	P	14 27 00.2	-0.2
	0.4nm,0.6s,baz=157,slow=7.8,SNR=3.0						
MKAR	Makanchi Array	61.61	328	P	P	14 28 04.7	-0.5
	0.3nm,0.5s,baz=121,slow=8.7,SNR=5.9						
KURBB	Kurchatov Arra	65.94	330	P	P	14 28 33.5	-0.1
	1.1nm,0.9s,baz=130,slow=5.8,SNR=11						

IDC 23 14:17:56.1±1.6, 50°.19N×156°.51E, h0^{km}, mb3.2/4, mb1 3.3/5, mb1mx3.1/50, mbtmp3.2/5, ML2.1/1, MS3.2/1, Ms1 3.2/1, ms1mx2.3/23, Error ellipse: s-maj=43.7km s-min=24.5km az=95.0
KRSC 23 14:17:59.9±1.4, 50°.33N×157°.51E, h49^{km}±22^{km}, ML4.0

ISC 23 14:18:00.6±2.4, 50°.2N±0°.1×157°.45E±0°.09, h50^{km}±23^{km}, n33, σ1^{s}.13/37, mb3.2/4, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.97	299	eP	Pn	14 18 17.7	-0.2
SKR				eS	Sn	14 18 30.2	-0.5
PAU	Pauzhetka	1.31	342	eP	Pn	14 18 22.9	+0.3
PAU				eS	Sn	14 18 38.8	-0.2
ALID	Alaid	1.38	299	eP	Pn	14 18 24.1	+0.5
ALID				eS	Sn	14 18 41.2	+0.4
MIPR	Malaya Ipel'ka	2.11	348	eP	Pn	14 18 34.5	+1.1
ASAK	Asacha	2.19	7	eP	Pn	14 18 34.8	+0.2
ASAK				eS	Sn	14 18 59.7	-0.8
MTVR	Mutnovka	2.31	11	eP	Pn	14 18 36.6	+0.2
MTVR				eS	Sn	14 19 02.9	-0.8
RUS	Russkaya	2.32	16	eP	Pn	14 18 35.9	-0.3
RUS				eS	Sn	14 19 01.6	-1.9
GRL	Gorelyy	2.37	9	eP	Pn	14 18 37.7	+0.6
GRL				eS	Sn	14 19 04.5	-0.5
KRMR	Karymshinskiy	2.65	9	eP	Pn	14 18 41.5	+0.7
KRMR				eS	Sn	14 19 10.8	-0.9
APC	Apacha	2.72	356	eP	Pn	14 18 42.5	+0.8
PETK	Petropavlovsk-	2.90	3	Pn	Pn	14 18 45.1	+0.9
	1.1nm,0.3s,baz=168,slow=16,SNR=58						
PETK				Sn	Sn	14 19 21.0	+3.1
	1.4nm,0.3s,baz=198,slow=9.3,SNR=2.3						
DALK	Dalny	2.93	16	eP	Pn	14 18 45.0	+0.3
DALK				eS	Sn	14 19 17.4	-1.2
UGLR	Uglovaya	3.12	15	eP	Pn	14 18 48.2	+0.9
AVH	Avacha	3.15	14	eP	Pn	14 18 49.3	+1.5
SMAR	Somma	3.16	15	eP	Pn	14 18 49.1	+1.0
KOK	Koryaka	3.17	13	eP	Pn	14 18 49.7	+1.7
SDLR	Sedlovina	3.19	16	eP	Pn	14 18 48.5	+0.1
KRER	Koryakskii	3.19	14	eS	Sn	14 19 25.2	-0.2
KRX	Arik	3.23	13	eP	Pn	14 18 50.4	+1.5
SPN	Mys Shipunski	3.30	28	eP	Pn	14 18 50.1	+0.4
SPN				eS	Sn	14 19 27.1	-0.5
TUMR	Tumrok	5.33	17	eP	Pn	14 19 19.6	+1.9
KBTR	Krutoberegovo	6.81	26	eP	Pn	14 19 37.9	+0.1
H11N2	WAKE ISLAND Hy	31.34	163	T	T	14 57 55.6	
	baz=348,slow=76,SNR=21						
H11N3	WAKE ISLAND Hy	31.35	163	T	T	14 58 01.4	
	baz=348,slow=76,SNR=22						
H11N1	WAKE ISLAND Hy	31.35	163	T	T	14 58 01.5	
	baz=348,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	32.49	164	T	T	14 59 24.6	
	baz=349,slow=76,SNR=34						
H11S3	WAKE ISLAND Hy	32.50	164	T	T	14 59 25.0	
	baz=349,slow=76,SNR=52						
H11S2	WAKE ISLAND Hy	32.51	164	T	T	14 59 24.9	
	baz=349,slow=76,SNR=31						
MKAR	Makanchi Array	47.94	297	P	P	14 26 32.5	-1.4
	0.1nm,0.3s,baz=70,slow=6.5,SNR=4.3						
KURBB	Kurchatov Arra	47.98	303	P	P	14 26 32.4	-1.6
	0.2nm,0.4s,baz=61,slow=7.2,SNR=4.6						
DAV	Davao City (W)	50.57	223	LR	LR	14 53 20.2	
	comp=Z,25nm,18.6s,baz=206,slow=42						
WRA	Warramunga Arr	72.78	203	P	P	14 29 24.0	+0.5
	0.1nm,0.4s,baz=16,slow=6.2,SNR=1.3						
ASAR	Alice Springs	76.46	202	P	P	14 29 46.4	+1.5
	0.1nm,0.5s,baz=16,slow=5.2,SNR=4.9						

KRSC 23 14:19:47.9±1.5, 49°.62N×157°.00E, h16^{km}±22^{km}, ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.21	332	eP	Pn	14 20 08.9	-1.2
SKR				eS	Sb	14 20 24.0	-1.7
ALID	Alaid	1.56	324	eP	Pn	14 20 15.6	+0.5
PAU	Pauzhetka	1.85	356	eP	Pb	14 20 20.5	-0.8
PAU				eS	Sb	14 20 44.4	+0.1
MIPR	Malaya Ipel'ka	2.66	357	eP	Pn	14 20 31.4	+1.3
ASAK	Asacha	2.82	11	eP	Pb	14 20 35.9	-2.0
ASAK				eS	Sb	14 21 09.7	-2.6
MTVR	Mutnovka	2.96	14	eP	Pn	14 20 37.3	+2.9
MTVR				eS	Sb	14 21 13.1	-3.2
RUS	Russkaya	2.97	18	eP	Pn	14 20 36.0	+1.6
RUS				eS	Sn	14 21 11.4	+1.7
GRL	Gorelyy	3.01	13	eP	Pb	14 20 38.4	-2.8
GRL				eS	Sb	14 21 15.8	-1.9
KRMR	Karymshinskiy	3.29	12	eP	Pn	14 20 41.9	+3.2
KRMR				eS	Sb	14 21 21.8	-3.8
APC	Apacha	3.31	2	eP	Pn	14 20 41.9	+2.9
DALK	Dalny	3.59	17	eP	Pn	14 20 46.3	+3.5
DALK				eS	Sb	14 21 29.5	-4.6
UGLR	Uglovaya	3.77	17	eP	Pn	14 20 49.2	+3.8
AVH	Avacha	3.81	16	eP	Pn	14 20 50.3	+4.4
KOK	Koryaka	3.81	15	eP	Pb	14 20 50.5	-4.4
SMAR	Somma	3.82	16	eP	Pn	14 20 50.1	+3.9
KRER	Koryakskii	3.85	16	eS	Sn	14 21 34.5	+3.0
SDLR	Sedlovina	3.85	17	eP	Pn	14 20 49.7	+3.2
KRX	Arik	3.88	15	eP	Pn	14 20 50.7	+3.7
SPN	Mys Shipunski	3.96	27	eP	Pn	14 20 50.8	+2.8
SPN				eS	Sn	14 21 38.1	+4.0
TUMR	Tumrok	5.99	18	eP	Pn	14 21 21.2	+5.3

IDC 23 14:32:21.8±15.0, 24°.12S×67°.32E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.3/41, mbtmp3.4/3, MS3.2/3, Ms1 3.3/3, ms1mx3.0/14, Error ellipse: s-maj=497.5km s-min=45.4km az=54.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEM	Lembang	42.27	73	LR	LR	14 54 38.2	
	comp=Z,59nm,19.7s,baz=230,slow=32						
CMAR	Chiang Mai Arr	52.37	39	LR	LR	15 02 10.7	
	comp=Z,20nm,18.2s,baz=200,slow=34						
ASAR	Alice Springs	60.32	104	P	P	14 42 32.8	-0.1
	0.4nm,0.6s,baz=252,slow=6.4,SNR=15						
WRA	Warramunga Arr	61.74	100	P	P	14 42 42.6	+0.1
	0.3nm,0.6s,baz=255,slow=6.9,SNR=7.4						
MKAR	Makanchi Array	71.87	11	P	P	14 43 46.5	0.0
	0.1nm,0.7s,baz=201,slow=5.6,SNR=1.8						
KSRS	Korea Array	83.64	44	LR	LR	15 21 52.3	
	comp=Z,6.4nm,20.0s,baz=235,slow=36						

IDC 23 14:43:25.8±18.0, 23°.92S×68°.87E, h0^{km}, mb3.6/3, mb1 3.8/3, mb1mx3.4/38, mbtmp3.6/3, MS3.0/1, Ms1 3.2/1, ms1mx2.7/21, Error ellipse: s-maj=609.9km s-min=46.2km az=53.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	51.34	38	LR	LR	15 13 30.8	
	comp=Z,15nm,18.1s,baz=185,slow=35						
ASAR	Alice Springs	59.00	104	P	P	14 53 27.9	+0.1
	0.5nm,0.7s,baz=251,slow=6.4,SNR=6.2						
WRA	Warramunga Arr	60.39	100	P	P	14 53 37.2	-0.2
	0.7nm,0.8s,baz=254,slow=7.2,SNR=4.7						
MKAR	Makanchi Array	71.42	10	P	P	14 54 47.8	0.0
	0.5nm,1.0s,baz=175,slow=6.5,SNR=2.9						

VAO 23 14:57:48.2±0.3, 10°.82N×74°.80W, h41^{km}±1^{km}, mb4.7
RSNC 23 14:58:00.9±0.8, 10°.64N×73°.40W, h8^{km}±4^{km}, ML4.4, Mw4.3, Fault plane solution: NP1:ϕ_s10.00000°, δ18.00000°, λ78.00000°.
NEIC 23 14:58:04.1±1.9, 10°.62N±0°.06×73°.21W±0°.06, h58^{km}±5^{km}, mb4.6/106, Error ellipse: s-maj=8.7km s-min=8.2km az=77.0
IDC 23 14:58:04.3±1.7, 10°.53N×73°.27W, h58^{km}±16^{km}, mb3.9/20, mb1 4.1/25, mb1mx4.0/38, mbtmp4.2/25, MS3.6/16, Ms1 3.6/16, ms1mx3.4/36, Error ellipse: s-maj=15.5km s-min=10.1km az=43.0

ISC 23 14:57:59.3±0.5, 10°.68N±0°.03×73°.34W±0°.03, h17^{km}±3^{km}, h17^{km}:pP-P, n270, σ2^{s}.15/283, mb4.6/64, MS3.6/11, 4C-7D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CODC	Agustn Codazz	0.75	188	⇓iPg	Pb	14 58 13.8	-0.2
CODC				eSg	Sb	14 58 22.5	-1.3
CODC				i		14 58 23.4	
	comp=Z,19μm,0.8s						
CODC				i		14 58 23.4	
	comp=Z,19μm,0.8s						
SMRC	Santa Marta, M	0.99	299	⇓iP	Pb	14 58 18.0	-0.1
SMRC				eS	Sb	14 58 30.4	-0.4
SMRC				i		14 58 38.1	
	comp=Z,8μm,0.5s						
SMRC				i		14 58 38.1	
	comp=Z,8μm,0.5s						
ARGC	Ariguani, Magd	1.21	227	⇓eP	Pn	14 58 20.7	-0.7
ARGC				i		14 58 38.1	
	comp=Z,4μm,0.5s						
URIC	Uribia, Colomb	1.67	52	⇑iP	Pb	14 58 29.7	0.0
URIC				eS	Sg	14 58 52.8	-0.5
URIC				i		14 59 01.7	
	comp=Z,3μm,0.5s						
URIC				i		14 59 01.7	
	comp=Z,3μm,0.5s						
URIC	Uribia, Colomb	1.67	52		Pb	14 58 29.7	0.0
SJCC	San Jacinto, C	1.97	247	⇓iP	Pn	14 58 33.6	+1.6
SJCC				eS	Sn	14 58 56.4	0.0
SJCC				i		14 59 13.0	
	comp=Z,4μm,1.0s						
SJCC				i		14 59 13.0	
	comp=Z,4μm,1.0s						
SMLC	San Martn de	2.00	201	eP	Pn	14 58 31.1	-1.3
SMLC				i		14 59 08.9	
	comp=Z,2μm,0.2s						
SDV	Santo Domingo	3.21	123	P	Pn	14 58 50.8	+1.6
	comp=Z,22nm,0.3s,baz=308,slow=5.5,SNR=213						
SDV				S	Sn	14 59 27.4	+0.1
	comp=Z,70nm,0.3s,baz=344,slow=8.4,SNR=4.8						
SDV				LR	LR	15 00 37.4	
	comp=Z,2μm,19.2s,baz=296,slow=50						
SDV	Santo Domingo	3.21	123	⇑iP	Pn	14 58 50.8	+1.6
SDV				i		14 59 53.5	
	comp=Z,605nm,0.6s						
SDV	Santo Domingo	3.21	123		Pn	14 58 50.6	+1.3
PAMC	Pamplona, Colo	3.38	169	eP	Pn	14 58 53.1	+1.3
PAMC				eS	Sb	14 59 43.0	+2.8
PAMC				i		14 59 49.8	
	comp=Z,817nm,1.2s						
LCBC	Los crdobas,	3.49	239	eP	Pn	14 58 53.9	+1.0
LCBC				eS	Sn	14 59 34.4	+0.6
LCBC				i		14 59 39.0	
	comp=Z,603nm,0.7s						
ZARC	Zaragoza, Cauc	3.50	205	eP	Pn	14 58 54.9	+1.8
ZARC				eS	Sn	14 59 38.1	+3.9
ZARC				i		14 59 56.6	
	comp=Z,873nm,0.6s						
BRRC	Barranca, Sant	3.57	186	eP	Pn	14 58 53.8	-0.2
BRRC				eS	Sb	14 59 45.1	-0.1
BRRC				i		15 00 02.9	
	comp=Z,541nm,0.6s						
UREC	San Jos de Ur	3.62	217	eP	Pn	14 58 55.6	+0.8
UREC				eS	Sn	14 59 35.9	-1.3
UREC				i		14 59 37.3	
	comp=Z,429nm,0.6s						
BARC	Barichara	4.07	178	eP	Pn	14 59 01.5	+0.5
BARC				eS	Sg	15 00 05.5	-4.5
PTBC	PUERTO BERRIO,	4.26	195	eP	Pn	14 59 04.8	+1.3
PTBC				eS	Sb	15 00 02.4	-2.6
PTBC				i		15 00 26.6	
	comp=Z,640nm,0.6s						
TAMC	Tame, Arauca	4.49	160	eP	Pn	14 59 08.2	+1.5
TAMC				eS	Sg	15 00 22.0	-1.6
TAMC				i		15 00 34.1	
	comp=Z,566nm,0.7s						
RUSC	La Rusia	4.76	177	eP	Pn	14 59 13.6	+2.8
RUSC				eS	Sg	15 00 27.5	-5.0
RUSC				i		15 00 46.4	
	comp=Z,480nm,0.7s						
RUSC	La Rusia	4.76	177		Pn	14 59 12.0	+1.1
HELC	Santa Helena	4.96	206	eP	Pn	14 59 15.6	+2.2
HELC				eS	Sb	15 00 27.2	+1.8
HELC				i		15 00 34.5	
	comp=Z,383nm,0.7s						
SPBC	San Pablo de B	5.05	188	eP	Pn	14 59 16.4	+2.0
SPBC				eS	Sn	15 00 19.7	+7.3
SPBC				i		15 00 40.6	
	comp=Z,239nm,0.5s						
NORC	Norcasia	5.30	197	eP	Pn	14 59 18.8	+0.9
NORC				eS	Sn	15 00 26.9	+8.3
NORC				i		15 00 35.0	
	comp=Z,252nm,0.8s						
CBOC	Ciudad Bolivar	5.46	209	eP	Pn	14 59 22.4	+2.2
CBOC				eS	Sb	15 00 37.8	-2.2
CBOC				i		15 01 00.5	
	comp=Z,185nm,2.0s						
GUY2C	Guyana, Caldas	5.78	200	eP	Pn	14 59 27.0	+2.2
GUY2C				eS	Sb	15 00 47.7	-1.5
GUY2C				i		15 01 07.9	
	comp=Z,287nm,0.8s						
ROSC	El Rosal	5.88	190	P	Pn	14 59 28.4	+2.3
	comp=Z,5.0nm,0.3s,baz=78,slow=22,SNR=7.1						
ROSC				S	Sn	15 00 40.5	+7.1
	comp=Z,21nm,0.3s,baz=327,slow=23,SNR=1.9						
ROSC	El Rosal	5.88	190	eP	Pn	14 59 29.6	+3.5
ROSC				eS	Sb	15 00 50.7	-1.5

ROSC				i		15 01 02.4	
	comp=Z,230nm,0.9s						
SOLC	**Bahia Solano**	5.98	223	eP	Pn	14 59 27.9	+0.7
SOLC				eS	Sn	15 00 32.2	-3.1
SOLC				i		15 00 47.2	
	comp=Z,94nm,1.1s						
CHIC	**Chingaza**	6.02	184	eP	Pn	14 59 30.0	+1.9
CHIC				eS	Sb	15 00 53.3	-3.0
CHIC				i		15 00 59.5	
	comp=Z,195nm,1.0s						
RREF	**El Recreo**	6.08	199	eP	Pn	14 59 31.8	+2.8
RREF				eS	Sn	15 00 46.3	+7.8
RREF				i		15 01 03.6	
	comp=Z,192nm,0.8s						
TOLC	**Tolima**	6.36	198	eP	Pn	14 59 37.2	+4.5
TOLC				i		15 01 18.6	
	comp=Z,111nm,0.8s						
ANIL	**Santa Ana**	6.48	199	eP	Pn	14 59 42.2	+7.9
ANIL				eP	Sb	15 01 12.3	+3.1
ANIL				i		15 01 28.1	
	comp=Z,242nm,0.4s						
VILC	**Villavicencio,**	6.54	183	eP	Pn	14 59 38.0	+3.1
VILC				eS	Sn	15 00 54.5	+5.3
VILC				i		15 01 14.4	
	comp=Z,232nm,1.3s						
PTGC	**Puerto Gaitan,**	6.55	169	eP	Pn	14 59 33.8	-1.2
PTGC				eS	Sn	15 00 52.9	+3.5
PTGC				i		15 01 07.5	
	comp=Z,168nm,0.7s						
BCIP	**Isla Barro Col**	6.57	257	eP	Pn	14 59 35.1	-0.1
BCIP				eS	Sn	15 00 47.5	-2.4
BCIP				i		15 01 03.8	
	comp=Z,102nm,0.8s						
BCIP	**Isla Barro Col**	6.57	257		Pn	14 59 35.1	-0.1
ORTC	**Ortega, Tolima**	6.99	196	eP	Pn	14 59 43.1	+2.0
ORTC				eS	Sb	15 01 12.4	-11
ORTC				i		15 01 30.8	
	comp=Z,130nm,0.9s						
YOTC	**Yotoco, Valle**	7.29	204	eP	Pn	14 59 55.0	+10
YOTC				eS	Sb	15 01 20.5	-12
YOTC				i		15 01 38.3	
	comp=Z,33nm,1.3s						
PAPH	**Port-au-Prince**	7.86	7	Pn	Pn	14 59 52.3	-0.7
HOJ	**Hope**	7.99	336	⇓iP	Pn	14 59 55.6	+0.8
GWJ	**Greenwich**	8.05	336	⇑iP	Pn	14 59 58.6	+3.0
STH	**Stony Hill**	8.08	336	⇑iP	Pn	14 59 58.0	+2.0
GUVC	**San Jose del G**	8.11	175	eP	Pn	15 00 03.8	+7.3
GUVC				i		15 01 40.3	
	comp=Z,83nm,0.9s						
BANI	**BANI**	8.19	20	Pn	Pn	14 59 58.6	+0.9
MCJ	**Malvern**	8.34	330	⇓iP	Pn	15 00 01.0	+1.3
SDDR	**Presa de Saban**	8.49	13		Pn	15 00 03.8	+2.1
MACC	**Macarena, Meta**	8.49	183	eP	Pn	15 00 08.4	+6.7
MACC				eS	Sn	15 01 35.3	-2.0
MACC				i		15 01 53.1	
	comp=Z,79nm,1.1s						
MTDJ	**Mount Denham**	8.53	332		Pn	15 00 03.2	+1.0
BBJ	**Bamboo Saint A**	8.55	334	⇓iP	Pn	15 00 04.8	+2.3
PCRV	**Puerto La Cruz**	8.58	93	P	Pn	15 00 04.4	+1.5
	comp=Z,19nm,0.3s,baz=243,slow=5.0,SNR=59						
PLCV	**Puerto La Cruz**	8.63	93		Pn	15 00 04.4	+0.8
GARC	**Garzon, Huila**	8.70	194	eP	Pn	15 00 04.6	-0.2
GARC				i		15 02 05.9	
	comp=Z,33nm,1.3s						
PCON	**Cinco Dias**	8.83	200	eP	Pn	15 00 13.8	+6.9
PCON				eS	Sn	15 01 58.4	+12
PCON				i		15 02 19.1	
	comp=Z,30nm,1.0s						
DR12	**Loma Pena Alta**	8.93	25		Pn	15 00 07.4	-0.3
SOTA	**Rioblanco**	9.09	201	eP	Pn	15 00 24.2	+14
SOTA				i		15 02 34.0	
	comp=Z,33nm,0.8s						
FLOC	**Florencia**	9.32	194	eP	Pn	15 00 13.6	+0.5
FLOC				eS	Sn	15 02 11.0	+13
FLOC				i		15 02 24.0	
	comp=Z,41nm,1.3s						
FLOC	**Florencia**	9.32	194		Pn	15 00 13.2	0.0
GTBY	**Guantanamo Bay**	9.35	350	Pn	Pn	15 00 14.7	+1.3
CRPR	**Cabo Rojo, PR**	9.46	39	Pn	Pn	15 00 12.3	-2.7
MLPR	**Magueyes Islan**	9.47	39	Pn	Pn	15 00 12.2	-2.9
SJG	**San Juan**	10.15	43	P	Pn	15 00 21.8	-2.6
	comp=Z,2.6nm,0.3s,baz=203,slow=13,SNR=8.1						
SJG				S	Sn	15 02 10.5	-7.5
	comp=Z,6.1nm,0.3s,baz=18,slow=12,SNR=7.1						
SJG				LR	LR	15 04 18.9	
	comp=Z,194nm,20.4s,baz=262,slow=37						
SJG	**San Juan**	10.15	43		Pn	15 00 21.4	-3.0
EMPR	**Esperanza - Ma**	10.18	40	Pn	Pn	15 00 24.1	-0.7
GCPR	**Guaynabo City**	10.34	42	Pn	Pn	15 00 25.1	-1.9
MTP	**Monte Pirata**	10.55	45	Pn	Pn	15 00 27.1	-2.8
CUPR	**Culebra, Puert**	10.88	45	Pn	Pn	15 00 31.7	-2.6
CBCY	**The Bluff, Cay**	10.92	326	Pn	Pn	15 00 34.4	-0.6
STVI	**Saint Thomas**	11.14	46	Pn	Pn	15 00 35.8	-2.2
JTS	**Las Juntas de**	11.42	269	P	Pn	15 00 41.4	-0.5
	comp=Z,0.8nm,0.3s,baz=330,slow=23,SNR=2.0						
JTS				S	Sn	15 02 43.6	-5.6
	comp=Z,1.1nm,0.3s,baz=238,slow=19,SNR=4.2						
JTS				LR	LR	15 06 00.3	
	comp=Z,208nm,18.2s,baz=162,slow=41						
JTS	**Las Juntas de**	11.42	269		Pn	15 00 41.0	-0.9
FSCY	**Frank Sound, G**	11.44	320	Pn	Pn	15 00 41.2	-0.9
GRGR	**Grenville**	11.55	82	Pn	Pn	15 00 41.0	-2.6
ACON	**Acoyapa**	11.67	277	Pn	Pn	15 00 45.3	0.0
SVB	**Belmont**	12.11	77		Pn	15 00 49.5	-1.8
TGUH	**Tegucigalpa,Un**	14.01	285	P	P	15 01 27.6	+2.4
TEIG	**Tepich**	17.23	305	P	P	15 02 01.4	+0.6
	comp=Z,1.1nm,0.3s,baz=8.5,slow=0.0,SNR=6.8						
TEIG				LR	LR	15 08 19.4	
	comp=Z,123nm,20.5s,baz=230,slow=35						
TEIG	**Tepich**	17.23	305	Pn	P	15 02 01.8	+1.0
TEIG				IAmb	IAmb	15 02 05.3	
	comp=Z,23nm,0.8s						
APG	**El Apazote**	17.23	286	P	P	15 02 03.6	+2.5
	comp=Z,3.1nm,0.3s,baz=102,slow=9.2,SNR=14						
APG				LR	LR	15 09 37.9	
	comp=Z,248nm,19.4s,baz=118,slow=40						
PTGA	**Pitinga**	17.48	130	P	Pn	15 02 02.4	-0.1
	comp=Z,0.8nm,0.3s,baz=317,slow=13,SNR=14						
PTGA	**Pitinga**	17.48	130		Pn	15 02 02.2	-0.3
PTGA				IAmb	IAmb	15 02 22.5	
	comp=Z,24nm,0.8s						
PTGA	**Pitinga**	17.48	130	eP	P	15 02 02.9	-0.7
PTGA				epP	sP	15 02 13.0	+2.0
PTGA				eS	S	15 05 32.0	+7.1
ATAH	**Atahualpa**	18.40	196	P	Pn	15 02 16.5	+2.3
	comp=Z,0.5nm,0.3s,baz=24,slow=7.2,SNR=4.2						
CCIG	**Comitan**	19.10	289	P	Pn	15 02 22.7	+0.2
CCIG				IAmb	IAmb	15 02 26.5	
	comp=Z,36nm,0.9s						
MDP	**Montagnes des**	21.23	104	P	P	15 02 44.0	-0.7
	comp=Z,16nm,0.8s,baz=269,slow=10,SNR=5.9						
MDP				LR	LR	15 12 00.2	
	comp=Z,88nm,18.0s,baz=277,slow=40						
CMIG	**Matias Romero**	21.85	289	P	P	15 02 50.3	-1.0
	comp=Z,4.7nm,0.7s,baz=82,slow=7.3,SNR=11						
CMIG				LR	LR	15 11 53.1	
	comp=Z,114nm,20.7s,baz=104,slow=38						
SAML	**Samuel**	21.97	152	P	P	15 02 49.5	-3.0
SAML				IAmb	IAmb	15 03 07.1	
	comp=Z,20nm,0.8s						
SAML	**Samuel**	21.97	152	eP	P	15 02 46.7	-5.9
SAML				epP	pP	15 02 57.8	+0.2
553A	**Crawfordville**	21.99	334	P	P	15 02 55.9	+3.2
NNA	**Nana**	22.79	189	P	P	15 03 07.0	+5.6
	comp=Z,6.4nm,0.6s,baz=2.0,slow=10,SNR=3.9						
NNA	**Nana**	22.79	189	IAmb	IAmb	15 03 33.6	
	comp=Z,18nm,1.1s						
152A	**Waverly Hall**	24.26	336	P	P	15 03 18.3	+2.6
GOGA	**Godfrey**	24.46	339	P	P	15 03 19.9	+2.5
GOGA				IAmb	IAmb	15 03 21.4	
	comp=Z,61nm,1.9s						
HODGE	**Hodges**	24.82	342	P	P	15 03 22.8	+2.1
HODGE				IAmb	IAmb	15 03 35.9	
	comp=Z,14nm,0.9s						
Z51A	**Franklin**	25.02	336	P	P	15 03 24.9	+2.3
Z51A				IAmb	IAmb	15 03 26.2	
	comp=Z,18nm,0.7s						
Z50A	**Ashland**	25.27	335	P	P	15 03 27.4	+2.6
Z50A				IAmb	IAmb	15 03 41.7	
	comp=Z,13nm,0.9s						
TLIG	**Tlapa**	25.38	288	P	P	15 03 27.2	+1.1
TLIG				IAmb	IAmb	15 03 32.4	
	comp=Z,25nm,1.3s						
LRAL	**Lakeview Retre**	25.55	333	P	P	15 03 29.7	+2.4
Z47A	**Carrollton**	26.18	331	P	P	15 03 35.0	+1.9
Z47A				IAmb	IAmb	15 03 50.3	
	comp=Z,32nm,0.9s						
344A	**Westbrook Farm**	26.20	325	P	P	15 03 35.2	+1.9
344A				IAmb	IAmb	15 03 53.1	
	comp=Z,50nm,1.4s						
146A	**Union**	26.21	329	P	P	15 03 35.3	+1.9
146A				IAmb	IAmb	15 03 57.0	
	comp=Z,30nm,0.9s						
TKL	**Tuckaleechee C**	26.61	341	P	P	15 03 40.6	+3.6
	comp=Z,2.3nm,0.7s,baz=175,slow=13,SNR=4.3						
TKL				LR	LR	15 15 04.9	
	comp=Z,135nm,18.8s,baz=162,slow=38						
TKL	**Tuckaleechee C**	26.61	341	IAmb	IAmb	15 04 04.6	
	comp=Z,24nm,1.4s						
V51A	**Loudon**	26.93	340	P	P	15 03 42.6	+2.8
V51A				IAmb	IAmb	15 03 56.4	
	comp=Z,22nm,1.2s						
LPAZ	**La Paz**	27.29	169	P	P	15 03 42.9	-0.9
	comp=Z,2.1nm,0.7s,baz=351,slow=12,SNR=5.4						
LPAZ	**La Paz**	27.29	169	P	P	15 03 42.4	-1.4
LPAZ	**La Paz**	27.29	169	eP	P	15 03 32.9	-11
LPAZ				epP	P	15 03 43.0	-0.9
CLDB	**Colider**	27.62	140	eP	P	15 03 40.9	-5.3
CLDB				epP	pP	15 03 51.6	0.0
CLDB				eS	S	15 08 29.4	+2.0
SIV	**San Ignacio**	29.15	155	P	P	15 03 56.8	-3.1
	comp=Z,3.8nm,0.8s,baz=346,slow=10,SNR=9.6						
SIV				LR	LR	15 16 16.5	
	comp=Z,306nm,18.5s,baz=322,slow=38						
ZAIG	**Zacatecas**	30.39	297	P	P	15 04 11.0	-0.2
ZAIG				IAmb	IAmb	15 04 15.1	
	comp=Z,15nm,1.4s						
T42A	**Van Buren**	30.73	331	P	P	15 04 14.8	+1.2
U40A	**Yellville**	31.07	329	P	P	15 04 18.2	+1.5
CCM	**Cathedral Cave**	31.64	332	P	P	15 04 20.4	-1.3
CCM				IAmb	IAmb	15 04 35.8	
	comp=Z,8.4nm,0.9s						
SALV	**Santo Antonio**	31.67	146	eP	P	15 04 15.1	-7.0
SALV				epP	pP	15 04 27.2	-0.3
SMTB	**Santa Maria do**	32.15	126	eP	P	15 04 23.6	-2.8
SMTB				epP	sP	15 04 34.1	+0.1
P43A	**Skaggs, Pawnee**	32.23	336	P	P	15 04 27.0	+0.2
P43A				IAmb	IAmb	15 04 46.7	
	comp=Z,13nm,0.7s						
S39A	**Bolivar**	32.34	330	P	P	15 04 27.8	0.0
ABTX	**Abilene, Hawle**	32.61	316	P	P	15 04 29.5	-0.8
ABTX				IAmb	IAmb	15 04 45.0	
	comp=Z,11nm,1.2s						
LVC	**Limon Verde**	33.37	173	eP	P	15 04 25.9	-11
ARAG	**Araguaiana, MT**	33.79	141	eP	P	15 04 35.2	-5.5
ARAG				epP	pP	15 04 46.4	+0.3
TXAR	**Lajitas Array**	33.84	308	P	P	15 04 41.4	+0.2
	comp=Z,2.3nm,0.7s,baz=123,slow=8.1,SNR=9.8						
TXAR				LR	LR	15 19 50.0	
	comp=Z,25nm,20.9s,baz=0.0,slow=38						
TXAR	**Lajitas Array**	33.84	308	P	P	15 04 41.8	+0.6
TX31	**Lajitas Ar. Si**	33.84	308	P	P	15 04 41.7	+0.5
TX32	**Lajitas Array**	33.84	308	P	P	15 04 41.9	+0.7
HPIG		34.46	302	P	P	15 04 47.4	+0.7
HPIG				IAmb	IAmb	15 04 48.6	
	comp=Z,5.1nm,0.8s						
NBPS	**Pedro II - PI**	35.11	114	eP	P	15 04 49.7	-2.6
AQDB	**Aquidauana**	35.49	151	eP	P	15 04 48.4	-7.0
MSTX	**Muleshoe**	35.52	315	P	P	15 04 56.3	+0.6
MSTX				IAmb	IAmb	15 05 15.3	
	comp=Z,32nm,1.8s						
C2SB	**Chapadao do Su**	35.57	145	eP	P	15 04 49.7	-6.3
NBMO	**Morrinhos-CE**	35.95	111	eP	P	15 04 56.6	-2.8
BDFB	**Brasilia**	36.24	136	P	P	15 05 00.6	-1.3
	comp=Z,8.4nm,0.6s,baz=302,slow=12,SNR=13						
BDFB				LR	LR	15 21 21.5	
	comp=Z,101nm,21.1s,baz=306,slow=39						
BDFB	**Brasilia**	36.24	136	P	P	15 05 00.6	-1.3
BDFB				IAmb	IAmb	15 05 01.1	
	comp=Z,10nm,0.7s						
NBPB	**Pedra_Branca-C**	37.28	114	eP	P	15 05 08.3	-2.5
ITRB	**Iturama**	37.74	143	eP	P	15 05 08.4	-6.2
IPMB	**Ipameri, GO**	37.78	139	eP	P	15 05 09.4	-5.6
JANB	**Januaria**	38.49	131	eP	P	15 05 16.4	-4.6
PCMB	**Pacaembu**	38.73	146	eP	P	15 05 16.1	-6.7
PCMB				epP	pP	15 05 28.9	+0.5
NBMA	**Muriti-CE**	38.81	116	eP	P	15 05 20.8	-3.0
TRCB	**Terra Rica**	38.97	149	eP	P	15 05 18.0	-6.9
319A	**Douglas**	39.10	307	P	P	15 05 27.2	+1.2
319A				IAmb	IAmb	15 05 29.4	
	comp=Z,14nm,1.1s						
NBPN	**Ponto Novo - B**	39.28	122	eP	P	15 05 23.8	-3.9
SDCO	**Great Sand Dun**	39.48	318	P	P	15 05 30.2	+0.9
NBPA	**Parau_RN**	39.59	113	eP	P	15 05 27.5	-2.8
BB19B	**Bebedouro**	39.88	142	eP	P	15 05 26.5	-6.0
BB19B				epP	pP	15 05 37.6	-0.4
CPUP	**Villa Florida**	39.95	157	LR	LR	15 23 44.3	
	comp=Z,118nm,21.1s,baz=27,slow=39						
EYMN	**Ely**	40.16	341	P	P	15 05 35.1	+0.6
EYMN				IAmb	IAmb	15 05 46.9	
	comp=Z,9.6nm,0.7s						
NBTA	**Tacaratu-PE**	40.24	118	eP	P	15 05 32.1	-3.5
SUSD	**Miller**	40.24	331	P	P	15 05 35.3	0.0
S22A	**4UR Ranch, Cre**	40.35	318	P	P	15 05 38.4	+1.8
RCBR	**Riachuelo**	40.73	112	P	P	15 05 37.5	-2.2
RCBR				IAmb	IAmb	15 05 52.2	
	comp=Z,14nm,0.8s						
RCBR	**Riachuelo**	40.73	112	eP	P	15 05 37.3	-2.4
RCBR				epP	sP	15 05 47.3	0.0
PTGB	**Pitanga**	40.85	150	eP	P	15 05 33.2	-7.4
PTGB				epP	pP	15 05 44.7	-1.4
X18A	**Snowflake**	40.95	311	P	P	15 05 42.1	+0.6
X18A				IAmb	IAmb	15 05 45.0	
	comp=Z,16nm,1.6s						
FRTB	**Fartura**	41.05	146	eP	P	15 05 35.0	-7.2
NBLA	**Lagarto - SE**	41.38	120	eP	P	15 05 41.4	-3.7
PV02	**Paradox Valley**	41.87	317	P	P	15 05 50.7	+1.6
PV02				IAmb	IAmb	15 06 11.9	
	comp=Z,7.2nm,0.9s						
PV13	**Radium Mtn., P**	41.90	317	P	P	15 05 51.1	+1.7
PV13				IAmb	IAmb	15 06 11.9	
	comp=Z,6.9nm,0.9s						
PV07	**Paradox Valley**	41.93	317	P	P	15 05 51.4	+1.8
PV07				IAmb	IAmb	15 06 15.4	
	comp=Z,14nm,1.5s						
PV03	**Paradox Valley**	41.97	317	P	P	15 05 51.1	+1.2
PV03				IAmb	IAmb	15 06 15.5	
	comp=Z,9.0nm,1.2s						
PV12	**Saucer Basin,**	41.97	317	P	P	15 05 52.3	+2.4
PV12				IAmb	IAmb	15 06 12.6	
	comp=Z,15nm,1.0s						
X16A	**Lo Mia Camp, P**	42.01	310	P	P	15 05 50.5	+0.4
NBAN	**Anadia - AL**	42.05	117	eP	P	15 05 47.5	-3.1
214A	**Organ Pipe Nat**	42.10	306	P	P	15 05 51.2	+0.5
NBIT	**Itapeh - BA**	42.15	127	eP	P	15 05 46.9	-4.4
BSCB	**Bom Sucesso**	42.18	138	eP	P	15 05 45.7	-5.9
BSCB				epP	pP	15 05 56.6	-0.5
VAO	**Valinhos**	42.28	143	eP	P	15 05 45.9	-6.5
VAO				epP	pP	15 05 57.4	-0.5
SPB	**Sao Paulo**	42.46	144	eP	P	15 05 47.1	-6.5
NBRF	**Rio Formoso -**	42.62	115	eP	P	15 05 51.7	-3.4
ITQB	**Itaqui**	43.23	159	eP	P	15 05 51.4	-8.4
PARB	**Paraibuna**	43.35	141	eP	P	15 05 54.5	-6.5
U15A	**North Rim**	43.50	313	P	P	15 06 03.8	+1.4
SRU	**San Rafael Swe**	43.53	317	P	P	15 06 03.4	+0.9
ULM	**Lac du Bonnet**	43.61	339	P	P	15 06 03.4	+0.7
	comp=Z,1.1nm,0.7s,baz=114,slow=7.6,SNR=3.9						
P17A	**Butcher Ranch,**	43.86	317	P	P	15 06 05.7	+0.6
GLA	**Glamis**	44.08	307	P	P	15 06 08.3	+1.5
GLA				IAmb	IAmb	15 06 22.4	
	comp=Z,12nm,0.8s						
TMUT	**Trail Mountain**	44.09	317	P	P	15 06 07.4	+0.3
Y12C	**Blythe**	44.09	308	P	P	15 06 08.4	+1.5
KNB	**Kanab**	44.14	313	P	P	15 06 09.2	+1.8
MTPU	**Mount Pierson**	44.15	315	P	P	15 06 08.7	+0.9
SCHQ	**Schefferville**	44.34	5	P	P	15 06 09.9	+1.4
	comp=Z,3.0nm,0.8s,baz=224,slow=4.6,SNR=4.1						
SCHQ	**Schefferville**	44.34	5	IAmb	IAmb	15 06 29.3	
	comp=Z,8.4nm,1.0s						
MSU	**Marysvale**	44.37	315	P	P	15 06 09.7	+0.4
LCMT	**Little Creek M**	44.44	313	P	P	15 06 10.2	+0.4
BW06	**Boulder Array**	44.88	322	P	P	15 06 13.8	+0.5
PD31	**Pinedale Array**	44.88	322	P	P	15 06 14.0	+0.6
PDAR	**Pinedale Array**	44.88	322	P	P	15 06 14.3	+1.0
	comp=Z,1.7nm,0.9s,baz=121,slow=9.6,SNR=12						
PDAR				PcP	PcP	15 07 54.5	-0.4
	comp=Z,0.4nm,0.5s,baz=114,slow=2.2,SNR=4.3						
PDAR	**Pinedale Array**	44.88	322	P	P	15 06 13.9	+0.6
NLU	**North Lily Min**	45.00	317	P	P	15 06 15.9	+1.7
CPSB	**Cacapava Do Su**	45.11	155	eP	P	15 06 06.2	-8.7
HWUT	**Hardware Ranch**	45.50	319	P	P	15 06 19.2	+1.0
DUG	**Dugway, Tooele**	45.61	317	P	P	15 06 20.6	+1.6
SHPR	**Sheep Range**	45.63	311	P	P	15 06 21.1	+1.8
AHID	**Auburn Hatcher**	45.83	321	P	P	15 06 21.6	+0.8
AHID				IAmb	IAmb	15 06 41.8	
	comp=Z,9.2nm,1.0s						
REDW	**Red Top Meadow**	46.00	322	P	P	15 06 23.3	+1.1
REDW				IAmb	IAmb	15 06 44.1	
	comp=Z,17nm,1.1s						
BGU	**Big Grassy Mou**	46.11	318	P	P	15 06 23.4	+0.5
TPAW	**Teton Pass**	46.13	322	P	P	15 06 23.5	+0.2
TPAW				IAmb	IAmb	15 06 43.5	
	comp=Z,6.5nm,1.0s						
PLTB	**Pedras Altas**	46.24	157	eP	P	15 06 14.8	-9.1
FXWY	**Fox Creek**	46.26	322	P	P	15 06 24.8	+0.6
GSC	**Goldstone, Bar**	46.41	309	P	P	15 06 26.1	+0.7
GSC				IAmb	IAmb	15 06 28.1	
	comp=Z,6.0nm,0.9s						
TPNV	**Topopah Spring**	46.61	311	P	P	15 06 26.9	-0.1
R11A	**Troy Canyon, C**	46.69	313	P	P	15 06 27.6	0.0
YHH	**Holmes Hill**	46.80	324	P	P	15 06 28.2	-0.3
YHL	**Hebgen Lake**	47.03	323	P	P	15 06 30.5	+0.2
MCMT	**McKenzie Canyo**	48.01	322	P	P	15 06 39.9	+2.0
EGMT	**Eagleton**	48.13	328	P	P	15 06 39.4	+0.9
EGMT				IAmb	IAmb	15 07 03.2	
	comp=Z,14nm,1.5s						
NVAR	**Mina Array Bea**	48.68	312	P	P	15 06 44.8	+1.6
	comp=Z,1.0nm,0.6s,baz=117,slow=7.1,SNR=11						
NVAR	**Mina Array Bea**	48.68	312	P	P	15 06 44.2	+1.1
KVN	**Kaiserville**	48.77	313	P	P	15 06 44.7	+0.9
PNTR	**Pine Nut**	49.87	313	P	P	15 06 53.0	+0.8
PNTR				IAmb	IAmb	15 07 15.2	
	comp=Z,6.4nm,1.0s						
BEKR	**Beckworth**	50.70	313	P	P	15 06 58.9	+0.4
BEKR				IAmb	IAmb	15 08 27.2	
	comp=Z,15nm,2.0s						
PLCA	**Paso Flores**	51.22	177	P	P	15 07 00.7	-1.4
	comp=Z,2.1nm,0.9s,baz=356,slow=8.1,SNR=3.9						
G08A	**Pilot Rock**	51.99	320	P	P	15 07 07.8	-0.2
G08A				IAmb	IAmb	15 07 10.1	
	comp=Z,16nm,1.8s						
C09A	**Chrisman Ranch**	52.76	323	P	P	15 07 14.4	+0.9
C09A				IAmb	IAmb	15 07 15.7	
	comp=Z,6.4nm,0.8s						
B08A	**Colville Reser**	53.65	323	P	P	15 07 20.8	+0.7
B08A				IAmb	IAmb	15 07 41.2	
	comp=Z,6.6nm,0.9s						
NLWA	**Neilton Lookou**	55.97	321	P	P	15 07 38.0	+1.1
NLWA				IAmb	IAmb	15 08 19.3	
	comp=Z,11nm,1.1s						
LLLB	**Lillooet**	56.18	325	P	P	15 07 39.4	+1.0
LLLB				IAmb	IAmb	15 08 00.9	
	comp=Z,3.8nm,0.9s						
YKA	**Yellowknife Ar**	59.59	339	P	P	15 08 02.5	+0.5
	comp=Z,0.9nm,0.7s,baz=129,slow=7.9,SNR=18						
YKA				LR	LR	15 35 09.5	
	comp=Z,90nm,18.3s,baz=0.0,slow=37						
ASCN	**Ascension**	61.55	105	P	P	15 08 14.3	-1.9
SUMG	**Summit**	65.26	11	iP	P	15 08 41.0	+0.7
ESDC	**Sonseca Array**	67.41	51	P	P	15 08 54.1	-0.1
	comp=Z,1.5nm,0.8s,baz=287,slow=7.5,SNR=2.7						
TIC	**Toumodi**	67.56	87	eP	P	15 08 54.3	-1.2
LIC	**Lamto**	67.61	88	eP	P	15 08 54.8	-1.1
	comp=Z,12nm,0.6s						
DBIC	**Dimbokro**	67.71	87	P	P	15 08 55.6	-0.9
	comp=Z,5.4nm,0.6s,baz=277,slow=4.9,SNR=11						
DBIC	**Dimbokro**	67.71	87	P	P	15 08 55.4	-1.1
KIC	**Kosan Boka**	67.87	87	eP	P	15 08 56.5	-1.0
	comp=Z,9.5nm,0.6s						
BALM	**Baldy**	70.59	331	P	P	15 09 14.9	+1.2
TGL	**Tana Glacier**	70.76	331	P	P	15 09 16.1	+1.4
BCAR	**Beaver Creek A**	70.83	333	P	P	15 09 16.2	+1.2
DAG	**Danmarks Havn**	71.94	11	iP	P	15 09 21.2	-0.2
RIDG	**Independent Ri**	72.32	334	P	P	15 09 25.4	+1.4
PAX	**Paxson**	72.44	333	P	P	15 09 25.9	+1.1
PRP	**Porcupine Dome**	72.98	335	P	P	15 09 28.6	+0.6
BMAR	**Burnt Mountain**	73.03	338	P	P	15 09 28.8	+0.7
TOA0	**Torodi Ar. Sit**	73.21	79	P	P	15 09 29.1	-1.0
TOA0				IAmb	IAmb	15 09 59.0	
	comp=Z,20nm,1.8s						
TORD	**Torodi Ar. Bea**	73.21	79	P	P	15 09 29.6	-0.5
	comp=Z,2.4nm,0.8s,baz=287,slow=5.6,SNR=10						
TORD				LR	LR	15 44 28.0	
	comp=Z,30nm,18.1s,baz=125,slow=38						
TORD	**Torodi Ar. Bea**	73.21	79	P	P	15 09 29.0	-1.1
IL31		73.40	335	P	P	15 09 30.6	+0.4
ILAR	**Eielson Array**	73.40	335	P	P	15 09 30.8	+0.5
	comp=Z,0.4nm,0.5s,baz=96,slow=3.9,SNR=14						
ILAR				LR	LR	15 43 06.0	
	comp=Z,53nm,18.6s,baz=127,slow=37						
ILAR	**Eielson Array**	73.40	335	P	P	15 09 30.5	+0.2
GHO	**Glory Hole Cre**	73.84	331	P	P	15 09 33.7	+0.7
RND	**Reindeer**	74.03	333	P	P	15 09 35.2	+1.1
BRLK	**Bradley Lake**	74.57	329	P	P	15 09 38.2	+0.9
SUA	**Susitna One**	74.67	331	P	P	15 09 38.8	+0.9
TRF	**Thorofare Moun**	74.68	333	P	P	15 09 39.1	+1.1
KTH	**Kantishna Hill**	74.97	333	P	P	15 09 40.4	+0.8
BPAW	**Bear Paw Mtn.**	75.06	334	P	P	15 09 40.8	+0.8
MLY	**Manley**	75.06	335	P	P	15 09 40.1	+0.1
SKT	**Skwentna**	75.09	331	P	P	15 09 41.2	+0.9
TOLK	**Toolik Lake Re**	75.11	338	P	P	15 09 40.6	+0.4
PPLA	**Purkeypile**	75.48	332	P	P	15 09 43.5	+0.9
OHAK	**Old Harbor**	75.65	326	P	P	15 09 43.5	+0.1
IMAR	**Indian Mountai**	76.41	335	P	P	15 09 48.5	+0.8
SVW2	**Sparrevohn**	76.97	330	P	P	15 09 51.2	+0.2
SVW2				IAmb	IAmb	15 12 41.0	
	comp=Z,7.9nm,0.8s						
TTA	**Tatalina**	77.22	332	P	P	15 09 52.8	+0.4
NB2	**NORSAR Subarra**	78.10	30	P	P	15 09 58.6	+1.3
	comp=Z,1.1nm,0.8s,baz=272,slow=5.9						
NOA	**NORSAR Array B**	78.10	30	P	P	15 09 58.2	+0.9
	comp=Z,1.9nm,0.9s,baz=275,slow=5.6,SNR=5.0						
KHC	**Kasperske Hory**	80.01	42	eP	P	15 10 08.5	+0.5
RDOG	**Red Dog Mine**	80.01	338	P	P	15 10 08.7	+1.1
GERES	**GERESS Array B**	80.11	42	P	P	15 10 09.4	+0.7
	comp=Z,1.0nm,0.6s,baz=250,slow=2.7,SNR=8.5						
ARCES	**ARCESS Array B**	83.16	20	P	P	15 10 23.5	-0.7
	comp=Z,1.4nm,0.8s,baz=322,slow=3.5,SNR=4.2						
AKASG	**Malin Array Be**	89.65	38	LR	LR	15 46 38.2	
	comp=Z,28nm,21.9s,baz=280,slow=32						
BRTR	**Keskin Array B**	95.98	48	P	P	15 11 25.0	-1.1
	comp=Z,1.0nm,0.8s,baz=242,slow=2.7,SNR=5.5						
KSH	**Kashi**	122.49	28	PKP	PKiKP	15 16 55.0	+0.3
KSH				sPKP		15 17 09.1	
KSH				PP	PP	15 18 35.1	+5.1
KSH				PKS	PKSdf	15 20 30.3	-1.0
KSH	**Kashi**	122.49	28	SS	SS	15 35 11.4	+1.4
LZH	**Lanzhou**	133.41	3	ePKP	PKPdf	15 17 13.5	-2.0
LZH				pPKP	sPKPdf	15 17 29.8	+5.8
LZH				sPKP		15 17 35.6	
CMAR	**Chiang Mai Arr**	150.06	15	PKPbc	PKPbc	15 17 50.0	-0.2
	comp=Z,1.6nm,0.8s,baz=321,slow=3.8,SNR=14						
CMAR	**Chiang Mai Arr**	150.06	15		PKPbc	15 17 49.0	-1.1
ASAR	**Alice Springs**	151.01	240	PKP	PKPdf	15 17 46.6	+0.1
	comp=Z,0.4nm,0.5s,baz=71,slow=2.2,SNR=5.1						
ASAR				PKPbc	PKPbc	15 17 51.4	-0.9
	comp=Z,2.8nm,0.8s,baz=110,slow=2.9,SNR=16						
ASAR	**Alice Springs**	151.01	240		PKPbc	15 17 51.1	-1.2
WRA	**Warramunga Arr**	151.79	248	PKPbc	PKPbc	15 17 53.7	-0.5
	comp=Z,2.0nm,0.6s,baz=102,slow=2.6,SNR=34						
WRA				PKPab	PKPab	15 18 02.8	-0.3
	comp=Z,4.4nm,0.6s,baz=102,slow=2.8,SNR=15						
WRA	**Warramunga Arr**	151.79	248		PKPbc	15 17 53.2	-0.9
WRA					sPKPbc	15 18 02.4	-0.3

IDC ***23*** *14:58:27.0±1.9, 19°.66S×70°.76W, h0km, mb3.7/2, mb1 3.8/4, mb1mx3.5/35, mbtmp3.7/4, ML3.5/1, MS2.4/1, Ms1 2.5/1, ms1mx2.3/27, Error ellipse: s-maj=54.0km s-min=19.9km az=65.0*

GUC ***23*** *14:58:30.8±0.7, 19°.73S×70°.79W, h44km±2km, ML3.4*

ISC 23 14:58:30.2±1.2**, 19°.75S**±0°.04×**70°.8W**±0°.1**, h21**km±6km**, n18, σ1s.07**/29**, 6C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	0.67	77	⇓iP	Pb	14 58 42.8	-0.5
PSGC				eS	Sb	14 58 52.1	-0.2
TA01	**Diego Aracena**	1.01	144	⇑iP	Pn	14 58 48.8	-0.4
TA01				eS	Sn	14 59 02.6	-0.2

TA01				IAML		14 59 06.1	
	comp=E,2µm,0.4s						
PB11	IPOC Station P	1.10	91	⇓iP	Pn	14 58 49.9	-0.6
PB11				eS	Sn	14 59 04.9	-0.2
PB11				IAML		14 59 09.1	
	comp=N,3µm,0.3s						
PB12	IPOC Station P	1.22	23	⇓iP	Pn	14 58 51.3	-0.8
PB12				eS	Sn	14 59 08.0	0.0
PB12				IAML		14 59 13.0	
	comp=E,1µm,0.3s						
PATCX	Punta Patache	1.24	150	⇑iP	Pn	14 58 52.0	-0.3
PATCX				eS	Sn	14 59 08.8	+0.3
PATCX				IAML		14 59 21.6	
	comp=E,651nm,0.7s						
AP01	Chacalluta	1.44	18	⇑iP	Pn	14 58 55.1	0.0
AP01				eS	Sn	14 59 13.7	+0.4
GO01	Chusmiza	1.53	87	⇓iP	Pn	14 58 57.3	+0.6
GO01				eS	Sn	14 59 17.7	+1.3
PB08	IPOC Station P	1.62	104	⇓iP	Pn	14 58 58.4	+0.5
PB08				eS	Sn	14 59 19.6	+1.3
PB08				IAML		14 59 23.6	
	comp=N,553nm,0.4s						
PB02	IPOC Station P	1.79	151	⇑iP	Pn	14 58 60.0	0.0
PB02				eS	Sn	14 59 23.4	+1.2
PB02				IAML		14 59 36.5	
	comp=E,1µm,0.3s						
PB01	IPOC Station P	1.80	136	⇑iP	Pn	14 59 00.4	+0.4
PB01				eS	Sn	14 59 23.0	+0.7
PB01				IAML		14 59 35.0	
	comp=N,584nm,0.5s						
PB16	IPOC Station P	1.87	42	⇑eP	Pn	14 59 02.2	+0.6
PB16				iS	Sn	14 59 26.5	+1.7
PB16				IAML		14 59 29.4	
	comp=N,982nm,0.3s						
PB04	IPOC Station P	2.65	166	IAML		15 00 05.0	
	comp=E,220nm,0.4s						
LVC	Limon Verde	3.36	148	Pn	Pn	14 59 23.5	+1.7
	baz=332,slow=9.0,SNR=1.0						
LVC				Sn	Sn	15 00 02.5	+1.2
	comp=E,9.7nm,0.3s,baz=158,slow=9.6,SNR=3.7						
LVC				Lg	Lg	15 00 14.9	
	comp=E,15nm,0.3s,baz=225,slow=18,SNR=11						
LPAZ	La Paz	4.29	37	Pn	Pn	14 59 37.9	+3.2
	comp=E,0.6nm,0.3s,baz=229,slow=2.0,SNR=13						
LPAZ				LR	LR	15 01 16.7	
	comp=E,38nm,18.0s,baz=193,slow=41						
SIV	San Ignacio	10.00	70	Pn	Pn	15 00 52.8	0.0
	comp=E,0.4nm,0.3s,baz=273,slow=10,SNR=10						
TORD	Torodi Ar. Bea	78.48	71	P	P	15 10 28.4	-1.8
	comp=E,0.7nm,0.6s,baz=266,slow=4.3,SNR=1.3						
YKA	Yellowknife Ar	88.95	341	P	P	15 11 22.9	+0.2
	comp=E,0.2nm,0.6s,baz=139,slow=5.6,SNR=2.3						
MKAR	Makanchi Array	145.21	33	PKPbc	PKPbc	15 18 05.7	-0.2
	comp=E,0.3nm,0.5s,baz=306,slow=4.1,SNR=5.0						

*MOS **23** 15:08:58.2±1.1, 71°.47N×134°.97W, h10^{km}, mb4.8/47, Error ellipse: s-maj=17.0km s-min=4.7km az=92.0*

*NEIC **23** 15:08:59.6±1.9, 71°.53N±0°.07×134°.6W±0°.2, h10^{km}±1^{km}, mb4.7/217, ML4.5(AEIC), Mwr4.6(OTT), Error ellipse: s-maj=11.2km s-min=9.9km az=184.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.24; $M_{\theta\theta}$-0.63; $M_{\phi\phi}$0.80; $M_{r\theta}$0.10; $M_{\theta\phi}$0.54; $M_{\phi r}$-0.04; Fault plane solution: $M_0$9.20000×10^{15} NP1:ϕ_s243.00000°, δ82.00000°, λ-7.00000°. NP2:ϕ_s334.00000°, δ83.00000°, λ-172.00000°. Principal axes: T 1.0006, Plg0.0000°, Azm109.0000°; N -0.1944, Plg80.0000°, Azm17.0000°; P -0.8061, Plg10.0000°, Azm199.0000°;*

*IDC **23** 15:08:59.2±0.4, 71°.59N×134°.68W, h0^{km}, mb4.3/28, mb1 4.5/32, mb1mx4.4/37, mbtmp4.3/32, ML4.8/4, MS3.4/24, Ms1 3.4/24, ms1mx3.2/52 Error ellipse: s-maj=12.8km s-min=9.5km az=53.0*

*PGC **23** 15:09:02.3±0.9, 71°.55N×134°.60W, h35^{km}, mb5.1, ML4.9/1, Mw4.6, 329km west of Sachs Harbour, Nt Beaufort Sea*

*AEIC **23** 15:09:05.3±6.3, 71°.14N±0°.07×135°.5W±0°.2, h24^{km}±4^{km}, Error ellipse: s-maj=9.6km s-min=8.4km az=188.0*

ISC 23 15:08:59.6±2.6, **71°.42N**±0°.04×**134°.80W**±0°.04, **h8**^{km}±16^{km}, **n711**, σ_{1s}**57**/719, **mb4.7**/158, **MS3.3**/22, **11C-12D, Beaufort Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
A36M	Sachs Harbour	3.07	75	P	Pn	15 09 47.2	-1.1
	baz=266						
A36M				S	Sn	15 10 19.5	-5.6
	baz=266						
INK	Inuvik	3.16	171	Pn	Pn	15 09 50.1	+0.6
	652nm,0.3s,baz=351,slow=14						
INK				Sn	Sn	15 10 25.3	-2.0
	254nm,0.3s,baz=268,slow=24,SNR=15						
INK				LR	LR	15 11 05.3	
	comp=Z,466nm,19.6s,baz=22,slow=38						
INK	Inuvik	3.16	171	Pn	Pn	15 09 50.2	+0.6
INK				Sn	Sn	15 10 25.9	-1.4
INK	Inuvik	3.16	171	P	Pn	15 09 50.1	+0.6
INK						15 10 24.4	
C36M	Paulatuk	4.17	115		Pn	15 10 03.0	-0.5
C36M	Paulatuk	4.17	115	P	Pn	15 10 02.7	-0.8
	baz=307,SNR=142						
C36M				S	Sn	15 10 47.0	-5.2
	baz=307						
PS01	TAPS Pump Stn	4.70	262		Pn	15 10 11.5	+0.9
EPYK	Eagle Plains	5.12	189		Pn	15 10 16.5	-0.1
EPYK	Eagle Plains	5.12	189		Sn	15 11 13.1	-2.7
EPYK	Eagle Plains	5.12	189	P	Pn	15 10 16.9	+0.4
	baz=7.0,SNR=307						
EPYK				S	Sn	15 11 13.6	-2.2
	baz=7.0						
BM01	Burnt Mountain	5.25	225		Pn	15 10 18.9	+0.6
BMAR	Burnt Mountain	5.28	225		Pn	15 10 19.3	+0.5
BM03	Burnt Mountain	5.30	225		Pn	15 10 19.5	+0.6
TOLK	Toolik Lake Re	5.77	248		Pn	15 10 24.9	-0.6
TOLK	Toolik Lake Re	5.77	248	P	Pn	15 10 25.0	-0.4
	baz=53,SNR=66						
TOLK				S	Sn	15 11 27.3	-4.5
	baz=53						
FYU	Fort Yukon	6.14	223		Sn	15 11 35.7	-5.1
FYU	Fort Yukon	6.14	223		Pn	15 10 30.8	+0.3
COLD	Coldfoot	6.87	240	Pn	Pn	15 10 40.9	+0.4
COLD				Sn	Sn	15 11 53.0	-5.8
COLD	Coldfoot	6.87	240		Pn	15 10 40.6	+0.1
COLD	Coldfoot	6.87	240		Sn	15 11 53.0	-5.8
DHRN	Dharma Camp	6.98	122	Pn	Pn	15 10 41.4	-0.6
DHRN				Sn	Sn	15 11 54.7	-6.8
DHRN	Dharma Camp	6.98	122	Pn	Pn	15 10 41.4	-0.6
EGAK	Eagle	7.08	203		Pn	15 10 43.2	-0.1
PRP	Porcupine Dome	7.11	219		Pn	15 10 43.8	-0.1
PRP	Porcupine Dome	7.11	219		Sn	15 11 58.8	-6.0
PS05	TAPS Pump Stn5	7.30	238		Pn	15 10 45.9	-0.4
PS05					Sn	15 12 03.2	-6.0
DAWY	Dawson	7.59	195	Pn	Pn	15 10 49.4	-1.0
DAWY				Sn	Sn	15 12 09.9	-6.5
DAWY	Dawson	7.59	195		Pn	15 10 49.4	-1.0
KUKN	Kugluktuk,NWT	7.74	108	Pn	Pn	15 10 51.4	-1.1
KUKN				Sn	Sn	15 12 11.3	-8.9
KUKN	Kugluktuk,NWT	7.74	108	Pn	Pn	15 10 51.4	-1.1
PS06	TAPS Pump Stn6	7.78	232		Pn	15 10 53.2	+0.2
POKR	Poker Plat Res	7.86	223		Pn	15 10 54.6	+0.6
POKR					Sn	15 12 17.0	-6.0
POKR	Poker Plat Res	7.86	223	P	Pn	15 10 54.7	+0.6
	baz=30,SNR=41						
POKR				S	Sn	15 12 17.0	-6.0
	baz=30						
IL31		8.04	220		Pn	15 10 56.5	0.0
ILAR	Eielson Array	8.04	220	Pn	Pn	15 10 56.7	+0.1
	3.0nm,0.3s,baz=28,slow=13,SNR=309						
ILAR				Sn	Sn	15 12 25.1	-2.4
	7.9nm,0.3s,baz=27,slow=23,SNR=16						
ILAR	Eielson Array	8.04	220		Pn	15 10 56.2	-0.4
COLA	College	8.16	223	P	Pn	15 10 58.3	+0.2
COLA	College	8.16	223		Pn	15 10 58.3	+0.2
TCOL	CIGO, UAF Yank	8.16	223		Pn	15 10 58.5	+0.4
TCOL	CIGO, UAF Yank	8.16	223	P	Pn	15 10 58.8	+0.6
	baz=30,SNR=25						
TCOL				S	Sn	15 12 26.5	-3.9
	baz=30						
MDM	Murphy Dome	8.17	224		Pn	15 10 58.3	0.0
PS08	TAPS Pump Stn8	8.23	219		Pn	15 10 59.4	+0.2
SCRK	Sand Creek	8.24	209		Pn	15 10 59.8	+0.4
CCB	Clear Creek Bu	8.34	222		Pn	15 11 00.8	+0.1
HDA	Harding Lake	8.37	219		Pn	15 11 01.1	0.0
HDA	Harding Lake	8.37	219	P	Pn	15 11 01.6	+0.5
	baz=27,SNR=27						
HDA				S	Sn	15 12 33.0	-2.7
	baz=27						
HDA				S	Sn	15 12 33.0	-2.7
	baz=27						
WRH	Wood River Hil	8.56	222		Pn	15 11 03.7	+0.1
RIDG	Independent Ri	8.60	211		Pn	15 11 05.1	+0.9
NEA	Nenana	8.68	225	Pn	Pn	15 11 05.6	+0.2
MLY	Manley	8.70	230		Pn	15 11 05.1	-0.5
IM03		8.75	241		Pn	15 11 05.5	-0.8
IMAR	Indian Mountai	8.75	241		Pn	15 11 05.2	-1.2
BC03		8.81	201		Pn	15 11 06.7	-0.3
BCAR	Beaver Creek A	8.81	201		Pn	15 11 06.4	-0.7
BWN	Browne	9.12	224		Pn	15 11 10.8	-0.6
MENT	Mentasta	9.18	206		Pn	15 11 11.8	-0.3
MCK	McKinley	9.39	222	P	Pn	15 11 15.4	+0.4
MCK	McKinley	9.39	222		Pn	15 11 15.4	+0.4
PAX	Paxson	9.42	211	Pn	Pn	15 11 16.7	+1.2
PAX				Sn	Sn	15 12 54.5	-7.1
PAX	Paxson	9.42	211	P	Pn	15 11 16.4	+0.9
PAX	Paxson	9.42	211		Pn	15 11 16.4	+0.9
BPAW	Bear Paw Mtn.	9.53	228		Pn	15 11 16.8	-0.2
YUK1	Sand Pete Hill	9.57	196	Pn	Pn	15 11 16.6	-1.1
YUK1				Sn	Sn	15 12 58.9	-6.4
YUK1	Sand Pete Hill	9.57	196		Pn	15 11 16.5	-1.1
RND	Reindeer	9.66	221	P	Pn	15 11 19.3	+0.5
RND	Reindeer	9.66	221		Pn	15 11 19.3	+0.5
TRF	Thorofare Moun	9.93	224		Pn	15 11 22.8	+0.2
YUK3	Moose Creek	9.94	196	Pn	Pn	15 11 21.5	-1.2
YUK3	Moose Creek	9.94	196		Pn	15 11 21.6	-1.1
YUK2	White River	9.96	197	Pn	Pn	15 11 21.8	-1.2
KTH	Kantishna Hill	9.98	226		Pn	15 11 23.1	-0.1
RDOG	Red Dog Mine	10.25	265		Pn	15 11 23.9	-2.8
MCARA	McCarthy VSAT	10.59	202		Pn	15 11 31.9	+0.4
GLB	Gilahina Butte	10.63	204		Pn	15 11 32.4	+0.3
HYT	Haines Junctio	10.70	187		Pn	15 11 32.2	-0.8
PTPK	Patty Peak	10.71	200	Pn	Pn	15 11 33.6	+0.3
PTPK				Sn	Sn	15 13 25.9	-7.4
BARN	Barnard Glacie	10.75	198		Pn	15 11 33.7	-0.2
VRDI	Verde Repeater	10.79	203		Pn	15 11 34.8	+0.5
SCM	Sheep Creek Mo	10.80	213	P	Pn	15 11 36.3	+1.9
SCM	Sheep Creek Mo	10.80	213		Pn	15 11 36.3	+1.9
WHY	Whitehorse	10.81	180	Pn	Pn	15 11 33.4	-1.1
WHY				Sn	Sn	15 13 27.1	-8.4
WHY	Whitehorse	10.81	180		Pn	15 11 33.6	-0.9
CTGM	Chitina Glacie	10.81	197	Pn	Pn	15 11 34.8	+0.1
CTGM				Sn	Sn	15 13 29.3	-6.5
CTGM	Chitina Glacie	10.81	197		Pn	15 11 34.5	-0.2
PPLA	Purkeypile	10.84	227		Pn	15 11 35.0	-0.1
BALM	Baldy	10.85	200	Pn	Pn	15 11 35.3	+0.2
BALM				Sn	Sn	15 13 29.4	-7.2
BALM	Baldy	10.85	200		Pn	15 11 35.0	0.0
KIAG	Kiagna River	10.96	200	Pn	Pn	15 11 37.4	+0.7
SML	Sawmill	11.01	216	P	Pn	15 11 38.2	+1.0
SML	Sawmill	11.01	216		Pn	15 11 38.1	+1.0
YUK7	Dusty Glacier	11.02	189	Pn	Pn	15 11 37.6	+0.2
GRNC	Granite Creek	11.09	198	Pn	Pn	15 11 39.6	+1.2
GRNC				Sn	Sn	15 13 34.7	-7.8
GHO	Glory Hole Cre	11.15	217		Pn	15 11 40.3	+1.1
TGL	Tana Glacier	11.18	201		Pn	15 11 40.7	+1.1
CRQM	Cirque	11.21	201		Pn	15 11 41.1	+1.0
PMR	Palmer	11.36	217	P	Pn	15 11 43.3	+1.4
PMR	Palmer	11.36	217		Pn	15 11 43.3	+1.4
KNK	Knik Glacier	11.39	215		Pn	15 11 43.7	+1.2
SKT	Skwentna	11.50	223		Pn	15 11 44.5	+0.6
PCA	Pinnacle	11.58	194	Pn	Pn	15 11 45.1	0.0
PCA	Pinnacle	11.58	194		Pn	15 11 46.9	+1.8
EYAK	Cordova Ski Ar	11.76	207		Pn	15 11 50.0	+2.6
TTA	Tatalina	11.76	234	P	Pn	15 11 47.3	-0.2
TTA	Tatalina	11.76	234		Pn	15 11 47.3	-0.2
RAGM	Ragged Mountai	11.76	205		Pn	15 11 50.1	+2.6
SUA	Susitna One	11.79	220		Pn	15 11 49.3	+1.3
YKW3	Yellowknife Ar	11.81	129	Pn	Pn	15 11 45.9	-2.2
YKW3				Sn	Sn	15 13 48.6	-11
YKA	Yellowknife Ar	11.87	129	Pn	Pn	15 11 46.0	-2.8
	12nm,0.3s,baz=323,slow=12,SNR=264						
YKA				Sn	Sn	15 13 47.5	-14
	11nm,0.3s,baz=324,slow=22,SNR=12						
YKA				LR	LR	15 17 08.8	
	comp=Z,107nm,18.3s,baz=0.0,slow=41						
YKA	Yellowknife Ar	11.87	129	iP	Pn	15 11 46.0	-2.8
YKA				pmax	pmax		
	comp=Z,20nm,0.3s						
YKW1	Yellowknife Ar	11.89	129	Pn	Pn	15 11 47.4	-1.8
YKW1				Sn	Sn	15 13 49.2	-13
RES	Resolute Bay	11.90	56	Pn	Pn	15 11 43.6	-5.6
	comp=Z,4.8nm,0.3s,baz=250,slow=9.6,SNR=76						
RES				Sn	Sn	15 13 45.4	-16
	comp=Z,12nm,0.3s,baz=174,slow=18,SNR=7.3						
RES	Resolute Bay	11.90	56	Pn	Pn	15 11 44.0	-5.2
RES				Sn	Sn	15 13 45.4	-16
RES	Resolute Bay	11.90	56	P	Pn	15 11 44.2	-5.0
RES	Resolute Bay	11.90	56		Pn	15 11 44.2	-5.0
RC01	Rabbit Creek A	11.93	217		Pn	15 11 50.3	+0.5
PNL	Peninsula	11.95	191	P	Pn	15 11 52.5	+2.4
SKAG	Skagway	12.01	181		Pn	15 11 50.5	-0.4
HIN	Hinchinbrook I	12.02	209		Pn	15 11 53.8	+2.8
DHAK	Deception Hill	12.46	188	Pn	Pn	15 11 57.8	+0.8
NBC1	NorthernBC 1	12.62	154	P	Pn	15 11 58.4	-0.8
NBC1				S	Sn	15 14 12.7	-7.0
NBC2	NorthernBC 2	12.70	151	P	Pn	15 11 58.4	-1.9
NBC2				S	Sn	15 14 09.7	-12
SEW	Seward	12.79	215	Pn	Pn	15 12 02.4	+0.9
BESE	Bessie Mountai	12.89	180	P	Pn	15 12 03.0	0.0
BESE	Bessie Mountai	12.89	180		Pn	15 12 02.9	0.0
RSO	Redoubt South	13.12	222	Pn	Pn	15 12 08.5	+2.2
NBC3	NorthernBC 3	13.14	147	P	Pn	15 12 03.6	-2.6
DLBC	Dease Lake	13.18	169	Pn	Pn	15 12 07.0	0.0
	comp=Z,8.1nm,0.3s,baz=10.0,slow=10.0,SNR=116						
DLBC	Dease Lake	13.18	169	P	Pn	15 12 06.7	-0.2
DLBC	Dease Lake	13.18	169		Pn	15 12 06.7	-0.2
JIS	Juneau Island	13.20	179		Pn	15 12 07.6	+0.5
SVW2	Sparrevohn	13.21	229		Pn	15 12 07.6	+0.4
ANM	Nome	13.21	254	P	Pn	15 12 05.4	-1.8
ANM	Nome	13.21	254		Pn	15 12 05.4	-1.8
BRLK	Bradley Lake	13.38	217	Pn	Pn	15 12 10.9	+1.4
FNBB	Fort Nelson	13.47	153	P	Pn	15 12 09.8	-1.0
FNBB				S	Sn	15 14 32.7	-7.9
CNPM	China Poot	13.67	218	Pn	Pn	15 12 14.8	+1.3
NBC6	NorthernBC 6	14.03	150	P	Pn	15 12 14.8	-3.5
NBC6				S	Sn	15 14 44.8	-9.2
HILA	High Level	14.84	141	P	Pn	15 12 25.3	-4.1
NBC5	NorthernBC 5	14.84	154	P	Pn	15 12 27.1	-2.4
WRAK	Wrangell Islan	15.10	175	Pn	Pn	15 12 33.3	+0.5
WRAK				IAmb	IAmb	15 12 53.8	
	comp=Z,28nm,0.8s						
GAMB	Gambell	15.74	260		Pn	15 12 39.7	-1.5
GAMB				IAmb	IAmb	15 12 48.2	
	comp=Z,38nm,0.8s						
CRAG	Craig	16.03	177	Pn	Pn	15 12 44.7	-0.3
OHAK	Old Harbor	16.22	218	P	P	15 12 52.7	+2.1
BMBC	Bull Mountain	16.35	154	P	Pn	15 12 46.5	-2.8
BMBC				S	Sn	15 15 39.0	-12
NBC4	NorthernBC 4	16.91	152	P	Pn	15 12 52.5	-3.8
SII	Sitkinak Islan	17.02	219	P	P	15 13 02.1	+2.6
ILON	Igloolik, Nuna	17.42	71	S	Sn	15 15 53.8	-22
TULEG	Thule	17.93	44	Pn	Pn	15 13 02.0	-6.9
VIB	Van Inlet	18.26	176	P	P	15 13 17.6	+4.3
DIB	Dawson Inlet,	18.31	176	P	P	15 13 17.4	+3.6
DIB	Dawson Inlet,	18.31	176	P	Pn	15 13 15.1	+1.4
UBRB	Upper Baezaeko	19.19	160	P	Pn	15 13 25.8	+1.3
BBB	Bella Bella	19.54	168	P	P	15 13 28.9	+1.8
	comp=Z,0.5nm,0.3s,baz=343,slow=13,SNR=4.9						
BBB				LR	LR	15 20 51.5	
	comp=Z,179nm,20.6s,baz=5.5,slow=36						
BBB	Bella Bella	19.54	168	P	Pn	15 13 29.4	+1.0
BBB				IAmb	IAmb	15 14 27.2	
	comp=Z,54nm,1.4s						
BILL	Bilibino	19.97	289	eP	P	15 13 31.1	-0.7
BILL				pmax	pmax		
	comp=Z,31nm,1.0s						
MNB	Mounoet Dainar	20.64	150	P	P	15 13 41.7	+2.2
BLBC	Blue River	20.66	152	P	P	15 13 41.2	+1.5
TLCB	Telegraph Cove	21.26	166	P	P	15 13 49.8	+4.0
NCRB	Newcastle Ridg	21.46	165	P	P	15 13 54.0	+5.7
SLEB	Sale Mountain	21.68	151	P	P	15 13 51.8	+1.2
LLLB	Lillooet	21.70	157	P	P	15 13 52.6	+2.0
LLLB	Lillooet	21.70	157	P	P	15 13 52.5	+1.8
CBB	Campbell River	21.89	164	P	P	15 13 55.0	+2.3
FFC	Flin Flon	21.90	123	P	P	15 13 52.4	-0.3
FFC				pmax	pmax		
	comp=Z,15nm,0.6s						
FFC	Flin Flon	21.90	123	P	P	15 13 52.4	-0.3
FFC				IAmb	IAmb	15 14 02.2	
	comp=Z,15nm,0.6s						
AKUT	Akutan	21.93	234	P	P	15 13 55.0	+1.9
AKUT				IAmb	IAmb	15 14 00.6	
	comp=Z,29nm,0.8s						
WSLR	Whistler	22.05	159	P	P	15 13 56.2	+1.7
UNV	Unalaska Valle	22.39	235	P	P	15 13 59.5	+1.5
UNV				IAmb	IAmb	15 14 05.6	
	comp=Z,21nm,0.8s						
BTB	Buttle Lake	22.44	164	P	P	15 14 01.3	+2.5
SHB	Sechelt	22.47	161	P	P	15 14 00.7	+1.7
NLLB	Nanaimo Lost L	22.82	162	P	P	15 14 04.7	+2.0
HNBB	Haney	22.92	159	P	P	15 14 05.4	+1.8
YOUB	Youbou, Lake C	23.12	162	P	P	15 14 08.2	+2.5
VDB	Vedder Mountai	23.23	158	P	P	15 14 10.2	+3.3
PNT	Penticton	23.26	154	P	P	15 14 10.1	+2.9
SNB	Saturna Island	23.36	160	P	P	15 14 09.8	+1.7
PGC	Sidney	23.45	161	P	P	15 14 11.4	+2.4
PGC	Sidney	23.45	161	P	P	15 14 10.5	+1.5
VGZ	Gonzales	23.70	161	P	P	15 14 14.2	+2.8
OBC	Olympics--Boni	23.99	162	P	P	15 14 18.1	+3.7
B08A	Colville Reser	24.24	154	P	P	15 14 17.3	+0.7
OSD	Olympics--Snow	24.24	162	P	P	15 14 20.3	+3.5
WALA	Waterton Lakes	24.43	145	P	P	15 14 20.3	+1.8
WALA	Waterton Lakes	24.43	145	P	P	15 14 20.6	+2.1
HDW	Hoodsport	24.48	161	P	P	15 14 21.6	+2.7
GNW	Green Mountain	24.59	160	P	P	15 14 23.0	+3.2
D03D	Eldon	24.59	161	P	P	15 14 22.8	+3.0
	baz=351						
NLWA	Neilton Lookou	24.65	162	P	P	15 14 22.4	+2.0
NLWA				IAmb	IAmb	15 14 35.7	
	comp=Z,14nm,0.8s						
NEW	Newport	24.66	151	P	P	15 14 22.7	+2.3
	comp=Z,1.6nm,0.5s,baz=359,slow=11,SNR=4.6						
NEW				LR	LR	15 25 23.3	
	comp=Z,77nm,20.2s,baz=353,slow=40						
NEW	Newport	24.66	151	P	P	15 14 23.5	+3.0
	baz=347						
D05A	Enumclaw	25.05	159	P	P	15 14 26.7	+2.8
D05A	Enumclaw	25.05	159	P	P	15 14 25.7	+1.7
D05A				IAmb	IAmb	15 14 45.0	
	comp=Z,28nm,1.0s						
FRB	Frobisher Bay	25.07	74	P	P	15 14 23.2	-0.8
	comp=Z,4.5nm,0.7s,baz=318,slow=11,SNR=15						
FRB				LR	LR	15 25 08.7	
	comp=Z,117nm,19.3s,baz=238,slow=39						
FRB	Frobisher Bay	25.07	74	P	P	15 14 22.9	-1.1
LTY	Liberty	25.14	157	P	P	15 14 26.1	+1.3
FMW	Mount Fremont	25.34	159	P	P	15 14 28.7	+1.9
LON	Longmire	25.50	159	P	P	15 14 30.9	+2.8
E03A	Lebam	25.52	162	P	P	15 14 31.5	+3.4
E04D	Cinebar	25.61	160	P	P	15 14 32.9	+3.8
	baz=351,SNR=7.4						
HAWA	Hanford	26.14	156	P	P	15 14 34.6	+0.8
EGMT	Eagleton	26.23	140	P	P	15 14 35.8	+1.1
EGMT				IAmb	IAmb	15 15 29.0	
	comp=Z,26nm,0.9s						
EGMT	Eagleton	26.23	140	P	P	15 14 37.5	+2.7
	baz=342,SNR=6.6						
F04A	Amboy	26.24	160	P	P	15 14 35.4	+0.7
F04A				IAmb	IAmb	15 14 53.6	
	comp=Z,15nm,0.9s						
MSO	Missoula	26.58	147	P	P	15 14 40.5	+2.6
	baz=346						
SUMG	Summit	26.81	42	P	P	15 14 38.3	-1.8
SUMG				pmax	pmax		
	comp=Z,11nm,1.0s						
SUMG	Summit	26.81	42	P	P	15 14 38.3	-1.8
DAG	Danmarks Havn	27.22	27	P	P	15 14 42.4	-0.9
DAG				pmax	pmax		
	comp=Z,11nm,0.7s						
G08A	Pilot Rock	27.30	155	P	P	15 14 43.9	-0.5
ULM	Lac du Bonnet	27.58	119	P	P	15 14 47.1	+0.3
	comp=Z,5.4nm,0.7s,baz=333,slow=10.0,SNR=14						
ULM				PcP	PcP	15 18 02.9	-1.1
	comp=Z,3.7nm,0.6s,baz=36,slow=3.0,SNR=3.7						
ULM	Lac du Bonnet	27.58	119	P	P	15 14 46.8	+0.1
ULM	Lac du Bonnet	27.58	119	ceP	P	15 14 46.9	+0.1
ULM	Lac du Bonnet	27.58	119	P	P	15 14 46.0	-0.7
H04D	Lebanon	27.60	161	P	P	15 14 50.5	+3.5
	baz=352						
SEY	Seymchan	27.67	290	P	P	15 14 47.7	+0.2
	comp=Z,5.1nm,0.9s,baz=28,slow=4.9,SNR=16						
SEY	Seymchan	27.67	290	⇓iP	P	15 14 47.6	+0.1
BMO	Blue Mountains	27.96	153	P	P	15 14 52.3	+2.0
BMO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BMO	Blue Mountains	27.96	153	P	P	15 14 52.3	+2.0
PKLO	Pickle Lake	28.07	112	P	P	15 14 50.1	-1.0
I07A	Izee	28.41	156	P	P	15 14 57.5	+3.1
I07A				IAmb	IAmb	15 14 58.8	
	comp=Z,9.9nm,0.9s						
PINE	Pine Mountain	28.52	159	P	P	15 14 57.8	+2.3
MCMT	McKenzie Canyo	28.71	146	P	P	15 14 59.2	+2.1
MDND	Maddock	28.77	126	P	P	15 14 58.8	+1.4
MDND				IAmb	IAmb	15 15 23.8	
	comp=Z,23nm,1.1s						
J04D	Umpqua Nationa	28.94	161	P	P	15 15 02.6	+3.4
	baz=352						
YHL	Hebgen Lake	28.99	144	P	P	15 15 01.6	+1.9
J05D	Fort Rock, OR	28.99	159	P	P	15 15 03.3	+3.8
	baz=351,SNR=7.1						
YHH	Holmes Hill	29.11	144	P	P	15 15 02.8	+2.0
YMR	Madison River	29.20	144	P	P	15 15 03.5	+2.0
J08A	Circle Bar Ran	29.26	155	P	P	15 15 04.2	+2.3
J08A				IAmb	IAmb	15 15 07.0	
	comp=Z,13nm,1.0s						
AGMN	Agassiz Nation	29.35	121	P	P	15 15 01.3	-1.3
AGMN	Agassiz Nation	29.35	121	P	P	15 15 03.6	+1.0
	baz=336,SNR=5.9						
MFID	Camas Ranch	29.59	151	P	P	15 15 06.5	+1.7
WVOR	Wild Horse Val	30.15	156	P	P	15 15 13.4	+3.6
WVOR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MA2	Magadan	30.78	287	⇓eP	P	15 15 14.2	-0.8
MA2				pmax	pmax		
	comp=Z,12nm,1.0s						
EYMN	Ely	30.90	116	P	P	15 15 16.3	0.0
EYMN				IAmb	IAmb	15 15 17.5	
	comp=Z,16nm,1.0s						
EYMN	Ely	30.90	116	P	P	15 15 16.4	+0.2
	baz=335,SNR=9.8						
RSSD	Black Hills	31.18	135	P	P	15 15 20.3	+1.3
RSSD				pmax	pmax		
	comp=Z,17nm,1.0s						
RSSD	Black Hills	31.18	135	P	P	15 15 20.3	+1.3
RSSD	Black Hills	31.18	135	P	P	15 15 21.3	+2.3
	baz=342						
BW06	Boulder Array	31.31	143	P	P	15 15 22.6	+2.5
	baz=345						
PD31	Pinedale Array	31.31	143	P	P	15 15 20.6	+0.4
PDAR	Pinedale Array	31.31	143	P	P	15 15 22.7	+2.5
	comp=Z,2.7nm,0.8s,baz=12,slow=5.6,SNR=20						
PDAR				PcP	PcP	15 18 14.3	+0.4
	comp=Z,1.1nm,0.5s,baz=68,slow=2.8,SNR=6.0						
PDAR				LR	LR	15 28 41.9	
	comp=Z,75nm,21.4s,baz=4.0,slow=38						
PDAR	Pinedale Array	31.31	143	P	P	15 15 20.3	+0.1
PDAR					PcP	15 18 13.9	-0.1
K22A	Casper	32.03	139	P	P	15 15 26.7	+0.3
K22A	Casper	32.03	139	P	P	15 15 28.3	+1.9
	baz=344,SNR=7.9						
HWUT	Hardware Ranch	32.06	146	P	P	15 15 29.0	+2.3
HWUT				IAmb	IAmb	15 15 30.6	
	comp=Z,8.7nm,0.9s						
SUSD	Miller	32.10	128	P	P	15 15 27.6	+0.8
SUSD	Miller	32.10	128	P	P	15 15 29.1	+2.2
	baz=340						
BGU	Big Grassy Mou	32.47	148	P	P	15 15 32.5	+2.2
BEKR	Beckworth	32.47	159	P	P	15 15 33.1	+2.9
BEKR				IAmb	IAmb	15 15 48.1	
	comp=Z,9.7nm,1.0s						
D41A	Chassel	32.55	113	P	P	15 15 31.0	+0.3
TCUT	Toone Canyon	32.56	146	P	P	15 15 32.3	+1.1
SCHQ	Schefferville	32.63	84	P	P	15 15 31.8	+0.4
	comp=Z,3.9nm,0.8s,baz=325,slow=6.8,SNR=9.6						
SCHQ	Schefferville	32.63	84	P	P	15 15 32.4	+1.0
SCHQ				IAmb	IAmb	15 15 43.2	
	comp=Z,17nm,1.2s						
RWWY	Rawlins	32.81	140		PcP	15 18 17.2	-0.9
SPMN	Marine on St.	33.01	120	P	P	15 15 34.9	0.0

SPMN				IAmb	IAmb	15 15 38.2	
	comp=Z,9.4nm,1.0s						
SPMN	Marine on St.	33.01	120	P	P	15 15 35.8	+1.0
	baz=337						
JLU	Jordanelle	33.05	146	P	P	15 15 35.5	0.0
DUG	Dugway, Tooele	33.21	148	P	P	15 15 37.6	+0.8
DUG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
DUG	Dugway, Tooele	33.21	148	P	P	15 15 37.6	+0.8
DUG	Dugway, Tooele	33.21	148	P	P	15 15 40.2	+3.4
	baz=348						
PNTR	Pine Nut	33.32	158	P	P	15 15 40.2	+2.3
PNTR				IAmb	IAmb	15 15 54.4	
	comp=Z,8.7nm,0.7s						
ECSD	EROS Data Cent	33.37	125	P	P	15 15 38.8	+0.9
ECSD	EROS Data Cent	33.37	125	P	P	15 15 39.4	+1.5
	baz=339,SNR=17						
RDMU	Red Mountain	33.43	144	P	P	15 15 40.6	+1.8
YERR	Yerington	33.47	158	P	P	15 15 40.2	+1.2
YERR				IAmb	IAmb	15 15 56.6	
	comp=Z,11nm,1.0s						
KVN	Kaiserville	33.55	156	P	P	15 15 42.3	+2.5
KVN				pmax	pmax		
	comp=Z,16nm,1.3s						
KVN	Kaiserville	33.55	156	P	P	15 15 42.2	+2.5
KVN				IAmb	IAmb	15 15 57.2	
	comp=Z,16nm,1.3s						
NLU	North Lily Min	33.57	148	P	P	15 15 42.4	+2.4
MPU	Maple Canyon	33.59	147	P	P	15 15 42.5	+2.4
E43A	Lone Tree Farm	33.64	112	P	P	15 15 39.6	-0.7
E43A				IAmb	IAmb	15 15 40.7	
	comp=Z,8.4nm,0.8s						
E44A	Grand Marais A	33.74	111	P	P	15 15 40.8	-0.3
E44A	Grand Marais A	33.74	111	P	P	15 15 41.5	+0.5
	baz=335						
N23A	Red Feather La	33.84	139	P	P	15 15 43.0	+0.7
N23A	Red Feather La	33.84	139	P	P	15 15 44.6	+2.2
	baz=344						
WAKR	Walker	33.92	158	P	P	15 15 45.8	+2.9
WAKR				IAmb	IAmb	15 15 58.6	
	comp=Z,6.9nm,0.9s						
PEA0B	Petropavlovsk-	33.93	274	P	P	15 15 42.8	+0.1
PEA0B				pmax	pmax		
	comp=Z,60nm,1.3s						
PEA0B	Petropavlovsk-	33.93	274	P	P	15 15 42.8	+0.1
PETK	Petropavlovsk-	33.93	274	P	P	15 15 43.4	+0.6
	comp=Z,3.3nm,0.7s,baz=80,slow=16,SNR=11						
PETK				LR	LR	15 32 04.8	
	comp=Z,55nm,19.1s,baz=60,slow=41						
PETK	Petropavlovsk-	33.93	274	P	P	15 15 43.0	+0.3
D46A	Sault St. Mari	34.06	108	P	P	15 15 44.0	+0.1
	baz=334						
O20A	White River Ci	34.10	142	P	P	15 15 45.5	+0.9
O20A				IAmb	IAmb	15 15 49.2	
	comp=Z,7.7nm,0.9s						
O20A	White River Ci	34.10	142	P	P	15 15 47.8	+3.2
	baz=346						
NVAR	Mina Array Bea	34.13	157	P	P	15 15 47.7	+2.9
	comp=Z,3.8nm,0.7s,baz=346,slow=7.1,SNR=38						
NVAR				PcP	PcP	15 18 23.0	+1.2
	comp=Z,2.0nm,0.8s,baz=317,slow=2.0,SNR=7.2						
NVAR	Mina Array Bea	34.13	157	P	P	15 15 45.5	+0.7
NVAR					PcP	15 18 22.9	+1.1
NV11	Mina Array Sit	34.15	156	P	P	15 15 47.4	+2.5
NV11				IAmb	IAmb	15 16 02.3	
	comp=Z,12nm,1.4s						
D47A	Chapleau	34.20	107	P	P	15 15 45.3	+0.2
	baz=334,SNR=7.1						
P17A	Butcher Ranch,	34.28	146	P	P	15 15 47.8	+1.8
TMUT	Trail Mountain	34.36	147	P	P	15 15 47.3	+0.3
E46A	Sault Ste Mari	34.45	109	P	P	15 15 47.0	-0.3
E46A				IAmb	IAmb	15 15 47.8	
	comp=Z,7.9nm,0.8s						
D48A	Paudash Townsh	34.49	106	P	P	15 15 47.8	+0.2
	baz=334,SNR=5.9						
R11A	Troy Canyon, C	34.58	153	P	P	15 15 51.6	+2.9
	baz=350						
PSUT	Pine Spring	34.67	150	P	P	15 15 52.3	+2.9
PSUT					PcP	15 18 24.2	+0.8
SRU	San Rafael Swe	34.67	146	P	P	15 15 52.0	+2.5
SRU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SRU	San Rafael Swe	34.67	146	P	P	15 15 52.0	+2.5
E47A	Iron Bridge	34.69	108	P	P	15 15 49.4	+0.1
	baz=334						
F45A	CMU Biological	34.70	111	P	P	15 15 49.2	-0.3
	baz=335						
YAK	Yakutsk	34.83	305	*e*P	P	15 15 50.8	+0.4
YAK				*e*		15 18 23.1	
YAK				*e*S	S	15 21 12.4	-8.5
YAK				pmax	pmax		
	comp=Z,27nm,0.7s						
YAK				pmax	pmax		
	comp=N,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.0s						
YAK				smax	smax		
	comp=E,128nm,5.9s						
YAK				smax	smax		
	comp=N,190nm,6.9s						
YAK	Yakutsk	34.83	305	P	P	15 15 49.9	-0.6
ISCO	Idaho Springs	34.96	139	P	P	15 15 55.4	+3.3
ISCO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ISCO	Idaho Springs	34.96	139	P	P	15 15 55.1	+3.0
	baz=344						
E48A	Lockeyer	35.00	107	P	P	15 15 52.0	0.0
	baz=334,SNR=7.5						
D50A	G1974 Best Tow	35.11	104	P	P	15 15 53.1	+0.2
	baz=333						
BGNE	Belgrade	35.15	129	P	P	15 15 54.1	+0.7
BGNE	Belgrade	35.15	129	P	P	15 15 55.1	+1.6
	baz=341						
G46A	Petoskey	35.23	111	P	P	15 15 54.3	+0.3
	baz=335						
G45A	Suttons Bay	35.24	112	P	P	15 15 54.2	+0.1
	baz=336,SNR=5.1						
D51A	Lot 18 Range I	35.32	103	P	P	15 15 54.8	0.0
	baz=333						
F48A	Evansville	35.45	108	P	P	15 15 56.0	+0.1
	baz=334,SNR=6.8						
PV21	Cone Mtn., Par	35.49	144	P	P	15 15 58.4	+1.8
PV09	Paradox Valley	35.52	144	P	P	15 15 57.6	+0.7
PV14	Lion Creek, Pa	35.66	144	P	P	15 15 59.8	+1.7
G47A	Hillman	35.66	110	P	P	15 15 58.0	+0.3
	baz=335						
F49A	Sandfield	35.69	107	P	P	15 15 57.9	0.0
	baz=334						
CCUT	Cedar City	35.70	150	P	P	15 16 00.9	+2.4
SZCU	Shurtz Canyon	35.71	150	P	P	15 16 01.1	+2.7
E51A	G1948 Merrick	35.78	104	P	P	15 15 59.0	+0.2
	baz=334						
D53A	Lac Vacive, Po	35.86	102	P	P	15 15 59.1	-0.3
D53A				IAmb	IAmb	15 16 40.3	
	comp=Z,11nm,1.3s						
D53A	Lac Vacive, Po	35.86	102	P	P	15 15 58.1	-1.3
	baz=333						
Q24A	Divide	35.86	139	P	P	15 16 02.9	+3.0
	baz=345						
TPNV	Topopah Spring	35.86	154	P	P	15 16 01.0	+1.2
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TPNV	Topopah Spring	35.86	154	P	P	15 16 01.0	+1.2
TPNV	Topopah Spring	35.86	154	P	P	15 16 02.4	+2.7
	baz=350						
N33A	J Bar K, Exete	35.96	128	P	P	15 16 02.0	+1.6
SCIA	State Center	35.97	122	P	P	15 16 01.3	+0.9
SCIA	State Center	35.97	122	P	P	15 16 02.0	+1.6
	baz=339						
PV01	Paradox Valley	35.98	144	P	P	15 16 02.9	+2.1
CWC	Cottonwood Cre	36.12	157	P	P	15 16 06.3	+4.4
	baz=351						
F51A	Arnstein	36.19	105	P	P	15 16 02.5	+0.2
	baz=334						
LCMT	Little Creek M	36.25	150	P	P	15 16 05.9	+2.9
E52A	Mattawa	36.26	103	P	P	15 16 03.2	+0.3
	baz=334						
N35A	Tabor	36.31	126	P	P	15 16 04.5	+1.2
KNB	Kanab	36.31	150	P	P	15 16 06.7	+3.1
KNB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KNB	Kanab	36.31	150	P	P	15 16 06.7	+3.1
L40A	Anamosa	36.37	120	P	P	15 16 04.2	+0.3
SHPR	Sheep Range	36.45	153	P	P	15 16 05.5	+0.7
E53A	Dumoine, Ponti	36.49	102	P	P	15 16 05.3	+0.5
	baz=333						
MPMC	Manual Prospec	36.57	156	P	P	15 16 09.9	+4.1
	baz=351,SNR=12						
E54A	Lac Daplat, Po	36.59	102	P	P	15 16 05.8	+0.2
	baz=333						
K43A	Burlington	36.60	116	P	P	15 16 05.8	0.0
S22A	4UR Ranch, Cre	36.69	142	P	P	15 16 10.4	+3.5
	baz=346						
NRIK	Noril'sk	36.73	336	P	P	15 16 06.8	+0.2
	comp=Z,1.3nm,0.4s,baz=7.2,slow=5.6,SNR=4.3						
NRIK				LR	LR	15 33 29.5	
	comp=Z,38nm,18.1s,baz=24,slow=40						
NRIK	Noril'sk	36.73	336	⇑*e*P	P	15 16 07.1	+0.5
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
D56A	ZEC Mazanza, M	36.81	99	P	P	15 16 07.9	+0.3
	baz=333						
ISA	Isabella, Lake	36.84	158	P	P	15 16 11.8	+3.9
	baz=352						
L42A	Oliver, Polo	36.86	118	P	P	15 16 07.9	-0.1
L42A				IAmb	IAmb	15 16 47.3	
	comp=Z,20nm,1.2s						
SDCO	Great Sand Dun	36.96	140	P	P	15 16 11.2	+2.0
SDCO	Great Sand Dun	36.96	140	P	P	15 16 11.9	+2.6
	baz=345,SNR=7.4						
I49A	Point Hope	37.09	109	P	P	15 16 09.2	-0.8
LRMC	Laurel Mtn Rad	37.12	157	P	P	15 16 14.2	+3.8
	baz=351,SNR=8.6						
CBKS	Cedar Bluff	37.22	132	P	P	15 16 10.8	-0.4
CBKS				pmax	pmax		
	comp=Z,14nm,0.8s						
CBKS	Cedar Bluff	37.22	132	P	P	15 16 10.8	-0.4
CBKS				IAmb	IAmb	15 16 25.5	
	comp=Z,14nm,0.8s						
CBKS	Cedar Bluff	37.22	132	P	P	15 16 13.2	+2.0
	baz=343						
TUQ	Turquoise Moun	37.40	154	P	P	15 16 16.5	+3.7
	baz=350,SNR=11						
GSC	Goldstone, Bar	37.41	155	P	P	15 16 13.8	+1.0
GSC				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GSC	Goldstone, Bar	37.41	155	P	P	15 16 13.8	+1.0
GSC	Goldstone, Bar	37.41	155	P	P	15 16 16.7	+3.9
	baz=351						
SADO	Sadowa	37.47	105	P	P	15 16 12.8	-0.4
SADO				IAmb	IAmb	15 16 24.8	
	comp=Z,21nm,1.2s						
E57A	Chemin Saint G	37.57	98	P	P	15 16 14.9	+0.9
	baz=333						
EDW2	Edwards Air Fo	37.67	157	P	P	15 16 19.0	+4.0
	baz=352						
KSU1	Kansas State U	37.72	128	P	P	15 16 16.3	+1.0
	baz=341						
N41A	Harden Midland	37.73	120	P	P	15 16 15.0	-0.4
I51A	Listowel	37.77	107	P	P	15 16 16.2	+0.6
	baz=335,SNR=6.4						
T25A	Trinidad	37.77	139		PcP	15 18 32.9	+0.2
I52A	Shelburne	37.79	106	P	P	15 16 16.1	+0.2
	baz=335						
G55A	Calabogie	37.79	102	P	P	15 16 16.3	+0.4
	baz=334						
H53A	Bobcaygeon	37.82	104	P	P	15 16 16.4	+0.2
	baz=335						
R32A	Long Quarter,	37.84	131	P	P	15 16 17.1	+0.8
R32A				IAmb	IAmb	15 16 19.4	
	comp=Z,21nm,1.1s						
PLVO	Plevna	37.87	102	P	P	15 16 16.6	0.0
PLVO				IAmb	IAmb	15 17 07.0	
	comp=Z,22nm,1.2s						
E58A	La Victoria	37.88	98	P	P	15 16 16.9	+0.2
	baz=333						
WUAZ	Wupatki	38.02	148	P	P	15 16 18.2	+0.1
WUAZ				PcP	PcP	15 18 34.3	+1.0
WUAZ	Wupatki	38.02	148	P	P	15 16 21.3	+3.3
	baz=348						
P38A	Dawn	38.02	124	P	P	15 16 17.2	-0.6
P38A				IAmb	IAmb	15 16 19.2	
	comp=Z,9.4nm,0.6s						
GMRC	Granite Mounta	38.07	154	P	P	15 16 22.1	+3.6
	baz=350,SNR=10						
DELO	Deloro Mine	38.17	103	P	P	15 16 18.8	-0.2
DELO				IAmb	IAmb	15 16 31.0	
	comp=Z,11nm,0.9s						
L48A	N Adams	38.43	112	P	P	15 16 21.7	+0.4
	baz=337						
J52A	Paris	38.44	107	P	P	15 16 21.7	+0.3
	baz=336						
L49A	Milan	38.48	112	P	P	15 16 22.6	+0.9
	baz=337						
F60A	Warwick	38.66	97	P	P	15 16 23.6	+0.4
	baz=333						
ARCES	ARCESS Array B	38.69	11	P	P	15 16 21.4	-1.8
	comp=Z,2.4nm,0.6s,baz=7.2,slow=9.5,SNR=13						
ARCES				PcP	PcP	15 18 33.8	-0.9
	comp=Z,2.3nm,0.9s,baz=306,slow=8.9,SNR=3.6						
ARCES				LR	LR	15 34 11.0	
	comp=Z,53nm,19.2s,baz=321,slow=39						
ARCES	ARCESS Array B	38.69	11	P	P	15 16 21.9	-1.3
ARCES	ARCESS Array B	38.69	11	P	P	15 16 21.9	-1.3
IRM	Iron Mountain	38.76	154	P	P	15 16 28.2	+4.0
	baz=350						
BELC	Belle Mtn. Jos	38.80	155	P	P	15 16 28.7	+4.1
	baz=351,SNR=6.3						
L50A	Kingsville	38.83	111	P	P	15 16 25.3	+0.7
	baz=337						
O44A	Mansfield	38.92	118	P	P	15 16 25.0	-0.4
O44A				IAmb	IAmb	15 16 26.6	
	comp=Z,26nm,1.2s						
H57A	Richville	38.92	101	P	P	15 16 25.7	+0.4
	baz=334						
J54A	Appleton	38.98	105	P	P	15 16 25.4	-0.5
N47A	Urbana	39.04	114	P	P	15 16 24.8	-1.6
N47A				IAmb	IAmb	15 17 54.6	
	comp=Z,32nm,1.4s						
N47A	Urbana	39.04	114	P	P	15 16 26.3	-0.1
	baz=338						
P43A	Skaggs, Pawnee	39.10	120	P	P	15 16 26.6	-0.2
P43A				IAmb	IAmb	15 16 28.6	
	comp=Z,31nm,1.4s						
MEDO	Medina	39.13	105	P	P	15 16 27.3	+0.2
N48A	Decatur	39.26	114	P	P	15 16 28.4	+0.2
	baz=338						
N49A	Columbus Grove	39.45	113	P	P	15 16 29.7	-0.1
N49A				IAmb	IAmb	15 16 32.4	
	comp=Z,24nm,1.4s						
N49A	Columbus Grove	39.45	113	P	P	15 16 30.2	+0.4
	baz=337						
ANMO	Albuquerque	39.47	142	P	P	15 16 30.5	+0.2
ANMO				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ANMO	Albuquerque	39.47	142	P	P	15 16 30.5	+0.2
ANMO	Albuquerque	39.47	142	P	P	15 16 34.0	+3.6
	baz=346						
R40A	Maddies Statio	39.61	123	P	P	15 16 30.7	-0.5
ERPA	Erie	39.61	108	P	P	15 16 31.2	0.0
ERPA				IAmb	IAmb	15 16 45.3	
	comp=Z,12nm,0.7s						
ERPA	Erie	39.61	108	P	P	15 16 32.0	+0.8
	baz=336						
J57A	Williamstown	39.68	102	P	P	15 16 31.3	-0.3
L53A	Girard	39.68	108	P	P	15 16 32.1	+0.3
	baz=336						
L54A	Sinclairville	39.71	107	P	P	15 16 32.3	+0.3
	baz=336						
M52A	Chesterland	39.73	109	P	P	15 16 32.4	+0.2
M52A				IAmb	IAmb	15 16 33.7	
	comp=Z,13nm,0.8s						
M52A	Chesterland	39.73	109	P	P	15 16 33.4	+1.3
	baz=337						
P46A	Rosedale	39.77	117	P	P	15 16 32.7	+0.2
P46A				IAmb	IAmb	15 16 44.4	
	comp=Z,16nm,0.6s						
O48A	Farmland	39.77	114	P	P	15 16 32.3	-0.2
	baz=338						
WVNY	West Valley, N	39.78	106	P	P	15 16 32.5	0.0
WVNY				IAmb	IAmb	15 16 33.7	
	comp=Z,20nm,1.0s						
G62A	West of Eustis	39.78	96	P	P	15 16 32.3	-0.3
G62A				IAmb	IAmb	15 16 44.7	
	comp=Z,28nm,1.3s						
T35A	Sooner Cattle	39.81	129	P	P	15 16 33.4	+0.5
T35A				IAmb	IAmb	15 16 35.2	
	comp=Z,12nm,0.9s						
MONP2	Monument Peak	39.83	156	P	P	15 16 37.0	+3.7
	baz=351,SNR=7.4						
S39A	Bolivar	39.89	125	P	P	15 16 33.9	+0.3
S39A				IAmb	IAmb	15 16 34.8	
	comp=Z,19nm,0.8s						
K56A	Middlesex	39.91	104	P	P	15 16 33.8	+0.1
	baz=335						
Q44A	Meyer Farm, Va	39.92	119	P	P	15 16 33.6	-0.2
Q44A				IAmb	IAmb	15 16 35.5	
	comp=Z,32nm,1.2s						
J58A	Remsen	39.95	102	P	P	15 16 34.1	+0.1
	baz=335						
ALLY	Alegheny Colle	39.99	108	P	P	15 16 34.2	-0.1
I59A	Olmsteadville	40.00	100	P	P	15 16 35.8	+1.5
	baz=334						
M53A	WI Miller and	40.02	109	P	P	15 16 35.2	+0.6
	baz=336,SNR=9.1						
L55A	Hinsdale	40.03	106	P	P	15 16 35.4	+0.7
	baz=336,SNR=7.0						
J59A	Piesco	40.10	101	P	P	15 16 35.3	+0.1
CCM	Cathedral Cave	40.10	122	P	P	15 16 35.3	0.0
CCM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CCM	Cathedral Cave	40.10	122	P	P	15 16 35.1	-0.2
	baz=340						
M54A	Oil Creek Stat	40.27	108	P	P	15 16 36.3	-0.3
M54A				IAmb	IAmb	15 16 38.4	
	comp=Z,22nm,0.9s						
M54A	Oil Creek Stat	40.27	108	P	P	15 16 37.0	+0.3
	baz=336,SNR=5.5						
OLIL	Olney	40.34	118	P	P	15 16 36.5	-0.7
OLIL				IAmb	IAmb	15 16 38.6	
	comp=Z,12nm,0.9s						
L56A	Greenwood	40.34	105	P	P	15 16 37.3	0.0
L56A	Greenwood	40.34	105	P	P	15 16 37.6	+0.3
	baz=336,SNR=7.8						
K58A	Earlville	40.37	103	P	P	15 16 37.3	-0.2
K58A				IAmb	IAmb	15 17 02.5	
	comp=Z,21nm,1.1s						
DRLN	Deer Lake	40.38	81	P	P	15 16 37.2	-0.3
BLO	Bloomington	40.38	116	P	P	15 16 37.4	-0.2
BLO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BLO	Bloomington	40.38	116	P	P	15 16 37.4	-0.2
P48A	Milroy	40.43	115	P	P	15 16 38.7	+0.7
	baz=338						
ACSO	Alum Creek Sta	40.44	112	P	P	15 16 38.3	+0.3
ACSO				IAmb	IAmb	15 16 39.3	
	comp=Z,15nm,1.1s						
ACSO	Alum Creek Sta	40.44	112	P	P	15 16 38.5	+0.5
	baz=338						
N53A	Lisbon	40.55	109	P	P	15 16 37.7	-1.3
N53A				IAmb	IAmb	15 16 40.4	
	comp=Z,26nm,1.1s						
P49A	Miami Univ. Ec	40.57	114	P	P	15 16 38.7	-0.4
	baz=338						
M55A	Ridgway	40.58	107	P	P	15 16 39.2	-0.1
M55A	Ridgway	40.58	107	P	P	15 16 39.5	+0.3
	baz=336						
N54A	Moraine State	40.67	108	P	P	15 16 39.3	-0.7
N54A				IAmb	IAmb	15 17 05.8	
	comp=Z,31nm,1.4s						
N54A	Moraine State	40.67	108	P	P	15 16 40.1	+0.2
	baz=337						
MGMO	Mountain Grove	40.68	124	P	P	15 16 40.0	-0.1
L57A	Andrews Acres	40.69	104	P	P	15 16 40.6	+0.5
	baz=336,SNR=5.8						
M56A	Emporium	40.75	106	P	P	15 16 40.3	-0.3
M56A	Emporium	40.75	106	P	P	15 16 40.8	+0.2
	baz=336						
LVZ	Lovozero	40.76	6	P	P	15 16 39.5	-0.9
LVZ				pmax	pmax		
	comp=Z,52nm,1.5s						
LVZ	Lovozero	40.76	6	P	P	15 16 39.5	-0.9
P50A	Jamestown	40.77	113	P	P	15 16 40.9	+0.1
	baz=338,SNR=6.7						
U38A	Gravette	40.80	127	P	P	15 16 40.9	-0.2
U38A				IAmb	IAmb	15 16 42.6	
	comp=Z,16nm,0.9s						
Q48A	North Vernon	40.84	116	P	P	15 16 41.4	+0.1
	baz=339,SNR=5.4						
O52A	Adamsville	40.89	111	P	P	15 16 41.4	-0.4
O52A				IAmb	IAmb	15 16 42.8	
	comp=Z,14nm,1.1s						
O52A	Adamsville	40.89	111	P	P	15 16 41.6	-0.2
	baz=337						
O53A	New Philadelph	40.95	110	P	P	15 16 43.0	+0.7
	baz=337						
L58A	Harry Jones Me	40.96	103	P	P	15 16 43.0	+0.6
	baz=336						
P51A	Williamsport	41.11	112	P	P	15 16 42.4	-1.1
P51A	Williamsport	41.11	112	P	P	15 16 43.3	-0.2
	baz=338						
T42A	Van Buren	41.11	123	P	P	15 16 42.8	-0.8
N55A	Marion Center	41.14	107	P	P	15 16 44.0	+0.2
	baz=337						
M57A	Sunshine Farm,	41.20	105	P	P	15 16 43.6	-0.7
M57A				IAmb	IAmb	15 16 45.6	
	comp=Z,14nm,0.9s						
M57A	Sunshine Farm,	41.20	105	P	P	15 16 44.6	+0.2
	baz=336						
N56A	West Decatur	41.23	106	P	P	15 16 44.6	0.0
	baz=336						
P52A	Corning	41.24	111	P	P	15 16 44.7	+0.1
	baz=338						
O54A	Avella	41.27	109	P	P	15 16 44.8	0.0
O54A				IAmb	IAmb	15 16 56.9	
	comp=Z,13nm,0.6s						
O54A	Avella	41.27	109	P	P	15 16 45.0	+0.2
	baz=337						
214A	Organ Pipe Nat	41.27	151	P	P	15 16 44.4	-0.7
U40A	Yellville	41.27	125	P	P	15 16 43.9	-1.1
U40A	Yellville	41.27	125	P	P	15 16 45.1	+0.1
	baz=341,SNR=5.9						
WCI	Wyandotte Cave	41.32	117	P	P	15 16 44.5	-0.8
WCI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WCI	Wyandotte Cave	41.32	117	P	P	15 16 44.5	-0.8
WCI	Wyandotte Cave	41.32	117	P	P	15 16 44.8	-0.6
	baz=339						
M58A	Price's Panora	41.38	104	P	P	15 16 46.0	+0.2
	baz=336						
Q51A	Peebles	41.44	113	P	P	15 16 45.6	-0.7
PBMO	Poplar Bluff	41.52	122	P	P	15 16 46.7	-0.3
O55A	Ligonier	41.57	108	P	P	15 16 47.4	0.0
	baz=337						
P53A	Whipple	41.60	111	P	P	15 16 47.3	-0.3
P53A				IAmb	IAmb	15 16 48.1	
	comp=Z,19nm,0.9s						
P53A	Whipple	41.60	111	P	P	15 16 47.3	-0.3
	baz=338						
SSPA	Standing Stone	41.61	106	P	P	15 16 47.2	-0.5
SSPA	Standing Stone	41.61	106	P	P	15 16 47.6	-0.1
	baz=336						
O56A	Blue Knob Stat	41.74	107	P	P	15 16 48.2	-0.6
O56A				IAmb	IAmb	15 17 00.6	
	comp=Z,9.2nm,0.7s						
O56A	Blue Knob Stat	41.74	107	P	P	15 16 48.6	-0.2
	baz=337						
N58A	Sunbury	41.79	105	P	P	15 16 48.7	-0.4
N58A				IAmb	IAmb	15 16 50.6	
	comp=Z,16nm,0.8s						
N58A	Sunbury	41.79	105	P	P	15 16 48.6	-0.5
	baz=336						
Q52A	Bidwell	41.82	112	P	P	15 16 48.9	-0.5
	baz=338						
FCAR	Ozark Folk Cen	41.91	125	P	P	15 16 49.6	-0.5
FCAR				IAmb	IAmb	15 16 51.8	
	comp=Z,18nm,1.1s						
KSCT	Kent School, K	41.99	101	P	P	15 16 51.0	+0.3
LCAR	Lake Charles	42.00	123	P	P	15 16 49.9	-1.0
N59A	State Game Lan	42.01	104	P	P	15 16 50.8	-0.2
N59A				IAmb	IAmb	15 16 52.2	
	comp=Z,14nm,1.1s						
N59A	State Game Lan	42.01	104	P	P	15 16 51.1	+0.1
	baz=336						
S49A	Springfield	42.03	116	P	P	15 16 50.5	-0.6
	baz=339						
R51A	Hillsboro	42.04	114	P	P	15 16 50.9	-0.4
	baz=338						
O57A	Amberson	42.08	106	P	P	15 16 51.7	+0.1
	baz=337,SNR=6.2						
Q53A	Leroy	42.14	111	P	P	15 16 51.9	-0.1
	baz=338						
ODNJ	Ogdensburg	42.22	103	P	P	15 16 52.3	-0.3
ODNJ				IAmb	IAmb	15 17 02.3	
	comp=Z,30nm,1.4s						
Q54A	Coxs Mills	42.23	110	P	P	15 16 52.2	-0.6
Q54A				IAmb	IAmb	15 16 53.6	

	comp=Z,23nm,1.2s						
Q54A	Coxs Mills	42.23	110	P	P	15 16 52.5	-0.3
	baz=338						
T47A	Sharon Grove	42.25	118	P	P	15 16 52.2	-0.7
T47A				IAmb	IAmb	15 16 53.3	
	comp=Z,12nm,1.0s						
N60A	Cedar Hill Far	42.26	103	P	P	15 16 53.1	+0.1
	baz=336						
X37A	Clayton	42.30	129	P	P	15 16 53.9	+0.4
X37A				IAmb	IAmb	15 16 55.8	
	comp=Z,10nm,0.8s						
P56A	Dayton Farm, R	42.35	108	P	P	15 16 54.5	+0.7
	baz=337						
O58A	Lewisberry	42.38	106	P	P	15 16 54.0	+0.1
	baz=337						
LUPA	Lehigh Univers	42.42	104	P	P	15 16 54.3	0.0
BOD	Bodaibo	42.43	312	eP	P	15 16 52.6	-1.5
BOD				pmax	pmax		
	comp=Z,19nm,1.2s						
O59A	Robesonia	42.43	105	P	P	15 16 54.4	0.0
	baz=336						
W41B	Gary Mavity, V	42.55	125	P	P	15 16 55.2	-0.2
W41B	Gary Mavity, V	42.55	125	P	P	15 16 55.5	+0.1
	baz=342						
T49A	Edmonton	42.59	116	P	P	15 16 55.4	-0.3
	baz=339						
P57A	Homestead Farm	42.63	107	P	P	15 16 56.1	+0.1
	baz=337						
ZEA	Zeya	42.64	300	eP	P	15 16 56.8	+0.9
ZEA				pmax	pmax		
	comp=Z,17nm,1.0s						
S51A	Beattyville	42.65	114	P	P	15 16 55.8	-0.4
	baz=339						
O60A	Telford	42.67	104	P	P	15 16 56.6	+0.3
	baz=336						
Q56A	Snyder Ridge,	42.67	109	P	P	15 16 56.7	+0.3
	baz=337						
MIAR	Mount Ida	42.80	127	P	P	15 16 57.2	-0.2
MIAR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MIAR	Mount Ida	42.80	127	P	P	15 16 57.2	-0.2
MIAR	Mount Ida	42.80	127	P	P	15 16 58.7	+1.3
	baz=342,SNR=5.3						
WVT	Waverly	42.85	120	P	P	15 16 57.0	-0.8
WVT				pmax	pmax		
	comp=Z,21nm,1.5s						
WVT	Waverly	42.85	120	P	P	15 16 57.0	-0.8
WVT				IAmb	IAmb	15 17 10.7	
	comp=Z,21nm,1.5s						
WVT	Waverly	42.85	120	P	P	15 16 57.6	-0.2
	baz=340						
T50A	Nancy	42.87	116	P	P	15 16 58.1	+0.2
	baz=339						
UALR	University of	42.90	125	P	P	15 16 58.4	+0.2
UALR				IAmb	IAmb	15 16 60.0	
	comp=Z,14nm,0.8s						
P59A	Jarrettsville	43.00	105	P	P	15 16 58.9	-0.1
	baz=337						
PSUB	Penn St. - Bra	43.01	104	P	P	15 16 58.3	-0.8
PSUB				IAmb	IAmb	15 17 16.9	
	comp=Z,22nm,1.4s						
S53A	Williamson	43.05	112	P	P	15 16 59.9	+0.4
	baz=338						
X40A	Basin Creek Fa	43.05	126	P	P	15 16 59.8	+0.3
X40A				IAmb	IAmb	15 17 01.5	
	comp=Z,12nm,0.7s						
X40A	Basin Creek Fa	43.05	126	P	P	15 17 00.2	+0.8
	baz=342,SNR=10						
P60A	Greenville	43.06	104	P	P	15 16 58.6	-0.9
P60A				IAmb	IAmb	15 17 50.7	
	comp=Z,24nm,1.4s						
O61A	Allentown	43.14	103	P	P	15 17 00.6	+0.5
	baz=336						
Q58A	Fox Den Farm,	43.23	107	P	P	15 17 00.7	-0.1
	baz=337						
CLTN	Cedars of Leba	43.31	118	P	P	15 17 01.0	-0.5
V48A	Smith Brothers	43.50	119	P	P	15 17 02.4	-0.7
R57A	Stanardsville	43.56	108	P	P	15 17 03.5	-0.1
	baz=338						
TZTN	Tazewell	43.68	115	P	P	15 17 04.3	-0.3
TZTN				IAmb	IAmb	15 17 23.2	
	comp=Z,20nm,1.2s						
R58A	Rapidan	43.72	108	P	P	15 17 04.8	0.0
	baz=338						
PLAL	Pickwick Lake	43.86	120	P	P	15 17 04.2	-1.7
PLAL				IAmb	IAmb	15 17 07.4	
	comp=Z,9.9nm,0.8s						
YSS	Yuzh-Sakhalins	44.03	282⇑	eP	P	15 17 01.5	-5.7
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				pmax	pmax		
	comp=Z,300nm,4.3s						
R58B	Mineral	44.06	108	P	P	15 17 07.7	+0.2
	baz=338						
V51A	Loudon	44.14	116	P	P	15 17 07.7	-0.5
SWET	Sewanee	44.24	118	P	P	15 17 07.7	-1.4
V52A	Sevierville	44.32	115	P	P	15 17 09.3	-0.4
V52A				IAmb	IAmb	15 17 53.8	
	comp=Z,17nm,1.4s						
S58A	Poland Farm, P	44.34	108	P	P	15 17 08.7	-1.0
S58A				IAmb	IAmb	15 17 21.9	
	comp=Z,11nm,0.7s						
S58A	Poland Farm, P	44.34	108	P	P	15 17 10.0	+0.2
	baz=338						
CPCT	Cooper Cave	44.42	116	P	P	15 17 10.2	-0.3
CPCT				IAmb	IAmb	15 17 11.6	
	comp=Z,10nm,1.0s						
TKL	Tuckaleechee C	44.44	115	P	P	15 17 10.5	-0.2
TKL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TKL	Tuckaleechee C	44.44	115	P	P	15 17 10.5	-0.2
TKL				IAmb	IAmb	15 17 11.2	
	comp=Z,9.8nm,1.0s						
X48A	Hartselle	44.64	119	P	P	15 17 11.6	-0.6
X48A				IAmb	IAmb	15 17 13.6	
	comp=Z,13nm,1.0s						
V53A	Saluda	44.71	114	P	P	15 17 13.2	+0.3
V53A				IAmb	IAmb	15 17 14.5	
	comp=Z,12nm,1.2s						
V54A	Nebo	44.87	113	P	P	15 17 14.2	+0.1
	baz=339						
FPAL	Fort Paine	44.96	118	P	P	15 17 14.1	-0.8
FPAL				IAmb	IAmb	15 17 15.7	
	comp=Z,12nm,1.1s						
T59A	Double "B" Far	45.08	108	P	P	15 17 15.0	-0.7
V56A	Mocksville	45.27	112	P	P	15 17 17.0	-0.2
	baz=339						
KLR	Kul'dur	45.36	293⇑	iP	P	15 17 17.0	-0.8
KLR				pmax	pmax		
	comp=Z,8.0nm,1.5s						
Y49A	Blount Mountai	45.38	119	P	P	15 17 18.0	-0.1
Y49A				IAmb	IAmb	15 17 19.4	
	comp=Z,8.7nm,0.9s						
W54A	Cherokee Point	45.44	114	P	P	15 17 18.6	0.0
	baz=339						
TX31	Lajitas Ar. Si	45.47	141	P	P	15 17 19.9	+1.0
TXAR	Lajitas Array	45.47	141	P	P	15 17 20.8	+1.8
	comp=Z,1.2nm,0.8s,baz=12,slow=6.8,SNR=5.4						
TXAR				LR	LR	15 36 39.7	
	comp=Z,40nm,21.5s,baz=0.0,slow=36						
TXAR	Lajitas Array	45.47	141	P	P	15 17 19.9	+0.9
Z47A	Carrollton	45.54	121	P	P	15 17 18.8	-0.6
X53A	Estanollee	45.66	115	P	P	15 17 20.5	+0.2
	baz=340						
NOA	NORSAR Array B	45.73	22	P	P	15 17 20.0	-0.6
	comp=Z,0.4nm,0.5s,baz=344,slow=7.6,SNR=2.0						
NOA	NORSAR Array B	45.73	22	P	P	15 17 20.0	-0.6
W56A	Indian Trail	45.87	112	P	P	15 17 22.2	+0.2
	baz=339						
X54A	Belton	45.89	114	P	P	15 17 22.1	0.0
	baz=340						
V59A	Middlesex	45.99	109	P	P	15 17 23.0	+0.1
	baz=338						
LRAL	Lakeview Retre	45.99	120	P	P	15 17 22.4	-0.5
LRAL				IAmb	IAmb	15 18 06.1	
	comp=Z,15nm,1.4s						
LRAL	Lakeview Retre	45.99	120	P	P	15 17 22.6	-0.3
	baz=341						
W57A	Gilead	46.03	111	P	P	15 17 22.4	-0.8
W57A				IAmb	IAmb	15 17 23.4	
	comp=Z,9.2nm,0.8s						
W57A	Gilead	46.03	111	P	P	15 17 21.9	-1.3
	baz=339						
Y52A	Lilburn	46.04	116	P	P	15 17 22.6	-0.7
Y52A				IAmb	IAmb	15 17 24.7	
	comp=Z,15nm,1.1s						
Y52A	Lilburn	46.04	116	P	P	15 17 23.2	-0.1
	baz=340						
Z50A	Ashland	46.08	119	P	P	15 17 22.9	-0.8
Z50A				IAmb	IAmb	15 17 33.4	
	comp=Z,12nm,1.2s						
Z50A	Ashland	46.08	119	P	P	15 17 23.4	-0.3
	baz=341						
X55A	Gracelyn & Ava	46.18	114	P	P	15 17 24.1	-0.3
	baz=340						
HODGE	Hodges	46.22	114	P	P	15 17 24.1	-0.6
X56A	White Oak	46.33	113	P	P	15 17 25.6	-0.1
	baz=339						
JSC	Jenkinsville	46.46	113	P	P	15 17 26.6	-0.1
JSC				pmax	pmax		
	comp=Z,13nm,0.8s						
JSC	Jenkinsville	46.46	113	P	P	15 17 26.6	-0.1
Y55A	Saluda	46.61	114	P	P	15 17 27.7	-0.1
	baz=340						
GOGA	Godfrey	46.63	116	P	P	15 17 27.4	-0.6
GOGA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GOGA	Godfrey	46.63	116	P	P	15 17 27.4	-0.6
GOGA				IAmb	IAmb	15 17 28.7	
	comp=Z,8.6nm,0.8s						
GOGA	Godfrey	46.63	116	P	P	15 17 28.0	0.0
	baz=340						
FIA1	FINESS Array S	46.75	12	P	P	15 17 27.4	-1.2
FIA1				IAmb	IAmb	15 18 31.4	
	comp=Z,15nm,1.2s						
FINES	FINESS Array B	46.75	12	P	P	15 17 27.4	-1.2
	comp=Z,2.2nm,0.4s,baz=356,slow=9.0,SNR=34						
FINES				LR	LR	15 38 40.5	
	comp=Z,36nm,21.4s,baz=340,slow=38						
FINES	FINESS Array B	46.75	12	P	P	15 17 27.2	-1.4
V62A	Hyde County Ai	46.87	107	P	P	15 17 29.6	-0.2
Y57A	Sumter	46.97	112	P	P	15 17 30.1	-0.5
Y57A	Sumter	46.97	112	P	P	15 17 30.8	+0.2
	baz=339						
152A	Waverly Hall	46.97	118	P	P	15 17 30.3	-0.4
152A				IAmb	IAmb	15 17 42.6	
	comp=Z,15nm,1.4s						
250A	Grady	47.19	120	P	P	15 17 31.2	-1.1
Z57A	Bowman	47.54	113	P	P	15 17 35.3	+0.2
	baz=340						
KLMR	Klimovskoe	47.95	4	eP	P	15 17 45.6	+7.7
KLMR				pmax	pmax		
	comp=Z,18nm,1.3s						
KLMR	Klimovskoe	47.95	4	eP	P	15 17 45.7	+7.8
KLMR				AMP		15 17 50.1	
	comp=Z,18nm,1.3s						
255A	Hazlehurst	48.31	116	P	P	15 17 41.1	+0.1
VSU	Vasula	49.76	13⇑	eP	P	15 17 51.2	-0.6
VSU				pmax	pmax		
	comp=Z,21nm,0.8s						
USA0B	Ussuriysk Arra	49.82	290d	iP	P	15 17 52.9	+0.4
USA0B	Ussuriysk Arra	49.82	290	P	P	15 17 52.7	+0.2
USA0B				IAmb	IAmb	15 17 53.9	
	comp=Z,8.7nm,0.9s						
USRK	Ussuriysk Ar.	49.82	290	P	P	15 17 52.8	+0.3
	comp=Z,6.1nm,0.8s,baz=24,slow=7.2,SNR=20						
USRK	Ussuriysk Ar.	49.82	290	P	P	15 17 51.6	-0.9
TLY	Talaya	50.45	317c	iP	P	15 17 57.5	+0.3
TLY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MOY	Mondy	51.03	319	eP	P	15 18 03.2	+1.5
MOY				pmax	pmax		
	comp=Z,16nm,1.2s						
SVE	Sverdlovsk	51.59	349⇓	eP	P	15 18 06.8	+1.2
SVE				pmax	pmax		
	comp=Z,16nm,1.0s						
ZAK	Zakamensk	51.75	316	eP	P	15 18 07.3	+0.2
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ZAA0	Zalesovo Array	51.83	331	P	P	15 18 06.0	-1.5
ZALV	Zalesovo Beam	51.83	331	P	P	15 18 07.0	-0.5
	comp=Z,4.7nm,0.7s,baz=8.4,slow=6.9,SNR=18						
ZALV				LR	LR	15 43 18.7	
	comp=Z,21nm,18.4s,baz=355,slow=40						
ZALV	Zalesovo Beam	51.83	331	i P	P	15 18 07.4	-0.1
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ZALV	Zalesovo Beam	51.83	331	P	P	15 18 06.6	-0.9
ZAIG	Zacatecas	52.06	141	P	P	15 18 09.5	-0.4
ZAIG				IAmb	IAmb	15 18 14.0	
	comp=Z,8.8nm,0.9s						
ARU	Arti	52.10	351	LR	LR	15 44 34.6	
	comp=Z,37nm,18.4s,baz=46,slow=41						
ARU	Arti	52.10	351d	iP	P	15 18 10.2	+0.8
ARU						15 19 18.6	
ARU						15 20 06.3	
ARU				S	S	15 25 37.2	+4.1
ARU				SS	SS	15 29 11.2	+1.9
ARU				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ARU	Arti	52.10	351	P	P	15 18 07.7	-1.8
ARU				IAmb	IAmb	15 18 21.8	
	comp=Z,12nm,0.9s						
ULN	Ulaanbaatar	53.24	312⇑	iP	P	15 18 19.0	+0.8
ULN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ULN	Ulaanbaatar	53.24	312	P	P	15 18 16.9	-1.4
ULN					PcP	15 19 25.9	0.0
SONM	Songino Array	53.42	313	P	P	15 18 20.8	+1.3
	comp=Z,5.8nm,0.8s,baz=18,slow=7.3,SNR=41						
SONM				PcP	PcP	15 19 27.6	+1.0
	comp=Z,3.0nm,0.8s,baz=19,slow=3.2,SNR=8.4						
SONM				LR	LR	15 45 08.0	
	comp=Z,34nm,18.1s,baz=15,slow=41						
SONM	Songino Array	53.42	313	P	P	15 18 20.4	+0.8
OBN	Obninsk	53.62	6	eP	P	15 18 22.0	+1.4
OBN				e		15 19 24.9	
OBN				e		15 20 20.3	
OBN				ePPP	PPP	15 21 28.1	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BRVK	Borovoye	54.55	342c	eP	P	15 18 27.4	-0.1
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BRVK	Borovoye	54.55	342	P	P	15 18 26.9	-0.6
BRVK				IAmb	IAmb	15 18 39.6	
	comp=Z,6.2nm,0.6s						
MAT	Matsushiro	54.89	281	P	P	15 18 31.0	+0.7
MJAR	Matsushiro Arr	54.89	281	P	P	15 18 30.4	+0.1
	comp=Z,3.5nm,0.8s,baz=17,slow=8.4,SNR=12						
MJAR				PcP	PcP	15 19 33.0	+0.8
	comp=Z,1.7nm,0.8s,baz=356,slow=1.8,SNR=5.3						
CLL	Collm	55.45	24	eP	P	15 18 34.0	-0.1
CLL				i		15 18 45.6	
CLL	Collm	55.45	24	eP	P	15 18 34.0	-0.1
DGZ	Jazzator, Alta	55.51	328⇓	eP	P	15 18 35.6	+0.9
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KURK	Kurchatov	55.87	335c	iP	P	15 18 36.9	-0.2
KURK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KURK	Kurchatov	55.87	335	P	P	15 18 36.8	-0.3
KSRS	Korea Array	57.23	290	P	P	15 18 47.9	+1.0
	comp=Z,3.5nm,0.9s,baz=18,slow=6.9,SNR=14						
KSAR	Wonju Array Be	57.25	290	P	P	15 18 47.2	+0.1
KSAR	Wonju Array Be	57.25	290	P	P	15 18 47.2	+0.1
AKASG	Malin Array Be	57.65	12	P	P	15 18 48.9	-0.8
	comp=Z,2.1nm,0.5s,baz=355,slow=7.2,SNR=18						
AKBB	Malin Array Si	57.65	12⇑	eP	P	15 18 48.8	-0.9
GERES	GERESS Array B	57.96	24	P	P	15 18 51.4	-0.6
	comp=Z,0.3nm,0.4s,baz=310,slow=7.6,SNR=2.6						
AKTO	Aktyubinsk	58.11	350	LR	LR	15 45 21.1	
	comp=Z,19nm,19.4s,baz=359,slow=38						
TJN	Taejon	58.39	290⇓	eP	P	15 18 55.5	+0.4
HHC	Hu-ho-hao-te	58.69	306	eP	P	15 18 55.3	-2.0
MK31	Makanchi Array	59.17	331	P	P	15 18 59.2	-1.2
MK31				pmax	pmax		
	comp=Z,5.0nm,1.4s						
MK31	Makanchi Array	59.17	331	P	P	15 18 59.2	-1.2
MKAR	Makanchi Array	59.17	331	P	P	15 18 59.9	-0.5
	comp=Z,2.8nm,0.8s,baz=41,slow=6.6,SNR=18						
MKAR				LR	LR	15 48 24.8	
	comp=Z,20nm,18.2s,baz=358,slow=40						
MKAR	Makanchi Array	59.17	331	P	P	15 18 59.4	-1.0
ABKAR	Akbulak array	59.17	349	P	P	15 18 59.0	-1.3
MAKZ	Makanchi	59.20	331	P	P	15 18 59.7	-1.0
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MAKZ	Makanchi	59.20	331	P	P	15 18 59.7	-1.0
WMQ	Urumqi	61.15	326	eP	P	15 19 15.0	+0.9
GTA	Gaotai	62.93	315	P	P	15 19 27.1	+1.0
GTA				pP	PcP	15 19 32.3	-32
GTA				sP	sP	15 19 35.0	+6.1
ESDC	Sonseca Array	63.86	41	P	P	15 19 32.6	+0.3
	comp=Z,2.5nm,0.8s,baz=354,slow=6.9,SNR=7.7						
AAK	Ala-Archa	64.34	336	LR	LR	15 49 52.7	
	comp=Z,24nm,19.2s,baz=3.5,slow=38						
AAK	Ala-Archa	64.34	336d	eP	P	15 19 36.2	+0.7
AAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AAK	Ala-Archa	64.34	336	P	P	15 19 35.6	+0.1
AAK				IAmb	IAmb	15 19 37.1	
	comp=Z,4.8nm,0.9s						
KK31	Karatay Array	64.36	340	P	P	15 19 34.4	-1.0
KK31				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KK31	Karatay Array	64.36	340	P	P	15 19 34.4	-1.0
KK31				IAmb	IAmb	15 19 36.5	
	comp=Z,5.9nm,0.8s						
KKAR	Karatay Array	64.36	340	P	P	15 19 34.7	-0.8
KKAR	Karatay Array	64.36	340	P	P	15 19 34.6	-0.8
KKAR	Karatay Array	64.36	340	P	P	15 19 34.3	-1.2
KKAR				IAmb	IAmb	15 19 36.5	
	comp=Z,5.9nm,0.8s						
KIV	Kislovodsk	64.92	2	eP	P	15 19 37.6	-1.6
KIV				pmax	pmax		
	comp=Z,21nm,1.1s						
KIV				MLR	MLR		
	comp=Z,65nm,17.0s						
NJ2	Nanjing	64.94	296	eP	P	15 19 38.5	-0.8
SHA1	Shidzhatmaz	65.14	2⇓	eP	P	15 19 41.1	+0.4
LZH	Lanzhou	65.14	310	eP	P	15 19 41.8	+1.0
LZH				pP	PcP	15 19 45.1	-28
LZH				sP	sP	15 19 46.5	+2.9
LZH				ePP	PP	15 21 06.3	-57
KBZ	Khabaz	65.15	2	P	P	15 19 41.3	+0.8
	comp=Z,5.8nm,0.7s,baz=348,slow=6.5,SNR=18						
KBZ				LR	LR	15 52 51.1	
	comp=Z,18nm,18.4s,baz=337,slow=40						
KBZ	Khabaz	65.15	2⇓	eP	P	15 19 41.1	+0.6
KSH	Kashi	67.22	335	P	P	15 19 57.6	+3.6
KSH				pP	PcP	15 20 41.9	+20
KSH				PP	PP	15 22 27.4	+5.9
KSH				PcS		15 24 24.1	
KSH				S	S	15 28 26.8	-22
WHN	Wuhan	67.63	299 ⇓	P	P	15 19 56.6	0.0
BR131	Keskin Array S	68.86	10d	eP	P	15 20 04.3	0.0
BRTR	Keskin Array B	68.86	10	P	P	15 20 04.5	+0.1
	comp=Z,1.6nm,0.8s,baz=15,slow=5.1,SNR=9.2						
BRTR	Keskin Array B	68.86	10	P	P	15 20 03.8	-0.5
ENH	Enshi	69.22	304	P	P	15 20 05.1	-1.5
KEST	Kesra	70.17	30	P	P	15 20 12.9	+0.5
	comp=Z,7.3nm,0.9s,baz=344,slow=3.8,SNR=5.2						
KEST	Kesra	70.17	30	IAmb	IAmb	15 20 25.5	
	comp=Z,10nm,1.1s						
GEYT	Alibeck	70.57	349	P	P	15 20 14.8	+0.1
	comp=Z,1.4nm,0.8s,baz=309,slow=9.4,SNR=4.5						
GEYT				LR	LR	15 55 54.2	
	comp=Z,27nm,18.2s,baz=180,slow=40						
SMLC	San Martn de	72.61	115	eP	P	15 20 26.4	-0.8
IDI	Anoyia	72.62	17	LR	LR	15 57 58.3	
	comp=Z,16nm,18.1s,baz=307,slow=41						
KBL	Kabul	72.99	340	P	P	15 20 26.6	-3.0
KBL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KBL	Kabul	72.99	340	P	P	15 20 26.6	-3.0
KBL				IAmb	IAmb	15 20 30.5	
	comp=Z,5.7nm,1.1s						
NIL	Nilore	73.36	336	P	P	15 20 30.7	-0.8
NIL				pmax	pmax		
	comp=Z,19nm,1.1s						
NIL	Nilore	73.36	336	P	P	15 20 30.7	-0.8
OCAC	Ocana	73.36	115	eP	P	15 20 30.3	-1.6
SDV	Santo Domingo	73.54	112	eP	P	15 20 32.6	-0.3
SDV	Santo Domingo	73.54	112	P	P	15 20 31.8	-1.1
ZARC	Zaragoza, Cauc	73.62	117	eP	P	15 20 32.7	-0.5
PAMC	Pamplona, Colo	74.39	114	eP	P	15 20 38.3	0.0
PTBC	PUERTO BERRIO,	74.65	116	eP	P	15 20 38.3	-0.9
HELC	Santa Helena	74.67	118	eP	P	15 20 38.8	-1.0
CBOC	Ciudad Bolivar	74.85	118	eP	P	15 20 37.9	-2.7
BARC	Barichara	74.96	115	eP	P	15 20 41.5	+0.1
NORC	Norcasia	75.46	117	eP	P	15 20 43.1	-0.9
GUY2C	Guyana, Caldas	75.64	118	eP	P	15 20 44.4	-1.2
RUSC	La Rusia	75.66	115	eP	P	15 20 45.2	-0.4
RUSC	La Rusia	75.66	115	P	P	15 20 44.9	-0.7
KMI	Kunming	75.88	308	P	P	15 20 45.3	-1.2
ROSC	El Rosal	76.30	117	P	P	15 20 50.0	+0.8
	comp=Z,22nm,0.9s,baz=16,slow=4.6,SNR=6.0						
ROSC	El Rosal	76.30	117	P	P	15 20 49.5	+0.3
CHIC	Chingaza	76.67	116	eP	P	15 20 50.3	-1.0
DANN	Dangsing	76.91	326	eP	P	15 20 52.8	+0.4
	comp=Z,38nm,0.9s						
ORTC	Ortega, Tolima	76.92	118	eP	P	15 20 50.7	-1.6
GUN	Gumba	76.94	324	eP	P	15 20 52.7	0.0
TAPN	Taplejung	77.13	322	eP	P	15 20 54.1	+0.4
	comp=Z,31nm,1.1s						
KKN	Kakani	77.17	324	eP	P	15 20 54.2	+0.4
	comp=Z,18nm,0.8s						
PKIN	Phulchoki	77.36	324	eP	P	15 20 55.1	+0.2
	comp=Z,4.3nm,0.5s						
PKI	Pulchoki	77.36	324	eP	P	15 20 55.0	0.0
	comp=Z,4.8nm,0.5s						
DMN	Daman	77.38	324	eP	P	15 20 55.7	+0.7
	comp=Z,20nm,0.7s						
ODAN	Odare	77.67	322	eP	P	15 20 56.5	-0.1
	comp=Z,18nm,1.1s						
RAMN	Ramite	77.74	323	eP	P	15 20 57.0	0.0
SOTA	Rioblanco	78.23	120	eP	P	15 21 00.7	+0.5
EIL	Elat	78.93	9	LR	LR	15 58 38.4	
	comp=Z,20nm,20.3s,baz=293,slow=38						
FLOC	Florencia	79.03	119	eP	P	15 21 04.0	0.0
FLOC	Florencia	79.03	119	P	P	15 21 03.3	-0.6
SLVN	Son La	79.20	306	P	P	15 21 03.8	-1.2
CM31	Chiang Mai Arr	83.22	310	P	P	15 21 25.2	-1.0
CM31				IAmb	IAmb	15 21 27.3	
	comp=Z,7.1nm,0.8s						
CMAR	Chiang Mai Arr	83.22	310	P	P	15 21 26.4	+0.2
	comp=Z,4.5nm,0.7s,baz=356,slow=5.7,SNR=33						
CMAR				LR	LR	16 03 43.3	
	comp=Z,12nm,18.0s,baz=75,slow=40						
CMAR	Chiang Mai Arr	83.22	310c	eP	P	15 21 26.3	+0.1
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CMAR	Chiang Mai Arr	83.22	310	P	P	15 21 25.7	-0.5
PBKT	Sadao Pong	84.52	307	P	P	15 21 33.0	+0.1
RAYN	Ar Rayn	85.32	360	P	P	15 21 36.6	-0.3
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
RAYN	Ar Rayn	85.32	360	P	P	15 21 36.6	-0.3
DBIC	Dimbokro	95.46	50	LR	LR	16 04 32.1	
	comp=Z,27nm,18.9s,baz=7.5,slow=35						
LPAZ	La Paz	98.17	117	LR	LR	16 12 25.8	
	comp=Z,42nm,18.2s,baz=314,slow=39						
VNDA	Vanda	153.28	206	PKPbc	PKPbc	15 28 56.4	+0.5
	comp=Z,0.8nm,0.9s,baz=100,slow=7.0,SNR=4.4						

NORS ***23*** *15:29:33.9±0.0, 42.°31N×42.°77E, h7km, MPVA3.1*

DDA ***23*** *15:29:33.2, 42.°27N×42.°81E, h4km±2km, ML2.0*

TIF ***23*** *15:29:36.1, 42.°29N×42.°80E, h0km±1km*

ISC 23 15:29:33.8±1.1, **42.°28N**±0.°02×**42.°82E**±0.°02, **h3**km±10km, **n29**, σ**0.s64**/55, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TKB	Tkibuli	0.15	63	P	Pg	15 29 36.3	-0.3
TKB				S	Sg	15 29 37.2	-1.4
ONI	Oni	0.56	57	P	Pg	15 29 44.2	-0.3
ONI				S	Sb	15 29 53.8	-0.9
ONI	Oni	0.56	57	ePg	Pg	15 29 44.2	-0.3
ONI				eSg	Sg	15 29 52.8	+1.0
BKRG	Bakuriani	0.74	135	P	Pg	15 29 48.1	+0.1
EPOS	Posof	0.78	185	i P	Pg	15 29 48.3	-0.5
EPOS				i S	Sg	15 29 59.7	+0.8
EPOS				IAML		15 30 09.0	
	comp=N,35nm,0.6s						
DIGR	Digorskoe uzhe	0.83	42	ePg	Pg	15 29 49.2	-0.5
DIGR				eSg	Sg	15 30 01.7	+1.2
ZEI	Tsey	0.94	57	ePg	Pg	15 29 51.4	-0.5
ZEI				eSg	Sg	15 30 05.1	+0.9
NEY	Neytrino	0.97	356	ePg	Pg	15 29 51.9	-0.4
NEY				eSg	Sg	15 30 05.7	+0.8
AKH	Akhalkalaki	1.01	150	P	Pg	15 29 53.0	-0.1
AKH				S	Sb	15 30 08.4	+0.7
AKH	Akhalkalaki	1.01	150	ePg	Pg	15 29 53.0	-0.1

AKH				*e*Sg	**Sb**	**15 30 07.4**	**-0.3**
BATM	**Batumi**	**1.08**	**231**	P	**Pg**	**15 29 54.4**	**-0.1**
BATM				S	**Sn**	**15 30 10.7**	**-0.6**
BATM	**Batumi**	**1.08**	**231**	*e*Pg	**Pg**	**15 29 54.4**	**-0.1**
BATM				*e*Sg	**Sb**	**15 30 09.7**	**+0.1**
BATM	**Batumi**	**1.08**	**231**	*i* P	**Pg**	**15 29 54.4**	**-0.1**
BATM				*i* S	**Sb**	**15 30 09.4**	**-0.2**
TRLG	**Trialeti**	**1.21**	**127**	P	**Pg**	**15 29 56.6**	**-0.4**
TRLG				S	**Sn**	**15 30 14.4**	**-0.3**
LACR	**Lac**	**1.22**	**63**	*e*Pg	**Pg**	**15 29 57.0**	**-0.1**
LACR				*e*Sg	**Sb**	**15 30 14.2**	**+0.5**
LSNR	**Lesken**	**1.24**	**36**	*e*Pg	**Pg**	**15 29 57.6**	**+0.1**
LSNR				*e*Sg	**Sb**	**15 30 14.3**	**+0.1**
DBOC	**Borcka**	**1.27**	**223**	*i* P	**Pg**	**15 29 57.5**	**-0.7**
DBOC				*i* S	**Sn**	**15 30 16.0**	**-0.1**
DOMR	**Dombai**	**1.34**	**319**	*e*Pg	**Pn**	**15 29 59.3**	**-0.2**
DOMR				*e*Sg	**Sn**	**15 30 17.9**	**0.0**
DAGI	**Agillar**	**1.38**	**210**	*i* P	**Pn**	**15 29 59.4**	**-0.7**
DAGI				*i* S	**Sn**	**15 30 19.0**	**+0.1**
DAGI				IAML		15 30 23.0	
	comp=E,11nm,0.5s						
DAGI				IAML		15 30 25.0	
	comp=N,15nm,0.4s						
SHA1	**Shidzhatmaz**	**1.46**	**355**	*e*Pg	**Pb**	**15 30 01.5**	**-0.2**
SHA1				*e*Sg	**Sn**	**15 30 21.7**	**+0.7**
KZRT	**Kazreti**	**1.48**	**127**	P	**Pn**	**15 30 00.8**	**-0.6**
KZRT				S	**Sg**	**15 30 21.8**	**+0.4**
KZRT	**Kazreti**	**1.48**	**127**	*e*Pg	**Pn**	**15 30 01.8**	**+0.4**
KZRT				*e*Sg	**Sg**	**15 30 21.8**	**+0.4**
KZRT	**Kazreti**	**1.48**	**127**	*i* P	**Pn**	**15 30 00.7**	**-0.6**
DBAD	**Bademkaya**	**1.52**	**214**	*i* P	**Pn**	**15 30 01.8**	**-0.1**
DBAD				*i* S	**Sg**	**15 30 23.0**	**+0.4**
DBAD				IAML		15 30 25.0	
	comp=E,67nm,0.4s						
DBAD				IAML		15 30 26.0	
	comp=N,42nm,0.4s						
TBLG	**Delisi**	**1.53**	**110**	P	**Pn**	**15 30 02.0**	**0.0**
TBLG				S	**Sg**	**15 30 24.1**	**+1.1**
TBLG	**Delisi**	**1.53**	**110**	*e*Pg	**Pn**	**15 30 02.0**	**0.0**
TBLG				*e*Sg	**Sg**	**15 30 24.1**	**+1.1**
DDEM	**Demirkent**	**1.60**	**210**	*i* P	**Pn**	**15 30 03.3**	**+0.2**
DDEM				IAML		15 30 30.0	
	comp=N,64nm,0.4s						
DDEM				IAML		15 30 31.0	
	comp=E,65nm,0.3s						
KRIK	**Erzurum-spir**	**2.41**	**217**	*i* P	**Pb**	**15 30 17.6**	**-0.3**
KRIK				*i* S	**Sg**	**15 30 52.2**	**+1.0**
BAYB	**BAYBURT**	**2.80**	**225**	*i* P	**Pn**	**15 30 21.3**	**+1.7**
BAYB				IAML		15 30 58.0	
	comp=N,17nm,1.1s						
BAYB				*i* S	**Sb**	**15 30 58.1**	**-1.2**
BAYB				IAML		15 31 02.0	
	comp=E,4.7nm,0.3s						

*DNK **23** 15:38:30.4±3.0, 80°.11N×3°.64E, h48^{km}±109^{km}, ML3.3, Hypocentre not reviewed by the ISC*

*IDC **23** 15:38:32.8±1.0, 79°.78N×2°.76E, h0^{km}, mb3.4/8, mb1 3.6/12, mb1mx3.4/58, mbtmp3.5/12, ML3.3/3, MS2.7/6, Ms1 2.7/6, ms1mx2.5/34, Error ellipse: s-maj=30.9km s-min=15.3km az=30.0*

*BER **23** 15:38:35.2±3.1, 79°.77N×3°.46E, h27^{km}±34^{km}, ML2.7, ML3.5(NAO), Confirmed Earthquake*

*IEPN **23** 15:38:38.0, 79°.65N×4°.95E, h15^{km}*

ISC 23 15:38:33.6±0.8**, 79°.71N**±0°.07×**3°.85E**±0°.07**, h10**^{km}**, n48, σ2^s.87**/60**, mb3.4**/8**, MS2.6**/3**, 3C, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**1.70**	**113**	Pn	**Pn**	**15 39 02.4**	**-0.8**
KBS				Sn	**Sn**	**15 39 22.2**	**-2.8**
KBS	**Kingsbay**	**1.70**	**113**	⇑*i*P	**Pn**	**15 39 02.5**	**-0.7**
KBS				*e*S	**Sn**	**15 39 22.4**	**-2.6**
KBS				IAML		15 39 23.3	
	comp=Z,116nm,0.3s						
KBS	**Kingsbay**	**1.70**	**113**	⇑*i*P	**Pn**	**15 39 02.5**	**-0.8**
KBS				*i* S	**Sn**	**15 39 22.3**	**-2.8**
KBS	**Kingsbay**	**1.70**	**113**	*i* P		15 39 01.9	
KBS				*i* S		15 39 22.2	
KBS				IAML		15 39 30.9	
	comp=Z,255nm,0.3s						
BRBB	**Barentsburg B**	**2.57**	**124**	Pn	**Pn**	**15 39 15.8**	**+0.5**
BRBB				Sn	**Sn**	**15 39 44.6**	**-2.0**
BRBB	**Barentsburg B**	**2.57**	**124**	Pn	**Pn**	**15 39 15.8**	**+0.5**
BRBB				Sn	**Sn**	**15 39 44.6**	**-2.0**
BRBA	**Barentsburg A**	**2.60**	**124**	Pn	**Pn**	**15 39 16.1**	**+0.5**
BRBA				Sn	**Sn**	**15 39 45.3**	**-1.8**
BRBA	**Barentsburg A**	**2.60**	**124**	Pn	**Pn**	**15 39 16.1**	**+0.5**
BRBA				Sn	**Sn**	**15 39 45.3**	**-1.8**
SPA0	**Spitsbergen Ar**	**2.86**	**116**	Pn	**Pn**	**15 39 19.2**	**+0.1**
	baz=324,slow=11						
SPA0				Sn	**Sn**	**15 39 50.6**	**-2.9**
SPA0	**Spitsbergen Ar**	**2.86**	**116**	Pn	**Pn**	**15 39 19.2**	**+0.1**
	baz=324,slow=11						
SPA0				Sn	**Sn**	**15 39 50.6**	**-2.9**
SPA0	**Spitsbergen Ar**	**2.86**	**116**	⇑*i*P	**Pn**	**15 39 19.3**	**+0.1**
SPA0				*i* S	**Sn**	**15 39 50.7**	**-2.9**
SPITS	**Spitsbergen Ar**	**2.86**	**116**	Pn	**Pn**	**15 39 19.2**	**+0.1**
	baz=327,slow=9.0,SNR=1841						
SPITS				Sn	**Sn**	**15 39 51.1**	**-2.4**
	baz=316,slow=6.9,SNR=1.7						
SPITS				LR	LR	15 40 34.1	
	comp=Z,170nm,19.1s,baz=135,slow=40						
HSPB	**Hornsund (broa**	**3.60**	**133**	Pn	**Pn**	**15 39 29.1**	**-0.2**
HSPB				Sn	**Sn**	**15 40 07.6**	**-4.1**
HSPB	**Hornsund (broa**	**3.60**	**133**	*e*P	**Pn**	**15 39 29.0**	**-0.3**
HSPB				*e*S	**Sn**	**15 40 08.2**	**-3.5**
HSPB				IAML		15 40 10.9	
	comp=Z,32nm,0.4s						
HSPB	**Hornsund (broa**	**3.60**	**133**	*e*P	**Pn**	**15 39 28.8**	**-0.5**
HSPB				*e*S	**Sn**	**15 40 06.7**	**-5.0**
NOR	**Nord**	**3.83**	**309**	Pn	**Pn**	**15 39 29.7**	**-2.8**
NOR	**Nord**	**3.83**	**309**	Pn	**Pn**	**15 39 29.7**	**-2.8**
HOPEN	**Hopen**	**5.39**	**116**	Pn	**Pn**	**15 39 53.5**	**-0.4**
HOPEN				Sn	**Sn**	**15 40 51.9**	**-4.0**
HOPEN	**Hopen**	**5.39**	**116**	*e*P	**Pn**	**15 39 53.5**	**-0.4**
HOPEN				*e*S	**Sn**	**15 40 50.8**	**-5.0**
HOPEN	**Hopen**	**5.39**	**116**	*e*P	**Pn**	**15 39 53.5**	**-0.4**
HOPEN				*e*S	**Sn**	**15 40 51.6**	**-4.2**
DAG	**Danmarks Havn**	**5.43**	**249**	*i* P	Pn	15 39 50.0	-4.4
DAG				*i*		15 40 45.2	
DAG	**Danmarks Havn**	**5.43**	**249**	*i* P	Pn	15 39 50.0	-4.4
DAG				IAML		15 40 54.3	
	comp=Z,13nm,0.3s						
DAG	**Danmarks Havn**	**5.43**	**249**	*i* P		15 39 50.0	
DAG				*i* P		15 39 50.0	
DAG				*i*		15 40 45.3	
DAG				IAML		15 40 54.3	
	comp=Z,13nm,0.3s						
BJO1	**Bjornoya**	**6.20**	**139**	Pn	**Pn**	**15 40 06.0**	**+1.0**
BJO1	**Bjornoya**	**6.20**	**139**	Pn	**Pn**	**15 40 06.0**	**+1.0**
BJO1	**Bjornoya**	**6.20**	**139**	*e*P	**Pn**	**15 40 05.9**	**+0.9**
BJO1				*e*S	**Sn**	**15 41 11.3**	**-4.5**
ZFI2	**Zemlya Franca-**	**7.36**	**60**	*e*P	**Pn**	**15 40 21.1**	**+0.2**
ZFI2				*e*S	**Sn**	**15 41 38.5**	**-5.8**
	comp=Z,18nm,0.3s						
DBG	**Daneborg**	**7.58**	**237**	*i* P	Pn	15 40 19.5	-4.5
DBG				*i* S	Sn	15 41 38.4	-11
DBG				IAML		15 41 40.3	
	comp=Z,8.4nm,0.3s						
DBG	**Daneborg**	**7.58**	**237**	*i* P		15 40 19.5	
DBG				*i* S		15 41 38.4	
DBG				IAML		15 41 40.3	
	comp=Z,8.4nm,0.3s						
ARA0	**ARCESS Array S**	**11.58**	**140**	Pn	**Pn**	**15 41 18.5**	**-0.2**
	baz=354,slow=14						
ARA0				Sn	**Sn**	**15 43 21.0**	**-6.9**
	baz=358,slow=22						
ARA0	**ARCESS Array S**	**11.58**	**140**	Pn	**Pn**	**15 41 18.5**	**-0.2**
	baz=354,slow=14						
ARA0				Sn	**Sn**	**15 43 21.0**	**-6.9**
	baz=358,slow=22						
ARCES	**ARCESS Array B**	**11.58**	**140**	Pn	**Pn**	**15 41 18.6**	**0.0**
	comp=Z,0.4nm,0.3s,baz=351,slow=11,SNR=9.8						
ARCES				Sn	**Sn**	**15 43 19.9**	**-7.9**
	comp=Z,0.2nm,0.3s,baz=29,slow=15,SNR=0.9						
SUMG	**Summit**	**12.02**	**257**	*i* P	Pn	15 41 20.1	-4.9
SUMG				*i*		15 43 24.7	
SUMG	**Summit**	**12.02**	**257**	*i* P	Pn	15 41 20.2	-4.9
SUMG				*i*		15 43 24.8	
SUMG				IAML		15 43 28.9	
	comp=Z,6.5nm,0.4s						
SUMG	**Summit**	**12.02**	**257**	*i* P		15 41 20.2	
SUMG				*i*		15 43 24.8	
SUMG				IAML		15 43 28.9	
	comp=Z,6.5nm,0.4s						
KULLO	**Kullorsuaq**	**13.81**	**281**	*i* P	Pn	15 41 41.0	-8.0
KULLO				*e*		15 44 00.6	
KULLO	**Kullorsuaq**	**13.81**	**281**	*i* P	Pn	15 41 41.1	-7.9
KULLO				*e*		15 44 00.6	
KULLO	**Kullorsuaq**	**13.81**	**281**	*i* P		15 41 41.1	
KULLO				*e*		15 44 00.6	
TULEG	**Thule**	**14.34**	**295**	*i* P	Pn	15 41 48.8	-7.4
TULEG				*i* P	Pn	15 41 49.6	-6.6
TULEG				*i*		15 44 18.6	
TULEG	**Thule**	**14.34**	**295**	*i* P		15 41 48.8	
TULEG				*i* P		15 41 49.6	
TULEG				*i*		15 44 18.6	
UPNV	**Upernavik**	**15.02**	**276**	*i* P		15 41 57.7	
UPNV				*i*		15 44 30.5	
NOA	**NORSAR Array B**	**18.89**	**169**	LR	LR	15 49 40.9	
	comp=Z,19nm,19.0s,baz=5.0,slow=35						
FIA0	**FINESS Array S**	**19.49**	**147**	P	**Pn**	**15 43 02.9**	**+1.3**
	baz=334,slow=10						
FIA0	**FINESS Array S**	**19.49**	**147**	P	**Pn**	**15 43 02.9**	**+1.3**
	baz=334,slow=10						
FINES	**FINESS Array B**	**19.49**	**147**	P	**Pn**	**15 43 02.8**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=349,slow=9.0,SNR=7.7						
FINES				LR	LR	15 50 34.1	
	comp=Z,12nm,21.8s,baz=308,slow=37						
RES	**Resolute Bay**	**19.77**	**309**	P	**P**	**15 43 00.8**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=24,slow=17,SNR=9.4						
NRIK	**Noril'sk**	**22.08**	**70**	P	**P**	**15 43 31.0**	**+2.8**
	comp=Z,1.1nm,0.3s,baz=350,slow=19,SNR=2.2						
NRIK				LR	LR	15 54 35.9	
	comp=Z,21nm,19.6s,baz=2.0,slow=43						
FRB	**Frobisher Bay**	**25.14**	**274**	P	**P**	**15 43 57.6**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=38,slow=6.3,SNR=3.3						
FRB				LR	LR	15 53 34.7	
	comp=Z,36nm,19.3s,baz=18,slow=36						
OBN	**Obninsk**	**26.86**	**137**	LR	LR	15 55 17.9	
	comp=Z,15nm,19.1s,baz=278,slow=37						
YKA	**Yellowknife Ar**	**33.75**	**313**	P	**P**	**15 45 13.0**	**-1.7**
	comp=Z,0.1nm,0.6s,baz=10,slow=7.2,SNR=1.9						
BVAR	**Borovoye Array**	**34.19**	**100**	P	**P**	**15 45 21.5**	**+2.9**
	comp=Z,0.3nm,0.6s,baz=226,slow=43,SNR=2.5						
KURBB	**Kurchatov Arra**	**37.95**	**93**	P	**P**	**15 45 53.1**	**+2.4**
	comp=Z,0.6nm,0.7s,baz=338,slow=8.0,SNR=7.3						
KBZ	**Khabaz**	**38.84**	**133**	P	**P**	**15 46 01.8**	**+3.5**
	comp=Z,1.1nm,0.8s,baz=77,slow=23,SNR=3.7						
BRTR	**Keskin Array B**	**41.70**	**145**	P	**P**	**15 46 24.5**	**+2.2**
	comp=Z,0.2nm,0.6s,baz=326,slow=5.7,SNR=1.9						
MKAR	**Makanchi Array**	**42.31**	**90**	P	**P**	**15 46 29.4**	**+2.4**
	comp=Z,0.5nm,0.6s,baz=349,slow=7.4,SNR=8.8						

*SJA **23** 15:50:29.0±0.5, 19°.35S×71°.53W, h56^{km}±8^{km}, ML3.4, MW3.7*

*GUC **23** 15:50:41.4±0.8, 19°.91S×70°.96W, h22^{km}±16^{km}, ML3.2*

ISC 23 15:50:40.5±1.7**, 19°.88S**±0°.05×**71°.03W**±0°.09**, h30**^{km}±16^{km}**, n18, σ1^s.32**/28**, 3C-5D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.90**	**72**	⇓*i*P	**Pn**	**15 50 55.6**	**-1.5**
PSGC				*e*S	**Sb**	**15 51 06.6**	**-2.5**
TA01	**Diego Aracena**	**1.05**	**131**	*e*P	**Pn**	**15 50 58.3**	**-0.9**
TA01				*e*S	**Sn**	**15 51 10.5**	**-2.3**
TA01				IAML		15 51 13.5	
	comp=E,2μm,0.6s						
PATCX	**Punta Patache**	**1.25**	**139**	⇑*i*P	**Pn**	**15 51 01.2**	**-0.7**
PATCX				*e*S	**Sn**	**15 51 16.1**	**-1.7**
PATCX				IAML		15 51 20.3	
	comp=E,594nm,0.3s						
PB11	**IPOC Station P**	**1.29**	**85**	⇑*i*P	**Pn**	**15 51 02.1**	**-0.6**
PB11				*e*S	**Sn**	**15 51 17.8**	**-1.3**
PB11				IAML		15 51 20.6	
	comp=N,1μm,0.2s						
PB12	**IPOC Station P**	**1.42**	**28**	⇓*i*P	**Pb**	**15 51 06.6**	**+0.2**
PB12				*i* S	**Sb**	**15 51 25.9**	**+1.7**
PB12				IAML		15 51 32.7	
	comp=E,465nm,0.4s						
GO01	**Chusmiza**	**1.74**	**83**	⇓*i*P	**Pn**	**15 51 09.7**	**+0.6**
GO01				*e*S	**Sn**	**15 51 32.5**	**+2.0**
PB08	**IPOC Station P**	**1.78**	**99**	⇑*i*P	**Pn**	**15 51 09.8**	**+0.2**
PB08				*e*S	**Sn**	**15 51 32.8**	**+1.4**
PB08				IAML		15 51 35.9	
	comp=N,448nm,0.5s						
PB02	**IPOC Station P**	**1.78**	**144**	⇓*i*P	**Pn**	**15 51 09.3**	**0.0**
PB02				*i* S	**Sn**	**15 51 31.5**	**+0.4**
PB02				IAML		15 51 33.7	
	comp=E,627nm,0.3s						
PB07	**IPOC Station P**	**2.13**	**150**	⇓*i*P	**Pn**	**15 51 13.9**	**-0.2**
PB07				*e*S	**Sn**	**15 51 42.0**	**+2.3**
PB07				IAML		15 51 48.0	
	comp=E,213nm,0.4s						
PB09	**IPOC Station P**	**2.54**	**139**	*i* P	**Pn**	**15 51 20.2**	**+0.4**
PB09				*i* Sg	**Sb**	**15 51 57.8**	**+1.5**
PB09				IAML		15 52 02.3	
	comp=Z,177nm,0.5s						
PB04	**IPOC Station P**	**2.58**	**162**	IAML		15 52 07.3	
	comp=N,112nm,0.6s						
PB04	**IPOC Station P**	**2.58**	**162**	*i* P	**Pn**	**15 51 19.8**	**-0.6**
PB04				*i* Sg	**Sb**	**15 51 57.9**	**+0.5**
PB05	**IPOC Station P**	**3.06**	**166**	*i* P	**Pn**	**15 51 26.7**	**-0.2**
PB05				IAML		15 52 29.6	
	comp=Z,41nm,0.6s						
PB06	**IPOC Station P**	**3.12**	**155**	*i* P	**Pn**	**15 51 28.1**	**+0.3**
PB06				IAML		15 52 17.4	
	comp=Z,72nm,1.1s						
LVC	**Limon Verde**	**3.36**	**144**	*i* P	**Pn**	**15 51 32.1**	**+0.8**
LVC				IAML		15 52 23.5	
	comp=Z,28nm,0.6s						
PB15	**IPOC Station P**	**3.62**	**157**	*i* P	**Pn**	**15 51 34.5**	**-0.2**
PB15				IAML		15 52 36.3	
	comp=Z,98nm,0.6s						
PB10	**IPOC Station P**	**3.64**	**173**	*i* P	**Pn**	**15 51 33.9**	**-1.0**
PB10				IAML		15 52 48.8	
	comp=Z,24nm,1.9s						
PB14	**IPOC Station P**	**4.76**	**173**	*i* P	**Pn**	**15 51 49.1**	**-1.4**
PB14				IAML		15 53 26.8	
	comp=Z,13nm,1.9s						

IDC 23 15:52:51.9±4.0**, 65°.00S**×**179°.60E, h0**^{km}**, mb3.9**/3**, mb1 4.1**/4**, mb1mx3.8**/30**, mbtmp3.9**/4**, ML3.7**/1**, MS3.8**/6**, Ms1 3.8**/6**, ms1mx3.5**/17**, Error ellipse: s-maj=140.8km s-min=26.8km az=68.0, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**13.69**	**196**	Pn	Pn	15 56 05.3	-1.5
	0.3nm,0.3s,baz=53,slow=19,SNR=17						
VNDA				LR	LR	16 00 09.8	
	comp=Z,346nm,19.4s,baz=350,slow=32						
RPZ	**Rata Peaks**	**21.86**	**343**	LR	LR	16 04 52.5	
	comp=Z,311nm,18.2s,baz=147,slow=33						
QSPA	**South Pole Qui**	**25.09**	**180**	P	P	15 58 18.8	+1.0
	6.8nm,1.1s,baz=30,slow=4.3,SNR=9.4						
MAW	**Mawson**	**40.28**	**212**	LR	LR	16 16 57.4	
	comp=Z,403nm,19.6s,baz=152,slow=36						
TBI	**Tubuai**	**46.23**	**41**	*e*LR	LR	16 14 09.5	
	comp=Z,180nm,29.0s						
TBI	**Tubuai**	**46.23**	**41**	*e*T	T	16 50 42.0	
	19nm,0.3s						
H01W1	**Cape Leeuwin H**	**48.65**	**275**	T	T	16 54 03.0	
	baz=148,slow=76,SNR=21						
H01W2	**Cape Leeuwin H**	**48.65**	**275**	T	T	16 54 03.1	
	baz=148,slow=76,SNR=20						
H01W3	**Cape Leeuwin H**	**48.67**	**275**	T	T	16 54 04.1	
	baz=148,slow=76,SNR=19						
ASAR	**Alice Springs**	**50.69**	**302**	P	P	16 01 53.5	+0.6
	1.1nm,0.9s,baz=155,slow=7.7,SNR=9.0						
PPT2	**Papeete2**	**51.69**	**39**	*e*LR	LR	16 16 32.0	
	comp=Z,198nm,27.2s						
PPT	**Papeete**	**51.71**	**39**	LR	LR	16 19 22.9	
	comp=Z,44nm,18.0s,baz=181,slow=31						
WRA	**Warramunga Arr**	**53.96**	**304**	P	P	16 02 16.8	-0.4
	1.0nm,0.8s,baz=160,slow=6.1,SNR=4.7						
VAH	**Vaihoa**	**54.46**	**40**	*e*T	T	17 00 51.0	
	28nm,0.2s						
PLCA	**Paso Flores**	**61.40**	**125**	LR	LR	16 24 46.5	
	comp=Z,35nm,19.9s,baz=228,slow=31						
TAOE	**Nuku Hiva Isla**	**62.68**	**46**	*e*LR	LR	16 21 37.8	
	comp=Z,104nm,28.5s						
BOSA	**Boshof**	**84.58**	**202**	LR	LR	16 39 22.0	
	comp=Z,50nm,21.7s,baz=156,slow=33						
H08S2	**Diego Garcia H**	**90.24**	**251**	T	T	17 46 22.3	
	baz=155,slow=76,SNR=3.9						
H08S1	**Diego Carcia H**	**90.25**	**251**	T	T	17 46 19.7	
	baz=155,slow=76,SNR=3.7						
H08S3	**Diego Garcia H**	**90.26**	**251**	T	T	17 46 23.6	
	baz=155,slow=76,SNR=5.2						
BRTR	**Keskin Array B**	**147.97**	**234**	PKPbc	PKPdf	16 12 36.1	+0.9
	0.3nm,0.5s,baz=174,slow=5.5,SNR=2.6						

*IDC **23** 15:59:51.6±0.6, 5°.08S×152°.55E, h0^{km}, mb4.3/16, mb1 4.5/16, mb1mx4.3/27, mbtmp4.3/16, MS3.8/14, Ms1 3.8/14, ms1mx3.6/27, Error ellipse: s-maj=22.6km s-min=13.3km az=118.0*

*DJA **23** 15:59:56.1±1.4, 5°S±4°×15°3E±°, h36^{km}±10^{km}, M4.9/18, mb4.7/18, mB4.8/3, MLv5.1/2, Mw(mB)4.0/3*

*BJI **23** 15:59:57.7±0.0, 4°.78S×152°.81E, h56^{km}, mB5.0/27, mb4.7/40, Ms4.9/8, Ms7 4.6/6*

*NEIC **23** 15:59:59.4±1.5, 5°.08S±0°.06×152°.50E±0°.07, h58^{km}±5^{km}, mb4.9/83, Error ellipse: s-maj=10.3km s-min=9.3km az=95.0*

*GCMT **23** 16:00:01.4±0.4, 5°.29S±0°.02×152°.65E±0°.04, h33^{km}, MW4.9/54, Moment Tensor Solution. s28,c30; s54,c79; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.67±.19; $M_{\theta\theta}$-2.02±.10; $M_{\phi\phi}$-0.65±.10; $M_{r\theta}$0.79±.09; $M_{\theta\phi}$-0.34±.07; $M_{\phi r}$-0.63±.12; Best double couple: $M_0$2.55800×10^{16} NP1:ϕ_s247.00000°, δ39.00000°, λ70.00000°. NP2: ϕ_s91.00000°, δ54.00000°, λ105.00000°. Principal axes: T 2.9280, Plg75.0000°, Azm48.0000°; N -0.7400, Plg12.0000°, Azm262.0000°; P -2.1880, Plg8.0000°, Azm171.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 15:59:59.3±0.3**, 5°.11S**±0°.05×**152°.55E**±0°.06**, h55**^{km}**, n166, σ1^s.25**/166**, mb4.9**/69**, MS3.9**/16**, 1C-1D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**0.95**	**327**	Pn	**Pn**	**16 00 16.1**	**-0.5**
	1μm,0.3s,baz=142,slow=1.6,SNR=4546						
KRVT				Sn	**Sn**	**16 00 30.4**	**+1.2**
KRVT				LR	LR	16 00 40.8	
	comp=Z,2μm,18.6s,baz=11,slow=53						
RABL	**Rabaul**	**0.99**	**337**		**Pn**	**16 00 16.7**	**-0.4**
PMG	**Port Moresby**	**6.85**	**231**	Pn	**Pn**	**16 01 38.1**	**+0.9**
	3.6nm,0.3s,baz=40,slow=8.9,SNR=27						
PMG				Sn	**Sn**	**16 02 52.7**	**-1.1**
	4.1nm,0.3s,baz=147,slow=21,SNR=2.2						
PMG	**Port Moresby**	**6.85**	**231**		**Pn**	**16 01 37.4**	**+0.2**
HNR	**Honiara**	**8.50**	**121**	LR	LR	16 05 43.4	
	comp=Z,703nm,18.6s,baz=304,slow=41						
COEN	**Coen**	**12.76**	**226**	Pn	**Pn**	**16 02 58.8**	**+0.7**
GUMO	**Guam**	**20.08**	**338**	LR	LR	16 11 19.3	
	comp=Z,140nm,18.0s,baz=126,slow=34						
GUMO	**Guam**	**20.08**	**338**	P	**P**	**16 04 26.3**	**-2.1**
EIDS	**Eidsvold**	**20.20**	**184**	P	**P**	**16 04 28.9**	**-0.8**
FAKI	**Fak Fak**	**20.37**	**275**	Pn	Pn	16 04 33.7	-0.4
KWAJ	**Kwajalein Atol**	**20.41**	**47**	P	**P**	**16 04 32.5**	**+0.5**
TARA	**Tarawa**	**21.34**	**73**	P	**P**	**16 04 43.0**	**+0.9**
TARA				IAmb	IAmb	16 04 44.3	
	comp=Z,77nm,0.8s						
DZM	**Mont Dzumac**	**21.57**	**143**	P	**P**	**16 04 46.5**	**+2.0**
	comp=Z,6.2nm,0.5s,baz=224,slow=7.1,SNR=13						
DZM	**Mont Dzumac**	**21.57**	**143**	P	**P**	**16 04 46.2**	**+1.7**
SIJI	**Sorong**	**21.67**	**281**	P	**P**	**16 04 45.8**	**+0.2**
	comp=Z,10nm,0.7s,baz=71,slow=10,SNR=3.0						
SWI	**Sorong**	**21.67**	**281**	P	**P**	**16 04 47.6**	**+2.0**
	comp=Z,22nm,0.7s						
MTN	**Manton Dam**	**22.50**	**249**	P	**P**	**16 04 54.4**	**-0.1**
MTN				IAmb	IAmb	16 05 14.9	
	comp=Z,26nm,0.8s						
WB0	**Warramunga Arr**	**22.91**	**229**	P	**P**	**16 04 58.6**	**-0.2**
WR0	**Warramunga Arr**	**22.92**	**228**	P	**P**	**16 04 57.6**	**-1.3**
WRAB	**Tennant Creek**	**23.04**	**229**	P	**P**	**16 04 59.1**	**-1.0**
WB2	**Warramunga Arr**	**23.05**	**229**	P	**P**	**16 04 59.0**	**-1.2**
WRA	**Warramunga Arr**	**23.06**	**229**	P	**P**	**16 04 58.9**	**-1.4**
	comp=Z,6.5nm,0.8s,baz=52,slow=9.2,SNR=34						
WRA	**Warramunga Arr**	**23.06**	**229**	P	**P**	**16 04 59.1**	**-1.1**
LBMI	**Labuha**	**25.41**	**279**	P	**P**	**16 05 25.4**	**+3.4**
	comp=Z,25nm,0.8s						
KNRA	**Kununurra**	**25.62**	**244**	P	**P**	**16 05 23.0**	**-0.8**
KNRA				IAmb	IAmb	16 05 51.7	
	comp=Z,30nm,0.8s						
AS31	**Alice Springs**	**25.76**	**222**	P	**P**	**16 05 24.5**	**-0.6**
ASAR	**Alice Springs**	**25.76**	**222**	P	**P**	**16 05 24.6**	**-0.5**
	comp=Z,2.8nm,0.5s,baz=57,slow=8.9,SNR=82						
ASAR				S	**S**	**16 09 56.1**	**+5.6**
	comp=Z,0.2nm,0.8s,baz=140,slow=52,SNR=1.9						
ASAR	**Alice Springs**	**25.76**	**222**	P	**P**	**16 05 24.1**	**-1.0**
MSVF	**Nonsavu**	**27.91**	**119**	P	**P**	**16 05 44.4**	**-0.2**
MSVF				IAmb	IAmb	16 06 05.8	
	comp=Z,24nm,1.1s						
SOEI	**Soe**	**28.42**	**259**	P	**P**	**16 05 52.6**	**+3.4**
	comp=Z,21nm,1.6s						
SOEI	**Soe**	**28.42**	**259**	P	**P**	**16 05 48.3**	**-0.9**
SOEI				IAmb	IAmb	16 06 30.4	
	comp=Z,19nm,1.0s						
STKA	**Stephens Creek**	**28.54**	**200**	P	**P**	**16 05 48.6**	**-1.4**
	comp=Z,3.1nm,0.8s,baz=25,slow=13,SNR=4.7						
STKA				LR	LR	16 17 39.3	
	comp=Z,216nm,18.7s,baz=15,slow=37						
STKA	**Stephens Creek**	**28.54**	**200**	P	**P**	**16 05 49.2**	**-0.7**
FITZ	**Fitzroy Crossi**	**29.30**	**242**	P	**P**	**16 05 55.7**	**-1.1**
	comp=Z,5.0nm,0.7s,baz=65,slow=7.4,SNR=26						
FITZ	**Fitzroy Crossi**	**29.30**	**242**	P	**P**	**16 05 55.4**	**-1.4**
DAV	**Davao City (W)**	**29.51**	**294**	LR	LR	16 16 58.7	
	comp=Z,136nm,19.5s,baz=95,slow=35						
FORT	**Forrest**	**34.40**	**219**	P	**P**	**16 06 40.0**	**-1.4**
FORT				IAmb	IAmb	16 06 49.8	
	comp=Z,18nm,0.8s						
PSA00	**Pilbara Seismi**	**35.66**	**240**	P	**P**	**16 06 51.3**	**-1.2**
PSA00				IAmb	IAmb	16 07 17.9	
	comp=Z,31nm,1.5s						
BKZ	**Black Stump Fm**	**40.24**	**151**	P	**P**	**16 07 32.4**	**+1.5**
TUWZ	**Tuamarina**	**40.91**	**155**	P	**P**	**16 07 36.5**	**+0.3**
MORW	**Morawa**	**41.96**	**231**	P	**P**	**16 07 44.2**	**-0.9**
JNU	**Nakatsue**	**43.22**	**333**	P	**P**	**16 07 54.7**	**-0.6**
CISI	**Cisompet, Garu**	**44.52**	**264**	P	**P**	**16 08 04.3**	**-1.7**
KSRS	**Korea Array**	**48.16**	**334**	P	**P**	**16 08 34.1**	**0.0**
	comp=Z,0.9nm,0.8s,baz=148,slow=8.2,SNR=4.6						
KSRS				LR	LR	16 27 35.0	
	comp=Z,27nm,19.1s,baz=140,slow=34						
NJ2	**Nanjing**	**48.93**	**321**	*e*P	**P**	**16 08 41.4**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**52.46**	**341**	P	**P**	**16 09 05.8**	**-0.7**
ENH	**Enshi**	**54.18**	**313**	P	**P**	**16 09 19.1**	**-0.4**
ENH				IAmb	IAmb	16 09 21.0	
	comp=Z,13nm,1.1s						
GYA	**Guiyang**	**54.38**	**308**	*e*P	**P**	**16 09 22.3**	**+1.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	**Xi'an**	**56.67**	**317**	P	**P**	**16 09 34.9**	**-2.5**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
XAN				pmax	pmax		
	comp=Z,140nm,4.9s						
KMI	**Kunming**	**56.95**	**304**	P	**P**	**16 09 40.9**	**+1.2**
KMI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
CMAR	**Chiang Mai Arr**	**57.78**	**295**	P	**P**	**16 09 46.4**	**+1.0**
	comp=Z,2.0nm,0.4s,baz=107,slow=5.1,SNR=4.4						
PPT	**Papeete**	**57.87**	**107**	LR	LR	16 31 32.8	
	comp=Z,49nm,18.5s,baz=330,slow=33						
CHTO	**Chiang Mai**	**57.90**	**296**	P	**P**	**16 09 45.6**	**-0.6**
PETK	**Petropavlovsk-**	**58.16**	**4**	P	**P**	**16 09 47.2**	**-0.2**
	comp=Z,1.5nm,0.5s,baz=171,slow=8.5,SNR=14						
PETK				PP	**PP**	**16 11 53.1**	**-3.6**
	comp=Z,8.9nm,0.9s,baz=240,slow=12,SNR=3.5						
PETK				LR	LR	16 29 25.7	
	comp=Z,76nm,20.8s,baz=238,slow=30						
HHC	**Hu-ho-hao-te**	**59.15**	**325**	*e*P	**P**	**16 09 56.3**	**+1.6**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,65nm,6.6s						
LZH	**Lanzhou**	**61.28**	**316**	*e*P	**P**	**16 10 08.8**	**-0.6**
LZH				pP	pP	16 10 25.0	+1.5
LZH				sP	sP	16 10 32.3	+2.9
LZH				pmax	pmax		
	comp=Z,24nm,1.3s						

LZH				pmax	pmax		
	comp=Z,97nm,4.6s						
LZH				LR	LR		
	comp=Z,320nm,15.3s						
LZH				LR	LR		
	comp=Z,310nm,15.2s						
LZH				LR	LR		
	comp=Z,500nm,18.0s						
GTA	**Gaotai**	**65.71**	**317**	*e*P	**P**	**16 10 39.6**	**+1.0**
GTA				pP	sP	16 10 59.3	+0.5
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SONM	**Songino Array**	**66.45**	**328**	P	**P**	**16 10 43.1**	**0.0**
	comp=Z,1.0nm,0.8s,baz=147,slow=6.5,SNR=6.4						
SONM				LR	LR	16 38 24.1	
	comp=Z,42nm,20.5s,baz=127,slow=35						
SONM	**Songino Array**	**66.45**	**328**	P	**P**	**16 10 42.9**	**-0.2**
UNV	**Unalaska Valle**	**68.00**	**25**	P	**P**	**16 10 52.0**	**-0.6**
AKUT	**Akutan**	**68.51**	**25**	P	**P**	**16 10 55.8**	**0.0**
ODAN	**Odare**	**70.49**	**301**	*e*P	**P**	**16 11 08.8**	**-0.1**
	comp=Z,20nm,0.9s						
GUN	**Gumba**	**72.07**	**301**	*e*P	**P**	**16 11 18.5**	**-0.1**
	comp=Z,26nm,1.0s						
PKI	**Pulchoki**	**72.38**	**301**	*e*P	**P**	**16 11 20.0**	**-0.4**
	comp=Z,3.1nm,0.5s						
PKIN	**Phulchoki**	**72.39**	**301**	*e*P	**P**	**16 11 20.4**	**0.0**
VNDA	**Vanda**	**72.53**	**178**	P	**P**	**16 11 19.4**	**-0.6**
	comp=Z,0.6nm,0.9s,baz=338,slow=5.2,SNR=2.1						
KKN	**Kakani**	**72.55**	**301**	*e*P	**P**	**16 11 21.3**	**0.0**
	comp=Z,11nm,0.7s						
DMN	**Daman**	**72.65**	**301**	*e*P	**P**	**16 11 21.9**	**0.0**
	comp=Z,14nm,0.7s						
GKN	**Gorkha**	**73.15**	**301**	*e*P	**P**	**16 11 24.8**	**0.0**
	comp=Z,20nm,0.9s						
GAMB	**Gambell**	**73.74**	**16**	P	**P**	**16 11 27.5**	**+0.3**
GAMB				IAmb	IAmb	16 11 29.0	
	comp=Z,14nm,1.0s						
DANN	**Dangsing**	**73.99**	**301**	*e*P	**P**	**16 11 29.5**	**-0.4**
	comp=Z,8.8nm,0.6s						
WMQ	**Urumqi**	**75.80**	**317**	*e*P	**P**	**16 11 40.4**	**+0.7**
WMQ				pP	pP	16 11 55.8	+1.8
WMQ				sP	sP	16 12 03.9	+4.1
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,81nm,4.3s						
WMQ				LR	LR		
	comp=Z,290nm,29.0s						
WMQ				LR	LR		
	comp=Z,930nm,29.0s						
ANM	**Nome**	**76.14**	**17**	P	**P**	**16 11 41.7**	**+0.6**
SVW2	**Sparrevohn**	**77.20**	**23**	P	**P**	**16 11 47.9**	**+0.8**
SVW2				IAmb	IAmb	16 11 49.2	
	comp=Z,13nm,0.9s						
CNPM	**China Poot**	**78.10**	**26**	P	**P**	**16 11 52.5**	**+0.3**
BRLK	**Bradley Lake**	**78.37**	**26**	P	**P**	**16 11 53.7**	**0.0**
BRLK				IAmb	IAmb	16 11 54.6	
	comp=Z,18nm,0.8s						
SUA	**Susitna One**	**79.34**	**24**	P	**P**	**16 11 58.4**	**-0.7**
RDOG	**Red Dog Mine**	**79.34**	**16**	P	**P**	**16 11 59.1**	**+0.2**
RC01	**Rabbit Creek A**	**79.56**	**25**	P	**P**	**16 11 59.8**	**-0.4**
PMR	**Palmer**	**80.06**	**24**	P	**P**	**16 12 02.5**	**-0.4**
PMR				IAmb	IAmb	16 12 03.6	
	comp=Z,13nm,0.8s						
GHO	**Glory Hole Cre**	**80.24**	**24**	P	**P**	**16 12 03.6**	**-0.4**
GHO				IAmb	IAmb	16 12 04.8	
	comp=Z,19nm,0.8s						
KTH	**Kantishna Hill**	**80.39**	**22**	P	**P**	**16 12 04.0**	**-0.7**
KTH				IAmb	IAmb	16 12 05.0	
	comp=Z,15nm,0.8s						
MK31	**Makanchi Array**	**80.39**	**319**	P	**P**	**16 12 04.0**	**-1.1**
MKAR	**Makanchi Array**	**80.39**	**319**	P	**P**	**16 12 04.8**	**-0.3**
	comp=Z,1.4nm,0.9s,baz=93,slow=7.6,SNR=10						
MKAR	**Makanchi Array**	**80.39**	**319**	P	**P**	**16 12 04.0**	**-1.0**
SML	**Sawmill**	**80.50**	**24**	P	**P**	**16 12 05.3**	**-0.1**
TRF	**Thorofare Moun**	**80.57**	**23**	P	**P**	**16 12 04.7**	**-1.1**
TRF				IAmb	IAmb	16 12 06.0	
	comp=Z,11nm,0.8s						
MAKZ	**Makanchi**	**80.60**	**319**	P	**P**	**16 12 05.5**	**-0.7**
BPAW	**Bear Paw Mtn.**	**80.66**	**22**	P	**P**	**16 12 05.4**	**-0.7**
BPAW				IAmb	IAmb	16 12 06.6	
	comp=Z,25nm,1.4s						
IMAR	**Indian Mountai**	**80.75**	**20**	P	**P**	**16 12 06.8**	**+0.2**
SCM	**Sheep Creek Mo**	**80.93**	**25**	P	**P**	**16 12 07.7**	**+0.1**
SCM				IAmb	IAmb	16 12 09.1	
	comp=Z,19nm,0.9s						
RND	**Reindeer**	**81.10**	**23**	P	**P**	**16 12 07.8**	**-0.8**
MCK	**McKinley**	**81.24**	**23**	P	**P**	**16 12 08.4**	**-0.8**
MLY	**Manley**	**81.26**	**21**	P	**P**	**16 12 09.2**	**-0.1**
BWN	**Browne**	**81.27**	**22**	P	**P**	**16 12 09.3**	**+0.1**
BWN				IAmb	IAmb	16 12 10.3	
	comp=Z,20nm,0.9s						
ZAA0	**Zalesovo Array**	**81.27**	**326**	P	**P**	**16 12 07.9**	**-1.6**
ZALV	**Zalesovo Beam**	**81.27**	**326**	P	**P**	**16 12 08.8**	**-0.7**
	comp=Z,2.6nm,0.7s,baz=111,slow=4.9,SNR=9.2						
ZALV	**Zalesovo Beam**	**81.27**	**326**	P	**P**	**16 12 07.8**	**-1.7**
DHY	**Denali Highway**	**81.52**	**24**	P	**P**	**16 12 10.5**	**-0.3**
DHY				IAmb	IAmb	16 12 12.4	
	comp=Z,11nm,0.8s						
WRH	**Wood River Hil**	**81.94**	**22**	P	**P**	**16 12 11.8**	**-1.0**
WRH				IAmb	IAmb	16 12 13.1	
	comp=Z,21nm,1.1s						
CCB	**Clear Creek Bu**	**82.13**	**22**	P	**P**	**16 12 12.6**	**-1.2**
CCB				IAmb	IAmb	16 12 13.9	
	comp=Z,13nm,0.8s						
COLA	**College**	**82.22**	**22**	P	**P**	**16 12 13.1**	**-1.2**
PAX	**Paxson**	**82.23**	**24**	P	**P**	**16 12 13.4**	**-1.1**
PAX				IAmb	IAmb	16 12 15.5	
	comp=Z,9.5nm,1.0s						
CRQM	**Cirque**	**82.24**	**27**	P	**P**	**16 12 14.5**	**-0.3**
CRQM				IAmb	IAmb	16 12 17.2	
	comp=Z,18nm,0.9s						
GLB	**Gilahina Butte**	**82.24**	**26**	P	**P**	**16 12 14.7**	**+0.2**
VRDI	**Verde Repeater**	**82.30**	**26**	P	**P**	**16 12 15.1**	**+0.1**
VRDI				IAmb	IAmb	16 12 16.4	
	comp=Z,17nm,0.9s						
HDA	**Harding Lake**	**82.33**	**22**	P	**P**	**16 12 13.9**	**-1.0**
TGL	**Tana Glacier**	**82.38**	**27**	P	**P**	**16 12 15.2**	**-0.1**
TGL				IAmb	IAmb	16 12 17.3	
	comp=Z,14nm,1.0s						
IL31		**82.53**	**22**	P	**P**	**16 12 14.4**	**-1.4**
IL31				IAmb	IAmb	16 12 15.9	
	comp=Z,14nm,0.8s						
ILAR	**Eielson Array**	**82.53**	**22**	P	**P**	**16 12 14.8**	**-1.2**
	comp=Z,13nm,0.9s,baz=243,slow=5.6,SNR=89						
ILAR				LR	LR	16 47 44.4	
	comp=Z,60nm,18.3s,baz=260,slow=35						
ILAR	**Eielson Array**	**82.53**	**22**	P	**P**	**16 12 14.5**	**-1.5**
MCARA	**McCarthy VSAT**	**82.56**	**26**	P	**P**	**16 12 16.1**	**-0.1**
COLD	**Coldfoot**	**82.63**	**19**	P	**P**	**16 12 16.7**	**+0.3**
BALM	**Baldy**	**82.71**	**26**	P	**P**	**16 12 17.1**	**0.0**
BALM				IAmb	IAmb	16 12 18.5	
	comp=Z,12nm,0.8s						
RIDG	**Independent Ri**	**82.84**	**23**	P	**P**	**16 12 17.2**	**-0.4**
RIDG				IAmb	IAmb	16 12 18.7	
	comp=Z,13nm,0.9s						
KSH	**Kashi**	**82.95**	**311**	P	**P**	**16 12 20.3**	**+1.5**
KSH				pP	pwP	16 12 37.3	-0.7
KSH				PP	**PP**	**16 15 34.0**	**+3.9**
KSH				S	**S**	**16 22 33.3**	**-0.6**
KSH				sS	sS	16 23 02.8	+2.2
KSH				SS	**SS**	**16 28 02.3**	**+4.0**
KSH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,270nm,3.9s						
KSH				LR	LR		
	comp=Z,100nm,8.7s						
KSH				LR	LR		
	comp=Z,180nm,15.0s						
KSH				LR	LR		
	comp=Z,110nm,10.2s						
BARN	**Barnard Glacie**	**83.03**	**27**	P	**P**	**16 12 19.0**	**+0.2**
BARN				IAmb	IAmb	16 12 20.5	
	comp=Z,16nm,0.8s						
CTGM	**Chitina Glacie**	**83.13**	**27**	P	**P**	**16 12 19.9**	**+0.6**
CTGM				IAmb	IAmb	16 12 21.0	
	comp=Z,18nm,0.8s						
SCRK	**Sand Creek**	**83.28**	**23**	P	**P**	**16 12 19.8**	**-0.2**
SCRK				IAmb	IAmb	16 12 21.2	
	comp=Z,10nm,0.8s						
PRP	**Porcupine Dome**	**83.40**	**22**	P	**P**	**16 12 18.3**	**-2.3**
PRP				IAmb	IAmb	16 12 50.7	
	comp=Z,20nm,1.9s						
TOLK	**Toolik Lake Re**	**83.58**	**18**	P	**P**	**16 12 21.4**	**+0.1**
TOLK				IAmb	IAmb	16 12 23.2	
	comp=Z,15nm,0.9s						
BCAR	**Beaver Creek A**	**83.79**	**25**	P	**P**	**16 12 22.8**	**+0.3**
KURK	**Kurchatov**	**83.86**	**322**	P	**P**	**16 12 22.8**	**-0.2**
NIL	**Nilore**	**83.94**	**304**	P	**P**	**16 12 23.6**	**-0.4**
NIL				IAmb	IAmb	16 12 25.7	
	comp=Z,9.7nm,0.8s						
FYU	**Fort Yukon**	**83.99**	**21**	P	**P**	**16 12 23.8**	**+0.4**
FYU				IAmb	IAmb	16 12 25.1	
	comp=Z,11nm,0.9s						
KZA	**Kyzart**	**84.03**	**313**	P	**P**	**16 12 26.9**	**+2.2**
	SNR=9.3						
CHMS	**Chumysh**	**84.59**	**314**	P	**P**	**16 12 28.2**	**+1.2**
	SNR=7.0						
UCH	**Uchtor**	**84.60**	**313**	P	**P**	**16 12 29.6**	**+2.0**
	SNR=14						
BMAR	**Burnt Mountain**	**84.62**	**20**	P	**P**	**16 12 27.3**	**+0.7**
AAK	**Ala-Archa**	**84.70**	**314**	P	**P**	**16 12 29.2**	**+1.5**
	SNR=7.0						
AAK	**Ala-Archa**	**84.70**	**314**	P	**P**	**16 12 28.0**	**+0.3**
EGAK	**Eagle**	**84.74**	**23**	P	**P**	**16 12 27.4**	**+0.2**
EGAK				IAmb	IAmb	16 12 28.9	
	comp=Z,13nm,0.9s						
HYT	**Haines Junctio**	**84.82**	**28**	P	**P**	**16 12 27.8**	**-0.1**
HYT				IAmb	IAmb	16 12 30.1	
	comp=Z,18nm,1.0s						
USP	**Ospenovka**	**84.82**	**314**	P	**P**	**16 12 29.6**	**+1.4**
	SNR=7.4						
DAWY	**Dawson**	**85.17**	**24**	P	**P**	**16 12 29.8**	**+0.3**
DAWY				IAmb	IAmb	16 12 31.6	
	comp=Z,10nm,1.2s						
AML	**Almayashu**	**85.18**	**313**	P	**P**	**16 12 32.4**	**+2.0**
	SNR=26						
MAW	**Mawson**	**85.19**	**203**	LR	LR	16 46 34.9	
	comp=Z,71nm,22.0s,baz=58,slow=33						
EKS2	**Erkin-Say**	**85.22**	**313**	P	**P**	**16 12 32.0**	**+1.7**
	SNR=10						
ARSB	**Arslanbob**	**85.55**	**312**	P	**P**	**16 12 32.2**	**+0.2**
NRIK	**Noril'sk**	**86.17**	**341**	P	**P**	**16 12 33.1**	**-1.1**
	comp=Z,1.8nm,0.4s,baz=99,slow=5.7,SNR=6.7						
EPYK	**Eagle Plains**	**87.04**	**22**	P	**P**	**16 12 38.9**	**+0.3**
KKAR	**Karatay Array**	**87.66**	**313**	P	**P**	**16 12 41.4**	**-0.8**
KKAR	**Karatay Array**	**87.66**	**313**	P	**P**	**16 12 41.0**	**-1.1**
KKAR				IAmb	IAmb	16 12 44.4	
	comp=Z,9.7nm,1.6s						
INK	**Inuvik**	**88.83**	**21**	P	**P**	**16 12 46.7**	**-0.2**
INK				IAmb	IAmb	16 12 48.9	
	comp=Z,13nm,1.2s						
C36M	**Paulatuk**	**92.40**	**21**	P	**P**	**16 13 03.0**	**-0.6**
C36M				IAmb	IAmb	16 13 04.3	
	comp=Z,5.6nm,0.9s						
NVAR	**Mina Array Bea**	**92.47**	**52**	P	**P**	**16 13 05.4**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=262,slow=5.3,SNR=6.4						
NVAR				LR	LR	16 48 14.3	
	comp=Z,112nm,19.9s,baz=302,slow=31						
NVAR	**Mina Array Bea**	**92.47**	**52**	P	**P**	**16 13 04.8**	**-0.1**
SYO	**Syowa Base**	**93.30**	**199**	⇓*e*P	**P**	**16 13 06.0**	**-1.8**
SYO	**Syowa Base**	**93.30**	**199**	⇑*e*X	P	16 13 20.0	+12
YKA	**Yellowknife Ar**	**95.81**	**28**	P	**P**	**16 13 19.8**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=264,slow=4.3,SNR=20						
YKA				LR	LR	16 52 55.2	
	comp=Z,75nm,20.0s,baz=0.0,slow=33						
GEYT	**Alibeck**	**96.61**	**307**	LR	LR	17 00 29.3	
	comp=Z,23nm,18.5s,baz=315,slow=38						
PDAR	**Pinedale Array**	**99.24**	**48**	PP	**PP**	**16 17 42.5**	**+3.5**
	comp=Z,0.8nm,0.9s,baz=291,slow=4.1,SNR=4.2						
PDAR				LR	LR	16 51 43.3	
	comp=Z,80nm,21.3s,baz=248,slow=31						
VYHS	**Vyhne**	**121.60**	**326**	*e*PKP	**PKiKP**	**16 18 47.5**	**+0.3**
CLL	**Collm**	**123.00**	**331**	*e*PKPdf	**PKiKP**	**16 18 51.0**	**+1.2**
CLL				*e*pPKPdf	**sPKPdf**	**16 19 08.0**	**-2.3**
GERES	**GERESS Array B**	**124.19**	**328**	PKP	**PKPdf**	**16 18 52.0**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=82,slow=2.8,SNR=10						
LPAZ	**La Paz**	**134.49**	**119**	PKP	**PKiKP**	**16 19 13.9**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=351,slow=6.9,SNR=4.4						
SIV	**San Ignacio**	**140.67**	**123**	PKP	**PKiKP**	**16 19 26.1**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=183,slow=3.5,SNR=5.7						
SVB	**Belmont**	**145.69**	**74**		**PKPdf**	**16 19 32.0**	**-0.7**
TOSP	**Speyside**	**146.70**	**77**		**PKPab**	**16 19 37.2**	**-0.2**
PTGA	**Pitinga**	**147.00**	**99**	PKPbc	**PKPbc**	**16 19 37.5**	**+0.4**
PTGA	**Pitinga**	**147.00**	**99**	PKPbc	**PKPdf**	**16 19 35.7**	**+0.6**
TOA0	**Torodi Ar. Sit**	**150.17**	**288**		**PKPbc**	**16 19 44.2**	**-1.0**
TORD	**Torodi Ar. Bea**	**150.17**	**288**	PKPbc	**PKPbc**	**16 19 44.8**	**-0.4**
	comp=Z,4.2nm,0.7s,baz=68,slow=2.9,SNR=19						
TORD	**Torodi Ar. Bea**	**150.17**	**288**		**PKPbc**	**16 19 44.2**	**-1.0**
BDFB	**Brasilia**	**151.02**	**136**	PKPbc	**PKiKP**	**16 19 49.6**	**+1.7**
	comp=Z,4.6nm,0.6s,baz=230,slow=4.7,SNR=6.1						
DBIC	**Dimbokro**	**157.48**	**275**	PKPab	**PKPab**	**16 20 21.2**	**-1.2**
	comp=Z,3.8nm,0.6s,baz=114,slow=3.7,SNR=7.6						

IDC 23 16:12:20.4±2.5**, 6°.82S**×**132°.47E, h0**^{km}**, mb3.2**/1**, mb1 3.6**/5**, mb1mx3.3**/30**, mbtmp3.5**/5**, ML3.6**/4**, Error ellipse: s-maj=104.6km s-min=25.7km az=84.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.03**	**348**	Pn	Pn	16 13 50.3	-0.7
	1.7nm,0.3s,baz=118,slow=0.9,SNR=44						
SIJI				Sn	Sn	16 14 53.6	-7.2
	3.0nm,0.3s,baz=244,slow=23,SNR=12						
FITZ	**Fitzroy Crossi**	**13.04**	**210**	Pn	Pn	16 15 26.1	-0.9
	0.2nm,0.3s,baz=37,slow=13,SNR=5.6						
FITZ				Sn	Sn	16 17 39.6	-13
	0.2nm,0.3s,baz=214,slow=12,SNR=3.9						
WRA	**Warramunga Arr**	**13.17**	**172**	Pn	Pn	16 15 29.3	+0.5
	0.2nm,0.3s,baz=356,slow=12,SNR=14						
WRA				Sn	Sn	16 17 50.1	-6.1
	0.5nm,0.3s,baz=354,slow=24,SNR=4.8						
ASAR	**Alice Springs**	**16.80**	**175**	Pn	Pn	16 16 17.1	-0.2
	0.2nm,0.3s,baz=349,slow=9.3,SNR=22						
ASAR				Sn	Sn	16 19 15.0	-10
	0.1nm,0.3s,baz=358,slow=27,SNR=5.3						
MKAR	**Makanchi Array**	**69.44**	**326**	P	P	16 23 30.9	+0.4
	0.2nm,0.8s,baz=125,slow=7.1,SNR=2.0						

TAP ***23*** *16:22:52.7, 24°.76N×122°.35E, h21*^{km}*, ML2.6, C*
JMA ***23*** *16:22:53.4±0.1, 24°.68N×122°.38E, h44*^{km}*±5*^{km}*, M1.6*
ISC 23 16:22:52.8±1.0**, 24°.78N**±0°.04×**122°.37E**±0°.02**, h25**^{km}±10^{km}**, n40,** σ**0**^{s}**.49**/62**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.32**	**223**	*i* P	**Pb**	**16 22 59.8**	**-0.2**
	baz=223						
EOS1				S	**Sb**	**16 23 05.1**	**+0.1**
	baz=223						
NTC	**Toucheng**	**0.49**	**278**	*e*P	**Pn**	**16 23 03.4**	**-0.8**
	baz=280						
TWC	**Suao**	**0.50**	**250**	*e*P	**Pb**	**16 23 02.1**	**-0.9**
	baz=250						
TWC				*e*S	**Sb**	**16 23 10.4**	**+0.4**
	baz=250						
TIPB	**Shuangxi**	**0.53**	**291**	*i* P	**Pb**	**16 23 03.7**	**+0.2**
	baz=293						
TIPB				*e*S	**Sb**	**16 23 11.4**	**+0.7**
	baz=293						
NWF	**Wu-fen Shan**	**0.60**	**298**	*e*P	**Pn**	**16 23 05.4**	**-0.4**
	baz=300						
WFSB	**Wu-fen Shan**	**0.60**	**298**	*e*P	**Pn**	**16 23 05.3**	**-0.5**
	baz=300						
JYNG	**Yonagunijimaku**	**0.62**	**122**	P	**Pb**	**16 23 04.9**	**-0.1**
JYNG				S	**Sb**	**16 23 13.8**	**+0.4**
TWE	**Neicheng**	**0.64**	**265**	*e*P	**Pb**	**16 23 04.9**	**-0.4**
	baz=265						
TWE				*e*S	**Sn**	**16 23 14.8**	**-0.8**
	baz=265						
SLBB	**Yuanshan**	**0.67**	**268**	*e*P	**Pb**	**16 23 05.2**	**-0.6**
	baz=269						
YOJ	**Yonaguni jima**	**0.67**	**118**	*e*P	**Pb**	**16 23 06.2**	**+0.4**
	baz=116						
YOJ				*e*S	**Sb**	**16 23 15.4**	**+0.8**
	baz=116						
YOJ	**Yonaguni jima**	**0.67**	**118**	P	**Pb**	**16 23 05.9**	**+0.1**
YOJ				*e*S	**Sb**	**16 23 14.9**	**+0.2**
ENA	**Nanau**	**0.67**	**238**	P	**Pb**	**16 23 05.9**	**0.0**
	baz=238						
ENA				*e*S	**Sn**	**16 23 15.1**	**-1.2**
	baz=238						
TWA	**Mucha**	**0.74**	**286**	*e*P	**Pb**	**16 23 06.8**	**-0.2**
	baz=287						
ENTT	**Nioudou**	**0.74**	**259**	P	**Pn**	**16 23 07.2**	**-0.5**
	baz=259						
ENTT				*e*S	**Sn**	**16 23 17.4**	**-0.7**
	baz=259						
NWLT	**Wulai**	**0.79**	**270**	*e*P	**Pn**	**16 23 07.9**	**-0.3**
	baz=270						
NWLT				*e*S	**Sn**	**16 23 18.5**	**-0.7**
	baz=270						
NDT	**Datong Townshi**	**0.80**	**257**	*e*P	**Pn**	**16 23 08.7**	**+0.3**
	baz=258						
NDT				*e*S	**Sb**	**16 23 18.5**	**+0.1**
	baz=258						
YM01	**YM01**	**0.81**	**297**	*e*P	**Pn**	**16 23 08.9**	**+0.3**
	baz=298						
YM01				*e*S	**Sn**	**16 23 19.5**	**-0.4**
	baz=298						
YM08	**YM08**	**0.81**	**300**	*e*P	**Pn**	**16 23 08.9**	**+0.3**
	baz=301						
YM08				*e*S	**Sb**	**16 23 19.1**	**+0.3**
	baz=301						
YM11	**YM11**	**0.81**	**298**	*e*P	**Pn**	**16 23 08.9**	**+0.2**
	baz=299						
YM05	**YM05**	**0.82**	**298**	*e*P	**Pn**	**16 23 08.7**	**-0.1**
	baz=299						
YM05				*e*S	**Sn**	**16 23 20.3**	**+0.1**
	baz=299						
YM10	**YM10**	**0.82**	**297**	*e*P	**Pn**	**16 23 09.5**	**+0.8**
	baz=298						
YM04	**YM04**	**0.84**	**296**	*e*P	**Pn**	**16 23 09.3**	**+0.3**
	baz=297						
TWY	**Chenhua**	**0.85**	**305**	*e*S	**Sn**	**16 23 21.0**	**+0.2**
	baz=307						
YHNB	**Yeheng**	**0.91**	**263**	P	**Pn**	**16 23 10.0**	**0.0**
	baz=263						
NSK	**Sanguang**	**0.92**	**264**	P	**Pn**	**16 23 10.1**	**-0.1**
	baz=264						
NSK				*e*S	**Sb**	**16 23 21.9**	**-0.2**
	baz=264						
NACB	**Ninganchiao**	**0.93**	**229**	*e*P	**Pb**	**16 23 09.8**	**-0.5**
	baz=229						
NACB				*e*S	**Sb**	**16 23 21.8**	**-0.3**
	baz=229						
NNSB	**Datong**	**0.96**	**249**	*e*P	**Pn**	**16 23 11.0**	**+0.2**
	baz=249						
NNSB				*e*S	**Sn**	**16 23 24.0**	**+0.2**
	baz=249						
NNSH	**Datong**	**0.96**	**249**	*e*P	**Pn**	**16 23 11.1**	**+0.3**
	baz=249						
NNSH				*e*S	**Sn**	**16 23 24.1**	**+0.4**
	baz=249						
NNS	**Nan Shan**	**0.97**	**250**	*e*P	**Pn**	**16 23 11.1**	**+0.3**
	baz=249						
NNS				*e*S	**Sn**	**16 23 24.1**	**+0.3**
	baz=249						
ETLH	**Xiulin Townshi**	**0.99**	**235**	*e*P	**Pn**	**16 23 11.7**	**+0.6**
	baz=234						
ETLH				*e*S	**Sn**	**16 23 25.0**	**+0.7**
	baz=234						
TWD	**Chiawan**	**0.99**	**225**	*e*P	**Pn**	**16 23 11.2**	**+0.1**
	baz=224						
WHF	**Hehuan Shan**	**1.19**	**238**	*e*P	**Pb**	**16 23 15.1**	**+0.2**
	baz=237						
LIOB	**Emei**	**1.24**	**264**	*e*P	**Pb**	**16 23 15.9**	**+0.4**
	baz=264						
CHGB	**Renai**	**1.30**	**237**	*e*P	**Pb**	**16 23 17.3**	**+0.5**
	baz=236						
IRIF	**Iriomote-Funau**	**1.32**	**109**	P	**Pn**	**16 23 14.9**	**-0.7**
IRIF				*e*S	**Sn**	**16 23 31.6**	**-0.7**
OWD	**Renai**	**1.36**	**233**	*e*P	**Pb**	**16 23 18.5**	**+0.8**
	baz=232						
WHP	**Taichung City**	**1.39**	**249**	*e*P	**Pb**	**16 23 18.7**	**+0.6**
	baz=249						
JKRS	**Kuro-shima**	**1.59**	**110**	P	**Pn**	**16 23 19.0**	**-0.3**
JKRS				*e*S	**Sn**	**16 23 38.2**	**-0.9**
SSLB	**Suanglung**	**1.63**	**233**	*e*P	**Pb**	**16 23 22.2**	**+0.1**
	baz=232						
JIJ	**Ishigaki jima**	**1.67**	**104**	P	**Pn**	**16 23 20.8**	**+0.4**

IDC ***23*** *16:45:13.0±1.0, 19°.44S×70°.91W, h0*^{km}*, mb4.2/4, mb1 4.2/6, mb1mx3.8/30, mbtmp4.2/6, ML3.7/2, MS3.0/4, Ms1 3.0/4, ms1mx2.8/27, Error ellipse: s-maj=36.6km s-min=17.7km az=71.0*
NEIC ***23*** *16:45:14.1±1.6, 19°.70S±0°.03×71°.08W±0°.04, h12*^{km}*±4*^{km}*, mb4.2/4, Mwr4.0/31, Error ellipse: s-maj=5.2km s-min=4.2km az=68.0*
NEIC ***23*** *16:45:15, 19°.70S×71°.10W, h17*^{km}*, Moment Tensor Solution. Moment tensor: Scale* 10^{15}*Nm;* M_{rr}*1.30;* $M_{\theta\theta}$*-0.11;* $M_{\phi\phi}$*-1.18;* $M_{r\theta}$*0.14;* $M_{\theta\phi}$*0.44;* $M_{\phi r}$*-0.54; Fault plane solution:* M_0*1.43000×*10^{15} *NP1:*ϕ_s*338.06000°, δ33.59000°, λ86.53000°. NP2:*ϕ_s*162.22000°, δ56.48000°, λ92.30000°. Principal axes: T 1.4122, Plg78.0000°, Azm80.0000°; N 0.0432, Plg2.0000°, Azm341.0000°; P -1.4554, Plg11.0000°, Azm251.0000°;*
GUC ***23*** *16:45:15.6±0.9, 19°.71S×71°.06W, h44*^{km}*±2*^{km}*, ML3.9*
ISC 23 16:45:12.1±1.8**, 19°.70S**±0°.03×**71°.14W**±0°.05**, h4**^{km}±11^{km}**, n49,** σ**1**^{s}**.09**/56**, mb4.3**/3**, 7C-2D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.96**	**84**	⇓*i*P	**Pb**	**16 45 31.8**	**+0.4**
PSGC				*i* S	**Sb**	**16 45 44.5**	**0.0**
PSGCX	**Pisagua**	**0.96**	**84**		**Pb**	**16 45 31.8**	**+0.4**
PSGCX				Sg	**Sg**	**16 45 42.8**	**-0.2**
TA01	**Diego Aracena**	**1.25**	**134**	⇑*i*P	**Pn**	**16 45 37.0**	**+0.7**
TA01				*i* S	**Sg**	**16 45 52.3**	**+0.2**
TA01				IAML		16 45 59.5	
	comp=E,4µm,0.5s						
PB12	**IPOC Station P**	**1.32**	**35**	⇑*i*P	**Pb**	**16 45 37.5**	**-0.1**
PB12				*i* S	**Sn**	**16 45 55.1**	**-0.5**
PB12				IAML		16 45 56.5	
	comp=N,5µm,0.5s						
PB12	**IPOC Station P**	**1.32**	**35**		**Pb**	**16 45 37.4**	**-0.1**
PB11	**IPOC Station P**	**1.40**	**93**	⇑*i*P	**Pg**	**16 45 39.1**	**+0.3**
PB11				*i* S	**Sb**	**16 45 57.1**	**0.0**
PB11				IAML		16 46 00.3	
	comp=N,4µm,0.3s						
PB11	**IPOC Station P**	**1.40**	**93**		**Pb**	**16 45 39.0**	**+0.1**
PB11				Sn	**Sb**	**16 45 56.4**	**-0.8**
PATCX	**Punta Patache**	**1.45**	**141**	⇑*i*P	**Pb**	**16 45 39.9**	**+0.2**
PATCX				*i* S	**Sb**	**16 45 57.7**	**-0.9**
PATCX	**Punta Patache**	**1.45**	**141**		**Pb**	**16 45 39.8**	**+0.1**
AP01	**Chacalluta**	**1.52**	**30**	*e*P	**Pn**	**16 45 39.6**	**-0.4**
AP01				*e*S	**Sn**	**16 45 59.2**	**-1.0**
GO01	**Chusmiza**	**1.83**	**89**	⇑*i*P	**Pb**	**16 45 45.8**	**-0.7**
GO01				*i* S	**Sn**	**16 46 08.9**	**+0.2**
GO01	**Chusmiza**	**1.83**	**89**		**Pn**	**16 45 45.6**	**+0.8**
PB08	**IPOC Station P**	**1.92**	**104**	⇑*i*P	**Pn**	**16 45 46.9**	**+1.0**
PB08				*i* S	**Sn**	**16 46 10.4**	**-0.3**
PB08				IAML		16 46 21.0	
	comp=N,1µm,0.5s						
PB02	**IPOC Station P**	**1.99**	**144**	*e*P	**Pn**	**16 45 47.5**	**+0.9**
PB02				*i* S	**Sn**	**16 46 11.3**	**-0.8**
PB02				IAML		16 46 27.5	
	comp=E,3µm,0.4s						
PB01	**IPOC Station P**	**2.05**	**131**	⇑*i*P	**Pn**	**16 45 48.5**	**+1.1**
PB01				*i* S	**Sn**	**16 46 12.7**	**-0.8**
PB01				IAML		16 46 26.1	
	comp=E,879nm,0.5s						
PB01	**IPOC Station P**	**2.05**	**131**		**Pn**	**16 45 48.6**	**+1.1**
PB16	**IPOC Station P**	**2.05**	**49**	⇓*e*P	**Pn**	**16 45 48.8**	**+0.9**
PB16				*i* S	**Sn**	**16 46 14.4**	**+0.1**
PB16				IAML		16 46 23.8	
	comp=E,1µm,0.3s						
PB16	**IPOC Station P**	**2.05**	**49**		**Pn**	**16 45 48.9**	**+1.0**
PB07	**IPOC Station P**	**2.33**	**150**		**Pn**	**16 45 52.1**	**+0.7**
PB09	**IPOC Station P**	**2.74**	**140**		**Pn**	**16 45 58.8**	**+1.8**
PB04	**IPOC Station P**	**2.78**	**161**		**Pn**	**16 45 58.0**	**+0.4**
LVC	**Limon Verde**	**3.57**	**145**	Pn	**Pn**	**16 46 10.8**	**+2.2**
	comp=E,10nm,0.3s,baz=332,slow=9.1,SNR=55						
LVC				Lg	Lg	16 47 07.5	
	comp=E,29nm,0.3s,baz=69,slow=18,SNR=8.5						
LVC	**Limon Verde**	**3.57**	**145**		**Pn**	**16 46 10.4**	**+1.9**
PB15	**IPOC Station P**	**3.82**	**156**		**Pn**	**16 46 12.0**	**+0.1**
PB10	**IPOC Station P**	**3.83**	**172**	Pn	**Pn**	**16 46 11.6**	**-0.4**
LPAZ	**La Paz**	**4.44**	**41**	Pn	**Pb**	**16 46 27.9**	**-3.1**
	comp=E,2.3nm,0.3s,baz=240,slow=8.3,SNR=44						
LPAZ				LR	LR	16 47 35.3	
	comp=E,60nm,19.5s,baz=247,slow=35						
LPAZ	**La Paz**	**4.44**	**41**		**Pn**	**16 46 24.2**	**+3.5**
PB14	**IPOC Station P**	**4.95**	**172**		**Pn**	**16 46 27.2**	**-0.3**
GO02	**Mina Guanaco**	**5.62**	**166**		**Pn**	**16 46 37.6**	**+0.8**
NNA	**Nana**	**9.43**	**324**	Pn	**Pn**	**16 47 30.4**	**+1.6**
	comp=E,0.5nm,0.3s,baz=256,slow=18,SNR=1.4						
SIV	**San Ignacio**	**10.27**	**71**	Pn	**Pn**	**16 47 41.0**	**+0.7**

	comp=E,1.1nm,0.3s,baz=271,slow=11,SNR=14						
SIV				LR	LR	16 52 10.8	
	comp=E,172nm,20.1s,baz=278,slow=42						
CPUP	**Villa Florida**	**14.32**	**120**	Pn	**P**	**16 48 40.9**	**-2.1**
	baz=305,slow=13,SNR=2.8						
CPUP				LR	LR	16 55 12.8	
	comp=E,73nm,18.9s,baz=280,slow=42						
PLCA	**Paso Flores**	**20.97**	**179**	P	Pn	16 50 02.4	+3.6
	comp=E,2.9nm,0.9s,baz=8.5,slow=13,SNR=5.4						
PLCA	**Paso Flores**	**20.97**	**179**	P	**P**	**16 49 56.6**	**+0.3**
PLCA				IAmb	IAmb	16 50 18.1	
	comp=Z,10nm,1.2s						
PTGA	**Pitinga**	**21.80**	**31**	P	**P**	**16 50 03.6**	**-1.6**
	comp=Z,3.4nm,0.3s,baz=224,slow=19,SNR=5.2						
PTGA	**Pitinga**	**21.80**	**31**	IAmb	IAmb	16 50 25.9	
	comp=Z,19nm,1.5s						
BDFB	**Brasilia**	**22.39**	**83**	LR	LR	16 59 02.4	
	comp=Z,39nm,19.5s,baz=107,slow=37						
RUSC	**La Rusia**	**25.50**	**356**	P	**P**	**16 50 42.5**	**+0.2**
URIC	**Uribia, Colomb**	**31.21**	**358**	P	**P**	**16 51 33.1**	**+0.4**
TORD	**Torodi Ar. Bea**	**78.75**	**72**	P	**P**	**16 57 15.7**	**-0.7**
	comp=Z,3.1nm,0.6s,baz=248,slow=5.5,SNR=13						
YKA	**Yellowknife Ar**	**88.81**	**341**	P	**P**	**16 58 08.1**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=136,slow=5.1,SNR=4.0						
H11S2	**WAKE ISLAND Hy**	**125.56**	**279**	T	T	19 23 35.8	
	baz=101,slow=74,SNR=14						
H11S1	**WAKE ISLAND Hy**	**125.57**	**279**	T	T	19 23 36.2	
	baz=101,slow=74,SNR=5.7						
H11S3	**WAKE ISLAND Hy**	**125.58**	**279**	T	T	19 23 40.0	
	baz=101,slow=74,SNR=4.1						
ASAR	**Alice Springs**	**130.46**	**211**	PKP	**PKiKP**	**17 04 25.8**	**+0.1**
	comp=Z,0.3nm,0.9s,baz=112,slow=1.6,SNR=4.8						
WRA	**Warramunga Arr**	**133.36**	**214**	PKP	**PKiKP**	**17 04 31.9**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=160,slow=1.9,SNR=5.9						
MKAR	**Makanchi Array**	**145.33**	**33**	PKPbc	**PKPdf**	**17 04 52.2**	**+0.9**
	comp=Z,1.0nm,0.6s,baz=323,slow=4.5,SNR=15						
MKAR	**Makanchi Array**	**145.33**	**33**		**PKPdf**	**17 04 52.1**	**+0.8**
SONM	**Songino Array**	**151.86**	**4**	PKPbc	**PKiKP**	**17 05 09.1**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=121,slow=44,SNR=1.9						

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*ROM **23** 17:05:49.0±0.3,43°.53N±0°.01×13°.83E±0°.02,h8^{km}±1^{km},Md2.1/6,Error ellipse: s-maj=1.8km s-min=1.1km az=244.0*

*VIE **23** 17:05:51.3±0.9,43°.54N×13°.91E,h8^{km},mb2.6/2,ml2.2/8,Error ellipse: s-maj=16.8km s-min=4.1km az=89.0 123 km ESE of San Marino*

ISC 23 17:05:50.9±0.9**,43°.49N**±0°.02×**13°.78E**±0°.02**,h7**^{km}±7^{km}**,n32,**σ**1^{s}11**/52**,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AOI	**Ancona**	**0.14**	**297**	P	**Pg**	**17 05 53.1**	**-0.8**
AOI				S	**Sg**	**17 05 56.1**	**+0.1**
AOI				AML	AML		
	comp=E,2655µm,0.4s						
AOI				AML	AML		
	comp=N,5460µm,0.3s						
AOI				END			
PP3	**Marolino**	**0.16**	**229**	P	**Pg**	**17 05 53.7**	**-0.5**
PP3				S	**Sg**	**17 05 57.6**	**+1.1**
PP3				AML	AML		
	comp=E,11500µm,0.5s						
PP3				AML	AML		
	comp=N,12700µm,0.2s						
PP3				AML	AML		
	comp=E,11700µm,0.7s						
PP3				AML	AML		
	comp=E,11475µm,0.5s						
PP3				AML	AML		
	comp=N,11950µm,0.2s						
PP3				END			
CIMA	**Civitanova Mar**	**0.20**	**204**	P	**Pg**	**17 05 54.8**	**-0.1**
CIMA				S	**Sg**	**17 05 59.8**	**+2.3**
PCRO	**Pietralacroce**	**0.22**	**305**	P	**Pg**	**17 05 54.5**	**-0.7**
PCRO				S	**Sg**	**17 05 58.8**	**+0.6**
CADA	**Capodarco di F**	**0.29**	**182**	P	**Pg**	**17 05 56.4**	**-0.2**
CADA				END			
TRE1	**Treia**	**0.38**	**243**	P	**Pg**	**17 05 57.7**	**-0.7**
TRE1				S	**Sb**	**17 06 04.8**	**-1.2**
CING	**Cingoli**	**0.44**	**256**	P	**Pg**	**17 05 58.7**	**-0.7**
CING				S	**Sb**	**17 06 06.2**	**-1.5**
GUMA	**Gualdo di Mace**	**0.44**	**165**	P	**Pb**	**17 06 00.5**	**-0.4**
GUMA				S	**Sb**	**17 06 10.1**	**+2.4**
SENI	**Senigallia**	**0.45**	**299**	P	**Pg**	**17 05 59.5**	**-0.2**
OFFI	**Offida**	**0.55**	**187**	P	**Pb**	**17 06 02.3**	**-0.6**
CSP1	**Cessapalombo**	**0.57**	**227**	P	**Pg**	**17 06 01.1**	**-1.0**
CSP1				S	**Sb**	**17 06 11.1**	**-0.6**
CSP1				END			
FDMO	**Fiordimonte**	**0.67**	**229**	P	**Pg**	**17 06 02.6**	**-1.3**
FDMO				S	**Sb**	**17 06 13.9**	**-0.6**
FDMO				END			
TRTR	**Tortoreto Alta**	**0.68**	**172**	P	**Pb**	**17 06 04.8**	**-0.3**
NRCA	**Norcia**	**0.81**	**217**	P	**Pg**	**17 06 05.0**	**-1.5**
NRCA				S	**Sb**	**17 06 18.4**	**-0.1**
NRCA				END			
LNSS	**Leonessa**	**1.03**	**212**	P	**Pg**	**17 06 09.0**	**-1.8**
DUGI	**Dugi Otok**	**1.06**	**61**	*e*Pg	**Pg**	**17 06 10.4**	**-0.8**
DUGI				Sg	**Sb**	**17 06 26.0**	**+0.4**
ATMI	**Monte Miggiano**	**1.11**	**263**	AML	AML		
	comp=N,294µm,0.4s						
ATMI				AML	AML		
	comp=E,209µm,1.5s						
NVLJ	**Novalja**	**1.34**	**36**	*i* Pg	**Pn**	**17 06 14.5**	**-1.4**
NVLJ				Sg	**Sg**	**17 06 33.1**	**-0.8**
ZIRJ	**Zirje**	**1.37**	**82**	*e*Pn	**Pn**	**17 06 14.9**	**-1.4**
ZIRJ				Sn	**Sg**	**17 06 34.9**	**+0.1**
MORI	**Morici**	**1.45**	**74**	*e*Pn	**Pn**	**17 06 16.9**	**-0.7**
MORI				Sn	**Sb**	**17 06 36.9**	**0.0**
UDBI	**Udbina**	**1.77**	**53**	*e*Pn	**Pn**	**17 06 22.5**	**+0.5**
UDBI				Sn	**Sb**	**17 06 46.5**	**+0.3**
RICI	**Ricice**	**2.44**	**89**	*e*Pn	**Pn**	**17 06 31.6**	**+0.4**
RICI				Sn	**Sn**	**17 07 03.5**	**+2.3**
OZLJ	**Ozalj**	**2.45**	**29**	*e*Pn	**Pn**	**17 06 31.2**	**0.0**
STON	**Ston**	**2.93**	**101**	*e*Pn	**Pn**	**17 06 36.2**	**-1.7**
STON				Sn	**Sn**	**17 07 14.3**	**+1.0**
ABTA	**Abfaltersbach**	**3.38**	**345**	*e*Pn	**Pn**	**17 06 44.2**	**0.0**
	comp=E,0.5nm,0.1s						
ABTA				*i* Sn	**Sn**	**17 07 24.3**	**-0.3**
	comp=E,0.8nm,0.2s						
WTTA	**Wattenberg**	**4.07**	**339**	*e*Pn	**Pn**	**17 06 54.3**	**+0.6**
	comp=E,1.1nm,0.2s						
SQTA	**Sankt Quirin**	**4.15**	**335**	*e*Pn	**Pn**	**17 06 56.0**	**+1.3**
	comp=E,2.9nm,0.3s						
SQTA				*e*Sn	**Sn**	**17 07 45.1**	**+1.6**
	comp=E,2.3nm,0.2s						
WATA	**Walderalm**	**4.15**	**339**	*e*Pn	**Pn**	**17 06 55.8**	**+1.0**
	comp=E,1.1nm,0.3s						
WATA				*e*Sn	**Sn**	**17 07 45.9**	**+2.3**
	comp=E,1.4nm,0.2s						
MOTA	**Moosalm**	**4.29**	**335**	*e*Pn	**Pn**	**17 06 57.6**	**+0.9**
	comp=E,1.1nm,0.3s						
MOA	**Molln**	**4.38**	**4**	*e*Pn	**Pn**	**17 06 58.1**	**+0.3**
	comp=E,0.6nm,0.2s						
MOA				*e*Sn	**Sn**	**17 07 49.5**	**+0.5**
	comp=E,0.4nm,0.2s						
RETA	**Reutte**	**4.53**	**333**	*e*Pn	**Pn**	**17 07 00.8**	**+0.9**
	comp=E,0.7nm,0.2s						
CONA	**Conrad Observa**	**4.68**	**17**	*e*Pn	**Pn**	**17 07 00.9**	**-1.1**
	comp=E,0.5nm,0.2s						

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*ROM **23** 17:17:45.1±0.3,43°.52N±0°.01×13°.81E±0°.02,h8^{km}±1^{km},ML2.6/1,Error ellipse: s-maj=1.8km s-min=0.7km az=239.0*

ISC 23 17:17:46.0±0.9**,43°.51N**±0°.02×**13°.81E**±0°.02**,h8**^{km}±8^{km}**,n44,**σ**1^{s}25**/54**,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AOI	**Ancona**	**0.15**	**284**	P	**Pg**	**17 17 48.7**	**-0.6**
AOI				S	**Sg**	**17 17 51.9**	**+0.4**
AOI				AML	AML		
	comp=E,3825µm,0.5s						
AOI				AML	AML		
	comp=N,4025µm,0.3s						
AOI				AML	AML		
	comp=E,3830µm,0.5s						
PP3	**Marolino**	**0.20**	**227**	P	**Pg**	**17 17 49.4**	**-0.6**
PP3				S	**Sg**	**17 17 53.3**	**+0.6**
PCRO	**Pietralacroce**	**0.22**	**296**	P	**Pg**	**17 17 50.3**	**-0.2**
CIMA	**Civitanova Mar**	**0.23**	**206**	P	**Pg**	**17 17 50.5**	**0.0**
CIMA				S	**Sg**	**17 17 55.5**	**+1.9**
CADA	**Capodarco di F**	**0.32**	**186**	P	**Pg**	**17 17 52.0**	**-0.2**
CADA				S	**Sb**	**17 17 58.0**	**-1.2**
CADA				AML	AML		
	comp=E,4690µm,0.5s						
CADA				AML	AML		
	comp=N,2605µm,0.5s						
SENI	**Senigallia**	**0.46**	**295**	P	**Pb**	**17 17 55.2**	**-1.1**
EL6	**Elcito**	**0.55**	**251**	P	**Pg**	**17 17 55.6**	**-0.9**
EL6				S	**Sb**	**17 18 04.3**	**-1.5**
OFFI	**Offida**	**0.58**	**189**	P	**Pb**	**17 17 57.9**	**-0.5**
OFFI				AML	AML		
	comp=E,1076µm,0.8s						
OFFI				AML	AML		
	comp=N,1240µm,1.0s						
OFFI				AML	AML		
	comp=N,1240µm,1.0s						
COR1	**Corinaldo**	**0.60**	**282**	P	**Pb**	**17 17 57.7**	**-1.0**
CSP1	**Cessapalombo**	**0.61**	**226**	P	**Pg**	**17 17 56.9**	**-0.8**
CSP1				AML	AML		
	comp=E,442µm,0.7s						
CSP1				AML	AML		
	comp=N,500µm,0.9s						
ARVD	**Arcevia**	**0.63**	**269**	P	**Pg**	**17 17 57.6**	**-0.5**
ARVD				S	**Sb**	**17 18 07.1**	**-1.1**
ARVD				AML	AML		
	comp=N,210µm,1.4s						
ARVD				AML	AML		
	comp=E,178µm,1.6s						
SNTG	**Esanatoglia**	**0.68**	**248**	P	**Pg**	**17 17 57.9**	**-1.2**
SNTG				S	**Sb**	**17 18 08.9**	**-0.8**
SNTG				AML	AML		
	comp=E,240µm,1.6s						
SNTG				AML	AML		
	comp=E,241µm,1.6s						
SNTG				AML	AML		
	comp=N,394µm,0.5s						
TRTR	**Tortoreto Alta**	**0.71**	**174**	P	**Pb**	**17 18 00.6**	**0.0**
FDMO	**Fiordimonte**	**0.71**	**228**	P	**Pg**	**17 17 58.3**	**-1.3**
FDMO				S	**Sb**	**17 18 10.3**	**-0.2**
FDMO				AML	AML		
	comp=E,528µm,0.3s						
FDMO				AML	AML		
	comp=N,261µm,0.2s						
FDMO				AML	AML		
	comp=N,260µm,0.2s						
MPAG	**Monte Paganucc**	**0.77**	**279**	P	**Pg**	**17 18 00.3**	**-0.5**
FRON	**Frontone**	**0.79**	**271**	P	**Pg**	**17 18 00.2**	**-0.9**
FRON				AML	AML		
	comp=N,330µm,1.0s						
FRON				AML	AML		
	comp=E,204µm,1.5s						
CESI	**CESI - Serrava**	**0.83**	**233**	P	**Pg**	**17 18 00.7**	**-1.3**
CESI				AML	AML		
	comp=N,221µm,0.7s						
CESI				AML	AML		
	comp=E,93µm,0.4s						
NRCA	**Norcia**	**0.85**	**217**	P	**Pg**	**17 18 00.6**	**-1.6**
NRCA				AML	AML		
	comp=E,480µm,0.2s						
NRCA				AML	AML		
	comp=N,458µm,1.4s						
NRCA				AML	AML		
	comp=N,459µm,1.4s						
NRCA				AML	AML		
	comp=E,480µm,0.2s						
NARO	**Abbazia di Nar**	**0.90**	**277**	P	**Pg**	**17 18 02.0**	**-1.2**
ATFO	**Monte Foce - G**	**0.91**	**261**	P	**Pb**	**17 18 03.2**	**-0.8**
ATFO				AML	AML		
	comp=E,306µm,0.6s						
ATFO				AML	AML		
	comp=N,576µm,0.5s						
ATFO				AML	AML		
	comp=E,307µm,0.6s						
ATFO				AML	AML		
	comp=N,577µm,0.5s						
SMA1	**SAN MARTINO**	**0.95**	**202**	P	**Pg**	**17 18 02.4**	**-1.8**
SMA1				AML	AML		
	comp=E,599µm,0.4s						
SMA1				AML	AML		
	comp=N,529µm,1.2s						
SMA1				AML	AML		
	comp=N,528µm,1.2s						
SMA1				AML	AML		
	comp=E,600µm,0.4s						
DUGI	**Dugi Otok**	**1.02**	**62**	*e*Pg	**Pn**	**17 18 06.3**	**-0.4**
DUGI				Sg	**Sn**	**17 18 23.3**	**+2.1**
LNSS	**Leonessa**	**1.07**	**212**	AML	AML		
	comp=E,502µm,0.4s						
LNSS				AML	AML		
	comp=N,526µm,0.4s						
LNSS				AML	AML		
	comp=E,502µm,0.4s						
LNSS				AML	AML		
	comp=N,526µm,0.4s						
BADI	**Badiali**	**1.14**	**270**	P	**Pb**	**17 18 07.0**	**-0.9**
BADI				AML	AML		
	comp=E,168µm,1.2s						
BADI				AML	AML		
	comp=N,321µm,0.5s						
BADI				AML	AML		
	comp=N,322µm,0.5s						
BADI				AML	AML		
	comp=E,169µm,1.2s						
FAGN	**Fagnano**	**1.26**	**188**	P	**Pg**	**17 18 09.8**	**-0.3**
FAGN				AML	AML		
	comp=E,780µm,0.5s						
FAGN				AML	AML		
	comp=N,533µm,0.4s						
FAGN				AML	AML		
	comp=N,534µm,0.4s						
FAGN				AML	AML		
	comp=E,780µm,0.5s						
NVLJ	**Novalja**	**1.30**	**36**	*i* Pg	**Pg**	**17 18 10.3**	**-0.6**
NVLJ				Sg	**Sn**	**17 18 29.4**	**+1.4**
ZIRJ	**Zirje**	**1.34**	**83**	*e*Pn	**Pg**	**17 18 11.0**	**-0.7**
ZIRJ				Sn	**Sg**	**17 18 30.8**	**+1.6**
CAFR	**Castel Frentan**	**1.34**	**163**	P	**Pg**	**17 18 11.3**	**-0.5**
MORI	**Morici**	**1.42**	**75**	*e*Pn	**Pg**	**17 18 12.7**	**-0.6**
MORI				Sn	**Sg**	**17 18 33.2**	**+1.5**
INTR	**Introdacqua**	**1.50**	**177**	P	**Pb**	**17 18 13.1**	**-1.0**
INTR				AML	AML		
	comp=E,373µm,1.2s						
INTR				AML	AML		
	comp=N,405µm,1.1s						
OZLJ	**Ozalj**	**2.41**	**29**	*e*Pn	**Pb**	**17 18 26.9**	**-2.7**
RICI	**Ricice**	**2.42**	**89**	*e*Pn	**Pn**	**17 18 26.9**	**+1.1**
RICI				Sn	**Sb**	**17 18 57.9**	**-1.9**
STON	**Ston**	**2.92**	**101**	*e*Pn	**Pn**	**17 18 32.8**	**+0.2**
STON				Sn	**Sn**	**17 19 08.1**	**+0.2**
MAGA	**Magasa**	**3.20**	**316**	AML	AML		
	comp=E,130µm,1.4s						
MAGA				AML	AML		
	comp=N,107µm,0.3s						
ABTA	**Abfaltersbach**	**3.36**	**345**	*e*Pn	**Pn**	**17 18 39.7**	**+0.9**
	comp=N,0.5nm,0.1s						
MCEL	**Monticello**	**3.52**	**154**	AML	AML		
	comp=N,76µm,1.6s						
MCEL				AML	AML		
	comp=E,76µm,1.6s						
RISI	**Rein**	**3.65**	**341**	AML	AML		
	comp=E,42µm,1.2s						
RISI				AML	AML		
	comp=N,44µm,1.1s						
WTTA	**Wattenberg**	**4.05**	**339**	*e*Pn	**Pn**	**17 18 49.9**	**+1.5**
	comp=N,0.9nm,0.3s						
FETA	**Feichten**	**4.13**	**329**	*e*Pn	**Pn**	**17 18 51.2**	**+1.8**
	comp=N,0.4nm,0.3s						
WATA	**Walderalm**	**4.13**	**338**	*e*Pn	**Pn**	**17 18 51.6**	**+2.1**
	comp=N,1.2nm,0.2s,SNR=4.7						
MOTA	**Moosalm**	**4.28**	**335**	*e*Pn	**Pn**	**17 18 53.3**	**+1.8**
	comp=N,0.9nm,0.2s						
MOA	**Molln**	**4.35**	**4**	*e*Pn	**Pn**	**17 18 53.9**	**+1.5**
	comp=N,0.4nm,0.3s						
RETA	**Reutte**	**4.51**	**333**	*i* Pn	**Pn**	**17 18 57.1**	**+2.4**
	comp=N,1.0nm,0.3s						
CONA	**Conrad Observa**	**4.64**	**17**	*e*Pn	**Pn**	**17 18 57.2**	**+0.7**
	comp=N,0.6nm,0.3s						

PGC 23 17:18:51.1±14.0**,50°.74N**×**138°.98W,h10**^{km}**,MLSn3.4**/3**,Mw4.1**/3**,564km Wsw of Sandspit, Bc West Of Vancouver Island,West of Vancouver Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VIB	**Van Inlet**	**4.71**	**55**	Pn	Pn	17 20 01.7	-0.5
VIB				Sn	Sn	17 20 53.0	-3.9
DIB	**Dawson Inlet,**	**4.72**	**56**	Pn	Pn	17 20 01.5	-0.8
DIB				Sn	Sn	17 20 53.4	-3.6
BNB	**Barry Inlet**	**4.86**	**65**	Pn	Pn	17 20 03.7	-0.6
PNL	**Peninsula**	**8.96**	**359**	Pn	Pn	17 21 01.9	+1.6
PCA	**Pinnacle**	**9.41**	**356**	Pn	Pn	17 21 08.0	+1.4
YUK7	**Dusty Glacier**	**9.83**	**2**	Pn	Pn	17 21 15.6	+3.1
GRNC	**Granite Creek**	**10.14**	**352**	Pn	Pn	17 21 17.2	+0.5
WHY	**Whitehorse**	**10.21**	**11**	Pn	Pn	17 21 21.0	+3.4
YUK6	**Outpost Mounta**	**10.24**	**2**	Pn	Pn	17 21 21.3	+3.2
CTGM	**Chitina Glacie**	**10.34**	**354**	Pn	Pn	17 21 20.4	+1.0
KIAG	**Kiagna River**	**10.38**	**351**	Pn	Pn	17 21 20.4	+0.3
YUK5	**Granite Creek**	**10.44**	**3**	Pn	Pn	17 21 23.9	+3.1
BALM	**Baldy**	**10.49**	**351**	Pn	Pn	17 21 23.0	+1.4
PTPK	**Patty Peak**	**10.65**	**351**	Pn	Pn	17 21 25.4	+1.7
YUK3	**Moose Creek**	**11.10**	**356**	Pn	Pn	17 21 32.9	+3.0
YUK1	**Sand Pete Hill**	**11.48**	**356**	Pn	Pn	17 21 37.7	+2.7
DAWY	**Dawson**	**13.37**	**359**	Pn	Pn	17 22 03.8	+3.1

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*IDC **23** 17:20:01.3±8.3,24°.16S×177°.42W,h170^{km}±76^{km},mb3.4/5,mb1 3.7/6,mb1mx3.4/21,mbtmp3.9/6,Error ellipse: s-maj=54.0km s-min=27.0km az=163.0*

ISC 23 17:20:03.9±1.0**,24°.3S**±0°.1×**177°.4W**±0°.2**,h200**^{km}**,n9,**σ**1^{s}28**/12**,mb3.5**/5**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**14.66**	**197**	P	**P**	**17 23 24.3**	**+1.4**
	0.3nm,0.3s,baz=27,slow=11,SNR=1.7						
URZ				S	**S**	**17 26 03.0**	**-1.7**
	0.6nm,0.3s,baz=257,slow=20,SNR=1.4						
ASAR	**Alice Springs**	**44.32**	**260**	P	**P**	**17 27 54.7**	**+0.3**
	0.6nm,0.6s,baz=94,slow=7.9,SNR=22						
ASAR				PcP	**PcP**	**17 29 35.8**	**+0.8**
	0.6nm,0.5s,baz=110,slow=3.9,SNR=12						
WRA	**Warramunga Arr**	**44.76**	**266**	P	**P**	**17 27 57.6**	**-0.3**
	1.4nm,0.4s,baz=91,slow=8.4,SNR=55						
WRA				PcP	**PcP**	**17 29 37.5**	**+1.0**
	0.6nm,0.6s,baz=95,slow=3.5,SNR=5.4						
NVAR	**Mina Array Bea**	**83.42**	**43**	P	**P**	**17 32 09.2**	**0.0**
	0.6nm,0.6s,baz=216,slow=8.3,SNR=6.3						
ILAR	**Eielson Array**	**91.91**	**13**	P	**P**	**17 32 49.2**	**+0.3**
	0.6nm,1.0s,baz=228,slow=5.9,SNR=4.6						
CMAR	**Chiang Mai Arr**	**91.92**	**289**	P	**P**	**17 32 50.9**	**+0.8**
	0.4nm,0.8s,baz=135,slow=2.6,SNR=4.6						
FINES	**FINESS Array B**	**139.59**	**343**	PKP	**PKiKP**	**17 39 08.9**	**-0.5**
	1.4nm,0.8s,baz=90,slow=2.8,SNR=6.3						
AKASG	**Malin Array Be**	**146.60**	**329**	PKPbc	**PKPab**	**17 39 20.5**	**-2.6**
	1.4nm,0.4s,baz=43,slow=4.3,SNR=18						
BRTR	**Keskin Array B**	**149.73**	**308**	PKPbc	**PKiKP**	**17 39 30.6**	**-0.6**
	0.8nm,0.7s,baz=126,slow=2.5,SNR=6.1						

IDC 23 17:32:14.9±2.3**,7°.29S**×**118°.90E,h0**^{km}**,mb3.1**/2**,mb1 3.4**/3**,mb1mx3.1**/39**,mbtmp3.2**/3**,ML3.4**/1**,Error ellipse: s-maj=177.9km s-min=16.5km az=48.0,Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.55**	**132**	P	Pn	17 36 45.3	-0.3
	0.1nm,0.3s,baz=304,slow=12,SNR=3.7						
WRA				S	S	17 40 26.1	-0.2
	0.1nm,0.3s,baz=356,slow=12,SNR=1.3						
ASAR	**Alice Springs**	**21.74**	**140**	P	P	17 37 08.4	+0.3
	0.1nm,0.5s,baz=314,slow=8.5,SNR=6.2						
MKAR	**Makanchi Array**	**62.90**	**333**	P	P	17 42 42.8	-0.2
	0.3nm,0.4s,baz=155,slow=6.0,SNR=9.1						

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*TAP **23** 17:37:43.5,24°.78N×122°.35E,h14^{km},ML3.0,C*

*JMA **23** 17:37:43.4,24°.74N×122°.36E,h38^{km}±3^{km},M2.1*

ISC 23 17:37:43.0±0.9**,24°.77N**±0°.03×**122°.36E**±0°.02**,h22**^{km}±7^{km}**,n77,**σ**0^{s}68**/116**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.30**	**223**	*i* P	**Pb**	**17 37 49.9**	**+0.1**
	baz=221						
EOS1				*e*S	**Sb**	**17 37 55.2**	**+0.8**
	baz=221						
TWB1	**Santiao Chiao**	**0.41**	**305**	P	**Pb**	**17 37 50.8**	**-0.7**
	baz=305						
TWB1				*e*S	**Sb**	**17 37 56.6**	**-0.7**
	baz=305						
NTC	**Toucheng**	**0.48**	**280**	P	**Pb**	**17 37 52.7**	**-0.1**
	baz=279						
NTC				S	**Sb**	**17 37 59.6**	**+0.1**
	baz=279						
TWC	**Suao**	**0.49**	**251**	P	**Pb**	**17 37 52.2**	**-0.7**
	baz=249						
TWC				S	**Sb**	**17 37 59.6**	**-0.1**
	baz=249						
TIPB	**Shuangxi**	**0.52**	**292**	P	**Pb**	**17 37 53.2**	**-0.3**
	baz=292						
TIPB				*e*S	**Sb**	**17 38 01.4**	**+0.7**
	baz=292						
ILA	**Ilan**	**0.55**	**269**	*e*P	**Pb**	**17 37 53.3**	**-0.7**
	baz=268						
NWF	**Wu-fen Shan**	**0.60**	**300**	P	**Pb**	**17 37 55.3**	**+0.4**
	baz=299						
NWF				*e*S	**Sb**	**17 38 03.0**	**0.0**
	baz=299						
WFSB	**Wu-fen Shan**	**0.60**	**300**	*e*P	**Pb**	**17 37 55.3**	**+0.5**
	baz=299						
WFSB				*e*S	**Sb**	**17 38 03.0**	**+0.1**
	baz=299						
JYNG	**Yonagunijimaku**	**0.63**	**121**	P	**Pb**	**17 37 55.2**	**-0.1**
JYNG				S	**Sb**	**17 38 04.4**	**+0.7**
SLBB	**Yuanshan**	**0.65**	**268**	*e*P	**Pb**	**17 37 55.1**	**-0.7**
	baz=267						
ENA	**Nanau**	**0.66**	**238**	P	**Pb**	**17 37 55.5**	**-0.3**
	baz=237						
ENA				*e*S	**Sb**	**17 38 04.0**	**-0.5**
	baz=237						
YOJ	**Yonaguni jima**	**0.67**	**117**	*i* P	**Pb**	**17 37 56.1**	**0.0**
	baz=117						
YOJ				*i* S	**Sb**	**17 38 05.4**	**+0.4**
	baz=117						
YOJ	**Yonaguni jima**	**0.67**	**117**	P	**Pb**	**17 37 56.1**	**0.0**
YOJ				*e*S	**Sb**	**17 38 05.1**	**+0.1**
ENTT	**Nioudou**	**0.73**	**260**	P	**Pb**	**17 37 56.8**	**-0.2**
	baz=258						
ENTT				*e*S	**Sb**	**17 38 06.5**	**-0.1**
	baz=258						
TWA	**Mucha**	**0.73**	**287**	*e*P	**Pb**	**17 37 57.5**	**+0.5**
	baz=286						
TWA				*e*S	**Sb**	**17 38 06.9**	**+0.3**
	baz=286						
NWLT	**Wulai**	**0.78**	**270**	P	**Pb**	**17 37 57.8**	**0.0**
	baz=269						
NWLT				*e*S	**Sb**	**17 38 07.9**	**0.0**
	baz=269						
NHDH	**Xindian Distri**	**0.78**	**284**	P	**Pb**	**17 37 58.5**	**+0.7**
	baz=283						
NHDH				*e*S	**Sb**	**17 38 08.8**	**+0.8**
	baz=283						
NDT	**Datong Townshi**	**0.78**	**258**	P	**Pb**	**17 37 58.0**	**+0.1**
	baz=257						
NDT				S	**Sb**	**17 38 08.6**	**+0.4**
	baz=257						
YM01	**YM01**	**0.80**	**298**	*e*P	**Pb**	**17 37 58.4**	**+0.1**
	baz=297						
YM01				*e*S	**Sb**	**17 38 09.5**	**+0.7**
	baz=297						
YM08	**YM08**	**0.81**	**301**	*e*P	**Pb**	**17 37 58.1**	**-0.3**
	baz=300						
YM08				*e*S	**Sb**	**17 38 08.8**	**-0.1**
	baz=300						
YM11	**YM11**	**0.81**	**299**	*e*P	**Pb**	**17 37 58.8**	**+0.4**
	baz=298						
YM11				*e*S	**Sb**	**17 38 08.9**	**0.0**
	baz=298						
TATO	**Taipei**	**0.81**	**284**	*e*P	**Pb**	**17 37 58.6**	**+0.1**
	baz=284						
TATO				*e*S	**Sb**	**17 38 09.6**	**+0.6**
	baz=284						
YM05	**YM05**	**0.81**	**299**	P	**Pb**	**17 37 58.5**	**0.0**
	baz=298						
YM05				S	**Sb**	**17 38 09.4**	**+0.3**
	baz=298						
YM10	**YM10**	**0.81**	**298**	P	**Pb**	**17 37 58.5**	**0.0**
	baz=297						
YM10				*e*S	**Sb**	**17 38 09.5**	**+0.4**
	baz=297						
YM04	**YM04**	**0.83**	**297**	P	**Pb**	**17 37 58.8**	**0.0**
	baz=296						

YM04				*e*S	Sb	17 38 09.7	0.0
	baz=296						
YM03	YM03	0.84	299	*e*P	Pb	17 37 59.3	+0.3
	baz=298						
YM03				*e*S	Sb	17 38 10.0	+0.1
	baz=298						
TWY	Chenhua	0.85	306	*e*P	Pb	17 37 59.7	+0.7
	baz=306						
TWY				*e*S	Sb	17 38 10.9	+0.9
	baz=306						
ANP	Anpu	0.86	299	*e*P	Pb	17 37 59.4	+0.1
	baz=298						
ANP				*e*S	Sb	17 38 10.2	-0.3
	baz=298						
PCYT	Pengchaiyu	0.89	343	*e*P	Pn	17 38 00.4	+0.2
	baz=343						
YHNB	Yeheng	0.90	264	*e*P	Pb	17 37 59.7	-0.2
	baz=263						
YHNB				*e*S	Sb	17 38 11.3	-0.1
	baz=263						
NSK	Sanguang	0.91	264	*e*P	Pn	17 38 00.1	-0.4
	baz=263						
NSK				*e*S	Sb	17 38 11.6	-0.3
	baz=263						
TWS1	Kuangyinshan	0.91	291	*e*P	Pn	17 38 00.6	+0.1
	baz=291						
TWS1				*e*S	Sb	17 38 12.2	+0.4
	baz=291						
NACB	Ninganchiao	0.91	229	*i* P	Pn	17 37 59.9	-0.7
	baz=228						
NACB				*i* S	Sb	17 38 12.1	+0.2
	baz=228						
NNSB	Datong	0.95	249	P	Pn	17 38 00.6	-0.5
	baz=248						
NNSB				*e*S	Sb	17 38 13.5	+0.5
	baz=248						
NNSH	Datong	0.95	249	*e*P	Pn	17 38 00.6	-0.5
	baz=248						
NNSH				*e*S	Sb	17 38 13.3	+0.3
	baz=248						
NNS	Nan Shan	0.95	250	*e*P	Pn	17 38 01.1	-0.1
	baz=248						
NNS				*e*S	Sb	17 38 13.7	+0.5
	baz=248						
ETLH	Xiulin Townshi	0.97	235	*e*P	Pn	17 38 01.2	-0.2
	baz=234						
ETLH				*e*S	Sb	17 38 13.4	-0.3
	baz=234						
TWD	Chiawan	0.98	225	P	Pn	17 38 01.1	-0.2
	baz=224						
TWD				*e*S	Sb	17 38 13.8	+0.1
	baz=224						
WHF	Hehuan Shan	1.17	238	P	Pb	17 38 05.1	+0.2
	baz=237						
WHF				*e*S	Sn	17 38 19.4	-0.6
	baz=237						
TWT	Tachien	1.19	244	*e*P	Pb	17 38 06.0	+1.0
	baz=244						
TWT				*e*S	Sb	17 38 21.1	+1.0
	baz=244						
TDCB	Techi	1.21	245	*e*P	Pb	17 38 05.8	+0.6
	baz=244						
LIOB	Emei	1.22	264	*e*P	Pb	17 38 05.6	+0.1
	baz=263						
NSTT	Nanjuang	1.24	264	*e*P	Pb	17 38 05.7	0.0
	baz=263						
ESL	Shilin	1.27	222	*e*P	Pb	17 38 06.7	+0.4
	baz=220						
CHGB	Renai	1.29	237	*e*P	Pb	17 38 07.4	+0.7
	baz=236						
IRIF	Iriomote-Funau	1.33	109	P	Pn	17 38 05.3	-0.9
OWD	Renai	1.35	233	*e*P	Pb	17 38 08.2	+0.5
	baz=232						
WHP	Taichung City	1.38	249	*e*P	Pb	17 38 09.0	+0.9
	baz=248						
EGFH	Guangfu	1.39	218	*e*P	Pb	17 38 09.0	+0.8
	baz=217						
NMLH	Miaoli	1.44	261	*e*P	Pb	17 38 09.5	+0.3
	baz=260						
DPDB	Guoxing	1.50	241	*e*P	Pb	17 38 11.5	+1.4
	baz=240						
VWDT	VWDT	1.50	228	*e*P	Pb	17 38 10.6	+0.4
	baz=227						
HGSD	Ruisui	1.53	214	*e*P	Pb	17 38 10.4	-0.4
	baz=213						
EHY	Hungye	1.58	217	*e*P	Pn	17 38 09.7	0.0
	baz=216						
SMLT	Sun Moon Lake	1.60	237	*e*P	Pb	17 38 12.8	+0.9
	baz=235						
JKRS	Kuro-shima	1.60	109	P	Pn	17 38 10.6	+0.7
JKRS				*e*S	Sn	17 38 29.2	-0.7
SSLB	Suanglung	1.61	233	*e*P	Pb	17 38 12.6	+0.5
	baz=232						
TYC	Yuchr	1.62	238	*e*P	Pb	17 38 13.2	+1.0
	baz=237						
JIJ	Ishigaki jima	1.68	104	P	Pn	17 38 11.0	0.0
JIJ				S	Sn	17 38 30.8	-1.1
YULB	Yu-li	1.68	215	*e*P	Pn	17 38 11.5	+0.4
	baz=214						
TWF1	Yuli	1.71	215	*e*P	Pn	17 38 12.5	+1.0
	baz=213						
WHYT	Xinyi Township	1.74	232	*e*P	Pb	17 38 14.9	+0.6
	baz=231						
JISG	Ishigakijimahi	1.79	96	P	Pn	17 38 13.5	+1.0
FULB	Fuli	1.84	212	*e*P	Pn	17 38 14.1	+0.8
	baz=211						
ALS	Alishan	1.89	229	*e*P	Pb	17 38 16.9	-0.1
	baz=227						
WDLH	Douliu	1.98	237	*e*P	Pb	17 38 18.3	0.0
	baz=236						
ELDTW	Lidau	2.00	218	*e*P	Pn	17 38 16.5	+1.0
	baz=217						
CHN4	Tsaushan	2.14	229	*e*P	Pb	17 38 21.0	-0.2
	baz=228						
TPUB	Ta-pu	2.15	227	*e*P	Pb	17 38 20.7	-0.6
	baz=226						
STYT	Tauyuan	2.17	223	*e*P	Pn	17 38 19.7	+1.8
	baz=221						
WTP	Ta-pu	2.20	227	*e*P	Pb	17 38 20.8	-1.3
	baz=225						
TWK	Hsinying	2.27	229	*e*P	Pb	17 38 22.4	-1.0
	baz=228						
SNST	Tainan City	2.30	228	*e*P	Pb	17 38 21.9	-1.9
	baz=227						
SGST	Jiashian	2.34	224	*e*P	Pn	17 38 21.2	+1.1
	baz=223						
SLGT	Liugui	2.36	222	*e*P	Pb	17 38 23.8	-1.1
	baz=221						
MASBT	Mashibuluo	2.67	217	*e*P	Pb	17 38 27.8	-2.3
	baz=216						
EAST	Anshuo	2.75	210	*e*P	Pn	17 38 28.2	+2.3
	baz=209						

NNC ***23*** *17:46:12.2±2.2, 36°.75N×70°.17E, h0^{km}, mb4.8, mpv4.8, Error ellipse: s-maj=21.9km s-min=11.8km az=159.0*

BJI ***23*** *17:46:15.7±0.0, 36°.59N×70°.46E, h191^{km}, mB4.5/12, mb4.1/18*

MOS ***23*** *17:46:16.1±0.7, 36°.48N×70°.45E, h213^{km}, mb4.2/23, Error ellipse: s-maj=8.3km s-min=4.5km az=82.7*

NEIC ***23*** *17:46:17.1±2.4, 36°.48N±0°.05×70°.41E±0°.07, h213^{km}±6^{km}, mb4.3/50, Error ellipse: s-maj=9.9km s-min=5.6km az=52.0*

IDC ***23*** *17:46:17.4±0.8, 36°.32N×70°.38E, h219^{km}±7^{km}, mb3.7/24, mb1 3.8/30, mb1mx3.6/58, mbtmp4.3/30, Error ellipse: s-maj=10.1km s-min=8.6km az=18.0*

ISC 23 17:46:16.5±0.4**, 36°.43N**±0°.04×**70°.44E**±0°.04**, h206**^{km}±4^{km}**, h206**^{km}**:pP-P, n214,** σ1^{s}**68**/239**, mb4.2**/68**, 15C-17D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.21	212	PN	Pn	17 46 59.2	+1.3
KBL				S	S	17 47 30.7	+1.1
KBL	Kabul	2.21	212		Pn	17 46 59.2	+1.3
KBL				S	S	17 47 30.7	+1.1
CEP	Cherat	2.87	155	P	Pn	17 47 06.4	+1.2
CEP				S	S	17 47 43.0	+0.4
CHCP	Chirah Chowk	3.61	139	P	Pn	17 47 15.0	+1.2
NIL	Nilore	3.61	139	PN	Pn	17 47 15.9	+2.1
NIL	Nilore	3.61	139		Pn	17 47 15.9	+2.1
THW	Thamme Wali	3.79	163	P	Pn	17 47 16.8	+0.8
SARP	Sargodha	4.87	157	P	Pn	17 47 29.9	+0.5
TAS	Tashkent	4.96	350	PN	Pn	17 47 30.5	-0.1
TAS	Tashkent	4.96	350		Pn	17 47 30.5	-0.1
JMU	Jammu	5.22	134	*e*x	Pn	17 47 37.5	+3.6
JMU				*e*x	S	17 48 26.5	-8.2
ARSB	Arslanbob	5.27	21	PN	Pn	17 47 34.0	-0.6
ARSB	Arslanbob	5.27	21		Pn	17 47 34.0	-0.6
KSH	Kashi	5.35	53	P	Pn	17 47 30.5	-5.0
KSH				S	S	17 48 24.9	-13
KSH				smax	smax		
	comp=N,350nm,0.7s						
KSH				smax	smax		
	comp=E,420nm,1.2s						
AML	Almayashu	6.22	23	P	Pn	17 47 46.3	-0.7
	SNR=690						
DHRM	DHARAMSHALA	6.39	129	*e*P	Pn	17 47 49.4	+0.2
DHRM				*e*S	S	17 49 00.4	-2.0
DHRM				IAML		17 49 01.6	
	comp=N,608nm,0.7s						
DHRM				IAML		17 49 02.6	
	comp=E,932nm,0.4s						
UCH	Uchtor	6.59	27	P	Pn	17 47 51.2	-0.7
	SNR=305						
KK31	Karatay Array	6.66	0	⇑P	Pn	17 47 48.7	-3.6
	comp=E,5.8nm,0.3s,baz=185,slow=12,SNR=234						
KK31				⇑S	S	17 49 02.1	-6.2
	comp=E,12nm,0.4s,baz=188,slow=16,SNR=8.3						
KK31	Karatay Array	6.66	0	PN	Pn	17 47 51.6	-0.7
KK31	Karatay Array	6.66	0		Pn	17 47 51.6	-0.7
KKAR	Karatay Array	6.66	0	PN	Pn	17 47 51.7	-0.6
KKAR	Karatay Array	6.66	0		Pn	17 47 51.7	-0.6
EKS2	Erkin-Say	6.73	21	P	Pn	17 47 52.9	-0.5
	SNR=61						
KZA	Kyzart	6.76	32	P	Pn	17 47 52.9	-1.0
	SNR=32						
AAK	Ala-Archa	6.94	26	P	Pn	17 47 55.9	-0.2
	comp=E,14nm,0.3s,baz=193,slow=7.4,SNR=185						
AAK				S	S	17 49 12.2	-2.9
	comp=E,11nm,0.3s,baz=100,slow=20,SNR=15						
AAK	Ala-Archa	6.94	26	P	Pn	17 47 55.6	-0.5
	SNR=75						
AAK	Ala-Archa	6.94	26	⇓P	Pn	17 47 52.8	-3.3
	comp=E,25nm,0.4s						
AAK				⇑S	S	17 49 11.4	-3.7
	comp=E,98nm,0.8s						
AAK	Ala-Archa	6.94	26*d*	*i*PN	Pn	17 47 55.4	-0.7
AAK				pmax	pmax		
	comp=Z,33nm,0.6s						
HRA	Herat	7.00	255		Pn	17 47 58.0	+1.1
BHK	Bhakra	7.05	133	*e*PN	Pn	17 47 56.4	-1.1
BHK				*e*SN	S	17 49 16.0	-1.6
KBK	Karagaybulak	7.12	28	P	Pn	17 47 58.3	-0.2
	SNR=63						
FRU1	Bishkek	7.14	26	PN	Pn	17 47 58.5	-0.1
FRU1	Bishkek	7.14	26		Pn	17 47 58.5	-0.1
ULHL	Ulahol	7.34	36	P	Pn	17 48 00.2	-1.1
	SNR=60						
CHMS	Chumysh	7.35	26	P	Pn	17 48 00.4	-0.9
	SNR=56						
CHMS	Chumysh	7.35	26	⇓P	Pn	17 48 00.0	-1.2
	comp=Z,52nm,0.7s						
CHMS				⇑S	S	17 49 19.1	-5.5
	comp=Z,46nm,0.7s						
BOOM	Boomskoye usch	7.39	33	PN	Pn	17 48 02.0	0.0
BOOM	Boomskoye usch	7.39	33	Pn	Pn	17 48 02.0	0.0
USP	Ospenovka	7.50	23	P	Pn	17 48 01.6	-1.7
	SNR=15						
SMLA	Simla	7.70	131	*e*P	Pn	17 48 05.6	-0.3
SMLA				*e*S	S	17 49 28.3	-4.7
SMLA				IAML		17 49 33.2	
	comp=N,215nm,0.2s						
SMLA				IAML		17 49 33.2	
	comp=E,315nm,0.6s						
MDOK	Medeo	8.43	35	⇑P	Pn	17 48 14.8	-0.5
	comp=E,43nm,0.6s						
MDOK	Medeo	8.43	35	PN	Pn	17 48 14.8	-0.5
KNDC	Almaty	8.43	35	⇓P	Pn	17 48 15.3	0.0
	comp=E,150nm,0.8s						
KNDC	Almaty	8.43	35	PN	Pn	17 48 15.3	0.0
JOSI	Joshimath	9.61	125	*e*P	Pn	17 48 30.4	-0.4
JOSI				IAML		17 50 19.7	
	comp=N,146nm,0.7s						
NDI	New Delhi	9.61	142	*e*P	Pn	17 48 29.0	-1.7
NDI				*e*S	S	17 50 11.0	-7.5
PDGK	Podgornoye	9.78	42	⇓P	Pn	17 48 31.2	-1.7
	comp=N,19nm,0.7s						
PDGK				⇓S	S	17 50 24.0	+1.5
	comp=N,23nm,1.1s						
PDGK	Podgornoye	9.78	42	P	Pn	17 48 31.2	-1.7
PDGK				S	S	17 50 24.4	+1.9
GEYT	Alibeck	9.95	282	P	Pn	17 48 33.4	-1.5
	comp=N,2.0nm,0.3s,baz=99,slow=9.6,SNR=43						
GEYT				S	S	17 50 22.4	-4.0
	comp=N,1.4nm,0.3s,baz=216,slow=50,SNR=2.0						
GEYT	Alibeck	9.95	282		Pn	17 48 33.9	-1.1
GYA0B	ALIBECK ARRAY	9.95	282	⇓P	Pn	17 48 33.1	-1.8
GYA0B				⇑S	S	17 50 21.0	-5.4
GYA0B	ALIBECK ARRAY	9.95	282		Pn	17 48 33.9	-1.1
MAKZ	Makanchi	13.47	36	⇓P	P	17 49 23.1	+1.2
	comp=N,17nm,0.7s						
MAKZ	Makanchi	13.47	36	P	Pn	17 49 18.7	-0.8
MAKZ	Makanchi	13.47	36		Pn	17 49 18.7	-0.8
MK31	Makanchi Array	13.61	37	⇓P	P	17 49 23.6	+0.2
	comp=N,4.4nm,0.7s,baz=219,slow=11,SNR=78						
MK31	Makanchi Array	13.61	37	P	Pn	17 49 20.6	-0.7
MK31	Makanchi Array	13.61	37		Pn	17 49 20.6	-0.7
MKAR	Makanchi Array	13.61	37	P	Pn	17 49 21.2	-0.1
	comp=N,0.6nm,0.3s,baz=222,slow=14,SNR=34						
MKAR				S	S	17 51 55.9	+3.6
	baz=215,slow=19,SNR=2.0						
MKAR	Makanchi Array	13.61	37	*i* P	Pn	17 49 20.2	-1.1
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MKAR	Makanchi Array	13.61	37		Pn	17 49 20.3	-0.9
DANN	Dangsing	13.83	122	*e*P	Pn	17 49 23.3	-1.1
	comp=Z,51nm,0.4s						
GKN	Gorkha	14.65	121	*e*P	Pn	17 49 33.7	-0.7
	comp=Z,90nm,0.4s						
AB31	Akbulak array	14.93	332	⇓P	Pn	17 49 36.3	-1.1
	comp=Z,3.7nm,0.5s,baz=157,slow=12,SNR=131						
AB31				⇑S	S	17 52 23.8	+1.1
	comp=Z,3.9nm,0.8s,baz=150,slow=23,SNR=4.4						
AB31	Akbulak array	14.93	332	P	Pn	17 49 36.3	-1.1
AB31				S	S	17 52 23.8	+1.1
ABKAR	Akbulak array	14.93	332		Pn	17 49 35.6	-1.7
ABKAR	Akbulak array	14.93	332	P	Pn	17 49 36.5	-0.9
DMN	Daman	15.22	121	*e*P	Pn	17 49 40.8	-0.6
	comp=Z,53nm,0.5s						
KKN	Kakani	15.23	120	*e*P	Pn	17 49 41.1	-0.4
	comp=Z,52nm,0.4s						
KURBB	Kurchatov Arra	15.33	20	P	P	17 49 42.3	-0.1
	comp=Z,0.3nm,0.3s,baz=210,slow=10,SNR=10						
KURBB				S	S	17 52 33.4	+1.3
	comp=Z,0.0nm,0.3s,baz=202,slow=17,SNR=1.7						
KURK	Kurchatov	15.44	20	⇑P	P	17 49 46.4	+2.7
	comp=Z,5.7nm,1.2s						
KURK	Kurchatov	15.44	20⇓	*e*P	Pn	17 49 41.7	-1.9
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KURK	Kurchatov	15.44	20	P	Pn	17 49 42.5	-1.0
PKIN	Phulchoki	15.44	121	*e*P	Pn	17 49 43.7	-0.4
	comp=Z,47nm,0.6s						
PKI	Pulchoki	15.46	121	*e*P	Pn	17 49 43.7	-0.6
	comp=Z,52nm,0.5s						
GUN	Gumba	15.58	119	*e*P	P	17 49 45.2	-0.6
	comp=Z,25nm,0.3s						
JIRN	Jiri	15.95	119	*e*P	P	17 49 50.3	+0.4
	comp=Z,220nm,0.5s						
BVAR	Borovoye Array	16.59	360	P	Pn	17 49 57.1	-0.3
	comp=Z,0.7nm,0.3s,baz=163,slow=11,SNR=18						
AKTO	Aktyubinsk	16.62	331	P	Pn	17 49 57.9	+0.2
	comp=Z,1.5nm,0.3s,baz=143,slow=11,SNR=34						
AKTO				S	S	17 52 57.6	-2.1
	comp=Z,0.2nm,0.3s,baz=105,slow=18,SNR=3.5						
AKTO	Aktyubinsk	16.62	331	⇓P	Pn	17 50 01.3	+3.6
	comp=Z,8.3nm,0.7s						
AKTO				⇑S	S	17 53 04.1	+4.4
	comp=Z,20nm,1.5s						
BRVK	Borovoye	16.62	360⇑	*e*P	Pn	17 49 57.2	-0.5
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRVK	Borovoye	16.62	360	P	P	17 49 55.9	-0.7
WSAR	Wadi Sarin	16.65	221	P	P	17 49 56.3	-0.9
	comp=Z,1.0nm,0.3s,baz=58,slow=7.9,SNR=9.9						
RAMN	Ramite	16.67	120	*e*P	Pn	17 49 58.7	-0.1
	comp=Z,38nm,0.4s						
UOSS	Minazif	16.74	231	P	P	17 49 58.4	+0.2
UOSS				IAmb	IAmb	17 50 02.9	
	comp=Z,15nm,0.8s						
TAPN	Taplejung	17.22	117	*e*P	Pn	17 50 05.9	+0.6
	comp=Z,47nm,0.6s						
ODAN	Odare	17.28	119	*e*P	Pn	17 50 06.9	+0.9
	comp=Z,37nm,0.6s						
DGZ	Jazzator, Alta	18.11	38*c*	*i*P	Pn	17 50 14.3	-1.1
LSA	Lhasa	18.59	105	P	P	17 50 20.1	+1.2
LSA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LSA	Lhasa	18.59	105	P	P	17 50 20.1	+1.2
LSA				IAmb	IAmb	17 50 26.6	
	comp=Z,9.3nm,0.8s						
BTLR	Botlikh	19.65	296⇓	*e*P	P	17 50 30.9	+1.3
ZAA0	Zalesovo Array	20.16	25	P	P	17 50 35.1	+0.1
ZAA0				IAmb	IAmb	17 50 38.5	
	comp=Z,17nm,1.3s						
ZALV	Zalesovo Beam	20.16	25	P	P	17 50 34.8	-0.1
	comp=Z,5.3nm,0.4s,baz=219,slow=11,SNR=37						
ZALV				S	S	17 54 06.6	-3.0
	comp=Z,1.3nm,0.6s,baz=218,slow=14,SNR=3.9						
ZALV	Zalesovo Beam	20.16	25	P	P	17 50 35.0	+0.1
HYB	Hyderabad	20.26	157	*i* P	Pn	17 50 39.5	-1.8
GNI	Garni	20.48	288	P	P	17 50 41.1	+2.4
	comp=Z,10.0nm,0.9s,baz=4.1,slow=7.6,SNR=5.6						
SVE	Sverdlovsk	21.44	345	*e*P	P	17 50 48.9	+0.6
SVE				pmax	pmax		
	comp=Z,11nm,1.1s						
ARU	Arti	21.55	342	P	P	17 50 50.3	+0.9
	comp=Z,2.3nm,0.5s,baz=175,slow=9.1,SNR=13						
ARU	Arti	21.55	342*c*	*i*P	P	17 50 49.7	+0.3
ARU						17 51 30.5	
ARU				S	S	17 54 37.5	+3.3
ARU				pmax	pmax		
	comp=Z,20nm,1.1s						
ARU	Arti	21.55	342	P	P	17 50 49.4	-0.1
KBZ	Khabaz	22.23	298	P	P	17 50 59.9	+3.8
	comp=Z,1.4nm,0.9s,baz=141,slow=14,SNR=2.2						
KIV	Kislovodsk	22.42	298	*e*P	P	17 51 00.1	+2.1
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GTA	Gaotai	23.32	74	*e*P	P	17 51 07.6	+1.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
RAYN	Ar Rayn	25.06	246	P	P	17 51 22.8	+0.8
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
RAYN	Ar Rayn	25.06	246	P	P	17 51 22.8	+0.8
KIRV	Kirov	26.11	335	P	P	17 51 32.2	+1.3
	comp=Z,14nm,0.6s,baz=114,slow=4.8,SNR=7.8						
ZAK	Zakamensk	27.37	49	*e*P	P	17 51 44.0	+1.4
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TLY	Talaya	28.01	47	P	P	17 51 49.9	+1.8
	comp=Z,3.5nm,0.5s,baz=74,slow=14,SNR=3.6						
TLY	Talaya	28.01	47⇓	*e*P	P	17 51 49.3	+1.2
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM	Songino Array	28.74	55	P	P	17 51 56.3	+1.5
	comp=Z,2.6nm,0.8s,baz=259,slow=9.6,SNR=19						
SONM				pP	pP	17 52 39.7	+2.1
	comp=Z,1.2nm,0.8s,baz=253,slow=11,SNR=4.5						
SONM	Songino Array	28.74	55	P	P	17 51 56.0	+1.3
BRTR	Keskin Array B	29.02	288	P	P	17 51 58.4	+1.0
	comp=Z,0.4nm,0.7s,baz=96,slow=8.8,SNR=2.6						
BRTR				pP	pP	17 52 42.0	+2.7
	comp=Z,0.7nm,0.9s,baz=65,slow=5.9,SNR=3.3						
ULN	Ulaanbaatar	29.19	55⇑	*e*P	P	17 51 59.4	+0.7
ULN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ULN	Ulaanbaatar	29.19	55	P	P	17 51 58.7	0.0
PRGR	Permogore	29.65	336	*e*P	P	17 52 02.0	-0.4
PRGR				pmax	pmax		
	comp=Z,12nm,0.6s						
OBN	Obninsk	29.70	320	*e*P	P	17 52 03.0	+0.1
OBN				*e**PP	pP	17 52 43.4	-1.5
OBN				*e*		17 53 07.5	
OBN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CHTO	Chiang Mai	30.59	117	P	P	17 52 12.7	+1.5
CHTO				pmax	pmax		
	comp=Z,3.0nm,1.6s						
CMAR	Chiang Mai Arr	30.82	118	P	P	17 52 14.2	+0.9
	comp=Z,1.6nm,0.8s,baz=301,slow=8.3,SNR=12						
CMAR				pP	pP	17 52 57.2	+0.8
	comp=Z,0.4nm,0.3s,baz=310,slow=9.5,SNR=1.7						
CMAR	Chiang Mai Arr	30.82	118*c*	*e*P	P	17 52 14.6	+1.4
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KLMR	Klimovskoe	31.32	331	*e*P	P	17 52 13.8	-3.3
KLMR				pmax	pmax		
	comp=Z,27nm,2.1s						
KLMR	Klimovskoe	31.32	331	*e*P	P	17 52 13.9	-3.2
KLMR				AMP		17 52 15.6	
	comp=Z,27nm,2.1s						
XAN	Xi'an	31.39	83	P	P	17 52 19.1	+1.0
XAN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,55nm,5.2s						
AKASG	Malin Array Be	32.64	309	P	P	17 52 28.8	+0.1
	comp=Z,0.5nm,0.5s,baz=78,slow=8.6,SNR=1.7						
AKASG				pP	pP	17 53 14.6	+3.6
	comp=Z,0.5nm,0.5s,baz=88,slow=7.1,SNR=2.1						
AKASG	Malin Array Be	32.64	309	IAmb	IAmb	17 52 31.1	
	comp=Z,1.3nm,1.2s						
PBKT	Sadao Pong	33.51	118	P	P	17 52 38.2	+1.6
NRIK	Noril'sk	34.27	11	P	P	17 52 44.2	+1.6
	comp=Z,12nm,0.6s,baz=193,slow=5.2,SNR=14						
NRIK	Noril'sk	34.27	11	*i* P	P	17 52 43.7	+1.1
NRIK				pmax	pmax		
	comp=Z,14nm,0.7s						
BOD	Bodaibo	35.69	39	*e*P	P	17 52 54.4	-0.4
BOD				pmax	pmax		
	comp=Z,5.0nm,0.8s						
JOF	Joensuu	35.70	330	P	P	17 52 55.4	+0.5
JOF				pmax	pmax		
	comp=Z,9.0nm,2.1s						
FINES	FINESS Array B	37.29	326	P	P	17 53 08.9	+0.7
	comp=Z,4.2nm,0.7s,baz=94,slow=12,SNR=12						
FINES	FINESS Array B	37.29	326	P	P	17 53 09.0	+0.7
SUF	Sumiainen	37.74	328	P	P	17 53 12.6	+0.6
SUF				pmax	pmax		
	comp=Z,15nm,0.7s						
MSF	Maaselka	38.05	334	P	P	17 53 15.2	+0.6
MSF				pmax	pmax		
	comp=Z,15nm,2.4s						
OUL	Oulu	38.82	332	P	P	17 53 21.4	+0.4
SGF	Sodankyl	39.68	335	P	P	17 53 28.9	+0.9
KEV	Kevo	40.70	338	P	P	17 53 37.1	+0.7
KEV				pmax	pmax		
	comp=Z,18nm,1.1s						
KEV	Kevo	40.70	338	P	P	17 53 37.1	+0.7
ARCES	ARCESS Array B	41.03	338	P	P	17 53 40.0	+0.8
	comp=Z,8.2nm,0.6s,baz=111,slow=8.2,SNR=32						
ARE0	ARCESS Array S	41.03	338	P	P	17 53 40.3	+1.1
IPM	Ipoh	42.44	131	P	P	17 53 50.6	-0.6
IPM				IAmb	IAmb	17 53 52.3	
	comp=Z,8.5nm,0.8s						
PSI	Prapat	42.55	135	P	P	17 53 52.5	+0.2
	comp=Z,2.0nm,0.4s,baz=314,slow=9.6,SNR=4.3						
RPSI	Rantau Prapat	42.64	135	P	P	17 53 52.5	-0.3
GSI	Gunungsitoli	43.04	138	P	P	17 53 56.8	+0.8
GSI				IAmb	IAmb	17 53 58.3	
	comp=Z,9.7nm,0.9s						
NC602	NORSAR Array S	43.97	323	P	P	17 54 02.6	-0.3
NORES	NORESS Array B	43.97	323	P	P	17 54 03.1	+0.2
NORES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NC303	NORSAR Array S	44.11	323	P	P	17 54 04.8	+0.8
NB201	NORSAR Array S	44.12	323	P	P	17 54 04.4	+0.3
NB2	NORSAR Subarra	44.16	323	P	P	17 54 04.3	-0.2
	comp=Z,3.2nm,0.6s,baz=99,slow=7.9						
NOA	NORSAR Array B	44.16	323	P	P	17 54 04.5	0.0
	comp=Z,2.3nm,0.6s,baz=97,slow=7.8,SNR=13						
YAK	Yakutsk	44.28	35	*e*P	P	17 54 05.1	-0.2
YAK				pmax	pmax		
	comp=Z,15nm,0.8s						
YAK	Yakutsk	44.28	35	P	P	17 54 02.9	-2.4
NBO00	NORSAR Array S	44.37	323	P	P	17 54 06.0	-0.1
NC204	NORSAR Array S	44.40	323	P	P	17 54 05.7	-0.7
NC204				IAmb	IAmb	17 54 23.8	
	comp=Z,16nm,1.2s						
KSRS	Korea Array	45.33	71	P	P	17 54 14.1	+0.2
	comp=Z,1.0nm,0.8s,baz=273,slow=7.8,SNR=4.7						
KLR	Kul'dur	45.55	54	P	P	17 54 15.9	+0.5
	comp=Z,2.3nm,0.7s,baz=277,slow=8.1,SNR=8.3						

KLR	Kul'dur	45.55	54	*d i*P	P	17 54 16.0	+0.5
KLR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TIXI	Tiksi	46.00	22	P	P	17 54 19.0	+0.3
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TIXI	Tiksi	46.00	22	P	P	17 54 18.9	+0.3
YSS	Yuzh-Sakhalins	53.23	55	⇓*e*P	P	17 55 13.9	+0.4
YSS				pmax	pmax		
	comp=Z,13nm,1.0s						
MJAR	Matsushiro Arr	53.40	68	P	P	17 55 14.8	-0.2
	comp=Z,2.7nm,1.0s,baz=285,slow=11,SNR=6.4						
MJAR	Matsushiro Arr	53.40	68	IAmb	IAmb	17 55 15.6	
	comp=Z,1.3nm,0.8s						
DAG	Danmarks Havn	54.67	344	P	P	17 55 23.9	+0.4
DAG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SEY	Seymchan	54.72	34	⇓*e*P	P	17 55 25.2	+1.1
BILL	Bilibino	58.87	26	*e*P	P	17 55 53.1	0.0
BILL				*e*		17 56 41.2	
BILL				*e*		17 58 06.0	
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TOA0	Torodi Ar. Sit	65.26	268	P	P	17 56 34.4	-2.1
TOA0				IAmb	IAmb	17 56 51.5	
	comp=Z,4.8nm,1.2s						
TORD	Torodi Ar. Bea	65.26	268	P	P	17 56 34.4	-2.0
	comp=Z,2.0nm,0.6s,baz=48,slow=6.2,SNR=11						
TORD	Torodi Ar. Bea	65.26	268	P	P	17 56 34.1	-2.3
GAMB	Gambell	68.76	25	P	P	17 56 57.7	+0.1
ANM	Nome	70.27	22	P	P	17 57 08.2	+1.3
ANM				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ANM	Nome	70.27	22	P	P	17 57 08.2	+1.3
ANM				IAmb	IAmb	17 57 09.5	
	comp=Z,7.3nm,1.3s						
TOLK	Toolik Lake Re	71.10	14	P	P	17 57 12.5	+0.6
IMAR	Indian Mountai	72.37	17	P	P	17 57 19.1	-0.3
C36M	Paulatuk	73.99	5	P	P	17 57 28.5	-0.3
C36M				IAmb	IAmb	17 57 29.7	
	comp=Z,6.7nm,1.1s						
INK	Inuvik	74.04	9	P	P	17 57 29.9	+0.8
INK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
INK	Inuvik	74.04	9	P	P	17 57 29.9	+0.8
INK				IAmb	IAmb	17 57 31.2	
	comp=Z,7.6nm,1.1s						
DBIC	Dimbokro	74.24	267	P	P	17 57 29.9	-1.3
	comp=Z,2.3nm,0.5s,baz=26,slow=5.7,SNR=6.3						
DBIC	Dimbokro	74.24	267	P	P	17 57 29.1	-2.0
DBIC				IAmb	IAmb	17 57 31.8	
	comp=Z,11nm,1.4s						
LBTB	Lobatse	74.33	222	P	P	17 57 32.3	+0.8
LBTB				pmax	pmax		
	comp=Z,6.0nm,0.8s						
LBTB	Lobatse	74.33	222	P	P	17 57 32.3	+0.8
LBTB				IAmb	IAmb	17 57 33.2	
	comp=Z,5.7nm,0.8s						
KIC	Kosan Boka	74.33	266	*e*PKP2	P	17 57 31.7	0.0
	comp=Z,8.2nm,0.6s						
TIC	Toumodi	74.39	267	*e*PKP2	P	17 57 32.4	+0.3
LIC	Lamto	74.64	266	*e*PKP2	P	17 57 32.9	-0.6
	comp=Z,8.8nm,0.7s						
ILAR	Eielson Array	74.97	16	P	P	17 57 34.2	-0.3
	comp=Z,2.7nm,1.0s,baz=312,slow=4.4,SNR=20						
ILAR	Eielson Array	74.97	16	P	P	17 57 32.6	-1.9
KTH	Kantishna Hill	75.07	18	P	P	17 57 34.9	-0.3
KTH				IAmb	IAmb	17 57 36.8	
	comp=Z,9.7nm,1.0s						
FITZ	Fitzroy Crossi	75.22	126	P	P	17 57 34.5	-2.0
PPLA	Purkeypile	75.29	19	P	P	17 57 36.6	0.0
PPLA				IAmb	IAmb	17 57 50.7	
	comp=Z,7.2nm,1.2s						
KNRA	Kununurra	75.57	122	P	P	17 57 37.5	-1.1
RND	Reindeer	75.69	17	P	P	17 57 38.7	-0.1
RND				pmax	pmax		
	comp=Z,8.0nm,1.0s						
RND	Reindeer	75.69	17	P	P	17 57 38.7	-0.1
RND				IAmb	IAmb	17 57 39.1	
	comp=Z,8.2nm,1.0s						
SVW2	Sparrevohn	75.83	21	P	P	17 57 38.7	-0.9
SVW2				IAmb	IAmb	17 57 46.9	
	comp=Z,5.9nm,1.2s						
SKT	Skwentna	76.23	19	P	P	17 57 40.9	-0.9
SKT				IAmb	IAmb	17 57 43.1	
	comp=Z,9.7nm,1.1s						
SCRK	Sand Creek	76.28	15	P	P	17 57 41.9	-0.2
SCRK				IAmb	IAmb	17 57 43.4	
	comp=Z,5.2nm,1.0s						
DHY	Denali Highway	76.32	17	P	P	17 57 42.3	-0.1
DHY				IAmb	IAmb	17 57 44.0	
	comp=Z,4.3nm,0.7s						
PAX	Paxson	76.85	16	P	P	17 57 45.2	-0.1
PAX				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PAX	Paxson	76.85	16	P	P	17 57 45.2	-0.1
SUA	Susitna One	76.87	19	P	P	17 57 44.4	-1.1
SUA				IAmb	IAmb	17 57 46.0	
	comp=Z,10nm,1.1s						
DAWY	Dawson	77.09	13	P	P	17 57 46.1	-0.5
DAWY				IAmb	IAmb	17 57 47.9	
	comp=Z,4.9nm,1.1s						
SML	Sawmill	77.19	18	P	P	17 57 45.4	-1.8
BOSA	Boshof	77.41	220	P	P	17 57 48.5	-0.4
	comp=Z,1.8nm,0.6s,baz=41,slow=5.5,SNR=4.3						
BOSA	Boshof	77.41	220	P	P	17 57 48.3	-0.5
RC01	Rabbit Creek A	77.44	19	P	P	17 57 48.2	-0.4
BCAR	Beaver Creek A	77.54	14	P	P	17 57 49.1	0.0
BRLK	Bradley Lake	78.26	20	P	P	17 57 51.6	-1.5
SEW	Seward	78.36	19	P	P	17 57 52.5	-1.0
EYAK	Cordova Ski Ar	78.91	17	P	P	17 57 57.1	+0.6
BALM	Baldy	79.25	16	P	P	17 57 58.8	+0.2
BALM				IAmb	IAmb	17 58 06.0	
	comp=Z,11nm,1.4s						
YKA	Yellowknife Ar	81.33	2	P	P	17 58 09.7	+0.2
	comp=Z,1.6nm,0.6s,baz=351,slow=4.9,SNR=39						
YKA				pP	pP	17 59 00.3	+0.5
	comp=Z,0.6nm,0.7s,baz=353,slow=5.1,SNR=4.1						
WRA	Warramunga Arr	82.34	122	P	P	17 58 14.1	-1.3
	comp=Z,3.6nm,0.8s,baz=324,slow=5.1,SNR=24						
WRAB	Tennant Creek	82.34	122	⇑*e*P	P	17 58 14.8	-0.6
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.7s						
ASAR	Alice Springs	84.59	125	P	P	17 58 25.8	-1.0
	comp=Z,3.0nm,0.6s,baz=310,slow=5.2,SNR=12						
ULM	Lac du Bonnet	92.85	351	P	P	17 59 04.7	-0.8
	comp=Z,1.8nm,0.9s,baz=47,slow=3.1,SNR=4.0						
ULM	Lac du Bonnet	92.85	351	IAmb	IAmb	17 59 05.2	
	comp=Z,3.3nm,1.1s						
PLCA	Paso Flores	149.38	250	PKPbc	PKPbc	18 05 39.7	-1.1
	comp=Z,3.7nm,1.0s,baz=245,slow=11,SNR=3.1						

NEIC ***23*** *17:49:01.8±2.1, 16.°86S±0.°05×173.°6W±0.°1, h10^{km}±1^{km}, mb4.4/11, Error ellipse: s-maj=18.0km s-min=8.8km az=78.0*

IDC ***23*** *17:49:01.1±0.7, 16.°79S×173.°58W, h0^{km}, mb4.1/10, mb1 4.4/12, mb1mx4.0/41, mbtmp4.1/12, ML3.8/2, MS3.3/4, Ms1 3.3/4, ms1mx3.1/37, Error ellipse: s-maj=34.1km s-min=15.9km az=132.0*

ISC 23 17:49:01.8±0.6, **16.°77S**±0.°07×**173.°4W**±0.°1, **h10**^{km}**, n42,** σ1.^{s}**66**/32, **mb4.3**/14, **MS3.1**/3, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.23	29	Pn	Pn	17 49 53.0	+0.3
	16nm,0.3s,baz=131,slow=7.0,SNR=8.4						
AFI				Sn	Sn	17 50 26.5	-4.9
	44nm,0.3s,baz=38,slow=20,SNR=5.7						
AFI				LR	LR	17 50 57.6	
	comp=Z,346nm,18.1s,baz=188,slow=35						
AFI	Afiamalu	3.23	29		Pn	17 49 52.5	-0.2
NIUE	Niue	4.00	125		Pn	17 50 01.6	-1.5
RAO	Raoul Island	13.10	198	Pn	Pn	17 52 00.3	-7.7
RAR	Rarotonga	13.59	111	LR	LR	17 56 19.4	
	comp=Z,79nm,21.3s,baz=315,slow=32						
DZM	Mont Dzumac	19.75	251	*e*LR	LR	17 58 39.0	
	comp=Z,275nm,24.9s						
DZM	Mont Dzumac	19.75	251	P	Pn	17 53 32.3	-1.2
	0.2nm,0.3s,baz=70,slow=17,SNR=1.9						
DZM				LR	LR	17 59 48.5	
	comp=Z,226nm,19.7s,baz=50,slow=33						
OUZ	Omahuta	21.75	210	P	P	17 53 54.1	+0.6
OUZ				IAmb	IAmb	17 53 58.2	
	comp=Z,14nm,0.9s						
PAE	Paea	22.74	96	*e*T	T	18 16 45.2	
	comp=Z,2.1nm,0.3s						
PPT2	Papeete2	22.74	96	*e*LR	LR	17 59 22.8	
	comp=Z,88nm,26.8s						
PPT2	Papeete2	22.74	96	*e*T	T	18 16 46.9	
	comp=Z,2.4nm,0.3s						
PPT	Papeete	22.74	95	LR	LR	18 00 50.9	
	comp=Z,61nm,19.4s,baz=318,slow=31						
URZ	Urewera	22.98	199	P	P	17 54 05.2	-1.4
	comp=Z,4.2nm,0.4s,baz=319,slow=4.7,SNR=11						
URZ	Urewera	22.98	199	IAmb	IAmb	17 54 11.0	
	comp=Z,9.5nm,0.9s						
TBI	Tubuai	23.37	110	*e*LR	LR	17 59 33.8	
	comp=Z,113nm,27.8s						
TBI	Tubuai	23.37	110	*e*T	T	18 17 50.1	
	comp=Z,7.9nm,0.3s						
VAH	Vaihoa	24.79	90	*e*T	T	18 19 13.2	
	comp=Z,5.0nm,0.3s						
STKA	Stephens Creek	43.39	241	P	P	17 57 03.5	-1.2
	comp=Z,5.1nm,0.9s,baz=57,slow=7.9,SNR=8.7						
STKA	Stephens Creek	43.39	241	P	P	17 57 04.3	-0.4
BBOO	Buckleboo	48.16	241	P	P	17 57 41.6	-0.9
WB0	Warramunga Arr	49.54	258	P	P	17 57 51.6	-1.7
WB0				IAmb	IAmb	17 58 08.3	
	comp=Z,5.3nm,1.3s						
WB2	Warramunga Arr	49.56	258	P	P	17 57 51.8	-1.6
WB2				IAmb	IAmb	17 57 59.9	
	comp=Z,6.2nm,1.4s						
WRA	Warramunga Arr	49.57	258	P	P	17 57 51.7	-1.8
	comp=Z,1.1nm,0.5s,baz=96,slow=7.4,SNR=25						
WRA	Warramunga Arr	49.57	258	P	P	17 57 51.3	-2.2
AS31	Alice Springs	49.73	253	P	P	17 57 53.1	-1.6
AS31				IAmb	IAmb	17 57 54.2	
	comp=Z,4.3nm,0.6s						
ASAR	Alice Springs	49.73	253	P	P	17 57 53.1	-1.5
	comp=Z,14nm,0.6s,baz=87,slow=8.8,SNR=385						
ASAR	Alice Springs	49.73	253	P	P	17 57 52.8	-1.8
FORT	Forrest	54.83	244	P	P	17 58 30.8	-1.7
VNDA	Vanda	62.02	186	P	P	17 59 23.6	+1.7
	comp=Z,1.9nm,0.9s,baz=358,slow=7.2,SNR=7.6						
VNDA	Vanda	62.02	186	P	P	17 59 23.5	+1.7
MJAR	Matsushiro Arr	70.00	320	P	P	18 00 12.7	-1.1
NVAR	Mina Array Bea	75.33	42	P	P	18 00 47.4	+1.7
	comp=Z,0.6nm,0.8s,baz=238,slow=8.2,SNR=5.2						
PDAR	Pinedale Array	83.26	42	P	P	18 01 30.2	+1.3
	comp=Z,0.9nm,0.6s,baz=221,slow=3.1,SNR=8.6						
ILAR	Eielson Array	83.78	11	P	P	18 01 31.7	+0.9
	comp=Z,0.3nm,0.5s,baz=237,slow=6.3,SNR=7.5						
YKA	Yellowknife Ar	91.34	23	P	P	18 02 09.3	+1.9
	comp=Z,0.2nm,0.7s,baz=243,slow=4.1,SNR=3.2						
CMAR	Chiang Mai Arr	93.07	288	P	P	18 02 18.4	+2.0
	comp=Z,0.5nm,0.3s,baz=102,slow=2.9,SNR=5.6						
BVAR	Borovoye Array	118.98	322	PKP	PKiKP	18 07 51.0	+0.4
	comp=Z,0.8nm,0.6s,baz=71,slow=2.5,SNR=7.6						
ARCES	ARCESS Array B	125.97	352	PKP	PKiKP	18 08 04.3	+0.3
	comp=Z,1.1nm,0.7s,baz=355,slow=8.5,SNR=4.4						
FINES	FINESS Array B	133.28	347	PKP	PKiKP	18 08 19.2	+0.4
	comp=Z,2.5nm,0.9s,baz=90,slow=3.8,SNR=3.3						
CLL	Collm	145.17	353	*e*PKPdf	PKPdf	18 08 41.0	+1.4
BRTR	Keskin Array B	147.23	320	PKPbc	PKPbc	18 08 46.3	+0.4
	comp=Z,0.9nm,0.8s,baz=152,slow=3.4,SNR=7.2						
GERES	GERESS Array B	147.50	351	PKPbc	PKPab	18 08 47.5	-0.7
	comp=Z,0.6nm,0.5s,baz=358,slow=3.1,SNR=7.7						

IDC 23 17:51:39.0±7.9, **20.°29S**×**175.°05W, h0**^{km}**, mb3.9**/4, **mb1 4.2**/4, **mb1mx3.7**/43, **mbtmp3.9**/4, **MS2.5**/1, **Ms1 2.5**/1, **ms1mx2.4**/29, **Error ellipse: s-maj=341.6km s-min=38.5km az=144.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	9.30	196	LR	LR	17 56 25.5	
	comp=Z,28nm,19.3s,baz=51,slow=31						
ASAR	Alice Springs	47.26	256	P	P	18 00 15.3	+0.9
	1.5nm,0.4s,baz=93,slow=7.4,SNR=11						
WRA	Warramunga Arr	47.37	261	P	P	18 00 15.0	-0.3
	1.1nm,0.4s,baz=99,slow=6.4,SNR=18						
FITZ	Fitzroy Crossi	55.80	261	P	P	18 01 17.3	-1.1
	0.7nm,0.7s,baz=100,slow=6.1						
ILAR	Eielson Array	87.52	12	P	P	18 04 28.4	+0.2
	0.2nm,0.4s,baz=215,slow=5.0,SNR=4.8						

DJA ***23*** *18:00:40.2±2.4, 5°S±6°×15°3E±1°4, h21^{km}±16^{km}, M4.6/11, mb4.3/11, mB4.6/1, MLv4.7/2, Mw(mB)3.8/1*

NEIC ***23*** *18:00:43.2±2.0, 5.°13S±0.°08×152.°6E±0.°1, h39^{km}±7^{km}, mb4.6/23, Error ellipse: s-maj=17.5km s-min=11.3km az=95.0*

IDC ***23*** *18:00:46.4±1.2, 5.°08S×152.°37E, h68^{km}±10^{km}, mb3.8/11, mb1 4.0/12, mb1mx3.6/45, mbtmp4.1/12, MS3.3/3, Ms1 3.2/3, ms1mx3.0/32, Error ellipse: s-maj=21.1km s-min=11.9km az=116.0*

ISC 23 18:00:44.8±0.5, **5.°16S**±0.°06×**152.°62E**±0.°09, **h55**^{km}**, n53,** σ1.^{s}**72**/54, **mb4.4**/26, **MS3.2**/3, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.03	325	P	Pn	18 01 01.2	-1.9
	725nm,0.3s,baz=163,slow=1.5,SNR=532						
KRVT				S	Sn	18 01 16.6	+0.1
	609nm,0.3s,baz=236,slow=22,SNR=5.9						
KRVT				LR	LR	18 01 25.8	
	comp=Z,674nm,19.4s,baz=3.1,slow=47						
RABL	Rabaul	1.06	335		Pn	18 01 01.8	-1.7
PMG	Port Moresby	6.86	232	P	Pn	18 02 23.0	+0.1
	3.4nm,0.3s,baz=46,slow=11,SNR=7.4						
PMG				S	Sn	18 03 38.6	-1.0
	4.3nm,0.3s,baz=152,slow=21,SNR=2.2						
PMG	Port Moresby	6.86	232		Pn	18 02 23.4	+0.5
EIDS	Eidsvold	20.15	184	P	P	18 05 12.3	-2.3
DZM	Mont Dzumac	21.49	143	P	P	18 05 32.4	+3.2
	8.8nm,0.8s,baz=341,slow=20,SNR=6.3						
DZM	Mont Dzumac	21.49	143	P	P	18 05 29.6	+0.4
DZM				IAmb	IAmb	18 05 35.7	
	comp=Z,16nm,1.1s						
SIJI	Sorong	21.74	281	P	P	18 05 34.1	+2.3
	comp=Z,8.9nm,0.6s,baz=78,slow=9.3,SNR=5.6						
SWI	Sorong	21.74	281	P	P	18 05 34.9	+3.0
	comp=Z,18nm,0.9s						
MTN	Manton Dam	22.53	249	P	P	18 05 40.5	+0.1
MTN				IAmb	IAmb	18 05 58.5	
	comp=Z,12nm,1.2s						
WB0	Warramunga Arr	22.93	229	P	P	18 05 41.0	-3.4
WB0				IAmb	IAmb	18 05 59.2	
	comp=Z,17nm,1.4s						
WR0	Warramunga Arr	22.93	229	P	P	18 05 42.2	-2.2
WB2	Warramunga Arr	23.06	229	P	P	18 05 44.6	-1.2
WB2				IAmb	IAmb	18 05 51.5	
	comp=Z,14nm,0.6s						
WRA	Warramunga Arr	23.07	229	P	P	18 05 44.3	-1.6
	comp=Z,0.5nm,0.5s,baz=52,slow=9.7,SNR=12						
WRA				LR	LR	18 16 35.0	
	comp=Z,74nm,18.4s,baz=105,slow=41						
WRA	Warramunga Arr	23.07	229	P	P	18 05 44.0	-1.9
LBMI	Labuha	25.47	279	P	P	18 06 10.8	+2.7
	comp=Z,19nm,0.8s						
KNRA	Kununurra	25.65	244	P	P	18 06 09.9	+0.3
KNRA				IAmb	IAmb	18 06 23.0	
	comp=Z,16nm,1.0s						
AS31	Alice Springs	25.76	223	P	P	18 06 10.2	-0.5
ASAR	Alice Springs	25.76	223	P	P	18 06 10.9	+0.3
	comp=Z,1.3nm,0.5s,baz=57,slow=9.4,SNR=47						
STKA	Stephens Creek	28.52	200	P	P	18 06 34.5	-0.6
	comp=Z,0.9nm,0.7s,baz=171,slow=19,SNR=3.0						
STKA				LR	LR	18 17 20.3	
	comp=Z,74nm,19.5s,baz=26,slow=35						
STKA	Stephens Creek	28.52	200	P	P	18 06 32.2	-3.0
FITZ	Fitzroy Crossi	29.33	242	P	P	18 06 39.9	-2.7
	comp=Z,1.3nm,0.5s,baz=64,slow=9.8,SNR=9.7						
FITZ	Fitzroy Crossi	29.33	242	P	P	18 06 39.8	-2.7
DAV	Davao City (W)	29.59	294	LR	LR	18 17 33.4	
	comp=Z,30nm,18.1s,baz=89,slow=34						
CMAR	Chiang Mai Arr	57.86	295	P	P	18 10 30.8	-0.6
	comp=Z,0.7nm,0.8s,baz=113,slow=4.6,SNR=5.8						
GAMB	Gambell	73.78	16	P	P	18 12 13.1	+0.2
GAMB				IAmb	IAmb	18 12 14.7	
	comp=Z,5.1nm,1.0s						
SUA	Susitna One	79.36	24	P	P	18 12 43.9	-0.8
SUA				IAmb	IAmb	18 12 44.9	
	comp=Z,6.1nm,0.6s						
RDOG	Red Dog Mine	79.38	16	P	P	18 12 44.8	+0.3
PPLA	Purkeypile	79.57	22	P	P	18 12 45.5	-0.3
PPLA				IAmb	IAmb	18 12 47.1	
	comp=Z,17nm,1.5s						
RC01	Rabbit Creek A	79.58	25	P	P	18 12 43.6	-2.1
SML	Sawmill	80.52	24	P	P	18 12 51.3	+0.3
IMAR	Indian Mountai	80.78	20	P	P	18 12 52.6	+0.4
RND	Reindeer	81.13	23	P	P	18 12 53.5	-0.6
RND				IAmb	IAmb	18 12 54.1	
	comp=Z,9.8nm,0.9s						
MCK	McKinley	81.26	23	P	P	18 12 52.3	-2.5
MLY	Manley	81.28	21	P	P	18 12 55.1	+0.2
MLY				IAmb	IAmb	18 12 55.7	
	comp=Z,6.0nm,0.6s						
CCB	Clear Creek Bu	82.15	22	P	P	18 12 56.9	-2.5
CCB				IAmb	IAmb	18 12 59.5	
	comp=Z,7.1nm,1.2s						
IL31		82.56	22	P	P	18 13 00.1	-1.4
IL31				IAmb	IAmb	18 13 01.5	
	comp=Z,4.7nm,0.8s						
ILAR	Eielson Array	82.56	22	P	P	18 13 00.1	-1.4
	comp=Z,3.5nm,0.8s,baz=256,slow=5.5,SNR=29						
ILAR	Eielson Array	82.56	22	P	P	18 12 59.4	-2.2
KSH	Kashi	83.03	311	P	P	18 13 08.3	+3.6
KSH				sP	sP	18 13 26.6	+1.7
KSH	Kashi	83.03	311	S	S	18 23 22.0	+1.9
KSH	Kashi	83.03	311	SS	SS	18 28 51.6	+6.6
BMAR	Burnt Mountain	84.64	20	P	P	18 13 12.9	+0.7
NRIK	Noril'sk	86.24	341	P	P	18 13 17.5	-2.5
	comp=Z,2.4nm,0.5s,baz=160,slow=5.9,SNR=4.1						
BBB	Bella Bella	87.49	37	P	P	18 13 26.9	+0.4
	comp=Z,22nm,1.1s,baz=227,slow=8.4,SNR=3.1						
BVAR	Borovoye Array	89.42	323	P	P	18 13 36.3	+0.7
	comp=Z,0.6nm,0.6s,baz=104,slow=6.1,SNR=3.7						
LTY	Liberty	91.52	43		pP	18 13 57.1	-3.8
NVAR	Mina Array Bea	92.45	52	P	P	18 13 51.0	+0.6
	comp=Z,0.2nm,0.6s,baz=260,slow=5.4,SNR=2.5						
YKA	Yellowknife Ar	95.83	28	P	P	18 14 05.6	+0.6
	comp=Z,0.3nm,0.6s,baz=267,slow=4.3,SNR=5.0						
CLL	Collm	123.07	331	*e*PKPdf	PKiKP	18 19 36.0	+0.6
PTGA	Pitinga	146.94	99	PKPbc	PKPbc	18 20 22.6	+0.3
	comp=Z,2.8nm,0.5s,baz=291,slow=6.6,SNR=7.6						
TORD	Torodi Ar. Bea	150.24	287	PKPbc	PKPbc	18 20 29.3	-1.6
	comp=Z,0.8nm,0.6s,baz=70,slow=3.3,SNR=4.9						
TORD				PKPab	PKPab	18 20 35.8	-1.3
	comp=Z,1.8nm,0.8s,baz=72,slow=3.4,SNR=6.4						
BDFB	Brasilia	150.94	136	PKPbc	PKiKP	18 20 34.2	+1.0
	comp=Z,1.4nm,0.5s,baz=135,slow=2.9,SNR=2.0						
BDFB				PKPab	pPKPdf	18 20 42.4	0.0
	comp=Z,1.7nm,0.4s,baz=184,slow=13,SNR=3.4						

NEIC ***23*** *18:02:41.3±1.5, 43.°80N±0.°06×105.°25W±0.°04, h0^{km}±2^{km}, ML3.2/34, Error ellipse: s-maj=9.9km s-min=3.2km az=341.0*

IDC ***23*** *18:02:41.3±1.5, 43.°94N×105.°62W, h0^{km}, mb1 3.5/4, mb1mx3.3/46, mbtmp3.2/4, ML3.2/4, Error ellipse: s-maj=40.3km s-min=8.2km az=147.0*

ISC 23 18:02:40.6±1.0, **43.°80N**±0.°05×**105.°25W**±0.°05, **h0**^{km}**, n29,** σ1.^{s}**00**/30, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.93	70		Pb	18 02 59.3	-0.5
K22A	Casper	1.48	219		Pn	18 03 07.3	-1.4
K22A				IAML		18 03 30.6	
	comp=N,376nm,0.3s						
K22A				IAML		18 03 32.5	
	comp=E,298nm,0.4s						
PHWY	Pilot Hill	2.50	184		Pn	18 03 23.1	+0.3
PHWY				IAML		18 04 01.7	
	comp=E,84nm,0.8s						
RWWY	Rawlins	2.56	215		Pn	18 03 23.8	+0.3
RWWY				IAML		18 03 59.2	
	comp=E,115nm,0.9s						
RWWY				IAML		18 04 00.0	
	comp=E,136nm,0.6s						
N23A	Red Feather La	2.95	190		Pn	18 03 29.9	+0.9
N23A				IAML		18 04 16.5	
	comp=E,98nm,0.5s						
LAO	LASA Array	2.97	347		Pn	18 03 29.6	+0.7
RLMT	Red Lodge	3.16	296		Pn	18 03 32.5	+0.7
RLMT				IAML		18 04 30.6	
	comp=E,53nm,0.5s						
RLMT				IAML		18 04 30.6	
	comp=E,60nm,0.7s						
PD31	Pinedale Array	3.31	253		Pn	18 03 34.4	+0.6
PDAR	Pinedale Array	3.31	253	Pn	Pn	18 03 34.1	+0.2
	comp=E,3.3nm,0.3s,baz=74,slow=15,SNR=69						
PDAR				Pg	Pb	18 03 39.8	-0.5
	comp=E,11nm,0.3s,baz=70,slow=18,SNR=53						
PDAR				Lg	Lg	18 04 20.6	
	comp=E,9.5nm,0.3s,baz=68,slow=32,SNR=16						
PDAR	Pinedale Array	3.31	253		Pn	18 03 33.9	+0.1
BW06	Boulder Array	3.31	253		Pn	18 03 33.9	+0.1
BW06				IAML		18 04 26.5	
	comp=N,41nm,0.7s						
BW06				IAML		18 04 31.2	
	comp=E,38nm,0.7s						
YNE	Yellowstone No	3.62	291		Pn	18 03 38.1	+0.1
YMP	Mirror Lake Pl	3.65	287		Pn	18 03 38.7	+0.1
GCMT	Greycliff	3.72	304		Pn	18 03 40.4	+1.0
FLWY	Flagg Ranch	3.94	276		Pn	18 03 43.6	+1.0
FLWY				IAML		18 04 52.2	
	comp=E,38nm,2.2s						
FLWY				IAML		18 04 56.5	
	comp=E,23nm,0.9s						
ISCO	Idaho Springs	4.01	184		Pn	18 03 44.5	+1.0
IMW	Indian Meadow	4.12	273		Pn	18 03 47.4	+2.4
IMW				IAML		18 04 54.5	
	comp=E,28nm,1.0s						
IMW				IAML		18 04 56.3	
	comp=E,28nm,0.8s						
FXWY	Fox Creek	4.19	270		Pn	18 03 47.0	+1.1
O20A	White River Ci	4.29	212		Pn	18 03 48.2	+0.9
O20A				IAML		18 04 58.9	
	comp=E,36nm,0.8s						
HWUT	Hardware Ranch	5.14	247	Pn	Pn	18 04 00.2	+1.2
HWUT				IAML		18 05 40.3	
	comp=E,20nm,0.8s						
EGMT	Eagleton	5.26	325	Pn	Pn	18 04 00.7	+0.2
PV09	Paradox Valley	6.05	210	Pn	Pn	18 04 12.2	+0.6
SDCO	Great Sand Dun	6.05	182	Pn	Pn	18 04 12.8	+1.2
SRU	San Rafael Swe	6.14	222	Pn	Pn	18 04 12.3	-0.4
S22A	4UR Ranch, Cre	6.17	192	Pn	Pn	18 04 14.3	+1.1
TMUT	Trail Mountain	6.34	227	Pn	Pn	18 04 16.6	+1.1
ULM	Lac du Bonnet	9.08	41	Pn	Pn	18 04 53.1	+0.2
	comp=E,0.8nm,0.3s,baz=230,slow=12,SNR=8.2						
ULM				Pg		18 05 27.5	
	comp=E,1.2nm,0.3s,baz=229,slow=15,SNR=6.5						
ULM				Lg	Lg	18 07 24.4	
	comp=E,0.5nm,0.3s,baz=118,slow=20,SNR=4.8						
NVAR	Mina Array Bea	11.21	246	Pn	Pn	18 05 23.9	+1.7
	comp=E,0.1nm,0.3s,baz=56,slow=12,SNR=3.5						
YKA	Yellowknife Ar	19.51	347	P	P	18 07 07.4	-1.6
	comp=E,0.1nm,0.3s,baz=157,slow=12,SNR=5.2						

IDC ***23*** *18:07:51.9±2.3, 35.°80N×81.°79E, h0^{km}, mb3.7/3, mb1 3.8/8, mb1mx3.5/45, mbtmp3.8/8, ML3.4/5, MS2.7/1, Ms1 2.7/1, ms1mx2.2/49, Error ellipse: s-maj=44.9km s-min=20.0km az=53.0*

BJI ***23*** *18:07:54.7±0.0, 36.°00N×82.°35E, h7^{km}, mb3.7/2, ML3.7/6*

NNC ***23*** *18:07:59.4±1.8, 36.°33N×82.°37E, h0^{km}, mb4.3, mpv3.9, Error ellipse: s-maj=19.3km s-min=13.2km az=66.0*

ISC 23 18:07:54.9±0.9, **35.°97N**±0.°07×**82.°2E**±0.°1, **h10**^{km}**, n25,** σ1.^{s}**45**/29, **4C-6D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	Podgornoye	7.65	345	⇓Pn	Pn	18 09 48.6	+2.1
	2.7nm,0.4s						
PDGK				⇓Sn	Sn	18 11 13.3	+0.1
	46nm,0.7s						
PDGK				⇑Lg	Lg	18 11 55.9	
	27nm,0.9s						
DANN	Dangsing	7.71	170	*e*P	Pn	18 09 48.4	+0.9
	8.9nm,0.4s						
GKN	Gorkha	8.20	165	*e*P	Pn	18 09 54.8	+0.7
	8.6nm,0.3s						
MDOK	Medeo	8.22	332	⇓Pn	Pn	18 09 56.4	+2.0
	2.8nm,0.4s						
MDOK				⇑Sn	Sn	18 11 28.0	+0.6
	5.4nm,0.6s						
MDOK				⇓Lg	Lg	18 12 10.8	
	35nm,1.0s						
KKN	Kakani	8.56	162	*e*P	Pn	18 09 59.8	+0.8

	6.1nm,0.6s						
GUN	Gumba	8.61	158	eP	Pn	18 10 01.2	+1.3
	13nm,0.7s						
DMN	Daman	8.69	163	eP	Pn	18 10 01.2	+0.3
	6.5nm,0.6s						
PKIN	Phulchoki	8.79	161	eP	Pn	18 10 03.2	+0.9
	3.7nm,0.4s						
PKI	Pulchoki	8.80	161	eP	Pn	18 10 03.3	+0.8
	10nm,0.7s						
WMQ	Urumqi	8.89	26	eP	Pn	18 10 05.3	+1.9
JIRN	Jiri	8.94	157	eP	Pn	18 10 05.8	+1.3
	9.6nm,0.4s						
AAK	Ala-Archa	8.96	320	Pn	Pn	18 10 02.7	-1.8
	0.2nm,0.3s,baz=157,slow=7.7,SNR=1.9						
AAK				Pg	Pg	18 10 33.4	-13
	0.3nm,0.3s,baz=143,slow=10,SNR=3.3						
AAK				Lg	Lg	18 12 34.3	
	0.6nm,0.3s,baz=99,slow=17,SNR=2.7						
RAMN	Ramite	9.73	156	eP	Pn	18 10 13.8	-1.4
	7.3nm,0.6s						
ODAN	Odare	10.09	153	eP	Pn	18 10 18.5	-1.6
	7.6nm,0.8s						
MK31	Makanchi Array	10.81	0	⇓Pn	Pn	18 10 30.0	+0.3
	1.2nm,0.4s,baz=179,slow=12,SNR=88						
MK31				⇓Sn	Sn	18 12 29.4	-1.4
	1.4nm,0.6s,baz=183,slow=24,SNR=5.5						
MKAR	Makanchi Array	10.81	0	Pn	Pn	18 10 30.6	+0.9
	1.0nm,0.3s,baz=185,slow=13,SNR=66						
MKAR				Sn	Sn	18 12 32.3	+1.4
	0.5nm,0.3s,baz=180,slow=23,SNR=5.5						
MAKZ	Makanchi	10.83	359	⇑Pn	Pn	18 10 30.6	+0.7
	6.5nm,0.5s						
MAKZ				⇑Sn	Sn	18 12 29.7	-1.5
	2.0nm,0.6s						
GTA	Gaotai	14.34	71	eP	P	18 11 22.8	-2.4
GTA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
KURBB	Kurchatov Arra	14.89	351	Pn	Pn	18 11 24.5	-0.9
	0.1nm,0.3s,baz=170,slow=11,SNR=4.5						
ZALV	Zalesovo Beam	18.07	5	P	Pn	18 12 04.9	-1.0
	0.2nm,0.3s,baz=190,slow=12,SNR=7.7						
BVAR	Borovoye Array	18.99	338	P	Pn	18 12 16.7	-0.4
	0.4nm,0.3s,baz=146,slow=11,SNR=9.6						
SONM	Songino Array	21.44	49	P	P	18 12 46.6	+3.3
	5.0nm,0.8s,baz=238,slow=12,SNR=27						
TLY	Talaya	21.90	38	LR	LR	18 22 28.9	
	comp=Z,19nm,19.8s,baz=207,slow=39						
CMAR	Chiang Mai Arr	22.85	135	P	P	18 12 58.4	-0.1
	0.4nm,0.7s,baz=317,slow=9.3,SNR=3.5						
NRIK	Noril'sk	33.55	3	P	P	18 14 33.5	-1.0
	2.1nm,0.5s,baz=176,slow=16,SNR=4.5						

MAN 23 18:15:27.0, 5°.41N×125°.58E, h52^{km}, mb4.5, ML3.3, MS3.1, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	0.70	11	eP	Pn	18 15 43.0	+2.0
DDMP				eS	Sn	18 15 56.8	+5.7
GSPH	General Santos	0.92	317	⇑iP	Pn	18 15 43.3	-0.5
GSPH				i S	Sn	18 15 55.6	-0.6
SKMP	Bagumbayan, Su	1.51	317	eP	Pn	18 15 51.9	+0.2
SKMP				eS	Sn	18 16 11.6	+1.3
KCP	Kidapawan	1.66	343	⇑eP	Pn	18 15 59.2	+5.4
KCP				i S	Sn	18 16 19.4	+5.3
MATI	Mati	1.67	24	eP	Pn	18 15 54.3	+0.3
CTBH	Cotabato--PC H	2.23	324	⇓iP	Pn	18 16 04.3	+2.7
PAGZ	Pagadian	3.26	318	eP	Pn	18 16 17.1	+1.4
PAGZ				eS	Sn	18 16 54.2	+1.0

IDC 23 18:15:57.8±1.8, 10°.38S×123°.80E, h0^{km}, mb3.6/1, mb1 3.4/4, mb1mx3.3/31, mbtmp3.3/4, ML3.1/3, Error ellipse: s-maj=111.6km s-min=27.5km az=62.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	7.88	167	Pn	Pn	18 17 55.2	+1.5
	0.1nm,0.3s,baz=354,slow=8.7,SNR=10						
FITZ				Sn	Sn	18 19 19.1	-4.6
	0.8nm,0.3s,baz=290,slow=23,SNR=10						
WRA	Warramunga Arr	13.92	134	Pn	Pn	18 19 15.1	-1.4
	0.1nm,0.3s,baz=309,slow=15,SNR=1.4						
WRA				Sn	Sn	18 21 42.1	-10
	0.3nm,0.3s,baz=302,slow=5.5,SNR=11						
ASAR	Alice Springs	16.36	145	Pn	Pn	18 19 48.2	-0.8
	0.1nm,0.3s,baz=316,slow=11,SNR=16						
ASAR				Sn	Sn	18 22 45.2	-6.1
	0.1nm,0.3s,baz=308,slow=21,SNR=6.2						
MKAR	Makanchi Array	67.90	331	P	P	18 26 58.2	0.0
	0.4nm,0.6s,baz=144,slow=7.9,SNR=5.5						

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*SJA **23** 18:19:53.7±0.5, 19°.62S×71°.30W, h15^{km}±71^{km}, ML5.9, MW5.7*

*IDC **23** 18:19:59.5±0.3, 19°.56S×70°.65W, h0^{km}, mb5.5/31, mb1 5.5/35, mb1mx5.4/41, mbtmp5.4/35, ML4.7/5, MS6.2/22, Ms1 6.2/22, ms1mx6.0/27, Error ellipse: s-maj=8.4km s-min=6.3km az=83.0*

*GUC **23** 18:20:00.8±0.8, 19°.79S×70°.94W, h34^{km}±3^{km}, ML6.1, MW6.2*

*BJI **23** 18:20:01.1±0.0, 19°.76S×70°.84W, h10^{km}, mB6.1/49, Ms6.5/83, Ms7 6.5/72*

*NEIC **23** 18:20:01.9±1.7, 19°.69S±0°.03×70°.85W±0°.02, h21^{km}±1^{km}, mb6.0/391, Ms_20 6.1/798, Mwb6.2/80, Mwc6.3/49, Mww6.3, ML6.1(GUC), Mwc6.3(GCMT), Error ellipse: s-maj=6.0km s-min=3.3km az=326.0*

*VAO **23** 18:20:01.8±0.4, 19°.61S×70°.62W, h17^{km}, mb5.8*

*NEIC **23** 18:20:03.5, 19°.76S×70°.85W, h21^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.69; $M_{\theta\theta}$-0.28; $M_{\phi\phi}$-1.42; $M_{r\theta}$0.65; $M_{\theta\phi}$0.63; $M_{\phi r}$-1.37; Fault plane solution: $M_0 2.28000\times10^{18}$ NP1:ϕ_s336.99000°, δ24.07000°, λ91.60000°. NP2:ϕ_s155.24000°, δ65.94000°, λ89.29000°. Principal axes: T 2.2765, Plg69.0000°, Azm64.0000°; N -0.0004, Plg1.0000°, Azm156.0000°; P -2.2762, Plg21.0000°, Azm246.0000°;*

*MOS **23** 18:20:04.7±1.7, 19°.62S×70°.78W, h38^{km}, mb5.9/30, MS6.2/35 Error ellipse: s-maj=8.7km s-min=6.1km az=79.3*

*BGR **23** 18:20:05.6±0.0, 19°.09S×70°.84W, h33^{km}, Ms6.4*

*GCMT **23** 18:20:07.9±0.1, 19°.70S×71°.05W, h22^{km}, MW6.2/157, Moment Tensor Solution. s155,c359; s157,c591; Duration: 3^s.2 Moment tensor: Scale 10^{18}Nm; M_{rr}1.85±.01; $M_{\theta\theta}$-0.00±.01; $M_{\phi\phi}$-1.85±.01; $M_{r\theta}$0.79±.02; $M_{\theta\phi}$0.54±.01; $M_{\phi r}$-2.00±.03; Best double couple: $M_0 2.88600\times10^{18}$ NP1:ϕ_s350.00000°, δ21.00000°, λ100.00000°. NP2:ϕ_s160.00000°, δ69.00000°, λ86.00000°. Principal axes: T 2.8190, Plg66.0000°, Azm64.0000°; N 0.1290, Plg3.0000°, Azm161.0000°; P -2.9520, Plg24.0000°, Azm253.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **23** 18:20:07, 19°.70S×70°.87W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}2.20; $M_{\theta\theta}$-0.30; $M_{\phi\phi}$-1.90; $M_{r\theta}$1.31; $M_{\theta\phi}$0.71; $M_{\phi r}$-2.06; Fault plane solution: $M_0 3.28000\times10^{18}$ NP1:ϕ_s151.00000°, δ69.00000°, λ84.00000°. NP2:ϕ_s347.00000°, δ22.00000°, λ105.00000°. Principal axes: T 3.3163, Plg65.0000°, Azm51.0000°; N -0.0726, Plg6.0000°, Azm153.0000°; P -3.2436, Plg24.0000°, Azm245.0000°;*

*NEIC **23** 18:20:09, 19°.78S×71°.20W, h22^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.77; $M_{\theta\theta}$0.03; $M_{\phi\phi}$-1.80; $M_{r\theta}$0.89; $M_{\theta\phi}$0.66; $M_{\phi r}$-2.08; Fault plane solution: $M_0 2.96000\times10^{18}$ NP1:ϕ_s158.00000°, δ70.00000°, λ87.00000°. NP2:ϕ_s348.00000°, δ20.00000°, λ99.00000°. Principal axes: T 2.8344, Plg65.0000°, Azm62.0000°; N 0.2300, Plg3.0000°, Azm159.0000°; P -3.0643, Plg25.0000°, Azm250.0000°;*

*NEIC **23** 18:20:18.2, 19°.61S×70°.89W, h31^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}2.10; $M_{\theta\theta}$-0.19; $M_{\phi\phi}$-1.91; $M_{r\theta}$0.21; $M_{\theta\phi}$0.55; $M_{\phi r}$-3.31; Fault plane solution: $M_0 3.92000\times10^{18}$ NP1:ϕ_s334.21000°, δ16.86000°, λ70.75000°. NP2:ϕ_s174.25000°, δ74.11000°, λ95.70000°. Principal axes: T 3.9717, Plg60.0000°, Azm92.0000°; N -0.0963, Plg5.0000°, Azm353.0000°; P -3.8754, Plg29.0000°, Azm260.0000°;*

ISC 23 18:20:01.2±0.5, 19°.70S±0°.02×70°.78W±0°.03, h14^{km}±2^{km}, n1793, σ2^s.51/1851, mb6.0/256, MS6.1/461, 56C-19D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.63	80	⇓iP	Pb	18 20 14.5	+0.4
PSGC				eS	Sn	18 20 26.2	+0.5
PSGCX	Pisagua	0.63	80		Pb	18 20 14.7	+0.6
PSGCX					Sn	18 20 25.1	-0.6
PSGCX					Sb	18 20 25.7	+2.9
TA01	Diego Aracena	1.03	147	⇑iP	Pb	18 20 20.5	-0.2
TA01				eS	Sn	18 20 35.1	-0.3
PB11	IPOC Station P	1.06	93	⇓iP	Pn	18 20 22.0	+0.2
PB11				eS	Sn	18 20 38.5	+2.0
PB11				IAML		18 20 42.1	
	comp=N,1249µm,0.8s						
PB11	IPOC Station P	1.06	93		Pb	18 20 21.6	+0.1
PB11					Pg	18 20 22.3	+0.6
PB11				Sn	Sn	18 20 38.0	+1.5
PB12	IPOC Station P	1.17	22	⇑iP	Pb	18 20 23.5	+0.3
PB12				eS	Sg	18 20 40.8	+1.9
PB12				IAML		18 20 44.8	
	comp=N,313µm,0.6s						
PB12	IPOC Station P	1.17	22		Pn	18 20 22.6	-0.6
PB12				Sn	Sb	18 20 38.0	-0.2
PATCX	Punta Patache	1.26	152		Pn	18 20 23.7	-0.7
AP01	Chacalluta	1.39	17	⇑iP	Pn	18 20 26.5	+0.4
AP01				eS	Sg	18 20 47.0	+1.0
AP01				IAML		18 20 50.6	
	comp=E,1080µm,0.7s						
GO01	Chusmiza	1.50	89	⇓iP	Pb	18 20 29.5	+0.4
GO01				eS	Sg	18 20 51.7	+2.1
GO01				IAML		18 20 54.6	
	comp=N,415µm,0.6s						
GO01	Chusmiza	1.50	89	Pn	Pb	18 20 28.9	-0.1
PB08	IPOC Station P	1.59	106	⇑iP	Pn	18 20 30.2	+0.8
PB08				eS	Sg	18 20 53.6	+1.0
PB08				IAML		18 20 55.8	
	comp=N,247µm,0.6s						
PB01	IPOC Station P	1.80	138	⇑iP	Pn	18 20 32.1	+0.1
PB01				eS	Sb	18 20 56.1	-0.5
PB01				IAML		18 21 03.5	
	comp=E,176µm,0.3s						
PB01	IPOC Station P	1.80	138		Pn	18 20 32.2	+0.3
PB02	IPOC Station P	1.81	153	⇑iP	Pn	18 20 31.6	-0.4
PB02				eS	Sn	18 20 54.6	-0.3
PB02				IAML		18 21 07.0	
	comp=E,233µm,0.6s						
PB16	IPOC Station P	1.82	42	eP	Pb	18 20 34.7	+0.1
PB16				eS	Sg	18 21 01.4	+1.6
PB16				IAML		18 21 03.7	
	comp=N,184µm,0.4s						
PB16	IPOC Station P	1.82	42		Pb	18 20 34.2	-0.4
PB07	IPOC Station P	2.18	158	eP	Pn	18 20 36.5	-0.8
PB07				eS	Sg	18 21 12.6	+1.2
PB07				IAML		18 21 19.3	
	comp=E,126µm,0.7s						
PB07	IPOC Station P	2.18	158		Pn	18 20 37.7	+0.5
PB03	IPOC Station P	2.52	158	⇑iP	Pn	18 20 41.2	-0.7
PB09	IPOC Station P	2.53	146		Pn	18 20 42.8	+0.7
PB04	IPOC Station P	2.68	167		Pn	18 20 42.7	-1.5
PB04	IPOC Station P	2.68	167	i P	Pn	18 20 42.6	-1.5
PB04				i Sg	Sg	18 21 26.7	-0.8
PB05	IPOC Station P	3.18	170	i P	Pn	18 20 48.8	-2.1
PB05				i Sg	Sg	18 21 41.5	-2.0
PB05				IAML		18 21 50.6	
	comp=Z,37µm,0.9s						
PB06	IPOC Station P	3.19	160	i P	Pn	18 20 49.9	-1.3
LVC	Limon Verde	3.38	149	Pn	Pn	18 20 54.5	+0.6
	comp=Z,123nm,0.3s,baz=337,slow=9.7,SNR=199						
LVC				Sn	Sn	18 21 37.8	+3.8
	comp=Z,2µm,0.3s,baz=67,slow=10,SNR=8.0						
LVC				LR	LR	18 21 41.6	
	comp=Z,42µm,21.0s,baz=330,slow=30						
LVC	Limon Verde	3.38	149	P	Pn	18 20 55.5	+1.6
LVC	Limon Verde	3.38	149		Pn	18 20 55.5	+1.6
LVC	Limon Verde	3.38	149	i P	Pn	18 20 54.5	+0.6
LVC				IAML		18 21 55.7	
	comp=Z,27µm,0.9s						
PB15	IPOC Station P	3.69	161		Pn	18 20 57.0	-1.2
PB15	IPOC Station P	3.69	161	i P	Pn	18 20 56.9	-1.2
PB15				i Sg	Sg	18 21 59.9	-0.1
PB10	IPOC Station P	3.80	177		Pn	18 20 56.9	-2.4
PB10	IPOC Station P	3.80	177	i P	Pn	18 20 57.0	-2.4
PB10				IAML		18 22 21.0	
	comp=Z,11µm,2.2s						
LPAZ	La Paz	4.23	37	Pn	Pn	18 21 09.6	+3.7
	comp=Z,24nm,0.3s,baz=212,slow=9.6,SNR=174						
LPAZ				Sn	Sn	18 21 58.0	+2.6
	comp=Z,132nm,0.3s,baz=240,slow=7.5,SNR=5.2						
LPAZ				LR	LR	18 22 58.6	
	comp=Z,505µm,18.1s,baz=228,slow=44						
LPAZ	La Paz	4.23	37	P	Pn	18 21 10.1	+4.2
LPAZ	La Paz	4.23	37		Pn	18 21 10.1	+4.2
PB14	IPOC Station P	4.91	176		Pn	18 21 11.6	-3.3
PB14	IPOC Station P	4.91	176	i P	Pn	18 21 13.4	-1.5
PB14				IAML		18 22 41.8	
	comp=Z,9µm,2.7s						
YJA	Yavi	5.50	117	i P	Pn	18 21 26.2	+3.1
YJA				IAML		18 23 06.1	
	comp=Z,4µm,2.4s						
GO02	Mina Guanaco	5.54	169		Pn	18 21 22.1	-1.5
AZAP	Zapla	6.95	131	i P	Pn	18 21 45.1	+2.2
AZAP				IAML		18 24 04.4	
	comp=Z,931nm,2.8s						
ASTB	Santa Barbara	7.24	127	i P	Pn	18 21 48.6	+1.8
ASTB				IAML		18 24 17.8	
	comp=Z,981nm,2.1s						
GO03	Copiap	7.87	176		Pn	18 21 52.5	-2.8
NNA	Nana	9.63	322	Pn	Pn	18 22 20.0	+0.5
	comp=Z,5.4nm,0.3s,baz=172,slow=19,SNR=8.9						
NNA				Sn	Sn	18 24 06.3	-1.5
	comp=Z,22nm,0.3s,baz=321,slow=4.7,SNR=8.1						
NNA	Nana	9.63	322	P	Pn	18 22 20.1	+0.5
NNA				pmax	pmax		
	comp=Z,467nm,0.8s						
NNA	Nana	9.63	322		Pn	18 22 17.5	-2.1
CYA	Choya	9.81	153	i P	Pn	18 22 21.3	-0.7
SIV	San Ignacio	9.95	70	Pn	Pn	18 22 23.3	-0.6
	comp=Z,35nm,0.3s,baz=264,slow=12,SNR=211						
SIV				Sn	Sn	18 24 13.7	-1.9
	comp=Z,13nm,0.3s,baz=347,slow=18,SNR=1.4						
SIV				LR	LR	18 26 53.7	
	comp=Z,402µm,18.0s,baz=274,slow=42						
GO04	Tololo Observa	10.42	180		Pn	18 22 26.3	-4.2
AROD	Rodeo	10.49	174	i P	Pn	18 22 29.2	-2.3
ACCO	Cerro Coronel	10.95	172	i P	Pn	18 22 35.8	-2.0
RTLS	Leoncito	12.12	174	i P	Pn	18 22 50.6	-3.2
RTCV	Cerro Valdivia	12.28	171	i P	Pn	18 22 53.1	-2.6
SAML	Samuel	12.97	36	P	Pn	18 23 05.9	+0.6
SAML	Samuel	12.97	36		Pn	18 23 05.9	+0.6
SAML	Samuel	12.97	36	eP	Pn	18 23 03.2	-2.1
ARCO	CERRO ARCO	13.19	173	i P	Pn	18 23 03.6	-4.7
ROC1	El Roble	13.22	181		Pn	18 23 08.0	-0.8
ROC1	El Roble	13.22	181	i P	Pn	18 23 04.8	-4.0
PEL	Peldehue	13.39	180	P	Pn	18 23 11.3	+0.4
PEL				pmax	pmax		
	comp=Z,173nm,1.7s						
PEL	Peldehue	13.39	180		Pn	18 23 06.4	-4.5
MRA	San Martin	13.45	161	i P	Pn	18 23 09.0	-2.8
CPUP	Villa Florida	14.03	121	Pn	Pn	18 23 20.8	+1.2
	comp=Z,1.4nm,0.3s,baz=300,slow=12,SNR=19						
CPUP				Sn	Sn	18 25 56.7	+1.5
	comp=Z,1.0nm,0.3s,baz=278,slow=18,SNR=1.6						
CPUP				LR	LR	18 29 25.7	
	comp=Z,97µm,22.0s,baz=301,slow=40						
CPUP	Villa Florida	14.03	121		Pn	18 23 21.2	+1.6
ATAH	Atahualpa	14.52	328	Pn	Pn	18 23 26.6	-0.2
	comp=Z,0.4nm,0.3s,baz=111,slow=10,SNR=3.6						
ATAH				Sn	Sn	18 26 06.6	-1.2
	comp=Z,0.9nm,0.3s,baz=75,slow=12,SNR=1.6						
SALV	Santo Antonio	14.86	78	eP	Pn	18 23 28.9	-2.1
GO05	Huala	15.28	184		Pn	18 23 29.0	-7.6
CLDB	Colider	16.90	61	eP	Pn	18 23 56.4	-1.1
PTGB	Pitanga	18.03	109	eP	Pn	18 24 09.7	-1.9
PCMB	Pacaembu	18.37	99	eP	P	18 24 14.3	-1.4
ARAG	Araguaiana, MT	18.50	81	eP	P	18 24 15.0	-2.1
ITAB	Concordia	18.67	117	eP	P	18 24 18.2	-0.7
LPA	La Plata	18.94	146	eP	P	18 24 14.3	-7.5
LPA				PPP	PPP	18 24 41.7	
LPA				S	Sn	18 27 51.9	-2.4
LPA				SSS	SSS	18 28 24.3	
LPA				SCS	ScS	18 36 12.0	+7.5
LPA				PKIKP	PKiKP	18 36 35.4	-2.6
LPA				SKIKP		18 40 01.5	
PLTB	Pedras Altas	19.56	131	eP	P	18 24 28.6	-0.1
GO06	Curarrehue	19.82	182		Pn	18 24 33.2	+0.1
CNLB	Canela	20.48	122	eP	P	18 24 37.1	-1.6
BB19B	Bebedouro	20.90	98	eP	P	18 24 43.3	-0.2
PLCA	Paso Flores	20.96	180	P	P	18 24 44.8	+0.8
	comp=Z,96nm,1.0s,baz=19,slow=12,SNR=45						
PLCA				S	Sn	18 28 40.6	-2.5
	comp=Z,8.2nm,1.0s,baz=222,slow=24,SNR=2.3						
PLCA				LR	LR	18 33 14.7	
	comp=Z,32µm,18.1s,baz=20,slow=38						
PLCA	Paso Flores	20.96	180	P	P	18 24 45.5	+1.5
PLCA				IAmb	IAmb	18 25 12.0	
	comp=Z,860nm,1.6s						
PLCA	Paso Flores	20.96	180	eP	P	18 24 44.7	+0.8
IPMB	Ipameri, GO	21.43	89	eP	P	18 24 47.5	-1.6
PTGA	Pitinga	21.63	31	P	P	18 24 49.1	-2.0
	comp=Z,227nm,0.3s,baz=215,slow=19,SNR=193						
PTGA				S	S	18 28 47.5	-3.0
	comp=Z,60nm,0.8s,baz=324,slow=14,SNR=3.3						
PTGA				LR	LR	18 33 51.2	
	comp=Z,118µm,18.6s,baz=208,slow=39						
PTGA	Pitinga	21.63	31	P	P	18 24 49.2	-2.0
PTGA	Pitinga	21.63	31	eP	P	18 24 49.0	-2.2
FLOC	Florencia	21.69	347	eP	P	18 24 51.3	-0.5
FLOC	Florencia	21.69	347	P	P	18 24 54.2	+2.4
CPAS2	Pasto	21.74	342	eP	P	18 25 01.2	+8.5
GCUF	Volcan Galeras	21.77	342	eP	P	18 24 58.2	+4.9
CRUC	La Cruz	21.99	343	eP	P	18 25 00.6	+5.2
SPB	Sao Paulo	22.04	104	P	P	18 24 57.2	+1.7
SPB				IAmb	IAmb	18 25 05.1	
	comp=Z,1µm,1.8s						
SPB	Sao Paulo	22.04	104	eP	P	18 24 55.1	-0.4
BDFB	Brasilia	22.06	83	P	P	18 24 55.3	-0.7
	comp=Z,44nm,0.5s,baz=247,slow=15,SNR=43						
BDFB				S	S	18 28 57.5	-1.6
	comp=Z,34nm,0.9s,baz=171,slow=8.6,SNR=1.8						
BDFB				LR	LR	18 34 29.4	
	comp=Z,120µm,19.2s,baz=258,slow=40						
BDFB	Brasilia	22.06	83	P	P	18 24 53.9	-2.0
BDFB				IAmb	IAmb	18 25 06.4	
	comp=Z,554nm,0.9s						
GARC	Garzon, Huila	22.24	347	eP	P	18 24 57.3	-0.7
VAO	Valinhos	22.42	103	eP	P	18 24 57.8	-1.9
SOTA	Rioblanco	22.44	345	eP	P	18 25 01.9	+1.4
PCON	Cinco Dias	22.58	345	eP	P	18 25 02.2	+0.2
PARB	Paraibuna	23.67	103	eP	P	18 25 10.9	-1.7
GR1C	Gorgona, Isla	23.70	341	eP	P	18 25 14.4	+1.6
PTGC	Puerto Gaitan,	23.79	357	eP	P	18 25 11.7	-2.0
VILC	Villavicencio,	23.84	353	eP	P	18 25 12.2	-2.1
ORTC	Ortega, Tolima	23.87	349	eP	P	18 25 14.0	-0.5
YOTC	Yotoco, Valle	24.17	346	eP	P	18 25 16.4	-1.0
CHIC	Chingaza	24.35	353	eP	P	18 25 18.2	-1.1
BSCB	Bom Sucesso	24.41	98	eP	P	18 25 18.3	-1.3
MALC	Bahia Malaga	24.43	344	eP	P	18 25 21.7	+2.1
ANIL	Santa Ana	24.47	349	eP	P	18 25 20.4	+0.1
ROSC	El Rosal	24.64	352	P	P	18 25 20.9	-1.1
	comp=Z,40nm,0.6s,baz=218,slow=5.9,SNR=21						
ROSC				S	S	18 29 51.0	+7.7
	comp=Z,7.3nm,0.5s,baz=293,slow=23,SNR=1.8						
ROSC				LR	LR	18 36 26.4	
	comp=Z,69µm,18.4s,baz=202,slow=40						
ROSC	El Rosal	24.64	352	eP	P	18 25 22.3	+0.4
ROSC	El Rosal	24.64	352	IAMs_20	IAMs_20	18 35 42.9	
	comp=Z,72µm,20.0s						
ESAR	Angra dos Reis	24.74	102	eP	P	18 25 20.7	-1.7
RREF	El Recreo	24.86	349	eP	P	18 25 25.8	+1.6
SMTB	Santa Maria do	24.89	68	eP	P	18 25 23.2	-0.7
PLMC	San Jos del P	25.05	347	eP	P	18 25 25.1	-0.2
GUY2C	Guyana, Caldas	25.18	349	eP	P	18 25 25.6	-1.3
PIZC	Pizarro, Choco	25.35	345	eP	P	18 25 28.8	+0.8
SPBC	San Pablo de B	25.40	352	eP	P	18 25 27.4	-1.1
NORC	Norcasia	25.43	350	eP	P	18 25 26.5	-2.2
RUSC	La Rusia	25.54	355	eP	P	18 25 29.7	-0.5
RUSC	La Rusia	25.54	355	P	P	18 25 30.3	+0.2
JANB	Januaria	25.67	84	eP	P	18 25 29.9	-1.1
CBOC	Ciudad Bolivar	25.92	348	eP	P	18 25 32.2	-1.1
TAMC	Tame, Arauca	25.99	358	eP	P	18 25 32.7	-1.1
HELC	Santa Helena	26.15	349	eP	P	18 25 34.3	-1.3
BARC	Barichara	26.24	355	eP	P	18 25 35.5	-0.8
PTBC	PUERTO BERRIO,	26.33	352	eP	P	18 25 33.9	-2.9
SOLC	Bahia Solano	26.58	345	eP	P	18 25 41.5	+2.5
BRRC	Barranca, Sant	26.80	354	eP	P	18 25 38.3	-2.8
PAMC	Pamplona, Colo	26.94	356	eP	P	18 25 42.0	-0.8
ZARC	Zaragoza, Cauc	27.32	351	eP	P	18 25 43.8	-2.0
PTAC	Punta Ardita,	27.56	345	eP	P	18 25 52.0	+4.1
UREC	San Jos de Ur	27.68	350	eP	P	18 25 47.3	-1.7
OCAC	Ocana	27.88	355	eP	P	18 25 46.9	-4.1
SJMB	Sao Joao De Ma	27.95	93	eP	P	18 25 50.2	-1.3
BSFB	Barra de Sao F	28.26	93	eP	P	18 25 53.6	-0.6
SDV	Santo Domingo	28.41	0	P	P	18 25 53.7	-2.0
	comp=Z,42nm,1.1s,baz=197,slow=8.1,SNR=18						
SDV				S	S	18 30 44.7	+2.1
	comp=Z,15nm,1.0s,baz=79,slow=22,SNR=1.6						
SDV				LR	LR	18 38 21.1	
	comp=Z,58µm,18.1s,baz=181,slow=39						
SDV	Santo Domingo	28.41	0	eP	P	18 25 53.4	-2.3
SDV	Santo Domingo	28.41	0	IAMs_20	IAMs_20	18 38 10.6	
	comp=Z,56µm,18.0s						
SDV	Santo Domingo	28.41	0	eP	P	18 25 54.2	-1.5
SMLC	San Martn de	28.51	353	eP	P	18 25 53.2	-3.2
BAUV	El Baul	28.59	6	eP	P	18 25 54.8	-2.3
LCBC	Los crdobas,	28.91	349	eP	P	18 26 00.1	+0.2
CODC	Agustn Codazz	29.57	355	eP	P	18 26 00.5	-5.3
ARGC	Ariguani, Magd	29.57	353	eP	P	18 26 03.7	-2.1
SJCC	San Jacinto, C	29.73	351	eP	P	18 26 06.5	-0.8
BCIP	Isla Barro Col	30.04	342	IAMs_20	IAMs_20	18 39 22.6	
	comp=Z,37µm,22.0s						
PLCV	Puerto La Cruz	30.30	12		S	18 31 19.1	+7.1
PCRV	Puerto La Cruz	30.30	12	P	P	18 26 11.0	-1.3
	comp=Z,141nm,1.1s,baz=260,slow=3.1,SNR=18						
PCRV				S	S	18 31 19.1	+7.0
	comp=Z,18nm,1.0s,baz=232,slow=18,SNR=2.2						
MDP	Montagnes des	30.43	38	P	P	18 26 12.7	-0.8
	comp=Z,62nm,0.8s,baz=215,slow=7.7,SNR=34						
MDP				S	S	18 31 18.2	+4.0
	comp=Z,14nm,0.9s,baz=60,slow=7.4,SNR=2.1						
MDP				LR	LR	18 39 12.9	
	comp=Z,158µm,18.9s,baz=214,slow=38						
TPP	Pointe-a-Pierr	31.21	18	eP	P	18 26 21.0	+0.7
GUIV	Guiria	31.32	16	eP	P	18 26 20.3	-0.9
TBH	Brigand Hill	31.49	19	eP	P	18 26 23.4	+0.6
GO09	Cerro Castillo	31.52	182	IAMs_20	IAMs_20	18 40 37.1	
	comp=Z,41µm,18.0s						
TRN	Trinidad (W)	31.54	18	eP	P	18 26 20.9	-2.3
HDC	Heredia	32.31	335	IAMs_20	IAMs_20	18 39 07.7	
	comp=Z,37µm,20.0s						
TOSP	Speyside	32.42	19	eP	P	18 26 28.2	-2.6
TOSP	Speyside	32.42	19	P	P	18 26 28.2	-2.6
TOSP	Speyside	32.42	19	IAmb	IAmb	18 26 35.4	
	comp=Z,916nm,1.3s						
TOSP				IAMs_20	IAMs_20	18 40 10.7	
	comp=Z,96µm,22.0s						
GRGR	Grenville	32.89	17	eP	P	18 26 30.4	-4.6
GRGR	Grenville	32.89	17	P	P	18 26 34.7	-0.4
JTS	Las Juntas de	32.91	334	P	P	18 26 35.5	+0.2
	comp=Z,12nm,0.8s,baz=286,slow=3.8,SNR=13						
JTS				S	S	18 31 56.6	+3.7
	comp=Z,1.3nm,0.3s,baz=6.5,slow=22,SNR=1.7						
JTS	Las Juntas de	32.91	334	IAMs_20	IAMs_20	18 39 20.6	
	comp=Z,27µm,20.0s						
GRHS	Sauteurs	32.98	17	eP	P	18 26 35.4	-0.4
GRSS	Sisters	33.06	17	eP	P	18 26 37.5	+1.0
GO10	Punta Arenas	33.39	180	P	P	18 26 37.9	-1.2
GO10				IAmb	IAmb	18 26 59.9	
	comp=Z,246nm,1.2s						
GO10				IAMs_20	IAMs_20	18 40 25.7	
	comp=Z,32µm,22.0s						
EFI	East Falkland	33.43	166	⇑eP	P	18 26 40.0	+0.5
EFI				pmax	pmax		
	comp=Z,141nm,0.9s						
EFI				MLR	MLR		
	comp=Z,49µm,17.0s						
SVB	Belmont	34.08	17	eP	P	18 26 41.5	-4.0
SVB	Belmont	34.08	17	IAMs_20	IAMs_20	18 41 37.8	
	comp=Z,39µm,18.0s						
SVV	Soufriere Volc	34.14	17	eP	P	18 26 45.0	-0.9
NBMO	Morrinhos-CE	34.14	65	eP	P	18 26 44.9	-1.1
SSV	Crater Summit	34.15	17	eP	P	18 26 42.9	-3.3

SFAN	Fancy Village	34.21	17	*e*P	P	18 26 43.1	-3.4
ESPN	Las Esperanzas	34.38	336	IAMs_20	IAMs_20	18 42 38.5	
	comp=Z,30µm,19.0s						
BBGH	Gun Hill	34.46	20	*e*P	P	18 26 48.6	-0.1
PRVC	Isla de Provid	34.48	342	*e*P	P	18 26 49.3	+0.4
ACON	Acoyapa	34.52	335	IAMs_20	IAMs_20	18 40 16.2	
	comp=Z,35µm,21.0s						
MCLT	Moule a Chique	34.59	17	*e*P	P	18 26 43.4	-6.4
MCLT	Moule a Chique	34.59	17	IAMs_20	IAMs_20	18 41 31.2	
	comp=Z,28µm,22.0s						
SLB	Belfond	34.67	17	*e*P	P	18 26 48.5	-2.1
SLBI	Saint Lucia, B	34.88	17	*e*P	P	18 26 43.8	-8.5
USHA	Ushuaia	35.12	178	P	P	18 26 55.5	+1.5
	comp=Z,33nm,1.0s,baz=153,slow=4.1,SNR=7.4						
FDF	Fort de France	35.51	16	*e*P	P	18 26 53.1	-4.7
FDF	Fort de France	35.51	16	P	P	18 26 53.1	-4.7
FDF				pmax	pmax		
	comp=Z,388nm,0.9s						
FDF				MLR	MLR		
	comp=Z,55µm,18.0s						
FDF	Fort de France	35.51	16	P	P	18 26 53.1	-4.7
DPMT	Pointe Michel	35.95	16	*e*P	P	18 26 56.8	-4.7
RPN	Rapa Nui	36.03	251	P	P	18 27 04.7	+2.4
	comp=Z,94nm,0.9s,baz=90,slow=5.1,SNR=3.2						
DLPL	La Plaine	36.06	16	*e*P	P	18 26 59.7	-2.8
MDPO	Dominica; Chan	36.24	15	*e*P	P	18 27 01.4	-2.6
DWS	Wesley	36.27	16	*e*P	P	18 27 02.0	-2.2
MDVC	Dominica, Viel	36.29	15	*e*P	P	18 27 03.9	-0.5
MDPV	Dominica, Penn	36.30	15	*e*P	P	18 27 03.6	-0.9
RCBR	Riachuelo	36.60	73	P	P	18 27 07.1	-0.3
	comp=Z,246nm,0.9s,baz=237,slow=9.7,SNR=51						
RCBR				S	S	18 32 47.1	-3.0
	comp=Z,25nm,1.1s,baz=120,slow=9.5,SNR=2.5						
RCBR	Riachuelo	36.60	73	P	P	18 27 06.7	-0.6
RCBR				IAmb	IAmb	18 27 10.5	
	comp=Z,383nm,1.1s						
RCBR	Riachuelo	36.60	73	*e*P	P	18 27 05.7	-1.7
MLYT	Lee's Yard	37.17	14	*e*P	P	18 27 05.6	-6.4
TGUH	Tegucigalpa,Un	37.27	333	IAMs_20	IAMs_20	18 45 10.0	
	comp=Z,28µm,18.0s						
SKOC	St. Kitts, UWI	37.61	13	*e*P	P	18 27 10.6	-5.0
SKI	Saint Kitts	37.64	13	*e*P	P	18 27 11.8	-4.2
OBIP	Obispado Ponce	37.73	6	IAmb	IAmb	18 27 34.0	
	comp=Z,298nm,1.0s						
OBIP				IAMs_20	IAMs_20	18 44 14.2	
	comp=Z,35µm,18.0s						
SEUS	St. Eustatius	37.75	12	*e*P	P	18 27 09.8	-7.1
PDPR	Patillas Dam,	37.78	7	IAmb	IAmb	18 27 33.0	
	comp=Z,636nm,1.6s						
SABA	Saba	37.82	12	*e*P	P	18 27 12.2	-5.3
SABA	Saba	37.82	12	P	P	18 27 12.2	-5.3
SABA	Saba	37.82	12	IAmb	IAmb	18 27 42.0	
	comp=Z,228nm,0.8s						
SJG	San Juan	37.85	7	P	P	18 27 15.5	-2.2
SJG				S	S	18 33 07.2	-1.5
SJG				pmax	pmax		
	comp=Z,500nm,1.4s						
SJG				MLR	MLR		
	comp=Z,31µm,19.0s						
SJG	San Juan	37.85	7	P	P	18 27 15.5	-2.2
SJG				IAmb	IAmb	18 27 33.7	
	comp=Z,500nm,1.4s						
SJG					S	18 33 07.2	-1.5
SJG	San Juan	37.85	7	IAMs_20	IAMs_20	18 44 09.1	
	comp=Z,31µm,19.0s						
MTP	Monte Pirata	37.91	8	IAmb	IAmb	18 27 30.3	
	comp=Z,275nm,1.1s						
AOPR	Arecibo Observ	38.02	6	IAmb	IAmb	18 27 40.3	
	comp=Z,218nm,1.0s						
CBYP	Canovanas	38.05	8	IAmb	IAmb	18 27 33.0	
	comp=Z,250nm,0.8s						
GCPR	Guaynabo City	38.06	7	IAmb	IAmb	18 27 23.3	
	comp=Z,169nm,0.8s						
CUPR	Culebra, Puert	38.16	8	IAmb	IAmb	18 27 32.0	
	comp=Z,201nm,0.8s						
ANWB	Willy Bob	38.17	14	*e*P	P	18 27 13.8	-6.6
ANWB	Willy Bob	38.17	14		P	18 27 13.8	-6.6
ANWB	Willy Bob	38.17	14	IAmb	IAmb	18 27 33.0	
	comp=Z,530nm,1.3s						
SMRT	St. Maarten	38.27	12	*e*P	P	18 27 17.3	-4.0
SMRT	St. Maarten	38.27	12	P	P	18 27 17.3	-4.0
SDDR	Presa de Saban	38.45	359	IAMs_20	IAMs_20	18 44 26.6	
	comp=Z,32µm,22.0s						
APG	El Apazote	39.55	329	P	P	18 27 33.6	+1.3
	comp=Z,55nm,1.1s,baz=169,slow=7.2,SNR=38						
GTBY	Guantanamo Bay	39.61	354	IAMs_20	IAMs_20	18 46 22.0	
	comp=Z,21µm,19.0s						
GRTK	Grand Turk	40.96	360	P	P	18 27 43.6	-0.1
GRTK				IAMs_20	IAMs_20	18 46 15.3	
	comp=Z,28µm,20.0s						
TEIG	Tepich	43.23	336	P	P	18 28 01.8	-0.3
	comp=Z,66nm,0.7s,SNR=26						
TEIG	Tepich	43.23	336	IAMs_20	IAMs_20	18 48 23.1	
	comp=Z,19µm,18.0s						
HOPE	Hope Point	43.29	151	IAMs_20	IAMs_20	18 45 11.6	
	comp=Z,35µm,21.0s						
CMIG	Matias Romero	43.56	325	P	P	18 28 05.1	+0.2
	comp=Z,25nm,0.9s,baz=121,slow=5.2,SNR=34						
PMSA	Palmer Station	45.27	176	P	P	18 28 19.8	+1.8
	comp=Z,57nm,1.1s,baz=61,slow=3.4,SNR=5.1						
PMSA	Palmer Station	45.27	176	IAMs_20	IAMs_20	18 46 54.8	
	comp=Z,16µm,18.0s						
PMSA	Palmer Station	45.27	176	*e*P	P	18 28 19.4	+1.4
060A	Indiantown	47.38	348	IAMs_20	IAMs_20	18 52 00.3	
	comp=Z,14µm,19.0s						
UNM	Universidad Na	47.75	323	IAMs_20	IAMs_20	18 46 09.9	
	comp=Z,16µm,22.0s						
DWPF	Disney Wildern	48.64	347	IAMs_20	IAMs_20	18 52 33.5	
	comp=Z,13µm,18.0s						
DWPF	Disney Wildern	48.64	347	P	P	18 28 45.9	+1.1
	baz=167						
DWPF				S	S	18 35 45.5	-1.0
	baz=167						
656A	Willston	50.09	347	IAmb	IAmb	18 29 35.6	
	comp=Z,348nm,1.3s						
656A				IAMs_20	IAMs_20	18 51 08.9	
	comp=Z,16µm,21.0s						
456A	Hilliard	51.29	348	IAMs_20	IAMs_20	18 54 40.7	
	comp=Z,18µm,18.0s						
553A	Crawfordville	51.31	345	IAMs_20	IAMs_20	18 51 00.3	
	comp=Z,15µm,21.0s						
451A	Vernon	52.06	344	IAmb	IAmb	18 29 15.4	
	comp=Z,398nm,1.4s						
451A				IAMs_20	IAMs_20	18 51 32.0	
	comp=Z,15µm,22.0s						
BBSR	BB Station	52.11	7	P	P	18 29 09.9	-1.0
257A	Skidaway Islan	52.31	349	IAMs_20	IAMs_20	18 55 34.8	
	comp=Z,16µm,18.0s						
TIGA	Tifton	52.31	346	IAMs_20	IAMs_20	18 52 04.6	
	comp=Z,20µm,20.0s						
TIGA	Tifton	52.31	346	P	P	18 29 13.4	+0.9
	baz=165,SNR=13						
TIGA				S	S	18 36 34.9	-2.6
	baz=165						
255A	Hazlehurst	52.55	347	IAmb	IAmb	18 29 54.1	
	comp=Z,272nm,1.2s						
255A				IAMs_20	IAMs_20	18 55 36.0	
	comp=Z,14µm,18.0s						
352A	Blakely	52.67	345	IAMs_20	IAMs_20	18 51 53.2	
	comp=Z,15µm,22.0s						
158A	Hollywood	52.91	350	P	P	18 29 18.1	+1.2
	baz=169,SNR=8.5						
545A	Edgard	52.98	339	IAMs_20	IAMs_20	18 54 39.6	
	comp=Z,15µm,20.0s						
157A	Early Branch	52.99	349	P	P	18 29 18.9	+1.4
	baz=168,SNR=11						
Z59A	Georgetown, SC	53.27	351	P	P	18 29 20.5	+1.0
	baz=170						
NHSC	New Hope	53.27	350	IAMs_20	IAMs_20	18 52 53.4	
	comp=Z,18µm,20.0s						
NHSC	New Hope	53.27	350	P	P	18 29 20.7	+1.2
	baz=169,SNR=25						
154A	Montrose	53.34	347	IAMs_20	IAMs_20	18 52 30.0	
	comp=Z,14µm,19.0s						
Z58A	St. Stephen	53.44	351	P	P	18 29 20.7	-0.1
	baz=170,SNR=20						
Z57A	Bowman	53.55	350	P	P	18 29 22.2	+0.6
	baz=168,SNR=18						
Z56A	Williston	53.69	349	IAMs_20	IAMs_20	18 56 25.4	
	comp=Z,16µm,18.0s						
Z56A	Williston	53.69	349	P	P	18 29 23.3	+0.6
	baz=168,SNR=7.3						
152A	Waverly Hall	53.76	345	P	P	18 29 22.1	-1.0
152A				IAMs_20	IAMs_20	18 52 39.0	
	comp=Z,20µm,21.0s						
KVTX	Kingsville	53.81	330	IAMs_20	IAMs_20	18 52 55.0	
	comp=Z,14µm,19.0s						
Y60A	Bolivia	53.88	352	IAMs_20	IAMs_20	18 53 33.8	
	comp=Z,16µm,21.0s						
Y60A	Bolivia	53.88	352	P	P	18 29 24.9	+0.9
	baz=171,SNR=17						
Y59A	Loris	53.95	352	IAMs_20	IAMs_20	18 52 52.3	
	comp=Z,17µm,21.0s						
Y59A	Loris	53.95	352	P	P	18 29 25.3	+0.8
	baz=171						
Y58A	Scranton	53.98	351	IAMs_20	IAMs_20	18 56 41.1	
	comp=Z,12µm,20.0s						
Y58A	Scranton	53.98	351	P	P	18 29 25.6	+0.9
	baz=170,SNR=13						
Y56A	Pelion	54.13	349	P	P	18 29 26.2	+0.4
	baz=168,SNR=6.7						
GOGA	Godfrey	54.19	347	P	P	18 29 25.5	-0.8
GOGA				pmax	pmax		
	comp=Z,145nm,1.4s						
GOGA				MLR	MLR		
	comp=Z,15µm,20.0s						
GOGA	Godfrey	54.19	347	P	P	18 29 25.5	-0.8
GOGA	Godfrey	54.19	347	IAMs_20	IAMs_20	18 52 55.4	
	comp=Z,15µm,20.0s						
GOGA	Godfrey	54.19	347	P	P	18 29 26.1	-0.1
	baz=165,SNR=14						
Y57A	Sumter	54.20	350	IAmb	IAmb	18 29 43.7	
	comp=Z,156nm,0.6s						
Y57A				IAMs_20	IAMs_20	18 53 09.9	
	comp=Z,16µm,21.0s						
Y57A	Sumter	54.20	350	P	P	18 29 27.0	+0.7
	baz=169,SNR=7.9						
Y55A	Saluda	54.38	349	P	P	18 29 28.1	+0.4
	baz=167,SNR=31						
X60A	Albert Glenn T	54.41	353	P	P	18 29 28.6	+0.8
	baz=172,SNR=13						
Z51A	Franklin	54.48	345	IAMs_20	IAMs_20	18 53 56.3	
	comp=Z,20µm,21.0s						
X59A	McDuffie Farm,	54.48	352	P	P	18 29 28.9	+0.6
	baz=171,SNR=8.2						
X58A	Rowland	54.57	351	IAmb	IAmb	18 29 44.5	
	comp=Z,137nm,0.8s						
X58A				IAMs_20	IAMs_20	18 54 40.7	
	comp=Z,17µm,21.0s						
X58A	Rowland	54.57	351	P	P	18 29 29.7	+0.7
	baz=170,SNR=15						
X57A	Johnson Farm,	54.59	351	P	P	18 29 29.1	-0.1
	baz=169						
Z50A	Ashland	54.61	344	P	P	18 29 28.5	-0.9
Z50A				IAmb	IAmb	18 29 35.4	
	comp=Z,103nm,0.8s						
Z50A				IAMs_20	IAMs_20	18 53 02.5	
	comp=Z,14µm,22.0s						
Z50A	Ashland	54.61	344	P	P	18 29 28.1	-1.3
	baz=163,SNR=64						
LRAL	Lakeview Retre	54.68	343	P	P	18 29 28.7	-1.2
	baz=161,SNR=28						
HODGE	Hodges	54.74	348	IAmb	IAmb	18 30 18.8	
	comp=Z,202nm,1.6s						
HODGE				IAMs_20	IAMs_20	18 57 18.1	
	comp=Z,14µm,18.0s						
Y52A	Lilburn	54.75	346	IAMs_20	IAMs_20	18 53 01.4	
	comp=Z,16µm,21.0s						
Y52A	Lilburn	54.75	346	P	P	18 29 30.2	-0.2
	baz=165,SNR=16						
X56A	White Oak	54.77	350	P	P	18 29 30.9	+0.5
	baz=168,SNR=26						
BIRD	Birdtown, Kers	54.83	350	IAmb	IAmb	18 30 05.2	
	comp=Z,171nm,0.9s						
BIRD				IAMs_20	IAMs_20	18 53 27.5	
	comp=Z,13µm,22.0s						
W60A	Pink Hill	54.85	353	P	P	18 29 31.8	+0.8
	baz=172,SNR=6.3						
X55A	Gracelyn & Ava	54.85	349	P	P	18 29 31.8	+0.7
	baz=168,SNR=27						
W61A	Ground Anchor	54.90	354	P	P	18 29 33.1	+1.7
	baz=173						
HKT	Hockley	54.95	333	P	P	18 29 32.8	+1.0
HKT				pmax	pmax		
	comp=Z,190nm,1.4s						
HKT	Hockley	54.95	333	P	P	18 29 32.8	+1.0
HKT				IAmb	IAmb	18 29 37.3	
	comp=Z,190nm,1.4s						
VBMS	Vicksburg	54.98	340	P	P	18 29 32.5	+0.5
	baz=157						
W58A	Raeford	55.01	352	P	P	18 29 32.3	+0.1
	baz=170,SNR=48						
W59A	Clinton	55.05	352	P	P	18 29 33.0	+0.5
	baz=171						
CNNC	Cliffs of the	55.05	353	IAMs_20	IAMs_20	18 57 14.0	
	comp=Z,11µm,18.0s						
CNNC	Cliffs of the	55.05	353	P	P	18 29 33.3	+0.8
	baz=172						
X54A	Belton	55.07	348	P	P	18 29 32.3	-0.3
	baz=167,SNR=27						
Z47A	Carrollton	55.14	342	P	P	18 29 32.4	-0.7
Z47A				IAmb	IAmb	18 29 36.2	
	comp=Z,279nm,1.6s						
833A	Chaparral WMA,	55.18	329	P	P	18 29 34.4	+0.8
	baz=147,SNR=8.1						
V62A	Hyde County Ai	55.18	355	IAMs_20	IAMs_20	18 54 05.4	
	comp=Z,15µm,19.0s						
X53A	Estanollee	55.21	347	P	P	18 29 33.6	0.0
	baz=166,SNR=13						
PAULI	Pauline	55.23	349	IAMs_20	IAMs_20	18 54 26.1	
	comp=Z,16µm,21.0s						
W57A	Gilead	55.25	351	IAmb	IAmb	18 29 49.4	
	comp=Z,148nm,1.1s						
W57A				IAMs_20	IAMs_20	18 55 12.8	
	comp=Z,14µm,21.0s						
W57A	Gilead	55.25	351	P	P	18 29 33.8	-0.1
	baz=170,SNR=18						
Y49A	Blount Mountai	55.31	344	P	P	18 29 33.1	-1.3
Y49A				IAMs_20	IAMs_20	18 55 27.0	
	comp=Z,12µm,19.0s						
W56A	Indian Trail	55.33	350	P	P	18 29 34.2	-0.3
	baz=169,SNR=18						
KMSC	Kings Mountain	55.46	350	IAmb	IAmb	18 30 25.8	
	comp=Z,461nm,2.0s						
KMSC				IAMs_20	IAMs_20	18 55 36.1	
	comp=Z,19µm,19.0s						
KMSC	Kings Mountain	55.46	350	P	P	18 29 35.2	-0.2
	baz=168,SNR=34						
V61A	Roper	55.46	354	IAMs_20	IAMs_20	18 54 04.8	
	comp=Z,12µm,20.0s						
V61A	Roper	55.46	354	P	P	18 29 37.1	+1.7
	baz=173						
V60A	Jim Taylor Roa	55.51	354	IAMs_20	IAMs_20	18 54 40.9	
	comp=Z,15µm,21.0s						
V60A	Jim Taylor Roa	55.51	354	P	P	18 29 36.8	+1.1
	baz=173						
W54A	Cherokee Point	55.55	349	P	P	18 29 36.5	+0.4
	baz=167,SNR=35						
X51A	Calhoun	55.60	346	IAMs_20	IAMs_20	18 53 28.0	
	comp=Z,13µm,21.0s						
X51A	Calhoun	55.60	346	P	P	18 29 36.1	-0.4
	baz=164,SNR=16						
V59A	Middlesex	55.62	353	P	P	18 29 36.7	+0.1
	baz=172,SNR=48						
V59A				S	S	18 37 20.6	-1.4
	baz=172						
H10N3	ASCENSION HYDR	55.69	86	P	P	18 29 39.4	+2.2
	baz=234,slow=7.6,SNR=29						
H10N2	ASCENSION HYDR	55.71	86	P	P	18 29 39.1	+1.7
	baz=234,slow=7.6,SNR=20						
H10N1	ASCENSION HYDR	55.71	86	P	P	18 29 39.1	+1.6
	baz=234,slow=7.6,SNR=31						
V58A	Windy Hill, Pi	55.76	352	IAmb	IAmb	18 29 53.0	
	comp=Z,177nm,1.1s						
V58A				IAMs_20	IAMs_20	18 54 41.1	
	comp=Z,16µm,22.0s						
V58A	Windy Hill, Pi	55.76	352	P	P	18 29 38.0	+0.5
	baz=171,SNR=27						
V58A				S	S	18 37 21.7	-2.2
	baz=171						
FPAL	Fort Paine	55.76	345	IAMs_20	IAMs_20	18 53 50.0	
	comp=Z,19µm,22.0s						
ASCN	Ascension	55.80	86	P	P	18 29 38.1	-0.2
W52A	Murphy	55.91	347	IAMs_20	IAMs_20	18 53 58.0	
	comp=Z,14µm,20.0s						
V57A	Coltrane Farms	55.94	351	P	P	18 29 38.9	0.0
	baz=170,SNR=28						
V57A				S	S	18 37 24.1	-2.3
	baz=170						
V56A	Mocksville	55.97	350	P	P	18 29 38.9	-0.3
	baz=169,SNR=43						
V56A				S	S	18 37 24.9	-1.9
	baz=169						
U61A	Possum Corner	55.99	354	IAMs_20	IAMs_20	18 54 19.7	
	comp=Z,14µm,22.0s						
U61A	Possum Corner	55.99	354	P	P	18 29 42.4	+3.2
	baz=174						
X48A	Hartselle	56.03	344	P	P	18 29 38.5	-1.1
X48A				IAmb	IAmb	18 29 43.4	
	comp=Z,166nm,1.2s						
NATX	Nacogdoches	56.06	335	P	P	18 29 40.7	+0.8
	baz=153,SNR=16						
NATX				S	S	18 37 28.4	+0.3
	baz=153						
V55A	Taylorsville	56.13	350	IAmb	IAmb	18 30 20.3	
	comp=Z,130nm,0.9s						
V55A				IAMs_20	IAMs_20	18 54 59.0	
	comp=Z,12µm,21.0s						
V55A	Taylorsville	56.13	350	P	P	18 29 40.2	0.0
	baz=168,SNR=39						
V55A				S	S	18 37 26.9	-2.0
	baz=168						
U59A	Littleton	56.14	353	IAMs_20	IAMs_20	18 55 13.8	
	comp=Z,12µm,21.0s						
U59A	Littleton	56.14	353	P	P	18 29 41.0	+0.7
	baz=172,SNR=25						
U59A				S	S	18 37 26.7	-2.4
	baz=172						
V54A	Nebo	56.18	349	P	P	18 29 40.1	-0.5
	baz=167,SNR=50						
V54A				S	S	18 37 27.8	-1.9
	baz=167						
U60A	Pendleton	56.19	354	P	P	18 29 42.1	+1.4
	baz=173,SNR=14						
U60A				S	S	18 37 28.1	-1.6
	baz=173						
V53A	Saluda	56.24	348	IAMs_20	IAMs_20	18 53 08.4	
	comp=Z,18µm,22.0s						
U58A	Oxford	56.27	352	P	P	18 29 41.3	0.0
	baz=171,SNR=37						
U58A				S	S	18 37 29.7	-1.1
	baz=171						
W50A	Signal Mountai	56.32	346	P	P	18 29 40.8	-0.9
W50A				IAMs_20	IAMs_20	18 54 09.8	
	comp=Z,14µm,20.0s						
CPCT	Cooper Cave	56.38	347	P	P	18 29 41.3	-0.7
CPCT				IAMs_20	IAMs_20	18 54 12.4	
	comp=Z,14µm,20.0s						
U57A	Blanch	56.41	352	P	P	18 29 43.0	+0.7
	baz=170,SNR=27						
U57A				S	S	18 37 30.3	-2.4
	baz=170						
TKL	Tuckaleechee C	56.42	347	IAmb	IAmb	18 30 25.2	
	comp=Z,162nm,1.1s						
TKL				IAMs_20	IAMs_20	18 58 17.6	
	comp=Z,14µm,18.0s						
435B	Jarrell	56.42	332	P	P	18 29 43.8	+1.3
	baz=150,SNR=6.4						
435B				S	S	18 37 30.7	-2.4
	baz=150						
SWET	Sewanee	56.48	345	P	P	18 29 41.4	-1.4
SWET				IAmb	IAmb	18 29 45.1	
	comp=Z,443nm,1.9s						
SWET				IAMs_20	IAMs_20	18 54 23.1	
	comp=Z,18µm,22.0s						
U56A	King	56.48	351	IAMs_20	IAMs_20	18 55 59.3	
	comp=Z,13µm,22.0s						
U56A	King	56.48	351	P	P	18 29 43.1	+0.4
	baz=169,SNR=25						
U56A				S	S	18 37 32.9	-0.7
	baz=169						
V52A	Sevierville	56.56	348	IAmb	IAmb	18 29 50.0	
	comp=Z,167nm,0.9s						
V52A				IAMs_20	IAMs_20	18 58 20.3	
	comp=Z,14µm,18.0s						
V51A	Loudon	56.68	347	IAmb	IAmb	18 29 46.4	
	comp=Z,318nm,1.8s						
V51A				IAMs_20	IAMs_20	18 58 30.5	
	comp=Z,16µm,19.0s						
Z41A	Richland Creek	56.71	338	P	P	18 29 45.5	+1.1
	baz=155,SNR=17						
Z41A				S	S	18 37 35.4	-1.2
	baz=155						
T59A	Double "B" Far	56.73	354	IAmb	IAmb	18 30 01.7	
	comp=Z,168nm,0.9s						
T59A				IAMs_20	IAMs_20	18 55 16.6	
	comp=Z,16µm,21.0s						
T59A	Double "B" Far	56.73	354	P	P	18 29 44.4	0.0
	baz=172,SNR=51						
T59A				S	S	18 37 34.6	-2.2
	baz=172						
U55A	TA2, Sparta	56.74	350	P	P	18 29 44.9	+0.2
	baz=168,SNR=21						
U55A				S	S	18 37 35.4	-1.8
	baz=168						
OXF	Oxford	56.75	342	P	P	18 29 43.6	-1.1
	baz=159,SNR=25						
T60A	Surry	56.81	354	IAMs_20	IAMs_20	18 54 55.6	
	comp=Z,14µm,21.0s						
T60A	Surry	56.81	354	P	P	18 29 47.2	+2.2
	baz=173						
T58A	Grand View Acr	56.82	353	P	P	18 29 45.0	-0.1
	baz=171,SNR=72						
T58A				S	S	18 37 36.5	-1.5
	baz=171						
U54A	Nelsons Funny	56.88	349	IAmb	IAmb	18 30 25.0	
	comp=Z,116nm,0.8s						
U54A				IAMs_20	IAMs_20	18 56 28.0	
	comp=Z,17µm,20.0s						
U54A	Nelsons Funny	56.88	349	P	P	18 29 45.3	-0.4
	baz=168,SNR=19						
U54A				S	S	18 37 36.7	-2.4
	baz=168						
T57A	Hurt	56.96	352	IAMs_20	IAMs_20	18 55 37.0	
	comp=Z,18µm,21.0s						
T57A	Hurt	56.96	352	P	P	18 29 47.2	+1.0
	baz=171,SNR=9.6						
T57A				S	S	18 37 38.9	-1.0
	baz=171						
T56A	Rocky Mt	57.10	351	P	P	18 29 47.4	+0.3
	baz=170,SNR=30						
T56A				S	S	18 37 40.6	-1.1
	baz=170						
JCT	Junction City	57.17	330	P	P	18 29 48.6	+0.8
	baz=147,SNR=12						
JCT				S	S	18 37 41.1	-2.0
	baz=147						
X43A	Marvell	57.21	340	P	P	18 29 48.1	+0.1
	baz=158,SNR=11						
TZTN	Tazewell	57.23	348	P	P	18 29 47.6	-0.5
	baz=166,SNR=21						
TZTN				S	S	18 37 40.1	-3.4
	baz=166						
T55A	Pulaski	57.30	351	P	P	18 29 48.8	+0.2
	baz=169,SNR=34						
T55A				S	S	18 37 43.0	-1.4
	baz=169						
BLA	Blacksburg	57.33	351	IAmb	IAmb	18 30 23.7	
	comp=Z,147nm,1.1s						
BLA				IAMs_20	IAMs_20	18 55 06.9	
	comp=Z,13µm,22.0s						
BLA	Blacksburg	57.33	351	P	P	18 29 49.8	+0.9
	baz=169,SNR=21						
BLA				S	S	18 37 43.7	-1.2
	baz=169						
S60A	Water View	57.37	354	P	P	18 29 50.3	+1.3
	baz=174						
T54A	Tazewell	57.37	350	P	P	18 29 48.6	-0.5
	baz=168,SNR=25						
T54A				S	S	18 37 42.9	-2.6
	baz=168						
WHTX	Lake Whitney,	57.41	333	P	P	18 29 50.4	+1.0
	baz=150,SNR=19						
WHTX				S	S	18 37 43.8	-2.2
	baz=150						
CLTN	Cedars of Leba	57.41	345	IAmb	IAmb	18 29 53.0	
	comp=Z,262nm,1.5s						
CLTN				IAMs_20	IAMs_20	18 55 01.8	
	comp=Z,15µm,22.0s						
S58A	Poland Farm, P	57.42	353	P	P	18 29 49.3	-0.1
	baz=172,SNR=16						
S58A				S	S	18 37 45.0	-0.9
	baz=172						
T53A	Wise	57.46	349	P	P	18 29 49.2	-0.6
	baz=167,SNR=25						
T53A				S	S	18 37 43.0	-3.6
	baz=167						
S59A	Mechanicsville	57.48	354	P	P	18 29 50.5	+0.7
	baz=173,SNR=13						
S59A				S	S	18 37 45.4	-1.3
	baz=173						
T52A	Hallie	57.67	348	IAmb	IAmb	18 30 36.0	

	comp=Z,160nm,1.2s						
T52A				IAMs_20	IAMs_20	18 55 40.6	
	comp=Z,17µm,21.0s						
T52A	**Hallie**	**57.67**	**348**	P	**P**	**18 29 50.7**	**-0.4**
	baz=166,SNR=17						
T52A				S	**S**	**18 37 45.4**	**-3.9**
	baz=166						
S56A	**Natural Bridge**	**57.67**	**352**	P	**P**	**18 29 51.8**	**+0.7**
	baz=170,SNR=18						
S56A				S	**S**	**18 37 48.2**	**-1.0**
	baz=170						
S57A	**Dark Hollow, R**	**57.67**	**352**	IAmb	IAmb	18 29 56.1	
	comp=Z,338nm,1.4s						
S57A				IAMs_20	IAMs_20	18 56 04.2	
	comp=Z,14µm,20.0s						
S57A	**Dark Hollow, R**	**57.67**	**352**	P	**P**	**18 29 51.3**	**+0.2**
	baz=171,SNR=49						
S57A				S	**S**	**18 37 49.2**	**-0.1**
	baz=171						
U49A	**Red Boiling Sp**	**57.68**	**346**	P	**P**	**18 29 49.9**	**-1.4**
U49A				IAmb	IAmb	18 29 53.5	
	comp=Z,286nm,1.6s						
U49A				IAMs_20	IAMs_20	18 54 39.9	
	comp=Z,16µm,21.0s						
T51A	**Gray**	**57.72**	**348**	P	**P**	**18 29 50.6**	**-0.9**
	baz=165,SNR=39						
T51A				S	**S**	**18 37 45.3**	**-4.6**
	baz=165						
R58B	**Mineral**	**57.75**	**353**	IAmb	IAmb	18 29 56.7	
	comp=Z,236nm,1.3s						
R58B				IAMs_20	IAMs_20	18 55 57.2	
	comp=Z,12µm,20.0s						
R58B	**Mineral**	**57.75**	**353**	P	**P**	**18 29 51.8**	**+0.1**
	baz=172,SNR=47						
R58B				S	**S**	**18 37 50.1**	**-0.1**
	baz=172						
SACV	**Santiago Islan**	**57.79**	**57**	P	**P**	**18 29 52.5**	**0.0**
SACV				IAmb	IAmb	18 30 04.8	
	comp=Z,190nm,0.9s						
SACV	**Santiago Islan**	**57.79**	**57**	IAMs_20	IAMs_20	18 52 22.5	
	comp=Z,15µm,21.0s						
WVT	**Waverly**	**57.83**	**344**	P	**P**	**18 29 50.4**	**-1.9**
WVT				pmax	pmax		
	comp=Z,97nm,0.8s						
WVT				MLR	MLR		
	comp=Z,10µm,20.0s						
WVT	**Waverly**	**57.83**	**344**	P	**P**	**18 29 50.4**	**-1.9**
WVT				IAmb	IAmb	18 29 57.2	
	comp=Z,97nm,0.8s						
WVT	**Waverly**	**57.83**	**344**	P	**P**	**18 29 50.8**	**-1.5**
	baz=161						
WVT				S	**S**	**18 37 44.6**	**-6.7**
	baz=161						
X40A	**Basin Creek Fa**	**57.83**	**339**	P	**P**	**18 29 52.9**	**+0.6**
	baz=155,SNR=7.0						
X40A				S	**S**	**18 37 48.0**	**-3.5**
	baz=155						
S55A	**Lewisburg**	**57.90**	**351**	P	**P**	**18 29 53.0**	**+0.2**
	baz=169,SNR=34						
S55A				S	**S**	**18 37 50.3**	**-2.0**
	baz=169						
R59A	**King George, V**	**57.90**	**354**	P	**P**	**18 29 54.8**	**+2.0**
	baz=173,SNR=8.5						
R59A				S	**S**	**18 37 51.6**	**-0.6**
	baz=173						
R60A	**Leonardtown, M**	**57.92**	**355**	P	**P**	**18 29 54.3**	**+1.5**
	baz=174						
UALR	**University of**	**57.93**	**339**	IAmb	IAmb	18 29 57.2	
	comp=Z,225nm,1.4s						
CBN	**Corbin Frederi**	**57.93**	**354**	IAMs_20	IAMs_20	18 55 42.2	
	comp=Z,14µm,21.0s						
CBN	**Corbin Frederi**	**57.93**	**354**	P	**P**	**18 29 53.7**	**+0.8**
	baz=173						
T50A	**Nancy**	**57.96**	**347**	P	**P**	**18 29 52.1**	**-1.1**
	baz=164,SNR=45						
T50A				S	**S**	**18 37 48.3**	**-4.8**
	baz=164						
S54A	**Dingess, Beckl**	**58.05**	**350**	IAmb	IAmb	18 30 48.8	
	comp=Z,175nm,1.0s						
S54A	**Dingess, Beckl**	**58.05**	**350**	P	**P**	**18 29 53.5**	**-0.4**
	baz=168,SNR=31						
S54A				S	**S**	**18 37 50.9**	**-3.4**
	baz=168						
S53A	**Williamson**	**58.07**	**349**	P	**P**	**18 29 53.6**	**-0.4**
	baz=168,SNR=26						
S53A				S	**S**	**18 37 51.0**	**-3.5**
	baz=168						
R58A	**Rapidan**	**58.09**	**353**	P	**P**	**18 29 54.3**	**+0.2**
	baz=172,SNR=34						
R58A				S	**S**	**18 37 54.3**	**-0.4**
	baz=172						
HBAR	**Harrisburg**	**58.10**	**341**	IAMs_20	IAMs_20	18 57 13.4	
	comp=Z,11µm,20.0s						
MIAR	**Mount Ida**	**58.14**	**338**	P	**P**	**18 29 54.4**	**-0.1**
MIAR				pmax	pmax		
	comp=Z,195nm,1.2s						
MIAR				MLR	MLR		
	comp=Z,6µm,20.0s						
MIAR	**Mount Ida**	**58.14**	**338**	P	**P**	**18 29 54.4**	**-0.1**
MIAR				IAmb	IAmb	18 30 12.1	
	comp=Z,195nm,1.1s						
MIAR	**Mount Ida**	**58.14**	**338**	P	**P**	**18 29 53.9**	**-0.6**
	baz=155,SNR=69						
MIAR				S	**S**	**18 37 53.1**	**-2.5**
	baz=155						
R57A	**Stanardsville**	**58.15**	**353**	P	**P**	**18 29 54.9**	**+0.4**
	baz=172,SNR=39						
R57A				S	**S**	**18 37 54.8**	**-0.6**
	baz=172						
TXAR	**Lajitas Array**	**58.16**	**326**	P	**P**	**18 29 54.0**	**-0.9**
	comp=Z,11nm,0.8s,baz=151,slow=8.4,SNR=45						
TXAR				LR	LR	18 55 18.6	
	comp=Z,5µm,18.5s,baz=0.0,slow=36						
TXAR				PKP2bc		18 59 45.9	
	comp=Z,1.2nm,0.9s,baz=289,slow=3.8,SNR=5.0						
TXAR	**Lajitas Array**	**58.16**	**326**	P	**P**	**18 29 54.5**	**-0.4**
TXAR	**Lajitas Array**	**58.16**	**326**	P	**P**	**18 29 54.5**	**-0.4**
TX31	**Lajitas Ar. Si**	**58.16**	**326**	P	**P**	**18 29 52.9**	**-2.0**
TX32	**Lajitas Array**	**58.16**	**326**	P	**P**	**18 29 54.2**	**-0.7**
T49A	**Edmonton**	**58.19**	**346**	IAmb	IAmb	18 30 00.9	
	comp=Z,208nm,0.9s						
T49A				IAMs_20	IAMs_20	18 55 06.4	
	comp=Z,18µm,21.0s						
T49A	**Edmonton**	**58.19**	**346**	P	**P**	**18 29 53.6**	**-1.2**
	baz=164,SNR=118						
T49A				S	**S**	**18 37 51.0**	**-5.0**
	baz=164						
S52A	**Salyersville**	**58.24**	**349**	P	**P**	**18 29 55.3**	**+0.1**
	baz=166,SNR=8.6						
W41B	**Gary Mavity, V**	**58.26**	**339**	P	**P**	**18 29 55.3**	**0.0**
	baz=156,SNR=34						
W41B				S	**S**	**18 37 52.6**	**-4.3**
	baz=156						
S51A	**Beattyville**	**58.30**	**348**	IAMs_20	IAMs_20	18 57 19.3	
	comp=Z,13µm,20.0s						
S51A	**Beattyville**	**58.30**	**348**	P	**P**	**18 29 55.6**	**+0.1**
	baz=166,SNR=14						
S51A				S	**S**	**18 37 52.5**	**-5.0**
	baz=166						
R55A	**Marlinton**	**58.34**	**351**	IAMs_20	IAMs_20	18 56 21.6	
	comp=Z,20µm,22.0s						
R55A	**Marlinton**	**58.34**	**351**	P	**P**	**18 29 57.1**	**+1.2**
	baz=170,SNR=20						
R55A				S	**S**	**18 37 58.1**	**-0.1**
	baz=170						
R56A	**Bull Pasture M**	**58.37**	**352**	P	**P**	**18 29 59.6**	**+3.5**
	baz=170,SNR=9.7						
R56A				S	**S**	**18 37 59.0**	**+0.5**
	baz=170						
R54A	**Victor**	**58.37**	**351**	P	**P**	**18 29 56.7**	**+0.6**
	baz=169,SNR=32						
R54A				S	**S**	**18 37 55.5**	**-2.9**
	baz=169						
WHAR	**Wooly Hollow**	**58.38**	**339**	IAmb	IAmb	18 30 00.4	
	comp=Z,146nm,1.3s						
S50A	**Richmond**	**58.50**	**347**	P	**P**	**18 29 56.2**	**-0.7**
	baz=165,SNR=59						
S50A				S	**S**	**18 37 54.9**	**-5.2**
	baz=165						
Q59A	**Harwood**	**58.52**	**355**	P	**P**	**18 29 58.6**	**+1.6**
	baz=174						
Q60A	**Greensboro**	**58.59**	**355**	IAMs_20	IAMs_20	18 58 57.6	
	comp=Z,10µm,19.0s						
Q60A	**Greensboro**	**58.59**	**355**	P	**P**	**18 29 57.7**	**+0.2**
	baz=174						
R53A	**Hurricane**	**58.67**	**350**	IAmb	IAmb	18 30 38.0	
	comp=Z,199nm,1.4s						
R53A				IAMs_20	IAMs_20	18 58 54.3	
	comp=Z,11µm,18.0s						
R53A	**Hurricane**	**58.67**	**350**	P	**P**	**18 29 59.0**	**+0.8**
	baz=168,SNR=15						
R53A				S	**S**	**18 37 59.3**	**-3.0**
	baz=168						
Q58A	**Fox Den Farm,**	**58.69**	**354**	P	**P**	**18 29 59.0**	**+0.7**
	baz=172,SNR=36						
Q58A				S	**S**	**18 38 01.9**	**-0.6**
	baz=172						
S49A	**Springfield**	**58.79**	**347**	P	**P**	**18 29 57.7**	**-1.3**
	baz=164,SNR=34						
S49A				S	**S**	**18 37 58.4**	**-5.4**
	baz=164						
R52A	**Catlettsburg**	**58.80**	**349**	P	**P**	**18 29 58.6**	**-0.4**
	baz=167,SNR=9.1						
W39A	**Magazine**	**58.80**	**338**	IAmb	IAmb	18 30 18.5	
	comp=Z,223nm,1.3s						
W39A	**Magazine**	**58.80**	**338**	P	**P**	**18 30 00.2**	**+1.1**
	baz=155,SNR=50						
W39A				S	**S**	**18 38 01.4**	**-2.7**
	baz=155						
Q57A	**Strasburg**	**58.86**	**353**	P	**P**	**18 30 00.2**	**+0.7**
	baz=172,SNR=49						
Q57A				S	**S**	**18 38 04.7**	**-0.1**
	baz=172						
FCAR	**Ozark Folk Cen**	**58.87**	**340**	P	**P**	**18 29 58.9**	**-0.7**
ABTX	**Abilene, Hawle**	**58.90**	**332**	IAmb	IAmb	18 30 02.5	
	comp=Z,110nm,1.0s						
ABTX	**Abilene, Hawle**	**58.90**	**332**	P	**P**	**18 29 59.8**	**-0.1**
	baz=148,SNR=36						
ABTX				S	**S**	**18 38 03.1**	**-2.5**
	baz=148						
R51A	**Hillsboro**	**58.94**	**348**	P	**P**	**18 29 59.2**	**-0.8**
	baz=166,SNR=31						
R51A				S	**S**	**18 38 00.2**	**-5.5**
	baz=166						
Q56A	**Snyder Ridge,**	**58.96**	**352**	IAMs_20	IAMs_20	18 57 02.4	
	comp=Z,10µm,20.0s						
Q56A	**Snyder Ridge,**	**58.96**	**352**	P	**P**	**18 30 00.7**	**+0.5**
	baz=171,SNR=37						
Q56A				S	**S**	**18 38 06.8**	**+0.7**
	baz=171						
Q55A	**Buckhannon**	**59.04**	**352**	P	**P**	**18 30 01.9**	**+1.1**
	baz=170,SNR=24						
Q55A				S	**S**	**18 38 06.6**	**-0.5**
	baz=170						
R50A	**Paris**	**59.06**	**348**	IAmb	IAmb	18 30 46.6	
	comp=Z,97nm,1.1s						
R50A				IAMs_20	IAMs_20	18 57 45.6	
	comp=Z,11µm,20.0s						
R50A	**Paris**	**59.06**	**348**	P	**P**	**18 29 59.8**	**-1.1**
	baz=165,SNR=28						
R50A				S	**S**	**18 38 02.8**	**-4.6**
	baz=165						
Q53A	**Leroy**	**59.12**	**350**	P	**P**	**18 30 00.5**	**-0.7**
	baz=168,SNR=49						
Q53A				S	**S**	**18 38 05.6**	**-2.5**
	baz=168						
Q54A	**Coxs Mills**	**59.13**	**351**	IAmb	IAmb	18 30 55.0	
	comp=Z,102nm,1.1s						
Q54A				IAMs_20	IAMs_20	18 56 58.5	
	comp=Z,18µm,22.0s						
Q54A	**Coxs Mills**	**59.13**	**351**	P	**P**	**18 30 00.7**	**-0.7**
	baz=169,SNR=21						
Q54A				S	**S**	**18 38 06.1**	**-2.1**
	baz=169						
PBMO	**Poplar Bluff**	**59.16**	**342**	IAmb	IAmb	18 30 05.3	
	comp=Z,293nm,1.6s						
P61A	**Hammonton**	**59.19**	**356**	IAMs_20	IAMs_20	18 55 16.4	
	comp=Z,12µm,22.0s						
P61A	**Hammonton**	**59.19**	**356**	P	**P**	**18 30 02.5**	**+0.9**
	baz=176						
P58A	**Pank, Wackersv**	**59.20**	**354**	P	**P**	**18 30 01.9**	**+0.1**
	baz=173,SNR=27						
P58A				S	**S**	**18 38 08.4**	**-0.6**
	baz=173						
P59A	**Jarrettsville**	**59.24**	**355**	P	**P**	**18 30 03.1**	**+1.0**
	baz=174,SNR=24						
P59A				S	**S**	**18 38 08.3**	**-1.3**
	baz=174						
R49A	**Shelbyville**	**59.25**	**347**	IAMs_20	IAMs_20	18 55 51.5	
	comp=Z,18µm,20.0s						
R49A	**Shelbyville**	**59.25**	**347**	P	**P**	**18 30 00.9**	**-1.3**
	baz=164,SNR=27						
R49A				S	**S**	**18 38 04.0**	**-5.8**
	baz=164						
P57A	**Homestead Farm**	**59.26**	**353**	IAMs_20	IAMs_20	18 56 21.4	
	comp=Z,15µm,22.0s						
P57A	**Homestead Farm**	**59.26**	**353**	P	**P**	**18 30 03.6**	**+1.4**
	baz=172,SNR=34						
P57A				S	**S**	**18 38 10.5**	**+0.6**
	baz=172						
Q52A	**Bidwell**	**59.34**	**350**	P	**P**	**18 30 02.0**	**-0.8**
	baz=168,SNR=19						
Q52A				S	**S**	**18 38 08.2**	**-2.8**
	baz=168						
P56A	**Dayton Farm, R**	**59.38**	**353**	P	**P**	**18 30 03.7**	**+0.7**
	baz=171,SNR=28						
P56A				S	**S**	**18 38 11.4**	**0.0**
	baz=171						
P60A	**Greenville**	**59.38**	**356**	IAmb	IAmb	18 30 06.7	
	comp=Z,225nm,1.6s						
P60A	**Greenville**	**59.38**	**356**	P	**P**	**18 30 03.5**	**+0.5**
	baz=175,SNR=11						
P60A				S	**S**	**18 38 10.7**	**-0.7**
	baz=175						
WCI	**Wyandotte Cave**	**59.44**	**346**	P	**P**	**18 30 02.3**	**-1.2**
WCI				pmax	pmax		
	comp=Z,206nm,1.3s						
WCI				MLR	MLR		
	comp=Z,15µm,20.0s						
WCI	**Wyandotte Cave**	**59.44**	**346**	P	**P**	**18 30 02.3**	**-1.2**
WCI				IAmb	IAmb	18 30 06.9	
	comp=Z,206nm,1.2s						
WCI	**Wyandotte Cave**	**59.44**	**346**	IAMs_20	IAMs_20	18 56 16.5	
	comp=Z,15µm,20.0s						
WCI	**Wyandotte Cave**	**59.44**	**346**	P	**P**	**18 30 02.8**	**-0.7**
	baz=163						
WCI				S	**S**	**18 38 06.5**	**-5.8**
	baz=163						
P55A	**Reedsville**	**59.51**	**352**	P	**P**	**18 30 04.7**	**+0.7**
	baz=170,SNR=22						
P55A				S	**S**	**18 38 12.5**	**-0.6**
	baz=170						
U40A	**Yellville**	**59.53**	**339**	P	**P**	**18 30 03.6**	**-0.6**
	baz=156,SNR=22						
U40A				S	**S**	**18 38 09.5**	**-4.2**
	baz=156						
Q50A	**Georgetown**	**59.54**	**348**	P	**P**	**18 30 03.6**	**-0.6**
	baz=166,SNR=18						
Q50A				S	**S**	**18 38 08.5**	**-5.0**
	baz=166						
O61A	**Allentown**	**59.59**	**357**	P	**P**	**18 30 05.2**	**+0.8**
	baz=176						
Q51A	**Peebles**	**59.59**	**349**	IAMs_20	IAMs_20	18 57 10.7	
	comp=Z,16µm,22.0s						
Q51A	**Peebles**	**59.59**	**349**	P	**P**	**18 30 03.6**	**-0.9**
	baz=166,SNR=19						
Q51A				S	**S**	**18 38 10.4**	**-3.8**
	baz=166						
MVL	**Millersville**	**59.62**	**355**	IAmb	IAmb	18 30 08.8	
	comp=Z,279nm,1.7s						
MCWV	**Mont Chateau**	**59.66**	**352**	P	**P**	**18 30 06.2**	**+1.3**
	baz=170,SNR=29						
MCWV				S	**S**	**18 38 14.1**	**-0.9**
	baz=170						
P54A	**Burton**	**59.69**	**351**	P	**P**	**18 30 05.8**	**+0.7**
	baz=170,SNR=47						
P54A				S	**S**	**18 38 13.8**	**-1.7**
	baz=170						
SIUC	**Southern Illin**	**59.69**	**343**	IAMs_20	IAMs_20	18 59 34.0	
	comp=Z,9µm,19.0s						
P53A	**Whipple**	**59.71**	**351**	IAmb	IAmb	18 30 51.2	
	comp=Z,173nm,1.0s						
P53A				IAMs_20	IAMs_20	18 57 29.8	
	comp=Z,12µm,21.0s						
P53A	**Whipple**	**59.71**	**351**	P	**P**	**18 30 05.5**	**+0.2**
	baz=168,SNR=29						
P53A				S	**S**	**18 38 11.5**	**-4.2**
	baz=168						
O58A	**Lewisberry**	**59.79**	**355**	P	**P**	**18 30 06.9**	**+1.1**
	baz=173,SNR=18						
O58A				S	**S**	**18 38 15.9**	**-0.8**
	baz=173						
X34A	**Smith Ranch, M**	**59.82**	**334**	IAmb	IAmb	18 30 25.0	
	comp=Z,200nm,1.1s						
O60A	**Telford**	**59.87**	**356**	P	**P**	**18 30 07.1**	**+0.8**
	baz=175,SNR=13						
O60A				S	**S**	**18 38 16.5**	**-1.2**
	baz=175						
PAGS	**Pennsylvania G**	**59.88**	**355**	IAmb	IAmb	18 30 11.4	
	comp=Z,151nm,1.4s						
PAGS				IAMs_20	IAMs_20	18 54 35.7	
	comp=Z,11µm,22.0s						
Q49A	**Aurora**	**59.88**	**347**	P	**P**	**18 30 06.0**	**-0.4**
	baz=165,SNR=21						
Q49A				S	**S**	**18 38 12.6**	**-5.3**
	baz=165						
O59A	**Robesonia**	**59.91**	**355**	P	**P**	**18 30 07.7**	**+0.9**
	baz=174,SNR=19						
O59A				S	**S**	**18 38 18.0**	**-0.4**
	baz=174						
O57A	**Amberson**	**59.94**	**354**	P	**P**	**18 30 07.5**	**+0.5**
	baz=173,SNR=52						
O57A				S	**S**	**18 38 19.3**	**+0.6**
	baz=173						
P52A	**Corning**	**59.97**	**350**	P	**P**	**18 30 06.6**	**-0.6**
	baz=168,SNR=35						
P52A				S	**S**	**18 38 15.9**	**-3.2**
	baz=168						
Q48A	**North Vernon**	**59.98**	**347**	P	**P**	**18 30 06.6**	**-0.6**
	baz=164,SNR=20						
Q48A				S	**S**	**18 38 14.3**	**-4.9**
	baz=164						
P51A	**Williamsport**	**59.98**	**349**	IAMs_20	IAMs_20	18 56 42.0	
	comp=Z,12µm,22.0s						
P51A	**Williamsport**	**59.98**	**349**	P	**P**	**18 30 06.7**	**-0.5**
	baz=167,SNR=17						
P51A				S	**S**	**18 38 14.8**	**-4.5**
	baz=167						
O56A	**Blue Knob Stat**	**60.10**	**353**	IAmb	IAmb	18 30 13.4	
	comp=Z,263nm,1.2s						
O56A	**Blue Knob Stat**	**60.10**	**353**	P	**P**	**18 30 08.0**	**0.0**
	baz=172,SNR=45						
O56A				S	**S**	**18 38 20.4**	**-0.5**
	baz=172						
O55A	**Ligonier**	**60.13**	**352**	P	**P**	**18 30 08.0**	**-0.2**
	baz=171,SNR=37						
O55A				S	**S**	**18 38 20.1**	**-1.0**
	baz=171						
U38A	**Gravette**	**60.13**	**338**	IAmb	IAmb	18 30 12.7	
	comp=Z,181nm,1.5s						
TUL1	**Leonard**	**60.17**	**337**	IAmb	IAmb	18 30 25.6	
	comp=Z,253nm,1.2s						
TUL1	**Leonard**	**60.17**	**337**	P	**P**	**18 30 08.3**	**-0.3**
	baz=153,SNR=48						
TUL1				S	**S**	**18 38 19.6**	**-2.1**
	baz=153						
BRNJ	**Basking Ridge**	**60.18**	**357**	IAMs_20	IAMs_20	18 56 07.7	
	comp=Z,19µm,22.0s						
N61A	**South Mountain**	**60.23**	**357**	P	**P**	**18 30 09.7**	**+0.8**
	baz=176,SNR=18						
N61A				S	**S**	**18 38 20.5**	**-1.8**
	baz=176						
O54A	**Avella**	**60.24**	**352**	IAmb	IAmb	18 30 53.2	
	comp=Z,126nm,1.2s						
O54A				IAMs_20	IAMs_20	18 57 07.5	
	comp=Z,18µm,21.0s						
O54A	**Avella**	**60.24**	**352**	P	**P**	**18 30 08.9**	**0.0**
	baz=170,SNR=16						
O54A				S	**S**	**18 38 20.9**	**-1.6**
	baz=170						
P50A	**Jamestown**	**60.24**	**348**	P	**P**	**18 30 08.2**	**-0.8**
	baz=166,SNR=22						
P50A				S	**S**	**18 38 18.7**	**-3.9**
	baz=166						
WMOK	**Wichita Mounta**	**60.33**	**334**	P	**P**	**18 30 09.5**	**-0.2**
	baz=150,SNR=19						
WMOK				S	**S**	**18 38 21.5**	**-2.4**
	baz=150						
P49A	**Miami Univ. Ec**	**60.35**	**348**	P	**P**	**18 30 08.0**	**-1.7**
	baz=165,SNR=36						
P49A				S	**S**	**18 38 18.7**	**-5.3**
	baz=165						
OLIL	**Olney**	**60.35**	**344**	IAMs_20	IAMs_20	19 00 49.6	
	comp=Z,10µm,18.0s						
N62A	**Caumsett State**	**60.37**	**358**	P	**P**	**18 30 11.2**	**+1.4**
	baz=177						
SSPA	**Standing Stone**	**60.39**	**354**	P	**P**	**18 30 09.7**	**-0.3**
SSPA	**Standing Stone**	**60.39**	**354**	IAMs_20	IAMs_20	18 57 16.3	
	comp=Z,19µm,22.0s						
SSPA	**Standing Stone**	**60.39**	**354**	P	**P**	**18 30 10.8**	**+0.8**
	baz=172						
SSPA				S	**S**	**18 38 24.4**	**0.0**
	baz=172						
BLO	**Bloomington**	**60.39**	**346**	IAmb	IAmb	18 30 59.6	
	comp=Z,120nm,1.1s						
BLO				IAMs_20	IAMs_20	18 56 25.7	
	comp=Z,18µm,21.0s						
N60A	**Cedar Hill Far**	**60.40**	**356**	P	**P**	**18 30 10.4**	**+0.5**
	baz=175,SNR=11						
N60A				S	**S**	**18 38 23.0**	**-1.4**
	baz=175						
O52A	**Adamsville**	**60.40**	**350**	IAmb	IAmb	18 30 14.0	
	comp=Z,168nm,1.4s						
O52A				IAMs_20	IAMs_20	18 57 51.9	
	comp=Z,16µm,21.0s						
O52A	**Adamsville**	**60.40**	**350**	P	**P**	**18 30 09.2**	**-0.8**
	baz=168,SNR=21						
O52A				S	**S**	**18 38 20.4**	**-4.1**
	baz=168						
P48A	**Milroy**	**60.43**	**347**	P	**P**	**18 30 07.8**	**-2.5**
P48A				IAmb	IAmb	18 30 12.4	
	comp=Z,213nm,1.6s						
P48A				IAMs_20	IAMs_20	18 55 30.6	
	comp=Z,16µm,22.0s						
P48A	**Milroy**	**60.43**	**347**	P	**P**	**18 30 09.1**	**-1.1**
	baz=164,SNR=18						
P48A				S	**S**	**18 38 18.8**	**-6.1**
	baz=164						
O53A	**New Philadelph**	**60.43**	**351**	P	**P**	**18 30 09.7**	**-0.6**
	baz=169,SNR=24						
O53A				S	**S**	**18 38 21.7**	**-3.3**
	baz=169						
PAL	**Palisades**	**60.47**	**357**	P	**P**	**18 30 10.8**	**+0.4**
	baz=177,SNR=12						
PAL				S	**S**	**18 38 23.5**	**-1.8**
	baz=177						
N58A	**Sunbury**	**60.48**	**355**	IAmb	IAmb	18 30 26.3	
	comp=Z,147nm,1.1s						
N58A	**Sunbury**	**60.48**	**355**	P	**P**	**18 30 10.6**	**0.0**
	baz=174,SNR=20						
N58A				S	**S**	**18 38 24.7**	**-0.9**
	baz=174						
N59A	**State Game Lan**	**60.49**	**356**	IAmb	IAmb	18 30 15.8	
	comp=Z,224nm,1.8s						
N59A	**State Game Lan**	**60.49**	**356**	P	**P**	**18 30 11.7**	**+1.0**
	baz=175,SNR=20						
N59A				S	**S**	**18 38 25.1**	**-0.6**
	baz=175						
O51A	**Pataskala**	**60.55**	**350**	P	**P**	**18 30 09.8**	**-1.3**
	baz=167,SNR=24						
O51A				S	**S**	**18 38 21.9**	**-4.7**
	baz=167						
ODNJ	**Ogdensburg**	**60.58**	**357**	P	**P**	**18 30 10.8**	**-0.4**
ODNJ				IAmb	IAmb	18 30 15.1	
	comp=Z,174nm,1.5s						
ODNJ				IAMs_20	IAMs_20	18 56 51.3	
	comp=Z,17µm,20.0s						
CCM	**Cathedral Cave**	**60.59**	**342**	P	**P**	**18 30 10.8**	**-0.6**
CCM				pmax	pmax		
	comp=Z,236nm,1.5s						
CCM				MLR	MLR		
	comp=Z,6µm,19.0s						
CCM	**Cathedral Cave**	**60.59**	**342**	P	**P**	**18 30 10.8**	**-0.6**
CCM				IAmb	IAmb	18 30 15.2	
	comp=Z,236nm,1.4s						
CCM	**Cathedral Cave**	**60.59**	**342**	P	**P**	**18 30 11.0**	**-0.4**
	baz=158						
CCM				S	**S**	**18 38 21.7**	**-5.3**
	baz=158						
N55A	**Marion Center**	**60.66**	**353**	P	**P**	**18 30 11.9**	**+0.1**
	baz=171,SNR=68						
N55A				S	**S**	**18 38 26.8**	**-1.0**
	baz=171						
ACSO	**Alum Creek Sta**	**60.70**	**349**	IAmb	IAmb	18 30 18.6	
	comp=Z,118nm,0.9s						
ACSO				IAMs_20	IAMs_20	18 57 14.9	
	comp=Z,12µm,21.0s						
ACSO	**Alum Creek Sta**	**60.70**	**349**	P	**P**	**18 30 11.2**	**-0.9**
	baz=167,SNR=28						
N56A	**West Decatur**	**60.71**	**353**	P	**P**	**18 30 12.2**	**0.0**
	baz=172,SNR=48						
N56A				S	**S**	**18 38 27.6**	**-1.0**
	baz=172						
O50A	**Cable**	**60.73**	**349**	P	**P**	**18 30 11.7**	**-0.7**

		baz=166,SNR=21						
O50A		baz=166			S	**S**	**18 38 23.5**	**-5.4**
YLE	**Yale**	comp=Z,18µm,21.0s	**60.74**	**358**	IAMs_20	IAMs_20	18 55 54.6	
M61A	**Granite Spring**	baz=177	**60.76**	**357**	P	**P**	**18 30 12.9**	**+0.5**
M61A		baz=177			S	**S**	**18 38 27.4**	**-1.8**
M63A	**Gales Ferry**	baz=179,SNR=9.2	**60.81**	**359**	P	**P**	**18 30 14.0**	**+1.3**
M63A		baz=179			S	**S**	**18 38 27.9**	**-1.7**
M60A	**Port Jervis**	baz=176,SNR=11	**60.82**	**357**	P	**P**	**18 30 13.2**	**+0.3**
M60A		baz=176			S	**S**	**18 38 28.4**	**-1.5**
M62A	**Hamden**	baz=178,SNR=16	**60.86**	**358**	P	**P**	**18 30 14.0**	**+0.9**
M62A		baz=178			S	**S**	**18 38 28.9**	**-1.4**
O49A	**Covington**	comp=Z,13µm,20.0s	**60.91**	**348**	IAMs_20	IAMs_20	18 59 26.4	
O49A	**Covington**	baz=166,SNR=11	**60.91**	**348**	P	**P**	**18 30 12.6**	**-0.9**
O49A		baz=166			S	**S**	**18 38 25.8**	**-5.3**
N53A	**Lisbon**	comp=Z,243nm,1.4s	**60.92**	**351**	IAmb	IAmb	18 30 48.4	
N53A		comp=Z,17µm,21.0s			IAMs_20	IAMs_20	18 58 00.9	
N53A	**Lisbon**	baz=169,SNR=18	**60.92**	**351**	P	**P**	**18 30 13.9**	**+0.4**
N53A		baz=169			S	**S**	**18 38 28.6**	**-2.6**
MNTX	**Cornudas Mount**	baz=142,SNR=37	**60.94**	**326**	P	**P**	**18 30 14.2**	**+0.3**
MNTX		baz=142			S	**S**	**18 38 30.2**	**-1.6**
M64A	**Tiverton**	baz=180	**60.94**	**360**	P	**P**	**18 30 13.5**	**-0.2**
M64A		baz=180			S	**S**	**18 38 29.0**	**-2.4**
M65A	**Busby, Falmout**	comp=Z,13µm,21.0s	**60.95**	**0**	IAMs_20	IAMs_20	18 55 39.6	
N54A	**Moraine State**	baz=170,SNR=51	**60.96**	**352**	P	**P**	**18 30 13.8**	**0.0**
N54A		baz=170			S	**S**	**18 38 29.6**	**-2.0**
P46A	**Rosedale**	comp=Z,15µm,21.0s	**60.98**	**346**	IAMs_20	IAMs_20	18 57 47.1	
M58A	**Price’s Panora**	baz=174,SNR=54	**60.99**	**355**	P	**P**	**18 30 15.0**	**+1.0**
M58A		baz=174			S	**S**	**18 38 31.3**	**-0.8**
M57A	**Sunshine Farm,**	comp=Z,9µm,19.0s	**61.01**	**355**	IAMs_20	IAMs_20	19 00 35.8	
M57A	**Sunshine Farm,**	baz=173,SNR=36	**61.01**	**355**	P	**P**	**18 30 14.6**	**+0.4**
M57A		baz=173			S	**S**	**18 38 31.5**	**-0.9**
N52A	**McGinn’s Farm,**	baz=168,SNR=21	**61.05**	**351**	P	**P**	**18 30 14.8**	**+0.3**
N52A		baz=168			S	**S**	**18 38 28.9**	**-4.0**
M59A	**Waymart**	baz=175,SNR=35	**61.08**	**356**	P	**P**	**18 30 14.5**	**-0.2**
M59A		baz=175			S	**S**	**18 38 32.7**	**-0.6**
KSPA	**Keystone Colle**	comp=Z,247nm,1.5s	**61.12**	**356**	IAmb	IAmb	18 30 20.0	
KSPA		comp=Z,11µm,21.0s			IAMs_20	IAMs_20	18 56 18.7	
O48A	**Farmland**	baz=165,SNR=55	**61.14**	**347**	P	**P**	**18 30 13.6**	**-1.5**
O48A		baz=165			S	**S**	**18 38 28.7**	**-5.2**
KSCT	**Kent School, K**	comp=Z,137nm,1.4s	**61.17**	**358**	IAmb	IAmb	18 30 20.1	
KSCT		comp=Z,14µm,20.0s			IAMs_20	IAMs_20	18 58 01.0	
N50A	**Nevada**	baz=167,SNR=32	**61.25**	**349**	P	**P**	**18 30 14.8**	**-1.1**
N50A		baz=167			S	**S**	**18 38 30.5**	**-5.0**
L63A	**North Scituate**	baz=179,SNR=22	**61.26**	**359**	P	**P**	**18 30 16.4**	**+0.5**
M56A	**Emporium**	comp=Z,18µm,22.0s	**61.26**	**354**	IAMs_20	IAMs_20	18 57 42.3	
M56A	**Emporium**	baz=172,SNR=50	**61.26**	**354**	P	**P**	**18 30 15.8**	**-0.1**
M56A		baz=172			S	**S**	**18 38 33.9**	**-1.7**
N51A	**Ashland**	comp=Z,14µm,21.0s	**61.27**	**350**	IAMs_20	IAMs_20	18 58 28.9	
N51A	**Ashland**	baz=168,SNR=14	**61.27**	**350**	P	**P**	**18 30 15.4**	**-0.5**
N51A		baz=168			S	**S**	**18 38 29.7**	**-6.0**
M55A	**Ridgway**	comp=Z,10µm,20.0s	**61.31**	**353**	IAMs_20	IAMs_20	19 00 16.5	
M55A	**Ridgway**	baz=172,SNR=45	**61.31**	**353**	P	**P**	**18 30 16.2**	**-0.1**
M55A		baz=172			S	**S**	**18 38 34.8**	**-1.3**
BRYW	**Bryant College**	comp=Z,11µm,22.0s	**61.31**	**359**	IAMs_20	IAMs_20	18 56 07.1	
L64A	**Middleborough**	baz=180,SNR=9.8	**61.33**	**360**	P	**P**	**18 30 16.8**	**+0.5**
L64A		baz=180			S	**S**	**18 38 35.0**	**-1.2**
L62A	**Suffield**	baz=178	**61.45**	**358**	P	**P**	**18 30 18.6**	**+1.5**
M54A	**Oil Creek Stat**	baz=170,SNR=60	**61.45**	**352**	P	**P**	**18 30 16.8**	**-0.4**
M54A		baz=170			S	**S**	**18 38 35.4**	**-2.6**
L60A	**Shokan**	baz=176,SNR=18	**61.46**	**357**	P	**P**	**18 30 17.5**	**+0.3**
MSTX	**Muleshoe**	comp=Z,180nm,1.1s	**61.47**	**330**	IAmb	IAmb	18 30 20.4	
MSTX	**Muleshoe**	baz=146,SNR=66	**61.47**	**330**	P	**P**	**18 30 17.7**	**+0.2**
MSTX		baz=146			S	**S**	**18 38 36.4**	**-2.2**
M53A	**WI Miller and**	baz=170,SNR=39	**61.52**	**352**	P	**P**	**18 30 17.3**	**-0.4**
M53A		baz=170			S	**S**	**18 38 35.2**	**-3.6**
N49A	**Columbus Grove**	baz=166,SNR=81	**61.59**	**348**	P	**P**	**18 30 17.1**	**-0.9**
N49A		baz=166			S	**S**	**18 38 34.1**	**-5.6**
L58A	**Harry Jones Me**	baz=175,SNR=34	**61.61**	**356**	P	**P**	**18 30 19.4**	**+1.1**
L58A		baz=175			S	**S**	**18 38 38.6**	**-1.4**
L61A	**Hillsdale 1, H**	baz=177,SNR=6.0	**61.64**	**358**	P	**P**	**18 30 19.9**	**+1.6**
L61A		baz=177			S	**S**	**18 38 38.9**	**-1.4**
M51A	**Elyria**	baz=168,SNR=10	**61.64**	**350**	P	**P**	**18 30 18.5**	**+0.1**
M51A		baz=168			S	**S**	**18 38 35.5**	**-4.8**
L57A	**Andrews Acres**	baz=174,SNR=19	**61.65**	**355**	P	**P**	**18 30 18.7**	**+0.2**
L57A		baz=174			S	**S**	**18 38 38.8**	**-1.6**
ALLY	**Alegheny Colle**	comp=Z,9µm,19.0s	**61.65**	**352**	IAMs_20	IAMs_20	19 01 50.6	
SFIN	**Lafayette**	comp=Z,19µm,21.0s	**61.67**	**346**	IAMs_20	IAMs_20	18 57 26.6	
SFIN	**Lafayette**	baz=163,SNR=42	**61.67**	**346**	P	**P**	**18 30 17.2**	**-1.5**
SFIN		baz=163			S	**S**	**18 38 33.0**	**-7.8**
QUA2	**Belchertown**	comp=Z,185nm,1.5s	**61.69**	**359**	IAmb	IAmb	18 30 22.7	
QUA2		comp=Z,13µm,20.0s			IAMs_20	IAMs_20	18 58 16.0	
N48A	**Decatur**	baz=165,SNR=32	**61.69**	**348**	P	**P**	**18 30 18.2**	**-0.6**
N48A		baz=165			S	**S**	**18 38 35.6**	**-5.4**
L59A	**Walton**	comp=Z,17µm,20.0s	**61.71**	**356**	IAMs_20	IAMs_20	18 57 47.2	
L59A	**Walton**	baz=176,SNR=37	**61.71**	**356**	P	**P**	**18 30 19.6**	**+0.7**
L59A		baz=176			S	**S**	**18 38 39.3**	**-1.9**
M52A	**Chesterland**	comp=Z,231nm,1.2s	**61.72**	**351**	IAmb	IAmb	18 30 34.1	
M52A		comp=Z,15µm,21.0s			IAMs_20	IAMs_20	18 58 25.9	
M52A	**Chesterland**	baz=169,SNR=26	**61.72**	**351**	P	**P**	**18 30 18.4**	**-0.6**
M52A		baz=169			S	**S**	**18 38 37.3**	**-4.0**
AMTX	**Amarillo**	comp=Z,170nm,1.7s	**61.72**	**331**	IAmb	IAmb	18 31 44.2	
AMTX	**Amarillo**	baz=147	**61.72**	**331**	P	**P**	**18 30 18.9**	**-0.3**
AMTX		baz=147			S	**S**	**18 38 38.2**	**-3.6**
BCX	**Boston College**	comp=Z,11µm,22.0s	**61.73**	**360**	IAMs_20	IAMs_20	18 56 06.0	
BINY	**Binghamton**	comp=Z,11µm,22.0s	**61.78**	**356**	IAMs_20	IAMs_20	18 56 39.0	
BINY	**Binghamton**	baz=174,SNR=32	**61.78**	**356**	P	**P**	**18 30 20.2**	**+0.8**
BINY		baz=174			S	**S**	**18 38 41.1**	**-1.0**
WES	**Weston**	comp=Z,165nm,1.3s	**61.78**	**360**	IAmb	IAmb	18 30 24.0	
WES		comp=Z,14µm,22.0s			IAMs_20	IAMs_20	18 56 07.4	
O44A	**Mansfield**	comp=Z,218nm,1.4s	**61.79**	**345**	IAmb	IAmb	18 30 22.3	
O44A		comp=Z,12µm,19.0s			IAMs_20	IAMs_20	19 01 48.6	
U32A	**Winter Ranch,**	comp=Z,97nm,0.9s	**61.83**	**334**	IAmb	IAmb	18 30 27.0	
L56A	**Greenwood**	comp=Z,11µm,20.0s	**61.84**	**354**	IAMs_20	IAMs_20	19 01 12.8	
L56A	**Greenwood**	baz=173,SNR=42	**61.84**	**354**	P	**P**	**18 30 20.7**	**+0.8**
L56A		baz=173			S	**S**	**18 38 41.7**	**-1.3**
N47A	**Urbana**	comp=Z,15µm,19.0s	**61.85**	**347**	IAMs_20	IAMs_20	18 59 39.2	
N47A	**Urbana**	baz=164,SNR=40	**61.85**	**347**	P	**P**	**18 30 19.1**	**-0.7**
N47A		baz=164			S	**S**	**18 38 37.0**	**-6.0**
M50A	**Fremont**	comp=Z,240nm,1.2s	**61.85**	**350**	IAmb	IAmb	18 30 23.6	
M50A		comp=Z,12µm,18.0s			IAMs_20	IAMs_20	19 01 07.4	
M50A	**Fremont**	baz=167,SNR=26	**61.85**	**350**	P	**P**	**18 30 19.6**	**-0.3**
L61B	**Northampton**	baz=178,SNR=20	**61.87**	**358**	P	**P**	**18 30 20.6**	**+0.7**
HRV	**Adam Dziewonsk**		**61.90**	**359**	P	**P**	**18 30 20.1**	**0.0**
HRV		comp=Z,167nm,1.1s			pmax	pmax		
HRV		comp=Z,15µm,22.0s			MLR	MLR		
HRV	**Adam Dziewonsk**		**61.90**	**359**	P	**P**	**18 30 20.1**	**0.0**
HRV		comp=Z,167nm,1.1s			IAmb	IAmb	18 30 25.1	
HRV	**Adam Dziewonsk**	comp=Z,15µm,22.0s	**61.90**	**359**	IAMs_20	IAMs_20	18 56 11.7	
HRV	**Adam Dziewonsk**	baz=179	**61.90**	**359**	P	**P**	**18 30 21.6**	**+1.4**
HRV		baz=179			S	**S**	**18 38 43.5**	**-0.1**
L53A	**Girard**	baz=170,SNR=39	**61.97**	**352**	P	**P**	**18 30 20.4**	**-0.2**
L53A		baz=170			S	**S**	**18 38 41.8**	**-2.6**
L55A	**Hinsdale**	baz=172,SNR=46	**61.98**	**354**	P	**P**	**18 30 21.0**	**+0.2**
L55A		baz=172			S	**S**	**18 38 42.8**	**-1.9**
K62A	**Royalston**	comp=Z,328nm,1.9s	**62.07**	**359**	IAmb	IAmb	18 30 26.4	
K62A		comp=Z,15µm,22.0s			IAMs_20	IAMs_20	18 56 19.1	
K62A	**Royalston**	baz=178,SNR=6.5	**62.07**	**359**	P	**P**	**18 30 23.4**	**+2.1**
K62A		baz=178			S	**S**	**18 38 44.6**	**-1.1**
K60A	**Five Rivers En**	baz=177	**62.07**	**357**	P	**P**	**18 30 23.2**	**+1.9**
K63A	**Dunstable**	baz=179,SNR=6.8	**62.08**	**359**	P	**P**	**18 30 23.6**	**+2.2**
M49A	**Liberty Center**	baz=166,SNR=42	**62.08**	**349**	P	**P**	**18 30 20.2**	**-1.3**
M49A		baz=166			S	**S**	**18 38 41.4**	**-4.5**
ERPA	**Erie**	baz=170,SNR=60	**62.09**	**352**	P	**P**	**18 30 21.0**	**-0.5**
ERPA		baz=170			S	**S**	**18 38 43.3**	**-2.7**
K61A	**Williamstown**	baz=177,SNR=11	**62.10**	**358**	P	**P**	**18 30 23.0**	**+1.4**
L54A	**Sinclairville**	baz=171,SNR=96	**62.13**	**353**	P	**P**	**18 30 21.6**	**-0.1**
L54A		baz=171			S	**S**	**18 38 44.6**	**-1.9**
TRY	**Troy**	comp=Z,16µm,21.0s	**62.18**	**358**	IAMs_20	IAMs_20	18 56 40.7	
WVNY	**West Valley, N**	comp=Z,18µm,22.0s	**62.22**	**353**	IAMs_20	IAMs_20	18 58 12.6	
M48A	**Edgerton**	comp=Z,11µm,18.0s	**62.23**	**348**	IAMs_20	IAMs_20	19 02 30.5	
M48A	**Edgerton**	baz=165,SNR=19	**62.23**	**348**	P	**P**	**18 30 21.7**	**-0.7**
K59A	**Cooperstown**	baz=176,SNR=52	**62.28**	**357**	P	**P**	**18 30 22.8**	**+0.1**
K59A		baz=176			S	**S**	**18 38 47.1**	**-1.3**
M47A	**Cromwell**	baz=164,SNR=13	**62.29**	**347**	P	**P**	**18 30 22.3**	**-0.5**
M47A		baz=164			S	**S**	**18 38 42.8**	**-5.8**
K58A	**Earlville**	comp=Z,218nm,1.1s	**62.31**	**356**	IAmb	IAmb	18 30 39.9	
K58A		comp=Z,12µm,20.0s			IAMs_20	IAMs_20	18 58 28.3	
K58A	**Earlville**	baz=175,SNR=32	**62.31**	**356**	P	**P**	**18 30 23.1**	**+0.1**
K58A		baz=175			S	**S**	**18 38 48.0**	**-0.8**
VNA3	**Neumayer Olymp**		**62.33**	**161**	P	**P**	**18 30 23.4**	**+0.5**
K57A	**Scipio Center**	baz=174,SNR=26	**62.35**	**355**	P	**P**	**18 30 22.5**	**-0.7**
K57A		baz=174			S	**S**	**18 38 47.5**	**-1.8**
HDIL	**Hopedale**	comp=Z,12µm,19.0s	**62.38**	**344**	IAMs_20	IAMs_20	19 02 01.2	
HDIL	**Hopedale**	baz=160,SNR=20	**62.38**	**344**	P	**P**	**18 30 22.6**	**-0.8**
HDIL		baz=160			S	**S**	**18 38 42.3**	**-7.4**
K56A	**Middlesex**	baz=173,SNR=16	**62.38**	**355**	P	**P**	**18 30 23.4**	**-0.1**
K56A		baz=173			S	**S**	**18 38 46.9**	**-2.8**
K54A	**Basiliko Farm,**	baz=172,SNR=48	**62.43**	**353**	P	**P**	**18 30 23.8**	**0.0**
K54A		baz=172			S	**S**	**18 38 48.4**	**-1.9**
L50A	**Kingsville**	baz=167,SNR=18	**62.43**	**350**	P	**P**	**18 30 23.2**	**-0.6**
L50A		baz=167			S	**S**	**18 38 44.5**	**-5.8**
K55A	**Perry**	baz=172,SNR=24	**62.48**	**354**	P	**P**	**18 30 24.1**	**0.0**
K55A		baz=172			S	**S**	**18 38 49.5**	**-1.4**
VNA1	**Neumayer--Stat**		**62.55**	**161**	P	**P**	**18 30 27.0**	**+2.8**
J62A	**Henniker**	baz=179	**62.62**	**359**	P	**P**	**18 30 25.8**	**+0.9**
J62A		baz=179			S	**S**	**18 38 52.1**	**-0.5**
L48A	**N Adams**	baz=166,SNR=32	**62.62**	**349**	P	**P**	**18 30 23.5**	**-1.5**
L48A		baz=166			S	**S**	**18 38 47.1**	**-5.7**
L49A	**Milan**	baz=166,SNR=24	**62.66**	**349**	P	**P**	**18 30 24.4**	**-0.9**
L49A		baz=166			S	**S**	**18 38 48.1**	**-5.1**
J63A	**Strafford**	baz=180,SNR=6.3	**62.67**	**360**	P	**P**	**18 30 27.4**	**+2.1**
J60A	**Lant Hill Farm**	baz=177,SNR=18	**62.68**	**358**	P	**P**	**18 30 26.4**	**+1.1**
J60A		baz=177			S	**S**	**18 38 53.6**	**+0.2**
J61A	**Chester**	baz=178,SNR=19	**62.76**	**359**	P	**P**	**18 30 27.1**	**+1.3**
J61A		baz=178			S	**S**	**18 38 55.1**	**+0.8**
319A	**Douglas**	comp=Z,83nm,0.9s	**62.80**	**323**	IAmb	IAmb	18 30 35.6	
319A		comp=Z,10µm,21.0s			IAMs_20	IAMs_20	18 54 42.7	
AAM	**Ann Arbor**	comp=Z,12µm,19.0s	**62.83**	**349**	IAMs_20	IAMs_20	19 01 47.3	
AAM	**Ann Arbor**	baz=166,SNR=6.8	**62.83**	**349**	P	**P**	**18 30 26.1**	**-0.3**
AAM		baz=166			S	**S**	**18 38 49.8**	**-5.4**
ACCN	**Adirondack Com**	comp=Z,15µm,21.0s	**62.83**	**358**	IAMs_20	IAMs_20	18 57 10.0	
K52A	**Tillsonburg**	baz=170,SNR=18	**62.84**	**352**	P	**P**	**18 30 25.9**	**-0.5**
K52A		baz=170			S	**S**	**18 38 52.3**	**-3.1**
M44A	**Midewin, Midew**	comp=Z,250nm,1.6s	**62.85**	**345**	IAmb	IAmb	18 30 28.7	
M44A		comp=Z,14µm,19.0s			IAMs_20	IAMs_20	19 01 51.8	
121A	**Cookes Peak, D**	baz=141,SNR=30	**62.86**	**325**	P	**P**	**18 30 29.4**	**+2.4**
121A		baz=141			S	**S**	**18 38 57.6**	**+1.2**
J58A	**Remsen**	comp=Z,257nm,1.6s	**62.89**	**356**	IAmb	IAmb	18 30 31.7	
J58A		comp=Z,18µm,20.0s			IAMs_20	IAMs_20	18 58 52.4	
J58A	**Remsen**	baz=175,SNR=20	**62.89**	**356**	P	**P**	**18 30 27.6**	**+0.8**
J58A		baz=175			S	**S**	**18 38 55.4**	**-0.6**
K51A	**Iona Station**	baz=169,SNR=13	**62.90**	**351**	P	**P**	**18 30 26.6**	**-0.2**
K51A		baz=169			S	**S**	**18 38 51.7**	**-4.4**
J56A	**Wolcott**	comp=Z,186nm,1.1s	**62.91**	**355**	IAmb	IAmb	18 30 31.3	
J56A	**Wolcott**	baz=174,SNR=10	**62.91**	**355**	P	**P**	**18 30 27.3**	**+0.4**
J56A		baz=174			S	**S**	**18 38 54.1**	**-2.2**
VNA2	**Neumayer--Watz**		**62.92**	**161**	P	**P**	**18 30 27.4**	**+0.6**
N41A	**Harden Midland**	comp=Z,10µm,20.0s	**62.94**	**343**	IAMs_20	IAMs_20	19 01 06.9	
J59A	**Piesco**	comp=Z,19µm,21.0s	**62.95**	**357**	IAMs_20	IAMs_20	18 57 59.5	
J59A	**Piesco**	baz=176,SNR=65	**62.95**	**357**	P	**P**	**18 30 27.2**	**0.0**
J59A		baz=176			S	**S**	**18 38 56.7**	**-0.1**
MEDO	**Medina**	comp=Z,14µm,22.0s	**62.95**	**354**	IAMs_20	IAMs_20	18 58 32.0	
J57A	**Williamstown**	comp=Z,183nm,1.1s	**62.98**	**356**	IAmb	IAmb	18 30 44.0	
J57A		comp=Z,15µm,22.0s			IAMs_20	IAMs_20	18 57 47.9	
J57A	**Williamstown**	baz=174,SNR=24	**62.98**	**356**	P	**P**	**18 30 27.8**	**+0.4**
J57A		baz=174			S	**S**	**18 38 55.3**	**-1.9**
J55A	**Hilton**	comp=Z,16µm,19.0s	**62.99**	**354**	IAMs_20	IAMs_20	19 01 47.0	
J55A	**Hilton**	baz=173,SNR=17	**62.99**	**354**	P	**P**	**18 30 27.5**	**+0.1**
J55A		baz=173			S	**S**	**18 38 55.3**	**-1.9**
L46A	**Eue Claire**	comp=Z,15µm,19.0s	**63.06**	**347**	IAMs_20	IAMs_20	19 00 25.3	
L46A	**Eue Claire**	baz=164,SNR=14	**63.06**	**347**	P	**P**	**18 30 26.9**	**-1.1**
L46A		baz=164			S	**S**	**18 38 50.4**	**-7.7**
J54A	**Appleton**	comp=Z,15µm,21.0s	**63.08**	**354**	IAMs_20	IAMs_20	18 58 25.4	
J54A	**Appleton**	baz=172,SNR=12	**63.08**	**354**	P	**P**	**18 30 28.3**	**+0.3**
J54A		baz=172			S	**S**	**18 38 55.9**	**-2.4**
HNH	**Hanover**	comp=Z,10µm,20.0s	**63.11**	**359**	IAMs_20	IAMs_20	18 58 56.6	
K50A	**Casco**	comp=Z,19µm,21.0s	**63.12**	**350**	IAMs_20	IAMs_20	18 59 34.0	
K50A	**Casco**	baz=168,SNR=16	**63.12**	**350**	P	**P**	**18 30 27.9**	**-0.4**
K50A		baz=168			S	**S**	**18 38 53.6**	**-5.3**
I58A	**Old Forge**	baz=176,SNR=32	**63.20**	**357**	P	**P**	**18 30 28.6**	**-0.2**
I58A		baz=176			S	**S**	**18 38 58.8**	**-1.2**
I59A	**Olmsteadville**	baz=177,SNR=51	**63.25**	**357**	P	**P**	**18 30 29.5**	**+0.3**
I59A		baz=177			S	**S**	**18 39 00.1**	**-0.4**
J52A	**Paris**	baz=170,SNR=70	**63.26**	**352**	P	**P**	**18 30 28.8**	**-0.5**
J52A		baz=170			S	**S**	**18 38 56.7**	**-4.0**
K49A	**Clarkson**	baz=167,SNR=11	**63.26**	**350**	P	**P**	**18 30 28.5**	**-0.7**
I62A	**Tamworth**	comp=Z,190nm,1.4s	**63.27**	**360**	IAmb	IAmb	18 30 33.8	
I62A		comp=Z,13µm,22.0s			IAMs_20	IAMs_20	18 57 02.8	
I62A	**Tamworth**	baz=179,SNR=12	**63.27**	**360**	P	**P**	**18 30 30.7**	**+1.5**
I62A		baz=179			S	**S**	**18 39 01.2**	**+0.5**
I60A	**Shoreham**	baz=177,SNR=18	**63.27**	**358**	P	**P**	**18 30 30.3**	**+1.0**
I60A		baz=177			S	**S**	**18 39 01.8**	**+1.1**
KSU1	**Kansas State U**	comp=Z,11µm,22.0s	**63.30**	**338**	IAMs_20	IAMs_20	19 02 39.8	
KSU1	**Kansas State U**	baz=153,SNR=19	**63.30**	**338**	P	**P**	**18 30 29.2**	**-0.4**
KSU1		baz=153			S	**S**	**18 38 57.7**	**-3.6**
I64A	**Boothbay**	baz=181,SNR=7.1	**63.32**	**1**	P	**P**	**18 30 31.9**	**+2.4**
I64A		baz=181			S	**S**	**18 39 01.8**	**+0.5**
I61A	**Oroboro, Fairl**	baz=178,SNR=33	**63.34**	**359**	P	**P**	**18 30 30.5**	**+0.8**
I61A		baz=178			S	**S**	**18 39 04.3**	**+2.7**
K48A	**Perry**	baz=166,SNR=46	**63.40**	**349**	P	**P**	**18 30 29.0**	**-1.1**
K48A		baz=166			S	**S**	**18 38 56.6**	**-5.8**
K47A	**Vermontville**	baz=165,SNR=24	**63.43**	**348**	P	**P**	**18 30 28.9**	**-1.5**
K47A		baz=165			S	**S**	**18 38 56.0**	**-6.8**
NCB	**Newcomb**	comp=Z,251nm,1.5s	**63.44**	**357**	IAmb	IAmb	18 30 35.4	
NCB		comp=Z,12µm,21.0s			IAMs_20	IAMs_20	18 57 30.1	
I63A	**Otisfield**	comp=Z,200nm,1.2s	**63.44**	**0**	IAmb	IAmb	18 30 36.0	
I63A		comp=Z,14µm,21.0s			IAMs_20	IAMs_20	18 57 03.4	
I63A	**Otisfield**	baz=180,SNR=11	**63.44**	**0**	P	**P**	**18 30 31.7**	**+1.3**
I63A		baz=180			S	**S**	**18 39 03.2**	**+0.4**
I57A	**Carthage**	baz=175,SNR=20	**63.48**	**356**	P	**P**	**18 30 31.2**	**+0.5**
I57A		baz=175			S	**S**	**18 39 01.4**	**-2.0**
R32A	**Long Quarter,**	comp=Z,133nm,1.1s	**63.48**	**336**	IAmb	IAmb	18 30 47.5	
L44A	**Lake County Fo**	baz=162,SNR=8.8	**63.57**	**346**	P	**P**	**18 30 30.4**	**-0.9**
L44A		baz=162			S	**S**	**18 38 58.7**	**-5.9**
PECO	**Prince Edward**	comp=Z,10µm,21.0s	**63.58**	**355**	IAMs_20	IAMs_20	18 57 36.7	
Y22D	**IRIS PASSCAL I**		**63.60**	**327**	IAMs_20	IAMs_20	19 00 28.0	

	comp=Z,9µm,18.0s						
Y22D	IRIS PASSCAL I	63.60	327	P	P	18 30 34.7	+2.8
	baz=142						
K46A	Dorr	63.60	348	P	P	18 30 30.3	-1.2
	baz=164,SNR=23						
K46A				S	S	18 38 57.7	-7.2
	baz=164						
LBNH	Lisbon	63.64	359	IAMs_20	IAMs_20	18 57 14.6	
	comp=Z,12µm,22.0s						
LBNH	Lisbon	63.64	359	P	P	18 30 33.1	+1.3
	baz=179,SNR=18						
LBNH				S	S	18 39 05.7	+0.3
	baz=179						
I53A	Kortright Cn E	63.73	353	P	P	18 30 32.7	+0.4
	baz=171,SNR=12						
J49A	Marlette	63.77	350	P	P	18 30 31.1	-1.5
	baz=167,SNR=19						
J49A				S	S	18 39 00.7	-6.3
	baz=167						
J48A	Bridge Port	63.82	349	IAMs_20	IAMs_20	18 58 50.5	
	comp=Z,13µm,22.0s						
J48A	Bridge Port	63.82	349	P	P	18 30 32.5	-0.4
	baz=166,SNR=43						
J48A				S	S	18 39 01.0	-6.6
	baz=166						
L42A	Oliver, Polo	63.83	344	IAmb	IAmb	18 30 36.5	
	comp=Z,165nm,1.4s						
L42A				IAMs_20	IAMs_20	19 03 02.7	
	comp=Z,11µm,18.0s						
H58A	Gabriels	63.88	357	P	P	18 30 33.5	+0.2
	baz=176,SNR=45						
H58A				S	S	18 39 07.9	-0.5
	baz=176						
I51A	Listowel	63.89	352	P	P	18 30 33.1	-0.3
	baz=169,SNR=65						
I51A				S	S	18 39 03.8	-4.7
	baz=169						
I55A	Frankford	63.92	354	P	P	18 30 33.4	-0.1
	baz=173,SNR=27						
I55A				S	S	18 39 07.5	-1.3
	baz=173						
H61A	Lyndonville	63.93	359	P	P	18 30 34.9	+1.2
	baz=179,SNR=21						
H61A				S	S	18 39 09.8	+0.8
	baz=179						
J47A	Sunmer	63.95	349	IAMs_20	IAMs_20	19 01 30.9	
	comp=Z,11µm,19.0s						
J47A	Sunmer	63.95	349	P	P	18 30 33.0	-0.8
	baz=165,SNR=22						
J47A				S	S	18 39 02.9	-6.3
	baz=165						
WVL	Waterville	63.96	1	IAmb	IAmb	18 30 39.0	
	comp=Z,168nm,1.2s						
WVL				IAMs_20	IAMs_20	18 57 17.3	
	comp=Z,16µm,22.0s						
H62A	Milan	63.96	360	IAmb	IAmb	18 31 19.9	
	comp=Z,224nm,1.6s						
H62A				IAMs_20	IAMs_20	18 57 22.3	
	comp=Z,14µm,22.0s						
H62A	Milan	63.96	360	P	P	18 30 35.9	+2.0
	baz=180,SNR=6.2						
H62A				S	S	18 39 10.4	+1.0
	baz=180						
H60A	Morristown	63.97	358	P	P	18 30 36.0	+2.1
	baz=178,SNR=16						
H60A				S	S	18 39 12.1	+2.6
	baz=178						
H57A	Richville	63.99	356	P	P	18 30 34.4	+0.4
	baz=175,SNR=36						
H57A				S	S	18 39 07.6	-2.1
	baz=175						
I52A	Shelburne	64.04	352	P	P	18 30 34.0	-0.4
	baz=170,SNR=58						
I52A				S	S	18 39 06.8	-3.5
	baz=170						
H64A	Troy	64.05	1	P	P	18 30 34.9	+0.5
	baz=182,SNR=15						
H64A				S	S	18 39 11.9	+1.6
	baz=182						
ANMO	Albuquerque	64.05	328	P	P	18 30 35.1	+0.2
ANMO				pmax	pmax		
	comp=Z,108nm,1.7s						
ANMO				MLR	MLR		
	comp=Z,6µm,18.0s						
ANMO	Albuquerque	64.05	328	P	P	18 30 35.1	+0.2
ANMO	Albuquerque	64.05	328	P	P	18 30 36.2	+1.3
	baz=142						
ANMO				S	S	18 39 09.8	-1.4
	baz=142						
H63A	New Sharon	64.05	1	P	P	18 30 35.2	+0.8
	baz=181,SNR=22						
H63A				S	S	18 39 11.2	+0.8
	baz=181						
H59A	Cadyville	64.09	358	P	P	18 30 35.0	+0.3
	baz=177,SNR=40						
H59A				S	S	18 39 11.0	+0.1
	baz=177						
LONY	Lake Ozonia	64.10	357	IAMs_20	IAMs_20	18 58 22.6	
	comp=Z,16µm,21.0s						
LONY	Lake Ozonia	64.10	357	P	P	18 30 36.1	+1.3
	baz=176						
H65A	Eastbrook	64.13	2	P	P	18 30 36.8	+1.9
	baz=183,SNR=13						
H65A				S	S	18 39 10.5	-0.8
	baz=183						
EMMW	East Machias	64.17	3	IAmb	IAmb	18 30 40.1	
	comp=Z,157nm,1.2s						
EMMW				IAMs_20	IAMs_20	19 00 02.8	
	comp=Z,10µm,20.0s						
K43A	Burlington	64.17	346	IAMs_20	IAMs_20	18 59 02.7	
	comp=Z,18µm,22.0s						
H56A	Elgin	64.18	356	P	P	18 30 35.0	-0.3
	baz=174,SNR=47						
H56A				S	S	18 39 09.9	-2.0
	baz=174						
H55A	Tweed	64.21	355	P	P	18 30 35.4	-0.1
	baz=173,SNR=27						
H55A				S	S	18 39 10.4	-2.0
	baz=173						
J46A	Howard City	64.21	348	P	P	18 30 35.2	-0.3
	baz=164						
J46A				S	S	18 39 05.8	-6.6
	baz=164						
DELO	Deloro Mine	64.21	355	IAmb	IAmb	18 30 40.0	
	comp=Z,254nm,1.3s						
DELO				IAMs_20	IAMs_20	18 58 08.4	
	comp=Z,12µm,22.0s						
CBKS	Cedar Bluff	64.23	335	IAmb	IAmb	18 30 52.6	
	comp=Z,166nm,1.1s						
CBKS	Cedar Bluff	64.23	335	P	P	18 30 36.5	+0.7
	baz=150,SNR=21						
CBKS				S	S	18 39 10.9	-2.0
	baz=150						
H66A	Whiting	64.25	3	P	P	18 30 37.6	+1.9
	baz=184,SNR=9.0						
H66A				S	S	18 39 11.4	-1.5
	baz=184						
FRNY	Flat Rock	64.28	358	IAMs_20	IAMs_20	18 57 40.2	
	comp=Z,14µm,22.0s						
I49A	Point Hope	64.29	350	P	P	18 30 35.9	-0.1
	baz=168,SNR=24						
I49A				S	S	18 39 07.3	-6.1
	baz=168						
L40A	Anamosa	64.30	343	IAMs_20	IAMs_20	19 03 24.9	
	comp=Z,12µm,18.0s						
H53A	Bobcaygeon	64.36	354	P	P	18 30 36.2	-0.3
	baz=172,SNR=40						
H53A				S	S	18 39 11.4	-2.9
	baz=172						
HAL	Halifax	64.36	6	IAmb	IAmb	18 30 41.1	
	comp=Z,209nm,1.2s						
HAL				IAMs_20	IAMs_20	18 58 09.1	
	comp=Z,13µm,22.0s						
J45A	Montague	64.44	347	IAMs_20	IAMs_20	19 01 24.9	
	comp=Z,11µm,18.0s						
J45A	Montague	64.44	347	P	P	18 30 36.8	-0.3
	baz=164						
J45A				S	S	18 39 08.0	-7.3
	baz=164						
G60A	Masonville	64.50	359	P	P	18 30 37.9	+0.5
	baz=178,SNR=21						
G60A				S	S	18 39 16.6	+0.5
	baz=178						
G59A	Clarenceville	64.51	358	P	P	18 30 38.2	+0.8
	baz=178,SNR=13						
G63A	Kingsbury	64.51	1	P	P	18 30 39.0	+1.6
	baz=181,SNR=18						
G63A				S	S	18 39 16.6	+0.5
	baz=181						
SNAA	Sanae	64.54	161	P	P	18 30 38.0	+0.5
SNAA	Sanae	64.54	161	⇑eP	P	18 30 37.3	-0.2
SNAA	Sanae	64.54	161	P	P	18 30 37.5	0.0
SNAA				IAmb	IAmb	18 30 42.4	
	comp=Z,186nm,1.2s						
SNAA				IAMs_20	IAMs_20	18 56 27.8	
	comp=Z,12µm,21.0s						
H52A	Wyevale	64.57	353	P	P	18 30 37.4	-0.4
	baz=171,SNR=44						
H52A				S	S	18 39 13.4	-3.5
	baz=171						
G57A	Newington	64.61	357	P	P	18 30 38.9	+0.8
	baz=176,SNR=44						
G57A				S	S	18 39 15.4	-1.8
	baz=176						
G58A	Ormstown	64.61	357	P	P	18 30 38.9	+0.9
	baz=177,SNR=28						
G58A				S	S	18 39 17.0	-0.3
	baz=177						
GGN	Saint George	64.61	3	P	P	18 30 38.8	+0.8
GGN				IAmb	IAmb	18 30 41.6	
	comp=Z,262nm,1.5s						
GGN				IAMs_20	IAMs_20	18 57 41.4	
	comp=Z,14µm,21.0s						
G62A	West of Eustis	64.61	0	IAMs_20	IAMs_20	18 58 01.3	
	comp=Z,15µm,22.0s						
G62A	West of Eustis	64.61	0	P	P	18 30 38.7	+0.6
	baz=180,SNR=54						
G62A				S	S	18 39 17.9	+0.6
	baz=180						
SADO	Sadowa	64.61	353	P	P	18 30 37.2	-0.9
SADO				IAmb	IAmb	18 30 53.8	
	comp=Z,214nm,1.1s						
SADO				IAMs_20	IAMs_20	19 02 40.0	
	comp=Z,13µm,19.0s						
I47A	Gladwin	64.65	349	IAMs_20	IAMs_20	18 59 16.4	
	comp=Z,15µm,21.0s						
I47A	Gladwin	64.65	349	P	P	18 30 37.8	-0.5
	baz=166,SNR=16						
I47A				S	S	18 39 10.8	-7.1
	baz=166						
G65A	Princeton	64.66	3	IAmb	IAmb	18 30 43.4	
	comp=Z,146nm,1.1s						
G65A				IAMs_20	IAMs_20	19 00 18.7	
	comp=Z,12µm,20.0s						
G65A	Princeton	64.66	3	P	P	18 30 39.8	+1.5
	baz=183,SNR=9.3						
G65A				S	S	18 39 16.8	-1.0
	baz=183						
G64A	Maxfield	64.67	2	P	P	18 30 39.9	+1.4
	baz=182,SNR=16						
G64A				S	S	18 39 17.6	-0.4
	baz=182						
PKME	Peaks-Kenny Pk	64.67	1	IAmb	IAmb	18 30 43.5	
	comp=Z,152nm,1.0s						
PKME				IAMs_20	IAMs_20	18 57 47.9	
	comp=Z,16µm,21.0s						
PKME	Peaks-Kenny Pk	64.67	1	P	P	18 30 39.7	+1.2
	baz=182,SNR=18						
PKME				S	S	18 39 17.6	-0.3
	baz=182						
I48A	Sherman Twp	64.67	350	P	P	18 30 36.7	-1.7
	baz=167,SNR=35						
I48A				S	S	18 39 12.7	-5.4
	baz=167						
G61A	St-Isidore-de-	64.67	359	P	P	18 30 39.5	+0.9
	baz=179,SNR=41						
G61A				S	S	18 39 19.1	+0.9
	baz=179						
PLVO	Plevna	64.68	355	IAmb	IAmb	18 30 54.0	
	comp=Z,157nm,1.2s						
PLVO				IAMs_20	IAMs_20	19 00 15.9	
	comp=Z,11µm,21.0s						
SCIA	State Center	64.72	342	P	P	18 30 38.2	-0.7
	baz=157,SNR=20						
I46A	Reed City	64.74	348	P	P	18 30 39.1	+0.1
	baz=165,SNR=22						
I46A				S	S	18 39 13.0	-6.0
	baz=165						
T25A	Trinidad	64.82	331	P	P	18 30 41.2	+1.2
	baz=145,SNR=47						
T25A				S	S	18 39 20.7	0.0
	baz=145						
JFWS	Jewell Farm	64.84	344	IAMs_20	IAMs_20	18 58 34.2	
	comp=Z,12µm,22.0s						
JFWS	Jewell Farm	64.84	344	P	P	18 30 38.7	-0.9
	baz=160,SNR=50						
JFWS				S	S	18 39 15.1	-5.1
	baz=160						
G55A	Calabogie	64.87	355	P	P	18 30 39.6	-0.2
	baz=174,SNR=46						
G55A				S	S	18 39 18.2	-2.3
	baz=174						
G53A	Haliburton	64.91	354	P	P	18 30 39.9	-0.2
	baz=172,SNR=64						
G53A				S	S	18 39 18.1	-2.9
	baz=172						
I45A	Fountain	64.99	348	IAMs_20	IAMs_20	19 00 38.4	
	comp=Z,13µm,22.0s						
I45A	Fountain	64.99	348	P	P	18 30 40.3	-0.2
	baz=164						
H48A	Harrisville	65.11	350	IAMs_20	IAMs_20	19 00 32.6	
	comp=Z,15µm,20.0s						
H48A	Harrisville	65.11	350	P	P	18 30 40.2	-1.2
	baz=167,SNR=20						
H48A				S	S	18 39 18.0	-5.5
	baz=167						
F63A	Nahmakanta, Br	65.11	1	IAmb	IAmb	18 30 47.2	
	comp=Z,198nm,1.4s						
F63A				IAMs_20	IAMs_20	18 58 01.7	
	comp=Z,16µm,21.0s						
F63A	Nahmakanta, Br	65.11	1	P	P	18 30 42.4	+1.1
	baz=182,SNR=12						
F63A				S	S	18 39 22.3	-1.2
	baz=182						
G54A	Lake Saint Pet	65.13	354	P	P	18 30 41.2	-0.2
	baz=172,SNR=48						
G54A				S	S	18 39 21.6	-2.1
	baz=172						
H47A	Mio	65.16	349	P	P	18 30 42.0	+0.3
	baz=166,SNR=13						
H47A				S	S	18 39 18.5	-5.6
	baz=166						
F59A	Saint Guilaume	65.27	358	P	P	18 30 44.3	+2.0
	baz=178,SNR=9.8						
214A	Organ Pipe Nat	65.27	321	P	P	18 30 45.1	+2.4
	baz=136,SNR=31						
214A				S	S	18 39 27.8	+1.7
	baz=136						
K38A	Parkersburg	65.27	342	IAMs_20	IAMs_20	19 02 39.7	
	comp=Z,11µm,20.0s						
H46A	Fife Lake	65.28	349	P	P	18 30 41.6	-0.9
	baz=165,SNR=7.3						
H46A				S	S	18 39 20.2	-5.4
	baz=165						
F64A	Sherman	65.29	2	IAmb	IAmb	18 30 47.5	
	comp=Z,213nm,1.2s						
F64A				IAMs_20	IAMs_20	18 58 17.4	
	comp=Z,12µm,21.0s						
F64A	Sherman	65.29	2	P	P	18 30 43.7	+1.2
	baz=182,SNR=21						
F64A				S	S	18 39 25.3	-0.4
	baz=182						
GBN	Guysborough	65.34	7	P	P	18 30 42.7	-0.1
GBN				IAmb	IAmb	18 30 47.1	
	comp=Z,161nm,1.2s						
F61A	St Evariste	65.36	360	P	P	18 30 44.2	+1.3
	baz=180,SNR=17						
F61A				S	S	18 39 26.4	-0.2
	baz=180						
F60A	Warwick	65.37	359	P	P	18 30 44.0	+1.0
	baz=179,SNR=37						
F60A				S	S	18 39 26.0	-0.6
	baz=179						
F55A	Otter Lake	65.42	356	P	P	18 30 44.2	+0.9
	baz=174						
F55A				S	S	18 39 26.1	-1.2
	baz=174						
I42A	Draeger Farm,	65.43	346	IAMs_20	IAMs_20	18 59 51.0	
	comp=Z,18µm,21.0s						
GLMI	Grayling	65.44	349	IAMs_20	IAMs_20	18 59 50.5	
	comp=Z,16µm,22.0s						
GLMI	Grayling	65.44	349	P	P	18 30 43.4	-0.1
	baz=166,SNR=11						
LMN	Caledonia Moun	65.47	5	IAmb	IAmb	18 30 48.0	
	comp=Z,165nm,1.1s						
LMN				IAMs_20	IAMs_20	19 01 22.2	
	comp=Z,10µm,20.0s						
H45A	Beulah	65.52	348	P	P	18 30 43.3	-0.7
	baz=164,SNR=14						
H45A				S	S	18 39 20.8	-7.6
	baz=164						
X18A	Snowflake	65.55	325	IAMs_20	IAMs_20	18 57 38.4	
	comp=Z,16µm,20.0s						
KSCO	Kaye Shedlock’	65.58	333	P	P	18 30 46.4	+1.6
	baz=147,SNR=22						
F52A	Sundridge	65.64	353	P	P	18 30 44.3	-0.5
	baz=171,SNR=98						
F52A				S	S	18 39 26.9	-3.2
	baz=171						
G47A	Hillman	65.65	350	P	P	18 30 44.6	-0.3
	baz=167,SNR=27						
G47A				S	S	18 39 25.1	-5.1
	baz=167						
ALGO	Algonquin Park	65.68	354	P	P	18 30 45.4	+0.4
	baz=172,SNR=28						
H43A	Windswept, Lux	65.72	347	IAMs_20	IAMs_20	18 59 39.8	
	comp=Z,19µm,22.0s						
E60A	Ste Agathe de	65.76	359	P	P	18 30 46.3	+0.8
	baz=179,SNR=14						
E60A				S	S	18 39 31.1	-0.3
	baz=179						
E58A	La Victoria	65.80	358	P	P	18 30 45.8	+0.1
	baz=178,SNR=51						
E58A				S	S	18 39 30.6	-1.3
	baz=178						
E61A	Lac Etchemin	65.82	0	P	P	18 30 47.1	+1.2
	baz=180,SNR=21						
E61A				S	S	18 39 32.1	-0.1
	baz=180						
SDCO	Great Sand Dun	65.82	330	IAmb	IAmb	18 30 52.1	
	comp=Z,177nm,1.3s						
SDCO	Great Sand Dun	65.82	330	P	P	18 30 47.0	+0.5
	baz=144,SNR=122						
SDCO				S	S	18 39 32.8	-0.3
	baz=144						
F51A	Arnstein	65.84	353	P	P	18 30 45.9	-0.2
	baz=171,SNR=40						
F51A				S	S	18 39 28.8	-3.6
	baz=171						
G45A	Suttons Bay	65.84	348	IAMs_20	IAMs_20	19 02 47.0	
	comp=Z,9µm,19.0s						
G45A	Suttons Bay	65.84	348	P	P	18 30 44.8	-1.3
	baz=165,SNR=26						
G45A				S	S	18 39 26.2	-6.3
	baz=165						
I40A	Norwalk	65.84	344	IAMs_20	IAMs_20	19 03 57.0	
	comp=Z,14µm,18.0s						
E63A	Oxbow	65.85	2	IAmb	IAmb	18 30 51.0	
	comp=Z,167nm,1.2s						
E63A				IAMs_20	IAMs_20	18 58 35.1	
	comp=Z,14µm,22.0s						
E63A	Oxbow	65.85	2	P	P	18 30 47.0	+0.9
	baz=182,SNR=18						
E63A				S	S	18 39 31.3	-1.2
	baz=182						
E64A	Bridgewater	65.86	2	P	P	18 30 46.9	+0.8
	baz=183,SNR=17						
E64A				S	S	18 39 31.8	-0.9
	baz=183						
E57A	Chemin Saint G	65.87	357	P	P	18 30 47.2	+0.9
	baz=177,SNR=45						
E57A				S	S	18 39 31.8	-1.0
	baz=177						
W18A	Petrified Fore	65.88	326	IAMs_20	IAMs_20	18 58 54.2	
	comp=Z,12µm,18.0s						
W18A	Petrified Fore	65.88	326	P	P	18 30 48.7	+2.0
	baz=140,SNR=14						
W18A				S	S	18 39 35.6	+1.9
	baz=140						
BGNE	Belgrade	65.89	338	P	P	18 30 46.3	-0.2
	baz=152,SNR=14						
BGNE				S	S	18 39 30.6	-2.6
	baz=152						
E59A	St. Maurice	65.89	359	P	P	18 30 47.4	+1.1
	baz=178						
E59A				S	S	18 39 32.6	-0.3
	baz=178						
F49A	Sandfield	65.95	351	P	P	18 30 46.4	-0.4
	baz=168,SNR=36						
F49A				S	S	18 39 28.0	-5.7
	baz=168						
G46A	Petoskey	65.97	349	P	P	18 30 46.4	-0.5
	baz=166,SNR=15						
E55A	Montcerf-Lytto	66.02	356	P	P	18 30 47.5	+0.3
	baz=175,SNR=12						
E55A				S	S	18 39 32.3	-2.2
	baz=175						
E56A	St. Veronique	66.05	357	P	P	18 30 47.0	-0.4
	baz=176,SNR=42						
E56A				S	S	18 39 33.2	-1.7
	baz=176						
E52A	Mattawa	66.06	354	P	P	18 30 47.5	0.0
	baz=172,SNR=44						
E52A				S	S	18 39 32.2	-2.8
	baz=172						
E53A	Dumoine, Ponti	66.06	355	P	P	18 30 48.3	+0.8
	baz=173,SNR=20						
E53A				S	S	18 39 33.0	-2.1
	baz=173						
E54A	Lac Daplat, Po	66.08	355	P	P	18 30 47.3	-0.3
	baz=173,SNR=31						
E54A				S	S	18 39 33.4	-1.9
	baz=173						
F48A	Evansville	66.10	351	P	P	18 30 47.0	-0.7
	baz=168,SNR=44						
F48A				S	S	18 39 29.2	-6.3
	baz=168						
PQI	Presque Isle	66.11	2	IAMs_20	IAMs_20	18 58 41.1	
	comp=Z,12µm,22.0s						
X16A	Lo Mia Camp, P	66.28	324	IAMs_20	IAMs_20	18 58 20.7	
	comp=Z,11µm,19.0s						
D60A	Saint Jean D’O	66.30	360	P	P	18 30 49.9	+1.0
	baz=180,SNR=17						
D60A				S	S	18 39 37.4	-0.5
	baz=180						
E51A	G1948 Merrick	66.39	353	P	P	18 30 49.3	-0.3
	baz=171,SNR=52						
E51A				S	S	18 39 35.9	-3.2
	baz=171						
D59A	Saint-Raymond	66.40	359	P	P	18 30 50.6	+0.9
	baz=179						
D59A				S	S	18 39 38.2	-1.0
	baz=179						
F45A	CMU Biological	66.44	349	P	P	18 30 49.5	-0.4
	baz=165,SNR=38						
F45A				S	S	18 39 34.3	-5.3
	baz=165						
S22A	4UR Ranch, Cre	66.45	329	P	P	18 30 51.9	+1.4
	baz=143,SNR=35						
S22A				S	S	18 39 41.7	+0.9
	baz=143						
D57A	Chemin Vers le	66.47	358	P	P	18 30 50.5	+0.5
	baz=177,SNR=54						
D57A				S	S	18 39 38.8	-1.2
	baz=177						
D63A	Stockholm	66.47	2	P	P	18 30 51.1	+1.1
	baz=183,SNR=18						
D63A				S	S	18 39 37.7	-2.3
	baz=183						
D62A	Allapoint, All	66.49	1	IAmb	IAmb	18 31 02.8	
	comp=Z,142nm,0.8s						
D62A				IAMs_20	IAMs_20	18 58 44.2	
	comp=Z,17µm,21.0s						
D62A	Allapoint, All	66.49	1	P	P	18 30 50.6	+0.4
	baz=182,SNR=32						
D62A				S	S	18 39 39.4	-0.9
	baz=182						
D58A	Chemin du LacG	66.51	358	P	P	18 30 50.4	+0.1
	baz=178,SNR=88						
D58A				S	S	18 39 38.9	-1.7
	baz=178						
D56A	ZEC Mazanza, M	66.53	357	P	P	18 30 50.0	-0.5
	baz=176,SNR=33						
D56A				S	S	18 39 39.2	-1.6
	baz=176						
D55A	Sainte-Anne-du	66.54	357	P	P	18 30 50.0	-0.5
	baz=175,SNR=40						
D55A				S	S	18 39 38.7	-2.3
	baz=175						
D61A	St Aubert, Com	66.59	0	P	P	18 30 53.3	+2.5
	baz=181,SNR=16						
D61A				S	S	18 39 40.8	-0.7
	baz=181						
Q24A	Divide	66.65	331	P	P	18 30 53.1	+1.3
	baz=145						

Q24A	baz=145			S	**S**	**18 39 43.7**	**+0.6**
E48A	**Lockeyer** baz=168,SNR=39	**66.67**	**351**	P	**P**	**18 30 51.3**	**-0.1**
I37A	**Lemond, Waseca** comp=Z,225nm,1.2s	**66.71**	**342**	IAmb	IAmb	18 30 55.8	
I37A	comp=Z,8µm,18.0s			IAMs_20	IAMs_20	19 04 51.7	
D54A	**Lac Fusel, La** baz=174,SNR=34	**66.75**	**356**	P	**P**	**18 30 51.5**	**-0.4**
D54A	baz=174			S	**S**	**18 39 40.9**	**-2.6**
D53A	**Lac Vacive, Po** comp=Z,83nm,0.9s	**66.76**	**355**	IAmb	IAmb	18 31 25.5	
D53A	comp=Z,13µm,20.0s			IAMs_20	IAMs_20	19 01 26.9	
D53A	**Lac Vacive, Po** baz=173,SNR=41	**66.76**	**355**	P	**P**	**18 30 51.6**	**-0.3**
D53A	baz=173			S	**S**	**18 39 41.4**	**-2.1**
LATQ	**La Tuque** baz=178,SNR=37	**66.80**	**359**	P	**P**	**18 30 53.0**	**+0.9**
BATG	**Bathurst New B** comp=Z,175nm,1.2s	**66.80**	**3**	IAmb	IAmb	18 30 56.9	
E47A	**Iron Bridge** baz=167,SNR=52	**66.81**	**351**	P	**P**	**18 30 51.8**	**-0.5**
E47A	baz=167			S	**S**	**18 39 38.5**	**-5.6**
MVCO	**Mesa Verde** comp=Z,244nm,1.6s	**66.85**	**328**	IAmb	IAmb	18 30 58.8	
MVCO	comp=Z,10µm,18.0s			IAMs_20	IAMs_20	18 59 52.0	
MVCO	**Mesa Verde** baz=141,SNR=49	**66.85**	**328**	P	**P**	**18 30 54.5**	**+1.5**
MVCO	baz=141			S	**S**	**18 39 45.9**	**+0.4**
E46A	**Sault Ste Mari** comp=Z,90nm,0.8s	**66.89**	**350**	IAmb	IAmb	18 31 10.4	
D51A	**Lot 18 Range I** baz=171,SNR=54	**66.93**	**354**	P	**P**	**18 30 53.2**	**+0.2**
D51A	baz=171			S	**S**	**18 39 42.5**	**-3.1**
OGNE	**Ogallala** baz=148,SNR=8.4	**66.96**	**335**	P	**P**	**18 30 54.6**	**+1.1**
F42A	**Maple Grove Fa** comp=Z,17µm,22.0s	**67.03**	**347**	IAMs_20	IAMs_20	19 00 29.4	
G40A	**Rib Lake** comp=Z,15µm,21.0s	**67.03**	**345**	IAMs_20	IAMs_20	19 01 43.4	
D50A	**G1974 Best Tow** baz=171,SNR=77	**67.06**	**353**	P	**P**	**18 30 53.4**	**-0.4**
D50A	baz=171			S	**S**	**18 39 43.2**	**-4.0**
WUAZ	**Wupatki** comp=Z,155nm,1.4s	**67.06**	**325**	IAmb	IAmb	18 31 00.7	
WUAZ	comp=Z,10µm,20.0s			IAMs_20	IAMs_20	18 58 34.4	
WUAZ	**Wupatki** baz=138,SNR=41	**67.06**	**325**	P	**P**	**18 30 56.9**	**+2.6**
WUAZ	baz=138			S	**S**	**18 39 50.8**	**+2.8**
GLA	**Glamis** baz=135,SNR=21	**67.24**	**321**	P	**P**	**18 30 57.5**	**+2.1**
GLA	baz=135			S	**S**	**18 39 54.0**	**+3.9**
D48A	**Paudash Townsh** baz=169,SNR=41	**67.30**	**352**	P	**P**	**18 30 54.7**	**-0.7**
D48A	baz=169			S	**S**	**18 39 44.5**	**-5.7**
D46A	**Sault St. Mari** baz=166,SNR=22	**67.35**	**350**	P	**P**	**18 30 55.0**	**-0.7**
D46A	baz=166			S	**S**	**18 39 44.1**	**-6.6**
D47A	**Chapleau** baz=168,SNR=54	**67.37**	**351**	P	**P**	**18 30 54.9**	**-0.9**
D47A	baz=168			S	**S**	**18 39 44.1**	**-6.9**
E43A	**Lone Tree Farm** comp=Z,155nm,1.4s	**67.39**	**348**	IAmb	IAmb	18 31 13.8	
E43A	comp=Z,10µm,20.0s			IAMs_20	IAMs_20	19 02 28.7	
E44A	**Grand Marais A** comp=Z,131nm,1.1s	**67.42**	**349**	IAmb	IAmb	18 31 00.3	
E44A	comp=Z,11µm,20.0s			IAMs_20	IAMs_20	19 02 30.6	
E44A	**Grand Marais A** baz=165	**67.42**	**349**	P	**P**	**18 30 55.9**	**-0.2**
ECSD	**EROS Data Cent** baz=154,SNR=151	**67.43**	**340**	P	**P**	**18 30 55.4**	**-0.9**
ECSD	baz=154			S	**S**	**18 39 48.1**	**-3.7**
ISCO	**Idaho Springs** baz=144,SNR=55	**67.53**	**332**	P	**P**	**18 30 57.9**	**+0.4**
ISCO	baz=144			S	**S**	**18 39 54.0**	**+0.1**
Y12C	**Blythe** baz=135,SNR=15	**67.56**	**321**	P	**P**	**18 30 59.7**	**+2.4**
Y12C	baz=135			S	**S**	**18 39 57.0**	**+3.3**
COWI	**Conover** comp=Z,115nm,1.2s	**67.57**	**346**	IAmb	IAmb	18 31 01.2	
COWI	comp=Z,16µm,20.0s			IAMs_20	IAMs_20	19 01 05.7	
PV01	**Paradox Valley** comp=Z,9µm,19.0s	**67.60**	**328**	IAMs_20	IAMs_20	19 05 25.0	
SMCO	**Snowmass** comp=Z,9µm,19.0s	**67.66**	**330**	IAMs_20	IAMs_20	19 02 02.7	
SPMN	**Marine on St.** comp=Z,86nm,0.9s	**67.66**	**343**	IAmb	IAmb	18 31 32.2	
SPMN	comp=Z,10µm,18.0s			IAMs_20	IAMs_20	19 05 00.9	
SPMN	**Marine on St.** baz=158,SNR=29	**67.66**	**343**	P	**P**	**18 30 57.4**	**-0.3**
SPMN	baz=158			S	**S**	**18 39 49.6**	**-4.8**
TAOE	**Nuku Hiva Isla** comp=Z,9µm,34.0s	**67.71**	**268**	*e*S	**S**	**18 39 52.4**	**-4.1**
TAOE	**Nuku Hiva Isla** comp=Z,10µm,26.5s,baz=111	**67.71**	**268**	*e*LR	LR	18 51 13.2	
PV15	**Paradox Valley** comp=Z,160nm,1.1s	**67.72**	**329**	IAmb	IAmb	18 31 04.6	
PV15	comp=Z,10µm,20.0s			IAMs_20	IAMs_20	19 02 48.2	
PDMCI	**Parker Dam,Lak** baz=136,SNR=10	**67.72**	**322**	P	**P**	**18 31 01.2**	**+2.9**
PDMCI	baz=136			S	**S**	**18 39 59.1**	**+3.5**
IKP	**In-Ko-Pah, Jac** baz=134,SNR=39	**67.74**	**320**	P	**P**	**18 31 00.9**	**+2.3**
IKP	baz=134			S	**S**	**18 40 00.1**	**+4.1**
PV02	**Paradox Valley** comp=Z,153nm,1.4s	**67.74**	**328**	IAmb	IAmb	18 31 03.8	
PV13	**Radium Mtn., P** comp=Z,161nm,1.4s	**67.74**	**328**	IAmb	IAmb	18 31 04.4	
PV13	comp=Z,8µm,19.0s			IAMs_20	IAMs_20	19 05 08.8	
SWSC	**Sam W. Stewart** baz=134,SNR=17	**67.75**	**320**	P	**P**	**18 31 02.0**	**+3.5**
VLDQ	**Val d'Or** comp=Z,211nm,1.2s	**67.77**	**355**	IAmb	IAmb	18 31 02.9	
VLDQ	comp=Z,15µm,20.0s			IAMs_20	IAMs_20	19 01 47.2	
PV05	**Paradox Valley** comp=Z,113nm,1.3s	**67.82**	**328**	IAmb	IAmb	18 31 04.7	
PV05	comp=Z,10µm,18.0s			IAMs_20	IAMs_20	19 00 57.5	
PV03	**Paradox Valley** comp=Z,135nm,1.5s	**67.83**	**328**	IAmb	IAmb	18 31 04.9	
PV03	comp=Z,10µm,18.0s			IAMs_20	IAMs_20	19 01 10.2	
PV18	**Skein Mesa, Pa** comp=Z,10µm,18.0s	**67.86**	**328**	IAMs_20	IAMs_20	19 01 00.8	
PV12	**Saucer Basin,** comp=Z,160nm,1.5s	**67.86**	**328**	IAmb	IAmb	18 31 05.3	
PV12	comp=Z,9µm,19.0s			IAMs_20	IAMs_20	19 05 22.9	
PV07	**Paradox Valley** comp=Z,143nm,1.5s	**67.88**	**329**	IAmb	IAmb	18 31 05.4	
PV07	comp=Z,10µm,19.0s			IAMs_20	IAMs_20	19 02 52.4	
PV11	**David Mesa, Pa** comp=Z,157nm,1.5s	**67.88**	**328**	IAmb	IAmb	18 31 05.2	
PV11	comp=Z,11µm,18.0s			IAMs_20	IAMs_20	19 01 10.4	
PV17	**East Wray Mesa** comp=Z,13µm,18.0s	**67.91**	**328**	IAMs_20	IAMs_20	19 01 02.1	
PV16	**Nyswonger Mesa** comp=Z,144nm,1.6s	**67.91**	**328**	IAmb	IAmb	18 31 05.4	
PV16	comp=Z,9µm,18.0s			IAMs_20	IAMs_20	19 01 20.2	
PV20	**West Nyswonger** comp=Z,10µm,18.0s	**67.96**	**328**	IAMs_20	IAMs_20	19 01 12.5	
PV04	**Paradox Valley** comp=Z,9µm,19.0s	**67.97**	**328**	IAMs_20	IAMs_20	19 00 31.7	
PV22	**Blue Mesa, Par** comp=Z,138nm,1.4s	**68.02**	**329**	IAmb	IAmb	18 31 06.1	
PV22	comp=Z,8µm,19.0s			IAMs_20	IAMs_20	19 02 55.9	
PV10	**Paradox Valley** comp=Z,13µm,18.0s	**68.02**	**328**	IAMs_20	IAMs_20	19 01 02.4	
BC3	**Big Chuckawall** baz=135,SNR=41	**68.04**	**321**	P	**P**	**18 31 02.8**	**+2.3**
BC3	baz=135			S	**S**	**18 40 03.9**	**+4.1**
MONP2	**Monument Peak** baz=134,SNR=29	**68.09**	**320**	P	**P**	**18 31 03.9**	**+2.9**
MONP2	baz=134			S	**S**	**18 40 03.4**	**+2.8**
BAR	**Barrett**	**68.10**	**319**	P	**P**	**18 31 00.0**	**-0.8**
BAR	comp=Z,130nm,1.2s			IAmb	IAmb	18 31 15.4	
IRM	**Iron Mountain** baz=135,SNR=62	**68.21**	**321**	P	**P**	**18 31 04.2**	**+2.8**
IRM	baz=135			S	**S**	**18 40 03.9**	**+2.4**
U15A	**North Rim** comp=Z,151nm,1.4s	**68.23**	**325**	IAmb	IAmb	18 31 16.6	
U15A	comp=Z,12µm,19.0s			IAMs_20	IAMs_20	18 59 11.5	
NEE2	**Needles Airpor** baz=136	**68.33**	**322**	P	**P**	**18 31 05.3**	**+3.1**
NEE2	baz=136			S	**S**	**18 40 06.5**	**+3.6**
D41A	**Chassel** comp=Z,246nm,1.2s	**68.36**	**347**	IAmb	IAmb	18 31 06.3	
D41A	comp=Z,16µm,22.0s			IAMs_20	IAMs_20	19 01 31.6	
109C	**Camp Elliot, M** baz=133	**68.51**	**319**	P	**P**	**18 31 06.0**	**+2.7**
109C	baz=133			S	**S**	**18 40 09.0**	**+3.8**
N23A	**Red Feather La** baz=144,SNR=29	**68.57**	**332**	P	**P**	**18 31 05.5**	**+1.7**
N23A	baz=144			S	**S**	**18 40 06.9**	**+0.8**
BELC	**Belle Mtn. Jos** baz=134,SNR=27	**68.60**	**321**	P	**P**	**18 31 06.4**	**+2.3**
BELC	baz=134			S	**S**	**18 40 10.3**	**+3.8**
XPFO	**Pion Flat**	**68.61**	**320**	P	**P**	**18 31 04.6**	**+0.6**
XPFO	comp=Z,172nm,1.8s			IAmb	IAmb	18 31 08.8	
PFO	**Pinyon Flats O**	**68.61**	**320**⇑	*e*P	**P**	**18 31 04.0**	**-0.1**
PFO	comp=Z,118nm,1.5s			pmax	pmax		
PFO	**Pinyon Flats O**	**68.61**	**320**	P	**P**	**18 31 04.5**	**+0.4**
PFO	comp=Z,172nm,1.8s			IAmb	IAmb	18 31 08.8	
PFO	**Pinyon Flats O** baz=134,SNR=33	**68.61**	**320**	P	**P**	**18 31 06.6**	**+2.5**
PFO	baz=134			S	**S**	**18 40 11.7**	**+5.1**
E38A	**The Farm, Brul** comp=Z,171nm,1.5s	**68.62**	**345**	IAmb	IAmb	18 31 37.5	
E38A	comp=Z,14µm,20.0s			IAMs_20	IAMs_20	19 02 34.4	
LSQQ	**Lebel-sur-Quev** baz=174	**68.67**	**356**	P	**P**	**18 31 03.5**	**-0.4**
LSQQ	baz=174			S	**S**	**18 40 02.7**	**-3.7**
PHWY	**Pilot Hill** comp=Z,173nm,1.4s	**68.69**	**333**	IAmb	IAmb	18 31 10.0	
SUSD	**Miller** baz=152,SNR=20	**68.84**	**339**	P	**P**	**18 31 05.1**	**0.0**
SUSD	baz=152			S	**S**	**18 40 05.5**	**-3.1**
GMRC	**Granite Mounta** baz=135,SNR=72	**68.95**	**322**	P	**P**	**18 31 07.7**	**+1.6**
GMRC	baz=135			S	**S**	**18 40 14.8**	**+4.2**
O20A	**White River Ci** comp=Z,231nm,1.4s	**69.01**	**330**	IAmb	IAmb	18 31 12.3	
O20A	comp=Z,12µm,19.0s			IAMs_20	IAMs_20	19 02 13.5	
O20A	**White River Ci** baz=142,SNR=51	**69.01**	**330**	P	**P**	**18 31 08.2**	**+1.6**
O20A	baz=142			S	**S**	**18 40 11.7**	**+0.5**
MURC	**Murrieta** baz=133,SNR=17	**69.05**	**320**	P	**P**	**18 31 09.9**	**+3.2**
MURC	baz=133			S	**S**	**18 40 15.4**	**+3.8**
NVL	**N'lazarevskaya**	**69.12**	**159**⇓	*i*P	**P**	**18 31 07.6**	**+1.0**
NVL				*e*PPP	PPP	18 35 22.6	
NVL				*i* S	**S**	**18 40 14.1**	**+2.7**
NVL				*e*SS	**SS**	**18 44 39.9**	**+2.9**
NVL	comp=Z,240nm,1.3s			pmax	pmax		
BBRC	**Big Bear Solar** baz=134	**69.34**	**320**	P	**P**	**18 31 12.3**	**+3.6**
HEC	**Hector,Ludlow** baz=134,SNR=51	**69.38**	**321**	P	**P**	**18 31 10.4**	**+1.6**
HEC	baz=134			S	**S**	**18 40 19.6**	**+4.1**
MATQ	**Matagami** baz=173,SNR=44	**69.42**	**355**	P	**P**	**18 31 07.8**	**-0.8**
MATQ	baz=173			S	**S**	**18 40 11.5**	**-3.7**
SCI2	**San Clemente I** baz=132	**69.47**	**318**	P	**P**	**18 31 12.7**	**+3.5**
TUQ	**Turquoise Moun** baz=135,SNR=40	**69.56**	**322**	P	**P**	**18 31 12.4**	**+2.4**
TUQ	baz=135			S	**S**	**18 40 21.3**	**+3.5**
LIC	**Lamto** comp=Z,264nm,1.6s	**69.60**	**75**	*e*P	**P**	**18 31 07.0**	**-3.5**
DRLN	**Deer Lake** comp=Z,9µm,19.0s	**69.66**	**9**	IAMs_20	IAMs_20	19 07 33.5	
CIS	**Catalina Islan** baz=132,SNR=6.5	**69.67**	**319**	P	**P**	**18 31 13.7**	**+3.1**
CIS	baz=132			S	**S**	**18 40 23.3**	**+4.4**
BFSC	**Mount Baldy Ra** baz=133,SNR=45	**69.77**	**320**	P	**P**	**18 31 14.0**	**+2.7**
BFSC	baz=133			S	**S**	**18 40 24.4**	**+4.2**
RWWY	**Rawlins** comp=Z,146nm,1.2s	**69.78**	**332**	IAmb	IAmb	18 31 15.9	
RWWY	comp=Z,7µm,18.0s			IAMs_20	IAMs_20	19 02 41.8	
TIC	**Toumodi** comp=Z,216nm,1.3s	**69.78**	**75**	*e*P	**P**	**18 31 11.3**	**-0.3**
FMP	**Fort Macarthur** baz=132	**69.80**	**319**	P	**P**	**18 31 14.9**	**+3.7**
RRX	**Edison Barstow** baz=134	**69.80**	**321**	P	**P**	**18 31 15.1**	**+3.8**
RRX	baz=134			S	**S**	**18 40 24.8**	**+4.4**
EYMN	**Ely** comp=Z,13µm,21.0s	**69.86**	**345**	IAMs_20	IAMs_20	19 02 38.1	
EYMN	**Ely** baz=159,SNR=30	**69.86**	**345**	P	**P**	**18 31 10.9**	**-0.4**
EYMN	baz=159			S	**S**	**18 40 15.3**	**-5.1**
KIC	**Kosan Boka** comp=Z,1µm,1.8s	**69.92**	**75**	*e*P	**P**	**18 31 10.5**	**-2.0**
DBIC	**Dimbokro** comp=Z,83nm,0.9s,baz=218,slow=6.3,SNR=55	**69.93**	**75**	P	**P**	**18 31 10.8**	**-1.8**
DBIC	comp=Z,6.7nm,1.0s,baz=315,slow=21,SNR=6.5			S	**S**	**18 40 22.5**	**-0.2**
DBIC	comp=Z,26µm,20.6s,baz=226,slow=35			LR	LR	19 00 23.3	
GSC	**Goldstone, Bar** comp=Z,197nm,1.6s	**69.98**	**321**	IAmb	IAmb	18 31 18.3	
GSC	**Goldstone, Bar** baz=134,SNR=50	**69.98**	**321**	P	**P**	**18 31 14.1**	**+1.6**
GSC	baz=134			S	**S**	**18 40 26.3**	**+3.6**
SHOC	**Shoshone, Teco** baz=135,SNR=22	**70.09**	**322**	P	**P**	**18 31 15.1**	**+2.0**
SHOC	baz=135			S	**S**	**18 40 28.0**	**+4.3**
DECC	**Green Verdugo** baz=132,SNR=11	**70.19**	**319**	P	**P**	**18 31 16.7**	**+3.0**
DECC	baz=132			S	**S**	**18 40 29.2**	**+4.2**
K22A	**Casper** comp=Z,230nm,1.4s	**70.25**	**333**	IAmb	IAmb	18 31 19.5	
K22A	**Casper** baz=144,SNR=10.0	**70.25**	**333**	P	**P**	**18 31 15.1**	**+1.0**
K22A	baz=144			S	**S**	**18 40 25.8**	**+0.2**
SNCC	**San Nicolas Is** baz=131	**70.26**	**318**	P	**P**	**18 31 17.2**	**+3.0**
EDW2	**Edwards Air Fo** baz=133,SNR=40	**70.41**	**320**	P	**P**	**18 31 16.1**	**+1.0**
EDW2	baz=133			S	**S**	**18 40 30.5**	**+3.0**
RSSD	**Black Hills** baz=147	**70.43**	**335**	P	**P**	**18 31 16.8**	**+1.6**
RSSD	baz=147			S	**S**	**18 40 27.9**	**+0.1**
ROSA	**Rosais** comp=Z,365nm,1.3s	**70.47**	**34**	*e*P	**P**	**18 31 17.9**	**+2.6**
ROSA				*e*S	**S**	**18 40 32.3**	**+4.2**
ROSA	**Rosais** comp=Z,1µm,19.7s	**70.47**	**34**	*e*LR	LR	18 53 15.2	
QSPA	**South Pole Qui** comp=Z,93nm,0.8s,baz=187,slow=0.7,SNR=67	**70.48**	**180**	P	**P**	**18 31 15.8**	**+0.6**
QSPA	comp=Z,2.1nm,1.0s,baz=102,slow=21,SNR=2.8			S	**S**	**18 40 29.4**	**+1.6**
QSPA	**South Pole Qui**	**70.48**	**180**	P	**P**	**18 31 16.2**	**+1.0**
QSPA	comp=Z,87nm,0.8s			IAmb	IAmb	18 31 21.2	
QSPA	**South Pole Qui** comp=Z,9µm,21.0s	**70.48**	**180**	IAMs_20	IAMs_20	19 03 52.6	
BLG	**Laguna Peak, P** baz=132,SNR=15	**70.54**	**319**	P	**P**	**18 31 18.4**	**+2.6**
BLG	baz=132			S	**S**	**18 40 32.3**	**+3.2**
D32A	**Dogwood Acres,** comp=Z,8µm,19.0s	**70.60**	**341**	IAMs_20	IAMs_20	19 08 19.4	
LRMC	**Laurel Mtn Rad** baz=133,SNR=36	**70.62**	**321**	P	**P**	**18 31 19.3**	**+2.8**
LRMC	baz=133			S	**S**	**18 40 35.8**	**+5.6**
OSI	**Osito Audit: C** baz=132,SNR=9.3	**70.67**	**320**	P	**P**	**18 31 19.7**	**+3.0**
OSI	baz=132			S	**S**	**18 40 33.9**	**+3.3**
TPNV	**Topopah Spring** comp=Z,146nm,1.4s	**70.81**	**323**	IAmb	IAmb	18 31 24.4	
TPNV	**Topopah Spring** baz=135,SNR=86	**70.81**	**323**	P	**P**	**18 31 19.2**	**+1.6**
TPNV	baz=135			S	**S**	**18 40 36.6**	**+4.2**
SCZ2	**Santa Cruz Isl** baz=132,SNR=8.2	**70.82**	**319**	P	**P**	**18 31 21.4**	**+3.8**
SCZ2	baz=132			S	**S**	**18 40 36.2**	**+3.8**
FURC	**Furnace Creek,** baz=134,SNR=47	**70.82**	**322**	P	**P**	**18 31 19.5**	**+2.0**
FURC	baz=134			S	**S**	**18 40 36.3**	**+4.2**
PGRA	**Graciosa** comp=Z,319nm,1.3s	**70.84**	**34**	*e*P	**P**	**18 31 20.9**	**+3.4**
PGRA				*e*S	**S**	**18 40 27.5**	**-4.8**
MPMC	**Manual Prospec** baz=134,SNR=53	**70.91**	**321**	P	**P**	**18 31 19.4**	**+1.1**
MPMC	baz=134			S	**S**	**18 40 38.0**	**+4.3**
PSMN	**Pico do Norte,** comp=Z,141nm,1.4s	**70.99**	**37**	*e*P	**P**	**18 31 17.9**	**-0.6**
PSMN				*e*S	**S**	**18 40 33.9**	**-0.2**
PSMN	**Pico do Norte,** comp=Z,2µm,18.8s	**70.99**	**37**	*e*LR	LR	18 53 10.4	
ARVC	**Arvin** baz=132,SNR=12	**71.08**	**320**	P	**P**	**18 31 22.6**	**+3.5**
ARVC	baz=132			S	**S**	**18 40 40.2**	**+5.0**
SBC	**Santa Barbara** baz=132	**71.16**	**319**	S	**S**	**18 40 40.3**	**+4.1**
PSET	**Sete Cidades** comp=Z,273nm,1.3s	**71.19**	**36**	*e*P	**P**	**18 31 20.5**	**+0.7**
PSET	**Sete Cidades** comp=Z,2µm,18.8s	**71.19**	**36**	*e*LR	LR	18 53 29.3	
ISA	**Isabella, Lake** baz=133,SNR=62	**71.22**	**320**	P	**P**	**18 31 21.7**	**+1.6**
ISA	baz=133			S	**S**	**18 40 41.5**	**+4.4**
CMLA	**Cha da Macela** comp=Z,572nm,1.5s	**71.26**	**36**	*e*P	**P**	**18 31 21.4**	**+1.2**
CMLA	**Cha da Macela** comp=Z,2µm,19.3s	**71.26**	**36**	*e*LR	LR	18 53 41.1	
CMLA	**Cha da Macela** comp=Z,13µm,19.0s	**71.26**	**36**	IAMs_20	IAMs_20	19 00 25.2	
DUG	**Dugway, Tooele** comp=Z,190nm,1.4s	**71.30**	**327**	IAmb	IAmb	18 31 26.7	
DUG	**Dugway, Tooele** baz=138,SNR=124	**71.30**	**327**	P	**P**	**18 31 21.9**	**+1.4**
DUG	baz=138			S	**S**	**18 40 40.5**	**+2.6**
AGMN	**Agassiz Nation** comp=Z,218nm,1.6s	**71.32**	**343**	IAmb	IAmb	18 31 23.5	
AGMN	comp=Z,11µm,18.0s			IAMs_20	IAMs_20	19 07 22.8	
AGMN	**Agassiz Nation** baz=155,SNR=54	**71.32**	**343**	P	**P**	**18 31 20.1**	**-0.1**
AGMN	baz=155			S	**S**	**18 40 32.7**	**-4.7**
R11A	**Troy Canyon, C** baz=136,SNR=126	**71.43**	**324**	P	**P**	**18 31 23.0**	**+1.6**
R11A	baz=136			S	**S**	**18 40 43.2**	**+3.7**
GRAC	**Grapevine Rang** baz=134,SNR=7.4	**71.48**	**322**	P	**P**	**18 31 24.7**	**+3.1**
GRAC	baz=134			S	**S**	**18 40 45.3**	**+5.3**
CWC	**Cottonwood Cre** baz=133	**71.52**	**321**	P	**P**	**18 31 23.2**	**+1.2**
CWC	baz=133			S	**S**	**18 40 44.7**	**+4.1**
PKM	**Mcpherson Peak** baz=132,SNR=43	**71.52**	**319**	P	**P**	**18 31 23.6**	**+1.5**
PKM	baz=132			S	**S**	**18 40 44.4**	**+3.6**
BW06	**Boulder Array** comp=Z,7µm,19.0s	**71.69**	**331**	IAMs_20	IAMs_20	19 03 59.5	
BW06	**Boulder Array** baz=142,SNR=20	**71.69**	**331**	P	**P**	**18 31 24.4**	**+1.5**
BW06	baz=142			S	**S**	**18 40 40.9**	**-1.6**
PDAR	**Pinedale Array** comp=Z,11nm,0.7s,baz=134,slow=6.4,SNR=41	**71.69**	**331**	P	**P**	**18 31 22.4**	**-0.5**
PDAR	comp=Z,0.1nm,0.3s,baz=66,slow=31,SNR=2.2			S	**S**	**18 40 41.5**	**-1.1**
PDAR	comp=Z,7µm,19.0s,baz=135,slow=37			LR	LR	19 04 11.3	
PDAR	**Pinedale Array**	**71.69**	**331**	P	**P**	**18 31 22.9**	**0.0**
VES	**Vestal, Richgr** baz=132,SNR=16	**71.71**	**320**	P	**P**	**18 31 26.2**	**+3.3**
VES	baz=132			S	**S**	**18 40 46.7**	**+4.2**
HWUT	**Hardware Ranch** comp=Z,9µm,18.0s	**71.74**	**329**	IAMs_20	IAMs_20	19 03 57.7	
SMMC	**Simmler** baz=132,SNR=49	**71.91**	**319**	P	**P**	**18 31 26.4**	**+2.3**
SMMC	baz=132			S	**S**	**18 40 48.9**	**+4.0**
TIN	**Tinemaha, Big** baz=133	**72.02**	**322**	P	**P**	**18 31 28.1**	**+3.2**
TIN	baz=133			S	**S**	**18 40 49.7**	**+3.3**
MDND	**Maddock** comp=Z,8µm,21.0s	**72.04**	**340**	IAMs_20	IAMs_20	19 06 53.4	
MDND	**Maddock** baz=152,SNR=15	**72.04**	**340**	P	**P**	**18 31 26.0**	**+1.4**
MDND	baz=152			S	**S**	**18 40 43.2**	**-2.7**
VOG	**Valley Oaks Go** baz=132	**72.21**	**320**	P	**P**	**18 31 28.2**	**+2.3**
AHID	**Auburn Hatcher** comp=Z,7µm,19.0s	**72.41**	**330**	IAMs_20	IAMs_20	19 04 03.3	
TBI	**Tubuai** comp=Z,19µm,28.2s	**72.42**	**251**	*e*S	**S**	**18 40 49.0**	**-2.3**
TBI	**Tubuai** comp=Z,34µm,27.0s,baz=97	**72.42**	**251**	*e*LR	LR	18 53 29.7	
MEH	**Mehetia** comp=Z,14nm,0.2s	**72.56**	**257**	*e*T	T	19 50 24.5	
REDW	**Red Top Meadow** comp=Z,200nm,1.4s	**72.75**	**331**	IAmb	IAmb	18 31 34.9	
MLAC	**Mammoth, Mammo** baz=133,SNR=17	**72.77**	**322**	P	**P**	**18 31 31.9**	**+2.4**
MLAC				S	**S**	**18 40 59.5**	**+4.4**

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      baz=133
SNOW  Snow King Moun   72.78 331   IAMs_20  IAMs_20  19 05 00.3
      comp=Z,7µm,19.0s
OMMB  Old Mammoth Mi   72.85 322   IAmb     IAmb     18 31 36.3
      comp=Z,167nm,1.3s
VAH   Vaihoa           72.87 260  eP        P        18 31 29.3 -1.0
      comp=Z,81nm,1.2s
TPAW  Teton Pass       72.89 331   P        P        18 31 30.1  0.0
TPAW                               IAmb     IAmb     18 31 40.5
      comp=Z,191nm,1.5s
ELK   Elko             72.96 326   IAMs_20  IAMs_20  19 02 36.7
      comp=Z,9µm,20.0s
PMPB  Monarch Peak     73.00 320   IAmb     IAmb     18 31 38.0
      comp=Z,134nm,1.1s
NVAR  Mina Array Bea   73.01 323   P        P        18 31 31.8 +0.9
      comp=Z,17nm,0.9s,baz=155,slow=6.1,SNR=86
NVAR                               S        S        18 40 58.9 +1.1
      comp=Z,0.1nm,0.2s,baz=121,slow=40,SNR=2.4
NVAR  Mina Array Bea   73.01 323   P        P        18 31 31.5 +0.6
ULM   Lac du Bonnet    73.09 343   P        P        18 31 29.9 -0.9
      comp=Z,203nm,1.3s,baz=153,slow=5.7,SNR=35
ULM                                S        S        18 40 52.9 -4.8
      comp=Z,1.8nm,0.7s,baz=138,slow=14,SNR=1.8
ULM                                LR       LR       19 05 36.7
      comp=Z,13µm,21.6s,baz=138,slow=38
ULM   Lac du Bonnet    73.09 343c iP        P        18 31 29.0 -1.8
ULM   Lac du Bonnet    73.09 343   IAmb     IAmb     18 31 34.6
      comp=Z,248nm,1.4s
ULM                                IAMs_20  IAMs_20  19 05 24.7
      comp=Z,15µm,21.0s
PMOZ  Porto Moniz, M   73.13  45  eP        P        18 31 37.1 +5.5
      comp=Z,252nm,1.5s
PMOZ                              eS        SKiKP    18 41 18.2  +14
PMOZ  Porto Moniz, M   73.13  45  eLR       LR       18 55 05.0
      comp=Z,9µm,20.0s
PMOR  Pomariorio Ree   73.19 260  eP        P        18 31 31.4 -0.8
      comp=Z,77nm,1.2s
IMW   Indian Meadow    73.20 331   IAmb     IAmb     18 31 37.7
      comp=Z,189nm,1.4s
FLWY  Flagg Ranch      73.24 331   IAmb     IAmb     18 31 40.7
      comp=Z,158nm,0.9s
RLMT  Red Lodge        73.42 333   P        P        18 31 34.8 +1.6
      baz=142,SNR=36
RLMT                               S        S        18 41 01.3 -0.8
      baz=142
LAO   LASA Array       73.42 335   P        P        18 31 34.7 +1.8
      baz=145,SNR=18
LAO                                S        S        18 41 00.1 -1.7
      baz=145
H17A  Grant Village    73.42 331   P        P        18 31 36.7 +3.4
      baz=141,SNR=24
H17A                               S        S        18 41 04.6 +2.3
      baz=141
TVO   Taravao          73.67 257  eT        T        19 51 48.4
      comp=Z,1.4nm,0.2s
TIAR  Tiarei           73.82 257  eT        T        19 51 59.3
      comp=Z,3.6nm,0.2s
PMPST Porto Santo, M   73.87  45  eP        P        18 31 35.4 -0.4
      comp=Z,462nm,1.3s
PMPST                             eS        S        18 41 18.7  +11
YERR  Yerington        73.92 323   IAmb     IAmb     18 31 42.7
      comp=Z,192nm,1.5s
PAE   Paea             74.00 257  eP        P        18 31 35.9 -1.0
      comp=Z,7.0nm,1.0s
PPT2  Papeete2         74.02 257  eP        P        18 31 36.6 -0.6
      comp=Z,53nm,1.4s
PPT2                              eS        SKiKP    18 41 06.5 +0.9
      comp=Z,9µm,24.2s
PPT2  Papeete2         74.02 257  eLR       LR       18 54 13.1
      comp=Z,25µm,24.8s,baz=111
PPT   Papeete          74.03 257   LR       LR       18 56 04.4
      comp=Z,6µm,21.0s,baz=95,slow=29
DGMT  Dagmar           74.14 338   P        P        18 31 38.2 +1.1
      baz=148,SNR=35
DGMT                               S        S        18 41 10.6 +0.8
      baz=148
SCHQ  Schefferville    74.31   2   P        P        18 31 37.3 -0.6
      comp=Z,33nm,0.8s,baz=181,slow=5.1,SNR=31
SCHQ                               S        S        18 41 08.3 -3.0
      comp=Z,3.7nm,1.0s,baz=352,slow=6.4,SNR=1.9
SCHQ                               LR       LR       19 06 25.3
      comp=Z,9µm,19.4s,baz=192,slow=38
SCHQ  Schefferville    74.31   2   IAMs_20  IAMs_20  19 06 24.0
      comp=Z,9µm,20.0s
PAHR  Pah Rah Range    74.49 323   IAmb     IAmb     18 31 46.0
      comp=Z,154nm,1.2s
DLMT  Dillon           75.09 331   IAmb     IAmb     18 31 47.9
      comp=Z,252nm,1.6s
DLMT                               IAMs_20  IAMs_20  19 09 36.3
      comp=Z,7µm,20.0s
MFID  Camas Ranch      75.19 328   IAMs_20  IAMs_20  19 06 37.0
      comp=Z,8µm,18.0s
ORV   Oroville         75.61 322   P        P        18 31 47.2 +1.5
ORV                                pmax     pmax
      comp=Z,294nm,1.4s
ORV   Oroville         75.61 322   P        P        18 31 47.2 +1.5
ORV                                IAmb     IAmb     18 31 52.1
      comp=Z,294nm,1.4s
EGMT  Eagleton         75.92 334   IAMs_20  IAMs_20  19 07 11.5
      comp=Z,8µm,20.0s
EGMT  Eagleton         75.92 334   P        P        18 31 48.1 +0.7
      baz=142,SNR=40
EGMT                               S        S        18 41 28.8 -0.9
      baz=142
J08A  Circle Bar Ran   76.51 326   IAMs_20  IAMs_20  19 06 17.7
      comp=Z,8µm,20.0s
O02D  Mt. Diablo Mer   76.76 322   P        P        18 31 54.1 +1.8
      baz=130,SNR=13
O02D                               S        S        18 41 40.2 +0.9
      baz=130
MSO   Missoula         76.81 331   IAmb     IAmb     18 31 58.7
      comp=Z,194nm,1.4s
MSO   Missoula         76.81 331   P        P        18 31 54.3 +1.8
      baz=139,SNR=76
N02D  Trinity Center   77.23 322   P        P        18 31 55.4 +0.4
      baz=131,SNR=18
M04C  Macdoel          77.27 323   P        P        18 31 56.8 +1.6
      baz=131,SNR=62
SBA   Scott Base       77.27 191   IAMs_20  IAMs_20  19 04 00.6
      comp=Z,6µm,18.0s
I07A  Izee             77.55 326   IAMs_20  IAMs_20  19 09 00.2
      comp=Z,8µm,20.0s
M02C  Callahan         77.59 323   P        P        18 31 58.2 +1.2
      baz=131,SNR=15
K04D  Chiloquin, OR    77.78 324   P        P        18 32 00.3 +2.2
      baz=132,SNR=15
L04D  Klamath Falls    77.81 323   P        P        18 32 00.2 +1.9
      baz=131,SNR=12
J05D  Fort Rock, OR    77.93 325   P        P        18 32 01.4 +2.4
      baz=132,SNR=45
TTIG  Tnine Tigouga,   78.00  51   P        P        18 32 03.0 +3.3
      SNR=17
TTIG                               P        P        18 32 03.0 +3.3
      SNR=17
G08A  Pilot Rock       78.11 327   IAMs_20  IAMs_20  19 05 56.0
      comp=Z,10µm,20.0s
PINE  Pine Mountain    78.11 325   IAmb     IAmb     18 32 06.5
      comp=Z,192nm,1.4s
VNDA  Vanda            78.30 190   P        P        18 32 01.4 +1.0
      comp=Z,9.7nm,0.9s,baz=114,slow=2.9,SNR=18
VNDA                               S        S        18 41 59.8 +4.9
      comp=Z,0.7nm,1.1s,baz=102,slow=18,SNR=3.2
J04D  Umpqua Nationa   78.38 324   P        P        18 32 03.8 +2.3
      baz=132,SNR=19
TOA0  Torodi Ar. Sit   78.43  71   IAmb     IAmb     18 32 04.0
      comp=Z,201nm,0.9s
TORD  Torodi Ar. Bea   78.43  71   P        P        18 32 00.3 -1.8
      comp=Z,165nm,0.8s,baz=253,slow=5.0,SNR=184
TORD                               S        S        18 42 01.0 +2.9
      comp=Z,9.7nm,1.1s,baz=240,slow=8.6,SNR=11
TORD                               ScS      ScS      18 42 20.4 -2.5
      comp=Z,4.3nm,0.9s,baz=258,slow=13,SNR=4.4
TORD                               LR       LR       19 04 58.3
      comp=Z,32µm,21.2s,baz=275,slow=34
TORD  Torodi Ar. Bea   78.43  71   P        P        18 32 00.2 -1.9
WALA  Waterton Lakes   78.47 333   IAmb     IAmb     18 32 07.2
      comp=Z,132nm,1.1s
WALA                               IAMs_20  IAMs_20  19 08 15.0
      comp=Z,9µm,22.0s
L02E  Cave Junction    78.51 323   P        P        18 32 04.0 +2.0
      baz=130,SNR=13
I05D  Terrebonne, OR   78.69 326   P        P        18 32 05.7 +2.7
      baz=132,SNR=32
OUK   Oukaimeden       78.77  51   P        P        18 32 08.0 +3.9
      SNR=16
OUK                                P        P        18 32 08.0 +3.9
      SNR=16
FFC   Flin Flon        78.78 342   IAMs_20  IAMs_20  19 09 11.2
      comp=Z,12µm,22.0s
SYO   Syowa Base       78.79 160⇑iP        P        18 32 02.0 -1.1
SYO   Syowa Base       78.79 160⇓ipP       pP       18 32 08.8 +1.7
K02D  Willamette Mer   78.89 323   P        P        18 32 06.5 +2.3
      baz=130,SNR=20
I04A  Tendick Farm,    78.91 325   P        P        18 32 05.3 +1.1
      baz=131,SNR=19
G06A  Carlson Farm,    78.93 327   IAMs_20  IAMs_20  19 08 14.7
      comp=Z,8µm,20.0s
E08A  Dider Farm, El   78.99 328   IAMs_20  IAMs_20  19 07 54.6
      comp=Z,7µm,19.0s
F07A  Phinny Hill Vi   79.02 327   IAMs_20  IAMs_20  19 06 33.1
      comp=Z,7µm,20.0s
HAWA  Hanford          79.16 328   IAmb     IAmb     18 32 11.6
      comp=Z,202nm,1.4s
HAWA                               IAMs_20  IAMs_20  19 06 59.9
      comp=Z,8µm,19.0s
G05D  Wamic, OR        79.29 326   P        P        18 32 09.2 +3.0
      baz=132,SNR=31
NEW   Newport          79.32 331   P        P        18 32 07.3 +0.9
      baz=136,SNR=24
J01E  Myrtle Point     79.34 323   P        P        18 32 09.7 +3.2
      baz=130
I03D  Drain, OR        79.36 324   P        P        18 32 08.2 +1.6
      baz=131,SNR=12
H04A  Detroit Lake     79.37 325   IAMs_20  IAMs_20  19 10 32.5
      comp=Z,6µm,19.0s
OUZM  OUZ              79.43  52   P        P        18 32 10.0 +2.5
      SNR=9.8
OUZM                               P        P        18 32 10.0 +2.5
      SNR=9.8
E07A  Sunnyside        79.44 328   IAMs_20  IAMs_20  19 07 07.2
      comp=Z,9µm,20.0s
C09A  Chrisman Ranch   79.53 330   IAmb     IAmb     18 32 13.4
      comp=Z,298nm,1.6s
H04D  Lebanon          79.56 325   P        P        18 32 09.9 +2.1
      baz=131
F05D  White Salmon     79.79 327   P        P        18 32 10.5 +1.6
      baz=132,SNR=7.7
I02D  Swisshome        79.90 324   P        P        18 32 12.1 +2.6
      baz=130
COR   Corvallis        79.91 325   P        P        18 32 13.1 +3.5
COR                                pmax     pmax
      comp=Z,132nm,1.4s
AVE   Averroes         80.18  49   P        P        18 32 14.9 +3.6
      SNR=7.7
AVE   Averroes         80.18  49⇑iP        P        18 32 10.9 -0.4
AVE                                iS       S        18 42 16.4 +0.3
TZRR  Tazzarine        80.25  52   P        P        18 32 14.0 +2.1
      SNR=25
TZRR                               P        P        18 32 14.0 +2.1
      SNR=25
G03D  McMinnville, O   80.30 325   P        P        18 32 14.5 +2.9
      baz=131,SNR=9.9
LTY   Liberty          80.32 328   IAMs_20  IAMs_20  19 08 45.6
      comp=Z,9µm,19.0s
F04A  Amboy            80.32 326   IAMs_20  IAMs_20  19 06 54.6
      comp=Z,7µm,21.0s
LON   Longmire         80.55 327   IAMs_20  IAMs_20  19 08 57.8
      comp=Z,8µm,19.0s
F04D  Rainier, OR      80.73 326   P        P        18 32 17.4 +3.4
      baz=131
ZHG   ZHG              80.81  50   P        P        18 32 16.1 +1.3
      SNR=11
ZHG                                P        P        18 32 16.1 +1.3
      SNR=11
E04D  Cinebar          80.81 327   P        P        18 32 16.5 +2.1
      baz=132,SNR=24
C06D  Leavenworth      80.89 328   P        P        18 32 17.5 +2.7
      baz=133
SUR   Sutherland       81.00 121   P        P        18 32 18.4 +2.2
SUR                                P        P        18 32 18.4 +2.2
SUR   Sutherland       81.00 121   P        P        18 32 16.1 -0.1
SUR                                IAmb     IAmb     18 32 20.6
      comp=Z,267nm,1.6s
SUR   Sutherland       81.00 121   IAMs_20  IAMs_20  19 05 01.7
      comp=Z,12µm,20.0s
GOLM  Goulmima         81.17  52   P        P        18 32 20.0 +3.2
      SNR=11
GOLM                               P        P        18 32 20.0 +3.2
      SNR=11
PFVI  Vila Bisbo       81.22  46  eP        P        18 32 18.0 +1.2
      comp=Z,220nm,1.9s
PFVI  Vila Bisbo       81.22  46  ePP       PP       18 35 37.8  +15
PFVI                              eSKS      SKSac    18 42 38.4 +2.7
E03A  Lebam            81.33 326   IAMs_20  IAMs_20  19 07 47.1
      comp=Z,7µm,20.0s
D04E  Lakebay          81.33 327   P        P        18 32 20.2 +3.1
      baz=132
PTEO  Sao Teotonio     81.52  45  eP        P        18 32 20.5 +2.2
      comp=Z,295nm,1.4s
ARF   Arif             81.58  52   P        P        18 32 22.0 +3.0
      SNR=9.7
ARF                                P        P        18 32 22.0 +3.0
      SNR=9.7
B06A  Marblemount      81.58 329   IAMs_20  IAMs_20  19 08 19.0
      comp=Z,7µm,20.0s
B05A  Bryant           81.71 328   P        P        18 32 19.8 +0.7
      baz=132,SNR=28
D03D  Eldon            81.73 327   P        P        18 32 20.7 +1.5
      baz=131,SNR=27
CZD   Col de Zad       81.76  51   P        P        18 32 23.0 +2.9
      SNR=17
LIS   Lisbon           81.87  44  eP        P        18 32 19.8 -0.4
LIS                               eS        S        18 42 31.5 -1.9
LIS                                AMS      AMS      19 06 51.5
      comp=Z,17µm,15.9s
LIS   Lisbon           81.87  44  eP        P        18 32 19.8 -0.4
LIS                               eS        S        18 42 31.5 -1.9
PBDV  Barranco-do-Ve   81.89  46  eP        P        18 32 21.0 +0.6
      comp=Z,150nm,1.4s
PBDV  Barranco-do-Ve   81.89  46  ePP       PP       18 35 29.7 +1.6
PBDV                              eSKS      SKSac    18 42 44.9 +4.6
PMAFR Mafra            81.91  44  eP        P        18 32 23.1 +2.7
      comp=Z,162nm,1.6s
PMAFR Mafra            81.91  44  eSKS      SKSac    18 42 44.9 +4.5
IFR   Ifrane           81.94  50⇑iP        P        18 32 19.6 -1.3
IFR                                iS       S        18 42 35.9 +1.2
PNCL  Nicolau / Gran   81.95  45  eP        P        18 32 22.3 +1.7
      comp=Z,96nm,1.4s
PNCL  Nicolau / Gran   81.95  45  eSKS      SKSac    18 42 43.4 +2.8
MDT   Midelt           81.97  51   P        P        18 32 22.3 +1.3
      comp=Z,59nm,1.1s,baz=238,slow=4.2,SNR=37
MDT   Midelt           81.97  51   P        P        18 32 24.1 +3.1
      SNR=11
MESJ  Messejana        82.01  45  eP        P        18 32 20.5 -0.5
MESJ                              eSKSac    S        18 42 37.0 +2.1
MESJ                               AMS      AMS      19 09 55.6
      comp=Z,11µm,16.4s
MESJ  Messejana        82.01  45  eP        P        18 32 20.4 -0.5
MESJ                              e                  18 42 36.9
MESJ  Messejana        82.01  45  eP        P        18 32 21.7 +0.8
      comp=Z,118nm,1.5s
PCVE  Castro Verde     82.02  45  eP        P        18 32 22.6 +1.6
      comp=Z,91nm,1.3s
PCVE  Castro Verde     82.02  45  eSKS      SKSac    18 42 44.8 +3.7
NLWA  Neilton Lookou   82.03 327   IAMs_20  IAMs_20  19 10 05.9
      comp=Z,7µm,20.0s
SICH  Sidi Chahed      82.09  50   P        P        18 32 25.0 +3.5
      SNR=9.9
SICH                               P        P        18 32 25.0 +3.5
      SNR=9.9
PVAQ  Vaqueiros        82.12  46   P        P        18 32 23.5 +2.0
      SNR=5.9
PVAQ                               P        P        18 32 23.5 +2.0
      SNR=5.9
PVAQ  Vaqueiros        82.12  46  eP        P        18 32 22.9 +1.4
      comp=Z,97nm,1.7s
PVAQ  Vaqueiros        82.12  46  eSKS      SKSac    18 42 44.8 +3.0
PVAQ  Vaqueiros        82.12  46  eLQ       LQ       18 56 52.8
PVAQ                              eLR       LR       18 58 18.4
      comp=Z,11µm,18.0s
RSA   Sarsar           82.12  49   P        P        18 32 24.1 +2.4
      SNR=13
RSA                                P        P        18 32 24.1 +2.4
      SNR=13
RAR   Rarotonga        82.18 250   LR       LR       19 00 31.6
      comp=Z,14µm,19.1s,baz=108,slow=30
TSUM  Tsumeb           82.24 108   P        P        18 32 22.9  0.0
TSUM                               IAmb     IAmb     18 32 27.1
      comp=Z,146nm,1.1s
A04D  Lummi Island     82.32 328   P        P        18 32 23.8 +1.5
      baz=132,SNR=14
PBEJ  Beja             82.35  45  eP        P        18 32 24.0 +1.3
      comp=Z,73nm,1.6s
CHEFC Chefchaouen      82.58  49   P        P        18 32 27.0 +2.9
      SNR=8.9
CHEFC                              P        P        18 32 27.0 +2.9
      SNR=8.9
IVI   Ivigtut          82.66  11   IAmb     IAmb     18 32 37.2
      comp=Z,182nm,1.0s
SFS   San Fernando     82.66  47⇑iP        P        18 32 24.8 +0.4
SFS                                iS       S        18 42 55.3  +14
SFS   San Fernando     82.66  47   IAMs_20  IAMs_20  19 12 46.1
      comp=Z,5µm,18.0s
PMTG  Montargil        82.67  44  eP        P        18 32 25.8 +1.5
      comp=Z,171nm,1.6s
PMTG  Montargil        82.67  44  ePP       PP       18 35 46.8  +12
PMTG                              eSKS      S        18 42 54.1  +13
PTOM  Tomar            82.84  44  eP        P        18 32 25.8 +0.6
      comp=Z,214nm,1.5s
CEU   Ceuta            82.95  48⇑iP        P        18 32 25.0 -0.9
CEU                                iS       S        18 42 48.8 +4.2
PESTR Estremoz         82.98  45   P        P        18 32 28.4 +2.3
      SNR=7.0
PESTR Estremoz         82.98  45  eSKS      SKSac    18 42 50.7 +3.2
PCAS  Casmilo, Conde   83.02  43  eP        P        18 32 27.7 +1.5
      comp=Z,95nm,1.7s
PCAS  Casmilo, Conde   83.02  43  eSKS      SKSac    18 42 55.9 +8.2
NRS   Narsarsuaq       83.13  12  iP        P        18 32 27.1 +0.9
NRS   Narsarsuaq       83.13  12  iP        P        18 32 27.1 +0.9
COI   Coimbra          83.16  43  eP        P        18 32 29.5 +2.6
      comp=Z,221nm,1.4s
COI   Coimbra          83.16  43  eS        S        18 42 55.3 +8.8
PVLZ  Peæn de          83.35  49⇑iP        P        18 32 26.7 -1.3
PVLZ                               iS       S        18 42 48.1 -0.5
PMRV  Marv??o          83.41  44  eP        P        18 32 29.2 +1.0
      comp=Z,87nm,1.4s
PMRV  Marv??o          83.41  44  ePP       PP       18 35 44.1 +3.6
PMRV                              eS        S        18 42 53.7 +4.6
PMRV  Marv??o          83.41  44  eLQ       LQ       18 57 52.4
PMRV                              eLR       LR       19 00 13.6
      comp=Z,14µm,18.0s
LIJA  Lijar            83.44  47  eP        P        18 32 30.0 +1.5
PCBR  Castelo Branco   83.57  44  eP        P        18 32 30.4 +1.4
      comp=Z,124nm,1.4s
PVIS  Viseu            83.77  43  eP        P        18 32 31.7 +1.6
      comp=Z,192nm,1.5s
MTE   Manteigas        83.82  43   IAmb     IAmb     18 32 34.8
      comp=Z,180nm,1.2s
MTE   Manteigas        83.82  43  eP        P        18 32 30.6 +0.2
      comp=Z,242nm,1.4s
MTE   Manteigas        83.82  43  eS        S        18 42 56.5 +3.1
MTE   Manteigas        83.82  43  eLQ       LQ       18 54 49.1
MTE                               eLR       LR       19 00 16.0
      comp=Z,27µm,18.0s
HORN  Hornachuelos     84.02  46   P        P        18 32 32.8 +1.5
      SNR=24
EMAL  Malaga-Limoner   84.04  48⇑iP        P        18 32 29.4 -2.1
PVRL  Vila Real        84.18  42  eP        P        18 32 31.8 -0.4
      comp=Z,226nm,1.5s
PGAV  Gavieira, Arco   84.20  42  eP        P        18 32 33.6 +1.3
      comp=Z,192nm,1.7s
PGAV  Gavieira, Arco   84.20  42  eS        S        18 43 06.8  +10
PGAV  Gavieira, Arco   84.20  42  eLQ       LQ       18 54 48.0
PGAV                              eLR       LR       19 00 34.9
      comp=Z,28µm,18.0s
PCAB  Cabril           84.22  42  eP        P        18 32 33.2 +0.9
      comp=Z,241nm,1.5s
MVO   Moncorvo         84.56  43  eP        P        18 32 34.5 +0.4
      comp=Z,308nm,1.6s
MVO   Moncorvo         84.56  43  eS        S        18 43 13.0  +12
MVO   Moncorvo         84.56  43  eLQ       LQ       18 54 55.9
MVO                               eLR       LR       19 00 25.7
      comp=Z,24µm,18.0s
PBRG  Braganca         85.08  42  eP        P        18 32 37.2 +0.5
      comp=Z,301nm,1.5s
PBRG  Braganca         85.08  42  eS        S        18 43 12.4 +6.5
PAB   San Pablo        85.48  45   P        P        18 32 38.6 -0.2
PAB                                pmax     pmax
      comp=Z,159nm,1.2s
PAB                                MLR      MLR
      comp=Z,16µm,18.0s
PAB   San Pablo        85.48  45   P        P        18 32 38.6 -0.2
PAB                                IAmb     IAmb     18 32 43.3
      comp=Z,158nm,1.2s
TAM   Tamanrasset      85.60  64   P        P        18 32 40.2 +0.3
ESDC  Sonseca Array    85.81  45   P        P        18 32 40.5 +0.1
      comp=Z,30nm,1.0s,baz=248,slow=2.8,SNR=36
ESDC                               S        S        18 43 06.9 -6.3
      comp=Z,1.1nm,0.8s,baz=164,slow=42,SNR=2.7
BOSA  Boshof           85.84 119  iP        P        18 32 41.2 +0.1
BOSA  Boshof           85.84 119   P        P        18 32 42.4 +1.4
      comp=Z,68nm,1.2s,baz=250,slow=4.8,SNR=29
BOSA                               S        S        18 43 10.4 -3.9
      comp=Z,2.0nm,0.8s,baz=69,slow=6.7,SNR=3.0
BOSA                               LR       LR       19 08 00.4
      comp=Z,20µm,19.6s,baz=249,slow=34
BOSA  Boshof           85.84 119  iP        P        18 32 41.2 +0.1
BOSA  Boshof           85.84 119   P        P        18 32 40.3 -0.7
BOSA                               pmax     pmax
      comp=Z,100nm,1.3s
BOSA  Boshof           85.84 119   P        P        18 32 40.3 -0.7
BOSA                               IAmb     IAmb     18 32 44.7
      comp=Z,100nm,1.2s
SESP  Santiago Espad   86.02  47   P        P        18 32 42.3 +0.7
      SNR=6.6
MAW   Mawson           86.54 164   P        P        18 32 45.0 +1.5
      comp=Z,45nm,1.0s,baz=207,slow=7.4,SNR=24
MAW                                S        S        18 43 13.8 -5.6
      comp=Z,3.0nm,1.0s,baz=100,slow=3.7,SNR=2.4
MAW                                LR       LR       19 11 47.9
      comp=Z,10µm,18.9s,baz=238,slow=36
MAW   Mawson           86.54 164   P        P        18 32 43.6 +0.1
MAW                                pmax     pmax
      comp=Z,16nm,1.2s
MAW                                MLR      MLR
      comp=Z,2µm,22.0s
MAW   Mawson           86.54 164   P        P        18 32 43.6 +0.1
UCM   Universidad Co   86.60  45⇑iP        P        18 32 40.4 -3.9
UCM                                iS       S        18 43 12.0 -8.8
CART  Cartagena        86.84  48⇑iP        P        18 32 44.1 -1.3
CART                               iS       S        18 43 18.5 -4.7
CART  Cartagena        86.84  48   IAMs_20  IAMs_20  19 10 59.7
      comp=Z,7µm,21.0s
BBB   Bella Bella      87.19 329   IAMs_20  IAMs_20  19 16 20.4
      comp=Z,5µm,20.0s
LBTB  Lobatse          87.36 115  iP        P        18 32 45.6 -3.0
LBTB  Lobatse          87.36 115  iP        P        18 32 45.6 -3.0
LBTB  Lobatse          87.36 115   P        P        18 32 48.4 -0.2
LBTB                               pmax     pmax
      comp=Z,52nm,1.1s
LBTB  Lobatse          87.36 115   P        P        18 32 48.4 -0.2
ETRT  Tiaret           87.50  51   P        P        18 32 55.1 +6.2
ETRT  Tiaret           87.50  51   P        P        18 32 55.1 +6.2
EANR  'Ain N'Sour      87.60  51   P        P        18 32 52.3 +3.0
EANR  'Ain N'Sour      87.60  51   P        P        18 32 52.3 +3.0
SFJD  Kangerlussuaq    87.74   8  iP        P        18 32 49.0 -0.1
SFJD  Kangerlussuaq    87.74   8  iP        P        18 32 49.0 -0.1
SFJD  Kangerlussuaq    87.74   8   P        P        18 32 47.1 -2.0
SFJD                               IAmb     IAmb     18 33 16.4
      comp=Z,96nm,1.4s
SFJD  Kangerlussuaq    87.74   8   IAMs_20  IAMs_20  19 13 06.3
      comp=Z,8µm,20.0s
ECHA  Ech Chlef        87.88  50   P        P        18 32 52.5 +2.0
ECHA  Ech Chlef        87.88  50   P        P        18 32 52.5 +2.0
EBNR  Beni Rached      88.06  50   P        P        18 32 53.8 +2.3
EBNR  Beni Rached      88.06  50   P        P        18 32 53.8 +2.3
ANGG  Ammassalik, Gr   88.70  13   P        P        18 32 53.6  0.0
YKA   Yellowknife Ar   88.92 341   P        P        18 32 54.0 -0.8
      comp=Z,67nm,0.9s,baz=138,slow=5.1,SNR=190
YKA                                PKKPbc   PKKPbc   18 50 35.9 -0.7
      comp=Z,0.5nm,0.6s,baz=319,slow=3.4,SNR=8.1
YKA                                PKPPKP            18 58 45.6
      comp=Z,1.3nm,1.2s,baz=325,slow=1.6,SNR=4.5
YKA                                LR       LR       19 16 18.4
      comp=Z,18µm,20.0s,baz=0.0,slow=38
ILULI Ilulissat        89.79   7  iP        P        18 33 00.0 +1.3
ILULI Ilulissat        89.79   7  iP        P        18 33 00.0 +1.3
DIB   Dawson Inlet,    89.94 328   IAMs_20  IAMs_20  19 14 40.1
      comp=Z,6µm,21.0s
DSB   Dublin           91.33  33   IAMs_20  IAMs_20  19 16 44.0
      comp=Z,8µm,20.0s
MATP  Matopo           91.50 112  iP        P        18 33 04.7 -3.4
MATP  Matopo           91.50 112  iP        P        18 33 04.7 -3.4
MAHO  Mahon            91.55  48⇑iP        P        18 33 06.7 -0.9
MAHO                               iS       S        18 43 48.0  -19
WRAK  Wrangell Islan   91.68 331   IAMs_20  IAMs_20  19 16 28.3
      comp=Z,6µm,22.0s
POHA  Pohakuloa        91.80 290   IAMs_20  IAMs_20  19 08 59.4
      comp=Z,5µm,18.0s
HPAH  Hawaii Prepara   92.04 290   IAMs_20  IAMs_20  19 09 05.2
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	comp=Z,5µm,19.0s						
KHLU	**Kahalu`u**	**92.06**	**290**	IAMs_20	IAMs_20	19 09 05.4	
	comp=Z,5µm,19.0s						
SIT	**Sitka**	**93.41**	**330**	IAMs_20	IAMs_20	19 17 20.9	
	comp=Z,7µm,21.0s						
JIS	**Juneau Island**	**93.62**	**332**	IAMs_20	IAMs_20	19 18 10.7	
	comp=Z,10µm,21.0s						
KEST	**Kesra**	**93.64**	**53**	LR	LR	19 15 42.3	
	comp=Z,16µm,20.8s,baz=212,slow=36						
SSB	**Saint Sauveur**	**93.94**	**43**	P	**P**	**18 33 20.5**	**+1.9**
SSB				pmax	pmax		
	comp=Z,39nm,1.5s						
ESK	**Eskdalemuir**	**93.99**	**32**	P	**P**	**18 33 16.9**	**-1.6**
ESK				pmax	pmax		
	comp=Z,164nm,1.7s						
ESK				MLR	MLR		
	comp=Z,8µm,20.0s						
ESK	**Eskdalemuir**	**93.99**	**32**	P	**P**	**18 33 16.9**	**-1.6**
ESK				IAmb	IAmb	18 33 22.9	
	comp=Z,164nm,1.7s						
ESK				IAMs_20	IAMs_20	19 12 57.2	
	comp=Z,8µm,20.0s						
BESE	**Bessie Mountai**	**94.00**	**332**	IAMs_20	IAMs_20	19 18 19.5	
	comp=Z,10µm,20.0s						
EKA	**Eskdalemuir Ar**	**94.02**	**32**	P	**P**	**18 33 18.6**	**0.0**
	comp=Z,42nm,1.2s,baz=224,slow=3.5,SNR=17						
CASY	**Casey**	**94.28**	**181**	IAMs_20	IAMs_20	19 17 15.4	
	comp=Z,9µm,21.0s						
KULLO	**Kullorsuaq**	**94.47**	**4**	*i* P	**P**	**18 33 21.3**	**+1.0**
KULLO	**Kullorsuaq**	**94.47**	**4**	*e*P	**P**	**18 33 21.3**	**+1.0**
KULLO				MLR	MLR		
	comp=Z,8µm,19.0s						
SUMG	**Summit**	**94.57**	**9**	*i* P	**P**	**18 33 21.0**	**-0.3**
	comp=Z,381nm,1.6s						
SUMG	**Summit**	**94.57**	**9**	*i* P	**P**	**18 33 21.0**	**-0.3**
SUMG				pmax	pmax		
	comp=Z,380nm,1.6s						
SUMG				MLR	MLR		
	comp=Z,32µm,19.0s						
SUMG	**Summit**	**94.57**	**9**	IAmb	IAmb	18 33 36.2	
	comp=Z,90nm,1.3s						
SKAG	**Skagway**	**94.67**	**332**	IAMs_20	IAMs_20	19 22 15.3	
	comp=Z,5µm,20.0s						
WHY	**Whitehorse**	**95.11**	**334**	IAMs_20	IAMs_20	19 17 11.9	
	comp=Z,5µm,21.0s						
NNZ	**Nelson**	**95.15**	**223**	IAMs_20	IAMs_20	19 09 17.4	
	comp=Z,5µm,20.0s						
BNI	**Bardonecchia**	**95.24**	**44**	P	**P**	**18 33 28.8**	**+4.1**
RES	**Resolute Bay**	**95.43**	**354**	IAMs_20	IAMs_20	19 22 49.4	
	comp=Z,9µm,19.0s						
RSL	**Roselend**	**95.45**	**43**	P	**P**	**18 33 27.1**	**+1.4**
DHAK	**Deception Hill**	**95.76**	**331**	IAMs_20	IAMs_20	19 19 14.2	
	comp=Z,8µm,21.0s						
QRZ	**Quartz Range**	**95.91**	**223**	IAMs_20	IAMs_20	19 07 27.3	
	comp=Z,7µm,22.0s						
SNF	**Seneffe**	**95.91**	**38**	P	**P**	**18 33 28.5**	**+1.1**
DOU	**Dourbes**	**95.92**	**39**	P	**P**	**18 33 27.1**	**-0.3**
	comp=Z,25nm,1.5s						
DOU	**Dourbes**	**95.92**	**39**	P	**P**	**18 33 30.4**	**+2.9**
TULEG	**Thule**	**96.04**	**0**	IAMs_20	IAMs_20	19 15 10.3	
	comp=Z,7µm,21.0s						
BMRD	**Maredsous**	**96.11**	**39**	P	**P**	**18 33 28.8**	**+0.5**
SCO	**Scoresbysund**	**96.16**	**15**	IAMs_20	IAMs_20	19 13 50.3	
	comp=Z,9µm,22.0s						
HYT	**Haines Junctio**	**96.30**	**333**	IAMs_20	IAMs_20	19 20 01.5	
	comp=Z,7µm,21.0s						
BGES	**Gesves**	**96.33**	**39**	P	**P**	**18 33 29.6**	**+0.3**
BCLA	**Clavier**	**96.47**	**39**	P	**P**	**18 33 30.0**	**+0.1**
C36M	**Paulatuk**	**96.52**	**343**	IAMs_20	IAMs_20	19 18 47.0	
	comp=Z,8µm,21.0s						
C36M	**Paulatuk**	**96.52**	**343**	S	**S**	**18 44 50.4**	**+0.8**
	baz=131						
YKU2	**Yakutat**	**96.62**	**331**	IAMs_20	IAMs_20	19 19 48.9	
	comp=Z,5µm,21.0s						
WLF	**Walferdange**	**96.68**	**40**	P	**P**	**18 33 31.0**	**0.0**
	comp=Z,62nm,1.4s						
WLF	**Walferdange**	**96.68**	**40**	*e*Pdiff	**P**	**18 33 31.5**	**+0.5**
WLF				*e*SKSac	**SKSac**	**18 44 09.7**	**+2.4**
WLF				*e*SP	**SP**	**18 46 18.1**	**+5.9**
WLF	**Walferdange**	**96.68**	**40**	P	**P**	**18 33 32.9**	**+2.0**
BSTI	**Sart Tilman**	**96.69**	**39**	P	**P**	**18 33 32.4**	**+1.5**
ECH	**Echery**	**96.75**	**41**	P	**P**	**18 33 32.1**	**+0.8**
ECH				pmax	pmax		
	comp=Z,34nm,1.2s						
ECH	**Echery**	**96.75**	**41**	IAmb	IAmb	18 33 33.4	
	comp=Z,69nm,1.4s						
BEBN	**Eben Emael**	**96.83**	**38**	P	**P**	**18 33 32.3**	**+0.7**
MSSA	**Maissana**	**96.86**	**45**	IAMs_20	IAMs_20	19 15 01.6	
	comp=Z,8µm,20.0s						
BHOU	**Houvegnez**	**96.86**	**39**	P	**P**	**18 33 32.2**	**+0.5**
MEM	**Membach**	**96.96**	**39**	P	**P**	**18 33 33.1**	**+0.9**
MEM	**Membach**	**96.96**	**39**	P	**P**	**18 33 35.1**	**+3.0**
MEM				pmax	pmax		
	comp=Z,24nm,1.2s						
PCA	**Pinnacle**	**97.15**	**332**	IAMs_20	IAMs_20	19 23 55.9	
	comp=Z,5µm,20.0s						
VLC	**Villacollemand**	**97.39**	**46**	IAMs_20	IAMs_20	19 18 08.7	
	comp=Z,9µm,20.0s						
SLE	**Schleitheim**	**97.42**	**42**	P	Pdif	18 33 35.7	+1.3
SLE				pmax	pmax		
	comp=Z,29nm,1.3s						
BFO	**Black Forest**	**97.52**	**41**	*e*Pdiff	**P**	**18 33 34.8**	**-0.1**
BFO				*e*PP	**PP**	**18 37 30.5**	**-2.0**
BFO				*e*SKSac	**SKSac**	**18 44 14.1**	**+2.3**
BFO				*e*SP	**SP**	**18 46 27.4**	**+6.0**
BFO	**Black Forest**	**97.52**	**41**	P	Pdif	18 33 36.7	+1.8
BFO				pmax	pmax		
	comp=Z,14nm,2.3s						
AHRW	**Bad Neuenahr-A**	**97.56**	**39**	*e*Pdiff	Pdif	18 33 35.5	+0.6
AHRW				*e*SKSac	**SKSac**	**18 44 16.3**	**+4.5**
AHRW				*e*SP	**SP**	**18 46 29.3**	**+7.6**
OSSC	**Osservatorio P**	**97.75**	**47**	IAMs_20	IAMs_20	19 23 09.5	
	comp=Z,7µm,18.0s						
ZCCA	**Zocca**	**97.85**	**46**	P	**P**	**18 33 35.7**	**-0.7**
DAVOX	**Davos/Dischmat**	**97.95**	**43**	P	**P**	**18 33 36.9**	**-0.1**
	comp=Z,8.8nm,1.0s,baz=181,slow=1.5,SNR=7.7						
BUG	**Bochum--Univer**	**98.01**	**38**	*e*Pdiff	Pdif	18 33 37.2	+0.3
BUG				*e*SKSac	**SKSac**	**18 44 17.0**	**+3.0**
BUG				*e*SP	**SP**	**18 46 31.1**	**+4.6**
BUG	**Bochum--Univer**	**98.01**	**38**	P	Pdif	18 33 39.3	+2.4
BUG				pmax	pmax		
	comp=Z,57nm,1.4s						
OUZ	**Omahuta**	**98.12**	**228**	IAMs_20	IAMs_20	19 09 08.7	
	comp=Z,7µm,20.0s						
DAVA	**Damuels**	**98.13**	**43**	*e*PcP	Pdif	18 33 39.0	+1.2
	comp=Z,25nm,1.5s						
STU	**Stuttgart**	**98.21**	**41**	*e*Pdiff	**P**	**18 33 37.8**	**0.0**
STU				*e*PP	**PP**	**18 37 36.7**	**-1.1**
STU				*e*SKSac	**SKSac**	**18 44 18.2**	**+3.0**
STU				*e*SP	**SP**	**18 46 34.3**	**+5.4**
STU	**Stuttgart**	**98.21**	**41**	P	Pdif	18 33 39.5	+1.6
STU				pmax	pmax		
	comp=Z,44nm,0.9s						
TNS	**Taunus Mts**	**98.27**	**40**	*e*Pdiff	Pdif	18 33 38.5	+0.3
TNS				*e*SKSac	**SKSac**	**18 44 20.1**	**+4.5**
TNS				*e*SP	**SP**	**18 46 35.2**	**+5.8**
TNS	**Taunus Mts**	**98.27**	**40**	P	Pdif	18 33 39.7	+1.5
TNS				pmax	pmax		
	comp=Z,47nm,1.5s						
UBR	**Ueberruh**	**98.41**	**42**	*e*Pdiff	**P**	**18 33 38.0**	**-0.8**
UBR				*e*SKSac	**SKSac**	**18 44 19.2**	**+2.8**
UBR				*e*SP	**SP**	**18 46 37.8**	**+6.7**
FETA	**Feichten**	**98.58**	**43**	*e*Pdiff	Pdif	18 33 41.0	+1.2
	comp=Z,16nm,1.2s						
TGL	**Tana Glacier**	**98.59**	**332**	IAMs_20	IAMs_20	19 25 34.0	
	comp=Z,5µm,19.0s						
IBBN	**Ibbenburen**	**98.60**	**37**	*e*Pdiff	Pdif	18 33 40.1	+0.6
IBBN				*e*SKSac	**SKSac**	**18 44 20.5**	**+3.5**
IBBN				*e*SP	**SP**	**18 46 37.2**	**+4.3**
DAWY	**Dawson**	**98.62**	**336**	IAMs_20	IAMs_20	19 21 53.9	
	comp=Z,9µm,20.0s						
CRQM	**Cirque**	**98.73**	**332**	IAMs_20	IAMs_20	19 27 08.0	
	comp=Z,4µm,18.0s						
RETA	**Reutte**	**98.76**	**43**	*e*Pdiff	Pdif	18 33 41.6	+1.1
	comp=Z,17nm,1.4s						
MOTA	**Moosalm**	**98.93**	**43**	*e*Pdiff	**P**	**18 33 40.9**	**-0.4**
	comp=Z,38nm,1.3s						
MCARA	**McCarthy VSAT**	**98.94**	**332**	IAMs_20	IAMs_20	19 22 30.3	
	comp=Z,5µm,21.0s						
SQTA	**Sankt Quirin**	**98.96**	**43**	*e*Pdiff	**P**	**18 33 41.1**	**-0.3**
	comp=Z,44nm,1.2s,SNR=8.8						
VRDI	**Verde Repeater**	**99.06**	**332**	IAMs_20	IAMs_20	19 25 00.5	
	comp=Z,4µm,19.0s						
WATA	**Walderalm**	**99.23**	**43**	*e*Pdiff	**Pdif**	**18 33 42.3**	**-0.4**
	comp=Z,28nm,1.2s,SNR=6.0						
WTTA	**Wattenberg**	**99.25**	**43**	*e*Pdiff	**Pdif**	**18 33 44.0**	**+1.2**
	comp=Z,51nm,1.2s,SNR=8.4						
RAGM	**Ragged Mountai**	**99.27**	**331**	IAMs_20	IAMs_20	19 21 48.9	
	comp=Z,7µm,21.0s						
PAOL	**Paolisi**	**99.29**	**50**	IAMs_20	IAMs_20	19 21 12.2	
	comp=Z,9µm,20.0s						
GLB	**Gilahina Butte**	**99.31**	**332**	IAMs_20	IAMs_20	19 26 25.0	
	comp=Z,4µm,18.0s						
FUR	**Furstenfeldbru**	**99.31**	**42**	*e*Pdiff	**Pdif**	**18 33 43.1**	**+0.3**
FUR				*e*SKSac	**SKSac**	**18 44 23.2**	**+2.3**
FUR				*e*SP	**SP**	**18 46 48.2**	**+7.3**
FUR	**Furstenfeldbru**	**99.31**	**42**	P	**Pdif**	**18 33 46.0**	**+3.1**
FUR				pmax	pmax		
	comp=Z,25nm,1.9s						
HLG	**Helgoland**	**99.34**	**36**	*e*SKSac	**SKSac**	**18 44 24.1**	**+3.5**
HLG				*e*SP	SP	18 46 44.4	+3.7
UBBA	**Unterbreizbach**	**99.40**	**39**	*e*Pdiff	**Pdif**	**18 33 43.9**	**+0.9**
UBBA				*e*SKSac	**SKSac**	**18 44 26.8**	**+5.9**
UBBA				*e*SP	**SP**	**18 46 47.0**	**+5.5**
GTTG	**Gottingen**	**99.62**	**39**	*e*Pdiff	**Pdif**	**18 33 44.8**	**+0.7**
GTTG				*e*PP	**PP**	**18 37 46.5**	**-1.9**
GTTG				*e*SKSac	**SKSac**	**18 44 27.4**	**+5.3**
GTTG				*e*SP	SP	18 46 49.0	+5.1
EGAK	**Eagle**	**99.63**	**336**	IAMs_20	IAMs_20	19 23 08.5	
	comp=Z,7µm,21.0s						
ABTA	**Abfaltersbach**	**99.65**	**44**	*e*Pdiff	**Pdif**	**18 33 46.6**	**+2.1**
	comp=Z,23nm,1.1s						
RETH	**Rethem/Aller,**	**99.67**	**37**	*e*Pdiff	**Pdif**	**18 33 45.4**	**+1.1**
GRF	**Grafenberg Arr**	**99.77**	**41**	*e*Pdiff	**Pdif**	**18 33 45.4**	**+0.5**
GRF				*e*SKSac	**SKSac**	**18 44 27.8**	**+4.7**
GRF				*e*SP	**SP**	**18 46 51.1**	**+5.4**
GRF				*e*L	L	19 14 43.2	
	comp=Z,9µm,21.8s						
EYAK	**Cordova Ski Ar**	**99.82**	**331**	IAMs_20	IAMs_20	19 23 48.5	
	comp=Z,7µm,20.0s						
MENT	**Mentasta**	**99.88**	**334**	IAMs_20	IAMs_20	19 26 30.1	
	comp=Z,7µm,18.0s						
CLZ	**Clausthal**	**99.96**	**38**	*e*Pdiff	**Pdif**	**18 33 46.4**	**+0.8**
CLZ				*e*SKSac	**SKSac**	**18 44 28.9**	**+4.9**
CLZ				*e*SP	**SP**	**18 46 52.2**	**+4.6**
NRDL	**Niedersach Rie**	**100.02**	**38**	*e*Pdiff	**Pdif**	**18 33 47.6**	**+1.8**
NRDL				*e*SKSac	**SKSac**	**18 44 28.4**	**+4.5**
HIN	**Hinchinbrook I**	**100.11**	**331**	IAMs_20	IAMs_20	19 22 27.1	
	comp=Z,7µm,19.0s						
RJOB	**Jochberg**	**100.14**	**43**	*e*Pdiff	**Pdif**	**18 33 46.9**	**+0.3**
RJOB				*e*SKSac	**SKSac**	**18 44 26.7**	**+1.6**
RJOB				*e*SP	SP	18 46 54.0	+4.1
ASSE	**Asse, Remlinge**	**100.23**	**38**	*e*Pdiff	**Pdif**	**18 33 47.9**	**+1.2**
ASSE				*e*SKSac	**SKSac**	**18 44 29.6**	**+4.7**
ASSE				*e*SP	SP	18 46 55.8	+5.4
CADS	**Cadrg**	**100.30**	**45**	*e*PP	**PP**	**18 37 51.5**	**-2.3**
CADS				*e*SKSac	**SKSac**	**18 44 27.9**	**+2.1**
CADS				*e*		18 46 56.5	
KBA	**Koelnbreinsper**	**100.30**	**44**	*e*pPdiff	pPdif	18 33 50.7	-0.8
	comp=Z,19nm,1.7s						
KBA	**Koelnbreinsper**	**100.30**	**44**	P	**Pdif**	**18 33 52.2**	**+4.7**
KBA				pmax	pmax		
	comp=Z,17nm,2.7s						
MOX	**Moxa**	**100.32**	**40**	*e*Pdiff	**Pdif**	**18 33 47.9**	**+0.7**
MOX				*e*PP	**PP**	**18 37 52.0**	**-1.8**
MOX				*e*SKSac	SKSac	18 44 39.9	+14
MOX				*e*L	L	19 15 23.4	
	comp=Z,17µm,20.2s						
MOX	**Moxa**	**100.32**	**40**	P	**Pdif**	**18 33 50.8**	**+3.6**
MOX				pmax	pmax		
	comp=Z,12nm,1.6s						
MYKA	**Terra Mystica**	**100.36**	**44**	*e*Pdiff	**Pdif**	**18 33 49.8**	**+2.2**
	comp=Z,22nm,1.2s						
ROTZ	**Rotzenmuhle**	**100.40**	**41**	*e*Pdiff	**Pdif**	**18 33 48.3**	**+0.6**
ROTZ				*e*SKSac	**SKSac**	**18 44 31.2**	**+5.0**
MANZ	**Manzenberg**	**100.41**	**41**	*e*Pdiff	**Pdif**	**18 33 48.5**	**+0.8**
MANZ				*e*SKSac	**SKSac**	**18 44 31.3**	**+5.1**
SCRK	**Sand Creek**	**100.41**	**335**	IAMs_20	IAMs_20	19 22 16.2	
	comp=Z,9µm,21.0s						
NEUB	**Neuenburg**	**100.59**	**39**	*e*Pdiff	**Pdif**	**18 33 49.3**	**+0.9**
NEUB				*e*PP	**PP**	**18 37 54.2**	**-1.6**
NEUB				*e*SKSac	**SKSac**	**18 44 31.6**	**+4.7**
NEUB				*e*SP	SP	18 46 59.8	+5.4
PLN	**Plauen**	**100.59**	**40**	*e*Pdiff	**Pdif**	**18 33 49.2**	**+0.7**
PLN				*e*PP	**PP**	**18 37 53.2**	**-2.6**
PLN				*e*SKSac	**SKSac**	**18 44 30.4**	**+3.3**
PLN				*e*SP	SP	18 46 57.9	+3.4
BSEG	**Bad Segeberg**	**100.61**	**36**	*e*Pdiff	**Pdif**	**18 33 47.6**	**-0.7**
BSEG				*e*PP	**PP**	**18 37 54.3**	**-1.5**
BSEG				*e*SKSac	**SKSac**	**18 44 30.6**	**+3.8**
BSEG				*e*SP	SP	18 46 57.5	+3.1
BSEG	**Bad Segeberg**	**100.61**	**36**	P	**Pdif**	**18 33 51.0**	**+2.6**
BSEG				pmax	pmax		
	comp=Z,18nm,1.0s						
WET	**Wettzell**	**100.63**	**42**	*e*Pdiff	**Pdif**	**18 33 49.1**	**+0.4**
WET				*e*SKSac	**SKSac**	**18 44 31.0**	**+3.7**
WET				*e*SP	SP	18 47 00.6	+5.6
WET	**Wettzell**	**100.63**	**42**	P	**Pdif**	**18 33 50.7**	**+2.0**
WET				pmax	pmax		
	comp=Z,16nm,1.5s						
PAX	**Paxson**	**100.63**	**333**	IAMs_20	IAMs_20	19 21 27.9	
	comp=Z,7µm,20.0s						
MBAR	**Mbarara**	**100.64**	**94**	PP	**PP**	**18 37 57.1**	**0.0**
	comp=Z,2.4nm,0.3s,baz=261,slow=13,SNR=6.8						
GUNZ	**Gunzen**	**100.66**	**40**	*e*Pdiff	**Pdif**	**18 33 49.7**	**+0.9**
RIDG	**Independent Ri**	**100.67**	**334**	IAMs_20	IAMs_20	19 28 50.9	
	comp=Z,7µm,19.0s						
WERN	**Wernitzgruen**	**100.67**	**40**	*e*Pdiff	**Pdif**	**18 33 51.4**	**+2.6**
WERN				*e*PP	**PP**	**18 37 54.5**	**-2.0**
NKC	**Novy Kostel**	**100.69**	**40**	*e*PDIFF	**Pdif**	**18 33 48.3**	**-0.7**
NKC				*e*x	x	18 37 40.4	
NKC				*e*SKS		18 44 30.7	
NKC				AMS	AMS	19 17 20.0	
	comp=Z,11µm,20.0s						
NKC	**Novy Kostel**	**100.69**	**40**	*e*P	**Pdif**	**18 33 48.3**	**-0.7**
NKC				*e*		18 44 30.7	
NKC				MLR	MLR		
	comp=Z,11µm,20.0s						
TANN	**Tannenbergstha**	**100.76**	**40**	*e*Pdiff	**Pdif**	**18 33 50.2**	**+0.9**
TANN				*e*PP	**PP**	**18 37 55.2**	**-2.0**
TANN				*e*SKSac	**SKSac**	**18 44 33.2**	**+5.3**
GEC2	**GERESS Array S**	**101.06**	**42**	*e*Pdiff	**Pdif**	**18 33 50.9**	**+0.2**
GEC2				*e*SKSac	**SKSac**	**18 44 32.3**	**+2.8**
GERES	**GERESS Array B**	**101.06**	**42**	P	**Pdif**	**18 33 50.2**	**-0.5**
	comp=Z,3.2nm,0.8s,baz=242,slow=2.9,SNR=15						
GERES				PP	**PP**	**18 37 58.6**	**-0.9**
	comp=Z,2.1nm,1.0s,baz=248,slow=7.1,SNR=4.5						
GERES				S	**SKSac**	**18 44 31.5**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=264,slow=40,SNR=2.2						
GERES	**GERESS Array B**	**101.06**	**42**	P	**Pdif**	**18 33 50.7**	**0.0**
GERES	**GERESS Array B**	**101.06**	**42**		**Pdif**	**18 33 50.7**	**0.0**
KHC	**Kasperske Hory**	**101.06**	**42**	*e*PDIFF	**Pdif**	**18 33 46.9**	**-3.7**
KHC				*e*PP	**PP**	**18 37 57.8**	**-1.7**
KHC				*e*SKS		18 44 31.5	
KHC				AMS	AMS	19 16 10.0	
	comp=Z,10µm,20.3s						
KHC	**Kasperske Hory**	**101.06**	**42⇑**	*e*P	**Pdif**	**18 33 50.8**	**+0.2**
KHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DAG	**Danmarks Havn**	**101.12**	**11**	*i* P	**Pdif**	**18 33 50.4**	**+0.2**
DAG	**Danmarks Havn**	**101.12**	**11**	*i* P	**Pdif**	**18 33 50.4**	**+0.2**
DAG				MLR	MLR		
	comp=Z,12µm,19.0s						
MOA	**Molln**	**101.12**	**43**	*e*Pdiff	**Pdif**	**18 33 53.4**	**+2.4**
	comp=Z,16nm,1.5s						
CLL	**Collm**	**101.35**	**40**	*e*Pdif	**Pdif**	**18 33 52.0**	**+0.2**
	comp=Z,25nm,1.3s						
CLL				*i* sPdif	pwP	18 34 03.1	+4.5
CLL				*i* PP	**PP**	**18 38 01.0**	**-0.5**
	comp=Z,36nm,1.6s						
CLL				*i* PKiKP	**PKiKP**	**18 38 16.8**	**+0.7**
CLL				*e*		18 39 16.0	
CLL				*e*PPP	PPP	18 40 12.0	
CLL				*e*		18 40 49.0	
CLL				*e*SKSac	**SKSac**	**18 44 37.0**	**+6.4**
CLL				*e*Sdif	**Sdif**	**18 45 42.0**	**+11**
CLL				*e*PS	PS	18 47 09.0	+4.2
CLL				*e*PPS	PPS	18 48 03.0	
CLL				*e*SS	**SS**	**18 52 24.0**	**-8.4**
CLL				*e*(SSS)		18 55 54.0	
CLL				*e*		18 57 30.0	
CLL				*e*		19 02 06.0	
CLL				LmV		19 16 00.0	
	comp=Z,19µm,21.1s						
CLL	**Collm**	**101.35**	**40**	*e*Pdiff	**Pdif**	**18 33 53.5**	**+1.7**
CLL				*e*PP	**PP**	**18 38 00.8**	**-0.8**
CLL				*e*SKSac	**SKSac**	**18 44 36.1**	**+5.5**
CLL				*e*SP	SP	18 47 09.6	+7.1
CLL	**Collm**	**101.35**	**40**	*e*P	**Pdif**	**18 33 52.0**	**+0.2**
CLL				*i*		18 38 01.0	
CLL				pmax	pmax		
	comp=Z,25nm,1.3s						
CLL				pmax	pmax		
	comp=Z,36nm,1.6s						
CLL				MLR	MLR		
	comp=Z,19µm,21.1s						
KNK	**Knik Glacier**	**101.37**	**331**	IAMs_20	IAMs_20	19 26 38.4	
	comp=Z,7µm,19.0s						
SEW	**Seward**	**101.38**	**330**	IAMs_20	IAMs_20	19 29 03.7	
	comp=Z,7µm,19.0s						
FBE	**Freiberg**	**101.45**	**40**	*e*Pdiff	**Pdif**	**18 33 53.3**	**+1.0**
FBE				*e*PP	**PP**	**18 38 00.7**	**-1.6**
DHY	**Denali Highway**	**101.48**	**333**	IAMs_20	IAMs_20	19 25 06.3	
	comp=Z,6µm,20.0s						
GHO	**Glory Hole Cre**	**101.70**	**332**	IAMs_20	IAMs_20	19 27 59.2	
	comp=Z,7µm,18.0s						
PMR	**Palmer**	**101.73**	**331**	IAMs_20	IAMs_20	19 28 06.0	
	comp=Z,7µm,18.0s						
ARSA	**Arzberg**	**101.77**	**44**	*e*Pdiff	**Pdif**	**18 33 56.4**	**+2.6**
	comp=Z,13nm,1.6s						
HDA	**Harding Lake**	**101.77**	**334**	IAMs_20	IAMs_20	19 23 05.2	
	comp=Z,8µm,21.0s						
BRG	**Berggiesshubel**	**101.80**	**40**	*e*PDIFF	**Pdif**	**18 33 55.2**	**+1.4**
	comp=Z,41nm,1.6s						
BRG				PP	**PP**	**18 37 59.0**	**-5.9**
BRG				SKS		18 44 34.0	
BRG				SDIFF	SKKSac	18 45 36.0	+26
BRG				SS	**SS**	**18 52 42.0**	**+3.4**
BRG	**Berggiesshubel**	**101.80**	**40**	*e*Pdiff	**Pdif**	**18 33 54.7**	**+0.9**
BRG				*e*SKSac	**SKSac**	**18 44 37.2**	**+4.5**
BRG				*e*SP	SP	18 47 12.7	+5.4
BRG	**Berggiesshubel**	**101.80**	**40**	P	**Pdif**	**18 33 56.8**	**+3.0**
BRG				pmax	pmax		
	comp=Z,15nm,1.5s						
RC01	**Rabbit Creek A**	**101.84**	**331**	IAMs_20	IAMs_20	19 23 31.9	
	comp=Z,8µm,22.0s						
PRA	**Prague**	**101.87**	**41**	*e*PDIFF	**Pdif**	**18 33 52.7**	**-1.4**
PRA				*e*x	x	18 37 47.6	
PRA				*e*SKS		18 44 37.6	
PRA				AMS	AMS	19 14 50.0	
	comp=Z,7µm,23.3s						
PRA	**Prague**	**101.87**	**41**	*e*P	**Pdif**	**18 33 52.7**	**-1.4**
PRA				MLR	MLR		
	comp=Z,7µm,23.3s						
ILAR	**Eielson Array**	**101.88**	**335**	P	**Pdif**	**18 33 53.4**	**-0.5**
	comp=Z,0.8nm,0.8s,baz=158,slow=4.0,SNR=7.9						
ILAR				PP	**PP**	**18 37 58.8**	**-6.4**
	comp=Z,2.6nm,0.9s,baz=106,slow=5.9,SNR=4.3						
FYU	**Fort Yukon**	**101.90**	**337**	IAMs_20	IAMs_20	19 22 24.6	
	comp=Z,6µm,21.0s						
PRU	**Pruhonice**	**101.91**	**41**	*e*PDIFF	**Pdif**	**18 33 48.3**	**-6.0**
PRU				*e*x	x	18 37 46.2	
PRU				*e*SKS		18 44 35.9	
PRU				AMS	AMS	19 23 00.0	
	comp=Z,7µm,18.9s						
PRU	**Pruhonice**	**101.91**	**41**	*e*P	**Pdif**	**18 33 48.3**	**-6.0**
PRU				*e*		18 44 35.9	
PRU				MLR	MLR		
	comp=Z,7µm,18.9s						
BRLK	**Bradley Lake**	**101.95**	**329**	IAMs_20	IAMs_20	19 29 47.0	
	comp=Z,6µm,18.0s						
KOGS	**Kog**	**102.03**	**45**	*e*PP	**PP**	**18 38 04.2**	**-2.6**
KOGS				*e*SKSac	**SKSac**	**18 44 32.5**	**-1.5**
CNPM	**China Poot**	**102.05**	**329**	IAMs_20	IAMs_20	19 23 19.3	
	comp=Z,4µm,20.0s						
KALN	**Kalnik**	**102.08**	**45**	*e*Pn	**Pdif**	**18 33 54.0**	**-1.2**
PVCC	**Panska Ves**	**102.08**	**41**	*e*PDIFF	**Pdif**	**18 33 58.5**	**+3.4**
PVCC				*e*PP	**PP**	**18 38 00.7**	**-6.3**
PVCC				AMS	AMS	19 18 20.0	
	comp=Z,9µm,19.6s						
PVCC	**Panska Ves**	**102.08**	**41**	*e*P	**Pdif**	**18 33 58.5**	**+3.4**
PVCC				MLR	MLR		
	comp=Z,9µm,19.6s						
RUE	**Ruedersdorf**	**102.15**	**39**	*e*SKSac	**SKSac**	**18 44 37.8**	**+3.5**
RUE				*e*SP	SP	18 47 13.8	+2.9
CONA	**Conrad Observa**	**102.18**	**43**	*e*Pdiff	**Pdif**	**18 33 57.7**	**+2.0**
	comp=Z,12nm,1.7s						
CCB	**Clear Creek Bu**	**102.20**	**335**	IAMs_20	IAMs_20	19 24 56.6	
	comp=Z,7µm,21.0s						
POKR	**Poker Plat Res**	**102.22**	**335**	Pdiff	**Pdif**	**18 33 56.4**	**+1.0**
	baz=110						
WRH	**Wood River Hil**	**102.26**	**334**	IAMs_20	IAMs_20	19 24 49.1	
	comp=Z,6µm,21.0s						
HOM	**Homer**	**102.28**	**329**	IAMs_20	IAMs_20	19 29 59.7	
	comp=Z,4µm,18.0s						
COLA	**College**	**102.30**	**335**	P	**Pdif**	**18 33 58.1**	**+2.4**
COLA				pmax	pmax		
	comp=Z,11nm,1.1s						
COLA	**College**	**102.30**	**335**	IAMs_20	IAMs_20	19 25 08.3	
	comp=Z,8µm,19.0s						
TREC	**Trest**	**102.31**	**42**	*e*PDIFF	**Pdif**	**18 33 54.1**	**-2.1**
TREC				*e*PP	**PP**	**18 38 02.2**	**-6.7**
TREC				*e*SKS		18 44 39.4	
TREC				AMS	AMS	19 17 00.0	
	comp=Z,8µm,20.4s						
TREC	**Trest**	**102.31**	**42**	*e*P	**Pdif**	**18 33 54.1**	**-2.1**
TREC				MLR	MLR		
	comp=Z,8µm,20.4s						
MCK	**McKinley**	**102.36**	**334**	IAMs_20	IAMs_20	19 29 39.7	
	comp=Z,7µm,18.0s						
RGN	**Rugen**	**102.47**	**36**	*e*Pdiff	**Pdif**	**18 33 58.2**	**+1.5**
RGN				*e*SKSac	**SKSac**	**18 44 40.6**	**+4.8**
RGN				*e*SP	SP	18 47 19.4	+5.2
MDM	**Murphy Dome**	**102.48**	**335**	IAMs_20	IAMs_20	19 25 14.0	
	comp=Z,6µm,20.0s						
NEA	**Nenana**	**102.70**	**334**	IAMs_20	IAMs_20	19 25 02.7	
	comp=Z,6µm,21.0s						
BWN	**Browne**	**102.73**	**334**	IAMs_20	IAMs_20	19 25 28.6	
	comp=Z,6µm,20.0s						
KRUC	**Moravsky**	**102.82**	**42**	*e*PDIFF	**Pdif**	**18 33 59.6**	**+1.2**
KRUC				*e*		18 44 38.7	
KRUC				*e*		18 47 20.8	
MSVF	**Nonsavu**	**102.87**	**246**	IAMs_20	IAMs_20	19 12 46.9	
	comp=Z,4µm,20.0s						
UPC	**Upice**	**102.96**	**41**	*e*PDIFF	**Pdif**	**18 33 57.0**	**-2.0**
UPC				*e*PP	**PP**	**18 38 09.4**	**-4.3**
UPC				*e*SKS		18 44 40.2	
UPC				AMS	AMS	19 15 30.0	
	comp=Z,9µm,24.4s						
UPC	**Upice**	**102.96**	**41**	*e*P	**Pdif**	**18 33 57.0**	**-2.0**
UPC				*e*		18 44 40.2	
UPC				MLR	MLR		
	comp=Z,9µm,24.4s						
CHVC	**Chvalec**	**103.01**	**41**	AMS	AMS	19 15 30.0	
	comp=Z,9µm,22.4s						
VRAC	**Vranov**	**103.01**	**42**	P	**Pdif**	**18 34 00.5**	**+1.3**
	comp=Z,1.1nm,0.3s,baz=245,slow=8.8,SNR=3.5						
VRAC				PP	**PP**	**18 38 10.8**	**-3.3**
	comp=Z,4.2nm,1.0s,baz=270,slow=7.9,SNR=3.6						
VRAC	**Vranov**	**103.01**	**42**	*e*PDIFF	**Pdif**	**18 34 00.7**	**+1.4**
VRAC				*e*		18 44 40.3	
VRAC				*e*		18 47 23.9	
KFL	**Anninata**	**103.08**	**54**	P	**PKiKP**	**18 38 12.0**	**-7.7**
IGT	**Igoumenitsa**	**103.10**	**53**	P	PKiKP	18 38 11.1	-8.6
OSTC	**Ostas**	**103.10**	**41**	*e*PDIFF	**Pdif**	**18 33 59.9**	**+0.3**
OSTC				*e*PP	PP	18 38 03.6	-11
OSTC				*e*SKS		18 44 40.5	
OSTC				AMS	AMS	19 15 30.0	
	comp=Z,9µm,24.0s						
DPC	**Dobruska-Polom**	**103.11**	**41**	*e*PDIFF	**Pdif**	**18 33 59.9**	**+0.2**
DPC				*e*PP	PP	18 37 54.9	-20
DPC				*e*SKS		18 44 43.7	
DPC				AMS	AMS	19 15 20.0	
	comp=Z,6µm,23.1s						
DPC	**Dobruska-Polom**	**103.11**	**41**	*e*P	**Pdif**	**18 33 59.9**	**+0.2**
DPC				*e*		18 44 43.7	
DPC				MLR	MLR		
	comp=Z,6µm,23.1s						
KTH	**Kantishna Hill**	**103.15**	**333**	IAMs_20	IAMs_20	19 30 26.5	
	comp=Z,7µm,18.0s						
LKD2	**Lefkada island**	**103.16**	**53**	P	PKiKP	18 38 09.6	-10
TIR	**Tirane**	**103.21**	**51**	P	**Pdif**	**18 34 00.2**	**-0.1**
TIR				pmax	pmax		
	comp=Z,87nm,0.7s						
TIR	**Tirane**	**103.21**	**51**	IAMs_20	IAMs_20	19 23 08.1	
	comp=Z,8µm,21.0s						
KSP	**Ksiaz**	**103.22**	**41**	*e*PKP	PKiKP	18 38 09.6	-10
KSP	**Ksiaz**	**103.22**	**41**	P	**Pdif**	**18 34 03.7**	**+3.6**
NB2	**NORSAR Subarra**	**103.23**	**30**	P	**Pdif**	**18 34 01.9**	**+1.9**
	comp=Z,2.1nm,0.8s,baz=246,slow=6.5						
NOA	**NORSAR Array B**	**103.23**	**30**	Pdiff	**Pdif**	**18 34 00.8**	**+0.8**
	comp=Z,4.1nm,1.1s,baz=252,slow=4.4,SNR=4.5						
KRLC	**Kraliky**	**103.33**	**41**	*e*PDIFF	**Pdif**	**18 34 02.8**	**+2.1**

KRLC				ePP	PP	18 38 05.1	-11
KRLC				eSKS		18 44 17.6	
KRLC				AMS	AMS	19 19 50.0	
	comp=Z,5µm,19.3s						
KRLC	Kraliky	103.33	41	eP	Pdif	18 34 02.8	+2.1
KRLC				MLR	MLR		
	comp=Z,5µm,19.3s						
BPAW	Bear Paw Mtn.	103.34	334	IAMs_20	IAMs_20	19 26 02.6	
	comp=Z,5µm,20.0s						
PPLA	Purkeypile	103.50	332	IAMs_20	IAMs_20	19 26 33.8	
	comp=Z,6µm,20.0s						
PYL	PYLOS	103.51	55	P	PKiKP	18 38 15.3	-5.2
MLY	Manley	103.52	335	IAMs_20	IAMs_20	19 25 46.3	
	comp=Z,6µm,19.0s						
AMT	Artemida-Makis	103.64	55	P	PKiKP	18 38 16.8	-4.0
ITM	Ithomi	103.72	55	P	PKiKP	18 38 16.7	-4.2
MORC	Moravsky Berou	103.73	42	P	Pdif	18 34 05.3	+2.8
MORC				pmax	pmax		
	comp=Z,8.0nm,1.3s						
MORC	Moravsky Berou	103.73	42	ePDIFF	Pdif	18 34 03.3	+0.8
MORC				e		18 47 29.7	
DRO	Drossia	103.75	54	P	PKiKP	18 38 18.2	-2.7
DYR	Agios Nikonas	103.94	56	P	PKiKP	18 38 13.7	-7.6
COLD	Coldfoot	103.97	337	IAMs_20	IAMs_20	19 26 08.3	
	comp=Z,6µm,19.0s						
EVR	Evrytania	104.06	53	P	PKiKP	18 38 21.4	-0.2
ANX	Ano Chora	104.06	54	P	PKiKP	18 38 21.6	0.0
KLV	Kalavryta, Ach	104.11	54	P	PKiKP	18 38 18.7	-3.0
VLX	Vlachokerasia	104.12	55	P	PKiKP	18 38 20.1	-1.7
OKC	Ostrava-Krasne	104.12	42	ePDIFF	Pdif	18 34 08.6	+4.4
OKC				ePP	PKiKP	18 38 16.7	-4.5
OKC				eSKS		18 44 44.6	
OKC				AMS	AMS	19 18 00.0	
	comp=Z,6µm,20.3s						
OKC	Ostrava-Krasne	104.12	42	eP	Pdif	18 34 08.6	+4.4
OKC				e		18 44 44.6	
OKC				MLR	MLR		
	comp=Z,6µm,20.3s						
HFS	Hagfors	104.17	31	PKiKP	PKiKP	18 38 23.5	+2.5
	comp=Z,38nm,1.3s,baz=299,slow=1.5,SNR=11						
FNA	Florina	104.18	52	P	PKiKP	18 38 21.9	+0.2
KALE	Kalithea	104.18	54	P	PKiKP	18 38 20.1	-1.7
VYHS	Vyhne	104.25	43	eP	Pdif	18 34 05.9	+1.1
VYHS	Vyhne	104.25	43	ePDIFF	Pdif	18 34 05.9	+1.1
THL	Klokotos Trika	104.37	53	P	PKiKP	18 38 20.6	-1.4
VLI	Veliai	104.39	56	P	PKiKP	18 38 22.1	0.0
ANKY	Antikythira Is	104.48	57	P	PKiKP	18 38 21.4	-0.9
AGG	Agios Georgios	104.48	53	P	PKiKP	18 38 22.6	+0.3
DSF	Desfina	104.48	54	P	PKiKP	18 38 22.1	-0.2
KNDR	Palaiochora Ch	104.63	58	P	PKiKP	18 38 22.1	-0.5
AXAR	Agios Charalam	104.67	54	P	PKiKP	18 38 22.5	-0.1
KRND	KRANIDI	104.72	55	P	PKiKP	18 38 22.2	-0.5
LOUT	Loutraki	104.72	55	P	PKiKP	18 38 24.8	+2.1
LTK	Loutraki	104.73	55	P	PKiKP	18 38 22.8	+0.1
LANS	Liptovska Anna	104.80	43	eP	Pdif	18 34 10.2	+2.9
LANS	Liptovska Anna	104.80	43	ePDIFF	Pdif	18 34 10.2	+2.9
DID	Didima	104.81	55	P	PKiKP	18 38 24.2	+1.3
LIT	Litokhoron	104.85	52	P	PKiKP	18 38 24.1	+1.2
LKR	Lokris	104.90	54	P	PKiKP	18 38 25.3	+2.3
IMMV	Iera Moni Meta	104.92	57	P	PKiKP	18 38 25.9	+2.8
VILL	Villia	105.03	54	P	PKiKP	18 38 25.9	+2.6
VAM	Vamos	105.08	57	P	PKiKP	18 38 27.3	+3.9
XOR	Xorichti	105.21	53	P	PKiKP	18 38 27.3	+3.7
NEO	Neokhori	105.22	53	P	PKiKP	18 38 27.7	+4.1
OJC	Ojcow	105.25	42	ePKP	PKiKP	18 38 24.4	+1.1
OJC	Ojcow	105.25	42	P	Pdif	18 34 13.6	+4.4
VLY	Voula,Athens	105.33	55	P	PKiKP	18 38 27.7	+3.9
ATHU	Athens Univers	105.34	55	P	PKiKP	18 38 26.4	+2.5
SKIA	Skiathos	105.37	54	P	PKiKP	18 38 29.8	+5.9
KNT	Kendrikon	105.39	51	P	PKiKP	18 38 30.6	+6.7
NIE	Niedzica	105.39	43	ePKP	PKiKP	18 38 27.9	+4.3
HORT	Hortiatis	105.42	52	P	PKiKP	18 38 30.5	+6.5
PTL	Penteli	105.42	55	P	PKiKP	18 38 29.8	+5.8
BZS	Buzias	105.45	47	⇓P	PKiKP	18 38 31.6	+7.8
IDI	Anoyia	105.60	58	P	PKiKP	18 38 30.9	+6.4
AOS	Alonnisos	105.69	54	P	PKiKP	18 38 32.4	+8.0
VTS	Vitosha	105.95	50	P	PKiKP	18 38 34.1	+9.1
OUR	Ouranopolis	106.02	52	P	PKiKP	18 38 35.2	+10
LAST	Lasithi	106.04	58	P	PKiKP	18 38 34.5	+9.2
NVR	Nevrokopi	106.14	51	P	PKiKP	18 38 35.9	+11
NPS	Neapolis	106.17	58	P	PKiKP	18 38 32.1	+6.6
IOSP	Ios island	106.24	56	P	PKiKP	18 38 32.3	+6.8
CMBO	Columbo, Santo	106.27	57	P	PKiKP	18 38 35.5	+10
SANT	Santorini	106.29	57	P	PP	18 38 35.2	-3.7
APE	Apeiranthos	106.50	56	P	PP	18 38 36.9	-3.5
ANAF	Anafi Island	106.54	57	P	PP	18 38 36.8	-3.8
KMBO	Kilima Mbogo	106.56	97	PKiKP	PKiKP	18 38 30.6	+3.5
	comp=Z,0.8nm,0.6s,baz=80,slow=1.8,SNR=4.6						
KMBO				PP	PP	18 38 44.5	+3.0
	comp=Z,0.5nm,0.4s,baz=240,slow=6.6,SNR=5.8						
ZKR	Zakros	106.62	58	P	PP	18 38 38.5	-2.8
THAS	Thassos island	106.62	52	P	PP	18 38 38.9	-2.2
AMGA	Amorgos Island	106.73	56	P	PP	18 38 38.4	-3.7
LIA	Limnos Island	106.82	53	P	PP	18 38 41.1	-1.5
LOT	Lotru	106.90	47	⇑P	PKiKP	18 38 23.8	-2.9
KWP	Kalwaria Pacla	106.97	43	ePKP	PKiKP	18 38 30.1	+3.6
KWP	Kalwaria Pacla	106.97	43	IAMs_20	IAMs_20	19 26 33.5	
	comp=Z,6µm,20.0s						
CHOS	Chios island	107.18	55	P	PP	18 38 41.9	-3.5
SIGR	SIGRI	107.19	54	P	PP	18 38 43.5	-1.9
SMTH	Samothraki Isl	107.20	53	P	PP	18 38 43.4	-2.0
RDO	Rodhopi	107.34	52	P	PP	18 38 44.1	-2.2
KARP	Karpathos	107.47	58	P	PP	18 38 44.2	-3.3
ARR	Arges	107.48	47	⇑P	PKiKP	18 38 31.5	+3.8
PRK	Paraskevi	107.52	54	P	PP	18 38 47.1	-0.6
SMG	Samos	107.65	56	P	PP	18 38 45.7	-3.1
ALN	Alexandroupoli	107.67	52	P	PP	18 38 44.9	-3.9
ENEZ	Enez	107.72	52	P	PP	18 38 48.8	-0.3
VOIR		107.78	47	⇑P	PKiKP	18 38 40.6	+12
KBS	Kingsbay	107.80	12	IAMs_20	IAMs_20	19 21 53.8	
	comp=Z,6µm,21.0s						
LVV	L'vov	107.85	43	eP	Pdif	18 34 19.6	-1.1
LVV				ePPP	PPP	18 41 13.0	
SUW	Suwalki	108.00	38	ePKP	PKiKP	18 38 31.2	+3.0
BURAR	Bucovina Array	108.26	45	⇑P	PKiKP	18 38 32.3	+3.2
EDRB	Edirne	108.36	51	P	PP	18 38 50.5	-3.3
MLR	Muntele Rosu	108.41	47	PKiKP	PKiKP	18 38 23.8	-5.7
	comp=Z,3.7nm,1.0s,baz=185,slow=8.5,SNR=3.2						
MLR				PP	PP	18 38 51.9	-2.4
	comp=Z,21nm,1.2s,baz=270,slow=5.2,SNR=6.7						
YER	Yerkesik	108.67	56	P	PP	18 38 52.0	-4.3
UNV	Unalaska Valle	109.00	321	IAMs_20	IAMs_20	19 25 27.1	
	comp=Z,4µm,22.0s						
VRI	Vrincioaia	109.01	47	⇑P	PKiKP	18 38 31.9	+1.4
TESR	Tescani	109.06	46	⇓P	PKiKP	18 38 33.4	+2.9
FETY	Fethiye	109.21	57	P	PP	18 38 55.4	-4.8
KULA	Kula-Manisa	109.21	55	P	PP	18 38 57.5	-2.8
ANM	Nome	109.56	333	IAMs_20	IAMs_20	19 33 07.1	
	comp=Z,5µm,18.0s						
CFR	Carcaliu	109.89	48	⇑P	PKiKP	18 38 33.0	+1.0
ISK	Istanbul-Kandi	109.94	52	P	PP	18 39 00.5	-4.8
NACGM	Naroch	110.20	38	eP	Pdif	18 34 44.0	+13
NACGM				ePP	PP	18 39 02.0	-4.7
NACGM				ePPP	PPP	18 40 42.0	
NACGM				ePKS		18 42 28.0	
NACGM				eSKS	SKSac	18 45 16.0	+6.0
NACGM				eSKKS	SKKSac	18 45 58.0	-11
NACGM				eSKKKS		18 46 44.0	
NACGM				ePS	PS	18 48 26.0	-10
NACGM				eSS	SKKPbc	18 53 48.0	+27
NACGM				eSSS	SSS	18 57 56.0	
NACGM				eLQ	LQ	19 08 32.0	
NACGM				eLR	LR	19 16 16.0	
NACGM				LRM	MLR	19 23 14.0	
	comp=Z,26nm,19.0s						
DZM	Mont Dzumac	110.36	236	ePP	PP	18 39 04.2	-4.1
	comp=Z,965nm,26.4s						
DZM				eSKSac	SKSac	18 45 08.7	-3.9
	comp=Z,3µm,27.6s						
DZM	Mont Dzumac	110.36	236	ePS	PS	18 48 32.3	-6.3
	comp=Z,3µm,25.1s						
DZM				eSS	SS	18 54 32.5	-3.1
	comp=Z,10µm,29.5s						
DZM	Mont Dzumac	110.36	236	eLR	LR	19 11 04.7	
	comp=Z,16µm,22.5s,baz=133						
FINES	FINESS Array B	110.36	31	PP	PP	18 39 08.1	+0.4
	comp=Z,13nm,1.1s,baz=219,slow=2.4,SNR=6.3						
ARCES	ARCESS Array B	110.49	22	PP	PP	18 39 06.5	-2.0
	comp=Z,8.9nm,1.1s,baz=263,slow=9.4,SNR=5.3						
ARCES				PKKPbc	PKKPbc	18 49 35.9	+1.1
	comp=Z,2.1nm,0.7s,baz=89,slow=3.6,SNR=9.8						
ISP	Isparta	110.54	56	IAMs_20	IAMs_20	19 29 16.9	
	comp=Z,5µm,20.0s						
KIS	Kishinev	110.60	46	eP	Pdif	18 34 38.0	+5.0
KIS	Kishinev	110.60	46	ePKP	PKiKP	18 38 37.0	+3.6
KIS	Kishinev	110.60	46	ePP	PP	18 39 08.0	-1.9
KIS	Kishinev	110.60	46	ePS	PS	18 48 04.0	-36
KIS	Kishinev	110.60	46	eP	Pdif	18 34 38.0	+5.0
KIS				e		18 39 08.0	
KIS				i PPS	PPS	18 49 48.0	
MICGM	Minsk	110.80	38	ePKP	PKiKP	18 38 30.0	-3.5
MICGM				ePP	PP	18 39 08.0	-3.0
MICGM				eSKS	SKSac	18 45 14.0	+1.5
MICGM				ePS	PKKPbc	18 48 40.0	-53
MICGM				eSS	SS	18 54 14.0	-27
MICGM				eSSS	SSS	18 58 36.0	
MICGM				eLR	LR	19 14 00.0	
MICGM				LRM	MLR	19 23 24.0	
	comp=Z,29nm,20.0s						
MICGM				LRM	MLR	19 23 36.0	
	comp=E,11nm,18.0s						
MICGM				LRM	MLR	19 23 40.0	
	comp=Z,27nm,20.0s						
MNK	Minsk	110.80	38	ePKIKP	PKiKP	18 38 30.0	-3.5
MNK				e		18 39 08.0	
MNK				e		18 45 14.0	
MNK				e		18 48 40.0	
MNK				MLR	MLR		
	comp=Z,29µm,20.0s						
KEV	Kevo	111.02	22	IAMs_20	IAMs_20	19 20 40.5	
	comp=Z,6µm,21.0s						
AKASG	Malin Array Be	111.27	42	PKiKP	PKiKP	18 38 35.1	+0.6
	comp=Z,0.7nm,0.5s,baz=281,slow=2.5,SNR=7.3						
AKASG				PP	PP	18 39 10.2	-4.3
	comp=Z,2.4nm,0.8s,baz=264,slow=6.7,SNR=4.5						
AKASG	Malin Array Be	111.27	42c	iPKIKP	PKiKP	18 38 36.7	+2.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKBB	Malin Array Si	111.27	42	⇑iPKIKP	PKiKP	18 38 33.7	-0.8
AKBB	Malin Array Si	111.27	42	IAMs_20	IAMs_20	19 27 06.1	
	comp=Z,6µm,21.0s						
SPIA	Saint Paul Isl	111.44	325	IAMs_20	IAMs_20	19 35 20.5	
	comp=Z,7µm,19.0s						
CSS	Mathiatis	112.33	59	P	PP	18 39 17.5	-5.2
EIL	Elat	112.79	65	PKiKP	PKiKP	18 38 38.6	+0.5
	comp=Z,4.5nm,0.6s,baz=127,slow=1.8,SNR=4.7						
EIL				PP	PP	18 39 22.3	-3.9
	comp=Z,2.6nm,0.5s,baz=299,slow=6.5,SNR=3.9						
BR131	Keskin Array S	113.22	54	⇑iPKIKP	PKiKP	18 38 39.6	+0.8
BRTR	Keskin Array B	113.22	54	PKiKP	PKiKP	18 38 40.1	+1.3
	comp=Z,11nm,1.2s,baz=180,slow=2.5,SNR=17						
BRTR				PP	PP	18 39 23.9	-5.2
	comp=Z,3.5nm,1.0s,baz=234,slow=4.2,SNR=4.2						
TOO	Toolangi	113.58	211	IAMs_20	IAMs_20	19 15 33.5	
	comp=Z,6µm,21.0s						
MMAI	Mount Meron Ar	113.73	62	PKiKP	PKiKP	18 38 40.8	+0.9
	comp=Z,6.8nm,0.9s,baz=219,slow=3.9,SNR=7.7						
RER	Riviere de l'E	113.78	125	IAMs_20	IAMs_20	19 20 41.7	
	comp=Z,7µm,20.0s						
SIM	Simferopol'	114.08	49	i PKIKP	PKiKP	18 38 42.3	+2.2
SIM				PPP	PPP	18 42 07.4	
SIM						18 45 41.2	
SIM				PS	PKKPbc	18 49 13.9	-8.2
SIM				pmax	pmax		
	comp=Z,680nm,11.5s						
DIKM	Dikmen	114.64	52	⇓P	PKPdf	18 38 40.6	-0.6
ASF	Jabal al Asfar	114.85	63	PKiKP	PKiKP	18 38 43.0	+0.9
	comp=Z,15nm,1.1s,baz=62,slow=0.0,SNR=13						
ASF				PP	PP	18 39 46.3	+5.5
	comp=Z,5.3nm,1.0s,baz=174,slow=1.7,SNR=4.6						
ADK	Adak	115.03	319	IAMs_20	IAMs_20	19 29 10.7	
	comp=Z,5µm,21.0s						
ARMA	Armidale	115.60	220	IAMs_20	IAMs_20	19 18 05.5	
	comp=Z,4µm,20.0s						
GAZ	Gaziantep	115.73	57	IAMs_20	IAMs_20	19 33 46.4	
	comp=Z,6µm,19.0s						
OBN	Obninsk	115.83	38	PKP	PKiKP	18 38 43.5	+0.4
	comp=Z,2.3nm,0.5s,baz=167,slow=12,SNR=4.9						
OBN				PP	PP	18 39 44.0	-2.8
	comp=Z,1.6nm,0.4s,baz=258,slow=7.8,SNR=3.8						
OBN	Obninsk	115.83	38	i PKIKP	PKiKP	18 38 44.2	+1.1
OBN				e		18 39 46.2	
OBN				e		18 45 46.1	
OBN				eSS	SS	18 55 52.9	+5.5
OBN				pmax	pmax		
	comp=Z,37nm,1.3s						
OBN				MLR	MLR		
	comp=Z,12µm,20.0s						
MOS	Moscow	116.40	37	i PKIKP	PKiKP	18 38 44.4	+0.2
MOS				e		18 39 48.1	
MOS				e		18 45 29.9	
MOS				ePS	PS	18 49 28.3	-4.8
MOS				eSS	SS	18 55 57.2	+2.4
MOS				eSSS	SSS	19 00 18.8	
ANN	Anapa	116.42	49	i PKIKP	PKiKP	18 38 46.7	+2.2
ANN				e		18 39 47.8	
ANN				e		18 42 21.0	
ANN				e		18 45 35.9	
ANN				eSP	SP	18 49 28.7	-2.7
ANN				eSS	SS	18 55 52.0	-3.8
ANN				pmax	pmax		
	comp=Z,32nm,1.1s						
KLMR	Klimovskoe	116.89	31	ePKIKP	PKPdf	18 38 44.7	-0.2
KLMR						18 45 38.4	
KLMR				PS	PKKPdf	18 49 38.7	-1.2
KLMR				SS	SS	18 55 57.5	-3.3
KLMR				pmax	pmax		
	comp=Z,47nm,1.4s						
KLMR	Klimovskoe	116.89	31	ePKPdf	PKPdf	18 38 44.7	-0.2
KLMR				AMP		18 38 49.3	
	comp=Z,47nm,1.4s						
KLMR				PP	PP	18 39 47.3	-6.7
KLMR				SKP		18 42 18.0	
KLMR				SKSac	SKSac	18 45 38.4	+2.4
KLMR				SKSac	SKSac	18 45 38.4	+2.4
KLMR				SKKSac	SKKSac	18 46 47.8	-6.4
KLMR				SKKSac	SKKSac	18 46 47.8	-6.4
KLMR				PS	PKKPdf	18 49 38.8	-1.2
KLMR				PS	PKKPdf	18 49 38.8	-1.2
KLMR				SS	SS	18 55 57.6	-3.2
KLMR				SS	SS	18 55 57.6	-3.2
KLMR				SSS	SSS	19 00 10.9	
KLMR				SSS	SSS	19 00 10.9	
KLMR				LQ	LQ	19 11 49.3	
KLMR				LQ	LQ	19 11 49.3	
KLMR				LR	LR	19 18 34.2	
KLMR				AMP		19 24 26.3	
	comp=Z,8µm,21.4s						
LPSR	Galich'ya Gora	117.35	40	i PKIKP	PKPdf	18 38 45.6	-0.5
LPSR				eSP	SP	18 49 38.8	-0.5
LPSR				pmax	pmax		
	comp=Z,20nm,1.1s						
LPSR				MLR	MLR		
	comp=Z,12µm,21.0s						
VSR	Storozhevoye	117.56	42	⇓iPKIKP	PKiKP	18 38 46.7	+0.1
VSR				MLR	MLR		
	comp=Z,12µm,22.0s						
VORD	Divnogorie	117.65	42	ePKIKP	PKiKP	18 38 47.7	+1.0
VORD				pmax	pmax		
	comp=Z,20nm,1.6s						
SOC	Sochi	118.03	50	i PKIKP	PKPdf	18 38 47.5	-0.2
SOC				ePS	PKKPdf	18 49 43.9	+6.5
SOC				pmax	pmax		
	comp=Z,23nm,1.1s						
VRH	Novokhopyorsk	119.17	42	i PKIKP	PKiKP	18 38 49.9	+0.2
VRH				eSP	SP	18 50 00.6	+4.8
VRH				pmax	pmax		
	comp=Z,30nm,1.4s						
VRH				MLR	MLR		
	comp=Z,13µm,23.0s						
BCA	Borcka	119.40	53	⇑P	PKiKP	18 38 51.4	+0.9
EIDS	Eidsvold	119.47	224	IAMs_20	IAMs_20	19 19 48.3	
	comp=Z,6µm,21.0s						
PRGR	Permogore	119.64	29	ePKIKP	PKPdf	18 38 50.2	0.0
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
STKA	Stephens Creek	120.06	212	PKP	PKiKP	18 38 52.9	+0.7
	comp=Z,3.9nm,0.7s,baz=328,slow=18,SNR=7.8						
STKA				PKKPbc	PKKPbc	18 49 02.1	+1.4
	comp=Z,3.0nm,0.8s,baz=291,slow=5.5,SNR=4.7						
KIV	Kislovodsk	120.18	50	i PKiKP	PKiKP	18 38 56.5	+4.4
	SNR=6.4						
KIV	Kislovodsk	120.18	50	eP	Pdif	18 35 19.1	+3.2
KIV				i		18 38 54.3	
KIV				e		18 40 21.1	
KIV				ePPP	PPP	18 42 54.6	
KIV				e		18 45 49.0	
KIV				ePS	PS	18 50 13.4	+5.4
KIV				eSS	SS	18 56 48.6	+3.8
KIV				pmax	pmax		
	comp=Z,57nm,1.0s						
KIV				MLR	MLR		
	comp=Z,11µm,22.0s						
KIV	Kislovodsk	120.18	50	IAMs_20	IAMs_20	19 31 26.7	
	comp=Z,3µm,20.0s						
KVAR	Kislovodsk Arr	120.19	50	PKP	PKPdf	18 38 51.7	-0.3
	comp=Z,2.5nm,0.6s,baz=88,slow=23,SNR=8.3						
KVAR				PP	PP	18 40 14.7	-2.9
	comp=Z,3.5nm,0.6s,baz=21,slow=19,SNR=1.8						
BILL	Bilibino	120.22	339	ePKIKP	PKPdf	18 38 51.2	0.0
BILL				ePPP	PPP	18 42 47.1	
BILL				e		18 46 02.6	
BILL				eSS	SS	18 56 44.8	+1.4
BILL				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BILL	Bilibino	120.22	339	IAMs_20	IAMs_20	19 36 20.8	
	comp=Z,6µm,20.0s						
NEY	Neytrino	120.22	51	⇑iPKIKP	PKPdf	18 38 51.8	-0.4
KBZ	Khabaz	120.34	50	PKP	PKiKP	18 38 52.8	+0.6
	comp=Z,10nm,0.9s,baz=239,slow=4.0,SNR=14						
KBZ				PP	PP	18 40 15.6	-2.8
	comp=Z,12nm,1.1s,baz=276,slow=4.8,SNR=2.2						
KBZ	Khabaz	120.34	50c	iPKIKP	PKiKP	18 38 52.7	+0.5
GOF	Gofitskoye	120.41	49	⇑ePKIKP	PKiKP	18 38 53.2	+0.9
GOF				pmax	pmax		
	comp=Z,62nm,1.4s						
AKH	Akhalkalaki	120.81	53	IAMs_20	IAMs_20	19 33 06.9	
	comp=Z,6µm,22.0s						
NCK	Nalchik	120.85	51	⇑iPKIKP	PKPdf	18 38 52.3	-0.9
RAYN	Ar Rayn	121.06	74	i PKiKP	PKiKP	18 38 55.1	+0.8
	SNR=21						
RAYN	Ar Rayn	121.06	74	PKIKP	PKPdf	18 38 54.2	0.0
RAYN				MLR	MLR		
	comp=Z,18µm,18.0s						
RAYN	Ar Rayn	121.06	74		PKPdf	18 38 54.2	0.0
ZEI	Tsey	121.09	51	i PKIKP	PKiKP	18 38 54.8	+0.8
ZEI				pmax	pmax		
	comp=Z,16nm,1.0s						
GNI	Garni	121.76	54	PKP	PKiKP	18 38 56.2	+0.8
	comp=Z,19nm,1.1s,baz=155,slow=3.9,SNR=13						
GNI	Garni	121.76	54	i PKiKP	PKiKP	18 38 57.1	+1.7
	SNR=9.0						
GNI	Garni	121.76	54	P	PKiKP	18 38 55.4	0.0
GNI	Garni	121.76	54	IAMs_20	IAMs_20	19 35 39.9	
	comp=Z,6µm,20.0s						
BBOO	Buckleboo	121.82	207	IAMs_20	IAMs_20	19 21 37.3	
	comp=Z,6µm,20.0s						
KIRV	Kirov	122.26	32	PKP	PKiKP	18 38 55.9	+0.4
	comp=Z,8.9nm,0.7s,baz=277,slow=4.6,SNR=6.0						
HNR	Honiara	122.27	245	IAMs_20	IAMs_20	19 21 59.8	
	comp=Z,5µm,20.0s						
GROC	Groznyy	122.47	51	i PKIKP	PKiKP	18 38 58.6	+2.2
GROC				e		18 40 33.7	
GROC				pmax	pmax		
	comp=Z,43nm,1.6s						
MAK	Makhachkala	123.73	51	eP	Pdif	18 35 26.9	-4.6
MAK				i		18 39 00.1	
MAK				e		18 40 39.3	
MAK				e		18 45 57.7	
MAK				ePS	PS	18 50 26.9	-12
MAK				eSS	SS	18 57 28.1	-1.8
MAK				eSSS	SSS	19 02 09.0	
MAK				pmax	pmax		
	comp=Z,294nm,1.2s						
AKT	Akhty	123.99	53	ePKIKP	PKiKP	18 39 02.0	+2.3
AKT				e		18 40 48.3	
AKT				pmax	pmax		
	comp=Z,43nm,1.2s						
H11S2	WAKE ISLAND Hy	125.89	279	T	T	20 58 17.8	
	baz=101,slow=74,SNR=4535						
H11S1	WAKE ISLAND Hy	125.90	279	T	T	20 58 39.9	
	baz=101,slow=74,SNR=1682						
H11S3	WAKE ISLAND Hy	125.91	279	T	T	20 58 22.0	
	baz=101,slow=74,SNR=1379						
H11N3	WAKE ISLAND Hy	125.93	280	T	T	20 58 19.9	
	baz=100,slow=75,SNR=1048						
H11N2	WAKE ISLAND Hy	125.94	280	T	T	20 58 22.9	
	baz=100,slow=75,SNR=1744						
H11N1	WAKE ISLAND Hy	125.95	280	T	T	20 58 24.4	
	baz=100,slow=75,SNR=958						
CTA	Charters Tower	126.33	225	PKP	PKiKP	18 39 06.5	+1.6
	comp=Z,11nm,0.9s,baz=171,slow=1.2,SNR=8.1						
CTAO	Charters Tower	126.33	225	IAMs_20	IAMs_20	19 25 19.1	
	comp=Z,6µm,21.0s						
SOCY	Socotra	126.56	89	P	PKPdf	18 39 04.6	-0.4
FORT	Forrest	126.64	200	IAMs_20	IAMs_20	19 35 08.5	
	comp=Z,4µm,22.0s						
TIXI	Tiksi	126.79	352	IAMs_20	IAMs_20	19 32 46.7	
	comp=Z,6µm,22.0s						
ABTO	Aybut	127.12	83	P	PKPdf	18 39 05.9	-0.1
	SNR=10						
ARU	Arti	127.62	33	i PKIKP	PKiKP	18 39 07.2	+0.9
ARU						18 41 05.8	
ARU				PPP	PPP	18 43 48.8	
ARU						18 46 15.5	
ARU				SP	SP	18 51 06.0	-4.0
ARU				PS	PS	18 51 18.9	+5.9
ARU				SS	SS	18 58 11.8	-5.7
ARU				SSS	SSS	19 02 59.7	
ARU				MLR	MLR		
	comp=Z,10µm,21.0s						
WHFO	Wadi Hawf	127.68	82	P	PKPdf	18 39 06.4	-0.6
	SNR=9.3						
SEY	Seymchan	127.76	337	⇑iPKIKP	PKiKP	18 39 06.3	0.0
SVE	Sverdlovsk	128.51	32	i PKIKP	PKiKP	18 39 09.5	+1.5
SVE				pmax	pmax		
	comp=Z,37nm,1.5s						
SVE				MLR	MLR		
	comp=E,6µm,19.0s						
SVE				MLR	MLR		
	comp=Z,8µm,18.0s						
SVE				MLR	MLR		
	comp=N,2µm,19.0s						
NRIK	Noril'sk	128.62	10	PKP	PKiKP	18 39 08.1	+0.2
	comp=N,1.9nm,0.5s,baz=30,slow=0.4,SNR=9.1						
NRIK				PP	PP	18 41 11.0	-1.7
	comp=N,4.2nm,0.9s,baz=334,slow=2.0,SNR=3.7						
DMTO	DMTO	128.74	83	P	PKiKP	18 39 09.6	-0.1
AKTO	Aktyubinsk	129.43	40	PKIKP	PKiKP	18 39 11.1	+1.0
PET	Petropavlovsk	129.58	323	⇑ePKIKP	PKiKP	18 39 12.8	+2.5
PEA0B	Petropavlovsk-	130.08	324	IAMs_20	IAMs_20	19 45 46.6	
	comp=Z,4µm,20.0s						
PETK	Petropavlovsk-	130.08	324	PKP	PKiKP	18 39 12.0	+0.7
	comp=Z,8.4nm,0.9s,baz=81,slow=11,SNR=4.9						
MA2	Magadan	130.34	334	⇑iPKIKP	PKiKP	18 39 12.3	+0.7
MA2	Magadan	130.34	334	IAMs_20	IAMs_20	19 45 33.3	
	comp=Z,4µm,19.0s						
ALNE	Al Ain	130.43	75	i PKiKP	PKiKP	18 39 14.8	+1.8
	SNR=6.5						
NAZ	Nazwa, Dubai	130.44	74	i PKiKP	PKiKP	18 39 15.0	+2.1
	SNR=7.7						
ASAR	Alice Springs	130.63	210	PKP	PKPdf	18 39 12.6	0.0
	comp=Z,19nm,1.1s,baz=136,slow=2.1,SNR=16						
ASAR				SKPab	SKPab	18 42 38.4	+2.3
	comp=Z,7.7nm,1.2s,baz=153,slow=3.0,SNR=4.4						
ASHO	Ashiyiah	130.77	74	P	PKPdf	18 39 12.9	+0.1
HATD	Hatta, Dubai	130.85	74	i PKiKP	PKiKP	18 39 16.0	+2.2
	SNR=9.3						
HATD	Hatta, Dubai	130.85	74	P	PKPdf	18 39 13.0	+0.1
	SNR=7.9						
UOSS	Minazif	130.93	74	i PKiKP	PKiKP	18 39 14.1	+0.2
	SNR=10.0						
UOSS	Minazif	130.93	74	P	PKiKP	18 39 14.0	+0.1
SHME	Shamm	130.96	72	i PKiKP	PKiKP	18 39 15.8	+1.8
	SNR=8.4						
AB31	Akbulak array	130.99	41	i PKIKP	PKPdf	18 39 12.2	-0.1
BANOM	Banah	131.09	72	P	PKiKP	18 39 14.4	+0.2
SOHO	SOHO	131.15	75	P	PKiKP	18 39 14.4	+0.1
	SNR=10						
DQM	DQM	131.54	80	P	PKiKP	18 39 15.8	+0.6
	SNR=8.3						
RABL	Rabaul	131.57	245	IAMs_20	IAMs_20	19 25 33.5	
	comp=Z,4µm,21.0s						
BSY	Bisya	131.61	77	P	PKiKP	18 39 15.0	-0.3
	SNR=8.6						
SKR	Severo-Kuril's	131.92	321	i PKIKP	PKiKP	18 39 26.4	+11
SKR				ePS	PS	18 51 43.5	-7.0
SKR				pmax	pmax		
	comp=Z,900nm,14.9s						
SKR				pmax	pmax		
	comp=Z,2µm,13.5s						
MHTO	MHTO	132.10	79	P	PKiKP	18 39 17.0	+0.7

	SNR=9.4						
GEYT	Alibeck	132.30	56	PKP	PKPdf	18 39 15.6	+0.3
	comp=Z,9.1nm,1.0s,baz=263,slow=7.3,SNR=4.2						
JMDO	Jabal Madar	132.40	77	P	PKiKP	18 39 17.2	+0.3
SMDO	Samad	132.43	76	P	PKiKP	18 39 16.8	-0.3
	SNR=17						
ASHT	Ashkhabad	132.51	56	IAMs_20	IAMs_20	19 50 45.8	
	comp=Z,3µm,20.0s						
COEN	Coen	132.72	228	IAMs_20	IAMs_20	19 29 43.2	
	comp=Z,4µm,19.0s						
PMG	Port Moresby	132.75	236⇑	*i*PKIKP	PKiKP	18 39 18.8	+0.9
PMG				MLR	MLR		
	comp=Z,14µm,17.0s						
PMG	Port Moresby	132.75	236	IAMs_20	IAMs_20	19 27 32.8	
	comp=Z,5µm,21.0s						
WSAR	Wadi Sarin	132.98	76	P	PKiKP	18 39 17.7	-0.4
	SNR=6.3						
WBK	Wadi Bani Khal	133.22	77	P	PKiKP	18 39 19.0	+0.4
	SNR=8.2						
WRA	Warramunga Arr	133.54	213	PKhKP	PKPpre	18 38 57.6	
	comp=Z,0.2nm,0.5s,baz=202,slow=23,SNR=5.1						
WRA				PKP	PKPdf	18 39 18.1	-0.1
	comp=Z,19nm,0.9s,baz=150,slow=1.7,SNR=31						
WRA				SKPbc	SKPab	18 42 47.4	-1.2
	comp=Z,52nm,1.3s,baz=144,slow=3.3,SNR=13						
WRAB	Tennant Creek	133.54	213*c*	*i*PKIKP	PKiKP	18 39 20.0	+0.6
WRAB	Tennant Creek	133.54	213		PKPpre	18 39 05.6	
BRVK	Borovoye	135.20	33⇑	*i*PKIKP	PKiKP	18 39 21.4	-0.3
BRVK				pmax	pmax		
	comp=Z,30nm,1.7s						
BRVK				MLR	MLR		
	comp=Z,12µm,22.0s						
YAK	Yakutsk	135.38	346	*e*PKIKP	PKPdf	18 39 16.1	-4.1
YAK				*e*SS	SS	18 59 46.3	-4.8
YAK				pmax	pmax		
	comp=Z,27nm,1.1s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.4s						
YAK				MLR	MLR		
	comp=Z,4µm,25.0s						
YAK				MLR	MLR		
	comp=N,2µm,25.0s						
YAK				MLR	MLR		
	comp=E,2µm,23.0s						
YAK	Yakutsk	135.38	346	IAMs_20	IAMs_20	19 41 56.8	
	comp=Z,4µm,21.0s						
MANU	Manus Island	136.77	244	IAMs_20	IAMs_20	19 29 30.2	
	comp=Z,3µm,21.0s						
PSAD2	Pilbara Seismi	137.61	195	IAMs_20	IAMs_20	19 43 14.8	
	comp=Z,3µm,19.0s						
PSAB3	Pilbara Seismi	137.66	195	IAMs_20	IAMs_20	19 40 05.1	
	comp=Z,4µm,20.0s						
PSAA3	Pilbara Seismi	137.67	195	IAMs_20	IAMs_20	19 35 30.5	
	comp=Z,4µm,19.0s						
PSAC2	Pilbara Seismi	137.68	195	IAMs_20	IAMs_20	19 37 25.6	
	comp=Z,4µm,22.0s						
PSA00	Pilbara Seismi	137.68	195	IAMs_20	IAMs_20	19 35 31.7	
	comp=Z,5µm,20.0s						
PSAA2	Pilbara Seismi	137.69	195	IAMs_20	IAMs_20	19 35 31.0	
	comp=Z,4µm,19.0s						
PSAB1	Pilbara Seismi	137.69	195	IAMs_20	IAMs_20	19 35 31.0	
	comp=Z,4µm,19.0s						
PSAB2	Pilbara Seismi	137.69	195	IAMs_20	IAMs_20	19 35 31.1	
	comp=Z,4µm,20.0s						
MBWA	Marble Bar	138.11	195	IAMs_20	IAMs_20	19 36 08.0	
	comp=Z,4µm,19.0s						
BRZS	Berezniki	138.13	35	*e*PP	PP	18 42 15.4	+1.3
NKL	Nikolayevsk	138.73	332	*i* PKIKP	PKPdf	18 39 21.9	-4.7
NKL				*e*		18 42 21.5	
KUR	Kuril'sk	139.21	318	*e*P	Pdif	18 36 50.3	+10
KUR				*i*		18 39 31.3	
KUR				*e*SS	SS	19 00 33.8	-4.4
KUR				MLR	MLR		
	comp=Z,2µm,19.0s						
CHM	Chimkent	139.74	47	*e*PKP	PKPdf	18 39 29.6	+0.7
CHM	Chimkent	139.74	47	*e*PKIKP	PKPdf	18 39 29.6	+0.7
KK31	Karatay Array	140.06	46	*i* PKIKP	PKiKP	18 39 30.9	-1.0
JBG	Jabagly	140.34	46	*e*PKIKP	PKiKP	18 39 32.0	-0.7
JBG				*e*		18 42 27.0	
DZA	Taraz	140.69	45	*e*PKP	PKPdf	18 39 31.6	+1.0
DZA	Taraz	140.69	45	*e*PKIKP	PKPdf	18 39 31.6	+1.0
KURK	Kurchatov	140.74	31⇓	*i*PKIKP	PKPdf	18 39 29.3	-1.1
KURK				MLR	MLR		
	comp=Z,8µm,22.0s						
KURBB	Kurchatov Arra	140.75	31	PKIKP	PKPdf	18 39 28.1	-2.3
YUK	Yuzh-Kuril'sk	141.02	317	*e*PKHKP	PKPpre	18 39 26.7	
YUK				*i* SS	SS	19 01 04.8	+5.3
ZALV	Zalesovo Beam	141.03	23	PKhKP	PKPpre	18 39 23.1	
	comp=Z,3.5nm,0.6s,baz=298,slow=4.0,SNR=12						
ZALV				PKP	PKPdf	18 39 31.6	+0.7
	comp=Z,14nm,0.8s,baz=282,slow=2.7,SNR=20						
YSS	Yuzh-Sakhalins	141.46	323⇓	*e*PKHKP	PKPpre	18 39 25.8	
YSS				*i*		18 39 33.5	
YSS				*e*		18 42 37.9	
YSS				*e*		18 46 33.2	
YSS				*e*PPS	PPS	18 54 52.1	
YSS				*e*SS	SS	19 01 01.3	-2.9
YSS				*e*SSS	SSS	19 06 14.0	
YSS				pmax	pmax		
	comp=Z,20nm,1.4s						
YSS				pmax	pmax		
	comp=E,10.0nm,0.9s						
YSS				pmax	pmax		
	comp=Z,800nm,9.5s						
YSS				pmax	pmax		
	comp=Z,800nm,10.3s						
YSS	Yuzh-Sakhalins	141.46	323	IAMs_20	IAMs_20	19 52 58.3	
	comp=Z,4µm,19.0s						
BTLS	Baital	141.48	41	*e*PKP	PKiKP	18 39 35.7	+0.9
BTLS				*e*PP	PP	18 43 06.7	+32
BTLS	Baital	141.48	41	*e*PKIKP	PKiKP	18 39 35.6	+0.9
SEM	Semipalatinsk	141.72	30	*e*PKP	PKPdf	18 39 30.3	-2.2
SEM				*i* PP	PP	18 42 36.6	+0.3
SEM	Semipalatinsk	141.72	30	*e*PKIKP	PKPdf	18 39 30.3	-2.2
SEM				*i*		18 42 36.5	
BOD	Bodaibo	141.77	356	*e*PKHKP	PKPpre	18 39 26.4	
BOD				pmax	pmax		
	comp=Z,25nm,1.4s						
GRNR	Gornyy	142.28	332	*e*PKIKP	PKPdf	18 39 31.9	-1.3
EKS2	Erkin-Say	142.42	45	P	PKPdf	18 39 31.4	-2.5
	SNR=9.2						
AML	Almayashu	142.60	45	P	PKPdf	18 39 31.9	-2.7
	SNR=10						
SGDS	Sogindy	142.61	43⇓	*i*PKP	PKPdf	18 39 30.8	-3.3
SGDS				*e*PP	PP	18 42 42.8	+0.8
USP	Ospenovka	142.62	43	P	PKiKP	18 39 37.6	+0.4
	SNR=12						
AAK	Ala-Archa	142.90	44	P	PKPdf	18 39 33.7	-1.1
	SNR=34						
AAK	Ala-Archa	142.90	44	*i* PKiKP	PKPdf	18 39 35.1	+0.3
	SNR=12						
AAK	Ala-Archa	142.90	44⇓	*e*PKIKP	PKPdf	18 39 33.6	-1.1
AAK				MLR	MLR		
	comp=Z,5µm,20.0s						
AAK	Ala-Archa	142.90	44		PKPdf	18 39 34.2	-0.6
AAK	Ala-Archa	142.90	44	IAMs_20	IAMs_20	19 50 12.8	
	comp=Z,5µm,20.0s						
CHMS	Chumysh	142.90	44	P	PKPdf	18 39 34.5	-0.1
	SNR=13						
BHUJ	Bhuj	143.09	77	*e*P	PKPab	18 39 31.4	+0.5
BHUJ				*i* PP	PP	18 42 45.7	-0.1
UCH	Uchtor	143.10	45	P	PKPdf	18 39 34.5	-1.0
	SNR=25						
MNCY	Minicoy	143.18	103	*e*x	PKPab	18 39 29.7	-1.7
MNCY				*i* x	x	18 42 43.7	
KBK	Karagaybulak	143.19	44	P	PKPdf	18 39 35.9	+0.6
	SNR=10						
ZEA	Zeya	143.30	342	*i* PKHKP	PKPpre	18 39 29.0	
ZEA				*e*		18 42 49.0	
ZEA				*e*PPP	PPP	18 46 00.5	
ZEA				*e*		18 55 24.0	
ZEA				pmax	pmax		
	comp=N,29nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,55nm,1.4s						
ZEA				pmax	pmax		
	comp=N,400nm,16.0s						
ZEA				pmax	pmax		
	comp=E,200nm,16.0s						
ZEA				pmax	pmax		
	comp=Z,2µm,16.0s						
ZEA				pmax	pmax		
	comp=N,600nm,14.0s						
ZEA				pmax	pmax		
	comp=E,300nm,14.0s						
KUU	Kurty	143.47	41⇓	*i*PKP	PKPbc	18 39 33.2	+0.4
KUU				*e*PP	PP	18 42 48.1	+1.0
KUU	Kurty	143.47	41*d*	*i*PKIKP	PKPbc	18 39 33.1	+0.3
KUU				*e*		18 42 48.0	
KZA	Kyzart	143.66	45	P	PKPbc	18 39 34.8	+0.9
	SNR=16						
ERM	Erimo	143.71	315⇑	*e*PKIKP	PKPdf	18 39 36.1	+0.1
ERM				MLR	MLR		
	comp=Z,3µm,18.0s						
ERM	Erimo	143.71	315	IAMs_20	IAMs_20	19 37 37.9	
	comp=Z,4µm,21.0s						
AAA	Alma-Ata	144.18	42	*e*PKP	PKPdf	18 39 37.4	+0.4
AAA				*e*PP	PP	18 42 53.3	+1.9
AAA	Alma-Ata	144.18	42	*e*PKIKP	PKPdf	18 39 37.3	+0.4
AAA				*e*		18 42 53.3	
KNDC	Almaty	144.21	42	PKIKP	PKPdf	18 39 36.6	-0.3
ULHL	Ulahol	144.23	44	P	PKPdf	18 39 36.5	-0.7
	SNR=55						
MDOK	Medeo	144.29	42	*i* PKP	PKPab	18 39 33.7	-1.5
MDOK				*e*PP	PP	18 42 49.0	-3.1
MDOK	Medeo	144.29	42	*i* PKHKP	PKPpre	18 39 33.6	
MDOK				*e*		18 42 49.0	
TNSS	Tian-Shan	144.29	42	*e*PKP	PKPdf	18 39 36.7	-0.8
TNSS	Tian-Shan	144.29	42	*e*PKIKP	PKPdf	18 39 36.7	-0.8
MAKZ	Makanchi	144.98	33	PKIKP	PKPab	18 39 36.0	-1.4
MAKZ	Makanchi	144.98	33		PKPab	18 39 37.2	-0.2
KPKS	Kokpek	145.14	40	*e*PKP	PKPbc	18 39 38.0	-0.2
KPKS				*e*PP	PP	18 42 56.2	-0.9
KPKS	Kokpek	145.14	40	*e*PKP2	PKPbc	18 39 37.9	-0.2
KPKS				*e*		18 42 56.2	
MK31	Makanchi Array	145.15	33	*i* PKP2	PKPbc	18 39 37.0	-0.9
MK31	Makanchi Array	145.15	33		PKPab	18 39 38.0	0.0
MKAR	Makanchi Array	145.15	33	PKP	PKPbc	18 39 37.4	-0.5
	comp=Z,126nm,1.0s,baz=326,slow=4.4,SNR=168						
MKAR	Makanchi Array	145.15	33		PKPbc	18 39 37.7	-0.3
NIL	Nilore	145.18	59	P	PKPdf	18 39 38.9	0.0
NIL	Nilore	145.18	59	PKP2	PKPbc	18 39 37.7	-0.7
NIL				MLR	MLR		
	comp=Z,12µm,19.0s						
NIL	Nilore	145.18	59		PKPbc	18 39 37.7	-0.7
SATY	Saty	145.19	41⇑	*i*PKP	PKPbc	18 39 38.0	-0.4
SATY				*e*PP	PP	18 42 57.7	+0.2
SATY	Saty	145.19	41*c*	*i*PKP2	PKPbc	18 39 37.9	-0.4
SATY				*e*		18 42 57.6	
KSH	Kashi	145.28	48	PKPbc	PKPab	18 39 38.8	0.0
KSH				PP	PP	18 43 03.8	+5.6
KSH				PKS		18 43 12.8	
KSH				SKKS		18 49 51.3	
KSH				AMB	AMB		
	comp=Z,2µm,6.3s						
KSH				LR	LR		
	comp=Z,910nm,10.9s						
KSH				LR	LR		
	comp=Z,2µm,13.6s						
KSH				LR	LR		
	comp=Z,4µm,18.1s						
GUMO	Guam	145.35	265	IAMs_20	IAMs_20	19 37 41.2	
	comp=Z,4µm,21.0s						
DGZ	Jazzator, Alta	145.38	25*c*	*e*PKP2	PKPbc	18 39 38.0	-0.7
DGZ				MLR	MLR		
	comp=Z,6µm,20.0s						
KLR	Kul'dur	145.44	334*d*	*e*PKP2	PKPbc	18 39 37.5	-1.2
KLR				MLR	MLR		
	comp=Z,7µm,23.0s						
UZB	Uzynbulak	145.52	41⇑	*i*PKP	PKPdf	18 39 39.0	-0.3
UZB				*e*PP	PP	18 42 58.2	-1.3
UZB	Uzynbulak	145.52	41*c*	*i*PKP2	PKPdf	18 39 39.0	-0.3
UZB				*e*		18 42 58.1	
PDGK	Podgornoye	145.71	40	PKP2	PKPab	18 39 41.6	+1.3
SHLS	Shalkode	145.79	40	*e*PKP	PKPdf	18 39 39.4	-0.3
SHLS				*e*PP	PP	18 43 02.0	+1.0
SHLS	Shalkode	145.79	40	*e*PKIKP	PKPdf	18 39 39.4	-0.3
SHLS				*e*		18 43 02.0	
ZSN	Zaisan	145.96	30⇑	*e*PKP	PKPdf	18 39 39.4	-0.4
ZSN				*e*PP	PP	18 43 03.0	+1.5
ZSN	Zaisan	145.96	30*c*	*e*PKIKP	PKPdf	18 39 39.3	-0.4
ZSN				*e*		18 43 02.9	
GOA	Goa	146.04	91	*e*P	PKPdf	18 39 39.4	-1.3
TEY	Ternei	146.05	324⇓	*e*PKP2	PKPab	18 39 42.0	+0.7
TEY				pmax	pmax		
	comp=E,20nm,1.2s						
TEY				pmax	pmax		
	comp=N,10.0nm,1.5s						
TEY				pmax	pmax		
	comp=Z,60nm,1.2s						
TEY				pmax	pmax		
	comp=Z,300nm,10.5s						
POO	Poona	146.60	86	*e*P	PKPdf	18 39 40.5	-1.2
IRK	Irkutsk	147.29	6	*e*PKIKP	PKPdf	18 39 42.8	+1.0
IRK				pmax	pmax		
	comp=Z,257nm,2.8s						
MOY	Mondy	147.45	10	*e*PKP2	PKPab	18 39 46.6	-0.1
MOY				pmax	pmax		
	comp=Z,238nm,1.5s						
CIT	Chita	147.57	355	*e*PKP2	PKPbc	18 39 45.8	+0.8
CIT				*e*		18 43 12.4	
CIT				pmax	pmax		
	comp=Z,219nm,1.4s						
TLY	Talaya	147.79	7*c*	*i*PKIKP	PKPdf	18 39 43.0	+0.3
TLY				*e*		18 43 09.4	
TLY				pmax	pmax		
	comp=Z,261nm,1.4s						
TLY	Talaya	147.79	7	IAMs_20	IAMs_20	19 58 43.3	
	comp=Z,3µm,18.0s						
DHRM	DHARAMSHALA	148.01	60	*e*P	PKPdf	18 39 43.2	-0.8
FAKI	Fak Fak	148.10	228		PKPbc	18 39 48.4	+0.8
SMLA	Simla	149.00	62	*e*P	PKPdf	18 39 43.8	-1.4
ZAK	Zakamensk	149.03	7	*e*PKIKP	PKPbc	18 39 47.0	-1.9
ZAK				pmax	pmax		
	comp=Z,57nm,1.3s						
USA0B	Ussuriysk Arra	149.06	327⇓	*e*PKIKP	PKPbc	18 39 47.5	-1.5
USA0B	Ussuriysk Arra	149.06	327	IAMs_20	IAMs_20	19 51 25.5	
	comp=Z,5µm,22.0s						
USRK	Ussuriysk Ar.	149.06	327	PKPbc	PKPbc	18 39 47.1	-1.9
	comp=Z,30nm,1.0s,baz=22,slow=1.0,SNR=21						
MMRI	Maumere	149.06	206	IAMs_20	IAMs_20	19 37 49.0	
	comp=Z,4µm,20.0s						
KLRI	Killari	149.12	88	*e*P	PKPdf	18 39 43.3	-2.6
KLRI				*e*PP	PP	18 43 18.4	-3.3
KLRI				*e*SKKSac	SKKSac	18 50 09.4	-3.6
KLRI				IVMs_BB	IVMs_BB	19 47 25.6	
	comp=Z,2µm,18.4s						
URV	Uravakonda	149.16	94	*e*P	PKPdf	18 39 43.1	-2.9
URV				*e*PP	PP	18 43 19.4	-2.5
URV				*e*SKKSac	SKKSac	18 50 10.2	-3.0
URV				IVMs_BB	IVMs_BB	19 45 44.9	
	comp=Z,2µm,20.6s						
MJAR	Matsushiro Arr	149.58	310	PKP	PKPdf	18 39 47.5	+1.4
	comp=Z,17nm,1.0s,baz=139,slow=0.1,SNR=13						
MJAR				PKPbc	PKiKP	18 39 52.2	+0.4
	comp=Z,42nm,1.0s,baz=110,slow=0.9,SNR=42						
MJAR				PKPab	pPKPbc	18 39 56.1	+1.3
	comp=Z,20nm,0.7s,baz=91,slow=1.0,SNR=30						
MAJO	Matsushiro	149.58	310	PKP2	PKPbc	18 39 51.0	+0.4
MAJO				MLR	MLR		
	comp=Z,6µm,22.0s						
MAJO	Matsushiro	149.58	310		PKPbc	18 39 51.0	+0.4
MAT	Matsushiro	149.59	310	PKP	PKPdf	18 39 47.6	+1.5
PALK	Pallekele	149.71	110	*i* PKiKP	PKPbc	18 39 50.5	-1.1
	SNR=35						
PALK	Pallekele	149.71	110*c*	*e*PKHKP	PKPpre	18 39 48.1	
PALK	Pallekele	149.71	110		PKiKP	18 39 52.3	-0.4
XMIS	Christmas Isla	149.80	173	IAMs_20	IAMs_20	19 39 40.5	
	comp=Z,4µm,21.0s						
VLA	Vladivostok	149.87	326⇓	*e*PKIKP	PKPdf	18 39 46.1	-0.2
MDJ	Mudanjiang	149.93	330	PKPbc	PKPdf	18 39 48.1	+1.8
MDJ				PP	PP	18 43 25.0	+0.4
MDJ				LR	LR		
	comp=Z,2µm,23.1s						
MDJ				LR	LR		
	comp=Z,2µm,26.5s						
MDJ	Mudanjiang	149.93	330	IAMs_20	IAMs_20	19 54 21.3	
	comp=Z,4µm,20.0s						
DDI	Dehra Dun	149.94	63	*e*P	PKPbc	18 39 49.6	-2.2
WMQ	Urumqi	149.96	32	*e*PKPbc	PKPdf	18 39 47.6	+1.1
WMQ				pPKP	sPKPdf	18 39 53.9	+1.8
WMQ				PP	PP	18 43 32.6	+7.6
WMQ				AMB	AMB		
	comp=Z,2µm,11.9s						
WMQ				LR	LR		
	comp=Z,6µm,23.5s						
WMQ				LR	LR		
	comp=Z,11µm,21.7s						
WMQ				LR	LR		
	comp=Z,9µm,19.9s						
BHPL	Bhopal	150.24	77	*e*P	PKPdf	18 39 48.1	+0.6
BHPL				*i* x	x	18 43 24.1	
HYBB	Hyderabad (bro	150.86	89	*e*P	PKPdf	18 39 45.8	-2.8
HYBB				*e*PP	PP	18 43 29.4	-2.4
HYBB				*e*SKKSac	SKKSac	18 50 17.5	-5.1
HYBB				IVMs_BB	IVMs_BB	19 44 25.1	
	comp=Z,2µm,21.0s						
HYB	Hyderabad	150.86	89	*i* PKP	PKPdf	18 39 50.0	+1.4
HYB				*e*PP	PP	18 43 30.0	-1.8
HYB				*e*		18 50 22.0	
HYB				*e*		18 53 50.0	
HYB				*e*		18 56 32.0	
HYB	Hyderabad	150.86	89	*e*P	PKPdf	18 39 44.3	-4.4
SRSP	Sriramsagar	150.87	86	*e*P	PKPdf	18 39 47.8	-0.7
SRSP				*e*PP	PP	18 43 29.2	-2.6
SRSP				*e*SKKSac	SKKSac	18 50 19.1	-3.5
SRSP				IVMs_BB	IVMs_BB	19 52 36.2	
	comp=Z,2µm,17.0s						
SRLM	Srisailam	150.94	92	*e*P	PKPdf	18 39 49.9	+1.1
SRLM				*e*PP	PP	18 43 29.5	-2.7
SRLM				*e*SKKSac	SKKSac	18 50 20.1	-3.0
SRLM				IVMs_BB	IVMs_BB	19 47 25.3	
	comp=Z,1µm,19.4s						
INU	Inuyama	150.97	308	IAMs_20	IAMs_20	19 43 03.7	
	comp=Z,4µm,20.0s						
SKHT	Srikalahasti	151.15	97	*e*P	PKPdf	18 39 49.3	+0.3
SKHT				*e*PP	PP	18 43 28.1	-5.3
SKHT				*e*SKKSac	SKKSac	18 50 20.4	-3.7
SKHT				IVMs_BB	IVMs_BB	19 42 32.5	
	comp=Z,928nm,21.8s						
NJS	Nagarjunasagar	151.42	91	*e*P	PKPdf	18 39 46.4	-3.0
NJS				*e*PP	PP	18 43 33.5	-1.5
NJS				*e*SKKSac	SKKSac	18 50 20.8	-4.8
NJS				IVMs_BB	IVMs_BB	19 49 10.4	
	comp=Z,967nm,17.4s						
MDRS	Chennai	151.46	99	*e*P	PKPdf	18 39 48.7	-0.8
MDRS				*i* x	x	18 43 26.4	
JAGI	Jajag, Banyuwa	151.59	190	IAMs_20	IAMs_20	19 49 06.2	
	comp=Z,3µm,20.0s						
RPR	Rampur	151.76	87	*e*P	PKPdf	18 39 49.5	-0.4
RPR				*e*PP	PP	18 43 31.7	-5.1
RPR				*e*SKKSac	SKKSac	18 50 20.9	-6.5
SONM	Songino Array	151.84	4	PKP	PKPdf	18 39 50.6	+1.2
	comp=Z,18nm,1.3s,baz=260,slow=0.5,SNR=34						
SONM				PKPbc	sPKPdf	18 39 57.0	+2.1
	comp=Z,27nm,1.0s,baz=294,slow=1.4,SNR=38						
SONM				PKPab	sPKPbc	18 40 03.6	+2.3
	comp=Z,31nm,0.9s,baz=316,slow=1.4,SNR=15						
ULN	Ulaanbaatar	151.85	3*c*	*i*PKIKP	PKPdf	18 39 51.1	+1.7
ULN				pmax	pmax		
	comp=Z,40nm,1.7s						
ADKI	Addanki	151.90	93	*e*P	PKPdf	18 39 46.6	-3.5
ADKI				*e*PP	PP	18 43 35.2	-2.5
ADKI				*e*SKKSac	SKKSac	18 50 24.5	-3.7
ADKI				IVMs_BB	IVMs_BB	19 46 38.3	
	comp=Z,1µm,21.1s						
GGR	Gangavaram	152.47	89	*e*P	PKPdf	18 39 49.0	-2.0
GGR				*e*PP	PP	18 43 39.0	-2.0
GGR				*e*SKKSac	SKKSac	18 50 27.8	-3.6
GGR				IVMs_BB	IVMs_BB	19 45 32.2	
	comp=Z,1µm,19.5s						
MYLAV	Mylavaram	152.71	92	*e*P	PKPdf	18 39 50.9	-0.4
MYLAV				*e*PP	PP	18 43 40.1	-2.2
MYLAV				*e*SKKSac	SKKSac	18 50 29.1	-3.4
MYLAV				IVMs_BB	IVMs_BB	19 49 47.1	
	comp=Z,1µm,18.4s						
PVM	Polavaram	153.72	91	*e*P	PKPdf	18 39 52.4	-0.4
PVM				*e*PP	PP	18 43 45.6	-2.4
PVM				*e*SKKSac	SKKSac	18 50 33.7	-4.4
PVM				IVMs_BB	IVMs_BB	19 50 45.2	
	comp=Z,1µm,19.4s						
SNY	Shenyang	154.80	334	⇑PKPbc	PKPdf	18 39 53.8	+0.2
SNY				PP	PP	18 43 51.6	-0.6
SNY				AMB	AMB		
	comp=Z,1µm,10.3s						
SNY				LR	LR		
	comp=Z,5µm,22.6s						
SNY				LR	LR		
	comp=Z,3µm,23.0s						
SNY				LR	LR		
	comp=Z,8µm,21.6s						
DANN	Dangsing	155.24	65	*e*P	PKPdf	18 39 56.7	+1.6
	comp=Z,328nm,1.0s						
MNAI	Manna	155.31	165	IAMs_20	IAMs_20	19 58 41.1	
	comp=Z,4µm,19.0s						
LUWI	Luwuk	155.47	214	IAMs_20	IAMs_20	19 42 47.4	
	comp=Z,4µm,21.0s						
KSRS	Korea Array	155.94	321	PKP	PKPdf	18 39 56.5	+1.2
	comp=Z,7.9nm,1.0s,baz=50,slow=0.9,SNR=31						
KSRS				PKPab	PKPab	18 40 21.2	-1.1
	comp=Z,10nm,1.0s,baz=74,slow=0.9,SNR=7.2						
GKN	Gorkha	156.08	65	*e*P	PKPdf	18 39 57.2	+1.2
	comp=Z,136nm,1.3s						
CHLP	Challavanipeta	156.20	89	*e*P	PKPdf	18 39 52.9	-3.3
CHLP				*e*PP	PP	18 43 59.8	-2.1
CHLP				*e*SKKSac	SKKSac	18 50 42.1	-9.2
CHLP				IVMs_BB	IVMs_BB	19 46 43.9	
	comp=Z,1µm,21.0s						
JNU	Nakatsue	156.50	309	IAMs_20	IAMs_20	20 04 22.5	
	comp=Z,3µm,22.0s						
DMN	Daman	156.58	66	*e*P	PKPdf	18 39 57.9	+1.1
	comp=Z,96nm,1.3s						
INCN	Inchon	156.67	323	IAMs_20	IAMs_20	20 04 11.3	
	comp=Z,4µm,21.0s						
KKN	Kakani	156.69	65	*e*P	PKPdf	18 39 57.8	+0.9
	comp=Z,62nm,1.2s						
PKIN	Phulchoki	156.84	66	*e*P	PKPdf	18 39 57.8	+0.6
	comp=Z,41nm,1.2s						
PKI	Pulchoki	156.85	66	*e*P	PKPdf	18 39 58.0	+0.7
	comp=Z,83nm,1.4s						
GUN	Gumba	157.16	65	*e*P	PKPdf	18 39 58.7	+1.0
	comp=Z,108nm,1.3s						
JIRN	Jiri	157.50	65	*e*P	PKPdf	18 39 59.2	+1.1
	comp=Z,71nm,1.3s						
BOK	Bokaro	157.96	75	*e*P	PKPdf	18 39 55.9	-2.5
BOK				*i* x	x	18 44 08.3	
RAMN	Ramite	158.03	67	*e*P	PKPdf	18 39 59.6	+0.9
	comp=Z,165nm,1.4s						
DL2	Dalian	158.06	333	PKP	PKPdf	18 39 57.8	-0.2
DL2				PP	PP	18 44 12.8	+2.5
DL2				SS	SS	19 04 09.4	+0.8
DL2				AMB	AMB		
	comp=Z,930nm,11.8s						
DL2				LR	LR		
	comp=Z,3µm,18.8s						
DL2				LR	LR		
	comp=Z,2µm,18.9s						
DL2				LR	LR		
	comp=Z,5µm,20.6s						
ODAN	Odare	158.74	66	*e*P	PKPdf	18 39 59.7	+0.2
	comp=Z,122nm,1.4s						
GTA	Gaotai	158.75	20	PKP	PKPdf	18 39 58.8	-0.2
GTA				SS	SS	19 04 18.6	+2.6
GTA				AMB	AMB		
	comp=Z,1µm,8.9s						
GTA				LR	LR		
	comp=Z,4µm,20.0s						
GTA				LR	LR		
	comp=Z,3µm,22.8s						
GTA				LR	LR		
	comp=Z,5µm,20.0s						
HHC	Hu-ho-hao-te	158.83	355	*e*PKP	PKPdf	18 40 02.1	+3.1
HHC				AMB	AMB		
	comp=Z,910nm,7.6s						
HHC				LR	LR		
	comp=Z,2µm,18.1s						
HHC				LR	LR		
	comp=Z,2µm,20.3s						
HHC				LR	LR		
	comp=Z,3µm,20.8s						
BJI	Beijing	158.87	345	PKP	PKPdf	18 40 01.9	+3.0
BJI				PP	PP	18 44 15.0	+0.6
BJI				AMB	AMB		
	comp=Z,1µm,13.9s						
BJI				LR	LR		
	comp=Z,3µm,22.3s						
BJI				LR	LR		
	comp=Z,4µm,22.7s						
BJI				LR	LR		
	comp=Z,5µm,26.3s						
TAPN	Taplejung	158.88	65	*e*P	PKPdf	18 39 59.7	0.0
	comp=Z,120nm,1.4s						

BTO	**Baotou**	**159.16**	**358**	*e*PKP	**PKPdf**	**18 39 57.0**	**-2.4**
GTK	**Tadong**	**159.65**	**64**	*e*P	**PKPdf**	**18 39 58.3**	**-2.1**
GTK				*i* x	x	18 44 13.6	
DAV	**Davao City (W)**	**159.75**	**234**	IAMs_20	IAMs_20	19 46 43.3	
	comp=Z,4µm,21.0s						
KCP	**Kidapawan**	**160.08**	**233**	⇑*e*P	**PKPdf**	**18 40 03.2**	**+2.1**
RPSI	**Rantau Prapat**	**160.33**	**148**		**PKPdf**	**18 40 03.1**	**+1.7**
RPSI					**PKPab**	**18 40 42.5**	**+0.7**
PSI	**Prapat**	**160.42**	**148**	PKP	**PKPdf**	**18 40 03.1**	**+1.4**
	comp=Z,13nm,0.8s						
PSI				PKPab	**PKPab**	**18 40 42.5**	**+0.2**
	comp=Z,23nm,0.9s,baz=145,slow=12,SNR=3.2						
LSA	**Lhasa**	**160.83**	**55**	PKP	**PKPdf**	**18 40 02.6**	**+0.5**
LSA				LR	LR		
	comp=Z,2µm,19.2s						
LSA				LR	LR		
	comp=Z,3µm,18.5s						
LSA				LR	LR		
	comp=Z,4µm,22.8s						
LSA	**Lhasa**	**160.83**	**55**	*i* PKPdf	**PKPdf**	**18 40 04.3**	**+2.2**
	SNR=31						
TIY	**Taiyuan**	**161.84**	**352**	*e*PKP	**PKPdf**	**18 40 05.6**	**+3.2**
TIY				PP	**PP**	**18 44 33.6**	**+3.2**
TIY				SS	SS	19 04 45.8	-2.1
TIY				AMB	AMB		
	comp=Z,1µm,9.2s						
TIY				LR	LR		
	comp=Z,4µm,18.8s						
TIY				LR	LR		
	comp=Z,3µm,19.7s						
TIY				LR	LR		
	comp=Z,8µm,20.1s						
TIA	**Tai'an**	**162.15**	**339**	PKP	**PKPdf**	**18 40 04.5**	**+1.8**
TIA				SKKS		18 51 26.8	
TIA				AMB	AMB		
	comp=Z,750nm,11.4s						
TIA				LR	LR		
	comp=Z,1µm,19.9s						
TIA				LR	LR		
	comp=Z,3µm,20.6s						
TIA				LR	LR		
	comp=Z,3µm,22.1s						
PBA	**Port Blair**	**162.24**	**114**	*e*P	PKPdf	18 40 01.9	-1.4
PBA				*i* x	x	18 44 32.5	
SHL	**Shillong**	**162.97**	**67**	*e*P	**PKPdf**	**18 40 01.3**	**-2.7**
SHL				*i* x	x	18 44 36.3	
LZH	**Lanzhou**	**163.01**	**15**	⇑PKP	**PKPdf**	**18 40 04.5**	**+0.8**
LZH				PP	**PP**	**18 44 36.3**	**-0.6**
LZH				SKKS		18 51 25.6	
LZH				SS	**SS**	**19 05 01.1**	**+0.6**
LZH				AMB	AMB		
	comp=Z,3µm,9.5s						
LZH				LR	LR		
	comp=Z,5µm,18.4s						
LZH				LR	LR		
	comp=Z,6µm,19.0s						
LZH				LR	LR		
	comp=Z,8µm,21.0s						
DGPR	**DIGLIPUR**	**163.09**	**110**	*e*P	**PKPdf**	**18 40 00.8**	**-3.3**
DGPR				*i* x	x	18 44 37.7	
TEZP	**TEZPUR**	**163.41**	**62**	*e*P	**PKPdf**	**18 40 00.8**	**-3.4**
TEZP				*i* x	x	18 44 35.2	
SSE	**Sheshan**	**164.34**	**319**	PKP	**PKPdf**	**18 40 02.9**	**-2.0**
SSE				PP	**PP**	**18 44 45.8**	**+1.3**
SSE				SS	SS	19 05 13.4	-2.0
SSE				AMB	AMB		
	comp=Z,500nm,13.1s						
SSE				LR	LR		
	comp=Z,1µm,22.9s						
SSE				LR	LR		
	comp=Z,330nm,20.0s						
KOHI	**KOHIMA**	**164.83**	**64**	*e*P	**PKPdf**	**18 40 01.0**	**-4.7**
KOHI				*i* x	x	18 44 48.5	
NJ2	**Nanjing**	**164.97**	**327**	*e*PKP	**PKPdf**	**18 40 05.3**	**-0.1**
NJ2				PP	**PP**	**18 44 47.0**	**-0.5**
NJ2				SS	SS	19 05 21.8	+0.6
NJ2				LR	LR		
	comp=Z,3µm,22.6s						
NJ2				LR	LR		
	comp=Z,3µm,19.9s						
NJ2				LR	LR		
	comp=Z,4µm,21.8s						
LKP	**Lekhapani**	**165.58**	**56**	*e*P	**PKPdf**	**18 40 04.7**	**-1.3**
LKP				*i* x	x	18 44 52.7	
XAN	**Xi'an**	**165.72**	**1**	PKP	**PKPdf**	**18 40 07.6**	**+1.5**
XAN				pPKP	sPKPdf	18 40 14.6	+3.0
XAN				PKPab	**PKPab**	**18 41 02.9**	**-2.0**
XAN				PP	**PP**	**18 44 50.0**	**-0.8**
XAN				SKS	**SKSdf**	**18 47 01.8**	**-8.3**
XAN				LR	LR		
	comp=Z,5µm,20.6s						
XAN				LR	LR		
	comp=Z,3µm,20.3s						
XAN				LR	LR		
	comp=Z,6µm,24.4s						
WHN	**Wuhan**	**168.25**	**338**	PKP	**PKPdf**	**18 40 10.0**	**+2.1**
WHN				PKPab	**PKPab**	**18 41 16.6**	**+0.5**
WHN				PP	**PP**	**18 45 04.3**	**+0.3**
WHN				SKKS		18 51 58.0	
WHN				LR	LR		
	comp=Z,8µm,17.1s						
WHN				LR	LR		
	comp=Z,4µm,18.6s						
WHN				LR	LR		
	comp=Z,18µm,21.6s						
QZH	**Quanzhou**	**169.88**	**303**	*i* PKP	**PKPdf**	**18 40 10.6**	**+1.5**
QZH				PP	**PP**	**18 45 14.1**	**+0.5**
QZH				SKKS		18 52 01.5	
QZH				SS	**SS**	**19 06 16.0**	**+3.5**
QZH				AMB	AMB		
	comp=Z,860nm,8.4s						
QZH				LR	LR		
	comp=Z,2µm,21.8s						
QZH				LR	LR		
	comp=Z,3µm,21.3s						
QZH				LR	LR		
	comp=Z,4µm,21.8s						
CMAR	**Chiang Mai Arr**	**170.21**	**96**	PKP	**PKPdf**	**18 40 10.8**	**+1.3**
	comp=Z,10nm,1.1s,baz=259,slow=1.7,SNR=37						
CMAR				PKPab	**PKPab**	**18 41 26.5**	**+1.0**
	comp=Z,15nm,0.9s,baz=264,slow=4.7,SNR=16						
CMAR				PP	**PP**	**18 45 18.5**	**+2.5**
	comp=Z,12nm,1.2s,baz=262,slow=5.4,SNR=6.8						
KMI	**Kunming**	**171.94**	**47**	PKP	**PKPdf**	**18 40 09.6**	**-0.9**
GYA	**Guiyang**	**172.88**	**19**	*i* PKP	**PKPdf**	**18 40 12.3**	**+1.5**
GYA				PKPab	**PKPab**	**18 41 37.8**	**+0.9**
GYA				PKS		18 43 39.4	
GYA				SKKS		18 52 11.0	
GYA				SS	**SS**	**19 06 37.5**	**-2.2**
GYA				AMB	AMB		
	comp=Z,1µm,11.0s						
GYA				LR	LR		
	comp=Z,3µm,19.5s						
GYA				LR	LR		
	comp=Z,3µm,19.9s						
GYA				LR	LR		
	comp=Z,3µm,20.2s						
GZH	**Guangzhou**	**174.89**	**312**	PKP	**PKPdf**	**18 40 10.5**	**-0.9**
GZH				SS	SS	19 06 56.6	-4.2
GZH				LR	LR		
	comp=Z,4µm,20.6s						
GZH				LR	LR		
	comp=Z,5µm,19.5s						
QIZ	**Qiongzhong**	**179.11**	**221**	PKP	**PKPdf**	**18 40 11.4**	**-0.8**
QIZ				PKPab	pPKPab	18 42 06.0	-2.8
QIZ				PP	**PP**	**18 45 59.6**	**+1.9**
QIZ				SKKS		18 52 46.3	
QIZ				SS	**SS**	**19 07 42.1**	**+1.8**
QIZ				LR	LR		
	comp=Z,4µm,20.6s						
QIZ				LR	LR		
	comp=Z,3µm,16.7s						
QIZ				LR	LR		
	comp=Z,5µm,21.6s						

IDC 23 18:23:04.2±2.6**, 5°.04S×128°.57E, h0^{km}, mb3.1**/1**, mb1 3.5**/3**, mb1mx3.2**/39**, mbtmp3.2**/3**, ML3.4**/2**, Error ellipse: s-maj=205.4km s-min=31.5km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.84**	**160**	Pn	Pn	18 26 48.7	0.0
	0.1nm,0.3s,baz=342,slow=13,SNR=2.4						
WRA				Sn	Sn	18 29 34.8	-10
	0.2nm,0.3s,baz=49,slow=23,SNR=5.5						
ASAR	**Alice Springs**	**19.22**	**165**	P	P	18 27 30.1	+0.1
	0.2nm,0.3s,baz=347,slow=12,SNR=18						
ASAR				S	Sn	18 30 56.1	-11
	0.0nm,0.3s,baz=350,slow=24,SNR=1.6						
MKAR	**Makanchi Array**	**65.82**	**327**	P	P	18 33 51.4	0.0
	0.1nm,0.3s,baz=125,slow=8.1,SNR=1.2						

DJA 23 18:30:44.3±0.7**, 10°S**±4°×**11°4E**±°**, h14^{km}**±5^{km}**, M3.9**/11**, mb4.3**/1**, MLv3.7**/11**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	**1.22**	**359**	P	Pn	18 31 06.0	-1.0
JAGI				S	Sn	18 31 23.4	+0.1
DNP	**Denpasar**	**1.45**	**45**	P	Pn	18 31 09.9	-0.1
DNP				S	Sb	18 31 29.6	+0.3
GMJI	**Gumukmas**	**1.59**	**333**	P	Pn	18 31 10.6	-1.4
GMJI				S	Sn	18 31 31.5	-0.9
SRBI	**Singaraja**	**1.91**	**33**	P	Pn	18 31 16.8	+0.4
GRJI	**Gresik**	**3.23**	**329**	P	Pn	18 31 35.3	+0.6
GRJI				S	Sn	18 32 13.9	+0.9
PCJI	**Pacitan**	**3.31**	**297**	P	Pn	18 31 35.3	-0.5
PCJI				S	Sn	18 32 16.6	+1.6
PLAI	**Plampang**	**3.66**	**77**	P	Pn	18 31 40.5	-0.1
PLAI				S	Sn	18 32 23.1	-0.6
WOJI	**Wonogiri, Jawa**	**3.70**	**300**	P	Pn	18 31 40.9	-0.2
CISI	**Cisompet, Garu**	**6.63**	**288**	P	Pn	18 32 21.6	+0.1
EDFI	**Ende, Flores**	**7.48**	**83**	P	Pn	18 32 33.7	+0.5

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*PDG **23** 18:31:48.7±1.7, 37°.49N×16°.70E, h11^{km}±2^{km}, ML4.3/13, Error ellipse: s-maj=2.3km s-min=2.8km az=0.0*

*IDC **23** 18:31:49.4±1.1, 37°.64N×16°.49E, h0^{km}, mb3.8/4, mb1 3.9/10, mb1mx3.7/50, mbtmp3.9/10, ML4.0/5, MS3.8/1, Ms1 3.8/1, ms1mx3.2/40, Error ellipse: s-maj=23.7km s-min=15.8km az=171.0*

*ROM **23** 18:31:53.0±0.2, 37°.509N±0°.007×16°.43E±0°.01, h38^{km}, ML3.7/46, Error ellipse: s-maj=1.1km s-min=0.6km az=305.0*

ISC 23 18:31:52.2±0.7**, 37°.66N**±0°.04×**16°.51E**±0°.03**, h26^{km}, n159, σ2^{s}18**/194**, mb3.9**/4**, 19C-26D, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPAZ	**Palizzi**	**0.49**	**307**	⇓P	**Pn**	**18 32 04.9**	**+1.3**
MPAZ				S	**Sn**	**18 32 12.9**	**+1.5**
MPAZ				AML	AML		
	comp=N,8810µm,0.3s						
MPAZ				AML	AML		
	comp=E,4465µm,1.3s						
SOI	**Samo**	**0.55**	**320**	⇓P	**Pn**	**18 32 06.0**	**+1.6**
SOI				S	**Sn**	**18 32 15.6**	**+2.9**
SOI				AML	AML		
	comp=N,1835µm,0.8s						
SOI				AML	AML		
	comp=E,2395µm,0.4s						
SOI				AML	AML		
	comp=N,1830µm,0.8s						
MTTG	**Motta San Giov**	**0.73**	**299**	⇓P	**Pn**	**18 32 07.9**	**+1.0**
MTTG				S	**Sn**	**18 32 19.1**	**+1.9**
MTTG				AML	AML		
	comp=N,3760µm,1.5s						
MTTG				AML	AML		
	comp=E,3755µm,0.5s						
GMB	**Gambarie**	**0.74**	**314**	⇓P	**Pn**	**18 32 08.5**	**+1.4**
GMB				S	**Sn**	**18 32 19.8**	**+2.2**
GMB				AML	AML		
	comp=E,18150µm,1.4s						
GMB				AML	AML		
	comp=N,14200µm,0.9s						
GMB				AML	AML		
	comp=E,18150µm,1.4s						
GMB				AML	AML		
	comp=N,14200µm,0.9s						
CEL	**Celeste**	**0.77**	**321**	⇓P	**Pn**	**18 32 09.3**	**+1.8**
CEL				S	**Sn**	**18 32 20.9**	**+2.6**
CEL				AML	AML		
	comp=E,6575µm,0.9s						
CEL				AML	AML		
	comp=E,5545µm,0.9s						
CEL				AML	AML		
	comp=N,3150µm,1.5s						
CEL				AML	AML		
	comp=N,2510µm,1.5s						
PLAC	**Placanica**	**0.80**	**356**	⇓P	**Pn**	**18 32 10.1**	**+2.3**
PLAC				S	**Sn**	**18 32 21.9**	**+3.1**
PLAC				AML	AML		
	comp=E,2790µm,0.4s						
PLAC				AML	AML		
	comp=N,3420µm,0.5s						
PLAC				AML	AML		
	comp=E,3565µm,0.5s						
PLAC				AML	AML		
	comp=N,3425µm,0.5s						
PLAC				AML	AML		
	comp=N,3045µm,0.4s						
MSCL	**Scilla**	**0.81**	**316**	⇓P	**Pn**	**18 32 09.7**	**+1.7**
MSCL				AML	AML		
	comp=E,5100µm,1.4s						
MSCL				AML	AML		
	comp=N,6865µm,0.9s						
MSCL				AML	AML		
	comp=N,6860µm,0.9s						
MSRU	**Castanea**	**0.99**	**308**	⇓P	**Pb**	**18 32 12.1**	**+1.3**
MSRU				S	**Sn**	**18 32 26.3**	**+2.6**
MSRU				AML	AML		
	comp=E,3260µm,0.4s						
MSRU				AML	AML		
	comp=E,3255µm,0.4s						
MSRU				AML	AML		
	comp=N,2450µm,0.5s						
MPNC	**Port Mandanici**	**1.04**	**299**	⇓P	**Pb**	**18 32 12.4**	**+0.9**
MPNC				AML	AML		
	comp=E,6530µm,0.5s						
MPNC				AML	AML		
	comp=N,4625µm,0.6s						
AIO	**Antillo**	**1.06**	**288**	⇓P	**Pb**	**18 32 12.0**	**+0.1**
AIO				S	**Sn**	**18 32 25.2**	**-0.1**
AIO				AML	AML		
	comp=E,1425µm,0.4s						
AIO				AML	AML		
	comp=N,1620µm,0.4s						
JOPP	**Joppolo**	**1.07**	**333**	⇓P	**Pb**	**18 32 13.6**	**+1.5**
JOPP				S	**Sb**	**18 32 27.8**	**+2.2**
JOPP				AML	AML		
	comp=N,2550µm,0.8s						
JOPP				AML	AML		
	comp=E,1535µm,1.5s						
MCSR	**Castroreale**	**1.07**	**293**	⇓P	**Pb**	**18 32 12.7**	**+0.5**
MCSR				AML	AML		
	comp=N,5975µm,0.3s						
MCSR				AML	AML		
	comp=N,5980µm,0.3s						
MCSR				AML	AML		
	comp=E,4135µm,0.3s						
AGST	**Augusta-Monte**	**1.09**	**249**	⇑P	**Pn**	**18 32 10.4**	**-1.4**
AGST				S	**Sn**	**18 32 22.6**	**-3.4**
AGST				AML	AML		
	comp=E,3850µm,1.0s						
AGST				AML	AML		
	comp=N,4145µm,0.5s						
HAGA	**Augusta**	**1.14**	**251**	⇑P	**Pn**	**18 32 11.1**	**-1.3**
HAGA				S	**Sn**	**18 32 23.9**	**-3.3**
HAGA				AML	AML		
	comp=E,4885µm,1.0s						
HAGA				AML	AML		
	comp=N,4660µm,0.6s						
NOV	**Novara**	**1.15**	**289**	P	**Pb**	**18 32 13.3**	**-0.1**
NOV				S	**Sb**	**18 32 27.8**	**-0.1**
NOV				AML	AML		
	comp=N,1770µm,1.5s						
NOV				AML	AML		
	comp=E,2555µm,0.8s						
GRI	**Girifalco**	**1.17**	**357**	P	**Pb**	**18 32 15.3**	**+1.6**
GRI				AML	AML		
	comp=E,1470µm,0.4s						
GRI				AML	AML		
	comp=N,1405µm,0.9s						
MILZ	**Milazzo**	**1.18**	**302**	AML	AML		
	comp=E,5175µm,0.5s						
MILZ				AML	AML		
	comp=N,3530µm,0.8s						
HCRL	**Carlentini**	**1.23**	**253**	⇑P	**Pn**	**18 32 12.7**	**-1.0**
HCRL				S	**Sn**	**18 32 26.7**	**-2.7**
HCRL				AML	AML		
	comp=N,7000µm,0.9s						
HCRL				AML	AML		
	comp=E,20000µm,0.4s						
SSY	**Sortino**	**1.25**	**247**	P	**Pn**	**18 32 12.5**	**-1.5**
SSY				S	**Sn**	**18 32 26.6**	**-3.4**
SSY				AML	AML		
	comp=N,4945µm,0.3s						
SSY				AML	AML		
	comp=E,3765µm,0.8s						
HAVL	**Avola**	**1.30**	**238**	⇑P	**Pn**	**18 32 13.4**	**-1.3**
HAVL				S	**Sn**	**18 32 28.2**	**-3.1**
HAVL				AML	AML		
	comp=E,6715µm,0.3s						
HAVL				AML	AML		
	comp=N,5295µm,0.3s						
HLNI	**Lentini**	**1.33**	**257**	⇓P	**Pn**	**18 32 14.0**	**-1.1**
HLNI				S	**Sn**	**18 32 29.0**	**-3.1**
HLNI				AML	AML		
	comp=E,5110µm,0.8s						
HLNI				AML	AML		
	comp=N,4150µm,0.3s						
MUCR	**Ucria**	**1.35**	**287**	⇓P	**Pb**	**18 32 16.3**	**-0.6**
MUCR				AML	AML		
	comp=E,669µm,0.3s						
MUCR				AML	AML		
	comp=N,2330µm,0.5s						
MEU	**Monte Lauro**	**1.37**	**247**	P	**Pn**	**18 32 15.3**	**-0.4**
MEU				S	**Sn**	**18 32 31.6**	**-1.6**
MEU				AML	AML		
	comp=N,6355µm,0.3s						
MEU				AML	AML		
	comp=E,7260µm,0.4s						
SERS	**Sersale**	**1.39**	**6**	⇑P	**Pb**	**18 32 18.4**	**+0.9**
SERS				AML	AML		
	comp=E,944µm,0.5s						
SERS				AML	AML		
	comp=N,892µm,0.6s						
SERS				AML	AML		
	comp=E,897µm,0.4s						
SERS				AML	AML		
	comp=N,1029µm,0.5s						
SERS				AML	AML		
	comp=E,946µm,0.5s						
SERS				AML	AML		
	comp=N,1025µm,0.5s						
SERS				AML	AML		
	comp=N,892µm,0.6s						
VPL	**Vulcano Piano**	**1.40**	**301**	P	**Pb**	**18 32 17.0**	**-0.7**
ECNV	**Catenanuova**	**1.43**	**268**	AML	AML		
	comp=E,2945µm,1.6s						
ECNV				AML	AML		
	comp=N,3855µm,1.1s						
LLI	**Lipari**	**1.46**	**303**	P	**Pb**	**18 32 18.1**	**-0.6**
LLI				AML	AML		
	comp=E,7650µm,0.7s						
LLI				AML	AML		
	comp=E,7655µm,0.7s						
LLI				AML	AML		
	comp=N,10850µm,0.6s						
MNO	**Monte Soro**	**1.46**	**281**	P	**Pb**	**18 32 18.0**	**-0.9**
MNO				AML	AML		
	comp=E,3345µm,1.2s						
MNO				AML	AML		
	comp=N,2345µm,1.3s						
MNO				AML	AML		
	comp=E,3330µm,1.2s						
HPAC	**Pachino**	**1.47**	**230**	P	**Pn**	**18 32 16.6**	**-0.3**
HPAC				S	**Sn**	**18 32 34.0**	**-1.3**
HPAC				AML	AML		
	comp=N,2560µm,0.4s						
HPAC				AML	AML		
	comp=E,3115µm,1.1s						
HVZN	**Vizzini**	**1.50**	**252**	P	**Pn**	**18 32 16.6**	**-0.9**
HVZN				S	**Sn**	**18 32 33.9**	**-2.4**
HVZN				AML	AML		
	comp=E,14850µm,1.0s						
HVZN				AML	AML		
	comp=N,18600µm,0.6s						
HVZN				AML	AML		
	comp=N,18600µm,0.6s						
IST3	**Stromboli F**	**1.52**	**319**	P	**Pb**	**18 32 18.8**	**-0.9**
IST3				AML	AML		
	comp=E,1450µm,1.4s						
IST3				AML	AML		
	comp=N,1515µm,0.9s						
TIP	**Timpagrande**	**1.53**	**7**	⇑P	**Pb**	**18 32 20.2**	**+0.2**
TIP				⇓S	**Sn**	**18 32 37.7**	**+0.6**
TIP	**Timpagrande**	**1.53**	**7**	P	**Pb**	**18 32 20.2**	**+0.2**
TIP				AML	AML		
	comp=E,496µm,0.4s						
TIP				AML	AML		
	comp=N,547µm,0.5s						
TIP				AML	AML		
	comp=E,586µm,0.4s						
TIP				AML	AML		
	comp=E,496µm,0.4s						
TIP				AML	AML		
	comp=N,702µm,0.5s						
TIP				AML	AML		
	comp=N,548µm,0.5s						
GALF	**Gagliano Caste**	**1.54**	**273**	P	**Pn**	**18 32 18.7**	**+0.7**
GALF				AML	AML		
	comp=E,1775µm,0.5s						
GALF				AML	AML		
	comp=N,1960µm,0.5s						
HMDC	**Modica**	**1.54**	**244**	⇑P	**Pn**	**18 32 16.9**	**-1.1**
HMDC				S	**Sn**	**18 32 34.4**	**-2.8**
CAR1	**CAROLEI**	**1.61**	**352**	P	**Pb**	**18 32 21.3**	**0.0**
CAR1				AML	AML		
	comp=E,2795µm,0.9s						
CAR1				AML	AML		
	comp=E,3470µm,0.8s						
CAR1				AML	AML		
	comp=N,2415µm,0.9s						
CAR1				AML	AML		
	comp=N,2490µm,0.6s						
LADO	**San Nicola del**	**1.67**	**13**	P	**Pb**	**18 32 22.1**	**-0.1**
LADO				AML	AML		
	comp=E,620µm,0.4s						
LADO				AML	AML		
	comp=N,449µm,0.8s						
VAE	**Valguarnera**	**1.67**	**265**	Pn	**Pb**	**18 32 21.8**	**-0.5**
	comp=N,2.3nm,0.3s,baz=186,slow=21,SNR=3.5						
VAE				Sn	**Sb**	**18 32 44.2**	**+1.2**
	comp=N,34nm,0.3s,baz=300,slow=20,SNR=7.8						
HBSP	**Bosco Santo Pi**	**1.69**	**252**	P	**Pn**	**18 32 19.3**	**-0.7**
HBSP				AML	AML		
	comp=E,4625µm,0.3s						
HBSP				AML	AML		
	comp=N,3365µm,1.4s						
CELI	**Celico**	**1.75**	**0**	P	**Pb**	**18 32 23.9**	**+0.2**
CELI				AML	AML		
	comp=E,1635µm,1.3s						
CELI				AML	AML		
	comp=N,2060µm,0.9s						
IFIL	**Filicudi I Eol**	**1.78**	**301**	P	**Pn**	**18 32 21.8**	**+0.5**
IFIL				AML	AML		
	comp=E,4270µm,0.6s						
IFIL				AML	AML		
	comp=N,1920µm,0.3s						
IACL	**Alicudi**	**1.91**	**298**	P	**Pn**	**18 32 23.7**	**+0.6**
IACL				AML	AML		
	comp=E,851µm,0.5s						
IACL				AML	AML		
	comp=N,760µm,0.4s						
CET2	**Cetraro**	**1.92**	**347**	P	**Pb**	**18 32 24.8**	**-1.7**
CET2				AML	AML		
	comp=N,4365µm,0.6s						
CET2				AML	AML		
	comp=E,2145µm,0.7s						
CLTA	**Licata**	**2.09**	**257**	P	**Pn**	**18 32 26.4**	**+0.9**
WDD	**Wied Dalam**	**2.41**	**222**	P	**Pn**	**18 32 29.9**	**0.0**
BULG	**Bulgheria - Ca**	**2.58**	**340**	P	**Pn**	**18 32 34.1**	**+1.8**
BULG				AML	AML		
	comp=E,602µm,0.5s						
BULG				AML	AML		
	comp=N,942µm,0.4s						
MGR	**Morigerati**	**2.59**	**344**	P	**Pn**	**18 32 34.3**	**+1.9**
MGR				AML	AML		
	comp=N,710µm,1.4s						
MGR				AML	AML		
	comp=E,665µm,1.5s						
SCTE	**Santa Cesarea**	**2.86**	**32**	P	**Pn**	**18 32 36.8**	**+0.7**

TAR1	Taranto	2.93	12	ePn	Pn	18 32 37.9	+0.8
TAR1				Sn	Sn	18 33 10.6	-0.8
MIGL	Miglionico	2.95	359	P	Pn	18 32 39.7	+2.4
MIGL				AML	AML		
	comp=N,1123µm,0.4s						
MIGL				AML	AML		
	comp=E,1030µm,1.4s						
MATE	Matera	2.99	3	⇑P	Pn	18 32 39.0	+1.1
MATE				⇑S	Sn	18 33 11.3	-1.7
MATE	Matera	2.99	3	P	Pn	18 32 39.2	+1.2
MATE				AML	AML		
	comp=E,555µm,0.3s						
MATE				AML	AML		
	comp=N,520µm,0.6s						
CGL1	Ceglie Messapi	3.09	14	ePn	Pn	18 32 40.4	+1.1
CGL1				Sn	Sn	18 33 14.2	-1.2
MESG	Mesagne	3.11	19	AML	AML		
	comp=E,752µm,0.4s						
MESG				AML	AML		
	comp=N,1490µm,0.2s						
NOCI	Noci	3.16	8	AML	AML		
	comp=N,901µm,1.1s						
NOCI				AML	AML		
	comp=E,846µm,0.9s						
SG1	Sgolgore (BA)	3.18	2	ePn	Pn	18 32 41.8	+1.2
SG1				Sn	Sn	18 33 16.1	-1.6
AMUR	Altamura	3.25	1	P	Pn	18 32 43.5	+2.0
VLS	Valsamata	3.27	80	P	Pn	18 32 42.5	+0.7
VLS	Valsamata	3.27	80	P	Pn	18 32 42.5	+0.7
VLS				AML	AML		
	comp=E,224µm,0.3s						
VLS				AML	AML		
	comp=N,413µm,0.5s						
KEK	Kerkira	3.29	50	P	Pn	18 32 42.2	+0.1
KEK	Kerkira	3.29	50	P	Pn	18 32 42.4	+0.3
KEK				AML	AML		
	comp=E,86µm,0.4s						
KEK				AML	AML		
	comp=N,94µm,0.5s						
FSK	Fiskardo	3.30	75	P	Pn	18 32 43.4	+1.2
MRVN	Minervino Murg	3.41	356	AML	AML		
	comp=E,252µm,0.6s						
MRVN				AML	AML		
	comp=N,291µm,0.3s						
EVGI	Lefkada island	3.41	72	P	Pn	18 32 45.1	+1.4
KFL	Anninata	3.42	81	P	Pn	18 32 44.5	+0.7
BAI	Bari	3.46	5	ePn	Pn	18 32 45.4	+1.1
BAI				Sn	Sn	18 33 22.4	-2.0
LKD2	Lefkada island	3.46	70	P	Pn	18 32 45.5	+1.1
IGT	Igoumenitsa	3.54	57	P	Pn	18 32 46.0	+0.6
PDO	Prodromos	3.81	74	P	Pn	18 32 51.0	+1.9
JAN	Janina	3.94	58	P	Pn	18 32 52.6	+1.5
PVO	Paravola	4.07	75	P	Pn	18 32 54.9	+2.1
MSAG	Monte S. Angel	4.08	354	AML	AML		
	comp=N,418µm,1.0s						
MSAG				AML	AML		
	comp=E,275µm,1.3s						
DRO	Drossia	4.13	84	P	Pn	18 32 55.2	+1.6
AMT	Artemida-Makis	4.13	90	P	Pn	18 32 54.8	+1.1
PYL	PYLOS	4.24	99	P	Pn	18 32 56.1	+0.9
MEV	Metsovon	4.26	59	P	Pn	18 32 57.8	+2.3
EFP	Efpalio	4.33	78	P	Pn	18 32 58.2	+1.9
ITM	Ithomi	4.34	95	P	Pn	18 32 58.4	+1.9
EVR	Evrytania	4.36	72	P	Pn	18 32 59.8	+3.0
ANX	Ano Chora	4.37	76	P	Pn	18 32 59.2	+2.2
KPRO	Kipourio	4.43	57	P	Pn	18 32 59.8	+2.0
SERG	Sergoula	4.45	79	P	Pn	18 32 59.7	+1.7
KLV	Kalavryta, Ach	4.48	83	P	Pn	18 33 00.1	+1.6
KALE	Kalithea	4.51	79	P	Pn	18 33 00.8	+2.0
TIR	Tirane	4.51	34	⇑P	Pn	18 33 00.1	+1.3
TIR				⇓S	Sn	18 33 50.1	-0.3
MAKR	Makrakomi, Fth	4.63	71	P	Pn	18 33 03.7	+3.3
THL	Klokotos Trika	4.72	64	P	Pn	18 33 03.7	+2.0
THL	Klokotos Trika	4.72	64	P	Pn	18 33 03.6	+2.0
THL				AML	AML		
	comp=N,56µm,0.6s						
THL				AML	AML		
	comp=E,77µm,0.3s						
DYR	Agios Nikonas	4.74	99	P	Pn	18 33 03.1	+1.2
AGG	Agios Georgios	4.78	72	P	Pn	18 33 05.3	+2.8
DSF	Desfina	4.81	79	P	Pn	18 33 04.4	+1.4
AXAR	Agios Charalam	4.97	75	P	Pn	18 33 08.4	+3.2
DRME	Dracevica, Mon	4.97	24	ePn	Pn	18 33 04.6	-0.5
HCY	Herceg Novi	5.02	17	ePn	Pn	18 33 05.8	0.0
PROD	Prodromos	5.09	81	P	Pn	18 33 09.4	+2.6
LTK	Loutraki	5.13	84	P	Pn	18 33 08.5	+1.2
DBRK	Dubrovnik	5.16	14	ePn	Pn	18 33 08.1	+0.3
DBRK				Sn	Sn	18 34 02.0	-4.4
PDG	Podgorica	5.21	23	⇓P	Pn	18 33 09.0	+0.6
PDG				⇓S	Sn	18 34 04.7	-3.0
PDG	Podgorica	5.21	23	⇑P	Sn	18 34 04.9	-2.8
PDG	Podgorica	5.21	23	ePn	Pn	18 33 08.2	-0.3
VLI	Veliai	5.22	98	P	Pn	18 33 11.2	+2.7
TREB	Trebinje	5.25	15	ePn	Pn	18 33 08.8	-0.1
LIT	Litokhoron	5.27	61	P	Pn	18 33 10.4	+1.1
STON	Ston	5.29	10	ePn	Pn	18 33 09.7	+0.3
STON				Sn	Sn	18 34 05.0	-4.5
STON	Ston	5.29	10	ePn	Pn	18 33 10.0	+0.5
DID	Didima	5.35	90	P	Pn	18 33 11.4	+1.0
VILL	Villia	5.41	83	P	Pn	18 33 12.2	+1.0
BRY	Bratogost	5.47	16	ePn	Pn	18 33 12.3	+0.2
NEO	Neokhori	5.52	71	P	Pn	18 33 13.6	+0.9
MAKA	Makarska	5.64	4	i Pn	Pn	18 33 15.1	+0.9
MAKA				Sn	Sn	18 34 13.4	-4.8
MRKA	Markates	5.68	77	P	Pn	18 33 16.6	+1.7
ANKY	Antikythira Is	5.74	106	P	Pn	18 33 17.0	+1.3
VLY	Voula,Athens	5.78	86	P	Pn	18 33 17.9	+1.7
PTL	Penteli	5.84	84	P	Pn	18 33 18.6	+1.5
RICI	Ricice	5.85	4	ePn	Pn	18 33 18.1	+0.9
RICI				Sn	Sn	18 34 19.2	-4.3
VAY	Valandovo	5.95	50	i Pn	Pn	18 33 19.4	+0.9
AOS	Alonnisos	5.99	73	P	Pn	18 33 20.0	+0.9
KEST	Kesra	6.07	254	Pn	Pn	18 33 19.2	-1.0
	comp=E,0.4nm,0.3s,baz=58,slow=14,SNR=5.0						
KEST				Sn	Sn	18 34 29.4	+0.5
	comp=E,0.1nm,0.3s,baz=128,slow=19,SNR=1.7						
RODP	Rodopos	6.20	108	P	Pn	18 33 23.2	+1.2
MORI	Morici	6.23	355	i Pn	Pn	18 33 23.4	+0.9
MORI				Sn	Sn	18 34 28.3	-4.5
RUDO	Rudo	6.34	19	ePn	Pn	18 33 18.0	-6.0
IMMV	Iera Moni Meta	6.40	108	P	Pn	18 33 25.1	+0.3
BBLS	Lazići	6.58	19	ePn	Pn	18 33 28.1	+0.8
HAPS	Han Pijesak,Bl	6.69	15	ePn	Pn	18 33 29.6	+0.8
MGRS	Mrkonjic Grad	6.77	4	ePn	Pn	18 33 32.1	+2.3
DIVS	Divibare	6.96	21	ePn	Pn	18 33 32.7	+0.2
NVLJ	Novalja	7.01	350	i Pn	Pn	18 33 34.0	+0.9
NVLJ				Sn	Sn	18 34 48.4	-3.5
THAS	Thassos island	7.03	63	P	Pn	18 33 33.1	-0.3
IOSP	Ios island	7.07	95	P	Pn	18 33 34.7	+0.7
BLY	Banja Luka	7.11	4	⇓P	Pn	18 33 36.0	+1.6
BLY				⇑S	Sn	18 34 50.1	-4.2
BLY	Banja Luka	7.11	4	ePn	Pn	18 33 35.4	+1.0
VTS	Vitosha	7.15	44	⇓P	Pn	18 33 36.0	+0.8
VTS				⇑S	Sn	18 34 53.1	-2.5
VTS	Vitosha	7.15	44	⇑P	Sn	18 34 53.0	-2.7
IDI	Anoyia	7.16	107	Pn	Pn	18 33 34.9	-0.3
	comp=E,2.2nm,0.3s,baz=270,slow=16,SNR=21						
APE	Apeiranthos	7.21	92	⇑P	Pn	18 33 37.5	+1.5
SANT	Santorini	7.28	97	⇓S	Sn	18 34 53.9	-4.8
ANAF	Anafi Island	7.53	97	P	Pn	18 33 40.7	+0.4
BLKB	Belogradchik	7.58	36	⇑S	Sn	18 35 03.2	-2.9
LAST	Lasithi	7.65	106	P	Pn	18 33 42.9	+0.9
MOSL	Moslavina	7.95	1	ePn	Pn	18 33 46.6	+0.5
MOSL				Sn	Sn	18 35 08.5	-6.7
MDVR	Moldovita	8.13	27	⇓P	Pn	18 33 48.5	0.0
MDVR				⇓S	Sn	18 35 13.5	-6.0
MDVR	Moldovita	8.13	27	⇓P	Sn	18 35 13.9	-5.5
KARP	Karpathos	8.82	101	P	Pn	18 33 58.1	0.0
BZS	Buzias	8.82	24	⇑P	Pn	18 33 57.8	-0.2
BZS				⇓S	Sn	18 35 30.1	-6.5
GZR	Gura Zlata	9.05	29	⇓P	Pn	18 34 02.3	+1.2
GZR				⇑S	Sn	18 35 36.5	-5.6
DRGR		10.22	25	⇑S	Sn	18 36 04.5	-6.4
MLR	Muntele Rosu	10.54	39	Pn	Pn	18 34 25.2	+3.6
	comp=E,0.3nm,0.3s,baz=184,slow=13,SNR=4.8						
MLR				LR	LR	18 39 13.4	
	comp=E,551nm,20.1s,baz=118,slow=42						
MLR	Muntele Rosu	10.54	39	P	Pn	18 34 25.2	+3.6
VYHS	Vyhne	10.97	8	eSN	Sn	18 36 21.1	-8.0
BRTR	Keskin Array B	13.54	76	Pn	Pn	18 35 06.6	+3.9
	comp=E,0.0nm,0.3s,baz=206,slow=5.4,SNR=3.6						
AKASG	Malin Array Be	15.88	31	Pn	P	18 35 36.8	-0.5
	comp=E,0.8nm,0.3s,baz=223,slow=10.0,SNR=24						
MMAI	Mount Meron Ar	16.10	101	Pn	Pn	18 35 36.8	0.0
	comp=E,1.3nm,0.3s,baz=270,slow=11,SNR=7.0						
EIL	Elat	17.28	112	P	Pn	18 35 50.5	-1.1
	comp=E,1.3nm,0.3s,baz=246,slow=1.0,SNR=9.0						
EKA	Eskdalemuir Ar	22.14	329	P	P	18 36 46.5	+0.9
	comp=E,1.5nm,0.8s,baz=150,slow=11,SNR=2.1						
HFS	Hagfors	22.57	356	P	P	18 36 50.3	+0.1
	comp=E,3.1nm,1.0s,baz=156,slow=11,SNR=4.8						
FINES	FINESS Array B	24.55	11	P	P	18 37 10.1	+0.5
	comp=E,5.1nm,0.8s,baz=184,slow=9.0,SNR=8.8						
ARCES	ARCESS Array B	32.31	6	P	P	18 38 18.9	+0.3
	comp=E,2.4nm,1.0s,baz=193,slow=8.7,SNR=5.3						
WRA	Warramunga Arr	123.70	90	PKP	PKiKP	18 50 51.5	+3.4
	comp=E,1.1nm,1.0s,baz=324,slow=5.3,SNR=2.8						
ASAR	Alice Springs	125.29	94	PKP	PKiKP	18 50 51.2	0.0
	comp=E,1.8nm,1.1s,baz=7.8,slow=2.7,SNR=4.2						

IDC ***23*** *18:51:07.1±1.6, 19°.65S×70°.54W, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.7/27, mbtmp3.8/6, ML3.8/1, Error ellipse: s-maj=39.9km s-min=17.4km az=78.0*

NEIC ***23*** *18:51:08.9±2.7, 19°.84S±0°.03×70°.89W±0°.02, h21km±6km, mb4.0/5, Error ellipse: s-maj=4.6km s-min=2.7km az=173.0*

GUC ***23*** *18:51:09.6±0.7, 19°.85S×70°.86W, h40km±3km, ML4.0*

SJA ***23*** *18:51:12.0±0.5, 20°.25S×71°.16W, h40km±36km, ML3.2, MW3.3*

ISC 23 18:51:07.4±1.5**, 19°.79S**±0°.03×**70°.89W**±0°.05**, h12**km±9km**, n55,** σ1ˢ**43**/64**, mb3.9**/4**, 6C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.74	75	⇓iP	Pb	18 51 23.1	+0.6
PSGC				i S	Sb	18 51 33.2	+0.6
PSGCX	Pisagua	0.74	75		Pb	18 51 22.5	+0.1
PSGCX					Sn	18 51 33.3	-1.9
TA01	Diego Aracena	1.01	139	⇓iP	Pb	18 51 27.4	+0.4
TA01				i S	Sb	18 51 40.4	+0.1
TA01				IAML		18 51 43.1	
	comp=E,3µm,0.4s						
PB11	IPOC Station P	1.16	89	eP	Pb	18 51 29.8	+0.3
PB11				i S	Sn	18 51 45.5	-0.1
PB11				IAML		18 51 46.4	
	comp=N,3µm,0.3s						
PB11	IPOC Station P	1.16	89		Pb	18 51 29.9	+0.3
PB11					Sn	18 51 45.5	-0.1
PATCX	Punta Patache	1.23	146		Pn	18 51 30.9	+0.2
PATCX					Sb	18 51 46.4	-0.3
PB12	IPOC Station P	1.28	24	⇑iP	Pg	18 51 32.4	+0.2
PB12				i S	Sn	18 51 50.3	+1.7
PB12	IPOC Station P	1.28	24		Pg	18 51 32.4	+0.2
PB12				Sn	Sn	18 51 49.5	+0.9
AP01	Chacalluta	1.50	20	eP	Pb	18 51 36.0	+0.6
AP01				i S	Sg	18 51 56.4	+0.6
AP01				IAML		18 52 05.0	
	comp=N,6µm,0.5s						
GO01	Chusmiza	1.60	86	eP	Pb	18 51 37.3	+0.1
GO01				eS	Sg	18 51 58.7	-0.2
GO01				IAML		18 52 00.6	
	comp=N,4µm,0.2s						
GO01	Chusmiza	1.60	86		Pb	18 51 37.4	+0.2
PB08	IPOC Station P	1.67	102	⇑iP	Pn	18 51 38.0	+1.2
PB08				i S	Sb	18 51 59.7	+0.3
PB08				IAML		18 52 01.0	
	comp=N,2µm,0.3s						
PB02	IPOC Station P	1.78	149	⇑iP	Pn	18 51 38.7	+0.5
PB02				i S	Sn	18 52 00.6	-0.3
PB02				IAML		18 52 11.7	
	comp=E,5µm,0.4s						
PB01	IPOC Station P	1.81	134	⇑iP	Pn	18 51 39.4	+0.9
PB01				i S	Sn	18 52 01.8	+0.3
PB01				IAML		18 52 09.1	
	comp=N,2µm,0.4s						
PB01	IPOC Station P	1.81	134		Pn	18 51 39.5	+0.9
PB16	IPOC Station P	1.95	42	⇑iP	Pb	18 51 42.7	-0.6
PB16				i S	Sg	18 52 08.9	-1.3
PB16				IAML		18 52 12.0	
	comp=N,2µm,0.3s						
PB16	IPOC Station P	1.95	42		Pb	18 51 42.9	-0.4
PB07	IPOC Station P	2.14	154	eP	Pn	18 51 43.5	+0.3
PB07				IAML		18 52 25.6	
	comp=E,941nm,0.5s						
PB07	IPOC Station P	2.14	154		Pn	18 51 44.2	+1.0
PB09	IPOC Station P	2.52	143	⇑iP	Pn	18 51 50.0	+1.6
PB09				IAML		18 52 32.7	
	comp=N,1µm,0.7s						
PB09	IPOC Station P	2.52	143		Pn	18 51 50.1	+1.7
PB09	IPOC Station P	2.52	143	i P	Pn	18 51 50.2	+1.8
PB09				i Sg	Sg	18 52 28.7	+0.3
PB04	IPOC Station P	2.62	165		Pn	18 51 49.5	-0.3
PB04	IPOC Station P	2.62	165	i P	Pn	18 51 49.5	-0.3
PB04				i Sg	Sn	18 52 26.1	+4.5
PB05	IPOC Station P	3.11	168	i P	Pn	18 51 55.8	-0.7
PB06	IPOC Station P	3.15	157	i P	Pn	18 51 57.4	+0.3
LVC	Limon Verde	3.35	147	Pn	Pn	18 52 01.3	+1.2
	comp=N,10nm,0.3s,baz=334,slow=9.5,SNR=20						
LVC				Sn	Sn	18 52 40.8	+0.7
	comp=N,22nm,0.3s,baz=96,slow=21,SNR=7.2						
LVC				Lg	Lg	18 52 52.6	
	comp=N,45nm,0.3s,baz=228,slow=21,SNR=10						
LVC	Limon Verde	3.35	147		Pn	18 52 02.2	+2.1
LVC	Limon Verde	3.35	147	i P	Pn	18 52 01.9	+1.8
LVC				IAML		18 52 55.6	
	comp=Z,94nm,0.5s						
PB15	IPOC Station P	3.65	159		Pn	18 52 05.2	+1.2
PB15	IPOC Station P	3.65	159	i P	Pn	18 52 04.6	+0.7
PB10	IPOC Station P	3.71	175	i P	Pn	18 52 03.9	-0.9
LPAZ	La Paz	4.36	37	Pn	Pn	18 52 16.4	+2.3
	comp=Z,0.6nm,0.3s,baz=217,slow=2.9,SNR=3.6						
LPAZ	La Paz	4.36	37		Pn	18 52 19.1	+5.0
PB14	IPOC Station P	4.83	175		Pn	18 52 18.5	-1.8
PB14	IPOC Station P	4.83	175	i P	Pn	18 52 19.6	-0.8
GO02	Mina Guanaco	5.48	168		Pn	18 52 28.9	-0.3
YJA	Yavi	5.55	116	i P	Pn	18 52 37.2	+6.8
YJA				IAML		18 52 47.7	
	comp=Z,7.1nm,0.6s						
SIV	San Ignacio	10.08	70	Pn	Pn	18 53 32.8	+0.7
	comp=Z,1.8nm,0.3s,baz=269,slow=10,SNR=25						
PLCA	Paso Flores	20.87	179	P	P	18 55 52.6	+3.1
	comp=Z,2.4nm,0.9s,baz=353,slow=4.8,SNR=3.7						
PLCA	Paso Flores	20.87	179	P	P	18 55 45.8	-3.7
PLCA				IAmb	IAmb	18 55 49.1	
	comp=Z,6.3nm,1.4s						
PTGA	Pitinga	21.75	31	P	P	18 55 58.0	-1.1
	comp=Z,3.9nm,0.3s,baz=185,slow=22,SNR=11						
PTGA	Pitinga	21.75	31	P	P	18 55 57.3	-1.7
PTGA				IAmb	IAmb	18 56 06.0	
	comp=Z,8.8nm,1.2s						
BDFB	Brasilia	22.17	83	P	P	18 56 01.1	-2.6
	comp=Z,1.3nm,0.4s,baz=236,slow=3.6,SNR=3.2						
BDFB	Brasilia	22.17	83	P	P	18 55 59.5	-4.2
BDFB				IAmb	IAmb	18 56 16.7	
	comp=Z,8.5nm,1.3s						
RUSC	La Rusia	25.61	355	P	P	18 56 38.6	+1.1
TORD	Torodi Ar. Bea	78.55	72	P	P	19 03 08.7	-0.7
	comp=Z,0.7nm,0.5s,baz=253,slow=4.9,SNR=6.5						
YKA	Yellowknife Ar	88.98	341	P	P	19 04 02.7	+1.1
	comp=Z,0.1nm,0.4s,baz=132,slow=5.3,SNR=2.2						
H11S2	WAKE ISLAND Hy	125.81	279	T	T	21 29 30.4	
	baz=101,slow=75						
H11S1	WAKE ISLAND Hy	125.82	279	T	T	21 29 29.3	
	baz=101,slow=75,SNR=21						
H11S3	WAKE ISLAND Hy	125.83	279	T	T	21 29 30.3	
	baz=101,slow=75						
H11N3	WAKE ISLAND Hy	125.85	280	T	T	21 29 30.1	
	baz=101,slow=74						
H11N2	WAKE ISLAND Hy	125.86	280	T	T	21 29 30.7	
	baz=173,slow=74						
H11N1	WAKE ISLAND Hy	125.87	280	T	T	21 29 32.0	
MKAR	Makanchi Array	145.28	33	PKP	PKPbc	19 10 45.9	+0.9
	comp=Z,0.4nm,0.6s,baz=328,slow=3.7,SNR=5.8						

MAN 23 18:57:37.2, 7°.81N×124°.68E, h48km, mb4.2, ML3.0, MS2.7, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	Musuan	0.38	80	eP	Pn	18 57 48.8	+1.7
BUKP				eS	Sn	18 57 57.1	+3.1
KCP	Kidapawan	0.89	153	⇓eP	Pn	18 57 54.8	+1.2
PAGZ	Pagadian	1.29	272	eP	Pn	18 57 59.3	+0.5
PAGZ				eS	Sn	18 58 16.1	+1.2
SKMP	Bagumbayan, Su	1.29	186	eP	Pn	18 57 59.8	+0.9
SKMP				eS	Sn	18 58 16.0	+1.0

IDC ***23*** *19:06:06.2±1.4, 19°.46S×70°.64W, h0km, mb3.8/5, mb1 3.9/7, mb1mx3.7/26, mbtmp3.9/7, ML3.7/2, Error ellipse: s-maj=35.3km s-min=25.7km az=94.0*

GUC ***23*** *19:06:10.2±0.6, 19°.69S×70°.67W, h43km±1km, ML3.7*

ISC 23 19:06:08.5±1.6**, 19°.67S**±0°.04×**70°.72W**±0°.06**, h15**km±11km**, n22,** σ1ˢ**26**/35**, mb3.9**/4**, 4C-6D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.56	83	⇓iP	Pb	19 06 20.6	+0.5
PSGC				i S	Sb	19 06 28.9	+0.8
PB11	IPOC Station P	1.00	95	⇓iP	Pb	19 06 27.8	+0.1
PB11				i S	Sb	19 06 41.1	+0.3
PB11				IAML		19 06 45.2	
	comp=N,3µm,0.4s						
TA01	Diego Aracena	1.02	151	⇓iP	Pb	19 06 27.7	-0.2
TA01				i S	Sb	19 06 41.3	+0.1
PB12	IPOC Station P	1.11	19	⇓iP	Pg	19 06 29.8	-0.2
PB12				i S	Sg	19 06 45.2	+0.6
PB12				IAML		19 06 47.2	
	comp=E,4µm,0.2s						
PATCX	Punta Patache	1.26	155	⇑iP	Pn	19 06 31.4	-0.2
PATCX				i S	Sn	19 06 47.7	-0.7
AP01	Chacalluta	1.34	15	eP	Pb	19 06 33.1	-0.2
AP01				i S	Sg	19 06 51.4	-0.4
GO01	Chusmiza	1.44	90	⇓iP	Pn	19 06 35.2	+0.8
GO01				i S	Sb	19 06 53.8	+0.3
PB08	IPOC Station P	1.54	108	⇓iP	Pn	19 06 36.4	+0.6
PB08				i S	Sn	19 06 56.5	+0.8
PB08				IAML		19 06 58.0	
	comp=N,1µm,0.6s						
PB16	IPOC Station P	1.75	41	⇑iP	Pb	19 06 40.5	-0.2
PB16				i S	Sg	19 07 03.7	-1.4
PB16				IAML		19 07 04.9	
	comp=N,1µm,0.5s						
PB01	IPOC Station P	1.79	140	⇑iP	Pn	19 06 39.3	+0.4
PB01				i S	Sn	19 07 01.6	+0.2
PB01				IAML		19 07 04.5	
	comp=E,872nm,0.3s						
PB02	IPOC Station P	1.81	155	⇑iP	Pn	19 06 39.4	+0.2
PB02				IAML		19 07 11.9	
	comp=E,2µm,0.5s						
PB07	IPOC Station P	2.19	159	eP	Pn	19 06 44.7	+0.2
PB07				i S	Sn	19 07 11.1	-0.3
PB07				IAML		19 07 24.1	
	comp=E,690nm,0.5s						
PB09	IPOC Station P	2.53	147	eP	Pn	19 06 50.3	+1.2
PB09				i S	Sn	19 07 21.0	+1.2
PB09				IAML		19 07 34.1	
	comp=N,1µm,0.9s						
LVC	Limon Verde	3.38	150	Pn	Pn	19 07 02.2	+1.2
	comp=N,3.9nm,0.3s,baz=354,slow=8.8,SNR=26						
LVC				Sn	Sn	19 07 41.8	+0.8
	comp=N,9.3nm,0.3s,baz=225,slow=18,SNR=3.8						
LPAZ	La Paz	4.17	37	Pn	Pn	19 07 16.3	+4.2
	comp=N,1.6nm,0.3s,baz=200,slow=2.8,SNR=9.9						
SIV	San Ignacio	9.89	70	Pn	Pn	19 08 29.7	-0.4
	comp=N,1.2nm,0.3s,baz=268,slow=12,SNR=11						
PLCA	Paso Flores	20.99	180	P	P	19 10 54.8	+3.4
	comp=N,1.2nm,0.9s,baz=38,slow=16,SNR=1.2						
PTGA	Pitinga	21.57	30	P	P	19 10 56.0	-1.7
	comp=N,4.7nm,0.3s,baz=323,slow=23,SNR=9.4						
BDFB	Brasilia	22.00	83	P	P	19 11 00.9	-1.5
	comp=N,1.1nm,0.4s,baz=207,slow=18,SNR=2.0						
TORD	Torodi Ar. Bea	78.36	71	P	P	19 18 07.2	-1.7
	comp=N,0.7nm,0.6s,baz=259,slow=5.2,SNR=4.9						
YKA	Yellowknife Ar	88.91	341	P	P	19 19 01.2	-0.6
	comp=N,0.3nm,0.6s,baz=135,slow=5.0,SNR=11						
MKAR	Makanchi Array	145.09	33	PKP	PKPab	19 25 44.5	-0.3
	comp=N,1.0nm,0.6s,baz=324,slow=3.1,SNR=13						

ROM ***23*** *19:25:01.9±0.1, 43°.490N±0°.003×12°.386E±0°.004, h8km, ML3.3/48, Error ellipse: s-maj=0.3km s-min=0.2km az=214.0*

IASPEI ***23*** *19:25:02.4±0.9, 43°.49N±0°.02×12°.38E±0°.02, h8km±5km, Error ellipse: s-maj=2.8km s-min=2.3km az=32.6, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

IDC ***23*** *19:25:02.8±1.5, 43°.56N×12°.81E, h0km, mb3.4/2, mb1 3.7/6, mb1mx3.4/51, mbtmp3.5/6, ML3.6/4, Error ellipse: s-maj=42.3km s-min=14.7km az=103.0*

LDG ***23*** *19:25:04.0±0.1, 43°.43N×12°.45E, h9km, Ml3.0/22, Error ellipse: s-maj=3.9km s-min=2.4km az=38.0*

PRU ***23*** *19:25:04.3±0.0, 43°.58N×12°.78E, h0km*

ISC 23 19:25:03.0±0.7**, 43°.46N**±0°.02×**12°.37E**±0°.02**, h11**km±3km**, n129,** σ1ˢ**55**/186**, 13C-8D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATPI	Pietralunga -	0.03	114	⇑P	Pg	19 25 03.8	-1.2
ATPI				S	Sg	19 25 05.0	-1.5
ATPI				AML	AML		
ATPI				AML	AML		
	comp=N,96500µm,0.3s						
ATVO	AVT- Monte Val	0.08	161	⇑P	Pg	19 25 05.0	-0.5
ATVO				S	Sg	19 25 07.3	-0.1
ATVO				AML	AML		
	comp=E,92350µm,0.4s						
ATVO				AML	AML		
	comp=N,40550µm,0.2s						
ATVO				AML	AML		
	comp=E,92350µm,0.4s						
ATVO				AML	AML		
	comp=N,40550µm,0.2s						
CDCA	Citt‘ di Caste	0.10	268	P	Pb	19 25 05.1	-0.5
CDCA				S	Sb	19 25 07.6	0.0
CDCA				AML	AML		
	comp=E,89600µm,0.7s						
CDCA				AML	AML		
CDCA				AML	AML		
	comp=E,89600µm,0.7s						
CDCA				AML	AML		
	comp=E,89600µm,0.7s						
CDCA				AML	AML		
	comp=E,89600µm,0.7s						
CDCA				AML	AML		
BADI	Badiali	0.10	298	⇑P	Pg	19 25 04.7	-1.0
BADI				S	Sb	19 25 06.7	-1.1
BADI				AML	AML		
	comp=E,80600µm,0.2s						
BADI				AML	AML		
BADI				AML	AML		
	comp=E,80600µm,0.2s						
ATMI	Monte Miggiano	0.15	210	P	Pb	19 25 06.2	-1.5
ATMI				S	Sg	19 25 09.5	+0.7
ATMI				AML	AML		
	comp=E,37850µm,0.3s						
ATMI				AML	AML		
	comp=N,33250µm,0.7s						
ATMI				AML	AML		
	comp=E,37850µm,0.3s						
ATFO	Monte Foce - G	0.17	123	P	Pb	19 25 06.2	-2.0
ATFO				S	Sb	19 25 09.6	0.0
ATFO				AML	AML		
	comp=E,25700µm,0.5s						
ATFO				AML	AML		
	comp=E,25700µm,0.5s						
ATFO				AML	AML		
	comp=N,15200µm,0.5s						
SSP9	Sansepolcro	0.21	303	P	Pg	19 25 06.5	-0.9
SSP9				AML	AML		
	comp=E,10095µm,0.6s						
SSP9				AML	AML		
	comp=N,9430µm,0.4s						
SSP9				AML	AML		
	comp=N,9415µm,0.4s						
SSP9				AML	AML		
	comp=E,10110µm,0.6s						
PARC	Parchiule	0.21	333	P	Pg	19 25 06.2	-1.2
PARC				S	Sg	19 25 09.6	-0.9
PARC				AML	AML		
	comp=N,32600µm,0.2s						

PARC				AML	AML		
	comp=E,25000µm,0.9s						
PARC				AML	AML		
	comp=N,32600µm,0.2s						
NARO	**Abbazia di Nar**	0.21	46	P	Pg	19 25 06.1	-1.4
NARO				S	Sg	19 25 09.3	-1.3
NARO				AML	AML		
	comp=N,13250µm,0.4s						
NARO				AML	AML		
	comp=N,13250µm,0.4s						
NARO				AML	AML		
	comp=E,13250µm,0.3s						
MURB	**Monte Urbino**	0.23	150	P	Pg	19 25 07.6	-0.2
MURB				S	Sb	19 25 12.1	+1.0
MURB				AML	AML		
	comp=N,36800µm,0.2s						
MURB				AML	AML		
	comp=N,36800µm,0.2s						
MURB				AML	AML		
	comp=E,55500µm,0.3s						
PE3	**Peglio**	0.25	21	P	Pg	19 25 06.9	-1.3
PE3				AML	AML		
	comp=N,41850µm,0.6s						
PE3				AML	AML		
	comp=E,60400µm,0.4s						
PE3				AML	AML		
	comp=E,60400µm,0.4s						
PE3				AML	AML		
	comp=N,41850µm,0.6s						
ATTE	**AVT- Monte Tez**	0.26	182	⇑P	Pg	19 25 08.2	-0.2
ATTE				S	Sb	19 25 12.8	-1.5
ATTE				AML	AML		
	comp=E,7310µm,0.8s						
ATTE				AML	AML		
	comp=N,9460µm,1.4s						
FRON	**Frontone**	0.27	78	⇑P	Pg	19 25 07.3	-1.1
FRON				S	Sg	19 25 11.6	-0.5
FRON				AML	AML		
	comp=E,5315µm,0.6s						
FRON				AML	AML		
	comp=N,6490µm,0.5s						
SSFR	**Montelago di S**	0.30	95	P	Pg	19 25 08.2	-0.9
SSFR				AML	AML		
	comp=N,12600µm,0.2s						
SSFR				AML	AML		
	comp=E,16300µm,0.2s						
SSFR				AML	AML		
	comp=E,16400µm,0.2s						
SSFR				AML	AML		
	comp=N,12550µm,0.2s						
SSFR				AML	AML		
	comp=N,11900µm,0.2s						
SSFR				AML	AML		
	comp=E,16300µm,0.2s						
CAFI	**Castiglion Fio**	0.32	246	⇑P	Pg	19 25 09.2	-0.2
CAFI				S	Sg	19 25 14.7	+0.9
CAFI				AML	AML		
	comp=E,8470µm,0.9s						
CAFI				AML	AML		
	comp=N,8370µm,0.3s						
CAFI				AML	AML		
	comp=E,8025µm,0.9s						
CAFI				AML	AML		
	comp=N,7925µm,0.3s						
MPAG	**Monte Paganucc**	0.33	59	P	Pg	19 25 08.4	-1.2
MPAG				AML	AML		
	comp=E,3405µm,0.7s						
MPAG				AML	AML		
	comp=N,6770µm,0.4s						
MPAG				AML	AML		
	comp=E,3385µm,0.6s						
MPAG				AML	AML		
	comp=N,6770µm,0.4s						
MPAG				AML	AML		
	comp=E,3405µm,0.7s						
MPAG				AML	AML		
	comp=N,6785µm,0.4s						
ATCC	**AVT- Casa Cast**	0.34	144	⇑P	Pg	19 25 09.6	-0.2
ATCC				S	Sb	19 25 15.8	-0.7
ATCC				AML	AML		
	comp=E,16850µm,1.0s						
ATCC				AML	AML		
	comp=N,9050µm,0.4s						
ATCC				AML	AML		
	comp=E,16850µm,1.0s						
CPGN	**Carpegna, Ital**	0.34	354	⇑P	Pg	19 25 09.2	-0.7
CPGN				S	Sg	19 25 15.3	+0.8
CPGN				AML	AML		
	comp=E,9190µm,1.2s						
CPGN				AML	AML		
	comp=N,13450µm,0.4s						
CPGN				AML	AML		
	comp=E,8950µm,1.2s						
CPGN				AML	AML		
	comp=E,9185µm,1.2s						
CPGN				AML	AML		
	comp=E,8965µm,1.2s						
CPGN				AML	AML		
	comp=N,13050µm,0.4s						
CPGN				AML	AML		
	comp=N,13450µm,0.4s						
CRE	**Caprese Michel**	0.34	298	P	Pg	19 25 08.9	-1.0
CRE				S	Sg	19 25 14.4	-0.1
CRE				AML	AML		
	comp=N,4600µm,1.2s						
CRE				AML	AML		
	comp=N,4595µm,1.2s						
CRE				AML	AML		
	comp=E,6490µm,0.2s						
FSSB	**Fossombrone**	0.38	52	⇑P	Pg	19 25 09.2	-1.2
FSSB				S	Sg	19 25 15.1	-0.4
FSSB				AML	AML		
	comp=E,11600µm,0.4s						
FSSB				AML	AML		
	comp=N,12500µm,1.4s						
FSSB				AML	AML		
	comp=E,11650µm,0.4s						
ARVD	**Arcevia**	0.42	85	⇑P	Pg	19 25 10.2	-1.0
ARVD				S	Sg	19 25 17.0	+0.2
ARVD				AML	AML		
	comp=E,2170µm,0.9s						
ARVD				AML	AML		
	comp=N,2560µm,1.2s						
ARVD				AML	AML		
	comp=N,2555µm,1.2s						
SNTG	**Esanatoglia**	0.47	116	P	Pg	19 25 11.6	-0.5
SNTG				S	Sb	19 25 19.1	-1.0
SNTG				AML	AML		
	comp=E,324µm,0.9s						
SNTG				AML	AML		
	comp=N,385µm,0.3s						
SNTG				AML	AML		
	comp=E,2240µm,0.7s						
SNTG				AML	AML		
	comp=N,2890µm,0.3s						
SNTG				AML	AML		
	comp=N,385µm,0.3s						
ASSB	**Assisi San Ben**	0.47	153	P	Pg	19 25 11.7	-0.4
ASSB				S	Sb	19 25 19.2	-1.0
ASSB				AML	AML		
	comp=E,3320µm,1.1s						
ASSB				AML	AML		
	comp=N,3775µm,0.2s						
COR1	**Corinaldo**	0.49	69	⇑P	Pg	19 25 11.9	-0.6
COR1				S	Sb	19 25 20.2	-0.5
COR1				AML	AML		
	comp=E,6610µm,0.3s						
COR1				AML	AML		
	comp=E,3500µm,0.3s						
COR1				AML	AML		
	comp=N,7385µm,1.0s						
COR1				AML	AML		
	comp=N,6825µm,0.9s						
COR1				AML	AML		
	comp=E,6610µm,0.3s						
COR1				AML	AML		
	comp=N,7405µm,1.0s						
ASQU	**Asqua**	0.54	309	P	Pg	19 25 12.3	-1.2
ASQU				S	Sg	19 25 20.8	+0.2
ASQU				AML	AML		
	comp=N,3380µm,0.3s						
ASQU				AML	AML		
	comp=E,2265µm,0.4s						
EL6	**Elcito**	0.55	104	P	Pg	19 25 12.8	-0.9
EL6				S	Sb	19 25 22.1	-0.5
EL6				AML	AML		
	comp=E,2655µm,0.5s						
EL6				AML	AML		
	comp=N,4400µm,0.4s						
EL6				AML	AML		
	comp=E,2660µm,0.5s						
EL6				AML	AML		
	comp=N,4390µm,0.4s						
MGAB	**Montegabbione**	0.58	199	P	Pb	19 25 14.0	-1.1
MGAB				AML	AML		
	comp=E,6290µm,0.9s						
MGAB				AML	AML		
	comp=N,8920µm,0.3s						
MGAB				AML	AML		
	comp=E,7345µm,0.6s						
MGAB				AML	AML		
	comp=E,6285µm,0.9s						
MGAB				AML	AML		
	comp=N,8375µm,1.6s						
SFI	**Santa Sofia**	0.58	320	P	Pg	19 25 12.9	-1.4
SFI				S	Sg	19 25 22.2	+0.2
SFI				AML	AML		
	comp=E,1635µm,1.0s						
SFI				AML	AML		
	comp=N,1510µm,1.6s						
SFI				AML	AML		
	comp=E,1635µm,0.2s						
SFI				AML	AML		
	comp=N,1605µm,1.6s						
SFI				AML	AML		
	comp=N,1610µm,1.6s						
PESA	**Pesaro**	0.59	35	⇑P	Pg	19 25 13.3	-1.1
PESA				AML	AML		
	comp=N,3810µm,0.8s						
PESA				AML	AML		
	comp=E,3610µm,0.3s						
CESI	**CESI - Serrava**	0.60	139	P	Pg	19 25 14.1	-0.6
CESI				S	Sn	19 25 24.2	-3.1
CESI				AML	AML		
	comp=E,406µm,0.5s						
CESI				AML	AML		
	comp=N,877µm,1.0s						
CESI				AML	AML		
	comp=N,876µm,1.0s						
CING	**Cingoli**	0.61	98	P	Pg	19 25 13.9	-0.9
CING				S	Sb	19 25 23.7	-0.5
CING				AML	AML		
	comp=N,1285µm,0.5s						
CING				AML	AML		
	comp=E,1212µm,0.5s						
SENI	**Senigallia**	0.67	68	AML	AML		
	comp=E,7695µm,0.9s						
SENI				AML	AML		
	comp=N,2540µm,1.4s						
SENI				AML	AML		
	comp=N,8205µm,0.5s						
SENI				AML	AML		
	comp=E,2410µm,1.6s						
SENI				AML	AML		
	comp=E,7715µm,0.9s						
MOMA	**Monte Martano**	0.67	167	P	Pg	19 25 15.4	-0.6
MOMA				AML	AML		
	comp=E,4265µm,0.5s						
MOMA				AML	AML		
	comp=N,2800µm,1.3s						
MOMA				AML	AML		
	comp=N,2805µm,1.3s						
MOMA				AML	AML		
	comp=N,2845µm,1.2s						
MOMA				AML	AML		
	comp=E,4450µm,0.5s						
FDMO	**Fiordimonte**	0.68	129	P	Pg	19 25 15.2	-0.9
SACS	**San Casciano d**	0.70	209	P	Pb	19 25 16.3	-0.9
SACS				AML	AML		
	comp=E,3275µm,0.4s						
SACS				AML	AML		
	comp=E,3090µm,0.4s						
SACS				AML	AML		
	comp=N,4290µm,0.9s						
SACS				AML	AML		
	comp=N,4310µm,0.9s						
CSP1	**Cessapalombo**	0.71	121	⇓P	Pg	19 25 16.1	-0.7
CSP1				AML	AML		
	comp=E,2660µm,0.6s						
CSP1				AML	AML		
	comp=N,2308µm,0.6s						
RUFI	**Rufina**	0.73	302	P	Pb	19 25 16.0	-1.7
RUFI				S	Sb	19 25 26.9	-0.8
RUFI				AML	AML		
	comp=E,1885µm,0.5s						
RUFI				AML	AML		
	comp=N,1315µm,0.4s						
LMD	**Lutirano**	0.78	322	*e*Pg	Pb	19 25 16.8	-1.8
LMD	**Lutirano**	0.78	322	P	Pb	19 25 16.3	-2.2
LMD				S	Sb	19 25 28.6	-0.6
LMD				AML	AML		
	comp=N,1535µm,0.3s						
LMD				AML	AML		
	comp=E,1346µm,1.5s						
CSNT	**Castellina Chi**	0.79	271	P	Pb	19 25 17.4	-1.2
CSNT				AML	AML		
	comp=N,674µm,0.7s						
CSNT				AML	AML		
	comp=N,675µm,0.7s						
CSNT				AML	AML		
	comp=E,536µm,0.6s						
OSSC	**Osservatorio P**	0.82	275	P	Pb	19 25 18.4	-0.9
OSSC				AML	AML		
	comp=E,1200µm,0.7s						
OSSC				AML	AML		
	comp=N,1160µm,0.7s						
NRCA	**Norcia**	0.83	139	P	Pb	19 25 18.0	-1.4
NRCA				AML	AML		
	comp=E,1105µm,0.7s						
NRCA				AML	AML		
	comp=N,1200µm,0.4s						
CESX	**Cesi**	0.86	170	P	Pn	19 25 19.4	-1.7
CESX				AML	AML		
	comp=N,1760µm,0.9s						
CESX				AML	AML		
	comp=E,2070µm,0.6s						
FROS	**Frosini**	0.92	255	P	Pb	19 25 19.9	-1.0
FROS				AML	AML		
	comp=E,1850µm,0.8s						
FROS				AML	AML		
	comp=N,1810µm,1.0s						
ARRO	**Arrone**	0.93	162	P	Pb	19 25 19.9	-1.2
ARRO				AML	AML		
	comp=N,840µm,1.6s						
ARRO				AML	AML		
	comp=E,1032µm,0.5s						
SEI	**Scarperia**	0.94	309	P	Pb	19 25 19.7	-1.7
SEI				AML	AML		
	comp=N,2785µm,0.6s						
SEI				AML	AML		
	comp=E,2680µm,0.5s						
CIMA	**Civitanova Mar**	0.96	99	P	Pb	19 25 20.9	-0.7
LNSS	**Leonessa**	0.99	150	P	Pb	19 25 21.0	-1.1
LNSS				AML	AML		
	comp=N,1970µm,0.4s						
LNSS				AML	AML		
	comp=E,1535µm,1.4s						
CRMI	**Carmignano**	1.07	288	P	Pb	19 25 22.5	-0.9
CRMI				AML	AML		
	comp=N,232µm,0.4s						
CRMI				AML	AML		
	comp=E,157µm,0.7s						
TRIF	**Trifonti**	1.13	253	P	Pn	19 25 23.6	-1.1
TRIF				AML	AML		
	comp=E,820µm,0.7s						
TRIF				AML	AML		
	comp=N,605µm,0.7s						
POPM	**Popiglio**	1.31	297	⇓P	Pb	19 25 28.2	+0.7
PII	**Pisa**	1.36	282	P	Pn	19 25 27.8	-0.1
PII				AML	AML		
	comp=N,689µm,0.7s						
PII				AML	AML		
	comp=E,510µm,1.3s						
MAIM	**Mastiano**	1.44	289	⇓P	Pn	19 25 28.4	-0.5
MAIM				AML	AML		
	comp=E,470µm,0.6s						
MAIM				AML	AML		
	comp=N,366µm,0.8s						
FAGN	**Fagnano**	1.49	143	⇓P	Pg	19 25 32.5	+0.9
DUGI	**Dugi Otok**	2.02	74	*e*Pn	Pn	19 25 36.9	0.0
NVLJ	**Novalja**	2.12	58	*e*Pn	Pn	19 25 37.9	-0.3
RIY	**Rijeka**	2.40	38	*i* Pn	Pn	19 25 41.9	-0.3
MORI	**Morici**	2.46	79	*i* Pn	Pn	19 25 43.4	+0.4
TRI	**Trieste**	2.46	23	⇑P	Pn	19 25 41.6	-1.4
TRI				AML	AML		
	comp=N,166µm,1.0s						
TRI				AML	AML		
	comp=E,170µm,0.9s						
LEOD	**Capriano del C**	2.56	322	S	Sn	19 26 17.0	+1.4
POLC	**Polcenigo**	2.57	2	⇓P	Pn	19 25 44.2	-0.3
POLC				AML	AML		
	comp=E,476µm,0.6s						
POLC				AML	AML		
	comp=N,508µm,0.7s						
MAGA	**Magasa**	2.63	332	⇓P	Pn	19 25 46.1	+0.7
PGF	**Pioggiola**	2.63	251	*e*Pn	Pn	19 25 45.5	0.0
PGF				*e*Sn	Sn	19 26 16.1	-1.4
	comp=N,9.5nm,0.5s						
STAL	**STALIGIAL**	2.81	5	⇓P	Pn	19 25 47.1	-0.7
STAL				AML	AML		
	comp=E,223µm,0.9s						
STAL				AML	AML		
	comp=N,211µm,1.0s						
PAOL	**Paolisi**	2.93	145	S	Sg	19 26 34.0	-2.9
HVAR	**Hvar**	2.99	94	*e*Pn	Pn	19 25 50.3	0.0
HVAR				Sn	Sn	19 26 26.1	0.0
OZLJ	**Ozalj**	3.09	45	*e*Pn	Pn	19 25 51.5	-0.1
ABTA	**Abfaltersbach**	3.29	2	*e*Pn	Pn	19 25 54.7	+0.2
	comp=N,13nm,0.5s,SNR=19						
ABTA				*e*Sn	Sn	19 26 36.1	+2.5
	comp=N,25nm,0.6s						
MYKA	**Terra Mystica**	3.29	15	*e*Pn	Pn	19 25 54.3	-0.2
	comp=N,1.7nm,0.2s						
ABSI	**Aberstueckl**	3.35	348	⇓P	Pn	19 25 56.0	+0.5
OBKA	**Obir**	3.42	26	*e*Pn	Pn	19 25 55.8	-0.5
	comp=N,12nm,0.5s						
RICI	**Ricice**	3.47	88	*i* Pn	Pn	19 25 58.0	+1.1
PTJ	**Puntijarka**	3.54	45	*e*Pn	Pn	19 25 57.7	-0.3
SBF	**Sospel**	3.60	278	*e*Pn	Pn	19 25 59.4	+0.6
SBF				*e*Sn	Sn	19 26 40.0	-1.3
	comp=N,8.0nm,0.3s						
KBA	**Koelnbreinsper**	3.68	10	*e*Pn	Pn	19 26 00.2	+0.2
	comp=N,8.5nm,0.3s,SNR=8.0						
SOKA	**Soboth**	3.73	29	*e*Pn	Pn	19 26 00.2	-0.3
	comp=N,0.7nm,0.3s						
FETA	**Feichten**	3.74	343	*e*Pn	Pn	19 26 02.4	+1.6
	comp=N,3.8nm,0.3s,SNR=10						
DAVOX	**Davos/Dischmat**	3.76	333	Pn	Pn	19 26 04.1	+3.1
	comp=N,3.8nm,0.3s,baz=164,slow=18,SNR=26						
DAVOX				Sn	Sn	19 26 48.4	+3.1
	comp=N,1.2nm,0.3s,baz=328,slow=22,SNR=6.3						
WTTA	**Wattenberg**	3.84	353	*e*Pn	Pn	19 26 03.5	+1.4
	comp=N,3.7nm,0.3s,SNR=12						
SQTA	**Sankt Quirin**	3.85	348	*e*Pn	Pn	19 26 04.8	+2.6
	comp=N,8.7nm,0.3s,SNR=17						
WATA	**Walderalm**	3.91	352	*e*Pn	Pn	19 26 05.2	+2.1
	comp=N,3.9nm,0.2s,SNR=17						
WATA				*e*Sn	Sn	19 26 51.3	+2.2
	comp=N,16nm,0.6s						
STON	**Ston**	3.94	97	*e*Pn	Pn	19 26 04.2	+0.8
STON				Sn	Sn	19 26 49.4	-0.2
MOTA	**Moosalm**	3.98	348	*e*Pn	Pn	19 26 06.3	+2.2
	comp=N,10nm,0.5s,SNR=17						
MOTA				*e*Sn	Sn	19 26 56.0	+5.2
	comp=N,13nm,0.5s						
FRF	**La Foret Royal**	4.16	273	*e*Pn	Pn	19 26 06.5	+0.1
FRF				*e*Sn	Sn	19 26 53.3	-1.8
	comp=N,2.9nm,0.3s						
RETA	**Reutte**	4.18	345	*e*Pn	Pn	19 26 08.8	+2.1
	comp=N,7.7nm,0.5s,SNR=9.8						
RETA				*e*Sn	Sn	19 26 58.5	+2.9
	comp=N,10nm,0.5s						
DAVA	**Damuels**	4.21	336	*e*Pn	Pn	19 26 10.0	+2.8
	comp=N,6.8nm,0.4s,SNR=11						
DAVA				Sn	Sn	19 27 01.1	+4.7
	comp=N,23nm,0.7s						
LMR	**La Mourre**	4.27	270	*e*Pn	Pn	19 26 07.7	-0.2
LMR				*e*Sn	Sn	19 26 55.4	-2.3
	comp=N,2.7nm,0.3s						
ARSA	**Arzberg**	4.39	29	*e*Pn	Pn	19 26 08.7	-0.9
	comp=N,2.1nm,0.3s,SNR=5.8						
LPG	**La Plagne**	4.51	299	*e*Pn	Pn	19 26 11.3	-0.1
LPG				*e*Sn	Sn	19 27 02.6	-1.3
	comp=N,11nm,0.6s						
LPL	**La Plagne**	4.53	299	*e*Pn	Pn	19 26 12.4	+0.8
LPL				*e*Sn	Sn	19 27 02.9	-1.4
	comp=N,9.0nm,0.6s						
MOA	**Molln**	4.58	16	*e*Pn	Pn	19 26 12.4	+0.2
	comp=N,5.1nm,0.3s,SNR=22						
MOA				*e*Sn	Sn	19 27 06.0	+0.5
	comp=N,8.8nm,0.4s						
ORIF	**Oris-en-Rattie**	4.89	290	*e*Pn	Pn	19 26 17.4	+0.9
ORIF				*e*Sn	Sn	19 27 11.3	-1.8
	comp=N,9.8nm,0.6s						
SMRF	**Simiane la Rot**	4.95	278	*e*Pn	Pn	19 26 18.3	+1.0
SMRF				*e*Sn	Sn	19 27 12.3	-2.2
	comp=N,1.8nm,0.3s						
CONA	**Conrad Observa**	5.09	27	*i* Pn	Pn	19 26 18.5	-0.7
	comp=N,1.7nm,0.4s,SNR=5.7						
CABF	**La Chapelle**	5.45	307	*e*Pn	Pn	19 26 24.3	+0.1
CABF				*e*Sn	Sn	19 27 25.4	-1.5
	comp=N,2.5nm,0.3s						
GERES	**GERESS Array B**	5.46	9	Pn	Pn	19 26 23.3	-1.1
	comp=N,1.3nm,0.3s,baz=182,slow=14,SNR=39						
GERES				Sn	Sn	19 27 25.7	-1.5
	comp=N,0.4nm,0.3s,baz=194,slow=19,SNR=4.5						
VIVF	**Saint-Julien-l**	5.71	287	*e*Pn	Pn	19 26 28.0	+0.3
KHC	**Kasperske Hory**	5.73	8	*e*PN	Pn	19 26 27.0	-1.0
KHC				*e*SN	Sn	19 27 31.6	-2.2
HINF	**Hinteralfeld**	5.82	320	*e*Pn	Pn	19 26 29.8	+0.5
HINF				*e*Sn	Sn	19 27 34.7	-1.3
	comp=N,18nm,0.7s						
CDF	**Champ du Feu**	6.09	326	*e*Pn	Pn	19 26 33.7	+0.7
CDF				*e*Sn	Sn	19 27 41.1	-1.6
	comp=N,14nm,0.7s						
SMOL	**Smolenice**	6.16	33	*e*PN	Pn	19 26 33.0	-0.8
LASF	**Ste Croix**	6.19	279	*e*Pn	Pn	19 26 34.5	+0.2
HAU	**Haudompre**	6.20	319	*e*Pn	Pn	19 26 35.2	+0.8
HAU				*e*Sn	Sn	19 27 43.2	-2.0
	comp=N,13nm,0.4s						
VRAC	**Vranov**	6.54	25	Pn	Pn	19 26 39.2	+0.2
	comp=N,0.8nm,0.3s,baz=184,slow=19,SNR=2.8						
VYHS	**Vyhne**	6.75	40	*e*PN	Pn	19 26 43.0	+1.0
VYHS				*e*SN	Sn	19 28 02.7	+3.8
SMF	**Signal de Mont**	6.83	301	*e*Pn	Pn	19 26 43.8	+0.8
SMF				*e*Sn	Sn	19 27 58.1	-2.6
	comp=N,8.0nm,0.6s						
PAGF	**Fort de Pagny**	6.88	320	*e*Pn	Pn	19 26 44.8	+1.1
PAGF				*e*Sn	Sn	19 27 59.8	-2.1
SFTF	**Sexfontaines**	6.98	315	*e*Pn	Pn	19 26 45.9	+0.8
	baz=136						
SFTF				*e*Sn	Sn	19 28 01.0	-3.4
	comp=N,4.1nm,0.5s						
LOR	**Lormes**	7.10	305	*e*Pn	Pn	19 26 47.5	+0.8
	baz=126						
LOR				*e*Sn	Sn	19 28 04.6	-2.8
	comp=N,4.9nm,0.5s						
MEZF	**Maizieres J'vi**	7.17	317	*e*Pn	Pn	19 26 48.6	+1.0
	baz=138						
MEZF				*e*Sn	Sn	19 28 06.6	-2.4
	comp=N,2.0nm,0.4s						
AVF	**Avril sur Loir**	7.19	301	*e*Pn	Pn	19 26 48.7	+0.7
SSF	**Saint Saulge**	7.21	303	*e*Pn	Pn	19 26 49.2	+0.9
SSF				*e*Sn	Sn	19 28 07.3	-2.9
	comp=N,2.0nm,0.4s						
KRLC	**Kraliky**	7.28	23	*e*PN	Pn	19 26 47.6	-1.6
MTLF	**Montolieu**	7.40	273	*e*Pn	Pn	19 26 50.6	-0.2
BGF	**Bois d'Agland**	7.42	298	*e*Pn	Pn	19 26 51.8	+0.6
BGF				*e*Sn	Sn	19 28 12.0	-3.4
	comp=N,7.7nm,0.6s						
BRG	**Berggiesshubel**	7.49	8	SG	Sn	19 28 13.3	-3.7
	comp=N,2.3nm,0.8s						
TCF	**Toulx Ste Croi**	7.75	295	*e*Pn	Pn	19 26 55.9	+0.2
HYF	**Humbligny**	7.84	302	*e*Pn	Pn	19 26 57.6	+0.7
CLL	**Collm**	7.86	3	*e*Pn	Pn	19 26 57.0	-0.2
CLL				*e*(Pg)	Pb	19 27 36.0	+17
CLL				*e*Sn	Sn	19 28 19.0	-7.1
CLL				*e*		19 28 44.0	
CLL				*e*		19 29 11.0	
CLL				*e*Sg	Sb	19 29 23.0	+30
	comp=Z,15nm,1.4s						
RJF	**Les Rejaudoux**	7.99	287	*e*Pn	Pn	19 26 59.1	+0.1
KEST	**Kesra**	8.06	198	Pn	Pn	19 27 05.8	+5.7
	comp=Z,0.1nm,0.3s,baz=34,slow=3.6,SNR=4.1						
LFF	**La Frestale**	8.49	284	*e*Pn	Pn	19 27 05.8	+0.1
BAIF	**Baives**	8.65	323	*e*P	Pn	19 27 14.7	+6.7
BAIF				*e*Sn	Sn	19 28 42.8	-2.7
	comp=Z,0.2nm,0.2s						

LDF	La Druitiere	10.09	305	ePn	Pn	19 27 28.2	+0.6
GRR	Gorron	10.45	303	ePn	Pn	19 27 33.1	+0.5
SGMF	Saint Gilles	11.45	300	ePn	Pn	19 27 46.7	+0.3
QUIF	Quistinic	11.74	298	ePn	Pn	19 27 50.5	+0.2
TORD	Torodi Ar. Bea	31.58	200	P	P	19 31 27.8	+2.3
	comp=Z,0.4nm,0.6s,baz=14,slow=9.3,SNR=2.8						
YKA	Yellowknife Ar	66.19	336	P	P	19 35 52.5	+2.4
	comp=Z,0.2nm,0.8s,baz=41,slow=5.6,SNR=4.4						

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*DJA **23** 19:38:30.1±0.5, 8°S±5°×11°9E±°, h10km, M3.6/7, MLv3.6/7*
*IDC **23** 19:38:32.5±2.0, 7°.99S×119°.66E, h0km, mb3.3/2, mb1 3.6/5, mb1mx3.3/42, mbtmp3.4/5, ML3.1/3, Error ellipse: s-maj=73.6km s-min=20.4km az=68.0*
ISC 23 19:38:30.2±1.0, **8°.24S**±0°.05×**119°.08E**±0°.06, **h10km, n10, σ2s.14**/13, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	1.42	246	P	Pn	19 38 54.9	-1.2
PLAI				S	Sb	19 39 14.4	-0.5
WBSI	Waikabubak, Su	1.43	168	P	Pn	19 38 55.2	-1.1
WBSI				S	Sb	19 39 14.9	-0.4
BASI	Baing, Sumba	2.46	143	P	Pn	19 39 10.8	+0.3
EDFI	Ende, Flores	2.63	101	P	Pn	19 39 13.1	+0.2
MMRI	Maumere	3.15	97	P	Pn	19 39 19.2	-0.7
KAPI	Kappang	3.27	12	Pn	Pn	19 39 20.4	-1.2
	1.1nm,0.3s,baz=180,slow=5.1,SNR=12						
KAPI				Sn	Sn	19 39 57.3	-3.3
	1.6nm,0.3s,baz=231,slow=23,SNR=7.6						
FITZ	Fitzroy Crossi	11.69	148	Pn	Pn	19 41 17.7	+0.4
	0.1nm,0.3s,baz=328,slow=8.4,SNR=5.3						
FITZ				Sn	Sn	19 43 24.8	-3.2
	0.1nm,0.3s,baz=207,slow=19,SNR=3.0						
WRA	Warramunga Arr	18.80	130	P	Pn	19 42 51.1	+0.5
	0.1nm,0.3s,baz=307,slow=12,SNR=7.7						
ASAR	Alice Springs	20.91	139	P	Pn	19 43 15.2	-0.3
	0.6nm,0.5s,baz=316,slow=10.0,SNR=16						
MKAR	Makanchi Array	63.82	333	P	P	19 49 07.1	+4.4
	0.4nm,0.9s,baz=156,slow=7.6,SNR=2.8						

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*DDA **23** 19:39:02.2, 40°.63N×35°.40E, h7km±3km, ML1.7*
*ISK **23** 19:39:02.5, 40°.66N×35°.42E, h5km, ML2.5/12*
ISC 23 19:39:02.0±1.0, **40°.65N**±0°.03×**35°.43E**±0°.02, **h14**km±9km, **n24, σ0s.44**/37, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMSY	Amasya-Merkez	0.31	93	iP	Pb	19 39 08.8	-0.6
AMSY				iS	Sg	19 39 12.5	-0.4
AMSY				IAML		19 39 14.0	
	comp=E,176nm,0.3s						
AMSY				IAML		19 39 18.0	
	comp=N,201nm,0.4s						
KAYA	Kayacik-Havza(	0.38	40	PG	Pb	19 39 10.6	0.0
KAYA				SG	Sb	19 39 16.2	-0.2
YARM	Yarimca-Ladik(	0.41	48	PG	Pb	19 39 10.9	-0.1
YARM				SG	Sb	19 39 16.9	-0.2
GULF	Gulfidan-Ladik	0.43	53	PG	Pb	19 39 11.5	+0.1
KIZO	Buyukkizoglu-L	0.46	57	PG	Pb	19 39 11.8	-0.1
HAVZ	Havza	0.47	28	iP	Pb	19 39 12.2	0.0
HAVZ				iS	Sg	19 39 17.4	-0.4
HAVZ				IAML		19 39 20.0	
	comp=N,112nm,0.1s						
HAVZ				IAML		19 39 20.0	
	comp=E,109nm,0.3s						
CTAK	Corum_Osmancik	0.48	270	iP	Pb	19 39 12.6	+0.2
CTAK				iS	Sg	19 39 18.1	0.0
CTAK				IAML		19 39 21.0	
	comp=N,53nm,0.2s						
CTAK				IAML		19 39 22.0	
	comp=E,55nm,0.2s						
HKOY	Hamitkoy-Ladik	0.49	61	PG	Pb	19 39 12.6	+0.2
COAL	Corum-Alaca	0.52	220	iP	Pg	19 39 12.3	0.0
COAL				iS	Sg	19 39 19.1	-0.2
KUPE	Kupecik-Ladik(	0.52	65	PG	Pb	19 39 13.2	+0.2
KVT	Kavak	0.64	48	PG	Pb	19 39 14.8	-0.1
KVT				SG	Sb	19 39 24.3	+0.6
CORM	Corum	0.77	232	PG	Pb	19 39 17.5	+0.2
CORM				SG	Sn	19 39 29.7	-0.3
TOKA	Tokat	0.87	112	iP	Pn	19 39 19.4	-0.4
TOKT	Tokat	0.92	111	PG	Pn	19 39 20.7	+0.2
DIKM	Dikmen	1.00	353	PG	Pn	19 39 22.3	+0.6
ERBA	Erbaa	1.01	88	iP	Pn	19 39 21.9	+0.1
YOZ	Yozgat	1.01	185	PG	Pn	19 39 22.4	+0.5
CDAG	Cicekdag	1.31	219	iP	Pb	19 39 26.4	0.0
CDAG				iS	Sb	19 39 43.0	0.0
CDAG				IAML		19 40 00.0	
	comp=N,10nm,1.1s						
DELI	KIRIKKALE	1.32	241	iP	Pb	19 39 26.7	0.0
DELI				iS	Sb	19 39 43.5	0.0
DELI				IAML		19 40 02.0	
	comp=N,20nm,1.2s						
SIRC	Yozgat	1.33	189	iP	Pg	19 39 27.4	-0.3
SIRC				iS	Sb	19 39 43.1	-0.7
SIRC				IAML		19 39 49.0	
	comp=E,18nm,0.4s						
SIRC				IAML		19 39 49.0	
	comp=N,16nm,0.3s						
ILGA	Ilgaz	1.36	288	iP	Pg	19 39 28.2	+0.1
ILGA				iS	Sb	19 39 43.2	-1.4
ILGA				IAML		19 39 49.0	
	comp=E,20nm,0.4s						
ILGA				IAML		19 39 51.0	
	comp=N,9.7nm,0.8s						
CUSAR	Sarkisla-SIVAS	1.38	153	iP	Pg	19 39 29.5	+0.8
CUSAR				IAML		19 39 45.0	
	comp=N,11nm,0.7s						
CUSAR				iS	Sb	19 39 45.3	0.0
CUSAR				IAML		19 40 06.0	
	comp=E,12nm,1.6s						
SVSK	Karacayir	1.41	121	PN	Pg	19 39 29.6	+0.5
BRTR	Keskin Array B	1.65	236	PN	Pb	19 39 32.8	+0.5

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*IDC **23** 19:42:58.9±9.6, 21°.09S×177°.68W, h460km±84km, mb3.5/10, mb1 3.6/11, mb1mx3.2/53, mbtmp4.3/11, Error ellipse: s-maj=71.3km s-min=26.4km az=108.0*
ISC 23 19:42:46.5±1.6, **21°.1S**±0°.3×**177°.1W**±0°.3, **h350km, n18, σ1s.26**/19, **mb3.8**/10, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	15.31	263	P	Pn	19 46 08.8	+1.7
	0.4nm,0.3s,baz=105,slow=16,SNR=2.9						
STKA	Stephens Creek	38.27	245	P	P	19 49 35.3	+0.8
	1.7nm,0.6s,baz=102,slow=11,SNR=5.2						
ASAR	Alice Springs	45.18	257	P	P	19 50 29.4	-0.6
	2.8nm,0.5s,baz=91,slow=8.3,SNR=50						
ASAR				PcP	PcP	19 52 03.0	-0.6
	0.6nm,0.5s,baz=102,slow=4.1,SNR=7.1						
WRA	Warramunga Arr	45.33	262	P	P	19 50 29.7	-1.6
	0.8nm,0.5s,baz=97,slow=7.6,SNR=34						
WRA				PcP	PcP	19 52 03.5	-0.7
	0.3nm,0.7s,baz=105,slow=2.8,SNR=1.7						
FITZ	Fitzroy Crossi	53.76	263	P	P	19 51 33.6	-0.6
	1.4nm,0.4s,baz=72,slow=5.1,SNR=17						
SIJI	Sorong	54.18	285	P	P	19 51 36.2	-1.1
	6.9nm,0.7s,baz=22,slow=4.0,SNR=5.7						
MJAR	Matsushiro Arr	71.18	323	P	P	19 53 27.5	-0.6
	1.4nm,0.5s,baz=138,slow=6.1,SNR=11						
ASAJ	Asahikawa	74.64	331	P	P	19 53 49.5	+1.5
	7.4nm,1.0s,baz=139,slow=9.3,SNR=4.9						
KSRS	Korea Array	77.88	318	P	P	19 54 06.7	+0.4
	0.9nm,0.5s,baz=124,slow=5.8,SNR=5.9						
USRK	Ussuriysk Ar.	79.92	325	P	P	19 54 17.7	+0.6
	2.5nm,0.8s,baz=199,slow=5.2,SNR=4.4						
CMAR	Chiang Mai Arr	91.08	289	P	P	19 55 12.9	+0.5
	0.9nm,0.8s,baz=129,slow=3.3,SNR=9.7						
MKAR	Makanchi Array	112.20	313	PKiKP	PKiKP	20 00 38.9	-2.0
	0.2nm,0.7s,baz=45,slow=6.3,SNR=2.0						
ARCES	ARCESS Array B	129.66	350	PKP	PKPdf	20 01 14.9	+1.3
	4.3nm,1.1s,baz=343,slow=2.8,SNR=3.7						
FINES	FINESS Array B	136.57	344	PKP	PKPdf	20 01 26.5	-0.3
	2.0nm,1.0s,baz=345,slow=3.2,SNR=1.6						
HFS	Hagfors	140.25	352	PKhKP	PKPpre	20 01 25.0	
	0.5nm,0.3s,baz=48,slow=2.2,SNR=7.5						
AKASG	Malin Array Be	143.93	331	PKP	PKPab	20 01 37.6	-1.1
	2.5nm,0.5s,baz=43,slow=4.4,SNR=29						
BRTR	Keskin Array B	147.85	312	PKPbc	PKPdf	20 01 50.1	+2.5
	1.0nm,0.6s,baz=138,slow=5.5,SNR=9.3						
GERES	GERESS Array B	150.99	345	PKPbc	PKPbc	20 01 58.1	-0.2
	0.5nm,0.5s,baz=45,slow=0.6,SNR=5.3						

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*PGC **23** 19:50:50.3±1.1, 71°.47N×134°.58W, h35km, ML3.6/1, 330km west of Sachs Harbour, Nt Beaufort Sea*
ISC 23 19:50:44.2±1.5, **71°.42N**±0°.10×**134°.61W**±0°.07, **h10km, n28, σ2s.90**/34, **Beaufort Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
A36M	Sachs Harbour	3.01	75	P	Pn	19 51 34.3	+2.5
	baz=264						
A36M				S	Sn	19 52 06.5	-1.4
	baz=264						
INK	Inuvik	3.15	173	Pn	Pn	19 51 37.2	+3.4
INK				Sn	Sn	19 52 12.3	+0.9
C36M	Paulatuk	4.12	115	S	Sn	19 52 34.2	-0.9
	baz=306						
EPYK	Eagle Plains	5.13	190	P	Pn	19 52 03.8	+2.8
	baz=7.6						
EPYK				S	Sn	19 53 00.5	+0.3
	baz=7.6						
TOLK	Toolik Lake Re	5.83	249	P	Pn	19 52 12.8	+2.2
	baz=54						
COLD	Coldfoot	6.92	240	Sn	Sn	19 53 40.3	-4.0
DHRN	Dharma Camp	6.93	122	Pn	Pn	19 52 28.8	+3.1
DHRN				Sn	Sn	19 53 40.9	-3.5
DAWY	Dawson	7.60	196	Pn	Pn	19 52 36.6	+1.7
DAWY				Sn	Sn	19 53 57.0	-4.1
KUKN	Kugluktuk,NWT	7.69	108	Pn	Pn	19 52 38.7	+2.7
KUKN				Sn	Sn	19 53 58.7	-4.3
POKR	Poker Plat Res	7.90	223	P	Pn	19 52 41.7	+2.7
	baz=31						
POKR				S	Sn	19 54 03.7	-4.5
	baz=31						
BVCY	Beaver Creek	9.36	198	Pn	Pn	19 53 00.9	+1.8
BVCY				Sn	Sn	19 54 37.9	-6.4
PAX	Paxson	9.45	212	Pn	Pn	19 53 04.0	+3.7
YUK1	Sand Pete Hill	9.59	197	Pn	Pn	19 53 03.7	+1.5
YUK1				Sn	Sn	19 54 44.7	-5.2
YUK3	Moose Creek	9.95	196	Pn	Pn	19 53 08.8	+1.5
YUK2	White River	9.98	197	Pn	Pn	19 53 09.3	+1.8
YUK4	Talbot Arm	10.24	191	Pn	Pn	19 53 11.5	+0.3
YUK4				Sn	Sn	19 54 58.0	-8.1
YUK5	Granite Creek	10.41	189	Pn	Pn	19 53 15.6	+2.0
YUK6	Outpost Mounta	10.63	190	Pn	Pn	19 53 18.6	+2.1
HYT	Haines Junctio	10.70	188	Pn	Pn	19 53 19.8	+2.3
PTPK	Patty Peak	10.73	201	Pn	Pn	19 53 21.0	+3.0
WHY	Whitehorse	10.81	181	Pn	Pn	19 53 21.3	+2.4
CTGM	Chitina Glacie	10.83	198	Pn	Pn	19 53 22.4	+3.1
BALM	Baldy	10.87	200	Pn	Pn	19 53 21.5	+1.8
KIAG	Kiagna River	10.98	200	Pn	Pn	19 53 24.5	+3.2
YUK7	Dusty Glacier	11.03	189	Pn	Pn	19 53 25.0	+3.0
PCA	Pinnacle	11.60	194	Pn	Pn	19 53 26.4	-3.3
YKW3	Yellowknife Ar	11.76	129	Pn	Pn	19 53 33.1	+1.4
YKW3				Sn	Sn	19 55 33.8	-9.0
RES	Resolute Bay	11.85	56	Pn	Pn	19 53 29.2	-3.7
RES				Sn	Sn	19 55 33.5	-11

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*IDC **23** 19:51:19.2±2.0, 2°.61N×125°.76E, h0km, mb3.2/4, mb1 3.4/4, mb1mx3.1/56, mbtmp3.2/4, Error ellipse: s-maj=126.5km s-min=26.8km az=68.0*
ISC 23 19:51:27.8±1.3, **3°.1N**±0°.1×**126°.5E**±0°.4, **h100km, n8, σ2s.79**/9, **mb3.2**/4, **1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	3.13	345	eP	Pn	19 52 11.9	-3.4
DDMP				eS	Sn	19 52 50.1	-1.9
SKMP	Bagumbayan, Su	3.96	330	eP	Pn	19 52 26.2	-0.3
KCP	Kidapawan	4.17	340	⇓eP	Pn	19 52 33.1	+3.6
PAGZ	Pagadian	5.69	327	eP	Pn	19 52 48.2	-1.7
FITZ	Fitzroy Crossi	21.04	182	P	P	19 56 01.4	-2.3
	1.6nm,1.0s,baz=18,slow=13,SNR=2.5						
WRA	Warramunga Arr	24.11	162	P	P	19 56 34.7	+0.3
	0.3nm,0.4s,baz=336,slow=10,SNR=11						
ASAR	Alice Springs	27.52	165	P	P	19 57 05.6	+0.4
	0.2nm,0.4s,baz=343,slow=7.4,SNR=6.8						
MKAR	Makanchi Array	57.98	326	P	P	20 01 13.1	+3.1
	0.1nm,0.3s,baz=129,slow=6.0,SNR=2.0						

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*IDC **23** 19:52:08.3±0.6, 57°.04S×24°.94W, h0km, mb4.4/9, mb1 4.5/9, mb1mx4.2/25, mbtmp4.4/9, Error ellipse: s-maj=24.0km s-min=18.5km az=66.0*
*NEIC **23** 19:52:09.6±1.8, 57°.0S±0°.1×24°.8W±0°.2, h10km±1km, mb4.6/16, Error ellipse: s-maj=21.5km s-min=13.6km az=193.0*
ISC 23 19:52:11.1±0.5, **57°.06S**±0°.09×**24°.89W**±0°.09, **h22km, n45, σ1s.03**/40, **mb4.5**/13, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.12	288	Pn	Pn	19 53 55.0	+1.2
VNA1	Neumayer--Stat	15.39	159	P	Pn	19 55 47.2	+0.7
VNA3	Neumayer Olymp	15.62	162	P	Pn	19 55 49.3	-0.2
SNAA	Sanae	17.30	156	P	P	19 56 12.7	+0.4
SNAA	Sanae	17.30	156	P	P	19 56 12.6	+0.4
EFI	East Falkland	19.93	272	P	P	19 56 40.0	-1.1
EFI				IAmb	IAmb	19 56 48.5	
	comp=Z,66nm,1.1s						
PMSA	Palmer Station	20.23	231	P	P	19 56 44.2	0.0
	comp=Z,23nm,1.0s,baz=338,slow=4.7,SNR=2.2						
PMSA	Palmer Station	20.23	231	P	P	19 56 42.6	-1.6
GO09	Cerro Castillo	27.90	261	P	P	19 57 57.5	-1.6
QSPA	South Pole Qui	33.19	180	P	P	19 58 46.6	+0.8
	comp=Z,2.4nm,0.6s,baz=218,slow=2.6,SNR=25						
QSPA	South Pole Qui	33.19	180	P	P	19 58 46.5	+0.7
QSPA				IAmb	IAmb	19 58 59.2	
	comp=Z,14nm,1.4s						
PLCA	Paso Flores	33.42	279	P	P	19 58 47.1	-0.9
	comp=Z,1.6nm,0.8s,baz=133,slow=8.9,SNR=4.8						
PLCA	Paso Flores	33.42	279	P	P	19 58 46.2	-1.8
CPUP	Villa Florida	38.44	309	P	P	19 59 30.5	-0.4
	comp=Z,5.6nm,0.6s,baz=151,slow=6.8,SNR=19						
CPUP	Villa Florida	38.44	309	P	P	19 59 30.8	-0.1
CPUP				IAmb	IAmb	19 59 31.7	
	comp=Z,5.6nm,0.7s						
MAW	Mawson	38.57	142	P	P	19 59 29.7	-1.9
ROC1	El Roble	39.46	288	P	P	19 59 39.8	-0.1
SUR	Sutherland	39.72	71	P	P	19 59 41.1	-0.7
SUR				IAmb	IAmb	19 59 54.6	
	comp=Z,18nm,1.4s						
BDFB	Brasilia	44.89	328	P	P	20 00 25.9	+1.9
	comp=Z,2.1nm,0.7s,baz=96,slow=11,SNR=3.3						
BOSA	Boshof	45.02	73	P	P	20 00 25.1	+0.1
BOSA				IAmb	IAmb	20 00 38.3	
	comp=Z,7.8nm,1.3s						
VNDA	Vanda	45.61	182	P	P	20 00 30.5	+1.5
	comp=Z,1.1nm,0.6s,baz=186,slow=6.4,SNR=12						
VNDA	Vanda	45.61	182	P	P	20 00 30.5	+1.5
LBTB	Lobatse	48.12	70	P	P	20 00 48.0	-1.2
LBTB				IAmb	IAmb	20 01 06.1	
	comp=Z,3.5nm,1.1s						
H10S2	ASCENSION HYDR	48.65	14	T	T	20 53 52.3	
	baz=188,slow=74,SNR=8.0						
H10S3	ASCENSION HYDR	48.65	14	T	T	20 53 55.5	
	baz=32,slow=74,SNR=5.3						
H10N1	ASCENSION HYDR	49.76	14	T	T	20 54 57.5	
H10N3	ASCENSION HYDR	49.77	14	T	T	20 55 02.9	
	SNR=5.4						
H10N2	ASCENSION HYDR	49.78	14	T	T	20 54 56.5	
LPAZ	La Paz	52.00	303	P	P	20 01 20.1	+0.8
	comp=Z,16nm,0.6s,baz=112,slow=5.4,SNR=4.9						
LPAZ	La Paz	52.00	303	P	P	20 01 18.6	-0.7
CASY	Casey	52.52	159	P	P	20 01 22.5	+0.6
CASY				IAmb	IAmb	20 01 39.8	
	comp=Z,17nm,1.5s						
SAML	Samuel	56.42	313	P	P	20 01 51.1	+0.3
SAML				IAmb	IAmb	20 01 55.2	
	comp=Z,14nm,1.4s						
TOA0	Torodi Ar. Sit	73.35	27	P	P	20 03 41.6	+0.7
TOA0				IAmb	IAmb	20 03 42.1	
	comp=Z,3.0nm,0.7s						
TORD	Torodi Ar. Bea	73.35	27	P	P	20 03 41.6	+0.7
	comp=Z,2.6nm,0.6s,baz=200,slow=6.8,SNR=22						
TORD	Torodi Ar. Bea	73.35	27	P	P	20 03 41.2	+0.3
ASAR	Alice Springs	97.62	160	P	Pdif	20 05 43.8	-0.2
	comp=Z,0.7nm,1.0s,baz=176,slow=3.7,SNR=5.0						
CMAR	Chiang Mai Arr	123.53	109	PKP	PKiKP	20 11 08.1	+1.4
	comp=Z,0.5nm,0.6s,baz=233,slow=3.8,SNR=5.7						
YKA	Yellowknife Ar	137.78	316	PKP	PKiKP	20 11 32.8	-1.1
	comp=Z,1.0nm,0.7s,baz=128,slow=2.7,SNR=14						
INK	Inuvik	147.40	319	PKPbc	PKPab	20 11 52.2	-1.2
	comp=Z,2.9nm,0.7s,baz=126,slow=3.6,SNR=7.3						
BCAR	Beaver Creek A	149.12	308		PKiKP	20 11 56.8	-0.6
SONM	Songino Array	149.52	86	PKPbc	PKiKP	20 11 58.2	-0.5
	comp=Z,1.4nm,0.6s,baz=219,slow=2.7,SNR=14						
SONM				PKPab	pPKPbc	20 12 02.8	-0.6
	comp=Z,1.4nm,0.8s,baz=212,slow=2.8,SNR=5.8						
TLY	Talaya	150.15	78	PKPbc	PKPbc	20 11 58.3	-0.7
	comp=Z,2.9nm,0.5s,baz=297,slow=18,SNR=5.8						
ILAR	Eielson Array	151.74	310	PKPbc	PKiKP	20 12 02.8	+0.1
	comp=Z,2.8nm,0.9s,baz=140,slow=1.6,SNR=14						
ILAR	Eielson Array	151.74	310		PKiKP	20 12 02.9	+0.3
TOLK	Toolik Lake Re	153.28	318		PKiKP	20 12 07.1	+1.3

IDC 23 20:00:56.6±5.4, **30°.69N**×**142°.28E, h0km, mb3.3**/2, **mb1 3.4**/4, **mb1mx3.1**/59, **mbtmp3.3**/4, **ML2.7**/2, **Error ellipse: s-maj=191.8km s-min=23.9km az=75.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	3.58	181	Pn	Pn	20 01 54.5	+1.0
	2.7nm,0.3s,baz=123,slow=21,SNR=1.7						
JCJ				Sn	Sn	20 02 36.4	-0.2
	3.3nm,0.3s,baz=280,slow=20,SNR=1.7						
MJAR	Matsushiro Arr	6.75	331	Pn	Pn	20 02 35.1	-1.9
	0.0nm,0.3s,baz=149,slow=9.9,SNR=4.1						
MKAR	Makanchi Array	48.32	307	P	P	20 09 40.5	+0.7
	0.2nm,0.6s,baz=89,slow=9.0,SNR=3.4						
WRA	Warramunga Arr	50.92	190	P	P	20 09 59.2	-0.6
	0.2nm,0.4s,baz=6.5,slow=7.7,SNR=5.6						

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*IDC **23** 20:07:10.0±0.7, 19°.60S×70°.66W, h0km, mb4.2/15, mb1 4.4/17, mb1mx4.2/43, mbtmp4.3/17, ML4.1/2, Error ellipse: s-maj=20.9km s-min=16.0km az=54.0*
*GUC **23** 20:07:12.9±0.7, 19°.69S×70°.93W, h41km±2km, ML4.5*
*NEIC **23** 20:07:12.4±2.9, 19°.72S±0°.04×70°.92W±0°.05, h18km±4km, mb4.7/14, Mwr4.4/35, Error ellipse: s-maj=6.5km s-min=5.0km az=76.0*
*NEIC **23** 20:07:12.2, 19°.76S×70°.98W, h22km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}4.25; $M_{\theta\theta}$-0.04; $M_{\phi\phi}$-4.21; $M_{r\theta}$-0.24; $M_{\theta\phi}$1.57; $M_{\phi r}$-1.56; Fault plane solution: $M_0$4.78000×10^{15} NP1:ϕ_s331.32000°, δ37.19000°, λ73.96000°. NP2:ϕ_s171.16000°, δ54.48000°, λ101.84000°. Principal axes: T 4.5901, Plg77.0000°, Azm121.0000°; N 0.3639, Plg10.0000°, Azm344.0000°; P -4.9540, Plg9.0000°, Azm253.0000°;*
*VAO **23** 20:07:17.0±1.2, 19°.65S×70°.66W, h54km±8km, mb4.4*
ISC 23 20:07:15.6±0.8, **19°.72S**±0°.03×**70°.81W**±0°.06, **h47**km±7km, **n91, σ1s.80**/105, **mb4.5**/17, **8C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.66	80	⇓iP	Pn	20 07 26.7	-2.2
PSGC				iS	Sn	20 07 37.8	-0.6
PSGC				IAML		20 07 40.2	
	comp=N,20μm,0.3s						
PSGCX	Pisagua	0.66	80		Pn	20 07 26.6	-2.3
PSGCX				Sg	Sn	20 07 38.5	0.0
TA01	Diego Aracena	1.03	145	⇑iP	Pn	20 07 32.8	-1.0
TA01				iS	Sn	20 07 47.2	+0.1
TA01				IAML		20 07 52.1	
	comp=E,18μm,0.5s						
PB11	IPOC Station P	1.09	92	⇓iP	Pn	20 07 34.1	-0.6
PB11				iS	Sn	20 07 50.5	+1.7
PB11				IAML		20 07 55.8	
	comp=E,20μm,0.6s						
PB11	IPOC Station P	1.09	92		Pn	20 07 34.2	-0.5
PB11				Sn	Sn	20 07 50.8	+2.0
PB12	IPOC Station P	1.19	23	⇓iP	Pn	20 07 34.2	-1.8
PB12				iS	Sn	20 07 50.4	-0.6
PB12	IPOC Station P	1.19	23		Pn	20 07 34.3	-1.6
PB12				Sn	Sn	20 07 51.8	+0.7
PATCX	Punta Patache	1.26	151	⇑iP	Pn	20 07 35.9	-1.1
PATCX				iS	Sn	20 07 53.5	+0.7
PATCX	Punta Patache	1.26	151		Pn	20 07 36.2	-0.7
AP01	Chacalluta	1.41	19	eP	Pn	20 07 36.9	-2.0
AP01				eS	Sn	20 07 56.2	-0.2
GO01	Chusmiza	1.53	88	⇑iP	Pn	20 07 41.4	+0.5
GO01				iS	Sn	20 08 03.3	+3.5
GO01	Chusmiza	1.53	88		Pn	20 07 41.8	+0.9
PB08	IPOC Station P	1.62	105	⇑iP	Pn	20 07 42.5	+0.4
PB08				iS	Sn	20 08 05.2	+3.2
PB08				IAML		20 08 12.2	
	comp=N,7μm,0.3s						
PB02	IPOC Station P	1.81	152	⇑iP	Pn	20 07 43.8	-0.7
PB02				iS	Sn	20 08 08.8	+2.5
PB02				IAML		20 08 18.6	
	comp=E,12μm,0.5s						
PB01	IPOC Station P	1.81	137	⇑iP	Pn	20 07 44.4	-0.2
PB01				iS	Sn	20 08 07.7	+1.3
PB01				IAML		20 08 16.6	
	comp=N,5μm,0.7s						
PB01	IPOC Station P	1.81	137		Pn	20 07 44.5	0.0
PB16	IPOC Station P	1.85	42	⇑iP	Pn	20 07 45.2	-0.2
PB16				iS	Sn	20 08 11.1	+3.2
PB16				IAML		20 08 13.4	
	comp=N,8μm,0.4s						
PB16	IPOC Station P	1.85	42		Pn	20 07 45.5	+0.1
PB07	IPOC Station P	2.18	157		Pn	20 07 48.7	-0.9
PB09	IPOC Station P	2.54	145	⇑iP	Pn	20 07 55.0	+0.4
PB09				IAML		20 08 41.3	
	comp=N,3μm,0.5s						
PB09	IPOC Station P	2.54	145		Pn	20 07 54.4	-0.1
PB04	IPOC Station P	2.68	167		Pn	20 07 54.6	-1.8
LVC	Limon Verde	3.38	149	Pn	Pn	20 08 06.8	+0.5
	comp=N,15nm,0.3s,baz=344,slow=10,SNR=32						
LVC				Sn	Sn	20 08 47.1	+1.7
	comp=N,82nm,0.3s,baz=55,slow=19,SNR=5.9						
LVC	Limon Verde	3.38	149		Pn	20 08 07.0	+0.8
LVC	Limon Verde	3.38	149	eP	Pn	20 08 06.7	+0.5
LVC				eS	Sn	20 08 46.4	+1.0
PB15	IPOC Station P	3.69	160		Pn	20 08 08.7	-1.7
PB10	IPOC Station P	3.79	176		Pn	20 08 08.7	-2.8
LPAZ	La Paz	4.26	37	Pn	Pn	20 08 21.1	+2.5
	comp=N,3.2nm,0.3s,baz=244,slow=6.0,SNR=66						
LPAZ	La Paz	4.26	37		Pn	20 08 21.2	+2.6
PB14	IPOC Station P	4.90	176		Pn	20 08 24.3	-2.8
GO02	Mina Guanaco	5.54	168		Pn	20 08 33.8	-2.0
NNA	Nana	9.63	322	Pn	Pn	20 09 34.0	+2.4
	comp=N,1.1nm,0.3s,baz=214,slow=6.2,SNR=2.2						
NNA				Sn	Sn	20 11 26.9	+8.4
	comp=N,1.2nm,0.3s,baz=232,slow=22,SNR=1.7						
SIV	San Ignacio	9.99	70	Pn	Pn	20 09 34.4	-2.2
	comp=N,2.0nm,0.3s,baz=266,slow=11,SNR=37						
SAML	Samuel	13.00	36		Pn	20 10 18.2	+0.4
SAML	Samuel	13.00	36	eP	Pn	20 10 18.9	+1.0
CPUP	Villa Florida	14.05	120	Pn	Pn	20 10 32.8	+0.8
	comp=N,0.3nm,0.3s,baz=309,slow=12,SNR=6.6						
SALV	Santo Antonio	14.89	78	eP	Pn	20 10 42.4	-0.8
CLDB	Colider	16.93	61	eP	Pn	20 11 07.5	-1.9
PTGB	Pitanga	18.05	109	eP	Pn	20 11 24.8	+1.6
ARAG	Araguaiana, MT	18.53	81	eP	Pn	20 11 27.4	-1.6
ITAB	Concordia	18.69	117	eP	Pn	20 11 29.6	-1.2
PLTB	Pedras Altas	19.57	131	eP	Pn	20 11 39.8	-1.5
PLCA	Paso Flores	20.95	179	P	P	20 11 55.8	+1.2
	comp=N,3.8nm,0.8s,baz=15,slow=10,SNR=8.6						
IPMB	Ipameri, GO	21.46	89	eP	P	20 11 59.5	-0.7
PTGA	Pitinga	21.65	31	P	P	20 12 00.4	-1.9
	comp=N,9.2nm,0.3s,baz=211,slow=13,SNR=33						
PTGA	Pitinga	21.65	31	P	P	20 11 59.9	-2.3
PTGA				IAmb	IAmb	20 12 09.1	
	comp=Z,11nm,0.7s						
PTGA	Pitinga	21.65	31	eP	P	20 12 00.3	-1.9
BDFB	Brasilia	22.09	83	P	P	20 12 05.6	-1.5
	comp=Z,4.2nm,0.6s,baz=246,slow=14,SNR=5.8						
BDFB	Brasilia	22.09	83	P	P	20 12 04.8	-2.3
RUSC	La Rusia	25.55	355	P	P	20 12 39.5	-1.2
JANB	Januaria	25.70	84	eP	P	20 12 40.7	-1.0
PAYG	Puerto Ayora	26.87	312	P	P	20 12 48.2	-4.0
PAYG				IAmb	IAmb	20 13 05.9	
	comp=Z,44nm,1.4s						
SDV	Santo Domingo	28.42	0	P	P	20 13 05.3	-0.9
	comp=Z,0.8nm,0.3s,baz=337,slow=18,SNR=1.8						
PLCV	Puerto La Cruz	30.32	12	P	P	20 13 24.1	+1.3
PCRV	Puerto La Cruz	30.32	12	P	P	20 13 24.1	+1.2
	comp=Z,32nm,1.1s						
RCBR	Riachuelo	36.64	73	P	P	20 14 17.6	-0.3
	comp=Z,9.1nm,0.8s,baz=242,slow=7.5,SNR=4.8						
RCBR	Riachuelo	36.64	73	P	P	20 14 15.9	-2.0
RCBR				IAmb	IAmb	20 14 18.4	

	comp=Z,13nm,0.9s						
PDPR	Patillas Dam,	37.79	7	P	P	20 14 24.7	-2.8
PDPR				IAmb	IAmb	20 14 26.4	
	comp=Z,12nm,0.9s						
STVI	Saint Thomas	38.27	9	P	P	20 14 29.5	-1.9
TXAR	Lajitas Array	58.16	326	P	P	20 17 05.1	+0.2
	comp=Z,0.2nm,0.4s,baz=157,slow=4.8,SNR=2.4						
SADO	Sadowa	64.62	353	P	P	20 17 48.0	-0.1
	comp=Z,3.4nm,0.5s,baz=263,slow=7.1,SNR=4.6						
DBIC	Dimbokro	69.97	75	P	P	20 18 22.1	-0.6
	comp=Z,4.8nm,0.9s,baz=236,slow=8.8,SNR=5.3						
DBIC	Dimbokro	69.97	75	IAmb	IAmb	20 18 23.1	
	comp=Z,7.5nm,1.0s						
PDAR	Pinedale Array	71.69	331	P	P	20 18 33.7	+0.9
	comp=Z,0.4nm,0.7s,baz=142,slow=7.5,SNR=3.8						
NVAR	Mina Array Bea	73.00	323	P	P	20 18 42.0	+1.3
	comp=Z,0.2nm,0.4s,baz=133,slow=6.3,SNR=3.6						
ULM	Lac du Bonnet	73.10	343	P	P	20 18 42.6	+1.9
	comp=Z,0.5nm,0.4s,baz=225,slow=1.4,SNR=1.6						
ULM	Lac du Bonnet	73.10	343	IAmb	IAmb	20 18 50.1	
	comp=Z,2.1nm,0.9s						
SCHQ	Schefferville	74.32	2	P	P	20 18 47.8	0.0
	comp=Z,1.6nm,0.7s,baz=266,slow=17,SNR=3.6						
SCHQ	Schefferville	74.32	2	P	P	20 18 46.9	-0.9
SCHQ				IAmb	IAmb	20 18 59.1	
	comp=Z,5.5nm,1.0s						
TOA0	Torodi Ar. Sit	78.46	71	P	P	20 19 11.7	-0.4
TOA0				IAmb	IAmb	20 19 12.7	
	comp=Z,6.8nm,0.7s						
TORD	Torodi Ar. Bea	78.46	71	P	P	20 19 11.4	-0.7
	comp=Z,5.9nm,0.6s,baz=254,slow=5.0,SNR=41						
TORD	Torodi Ar. Bea	78.46	71	P	P	20 19 11.2	-1.0
YKA	Yellowknife Ar	88.93	341	P	P	20 20 05.2	+0.7
	comp=Z,2.2nm,0.8s,baz=136,slow=5.1,SNR=33						
H11S2	WAKE ISLAND Hy	125.86	279	T	T	22 45 29.4	
	baz=101,slow=74,SNR=191						
H11S1	WAKE ISLAND Hy	125.87	279	T	T	22 45 30.0	
	baz=101,slow=74,SNR=116						
H11S3	WAKE ISLAND Hy	125.88	279	T	T	22 45 32.8	
	baz=101,slow=74,SNR=98						
H11N3	WAKE ISLAND Hy	125.90	280	T	T	22 45 32.4	
	baz=100,slow=75,SNR=47						
H11N2	WAKE ISLAND Hy	125.92	280	T	T	22 45 33.7	
	baz=100,slow=75,SNR=52						
H11N1	WAKE ISLAND Hy	125.92	280	T	T	22 45 30.2	
	baz=100,slow=75,SNR=37						
ASAR	Alice Springs	130.60	210	PKP	PKiKP	20 26 23.2	+0.2
	comp=Z,0.3nm,0.7s,baz=158,slow=3.6,SNR=4.0						
WRA	Warramunga Arr	133.51	213	PKP	PKiKP	20 26 29.7	+0.8
	comp=Z,0.5nm,0.9s,baz=166,slow=1.6,SNR=2.1						
ZALV	Zalesovo Beam	141.06	23	PKP	PKiKP	20 26 42.0	-1.1
	comp=Z,0.3nm,0.3s,baz=222,slow=1.9,SNR=1.7						
MAKZ	Makanchi	145.01	33		PKPdf	20 26 48.4	+0.6
MK31	Makanchi Array	145.18	33		PKPdf	20 26 48.8	+0.8
MKAR	Makanchi Array	145.18	33	PKPbc	PKPdf	20 26 48.6	+0.6
	comp=Z,2.5nm,0.7s,baz=327,slow=4.4,SNR=30						
MKAR	Makanchi Array	145.18	33		PKPdf	20 26 48.8	+0.8
KSH	Kashi	145.31	48	PKPbc	PKiKP	20 26 50.1	-2.4
KSH				pPKP	pPKPab	20 27 00.3	-2.2
KSH				PP	PP	20 30 12.8	+4.5
KSH				PKS	PKSdf	20 30 26.5	+2.3
MJAR	Matsushiro Arr	149.57	310	PKPbc	PKiKP	20 27 01.8	+0.6
	comp=Z,0.3nm,0.4s,baz=264,slow=1.2,SNR=5.4						
MJAR				PKPab	pPKPdf	20 27 08.4	-0.8
	comp=Z,1.3nm,0.8s,baz=131,slow=5.0,SNR=3.4						
SONM	Songino Array	151.86	4	PKPbc	PKiKP	20 27 06.9	+1.1
	comp=Z,0.3nm,0.5s,baz=343,slow=1.5,SNR=6.2						
SONM				PKPab	PKPab	20 27 13.6	-0.9
	comp=Z,1.5nm,0.8s,baz=321,slow=2.0,SNR=8.8						
LZH	Lanzhou	163.03	15	*e*PKP	PKPdf	20 27 11.9	-1.4
LZH				pPKP	pPKPdf	20 27 20.1	-7.2
LZH				sPKP		20 27 22.8	
LZH				PKP	PKPab	20 28 04.3	+1.4
CMAR	Chiang Mai Arr	170.23	96	PKPab	PKPab	20 28 35.8	+0.4
	comp=Z,0.4nm,0.6s,baz=260,slow=5.1,SNR=4.6						

SJA ***23*** *20:12:36.7±0.6, 19°.41S×71°.70W, h40^{km}±16^{km}, ML3.5, MW3.4*

IDC ***23*** *20:12:44.2±0.8, 19°.56S×70°.54W, h0^{km}, mb4.1/11, mb1 4.3/12, mb1mx4.1/43, mbtmp4.2/12, ML3.8/1, Error ellipse: s-maj=25.2km s-min=19.8km az=54.0*

NEIC ***23*** *20:12:46.9±2.1, 19°.75S±0°.03×70°.74W±0°.06, h21^{km}±4^{km}, Mwr4.1/24, ML4.2(GUC), Error ellipse: s-maj=7.6km s-min=4.5km az=97.0*

NEIC ***23*** *20:12:46.8, 19°.75S×70°.74W, h25^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.35; $M_{\theta\theta}$-0.15; $M_{\phi\phi}$-1.20; $M_{r\theta}$1.10; $M_{\theta\phi}$0.74; $M_{\phi r}$-0.09; Fault plane solution: $M_0$1.84000×10^{15} NP1:ϕ_s356.58000°, δ39.73000°, λ133.80000°. NP2:ϕ_s125.31000°, δ62.53000°, λ60.09000°. Principal axes: T 1.9504, Plg60.0000°, Azm350.0000°; N -0.2375, Plg26.0000°, Azm140.0000°; P -1.7129, Plg13.0000°, Azm236.0000°;*

GUC ***23*** *20:12:48.2±0.6, 19°.73S×70°.68W, h42^{km}±2^{km}, ML4.2*

ISC 23 20:12:47.7±1.3**, 19°.78S**±0°.03×**70°.67W**±0°.05**, h31**^{km}±9^{km}**, n60, σ1^{s}39**/67**, mb4.3**/10**, 4C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.55	70	⇓*i*P	Pn	20 12 58.6	-0.9
PSGC				*e*S	Sn	20 13 07.1	-0.5
PSGCX	Pisagua	0.55	70		Pn	20 12 58.1	-1.3
PSGCX					Sn	20 13 07.0	-0.5
TA01	Diego Aracena	0.91	150	⇑*i*P	Pb	20 13 05.0	0.0
TA01				*e*S	Sn	20 13 18.3	+2.0
TA01				IAML		20 13 21.6	
	comp=N,8μm,0.3s						
PB11	IPOC Station P	0.95	89	⇓*i*P	Pn	20 13 05.5	+0.4
PB11				*e*S	Sn	20 13 19.2	+1.4
PB11				IAML		20 13 22.8	
	comp=N,26μm,0.3s						
PB11	IPOC Station P	0.95	89		Pn	20 13 05.5	+0.4
PB11				Sn	Sn	20 13 19.7	+1.9
PATCX	Punta Patache	1.14	155	⇑*i*P	Pb	20 13 08.8	-0.1
PATCX				*e*S	Sb	20 13 24.9	+1.4
PATCX	Punta Patache	1.14	155		Pb	20 13 08.8	-0.1
PB12	IPOC Station P	1.21	16	⇓*i*P	Pn	20 13 08.1	-0.5
PB12				*e*S	Sn	20 13 24.3	+0.4
PB12				IAML		20 13 26.4	
	comp=N,6μm,0.5s						
PB12	IPOC Station P	1.21	16		Pn	20 13 08.0	-0.6
PB12				Sn	Sn	20 13 24.2	+0.4
GO01	Chusmiza	1.39	86	⇑*i*P	Pb	20 13 13.2	-0.3
GO01				*e*S	Sb	20 13 32.2	+1.1
GO01	Chusmiza	1.39	86		Pb	20 13 13.1	-0.3
AP01	Chacalluta	1.44	13	⇑*i*P	Pn	20 13 12.1	+0.5
AP01				*e*S	Sn	20 13 30.4	+1.0
AP01				IAML		20 13 35.2	
	comp=N,8μm,0.6s						
PB08	IPOC Station P	1.47	104	⇓*i*P	Pb	20 13 14.4	-0.3
PB08				*e*S	Sb	20 13 34.2	+1.1
PB08				IAML		20 13 35.4	
	comp=N,6μm,0.2s						
PB01	IPOC Station P	1.68	139		Pb	20 13 16.9	-1.1
PB02	IPOC Station P	1.69	155	⇓*i*P	Pb	20 13 17.0	-1.3
PB02				*e*S	Sb	20 13 38.3	-1.0
PB02				IAML		20 13 46.1	
	comp=E,6μm,0.3s						
PB16	IPOC Station P	1.81	38	Pn	Pb	20 13 18.7	-1.8
PB07	IPOC Station P	2.07	159		Pn	20 13 21.6	+1.1
PB09	IPOC Station P	2.41	147		Pb	20 13 28.0	-2.6
PB09	IPOC Station P	2.41	147	*i* P	Pb	20 13 28.9	-1.7
PB04	IPOC Station P	2.58	169		Pn	20 13 28.2	+0.6
PB04	IPOC Station P	2.58	169	*i* P	Pn	20 13 28.2	+0.6
PB04				*i* Sg	Sb	20 14 05.8	+0.9
PB06	IPOC Station P	3.08	161	*i* P	Pn	20 13 36.2	+1.8
PB05	IPOC Station P	3.09	172	*i* P	Pn	20 13 34.2	-0.2
LVC	Limon Verde	3.26	150	Pn	Pn	20 13 39.9	+2.9
	comp=E,8.4nm,0.3s,baz=331,slow=10,SNR=19						
LVC				Sn	Sn	20 14 17.4	+2.5
	comp=E,52nm,0.3s,baz=130,slow=22,SNR=8.3						
PB15	IPOC Station P	3.59	162		Pn	20 13 42.1	+0.7
PB15	IPOC Station P	3.59	162	*i* P	Pn	20 13 42.7	+1.3
PB15				*i* Sg	Sb	20 14 32.0	-1.8
PB10	IPOC Station P	3.71	178	Pn	Pn	20 13 42.3	-0.7
PB10	IPOC Station P	3.71	178	*i* P	Pn	20 13 41.2	-1.8
LPAZ	La Paz	4.23	35	Pn	Pn	20 13 54.8	+4.2
	comp=E,0.8nm,0.3s,baz=201,slow=7.6,SNR=7.9						
PB14	IPOC Station P	4.83	177		Pn	20 13 57.4	-1.1
PB14	IPOC Station P	4.83	177	*i* P	Pn	20 13 57.5	-1.1
YJA	Yavi	5.37	117	*i* P	Pn	20 14 12.3	+6.2
YJA				IAML		20 14 36.7	
	comp=Z,13nm,0.6s						
GO02	Mina Guanaco	5.45	170		Pn	20 14 07.6	+0.6
NNA	Nana	9.76	322	Pn	Pn	20 15 08.2	+2.1
	comp=Z,0.6nm,0.3s,baz=87,slow=2.4,SNR=1.8						
SIV	San Ignacio	9.88	69	Pn	Pn	20 15 09.1	+1.3
	comp=Z,2.6nm,0.3s,baz=273,slow=8.7,SNR=14						
CPUP	Villa Florida	13.90	120	Pn	P	20 16 06.9	-3.4
	comp=Z,0.1nm,0.3s,baz=311,slow=11,SNR=1.7						
PLCA	Paso Flores	20.88	180	P	Pn	20 17 31.0	+1.0
	comp=Z,2.7nm,0.9s,baz=7.3,slow=8.2,SNR=6.5						
PTGA	Pitinga	21.64	30	P	P	20 17 34.9	-0.7
	comp=Z,7.6nm,0.3s,baz=97,slow=23,SNR=11						
BDFB	Brasilia	21.96	83	P	P	20 17 39.6	+0.3
	comp=Z,2.5nm,0.6s,baz=299,slow=10,SNR=2.0						
RUSC	La Rusia	25.62	354	P	P	20 18 14.9	-0.2
GO09	Cerro Castillo	31.45	182	P	P	20 19 04.0	-2.2
RCBR	Riachuelo	36.53	72	P	P	20 19 50.3	-0.5
	comp=Z,13nm,1.0s,baz=97,slow=7.1,SNR=2.2						
TKL	Tuckaleechee C	56.52	347	P	P	20 22 27.4	+0.4
	comp=Z,2.1nm,0.8s,baz=145,slow=8.2,SNR=3.8						
SADO	Sadowa	64.70	353	P	P	20 23 22.6	0.0
	comp=Z,4.2nm,0.8s,baz=86,slow=9.8,SNR=4.8						
DBIC	Dimbokro	69.85	75	P	P	20 23 55.4	-0.6
	comp=Z,1.8nm,0.7s						
PDAR	Pinedale Array	71.81	331	P	P	20 24 07.0	-0.6
	comp=Z,0.2nm,0.6s,baz=108,slow=4.8,SNR=3.6						
NVAR	Mina Array Bea	73.13	323	P	P	20 24 17.4	+1.9
	comp=Z,0.5nm,0.7s,baz=166,slow=6.9,SNR=3.8						
TOA0	Torodi Ar. Sit	78.35	71	P	P	20 24 44.0	-1.6
TORD	Torodi Ar. Bea	78.35	71	P	P	20 24 45.4	-0.2
	comp=Z,3.6nm,0.8s,baz=250,slow=5.4,SNR=12						
YKA	Yellowknife Ar	89.03	341	P	P	20 25 39.6	+0.5
	comp=Z,1.7nm,0.7s,baz=135,slow=5.2,SNR=26						
H11S2	WAKE ISLAND Hy	126.01	279	T	T	22 51 15.5	
	baz=101,slow=75,SNR=124						
H11S1	WAKE ISLAND Hy	126.02	279	T	T	22 51 12.2	
	baz=101,slow=75,SNR=80						
H11S3	WAKE ISLAND Hy	126.02	279	T	T	22 51 13.4	
	baz=101,slow=75,SNR=65						
H11N3	WAKE ISLAND Hy	126.05	280	T	T	22 51 05.4	
	baz=100,slow=74,SNR=25						
H11N2	WAKE ISLAND Hy	126.06	280	T	T	22 51 06.4	
	baz=100,slow=74,SNR=26						
H11N1	WAKE ISLAND Hy	126.06	280	T	T	22 51 06.8	
	baz=100,slow=74,SNR=7.8						
ASAR	Alice Springs	130.61	210	PKP	PKPdf	20 31 57.2	+0.9
	comp=Z,0.3nm,0.8s,baz=134,slow=2.7,SNR=2.4						
MKAR	Makanchi Array	145.16	33	PKP	PKPab	20 32 22.8	+0.9
	comp=Z,3.2nm,0.7s,baz=322,slow=3.8,SNR=39						
MKAR	Makanchi Array	145.16	33		PKPdf	20 32 22.9	+0.8
MJAR	Matsushiro Arr	149.72	310	PKPbc	PKPbc	20 32 36.0	+1.3
	comp=Z,1.0nm,0.7s,baz=227,slow=1.6,SNR=4.6						

SJA ***23*** *20:22:59.2±0.6, 19°.95S×71°.16W, h10^{km}±69^{km}, ML4.7, MW4.5*

IDC ***23*** *20:23:01.8±0.6, 19°.76S×70°.62W, h0^{km}, mb4.6/15, mb1 4.7/19, mb1mx4.6/29, mbtmp4.6/19, ML4.3/4, MS4.5/14, Ms1 4.5/14, ms1mx4.4/25, Error ellipse: s-maj=19.8km s-min=13.8km az=48.0*

NEIC ***23*** *20:23:03.3±3.0, 19°.88S±0°.03×70°.86W±0°.05, h17^{km}±3^{km}, mb5.2/29, Mwr5.0/40, Mww5.1, ML4.9(GUC), Error ellipse: s-maj=6.6km s-min=5.0km az=89.0*

NEIC ***23*** *20:23:03.2, 19°.90S×70°.93W, h22^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}3.05; $M_{\theta\theta}$-0.49; $M_{\phi\phi}$-2.56; $M_{r\theta}$0.47; $M_{\theta\phi}$0.96; $M_{\phi r}$-2.32; Fault plane solution: $M_0$3.82000×10^{16} NP1:ϕ_s333.25000°, δ26.26000°, λ79.75000°. NP2:ϕ_s164.65000°, δ64.19000°, λ95.02000°. Principal axes: T 3.8899, Plg70.0000°, Azm85.0000°; N -0.1491, Plg5.0000°, Azm342.0000°; P -3.7408, Plg19.0000°, Azm251.0000°;*

VAO ***23*** *20:23:04.7±0.7, 19°.76S×70°.74W, h21^{km}, mb4.8*

BJI ***23*** *20:23:04.0±0.0, 19°.90S×70°.90W, h10^{km}, mB5.5/11, Ms5.4/8, Ms7 5.1/9*

GUC ***23*** *20:23:04.4±0.5, 19°.84S×70°.90W, h43^{km}±1^{km}, ML4.9*

MOS ***23*** *20:23:05.7±1.7, 19°.76S×70°.83W, h33^{km}, mb5.1/15, Error ellipse: s-maj=12.2km s-min=7.9km az=106.3*

NEIC ***23*** *20:23:07, 20°.00S×71°.04W, h30^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}4.93; $M_{\theta\theta}$0.07; $M_{\phi\phi}$-5.00; $M_{r\theta}$0.74; $M_{\theta\phi}$1.55; $M_{\phi r}$-1.72; Fault plane solution: $M_0$5.53000×10^{16} NP1:ϕ_s161.00000°, δ55.00000°, λ87.00000°. NP2:ϕ_s347.00000°, δ35.00000°, λ95.00000°. Principal axes: T 5.2666, Plg80.0000°, Azm58.0000°; N 0.4937, Plg3.0000°, Azm163.0000°; P -5.7604, Plg10.0000°, Azm254.0000°;*

GCMT ***23*** *20:23:09.3±0.5, 20°.01S±0°.03×71°.11W±0°.04, h32^{km}±1^{km}, MW5.3/61, Moment Tensor Solution. s24, c26; s61, c76; Duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.80±.08; $M_{\theta\theta}$0.15±.05; $M_{\phi\phi}$-0.95±.05; $M_{r\theta}$0.37±.07; $M_{\theta\phi}$0.33±.03; $M_{\phi r}$-0.35±.07; Best double couple: $M_0$1.06800×10^{17} NP1:ϕ_s5.00000°, δ36.00000°, λ122.00000°. NP2:ϕ_s147.00000°, δ60.00000°, λ69.00000°. Principal axes: T 0.9920, Plg68.0000°, Azm16.0000°; N 0.1530, Plg18.0000°, Azm158.0000°; P -1.1440, Plg13.0000°, Azm252.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 20:23:04.8±1.2**, 19°.85S**±0°.02×**70°.83W**±0°.04**, h23**^{km}±8^{km}**, n531, σ1^{s}31**/544**, mb5.0**/42**, MS4.8**/13**, 23C-11D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.71	69	⇓*i*P	Pb	20 23 18.6	0.0
PSGC				*i* S	Sn	20 23 29.4	-0.5
PSGCX	Pisagua	0.71	69		Pb	20 23 18.2	-0.5
PSGCX				Sn	Sn	20 23 30.0	+0.1
TA01	Diego Aracena	0.94	139	⇓*i*P	Pb	20 23 21.8	-0.6
TA01				*e*S	Sb	20 23 35.0	+0.6
TA01				IAML		20 23 38.2	
	comp=N,42μm,0.4s						
PB11	IPOC Station P	1.11	86	⇓*i*P	Pn	20 23 25.2	+0.1
PB11				*i* S	Sn	20 23 40.8	+1.0
PB11				IAML		20 23 42.5	
	comp=N,39μm,0.3s						
PB11	IPOC Station P	1.11	86		Pn	20 23 25.1	0.0
PB11				Sn	Sn	20 23 41.1	+1.3
PATCX	Punta Patache	1.16	147	⇑*i*P	Pn	20 23 24.9	-0.6
PATCX				*i* S	Sn	20 23 41.8	+1.0
PATCX				IAML		20 23 47.1	
	comp=E,23μm,0.6s						
PATCX	Punta Patache	1.16	147		Pn	20 23 25.1	-0.6
PB12	IPOC Station P	1.32	21	⇑*i*P	Pn	20 23 28.1	+0.3
PB12				*i* S	Sb	20 23 45.7	+0.3
PB12				IAML		20 23 53.0	
	comp=E,40μm,0.6s						
PB12	IPOC Station P	1.32	21		Pb	20 23 28.3	-0.6
PB12				Sn	Sb	20 23 46.2	+0.7
AP01	Chacalluta	1.54	18	*e*P	Pn	20 23 30.6	-0.3
AP01				*e*S	Sn	20 23 50.8	+0.6
GO01	Chusmiza	1.55	84	⇑*i*P	Pb	20 23 32.6	-0.6
GO01				*i* S	Sb	20 23 54.3	+1.7
GO01				IAML		20 23 56.3	
	comp=N,50μm,0.2s						
GO01	Chusmiza	1.55	84		Pb	20 23 32.7	-0.5
PB08	IPOC Station P	1.61	101	⇑*i*P	Pn	20 23 32.8	+0.7
PB08				*i* S	Sb	20 23 55.0	+1.0
PB08				IAML		20 23 56.7	
	comp=N,14μm,0.2s						
PB02	IPOC Station P	1.71	149	⇑*i*P	Pn	20 23 32.7	-0.5
PB02				*e*S	Sn	20 23 54.8	+0.4
PB02				IAML		20 24 01.9	
	comp=N,39μm,0.5s						
PB01	IPOC Station P	1.73	133	⇑*i*P	Pn	20 23 33.8	+0.2
PB01				*i* S	Sn	20 23 56.5	+1.5
PB01				IAML		20 24 03.9	
	comp=E,22μm,0.6s						
PB01	IPOC Station P	1.73	133		Pn	20 23 34.0	+0.4
PB16	IPOC Station P	1.96	40	⇑*i*P	Pn	20 23 38.3	+1.2
PB16				*i* S	Sb	20 24 04.0	-0.3
PB16	IPOC Station P	1.96	40		Pb	20 23 38.7	-1.4
PB07	IPOC Station P	2.07	155	*e*P	Pn	20 23 37.5	-0.7
PB07				*i* S	Sn	20 24 02.3	-1.1
PB07	IPOC Station P	2.07	155		Pn	20 23 37.5	-0.7
PB09	IPOC Station P	2.44	143		Pn	20 23 44.5	+1.1
PB09	IPOC Station P	2.44	143	*i* P	Pn	20 23 43.7	+0.3
PB09				*i* Sg	Sb	20 24 21.4	+3.5
PB04	IPOC Station P	2.55	166		Pn	20 23 43.6	-1.3
PB04	IPOC Station P	2.55	166	*i* P	Pn	20 23 43.5	-1.3
PB04				*i* Sg	Sb	20 24 21.4	+0.4
PB05	IPOC Station P	3.04	169	*i* P	Pn	20 23 49.6	-2.0
PB05				IAML		20 24 51.6	
	comp=Z,3μm,0.6s						
PB06	IPOC Station P	3.08	158	*i* P	Pn	20 23 51.3	-0.8
PB06				*i* Sg	Sb	20 24 39.1	+3.1
PB06				IAML		20 24 49.5	
	comp=Z,4μm,0.6s						
LVC	Limon Verde	3.28	147	Pn	Pn	20 23 55.9	+0.8
	comp=Z,126nm,0.3s,baz=321,slow=8.7,SNR=241						
LVC				Sn	Sn	20 24 34.6	+1.0
	comp=Z,151nm,0.3s,baz=260,slow=18,SNR=6.5						
LVC	Limon Verde	3.28	147	P	Pn	20 23 56.7	+1.6
LVC	Limon Verde	3.28	147		Pn	20 23 56.0	+1.0
LVC	Limon Verde	3.28	147	*e*P	Pn	20 23 55.9	+0.8
LVC				*e*S	Sn	20 24 34.6	+1.0
PB15	IPOC Station P	3.57	159		Pn	20 23 57.7	-1.3
PB15	IPOC Station P	3.57	159	*i* P	Pn	20 23 58.2	-0.8
PB15				*i* Sg	Sb	20 24 54.4	+3.9
PB15				IAML		20 25 01.6	
	comp=Z,6μm,1.1s						
PB10	IPOC Station P	3.65	176		Pn	20 23 57.6	-2.2
PB10	IPOC Station P	3.65	176	*i* P	Pn	20 23 57.7	-2.2
PB10				IAML		20 25 07.2	
	comp=Z,653nm,1.0s						
LPAZ	La Paz	4.38	36	Pn	Pn	20 24 11.1	+0.7
	comp=Z,2.8nm,0.3s,baz=204,slow=8.4,SNR=39						
LPAZ				LR	LR	20 26 03.5	
	comp=Z,5μm,20.5s,baz=240,slow=43						
LPAZ	La Paz	4.38	36	P	Pn	20 24 14.9	+4.5
LPAZ	La Paz	4.38	36		Pn	20 24 14.9	+4.5
PB14	IPOC Station P	4.77	175		Pn	20 24 13.1	-2.4
PB14	IPOC Station P	4.77	175	*i* P	Pn	20 24 13.9	-1.6
PB14				IAML		20 25 48.6	
	comp=Z,879nm,0.7s						
GO02	Mina Guanaco	5.41	168		Pn	20 24 23.1	-1.2
YJA	Yavi	5.48	116	*i* P	Pn	20 24 28.8	+3.4
YJA				IAML		20 26 01.7	
	comp=Z,112nm,1.9s						
AZAP	Zapla	6.90	130	*i* P	Pn	20 24 46.7	+2.0
AZAP				IAML		20 27 07.3	
	comp=Z,54nm,2.0s						
ASTB	Santa Barbara	7.19	126	*i* P	Pn	20 24 51.0	+2.3
ASTB				IAML		20 27 16.8	
	comp=Z,35nm,1.9s						
GO03	Copiap	7.73	176		Pn	20 24 53.5	-2.5
NNA	Nana	9.72	323	Pn	Pn	20 25 25.3	+2.0
	comp=Z,1.5nm,0.3s,baz=339,slow=14,SNR=4.1						
NNA				Sn	Sn	20 27 05.6	-6.2
	comp=Z,2.7nm,0.3s,baz=219,slow=12,SNR=1.8						
NNA				LR	LR	20 28 49.5	
	comp=Z,1μm,18.8s,baz=146,slow=36						
NNA	Nana	9.72	323	⇓*e*P	Pn	20 25 23.7	+0.4
SIV	San Ignacio	10.05	69	Pn	Pn	20 25 26.5	-1.4
	comp=Z,7.9nm,0.3s,baz=266,slow=9.2,SNR=50						
SIV				Sn	Sn	20 27 16.0	-4.0
	baz=355,slow=21,SNR=0.9						
SIV				LR	LR	20 29 48.1	
	comp=Z,3μm,21.8s,baz=267,slow=41						
GO04	Tololo Observa	10.28	180		Pn	20 25 27.8	-3.3
SAML	Samuel	13.12	35	P	Pn	20 26 08.9	-1.0
SAML	Samuel	13.12	35		Pn	20 26 08.8	-1.0
SAML	Samuel	13.12	35	*e*P	Pn	20 26 07.9	-1.9
CPUP	Villa Florida	13.99	120	Pn	Pn	20 26 24.8	+3.1
	comp=Z,0.2nm,0.3s,baz=308,slow=12,SNR=5.8						
CPUP				Sn	Sn	20 28 51.5	-4.9
	comp=Z,0.1nm,0.3s,baz=208,slow=13,SNR=1.3						
CPUP				LR	LR	20 32 45.1	
	comp=Z,2μm,18.3s,baz=303,slow=42						
CPUP	Villa Florida	13.99	120	P	Pn	20 26 22.4	+0.7
CPUP	Villa Florida	13.99	120		Pn	20 26 22.4	+0.7
ATAH	Atahualpa	14.62	329	Pn	Pn	20 26 32.8	+2.1
	comp=Z,0.4nm,0.3s,baz=134,slow=14,SNR=1.3						
SALV	Santo Antonio	14.94	77	*e*P	Pn	20 26 32.9	-1.7
CLDB	Colider	17.02	61	*e*P	Pn	20 27 00.0	-1.4
PTGB	Pitanga	18.03	109	*e*P	P	20 27 14.8	+0.5
PCMB	Pacaembu	18.39	99	*e*P	P	20 27 17.1	-1.2
ARAG	Araguaiana, MT	18.57	80	*e*P	P	20 27 18.8	-1.5
ITAB	Concordia	18.64	117	*e*P	P	20 27 19.9	-1.1
PLTB	Pedras Altas	19.50	131	*e*P	P	20 27 29.9	-0.5
PLCA	Paso Flores	20.82	179	P	P	20 27 45.4	+0.7
	comp=Z,3.7nm,0.5s,baz=22,slow=12,SNR=12						
PLCA				LR	LR	20 35 16.9	
	comp=Z,571nm,18.6s,baz=20,slow=35						
PLCA	Paso Flores	20.82	179	P	P	20 27 44.7	0.0
PLCA				pmax	pmax		
	comp=Z,95nm,1.6s						
PLCA	Paso Flores	20.82	179	P	P	20 27 44.6	0.0
IPMB	Ipameri, GO	21.48	89	*e*P	P	20 27 51.3	-0.7
PTGA	Pitinga	21.78	31	P	P	20 27 53.8	-1.3
	comp=Z,11nm,0.3s,baz=213,slow=12,SNR=20						
PTGA	Pitinga	21.78	31	P	P	20 27 53.6	-1.6
PTGA				IAmb	IAmb	20 28 05.8	
	comp=Z,81nm,1.1s						
PTGA	Pitinga	21.78	31	*e*P	P	20 27 53.5	-1.6
BDFB	Brasilia	22.13	83	P	P	20 27 56.6	-2.4
	comp=Z,5.5nm,0.5s,baz=258,slow=8.4,SNR=11						
BDFB				LR	LR	20 38 05.4	
	comp=Z,2μm,18.3s,baz=261,slow=41						
BDFB	Brasilia	22.13	83	P	P	20 27 56.9	-2.1
BDFB				pmax	pmax		
	comp=Z,52nm,1.1s						
BDFB	Brasilia	22.13	83	P	P	20 27 56.9	-2.1
VAO	Valinhos	22.43	102	*e*P	P	20 28 01.0	-1.2
BSCB	Bom Sucesso	24.44	97	*e*P	P	20 28 23.1	+1.0
ROSC	El Rosal	24.77	352	P	P	20 28 26.0	+0.6
	comp=Z,8.1nm,0.4s,baz=114,slow=18,SNR=5.0						
ROSC				LR	LR	20 39 05.6	
	comp=Z,1μm,18.2s,baz=195,slow=39						
RUSC	La Rusia	25.68	355	P	P	20 28 33.5	-0.2
JANB	Januaria	25.73	84	*e*P	P	20 28 32.5	-1.2
BSFB	Barra de Sao F	28.30	93	*e*P	P	20 28 56.5	-0.3
SDV	Santo Domingo	28.56	0	P	P	20 28 58.2	-1.0
	comp=Z,12nm,0.9s,baz=181,slow=8.7,SNR=5.0						
SDV	Santo Domingo	28.56	0	*e*P	P	20 28 58.2	-1.0
EFI	East Falkland	33.30	165	⇓*e*P	P	20 29 37.3	-3.2
EFI				pmax	pmax		
	comp=Z,65nm,1.1s						
USHA	Ushuaia	34.97	178	LR	LR	20 42 34.8	
	comp=Z,448nm,20.6s,baz=88,slow=34						
RCBR	Riachuelo	36.70	72	P	P	20 30 09.0	-1.3
RCBR				pmax	pmax		
	comp=Z,146nm,1.8s						
RCBR	Riachuelo	36.70	72	P	P	20 30 09.0	-1.3
RCBR	Riachuelo	36.70	72	*e*P	P	20 30 09.8	-0.5
APG	El Apazote	39.65	329	P	P	20 30 36.9	+1.5
	comp=Z,6.9nm,0.3s,baz=143,slow=4.7,SNR=7.1						
TEIG	Tepich	43.34	336	P	P	20 31 03.8	-1.5
NHSC	New Hope	53.41	350	P	P	20 32 24.1	+1.4
	baz=169						
Z57A	Bowman	53.68	350	P	P	20 32 25.6	+0.9
	baz=169,SNR=7.3						
Y60A	Bolivia	54.02	352	P	P	20 32 28.2	+1.1
	baz=172						
GOGA	Godfrey	54.32	347	P	P	20 32 28.0	-1.4
GOGA				pmax	pmax		
	comp=Z,25nm,1.4s						
GOGA	Godfrey	54.32	347	P	P	20 32 28.0	-1.4
GOGA				IAmb	IAmb	20 32 30.2	
	comp=Z,25nm,1.4s						
GOGA	Godfrey	54.32	347	P	P	20 32 29.8	+0.4
	baz=166						
Y57A	Sumter	54.34	350	P	P	20 32 30.8	+1.3
	baz=169						
Y55A	Saluda	54.51	349	P	P	20 32 31.4	+0.6
	baz=167,SNR=5.8						
X60A	Albert Glenn T	54.55	353	P	P	20 32 32.8	+1.8
	baz=172						
X59A	McDuffie Farm,	54.62	352	P	P	20 32 32.5	+1.0
	baz=171						
X58A	Rowland	54.70	351	P	P	20 32 32.8	+0.7
	baz=170						
Z50A	Ashland	54.74	345	P	P	20 32 32.4	0.0
	baz=163,SNR=5.8						
LRAL	Lakeview Retre	54.81	343	P	P	20 32 32.8	-0.1
	baz=162						
Y52A	Lilburn	54.88	347	P	P	20 32 33.9	+0.4
	baz=165						
X56A	White Oak	54.91	350	P	P	20 32 34.2	+0.6
	baz=168,SNR=5.2						
X55A	Gracelyn & Ava	54.99	349	P	P	20 32 34.9	+0.6
	baz=168,SNR=5.9						
HKT	Hockley	55.06	333	P	P	20 32 36.5	+1.8

HKT	comp=Z,16nm,1.4s			pmax	pmax		
HKT	Hockley comp=Z,18nm,1.1s	55.06	333	IAmb	IAmb	20 32 37.1	
W58A	Raeford baz=170,SNR=9.8	55.15	352	P	P	20 32 36.4	+1.0
X54A	Belton baz=167,SNR=5.5	55.20	348	P	P	20 32 36.3	+0.5
X53A	Estanollee baz=166	55.34	347	P	P	20 32 37.1	+0.3
W57A	Gilead baz=170,SNR=5.4	55.39	351	P	P	20 32 37.6	+0.5
W56A	Indian Trail baz=169	55.46	350	P	P	20 32 38.2	+0.6
KMSC	Kings Mountain baz=168,SNR=5.2	55.59	350	P	P	20 32 39.4	+0.8
W54A	Cherokee Point baz=167,SNR=6.7	55.69	349	P	P	20 32 40.2	+0.9
X51A	Calhoun baz=164	55.73	346	P	P	20 32 39.6	0.0
V59A	Middlesex baz=172,SNR=7.0	55.75	353	P	P	20 32 40.7	+1.0
V58A	Windy Hill, Pi baz=171,SNR=5.4	55.89	352	P	P	20 32 41.4	+0.7
V57A	Coltrane Farms baz=170	56.08	351	P	P	20 32 42.5	+0.5
V56A	Mocksville baz=169,SNR=11	56.11	351	P	P	20 32 43.3	+1.0
NATX	Nacogdoches baz=153	56.17	336	P	P	20 32 44.4	+1.6
V55A	Taylorsville baz=168,SNR=8.3	56.26	350	P	P	20 32 44.5	+1.1
U59A	Littleton baz=172,SNR=5.2	56.28	353	P	P	20 32 44.8	+1.3
V54A	Nebo baz=168,SNR=8.5	56.32	349	P	P	20 32 44.2	+0.5
U60A	Pendleton baz=173	56.34	354	P	P	20 32 44.5	+0.7
U58A	Oxford baz=171	56.41	353	P	P	20 32 45.3	+0.9
U57A	Blanch baz=171,SNR=5.0	56.55	352	P	P	20 32 46.1	+0.7
U56A	King baz=169,SNR=5.4	56.62	351	P	P	20 32 47.2	+1.3
Z41A	Richland Creek baz=155	56.83	338	P	P	20 32 48.7	+1.3
T59A	Double "B" Far baz=173,SNR=10.0	56.87	354	P	P	20 32 47.8	+0.2
U55A	TA2, Sparta baz=169	56.87	350	P	P	20 32 47.7	0.0
OXF	Oxford baz=159	56.88	342	P	P	20 32 47.4	-0.3
T58A	Grand View Acr baz=172	56.95	353	P	P	20 32 49.5	+1.2
U54A	Nelsons Funny baz=168,SNR=5.3	57.02	349	P	P	20 32 49.3	+0.5
T57A	Hurt baz=171,SNR=5.7	57.10	352	P	P	20 32 50.3	+1.0
T56A	Rocky Mt baz=170,SNR=5.5	57.23	351	P	P	20 32 51.0	+0.8
JCT	Junction City baz=147	57.28	330	P	P	20 32 50.8	+0.1
TZTN	Tazewell baz=166	57.36	348	P	P	20 32 51.0	-0.2
T55A	Pulaski baz=169,SNR=6.3	57.43	351	P	P	20 32 52.6	+0.9
T54A	Tazewell baz=168	57.51	350	P	P	20 32 52.5	+0.2
S58A	Poland Farm, P baz=172	57.56	353	P	P	20 32 53.5	+1.0
T53A	Wise baz=167	57.59	349	P	P	20 32 53.0	+0.1
T52A	Hallie baz=167	57.80	349	P	P	20 32 54.0	-0.2
S56A	Natural Bridge baz=170	57.81	352	P	P	20 32 55.3	+1.0
S57A	Dark Hollow, R baz=171,SNR=6.8	57.81	352	P	P	20 32 55.4	+1.1
T51A	Gray baz=166,SNR=7.9	57.85	348	P	P	20 32 54.6	0.0
R58B	Mineral baz=172,SNR=6.7	57.89	353	P	P	20 32 55.6	+0.8
WVT	Waverly	57.95	344	P	P	20 32 54.7	-0.6
WVT	comp=Z,22nm,1.4s			pmax	pmax		
WVT	Waverly baz=161	57.95	344	P	P	20 32 54.9	-0.4
S55A	Lewisburg baz=169,SNR=8.8	58.03	351	P	P	20 32 56.9	+1.0
CBN	Corbin Frederi baz=173	58.07	354	P	P	20 32 57.0	+0.9
T50A	Nancy baz=165,SNR=5.6	58.09	347	P	P	20 32 56.1	-0.1
S54A	Dingess, Beckl baz=169	58.18	350	P	P	20 32 57.5	+0.5
S53A	Williamson baz=168,SNR=5.8	58.20	349	P	P	20 32 57.1	0.0
R58A	Rapidan baz=172	58.23	353	P	P	20 32 58.2	+1.0
TXAR	Lajitas Array comp=Z,3.1nm,0.9s,baz=134,slow=7.2,SNR=11	58.26	326	P	P	20 32 57.3	-0.4
MIAR	Mount Ida	58.26	338	P	P	20 32 56.2	-1.3
MIAR	comp=Z,29nm,1.1s			pmax	pmax		
MIAR	Mount Ida	58.26	338	P	P	20 32 56.2	-1.3
MIAR	comp=Z,29nm,1.1s			IAmb	IAmb	20 32 59.0	
MIAR	Mount Ida baz=155,SNR=14	58.26	338	P	P	20 32 58.1	+0.6
R57A	Stanardsville baz=172,SNR=9.1	58.29	353	P	P	20 32 58.7	+1.1
T49A	Edmonton baz=164,SNR=18	58.32	346	P	P	20 32 57.7	-0.2
S52A	Salyersville baz=167	58.37	349	P	P	20 32 58.1	-0.2
W41B	Gary Mavity, V baz=156,SNR=5.6	58.38	339	P	P	20 32 58.5	+0.2
S51A	Beattyville comp=Z,44nm,1.8s	58.43	348	IAmb	IAmb	20 33 28.4	
S51A	Beattyville baz=166	58.43	348	P	P	20 32 58.8	+0.2
R55A	Marlinton baz=170	58.48	351	P	P	20 33 00.1	+1.1
R54A	Victor baz=169	58.51	351	P	P	20 32 59.7	+0.6
S50A	Richmond baz=165,SNR=8.9	58.63	347	P	P	20 33 00.0	0.0
R53A	Hurricane baz=168	58.81	350	P	P	20 33 01.4	+0.2
Q58A	Fox Den Farm, baz=173,SNR=6.6	58.83	354	P	P	20 33 02.5	+1.1
S49A	Springfield baz=164	58.92	347	P	P	20 33 01.9	-0.1
W39A	Magazine baz=155,SNR=12	58.92	338	P	P	20 33 02.9	+0.8
Q57A	Strasburg baz=172,SNR=9.0	59.00	353	P	P	20 33 03.9	+1.3
ABTX	Abilene, Hawle baz=148,SNR=7.6	59.01	332	P	P	20 33 03.6	+0.8
R51A	Hillsboro baz=166,SNR=6.3	59.07	348	P	P	20 33 03.1	0.0
Q56A	Snyder Ridge, baz=171,SNR=8.3	59.10	352	P	P	20 33 04.9	+1.6
Q55A	Buckhannon baz=170,SNR=5.1	59.17	352	P	P	20 33 05.1	+1.3
R50A	Paris comp=Z,32nm,1.4s	59.20	348	IAmb	IAmb	20 33 04.7	
R50A	Paris baz=165	59.20	348	P	P	20 33 04.1	+0.1
Q53A	Leroy baz=168,SNR=6.2	59.25	350	P	P	20 33 04.7	+0.3
Q54A	Coxs Mills baz=169	59.27	351	P	P	20 33 04.8	+0.3
P58A	Pank, Wackersv baz=173	59.34	354	P	P	20 33 05.7	+0.8
P59A	Jarrettsville baz=174,SNR=5.8	59.38	355	P	P	20 33 06.7	+1.5
R49A	Shelbyville comp=Z,39nm,1.6s	59.38	347	IAmb	IAmb	20 33 05.7	
P57A	Homestead Farm baz=172,SNR=6.9	59.40	354	P	P	20 33 06.8	+1.5
P56A	Dayton Farm, R baz=171,SNR=6.0	59.52	353	P	P	20 33 07.8	+1.7
WCI	Wyandotte Cave	59.57	346	P	P	20 33 06.3	-0.2
WCI	comp=Z,22nm,1.3s			pmax	pmax		
WCI	Wyandotte Cave baz=163	59.57	346	P	P	20 33 06.3	-0.2
P55A	Reedsville baz=170	59.64	352	P	P	20 33 08.1	+1.1
U40A	Yellville baz=156,SNR=8.9	59.66	339	P	P	20 33 07.2	+0.1
Q50A	Georgetown baz=166	59.67	348	P	P	20 33 07.8	+0.6
Q51A	Peebles baz=166	59.73	349	P	P	20 33 07.5	-0.1
MCWV	Mont Chateau baz=170,SNR=5.4	59.79	352	P	P	20 33 09.5	+1.4
P54A	Burton baz=170,SNR=9.3	59.83	351	P	P	20 33 09.0	+0.7
P53A	Whipple baz=169	59.85	351	P	P	20 33 09.2	+0.8
O58A	Lewisberry baz=174	59.93	355	P	P	20 33 08.6	-0.4
O60A	Telford baz=175	60.01	356	P	P	20 33 10.1	+0.7
Q49A	Aurora baz=165	60.01	347	P	P	20 33 09.2	-0.3
O59A	Robesonia baz=174	60.06	355	P	P	20 33 10.6	+0.7
O57A	Amberson baz=173,SNR=7.9	60.09	354	P	P	20 33 11.3	+1.2
P52A	Corning baz=168	60.11	350	P	P	20 33 09.9	-0.3
Q48A	North Vernon baz=164	60.11	347	P	P	20 33 09.6	-0.6
P51A	Williamsport baz=167	60.12	349	P	P	20 33 09.9	-0.3
O56A	Blue Knob Stat baz=172,SNR=9.5	60.24	353	P	P	20 33 12.4	+1.3
O55A	Ligonier baz=171,SNR=7.8	60.27	353	P	P	20 33 12.5	+1.2
TUL1	Leonard baz=153,SNR=8.6	60.28	337	P	P	20 33 12.1	+0.6
P50A	Jamestown baz=166,SNR=5.8	60.38	348	P	P	20 33 11.8	-0.3
O54A	Avella baz=170	60.38	352	P	P	20 33 12.0	0.0
WMOK	Wichita Mounta	60.44	334	P	P	20 33 11.9	-0.7
WMOK	comp=Z,7.0nm,2.2s			pmax	pmax		
WMOK	Wichita Mounta baz=150	60.44	334	P	P	20 33 12.4	-0.2
P49A	Miami Univ. Ec baz=165	60.48	348	P	P	20 33 12.2	-0.5
O52A	Adamsville baz=168	60.53	350	P	P	20 33 13.0	-0.1
SSPA	Standing Stone baz=172	60.53	354	P	P	20 33 14.2	+1.2
N60A	Cedar Hill Far baz=176	60.54	356	P	P	20 33 14.1	+1.0
P48A	Milroy baz=164	60.56	347	P	P	20 33 12.4	-0.8
N58A	Sunbury baz=174,SNR=5.5	60.62	355	P	P	20 33 15.1	+1.4
O51A	Pataskala baz=167	60.69	350	P	P	20 33 14.1	0.0
CCM	Cathedral Cave	60.71	342	P	P	20 33 15.3	+1.0
CCM	comp=Z,15nm,1.7s			pmax	pmax		
CCM	Cathedral Cave baz=158	60.71	342	P	P	20 33 14.3	0.0
N55A	Marion Center baz=171,SNR=23	60.79	353	P	P	20 33 15.9	+1.0
ACSO	Alum Creek Sta baz=167,SNR=5.3	60.84	349	P	P	20 33 15.2	+0.1
N56A	West Decatur baz=172,SNR=9.2	60.85	354	P	P	20 33 16.5	+1.2
O50A	Cable baz=166	60.87	349	P	P	20 33 14.8	-0.6
MNTX	Cornudas Mount baz=143,SNR=9.0	61.03	326	P	P	20 33 17.1	+0.4
O49A	Covington baz=166	61.04	348	P	P	20 33 16.6	0.0
N53A	Lisbon baz=169	61.06	351	P	P	20 33 17.2	+0.5
N54A	Moraine State baz=170,SNR=7.7	61.09	352	P	P	20 33 18.0	+1.1
M58A	Price’s Panora baz=174,SNR=6.8	61.13	355	P	P	20 33 18.7	+1.5
M57A	Sunshine Farm, baz=173,SNR=7.3	61.15	355	P	P	20 33 18.7	+1.4
M59A	Waymart baz=175,SNR=5.9	61.23	356	P	P	20 33 19.0	+1.2
O48A	Farmland baz=165,SNR=9.0	61.27	348	P	P	20 33 17.6	-0.5
N50A	Nevada baz=167,SNR=5.1	61.39	349	P	P	20 33 18.7	-0.2
M56A	Emporium	61.40	354	P	P	20 33 16.6	-2.4
M56A	Emporium baz=172,SNR=12	61.40	354	P	P	20 33 19.9	+1.0
N51A	Ashland baz=168	61.40	350	P	P	20 33 19.2	+0.2
L63A	North Scituate baz=179,SNR=5.4	61.40	359	P	P	20 33 20.1	+1.1
M55A	Ridgway baz=172,SNR=11	61.45	353	P	P	20 33 20.3	+1.0
MSTX	Muleshoe baz=146,SNR=9.6	61.57	330	P	P	20 33 20.8	+0.4
M54A	Oil Creek Stat	61.59	352	P	P	20 33 18.3	-2.0
M54A	Oil Creek Stat baz=171,SNR=11	61.59	352	P	P	20 33 21.1	+0.8
L60A	Shokan baz=176	61.61	357	P	P	20 33 21.5	+1.2
M53A	WI Miller and baz=170,SNR=6.2	61.66	352	P	P	20 33 21.1	+0.4
N49A	Columbus Grove baz=166,SNR=12	61.72	349	P	P	20 33 21.0	-0.1
L58A	Harry Jones Me baz=175,SNR=9.5	61.76	356	P	P	20 33 22.6	+1.2
L57A	Andrews Acres baz=174	61.79	355	P	P	20 33 22.6	+1.0
SFIN	Lafayette baz=163,SNR=5.6	61.80	346	P	P	20 33 20.4	-1.3
N48A	Decatur baz=165,SNR=6.9	61.82	348	P	P	20 33 21.4	-0.4
L59A	Walton baz=176,SNR=11	61.85	356	P	P	20 33 23.2	+1.2
BINY	Binghamton baz=175,SNR=7.0	61.92	356	P	P	20 33 23.7	+1.2
N47A	Urbana baz=164,SNR=5.6	61.98	347	P	P	20 33 22.0	-0.9
M50A	Fremont baz=167	61.98	350	P	P	20 33 23.1	+0.2
L56A	Greenwood baz=173,SNR=6.7	61.99	354	P	P	20 33 24.0	+1.0
L61B	Northampton baz=178	62.01	358	P	P	20 33 23.8	+0.7
HRV	Adam Dziewonsk	62.05	359	P	P	20 33 25.8	+2.5
HRV	comp=Z,66nm,1.2s			pmax	pmax		
HRV	Adam Dziewonsk baz=179	62.05	359	P	P	20 33 24.4	+1.2
L53A	Girard baz=170,SNR=9.7	62.11	352	P	P	20 33 24.2	+0.5
L55A	Hinsdale baz=172,SNR=9.8	62.12	354	P	P	20 33 24.9	+1.1
M49A	Liberty Center baz=166,SNR=5.7	62.22	349	P	P	20 33 24.3	-0.2
ERPA	Erie baz=170,SNR=5.4	62.23	352	P	P	20 33 25.2	+0.6
K61A	Williamstown baz=178	62.25	358	P	P	20 33 25.8	+1.1
L54A	Sinclairville baz=171,SNR=20	62.27	353	P	P	20 33 25.7	+0.9
WVNY	West Valley, N	62.36	354	P	P	20 33 24.6	-0.8
M48A	Edgerton baz=165	62.37	348	P	P	20 33 25.3	-0.1
K59A	Cooperstown baz=176,SNR=12	62.42	357	P	P	20 33 27.0	+1.2
M47A	Cromwell baz=164	62.42	347	P	P	20 33 25.4	-0.5
K58A	Earlville baz=175,SNR=8.1	62.46	356	P	P	20 33 27.1	+1.1
K57A	Scipio Center baz=174	62.49	355	P	P	20 33 27.0	+0.7
HDIL	Hopedale baz=161	62.51	344	P	P	20 33 26.1	-0.3
K56A	Middlesex baz=173	62.52	355	P	P	20 33 27.3	+0.7
K54A	Basiliko Farm, baz=172,SNR=10	62.57	353	P	P	20 33 27.4	+0.6
K55A	Perry baz=172,SNR=5.4	62.62	354	P	P	20 33 28.0	+0.8
L48A	N Adams baz=166	62.76	349	P	P	20 33 27.6	-0.4
J62A	Henniker baz=179	62.77	359	P	P	20 33 29.7	+1.6
L49A	Milan baz=166	62.80	349	P	P	20 33 28.4	+0.1
J61A	Chester baz=178	62.90	359	P	P	20 33 30.4	+1.5
121A	Cookes Peak, D baz=141,SNR=7.3	62.95	325	P	P	20 33 31.6	+1.8
J58A	Remsen baz=175	63.03	356	P	P	20 33 30.7	+0.8
J59A	Piesco baz=176,SNR=10	63.09	357	P	P	20 33 31.5	+1.2
J57A	Williamstown baz=175,SNR=5.1	63.12	356	P	P	20 33 31.2	+0.8
J55A	Hilton baz=173	63.13	354	P	P	20 33 31.1	+0.6
J54A	Appleton baz=172	63.22	354	P	P	20 33 31.7	+0.7
I58A	Old Forge baz=176,SNR=6.3	63.34	357	P	P	20 33 32.9	+1.0
I59A	Olmsteadville baz=177,SNR=7.3	63.39	358	P	P	20 33 33.5	+1.2
J52A	Paris baz=170,SNR=13	63.40	352	P	P	20 33 32.8	+0.5
I60A	Shoreham baz=178	63.42	358	P	P	20 33 33.7	+1.4
I61A	Oroboro, Fairl baz=179,SNR=6.0	63.48	359	P	P	20 33 34.5	+1.7
K47A	Vermontville baz=165	63.57	348	P	P	20 33 32.9	-0.5
I57A	Carthage baz=175	63.63	356	P	P	20 33 34.3	+0.5
LBNH	Lisbon baz=179	63.78	359	P	P	20 33 36.5	+1.6
J49A	Marlette baz=167	63.91	350	P	P	20 33 35.3	-0.3
J48A	Bridge Port baz=167,SNR=5.0	63.95	350	P	P	20 33 35.4	-0.6
I51A	Listowel baz=170,SNR=5.6	64.03	352	P	P	20 33 36.2	-0.2
H58A	Gabriels baz=177,SNR=6.1	64.03	357	P	P	20 33 37.4	+1.0
I55A	Frankford baz=173	64.06	355	P	P	20 33 37.3	+0.6
H61A	Lyndonville baz=179,SNR=5.6	64.08	359	P	P	20 33 38.3	+1.6
J47A	Sunmer baz=166	64.08	349	P	P	20 33 36.4	-0.4
H57A	Richville baz=175,SNR=11	64.13	356	P	P	20 33 38.0	+0.9
ANMO	Albuquerque	64.15	328	P	P	20 33 39.1	+1.4
ANMO	comp=Z,5.0nm,1.0s			pmax	pmax		
ANMO	Albuquerque baz=143	64.15	328	P	P	20 33 38.9	+1.2
I52A	Shelburne baz=170,SNR=6.9	64.18	353	P	P	20 33 38.0	+0.5
H64A	Troy baz=182	64.19	1	P	P	20 33 39.2	+1.7
H63A	New Sharon baz=181	64.20	1	P	P	20 33 39.5	+2.0
H59A	Cadyville baz=177,SNR=7.1	64.23	358	P	P	20 33 38.9	+1.1
LONY	Lake Ozonia baz=176	64.25	357	P	P	20 33 38.9	+1.1
H56A	Elgin baz=174,SNR=5.6	64.32	356	P	P	20 33 38.8	+0.5
CBKS	Cedar Bluff baz=150	64.34	335	P	P	20 33 39.8	+1.2
H55A	Tweed baz=174	64.35	355	P	P	20 33 38.8	+0.3
SNAA	Sanae	64.42	161⇑	eP	P	20 33 39.0	+0.2
SNAA	Sanae	64.42	161	P	P	20 33 38.5	-0.3
SNAA	comp=Z,28nm,1.3s			IAmb	IAmb	20 33 41.0	
I49A	Point Hope baz=168	64.42	350	P	P	20 33 38.6	-0.4
H53A	Bobcaygeon baz=172,SNR=6.6	64.50	354	P	P	20 33 40.0	+0.5
G60A	Masonville baz=179	64.65	359	P	P	20 33 42.4	+2.0
G59A	Clarenceville baz=178	64.65	358	P	P	20 33 41.1	+0.6
H52A	Wyevale baz=171	64.71	353	P	P	20 33 41.5	+0.7
G57A	Newington baz=176,SNR=6.8	64.75	357	P	P	20 33 42.1	+1.0
G58A	Ormstown baz=177	64.75	357	P	P	20 33 42.0	+0.9
G62A	West of Eustis baz=180,SNR=12	64.75	0	P	P	20 33 42.9	+1.7
I47A	Gladwin baz=166	64.78	349	P	P	20 33 41.4	+0.1
I48A	Sherman Twp baz=167	64.81	350	P	P	20 33 41.1	-0.4
PKME	Peaks-Kenny Pk baz=182	64.81	1	P	P	20 33 42.1	+0.5
G61A	St-Isidore-de- baz=179,SNR=7.1	64.82	359	P	P	20 33 43.3	+1.7
I46A	Reed City baz=165	64.88	348	P	P	20 33 41.4	-0.6
T25A	Trinidad baz=145,SNR=6.8	64.93	331	P	P	20 33 44.1	+1.3
JFWS	Jewell Farm baz=160	64.96	344	P	P	20 33 42.6	0.0
G55A	Calabogie baz=174,SNR=6.5	65.01	355	P	P	20 33 43.6	+0.8
G53A	Haliburton baz=172,SNR=12	65.05	354	P	P	20 33 43.7	+0.6
G54A	Lake Saint Pet baz=173,SNR=6.1	65.27	354	P	P	20 33 45.0	+0.5
214A	Organ Pipe Nat baz=136,SNR=6.9	65.35	321	P	P	20 33 47.5	+2.1
F64A	Sherman baz=183	65.44	2	P	P	20 33 46.8	+1.2
F60A	Warwick baz=179,SNR=5.1	65.51	359	P	P	20 33 46.9	+0.9
KSCO	Kaye Shedlock’ baz=147	65.69	333	P	P	20 33 49.0	+1.4
F52A	Sundridge baz=171,SNR=7.1	65.78	353	P	P	20 33 48.4	+0.6
G47A	Hillman baz=167	65.79	350	P	P	20 33 48.1	+0.2
ALGO	Algonquin Park baz=173	65.82	354	P	P	20 33 48.4	+0.3
SDCO	Great Sand Dun baz=144,SNR=14	65.92	330	P	P	20 33 50.8	+1.5
E58A	La Victoria baz=178	65.94	358	P	P	20 33 49.8	+1.0
E61A	Lac Etchemin baz=180	65.97	0	P	P	20 33 50.0	+1.0
G45A	Suttons Bay baz=165	65.98	349	P	P	20 33 49.0	0.0
F51A	Arnstein baz=171	65.98	353	P	P	20 33 49.5	+0.4
E63A	Oxbow baz=183	65.99	2	P	P	20 33 50.0	+0.8
BGNE	Belgrade baz=152,SNR=5.7	66.00	338	P	P	20 33 50.1	+0.7
E64A	Bridgewater baz=183	66.01	2	P	P	20 33 49.7	+0.5
E57A	Chemin Saint G baz=177	66.02	357	P	P	20 33 50.0	+0.6
F49A	Sandfield baz=169	66.09	351	P	P	20 33 49.3	-0.4
G46A	Petoskey baz=166	66.10	349	P	P	20 33 49.9	0.0
E55A	Montcerf-Lytto baz=175	66.16	356	P	P	20 33 50.8	+0.6
E56A	St. Veronique baz=176,SNR=7.4	66.19	357	P	P	20 33 51.1	+0.7
E52A	Mattawa baz=172	66.20	354	P	P	20 33 51.0	+0.5
E53A	Dumoine, Ponti baz=173	66.20	355	P	P	20 33 51.4	+0.8
E54A	Lac Daplat, Po baz=174,SNR=5.2	66.22	355	P	P	20 33 51.0	+0.4
F48A	Evansville baz=168	66.23	351	P	P	20 33 50.4	-0.3
E51A	G1948 Merrick baz=171	66.53	353	P	P	20 33 53.0	+0.4
S22A	4UR Ranch, Cre baz=143,SNR=5.1	66.55	329	P	P	20 33 54.7	+1.4
F45A	CMU Biological baz=165,SNR=6.1	66.57	349	P	P	20 33 52.5	-0.3
D57A	Chemin Vers le baz=177,SNR=7.5	66.61	358	P	P	20 33 54.2	+1.1
D63A	Stockholm	66.62	2	P	P	20 33 54.2	+1.0

	baz=183						
D62A	Allapoint, All	66.64	1	P	P	20 33 53.0	-0.2
D62A	Allapoint, All	66.64	1	P	P	20 33 54.4	+1.2
	baz=182,SNR=5.6						
D58A	Chemin du LacG	66.66	358	P	P	20 33 54.5	+1.1
	baz=178,SNR=7.3						
D56A	ZEC Mazanza, M	66.68	357	P	P	20 33 54.0	+0.5
	baz=176						
D55A	Sainte-Anne-du	66.69	357	P	P	20 33 54.1	+0.5
	baz=175,SNR=5.9						
D61A	St Aubert, Com	66.74	0	P	P	20 33 55.4	+1.5
	baz=181						
Q24A	Divide	66.75	331	P	P	20 33 55.9	+1.3
	baz=145						
E48A	Lockeyer	66.81	352	P	P	20 33 54.3	-0.1
	baz=168						
D54A	Lac Fusel, La	66.89	356	P	P	20 33 54.7	-0.3
	baz=174,SNR=6.5						
D53A	Lac Vacive, Po	66.90	355	P	P	20 33 54.1	-0.9
D53A				IAmb	IAmb	20 33 56.3	
	comp=Z,14nm,1.0s						
D53A	Lac Vacive, Po	66.90	355	P	P	20 33 55.3	+0.4
	baz=173,SNR=5.2						
LATQ	La Tuque	66.94	359	P	P	20 33 56.2	+1.0
	baz=178						
MVCO	Mesa Verde	66.94	328	P	P	20 33 57.3	+1.6
	baz=142						
E47A	Iron Bridge	66.95	351	P	P	20 33 54.7	-0.5
	baz=167						
D51A	Lot 18 Range I	67.07	354	P	P	20 33 56.2	+0.2
	baz=171,SNR=6.3						
WUAZ	Wupatki	67.15	325	P	P	20 33 59.0	+1.9
	baz=139,SNR=9.4						
D50A	G1974 Best Tow	67.20	353	P	P	20 33 57.4	+0.6
	baz=171,SNR=12						
D48A	Paudash Townsh	67.44	352	P	P	20 33 58.0	-0.4
	baz=169						
D47A	Chapleau	67.51	351	P	P	20 33 58.2	-0.6
	baz=168						
ECSD	EROS Data Cent	67.55	340	P	P	20 33 59.3	+0.2
	baz=154,SNR=18						
ISCO	Idaho Springs	67.64	332	P	P	20 34 00.2	0.0
ISCO				pmax	pmax		
	comp=Z,12nm,1.2s						
ISCO	Idaho Springs	67.64	332	P	P	20 34 01.5	+1.3
	baz=145,SNR=6.8						
SPMN	Marine on St.	67.78	343	P	P	20 34 00.9	+0.3
	baz=158						
PDMCI	Parker Dam,Lak	67.81	322	P	P	20 34 03.3	+2.3
	baz=136						
IKP	In-Ko-Pah, Jac	67.82	320	P	P	20 34 03.7	+2.5
	baz=134,SNR=5.6						
BC3	Big Chuckawall	68.12	321	P	P	20 34 05.2	+2.0
	baz=135,SNR=8.5						
MONP2	Monument Peak	68.17	320	P	P	20 34 05.6	+2.0
	baz=134						
IRM	Iron Mountain	68.29	321	P	P	20 34 06.4	+2.3
	baz=135,SNR=15						
N23A	Red Feather La	68.68	332	P	P	20 34 04.8	-1.9
	baz=145						
BELC	Belle Mtn. Jos	68.69	321	P	P	20 34 08.9	+2.2
	baz=134						
XPFO	Pion Flat	68.69	320	P	P	20 34 06.2	-0.6
PFO	Pinyon Flats O	68.69	320	*c i*P	P	20 34 07.0	+0.3
PFO				pmax	pmax		
	comp=Z,14nm,1.1s						
PFO	Pinyon Flats O	68.69	320	P	P	20 34 05.6	-1.2
PFO	Pinyon Flats O	68.69	320	P	P	20 34 08.9	+2.2
	baz=134,SNR=6.0						
LSQQ	Lebel-sur-Quev	68.81	356	P	P	20 34 07.1	+0.2
	baz=174						
GMRC	Granite Mounta	69.03	322	P	P	20 34 10.9	+2.1
	baz=135,SNR=11						
O20A	White River Ci	69.11	330	P	P	20 34 10.7	+1.4
	baz=142,SNR=5.6						
HEC	Hector,Ludlow	69.46	321	P	P	20 34 14.0	+2.6
	baz=134,SNR=9.2						
MATQ	Matagami	69.56	355	P	P	20 34 11.5	0.0
	baz=173,SNR=5.9						
TUQ	Turquoise Moun	69.64	322	P	P	20 34 15.0	+2.4
	baz=135,SNR=7.2						
LIC	Lamto	69.69	75	*e*P	P	20 34 11.8	-1.4
	comp=Z,3.6nm,0.3s						
DRLN	Deer Lake	69.81	9	P	P	20 34 13.2	0.0
BFSC	Mount Baldy Ra	69.85	320	P	P	20 34 16.3	+2.5
	baz=133,SNR=6.9						
TIC	Toumodi	69.86	75	*e*P	P	20 34 12.9	-1.4
	comp=Z,1.8nm,0.3s						
EYMN	Ely	69.98	345	P	P	20 34 14.0	-0.3
	baz=160						
KIC	Kosan Boka	70.00	75	*e*P	P	20 34 13.7	-1.4
	comp=Z,82nm,1.4s						
DBIC	Dimbokro	70.02	75	P	P	20 34 14.4	-0.8
	comp=Z,10.0nm,0.9s,baz=221,slow=7.5,SNR=7.0						
DBIC	Dimbokro	70.02	75	P	P	20 34 14.1	-1.1
DBIC				pmax	pmax		
	comp=Z,29nm,1.2s						
DBIC	Dimbokro	70.02	75	P	P	20 34 14.1	-1.1
DBIC				IAmb	IAmb	20 34 15.3	
	comp=Z,29nm,1.2s						
GSC	Goldstone, Bar	70.07	321	P	P	20 34 17.6	+2.5
	baz=134,SNR=8.7						
QSPA	South Pole Qui	70.33	180	P	P	20 34 17.9	+1.5
QSPA				IAmb	IAmb	20 34 18.5	
	comp=Z,31nm,1.4s						
K22A	Casper	70.36	333	P	P	20 34 18.3	+1.4
	baz=145						
EDW2	Edwards Air Fo	70.49	320	P	P	20 34 19.7	+2.0
	baz=133,SNR=7.1						
RSSD	Black Hills	70.55	335	P	P	20 34 16.5	-1.6
RSSD				pmax	pmax		
	comp=Z,12nm,1.0s						
RSSD	Black Hills	70.55	335	P	P	20 34 16.5	-1.6
RSSD				IAmb	IAmb	20 34 20.1	
	comp=Z,12nm,0.9s						
RSSD	Black Hills	70.55	335	P	P	20 34 19.4	+1.4
	baz=147						
BLG	Laguna Peak, P	70.62	319	P	P	20 34 21.3	+2.8
	baz=132						
LRMC	Laurel Mtn Rad	70.71	321	P	P	20 34 21.6	+2.5
	baz=134						
TPNV	Topopah Spring	70.89	323	P	P	20 34 22.9	+2.7
	baz=135,SNR=7.2						
FURC	Furnace Creek,	70.91	322	P	P	20 34 23.2	+3.1
	baz=134,SNR=6.1						
MPMC	Manual Prospec	70.99	321	P	P	20 34 23.0	+2.1
	baz=134,SNR=7.5						
ISA	Isabella, Lake	71.31	321	P	P	20 34 25.2	+2.5
	baz=133,SNR=14						
DUG	Dugway, Tooele	71.40	327	P	P	20 34 24.5	+1.3
DUG				pmax	pmax		
	comp=Z,19nm,1.3s						
DUG	Dugway, Tooele	71.40	327	P	P	20 34 25.4	+2.2
	baz=139,SNR=17						
AGMN	Agassiz Nation	71.44	343	P	P	20 34 23.1	0.0
	baz=155,SNR=8.4						
R11A	Troy Canyon, C	71.52	324	P	P	20 34 26.6	+2.6
	baz=136,SNR=13						
PKM	Mcpherson Peak	71.60	319	P	P	20 34 27.2	+2.6
	baz=132,SNR=7.3						
CWC	Cottonwood Cre	71.60	321	P	P	20 34 26.9	+2.3
	baz=134						
VES	Vestal, Richgr	71.79	320	P	P	20 34 27.9	+2.4
	baz=133						
BW06	Boulder Array	71.80	331	P	P	20 34 27.1	+1.5
	baz=142						
PDAR	Pinedale Array	71.80	331	P	P	20 34 26.6	+0.9
	comp=Z,2.3nm,0.9s,baz=134,slow=6.4,SNR=12						
SMMC	Simmler	71.99	319	P	P	20 34 29.6	+2.8
	baz=132,SNR=6.5						
MDND	Maddock	72.17	340	P	P	20 34 28.4	+1.0
	baz=152,SNR=11						
NVAR	Mina Array Bea	73.09	323	P	P	20 34 35.4	+1.9
	comp=Z,5.4nm,0.9s,baz=148,slow=6.3,SNR=30						
ULM	Lac du Bonnet	73.22	344	P	P	20 34 33.6	-0.1
	comp=Z,8.6nm,1.0s,baz=145,slow=6.6,SNR=11						
ULM	Lac du Bonnet	73.22	344	*c i*P	P	20 34 32.8	-0.9
RLMT	Red Lodge	73.52	333	P	P	20 34 37.0	+1.1
	baz=143,SNR=13						
LAO	LASA Array	73.53	335	P	P	20 34 37.1	+1.4
	baz=146,SNR=9.3						
DGMT	Dagmar	74.26	338	P	P	20 34 41.2	+1.3
	baz=148,SNR=8.0						
SCHQ	Schefferville	74.46	2	P	P	20 34 39.8	-1.1
	comp=Z,5.0nm,0.9s,baz=172,slow=6.6,SNR=4.8						
EGMT	Eagleton	76.03	334	P	P	20 34 50.3	+0.1
	baz=143						
MSO	Missoula	76.91	331	P	P	20 34 57.4	+2.2
	baz=139,SNR=9.1						
N02D	Trinity Center	77.32	322	P	P	20 34 58.8	+1.2
	baz=131						
M04C	Macdoel	77.36	323	P	P	20 34 59.9	+2.1
	baz=132						
M02C	Callahan	77.67	323	P	P	20 35 00.8	+1.3
	baz=131						
L04D	Klamath Falls	77.90	324	P	P	20 35 02.1	+1.2
	baz=131						
J05D	Fort Rock, OR	78.02	325	P	P	20 35 03.6	+2.1
	baz=132,SNR=6.1						
TOA0	Torodi Ar. Sit	78.52	71	P	P	20 35 04.0	-0.8
TOA0				IAmb	IAmb	20 35 05.1	
	comp=Z,48nm,1.1s						
TORD	Torodi Ar. Bea	78.52	71	P	P	20 35 03.8	-1.0
	comp=Z,31nm,1.1s,baz=250,slow=5.5,SNR=60						
TORD				LR	LR	21 07 49.4	
	comp=Z,516nm,20.8s,baz=20,slow=34						
TORD	Torodi Ar. Bea	78.52	71	P	P	20 35 03.4	-1.3
SYO	Syowa Base	78.67	160	⇑*e*pP	P	20 35 04.4	-0.2
SYO	Syowa Base	78.67	160	⇑*e*PcP	P	20 35 09.0	+4.4
I05D	Terrebonne, OR	78.79	326	P	P	20 35 08.1	+2.4
	baz=132						
FFC	Flin Flon	78.91	342	*ce*P	P	20 35 06.8	+0.8
FFC				pmax	pmax		
	comp=Z,29nm,2.5s						
I04A	Tendick Farm,	79.00	325	P	P	20 35 08.0	+1.2
	baz=132						
G05D	Wamic, OR	79.38	326	P	P	20 35 11.6	+2.8
	baz=133						
NEW	Newport	79.43	331	P	P	20 35 09.0	0.0
NEW				pmax	pmax		
	comp=Z,6.0nm,1.4s						
NEW	Newport	79.43	331	P	P	20 35 09.9	+0.9
	baz=136						
B05A	Bryant	81.81	328	P	P	20 35 22.6	+0.9
	baz=132						
RAR	Rarotonga	82.09	250	LR	LR	21 02 59.8	
	comp=Z,484nm,19.1s,baz=246,slow=29						
TSUM	Tsumeb	82.25	108	P	P	20 35 23.2	-1.7
TSUM				IAmb	IAmb	20 35 26.1	
	comp=Z,22nm,1.4s						
PAB	San Pablo	85.62	45	P	P	20 35 44.5	+2.9
PAB				pmax	pmax		
	comp=Z,15nm,1.9s						
TAM	Tamanrasset	85.70	64	P	P	20 35 43.0	+0.5
TAM				pmax	pmax		
	comp=Z,19nm,1.3s						
BOSA	Boshof	85.81	119	LR	LR	21 10 31.8	
	comp=Z,287nm,19.4s,baz=289,slow=33						
ESDC	Sonseca Array	85.94	45	P	P	20 35 43.3	+0.2
	comp=Z,4.5nm,1.0s,baz=201,slow=3.1,SNR=7.9						
YKA	Yellowknife Ar	89.05	341	P	P	20 35 57.9	+0.5
	comp=Z,10nm,1.1s,baz=139,slow=5.3,SNR=64						
YKA				LR	LR	21 19 30.9	
	comp=Z,289nm,19.7s,baz=0.0,slow=38						
KEST	Kesra	93.76	53	LR	LR	21 18 55.9	
	comp=Z,362nm,20.3s,baz=234,slow=36						
URZ	Urewera	94.02	227	LR	LR	21 09 30.5	
	comp=Z,431nm,20.8s,baz=284,slow=30						
SUMG	Summit	94.72	9	*i* P	P	20 36 36.4	+12
SUMG	Summit	94.72	9	*e*P	P	20 36 36.4	+12
OBN	Obninsk	115.98	38	*i* PKIKP	PKiKP	20 41 45.7	+0.3
OBN				*e*		20 42 50.4	
OBN				*e*PPP	PPP	20 45 14.5	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,266nm,22.0s						
VSR	Storozhevoye	117.70	42	⇑*i*PKIKP	PKiKP	20 41 49.2	+0.3
KIV	Kislovodsk	120.32	50	*e*PKIKP	PKiKP	20 41 54.5	+0.1
KIV				pmax	pmax		
	comp=Z,22nm,1.1s						
BILL	Bilibino	120.33	339	*e*PKIKP	PKPdf	20 41 53.4	-0.1
BILL				*e*		20 43 17.3	
BILL				*e*PPP	PPP	20 45 51.0	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
NEY	Neytrino	120.35	51	*i* PKIKP	PKiKP	20 41 54.7	+0.1
KBZ	Khabaz	120.47	50	PKP	PKiKP	20 41 55.4	+0.9
	comp=Z,5.8nm,1.0s,baz=119,slow=3.2,SNR=8.8						
KBZ	Khabaz	120.47	50	⇑*i*PKIKP	PKiKP	20 41 54.5	0.0
H11S2	WAKE ISLAND Hy	125.86	279	T	T	23 01 34.5	
	baz=102,slow=74,SNR=271						
H11S1	WAKE ISLAND Hy	125.87	279	T	T	23 01 37.4	
	baz=102,slow=74,SNR=175						
H11S3	WAKE ISLAND Hy	125.88	279	T	T	23 01 38.2	
	baz=102,slow=74,SNR=149						
H11N3	WAKE ISLAND Hy	125.91	280	T	T	23 01 29.1	
	baz=100,slow=74,SNR=143						
H11N2	WAKE ISLAND Hy	125.92	280	T	T	23 01 30.3	
	baz=100,slow=74,SNR=130						
H11N1	WAKE ISLAND Hy	125.93	280	T	T	23 01 29.1	
	baz=100,slow=74,SNR=90						
ARU	Arti	127.78	33	*i* PKIKP	PKiKP	20 42 08.5	-0.1
ARU						20 44 06.8	
ARU						20 49 17.0	
SEY	Seymchan	127.88	337	⇑*i*PKIKP	PKiKP	20 42 08.6	0.0
NRIK	Noril'sk	128.77	10	⇓*e*PKIKP	PKiKP	20 42 10.7	+0.5
ASAR	Alice Springs	130.48	210	PKP	PKPdf	20 42 14.3	0.0
	comp=Z,4.0nm,1.1s,baz=136,slow=2.4,SNR=13						
ASAR	Alice Springs	130.48	210	PKIKP	PKPdf	20 42 14.0	-0.3
ASAR	Alice Springs	130.48	210		PKPdf	20 42 14.0	-0.3
GEYT	Alibeck	132.42	56	PKP	PKPdf	20 42 17.6	+0.1
	comp=Z,1.6nm,0.8s,baz=328,slow=5.3,SNR=6.4						
WRA	Warramunga Arr	133.39	213	PKP	PKPdf	20 42 20.0	+0.1
	comp=Z,3.3nm,1.1s,baz=142,slow=1.7,SNR=9.1						
WRAB	Tennant Creek	133.40	213	⇓*i*PKIKP	PKPdf	20 42 19.9	0.0
YAK	Yakutsk	135.51	346	⇓*e*PKIKP	PKPdf	20 42 21.2	-1.3
KKAR	Karatay Array	140.19	46	⇑*e*PKIKP	PKiKP	20 42 33.5	-0.8
KURK	Kurchatov	140.89	31	⇓*i*PKIKP	PKiKP	20 42 34.3	-1.1
ZALV	Zalesovo Beam	141.19	23	PKP	PKPdf	20 42 34.4	+1.2
	comp=Z,5.5nm,0.8s,baz=298,slow=3.2,SNR=16						
YSS	Yuzh-Sakhalins	141.54	322	*e*PKHKP	PKPpre	20 42 13.2	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AAK	Ala-Archa	143.04	44	⇑*i*PKIKP	PKPdf	20 42 36.0	-1.1
ZEA	Zeya	143.43	342	*e*PKIKP	PKPdf	20 42 37.0	-0.2
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
MAKZ	Makanchi	145.13	33	PKIKP	PKPdf	20 42 40.6	+0.2
MAKZ	Makanchi	145.13	33		PKPdf	20 42 40.6	+0.2
MK31	Makanchi Array	145.30	33	PKIKP	PKPdf	20 42 41.2	+0.5
MK31	Makanchi Array	145.30	33		PKPdf	20 42 41.2	+0.5
MKAR	Makanchi Array	145.30	33	PKPbc	PKPdf	20 42 40.9	+0.2
	comp=Z,9.1nm,0.9s,baz=321,slow=3.1,SNR=68						
MKAR	Makanchi Array	145.30	33	PKIKP	PKPdf	20 42 41.4	+0.7
MKAR	Makanchi Array	145.30	33		PKPdf	20 42 41.4	+0.7
KSH	Kashi	145.41	48	PKPbc	PKPab	20 42 42.0	+0.6
KSH				PP	PP	20 46 06.1	+4.9
KSH				SKKS		20 52 56.3	
KSH				AMB	AMB		
	comp=Z,340nm,4.7s						
KSH				LR	LR		
	comp=Z,150nm,11.2s						
KSH				LR	LR		
	comp=Z,110nm,9.0s						
KSH				LR	LR		
	comp=Z,130nm,12.8s						
DGZ	Jazzator, Alta	145.53	25	*c i*PKIKP	PKPab	20 42 42.2	+0.7
KLR	Kul'dur	145.55	334	*c i*PKIKP	PKPab	20 42 41.2	-0.2
TEY	Ternei	146.14	324	⇑*e*PKP2	PKPab	20 42 44.3	+0.6
TEY				pmax	pmax		
	comp=Z,20nm,1.0s						
IRK	Irkutsk	147.45	6	*e*PKP2	PKPbc	20 42 45.8	-0.8
IRK				pmax	pmax		
	comp=Z,41nm,1.2s						
MOY	Mondy	147.61	10	*e*PKP2	PKPbc	20 42 46.9	-0.3
MOY				pmax	pmax		
	comp=Z,31nm,2.0s						
TLY	Talaya	147.94	6	⇑*i*PKP2	PKPbc	20 42 47.4	-0.6
USA0B	Ussuriysk Arra	149.15	327	*c i*PKP2	PKiKP	20 42 52.3	-0.3
USRK	Ussuriysk Ar.	149.15	327	PKPbc	PKiKP	20 42 52.6	+0.1
	comp=Z,17nm,1.1s,baz=37,slow=2.1,SNR=22						
ZAK	Zakamensk	149.18	7	*e*PKIKP	PKPdf	20 42 47.3	+0.2
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MJAR	Matsushiro Arr	149.64	309	PKPbc	PKiKP	20 42 54.0	+0.1
	comp=Z,12nm,0.9s,baz=135,slow=0.8,SNR=31						
MJAR	Matsushiro Arr	149.64	309	PKP2	PKiKP	20 42 54.1	+0.2
MJAR	Matsushiro Arr	149.64	309		PKiKP	20 42 54.1	+0.2
MAJO	Matsushiro	149.64	309	PKP2	PKiKP	20 42 54.0	+0.1
MAJO	Matsushiro	149.64	309		PKiKP	20 42 54.0	+0.1
MAT	Matsushiro	149.64	309	PKP	PKiKP	20 42 53.3	-0.6
MJB9	Matsu-Tunnel	149.64	309		PKiKP	20 42 54.0	+0.1
PALK	Pallekele	149.70	110	⇓*i*PKP2	PKPbc	20 42 54.1	+0.4
MDJ	Mudanjiang	150.03	330	P	PKPbc	20 42 53.6	+0.1
WMQ	Urumqi	150.11	32	*e*PKPbc	PKPdf	20 42 46.9	-1.9
WMQ				LR	LR		
	comp=Z,390nm,28.9s						
WMQ				LR	LR		
	comp=Z,750nm,28.9s						
WMQ				LR	LR		
	comp=Z,170nm,24.7s						
HYB	Hyderabad	150.91	90	*i* PKP	PKiKP	20 42 57.0	0.0
SONM	Songino Array	151.99	4	PKP	PKPdf	20 42 52.4	+0.8
	comp=Z,2.7nm,1.1s,baz=210,slow=0.6,SNR=14						
SONM				PKPbc	PKiKP	20 42 58.9	+0.3
	comp=Z,2.3nm,1.0s,baz=357,slow=5.9,SNR=5.6						
SONM				PKPab	PKPab	20 43 07.9	+0.4
	comp=Z,4.7nm,0.9s,baz=330,slow=1.3,SNR=10						
KSRS	Korea Array	156.03	321	PKP	PKPdf	20 42 58.2	+0.8
	comp=Z,3.6nm,1.1s,baz=24,slow=0.6,SNR=11						
GTA	Gaotai	158.91	20	PKP	PKPdf	20 43 02.6	+1.4
HHC	Hu-ho-hao-te	158.97	355	*e*PKP	PKPdf	20 42 57.3	-3.9
BJI	Beijing	159.00	345	PKP	PKPdf	20 42 58.9	-2.2
LZH	Lanzhou	163.16	15	*e*PKP	PKPdf	20 43 04.8	-1.1
LZH				pPKP	pPKPdf	20 43 12.5	-0.8
LZH				sPKP		20 43 15.3	
LZH				LR	LR		
	comp=Z,170nm,18.0s						
LZH				LR	LR		
	comp=Z,160nm,18.1s						
LZH				LR	LR		
	comp=Z,200nm,20.3s						
NJ2	Nanjing	165.06	326	*e*PKP	PKPdf	20 43 04.0	-3.5
XAN	Xi'an	165.87	1	PKP	PKPdf	20 43 09.3	+1.1
WHN	Wuhan	168.37	337	⇓PKP	PKPdf	20 43 10.5	+0.4
CMAR	Chiang Mai Arr	170.24	96	PKP	PKPdf	20 43 11.8	+0.2
	comp=Z,0.3nm,0.3s,baz=283,slow=1.6,SNR=7.2						
CMAR				PKPab	PKPab	20 44 27.8	+0.1
	comp=Z,0.5nm,0.4s,baz=265,slow=4.8,SNR=8.9						
CMAR				PP	PP	20 48 17.9	-0.3
	comp=Z,0.2nm,0.3s,baz=257,slow=5.6,SNR=4.3						
GYA	Guiyang	173.03	19	PKP	PKPdf	20 43 10.0	-2.9
GYA				PKPab	PKPab	20 44 39.3	-0.3
GYA				PKS		20 46 41.4	
GYA				PP	PP	20 48 32.8	+2.7
GYA				AMB	AMB		
	comp=Z,130nm,8.2s						

IDC 23 20:31:19.8±1.5,57°.00S×25°.02W,h0^{km},mb4.3/3, mb1 4.5/3,mb1mx4.0/18,mbtmp4.3/3,Error ellipse: s-maj=65.8km s-min=30.8km az=14.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CPUP	Villa Florida	38.34	309	P	P	20 38 41.5	-0.7
	1.2nm,0.6s,baz=145,slow=7.7,SNR=5.1						
LPAZ	La Paz	51.91	303	P	P	20 40 31.7	+1.0
	5.5nm,0.5s,baz=158,slow=10.0,SNR=7.2						
TORD	Torodi Ar. Bea	73.32	27	P	P	20 42 53.1	+0.2
	1.4nm,0.5s,baz=201,slow=6.8,SNR=22						
YKA	Yellowknife Ar	137.69	316	PKP	PKPdf	20 50 44.6	+0.4
	0.4nm,0.7s,baz=122,slow=2.7,SNR=6.9						
SONM	Songino Array	149.59	86	PKPbc	PKPbc	20 51 09.8	-0.4
	0.6nm,0.4s,baz=216,slow=4.1,SNR=10.0						
SONM				PKPab	PKPab	20 51 14.7	-0.7
	0.2nm,0.4s,baz=221,slow=4.3,SNR=3.9						
ILAR	Eielson Array	151.65	310	PKPbc	PKPbc	20 51 14.6	+0.2
	0.4nm,0.4s,baz=130,slow=1.6,SNR=12						
ILAR				PKPab	PKPab	20 51 21.1	-2.2
	0.7nm,0.8s,baz=136,slow=2.2,SNR=6.7						

GEN 23 21:10:19.6,43°.74N×10°.12E,h9^{km}±3^{km},Ml1.9

ROM 23 21:10:18.5±0.1,43°.756N±0°.007×10°.12E±0°.01,h2^{km}, ML2.0/1,3C,Error ellipse: s-maj=1.1km s-min=0.7km az=302.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MAIM	Mastiano	0.31	60	P	Pb	21 10 26.0	-0.9
MAIM				S	Sb	21 10 30.7	-1.7
MAIM				AML	AML		
	comp=N,232µm,1.1s						
MAIM				AML	AML		
	comp=E,230µm,0.9s						
MAIM	Mastiano	0.31	60	P	Pb	21 10 26.0	-0.9
MAIM				S	Sg	21 10 30.5	+1.8
PLMA	Palmaria, Port	0.35	327	⇑P	Pg	21 10 26.0	+0.8
GROG	Isola di Gorgo	0.37	206	P	Pg	21 10 26.6	+1.0
GROG				S	Sg	21 10 31.8	+1.5
CARD	Cardoso	0.38	44	P	Pb	21 10 27.1	-0.9
CARD				S	Sb	21 10 32.8	-1.5
CARD				AML	AML		
	comp=E,798µm,0.1s						
CARD				AML	AML		
	comp=N,911µm,0.7s						
CARD	Cardoso	0.38	44	P	Pb	21 10 27.1	-0.9
CARD				S	Sg	21 10 32.3	+1.6
EQUI	Equi	0.41	4	P	Pb	21 10 27.7	-0.9
EQUI				S	Sb	21 10 33.6	-1.6
EQUI				AML	AML		
	comp=E,200µm,1.6s						
EQUI				AML	AML		
	comp=N,195µm,1.6s						
EQUI	Equi	0.41	4	P	Pb	21 10 27.7	-0.8
EQUI				S	Sb	21 10 33.7	-1.6
VLC	Villacollemand	0.45	26	P	Pb	21 10 28.6	-0.6
VLC				S	Sb	21 10 35.0	-1.3
SARO	Sassorosso	0.47	26	P	Pb	21 10 29.1	-0.6
SARO				S	Sb	21 10 36.0	-1.2
SARO				AML	AML		
	comp=N,110µm,0.5s						
SARO				AML	AML		
	comp=E,99µm,0.3s						
SARO	Sassorosso	0.47	26	P	Pb	21 10 29.0	-0.7
SARO				S	Sb	21 10 35.7	-1.5
POPM	Popiglio	0.55	58	P	Pb	21 10 30.5	-0.3
POPM				S	Sb	21 10 38.5	-0.6
POPM				AML	AML		
	comp=E,554µm,0.9s						
POPM				AML	AML		
	comp=N,560µm,0.1s						
POPM	Popiglio	0.55	58	P	Pb	21 10 30.2	-0.6
POPM				S	Sb	21 10 37.9	-1.2
CRMI	Carmignano	0.62	87	P	Pb	21 10 31.9	-0.1
ERBM	Eremo	0.70	18	⇑P	Pb	21 10 34.4	+0.9
MSSA	Maissana	0.71	323	P	Pb	21 10 33.5	-0.2
GRAM	Graiana	0.74	357	P	Pb	21 10 34.4	+0.3
GRAM				S	Sb	21 10 45.6	+1.0
GRAM				AML	AML		
	comp=E,302µm,0.4s						
GRAM				AML	AML		
	comp=N,270µm,1.6s						
GRAM	Graiana	0.74	357	P	Pb	21 10 33.8	-0.3
GRAM				S	Sb	21 10 43.6	-1.0
CELB	S.Piero in Cam	1.01	176	S	Sg	21 10 48.0	-3.0
MNTV	Mantova	1.47	19	⇑P	Pn	21 10 39.0	-7.1
CPGN	Carpegna, Ital	1.60	88	S	Sg	21 11 16.0	+6.2
ATCC	AVT- Casa Cast	1.92	106	S	Sg	21 11 23.0	+2.7

ROM 23 21:10:22.9±0.1,43°.497N±0°.004×12°.373E±0°.006, h9^{km},ML1.4/2,7C-1D,Error ellipse: s-maj=0.4km s-min=0.3km az=328.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ATPI	Pietralunga -	0.05	155	P	Pg	21 10 25.1	+0.2
ATPI	Pietralunga -	0.05	155	S	Sg	21 10 26.3	+0.1
ATPI				AML	AML		
	comp=N,248µm,0.8s						
ATPI				AML	AML		
	comp=E,208µm,0.2s						
BADI	Badiali	0.10	278	⇑P	Pg	21 10 25.7	+0.3
BADI	Badiali	0.10	278	⇑P	Pg	21 10 25.7	+0.3
BADI				S	Sg	21 10 27.4	+0.3
BADI				AML	AML		
	comp=E,394µm,0.6s						
BADI				AML	AML		
	comp=N,394µm,0.5s						
BADI				AML	AML		
	comp=N,393µm,0.5s						
BADI				AML	AML		
	comp=E,394µm,0.6s						
CDCA	Citt' di Caste	0.11	249	P	Sg	21 10 26.1	-1.2

CDCA				⇑P	Pg	21 10 28.2	+2.7
CDCA	Citt‘ di Caste	0.11	249	S	Sg	21 10 28.0	+0.7
CDCA				AML	AML		
	comp=N,345µm,1.6s						
CDCA				AML	AML		
	comp=E,356µm,1.6s						
ATVO	AVT- Monte Val	0.12	168	⇓P	Pg	21 10 26.4	+0.8
ATVO				AML	AML		
	comp=E,327µm,0.5s						
ATVO				AML	AML		
	comp=N,210µm,0.7s						
ATVO				AML	AML		
	comp=E,327µm,0.5s						
ATVO	AVT- Monte Val	0.12	168	⇑P	Pg	21 10 25.9	+0.3
ATVO				S	Sg	21 10 28.7	+1.1
ATMI	Monte Miggiano	0.18	205	P	Pg	21 10 30.7	+4.0
ATMI	Monte Miggiano	0.18	205	P	Pg	21 10 27.0	+0.3
ATMI				S	Sg	21 10 30.9	+1.6
PARC	Parchiule	0.18	327	P	Pg	21 10 27.6	+0.8
PARC	Parchiule	0.18	327	S	Sg	21 10 30.9	+1.5
NARO	Abbazia di Nar	0.19	53	P	Pg	21 10 27.2	+0.3
NARO	Abbazia di Nar	0.19	53	S	Sg	21 10 30.8	+1.3
CAFI	Castiglion Fio	0.34	241	P	Pb	21 10 30.5	-0.7
CAFI	Castiglion Fio	0.34	241	P	Pb	21 10 30.4	-0.8
CAFI				S	Sb	21 10 35.9	-0.9
ATCC	AVT- Casa Cast	0.37	148	P	Pg	21 10 26.4	-3.8
COR1	Corinaldo	0.47	73	⇑P	Pn	21 10 36.5	+0.5
COR1				AML	AML		
	comp=E,522µm,1.6s						
COR1				AML	AML		
	comp=N,695µm,1.6s						
COR1				AML	AML		
	comp=N,695µm,1.6s						
SFI	Santa Sofia	0.56	317	P	Pg	21 10 31.8	-1.9
CELB	S.Piero in Cam	1.75	245	⇑P	Pn	21 10 47.4	-6.2
MSSA	Maissana	2.22	293	S	Sn	21 11 23.0	-4.7
CERA	Filignano	2.25	147	S	Sn	21 11 24.0	-4.4
ROVR	Rover Verones	2.34	337	P	Pb	21 11 04.3	-1.1
PAOL	Paolisi	2.95	146	S	Sn	21 11 42.0	-3.7
STON	Ston	3.94	97	⇑P	Pn	21 11 19.4	-4.3
MTGR	Montagna Grand	5.61	177	P	Pn	21 11 43.0	-3.5

IDC ***23*** *21:10:43.6±1.0, 57°.02S×24°.96W, h0^{km}, mb4.2/5, mb1 4.2/5, mb1mx3.9/31, mbtmp4.1/5, Error ellipse: s-maj=46.2km s-min=27.3km az=71.0*

NEIC ***23*** *21:10:49.4±1.5, 57°.1S±0°.1×25°.0W±0°.4, h41^{km}±8^{km}, mb4.0/6, Error ellipse: s-maj=33.7km s-min=15.0km az=74.0*

ISC 23 21:10:46.8±0.7**, 57°.1S**±0°.1×**25°.1W**±0°.2**, h22**^{km}**, n19,** σ0^{s}.**74**/19**, mb3.9**/7**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	15.41	159	P	Pn	21 14 21.9	-0.5
VNA3	Neumayer Olymp	15.64	161	P	Pn	21 14 24.1	-1.4
SNAA	Sanae	17.33	156	P	Pn	21 14 47.5	+0.5
SNAA	Sanae	17.33	156	Pn	Pn	21 14 46.7	-0.3
QSPA	South Pole Qui	33.17	180	P	P	21 17 21.6	+0.2
QSPA				IAmb	IAmb	21 17 23.1	
	comp=Z,0.8nm,0.5s						
CPUP	Villa Florida	38.37	309	P	P	21 18 05.5	-0.6
	comp=Z,3.0nm,0.9s,baz=150,slow=8.5,SNR=5.5						
CPUP	Villa Florida	38.37	309	P	P	21 18 05.6	-0.6
VNDA	Vanda	45.60	182	P	P	21 19 05.2	+0.7
	comp=Z,0.6nm,0.5s,baz=194,slow=6.3,SNR=8.3						
VNDA	Vanda	45.60	182	P	P	21 19 05.1	+0.7
FLOC	Florencia	71.12	305	P	P	21 22 02.5	-1.0
TOA0	Torodi Ar. Sit	73.40	27	P	P	21 22 16.7	-0.2
TOA0				IAmb	IAmb	21 22 25.3	
	comp=Z,2.5nm,1.1s						
TORD	Torodi Ar. Bea	73.40	27	P	P	21 22 16.8	-0.1
	comp=Z,0.7nm,0.7s,baz=197,slow=6.3,SNR=4.5						
TORD	Torodi Ar. Bea	73.40	27	P	P	21 22 16.8	-0.1
PLCV	Puerto La Cruz	74.46	319	P	P	21 22 24.6	+1.4
PCRV	Puerto La Cruz	74.49	319	P	P	21 22 24.6	+1.2
	comp=Z,24nm,1.1s,baz=177,slow=4.5,SNR=1.3						
ASAR	Alice Springs	97.64	161	P	P	21 24 19.4	-0.3
	comp=Z,0.2nm,0.8s,baz=190,slow=4.7,SNR=1.4						
SONM	Songino Array	149.61	87	PKPbc	PKPbc	21 30 33.7	0.0
	comp=Z,0.4nm,0.7s,baz=223,slow=3.7,SNR=4.4						
ILAR	Eielson Array	151.68	310	PKPbc	PKiKP	21 30 38.2	0.0
	comp=Z,0.6nm,0.8s,baz=109,slow=1.8,SNR=5.4						
ILAR	Eielson Array	151.68	310		PKiKP	21 30 38.4	+0.2

NEIC ***23*** *21:16:56.5±1.9, 19°.74S±0°.04×71°.03W±0°.05, h10^{km}±1^{km}, mb4.0/7, Error ellipse: s-maj=7.8km s-min=5.9km az=277.0*

IDC ***23*** *21:16:56.8±1.9, 19°.59S×70°.87W, h0^{km}, mb3.9/3, mb1 4.0/5, mb1mx3.7/33, mbtmp3.9/5, ML3.7/2, Error ellipse: s-maj=47.0km s-min=34.0km az=71.0*

GUC ***23*** *21:17:00.0±0.6, 19°.72S×70°.92W, h44^{km}±2^{km}, ML3.4*

ISC 23 21:16:56.6±1.5**, 19°.73S**±0°.03×**70°.95W**±0°.06**, h12**^{km}±9^{km}**, n42,** σ1^{s}.**00**/51**, mb4.0**/4**, 8C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.79	81	⇓*i*P	Pn	21 17 13.8	+0.1
PSGC				*i* S	Sn	21 17 24.7	-0.9
PSGC				IAML		21 17 26.8	
	comp=E,2µm,0.5s						
PSGCX	Pisagua	0.79	81		Pn	21 17 14.1	+0.4
PSGCX					Sn	21 17 25.0	-0.6
TA01	Diego Aracena	1.10	139	⇑*i*P	Pn	21 17 19.4	+1.5
TA01				*i* S	Sn	21 17 33.6	+0.5
PB11	IPOC Station P	1.22	92	⇓*i*P	Pg	21 17 21.1	+0.9
PB11				*i* S	Sn	21 17 37.3	+1.1
PB11	IPOC Station P	1.22	92		Pg	21 17 21.1	+0.9
PB11					Sn	21 17 36.1	-0.2
PB12	IPOC Station P	1.26	28	⇑*i*P	Pg	21 17 21.6	+0.8
PB12				*i* S	Sn	21 17 38.0	+1.0
PB12	IPOC Station P	1.26	28		Pg	21 17 21.6	+0.8
PB12					Sn	21 17 38.1	+1.0
PATCX	Punta Patache	1.32	145	⇑*i*P	Pg	21 17 22.5	+0.5
PATCX				*i* S	Sg	21 17 39.3	+0.1
PATCX	Punta Patache	1.32	145		Pg	21 17 21.8	-0.3
GO01	Chusmiza	1.66	88	⇑*i*P	Pg	21 17 28.4	-0.2
GO01				*i* S	Sg	21 17 50.2	0.0
GO01	Chusmiza	1.66	88		Pn	21 17 26.5	+0.5
PB08	IPOC Station P	1.74	104	⇑*i*P	Pg	21 17 29.3	-0.9
PB08				*i* S	Sg	21 17 51.7	-1.1
PB02	IPOC Station P	1.87	148	⇑*i*P	Pb	21 17 30.3	-0.4
PB01	IPOC Station P	1.90	134	⇑*i*P	Pb	21 17 31.1	-0.2
PB01	IPOC Station P	1.90	134		Pb	21 17 30.2	-1.0
PB16	IPOC Station P	1.95	45	⇑*i*P	Pb	21 17 32.4	0.0
PB16	IPOC Station P	1.95	45		Pb	21 17 31.3	-1.1
PB07	IPOC Station P	2.22	153		Pn	21 17 34.6	+1.1
PB09	IPOC Station P	2.61	142		Pn	21 17 39.9	+1.1
PB04	IPOC Station P	2.70	164		Pn	21 17 40.7	+0.7
LVC	Limon Verde	3.44	147	Pn	Pn	21 17 53.6	+3.2
	comp=E,3.8nm,0.3s,baz=321,slow=10,SNR=19						
LVC	Limon Verde	3.44	147		Pn	21 17 51.0	+0.6
PB15	IPOC Station P	3.73	159		Pn	21 17 54.5	+0.3
PB10	IPOC Station P	3.78	174	Pn	Pn	21 17 55.0	+0.2
LPAZ	La Paz	4.35	39	Pn	Pb	21 18 08.3	-5.1
	comp=E,0.6nm,0.3s,baz=237,slow=6.5,SNR=3.6						
LPAZ	La Paz	4.35	39		Pn	21 18 01.5	-1.7
PB14	IPOC Station P	4.90	174		Pn	21 18 10.6	+0.2
GO02	Mina Guanaco	5.55	167	Pn	Pn	21 18 19.7	+0.3
SIV	San Ignacio	10.12	70	Pn	Pn	21 19 23.6	+1.8
	comp=E,1.1nm,0.3s,baz=270,slow=12,SNR=17						
CPUP	Villa Florida	14.15	120	Pn	Pn	21 20 17.4	+0.4
GO06	Curarrehue	19.79	181	P	P	21 21 25.9	-1.0
GO06				IAmb	IAmb	21 21 34.3	
	comp=Z,3.0nm,1.1s						
FLOC	Florencia	21.68	347	P	P	21 21 46.8	-0.6
PTGA	Pitinga	21.73	31	P	P	21 21 48.1	+0.1
	comp=Z,2.5nm,0.3s,baz=139,slow=24,SNR=5.2						
PTGA	Pitinga	21.73	31	P	P	21 21 48.0	0.0
PTGA				IAmb	IAmb	21 21 50.4	
	comp=Z,3.4nm,0.8s						
RUSC	La Rusia	25.55	355	P	P	21 22 24.9	-1.1
G62A	West of Eustis	64.64	0	P	P	21 27 33.3	-0.7
RWWY	Rawlins	69.72	332	P	P	21 28 05.7	-1.0
RWWY				IAmb	IAmb	21 28 10.8	
	comp=Z,25nm,1.1s						
TORD	Torodi Ar. Bea	78.59	72	P	P	21 28 59.0	+0.3
	comp=Z,0.8nm,0.6s,baz=253,slow=5.4,SNR=6.9						
TORD	Torodi Ar. Bea	78.59	72	P	P	21 28 57.7	-1.1
YKA	Yellowknife Ar	88.90	341	P	P	21 29 52.3	+1.9
	comp=Z,0.4nm,0.8s,baz=138,slow=4.7,SNR=4.8						
MKAR	Makanchi Array	145.26	33	PKPbc	PKPdf	21 36 35.9	+1.6
	comp=Z,0.3nm,0.7s,baz=342,slow=3.8,SNR=3.7						
MKAR	Makanchi Array	145.26	33		PKPbc	21 36 33.4	-0.7

IDC ***23*** *21:17:24.2±0.5, 19°.52S×70°.47W, h0^{km}, mb4.5/24, mb1 4.6/27, mb1mx4.5/34, mbtmp4.5/27, ML4.1/3, MS3.7/1, Ms1 3.7/1, ms1mx3.3/27, Error ellipse: s-maj=17.4km s-min=10.5km az=66.0*

NEIC ***23*** *21:17:27.3±1.7, 19°.71S±0°.03×70°.71W±0°.04, h28^{km}±1^{km}, mb4.7/103, Mwr4.6/33, ML4.5(GUC), Error ellipse: s-maj=6.3km s-min=4.0km az=246.0*

NEIC ***23*** *21:17:27.6, 19°.69S×70°.69W, h28^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.41; $M_{\theta\theta}$-0.05; $M_{\phi\phi}$-0.36; $M_{r\theta}$0.24; $M_{\theta\phi}$-0.02; $M_{\phi r}$-0.94; Fault plane solution: $M_0$1.04000×10^{16} NP1:ϕ_s13.45000°, δ11.66000°, λ115.80000°. NP2:ϕ_s167.18000°, δ79.51000°, λ84.87000°. Principal axes: T 1.0748, Plg55.0000°, Azm71.0000°; N -0.0747, Plg5.0000°, Azm168.0000°; P -1.0001, Plg34.0000°, Azm262.0000°;*

VAO ***23*** *21:17:28.7±3.3, 19°.62S×70°.61W, h34^{km}±20^{km}, mb4.9*

GUC ***23*** *21:17:28.8±0.6, 19°.69S×70°.67W, h43^{km}±2^{km}, ML4.5*

ISC 23 21:17:25.8±0.9**, 19°.67S**±0°.02×**70°.67W**±0°.04**, h16**^{km}±5^{km}**, n197,** σ1^{s}.**66**/191**, mb4.7**/63**, 3C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.52	82	⇓*i*P	Pn	21 17 39.1	+0.5
PSGC				*i* S	Sn	21 17 47.4	+0.3
PSGCX	Pisagua	0.52	82		Pn	21 17 39.1	+0.5
PSGCX					Sn	21 17 47.3	+0.2
PB11	IPOC Station P	0.95	95	⇓*i*P	Pn	21 17 46.3	+1.6
PB11				*i* S	Sn	21 17 59.4	+1.3
PB11				IAML		21 18 04.0	
	comp=N,22µm,0.6s						
PB11	IPOC Station P	0.95	95		Pn	21 17 46.0	+1.3
PB11				Sn	Sg	21 17 57.5	+0.6
TA01	Diego Aracena	1.00	153	*i* P	Pn	21 17 46.3	+1.2
TA01				*i* S	Sn	21 17 59.6	+0.7
TA01				IAML		21 18 03.3	
	comp=E,33µm,0.4s						
PB12	IPOC Station P	1.10	17	*e*P	Pg	21 17 48.1	+1.0
PB12				*e*S	Sn	21 18 03.6	+2.1
PB12				IAML		21 18 05.9	
	comp=N,18µm,0.6s						
PB12	IPOC Station P	1.10	17		Pg	21 17 47.4	+0.3
PB12					Sn	21 18 03.0	+1.5
PATCX	Punta Patache	1.24	157	*i* P	Pg	21 17 49.9	+0.2
PATCX				*i* S	Sg	21 18 07.0	+1.0
PATCX				IAML		21 18 09.0	
	comp=E,16µm,0.7s						
PATCX	Punta Patache	1.24	157	Pn	Pn	21 17 47.6	-1.0
PATCX					Sg	21 18 05.7	-0.2
AP01	Chacalluta	1.33	13	⇑*e*P	Pg	21 17 52.0	+0.5
AP01				*e*S	Sg	21 18 09.6	+0.8
GO01	Chusmiza	1.39	90	⇓*i*P	Pg	21 17 53.7	+1.1
GO01				*i* S	Sg	21 18 12.6	+1.9
GO01	Chusmiza	1.39	90		Pg	21 17 53.7	+1.1
PB08	IPOC Station P	1.50	108	*i* P	Pg	21 17 54.9	+0.3
PB08				*i* S	Sg	21 18 14.8	+0.6
PB08				IAML		21 18 17.2	
	comp=N,8µm,0.6s						
PB16	IPOC Station P	1.72	40	*i* P	Pg	21 17 58.5	-0.5
PB16				*i* S	Sg	21 18 22.1	+0.6
PB16				IAML		21 18 24.1	
	comp=N,7µm,0.3s						
PB16	IPOC Station P	1.72	40		Pg	21 17 59.3	+0.3
PB01	IPOC Station P	1.75	141	*e*P	Pb	21 17 57.4	-0.3
PB01				*e*S	Sb	21 18 20.4	+0.8
PB01				IAML		21 18 27.1	
	comp=N,13µm,0.6s						
PB01	IPOC Station P	1.75	141		Pb	21 17 56.6	-1.1
PB02	IPOC Station P	1.79	156	*i* P	Pb	21 17 58.1	-0.2
PB02				*i* S	Sn	21 18 19.4	+0.8
LVC	Limon Verde	3.35	151	Pn	Pn	21 18 20.0	+2.2
	comp=N,31nm,0.3s,baz=321,slow=7.2,SNR=23						
LVC				Sn	Sn	21 18 59.7	+2.2
	comp=N,118nm,0.3s,baz=236,slow=19,SNR=4.2						
LVC				Lg	Lg	21 19 11.4	
	comp=N,215nm,0.3s,baz=89,slow=17,SNR=13						
LVC	Limon Verde	3.35	151		Pn	21 18 18.1	+0.2
LVC					Sn	21 18 57.3	-0.2
PB10	IPOC Station P	3.82	178		Pn	21 18 23.9	-0.1
PB10				Sn	Sn	21 19 04.4	-4.3
LPAZ	La Paz	4.14	36	Pn	Pb	21 18 35.1	-3.5
	comp=N,2.0nm,0.3s,baz=154,slow=2.1,SNR=9.8						
LPAZ	La Paz	4.14	36		Pn	21 18 30.1	+1.1
GO03	Copiap	7.89	177		Pn	21 19 19.3	-0.8
GO03				Sn	Sn	21 20 45.2	-4.0
NNA	Nana	9.68	321	Pn	Pn	21 19 47.0	+2.5
	comp=N,1.4nm,0.3s,baz=195,slow=12,SNR=2.1						
NNA				Sn	Sn	21 21 29.8	-3.2
	comp=N,3.0nm,0.3s,baz=76,slow=22,SNR=2.2						
NNA				LR	LR	21 23 25.4	
	comp=N,446nm,21.3s,baz=230,slow=37						
NNA	Nana	9.68	321		Pn	21 19 45.1	+0.6
NNA					Sn	21 21 29.9	-3.1
SIV	San Ignacio	9.84	70	Pn	Pn	21 19 46.9	+0.2
	comp=N,3.4nm,0.3s,baz=273,slow=9.1,SNR=56						
SIV				Sn	Sn	21 21 28.8	-8.1
	baz=23,slow=23,SNR=1.2						
GO04	Tololo Observa	10.46	181		Pn	21 19 55.5	+0.2
SAML	Samuel	12.89	35		Pn	21 20 26.6	-1.8
SAML	Samuel	12.89	35	*e*P	Pn	21 20 27.6	-0.9
CPUP	Villa Florida	13.95	121	Pn	Pn	21 20 42.8	0.0
	comp=N,0.3nm,0.3s,baz=303,slow=12,SNR=14						
SALV	Santo Antonio	14.74	78	*e*P	Pn	21 20 53.4	-0.4
CLDB	Colider	16.79	61	*e*P	Pn	21 21 20.9	+0.5
PTGB	Pitanga	17.94	110	*e*P	P	21 21 36.9	+1.7
PCMB	Pacaembu	18.26	99	*e*P	Pn	21 21 38.2	-0.5
ARAG	Araguaiana, MT	18.39	81	*e*P	Pn	21 21 40.4	+0.2
ITAB	Concordia	18.58	117	*e*P	Pn	21 21 42.9	+0.4
PLTB	Pedras Altas	19.49	132	*e*P	Pn	21 21 52.9	-0.6
GO06	Curarrehue	19.86	182		Pn	21 21 58.2	+0.3
FRTB	Fartura	19.97	104	*e*P	P	21 21 57.8	+0.3
CNLB	Canela	20.40	122	*e*P	P	21 22 01.8	-0.4
PLCA	Paso Flores	20.99	180	P	Pn	21 22 10.9	-0.2
	comp=N,8.1nm,0.7s,baz=16,slow=12,SNR=22						
PLCA	Paso Flores	20.99	180	P	P	21 22 08.5	0.0
IPMB	Ipameri, GO	21.32	89	*e*P	P	21 22 11.5	-0.7
PTGA	Pitinga	21.55	30	P	P	21 22 13.9	-0.6
	comp=N,29nm,0.5s,baz=213,slow=11,SNR=34						
PTGA	Pitinga	21.55	30	P	P	21 22 14.4	-0.2
PTGA				IAmb	IAmb	21 22 19.9	
	comp=Z,40nm,0.9s						
PTGA	Pitinga	21.55	30	*e*P	P	21 22 14.1	-0.4
FLOC	Florencia	21.68	346	*e*P	P	21 22 19.3	+3.2
FLOC	Florencia	21.68	346	P	P	21 22 17.0	+0.9
BDFB	Brasilia	21.95	83	P	P	21 22 17.9	-1.1
	comp=Z,9.3nm,0.7s,baz=250,slow=15,SNR=13						
BDFB	Brasilia	21.95	83	P	P	21 22 18.0	-1.1
BDFB				IAmb	IAmb	21 22 25.1	
	comp=Z,21nm,0.7s						
CRUC	La Cruz	21.99	343	*e*P	P	21 22 23.6	+3.8
SOTA	Rioblanco	22.44	344	*e*P	P	21 22 27.8	+3.0
PCON	Cinco Dias	22.58	345	*e*P	P	21 22 31.3	+5.1
POPC	Popayan, Colom	22.85	344	*e*P	P	21 22 32.7	+4.0
ORTC	Ortega, Tolima	23.86	349	*e*P	P	21 22 39.1	+0.4
ORTC				*e*P	P	21 22 39.8	+1.1
YOTC	Yotoco, Valle	24.16	346	*e*P	P	21 22 46.2	+4.6
BSCB	Bom Sucesso	24.31	98	*e*P	P	21 22 42.2	-0.6
CHIC	Chingaza	24.34	353	⇑*e*P	P	21 22 49.7	+6.2
ROSC	El Rosal	24.62	351	P	P	21 22 46.4	+0.3
	comp=Z,22nm,0.7s,baz=162,slow=19,SNR=1.6						
ROSC	El Rosal	24.62	351	P	P	21 22 44.8	-1.3
ROSC				IAmb	IAmb	21 22 52.1	
	comp=Z,17nm,0.8s						
RREF	El Recreo	24.85	349	*e*P	P	21 22 52.5	+4.2
GUY2C	Guyana, Caldas	25.17	349	*e*P	P	21 22 54.0	+2.9
GUY2C				*e*P	P	21 22 54.7	+3.6
SPBC	San Pablo de B	25.39	352	*e*P	P	21 22 51.1	-1.5
NORC	Norcasia	25.42	350	*e*P	P	21 22 54.0	+1.1
RUSC	La Rusia	25.52	354	*e*P	P	21 22 55.4	+1.1
RUSC	La Rusia	25.52	354	P	P	21 22 54.5	+0.3
JANB	Januaria	25.55	84	*e*P	P	21 22 53.3	-0.9
CBOC	Ciudad Bolivar	25.92	348	*e*P	P	21 23 00.3	+2.8
CBOC				*e*P	P	21 23 01.1	+3.5
TAMC	Tame, Arauca	25.97	357	*e*P	P	21 22 58.9	+1.1
TAMC				*e*P	P	21 23 01.1	+3.2
HELC	Santa Helena	26.14	349	*e*P	P	21 23 01.1	+1.2
BARC	Barichara	26.22	354	*e*P	P	21 23 01.1	+0.7
PAMC	Pamplona, Colo	26.92	356	*e*P	P	21 23 07.4	+0.5
SDV	Santo Domingo	28.38	0	P	P	21 23 17.9	-1.8
	comp=Z,4.1nm,0.5s,baz=159,slow=3.9,SNR=7.8						
SDV	Santo Domingo	28.38	0	P	P	21 23 19.1	-0.6
SMLC	San Martn de	28.49	353	*e*P	P	21 23 19.4	-1.1
SJCC	San Jacinto, C	29.72	351	*e*P	P	21 23 31.5	0.0
PLCV	Puerto La Cruz	30.25	12	P	P	21 23 36.0	-0.1
PCRV	Puerto La Cruz	30.25	12	P	P	21 23 36.0	-0.2
	comp=Z,11nm,1.0s,baz=209,slow=19,SNR=1.5						
MDP	Montagnes des	30.34	38	P	P	21 23 35.8	-1.1
	comp=Z,15nm,0.6s,baz=210,slow=7.6,SNR=9.1						
RCBR	Riachuelo	36.49	73	P	P	21 24 29.5	-1.1
	comp=Z,9.8nm,0.8s,baz=261,slow=10,SNR=4.9						
RCBR	Riachuelo	36.49	73	P	P	21 24 29.5	-1.1
RCBR				IAmb	IAmb	21 24 33.8	
	comp=Z,14nm,0.8s						
SJG	San Juan	37.81	7	P	P	21 24 40.1	-1.5
	comp=Z,3.4nm,0.4s,baz=219,slow=6.5,SNR=2.2						
CBYP	Canovanas	38.00	7	P	P	21 24 42.6	-0.7
GCPR	Guaynabo City	38.01	7	P	P	21 24 42.5	-0.9
TEIG	Tepich	43.24	335	P	P	21 25 27.1	+0.6
	comp=Z,6.4nm,0.7s,baz=268,slow=0.1,SNR=5.5						
TEIG	Tepich	43.24	335	P	P	21 25 26.8	+0.2
CMIG	Matias Romero	43.60	325	P	P	21 25 30.2	+0.7
	comp=Z,2.2nm,0.9s,baz=200,slow=9.3,SNR=3.1						
Z50A	Ashland	54.61	344	IAmb	IAmb	21 26 54.7	
	comp=Z,6.5nm,0.7s						
V48A	Smith Brothers	57.20	344	IAmb	IAmb	21 27 20.1	
	comp=Z,7.5nm,0.8s						
WVT	Waverly	57.83	344	P	P	21 27 16.4	-0.1
WVT				IAmb	IAmb	21 27 16.9	
	comp=Z,5.9nm,0.7s						
MIAR	Mount Ida	58.16	338	IAmb	IAmb	21 27 27.6	
	comp=Z,5.9nm,0.9s						
TXAR	Lajitas Array	58.20	326	P	P	21 27 20.0	+0.6
	comp=Z,0.8nm,0.8s,baz=145,slow=9.5,SNR=2.7						
TXAR	Lajitas Array	58.20	326	P	P	21 27 19.2	-0.2
W39A	Magazine	58.82	338	P	P	21 27 23.4	-0.1
W39A				IAmb	IAmb	21 27 25.4	
	comp=Z,6.3nm,1.0s						
X37A	Clayton	58.86	336	IAmb	IAmb	21 27 27.7	
	comp=Z,9.4nm,0.9s						
ABTX	Abilene, Hawle	58.93	331	P	P	21 27 25.2	+0.8
ABTX				IAmb	IAmb	21 27 33.5	
	comp=Z,5.9nm,0.6s						
WCI	Wyandotte Cave	59.44	346	P	P	21 27 28.0	+0.3
WCI				IAmb	IAmb	21 27 35.2	
	comp=Z,4.5nm,0.8s						
U40A	Yellville	59.55	339	IAmb	IAmb	21 27 37.6	
	comp=Z,5.4nm,0.9s						
MGMO	Mountain Grove	60.08	340	IAmb	IAmb	21 27 40.5	
	comp=Z,4.9nm,0.9s						
S39A	Bolivar	60.91	340	IAmb	IAmb	21 27 40.7	
	comp=Z,5.4nm,0.9s						
R40A	Maddies Statio	61.12	341	IAmb	IAmb	21 27 47.3	
	comp=Z,5.4nm,0.8s						
MSTX	Muleshoe	61.49	330	IAmb	IAmb	21 27 50.4	
	comp=Z,7.5nm,1.1s						
319A	Douglas	62.85	323	IAmb	IAmb	21 27 53.7	
	comp=Z,4.2nm,0.7s						
J58A	Remsen	62.86	356	IAmb	IAmb	21 27 59.1	
	comp=Z,5.9nm,0.8s						
FRNY	Flat Rock	64.25	358	IAmb	IAmb	21 28 01.8	
	comp=Z,7.6nm,0.7s						
SNAA	Sanae	64.53	161	P	P	21 28 02.0	+0.3
JFWS	Jewell Farm	64.84	344	IAmb	IAmb	21 28 13.7	
	comp=Z,6.4nm,0.7s						
WUAZ	Wupatki	67.10	325	IAmb	IAmb	21 28 28.4	
	comp=Z,4.8nm,1.1s						
E43A	Lone Tree Farm	67.38	348	P	P	21 28 20.5	+0.4
E43A				IAmb	IAmb	21 28 21.0	
	comp=Z,4.7nm,0.8s						
SPMN	Marine on St.	67.66	343	IAmb	IAmb	21 28 31.9	
	comp=Z,3.5nm,0.7s						
LIC	Lamto	69.49	75	*e*P	P	21 28 33.4	-0.6
	comp=Z,12nm,0.7s						
TIC	Toumodi	69.66	75	*e*P	P	21 28 33.4	-1.7
KIC	Kosan Boka	69.80	75	*e*P	P	21 28 35.5	-0.5
	comp=Z,15nm,0.7s						
DBIC	Dimbokro	69.82	75	P	P	21 28 35.4	-0.7
	comp=Z,9.0nm,0.7s,baz=229,slow=6.5,SNR=15						
QSPA	South Pole Qui	70.51	180	P	P	21 28 40.2	+0.6
ISA	Isabella, Lake	71.27	320	IAmb	IAmb	21 28 55.9	
	comp=Z,4.3nm,0.8s						
DUG	Dugway, Tooele	71.33	327	IAmb	IAmb	21 28 56.7	
	comp=Z,6.6nm,1.1s						
PDAR	Pinedale Array	71.72	331	P	P	21 28 48.6	+1.3
	comp=Z,0.6nm,0.5s,baz=128,slow=7.1,SNR=7.5						
PDAR	Pinedale Array	71.72	331	P	P	21 28 46.8	-0.5
AHID	Auburn Hatcher	72.44	330	IAmb	IAmb	21 28 54.0	
	comp=Z,8.6nm,1.1s						
OMMB	Old Mammoth Mi	72.90	322	IAmb	IAmb	21 28 58.0	
	comp=Z,5.2nm,1.0s						
NVAR	Mina Array Bea	73.05	323	P	P	21 28 56.4	+1.0
	comp=Z,1.1nm,0.8s,baz=146,slow=6.3,SNR=8.1						
NVAR	Mina Array Bea	73.05	323	P	P	21 28 55.3	-0.1
ULM	Lac du Bonnet	73.10	343	P	P	21 28 54.2	-0.9
	comp=Z,1.6nm,0.5s,baz=167,slow=7.9,SNR=6.9						
FLWY	Flagg Ranch	73.26	331	IAmb	IAmb	21 28 59.7	
	comp=Z,9.9nm,0.9s						
SCHQ	Schefferville	74.27	2	P	P	21 29 02.5	+0.6
	comp=Z,4.3nm,0.8s,baz=183,slow=5.2,SNR=5.5						
SCHQ	Schefferville	74.27	2	P	P	21 29 01.9	0.0
SCHQ				IAmb	IAmb	21 29 03.1	
	comp=Z,6.0nm,0.9s						
PAHR	Pah Rah Range	74.53	323	IAmb	IAmb	21 29 07.7	
	comp=Z,6.6nm,0.9s						
DLMT	Dillon	75.11	331	IAmb	IAmb	21 29 18.6	
	comp=Z,5.9nm,1.1s						
ORV	Oroville	75.65	322	P	P	21 29 10.7	+0.5
ORV				IAmb	IAmb	21 29 13.2	
	comp=Z,4.1nm,0.8s						
EGMT	Eagleton	75.94	334	IAmb	IAmb	21 29 14.2	
	comp=Z,9.9nm,1.1s						
BMO	Blue Mountains	77.00	328	IAmb	IAmb	21 29 20.8	
	comp=Z,4.6nm,0.8s						
F10A	Beach Ranch, E	77.76	329	IAmb	IAmb	21 29 30.5	
	comp=Z,4.0nm,0.8s						
TOA0	Torodi Ar. Sit	78.31	71	P	P	21 29 25.3	-0.4
TORD	Torodi Ar. Bea	78.31	71	P	P	21 29 25.4	-0.3
	comp=Z,16nm,0.7s,baz=252,slow=5.1,SNR=58						
TORD	Torodi Ar. Bea	78.31	71	P	P	21 29 25.3	-0.4
VNDA	Vanda	78.35	190	P	P	21 29 27.5	+2.6
	comp=Z,1.4nm,0.8s,baz=141,slow=2.3,SNR=3.2						
WALA	Waterton Lakes	78.49	333	IAmb	IAmb	21 29 28.7	
	comp=Z,6.7nm,0.8s						
SYO	Syowa Base	78.78	160	⇑*e*P	P	21 29 26.0	-1.3
HAWA	Hanford	79.19	328	IAmb	IAmb	21 29 33.1	
	comp=Z,6.4nm,0.8s						
C09A	Chrisman Ranch	79.56	330	IAmb	IAmb	21 29 34.9	
	comp=Z,7.4nm,0.8s						
LTY	Liberty	80.36	328	IAmb	IAmb	21 29 39.2	
	comp=Z,6.3nm,1.1s						
LLLB	Lillooet	83.21	330	IAmb	IAmb	21 29 53.3	
	comp=Z,8.0nm,1.1s						
TAM	Tamanrasset	85.48	64	IAmb	IAmb	21 30 05.9	
	comp=Z,6.1nm,1.0s						
ESDC	Sonseca Array	85.71	45	P	P	21 30 04.5	+0.4
	comp=Z,1.7nm,0.8s,baz=255,slow=3.8,SNR=5.3						
BOSA	Boshof	85.76	119	P	P	21 30 05.3	+0.4
	comp=Z,2.5nm,0.8s,baz=298,slow=2.4,SNR=4.3						
BOSA	Boshof	85.76	119	P	P	21 30 03.7	-1.2
BOSA				IAmb	IAmb	21 30 06.6	
	comp=Z,7.4nm,1.1s						
MAW	Mawson	86.54	164	P	P	21 30 09.6	+1.9
	comp=Z,5.1nm,0.9s,baz=223,slow=8.1,SNR=4.2						
MAW	Mawson	86.54	164	P	P	21 30 08.0	+0.3
LBTB	Lobatse	87.28	115	P	P	21 30 13.5	+1.1
	comp=Z,2.4nm,0.7s						
YKA	Yellowknife Ar	88.93	341	P	P	21 30 19.8	+0.7
	comp=Z,7.2nm,0.6s,baz=135,slow=5.0,SNR=94						
MATP	Matopo	91.41	112	P	P	21 30 30.0	-2.0
	comp=Z,3.4nm,0.8s,baz=229,slow=2.3,SNR=6.8						
BRTR	Keskin Array B	113.11	54	PP	PP	21 36 52.9	+0.3
	comp=Z,0.4nm,0.7s,baz=284,slow=5.8,SNR=3.8						
STKA	Stephens Creek	120.14	212	PKP	PKiKP	21 36 17.2	+0.6
	comp=Z,0.7nm,0.5s,baz=184,slow=5.7,SNR=3.2						
KBZ	Khabaz	120.24	50	PKP	PKiKP	21 36 16.9	+0.7
	comp=Z,1.5nm,0.8s,baz=144,slow=3.5,SNR=4.6						
RAYN	Ar Rayn	120.95	74		PKPdf	21 36 17.7	-0.5
H11S2	WAKE ISLAND Hy	126.00	279	T	T	23 55 46.3	
	baz=101,slow=75,SNR=558						
H11S1	WAKE ISLAND Hy	126.00	279	T	T	23 55 41.1	
	baz=101,slow=75,SNR=120						
H11S3	WAKE ISLAND Hy	126.01	279	T	T	23 55 33.6	

	baz=101,slow=75,SNR=114						
H11N3	WAKE ISLAND Hy	126.03	280	T	T	23 55 40.7	
	baz=100,slow=74,SNR=84						
H11N2	WAKE ISLAND Hy	126.05	280	T	T	23 55 41.8	
	baz=100,slow=74,SNR=98						
H11N1	WAKE ISLAND Hy	126.05	280	T	T	23 55 46.9	
	baz=100,slow=74,SNR=69						
AKTO	Aktyubinsk	129.34	40	PKP	PKiKP	21 36 34.3	+0.2
	comp=Z,1.0nm,0.6s,baz=358,slow=3.8,SNR=4.4						
ASAR	Alice Springs	130.71	210	PKP	PKiKP	21 36 37.8	-0.1
	comp=Z,1.4nm,0.5s,baz=124,slow=1.6,SNR=20						
ASAR	Alice Springs	130.71	210		PKPdf	21 36 35.8	-1.2
ABKAR	Akbulak array	130.90	41		PKPdf	21 36 36.6	+0.2
WRA	Warramunga Arr	133.63	213	PKP	PKiKP	21 36 43.7	-0.1
	comp=Z,2.1nm,0.8s,baz=156,slow=1.8,SNR=18						
WRA	Warramunga Arr	133.63	213		PKPdf	21 36 41.6	-0.9
KURBB	Kurchatov Arra	140.67	31	PKhKP	PKPpre	21 36 47.7	
	comp=Z,0.5nm,0.6s,baz=306,slow=2.8,SNR=11						
ZALV	Zalesovo Beam	140.96	23	PKhKP	PKPpre	21 36 48.6	
	comp=Z,0.8nm,0.5s,baz=317,slow=4.1,SNR=3.6						
ZALV				PKP	PKPdf	21 36 56.3	+1.3
	comp=Z,1.6nm,0.5s,baz=309,slow=3.0,SNR=6.9						
ZALV	Zalesovo Beam	140.96	23		PKPdf	21 36 53.6	-1.4
AAK	Ala-Archa	142.80	44	PKP	PKPdf	21 36 57.1	-1.7
	comp=Z,2.1nm,0.7s,baz=213,slow=2.7,SNR=13						
AAK	Ala-Archa	142.80	44		PKPdf	21 36 57.5	-1.3
MAKZ	Makanchi	144.89	33		PKPdf	21 37 01.8	-0.3
MK31	Makanchi Array	145.06	33		PKPdf	21 37 02.4	-0.1
MKAR	Makanchi Array	145.06	33	PKP	PKPdf	21 37 02.8	+0.3
	comp=Z,16nm,0.7s,baz=323,slow=4.0,SNR=152						
MKAR	Makanchi Array	145.06	33		PKPbc	21 37 01.7	-0.2
KSH	Kashi	145.17	48	PKPbc	PKPdf	21 37 04.3	+1.3
KSH				sPKP		21 37 18.5	
KSH				PP	PP	21 40 26.8	+4.9
KSH				PKS	PKSdf	21 40 40.8	+2.2
SOEI	Soe	147.27	208		PKPbc	21 37 10.1	+0.5
FAKI	Fak Fak	148.21	228		PKiKP	21 37 13.4	-0.4
USRK	Ussuriysk Ar.	149.09	327	PKPbc	PKPbc	21 37 13.4	0.0
	comp=Z,2.3nm,0.8s,baz=29,slow=2.9,SNR=6.6						
USRK	Ussuriysk Ar.	149.09	327		PKPbc	21 37 13.1	-0.3
PALK	Pallekele	149.61	110	PKPbc	PKPbc	21 37 16.0	+0.4
	comp=Z,2.0nm,0.7s,baz=203,slow=5.3,SNR=3.6						
PALK	Pallekele	149.61	110		PKiKP	21 37 16.2	-0.4
MJAR	Matsushiro Arr	149.65	310	PKPbc	PKiKP	21 37 16.1	0.0
	comp=Z,3.0nm,0.8s,baz=151,slow=1.1,SNR=11						
MJAR	Matsushiro Arr	149.65	310		PKPbc	21 37 13.8	-1.3
MAT	Matsushiro	149.65	310	PKP	PKiKP	21 37 16.4	+0.3
HYB	Hyderabad	150.75	89	i PKP	PKiKP	21 37 19.0	+0.1
SONM	Songino Array	151.81	4	PKPbc	PKiKP	21 37 21.0	+0.7
	comp=Z,2.1nm,0.8s,baz=313,slow=1.6,SNR=14						
SONM	Songino Array	151.81	4		PKPbc	21 37 19.9	0.0
KSRS	Korea Array	155.99	321	PKP	PKPdf	21 37 19.4	-0.2
	comp=Z,0.7nm,0.6s,baz=22,slow=1.3,SNR=2.5						
RPSI	Rantau Prapat	160.30	148		PKPdf	21 37 25.7	+0.1
RPSI					PKPab	21 38 07.5	+1.6
PSI	Prapat	160.39	147	PKP	PKPdf	21 37 25.7	-0.2
	comp=Z,2.2nm,0.3s,baz=96,slow=2.4,SNR=1.6						
PSI				PKPab	PKPab	21 38 07.5	+1.0
	comp=Z,5.7nm,0.7s,baz=96,slow=24,SNR=5.4						
LZH	Lanzhou	162.95	15	ePKP	PKPdf	21 37 27.5	-0.4
LZH				pPKP	sPKPdf	21 37 34.8	0.0
LZH				sPKP		21 37 37.3	
LZH				PKP	pPKPab	21 38 19.6	-2.6
CMAR	Chiang Mai Arr	170.10	95	PKP	PKPdf	21 37 35.1	+1.4
	comp=Z,0.5nm,0.6s,baz=265,slow=1.6,SNR=5.4						
CMAR				PKPab	PKPab	21 38 49.3	+0.1
	comp=Z,0.9nm,0.7s,baz=260,slow=6.7,SNR=6.9						
CMAR	Chiang Mai Arr	170.10	95		PKPdf	21 37 32.8	-0.9
CMAR					PKPab	21 38 47.5	-1.7

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*SJA **23** 22:04:15.4±0.4, 19°.27S×71°.40W, h60^{km}±10^{km}, ML5.1, MW4.9*

*IDC **23** 22:04:23.5±0.4, 19°.61S×70°.54W, h0^{km}, mb4.6/25, mb1 4.7/28, mb1mx4.6/42, mbtmp4.6/28, ML3.9/3, MS4.7/15, Ms1 4.7/15, ms1mx4.4/27, Error ellipse: s-maj=18.3km s-min=9.8km az=67.0*

*NEIC **23** 22:04:26.3±1.6, 19°.82S±0°.03×70°.79W±0°.04, h23^{km}±3^{km}, mb4.9/252, Mwr5.0/30, Mww5.1, ML4.8(GUC), Error ellipse: s-maj=5.8km s-min=4.7km az=102.0*

*NEIC **23** 22:04:26.8, 19°.81S×70°.75W, h25^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.34; M$_{\theta\theta}$-0.65; M$_{\phi\phi}$0.98; M$_{r\theta}$2.20; M$_{\theta\phi}$0.62; M$_{\phi r}$-3.29; Fault plane solution: M$_0$4.10000×10^{16} NP1:ϕ$_s$328.57000°, δ88.70000°, λ-104.36000°. NP2:ϕ$_s$233.50000°, δ14.42000°, λ-5.24000°. Principal axes: T 3.8891, Plg42.0000°, Azm72.0000°; N 0.3854, Plg14.0000°, Azm329.0000°; P -4.2745, Plg45.0000°, Azm224.0000°;*

*VAO **23** 22:04:27.7±0.6, 19°.80S×70°.44W, h10^{km}, mb4.7*

*GUC **23** 22:04:27.6±0.8, 19°.76S×70°.75W, h42^{km}±2^{km}, ML4.8*

*GCMT **23** 22:04:30.3±0.3, 19°.76S±0°.02×71°.12W±0°.03, h31^{km}±1^{km}, MW5.2/92, Moment Tensor Solution. s41,c44; s92,c129; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.65±.31; M$_{\theta\theta}$-0.48±.17; M$_{\phi\phi}$-3.17±.21; M$_{r\theta}$2.22±.23; M$_{\theta\phi}$2.47±.12; M$_{\phi r}$-4.66±.36; Best double couple: M$_0$6.62300×10^{16} NP1:ϕ$_s$322.00000°, δ20.00000°, λ79.00000°. NP2: ϕ$_s$154.00000°, δ71.00000°, λ94.00000°. Principal axes: T 6.1440, Plg64.0000°, Azm70.0000°; N 0.9570, Plg4.0000°, Azm333.0000°; P -7.1010, Plg26.0000°, Azm241.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **23** 22:04:30, 19°.82S×70°.79W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.94; M$_{\theta\theta}$-0.58; M$_{\phi\phi}$-1.36; M$_{r\theta}$2.83; M$_{\theta\phi}$1.28; M$_{\phi r}$-3.81; Fault plane solution: M$_0$5.21000×10^{16} NP1:ϕ$_s$143.00000°, δ78.00000°, λ90.00000°. NP2:ϕ$_s$324.00000°, δ12.00000°, λ90.00000°. Principal axes: T 5.0131, Plg57.0000°, Azm53.0000°; N 0.3735, Plg0.0000°, Azm143.0000°; P -5.3866, Plg33.0000°, Azm233.0000°;*

ISC 23 22:04:26.0±1.0**, 19°.80S**±0°.02×**70°.79W**±0°.03**, h20**^{km}±4^{km}**, n540,** σ1^{s}.**53**/465**, mb4.9**/127**, MS4.9**/17**, 1C-13D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.66	72	⇓iP	Pb	22 04 39.0	+0.1
PSGC				eS	Sb	22 04 48.1	+0.4
PSGC				IAML		22 04 49.1	
	comp=N,51µm,0.3s						
PSGCX	Pisagua	0.66	72	Pn	Pb	22 04 38.8	-0.1
PSGCX					Sg	22 04 47.6	-0.4
TA01	Diego Aracena	0.95	143	⇓iP	Pn	22 04 44.9	+0.7
TA01				eS	Sn	22 04 58.0	+0.7
TA01				IAML		22 05 01.2	
	comp=E,32µm,0.3s						
PB11	IPOC Station P	1.07	88	⇓iP	Pn	22 04 46.0	-0.1
PB11				eS	Sg	22 05 00.5	-0.5
PB11				IAML		22 05 02.4	
	comp=N,64µm,0.3s						
PB11	IPOC Station P	1.07	88	Pn	Pb	22 04 45.8	-0.2
PB11					Sn	22 05 00.8	+0.3
PATCX	Punta Patache	1.18	150	⇓iP	Pg	22 04 48.5	-0.4
PATCX				eS	Sg	22 05 04.3	-0.1
PATCX	Punta Patache	1.18	150	Pn	Pg	22 04 48.0	-0.9
PB12	IPOC Station P	1.26	20	⇓iP	Pn	22 04 48.3	-0.3
PB12				eS	Sb	22 05 05.0	0.0
PB12				IAML		22 05 07.2	
	comp=N,40µm,0.6s						
PB12	IPOC Station P	1.26	20	Pn	Pn	22 04 48.0	-0.6
PB12					Sg	22 05 06.0	-1.0
AP01	Chacalluta	1.49	17	⇑iP	Pb	22 04 52.2	-0.8
AP01				eS	Sb	22 05 11.0	-0.4
GO01	Chusmiza	1.51	85	⇓iP	Pb	22 04 53.5	-0.2
GO01				eS	Sb	22 05 13.3	+0.7
GO01				IAML		22 05 15.4	
	comp=N,61µm,0.3s						
GO01	Chusmiza	1.51	85	Pn	Pb	22 04 53.6	0.0
GO01					Sg	22 05 13.8	-1.2
PB08	IPOC Station P	1.58	103	⇓iP	Pb	22 04 54.5	-0.2
PB08				eS	Sb	22 05 15.3	+0.9
PB08				IAML		22 05 17.3	
	comp=N,36µm,0.4s						
PB02	IPOC Station P	1.73	151	⇓iP	Pb	22 04 56.5	-0.7
PB02				eS	Sn	22 05 17.6	+1.0
PB02				IAML		22 05 31.5	
	comp=E,25µm,0.5s						
PB01	IPOC Station P	1.74	136	⇓iP	Pb	22 04 57.0	-0.3
PB01				eS	Sb	22 05 18.9	+0.1
PB01				IAML		22 05 21.8	
	comp=N,14µm,0.4s						
PB01	IPOC Station P	1.74	136	Pn	Pb	22 04 56.5	-0.8
PB16	IPOC Station P	1.90	40	Pn	Pb	22 04 59.3	-1.0
PB16					Sb	22 05 24.3	+0.4
PB07	IPOC Station P	2.09	156	eP	Pn	22 05 01.4	+1.3
PB07				IAML		22 05 40.1	
	comp=E,7µm,0.3s						
PB07	IPOC Station P	2.09	156	Pn	Pn	22 05 00.5	+0.3
PB03	IPOC Station P	2.44	157	⇓iP	Pn	22 05 05.9	+1.0
PB03				eS	Sb	22 05 41.3	+2.3
PB03				IAML		22 05 50.7	
	comp=E,4µm,0.6s						
PB09	IPOC Station P	2.46	144	Pn	Pn	22 05 04.9	-0.2
PB09	IPOC Station P	2.46	144	eP	Pn	22 05 05.9	+0.7
PB09				eS	Sg	22 05 43.7	-1.5
PB04	IPOC Station P	2.59	167	Pn	Pn	22 05 06.0	-1.0
PB04	IPOC Station P	2.59	167	eP	Pn	22 05 06.7	-0.3
PB05	IPOC Station P	3.08	170	eP	Pn	22 05 13.1	-0.7
PB05				IAML		22 06 16.8	
	comp=Z,4µm,1.0s						
PB06	IPOC Station P	3.10	159	eP	Pn	22 05 14.4	+0.3
PB06				eS	Sb	22 05 57.9	-0.3
LVC	Limon Verde	3.30	148	Pn	Pn	22 05 19.3	+2.4
	comp=Z,29nm,0.3s,baz=316,slow=10.0,SNR=52						
LVC				Sn	Sn	22 05 58.0	+2.2
	comp=Z,148nm,0.3s,baz=81,slow=18,SNR=8.4						
LVC				LR	LR	22 06 02.0	
	comp=Z,341nm,21.3s,baz=326,slow=29						
LVC				Lg	Lg	22 06 11.1	
	comp=Z,207nm,0.3s,baz=229,slow=19,SNR=8.1						
LVC	Limon Verde	3.30	148	Pn	Pn	22 05 17.5	+0.6
LVC					Sn	22 05 55.4	-0.4
LVC	Limon Verde	3.30	148	eP	Pn	22 05 17.9	+0.9
LVC				IAML		22 06 13.7	
	comp=Z,3µm,1.1s						
PB15	IPOC Station P	3.60	160	Pn	Pn	22 05 21.0	0.0
PB15	IPOC Station P	3.60	160	eP	Pn	22 05 21.3	+0.3
PB15				eS	Sb	22 06 09.8	-2.9
PB15				IAML		22 06 36.4	
	comp=Z,3µm,0.4s						
PB10	IPOC Station P	3.70	177	Pn	Pn	22 05 21.9	-0.2
PB10				Sn	Sn	22 06 05.0	-0.1
PB10	IPOC Station P	3.70	177	eP	Pn	22 05 20.5	-1.7
PB10				IAML		22 06 37.3	
	comp=Z,814nm,0.8s						
LPAZ	La Paz	4.32	36	Pn	Pn	22 05 34.8	+3.7
	comp=Z,26nm,0.3s,baz=234,slow=8.7,SNR=60						
LPAZ	La Paz	4.32	36	Pn	Pn	22 05 32.1	+0.9
PB14	IPOC Station P	4.81	176		Pn	22 05 37.0	-0.7
PB14				Sn	Sn	22 06 32.7	-0.4
PB14	IPOC Station P	4.81	176	eP	Pn	22 05 36.1	-1.6
PB14				IAML		22 07 06.8	
	comp=Z,680nm,0.9s						
GO02	Mina Guanaco	5.45	168	Pn	Pn	22 05 46.9	+0.4
GO02				Sn	Sn	22 06 48.7	0.0
GO03	Copiap	7.77	176		Pn	22 06 16.5	-1.6
GO03				Sn	Sn	22 07 44.1	-1.6
NNA	Nana	9.71	322	Pn	Pn	22 06 44.8	+0.1
	comp=Z,1.3nm,0.3s,baz=172,slow=14,SNR=3.3						
NNA				Sn	Sn	22 08 26.3	-7.0
	comp=Z,5.5nm,0.3s,baz=238,slow=16,SNR=2.2						
NNA				LR	LR	22 10 32.0	
	comp=Z,1µm,19.1s,baz=163,slow=38						
NNA	Nana	9.71	322		Pn	22 06 44.0	-0.7
SIV	San Ignacio	10.00	69	Pn	Pn	22 06 48.3	-0.4
	comp=Z,12nm,0.3s,baz=264,slow=10,SNR=93						
SIV				Sn	Sn	22 08 28.4	-12
	comp=Z,0.9nm,0.3s,baz=159,slow=24,SNR=1.6						
SIV				LR	LR	22 11 16.7	
	comp=Z,9µm,18.1s,baz=281,slow=42						
GO04	Tololo Observa	10.32	180		Pn	22 06 51.7	-1.6
SAML	Samuel	13.06	35		Pn	22 07 30.9	+0.3
ROC1	El Roble	13.12	181		Pn	22 07 30.9	-0.6
CPUP	Villa Florida	13.98	120	Pn	Pn	22 07 45.0	+1.8
	comp=Z,0.2nm,0.3s,baz=298,slow=12,SNR=14						
CPUP	Villa Florida	13.98	120		Pn	22 07 42.8	-0.3
ATAH	Atahualpa	14.60	329	Pn	Pn	22 07 51.9	-0.1
	comp=Z,0.3nm,0.3s,baz=142,slow=17,SNR=1.5						
ATAH				LR	LR	22 13 35.9	
	comp=Z,645nm,20.0s,baz=119,slow=38						
SALV	Santo Antonio	14.89	77	eP	Pn	22 07 54.9	-0.6
GO05	Huala	15.18	184	IAmb	IAmb	22 08 01.2	
	comp=Z,68nm,1.1s						
CLDB	Colider	16.96	61	eP	Pn	22 08 21.5	-0.8
ARAG	Araguaiana, MT	18.53	80	eP	P	22 08 40.1	-1.4
ITAB	Concordia	18.63	117	eP	P	22 08 42.1	-0.4
CPSB	Cacapava Do Su	18.91	127	eP	P	22 08 44.6	-0.9
PLTB	Pedras Altas	19.50	131	eP	Pn	22 08 53.1	-0.2
GO06	Curarrehue	19.72	182	P	Pn	22 08 55.3	-0.8
GO06				IAmb	IAmb	22 09 03.9	
	comp=Z,49nm,0.9s						
FRTB	Fartura	20.05	104	eP	P	22 08 57.7	-0.5
PLCA	Paso Flores	20.86	179	P	Pn	22 09 09.0	-0.3
	comp=Z,103nm,1.0s,baz=24,slow=12,SNR=53						
PLCA	Paso Flores	20.86	179	P	P	22 09 06.9	+0.1
IPMB	Ipameri, GO	21.44	89	eP	P	22 09 11.4	-1.8
PTGA	Pitinga	21.72	30	P	P	22 09 14.0	-2.1
	comp=Z,30nm,0.3s,baz=297,slow=22,SNR=47						
PTGA				LR	LR	22 18 15.3	
	comp=Z,3µm,18.9s,baz=210,slow=39						
PTGA	Pitinga	21.72	30	P	P	22 09 14.3	-1.8
PTGA				IAmb	IAmb	22 09 17.4	
	comp=Z,62nm,1.1s						
FLOC	Florencia	21.78	347	eP	P	22 09 16.5	-0.4
FLOC	Florencia	21.78	347	P	P	22 09 16.8	0.0
SPB	Sao Paulo	22.02	104	P	P	22 09 19.0	-0.4
SPB	Sao Paulo	22.02	104	eP	P	22 09 20.8	+1.4
BDFB	Brasilia	22.08	83	P	P	22 09 18.3	-1.9
	comp=Z,5.9nm,0.5s,baz=251,slow=11,SNR=8.8						
BDFB				LR	LR	22 18 51.8	
	comp=Z,3µm,18.5s,baz=265,slow=40						
BDFB	Brasilia	22.08	83	P	P	22 09 19.8	-0.4
BDFB				IAmb	IAmb	22 09 26.6	
	comp=Z,45nm,1.2s						
CRUC	La Cruz	22.08	343	eP	P	22 09 26.2	+5.8
GARC	Garzon, Huila	22.34	348	eP	P	22 09 24.6	+1.6
SOTA	Rioblanco	22.54	345	eP	P	22 09 28.5	+3.1
PCON	Cinco Dias	22.67	345	eP	P	22 09 33.2	+6.3
POPC	Popayan, Colom	22.94	345	eP	P	22 09 30.1	+0.6
GR1C	Gorgona, Isla	23.79	341	eP	P	22 09 39.8	+2.2
PTGC	Puerto Gaitan,	23.89	357	eP	P	22 09 36.7	-1.8
VILC	Villavicencio,	23.94	353	eP	P	22 09 44.1	+4.9
ORTC	Ortega, Tolima	23.97	349	eP	P	22 09 39.0	-0.3
YOTC	Yotoco, Valle	24.26	346	eP	P	22 09 42.1	0.0
YOTC				eP	P	22 09 45.6	+3.5
ROSC	El Rosal	24.73	352	P	P	22 09 46.0	-0.7
	comp=Z,15nm,0.7s,baz=194,slow=19,SNR=3.4						
ROSC	El Rosal	24.73	352	eP	P	22 09 52.6	+5.9
ROSC	El Rosal	24.73	352	IAmb	IAmb	22 09 53.3	
	comp=Z,23nm,1.1s						
RREF	El Recreo	24.95	349	eP	P	22 09 52.3	+3.2
PLMC	San Jos del P	25.14	347	eP	P	22 09 53.0	+3.0
GUY2C	Guyana, Caldas	25.27	349	eP	P	22 09 51.5	-0.2
GUY2C				eP	P	22 09 51.9	+0.1
PIZC	Pizarro, Choco	25.45	345	eP	P	22 09 55.0	+2.2
SPBC	San Pablo de B	25.50	352	eP	P	22 09 52.3	-1.1
NORC	Norcasia	25.52	351	eP	P	22 09 52.3	-1.3
RUSC	La Rusia	25.63	355	eP	P	22 09 56.1	+1.1
RUSC	La Rusia	25.63	355	P	P	22 09 55.4	+0.4
JANB	Januaria	25.69	84	eP	P	22 09 53.4	-1.6
CBOC	Ciudad Bolivar	26.02	348	eP	P	22 10 01.6	+3.4
CBOC				eP	P	22 10 02.4	+4.2
TAMC	Tame, Arauca	26.09	358	eP	P	22 09 58.9	+0.2
TAMC				eP	P	22 10 06.7	+8.0
HELC	Santa Helena	26.25	349	eP	P	22 09 59.6	-0.8
BARC	Barichara	26.33	355	eP	P	22 10 00.8	-0.3
PTBC	PUERTO BERRIO,	26.42	352	eP	P	22 09 59.3	-2.4
BRRC	Barranca, Sant	26.89	354	eP	P	22 10 12.1	+6.2
SDV	Santo Domingo	28.51	0	P	P	22 10 19.6	-0.9
	comp=Z,9.3nm,0.9s,baz=177,slow=21,SNR=7.8						
SDV				LR	LR	22 22 46.3	
	comp=Z,2µm,18.5s,baz=204,slow=39						
SDV	Santo Domingo	28.51	0	P	P	22 10 20.6	+0.1
SDV	Santo Domingo	28.51	0	eP	P	22 10 23.8	+3.3
SMLC	San Martn de	28.61	353	eP	P	22 10 18.3	-2.9
SJCC	San Jacinto, C	29.83	351	eP	P	22 10 30.0	-2.1
PCRV	Puerto La Cruz	30.40	12	LR	LR	22 23 43.7	
	comp=Z,4µm,18.1s,slow=38						
GO09	Cerro Castillo	31.43	182	P	P	22 10 45.4	-0.4
GO09				IAmb	IAmb	22 10 49.5	
	comp=Z,28nm,1.1s						
USHA	Ushuaia	35.02	178	P	P	22 11 18.7	+1.6
	comp=Z,19nm,1.0s,baz=0.0,slow=4.0,SNR=2.9						
RCBR	Riachuelo	36.64	72	P	P	22 11 30.3	-1.3
RCBR	Riachuelo	36.64	72	eP	P	22 11 32.4	+0.8
SJG	San Juan	37.95	7	P	P	22 11 41.6	-0.8
SJG				IAmb	IAmb	22 11 49.5	
	comp=Z,29nm,0.9s						
AOPR	Arecibo Observ	38.12	6	P	P	22 11 44.0	0.0
GCPR	Guaynabo City	38.16	7	IAmb	IAmb	22 11 50.8	
	comp=Z,24nm,0.8s						
CUPR	Culebra, Puert	38.26	8	P	P	22 11 45.2	+0.2
CUPR				IAmb	IAmb	22 11 52.1	
	comp=Z,26nm,0.8s						
APG	El Apazote	39.63	329	P	P	22 11 57.4	+0.5
	comp=Z,3.6nm,0.9s,baz=156,slow=16,SNR=1.3						
TEIG	Tepich	43.31	336	P	P	22 12 27.6	+0.9
	comp=Z,11nm,0.6s,baz=314,slow=0.0						
TEIG	Tepich	43.31	336	P	P	22 12 27.3	+0.5
TEIG				IAmb	IAmb	22 12 28.0	
	comp=Z,11nm,0.7s						
CMIG	Matias Romero	43.64	326	P	P	22 12 30.7	+1.3
	comp=Z,5.1nm,0.7s,baz=125,slow=4.2,SNR=11						
ZAIG	Zacatecas	52.47	322	IAmb	IAmb	22 13 41.4	
	comp=Z,12nm,0.8s						
Z57A	Bowman	53.64	350	P	P	22 13 46.9	+0.7
	baz=168						
152A	Waverly Hall	53.85	345	IAmb	IAmb	22 13 49.8	
	comp=Z,9.2nm,1.0s						
Y55A	Saluda	54.47	349	P	P	22 13 52.4	+0.2
	baz=167						
Z50A	Ashland	54.70	344	IAmb	IAmb	22 13 55.4	
	comp=Z,11nm,1.0s						
Z50A	Ashland	54.70	344	P	P	22 13 53.6	-0.4
	baz=162						
LRAL	Lakeview Retre	54.78	343	P	P	22 13 54.8	+0.4
	baz=161						
X56A	White Oak	54.87	350	P	P	22 13 55.0	0.0
	baz=168						
BIRD	Birdtown, Kers	54.92	350	P	P	22 13 56.0	+0.5
BIRD				IAmb	IAmb	22 13 58.3	
	comp=Z,24nm,1.2s						
X55A	Gracelyn & Ava	54.95	349	P	P	22 13 56.0	+0.3
	baz=168						
HKT	Hockley	55.03	333	P	P	22 13 56.7	+0.4
W58A	Raeford	55.11	352	P	P	22 13 57.4	+0.6
	baz=170						
X54A	Belton	55.16	348	P	P	22 13 57.2	0.0
	baz=167						
833A	Chaparral WMA,	55.26	329	IAmb	IAmb	22 14 08.8	
	comp=Z,18nm,0.9s						
W57A	Gilead	55.35	351	P	P	22 13 58.7	+0.2
	baz=169						
W56A	Indian Trail	55.42	350	P	P	22 13 59.2	+0.1
	baz=169						
KMSC	Kings Mountain	55.55	350	IAmb	IAmb	22 14 10.0	
	comp=Z,9.9nm,1.1s						
W54A	Cherokee Point	55.65	349	P	P	22 14 01.2	+0.5
	baz=167						
V59A	Middlesex	55.71	353	P	P	22 14 01.6	+0.5
	baz=172						
V58A	Windy Hill, Pi	55.85	352	IAmb	IAmb	22 14 05.0	
	comp=Z,20nm,1.1s						
V58A	Windy Hill, Pi	55.85	352	P	P	22 14 03.5	+1.3
	baz=170						
V56A	Mocksville	56.07	350	P	P	22 14 04.1	+0.4
	baz=169						
X48A	Hartselle	56.13	344	IAmb	IAmb	22 14 12.7	
	comp=Z,9.5nm,0.9s						
V55A	Taylorsville	56.23	350	IAmb	IAmb	22 14 07.4	
	comp=Z,10nm,1.1s						
V55A	Taylorsville	56.23	350	P	P	22 14 05.7	+0.8
	baz=168						
U59A	Littleton	56.24	353	IAmb	IAmb	22 14 06.6	
	comp=Z,11nm,1.1s						
U59A	Littleton	56.24	353	P	P	22 14 05.3	+0.4
	baz=172						
V54A	Nebo	56.28	349	P	P	22 14 05.5	+0.2
	baz=167,SNR=5.7						
U58A	Oxford	56.37	352	P	P	22 14 07.0	+1.2
	baz=171						
W50A	Signal Mountai	56.41	346	IAmb	IAmb	22 14 07.8	
	comp=Z,8.0nm,0.9s						
CPCT	Cooper Cave	56.47	347	IAmb	IAmb	22 14 15.3	
	comp=Z,9.9nm,1.1s						
U57A	Blanch	56.51	352	P	P	22 14 07.5	+0.7
	baz=170						
TKL	Tuckaleechee C	56.51	347	P	P	22 14 06.5	-0.4
	comp=Z,12nm,1.1s,baz=160,slow=9.2,SNR=8.8						
TKL	Tuckaleechee C	56.51	347	IAmb	IAmb	22 14 16.1	
	comp=Z,16nm,1.1s						
SWET	Sewanee	56.57	345	IAmb	IAmb	22 14 07.0	
	comp=Z,5.3nm,0.6s						
U56A	King	56.58	351	IAmb	IAmb	22 14 11.0	
	comp=Z,12nm,1.1s						
U56A	King	56.58	351	P	P	22 14 08.6	+1.3
	baz=169						
V51A	Loudon	56.77	347	IAmb	IAmb	22 14 11.9	
	comp=Z,9.6nm,1.1s						
T59A	Double "B" Far	56.83	354	IAmb	IAmb	22 14 19.1	
	comp=Z,16nm,1.0s						
T59A	Double "B" Far	56.83	354	P	P	22 14 09.5	+0.5
	baz=172						
OXF	Oxford	56.84	342	IAmb	IAmb	22 14 11.9	
	comp=Z,16nm,0.9s						
PLAL	Pickwick Lake	56.90	343	IAmb	IAmb	22 14 11.7	
	comp=Z,8.7nm,1.0s						
T58A	Grand View Acr	56.91	353	P	P	22 14 11.7	+2.0
	baz=171,SNR=5.7						
U54A	Nelsons Funny	56.98	349	IAmb	IAmb	22 14 12.7	
	comp=Z,21nm,1.1s						
U54A	Nelsons Funny	56.98	349	P	P	22 14 11.1	+0.8
	baz=168						
T57A	Hurt	57.06	352	IAmb	IAmb	22 14 13.2	
	comp=Z,16nm,1.1s						
T57A	Hurt	57.06	352	P	P	22 14 12.5	+1.8
	baz=170						
T56A	Rocky Mt	57.19	351	P	P	22 14 14.1	+2.4
	baz=170						
V48A	Smith Brothers	57.29	345	IAmb	IAmb	22 14 15.0	
	comp=Z,14nm,1.1s						
T55A	Pulaski	57.39	351	P	P	22 14 13.8	+0.6
	baz=169						
T54A	Tazewell	57.47	350	P	P	22 14 13.7	0.0
	baz=168						
CLTN	Cedars of Leba	57.50	345	IAmb	IAmb	22 14 22.9	
	comp=Z,13nm,1.1s						
T53A	Wise	57.56	349	P	P	22 14 13.8	-0.5
	baz=167						
T52A	Hallie	57.76	348	IAmb	IAmb	22 14 17.2	
	comp=Z,16nm,1.1s						
T52A	Hallie	57.76	348	P	P	22 14 15.3	-0.4
	baz=166						
S57A	Dark Hollow, R	57.77	352	IAmb	IAmb	22 14 18.2	
	comp=Z,18nm,1.1s						
T51A	Gray	57.81	348	P	P	22 14 15.4	-0.6
	baz=165						
R58B	Mineral	57.84	353	IAmb	IAmb	22 14 25.4	
	comp=Z,9.8nm,1.1s						
R58B	Mineral	57.84	353	P	P	22 14 16.6	+0.4
	baz=172						
WVT	Waverly	57.92	344	P	P	22 14 16.1	-0.7
WVT				IAmb	IAmb	22 14 24.8	
	comp=Z,10nm,0.8s						
WVT	Waverly	57.92	344	P	P	22 14 15.8	-1.0
	baz=161						
S55A	Lewisburg	57.99	351	P	P	22 14 17.7	+0.4
	baz=169,SNR=6.0						
T50A	Nancy	58.05	347	P	P	22 14 16.9	-0.8
	baz=164						
S54A	Dingess, Beckl	58.14	350	P	P	22 14 19.6	+1.2
	baz=168						
R58A	Rapidan	58.19	353	P	P	22 14 20.6	+1.9
	baz=172						
MIAR	Mount Ida	58.23	338	IAmb	IAmb	22 14 26.6	
	comp=Z,11nm,1.1s						
MIAR	Mount Ida	58.23	338	P	P	22 14 18.9	-0.2
	baz=155,SNR=9.4						
TXAR	Lajitas Array	58.24	326	P	P	22 14 18.7	-0.6
	comp=Z,2.2nm,0.8s,baz=148,slow=9.8,SNR=8.9						
TXAR	Lajitas Array	58.24	326	P	P	22 14 19.6	+0.2
R57A	Stanardsville	58.24	353	P	P	22 14 21.7	+2.6
	baz=171						
T49A	Edmonton	58.28	346	P	P	22 14 19.0	-0.4
	baz=164,SNR=14						
S52A	Salyersville	58.33	349	P	P	22 14 19.5	-0.2
	baz=166						
W41B	Gary Mavity, V	58.35	339	P	P	22 14 19.4	-0.4
	baz=156						

S51A	Beattyville	58.39	348	P	P	22 14 19.5	-0.6
	baz=166						
R55A	Marlinton	58.44	351	P	P	22 14 22.4	+1.9
	baz=170						
R54A	Victor	58.47	351	P	P	22 14 21.0	+0.3
	baz=169						
WHAR	Wooly Hollow	58.47	339	IAmb	IAmb	22 14 22.0	
	comp=Z,6.7nm,0.9s						
S50A	Richmond	58.59	347	P	P	22 14 21.3	-0.3
	baz=165						
S49A	Springfield	58.88	347	P	P	22 14 23.9	+0.4
	baz=164						
W39A	Magazine	58.89	338	IAmb	IAmb	22 14 26.4	
	comp=Z,15nm,1.1s						
W39A	Magazine	58.89	338	P	P	22 14 24.4	+0.8
	baz=155						
Q57A	Strasburg	58.96	353	P	P	22 14 25.1	+1.1
	baz=172						
ABTX	Abilene, Hawle	58.99	332	IAmb	IAmb	22 14 26.0	
	comp=Z,12nm,0.9s						
ABTX	Abilene, Hawle	58.99	332	P	P	22 14 25.0	+0.6
	baz=148,SNR=6.2						
Q56A	Snyder Ridge,	59.06	352	P	P	22 14 25.6	+0.9
	baz=171,SNR=5.8						
Q55A	Buckhannon	59.13	352	P	P	22 14 27.0	+1.7
	baz=170						
Q53A	Leroy	59.21	350	P	P	22 14 26.2	+0.4
	baz=168						
Q54A	Coxs Mills	59.23	351	P	P	22 14 25.7	-0.2
	baz=169						
PBMO	Poplar Bluff	59.25	342	IAmb	IAmb	22 14 34.2	
	comp=Z,8.7nm,0.8s						
P59A	Jarrettsville	59.34	355	P	P	22 14 28.9	+2.3
	baz=174						
P57A	Homestead Farm	59.36	354	IAmb	IAmb	22 14 30.1	
	comp=Z,11nm,1.0s						
P57A	Homestead Farm	59.36	354	P	P	22 14 29.7	+2.9
	baz=172						
P56A	Dayton Farm, R	59.47	353	P	P	22 14 30.4	+2.8
	baz=171						
WCI	Wyandotte Cave	59.53	346	P	P	22 14 27.9	-0.1
WCI				IAmb	IAmb	22 14 29.1	
	comp=Z,12nm,1.1s						
WCI	Wyandotte Cave	59.53	346	P	P	22 14 28.8	+0.8
	baz=163						
P55A	Reedsville	59.60	352	P	P	22 14 30.1	+1.6
	baz=170						
U40A	Yellville	59.62	339	IAmb	IAmb	22 14 37.6	
	comp=Z,12nm,1.0s						
U40A	Yellville	59.62	339	P	P	22 14 28.6	-0.1
	baz=156						
Q50A	Georgetown	59.63	348	P	P	22 14 29.2	+0.5
	baz=166						
T42A	Van Buren	59.69	341	IAmb	IAmb	22 14 30.2	
	comp=Z,7.7nm,1.1s						
Q51A	Peebles	59.69	349	P	P	22 14 29.0	-0.1
	baz=166						
MCWV	Mont Chateau	59.75	352	IAmb	IAmb	22 14 32.6	
	comp=Z,7.2nm,1.0s						
MCWV	Mont Chateau	59.75	352	P	P	22 14 30.2	+0.7
	baz=170						
P54A	Burton	59.78	351	P	P	22 14 30.5	+0.7
	baz=169						
P53A	Whipple	59.81	351	P	P	22 14 30.3	+0.4
	baz=168						
HHAR	Hobbs	59.92	338	IAmb	IAmb	22 14 40.5	
	comp=Z,18nm,1.2s						
Q49A	Aurora	59.97	347	P	P	22 14 31.9	+0.9
	baz=165						
O57A	Amberson	60.04	354	P	P	22 14 33.8	+2.3
	baz=172						
P52A	Corning	60.07	350	P	P	22 14 31.3	-0.4
	baz=168						
Q48A	North Vernon	60.08	347	P	P	22 14 31.1	-0.6
	baz=164						
P51A	Williamsport	60.08	349	IAmb	IAmb	22 14 33.0	
	comp=Z,11nm,0.9s						
P51A	Williamsport	60.08	349	P	P	22 14 32.3	+0.5
	baz=167						
MGMO	Mountain Grove	60.16	340	IAmb	IAmb	22 14 34.8	
	comp=Z,16nm,1.1s						
O56A	Blue Knob Stat	60.20	353	IAmb	IAmb	22 14 42.6	
	comp=Z,15nm,1.0s						
O56A	Blue Knob Stat	60.20	353	P	P	22 14 33.7	+1.1
	baz=172						
O55A	Ligonier	60.22	352	P	P	22 14 33.3	+0.6
	baz=171						
TUL1	Leonard	60.26	337	IAmb	IAmb	22 14 35.4	
	comp=Z,13nm,0.9s						
TUL1	Leonard	60.26	337	P	P	22 14 32.7	-0.3
	baz=153						
P50A	Jamestown	60.34	348	P	P	22 14 32.5	-1.0
	baz=166						
WMOK	Wichita Mounta	60.42	334	P	P	22 14 33.6	-0.6
	baz=150						
P49A	Miami Univ. Ec	60.45	348	P	P	22 14 33.2	-1.1
	baz=165						
SSPA	Standing Stone	60.49	354	P	P	22 14 34.4	-0.2
SSPA				IAmb	IAmb	22 14 37.1	
	comp=Z,15nm,1.1s						
SSPA	Standing Stone	60.49	354	P	P	22 14 36.7	+2.2
	baz=172						
O51A	Pataskala	60.65	350	P	P	22 14 34.9	-0.7
	baz=167						
CCM	Cathedral Cave	60.68	342	P	P	22 14 35.6	-0.3
CCM				IAmb	IAmb	22 14 38.7	
	comp=Z,14nm,1.1s						
CCM	Cathedral Cave	60.68	342	P	P	22 14 35.6	-0.3
	baz=158						
N55A	Marion Center	60.75	353	P	P	22 14 37.0	+0.7
	baz=171,SNR=8.6						
ACSO	Alum Creek Sta	60.80	349	P	P	22 14 37.1	+0.4
	baz=167						
N56A	West Decatur	60.81	353	P	P	22 14 38.1	+1.3
	baz=172						
O50A	Cable	60.83	349	P	P	22 14 36.7	-0.2
	baz=166						
S39A	Bolivar	60.99	340	IAmb	IAmb	22 14 46.9	
	comp=Z,16nm,1.1s						
O49A	Covington	61.00	348	IAmb	IAmb	22 14 46.8	
	comp=Z,7.1nm,0.9s						
O49A	Covington	61.00	348	P	P	22 14 38.4	+0.3
	baz=165						
MNTX	Cornudas Mount	61.01	326	P	P	22 14 38.8	+0.4
	baz=142,SNR=8.9						
N53A	Lisbon	61.02	351	IAmb	IAmb	22 14 40.1	
	comp=Z,14nm,0.9s						
N54A	Moraine State	61.05	352	P	P	22 14 39.8	+1.4
	baz=170,SNR=5.4						
M58A	Price’s Panora	61.09	355	P	P	22 14 39.9	+1.3
	baz=174						
M57A	Sunshine Farm,	61.11	355	P	P	22 14 39.9	+1.2
	baz=173						
M59A	Waymart	61.18	356	P	P	22 14 40.0	+0.7
	baz=175						
O48A	Farmland	61.23	347	P	P	22 14 39.1	-0.5
	baz=164						
N50A	Nevada	61.35	349	P	P	22 14 40.2	-0.1
	baz=167						
L63A	North Scituate	61.36	359	P	P	22 14 40.9	+0.6
	baz=179						
M56A	Emporium	61.36	354	P	P	22 14 40.7	+0.2
	baz=172						
M55A	Ridgway	61.41	353	P	P	22 14 41.4	+0.7
	baz=171,SNR=6.4						
MSTX	Muleshoe	61.55	330	P	P	22 14 42.8	+0.8
	baz=146,SNR=7.8						
M54A	Oil Creek Stat	61.55	352	P	P	22 14 41.8	+0.1
	baz=170,SNR=6.2						
M53A	WI Miller and	61.62	352	P	P	22 14 42.3	+0.1
	baz=169						
N49A	Columbus Grove	61.68	348	P	P	22 14 42.2	-0.4
	baz=166,SNR=13						
L58A	Harry Jones Me	61.71	356	P	P	22 14 43.6	+0.8
	baz=174						
L59A	Walton	61.80	356	P	P	22 14 44.3	+0.9
	baz=175						
M52A	Chesterland	61.81	351	P	P	22 14 43.3	-0.2
	baz=169						
BINY	Binghamton	61.88	356	P	P	22 14 45.1	+1.1
	baz=174						
N47A	Urbana	61.94	347	P	P	22 14 43.9	-0.4
	baz=164						
L56A	Greenwood	61.94	354	P	P	22 14 44.9	+0.5
	baz=173						
L53A	Girard	62.07	352	P	P	22 14 45.4	+0.2
	baz=170,SNR=6.6						
L55A	Hinsdale	62.08	354	P	P	22 14 45.9	+0.6
	baz=172,SNR=9.2						
M49A	Liberty Center	62.18	349	P	P	22 14 45.4	-0.5
	baz=166						
L54A	Sinclairville	62.23	353	P	P	22 14 47.0	+0.7
	baz=171,SNR=14						
K59A	Cooperstown	62.38	357	P	P	22 14 48.4	+1.1
	baz=176						
K58A	Earlville	62.41	356	P	P	22 14 48.5	+0.9
	baz=175						
K56A	Middlesex	62.48	355	P	P	22 14 49.8	+1.9
	baz=173						
K54A	Basiliko Farm,	62.52	353	P	P	22 14 48.9	+0.6
	baz=172,SNR=5.6						
L48A	N Adams	62.72	349	P	P	22 14 48.9	-0.7
	baz=166						
L49A	Milan	62.76	349	P	P	22 14 50.0	+0.2
	baz=166						
121A	Cookes Peak, D	62.93	325	IAmb	IAmb	22 14 53.8	
	comp=Z,5.1nm,0.7s						
121A	Cookes Peak, D	62.93	325	P	P	22 14 53.2	+1.8
	baz=141						
J58A	Remsen	62.98	356	P	P	22 14 52.5	+1.2
	baz=175						
J59A	Piesco	63.05	357	P	P	22 14 52.8	+1.1
	baz=176,SNR=5.1						
J57A	Williamstown	63.08	356	P	P	22 14 53.1	+1.2
	baz=174						
I58A	Old Forge	63.30	357	P	P	22 14 53.9	+0.5
	baz=176						
I59A	Olmsteadville	63.35	358	P	P	22 14 54.7	+1.0
	baz=177						
J52A	Paris	63.36	352	P	P	22 14 53.9	+0.1
	baz=170,SNR=9.0						
I60A	Shoreham	63.37	358	P	P	22 14 54.7	+0.9
	baz=177						
I61A	Oroboro, Fairl	63.43	359	P	P	22 14 55.8	+1.5
	baz=178						
K48A	Perry	63.49	349	P	P	22 14 53.9	-0.8
	baz=166						
K47A	Vermontville	63.53	348	P	P	22 14 55.7	+0.8
	baz=165						
R32A	Long Quarter,	63.57	336	IAmb	IAmb	22 14 57.7	
	comp=Z,13nm,1.1s						
I57A	Carthage	63.58	356	P	P	22 14 56.1	+0.9
	baz=175						
LBNH	Lisbon	63.74	359	P	P	22 14 59.0	+2.7
	baz=179						
J48A	Bridge Port	63.92	349	P	P	22 14 56.5	-0.9
	baz=166						
H58A	Gabriels	63.98	357	P	P	22 14 58.3	+0.4
	baz=176						
I51A	Listowel	63.98	352	P	P	22 14 57.8	-0.2
	baz=169,SNR=5.6						
I55A	Frankford	64.02	354	P	P	22 14 59.7	+1.6
	baz=173						
H61A	Lyndonville	64.03	359	P	P	22 15 00.8	+2.6
	baz=179						
J47A	Sunmer	64.04	349	P	P	22 14 58.4	+0.1
	baz=165						
H57A	Richville	64.09	356	P	P	22 14 59.0	+0.5
	baz=175,SNR=7.1						
ANMO	Albuquerque	64.13	328	P	P	22 14 58.6	-0.6
ANMO	Albuquerque	64.13	328	P	P	22 15 00.6	+1.3
	baz=142						
I52A	Shelburne	64.14	352	P	P	22 14 59.1	+0.2
	baz=170						
H63A	New Sharon	64.15	1	P	P	22 15 00.4	+1.5
	baz=181						
H59A	Cadyville	64.19	358	P	P	22 15 00.0	+0.8
	baz=177						
H56A	Elgin	64.28	356	P	P	22 15 00.6	+0.8
	baz=174						
SNAA	Sanae	64.45	161	P	P	22 15 01.2	+0.4
SNAA				IAmb	IAmb	22 15 03.6	
	comp=Z,12nm,0.8s						
H53A	Bobcaygeon	64.46	354	P	P	22 15 01.1	+0.1
	baz=172						
G60A	Masonville	64.60	359	P	P	22 15 03.3	+1.4
	baz=178						
G59A	Clarenceville	64.61	358	P	P	22 15 02.9	+1.0
	baz=177						
H52A	Wyevale	64.67	353	P	P	22 15 02.3	0.0
	baz=170						
G57A	Newington	64.70	357	P	P	22 15 03.2	+0.7
	baz=176,SNR=7.1						
G58A	Ormstown	64.71	357	P	P	22 15 04.3	+1.8
	baz=177						
G62A	West of Eustis	64.71	0	P	P	22 15 03.3	+0.7
G62A	West of Eustis	64.71	0	P	P	22 15 03.9	+1.3
	baz=180,SNR=8.2						
SADO	Sadowa	64.71	353	P	P	22 15 02.1	-0.5
	comp=Z,16nm,0.9s,baz=213,slow=2.6,SNR=15						
I48A	Sherman Twp	64.77	350	P	P	22 15 03.0	0.0
	baz=166,SNR=5.2						
G61A	St-Isidore-de-	64.77	359	P	P	22 15 04.4	+1.4
	baz=179						
PLVO	Plevna	64.78	355	IAmb	IAmb	22 15 12.3	
	comp=Z,14nm,1.0s						
T25A	Trinidad	64.91	331	P	P	22 15 05.7	+1.4
	baz=145						
JFWS	Jewell Farm	64.93	344	IAmb	IAmb	22 15 12.7	
	comp=Z,10.0nm,0.9s						
G55A	Calabogie	64.97	355	P	P	22 15 04.5	+0.2
	baz=174						
G53A	Haliburton	65.00	354	P	P	22 15 04.7	+0.1
	baz=172,SNR=7.5						
G54A	Lake Saint Pet	65.23	354	P	P	22 15 07.2	+1.2
	baz=172						
214A	Organ Pipe Nat	65.34	321	IAmb	IAmb	22 15 10.2	
	comp=Z,7.6nm,0.9s						
214A	Organ Pipe Nat	65.34	321	P	P	22 15 09.1	+2.1
	baz=136						
F64A	Sherman	65.39	2	P	P	22 15 07.8	+0.8
	baz=182						
F60A	Warwick	65.47	359	P	P	22 15 08.0	+0.5
	baz=179						
I42A	Draeger Farm,	65.52	346	IAmb	IAmb	22 15 17.4	
	comp=Z,10nm,0.8s						
F52A	Sundridge	65.74	353	P	P	22 15 09.5	+0.2
	baz=171,SNR=8.7						
G47A	Hillman	65.75	350	P	P	22 15 09.3	0.0
	baz=166						
ALGO	Algonquin Park	65.77	354	P	P	22 15 09.5	0.0
	baz=172						
H43A	Windswept, Lux	65.82	347	IAmb	IAmb	22 15 11.7	
	comp=Z,16nm,1.1s						
E58A	La Victoria	65.90	358	P	P	22 15 10.8	+0.5
	baz=177						
SDCO	Great Sand Dun	65.90	330	IAmb	IAmb	22 15 14.8	
	comp=Z,10nm,1.1s						
SDCO	Great Sand Dun	65.90	330	P	P	22 15 12.2	+1.3
	baz=144,SNR=15						
E61A	Lac Etchemin	65.92	0	P	P	22 15 12.9	+2.4
	baz=180						
F51A	Arnstein	65.94	353	P	P	22 15 10.3	-0.3
	baz=171						
E57A	Chemin Saint G	65.97	357	P	P	22 15 13.0	+2.1
	baz=176						
F49A	Sandfield	66.05	351	P	P	22 15 10.4	-0.8
	baz=168						
E56A	St. Veronique	66.14	357	P	P	22 15 12.2	+0.3
	baz=176,SNR=6.8						
E53A	Dumoine, Ponti	66.16	355	P	P	22 15 11.9	0.0
	baz=173						
E54A	Lac Daplat, Po	66.18	355	P	P	22 15 12.3	+0.2
	baz=173						
E51A	G1948 Merrick	66.49	353	P	P	22 15 14.3	+0.2
	baz=171						
S22A	4UR Ranch, Cre	66.53	329	P	P	22 15 16.8	+1.8
	baz=143						
F45A	CMU Biological	66.53	349	P	P	22 15 13.7	-0.7
	baz=165						
D57A	Chemin Vers le	66.56	358	P	P	22 15 15.2	+0.6
	baz=177,SNR=6.8						
D62A	Allapoint, All	66.59	1	P	P	22 15 15.2	+0.5
D62A	Allapoint, All	66.59	1	P	P	22 15 15.4	+0.7
	baz=182						
D58A	Chemin du LacG	66.61	358	P	P	22 15 15.5	+0.6
	baz=178,SNR=8.7						
D56A	ZEC Mazanza, M	66.63	357	P	P	22 15 15.3	+0.3
	baz=176						
D55A	Sainte-Anne-du	66.64	357	P	P	22 15 15.1	0.0
	baz=175						
Q24A	Divide	66.73	331	P	P	22 15 17.9	+1.6
	baz=145						
E48A	Lockeyer	66.77	351	P	P	22 15 15.4	-0.5
	baz=168						
D54A	Lac Fusel, La	66.85	356	P	P	22 15 16.2	-0.2
	baz=174						
D53A	Lac Vacive, Po	66.86	355	P	P	22 15 16.8	+0.3
D53A				IAmb	IAmb	22 15 25.6	
	comp=Z,16nm,1.1s						
D53A	Lac Vacive, Po	66.86	355	P	P	22 15 16.7	+0.2
	baz=173						
LATQ	La Tuque	66.90	359	P	P	22 15 17.0	+0.4
	baz=178						
E47A	Iron Bridge	66.91	351	P	P	22 15 16.5	-0.2
	baz=167						
MVCO	Mesa Verde	66.92	328	IAmb	IAmb	22 15 28.2	
	comp=Z,6.1nm,0.9s						
MVCO	Mesa Verde	66.92	328	P	P	22 15 19.1	+1.7
	baz=141						
E46A	Sault Ste Mari	66.98	350	IAmb	IAmb	22 15 18.4	
	comp=Z,9.5nm,0.9s						
D51A	Lot 18 Range I	67.03	354	P	P	22 15 19.1	+1.6
	baz=171						
WUAZ	Wupatki	67.13	325	IAmb	IAmb	22 15 21.8	
	comp=Z,7.1nm,0.8s						
WUAZ	Wupatki	67.13	325	P	P	22 15 20.9	+2.2
	baz=138,SNR=5.5						
D50A	G1974 Best Tow	67.15	353	P	P	22 15 20.0	+1.7
	baz=171,SNR=8.0						
D48A	Paudash Townsh	67.40	352	P	P	22 15 21.4	+1.5
	baz=169						
D47A	Chapleau	67.47	351	P	P	22 15 19.8	-0.5
	baz=167						
ECSD	EROS Data Cent	67.52	340	IAmb	IAmb	22 15 23.4	
	comp=Z,12nm,1.1s						
ECSD	EROS Data Cent	67.52	340	P	P	22 15 20.8	0.0
	baz=154,SNR=6.2						
ISCO	Idaho Springs	67.62	332	P	P	22 15 23.2	+1.4
	baz=144						
Y12C	Blythe	67.63	321	P	P	22 15 24.2	+2.6
	baz=135						
COWI	Conover	67.67	346	IAmb	IAmb	22 15 23.8	
	comp=Z,9.3nm,1.1s						
SPMN	Marine on St.	67.75	343	P	P	22 15 22.9	+0.7
	baz=158						
PDMCI	Parker Dam,Lak	67.80	322	P	P	22 15 24.8	+2.1
	baz=136						
PV15	Paradox Valley	67.80	329	IAmb	IAmb	22 15 25.9	
	comp=Z,8.8nm,0.8s						
IKP	In-Ko-Pah, Jac	67.81	320	P	P	22 15 25.5	+2.6
	baz=134						
VLDQ	Val d'Or	67.86	355	IAmb	IAmb	22 15 26.3	
	comp=Z,10nm,1.1s						
BC3	Big Chuckawall	68.11	321	P	P	22 15 26.9	+2.1
	baz=135,SNR=8.1						
MONP2	Monument Peak	68.17	320	P	P	22 15 27.3	+2.0
	baz=134						
BAR	Barrett	68.17	319	P	P	22 15 25.7	+0.6
BAR				IAmb	IAmb	22 15 28.4	
	comp=Z,13nm,0.9s						
IRM	Iron Mountain	68.28	321	P	P	22 15 28.0	+2.3
	baz=135,SNR=11						
U15A	North Rim	68.31	325	IAmb	IAmb	22 15 29.2	
	comp=Z,5.9nm,0.8s						
D41A	Chassel	68.45	347	IAmb	IAmb	22 15 28.4	
	comp=Z,15nm,1.1s						
BELC	Belle Mtn. Jos	68.67	321	P	P	22 15 30.7	+2.3
	baz=134,SNR=5.2						
XPFO	Pion Flat	68.68	320	P	P	22 15 28.9	+0.5
XPFO				IAmb	IAmb	22 15 31.8	
	comp=Z,6.6nm,0.8s						
PFO	Pinyon Flats O	68.68	320	P	P	22 15 29.5	+1.1
	comp=Z,6.0nm,0.7s,baz=111,slow=5.5,SNR=12						
PFO				LR	LR	22 41 16.6	
	comp=Z,98nm,20.2s,baz=142,slow=32						
PFO	Pinyon Flats O	68.68	320	P	P	22 15 29.1	+0.7
PFO				IAmb	IAmb	22 15 31.7	
	comp=Z,6.6nm,0.8s						
PFO	Pinyon Flats O	68.68	320	P	P	22 15 30.9	+2.5
	baz=134,SNR=5.7						
LSQQ	Lebel-sur-Quev	68.77	356	P	P	22 15 28.5	+0.1
	baz=174						
GMRC	Granite Mounta	69.02	322	P	P	22 15 33.0	+2.5
	baz=135,SNR=10						
PKCU	Pink Cliffs	69.07	326	P	P	22 15 30.1	-0.9
O20A	White River Ci	69.09	330	P	P	22 15 32.3	+1.4
	baz=142						
HEC	Hector,Ludlow	69.45	321	P	P	22 15 35.4	+2.3
	baz=134						
MATQ	Matagami	69.52	355	P	P	22 15 32.8	-0.2
	baz=173						
LIC	Lamto	69.63	75	*e*PKP1	P	22 15 34.2	-0.4
	comp=Z,12nm,1.0s						
DRLN	Deer Lake	69.76	9	P	P	22 15 34.7	+0.1
DRLN				IAmb	IAmb	22 15 42.9	
	comp=Z,14nm,0.9s						
TIC	Toumodi	69.81	75	*e*PKP1	P	22 15 35.6	-0.1
BFSC	Mount Baldy Ra	69.84	320	P	P	22 15 38.0	+2.4
	baz=133						
KIC	Kosan Boka	69.95	75	*e*PKP1	P	22 15 35.2	-1.3
	comp=Z,11nm,0.8s						
SHPR	Sheep Range	69.95	323	IAmb	IAmb	22 15 39.2	
	comp=Z,6.4nm,0.7s						
DBIC	Dimbokro	69.97	75	P	P	22 15 35.3	-1.4
	comp=Z,9.8nm,1.0s,baz=230,slow=6.0,SNR=12						
DBIC				LR	LR	22 44 46.3	
	comp=Z,620nm,20.4s,slow=35						
DBIC	Dimbokro	69.97	75	IAmb	IAmb	22 15 42.1	
	comp=Z,6.2nm,0.8s						
GSC	Goldstone, Bar	70.06	321	IAmb	IAmb	22 15 39.7	
	comp=Z,5.6nm,0.8s						
GSC	Goldstone, Bar	70.06	321	P	P	22 15 39.3	+2.5
	baz=134						
MWC	Mount Wilson	70.07	320	P	P	22 15 36.5	-0.6
MWC				IAmb	IAmb	22 15 40.2	
	comp=Z,7.2nm,0.8s						
K22A	Casper	70.33	333	IAmb	IAmb	22 15 41.5	
	comp=Z,6.7nm,0.9s						
K22A	Casper	70.33	333	P	P	22 15 39.7	+1.2
	baz=144						
QSPA	South Pole Qui	70.38	180	P	P	22 15 38.4	0.0
EDW2	Edwards Air Fo	70.48	320	P	P	22 15 41.3	+1.9
	baz=133,SNR=6.8						
RSSD	Black Hills	70.52	335	P	P	22 15 39.4	-0.3
RSSD				IAmb	IAmb	22 15 42.1	
	comp=Z,7.0nm,0.8s						
RSSD	Black Hills	70.52	335	P	P	22 15 40.8	+1.2
	baz=147						
LRMC	Laurel Mtn Rad	70.70	321	P	P	22 15 43.0	+2.2
	baz=133						
TPNV	Topopah Spring	70.88	323	IAmb	IAmb	22 15 45.1	
	comp=Z,8.5nm,0.8s						
TPNV	Topopah Spring	70.88	323	P	P	22 15 44.6	+2.7
	baz=135,SNR=14						
FURC	Furnace Creek,	70.90	322	P	P	22 15 44.8	+3.0
	baz=134,SNR=7.2						
MPMC	Manual Prospec	70.98	321	P	P	22 15 44.6	+1.9
	baz=134,SNR=8.3						
ARVC	Arvin	71.15	320	P	P	22 15 45.6	+2.2
	baz=132						
ISA	Isabella, Lake	71.29	321	IAmb	IAmb	22 15 47.8	
	comp=Z,12nm,0.8s						
ISA	Isabella, Lake	71.29	321	P	P	22 15 46.8	+2.4
	baz=133,SNR=10						
DUG	Dugway, Tooele	71.38	327	IAmb	IAmb	22 15 55.1	
	comp=Z,11nm,1.1s						
DUG	Dugway, Tooele	71.38	327	P	P	22 15 46.9	+2.1
	baz=138,SNR=7.5						
E28A	Huff	71.38	339	IAmb	IAmb	22 15 48.8	
	comp=Z,16nm,0.9s						
AGMN	Agassiz Nation	71.41	343	IAmb	IAmb	22 15 54.2	
	comp=Z,7.9nm,1.1s						
AGMN	Agassiz Nation	71.41	343	P	P	22 15 45.7	+1.0
	baz=155						
R11A	Troy Canyon, C	71.50	324	IAmb	IAmb	22 15 57.4	
	comp=Z,8.6nm,1.1s						
R11A	Troy Canyon, C	71.50	324	P	P	22 15 48.1	+2.4
	baz=136,SNR=7.7						
CWC	Cottonwood Cre	71.59	321	P	P	22 15 48.6	+2.4
	baz=133						
PKM	Mcpherson Peak	71.59	319	P	P	22 15 48.8	+2.4
	baz=132,SNR=5.5						
PDAR	Pinedale Array	71.77	331	P	P	22 15 47.9	+0.6
	comp=Z,1.5nm,0.7s,baz=136,slow=6.4,SNR=16						
PDAR	Pinedale Array	71.77	331	P	P	22 15 46.9	-0.4
VES	Vestal, Richgr	71.78	320	P	P	22 15 49.8	+2.6
	baz=132,SNR=5.8						
HWUT	Hardware Ranch	71.82	329	IAmb	IAmb	22 15 51.2	
	comp=Z,11nm,0.9s						
TIN	Tinemaha, Big	72.10	322	P	P	22 15 51.9	+2.7
	baz=133						
TBI	Tubuai	72.38	251	*e*S	S	22 25 13.9	-0.2
	comp=Z,359nm,25.2s						

TBI	Tubuai	72.38	251	eLR	LR	22 38 02.2	
	comp=Z,972nm,26.8s,baz=102						
AHID	Auburn Hatcher	72.49	330	IAmb	IAmb	22 15 54.1	
	comp=Z,10nm,0.9s						
OMMB	Old Mammoth Mi	72.93	322	IAmb	IAmb	22 15 57.6	
	comp=Z,11nm,0.9s						
TPAW	Teton Pass	72.98	331	IAmb	IAmb	22 16 04.8	
	comp=Z,10nm,0.9s						
NVAR	Mina Array Bea	73.08	323	P	P	22 15 55.9	+0.7
	comp=Z,4.0nm,0.8s,baz=153,slow=6.5,SNR=26						
NVAR	Mina Array Bea	73.08	323	P	P	22 15 55.0	-0.2
ULM	Lac du Bonnet	73.19	343	P	P	22 15 54.4	-0.9
	comp=Z,3.4nm,0.8s,baz=164,slow=8.2,SNR=6.2						
FLWY	Flagg Ranch	73.32	331	IAmb	IAmb	22 15 59.8	
	comp=Z,14nm,0.8s						
RLMT	Red Lodge	73.50	333	IAmb	IAmb	22 15 59.9	
	comp=Z,7.0nm,0.7s						
RLMT	Red Lodge	73.50	333	P	P	22 15 58.9	+1.4
	baz=142,SNR=8.2						
H17A	Grant Village	73.51	331	P	P	22 16 00.4	+2.8
	baz=141						
LAO	LASA Array	73.51	335	IAmb	IAmb	22 16 00.8	
	comp=Z,17nm,1.1s						
LAO	LASA Array	73.51	335	P	P	22 15 59.1	+1.8
	baz=145						
LKWY	Lake	73.56	332	IAmb	IAmb	22 16 01.9	
	comp=Z,9.9nm,0.8s						
PPT2	Papeete2	73.99	257	eS	S	22 25 33.5	+0.8
	comp=Z,715nm,25.8s						
PPT2	Papeete2	73.99	257	eLR	LR	22 38 49.4	
	comp=Z,771nm,24.5s,baz=110						
DGMT	Dagmar	74.23	338	IAmb	IAmb	22 16 11.1	
	comp=Z,15nm,1.1s						
DGMT	Dagmar	74.23	338	P	P	22 16 02.9	+1.4
	baz=147						
SCHQ	Schefferville	74.41	2	P	P	22 16 01.7	-0.6
	comp=Z,6.4nm,1.0s,baz=142,slow=14,SNR=4.0						
SCHQ	Schefferville	74.41	2	IAmb	IAmb	22 16 04.2	
	comp=Z,9.4nm,1.1s						
PAHR	Pah Rah Range	74.57	323	IAmb	IAmb	22 16 07.2	
	comp=Z,10nm,0.8s						
MFID	Camas Ranch	75.27	328	IAmb	IAmb	22 16 12.3	
	comp=Z,15nm,1.1s						
ORV	Oroville	75.68	322	IAmb	IAmb	22 16 19.7	
	comp=Z,14nm,1.1s						
EGMT	Eagleton	76.00	334	IAmb	IAmb	22 16 13.7	
	comp=Z,9.2nm,0.8s						
EGMT	Eagleton	76.00	334	P	P	22 16 13.1	+1.3
	baz=142						
MSO	Missoula	76.89	331	P	P	22 16 20.3	+3.4
	baz=139						
N02D	Trinity Center	77.30	322	P	P	22 16 20.4	+1.1
	baz=131						
M04C	Macdoel	77.34	323	P	P	22 16 21.0	+1.4
	baz=131						
JTMT	Jette	77.73	332	IAmb	IAmb	22 16 32.6	
	comp=Z,12nm,1.1s						
YBH	Yreka Blue Hor	77.80	323	P	P	22 16 22.4	+0.4
	comp=Z,2.4nm,0.9s,baz=125,slow=6.3,SNR=4.4						
J05D	Fort Rock, OR	78.01	325	P	P	22 16 25.5	+2.2
	baz=132						
VNDA	Vanda	78.20	190	P	P	22 16 26.1	+2.4
	comp=Z,3.2nm,0.8s,baz=128,slow=4.3,SNR=14						
VNDA	Vanda	78.20	190	P	P	22 16 23.1	-0.6
TOA0	Torodi Ar. Sit	78.47	71	P	P	22 16 25.2	-1.0
TORD	Torodi Ar. Bea	78.47	71	P	P	22 16 25.1	-1.2
	comp=Z,15nm,0.9s,baz=251,slow=4.0,SNR=37						
TORD				LR	LR	22 50 42.1	
	comp=Z,637nm,18.2s,baz=275,slow=36						
TORD	Torodi Ar. Bea	78.47	71	P	P	22 16 25.2	-1.0
WALA	Waterton Lakes	78.56	333	IAmb	IAmb	22 16 29.9	
	comp=Z,15nm,1.1s						
SYO	Syowa Base	78.70	160	⇓eP	P	22 16 22.6	-3.9
SYO	Syowa Base	78.70	160	⇓epP	pP	22 16 30.6	-1.8
SYO	Syowa Base	78.70	160	⇓esP	sP	22 16 36.0	+1.4
I05D	Terrebonne, OR	78.77	326	P	P	22 16 29.7	+2.3
	baz=132						
F04A	Amboy	80.40	326	IAmb	IAmb	22 16 46.9	
	comp=Z,25nm,1.2s						
D05A	Enumclaw	81.02	327	IAmb	IAmb	22 16 50.6	
	comp=Z,16nm,0.9s						
B05A	Bryant	81.79	328	P	P	22 16 44.9	+1.5
	baz=132						
TSUM	Tsumeb	82.22	108	P	P	22 16 45.4	-1.2
LLLB	Lillooet	83.27	330	IAmb	IAmb	22 17 01.9	
	comp=Z,12nm,1.1s						
FRB	Frobisher Bay	83.29	1	P	P	22 16 50.2	-0.7
	comp=Z,2.0nm,1.0s,baz=170,slow=6.8,SNR=4.4						
TAM	Tamanrasset	85.65	64	P	P	22 17 02.8	-1.2
BOSA	Boshof	85.80	119	LR	LR	22 52 13.1	
	comp=Z,361nm,18.7s,baz=254,slow=34						
ESDC	Sonseca Array	85.88	45	P	P	22 17 04.4	-0.2
	comp=Z,2.5nm,0.9s,baz=252,slow=2.7,SNR=6.7						
MAW	Mawson	86.45	164	P	P	22 17 08.3	+1.4
	comp=Z,7.6nm,0.9s,baz=244,slow=8.2,SNR=5.6						
YKA	Yellowknife Ar	89.02	341	P	P	22 17 19.1	+0.1
	comp=Z,3.9nm,0.7s,baz=135,slow=5.2,SNR=69						
YKA				LR	LR	23 00 32.6	
	comp=Z,466nm,20.1s,baz=0.0,slow=38						
KEST	Kesra	93.70	53	LR	LR	23 00 16.4	
	comp=Z,392nm,20.6s,baz=206,slow=36						
RPZ	Rata Peaks	95.18	220	LR	LR	22 51 08.1	
	comp=Z,591nm,21.9s,baz=122,slow=29						
DAVOX	Davos/Dischmat	98.03	43	LR	LR	22 59 04.8	
	comp=Z,157nm,21.7s,baz=262,slow=34						
CLL	Collm	101.44	40	eSKSac	SKSac	22 28 59.0	+4.8
CLL				e		22 31 00.0	
CLL				eSS	SS	22 36 48.0	-8.9
CLL				Lm	MLR	22 59 00.0	
	comp=Z,500nm,20.4s						
ILAR	Eielson Array	101.97	335	PP	PP	22 22 33.5	+3.8
	comp=Z,0.7nm,1.0s,baz=100,slow=5.9,SNR=4.5						
DZM	Mont Dzumac	110.30	236	eLR	LR	22 55 40.9	
	comp=Z,551nm,23.3s						
KBZ	Khabaz	120.41	50	PKP	PKiKP	22 23 16.4	+0.2
	comp=Z,3.1nm,0.9s,baz=359,slow=1.0,SNR=7.3						
RAYN	Ar Rayn	121.10	74		PKPdf	22 23 17.3	-0.8
H11S2	WAKE ISLAND Hy	125.90	279	T	T	00 42 43.3	
	baz=101,slow=75,SNR=650						
H11S1	WAKE ISLAND Hy	125.91	279	T	T	00 42 44.6	
	baz=101,slow=75,SNR=193						
H11S3	WAKE ISLAND Hy	125.92	279	T	T	00 42 45.3	
	baz=101,slow=75,SNR=154						
H11N3	WAKE ISLAND Hy	125.94	280	T	T	00 42 45.5	
	baz=100,slow=74,SNR=69						
H11N2	WAKE ISLAND Hy	125.95	280	T	T	00 42 50.5	
	baz=100,slow=74,SNR=77						
H11N1	WAKE ISLAND Hy	125.96	280	T	T	00 43 03.3	
	baz=100,slow=74,SNR=66						
ASAR	Alice Springs	130.54	210	PKP	PKiKP	22 23 36.7	-0.4
	comp=Z,2.9nm,0.9s,baz=148,slow=2.0,SNR=22						
ASAR	Alice Springs	130.54	210		PKPdf	22 23 35.6	-0.7
ABKAR	Akbulak array	131.07	41		PKPdf	22 23 36.5	+0.2
GEYT	Alibeck	132.36	56	PKP	PKPdf	22 23 39.1	-0.1
	comp=Z,1.0nm,0.7s,baz=264,slow=6.8,SNR=4.2						
GEYT	Alibeck	132.36	56		PKPdf	22 23 38.4	-0.8
WRA	Warramunga Arr	133.46	213	PKP	PKPdf	22 23 42.2	+0.4
	comp=Z,2.5nm,0.8s,baz=158,slow=1.7,SNR=12						
FITZ	Fitzroy Crossi	139.03	204	PKhKP	PKPpre	22 23 45.5	
	comp=Z,2.0nm,0.9s,baz=181,slow=4.0,SNR=2.4						
ZALV	Zalesovo Beam	141.13	23	PKP	PKPdf	22 23 54.7	-0.2
	comp=Z,2.6nm,0.8s,baz=318,slow=2.0,SNR=7.6						
ZALV	Zalesovo Beam	141.13	23		PKPdf	22 23 54.4	-0.5
AAK	Ala-Archa	142.98	44		PKPdf	22 23 58.0	-0.8
MAKZ	Makanchi	145.07	33		PKPab	22 24 01.8	+0.2
NIL	Nilore	145.24	59		PKPbc	22 24 02.4	0.0
MKAR	Makanchi Array	145.24	33	PKP	PKPdf	22 24 02.4	0.0
	comp=Z,9.1nm,0.8s,baz=325,slow=3.6,SNR=76						
KSH	Kashi	145.35	48	PKPbc	PKPdf	22 24 02.9	0.0
KSH				pPKP	sPKPdf	22 24 13.3	+2.1
KSH				PP	PP	22 27 26.8	+4.2
KSH				PKS	PKSdf	22 27 39.3	+0.8
KSH				SKKS		22 34 13.3	
KSH				AMB	AMB		
	comp=Z,300nm,5.4s						
KSH				LR	LR		
	comp=Z,42nm,10.5s						
KSH				LR	LR		
	comp=Z,140nm,11.2s						
KSH				LR	LR		
	comp=Z,100nm,12.2s						
SOEI	Soe	147.10	208		PKPbc	22 24 09.3	+0.6
FAKI	Fak Fak	148.03	228		PKiKP	22 24 12.8	-0.2
USRK	Ussuriysk Ar.	149.14	327	PKPbc	PKPbc	22 24 13.1	0.0
	comp=Z,4.5nm,0.8s,baz=71,slow=1.8,SNR=6.2						
USRK	Ussuriysk Ar.	149.14	327		PKiKP	22 24 14.0	-0.3
MJAR	Matsushiro Arr	149.64	309	PKPbc	PKiKP	22 24 15.4	-0.2
	comp=Z,5.9nm,0.7s,baz=107,slow=1.2,SNR=22						
MJAR	Matsushiro Arr	149.64	309		PKiKP	22 24 15.3	-0.4
MAJO	Matsushiro	149.64	309	PKPbc	PKPbc	22 24 13.9	-0.7
MJB9	Matsu-Tunnel	149.64	309	PKPbc	PKPbc	22 24 13.9	-0.8
WMQ	Urumqi	150.04	32	ePKPbc	PKPdf	22 24 11.4	+0.9
SIJI	Sorong	150.17	229	PKPbc	PKiKP	22 24 17.5	+0.1
	comp=Z,19nm,0.7s,baz=50,slow=4.5,SNR=17						
HYB	Hyderabad	150.87	90	i PKP	PKiKP	22 24 18.5	-0.2
SONM	Songino Array	151.94	4	PKPbc	PKiKP	22 24 20.4	+0.2
	comp=Z,2.2nm,0.8s,baz=329,slow=1.7,SNR=4.9						
SONM	Songino Array	151.94	4		PKPdf	22 24 12.0	-1.4
KAPI	Kappang	153.25	204	PKPbc	PKiKP	22 24 25.0	+1.3
	comp=Z,3.4nm,0.4s,baz=48,slow=6.0,SNR=3.9						
LEM	Lembang	153.49	176	PKPbc	PKiKP	22 24 25.9	+1.4
	comp=Z,12nm,0.6s,baz=111,slow=22,SNR=4.4						
KSRS	Korea Array	156.01	321	PKP	PKPdf	22 24 19.6	+0.3
	comp=Z,1.4nm,0.8s,baz=331,slow=0.1,SNR=5.9						
GTA	Gaotai	158.85	21	PKP	PKPdf	22 24 25.1	+2.2
HHC	Hu-ho-hao-te	158.93	355	ePKP	PKPdf	22 24 20.3	-2.7
RPSI	Rantau Prapat	160.25	148		PKPab	22 25 06.0	+0.7
PSI	Prapat	160.34	148	PKPab	PKPab	22 25 06.0	+0.2
	comp=Z,1.7nm,0.3s,baz=296,slow=8.3,SNR=4.9						
LZH	Lanzhou	163.10	15	ePKP	PKPdf	22 24 27.3	-0.4
LZH				pPKP	sPKPdf	22 24 33.5	-2.4
LZH				sPKP		22 24 35.3	
LZH				LR	LR		
	comp=Z,87nm,18.0s						
LZH				LR	LR		
	comp=Z,95nm,18.2s						
NJ2	Nanjing	165.04	327	ePKP	PKPdf	22 24 31.0	+1.7
XAN	Xi'an	165.82	1	PKP	PKPdf	22 24 32.0	+2.0
CMAR	Chiang Mai Arr	170.20	96	PKP	PKPdf	22 24 33.8	+0.5
	comp=Z,0.7nm,0.8s,baz=272,slow=2.4,SNR=4.8						
CMAR				PKPab	PKPab	22 25 48.5	-0.9
	comp=Z,0.4nm,0.4s,baz=265,slow=6.2,SNR=5.4						
CMAR	Chiang Mai Arr	170.20	96		PKPdf	22 24 31.4	-2.0
CMAR					PKPab	22 25 46.1	-3.2

IDC 23 22:19:25.5±2.8**, 7°.34S**×**130°.56E, h136^{km}**±36^{km}**, mb3.2**/1**, mb1 3.2**/5**, mb1mx3.0**/37**, mbtmp3.5**/5**, Error ellipse: s-maj=62.9km s-min=20.4km az=86.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	6.46	6	P	Pn	22 20 58.0	-0.3
	0.5nm,0.3s,baz=186,slow=19,SNR=1.3						
SIJI				S	Sn	22 22 01.8	-9.2
	0.9nm,0.3s,baz=219,slow=23,SNR=1.7						
FITZ	Fitzroy Crossi	11.72	204	P	Pn	22 22 09.9	+1.3
	0.1nm,0.3s,baz=22,slow=12,SNR=1.0						
FITZ				S	Sn	22 24 12.7	-5.2
	0.3nm,0.3s,baz=138,slow=18,SNR=6.5						
WRA	Warramunga Arr	13.05	164	P	Pn	22 22 26.1	+0.2
	0.3nm,0.3s,baz=342,slow=10,SNR=12						
WRA				S	Sn	22 24 50.7	+0.5
	0.1nm,0.3s,baz=352,slow=20,SNR=1.5						
ASAR	Alice Springs	16.55	169	P	Pn	22 23 08.0	-1.8
	0.1nm,0.3s,baz=348,slow=12,SNR=3.0						
MKAR	Makanchi Array	68.81	327	P	P	22 30 15.1	+0.1
	0.3nm,0.4s,baz=113,slow=6.0,SNR=7.1						

NEIC ***23*** *22:22:50.3±1.3, 12°.55N±0°.07×87°.63W±0°.06, h77^{km}±6^{km}, mb4.1/10, Md4.3(SNET), Error ellipse: s-maj=11.0km s-min=7.3km az=217.0*

IDC ***23*** *22:22:50.4±1.6, 12°.75N×87°.34W, h83^{km}±19^{km}, mb3.4/8, mb1 3.7/11, mb1mx3.5/32, mbtmp3.7/11, MS3.4/2, Ms1 3.5/2, ms1mx3.1/25, Error ellipse: s-maj=35.8km s-min=12.5km az=46.0*

SNET ***23*** *22:22:50.8±0.8, 12°.54N×87°.76W, h64^{km}±10^{km}, ML4.3*

UCR ***23*** *22:22:50.1±1.3, 12°.52N×87°.71W, h68^{km}±11^{km}, ML4.3, mb4.1(NEIC)*

INET ***23*** *22:22:50.5, 12°.52N×87°.65W, h68^{km}, ML4.9*

GCG ***23*** *22:22:51.5±3.1, 12°.47N×88°.04W, h0^{km}±999^{km}, MD4.3*

ISC 23 22:22:49.7±0.8**, 12°.54N**±0°.06×**87°.66W**±0°.04**, h79^{km}**±6^{km}**, n100, σ0^{s}.89**/134**, mb3.9**/13**, 2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	Cosiguina Volc	0.45	12	eP	Pn	22 23 03.3	+0.2
CSGN	Cosiguina Volc	0.45	12	Pn	Pn	22 23 03.4	+0.3
CSGN				Sn	Sn	22 23 12.8	-0.2
CRIN	San Cristobal	0.61	75	eP	Pn	22 23 04.8	+0.2
CNCH	Conchagua	0.75	347	eP	Pn	22 23 05.8	-0.3
CNCH				eS	Sn	22 23 17.9	-0.3
CNCH	Conchagua	0.75	347	eP	Pn	22 23 05.8	-0.3
CNCH				eS	Sn	22 23 17.9	-0.3
LCND	La Caada	0.80	344	eP	Pn	22 23 06.1	-0.3
LCND				eS	Sn	22 23 19.0	+0.1
LCND				IAML		22 23 20.4	
	comp=Z,8μm,0.4s						
LCND	La Caada	0.80	344	eP	Pn	22 23 06.1	-0.3
LCND				eS	Sn	22 23 19.0	+0.1
LCND				IAML		22 23 20.4	
	comp=Z,8μm,0.4s						
JUCU	Jucuar¡n	0.92	321	eP	Pn	22 23 07.2	-0.7
JUCU				eS	Sn	22 23 20.4	-0.9
JUCU				IAML		22 23 23.5	
	comp=Z,10μm,0.2s						
JUCU	Jucuar¡n	0.92	321	eP	Pn	22 23 07.2	-0.7
JUCU				eS	Sn	22 23 20.4	-0.9
JUCU				IAML		22 23 23.5	
	comp=Z,10μm,0.2s						
CNGN	Cerro Negro	0.94	92	eP	Pn	22 23 08.0	0.0
BLLM	Bellamira	1.06	328	eP	Pn	22 23 09.7	+0.1
BLLM				eS	Sn	22 23 23.8	-0.6
BLLM	Bellamira	1.06	328	eP	Pn	22 23 09.7	+0.1
BLLM				eS	Sn	22 23 23.8	-0.6
VSM	San Miguel	1.07	326	eP	Pn	22 23 10.4	+0.5
VSM	San Miguel	1.07	326	eP	Pn	22 23 10.4	+0.5
LCY	Lacayo	1.08	325	eP	Pn	22 23 10.0	+0.1
LCY	Lacayo	1.08	325	eP	Pn	22 23 10.0	+0.1
PACA	Pacayal	1.13	325	eP	Pn	22 23 10.6	+0.1
PACA				eS	Sn	22 23 25.9	-0.1
PACA				IAML		22 23 30.9	
	comp=Z,27μm,0.2s						
PACA	Pacayal	1.13	325	eP	Pn	22 23 10.6	+0.1
PACA				eS	Sn	22 23 25.9	-0.1
PACA				IAML		22 23 30.9	
	comp=Z,27μm,0.2s						
ALJI	Alcalda de J	1.19	311	eP	Pn	22 23 10.7	-0.3
ALJI				eS	Sn	22 23 26.2	-0.8
ALJI				IAML		22 23 28.7	
	comp=Z,6μm,0.2s						
ALJI	Alcalda de J	1.19	311	eP	Pn	22 23 10.7	-0.3
ALJI				eS	Sn	22 23 26.2	-0.8
ALJI				IAML		22 23 28.7	
	comp=Z,6μm,0.2s						
FAGO	Alcalda de S	1.23	339	eP	Pn	22 23 11.7	0.0
FAGO				eS	Sn	22 23 28.1	0.0
FAGO	Alcalda de S	1.23	339	eP	Pn	22 23 11.7	0.0
FAGO				eS	Sn	22 23 28.1	0.0
TECA	Tecapa	1.26	319	eP	Pn	22 23 12.2	+0.1
TECA				eS	Sn	22 23 27.9	-1.0
TECA	Tecapa	1.26	319	eP	Pn	22 23 12.2	+0.1
TECA				eS	Sn	22 23 27.9	-1.0
COEB	Comit de Eme	1.28	318	eP	Pn	22 23 12.5	+0.2
COEB				eS	Sn	22 23 29.0	-0.3
COEB				IAML		22 23 34.9	
	comp=Z,3μm,0.4s						
COEB	Comit de Eme	1.28	318	eP	Pn	22 23 12.5	+0.2
COEB				eS	Sn	22 23 29.0	-0.3
COEB				IAML		22 23 34.9	
	comp=Z,3μm,0.4s						
TGUH	Tegucigalpa,Un	1.56	14	⇓eP	Pn	22 23 16.9	+1.0
TGUH	Tegucigalpa,Un	1.56	14	⇓eP	Pn	22 23 16.9	+1.0
TGUH	Tegucigalpa,Un	1.56	14		Pn	22 23 16.2	+0.3
TGUH				Sn	Sn	22 23 35.0	-0.7
MASN	Masaya	1.57	110	eP	Pn	22 23 16.2	+0.2
MATN	Matagalpa	1.73	77	eP	Pn	22 23 18.4	+0.3
LFRS	El Faro	1.74	308	eP	Pn	22 23 18.2	-0.1
LBRS	Las Brisas	1.80	312	eP	Pn	22 23 19.4	+0.3
LOMA	Loma Larga	1.84	307	eP	Pn	22 23 19.8	+0.1
LOMA				eS	Sn	22 23 42.2	-0.2
LOMA				IAML		22 23 45.3	
	comp=Z,3μm,0.2s						
LOMA	Loma Larga	1.84	307	eP	Pn	22 23 19.8	+0.1
LOMA				eS	Sn	22 23 42.2	-0.2
LOMA				IAML		22 23 45.3	
	comp=Z,3μm,0.2s						
LALI	Alcalda de L	1.88	300	eP	Pn	22 23 19.5	-0.5
LALI				eS	Sn	22 23 42.2	-0.8
LALI	Alcalda de L	1.88	300	eP	Pn	22 23 19.5	-0.5
LALI				eS	Sn	22 23 42.2	-0.8
SNET	Serv Nac Est T	1.91	307	eP	Pn	22 23 20.5	-0.1
SNET				eS	Sn	22 23 43.8	-0.2
SNET				IAML		22 23 49.5	
	comp=Z,2μm,0.3s						
SNET	Serv Nac Est T	1.91	307	eP	Pn	22 23 20.5	-0.1
SNET				eS	Sn	22 23 43.8	-0.2
SNET				IAML		22 23 49.5	
	comp=Z,2μm,0.3s						
SNET	Serv Nac Est T	1.91	307		Pn	22 23 20.8	+0.3
SNET				Sn	Sn	22 23 43.9	0.0
UEES	Universidad Ev	1.94	307	eP	Pn	22 23 20.8	-0.1
UEES				eS	Sn	22 23 44.6	+0.1
UEES	Universidad Ev	1.94	307	eP	Pn	22 23 20.8	-0.1
UEES				eS	Sn	22 23 44.6	+0.1
BOQS	Boqueron	1.98	307	eP	Pn	22 23 21.9	+0.3
BOQS				eS	Sn	22 23 46.3	+0.6
CEVE	Cerro Verde	2.31	304	eP	Pn	22 23 26.4	+0.4
CEVE				eS	Sn	22 23 54.1	+0.5
CEVE				IAML		22 24 01.4	
	comp=Z,2μm,0.3s						
CEVE	Cerro Verde	2.31	304	eP	Pn	22 23 26.4	+0.4
CEVE				eS	Sn	22 23 54.1	+0.5
CEVE				IAML		22 24 01.4	
	comp=Z,2μm,0.3s						
SBLS	San Blas	2.31	304	eP	Pn	22 23 26.6	+0.6
SBLS	San Blas	2.31	304	eP	Pn	22 23 26.6	+0.6
SNJE	San Jose	2.31	305	eP	Pn	22 23 26.4	+0.3
SNJE	San Jose	2.31	305	eP	Pn	22 23 26.4	+0.3
RTR	El Retiro	2.36	305	eP	Pn	22 23 26.7	+0.1
RTR	El Retiro	2.36	305	eP	Pn	22 23 26.7	+0.1
MTO3	Montecristo	2.48	318	eP	Pn	22 23 28.8	+0.4
MTO3	Montecristo	2.48	318	eP	Pn	22 23 28.8	+0.4
ACON	Acoyapa	2.49	103	eP	Pn	22 23 27.9	-0.3
ACON	Acoyapa	2.49	103	Pn	Pn	22 23 27.8	-0.4
ACON				Sn	Sn	22 23 57.3	-0.4
CUI	Cuipilapa	3.08	127	eP	Pn	22 23 37.5	+1.3
PLVR	Palo Verde	3.14	134	eP	Pn	22 23 38.2	+1.1
IXG	Ixpaco	3.16	301	eP	Pn	22 23 38.8	+1.4
ESPN	Las Esperanzas	3.30	96	eP	Pn	22 23 39.7	+0.6
ESPN	Las Esperanzas	3.30	96	Pn	Pn	22 23 39.8	+0.6
NBG	Las Nubes	3.31	308	eP	Pn	22 23 42.1	+2.5
JTS	Las Juntas de	3.47	130	P	Pn	22 23 41.2	-0.3
	comp=Z,6.0nm,0.3s,baz=27,slow=15,SNR=23						
JTS				S	Sn	22 24 20.8	-0.6
	comp=Z,12nm,0.3s,baz=27,slow=23,SNR=1.7						
JTS	Las Juntas de	3.47	130		Pn	22 23 41.7	+0.2
ARE1	Arenal 1	3.54	125	eP	Pn	22 23 47.5	+5.0
FUG	Fuego 3	3.63	302	eP	Pn	22 23 45.8	+1.9
FUG				eS	Sn	22 24 27.7	+2.0
APG	El Apazote	3.67	312	P	Pn	22 23 45.6	+1.3
	comp=Z,1.3nm,0.3s,baz=97,slow=10,SNR=13						
STG3	Santiaguito 3,	4.38	300	eP	Pn	22 23 56.0	+2.1
STG3				eS	Sn	22 24 43.0	-0.8
LCR2	La Lucha 2	4.54	127	eP	Pn	22 23 58.3	+2.1
CCIG	Comitan	5.72	311		Pn	22 24 14.7	+2.5
ICCO	Coco Island	6.97	175	i P	Pn	22 24 31.3	+2.0
TEIG	Tepich	7.67	356	P	Pn	22 24 41.3	+2.6
	baz=292,slow=0.0						
TEIG	Tepich	7.67	356	Pn	Pn	22 24 40.8	+2.0
CMIG	Matias Romero	8.33	304	P	Pn	22 24 49.9	+2.2
	comp=Z,0.7nm,0.3s,baz=147,slow=8.5,SNR=5.5						
CMIG				S	Sn	22 26 10.9	-9.3
	comp=Z,1.0nm,0.3s,baz=278,slow=5.0,SNR=2.1						
CMIG				LR	LR	22 28 01.2	
	comp=Z,357nm,21.3s,baz=169,slow=37						
MTDJ	Mount Denham	11.28	59	Pn	Pn	22 25 30.1	+2.0
TXAR	Lajitas Array	22.38	321	P	P	22 27 42.8	+1.1
	comp=Z,1.6nm,0.5s,baz=139,slow=9.4,SNR=13						
TXAR	Lajitas Array	22.38	321	P	P	22 27 42.0	+0.3
TX31	Lajitas Ar. Si	22.38	321	P	P	22 27 42.1	+0.4
TX32	Lajitas Array	22.38	321	P	P	22 27 42.4	+0.7
TX32				IAmb	IAmb	22 27 44.5	
	comp=Z,2.8nm,0.6s						
TKL	Tuckaleechee C	23.29	8	P	P	22 27 52.0	+1.4
	comp=Z,2.8nm,0.7s,baz=204,slow=20,SNR=3.1						
FNO	Franklin	24.28	340	P	P	22 28 00.5	+0.9
WMOK	Wichita Mounta	24.30	337	P	P	22 27 59.9	+0.1
MSTX	Muleshoe	25.39	330	P	P	22 28 10.8	+0.9
MSTX				IAmb	IAmb	22 28 11.7	
	comp=Z,6.9nm,0.8s						
S39A	Bolivar	25.56	350	P	P	22 28 11.5	+0.3
S39A				IAmb	IAmb	22 28 11.7	
	comp=Z,3.4nm,0.5s						
PV17	East Wray Mesa	31.89	327	P	P	22 29 07.5	-0.4
P17A	Butcher Ranch,	33.71	327	P	P	22 29 24.5	+0.8
LPAZ	La Paz	34.54	146	LR	LR	22 42 45.0	
	comp=Z,51nm,20.4s,baz=349,slow=35						
PDAR	Pinedale Array	35.60	332	P	P	22 29 40.7	+0.7
	comp=Z,0.3nm,0.3s,baz=132,slow=11,SNR=8.2						
HWUT	Hardware Ranch	35.70	329	P	P	22 29 41.9	+1.1
HWUT				IAmb	IAmb	22 29 42.6	
	comp=Z,3.7nm,0.8s						
REDW	Red Top Meadow	36.66	331	P	P	22 29 50.6	+1.6
NVAR	Mina Array Bea	37.50	319	P	P	22 29 57.7	+1.5
	comp=Z,0.6nm,0.6s,baz=127,slow=7.1,SNR=5.6						
ULM	Lac du Bonnet	38.20	351	P	P	22 30 00.1	-1.6
	comp=Z,0.9nm,0.4s,baz=175,slow=11,SNR=3.4						
MCMT	McKenzie Canyo	38.71	331	P	P	22 30 07.3	+1.0
SCHQ	Schefferville	45.25	17	P	P	22 30 57.3	-1.9
	comp=Z,2.1nm,0.5s,baz=218,slow=4.5,SNR=13						
YKA	Yellowknife Ar	53.48	345	P	P	22 32 00.6	-1.0
	comp=Z,0.4nm,0.7s,baz=138,slow=8.0,SNR=3.5						
YKA				pP	pP	22 32 21.8	+0.4
	comp=Z,0.2nm,0.4s,baz=130,slow=9.5,SNR=3.5						
PLCA	Paso Flores	55.32	164	P	P	22 32 16.0	+0.7
	comp=Z,1.7nm,0.8s,baz=346,slow=8.3,SNR=2.8						
RES	Resolute Bay	62.27	358	P	P	22 33 01.4	-1.5
ILAR	Eielson Array	65.86	336	P	P	22 33 25.7	-1.0
	comp=Z,0.2nm,0.4s,baz=155,slow=5.0,SNR=5.7						
LZH	Lanzhou	130.43	348	ePKP	PKPdf	22 41 51.6	-0.3
LZH				pPKP	pPKPdf	22 42 12.5	-1.8
LZH				sPKP		22 42 21.3	
WRA	Warramunga Arr	139.10	254	PKP	PKPdf	22 42 09.1	+0.8
	comp=Z,0.5nm,0.5s,baz=90,slow=2.5,SNR=6.1						
ASAR	Alice Springs	139.11	248	PKhKP	PKPpre	22 42 05.7	
	comp=Z,0.3nm,0.7s,baz=90,slow=1.9,SNR=2.3						

IDC ***23*** *22:40:26.4±1.0, 19°.57S×70°.85W, h0^{km}, mb3.8/6, mb1 4.0/9, mb1mx3.7/49, mbtmp3.9/9, ML3.6/3, MS3.7/1, Ms1 3.7/1, ms1mx3.0/19, Error ellipse: s-maj=27.2km s-min=22.5km az=57.0*

NEIC ***23*** *22:40:28.1±1.9, 19°.77S±0°.02×70°.97W±0°.07, h17^{km}±5^{km}, mb4.0/5, ML3.9(GUC), Error ellipse: s-maj=9.2km s-min=3.4km az=96.0*

GUC ***23*** *22:40:28.7±0.7, 19°.74S×71°.07W, h43^{km}±3^{km}, ML3.9*

ISC 23 22:40:26.3±1.5**, 19°.76S**±0°.03×**71°.00W**±0°.05**, h8^{km}**±9^{km}**, n52, σ1^{s}.32**/66**, mb4.1**/5**, 9C-1D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.84	79	⇓iP	Pn	22 40 44.5	-0.1
PSGC				eS	Sn	22 40 57.5	+0.2
PSGCX	Pisagua	0.84	79		Pn	22 40 44.7	+0.1
PSGCX				Sn	Sn	22 40 56.6	-0.7
TA01	Diego Aracena	1.11	136	⇑iP	Pn	22 40 49.4	+1.2
TA01				i S	Sn	22 41 04.3	+0.6
TA01				IAML		22 41 10.6	
	comp=E,3μm,0.5s						
PB11	IPOC Station P	1.27	90	⇑iP	Pn	22 40 51.9	+1.4
PB11				i S	Sn	22 41 09.4	+1.5
PB11				IAML		22 41 13.1	
	comp=E,4μm,0.5s						
PB11	IPOC Station P	1.27	90		Pn	22 40 51.8	+1.3
PB11				Sn	Sg	22 41 06.1	-1.0
PB12	IPOC Station P	1.31	29	⇑iP	Pg	22 40 51.1	-0.3
PB12				i S	Sb	22 41 09.1	+0.9
PB12				IAML		22 41 11.1	
	comp=E,3μm,0.6s						
PB12	IPOC Station P	1.31	29		Pg	22 40 51.3	-0.1
PB12				Sn	Sg	22 41 08.3	-0.1
PATCX	Punta Patache	1.32	143	⇑iP	Pn	22 40 52.4	+1.2
PATCX				i S	Sn	22 41 10.0	+0.9
PATCX				IAML		22 41 20.7	
	comp=E,3μm,0.6s						
PATCX	Punta Patache	1.32	143		Pn	22 40 52.2	+1.0
PATCX				Sn	Sb	22 41 08.4	-0.1

AP01	**Chacalluta**	**1.52**	**24**	*e*P	**Pn**	**22 40 54.0**	**+0.2**
AP01				*i* S	**Sn**	**22 41 14.6**	**+0.9**
AP01				IAML		22 41 16.7	
	comp=N,6µm,0.3s						
GO01	**Chusmiza**	**1.71**	**87⇑**	*i*P	**Pg**	**22 40 58.7**	**-0.4**
GO01				*i* S	**Sg**	**22 41 22.2**	**+1.0**
GO01				IAML		22 41 24.3	
	comp=N,2µm,0.2s						
GO01	**Chusmiza**	**1.71**	**87**		**Pg**	**22 40 58.6**	**-0.4**
GO01				Sn	**Sn**	**22 41 17.4**	**-1.7**
PB08	**IPOC Station P**	**1.78**	**103⇑**	*i*P	**Pb**	**22 40 59.6**	**+0.1**
PB08				*i* S	**Sg**	**22 41 23.9**	**+0.3**
PB08				IAML		22 41 32.2	
	comp=N,1µm,0.5s						
PB02	**IPOC Station P**	**1.86**	**146⇑**	*i*P	**Pb**	**22 41 00.1**	**-0.6**
PB02				IAML		22 41 38.7	
	comp=E,4µm,0.5s						
PB01	**IPOC Station P**	**1.91**	**132⇑**	*i*P	**Pb**	**22 41 01.1**	**-0.4**
PB01				*i* S	**Sb**	**22 41 24.6**	**-0.9**
PB01				IAML		22 41 35.5	
	comp=E,2µm,0.6s						
PB01	**IPOC Station P**	**1.91**	**132**		**Pb**	**22 41 00.8**	**-0.7**
PB01				Sn	**Sn**	**22 41 22.5**	**-1.1**
PB16	**IPOC Station P**	**2.00**	**45⇑**	*i*P	**Pn**	**22 41 02.3**	**+1.3**
PB16				*i* S	**Sg**	**22 41 30.7**	**0.0**
PB16				IAML		22 41 38.3	
	comp=E,1µm,0.6s						
PB16	**IPOC Station P**	**2.00**	**45**		**Pn**	**22 41 02.3**	**+1.3**
PB16				Sn	**Sn**	**22 41 25.1**	**-1.4**
PB07	**IPOC Station P**	**2.22**	**152**		**Pn**	**22 41 04.7**	**+1.1**
PB09	**IPOC Station P**	**2.61**	**141**		**Pn**	**22 41 11.1**	**+2.1**
PB04	**IPOC Station P**	**2.68**	**163**		**Pn**	**22 41 10.2**	**+0.3**
LVC	**Limon Verde**	**3.44**	**146**	Pn	**Pn**	**22 41 23.0**	**+2.4**
	comp=E,5.6nm,0.3s,baz=350,slow=8.0,SNR=24						
LVC				Sn	**Sn**	**22 42 03.1**	**+1.3**
	comp=E,12nm,0.3s,baz=237,slow=5.2,SNR=4.5						
LVC				Lg	Lg	22 42 15.0	
	comp=E,13nm,0.3s,baz=40,slow=21,SNR=6.1						
LVC	**Limon Verde**	**3.44**	**146**		**Pn**	**22 41 21.4**	**+0.8**
LVC					**Sn**	**22 42 00.3**	**-1.5**
PB15	**IPOC Station P**	**3.71**	**158**		**Pn**	**22 41 24.4**	**+0.2**
PB15				Sn	**Sn**	**22 42 07.0**	**-1.4**
LPAZ	**La Paz**	**4.40**	**39**	Pn	**Pn**	**22 41 38.4**	**+4.3**
	comp=E,1.7nm,0.3s,baz=211,slow=6.4,SNR=12						
LPAZ	**La Paz**	**4.40**	**39**		**Pn**	**22 41 35.1**	**+1.0**
PB14	**IPOC Station P**	**4.87**	**174**		**Pn**	**22 41 40.1**	**-0.2**
GO02	**Mina Guanaco**	**5.53**	**167**		**Pn**	**22 41 50.1**	**+0.8**
NNA	**Nana**	**9.55**	**323**	Pn	**Pn**	**22 42 46.2**	**+1.8**
	comp=E,0.7nm,0.3s,baz=136,slow=21,SNR=1.4						
NNA				Sn	**Sn**	**22 44 27.1**	**-4.9**
	comp=E,0.7nm,0.3s,baz=191,slow=17,SNR=1.7						
SIV	**San Ignacio**	**10.17**	**70**	Pn	**Pn**	**22 42 53.1**	**+0.3**
	comp=E,0.8nm,0.3s,baz=258,slow=11,SNR=23						
SIV				LR	LR	22 47 24.4	
	comp=E,421nm,18.2s,baz=288,slow=42						
CPUP	**Villa Florida**	**14.18**	**120**	Pn	**P**	**22 43 53.5**	**-1.6**
	comp=E,0.1nm,0.3s,baz=327,slow=14,SNR=4.0						
GO06	**Curarrehue**	**19.76**	**181**	P	**P**	**22 44 57.6**	**+0.8**
GO06				IAmb	IAmb	22 45 12.1	
	comp=Z,6.3nm,0.9s						
PLCA	**Paso Flores**	**20.91**	**179**	P	Pn	22 45 13.2	+1.4
	comp=Z,1.9nm,1.0s,baz=4.8,slow=12,SNR=2.0						
PLCA	**Paso Flores**	**20.91**	**179**	P	**P**	**22 45 08.4**	**-0.9**
PLCA				IAmb	IAmb	22 45 22.1	
	comp=Z,8.1nm,1.1s						
PTGA	**Pitinga**	**21.78**	**31**	P	**P**	**22 45 17.3**	**-1.5**
	comp=Z,3.6nm,0.5s,baz=328,slow=22,SNR=9.3						
PTGA	**Pitinga**	**21.78**	**31**	P	**P**	**22 45 17.3**	**-1.5**
PTGA				IAmb	IAmb	22 45 27.4	
	comp=Z,6.9nm,0.8s						
BDFB	**Brasilia**	**22.27**	**83**	P	**P**	**22 45 24.0**	**-0.2**
	comp=Z,2.2nm,0.8s,baz=258,slow=13,SNR=2.6						
NVAR	**Mina Array Bea**	**72.93**	**323**	P	**P**	**22 51 57.4**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=152,slow=7.8,SNR=1.7						
TORD	**Torodi Ar. Bea**	**78.64**	**72**	P	**P**	**22 52 28.9**	**-0.5**
	comp=Z,2.5nm,0.6s,baz=250,slow=4.8,SNR=24						
TORD	**Torodi Ar. Bea**	**78.64**	**72**	P	**P**	**22 52 28.1**	**-1.3**
YKA	**Yellowknife Ar**	**88.91**	**341**	P	**P**	**22 53 21.5**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=136,slow=5.0,SNR=17						
H11S2	**WAKE ISLAND Hy**	**125.69**	**279**	T	T	01 18 51.8	
	baz=101,slow=74,SNR=3.4						
H11S1	**WAKE ISLAND Hy**	**125.70**	**279**	T	T	01 18 49.8	
	baz=101,slow=74,SNR=4.1						
H11S3	**WAKE ISLAND Hy**	**125.71**	**279**	T	T	01 18 38.1	
	baz=101,slow=74,SNR=3.5						
H11N3	**WAKE ISLAND Hy**	**125.74**	**280**	T	T	01 18 52.9	
	baz=99,slow=74						
H11N2	**WAKE ISLAND Hy**	**125.75**	**280**	T	T	01 18 53.7	
	baz=99,slow=74						
H11N1	**WAKE ISLAND Hy**	**125.75**	**280**	T	T	01 18 52.0	
	baz=99						
ASAR	**Alice Springs**	**130.47**	**211**	PKP	**PKPdf**	**22 59 39.5**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=149,slow=2.0,SNR=2.3						
MKAR	**Makanchi Array**	**145.31**	**33**	PKPbc	**PKPbc**	**23 00 05.6**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=327,slow=4.5,SNR=10						
MKAR	**Makanchi Array**	**145.31**	**33**		**PKPbc**	**23 00 05.1**	**+0.5**
SONM	**Songino Array**	**151.92**	**4**	PKPbc	**PKPbc**	**23 00 22.9**	**+0.8**
	comp=Z,0.8nm,1.0s,baz=351,slow=0.9,SNR=4.9						
SONM	**Songino Array**	**151.92**	**4**	PKPdf	**PKPdf**	**23 00 16.0**	**+0.4**

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*IDC **23** 22:43:58.0±0.8, 57.°03S×25.°03W, h0^{km}, mb4.2/6, mb1 4.3/6, mb1mx4.0/26, mbtmp4.1/6, Error ellipse: s-maj=35.9km s-min=21.1km az=74.0*

*NEIC **23** 22:44:04.1±1.4, 57.°0S±0.°1×25.°0W±0.°3, h47^{km}±5^{km}, mb4.3/9, Error ellipse: s-maj=23.5km s-min=18.9km az=72.0*

ISC 23 22:44:01.1±0.7**, 57.°0S**±0.°1×**24.°9W**±0.°2**, h22**^{km}**, n25, σ0.^{s}70**/25**, mb4.2**/9**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**15.43**	**159**	P	**Pn**	**22 47 37.0**	**0.0**
VNA3	**Neumayer Olymp**	**15.66**	**162**	P	**Pn**	**22 47 39.6**	**-0.4**
SNAA	**Sanae**	**17.34**	**156**	P	**P**	**22 48 02.9**	**+0.2**
SNAA	**Sanae**	**17.34**	**156**	P	**P**	**22 48 02.4**	**-0.3**
GO09	**Cerro Castillo**	**27.88**	**261**	P	**P**	**22 49 48.3**	**-0.7**
QSPA	**South Pole Qui**	**33.22**	**180**	P	**P**	**22 50 36.2**	**+0.1**
	1.9nm,0.5s,baz=227,slow=0.6,SNR=26						
QSPA	**South Pole Qui**	**33.22**	**180**	P	**P**	**22 50 36.4**	**+0.3**
CPUP	**Villa Florida**	**38.40**	**309**	P	**P**	**22 51 20.2**	**-0.4**
	1.1nm,0.6s,baz=153,slow=4.0,SNR=4.9						
CPUP	**Villa Florida**	**38.40**	**309**	P	**P**	**22 51 20.7**	**+0.1**
CPUP				IAmb	IAmb	22 51 21.1	
	comp=Z,4.0nm,0.9s						
VNDA	**Vanda**	**45.65**	**182**	P	**P**	**22 52 19.6**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=187,slow=7.7,SNR=8.7						
VNDA	**Vanda**	**45.65**	**182**	P	**P**	**22 52 19.6**	**+0.4**
LVC	**Limon Verde**	**46.87**	**298**	P	**P**	**22 52 29.3**	**-0.5**
LVC				IAmb	IAmb	22 52 44.7	
	comp=Z,4.3nm,0.9s						
PB09	**IPOC Station P**	**47.72**	**299**	P	**P**	**22 52 39.0**	**+2.8**
LPAZ	**La Paz**	**51.96**	**303**	P	**P**	**22 53 09.1**	**0.0**
	comp=Z,5.9nm,0.6s,baz=146,slow=5.2,SNR=21						
LPAZ	**La Paz**	**51.96**	**303**	P	**P**	**22 53 08.9**	**-0.1**
SAML	**Samuel**	**56.38**	**313**	P	**P**	**22 53 40.4**	**-0.2**
SAML				IAmb	IAmb	22 53 51.5	
	comp=Z,3.2nm,1.1s						
TOA0	**Torodi Ar. Sit**	**73.32**	**27**	P	**P**	**22 55 30.5**	**-0.3**
TOA0				IAmb	IAmb	22 55 31.9	
	comp=Z,1.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.32**	**27**	P	**P**	**22 55 31.5**	**+0.8**
	comp=Z,1.8nm,0.6s,baz=203,slow=6.4,SNR=12						
TORD	**Torodi Ar. Bea**	**73.32**	**27**	P	**P**	**22 55 30.1**	**-0.7**
ASAR	**Alice Springs**	**97.67**	**160**	P	**P**	**22 57 33.7**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=193,slow=3.8,SNR=1.7						
YKA	**Yellowknife Ar**	**137.74**	**316**	PKP	**PKPdf**	**23 03 21.9**	**0.0**
	comp=Z,0.4nm,0.8s,baz=126,slow=2.8,SNR=6.1						
SONM	**Songino Array**	**149.54**	**86**	PKPbc	**PKPbc**	**23 03 47.9**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=213,slow=3.4,SNR=9.4						
SONM	**Songino Array**	**149.54**	**86**		**PKPbc**	**23 03 48.1**	**+0.3**
ILAR	**Eielson Array**	**151.70**	**310**	PKPbc	**PKiKP**	**23 03 52.5**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=134,slow=2.7,SNR=7.8						
ILAR	**Eielson Array**	**151.70**	**310**		**PKiKP**	**23 03 52.8**	**+0.2**

IDC 23 22:58:04.2±387.0**, 62.°22N**×**42.°61E, h0**^{km}**, Error ellipse: s-maj=119.8km s-min=22.5km az=135.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**6.16**	**209**	*i*		23 34 00.0	
	baz=22,slow=334,SNR=1.3						
I37NO	**I37NO**	**11.98**	**315**	*i*		00 15 00.0	
	baz=113,slow=334,SNR=1.2						
I31KZ	**AKTYUBINSK INF**	**14.55**	**137**	*i*		00 26 00.0	
	baz=331,slow=316,SNR=6.7						
I53US	**FAIRBANKS INFR**	**52.97**	**6**	*i*		04 26 31.7	
	baz=354,slow=330,SNR=1.2						

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*IDC **23** 23:18:43.9±2.5, 20.°49S×70.°64W, h0^{km}, mb3.4/2, mb1 3.6/3, mb1mx3.5/21, mbtmp3.4/3, ML3.2/1, Error ellipse: s-maj=76.5km s-min=63.3km az=135.0*

*GUC **23** 23:18:52.1±0.7, 19.°66S×70.°67W, h44^{km}±2^{km}, ML3.2*

ISC 23 23:18:49.9±1.7**, 19.°69S**±0.°03×**70.°74W**±0.°07**, h23**^{km}±13^{km}**, n22, σ1.^{s}13**/26**, 5C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.59**	**81⇓**	*i*P	**Pn**	**23 19 02.4**	**-0.6**
PSGC				*e*S	**Sn**	**23 19 10.5**	**-1.4**
TA01	**Diego Aracena**	**1.01**	**149⇑**	*i*P	**Pn**	**23 19 10.2**	**+1.4**
TA01				*e*S	**Sn**	**23 19 23.4**	**+1.0**
TA01				IAML		23 19 25.4	
	comp=N,810nm,0.2s						
PB11	**IPOC Station P**	**1.02**	**94**	*e*P	**Pn**	**23 19 09.6**	**+0.6**
PB11				*e*S	**Sn**	**23 19 23.2**	**+0.5**
PB11				IAML		23 19 26.8	
	comp=N,1µm,0.3s						
PB12	**IPOC Station P**	**1.14**	**20**	*e*P	**Pn**	**23 19 10.9**	**+0.3**
PB12				*e*S	**Sn**	**23 19 26.6**	**+1.0**
PB12				IAML		23 19 27.8	
	comp=N,1µm,0.5s						
PATCX	**Punta Patache**	**1.25**	**154⇑**	*i*P	**Pb**	**23 19 13.7**	**+0.8**
PATCX				*e*S	**Sn**	**23 19 30.2**	**+1.9**
PATCX				IAML		23 19 33.2	
	comp=E,624nm,0.3s						
GO01	**Chusmiza**	**1.45**	**89⇓**	*i*P	**Pb**	**23 19 17.0**	**+0.4**
GO01				*e*S	**Sb**	**23 19 35.6**	**+0.7**
PB08	**IPOC Station P**	**1.56**	**107⇓**	*i*P	**Pb**	**23 19 18.4**	**+0.2**
PB08				*e*S	**Sb**	**23 19 38.7**	**+1.0**
PB08				IAML		23 19 45.4	
	comp=E,446nm,0.2s						
PB16	**IPOC Station P**	**1.78**	**41⇑**	*i*P	**Pb**	**23 19 22.1**	**-0.2**
PB16				*i* S	**Sb**	**23 19 44.6**	**+0.2**
PB16				IAML		23 19 49.2	
	comp=N,454nm,0.2s						
PB01	**IPOC Station P**	**1.79**	**139⇑**	*i*P	**Pb**	**23 19 21.5**	**-0.5**
PB01				*e*S	**Sb**	**23 19 43.8**	**-0.2**
PB01				IAML		23 19 49.2	
	comp=N,482nm,0.3s						
PB02	**IPOC Station P**	**1.80**	**154⇑**	*i*P	**Pb**	**23 19 21.8**	**-0.5**
PB02				*e*S	**Sb**	**23 19 45.6**	**+1.1**
PB02				IAML		23 19 51.4	
	comp=E,636nm,0.6s						
PB07	**IPOC Station P**	**2.18**	**159**	*e*P	**Pb**	**23 19 27.2**	**-1.6**
PB07				IAML		23 20 10.7	
	comp=E,266nm,0.4s						
PB09	**IPOC Station P**	**2.52**	**147**	*e*P	**Pb**	**23 19 32.7**	**-1.9**
PB09				*e*S	**Sb**	**23 20 03.4**	**-1.8**
PB09				IAML		23 20 15.9	
	comp=E,252nm,0.5s						
LPAZ	**La Paz**	**4.20**	**37**	Pn	Pn	23 19 58.3	+5.2
	comp=E,0.6nm,0.3s,baz=213,slow=7.1,SNR=20						
TORD	**Torodi Ar. Bea**	**78.39**	**71**	P	**P**	**23 30 47.5**	**-1.7**
	comp=E,0.3nm,0.9s,baz=244,slow=6.1,SNR=1.3						
YKA	**Yellowknife Ar**	**88.93**	**341**	P	**P**	**23 31 43.1**	**+1.0**
	comp=E,0.2nm,0.6s,baz=141,slow=4.9,SNR=1.9						
H11S2	**WAKE ISLAND Hy**	**125.93**	**279**	T	T	01 57 03.8	
	baz=101,slow=75,SNR=7.6						
H11S1	**WAKE ISLAND Hy**	**125.94**	**279**	T	T	01 57 06.2	
	baz=101,slow=75,SNR=3.9						
H11S3	**WAKE ISLAND Hy**	**125.95**	**279**	T	T	01 57 03.5	
	baz=101,slow=75,SNR=5.5						
H11N3	**WAKE ISLAND Hy**	**125.97**	**280**	T	T	01 57 04.1	
	baz=98						
H11N2	**WAKE ISLAND Hy**	**125.98**	**280**	T	T	01 57 03.8	
	baz=98						
H11N1	**WAKE ISLAND Hy**	**125.99**	**280**	T	T	01 57 12.1	
	baz=98						
MKAR	**Makanchi Array**	**145.12**	**33**	PKPbc	**PKPbc**	**23 38 24.8**	**-0.4**
	comp=E,0.2nm,0.5s,baz=328,slow=3.0,SNR=4.8						

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*GUC **23** 23:26:51.2±0.7, 29.°27S×70.°68W, h72^{km}±8^{km}, ML4.2*

*SJA **23** 23:26:51.2±0.5, 29.°23S×70.°71W, h75^{km}±8^{km}, ML3.8, MW3.8*

*IDC **23** 23:26:52.2±1.2, 29.°29S×70.°48W, h78^{km}±6^{km}, mb3.6/4, mb1 3.6/8, mb1mx3.4/29, mbtmp3.7/8, Error ellipse: s-maj=34.3km s-min=21.9km az=89.0*

ISC 23 23:26:51.7±0.7**, 29.°26S**±0.°03×**70.°74W**±0.°07**, h75**^{km}±7^{km}**, n42, σ1.^{s}52**/56**, mb3.9**/4**, 1C-3D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO04	**Tololo Observa**	**0.91**	**183**	*e*P	**Pn**	**23 27 10.3**	**+0.6**
GO04				*i* S	**Sn**	**23 27 24.4**	**+1.3**
GO04				IAML		23 27 31.3	
	comp=N,8µm,0.3s						
GO04	**Tololo Observa**	**0.91**	**183**	*i* P	**Pn**	**23 27 10.6**	**+0.8**
GO04				*e*S	**Sn**	**23 27 24.6**	**+1.5**
AROD	**Rodeo**	**1.43**	**130**	*i* P	**Pn**	**23 27 17.5**	**+1.2**
AROD				IAML		23 27 38.1	
	comp=Z,293nm,0.5s						
CO03	**El Pedregal**	**1.57**	**178**	*e*P	**Pn**	**23 27 18.8**	**+0.8**
CO03				*i* S	**Sn**	**23 27 38.9**	**+1.1**
CO03				IAML		23 27 41.6	
	comp=E,5µm,0.3s						
ACDV	**Cuesta del Vie**	**1.68**	**123**	*i* P	**Pn**	**23 27 20.5**	**+1.1**
ACDV				IAML		23 27 47.3	
	comp=Z,337nm,0.3s						
GO03	**Copiap**	**1.72**	**15**	*e*P	**Pn**	**23 27 20.2**	**+0.3**
GO03				*i* S	**Sn**	**23 27 41.0**	**-0.2**
GO03				IAML		23 27 44.6	
	comp=N,1µm,0.2s						
GO03	**Copiap**	**1.72**	**15**	*i* P	**Pn**	**23 27 20.7**	**+0.8**
GO03				*e*S	**Sn**	**23 27 41.4**	**+0.3**
CO02	**Combarbal**	**1.95**	**187⇓**	*i*P	**Pn**	**23 27 23.5**	**+0.5**
CO02				*i* S	**Sn**	**23 27 48.7**	**+1.9**
CO02				IAML		23 27 55.0	
	comp=N,4µm,0.2s						
ACCO	**Cerro Coronel**	**1.97**	**133**	*i* P	**Pn**	**23 27 25.1**	**+1.7**
ACCO				IAML		23 27 57.1	
	comp=Z,702nm,0.4s						
VCA	**Vinchina**	**2.28**	**77⇑**	*i*P	**Pn**	**23 27 29.5**	**+2.0**
VCA				*i* S	**Sn**	**23 27 57.3**	**+2.6**
VCA				IAML		23 28 01.9	
	comp=N,2µm,0.3s						
VCA	**Vinchina**	**2.28**	**77**	*i* P	**Pn**	**23 27 28.4**	**+0.9**
VCA				IAML		23 28 00.6	
	comp=Z,1µm,0.3s						
CO04	**Los Peladeros**	**2.78**	**184**	IAML		23 28 17.8	
	comp=N,992nm,0.2s						
RTLS	**Leoncito**	**2.82**	**154**	*i* P	**Pn**	**23 27 36.5**	**+1.7**
RTLS				IAML		23 28 15.0	
	comp=Z,93nm,0.4s						
RTLL	**Cerro Villicun**	**2.85**	**137**	*i* P	**Pn**	**23 27 36.2**	**+1.2**
RTLL				IAML		23 28 14.6	
	comp=Z,386nm,0.4s						
ZON	**Zonda**	**2.89**	**142**	*i* P	**Pn**	**23 27 37.3**	**+1.6**
ZON				IAML		23 28 21.5	
	comp=Z,116nm,0.5s						
RTCV	**Cerro Valdivia**	**3.21**	**144**	*i* P	**Pn**	**23 27 41.2**	**+1.2**
RTCV				IAML		23 28 25.7	
	comp=Z,84nm,0.3s						
VA03	**San Esteban**	**3.50**	**177⇓**	*i*P	**Pn**	**23 27 45.1**	**+1.2**
VA03				*e*S	**Sn**	**23 28 25.2**	**+1.0**
VA03				IAML		23 28 38.4	
	comp=E,605nm,0.3s						
ROC1	**El Roble**	**3.71**	**184**	*i* P	**Pn**	**23 27 48.4**	**+1.4**
PEL	**Peldehue**	**3.87**	**179**	*e*P	**Pn**	**23 27 49.8**	**+0.8**
PEL				*e*S	**Sn**	**23 28 33.9**	**+0.6**
PEL	**Peldehue**	**3.87**	**179**	*i* P	**Pn**	**23 27 50.0**	**+1.0**
PEL				*e*S	Sn	23 28 48.8	+16
ARCO	**CERRO ARCO**	**3.89**	**157**	*i* P	**Pn**	**23 27 50.7**	**+1.3**
ARCO				IAML		23 28 45.8	
	comp=Z,173nm,0.5s						
MT02	**Curacav**	**4.00**	**185⇓**	*i*P	**Pn**	**23 27 50.9**	**+0.2**
AAGR	**Agrelo**	**4.15**	**157**	*i* P	**Pn**	**23 27 54.1**	**+1.3**
AAGR				IAML		23 28 59.3	
	comp=Z,75nm,0.7s						
PB14	**IPOC Station P**	**4.62**	**4**	*i* P	**Pn**	**23 27 59.7**	**+0.3**
PB14				*e*S	**Sn**	**23 28 59.5**	**+7.5**
PB14				IAML		23 29 11.7	
	comp=Z,134nm,0.9s						
MRA	**San Martin**	**5.35**	**127**	*i* P	**Pn**	**23 28 08.6**	**-0.5**
MRA				IAML		23 29 13.7	
	comp=Z,60nm,1.0s						
LAMA	**Las Malvinas**	**5.81**	**167**	*i* P	**Pn**	**23 28 16.3**	**+1.0**
PB15	**IPOC Station P**	**6.13**	**11**	*i* P	**Pn**	**23 28 20.1**	**+0.1**
PB15				IAML		23 29 51.7	
	comp=Z,126nm,0.3s						
PB05	**IPOC Station P**	**6.40**	**4**	*i* P	**Pn**	**23 28 23.6**	**0.0**
PB05				*e*S	Sn	23 29 54.9	+20
PB05				IAML		23 30 04.5	
	comp=Z,57nm,0.6s						
LVC	**Limon Verde**	**6.82**	**14**	P	**Pn**	**23 28 29.2**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=194,slow=9.6,SNR=1.5						
LVC				S	**Sn**	**23 29 45.4**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=227,slow=19,SNR=1.2						
LVC	**Limon Verde**	**6.82**	**14**	*i* P	**Pn**	**23 28 29.7**	**+0.1**
LVC				IAML		23 30 30.0	
	comp=Z,20nm,0.8s						
PB04	**IPOC Station P**	**6.92**	**5**	*i* P	**Pn**	**23 28 30.6**	**-0.1**
PB04				*e*S	Sn	23 30 12.1	+24
AZAP	**Zapla**	**7.13**	**47**	*i* P	**Pn**	**23 28 34.5**	**+0.8**
AZAP				IAML		23 30 04.7	
	comp=Z,6.5nm,4.1s						
PB09	**IPOC Station P**	**7.55**	**11**	*i* P	**Pn**	**23 28 38.4**	**-0.9**
PB09				IAML		23 30 37.6	
	comp=Z,59nm,1.2s						
CPUP	**Villa Florida**	**12.23**	**79**	P	**Pn**	**23 29 41.3**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=253,slow=13,SNR=3.3						
LPAZ	**La Paz**	**13.13**	**11**	P	**Pn**	**23 29 57.6**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=218,slow=8.6,SNR=2.4						
SIV	**San Ignacio**	**15.93**	**36**	P	**Pn**	**23 30 30.9**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=236,slow=8.7,SNR=7.5						
DBIC	**Dimbokro**	**72.63**	**72**	P	**P**	**23 38 10.2**	**-1.3**
	comp=Z,1.1nm,0.5s						
PDAR	**Pinedale Array**	**80.07**	**332**	P	**P**	**23 38 54.4**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=151,slow=4.0,SNR=1.9						
BOSA	**Boshof**	**81.29**	**118**	P	**P**	**23 38 59.2**	**-1.1**
	comp=Z,1.5nm,0.8s,baz=169,slow=8.2,SNR=3.2						
TORD	**Torodi Ar. Bea**	**81.55**	**70**	P	**P**	**23 39 00.6**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=254,slow=9.0,SNR=6.1						
TORD				pP	**pP**	**23 39 21.5**	**-1.5**
	comp=Z,0.7nm,0.6s,baz=256,slow=5.2,SNR=3.1						
ZALV	**Zalesovo Beam**	**149.59**	**29**	PKPbc	**PKPbc**	**23 46 31.9**	**-0.2**
	comp=Z,1.5nm,0.5s,baz=305,slow=3.9,SNR=8.2						
ZALV				pPKPbc	**pPKPbc**	**23 46 53.3**	**-0.6**
	comp=Z,1.5nm,0.6s,baz=298,slow=4.4,SNR=4.2						
MKAR	**Makanchi Array**	**152.67**	**43**	PKPbc	**PKPbc**	**23 46 39.0**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=316,slow=1.3,SNR=5.0						
MKAR				PKPab	**PKPab**	**23 46 50.1**	**-0.4**
	comp=Z,0.3nm,0.8s,baz=320,slow=3.7,SNR=2.3						
MKAR				pPKPbc	**pPKPbc**	**23 47 01.2**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=292,slow=0.6,SNR=3.7						

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*NEIC **23** 23:28:20.8±2.2, 5.°56S±0.°09×153.°64E±0.°04, h10^{km}±1^{km}, mb4.4/13, Error ellipse: s-maj=16.1km s-min=2.9km az=203.0*

*IDC **23** 23:28:21.0±1.3, 5.°56S×153.°40E, h0^{km}, mb3.9/11, mb1 4.0/11, mb1mx3.9/29, mbtmp3.9/11, MS3.1/2, Ms1 3.0/2, ms1mx2.7/34, Error ellipse: s-maj=37.7km s-min=19.1km az=108.0*

ISC 23 23:28:20.7±0.6**, 5.°52S**±0.°08×**153.°62E**±0.°09**, h10**^{km}**, n31, σ1.^{s}60**/32**, mb4.2**/17**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.96**	**312**		**Pn**	**23 28 54.3**	**+0.2**
KRVT	**Keravat (AS076**	**2.00**	**307**	Pn	**Pn**	**23 28 54.3**	**-0.2**
	236nm,0.3s,baz=168,slow=1.6,SNR=67						
KRVT				Sn	**Sn**	**23 29 15.2**	**-4.3**
	127nm,0.3s,baz=16,slow=4.7,SNR=12						
KRVT				LR	LR	23 29 46.5	
	comp=Z,640nm,18.9s,baz=125,slow=46						
MANU	**Manus Island**	**7.13**	**299**	Pn	**Pn**	**23 30 04.8**	**-0.4**
HNR	**Honiara**	**7.38**	**122**	Pn	**Pn**	**23 30 07.4**	**-1.1**
PMG	**Port Moresby**	**7.48**	**239**	Pn	**Pn**	**23 30 10.0**	**+0.1**
CTAO	**Charters Tower**	**16.16**	**206**	Pn	**Pn**	**23 32 06.4**	**-1.6**
WR0	**Warramunga Arr**	**23.46**	**231**	P	**P**	**23 33 31.0**	**+0.4**
WB0	**Warramunga Arr**	**23.46**	**231**	P	**P**	**23 33 30.7**	**+0.1**
WB0				IAmb	IAmb	23 33 37.4	
	comp=Z,9.4nm,1.1s						
WB2	**Warramunga Arr**	**23.60**	**231**	P	**P**	**23 33 33.0**	**+1.0**
WB2				IAmb	IAmb	23 33 52.4	
	comp=Z,12nm,0.7s						
WRA	**Warramunga Arr**	**23.61**	**231**	P	**P**	**23 33 31.6**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=52,slow=9.2,SNR=3.8						
WRA				LR	LR	23 42 12.4	
	comp=Z,47nm,20.6s,baz=35,slow=36						
ASAR	**Alice Springs**	**26.19**	**224**	P	**P**	**23 33 56.5**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=57,slow=8.8,SNR=7.3						
STKA	**Stephens Creek**	**28.54**	**202**	P	**P**	**23 34 17.6**	**+0.9**
	comp=Z,1.7nm,0.8s,baz=19,slow=9.4,SNR=2.4						
STKA				LR	LR	23 45 31.5	
	comp=Z,34nm,18.3s,baz=36,slow=36						
FITZ	**Fitzroy Crossi**	**30.05**	**243**	P	**P**	**23 34 29.7**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=52,slow=9.0,SNR=6.3						
PETK	**Petropavlovsk-**	**58.51**	**3**	P	**P**	**23 38 20.0**	**+3.0**
	comp=Z,1.7nm,0.5s,baz=165,slow=6.0,SNR=1.5						
PETK	**Petropavlovsk-**	**58.51**	**3**	P	**P**	**23 38 18.1**	**+1.0**
CMAR	**Chiang Mai Arr**	**58.92**	**295**	P	**P**	**23 38 21.4**	**+0.8**
	comp=Z,0.6nm,0.4s,baz=131,slow=6.1,SNR=1.6						
SONM	**Songino Array**	**67.37**	**328**	P	**P**	**23 39 18.2**	**+1.9**
	comp=Z,0.6nm,0.6s,baz=142,slow=6.0,SNR=11						
SONM	**Songino Array**	**67.37**	**328**	P	**P**	**23 39 16.9**	**+0.6**
MKAR	**Makanchi Array**	**81.40**	**319**	P	**P**	**23 40 38.7**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=105,slow=6.5,SNR=8.0						
MAKZ	**Makanchi**	**81.61**	**319**	P	**P**	**23 40 40.5**	**+1.5**
MAKZ				IAmb	IAmb	23 42 37.8	
	comp=Z,9.0nm,1.9s						
ZALV	**Zalesovo Beam**	**82.20**	**326**	P	**P**	**23 40 42.8**	**+0.9**
	comp=Z,1.7nm,0.6s,baz=116,slow=5.1,SNR=8.4						
ZALV	**Zalesovo Beam**	**82.20**	**326**	P	**P**	**23 40 43.0**	**+1.1**
ILAR	**Eielson Array**	**82.52**	**22**	P	**P**	**23 40 45.2**	**+1.9**
	comp=Z,0.4nm,0.8s,baz=255,slow=5.0,SNR=2.7						
BALM	**Baldy**	**82.61**	**26**	P	**P**	**23 40 42.4**	**-1.7**
COLD	**Coldfoot**	**82.67**	**19**	P	**P**	**23 40 42.8**	**-1.3**
COLD				IAmb	IAmb	23 42 46.2	
	comp=Z,11nm,1.9s						
KURK	**Kurchatov**	**84.84**	**322**	P	**P**	**23 40 55.5**	**0.0**
KURK				IAmb	IAmb	23 40 58.1	
	comp=Z,3.2nm,1.1s						
AAK	**Ala-Archa**	**85.75**	**313**	P	**P**	**23 41 01.4**	**+0.9**
AAK				IAmb	IAmb	23 41 09.6	
	comp=Z,1.6nm,0.8s						
NRIK	**Noril'sk**	**86.91**	**341**	P	**P**	**23 41 07.3**	**+2.0**
	comp=Z,1.4nm,0.5s,baz=105,slow=4.3,SNR=4.7						
PAGB	**Antelope Grade**	**90.05**	**54**	P	**P**	**23 41 19.8**	**-1.4**
RDMU	**Red Mountain**	**98.73**	**50**	P	**P**	**23 41 57.6**	**-3.5**
TORD	**Torodi Ar. Bea**	**151.30**	**287**	PKPbc	**PKiKP**	**23 48 17.6**	**+1.4**
	comp=Z,1.3nm,0.6s,baz=67,slow=2.0,SNR=12						

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*SJA **23** 23:32:23.9±0.6, 32.°92S×71.°69W, h26^{km}±6^{km}, ML3.5, MW3.8*

*GUC **23** 23:32:24.2±0.9, 32.°68S×71.°54W, h33^{km}±3^{km}, ML3.7*

ISC 23 23:32:22.8±1.6**, 32.°72S**±0.°03×**71.°73W**±0.°06**, h17**^{km}±11^{km}**, n31, σ1.^{s}15**/48**, 1C-7D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROC1	**El Roble**	**0.65**	**113**	*i* P	**Pg**	**23 32 36.2**	**+0.4**
ROC1				*e*S	**Sb**	**23 32 44.6**	**-0.1**
ROCH	**El Roble**	**0.66**	**112⇓**	*i*P	**Pg**	**23 32 36.1**	**+0.4**
ROCH				*e*S	**Sb**	**23 32 44.8**	**0.0**
ROCH				IAML		23 32 45.9	
	comp=N,5µm,0.2s						
MT02	**Curacav**	**0.73**	**137⇓**	*i*P	**Pg**	**23 32 37.2**	**+0.1**
CO04	**Los Peladeros**	**0.93**	**44**	*e*P	**Pb**	**23 32 40.4**	**-0.3**
CO04				*e*S	**Sb**	**23 32 52.8**	**0.0**
CO04				IAML		23 32 53.4	
	comp=E,4µm,0.3s						
PEL	**Peldehue**	**0.97**	**116⇓**	*i*P	**Pb**	**23 32 41.2**	**-0.1**
PEL				*e*S	**Sb**	**23 32 53.1**	**-0.7**
PEL				IAML		23 32 55.1	
	comp=E,7µm,0.1s						
PEL	**Peldehue**	**0.97**	**116**	*i* P	**Pb**	**23 32 41.1**	**-0.1**
PEL				*e*S	**Sb**	**23 32 54.1**	**+0.3**
VA03	**San Esteban**	**1.00**	**93⇓**	*i*P	**Pb**	**23 32 41.0**	**-0.7**
VA03				*e*S	**Sb**	**23 32 53.5**	**-1.0**
VA03				IAML		23 32 55.2	
	comp=E,10µm,0.2s						
RCDM	**Rinconada Maip**	**1.09**	**135**	*e*P	**Pg**	**23 32 43.8**	**-0.1**
RCDM				*i* S	**Sn**	**23 32 57.7**	**-0.2**
CLCH	**Cerro Calan**	**1.21**	**124**	*e*P	**Pn**	**23 32 44.9**	**0.0**
CLCH				*e*S	**Sb**	**23 33 00.2**	**-0.3**
CLCH				IAML		23 33 00.8	
	comp=E,3µm,0.3s						

MT01	Popeta	1.21	161	⇓iP	Pb	23 32 44.9	-0.3
MT01				eS	Sn	23 33 00.7	-0.1
MT01				IAML		23 33 04.6	
	comp=E,3µm,0.3s						
ANTU	Antumapu	1.25	133	eP	Pg	23 32 46.8	-0.2
ANTU				i S	Sb	23 33 02.5	+0.7
ANTU				IAML		23 33 05.7	
	comp=N,2µm,0.1s						
FSR	Penalolen	1.26	127	eP	Pb	23 32 46.5	+0.4
FSR				eS	Sb	23 33 03.0	+1.0
MT03	Universidad Ad	1.28	127	⇓iP	Pb	23 32 46.3	-0.2
MT03				eS	Sn	23 33 02.5	-0.2
MT03				IAML		23 33 03.1	
	comp=E,9µm,0.2s						
FCH	Farellones	1.35	117	⇓iP	Pn	23 32 47.0	-0.2
FCH				i S	Sn	23 33 04.2	-0.6
FCH				IAML		23 33 04.6	
	comp=N,3µm,0.3s						
CO02	Combarbal	1.64	22	eP	Pb	23 32 51.7	-0.9
CO02				eS	Sb	23 33 12.8	-0.2
LMEL	Las Melosas	1.70	132	⇑iP	Pb	23 32 52.8	-0.9
LMEL				i S	Sb	23 33 15.1	+0.2
LMEL				IAML		23 33 17.3	
	comp=N,3µm,0.1s						
BO01	Tunca	1.75	162	i P	Pn	23 32 53.0	+0.7
BO01				i S	Sb	23 33 15.8	-0.2
CO03	El Pedregal	2.08	26	eP	Pn	23 32 57.9	+1.0
CO03				i S	Sb	23 33 24.3	-1.3
CO03				IAML		23 33 30.5	
	comp=E,878nm,0.2s						
BO02	Sierra Bellavi	2.21	159	IAML		23 33 33.2	
	comp=E,1µm,0.2s						
GO05	Huala	2.29	184	i P	Pn	23 32 59.6	-0.1
ARCO	CERRO ARCO	2.36	94	i P	Pb	23 33 04.7	-0.3
ARCO				IAML		23 33 42.8	
	comp=Z,296nm,0.3s						
ASAL	Salagasta	2.45	88	i P	Pb	23 33 06.0	-0.4
ASAL				IAML		23 33 48.4	
	comp=Z,180nm,0.4s						
AAGR	Agrelo	2.47	99	i P	Pb	23 33 06.3	-0.4
AAGR				IAML		23 33 46.1	
	comp=Z,187nm,0.7s						
GO04	Tololo Observa	2.67	18	i P	Pn	23 33 05.8	+0.6
RTCV	Cerro Valdivia	2.84	73	i P	Pb	23 33 11.1	-1.9
RTCV				i Sg	Sb	23 33 47.3	-0.1
RTCV				IAML		23 33 53.5	
	comp=Z,135nm,0.3s						
ZON	Zonda	2.84	66	i P	Pb	23 33 10.8	-2.3
ZON				IAML		23 33 58.3	
	comp=Z,163nm,0.8s						
RTLL	Cerro Villicun	3.10	64	i P	Pb	23 33 14.7	-2.7
RTLL				IAML		23 34 03.2	
	comp=Z,272nm,0.4s						
ACCO	Cerro Coronel	3.12	48	i P	Pn	23 33 14.6	+3.2
ACCO				IAML		23 34 05.8	
	comp=Z,278nm,0.4s						
AROD	Rodeo	3.20	38	i P	Pn	23 33 15.6	+3.0
AROD				IAML		23 34 08.3	
	comp=Z,21nm,0.9s						
AGUA	GUANDACOL	4.26	42	i P	Pn	23 33 30.3	+3.4
AGUA				IAML		23 34 32.5	
	comp=Z,22nm,0.4s						
CYA	Choya	6.66	52	i P	Pn	23 33 59.6	-0.2
CYA				IAML		23 35 33.4	
	comp=Z,21nm,0.7s						

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*IDC **23** 23:43:43.8±0.9, 55°.45S×125°.58W, h0^{km}, mb4.2/7, mb1 4.3/7, mb1mx4.0/48, mbtmp4.2/7, MS4.1/14, Ms1 4.1/14, ms1mx3.9/24, Error ellipse: s-maj=44.4km s-min=23.4km az=162.0*

*GCMT **23** 23:43:50.0±0.2, 55°.61S±0°.01×124°.81W±0°.02, h26^{km}±1^{km}, MW5.1/104, Moment Tensor Solution. s55,c67; s104,c148; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.86±.17; M$_{\theta\theta}$3.74±.17; M$_{\phi\phi}$-2.88±.13; M$_{r\theta}$-0.75±.26; M$_{\theta\phi}$4.16±.09; M$_{\phi r}$0.23±.23; Best double couple: M$_0$5.37600×10^{16} NP1:φ$_s$199.00000°, δ81.00000°, λ-178.00000°. NP2:φ$_s$109.00000°, δ88.00000°, λ-9.00000°. Principal axes: T 5.7970, Plg5.0000°, Azm155.0000°; N -0.8450, Plg81.0000°, Azm278.0000°; P -4.9560, Plg7.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 23 23:43:45.2±0.9**, 55°.4S**±0°.2×**125°.6W**±0°.2**, h10**^{km}**, n35, σ0^{s}46**/11**, mb4.2**/7**, MS4.2**/16**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMSA	Palmer Station	30.82	133	LR	LR	23 58 39.6	
	comp=Z,337nm,21.8s,baz=266,slow=29						
VNDA	Vanda	32.95	202	LR	LR	23 59 31.3	
	comp=Z,233nm,20.5s,baz=86,slow=29						
QSPA	South Pole Qui	34.75	180	P	P	23 50 35.2	-0.1
	1.2nm,0.6s,baz=324,slow=1.7,SNR=8.4						
TBI	Tubuai	36.60	321	eS	S	23 56 34.2	+0.3
	126nm,28.8s						
TBI				eLR	LR	00 00 36.7	
	comp=Z,726nm,29.5s,baz=168						
TBI	Tubuai	36.60	321	eT	T	00 29 47.0	
	31nm,0.3s						
PLCA	Paso Flores	38.53	91	LR	LR	00 02 42.3	
	comp=Z,323nm,18.5s,baz=256,slow=30						
TVO	Taravao	41.68	325	eT	T	00 36 03.6	
	1.1nm,0.4s						
PPT2	Papeete2	41.97	325	eS	S	23 57 54.5	-0.4
	118nm,25.5s						
PPT2				eLR	LR	00 03 20.7	
	comp=Z,797nm,26.0s,baz=171						
PPT	Papeete	41.99	325	LR	LR	00 04 14.8	
	comp=Z,296nm,21.8s,baz=166,slow=29						
VAH	Vaihoa	43.56	328	eT	T	00 38 27.7	
	99nm,0.3s						
PMOR	Pomariorio Ree	43.87	328	eT	T	00 38 50.2	
	5.3nm,0.2s						
CPUP	Villa Florida	56.50	89	LR	LR	00 14 10.8	
	comp=Z,194nm,19.0s,baz=238,slow=32						
LPAZ	La Paz	58.44	72	P	P	23 53 42.4	+0.6
	2.5nm,1.1s,baz=101,slow=3.5,SNR=3.4						
LPAZ				LR	LR	00 12 52.8	
	comp=Z,148nm,20.7s,baz=187,slow=30						
SIV	San Ignacio	62.56	78	P	P	23 54 09.0	-0.3
	1.4nm,0.8s,baz=193,slow=7.0,SNR=4.3						
STKA	Stephens Creek	65.92	249	P	P	23 54 31.3	+0.1
	1.7nm,0.7s,baz=194,slow=4.2,SNR=3.4						
STKA				LR	LR	00 17 04.7	
	comp=Z,103nm,22.0s,baz=188,slow=30						
ASAR	Alice Springs	76.54	248	P	P	23 55 36.0	+0.4
	1.8nm,0.8s,baz=150,slow=6.0,SNR=14						
ASAR				LR	LR	00 24 02.0	
	comp=Z,128nm,21.3s,baz=154,slow=32						
H01W1	Cape Leeuwin H	76.59	227	T	T	01 20 53.6	
	baz=148,slow=76,SNR=86						
H01W2	Cape Leeuwin H	76.60	227	T	T	01 21 01.6	
	baz=148,slow=76,SNR=68						
H01W3	Cape Leeuwin H	76.61	227	T	T	01 20 55.7	
	baz=148,slow=76,SNR=61						
WRA	Warramunga Arr	79.35	250	P	P	23 55 51.6	+0.4
	3.8nm,0.9s,baz=144,slow=5.1,SNR=8.5						
WRA				LR	LR	00 27 23.9	
	comp=Z,118nm,19.6s,baz=105,slow=33						
KRVT	Keravat (AS076	82.14	274	LR	LR	00 27 34.4	
	comp=Z,39nm,19.2s,baz=212,slow=32						
FITZ	Fitzroy Crossi	85.45	245	P	P	23 56 23.2	+0.2
	2.0nm,0.6s,baz=166,slow=4.2,SNR=8.8						
FITZ				LR	LR	00 28 35.6	
	comp=Z,60nm,21.5s,baz=146,slow=32						
BOSA	Boshof	92.65	155	LR	LR	00 31 34.6	
	comp=Z,104nm,21.9s,baz=192,slow=31						
H11S2	WAKE ISLAND Hy	93.08	298	T	T	01 40 52.7	
	baz=147,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	93.09	298	T	T	01 40 49.5	
	baz=147,slow=76,SNR=29						
H11S1	WAKE ISLAND Hy	93.10	298	T	T	01 40 47.2	
	baz=147,slow=76,SNR=15						
NVAR	Mina Array Bea	93.70	6	LR	LR	00 29 09.9	
	comp=Z,114nm,21.8s,baz=204,slow=29						
H11N3	WAKE ISLAND Hy	94.02	299	T	T	01 42 00.8	
	baz=148,slow=76,SNR=21						
H11N1	WAKE ISLAND Hy	94.02	299	T	T	01 42 02.7	
	baz=148,slow=76,SNR=23						
H11N2	WAKE ISLAND Hy	94.03	299	T	T	01 42 00.9	
	baz=148,slow=76,SNR=21						
PDAR	Pinedale Array	98.77	12	LR	LR	00 34 31.0	
	comp=Z,70nm,18.7s,baz=203,slow=31						
H02S1	DAWSON INLET T	108.42	356	T	T	01 59 30.9	
	baz=146						
H02N1	VAN INLET T-PH	108.47	356	T	T	01 59 49.9	
SONM	Songino Array	147.53	279	PKPbc	PKPbc	00 03 28.1	-0.6
	0.4nm,0.5s,baz=134,slow=4.8,SNR=4.9						
MKAR	Makanchi Array	160.59	255	PKPab	PKPab	00 04 25.5	-0.5
	0.5nm,0.7s,baz=117,slow=5.6,SNR=7.2						

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*ISK **23** 23:46:16.8, 36°.88N×42°.00E, h6^{km}, ML2.5/9*

*ISN **23** 23:46:18.0±1.1, 36°.83N×41°.98E, h15^{km}, ML2.0*

ISC 23 23:46:17.0±1.5**, 36°.86N**±0°.06×**42°.00E**±0°.04**, h8**^{km}±13^{km}**, n12, σ0^{s}99**/17**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIRT	Sirnak	0.73	29	PG	Pg	23 46 30.9	-0.3
MSL	Mosul	1.01	117	ePg	Pb	23 46 36.0	-0.7
	baz=295						
MSL				eSg	Sn	23 46 51.0	-0.8
MSL				AML	AML	23 46 56.7	
	comp=N,40nm,0.3s						
CUKT	Cukurca	1.35	73	PN	Pg	23 46 42.6	-0.3
CUKT				SN	Sg	23 47 01.5	+1.1
MAZI	Mazidag	1.38	296	PN	Pg	23 46 42.9	-0.5
MAZI				SN	Sg	23 47 02.2	+0.9
SVAN	Silvan-Diyarba	1.44	334	PN	Pb	23 46 43.8	-0.3
SVAN				SN	Sg	23 47 03.4	+0.1
AKDM	Akdamar-Van	1.66	28	PN	Pb	23 46 46.9	-1.1
AKDM				SN	Sb	23 47 09.2	0.0
GURO	Guroymak-BITLI	1.69	1	PN	Pb	23 46 47.3	-1.2
DYBB	Diyarbakir	1.84	307	PN	Pb	23 46 49.7	-1.2
BNGB	Bingl	2.37	334	PN	Pn	23 46 57.2	+0.9
KARO	Karliova-Bingo	2.56	343	PN	Pn	23 46 59.8	+0.8
SVRC	Sivrice-ELAZID	2.62	306	PN	Pn	23 47 01.2	+1.4
AGRB	Hanur-Agry	2.83	16	PN	Pn	23 47 03.9	+1.2

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*IDC **23** 23:47:56.7±1.8, 19°.51S×70°.87W, h0^{km}, mb3.6/3, mb1 3.7/5, mb1mx3.5/38, mbtmp3.6/5, ML3.3/2, MS2.9/1, Ms1 2.9/1, ms1mx2.5/25, Error ellipse: s-maj=47.5km s-min=34.6km az=76.0*

*GUC **23** 23:48:00.3±0.8, 19°.70S×70°.92W, h43^{km}±2^{km}, ML3.6*

ISC 23 23:48:01.6±1.8**, 19°.69S**±0°.04×**70°.9W**±0°.1**, h44**^{km}±16^{km}**, n28, σ1^{s}46**/30**, mb3.7**/3**, 7C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.74	83	⇓iP	Pn	23 48 13.8	-2.0
PSGC				eS	Sn	23 48 24.5	-1.5
PSGC				IAML		23 48 27.1	
	comp=N,2µm,0.1s						
TA01	Diego Aracena	1.10	142	⇑iP	Pn	23 48 19.9	-0.7
TA01				eS	Sn	23 48 34.3	-0.3
TA01				IAML		23 48 39.4	
	comp=E,2µm,0.4s						
PB11	IPOC Station P	1.18	93	⇓iP	Pn	23 48 21.3	-0.5
PB11				eS	Sn	23 48 37.8	+1.0
PB11				IAML		23 48 39.5	
	comp=N,3µm,0.3s						
PB12	IPOC Station P	1.20	27	⇑iP	Pn	23 48 21.4	-0.7
PB12				eS	Sn	23 48 37.7	+0.4
PB12				IAML		23 48 41.9	
	comp=N,2µm,0.3s						
PATCX	Punta Patache	1.32	148	⇑iP	Pn	23 48 23.1	-0.7
PATCX				eS	Sn	23 48 40.7	+0.5
PATCX				IAML		23 48 46.6	
	comp=E,916nm,0.4s						
AP01	Chacalluta	1.42	22	⇓iP	Pn	23 48 24.9	0.0
AP01				i S	Sn	23 48 44.3	+1.9
GO01	Chusmiza	1.61	89	⇑iP	Pn	23 48 28.5	+0.5
GO01				eS	Sn	23 48 50.0	+2.2
PB08	IPOC Station P	1.71	105	⇑iP	Pn	23 48 29.7	+0.5
PB08				eS	Sn	23 48 52.4	+2.3
PB08				IAML		23 48 59.2	
	comp=N,990nm,0.2s						
PB02	IPOC Station P	1.87	150	⇑iP	Pn	23 48 30.9	-0.4
PB02				IAML		23 49 05.9	
	comp=E,1µm,0.5s						
PB01	IPOC Station P	1.89	136	⇑iP	Pn	23 48 31.6	+0.1
PB01				eS	Sn	23 48 54.8	+0.7
PB01				IAML		23 49 03.0	
	comp=N,547nm,0.4s						
PB16	IPOC Station P	1.89	45	⇓iP	Pn	23 48 32.5	+0.6
PB16				eS	Sn	23 48 58.0	+3.2
PB16				IAML		23 49 00.7	
	comp=N,785nm,0.3s						
PB07	IPOC Station P	2.23	155	IAML		23 49 19.5	
	comp=E,375nm,0.8s						
PB03	IPOC Station P	2.58	156	eP	Pn	23 48 40.6	-0.4
PB09	IPOC Station P	2.61	144	IAML		23 49 28.2	
	comp=E,458nm,0.4s						
PB09				IAML		23 49 28.5	
	comp=N,425nm,0.6s						
LVC	Limon Verde	3.45	148	Pn	Pn	23 48 54.3	+1.2
	comp=N,3.1nm,0.3s,baz=332,slow=9.1,SNR=18						
LVC				Sn	Sn	23 49 35.4	+2.5
	comp=N,9.0nm,0.3s,baz=61,slow=20,SNR=6.0						
LVC				Lg	Lg	23 49 44.8	
	comp=N,15nm,0.3s,baz=99,slow=14,SNR=6.5						
LPAZ	La Paz	4.29	38	Pn	Pn	23 49 10.8	+5.8
	comp=N,1.1nm,0.3s,baz=238,slow=9.6,SNR=22						
SIV	San Ignacio	10.06	70	Pn	Pn	23 50 22.6	-1.0
	comp=N,0.3nm,0.3s,baz=250,slow=15,SNR=4.3						
SIV				LR	LR	23 54 43.8	
	comp=N,68nm,20.5s,baz=282,slow=41						
PTGA	Pitinga	21.68	31	P	P	23 52 47.4	-1.3
	comp=N,1.2nm,0.4s,baz=225,slow=5.7,SNR=1.6						
TORD	Torodi Ar. Bea	78.53	72	P	P	23 59 59.0	+0.1
	comp=N,1.0nm,0.8s,baz=254,slow=5.8,SNR=5.2						
YKA	Yellowknife Ar	88.88	341	P	P	00 00 51.7	+1.0
	comp=N,0.1nm,0.4s,baz=134,slow=4.4,SNR=2.1						
H11S2	WAKE ISLAND Hy	125.78	279	T	T	02 26 16.3	
	baz=101,slow=75,SNR=14						
H11S1	WAKE ISLAND Hy	125.78	279	T	T	02 26 17.0	
	baz=101,slow=75,SNR=4.1						
H11S3	WAKE ISLAND Hy	125.79	279	T	T	02 26 18.9	
	baz=101,slow=75,SNR=4.8						
H11N3	WAKE ISLAND Hy	125.82	281	T	T	02 26 20.0	
	baz=100,slow=74						
H11N2	WAKE ISLAND Hy	125.83	281	T	T	02 26 21.1	
	baz=100,slow=74						
H11N1	WAKE ISLAND Hy	125.83	280	T	T	02 26 20.4	
	baz=100						
FITZ	Fitzroy Crossi	139.08	204	PKP	PKiKP	00 07 26.4	-0.1
	comp=N,0.4nm,0.6s,baz=168,slow=9.3,SNR=0.8						
MKAR	Makanchi Array	145.21	33	PKPbc	PKiKP	00 07 35.4	-3.0
	comp=N,0.3nm,0.7s,baz=333,slow=1.9,SNR=1.6						

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*SJA **23** 23:55:42.8±0.4, 19°.96S×71°.57W, h40^{km}±10^{km}, ML3.4, MW3.1*

*IDC **23** 23:55:45.2±1.0, 19°.66S×70°.59W, h0^{km}, mb3.9/7, mb1 4.0/10, mb1mx3.9/30, mbtmp4.0/10, ML3.6/3, MS3.7/6, Ms1 3.7/6, ms1mx3.4/24, Error ellipse: s-maj=26.1km s-min=22.3km az=55.0*

*GUC **23** 23:55:48.6±0.6, 19°.86S×70°.88W, h34^{km}±2^{km}, ML4.1*

*NEIC **23** 23:55:48.0±1.8, 19°.96S±0°.04×70°.8W±0°.1, h21^{km}±2^{km}, Mwr4.4/29, ML4.0(GUC), Error ellipse: s-maj=16.1km s-min=7.2km az=274.0*

*NEIC **23** 23:55:48, 19°.86S×70°.85W, h21^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.92; M$_{\theta\theta}$-0.01; M$_{\phi\phi}$-0.91; M$_{r\theta}$1.20; M$_{\theta\phi}$-0.63; M$_{\phi r}$-4.59; Fault plane solution: M$_0$4.88000×10^{15} NP1:φ$_s$50.84000°, δ10.22000°, λ153.44000°. NP2:φ$_s$167.04000°, δ85.45000°, λ80.84000°. Principal axes: T 5.0400, Plg49.0000°, Azm67.0000°; N -0.3417, Plg9.0000°, Azm168.0000°; P -4.6983, Plg40.0000°, Azm265.0000°;*

*VAO **23** 23:55:49.6±1.0, 19°.88S×70°.86W, h59^{km}±8^{km}, mb4.1*

ISC 23 23:55:47.2±1.2**, 19°.89S**±0°.03×**70°.90W**±0°.05**, h30**^{km}±8^{km}**, n84, σ1^{s}81**/90**, mb4.1**/6**, MS3.8**/4**, 7C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.79	68	⇓iP	Pb	23 56 01.4	-1.1
PSGC				i S	Sb	23 56 11.8	-1.1
PSGCX	Pisagua	0.79	68		Pb	23 56 01.5	-1.0
TA01	Diego Aracena	0.95	135	⇓iP	Pn	23 56 04.8	+0.2
TA01				i S	Sn	23 56 17.6	+0.5
TA01				IAML		23 56 19.6	
	comp=N,8µm,0.3s						
PATCX	Punta Patache	1.16	143	⇑iP	Pb	23 56 08.1	-0.6
PATCX				i S	Sb	23 56 23.5	0.0
PATCX				IAML		23 56 29.4	
	comp=E,5µm,0.3s						
PATCX	Punta Patache	1.16	143		Pb	23 56 08.1	-0.6
PB11	IPOC Station P	1.18	84	i P	Pn	23 56 08.0	+0.1
PB11				i S	Sn	23 56 23.4	+0.4
PB11				IAML		23 56 29.3	
	comp=N,7µm,0.3s						
PB11	IPOC Station P	1.18	84	Pn	Pn	23 56 08.1	+0.3
PB12	IPOC Station P	1.38	23	⇑iP	Pb	23 56 11.2	-1.2
PB12				i S	Sb	23 56 29.0	-0.8
PB12				IAML		23 56 35.2	
	comp=N,4µm,0.4s						
PB12	IPOC Station P	1.38	23		Pb	23 56 11.2	-1.2
AP01	Chacalluta	1.60	19	eP	Pb	23 56 15.0	-1.1
AP01				i S	Sn	23 56 34.1	+0.9
GO01	Chusmiza	1.62	82	⇓iP	Pb	23 56 15.5	-1.3
GO01				i S	Sb	23 56 36.7	-0.3
GO01	Chusmiza	1.62	82		Pn	23 56 15.4	+1.1
PB08	IPOC Station P	1.66	99	⇑iP	Pn	23 56 15.8	+1.1
PB08				i S	Sb	23 56 37.4	-0.7
PB08				IAML		23 56 42.2	
	comp=N,2µm,0.3s						
PB02	IPOC Station P	1.70	147	⇑iP	Pn	23 56 16.0	+1.0
PB02				i S	Sb	23 56 37.8	-1.2
PB02				IAML		23 56 44.0	
	comp=E,6µm,0.5s						
PB01	IPOC Station P	1.75	131	⇑iP	Pn	23 56 16.8	+1.2
PB01				i S	Sb	23 56 38.9	-1.5
PB01				IAML		23 56 45.3	
	comp=N,5µm,0.3s						
PB01	IPOC Station P	1.75	131		Pn	23 56 16.4	+0.7
PB16	IPOC Station P	2.03	41	⇑iP	Pn	23 56 21.3	+1.3
PB16				eS	Sb	23 56 47.3	-1.6
PB16				IAML		23 56 55.9	
	comp=N,2µm,0.3s						
PB16	IPOC Station P	2.03	41		Pn	23 56 21.3	+1.3
PB07	IPOC Station P	2.06	153	IAML		23 57 00.7	
	comp=E,2µm,0.4s						
PB07	IPOC Station P	2.06	153		Pn	23 56 20.7	+0.8
PB03	IPOC Station P	2.40	154	IAML		23 57 09.1	
	comp=E,978nm,0.1s						
PB09	IPOC Station P	2.45	141	⇑iP	Pn	23 56 27.4	+2.1
PB09				i S	Sn	23 56 57.4	+3.1
PB09				IAML		23 57 08.6	
	comp=E,2µm,0.4s						
PB09	IPOC Station P	2.45	141		Pn	23 56 25.9	+0.6
PB09	IPOC Station P	2.45	141	i P	Pb	23 56 28.0	-2.7
PB09				i Sg	Sb	23 57 01.6	+1.1
PB04	IPOC Station P	2.53	164		Pn	23 56 26.9	+0.5
PB04	IPOC Station P	2.53	164	i P	Pn	23 56 26.3	-0.1
PB05	IPOC Station P	3.02	168	i P	Pn	23 56 32.5	-0.6
PB06	IPOC Station P	3.06	156	i P	Pn	23 56 34.7	+0.9
LVC	Limon Verde	3.28	146	Pn	Pn	23 56 39.2	+2.2
	comp=E,15nm,0.3s,baz=18,slow=6.7,SNR=77						
LVC				Sn	Sn	23 57 16.4	+1.2
	comp=E,48nm,0.3s,baz=130,slow=22,SNR=8.2						
LVC				Lg	Lg	23 57 25.5	
	comp=E,64nm,0.3s,baz=102,slow=23,SNR=11						
LVC	Limon Verde	3.28	146	eP	Pn	23 56 39.1	+2.2
LVC				i S	Sn	23 57 17.8	+2.6
LVC	Limon Verde	3.28	146		Pn	23 56 39.0	+2.0
LVC	Limon Verde	3.28	146	eP	Pn	23 56 38.8	+1.9
LVC				eS	Sn	23 57 17.1	+1.9
LVC	Limon Verde	3.28	146	i P	Pn	23 56 39.1	+2.2
LVC				i Sg	Sb	23 57 21.5	-3.1
PB15	IPOC Station P	3.56	158		Pn	23 56 40.3	-0.4
PB15	IPOC Station P	3.56	158	i P	Pn	23 56 41.4	+0.8
PB15				i Sg	Sn	23 57 24.8	+3.0
PB10	IPOC Station P	3.62	175	Pn	Pn	23 56 40.8	-0.5
LPAZ	La Paz	4.45	37	Pn	Pn	23 56 57.0	+3.8
	comp=E,1.6nm,0.3s,baz=216,slow=7.2,SNR=29						
LPAZ				LR	LR	23 58 47.2	
	comp=E,854nm,18.3s,baz=237,slow=44						
LPAZ	La Paz	4.45	37		Pn	23 56 56.5	+3.2
PB14	IPOC Station P	4.73	175		Pn	23 56 56.3	-0.6
PB14	IPOC Station P	4.73	175	i P	Pn	23 56 55.9	-1.0
YJA	Yavi	5.52	115	i P	Pn	23 57 14.3	+6.5
YJA				IAML		23 57 27.4	
	comp=Z,13nm,0.7s						
AZAP	Zapla	6.92	130	i P	Pn	23 57 31.1	+4.2
AZAP				IAML		23 57 39.4	
	comp=Z,4.6nm,0.6s						
GO03	Copiap	7.69	176		Pn	23 57 37.7	+0.5
NNA	Nana	9.71	323	Pn	Pn	23 58 07.4	+2.3
	comp=Z,0.3nm,0.3s,baz=160,slow=15,SNR=1.7						
NNA				Sn	Sn	23 59 51.4	-1.9
	comp=Z,0.6nm,0.3s,baz=160,slow=16,SNR=1.9						
SIV	San Ignacio	10.13	69	Pn	Pn	23 58 09.3	-1.4
	comp=Z,0.5nm,0.3s,baz=260,slow=11,SNR=16						
SIV				Lg	Lg	00 00 52.1	
	comp=Z,0.1nm,0.3s,baz=156,slow=7.2,SNR=2.1						
GO04	Tololo Observa	10.24	180	Pn	Pn	23 58 13.2	+0.9
ROC1	El Roble	13.03	180	Pn	Pn	23 58 51.1	+0.5
SAML	Samuel	13.19	36	eP	Pn	23 58 54.8	+2.1
CPUP	Villa Florida	14.03	120	LR	LR	00 05 29.8	
	comp=Z,243nm,18.2s,baz=250,slow=42						
ATAH	Atahualpa	14.62	329	LR	LR	00 05 12.2	
	comp=Z,98nm,19.5s,baz=84,slow=39						
SALV	Santo Antonio	15.01	77	eP	Pn	23 59 17.3	0.0
C2SB	Chapadao do Su	17.09	89	eP	P	23 59 45.7	+0.2
CLDB	Colider	17.09	61	eP	Pn	23 59 43.2	-0.9
TRCB	Terra Rica	17.26	103	eP	Pn	23 59 45.7	-0.5
PTGB	Pitanga	18.07	109	eP	P	23 59 57.3	+0.8
ARAG	Araguaiana, MT	18.64	80	eP	Pn	00 00 03.9	+0.7
PLCA	Paso Flores	20.78	179	P	Pn	00 00 30.5	+2.1
	comp=Z,1.5nm,0.8s,baz=87,slow=14,SNR=1.8						
PLCA	Paso Flores	20.78	179	eP	P	00 00 24.9	-1.0
IPMB	Ipameri, GO	21.54	89	eP	P	00 00 33.9	-0.5
PTGA	Pitinga	21.85	31	P	P	00 00 36.0	-1.5
	comp=Z,2.2nm,0.3s,baz=211,slow=17,SNR=6.0						
PTGA	Pitinga	21.85	31	eP	P	00 00 36.2	-1.3
BDFB	Brasilia	22.20	83	P	P	00 00 40.0	-1.4
	comp=Z,0.9nm,0.4s,baz=241,slow=16,SNR=2.0						
BDFB				LR	LR	00 10 15.0	
	comp=Z,301nm,19.7s,baz=271,slow=40						
JANB	Januaria	25.80	84	eP	P	00 01 15.5	-0.5
SJMB	Sao Joao De Ma	28.06	93	eP	P	00 01 33.0	-3.3
RCBR	Riachuelo	36.77	72	P	P	00 02 51.8	-0.7
	comp=Z,6.2nm,0.9s,baz=211,slow=5.9,SNR=1.7						
PMSA	Palmer Station	45.09	176	LR	LR	00 22 57.1	
	comp=Z,84nm,20.3s,baz=142,slow=36						
TAOE	Nuku Hiva Isla	67.59	268	eLR	LR	00 05 56.5	
	comp=Z,678nm,29.8s						
PDAR	Pinedale Array	71.80	331	P	P	00 07 09.5	+2.3
	comp=Z,0.2nm,0.6s,baz=121,slow=6.4,SNR=2.7						
ULM	Lac du Bonnet	73.24	344	LR	LR	00 41 08.8	
	comp=Z,64nm,19.9s,baz=206,slow=37						
TORD	Torodi Ar. Bea	78.59	71	P	P	00 07 46.5	-0.1
	comp=Z,2.9nm,0.8s,baz=249,slow=4.8,SNR=11						
YKA	Yellowknife Ar	89.07	341	P	P	00 08 40.9	+1.8
	comp=Z,0.6nm,0.7s,baz=140,slow=5.2,SNR=9.0						
H11S2	WAKE ISLAND Hy	125.81	279	T	T	02 34 07.9	
	baz=101,slow=75,SNR=66						
H11S1	WAKE ISLAND Hy	125.82	279	T	T	02 34 05.5	
	baz=101,slow=75,SNR=35						
H11S3	WAKE ISLAND Hy	125.83	279	T	T	02 34 09.2	
	baz=101,slow=75,SNR=40						
H11N3	WAKE ISLAND Hy	125.85	280	T	T	02 34 12.2	
	baz=100,slow=74,SNR=19						
H11N2	WAKE ISLAND Hy	125.87	280	T	T	02 34 12.7	
	baz=100,slow=74,SNR=26						
H11N1	WAKE ISLAND Hy	125.87	280	T	T	02 34 23.8	
	baz=100,slow=74,SNR=12						
ASAR	Alice Springs	130.41	210	PKP	PKiKP	00 14 59.5	+3.0
	comp=Z,0.4nm,0.9s,baz=156,slow=2.5,SNR=1.7						
ZALV	Zalesovo Beam	141.25	23	PKP	PKPdf	00 15 16.2	+1.5
	comp=Z,0.7nm,0.7s,baz=301,slow=3.0,SNR=2.0						
MKAR	Makanchi Array	145.37	33	PKPbc	PKPab	00 15 23.8	+1.5
	comp=Z,1.6nm,0.7s,baz=331,slow=4.1,SNR=15						
KSH	Kashi	145.49	48	PKPbc	PKPdf	00 15 20.8	-2.0
KSH				pPKP	pPKPab	00 15 30.3	-1.6
KSH				PP	PP	00 18 43.8	+0.7
KSH				PKS	PKSdf	00 18 53.4	-5.0
KSH	Kashi	145.49	48	SKKS	SKKSac	00 25 27.3	-6.3
SONM	Songino Array	152.04	4	PKPbc	PKiKP	00 15 41.6	+1.5
	comp=Z,0.6nm,0.8s,baz=16,slow=0.9,SNR=4.4						
LZH	Lanzhou	163.22	15	ePKP	PKPdf	00 15 46.3	-1.1
LZH				pPKP	sPKPab	00 16 52.8	+3.3
LZH				sPKP		00 16 54.8	

*NEIC **23** 23:56:43.1±1.6, 4°.15S±0°.07×102°.50E±0°.04, h42^{km}±6^{km}, mb4.4/19, Error ellipse: s-maj=11.3km s-min=3.8km az=205.0*

*IDC **23** 23:56:44.7±2.5, 4°.09S×102°.45E, h52^{km}±22^{km}, mb3.9/14, mb1 4.0/16, mb1mx3.8/45, mbtmp4.2/16, ML3.6/2, MS3.3/3, Ms1 3.3/3, ms1mx2.8/34, Error ellipse: s-maj=31.8km s-min=11.9km az=52.0*

*DJA **23** 23:56:44.1±0.5, 4°S±4°×10°2E±°, h35^{km}±9^{km}, M4.7/13, mB5.2/3, mb4.8/6, MLv4.7/13, Mw(mB)4.5/3*

ISC 23 23:56:45.6±0.4**, 4°.20S**±0°.06×**102°.53E**±0°.06**, h65**^{km}**, n95,** σ**1^{s}.88**/103**, mb4.3**/24**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNAI	Manna	0.46	111	P	Pn	23 56 54.2	-3.4
MNAI	Manna	0.46	111		Pn	23 56 54.3	-3.3
MNAI				Sn	Sn	23 57 01.5	-4.9
KSI	Kapahiang	0.54	7	P	Pn	23 57 00.9	+2.3
MDSI	Maura Dua	1.67	100	P	Pn	23 57 11.8	-1.0
MDSI				S	Sn	23 57 35.9	+2.6
LWLI	Liwa	1.73	118	P	Pn	23 57 13.7	0.0
LWLI				S	Sn	23 57 36.5	+1.6
KRJI	Kerinci	2.34	333	P	Pn	23 57 20.9	-1.1
KRJI				S	Sn	23 57 48.3	-1.5
PMBI	Palembang	2.57	61	Pn	Pn	23 57 22.9	-2.0
PPSI	Pulau Pagai	2.89	299	P	Pn	23 57 28.1	-1.2
SDSI	Sungai Dareh	3.42	341	P	Pn	23 57 35.7	-0.9
PDSI	Padang	3.86	328	P	Pn	23 57 41.3	-1.3
SISI	Saibi	4.46	310	P	Pn	23 57 49.5	-1.3
BKNI	Bangkinang	4.73	342	Pn	Pn	23 57 51.8	-2.7
CNJI	Cibinong	5.53	124	P	Pn	23 58 04.9	-0.5
	0.2nm1μm38nm,0.9s						
LEM	Lembang	5.70	118	P	Pn	23 58 10.2	+2.3
	4.3nm,0.3s,baz=346,slow=19,SNR=6.2						
LEM				Lg	Lg	23 59 42.6	
	4.1nm,0.3s,baz=163,slow=23,SNR=1.8						
LEM				LR	LR	00 00 58.3	
	comp=Z,277nm,18.4s,baz=360,slow=44						
CISI	Cisompet, Garu	6.23	123	P	Pn	23 58 15.3	+0.2
	0.3nm40nm,0.5s						
CISI	Cisompet, Garu	6.23	123		Pn	23 58 14.2	-0.9
GSI	Gunungsitoli	7.37	318	P	Pn	23 58 28.6	-2.0
	0.9nm123nm,0.4s						
GSI	Gunungsitoli	7.37	318		Pn	23 58 28.7	-2.0
RPSI	Rantau Prapat	7.73	332	Pn	Pn	23 58 33.4	-2.2
PSI	Prapat	7.83	333	P	Pn	23 58 33.5	-3.5
	0.3nm,0.3s,baz=157,slow=16,SNR=1.7						
PSI				Lg	Lg	00 00 40.4	
	0.4nm,0.3s,baz=261,slow=12,SNR=1.6						
PSI				LR	LR	00 01 47.7	
	comp=Z,258nm,18.4s,baz=162,slow=40						
SMRI	Semarang	8.37	110	Pn	Pn	23 58 42.4	-2.0
IPM	Ipoh	8.75	350	Pn	Pn	23 58 46.2	-3.3
PCJI	Pacitan	9.47	115	P	Pn	23 58 59.4	0.0
	1μm34nm,1.0s						
KSM	Kuching	9.60	54	Pn	Pn	23 58 58.7	-2.5
KULM	Kulim	9.61	349	Pn	Pn	23 58 58.0	-3.3
COCO	West Island	9.74	215	Pn	Pn	23 59 01.5	-1.5
MLSI	Meulaboh, Aceh	10.39	324	P	Pn	23 59 10.1	-1.9
	38nm,0.5s						
LHMI	Lhok Sumawe	10.89	329	Pn	Pn	23 59 16.2	-2.6
JAGI	Jajag, Banyuwa	12.31	111	P	Pn	23 59 38.2	0.0
	1μm71nm,0.7s						
JAGI	Jajag, Banyuwa	12.31	111		Pn	23 59 37.1	-1.1
SRBI	Singaraja	13.19	108	P	Pn	23 59 50.0	-0.2
CMAR	Chiang Mai Arr	22.78	351	P	P	00 01 41.3	-1.8
	0.6nm,0.4s,baz=182,slow=8.8,SNR=7.8						
PALK	Pallekele	24.58	298	LR	LR	00 09 57.8	
	comp=Z,54nm,21.6s,baz=190,slow=32						
FITZ	Fitzroy Crossi	26.50	123	P	P	00 02 18.0	+0.8
	5.1nm,0.6s,baz=310,slow=7.0,SNR=25						
FITZ	Fitzroy Crossi	26.50	123	P	P	00 02 18.3	+1.0
FITZ				IAmb	IAmb	00 02 25.6	
	comp=Z,4.2nm,0.8s						
H01W3	Cape Leeuwin H	32.38	162	T	T	00 37 01.3	
	baz=339,slow=76,SNR=22						
H01W2	Cape Leeuwin H	32.39	162	T	T	00 37 06.0	
	baz=339,slow=76,SNR=32						
H01W1	Cape Leeuwin H	32.39	162	T	T	00 37 14.0	
	baz=339,slow=76,SNR=28						
ODAN	Odare	34.17	335	*e*P	P	00 03 25.0	-0.1
	comp=Z,8.9nm,0.5s						
TAPN	Taplejung	34.47	336	*e*P	P	00 03 28.2	+0.4
	comp=Z,15nm,0.8s						
RAMN	Ramite	34.58	334	*e*P	P	00 03 28.8	+0.1
	comp=Z,4.3nm,0.3s						
WB0	Warramunga Arr	34.70	119	P	P	00 03 30.2	+0.6
WB0				IAmb	IAmb	00 03 40.5	
	comp=Z,5.5nm,1.1s						
WRA	Warramunga Arr	34.72	119	P	P	00 03 30.4	+0.7
	comp=Z,3.1nm,0.4s,baz=299,slow=9.2,SNR=12						
WB2	Warramunga Arr	34.73	119	P	P	00 03 30.4	+0.6
WR0	Warramunga Arr	34.90	119	P	P	00 03 31.9	+0.6
JIRN	Jiri	35.38	334	*e*P	P	00 03 35.8	+0.1
	comp=Z,38nm,0.7s						
GUN	Gumba	35.73	334	*e*P	P	00 03 38.4	-0.3
	comp=Z,15nm,0.4s						
FORT	Forrest	35.75	141	P	P	00 03 38.2	-0.3
ASAR	Alice Springs	35.93	126	P	P	00 03 41.3	+1.1
	comp=Z,2.8nm,0.4s,baz=298,slow=8.1,SNR=48						
ASAR				PcP	PcP	00 06 08.1	+2.0
	comp=Z,0.4nm,0.4s,baz=301,slow=2.4,SNR=3.7						
ASAR				ScP	ScP	00 09 49.2	+2.4
	comp=Z,0.5nm,0.9s,baz=300,slow=4.2,SNR=4.1						
ASAR	Alice Springs	35.93	126	P	P	00 03 41.1	+1.0
AS31	Alice Springs	35.93	126	P	P	00 03 41.4	+1.2
AS31				IAmb	IAmb	00 03 43.0	
	comp=Z,2.9nm,0.4s						
GKN	Gorkha	36.36	333	*e*P	P	00 03 43.8	0.0
	comp=Z,6.8nm,0.3s						
DANN	Dangsing	37.06	332	*e*P	P	00 03 49.7	-0.3
	comp=Z,20nm,0.4s						
LZH	Lanzhou	40.09	2	*e*P	P	00 04 16.8	+1.7
LZH				pP	pP	00 04 28.3	-3.2
LZH				sP	sP	00 04 33.5	-5.6
LZH				*e*PP	PnPn	00 05 54.3	+1.8
HHC	Hu-ho-hao-te	45.58	10	*e*P	P	00 05 01.3	+1.9
STKA	Stephens Creek	45.82	132	P	P	00 05 02.6	+1.3
	comp=Z,2.2nm,0.7s,baz=306,slow=7.1,SNR=5.9						
STKA	Stephens Creek	45.82	132	P	P	00 05 02.9	+1.5
NIL	Nilore	46.72	326	P	P	00 05 08.2	-0.2
NIL					pP	00 05 18.0	-6.9
WMQ	Urumqi	49.63	346	*e*P	P	00 05 31.6	+0.9
WMQ				pP	pP	00 05 43.0	-4.4
KSH	Kashi	49.90	333	P	P	00 05 35.0	+2.1
KSH				pP	pP	00 05 47.3	-2.3
KSH				PcP	PcP	00 06 54.1	+1.6
KSH				PcS	PcS	00 10 50.3	+0.8
KSH				S	S	00 12 41.3	+2.8
SONM	Songino Array	51.92	3	P	P	00 05 48.2	+0.3
	comp=Z,0.8nm,0.6s,baz=187,slow=8.4,SNR=5.7						
MK31	Makanchi Array	53.83	343	P	P	00 06 01.4	-0.4
MK31				IAmb	IAmb	00 06 01.9	
	comp=Z,1.8nm,0.6s						
MKAR	Makanchi Array	53.83	343	P	P	00 06 01.4	-0.5
	comp=Z,2.2nm,0.4s,baz=151,slow=9.1,SNR=58						
MKAR	Makanchi Array	53.83	343	P	P	00 06 00.8	-1.1
MAKZ	Makanchi	53.94	343	P	P	00 06 01.8	-0.8
KKAR	Karatay Array	55.26	332	P	P	00 06 12.4	+0.1
KURK	Kurchatov	58.43	342	P	P	00 06 34.3	-0.3
KURK				IAmb	IAmb	00 06 34.7	
	comp=Z,2.6nm,0.7s						
ZAA0	Zalesovo Array	59.80	348	P	P	00 06 43.5	-0.5
ZAA0				IAmb	IAmb	00 06 44.0	
	comp=Z,4.0nm,0.9s						
ZALV	Zalesovo Beam	59.80	348	P	P	00 06 43.4	-0.6
	comp=Z,4.1nm,0.4s,baz=164,slow=6.4,SNR=24						
ZALV	Zalesovo Beam	59.80	348	P	P	00 06 43.1	-0.9
BRVK	Borovoye	63.18	339	P	P	00 07 05.9	-0.9
BRVK				IAmb	IAmb	00 07 18.3	
	comp=Z,1.6nm,0.9s						
ABKAR	Akbulak array	64.77	331	P	P	00 07 16.4	-0.9
ABKAR	Akbulak array	64.77	331	P	P	00 07 16.8	-0.5
ABKAR				IAmb	IAmb	00 07 26.9	
	comp=Z,4.2nm,0.8s						
KBZ	Khabaz	71.61	319	P	P	00 07 58.9	-1.4
	comp=Z,1.2nm,0.7s,baz=108,slow=7.7,SNR=2.8						
KIV	Kislovodsk	71.84	319	P	P	00 08 02.3	+0.5
KIV				IAmb	IAmb	00 08 05.7	
	comp=Z,3.4nm,1.0s						
GAZ	Gaziantep	73.20	311	P	P	00 08 08.1	-1.9
GAZ				IAmb	IAmb	00 08 12.0	
	comp=Z,3.2nm,0.8s						
BSWZ	Blackbirch Sta	73.32	132	P	P	00 08 08.6	-2.0
MSWZ	Moikau Station	74.30	132	P	P	00 08 17.1	+0.8
PLWZ	Palliser	74.32	132	P	P	00 08 14.2	-2.3
BR131	Keskin Array S	76.66	312	P	P	00 08 29.1	-0.9
BRTR	Keskin Array B	76.66	312	P	P	00 08 29.5	-0.4
	comp=Z,0.8nm,0.7s,baz=139,slow=6.9,SNR=8.0						
BRTR	Keskin Array B	76.66	312	P	P	00 08 29.4	-0.6
BOSA	Boshof	76.83	242	P	P	00 08 32.0	+0.8
	comp=Z,1.9nm,0.7s,baz=149,slow=3.1,SNR=4.7						
VNDA	Vanda	79.54	169	P	P	00 08 46.1	+1.1
	comp=Z,0.4nm,0.7s,baz=22,slow=11,SNR=1.7						
KARP	Karpathos	80.59	307	P	P	00 08 48.7	-2.8
KARP				IAmb	IAmb	00 08 54.2	
	comp=Z,5.6nm,0.9s						
BURAR	Bucovina Array	84.56	318	P	P	00 09 12.3	+0.2
BUR08	Bucovina Ar. S	84.58	318	P	P	00 09 12.3	+0.2
FINES	FINESS Array B	87.22	332	P	P	00 09 25.3	+0.6
	comp=Z,1.8nm,0.9s,baz=130,slow=3.0,SNR=5.7						
ARCES	ARCESS Array B	89.38	340	P	P	00 09 34.8	0.0
	comp=Z,1.5nm,0.8s,baz=96,slow=8.3,SNR=1.3						
CPUP	Villa Florida	143.93	212	PKP	PKPdf	00 16 14.4	-0.1
	comp=Z,0.4nm,0.3s,baz=65,slow=2.4,SNR=3.0						
TXAR	Lajitas Array	144.77	42	PKP	PKPdf	00 16 15.9	-0.2
	comp=Z,0.4nm,0.6s,baz=172,slow=2.7,SNR=3.7						
U40A	Yellville	145.00	22		PKPab	00 16 15.4	0.0
WCI	Wyandotte Cave	145.18	12		PKPdf	00 16 16.6	+0.3
WCI					PKiKP	00 16 26.2	+6.0
FCAR	Ozark Folk Cen	145.68	21	pPKPdf	PKiKP	00 16 26.5	+5.2
LCAR	Lake Charles	145.86	20		PKPab	00 16 18.9	+0.2

IDC 24 00:14:25.4±10.0**, 15°.45S**×**167°.89E, h201**^{km}±125^{km}**, mb3.1**/3**, mb1 3.3**/4**, mb1mx3.1**/36**, mbtmp3.7**/4**, Error ellipse: s-maj=127.4km s-min=38.7km az=151.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	6.73	192	P	Pn	00 16 01.6	-0.6
	1.6nm,0.3s,baz=180,slow=7.3,SNR=10						
DZM				S	S	00 17 20.4	+1.6
	baz=330,slow=20,SNR=1.7						
ASAR	Alice Springs	32.99	250	P	P	00 20 41.2	-0.4
	0.3nm,0.5s,baz=79,slow=8.7,SNR=6.8						
SONM	Songino Array	83.43	323	P	P	00 26 31.3	+0.9
	0.8nm,0.8s,baz=134,slow=6.2,SNR=3.8						
ILAR	Eielson Array	87.03	18	P	P	00 26 47.2	-0.4
	0.2nm,0.6s,baz=235,slow=4.4,SNR=4.5						

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*IDC **24** 00:20:57.6±0.8, 1°.00S×122°.81E, h0^{km}, mb4.0/10, mb1 4.2/12, mb1mx4.0/35, mbtmp4.1/12, ML4.3/2, MS3.1/7, Ms1 3.1/7, ms1mx2.8/35, Error ellipse: s-maj=26.8km s-min=15.8km az=75.0*

*DJA **24** 00:21:01.1±0.2, 1°S±2°×12°3E±°, h10^{km}, M4.7/19, mB5.3/6, mb4.8/12, MLv4.7/19, Mw(mB)4.7/6*

*NEIC **24** 00:21:01.6±1.8, 1°.10S±0°.06×122°.72E±0°.06, h31^{km}±6^{km}, mb4.3/19, Error ellipse: s-maj=9.6km s-min=9.0km az=151.0*

ISC 24 00:21:01.1±0.7**, 1°.10S**±0°.05×**122°.72E**±0°.05**, h23**^{km}±5^{km}**, n84,** σ**1^{s}.42**/87**, mb4.1**/18**, MS3.0**/5**, 2D, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	Luwuk	0.08	45	P	Pb	00 21 03.5	-1.9
LUWI				S	Sb	00 21 07.6	-0.6
LUWI	Luwuk	0.08	45		Pb	00 21 04.3	-1.0
MRSI	Marisa	1.75	334	P	Pn	00 21 30.5	+0.4
MRSI				S	Sb	00 21 55.6	+1.6
KMSI	Cibinong	2.09	37	P	Pb	00 21 37.4	-0.9
KMSI				S	Sb	00 22 06.4	+2.6
MPSI	Mapaga	3.16	297	P	Pn	00 21 50.4	+0.9
SANI	Sanana	3.40	106	P	Pn	00 21 52.2	-0.7
SPSI	Sidrap Palu	4.10	226	P	Pn	00 22 02.1	-0.3
BNSI	Bone	4.19	218	P	Pn	00 22 03.7	0.0
BBSI	Bau Bau	4.36	182	P	Pn	00 22 06.8	+0.7
LBMI	Labuha	4.80	85	P	Pn	00 22 13.1	+0.9
NLAI	Namlea	4.87	116	P	Pn	00 22 14.4	+1.4
KAPI	Kappang	4.89	217	Pn	Pn	00 22 13.4	+0.1
	54nm,0.3s,baz=4.5,slow=5.0,SNR=49						
KAPI				Sn	Sn	00 23 09.8	+0.5
	6.5nm,0.3s,baz=143,slow=18,SNR=1.4						
KAPI				LR	LR	00 24 19.9	
	comp=Z,383nm,19.3s,baz=94,slow=40						
BKSI	Bulukumba	4.93	212	P	Pn	00 22 14.0	+0.1
BKSI				S	Sn	00 23 11.7	+1.4
TNTI	Ternate	5.01	68	P	Pn	00 22 18.3	+3.4
	0.5nm49nm,0.5s						
TNTI	Ternate	5.01	68	Pn	Pn	00 22 14.6	-0.3
BKB	Balikpapan	5.82	268	P	Pn	00 22 25.4	-0.7
	0.8nm100nm,0.8s						
BKB	Balikpapan	5.82	268	Pn	Pn	00 22 26.8	+0.7
AAI	Ambon	6.05	115	P	Pn	00 22 31.4	+2.1
	0.6nm3μm184nm,0.8s						
MSAI	Masohi	6.60	110	P	Pn	00 22 40.4	+3.6
	0.2nm30nm,0.8s						
KBKI	Kotabaru	6.90	251	P	Pn	00 22 41.8	+0.8
	0.1nm14nm,0.9s						
MMRI	Maumere	7.50	184	P	Pn	00 22 49.0	-0.3
MMRI	Maumere	7.50	184	Pn	Pn	00 22 49.7	+0.5
EDFI	Ende, Flores	7.67	188	P	Pn	00 22 51.4	-0.3
BNDI	Bandanaira	7.94	116	P	Pn	00 22 58.9	+3.6
	1.0nm159nm,0.9s						
KCP	Kidapawan	8.39	16	⇓*e*P	Pn	00 23 06.1	+4.5
CTBH	Cotabato--PC H	8.40	10	⇓*i*P	Pn	00 23 05.7	+4.1
SWI	Sorong	8.54	89	P	Pn	00 23 05.3	+1.7
	46nm,0.7s						
SIJI	Sorong	8.55	89	Pn	Pn	00 23 06.4	+2.7
	5.1nm,0.3s,baz=284,slow=9.9,SNR=12						
SIJI				Sn	Sn	00 24 38.7	-0.8
	1.2nm,0.3s,baz=119,slow=23,SNR=1.3						
SIJI				LR	LR	00 26 41.6	
	comp=Z,72nm,20.9s,baz=268,slow=41						
DAV	Davao City (W)	8.60	19	Pn	Pn	00 23 06.2	+1.8
SOEI	Soe	8.74	170	P	Pn	00 23 08.3	+2.0
	75nm,0.9s						
SOEI	Soe	8.74	170		Pn	00 23 06.1	-0.3
KKM	Kota Kinabalu	9.62	318	Pn	Pn	00 23 18.1	-0.3
FAKI	Fak Fak	9.70	101	P	Pn	00 23 19.6	+0.2
FAKI	Fak Fak	9.70	101		Pn	00 23 19.3	-0.1
MTN	Manton Dam	14.34	145	Pn	Pn	00 24 23.5	+0.5
KNRA	Kununurra	15.67	158	Pn	Pn	00 24 39.6	-1.0
FITZ	Fitzroy Crossi	17.14	171	P	P	00 25 01.6	+0.8
	0.3nm,0.3s,baz=6.3,slow=7.9,SNR=8.8						
FITZ	Fitzroy Crossi	17.14	171	P	Pn	00 24 58.9	-0.4
MDSI	Maura Dua	18.82	259	P	Pn	00 25 22.4	+2.4
WB0	Warramunga Arr	21.79	149	P	P	00 25 51.4	-0.3
WB0				IAmb	IAmb	00 25 54.3	
	comp=Z,13nm,1.0s						
WRA	Warramunga Arr	21.91	149	P	P	00 25 53.2	+0.2
	comp=Z,7.7nm,1.0s,baz=330,slow=11,SNR=13						
WRA				LR	LR	00 36 42.8	
	comp=Z,35nm,19.0s,baz=140,slow=43						
WRA	Warramunga Arr	21.91	149	P	P	00 25 53.6	+0.6
WR0	Warramunga Arr	22.03	149	P	P	00 25 54.4	+0.1
WR0				IAmb	IAmb	00 26 00.7	
	comp=Z,19nm,1.1s						
COEN	Coen	23.93	123	P	P	00 26 11.5	-2.3
COEN				IAmb	IAmb	00 26 19.1	
	comp=Z,7.6nm,1.1s						
RPSI	Rantau Prapat	24.08	279	P	P	00 26 15.3	+0.1
RPSI	Rantau Prapat	24.08	279	P	P	00 26 14.8	-0.4
RPSI				IAmb	IAmb	00 26 18.1	
	comp=Z,4.9nm,0.9s						
PSI	Prapat	24.10	279	P	P	00 26 15.3	-0.2
	comp=Z,2.5nm,0.4s,baz=60,slow=6.9,SNR=3.5						
TPUB	Ta-pu	24.34	355	P	P	00 26 16.8	-0.6
YULB	Yu-li	24.38	357	P	P	00 26 16.4	-1.5
YULB				IAmb	IAmb	00 26 24.2	
	comp=Z,13nm,0.9s						
AS31	Alice Springs	24.92	155	P	P	00 26 22.9	+0.1
ASAR	Alice Springs	24.92	155	P	P	00 26 23.1	+0.4
	comp=Z,1.4nm,0.6s,baz=341,slow=12,SNR=21						
ASAR				LR	LR	00 36 39.3	
	comp=Z,41nm,18.2s,baz=300,slow=38						
ASAR	Alice Springs	24.92	155	P	P	00 26 22.7	-0.1
YHNB	Yeheng	25.65	357	P	P	00 26 27.8	-1.6
CMAR	Chiang Mai Arr	30.40	311	P	P	00 27 13.6	+1.7
	comp=Z,0.6nm,0.3s,baz=140,slow=7.7,SNR=6.1						
CMAR				LR	LR	00 41 56.0	
	comp=Z,25nm,19.6s,baz=126,slow=41						
CHTO	Chiang Mai	30.62	311	P	P	00 27 13.1	-0.8
CHTO				IAmb	IAmb	00 27 17.0	
	comp=Z,4.7nm,1.0s						
WHN	Wuhan	32.46	346	P	P	00 27 37.4	+7.6
KMI	Kunming	32.46	325	P	P	00 27 31.5	+1.3
BRDH	Bariadhala	38.41	310	LR	LR	00 44 49.9	
	comp=Z,54nm,21.2s,baz=74,slow=37						
MJAR	Matsushiro Arr	40.12	19	P	P	00 28 33.5	-1.8
	comp=Z,1.2nm,0.3s,baz=181,slow=9.2,SNR=4.8						
MJAR				LR	LR	00 43 12.8	
	comp=Z,27nm,21.6s,baz=115,slow=33						
TAPN	Taplejung	43.97	313	*e*P	P	00 29 07.9	+0.7
	comp=Z,7.4nm,0.6s						
RAMN	Ramite	44.57	311	*e*P	P	00 29 13.1	+1.1
	comp=Z,10nm,0.6s						
JIRN	Jiri	45.26	312	*e*P	P	00 29 18.4	+0.8
	comp=Z,15nm,0.6s						
GUN	Gumba	45.63	312	*e*P	P	00 29 21.2	+0.7
	comp=Z,21nm,0.7s						
PKI	Pulchoki	45.80	311	*e*P	P	00 29 22.2	+0.4
PKIN	Phulchoki	45.81	311	*e*P	P	00 29 23.0	+1.1
USRK	Ussuriysk Ar.	45.85	9	P	P	00 29 20.4	-1.1
	comp=Z,1.2nm,0.5s,baz=200,slow=6.1,SNR=4.9						
KKN	Kakani	46.01	312	*e*P	P	00 29 24.0	+0.6
DANN	Dangsing	47.45	311	*e*P	P	00 29 35.2	+0.5
	comp=Z,14nm,0.5s						
ULN	Ulaanbaatar	50.64	346	P	P	00 29 57.4	-1.2
SONM	Songino Array	50.77	346	P	P	00 29 60.0	+0.3
	comp=Z,1.0nm,0.7s,baz=166,slow=8.6,SNR=8.7						
SONM	Songino Array	50.77	346	P	P	00 29 58.0	-1.7
MK31	Makanchi Array	59.40	329	IAmb	IAmb	00 31 11.9	
	comp=Z,2.8nm,0.8s						
MKAR	Makanchi Array	59.40	329	P	P	00 31 01.0	-0.9
	comp=Z,1.8nm,0.7s,baz=121,slow=7.7,SNR=24						
MKAR	Makanchi Array	59.40	329	P	P	00 31 01.0	-0.9
MAKZ	Makanchi	59.57	329	P	P	00 31 02.4	-0.6
MAKZ				IAmb	IAmb	00 31 13.1	
	comp=Z,2.1nm,0.8s						
PETK	Petropavlovsk-	61.40	23	P	P	00 31 15.0	-0.4
	comp=Z,2.7nm,0.7s,baz=228,slow=7.6,SNR=1.5						
PETK	Petropavlovsk-	61.40	23	P	P	00 31 14.8	-0.6
ZALV	Zalesovo Beam	63.19	336	P	P	00 31 27.2	-0.2
	comp=Z,0.5nm,0.4s,baz=149,slow=3.0,SNR=3.8						
ZALV	Zalesovo Beam	63.19	336		pP	00 31 35.6	+0.9
KURK	Kurchatov	63.78	330	P	P	00 31 30.2	-1.1
KURK				pP	pP	00 31 39.7	+1.0
ABKAR	Akbulak array	73.42	323	P	P	00 32 30.4	-1.1
ABKAR	Akbulak array	73.42	323	P	P	00 32 30.7	-0.8
ABKAR				IAmb	IAmb	00 32 44.4	
	comp=Z,0.8nm,0.9s						
PDAR	Pinedale Array	117.60	41	PKP	PKPdf	00 39 45.6	-0.4
	comp=Z,0.2nm,0.6s,baz=64,slow=2.1,SNR=3.7						
TORD	Torodi Ar. Bea	120.41	285	PKP	PKPdf	00 39 50.9	-0.9
	comp=Z,0.9nm,0.9s,baz=74,slow=0.2,SNR=3.7						

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*SOME **24** 00:56:20.7, 39°.52N×77°.17E, h5^{km}*

*NNC **24** 00:56:22.9±0.6, 39°.59N×77°.17E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=3.9km s-min=2.9km az=165.0*

*KRNET **24** 00:56:28.1±0.1, 39°.73N×77°.17E, mb3.0*

ISC 24 00:56:29.2±1.0**, 39°.53N**±0°.04×**77°.32E**±0°.04**, h25**^{km}**, n61,** σ**2^{s}.26**/67**, 27C-17D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRN	Naryn	2.15	332	⇑*i*P	Pn	00 57 04.0	+0.3
	baz=32						
NRN				⇑*i*S	Sb	00 57 29.8	-4.2
	baz=32						
KDJ	Kajisay	2.60	358	⇓*i*P	Pn	00 57 10.8	+1.0
	baz=1.0						
KDJ				⇓*i*S	Sn	00 57 42.2	+1.6
	baz=1.0						
ULHL	Ulahol	2.83	344	⇑*e*P	Pn	00 57 13.7	+0.7
	baz=45						
ULHL				⇑*i*S	Sn	00 57 47.3	+0.8
	baz=45						
KZA	Kyzart	2.99	329	⇓*i*P	Pn	00 57 15.9	+0.5
	baz=29						
KZA				⇓*i*S	Sn	00 57 51.5	+0.9
	baz=29						
PRZ	Przheval'sk	3.06	15	⇑*i*P	Pn	00 57 18.5	+2.4
	baz=19						
PRZ				⇑*i*S	Sn	00 57 54.0	+2.0
	baz=19						
BOOM	Boomskoye usch	3.13	341	⇑*i*P	Pn	00 57 18.1	+1.0
	baz=42						
BOOM				⇑*i*S	Sn	00 57 54.5	+0.6
	baz=42						
ARLS	Aral	3.26	317	⇓*e*P	Pn	00 57 19.7	+0.9
	baz=16						
ARLS				⇓*i*S	Sn	00 57 57.9	+1.0
	baz=16						
ANVS	Anan'yevo	3.26	4	⇑*e*P	Pn	00 57 21.0	+2.1
	baz=7.0						
ANVS				⇑*i*S	Sn	00 57 59.1	+2.2
	baz=7.0						
UCH	Uchtor	3.43	323	⇑*i*P	Pn	00 57 22.1	+0.6
	baz=22						
UCH				⇑*i*S	Sn	00 58 02.2	+0.6
	baz=22						
TNSS	Tian-Shan	3.51	356	*e*P	Pb	00 57 26.2	-4.7
	5.3nm,0.4s						
TNSS				*e*S	Sb	00 58 13.4	+0.2
	9.2nm,0.4s						
TNSS	Tian-Shan	3.51	356	Pg	Pb	00 57 26.2	-4.7
	5.2nm,0.5s						
TNSS				Lg	Lg	00 58 13.6	
	8.9nm,0.5s						
IZV	Izvestkoviy	3.54	352	*e*P	Pb	00 57 26.8	-4.4
	2.2nm,0.5s						
IZV				*e*S	Sb	00 58 14.5	+0.6
	11nm,0.3s						
IZV	Izvestkoviy	3.54	352	Pg	Pb	00 57 26.8	-4.4
	2.2nm,0.5s						
IZV				Lg	Lg	00 58 14.5	
	11nm,0.3s						
KBK	Karagaybulak	3.60	331	⇓*i*P	Pn	00 57 24.3	+0.8
	baz=31						
KBK				⇓*i*S	Sn	00 58 05.8	+0.5
	baz=31						
SATY	Saty	3.62	13	*e*P	Pb	00 57 28.2	-4.3
	1.5nm,0.4s						
SATY				*e*S	Sb	00 58 16.9	+0.9
	6.3nm,0.4s						
SATY	Saty	3.62	13	Pg	Pb	00 57 28.1	-4.4
	2.1nm,0.5s						
SATY				Lg	Lg	00 58 16.9	
	9.0nm,0.5s						
MDOK	Medeo	3.63	357	*e*P	Pb	00 57 28.4	-4.4
	1.9nm,0.3s						
MDOK				*e*S	Sb	00 58 17.0	+0.6
	8.1nm,0.4s						
MDOK	Medeo	3.63	357	⇑Pg	Pb	00 57 28.9	-3.9
	3.1nm,0.8s						
MDOK				⇑Lg	Lg	00 58 17.1	
	13nm,0.8s						
MDOK	Medeo	3.63	357	Pg	Pb	00 57 28.4	-4.4
	1.9nm,0.3s						
MDOK				Lg	Lg	00 58 17.0	
	8.1nm,0.4s						
KST	Kastek	3.66	344	⇓*e*P	Pb	00 57 28.1	-5.0
	2.0nm,0.3s						
KST				*e*S	Sb	00 58 16.6	-0.4
	6.4nm,0.3s						
KST	Kastek	3.66	344	Pg	Pb	00 57 28.1	-5.0
	5.5nm,0.9s						
KST				Lg	Lg	00 58 17.1	
	7.3nm,0.6s						
MTBS	Maitube	3.66	350	*e*P	Pb	00 57 28.6	-4.5
	5.0nm,0.1s						
MTBS				*e*S	Sb	00 58 17.6	+0.5
	6.1nm,0.3s						
MTBS	Maitube	3.66	350	Pg	Pb	00 57 28.6	-4.5
	5.0nm,0.1s						
MTBS				Lg	Lg	00 58 17.4	
	6.1nm,0.2s						
KOTS	Kotyrbulak	3.70	358	*e*P	Pb	00 57 28.9	-5.1
	7.7nm,0.3s						
KOTS				*e*S	Sb	00 58 18.0	-0.4
	9.4nm,0.3s						
KOTS	Kotyrbulak	3.70	358	Pg	Pb	00 57 28.9	-5.1
	7.7nm,0.3s						
KOTS				Lg	Lg	00 58 18.0	
	9.4nm,0.3s						
ARSB	Arslanbob	3.77	300	⇑*i*P	Pn	00 57 26.9	+1.1
	baz=98						
ARSB				⇑*i*S	Sn	00 58 10.4	+1.1
	baz=98						
AAK	Ala-Archa	3.77	326	⇑*e*P	Pn	00 57 26.7	+0.9

	baz=26						
AAK				⇑iS	Sn	00 58 10.0	+0.6
	baz=26						
AAK	Ala-Archa	3.77	326	⇓Pg	Pb	00 57 29.6	-5.5
	3.5nm,0.5s						
AAK				⇓Lg	Lg	00 58 18.5	
	20nm,0.7s						
AML	Almayashu	3.78	315	⇓eP	Pn	00 57 27.2	+0.9
	baz=14						
AML				⇓eS	Sn	00 58 10.9	+0.7
	baz=14						
UZB	Uzynbulak	3.83	19	eP	Pb	00 57 32.5	-3.7
	0.7nm,0.2s						
UZB				eS	Sb	00 58 24.2	+2.0
	2.4nm,0.3s						
UZB	Uzynbulak	3.83	19	Pg	Pb	00 57 32.5	-3.7
	1.1nm,0.2s						
UZB				Lg	Lg	00 58 24.2	
	3.5nm,0.4s						
DGS	Degeres	3.89	343	eP	Pn	00 57 31.2	+3.8
	4.6nm,0.4s						
DGS				eS	Sb	00 58 22.0	-1.7
	6.7nm,0.4s						
DGS	Degeres	3.89	343	Pg	Pn	00 57 31.2	+3.8
	4.6nm,0.4s						
DGS				Lg	Lg	00 58 22.0	
	6.7nm,0.4s						
SHLS	Shalkode	3.96	23	eP	Pb	00 57 37.9	-0.5
	2.3nm,0.1s						
SHLS				eS	Sb	00 58 33.7	+7.8
	7.3nm,0.4s						
SHLS	Shalkode	3.96	23	Pg	Pb	00 57 37.9	-0.5
	3.9nm,0.1s						
SHLS				Lg	Lg	00 58 33.7	
	7.8nm,0.3s						
CHMS	Chumysh	3.97	332	⇑Pg	Pb	00 57 33.1	-5.3
	2.6nm,0.5s						
CHMS				⇑Lg	Lg	00 58 26.4	
	6.6nm,0.6s						
KURS	Kuram	4.00	9	eP	Pb	00 57 35.3	-3.8
	2.9nm,0.8s						
KURS				eS	Sb	00 58 28.9	+1.9
	2.8nm,0.6s						
KURS	Kuram	4.00	9	Pg	Pb	00 57 35.3	-3.8
	2.9nm,0.8s						
KURS				Lg	Lg	00 58 29.3	
	3.2nm,1.1s						
EKS2	Erkin-Say	4.12	321	⇑iP	Pn	00 57 31.5	+0.9
	baz=20						
EKS2				⇑iS	Sn	00 58 18.2	+0.2
	baz=20						
PDGK	Podgornoye	4.13	23	Pg	Pb	00 57 38.2	-3.1
	0.6nm,0.2s						
PDGK				Lg	Lg	00 58 34.2	
	2.5nm,0.6s						
PDGK	Podgornoye	4.13	23	⇑Pg	Pb	00 57 37.9	-3.4
	2.1nm,1.1s						
PDGK				⇑Lg	Lg	00 58 34.6	
	5.3nm,0.7s						
KTBS	Karatobe	4.21	354	eP	Pb	00 57 38.4	-4.1
	1.2nm,0.2s						
KTBS				eS	Sb	00 58 34.3	+1.6
	10nm,0.4s						
KTBS	Karatobe	4.21	354	Pg	Pb	00 57 38.4	-4.1
	1.2nm,0.2s						
KTBS				Lg	Lg	00 58 34.4	
	7.7nm,1.0s						
CHKK	Chushkaly	4.33	357	eP	Pb	00 57 41.4	-3.1
	0.7nm,0.1s						
CHKK				eS	Sb	00 58 39.3	+3.1
	5.2nm,0.2s						
CHKK	Chushkaly	4.33	357	Pg	Pb	00 57 41.3	-3.1
	0.8nm,0.1s						
CHKK				Lg	Lg	00 58 39.8	
	7.2nm,0.3s						
KRBS	Karabastau	4.34	344	eP	Pb	00 57 39.9	-4.8
	2.1nm,0.5s						
KRBS				eS	Sb	00 58 37.0	+0.3
	2.8nm,0.8s						
KRBS	Karabastau	4.34	344	Pg	Pb	00 57 39.9	-4.8
	2.1nm,0.5s						
KRBS				Lg	Lg	00 58 37.0	
	3.5nm,0.7s						
SGDS	Sogindy	4.41	334	Pg	Pb	00 57 41.0	-4.9
	3.5nm,0.5s						
SGDS				Lg	Lg	00 58 39.0	
	5.1nm,0.5s						
KUU	Kurty	4.42	351	eP	Pb	00 57 42.2	-3.8
	0.7nm,0.3s						
KUU				⇑iS	Sb	00 58 41.0	+2.0
	4.9nm,0.7s						
KUU	Kurty	4.42	351	Pg	Pb	00 57 42.2	-3.8
	2.0nm,0.7s						
KUU				Lg	Lg	00 58 41.0	
	4.9nm,0.7s						
MRKS	Merke	4.46	317	eP	Pb	00 57 41.9	-4.9
	2.7nm,0.4s						
MRKS				eS	Sb	00 58 40.5	+0.4
	6.6nm,0.7s						
MRKS	Merke	4.46	317	Pg	Pb	00 57 41.9	-4.9
	5.0nm,0.5s						
MRKS				Lg	Lg	00 58 40.5	
	7.2nm,0.7s						
ARK	Arkit	4.66	301	⇓eP	Pn	00 57 39.4	+1.3
	baz=99						
ARK				⇓iS	Sn	00 58 31.4	0.0
	baz=99						
ARXS	Arharly	4.69	4	eP	Pb	00 57 47.8	-3.0
	2.1nm,0.4s						
ARXS				eS	Sb	00 58 50.7	+3.9
	4.4nm,0.5s						
ARXS	Arharly	4.69	4	Pg	Pb	00 57 47.8	-3.0
	2.1nm,0.7s						
ARXS				Lg	Lg	00 58 50.7	
	4.4nm,0.5s						
BTK	Batken	5.04	278	⇓iP	Pn	00 57 46.1	+2.9
	baz=76						
BTK				⇓iS	Sn	00 58 41.4	+0.8
	baz=76						
DJR	Jarkent	5.14	20	Pg	Pb	00 57 56.0	-2.4
	0.3nm,0.1s						
DJR				Lg	Lg	00 59 04.6	
	2.4nm,0.2s						
KAPS	Kapalarasan	5.94	14	Pg	Pb	00 58 12.4	+0.3
	0.8nm,0.6s						
KAPS				Lg	Lg	00 59 32.8	
	1.2nm,0.1s						
BTLS	Baital	6.02	337	Pg	Pb	00 58 11.4	-1.8
	0.9nm,0.2s						
BTLS				Lg	Lg	00 59 31.1	
	2.9nm,0.4s						
KK31	Karatay Array	6.25	307	⇑Pg	Pb	00 58 15.6	-1.5
	2.3nm,1.1s,baz=121,slow=28,SNR=2.5						
KK31				⇑Lg	Lg	00 59 37.2	
	1.2nm,0.5s,baz=122,slow=27,SNR=5.6						
BRLS	Borolday	6.63	304	Pg	Pb	00 58 21.9	-1.9
	1.0nm,0.3s						
BRLS				Lg	Lg	00 59 49.4	
	0.9nm,0.3s						

NEIC ***24*** *01:32:54.7±2.8, 3°.92N±0°.05×95°.89E±0°.07, h44^{km}±6^{km}, mb4.8/51, Error ellipse: s-maj=10.7km s-min=7.8km az=85.0*

MOS ***24*** *01:32:54.3±1.1, 4°.09N×95°.95E, h46^{km}, mb5.0/43, Error ellipse: s-maj=8.9km s-min=4.9km az=117.7*

KLM ***24*** *01:32:55.0, 3°.86N×95°.76E, h54^{km}, mb4.9*

DJA ***24*** *01:32:58.4±0.3, 4°N±2°×9°6E±°, h63^{km}±3^{km}, M4.8/36, mb4.9/36, mB5.3/14, MLv4.8/12, Mw(mB)4.7/14, Mwp6.0/2*

IDC ***24*** *01:32:59.2±2.1, 4°.04N×96°.00E, h72^{km}±19^{km}, mb4.2/33, mb1 4.3/35, mb1mx4.2/47, mbtmp4.5/35, MS3.5/24, Ms1 3.5/24, ms1mx3.4/40, Error ellipse: s-maj=16.0km s-min=9.2km az=53.0*

ISC 24 01:32:55.1±0.4, **3°.95N**±0°.04×**95°.90E**±0°.04, **h40**^{km}±3^{km}, **h40**^{km}**:pP-P, n314,** σ1^{s}**53**/319, **mb4.8**/102, **MS3.5**/21, **30C-24D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSI	Meulaboh, Aceh	0.60	58	P	Pn	01 33 08.9	+1.7
TPTI		1.45	118	P	Pn	01 33 20.2	+1.4
SNSI	Sinabang, Aceh	1.59	164	P	Pn	01 33 21.9	+1.2
LHMI	Lhok Sumawe	1.65	39	P	Pn	01 33 24.8	+3.2
LHMI	Lhok Sumawe	1.65	39		Pn	01 33 25.0	+3.4
LHMI					Sn	01 33 39.9	-1.7
KCSI	Kotacane, Aceh	1.92	103	P	Pn	01 33 28.4	+3.1
GSI	Gunungsitoli	3.12	147	P	Pn	01 33 43.0	+1.3
GSI	Gunungsitoli	3.12	147		Pn	01 33 43.1	+1.3
GSI					Sn	01 34 15.3	-2.5
PSI	Prapat	3.23	111	P	Pn	01 33 47.0	+3.6
	20nm,0.3s,baz=316,slow=7.8,SNR=64						
PSI				S	Sn	01 34 26.1	+5.4
	36nm,0.3s,baz=281,slow=21,SNR=5.8						
PSI				LR	LR	01 35 18.7	
	comp=Z,713nm,21.7s,baz=280,slow=43						
PSI	Prapat	3.23	111	P	Pn	01 33 46.9	+3.5
RPSI	Rantau Prapat	3.27	112		Pn	01 33 46.9	+3.1
RPSI	Rantau Prapat	3.27	112		Pn	01 33 47.0	+3.2
RPSI					Sn	01 34 26.1	+4.6
KULM	Kulim	4.92	74		Pn	01 34 08.7	+2.1
KULM					Sn	01 35 00.3	-2.0
KULM	Kulim	4.92	74	P	Pn	01 34 09.0	+2.4
IPM	Ipoh	5.14	84		Pn	01 34 11.4	+1.7
IPM	Ipoh	5.14	84	P	Pn	01 34 11.0	+1.4
SISI	Saibi	6.13	149	P	Pn	01 34 24.4	+1.2
	0.3nm684nm53nm,0.7s						
BKNI	Bangkinang	6.27	125	Pn	Pn	01 34 24.6	-0.5
PDSI	Padang	6.64	137	P	Pn	01 34 33.1	+2.9
	0.4nm3μm28nm,0.5s						
KSI	Kapahiang	10.09	138	P	Pn	01 35 24.4	+6.8
KSI	Kapahiang	10.09	138	P	Pn	01 35 20.1	+2.5
KSI				pmax	pmax		
	comp=Z,84nm,0.6s						
MNAI	Manna	10.86	139	P	Pn	01 35 27.9	-0.1
	comp=Z,126nm,0.5s						
MNAI	Manna	10.86	139		Pn	01 35 28.4	+0.4
MNAI				Sn	Sn	01 37 23.6	-4.7
MDSI	Maura Dua	11.77	135	P	Pn	01 35 40.6	0.0
	comp=Z,436nmcomp=Z,37nm,0.7s						
KASI	Kota Agung	12.74	138	P	Pn	01 35 54.8	+1.0
	comp=Z,992nmcomp=Z,31nm,0.5s						
PBKT	Sadao Pong	13.50	21		Pn	01 36 07.5	+3.4
TNG	Tangerang	14.71	133	P	P	01 36 26.2	+0.2
CM31	Chiang Mai Arr	14.73	11	Pn	Pn	01 36 19.0	-1.8
CMAR	Chiang Mai Arr	14.73	11	P	P	01 36 23.8	-2.4
	comp=Z,1.9nm,0.3s,baz=199,slow=12,SNR=55						
CMAR				LR	LR	01 42 20.8	
	comp=Z,246nm,20.1s,baz=204,slow=38						
CMAR	Chiang Mai Arr	14.73	11	ceP	P	01 36 26.3	0.0
CMAR				pmax	pmax		
	comp=Z,16nm,0.6s						
CMAR	Chiang Mai Arr	14.73	11	Pn	Pn	01 36 20.7	-0.1
CHTO	Chiang Mai	15.07	11	P	Pn	01 36 25.8	+0.4
CHTO				pmax	pmax		
	comp=Z,14nm,0.8s						
CHTO	Chiang Mai	15.07	11		Pn	01 36 25.8	+0.4
PALK	Pallekele	15.48	283	P	P	01 36 37.4	+2.7
	comp=Z,0.5nm,0.3s,baz=107,slow=8.6,SNR=8.0						
PALK				LR	LR	01 42 19.8	
	comp=Z,158nm,19.4s,baz=116,slow=36						
PALK	Pallekele	15.48	283	⇓eP	Pn	01 36 30.6	-0.2
PALK	Pallekele	15.48	283	P	Pn	01 36 31.1	+0.3
LEM	Lembang	15.86	132	LR	LR	01 43 39.6	
	comp=Z,157nm,18.1s,baz=224,slow=40						
SBUM	Sibu	16.36	95		Pn	01 36 39.6	-2.5
SBUM	Sibu	16.36	95	P	P	01 36 45.0	+0.5
SLVN	Son La	18.95	24	P	P	01 37 11.2	-1.9
BRDH	Bariadhala	19.07	348	LR	LR	01 45 24.4	
	comp=Z,199nm,21.8s,baz=170,slow=39						
QIZ	Qiongzhong	20.26	41	P	Pn	01 37 28.6	-0.8
QIZ				S	Sn	01 41 17.3	+0.5
KKM	Kota Kinabalu	20.35	83	P	P	01 37 25.3	-3.1
KKM				IAmb	IAmb	01 37 31.5	
	comp=Z,61nm,0.7s						
SPMM	Sapulut	20.52	87	P	P	01 37 31.0	+0.7
HYB	Hyderabad	21.64	309	i P	P	01 37 45.0	+2.8
KMI	Kunming	22.06	17	P	P	01 37 49.8	+2.9
KMI				pP	sP	01 38 00.6	-1.4
KMI				sP	pP	01 38 06.8	+10
KMI				S	S	01 41 47.0	-1.2
KMI	Kunming	22.06	17	P	P	01 37 44.6	-2.3
KMI				pmax	pmax		
	comp=Z,13nm,0.9s						
KMI	Kunming	22.06	17	P	P	01 37 44.6	-2.3
SRBI	Singaraja	22.67	122	P	P	01 37 54.2	+0.9
	comp=Z,72nm,0.9s						
ODAN	Odare	24.19	341	eP	P	01 38 08.1	-0.2
MPSI	Mapaga	24.25	98	P	P	01 38 09.4	+0.8
	comp=Z,628nmcomp=Z,61nm,0.7s						
RAMN	Ramite	24.54	340	eP	P	01 38 11.7	+0.3
	comp=Z,24nm,0.5s						
TAPN	Taplejung	24.55	342	eP	P	01 38 11.6	0.0
	comp=Z,7.0nm,0.3s						
GYA	Guiyang	24.65	24	⇓iP	P	01 38 14.0	+1.8
GYA				pP	sP	01 38 28.4	+0.4
GYA				PP	PnPn	01 38 58.0	+13
GYA				S	S	01 42 39.4	+8.1
GYA				sS	sS	01 42 53.3	+4.0
GYA				SS		01 43 51.3	
SPSI	Sidrap Palu	25.11	108	P	P	01 38 15.8	-0.7
	comp=Z,12nm,0.8s						
PLAI	Plampang	25.24	120	P	P	01 38 14.9	-2.7
	comp=Z,27nm,0.6s						
JIRN	Jiri	25.34	340	eP	P	01 38 18.8	0.0
	comp=Z,73nm,0.7s						
KAPI	Kappang	25.44	110	P	P	01 38 19.9	+0.4
	comp=Z,25nm,0.6s,baz=292,slow=7.3,SNR=15						
KAPI				LR	LR	01 49 21.8	
	comp=Z,139nm,18.1s,baz=286,slow=39						
PKI	Pulchoki	25.54	338	eP	P	01 38 20.1	-0.5
	comp=Z,11nm,0.4s						
PKIN	Phulchoki	25.55	338	eP	P	01 38 20.2	-0.4
	comp=Z,16nm,0.5s						
BNSI	Bone	25.57	109	P	P	01 38 21.6	+1.0
	comp=Z,16nm,0.8s						
GUN	Gumba	25.67	339	eP	P	01 38 21.7	-0.1
	comp=Z,61nm,0.6s						
DMN	Daman	25.68	337	eP	P	01 38 21.5	-0.3
KKN	Kakani	25.78	338	eP	P	01 38 22.4	-0.3
	comp=Z,36nm,0.7s						
BKSI	Bulukumba	25.89	111	P	P	01 38 24.5	+1.0
	comp=Z,775nmcomp=Z,97nm,0.8s						
LSA	Lhasa	26.01	351	P	P	01 38 21.0	-4.0
LSA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LSA	Lhasa	26.01	351	P	P	01 38 20.9	-4.0
H08S2	Diego Garcia H	26.04	244	T	T	02 05 26.0	
	baz=64,slow=76,SNR=31						
H08S3	Diego Garcia H	26.04	244	T	T	02 05 45.3	
	baz=64,slow=76,SNR=133						
H08S1	Diego Carcia H	26.05	244	T	T	02 05 36.4	
	baz=64,slow=76,SNR=10						
GKN	Gorkha	26.22	337	eP	P	01 38 26.5	-0.1
	comp=Z,40nm,0.4s						
MRSI	Marisa	26.25	97	P	P	01 38 27.2	+0.4
	comp=Z,1μmcomp=Z,30nm,0.5s						
DANN	Dangsing	26.88	336	eP	P	01 38 32.6	0.0
	comp=Z,83nm,0.6s						
WBSI	Waikabubak, Su	27.02	120	P	P	01 38 33.3	-0.5
	comp=Z,35μmcomp=Z,772nmcomp=Z,34nm,0.7s						
LUWI	Luwuk	27.31	100	P	P	01 38 37.6	+1.2
	comp=Z,53nm,1.1s						
LUWI	Luwuk	27.31	100	P	P	01 38 34.2	-2.1
LUWI				IAmb	IAmb	01 38 52.0	
	comp=Z,38nm,0.8s						
CD2	Chengdu	27.83	15	P	P	01 38 40.3	-0.5
BASI	Baing, Sumba	28.32	120	P	P	01 38 44.7	-0.7
	comp=Z,556nmcomp=Z,41nm,0.8s						
EDFI	Ende, Flores	28.64	116	P	P	01 38 46.7	-1.7
DAV	Davao City (W)	29.70	83	LR	LR	01 53 12.7	
	comp=Z,43nm,18.2s,baz=298,slow=41						
SOEI	Soe	31.37	116	P	P	01 39 19.8	+7.2
SOEI	Soe	31.37	116	P	P	01 39 09.3	-3.2
SOEI				IAmb	IAmb	01 39 24.4	
	comp=Z,19nm,0.8s						
WHN	Wuhan	31.68	31	P	P	01 39 25.9	+11
XAN	Xi'an	32.30	20	P	P	01 39 19.9	-0.5
XAN				pP	pP	01 39 27.0	-4.4
XAN	Xi'an	32.30	20	P	P	01 39 19.4	-1.0
XAN				pmax	pmax		
	comp=Z,21nm,0.6s						
XAN	Xi'an	32.30	20	P	P	01 39 19.4	-1.0
LZH	Lanzhou	32.81	12	eP	P	01 39 25.1	+0.1
LZH				pP	sP	01 39 42.6	+1.8
LZH				sP	pP	01 39 50.9	+15
LZH				PP	PnPn	01 40 36.0	+1.6
NJ2	Nanjing	35.30	35	eP	P	01 39 46.6	+0.2
GTA	Gaotai	35.48	5	P	P	01 39 47.6	-0.4
GTA				pP	pP	01 39 55.3	-3.8
GTA				sP	sP	01 39 58.8	-5.1
SWI	Sorong	35.66	97	P	P	01 39 49.8	0.0
	comp=Z,7μmcomp=Z,33nm,0.7s						
NIL	Nilore	36.32	327	P	P	01 39 55.2	0.0
NIL				pmax	pmax		
	comp=Z,47nm,0.7s						
NIL	Nilore	36.32	327	P	P	01 39 55.2	0.0
FITZ	Fitzroy Crossi	36.60	128	P	P	01 39 56.8	-0.9
	comp=Z,4.1nm,0.6s,baz=312,slow=6.8,SNR=20						
FITZ				LR	LR	01 57 29.6	
	comp=Z,56nm,18.8s,baz=316,slow=40						
FITZ	Fitzroy Crossi	36.60	128	P	P	01 39 56.7	-1.0
FITZ				IAmb	IAmb	01 40 00.0	
	comp=Z,4.4nm,0.7s						
FAKI	Fak Fak	36.96	100	P	P	01 40 00.1	-0.8
FAKI				IAmb	IAmb	01 40 01.2	
	comp=Z,15nm,0.7s						
KNRA	Kununurra	37.92	122	P	P	01 40 07.9	-1.1
KNRA				IAmb	IAmb	01 40 09.8	
	comp=Z,9.5nm,0.6s						
KBL	Kabul	39.34	324	P	P	01 40 21.2	+0.2
KBL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KBL	Kabul	39.34	324	P	P	01 40 21.2	+0.2
HHC	Hu-ho-hao-te	39.35	19	eP	P	01 40 23.0	+2.2
HHC				pP	sP	01 40 34.4	-2.4
HHC				S	S	01 46 19.6	+0.1
KSH	Kashi	39.75	336	P	P	01 40 25.3	+1.2
KSH				pP	sP	01 40 40.1	0.0
KSH				PcS	PcS	01 46 20.4	+0.1
KSH				S	S	01 46 25.6	+0.1
BJI	Beijing	40.34	24	P	P	01 40 29.8	+1.0
WMQ	Urumqi	40.37	351	eP	P	01 40 30.3	+1.2
WMQ				pP	sP	01 40 43.6	-1.5
WSAR	Wadi Sarin	40.79	302	P	P	01 40 34.4	+1.6
	comp=Z,8.0nm,0.9s,baz=210,slow=3.7,SNR=4.8						
NWAO	Narrogin (SRO)	41.88	153	P	P	01 40 42.1	+0.5
	comp=Z,4.8nm,0.7s,baz=333,slow=9.0,SNR=2.2						
KZA	Kyzart	42.21	337	P	P	01 40 41.9	-2.8
	SNR=6.4						
ARSB	Arslanbob	42.52	334	P	P	01 40 47.5	+0.6
ARSB				IAmb	IAmb	01 40 49.2	
	comp=Z,14nm,0.6s						
ARSB				PcP	PcP	01 42 41.0	+1.9
UCH	Uchtor	42.63	336	P	P	01 40 48.9	+0.8
	SNR=11						
KBK	Karagaybulak	42.82	337	P	P	01 40 50.3	+0.9
	SNR=14						
AML	Almayashu	42.88	336	P	P	01 40 50.8	+0.7
	SNR=16						
AAK	Ala-Archa	42.98	337	P	P	01 40 52.0	+1.3
	comp=Z,2.6nm,0.5s,baz=146,slow=5.1,SNR=15						
AAK	Ala-Archa	42.98	337	P	P	01 40 51.3	+0.7
	SNR=5.5						
AAK	Ala-Archa	42.98	337	deP	P	01 40 51.7	+1.0
AAK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AAK	Ala-Archa	42.98	337	P	P	01 40 50.0	-0.7
EKS2	Erkin-Say	43.29	336	P	P	01 40 54.0	+0.9
	SNR=8.1						
TJN	Taejon	43.35	38	⇓eP	P	01 40 53.4	-0.2
USP	Ospenovka	43.51	337	P	P	01 40 55.0	+0.2
	SNR=20						
JNU	Nakatsue	43.68	44	P	P	01 40 55.3	-1.0
	comp=Z,4.8nm,0.6s,baz=347,slow=7.8,SNR=3.6						
JNU				LR	LR	01 59 45.7	
	comp=Z,74nm,21.7s,baz=202,slow=37						
MK31	Makanchi Array	44.28	347	i P	P	01 40 59.6	-1.3
MK31	Makanchi Array	44.28	347	IAmb	IAmb	01 41 00.9	
	comp=Z,6.6nm,0.8s						
MKAR	Makanchi Array	44.28	347	P	P	01 41 00.1	-0.8
	comp=Z,8.2nm,0.6s,baz=164,slow=8.0,SNR=151						
MKAR				LR	LR	02 02 34.5	
	comp=Z,30nm,19.7s,baz=161,slow=40						
MKAR	Makanchi Array	44.28	347	P	P	01 40 59.8	-1.1
KSAR	Wonju Array Be	44.37	37	P	P	01 41 01.0	-0.7
KSAR	Wonju Array Be	44.37	37	P	P	01 41 01.0	-0.7
MAKZ	Makanchi	44.37	346	i P	P	01 41 00.4	-1.2
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MAKZ	Makanchi	44.37	346	P	P	01 41 00.7	-0.9
MAKZ				IAmb	IAmb	01 41 01.8	
	comp=Z,11nm,0.6s						
KSRS	Korea Array	44.40	37	P	P	01 41 01.5	-0.4
	comp=Z,4.4nm,0.6s,baz=223,slow=8.7,SNR=15						
KSRS				LR	LR	02 00 16.2	
	comp=Z,62nm,18.0s,baz=228,slow=37						
WB0	Warramunga Arr	44.57	123	IAmb	IAmb	01 41 21.1	
	comp=Z,14nm,0.6s						
WRA	Warramunga Arr	44.61	124	P	P	01 41 04.0	+0.1
	comp=Z,6.8nm,0.5s,baz=302,slow=9.2,SNR=31						
WRA				LR	LR	02 02 04.2	
	comp=Z,105nm,19.5s,baz=300,slow=39						
WRA	Warramunga Arr	44.61	124	i P	P	01 41 04.0	+0.1
WRA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WRA	Warramunga Arr	44.61	124	P	P	01 41 03.8	-0.1
WRAB	Tennant Creek	44.61	124	c iP	P	01 41 03.9	0.0
WRAB				pmax	pmax		
	comp=Z,23nm,1.0s						
SONM	Songino Array	44.65	10	P	P	01 41 03.5	-0.4
	comp=Z,22nm,0.7s,baz=189,slow=9.1,SNR=180						
SONM				PcP	PcP	01 42 46.4	+0.2
	comp=Z,5.2nm,0.6s,baz=191,slow=3.8,SNR=12						
SONM				LR	LR	02 01 45.3	
	comp=Z,159nm,19.5s,baz=180,slow=39						
SONM	Songino Array	44.65	10	P	P	01 41 03.5	-0.4
SONM				pmax	pmax		
	comp=Z,16nm,0.6s						
SONM	Songino Array	44.65	10	P	P	01 41 03.5	-0.4
WR0	Warramunga Arr	44.78	123	IAmb	IAmb	01 41 06.9	
	comp=Z,22nm,0.9s						
ULN	Ulaanbaatar	44.80	11	c iP	P	01 41 04.4	-0.8
ULN				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ULN	Ulaanbaatar	44.80	11	P	P	01 41 04.3	-0.8
ULN				IAmb	IAmb	01 41 05.4	
	comp=Z,13nm,0.6s						
KK31	Karatay Array	45.03	334	i P	P	01 41 07.2	+0.2
KK31	Karatay Array	45.03	334	IAmb	IAmb	01 41 22.8	
	comp=Z,7.5nm,1.0s						
KKAR	Karatay Array	45.03	334	P	P	01 41 07.1	+0.1
KKAR	Karatay Array	45.03	334	P	P	01 41 07.1	+0.1
KKAR	Karatay Array	45.03	334	IAmb	IAmb	01 41 22.8	
	comp=Z,7.5nm,1.0s						
ASAR	Alice Springs	46.09	128	P	P	01 41 15.8	+0.1
	comp=Z,3.2nm,0.5s,baz=300,slow=7.7,SNR=62						
ASAR				PP	PP	01 43 07.1	+2.7
	comp=Z,2.6nm,0.6s,baz=302,slow=2.8,SNR=6.1						
ASAR	Alice Springs	46.09	128	P	P	01 41 15.6	0.0
ASAR	Alice Springs	46.09	128	P	P	01 41 15.6	0.0
DGZ	Jazzator, Alta	46.15	352	ceP	P	01 41 15.4	-0.5
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FORT	Forrest	46.21	141	P	P	01 41 16.4	+0.1
ZAK	Zakamensk	46.69	6	eP	P	01 41 19.4	-0.6
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TLY	Talaya	48.01	6	P	P	01 41 30.2	+0.1
	comp=Z,4.3nm,0.6s,baz=297,slow=4.5,SNR=3.1						
TLY	Talaya	48.01	6	⇑eP	P	01 41 30.8	+0.6
TLY				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TLY	Talaya	48.01	6	P	P	01 41 29.5	-0.6
TLY				IAmb	IAmb	01 41 31.2	
	comp=Z,6.0nm,0.7s						
GEYT	Alibeck	48.29	320	P	P	01 41 33.7	+1.2
	comp=Z,5.7nm,0.5s,baz=132,slow=6.6,SNR=12						
GEYT				LR	LR	02 04 27.3	
	comp=Z,28nm,19.6s,baz=75,slow=39						
GEYT	Alibeck	48.29	320	P	P	01 41 30.9	-1.7
KURBB	Kurchatov Arra	48.76	345	P	P	01 41 34.9	-1.0
KURK	Kurchatov	48.82	345	c iP	P	01 41 35.8	-0.6
KURK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KURK	Kurchatov	48.82	345	P	P	01 41 36.1	-0.2
KURK				IAmb	IAmb	01 41 36.8	
	comp=Z,7.3nm,0.6s						
KURK				PcP	PcP	01 43 01.3	+0.7
HIA	Hailar	49.50	20	⇓eP	P	01 41 41.6	-0.1
HIA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MJAR	Matsushiro Arr	50.60	45	P	P	01 41 50.1	-0.1
	comp=Z,1.4nm,0.4s,baz=232,slow=6.9,SNR=2.1						
MJAR				PcP	PcP	01 43 07.6	+0.1
	comp=Z,2.3nm,0.5s,baz=248,slow=4.2,SNR=4.1						

MJAR				LR	LR	02 04 08.2	
	comp=Z,65nm,21.8s,baz=255,slow=37						
ZALV	Zalesovo Beam	50.66	352	P	P	01 41 49.7	-0.6
	comp=Z,30nm,0.5s,baz=181,slow=7.4,SNR=140						
ZALV				LR	LR	02 04 41.6	
	comp=Z,24nm,19.6s,baz=92,slow=38						
ZALV	Zalesovo Beam	50.66	352	P	P	01 41 49.5	-0.8
ZALV	Zalesovo Beam	50.66	352	P	P	01 41 49.5	-0.8
USA0B	Ussuriysk Arra	51.15	33	⇓eP	P	01 41 53.6	-0.5
USRK	Ussuriysk Ar.	51.15	33	P	P	01 41 54.0	-0.1
	comp=Z,2.5nm,0.6s,baz=250,slow=6.9,SNR=12						
USRK				LR	LR	02 07 48.2	
	comp=Z,40nm,18.3s,baz=193,slow=41						
USRK	Ussuriysk Ar.	51.15	33	P	P	01 41 52.3	-1.8
USRK	Ussuriysk Ar.	51.15	33	P	P	01 41 52.3	-1.8
RAYN	Ar Rayn	52.34	297	P	P	01 42 05.4	+1.9
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
PMG	Port Moresby	52.78	105	ceP	P	01 42 06.4	-0.4
PMG				pmax	pmax		
	comp=Z,49nm,0.7s						
BRVK	Borovoye	53.31	341	c iP	P	01 42 09.2	-0.8
BRVK				i *PP	pP	01 42 22.8	+1.2
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BRVK	Borovoye	53.31	341	P	P	01 42 08.8	-1.2
BRVK				IAmb	IAmb	01 42 10.2	
	comp=Z,7.8nm,0.6s						
KLR	Kul'dur	54.43	28	P	P	01 42 18.6	+0.4
	comp=Z,4.5nm,0.6s,baz=261,slow=7.2,SNR=17						
KLR	Kul'dur	54.43	28	⇓eP	P	01 42 19.1	+0.8
KLR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AB31	Akbulak array	54.49	332	eP	P	01 42 18.4	-0.4
AB31				pmax	pmax		
	comp=Z,17nm,0.8s						
ABKAR	Akbulak array	54.49	332	P	P	01 42 18.9	+0.1
ABKAR	Akbulak array	54.49	332	IAmb	IAmb	01 42 19.9	
	comp=Z,21nm,1.0s						
CTAO	Charters Tower	54.91	118	P	P	01 42 24.0	+1.7
CTAO				pmax	pmax		
	comp=Z,18nm,1.1s						
BOD	Bodaibo	55.58	12	eP	P	01 42 26.0	-0.5
BOD				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ZEA	Zeya	55.87	22	eP	P	01 42 28.4	-0.2
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
STKA	Stephens Creek	56.16	133	P	P	01 42 31.5	+0.5
	comp=Z,5.2nm,0.7s,baz=307,slow=8.6,SNR=17						
STKA				LR	LR	02 10 04.6	
	comp=Z,42nm,19.2s,baz=2.7,slow=40						
AKT	Akhty	56.97	318	eP	P	01 42 37.5	+0.7
AKT				e		01 43 30.0	
AKT				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ASAJ	Asahikawa	57.30	39	P	P	01 42 39.3	+0.3
	comp=Z,6.7nm,0.6s,baz=97,slow=8.1,SNR=5.1						
KMBO	Kilima Mbogo	58.82	266	LR	LR	02 05 55.8	
	comp=Z,52nm,19.8s,baz=96,slow=34						
TBLG	Delisi	59.09	317	P	P	01 42 50.6	-1.0
TBLG				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TBLG	Delisi	59.09	317	P	P	01 42 50.6	-1.0
TBLG				IAmb	IAmb	01 42 54.2	
	comp=Z,8.9nm,0.7s						
SVE	Sverdlovsk	59.67	338	⇓eP	P	01 42 55.2	0.0
SVE				pmax	pmax		
	comp=Z,24nm,0.9s						
AKH	Akhalkalaki	59.81	316	P	P	01 42 59.2	+2.5
ZEI	Tsey	60.10	318	eP	P	01 42 59.6	+0.9
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ARU	Arti	60.16	337	c iP	P	01 42 58.0	-0.6
ARU				*PP	sP	01 43 12.3	-2.7
ARU						01 43 43.5	
ARU						01 45 10.3	
ARU				S	S	01 51 09.7	+0.5
ARU				SS	SS	01 55 01.1	-5.7
ARU				pmax	pmax		
	comp=Z,18nm,1.3s						
ARU	Arti	60.16	337	P	P	01 42 56.8	-1.9
ARU				IAmb	IAmb	01 42 58.9	
	comp=Z,13nm,1.0s						
ONI	Oni	60.32	318	P	P	01 43 01.9	+1.8
NCK	Nalchik	60.60	319	⇑eP	P	01 43 02.7	+0.8
NCK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBZ	Khabaz	61.16	319	P	P	01 43 05.9	+0.3
	comp=Z,5.8nm,0.7s,baz=126,slow=8.0,SNR=19						
KBZ	Khabaz	61.16	319	⇓eP	P	01 43 04.9	-0.7
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KIV	Kislovodsk	61.39	319	eP	P	01 43 10.2	+2.8
KIV				pmax	pmax		
	comp=Z,36nm,0.9s						
KIV				MLR	MLR		
	comp=Z,49nm,17.0s						
KIV	Kislovodsk	61.39	319	P	P	01 43 06.3	-1.1
KIV				IAmb	IAmb	01 43 11.8	
	comp=Z,9.8nm,0.7s						
YAK	Yakutsk	63.18	17	eP	P	01 43 17.7	-1.1
YAK				e*PP	pP	01 43 31.6	+1.0
YAK				ePPP	PPP	01 47 06.3	
YAK				eS	S	01 51 46.1	-1.1
YAK				e*SS	sS	01 52 19.4	+13
YAK				eSS	SS	01 55 54.5	+0.7
YAK				pmax	pmax		
	comp=Z,64nm,1.1s						
YAK				pmax	pmax		
	comp=N,14nm,1.1s						
YAK				pmax	pmax		
	comp=E,11nm,1.1s						
YAK				smax	smax		
	comp=N,83nm,4.6s						
YAK				smax	smax		
	comp=E,39nm,4.2s						
YAK	Yakutsk	63.18	17	P	P	01 43 18.0	-0.8
SOC	Sochi	63.23	317	eP	P	01 43 17.8	-1.7
SOC				e		01 45 42.8	
SOC				ePPP	PPP	01 47 09.1	
SOC				eS	S	01 51 47.2	-1.3
SOC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VRH	Novokhopyorsk	65.13	326	eP	P	01 43 31.0	-0.8
VRH				e*PP	pP	01 43 45.1	+1.4
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CSS	Mathiatis	65.39	307	P	P	01 43 32.7	-1.2
CSS				IAmb	IAmb	01 43 45.6	
	comp=Z,5.6nm,0.5s						
NRIK	Noril'sk	65.53	357	P	P	01 43 33.2	-0.9
	comp=Z,4.2nm,0.6s,baz=150,slow=7.3,SNR=8.0						
NRIK	Noril'sk	65.53	357	eP	P	01 43 33.2	-0.9
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BR131	Keskin Array S	66.32	312	c iP	P	01 43 39.7	-0.2
BR131	Keskin Array S	66.32	312	IAmb	IAmb	01 43 54.7	
	comp=Z,5.0nm,0.7s						
BRTR	Keskin Array B	66.32	312	P	P	01 43 40.0	+0.1
	comp=Z,3.4nm,0.7s,baz=133,slow=7.3,SNR=40						
BRTR				LR	LR	02 14 37.9	
	comp=Z,19nm,21.2s,baz=154,slow=38						
BRTR	Keskin Array B	66.32	312	ceP	P	01 43 39.7	-0.2
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRTR	Keskin Array B	66.32	312	P	P	01 43 39.0	-1.0
VORD	Divnogorie	66.41	325	eP	P	01 43 38.2	-1.9
VORD				e*PP	pP	01 43 52.0	+0.1
VORD				pmax	pmax		
	comp=Z,6.0nm,0.4s						
VSR	Storozhevoye	66.59	325	⇓eP	P	01 43 40.4	-0.8
VSR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
LPSR	Galich'ya Gora	67.30	326	eP	P	01 43 44.2	-1.5
LPSR				e*PP	pP	01 43 58.1	+0.5
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SIM	Simferopol'	67.47	317	eP	P	01 43 44.7	-2.3
SIM				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ELL	Elmali	68.48	308	P	P	01 43 54.8	+1.1
PRGR	Permogore	68.62	337	eP	P	01 43 51.5	-2.3
PRGR				pmax	pmax		
	comp=Z,14nm,0.5s						
OBN	Obninsk	69.61	328	⇓eP	P	01 43 59.8	-0.3
OBN				e		01 44 20.5	
OBN				e		01 46 34.5	
OBN				eS	S	01 53 10.3	+4.9
OBN				pmax	pmax		
	comp=Z,39nm,2.5s						
PETK	Petropavlovsk-	70.20	34	P	P	01 44 02.9	-0.8
	comp=Z,1.9nm,0.5s,baz=235,slow=4.4,SNR=6.9						
PETK				LR	LR	02 16 59.4	
	comp=Z,28nm,18.4s,baz=241,slow=38						
PETK	Petropavlovsk-	70.20	34	P	P	01 44 03.0	-0.8
PET	Petropavlovsk	70.71	35	⇑eP	P	01 44 09.2	+2.3
PET				pmax	pmax		
	comp=Z,56nm,1.2s						
KLMR	Klimovskoe	70.73	334	eP	P	01 44 04.4	-2.4
KLMR				pmax	pmax		
	comp=Z,28nm,1.7s						
KLMR	Klimovskoe	70.73	334	eP	P	01 44 04.5	-2.4
KLMR				AMP		01 44 19.1	
	comp=Z,28nm,1.7s						
TIXI	Tiksi	70.73	11	P	P	01 44 05.3	-1.4
ICOR	Ion Corvin	71.61	315	⇓P	P	01 44 26.7	+14
SEY	Seymchan	71.77	24	⇑eP	P	01 44 12.6	-0.5
SORM	Soroca	72.18	319	⇓P	P	01 44 15.8	-0.1
SORM	Soroca	72.18	319	⇓P	P	01 44 15.8	-0.1
AKASG	Malin Array Be	72.30	322	P	P	01 44 15.4	-1.2
	comp=Z,0.4nm,0.3s,baz=84,slow=5.3,SNR=8.7						
AKASG	Malin Array Be	72.30	322	ceP	P	01 44 15.3	-1.2
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKBB	Malin Array Si	72.30	322	⇓eP	P	01 44 16.0	-0.5
BISRR	Bisoca	72.68	317	⇓P	P	01 44 20.5	+1.4
VRI	Vrincioaia	72.73	317	⇑P	P	01 44 20.3	+1.0
VRI	Vrincioaia	72.73	317	⇑P	P	01 44 20.3	+1.0
ELND	Elena	72.74	314	⇑P	P	01 44 19.6	+0.3
PLOR	Plostina	72.78	317	⇓P	P	01 44 20.6	+1.0
PLOR	Plostina	72.78	317	⇓P	P	01 44 20.6	+1.0
TESR	Tescani	72.93	317	⇓P	P	01 44 20.8	+0.4
MLR	Muntele Rosu	73.19	316	⇑P	P	01 44 22.8	+0.7
MLR	Muntele Rosu	73.19	316	⇑P	P	01 44 22.8	+0.7
MLR	Muntele Rosu	73.19	316	IAmb	IAmb	01 44 39.1	
	comp=Z,6.4nm,0.8s						
BIZ	Bicaz	73.39	318	⇓P	P	01 44 23.6	+0.5
HUMR	Humele	73.67	315	⇓P	P	01 44 24.1	-0.7
VOIR		73.80	316	⇓P	P	01 44 25.4	-0.2
VOIR		73.80	316	⇓P	P	01 44 25.4	-0.2
ARR	Arges	74.07	316	⇑P	P	01 44 26.9	-0.4
BURAR	Bucovina Array	74.12	318	⇑P	P	01 44 28.5	+1.0
BURAR	Bucovina Array	74.12	318	⇑P	P	01 44 28.5	+1.0
BURAR	Bucovina Array	74.12	318	P	P	01 44 28.3	+0.8
BUR08	Bucovina Ar. S	74.14	318	P	P	01 44 28.5	+0.9
VTS	Vitosha	74.60	313	⇑P	P	01 44 30.6	+0.1
VTS	Vitosha	74.60	313	⇑P	P	01 44 30.6	+0.1
LIT	Litokhoron	74.79	310	P	P	01 44 32.2	+0.8
LIT	Litokhoron	74.79	310	IAmb	IAmb	01 44 31.7	
	comp=Z,10nm,0.7s						
GRG	Griva	74.97	311	P	P	01 44 33.5	+1.0
BOSA	Boshof	75.04	239	LR	LR	02 10 28.8	
	comp=Z,59nm,20.8s,baz=113,slow=30						
DEV	Deva	75.36	316	⇑P	P	01 44 33.1	-1.5
DEV	Deva	75.36	316	⇑P	P	01 44 33.1	-1.5
TRPA	Tarpa	75.98	319	⇑P	P	01 44 38.8	+0.7
KWP	Kalwaria Pacla	76.14	320	P	P	01 44 39.3	+0.3
KWP				pmax	pmax		
	comp=Z,33nm,1.3s						
SUW	Suwalki	76.69	325	eP	P	01 44 41.3	-0.6
SUW	Suwalki	76.69	325	P	P	01 44 41.9	-0.1
SUW				pmax	pmax		
	comp=Z,25nm,0.9s						
SUW	Suwalki	76.69	325	P	P	01 44 41.9	-0.1
FINES	FINESS Array B	76.98	332	P	P	01 44 43.1	-0.3
	comp=Z,4.4nm,0.6s,baz=91,slow=5.4,SNR=20						
OJC	Ojcow	78.09	320	P	P	01 44 49.0	-0.9
VYHS	Vyhne	78.48	319	eP	P	01 44 54.6	+2.5
VYHS	Vyhne	78.48	319	eP	P	01 44 54.6	+2.5
BILL	Bilibino	79.08	21	d iP	P	01 44 54.7	-0.3
BILL				e		01 45 03.7	
BILL				e		01 47 54.4	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,98nm,19.0s						
MORC	Moravsky Berou	79.48	320	P	P	01 45 00.7	+3.1
MORC				pmax	pmax		
	comp=Z,6.0nm,1.8s						
MORC	Moravsky Berou	79.48	320	IAmb	IAmb	01 45 14.7	
	comp=Z,5.8nm,1.0s						
ARCES	ARCESS Array B	79.53	340	P	P	01 44 57.3	-0.1
	comp=Z,3.1nm,0.5s,baz=99,slow=6.8,SNR=41						
ARCES	ARCESS Array B	79.53	340	P	P	01 44 55.8	-1.6
ARCES	ARCESS Array B	79.53	340	P	P	01 44 55.8	-1.6
KRLC	Kraliky	80.00	320	eP	P	01 45 01.1	+0.7
KRLC				esP	sP	01 45 16.6	-0.5
DPC	Dobruska-Polom	80.32	320	eP	P	01 45 03.2	+1.1
DPC				esP	sP	01 45 18.5	-0.3
DPC	Dobruska-Polom	80.32	320	eP	P	01 45 03.2	+1.1
DPC				e		01 45 18.5	
KSP	Ksiaz	80.39	321	eP	P	01 45 02.8	+0.3
KSP	Ksiaz	80.39	321	P	P	01 45 05.0	+2.6
CONA	Conrad Observa	80.40	318	i sP	sP	01 45 16.8	-2.5
	comp=Z,8.3nm,1.4s						
SOKA	Soboth	80.87	316	i P	P	01 45 05.8	+0.5
	comp=Z,5.2nm,0.8s						
BRG	Berggiesshubel	81.87	321	eP	P	01 45 11.4	+1.1
	comp=Z,6.8nm,1.4s						
BRG				e		01 45 26.9	
	comp=Z,11nm,1.9s						
BRG	Berggiesshubel	81.87	321	eP	P	01 45 11.4	+1.1
BRG				e		01 45 26.9	
BRG				pmax	pmax		
	comp=Z,7.0nm,1.4s						
BRG				pmax	pmax		
	comp=Z,11nm,1.9s						
GERES	GERESS Array B	81.91	319	P	P	01 45 11.2	+0.6
	comp=Z,2.4nm,0.9s,baz=93,slow=6.7,SNR=16						
GERES	GERESS Array B	81.91	319	P	P	01 45 10.3	-0.4
GERES	GERESS Array B	81.91	319	P	P	01 45 10.3	-0.4
KHC	Kasperske Hory	82.00	319	eP	P	01 45 11.5	+0.4
KHC				esP	sP	01 45 26.9	-0.9
KHC	Kasperske Hory	82.00	319	eP	P	01 45 11.5	+0.4
KHC				e		01 45 26.9	
SYO	Syowa Base	82.20	198	⇑eX	P	01 45 09.2	-2.4
SYO	Syowa Base	82.20	198	⇑ePcP	PcP	01 45 15.0	-1.9
CLL	Collm	82.49	321	esP	sP	01 45 30.0	-0.2
ABTA	Abfaltersbach	82.61	316	i PcP	PcP	01 45 19.3	0.0
	comp=Z,12nm,1.6s						
SQTA	Sankt Quirin	83.51	317	i P	P	01 45 18.7	-0.4
	comp=Z,3.9nm,0.6s						
MOTA	Moosalm	83.59	317	i P	P	01 45 18.9	-0.7
	comp=Z,4.2nm,0.8s						
NORES	NORESS Array B	83.81	331	P	P	01 45 22.7	+2.5
NORES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
RETA	Reutte	83.82	317	i P	P	01 45 20.5	-0.1
	comp=Z,4.3nm,0.7s						
NB2	NORSAR Subarra	83.99	331	P	P	01 45 20.5	-0.6
	comp=Z,3.6nm,1.0s,baz=93,slow=5.3						
NOA	NORSAR Array B	83.99	331	P	P	01 45 20.5	-0.6
	comp=Z,1.3nm,0.8s,baz=92,slow=5.6,SNR=5.8						
NOA				LR	LR	02 26 15.2	
	comp=Z,19nm,18.4s,baz=350,slow=38						
KEST	Kesra	84.92	305	P	P	01 45 28.3	+1.9
	comp=Z,12nm,0.6s,baz=40,slow=1.4,SNR=18						
VNDA	Vanda	88.76	169	P	P	01 45 45.2	+1.2
	comp=Z,0.7nm,0.7s,baz=10,slow=2.3,SNR=5.3						
TORD	Torodi Ar. Bea	93.20	283	P	P	01 46 07.5	+1.5
	comp=Z,0.7nm,0.6s,baz=100,slow=5.4,SNR=5.3						
TORD				LR	LR	02 26 23.1	
	comp=Z,46nm,18.2s,baz=345,slow=34						
TORD	Torodi Ar. Bea	93.20	283	P	P	01 46 06.4	+0.3
IMAR	Indian Mountai	94.57	23	P	P	01 46 11.1	-0.2
ESDC	Sonseca Array	95.07	310	P	P	01 46 15.1	+0.8
	comp=Z,1.3nm,0.6s,baz=62,slow=5.0,SNR=9.9						
ILAR	Eielson Array	97.69	23	P	P	01 46 24.1	-1.4
	comp=Z,0.2nm,0.6s,baz=301,slow=5.1,SNR=4.1						
YKA	Yellowknife Ar	109.79	15	PKiKP	PKiKP	01 51 21.1	-0.5
	comp=Z,0.2nm,0.5s,baz=308,slow=2.4,SNR=5.2						
SCHQ	Schefferville	119.70	349	PKP	PKiKP	01 51 41.1	+0.2
	comp=Z,2.5nm,0.7s,baz=316,slow=3.8,SNR=4.7						
ULM	Lac du Bonnet	125.07	9	PKP	PKPdf	01 51 50.9	-0.3
	comp=Z,3.7nm,0.6s,baz=20,slow=2.1,SNR=11						
ULM	Lac du Bonnet	125.07	9	PKIKP	PKPdf	01 51 51.0	-0.3
ULM	Lac du Bonnet	125.07	9		PKPdf	01 51 51.0	-0.3
NVAR	Mina Array Bea	127.28	34	PKP	PKiKP	01 51 57.2	+0.5
	comp=Z,1.5nm,0.6s,baz=306,slow=2.0,SNR=13						
PDAR	Pinedale Array	128.10	24	PKP	PKPdf	01 51 57.4	-0.3
	comp=Z,0.5nm,0.5s,baz=122,slow=2.8,SNR=7.7						
ECSD	EROS Data Cent	131.22	12		PKPdf	01 52 03.5	+0.2
ANMO	Albuquerque	135.97	27	PKIKP	PKiKP	01 52 15.3	+1.0
TXAR	Lajitas Array	141.95	28	PKhKP	PKPpre	01 52 16.8	
	comp=Z,0.7nm,0.5s,baz=192,slow=0.5,SNR=7.0						
TXAR	Lajitas Array	141.95	28	PKHKP	PKPpre	01 52 16.7	
Z47A	Carrollton	142.87	6		PKPdf	01 52 24.1	-0.9
HPIG		142.89	33		PKPdf	01 52 23.6	-1.9
CPUP	Villa Florida	146.05	226	PKPbc	PKPbc	01 52 32.0	+0.5
	comp=Z,2.9nm,0.5s,baz=122,slow=2.6,SNR=13						
SIV	San Ignacio	154.39	241	PKPbc	PKPbc	01 52 52.4	0.0
	comp=Z,0.7nm,0.6s,baz=117,slow=4.2,SNR=6.2						

TRN 24 01:37:41.6, 17°.51N×62°.93W, h17^{km}, MD3.5, 1C-1D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEUS	St. Eustatius	0.05	248	⇑iP	Pg	01 37 46.2	+1.5
SEUS				eS	Sg	01 37 47.8	+1.0
SKI	Saint Kitts	0.26	135	⇓iP	Pn	01 37 49.7	-1.0
SKI				eS	Sb	01 37 53.9	+1.8
SKOC	St. Kitts, UWI	0.29	139	eP	Pn	01 37 49.8	-1.4
SKOC				eS	Sb	01 37 54.7	+1.7
SABA	Saba	0.32	290	eP	Pn	01 37 50.6	-1.0
SABA				eS	Sb	01 37 55.2	+1.4
NVDO	Nevis, Disaste	0.49	143	eP	Pn	01 37 53.9	-0.1
NVDO				eS	Sn	01 38 01.7	-0.4
SMRT	St. Maarten	0.55	345	eP	Pn	01 37 54.8	-0.1
SMRT				eS	Sn	01 38 04.2	+0.5
MLYT	Lee's Yard	1.06	138	eP	Pg	01 38 03.6	+1.5
MLYT				eS	Sn	01 38 19.0	+2.8
ANWB	Willy Bob	1.10	82	eP	Pg	01 38 04.5	+1.5
ANWB				eS	Sg	01 38 19.8	+2.4

ROM 24 01:42:34.4±0.1, 43°.491N±0°.004×12°.380E±0°.004, h9^{km}, ML1.6/9, 6C, Error ellipse: s-maj=0.3km s-min=0.2km az=325.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATPI	Pietralunga -	0.04	158	⇑iP	Pg	01 42 36.4	+0.1
ATPI				S	Sg	01 42 37.6	0.0
ATPI				AML	AML		
	comp=E,1474µm,0.4s						
ATPI				AML	AML		
	comp=N,1470µm,0.1s						
BADI	Badiali	0.10	281	⇑P	Pg	01 42 37.3	+0.4
BADI				S	Sg	01 42 39.2	+0.5
BADI				AML	AML		
	comp=N,970µm,1.0s						
BADI				AML	AML		
	comp=N,969µm,1.0s						
BADI				AML	AML		
	comp=E,676µm,0.1s						
ATVO	AVT- Monte Val	0.11	170	⇑P	Pg	01 42 37.6	+0.5
ATVO				S	Sg	01 42 39.8	+0.9
ATVO				AML	AML		
	comp=E,1095µm,0.1s						
ATVO				AML	AML		
	comp=N,669µm,0.1s						
ATVO				AML	AML		
	comp=E,1090µm,0.1s						
CDCA	Citt' di Caste	0.11	253	⇑P	Pg	01 42 37.5	+0.5
CDCA				S	Sg	01 42 39.8	+0.9
ATMI	Monte Miggiano	0.18	208	⇑P	Pg	01 42 38.8	+0.6
ATMI				S	Sg	01 42 42.3	+1.6
ATMI				AML	AML		
	comp=E,336µm,0.4s						
ATMI				AML	AML		
	comp=N,306µm,0.2s						
ATFO	Monte Foce - G	0.19	132	P	Pg	01 42 38.9	+0.6
ATFO				S	Sg	01 42 42.5	+1.5
ATFO				AML	AML		
	comp=E,273µm,0.5s						
ATFO				AML	AML		
	comp=N,228µm,0.2s						
PARC	Parchiule	0.19	327	P	Pg	01 42 38.9	+0.5
PARC				S	Sg	01 42 42.5	+1.4
PARC				AML	AML		
	comp=E,252µm,0.6s						
PARC				AML	AML		
	comp=N,354µm,0.2s						
NARO	Abbazia di Nar	0.19	50	P	Pg	01 42 38.7	+0.3
NARO				S	Sg	01 42 42.1	+1.1
NARO				AML	AML		
	comp=E,174µm,0.3s						
NARO				AML	AML		
	comp=N,156µm,0.4s						
SSP9	Sansepolcro	0.20	295	P	Pg	01 42 39.0	+0.5
PE3	Peglio	0.22	22	P	Pg	01 42 39.7	+0.8
PE3				S	Sg	01 42 44.4	+2.3
CRE	Caprese Michel	0.34	293	P	Pg	01 42 41.7	+0.5
CRE				S	Sb	01 42 47.8	-0.4
CAFI	Castiglion Fio	0.34	242	P	Pg	01 42 41.8	+0.6
CAFI				S	Sb	01 42 47.5	-0.8
CAFI				AML	AML		
	comp=N,104µm,1.6s						
CAFI				AML	AML		
	comp=E,113µm,0.1s						
FSSB	Fossombrone	0.35	55	⇑P	Pg	01 42 41.8	+0.5
FSSB				AML	AML		
	comp=E,134µm,1.3s						
FSSB				AML	AML		
	comp=N,124µm,1.1s						
ARVD	Arcevia	0.41	89	P	Pg	01 42 42.9	+0.4
ARVD				S	Sb	01 42 49.7	-0.5

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*PRU **24** 01:44:39.2±0.0, 50°.24N×18°.83E, h0^{km}*

ISC 24 01:44:38.7±1.0, 50°.26N±0°.05×18°.83E±0°.02, h0^{km}, n15, σ0^{s}.57/23, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.61	226	ePG	Pg	01 44 50.4	0.0
OKC				eSG	Sg	01 44 58.7	+0.5
OKC	Ostrava-Krasne	0.61	226	eP	Pg	01 44 50.4	0.0
OKC				e		01 44 58.7	
OJC	Ojcow	0.63	94	eP	Pg	01 44 50.6	-0.1
OJC	Ojcow	0.63	94	ePg	Pg	01 44 50.5	-0.1
OJC				eSg	Sg	01 44 58.0	-0.8
OJC	Ojcow	0.63	94	eP	Pg	01 44 50.5	-0.2
OJC				e		01 44 58.0	
MORC	Moravsky Berou	0.96	240	ePG	Pg	01 44 57.2	+0.1
MORC				eSG	Sg	01 45 08.4	-1.1
LANS	Liptovska Anna	1.19	159	ePG	Pg	01 45 01.2	-0.3
LANS				eSG	Sg	01 45 17.0	+0.1
LANS				eLG	Lg	01 45 21.9	
NIE	Niedzica	1.28	131	ePg	Pg	01 45 03.3	+0.2
NIE				eSg	Sg	01 45 19.5	-0.1
KRLC	Kraliky	1.33	263	ePG	Pg	01 45 03.1	-1.0
KRLC				eSG	Sg	01 45 21.1	-0.2
KRLC	Kraliky	1.33	263	eP	Pg	01 45 03.1	-1.0
KRLC				e		01 45 21.1	
DPC	Dobruska-Polom	1.61	274	ePG	Pn	01 45 08.9	+0.5
DPC				eSG	Sg	01 45 30.9	+0.6
VRAC	Vranov	1.73	237	eSG	Sn	01 45 32.5	-0.4
VYHS	Vyhne	1.77	180	ePN	Pn	01 45 10.9	+0.3
CHVC	Chvalec	1.80	281	ePG	Pb	01 45 12.9	+0.4
CHVC				eSG	Sg	01 45 37.4	+0.9
KRUC	Moravsky	1.98	234	eSG	Sb	01 45 40.3	-0.6

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*IDC **24** 01:50:41.5±1.7, 19°.56S×70°.73W, h0^{km}, mb3.8/3, mb1 3.8/5, mb1mx3.6/30, mbtmp3.7/5, ML3.4/2, MS2.4/1, Ms1 2.5/1, ms1mx2.2/22, Error ellipse: s-maj=45.3km s-min=27.4km az=71.0*

*GUC **24** 01:50:47.1±0.6, 19°.70S×70°.68W, h35^{km}±2^{km}, ML3.3*

ISC 24 01:50:46.2±1.7, 19°.65S±0°.05×70°.67W±0°.08, h32^{km}±11^{km}, n20, σ0^{s}.94/29, mb3.6/3, 5C-5D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.52	84	⇓eP	Pb	01 50 56.7	-0.4
PSGC				eS	Sn	01 51 04.7	-0.4
PB11	IPOC Station P	0.96	97	⇓iP	Pb	01 51 03.7	-0.7
PB11				i S	Sb	01 51 17.0	+0.1

PB11				IAML		01 51 19.4	
	comp=N,1μm,0.3s						
TA01	**Diego Aracena**	**1.02**	**153**	⇑*i*P	**Pn**	**01 51 03.6**	**-0.6**
TA01				*i* S	**Sn**	**01 51 16.9**	**-0.5**
TA01				IAML		01 51 21.1	
	comp=E,1μm,0.5s						
PB12	**IPOC Station P**	**1.08**	**17**	⇓*e*P	**Pb**	**01 51 05.9**	**-0.6**
PB12				*i* S	**Sb**	**01 51 21.4**	**+1.1**
PB12				IAML		01 51 23.3	
	comp=E,1μm,0.4s						
PATCX	**Punta Patache**	**1.26**	**158**	⇑*i*P	**Pn**	**01 51 07.5**	**-0.1**
PATCX				*i* S	**Sn**	**01 51 23.1**	**-0.3**
AP01	**Chacalluta**	**1.31**	**14**	⇑*i*P	**Pb**	**01 51 09.3**	**-0.9**
AP01				*e*S	**Sb**	**01 51 27.1**	**+0.4**
AP01				IAML		01 51 30.5	
	comp=E,2μm,0.6s						
GO01	**Chusmiza**	**1.39**	**91**	*e*P	**Pb**	**01 51 11.2**	**-0.7**
GO01				*e*S	**Sb**	**01 51 29.8**	**+0.4**
PB08	**IPOC Station P**	**1.50**	**109**	⇓*e*P	**Pb**	**01 51 12.4**	**-1.4**
PB08				*e*S	**Sb**	**01 51 32.3**	**-0.4**
PB08				IAML		01 51 33.9	
	comp=N,592nm,0.6s						
PB16	**IPOC Station P**	**1.71**	**40**	⇑*i*P	**Pb**	**01 51 16.6**	**-0.7**
PB16				*e*S	**Sb**	**01 51 39.7**	**+1.1**
PB16				IAML		01 51 42.7	
	comp=N,565nm,0.3s						
PB01	**IPOC Station P**	**1.77**	**142**	*i* P	**Pn**	**01 51 15.0**	**+0.3**
PB01				*e*S	**Sn**	**01 51 37.2**	**+1.1**
PB01				IAML		01 51 40.0	
	comp=E,447nm,0.5s						
PB02	**IPOC Station P**	**1.81**	**157**	⇑*i*P	**Pn**	**01 51 15.5**	**+0.3**
PB02				IAML		01 51 53.8	
	comp=E,558nm,0.3s						
PB07	**IPOC Station P**	**2.19**	**161**	IAML		01 51 57.0	
	comp=E,312nm,0.4s						
PB09	**IPOC Station P**	**2.52**	**148**	⇓*i*P	**Pn**	**01 51 26.5**	**+1.5**
PB09				IAML		01 52 07.3	
	comp=E,322nm,0.4s						
LVC	**Limon Verde**	**3.37**	**151**	Pn	**Pn**	**01 51 38.2**	**+1.3**
	comp=E,1.9nm,0.3s,baz=332,slow=12,SNR=14						
LVC				Sn	**Sn**	**01 52 18.5**	**+2.5**
	comp=E,5.0nm,0.3s,baz=288,slow=20,SNR=8.2						
LVC				Lg	Lg	01 52 26.1	
	comp=E,8.1nm,0.3s,baz=158,slow=16,SNR=8.1						
LPAZ	**La Paz**	**4.13**	**36**	Pn	Pb	01 51 52.8	-5.6
	comp=E,0.8nm,0.3s,baz=249,slow=2.4,SNR=20						
LPAZ				LR	LR	01 53 37.0	
	comp=E,51nm,21.1s,baz=221,slow=43						
SIV	**San Ignacio**	**9.84**	**70**	Pn	**Pn**	**01 53 06.2**	**+0.8**
	comp=E,0.6nm,0.3s,baz=265,slow=7.3,SNR=13						
PTGA	**Pitinga**	**21.53**	**30**	P	**P**	**01 55 31.7**	**-1.1**
	comp=E,2.4nm,0.3s,baz=320,slow=22,SNR=4.7						
TORD	**Torodi Ar. Bea**	**78.31**	**71**	P	**P**	**02 02 43.0**	**-0.7**
	comp=E,0.3nm,0.6s,baz=249,slow=5.1,SNR=4.4						
YKA	**Yellowknife Ar**	**88.91**	**341**	P	**P**	**02 03 36.7**	**-0.2**
	comp=E,0.2nm,0.6s,baz=131,slow=5.0,SNR=6.9						
MKAR	**Makanchi Array**	**145.05**	**33**	PKPbc	**PKPdf**	**02 10 20.4**	**+0.1**
	comp=E,0.4nm,0.5s,baz=330,slow=2.6,SNR=6.5						

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*IDC **24** 01:50:52.0±2.2, 2°.91S×136°.52E, h0^{km}, mb3.9/2, mb1 4.1/5, mb1mx3.6/38, mbtmp3.9/5, ML4.0/3, Error ellipse: s-maj=63.4km s-min=28.8km az=77.0*

*NEIC **24** 01:50:58.1±2.8, 3°.05S±0°.05×136°.5E±0°.1, h49^{km}±12^{km}, mb4.2/9, Error ellipse: s-maj=15.4km s-min=5.6km az=104.0*

ISC 24 01:50:57.6±1.1, 3°.19S±0°.09×136°.47E±0°.08, h34^{km}, n20, σ2^{s}.30/26, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**4.22**	**273**	Pn	**Pn**	**01 52 00.6**	**+1.0**
FAKI				Sn	**Sn**	**01 52 46.0**	**-1.7**
MTN	**Manton Dam**	**10.95**	**208**		**Pn**	**01 53 35.5**	**+3.5**
COEN	**Coen**	**12.59**	**149**		**Pn**	**01 53 56.0**	**+1.5**
KNRA	**Kununurra**	**14.55**	**211**		**Pn**	**01 54 23.2**	**+2.1**
KNRA					**Sn**	**01 57 02.7**	**+1.3**
WB0	**Warramunga Arr**	**16.60**	**187**	P	**Pn**	**01 54 47.9**	**0.0**
WB0				IAmb	IAmb	01 54 54.5	
	comp=Z,13nm,0.9s						
WB0				S	**Sn**	**01 57 49.3**	**-2.1**
WR0	**Warramunga Arr**	**16.78**	**186**	P	**Pn**	**01 54 50.5**	**+0.3**
WR0				IAmb	IAmb	01 54 56.5	
	comp=Z,17nm,0.8s						
WR0					**Sn**	**01 57 56.2**	**+0.6**
WB2	**Warramunga Arr**	**16.78**	**187**		**Pn**	**01 54 49.9**	**-0.4**
WB2				IAmb	IAmb	01 54 56.6	
	comp=Z,15nm,0.8s						
WRA	**Warramunga Arr**	**16.78**	**187**	P	**Pn**	**01 54 50.2**	**0.0**
	comp=Z,0.6nm,0.3s,baz=3.2,slow=13,SNR=11						
WRA				S	**Sn**	**01 57 50.5**	**-5.3**
	comp=Z,0.1nm,0.3s,baz=9.2,slow=22,SNR=8.2						
WRA	**Warramunga Arr**	**16.78**	**187**	P	**Pn**	**01 54 50.8**	**+0.6**
FITZ	**Fitzroy Crossi**	**18.23**	**215**	P	**Pn**	**01 55 10.4**	**+2.3**
	comp=Z,0.3nm,0.3s,baz=30,slow=11,SNR=8.4						
FITZ				S	**Sn**	**01 58 25.4**	**-5.3**
	comp=Z,0.2nm,0.3s,baz=219,slow=11,SNR=6.5						
FITZ	**Fitzroy Crossi**	**18.23**	**215**	IAmb	IAmb	01 55 16.9	
	comp=Z,3.0nm,0.9s						
FITZ					**Sn**	**01 58 27.8**	**-2.9**
CTA	**Charters Tower**	**19.32**	**151**	P	**P**	**01 55 20.7**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=325,slow=13,SNR=1.2						
AS31	**Alice Springs**	**20.51**	**187**		Pn	01 55 36.0	+0.7
AS31				IAmb	IAmb	01 55 38.4	
	comp=Z,8.2nm,0.7s						
ASAR	**Alice Springs**	**20.51**	**187**	P	**P**	**01 55 35.6**	**+2.6**
	comp=Z,19nm,0.7s,baz=12,slow=11,SNR=150						
ASAR				S	**S**	**01 59 19.2**	**-1.7**
	comp=Z,0.3nm,0.5s,baz=226,slow=38,SNR=2.8						
ASAR	**Alice Springs**	**20.51**	**187**	P	**P**	**01 55 35.2**	**+2.2**
PSAD1	**Pilbara Seismi**	**24.32**	**220**	P	**P**	**01 56 13.2**	**+0.9**
PSAD1				IAmb	IAmb	01 56 15.9	
	comp=Z,7.8nm,0.7s						
FORT	**Forrest**	**28.57**	**195**	P	**P**	**01 56 51.0**	**+0.5**
LBZ	**Lake Benmore**	**50.66**	**149**	P	**P**	**01 59 51.8**	**-2.0**
CASY	**Casey**	**65.56**	**191**	P	**P**	**02 01 37.1**	**-0.4**
MKAR	**Makanchi Array**	**68.81**	**323**	P	**P**	**02 01 57.0**	**-1.6**
	comp=Z,0.1nm,0.4s,baz=112,slow=8.3,SNR=1.9						

IDC 24 02:11:15.8±1.1, 56°.02S×27°.74W, h0^{km}, mb3.6/3, mb1 3.8/3, mb1mx3.7/16, mbtmp3.6/3, Error ellipse: s-maj=49.2km s-min=33.7km az=78.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**46.59**	**183**	P	P	02 19 45.7	+0.9
	0.7nm,0.8s,baz=185,slow=8.6,SNR=5.8						
LPAZ	**La Paz**	**50.11**	**306**	P	P	02 20 14.2	+0.8
	0.7nm,0.4s,baz=155,slow=4.1,SNR=6.8						
TORD	**Torodi Ar. Bea**	**73.19**	**30**	P	P	02 22 50.0	+1.7
	0.4nm,1.0s,baz=205,slow=6.4,SNR=1.4						
ILAR	**Eielson Array**	**149.87**	**312**	PKPbc	PKPdf	02 31 03.5	+2.0
	0.3nm,0.6s,baz=108,slow=2.0,SNR=5.7						
SONM	**Songino Array**	**151.04**	**87**	PKPbc	PKPbc	02 31 08.2	-1.6
	0.3nm,0.4s,baz=262,slow=2.2,SNR=2.4						

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*SJA **24** 02:19:16.1±0.7, 28°.59S×71°.85W, h10^{km}, ML3.9, MW3.7*

*IDC **24** 02:19:17.4±1.2, 29°.09S×71°.58W, h0^{km}, mb3.8/2, mb1 3.9/5, mb1mx3.7/21, mbtmp3.7/5, ML3.5/3, MS2.8/2, Ms1 2.9/2, ms1mx2.7/16, Error ellipse: s-maj=43.1km s-min=35.2km az=95.0*

*GUC **24** 02:19:21.5±0.6, 28°.82S×71°.53W, h64^{km}±9^{km}, ML3.9*

ISC 24 02:19:16.8±4.2, 28°.68S±0°.04×72°.05W±0°.09, h14^{km}±28^{km}, n33, σ2^{s}.26/38, 5C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO04	**Tololo Observa**	**1.85**	**144**	⇑*i*P	**Pn**	**02 19 48.1**	**-0.2**
GO04				*i* S	**Sn**	**02 20 08.6**	**-3.0**
GO04	**Tololo Observa**	**1.85**	**144**	*i* P	**Pn**	**02 19 48.1**	**-0.2**
GO04				*e*S	**Sn**	**02 20 07.8**	**-3.8**
GO03	**Copiap**	**1.94**	**56**	⇑*i*P	**Pn**	**02 19 49.7**	**+0.4**
GO03				*i* S	**Sn**	**02 20 12.0**	**-1.5**
GO03				IAML		02 20 15.1	
	comp=N,3μm,0.2s						
GO03	**Copiap**	**1.94**	**56**	*i* P	**Pn**	**02 19 49.8**	**+0.4**
GO03				*e*S	**Sn**	**02 20 12.3**	**-1.2**
CO03	**El Pedregal**	**2.46**	**151**	⇑*i*P	**Pn**	**02 19 56.9**	**+0.4**
CO03				*i* S	**Sn**	**02 20 23.2**	**-3.2**
CO03				IAML		02 20 31.8	
	comp=E,754nm,0.6s						
CO02	**Combarbal**	**2.68**	**160**	⇑*i*P	**Pn**	**02 20 00.7**	**+1.1**
CO02				*i* S	**Sn**	**02 20 30.1**	**-1.8**
AROD	**Rodeo**	**2.69**	**124**	*i* P	**Pn**	**02 20 01.1**	**+1.1**
AROD				IAML		02 20 43.8	
	comp=Z,48nm,0.6s						
ACDV	**Cuesta del Vie**	**2.96**	**121**	*i* P	**Pn**	**02 20 05.1**	**+1.6**
ACDV				IAML		02 20 47.1	
	comp=Z,296nm,1.0s						
AGUA	**GUANDACOL**	**3.22**	**105**	*i* P	**Pn**	**02 20 09.0**	**+2.0**
AGUA				IAML		02 20 54.3	
	comp=Z,75nm,1.2s						
ACCO	**Cerro Coronel**	**3.22**	**127**	*i* P	**Pn**	**02 20 09.1**	**+1.9**
ACCO				IAML		02 20 55.5	
	comp=Z,322nm,1.2s						
VCA	**Vinchina**	**3.38**	**92**	*i* P	**Pn**	**02 20 11.7**	**+2.4**
VCA				IAML		02 20 60.0	
	comp=Z,728nm,0.5s						
CO04	**Los Peladeros**	**3.48**	**165**	⇑*i*P	**Pn**	**02 20 12.6**	**+1.8**
CO04				*i* S	**Sn**	**02 20 50.4**	**-1.5**
ZON	**Zonda**	**4.09**	**135**	*i* P	**Pn**	**02 20 20.7**	**+1.8**
ZON				IAML		02 21 29.1	
	comp=Z,140nm,0.6s						
PB14	**IPOC Station P**	**4.30**	**20**	*i* P	**Pn**	**02 20 23.6**	**+1.5**
PB14				IAML		02 21 47.1	
	comp=Z,146nm,0.5s						
ROC1	**El Roble**	**4.38**	**168**	*i* P	**Pn**	**02 20 24.5**	**+1.5**
ROC1				*e*S	**Sb**	**02 21 26.4**	**+0.1**
RTCV	**Cerro Valdivia**	**4.39**	**137**	*i* P	**Pn**	**02 20 25.0**	**+1.9**
RTCV				IAML		02 21 36.8	
	comp=Z,107nm,0.8s						
PEL	**Peldehue**	**4.60**	**166**	*i* P	**Pn**	**02 20 28.2**	**+2.2**
PEL				*e*S	**Sb**	**02 21 37.2**	**+4.5**
ARCO	**CERRO ARCO**	**4.94**	**148**	*i* P	**Pn**	**02 20 34.1**	**+3.4**
ARCO				IAML		02 21 53.6	
	comp=Z,143nm,1.1s						
PB15	**IPOC Station P**	**5.92**	**24**	*i* P	**Pn**	**02 20 46.0**	**+1.7**
PB15				IAML		02 22 31.8	
	comp=Z,263nm,0.4s						
PB05	**IPOC Station P**	**6.04**	**16**	*i* P	**Pn**	**02 20 46.7**	**+0.9**
PB05				IAML		02 22 33.1	
	comp=Z,58nm,0.8s						
PB06	**IPOC Station P**	**6.36**	**21**	*i* P	**Pn**	**02 20 52.6**	**+2.4**
PB06				IAML		02 22 40.3	
	comp=Z,84nm,0.6s						
PB04	**IPOC Station P**	**6.55**	**16**	*i* P	**Pn**	**02 20 53.8**	**+1.0**
PLCA	**Paso Flores**	**12.09**	**175**	Pn	**Pn**	**02 22 05.1**	**-3.5**
	comp=Z,0.0nm,0.3s,baz=0.0,slow=9.1,SNR=1.9						
LPAZ	**La Paz**	**12.85**	**17**	Pn	**P**	**02 22 26.8**	**-3.8**
	comp=Z,0.2nm,0.3s,baz=204,slow=9.1,SNR=6.6						
LPAZ				LR	LR	02 28 33.3	
	comp=Z,26nm,19.6s,baz=108,slow=42						
CPUP	**Villa Florida**	**13.28**	**83**	Pn	**Pn**	**02 22 23.3**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=249,slow=12,SNR=4.0						
CPUP				Lg	Lg	02 26 00.2	
	comp=Z,0.1nm,0.3s,baz=157,slow=17,SNR=3.0						
CPUP				LR	LR	02 27 30.5	
	comp=Z,59nm,18.6s,baz=246,slow=38						
PDAR	**Pinedale Array**	**79.03**	**333**	P	P	02 31 26.0	+5.5
	comp=Z,0.2nm,0.5s,baz=144,slow=7.8,SNR=1.8						
TORD	**Torodi Ar. Bea**	**82.44**	**71**	P	**P**	**02 31 40.0**	**+0.9**
	comp=Z,1.9nm,0.8s,baz=249,slow=5.7,SNR=13						
WRA	**Warramunga Arr**	**125.35**	**211**	PKP	**PKiKP**	**02 38 20.9**	**+2.6**
	comp=Z,0.5nm,0.5s,baz=156,slow=1.8,SNR=1.1						
H11N3	**WAKE ISLAND Hy**	**125.94**	**274**	T	T	04 57 28.3	
	baz=113,slow=75,SNR=14						
H11N1	**WAKE ISLAND Hy**	**125.95**	**274**	T	T	04 57 30.6	
	baz=113,slow=75,SNR=7.2						
H11N2	**WAKE ISLAND Hy**	**125.95**	**274**	T	T	04 57 34.1	
	baz=113,slow=75,SNR=16						
ZALV	**Zalesovo Beam**	**149.62**	**27**	PKPbc	**PKiKP**	**02 39 09.1**	**+2.6**
	comp=Z,3.0nm,0.6s,baz=309,slow=3.4,SNR=14						
MKAR	**Makanchi Array**	**153.01**	**41**	PKPbc	**PKiKP**	**02 39 16.6**	**+2.8**
	comp=Z,0.9nm,0.7s,baz=318,slow=1.1,SNR=12						

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*INET **24** 02:39:08.0, 11°.86N×88°.93W, h15^{km}, ML4.1*

*SNET **24** 02:39:09.7±1.1, 12°.09N×88°.95W, h20^{km}±41^{km}, ML3.6*

*UCR **24** 02:39:09.8±1.1, 12°.08N×88°.95W, h20^{km}±43^{km}, ML3.6*

ISC 24 02:39:10.6±3.8, 12°.0N±0°.2×88°.92W±0°.07, h41^{km}, n29, σ0^{s}.74/44, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALJI	**Alcalda de J**	**1.37**	**14**	*e*P	**Pn**	**02 39 32.9**	**-0.3**
ALJI				*e*S	**Sn**	**02 39 50.2**	**0.0**
ALJI				IAML		02 39 53.0	
	comp=Z,855nm,0.2s						
ALJI	**Alcalda de J**	**1.37**	**14**	*e*P	**Pn**	**02 39 32.9**	**-0.3**
ALJI				*e*S	**Sn**	**02 39 50.2**	**0.0**
ALJI				IAML		02 39 53.0	
	comp=Z,855nm,0.2s						
JUCU	**Jucuar¡n**	**1.41**	**28**	*e*P	**Pn**	**02 39 33.0**	**-0.9**
JUCU	**Jucuar¡n**	**1.41**	**28**	*e*P	**Pn**	**02 39 33.0**	**-0.9**
COEB	**Comit de Eme**	**1.54**	**14**	*e*P	**Pn**	**02 39 35.1**	**-0.6**
COEB				*e*S	**Sn**	**02 39 54.9**	**+0.3**
COEB				IAML		02 39 55.7	
	comp=Z,769nm,0.3s						
COEB	**Comit de Eme**	**1.54**	**14**	*e*P	**Pn**	**02 39 35.1**	**-0.6**
COEB				*e*S	**Sn**	**02 39 54.9**	**+0.3**
COEB				IAML		02 39 55.7	
	comp=Z,769nm,0.3s						
TECA	**Tecapa**	**1.54**	**15**	*e*P	**Pn**	**02 39 35.2**	**-0.7**
TECA	**Tecapa**	**1.54**	**15**	*e*P	**Pn**	**02 39 35.2**	**-0.7**
PACA	**Pacayal**	**1.58**	**22**	*e*P	**Pn**	**02 39 36.0**	**-0.2**
PACA				*e*S	**Sn**	**02 39 56.3**	**+0.9**
PACA	**Pacayal**	**1.58**	**22**	*e*P	**Pn**	**02 39 36.0**	**-0.2**
PACA				*e*S	**Sn**	**02 39 56.3**	**+0.9**
BLLM	**Bellamira**	**1.59**	**25**	*e*P	**Pn**	**02 39 35.5**	**-0.8**
BLLM	**Bellamira**	**1.59**	**25**	*e*P	**Pn**	**02 39 35.5**	**-0.8**
LFRS	**El Faro**	**1.62**	**355**	*e*P	**Pn**	**02 39 35.5**	**-1.4**
CNCH	**Conchagua**	**1.66**	**40**	*e*P	**Pn**	**02 39 36.8**	**-0.5**
CNCH				*e*S	**Sn**	**02 39 59.1**	**+1.6**
CNCH	**Conchagua**	**1.66**	**40**	*e*P	**Pn**	**02 39 36.8**	**-0.5**
CNCH				*e*S	**Sn**	**02 39 59.1**	**+1.6**
OPAM	**Oficina de Pla**	**1.73**	**351**	*e*P	**Pn**	**02 39 37.4**	**-0.8**
OPAM	**Oficina de Pla**	**1.73**	**351**	*e*P	**Pn**	**02 39 37.4**	**-0.8**
LBRS	**Las Brisas**	**1.74**	**356**	*e*P	**Pn**	**02 39 37.8**	**-0.5**
UEES	**Universidad Ev**	**1.74**	**350**	*e*P	**Pn**	**02 39 37.9**	**-0.5**
UEES				*e*S	**Sn**	**02 39 58.8**	**-0.6**
UEES	**Universidad Ev**	**1.74**	**350**	*e*P	**Pn**	**02 39 37.9**	**-0.5**
UEES				*e*S	**Sn**	**02 39 58.8**	**-0.6**
BOQS	**Boqueron**	**1.76**	**349**	*e*P	**Pn**	**02 39 38.4**	**-0.5**
BOQS				*e*S	**Sn**	**02 40 00.2**	**0.0**
FAGO	**Alcalda de S**	**1.87**	**25**	*e*P	**Pn**	**02 39 39.9**	**-0.3**
FAGO				*e*S	**Sn**	**02 40 02.9**	**+0.4**
FAGO	**Alcalda de S**	**1.87**	**25**	*e*P	**Pn**	**02 39 39.9**	**-0.3**
FAGO				*e*S	**Sn**	**02 40 02.9**	**+0.4**
CEVE	**Cerro Verde**	**1.95**	**339**	*e*P	**Pn**	**02 39 41.1**	**-0.3**
CEVE				*e*S	**Sn**	**02 40 06.0**	**+1.3**
CEVE				IAML		02 40 10.6	
	comp=Z,860nm,0.2s						
CEVE	**Cerro Verde**	**1.95**	**339**	*e*P	**Pn**	**02 39 41.1**	**-0.3**
CEVE				*e*S	**Sn**	**02 40 06.0**	**+1.3**
CEVE				IAML		02 40 10.6	
	comp=Z,860nm,0.2s						
RTR	**El Retiro**	**2.02**	**340**	*e*P	**Pn**	**02 39 42.8**	**+0.4**
RTR	**El Retiro**	**2.02**	**340**	*e*P	**Pn**	**02 39 42.8**	**+0.4**
TGUH	**Tegucigalpa,Un**	**2.60**	**38**	*e*P	**Pn**	**02 39 49.6**	**-0.7**
TGUH	**Tegucigalpa,Un**	**2.60**	**38**	*e*P	**Pn**	**02 39 49.6**	**-0.7**

IDC 24 02:42:12.1±2.9, 12°.22S×167°.23E, h0^{km}, mb4.0/5, mb1 4.1/5, mb1mx3.8/20, mbtmp3.9/5, Error ellipse: s-maj=115.5km s-min=34.0km az=141.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**33.60**	**246**	P	P	02 48 54.5	0.0
	0.2nm,0.4s,baz=70,slow=9.7,SNR=7.0						
SONM	**Songino Array**	**80.47**	**323**	P	P	02 54 26.6	+0.6
	0.2nm,0.4s,baz=134,slow=4.2,SNR=1.4						
ILAR	**Eielson Array**	**84.16**	**18**	P	P	02 54 45.2	+0.4
	2.4nm,0.6s,baz=232,slow=5.2,SNR=48						
YKA	**Yellowknife Ar**	**95.34**	**27**	P	P	02 55 37.1	-0.7
	0.4nm,0.7s,baz=254,slow=4.6,SNR=4.4						
MKAR	**Makanchi Array**	**95.37**	**317**	P	P	02 55 37.6	-0.9
	0.7nm,0.6s,baz=88,slow=6.1,SNR=8.6						

IDC 24 02:46:46.7±4.3, 0°.05N×97°.52E, h0^{km}, mb3.5/5, mb1 3.6/5, mb1mx3.4/39, mbtmp3.5/5, Error ellipse: s-maj=180.9km s-min=24.8km az=58.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**26.09**	**252**	T	T	03 19 35.4	
	baz=74,slow=76,SNR=40						
H08S3	**Diego Garcia H**	**26.10**	**252**	T	T	03 19 36.7	
	baz=74,slow=76,SNR=219						
H08S1	**Diego Carcia H**	**26.11**	**252**	T	T	03 19 36.6	
	baz=74,slow=76,SNR=30						
WRA	**Warramunga Arr**	**41.17**	**121**	P	P	02 54 34.0	+0.7
	0.3nm,0.4s,baz=302,slow=9.1,SNR=2.7						
ASAR	**Alice Springs**	**42.46**	**126**	P	P	02 54 43.0	-0.9
	0.3nm,0.7s,baz=297,slow=8.2,SNR=4.4						
SONM	**Songino Array**	**48.22**	**8**	P	P	02 55 29.7	+0.4
	0.3nm,0.4s,baz=176,slow=8.7,SNR=2.6						
MKAR	**Makanchi Array**	**48.43**	**346**	P	P	02 55 31.0	+0.1
	0.3nm,0.7s,baz=156,slow=8.0,SNR=5.1						
ZALV	**Zalesovo Beam**	**54.74**	**351**	P	P	02 56 17.0	-0.8
	0.7nm,0.4s,baz=165,slow=6.0,SNR=2.4						

MAN 24 03:00:29.2, 9°.90N×124°.00E, h30^{km}, mb4.0, ML2.8, MS2.4, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.25**	**215**	*e*P	Pn	03 00 37.4	+0.5
LLP	**Lapu-Lapu**	**0.42**	**355**	⇓*i*P	Pn	03 00 39.6	+0.3
LLP				*i* S	Sn	03 00 46.8	+0.8
MSLP	**Maasin**	**0.88**	**74**	*e*P	Pn	03 00 45.3	-0.2
MSLP				*e*S	Sb	03 00 57.5	+0.2

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*IDC **24** 03:04:43.8±1.3, 34°.85N×137°.98E, h0^{km}, mb3.5/2, mb1 3.6/3, mb1mx3.2/35, mbtmp3.6/3, ML3.0/1, Error ellipse: s-maj=37.2km s-min=18.4km az=76.0*

*JMA **24** 03:04:45.0±0.2, 35°.69N×140°.08E, h68^{km}±2^{km}, M2.9*

ISC 24 03:04:45.5±1.2, 35°.63N±0°.04×140°.08E±0°.05, h69^{km}±10^{km}, n18, σ0^{s}.88/27, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCN	**Nagara**	**0.24**	**154**	P	**Pn**	**03 04 56.6**	**+0.4**
TOK	**Tokyo**	**0.26**	**282**	P	**Pn**	**03 04 56.8**	**+0.6**
JSMT	**Sammumatsuo**	**0.30**	**88**	P	**Pn**	**03 04 56.7**	**+0.2**
JOD2	**Odawara 2**	**0.89**	**246**	P	**Pn**	**03 05 02.1**	**-0.4**
JOD2				S	**Sn**	**03 05 14.4**	**-0.8**
BSO3	**Boso 3**	**0.90**	**157**	P	**Pn**	**03 05 02.1**	**-0.3**
BSO3				S	**Sn**	**03 05 15.8**	**+0.7**
JAG	**Ashikaga**	**0.94**	**328**	P	**Pn**	**03 05 02.4**	**-0.7**
JAG				S	**Sn**	**03 05 14.7**	**-1.6**
JRY	**Ryogami san**	**1.03**	**292**	P	**Pn**	**03 05 04.4**	**+0.1**
JIM2	**Oshima 3**	**1.06**	**210**	P	**Pn**	**03 05 03.8**	**-0.9**
JIM2				S	**Sn**	**03 05 17.9**	**-1.0**
JFNN	**Fujinakano**	**1.22**	**249**	P	**Pn**	**03 05 06.7**	**0.0**
JFNN				S	**Sn**	**03 05 22.6**	**0.0**
BSO1	**Boso 1**	**1.23**	**143**	P	**Pn**	**03 05 05.8**	**-0.5**
JYN	**Shimob**	**1.26**	**264**	P	**Pn**	**03 05 07.1**	**-0.2**
JYN				S	**Sn**	**03 05 23.6**	**0.0**
JKT	**Katashina**	**1.31**	**330**	P	**Pn**	**03 05 07.4**	**-0.6**
JKT				S	**Sn**	**03 05 24.2**	**-0.8**
JIZS	**Izushimoda**	**1.34**	**227**	S	**Sn**	**03 05 24.9**	**-0.5**
MJAR	**Matsushiro Arr**	**1.76**	**301**	Pn	**Pn**	**03 05 13.8**	**-0.2**
	1.5nm,0.3s,baz=140,slow=14,SNR=38						
MJAR				Sn	**Sn**	**03 05 37.6**	**+2.1**
	0.8nm,0.3s,baz=152,slow=14,SNR=3.1						
MAT	**Matsushiro**	**1.77**	**301**	P	**Pn**	**03 05 14.0**	**+0.1**
MAT				S	**Sn**	**03 05 37.6**	**+2.1**
JHJ	**Hachijo jima 2**	**2.52**	**186**	Pn	**Pn**	**03 05 25.0**	**+0.8**
	9.5nm,0.3s,baz=252,slow=20,SNR=1.9						
JHJ				Sn	**Sn**	**03 05 53.8**	**0.0**
	26nm,0.3s,baz=121,slow=23,SNR=5.8						
MKAR	**Makanchi Array**	**43.96**	**303**	P	**P**	**03 12 45.8**	**+0.1**
	0.2nm,0.5s,baz=86,slow=10.0,SNR=4.8						
WRA	**Warramunga Arr**	**55.54**	**187**	P	P	03 14 12.6	-1.0
	0.3nm,0.4s,baz=1.1,slow=7.6,SNR=7.3						

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*IDC **24** 03:11:28.1±0.8, 57°.26S×25°.93W, h0^{km}, mb4.0/6, mb1 4.1/7, mb1mx3.9/25, mbtmp4.0/7, ML3.7/1, Error ellipse: s-maj=37.7km s-min=19.0km az=72.0*

*NEIC **24** 03:11:33.3±1.9, 57°.3S±0°.1×25°.8W±0°.3, h35^{km}±2^{km}, mb4.0/8, Error ellipse: s-maj=28.4km s-min=19.9km az=222.0*

ISC 24 03:11:34.3±0.8, 57°.3S±0°.1×25°.7W±0°.2, h35^{km}, n25, σ2^{s}.23/19, mb4.1/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.81**	**292**	Pn	**Pn**	**03 13 14.3**	**+2.8**
VNA1	**Neumayer--Stat**	**15.34**	**158**	P	**Pn**	**03 15 07.9**	**+0.1**
VNA3	**Neumayer Olymp**	**15.55**	**161**	P	**Pn**	**03 15 10.1**	**-0.5**
SNAA	**Sanae**	**17.28**	**156**	P	**Pn**	**03 15 33.3**	**+0.8**
SNAA	**Sanae**	**17.28**	**156**	P	**Pn**	**03 15 32.9**	**+0.5**
	0.3nm,0.3s,baz=300,slow=11,SNR=8.3						
SNAA	**Sanae**	**17.28**	**156**	IAmb	IAmb	03 15 37.2	
	comp=Z,5.6nm,1.2s						
QSPA	**South Pole Qui**	**32.98**	**180**	P	**P**	**03 18 04.2**	**-1.3**
	comp=Z,2.4nm,0.6s,baz=120,slow=16,SNR=30						
QSPA	**South Pole Qui**	**32.98**	**180**	P	**P**	**03 18 04.6**	**-0.9**
QSPA				IAmb	IAmb	03 18 07.3	
	comp=Z,1.8nm,0.5s						
CPUP	**Villa Florida**	**38.25**	**310**	P	**P**	**03 18 48.7**	**-2.1**
	comp=Z,0.8nm,0.8s,baz=158,slow=7.4,SNR=1.5						
CPUP	**Villa Florida**	**38.25**	**310**	IAmb	IAmb	03 18 59.5	
	comp=Z,2.5nm,1.2s						
BDFB	**Brasilia**	**44.85**	**329**	P	**P**	**03 19 43.3**	**-1.7**
	comp=Z,1.4nm,0.5s,baz=333,slow=6.5,SNR=1.5						
VNDA	**Vanda**	**45.39**	**182**	P	**P**	**03 19 47.8**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=189,slow=7.2,SNR=11						
VNDA	**Vanda**	**45.39**	**182**	P	**P**	**03 19 47.9**	**-0.6**
VNDA				IAmb	IAmb	03 19 48.6	
	comp=Z,0.9nm,0.7s						
LVC	**Limon Verde**	**46.65**	**299**	P	**P**	**03 19 58.3**	**-1.2**
H10N1	**ASCENSION HYDR**	**50.07**	**14**	T	T	04 14 30.2	
	baz=188						
H10N3	**ASCENSION HYDR**	**50.07**	**14**	T	T	04 14 29.8	
	baz=188,slow=74						
H10N2	**ASCENSION HYDR**	**50.08**	**14**	T	T	04 14 31.0	
	baz=188,slow=74						
LPAZ	**La Paz**	**51.77**	**304**	P	**P**	**03 20 37.3**	**-1.8**
	comp=Z,1.3nm,0.4s,baz=119,slow=3.8,SNR=18						
LPAZ	**La Paz**	**51.77**	**304**	IAmb	IAmb	03 20 39.0	
	comp=Z,4.7nm,1.4s						
TOA0	**Torodi Ar. Sit**	**73.72**	**28**	P	**P**	**03 23 04.0**	**-0.3**
TOA0				IAmb	IAmb	03 23 11.8	
	comp=Z,1.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.72**	**28**	P	**P**	**03 23 04.6**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=200,slow=6.7,SNR=8.8						
YKA	**Yellowknife Ar**	**137.65**	**316**	PKP	**PKPdf**	**03 30 51.1**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=128,slow=2.5,SNR=4.5						
SONM	**Songino Array**	**149.94**	**87**	PKPbc	**PKPdf**	**03 31 18.3**	**+3.3**
	comp=Z,0.6nm,0.6s,baz=231,slow=2.0,SNR=4.8						
ILAR	**Eielson Array**	**151.56**	**310**	PKPbc	**PKPdf**	**03 31 21.4**	**+4.6**
	comp=Z,1.8nm,0.7s,baz=144,slow=3.5,SNR=35						
ILAR	**Eielson Array**	**151.56**	**310**		**PKPdf**	**03 31 21.2**	**+4.4**

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*IDC **24** 03:22:04.2±3.0, 39°.72N×70°.32E, h0^{km}, mb3.7/2, mb1 3.7/4, mb1mx3.3/35, mbtmp3.6/4, ML3.0/2, Error ellipse: s-maj=79.8km s-min=22.0km az=151.0*

*ISU **24** 03:22:04.4, 39°.72N×70°.31E, h5^{km}*

*KRNET **24** 03:22:05.5±0.1, 39°.71N×70°.36E, mb3.6*

*SOME **24** 03:22:06.3, 39°.85N×70°.45E, h5^{km}*

*NNC **24** 03:22:09.6±1.5, 39°.92N×70°.48E, h9^{km}±7^{km}, mb4.1, mpv3.9, Error ellipse: s-maj=10.6km s-min=5.3km az=20.0*

ISC 24 03:22:07.2±1.7, 39°.83N±0°.07×70°.33E±0°.03, h8^{km}±8^{km}, n73, σ2^{s}.76/104, 39C-13D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**0.43**	**59**	⇑*i*P	**Pg**	**03 22 15.1**	**-0.6**
	baz=45						
BTK				⇑*i*S	**Sg**	**03 22 22.2**	**+0.8**
	baz=45						
BTK	**Batken**	**0.43**	**59**	*i* P	**Pg**	**03 22 14.7**	**-1.0**
BTK				*i* S	**Sg**	**03 22 22.3**	**+0.8**
FRG	**Fergana**	**1.43**	**50**	*e*P	**Pn**	**03 22 30.3**	**-3.1**
FRG				S	**Sn**	**03 22 51.9**	**-0.5**
NAM	**Namangan**	**1.54**	**41**	*e*P	**Pg**	**03 22 37.7**	**+1.0**
NAM				S	**Sg**	**03 23 00.8**	**+4.2**
TAS	**Tashkent**	**1.69**	**332**	⇑*i*P	**Pg**	**03 22 39.3**	**-0.3**
	baz=34						

TAS	baz=34			⇑*i*S	**Sg**	**03 23 03.5**	**+2.0**
TAS	**Tashkent**	**1.69**	**332**	*e*P	**Pg**	**03 22 39.9**	**+0.3**
TAS				S	**Sg**	**03 23 04.3**	**+2.8**
ANR	**Andizhan**	**1.80**	**59**	*e*P	**Pg**	**03 22 41.6**	**-0.2**
ANR				*e*S	**Sg**	**03 23 08.5**	**+3.3**
CHRV	**Charvak**	**1.83**	**351**	*e*P	**Pg**	**03 22 41.9**	**-0.4**
CHRV				S	**Sg**	**03 23 08.5**	**+2.5**
ARK	**Arkit** baz=30	**2.32**	**32**	⇓*i*P	**Pn**	**03 22 47.1**	**+1.3**
ARK	baz=30			⇓*i*S	**Sb**	**03 23 18.4**	**+0.2**
ARK	**Arkit**	**2.32**	**32**	*i* P	**Pn**	**03 22 47.5**	**+1.7**
ARK				*i* S	**Sg**	**03 23 20.9**	**-0.9**
ARSB	**Arslanbob** baz=50	**2.51**	**53**	⇑*i*P	**Pn**	**03 22 50.3**	**+1.9**
ARSB	baz=50			⇑*i*S	**Sb**	**03 23 23.4**	**-0.2**
JBG	**Jabagly** 98nm,0.3s	**2.59**	**3**	Pg	**Pg**	**03 22 55.9**	**-1.0**
JBG	140nm,0.3s			Lg	Lg	03 23 32.1	
BRLS	**Borolday** 17nm,0.3s	**3.22**	**353**	*e*P	**Pb**	**03 23 02.0**	**-2.5**
BRLS	36nm,0.2s			*e*S	**Sb**	**03 23 42.5**	**-1.4**
BRLS	**Borolday** 17nm,0.3s	**3.22**	**353**	Pg	**Pb**	**03 23 02.1**	**-2.5**
BRLS	36nm,0.2s			Lg	Lg	03 23 42.5	
KK31	**Karatay Array** 5.0nm,0.3s,baz=171,slow=12,SNR=172	**3.27**	**2**	⇑Pn	**Pn**	**03 23 00.7**	**+2.0**
KK31	3.0nm,0.2s,baz=188,slow=18,SNR=14			⇑Pg	**Pg**	**03 23 08.3**	**-1.6**
KK31	7.4nm,0.2s,baz=181,slow=30,SNR=7.0			Lg	Lg	03 23 50.0	
AML	**Almayashu** baz=45	**3.43**	**47**	⇑*i*P	**Pn**	**03 23 03.4**	**+2.2**
AML	baz=45			⇑*i*S	**Sb**	**03 23 46.2**	**-4.1**
AML	**Almayashu** SNR=31	**3.43**	**47**	P	**Pn**	**03 23 03.2**	**+2.0**
MRKS	**Merke** 44nm,0.3s	**3.63**	**36**	*e*P	**Pb**	**03 23 13.4**	**+1.6**
MRKS	25nm,0.4s			*e*S	**Sg**	**03 24 01.9**	**-2.0**
MRKS	**Merke** 44nm,0.3s	**3.63**	**36**	Pg	**Pb**	**03 23 13.7**	**+1.9**
MRKS	25nm,0.4s			Lg	Lg	03 24 01.9	
ARLS	**Aral** baz=53	**3.64**	**55**	⇓*i*P	**Pn**	**03 23 06.2**	**+2.2**
ARLS	baz=53			⇓*i*S	**Sn**	**03 23 50.6**	**+3.4**
EKS2	**Erkin-Say** baz=40	**3.84**	**41**	⇑*i*P	**Pn**	**03 23 09.1**	**+2.5**
EKS2	baz=40			⇑*i*S	**Sn**	**03 23 55.9**	**+3.9**
EKS2	**Erkin-Say** SNR=14	**3.84**	**41**	P	**Pn**	**03 23 09.4**	**+2.8**
UCH	**Uchtor** baz=50	**3.96**	**52**	⇑*i*P	**Pn**	**03 23 11.1**	**+2.4**
UCH	baz=50			⇑*i*S	**Sn**	**03 23 58.9**	**+3.4**
UCH	**Uchtor** SNR=16	**3.96**	**52**	P	**Pn**	**03 23 11.8**	**+3.1**
AAK	**Ala-Archa** baz=45	**4.21**	**47**	⇑*i*P	**Pn**	**03 23 14.4**	**+2.7**
AAK	baz=45			⇑*i*S	**Sn**	**03 24 04.6**	**+3.5**
AAK	**Ala-Archa** SNR=15	**4.21**	**47**	P	**Pn**	**03 23 14.2**	**+2.5**
AAK	**Ala-Archa** 2.7nm,0.3s	**4.21**	**47**	⇑Pn	**Pn**	**03 23 12.8**	**+1.1**
AAK	7.7nm,0.5s			⇓Pg	**Pb**	**03 23 24.5**	**+3.0**
AAK	17nm,0.5s			⇑Lg	Lg	03 24 21.1	
KZA	**Kyzart** baz=56	**4.34**	**57**	⇑*i*P	**Pn**	**03 23 16.4**	**+2.5**
KZA	baz=56			⇑*i*S	**Sn**	**03 24 07.8**	**+2.9**
KZA	**Kyzart** SNR=18	**4.34**	**57**	P	**Pn**	**03 23 16.8**	**+2.9**
FRU1	**Bishkek** baz=45	**4.39**	**46**	⇑*i*P	**Pn**	**03 23 16.8**	**+2.6**
FRU1	baz=45			⇑*i*S	**Sn**	**03 24 09.1**	**+3.5**
KBK	**Karagaybulak** baz=48	**4.48**	**49**	⇑*i*P	**Pn**	**03 23 18.3**	**+2.8**
KBK	baz=48			⇑*i*S	**Sn**	**03 24 10.9**	**+3.1**
KBK	**Karagaybulak** SNR=8.9	**4.48**	**49**	P	**Pn**	**03 23 18.2**	**+2.8**
CHMS	**Chumysh** baz=44	**4.59**	**45**	⇑*i*P	**Pn**	**03 23 19.5**	**+2.7**
CHMS	baz=44			⇑*i*S	**Sn**	**03 24 13.6**	**+3.3**
CHMS	**Chumysh** SNR=6.9	**4.59**	**45**	P	**Pn**	**03 23 20.1**	**+3.3**
CHMS	**Chumysh** 6.2nm,0.5s	**4.59**	**45**	⇓Pn	**Pn**	**03 23 17.1**	**+0.3**
CHMS	8.8nm,0.5s			⇓Pg	**Pg**	**03 23 31.6**	**-3.5**
CHMS	18nm,0.8s			⇓Lg	Lg	03 24 31.5	
NRN	**Naryn** baz=66	**4.60**	**68**	⇓*i*P	**Pn**	**03 23 18.5**	**+1.2**
NRN	baz=66			⇓*i*S	**Sn**	**03 24 12.1**	**+1.1**
USP	**Ospenovka** baz=40	**4.64**	**41**	⇑*i*P	**Pn**	**03 23 20.3**	**+2.7**
USP	baz=40			⇑*i*S	**Sn**	**03 24 15.0**	**+3.3**
USP	**Ospenovka** SNR=9.8	**4.64**	**41**	P	**Pn**	**03 23 19.4**	**+1.8**
SGDS	**Sogindy** 10nm,0.3s	**4.84**	**40**	Pg	**Pb**	**03 23 33.8**	**+1.5**
SGDS	12nm,0.6s			Lg	Lg	03 24 36.4	
BOOM	**Boomskoye usch** baz=55	**5.00**	**56**	⇑*i*P	**Pn**	**03 23 24.9**	**+2.3**
BOOM	baz=55			⇑*i*S	**Sn**	**03 24 22.9**	**+2.3**
ULHL	**Ulahol** baz=58	**5.08**	**60**	⇑*i*P	**Pn**	**03 23 26.2**	**+2.5**
ULHL	baz=58			⇑*i*S	**Sn**	**03 24 24.9**	**+2.3**
KST	**Kastek** 11nm,0.4s	**5.31**	**51**	*e*P	**Pb**	**03 23 43.8**	**+3.5**
KST	23nm,0.5s			*e*S	**Sg**	**03 24 53.9**	**-3.7**
KST	**Kastek** 8.7nm,0.4s	**5.31**	**51**	Pg	**Pb**	**03 23 44.1**	**+3.8**
KST	23nm,0.5s			Lg	Lg	03 24 53.9	
DGS	**Degeres** 10nm,0.5s	**5.32**	**48**	*e*P	**Pb**	**03 23 43.2**	**+2.9**
DGS	19nm,0.5s			*e*S	**Sg**	**03 24 53.2**	**-4.6**
DGS	**Degeres** 10nm,0.5s	**5.32**	**48**	Pg	**Pb**	**03 23 44.1**	**+3.7**
DGS	19nm,0.5s			Lg	Lg	03 24 53.2	
KRBS	**Karabastau** 6.4nm,0.3s	**5.55**	**44**	*e*P	**Pb**	**03 23 47.0**	**+2.7**
KRBS	5.5nm,0.3s			*e*S	**Sg**	**03 24 59.9**	**-5.5**
KRBS	**Karabastau** 6.4nm,0.3s	**5.55**	**44**	Pg	**Pb**	**03 23 47.8**	**+3.4**
KRBS	5.5nm,0.3s			Lg	Lg	03 24 59.9	
MTBS	**Maitube** 2.2nm,0.1s	**5.64**	**52**	*e*P	**Pb**	**03 23 47.9**	**+2.0**
MTBS	10nm,0.3s			*e*S	**Sg**	**03 25 01.5**	**-6.7**
MTBS	**Maitube** 4.1nm,0.2s	**5.64**	**52**	Pg	**Pb**	**03 23 48.8**	**+3.0**
MTBS	10nm,0.3s			Lg	Lg	03 25 01.5	
KDJ	**Kajisay** baz=63	**5.67**	**64**	⇑*i*P	**Pn**	**03 23 33.5**	**+1.7**
KDJ	baz=63			⇑*i*S	**Sn**	**03 24 37.9**	**+0.8**
IZV	**Izvestkoviy** 4.7nm,0.3s	**5.70**	**54**	*e*P	**Pb**	**03 23 50.4**	**+3.4**
IZV	12nm,0.3s			*e*S	**Sg**	**03 25 05.6**	**-4.7**
IZV	**Izvestkoviy** 4.7nm,0.3s	**5.70**	**54**	Pg	**Pb**	**03 23 51.2**	**+4.2**
IZV	12nm,0.3s			Lg	Lg	03 25 05.6	
TNSS	**Tian-Shan** 4.6nm,0.4s	**5.91**	**55**	Pg	**Pb**	**03 23 54.4**	**+3.7**
TNSS	16nm,0.4s			Lg	Lg	03 25 11.3	
MDOK	**Medeo** 3.3nm,0.5s	**6.04**	**54**	⇑Pn	**Pn**	**03 23 38.7**	**+1.8**
MDOK	15nm,1.0s			Lg	Lg	03 25 18.5	
MDOK	**Medeo** 3.8nm,0.2s	**6.04**	**54**	Pg	**Pb**	**03 23 57.0**	**+4.3**
MDOK	9.0nm,0.4s			Lg	Lg	03 25 15.5	
KUU	**Kurty** 4.4nm,0.3s	**6.04**	**46**	Pg	**Pb**	**03 23 57.0**	**+4.2**
KUU	14nm,0.4s			Lg	Lg	03 25 14.9	
KOTS	**Kotyrbulak** 10nm,0.3s	**6.12**	**54**	Pg	Pg	03 23 59.3	-5.0
KOTS	29nm,0.7s			Lg	Lg	03 25 19.4	
KTBS	**Karatobe** 3.8nm,0.3s	**6.13**	**49**	Pg	**Pb**	**03 23 58.8**	**+4.7**
KTBS				Lg	Lg	03 25 18.6	
ANVS	**Anan'yevo** baz=58	**6.26**	**60**	⇑*i*P	**Pn**	**03 23 42.3**	**+2.3**
ANVS	baz=58			⇑*i*S	**Sn**	**03 24 52.9**	**+1.2**
SATY	**Saty** 3.9nm,0.5s	**6.87**	**59**	Pg	**Pb**	**03 24 11.4**	**+4.6**
SATY	8.4nm,0.4s			Lg	Lg	03 25 39.8	
KURS	**Kuram** 3.5nm,0.4s	**6.91**	**56**	Pg	Pb	03 24 12.4	+4.9
KURS	4.7nm,0.8s			Lg	Lg	03 25 41.2	
ARXS	**Arharly** 3.4nm,0.6s	**7.09**	**49**	Pg	Pg	03 24 17.2	-5.7
ARXS	7.9nm,0.7s			Lg	Lg	03 25 48.8	
UZB	**Uzynbulak** 1.5nm,0.4s	**7.31**	**60**	Pg	Pg	03 24 21.2	-6.0
UZB	2.8nm,0.3s			Lg	Lg	03 25 55.5	
SHLS	**Shalkode** 3.7nm,0.2s	**7.61**	**61**	Pg	**Pg**	**03 24 30.8**	**-2.2**
SHLS	8.1nm,0.4s			Lg	Lg	03 26 12.4	
PDGK	**Podgornoye** 0.6nm,0.3s	**7.70**	**60**	Pg	Pb	03 24 26.7	+5.7
PDGK	3.0nm,0.7s			Lg	Lg	03 26 05.8	
PDGK	**Podgornoye** 9.0nm,0.9s	**7.70**	**60**	⇑Lg	Lg	03 26 10.4	
KAPS	**Kapalarasan** 1.2nm,0.3s	**8.60**	**48**	Pg	Pg	03 24 45.1	-6.7
KAPS	3.3nm,0.4s			Lg	Lg	03 26 36.1	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=236,slow=16,SNR=5.9	**11.14**	**47**	Pn	**Pn**	**03 24 46.2**	**-0.5**
MKAR	0.1nm,0.3s,baz=239,slow=28,SNR=3.5			Lg	Lg	03 27 57.4	
AB31	**Akbulak array** 0.5nm,0.4s,baz=90,slow=32,SNR=29	**11.97**	**325**	⇓Pn	**Pn**	**03 24 57.1**	**-0.9**
AB31	0.3nm,0.2s,baz=135,slow=14,SNR=4.6			⇑Sn	**Sn**	**03 27 10.5**	**-1.3**
AKTO	**Aktyubinsk** 1.1nm,0.8s	**13.69**	**325**	⇓Pn	**Pn**	**03 25 21.0**	**-0.5**
AKTO	1.4nm,0.8s			⇓Sn	**Sn**	**03 27 54.1**	**+0.5**
ZALV	**Zalesovo Beam** 0.2nm,0.3s,baz=217,slow=9.8,SNR=1.7	**17.19**	**30**	P	**Pn**	**03 26 05.6**	**-1.9**
ARCES	**ARCESS Array B** 2.0nm,0.8s,baz=104,slow=7.5,SNR=1.8	**37.88**	**336**	P	**P**	**03 29 23.8**	**-0.4**
TORD	**Torodi Ar. Bea** 0.3nm,0.6s,baz=44,slow=6.1,SNR=1.9	**65.33**	**267**	P	**P**	**03 32 47.7**	**-2.4**

IDC 24 03:23:07.4±7.5**, 21°.39S**×**169°.84E, h93**^{km}±46^{km}**, mb3.5**/2**, mb1 3.8**/3**, mb1mx3.3**/26**, mbtmp3.8**/3**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.4**/18**, Error ellipse: s-maj=193.1km s-min=51.1km az=159.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac** 16nm,0.3s,baz=109,slow=9.2,SNR=119	**3.23**	**257**	P	Pn	03 23 57.2	+1.1
DZM	16nm,0.3s,baz=200,slow=23,SNR=11			S	Sn	03 24 33.7	-0.1
HNR	**Honiara** comp=Z,50nm,22.0s,baz=16,slow=30	**15.23**	**320**	LR	LR	03 30 44.3	
WRA	**Warramunga Arr** 0.3nm,0.4s,baz=101,slow=8.0,SNR=2.6	**33.21**	**266**	P	P	03 29 35.2	-0.4
ASAR	**Alice Springs** 1.6nm,0.6s,baz=95,slow=9.5,SNR=21	**33.22**	**259**	P	P	03 29 36.6	+0.9
GERES	**GERESS Array B** 0.5nm,0.7s,baz=29,slow=3.0,SNR=3.8	**146.64**	**331**	PKPbc	PKPdf	03 42 36.5	-0.1

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*TAP **24** 03:30:19.9, 23°.95N×122°.75E, h46^{km}, ML3.3, D*
*JMA **24** 03:30:20.3±0.2, 23°.99N×122°.63E, h32^{km}±4^{km}, M2.6*
ISC 24 03:30:19.9±1.1**, 23°.93N**±0°.03×**122°.66E**±0°.02**, h28**^{km}±12^{km}**, n70, σ0^{s}94**/129**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.59**	**27**	P	**Pb**	**03 30 31.1**	**-0.6**
JYNG				S	**Sb**	**03 30 38.7**	**-1.0**
YOJ	**Yonaguni jima** baz=24	**0.62**	**31**	P	**Pb**	**03 30 31.9**	**-0.4**
YOJ	baz=24			S	**Sn**	**03 30 40.9**	**-1.1**
YOJ	**Yonaguni jima**	**0.62**	**31**	P	**Pb**	**03 30 31.8**	**-0.5**
YOJ				*e*S	**Sb**	**03 30 40.2**	**-0.6**
EOS1	**EOS1** baz=318	**0.78**	**322**	P	**Pb**	**03 30 35.3**	**+0.3**
EOS1	baz=318			S	**Sn**	**03 30 47.7**	**+1.8**
ENA	**Nanau** baz=299	**0.97**	**301**	*e*P	**Pb**	**03 30 38.4**	**+0.2**
ENA	baz=299			*e*S	**Sb**	**03 30 52.3**	**+1.7**
TWD	**Chiawan** baz=279	**0.98**	**279**	*e*P	**Pn**	**03 30 37.5**	**-0.3**
TWD	baz=279			*e*S	**Sb**	**03 30 52.8**	**+2.0**
NACB	**Ninganchiao** baz=272	**1.00**	**284**	P	**Pn**	**03 30 37.6**	**-0.5**
NACB	baz=272			*e*S	**Sb**	**03 30 52.0**	**+0.6**
TWC	**Suao** baz=311	**1.00**	**313**	*i* P	**Pb**	**03 30 38.4**	**-0.3**
TWC	baz=311			*i* S	**Sb**	**03 30 51.6**	**+0.1**
HATJ	**Hateruma jima**	**1.06**	**83**	P	**Pn**	**03 30 39.7**	**+0.8**
HATJ				*e*S	**Sb**	**03 30 53.9**	**+0.8**
IRIF	**Iriomote-Funau**	**1.06**	**67**	P	**Pn**	**03 30 39.2**	**+0.3**
IRIF				*e*S	**Sb**	**03 30 53.4**	**+0.2**
ETLH	**Xiulin Townshi** baz=275	**1.11**	**285**	P	**Pn**	**03 30 39.6**	**-0.1**
ETLH	baz=275			*e*S	**Sb**	**03 30 56.6**	**+2.0**
ESL	**Shilin** baz=257	**1.12**	**265**	*e*P	**Pn**	**03 30 39.3**	**-0.5**
ESL	baz=257			*e*S	**Sb**	**03 30 55.4**	**+0.4**
EGFH	**Guangfu** baz=248	**1.15**	**257**	P	**Pb**	**03 30 41.0**	**-0.3**
EGFH	baz=248			S	**Sn**	**03 30 55.4**	**+0.4**
NTC	**Toucheng** baz=331	**1.19**	**321**	P	**Pb**	**03 30 41.9**	**0.0**
NTC	baz=331			S	**Sb**	**03 30 57.5**	**+0.6**
TWE	**Neicheng** baz=310	**1.20**	**311**	P	**Pb**	**03 30 42.5**	**+0.5**
TWE	baz=310			*i* S	**Sb**	**03 30 57.7**	**+0.6**
HGSD	**Ruisui** baz=250	**1.21**	**249**	P	**Pn**	**03 30 40.9**	**0.0**
HGSD	baz=250			S	**Sn**	**03 30 56.4**	**+0.1**
ENTT	**Nioudou** baz=305	**1.22**	**306**	*i* P	**Pb**	**03 30 41.9**	**-0.5**
ENTT	baz=305			*e*S	**Sb**	**03 30 58.6**	**+0.8**
NDT	**Datong Townshi** baz=291	**1.24**	**303**	P	**Pb**	**03 30 42.6**	**-0.1**
NDT	baz=291			*e*S	**Sb**	**03 30 59.0**	**+0.7**
SLBB	**Yuanshan** baz=309	**1.24**	**312**	P	**Pb**	**03 30 41.7**	**-1.1**
NNSH	**Datong** baz=292	**1.26**	**294**	P	**Pb**	**03 30 42.2**	**-0.9**
NNSH	baz=292			*e*S	**Sb**	**03 30 59.6**	**+0.5**
JKRS	**Kuro-shima**	**1.28**	**76**	P	**Pn**	**03 30 42.7**	**+0.8**
JKRS				*e*S	**Sb**	**03 31 00.3**	**+1.0**
NNS	**Nan Shan** baz=293	**1.28**	**294**	P	**Pb**	**03 30 42.5**	**-0.9**
NNS	baz=293			*e*S	**Sb**	**03 30 59.9**	**+0.4**
TIPB	**Shuangxi** baz=334	**1.29**	**324**	P	**Pb**	**03 30 42.3**	**-1.2**
TIPB	baz=334			*e*S	**Sb**	**03 30 58.7**	**-1.0**
NWLT	**Wulai** baz=308	**1.35**	**309**	P	**Pb**	**03 30 44.1**	**-0.4**
NWLT	baz=308			S	**Sb**	**03 31 02.1**	**+0.6**
OWD	**Renai** baz=272	**1.35**	**271**	P	**Pn**	**03 30 43.5**	**+0.4**
OWD	baz=272			S	**Sb**	**03 31 01.3**	**-0.4**
YULB	**Yu-li** baz=240	**1.35**	**247**	P	**Pn**	**03 30 43.3**	**+0.4**
YULB	baz=240			S	**Sn**	**03 31 00.1**	**0.0**
CHGB	**Renai** baz=276	**1.36**	**276**	P	**Pn**	**03 30 43.6**	**+0.3**
CHGB	baz=276			*e*S	**Sb**	**03 31 01.6**	**-0.4**
TWF1	**Yuli** baz=238	**1.37**	**246**	*i* P	**Pn**	**03 30 44.0**	**+0.9**
TWF1	baz=238			*i* S	**Sn**	**03 31 00.5**	**+0.1**
YHNB	**Yeheng** baz=302	**1.38**	**303**	P	**Pb**	**03 30 43.9**	**-1.3**
YHNB	baz=302			*e*S	**Sb**	**03 31 01.7**	**-0.8**
NWF	**Wu-fen Shan** baz=324	**1.39**	**325**	*e*P	**Pb**	**03 30 44.4**	**-0.9**
NWF	baz=324			*e*S	**Sb**	**03 31 01.7**	**-1.0**
WFSB	**Wu-fen Shan** baz=324	**1.39**	**325**	P	**Pb**	**03 30 44.5**	**-0.8**
WFSB	baz=324			*e*S	**Sb**	**03 31 01.7**	**-0.9**
VWDT	**VWDT** baz=264	**1.40**	**263**	P	**Pn**	**03 30 44.4**	**+0.9**
VWDT	baz=264			S	**Sb**	**03 31 01.9**	**-0.8**
NSK	**Sanguang** baz=290	**1.40**	**302**	P	**Pb**	**03 30 44.1**	**-1.4**
TDCB	**Techi** baz=284	**1.41**	**284**	P	**Pb**	**03 30 44.9**	**-0.7**
TDCB	baz=284			*e*S	**Sb**	**03 31 02.8**	**-0.4**
JIJ	**Ishigaki jima**	**1.43**	**72**	P	**Pn**	**03 30 44.3**	**+0.4**
JIJ				*e*S	**Sn**	**03 31 02.2**	**+0.4**
CHKT	**Chengkung** baz=228	**1.44**	**235**	S	**Sn**	**03 31 01.1**	**-1.0**
FULB	**Fuli** baz=233	**1.44**	**240**	P	**Pn**	**03 30 45.0**	**+0.8**
FULB	baz=233			S	**Sn**	**03 31 02.7**	**+0.4**
SSLB	**Suanglung** baz=258	**1.56**	**265**	P	**Pb**	**03 30 47.5**	**-0.7**
SSLB	baz=258			S	**Sn**	**03 31 06.0**	**+0.8**
YM01	**YM01** baz=321	**1.56**	**321**	*e*P	**Pb**	**03 30 46.7**	**-1.6**
YM01	baz=321			*e*S	**Sb**	**03 31 05.5**	**-2.2**
YM11	**YM11** baz=319	**1.58**	**322**	*e*P	**Pb**	**03 30 46.7**	**-1.8**
DPDB	**Guoxing** baz=275	**1.58**	**274**	*e*P	**Pb**	**03 30 47.3**	**-1.3**
DPDB	baz=275			*e*S	**Sb**	**03 31 07.8**	**-0.5**
YM08	**YM08** baz=320	**1.59**	**323**	*e*P	**Pn**	**03 30 46.6**	**+0.4**
WHP	**Taichung City** baz=283	**1.60**	**283**	P	**Pb**	**03 30 48.3**	**-0.6**
WHP	baz=283			*e*S	**Sb**	**03 31 08.0**	**-0.8**
SMLT	**Sun Moon Lake** baz=262	**1.61**	**269**	*i* P	**Pb**	**03 30 47.7**	**-1.3**
SMLT	baz=262			S	**Sb**	**03 31 09.2**	**+0.3**
TWH	**Lutao** baz=222	**1.62**	**222**	P	**Pn**	**03 30 47.1**	**+0.5**
TWH	baz=222			*i* S	**Sn**	**03 31 05.7**	**-1.0**
JISG	**Ishigakijimahi**	**1.65**	**66**	P	**Pn**	**03 30 47.1**	**+0.1**
JISG				S	**Sn**	**03 31 06.5**	**-0.7**
LIOB	**Emei** baz=296	**1.66**	**296**	*e*P	**Pb**	**03 30 48.2**	**-1.6**
LIOB	baz=296			S	**Sb**	**03 31 09.9**	**-0.4**
WHYT	**Xinyi Township** baz=254	**1.67**	**262**	*e*P	**Pn**	**03 30 48.1**	**+0.9**
WHYT	baz=254			*e*S	**Sb**	**03 31 10.3**	**-0.3**
ELDTW	**Lidau** baz=244	**1.67**	**244**	*e*P	**Pb**	**03 30 49.3**	**-0.8**
WNT	**Mingjian** baz=270	**1.80**	**269**	*e*P	**Pb**	**03 30 51.5**	**-0.8**
WNT	baz=270			*e*S	**Sb**	**03 31 15.1**	**+0.6**
TWGBT	**Beinan** baz=226	**1.82**	**233**	*e*S	**Sn**	**03 31 10.6**	**-0.9**
CHN5	**Tsauling** baz=254	**1.84**	**260**	*e*P	**Pb**	**03 30 51.8**	**-1.1**
CHN5	baz=254			*e*S	**Sb**	**03 31 14.6**	**-1.0**
WDLH	**Douliu** baz=265	**1.95**	**263**	*e*P	**Pb**	**03 30 54.2**	**-0.6**
WDLH	baz=265			S	**Sb**	**03 31 19.1**	**+0.3**
TPUB	**Ta-pu** baz=244	**1.96**	**252**	P	**Pb**	**03 30 53.9**	**-1.0**
TPUB	baz=244			S	**Sb**	**03 31 17.9**	**-1.1**
CHN4	**Tsaushan** baz=247	**1.98**	**254**	*e*P	**Pb**	**03 30 54.2**	**-1.0**
CHN4	baz=247			*e*S	**Sb**	**03 31 18.6**	**-0.8**
WTP	**Ta-pu** baz=245	**1.99**	**251**	*i* P	**Pb**	**03 30 54.8**	**-0.7**
WTP	baz=245			S	**Sb**	**03 31 18.8**	**-1.1**
JTJ	**Tarama**	**2.00**	**69**	P	**Pn**	**03 30 52.7**	**+0.9**
SLGT	**Liugui** baz=237	**2.06**	**244**	*e*P	**Pb**	**03 30 55.5**	**-1.3**
SLGT	baz=237			*e*S	**Sn**	**03 31 20.0**	**+2.5**
SGST	**Jiashian** baz=239	**2.08**	**247**	*e*P	**Pb**	**03 30 55.6**	**-1.4**
SGST	baz=239			S	**Sb**	**03 31 21.3**	**-1.1**
CHN1	**Nanshi** baz=250	**2.09**	**250**	*i* P	**Pb**	**03 30 56.4**	**-0.7**
CHN1	baz=250			*i* S	**Sb**	**03 31 21.7**	**-0.9**
TWK	**Hsinying** baz=253	**2.09**	**252**	P	**Pb**	**03 30 56.2**	**-1.1**
TWK	baz=253			*i* S	**Sb**	**03 31 21.7**	**-1.2**
SNST	**Tainan City** baz=252	**2.10**	**251**	*e*P	**Pb**	**03 30 56.1**	**-1.2**
SNST	baz=252			S	**Sb**	**03 31 22.1**	**-1.0**
SSD	**Sandimen** baz=235	**2.20**	**238**	*e*S	**Sn**	**03 31 21.4**	**+0.5**
EAST	**Anshuo** baz=235	**2.26**	**228**	*i* P	**Pn**	**03 30 56.3**	**+0.8**
EAST	baz=235			S	**Sn**	**03 31 23.0**	**+0.5**
MASBT	**Mashibuluo** baz=232	**2.27**	**235**	*e*P	**Pn**	**03 30 57.0**	**+1.4**
MASBT	baz=232			*e*S	**Sn**	**03 31 23.7**	**+1.0**

SCZT	Fangliau	2.43	231	*e*P	Pn	03 30 58.8	+1.0
	baz=226						
WDGT	Dungji	2.83	257	P	Pn	03 31 05.5	+2.4
	baz=257						
WDGT				*e*S	Sn	03 31 38.5	+2.1
	baz=257						
PNG	Penghu	2.86	263	*e*S	Sn	03 31 38.5	+1.3
	baz=280						
VWUC	VWUC	3.11	291	*e*P	Pn	03 31 07.2	+0.2
	baz=293						
VWUC				*e*S	Sn	03 31 43.1	-0.2
	baz=293						
PTMZ	Houxiangcun	3.41	290	*e*P	Pn	03 31 11.7	+0.5
	baz=292						
PTMZ				*e*S	Sn	03 31 50.9	+0.3
	baz=292						

*VAO **24** 04:08:33.7±1.8,23°.37S×67°.69W,h365^{km}±23^{km},mb3.9*

*SJA **24** 04:08:37.2±0.5,23°.02S×66°.46W,h243^{km}±4^{km},ML3.7,MW3.7*

*NEIC **24** 04:08:37.4±2.0,22°.98S±0°.08×66°.5W±0°.1,h251^{km}±14^{km},Error ellipse: s-maj=17.4km s-min=10.6km az=100.0*

*IDC **24** 04:08:37.2±1.2,22°.93S×66°.38W,h227^{km}±16^{km},mb4.1/2,mb1 3.6/8,mb1mx3.3/26,mbtmp4.3/8,Error ellipse: s-maj=25.0km s-min=15.3km az=116.0*

*GUC **24** 04:08:39.0±0.5,22°.90S×67°.17W,h284^{km}±9^{km},ML4.2*

ISC 24 04:08:36.6±0.6,23°.00S±0°.05×66°.50W±0°.04,h250^{km}±7^{km},n62,σ1^{s}51/88,10C-1D,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YJA	Yavi	1.23	48	*i* P	Pn	04 09 13.8	+0.2
YJA				*e*S	S	04 09 41.4	-1.3
YJA				IAML		04 09 42.3	
	comp=Z,77nm,0.5s						
AZAP	Zapla	1.79	133	*i* P	Pn	04 09 17.4	-0.1
AZAP				*e*S	S	04 09 47.7	-2.1
AZAP				IAML		04 09 48.1	
	comp=Z,67nm,0.5s						
SLA	San Lorenzo	1.94	152	*i* P	Pn	04 09 19.0	+0.2
SLA				IAML		04 09 52.6	
	comp=Z,47nm,0.9s						
LVC	Limon Verde	2.25	279	P	Pn	04 09 22.9	+1.1
	comp=Z,50nm,0.3s,baz=107,slow=5.6,SNR=152						
LVC				S	S	04 09 56.7	-0.9
	comp=Z,22nm,0.3s,baz=248,slow=20,SNR=20						
LVC	Limon Verde	2.25	279		Pn	04 09 22.7	+0.9
LVC	Limon Verde	2.25	279	*e*P	Pn	04 09 22.8	+0.9
LVC	Limon Verde	2.25	279	*i* P	Pn	04 09 22.9	+1.1
LVC				*e*S	S	04 09 56.5	-1.0
LVC				IAML		04 10 02.3	
	comp=Z,38nm,0.5s						
PB15	IPOC Station P	2.74	265	⇑*i*P	Pn	04 09 27.6	+1.1
PB15				*i* S	S	04 10 05.3	-0.7
PB15	IPOC Station P	2.74	265		Pn	04 09 27.7	+1.1
PB15				S	S	04 10 05.7	-0.4
PB15	IPOC Station P	2.74	265	*i* P	Pn	04 09 27.8	+1.3
PB15				*e*S	S	04 10 04.7	-1.3
PB15				IAML		04 10 07.0	
	comp=Z,2μm,0.2s						
PB09	IPOC Station P	2.80	295	⇑*i*P	Pn	04 09 28.8	+1.5
PB09				*e*S	S	04 10 06.2	-1.0
PB09				IAML		04 10 10.9	
	comp=E,270nm,0.4s						
PB09	IPOC Station P	2.80	295		Pn	04 09 28.7	+1.5
PB09	IPOC Station P	2.80	295	*i* P	Pn	04 09 28.5	+1.3
PB09				*e*S	S	04 10 05.8	-1.4
PB09				IAML		04 10 08.3	
	comp=Z,223nm,0.5s						
PB06	IPOC Station P	2.84	275	⇑*i*P	Pn	04 09 28.6	+1.0
PB06				*e*S	S	04 10 06.6	-1.4
PB06				IAML		04 10 10.6	
	comp=N,441nm,0.5s						
PB06	IPOC Station P	2.84	275	*i* P	Pn	04 09 28.7	+1.1
PB06				*e*S	S	04 10 06.6	-1.4
PB06				IAML		04 10 12.1	
	comp=Z,213nm,0.4s						
PB03	IPOC Station P	3.15	287	⇑*i*P	Pn	04 09 31.8	+0.8
PB03				*i* S	S	04 10 11.8	-2.1
PB07	IPOC Station P	3.38	291	⇑*i*P	Pn	04 09 34.4	+0.9
PB07				*i* S	S	04 10 16.0	-2.5
PB07	IPOC Station P	3.38	291		Pn	04 09 34.1	+0.6
PB01	IPOC Station P	3.38	305	⇑*i*P	Pn	04 09 34.1	+0.6
PB01	IPOC Station P	3.38	305		Pn	04 09 34.3	+0.8
PB05	IPOC Station P	3.41	272	⇑*i*P	Pn	04 09 34.7	+1.0
PB05				*e*S	S	04 10 16.3	-2.8
PB05	IPOC Station P	3.41	272	*i* P	Pn	04 09 34.8	+1.0
PB05				IAML		04 10 21.6	
	comp=Z,147nm,0.5s						
PB04	IPOC Station P	3.43	280	⇑*i*P	Pn	04 09 34.9	+0.9
PB04	IPOC Station P	3.43	280		Pn	04 09 34.9	+0.9
PB04	IPOC Station P	3.43	280	*i* P	Pn	04 09 35.0	+0.9
PB04				*e*S	S	04 10 18.1	-1.5
GO02	Mina Guanaco	3.55	232		Pn	04 09 36.8	+1.3
PB02	IPOC Station P	3.56	297	⇑*i*P	Pn	04 09 36.0	+0.6
PB02				*e*S	S	04 10 19.3	-2.8
PB10	IPOC Station P	3.76	261	⇑*i*P	Pn	04 09 38.5	+0.9
PB10				*i* S	S	04 10 23.0	-3.0
PB10	IPOC Station P	3.76	261		Pn	04 09 38.5	+0.9
PB10	IPOC Station P	3.76	261	*i* P	Pn	04 09 38.7	+1.1
PB10				*e*S	S	04 10 24.0	-2.1
PB10				IAML		04 10 28.5	
	comp=Z,127nm,0.5s						
PB14	IPOC Station P	3.92	245		Pn	04 09 40.7	+1.0
PB14	IPOC Station P	3.92	245	*i* P	Pn	04 09 40.8	+1.0
PB14				*e*S	S	04 10 28.0	-1.9
PB14				IAML		04 10 31.8	
	comp=Z,288nm,0.4s						
PATCX	Punta Patache	4.02	302	⇓*i*P	Pn	04 09 41.4	+0.5
PATCX				*i* S	S	04 10 28.6	-3.1
PATCX	Punta Patache	4.02	302		Pn	04 09 41.1	+0.3
PATCX				S	S	04 10 29.2	-2.6
GO01	Chusmiza	4.16	322		Pn	04 09 44.0	+1.2
TA01	Diego Aracena	4.19	305	*e*P	Pn	04 09 42.5	-0.2
TA01				*i* S	S	04 10 31.5	-3.7
PB11	IPOC Station P	4.36	317		Pn	04 09 45.1	+0.2
PB11				S	S	04 10 35.8	-3.4
PSGCX	Pisagua	4.78	314		Pn	04 09 50.0	+0.1
PB16	IPOC Station P	5.43	328		Pn	04 09 59.3	+1.0
PB12	IPOC Station P	5.64	320	Pn	Pn	04 09 59.8	-0.6
GO03	Copiap	5.68	216		Pn	04 10 00.5	-0.4
GO03					S	04 11 06.9	-1.3
LPAZ	La Paz	6.85	347	P	Pn	04 10 17.0	+0.9
	comp=Z,2.2nm,0.3s,baz=125,slow=5.3,SNR=66						
LPAZ				S	S	04 11 33.1	-2.7
	baz=236,slow=19,SNR=1.1						
LPAZ	La Paz	6.85	347		Pn	04 10 17.3	+1.2
LPAZ	La Paz	6.85	347	*e*P	Pn	04 10 17.3	+1.2
GO04	Tololo Observa	8.11	207	Pn	Pn	04 10 30.7	-0.8
SIV	San Ignacio	8.65	37	P	Pn	04 10 37.8	-0.4
	comp=Z,1.3nm,0.3s,baz=234,slow=9.8,SNR=28						
CPUP	Villa Florida	8.98	114	*e*P	P	04 10 49.8	+0.6
SAML	Samuel	14.33	13		P	04 11 50.3	+1.2
NNA	Nana	14.73	316	P	Pn	04 11 56.1	+2.5
	comp=Z,0.9nm,0.3s,baz=196,slow=15,SNR=1.8						
CNLB	Canela	15.39	117	*e*P	P	04 12 00.6	-0.1
GO06	Curarrehue	17.06	193	P	Pn	04 12 21.8	+0.7
GO06				IAmb	IAmb	04 12 27.5	
	comp=Z,12nm,1.4s						
SPB	Sao Paulo	17.53	96	*e*P	Pn	04 12 26.3	-0.4
PLCA	Paso Flores	18.01	190	P	Pn	04 12 31.9	-0.2
	comp=Z,0.2nm,0.3s,baz=62,slow=12,SNR=9.1						
PLCA	Paso Flores	18.01	190	P	Pn	04 12 32.0	-0.2
PLCA				IAmb	IAmb	04 12 39.5	
	comp=Z,14nm,1.4s						
BDFB	Brasilia	18.91	71	P	P	04 12 40.8	+1.6
	comp=Z,0.8nm,0.3s,baz=236,slow=11,SNR=16						
BDFB	Brasilia	18.91	71	P	P	04 12 40.6	+1.3
MDP	Montagnes des	31.04	28	P	P	04 14 32.3	+0.9
	comp=Z,22nm,1.0s,baz=202,slow=8.1,SNR=6.6						
TOA0	Torodi Ar. Sit	75.79	69	P	P	04 19 56.7	+1.2
TORD	Torodi Ar. Bea	75.79	69	P	P	04 19 56.7	+1.2
	comp=Z,0.8nm,0.3s,baz=260,slow=5.1,SNR=30						
TORD	Torodi Ar. Bea	75.79	69	IAmb	IAmb	04 19 58.7	
	comp=Z,2.7nm,1.4s						
KSH	Kashi	144.25	54	PKP	PKPab	04 27 39.0	-2.6
KSH				pPKP	pPKPdf	04 28 51.3	+3.1
KSH				PP	PP	04 30 59.9	-1.0
KSH				PKS	PKSdf	04 31 14.5	-4.1
KSH				SKKS		04 37 20.4	
MKAR	Makanchi Array	145.47	39	PKPbc	PKiKP	04 27 48.7	-0.1
	comp=Z,0.6nm,0.4s,baz=307,slow=3.7,SNR=13						

*KRNET **24** 04:08:41.3±0.1,39°.43N×70°.17E,mb3.5*

*SOME **24** 04:08:46.2,39°.85N×70°.47E,h0^{km}*

*NNC **24** 04:08:48.1±1.1,39°.86N×70°.42E,h3^{km}±4^{km},mb3.9,mpv3.6,Error ellipse: s-maj=8.1km s-min=4.8km az=10.0*

*ISU **24** 04:09:44.0,39°.60N×70°.50E,h5^{km}*

ISC 24 04:08:49.9±1.6,39°.99N±0°.08×70°.39E±0°.04,h10^{km},n42,σ2^{s}60/65,21C-11D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTK	Batken	0.33	78	*i* P	Pg	04 08 54.2	-2.4
BTK				*i* S	Sb	04 09 01.5	-1.9
FRG	Fergana	1.30	54	*e*P	Pn	04 09 08.8	-5.3
FRG				S	Sb	04 09 27.5	-3.7
TAS	Tashkent	1.58	328	⇑*e*P	Pn	04 09 17.6	-0.4
	baz=41						
TAS				⇑*e*S	Sg	04 09 43.6	+3.0
	baz=41						
ANR	Andizhan	1.69	62	*e*P	Pg	04 09 21.5	-0.7
ANR				*e*S	Sg	04 09 47.9	+3.8
ARK	Arkit	2.17	33	⇑*i*P	Pn	04 09 26.7	+0.6
	baz=30						
ARK				⇑*i*S	Sg	04 10 01.2	+1.7
	baz=30						
ARSB	Arslanbob	2.38	55	⇑*e*P	Pn	04 09 29.4	+0.3
	baz=48						
ARSB				⇑*i*S	Sb	04 10 04.1	+1.7
	baz=48						
ARSB	Arslanbob	2.38	55	*i* P	Pb	04 09 32.3	-0.6
ARSB				*i* S	Sb	04 10 00.9	-1.5
JBG	Jabagly	2.44	3	Pg	Pb	04 09 35.5	+1.6
	44nm,0.2s						
JBG				Lg	Lg	04 10 11.2	
	65nm,0.5s						
BRLS	Borolday	3.07	352	*e*P	Pb	04 09 42.0	-2.6
	4.3nm,0.2s						
BRLS				*e*S	Sb	04 10 22.2	+0.1
	4.1nm,0.2s						
BRLS	Borolday	3.07	352	Pg	Pb	04 09 42.0	-2.6
	4.3nm,0.2s						
BRLS				Lg	Lg	04 10 22.2	
	4.1nm,0.2s						
KK31	Karatay Array	3.12	2	⇓Pn	Pn	04 09 40.1	+1.0
	2.1nm,0.3s,baz=183,slow=12,SNR=76						
KK31				⇓Pg	Pb	04 09 47.7	+2.3
	1.7nm,0.3s,baz=183,slow=17,SNR=13						
KK31				Lg	Lg	04 10 30.6	
	3.3nm,0.2s,baz=180,slow=29,SNR=6.9						
AML	Almayashu	3.29	48	⇑*i*P	Pn	04 09 42.6	+0.8
	baz=44						
AML				⇑*i*S	Sb	04 10 27.0	-1.8
	baz=44						
MRKS	Merke	3.48	37	*e*P	Pb	04 09 53.2	+1.5
	18nm,0.3s						
MRKS				*e*S	Sg	04 10 41.5	-0.2
	27nm,0.3s						
MRKS	Merke	3.48	37	Pg	Pb	04 09 53.2	+1.5
	18nm,0.3s						
MRKS				Lg	Lg	04 10 41.5	
	27nm,0.3s						
ARLS	Aral	3.52	57	⇓*i*P	Pn	04 09 44.9	+0.2
	baz=51						
ARLS				⇓*i*S	Sb	04 10 32.0	-3.1
	baz=51						
EKS2	Erkin-Say	3.69	43	⇓*i*P	Pn	04 09 48.4	+1.3
	baz=39						
EKS2				⇓*i*S	Sb	04 10 36.6	-3.5
	baz=39						
UCH	Uchtor	3.83	53	⇓*i*P	Pn	04 09 50.0	+0.6
	baz=48						
UCH				⇓*i*S	Sb	04 10 39.7	-4.8
	baz=48						
AAK	Ala-Archa	4.07	48	⇑*e*P	Pn	04 09 53.3	+1.0
	baz=44						
AAK				⇑*i*S	Sn	04 10 45.3	+5.2
	baz=44						
AAK	Ala-Archa	4.07	48	⇑Pn	Pn	04 09 53.3	+1.0
	1.5nm,0.3s						
AAK				⇑Pg	Pg	04 10 05.3	-2.5
	5.2nm,0.6s						
AAK				Lg	Lg	04 11 01.7	
KZA	Kyzart	4.22	59	⇑*i*P	Pn	04 09 55.0	+0.3
	baz=54						
KZA				⇑*i*S	Sn	04 10 48.2	+3.9
	baz=54						
CHMS	Chumysh	4.45	46	⇓Pg	Pg	04 10 11.8	-3.2
	3.4nm,0.5s						
CHMS				⇓Sn	Sn	04 10 52.1	+2.9
	3.5nm,0.5s						
CHMS				⇓Lg	Lg	04 11 12.8	
	5.3nm,0.5s						
NRN	Naryn	4.50	69	⇑*i*P	Pn	04 09 57.3	-1.1
	baz=64						
NRN				⇑*i*S	Sn	04 10 52.1	+1.2
	baz=64						
SGDS	Sogindy	4.69	41	Pg	Pb	04 10 13.8	+1.5
	4.6nm,0.5s						
SGDS				Lg	Lg	04 11 17.4	
	8.2nm,0.7s						
BOOM	Boomskoye usch	4.87	57	⇑*i*P	Pn	04 10 03.7	+0.3
	baz=53						
BOOM				⇑*i*S	Sn	04 11 03.4	+3.5
	baz=53						
KST	Kastek	5.18	52	*e*P	Pb	04 10 23.4	+2.8
	5.6nm,0.5s						
KST				*e*S	Sg	04 11 33.1	-2.9
	10nm,0.6s						
KST	Kastek	5.18	52	Pg	Pb	04 10 23.4	+2.8
	5.9nm,0.7s						
KST				Lg	Lg	04 11 33.1	
	10nm,0.5s						
DGS	Degeres	5.18	49	*e*P	Pb	04 10 24.0	+3.4
	5.3nm,0.4s						
DGS				*e*S	Sg	04 11 34.7	-1.4
	9.1nm,0.5s						
DGS	Degeres	5.18	49	Pg	Pb	04 10 24.0	+3.4
	5.3nm,0.4s						
DGS				Lg	Lg	04 11 34.7	
	9.1nm,0.5s						
KRBS	Karabastau	5.41	45	*e*P	Pb	04 10 27.8	+3.2
	2.8nm,0.3s						
KRBS				*e*S	Sg	04 11 40.6	-3.0
	2.1nm,0.5s						
KRBS	Karabastau	5.41	45	Pg	Pb	04 10 27.8	+3.2
	2.8nm,0.3s						
KRBS				Lg	Lg	04 11 40.6	
	2.1nm,0.5s						
MTBS	Maitube	5.51	53	*e*P	Pb	04 10 29.6	+3.3
	3.6nm,0.2s						
MTBS				*e*S	Sg	04 11 43.8	-2.9
	8.9nm,0.2s						
MTBS	Maitube	5.51	53	Pg	Pb	04 10 29.5	+3.3
	3.6nm,0.2s						
MTBS				Lg	Lg	04 11 43.8	
	8.9nm,0.2s						
IZV	Izvestkoviy	5.57	55	*e*P	Pb	04 10 30.8	+3.5
	2.7nm,0.5s						
IZV				*e*S	Sg	04 11 46.3	-2.5
	7.3nm,0.3s						
IZV	Izvestkoviy	5.57	55	Pg	Pb	04 10 30.8	+3.5
	2.7nm,0.5s						
IZV				Lg	Lg	04 11 46.8	
	7.3nm,0.3s						
TNSS	Tian-Shan	5.79	56	Pg	Pb	04 10 34.9	+3.8
	3.0nm,0.5s						
TNSS				Lg	Lg	04 11 52.9	
	6.3nm,0.6s						
KUU	Kurty	5.91	47	Pg	Pb	04 10 36.6	+3.7
	2.5nm,0.5s						
KUU				Lg	Lg	04 11 56.3	
	4.8nm,0.7s						
MDOK	Medeo	5.91	55	⇑Pn	Pn	04 10 16.5	-1.2
	1.0nm,0.3s						
MDOK				Lg	Lg	04 11 56.6	
	3.7nm,0.6s						
KOTS	Kotyrbulak	5.99	55	Pg	Pb	04 10 38.1	+3.6
	5.1nm,0.3s						
KOTS				Lg	Lg	04 11 58.8	
	5.7nm,0.3s						
KTBS	Karatobe	5.99	50	Pg	Pb	04 10 37.6	+3.2
	2.4nm,0.2s						
KTBS				Lg	Lg	04 11 57.8	
	8.1nm,0.5s						
ARXS	Arharly	6.95	50	Pg	Pb	04 10 55.4	+4.6
	3.2nm,0.6s						
ARXS				Lg	Lg	04 12 28.6	
	3.5nm,0.5s						
KAPS	Kapalarasan	8.46	48	Pg	Pg	04 11 23.7	-8.1
	1.1nm,0.3s						
KAPS				Lg	Lg	04 13 17.1	
	1.6nm,0.5s						
AB31	Akbulak array	11.88	325	⇑Pn	Pn	04 11 37.5	-1.7
	0.3nm,0.4s,baz=147,slow=13,SNR=11						
AB31				⇑Sn	Sn	04 13 53.7	+2.0
	0.4nm,0.5s,baz=145,slow=23,SNR=3.0						

IDC 24 04:12:56.8±4.0,1°.87S×141°.14E,h0^{km},mb3.4/2,mb1 3.7/3,mb1mx3.4/30,mbtmp3.5/3,ML3.8/1,Error ellipse: s-maj=141.1km s-min=32.0km az=88.0,Ninigo Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	19.16	200	P	P	04 17 20.7	-1.2
	0.3nm,0.3s,baz=22,slow=11,SNR=6.6						
ASAR	Alice Springs	22.78	197	P	P	04 18 01.5	+0.4
	1.2nm,0.5s,baz=26,slow=11,SNR=12						
MKAR	Makanchi Array	70.62	321	P	P	04 24 14.5	+0.3
	0.1nm,0.5s,baz=111,slow=7.9,SNR=2.2						

*AEIC **24** 04:17:15.8±1.0,60°.08N±0°.04×152°.68W±0°.06,h102^{km}±3^{km},ML2.8/77,Error ellipse: s-maj=5.1km s-min=4.6km az=152.0*

*NEIC **24** 04:17:15.0±0.8,60°.09N±0°.03×152°.72W±0°.06,h104^{km}±3^{km},Error ellipse: s-maj=5.2km s-min=3.3km az=145.0*

*IDC **24** 04:17:17.8±8.2,60°.35N×152°.46W,h126^{km}±66^{km},mb3.2/3,mb1 3.0/5,mb1mx2.8/40,mbtmp3.4/5,MS3.3/1,Ms1 3.3/1,ms1mx2.5/16,Error ellipse: s-maj=67.5km s-min=39.7km az=19.0*

ISC 24 04:17:14.8±0.9,60°.09N±0°.04×152°.65W±0°.04,h108^{km}±6^{km},n88,σ0^{s}84/103,mb3.6/3,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IVE	Iliamna Volcan	0.20	250		Pn	04 17 29.6	-0.4
IVE					Sn	04 17 40.9	-0.5
ILW	Iliamna West	0.25	264		Pn	04 17 29.8	-0.4
ILW					Sn	04 17 41.7	-0.2
ILS	Iliamna Low So	0.25	239		Pn	04 17 29.8	-0.4
RED	Redoubt Volcan	0.34	349		Pn	04 17 30.4	-0.2
RED					Sn	04 17 41.8	-0.6
RSO	Redoubt South	0.38	352		Pn	04 17 30.8	-0.1
RDWB	Redoubt West	0.42	347		Pn	04 17 30.7	-0.3
RDWB					Sn	04 17 42.5	-0.8
DFR	Drift River	0.51	358		Pn	04 17 31.4	-0.1
DFR					Sn	04 17 43.5	-0.6
RDJH	Redoubt Jeurge	0.51	351		Pn	04 17 31.4	-0.2
HOM	Homer	0.66	130		Pn	04 17 32.8	+0.3
HOM					Sn	04 17 46.7	+0.8
AUL	Augustine Lava	0.81	210		Pn	04 17 34.0	+0.1
AUL					Sn	04 17 47.9	-0.4
AUP	Augustine Pinn	0.82	209		Pn	04 17 34.2	+0.1
AUH	Augustine H	0.83	210		Pn	04 17 34.2	+0.1
AUW	Augustine West	0.83	211		Pn	04 17 34.0	0.0
CNPM	China Poot	0.91	128		Pn	04 17 34.9	+0.1
BRLK	Bradley Lake	0.94	109		Pn	04 17 35.1	-0.1
BRLK					Sn	04 17 50.3	-0.3
CAPN	Captain Cook N	1.01	47		Pn	04 17 37.7	+2.0
BRSE	Bradley Lake S	1.02	109		Pn	04 17 36.0	+0.1
BRSE					Sn	04 17 51.8	-0.2
SPCR	Spurr Chakacha	1.14	11		Pn	04 17 37.6	+0.3
SPCR					Sn	04 17 54.9	+0.5
SPBG	Spurr Blockage	1.19	6		Pn	04 17 38.3	+0.5
SPBG					Sn	04 17 55.8	+0.5
SLKM	Skilak Lake	1.28	70		Pn	04 17 38.7	-0.2
STLK	Strandline Lak	1.47	15		Pn	04 17 41.6	+0.5
FIS	Fire Island	1.60	47		Pn	04 17 44.1	+1.5
SEW	Seward	1.60	88		Pn	04 17 42.1	-0.5
RC01	Rabbit Creek A	1.75	54		Pn	04 17 44.8	+0.3
RC01					Sn	04 18 07.2	0.0
SVW2	Sparrevohn	1.77	306		Pn	04 17 44.4	-0.3
KAHC	Katmai Hardscr	1.88	221		Pn	04 17 46.0	-0.2
KABU	Katmai Buttres	2.27	218		Pn	04 17 51.4	+0.2
PWL	Port Wells	2.27	68		Pn	04 17 50.3	-0.8
PMR	Palmer	2.29	47		Pn	04 17 51.0	-0.3
KNK	Knik Glacier	2.45	55		Pn	04 17 53.0	-0.5
GHO	Glory Hole Cre	2.48	45		Pn	04 17 53.6	-0.3
SML	Sawmill	2.72	49		Pn	04 17 56.6	-0.4
PPLA	Purkeypile	2.83	4		Pn	04 17 59.4	+0.9
HIN	Hinchinbrook I	3.08	82		Sn	04 18 36.7	-1.2
HIN	Hinchinbrook I	3.08	82		Pn	04 18 01.3	-0.4
SCM	Sheep Creek Mo	3.13	54		Pn	04 18 02.0	-0.4
HUR	Hurricane	3.24	25		Pn	04 18 05.1	+1.3
MID	Middleton Isla	3.26	99	Pn	Pn	04 18 04.3	+0.3
TT01	Tatalina	3.26	332		Pn	04 18 04.1	0.0
WAT1	Susitna Watana	3.38	34		Pn	04 18 05.9	+0.1
WAT6	Susitna Watana	3.44	41		Pn	04 18 06.5	-0.2
EYAK	Cordova Ski Ar	3.46	79	Pn	Pn	04 18 07.4	+0.6
WAT2	Susitna Watana	3.48	32		Pn	04 18 07.2	0.0
TRF	Thorofare Moun	3.56	17		Pn	04 18 08.2	0.0
KTH	Kantishna Hill	3.58	12		Pn	04 18 08.6	+0.2
RND	Reindeer	3.79	27		Pn	04 18 11.7	+0.5
DHY	Denali Highway	3.92	38		Pn	04 18 13.3	+0.3
GOAT	Goat Mountain	3.97	79		Pn	04 18 13.9	+0.3
RAGM	Ragged Mountai	3.99	82	Pn	Pn	04 18 16.1	+2.2
MCK	McKinley	4.06	24		Pn	04 18 15.6	+0.8
BPAW	Bear Paw Mtn.	4.10	10		Pn	04 18 15.7	+0.3
BWN	Browne	4.37	19	Pn	Pn	04 18 19.5	+0.6
PAX	Paxson	4.49	47		Pn	04 18 21.5	+0.8
PAX				Sn	Sn	04 19 10.7	-1.2
GLB	Gilahina Butte	4.54	69	Pn	Pn	04 18 20.7	-0.6
VRDI	Verde Repeater	4.67	72	Pn	Pn	04 18 23.4	+0.2
PS10	TAPS Pump St10	4.68	41		Pn	04 18 24.3	+1.2
CRQM	Cirque	4.76	78	Pn	Pn	04 18 25.2	+0.8
WRH	Wood River Hil	4.89	24		Pn	04 18 26.1	+0.2
MCARA	McCarthy VSAT	4.90	70	Pn	Pn	04 18 27.1	+1.0
TGL	Tana Glacier	4.91	78	Pn	Pn	04 18 26.7	+0.3
MLY	Manley	5.04	9		Pn	04 18 29.1	+1.1
HDA	Harding Lake	5.09	29	Pn	Pn	04 18 29.1	+0.4
HDA				Sn	Sn	04 19 25.6	-0.6
CCB	Clear Creek Bu	5.10	24		Pn	04 18 28.6	-0.2
BALM	Baldy	5.17	75		Pn	04 18 30.3	+0.4
RIDG	Independent Ri	5.20	42		Pn	04 18 30.8	+0.6
PS08	TAPS Pump Stn8	5.23	29		Pn	04 18 30.7	+0.1
COLA	College	5.29	23		Pn	04 18 31.9	+0.5
MDM	Murphy Dome	5.30	21		Pn	04 18 31.9	+0.4
ILAR	Eielson Array	5.41	27	P	Pn	04 18 32.8	-0.2
	0.6nm,0.3s,baz=214,slow=14,SNR=36						
ILAR				S	Sn	04 19 30.5	-3.4
	0.4nm,0.3s,baz=211,slow=21,SNR=5.2						
BARN	Barnard Glacie	5.51	75	Pn	Pn	04 18 35.3	+0.8
SCRK	Sand Creek	5.64	42	Pn	Pn	04 18 36.1	-0.1
CTGM	Chitina Glacie	5.66	76	Pn	Pn	04 18 38.5	+2.0
IM03		5.94	356		Pn	04 18 40.4	+0.2
IMAR	Indian Mountai	5.94	356	Pn	Pn	04 18 40.8	+0.6
PCA	Pinnacle	6.20	85	Pn	Pn	04 18 44.9	+1.1
PCA				Sn	Sn	04 19 49.5	-3.7
PRP	Porcupine Dome	6.35	28		Pn	04 18 46.1	+0.2
PNL	Peninsula	6.68	88		Pn	04 18 50.4	+0.1
EGAK	Eagle	7.11	44	Pn	Pn	04 18 55.5	-0.4
FYU	Fort Yukon	7.30	24	Pn	Pn	04 18 58.8	+0.2
DAWY	Dawson	7.39	52	Pn	Pn	04 19 00.6	+0.8
DHAK	Deception Hill	7.39	91		Pn	04 19 01.3	+1.4
BM03	Burnt Mountain	8.17	22		Pn	04 19 09.5	-0.9
BMAR	Burnt Mountain	8.18	22	Pn	Pn	04 19 10.4	-0.2
YKA	Yellowknife Ar	18.25	66	P	P	04 21 20.1	+0.6
	0.1nm,0.3s,baz=274,slow=9.3,SNR=7.4						
NVAR	Mina Array Bea	30.61	120	LR	LR	04 34 12.9	
	comp=Z,46nm,18.2s,baz=283,slow=33						
SONM	Songino Array	54.88	306	P	P	04 26 34.8	+1.0
	0.6nm,0.9s,baz=48,slow=8.6,SNR=2.7						
ZALV	Zalesovo Beam	57.41	324	P	P	04 26 51.7	+0.1
	0.7nm,0.5s,baz=50,slow=7.8,SNR=2.1						
MKAR	Makanchi Array	64.48	321	P	P	04 27 38.4	-1.0
	0.2nm,0.5s,baz=38,slow=6.6,SNR=4.6						

*AUST **24** 05:15:00.7±0.4,30°.50S×138°.37E,h0^{km},Error ellipse: s-maj=6.3km s-min=2.6km az=28.0*

*IDC **24** 05:15:01.5±2.8,30°.00S×138°.69E,h0^{km},mb1 2.8/3,mb1mx2.8/34,mbtmp2.6/3,ML2.3/3,Error ellipse:*

s-maj=80.4km s-min=15.1km az=47.0

ISC 24 05:15:00.1±0.9,**30°.36S**±0°.07×**138°.40E**±0°.05,**h10^{km},n8,** σ**2**^{s}.**19**/12,**South Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCRK	**Leigh Creek**	**0.19**	**240**	P	**Pg**	**05 15 03.3**	**-0.7**
	baz=0.1						
HTT	**Hallett**	**3.10**	**172**	P	**Pn**	**05 15 48.8**	**-0.2**
	baz=3.0						
STKA	**Stephens Creek**	**3.13**	**120**	P	**Pn**	**05 15 50.8**	**+1.3**
	baz=3.1						
STKA	**Stephens Creek**	**3.13**	**120**	Pn	**Pn**	**05 15 51.2**	**+1.7**
	0.2nm,0.3s,baz=312,slow=12,SNR=5.0						
STKA				Pg	**Pg**	**05 15 58.7**	**-1.4**
	1.0nm,0.3s,baz=311,slow=17,SNR=12						
STKA				Sn	**Sn**	**05 16 29.2**	**+2.3**
	1.1nm,0.3s,baz=306,slow=20,SNR=5.4						
STKA				Lg	Lg	05 16 41.8	
	1.6nm,0.3s,baz=202,slow=19,SNR=5.0						
BBOO	**Buckleboo**	**3.16**	**219**	P	**Pn**	**05 15 50.3**	**+0.4**
	baz=3.0						
MULG	**Mulgathing**	**3.76**	**270**	P	**Pn**	**05 15 59.6**	**+1.6**
	baz=3.7						
ASAR	**Alice Springs**	**7.78**	**328**	Pn	**Pn**	**05 16 55.7**	**+2.3**
	0.1nm,0.3s,baz=144,slow=13,SNR=2.0						
ASAR				Sn	**Sn**	**05 18 24.2**	**+2.7**
	0.1nm,0.3s,baz=156,slow=22,SNR=6.0						
WRA	**Warramunga Arr**	**11.00**	**340**	Pn	**Pn**	**05 17 35.2**	**-2.3**
	0.0nm,0.3s,baz=158,slow=13,SNR=1.3						
WRA				Sn	**Sn**	**05 19 37.5**	**-3.2**
	0.1nm,0.3s,baz=164,slow=22,SNR=1.8						

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*NEIC **24** 05:16:17.2±0.6, 19°.8S±0°.3×169°.9E±0°.1, h246^{km}±12^{km}, mb4.0/3, Error ellipse: s-maj=42.8km s-min=10.3km az=157.0*

*IDC **24** 05:16:18.4±2.9, 19°.73S×169°.76E, h239^{km}±48^{km}, mb3.3/4, mb1 3.5/5, mb1mx3.3/35, mbtmp3.9/5, Error ellipse: s-maj=172.9km s-min=29.3km az=152.0*

ISC 24 05:16:17.8±0.9,**20°.0S**±0°.2×**170°.0E**±0°.1,**h250^{km},n12,** σ**1**^{s}.**33**/13,**mb3.8**/7,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.90**	**237**	P	**Pn**	**05 17 20.5**	**0.0**
	2.7nm,0.3s,baz=238,slow=23,SNR=20						
DZM				S	**S**	**05 18 09.4**	**-0.9**
	1.9nm,0.3s,baz=259,slow=24,SNR=2.0						
DZM	**Mont Dzumac**	**3.90**	**237**		**Pn**	**05 17 21.0**	**+0.5**
MSVF	**Nonsavu**	**7.98**	**75**	Pn	**Pn**	**05 18 09.9**	**-1.2**
WB0	**Warramunga Arr**	**33.40**	**264**	P	**P**	**05 22 32.6**	**-0.8**
WB0				IAmb	IAmb	05 22 44.7	
	comp=Z,6.4nm,1.4s						
WRA	**Warramunga Arr**	**33.44**	**264**	P	**P**	**05 22 32.6**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=99,slow=8.3,SNR=1.2						
AS31	**Alice Springs**	**33.61**	**257**	P	**P**	**05 22 35.4**	**+0.3**
AS31				IAmb	IAmb	05 22 36.4	
	comp=Z,2.4nm,0.4s						
ASAR	**Alice Springs**	**33.61**	**257**	P	**P**	**05 22 36.0**	**+0.8**
	comp=Z,2.8nm,0.4s,baz=82,slow=8.8,SNR=51						
FITZ	**Fitzroy Crossi**	**41.84**	**265**	P	**P**	**05 23 41.7**	**-2.1**
FITZ				IAmb	IAmb	05 23 52.1	
	comp=Z,5.6nm,1.4s						
QSPA	**South Pole Qui**	**70.11**	**180**	P	**P**	**05 27 03.9**	**+1.0**
SONM	**Songino Array**	**88.19**	**323**	P	**P**	**05 28 41.5**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=103,slow=6.5,SNR=3.0						
ILAR	**Eielson Array**	**90.71**	**17**	P	**P**	**05 28 52.1**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=236,slow=5.5,SNR=7.8						
YKA	**Yellowknife Ar**	**100.99**	**27**	P	**Pdif**	**05 29 41.0**	**+2.6**
	comp=Z,0.1nm,0.6s,baz=240,slow=3.6,SNR=2.8						

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*IDC **24** 05:22:39.9±1.6, 19°.61S×70°.64W, h0^{km}, mb3.8/2, mb1 3.9/4, mb1mx3.6/31, mbtmp3.8/4, ML3.6/2, MS3.0/1, Ms1 3.0/1, ms1mx2.4/27, Error ellipse: s-maj=48.9km s-min=19.0km az=66.0*

*NEIC **24** 05:22:40.8±2.6, 19°.72S±0°.03×70°.86W±0°.03, h10^{km}±1^{km}, mb4.0/4, Error ellipse: s-maj=5.8km s-min=5.1km az=22.0*

*GUC **24** 05:22:45.2±0.7, 19°.70S×70°.68W, h38^{km}±3^{km}, ML3.5*

ISC 24 05:22:41.9±1.3,**19°.71S**±0°.02×**70°.68W**±0°.05,**h18^{km}**±4^{km}, **n36,**σ**1**^{s}.**10**/50,**mb3.9**/3,**5C-5D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.54**	**78**	⇓eP	**Pn**	**05 22 54.9**	**+0.1**
PSGC				eS	**Sn**	**05 23 03.2**	**-0.2**
PSGCX	**Pisagua**	**0.54**	**78**		**Pn**	**05 22 54.4**	**-0.3**
PSGCX				Sg	**Sn**	**05 23 02.9**	**-0.5**
PB11	**IPOC Station P**	**0.96**	**93**		**Pn**	**05 23 01.9**	**+1.2**
PB11				Sg	**Sn**	**05 23 15.4**	**+1.3**
TA01	**Diego Aracena**	**0.97**	**151**	⇓eP	**Pg**	**05 23 01.8**	**+0.9**
TA01				eS	**Sn**	**05 23 14.7**	**+0.6**
TA01				IAML		05 23 18.6	
	comp=E,2μm,0.3s						
PB12	**IPOC Station P**	**1.14**	**17**	⇓eP	**Pb**	**05 23 04.0**	**+0.9**
PB12				eS	**Sn**	**05 23 19.3**	**+1.1**
PB12				IAML		05 23 21.5	
	comp=E,3μm,0.2s						
PB12	**IPOC Station P**	**1.14**	**17**		**Pn**	**05 23 03.9**	**+0.8**
PB12				Sg	**Sb**	**05 23 18.6**	**+0.9**
PATCX	**Punta Patache**	**1.21**	**156**	⇑iP	**Pg**	**05 23 05.5**	**+0.1**
PATCX				eS	**Sg**	**05 23 21.8**	**+0.4**
PATCX				IAML		05 23 30.0	
	comp=E,1μm,0.3s						
PATCX	**Punta Patache**	**1.21**	**156**		**Pg**	**05 23 05.5**	**+0.1**
PATCX				Sn	**Sg**	**05 23 21.1**	**-0.2**
AP01	**Chacalluta**	**1.37**	**14**	⇑iP	**Pn**	**05 23 07.2**	**+1.0**
AP01				eS	**Sb**	**05 23 25.2**	**+1.1**
GO01	**Chusmiza**	**1.40**	**89**	⇓eP	**Pg**	**05 23 09.4**	**+0.4**
GO01				eS	**Sg**	**05 23 27.5**	**+0.1**
GO01	**Chusmiza**	**1.40**	**89**		**Pg**	**05 23 09.4**	**+0.4**
PB08	**IPOC Station P**	**1.50**	**107**	⇓eP	**Pg**	**05 23 10.6**	**-0.3**
PB08				eS	**Sg**	**05 23 30.1**	**-0.4**
PB08				IAML		05 23 32.3	
	comp=N,964nm,0.4s						
PB01	**IPOC Station P**	**1.74**	**140**	⇑iP	**Pb**	**05 23 13.4**	**+0.1**
PB01				eS	**Sb**	**05 23 34.7**	**-0.2**
PB01				IAML		05 23 42.0	
	comp=N,698nm,0.7s						
PB01	**IPOC Station P**	**1.74**	**140**		**Pb**	**05 23 13.5**	**+0.1**
PB16	**IPOC Station P**	**1.76**	**39**	⇑iP	**Pb**	**05 23 14.8**	**+0.7**
PB16				eS	**Sg**	**05 23 37.8**	**-1.1**
PB16				IAML		05 23 40.1	
	comp=N,866nm,0.3s						
PB16	**IPOC Station P**	**1.76**	**39**		**Pb**	**05 23 14.7**	**+0.7**
PB02	**IPOC Station P**	**1.76**	**156**	⇑iP	**Pb**	**05 23 13.5**	**-0.3**
PB02				eS	**Sb**	**05 23 35.3**	**-0.4**
PB02				IAML		05 23 45.9	
	comp=E,2μm,0.3s						
PB07	**IPOC Station P**	**2.14**	**160**		**Pn**	**05 23 18.4**	**+1.4**
PB09	**IPOC Station P**	**2.48**	**147**		**Pn**	**05 23 23.7**	**+2.2**
PB04	**IPOC Station P**	**2.66**	**169**		**Pn**	**05 23 25.0**	**+1.0**
LVC	**Limon Verde**	**3.33**	**151**	Pn	**Pn**	**05 23 36.1**	**+2.7**
	comp=E,2.9nm,0.3s,baz=338,slow=9.5,SNR=20						
LVC				Sn	**Sn**	**05 24 15.4**	**+2.7**
	comp=E,10nm,0.3s,baz=40,slow=22,SNR=7.8						
LVC				Lg	Lg	05 24 27.1	
	comp=E,45nm,0.3s,baz=81,slow=3.8,SNR=6.6						
LVC	**Limon Verde**	**3.33**	**151**		**Pn**	**05 23 35.9**	**+2.5**
PB15	**IPOC Station P**	**3.66**	**162**		**Pn**	**05 23 37.7**	**-0.2**
PB10	**IPOC Station P**	**3.79**	**178**	Pn	**Pn**	**05 23 39.5**	**0.0**
LPAZ	**La Paz**	**4.18**	**36**	Pn	Pn	05 23 50.9	+5.5
	comp=E,1.4nm,0.3s,baz=230,slow=6.5,SNR=40						
LPAZ	**La Paz**	**4.18**	**36**		**Pn**	**05 23 46.6**	**+1.3**
GO02	**Mina Guanaco**	**5.52**	**170**	Pn	**Pn**	**05 24 04.3**	**+0.8**
SIV	**San Ignacio**	**9.87**	**70**	Pn	**Pn**	**05 25 04.1**	**+1.1**
	comp=E,0.9nm,0.3s,baz=258,slow=12,SNR=19						
SIV				LR	LR	05 29 28.4	
	comp=E,80nm,19.3s,baz=290,slow=42						
PTGA	**Pitinga**	**21.58**	**30**	P	**P**	**05 27 30.4**	**-0.4**
PTGA				IAmb	IAmb	05 27 43.2	
	comp=Z,10nm,1.5s						
RUSC	**La Rusia**	**25.55**	**354**	P	**P**	**05 28 07.8**	**-2.6**
QSPA	**South Pole Qui**	**70.47**	**180**	P	**P**	**05 33 53.8**	**-1.4**
TORD	**Torodi Ar. Bea**	**78.34**	**71**	P	**P**	**05 34 41.1**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=250,slow=4.8,SNR=6.8						
TORD	**Torodi Ar. Bea**	**78.34**	**71**	P	**P**	**05 34 41.3**	**-0.4**
YKA	**Yellowknife Ar**	**88.96**	**341**	P	**P**	**05 35 35.5**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=136,slow=4.9,SNR=12						
MKAR	**Makanchi Array**	**145.10**	**33**	PKPbc	**PKPbc**	**05 42 18.4**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=322,slow=3.8,SNR=12						
MKAR	**Makanchi Array**	**145.10**	**33**		**PKPbc**	**05 42 18.2**	**+0.4**

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*SOME **24** 05:27:17.7, 42°.35N×82°.50E, h10^{km}*

*NNC **24** 05:27:20.1±1.8, 42°.34N×82°.37E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=13.5km s-min=7.2km az=151.0*

ISC 24 05:27:21.2±2.2,**42°.29N**±0°.10×**82°.29E**±0°.06,**h10^{km},n26,** σ**1**^{s}.**61**/41,**5C-5D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**1.83**	**310**	eP	**Pb**	**05 27 54.8**	**-0.1**
	11nm,0.1s						
KTMS				eS	**Sg**	**05 28 21.5**	**+1.3**
	38nm,0.2s						
KTMS	**Ketmen**	**1.83**	**310**	Pg	**Pb**	**05 27 54.8**	**-0.1**
	11nm,0.2s						
KTMS				Lg	Lg	05 28 21.5	
	40nm,0.2s						
SHLS	**Shalkode**	**2.25**	**294**	⇑eP	**Pn**	**05 27 58.1**	**-0.6**
	48nm,0.3s						
SHLS				eS	**Sn**	**05 28 26.8**	**+0.2**
	89nm,0.4s						
SHLS	**Shalkode**	**2.25**	**294**	Pg	**Pn**	**05 27 58.0**	**-0.6**
	42nm,0.2s						
SHLS				Lg	Lg	05 28 27.2	
	89nm,0.4s						
PDGK	**Podgornoye**	**2.31**	**298**	Pg	**Pb**	**05 28 02.9**	**-0.1**
	10nm,0.3s						
PDGK				Lg	Lg	05 28 35.9	
	46nm,0.5s						
PDGK	**Podgornoye**	**2.31**	**298**	⇓Pn	**Pb**	**05 28 01.2**	**-1.7**
	10nm,0.4s						
PDGK				⇑Lg	Lg	05 28 34.9	
	73nm,0.6s						
UZB	**Uzynbulak**	**2.55**	**291**	eP	**Pb**	**05 28 07.4**	**+0.2**
	6.3nm,0.2s						
UZB				eS	**Sg**	**05 28 43.4**	**+0.2**
	27nm,0.4s						
UZB	**Uzynbulak**	**2.55**	**291**	Pg	**Pb**	**05 28 07.4**	**+0.2**
	6.3nm,0.2s						
UZB				Lg	Lg	05 28 43.4	
	27nm,0.4s						
DJR	**Jarkent**	**2.74**	**319**	eP	**Pb**	**05 28 08.2**	**-2.1**
	1.1nm,0.3s						
DJR				eS	**Sb**	**05 28 44.8**	**+0.9**
	25nm,0.5s						
DJR	**Jarkent**	**2.74**	**319**	Pg	**Pb**	**05 28 08.2**	**-2.1**
	1.8nm,0.5s						
DJR				Lg	Lg	05 28 44.8	
	25nm,0.3s						
SATY	**Saty**	**2.96**	**286**	eP	**Pb**	**05 28 13.9**	**-0.2**
	1.8nm,0.1s						
SATY				eS	**Sg**	**05 28 54.5**	**-1.9**
	23nm,0.2s						
SATY	**Saty**	**2.96**	**286**	Pg	**Pb**	**05 28 13.9**	**-0.2**
	2.8nm,0.2s						
SATY				Lg	Lg	05 28 54.5	
	23nm,0.2s						
KURS	**Kuram**	**3.25**	**293**	eP	**Pb**	**05 28 18.4**	**-0.7**
	2.7nm,0.3s						
KURS				eS	**Sb**	**05 29 01.9**	**+3.1**
	8.5nm,0.5s						
KURS	**Kuram**	**3.25**	**293**	Pg	**Pb**	**05 28 18.4**	**-0.7**
	2.7nm,0.3s						
KURS				Lg	Lg	05 29 01.9	
	8.5nm,0.5s						
KAPS	**Kapalarasan**	**3.67**	**326**	eP	**Pb**	**05 28 24.1**	**-2.0**
	6.6nm,0.5s						
KAPS				eS	**Sb**	**05 29 12.2**	**+1.4**
	16nm,0.3s						
KAPS	**Kapalarasan**	**3.67**	**326**	Pg	**Pb**	**05 28 24.1**	**-2.0**
	6.6nm,0.5s						
KAPS				Lg	Lg	05 29 12.2	
	16nm,0.3s						
ARXS	**Arharly**	**3.78**	**302**	eP	**Pb**	**05 28 28.8**	**+0.7**
	2.7nm,0.5s						
ARXS				eS	**Sg**	**05 29 19.9**	**-2.8**
	9.5nm,0.4s						
ARXS	**Arharly**	**3.78**	**302**	Pg	**Pb**	**05 28 28.7**	**+0.7**
	2.7nm,0.5s						
ARXS				Lg	Lg	05 29 19.9	
	11nm,0.4s						
TNSS	**Tian-Shan**	**4.01**	**283**	eP	**Pb**	**05 28 32.4**	**+0.3**
	4.1nm,0.6s						
TNSS				eS	**Sg**	**05 29 26.3**	**-3.6**
	6.2nm,0.7s						
TNSS	**Tian-Shan**	**4.01**	**283**	Pg	**Pb**	**05 28 32.4**	**+0.3**
	4.4nm,0.5s						
TNSS				Lg	Lg	05 29 26.9	
	8.0nm,0.8s						
MK31	**Makanchi Array**	**4.50**	**0**	⇓Pn	**Pn**	**05 28 30.0**	**+0.5**
	0.1nm,0.2s,baz=183,slow=15,SNR=7.8						
MK31				Pg	**Pb**	**05 28 40.5**	**+0.2**
	0.9nm,0.3s,baz=179,slow=16,SNR=13						
MK31				⇑Sn	**Sn**	**05 29 22.7**	**+0.8**
	1.8nm,0.7s						
MK31				⇑Lg	Lg	05 29 41.7	
	6.3nm,0.7s,baz=176,slow=27,SNR=7.8						
MAKZ	**Makanchi**	**4.52**	**357**	⇓Pn	**Pn**	**05 28 30.0**	**+0.3**
	1.0nm,0.7s						
MAKZ				⇓Pg	**Pb**	**05 28 42.1**	**+1.4**
	1.0nm,0.5s						
MAKZ				⇑Sn	**Sn**	**05 29 24.2**	**+1.8**
	1.1nm,0.3s						
MAKZ				⇓Lg	Lg	05 29 43.0	
	4.2nm,0.7s						
KUU	**Kurty**	**4.64**	**292**	eP	**Pb**	**05 28 44.3**	**+1.6**
	1.0nm,0.1s						
KUU				eS	**Sg**	**05 29 46.6**	**-3.6**
	6.3nm,0.5s						
KUU	**Kurty**	**4.64**	**292**	Pg	**Pb**	**05 28 44.3**	**+1.6**
	2.3nm,0.4s						
KUU				Lg	Lg	05 29 46.6	
	7.5nm,0.8s						
ZSN	**Zaisan**	**5.47**	**19**	eP	**Pb**	**05 28 54.9**	**-2.0**
	2.3nm,0.2s						
ZSN				eS	**Sb**	**05 30 04.5**	**+1.9**
	4.2nm,0.5s						
ZSN	**Zaisan**	**5.47**	**19**	Pg	**Pb**	**05 28 54.9**	**-2.0**
	3.5nm,0.2s						
ZSN				Lg	Lg	05 30 04.5	
	7.8nm,0.9s						

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*SKHL **24** 05:35:35.9±0.7, 51°.80N×142°.88E, h10^{km}, mb4.7/5, Ms3.9/2*

SKHL Felt (III-IV) at Nogliki, Katangli; (II-III) at Val.

*IDC **24** 05:35:35.7±0.9, 51°.72N×143°.47E, h0^{km}, mb3.7/13, mb1 3.9/15, mb1mx3.7/42, mbtmp3.7/15, ML2.8/2, MS2.9/6, Ms1 2.9/6, ms1mx2.6/43, Error ellipse: s-maj=29.2km s-min=13.7km az=157.0*

*NEIC **24** 05:35:37.1±1.9, 51°.71N±0°.09×143°.4E±0°.2, h10^{km}±1^{km}, mb4.1/14, Error ellipse: s-maj=17.7km s-min=12.7km az=125.0*

*MOS **24** 05:35:38.4±0.8, 51°.71N×143°.29E, h14^{km}, mb4.1/6, Error ellipse: s-maj=16.6km s-min=10.3km az=77.1*

MOS Felt (III-IV) at Katangli, Nogliki; (II-III) at Val.

ISC 24 05:35:37.3±1.4,**51°.75N**±0°.04×**143°.36E**±0°.07,**h13^{km}**±9^{km}, **n73,**σ**1**^{s}.**39**/73,**mb3.9**/18,**1C-1D,Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TYV	**Tymovskoe**	**0.99**	**207**	ePg	**Pg**	**05 35 55.3**	**-1.0**
TYV				AMB	AMB	05 35 55.8	
	600nm,0.3s						
TYV				eSg	**Sg**	**05 36 08.5**	**-0.7**
TYV				A	A	05 36 10.2	
	1μm,0.4s						
TYV				A	A	05 36 10.2	
	3μm,0.4s						
TYV				AMS	AMS	05 36 22.0	
	5μm,12.0s						
TYV				AMS	AMS	05 36 22.0	
	4μm,12.0s						
TYV				AMS	AMS	05 36 22.0	
	3μm,12.0s						
TYV	**Tymovskoe**	**0.99**	**207**	ePN	**Pg**	**05 35 55.5**	**-0.8**
TYV				eS	**Sb**	**05 36 09.5**	**+0.4**
TYV				pmax	pmax		
	comp=Z,500nm,0.3s						
TYV				pmax	pmax		
	comp=Z,598nm,0.3s						
TYV				smax	smax		
	comp=E,2μm,0.6s						
TYV				smax	smax		
	comp=E,3μm,0.6s						
OKH	**Okha**	**1.83**	**352**	eP	Pn	05 35 59.4	-8.9
OKH				ePg	**Pb**	**05 36 10.9**	**+0.4**
OKH				AMB	AMB	05 36 11.5	
	comp=E,700nm,0.6s						
OKH				eS	**Sn**	**05 36 25.5**	**-5.7**
OKH				eSg	**Sg**	**05 36 37.2**	**+1.2**
OKH				A	A	05 36 37.6	
	comp=E,10μm,0.8s						
OKH				A	A	05 36 37.6	
	comp=E,13μm,0.8s						
OKH				AMS	AMS	05 37 05.3	
	comp=E,2μm,6.0s						
OKH				AMS	AMS	05 37 05.3	
	comp=E,2μm,6.0s						
OKH				AMS	AMS	05 37 05.3	
	comp=E,1μm,6.0s						
OKH	**Okha**	**1.83**	**352**	⇓ePN	Pn	05 35 57.7	-11
OKH				pmax	pmax		
	comp=Z,39nm,1.1s						
NKL	**Nikolayevsk**	**2.16**	**312**	i Pg	**Pn**	**05 36 13.5**	**+0.6**
NKL				AMB	AMB	05 36 14.2	
	comp=Z,160nm,0.2s						
NKL				eSg	**Sn**	**05 36 40.4**	**+0.9**
NKL				A	A	05 36 40.7	
	comp=Z,540nm,0.9s						
NKL				A	A	05 36 40.7	
	comp=Z,300nm,0.9s						
NKL	**Nikolayevsk**	**2.16**	**312**	c iPN	**Pn**	**05 36 13.4**	**+0.6**
NKL				eS	**Sn**	**05 36 40.3**	**+0.8**
NKL				pmax	pmax		
	comp=E,14nm,0.3s						
NKL				pmax	pmax		
	comp=Z,39nm,0.3s						
NKL				pmax	pmax		
	comp=N,5.0nm,0.5s						
NKL				smax	smax		
	comp=E,61nm,0.3s						
NKL				smax	smax		
	comp=N,2.0nm,0.2s						
UGL	**Uglegorsk**	**2.80**	**198**	ePg	**Pg**	**05 36 30.3**	**-0.5**
UGL				eSg	**Sg**	**05 37 09.7**	**+2.7**
UGL				A	A	05 37 12.4	
	comp=N,290nm,0.7s						
UGL				A	A	05 37 12.4	
	comp=N,270nm,0.7s						
UGL				AMS	AMS	05 38 47.0	
	comp=N,3μm,19.0s						
UGL				AMS	AMS	05 38 47.0	
	comp=N,2μm,19.0s						
UGL				AMS	AMS	05 38 47.0	
	comp=N,2μm,19.0s						
UGL	**Uglegorsk**	**2.80**	**198**	ePN	**Pg**	**05 36 30.9**	**+0.1**
UGL				e		05 36 54.9	
UGL				pmax	pmax		
	comp=Z,171nm,1.1s						
UGL				smax	smax		
	comp=E,1μm,2.6s						
UGL				smax	smax		
	comp=E,693nm,0.8s						
UGL				smax	smax		
	comp=N,388nm,0.9s						
GRNR	**Gornyy**	**4.47**	**260**	ePN	**Pn**	**05 36 44.6**	**0.0**
GRNR				e		05 37 38.6	
GRNR				pmax	pmax		
	comp=Z,20nm,0.5s						
GRNR				smax	smax		
	comp=Z,50nm,0.8s						
GRNR				MLR	MLR		
	comp=Z,80nm,13.0s						
YSS	**Yuzh-Sakhalins**	**4.81**	**185**	eP	**Pn**	**05 36 49.8**	**+0.5**
YSS				AMB	AMB	05 36 50.3	
	comp=Z,80nm,0.7s						
YSS	**Yuzh-Sakhalins**	**4.81**	**185**	ePN	**Pn**	**05 36 49.7**	**+0.5**
YSS				e		05 37 46.2	
YSS				pmax	pmax		
	comp=Z,80nm,0.4s						
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS				smax	smax		
	comp=N,50nm,0.9s						
YSS				MLR	MLR		
	comp=Z,100nm,14.0s						
YSS	**Yuzh-Sakhalins**	**4.81**	**185**		**Pn**	**05 36 48.9**	**-0.4**
KLR	**Kul'dur**	**7.83**	**256**	Pn	**Pn**	**05 37 31.6**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=64,slow=16,SNR=5.0						
KLR				Pg	Pb	05 37 58.1	+5.5
	comp=Z,0.7nm,0.3s,baz=75,slow=17,SNR=6.6						
KLR				Lg	Lg	05 39 43.6	
	comp=Z,1.1nm,0.3s,baz=333,slow=23,SNR=8.1						
KLR				LR	LR	05 41 03.6	
	comp=Z,62nm,21.7s,baz=82,slow=42						
KLR	**Kul'dur**	**7.83**	**256**	i PN	**Pn**	**05 37 28.4**	**-2.2**
YUK	**Yuzh-Kuril'sk**	**7.89**	**167**	i PN	**Pn**	**05 37 28.5**	**-3.1**
PETK	**Petropavlovsk-**	**8.87**	**76**	LR	LR	05 41 15.9	
	comp=Z,75nm,20.6s,baz=267,slow=39						
MA2	**Magadan**	**8.89**	**25**	LR	LR	05 41 31.2	
	comp=Z,57nm,18.9s,baz=267,slow=40						
USA0B	**Ussuriysk Arra**	**10.72**	**230**	i PN	**Pn**	**05 38 10.5**	**+0.2**
USA0B	**Ussuriysk Arra**	**10.72**	**230**	Pn	**Pn**	**05 38 10.8**	**+0.5**
USRK	**Ussuriysk Ar.**	**10.72**	**230**	Pn	**Pn**	**05 38 10.9**	**+0.6**
	baz=37,slow=12,SNR=4.3						
USRK	**Ussuriysk Ar.**	**10.72**	**230**	PN	**Pn**	**05 38 11.6**	**+1.3**
USRK	**Ussuriysk Ar.**	**10.72**	**230**		**Pn**	**05 38 11.6**	**+1.3**
MJAR	**Matsushiro Arr**	**15.64**	**196**	LR	LR	05 45 44.4	
	comp=Z,57nm,18.7s,baz=315,slow=39						
KSRS	**Korea Array**	**17.97**	**223**	LR	LR	05 46 33.2	
	comp=Z,57nm,18.9s,baz=355,slow=36						
JNU	**Nakatsue**	**20.71**	**211**	LR	LR	05 47 28.2	
	comp=Z,41nm,20.5s,baz=38,slow=34						
TIXI	**Tiksi**	**21.00**	**347**	P	**P**	**05 40 19.8**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TIXI	**Tiksi**	**21.00**	**347**	P	**P**	**05 40 19.8**	**-0.1**
ULN	**Ulaanbaatar**	**23.59**	**275**	i P	**P**	**05 40 45.8**	**-1.8**
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	**Songino Array**	**24.01**	**275**	P	**P**	**05 40 53.6**	**+2.0**
	comp=Z,0.6nm,0.4s,baz=54,slow=7.3,SNR=5.2						
SONM	**Songino Array**	**24.01**	**275**	P	**P**	**05 40 51.4**	**-0.2**
SONM	**Songino Array**	**24.01**	**275**	P	**P**	**05 40 51.4**	**-0.2**
TLY	**Talaya**	**24.41**	**286**	P	**P**	**05 40 57.8**	**+2.7**
	comp=Z,1.7nm,0.6s,baz=82,slow=7.6,SNR=3.5						
TLY	**Talaya**	**24.41**	**286**	i P	**P**	**05 40 53.8**	**-1.3**
TLY				pmax	pmax		
	comp=Z,7.0nm,2.4s						
TLY	**Talaya**	**24.41**	**286**	P	**P**	**05 40 55.7**	**+0.6**
TLY				IAmb	IAmb	05 40 59.5	
	comp=Z,2.2nm,0.8s						
WHN	**Wuhan**	**30.10**	**237**	P	P	05 41 40.9	-5.4
IMAR	**Indian Mountai**	**33.84**	**41**	P	**P**	**05 42 19.5**	**+0.8**
ILAR	**Eielson Array**	**36.88**	**42**	P	**P**	**05 42 45.8**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=291,slow=6.4,SNR=6.7						
ILAR	**Eielson Array**	**36.88**	**42**	P	**P**	**05 42 46.1**	**+1.2**
BMAR	**Burnt Mountain**	**37.20**	**37**	P	**P**	**05 42 48.8**	**+1.1**
MK31	**Makanchi Array**	**39.13**	**288**	P	**P**	**05 43 06.4**	**+2.3**
MK31	**Makanchi Array**	**39.13**	**288**	P	**P**	**05 43 06.4**	**+2.3**
MKAR	**Makanchi Array**	**39.13**	**288**	P	**P**	**05 43 06.0**	**+1.9**
	comp=Z,0.5nm,0.6s,baz=62,slow=6.7,SNR=5.6						
MKAR	**Makanchi Array**	**39.13**	**288**	i P	**P**	**05 43 06.4**	**+2.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**39.13**	**288**	P	**P**	**05 43 05.4**	**+1.3**
EGAK	**Eagle**	**39.24**	**41**	P	**P**	**05 43 05.5**	**+0.7**
EGAK				IAmb	IAmb	05 43 14.7	
	comp=Z,3.7nm,1.2s						
BCAR	**Beaver Creek A**	**39.53**	**44**	P	**P**	**05 43 08.8**	**+1.5**
CRQM	**Cirque**	**39.73**	**47**	P	**P**	**05 43 08.1**	**-1.1**
INK	**Inuvik**	**40.99**	**34**	P	**P**	**05 43 19.1**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=300,slow=8.1,SNR=2.0						
INK	**Inuvik**	**40.99**	**34**	P	**P**	**05 43 18.9**	**-0.3**
INK				IAmb	IAmb	05 43 19.1	
	comp=Z,2.2nm,1.1s						
ABKAR	**Akbulak array**	**50.33**	**302**	P	**P**	**05 44 31.9**	**-1.4**
ABKAR	**Akbulak array**	**50.33**	**302**	P	**P**	**05 44 30.4**	**-2.9**
YKA	**Yellowknife Ar**	**50.69**	**36**	P	**P**	**05 44 36.0**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=309,slow=6.8,SNR=9.0						
FINES	**FINESS Array B**	**56.64**	**329**	P	**P**	**05 45 19.8**	**+0.5**
	comp=Z,1.9nm,0.9s,baz=60,slow=8.2,SNR=2.3						
FINES	**FINESS Array B**	**56.64**	**329**	P	**P**	**05 45 18.4**	**-1.0**
BEKR	**Beckworth**	**63.40**	**59**	P	**P**	**05 46 06.7**	**+0.3**
AKASG	**Malin Array Be**	**63.72**	**320**	P	**P**	**05 46 07.2**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=38,slow=7.4,SNR=3.1						
YERR	**Yerington**	**64.64**	**59**	P	**P**	**05 46 15.9**	**+1.4**
YERR				IAmb	IAmb	05 46 17.2	
	comp=Z,2.9nm,1.2s						
RLMT	**Red Lodge**	**65.05**	**48**	P	**P**	**05 46 18.8**	**+1.6**
NVAR	**Mina Array Bea**	**65.54**	**59**	P	**P**	**05 46 21.0**	**+0.6**

	comp=Z,0.6nm,0.7s,baz=311,slow=5.9,SNR=5.1						
NVAR	Mina Array Bea	65.54	59	P	P	05 46 20.7	+0.2
ULM	Lac du Bonnet	66.65	37	P	P	05 46 26.9	-0.2
	comp=Z,1.3nm,0.7s,baz=298,slow=6.2,SNR=4.5						
ULM	Lac du Bonnet	66.65	37	P	P	05 46 27.1	0.0
ULM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ULM	Lac du Bonnet	66.65	37	P	P	05 46 27.1	0.0
ULM				IAmb	IAmb	05 46 27.4	
	comp=Z,1.4nm,0.8s						
PDAR	Pinedale Array	66.71	50	P	P	05 46 28.3	+0.4
	comp=Z,0.4nm,0.5s,baz=12,slow=2.5,SNR=4.8						
PDAR	Pinedale Array	66.71	50	P	P	05 46 28.2	+0.3
TPNV	Topopah Spring	67.73	58	P	P	05 46 35.3	+0.9
TPNV				pmax	pmax		
	comp=Z,2.0nm,1.3s						
TPNV	Topopah Spring	67.73	58	P	P	05 46 35.3	+0.9
TPNV				IAmb	IAmb	05 46 45.8	
	comp=Z,2.4nm,1.2s						
PSUT	Pine Spring	67.79	56	P	P	05 46 35.7	+0.9
ASAR	Alice Springs	75.54	189	P	P	05 47 21.4	+0.2
	comp=Z,0.6nm,0.6s,baz=4.4,slow=5.9,SNR=6.9						
ASAR	Alice Springs	75.54	189	P	P	05 47 20.5	-0.6
TXAR	Lajitas Array	80.22	55	P	P	05 47 48.8	+1.4
	comp=Z,0.3nm,0.7s,baz=316,slow=6.4,SNR=2.6						
TXAR	Lajitas Array	80.22	55	P	P	05 47 47.7	+0.2
TXAR	Lajitas Array	80.22	55	P	P	05 47 47.6	+0.2

*GCG **24** 05:35:37.4±0.4, 15°.21N×92°.41W, h134^{km}±7^{km}, MD3.8*
*MEX **24** 05:35:42.0±0.4, 14°.15N×92°.59W, h19^{km}±22^{km}, MD3.9*
ISC 24 05:35:43.6±2.1, **14°.3N**±0°.1×**92°.6W**±0°.1, **h56**^{km}±57^{km}, **n7**, σ**1^{s}.68**/14, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	1.07	69	*e*P	Pn	05 36 00.9	-1.7
STG3				*e*S	Sn	05 36 19.4	+2.8
PCIG		1.50	336	*e*P	Pn	05 36 06.8	-1.4
PCIG				*i* S	Sn	05 36 27.5	+0.7
FUG	Fuego 3	1.71	86	*e*P	Pn	05 36 08.9	-2.4
FUG				*e*S	Sn	05 36 33.2	+1.2
FUG				*e*S		05 36 33.9	
CCIG	Comitan	2.00	13	*e*P	Pn	05 36 13.6	-1.6
CCIG				*e*S	Sn	05 36 39.4	+0.2
IXG	Ixpaco	2.10	94	*e*P	Pn	05 36 16.2	-0.4
IXG				*e*S	Sn	05 36 43.6	+2.0
TGIG		2.49	348	*e*P	Pn	05 36 22.4	+0.6
TGIG				*i* S	Sn	05 36 52.1	+1.0
CMIG	Matias Romero	3.52	322	*i* P	Pn	05 36 36.0	0.0
CMIG				*i* S	Sn	05 37 16.6	+0.2

*IDC **24** 06:21:53.8±3.8, 35°.48N×69°.15E, h0^{km}, mb3.7/4, mb1 3.7/5, mb1mx3.4/35, mbtmp3.7/5, ML3.0/1, Error ellipse: s-maj=88.4km s-min=29.0km az=143.0*
*NNC **24** 06:22:07.4±4.2, 35°.95N×69°.36E, h72^{km}±82^{km}, mb3.6, mpv3.9, Error ellipse: s-maj=31.8km s-min=30.1km az=135.0*
ISC 24 06:22:06.0±1.6, **35°.8N**±0°.1×**69°.4E**±0°.1, **h100**^{km}, **n11**, σ**1^{s}.37**/15, **mb3.8**/4, **4C-2D**, **Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	7.31	6	P	Pn	06 23 51.0	+1.0
	2.8nm,0.4s,baz=198,slow=14,SNR=37						
KK31				S	Sn	06 25 12.8	+1.5
	2.8nm,0.5s,baz=61,slow=19,SNR=6.4						
AAK	Ala-Archa	7.85	29	⇑P	Pn	06 23 57.4	-0.1
	2.5nm,0.4s						
AAK				⇑S	Sn	06 25 24.3	-0.5
	10nm,0.8s						
CHMS	Chumysh	8.26	28	⇓P	Pn	06 24 02.4	-0.6
	5.3nm,0.8s						
CHMS				⇑S	Sn	06 25 33.9	-0.6
	12nm,0.7s						
MAKZ	Makanchi	14.45	37	⇑P	P	06 25 29.1	-0.3
	1.4nm,0.7s						
MK31	Makanchi Array	14.59	37	P	P	06 25 30.2	-0.9
	1.1nm,0.8s,baz=215,slow=9.8,SNR=8.3						
MKAR	Makanchi Array	14.59	37	Pn	Pn	06 25 27.5	+0.1
	0.1nm,0.3s,baz=219,slow=16,SNR=9.6						
AB31	Akbulak array	15.10	336	P	Pn	06 25 34.1	+0.4
	0.7nm,0.6s,baz=154,slow=12,SNR=18						
AB31				⇓S	Sn	06 28 16.7	-3.6
	0.7nm,0.6s,baz=156,slow=24,SNR=3.3						
ZALV	Zalesovo Beam	21.06	26	P	P	06 26 42.7	+0.9
	3.3nm,0.5s,baz=224,slow=10,SNR=11						
FINES	FINESS Array B	37.33	327	P	P	06 29 09.2	+1.0
	0.7nm,0.7s,baz=103,slow=16,SNR=1.1						
ARCES	ARCESS Array B	41.27	338	P	P	06 29 42.1	+1.2
	1.4nm,0.8s,baz=100,slow=10,SNR=1.1						
TORD	Torodi Ar. Bea	64.41	268	P	P	06 32 30.6	-1.1
	0.2nm,0.3s,baz=52,slow=5.8,SNR=4.1						

*THE **24** 06:33:38.5, 38°.31N×20°.42E, h11^{km}, ML2.9/5, Error ellipse: s-maj=0.8km s-min=0.2km az=247.0*
*ATH **24** 06:33:38.2, 38°.31N×20°.40E, h10^{km}±2^{km}, ML2.8/7, Error ellipse: s-maj=2.5km s-min=0.8km az=253.0*
ISC 24 06:33:38.1±1.0, **38°.31N**±0°.02×**20°.42E**±0°.05, **h12**^{km}±5^{km}, **n35**, σ**0^{s}.43**/61, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.05	173	P	Pg	06 33 40.4	+0.1
KEF4				S	Sg	06 33 41.8	-0.2
KEF1	Kardakata, Kep	0.05	125	P	Pg	06 33 40.3	0.0
KEF1				S	Sg	06 33 41.5	-0.5
AGT1	Agia Thekli	0.06	204	P	Pg	06 33 40.6	+0.2
AGT1				S	Sg	06 33 42.3	+0.2
LXR1	Lixouri, Cepha	0.11	171	P	Pg	06 33 41.4	+0.5
LXR1				S	Sg	06 33 43.8	+0.8
LXRA	Lixouri, Kepha	0.11	171	P	Pg	06 33 41.3	+0.4
LXRA				S	Sg	06 33 43.6	+0.5
CHV1	Chavriata, Kef	0.13	192	P	Pg	06 33 41.6	+0.4
CHV1				S	Sg	06 33 44.1	+0.6
ARGA	Argostoli. Kep	0.14	159	P	Pg	06 33 41.3	-0.1
ARGA				S	Sg	06 33 43.9	+0.1
ARG2	Argostoli	0.14	156	P	Pg	06 33 41.8	+0.4
ARG2				S	Sg	06 33 44.5	+0.7
KEF2	Argostoli. Kep	0.15	159	P	Pg	06 33 41.8	+0.2
KEF2				S	Sg	06 33 44.3	+0.2
VSK1	VASILIKIADES	0.15	49	P	Pg	06 33 42.0	+0.3
VSK1				S	Sg	06 33 44.6	+0.4
	9µm,0.3s						
KONA	Konidatara, Ke	0.17	46	P	Pg	06 33 42.2	+0.3
KONA				S	Sg	06 33 44.3	-0.3
KONA				AML	AML	06 33 45.5	
	comp=N,11818µm,0.2s						
KONA				AML	AML	06 33 45.8	
	comp=E,5443µm,0.2s						
VLS	Valsamata	0.19	134	P	Pg	06 33 42.3	+0.1
VLS				S	Sg	06 33 45.4	+0.3
	comp=E,6µm,0.2s						
VLS	Valsamata	0.19	134	P	Pg	06 33 42.4	+0.1
VLS				S	Sg	06 33 45.0	0.0
VLS				AML	AML	06 33 45.6	
	comp=N,15360µm,0.3s						
VLS				AML	AML	06 33 46.0	
	comp=E,6967µm,0.1s						
FSK	Fiskardo	0.19	37	P	Pg	06 33 42.5	+0.2
FSK				S	Sg	06 33 45.6	+0.5
	comp=E,5µm,0.1s						
FSK	Fiskardo	0.19	37	P	Pg	06 33 42.4	+0.2
FSK				S	Sg	06 33 44.8	-0.3
FSK				AML	AML	06 33 46.1	
	comp=N,5776µm,0.1s						
FSK				AML	AML	06 33 46.1	
	comp=E,14376µm,0.2s						
KFL	Anninata	0.35	124	P	Pg	06 33 45.3	+0.1
KFL				S	Sg	06 33 50.9	+1.0
	comp=E,5µm,0.4s						
KFL	Anninata	0.35	124	P	Pg	06 33 45.3	+0.1
KFL				S	Sg	06 33 50.6	+0.7
KFL				AML	AML	06 33 51.3	
	comp=N,9851µm,0.4s						
KFL				AML	AML	06 33 51.6	
	comp=E,10295µm,0.3s						
EVGI	Lefkada island	0.36	31	P	Pg	06 33 45.7	+0.3
EVGI				S	Sg	06 33 51.5	+1.2
EVGI	Lefkada island	0.36	31	P	Pg	06 33 45.6	+0.2
EVGI				S	Sg	06 33 51.1	+0.9
MGNA	Meganis	0.46	40	P	Pg	06 33 47.0	0.0
LKD2	Lefkada island	0.52	21	P	Pg	06 33 48.1	-0.1
LKD2				S	Sg	06 33 55.9	+0.8
LKD2	Lefkada island	0.52	21	P	Pg	06 33 47.9	-0.3
LKD2				S	Sg	06 33 55.3	+0.2
TSLK	Tsoukalades, L	0.55	20	P	Pg	06 33 48.9	+0.1
TSLK				S	Sb	06 33 57.5	0.0
	comp=E,320nm,0.7s						
TSLK	Tsoukalades, L	0.55	20	P	Pg	06 33 48.7	-0.1
TSLK				S	Sb	06 33 57.5	0.0
TSLK				AML	AML	06 33 59.5	
	comp=E,598µm,0.5s						
TSLK				AML	AML	06 34 01.9	
	comp=N,676µm,0.5s						
PDO	Prodromos	0.67	64	P	Pg	06 33 51.3	+0.3
PDO				S	Sb	06 34 00.9	0.0
PDO	Prodromos	0.67	64	P	Pg	06 33 51.1	0.0
PDO				S	Sb	06 34 01.5	+0.5
PDO				AML	AML	06 34 03.7	
	comp=E,1724µm,0.4s						
PDO				AML	AML	06 34 03.8	
	comp=N,1386µm,0.3s						
RLS	Riolos of Patr	0.86	106	P	Pg	06 33 54.7	-0.1
PVO	Paravola	0.92	70	P	Pg	06 33 56.1	+0.2
PVO	Paravola	0.92	70	P	Pg	06 33 56.1	+0.2
PVO				S	Sn	06 34 10.2	+0.1
PVO				AML	AML	06 34 12.5	
	comp=E,1268µm,0.3s						
PVO				AML	AML	06 34 12.6	
	comp=N,751µm,0.3s						
DRO	Drossia	1.08	109	P	Pb	06 33 58.0	-0.7
DRO	Drossia	1.08	109	P	Pb	06 33 58.0	-0.7
EFP	Efpalio	1.18	84	P	Pb	06 33 59.9	-0.4
ANX	Ano Chora	1.22	76	P	Pn	06 34 00.7	-0.3
TRIZ	Trizonia	1.30	87	P	Pn	06 34 02.0	-0.1
KALE	Kalithea	1.36	86	P	Pn	06 34 03.0	+0.1

*GCG **24** 06:36:46.1±0.9, 13°.17N×89°.93W, h10^{km}±19^{km}, MD4.0*
*SNET **24** 06:36:46.5±1.1, 13°.17N×89°.78W, h31^{km}±3^{km}, ML3.4*
*IDC **24** 06:36:55.6±9.3, 13°.82N×89°.76W, h94^{km}±44^{km}, mb3.1/4, mb1 3.4/6, mb1mx3.2/38, mbtmp3.5/6, MS3.1/2, Ms1 3.1/2, ms1mx2.6/10, Error ellipse: s-maj=106.0km s-min=28.7km az=177.0*
ISC 24 06:36:46.8±1.5, **13°.15N**±0°.09×**89°.77W**±0°.04, **h48**^{km}±13^{km}, **n33**, σ**1^{s}.15**/44, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.55	52	*e*P	Pn	06 36 58.2	-0.4
LALI				*e*S	Sn	06 37 06.5	-0.5
LALI				IAML		06 37 06.9	
	comp=Z,2µm,0.3s						
CEVE	Cerro Verde	0.69	11	*e*P	Pn	06 36 59.9	-0.7
SBLS	San Blas	0.70	11	*e*P	Pn	06 37 00.1	-0.7
SNET	Serv Nac Est T	0.75	44	*e*S	Sn	06 37 11.8	+0.2
SNET				IAML		06 37 16.5	
	comp=Z,1µm,0.3s						
RTR	El Retiro	0.76	9	*e*P	Pn	06 37 00.8	-0.6
LOMA	Loma Larga	0.76	49	*e*P	Pn	06 37 01.2	-0.2
LOMA				*e*S	Sn	06 37 12.5	+0.5
UEES	Universidad Ev	0.76	42	IAML		06 37 18.8	
	comp=Z,1µm,0.3s						
OPAM	Oficina de Pla	0.79	44	*e*P	Pn	06 37 01.4	-0.3
OPAM				*e*S	Sn	06 37 12.8	+0.2
UESS	Universidad de	0.79	44	*e*P	Pn	06 37 01.6	-0.2
UDBS	Universidad Do	0.82	46	*e*S	Sn	06 37 14.0	+0.7
AEIL	Aeropuerto Ilo	0.84	49	*e*P	Pn	06 37 02.7	+0.3
AEIL				*e*S	Sn	06 37 15.0	+1.3
UNIC	Universidad Ca	0.86	14	*e*P	Pn	06 37 02.1	-0.5
ALJI	Alcalda de J	1.18	81	*e*P	Pn	06 37 07.1	+0.2
ALJI				*e*S	Sn	06 37 22.6	+0.7
ALJI				IAML		06 37 28.3	
	comp=Z,973nm,0.8s						
IXG	Ixpaco	1.21	327	*e*P	Pn	06 37 07.0	-0.6
COEB	Comit de Eme	1.25	74	*e*P	Pn	06 37 08.1	+0.1
COEB				*e*S	Sn	06 37 24.4	+0.5
COEB				IAML		06 37 29.0	
	comp=Z,772nm,0.5s						
TECA	Tecapa	1.28	74	*e*P	Pn	06 37 08.7	+0.2
LLGN	La Laguna	1.29	38	*e*P	Pn	06 37 09.1	+0.5
LLGN				*e*S	Sn	06 37 26.4	+1.7
PACA	Pacayal	1.44	77	*e*P	Pn	06 37 10.8	+0.2
JUCU	Jucuar¡n	1.48	86	*e*P	Pn	06 37 11.1	0.0
JUCU				*e*S	Sn	06 37 30.8	+1.5
BLLM	Bellamira	1.52	79	*e*P	Pn	06 37 12.3	+0.7
NBG	Las Nubes	1.54	339	*e*P	Pn	06 37 13.4	+1.3
NBG				*e*S	Sn	06 37 33.4	+2.3
FUG	Fuego 3	1.66	321	*e*P	Pn	06 37 13.3	-0.4
FUG				*e*S	Sn	06 37 35.8	+1.7
FAGO	Alcalda de S	1.70	71	*e*P	Pn	06 37 14.5	+0.4
LCND	La Caada	1.83	85	*e*P	Pn	06 37 16.5	+0.6
ERG	Entre ros, C	2.17	306	*e*P	Pn	06 37 20.6	+0.1
ERG				*e*S	Sn	06 37 46.2	-0.1
STG3	Santiaguito 3,	2.34	312	*e*P	Pn	06 37 23.1	0.0
STG3				*e*S	Sn	06 37 50.5	-0.3
CMIG	Matias Romero	6.31	309	P	Pn	06 38 20.4	+3.1
	comp=Z,0.6nm,0.3s,baz=140,slow=14,SNR=5.4						
CMIG				S	Sn	06 39 26.0	-2.1
	comp=Z,1.1nm,0.3s,baz=249,slow=21,SNR=3.8						
TEIG	Tepich	7.18	11	P	Pn	06 38 30.6	+1.3
TEIG				LR	LR	06 41 32.9	
	comp=Z,64nm,21.0s,baz=76,slow=42						
TXAR	Lajitas Array	20.64	323	P	P	06 41 23.4	+0.9
	comp=Z,0.2nm,0.5s,baz=135,slow=9.0,SNR=3.0						
NVAR	Mina Array Bea	35.71	320	P	P	06 43 43.0	+1.9
	comp=Z,0.5nm,0.7s,baz=134,slow=6.6,SNR=5.2						
ULM	Lac du Bonnet	37.34	354	LR	LR	07 00 30.2	
	comp=Z,78nm,18.3s,baz=182,slow=39						
SCHQ	Schefferville	45.30	18	P	P	06 44 57.1	-2.6
	comp=Z,3.6nm,1.2s,baz=230,slow=8.5,SNR=3.9						
YKA	Yellowknife Ar	52.37	346	P	P	06 45 52.0	-1.7
	comp=Z,0.1nm,0.6s,baz=141,slow=8.5,SNR=6.1						

*IDC **24** 06:39:37.8±9.0, 24°.07S×68°.97E, h0^{km}, mb3.8/5, mb1 3.9/5, mb1mx3.6/50, mbtmp3.8/5, MS3.3/4, Ms1 3.4/4, ms1mx2.9/37, Error ellipse: s-maj=297.9km s-min=31.9km az=51.0*
*NEIC **24** 06:39:43.0±1.4, 23°.5S±0°.2×69°.9E±0°.2, h10^{km}±1^{km}, mb4.3/9, Error ellipse: s-maj=38.4km s-min=5.7km az=223.0*
ISC 24 06:39:42.9±1.1, **23°.6S**±0°.2×**69°.8E**±0°.3, **h10**^{km}, **n24**, σ**0^{s}.91**/17, **mb4.1**/9, **MS3.4**/4, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	16.02	10	T	T	06 58 54.2	
	baz=190,slow=75,SNR=7.7						
H08S2	Diego Garcia H	16.02	10	T	T	06 58 51.8	
	baz=190,slow=75,SNR=7.6						
H08S3	Diego Garcia H	16.04	10	T	T	06 58 54.5	
	baz=190,slow=75,SNR=7.8						
BOSA	Boshof	40.16	253	LR	LR	07 00 22.9	
	comp=Z,49nm,18.7s,baz=132,slow=32						
CMAR	Chiang Mai Arr	50.52	37	LR	LR	07 07 26.7	
	comp=Z,17nm,21.2s,baz=240,slow=32						
ASAR	Alice Springs	58.25	104	P	P	06 49 38.7	+0.7
	1.0nm,0.6s,baz=252,slow=6.3,SNR=14						
ASAR	Alice Springs	58.25	104	P	P	06 49 38.8	+0.8
AS31	Alice Springs	58.25	104	P	P	06 49 38.7	+0.6
WRA	Warramunga Arr	59.60	100	P	P	06 49 48.6	+1.2
	1.5nm,0.8s,baz=256,slow=6.8,SNR=8.6						
WB0	Warramunga Arr	59.70	100	P	P	06 49 46.5	-1.6
WR0	Warramunga Arr	59.77	100	P	P	06 49 46.8	-1.8
WR0				IAmb	IAmb	06 49 50.1	
	comp=Z,5.6nm,1.4s						
AAK	Ala-Archa	66.00	4	LR	LR	07 16 43.2	
	comp=Z,24nm,18.9s,baz=140,slow=33						
KK31	Karatay Array	66.33	1	P	P	06 50 32.0	+0.4
KK31				IAmb	IAmb	06 50 34.5	
	comp=Z,1.7nm,0.8s						
KKAR	Karatay Array	66.33	1	P	P	06 50 32.0	+0.4
KKAR	Karatay Array	66.33	1	P	P	06 50 31.7	+0.1
KKAR				IAmb	IAmb	06 50 34.5	
	comp=Z,1.7nm,0.8s						
QSPA	South Pole Qui	66.57	180	P	P	06 50 33.1	-0.1
VNDA	Vanda	67.62	166	LR	LR	07 16 19.9	
	comp=Z,35nm,18.6s,baz=186,slow=33						
MK31	Makanchi Array	70.92	9	P	P	06 50 58.8	-1.4
MK31				IAmb	IAmb	06 51 01.1	
	comp=Z,2.3nm,1.4s						
MKAR	Makanchi Array	70.92	9	P	P	06 51 00.3	+0.1
	comp=Z,0.5nm,0.6s,baz=191,slow=7.0,SNR=5.1						
MKAR	Makanchi Array	70.92	9	P	P	06 50 59.8	-0.4
BR131	Keskin Array S	71.44	331	P	P	06 51 03.6	0.0
BVAR	Borovoye Array	76.25	0	P	P	06 51 31.3	-0.1
	comp=Z,0.3nm,0.3s,baz=228,slow=40,SNR=1.7						
SONM	Songino Array	78.30	24	P	P	06 51 43.7	+0.6
	comp=Z,0.4nm,0.8s,baz=225,slow=3.9,SNR=1.8						
SONM	Songino Array	78.30	24	P	P	06 51 43.6	+0.4

*NIED **24** 06:41:00, 41°.00N×142°.70E, h29^{km}, Mw3.8 Best double couple: M$_0$6.52000×10^{14} NP1:φ$_s$340.00000°, δ56.00000°, λ75.00000°. NP2:φ$_s$186.00000°, δ37.00000°, λ111.00000°.*
*JMA **24** 06:41:25.5±0.2, 41°.03N×142°.73E, h16^{km}±4^{km}, M3.9*
JMA Felt I J1.
*IDC **24** 06:41:29.2±2.2, 41°.06N×142°.57E, h43^{km}±19^{km}, mb3.5/13, mb1 3.7/16, mb1mx3.5/56, mbtmp3.7/16, ML3.2/3, MS2.9/6, Ms1 2.9/6, ms1mx2.7/32, Error ellipse: s-maj=19.2km s-min=13.2km az=110.0*
ISC 24 06:41:26.6±0.7, **41°.07N**±0°.04×**142°.65E**±0°.05, **h21**^{km}±3^{km}, **n41**, σ**1^{s}.07**/44, **mb4.0**/13, **8D**, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JARK	Aomorirokkasho	0.97	267	⇓P	Pb	06 41 44.5	-0.2
JARK				*e*S	Sn	06 41 58.5	+0.4
JAHD	Aomorihigashid	1.01	282	⇓P	Pb	06 41 45.2	-0.1
JAHD				*e*S	Sn	06 41 59.3	+0.3
JEM	Erimo	1.02	22	P	Pn	06 41 44.7	-0.9
JEM				*e*S	Sb	06 41 58.4	-0.1
JANG	Nango	1.11	231	⇓P	Pn	06 41 46.2	-0.6
JANG				*e*S	Sn	06 42 00.8	-0.6
JKEN	Kujiedanarisaw	1.12	220	⇓P	Pn	06 41 46.0	-1.0
JNBK	Urakawa-nobuka	1.21	4	P	Pn	06 41 48.3	0.0
JTM	Tenmabayashi	1.23	257	P	Pb	06 41 48.9	-0.2
JTM				*e*S	Sb	06 42 05.4	+0.9
JOT	Ohata	1.25	285	⇓P	Pn	06 41 48.8	+0.1
JKB	Kayabe	1.46	305	⇓P	Pn	06 41 51.8	+0.1
JKB				*e*S	Sb	06 42 11.0	-0.2
JCH	Churui	1.63	19	⇓P	Pn	06 41 54.1	0.0
JCH				*e*S	Sn	06 42 14.6	+0.1
JIAM	Iburiatsuma	1.65	341	P	Pb	06 41 56.1	-0.1
JBT2	Biratori 2	1.72	353	P	Pb	06 41 57.2	-0.3
JSR	Shiriuchi	1.74	286	P	Pb	06 41 56.6	-1.2
JSR				*e*S	Sb	06 42 19.5	+0.3
JAH	Hinai	1.77	241	⇓P	Pb	06 41 57.0	-1.2
JAH				*e*S	Sb	06 42 19.7	-0.2
JOM	Ohasama	1.90	213	P	Pn	06 41 57.9	+0.1
JEW	Eniwo	1.98	334	P	Pb	06 42 00.6	-1.3
ASAJ	Asahikawa	3.05	359	P	Pn	06 42 15.4	+1.9
	8.5nm,0.3s,baz=218,slow=11,SNR=13						
ASAJ				S	Sn	06 42 49.8	+0.5
	4.9nm,0.3s,baz=74,slow=30,SNR=3.7						
MAT	Matsushiro	5.70	219	P	Pn	06 42 50.2	+0.2
MAT				*e*S	Sn	06 43 59.0	+4.3
MJAR	Matsushiro Arr	5.70	219	P	Pn	06 42 52.2	+2.3
	0.3nm,0.3s,baz=37,slow=13,SNR=12						
MJAR				LR	LR	06 45 18.6	
	comp=Z,101nm,18.7s,baz=50,slow=41						
USRK	Ussuriysk Ar.	8.46	295	P	Pn	06 43 29.0	+1.2
	baz=100,slow=14,SNR=7.6						
KLR	Kul'dur	11.21	320	LR	LR	06 48 12.3	
	comp=Z,46nm,19.4s,baz=146,slow=36						
KSRS	Korea Array	11.97	257	P	Pn	06 44 21.3	+5.4
	0.5nm,0.3s,baz=63,slow=14,SNR=4.3						
KSRS				LR	LR	06 48 37.0	
	comp=Z,60nm,18.8s,baz=60,slow=36						
JNU	Nakatsue	12.29	234	LR	LR	06 48 57.3	
	comp=Z,47nm,18.7s,baz=324,slow=37						
PETK	Petropavlovsk-	15.77	35	LR	LR	06 51 17.3	
	comp=Z,36nm,20.7s,baz=234,slow=37						
SONM	Songino Array	26.57	297	P	P	06 47 02.3	-0.8
	0.6nm,0.5s,baz=79,slow=7.7,SNR=4.9						
H11S1	WAKE ISLAND Hy	30.50	130	T	T	07 20 05.8	
	baz=324,slow=76,SNR=56						
H11S3	WAKE ISLAND Hy	30.50	130	T	T	07 20 05.8	
	baz=324,slow=76,SNR=56						
H11S2	WAKE ISLAND Hy	30.51	130	T	T	07 19 57.9	
	baz=324,slow=76,SNR=37						
ZALV	Zalesovo Beam	40.02	309	P	P	06 48 59.5	-0.1
	2.2nm,0.6s,baz=82,slow=8.7,SNR=6.7						
MKAR	Makanchi Array	42.91	299	P	P	06 49 23.3	-0.2
	1.4nm,0.6s,baz=86,slow=9.2,SNR=16						
KURBB	Kurchatov Arra	44.38	305	P	P	06 49 34.5	-0.7
	1.5nm,0.3s,baz=78,slow=8.6,SNR=7.1						
ILAR	Eielson Array	45.60	34	P	P	06 49 44.8	0.0
	0.4nm,0.7s,baz=264,slow=6.1,SNR=5.1						
BVAR	Borovoye Array	48.64	310	P	P	06 50 08.3	-0.4
	0.8nm,0.4s,baz=84,slow=9.1,SNR=11						
INK	Inuvik	50.37	29	P	P	06 50 21.8	+0.2
	0.7nm,0.4s,baz=239,slow=3.3,SNR=2.5						
YKA	Yellowknife Ar	59.86	32	P	P	06 51 32.0	+1.9
	0.1nm,0.4s,baz=299,slow=6.3,SNR=1.4						
WRA	Warramunga Arr	61.19	189	P	P	06 51 38.5	-1.1
	0.6nm,0.4s,baz=6.8,slow=6.8,SNR=9.8						
ASAR	Alice Springs	64.92	189	P	P	06 52 03.5	-0.9
	0.5nm,0.4s,baz=1.9,slow=7.1,SNR=8.1						
FINES	FINESS Array B	65.70	332	P	P	06 52 08.3	-0.8
	1.2nm,0.5s,baz=60,slow=8.6,SNR=13						
NOA	NORSAR Array B	70.84	337	LR	LR	07 29 54.2	
	comp=Z,8.8nm,18.6s,baz=340,slow=41						
NVAR	Mina Array Bea	71.84	55	P	P	06 52 48.6	+0.5
	0.2nm,0.7s,baz=290,slow=5.7,SNR=1.8						
PDAR	Pinedale Array	74.18	47	P	P	06 53 01.5	-0.3
	0.1nm,0.5s,baz=333,slow=0.4,SNR=1.3						

*IDC **24** 06:41:39.6±14.0, 35°.78N×71°.96E, h193^{km}±70^{km}, mb3.0/3, mb1 3.0/5, mb1mx2.8/54, mbtmp3.5/5, MS2.8/1, Ms1 2.8/1, ms1mx2.2/18, Error ellipse: s-maj=269.2km s-min=37.7km az=142.0*
*NNC **24** 06:41:51.9±2.5, 37°.00N×71°.00E, h159^{km}±45^{km}, mb2.5, mpv3.3, Error ellipse: s-maj=23.8km s-min=15.2km az=14.0*
ISC 24 06:41:43.8±2.1, **36°.4N**±0°.2×**71°.3E**±0°.2, **h200**^{km}, **n10**, σ**1^{s}.43**/9, **3C-1D**, **Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	6.74	21	P	Pn	06 43 21.4	+0.7
	0.8nm,0.3s,baz=140,slow=5.6,SNR=9.1						
AAK				S	Sn	06 44 32.8	-4.7
	0.4nm,0.3s,baz=141,slow=21,SNR=3.9						
AAK	Ala-Archa	6.74	21	⇑P	Pn	06 43 21.8	+1.1
	1.3nm,0.5s						
AAK				⇑S	Sn	06 44 33.1	-4.4
	2.4nm,0.7s						
KK31	Karatay Array	6.75	355	P	Pn	06 43 20.3	-0.4
	1.4nm,0.6s,baz=183,slow=12,SNR=16						
KK31				⇑S	Sn	06 44 29.7	-7.9
	2.6nm,0.5s,baz=188,slow=24,SNR=8.6						
MK31	Makanchi Array	13.27	35	P	P	06 44 49.2	+1.9
	0.7nm,0.9s,baz=194,slow=4.5,SNR=3.9						
MKAR	Makanchi Array	13.27	35	P	Pn	06 44 42.5	-2.1
	0.0nm,0.3s,baz=216,slow=10,SNR=2.6						
AB31	Akbulak array	15.30	331	⇓P	P	06 45 11.3	+1.5
	0.3nm,0.4s,baz=145,slow=12,SNR=13						
AKTO	Aktyubinsk	17.00	330	LR	LR	06 53 32.5	
	comp=Z,26nm,18.5s,baz=272,slow=40						
ZALV	Zalesovo Beam	19.94	24	P	P	06 46 00.6	+0.3
	0.6nm,0.3s,baz=211,slow=12,SNR=1.8						
TORD	Torodi Ar. Bea	65.93	269	P	P	06 52 08.9	+0.2
	0.5nm,0.7s,baz=46,slow=6.2,SNR=2.2						
YKA	Yellowknife Ar	81.36	3	P	P	06 53 37.0	-0.6
	0.2nm,0.4s,baz=354,slow=5.3,SNR=8.0						

*NEIC **24** 07:08:29.8±2.2, 19°.80S±0°.04×70°.85W±0°.04, h10^{km}±1^{km}, mb4.1/3, Error ellipse: s-maj=8.5km s-min=4.4km az=326.0*
*GUC **24** 07:08:32.2±0.6, 19°.76S×70°.77W, h42^{km}±2^{km}, ML3.2*
ISC 24 07:08:30.8±1.5, **19°.77S**±0°.03×**70°.82W**±0°.07, **h29**^{km}±13^{km}, **n28**, σ**1^{s}.06**/40, **1C-9D**, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.67	75	⇓*i*P	Pn	07 08 43.9	-0.6
PSGC				*i* S	Sb	07 08 53.0	-0.2
PSGC				IAML		07 08 53.3	
	comp=N,1µm,0.2s						
PSGCX	Pisagua	0.67	75		Pn	07 08 43.6	-0.9
PSGCX				Sg	Sb	07 08 52.9	-0.3

TA01	Diego Aracena	0.99	143	⇓*i*P	Pb	07 08 49.9	+0.5
TA01				*i*S	Sb	07 09 03.7	+1.7
TA01				IAML		07 09 04.9	
	comp=E,577nm,0.3s						
PB11	IPOC Station P	1.09	90	⇓*i*P	Pb	07 08 50.9	-0.3
PB11				*i*S	Sb	07 09 05.5	+0.3
PB11				IAML		07 09 08.8	
	comp=N,2µm,0.3s						
PB11	IPOC Station P	1.09	90		Pb	07 08 50.8	-0.4
PB11				Sn	Sb	07 09 05.1	0.0
PATCX	Punta Patache	1.22	149	⇓*i*P	Pb	07 08 53.2	0.0
PATCX				*i*S	Sb	07 09 09.3	+0.7
PATCX				IAML		07 09 21.2	
	comp=N,762nm,0.9s						
PATCX	Punta Patache	1.22	149		Pb	07 08 53.0	-0.2
PB12	IPOC Station P	1.24	22	⇓*i*P	Pb	07 08 53.1	-0.5
PB12				*i*S	Sb	07 09 09.7	+0.4
PB12				IAML		07 09 11.9	
	comp=N,828nm,0.3s						
PB12	IPOC Station P	1.24	22		Pb	07 08 53.1	-0.5
GO01	Chusmiza	1.53	86	⇓*i*P	Pb	07 08 58.5	-0.3
GO01				*i*S	Sb	07 09 18.7	+0.7
GO01	Chusmiza	1.53	86		Pb	07 08 58.5	-0.3
PB08	IPOC Station P	1.61	104	⇓*i*P	Pb	07 08 59.4	-0.6
PB08				*i*S	Sb	07 09 20.4	+0.3
PB08				IAML		07 09 22.9	
	comp=N,1µm,0.4s						
PB02	IPOC Station P	1.77	151	⇓*i*P	Pn	07 09 01.2	+1.6
PB02				*i*S	Sb	07 09 23.2	-1.2
PB02				IAML		07 09 30.3	
	comp=E,612nm,0.5s						
PB01	IPOC Station P	1.78	136	⇓*i*P	Pb	07 09 01.7	-1.1
PB01				*i*S	Sb	07 09 23.8	-0.9
PB01				IAML		07 09 26.8	
	comp=E,280nm,0.2s						
PB01	IPOC Station P	1.78	136		Pb	07 09 01.5	-1.2
PB16	IPOC Station P	1.89	41	⇑*i*P	Pb	07 09 03.8	-1.1
PB16				*i*S	Sb	07 09 28.5	+0.2
PB16				IAML		07 09 29.7	
	comp=N,518nm,0.2s						
PB16	IPOC Station P	1.89	41		Pb	07 09 03.9	-1.1
PB07	IPOC Station P	2.13	156		Pn	07 09 06.0	+1.3
PB09	IPOC Station P	2.50	144		Pb	07 09 12.6	-2.5
PB04	IPOC Station P	2.63	166		Pn	07 09 12.2	+0.7
LVC	Limon Verde	3.34	148		Pn	07 09 24.2	+2.7
PB15	IPOC Station P	3.64	160		Pn	07 09 26.2	+0.7
PB10	IPOC Station P	3.73	176	Pn	Pn	07 09 26.4	-0.1
LPAZ	La Paz	4.30	37	Pn	Pn	07 09 37.4	+2.4
PB14	IPOC Station P	4.85	176	Pn	Pn	07 09 41.6	-0.6
GO02	Mina Guanaco	5.49	168		Pn	07 09 51.6	+0.7
PTGA	Pitinga	21.70	31	P	P	07 13 19.3	-0.4
PTGA				IAmb	IAmb	07 13 29.8	
	comp=Z,9.2nm,1.4s						
QSPA	South Pole Qui	70.41	180	P	P	07 19 42.1	-0.1
QSPA				IAmb	IAmb	07 19 52.9	
	comp=Z,2.6nm,1.2s						

SJA ***24*** *07:13:40.1±0.8, 19°.29S×71°.54W, h122^{km}±57^{km}, ML3.4, MW3.2*
IDC ***24*** *07:13:49.7±4.2, 20°.89S×70°.40W, h0^{km}, mb3.8/1, mb1 3.7/2, mb1mx3.4/24, mbtmp3.7/2, ML3.3/1, MS2.5/1, Ms1 2.6/1, ms1mx2.4/19, Error ellipse: s-maj=151.8km s-min=64.9km az=103.0*
NEIC ***24*** *07:13:53.0±1.9, 19°.98S±0°.03×70°.82W±0°.06, h18^{km}±5^{km}, mb4.3/3, Error ellipse: s-maj=8.5km s-min=4.0km az=99.0*
GUC ***24*** *07:13:53.1±0.6, 19°.97S×70°.86W, h37^{km}±3^{km}, ML3.4*
ISC 24 07:13:50.8±1.7**, 19°.97S**±0°.03×**70°.91W**±0°.06**, h10**^{km}±10^{km}**, n43,** σ1^{s}**20**/62**, mb4.1**/3**, 1C-9D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.83	64	⇓*i*P	Pb	07 14 07.2	-0.2
PSGC				*i*S	Sb	07 14 17.9	-0.8
PSGC				IAML		07 14 22.3	
	comp=E,856nm,0.1s						
PSGCX	Pisagua	0.83	64		Pb	07 14 07.1	-0.3
PSGCX				Sg	Sb	07 14 18.1	-0.6
TA01	Diego Aracena	0.91	131	⇓*i*P	Pg	07 14 08.6	+0.3
TA01				*i*S	Sn	07 14 20.9	-1.9
TA01				IAML		07 14 25.2	
	comp=E,3µm,0.3s						
PATCX	Punta Patache	1.11	140	⇓*i*P	Pb	07 14 12.0	-0.1
PATCX				IAML		07 14 30.2	
	comp=E,1µm,0.2s						
PATCX	Punta Patache	1.11	140		Pn	07 14 12.2	-0.3
PATCX				Sn	Sn	07 14 27.2	-0.6
PB11	IPOC Station P	1.20	80	⇓*i*P	Pn	07 14 13.4	-0.4
PB11				*i*S	Sn	07 14 29.0	-1.2
PB11				IAML		07 14 35.5	
	comp=N,2µm,0.3s						
PB11	IPOC Station P	1.20	80		Pn	07 14 13.2	-0.7
PB11				Sn	Sb	07 14 28.9	-0.5
PB12	IPOC Station P	1.46	22	⇓*i*P	Pn	07 14 17.8	+0.6
PB12				*i*S	Sn	07 14 37.4	+0.9
PB12				IAML		07 14 40.7	
	comp=N,964nm,0.4s						
PB12	IPOC Station P	1.46	22		Pn	07 14 18.4	+1.1
PB12				Sn	Sn	07 14 37.4	+0.9
GO01	Chusmiza	1.65	80	⇓*i*P	Pn	07 14 21.1	+0.8
GO01	Chusmiza	1.65	80		Pn	07 14 20.9	+0.8
PB02	IPOC Station P	1.65	145	⇓*i*P	Pb	07 14 20.8	-0.6
PB02				*i*S	Sb	07 14 42.1	-0.1
PB02				IAML		07 14 45.0	
	comp=N,1µm,0.3s						
PB08	IPOC Station P	1.66	96	⇓*i*P	Pn	07 14 21.0	+0.6
PB08				*i*S	Sb	07 14 42.5	-0.4
PB08				IAML		07 14 46.5	
	comp=N,732nm,0.4s						
PB01	IPOC Station P	1.71	129	*e*P	Pb	07 14 21.4	-1.0
PB01				*i*S	Sb	07 14 43.6	-0.4
PB01				IAML		07 14 49.0	
	comp=N,754nm,0.5s						
PB01	IPOC Station P	1.71	129		Pb	07 14 21.6	-0.8
PB07	IPOC Station P	1.99	151	*e*P	Pn	07 14 25.6	+0.8
PB07				*i*S	Sb	07 14 51.0	-1.3
PB07				IAML		07 15 01.9	
	comp=E,338nm,0.4s						
PB07	IPOC Station P	1.99	151		Pn	07 14 25.5	+0.8
PB16	IPOC Station P	2.10	39	⇑*i*P	Pn	07 14 28.5	+1.9
PB16				*i*S	Sb	07 14 55.8	+0.1
PB16	IPOC Station P	2.10	39		Pn	07 14 28.5	+1.9
PB03	IPOC Station P	2.33	153	⇓*i*P	Pn	07 14 30.4	+0.9
PB03				*i*S	Sn	07 14 57.9	-0.3
PB03				IAML		07 15 14.8	
	comp=E,184nm,0.5s						
PB09	IPOC Station P	2.40	140		Pb	07 14 33.0	-1.2
PB09	IPOC Station P	2.40	140	*i* P	Pb	07 14 32.2	-1.9
PB09				*e*S	Sg	07 15 09.5	+1.5
PB04	IPOC Station P	2.46	163		Pn	07 14 31.3	+0.2
PB04	IPOC Station P	2.46	163	*i* P	Pn	07 14 31.4	+0.2
PB04				*e*S	Sg	07 15 10.1	+0.2
PB05	IPOC Station P	2.94	167	*i* P	Pn	07 14 37.6	-0.1
PB06	IPOC Station P	3.00	156	*i* P	Pn	07 14 38.9	+0.4
PB06				*e*S	Sb	07 15 23.2	+2.1
LVC	Limon Verde	3.22	145		Pn	07 14 44.5	+2.7
LVC	Limon Verde	3.22	145	*i* P	Pn	07 14 43.6	+1.8
LVC				*e*S	Sb	07 15 29.1	+1.2
LVC				IAML		07 15 38.8	
	comp=Z,47nm,0.5s						
PB15	IPOC Station P	3.49	158		Pn	07 14 45.8	+0.4
PB15	IPOC Station P	3.49	158	*i* P	Pn	07 14 45.5	+0.1
PB15				*e*S	Sb	07 15 34.4	-1.0
PB10	IPOC Station P	3.54	175	Pn	Pn	07 14 45.1	-0.7
PB10	IPOC Station P	3.54	175	*i* P	Pn	07 14 45.1	-0.7
LPAZ	La Paz	4.52	36	Pn	Pb	07 15 07.4	-3.2
	comp=Z,0.6nm,0.3s,baz=258,slow=2.5,SNR=22						
LPAZ				LR	LR	07 17 24.6	
	comp=Z,43nm,19.1s,baz=235,slow=42						
LPAZ	La Paz	4.52	36	Pn	Pb	07 15 07.2	-3.4
PB14	IPOC Station P	4.66	174	Pn	Pn	07 15 01.0	-0.5
PB14	IPOC Station P	4.66	174	*i* P	Pn	07 15 00.3	-1.2
GO02	Mina Guanaco	5.31	167	Pn	Pn	07 15 11.2	+0.7
PTGA	Pitinga	21.92	31	P	P	07 18 44.0	-0.5
PTGA				IAmb	IAmb	07 18 54.6	
	comp=Z,9.9nm,1.3s						
QSPA	South Pole Qui	70.21	180		P	07 25 05.6	+1.8
QSPA				IAmb	IAmb	07 25 22.9	
	comp=Z,5.0nm,1.2s						
TORD	Torodi Ar. Bea	78.63	71	P	P	07 25 53.2	-0.3
	comp=Z,0.7nm,0.7s,baz=230,slow=6.0,SNR=2.4						
TORD	Torodi Ar. Bea	78.63	71	P	P	07 25 53.5	0.0
MKAR	Makanchi Array	145.44	33	PKPbc	PKPab	07 33 30.4	+1.1
	comp=Z,0.2nm,0.6s,baz=323,slow=5.1,SNR=3.7						
MKAR	Makanchi Array	145.44	33		PKPbc	07 33 27.8	-1.3

AEIC ***24*** *07:29:58.8±1.4, 63°.50N±0°.02×147°.54W±0°.05, h72^{km}±4^{km}, ML3.6/119, mb4.0/12(NEIC), Error ellipse: s-maj=4.1km s-min=2.4km az=135.0*
NEIC ***24*** *07:29:58.6±1.4, 63°.51N±0°.03×147°.57W±0°.06, h80^{km}±4^{km}, Error ellipse: s-maj=4.2km s-min=4.0km az=47.0*
IDC ***24*** *07:29:59.5±1.7, 63°.62N×147°.49W, h87^{km}±11^{km}, mb3.4/12, mb1 3.6/15, mb1mx3.4/38, mbtmp3.7/15, Error ellipse: s-maj=21.6km s-min=12.6km az=43.0*
ISC 24 07:29:58.2±0.6**, 63°.51N**±0°.03×**147°.53W**±0°.03**, h77**^{km}±6^{km}**, n133,** σ1^{s}**09**/155**, mb3.9**/15**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DHY	Denali Highway	0.45	171		Pn	07 30 11.5	+0.1
DHY					Sn	07 30 21.4	+0.4
RND	Reindeer	0.60	260		Pn	07 30 13.3	+0.6
RND					Sn	07 30 24.1	+0.7
MCK	McKinley	0.67	290		Pn	07 30 13.8	+0.6
MCK					Sn	07 30 25.1	+0.6
WAT2	Susitna Watana	0.73	221		Pn	07 30 14.2	+0.1
WAT2					Sn	07 30 25.8	0.0
PS10	TAPS Pump St10	0.80	96		Pn	07 30 16.0	+1.4
PS10					Sn	07 30 28.8	+1.9
WAT1	Susitna Watana	0.83	215		Pn	07 30 15.2	+0.1
WAT1					Sn	07 30 27.7	+0.1
HDA	Harding Lake	0.94	16		Pn	07 30 17.4	+1.1
HDA					Sn	07 30 30.6	+0.9
WAT6	Susitna Watana	0.94	186		Pn	07 30 16.8	+0.2
WAT6					Sn	07 30 30.3	+0.2
WRH	Wood River Hil	0.99	346		Pn	07 30 17.7	+0.8
WRH					Sn	07 30 31.5	+0.6
PS08	TAPS Pump Stn8	1.08	16		Pn	07 30 19.1	+1.1
PS08					Sn	07 30 33.5	+0.7
PAX	Paxson	1.08	119		Pn	07 30 18.9	+0.8
BWN	Browne	1.08	308		Pn	07 30 17.9	-0.1
BWN					Sn	07 30 32.4	-0.5
HUR	Hurricane	1.09	242		Pn	07 30 18.4	+0.1
CCB	Clear Creek Bu	1.14	354		Pn	07 30 19.6	+0.8
RIDG	Independent Ri	1.22	78		Pn	07 30 20.6	+0.8
RIDG					Sn	07 30 37.0	+1.0
TRF	Thorofare Moun	1.24	268		Pn	07 30 20.8	+0.6
NEA	Nenana	1.27	328		Pn	07 30 21.0	+0.7
NEA					Sn	07 30 36.9	-0.1
IL31		1.29	12		Pn	07 30 21.6	+1.0
ILAR	Eielson Array	1.29	12	P	Pn	07 30 21.1	+0.4
	29nm,0.3s,baz=192,slow=13,SNR=1415						
ILAR				S	Sn	07 30 37.5	0.0
	216nm,0.3s,baz=184,slow=23,SNR=19						
COLA	College	1.37	354		Pn	07 30 22.5	+0.8
TCOL	CIGO, UAF Yank	1.37	354		Pn	07 30 22.5	+0.8
MDM	Murphy Dome	1.48	348		Pn	07 30 24.1	+1.0
MDM					Sn	07 30 41.9	-0.1
KTH	Kantishna Hill	1.52	273		Pn	07 30 24.1	+0.4
POKR	Poker Plat Res	1.61	1		Pn	07 30 25.6	+0.8
POKR					Sn	07 30 45.1	+0.2
SCRK	Sand Creek	1.64	72		Pn	07 30 25.8	+0.5
SCRK					Sn	07 30 45.7	-0.2
BPAW	Bear Paw Mtn.	1.64	293		Pn	07 30 25.3	+0.1
SCM	Sheep Creek Mo	1.69	177		Pn	07 30 26.4	+0.4
PS11	TAPS Pump St11	1.72	146		Pn	07 30 27.3	+1.0
SML	Sawmill	1.75	193		Pn	07 30 27.3	+0.6
MENT	Mentasta	1.82	107		Pn	07 30 28.1	+0.5
PS07	TAPS Pump Stn7	1.83	350		Pn	07 30 28.9	+1.2
PS07					Sn	07 30 50.5	+0.4
GHO	Glory Hole Cre	1.86	201		Pn	07 30 28.6	+0.4
CAST	Castle Rocks	2.05	269		Pn	07 30 30.8	+0.2
PMR	Palmer	2.07	202		Pn	07 30 31.6	+0.8
MLY	Manley	2.07	319		Pn	07 30 31.6	+0.7
KNK	Knik Glacier	2.15	192		Pn	07 30 32.9	+0.9
CHUM	Lake Minchumin	2.16	282		Pn	07 30 32.4	+0.3
PRP	Porcupine Dome	2.19	22		Pn	07 30 33.8	+1.2
PPLA	Purkeypile	2.20	256		Pn	07 30 33.5	+0.7
PPLA					Sn	07 31 00.6	+1.5
SKT	Skwentna	2.40	232		Pn	07 30 35.7	+0.4
PS06	TAPS Pump Stn6	2.54	339		Pn	07 30 38.2	+1.2
SUA	Susitna One	2.54	217		Pn	07 30 38.5	+1.1
BC03		2.63	97		Pn	07 30 38.2	-0.2
BCAR	Beaver Creek A	2.63	97		Pn	07 30 38.6	+0.1
RC01	Rabbit Creek A	2.64	204		Pn	07 30 39.8	+1.2
FIS	Fire Island	2.69	209		Pn	07 30 42.2	+3.0
PWL	Port Wells	2.69	188		Pn	07 30 39.5	+0.2
GLB	Gilahina Butte	2.70	139		Pn	07 30 39.9	+0.4
VRDI	Verde Repeater	2.98	139		Pn	07 30 43.7	+0.4
MCARA	McCarthy VSAT	2.99	134		Pn	07 30 44.8	+1.5
EGAK	Eagle	3.07	63		Pn	07 30 44.9	+0.7
EYAK	Cordova Ski Ar	3.09	163		Pn	07 30 44.4	-0.3
HIN	Hinchinbrook I	3.17	171		Pn	07 30 45.1	-0.6
SPCR	Spurr Chakacha	3.19	225		Pn	07 30 48.1	+2.1
SPBG	Spurr Blockage	3.19	227		Pn	07 30 48.4	+2.3
FYU	Fort Yukon	3.22	17		Pn	07 30 47.8	+1.5
GOAT	Goat Mountain	3.23	155		Pn	07 30 46.2	-0.3
SLKM	Skilak Lake	3.27	204		Pn	07 30 48.0	+0.8
PTPK	Patty Peak	3.32	132		Pn	07 30 49.2	+1.3
RAGM	Ragged Mountai	3.42	155		Pn	07 30 48.9	-0.2
CRQM	Cirque	3.45	141		Pn	07 30 49.3	-0.4
BALM	Baldy	3.47	133		Pn	07 30 50.3	+0.4
YUK1	Sand Pete Hill	3.49	110		Pn	07 30 50.3	+0.1
TGL	Tana Glacier	3.54	139		Pn	07 30 50.1	-0.7
YUK2	White River	3.54	116		Pn	07 30 51.2	+0.4
SEW	Seward	3.54	196		Pn	07 30 51.4	+0.7
KIAG	Kiagna River	3.55	135		Pn	07 30 50.8	-0.3
PS05	TAPS Pump Stn5	3.57	340		Pn	07 30 52.6	+1.6
IM03		3.64	316		Pn	07 30 52.8	+0.7
IMAR	Indian Mountai	3.64	316		Pn	07 30 52.7	+0.7
DAWY	Dawson	3.65	78		Pn	07 30 52.1	-0.2
BARN	Barnard Glacie	3.68	129		Pn	07 30 54.2	+1.3
YUK3	Moose Creek	3.70	115		Pn	07 30 53.2	+0.1
DFR	Drift River	3.81	222		Pn	07 30 56.1	+1.7
RDJH	Redoubt Jeurge	3.84	223		Pn	07 30 57.1	+2.1
CTGM	Chitina Glacie	3.87	129		Pn	07 30 56.3	+1.0
GRNC	Granite Creek	3.89	133		Pn	07 30 55.3	-0.4
TT01	Tatalina	3.89	265		Pn	07 30 55.0	-0.6
COLD	Coldfoot	3.89	344		Pn	07 30 57.0	+1.5
RSO	Redoubt South	3.93	221		Pn	07 30 57.5	+1.3
RDWB	Redoubt West	3.94	222		Pn	07 30 57.8	+1.5
RED	Redoubt Volcan	3.97	221		Pn	07 30 58.1	+1.4
BRSE	Bradley Lake S	4.08	203		Pn	07 30 58.9	+0.7
BRLK	Bradley Lake	4.09	205		Pn	07 30 59.2	+0.9
BM03	Burnt Mountain	4.11	16		Pn	07 30 59.6	+1.1
BMAR	Burnt Mountain	4.12	16		Pn	07 30 59.4	+0.7
CNPM	China Poot	4.38	206		Pn	07 31 02.7	+0.5
SVW2	Sparrevohn	4.47	241		Pn	07 31 03.7	+0.3
YUK4	Talbot Arm	4.67	114		Pn	07 31 05.8	-0.4
YUK6	Outpost Mounta	5.00	117		Pn	07 31 11.2	+0.3
TOLK	Toolik Lake Re	5.22	352		Pn	07 31 15.7	+2.1
YUK7	Dusty Glacier	5.34	120		Pn	07 31 16.4	+1.0
EPYK	Eagle Plains	5.41	53		Pn	07 31 17.0	+0.8
HYT	Haines Junctio	5.42	115		Pn	07 31 18.7	+2.3
KAHC	Katmai Hardscr	6.08	220		Pn	07 31 25.6	+0.2
WHY	Whitehorse	6.59	110		Pn	07 31 33.1	+0.7
INK	Inuvik	7.47	44	P	Pn	07 31 45.6	+1.4
	1.3nm,0.3s,baz=242,slow=17,SNR=41						
INK				S	Sn	07 33 06.0	-1.1
	1.2nm,0.3s,baz=290,slow=22,SNR=6.5						
INK	Inuvik	7.47	44		Pn	07 31 44.9	+0.8
ANM	Nome	7.90	286		Pn	07 31 51.5	+1.4
DLBC	Dease Lake	9.89	113	P	Pn	07 32 19.3	+1.9
	0.2nm,0.3s,baz=152,slow=4.4,SNR=2.9						
GAMB	Gambell	10.73	282		Pn	07 32 29.9	+1.3
C36M	Paulatuk	11.00	48		Pn	07 32 32.1	-0.2
YKA	Yellowknife Ar	14.89	79	P	Pn	07 33 23.1	-1.1
	0.2nm,0.3s,baz=285,slow=10,SNR=19						
YKA				S	Sn	07 36 03.0	-4.8
	0.0nm,0.3s,baz=286,slow=23,SNR=9.6						
YKA				ScP	ScP	07 41 55.2	0.0
	baz=1.3,slow=2.7,SNR=3.9						
ATKA	Atka Island	17.99	243	P	Pn	07 34 03.1	+0.4
ATKA				IAmb	IAmb	07 34 04.1	
	comp=Z,36nm,1.0s						
ADK	Adak	19.24	246	P	P	07 34 16.2	+0.2
RES	Resolute Bay	20.93	36	P	P	07 34 32.4	-1.7
	comp=Z,1.0nm,0.6s,baz=240,slow=12,SNR=9.0						
RES	Resolute Bay	20.93	36	P	P	07 34 33.9	-0.2
RES				IAmb	IAmb	07 34 39.8	
	comp=Z,5.1nm,1.4s						
WALA	Waterton Lakes	23.24	113	P	P	07 34 59.8	+1.1
WALA				IAmb	IAmb	07 35 07.8	
	comp=Z,5.5nm,1.4s						
JTMT	Jette	24.12	115	P	P	07 35 05.9	-0.7
SEY	Seymchan	26.22	296	P	P	07 35 23.8	-1.6
	comp=Z,1.0nm,0.5s,baz=219,slow=12,SNR=4.8						
WDC	Whiskeytown Da	27.28	135	P	P	07 35 37.5	+2.4
YMR	Madison River	27.97	115	P	P	07 35 41.9	+0.4
LKWY	Lake	28.28	114	P	P	07 35 40.9	-3.4
LKWY				IAmb	IAmb	07 35 49.2	
	comp=Z,4.2nm,1.1s						
PDAR	Pinedale Array	30.11	115	P	P	07 36 01.0	+0.5
	comp=Z,1.2nm,0.7s,baz=322,slow=6.2,SNR=13						
PDAR	Pinedale Array	30.11	115	P	P	07 36 02.8	+2.3
NVAR	Mina Array Bea	30.61	131	P	P	07 36 06.5	+1.6
	comp=Z,0.5nm,0.6s,baz=326,slow=8.3,SNR=6.3						
NVAR	Mina Array Bea	30.61	131	P	P	07 36 06.4	+1.5
EYMN	Ely	33.89	90	P	P	07 36 33.9	+0.6
EYMN				IAmb	IAmb	07 36 39.0	
	comp=Z,3.9nm,1.2s						
NRIK	Noril'sk	41.88	334	P	P	07 37 41.0	+0.9
	comp=Z,0.8nm,0.4s,baz=32,slow=14,SNR=3.5						
TXAR	Lajitas Array	44.11	120	P	P	07 37 59.2	+0.5
	comp=Z,0.2nm,0.6s,baz=322,slow=5.7,SNR=2.4						
TXAR	Lajitas Array	44.11	120	P	P	07 37 58.8	+0.1
ARCES	ARCESS Array B	47.14	3	P	P	07 38 21.8	-0.2
	comp=Z,2.6nm,0.9s,baz=348,slow=6.7,SNR=6.0						
ARCES	ARCESS Array B	47.14	3	P	P	07 38 21.4	-0.6
SONM	Songino Array	54.77	308	P	P	07 39 20.0	+0.4
	comp=Z,0.4nm,0.6s,baz=4.0,slow=3.9,SNR=3.7						
SONM	Songino Array	54.77	308	P	P	07 39 20.5	+0.9
FINES	FINESS Array B	55.27	4	P	P	07 39 22.4	-0.3
	comp=Z,0.8nm,0.4s,baz=356,slow=7.6,SNR=6.8						
FINES	FINESS Array B	55.27	4	P	P	07 39 22.2	-0.5
ZALV	Zalesovo Beam	56.01	326	P	P	07 39 26.9	-1.3
	comp=Z,0.7nm,0.4s,baz=12,slow=6.3,SNR=2.4						
MKAR	Makanchi Array	63.21	324	P	P	07 40 16.5	-1.4
	comp=Z,0.2nm,0.3s,baz=36,slow=6.3,SNR=2.8						
MKAR	Makanchi Array	63.21	324	P	P	07 40 17.0	-0.8
ABKAR	Akbulak array	65.51	341	P	P	07 40 33.0	+0.3
ABKAR				IAmb	IAmb	07 40 37.4	
	comp=Z,0.9nm,0.6s						
ABKAR	Akbulak array	65.51	341	P	P	07 40 32.9	+0.1
AKASG	Malin Array Be	66.10	2	P	P	07 40 36.0	-0.5
	comp=Z,0.5nm,0.3s,baz=1.4,slow=6.3,SNR=5.4						

RSNC ***24*** *07:35:09.7±1.1, 8°.48N×77°.87W, h10^{km}±5^{km}, ML2.6*
UPA ***24*** *07:35:10.1±0.7, 8°.56N×77°.80W, h29^{km}±16^{km}, MW4.0*
ISC 24 07:35:09.3±1.4**, 8°.49N**±0°.04×**77°.87W**±0°.03**, h19**^{km}±4^{km}**, n23,** σ1^{s}**11**/42**, 1C-2D, Panama-Colombia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAP2	Capurgana	0.52	73	⇓*i*P	Pg	07 35 19.4	-0.5
CAP2				*e*S	Sg	07 35 26.6	-0.4
CAPC	Capurgana	0.53	74	⇓*i*P	Pb	07 35 19.3	-0.5
CAPC				*e*S	Sg	07 35 26.6	-0.6
CAPC				*i*		07 35 27.0	
	comp=Z,702nm,0.5s						
CNTA3	Canitas, Panam	1.24	306	*e*P	Pn	07 35 31.0	-0.6
CNTA3				*e*S	Sb	07 35 46.7	-1.0
PTAC	Punta Ardita,	1.34	178	*e*P	Pn	07 35 33.1	+0.2
PTAC				*e*S	Sn	07 35 50.0	-0.2
PTAC	Punta Ardita,	1.34	178	*e*P	Pn	07 35 33.1	+0.2
PTAC				*e*S	Sn	07 35 50.0	-0.2
CHPO	Chepo, Panama	1.41	299	*e*P	Pn	07 35 33.1	-0.7
CHPO				*e*S	Sn	07 35 52.3	+0.5
FLAM	Flamenco Islan	1.70	284	*e*S	Sn	07 35 59.2	0.0
UPA	Univ. de Panam	1.72	287	*e*P	Pn	07 35 38.5	+0.4
UPA				*e*S	Sn	07 36 00.1	+0.6
UPA				*i*		07 36 01.7	
	comp=Z,28nm,0.5s						
UPA	Univ. de Panam	1.72	287	⇑*i*P	Pn	07 35 38.6	+0.4
UPA				*e*S	Sn	07 36 00.5	+0.9
CHOR3	La Chorrera	1.92	282	*e*P	Pn	07 35 42.1	+1.1
CHOR3				*e*S	Sn	07 36 06.0	+1.5
GAMB1	Gamboa	1.93	289	*e*S	Sn	07 36 06.0	+1.4
FRIJ	El Hiral	1.98	292	*e*P	Pn	07 35 42.2	+0.5
FRIJ				*e*S	Sn	07 36 06.1	+0.2
ZANG	Zanguenga, Cho	2.03	283	*e*P	Pn	07 35 42.7	+0.3
ZANG				*e*S	Sn	07 36 09.6	+2.3
BCIP	Isla Barro Col	2.06	289	*e*P	Pn	07 35 43.9	+1.1
BCIP				*e*S	Sn	07 36 08.9	+0.9
BCIP				*i*		07 36 22.4	
	comp=Z,55nm,0.7s						
SOLC	Bahia Solano	2.30	169	*e*P	Pn	07 35 46.0	-0.1
SOLC				*e*S	Sn	07 36 15.1	+1.2
SOLC				*i*		07 36 24.6	
	comp=Z,32nm,0.4s						
UREC	San Jos de Ur	2.42	108	*e*P	Pn	07 35 48.5	+0.6
UREC				*e*S	Sn	07 36 18.4	+1.4
UREC				*i*		07 36 20.9	
	comp=Z,17nm,0.3s						
AZU	Azuero	2.48	254	*e*P	Pn	07 35 50.1	+1.4
AZU				*e*S	Sn	07 36 19.3	+0.8
AZU				*i*		07 36 30.6	
	comp=Z,88nm,0.4s						
AZU	Azuero	2.48	254	*e*P	Pn	07 35 50.1	+1.4
AZU				*e*S	Sn	07 36 19.2	+0.8
SJCC	San Jacinto, C	3.00	62	*e*S	Sn	07 36 33.5	+2.2
ZARC	Zaragoza, Cauc	3.14	108	*e*P	Pn	07 35 58.9	+1.1
ZARC				*e*S	Sn	07 36 35.3	+0.5
ZARC				*i*		07 36 36.9	
	comp=Z,25nm,0.6s						
CACAO	El Cacao, Vera	3.18	249	*e*S	Sn	07 36 36.3	+0.7
CBOC	Ciudad Bolivar	3.19	145	*e*P	Pn	07 36 00.3	+1.7
CBOC				*e*S	Sn	07 36 37.1	+0.8
CBOC				*i*		07 36 49.2	
	comp=Z,9.8nm,0.7s						
HELC	Santa Helena	3.26	134	*e*P	Pn	07 36 01.8	+2.1
HELC				*e*S	Sb	07 36 44.0	-2.1

ANF ***24*** *07:38:09.7±0.5, 32°.32N×115°.28W, h15^{km}, ML2.6/15, Error ellipse: s-maj=4.6km s-min=2.6km az=167.0*
PAS ***24*** *07:38:11.4±2.7, 32°.28N±0°.02×115°.29W±0°.03, h16^{km}±3^{km}, Error ellipse: s-maj=3.3km s-min=3.2km az=214.0*
NEIC ***24*** *07:38:11.1±2.0, 32°.23N±0°.02×115°.35W±0°.03, h16^{km}±1^{km}, Error ellipse: s-maj=3.4km s-min=2.6km az=96.0*
ECX ***24*** *07:38:12.0±0.5, 32°.27N×115°.31W, h8^{km}±4^{km}, MD2.7, ML3.0*
MEX ***24*** *07:38:13.0±0.6, 32°.29N×115°.26W, h10^{km}±8^{km}, MD3.8*
ISC 24 07:38:10.0±1.0**, 32°.27N**±0°.02×**115°.30W**±0°.02**, h16**^{km}±9^{km}**, n78,** σ0^{s}**81**/115**, 2C-9D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.15	358	⇓*e*P	Pb	07 38 14.7	+0.1
CPBX				*e*S	Sb	07 38 17.8	+0.2
CPBX				⇓*e*		07 38 18.5	
CPBX				IAML		07 38 18.5	
	comp=N,19µm,0.1s						
CPBX				⇓*e*		07 38 19.7	
CPBX				IAML		07 38 19.7	
	comp=E,19µm,0.4s						
CPBX	Cerro Prieto	0.15	358		Pb	07 38 14.6	+0.1
CPBX					Sb	07 38 18.3	+0.7
MBIG	Mexicali	0.17	31	*e*P	Pb	07 38 15.3	+0.6
MBIG	Mexicali	0.17	31	*e*P	Pb	07 38 15.5	+0.7
MBIG				*e*S	Sb	07 38 17.8	-0.1
UABX	UABC, Campus M	0.38	342	*e*P	Pb	07 38 19.1	+0.7
UABX	UABC, Campus M	0.38	342		Pb	07 38 19.2	+0.7
UABX					Sb	07 38 25.8	+1.5
DREC	Desert Rsrch C	0.55	347		Pb	07 38 22.2	+0.8
DREC					Sn	07 38 31.5	-0.7
SNR	Schaffner Ranc	0.61	349		Pb	07 38 22.9	+0.6
SNR					Sb	07 38 32.6	+2.0
ESJX	Sierra Juarez	0.61	245	⇑*e*P	Pb	07 38 23.0	+0.5
ESJX				*e*S	Sb	07 38 31.2	+0.3
WESC	Westside Schoo	0.61	323	*e*P	Pb	07 38 22.9	+0.5
WESC	Westside Schoo	0.61	323		Pb	07 38 22.8	+0.5
WESC					Sb	07 38 32.5	+1.7
ERMX	Rumorosa	0.68	295	⇓*e*P	Pg	07 38 23.7	+0.3
ERMX				*e*S	Sg	07 38 32.9	+0.4
ERMX				IAML		07 38 33.3	
	comp=E,609nm,0.1s						
COK2	Cook Ranch 2	0.69	328	*e*P	Pg	07 38 23.9	+0.4
COK2	Cook Ranch 2	0.69	328		Pg	07 38 23.9	+0.4

COK2					Sb	07 38 34.6	+1.7
RMX	La Rumorosa	0.74	297		Pg	07 38 23.7	-0.8
RMX					Sg	07 38 32.4	-1.9
IKP	In-Ko-Pah, Jac	0.79	299	*e*P	Pg	07 38 25.5	+0.1
IKP	In-Ko-Pah, Jac	0.79	299		Pg	07 38 25.4	+0.1
IKP					Sg	07 38 35.7	-0.1
IKP	In-Ko-Pah, Jac	0.79	299	P	Pg	07 38 25.5	+0.1
	baz=118,SNR=26						
IKP				S	Sg	07 38 35.7	-0.1
	baz=118						
SWSC	Sam W. Stewart	0.80	328		Pg	07 38 25.2	-0.4
SWSC	Sam W. Stewart	0.80	328	P	Pg	07 38 25.2	-0.4
	baz=147,SNR=35						
SWSC				S	Sg	07 38 35.8	-0.3
	baz=147						
ECBX	El Chinero	0.82	165	*e*P	Pb	07 38 26.4	+0.5
ECBX				*e*S	Sb	07 38 37.7	+1.0
CRR	Carrizo Plain	0.84	318	⇓*i*P	Pg	07 38 26.5	+0.1
CRR	Carrizo Plain	0.84	318		Pg	07 38 26.3	-0.1
GLA	Glamis	0.88	27	Pg	Pg	07 38 26.4	-0.8
GLA	Glamis	0.88	27	P	Pg	07 38 26.5	-0.6
	baz=207,SNR=25						
GLA				S	Sg	07 38 37.5	-1.2
	baz=207						
CBKC	Canebrake	1.02	308	⇓*i*P	Pb	07 38 30.0	+0.5
CBKC	Canebrake	1.02	308		Pb	07 38 29.9	+0.5
MONP2	Monument Peak	1.14	304	⇓*e*P	Pb	07 38 31.7	+0.3
MONP2	Monument Peak	1.14	304		Pb	07 38 31.7	+0.3
MONP2					Sb	07 38 46.5	+0.4
MONP2	Monument Peak	1.14	304	P	Pb	07 38 30.8	-0.6
	baz=122,SNR=27						
MONP2				S	Sb	07 38 45.9	-0.1
	baz=122						
CBX	Cerro Bola	1.16	273	*e*P	Pb	07 38 32.0	+0.2
CBX				*e*S	Sb	07 38 47.5	+0.9
CBX				⇓*e*		07 38 51.9	
CBX				IAML		07 38 51.9	
	comp=N,340nm,0.5s						
CBX	Cerro Bola	1.16	273	*e*P	Pb	07 38 31.9	+0.2
CBX				*e*S	Sb	07 38 47.2	+0.6
CBX	Cerro Bola	1.16	273		Pb	07 38 31.9	+0.2
CBX					Sb	07 38 46.5	-0.1
TJIG	Tijuana	1.18	279	*e*P	Pn	07 38 32.0	+0.2
TJIG				*e*S	Sb	07 38 47.1	+0.1
SPIG	San Pedro Mart	1.23	187	*e*P	Pn	07 38 33.1	+0.2
SPIG	San Pedro Mart	1.23	187	*e*P	Pn	07 38 33.1	+0.2
SPIG				*e*S	Sb	07 38 48.8	+0.1
CCX	Cicese	1.23	251		Pb	07 38 33.3	+0.5
BAR	Barrett	1.23	290	*e*P	Pn	07 38 33.1	+0.5
BAR	Barrett	1.23	290		Pn	07 38 33.3	+0.6
BAR	Barrett	1.23	290		Sb	07 38 48.9	+0.2
BAR	Barrett	1.23	290	Sg	Sb	07 38 48.7	0.0
SPX	San Pedro Mart	1.23	187	⇓*e*P	Pn	07 38 33.1	+0.2
SPX				IAML		07 38 51.8	
	comp=N,158nm,0.4s						
SPX				⇑*e*		07 38 51.8	
SPX	San Pedro Mart	1.23	187	*e*P	Pn	07 38 32.9	0.0
SPX				*e*S	Sb	07 38 48.9	-0.1
SPX	San Pedro Mart	1.23	187		Pn	07 38 33.2	+0.2
SPX	San Pedro Mart	1.23	187		Sb	07 38 48.9	-0.1
SFX	San Felipe	1.28	163	*e*P	Pn	07 38 34.0	+0.7
SFX				*e*S	Sg	07 38 51.5	+0.1
SFX	San Felipe	1.28	163		Pn	07 38 34.0	+0.7
SFX					Sg	07 38 51.6	+0.1
BORC	Borrego Spring	1.37	317		Pn	07 38 34.1	-0.5
BORC					Sb	07 38 53.7	+1.0
BC3	Big Chuckawall	1.39	355	P	Pn	07 38 34.2	-0.8
	baz=174,SNR=11						
BC3				S	Sn	07 38 51.4	-1.6
	baz=174						
OLP	Otay Lakes Par	1.42	284	*e*P	Pb	07 38 36.5	+0.3
OLP	Otay Lakes Par	1.42	284		Pb	07 38 37.0	+0.8
OLP					Sb	07 38 54.8	+0.7
EML	El Monte Cty P	1.45	296	*e*P	Pb	07 38 36.9	+0.2
EML	El Monte Cty P	1.45	296		Pb	07 38 37.0	+0.4
EML					Sb	07 38 55.3	+0.5
SDRC	San Diego Road	1.47	289	*e*P	Pb	07 38 37.2	+0.2
SDRC	San Diego Road	1.47	289		Sb	07 38 55.8	+0.4
TJX	Tijuana	1.50	280		Sb	07 38 57.9	+1.4
DPP	Dos Picos Cty	1.57	298		Pg	07 38 40.1	-0.1
DPP					Sb	07 38 59.1	+0.8
HWB	Hans Werner Br	1.59	299		Sb	07 38 59.9	+0.8
Y12C	Blythe	1.62	24		Pb	07 38 40.4	+0.9
Y12C	Blythe	1.62	24	Pb	Pn	07 38 38.6	+0.6
	baz=204,SNR=10.0						
109C	Camp Elliot, M	1.65	293		Pb	07 38 39.9	-0.1
109C	Camp Elliot, M	1.65	293	Pb	Pb	07 38 40.1	+0.1
	baz=111						
109C				Sb	Sb	07 39 01.2	+0.6
	baz=111						
CPE	Camp Elliot	1.65	293		Pb	07 38 40.2	+0.2
CPE					Sb	07 39 01.1	+0.5
XPFO	Pion Flat	1.66	324	Pn	Pn	07 38 37.8	-0.9
PFO	Pinyon Flats O	1.66	324	Pn	Pn	07 38 37.8	-0.8
PFO	Pinyon Flats O	1.66	324	P	Pn	07 38 37.8	-0.8
	baz=143						
PFO				S	Sn	07 38 58.2	-1.5
	baz=143						
BELC	Belle Mtn. Jos	1.83	341	Pg	Pg	07 38 45.4	+0.2
	baz=161						
IRM	Iron Mountain	1.89	4	P	Pn	07 38 40.2	-1.6
	baz=184						
IRM				Sg	Sg	07 39 10.5	-0.5
	baz=184						
MURC	Murrieta	2.08	310	P	Pn	07 38 43.5	-0.8
	baz=129						
MURC				S	Sn	07 39 08.9	-1.0
	baz=129						
214A	Organ Pipe Nat	2.13	98	*e*P	Pn	07 38 44.6	-0.4
214A	Organ Pipe Nat	2.13	98		Pn	07 38 44.5	-0.5
214A	Organ Pipe Nat	2.13	98	P	Pn	07 38 44.4	-0.7
	baz=280						
214A				S	Sn	07 39 09.7	-1.5
	baz=280						
Y14A	Wickenburg	2.55	48		Pn	07 38 51.7	+0.9
BFSC	Mount Baldy Ra	2.79	315	Sb	Sb	07 39 35.5	+1.9
	baz=134						
SCI2	San Clemente I	2.83	285	Sb	Sb	07 39 36.8	+2.1
	baz=103						
CIS	Catalina Islan	2.86	294	Sb	Sb	07 39 37.4	+2.0
	baz=112						
W13A	Hualapai Mount	3.06	22	Pn	Pn	07 39 00.2	+2.2
X16A	Lo Mia Camp, P	3.88	55		Pn	07 39 10.3	+1.2

IDC ***24*** *07:55:53.8±0.7, 28.°19N×139.°78E, h403^{km}±9^{km}, mb3.2/18, mb1 3.3/21, mb1mx3.2/44, mbtmp4.0/21, Error ellipse: s-maj=24.9km s-min=10.4km az=72.0*

JMA ***24*** *07:55:54.3±0.3, 28.°41N×140.°49E, h437^{km}±5^{km}, M3.5*

ISC 24 07:55:54.9±0.6**, 28.°30N**±0.°07×**140.°1E**±0.°1**, h421^{km}, n38, σ1.^{s}16**/47**, mb3.5**/18**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.21	122	P	P	07 56 53.8	-0.4
CBIJ				*e*S	S	07 57 40.4	-1.7
JCJ	Chichijima	2.21	122	P	P	07 56 53.9	-0.3
	60nm,0.3s,baz=276,slow=21,SNR=34						
JCJ				S	S	07 57 40.2	-1.9
	55nm,0.3s,baz=284,slow=21,SNR=6.8						
JHH2	Haha-jima-NKT2	2.49	131	P	P	07 56 56.1	+0.1
JHH2				S	S	07 57 44.9	-0.5
JHJ2	Mitsune	4.80	357	P	P	07 57 16.3	+0.7
JHJ2				*e*S	S	07 58 21.2	-0.4
JHJ	Hachijo jima 2	4.81	357	P	P	07 57 16.0	+0.3
	30nm,0.3s,baz=83,slow=23,SNR=10.0						
JHJ				S	S	07 58 18.8	-3.0
	22nm,0.3s,baz=57,slow=23,SNR=6.3						
BSO1	Boso 1	6.38	7	P	P	07 57 32.7	+1.4
BSO1				*e*S	S	07 58 49.4	-1.2
BSO3	Boso 3	6.49	3	P	P	07 57 32.9	+0.1
BSO3				*e*S	S	07 58 50.7	-2.6
BSO4	Boso 4	6.67	2	*e*S	S	07 58 56.0	-1.2
JIE	Ise	6.72	335	P	P	07 57 37.7	+1.5
JKN2	Miekihoku	6.76	332	P	P	07 57 38.1	+1.6
JAO	Obara	7.35	342	P	P	07 57 43.8	+0.8
JEG	Eigenji	7.50	336	P	P	07 57 46.5	+1.8
JHU	Hanno	7.56	355	P	P	07 57 44.3	-0.9
JTO	Tosashimizu	7.75	308	P	P	07 57 47.7	+0.3
JRY	Ryogami san	7.75	353	P	P	07 57 47.2	-0.3
JAG	Ashikaga	8.12	356	P	P	07 57 50.2	-1.0
USRK	Ussuriysk Ar.	17.14	340	P	P	07 59 30.9	+1.5
	baz=148,slow=8.4,SNR=8.3						
KLR	Kul'dur	21.86	345	P	P	08 00 16.4	+1.7
	3.2nm,0.5s,baz=168,slow=7.4,SNR=18						
SONM	Songino Array	32.56	316	P	P	08 01 48.7	-0.6
	0.4nm,0.4s,baz=127,slow=9.9,SNR=3.9						
ZALV	Zalesovo Beam	47.36	319	PcP	PcP	08 05 10.8	-0.9
	1.1nm,0.5s,baz=116,slow=3.4,SNR=3.7						
MKAR	Makanchi Array	48.27	309	P	P	08 03 55.1	-0.8
	0.7nm,0.7s,baz=91,slow=8.8,SNR=6.0						
MKAR				PcP	PcP	08 05 14.7	-0.5
	0.7nm,0.6s,baz=77,slow=5.2,SNR=8.1						
WRA	Warramunga Arr	48.28	187	P	P	08 03 55.3	-0.8
	0.3nm,0.3s,baz=4.6,slow=7.6,SNR=1.3						
WRA				PcP	PcP	08 05 15.6	+0.2
	0.4nm,0.5s,baz=2.1,slow=3.7,SNR=1.9						
NRIK	Noril'sk	50.85	339	P	P	08 04 15.3	+0.7
	1.7nm,0.4s,baz=127,slow=11,SNR=3.8						
KURBB	Kurchatov Arra	50.87	314	P	P	08 04 13.9	-1.1
	1.1nm,0.8s,baz=92,slow=7.8,SNR=9.4						
ASAR	Alice Springs	52.01	187	P	P	08 04 22.9	-0.8
	0.2nm,0.4s,baz=1.9,slow=5.8,SNR=6.9						
BVAR	Borovoye Array	55.90	317	P	P	08 04 50.5	-0.4
	1.8nm,0.8s,baz=81,slow=9.2,SNR=8.3						
ARU	Arti	62.33	322	P	P	08 05 34.0	-0.4
	1.9nm,0.2s,baz=296,slow=12,SNR=3.0						
AKTO	Aktyubinsk	63.87	315	P	P	08 05 43.7	-0.8
	0.9nm,0.8s,baz=80,slow=20,SNR=4.0						
ARCES	ARCESS Array B	71.79	340	P	P	08 06 33.8	+1.0
	2.0nm,0.6s,baz=71,slow=8.3,SNR=15						
YKA	Yellowknife Ar	71.96	28	P	P	08 06 35.7	+1.7
	0.2nm,0.7s,baz=295,slow=5.5,SNR=3.3						
KBZ	Khabaz	75.83	312	P	P	08 06 56.5	+0.1
	2.3nm,0.8s,baz=236,slow=4.5,SNR=5.9						
FINES	FINESS Array B	76.04	333	P	P	08 06 57.3	+0.1
	2.9nm,0.3s,baz=70,slow=4.8,SNR=37						
AKASG	Malin Array Be	80.54	323	P	P	08 07 21.4	-0.4
	1.0nm,0.5s,baz=51,slow=5.2,SNR=3.4						
NVAR	Mina Array Bea	81.22	51	P	P	08 07 28.0	+2.1
	0.2nm,0.5s,baz=287,slow=4.6,SNR=2.2						
NB2	NORSAR Subarra	81.80	337	P	P	08 07 27.4	-0.8
	comp=Z,0.7nm,0.4s,baz=46,slow=5.1						
NOA	NORSAR Array B	81.80	337	P	P	08 07 28.1	-0.1
	comp=Z,1.3nm,0.5s,baz=46,slow=5.0,SNR=5.4						
BRTR	Keskin Array B	83.82	312	P	P	08 07 38.4	-0.6
	comp=Z,0.5nm,0.6s,baz=43,slow=4.7,SNR=3.3						
TORD	Torodi Ar. Bea	122.39	310	PKP	PKPdf	08 14 01.6	-0.2
	comp=Z,0.4nm,0.4s,baz=19,slow=1.0,SNR=6.8						

TAP 24 07:56:52.5, 24.°49N×121.°92E, h10^{km}, ML1.8, 1C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.13	332	⇑*i*P	Pb	07 56 56.4	-0.6
	baz=335						
TWC				*i* S	Sg	07 56 58.5	+0.8
	baz=335						
ENA	Nanau	0.17	248	P	Pb	07 56 57.1	-0.6
	baz=245						
ENA				*i* S	Sg	07 57 00.1	+1.3
	baz=245						
EOS1	EOS1	0.20	74	*i* P	Pg	07 56 57.3	+0.7
	baz=74						
EOS1				*i* S	Sg	07 57 01.3	+1.8
	baz=74						
ILA	Ilan	0.31	331	*e*P	Pb	07 56 59.7	-0.4
	baz=331						
ILA				*e*S	Sb	07 57 05.0	-0.3
	baz=331						
ENTT	Nioudou	0.35	295	*e*P	Pb	07 57 00.4	-0.4
	baz=294						
ENTT				*e*S	Sb	07 57 05.8	-0.6
	baz=294						
NTC	Toucheng	0.37	348	*e*P	Pb	07 57 00.8	-0.2
	baz=347						
NDT	Datong Townshi	0.38	286	*e*P	Pb	07 57 01.1	-0.2
	baz=286						
NDT				*e*S	Sb	07 57 07.0	-0.3
	baz=286						
NACB	Ninganchiao	0.43	223	*e*P	Pb	07 57 01.6	-0.5
	baz=222						
NWLT	Wulai	0.47	307	*e*S	Sb	07 57 10.2	+0.3
	baz=306						
TIPB	Shuangxi	0.48	350	*e*P	Pb	07 57 02.8	-0.2
	baz=350						
TIPB				*e*S	Sb	07 57 10.2	-0.1
	baz=350						
ETLH	Xiulin Townshi	0.49	234	*e*P	Pg	07 57 02.5	+0.5
	baz=234						
NNSB	Datong	0.49	262	P	Pb	07 57 02.9	-0.3
	baz=262						
NNS	Nan Shan	0.50	264	*e*P	Pb	07 57 02.9	-0.4
	baz=263						
YHNB	Yeheng	0.52	290	*e*P	Pb	07 57 03.8	+0.1
	baz=289						

TAP 24 07:56:59.8, 24.°52N×121.°92E, h16^{km}, ML1.9, 1C-2D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.11	326	⇑*i*P	Pb	07 57 04.2	+0.7
	baz=330						
TWC				*i* S	Sb	07 57 06.4	+0.5
	baz=330						
ENA	Nanau	0.18	241	*i* P	Pb	07 57 04.8	+0.1
	baz=238						
ENA				*i* S	Sb	07 57 07.7	-0.3
	baz=238						
EOS1	EOS1	0.20	81	⇓P	Pb	07 57 05.1	+0.2
	baz=80						
EOS1				S	Sb	07 57 08.9	+0.5
	baz=80						
ENTT	Nioudou	0.34	291	P	Pb	07 57 07.3	-0.1
	baz=290						
ENTT				S	Sb	07 57 13.5	+0.8
	baz=290						
NDT	Datong Townshi	0.38	283	P	Pb	07 57 08.9	+0.8
	baz=282						
NDT				S	Sb	07 57 14.6	+0.9
	baz=282						
NACB	Ninganchiao	0.45	221	P	Pg	07 57 09.0	+0.2
	baz=220						
NACB				*e*S	Sg	07 57 15.4	+0.4
	baz=220						
NACB	Ninganchiao	0.45	221	S	Pg	07 57 09.1	+0.2
	baz=222						
NWLT	Wulai	0.46	305	*e*P	Pg	07 57 09.0	0.0
	baz=304						
NWLT				*e*S	Sb	07 57 16.6	+0.6
	baz=304						
TIPB	Shuangxi	0.46	350	*e*P	Pg	07 57 09.1	+0.1
	baz=349						
TIPB				*e*S	Sb	07 57 16.5	+0.4
	baz=349						
NNSB	Datong	0.49	260	*e*P	Pg	07 57 09.9	+0.2
	baz=259						
NNSB				*e*S	Sb	07 57 17.0	-0.2
	baz=259						
NNSB	Datong	0.49	260	*e*S	Pg	07 57 10.1	+0.4
	baz=262						
NNSH	Datong	0.49	260	*e*S	Pg	07 57 10.2	+0.5
	baz=262						
NNSH	Datong	0.49	260	*e*P	Pg	07 57 09.8	+0.1
	baz=259						
NNSH				*e*S	Sb	07 57 17.1	0.0
	baz=259						
NNS	Nan Shan	0.50	261	*e*P	Pb	07 57 10.5	+0.2
	baz=260						
NNS				*e*S	Sb	07 57 18.0	+0.7
	baz=260						
NNS	Nan Shan	0.50	261	*e*S	Pb	07 57 10.9	+0.6
	baz=263						
ETLH	Xiulin Townshi	0.50	232	⇓*e*P	Pb	07 57 10.3	+0.1
	baz=231						
ETLH				*e*S	Sb	07 57 18.1	+0.7
	baz=231						
ETLH	Xiulin Townshi	0.50	232	*e*S	Pb	07 57 10.3	+0.1
	baz=234						
YHNB	Yeheng	0.52	287	*e*P	Pb	07 57 11.2	+0.7
	baz=287						
YHNB				S	Sb	07 57 18.4	+0.7
	baz=287						
YHNB	Yeheng	0.52	287	*e*S	Pb	07 57 11.4	+0.9
	baz=289						
NSK	Sanguang	0.53	287	P	Pb	07 57 10.9	+0.1
	baz=287						
NSK				S	Sb	07 57 18.5	+0.3
	baz=287						
NWF	Wu-fen Shan	0.56	347	*e*P	Pb	07 57 11.6	+0.3
	baz=347						
NWF				S	Sb	07 57 19.5	+0.3
	baz=347						
WFSB	Wu-fen Shan	0.56	347	*e*P	Pb	07 57 11.6	+0.3
	baz=347						
WFSB				S	Sb	07 57 19.6	+0.5
	baz=347						
WHF	Hehuan Shan	0.70	238	P	Pb	07 57 14.2	+0.3
	baz=237						
WHF				*e*S	Sb	07 57 23.9	+0.5
	baz=237						

IDC ***24*** *08:04:18.1±1.3, 49.°94N×102.°76E, h0^{km}, mb3.3/3, mb1 3.4/5, mb1mx3.2/39, mbtmp3.1/5, ML2.5/2, Error ellipse: s-maj=16.9km s-min=12.0km az=84.0*

BYKL ***24*** *08:04:18.2±0.4, 49.°92N×102.°65E*

ISC 24 08:04:19.1±0.7**, 49.°97N**±0.°03×**102.°96E**±0.°03**, h10^{km}, n38, σ2.^{s}17**/73**, 6C, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAK	Zakamensk	0.47	26	⇑*i*Pg	Pb	08 04 29.4	-0.1
ZAK				*e*Sg	Sb	08 04 37.4	+0.9
ZAK				Pmax			
	308nm,0.1s						
ZAK				Smax			
	4µm,0.2s						
TLY	Talaya	1.77	14	⇑*i*Pg	Pg	08 04 52.0	-1.1
TLY				*e*		08 04 58.4	
TLY				*e*Sg	Sg	08 05 16.8	+0.8
TLY				Pmax			
	74nm,0.1s						
TLY				Smax			
	645nm,0.9s						
TLY	Talaya	1.77	14	Pg	Pg	08 04 51.9	-1.1
	0.3nm,0.3s,baz=203,slow=12,SNR=92						
TLY				Lg	Lg	08 05 16.3	
	0.6nm,0.3s,baz=202,slow=14,SNR=31						
TLY				LR	LR	08 05 47.6	
	comp=Z,47nm,21.1s,baz=121,slow=49						
ARS	Arshan	1.99	350	⇑*i*Pg	Pb	08 04 54.5	-0.9
ARS				*e*		08 04 56.7	
ARS				*e*Sg	Sg	08 05 21.3	-1.6
ARS				*e*		08 05 25.9	
ARS				max			
	125nm,0.6s						
ARS				max			
	652nm,0.6s						
IVK	Ivanovka	2.06	26	⇑*i*Pg	Pg	08 04 57.6	-0.9
IVK				*e*		08 05 00.2	
IVK				*e*		08 05 02.8	
IVK				*e*		08 05 17.2	
IVK				*e*Sg	Sg	08 05 26.9	+1.8
IVK				max			
	86nm,0.5s						
IVK				Smax			
	383nm,0.8s						
MOY	Mondy	2.11	325	*e*Pn	Pn	08 04 54.4	-0.2
MOY				*e*Pg	Pb	08 04 55.7	-1.8
MOY				*i* Sg	Sb	08 05 22.1	-1.7
MOY				Pmax			
	161nm,0.4s						
MOY				Smax			
	790nm,0.7s						
LSTR	Listvyanka	2.24	31	⇑*i*Pg	Pg	08 05 01.2	-0.9
LSTR				*e*Sg	Sg	08 05 31.8	+0.6
LSTR				*e*		08 05 54.9	
LSTR				Pmax			
	50nm,0.4s						
LSTR				Smax			
	387nm,0.6s						
IRK	Irkutsk	2.42	19	*e*Pg	Pb	08 05 03.4	+0.6
IRK				*e*		08 05 30.2	
IRK				*e*Sg	Sg	08 05 36.6	-0.4
IRK				Pmax			
	252nm,0.1s						
IRK				Smax			
	2µm,0.5s						
BGT	Bolshoye Golou	2.59	36	*e*	Pb	08 05 06.5	+0.8
BGT				*e*Pg	Pg	08 05 07.8	-1.0
BGT				*e*PgPg	PbPb	08 05 11.8	+3.0
BGT				*e*Sg	Sg	08 05 43.3	+0.9
BGT				Pmax			
	80nm,0.4s						
BGT				Smax			
	594nm,0.5s						
HRMR	Khuramsha	3.03	55	*e*Pn	Pn	08 05 09.5	+2.3
HRMR				*e*		08 05 12.6	
HRMR				*e*Pg	Pg	08 05 15.5	-1.7
HRMR				*e*Sg	Sg	08 05 58.2	+1.7
STDB	Stepnoy Dvoret	3.08	43	Pn	Pb	08 05 10.5	-3.5
STDB				*e*		08 05 20.6	
STDB				*e*Sg	Sg	08 06 00.0	+2.0
STDB				*e*		08 06 10.8	
SONM	Songino Array	3.11	132	Pn	Pn	08 05 09.7	+1.3
	0.6nm,0.3s,baz=314,slow=14,SNR=12						
SONM				Pg	Pg	08 05 17.0	-1.7
	19nm,0.3s,baz=312,slow=18,SNR=71						
SONM				Lg	Lg	08 05 58.5	
	86nm,0.3s,baz=308,slow=27,SNR=9.9						
KAB	Kabansk	3.13	47	*e*	Pn	08 05 08.1	-0.4
KAB				*e*		08 05 15.2	
KAB				*e*Sg	Sg	08 06 00.7	+1.1
KAB				Smax			
	1µm,0.8s						
ORL	Orlik	3.25	324	*e*	Pn	08 05 11.2	+1.0
ORL				*e*Pg	Pb	08 05 15.9	-1.0
ORL				*e*Sg	Sb	08 05 57.5	+1.0
ORL				Pmax			
	33nm,0.6s						
ORL				Smax			
	357nm,1.0s						
ULN	Ulaanbaatar	3.42	126	*e*	Pb	08 05 20.7	+0.8
ULN				*e*Pg	Pg	08 05 22.8	-1.9
ULN				*e*		08 05 46.6	
ULN				*e*Sn	Sn	08 05 55.2	+1.9
ULN				*e*Sg	Sg	08 06 08.5	-0.5
ULN				*e*		08 06 14.9	
TRG	Tyrgan	3.51	36	⇑*i*Pn	Pn	08 05 16.2	+2.4
TRG				*e*Pg	Pg	08 05 23.9	-2.5
TRG				*e*		08 06 08.1	
TRG				*e*Sg	Sg	08 06 12.1	+0.2
TRG				Pmax			
	42nm,0.4s						
TRG				Smax			
	643nm,0.4s						
UUDB	Ulan-Yde	3.53	56	*e*	Pb	08 05 19.8	-1.9
UUDB				*e*Pg	Pg	08 05 24.0	-2.8
UUDB				*e*		08 05 51.3	
UUDB				*e*Sg	Sg	08 06 13.1	+0.6
UUDB				Pmax			
	64nm,0.6s						
UUDB				Smax			
	736nm,1.4s						
ZRHB	Zarechye	3.69	44	*e*Pg	Pg	08 05 27.4	-2.5
ZRHB				*e*Sg	Sg	08 06 17.5	-0.2
ZRHB				Pmax			
	107nm,1.0s						
ZRHB				Smax			
	1µm,0.8s						
TRTB	Turuntaevo	3.72	51	*e*Pn	Pn	08 05 19.3	+2.7
TRTB				*e*		08 05 24.8	
TRTB				Pg	Pb	08 05 26.7	+1.9
TRTB				*e*		08 06 10.1	
TRTB				*e*Sg	Sg	08 06 17.9	-0.5
OGRR	Ongureny	4.67	36	*e*Pn	Pn	08 05 32.9	+3.2
OGRR				*e*Pg	Pg	08 05 46.0	-2.5
OGRR				*e*Sg	Sg	08 06 47.1	-1.9
OGRR				Pmax			
	15nm,0.3s						
OGRR				Smax			
	312nm,0.6s						
MXMB	Maximikha	4.89	45	*e*Pn	Pn	08 05 34.9	+2.3
MXMB				*e*		08 05 42.8	
MXMB				*e*		08 06 06.2	
MXMB				*e*Sg	Sg	08 06 54.7	-1.2
TDJR	Todzha	4.95	302	*e*	Pn	08 05 26.4	-7.2
TDJR				*e*Pg	Pb	08 05 44.9	-1.0
TDJR				*e*Sg	Sb	08 06 48.9	+3.4
KZLR	Kyzyl	5.66	291	*e*Sg	Sb	08 07 07.7	+1.8
KZLR				*e*		08 07 13.6	

KPC	**Khapcheranga**	**6.10**	**89**	*e*	**Pn**	**08 05 49.8**	**+0.4**
KPC				*e*Pg	**Pg**	**08 06 12.2**	**-3.7**
KPC				*e*		08 06 56.1	
KPC				*e*Sg	**Sg**	**08 07 33.5**	**-1.4**
KPC				*e*		08 07 48.9	
KPC				Pmax			
	14nm,0.4s						
KPC				Smax			
	132nm,1.1s						
ARDR	**Aradan**	**6.53**	**297**	*e*Pg	**Pb**	**08 06 12.3**	**-0.4**
ARDR				*e*Sg	**Sb**	**08 07 34.6**	**+3.9**
CIT	**Chita**	**7.00**	**69**	Sg	**Sg**	**08 08 00.8**	**-2.7**
CIT				Smax			
	129nm,1.1s						
YLYR	**Ulyunkhan**	**7.02**	**42**	*e*Pn	**Pn**	**08 06 05.2**	**+3.3**
YLYR				*e*Pg	Pg	08 06 27.6	-5.9
YLYR				*e*		08 07 55.7	
YLYR				*e*Sg	**Sg**	**08 08 01.1**	**-3.2**
YLYR				Pmax			
	4.0nm,0.5s						
YLYR				Smax			
	56nm,1.9s						
NIZ	**Nizh Angarsk**	**7.05**	**32**	*e*Sn	**Sn**	**08 07 22.9**	**+0.5**
NIZ				Sg	**Sg**	**08 07 59.1**	**-6.1**
NIZ				*e*		08 08 05.4	
NIZ				max			
	72nm,0.8s						
KMO	**Kumora**	**7.74**	**37**	*e*Sg	**Sg**	**08 08 22.1**	**-5.2**
KMO				Smax			
	83nm,1.1s						
YOA	**Uoyan**	**8.12**	**37**	Sg	**Sg**	**08 08 35.5**	**-4.0**
YOA				*e*		08 08 44.4	
YOA				max			
	101nm,0.8s						
UKT	**Uakit**	**8.51**	**45**	*e*Pn	**Pn**	**08 06 24.1**	**+1.7**
UKT				*e*Pg	Pg	08 06 55.3	-6.6
UKT				*e*		08 07 08.4	
UKT				*e*		08 08 32.5	
UKT				*e*Sg	**Sg**	**08 08 48.0**	**-4.0**
UKT				Pmax			
	2.0nm,0.7s						
UKT				Smax			
	37nm,1.4s						
NLYR	**Nelyaty**	**10.04**	**45**	*e*		08 08 47.4	
NLYR				*e*Sg	Sn	08 09 34.2	+58
NLYR				*e*		08 09 54.1	
NLYR				max			
	56nm,2.5s						
TUP	**Tupik**	**11.34**	**60**	*e*		08 09 18.4	
TUP				*e*		08 10 09.7	
TUP				*e*Sg		08 10 15.5	
TUP				*e*		08 10 22.3	
TUP				max			
	96nm,1.5s						
MKAR	**Makanchi Array**	**14.09**	**265**	Lg	Lg	08 11 42.2	
	0.0nm,0.3s,baz=57,slow=29,SNR=2.6						
KURBB	**Kurchatov Arra**	**15.61**	**282**	Pn	**Pn**	**08 07 56.1**	**-3.0**
	0.0nm,0.3s,baz=93,slow=31,SNR=2.4						
BVAR	**Borovoye Array**	**20.41**	**291**	P	**P**	**08 08 55.4**	**-0.6**
	0.5nm,0.5s,baz=224,slow=45,SNR=3.2						
ILAR	**Eielson Array**	**53.52**	**30**	P	**P**	**08 13 40.2**	**+0.9**
	0.4nm,0.9s,baz=313,slow=3.8,SNR=1.1						
YKA	**Yellowknife Ar**	**63.99**	**18**	P	**P**	**08 14 53.9**	**+1.8**
	0.4nm,0.8s,baz=337,slow=6.1,SNR=4.5						

IDC ***24*** *08:06:30.7±1.4, 19°.49S×70°.42W, h0^{km}, mb4.2/3, mb1 4.2/5, mb1mx3.7/32, mbtmp4.1/5, ML3.5/2, MS3.0/6, Ms1 3.1/6, ms1mx2.8/27, Error ellipse: s-maj=46.3km s-min=18.8km az=72.0*

NEIC ***24*** *08:06:33.4±2.0, 19°.67S±0°.03×70°.71W±0°.05, h23^{km}±5^{km}, mb4.5/6, Error ellipse: s-maj=7.3km s-min=4.4km az=83.0*

GUC ***24*** *08:06:34.4±0.6, 19°.64S×70°.69W, h42^{km}±1^{km}, ML3.8*

ISC 24 08:06:33.0±0.8**, 19°.65S**±0°.03×**70°.75W**±0°.07**, h22**^{km}±5^{km}**, n45, σ1^{s}.20**/57**, mb4.4**/5**, 3C-8D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.59**	**85**	⇓*i*P	**Pb**	**08 06 45.0**	**+0.2**
PSGC				*i* S	**Sb**	**08 06 53.0**	**+0.1**
PSGC				IAML		08 06 53.5	
	comp=N,3µm,0.1s						
PSGCX	**Pisagua**	**0.59**	**85**	Pg	**Pb**	**08 06 44.0**	**-0.8**
PSGCX				Sg	**Sb**	**08 06 52.9**	**+0.1**
PB11	**IPOC Station P**	**1.04**	**96**	⇓*i*P	**Pb**	**08 06 52.2**	**-0.1**
PB11				*i* S	**Sn**	**08 07 05.5**	**-0.8**
PB11				IAML		08 07 09.8	
	comp=N,5µm,0.3s						
PB11	**IPOC Station P**	**1.04**	**96**		**Pn**	**08 06 51.6**	**-0.7**
PB11				Sn	**Sn**	**08 07 05.4**	**-0.8**
TA01	**Diego Aracena**	**1.06**	**150**	⇓*i*P	**Pb**	**08 06 52.8**	**+0.2**
TA01				*i* S	**Sn**	**08 07 06.7**	**+0.1**
TA01				IAML		08 07 10.8	
	comp=E,3µm,0.5s						
PB12	**IPOC Station P**	**1.10**	**21**	⇓*i*P	**Pn**	**08 06 53.2**	**0.0**
PB12				*i* S	**Sn**	**08 07 08.0**	**+0.1**
PB12				IAML		08 07 10.1	
	comp=E,4µm,0.1s						
PB12	**IPOC Station P**	**1.10**	**21**		**Pn**	**08 06 53.2**	**0.0**
PB12				Sn	**Sn**	**08 07 07.8**	**0.0**
PATCX	**Punta Patache**	**1.29**	**154**	⇑*i*P	**Pn**	**08 06 56.4**	**+0.5**
PATCX				*i* S	**Sb**	**08 07 13.5**	**+0.6**
PATCX				IAML		08 07 20.1	
	comp=E,2µm,0.4s						
PATCX	**Punta Patache**	**1.29**	**154**		**Pn**	**08 06 56.4**	**+0.5**
AP01	**Chacalluta**	**1.33**	**17**	IAML		08 07 18.8	
	comp=N,5µm,0.2s						
GO01	**Chusmiza**	**1.47**	**91**	⇓*i*P	**Pb**	**08 06 59.6**	**-0.2**
GO01				*i* S	**Sb**	**08 07 18.7**	**+0.5**
GO01	**Chusmiza**	**1.47**	**91**		**Pb**	**08 06 59.4**	**-0.5**
PB08	**IPOC Station P**	**1.58**	**108**	⇓*i*P	**Pb**	**08 07 01.1**	**-0.6**
PB08				*i* S	**Sb**	**08 07 22.1**	**+0.6**
PB08				IAML		08 07 26.6	
	comp=N,1µm,0.3s						
PB16	**IPOC Station P**	**1.76**	**42**	⇓*i*P	**Pb**	**08 07 04.4**	**-0.5**
PB16				*i* S	**Sb**	**08 07 27.4**	**+0.7**
PB16				IAML		08 07 31.7	
	comp=E,2µm,0.3s						
PB16	**IPOC Station P**	**1.76**	**42**		**Pb**	**08 07 04.3**	**-0.5**
PB16				Sn	**Sn**	**08 07 24.9**	**+0.3**
PB01	**IPOC Station P**	**1.82**	**140**	⇑*i*P	**Pn**	**08 07 04.1**	**+1.0**
PB01				*i* S	**Sb**	**08 07 26.9**	**-1.3**
PB01				IAML		08 07 35.0	
	comp=N,1µm,0.5s						
PB01	**IPOC Station P**	**1.82**	**140**		**Pn**	**08 07 04.0**	**+0.9**
PB01				Sn	**Sn**	**08 07 23.6**	**-2.0**
PB02	**IPOC Station P**	**1.85**	**154**	⇑*i*P	**Pn**	**08 07 04.3**	**+0.8**
PB02				IAML		08 07 37.5	
	comp=E,3µm,0.4s						
PB07	**IPOC Station P**	**2.22**	**159**	⇓*i*P	**Pn**	**08 07 09.4**	**+0.7**
PB07				IAML		08 07 59.0	
	comp=E,743nm,0.3s						
PB07	**IPOC Station P**	**2.22**	**159**		**Pn**	**08 07 09.3**	**+0.7**
PB09	**IPOC Station P**	**2.56**	**147**		**Pn**	**08 07 15.1**	**+1.7**
PB04	**IPOC Station P**	**2.73**	**168**		**Pn**	**08 07 15.6**	**-0.1**
LVC	**Limon Verde**	**3.41**	**150**	Pn	**Pn**	**08 07 27.1**	**+1.9**
	comp=E,6.0nm,0.3s,baz=329,slow=11,SNR=26						
LVC				Lg	Lg	08 08 17.4	
	comp=E,46nm,0.3s,baz=101,slow=8.0,SNR=11						
LVC				LR	LR	08 08 37.8	
	comp=E,42nm,20.6s,baz=351,slow=37						
LVC	**Limon Verde**	**3.41**	**150**	*e*P	**Pn**	**08 07 27.1**	**+1.9**
LVC				*i* S	**Sn**	**08 08 07.0**	**+1.8**
PB15	**IPOC Station P**	**3.74**	**162**		**Pn**	**08 07 29.8**	**+0.2**
PB10	**IPOC Station P**	**3.85**	**177**	Pn	**Pn**	**08 07 29.9**	**-1.0**
LPAZ	**La Paz**	**4.17**	**37**	Pn	**Pn**	**08 07 40.4**	**+4.6**
	comp=E,1.8nm,0.3s,baz=219,slow=3.7,SNR=33						
LPAZ				LR	LR	08 09 24.8	
	comp=E,142nm,19.1s,baz=234,slow=45						
PB14	**IPOC Station P**	**4.96**	**176**		**Pn**	**08 07 45.1**	**-1.4**
GO02	**Mina Guanaco**	**5.59**	**169**		**Pn**	**08 07 55.3**	**+0.1**
SIV	**San Ignacio**	**9.91**	**70**	Pn	**Pn**	**08 08 53.7**	**-0.5**
	comp=E,0.9nm,0.3s,baz=275,slow=8.7,SNR=18						
SIV				LR	LR	08 13 10.6	
	comp=E,78nm,20.6s,baz=274,slow=42						
SAML	**Samuel**	**12.91**	**36**	Pn	**Pn**	**08 09 36.1**	**+0.8**
CPUP	**Villa Florida**	**14.03**	**121**	Pn	**Pn**	**08 09 49.9**	**-0.6**
	comp=E,0.1nm,0.3s,baz=234,slow=8.7,SNR=2.3						
CPUP	**Villa Florida**	**14.03**	**121**		**Pn**	**08 09 49.6**	**-0.9**
PTGA	**Pitinga**	**21.56**	**31**	P	**P**	**08 11 20.0**	**-1.1**
	comp=E,14nm,0.3s,baz=305,slow=23,SNR=38						
PTGA				LR	LR	08 20 16.7	
	comp=E,39nm,18.0s,baz=234,slow=39						
PTGA	**Pitinga**	**21.56**	**31**	P	**P**	**08 11 20.1**	**-1.1**
PTGA				IAmb	IAmb	08 11 20.4	
	comp=Z,19nm,0.2s						
RUSC	**La Rusia**	**25.48**	**355**	P	**P**	**08 11 58.5**	**-1.8**
PCRV	**Puerto La Cruz**	**30.24**	**12**	LR	LR	08 26 33.2	
	comp=Z,212nm,21.4s,slow=40						
QSPA	**South Pole Qui**	**70.53**	**180**	P	**P**	**08 17 47.2**	**+1.2**
QSPA				IAmb	IAmb	08 17 55.6	
	comp=Z,4.6nm,1.4s						
TOA0	**Torodi Ar. Sit**	**78.38**	**71**	P	**P**	**08 18 31.9**	**-0.4**
TOA0				IAmb	IAmb	08 18 44.9	
	comp=Z,5.2nm,1.2s						
TORD	**Torodi Ar. Bea**	**78.38**	**71**	P	**P**	**08 18 30.6**	**-1.8**
	comp=Z,0.9nm,0.7s,baz=246,slow=5.1,SNR=3.9						
TORD	**Torodi Ar. Bea**	**78.38**	**71**	P	**P**	**08 18 30.1**	**-2.2**
NEW	**Newport**	**79.29**	**331**	LR	LR	08 55 27.9	
	comp=Z,15nm,18.1s,baz=260,slow=37						
YKA	**Yellowknife Ar**	**88.88**	**341**	P	**P**	**08 19 25.4**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=134,slow=4.9,SNR=13						
ASAR	**Alice Springs**	**130.69**	**210**	PKP	**PKiKP**	**08 25 46.6**	**+2.6**
	comp=Z,0.7nm,1.1s,baz=147,slow=5.6,SNR=3.3						
MKAR	**Makanchi Array**	**145.09**	**33**	PKP	**PKPdf**	**08 26 08.6**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=303,slow=3.8,SNR=12						

NEIC ***24*** *08:41:26.7±0.9, 60°.60N±0°.03×152°.34W±0°.08, h100^{km}±4^{km}, Error ellipse: s-maj=5.5km s-min=3.3km az=70.0*

AEIC ***24*** *08:41:27.9±1.4, 60°.60N±0°.03×152°.36W±0°.09, h95^{km}±4^{km}, ML2.8/89, Error ellipse: s-maj=6.3km s-min=4.6km az=106.0*

IDC ***24*** *08:41:28.1±8.0, 60°.95N×152°.76W, h122^{km}±73^{km}, mb2.9/2, mb1 3.1/4, mb1mx2.7/56, mbtmp3.2/4, Error ellipse: s-maj=66.6km s-min=29.5km az=27.0*

ISC 24 08:41:25.3±1.0**, 60°.58N**±0°.04×**152°.36W**±0°.05**, h110**^{km}±7^{km}**, n90, σ1^{s}.03**/102**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RDT	**Redoubt**	**0.02**	**244**		**Pn**	**08 41 40.7**	**+0.2**
RDT					**Sn**	**08 41 51.0**	**-0.9**
DFR	**Drift River**	**0.16**	**273**		**Pn**	**08 41 40.8**	**+0.1**
DFR					**Sn**	**08 41 51.3**	**-1.0**
RDJH	**Redoubt Jeurge**	**0.22**	**272**		**Pn**	**08 41 41.2**	**+0.2**
RDJH					**Sn**	**08 41 51.8**	**-0.8**
RSO	**Redoubt South**	**0.23**	**238**	Pn	**Pn**	**08 41 41.1**	**+0.1**
RSO				Sn	**Sn**	**08 41 52.4**	**-0.4**
RDWB	**Redoubt West**	**0.26**	**248**		**Pn**	**08 41 40.9**	**-0.1**
RDWB					**Sn**	**08 41 52.3**	**-0.6**
RED	**Redoubt Volcan**	**0.26**	**231**		**Pn**	**08 41 41.1**	**+0.1**
RED					**Sn**	**08 41 51.9**	**-0.9**
CAPN	**Captain Cook N**	**0.62**	**72**		**Pn**	**08 41 45.0**	**+2.1**
SPCR	**Spurr Chakacha**	**0.62**	**7**		**Pn**	**08 41 43.4**	**+0.2**
CKT	**Bend**	**0.62**	**7**		**Pn**	**08 41 43.5**	**+0.3**
ILW	**Iliamna West**	**0.65**	**217**		**Pn**	**08 41 44.1**	**+0.7**
ILW					**Sn**	**08 41 56.8**	**-0.3**
IVE	**Iliamna Volcan**	**0.66**	**210**		**Pn**	**08 41 44.0**	**+0.6**
IVE					**Sn**	**08 41 57.3**	**+0.3**
SPBG	**Spurr Blockage**	**0.68**	**360**		**Pn**	**08 41 44.1**	**+0.6**
SPWE	**Spurr West**	**0.70**	**352**		**Pn**	**08 41 44.6**	**+0.8**
SPWE					**Sn**	**08 41 57.2**	**-0.5**
ILS	**Iliamna Low So**	**0.72**	**210**		**Pn**	**08 41 44.7**	**+0.8**
HOM	**Homer**	**1.00**	**158**		**Pn**	**08 41 47.9**	**+1.5**
SLKM	**Skilak Lake**	**1.06**	**93**		**Pn**	**08 41 47.8**	**+0.6**
BRLK	**Bradley Lake**	**1.10**	**137**		**Pn**	**08 41 48.4**	**+0.8**
BRLK					**Sn**	**08 42 04.8**	**+0.3**
BRSE	**Bradley Lake S**	**1.17**	**135**		**Pn**	**08 41 49.0**	**+0.7**
FIS	**Fire Island**	**1.19**	**61**		**Pn**	**08 41 50.5**	**+2.0**
CNPM	**China Poot**	**1.20**	**151**		**Pn**	**08 41 49.8**	**+1.1**
AUL	**Augustine Lava**	**1.32**	**205**		**Pn**	**08 41 51.5**	**+1.5**
AUP	**Augustine Pinn**	**1.34**	**204**		**Pn**	**08 41 51.8**	**+1.6**
RC01	**Rabbit Creek A**	**1.38**	**67**		**Pn**	**08 41 51.3**	**+0.6**
SEW	**Seward**	**1.52**	**107**		**Pn**	**08 41 52.6**	**+0.3**
SVW2	**Sparrevohn**	**1.66**	**290**		**Pn**	**08 41 54.6**	**+0.6**
PMR	**Palmer**	**1.87**	**56**		**Pn**	**08 41 57.2**	**+0.7**
PWL	**Port Wells**	**2.00**	**80**		**Pn**	**08 41 58.2**	**0.0**
GHO	**Glory Hole Cre**	**2.05**	**53**		**Pn**	**08 41 59.5**	**+0.6**
GHO					**Sn**	**08 42 24.2**	**-0.4**
KNK	**Knik Glacier**	**2.08**	**65**		**Pn**	**08 41 59.8**	**+0.5**
SML	**Sawmill**	**2.31**	**56**		**Pn**	**08 42 02.8**	**+0.6**
PPLA	**Purkeypile**	**2.32**	**2**		**Pn**	**08 42 04.0**	**+1.5**
KAHC	**Katmai Hardscr**	**2.36**	**216**		**Pn**	**08 42 04.5**	**+1.5**
HUR	**Hurricane**	**2.73**	**27**		**Pn**	**08 42 08.8**	**+1.2**
SCM	**Sheep Creek Mo**	**2.74**	**61**		**Pn**	**08 42 08.4**	**+0.5**
KABU	**Katmai Buttres**	**2.76**	**214**		**Pn**	**08 42 10.1**	**+2.0**
WAT1	**Susitna Watana**	**2.89**	**37**		**Pn**	**08 42 10.9**	**+1.0**
HIN	**Hinchinbrook I**	**2.91**	**91**		**Pn**	**08 42 09.2**	**-0.8**
TT01	**Tatalina**	**2.91**	**325**		**Pn**	**08 42 11.5**	**+1.5**
TTA	**Tatalina**	**2.92**	**325**		**Pn**	**08 42 11.7**	**+1.4**
WAT6	**Susitna Watana**	**2.98**	**46**		**Pn**	**08 42 12.4**	**+1.3**
WAT2	**Susitna Watana**	**2.99**	**35**		**Pn**	**08 42 12.3**	**+1.1**
TRF	**Thorofare Moun**	**3.04**	**18**		**Pn**	**08 42 12.9**	**+1.0**
KTH	**Kantishna Hill**	**3.06**	**12**		**Pn**	**08 42 13.2**	**+1.1**
EYAK	**Cordova Ski Ar**	**3.27**	**88**		**Pn**	**08 42 15.2**	**+0.5**
RND	**Reindeer**	**3.28**	**29**		**Pn**	**08 42 15.9**	**+0.9**
DHY	**Denali Highway**	**3.44**	**41**		**Pn**	**08 42 18.7**	**+1.5**
MCK	**McKinley**	**3.54**	**25**		**Pn**	**08 42 19.7**	**+1.2**
BPAW	**Bear Paw Mtn.**	**3.59**	**10**		**Pn**	**08 42 19.6**	**+0.6**
GOAT	**Goat Mountain**	**3.77**	**87**		**Pn**	**08 42 20.9**	**-0.6**
BWN	**Browne**	**3.84**	**19**		**Pn**	**08 42 24.1**	**+1.7**
PAX	**Paxson**	**4.05**	**51**		**Pn**	**08 42 26.8**	**+1.4**
PS10	**TAPS Pump St10**	**4.22**	**45**		**Pn**	**08 42 29.9**	**+2.4**
GLB	**Gilahina Butte**	**4.25**	**75**		**Pn**	**08 42 28.1**	**+0.1**
WRH	**Wood River Hil**	**4.37**	**25**		**Pn**	**08 42 30.2**	**+0.7**
VRDI	**Verde Repeater**	**4.40**	**78**		**Pn**	**08 42 29.9**	**-0.2**
MLY	**Manley**	**4.53**	**9**		**Pn**	**08 42 33.1**	**+1.4**
CRQM	**Cirque**	**4.54**	**84**		**Pn**	**08 42 31.5**	**-0.5**
HDA	**Harding Lake**	**4.59**	**31**		**Pn**	**08 42 33.5**	**+1.1**
CCB	**Clear Creek Bu**	**4.59**	**25**		**Pn**	**08 42 32.9**	**+0.5**
MCARA	**McCarthy VSAT**	**4.62**	**76**		**Pn**	**08 42 33.2**	**+0.3**
TGL	**Tana Glacier**	**4.69**	**84**		**Pn**	**08 42 33.8**	**-0.2**
RIDG	**Independent Ri**	**4.74**	**45**		**Pn**	**08 42 36.1**	**+1.6**
MDM	**Murphy Dome**	**4.78**	**22**		**Pn**	**08 42 36.3**	**+1.2**
PTPK	**Patty Peak**	**4.87**	**79**		**Pn**	**08 42 36.9**	**+0.4**
IL31		**4.90**	**29**		**Pn**	**08 42 37.7**	**+1.1**
ILAR	**Eielson Array**	**4.90**	**29**	P	**Pn**	**08 42 37.4**	**+0.8**
	2.0nm,0.3s,baz=213,slow=13,SNR=54						
ILAR				S	**Sn**	**08 43 29.9**	**-2.2**
	1.1nm,0.3s,baz=336,slow=28,SNR=5.6						
ILAR	**Eielson Array**	**4.90**	**29**		**Pn**	**08 42 37.5**	**+0.8**
ILAR					**Sn**	**08 43 30.6**	**-1.6**
KIAG	**Kiagna River**	**4.92**	**82**		**Pn**	**08 42 36.9**	**-0.2**
BALM	**Baldy**	**4.93**	**80**		**Pn**	**08 42 36.7**	**-0.5**
POKR	**Poker Plat Res**	**5.08**	**24**		**Pn**	**08 42 39.3**	**+0.3**
SCRK	**Sand Creek**	**5.18**	**45**		**Pn**	**08 42 41.3**	**+0.8**
GRNC	**Granite Creek**	**5.22**	**84**		**Pn**	**08 42 42.0**	**+0.8**
BARN	**Barnard Glacie**	**5.26**	**80**		**Sn**	**08 43 40.4**	**-0.8**
BARN	**Barnard Glacie**	**5.26**	**80**		**Pn**	**08 42 42.4**	**+0.7**
CTGM	**Chitina Glacie**	**5.42**	**81**		**Pn**	**08 42 44.7**	**+0.9**
IM03		**5.46**	**354**		**Pn**	**08 42 45.3**	**+1.2**
IMAR	**Indian Mountai**	**5.46**	**354**		**Pn**	**08 42 45.3**	**+1.2**
BC03		**5.60**	**59**		**Pn**	**08 42 47.3**	**+1.3**
BCAR	**Beaver Creek A**	**5.60**	**59**	Pn	**Pn**	**08 42 46.8**	**+0.7**
PRP	**Porcupine Dome**	**5.84**	**29**		**Pn**	**08 42 50.7**	**+1.2**
EGAK	**Eagle**	**6.65**	**46**		**Pn**	**08 43 01.0**	**+0.7**
FYU	**Fort Yukon**	**6.79**	**25**		**Pn**	**08 43 03.1**	**+1.0**
DAWY	**Dawson**	**6.97**	**54**		**Pn**	**08 43 05.8**	**+1.1**
HYT	**Haines Junctio**	**7.30**	**82**	Pn	**Pn**	**08 43 09.7**	**+0.5**
BM03	**Burnt Mountain**	**7.65**	**23**		**Pn**	**08 43 14.2**	**+0.2**
BMAR	**Burnt Mountain**	**7.67**	**23**		**Pn**	**08 43 14.2**	**+0.1**
WHY	**Whitehorse**	**8.60**	**82**	Pn	**Pn**	**08 43 27.2**	**+0.5**
YKA	**Yellowknife Ar**	**17.93**	**67**	P	**Pn**	**08 45 29.1**	**+2.0**
	0.0nm,0.3s,baz=278,slow=9.8,SNR=5.8						
TXAR	**Lajitas Array**	**44.90**	**112**	P	P	08 49 33.2	+4.4
	0.1nm,0.4s,baz=335,slow=4.0,SNR=2.1						
SONM	**Songino Array**	**54.70**	**306**	P	**P**	**08 50 41.1**	**-1.7**
	0.3nm,0.3s,baz=61,slow=6.8,SNR=1.8						

IDC ***24*** *08:46:50.3±0.7, 17°.33N×94°.49W, h135^{km}±8^{km}, mb3.3/6, mb1 3.4/9, mb1mx3.2/44, mbtmp3.7/9, MS3.6/1, Ms1 3.6/1, ms1mx2.5/17, Error ellipse: s-maj=25.6km s-min=11.3km az=19.0*

NEIC ***24*** *08:46:50.7±2.0, 17°.30N±0°.08×94°.63W±0°.05, h146^{km}±13^{km}, Error ellipse: s-maj=12.3km s-min=7.4km az=183.0*

MEX ***24*** *08:46:51.9±1.1, 17°.33N×94°.66W, h147^{km}±6^{km}, MD4.0*

ISC 24 08:46:50.4±0.7**, 17°.30N**±0°.06×**94°.63W**±0°.03**, h146**^{km}±6^{km}**, n78, σ1^{s}.02**/99**, mb4.2**/18**, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.32**	**230**	P	**Pn**	**08 47 10.9**	**+0.3**
	97nm,0.3s,baz=122,slow=2.5,SNR=1367						
CMIG				S	**Sn**	**08 47 25.3**	**-0.7**
CMIG	**Matias Romero**	**0.32**	**230**	*e*P	**Pn**	**08 47 11.2**	**+0.5**
CMIG				*e*S	**Sn**	**08 47 25.5**	**-0.4**
CMIG	**Matias Romero**	**0.32**	**230**		**Pn**	**08 47 11.2**	**+0.5**
CMIG					**Sn**	**08 47 25.5**	**-0.4**
TGIG		**1.53**	**109**	*e*P	**Pn**	**08 47 20.8**	**+0.7**
TGIG				*i* S	**Sn**	**08 47 42.3**	**-0.6**
TGIG		**1.53**	**109**		**Pn**	**08 47 20.8**	**+0.7**
TGIG					**Sn**	**08 47 42.3**	**-0.6**
VHO	**Vista Hermosa**	**2.02**	**264**	*e*P	**Pn**	**08 47 27.2**	**+1.3**
VHO				*i* S	**Sn**	**08 47 54.2**	**+1.3**
HUIG	**Huatulco**	**2.08**	**223**	*e*P	**Pn**	**08 47 25.1**	**-1.2**
HUIG				*i* S	**Sn**	**08 47 53.5**	**-0.3**
HUIG	**Huatulco**	**2.08**	**223**		**Pn**	**08 47 25.1**	**-1.2**
HUIG					**Sn**	**08 47 53.5**	**-0.3**
PCIG		**2.08**	**139**	*e*P	**Pn**	**08 47 27.5**	**+1.1**
PCIG				*e*S	**Sn**	**08 47 54.6**	**+0.6**
PCIG		**2.08**	**139**		**Pn**	**08 47 27.5**	**+1.1**
PCIG					**Sn**	**08 47 54.6**	**+0.6**
TOIG	**Toxpalan**	**2.45**	**289**	*e*P	**Pn**	**08 47 31.0**	**+0.1**
TOIG				*i* S	**Sn**	**08 48 01.2**	**-0.9**
CCIG	**Comitan**	**2.59**	**113**	*e*P	**Pn**	**08 47 33.5**	**+0.7**
CCIG				*i* S	**Sn**	**08 48 06.0**	**+0.7**
CCIG	**Comitan**	**2.59**	**113**		**Pn**	**08 47 33.4**	**+0.7**
CCIG				Sn	**Sn**	**08 48 04.0**	**-1.2**
CCIG	**Comitan**	**2.59**	**113**		**Pn**	**08 47 33.5**	**+0.7**
CCIG					**Sn**	**08 48 06.0**	**+0.7**
PEIG	**Puerto Escondi**	**2.74**	**242**	*e*P	**Pn**	**08 47 33.3**	**-1.1**
PEIG				*e*S	**Sn**	**08 48 08.5**	**+0.2**
YOIG	**Yosondua**	**2.82**	**262**	*e*P	**Pn**	**08 47 36.3**	**+0.6**
YOIG				*i* S	**Sn**	**08 48 10.4**	**-0.2**
TPIG	**Tehuac#an**	**2.83**	**294**	*e*P	**Pn**	**08 47 36.1**	**+0.4**
TPIG				*i* S	**Sn**	**08 48 10.0**	**-0.6**
TPIG	**Tehuac#an**	**2.83**	**294**		**Pn**	**08 47 36.1**	**+0.4**
TPIG					**Sn**	**08 48 10.0**	**-0.6**
PNIG	**Pinotepa**	**3.47**	**255**	*e*P	**Pn**	**08 47 43.0**	**-0.7**
PNIG				*e*S	**Sn**	**08 48 24.4**	**-0.5**
PNIG	**Pinotepa**	**3.47**	**255**		**Pn**	**08 47 43.0**	**-0.7**
PNIG					**Sn**	**08 48 24.4**	**-0.5**
TLIG	**Tlapa**	**3.77**	**275**		**Pn**	**08 47 49.0**	**+1.2**
TLIG				Sn	**Sn**	**08 48 30.6**	**-1.5**
APG	**El Apazote**	**4.61**	**119**	P	**Pn**	**08 47 58.7**	**-0.1**
	0.9nm,0.3s,baz=344,slow=15,SNR=12						
APG				S	**Sn**	**08 48 49.0**	**-3.0**
	4.6nm,0.3s,baz=73,slow=17,SNR=13						
TEIG	**Tepich**	**6.69**	**63**	P	**Pn**	**08 48 24.8**	**-1.5**
	1.5nm,0.3s,baz=110,slow=0.0,SNR=18						
TEIG				S	**Sn**	**08 49 38.4**	**-3.0**
TEIG	**Tepich**	**6.69**	**63**	Pn	**Pn**	**08 48 25.0**	**-1.3**
TEIG				Sn	**Sn**	**08 49 39.9**	**-1.5**
TXAR	**Lajitas Array**	**14.57**	**327**	P	**P**	**08 50 11.0**	**-1.2**
	0.0nm,0.3s,baz=155,slow=16,SNR=1.8						
ABTX	**Abilene, Hawle**	**15.92**	**344**		**P**	**08 50 29.6**	**+2.5**
ABTX				IAmb	IAmb	08 50 30.5	
	comp=Z,4.1nm,0.6s						
LRAL	**Lakeview Retre**	**17.11**	**22**		**Pn**	**08 50 41.0**	**+0.2**
LRAL				IAmb	IAmb	08 50 56.2	
	comp=Z,12nm,1.4s						
W35A	**Tecumseh**	**17.90**	**354**		**P**	**08 50 49.4**	**+0.6**
FNO	**Franklin**	**18.06**	**353**	P	**Pn**	**08 50 52.2**	**+0.1**
Z51A	**Franklin**	**18.08**	**26**	P	**Pn**	**08 50 52.4**	**0.0**
Z51A				IAmb	IAmb	08 51 02.1	
	comp=Z,10nm,1.1s						
ADOK	**Arcadia Dam**	**18.44**	**353**	P	**P**	**08 50 55.6**	**+0.8**
AMTX	**Amarillo**	**18.61**	**342**	P	**P**	**08 50 57.5**	**+0.8**
AMTX				IAmb	IAmb	08 50 59.2	
	comp=Z,7.5nm,0.5s						
FCAR	**Ozark Folk Cen**	**18.65**	**6**	P	**P**	**08 50 57.2**	**+0.2**
FCAR				IAmb	IAmb	08 50 59.1	
	comp=Z,6.8nm,0.8s						
HHAR	**Hobbs**	**18.92**	**2**	P	**P**	**08 51 00.0**	**+0.1**
LCAR	**Lake Charles**	**18.95**	**9**	P	**P**	**08 51 01.2**	**+1.0**
U40A	**Yellville**	**19.05**	**4**	P	**P**	**08 51 02.1**	**+0.8**
U40A				IAmb	IAmb	08 51 03.5	
	comp=Z,6.8nm,0.8s						
S39A	**Bolivar**	**20.35**	**3**	P	**P**	**08 51 15.7**	**+0.3**
BG3	**Lake Jocassee**	**20.48**	**28**	P	Pn	08 51 18.9	-1.8
ANMO	**Albuquerque**	**20.50**	**331**	P	Pn	08 51 20.2	-0.9
	comp=Z,0.8nm,0.7s,baz=156,slow=12,SNR=5.2						
V51A	**Loudon**	**20.57**	**24**	P	**P**	**08 51 18.2**	**+0.5**
U49A	**Red Boiling Sp**	**20.68**	**21**	P	**P**	**08 51 18.7**	**-0.2**
U49A				IAmb	IAmb	08 51 20.4	
	comp=Z,5.5nm,0.5s						
T47A	**Sharon Grove**	**20.71**	**17**	P	**P**	**08 51 19.3**	**+0.1**
T47A				IAmb	IAmb	08 51 21.2	
	comp=Z,7.1nm,0.6s						
V52A	**Sevierville**	**20.91**	**26**	P	**P**	**08 51 22.5**	**+1.1**
V52A				IAmb	IAmb	08 51 24.2	
	comp=Z,11nm,1.4s						
R40A	**Maddies Statio**	**21.02**	**5**	P	**P**	**08 51 23.4**	**+0.9**
V53A	**Saluda**	**21.10**	**28**	P	**P**	**08 51 23.3**	**-0.2**
V53A				IAmb	IAmb	08 51 24.4	
	comp=Z,16nm,1.5s						
R32A	**Long Quarter,**	**21.35**	**351**	P	**P**	**08 51 28.4**	**+2.3**
R32A				IAmb	IAmb	08 51 38.7	
	comp=Z,12nm,1.4s						
KMSC	**Kings Mountain**	**21.36**	**31**	P	**P**	**08 51 26.1**	**-0.2**
TZTN	**Tazewell**	**21.54**	**25**	P	**P**	**08 51 26.1**	**-2.0**
TZTN				IAmb	IAmb	08 51 37.8	
	comp=Z,13nm,1.3s						
V55A	**Taylorsville**	**21.99**	**30**	P	**P**	**08 51 32.0**	**-0.8**
WCI	**Wyandotte Cave**	**22.10**	**18**	P	**P**	**08 51 32.6**	**-1.2**
WCI				IAmb	IAmb	08 51 33.6	
	comp=Z,6.7nm,0.7s						
U54A	**Nelsons Funny**	**22.25**	**28**	P	**P**	**08 51 33.9**	**-1.6**
P38A	**Dawn**	**22.27**	**2**	P	**P**	**08 51 35.4**	**-0.2**
W18A	**Petrified Fore**	**22.28**	**326**	P	**P**	**08 51 33.5**	**-2.4**
U56A	**King**	**22.79**	**31**	P	**P**	**08 51 40.1**	**-0.5**
U56A				IAmb	IAmb	08 51 41.3	
	comp=Z,9.5nm,0.8s						
P46A	**Rosedale**	**23.16**	**15**	P	**P**	**08 51 44.1**	**+0.2**
P46A				IAmb	IAmb	08 51 52.5	
	comp=Z,3.8nm,0.7s						
N38A	**Joes South For**	**23.45**	**3**	P	**P**	**08 51 47.1**	**+0.6**
HDIL	**Hopedale**	**23.63**	**10**	P	**P**	**08 51 47.9**	**-0.3**
HDIL				IAmb	IAmb	08 51 48.7	
	comp=Z,7.5nm,0.8s						
R53A	**Hurricane**	**23.72**	**25**	P	**P**	**08 51 48.8**	**-0.2**
T57A	**Hurt**	**23.86**	**32**	P	**P**	**08 51 51.0**	**+0.7**
T57A				IAmb	IAmb	08 51 55.4	
	comp=Z,10nm,1.3s						
R55A	**Marlinton**	**24.47**	**28**	P	**P**	**08 51 55.1**	**-0.9**
R55A				IAmb	IAmb	08 51 57.5	
	comp=Z,6.0nm,0.9s						
O49A	**Covington**	**24.49**	**19**	P	**P**	**08 51 55.0**	**-1.0**
O49A				IAmb	IAmb	08 51 55.4	
	comp=Z,11nm,1.1s						
SCIA	**State Center**	**24.56**	**3**	P	**P**	**08 51 57.5**	**+0.9**
N47A	**Urbana**	**24.73**	**16**	P	**P**	**08 51 58.9**	**+0.6**
N47A				IAmb	IAmb	08 51 58.9	
	comp=Z,4.9nm,0.6s						
L42A	**Oliver, Polo**	**24.99**	**9**	P	**P**	**08 52 00.2**	**-0.3**
JFWS	**Jewell Farm**	**25.81**	**7**	P	**P**	**08 52 08.3**	**+0.4**
JFWS				IAmb	IAmb	08 52 10.9	
	comp=Z,4.8nm,0.7s						
K43A	**Burlington**	**25.89**	**11**	P	**P**	**08 52 08.2**	**-0.4**
ECSD	**EROS Data Cent**	**26.41**	**357**	P	**P**	**08 52 13.7**	**+0.3**
E43A	**Lone Tree Farm**	**29.68**	**11**	P	**P**	**08 52 41.3**	**-1.1**
E43A				IAmb	IAmb	08 52 41.7	
	comp=Z,2.7nm,0.6s						
E46A	**Sault Ste Mari**	**30.23**	**14**	P	**P**	**08 52 45.3**	**-1.8**
EYMN	**Ely**	**30.68**	**4**	P	**P**	**08 52 50.4**	**-0.7**
AGMN	**Agassiz Nation**	**30.94**	**358**	P	**P**	**08 52 53.0**	**-0.4**
D53A	**Lac Vacive, Po**	**32.82**	**22**	P	**P**	**08 53 08.6**	**-1.4**
ULM	**Lac du Bonnet**	**32.89**	**359**	P	**P**	**08 53 09.5**	**-0.9**
	comp=Z,1.6nm,0.6s,baz=181,slow=9.0,SNR=4.8						
RPN	**Rapa Nui**	**46.41**	**198**	LR	LR	09 09 34.4	
	comp=Z,71nm,20.4s,baz=12,slow=29						
YKA	**Yellowknife Ar**	**47.27**	**348**	P	**P**	**08 55 09.1**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=152,slow=7.9,SNR=13						
ILAR	**Eielson Array**	**58.83**	**337**	P	**P**	**08 56 34.8**	**+1.6**
	comp=Z,0.2nm,0.6s,baz=136,slow=5.4,SNR=4.5						
NOA	**NORSAR Array B**	**82.46**	**28**	P	**P**	**08 58 56.3**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=324,slow=6.7,SNR=2.1						
ARCES	**ARCESS Array B**	**83.80**	**18**	P	**P**	**08 59 03.8**	**+0.7**
	comp=Z,2.2nm,0.9s,baz=321,slow=8.1,SNR=1.7						

IDC ***24*** *08:50:37.3±6.0, 31°.96S×138°.21E, h0^{km}, mb1 2.9/3, mb1mx2.9/31, mbtmp2.6/3, ML2.6/3, Error ellipse: s-maj=93.4km s-min=20.4km az=23.0*

AUST ***24*** *08:50:38.9±1.0, 32°.10S×138°.30E, h13^{km}±7^{km}, Error ellipse: s-maj=3.3km s-min=2.4km az=115.0*

ISC 24 08:50:37.0±0.9**, 32°.06S**±0°.06×**138°.15E**±0°.05**, h10^{km}, n12, σ2^{s}.09**/17**, Near coast of South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HTT	Hallett	1.51	155	P	Pn	08 51 04.9	+0.7
	baz=1.4,SNR=16						
LCRK	Leigh Creek	1.61	2	P	Pn	08 51 07.6	+2.1
	baz=1.7,SNR=27						
LCRK				S	Sb	08 51 29.4	+2.1
	baz=1.7						
BBOO	Buckleboo	1.91	247	P	Pb	08 51 12.5	+0.4
	baz=2.0,SNR=31						
BBOO				S	Sg	08 51 38.8	+0.3
	baz=2.0						
STKA	Stephens Creek	2.94	87	P	Pn	08 51 24.1	+0.4
	baz=2.8,SNR=10						
STKA	Stephens Creek	2.94	87	Pn	Pn	08 51 24.1	+0.4
	0.2nm,0.3s,baz=266,slow=13,SNR=5.0						
STKA				Pg	Pb	08 51 30.4	+1.0
	1.3nm,0.3s,baz=270,slow=14,SNR=7.5						
STKA				Sn	Sn	08 51 58.4	-0.8
	1.6nm,0.3s,baz=41,slow=17,SNR=4.0						
STKA				Lg	Lg	08 52 08.3	
	3.0nm,0.3s,baz=304,slow=20,SNR=5.4						
MULG	Mulgathing	3.93	296	P	Pn	08 51 40.0	+2.6
	baz=4.1,SNR=5.3						
OOD	Oodnadatta	4.76	333	P	Pn	08 51 52.0	+3.2
	baz=4.9						
ARPS	Mount Arapiles	5.60	148	P	Pn	08 52 00.2	-0.1
	baz=5.5						
CMSA	Cobar Meteorol	6.45	87	P	Pn	08 52 11.7	-0.3
	baz=6.3						
ASAR	Alice Springs	9.17	335	Pn	Pn	08 52 50.9	+1.5
	0.1nm,0.3s,baz=174,slow=8.3,SNR=9.7						
ASAR				Sn	Sn	08 54 27.3	-5.4
	0.3nm,0.3s,baz=154,slow=22,SNR=10.0						
WRKA	Warakurna	11.13	307	P	Pn	08 53 16.3	0.0
	baz=11						
WRA	Warramunga Arr	12.54	343	Pn	Pn	08 53 34.8	-0.8
	0.1nm,0.3s,baz=171,slow=14,SNR=5.0						
WRA				Sn	Sn	08 55 48.0	-7.5
	0.1nm,0.3s,baz=170,slow=29,SNR=2.3						

NNC 24 08:59:34.7±3.3**, 54°.58N×86°.00E, h0^{km}, mb3.7, mpv2.8, 3C-3D, Error ellipse: s-maj=95.7km s-min=16.7km az=140.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	0.94	228	⇑P	Pg	08 59 52.2	-0.4
	0.3nm,0.3s						
ZAA0				⇑S	Sb	09 00 05.8	-0.9
	0.9nm,0.2s						
KURBB	Kurchatov Arra	6.03	232	⇑Pn	Pn	09 01 07.9	+2.8
	1.9nm,0.5s						
KURBB				⇓Lg	Lg	09 02 48.0	
	3.8nm,0.7s						
MK31	Makanchi Array	8.14	198	⇓Pn	Pn	09 01 35.5	+1.3
	0.8nm,0.5s,baz=27,slow=13,SNR=50						
MK31				⇓Lg	Lg	09 03 51.7	
	1.0nm,0.8s,baz=23,slow=31,SNR=3.7						

NEIC ***24*** *09:00:19.5±1.2, 14°.92S±0°.04×167°.4E±0°.2, h143^{km}±13^{km}, mb4.4/12, Error ellipse: s-maj=29.2km s-min=5.3km az=96.0*

IDC ***24*** *09:00:19.4±4.9, 14°.91S×167°.42E, h138^{km}±51^{km}, mb3.8/8, mb1 3.9/9, mb1mx3.6/35, mbtmp4.2/9, Error ellipse: s-maj=43.6km s-min=27.6km az=138.0*

ISC 24 09:00:18.5±1.1**, 14°.86S**±0°.09×**167°.4E**±0°.2**, h129^{km}, n24, σ0^{s}.90**/24**, mb4.2**/14**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.23	187	P	Pn	09 02 01.9	+0.1
	4.6nm,0.3s,baz=56,slow=4.0,SNR=71						
DZM				S	Sn	09 03 22.4	-0.1
	2.9nm,0.3s,baz=326,slow=23,SNR=2.4						
DZM	Mont Dzumac	7.23	187		Pn	09 02 02.0	+0.3
EIDS	Eidsvold	18.54	233		P	09 04 25.6	+0.3
CTA	Charters Tower	20.83	253	P	P	09 04 51.6	+1.4
	7.0nm,0.8s,baz=90,slow=12,SNR=8.4						
COEN	Coen	23.49	269	P	P	09 05 16.9	0.0
COEN				IAmb	IAmb	09 05 20.0	
	comp=Z,11nm,1.3s						
BKZ	Black Stump Fm	25.50	163	P	P	09 05 34.5	-0.4
BKZ				IAmb	IAmb	09 05 37.1	
	comp=Z,22nm,1.5s						
OXZ	Oxford	28.64	173	P	P	09 06 03.1	+0.1
OXZ				IAmb	IAmb	09 06 13.5	
	comp=Z,10nm,0.9s						
STKA	Stephens Creek	29.01	230	P	P	09 06 07.3	+0.9
	comp=Z,8.8nm,0.5s,baz=48,slow=9.1,SNR=40						
STKA	Stephens Creek	29.01	230	P	P	09 06 07.5	+1.1
WB0	Warramunga Arr	31.87	256	P	P	09 06 30.3	-1.4
WB0				IAmb	IAmb	09 06 31.2	
	comp=Z,6.0nm,1.1s						
WRA	Warramunga Arr	31.93	256	P	P	09 06 31.1	-1.1
	comp=Z,2.0nm,0.8s,baz=86,slow=8.3,SNR=14						
WRA	Warramunga Arr	31.93	256	IAmb	IAmb	09 06 32.0	
	comp=Z,0.2nm,0.9s						
AS31	Alice Springs	32.76	249	P	P	09 06 38.5	-1.0
AS31				IAmb	IAmb	09 06 39.7	
	comp=Z,2.1nm,0.5s						
ASAR	Alice Springs	32.76	249	P	P	09 06 38.5	-1.0
	comp=Z,4.3nm,0.4s,baz=78,slow=9.2,SNR=89						
ASAR	Alice Springs	32.76	249	P	P	09 06 37.4	-2.0
BBOO	Buckleboo	33.61	232	P	P	09 06 46.4	-0.3
BBOO				IAmb	IAmb	09 06 48.0	
	comp=Z,15nm,0.8s						
KNRA	Kununurra	37.26	264	P	P	09 07 17.7	-0.4
FORT	Forrest	39.35	239	P	P	09 07 34.6	-0.9
FITZ	Fitzroy Crossi	40.13	259	P	P	09 07 41.7	-0.4
FITZ				IAmb	IAmb	09 07 42.6	
	comp=Z,5.9nm,0.6s						
USRK	Ussuriysk Ar.	67.06	333	P	P	09 10 59.2	+1.3
	comp=Z,1.0nm,0.6s,baz=140,slow=9.4,SNR=2.7						
KLR	Kul'dur	71.18	336	P	P	09 11 23.1	-0.1
	comp=Z,0.8nm,0.5s,baz=121,slow=6.3,SNR=4.0						
SONM	Songino Array	82.68	324	P	P	09 12 27.9	0.0
	comp=Z,0.4nm,0.6s,baz=148,slow=5.9,SNR=4.7						
MKAR	Makanchi Array	97.39	316	P	P	09 13 37.5	0.0
	comp=Z,0.4nm,0.6s,baz=81,slow=6.6,SNR=5.1						
ARCES	ARCESS Array B	120.41	345	PKP	PKPdf	09 18 53.3	-0.8
	comp=Z,2.0nm,0.8s,baz=48,slow=1.8,SNR=5.2						

IDC ***24*** *09:03:06.5±2.5, 19°.85S×70°.61W, h0^{km}, mb3.8/4, mb1 4.0/4, mb1mx3.7/28, mbtmp3.8/4, MS3.2/3, Ms1 3.1/3, ms1mx2.9/21, Error ellipse: s-maj=69.3km s-min=44.4km az=12.0*

NEIC ***24*** *09:03:09.1±1.5, 19°.89S±0°.05×70°.93W±0°.05, h19^{km}±6^{km}, mb4.1/2, Error ellipse: s-maj=7.1km s-min=6.5km az=138.0*

GUC ***24*** *09:03:10.2±0.7, 19°.84S×70°.89W, h44^{km}±2^{km}, ML3.8*

ISC 24 09:03:08.0±1.7**, 19°.88S**±0°.03×**70°.94W**±0°.07**, h13^{km}**±10^{km}**, n39, σ0^{s}.99**/46**, mb3.9**/4**, 8C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.82	70	⇓*i*P	Pg	09 03 24.2	+0.2
PSGC				*i* S	Sg	09 03 34.7	0.0
PSGCX	Pisagua	0.82	70		Pg	09 03 24.0	+0.1
PSGCX				Sg	Sg	09 03 35.1	+0.4
TA01	Diego Aracena	0.98	134	⇓*i*P	Pn	09 03 27.6	0.0
TA01				*i* S	Sg	09 03 41.0	+1.1
TA01				IAML		09 03 43.4	
	comp=E,3µm,0.5s						
PATCX	Punta Patache	1.19	142	⇑*i*P	Pn	09 03 30.8	+0.3
PATCX				*i* S	Sg	09 03 47.2	+0.7
PATCX				IAML		09 03 52.1	
	comp=N,2µm,0.4s						
PATCX	Punta Patache	1.19	142		Pb	09 03 31.0	+0.5
PB11	IPOC Station P	1.21	85	⇓*i*P	Pb	09 03 30.8	-0.2
PB11				*i* S	Sg	09 03 46.8	-0.5
PB11				IAML		09 03 51.8	
	comp=N,3µm,0.3s						
PB11	IPOC Station P	1.21	85		Pb	09 03 31.1	+0.1
PB11				Sn	Sg	09 03 46.7	-0.6
PB12	IPOC Station P	1.39	25	⇑*i*P	Pb	09 03 33.4	-0.5
PB12				*i* S	Sg	09 03 51.5	-1.2
PB12				IAML		09 03 54.1	
	comp=N,2µm,0.4s						
PB12	IPOC Station P	1.39	25		Pb	09 03 33.4	-0.5
AP01	Chacalluta	1.61	21	IAML		09 04 00.7	
	comp=E,5µm,0.3s						
GO01	Chusmiza	1.66	83	⇑*i*P	Pb	09 03 38.2	-0.6
GO01				*i* S	Sg	09 04 00.1	-1.3
GO01				IAML		09 04 03.8	
	comp=N,4µm,0.3s						
GO01	Chusmiza	1.66	83		Pb	09 03 38.2	-0.6
PB08	IPOC Station P	1.70	99	⇑*i*P	Pb	09 03 38.5	-0.9
PB08				*i* S	Sb	09 04 00.6	-0.2
PB08				IAML		09 04 02.2	
	comp=N,1µm,0.3s						
PB02	IPOC Station P	1.73	146	⇑*i*P	Pn	09 03 38.6	+0.5
PB02				*i* S	Sn	09 04 00.2	+0.1
PB02				IAML		09 04 08.2	
	comp=N,3µm,0.4s						
PB01	IPOC Station P	1.79	131	⇑*i*P	Pn	09 03 39.6	+0.8
PB01				*i* S	Sb	09 04 02.2	-0.8
PB01				IAML		09 04 09.1	
	comp=E,2µm,0.4s						
PB01	IPOC Station P	1.79	131		Pn	09 03 39.4	+0.7
PB16	IPOC Station P	2.05	42	⇑*i*P	Pn	09 03 43.6	+0.8
PB16	IPOC Station P	2.05	42		Pn	09 03 43.7	+0.9
PB07	IPOC Station P	2.08	152		Pn	09 03 43.1	+0.2
PB09	IPOC Station P	2.48	141	⇑*i*P	Pn	09 03 50.0	+1.7
PB09	IPOC Station P	2.48	141		Pn	09 03 49.9	+1.5
PB04	IPOC Station P	2.55	163		Pn	09 03 49.6	+0.3
LVC	Limon Verde	3.31	145		Pn	09 04 01.4	+1.4
PB15	IPOC Station P	3.58	158		Pn	09 04 03.6	+0.1
PB10	IPOC Station P	3.63	174	Pn	Pn	09 04 03.3	-0.7
LPAZ	La Paz	4.46	37	Pn	Pn	09 04 19.5	+3.5
	comp=E,1.1nm,0.3s,baz=160,slow=4.4,SNR=19						
LPAZ	La Paz	4.46	37		Pn	09 04 16.8	+0.8
PB14	IPOC Station P	4.75	174		Pn	09 04 18.8	-0.8
GO02	Mina Guanaco	5.40	167		Pn	09 04 28.7	0.0
GO04	Tololo Observa	10.25	179	Pn	Pn	09 05 36.0	+0.8
CPUP	Villa Florida	14.06	120	LR	LR	09 12 02.8	
	comp=E,34nm,19.8s,baz=280,slow=39						
PTGA	Pitinga	21.86	31	P	P	09 07 59.1	-1.6
	comp=E,3.5nm,0.3s,baz=215,slow=19						
PTGA				LR	LR	09 17 21.2	
	comp=E,51nm,20.6s,baz=210,slow=39						
PTGA	Pitinga	21.86	31	IAmb	IAmb	09 08 03.5	
	comp=Z,13nm,1.4s						
TXAR	Lajitas Array	58.23	326	P	P	09 13 03.8	+1.3
	comp=Z,0.1nm,0.4s,baz=134,slow=10,SNR=1.8						
TORD	Torodi Ar. Bea	78.62	72	P	P	09 15 08.7	-1.6
	comp=Z,1.9nm,0.8s,baz=259,slow=4.0,SNR=5.9						
TORD	Torodi Ar. Bea	78.62	72	P	P	09 15 09.5	-0.8
YKA	Yellowknife Ar	89.05	341	P	P	09 16 02.8	+0.4
	comp=Z,0.4nm,0.9s,baz=134,slow=5.4,SNR=5.2						
VAE	Valguarnera	98.29	53	LR	LR	09 57 15.7	
	comp=Z,30nm,20.8s,baz=322,slow=33						
MKAR	Makanchi Array	145.38	33	PKPbc	PKPdf	09 22 46.4	+0.5
	comp=Z,0.5nm,0.8s,baz=7.3,slow=3.8,SNR=1.9						

ECX ***24*** *09:10:47.3±0.5, 31°.29N×116°.15W, h11^{km}±5^{km}, MD2.3, ML2.5*

MEX ***24*** *09:10:48.4±0.3, 31°.22N×116°.19W, h16^{km}±55^{km}, MD3.5*

ISC 24 09:10:45.8±1.3**, 31°.29N**±0°.04×**116°.17W**±0°.06**, h16^{km}**±12^{km}**, n17, σ0^{s}.37**/28**, 5C-3D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIG	San Pedro Mart	0.65	112	*e*P	Pg	09 10 58.6	0.0
SPIG	San Pedro Mart	0.65	112	*e*P	Pg	09 10 58.9	+0.3
SPIG				*e*S	Sg	09 11 07.4	+0.1
SPX	San Pedro Mart	0.65	112	⇑*e*P	Pg	09 10 58.9	+0.2
SPX				*e*S	Sg	09 11 07.6	+0.2
SPX				IAML		09 11 07.8	
	comp=E,160nm,0.1s						
SPX				⇓*e*		09 11 07.8	
SPX				⇑*e*		09 11 08.4	
SPX				IAML		09 11 08.4	
	comp=N,243nm,0.1s						
SPX	San Pedro Mart	0.65	112	*e*P	Pg	09 10 58.9	+0.2
SPX				*e*S	Sg	09 11 06.8	-0.6
CCX	Cicese	0.72	324	*e*P	Pb	09 11 00.1	+0.3
CCX				*e*S	Sb	09 11 10.1	+0.6
ESJX	Sierra Juarez	0.74	15	⇓*e*P	Pg	09 11 00.3	0.0
ESJX				*e*S	Sg	09 11 10.0	-0.1
SQX	San Quintin	0.75	160	⇑*e*P	Pg	09 11 00.3	-0.1
SQX				*e*S	Sb	09 11 10.6	+0.1
ECBX	El Chinero	0.97	79	*e*P	Pn	09 11 04.9	+0.2
ECBX				*e*S	Sg	09 11 17.6	+0.2
CBX	Cerro Bola	1.11	338	⇑*e*P	Pb	09 11 06.4	-0.2
CBX				*e*S	Sb	09 11 21.0	+0.2
CBX				⇑*e*		09 11 21.6	
CBX				IAML		09 11 21.6	
	comp=N,160nm,0.2s						
CBX				IAML		09 11 21.6	
	comp=E,134nm,0.2s						
CBX	Cerro Bola	1.11	338	*e*P	Pb	09 11 06.2	-0.4
CBX				*e*S	Sb	09 11 20.3	-0.5
SFX	San Felipe	1.16	102	*e*P	Pn	09 11 06.9	-0.4
SFX				*e*S	Sb	09 11 22.6	+0.4
TJIG	Tijuana	1.22	339	*e*P	Pn	09 11 08.2	-0.1
TJIG				*e*S	Sb	09 11 23.4	-0.7
ERMX	Rumorosa	1.27	5	*e*P	Pn	09 11 09.2	+0.3
ERMX				⇓*e*		09 11 27.5	
ERMX				IAML		09 11 27.5	
	comp=N,74nm,0.3s						
BAR	Barrett	1.45	343	*e*P	Pn	09 11 12.1	+0.7
OLP	Otay Lakes Par	1.47	334	*e*P	Pb	09 11 12.6	-0.1
SDRC	San Diego Road	1.59	336	*e*P	Pb	09 11 14.4	-0.4
MONP2	Monument Peak	1.61	352	*e*P	Pb	09 11 14.9	-0.4

IDC ***24*** *09:14:49.9±3.9, 36°.96N×71°.37E, h74^{km}±28^{km}, mb3.6/9, mb1 3.8/14, mb1mx3.5/47, mbtmp4.0/14, MS2.9/1, Ms1 2.8/1, ms1mx2.2/36, Error ellipse: s-maj=39.7km s-min=18.4km az=172.0*

NEIC ***24*** *09:14:54.0±2.4, 37°.41N±0°.03×71°.1E±0°.1, h93^{km}±9^{km}, mb4.3/15, Error ellipse: s-maj=12.9km s-min=2.3km az=106.0*

NNC ***24*** *09:14:56.9±2.9, 37°.59N×71°.20E, h147^{km}±40^{km}, mb3.5, mpv4.2, Error ellipse: s-maj=25.8km s-min=15.5km az=21.0*

ISC 24 09:14:52.6±0.5**, 37°.16N**±0°.05×**71°.28E**±0°.05**, h106^{km}, n92, σ2^{s}.12**/98**, mb4.0**/17**, 7C-7D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	3.19	215		Pn	09 15 44.9	+3.7
CHCP	Chirah Chowk	3.85	155	⇓P	Pn	09 15 54.1	+4.1
NIL	Nilore	3.86	155		Pn	09 15 54.1	+4.1
ARSB	Arslanbob	4.36	17		Pn	09 15 55.8	-1.0
AML	Almayashu	5.30	20	P	Pn	09 16 09.8	0.0
	SNR=202						
JMU	Jammu	5.34	145	*e*P	Pn	09 16 04.0	-6.0
JMU				*e*S	Sn	09 17 06.0	-4.2
SARP	Sargodha	5.36	167	P	Pn	09 16 12.6	+2.4
UCH	Uchtor	5.64	25	P	Pn	09 16 14.4	+0.1
	SNR=30						
KZA	Kyzart	5.79	31	P	Pn	09 16 16.4	+0.1
	SNR=23						
EKS2	Erkin-Say	5.82	18	P	Pn	09 16 16.8	+0.3
	SNR=35						
KK31	Karatay Array	5.96	355	⇑P	Pn	09 16 17.7	-0.7
	14nm,0.3s,baz=181,slow=12,SNR=326						
KK31				⇑S	Sn	09 17 20.3	-4.9
	9.8nm,0.3s,baz=163,slow=20,SNR=4.8						
KK31	Karatay Array	5.96	355		Pn	09 16 17.8	-0.6
KKAR	Karatay Array	5.96	355		Pn	09 16 17.6	-0.7
KKAR	Karatay Array	5.96	355		Pn	09 16 17.7	-0.7
THN	Thein Dam	5.97	141	*e*P	Pn	09 16 20.5	+2.1
THN				*e*x	x	09 17 53.0	
AAK	Ala-Archa	6.00	23	P	Pn	09 16 19.9	+0.9
	7.6nm,0.3s,baz=196,slow=9.3,SNR=41						
AAK				S	Sn	09 17 23.3	-3.1
	3.4nm,0.3s,baz=334,slow=21,SNR=12						
AAK	Ala-Archa	6.00	23	P	Pn	09 16 19.1	+0.1
	SNR=34						
AAK	Ala-Archa	6.00	23	⇑P	Pn	09 16 19.1	+0.1
	11nm,0.3s						
AAK				⇑S	Sn	09 17 24.3	-2.0
	45nm,0.5s						
AAK	Ala-Archa	6.00	23		Pn	09 16 19.2	+0.1
KBK	Karagaybulak	6.17	26	P	Pn	09 16 22.3	+1.0
	SNR=7.3						
ULHL	Ulahol	6.35	35	P	Pn	09 16 24.8	+0.9
	SNR=11						
CHMS	Chumysh	6.41	23	P	Pn	09 16 24.7	+0.3
	SNR=38						
CHMS	Chumysh	6.41	23	⇓P	Pn	09 16 24.3	-0.1
	79nm,0.8s						
CHMS				⇓S	Sn	09 17 32.1	-4.0
	32nm,0.7s						
DHRM	DHARAMSHALA	6.41	138	*e*P	Pn	09 16 26.1	+1.4
DHRM				*e*S	Sn	09 17 35.0	-1.6
DHRM				*e*x	x	09 17 35.3	
DHRM				IAML		09 17 39.0	
	comp=N,862nm,0.3s						
DHRM				IAML		09 17 39.9	
	comp=E,1µm,0.3s						
BOOM	Boomskoye usch	6.42	33	Pn	Pn	09 16 25.2	+0.6
USP	Ospenovka	6.57	21	P	Pn	09 16 26.6	-0.1
	SNR=19						
BHK	Bhakra	7.14	142	*e*P	Pn	09 16 35.6	+1.2
BHK				*e*x	x	09 17 52.8	
MDOK	Medeo	7.44	35	⇓P	Pn	09 16 36.8	-1.8
	comp=E,3.7nm,0.4s						
SMLA	Simla	7.75	139	*e*P	Pn	09 16 43.9	+1.3
SMLA				*e*S	Sn	09 18 04.1	-4.6
SMLA				IAML		09 18 11.2	
	comp=N,416nm,0.3s						
SMLA				IAML		09 18 12.2	
	comp=E,437nm,0.3s						
PDGK	Podgornoye	8.79	43	⇓P	Pn	09 16 56.9	0.0
	comp=E,1.8nm,0.5s						
JOSI	Joshimath	9.53	131	*e*P	Pn	09 17 09.0	+2.0
JOSI				*e*S	Sn	09 18 48.0	-4.3
JOSI				IAML		09 18 57.4	
	comp=N,207nm,0.5s						
JOSI				IAML		09 19 01.8	
	comp=E,292nm,0.3s						
NDI	New Delhi	9.82	148	*e*P	Pn	09 17 00.0	-11
NDI				*e*S	Sn	09 18 50.0	-9.1
KUDL	Kundal	10.01	153	*e*P	Pn	09 16 58.6	-15
KUDL				*e*S	Sn	09 18 39.9	-24
GEYT	Alibeck	10.48	278	P	Pn	09 17 17.8	-1.9
	comp=E,0.8nm,0.3s,baz=268,slow=40,SNR=2.2						
GEYT				S	Sn	09 19 11.1	-4.1
	comp=E,3.8nm,0.3s,baz=260,slow=8.9,SNR=4.2						
GYA0B	ALIBECK ARRAY	10.48	278	Pn	Pn	09 17 18.3	-1.4
GYA0B					Sn	09 19 11.1	-4.1
MAKZ	Makanchi	12.48	36		Pn	09 17 45.9	-0.5
MK31	Makanchi Array	12.62	37	P	Pn	09 17 47.4	-0.9
	comp=E,2.5nm,0.6s,baz=222,slow=14,SNR=28						
MK31	Makanchi Array	12.62	37		Pn	09 17 48.1	-0.2
MKAR	Makanchi Array	12.62	37	P	Pn	09 17 48.0	-0.3
	comp=E,0.2nm,0.3s,baz=225,slow=15,SNR=26						
MKAR	Makanchi Array	12.62	37		Pn	09 17 47.8	-0.5
DANN	Dangsing	13.68	126	*e*P	Pn	09 18 00.3	-2.2
	comp=E,29nm,0.2s						
KURBB	Kurchatov Arra	14.42	19	P	Pn	09 18 09.2	-2.3
	comp=E,0.1nm,0.3s,baz=214,slow=12,SNR=9.2						
KURBB	Kurchatov Arra	14.42	19	⇑P	Pn	09 18 08.3	-3.2
	comp=E,2.2nm,0.7s						
GKN	Gorkha	14.49	125	*e*P	Pn	09 18 10.7	-2.0
	comp=E,47nm,0.2s						
KURK	Kurchatov	14.53	19		Pn	09 18 11.7	-1.1
AB31	Akbulak array	14.62	329	⇑P	Pn	09 18 11.4	-2.6
	comp=E,5.0nm,0.3s,baz=138,slow=13,SNR=229						
AB31				⇓S	Sn	09 20 46.1	-9.0
	comp=E,2.5nm,0.5s						
ABKAR	Akbulak array	14.62	329		Pn	09 18 11.3	-2.7
KKN	Kakani	15.05	124	*e*P	Pn	09 18 17.5	-2.4
	comp=E,33nm,0.4s						
DMN	Daman	15.06	125	*e*P	Pn	09 18 18.0	-2.0
	comp=E,24nm,0.4s						
PKIN	Phulchoki	15.27	125	*e*P	Pn	09 18 21.2	-1.5
	comp=E,16nm,0.3s						
PKI	Pulchoki	15.28	125	*e*P	Pn	09 18 21.0	-1.9
GUN	Gumba	15.37	123	*e*P	Pn	09 18 21.9	-2.1
	comp=E,138nm,0.8s						
JIRN	Jiri	15.74	123	*e*P	Pn	09 18 26.6	-2.1
	comp=E,166nm,0.5s						
BVAR	Borovoye Array	15.87	358	P	Pn	09 18 28.0	-1.7
	comp=E,0.9nm,0.3s,baz=161,slow=14,SNR=20						
BRVK	Borovoye	15.91	358	⇓P	Pn	09 18 28.4	-1.8
	comp=E,2.5nm,0.5s						
BRVK	Borovoye	15.91	358		Pn	09 18 28.3	-1.9
AKTO	Aktyubinsk	16.32	329	P	Pn	09 18 35.0	-0.3
	comp=E,1.1nm,0.3s,baz=132,slow=11,SNR=15						
AKTO				S	Sn	09 21 22.2	-14
	comp=E,0.2nm,0.3s,baz=137,slow=4.5,SNR=1.8						
AKTO	Aktyubinsk	16.32	329	⇑P	Pn	09 18 35.6	+0.2
	comp=E,5.6nm,0.6s						
RAMN	Ramite	16.48	124	*e*P	Pn	09 18 35.5	-2.3
	comp=E,72nm,0.5s						
TAPN	Taplejung	16.98	120	*e*P	Pn	09 18 41.6	-2.2
	comp=E,41nm,0.5s						
ODAN	Odare	17.07	122	*e*P	Pn	09 18 43.6	-1.4
	comp=E,26nm,0.4s						
ZALV	Zalesovo Beam	19.22	25	P	P	09 19 07.8	-0.3
	comp=E,0.9nm,0.3s,baz=225,slow=10,SNR=14						
ZALV	Zalesovo Beam	19.22	25	P	P	09 19 08.2	+0.1
ARU	Arti	21.08	340	P	P	09 19 31.3	+3.1
	comp=E,1.1nm,0.3s,baz=277,slow=23,SNR=3.3						
KBZ	Khabaz	22.50	296	LR	LR	09 31 23.4	
	comp=E,28nm,18.1s,baz=82,slow=44						
SONM	Songino Array	27.78	56	P	P	09 20 32.4	+0.9
	comp=E,1.1nm,0.8s,baz=262,slow=8.8,SNR=8.6						
FINES	FINESS Array B	37.06	326	P	P	09 21 54.6	+2.7
	comp=E,0.9nm,0.5s,baz=107,slow=6.6,SNR=5.1						
FINES	FINESS Array B	37.06	326	P	P	09 21 53.2	+1.3
ARCES	ARCESS Array B	40.62	337	P	P	09 22 24.0	+2.4
	comp=E,0.7nm,0.4s,baz=118,slow=9.2,SNR=11						
NB2	NORSAR Subarra	43.99	323	P	P	09 22 50.9	+1.9
	comp=Z,1.1nm,0.5s,baz=93,slow=7.9						
NOA	NORSAR Array B	43.99	323	P	P	09 22 51.1	+2.1
	comp=Z,2.3nm,0.7s,baz=95,slow=7.8,SNR=9.4						
NC204	NORSAR Array S	44.22	323	P	P	09 22 52.6	+1.7
NC204				IAmb	IAmb	09 23 11.8	
	comp=Z,7.0nm,0.9s						
TIXI	Tiksi	45.08	22	P	P	09 22 59.3	+1.8
TIXI				IAmb	IAmb	09 22 59.8	
	comp=Z,4.5nm,0.8s						
USRK	Ussuriysk Ar.	45.65	61	P	P	09 23 03.7	+1.3
	comp=Z,0.5nm,0.5s,baz=265,slow=7.6,SNR=4.3						
TORD	Torodi Ar. Bea	65.96	269	P	P	09 25 29.0	+1.2
	comp=Z,0.6nm,0.6s,baz=55,slow=5.9,SNR=4.2						
TORD	Torodi Ar. Bea	65.96	269	P	P	09 25 28.8	+1.1
IMAR	Indian Mountai	71.47	18	P	P	09 26 03.1	+1.9
BMAR	Burnt Mountain	72.24	14	P	P	09 26 08.7	+2.9
FYU	Fort Yukon	72.87	14	P	P	09 26 12.4	+2.9
FYU				IAmb	IAmb	09 26 15.7	
	comp=Z,6.9nm,1.4s						
MLY	Manley	72.98	17	P	P	09 26 11.8	+1.6
MLY				IAmb	IAmb	09 26 15.2	
	comp=Z,4.3nm,1.3s						
C36M	Paulatuk	73.20	6	P	P	09 26 13.3	+1.9
C36M				IAmb	IAmb	09 26 13.8	
	comp=Z,3.1nm,0.6s						
INK	Inuvik	73.21	9	P	P	09 26 13.8	+2.3
INK				IAmb	IAmb	09 26 14.7	
	comp=Z,2.8nm,0.8s						
ILAR	Eielson Array	74.08	16	P	P	09 26 17.9	+1.3
	comp=Z,0.7nm,0.8s,baz=334,slow=4.8,SNR=6.9						
ILAR	Eielson Array	74.08	16	P	P	09 26 16.7	+0.1
KTH	Kantishna Hill	74.17	18	P	P	09 26 18.8	+1.5
PPLA	Purkeypile	74.39	19	P	P	09 26 20.3	+1.7
DAWY	Dawson	76.22	13	P	P	09 26 30.8	+1.8
SML	Sawmill	76.28	18	P	P	09 26 31.4	+2.0
BCAR	Beaver Creek A	76.67	15	P	P	09 26 34.1	+2.6
BALM	Baldy	78.36	16	P	P	09 26 42.9	+1.8
BALM				IAmb	IAmb	09 26 49.4	
	comp=Z,7.7nm,1.3s						
CTGM	Chitina Glacie	78.65	16	P	P	09 26 44.9	+2.3
CTGM				IAmb	IAmb	09 26 45.7	
	comp=Z,5.9nm,1.0s						
YKA	Yellowknife Ar	80.57	3	P	P	09 26 55.0	+2.2
	comp=Z,1.5nm,0.6s,baz=352,slow=5.1,SNR=42						

IDC ***24*** *09:43:12.5±3.0, 9°.44N×123°.05E, h0^{km}, mb3.3/3, mb1 3.6/3, mb1mx3.2/50, mbtmp3.3/3, Error ellipse:*

s-maj=320.0km s-min=28.9km az=63.0

*MAN **24** 09:43:12.2, 9°.96N×124°.12E, h2km, mb4.6, ML3.5, MS3.4*
MAN Intensity I - Lapu-Lapu City.

ISC 24 09:43:12.3±1.1**, 9°.93N**±0°.03×**124°.12E**±0°.03**, h12**km±9km**,**
n15, σ1ˢ.31/25**, mb3.4**/3**, 3C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBP	**Tagbilaran**	**0.35**	**226**	*e*P	**Pb**	**09 43 20.1**	**-0.3**
TBP				*i* S	**Sb**	**09 43 26.7**	**+0.8**
LLP	**Lapu-Lapu**	**0.41**	**339**	⇓*i*P	**Pg**	**09 43 20.1**	**-0.4**
LLP				*i* S	**Sg**	**09 43 26.3**	**+0.2**
MSLP	**Maasin**	**0.76**	**74**	*e*P	**Pg**	**09 43 26.4**	**-0.6**
MSLP				*e*S	**Sb**	**09 43 38.2**	**+0.3**
SNPH	**Sibulan**	**1.05**	**236**	⇓*i*P	**Pn**	**09 43 33.0**	**+0.1**
SNPH				*i* S	**Sn**	**09 43 49.0**	**+1.5**
OCLP	**Ormoc**	**1.21**	**23**	*e*P	**Pn**	**09 43 34.1**	**-1.1**
OCLP				*e*S	**Sg**	**09 43 53.4**	**+1.9**
DCPH	**Dipolog City**	**1.54**	**209**	⇑*e*P	**Pb**	**09 43 40.6**	**-0.2**
CGP	**Cagayan de Oro**	**1.57**	**159**	⇓*e*P	**Pb**	**09 43 41.8**	**+0.4**
CGP				*e*S	**Sg**	**09 44 03.6**	**+0.6**
GUIM	**Jordan**	**1.65**	**295**	*e*P	**Pn**	**09 43 41.6**	**+0.4**
GUIM				*e*S	**Sg**	**09 44 04.6**	**-1.0**
RCP	**Roxas**	**2.11**	**320**	⇑*e*P	**Pn**	**09 43 48.0**	**+0.6**
PAGZ	**Pagadian**	**2.19**	**199**	*e*P	**Pb**	**09 43 51.1**	**-0.9**
PAGZ				*e*S	**Sn**	**09 44 11.7**	**-4.1**
BUKP	**Musuan**	**2.24**	**155**	*e*P	**Pb**	**09 43 52.4**	**-0.5**
BUKP				*e*S	**Sg**	**09 44 25.7**	**+1.2**
KCP	**Kidapawan**	**3.06**	**162**	⇑*e*P	**Pb**	**09 44 05.2**	**-1.6**
KCP				*i* S	**Sg**	**09 44 51.9**	**+1.2**
WRA	**Warramunga Arr**	**31.34**	**161**	P	**P**	**09 49 34.5**	**+1.5**
	0.5nm,1.0s,baz=338,slow=9.0,SNR=2.9						
ASAR	**Alice Springs**	**34.74**	**164**	P	**P**	**09 50 02.8**	**+0.1**
	0.3nm,0.5s,baz=339,slow=6.8,SNR=10						
MKAR	**Makanchi Array**	**51.03**	**324**	P	**P**	**09 52 14.7**	**+0.3**
	0.2nm,0.6s,baz=108,slow=7.9,SNR=3.6						

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*NEIC **24** 09:53:00.2±2.3, 7°.6N±0°.1×94°.2E±0°.1, h10km±1km,*
mb4.2/5, Error ellipse: s-maj=24.7km s-min=7.9km
az=228.0
*IDC **24** 09:53:06.2±4.2, 7°.64N×94°.29E, h58km±38km, mb3.5/12,*
mb1 3.7/14, mb1mx3.4/59, mbtmp3.8/14, ML3.8/2, MS3.3/15,
Ms1 3.3/15, ms1mx3.1/45, Error ellipse: s-maj=45.9km
s-min=17.7km az=62.0

ISC 24 09:53:02.9±0.7**, 7°.68N**±0°.10×**94°.3E**±0°.1**, h20**km**, n46,**
σ1ˢ.79/37**, mb3.9**/15**, MS3.3**/10**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**3.55**	**133**	Pn	**Pn**	**09 53 58.5**	**+1.6**
LHMI				Sn	**Sn**	**09 54 38.8**	**+0.5**
PSI	**Prapat**	**6.65**	**137**	P	**Pn**	**09 54 42.5**	**+2.9**
	0.5nm,0.3s,baz=324,slow=10,SNR=1.8						
PSI				LR	LR	09 57 34.3	
	comp=Z,428nm,20.5s,baz=318,slow=40						
KULM	**Kulim**	**6.70**	**110**	Pn	**Pn**	**09 54 40.7**	**+0.5**
RPSI	**Rantau Prapat**	**6.73**	**137**		**Pn**	**09 54 42.5**	**+1.9**
RPSI	**Rantau Prapat**	**6.73**	**137**	Pn	**Pn**	**09 54 43.4**	**+2.8**
IPM	**Ipoh**	**7.36**	**115**		**Pn**	**09 54 49.3**	**0.0**
IPM					**Sn**	**09 56 10.0**	**-2.4**
PBKT	**Sadao Pong**	**10.95**	**36**		**Pn**	**09 55 40.5**	**+2.0**
CMAR	**Chiang Mai Arr**	**11.61**	**22**	P	**Pn**	**09 55 50.4**	**+2.8**
	0.5nm,0.3s,baz=214,slow=15,SNR=8.6						
CMAR				LR	LR	10 00 32.3	
	comp=Z,106nm,19.0s,baz=220,slow=38						
PALK	**Pallekele**	**13.53**	**269**	LR	LR	10 00 47.6	
	comp=Z,104nm,20.1s,baz=105,slow=34						
BRDH	**Bariadhala**	**15.14**	**350**	LR	LR	10 03 55.5	
	comp=Z,141nm,19.8s,baz=48,slow=43						
LEM	**Lembang**	**19.57**	**137**	LR	LR	10 06 22.4	
	comp=Z,138nm,19.1s,baz=18,slow=41						
RAMN	**Ramite**	**20.53**	**340**	*e*P	**P**	**09 57 40.7**	**+0.4**
	25nm,0.7s						
TAPN	**Taplejung**	**20.55**	**343**	*e*P	**P**	**09 57 41.3**	**+0.7**
JIRN	**Jiri**	**21.32**	**340**	*e*P	**P**	**09 57 49.0**	**0.0**
	47nm,1.0s						
GUN	**Gumba**	**21.66**	**339**	*e*P	**P**	**09 57 52.5**	**-0.1**
	72nm,1.3s						
DANN	**Dangsing**	**22.86**	**335**	*e*P	**P**	**09 58 04.1**	**-1.3**
	23nm,0.9s						
WHN	**Wuhan**	**29.47**	**37**	P	P	09 59 11.8	+6.2
KSH	**Kashi**	**35.73**	**335**	P	**P**	**10 00 04.5**	**+4.0**
KSH				sP	pwP	10 00 18.3	+9.4
KSH				PcP	**PcP**	**10 02 32.8**	**+4.4**
KSH				S	**S**	**10 05 38.8**	**+2.2**
KSH				sS	sS	10 05 55.6	+10
ARSB	**Arslanbob**	**38.51**	**334**	P	P	10 00 29.1	+5.0
ARSB				IAmb	IAmb	10 00 33.4	
	comp=Z,5.5nm,0.8s						
MK31	**Makanchi Array**	**40.32**	**347**	P	**P**	**10 00 38.0**	**-0.9**
MKAR	**Makanchi Array**	**40.32**	**347**	P	**P**	**10 00 37.8**	**-1.2**
	comp=Z,1.7nm,0.9s,baz=161,slow=7.7,SNR=13						
MKAR	**Makanchi Array**	**40.32**	**347**	P	**P**	**10 00 37.6**	**-1.3**
MAKZ	**Makanchi**	**40.41**	**347**	P	**P**	**10 00 39.3**	**-0.3**
MAKZ				IAmb	IAmb	10 00 44.4	
	comp=Z,2.5nm,0.6s						
SONM	**Songino Array**	**41.31**	**12**	P	**P**	**10 00 46.6**	**-0.6**
	comp=Z,0.9nm,1.0s,baz=193,slow=9.5,SNR=7.5						
SONM				LR	LR	10 20 11.4	
	comp=Z,45nm,18.3s,baz=194,slow=39						
KSRS	**Korea Array**	**42.48**	**41**	LR	LR	10 19 09.0	
	comp=Z,39nm,18.1s,baz=212,slow=37						
GEYT	**Alibeck**	**44.48**	**318**	LR	LR	10 21 44.4	
	comp=Z,29nm,19.1s,baz=185,slow=39						
TLY	**Talaya**	**44.53**	**8**	LR	LR	10 21 20.2	
	comp=Z,31nm,19.0s,baz=193,slow=38						
KURBB	**Kurchatov Arra**	**44.78**	**346**	P	**P**	**10 01 14.2**	**-0.9**
	comp=Z,3.2nm,0.7s,baz=169,slow=7.0,SNR=13						
KURK	**Kurchatov**	**44.85**	**346**	P	**P**	**10 01 15.8**	**+0.1**
ZALV	**Zalesovo Beam**	**46.77**	**352**	P	**P**	**10 01 30.4**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=183,slow=8.6,SNR=4.3						
WB0	**Warramunga Arr**	**47.94**	**125**	P	**P**	**10 01 39.2**	**-1.2**
WB0				IAmb	IAmb	10 01 56.5	
	comp=Z,3.0nm,1.2s						
WRA	**Warramunga Arr**	**47.98**	**126**	P	**P**	**10 01 39.8**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=306,slow=8.5,SNR=1.8						
MJAR	**Matsushiro Arr**	**49.14**	**48**	LR	LR	10 22 15.0	
	comp=Z,20nm,21.8s,baz=220,slow=36						
BVAR	**Borovoye Array**	**49.24**	**341**	P	**P**	**10 01 48.1**	**-1.7**
	comp=Z,1.2nm,0.9s,baz=123,slow=10,SNR=3.3						
ASAR	**Alice Springs**	**49.64**	**130**	P	**P**	**10 01 52.2**	**-1.2**
	comp=Z,0.6nm,0.8s,baz=316,slow=7.1,SNR=5.1						
ASAR	**Alice Springs**	**49.64**	**130**	P	**P**	**10 01 51.9**	**-1.5**
ABKAR	**Akbulak array**	**50.50**	**331**	P	**P**	**10 01 58.6**	**-1.0**
ASAJ	**Asahikawa**	**55.43**	**41**	LR	LR	10 27 19.6	
	comp=Z,21nm,18.4s,baz=236,slow=37						
BRTR	**Keskin Array B**	**62.71**	**311**	P	**P**	**10 03 25.3**	**-1.5**
	comp=Z,0.5nm,0.9s,baz=118,slow=4.6,SNR=1.8						
TIXI	**Tiksi**	**67.38**	**11**	P	**P**	**10 03 54.8**	**-1.6**
	comp=Z,1.2nm,0.3s,baz=189,slow=2.6,SNR=3.5						
PETK	**Petropavlovsk-**	**68.04**	**36**	LR	LR	10 35 11.9	
	comp=Z,17nm,18.1s,baz=243,slow=37						
AKASG	**Malin Array Be**	**68.43**	**322**	LR	LR	10 36 13.7	
	comp=Z,15nm,20.4s,baz=10.0,slow=38						
FINES	**FINESS Array B**	**72.98**	**332**	P	**P**	**10 04 29.6**	**-1.2**
	comp=Z,1.5nm,0.9s,baz=185,slow=36,SNR=2.8						
ARCES	**ARCESS Array B**	**75.52**	**340**	LR	LR	10 40 39.1	
	comp=Z,54nm,21.0s,baz=288,slow=38						
GERES	**GERESS Array B**	**78.11**	**318**	P	**P**	**10 04 58.9**	**-1.8**
	comp=Z,0.3nm,0.2s,baz=114,slow=4.4,SNR=1.8						
NOA	**NORSAR Array B**	**80.00**	**331**	P	**P**	**10 05 10.5**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=90,slow=5.8,SNR=2.0						
NOA				LR	LR	10 43 11.1	
	comp=Z,16nm,19.9s,baz=355,slow=38						

MAN 24 10:15:08.2, 8°.60N×125°.74E, h9km, mb4.7, ML3.6, MS3.5,
Mindanao

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*JMA **24** 10:16:53.2±0.1, 36°.05N×139°.89E, h45km±1km, M3.5*
Broadband fault plane solution: P waves. NP1:
φs232.00000°, δ15.00000°, λ100.00000°. NP2:
φs42.00000°, δ75.00000°, λ87.00000°. Principal axes: T
Plg60.0000°, Azm308.0000°; N Plg3.0000°, Azm43.0000°;
P Plg30.0000°, Azm134.0000°;
JMA Felt II J1.
*IDC **24** 10:16:53.5±2.9, 35°.94N×139°.91E, h56km±30km, mb3.2/3,*
mb1 3.4/4, mb1mx3.1/46, mbtmp3.5/4, ML3.8/1, MS3.0/1,
Ms1 3.0/1, ms1mx2.1/20 Error ellipse: s-maj=37.9km
s-min=9.9km az=59.0

ISC 24 10:16:53.0±1.0**, 36°.03N**±0°.05×**139°.92E**±0°.06**, h47**km±10km**,**
n19, σ0ˢ.68/20**, mb3.3**/3**, 1C-3D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYT	**Yasato**	**0.29**	**48**	⇑P	**Pn**	**10 17 01.9**	**+0.2**
JYT				*e*S	**Sn**	**10 17 08.0**	**+0.1**
JAG	**Ashikaga**	**0.55**	**316**	⇓P	**Pn**	**10 17 04.5**	**-0.1**
JAG				*e*S	**Sn**	**10 17 12.5**	**-0.4**
JRY	**Ryogami san**	**0.83**	**269**	⇓P	**Pn**	**10 17 08.0**	**-0.3**
JRY				*e*S	**Sn**	**10 17 18.8**	**-0.7**
JKT	**Katashina**	**0.91**	**324**	⇓P	**Pn**	**10 17 09.2**	**-0.3**
JKT				*e*S	**Sn**	**10 17 21.2**	**-0.4**
JOD2	**Odawara 2**	**1.03**	**222**	P	**Pn**	**10 17 11.4**	**+0.4**
JOD2				*e*S	**Sn**	**10 17 24.4**	**+0.1**
JYN	**Shimob**	**1.24**	**245**	P	**Pn**	**10 17 15.2**	**+1.2**
MJAR	**Matsushiro Arr**	**1.48**	**291**	P	**Pn**	**10 17 16.9**	**-0.2**
	2.9nm,0.3s,baz=96,slow=11,SNR=143						
MJAR				S	**Sn**	**10 17 36.2**	**+0.9**
	2.1nm,0.3s,baz=49,slow=24,SNR=4.2						
MAT	**Matsushiro**	**1.48**	**291**	P	**Pn**	**10 17 16.6**	**-0.5**
MAT				S	**Sn**	**10 17 35.9**	**+0.6**
JHJ	**Hachijo jima 2**	**2.91**	**182**	P	**Pn**	**10 17 36.5**	**-0.3**
	38nm,0.3s,baz=60,slow=20,SNR=38						
JHJ				S	**Sn**	**10 18 09.2**	**-1.3**
	21nm,0.3s,baz=53,slow=20,SNR=1.8						
H11N2	**WAKE ISLAND Hy**	**28.71**	**117**	T	T	10 52 41.4	
	baz=309						
H11N1	**WAKE ISLAND Hy**	**28.72**	**117**	T	T	10 52 42.0	
	baz=309						
H11N3	**WAKE ISLAND Hy**	**28.73**	**117**	T	T	10 52 31.8	
	baz=309						
H11S1	**WAKE ISLAND Hy**	**29.37**	**119**	T	T	10 53 00.3	
	baz=311						
H11S3	**WAKE ISLAND Hy**	**29.37**	**119**	T	T	10 52 52.0	
	baz=311						
H11S2	**WAKE ISLAND Hy**	**29.39**	**119**	T	T	10 53 08.4	
	baz=311						
ZALV	**Zalesovo Beam**	**41.71**	**313**	P	**P**	**10 24 36.5**	**-0.5**
	1.1nm,0.6s,baz=91,slow=6.3,SNR=4.7						
MKAR	**Makanchi Array**	**43.64**	**303**	P	**P**	**10 24 52.4**	**-0.5**
	0.2nm,0.6s,baz=74,slow=7.7,SNR=3.3						
ILAR	**Eielson Array**	**50.98**	**32**	P	**P**	**10 25 50.5**	**+0.9**
	0.2nm,0.6s,baz=286,slow=6.5,SNR=1.7						
WRA	**Warramunga Arr**	**55.92**	**186**	LR	LR	10 48 22.0	
	comp=Z,15nm,21.0s,baz=115,slow=34						

IDC 24 10:19:48.3±2.1**, 2°.86N×126°.10E, h0**km**, mb3.5**/4**,**
mb1 3.7/4**, mb1mx3.4**/43**, mbtmp3.6**/4**, MS3.4**/1**, Ms1 3.3**/1**,**
ms1mx2.3/19**, Error ellipse: s-maj=134.9km**
s-min=25.5km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**4.78**	**240**	P	Pb	10 21 10.9	-2.1
FITZ	**Fitzroy Crossi**	**20.83**	**181**	P	P	10 24 32.0	+0.3
	0.4nm,0.3s,baz=0.4,slow=8.2,SNR=3.1						
WRA	**Warramunga Arr**	**24.06**	**161**	P	P	10 25 05.6	+0.1
	0.7nm,0.4s,baz=339,slow=10,SNR=2.4						
ASAR	**Alice Springs**	**27.44**	**164**	P	P	10 25 36.0	-0.2
	0.3nm,0.4s,baz=339,slow=6.9,SNR=24						
STKA	**Stephens Creek**	**37.55**	**158**	LR	LR	10 45 14.7	
	comp=Z,56nm,18.9s,baz=24,slow=41						
MKAR	**Makanchi Array**	**57.91**	**326**	P	P	10 29 42.2	-0.1
	0.2nm,0.3s,baz=126,slow=7.8,SNR=4.7						

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*NEIC **24** 10:21:33.4±1.5, 3°.30S±0°.08×128°.27E±0°.08, h68km±13km,*
mb4.1/8, Error ellipse: s-maj=12.2km s-min=11.6km
az=124.0
*DJA **24** 10:21:33.9±0.3, 3°S±4°×12°8E±°, h35km±7km, M4.6/9,*
mB5.5/3, mb4.9/4, MLv4.3/9, Mw(mB)5.0/3
*IDC **24** 10:21:35.5±4.2, 3°.25S×128°.51E, h85km±40km, mb3.7/4,*
mb1 4.0/7, mb1mx3.5/40, mbtmp4.2/7, MS2.8/4, Ms1 2.8/4,
ms1mx2.5/28, Error ellipse: s-maj=43.1km s-min=15.9km
az=96.0

ISC 24 10:21:34.4±0.7**, 3°.32S**±0°.06×**128°.31E**±0°.07**, h91**km**, n35,**
σ2ˢ.12/33**, mb3.9**/3**, 1C, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**0.38**	**198**	P	**Pn**	**10 21 44.7**	**-3.8**
AAI				S	**Sn**	**10 21 51.7**	**-7.2**
MSAI	**Masohi**	**0.62**	**92**	P	**Pn**	**10 21 48.2**	**-2.0**
NLAI	**Namlea**	**1.21**	**274**	P	**Pn**	**10 21 55.2**	**-1.5**
BNDI	**Bandanaira**	**1.99**	**127**	P	**Pn**	**10 22 06.2**	**-0.3**
SANI	**Sanana**	**2.64**	**298**	P	**Pn**	**10 22 11.6**	**-3.6**
LBMI	**Labuha**	**2.79**	**343**	P	**Pn**	**10 22 15.7**	**-1.4**
SIJI	**Sorong**	**3.83**	**51**	P	**Pn**	**10 22 30.4**	**-0.8**
	28nm,0.3s,baz=250,slow=16,SNR=7.2						
SIJI				S	**Sn**	**10 23 11.6**	**-3.6**
	32nm,0.3s,baz=298,slow=23,SNR=33						
FAKI	**Fak Fak**	**3.95**	**84**		**Pn**	**10 22 32.9**	**0.0**
TNTI	**Ternate**	**4.17**	**347**	P	**Pn**	**10 22 34.3**	**-1.6**
TNTI	**Ternate**	**4.17**	**347**		**Pn**	**10 22 33.7**	**-2.2**
LUWI	**Luwuk**	**5.98**	**292**	P	**Pn**	**10 22 59.6**	**-0.8**
	0.5nm2µm102nm,0.9s						
LUWI	**Luwuk**	**5.98**	**292**		**Pn**	**10 22 59.2**	**-1.2**
APSI	**Ampana**	**7.08**	**290**	P	**Pn**	**10 23 14.0**	**-1.4**
	0.7nm2µm144nm,0.5s						
SOEI	**Soe**	**7.55**	**212**	Pn	**Pn**	**10 23 21.0**	**-0.9**
SPSI	**Sidrap Palu**	**8.55**	**265**	P	**Pn**	**10 23 35.1**	**-0.4**
KAPI	**Kappang**	**8.70**	**259**	LR	LR	10 27 40.7	
	comp=Z,33nm,20.0s,baz=54,slow=41						
MTN	**Manton Dam**	**9.87**	**164**		**Pn**	**10 23 52.5**	**-0.9**
KCP	**Kidapawan**	**10.75**	**343**	⇑*e*P	**Pn**	**10 24 04.3**	**-1.3**
KNRA	**Kununurra**	**12.29**	**178**		**Pn**	**10 24 26.4**	**+0.2**
FITZ	**Fitzroy Crossi**	**14.92**	**190**	P	**Pn**	**10 25 01.6**	**+1.0**
	0.2nm,0.3s,baz=27,slow=11,SNR=7.5						
FITZ				LR	LR	10 30 57.7	
	comp=Z,26nm,20.6s,baz=353,slow=37						
WB0	**Warramunga Arr**	**17.39**	**160**		**P**	**10 25 31.3**	**-0.1**
WB0				IAmb	IAmb	10 25 35.0	
	comp=Z,10nm,0.8s						
WRAB	**Tennant Creek**	**17.53**	**161**	P	**Pn**	**10 25 33.5**	**+0.4**
WRAB				IAmb	IAmb	10 25 35.4	
	comp=Z,11nm,0.9s						
WRA	**Warramunga Arr**	**17.54**	**161**	P	**Pn**	**10 25 34.1**	**+0.9**
	comp=Z,2.4nm,0.3s,baz=339,slow=12,SNR=24						
WRA				LR	LR	10 31 37.2	
	comp=Z,55nm,21.8s,baz=290,slow=34						
WRA	**Warramunga Arr**	**17.54**	**161**	IAmb	IAmb	10 25 35.8	
	comp=Z,0.5nm,1.1s						
WB2	**Warramunga Arr**	**17.54**	**161**	P	**Pn**	**10 25 33.7**	**+0.4**
WB2				IAmb	IAmb	10 25 35.6	
	comp=Z,13nm,1.1s						
WR0	**Warramunga Arr**	**17.62**	**160**	P	**Pn**	**10 25 34.7**	**+0.5**
WR0				IAmb	IAmb	10 25 35.8	
	comp=Z,5.7nm,0.5s						
COEN	**Coen**	**18.08**	**127**	P	**Pn**	**10 25 41.2**	**+1.4**
PMG	**Port Moresby**	**19.68**	**109**	LR	LR	10 35 29.6	
	comp=Z,36nm,20.0s,baz=334,slow=43						
AS31	**Alice Springs**	**20.94**	**166**	P	Pn	10 26 11.9	-1.5
AS31				IAmb	IAmb	10 26 13.2	
	comp=Z,7.6nm,0.9s						
ASAR	**Alice Springs**	**20.94**	**166**	P	Pn	10 26 11.8	-1.6
	comp=Z,9.5nm,0.4s,baz=344,slow=11,SNR=184						
ASAR				PcP	**PcP**	**10 30 16.9**	**+2.3**
	comp=Z,0.7nm,0.6s,baz=349,slow=1.3,SNR=6.0						
ASAR	**Alice Springs**	**20.94**	**166**	P	**P**	**10 26 11.1**	**+1.1**
STKA	**Stephens Creek**	**31.03**	**158**	P	**P**	**10 27 45.3**	**+1.6**
	comp=Z,1.0nm,0.4s,baz=339,slow=8.6,SNR=6.0						
STKA	**Stephens Creek**	**31.03**	**158**	P	**P**	**10 27 45.1**	**+1.5**
MJAR	**Matsushiro Arr**	**40.72**	**12**	P	**P**	**10 29 06.9**	**+0.6**
	comp=Z,1.6nm,0.9s,baz=186,slow=9.4,SNR=2.9						
MKAR	**Makanchi Array**	**64.25**	**327**	P	**P**	**10 32 01.9**	**+2.0**
	comp=Z,0.2nm,0.4s,baz=124,slow=6.1,SNR=3.5						

JMA 24 10:49:05.2±0.1**, 37°.53N×141°.75E, h39**km±2km**, M3.8,**
Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMST	**Minamisoumatoc**	**0.71**	**286**	P	Pn	10 49 18.8	0.0
JMST				S	Sn	10 49 28.2	-0.3
JFK	**Kawauchi**	**0.72**	**257**	P	Pn	10 49 19.0	+0.1
JFK				S	Sn	10 49 28.4	-0.3
JIKH	**Ishinomakikobu**	**0.81**	**344**	P	Pn	10 49 20.3	+0.2
JIKH				S	Sn	10 49 30.6	-0.4
JMM	**Marumori**	**0.83**	**294**	P	Pn	10 49 20.7	+0.3
JMM				*e*S	Sn	10 49 31.3	-0.1
ONAJ	**Iwakimizuishiy**	**0.87**	**241**	P	Pn	10 49 21.0	0.0
ONAJ				S	Sn	10 49 31.7	-0.8
JIO	**Ouri**	**0.98**	**341**	P	Pn	10 49 22.7	+0.3
JIO				S	Sn	10 49 34.4	-0.6
JFT	**Otama**	**1.12**	**270**	P	Pn	10 49 25.6	+1.2
JFT				S	Sn	10 49 39.9	+1.2
JOU	**Okura**	**1.20**	**315**	P	Pn	10 49 26.4	+1.0
JMK	**Ichinoseki**	**1.48**	**344**	P	Pn	10 49 30.1	+0.8
MAT	**Matsushiro**	**3.00**	**252**	P	Pn	10 49 54.0	+3.8
MAT				*e*S	Sn	10 50 32.2	+7.2

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*TAP **24** 11:01:55.1, 23°.91N×122°.79E, h37km±1km, ML2.6, D*
*JMA **24** 11:01:55.2±0.1, 23°.94N×122°.73E, h41km, M2.2*

ISC 24 11:01:51.8±1.2**, 23°.87N**±0°.03×**122°.77E**±0°.02**, h10**km±9km**,**
n54, σ0ˢ.85/100**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.60**	**16**	P	**Pn**	**11 02 06.4**	**0.0**
JYNG				*e*S	**Sn**	**11 02 14.3**	**-1.9**
YOJ	**Yonaguni jima**	**0.63**	**21**	P	**Pn**	**11 02 07.2**	**+0.4**
	baz=19						
YOJ				S	**Sn**	**11 02 15.7**	**-1.3**
	baz=19						
YOJ	**Yonaguni jima**	**0.63**	**21**	P	**Pn**	**11 02 07.2**	**+0.4**
YOJ				*e*S	**Sn**	**11 02 15.2**	**-1.8**
EOS1	**EOS1**	**0.90**	**320**	*e*P	**Pn**	**11 02 11.7**	**+1.3**
	baz=317						
EOS1				*e*S	**Sn**	**11 02 24.6**	**+1.3**
	baz=317						
HATJ	**Hateruma jima**	**0.97**	**79**	P	**Pn**	**11 02 13.3**	**+1.9**
HATJ				S	**Sn**	**11 02 26.4**	**+1.2**
IRIF	**Iriomote-Funau**	**1.00**	**62**	P	**Pn**	**11 02 12.9**	**+1.1**
IRIF				S	**Sn**	**11 02 26.3**	**+0.4**
ENA	**Nanau**	**1.09**	**301**	P	**Pn**	**11 02 14.1**	**+1.0**
	baz=299						
ENA				S	**Sn**	**11 02 29.0**	**+0.8**
	baz=299						
NACB	**Ninganchiao**	**1.11**	**286**	P	**Pn**	**11 02 13.9**	**+0.5**
	baz=272						
NACB				S	**Sg**	**11 02 27.9**	**+0.2**
	baz=272						
TWC	**Suao**	**1.12**	**312**	P	**Pn**	**11 02 14.6**	**+1.2**
	baz=309						
TWC				S	**Sn**	**11 02 29.1**	**+0.2**
	baz=309						
JKRS	**Kuro-shima**	**1.20**	**72**	P	**Pg**	**11 02 16.4**	**+1.6**
JKRS				*e*S	**Sn**	**11 02 31.5**	**+0.7**
ESL	**Shilin**	**1.22**	**268**	P	**Pb**	**11 02 14.9**	**-0.1**
	baz=257						
ESL				S	**Sn**	**11 02 31.2**	**-0.3**
	baz=257						
ETLH	**Xiulin Townshi**	**1.22**	**286**	P	**Pg**	**11 02 16.1**	**+0.8**
	baz=275						
ETLH				S	**Sn**	**11 02 31.7**	**+0.1**
	baz=275						
HGSD	**Ruisui**	**1.28**	**253**	P	**Pb**	**11 02 16.1**	**+0.1**
	baz=252						
ENTT	**Nioudou**	**1.34**	**305**	P	**Pg**	**11 02 19.0**	**+1.5**
	baz=304						
ENTT				*e*S	**Sg**	**11 02 35.4**	**+0.5**
	baz=304						
JIJ	**Ishigaki jima**	**1.35**	**68**	P	**Pg**	**11 02 18.0**	**+0.2**
JIJ				S	**Sg**	**11 02 34.7**	**-0.6**
NDT	**Datong Townshi**	**1.36**	**303**	*e*P	**Pg**	**11 02 18.1**	**+0.2**
	baz=290						
NDT				S	**Sg**	**11 02 35.9**	**+0.3**
	baz=290						
SLBB	**Yuanshan**	**1.36**	**311**	P	**Pg**	**11 02 19.3**	**+1.4**
	baz=309						
SLBB				*e*S	**Sg**	**11 02 35.5**	**0.0**
	baz=309						
EHY	**Hungye**	**1.37**	**255**	*i* P	**Pb**	**11 02 17.6**	**0.0**
	baz=254						
EHY				*i* S	**Sn**	**11 02 35.1**	**-0.1**
	baz=254						
NNSH	**Datong**	**1.38**	**294**	*e*P	**Pg**	**11 02 18.3**	**0.0**
	baz=284						
NNSH				*e*S	**Sb**	**11 02 34.9**	**-0.6**
	baz=284						
NNSB	**Datong**	**1.38**	**294**	P	**Pg**	**11 02 17.8**	**-0.5**
	baz=293						
NNSB				S	**Sn**	**11 02 35.4**	**-0.2**
	baz=293						
NNS	**Nan Shan**	**1.39**	**294**	*e*P	**Pg**	**11 02 19.0**	**+0.4**
	baz=293						
NNS				S	**Sb**	**11 02 35.4**	**-0.5**
	baz=293						
TIPB	**Shuangxi**	**1.40**	**322**	P	**Pg**	**11 02 19.0**	**+0.4**
	baz=334						
TIPB				S	**Sg**	**11 02 35.5**	**-1.2**
	baz=334						
YULB	**Yu-li**	**1.43**	**251**	P	**Pb**	**11 02 18.8**	**+0.3**
	baz=241						
YULB				S	**Sn**	**11 02 36.6**	**0.0**
	baz=241						
TWF1	**Yuli**	**1.44**	**249**	P	**Pb**	**11 02 18.8**	**+0.1**
	baz=239						
TWF1				S	**Sn**	**11 02 36.6**	**-0.3**
	baz=239						
OWD	**Renai**	**1.46**	**274**	*e*P	**Pb**	**11 02 18.5**	**-0.5**
	baz=273						
OWD				*e*S	**Sn**	**11 02 37.1**	**-0.4**
	baz=273						
NWLT	**Wulai**	**1.47**	**308**	*e*P	**Pg**	**11 02 19.8**	**-0.1**
	baz=308						
NWLT				*e*S	**Sg**	**11 02 38.0**	**-1.0**
	baz=308						
CHGB	**Renai**	**1.47**	**278**	P	**Pg**	**11 02 20.0**	**0.0**
	baz=268						
CHGB				S	**Sn**	**11 02 37.8**	**-0.1**
	baz=268						
VWDT	**VWDT**	**1.49**	**266**	P	**Pg**	**11 02 20.1**	**-0.4**
	baz=257						
VWDT				*e*S	**Sn**	**11 02 38.2**	**+0.1**
	baz=257						
YHNB	**Yeheng**	**1.50**	**303**	P	**Pg**	**11 02 20.0**	**-0.6**
	baz=302						
YHNB				*e*S	**Sb**	**11 02 38.5**	**-0.3**
	baz=302						
FULB	**Fuli**	**1.50**	**244**	*e*P	**Pn**	**11 02 18.5**	**-0.3**
	baz=235						
FULB				S	**Sn**	**11 02 37.3**	**-1.2**
	baz=235						
NSK	**Sanguang**	**1.52**	**302**	P	**Pg**	**11 02 20.2**	**-0.7**
	baz=302						
NSK				S	**Sb**	**11 02 38.8**	**-0.6**
	baz=302						
JISG	**Ishigakijimahi**	**1.58**	**63**	P	**Pg**	**11 02 20.9**	**-1.3**
JISG				*e*S	**Sb**	**11 02 39.7**	**-1.5**
TWH	**Lutao**	**1.65**	**226**	*e*P	**Pn**	**11 02 20.2**	**-0.6**
	baz=225						
TWH				*e*S	**Sn**	**11 02 40.2**	**-1.8**
	baz=225						
SSLB	**Suanglung**	**1.66**	**268**	P	**Pg**	**11 02 23.2**	**-0.4**
	baz=257						
SSLB				*e*S	**Sn**	**11 02 41.7**	**-0.7**
	baz=257						
DPDB	**Guoxing**	**1.69**	**276**	*e*P	**Pg**	**11 02 23.6**	**-0.6**
	baz=275						
YUS	**Yu-Shan**	**1.70**	**258**	*e*P	**Pn**	**11 02 22.7**	**+0.7**
	baz=257						
YUS				*e*S	**Sn**	**11 02 43.4**	**-0.7**
	baz=257						
SMLT	**Sun Moon Lake**	**1.71**	**271**	*e*P	**Pb**	**11 02 23.8**	**+0.4**
	baz=261						
SMLT				*e*S	**Sn**	**11 02 43.7**	**+0.1**
	baz=261						
WHP	**Taichung City**	**1.71**	**284**	*e*P	**Pg**	**11 02 24.1**	**-0.6**
	baz=284						
WHP				*e*S	**Sb**	**11 02 44.9**	**-0.2**
	baz=284						
ELDTW	**Lidau**	**1.74**	**248**	P	**Pn**	**11 02 22.7**	**+0.5**
	baz=246						
ELDTW				S	**Sn**	**11 02 43.7**	**-0.8**
	baz=246						
TYC	**Yuchr**	**1.75**	**272**	*e*P	**Pg**	**11 02 25.6**	**+0.3**
	baz=260						
WHYT	**Xinyi Township**	**1.76**	**265**	*e*P	**Pb**	**11 02 24.6**	**+0.5**
	baz=257						
LIOB	**Emei**	**1.78**	**296**	*e*P	**Pb**	**11 02 23.4**	**-1.0**
	baz=296						
LIOB				*e*S	**Sb**	**11 02 46.3**	**-0.4**
	baz=296						
NSTT	**Nanjuang**	**1.78**	**296**	*e*S	**Sb**	**11 02 46.6**	**-0.3**
	baz=295						
CHN5	**Tsauling**	**1.93**	**262**	*e*P	**Pb**	**11 02 27.1**	**-0.1**
	baz=262						

CHN5				eS	Sb	11 02 51.5	+0.1
	baz=262						
STYT	Tauyuan	1.97	250	eP	Pb	11 02 27.8	0.0
	baz=242						
STYT				S	Sn	11 02 49.5	-0.6
	baz=242						
TPUB	Ta-pu	2.04	254	eP	Pb	11 02 29.3	+0.4
	baz=247						
TPUB				eS	Sb	11 02 53.6	-0.7
	baz=247						
WDLH	Douliu	2.05	266	eS	Sb	11 02 56.1	+1.5
	baz=265						
CHN4	Tsaushan	2.06	256	eP	Pg	11 02 30.5	-0.8
	baz=246						
CHN4				eS	Sb	11 02 56.1	+1.2
	baz=246						
WTP	Ta-pu	2.07	253	eP	Pb	11 02 29.8	+0.3
	baz=245						
WTP				eS	Sn	11 02 54.1	+1.7
	baz=245						
SLGT	Liugui	2.13	246	eP	Pn	11 02 29.0	+1.6
	baz=240						
SLGT				eS	Sb	11 02 56.3	-0.7
	baz=240						
CHN1	Nanshi	2.16	252	eP	Pb	11 02 30.5	-0.6
	baz=251						
CHN1				eS	Sn	11 02 56.6	+1.8
	baz=251						
TWK	Hsinying	2.17	255	eP	Pb	11 02 31.0	-0.3
	baz=245						
TWK				eS	Sb	11 02 57.8	-0.4
	baz=245						
EAST	Anshuo	2.30	230	eP	Pn	11 02 31.0	+1.2
	baz=238						
MASBT	Mashibuluo	2.33	238	eP	Pb	11 02 32.4	-1.3
	baz=231						

*IDC **24** 11:10:07.3±1.7, 1°.79N×123°.44E, h0^{km}, mb3.5/3, mb1 3.7/3, mb1mx3.3/45, mbtmp3.5/3, Error ellipse: s-maj=231.2km s-min=24.1km az=63.0*

ISC 24 11:10:08.8±1.5, **1°.6N**±0°.1×**123°.1E**±0°.4, **h10^{km}, n5, σ2^{s}.55**/5, **mb3.5**/3, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBP	Tagbilaran	8.04	5	eP	Pb	11 12 26.9	-1.4
TBP	Tagbilaran	8.04	5	eP	Sn	11 13 38.8	+2.0
WRA	Warramunga Arr	24.11	153	P	P	11 15 23.4	-1.5
	0.7nm,0.4s,baz=330,slow=12,SNR=16						
ASAR	Alice Springs	27.25	158	P	P	11 15 55.6	+2.1
	0.2nm,0.3s,baz=340,slow=9.7,SNR=11						
MKAR	Makanchi Array	57.29	328	P	P	11 19 56.9	0.0
	0.2nm,0.4s,baz=116,slow=6.7,SNR=9.4						

*IDC **24** 11:18:55.0±0.6, 3°.13S×142°.27E, h0^{km}, mb4.3/21, mb1 4.5/25, mb1mx4.4/43, mbtmp4.4/25, ML4.6/2, MS3.5/9, Ms1 3.5/9, ms1mx3.3/47, Error ellipse: s-maj=17.8km s-min=12.4km az=81.0*

*MOS **24** 11:18:58.6±0.8, 3°.13S×142°.27E, h35^{km}, mb4.8/27, Error ellipse: s-maj=10.5km s-min=6.2km az=109.3*

*NEIC **24** 11:19:00.5±1.1, 3°.16S±0°.07×142°.17E±0°.02, h35^{km}±1^{km}, mb4.8/71, Error ellipse: s-maj=11.8km s-min=3.2km az=174.0*

*DJA **24** 11:19:01.3±1.0, 3°S±10°×14°2E±°, h82^{km}±9^{km}, M5.0/9, mb5.0/9, mB5.2/4, MLv5.1/3, Mw(mB)4.6/4*

ISC 24 11:18:59.6±0.3, **3°.20S**±0°.04×**142°.20E**±0°.05, **h27^{km}, n198, σ1^{s}.15**/190, **mb4.7**/68, **MS3.6**/3, **10C-2D, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	2.12	286	P	Pn	11 19 33.1	-0.2
MANU	Manus Island	5.28	78	Pn	Pn	11 20 17.3	+0.4
MANU				Sn	Sn	11 21 19.3	+2.5
BAKI	Biak	6.41	288	P	Pn	11 20 33.2	+0.9
	246nm,0.7s						
PMG	Port Moresby	7.89	142	Pn	Pn	11 20 52.8	+0.1
	0.7nm,0.3s,baz=300,slow=9.2,SNR=3.5						
PMG				Sn	Sn	11 22 21.5	+0.4
	baz=300,slow=6.1,SNR=0.8						
PMG				LR	LR	11 24 47.7	
	comp=Z,291nm,21.8s,baz=320,slow=45						
PMG	Port Moresby	7.89	142	ceP	Pn	11 20 54.4	+1.7
PMG				pmax	pmax		
	comp=Z,80nm,1.7s						
PMG	Port Moresby	7.89	142		Pn	11 20 53.2	+0.6
PMG				Sn	Sn	11 22 22.4	+1.2
KRVT	Keravat (AS076	9.86	97	LR	LR	11 24 27.7	
	comp=Z,120nm,21.0s,baz=290,slow=34						
FAKI	Fak Fak	9.95	271	Pn	Pn	11 21 21.0	+0.2
RABL	Rabaul	9.99	96	Pn	Pn	11 21 22.6	+1.1
COEN	Coen	10.73	175		Pn	11 21 34.9	+3.2
SIJI	Sorong	11.17	282	Pn	Pn	11 21 38.9	+1.1
	comp=Z,5.5nm,0.3s,baz=89,slow=10.0,SNR=16						
SIJI				LR	LR	11 27 00.2	
	comp=Z,216nm,18.8s,baz=56,slow=43						
SWI	Sorong	11.18	282	P	Pn	11 21 39.4	+1.6
	comp=Z,46nm,0.6s						
SWI	Sorong	11.18	282	P	Pn	11 21 40.1	+2.3
SWI				pmax	pmax		
	comp=Z,46nm,0.7s						
SAUI	Saumlaki	11.85	246	P	Pn	11 21 47.9	+1.0
	comp=Z,7µmcomp=Z,162nm,0.7s						
SAUI	Saumlaki	11.85	246	Pn	Pn	11 21 47.5	+0.6
MTN	Manton Dam	14.55	228		Pn	11 22 23.7	-0.2
MTN				Sn	Sn	11 24 59.5	-5.0
GUMO	Guam	16.89	9	LR	LR	11 28 17.1	
	comp=Z,87nm,18.8s,baz=204,slow=33						
KNRA	Kununurra	18.14	226	P	P	11 23 10.4	+0.5
KNRA				IAmb	IAmb	11 23 20.7	
	comp=Z,57nm,1.0s						
WB0	Warramunga Arr	18.15	204	P	P	11 23 10.5	+0.5
WR0	Warramunga Arr	18.26	204	P	P	11 23 11.0	-0.3
WRAB	Tennant Creek	18.32	204	ceP	Pn	11 23 12.6	+0.7
WRAB				pmax	pmax		
	comp=Z,12nm,0.7s						
WRAB	Tennant Creek	18.32	204	P	Pn	11 23 11.8	-0.1
WB2	Warramunga Arr	18.32	204	P	Pn	11 23 12.0	0.0
WRA	Warramunga Arr	18.33	204	P	P	11 23 11.9	-0.1
	comp=Z,2.1nm,0.3s,baz=26,slow=12,SNR=32						
WRA				LR	LR	11 30 42.2	
	comp=Z,379nm,18.7s,baz=30,slow=38						
WRA	Warramunga Arr	18.33	204	i P	Pn	11 23 13.0	+0.9
WRA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
WRA	Warramunga Arr	18.33	204	P	Pn	11 23 12.4	+0.3
HNR	Honiara	18.68	110	P	Pn	11 23 16.2	-0.2
	comp=Z,7.9nm,0.3s,baz=229,slow=1.5,SNR=9.1						
HNR	Honiara	18.68	110	P	Pn	11 23 16.5	+0.1
HNR				pmax	pmax		
	comp=Z,88nm,0.8s						
HNR	Honiara	18.68	110	P	Pn	11 23 16.5	+0.1
SOEI	Soe	18.97	249	P	P	11 23 19.2	0.0
SOEI	Soe	18.97	249	P	P	11 23 19.4	+0.2
SOEI				IAmb	IAmb	11 23 38.6	
	comp=Z,59nm,0.7s						
DAV	Davao City (W)	19.48	302	LR	LR	11 30 34.1	
	comp=Z,85nm,21.4s,baz=285,slow=36						
LUWI	Luwuk	19.54	276	P	P	11 23 25.0	-0.3
LUWI				IAmb	IAmb	11 23 37.3	
	comp=Z,49nm,0.7s						
KCP	Kidapawan	19.86	301	⇓eP	Pn	11 23 32.6	+2.0
AS31	Alice Springs	21.87	201	P	P	11 23 50.5	0.0
ASAR	Alice Springs	21.88	201	P	P	11 23 50.4	-0.2
	comp=Z,3.1nm,0.5s,baz=29,slow=11,SNR=91						
ASAR				LR	LR	11 33 05.2	
	comp=Z,252nm,21.2s,baz=24,slow=39						
ASAR	Alice Springs	21.88	201	P	P	11 23 50.3	-0.3
FITZ	Fitzroy Crossi	21.97	226	P	P	11 23 50.8	-0.8
	comp=Z,3.4nm,0.3s,baz=49,slow=11,SNR=25						
FITZ				LR	LR	11 33 20.8	
	comp=Z,203nm,19.8s,baz=48,slow=39						
FITZ	Fitzroy Crossi	21.97	226	P	P	11 23 51.4	-0.2
KAPI	Kappang	22.47	265	P	P	11 23 57.3	+0.3
	comp=Z,1.7nm,0.4s,baz=266,slow=21,SNR=1.4						
EIDS	Eidsvold	23.64	160	P	P	11 24 09.8	+0.9
EIDS				IAmb	IAmb	11 24 19.6	
	comp=Z,17nm,0.8s						
STKA	Stephens Creek	28.54	181	P	P	11 24 52.5	-0.7
	comp=Z,2.3nm,0.6s,baz=348,slow=7.6,SNR=7.8						
STKA				LR	LR	11 37 36.0	
	comp=Z,179nm,18.0s,baz=12,slow=39						
STKA	Stephens Creek	28.54	181	P	P	11 24 53.5	+0.4
STKA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
STKA	Stephens Creek	28.54	181	P	P	11 24 53.5	+0.4
BBOO	Buckleboo	30.02	190	P	P	11 25 06.3	+0.1
BBOO				IAmb	IAmb	11 25 15.4	
	comp=Z,19nm,1.4s						
DZM	Mont Dzumac	30.09	131	P	P	11 25 07.9	+0.7
	comp=Z,2.8nm,0.5s,baz=259,slow=16,SNR=1.3						
DZM	Mont Dzumac	30.09	131	P	P	11 25 07.3	+0.1
DZM				IAmb	IAmb	11 25 20.2	
	comp=Z,13nm,1.2s						
FORT	Forrest	30.52	204	P	P	11 25 11.3	+0.6
H11S3	WAKE ISLAND Hy	32.34	47	T	T	11 59 26.0	
	baz=230,slow=75,SNR=224						
H11S2	WAKE ISLAND Hy	32.35	47	T	T	11 59 25.3	
	baz=230,slow=75,SNR=70						
H11S1	WAKE ISLAND Hy	32.36	47	T	T	11 59 21.5	
	baz=230,slow=75,SNR=40						
CAN	Canberra	32.58	170	P	P	11 25 28.5	-0.4
CAN				pmax	pmax		
	comp=Z,18nm,1.2s						
CAN	Canberra	32.58	170	P	P	11 25 28.5	-0.4
CAN				IAmb	IAmb	11 25 30.8	
	comp=Z,18nm,1.2s						
MORW	Morawa	35.78	221	P	P	11 25 56.5	-0.1
MORW				IAmb	IAmb	11 26 10.2	
	comp=Z,20nm,1.4s						
JNU	Nakatsue	37.68	344	P	P	11 26 12.0	-0.8
JNU				IAmb	IAmb	11 26 17.9	
	comp=Z,16nm,1.2s						
NWAO	Narrogin (SRO)	37.70	215	P	P	11 26 13.4	+0.4
NWAO				pmax	pmax		
	comp=Z,22nm,1.2s						
NWAO	Narrogin (SRO)	37.70	215	P	P	11 26 13.4	+0.4
NWAO				IAmb	IAmb	11 26 20.8	
	comp=Z,22nm,1.1s						
MJAR	Matsushiro Arr	39.71	355	P	P	11 26 27.6	-2.2
	comp=Z,2.1nm,0.8s,baz=182,slow=9.5,SNR=7.0						
MAJO	Matsushiro	39.71	355	P	P	11 26 29.4	-0.4
MAJO				pmax	pmax		
	comp=Z,13nm,1.5s						
MAJO	Matsushiro	39.71	355	P	P	11 26 29.4	-0.4
MAT	Matsushiro	39.71	355	P	P	11 26 29.6	-0.2
KSAR	Wonju Array Be	42.57	343	P	P	11 26 53.0	-0.2
KSAR	Wonju Array Be	42.57	343	P	P	11 26 53.0	-0.2
KSRS	Korea Array	42.57	343	P	P	11 26 53.1	-0.1
	comp=Z,1.4nm,0.6s,baz=158,slow=8.2,SNR=7.4						
WHN	Wuhan	42.81	324	P	P	11 26 57.3	+2.0
OUZ	Omahuta	43.14	141	P	P	11 26 58.6	+0.7
OUZ				IAmb	IAmb	11 27 05.3	
	comp=Z,16nm,1.3s						
RPSI	Rantau Prapat	43.66	277	P	P	11 27 02.5	+0.1
PSI	Prapat	43.67	277	P	P	11 27 02.5	-0.1
	comp=Z,5.3nm,0.7s,baz=91,slow=13,SNR=2.2						
JKA	Kamikawa-asahi	47.10	0	P	P	11 27 28.3	-0.9
ASAJ	Asahikawa	47.10	0	P	P	11 27 28.3	-0.9
	comp=Z,7.0nm,0.8s,baz=208,slow=8.7,SNR=6.4						
BKZ	Black Stump Fm	47.46	144	P	P	11 27 32.6	+0.4
BKZ				IAmb	IAmb	11 27 42.5	
	comp=Z,13nm,1.1s						
BSWZ	Blackbirch Sta	47.71	148	P	P	11 27 33.9	-0.2
CMAR	Chiang Mai Arr	47.72	298	P	P	11 27 34.2	-0.4
	comp=Z,0.8nm,0.6s,baz=116,slow=5.6,SNR=6.1						
CMAR	Chiang Mai Arr	47.72	298	ceP	P	11 27 37.2	+2.7
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
USA0B	Ussuriysk Arra	48.07	350	i P	P	11 27 35.1	-1.6
USA0B	Ussuriysk Arra	48.07	350	P	P	11 27 36.1	-0.6
USA0B				IAmb	IAmb	11 27 37.8	
	comp=Z,8.6nm,0.8s						
USRK	Ussuriysk Ar.	48.07	350	P	P	11 27 36.3	-0.4
	comp=Z,9.8nm,0.8s,baz=150,slow=6.8,SNR=18						
XAN	Xi'an	48.53	323	P	P	11 27 41.0	+0.4
XAN	Xi'an	48.53	323	P	P	11 27 40.1	-0.5
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
XAN	Xi'an	48.53	323	P	P	11 27 40.1	-0.5
XAN				IAmb	IAmb	11 27 41.8	
	comp=Z,11nm,0.8s						
MDJ	Mudanjiang	48.92	348	P	P	11 27 43.1	-0.2
MDJ				IAmb	IAmb	11 27 44.2	
	comp=Z,8.3nm,0.7s						
BJI	Beijing	49.21	334	P	P	11 27 46.0	+0.4
CD2	Chengdu	49.92	316	P	P	11 27 52.4	+1.1
YSS	Yuzh-Sakhalins	49.94	0	eP	P	11 27 48.8	-2.2
HHC	Hu-ho-hao-te	52.01	331	eP	P	11 28 08.6	+1.7
KLR	Kul'dur	53.00	351	i P	P	11 28 13.6	-0.3
KLR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
LZH	Lanzhou	53.01	321	⇓P	P	11 28 16.0	+1.5
LZH				pP	sP	11 28 26.8	+0.8
LZH				sP	pP	11 28 32.8	+10
LZH				PP	PP	11 30 19.8	+5.3
LZH	Lanzhou	53.01	321	SKKS		11 58 00.4	
HIA	Hailar	55.77	342	P	P	11 28 33.4	-0.7
HIA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HIA	Hailar	55.77	342	P	P	11 28 33.4	-0.7
HIA				IAmb	IAmb	11 28 34.5	
	comp=Z,5.6nm,1.0s						
GTA	Gaotai	57.57	322	P	P	11 28 48.8	+1.5
GTA				pP	sP	11 29 03.3	+4.4
GTA				sP	pP	11 29 11.4	+16
PETK	Petropavlovsk-	57.60	11	P	P	11 28 45.9	-1.1
	comp=Z,4.8nm,0.7s,baz=174,slow=7.8,SNR=3.7						
PETK	Petropavlovsk-	57.60	11	P	P	11 28 46.3	-0.7
PETK	Petropavlovsk-	57.60	11	P	P	11 28 46.3	-0.7
ZEA	Zeya	58.09	350	eP	P	11 28 50.2	-0.3
ZEA				pmax	pmax		
	comp=Z,14nm,1.2s						
LSA	Lhasa	58.75	308	P	P	11 28 54.8	-1.3
LSA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
LSA	Lhasa	58.75	308	P	P	11 28 54.8	-1.3
LSA				IAmb	IAmb	11 29 13.0	
	comp=Z,6.2nm,0.5s						
ULN	Ulaanbaatar	59.42	333	ceP	P	11 28 59.2	-0.8
ULN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SONM	Songino Array	59.69	333	P	P	11 29 02.0	+0.1
	comp=Z,0.8nm,0.6s,baz=154,slow=8.5,SNR=5.7						
SONM	Songino Array	59.69	333	P	P	11 29 01.4	-0.4
RAMN	Ramite	61.41	303	eP	P	11 29 15.2	+1.0
	comp=Z,9.6nm,0.5s						
JIRN	Jiri	62.00	304	eP	P	11 29 19.1	+0.8
GUN	Gumba	62.34	304	eP	P	11 29 21.6	+1.0
PKI	Pulchoki	62.62	303	eP	P	11 29 22.9	+0.5
PKIN	Phulchoki	62.63	303	eP	P	11 29 22.9	+0.5
KKN	Kakani	62.80	303	eP	P	11 29 24.3	+0.8
	comp=Z,27nm,0.7s						
DMN	Daman	62.89	303	eP	P	11 29 25.2	+1.1
ZAK	Zakamensk	62.95	333	eP	P	11 29 21.9	-1.9
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GKN	Gorkha	63.41	303	eP	P	11 29 28.3	+0.9
	comp=Z,43nm,0.5s						
TLY	Talaya	63.72	334	ceP	P	11 29 30.4	+1.6
TLY				pmax	pmax		
	comp=Z,4.0nm,1.7s						
TLY	Talaya	63.72	334	P	P	11 29 28.4	-0.4
DANN	Dangsing	64.25	304	eP	P	11 29 33.9	+0.8
	comp=Z,40nm,0.6s						
MOY	Mondy	64.88	333	eP	P	11 29 36.9	+0.3
BOD	Bodaibo	64.91	344	eP	P	11 29 36.2	-0.2
BOD				pmax	pmax		
	comp=Z,5.0nm,1.4s						
YAK	Yakutsk	65.75	354	eP	P	11 29 41.2	-0.6
YAK				pmax	pmax		
	comp=Z,14nm,0.8s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.8s						
YAK	Yakutsk	65.75	354	P	P	11 29 41.1	-0.7
WMQ	Urumqi	67.58	320	eP	P	11 29 55.1	+1.1
WMQ				pP	sP	11 30 08.4	+2.7
WMQ	Urumqi	67.58	320	P	P	11 29 53.3	-0.7
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WMQ	Urumqi	67.58	320	P	P	11 29 53.3	-0.7
WMQ				IAmb	IAmb	11 29 55.8	
	comp=Z,7.9nm,0.8s						
DGZ	Jazzator, Alta	70.62	326	i P	P	11 30 13.3	+0.5
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MK31	Makanchi Array	72.32	321	P	P	11 30 23.2	+0.2
MK31				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MK31	Makanchi Array	72.32	321	P	P	11 30 23.2	+0.2
MKAR	Makanchi Array	72.32	321	P	P	11 30 23.4	+0.4
	comp=Z,3.0nm,0.8s,baz=107,slow=7.8,SNR=33						
MKAR	Makanchi Array	72.32	321	ceP	P	11 30 23.6	+0.6
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MKAR	Makanchi Array	72.32	321	P	P	11 30 23.1	+0.1
MAKZ	Makanchi	72.52	321	P	P	11 30 24.3	+0.1
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MAKZ	Makanchi	72.52	321	P	P	11 30 24.3	+0.1
MAKZ				IAmb	IAmb	11 30 25.7	
	comp=Z,7.8nm,1.0s						
KSH	Kashi	73.97	313	P	P	11 30 35.6	+2.6
KSH				pP	PcP	11 30 48.8	+0.5
KSH				PP	PP	11 33 23.8	+5.4
KSH				S	S	11 40 04.5	+0.6
KSH	Kashi	73.97	313	ScS	S	11 40 38.0	+34
ZAA0	Zalesovo Array	74.13	329	P	P	11 30 32.4	-1.0
ZALV	Zalesovo Beam	74.13	329	P	P	11 30 32.5	-0.9
	comp=Z,5.1nm,0.8s,baz=105,slow=5.1,SNR=17						
ZALV	Zalesovo Beam	74.13	329	P	P	11 30 32.8	-0.7
ZALV	Zalesovo Beam	74.13	329	P	P	11 30 32.8	-0.7
NIL	Nilore	74.42	306	P	P	11 30 36.0	+0.3
NIL				pmax	pmax		
	comp=Z,29nm,0.6s						
NIL	Nilore	74.42	306	P	P	11 30 36.0	+0.3
VNDA	Vanda	75.01	176	P	P	11 30 38.3	+0.1
	comp=Z,0.6nm,0.5s,baz=334,slow=9.7,SNR=2.0						
VNDA	Vanda	75.01	176	P	P	11 30 38.2	+0.1
TIXI	Tiksi	75.22	356	ceP	P	11 30 37.7	-1.7
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.7s						
TIXI	Tiksi	75.22	356	P	P	11 30 38.4	-1.0
KZA	Kyzart	75.29	315	P	P	11 30 42.6	+1.6
	SNR=16						
UCH	Uchtor	75.85	315	P	P	11 30 45.3	+1.0
	SNR=8.9						
AAK	Ala-Archa	75.99	315	ceP	P	11 30 45.7	+1.0
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AAK	Ala-Archa	75.99	315	P	P	11 30 44.7	0.0
KURK	Kurchatov	76.14	324	ceP	P	11 30 45.3	+0.2
KURK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KURK	Kurchatov	76.14	324	P	P	11 30 44.6	-0.5
USP	Ospenovka	76.18	316	P	P	11 30 45.7	+0.1
	SNR=7.5						
AML	Almayashu	76.41	315	P	P	11 30 48.6	+1.2
	SNR=9.2						
EKS2	Erkin-Say	76.50	315	P	P	11 30 48.7	+1.1
	SNR=6.1						
ANM	Nome	77.70	21	P	P	11 30 53.8	+0.2
ANM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ANM	Nome	77.70	21	P	P	11 30 53.8	+0.2
KBL	Kabul	78.02	306	P	P	11 30 55.1	-1.3
KBL				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KBL	Kabul	78.02	306	P	P	11 30 55.1	-1.3
KBL				IAmb	IAmb	11 30 56.5	
	comp=Z,4.3nm,0.5s						
GAR	Garm	78.04	311	P	P	11 30 55.7	-0.6
GAR				IAmb	IAmb	11 30 57.0	
	comp=Z,7.5nm,0.8s						
CHGR	Chuyangaron	78.84	310	P	P	11 30 59.9	-0.8
CHGR				IAmb	IAmb	11 31 01.8	
	comp=Z,12nm,0.9s						
KK31	Karatay Array	78.93	315	P	P	11 30 59.8	-1.1
KK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KK31	Karatay Array	78.93	315	P	P	11 30 59.8	-1.1
KKAR	Karatay Array	78.93	315	P	P	11 31 00.4	-0.5
KKAR	Karatay Array	78.93	315	P	P	11 31 00.4	-0.5
OHAK	Old Harbor	79.21	30	P	P	11 31 01.6	-0.5
SVW2	Sparrevohn	79.76	26	P	P	11 31 05.4	+0.3
SVW2				IAmb	IAmb	11 31 07.3	
	comp=Z,11nm,1.3s						
RDOG	Red Dog Mine	80.53	18	IAmb	IAmb	11 31 13.2	
	comp=Z,8.9nm,0.6s						
NRIK	Noril'sk	81.19	343	P	P	11 31 11.7	-0.8
	comp=Z,1.9nm,0.3s,baz=114,slow=4.9,SNR=8.6						
NRIK	Noril'sk	81.19	343	i P	P	11 31 12.2	-0.3
NRIK				pmax	pmax		
	comp=Z,18nm,1.7s						
BVAR	Borovoye Array	81.72	325	P	P	11 31 15.6	-0.1
	comp=Z,14nm,0.9s,baz=112,slow=6.6,SNR=47						
BRVK	Borovoye	81.79	325	ceP	P	11 31 16.1	+0.1
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BRVK	Borovoye	81.79	325	P	P	11 31 15.8	-0.3
BRVK				IAmb	IAmb	11 31 18.1	
	comp=Z,9.8nm,0.8s						
SUA	Susitna One	82.05	27	IAmb	IAmb	11 31 18.5	
	comp=Z,7.1nm,0.8s						
IMAR	Indian Mountai	82.63	22	P	P	11 31 19.8	-0.4
KTH	Kantishna Hill	82.76	25	IAmb	IAmb	11 31 20.9	
	comp=Z,10.0nm,0.8s						
TRF	Thorofare Moun	82.98	25	IAmb	IAmb	11 31 23.7	
	comp=Z,4.8nm,0.8s						
MLY	Manley	83.39	23	IAmb	IAmb	11 31 25.8	
	comp=Z,9.9nm,1.3s						
CCB	Clear Creek Bu	84.43	24	P	P	11 31 28.4	-1.0
COLA	College	84.48	24	P	P	11 31 28.5	-1.2
COLA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
COLA	College	84.48	24	P	P	11 31 28.5	-1.2
COLA				IAmb	IAmb	11 31 29.8	
	comp=Z,8.1nm,0.8s						
HDA	Harding Lake	84.70	24	IAmb	IAmb	11 31 30.7	
	comp=Z,4.8nm,0.8s						
IL31		84.84	24	P	P	11 31 29.8	-1.6
ILAR	Eielson Array	84.84	24	P	P	11 31 29.7	-1.8
	comp=Z,8.8nm,0.7s,baz=259,slow=4.8,SNR=133						
TOLK	Toolik Lake Re	85.17	20	P	P	11 31 33.5	+0.3
TOLK				IAmb	IAmb	11 31 35.6	
	comp=Z,6.0nm,0.8s						
RIDG	Independent Ri	85.38	25	IAmb	IAmb	11 31 34.3	
	comp=Z,8.2nm,0.9s						
BCAR	Beaver Creek A	86.53	26	P	P	11 31 39.8	-0.2
BMAR	Burnt Mountain	86.55	22	P	P	11 31 39.9	-0.1
QSPA	South Pole Qui	86.75	180	P	P	11 31 40.8	-0.3
QSPA				IAmb	IAmb	11 31 41.4	
	comp=Z,3.9nm,0.7s						
EGAK	Eagle	87.20	25	P	P	11 31 42.9	-0.3
EGAK				IAmb	IAmb	11 31 43.6	
	comp=Z,5.5nm,0.9s						
ABKAR	Akbulak array	87.35	319	P	P	11 31 42.9	-1.3
AKTO	Aktyubinsk	88.73	320	P	P	11 31 49.5	-1.3
	comp=Z,1.4nm,0.9s,baz=69,slow=4.9,SNR=4.0						
SOCY	Socotra	88.92	282	P	P	11 31 51.5	-1.1
YKA	Yellowknife Ar	98.91	27	P	P	11 32 35.7	-1.5
	comp=Z,0.5nm,0.8s,baz=275,slow=4.8,SNR=9.0						
GERES	GERESS Array B	116.89	325	PKP	PKPdf	11 37 41.5	-0.5
	comp=Z,0.5nm,0.5s,baz=40,slow=1.7,SNR=2.1						
GERES	GERESS Array B	116.89	325	PKIKP	PKiKP	11 37 41.7	-0.3
GERES	GERESS Array B	116.89	325		PKiKP	11 37 41.7	-0.3
SCHQ	Schefferville	123.38	20	PKP	PKPdf	11 37 53.5	-0.7
	comp=Z,1.9nm,0.7s,baz=15,slow=1.2,SNR=4.3						
CRPR	Cabo Rojo, PR	147.73	61	PKPbc	PKPbc	11 38 41.6	-1.2
MLPR	Magueyes Islan	147.80	61		PKPbc	11 38 41.9	-1.1
OBIP	Obispado Ponce	148.15	60		PKPbc	11 38 41.8	-2.2
SJG	San Juan	148.52	60	PKP2	PKPbc	11 38 44.1	-0.8
SJG	San Juan	148.52	60		PKPbc	11 38 44.1	-0.8
PDPR	Patillas Dam,	148.67	60		PKPbc	11 38 44.3	-1.0
SMRT	St. Maarten	151.17	57		PKPbc	11 38 50.4	-1.1

*IDC **24** 11:24:36.9±1.2, 12°.30N×86°.40W, h0^{km}, mb4.1/8, mb1 4.4/11, mb1mx4.1/48, mbtmp4.2/11, ML3.9/3, MS5.5/1, Ms1 5.5/1, ms1mx3.5/41, Error ellipse: s-maj=43.4km s-min=18.8km az=50.0*

*UCR **24** 11:24:39.6, 11°.61N×87°.10W, h15^{km}, MD4.2, ML4.0, mb4.5(NEIC)*

*INET **24** 11:24:41.7, 11°.68N×86°.98W, h16^{km}, ML4.9*

*NEIC **24** 11:24:42.4±1.2, 11°.69N±0°.02×86°.89W±0°.05, h58^{km}±9^{km}, mb4.5/123, Error ellipse: s-maj=7.3km s-min=3.3km az=91.0*

*SNET **24** 11:24:42.0±0.9, 11°.61N×87°.17W, h35^{km}±999^{km}, ML4.2*

*GCG **24** 11:24:46.8±3.3, 11°.37N×87°.69W, h24^{km}±999^{km}, MD4.5*

ISC 24 11:24:42.9±0.9**, 11°.73N**±0°.05×**87°.02W**±0°.05**, h61**km±9km**,** **n247, σ1§38**/231**, mb4.4**/54**, 2C-3D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIN	San Cristobal	0.96	358	⇑*e*P	Pn	11 24 59.6	-1.1
CSGN	Cosiguina Volc	1.35	337	⇑*e*P	Pn	11 25 05.9	+0.2
CSGN				*e*S	Sn	11 25 24.7	+1.9
CSGN	Cosiguina Volc	1.35	337		Pn	11 25 05.7	0.0
CSGN				Sn	Sn	11 25 23.9	+1.2
MATN	Matagalpa	1.60	42	⇓*i*P	Pn	11 25 08.1	-1.0
CNCH	Conchagua	1.73	333	*e*P	Pn	11 25 10.4	-0.5
CNCH				IAML		11 25 36.2	
	comp=Z,4µm,0.4s						
CNCH	Conchagua	1.73	333	*e*P	Pn	11 25 10.4	-0.5
CNCH				IAML		11 25 36.2	
	comp=Z,4µm,0.4s						
LCND	La Caada	1.79	332	*e*P	Pn	11 25 11.1	-0.5
LCND				*e*S	Sn	11 25 33.8	+0.6
LCND				IAML		11 25 37.4	
	comp=Z,4µm,0.4s						
LCND	La Caada	1.79	332	*e*P	Pn	11 25 11.1	-0.5
LCND				*e*S	Sn	11 25 33.8	+0.6
LCND				IAML		11 25 37.4	
	comp=Z,4µm,0.4s						
ACON	Acoyapa	1.82	82	⇓*i*P	Pn	11 25 09.7	-2.2
ACON	Acoyapa	1.82	82		Pn	11 25 09.4	-2.5
ACON				Sn	Sn	11 25 30.8	-3.1
GPS3	Bodega del ICE	1.89	121	*i* P	Pn	11 25 11.3	-1.7
GPS3				*i* S	Sn	11 25 36.9	+1.2
JUCU	Jucuar¡n	1.93	322	*e*P	Pn	11 25 12.6	-1.1
JUCU				*e*S	Sn	11 25 37.4	+0.5
JUCU	Jucuar¡n	1.93	322	*e*P	Pn	11 25 12.6	-1.1
JUCU				*e*S	Sn	11 25 37.4	+0.5
LIM1	Limonal	2.01	121	*i* P	Pn	11 25 11.0	-3.6
LIM1				*i* S	Sn	11 25 40.9	+2.2
COLC	Colonia	2.07	121	*i* P	Pn	11 25 13.0	-2.4
BLLM	Bellamira	2.08	325	*e*P	Pn	11 25 15.5	0.0
BLLM	Bellamira	2.08	325	*e*P	Pn	11 25 15.5	0.0
VSM	San Miguel	2.09	324	*e*P	Pn	11 25 16.4	+0.5
VSM	San Miguel	2.09	324	*e*P	Pn	11 25 16.4	+0.5
LCY	Lacayo	2.10	324	*e*P	Pn	11 25 15.6	-0.3
LCY	Lacayo	2.10	324	*e*P	Pn	11 25 15.6	-0.3
CUI	Cuipilapa	2.11	120	*e*P	Pn	11 25 14.1	-1.9
CUI				*e*S	Sn	11 25 41.3	+0.2
PLVR	Palo Verde	2.13	130	*e*P	Pn	11 25 13.9	-2.6
PLVR				*e*S	Sn	11 25 45.9	+4.0
PACA	Pacayal	2.15	324	*e*P	Pn	11 25 16.2	-0.4
PACA	Pacayal	2.15	324	*e*P	Pn	11 25 16.2	-0.4
ALJI	Alcalda de J	2.20	316	*e*P	Pn	11 25 16.2	-0.9
ALJI				IAML		11 25 27.4	
	comp=Z,1µm,0.4s						
ALJI				*e*S	Sn	11 25 42.0	-1.2
ALJI	Alcalda de J	2.20	316	*e*P	Pn	11 25 16.2	-0.9
ALJI				IAML		11 25 27.4	
	comp=Z,1µm,0.4s						
ALJI				*e*S	Sn	11 25 42.0	-1.2
FAGO	Alcalda de S	2.22	332	*e*P	Pn	11 25 17.1	-0.4
FAGO				*e*S	Sn	11 25 44.8	+0.9
FAGO				IAML		11 25 49.3	
	comp=Z,614nm,0.5s						
FAGO	Alcalda de S	2.22	332	*e*P	Pn	11 25 17.1	-0.4
FAGO				*e*S	Sn	11 25 44.8	+0.9
FAGO				IAML		11 25 49.3	
	comp=Z,614nm,0.5s						
ACAL	Aguas Claras	2.23	119	*i* P	Pn	11 25 15.9	-1.8
TECA	Tecapa	2.28	321	*e*P	Pn	11 25 17.7	-0.7
TECA	Tecapa	2.28	321	*e*P	Pn	11 25 17.7	-0.7
COEB	Comit de Eme	2.30	320	*e*P	Pn	11 25 17.8	-0.8
COEB				*e*S	Sn	11 25 46.5	+0.7
COEB				IAML		11 25 53.3	
	comp=Z,1µm,0.4s						
COEB	Comit de Eme	2.30	320	*e*P	Pn	11 25 17.8	-0.8
COEB				*e*S	Sn	11 25 46.5	+0.7
COEB				IAML		11 25 53.3	
	comp=Z,1µm,0.4s						
TGUH	Tegucigalpa,Un	2.33	354	*e*P	Pn	11 25 19.4	+0.4
TGUH	Tegucigalpa,Un	2.33	354	*e*P	Pn	11 25 19.4	+0.4
TGUH	Tegucigalpa,Un	2.33	354		Pn	11 25 19.4	+0.4
TGUH				Sn	Sn	11 25 47.1	+0.6
JTS	Las Juntas de	2.48	125	Pn	Pn	11 25 18.9	-2.1
	comp=Z,19nm,0.3s,baz=355,slow=24,SNR=86						
JTS				Sn	Sn	11 25 50.8	+0.6
	comp=Z,78nm,0.3s,baz=54,slow=23,SNR=9.3						
JTS	Las Juntas de	2.48	125	*e*P	Pn	11 25 18.3	-2.7
JTS	Las Juntas de	2.48	125		Pn	11 25 18.7	-2.3
ARE1	Arenal 1	2.58	119	*e*P	Pn	11 25 20.5	-1.9
ARE1				*e*S	Sn	11 25 56.7	+4.0
CASO	Castillo	2.58	120	*i* P	Pn	11 25 20.0	-2.5
CEDE	Laguna Cedeo	2.58	118	*e*P	Pn	11 25 21.2	-1.2
FORC	Fortuna	2.62	118	*i* P	Pn	11 25 21.1	-1.8
ESPN	Las Esperanzas	2.70	80	⇓*e*P	Pn	11 25 22.4	-1.5
ESPN	Las Esperanzas	2.70	80	Pn	Pn	11 25 22.0	-1.9
LFRS	El Faro	2.74	314	*e*P	Pn	11 25 23.1	-1.5
LOMA	Loma Larga	2.84	312	IAML		11 26 05.0	
	comp=Z,1µm,0.2s						
LOMA	Loma Larga	2.84	312	IAML		11 26 05.0	
	comp=Z,1µm,0.2s						
OPAM	Oficina de Pla	2.90	313	IAML		11 26 11.2	
	comp=Z,784nm,0.5s						
OPAM	Oficina de Pla	2.90	313	IAML		11 26 11.2	
	comp=Z,784nm,0.5s						
SNET	Serv Nac Est T	2.91	312	IAML		11 26 15.3	
	comp=Z,861nm,0.5s						
SNET	Serv Nac Est T	2.91	312	IAML		11 26 15.3	
	comp=Z,861nm,0.5s						
SNET	Serv Nac Est T	2.91	312		Pn	11 25 27.0	+0.1
UEES	Universidad Ev	2.93	313	IAML		11 26 19.1	
	comp=Z,780nm,0.3s						
UEES	Universidad Ev	2.93	313	IAML		11 26 19.1	
	comp=Z,780nm,0.3s						
BOQS	Boqueron	2.98	312	*e*P	Pn	11 25 27.7	-0.2
SRA1	San Ramn	2.98	123	*e*P	Pn	11 25 25.7	-2.2
CEVE	Cerro Verde	3.29	310	*e*P	Pn	11 25 31.8	-0.5
CEVE	Cerro Verde	3.29	310	*e*P	Pn	11 25 31.8	-0.5
SBLS	San Blas	3.30	310	*e*P	Pn	11 25 32.0	-0.4
SBLS	San Blas	3.30	310	*e*P	Pn	11 25 32.0	-0.4
SNJE	San Jose	3.30	310	*e*P	Pn	11 25 32.4	0.0
SNJE	San Jose	3.30	310	*e*P	Pn	11 25 32.4	0.0
HDC	Heredia	3.33	121	*e*P	Pn	11 25 32.7	0.0
HDC				*e*S	Sn	11 26 14.7	+3.6
HDC	Heredia	3.33	121	Pn	Pn	11 25 30.1	-2.6
LCR2	La Lucha 2	3.56	123	*e*P	Pn	11 25 34.6	-1.4
IXG	Ixpaco	4.13	306	*e*P	Pn	11 25 44.3	+0.6
FUG	Fuego 3	4.60	306	*e*P	Pn	11 25 51.7	+1.5
FUG				*e*S	Sn	11 26 43.0	+0.5
APG	El Apazote	4.67	314	Pn	Pn	11 25 51.2	0.0
	comp=Z,2.4nm,0.3s,baz=123,slow=7.7,SNR=20						
STG3	Santiaguito 3,	5.33	304	*e*P	Pn	11 26 01.9	+1.7
STG3				*e*S	Sn	11 26 59.5	-0.9
ICCO	Coco Island	6.15	180	*e*P	Pn	11 26 09.2	-2.0
CCIG	Comitan	6.72	313		Pn	11 26 20.6	+1.4
BCIP	Isla Barro Col	7.50	109	Pn	Pn	11 26 27.7	-2.1
TEIG	Tepich	8.53	352	Pn	Pn	11 26 44.1	+0.3
CMIG	Matias Romero	9.30	306	Pn	Pn	11 26 54.9	+0.5
	comp=Z,3.4nm,0.3s,baz=127,slow=6.1,SNR=52						
TLIG	Tlapa	12.59	299		Pn	11 27 40.6	+1.2
ZAIG	Zacatecas	18.45	309	P	Pn	11 28 55.4	+0.6
TIGA	Tifton	19.87	9	P	Pn	11 29 13.0	+1.8
	baz=190						
HKT	Hockley	19.90	337	P	Pn	11 29 10.4	-1.1
HKT				IAmb	IAmb	11 29 12.3	
	comp=Z,22nm,1.0s						
833A	Chaparral WMA,	20.16	327	P	P	11 29 12.6	+0.1
833A	Chaparral WMA,	20.16	327	P	P	11 29 12.6	+0.1
	baz=142,SNR=6.4						
ATAH	Atahualpa	20.61	155	LR	LR	11 36 50.1	
	comp=Z,12µm,19.2s,baz=122,slow=35						
146A	Union	20.89	355	P	P	11 29 21.0	+0.8
146A				IAmb	IAmb	11 29 25.0	
	comp=Z,21nm,0.5s						
152A	Waverly Hall	20.95	5	P	P	11 29 21.1	+0.2
NATX	Nacogdoches	21.14	342	P	P	11 29 24.1	+1.1
NATX				IAmb	IAmb	11 29 27.3	
	comp=Z,26nm,0.8s						
NATX	Nacogdoches	21.14	342	P	P	11 29 25.9	+2.9
	baz=159						
LRAL	Lakeview Retre	21.20	0	P	P	11 29 25.1	+1.5
	baz=180						
435B	Jarrell	21.34	334	P	P	11 29 25.3	+0.3
435B				IAmb	IAmb	11 29 26.9	
	comp=Z,12nm,0.8s						
Z50A	Ashland	21.45	3	P	P	11 29 28.4	+2.2
	baz=183						
157A	Early Branch	21.57	14	P	P	11 29 30.0	+2.6
	baz=196						
237A	Washetta, Mont	21.74	339	IAmb	IAmb	11 29 33.0	
	comp=Z,17nm,0.8s						
GOGA	Godfrey	21.82	8	P	P	11 29 31.4	+1.2
	baz=189						
Y49A	Blount Mountai	22.03	1	P	P	11 29 33.3	+0.8
Y49A				IAmb	IAmb	11 29 34.2	
	comp=Z,22nm,1.2s						
JCT	Junction City	22.11	329	P	P	11 29 33.1	-0.3
	baz=145						
Y52A	Lilburn	22.20	7	P	P	11 29 34.7	+0.5
Y52A				IAmb	IAmb	11 29 37.6	
	comp=Z,14nm,0.8s						
Y52A	Lilburn	22.20	7	P	P	11 29 34.8	+0.6
	baz=187						
WHTX	Lake Whitney,	22.34	336	P	P	11 29 36.0	+0.2
	baz=152,SNR=19						
Y55A	Saluda	22.60	11	P	P	11 29 39.3	+0.8
	baz=193						
OXF	Oxford	22.78	355	P	P	11 29 40.0	-0.5
	baz=174						
X54A	Belton	23.10	10	P	P	11 29 42.5	-1.2
	baz=191						
PLAL	Pickwick Lake	23.17	358	P	P	11 29 44.1	-0.2
X40A	Basin Creek Fa	23.27	348	P	P	11 29 45.8	+0.5
	baz=165						
X56A	White Oak	23.30	13	P	P	11 29 45.6	0.0
	baz=195						
TXAR	Lajitas Array	23.40	321	P	P	11 29 47.7	+1.0
	comp=Z,9.2nm,0.6s,baz=138,slow=9.9,SNR=125						
TX31	Lajitas Ar. Si	23.40	321	P	P	11 29 47.7	+1.0
TX31				IAmb	IAmb	11 29 48.4	
	comp=Z,13nm,0.8s						
TX32	Lajitas Array	23.40	321	IAmb	IAmb	11 29 48.4	
	comp=Z,13nm,0.8s						
W50A	Signal Mountai	23.42	4	P	P	11 29 47.3	+0.6
W50A				IAmb	IAmb	11 29 48.7	
	comp=Z,12nm,0.7s						
MIAR	Mount Ida	23.48	346	IAmb	IAmb	11 29 48.3	
	comp=Z,15nm,0.7s						
MIAR	Mount Ida	23.48	346	P	P	11 29 46.9	-0.4
	baz=164,SNR=9.8						
W54A	Cherokee Point	23.66	10	P	P	11 29 49.6	+0.7
	baz=192						
CPCT	Cooper Cave	23.72	5	P	P	11 29 49.4	-0.1
ABTX	Abilene, Hawle	23.81	333	IAmb	IAmb	11 29 52.9	
	comp=Z,25nm,1.1s						
ABTX	Abilene, Hawle	23.81	333	P	P	11 29 50.5	+0.1
	baz=148						
W41B	Gary Mavity, V	23.82	349	P	P	11 29 50.3	0.0
	baz=167						
V48A	Smith Brothers	23.90	0	IAmb	IAmb	11 29 53.2	
	comp=Z,6.3nm,0.7s						
W39A	Magazine	24.16	346	IAmb	IAmb	11 29 54.7	
	comp=Z,8.4nm,0.8s						
W39A	Magazine	24.16	346	P	P	11 29 53.8	+0.4
	baz=163,SNR=5.8						
W58A	Raeford	24.24	16	P	P	11 29 55.5	+1.3
	baz=198						
CLTN	Cedars of Leba	24.26	1	IAmb	IAmb	11 29 56.6	
	comp=Z,12nm,0.6s						
WVT	Waverly	24.30	358	P	P	11 29 54.1	-0.6
	baz=178						
V54A	Nebo	24.38	10	P	P	11 29 55.6	+0.1
	baz=192						
V56A	Mocksville	24.69	13	P	P	11 29 58.7	+0.4
	baz=195						
TZTN	Tazewell	24.90	7	P	P	11 30 00.7	+0.4
TZTN				IAmb	IAmb	11 30 03.2	
	comp=Z,11nm,0.9s						
TZTN	Tazewell	24.90	7	P	P	11 30 00.8	+0.6
	baz=188						
PARMO	Parma	24.95	355	IAmb	IAmb	11 30 01.8	
	comp=Z,29nm,1.0s						
V58A	Windy Hill, Pi	25.00	15	P	P	11 30 01.4	+0.3
V58A				IAmb	IAmb	11 30 02.3	
	comp=Z,12nm,0.7s						
V58A	Windy Hill, Pi	25.00	15	P	P	11 30 00.6	-0.6
	baz=198						
U40A	Yellville	25.08	349	IAmb	IAmb	11 30 03.0	
	comp=Z,8.1nm,0.7s						
U40A	Yellville	25.08	349	P	P	11 30 01.4	-0.4
	baz=166,SNR=7.4						
PBMO	Poplar Bluff	25.13	354	IAmb	IAmb	11 30 03.6	
	comp=Z,5.9nm,0.5s						
T47A	Sharon Grove	25.15	360	IAmb	IAmb	11 30 03.7	
	comp=Z,7.6nm,0.8s						
WMOK	Wichita Mounta	25.28	337	P	P	11 30 03.7	0.0
	baz=152,SNR=56						
T49A	Edmonton	25.30	3	P	P	11 30 03.8	0.0
	baz=183						
TUL1	Leonard	25.35	343	IAmb	IAmb	11 30 04.6	
	comp=Z,22nm,1.1s						
TUL1	Leonard	25.35	343	P	P	11 30 03.1	-1.2
	baz=159						
U38A	Gravette	25.48	346	IAmb	IAmb	11 30 05.8	
	comp=Z,11nm,0.9s						
U57A	Blanch	25.55	14	P	P	11 30 06.2	+0.1
	baz=197						
U58A	Oxford	25.72	16	P	P	11 30 07.7	+0.1
	baz=199						
MNTX	Cornudas Mount	26.11	322	P	P	11 30 12.6	+1.3
	baz=136,SNR=10						
MSTX	Muleshoe	26.40	330	IAmb	IAmb	11 30 16.7	
	comp=Z,18nm,0.8s						
MSTX	Muleshoe	26.40	330	P	P	11 30 13.7	-0.2
	baz=143,SNR=14						
S39A	Bolivar	26.46	349	IAmb	IAmb	11 30 15.0	
	comp=Z,8.0nm,0.7s						
CCM	Cathedral Cave	26.49	352	P	P	11 30 14.2	-0.4
CCM	Cathedral Cave	26.49	352	P	P	11 30 14.1	-0.4
	baz=170						
AMTX	Amarillo	26.63	332	P	P	11 30 17.5	+1.5
	baz=146						
S58A	Poland Farm, P	27.00	16	P	P	11 30 19.0	-0.1
	baz=199						
Q51A	Peebles	27.38	6	P	P	11 30 22.7	+0.1
	baz=188						
121A	Cookes Peak, D	28.16	321	P	P	11 30 34.9	+5.1
	baz=133						
Q57A	Strasburg	28.25	14	P	P	11 30 30.2	-0.1
	baz=198						
O50A	Cable	28.46	5	P	P	11 30 31.6	-0.6
	baz=187						
MCWV	Mont Chateau	28.53	12	P	P	11 30 30.9	-1.9
	baz=194						
KSU1	Kansas State U	28.56	344	IAmb	IAmb	11 30 33.3	
	comp=Z,19nm,1.0s						
KSU1	Kansas State U	28.56	344	P	P	11 30 32.3	-0.9
	baz=160						
HDIL	Hopedale	28.78	356	IAmb	IAmb	11 30 43.3	
	comp=Z,14nm,0.6s						
ANMO	Albuquerque	29.09	326	P	P	11 30 38.8	+0.8
	comp=Z,0.9nm,0.7s,baz=123,slow=6.6,SNR=5.3						
ANMO	Albuquerque	29.09	326	P	P	11 30 39.3	+1.2
ANMO	Albuquerque	29.09	326	P	P	11 30 40.1	+2.0
	baz=138						
N49A	Columbus Grove	29.18	4	P	P	11 30 38.3	-0.3
	baz=185						
O56A	Blue Knob Stat	29.39	13	P	P	11 30 40.0	-0.5
O56A				IAmb	IAmb	11 30 51.9	
	comp=Z,19nm,1.4s						
T25A	Trinidad	29.74	331	P	P	11 30 44.8	+0.9
T25A	Trinidad	29.74	331	P	P	11 30 45.2	+1.3
	baz=144						
M50A	Fremont	29.76	6	P	P	11 30 43.5	-0.2
	baz=188						
N33A	J Bar K, Exete	30.32	344	P	P	11 30 48.8	+0.1
KSCO	Kaye Shedlock’	30.51	336	P	P	11 30 50.9	+0.3
	baz=149						
M56A	Emporium	30.63	13	P	P	11 30 51.2	-0.2
M56A				IAmb	IAmb	11 30 55.6	
	comp=Z,7.7nm,0.9s						
L53A	Girard	30.68	10	P	P	11 30 51.4	-0.5
	baz=193						
N59A	State Game Lan	30.71	17	P	P	11 30 52.5	+0.3
N59A				IAmb	IAmb	11 31 02.8	
	comp=Z,24nm,1.4s						
N59A	State Game Lan	30.71	17	P	P	11 30 51.6	-0.5
	baz=202						
M57A	Sunshine Farm,	30.74	15	P	P	11 30 51.9	-0.5
	baz=199						
SDCO	Great Sand Dun	30.74	331	P	P	11 30 53.5	+0.7
SDCO	Great Sand Dun	30.74	331	P	P	11 30 53.8	+1.0
	baz=142,SNR=5.8						
K48A	Perry	31.06	4	P	P	11 30 53.5	-1.7
	baz=185						
BGNE	Belgrade	31.14	344	P	P	11 30 54.7	-1.2
	baz=158						
S22A	4UR Ranch, Cre	31.40	329	P	P	11 30 59.1	+0.6
	baz=140						
X16A	Lo Mia Camp, P	31.70	319	P	P	11 31 02.8	+1.6
WUAZ	Wupatki	32.36	321	IAmb	IAmb	11 31 11.7	
	comp=Z,4.6nm,0.8s						
WUAZ	Wupatki	32.36	321	P	P	11 31 08.3	+1.4
	baz=131						
PV12	Saucer Basin,	32.85	327	IAmb	IAmb	11 31 13.5	
	comp=Z,8.3nm,0.7s						
ECSD	EROS Data Cent	32.95	347	IAmb	IAmb	11 31 11.7	
	comp=Z,10nm,0.8s						
ECSD	EROS Data Cent	32.95	347	P	P	11 31 10.3	-1.5
	baz=162,SNR=9.8						
H48A	Harrisville	33.01	5	P	P	11 31 11.1	-1.2
	baz=186						
G40A	Rib Lake	33.53	356	IAmb	IAmb	11 31 17.1	
	comp=Z,5.1nm,1.1s						
SPMN	Marine on St.	33.74	353	P	P	11 31 17.0	-1.6
	baz=170,SNR=7.8						
BC3	Big Chuckawall	33.93	315	P	P	11 31 22.8	+2.2
	baz=123						
O20A	White River Ci	33.94	330	IAmb	IAmb	11 31 23.0	
	comp=Z,13nm,1.2s						
O20A	White River Ci	33.94	330	P	P	11 31 21.9	+1.2
	baz=140,SNR=5.4						
SUSD	Miller	34.18	345	P	P	11 31 20.9	-1.5
	baz=159,SNR=6.7						
F48A	Evansville	34.19	5	P	P	11 31 21.1	-1.4
	baz=187						
COWI	Conover	34.30	357	IAmb	IAmb	11 31 23.0	
	comp=Z,4.6nm,0.6s						
G54A	Lake Saint Pet	34.41	11	P	P	11 31 22.8	-1.6
	baz=195						
BELC	Belle Mtn. Jos	34.49	315	P	P	11 31 28.3	+2.8
	baz=123						
E43A	Lone Tree Farm	34.53	0	IAmb	IAmb	11 31 25.2	
	comp=Z,5.8nm,0.7s						
E47A	Iron Bridge	34.75	5	P	P	11 31 26.8	-0.5
	baz=186						
E44A	Grand Marais A	34.79	1	P	P	11 31 26.4	-1.2
	baz=182						
D46A	Sault St. Mari	35.13	4	P	P	11 31 27.8	-2.9
	baz=185						
D47A	Chapleau	35.36	5	P	P	11 31 31.1	-1.5
	baz=186						
RSSD	Black Hills	35.45	339	P	P	11 31 34.5	+0.8
	baz=150						
D48A	Paudash Townsh	35.60	6	P	P	11 31 33.3	-1.4
	baz=189						
EYMN	Ely	36.30	355	P	P	11 31 38.6	-1.9
	baz=172						
TPNV	Topopah Spring	36.34	319	P	P	11 31 42.5	+1.3
	baz=126						
DUG	Dugway, Tooele	36.36	326	P	P	11 31 43.0	+1.6
	baz=134						
D54A	Lac Fusel, La	36.37	12	P	P	11 31 40.8	-0.5
	baz=197						
FURC	Furnace Creek,	36.46	318	P	P	11 31 44.5	+2.5
	baz=125						
BW06	Boulder Array	36.60	332	IAmb	IAmb	11 31 44.4	
	comp=Z,2.4nm,0.6s						
BW06	Boulder Array	36.60	332	P	P	11 31 43.8	+0.3
	baz=141						
PD31	Pinedale Array	36.60	332	P	P	11 31 44.0	+0.5
PDAR	Pinedale Array	36.60	332	P	P	11 31 43.7	+0.2
	comp=Z,2.5nm,0.7s,baz=130,slow=10,SNR=28						
PDAR	Pinedale Array	36.60	332	P	P	11 31 43.6	0.0
MPMC	Manual Prospec	36.65	316	P	P	11 31 45.4	+1.4
	baz=124						
R11A	Troy Canyon, C	36.76	321	P	P	11 31 45.9	+1.0
	baz=128						
AGMN	Agassiz Nation	37.20	350	P	P	11 31 46.9	-1.3
	baz=165						
AHID	Auburn Hatcher	37.34	330	IAmb	IAmb	11 31 52.0	
	comp=Z,5.2nm,0.7s						
MDND	Maddock	37.52	346	P	P	11 31 50.2	-0.8
	baz=159						
SNOW	Snow King Moun	37.70	331	P	P	11 31 53.8	+0.9
TPAW	Teton Pass	37.81	331	IAmb	IAmb	11 31 56.2	
	comp=Z,5.5nm,0.7s						
FLWY	Flagg Ranch	38.15	332	IAmb	IAmb	11 31 58.2	
	comp=Z,4.6nm,0.8s						
RLMT	Red Lodge	38.33	334	IAmb	IAmb	11 31 59.0	
	comp=Z,2.9nm,0.7s						
RLMT	Red Lodge	38.33	334	P	P	11 31 58.2	+0.1
	baz=143						
NV11	Mina Array Sit	38.43	319	P	P	11 32 00.5	+1.5
NVAR	Mina Array Bea	38.52	319	P	P	11 32 02.1	+2.3
	comp=Z,0.7nm,0.7s,baz=133,slow=7.6,SNR=7.9						
NVAR	Mina Array Bea	38.52	319	P	P	11 32 01.1	+1.3
ULM	Lac du Bonnet	39.09	351	P	P	11 32 01.7	-2.4
	comp=Z,6.3nm,0.6s,baz=172,slow=8.3,SNR=11						
DGMT	Dagmar	39.33	342	P	P	11 32 05.7	-0.5
	baz=153						
DLMT	Dillon	40.00	332	P	P	11 32 12.8	+0.8
DLMT				IAmb	IAmb	11 32 13.8	
	comp=Z,4.6nm,0.9s						
EGMT	Eagleton	40.88	337	P	P	11 32 18.8	-0.3
	baz=145						
MSO	Missoula	41.72	332	P	P	11 32 25.9	-0.1
	baz=138						
O02D	Mt. Diablo Mer	42.38	318	P	P	11 32 33.0	+1.4
	baz=122						
F10A	Beach Ranch, E	42.69	329	P	P	11 32 34.2	+0.3
F10A				IAmb	IAmb	11 32 39.3	
	comp=Z,4.9nm,0.9s						
E07A	Sunnyside	44.44	328	IAmb	IAmb	11 32 49.5	
	comp=Z,7.3nm,0.9s						
FFC	Flin Flon	44.49	348	P	P	11 32 47.1	-1.0
FFC				IAmb	IAmb	11 32 50.3	
	comp=Z,5.7nm,1.1s						
SCHQ	Schefferville	45.84	16	P	P	11 32 56.1	-2.8
	comp=Z,0.9nm,0.5s,baz=236,slow=11,SNR=3.8						
SCHQ	Schefferville	45.84	16	P	P	11 32 57.0	-1.9
SCHQ				IAmb	IAmb	11 33 14.5	
	comp=Z,6.2nm,1.2s						
B05A	Bryant	46.70	328	P	P	11 33 04.5	-1.2
	baz=129						
PEL	Peldehue	47.27	161	P	P	11 33 09.9	-0.4
YKA	Yellowknife Ar	54.41	345	P	P	11 34 02.2	-1.4
	comp=Z,2.9nm,0.8s,baz=140,slow=7.9,SNR=66						
EPYK	Eagle Plains	63.88	340	P	P	11 35 07.8	-1.3
	baz=124						
INK	Inuvik	64.02	343	P	P	11 35 09.5	-0.3
INK				IAmb	IAmb	11 35 11.0	
	comp=Z,5.4nm,1.3s						
BCAR	Beaver Creek A	64.08	336	P	P	11 35 10.5	+0.1
POHA	Pohakuloa	66.06	286	P	P	11 35 23.5	-0.8
HDA	Harding Lake	66.73	336	P	P	11 35 26.3	-1.1
	baz=113						
ILAR	Eielson Array	66.85	336	P	P	11 35 27.2	-1.0
	comp=Z,1.2nm,0.9s,baz=123,slow=4.7,SNR=11						
ILAR	Eielson Array	66.85	336	P	P	11 35 27.1	-1.2
RND	Reindeer	67.14	334	P	P	11 35 30.2	0.0
RND				IAmb	IAmb	11 35 31.3	
	comp=Z,8.0nm,1.0s						
KSH	Kashi	126.61	16	PKP	PKiKP	11 43 43.0	+2.5
KSH				sPKP		11 43 57.3	
KSH				PP	PP	11 45 42.3	+6.8
ASAR	Alice Springs	139.39	247	PKP	PKiKP	11 44 06.0	-0.6
	comp=Z,0.3nm,0.8s,baz=100,slow=3.3,SNR=2.0						
WRA	Warramunga Arr	139.47	253	PKP	PKiKP	11 44 05.7	-1.1
	comp=Z,0.7nm,1.0s,baz=90,slow=2.4,SNR=3.3						

IDC ***24*** *11:26:36.6±0.4, 19°.71S×70°.60W, h0km, mb4.8/29, mb1 4.9/33, mb1mx4.8/46, mbtmp4.8/33, ML4.3/4, MS5.5/35, Ms1 5.4/35, ms1mx5.3/44, Error ellipse: s-maj=13.6km s-min=8.7km az=77.0*

VAO ***24*** *11:26:38.1±0.4, 19°.81S×70°.62W, h10km, mb5.3*

NEIC ***24*** *11:26:38.2, 19°.86S×70°.87W, h15km, Moment Tensor Solution. Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*3.25;* $M_{\theta\theta}$*0.59;* $M_{\phi\phi}$*-3.84;* $M_{r\theta}$*0.68;* $M_{\theta\phi}$*0.81;* $M_{\phi r}$*-3.24; Fault plane solution:* M_0*4.95000×*10^{17} *NP1:*ϕ_s*168.59000°, δ66.23000°, λ88.64000°. NP2:*ϕ_s*351.96000°, δ23.81000°, λ93.09000°. Principal axes: T 4.5395, Plg69.0000°, Azm76.0000°; N 0.7301, Plg1.0000°, Azm169.0000°; P -5.2696, Plg21.0000°, Azm260.0000°;*

NEIC ***24*** *11:26:39.4±1.4, 19°.82S±0°.03×70°.77W±0°.05, h22km±1km, mb5.5/322, Ms_20 5.4/672, Mwb5.7/65, Mww5.7,* *ML5.4(GUC),Mwc5.8(GCMT) Error ellipse: s-maj=8.8km s-min=5.3km az=284.0*

*MOS **24** 11:26:39.2±1.4,19°.76S×70°.76W,h26^{km},mb5.5/17, MS5.6/17,Error ellipse: s-maj=11.2km s-min=7.6km az=96.7*

*NEIC **24** 11:26:39,19°.54S×70°.64W,h24^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$3.38; M$_{\theta\theta}$-0.03; M$_{\phi\phi}$-3.35; M$_{r\theta}$1.11; M$_{\theta\phi}$0.67; M$_{\phi r}$-3.57; Fault plane solution: M$_0$5.07000×10^{17} NP1:ϕ$_s$164.00000°, δ69.00000°,λ87.00000°. NP2:ϕ$_s$354.00000°,δ21.00000°, λ99.00000°. Principal axes: T 5.0333, Plg66.0000°, Azm68.0000°; N 0.0770, Plg3.0000°, Azm166.0000°; P -5.1102, Plg24.0000°, Azm257.0000°;*

*GUC **24** 11:26:40.0±0.7,19°.88S×70°.84W,h6^{km}±6^{km},ML5.4*

*BJI **24** 11:26:40.0±0.0,19°.90S×70°.90W,h20^{km},mB5.6/42, Ms5.8/46,Ms7 5.7/47*

*GCMT **24** 11:26:45.4±0.1,19°.80S±0°.01×71°.05W±0°.01,h22^{km}, MW5.8/148,Moment Tensor Solution. s132,c252; s148,c302; Duration: 1^{s}8 Moment tensor: Scale 10^{17} Nm; M$_{rr}$3.40±.05; M$_{\theta\theta}$0.23±.03; M$_{\phi\phi}$-3.64±.04; M$_{r\theta}$0.85±.06; M$_{\theta\phi}$0.75±.03; M$_{\phi r}$-3.73±.10; Best double couple: M$_0$5.24700×10^{17} NP1:ϕ$_s$352.00000°,δ22.00000°, λ94.00000°. NP2:ϕ$_s$168.00000°,δ68.00000°,λ89.00000°. Principal axes: T 5.0590, Plg67.0000°, Azm75.0000°; N 0.3710, Plg1.0000°, Azm168.0000°; P -5.4350, Plg23.0000°, Azm259.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **24** 11:26:46,19°.82S×71°.07W,h21^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$3.32; M$_{\theta\theta}$0.29; M$_{\phi\phi}$-3.60; M$_{r\theta}$1.23; M$_{\theta\phi}$0.95; M$_{\phi r}$-4.17; Fault plane solution: M$_0$5.64000×10^{17} NP1:ϕ$_s$164.00000°, δ70.00000°,λ88.00000°. NP2:ϕ$_s$351.00000°,δ20.00000°, λ96.00000°. Principal axes: T 5.3781, Plg65.0000°, Azm71.0000°; N 0.4971, Plg2.0000°, Azm165.0000°; P -5.8752, Plg25.0000°, Azm256.0000°;*

ISC 24 11:26:37.7±0.8**,19°.85S**±0°.02×**70°.75W**±0°.03**,h10**^{km}±4^{km}**, n1257,**σ**1^{s}68**/896**,mb5.5**/179**,MS5.5**/392**,12C-5D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.64	67	⇓iP	Pn	11 26 53.1	+0.1
PSGC				iS	Sn	11 27 02.9	-0.3
PSGCX	Pisagua	0.64	67		Pn	11 26 52.8	-0.1
PSGCX					Sn	11 27 03.1	-0.1
TA01	Diego Aracena	0.89	144	⇓iP	Pn	11 26 56.6	+0.3
TA01				iS	Sn	11 27 10.1	+0.8
TA01				IAML		11 27 15.8	
	comp=N,242µm,0.9s						
PB11	IPOC Station P	1.03	85	⇓iP	Pn	11 26 59.7	+1.3
PB11				iS	Sn	11 27 15.0	+2.0
PB11				IAML		11 27 18.6	
	comp=N,192µm,0.4s						
PB11	IPOC Station P	1.03	85		Pn	11 26 59.8	+1.4
PATCX	Punta Patache	1.12	150	⇑iP	Pn	11 27 00.1	+0.4
PATCX				iS	Sn	11 27 15.9	+0.8
PATCX				IAML		11 27 22.1	
	comp=E,84µm,0.2s						
PATCX	Punta Patache	1.12	150		Pn	11 26 60.0	+0.4
PATCX					Sn	11 27 16.1	+1.0
PB12	IPOC Station P	1.29	18	⇑iP	Pg	11 27 02.8	+0.3
PB12				iS	Sn	11 27 21.2	+1.9
PB12	IPOC Station P	1.29	18		Pg	11 27 02.7	+0.3
GO01	Chusmiza	1.47	83	⇓iP	Pg	11 27 07.2	+1.1
GO01				iS	Sg	11 27 28.4	+3.1
GO01				IAML		11 27 31.8	
	comp=N,144µm,0.4s						
GO01	Chusmiza	1.47	83		Pg	11 27 07.2	+1.1
PB08	IPOC Station P	1.53	101	⇑iP	Pg	11 27 07.6	+0.5
PB08				iS	Sg	11 27 29.1	+2.2
PB08				IAML		11 27 33.8	
	comp=N,52µm,0.5s						
PB02	IPOC Station P	1.67	152	⇑iP	Pb	11 27 08.0	-0.6
PB02				iS	Sg	11 27 31.9	+0.5
PB01	IPOC Station P	1.68	135	iP	Pb	11 27 08.9	+0.1
PB01				iS	Sb	11 27 30.0	0.0
PB01				IAML		11 27 37.7	
	comp=E,72µm,0.8s						
PB01				IAML		11 27 40.5	
	comp=N,62µm,0.5s						
PB01	IPOC Station P	1.68	135		Pb	11 27 08.5	-0.3
PB16	IPOC Station P	1.91	38	⇑iP	Pb	11 27 13.1	+0.1
PB16				iS	Sg	11 27 40.0	+0.9
PB16				IAML		11 27 46.5	
	comp=E,58µm,0.5s						
PB16				IAML		11 27 48.9	
	comp=N,83µm,0.7s						
PB16	IPOC Station P	1.91	38		Pb	11 27 12.7	-0.2
PB07	IPOC Station P	2.04	157		Pn	11 27 12.3	0.0
PB03	IPOC Station P	2.38	157	IAML		11 28 09.0	
	comp=N,18µm,0.7s						
PB03				IAML		11 28 09.5	
	comp=E,23µm,0.6s						
PB09	IPOC Station P	2.40	144	Pn	Pn	11 27 18.7	+1.5
PB04	IPOC Station P	2.54	167		Pn	11 27 18.6	-0.5
LVC	Limon Verde	3.24	148	Pn	Pn	11 27 31.2	+2.2
	comp=E,95nm,0.3s,baz=320,slow=8.2,SNR=222						
LVC				Sn	Sn	11 28 09.7	+1.9
	comp=E,584nm,0.3s,baz=53,slow=8.1,SNR=5.3						
LVC				LR	LR	11 28 16.8	
	comp=E,8µm,20.0s,baz=324,slow=30						
LVC				Lg	Lg	11 28 19.9	
	comp=E,810nm,0.3s,baz=239,slow=22,SNR=12						
LVC	Limon Verde	3.24	148	eP	Pn	11 27 30.6	+1.6
LVC	Limon Verde	3.24	148		Pn	11 27 30.6	+1.6
PB15	IPOC Station P	3.55	161		Pn	11 27 32.8	-0.4
PB10	IPOC Station P	3.65	177		Pn	11 27 32.9	-1.4
I08BO	LAS PENAS INFR	4.22	32	Pn	Pb	11 27 50.1	-2.3
	baz=220,slow=26,SNR=1.8						
I08BO				i		11 47 10.0	
	baz=205,slow=325,SNR=3.6						
LPAZ	La Paz	4.33	36	Pn	Pn	11 27 47.8	+3.7
	comp=E,6.1nm,0.3s,baz=207,slow=8.6,SNR=64						
LPAZ				LR	LR	11 29 38.9	
	comp=E,75µm,18.3s,baz=236,slow=44						
LPAZ	La Paz	4.33	36	P	Pn	11 27 46.9	+2.8
LPAZ	La Paz	4.33	36		Pn	11 27 46.9	+2.8
PB14	IPOC Station P	4.77	176		Pn	11 27 48.2	-1.8
GO02	Mina Guanaco	5.40	169		Pn	11 27 58.2	-0.4
GO03	Copiap	7.73	177		Pn	11 28 28.5	-1.9
SIV	San Ignacio	9.97	69	Pn	Pn	11 29 01.1	-0.1
	comp=E,5.6nm,0.3s,baz=269,slow=9.3,SNR=73						
SIV				LR	LR	11 33 23.5	
	comp=E,44µm,21.6s,baz=270,slow=42						
SAML	Samuel	13.07	35	P	Pn	11 29 43.5	-0.1
SAML	Samuel	13.07	35		Pn	11 29 43.5	-0.1
SAML	Samuel	13.07	35	eP	Pn	11 29 42.5	-1.1
SAML				eS	Sn	11 32 09.6	+0.3
CPUP	Villa Florida	13.93	120	Pn	Pn	11 29 54.8	-0.5
	comp=E,0.2nm,0.3s,baz=298,slow=12,SNR=19						
CPUP				LR	LR	11 36 22.7	
	comp=E,19µm,18.5s,baz=300,slow=42						
CPUP	Villa Florida	13.93	120	P	Pn	11 29 55.9	+0.7
CPUP	Villa Florida	13.93	120		Pn	11 29 55.9	+0.7
AQDB	Aquidauana	14.14	95	eP	Pn	11 29 57.7	-0.5
ATAH	Atahualpa	14.65	329	Pn	Pn	11 30 06.2	+0.6
	comp=E,0.3nm,0.3s,baz=134,slow=18,SNR=2.3						
SALV	Santo Antonio	14.86	77	eP	Pn	11 30 07.8	-0.2
GO05	Huala	15.14	184	Pn	Pn	11 30 14.2	+2.4
GO05				IAmb	IAmb	11 30 40.8	
	comp=Z,200nm,1.2s						
CLDB	Colider	16.94	60	eP	Pn	11 30 32.7	-2.4
CLDB				eS	Sn	11 33 41.4	-2.1
TRCB	Terra Rica	17.13	103	eP	Pn	11 30 37.1	-0.3
PTGB	Pitanga	17.95	109	eP	Pn	11 30 47.3	-0.4
PCMB	Pacaembu	18.31	99	eP	Pn	11 30 50.3	-1.8
ARAG	Araguaiana, MT	18.49	80	eP	P	11 30 53.5	-0.7
ITAB	Concordia	18.57	117	eP	P	11 30 54.8	-0.2
LPA	La Plata	18.80	146	eP	P	11 30 49.5	-7.9
LPA				PPP	PPP	11 31 17.6	
LPA				S	Sn	11 34 21.8	-6.5
LPA				SSS	SSS	11 34 57.3	
LPA				PCP	PcP	11 35 23.6	-1.0
LPA				SCS	ScS	11 42 32.7	-9.0
LPA				PKIKP	PKiKP	11 43 14.2	-1.0
ITRB	Iturama	19.19	93	eP	P	11 31 00.8	-1.0
PLTB	Pedras Altas	19.44	131	eP	P	11 31 03.8	-0.7
GO06	Curarrehue	19.68	182	P	P	11 31 07.0	-0.2
FRTB	Fartura	20.00	104	eP	P	11 31 09.2	-1.5
CNLB	Canela	20.38	121	eP	P	11 31 14.0	-0.7
PLCA	Paso Flores	20.82	180	P	Pn	11 31 21.2	-0.7
	comp=Z,16nm,0.9s,baz=23,slow=11,SNR=9.4						
PLCA				LR	LR	11 38 45.5	
	comp=Z,6µm,19.7s,baz=20,slow=35						
PLCA	Paso Flores	20.82	180	P	P	11 31 19.3	-0.2
PLCA				pmax	pmax		
	comp=Z,90nm,1.0s						
PLCA	Paso Flores	20.82	180	P	P	11 31 19.3	-0.2
PLCA	Paso Flores	20.82	180	eP	Pn	11 31 21.1	-0.8
BB19B	Bebedouro	20.85	97	eP	P	11 31 19.2	-0.7
IPMB	Ipameri, GO	21.40	89	eP	P	11 31 25.6	-0.3
PTGA	Pitinga	21.73	30	P	P	11 31 27.6	-1.8
	comp=Z,32nm,0.3s,baz=261,slow=23,SNR=55						
PTGA				S	S	11 35 29.0	-1.0
	comp=Z,33nm,0.9s,baz=290,slow=19,SNR=3.3						
PTGA				LR	LR	11 40 50.9	
	comp=Z,23µm,18.5s,baz=208,slow=40						
PTGA	Pitinga	21.73	30	P	P	11 31 28.3	-1.1
PTGA				IAmb	IAmb	11 32 08.7	
	comp=Z,177nm,1.0s						
PTGA	Pitinga	21.73	30	eP	P	11 31 27.9	-1.4
FLOC	Florencia	21.83	347	eP	P	11 31 32.1	+1.6
FLOC				eP	P	11 31 33.3	+2.8
FLOC				eP	P	11 31 35.7	+5.2
FLOC	Florencia	21.83	347	P	P	11 31 30.6	+0.1
GCUF	Volcan Galeras	21.92	342	eP	P	11 31 38.0	+6.1
SPB	Sao Paulo	21.97	104	P	P	11 31 31.4	-0.5
SPB				IAmb	IAmb	11 31 45.4	
	comp=Z,167nm,1.2s						
SPB				IAMs_20	IAMs_20	11 41 18.5	
	comp=Z,19µm,18.0s						
SPB	Sao Paulo	21.97	104	eP	P	11 31 32.1	+0.2
BDFB	Brasilia	22.05	83	P	P	11 31 30.8	-2.1
	comp=Z,55nm,0.8s,baz=237,slow=8.8,SNR=14						
BDFB				LR	LR	11 41 41.2	
	comp=Z,23µm,19.4s,baz=259,slow=41						
BDFB	Brasilia	22.05	83	P	P	11 31 32.6	-0.3
BDFB				pmax	pmax		
	comp=Z,112nm,1.0s						
BDFB				MLR	MLR		
	comp=Z,28µm,20.0s						
BDFB	Brasilia	22.05	83	P	P	11 31 32.6	-0.3
BDFB				IAmb	IAmb	11 31 41.5	
	comp=Z,112nm,1.0s						
MACC	Macarena, Meta	22.07	352	eP	P	11 31 37.0	+4.1
CRUC	La Cruz	22.13	343	eP	P	11 31 40.4	+6.3
VAO	Valinhos	22.35	102	eP	P	11 31 34.2	-1.9
GARC	Garzon, Huila	22.39	347	eP	P	11 31 40.4	+3.7
GARC				eP	P	11 31 42.7	+6.1
SOTA	Rioblanco	22.59	345	eP	P	11 31 46.3	+7.2
PCON	Cinco Dias	22.72	345	eP	P	11 31 41.7	+1.1
PARB	Paraibuna	23.61	103	eP	P	11 31 49.4	+0.3
PTGC	Puerto Gaitan,	23.93	357	eP	P	11 31 55.7	+3.6
VILC	Villavicencio,	23.98	353	eP	P	11 31 55.1	+2.3
ORTC	Ortega, Tolima	24.02	349	eP	P	11 31 49.1	-3.9
YOTC	Yotoco, Valle	24.31	346	eP	P	11 31 58.4	+2.6
BSCB	Bom Sucesso	24.36	97	eP	P	11 31 54.2	-2.0
CHIC	Chingaza	24.50	353	eP	P	11 31 57.7	-0.2
ANIL	Santa Ana	24.61	349	eP	P	11 32 04.0	+5.2
ROSC	El Rosal	24.78	351	P	P	11 32 00.9	+0.5
	comp=Z,12nm,0.5s,baz=158,slow=19,SNR=2.6						
ROSC				LR	LR	11 43 06.4	
	comp=Z,17µm,18.1s,baz=200,slow=40						
ROSC	El Rosal	24.78	351	P	P	11 32 00.5	+0.1
ROSC				IAmb	IAmb	11 32 20.6	
	comp=Z,60nm,0.7s						
ROSC				IAMs_20	IAMs_20	11 43 05.1	
	comp=Z,18µm,20.0s						
SMTB	Santa Maria do	24.91	67	eP	P	11 32 00.9	-0.3
RREF	El Recreo	25.00	349	eP	P	11 32 04.9	+2.2
SPBC	San Pablo de B	25.55	352	eP	P	11 32 06.0	-0.9
JANB	Januaria	25.65	84	eP	P	11 32 07.1	-0.9
RUSC	La Rusia	25.68	355	P	P	11 32 08.3	-0.3
HELC	Santa Helena	26.30	349	eP	P	11 32 12.2	-1.9
BARC	Barichara	26.38	355	eP	P	11 32 13.4	-1.3
SOLC	Bahia Solano	26.73	345	eP	P	11 32 18.1	+0.6
PAMC	Pamplona, Colo	27.08	356	eP	P	11 32 18.8	-2.5
UREC	San Jos de Ur	27.83	350	eP	P	11 32 30.1	+2.7
SJMB	Sao Joao De Ma	27.91	93	eP	P	11 32 27.8	-0.5
BSFB	Barra de Sao F	28.22	93	eP	P	11 32 29.9	-1.1
SDV	Santo Domingo	28.55	0	P	P	11 32 32.8	-1.3
	comp=Z,16nm,0.8s,baz=223,slow=5.2,SNR=15						
SDV				LR	LR	11 45 01.1	
	comp=Z,9µm,18.5s,baz=210,slow=39						
SDV	Santo Domingo	28.55	0	eP	P	11 32 33.4	-0.7
SDV	Santo Domingo	28.55	0	P	P	11 32 33.0	-1.1
SDV	Santo Domingo	28.55	0	IAMs_20	IAMs_20	11 42 49.4	
	comp=Z,10µm,20.0s						
SDV	Santo Domingo	28.55	0	eP	P	11 32 34.7	+0.6
SMLC	San Martn de	28.65	353	eP	P	11 32 31.2	-3.6
BAUV	El Baul	28.73	6	eP	P	11 32 32.6	-2.9
BAUV	El Baul	28.73	6	e	S	11 37 18.1	-6.8
CODC	Agustn Codazz	29.71	355	eP	P	11 32 46.9	+2.7
SJCC	San Jacinto, C	29.88	351	eP	P	11 32 49.9	+4.1
BCIP	Isla Barro Col	30.19	342	IAMs_20	IAMs_20	11 45 13.9	
	comp=Z,8µm,22.0s						
PLCV	Puerto La Cruz	30.43	12	P	P	11 32 49.7	-0.9
PCRV	Puerto La Cruz	30.43	12	P	P	11 32 49.7	-1.0
	comp=Z,14nm,1.1s,baz=209,slow=6.9,SNR=3.5						
PCRV				LR	LR	11 46 25.3	
	comp=Z,35µm,18.1s,slow=39						
MDP	Montagnes des	30.52	38	P	P	11 32 49.8	-1.6
	comp=Z,12nm,0.7s,baz=240,slow=16,SNR=1.5						
MDP				LR	LR	11 45 52.4	
	comp=Z,29µm,18.7s,baz=212,slow=38						
GO09	Cerro Castillo	31.38	182	IAMs_20	IAMs_20	11 47 02.7	
	comp=Z,8µm,18.0s						
GUIV	Guiria	31.44	16	eP	P	11 32 58.8	-0.6
GUIV	Guiria	31.44	16	e	S	11 38 07.1	-0.3
TRN	Trinidad (W)	31.67	18	eP	P	11 33 00.3	-1.1
HDC	Heredia	32.45	335	IAMs_20	IAMs_20	11 45 46.5	
	comp=Z,8µm,20.0s						
TOSP	Speyside	32.54	19	eP	P	11 33 06.2	-3.0
TOSP	Speyside	32.54	19	e		11 38 17.5	
TOSP	Speyside	32.54	19	P	P	11 33 08.0	-1.2
GRGR	Grenville	33.01	16	eP	P	11 33 09.3	-3.9
GRGR	Grenville	33.01	16	e	S	11 38 20.3	-12
GRGR	Grenville	33.01	16	P	P	11 33 12.5	-0.8
GRGR				IAMs_20	IAMs_20	11 47 41.6	
	comp=Z,10µm,19.0s						
JTS	Las Juntas de	33.05	334	LR	LR	11 46 12.8	
	comp=Z,6µm,20.8s,baz=211,slow=36						
JTS	Las Juntas de	33.05	334	P	P	11 33 12.5	-1.2
JTS				pmax	pmax		
	comp=Z,22nm,1.0s						
JTS				MLR	MLR		
	comp=Z,5µm,20.0s						
JTS	Las Juntas de	33.05	334	P	P	11 33 12.5	-1.2
GRHS	Sauteurs	33.10	16	eP	P	11 33 10.1	-4.0
GRSS	Sisters	33.18	16	eP	P	11 33 10.8	-4.0
EFI	East Falkland	33.29	166	P	P	11 33 15.7	+0.4
EFI				pmax	pmax		
	comp=Z,297nm,1.9s						
EFI				MLR	MLR		
	comp=Z,8µm,18.0s						
EFI	East Falkland	33.29	166	P	P	11 33 15.7	+0.4
EFI	East Falkland	33.29	166	IAMs_20	IAMs_20	11 49 17.2	
	comp=Z,8µm,18.0s						
NBMO	Morrinhos-CE	34.17	65	eP	P	11 33 22.1	-1.3
SVB	Belmont	34.21	17	e	S	11 38 42.3	-8.3
SVB	Belmont	34.21	17	P	P	11 33 24.1	+0.3
SVB				IAMs_20	IAMs_20	11 48 18.3	
	comp=Z,6µm,18.0s						
SVV	Soufriere Volc	34.27	17	eP	P	11 33 19.7	-4.5
SSV	Crater Summit	34.28	17	eP	P	11 33 15.6	-8.9
ESPN	Las Esperanzas	34.52	336	IAMs_20	IAMs_20	11 49 18.5	
	comp=Z,7µm,20.0s						
ACON	Acoyapa	34.66	335	IAMs_20	IAMs_20	11 46 54.0	
	comp=Z,7µm,22.0s						
MCLT	Moule a Chique	34.71	17	eP	P	11 33 19.4	-8.7
MCLT	Moule a Chique	34.71	17	e	S	11 38 49.9	-8.4
MCLT	Moule a Chique	34.71	17	P	P	11 33 28.1	0.0
USHA	Ushuaia	34.97	178	P	P	11 33 31.5	+1.6
	comp=Z,12nm,0.8s,baz=5.2,slow=3.8,SNR=2.5						
SLBI	Saint Lucia, B	35.00	17	eP	P	11 33 23.3	-7.2
SLBI	Saint Lucia, B	35.00	17	e	S	11 38 55.5	-7.2
NBLI	Livramento-PB	35.03	74	eP	P	11 33 28.9	-2.1
FDF	Fort de France	35.64	16	eP	P	11 33 28.3	-7.8
FDF	Fort de France	35.64	16	e	S	11 38 56.4	-16
RPN	Rapa Nui	36.02	251	LR	LR	11 44 30.8	
	comp=Z,14µm,20.5s,baz=85,slow=30						
DLPL	La Plaine	36.19	16	eP	P	11 33 35.3	-5.4
RCBR	Riachuelo	36.62	72	LR	LR	11 49 53.7	
	comp=Z,18µm,19.9s,baz=234,slow=38						
RCBR	Riachuelo	36.62	72	P	P	11 33 44.6	0.0
RCBR				pmax	pmax		
	comp=Z,76nm,1.0s						
RCBR				MLR	MLR		
	comp=Z,17µm,19.0s						
RCBR	Riachuelo	36.62	72	P	P	11 33 44.6	0.0
RCBR				IAmb	IAmb	11 33 45.8	
	comp=Z,76nm,0.9s						
RCBR	Riachuelo	36.62	72	eP	P	11 33 44.6	0.0
SKI	Saint Kitts	37.77	13	e	S	11 39 36.1	-9.0
SEUS	St. Eustatius	37.88	12	eP	P	11 34 00.3	+5.2
SEUS	St. Eustatius	37.88	12	P	P	11 33 54.5	-0.6
PDPR	Patillas Dam,	37.91	7	IAmb	IAmb	11 34 17.8	
	comp=Z,81nm,0.9s						
SABA	Saba	37.95	12	eP	P	11 33 50.7	-5.0
SABA	Saba	37.95	12	P	P	11 33 55.1	-0.6
MPR	Mayaguez	37.99	6	IAmb	IAmb	11 34 08.1	
	comp=Z,124nm,1.1s						
SJG	San Juan	37.99	7	P	P	11 33 53.8	-2.2
	comp=Z,11nm,0.2s,baz=195,slow=2.8,SNR=8.4						
SJG				LR	LR	11 50 59.5	
	comp=Z,5µm,18.3s,baz=198,slow=39						
SJG	San Juan	37.99	7	P	P	11 33 54.3	-1.7
SJG				pmax	pmax		
	comp=Z,110nm,1.1s						
SJG				MLR	MLR		
	comp=Z,7µm,18.0s						
SJG	San Juan	37.99	7	P	P	11 33 54.3	-1.7
SJG				IAmb	IAmb	11 34 34.5	
	comp=Z,110nm,1.1s						
SJG	San Juan	37.99	7	IAMs_20	IAMs_20	11 51 22.9	
	comp=Z,7µm,18.0s						
AOPR	Arecibo Observ	38.16	6	IAmb	IAmb	11 34 26.4	
	comp=Z,74nm,0.8s						
GCPR	Guaynabo City	38.19	7	IAmb	IAmb	11 34 07.2	
	comp=Z,83nm,0.8s						
CUPR	Culebra, Puert	38.29	8	IAmb	IAmb	11 34 13.1	
	comp=Z,128nm,1.2s						
STVI	Saint Thomas	38.38	9	P	P	11 33 58.7	-0.6
SDDR	Presa de Saban	38.59	359	IAMs_20	IAMs_20	11 52 54.5	
	comp=Z,6µm,19.0s						
APG	El Apazote	39.69	329	LR	LR	11 50 12.5	
	comp=Z,4µm,18.9s,baz=144,slow=36						
GTBY	Guantanamo Bay	39.76	354	P	P	11 34 10.5	-0.3
GTBY				IAMs_20	IAMs_20	11 53 10.1	
	comp=Z,4µm,19.0s						
GRTK	Grand Turk	41.11	359	P	P	11 34 21.0	-0.9
GRTK				IAmb	IAmb	11 34 46.9	
	comp=Z,142nm,1.1s						
GRTK				IAMs_20	IAMs_20	11 53 04.1	
	comp=Z,5µm,19.0s						
CCIG	Comitan	41.60	328	IAMs_20	IAMs_20	11 49 50.7	
	comp=Z,5µm,20.0s						
TEIG	Tepich	43.37	336	LR	LR	11 52 36.4	
	comp=Z,2µm,20.8s,baz=309,slow=36						
TEIG	Tepich	43.37	336	P	P	11 34 39.4	-1.1
TEIG	Tepich	43.37	336	IAMs_20	IAMs_20	11 55 02.8	
	comp=Z,5µm,18.0s						
CMIG	Matias Romero	43.70	326	P	P	11 34 42.1	-1.1
	comp=Z,4.5nm,1.1s,baz=102,slow=4.8,SNR=5.3						
PMSA	Palmer Station	45.12	176	LR	LR	11 53 29.2	
	comp=Z,2µm,20.0s,baz=356,slow=36						
TLIG	Tlapa	46.13	322	P	P	11 35 02.7	0.0
TLIG				IAMs_20	IAMs_20	11 53 27.4	
	comp=Z,5µm,19.0s						
061Z	Ochoppi	46.50	347	IAMs_20	IAMs_20	11 55 53.3	
	comp=Z,4µm,20.0s						
UNM	Universidad Na	47.88	323	IAMs_20	IAMs_20	11 52 01.8	
	comp=Z,4µm,22.0s						
DWPF	Disney Wildern	48.78	347	IAMs_20	IAMs_20	11 56 49.8	
	comp=Z,3µm,20.0s						
DWPF	Disney Wildern	48.78	347	P	P	11 35 25.6	+2.6
	baz=167						
656A	Willston	50.23	347	IAMs_20	IAMs_20	11 57 47.2	
	comp=Z,4µm,20.0s						
456A	Hilliard	51.44	348	IAMs_20	IAMs_20	12 01 46.1	
	comp=Z,4µm,18.0s						
257A	Skidaway Islan	52.46	349	IAMs_20	IAMs_20	12 02 14.3	
	comp=Z,4µm,18.0s						
TIGA	Tifton	52.46	346	IAMs_20	IAMs_20	11 58 55.2	
	comp=Z,5µm,22.0s						
TIGA	Tifton	52.46	346	P	P	11 35 51.5	+0.8
	baz=165						
ZAIG	Zacatecas	52.53	322	P	P	11 35 52.0	+0.3
ZAIG				IAMs_20	IAMs_20	11 55 50.9	
	comp=Z,4µm,19.0s						
255A	Hazlehurst	52.69	347	IAMs_20	IAMs_20	12 02 15.3	
	comp=Z,3µm,19.0s						
352A	Blakely	52.81	345	IAMs_20	IAMs_20	11 58 21.5	
	comp=Z,3µm,22.0s						
545A	Edgard	53.12	339	IAMs_20	IAMs_20	12 01 29.0	
	comp=Z,3µm,20.0s						
NHSC	New Hope	53.42	350	IAMs_20	IAMs_20	11 59 53.8	
	comp=Z,5µm,21.0s						
NHSC	New Hope	53.42	350	P	P	11 35 58.8	+1.1
	baz=169						
154A	Montrose	53.49	347	IAMs_20	IAMs_20	12 03 09.4	
	comp=Z,3µm,18.0s						
Z58A	St. Stephen	53.59	351	P	P	11 36 00.9	+1.9
	baz=169						
250A	Grady	53.63	344	IAmb	IAmb	11 36 42.7	
	comp=Z,62nm,0.9s						
Z57A	Bowman	53.69	350	P	P	11 36 00.8	+1.0
	baz=168						
Z56A	Williston	53.84	349	IAMs_20	IAMs_20	12 01 03.7	
	comp=Z,3µm,18.0s						
152A	Waverly Hall	53.90	345	IAmb	IAmb	11 36 46.7	
	comp=Z,40nm,0.9s						
152A				IAMs_20	IAMs_20	12 00 13.3	
	comp=Z,5µm,22.0s						
Y60A	Bolivia	54.02	352	IAMs_20	IAMs_20	12 00 22.8	
	comp=Z,4µm,20.0s						
Y60A	Bolivia	54.02	352	P	P	11 36 03.2	+1.0
	baz=171						
Y59A	Loris	54.09	352	IAMs_20	IAMs_20	11 59 41.7	
	comp=Z,5µm,21.0s						
Y58A	Scranton	54.12	351	IAMs_20	IAMs_20	12 03 21.2	
	comp=Z,3µm,18.0s						
GOGA	Godfrey	54.33	347	IAMs_20	IAMs_20	12 03 44.8	
	comp=Z,3µm,18.0s						
GOGA	Godfrey	54.33	347	P	P	11 36 05.0	+0.5
	baz=165						
Y57A	Sumter	54.34	350	IAMs_20	IAMs_20	11 59 48.3	
	comp=Z,4µm,21.0s						
Y55A	Saluda	54.52	349	P	P	11 36 06.8	+0.9
	baz=167						
X60A	Albert Glenn T	54.56	353	P	P	11 36 06.8	+0.7
	baz=172						
X59A	McDuffie Farm,	54.63	352	P	P	11 36 07.0	+0.4
	baz=171						
Z51A	Franklin	54.63	345	IAMs_20	IAMs_20	12 00 36.6	
	comp=Z,5µm,21.0s						
X58A	Rowland	54.71	351	IAMs_20	IAMs_20	12 00 11.8	
	comp=Z,5µm,22.0s						
X58A	Rowland	54.71	351	P	P	11 36 07.6	+0.4
	baz=170						
Z50A	Ashland	54.76	344	IAmb	IAmb	11 36 26.1	
	comp=Z,37nm,0.8s						
Z50A				IAMs_20	IAMs_20	11 59 51.5	
	comp=Z,3µm,22.0s						
Z50A	Ashland	54.76	344	P	P	11 36 08.0	+0.4
	baz=162						
LRAL	Lakeview Retre	54.83	343	P	P	11 36 08.2	+0.1
	baz=161						
HODGE	Hodges	54.88	348	IAMs_20	IAMs_20	11 59 13.4	
	comp=Z,3µm,22.0s						
Y52A	Lilburn	54.90	346	IAMs_20	IAMs_20	12 03 47.4	
	comp=Z,3µm,18.0s						
Y52A	Lilburn	54.90	346	P	P	11 36 08.7	+0.1
	baz=165						
X56A	White Oak	54.92	350	P	P	11 36 08.8	+0.1
	baz=168						
BIRD	Birdtown, Kers	54.97	350	IAmb	IAmb	11 36 37.4	
	comp=Z,64nm,1.0s						
BIRD				IAMs_20	IAMs_20	12 00 06.8	
	comp=Z,4µm,22.0s						
342A	Flagon Creek P	54.98	337	IAMs_20	IAMs_20	12 00 41.1	
	comp=Z,3µm,21.0s						
W60A	Pink Hill	54.99	353	P	P	11 36 09.9	+0.7
	baz=172						
X55A	Gracelyn & Ava	55.00	349	P	P	11 36 10.8	+1.5
	baz=168						
W61A	Ground Anchor	55.04	354	P	P	11 36 10.4	+0.8
	baz=173						
HKT	Hockley	55.09	333	P	P	11 36 09.2	-0.8

HKT	comp=Z,45nm,1.3s			pmax	pmax		
HKT	Hockley	55.09	333	P	P	11 36 09.2	-0.8
HKT	comp=Z,45nm,1.2s			IAmb	IAmb	11 36 38.2	
VBMS	Vicksburg baz=157	55.12	340	P	P	11 36 10.6	+0.4
W58A	Raeford baz=170,SNR=7.2	55.16	352	P	P	11 36 10.6	+0.2
CNNC	Cliffs of the comp=Z,2µm,18.0s	55.20	353	IAMs_20	IAMs_20	12 04 02.8	
CNNC	Cliffs of the baz=172	55.20	353	P	P	11 36 12.6	+1.8
X54A	Belton baz=167	55.21	348	P	P	11 36 12.2	+1.3
833A	Chaparral WMA, baz=147	55.32	329	P	P	11 36 11.9	+0.1
V62A	Hyde County Ai comp=Z,3µm,20.0s	55.32	355	IAMs_20	IAMs_20	12 00 33.1	
X53A	Estanollee baz=166	55.35	347	P	P	11 36 13.5	+1.7
PAULI	Pauline comp=Z,82nm,1.4s	55.37	349	IAmb	IAmb	11 36 48.8	
PAULI	comp=Z,4µm,21.0s			IAMs_20	IAMs_20	12 01 05.1	
W57A	Gilead comp=Z,51nm,1.1s	55.40	351	IAmb	IAmb	11 36 38.6	
W57A	comp=Z,4µm,22.0s			IAMs_20	IAMs_20	12 00 42.8	
W57A	Gilead baz=170	55.40	351	P	P	11 36 13.2	+1.1
W56A	Indian Trail baz=169	55.47	350	P	P	11 36 13.6	+1.0
KMSC	Kings Mountain comp=Z,33nm,1.0s	55.60	349	IAmb	IAmb	11 37 12.0	
KMSC	comp=Z,4µm,20.0s			IAMs_20	IAMs_20	12 00 58.2	
KMSC	Kings Mountain baz=168	55.60	349	P	P	11 36 14.1	+0.5
V61A	Roper baz=173	55.61	354	P	P	11 36 14.4	+0.7
V60A	Jim Taylor Roa comp=Z,3µm,21.0s	55.65	354	IAMs_20	IAMs_20	12 01 20.0	
V60A	Jim Taylor Roa baz=173	55.65	354	P	P	11 36 15.0	+1.1
W54A	Cherokee Point baz=167	55.70	349	P	P	11 36 14.8	+0.4
X51A	Calhoun baz=164	55.75	346	P	P	11 36 15.0	+0.3
V59A	Middlesex baz=172,SNR=5.1	55.76	353	P	P	11 36 15.3	+0.6
V58A	Windy Hill, Pi comp=Z,50nm,1.0s	55.90	352	IAmb	IAmb	11 36 42.1	
V58A	comp=Z,4µm,21.0s			IAMs_20	IAMs_20	12 01 08.3	
V58A	Windy Hill, Pi baz=170	55.90	352	P	P	11 36 15.9	+0.1
FPAL	Fort Paine comp=Z,4µm,22.0s	55.90	345	IAMs_20	IAMs_20	12 00 40.0	
W52A	Murphy comp=Z,32nm,1.1s	56.05	347	IAmb	IAmb	11 36 53.6	
W52A	comp=Z,4µm,18.0s			IAMs_20	IAMs_20	12 04 46.0	
V57A	Coltrane Farms baz=170	56.09	351	P	P	11 36 17.2	+0.1
V56A	Mocksville baz=169,SNR=6.2	56.12	350	P	P	11 36 17.4	0.0
U61A	Possum Corner baz=174	56.13	354	P	P	11 36 18.0	+0.6
X48A	Hartselle comp=Z,42nm,1.1s	56.18	344	IAmb	IAmb	11 37 00.8	
NATX	Nacogdoches comp=Z,41nm,0.8s	56.20	335	IAmb	IAmb	11 36 59.5	
NATX	Nacogdoches baz=153	56.20	335	P	P	11 36 18.0	0.0
V55A	Taylorsville comp=Z,42nm,0.8s	56.27	350	IAmb	IAmb	11 37 02.3	
V55A	comp=Z,3µm,20.0s			IAMs_20	IAMs_20	12 02 01.0	
V55A	Taylorsville baz=168	56.27	350	P	P	11 36 18.6	+0.1
U59A	Littleton comp=Z,37nm,1.1s	56.29	353	IAmb	IAmb	11 36 31.7	
U59A	Littleton baz=172	56.29	353	P	P	11 36 18.7	+0.1
V54A	Nebo baz=167,SNR=5.5	56.33	349	P	P	11 36 19.0	+0.1
U60A	Pendleton baz=173	56.34	354	P	P	11 36 19.0	+0.2
V53A	Saluda comp=Z,4µm,22.0s	56.38	348	IAMs_20	IAMs_20	11 59 58.9	
U58A	Oxford baz=171	56.42	352	P	P	11 36 19.6	+0.1
W50A	Signal Mountai comp=Z,51nm,1.1s	56.46	346	IAmb	IAmb	11 37 15.8	
W50A	comp=Z,3µm,20.0s			IAMs_20	IAMs_20	12 00 48.8	
CPCT	Cooper Cave comp=Z,4µm,18.0s	56.52	347	IAMs_20	IAMs_20	12 05 02.5	
U57A	Blanch baz=170	56.56	352	P	P	11 36 20.2	-0.2
435B	Jarrell baz=150	56.56	332	P	P	11 36 20.0	-0.6
SWET	Sewanee comp=Z,38nm,1.0s	56.62	345	IAmb	IAmb	11 37 16.3	
SWET	comp=Z,4µm,22.0s			IAMs_20	IAMs_20	12 01 47.1	
U56A	King comp=Z,62nm,1.1s	56.63	351	IAmb	IAmb	11 36 54.2	
U56A	comp=Z,4µm,22.0s			IAMs_20	IAMs_20	12 01 30.4	
U56A	King baz=169	56.63	351	P	P	11 36 20.8	-0.2
V52A	Sevierville comp=Z,61nm,1.1s	56.71	348	IAmb	IAmb	11 36 57.9	
V52A	comp=Z,3µm,18.0s			IAMs_20	IAMs_20	12 05 00.3	
V51A	Loudon comp=Z,4µm,18.0s	56.83	347	IAMs_20	IAMs_20	12 05 18.5	
237A	Washetta, Mont	56.87	335	P	P	11 36 22.5	-0.3
T59A	Double "B" Far comp=Z,60nm,1.1s	56.88	353	IAmb	IAmb	11 36 35.9	
T59A	comp=Z,4µm,21.0s			IAMs_20	IAMs_20	12 02 07.1	
T59A	Double "B" Far baz=172,SNR=6.7	56.88	353	P	P	11 36 22.7	0.0
U55A	TA2, Sparta baz=168	56.88	350	P	P	11 36 22.6	-0.3
OXF	Oxford comp=Z,49nm,0.9s	56.90	342	IAmb	IAmb	11 37 16.8	
OXF	Oxford baz=159	56.90	342	P	P	11 36 22.4	-0.5
T58A	Grand View Acr baz=171,SNR=8.3	56.96	353	P	P	11 36 23.7	+0.3
U54A	Nelsons Funny comp=Z,73nm,1.1s	57.03	349	IAmb	IAmb	11 36 59.9	
U54A	comp=Z,3µm,20.0s			IAMs_20	IAMs_20	12 03 18.0	
U54A	Nelsons Funny baz=168	57.03	349	P	P	11 36 23.6	-0.3
T57A	Hurt comp=Z,74nm,1.2s	57.10	352	IAmb	IAmb	11 36 51.6	
T57A	comp=Z,4µm,20.0s			IAMs_20	IAMs_20	12 02 16.1	
T57A	Hurt baz=170,SNR=7.0	57.10	352	P	P	11 36 24.3	0.0
T56A	Rocky Mt baz=170	57.24	351	P	P	11 36 25.5	+0.2
JCT	Junction City baz=147	57.31	330	P	P	11 36 25.5	-0.5
V48A	Smith Brothers comp=Z,44nm,0.9s	57.34	344	IAmb	IAmb	11 37 09.0	
V48A	comp=Z,3µm,22.0s			IAMs_20	IAMs_20	12 02 22.1	
X43A	Marvell comp=Z,52nm,0.9s	57.36	340	IAmb	IAmb	11 36 44.2	
X43A	Marvell baz=158	57.36	340	P	P	11 36 25.9	-0.2
TZTN	Tazewell comp=Z,2µm,18.0s	57.38	348	IAMs_20	IAMs_20	12 04 57.1	
TZTN	Tazewell baz=166	57.38	348	P	P	11 36 26.0	-0.3
S61A	Accomac baz=174	57.41	355	P	P	11 36 26.9	+0.4
T55A	Pulaski baz=169,SNR=6.1	57.44	350	P	P	11 36 27.0	+0.2
BLA	Blacksburg comp=Z,4µm,22.0s	57.48	351	IAMs_20	IAMs_20	12 02 08.0	
BLA	Blacksburg baz=169	57.48	351	P	P	11 36 27.3	+0.2
T54A	Tazewell baz=168	57.52	350	P	P	11 36 27.4	+0.1
HPIG	comp=Z,3µm,18.0s	57.52	323	IAMs_20	IAMs_20	12 01 47.8	
WHTX	Lake Whitney, comp=Z,64nm,1.1s	57.55	333	IAmb	IAmb	11 36 55.8	
WHTX	Lake Whitney, baz=150	57.55	333	P	P	11 36 27.7	+0.1
CLTN	Cedars of Leba comp=Z,48nm,1.1s	57.56	345	IAmb	IAmb	11 37 23.5	
CLTN	comp=Z,4µm,22.0s			IAMs_20	IAMs_20	12 02 03.7	
S58A	Poland Farm, P baz=172	57.56	353	P	P	11 36 28.0	+0.5
T53A	Wise baz=167	57.61	349	P	P	11 36 28.2	+0.3
MET	Memphis--Engin comp=Z,2µm,19.0s	57.62	341	IAMs_20	IAMs_20	12 03 43.3	
S59A	Mechanicsville baz=173	57.63	354	P	P	11 36 28.1	+0.1
HDBT	Hernando Brdge comp=Z,3µm,22.0s	57.69	341	IAMs_20	IAMs_20	11 52 28.1	
T52A	Hallie comp=Z,4µm,22.0s	57.81	348	IAMs_20	IAMs_20	12 00 53.7	
T52A	Hallie baz=166	57.81	348	P	P	11 36 28.9	-0.5
S56A	Natural Bridge baz=170	57.81	352	P	P	11 36 29.7	+0.3
S57A	Dark Hollow, R comp=Z,3µm,20.0s	57.82	352	IAMs_20	IAMs_20	12 02 45.0	
S57A	Dark Hollow, R baz=171,SNR=5.6	57.82	352	P	P	11 36 29.6	+0.2
U49A	Red Boiling Sp comp=Z,3µm,20.0s	57.83	346	IAMs_20	IAMs_20	12 02 55.9	
SACV	Santiago Islan comp=Z,4µm,22.0s	57.84	57	IAMs_20	IAMs_20	11 59 01.9	
T51A	Gray baz=165	57.86	348	P	P	11 36 29.1	-0.6
R58B	Mineral comp=Z,36nm,1.1s	57.89	353	IAmb	IAmb	11 36 43.4	
R58B	comp=Z,3µm,20.0s			IAMs_20	IAMs_20	12 02 35.8	
R58B	Mineral baz=172	57.89	353	P	P	11 36 30.0	+0.2
WVT	Waverly	57.97	344	P	P	11 36 29.1	-1.4
WVT	comp=Z,33nm,0.9s			pmax	pmax		
WVT	comp=Z,2µm,20.0s			MLR	MLR		
WVT	Waverly	57.97	344	P	P	11 36 29.1	-1.4
WVT	comp=Z,33nm,0.8s			IAmb	IAmb	11 37 13.5	
WVT	Waverly baz=161	57.97	344	P	P	11 36 30.0	-0.5
X40A	Basin Creek Fa baz=155	57.98	339	P	P	11 36 30.1	-0.4
R61A	Willards baz=175	58.03	356	P	P	11 36 30.9	+0.1
S55A	Lewisburg baz=169,SNR=6.3	58.04	351	P	P	11 36 31.5	+0.5
R59A	King George, V baz=173	58.05	354	P	P	11 36 31.0	+0.1
R60A	Leonardtown, M baz=174	58.06	355	P	P	11 36 30.9	-0.1
UALR	University of comp=Z,29nm,0.9s	58.07	339	IAmb	IAmb	11 36 48.6	
CBN	Corbin Frederi comp=Z,3µm,21.0s	58.08	354	IAMs_20	IAMs_20	12 02 21.0	
CBN	Corbin Frederi baz=173	58.08	354	P	P	11 36 31.1	0.0
T50A	Nancy baz=164	58.10	347	P	P	11 36 30.4	-0.9
S54A	Dingess, Beckl baz=168	58.19	350	P	P	11 36 31.5	-0.6
S53A	Williamson baz=167	58.21	349	P	P	11 36 31.4	-0.8
R58A	Rapidan baz=172	58.24	353	P	P	11 36 32.1	-0.2
MIAR	Mount Ida comp=Z,40nm,0.9s	58.29	338	IAmb	IAmb	11 36 50.5	
MIAR	Mount Ida baz=155,SNR=12	58.29	338	P	P	11 36 32.4	-0.3
R57A	Stanardsville baz=171,SNR=6.2	58.29	353	P	P	11 36 33.3	+0.6
TXAR	Lajitas Array comp=Z,2.1nm,0.7s,baz=149,slow=8.2,SNR=23	58.30	326	P	P	11 36 32.5	-0.5
TXAR	comp=Z,1µm,18.4s,baz=0.0,slow=36			LR	LR	12 01 57.7	
TXAR	Lajitas Array	58.30	326	P	P	11 36 32.8	-0.2
TXAR	Lajitas Array	58.30	326	P	P	11 36 32.8	-0.2
TX31	Lajitas Ar. Si	58.30	326	P	P	11 36 32.8	-0.3
T49A	Edmonton comp=Z,4µm,18.0s	58.34	346	IAMs_20	IAMs_20	12 06 09.2	
T49A	Edmonton baz=164,SNR=16	58.34	346	P	P	11 36 32.2	-0.8
S52A	Salyersville baz=166	58.38	349	P	P	11 36 32.9	-0.4
W41B	Gary Mavity, V baz=156	58.40	339	P	P	11 36 33.2	-0.3
S51A	Beattyville comp=Z,3µm,22.0s	58.44	348	IAMs_20	IAMs_20	12 00 27.1	
S51A	Beattyville baz=166	58.44	348	P	P	11 36 33.3	-0.4
R55A	Marlinton comp=Z,52nm,1.1s	58.49	351	IAmb	IAmb	11 36 56.2	
R55A	comp=Z,4µm,22.0s			IAMs_20	IAMs_20	12 03 00.5	
R55A	Marlinton baz=170	58.49	351	P	P	11 36 33.4	-0.7
R56A	Bull Pasture M baz=170	58.51	352	P	P	11 36 33.5	-0.8
R54A	Victor baz=169	58.52	351	P	P	11 36 34.0	-0.2
WHAR	Wooly Hollow comp=Z,32nm,1.0s	58.52	339	IAmb	IAmb	11 36 51.6	
Q61A	Milford baz=175	58.57	356	P	P	11 36 34.5	-0.1
S50A	Richmond baz=165,SNR=7.4	58.64	347	P	P	11 36 34.5	-0.7
Q60A	Greensboro baz=174	58.73	355	P	P	11 36 35.7	0.0
PVMO	Portageville comp=Z,2µm,21.0s	58.76	342	IAMs_20	IAMs_20	12 03 26.3	
R53A	Hurricane comp=Z,3µm,19.0s	58.82	350	IAMs_20	IAMs_20	12 05 44.1	
R53A	Hurricane baz=168	58.82	350	P	P	11 36 36.5	+0.2
Q58A	Fox Den Farm, baz=172	58.84	354	P	P	11 36 36.8	+0.4
LCAR	Lake Charles comp=Z,25nm,0.9s	58.87	341	IAmb	IAmb	11 37 39.0	
S49A	Springfield baz=164	58.93	347	P	P	11 36 37.4	+0.2
R52A	Catlettsburg baz=167	58.94	349	P	P	11 36 37.4	+0.2
W39A	Magazine comp=Z,42nm,1.1s	58.95	338	IAmb	IAmb	11 37 46.6	
W39A	Magazine baz=155,SNR=11	58.95	338	P	P	11 36 37.4	+0.1
Q57A	Strasburg baz=172,SNR=7.1	59.01	353	P	P	11 36 38.4	+0.7
FCAR	Ozark Folk Cen comp=Z,23nm,1.0s	59.02	340	IAmb	IAmb	11 36 54.6	
ABTX	Abilene, Hawle baz=148,SNR=5.5	59.04	332	P	P	11 36 38.1	0.0
R51A	Hillsboro baz=166	59.08	348	P	P	11 36 38.3	+0.1
Q56A	Snyder Ridge, comp=Z,3µm,20.0s	59.11	352	IAMs_20	IAMs_20	12 03 43.0	
Q56A	Snyder Ridge, baz=171,SNR=6.3	59.11	352	P	P	11 36 39.3	+0.9
Q55A	Buckhannon baz=170	59.18	352	P	P	11 36 39.5	+0.6
R50A	Paris comp=Z,28nm,0.9s	59.21	348	IAmb	IAmb	11 37 34.0	
R50A	comp=Z,3µm,20.0s			IAMs_20	IAMs_20	12 03 30.4	
R50A	Paris baz=165	59.21	348	P	P	11 36 39.0	-0.1
Q53A	Leroy baz=168	59.26	350	P	P	11 36 39.5	+0.1
Q54A	Coxs Mills comp=Z,39nm,0.9s	59.28	351	IAmb	IAmb	11 37 22.5	
Q54A	comp=Z,4µm,21.0s			IAMs_20	IAMs_20	12 03 46.4	
Q54A	Coxs Mills baz=169	59.28	351	P	P	11 36 39.4	-0.1
PBMO	Poplar Bluff comp=Z,51nm,1.0s	59.31	342	IAmb	IAmb	11 37 41.9	
P61A	Hammonton baz=176	59.33	356	P	P	11 36 40.7	+0.9
P58A	Pank, Wackersv baz=173	59.34	354	P	P	11 36 40.6	+0.6
P59A	Jarrettsville baz=174	59.38	355	P	P	11 36 40.9	+0.7
R49A	Shelbyville comp=Z,4µm,20.0s	59.40	347	IAMs_20	IAMs_20	12 02 31.3	
R49A	Shelbyville baz=164	59.40	347	P	P	11 36 40.9	+0.6
P57A	Homestead Farm comp=Z,42nm,1.0s	59.41	353	IAmb	IAmb	11 37 12.9	
P57A	comp=Z,3µm,22.0s			IAMs_20	IAMs_20	12 02 50.0	
P57A	Homestead Farm baz=172	59.41	353	P	P	11 36 41.2	+0.9
Q52A	Bidwell baz=168	59.49	350	P	P	11 36 41.5	+0.5
P60A	Greenville baz=175	59.52	356	P	P	11 36 41.6	+0.5
P56A	Dayton Farm, R baz=171	59.52	353	P	P	11 36 41.9	+0.7
WCI	Wyandotte Cave	59.59	346	P	P	11 36 40.6	-1.0
WCI	comp=Z,32nm,0.8s			pmax	pmax		
WCI	comp=Z,3µm,20.0s			MLR	MLR		
WCI	Wyandotte Cave	59.59	346	P	P	11 36 40.6	-1.0
WCI	comp=Z,32nm,0.8s			IAmb	IAmb	11 37 36.7	
WCI	Wyandotte Cave comp=Z,3µm,20.0s	59.59	346	IAMs_20	IAMs_20	12 03 39.2	
WCI	Wyandotte Cave baz=163	59.59	346	P	P	11 36 40.8	-0.8
P55A	Reedsville baz=170	59.65	352	P	P	11 36 41.9	-0.3
USIN	University of comp=Z,3µm,22.0s	59.66	345	IAMs_20	IAMs_20	12 02 20.3	
U40A	Yellville comp=Z,27nm,0.8s	59.68	339	IAmb	IAmb	11 36 59.7	
U40A	Yellville baz=156,SNR=8.9	59.68	339	P	P	11 36 41.9	-0.5
Q50A	Georgetown baz=166	59.68	348	P	P	11 36 41.3	-1.0
O61A	Allentown baz=176	59.73	357	P	P	11 36 42.3	-0.3
Q51A	Peebles comp=Z,25nm,0.9s	59.74	349	IAmb	IAmb	11 37 16.5	
Q51A	comp=Z,3µm,20.0s			IAMs_20	IAMs_20	12 03 18.5	
Q51A	Peebles baz=166	59.74	349	P	P	11 36 42.2	-0.5
MVL	Millersville comp=Z,36nm,1.1s	59.76	355	IAmb	IAmb	11 36 59.7	
MCWV	Mont Chateau baz=170	59.80	352	P	P	11 36 42.7	-0.4
P54A	Burton baz=169,SNR=9.4	59.83	351	P	P	11 36 43.6	+0.2
P53A	Whipple comp=Z,3µm,22.0s	59.85	350	IAMs_20	IAMs_20	12 03 32.7	
P53A	Whipple baz=168	59.85	350	P	P	11 36 43.0	-0.5
O58A	Lewisberry baz=173	59.94	355	P	P	11 36 43.6	-0.4
X34A	Smith Ranch, M comp=Z,52nm,1.1s	59.96	334	IAmb	IAmb	11 37 12.3	
HHAR	Hobbs comp=Z,36nm,1.2s	59.98	338	IAmb	IAmb	11 37 02.1	
O60A	Telford baz=175	60.01	356	P	P	11 36 44.3	-0.2
Q49A	Aurora baz=165	60.02	347	P	P	11 36 43.9	-0.8
O59A	Robesonia baz=174	60.06	355	P	P	11 36 44.4	-0.5
O57A	Amberson baz=173	60.09	354	P	P	11 36 45.4	+0.3
P52A	Corning baz=168	60.12	350	P	P	11 36 44.5	-0.8
Q48A	North Vernon baz=164	60.13	347	P	P	11 36 44.5	-0.9
P51A	Williamsport comp=Z,26nm,0.9s	60.13	349	IAmb	IAmb	11 37 17.2	
P51A	comp=Z,3µm,21.0s			IAMs_20	IAMs_20	12 03 20.8	
P51A	Williamsport baz=167	60.13	349	P	P	11 36 44.4	-1.0
MGMO	Mountain Grove comp=Z,38nm,1.0s	60.22	340	IAmb	IAmb	11 37 03.3	
O56A	Blue Knob Stat comp=Z,42nm,0.9s	60.24	353	IAmb	IAmb	11 37 18.7	
O56A	Blue Knob Stat baz=172,SNR=7.1	60.24	353	P	P	11 36 47.0	+0.8
O55A	Ligonier baz=171,SNR=6.0	60.27	352	P	P	11 36 47.2	+0.8
U38A	Gravette comp=Z,31nm,1.3s	60.28	338	IAmb	IAmb	11 37 04.0	
TUL1	Leonard baz=153	60.31	337	P	P	11 36 45.8	-0.9
BRNJ	Basking Ridge comp=Z,3µm,21.0s	60.32	357	IAMs_20	IAMs_20	12 02 57.3	
O54A	Avella baz=170	60.39	352	P	P	11 36 46.8	-0.3
P50A	Jamestown baz=166	60.39	348	P	P	11 36 46.6	-0.5
WMOK	Wichita Mounta baz=150	60.47	334	P	P	11 36 47.0	-0.9
P49A	Miami Univ. Ec baz=165	60.50	348	P	P	11 36 47.1	-0.8
OLIL	Olney comp=Z,3µm,22.0s	60.50	344	IAMs_20	IAMs_20	12 02 43.9	
N62A	Caumsett State baz=177	60.52	358	P	P	11 36 48.0	+0.1
SSPA	Standing Stone	60.53	354	P	P	11 36 48.1	0.0
SSPA	Standing Stone comp=Z,4µm,22.0s	60.53	354	IAMs_20	IAMs_20	12 03 43.8	
SSPA	Standing Stone baz=172	60.53	354	P	P	11 36 48.3	+0.2
BLO	Bloomington comp=Z,4µm,18.0s	60.54	346	IAMs_20	IAMs_20	12 07 37.5	
N60A	Cedar Hill Far baz=175	60.54	356	P	P	11 36 48.4	+0.2
O52A	Adamsville comp=Z,2µm,19.0s	60.54	350	IAMs_20	IAMs_20	12 05 28.8	
O52A	Adamsville baz=168	60.54	350	P	P	11 36 48.0	-0.1
P48A	Milroy comp=Z,3µm,21.0s	60.57	347	IAMs_20	IAMs_20	12 03 07.4	
P48A	Milroy baz=164	60.57	347	P	P	11 36 47.8	-0.6
O53A	New Philadelph baz=169	60.58	351	P	P	11 36 48.6	+0.2
PAL	Palisades comp=Z,4µm,21.0s	60.61	357	IAMs_20	IAMs_20	12 02 51.0	
PAL	Palisades baz=177	60.61	357	P	P	11 36 49.0	+0.4
N58A	Sunbury comp=Z,26nm,0.8s	60.63	355	IAmb	IAmb	11 37 06.3	
N58A	Sunbury baz=174	60.63	355	P	P	11 36 49.3	+0.5
N59A	State Game Lan baz=175	60.63	356	P	P	11 36 49.2	+0.4
O51A	Pataskala baz=167	60.70	350	P	P	11 36 48.6	-0.6
ODNJ	Ogdensburg comp=Z,3µm,21.0s	60.72	357	IAMs_20	IAMs_20	12 03 20.9	
CCM	Cathedral Cave	60.73	342	P	P	11 36 48.5	-1.0
CCM	comp=Z,33nm,0.9s			pmax	pmax		
CCM	comp=Z,1µm,21.0s			MLR	MLR		
CCM	Cathedral Cave	60.73	342	P	P	11 36 48.5	-1.0
CCM	comp=Z,33nm,0.9s			IAmb	IAmb	11 37 51.9	
CCM	Cathedral Cave baz=158	60.73	342	P	P	11 36 48.3	-1.2
N55A	Marion Center baz=171,SNR=17	60.80	353	P	P	11 36 50.3	+0.3
ACSO	Alum Creek Sta comp=Z,45nm,0.9s	60.84	349	IAmb	IAmb	11 37 24.2	
ACSO	comp=Z,3µm,22.0s			IAMs_20	IAMs_20	12 03 52.8	
ACSO	Alum Creek Sta baz=167,SNR=7.5	60.84	349	P	P	11 36 49.2	-1.1
N56A	West Decatur baz=172	60.86	353	P	P	11 36 49.7	-0.7

O50A	Cable	60.88	349	P	P	11 36 49.7	-0.8
	baz=166						
YLE	Yale	60.88	358	IAMs_20	IAMs_20	12 06 56.2	
	comp=Z,3µm,19.0s						
Q44A	Meyer Farm, Va	60.90	344	IAmb	IAmb	11 37 46.7	
	comp=Z,50nm,1.0s						
M61A	Granite Spring	60.91	357	P	P	11 36 50.4	-0.2
	baz=177						
M63A	Gales Ferry	60.95	359	P	P	11 36 50.9	0.0
	baz=179						
M60A	Port Jervis	60.97	357	P	P	11 36 51.1	0.0
	baz=176						
M62A	Hamden	61.01	358	P	P	11 36 50.1	-1.2
	baz=178						
S39A	Bolivar	61.05	340	IAmb	IAmb	11 37 09.0	
	comp=Z,35nm,0.9s						
O49A	Covington	61.05	348	IAmb	IAmb	11 37 46.3	
	comp=Z,47nm,1.1s						
O49A				IAMs_20	IAMs_20	12 05 56.2	
	comp=Z,3µm,20.0s						
O49A	Covington	61.05	348	P	P	11 36 50.6	-1.1
	baz=165						
N53A	Lisbon	61.07	351	IAmb	IAmb	11 37 36.4	
	comp=Z,38nm,0.8s						
N53A	Lisbon	61.07	351	P	P	11 36 51.0	-0.8
	baz=169						
MNTX	Cornudas Mount	61.07	326	P	P	11 36 51.8	-0.2
	baz=142,SNR=13						
M64A	Tiverton	61.09	360	P	P	11 36 50.8	-1.0
	baz=180						
M65A	Busby, Falmout	61.09	0	IAMs_20	IAMs_20	12 02 19.0	
	comp=Z,3µm,22.0s						
M65A	Busby, Falmout	61.09	0	P	P	11 36 50.9	-0.9
	baz=180						
N54A	Moraine State	61.10	352	IAMs_20	IAMs_20	12 03 57.7	
	comp=Z,3µm,22.0s						
N54A	Moraine State	61.10	352	P	P	11 36 52.1	+0.1
	baz=170,SNR=5.4						
P46A	Rosedale	61.12	346	IAMs_20	IAMs_20	12 04 26.9	
	comp=Z,4µm,22.0s						
M58A	Price's Panora	61.13	355	P	P	11 36 51.8	-0.4
	baz=174						
M57A	Sunshine Farm,	61.16	355	IAmb	IAmb	11 37 18.7	
	comp=Z,26nm,0.8s						
M57A	Sunshine Farm,	61.16	355	P	P	11 36 53.1	+0.8
	baz=173,SNR=5.1						
N52A	McGinn's Farm,	61.20	351	P	P	11 36 51.8	-0.8
	baz=168						
M59A	Waymart	61.23	356	P	P	11 36 52.6	-0.3
	baz=175						
R40A	Maddies Statio	61.26	341	IAmb	IAmb	11 37 56.0	
	comp=Z,23nm,0.8s						
O48A	Farmland	61.28	347	P	P	11 36 52.6	-0.7
	baz=165						
KSCT	Kent School, K	61.31	358	IAMs_20	IAMs_20	12 04 10.6	
	comp=Z,3µm,20.0s						
N50A	Nevada	61.40	349	P	P	11 36 53.3	-0.7
	baz=167						
L63A	North Scituate	61.40	359	P	P	11 36 53.8	-0.2
	baz=179						
M56A	Emporium	61.41	354	IAmb	IAmb	11 37 29.7	
	comp=Z,46nm,0.9s						
M56A				IAMs_20	IAMs_20	12 04 21.4	
	comp=Z,3µm,22.0s						
M56A	Emporium	61.41	354	P	P	11 36 54.4	+0.4
	baz=172,SNR=7.1						
N51A	Ashland	61.41	350	IAMs_20	IAMs_20	12 06 14.8	
	comp=Z,3µm,20.0s						
N51A	Ashland	61.41	350	P	P	11 36 53.4	-0.7
	baz=168						
M55A	Ridgway	61.45	353	IAMs_20	IAMs_20	12 04 14.1	
	comp=Z,3µm,22.0s						
M55A	Ridgway	61.45	353	P	P	11 36 54.5	+0.1
	baz=171,SNR=11						
L64A	Middleborough	61.47	360	P	P	11 36 54.5	+0.1
	baz=180						
M54A	Oil Creek Stat	61.60	352	P	P	11 36 55.5	+0.1
	baz=170,SNR=8.0						
L60A	Shokan	61.60	357	P	P	11 36 54.6	-0.8
	baz=176						
MSTX	Muleshoe	61.60	330	P	P	11 36 55.6	-0.1
	baz=146,SNR=11						
M53A	WI Miller and	61.66	352	P	P	11 36 55.7	-0.1
	baz=169						
N49A	Columbus Grove	61.73	348	P	P	11 36 55.4	-0.8
	baz=166,SNR=11						
L58A	Harry Jones Me	61.76	356	P	P	11 36 57.0	+0.5
	baz=175,SNR=7.4						
L61A	Hillsdale 1, H	61.78	358	P	P	11 36 55.4	-1.1
	baz=177						
M51A	Elyria	61.78	350	P	P	11 36 55.7	-0.9
	baz=168						
L57A	Andrews Acres	61.79	355	P	P	11 36 55.7	-1.0
	baz=174						
SFIN	Lafayette	61.82	346	IAmb	IAmb	11 37 38.3	
	comp=Z,36nm,0.8s						
SFIN				IAMs_20	IAMs_20	12 04 15.4	
	comp=Z,4µm,20.0s						
SFIN	Lafayette	61.82	346	P	P	11 36 54.9	-1.9
	baz=163						
QUA2	Belchertown	61.83	359	IAMs_20	IAMs_20	12 04 55.3	
	comp=Z,3µm,21.0s						
N48A	Decatur	61.84	348	P	P	11 36 55.9	-1.1
	baz=165						
L59A	Walton	61.85	356	IAMs_20	IAMs_20	12 04 46.8	
	comp=Z,3µm,21.0s						
L59A	Walton	61.85	356	P	P	11 36 57.8	+0.7
	baz=175,SNR=7.7						
AMTX	Amarillo	61.86	331	P	P	11 36 56.4	-0.9
	baz=147						
M52A	Chesterland	61.86	351	IAMs_20	IAMs_20	12 05 14.3	
	comp=Z,4µm,21.0s						
M52A	Chesterland	61.86	351	P	P	11 36 56.1	-1.0
	baz=169						
WES	Weston	61.92	360	IAMs_20	IAMs_20	12 02 47.8	
	comp=Z,2µm,22.0s						
BINY	Binghamton	61.92	356	P	P	11 36 58.1	+0.5
	baz=174,SNR=6.8						
O44A	Mansfield	61.93	345	IAMs_20	IAMs_20	12 05 35.3	
	comp=Z,3µm,19.0s						
L56A	Greenwood	61.99	354	IAmb	IAmb	11 37 15.4	
	comp=Z,35nm,0.9s						
L56A				IAMs_20	IAMs_20	12 07 51.9	
	comp=Z,2µm,19.0s						
L56A	Greenwood	61.99	354	P	P	11 36 58.4	+0.4
	baz=173,SNR=5.3						
N47A	Urbana	61.99	347	IAMs_20	IAMs_20	12 06 20.0	
	comp=Z,3µm,19.0s						
N47A	Urbana	61.99	347	P	P	11 36 56.8	-1.2
	baz=164						
M50A	Fremont	62.00	350	IAmb	IAmb	11 37 43.0	
	comp=Z,44nm,1.1s						
M50A				IAMs_20	IAMs_20	12 04 28.8	
	comp=Z,3µm,20.0s						
M50A	Fremont	62.00	350	P	P	11 36 56.9	-1.1
	baz=167						
L61B	Northampton	62.01	358	P	P	11 36 57.9	-0.2
	baz=178						
HRV	Adam Dziewonsk	62.04	359	P	P	11 36 57.8	-0.5
HRV				pmax	pmax		
	comp=Z,54nm,1.0s						
HRV	Adam Dziewonsk	62.04	359	P	P	11 36 57.8	-0.5
HRV	Adam Dziewonsk	62.04	359	IAMs_20	IAMs_20	12 02 50.0	
	comp=Z,3µm,22.0s						
HRV	Adam Dziewonsk	62.04	359	P	P	11 36 58.1	-0.2
	baz=179						
L53A	Girard	62.11	352	P	P	11 36 58.8	0.0
	baz=170,SNR=8.3						
L55A	Hinsdale	62.12	354	P	P	11 36 59.3	+0.4
	baz=172,SNR=8.4						
HSIG		62.17	320	IAMs_20	IAMs_20	12 02 01.6	
	comp=Z,2µm,19.0s						
VNA3	Neumayer Olymp	62.19	161	P	P	11 37 00.5	+1.4
K62A	Royalston	62.21	359	IAMs_20	IAMs_20	12 05 06.0	
	comp=Z,3µm,20.0s						
K62A	Royalston	62.21	359	P	P	11 36 59.4	-0.1
	baz=178						
K60A	Five Rivers En	62.22	357	P	P	11 36 59.1	-0.3
	baz=177						
K63A	Dunstable	62.23	359	P	P	11 36 59.2	-0.3
	baz=179						
M49A	Liberty Center	62.23	349	P	P	11 36 58.9	-0.7
	baz=166,SNR=6.3						
ERPA	Erie	62.24	352	P	P	11 36 59.6	-0.1
	baz=170,SNR=6.9						
K61A	Williamstown	62.24	358	P	P	11 36 59.6	-0.1
	baz=177						
L54A	Sinclairville	62.27	353	P	P	11 37 00.1	+0.3
	baz=171,SNR=16						
TRY	Troy	62.32	358	IAMs_20	IAMs_20	12 03 30.3	
	comp=Z,3µm,20.0s						
WVNY	West Valley, N	62.36	353	IAMs_20	IAMs_20	12 04 51.2	
	comp=Z,4µm,21.0s						
VNA1	Neumayer--Stat	62.41	161	P	P	11 37 02.1	+1.6
K59A	Cooperstown	62.42	357	P	P	11 37 01.5	+0.7
	baz=176,SNR=8.3						
M47A	Cromwell	62.44	347	P	P	11 36 59.9	-1.1
	baz=164						
K58A	Earlville	62.46	356	IAMs_20	IAMs_20	12 07 25.4	
	comp=Z,3µm,18.0s						
K58A	Earlville	62.46	356	P	P	11 37 01.5	+0.4
	baz=175,SNR=6.5						
K57A	Scipio Center	62.49	355	P	P	11 37 00.7	-0.6
	baz=174						
HDIL	Hopedale	62.52	344	IAmb	IAmb	11 37 28.0	
	comp=Z,52nm,1.0s						
HDIL				IAMs_20	IAMs_20	12 08 49.9	
	comp=Z,3µm,19.0s						
HDIL	Hopedale	62.52	344	P	P	11 37 00.4	-1.2
	baz=160						
K56A	Middlesex	62.52	355	P	P	11 37 01.1	-0.5
	baz=173						
K54A	Basiliko Farm,	62.57	353	P	P	11 37 02.0	+0.2
	baz=172,SNR=13						
L50A	Kingsville	62.58	350	P	P	11 37 00.5	-1.4
	baz=167						
K55A	Perry	62.62	354	P	P	11 37 01.4	-0.9
	baz=172						
J62A	Henniker	62.77	359	P	P	11 37 02.4	-0.7
	baz=179						
L48A	N Adams	62.77	349	P	P	11 37 01.9	-1.3
	baz=166						
VNA2	Neumayer--Watz	62.77	161	P	P	11 37 04.0	+1.0
L49A	Milan	62.81	349	P	P	11 37 02.7	-0.7
	baz=166						
J60A	Lant Hill Farm	62.82	358	P	P	11 37 03.9	+0.4
	baz=177						
J61A	Chester	62.90	359	P	P	11 37 05.1	+1.1
	baz=178						
319A	Douglas	62.94	323	IAMs_20	IAMs_20	12 01 20.6	
	comp=Z,3µm,21.0s						
AAM	Ann Arbor	62.97	349	IAMs_20	IAMs_20	12 05 09.1	
	comp=Z,3µm,20.0s						
AAM	Ann Arbor	62.97	349	P	P	11 37 05.0	+0.5
	baz=166						
K52A	Tillsonburg	62.99	352	P	P	11 37 04.8	+0.2
	baz=170						
121A	Cookes Peak, D	62.99	325	P	P	11 37 04.4	-0.7
121A				IAmb	IAmb	11 38 00.1	
	comp=Z,24nm,1.0s						
121A	Cookes Peak, D	62.99	325	P	P	11 37 04.7	-0.4
	baz=141,SNR=5.9						
M44A	Midewin, Illi	63.00	345	IAMs_20	IAMs_20	12 08 41.2	
	comp=Z,4µm,18.0s						
J58A	Remsen	63.03	356	IAMs_20	IAMs_20	12 05 31.5	
	comp=Z,3µm,20.0s						
J58A	Remsen	63.03	356	P	P	11 37 05.0	+0.1
	baz=175						
K51A	Iona Station	63.04	351	P	P	11 37 04.4	-0.5
	baz=169						
J56A	Wolcott	63.06	355	P	P	11 37 04.8	-0.2
	baz=174						
J59A	Piesco	63.09	357	IAMs_20	IAMs_20	12 04 49.2	
	comp=Z,3µm,21.0s						
J59A	Piesco	63.09	357	P	P	11 37 05.8	+0.4
	baz=176,SNR=8.2						
MEDO	Medina	63.10	354	IAMs_20	IAMs_20	12 05 22.1	
	comp=Z,3µm,21.0s						
J57A	Williamstown	63.13	356	IAmb	IAmb	11 37 24.5	
	comp=Z,31nm,0.8s						
J57A				IAMs_20	IAMs_20	12 09 06.0	
	comp=Z,2µm,19.0s						
J57A	Williamstown	63.13	356	P	P	11 37 05.3	-0.2
	baz=174						
J55A	Hilton	63.13	354	IAMs_20	IAMs_20	12 08 36.1	
	comp=Z,3µm,19.0s						
J55A	Hilton	63.13	354	P	P	11 37 05.2	-0.3
	baz=173						
L46A	Eue Claire	63.20	347	IAMs_20	IAMs_20	12 07 05.7	
	comp=Z,3µm,19.0s						
L46A	Eue Claire	63.20	347	P	P	11 37 05.0	-1.1
	baz=164						
J54A	Appleton	63.22	354	IAMs_20	IAMs_20	12 05 15.5	
	comp=Z,3µm,21.0s						
J54A	Appleton	63.22	354	P	P	11 37 05.9	-0.2
	baz=172						
HNH	Hanover	63.25	359	IAMs_20	IAMs_20	12 05 45.5	
	comp=Z,2µm,21.0s						
K50A	Casco	63.26	350	IAMs_20	IAMs_20	12 05 39.3	
	comp=Z,4µm,20.0s						
K50A	Casco	63.26	350	P	P	11 37 05.5	-0.9
	baz=168						
I58A	Old Forge	63.34	357	P	P	11 37 07.4	+0.4
	baz=176,SNR=8.1						
I62A	Tamworth	63.41	360	IAMs_20	IAMs_20	12 06 34.7	
	comp=Z,2µm,20.0s						
I62A	Tamworth	63.41	360	P	P	11 37 07.7	+0.3
	baz=179						
J52A	Paris	63.41	352	P	P	11 37 06.9	-0.5
	baz=170,SNR=14						
K49A	Clarkson	63.41	350	P	P	11 37 06.3	-1.2
	baz=167						
I60A	Shoreham	63.42	358	P	P	11 37 07.4	0.0
	baz=177						
KSU1	Kansas State U	63.44	338	IAMs_20	IAMs_20	12 05 43.5	
	comp=Z,2µm,18.0s						
I64A	Boothbay	63.46	1	P	P	11 37 07.1	-0.6
	baz=181						
I61A	Oroboro, Fairl	63.48	359	P	P	11 37 07.2	-0.6
	baz=178						
K48A	Perry	63.54	349	P	P	11 37 07.0	-1.3
	baz=166,SNR=7.2						
K47A	Vermontville	63.58	348	P	P	11 37 06.8	-1.7
	baz=165						
I63A	Otisfield	63.58	0	IAMs_20	IAMs_20	12 03 54.3	
	comp=Z,3µm,21.0s						
I63A	Otisfield	63.58	0	P	P	11 37 07.5	-1.0
	baz=180						
NCB	Newcomb	63.58	357	IAmb	IAmb	11 37 36.1	
	comp=Z,28nm,1.1s						
NCB				IAMs_20	IAMs_20	12 05 02.2	
	comp=Z,2µm,20.0s						
R32A	Long Quarter,	63.63	336	IAmb	IAmb	11 37 26.5	
	comp=Z,39nm,1.1s						
I57A	Carthage	63.63	356	P	P	11 37 07.6	-1.2
	baz=175						
L44A	Lake County Fo	63.72	346	IAMs_20	IAMs_20	12 05 23.2	
	comp=Z,4µm,21.0s						
L44A	Lake County Fo	63.72	346	P	P	11 37 07.9	-1.6
	baz=162						
PECO	Prince Edward	63.72	355	P	P	11 37 08.7	-0.7
PECO				IAmb	IAmb	11 37 29.5	
	comp=Z,39nm,0.9s						
K46A	Dorr	63.75	348	P	P	11 37 08.0	-1.6
	baz=164						
LBNH	Lisbon	63.78	359	IAMs_20	IAMs_20	12 05 59.5	
	comp=Z,2µm,21.0s						
LBNH	Lisbon	63.78	359	P	P	11 37 08.1	-1.8
	baz=179						
J49A	Marlette	63.92	350	P	P	11 37 09.0	-1.7
	baz=167						
J48A	Bridge Port	63.97	349	IAMs_20	IAMs_20	12 05 29.9	
	comp=Z,3µm,21.0s						
J48A	Bridge Port	63.97	349	P	P	11 37 09.4	-1.7
	baz=166						
L42A	Oliver, Polo	63.98	344	IAMs_20	IAMs_20	12 09 59.0	
	comp=Z,3µm,18.0s						
H58A	Gabriels	64.03	357	P	P	11 37 11.9	+0.5
	baz=176,SNR=6.5						
I51A	Listowel	64.03	352	P	P	11 37 10.9	-0.7
	baz=169,SNR=9.2						
I55A	Frankford	64.06	354	P	P	11 37 11.0	-0.7
	baz=173						
H61A	Lyndonville	64.07	359	P	P	11 37 12.0	+0.3
	baz=179						
J47A	Sumner	64.09	349	P	P	11 37 10.6	-1.3
	baz=165						
WVL	Waterville	64.10	1	IAMs_20	IAMs_20	12 03 55.2	
	comp=Z,3µm,21.0s						
H62A	Milan	64.11	360	IAMs_20	IAMs_20	12 03 38.2	
	comp=Z,3µm,22.0s						
H62A	Milan	64.11	360	P	P	11 37 12.7	+0.7
	baz=180						
H60A	Morristown	64.12	358	P	P	11 37 12.1	0.0
	baz=178						
H57A	Richville	64.13	356	P	P	11 37 12.1	-0.1
	baz=175,SNR=11						
I52A	Shelburne	64.18	352	P	P	11 37 12.7	+0.1
	baz=170						
ANMO	Albuquerque	64.19	328	P	P	11 37 13.0	0.0
	comp=Z,1.1nm,0.5s,baz=147,slow=10,SNR=10						
ANMO	Albuquerque	64.19	328	*e*P	P	11 37 12.6	-0.4
ANMO	Albuquerque	64.19	328	P	P	11 37 12.6	-0.4
ANMO	Albuquerque	64.19	328	P	P	11 37 12.2	-0.7
	baz=142						
H64A	Troy	64.19	1	P	P	11 37 12.9	+0.4
	baz=182						
H63A	New Sharon	64.20	1	P	P	11 37 13.1	+0.6
	baz=181						
H59A	Cadyville	64.23	358	P	P	11 37 13.1	+0.3
	baz=177,SNR=9.4						
LONY	Lake Ozonia	64.25	357	IAmb	IAmb	11 37 41.2	
	comp=Z,50nm,1.2s						
LONY				IAMs_20	IAMs_20	12 05 11.7	
	comp=Z,3µm,21.0s						
LONY	Lake Ozonia	64.25	357	P	P	11 37 13.3	+0.3
	baz=176						
H65A	Eastbrook	64.27	2	P	P	11 37 13.1	+0.1
	baz=183						
EMMW	East Machias	64.31	3	IAMs_20	IAMs_20	12 09 45.7	
	comp=Z,2µm,19.0s						
K43A	Burlington	64.32	346	IAMs_20	IAMs_20	12 09 27.0	
	comp=Z,4µm,19.0s						
H56A	Elgin	64.32	356	P	P	11 37 13.4	0.0
	baz=174						
H55A	Tweed	64.35	355	P	P	11 37 13.1	-0.4
	baz=173						
J46A	Howard City	64.36	348	P	P	11 37 12.2	-1.4
	baz=164						
DELO	Deloro Mine	64.36	355	IAmb	IAmb	11 37 30.0	
	comp=Z,52nm,1.2s						
DELO				IAMs_20	IAMs_20	12 06 32.5	
	comp=Z,2µm,20.0s						
CBKS	Cedar Bluff	64.37	335	P	P	11 37 13.6	-0.3
	baz=150						
H66A	Whiting	64.39	3	P	P	11 37 12.7	-1.1
	baz=184						
SNAA	Sanae	64.40	161	P	P	11 37 14.8	+1.1
SNAA	Sanae	64.40	161	P	P	11 37 14.0	+0.3
	comp=Z,14nm,0.8s,baz=271,slow=5.6,SNR=19						
SNAA	Sanae	64.40	161	*i* P	P	11 37 13.5	-0.3
SNAA	Sanae	64.40	161	P	P	11 37 13.4	-0.3
SNAA				IAmb	IAmb	11 37 26.4	
	comp=Z,56nm,1.3s						
I49A	Point Hope	64.43	350	P	P	11 37 13.6	-0.5
	baz=167						
L40A	Anamosa	64.44	343	IAMs_20	IAMs_20	12 10 03.2	
	comp=Z,3µm,18.0s						
HAL	Halifax	64.50	6	IAMs_20	IAMs_20	12 04 48.0	
	comp=Z,3µm,21.0s						
H53A	Bobcaygeon	64.50	354	P	P	11 37 14.3	-0.3
	baz=172,SNR=8.8						
J45A	Montague	64.59	347	IAMs_20	IAMs_20	12 06 52.3	
	comp=Z,2µm,21.0s						
G60A	Masonville	64.64	359	P	P	11 37 15.2	-0.3
	baz=178						
G59A	Clarenceville	64.65	358	P	P	11 37 15.2	-0.2
	baz=178						
G63A	Kingsbury	64.65	1	P	P	11 37 15.2	-0.4
	baz=181						
N35A	Tabor	64.68	339	IAmb	IAmb	11 38 28.1	
	comp=Z,34nm,0.8s						
H52A	Wyevale	64.72	353	P	P	11 37 15.5	-0.5
	baz=170						
GGN	Saint George	64.75	3	IAMs_20	IAMs_20	12 04 21.3	
	comp=Z,3µm,21.0s						
G57A	Newington	64.75	357	P	P	11 37 16.2	+0.1
	baz=176,SNR=9.8						
G58A	Ormstown	64.75	357	P	P	11 37 16.0	-0.1
	baz=177						
G62A	West of Eustis	64.75	0	IAMs_20	IAMs_20	12 04 40.2	
	comp=Z,3µm,21.0s						
G62A	West of Eustis	64.75	0	P	P	11 37 15.6	-0.6
	baz=180,SNR=14						
SADO	Sadowa	64.76	353	IAMs_20	IAMs_20	12 10 32.0	
	comp=Z,3µm,19.0s						
I47A	Gladwin	64.79	349	IAMs_20	IAMs_20	12 06 05.7	
	comp=Z,3µm,22.0s						
I47A	Gladwin	64.79	349	P	P	11 37 15.0	-1.5
	baz=166						
G65A	Princeton	64.80	2	IAMs_20	IAMs_20	12 10 01.6	
	comp=Z,3µm,18.0s						
G65A	Princeton	64.80	2	P	P	11 37 15.5	-0.9
	baz=183						
G64A	Maxfield	64.81	2	P	P	11 37 16.2	-0.3
	baz=182						
PKME	Peaks-Kenny Pk	64.81	1	IAMs_20	IAMs_20	12 04 27.9	
	comp=Z,3µm,21.0s						
PKME	Peaks-Kenny Pk	64.81	1	P	P	11 37 15.8	-0.7
	baz=182						
I48A	Sherman Twp	64.81	350	P	P	11 37 14.7	-1.9
	baz=167,SNR=8.6						
G61A	St-Isidore-de-	64.82	359	P	P	11 37 17.5	+0.8
	baz=179,SNR=7.5						
PLVO	Plevna	64.83	355	IAmb	IAmb	11 37 42.4	
	comp=Z,53nm,1.4s						
PLVO				IAMs_20	IAMs_20	12 06 43.0	
	comp=Z,2µm,21.0s						
SCIA	State Center	64.86	342	IAmb	IAmb	11 38 09.3	
	comp=Z,31nm,0.8s						
SCIA				IAMs_20	IAMs_20	12 04 38.3	
	comp=Z,2µm,22.0s						
SCIA	State Center	64.86	342	P	P	11 37 16.4	-0.6
	baz=157						
I46A	Reed City	64.89	348	P	P	11 37 16.2	-1.0
	baz=165						
T25A	Trinidad	64.96	331	IAmb	IAmb	11 37 44.8	
	comp=Z,26nm,1.1s						
T25A	Trinidad	64.96	331	P	P	11 37 16.2	-1.9
	baz=145						
JFWS	Jewell Farm	64.98	344	IAmb	IAmb	11 37 38.4	
	comp=Z,35nm,0.8s						
JFWS	Jewell Farm	64.98	344	IAMs_20	IAMs_20	12 05 12.5	
	comp=Z,3µm,22.0s						
JFWS	Jewell Farm	64.98	344	P	P	11 37 16.8	-1.0
	baz=160						
G55A	Calabogie	65.01	355	P	P	11 37 17.8	-0.1
	baz=174,SNR=5.8						
G53A	Haliburton	65.05	354	P	P	11 37 18.2	+0.1
	baz=172,SNR=16						
I45A	Fountain	65.13	348	IAMs_20	IAMs_20	12 07 19.8	
	comp=Z,3µm,21.0s						
N33A	J Bar K, Exete	65.19	338	IAMs_20	IAMs_20	12 08 25.8	
	comp=Z,2µm,19.0s						
F63A	Nahmakanta, Br	65.25	1	IAMs_20	IAMs_20	12 04 40.6	
	comp=Z,3µm,21.0s						
H48A	Harrisville	65.25	350	IAMs_20	IAMs_20	12 07 11.0	
	comp=Z,4µm,20.0s						
H48A	Harrisville	65.25	350	P	P	11 37 18.2	-1.2
	baz=167						
G54A	Lake Saint Pet	65.27	354	P	P	11 37 19.6	0.0
	baz=172						
H47A	Mio	65.30	349	P	P	11 37 19.4	-0.4
	baz=166						
214A	Organ Pipe Nat	65.40	321	P	P	11 37 21.7	+1.0
	baz=136,SNR=8.4						
F59A	Saint Guillaume	65.41	358	P	P	11 37 20.3	-0.1
	baz=178						
K38A	Parkersburg	65.42	342	IAmb	IAmb	11 38 04.4	
	comp=Z,60nm,1.4s						
K38A				IAMs_20	IAMs_20	12 10 40.9	
	comp=Z,2µm,18.0s						
H46A	Fife Lake	65.42	349	P	P	11 37 20.5	0.0
	baz=165						
F64A	Sherman	65.43	2	P	P	11 37 20.2	-0.3
F64A				IAmb	IAmb	11 37 41.9	
	comp=Z,65nm,1.2s						
F64A	Sherman	65.43	2	P	P	11 37 20.1	-0.5
	baz=182						
F61A	St Evariste	65.51	360	P	P	11 37 21.1	+0.1
	baz=180						
F60A	Warwick	65.51	359	P	P	11 37 21.4	+0.3
	baz=179,SNR=6.3						
F55A	Otter Lake	65.56	356	P	P	11 37 21.2	-0.2
	baz=174						
I42A	Draeger Farm,	65.58	346	IAmb	IAmb	11 37 43.0	
	comp=Z,54nm,1.2s						
I42A				IAMs_20	IAMs_20	12 06 52.3	
	comp=Z,4µm,21.0s						
GLMI	Grayling	65.59	349	IAMs_20	IAMs_20	12 06 28.9	
	comp=Z,4µm,22.0s						
LMN	Caledonia Moun	65.61	5	IAmb	IAmb	11 38 04.3	
	comp=Z,38nm,1.0s						
LMN				IAMs_20	IAMs_20	12 05 15.1	

	comp=Z,2µm,21.0s						
H45A	**Beulah**	**65.66**	**348**	P	**P**	**11 37 21.6**	**-0.5**
	baz=164						
X18A	**Snowflake**	**65.68**	**325**	IAMs_20	IAMs_20	12 04 17.3	
	comp=Z,3µm,20.0s						
KSCO	**Kaye Shedlock’**	**65.72**	**333**	P	**P**	**11 37 22.4**	**-0.4**
	baz=147						
F52A	**Sundridge**	**65.79**	**353**	P	**P**	**11 37 22.7**	**-0.3**
	baz=171,SNR=8.7						
G47A	**Hillman**	**65.80**	**350**	P	**P**	**11 37 22.8**	**-0.2**
	baz=166						
ALGO	**Algonquin Park**	**65.82**	**354**	P	**P**	**11 37 23.0**	**-0.1**
	baz=172,SNR=8.7						
H43A	**Windswept, Lux**	**65.87**	**347**	IAmb	IAmb	11 37 40.0	
	comp=Z,55nm,1.1s						
E60A	**Ste Agathe de**	**65.90**	**359**	P	**P**	**11 37 23.8**	**+0.2**
	baz=179						
E58A	**La Victoria**	**65.94**	**358**	P	**P**	**11 37 24.5**	**+0.6**
	baz=177,SNR=6.5						
SDCO	**Great Sand Dun**	**65.96**	**330**	P	**P**	**11 37 24.7**	**+0.2**
SDCO				IAmb	IAmb	11 37 52.0	
	comp=Z,45nm,1.1s						
SDCO	**Great Sand Dun**	**65.96**	**330**	P	**P**	**11 37 25.1**	**+0.5**
	baz=144,SNR=19						
E61A	**Lac Etchemin**	**65.96**	**0**	P	**P**	**11 37 24.1**	**0.0**
	baz=180						
E63A	**Oxbow**	**65.99**	**2**	IAmb	IAmb	11 37 44.9	
	comp=Z,34nm,1.1s						
E63A				IAMs_20	IAMs_20	12 05 14.1	
	comp=Z,3µm,22.0s						
E63A	**Oxbow**	**65.99**	**2**	P	**P**	**11 37 24.5**	**+0.3**
	baz=182						
F51A	**Arnstein**	**65.99**	**353**	P	**P**	**11 37 23.6**	**-0.6**
	baz=171,SNR=7.0						
G45A	**Suttons Bay**	**65.99**	**348**	IAMs_20	IAMs_20	12 10 56.4	
	comp=Z,2µm,18.0s						
G45A	**Suttons Bay**	**65.99**	**348**	P	**P**	**11 37 24.5**	**+0.3**
	baz=165						
I40A	**Norwalk**	**65.99**	**344**	IAmb	IAmb	11 37 40.4	
	comp=Z,21nm,0.7s						
I40A				IAMs_20	IAMs_20	12 10 36.3	
	comp=Z,3µm,18.0s						
E64A	**Bridgewater**	**66.00**	**2**	P	**P**	**11 37 24.5**	**+0.2**
	baz=183						
W18A	**Petrified Fore**	**66.01**	**326**	IAmb	IAmb	11 37 52.3	
	comp=Z,54nm,1.4s						
W18A				IAMs_20	IAMs_20	12 05 35.1	
	comp=Z,3µm,19.0s						
W18A	**Petrified Fore**	**66.01**	**326**	P	**P**	**11 37 24.1**	**-0.7**
	baz=140						
E57A	**Chemin Saint G**	**66.02**	**357**	P	**P**	**11 37 24.6**	**+0.2**
	baz=176,SNR=5.8						
BGNE	**Belgrade**	**66.03**	**338**	P	**P**	**11 37 24.5**	**-0.1**
	baz=152,SNR=7.9						
F49A	**Sandfield**	**66.10**	**351**	P	**P**	**11 37 24.2**	**-0.6**
	baz=168						
G46A	**Petoskey**	**66.11**	**349**	P	**P**	**11 37 23.8**	**-1.1**
	baz=166						
E55A	**Montcerf-Lytto**	**66.16**	**356**	P	**P**	**11 37 24.7**	**-0.5**
	baz=175						
E56A	**St. Veronique**	**66.19**	**357**	P	**P**	**11 37 25.6**	**+0.1**
	baz=176,SNR=9.3						
E52A	**Mattawa**	**66.21**	**354**	P	**P**	**11 37 25.2**	**-0.3**
	baz=172,SNR=5.2						
E53A	**Dumoine, Ponti**	**66.21**	**355**	P	**P**	**11 37 25.4**	**-0.2**
	baz=173						
E54A	**Lac Daplat, Po**	**66.22**	**355**	P	**P**	**11 37 25.5**	**-0.2**
	baz=173,SNR=7.1						
F48A	**Evansville**	**66.24**	**351**	P	**P**	**11 37 25.3**	**-0.5**
	baz=168						
PQI	**Presque Isle**	**66.25**	**2**	P	**P**	**11 37 26.1**	**+0.3**
PQI				IAmb	IAmb	11 37 47.6	
	comp=Z,43nm,1.2s						
PQI				IAMs_20	IAMs_20	12 10 48.0	
	comp=Z,2µm,18.0s						
X16A	**Lo Mia Camp, P**	**66.41**	**324**	IAmb	IAmb	11 37 56.0	
	comp=Z,27nm,1.2s						
X16A				IAMs_20	IAMs_20	12 05 01.6	
	comp=Z,3µm,19.0s						
D60A	**Saint Jean D’O**	**66.44**	**360**	P	**P**	**11 37 26.9**	**-0.1**
	baz=180						
E51A	**G1948 Merrick**	**66.54**	**353**	P	**P**	**11 37 27.4**	**-0.3**
	baz=171,SNR=6.6						
D59A	**Saint-Raymond**	**66.55**	**359**	P	**P**	**11 37 27.7**	**0.0**
	baz=179						
F45A	**CMU Biological**	**66.58**	**349**	P	**P**	**11 37 27.4**	**-0.6**
	baz=165						
S22A	**4UR Ranch, Cre**	**66.59**	**329**	P	**P**	**11 37 26.9**	**-1.7**
	baz=143						
D57A	**Chemin Vers le**	**66.61**	**358**	P	**P**	**11 37 28.3**	**+0.1**
	baz=177,SNR=8.3						
D63A	**Stockholm**	**66.61**	**2**	P	**P**	**11 37 28.7**	**+0.6**
	baz=183						
D62A	**Allapoint, All**	**66.63**	**1**	IAmb	IAmb	11 37 49.6	
	comp=Z,55nm,1.1s						
D62A				IAMs_20	IAMs_20	12 05 45.1	
	comp=Z,3µm,21.0s						
D62A	**Allapoint, All**	**66.63**	**1**	P	**P**	**11 37 28.7**	**+0.4**
	baz=182						
D58A	**Chemin du LacG**	**66.66**	**358**	P	**P**	**11 37 28.7**	**+0.3**
	baz=178,SNR=11						
D56A	**ZEC Mazanza, M**	**66.68**	**357**	P	**P**	**11 37 28.3**	**-0.3**
	baz=176						
D55A	**Sainte-Anne-du**	**66.69**	**356**	P	**P**	**11 37 28.6**	**-0.1**
	baz=175,SNR=8.6						
D61A	**St Aubert, Com**	**66.74**	**0**	P	**P**	**11 37 29.6**	**+0.7**
	baz=181						
Q24A	**Divide**	**66.79**	**331**	IAMs_20	IAMs_20	12 08 51.8	
	comp=Z,2µm,22.0s						
Q24A	**Divide**	**66.79**	**331**	P	**P**	**11 37 29.4**	**-0.5**
	baz=145						
E48A	**Lockeyer**	**66.82**	**351**	P	**P**	**11 37 29.1**	**-0.4**
	baz=168,SNR=7.0						
I37A	**Lemond, Waseca**	**66.85**	**342**	IAMs_20	IAMs_20	12 11 41.0	
	comp=Z,2µm,19.0s						
D54A	**Lac Fusel, La**	**66.90**	**356**	P	**P**	**11 37 29.4**	**-0.6**
	baz=174,SNR=6.3						
D53A	**Lac Vacive, Po**	**66.91**	**355**	IAmb	IAmb	11 37 46.5	
	comp=Z,36nm,0.9s						
D53A				IAMs_20	IAMs_20	12 08 04.8	
	comp=Z,2µm,20.0s						
D53A	**Lac Vacive, Po**	**66.91**	**355**	P	**P**	**11 37 29.9**	**-0.1**
	baz=173,SNR=6.2						
LATQ	**La Tuque**	**66.94**	**358**	P	**P**	**11 37 30.5**	**+0.3**
	baz=178						
E47A	**Iron Bridge**	**66.95**	**351**	P	**P**	**11 37 30.0**	**-0.3**
	baz=167						
MVCO	**Mesa Verde**	**66.98**	**328**	IAmb	IAmb	11 38 31.1	
	comp=Z,23nm,1.0s						
MVCO				IAMs_20	IAMs_20	12 06 30.8	
	comp=Z,2µm,18.0s						
MVCO	**Mesa Verde**	**66.98**	**328**	P	**P**	**11 37 30.3**	**-0.8**
	baz=141						
E46A	**Sault Ste Mari**	**67.03**	**350**	IAmb	IAmb	11 38 12.4	
	comp=Z,38nm,0.9s						
D51A	**Lot 18 Range I**	**67.08**	**354**	P	**P**	**11 37 31.2**	**+0.1**
	baz=171						
OGNE	**Ogallala**	**67.10**	**335**	IAmb	IAmb	11 37 50.0	
	comp=Z,71nm,1.4s						
OGNE	**Ogallala**	**67.10**	**335**	P	**P**	**11 37 32.0**	**+0.4**
	baz=148						
F42A	**Maple Grove Fa**	**67.17**	**347**	IAMs_20	IAMs_20	12 07 08.7	
	comp=Z,4µm,22.0s						
G40A	**Rib Lake**	**67.18**	**345**	IAMs_20	IAMs_20	12 08 03.7	
	comp=Z,3µm,20.0s						
WUAZ	**Wupatki**	**67.19**	**325**	IAmb	IAmb	11 38 00.9	
	comp=Z,44nm,1.1s						
WUAZ				IAMs_20	IAMs_20	12 05 14.3	
	comp=Z,2µm,20.0s						
WUAZ	**Wupatki**	**67.19**	**325**	P	**P**	**11 37 33.7**	**+1.3**
	baz=138,SNR=11						
D50A	**G1974 Best Tow**	**67.20**	**353**	P	**P**	**11 37 31.8**	**-0.2**
	baz=171,SNR=11						
D48A	**Paudash Townsh**	**67.45**	**352**	P	**P**	**11 37 33.3**	**-0.2**
	baz=169						
D46A	**Sault St. Mari**	**67.50**	**350**	P	**P**	**11 37 34.4**	**+0.6**
	baz=166						
D47A	**Chapleau**	**67.52**	**351**	P	**P**	**11 37 33.0**	**-0.9**
	baz=168						
E43A	**Lone Tree Farm**	**67.53**	**348**	IAmb	IAmb	11 37 50.5	
	comp=Z,19nm,0.8s						
E43A				IAMs_20	IAMs_20	12 09 00.2	
	comp=Z,3µm,20.0s						
E44A	**Grand Marais A**	**67.56**	**349**	IAmb	IAmb	11 38 34.7	
	comp=Z,49nm,1.1s						
E44A				IAMs_20	IAMs_20	12 09 10.0	
	comp=Z,3µm,20.0s						
E44A	**Grand Marais A**	**67.56**	**349**	P	**P**	**11 37 34.1**	**-0.1**
	baz=165						
ECSD	**EROS Data Cent**	**67.57**	**340**	P	**P**	**11 37 34.2**	**-0.2**
	baz=154,SNR=9.8						
ISCO	**Idaho Springs**	**67.68**	**332**	IAmb	IAmb	11 38 02.8	
	comp=Z,33nm,1.2s						
ISCO	**Idaho Springs**	**67.68**	**332**	P	**P**	**11 37 35.9**	**+0.4**
	baz=144,SNR=6.5						
COWI	**Conover**	**67.72**	**346**	IAmb	IAmb	11 37 56.7	
	comp=Z,44nm,1.2s						
COWI				IAMs_20	IAMs_20	12 07 45.1	
	comp=Z,3µm,20.0s						
TAOE	**Nuku Hiva Isla**	**67.73**	**268**	*e*S	**S**	**11 46 35.5**	**+1.0**
	comp=Z,5µm,27.0s						
TAOE	**Nuku Hiva Isla**	**67.73**	**268**	*e*LR	LR	11 57 54.2	
	comp=Z,2µm,24.2s,baz=109						
TAOE	**Nuku Hiva Isla**	**67.73**	**268**	*e*T	T	12 50 52.0	
	comp=Z,32nm,0.2s						
PV01	**Paradox Valley**	**67.74**	**328**	IAmb	IAmb	11 37 54.6	
	comp=Z,42nm,1.3s						
SMCO	**Snowmass**	**67.80**	**330**	IAMs_20	IAMs_20	12 07 57.3	
	comp=Z,2µm,20.0s						
SPMN	**Marine on St.**	**67.80**	**343**	IAMs_20	IAMs_20	12 12 40.2	
	comp=Z,2µm,18.0s						
SPMN	**Marine on St.**	**67.80**	**343**	P	**P**	**11 37 36.3**	**+0.5**
	baz=158						
PDMCI	**Parker Dam,Lak**	**67.86**	**322**	P	**P**	**11 37 36.8**	**+0.4**
	baz=136						
PV15	**Paradox Valley**	**67.86**	**329**	IAMs_20	IAMs_20	12 07 27.0	
	comp=Z,2µm,19.0s						
IKP	**In-Ko-Pah, Jac**	**67.87**	**320**	P	**P**	**11 37 35.8**	**-0.7**
	baz=134						
PV02	**Paradox Valley**	**67.88**	**328**	IAMs_20	IAMs_20	12 07 29.5	
	comp=Z,2µm,18.0s						
PV13	**Radium Mtn., P**	**67.88**	**328**	IAMs_20	IAMs_20	12 07 53.6	
	comp=Z,3µm,18.0s						
SWSC	**Sam W. Stewart**	**67.88**	**320**	P	**P**	**11 37 37.0**	**+0.4**
	baz=134						
VLDQ	**Val d'Or**	**67.91**	**355**	IAmb	IAmb	11 38 02.3	
	comp=Z,44nm,1.1s						
VLDQ				IAMs_20	IAMs_20	12 08 16.3	
	comp=Z,3µm,20.0s						
PV18	**Skein Mesa, Pa**	**67.99**	**328**	IAMs_20	IAMs_20	12 07 55.6	
	comp=Z,2µm,18.0s						
PV07	**Paradox Valley**	**68.01**	**329**	IAMs_20	IAMs_20	12 09 31.2	
	comp=Z,2µm,19.0s						
PV16	**Nyswonger Mesa**	**68.05**	**328**	IAMs_20	IAMs_20	12 07 51.0	
	comp=Z,2µm,18.0s						
PV19	**Morning Glory**	**68.08**	**328**	IAMs_20	IAMs_20	12 07 58.9	
	comp=Z,3µm,19.0s						
PV20	**West Nyswonger**	**68.10**	**328**	IAMs_20	IAMs_20	12 07 50.3	
	comp=Z,3µm,18.0s						
PV14	**Lion Creek, Pa**	**68.15**	**328**	IAMs_20	IAMs_20	12 08 00.7	
	comp=Z,3µm,18.0s						
BC3	**Big Chuckawall**	**68.17**	**321**	P	**P**	**11 37 39.6**	**+1.1**
	baz=135,SNR=9.4						
MONP2	**Monument Peak**	**68.22**	**320**	P	**P**	**11 37 39.9**	**+0.9**
	baz=134						
BAR	**Barrett**	**68.23**	**319**	P	**P**	**11 37 37.7**	**-1.1**
BAR				IAmb	IAmb	11 37 51.6	
	comp=Z,30nm,1.2s						
IRM	**Iron Mountain**	**68.34**	**321**	P	**P**	**11 37 40.8**	**+1.3**
	baz=135,SNR=10						
U15A	**North Rim**	**68.37**	**325**	IAmb	IAmb	11 38 08.7	
	comp=Z,45nm,1.3s						
U15A				IAMs_20	IAMs_20	12 05 51.5	
	comp=Z,3µm,20.0s						
D41A	**Chassel**	**68.51**	**347**	IAmb	IAmb	11 38 01.2	
	comp=Z,44nm,0.9s						
D41A				IAMs_20	IAMs_20	12 08 10.9	
	comp=Z,3µm,21.0s						
N23A	**Red Feather La**	**68.71**	**332**	IAmb	IAmb	11 38 09.2	
	comp=Z,29nm,1.2s						
N23A	**Red Feather La**	**68.71**	**332**	P	**P**	**11 37 40.3**	**-1.6**
	baz=144						
BELC	**Belle Mtn. Jos**	**68.73**	**321**	P	**P**	**11 37 42.9**	**+0.8**
	baz=134						
XPFO	**Pion Flat**	**68.74**	**320**	P	**P**	**11 37 39.9**	**-2.2**
PFO	**Pinyon Flats O**	**68.74**	**320**	*e*P	**P**	**11 37 41.3**	**-0.8**
PFO	**Pinyon Flats O**	**68.74**	**320**	P	**P**	**11 37 41.3**	**-0.8**
PFO	**Pinyon Flats O**	**68.74**	**320**	P	**P**	**11 37 42.3**	**+0.3**
	baz=134						
E38A	**The Farm, Brul**	**68.76**	**345**	P	**P**	**11 37 40.9**	**-0.8**
E38A				IAmb	IAmb	11 38 45.4	
	comp=Z,33nm,1.1s						
E38A				IAMs_20	IAMs_20	12 09 04.6	
	comp=Z,4µm,21.0s						
LSQQ	**Lebel-sur-Quev**	**68.82**	**356**	P	**P**	**11 37 41.9**	**-0.1**
	baz=174						
PHWY	**Pilot Hill**	**68.83**	**333**	P	**P**	**11 37 42.2**	**-0.5**
PHWY				IAmb	IAmb	11 38 10.7	
	comp=Z,66nm,1.6s						
NVL	**N'lazarevskaya**	**68.98**	**159**	⇑*i*P	**P**	**11 37 41.2**	**-1.7**
NVL				*e*PPP	PPP	11 41 59.9	
NVL				*e*S	**S**	**11 46 45.9**	**-1.4**
NVL				pmax	pmax		
	comp=Z,19nm,0.9s						
SUSD	**Miller**	**68.98**	**339**	IAmb	IAmb	11 38 14.8	
	comp=Z,46nm,1.0s						
SUSD	**Miller**	**68.98**	**339**	P	**P**	**11 37 43.5**	**+0.3**
	baz=152						
GMRC	**Granite Mounta**	**69.08**	**322**	P	**P**	**11 37 45.9**	**+1.7**
	baz=135,SNR=13						
O20A	**White River Ci**	**69.15**	**330**	IAmb	IAmb	11 38 12.3	
	comp=Z,42nm,1.1s						
O20A	**White River Ci**	**69.15**	**330**	P	**P**	**11 37 45.4**	**+0.9**
	baz=142						
MURC	**Murrieta**	**69.18**	**320**	P	**P**	**11 37 43.2**	**-1.5**
	baz=133						
BBRC	**Big Bear Solar**	**69.47**	**320**	P	**P**	**11 37 47.3**	**+0.6**
	baz=134						
HEC	**Hector,Ludlow**	**69.51**	**321**	P	**P**	**11 37 48.0**	**+1.3**
	baz=134,SNR=11						
MATQ	**Matagami**	**69.56**	**355**	P	**P**	**11 37 46.1**	**-0.6**
	baz=173,SNR=6.0						
LIC	**Lamto**	**69.61**	**75**	*e*P	**P**	**11 37 46.6**	**-1.1**
	comp=Z,60nm,1.2s						
TUQ	**Turquoise Moun**	**69.69**	**322**	P	**P**	**11 37 47.8**	**-0.1**
	baz=135						
TIC	**Toumodi**	**69.78**	**75**	*e*P	**P**	**11 37 47.6**	**-1.2**
	comp=Z,48nm,1.1s						
DRLN	**Deer Lake**	**69.79**	**9**	IAmb	IAmb	11 38 08.4	
	comp=Z,48nm,1.0s						
DRLN				IAMs_20	IAMs_20	12 09 27.0	
	comp=Z,2µm,19.0s						
CIS	**Catalina Islan**	**69.80**	**319**	P	**P**	**11 37 46.1**	**-2.4**
	baz=132						
BFSC	**Mount Baldy Ra**	**69.90**	**320**	P	**P**	**11 37 50.8**	**+1.6**
	baz=133						
KIC	**Kosan Boka**	**69.92**	**75**	*e*P	**P**	**11 37 48.7**	**-1.0**
	comp=Z,74nm,1.2s						
RRX	**Edison Barstow**	**69.93**	**321**	P	**P**	**11 37 47.0**	**-2.3**
	baz=134						
DBIC	**Dimbokro**	**69.94**	**75**	P	**P**	**11 37 48.8**	**-1.0**
	comp=Z,30nm,0.9s,baz=225,slow=6.0,SNR=22						
DBIC				LR	LR	12 07 01.5	
	comp=Z,6µm,20.3s,baz=229,slow=35						
DBIC	**Dimbokro**	**69.94**	**75**	P	**P**	**11 37 49.1**	**-0.6**
DBIC				pmax	pmax		
	comp=Z,77nm,1.2s						
DBIC	**Dimbokro**	**69.94**	**75**	P	**P**	**11 37 49.1**	**-0.6**
EYMN	**Ely**	**70.00**	**345**	IAmb	IAmb	11 38 56.9	
	comp=Z,30nm,1.2s						
EYMN	**Ely**	**70.00**	**345**	IAMs_20	IAMs_20	12 09 49.4	
	comp=Z,2µm,20.0s						
EYMN	**Ely**	**70.00**	**345**	P	**P**	**11 37 48.1**	**-1.3**
	baz=159						
GSC	**Goldstone, Bar**	**70.11**	**321**	IAmb	IAmb	11 38 19.5	
	comp=Z,37nm,1.4s						
GSC	**Goldstone, Bar**	**70.11**	**321**	P	**P**	**11 37 50.4**	**-0.1**
	baz=134						
SHOC	**Shoshone, Teco**	**70.22**	**322**	P	**P**	**11 37 51.5**	**+0.5**
	baz=135						
DECC	**Green Verdugo**	**70.32**	**319**	P	**P**	**11 37 48.9**	**-2.8**
	baz=133						
QSPA	**South Pole Qui**	**70.34**	**180**	P	**P**	**11 37 53.0**	**+1.5**
	comp=Z,16nm,0.8s,baz=157,slow=5.3						
QSPA	**South Pole Qui**	**70.34**	**180**	P	**P**	**11 37 51.8**	**+0.3**
QSPA				IAmb	IAmb	11 38 00.9	
	comp=Z,28nm,0.9s						
SNCC	**San Nicolas Is**	**70.39**	**318**	P	**P**	**11 37 51.6**	**-0.5**
	baz=131						
K22A	**Casper**	**70.39**	**333**	IAmb	IAmb	11 38 19.4	
	comp=Z,36nm,1.2s						
K22A	**Casper**	**70.39**	**333**	P	**P**	**11 37 52.9**	**+0.8**
	baz=144,SNR=6.7						
EDW2	**Edwards Air Fo**	**70.53**	**320**	P	**P**	**11 37 53.8**	**+0.8**
	baz=133						
RSSD	**Black Hills**	**70.58**	**335**	P	**P**	**11 37 53.3**	**0.0**
RSSD				pmax	pmax		
	comp=Z,16nm,1.1s						
RSSD				MLR	MLR		
	comp=Z,2µm,20.0s						
RSSD	**Black Hills**	**70.58**	**335**	P	**P**	**11 37 53.3**	**0.0**
RSSD	**Black Hills**	**70.58**	**335**	P	**P**	**11 37 51.4**	**-1.9**
	baz=147						
BLG	**Laguna Peak, P**	**70.67**	**319**	P	**P**	**11 37 52.4**	**-1.5**
	baz=132						
LRMC	**Laurel Mtn Rad**	**70.76**	**321**	P	**P**	**11 37 50.7**	**-3.8**
	baz=133						
OSI	**Osito Audit: C**	**70.80**	**320**	P	**P**	**11 37 52.3**	**-2.4**
	baz=132						
TPNV	**Topopah Spring**	**70.94**	**323**	IAmb	IAmb	11 38 30.2	
	comp=Z,24nm,0.9s						
TPNV	**Topopah Spring**	**70.94**	**323**	P	**P**	**11 37 57.3**	**+1.7**
	baz=135,SNR=14						
SCZ2	**Santa Cruz Isl**	**70.95**	**319**	P	**P**	**11 37 51.8**	**-3.8**
	baz=132						
FURC	**Furnace Creek,**	**70.96**	**322**	P	**P**	**11 37 57.2**	**+1.7**
	baz=134,SNR=12						
MPMC	**Manual Prospec**	**71.04**	**321**	P	**P**	**11 37 53.8**	**-2.5**
	baz=134						
ARVC	**Arvin**	**71.21**	**320**	P	**P**	**11 37 54.7**	**-2.3**
	baz=132						
ISA	**Isabella, Lake**	**71.35**	**321**	P	**P**	**11 37 59.7**	**+1.7**
	baz=133,SNR=12						
E28A	**Huff**	**71.44**	**339**	IAMs_20	IAMs_20	12 14 42.1	
	comp=Z,2µm,18.0s						
DUG	**Dugway, Tooele**	**71.44**	**327**	P	**P**	**11 37 59.3**	**+0.8**
	baz=138,SNR=14						
AGMN	**Agassiz Nation**	**71.46**	**343**	IAMs_20	IAMs_20	12 14 02.8	
	comp=Z,3µm,18.0s						
AGMN	**Agassiz Nation**	**71.46**	**343**	P	**P**	**11 37 56.9**	**-1.4**
	baz=155						
R11A	**Troy Canyon, C**	**71.56**	**324**	IAMs_20	IAMs_20	12 10 48.9	
	comp=Z,2µm,20.0s						
R11A	**Troy Canyon, C**	**71.56**	**324**	P	**P**	**11 38 00.6**	**+1.3**
	baz=136						
GRAC	**Grapevine Rang**	**71.61**	**322**	P	**P**	**11 37 58.6**	**-0.9**
	baz=134						
CWC	**Cottonwood Cre**	**71.65**	**321**	P	**P**	**11 38 00.6**	**+0.7**
	baz=133						
PKM	**Mcpherson Peak**	**71.65**	**319**	P	**P**	**11 38 01.5**	**+1.5**
	baz=132						
BW06	**Boulder Array**	**71.83**	**331**	P	**P**	**11 37 59.8**	**-1.2**
	baz=142						
PD31	**Pinedale Array**	**71.83**	**331**	P	**P**	**11 38 00.8**	**-0.2**
PDAR	**Pinedale Array**	**71.83**	**331**	P	**P**	**11 38 01.3**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=128,slow=6.8,SNR=16						
PDAR				LR	LR	12 10 50.3	
	comp=Z,1µm,18.6s,baz=135,slow=37						
PDAR	**Pinedale Array**	**71.83**	**331**	P	**P**	**11 38 00.5**	**-0.4**
VES	**Vestal, Richgr**	**71.84**	**320**	P	**P**	**11 38 02.2**	**+1.4**
	baz=132						
HWUT	**Hardware Ranch**	**71.88**	**329**	IAMs_20	IAMs_20	12 10 36.6	
	comp=Z,3µm,19.0s						
SMMC	**Simmler**	**72.04**	**319**	P	**P**	**11 38 03.4**	**+1.2**
	baz=132						
TIN	**Tinemaha, Big**	**72.16**	**322**	P	**P**	**11 38 04.1**	**+1.3**
	baz=133						
MDND	**Maddock**	**72.19**	**340**	P	**P**	**11 38 03.5**	**+0.8**
	baz=152						
TBI	**Tubuai**	**72.40**	**251**	*e*S	**S**	**11 47 30.0**	**+1.2**
	comp=Z,4µm,27.5s						
TBI	**Tubuai**	**72.40**	**251**	*e*LR	LR	12 00 07.6	
	comp=Z,7µm,26.8s,baz=103						
AHID	**Auburn Hatcher**	**72.55**	**330**	IAMs_20	IAMs_20	12 10 51.1	
	comp=Z,2µm,19.0s						
HVU	**Hansel Valley**	**72.60**	**328**	P	**P**	**11 38 05.0**	**-0.5**
HVU				pmax	pmax		
	comp=Z,45nm,1.2s						
HVU	**Hansel Valley**	**72.60**	**328**	P	**P**	**11 38 05.0**	**-0.5**
REDW	**Red Top Meadow**	**72.89**	**331**	IAMs_20	IAMs_20	12 11 26.4	
	comp=Z,2µm,18.0s						
MLAC	**Mammoth, Mammo**	**72.90**	**322**	P	**P**	**11 38 09.5**	**+2.0**
	baz=133						
SNOW	**Snow King Moun**	**72.92**	**331**	IAMs_20	IAMs_20	12 11 39.0	
	comp=Z,2µm,19.0s						
OMMB	**Old Mammoth Mi**	**72.98**	**322**	IAmb	IAmb	11 38 37.1	
	comp=Z,33nm,1.1s						
TPAW	**Teton Pass**	**73.03**	**331**	IAMs_20	IAMs_20	12 12 16.1	
	comp=Z,2µm,19.0s						
ELK	**Elko**	**73.10**	**326**	IAMs_20	IAMs_20	12 10 53.6	
	comp=Z,2µm,19.0s						
PMPB	**Monarch Peak**	**73.13**	**320**	P	**P**	**11 38 08.2**	**-0.4**
PMPB				IAmb	IAmb	11 38 29.1	
	comp=Z,40nm,1.1s						
NVAR	**Mina Array Bea**	**73.14**	**323**	P	**P**	**11 38 09.5**	**+0.7**
	comp=Z,3.2nm,0.8s,baz=156,slow=6.7,SNR=26						
NVAR				LR	LR	12 07 44.3	
	comp=Z,909nm,20.9s,baz=134,slow=34						
NVAR	**Mina Array Bea**	**73.14**	**323**	P	**P**	**11 38 08.7**	**-0.1**
ULM	**Lac du Bonnet**	**73.24**	**343**	P	**P**	**11 38 08.3**	**-0.6**
	comp=Z,6.0nm,0.9s,baz=145,slow=6.6,SNR=12						
ULM				LR	LR	12 12 16.2	
	comp=Z,3µm,21.4s,baz=138,slow=37						
ULM	**Lac du Bonnet**	**73.24**	**343**	*i* P	**P**	**11 38 07.4**	**-1.4**
ULM	**Lac du Bonnet**	**73.24**	**343**	IAmb	IAmb	11 38 29.7	
	comp=Z,45nm,1.3s						
ULM				IAMs_20	IAMs_20	12 12 05.0	
	comp=Z,3µm,21.0s						
RLMT	**Red Lodge**	**73.56**	**333**	IAmb	IAmb	11 38 38.7	
	comp=Z,83nm,1.6s						
RLMT				IAMs_20	IAMs_20	12 10 56.0	
	comp=Z,2µm,20.0s						
RLMT	**Red Lodge**	**73.56**	**333**	P	**P**	**11 38 11.8**	**+0.7**
	baz=142,SNR=15						
H17A	**Grant Village**	**73.56**	**331**	P	**P**	**11 38 13.2**	**+1.9**
	baz=141						
LAO	**LASA Array**	**73.56**	**335**	IAmb	IAmb	11 38 27.0	
	comp=Z,48nm,1.3s						
LAO	**LASA Array**	**73.56**	**335**	P	**P**	**11 38 11.7**	**+0.8**
	baz=145,SNR=9.1						
YPP	**Pitchstone Pla**	**73.57**	**331**	P	**P**	**11 38 11.0**	**-0.4**
PPT2	**Papeete2**	**74.02**	**257**	*e*S	**S**	**11 47 47.5**	**+0.1**
	comp=Z,2µm,25.0s						
PPT2	**Papeete2**	**74.02**	**257**	*e*LR	LR	12 00 47.3	
	comp=Z,5µm,24.2s,baz=104						
PPT	**Papeete**	**74.03**	**257**	LR	LR	12 02 57.9	
	comp=Z,2µm,18.4s,baz=101,slow=29						
DGMT	**Dagmar**	**74.29**	**338**	IAmb	IAmb	11 38 42.0	
	comp=Z,30nm,0.8s						
DGMT	**Dagmar**	**74.29**	**338**	P	**P**	**11 38 15.9**	**+0.8**
	baz=148,SNR=7.4						
SCHQ	**Schefferville**	**74.45**	**2**	P	**P**	**11 38 15.8**	**-0.1**
	comp=Z,6.2nm,0.8s,baz=211,slow=3.2,SNR=9.6						
SCHQ				LR	LR	12 13 14.4	
	comp=Z,2µm,19.2s,baz=190,slow=38						
SCHQ	**Schefferville**	**74.45**	**2**	P	**P**	**11 38 15.3**	**-0.6**
SCHQ				IAmb	IAmb	11 38 40.5	
	comp=Z,34nm,1.0s						
SCHQ				IAMs_20	IAMs_20	12 13 02.8	
	comp=Z,2µm,20.0s						
PAHR	**Pah Rah Range**	**74.62**	**323**	IAmb	IAmb	11 38 46.7	
	comp=Z,33nm,1.0s						
DLMT	**Dillon**	**75.23**	**331**	IAmb	IAmb	11 38 40.3	
	comp=Z,54nm,1.6s						
DLMT				IAMs_20	IAMs_20	12 12 26.9	
	comp=Z,2µm,19.0s						
MFID	**Camas Ranch**	**75.33**	**328**	IAmb	IAmb	11 38 41.3	
	comp=Z,40nm,1.1s						
MFID				IAMs_20	IAMs_20	12 11 04.8	
	comp=Z,2µm,20.0s						
ORV	**Oroville**	**75.74**	**322**	IAmb	IAmb	11 38 51.5	
	comp=Z,32nm,1.1s						
EGMT	**Eagleton**	**76.06**	**334**	IAmb	IAmb	11 38 52.0	
	comp=Z,42nm,1.1s						
EGMT				IAMs_20	IAMs_20	12 13 51.3	
	comp=Z,2µm,21.0s						
EGMT	**Eagleton**	**76.06**	**334**	P	**P**	**11 38 26.0**	**+0.6**
	baz=142,SNR=11						
WVOR	**Wild Horse Val**	**76.09**	**326**	IAMs_20	IAMs_20	12 13 03.9	
	comp=Z,2µm,20.0s						
J08A	**Circle Bar Ran**	**76.65**	**326**	IAMs_20	IAMs_20	12 12 56.7	
	comp=Z,2µm,20.0s						
O02D	**Mt. Diablo Mer**	**76.89**	**322**	P	**P**	**11 38 30.7**	**+0.4**
	baz=130						
MSO	**Missoula**	**76.95**	**331**	IAMs_20	IAMs_20	12 13 37.7	
	comp=Z,2µm,20.0s						
MSO	**Missoula**	**76.95**	**331**	P	**P**	**11 38 30.8**	**+0.3**
	baz=139						
BMO	**Blue Mountains**	**77.10**	**328**	IAMs_20	IAMs_20	12 12 31.9	
	comp=Z,1µm,18.0s						
N02D	**Trinity Center**	**77.36**	**322**	P	**P**	**11 38 32.4**	**-0.5**
	baz=131						
M04C	**Macdoel**	**77.40**	**323**	P	**P**	**11 38 33.6**	**+0.4**
	baz=132						

I07A	**Izee**	**77.69**	**326**	IAMs_20	IAMs_20	12 15 38.2	
	comp=Z,2μm,19.0s						
M02C	**Callahan**	**77.72**	**323**	P	**P**	**11 38 36.7**	**+1.8**
	baz=131						
JTMT	**Jette**	**77.79**	**332**	IAMs_20	IAMs_20	12 16 48.0	
	comp=Z,2μm,22.0s						
F10A	**Beach Ranch, E**	**77.87**	**329**	IAMs_20	IAMs_20	12 13 51.0	
	comp=Z,1μm,19.0s						
L04D	**Klamath Falls**	**77.95**	**323**	P	**P**	**11 38 37.5**	**+1.3**
	baz=131						
J05D	**Fort Rock, OR**	**78.06**	**325**	P	**P**	**11 38 38.2**	**+1.3**
	baz=132						
VNDA	**Vanda**	**78.17**	**190**	P	**P**	**11 38 38.8**	**+2.0**
	comp=Z,4.3nm,1.1s,baz=133,slow=3.7,SNR=10						
VNDA	**Vanda**	**78.17**	**190**	P	**P**	**11 38 37.1**	**+0.2**
VNDA				pmax	pmax		
	comp=Z,31nm,1.7s						
VNDA	**Vanda**	**78.17**	**190**	P	**P**	**11 38 37.1**	**+0.2**
G08A	**Pilot Rock**	**78.24**	**327**	IAMs_20	IAMs_20	12 12 45.6	
	comp=Z,2μm,20.0s						
PINE	**Pine Mountain**	**78.25**	**325**	IAMs_20	IAMs_20	12 15 19.7	
	comp=Z,1μm,19.0s						
KRMB	**Red Mountain**	**78.41**	**322**	P	**P**	**11 38 37.9**	**-0.9**
TOA0	**Torodi Ar. Sit**	**78.44**	**71**	P	**P**	**11 38 38.8**	**-0.6**
TOA0				IAmb	IAmb	11 38 49.0	
	comp=Z,48nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.44**	**71**	P	**P**	**11 38 38.6**	**-0.8**
	comp=Z,42nm,1.0s,baz=256,slow=4.6,SNR=87						
TORD				LR	LR	12 13 06.2	
	comp=Z,6μm,18.1s,baz=270,slow=36						
TORD	**Torodi Ar. Bea**	**78.44**	**71**	P	**P**	**11 38 38.4**	**-1.0**
WALA	**Waterton Lakes**	**78.61**	**333**	IAMs_20	IAMs_20	12 14 53.5	
	comp=Z,2μm,22.0s						
L02E	**Cave Junction**	**78.64**	**323**	P	**P**	**11 38 41.3**	**+1.4**
	baz=130						
SYO	**Syowa Base**	**78.64**	**160**⇑	*e*P	**P**	**11 38 38.4**	**-1.1**
SYO	**Syowa Base**	**78.64**	**160**⇓	*i*X	**P**	**11 38 41.0**	**+1.5**
E09A	**Wood Farm, Sta**	**78.70**	**329**	IAMs_20	IAMs_20	12 14 02.7	
	comp=Z,1μm,19.0s						
I05D	**Terrebonne, OR**	**78.83**	**326**	P	**P**	**11 38 43.3**	**+2.4**
	baz=132						
FFC	**Flin Flon**	**78.93**	**342**	P	**P**	**11 38 40.1**	**-1.1**
FFC				pmax	pmax		
	comp=Z,42nm,1.7s						
FFC				MLR	MLR		
	comp=Z,2μm,21.0s						
FFC	**Flin Flon**	**78.93**	**342**	P	**P**	**11 38 40.1**	**-1.1**
FFC	**Flin Flon**	**78.93**	**342**	IAMs_20	IAMs_20	12 15 51.1	
	comp=Z,2μm,21.0s						
K02D	**Willamette Mer**	**79.02**	**323**	P	**P**	**11 38 43.9**	**+1.8**
	baz=130						
I04A	**Tendick Farm,**	**79.04**	**325**	P	**P**	**11 38 43.1**	**+1.0**
	baz=131						
G06A	**Carlson Farm,**	**79.06**	**327**	IAMs_20	IAMs_20	12 14 43.3	
	comp=Z,2μm,20.0s						
E08A	**Dider Farm, El**	**79.13**	**328**	IAMs_20	IAMs_20	12 14 34.1	
	comp=Z,2μm,18.0s						
F07A	**Phinny Hill Vi**	**79.15**	**327**	IAMs_20	IAMs_20	12 13 23.7	
	comp=Z,2μm,21.0s						
HAWA	**Hanford**	**79.30**	**328**	P	**P**	**11 38 45.0**	**+1.6**
HAWA				IAMs_20	IAMs_20	12 13 48.5	
	comp=Z,2μm,20.0s						
G05D	**Wamic, OR**	**79.42**	**326**	P	**P**	**11 38 44.8**	**+0.6**
	baz=132						
NEW	**Newport**	**79.46**	**331**	IAMs_20	IAMs_20	12 14 44.9	
	comp=Z,1μm,18.0s						
NEW	**Newport**	**79.46**	**331**	P	**P**	**11 38 44.2**	**-0.1**
	baz=136						
E07A	**Sunnyside**	**79.57**	**328**	IAMs_20	IAMs_20	12 16 30.8	
	comp=Z,2μm,18.0s						
H04D	**Lebanon**	**79.70**	**325**	P	**P**	**11 38 44.9**	**-0.8**
	baz=131						
I02D	**Swisshome**	**80.03**	**324**	P	**P**	**11 38 48.9**	**+1.5**
	baz=130						
G03D	**McMinnville, O**	**80.43**	**325**	P	**P**	**11 38 49.3**	**-0.3**
	baz=131						
F04A	**Amboy**	**80.46**	**326**	IAmb	IAmb	11 39 17.9	
	comp=Z,47nm,1.1s						
F04A				IAMs_20	IAMs_20	12 13 21.2	
	comp=Z,2μm,20.0s						
LTY	**Liberty**	**80.46**	**328**	IAmb	IAmb	11 39 08.5	
	comp=Z,88nm,1.8s						
LTY				IAMs_20	IAMs_20	12 15 25.2	
	comp=Z,2μm,19.0s						
B08A	**Colville Reser**	**80.57**	**330**	IAMs_20	IAMs_20	12 20 49.2	
	comp=Z,1μm,18.0s						
LON	**Longmire**	**80.69**	**327**	IAMs_20	IAMs_20	12 15 46.4	
	comp=Z,2μm,19.0s						
F04D	**Rainier, OR**	**80.87**	**326**	P	**P**	**11 38 53.4**	**+1.5**
	baz=131						
SUR	**Sutherland**	**80.90**	**121**	P	**P**	**11 38 53.6**	**+0.8**
	comp=Z,11nm,0.9s,baz=212,slow=8.1,SNR=5.3						
SUR	**Sutherland**	**80.90**	**121**	P	**P**	**11 38 53.1**	**+0.3**
E04D	**Cinebar**	**80.95**	**327**	P	**P**	**11 38 53.0**	**+0.7**
	baz=132						
F03A	**Seaside**	**81.06**	**326**	IAMs_20	IAMs_20	12 14 53.1	
	comp=Z,1μm,21.0s						
D05A	**Enumclaw**	**81.08**	**327**	IAMs_20	IAMs_20	12 14 53.6	
	comp=Z,2μm,20.0s						
PFVI	**Vila Bisbo**	**81.30**	**46**	IAMs_20	IAMs_20	12 10 18.7	
	comp=Z,2μm,20.0s						
PFVI	**Vila Bisbo**	**81.30**	**46**	*e*SKSac	**SKSac**	**11 49 18.4**	**+4.5**
E03A	**Lebam**	**81.46**	**326**	IAMs_20	IAMs_20	12 14 14.8	
	comp=Z,2μm,20.0s						
PTEO	**Sao Teotonio**	**81.59**	**45**	*e*P	**P**	**11 38 56.4**	**+0.5**
	comp=Z,108nm,1.7s						
B06A	**Marblemount**	**81.72**	**329**	IAMs_20	IAMs_20	12 15 08.6	
	comp=Z,1μm,19.0s						
B05A	**Bryant**	**81.85**	**328**	P	**P**	**11 38 56.8**	**-0.2**
	baz=132						
D03D	**Eldon**	**81.86**	**327**	P	**P**	**11 38 58.7**	**+1.6**
	baz=131						
LIS	**Lisbon**	**81.95**	**44**	*e*P	**P**	**11 38 57.8**	**0.0**
LIS				AMb	AMB	11 38 59.5	
	comp=Z,112nm,1.6s						
LIS	**Lisbon**	**81.95**	**44**	*e*P	**P**	**11 38 57.8**	**0.0**
PBDV	**Barranco-do-Ve**	**81.96**	**46**	*e*P	**P**	**11 39 00.5**	**+2.5**
	comp=Z,68nm,1.5s						
PBDV	**Barranco-do-Ve**	**81.96**	**46**	*e*SKS	**SKSac**	**11 49 24.6**	**+6.1**
PMAFR	**Mafra**	**81.99**	**44**	*e*SKS	**SKSac**	**11 49 23.0**	**+4.4**
PNCL	**Nicolau / Gran**	**82.03**	**45**	*e*P	**P**	**11 38 58.9**	**+0.7**
	comp=Z,42nm,1.9s						
PNCL	**Nicolau / Gran**	**82.03**	**45**	*e*SKS	**SKSac**	**11 49 26.3**	**+7.5**
MDT	**Midelt**	**82.03**	**51**	P	**P**	**11 38 59.3**	**+0.8**
	comp=Z,10nm,1.1s,baz=273,slow=4.6,SNR=9.9						
MESJ	**Messejana**	**82.09**	**45**	*e*P	**P**	**11 38 58.7**	**+0.1**
MESJ				AMb	AMB	11 39 03.1	
	comp=Z,38nm,2.1s						
MESJ				*e*S	**S**	**11 49 13.4**	**+0.1**
MESJ	**Messejana**	**82.09**	**45**	*e*P	**P**	**11 38 58.6**	**+0.1**
MESJ				*e*S	**S**	**11 49 13.4**	**+0.1**
MESJ	**Messejana**	**82.09**	**45**	*e*P	**P**	**11 38 59.4**	**+0.9**
	comp=Z,47nm,1.9s						
PCVE	**Castro Verde**	**82.10**	**45**	*e*P	**P**	**11 38 59.9**	**+1.3**
	comp=Z,43nm,1.6s						
TSUM	**Tsumeb**	**82.17**	**108**	P	**P**	**11 39 00.5**	**+0.8**
	comp=Z,15nm,0.8s,baz=248,slow=5.7,SNR=16						
TSUM	**Tsumeb**	**82.17**	**108**	P	**P**	**11 38 59.4**	**-0.3**
TSUM				IAmb	IAmb	11 39 23.3	
	comp=Z,43nm,1.1s						
NLWA	**Neilton Lookou**	**82.17**	**327**	IAMs_20	IAMs_20	12 16 53.6	
	comp=Z,2μm,21.0s						
PVAQ	**Vaqueiros**	**82.19**	**46**	IAMs_20	IAMs_20	12 16 39.3	
	comp=Z,2μm,19.0s						
PVAQ	**Vaqueiros**	**82.19**	**46**	*e*P	**P**	**11 38 57.0**	**-2.1**
PVAQ	**Vaqueiros**	**82.19**	**46**	*e*S	S	11 49 25.0	+11
A04D	**Lummi Island**	**82.46**	**328**	P	**P**	**11 39 01.8**	**+1.6**
	baz=132						
PMTG	**Montargil**	**82.75**	**44**	*e*SKS	**SKSac**	**11 49 30.5**	**+6.9**
PESTR	**Estremoz**	**83.06**	**45**	*e*SKS	**SKSac**	**11 49 34.5**	**+8.8**
COI	**Coimbra**	**83.24**	**43**	*e*S	S	11 49 36.5	+12
LLLB	**Lillooet**	**83.33**	**330**	IAMs_20	IAMs_20	12 15 46.1	
	comp=Z,1μm,22.0s						
PMRV	**Marv??o**	**83.48**	**44**	*e*S	S	11 49 40.3	+13
MTE	**Manteigas**	**83.90**	**43**	*e*P	**P**	**11 39 05.6**	**-2.4**
MTE	**Manteigas**	**83.90**	**43**	*e*S	S	11 49 42.7	+11
PGAV	**Gavieira, Arco**	**84.28**	**42**	*e*S	**S**	**11 49 37.8**	**+2.1**
MVO	**Moncorvo**	**84.64**	**43**	*e*P	**P**	**11 39 12.4**	**+0.7**
MVO	**Moncorvo**	**84.64**	**43**	*e*S	**S**	**11 49 47.4**	**+8.2**
PBRG	**Braganca**	**85.16**	**42**	*e*P	**P**	**11 39 15.7**	**+1.4**
PAB	**San Pablo**	**85.56**	**45**	P	**P**	**11 39 15.7**	**-0.7**
PAB				pmax	pmax		
	comp=Z,20nm,1.0s						
PAB	**San Pablo**	**85.56**	**45**	P	**P**	**11 39 15.7**	**-0.7**
PAB				IAmb	IAmb	11 39 54.5	
	comp=Z,20nm,1.0s						
TAM	**Tamanrasset**	**85.63**	**64**	P	**P**	**11 39 18.0**	**+0.8**
TAM				pmax	pmax		
	comp=Z,71nm,1.5s						
TAM				MLR	MLR		
	comp=Z,8μm,20.0s						
TAM	**Tamanrasset**	**85.63**	**64**	P	**P**	**11 39 18.0**	**+0.8**
BOSA	**Boshof**	**85.74**	**119**	P	**P**	**11 39 16.8**	**-1.0**
	comp=Z,12nm,1.0s,baz=251,slow=5.9,SNR=10						
BOSA				LR	LR	12 14 36.4	
	comp=Z,3μm,19.5s,baz=246,slow=34						
BOSA	**Boshof**	**85.74**	**119**	P	**P**	**11 39 17.4**	**-0.4**
BOSA				pmax	pmax		
	comp=Z,37nm,1.3s						
BOSA	**Boshof**	**85.74**	**119**	P	**P**	**11 39 17.4**	**-0.4**
BOSA				IAmb	IAmb	11 39 36.3	
	comp=Z,37nm,1.3s						
MAW	**Mawson**	**86.39**	**164**	P	**P**	**11 39 20.0**	**0.0**
	comp=Z,14nm,1.1s,baz=245,slow=6.5,SNR=9.4						
MAW				LR	LR	12 18 20.9	
	comp=Z,2μm,18.9s,baz=240,slow=36						
MAW	**Mawson**	**86.39**	**164**	P	**P**	**11 39 20.5**	**+0.5**
MAW	**Mawson**	**86.39**	**164**	P	**P**	**11 39 20.5**	**+0.5**
CART	**Cartagena**	**86.91**	**48**	IAMs_20	IAMs_20	12 17 37.4	
	comp=Z,1μm,21.0s						
LBTB	**Lobatse**	**87.28**	**115**	P	**P**	**11 39 24.3**	**-1.1**
	comp=Z,6.9nm,0.7s,baz=254,slow=5.3,SNR=10						
LBTB	**Lobatse**	**87.28**	**115**	P	**P**	**11 39 25.0**	**-0.3**
LBTB				pmax	pmax		
	comp=Z,70nm,1.8s						
LBTB	**Lobatse**	**87.28**	**115**	P	**P**	**11 39 25.0**	**-0.3**
LBTB				IAmb	IAmb	11 39 29.5	
	comp=Z,70nm,1.8s						
YKA	**Yellowknife Ar**	**89.07**	**341**	P	**P**	**11 39 32.4**	**-0.3**
	comp=Z,7.1nm,0.9s,baz=138,slow=5.3,SNR=65						
YKA				LR	LR	12 22 57.6	
	comp=Z,3μm,20.1s,baz=0.0,slow=38						
MATP	**Matopo**	**91.42**	**112**	P	**P**	**11 39 42.4**	**-2.6**
	comp=Z,6.1nm,0.9s,baz=256,slow=5.3,SNR=9.1						
LSZ	**Lusaka**	**93.02**	**107**	P	**P**	**11 39 53.8**	**+1.4**
	comp=Z,1.6nm,0.5s,baz=230,slow=7.9,SNR=2.3						
KEST	**Kesra**	**93.69**	**53**	LR	LR	12 22 42.7	
	comp=Z,4μm,20.5s,baz=194,slow=36						
URZ	**Urewera**	**94.08**	**227**	LR	LR	12 12 57.0	
	comp=Z,4μm,20.5s,baz=180,slow=30						
RAO	**Raoul Island**	**94.52**	**237**	LR	LR	12 13 31.2	
	comp=Z,713nm,21.0s,baz=121,slow=30						
SUMG	**Summit**	**94.71**	**9**	*i* P	**P**	**11 39 59.5**	**+0.4**
SUMG	**Summit**	**94.71**	**9**	*i* P	**P**	**11 39 59.5**	**+0.4**
SUMG	**Summit**	**94.71**	**9**	P	**P**	**11 39 59.3**	**+0.1**
SUMG				IAmb	IAmb	11 40 17.9	
	comp=Z,31nm,1.2s						
SKAG	**Skagway**	**94.81**	**332**	IAMs_20	IAMs_20	12 28 53.8	
	comp=Z,1μm,20.0s						
WHY	**Whitehorse**	**95.25**	**334**	IAMs_20	IAMs_20	12 28 04.5	
	comp=Z,1μm,18.0s						
AFI	**Afiamalu**	**95.41**	**253**	LR	LR	12 15 21.0	
	comp=Z,2μm,18.0s,baz=110,slow=31						
RES	**Resolute Bay**	**95.57**	**354**	LR	LR	12 24 48.9	
	comp=Z,2μm,21.7s,baz=152,slow=37						
QRZ	**Quartz Range**	**95.82**	**223**	IAMs_20	IAMs_20	12 25 50.5	
	comp=Z,2μm,20.0s						
DHAK	**Deception Hill**	**95.90**	**331**	IAMs_20	IAMs_20	12 26 03.8	
	comp=Z,2μm,21.0s						
PCA	**Pinnacle**	**97.29**	**332**	IAMs_20	IAMs_20	12 27 06.5	
	comp=Z,1μm,21.0s						
OSSC	**Osservatorio P**	**97.83**	**47**	IAMs_20	IAMs_20	12 26 16.2	
	comp=Z,2μm,19.0s						
CTGM	**Chitina Glacie**	**98.16**	**332**	IAMs_20	IAMs_20	12 28 43.6	
	comp=Z,1μm,22.0s						
TGL	**Tana Glacier**	**98.73**	**332**	IAMs_20	IAMs_20	12 32 04.5	
	comp=Z,1μm,18.0s						
DAWY	**Dawson**	**98.76**	**336**	IAMs_20	IAMs_20	12 33 21.4	
	comp=Z,2μm,20.0s						
INK	**Inuvik**	**98.81**	**340**	LR	LR	12 26 31.2	
	comp=Z,2μm,21.9s,baz=106,slow=36						
CRQM	**Cirque**	**98.87**	**332**	IAMs_20	IAMs_20	12 32 16.6	
	comp=Z,1μm,18.0s						
MCARA	**McCarthy VSAT**	**99.08**	**332**	IAMs_20	IAMs_20	12 32 35.8	
	comp=Z,1μm,19.0s						
VRDI	**Verde Repeater**	**99.20**	**332**	IAMs_20	IAMs_20	12 31 50.1	
	comp=Z,1μm,20.0s						
GLB	**Gilahina Butte**	**99.45**	**332**	IAMs_20	IAMs_20	12 27 36.6	
	comp=Z,1μm,19.0s						
EGAK	**Eagle**	**99.77**	**336**	IAMs_20	IAMs_20	12 29 49.1	
	comp=Z,2μm,20.0s						
HIN	**Hinchinbrook I**	**100.25**	**331**	IAMs_20	IAMs_20	12 29 06.7	
	comp=Z,2μm,18.0s						
SCRK	**Sand Creek**	**100.55**	**335**	IAMs_20	IAMs_20	12 28 55.7	
	comp=Z,2μm,21.0s						
PAX	**Paxson**	**100.77**	**333**	IAMs_20	IAMs_20	12 32 54.6	
	comp=Z,2μm,18.0s						
NKC	**Novy Kostel**	**100.78**	**40**	AMS	AMS	12 24 00.0	
	comp=Z,3μm,19.0s						
RIDG	**Independent Ri**	**100.81**	**334**	IAMs_20	IAMs_20	12 28 43.4	
	comp=Z,2μm,20.0s						
GEC2	**GERESS Array S**	**101.14**	**42**	IAMs_20	IAMs_20	12 24 44.4	
	comp=Z,2μm,21.0s						
GERES	**GERESS Array B**	**101.14**	**42**	P	**Pdif**	**11 40 28.1**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=207,slow=2.7,SNR=4.5						
GERES	**GERESS Array B**	**101.14**	**42**	P	**Pdif**	**11 40 27.6**	**-0.7**
GERES	**GERESS Array B**	**101.14**	**42**		**Pdif**	**11 40 27.6**	**-0.7**
KHC	**Kasperske Hory**	**101.15**	**42**	AMS	AMS	12 22 40.0	
	comp=Z,2μm,21.1s						
KHC	**Kasperske Hory**	**101.15**	**42**	*i* P	**Pdif**	**11 40 27.5**	**-0.7**
KHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CLL	**Collm**	**101.44**	**40**	*e*Pdif	**Pdif**	**11 40 30.0**	**+0.6**
CLL				*e*PP	**PP**	**11 44 38.0**	**-1.4**
CLL				*e*SKSac	**SKSac**	**11 51 17.0**	**+8.3**
CLL				*e*Sdif	**Sdif**	**11 52 12.0**	**+2.4**
CLL				*e*PS	PS	11 53 47.0	+4.2
CLL				*e*PPS	PPS	11 54 39.0	
CLL				*e*		11 58 00.0	
CLL				*e*		11 58 30.0	
CLL				*e*SS	SS	11 58 54.0	-17
CLL				*e*(SSS)		12 02 24.0	
CLL				*e*		12 08 42.0	
CLL				Lm	MLR	12 22 00.0	
	comp=N,1μm,20.5s						
CLL				Lm	MLR	12 22 00.0	
	comp=E,3μm,22.0s						
CLL				Lm	MLR	12 22 00.0	
	comp=Z,3μm,21.4s						
CLL	**Collm**	**101.44**	**40**	*e*P	**Pdif**	**11 40 30.0**	**+0.6**
CLL				*e*		11 44 38.0	
CLL				*e*S	**Sdif**	**11 52 12.0**	**+2.4**
CLL				MLR	MLR		
	comp=Z,3μm,21.4s						
KNK	**Knik Glacier**	**101.51**	**331**	IAMs_20	IAMs_20	12 33 17.1	
	comp=Z,2μm,19.0s						
PRP	**Porcupine Dome**	**101.76**	**336**	IAMs_20	IAMs_20	12 34 44.7	
	comp=Z,1μm,19.0s						
GHO	**Glory Hole Cre**	**101.84**	**332**	IAMs_20	IAMs_20	12 34 57.8	
	comp=Z,975nm,18.0s						
PMR	**Palmer**	**101.87**	**331**	IAMs_20	IAMs_20	12 34 54.7	
	comp=Z,2μm,20.0s						
BRG	**Berggiesshubel**	**101.88**	**40**	PDIFF	**Pdif**	**11 40 36.0**	**+4.6**
BRG				PP	**PP**	**11 44 35.0**	**-7.7**
BRG				SKS	**SKSac**	**11 51 11.0**	**+0.1**
BRG				S	**Sdif**	**11 52 13.0**	**-0.3**
BRG				SS	SS	11 59 05.0	-12
BRG	**Berggiesshubel**	**101.88**	**40**	P	**Pdif**	**11 40 36.0**	**+4.6**
BRG						11 51 11.0	
BRG				S	**Sdif**	**11 52 13.0**	**-0.3**
BRG				MLR	MLR		
	comp=N,442nm,15.4s						
BRG				MLR	MLR		
	comp=E,2μm,20.0s						
BRG				MLR	MLR		
	comp=Z,3μm,21.2s						
HDA	**Harding Lake**	**101.92**	**334**	IAMs_20	IAMs_20	12 29 44.7	
	comp=Z,2μm,21.0s						
PRA	**Prague**	**101.95**	**41**	AMS	AMS	12 29 40.0	
	comp=Z,1μm,18.8s						
RC01	**Rabbit Creek A**	**101.98**	**331**	IAMs_20	IAMs_20	12 30 11.5	
	comp=Z,2μm,22.0s						
PRU	**Pruhonice**	**102.00**	**41**	AMS	AMS	12 29 10.0	
	comp=Z,2μm,18.4s						
ILAR	**Eielson Array**	**102.02**	**335**	PP	**PP**	**11 44 41.6**	**-1.8**
	comp=Z,0.3nm,0.8s,baz=96,slow=6.6,SNR=3.2						
FYU	**Fort Yukon**	**102.04**	**337**	IAMs_20	IAMs_20	12 29 04.2	
	comp=Z,1μm,21.0s						
PVCC	**Panska Ves**	**102.17**	**41**	AMS	AMS	12 25 00.0	
	comp=Z,2μm,21.2s						
CCB	**Clear Creek Bu**	**102.35**	**335**	IAMs_20	IAMs_20	12 31 47.2	
	comp=Z,1μm,21.0s						
TREC	**Trest**	**102.39**	**42**	AMS	AMS	12 23 30.0	
	comp=Z,2μm,18.2s						
WRH	**Wood River Hil**	**102.40**	**334**	IAMs_20	IAMs_20	12 36 12.7	
	comp=Z,2μm,20.0s						
COLA	**College**	**102.44**	**335**	IAMs_20	IAMs_20	12 31 46.9	
	comp=Z,2μm,20.0s						
MCK	**McKinley**	**102.50**	**334**	IAMs_20	IAMs_20	12 36 27.4	
	comp=Z,2μm,19.0s						
NEA	**Nenana**	**102.84**	**334**	IAMs_20	IAMs_20	12 30 23.2	
	comp=Z,1μm,21.0s						
BWN	**Browne**	**102.87**	**334**	IAMs_20	IAMs_20	12 32 09.1	
	comp=Z,1μm,20.0s						
UPC	**Upice**	**103.05**	**41**	AMS	AMS	12 25 20.0	
	comp=Z,2μm,21.6s						
CHVC	**Chvalec**	**103.09**	**41**	AMS	AMS	12 25 30.0	
	comp=Z,2μm,22.3s						
PDG	**Podgorica**	**103.11**	**49**	IAMs_20	IAMs_20	12 27 17.4	
	comp=Z,2μm,22.0s						
OSTC	**Ostas**	**103.19**	**41**	AMS	AMS	12 25 40.0	
	comp=Z,2μm,21.0s						
DPC	**Dobruska-Polom**	**103.20**	**41**	AMS	AMS	12 26 40.0	
	comp=Z,1μm,20.7s						
TIR	**Tirane**	**103.28**	**51**	IAMs_20	IAMs_20	12 31 00.8	
	comp=Z,2μm,19.0s						
KTH	**Kantishna Hill**	**103.29**	**333**	IAMs_20	IAMs_20	12 37 06.2	
	comp=Z,2μm,19.0s						
KRLC	**Kraliky**	**103.41**	**41**	AMS	AMS	12 32 20.0	
	comp=Z,1μm,18.6s						
BPAW	**Bear Paw Mtn.**	**103.48**	**334**	IAMs_20	IAMs_20	12 32 33.1	
	comp=Z,1μm,20.0s						
PPLA	**Purkeypile**	**103.64**	**332**	IAMs_20	IAMs_20	12 31 15.5	
	comp=Z,1μm,21.0s						
MLY	**Manley**	**103.66**	**335**	IAMs_20	IAMs_20	12 32 26.9	
	comp=Z,1μm,19.0s						
MORC	**Moravsky Berou**	**103.81**	**42**	IAMs_20	IAMs_20	12 24 44.1	
	comp=Z,2μm,20.0s						
COLD	**Coldfoot**	**104.11**	**337**	IAMs_20	IAMs_20	12 32 38.8	
	comp=Z,1μm,22.0s						
OKC	**Ostrava-Krasne**	**104.21**	**42**	AMS	AMS	12 24 50.0	
	comp=Z,1μm,17.6s						
TOLK	**Toolik Lake Re**	**104.31**	**338**	IAMs_20	IAMs_20	12 31 24.2	
	comp=Z,2μm,20.0s						
TOLK	**Toolik Lake Re**	**104.31**	**338**	P	**Pdif**	**11 40 41.2**	**-0.7**
	baz=108						
VTS	**Vitosha**	**106.02**	**50**	IAMs_20	IAMs_20	12 31 56.2	
	comp=Z,1μm,19.0s						
SANT	**Santorini**	**106.34**	**57**	IAMs_20	IAMs_20	12 31 29.2	
	comp=Z,2μm,20.0s						
KBS	**Kingsbay**	**107.94**	**12**	IAMs_20	IAMs_20	12 28 33.1	
	comp=Z,1μm,21.0s						
RDOG	**Red Dog Mine**	**109.03**	**337**	IAMs_20	IAMs_20	12 36 00.9	
	comp=Z,2μm,20.0s						
ANM	**Nome**	**109.70**	**333**	IAMs_20	IAMs_20	12 40 04.7	
	comp=Z,1μm,19.0s						
DZM	**Mont Dzumac**	**110.31**	**236**	*e*PP	**PP**	**11 45 40.0**	**-5.1**
	comp=Z,207nm,25.9s						
DZM				*e*SKSac	**SKSac**	**11 51 52.6**	**+2.6**
	comp=Z,604nm,27.1s						
DZM	**Mont Dzumac**	**110.31**	**236**	*e*PS	PS	11 55 16.6	+1.4
	comp=Z,635nm,25.8s						
DZM				*e*SS	SS	12 01 15.0	+2.5
	comp=Z,2μm,26.2s						
DZM	**Mont Dzumac**	**110.31**	**236**	*e*LR	LR	12 17 38.6	
	comp=Z,3μm,22.8s,baz=134						
VSU	**Vasula**	**110.58**	**34**	*i* PKIKP	**PKiKP**	**11 45 10.0**	**-0.1**
ISP	**Isparta**	**110.59**	**56**	IAMs_20	IAMs_20	12 42 24.8	
	comp=Z,1μm,19.0s						
KIS	**Kishinev**	**110.68**	**46**	*e*	**PP**	**11 45 42.0**	**-5.6**
KIS				LRM	MLR	12 32 20.0	
	comp=Z,1μm,22.0s						
KEV	**Kevo**	**111.14**	**22**	IAMs_20	IAMs_20	12 27 19.6	
	comp=Z,1μm,22.0s						
AKASG	**Malin Array Be**	**111.35**	**42**	PP	**PP**	**11 45 51.1**	**-1.2**
	comp=Z,0.2nm,0.2s,baz=262,slow=6.6,SNR=4.8						
ANTO	**Ankara**	**112.65**	**54**	IAMs_20	IAMs_20	12 36 32.2	
	comp=Z,1μm,19.0s						
BRTR	**Keskin Array B**	**113.28**	**54**	PKiKP	**PKiKP**	**11 45 15.0**	**-1.1**
	comp=Z,1.5nm,0.9s,baz=191,slow=2.5,SNR=6.6						
BRTR				PP	**PP**	**11 46 02.6**	**-4.0**
	comp=Z,0.3nm,0.4s,baz=284,slow=5.8,SNR=2.3						
APA	**Apatity**	**113.58**	**24**⇑	*i*PKIKP	**PKiKP**	**11 45 13.8**	**-1.8**
APA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SIM	**Simferopol'**	**114.15**	**49**	*i* PKIKP	PKPdf	11 45 08.6	-8.8
SIM				*e*		11 46 14.0	
SIM				*e*PS	**PS**	**11 55 42.0**	**-8.1**
SIM				pmax	pmax		
	comp=Z,11nm,0.7s						
ARMA	**Armidale**	**115.51**	**220**	IAMs_20	IAMs_20	12 24 07.5	
	comp=Z,1μm,20.0s						
OBN	**Obninsk**	**115.92**	**38***c*	*i*PKIKP	**PKPdf**	**11 45 20.4**	**-0.1**
OBN				*e*		11 46 24.3	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
OBN				MLR	MLR		
	comp=Z,2μm,19.0s						
ANN	**Anapa**	**116.49**	**49**	*i* PKIKP	**PKPdf**	**11 45 21.5**	**-0.4**
ANN				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ANN				MLR	MLR		
	comp=Z,908nm,19.0s						
KLMR	**Klimovskoe**	**116.99**	**31**	*e*PKIKP	**PKPdf**	**11 45 21.7**	**-0.6**
KLMR						11 46 33.3	
KLMR						11 52 09.5	
KLMR				*i* SP	SP	11 56 11.6	-1.6
KLMR				PS	**PKKPdf**	**11 56 21.9**	**+4.9**
KLMR				SS	**SS**	**12 02 44.5**	**+4.8**
KLMR				SSS	SSS	12 07 02.7	
KLMR				pmax	pmax		
	comp=Z,23nm,1.7s						
KLMR				MLR	MLR		
	comp=Z,2μm,17.0s						
KLMR	**Klimovskoe**	**116.99**	**31**	*e*PKPdf	**PKPdf**	**11 45 21.8**	**-0.6**
KLMR				AMP		11 45 24.1	
	comp=Z,23nm,1.7s						
KLMR				PP	**PP**	**11 46 33.3**	**+1.4**
KLMR				SKP		11 48 56.6	
KLMR				SKSac	**SKSac**	**11 52 09.5**	**-4.5**
KLMR				SKSac	**SKSac**	**11 52 09.5**	**-4.5**
KLMR				SKKSac	**SKKSac**	**11 53 33.8**	**+1.2**
KLMR				SKKSac	**SKKSac**	**11 53 33.8**	**+1.2**
KLMR				PKKPab	PKKPbc	11 55 40.4	-9.2
KLMR				*i* SP	SP	11 56 11.6	-1.6
KLMR				PS	**PKKPdf**	**11 56 21.9**	**+4.9**
KLMR				PS	**PKKPdf**	**11 56 21.9**	**+4.9**
KLMR				SS	**SS**	**12 02 44.6**	**+4.8**
KLMR				SS	**SS**	**12 02 44.6**	**+4.8**
KLMR				SSS	SSS	12 07 02.7	
KLMR				SSS	SSS	12 07 02.7	
KLMR				LR	LR	12 26 52.8	
KLMR				AMP		12 32 53.6	
	comp=Z,2μm,17.2s						
SOC	**Sochi**	**118.10**	**51**	*i* PKIKP	**PKPdf**	**11 45 24.1**	**-0.9**
SOC				*e*		11 46 43.6	
SOC				*e*PPP	PPP	11 49 12.7	
SOC				*e*		11 52 17.4	
SOC				*e*PS	**PKKPdf**	**11 56 16.3**	**+1.8**
SOC				*e*SS	SS	12 02 56.4	+1.1
SOC				pmax	pmax		
	comp=Z,14nm,1.0s						
EIDS	**Eidsvold**	**119.39**	**224**	IAMs_20	IAMs_20	12 28 15.5	
	comp=Z,1μm,19.0s						
STKA	**Stephens Creek**	**119.95**	**212**	PKP	**PKiKP**	**11 45 31.9**	**+2.7**
	comp=Z,1.5nm,0.9s,baz=127,slow=5.3,SNR=3.5						
STKA	**Stephens Creek**	**119.95**	**212**	PKIKP	**PKiKP**	**11 45 30.5**	**+1.3**
STKA	**Stephens Creek**	**119.95**	**212**		**PKiKP**	**11 45 30.5**	**+1.3**
KIV	**Kislovodsk**	**120.25**	**50**	*i* PKIKP	**PKiKP**	**11 45 30.4**	**+1.0**
KIV				*e*		11 46 56.0	
KIV				*e*PS	**PS**	**11 56 46.6**	**+0.8**
KIV				*e*SS	SS	12 03 24.3	+1.0
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
KIV				MLR	MLR		
	comp=Z,2μm,22.0s						
NEY	**Neytrino**	**120.29**	**51**	*i* PKIKP	**PKPdf**	**11 45 29.2**	**-0.3**
BILL	**Bilibino**	**120.36**	**339**⇑	*e*PKIKP	**PKiKP**	**11 45 29.8**	**+1.0**
BILL				*e*		11 46 53.8	
BILL				*e*PPP	PPP	11 49 35.2	
BILL				*i* SS	SS	12 03 22.6	-0.3
BILL				pmax	pmax		
	comp=Z,4.0nm,1.5s						
KBZ	**Khabaz**	**120.41**	**50**	PKP	**PKiKP**	**11 45 30.3**	**+0.7**
	comp=Z,7.7nm,0.9s,baz=264,slow=3.1,SNR=11						
KBZ	**Khabaz**	**120.41**	**50**	*i* PKIKP	**PKiKP**	**11 45 29.9**	**+0.4**
AKH	**Akhalkalaki**	**120.87**	**53**	IAMs_20	IAMs_20	12 43 38.6	
	comp=Z,1μm,19.0s						

RAYN	Ar Rayn	121.07	74	PKIKP	PKiKP	11 45 32.0	+0.4
RAYN				MLR	MLR		
	comp=Z,3µm,18.0s						
RAYN	Ar Rayn	121.07	74		PKiKP	11 45 31.9	+0.4
ZEI	Tsey	121.16	51	*i* PKIKP	PKiKP	11 45 31.8	+0.4
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GNI	Garni	121.82	55	IAMs_20	IAMs_20	12 42 56.9	
	comp=Z,1µm,20.0s						
HNR	Honiara	122.24	244	IAMs_20	IAMs_20	12 39 52.6	
	comp=Z,1µm,22.0s						
H11S2	WAKE ISLAND Hy	125.94	279	T	T	14 04 59.9	
	baz=100,slow=74,SNR=410						
H11S1	WAKE ISLAND Hy	125.95	279	T	T	14 05 00.5	
	baz=100,slow=74,SNR=259						
H11S3	WAKE ISLAND Hy	125.96	279	T	T	14 05 01.3	
	baz=100,slow=74,SNR=269						
H11N3	WAKE ISLAND Hy	125.99	280	T	T	14 05 02.5	
	baz=100,slow=75,SNR=247						
H11N2	WAKE ISLAND Hy	126.00	280	T	T	14 05 03.6	
	baz=100,slow=75,SNR=359						
H11N1	WAKE ISLAND Hy	126.00	280	T	T	14 05 07.1	
	baz=100,slow=75,SNR=254						
CTAO	Charters Tower	126.25	225	IAMs_20	IAMs_20	12 29 30.4	
	comp=Z,1µm,22.0s						
FORT	Forrest	126.52	200	IAMs_20	IAMs_20	12 48 18.4	
	comp=Z,1µm,21.0s						
TIXI	Tiksi	126.94	352	PKIKP	PKPdf	11 45 40.8	-0.4
TIXI	Tiksi	126.94	352		PKPdf	11 45 40.8	-0.4
TIXI				IAMs_20	IAMs_20	12 50 23.5	
	comp=Z,1µm,21.0s						
ARU	Arti	127.73	33	*i* PKIKP	PKPdf	11 45 43.2	+0.1
ARU						11 47 45.0	
ARU						11 52 53.0	
ARU				SS	SS	12 04 49.0	-7.4
ARU				MLR	MLR		
	comp=Z,2µm,21.0s						
ARU	Arti	127.73	33		PKPdf	11 45 43.4	+0.3
SEY	Seymchan	127.91	337	*i* PKIKP	PKiKP	11 45 44.0	+0.2
AKTO	Aktyubinsk	129.52	40	PKP	PKiKP	11 45 47.4	-0.1
	comp=Z,5.5nm,1.1s,baz=281,slow=2.2,SNR=7.6						
PETK	Petropavlovsk-	130.22	324	PKP	PKiKP	11 45 48.5	-0.3
	comp=Z,5.6nm,0.9s,baz=81,slow=9.5,SNR=4.0						
PETK	Petropavlovsk-	130.22	324	PKIKP	PKiKP	11 45 49.5	+0.7
PETK	Petropavlovsk-	130.22	324		PKiKP	11 45 49.5	+0.7
MA2	Magadan	130.48	334	IAMs_20	IAMs_20	12 52 20.9	
	comp=Z,631nm,20.0s						
ASAR	Alice Springs	130.52	210	PKP	PKPdf	11 45 48.5	-1.1
	comp=Z,3.5nm,0.9s,baz=156,slow=1.8,SNR=18						
ASAR	Alice Springs	130.52	210	PKIKP	PKPdf	11 45 49.2	-0.4
ASAR	Alice Springs	130.52	210		PKPdf	11 45 49.2	-0.4
AS31	Alice Springs	130.52	210		PKPdf	11 45 49.3	-0.3
MORW	Morawa	130.93	188	IAMs_20	IAMs_20	12 41 54.3	
	comp=Z,1µm,21.0s						
ABKAR	Akbulak array	131.08	41		PKiKP	11 45 50.9	+0.2
ABKAR	Akbulak array	131.08	41		PKiKP	11 45 50.5	-0.1
RABL	Rabaul	131.54	245	IAMs_20	IAMs_20	12 31 01.3	
	comp=Z,1µm,20.0s						
GYA0B	ALIBECK ARRAY	132.35	56	IAMs_20	IAMs_20	12 50 29.6	
	comp=Z,1µm,20.0s						
ASHT	Ashkhabad	132.56	56	IAMs_20	IAMs_20	12 50 37.1	
	comp=Z,1µm,20.0s						
COEN	Coen	132.65	227	IAMs_20	IAMs_20	12 34 57.1	
	comp=Z,963nm,22.0s						
WR0	Warramunga Arr	133.32	214		PKiKP	11 45 55.7	-0.4
WB1	Warramunga Ar.	133.42	213	IAMs_20	IAMs_20	12 38 44.4	
	comp=Z,1µm,22.0s						
WR1	Warramunga Arr	133.44	213	IAMs_20	IAMs_20	12 33 19.9	
	comp=Z,1µm,21.0s						
WRA	Warramunga Arr	133.44	213	PKP	PKPdf	11 45 55.1	-0.1
	comp=Z,3.2nm,0.7s,baz=140,slow=1.7,SNR=14						
WRAB	Tennant Creek	133.44	213	*i* PKIKP	PKPdf	11 45 53.8	-1.4
WC1	Warramunga Arr	133.46	213	IAMs_20	IAMs_20	12 37 20.3	
	comp=Z,1µm,20.0s						
WB0	Warramunga Arr	133.56	214		PKPdf	11 45 55.9	+0.5
BVAR	Borovoye Array	135.37	33	PKP	PKiKP	11 45 58.6	-0.6
	comp=Z,1.8nm,0.8s,baz=333,slow=1.7,SNR=11						
YAK	Yakutsk	135.52	346	IAMs_20	IAMs_20	12 50 30.9	
	comp=Z,878nm,21.0s						
PSAA3	Pilbara Seismi	137.54	195	IAMs_20	IAMs_20	12 45 52.4	
	comp=Z,999nm,20.0s						
MBWA	Marble Bar	137.98	195	IAMs_20	IAMs_20	12 42 40.8	
	comp=Z,893nm,19.0s						
KURK	Kurchatov	140.84	31	*i* PKIKP	PKPdf	11 46 05.2	-2.6
KURK	Kurchatov	140.84	31		PKPdf	11 46 09.1	+1.3
ZAA0	Zalesovo Array	141.15	23		PKPdf	11 46 08.0	-0.3
ZAA0				IAMs_20	IAMs_20	12 51 13.2	
	comp=Z,884nm,21.0s						
ZALV	Zalesovo Beam	141.15	23	PKP	PKPdf	11 46 09.2	+0.9
	comp=Z,6.6nm,0.7s,baz=295,slow=2.6,SNR=14						
ZALV	Zalesovo Beam	141.15	23	PKIKP	PKPdf	11 46 07.9	-0.4
ZALV	Zalesovo Beam	141.15	23		PKPdf	11 46 07.9	-0.4
GAR	Garm	141.45	52		PKPdf	11 46 09.7	+0.2
YSS	Yuzh-Sakhalins	141.59	323	*e*PKIKP	PKiKP	11 46 12.6	+0.5
YSS				*e*		11 49 15.0	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
YSS	Yuzh-Sakhalins	141.59	323	IAMs_20	IAMs_20	12 54 27.2	
	comp=Z,1µm,20.0s						
BOD	Bodaibo	141.92	356	*e*PKIKP	PKPdf	11 46 09.0	-0.5
BOD				pmax	pmax		
	comp=Z,9.0nm,1.4s						
AAK	Ala-Archa	142.98	44	*i* PKIKP	PKPdf	11 46 10.1	-2.0
AAK	Ala-Archa	142.98	44		PKPdf	11 46 11.1	-1.1
MAKZ	Makanchi	145.08	33	PKIKP	PKPab	11 46 15.1	+0.1
MAKZ				MLR	MLR		
	comp=Z,2µm,20.0s						
MAKZ	Makanchi	145.08	33		PKPab	11 46 15.1	+0.1
NIL	Nilore	145.22	59	PKIKP	PKPbc	11 46 15.4	-0.4
NIL	Nilore	145.22	59		PKPbc	11 46 15.3	-0.4
MK31	Makanchi Array	145.25	33	PKIKP	PKPbc	11 46 15.3	-0.2
MK31	Makanchi Array	145.25	33		PKPbc	11 46 15.3	-0.2
MKAR	Makanchi Array	145.25	33	PKPbc	PKPab	11 46 15.7	+0.1
	comp=Z,13nm,0.7s,baz=328,slow=3.7,SNR=97						
MKAR	Makanchi Array	145.25	33	PKIKP	PKPbc	11 46 15.5	0.0
MKAR	Makanchi Array	145.25	33		PKPbc	11 46 15.5	0.0
KSH	Kashi	145.35	48	PKPbc	PKPdf	11 46 16.8	+0.5
KSH				sPKP		11 46 29.6	
KSH				PP	PP	11 49 39.5	+3.6
KSH				PKS	PKSdf	11 49 53.4	+1.5
KSH				SKKS		11 56 27.6	
KSH				AMB	AMB		
	comp=Z,680nm,9.6s						
KSH				LR	LR		
	comp=Z,280nm,11.5s						
KSH				LR	LR		
	comp=Z,370nm,9.0s						
KSH				LR	LR		
	comp=Z,380nm,14.3s						
DGZ	Jazzator, Alta	145.50	25	*i* PKIKP	PKPab	11 46 17.1	+0.6
KLR	Kul'dur	145.59	334	*i* PKIKP	PKPbc	11 46 16.4	0.0
POO	Poona	146.57	86	*e*P	PKPdf	11 46 16.8	-2.1
IRK	Irkutsk	147.43	6	*e*PKHKP	PKPpre	11 46 10.7	
IRK				pmax	pmax		
	comp=Z,96nm,4.0s						
MOY	Mondy	147.59	10	*e*PKP2	PKPbc	11 46 23.1	+0.8
MOY				pmax	pmax		
	comp=Z,94nm,2.8s						
TLY	Talaya	147.93	7	*c i*PKP2	PKPbc	11 46 23.8	+0.7
TLY				pmax	pmax		
	comp=Z,54nm,2.0s						
TLY	Talaya	147.93	7	IAMs_20	IAMs_20	13 05 30.7	
	comp=Z,844nm,19.0s						
FAKI	Fak Fak	148.03	227		PKPbc	11 46 24.7	+0.1
FAKI				IAMs_20	IAMs_20	12 45 03.8	
	comp=Z,933nm,21.0s						
BHK	Bhakra	148.35	62	*e*x	x	11 46 18.0	
MMRI	Maumere	148.94	206		PKPdf	11 46 23.2	+0.3
MMRI				IAMs_20	IAMs_20	12 44 34.8	
	comp=Z,835nm,22.0s						
KLRI	Killari	149.09	88	*e*PKPdf	PKPdf	11 46 22.9	-0.1
KLRI				IVMs_BB	IVMs_BB	12 57 20.9	
	comp=Z,374nm,18.2s						
URV	Uravakonda	149.11	94	*e*PKPbc	PKPbc	11 46 25.9	-1.4
URV				IVMs_BB	IVMs_BB	12 52 02.5	
	comp=Z,512nm,19.7s						
ZAK	Zakamensk	149.16	7	*e*PKIKP	PKPdf	11 46 23.3	+1.0
ZAK				pmax	pmax		
	comp=Z,22nm,1.2s						
USA0B	Ussuriysk Arra	149.19	327	PKIKP	PKPdf	11 46 21.9	-0.5
USA0B	Ussuriysk Arra	149.19	327		PKPdf	11 46 21.9	-0.5
USA0B				PKPbc	PKiKP	11 46 27.6	-0.2
USRK	Ussuriysk Ar.	149.19	327	PKPbc	PKiKP	11 46 27.3	-0.5
	comp=Z,13nm,1.0s,baz=33,slow=1.2,SNR=22						
USRK	Ussuriysk Ar.	149.19	327	PKIKP	PKPdf	11 46 21.6	-0.8
USRK						11 46 27.3	
USRK	Ussuriysk Ar.	149.19	327	PKPdf	PKPdf	11 46 21.6	-0.8
USRK					PKiKP	11 46 27.3	-0.5
PALK	Pallekele	149.62	110	PKPbc	PKPbc	11 46 27.8	-0.8
	comp=Z,16nm,1.1s,baz=183,slow=2.7,SNR=6.6						
PALK	Pallekele	149.62	110	PKP2	PKPbc	11 46 28.3	-0.4
PALK				MLR	MLR		
	comp=Z,2µm,19.0s						
PALK	Pallekele	149.62	110		PKPbc	11 46 28.2	-0.4
MJAR	Matsushiro Arr	149.70	309	PKPbc	PKPbc	11 46 28.2	0.0
	comp=Z,11nm,0.9s,baz=113,slow=1.2,SNR=25						
MJAR	Matsushiro Arr	149.70	309	PKP2	PKPbc	11 46 28.3	+0.1
MJAR	Matsushiro Arr	149.70	309		PKPbc	11 46 28.3	+0.1
MAJO	Matsushiro	149.70	309	PKP2	PKPbc	11 46 28.2	0.0
MAJO	Matsushiro	149.70	309		PKPbc	11 46 28.2	0.0
MAT	Matsushiro	149.70	309	PKP	PKPbc	11 46 28.4	+0.2
MJB9	Matsu-Tunnel	149.70	309		PKPbc	11 46 28.5	+0.3
WMQ	Urumqi	150.06	32	*e*PKPbc	PKPdf	11 46 23.8	-0.1
WMQ				pPKP	PKiKP	11 46 29.8	0.0
WMQ				PKPab	PKPab	11 46 36.0	+1.3
WMQ				PP	PP	11 50 06.1	+3.3
WMQ				SS	SS	12 09 15.9	-3.8
WMQ				AMB	AMB		
	comp=Z,290nm,6.3s						
WMQ				LR	LR		
	comp=Z,940nm,25.7s						
WMQ				LR	LR		
	comp=Z,3µm,25.7s						
WMQ				LR	LR		
	comp=Z,2µm,22.3s						
MDJ	Mudanjiang	150.06	330	PKPbc	PKPbc	11 46 28.6	-0.1
MDJ	Mudanjiang	150.06	330		PKPbc	11 46 29.0	+0.3
SIJI	Sorong	150.17	229	PKPbc	PKiKP	11 46 31.7	+0.9
	comp=Z,26nm,0.7s,baz=37,slow=5.5,SNR=15						
HYBB	Hyderabad (bro	150.83	90	*e*PKPdf	PKPdf	11 46 25.2	-0.6
HYBB				IVMs_BB	IVMs_BB	12 50 52.6	
	comp=Z,392nm,21.2s						
HYB	Hyderabad	150.83	90	*i* PKP	PKPdf	11 46 26.0	+0.2
SRSP	Sriramsagar	150.85	87	*e*PKPdf	PKPdf	11 46 25.4	-0.4
SRSP				IVMs_BB	IVMs_BB	12 59 06.0	
	comp=Z,295nm,15.8s						
SRLM	Srisailam	150.90	92	*e*PKPdf	PKPdf	11 46 26.2	+0.3
SRLM				IVMs_BB	IVMs_BB	12 56 45.6	
	comp=Z,299nm,20.1s						
SKHT	Srikalahasti	151.10	98	*e*PKPdf	PKPdf	11 46 25.7	-0.5
SKHT				IVMs_BB	IVMs_BB	12 55 02.9	
	comp=Z,192nm,19.4s						
NJS	Nagarjunasagar	151.38	92	*e*PKPdf	PKPdf	11 46 26.2	-0.4
NJS				IVMs_BB	IVMs_BB	12 56 37.9	
	comp=Z,294nm,17.9s						
JAGI	Jajag, Banyuwa	151.45	190	IAMs_20	IAMs_20	13 05 56.9	
	comp=Z,625nm,20.0s						
RPR	Rampur	151.73	87	*e*PKPdf	PKPdf	11 46 25.7	-1.4
ADKI	Addanki	151.86	93	*e*PKPdf	PKPdf	11 46 25.8	-1.5
ADKI				IVMs_BB	IVMs_BB	12 54 14.1	
	comp=Z,246nm,19.7s						
SONM	Songino Array	151.98	4	PKP	PKPdf	11 46 27.2	+0.4
	comp=Z,2.3nm,1.0s,baz=258,slow=0.1,SNR=12						
SONM				PKPbc	PKiKP	11 46 33.9	+0.2
	comp=Z,6.8nm,0.8s,baz=318,slow=1.0,SNR=22						
SONM	Songino Array	151.98	4	PKIKP	PKPdf	11 46 26.6	-0.2
SONM						11 46 34.0	
SONM	Songino Array	151.98	4		PKPdf	11 46 26.6	-0.2
SONM					PKiKP	11 46 34.0	+0.3
GGR	Gangavaram	152.44	89	*e*PKPdf	PKPdf	11 46 28.5	+0.3
GGR				IVMs_BB	IVMs_BB	12 58 13.7	
	comp=Z,375nm,18.7s						
MYLAV	Mylavaram	152.67	92	*e*PKPdf	PKPdf	11 46 29.5	+1.0
MYLAV				IVMs_BB	IVMs_BB	12 54 10.4	
	comp=Z,276nm,19.4s						
CISI	Cisompet, Garu	152.73	177	IAMs_20	IAMs_20	12 49 03.7	
	comp=Z,678nm,21.0s						
PVM	Polavaram	153.69	91	*e*PKPdf	PKPdf	11 46 30.6	+0.6
PVM				IVMs_BB	IVMs_BB	12 50 59.8	
	comp=Z,277nm,22.6s						
MNAI	Manna	155.16	165	IAMs_20	IAMs_20	13 00 04.8	
	comp=Z,893nm,21.0s						
KSRS	Korea Array	156.07	321	PKP	PKPdf	11 46 33.8	+1.1
	comp=Z,2.9nm,1.0s,baz=71,slow=2.3,SNR=8.6						
KSAR	Wonju Array Be	156.10	321	PKIKP	PKPdf	11 46 33.0	+0.3
KSAR	Wonju Array Be	156.10	321		PKPdf	11 46 33.0	+0.3
CHLP	Challavanipeta	156.17	89	*e*PKPdf	PKPdf	11 46 31.9	-1.4
CHLP				IVMs_BB	IVMs_BB	12 52 49.0	
	comp=Z,324nm,19.9s						
INCN	Inchon	156.80	323	IAMs_20	IAMs_20	13 11 00.1	
	comp=Z,924nm,22.0s						
DL2	Dalian	158.20	333	PKP	PKPdf	11 46 36.0	+0.6
DL2				PP	PP	11 50 54.0	+5.7
DL2				AMB	AMB		
	comp=Z,210nm,10.8s						
DL2				LR	LR		
	comp=Z,470nm,19.3s						
DL2				LR	LR		
	comp=Z,570nm,21.2s						
DL2				LR	LR		
	comp=Z,800nm,22.1s						
GTA	Gaotai	158.87	21	PKP	PKPdf	11 46 38.8	+2.4
GTA				PP	PP	11 50 51.3	-0.7
GTA				AMB	AMB		
	comp=Z,340nm,7.8s						
GTA				LR	LR		
	comp=Z,780nm,18.6s						
GTA				LR	LR		
	comp=Z,870nm,21.0s						
GTA				LR	LR		
	comp=Z,1µm,21.6s						
HHC	Hu-ho-hao-te	158.97	355	*e*PKP	PKPdf	11 46 40.8	+4.4
HHC				PP	PP	11 50 52.9	+0.7
HHC				SS	SS	12 10 55.8	+0.3
HHC				AMB	AMB		
	comp=Z,280nm,10.2s						
HHC				LR	LR		
	comp=Z,420nm,19.2s						
HHC				LR	LR		
	comp=Z,260nm,19.0s						
HHC				LR	LR		
	comp=Z,960nm,19.0s						
TIA	Tai'an	162.29	339	PKP	PKPdf	11 46 43.3	+3.3
TIA				PP	PP	11 51 11.3	+1.1
TIA				LR	LR		
	comp=Z,680nm,22.6s						
TIA				LR	LR		
	comp=Z,670nm,23.5s						
TIA				LR	LR		
	comp=Z,1µm,28.4s						
LZH	Lanzhou	163.14	15	⇑PKP	PKPdf	11 46 32.1	-9.0
LZH				pPKP	sPKPdf	11 46 46.0	+1.0
LZH				sPKP		11 46 49.3	
LZH				PP	PP	11 51 13.4	-1.4
LZH	Lanzhou	163.14	15	SS	SS	12 11 43.4	+3.9
NJ2	Nanjing	165.10	327	*e*PKP	PKPdf	11 46 41.5	-1.2
XAN	Xi'an	165.86	1	PKP	PKPdf	11 46 44.0	+0.6
XAN				pPKP	sPKPdf	11 46 54.5	+7.1
XAN				SKS	SKSdf	11 53 41.3	-6.6
XAN				AMB	AMB		
	comp=Z,500nm,13.8s						
XAN				LR	LR		
	comp=Z,1µm,21.7s						
XAN				LR	LR		
	comp=Z,890nm,22.2s						
XAN				LR	LR		
	comp=Z,1µm,25.0s						
CD2	Chengdu	167.92	23	PKP	PKPdf	11 46 42.8	-2.2
WHN	Wuhan	168.40	338	PKP	PKPdf	11 46 40.3	-5.0
WHN				LR	LR		
	comp=Z,3µm,27.4s						
WHN				LR	LR		
	comp=Z,1µm,13.5s						
WHN				LR	LR		
	comp=Z,3µm,20.2s						
QZH	Quanzhou	169.98	302	*i* PKP	PKPdf	11 46 48.8	+2.4
QZH				PP	PP	11 51 55.8	+4.4
QZH				SS	SS	12 12 53.3	+2.1
QZH				LR	LR		
	comp=Z,800nm,19.5s						
QZH				LR	LR		
	comp=Z,580nm,23.8s						
QZH				LR	LR		
	comp=Z,950nm,17.6s						
CMAR	Chiang Mai Arr	170.16	96	PKP	PKPdf	11 46 46.6	-0.1
	comp=Z,0.4nm,0.3s,baz=252,slow=2.8,SNR=5.7						
CMAR				PKPab	PKPab	11 48 03.0	+0.5
	comp=Z,1.1nm,0.4s,baz=264,slow=6.6,SNR=6.8						
CMAR	Chiang Mai Arr	170.16	96	PKIKP	PKPdf	11 46 46.2	-0.5
CMAR	Chiang Mai Arr	170.16	96		PKPdf	11 46 46.2	-0.5
PBKT	Sadao Pong	171.48	111		PKPdf	11 46 47.0	-0.4
PBKT					PKPab	11 48 07.6	-0.7
KMI	Kunming	172.01	48	PKP	PKPdf	11 46 45.1	-2.7
KMI				pPKP	sPKPdf	11 46 51.6	-0.1
KMI				sPKP		11 46 54.1	
GYA	Guiyang	173.00	19	PKP	PKPdf	11 46 46.3	-1.7
GYA				PKPab	PKPab	11 48 15.0	+0.4
GYA				PKS		11 50 17.4	
GYA				PP	PP	11 52 07.5	+2.4
GYA				AMB	AMB		
	comp=Z,140nm,8.2s						
QIZ	Qiongzhong	179.01	215	PKP	PKPdf	11 46 45.8	-3.7
QIZ				PKPab	pPKPab	11 48 42.9	-1.2
QIZ				PP	PP	11 52 32.8	-1.4
QIZ				SS	SS	12 14 16.1	-0.4
QIZ				AMB	AMB		
	comp=Z,570nm,8.8s						
QIZ				LR	LR		
	comp=Z,550nm,18.6s						
QIZ				LR	LR		
	comp=Z,1µm,19.6s						
QIZ				LR	LR		
	comp=Z,1µm,18.6s						

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*IDC **24** 11:32:12.7±0.4, 19.°71S×70.°58W, h0^{km}, mb4.8/27, mb1 4.8/29, mb1mx4.7/46, mbtmp4.8/29, ML4.6/2, Error ellipse: s-maj=16.7km s-min=9.5km az=62.0*

*SJA **24** 11:32:13.3±1.3, 19.°82S×70.°86W, h14^{km}±6^{km}, ML5.2, MW5.0*

*NEIC **24** 11:32:14.5, 19.°83S×70.°82W, h22^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.17; $M_{\theta\theta}$-1.09; $M_{\phi\phi}$-0.09; $M_{r\theta}$0.93; $M_{\theta\phi}$-0.32; $M_{\phi r}$-5.47; Fault plane solution: $M_0$5.68000×10^{16} NP1:ϕ_s18.16000°, δ3.43000°, λ117.23000°. NP2:ϕ_s170.89000°, δ86.95000°, λ88.43000°. Principal axes: T 6.1673, Plg48.0000°, Azm79.0000°; N -1.1631, Plg2.0000°, Azm171.0000°; P -5.0043, Plg42.0000°, Azm262.0000°;*

*BJI **24** 11:32:15.8±0.0, 19.°80S×70.°80W, h20^{km}, mB5.4/10, Ms5.7/11, Ms7 5.6/12*

*MOS **24** 11:32:15.0±1.3, 19.°66S×70.°70W, h23^{km}, mb5.3/8, Error ellipse: s-maj=13.1km s-min=7.7km az=109.0*

*NEIC **24** 11:32:15±1.4, 19.°79S±0.°04×70.°81W±0.°05, h18^{km}±2^{km}, mb5.2/213, Mwr5.1/31, Mww5.2, ML5.1(GUC), Error ellipse: s-maj=7.3km s-min=6.0km az=102.0*

*GUC **24** 11:32:16.1±0.8, 19.°80S×70.°81W, h42^{km}±3^{km}, ML5.1*

*GCMT **24** 11:32:19.0±0.4, 19.°84S±0.°03×71.°25W±0.°03, h33^{km}±1^{km}, MW5.3/75, Moment Tensor Solution. s26,c32; s75,c95; Duration: 1.^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}1.09±.10; $M_{\theta\theta}$-0.09±.05; $M_{\phi\phi}$-1.00±.06; $M_{r\theta}$0.17±.05; $M_{\theta\phi}$0.16±.03; $M_{\phi r}$-0.81±.06; Best double couple: $M_0$1.34500×10^{17} NP1:ϕ_s351.00000°, δ26.00000°, λ92.00000°. NP2:ϕ_s169.00000°, δ64.00000°, λ89.00000°. Principal axes: T 1.3760, Plg71.0000°, Azm77.0000°; N -0.0560, Plg1.0000°, Azm169.0000°; P -1.3140, Plg19.0000°, Azm260.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **24** 11:32:20, 19.°78S×70.°92W, h26^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}4.40; $M_{\theta\theta}$0.87; $M_{\phi\phi}$-5.27; $M_{r\theta}$3.00; $M_{\theta\phi}$1.28; $M_{\phi r}$-6.14; Fault plane solution: $M_0$8.50000×10^{16} NP1:ϕ_s156.00000°, δ72.00000°, λ80.00000°. NP2:ϕ_s6.00000°, δ20.00000°, λ118.00000°. Principal axes: T 8.0501, Plg61.0000°, Azm51.0000°; N 0.8378, Plg9.0000°, Azm159.0000°; P -8.8879, Plg27.0000°, Azm254.0000°;*

*VAO **24** 11:32:23.0±0.9, 19.°85S×70.°40W, h77^{km}±6^{km}, mb5.0*

ISC 24 11:32:16.0±0.9, **19.°78S**±0.°02×**70.°79W**±0.°04, **h24**^{km}±6^{km}, **n735**, σ1.^{s}**01**/668, **mb5.2**/126, **11C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	0.66	74	*e*P	Pb	11 32 28.7	-0.1
PSGC				*e*S	Sb	11 32 38.1	+0.5
PSGCX	Pisagua	0.66	74		Pb	11 32 28.7	-0.2
PSGCX				Sg	Sb	11 32 38.5	+0.8
PSGCX	Pisagua	0.66	74	*e*P	Pb	11 32 28.7	-0.2
PSGCX				*e*S	Sn	11 32 38.7	-0.9
PSGCX				IAML		11 32 39.3	
	comp=Z,36µm,1.7s						
TA01	Diego Aracena	0.97	144	⇓*e*P	Pb	11 32 33.0	-1.1
TA01				*e*S	Sb	11 32 46.1	-0.4
TA01				IAML		11 32 49.4	
	comp=E,91µm,0.3s						
PB11	IPOC Station P	1.07	89	⇓*e*P	Pn	11 32 35.5	-0.2
PB11				*e*S	Sn	11 32 50.6	+0.8
PB11				IAML		11 32 54.9	
	comp=N,49µm,0.4s						
PB11	IPOC Station P	1.07	89	Pn	Pn	11 32 35.5	-0.2
PB11					Sn	11 32 51.2	+1.3
PB11	IPOC Station P	1.07	89	*e*P	Pn	11 32 35.6	-0.2
PB11				*e*S	Sn	11 32 50.4	+0.5
PB11				IAML		11 32 51.8	
	comp=Z,34µm,0.9s						
PATCX	Punta Patache	1.20	150	⇑*i*P	Pn	11 32 36.5	-0.9
PATCX				*e*S	Sb	11 32 53.5	+0.3
PATCX				IAML		11 33 00.4	
	comp=N,50µm,0.3s						
PATCX	Punta Patache	1.20	150	Pn	Pn	11 32 36.5	-0.9
PATCX	Punta Patache	1.20	150	*e*P	Pn	11 32 36.4	-0.9
PATCX				*e*S	Sn	11 32 52.6	-0.3
PATCX				IAML		11 33 02.0	
	comp=Z,39µm,0.6s						
PB12	IPOC Station P	1.24	21	⇑*i*P	Pn	11 32 38.1	+0.2
PB12				*e*S	Sb	11 32 54.6	+0.2
PB12				IAML		11 33 01.4	
	comp=N,79µm,0.4s						
PB12	IPOC Station P	1.24	21	Pn	Pn	11 32 37.9	0.0
PB12	IPOC Station P	1.24	21	*e*P	Pn	11 32 38.2	+0.2
PB12				*e*S	Sb	11 32 55.5	+1.1
PB12				IAML		11 32 59.0	
	comp=Z,42µm,1.2s						
AP01	Chacalluta	1.47	17	⇑*i*P	Pn	11 32 41.7	+0.8
AP01				*e*S	Sb	11 33 00.3	-0.4
GO01	Chusmiza	1.51	86	⇓*e*P	Pb	11 32 43.0	-0.6
GO01				*e*S	Sb	11 33 03.4	+0.9
GO01				*e*S	Sn	11 33 04.3	+3.1
GO01				IAML		11 33 06.3	
	comp=N,53µm,0.3s						
GO01	Chusmiza	1.51	86	Pn	Pb	11 32 43.0	-0.6
PB08	IPOC Station P	1.58	103	⇑*i*P	Pn	11 32 43.7	+0.8
PB08				IAML		11 33 06.4	
	comp=N,39µm,0.6s						
PB08	IPOC Station P	1.58	103	*e*P	Pb	11 32 44.0	-0.8
PB08				*e*S	Sb	11 33 05.3	+0.8
PB08				IAML		11 33 06.8	
	comp=Z,33µm,0.8s						
PB02	IPOC Station P	1.75	151	*e*P	Pn	11 32 44.6	-0.3
PB02				*e*S	Sb	11 33 09.5	+0.5
PB02				IAML		11 33 13.6	
	comp=Z,49µm,0.4s						
PB01	IPOC Station P	1.75	136	⇑*i*P	Pn	11 32 45.0	-0.1
PB01				*e*S	Sn	11 33 07.6	+0.9
PB01				IAML		11 33 15.2	
	comp=N,33µm,0.5s						
PB01	IPOC Station P	1.75	136	Pn	Pn	11 32 45.2	+0.1
PB16	IPOC Station P	1.88	40	⇑*i*P	Pn	11 32 48.4	+1.2
PB16				*e*S	Sb	11 33 14.2	+0.8
PB16				IAML		11 33 25.8	
	comp=E,32µm,0.7s						
PB16	IPOC Station P	1.88	40	Pn	Pn	11 32 48.4	+1.2
PB16	IPOC Station P	1.88	40	*e*P	Pb	11 32 48.9	-1.1
PB16				*e*S	Sb	11 33 15.5	+2.2
PB16				IAML		11 33 20.3	
	comp=Z,51µm,0.5s						
PB07	IPOC Station P	2.11	157	IAML		11 33 31.6	
	comp=E,31µm,0.4s						
PB07	IPOC Station P	2.11	157	Pn	Pn	11 32 49.6	-0.5
PB07	IPOC Station P	2.11	157	*e*P	Pn	11 32 50.0	-0.1
PB07				*e*S	Sb	11 33 20.5	+0.9
PB07				IAML		11 33 28.5	
	comp=Z,19µm,1.0s						
PB03	IPOC Station P	2.46	157	*e*P	Pn	11 32 54.6	-0.2
PB03				*e*S	Sb	11 33 31.0	+1.5
PB03				IAML		11 33 34.5	
	comp=Z,17µm,1.2s						

PB09	IPOC Station P	2.48	144	Pn	Pn	11 32 56.0	+0.9
PB09	IPOC Station P	2.48	144	*e*P	Pn	11 32 56.5	+1.5
PB09				*e*S	Sb	11 33 32.5	+2.5
PB09				IAML		11 33 40.1	
	comp=Z,29µm,0.7s						
PB04	IPOC Station P	2.61	167	Pn	Pn	11 32 55.7	-1.2
PB04	IPOC Station P	2.61	167	*i* P	Pn	11 32 55.3	-1.6
PB04				*e*S	Sb	11 33 37.4	+3.5
PB05	IPOC Station P	3.11	170	*i* P	Pn	11 33 01.5	-2.2
PB05				*e*S	Sb	11 33 52.8	+4.6
PB05				IAML		11 33 57.2	
	comp=Z,6µm,0.9s						
PB06	IPOC Station P	3.13	159	*i* P	Pn	11 33 02.6	-1.4
PB06				*e*S	Sb	11 33 50.3	+1.5
PB06				IAML		11 33 55.3	
	comp=Z,10µm,1.2s						
LVC	Limon Verde	3.32	148	Pn	Pn	11 33 06.7	-0.1
	comp=Z,140nm,0.3s,baz=353,slow=7.9,SNR=14						
LVC				Sn	Sn	11 33 47.2	+1.5
	comp=Z,340nm,0.3s,baz=3.6,slow=16,SNR=3.6						
LVC				Lg	Lg	11 33 57.2	
	comp=Z,570nm,0.3s,baz=53,slow=20,SNR=5.8						
LVC	Limon Verde	3.32	148	*e*P	Pn	11 33 08.2	+1.4
LVC	Limon Verde	3.32	148	Pn	Pn	11 33 07.5	+0.7
LVC	Limon Verde	3.32	148	*e*P	Pn	11 33 09.0	+2.2
LVC	Limon Verde	3.32	148	*i* P	Pn	11 33 08.6	+1.8
LVC				*e*S	Sb	11 33 57.1	+2.6
LVC				IAML		11 34 08.4	
	comp=Z,3µm,1.2s						
PB15	IPOC Station P	3.63	160	Pn	Pn	11 33 10.1	-0.8
PB15	IPOC Station P	3.63	160	*e*P	Pn	11 33 10.1	-0.8
PB15				*e*S	Sb	11 34 04.8	+1.6
PB15				IAML		11 34 11.0	
	comp=Z,13µm,1.2s						
PB10	IPOC Station P	3.72	177	Pn	Pn	11 33 09.4	-2.6
PB10	IPOC Station P	3.72	177	*i* P	Pn	11 33 09.3	-2.8
PB10				*e*S	Sb	11 34 12.4	+6.6
PB10				IAML		11 34 23.1	
	comp=Z,2µm,0.9s						
I08BO	LAS PENAS INFR	4.18	32	Pn	Pb	11 33 28.2	-1.1
	baz=224,slow=24,SNR=1.6						
I08BO				*i*		11 55 40.0	
	baz=205,slow=330,SNR=4.8						
LPAZ	La Paz	4.30	37	Pn	Pn	11 33 24.3	+3.8
	comp=Z,37nm,0.3s,baz=239,slow=5.5,SNR=52						
LPAZ	La Paz	4.30	37	P	Pn	11 33 24.0	+3.5
LPAZ	La Paz	4.30	37	*e*P	Pn	11 33 24.0	+3.5
PB14	IPOC Station P	4.84	176	Pn	Pn	11 33 24.5	-3.1
PB14	IPOC Station P	4.84	176	*i* P	Pn	11 33 25.3	-2.4
PB14				*e*S	Sb	11 34 35.9	-2.2
PB14				IAML		11 34 54.4	
	comp=Z,2µm,0.9s						
GO02	Mina Guanaco	5.47	169	Pn	Pn	11 33 34.9	-1.4
AZAP	Zapla	6.91	131	*i* P	Pn	11 34 01.9	+5.8
ASTB	Santa Barbara	7.20	126	*i* P	Pn	11 34 01.7	+1.7
GO03	Copiap	7.79	176	Pn	Pn	11 34 04.8	-3.3
SIV	San Ignacio	9.99	69	Pn	Pn	11 34 37.7	-0.5
	comp=Z,18nm,0.3s,baz=260,slow=12,SNR=16						
GO04	Tololo Observa	10.35	180	Pn	Pn	11 34 40.1	-3.1
SAML	Samuel	13.04	35	P	Pn	11 35 20.5	+0.6
SAML	Samuel	13.04	35	Pn	Pn	11 35 20.5	+0.6
CPUP	Villa Florida	14.00	120	Pn	Pn	11 35 31.4	-1.5
	comp=Z,0.5nm,0.3s,baz=0.5,slow=9.9,SNR=2.8						
CPUP	Villa Florida	14.00	120	P	Pn	11 35 32.8	-0.1
CPUP	Villa Florida	14.00	120	Pn	Pn	11 35 32.8	-0.1
CPUP	Villa Florida	14.00	120	*e*P	Pn	11 35 31.6	-1.3
AQDB	Aquidauana	14.19	95	*e*P	Pn	11 35 37.2	+1.5
TRCB	Terra Rica	17.18	103	*e*P	Pn	11 36 12.6	-2.1
PTGB	Pitanga	18.01	109	*e*P	Pn	11 36 24.6	-0.4
PCMB	Pacaembu	18.36	99	*e*P	P	11 36 27.4	-1.7
ITAB	Concordia	18.64	117	*e*P	P	11 36 30.2	-1.9
CPSB	Cacapava Do Su	18.92	127	*e*P	P	11 36 33.6	-1.6
ITRB	Iturama	19.23	93	*e*P	P	11 36 37.9	-0.8
PLTB	Pedras Altas	19.51	131	*e*P	P	11 36 40.9	-0.8
GO06	Curarrehue	19.75	182	P	P	11 36 44.2	-0.1
FRTB	Fartura	20.06	104	*e*P	P	11 36 46.2	-1.5
CNLB	Canela	20.45	122	*e*P	P	11 36 50.7	-1.3
PLCA	Paso Flores	20.89	179	P	P	11 36 57.7	+1.1
	comp=Z,17nm,1.0s,baz=15,slow=10.0,SNR=22						
PLCA	Paso Flores	20.89	179	P	P	11 36 57.4	+0.8
PLCA				pmax	pmax		
	comp=Z,43nm,1.1s						
PLCA	Paso Flores	20.89	179	P	P	11 36 57.4	+0.8
PLCA	Paso Flores	20.89	179	*e*P	Pn	11 36 59.1	0.0
BB19B	Bebedouro	20.90	97	*e*P	P	11 36 55.5	-1.5
IPMB	Ipameri, GO	21.44	89	*e*P	P	11 37 00.7	-2.0
PTGA	Pitinga	21.70	31	P	P	11 37 04.0	-1.4
	comp=Z,77nm,0.3s,baz=220,slow=23,SNR=71						
PTGA	Pitinga	21.70	31	P	P	11 37 03.8	-1.7
FLOC	Florencia	21.76	347	P	P	11 37 06.8	+0.7
SPB	Sao Paulo	22.03	104	P	P	11 37 07.6	-1.3
BDFB	Brasilia	22.08	83	P	P	11 37 07.3	-2.3
	comp=Z,21nm,0.4s,baz=255,slow=7.2,SNR=21						
BDFB	Brasilia	22.08	83	P	P	11 37 08.8	-0.9
BDFB	Brasilia	22.08	83	P	P	11 37 08.8	-0.9
VAO	Valinhos	22.41	102	*e*P	P	11 37 11.2	-2.0
PARB	Paraibuna	23.66	103	*e*P	P	11 37 24.0	-1.9
ROSC	El Rosal	24.71	352	P	P	11 37 37.1	+1.1
	comp=Z,26nm,0.5s,baz=197,slow=10,SNR=5.6						
ROSC	El Rosal	24.71	352	P	P	11 37 36.2	+0.2
SMTB	Santa Maria do	24.93	67	*e*P	P	11 37 36.9	-0.7
RUSC	La Rusia	25.61	355	P	P	11 37 44.5	+0.3
JANB	Januaria	25.68	84	*e*P	P	11 37 42.9	-1.6
BSFB	Barra de Sao F	28.26	93	*e*P	P	11 38 05.7	-2.0
SDV	Santo Domingo	28.49	0	P	P	11 38 10.4	+0.6
	comp=Z,28nm,1.1s,baz=215,slow=8.4,SNR=3.4						
SDV	Santo Domingo	28.49	0	P	P	11 38 08.8	-1.0
PLCV	Puerto La Cruz	30.38	12	P	P	11 38 26.9	+0.5
PCRV	Puerto La Cruz	30.38	12	P	P	11 38 26.9	+0.5
	comp=Z,8.5nm,0.6s,baz=287,slow=15,SNR=2.6						
TOSP	Speyside	32.49	19	P	P	11 38 44.9	-0.1
GRGR	Grenville	32.96	17	P	P	11 38 48.3	-0.8
JTS	Las Juntas de	32.98	334	*i* P	P	11 38 49.8	+0.5
EFI	East Falkland	33.36	166	P	P	11 38 52.4	+0.2
EFI				pmax	pmax		
	comp=Z,90nm,1.3s						
EFI	East Falkland	33.36	166	P	P	11 38 52.4	+0.2
NBMO	Morrinhos-CE	34.18	65	*e*P	P	11 38 58.1	-1.7
NBLI	Livramento-PB	35.05	74	*e*P	P	11 39 06.1	-1.3
RCBR	Riachuelo	36.64	72	P	P	11 39 19.5	-1.5
	comp=Z,41nm,0.9s,baz=244,slow=8.8,SNR=12						
RCBR	Riachuelo	36.64	72	P	P	11 39 20.3	-0.7
RCBR	Riachuelo	36.64	72	P	P	11 39 20.3	-0.7
RCBR	Riachuelo	36.64	72	*e*P	P	11 39 20.2	-0.7
MLPR	Magueyes Islan	37.69	6	P	P	11 39 28.8	-0.9
CRPR	Cabo Rojo, PR	37.73	6	P	P	11 39 28.9	-1.1
OBIP	Obispado Ponce	37.81	7	P	P	11 39 28.6	-2.2
PDPR	Patillas Dam,	37.85	7	P	P	11 39 29.5	-1.6
MPR	Mayaguez	37.92	6	P	P	11 39 30.6	-1.1
SJG	San Juan	37.93	7	P	P	11 39 29.6	-2.1
	comp=Z,9.4nm,0.3s,baz=227,slow=2.7,SNR=5.3						
SJG	San Juan	37.93	7	P	P	11 39 30.2	-1.5
SJG				pmax	pmax		
	comp=Z,43nm,0.8s						
SJG	San Juan	37.93	7	P	P	11 39 30.2	-1.5
SJG				IAmb	IAmb	11 39 41.3	
	comp=Z,42nm,0.8s						
PCDR	Punta Cana, DR	38.13	4	P	P	11 39 33.3	-0.1
GCPR	Guaynabo City	38.13	7	P	P	11 39 31.9	-1.5
SMRT	St. Maarten	38.35	12	P	P	11 39 32.5	-2.9
SDDR	Presa de Saban	38.52	359	P	P	11 39 35.1	-1.7
APG	El Apazote	39.61	329	P	P	11 39 47.5	+1.3
	comp=Z,17nm,1.2s,baz=179,slow=5.4,SNR=6.1						
HOPE	Hope Point	43.23	151	P	P	11 40 15.7	+0.6
HOPE				pmax	pmax		
	comp=Z,85nm,1.2s						
HOPE	Hope Point	43.23	151	P	P	11 40 15.7	+0.6
HOPE				IAmb	IAmb	11 40 34.5	
	comp=Z,85nm,1.2s						
TEIG	Tepich	43.29	336	P	P	11 40 16.2	+0.2
	comp=Z,15nm,0.7s,baz=230,slow=0.0						
CMIG	Matias Romero	43.62	326	P	P	11 40 19.5	+0.7
	comp=Z,5.6nm,0.9s,baz=141,slow=8.6						
ZAIG	Zacatecas	52.45	322	P	P	11 41 28.5	+1.1
157A	Early Branch	53.07	349	P	P	11 41 31.7	+0.4
	baz=168						
Z59A	Georgetown, SC	53.34	351	P	P	11 41 33.7	+0.3
	baz=170						
NHSC	New Hope	53.35	350	P	P	11 41 33.9	+0.5
	baz=169						
Z58A	St. Stephen	53.51	351	P	P	11 41 34.7	+0.1
	baz=170						
250A	Grady	53.56	344	P	P	11 41 34.5	-0.6
Z57A	Bowman	53.62	350	P	P	11 41 35.8	+0.4
	baz=168						
Y60A	Bolivia	53.95	352	P	P	11 41 37.9	+0.1
	baz=171						
GOGA	Godfrey	54.26	347	P	P	11 41 40.2	+0.1
	baz=165						
Y55A	Saluda	54.45	349	P	P	11 41 41.6	+0.1
	baz=167						
Z50A	Ashland	54.68	344	IAmb	IAmb	11 41 57.1	
	comp=Z,17nm,0.8s						
Z50A	Ashland	54.68	344	P	P	11 41 42.9	-0.3
	baz=163,SNR=6.1						
LRAL	Lakeview Retre	54.75	343	P	P	11 41 42.8	-0.9
	baz=161						
Y52A	Lilburn	54.82	346	P	P	11 41 43.6	-0.6
	baz=165						
X56A	White Oak	54.84	350	P	P	11 41 44.3	-0.1
	baz=168						
X55A	Gracelyn & Ava	54.93	349	P	P	11 41 44.9	-0.1
	baz=168,SNR=6.2						
W61A	Ground Anchor	54.97	354	P	P	11 41 44.7	-0.5
	baz=173						
HKT	Hockley	55.01	333	P	P	11 41 44.7	-0.9
HKT	Hockley	55.01	333	P	P	11 41 44.7	-0.9
W58A	Raeford	55.09	352	P	P	11 41 46.3	+0.2
	baz=170						
X54A	Belton	55.14	348	P	P	11 41 46.5	0.0
	baz=167						
833A	Chaparral WMA,	55.24	329	P	P	11 41 46.6	-0.7
	baz=147						
X53A	Estanollee	55.28	347	P	P	11 41 47.3	-0.2
	baz=166						
W56A	Indian Trail	55.40	350	P	P	11 41 47.7	-0.6
	baz=169						
KMSC	Kings Mountain	55.53	350	IAmb	IAmb	11 41 51.3	
	comp=Z,34nm,1.2s						
KMSC	Kings Mountain	55.53	350	P	P	11 41 48.8	-0.5
	baz=168						
W54A	Cherokee Point	55.63	349	P	P	11 41 49.7	-0.3
	baz=167						
X51A	Calhoun	55.68	346	IAmb	IAmb	11 41 51.0	
	comp=Z,56nm,1.4s						
X51A	Calhoun	55.68	346	P	P	11 41 50.1	-0.2
	baz=164						
V59A	Middlesex	55.69	353	P	P	11 41 50.5	+0.1
	baz=172						
V58A	Windy Hill, Pi	55.83	352	IAmb	IAmb	11 41 54.1	
	comp=Z,27nm,1.1s						
V58A	Windy Hill, Pi	55.83	352	P	P	11 41 51.6	+0.2
	baz=171						
V57A	Coltrane Farms	56.01	351	P	P	11 41 52.7	0.0
	baz=170						
V56A	Mocksville	56.05	350	P	P	11 41 52.4	-0.6
	baz=169,SNR=5.5						
U61A	Possum Corner	56.06	354	P	P	11 41 52.9	-0.2
	baz=174						
X48A	Hartselle	56.10	344	IAmb	IAmb	11 41 54.7	
	comp=Z,29nm,1.2s						
NATX	Nacogdoches	56.13	335	P	P	11 41 53.4	-0.2
	baz=153						
V55A	Taylorsville	56.20	350	IAmb	IAmb	11 41 56.1	
	comp=Z,48nm,1.4s						
V55A	Taylorsville	56.20	350	P	P	11 41 55.2	+1.1
	baz=168,SNR=5.7						
U59A	Littleton	56.22	353	IAmb	IAmb	11 41 56.5	
	comp=Z,50nm,1.5s						
U59A	Littleton	56.22	353	P	P	11 41 53.9	-0.3
	baz=172						
V54A	Nebo	56.26	349	P	P	11 41 54.3	-0.2
	baz=167						
U60A	Pendleton	56.27	354	P	P	11 41 54.3	-0.2
	baz=173						
U58A	Oxford	56.35	352	P	P	11 41 55.5	+0.3
	baz=171						
W50A	Signal Mountai	56.39	346	IAmb	IAmb	11 41 56.1	
	comp=Z,37nm,1.3s						
CPCT	Cooper Cave	56.45	347	IAmb	IAmb	11 41 57.2	
	comp=Z,32nm,1.4s						
435B	Jarrell	56.49	332	P	P	11 41 55.9	-0.3
	baz=150						
U57A	Blanch	56.49	352	P	P	11 41 56.2	+0.1
	baz=170						
U56A	King	56.55	351	P	P	11 41 56.7	+0.1
	baz=169						
V52A	Sevierville	56.63	348	IAmb	IAmb	11 41 57.8	
	comp=Z,40nm,1.1s						
T59A	Double "B" Far	56.80	354	IAmb	IAmb	11 41 59.9	
	comp=Z,42nm,1.1s						
T59A	Double "B" Far	56.80	354	P	P	11 41 58.3	-0.1
	baz=172,SNR=6.4						
U55A	TA2, Sparta	56.81	350	P	P	11 41 58.0	-0.5
	baz=168						
OXF	Oxford	56.82	342	IAmb	IAmb	11 42 00.3	
	comp=Z,43nm,1.1s						
OXF	Oxford	56.82	342	P	P	11 41 58.0	-0.6
	baz=159						
PLAL	Pickwick Lake	56.88	343	IAmb	IAmb	11 41 59.5	
	comp=Z,23nm,1.3s						
T58A	Grand View Acr	56.89	353	P	P	11 41 59.0	0.0
	baz=171,SNR=7.7						
U54A	Nelsons Funny	56.96	349	IAmb	IAmb	11 42 00.7	
	comp=Z,38nm,1.0s						
U54A	Nelsons Funny	56.96	349	P	P	11 41 59.3	-0.3
	baz=168,SNR=7.6						
T57A	Hurt	57.03	352	P	P	11 41 60.0	0.0
	baz=171						
T56A	Rocky Mt	57.17	351	P	P	11 42 01.3	+0.3
	baz=170						
JCT	Junction City	57.23	330	P	P	11 42 01.1	-0.5
	baz=147						
V48A	Smith Brothers	57.27	345	IAmb	IAmb	11 42 02.2	
	comp=Z,51nm,1.4s						
X43A	Marvell	57.28	340	P	P	11 42 01.9	+0.1
	baz=158						
TZTN	Tazewell	57.30	348	P	P	11 42 01.7	-0.2
	baz=166						
T55A	Pulaski	57.37	351	P	P	11 42 02.6	+0.1
	baz=169,SNR=5.5						
BLA	Blacksburg	57.41	351	P	P	11 42 03.1	+0.4
	baz=169						
T54A	Tazewell	57.44	350	P	P	11 42 03.1	+0.1
	baz=168						
WHTX	Lake Whitney,	57.47	333	IAmb	IAmb	11 42 06.1	
	comp=Z,22nm,1.1s						
WHTX	Lake Whitney,	57.47	333	P	P	11 42 03.5	+0.3
	baz=150,SNR=6.1						
CLTN	Cedars of Leba	57.48	345	IAmb	IAmb	11 42 04.3	
	comp=Z,28nm,1.3s						
S58A	Poland Farm, P	57.49	353	IAmb	IAmb	11 42 04.8	
	comp=Z,24nm,1.1s						
S58A	Poland Farm, P	57.49	353	P	P	11 42 03.6	+0.4
	baz=172						
T53A	Wise	57.53	349	P	P	11 42 03.4	-0.3
	baz=167						
T52A	Hallie	57.74	348	P	P	11 42 04.2	-0.8
	baz=166						
S57A	Dark Hollow, R	57.75	352	P	P	11 42 05.6	+0.6
	baz=171,SNR=6.2						
T51A	Gray	57.79	348	P	P	11 42 05.0	-0.3
	baz=165						
R58B	Mineral	57.82	353	P	P	11 42 05.4	-0.1
	baz=172,SNR=5.5						
WVT	Waverly	57.90	344	P	P	11 42 05.0	-1.1
WVT	Waverly	57.90	344	P	P	11 42 05.0	-1.1
WVT	Waverly	57.90	344	P	P	11 42 05.2	-0.8
	baz=161						
R61A	Willards	57.96	356	P	P	11 42 06.0	-0.5
	baz=175						
S55A	Lewisburg	57.97	351	P	P	11 42 07.2	+0.6
	baz=169,SNR=6.7						
UALR	University of	57.99	339	IAmb	IAmb	11 42 09.2	
	comp=Z,45nm,1.4s						
T50A	Nancy	58.03	347	P	P	11 42 06.2	-0.8
	baz=164,SNR=5.5						
S54A	Dingess, Beckl	58.12	350	IAmb	IAmb	11 42 22.1	
	comp=Z,34nm,1.1s						
S54A	Dingess, Beckl	58.12	350	P	P	11 42 07.5	-0.2
	baz=168						
S53A	Williamson	58.14	349	P	P	11 42 07.5	-0.3
	baz=168						
R58A	Rapidan	58.17	353	P	P	11 42 08.2	+0.3
	baz=172						
MIAR	Mount Ida	58.21	338	P	P	11 42 08.8	+0.5
MIAR				pmax	pmax		
	comp=Z,30nm,1.1s						
MIAR	Mount Ida	58.21	338	IAmb	IAmb	11 42 11.0	
	comp=Z,32nm,1.1s						
MIAR	Mount Ida	58.21	338	P	P	11 42 08.4	+0.1
	baz=155,SNR=10						
TXAR	Lajitas Array	58.22	326	P	P	11 42 09.0	+0.4
	comp=Z,2.2nm,0.8s,baz=150,slow=7.4,SNR=9.1						
TXAR	Lajitas Array	58.22	326	P	P	11 42 08.4	-0.2
TX32	Lajitas Array	58.22	326	P	P	11 42 09.0	+0.4
R57A	Stanardsville	58.22	353	P	P	11 42 08.7	+0.4
	baz=172,SNR=6.0						
T49A	Edmonton	58.26	346	P	P	11 42 08.1	-0.6
	baz=164,SNR=14						
W41B	Gary Mavity, V	58.33	339	P	P	11 42 08.5	-0.6
	baz=156						
S51A	Beattyville	58.37	348	P	P	11 42 09.1	-0.3
	baz=166						
R55A	Marlinton	58.41	351	P	P	11 42 09.7	-0.1
	baz=170						
R54A	Victor	58.44	351	P	P	11 42 09.6	-0.3
	baz=169						
WHAR	Wooly Hollow	58.45	339	IAmb	IAmb	11 42 29.6	
	comp=Z,16nm,1.0s						
S50A	Richmond	58.57	347	P	P	11 42 10.0	-0.8
	baz=165,SNR=5.6						
Q58A	Fox Den Farm,	58.77	354	P	P	11 42 12.4	+0.3
	baz=172						
LCAR	Lake Charles	58.80	341	IAmb	IAmb	11 42 12.8	
	comp=Z,21nm,1.4s						
S49A	Springfield	58.86	347	P	P	11 42 12.1	-0.7
	baz=164						
W39A	Magazine	58.87	338	IAmb	IAmb	11 42 14.7	
	comp=Z,22nm,1.1s						
W39A	Magazine	58.87	338	P	P	11 42 13.3	+0.4
	baz=155,SNR=7.3						
FCAR	Ozark Folk Cen	58.94	340	IAmb	IAmb	11 42 13.8	
	comp=Z,24nm,1.5s						
Q57A	Strasburg	58.94	353	P	P	11 42 14.2	+0.9
	baz=172,SNR=6.8						
ABTX	Abilene, Hawle	58.97	332	P	P	11 42 13.2	-0.5
	baz=148,SNR=8.6						
R51A	Hillsboro	59.01	348	P	P	11 42 13.3	-0.5
	baz=166						
Q56A	Snyder Ridge,	59.04	352	P	P	11 42 14.5	+0.4
	baz=171,SNR=6.8						
Q55A	Buckhannon	59.11	352	P	P	11 42 14.5	-0.1
	baz=170						
R50A	Paris	59.14	348	IAmb	IAmb	11 42 15.9	
	comp=Z,32nm,1.3s						
R50A	Paris	59.14	348	P	P	11 42 14.4	-0.3
	baz=165						
Q53A	Leroy	59.19	350	P	P	11 42 15.4	+0.3
	baz=168						
Q54A	Coxs Mills	59.21	351	P	P	11 42 15.3	+0.1
	baz=169						
P58A	Pank, Wackersv	59.27	354	P	P	11 42 16.0	+0.4
	baz=173						
P59A	Jarrettsville	59.31	355	P	P	11 42 15.5	-0.4
	baz=174						
R49A	Shelbyville	59.32	347	IAmb	IAmb	11 42 16.2	
	comp=Z,25nm,1.2s						
R49A	Shelbyville	59.32	347	P	P	11 42 15.3	-0.6
	baz=164						
P57A	Homestead Farm	59.34	354	IAmb	IAmb	11 42 18.4	
	comp=Z,38nm,1.3s						
P57A	Homestead Farm	59.34	354	P	P	11 42 16.0	-0.1
	baz=172						
Q52A	Bidwell	59.41	350	P	P	11 42 16.6	0.0
	baz=168						
P56A	Dayton Farm, R	59.45	353	P	P	11 42 16.9	0.0
	baz=171						
P60A	Greenville	59.45	356	P	P	11 42 16.0	-0.8
	baz=175						
WCI	Wyandotte Cave	59.51	346	P	P	11 42 16.6	-0.7
WCI	Wyandotte Cave	59.51	346	P	P	11 42 16.6	-0.7
WCI	Wyandotte Cave	59.51	346	P	P	11 42 16.4	-0.9
	baz=163						
P55A	Reedsville	59.58	352	P	P	11 42 17.7	0.0
	baz=170						
U40A	Yellville	59.60	339	IAmb	IAmb	11 42 33.7	
	comp=Z,12nm,0.8s						
U40A	Yellville	59.60	339	P	P	11 42 17.2	-0.8
	baz=156,SNR=6.2						
Q50A	Georgetown	59.61	348	P	P	11 42 17.1	-0.8
	baz=166						
O61A	Allentown	59.66	357	P	P	11 42 18.4	+0.1
	baz=176						
Q51A	Peebles	59.67	349	P	P	11 42 17.6	-0.7
Q51A	Peebles	59.67	349	P	P	11 42 17.6	-0.7
	baz=166						
MCWV	Mont Chateau	59.73	352	IAmb	IAmb	11 42 22.4	
	comp=Z,14nm,0.9s						
MCWV	Mont Chateau	59.73	352	P	P	11 42 18.7	-0.1
	baz=170						
P54A	Burton	59.76	351	P	P	11 42 18.0	-1.0
	baz=170,SNR=6.9						
P53A	Whipple	59.78	351	IAmb	IAmb	11 42 37.8	
	comp=Z,25nm,0.8s						
P53A	Whipple	59.78	351	P	P	11 42 19.4	+0.2
	baz=168						
O58A	Lewisberry	59.87	355	P	P	11 42 19.3	-0.4
	baz=173						
X34A	Smith Ranch, M	59.88	334	IAmb	IAmb	11 42 22.7	
	comp=Z,32nm,1.1s						
HHAR	Hobbs	59.90	338	IAmb	IAmb	11 42 21.8	
	comp=Z,45nm,1.5s						
Q49A	Aurora	59.95	347	P	P	11 42 19.9	-0.4
	baz=165						
O57A	Amberson	60.02	354	P	P	11 42 19.8	-1.0
	baz=173						
P52A	Corning	60.05	350	P	P	11 42 20.4	-0.6
	baz=168						
Q48A	North Vernon	60.05	347	P	P	11 42 20.0	-1.0
	baz=164						
P51A	Williamsport	60.06	349	IAmb	IAmb	11 42 21.4	
	comp=Z,19nm,1.0s						
P51A	Williamsport	60.06	349	P	P	11 42 19.9	-1.2
	baz=167						
MGMO	Mountain Grove	60.14	340	IAmb	IAmb	11 42 23.2	
	comp=Z,29nm,1.1s						
O56A	Blue Knob Stat	60.17	353	P	P	11 42 22.1	+0.2
	baz=172,SNR=6.4						
O55A	Ligonier	60.20	352	P	P	11 42 22.6	+0.6
	baz=171,SNR=7.3						
TUL1	Leonard	60.24	337	IAmb	IAmb	11 42 23.6	
	comp=Z,26nm,0.9s						
TUL1	Leonard	60.24	337	P	P	11 42 22.1	-0.2
	baz=153,SNR=6.0						
P50A	Jamestown	60.32	348	P	P	11 42 22.5	-0.3
	baz=166						
P49A	Miami Univ. Ec	60.42	348	P	P	11 42 22.9	-0.6
	baz=165						
SSPA	Standing Stone	60.47	354	P	P	11 42 23.7	-0.1
SSPA	Standing Stone	60.47	354	P	P	11 42 24.3	+0.5
	baz=172						
O52A	Adamsville	60.47	350	P	P	11 42 23.8	0.0
	baz=168						
N60A	Cedar Hill Far	60.47	356	P	P	11 42 24.1	+0.3
	baz=175						
P48A	Milroy	60.50	347	P	P	11 42 23.3	-0.8
	baz=164						
O53A	New Philadelph	60.50	351	P	P	11 42 24.4	+0.3
	baz=169						
PAL	Palisades	60.54	357	P	P	11 42 24.8	+0.6
	baz=177						
N57A	Milroy	60.55	354	P	P	11 42 24.5	+0.2
	baz=173						
N58A	Sunbury	60.56	355	P	P	11 42 23.8	-0.6
N58A	Sunbury	60.56	355	P	P	11 42 24.6	+0.2
	baz=174						
O51A	Pataskala	60.63	350	P	P	11 42 24.4	-0.5
	baz=167						
CCM	Cathedral Cave	60.66	342	P	P	11 42 24.6	-0.5
CCM	Cathedral Cave	60.66	342	P	P	11 42 24.6	-0.5
CCM	Cathedral Cave	60.66	342	P	P	11 42 25.3	+0.1
	baz=158						
N55A	Marion Center	60.73	353	P	P	11 42 26.4	+0.8
	baz=171,SNR=16						
ACSO	Alum Creek Sta	60.77	349	P	P	11 42 25.6	-0.3
ACSO	Alum Creek Sta	60.77	349	P	P	11 42 25.0	-0.9
	baz=167,SNR=6.3						
N56A	West Decatur	60.79	353	P	P	11 42 26.2	+0.2
	baz=172						
O50A	Cable	60.80	349	P	P	11 42 26.1	0.0
	baz=166						
M62A	Hamden	60.94	358	P	P	11 42 27.0	0.0
	baz=178						
S39A	Bolivar	60.97	340	IAmb	IAmb	11 42 29.5	
	comp=Z,33nm,1.1s						
O49A	Covington	60.98	348	P	P	11 42 26.9	-0.4
	baz=166						
MNTX	Cornudas Mount	60.99	326	P	P	11 42 26.7	-0.9

	baz=142,SNR=8.9						
N53A	Lisbon	60.99	351	IAmb	IAmb	11 42 28.6	
	comp=Z,18nm,1.0s						
N53A	Lisbon	60.99	351	P	P	11 42 27.3	-0.1
	baz=169						
M64A	Tiverton	61.02	360	P	P	11 42 27.4	-0.1
	baz=180						
N54A	Moraine State	61.03	352	P	P	11 42 27.9	+0.2
	baz=170,SNR=6.5						
M58A	Price's Panora	61.07	355	P	P	11 42 28.4	+0.5
	baz=174,SNR=6.1						
M57A	Sunshine Farm,	61.09	355	IAmb	IAmb	11 42 30.0	
	comp=Z,31nm,1.2s						
M57A	Sunshine Farm,	61.09	355	P	P	11 42 28.4	+0.4
	baz=173						
N52A	McGinn's Farm,	61.13	351	P	P	11 42 28.3	0.0
	baz=168						
M59A	Waymart	61.16	356	P	P	11 42 28.8	+0.3
	baz=175,SNR=6.2						
R40A	Maddies Statio	61.19	341	IAmb	IAmb	11 42 30.7	
	comp=Z,32nm,1.2s						
O48A	Farmland	61.21	347	P	P	11 42 28.5	-0.4
	baz=165						
N50A	Nevada	61.33	349	P	P	11 42 29.2	-0.5
	baz=167						
L63A	North Scituate	61.33	359	P	P	11 42 29.4	-0.2
	baz=179						
M56A	Emporium	61.34	354	P	P	11 42 30.0	+0.2
	baz=172,SNR=6.7						
N51A	Ashland	61.34	350	P	P	11 42 29.3	-0.5
	baz=168						
M55A	Ridgway	61.38	353	P	P	11 42 30.3	+0.2
	baz=172,SNR=7.9						
T35A	Sooner Cattle	61.40	337	IAmb	IAmb	11 42 32.2	
	comp=Z,26nm,1.1s						
MSTX	Muleshoe	61.53	330	IAmb	IAmb	11 42 33.0	
	comp=Z,23nm,1.1s						
MSTX	Muleshoe	61.53	330	P	P	11 42 30.7	-0.6
	baz=146,SNR=9.6						
M54A	Oil Creek Stat	61.53	352	P	P	11 42 30.7	-0.3
	baz=170,SNR=7.7						
M53A	Wl Miller and	61.59	352	P	P	11 42 31.2	-0.2
	baz=170						
N49A	Columbus Grove	61.66	348	P	P	11 42 30.7	-1.2
	baz=166,SNR=12						
L58A	Harry Jones Me	61.69	356	P	P	11 42 33.1	+1.0
	baz=175,SNR=5.9						
L61A	Hillsdale 1, H	61.71	358	P	P	11 42 32.7	+0.4
	baz=177						
L57A	Andrews Acres	61.72	355	P	P	11 42 32.5	+0.1
	baz=174						
SFIN	Lafayette	61.75	346	IAmb	IAmb	11 42 32.0	
	comp=Z,23nm,1.0s						
SFIN	Lafayette	61.75	346	P	P	11 42 31.3	-1.2
	baz=163						
N48A	Decatur	61.76	348	P	P	11 42 31.5	-1.1
	baz=165						
L59A	Walton	61.78	356	P	P	11 42 32.7	-0.1
	baz=176,SNR=6.3						
M52A	Chesterland	61.79	351	IAmb	IAmb	11 42 33.6	
	comp=Z,24nm,0.9s						
M52A	Chesterland	61.79	351	P	P	11 42 32.3	-0.5
	baz=169						
BINY	Binghamton	61.85	356	P	P	11 42 33.8	+0.6
	baz=174,SNR=5.8						
N47A	Urbana	61.92	347	IAmb	IAmb	11 42 34.9	
	comp=Z,25nm,0.9s						
N47A	Urbana	61.92	347	P	P	11 42 32.8	-0.8
	baz=164						
L56A	Greenwood	61.92	354	IAmb	IAmb	11 42 35.3	
	comp=Z,24nm,0.8s						
L56A	Greenwood	61.92	354	P	P	11 42 33.9	+0.2
	baz=173,SNR=5.2						
M50A	Fremont	61.92	350	IAmb	IAmb	11 42 34.1	
	comp=Z,30nm,1.1s						
M50A	Fremont	61.92	350	P	P	11 42 32.9	-0.8
	baz=167						
L61B	Northampton	61.94	358	P	P	11 42 33.6	-0.1
	baz=178						
HRV	Adam Dziewonsk	61.98	359	P	P	11 42 33.5	-0.5
HRV	Adam Dziewonsk	61.98	359	P	P	11 42 33.5	-0.5
HRV	Adam Dziewonsk	61.98	359	P	P	11 42 34.0	0.0
	baz=179						
L53A	Girard	62.04	352	P	P	11 42 33.8	-0.7
	baz=170,SNR=9.3						
L55A	Hinsdale	62.05	354	P	P	11 42 35.1	+0.6
	baz=172,SNR=8.6						
K62A	Royalston	62.15	359	P	P	11 42 34.5	-0.6
	baz=178						
M49A	Liberty Center	62.16	349	P	P	11 42 34.4	-0.8
	baz=166,SNR=7.4						
K63A	Dunstable	62.16	359	P	P	11 42 35.1	-0.1
	baz=179						
ERPA	Erie	62.17	352	P	P	11 42 35.2	-0.1
	baz=170,SNR=5.9						
L54A	Sinclairville	62.20	353	P	P	11 42 35.8	+0.3
	baz=171,SNR=13						
TRY	Troy	62.25	358	IAmb	IAmb	11 42 48.4	
	comp=Z,34nm,1.1s						
VNA3	Neumayer Olymp	62.26	161	P	P	11 42 36.9	+1.3
K59A	Cooperstown	62.35	357	P	P	11 42 37.1	+0.5
	baz=176,SNR=10						
M47A	Cromwell	62.37	347	P	P	11 42 36.6	0.0
	baz=164						
K58A	Earlville	62.39	356	P	P	11 42 37.4	+0.6
	baz=175,SNR=5.7						
K57A	Scipio Center	62.42	355	P	P	11 42 37.4	+0.4
	baz=174						
HDIL	Hopedale	62.45	344	P	P	11 42 37.1	-0.1
	baz=160						
K56A	Middlesex	62.46	355	P	P	11 42 37.2	-0.1
	baz=173						
K54A	Basiliko Farm,	62.50	353	P	P	11 42 37.8	+0.3
	baz=172,SNR=9.7						
L50A	Kingsville	62.51	350	P	P	11 42 37.0	-0.5
	baz=167						
K55A	Perry	62.55	354	P	P	11 42 38.2	+0.3
	baz=172,SNR=5.9						
L48A	N Adams	62.70	349	P	P	11 42 37.9	-0.9
	baz=166						
L49A	Milan	62.73	349	P	P	11 42 38.2	-0.9
	baz=166						
J63A	Strafford	62.74	360	P	P	11 42 40.4	+1.3
	baz=180						
J60A	Lant Hill Farm	62.76	358	P	P	11 42 39.7	+0.6
	baz=177						
J61A	Chester	62.83	359	P	P	11 42 41.2	+1.5
	baz=178						
VNA2	Neumayer--Watz	62.85	161	P	P	11 42 40.8	+1.2
319A	Douglas	62.86	323	IAmb	IAmb	11 42 42.8	
	comp=Z,13nm,0.9s						
ACCN	Adirondack Com	62.91	358	IAmb	IAmb	11 42 42.3	
	comp=Z,40nm,1.3s						
121A	Cookes Peak, D	62.91	325	P	P	11 42 41.1	+0.4
121A	Cookes Peak, D	62.91	325	P	P	11 42 41.8	+1.1
	baz=141						
K52A	Tillsonburg	62.92	352	P	P	11 42 40.6	+0.4
	baz=170						
J58A	Remsen	62.96	356	P	P	11 42 41.2	+0.6
	baz=175						
J56A	Wolcott	62.99	355	P	P	11 42 41.5	+0.8
	baz=174						
J59A	Piesco	63.02	357	P	P	11 42 41.5	+0.5
	baz=176,SNR=7.9						
J57A	Williamstown	63.06	356	P	P	11 42 41.5	+0.3
	baz=174,SNR=5.6						
J55A	Hilton	63.06	354	P	P	11 42 41.5	+0.3
	baz=173						
J54A	Appleton	63.15	354	P	P	11 42 42.2	+0.4
	baz=172						
K50A	Casco	63.19	350	P	P	11 42 42.1	0.0
	baz=168						
I58A	Old Forge	63.27	357	P	P	11 42 43.0	+0.4
	baz=176						
I59A	Olmsteadville	63.33	358	P	P	11 42 43.6	+0.7
	baz=177						
J52A	Paris	63.34	352	P	P	11 42 43.0	-0.1
	baz=170,SNR=11						
I62A	Tamworth	63.34	360	P	P	11 42 43.6	+0.6
	baz=179						
I60A	Shoreham	63.35	358	P	P	11 42 43.6	+0.5
	baz=177						
KSU1	Kansas State U	63.37	338	P	P	11 42 43.6	+0.3
	baz=153						
I64A	Boothbay	63.39	1	P	P	11 42 43.4	0.0
	baz=181						
I61A	Oroboro, Fairl	63.41	359	P	P	11 42 44.5	+1.0
	baz=178,SNR=6.7						
K48A	Perry	63.47	349	P	P	11 42 43.3	-0.7
	baz=166						
K47A	Vermontville	63.51	348	P	P	11 42 43.5	-0.7
	baz=165						
NCB	Newcomb	63.51	357	IAmb	IAmb	11 43 02.6	
	comp=Z,11nm,0.8s						
I63A	Otisfield	63.52	0	P	P	11 42 44.7	+0.5
	baz=180						
R32A	Long Quarter,	63.55	336	IAmb	IAmb	11 42 47.7	
	comp=Z,31nm,1.2s						
I57A	Carthage	63.56	356	P	P	11 42 44.5	0.0
	baz=175						
L44A	Lake County Fo	63.65	346	P	P	11 42 44.9	-0.2
	baz=162						
LBNH	Lisbon	63.71	359	P	P	11 42 46.2	+0.7
	baz=179						
J49A	Marlette	63.84	350	P	P	11 42 45.7	-0.7
	baz=167						
J48A	Bridge Port	63.89	349	P	P	11 42 46.4	-0.3
	baz=166						
H58A	Gabriels	63.96	357	P	P	11 42 47.5	+0.3
	baz=176,SNR=6.6						
I51A	Listowel	63.96	352	P	P	11 42 46.6	-0.5
	baz=169,SNR=9.1						
I55A	Frankford	63.99	354	P	P	11 42 47.1	-0.2
	baz=173,SNR=5.5						
H61A	Lyndonville	64.01	359	P	P	11 42 48.0	+0.5
	baz=179						
J47A	Sunmer	64.02	349	P	P	11 42 47.0	-0.6
	baz=165						
H62A	Milan	64.04	360	P	P	11 42 48.1	+0.4
	baz=180						
H60A	Morristown	64.05	358	P	P	11 42 48.1	+0.3
	baz=178						
H57A	Richville	64.07	356	P	P	11 42 47.9	+0.1
	baz=175,SNR=9.2						
ANMO	Albuquerque	64.11	328	P	P	11 42 49.2	+0.6
	comp=Z,1.3nm,0.8s,baz=137,slow=8.2,SNR=5.2						
ANMO	Albuquerque	64.11	328	*e*P	P	11 42 49.5	+0.9
ANMO	Albuquerque	64.11	328	P	P	11 42 48.8	+0.3
ANMO	Albuquerque	64.11	328	P	P	11 42 48.3	-0.3
	baz=142						
H64A	Troy	64.12	1	P	P	11 42 48.8	+0.6
	baz=182						
H63A	New Sharon	64.13	1	P	P	11 42 49.1	+0.8
	baz=181						
H59A	Cadyville	64.17	358	P	P	11 42 48.9	+0.4
	baz=177,SNR=8.3						
LONY	Lake Ozonia	64.18	357	IAmb	IAmb	11 42 50.3	
	comp=Z,25nm,1.0s						
LONY	Lake Ozonia	64.18	357	P	P	11 42 48.9	+0.3
	baz=176						
H56A	Elgin	64.25	356	P	P	11 42 49.3	+0.2
	baz=174,SNR=5.3						
H55A	Tweed	64.28	355	P	P	11 42 49.3	+0.1
	baz=173						
DELO	Deloro Mine	64.29	355	IAmb	IAmb	11 42 50.5	
	comp=Z,26nm,1.1s						
H66A	Whiting	64.33	3	P	P	11 42 50.1	+0.6
	baz=184						
I49A	Point Hope	64.36	350	P	P	11 42 49.6	-0.2
	baz=168						
H53A	Bobcaygeon	64.43	354	P	P	11 42 50.2	0.0
	baz=172,SNR=8.4						
SNAA	Sanae	64.47	161	P	P	11 42 50.9	+0.6
SNAA	Sanae	64.47	161	P	P	11 42 50.4	+0.1
	comp=Z,6.1nm,0.7s,baz=271,slow=7.9,SNR=11						
SNAA	Sanae	64.47	161	*i* P	P	11 42 50.6	+0.3
G60A	Masonville	64.58	359	P	P	11 42 52.0	+0.8
	baz=178						
G59A	Clarenceville	64.58	358	P	P	11 42 51.4	+0.3
	baz=178						
G63A	Kingsbury	64.59	1	P	P	11 42 51.7	+0.4
	baz=181						
N35A	Tabor	64.60	339	P	P	11 42 50.6	-0.9
H52A	Wyevale	64.64	353	P	P	11 42 51.7	+0.1
	baz=171						
G57A	Newington	64.68	357	P	P	11 42 52.2	+0.4
	baz=176,SNR=6.9						
G58A	Ormstown	64.68	357	P	P	11 42 51.9	0.0
	baz=177						
G62A	West of Eustis	64.68	0	P	P	11 42 52.2	+0.3
G62A	West of Eustis	64.68	0	P	P	11 42 52.3	+0.4
	baz=180,SNR=12						
SADO	Sadowa	64.69	353	P	P	11 42 51.2	-0.7
I47A	Gladwin	64.72	349	P	P	11 42 51.9	-0.2
	baz=166						
G65A	Princeton	64.73	3	P	P	11 42 52.3	+0.2
	baz=183						
I48A	Sherman Twp	64.74	350	P	P	11 42 51.1	-1.1
	baz=167,SNR=8.3						
PKME	Peaks-Kenny Pk	64.74	1	P	P	11 42 52.6	+0.3
PKME	Peaks-Kenny Pk	64.74	1	P	P	11 42 52.5	+0.3
	baz=182						
G64A	Maxfield	64.75	2	P	P	11 42 52.3	0.0
	baz=182						
G61A	St-Isidore-de-	64.75	359	P	P	11 42 53.3	+1.0
	baz=179,SNR=7.4						
SCIA	State Center	64.79	342	IAmb	IAmb	11 42 54.0	
	comp=Z,34nm,1.1s						
SCIA	State Center	64.79	342	P	P	11 42 52.1	-0.5
	baz=157						
I46A	Reed City	64.82	348	P	P	11 42 52.2	-0.6
	baz=165						
T25A	Trinidad	64.89	331	P	P	11 42 54.9	+1.2
	baz=145						
JFWS	Jewell Farm	64.91	344	P	P	11 42 53.3	-0.1
	baz=160						
G55A	Calabogie	64.94	355	P	P	11 42 53.5	0.0
	baz=174						
G53A	Haliburton	64.98	354	P	P	11 42 53.4	-0.4
	baz=172,SNR=14						
H48A	Harrisville	65.18	350	P	P	11 42 54.6	-0.5
	baz=167,SNR=5.6						
G54A	Lake Saint Pet	65.20	354	P	P	11 42 55.0	-0.3
	baz=172,SNR=6.9						
214A	Organ Pipe Nat	65.32	321	IAmb	IAmb	11 43 00.6	
	comp=Z,13nm,1.1s						
214A	Organ Pipe Nat	65.32	321	P	P	11 42 57.8	+1.5
	baz=136,SNR=8.6						
K38A	Parkersburg	65.34	342	IAmb	IAmb	11 42 56.8	
	comp=Z,24nm,1.1s						
F64A	Sherman	65.37	2	P	P	11 42 56.7	+0.5
	baz=182						
F61A	St Evariste	65.44	360	P	P	11 42 57.2	+0.4
	baz=180						
F60A	Warwick	65.44	359	P	P	11 42 56.9	+0.1
	baz=179,SNR=5.2						
I42A	Draeger Farm,	65.50	346	IAmb	IAmb	11 42 58.0	
	comp=Z,34nm,1.3s						
KSCO	Kaye Shedlock'	65.64	333	IAmb	IAmb	11 43 01.6	
	comp=Z,25nm,0.9s						
KSCO	Kaye Shedlock'	65.64	333	P	P	11 42 59.3	+0.8
	baz=147						
F52A	Sundridge	65.72	353	P	P	11 42 58.5	-0.1
	baz=171,SNR=9.2						
G47A	Hillman	65.73	350	P	P	11 42 58.3	-0.3
	baz=167						
ALGO	Algonquin Park	65.75	354	P	P	11 42 59.6	+0.9
	baz=172,SNR=5.9						
E60A	Ste Agathe de	65.84	360	P	P	11 42 60.0	+0.7
	baz=179						
E58A	La Victoria	65.88	358	P	P	11 43 00.1	+0.6
	baz=178,SNR=7.3						
SDCO	Great Sand Dun	65.88	330	IAmb	IAmb	11 43 02.5	
	comp=Z,12nm,1.1s						
SDCO	Great Sand Dun	65.88	330	P	P	11 43 01.2	+1.0
	baz=144,SNR=14						
E61A	Lac Etchemin	65.90	0	P	P	11 43 00.4	+0.6
	baz=180						
F51A	Arnstein	65.92	353	P	P	11 42 59.8	0.0
	baz=171,SNR=5.2						
E63A	Oxbow	65.92	2	P	P	11 43 00.3	+0.5
	baz=182						
W18A	Petrified Fore	65.94	326	P	P	11 43 01.7	+1.3
	baz=140						
E64A	Bridgewater	65.94	2	P	P	11 42 59.7	-0.2
	baz=183						
E57A	Chemin Saint G	65.95	357	P	P	11 42 59.8	-0.3
	baz=177						
BGNE	Belgrade	65.95	338	P	P	11 43 00.1	-0.1
	baz=152,SNR=6.2						
F49A	Sandfield	66.03	351	P	P	11 43 00.0	-0.5
	baz=168						
G46A	Petoskey	66.04	349	P	P	11 43 00.4	-0.2
	baz=166						
E56A	St. Veronique	66.12	357	P	P	11 43 01.2	+0.1
	baz=176,SNR=8.8						
E52A	Mattawa	66.14	354	P	P	11 43 00.7	-0.5
	baz=172,SNR=6.0						
E53A	Dumoine, Ponti	66.14	355	P	P	11 43 01.2	0.0
	baz=173						
E54A	Lac Daplat, Po	66.15	355	P	P	11 43 01.3	0.0
	baz=173,SNR=5.5						
F48A	Evansville	66.17	351	P	P	11 43 01.3	-0.2
	baz=168						
D60A	Saint Jean D'O	66.38	360	P	P	11 43 03.2	+0.5
	baz=180						
E51A	G1948 Merrick	66.47	353	P	P	11 43 03.4	+0.1
	baz=171,SNR=5.7						
D59A	Saint-Raymond	66.48	359	P	P	11 43 02.7	-0.7
	baz=179						
F45A	CMU Biological	66.51	349	P	P	11 43 03.0	-0.7
	baz=165						
D57A	Chemin Vers le	66.54	358	P	P	11 43 03.7	-0.1
	baz=177,SNR=7.3						
D63A	Stockholm	66.55	2	P	P	11 43 03.6	-0.2
	baz=183						
D62A	Allapoint, All	66.57	1	P	P	11 43 04.1	+0.1
	baz=182						
D58A	Chemin du LacG	66.59	358	P	P	11 43 04.1	0.0
	baz=178,SNR=10						
D56A	ZEC Mazanza, M	66.61	357	P	P	11 43 04.5	+0.2
	baz=176,SNR=5.1						
D55A	Sainte-Anne-du	66.62	357	P	P	11 43 04.3	0.0
	baz=175,SNR=7.3						
D61A	St Aubert, Com	66.67	0	P	P	11 43 05.3	+0.7
	baz=181						
Q24A	Divide	66.71	331	P	P	11 43 06.2	+0.7
	baz=145,SNR=6.1						
E48A	Lockeyer	66.75	351	P	P	11 43 05.3	+0.1
	baz=168						
I37A	Lemond, Waseca	66.78	342	IAmb	IAmb	11 43 06.3	
	comp=Z,27nm,1.1s						
D54A	Lac Fusel, La	66.83	356	P	P	11 43 05.5	-0.2
	baz=174						
D53A	Lac Vacive, Po	66.84	355	IAmb	IAmb	11 43 06.8	
	comp=Z,26nm,1.1s						
D53A	Lac Vacive, Po	66.84	355	P	P	11 43 05.2	-0.5
	baz=173,SNR=6.9						
LATQ	La Tuque	66.87	359	P	P	11 43 05.4	-0.6
	baz=178,SNR=6.7						
BATG	Bathurst New B	66.88	4	IAmb	IAmb	11 43 07.6	
	comp=Z,30nm,1.1s						
E47A	Iron Bridge	66.88	351	P	P	11 43 05.6	-0.4
	baz=167						
MVCO	Mesa Verde	66.91	328	P	P	11 43 06.8	+0.2
	baz=141						
E46A	Sault Ste Mari	66.96	350	IAmb	IAmb	11 43 06.7	
	comp=Z,15nm,0.9s						
D51A	Lot 18 Range I	67.00	354	P	P	11 43 06.4	-0.4
	baz=171						
OGNE	Ogallala	67.03	335	P	P	11 43 07.0	-0.2
	baz=148						
WUAZ	Wupatki	67.11	325	P	P	11 43 08.9	+0.9
	baz=138,SNR=5.9						
D50A	G1974 Best Tow	67.13	353	P	P	11 43 07.5	-0.1
	baz=171,SNR=9.6						
D48A	Paudash Townsh	67.38	352	P	P	11 43 09.2	0.0
	baz=169						
D46A	Sault St. Mari	67.43	350	P	P	11 43 09.1	-0.3
	baz=167						
D47A	Chapleau	67.44	351	P	P	11 43 09.5	-0.1
	baz=168						
E43A	Lone Tree Farm	67.46	348	IAmb	IAmb	11 43 10.0	
	comp=Z,10nm,0.8s						
ECSD	EROS Data Cent	67.50	340	IAmb	IAmb	11 43 12.4	
	comp=Z,39nm,1.4s						
ECSD	EROS Data Cent	67.50	340	P	P	11 43 10.1	+0.1
	baz=154,SNR=10						
ISCO	Idaho Springs	67.60	332	P	P	11 43 11.8	+0.7
ISCO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ISCO	Idaho Springs	67.60	332	P	P	11 43 11.9	+0.7
	baz=145,SNR=6.4						
Y12C	Blythe	67.61	321	P	P	11 43 11.4	+0.5
	baz=135						
SMCO	Snowmass	67.72	330	P	P	11 43 11.6	-0.4
SPMN	Marine on St.	67.73	343	IAmb	IAmb	11 43 11.9	
	comp=Z,19nm,1.1s						
SPMN	Marine on St.	67.73	343	P	P	11 43 11.6	+0.2
	baz=158						
PDMCI	Parker Dam,Lak	67.78	322	P	P	11 43 13.0	+1.0
	baz=136						
IKP	In-Ko-Pah, Jac	67.79	320	P	P	11 43 13.3	+1.1
	baz=134						
SWSC	Sam W. Stewart	67.81	320	P	P	11 43 11.3	-0.9
	baz=134						
VLDQ	Val d'Or	67.84	355	IAmb	IAmb	11 43 14.1	
	comp=Z,20nm,1.1s						
BC3	Big Chuckawall	68.09	321	P	P	11 43 15.4	+1.3
	baz=135,SNR=7.4						
MONP2	Monument Peak	68.15	320	P	P	11 43 16.2	+1.6
	baz=134,SNR=7.1						
BAR	Barrett	68.16	319	P	P	11 43 15.2	+0.8
PV21	Cone Mtn., Par	68.19	329	P	P	11 43 14.9	+0.1
IRM	Iron Mountain	68.26	321	P	P	11 43 16.8	+1.7
	baz=135,SNR=8.6						
D41A	Chassel	68.43	347	IAmb	IAmb	11 43 16.7	
	comp=Z,19nm,0.9s						
N23A	Red Feather La	68.64	332	P	P	11 43 18.3	+0.7
	baz=144						
BELC	Belle Mtn. Jos	68.66	321	P	P	11 43 18.7	+1.0
	baz=134						
XPFO	Pion Flat	68.66	320	P	P	11 43 18.0	+0.3
PFO	Pinyon Flats O	68.66	320	*ce*P	P	11 43 19.4	+1.7
PFO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PFO	Pinyon Flats O	68.66	320	P	P	11 43 18.3	+0.6
PFO	Pinyon Flats O	68.66	320	P	P	11 43 20.6	+2.9
	baz=134,SNR=5.2						
LSQQ	Lebel-sur-Quev	68.75	356	P	P	11 43 17.7	0.0
	baz=174						
SUSD	Miller	68.90	339	IAmb	IAmb	11 43 21.0	
	comp=Z,22nm,1.0s						
SUSD	Miller	68.90	339	P	P	11 43 19.0	+0.1
	baz=152						
GMRC	Granite Mounta	69.00	322	P	P	11 43 21.6	+1.8
	baz=135,SNR=11						
O20A	White River Ci	69.07	330	IAmb	IAmb	11 43 22.6	
	comp=Z,17nm,1.4s						
O20A	White River Ci	69.07	330	P	P	11 43 21.5	+1.3
	baz=142						
MURC	Murrieta	69.10	320	P	P	11 43 21.4	+1.1
	baz=133						
BBRC	Big Bear Solar	69.39	320	P	P	11 43 23.6	+1.3
	baz=134						
HEC	Hector,Ludlow	69.43	321	P	P	11 43 24.2	+1.8
	baz=134,SNR=11						
MATQ	Matagami	69.49	355	P	P	11 43 22.0	-0.3
	baz=173,SNR=7.9						
TUQ	Turquoise Moun	69.61	322	P	P	11 43 25.1	+1.5
	baz=135						
LIC	Lamto	69.63	75	*e*P	P	11 43 22.6	-1.4
	comp=Z,31nm,1.0s						
CIS	Catalina Islan	69.72	319	P	P	11 43 25.2	+1.0
	baz=132						
DRLN	Deer Lake	69.73	9	P	P	11 43 23.6	-0.2
TIC	Toumodi	69.80	75	*e*P	P	11 43 23.5	-1.6
	comp=Z,26nm,0.9s						
BFSC	Mount Baldy Ra	69.82	320	P	P	11 43 25.8	+1.0
	baz=133						
RWWY	Rawlins	69.84	332	IAmb	IAmb	11 43 27.1	
	comp=Z,22nm,1.4s						
EYMN	Ely	69.93	345	P	P	11 43 24.7	-0.3
EYMN	Ely	69.93	345	P	P	11 43 25.6	+0.6
	baz=159						
KIC	Kosan Boka	69.94	75	*e*P	P	11 43 24.7	-1.2
	comp=Z,37nm,0.8s						
DBIC	Dimbokro	69.96	75	P	P	11 43 24.5	-1.5
	comp=Z,16nm,0.8s,baz=213,slow=5.8,SNR=13						
DBIC	Dimbokro	69.96	75	P	P	11 43 24.8	-1.2
DBIC	Dimbokro	69.96	75	P	P	11 43 24.8	-1.2
GSC	Goldstone, Bar	70.04	321	IAmb	IAmb	11 43 30.6	
	comp=Z,16nm,1.3s						
GSC	Goldstone, Bar	70.04	321	P	P	11 43 27.8	+1.6
	baz=134,SNR=7.1						
MWC	Mount Wilson	70.05	320	P	P	11 43 26.3	-0.1
MWC	Mount Wilson	70.05	320	P	P	11 43 26.2	-0.1
PASC	Pasadena Art C	70.09	320	P	P	11 43 26.1	-0.3
K22A	Casper	70.31	333	IAmb	IAmb	11 43 29.7	
	comp=Z,11nm,0.9s						
K22A	Casper	70.31	333	P	P	11 43 28.3	+0.5
	baz=144						
QSPA	South Pole Qui	70.40	180	P	P	11 43 28.8	+0.7
	comp=Z,7.4nm,0.6s,baz=148,slow=7.2,SNR=33						

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QSPA  South Pole Qui   70.40 180    P        P          11 43 28.2 +0.2
EDW2  Edwards Air Fo   70.46 320    P        P          11 43 30.8 +2.1
      baz=133,SNR=6.1
RSSD  Black Hills      70.50 335    P        P          11 43 29.2 +0.3
RSSD  Black Hills      70.50 335    P        P          11 43 29.2 +0.3
RSSD  Black Hills      70.50 335    P        P          11 43 29.6 +0.7
      baz=147
LRMC  Laurel Mtn Rad   70.68 321    P        P          11 43 31.8 +1.7
      baz=133
TPNV  Topopah Spring   70.86 323    P        P          11 43 33.1 +1.8
      baz=135,SNR=10
SCZ2  Santa Cruz Isl   70.87 319    P        P          11 43 32.9 +1.7
      baz=132
FURC  Furnace Creek,   70.88 322    P        P          11 43 32.8 +1.7
      baz=134,SNR=10
MPMC  Manual Prospec   70.96 321    P        P          11 43 33.3 +1.4
      baz=134,SNR=7.1
ISA   Isabella, Lake   71.28 321    IAmb     IAmb       11 43 38.1
      comp=Z,12nm,0.9s
ISA   Isabella, Lake   71.28 321    P        P          11 43 35.7 +2.1
      baz=133,SNR=9.5
DUG   Dugway, Tooele   71.36 327    P        P          11 43 36.2 +2.0
DUG                                 pmax     pmax
      comp=Z,21nm,1.3s
DUG   Dugway, Tooele   71.36 327    IAmb     IAmb       11 43 38.4
      comp=Z,16nm,1.1s
DUG   Dugway, Tooele   71.36 327    P        P          11 43 35.9 +1.7
      baz=138,SNR=13
AGMN  Agassiz Nation   71.39 343    IAmb     IAmb       11 43 36.5
      comp=Z,20nm,1.2s
AGMN  Agassiz Nation   71.39 343    P        P          11 43 34.5 +0.6
      baz=155
R11A  Troy Canyon, C   71.48 324    P        P          11 43 36.7 +1.8
      baz=136,SNR=8.3
GRAC  Grapevine Rang   71.54 322    P        P          11 43 36.3 +1.2
      baz=134
CWC   Cottonwood Cre   71.57 321    P        P          11 43 37.3 +1.8
      baz=133
PKM   Mcpherson Peak   71.57 319    P        P          11 43 37.5 +1.9
      baz=132
BW06  Boulder Array    71.75 331    P        P          11 43 37.2 +0.6
      baz=142
PD31  Pinedale Array   71.75 331    P        P          11 43 36.6 +0.1
PDAR  Pinedale Array   71.75 331    P        P          11 43 37.3 +0.7
      comp=Z,2.1nm,0.7s,baz=132,slow=6.0,SNR=7.8
PDAR  Pinedale Array   71.75 331    P        P          11 43 36.5 -0.1
VES   Vestal, Richgr   71.76 320    P        P          11 43 38.0 +1.5
      baz=132,SNR=7.5
SMMC  Simmler          71.97 319    P        P          11 43 39.4 +1.6
      baz=132
MDND  Maddock          72.11 340    P        P          11 43 39.8 +1.4
      baz=152
AHID  Auburn Hatcher   72.47 330    IAmb     IAmb       11 43 42.8
      comp=Z,15nm,0.9s
REDW  Red Top Meadow   72.81 331    IAmb     IAmb       11 43 59.1
      comp=Z,23nm,1.4s
NVAR  Mina Array Bea   73.06 323    P        P          11 43 45.8 +1.3
      comp=Z,3.1nm,0.8s,baz=151,slow=6.4,SNR=13
NVAR  Mina Array Bea   73.06 323    P        P          11 43 45.4 +1.0
ULM   Lac du Bonnet    73.17 343    P        P          11 43 43.9 -0.6
      comp=Z,7.0nm,0.9s,baz=163,slow=6.2,SNR=6.3
ULM   Lac du Bonnet    73.17 343  i P        P          11 43 43.4 -1.1
FLWY  Flagg Ranch      73.30 331    IAmb     IAmb       11 43 48.5
      comp=Z,24nm,0.9s
RLMT  Red Lodge        73.48 333    IAmb     IAmb       11 43 49.1
      comp=Z,38nm,1.5s
RLMT  Red Lodge        73.48 333    P        P          11 43 47.7 +0.9
      baz=142,SNR=9.4
H17A  Grant Village    73.49 331    P        P          11 43 48.7 +1.8
      baz=141
LAO   LASA Array       73.49 335    IAmb     IAmb       11 43 49.3
      comp=Z,41nm,1.4s
LAO   LASA Array       73.49 335    P        P          11 43 47.3 +0.7
      baz=145,SNR=6.3
YPP   Pitchstone Pla   73.49 331    P        P          11 43 47.3 +0.3
DGMT  Dagmar           74.21 338    P        P          11 43 51.9 +1.2
      baz=148
SCHQ  Schefferville    74.39   2    P        P          11 43 50.9 -0.7
      comp=Z,5.8nm,0.8s,baz=210,slow=4.8,SNR=7.2
SCHQ  Schefferville    74.39   2    P        P          11 43 51.5 -0.1
RUBR  Rubicon Trail    74.55 322    P        P          11 43 53.8 +0.7
ORV   Oroville         75.66 322    IAmb     IAmb       11 44 03.8
      comp=Z,28nm,1.2s
EGMT  Eagleton         75.98 334    IAmb     IAmb       11 44 02.9
      comp=Z,21nm,1.0s
EGMT  Eagleton         75.98 334    P        P          11 44 01.5 +0.4
      baz=142,SNR=9.7
MOD   Modoc Plateau    76.55 324    IAmb     IAmb       11 44 20.6
      comp=Z,18nm,1.3s
O02D  Mt. Diablo Mer   76.82 322    P        P          11 44 06.6 +0.6
      baz=130
MSO   Missoula         76.87 331    P        P          11 44 07.0 +0.8
      baz=139,SNR=6.0
N02D  Trinity Center   77.28 322    P        P          11 44 09.0 +0.4
      baz=131
M04C  Macdoel          77.32 323    P        P          11 44 09.8 +0.9
      baz=132
M02C  Callahan         77.64 323    P        P          11 44 11.5 +1.0
      baz=131
L04D  Klamath Falls    77.87 324    P        P          11 44 12.8 +0.9
      baz=131
J05D  Fort Rock, OR    77.99 325    P        P          11 44 13.5 +1.0
      baz=132,SNR=6.7
PINE  Pine Mountain    78.17 325    IAmb     IAmb       11 44 16.8
      comp=Z,27nm,1.5s
VNDA  Vanda            78.23 190    P        P          11 44 14.6 +1.4
VNDA                                pmax     pmax
      comp=Z,5.0nm,1.1s
VNDA  Vanda            78.23 190    P        P          11 44 14.6 +1.4
J04D  Umpqua Nationa   78.44 324    P        P          11 44 16.0 +0.9
      baz=132
TOA0  Torodi Ar. Sit   78.46  71    P        P          11 44 14.9 -0.6
TORD  Torodi Ar. Bea   78.46  71    P        P          11 44 14.2 -1.4
      comp=Z,27nm,0.8s,baz=254,slow=5.2,SNR=38
WALA  Waterton Lakes   78.53 333    IAmb     IAmb       11 44 18.1
      comp=Z,31nm,1.4s
L02E  Cave Junction    78.56 323    P        P          11 44 17.3 +1.7
      baz=130
E09A  Wood Farm, Sta   78.62 329    IAmb     IAmb       11 44 19.2
      comp=Z,19nm,1.3s
SYO   Syowa Base       78.72 160⇑eP      P          11 44 15.2 -0.8
SYO   Syowa Base       78.72 160⇑esP     sP         11 44 22.8 -2.8
I05D  Terrebonne, OR   78.75 326    P        P          11 44 18.4 +1.8
      baz=132
FFC   Flin Flon        78.85 342  eP        P          11 44 17.6 +0.8
K02D  Willamette Mer   78.94 323    P        P          11 44 19.1 +1.3
      baz=130
I04A  Tendick Farm,    78.97 325    P        P          11 44 18.8 +1.0
      baz=131
F07A  Phinny Hill Vi   79.08 327    P        P          11 44 18.6 +0.4
G05D  Wamic, OR        79.34 326    P        P          11 44 21.4 +1.6
      baz=132
NEW   Newport          79.39 331    P        P          11 44 20.4 +0.4
      baz=136
F04A  Amboy            80.38 326    IAmb     IAmb       11 44 37.1
      comp=Z,28nm,1.1s
E04D  Cinebar          80.87 327    P        P          11 44 28.7 +0.7
      baz=132
SUR   Sutherland       80.97 121    P        P          11 44 29.8 +0.6
      comp=Z,5.6nm,0.7s,baz=194,slow=4.1,SNR=3.7
SUR   Sutherland       80.97 121    P        P          11 44 29.4 +0.2
B06A  Marblemount      81.64 329    IAmb     IAmb       11 44 43.1
      comp=Z,13nm,0.8s
B05A  Bryant           81.77 328    P        P          11 44 33.0 +0.3
      baz=132,SNR=5.9
D03D  Eldon            81.79 327    P        P          11 44 34.8 +2.0
      baz=131
MDT   Midelt           82.02  51    P        P          11 44 34.9 +0.3
      comp=Z,8.7nm,1.0s,baz=229,slow=4.4,SNR=7.6
TSUM  Tsumeb           82.23 108    P        P          11 44 36.2 +0.2
      comp=Z,10nm,0.8s,baz=225,slow=5.7,SNR=10
TSUM  Tsumeb           82.23 108    P        P          11 44 35.8 -0.3
IVI   Ivigtut          82.73  11    P        P          11 44 37.8 +0.4
LLLB  Lillooet         83.25 330    IAmb     IAmb       11 44 43.4
      comp=Z,19nm,1.2s
PAB   San Pablo        85.55  45    P        P          11 44 52.3 -0.1
PAB   San Pablo        85.55  45    P        P          11 44 52.3 -0.1
TAM   Tamanrasset      85.64  64    P        P          11 44 53.7 +0.4
TAM   Tamanrasset      85.64  64    P        P          11 44 53.7 +0.4
BOSA  Boshof           85.81 119    P        P          11 44 54.0 -0.2
      comp=Z,3.8nm,0.7s,baz=262,slow=4.8,SNR=4.7
BOSA  Boshof           85.81 119    P        P          11 44 53.7 -0.5
MAW   Mawson           86.47 164    P        P          11 44 57.0 +0.6
      comp=Z,8.2nm,0.9s,baz=199,slow=6.4,SNR=6.6
MAW   Mawson           86.47 164    P        P          11 44 57.0 +0.6
LBTB  Lobatse          87.34 115    P        P          11 45 01.6 -0.1
      comp=Z,3.2nm,0.6s,baz=252,slow=5.7,SNR=4.7
LBTB  Lobatse          87.34 115    P        P          11 45 01.4 -0.3
YKA   Yellowknife Ar   88.99 341    P        P          11 45 08.1 -0.3
      comp=Z,48nm,1.3s,baz=136,slow=4.7,SNR=21
MATP  Matopo           91.48 112    P        P          11 45 18.6 -2.6
      comp=Z,3.2nm,0.6s,baz=246,slow=4.0,SNR=4.9
CLL   Collm           101.42  40  ePdif    Pdif       11 46 07.0 +1.7
CLL                               ePP      PP         11 50 14.0 -1.4
CLL   Collm           101.42  40  eP       Pdif       11 46 07.0 +1.7
CLL                               e                   11 50 14.0
BRTR  Keskin Array B  113.27  54    PKiKP    PKiKP      11 50 52.5 +0.4
      comp=Z,0.8nm,0.7s,baz=210,slow=4.3,SNR=4.0
KBZ   Khabaz          120.40  50    PKP      PKiKP      11 51 05.9 +0.4
      comp=Z,4.3nm,1.0s,baz=298,slow=3.4,SNR=5.6
KBZ   Khabaz          120.40  50  i PKIKP    PKiKP      11 51 05.7 +0.2
RAYN  Ar Rayn         121.09  74    PKIKP    PKiKP      11 51 07.7 +0.1
RAYN  Ar Rayn         121.09  74             PKiKP      11 51 07.7 +0.1
H11S2 WAKE ISLAND Hy125.89 279    T        T          14 10 34.7
      baz=100,slow=74,SNR=14
H11S1 WAKE ISLAND Hy125.90 279    T        T          14 10 35.6
      baz=100,slow=74,SNR=17
H11S3 WAKE ISLAND Hy125.91 279    T        T          14 10 36.8
      baz=100,slow=74,SNR=16
H11N3 WAKE ISLAND Hy125.94 280    T        T          14 10 36.5
      baz=100,slow=75,SNR=9.3
H11N2 WAKE ISLAND Hy125.95 280    T        T          14 10 37.6
      baz=100,slow=75,SNR=7.1
H11N1 WAKE ISLAND Hy125.95 280    T        T          14 10 37.5
      baz=100,slow=75,SNR=5.0
ARU   Arti            127.69  33    PKP      PKiKP      11 51 19.4 -0.2
      comp=Z,2.2nm,0.2s,baz=339,slow=10.0,SNR=4.0
ARU   Arti            127.69  33  i PKIKP    PKiKP      11 51 20.8 +1.2
ARU                                                     11 53 19.5
ARU                                                     11 58 30.6
ARU                                 SS       SS         12 10 22.7 -8.0
SEY   Seymchan        127.83 337    PKP      PKiKP      11 51 19.6 -0.1
      comp=Z,4.5nm,0.7s,baz=124,slow=4.6
SEY   Seymchan        127.83 337  i PKIKP    PKiKP      11 51 20.4 +0.7
AKTO  Aktyubinsk      129.50  40    PKP      PKiKP      11 51 23.1 -0.3
      comp=Z,3.0nm,0.9s,baz=227,slow=4.8,SNR=4.2
PETK  Petropavlovsk-  130.14 324    PKP      PKiKP      11 51 24.7  0.0
      comp=Z,5.4nm,1.0s,baz=86,slow=9.8,SNR=2.1
ASAR  Alice Springs   130.56 210    PKP      PKPdf      11 51 25.6  0.0
      comp=Z,2.6nm,0.7s,baz=51,slow=12,SNR=4.3
ASAR  Alice Springs   130.56 210    PKIKP    PKiKP      11 51 26.1 -0.4
ASAR  Alice Springs   130.56 210             PKiKP      11 51 26.1 -0.4
ABKAR Akbulak array   131.05  41             PKiKP      11 51 27.2 +0.7
WRA   Warramunga Arr  133.47 213    PKP      PKPdf      11 51 31.7 +0.5
      comp=Z,1.0nm,0.3s,baz=149,slow=1.7,SNR=2.8
WRA   Warramunga Arr  133.47 213             PKPdf      11 51 31.4 +0.2
BVAR  Borovoye Array  135.34  33    PKP      PKPdf      11 51 33.3 -0.3
      comp=Z,1.2nm,0.7s,baz=298,slow=3.2,SNR=4.0
ZALV  Zalesovo Beam   141.11  23    PKP      PKPdf      11 51 44.6 +0.4
      comp=Z,5.3nm,0.8s,baz=308,slow=3.3,SNR=4.2
AAK   Ala-Archa       142.96  44c iPKIKP    PKiKP      11 51 51.3  0.0
AAK                                 pmax     pmax
      comp=Z,18nm,1.0s
AAK   Ala-Archa       142.96  44             PKPdf      11 51 47.6 -0.5
MK31  Makanchi Array  145.22  33    PKIKP    PKPbc      11 51 51.3 -0.1
MK31  Makanchi Array  145.22  33             PKPbc      11 51 51.3 -0.1
MKAR  Makanchi Array  145.22  33    PKPbc    PKPbc      11 51 51.2 -0.2
      comp=Z,14nm,0.7s,baz=328,slow=3.9,SNR=27
MKAR  Makanchi Array  145.22  33    PKIKP    PKPbc      11 51 51.3 -0.1
NIL   Nilore          145.22  59    PKIKP    PKPbc      11 51 51.7 -0.1
NIL   Nilore          145.22  59             PKPbc      11 51 51.7 -0.1
KSH   Kashi           145.34  48    PKPbc    PKPdf      11 51 52.9 +0.6
KSH                                 pPKP     sPKPdf     11 52 03.9 +1.8
KSH                                 PP       PP         11 55 15.6 +3.7
KSH                                 SKKS                12 02 05.8
KSH                                 AMB      AMB
      comp=Z,190nm,4.0s
KSH                                 LR       LR
      comp=Z,310nm,10.8s
KSH                                 LR       LR
      comp=Z,280nm,12.7s
KSH                                 LR       LR
      comp=Z,540nm,15.2s
KLR   Kul'dur         145.51 334    PKPbc    PKPab      11 51 52.5 +0.1
      comp=Z,13nm,1.1s,baz=24,slow=3.1,SNR=11
MOY   Mondy           147.53  10  ePKP2    PKPbc      11 51 59.0 +0.8
MOY                                 pmax     pmax
      comp=Z,30nm,1.5s
TLY   Talaya          147.87   7c iPKP2     PKiKP      11 52 01.0 +0.1
TLY                                 pmax     pmax
      comp=Z,24nm,1.3s
TLY   Talaya          147.87   7             PKPbc      11 51 58.7 -0.2
MMRI  Maumere         148.99 206             PKPbc      11 52 03.1 +0.1
ZAK   Zakamensk       149.10   7  ePKHKP   PKPpre     11 51 55.8
ZAK                                 pmax     pmax
      comp=Z,9.0nm,1.1s
USA0B Ussuriysk Arra  149.12 327    PKP2     PKiKP      11 52 03.1 -0.5
USA0B Ussuriysk Arra  149.12 327             PKiKP      11 52 03.1 -0.5
USRK  Ussuriysk Ar.   149.12 327    PKPbc    PKiKP      11 52 03.3 -0.4
      comp=Z,10nm,1.0s,baz=41,slow=2.0,SNR=12
USRK  Ussuriysk Ar.   149.12 327             PKPbc      11 52 02.9 +0.5
MJAR  Matsushiro Arr  149.62 309    PKPbc    PKiKP      11 52 04.5 -0.5
      comp=Z,7.9nm,0.8s,baz=126,slow=1.1,SNR=17
MAJO  Matsushiro      149.63 309    PKP2     PKPbc      11 52 04.4 +0.5
MAJO  Matsushiro      149.63 309             PKPbc      11 52 04.4 +0.5
MAT   Matsushiro      149.63 309    PKP      PKiKP      11 52 04.5 -0.5
PALK  Pallekele       149.69 110    PKP2     PKiKP      11 52 05.3 -0.5
PALK  Pallekele       149.69 110             PKiKP      11 52 05.3 -0.5
WMQ   Urumqi          150.03  32  ePKPbc   PKPdf      11 51 59.3 -0.5
WMQ                                 LR       LR
      comp=Z,2µm,24.3s
SIJI  Sorong          150.18 229    PKPbc    PKPbc      11 52 06.3 +0.3
      comp=Z,10nm,0.7s,baz=33,slow=11,SNR=5.4
HYB   Hyderabad       150.87  90  i PKP      PKiKP      11 52 08.0 -0.1
SONM  Songino Array   151.92   4    PKP      PKPdf      11 52 02.3 -0.4
      comp=Z,3.2nm,1.2s,baz=327,slow=2.4,SNR=3.7
SONM                                PKPbc    PKiKP      11 52 09.7 +0.1
      comp=Z,4.4nm,0.8s,baz=312,slow=1.2,SNR=8.6
SONM  Songino Array   151.92   4             PKPdf      11 52 03.8 +1.1
SONM                                         PKiKP      11 52 09.5  0.0
SONM                                         sPKPbc     11 52 19.3 +0.3
KSRS  Korea Array     156.00 321    PKP      PKPdf      11 52 09.0 +0.4
      comp=Z,1.9nm,0.8s,baz=88,slow=1.1,SNR=5.3
KSAR  Wonju Array Be  156.03 321    PKIKP    PKPdf      11 52 09.6 +1.0
KSAR  Wonju Array Be  156.03 321             PKPdf      11 52 09.6 +1.0
HHC   Hu-ho-hao-te    158.90 355  ePKP     PKPdf      11 52 08.1 -4.2
LZH   Lanzhou         163.08  15  ePKP     PKPdf      11 52 16.6 -0.4
LZH                                 pPKP     pPKPdf     11 52 23.8 -0.5
LZH                                 sPKP                11 52 27.3
LZH                                 LR       LR
      comp=Z,280nm,17.8s
LZH                                 LR       LR
      comp=Z,380nm,19.0s
LZH                                 LR       LR
      comp=Z,460nm,20.1s
NJ2   Nanjing         165.02 327  ePKP     PKPdf      11 52 19.3 +0.7
XAN   Xi'an           165.79   1    PKP      PKPdf      11 52 20.3 +1.0
CD2   Chengdu         167.88  23    PKP      PKPdf      11 52 18.3 -2.7
CMAR  Chiang Mai Arr  170.21  96    PKPab    PKPab      11 53 38.3 -0.4
      comp=Z,0.7nm,0.3s,baz=263,slow=5.2,SNR=4.8
CMAR  Chiang Mai Arr  170.21  96    PKP2     PKPab      11 53 38.7  0.0
CMAR  Chiang Mai Arr  170.21  96             PKPab      11 53 38.7  0.0
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IDC ***24*** *11:35:32.1±1.0, 19°.47S×70°.58W, h0km, mb4.2/6, mb1 4.4/7, mb1mx4.0/48, mbtmp4.2/7, Error ellipse: s-maj=43.7km s-min=16.7km az=67.0*

NEIC ***24*** *11:35:35.7±1.5, 19°.56S±0°.02×70°.78W±0°.05, h20km±5km, mb4.7/13, Error ellipse: s-maj=6.5km s-min=3.0km az=102.0*

ISC 24 11:35:38.1±0.6**, 19°.57S**±0°.04×**70°.67W**±0°.07**, h44**km**, n38, σ0ˢ.91**/41**, mb4.5**/11**, 1C-1D, Near coast of northern Chile**

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Code  Station Name       Δ°   AZ°     Phase ID            Time      Res
                                    Op       ISC         h  m  s    ISC
PSGCX Pisagua           0.52  93    Pg       Pn         11 35 47.4 -2.0
PSGCX                               Sg       Sn         11 35 56.5 -0.9
PB11  IPOC Station P    0.98 101             Pn         11 35 55.0 -0.5
PB11                                         Sn         11 36 10.4 +2.1
PB12  IPOC Station P    1.01  19             Pn         11 35 54.5 -1.4
PB12                                         Sn         11 36 08.7 -0.2
PATCX Punta Patache     1.33 159    Pn       Pn         11 35 59.3 -1.1
GO01  Chusmiza          1.40  94    Pn       Pn         11 36 02.2 +0.6
PB16  IPOC Station P    1.65  42    Pn       Pn         11 36 06.1 +0.9
PB01  IPOC Station P    1.84 143    Pn       Pn         11 36 06.4 -0.9
PB07  IPOC Station P    2.27 161    Pn       Pn         11 36 13.0 -0.2
LVC   Limon Verde       3.44 152    Pn       Pn         11 36 30.0 +0.4
      baz=351,slow=14,SNR=0.9
LVC                                 Sn       Sn         11 37 10.6 +1.3
      38nm,0.3s,baz=66,slow=20,SNR=2.1
LVC                                 Lg       Lg         11 37 22.8
      50nm,0.3s,baz=85,slow=16,SNR=2.8
LVC   Limon Verde       3.44 152             Pn         11 36 29.5 -0.1
PB10  IPOC Station P    3.92 178    Pn       Pn         11 36 35.6 -0.2
LPAZ  La Paz            4.07  37    Pn       Pn         11 36 39.9 +1.6
      2.9nm,0.3s,baz=174,slow=16,SNR=0.7
PTGA  Pitinga          21.46  31    P        P          11 40 21.7 -1.3
      15nm,0.3s,baz=209,slow=19,SNR=6.7
PTGA  Pitinga          21.46  31    P        P          11 40 21.4 -1.5
FLOC  Florencia        21.59 346    P        P          11 40 24.6 +0.4
ROSC  El Rosal         24.52 351    P        P          11 40 54.3 +0.2
RUSC  La Rusia         25.42 354    P        P          11 41 02.7 +0.4
SDV   Santo Domingo    28.28   0    P        P          11 41 28.2 +0.5
SDV                                 IAmb     IAmb       11 41 28.6
      comp=Z,24nm,1.2s
TXAR  Lajitas Array    58.11 326    P        P          11 45 27.3 -0.2
      comp=Z,0.5nm,0.7s,baz=140,slow=7.1,SNR=2.5
TXAR  Lajitas Array    58.11 326    P        P          11 45 27.6 +0.2
SNAA  Sanae            64.63 161    P        P          11 46 11.4 +0.4
      comp=Z,3.1nm,1.0s,baz=275,slow=12,SNR=2.6
SNAA  Sanae            64.63 161    P        P          11 46 11.3 +0.4
DBIC  Dimbokro         69.80  75    P        P          11 46 43.6 -0.9
DBIC                                IAmb     IAmb       11 46 46.9
      comp=Z,8.9nm,1.1s
QSPA  South Pole Qui   70.61 180    P        P          11 46 50.0 +1.3
QSPA                                IAmb     IAmb       11 46 51.4
      comp=Z,7.6nm,1.4s
TPNV  Topopah Spring   70.77 323    P        P          11 46 51.2 +1.1
TPNV                                IAmb     IAmb       11 46 55.7
      comp=Z,2.7nm,0.9s
MDPB  Devils Postpil   72.87 322    P        P          11 47 03.1 +0.2
NVAR  Mina Array Bea   72.97 323    P        P          11 47 04.6 +1.3
      comp=Z,0.5nm,0.8s,baz=144,slow=6.7,SNR=2.7
NVAR  Mina Array Bea   72.97 323    P        P          11 47 03.7 +0.4
TOA0  Torodi Ar. Sit   78.29  71    P        P          11 47 33.2 -0.8
TOA0                                IAmb     IAmb       11 47 40.5
      comp=Z,13nm,1.5s
TORD  Torodi Ar. Bea   78.29  71    P        P          11 47 33.5 -0.6
      comp=Z,2.7nm,0.7s,baz=247,slow=5.7,SNR=2.6
TORD  Torodi Ar. Bea   78.29  71    P        P          11 47 33.4 -0.6
SYO   Syowa Base       78.87 160⇓eP      P          11 47 35.6 -0.7
SYO   Syowa Base       78.87 160⇑epP     P          11 47 41.6 +5.3
YKA   Yellowknife Ar   88.83 341    P        P          11 48 26.7 -0.3
      comp=Z,1.4nm,0.6s,baz=135,slow=5.0,SNR=4.5
MKAR  Makanchi Array  144.99  33    PKP      PKPdf      11 55 10.3 -0.3
      comp=Z,2.5nm,0.7s,baz=323,slow=3.5,SNR=9.8
MKAR  Makanchi Array  144.99  33             PKPdf      11 55 10.5 -0.1
SONM  Songino Array   151.71   4    PKPbc    PKiKP      11 55 28.3  0.0
      comp=Z,1.3nm,0.9s,baz=310,slow=1.1,SNR=2.8
SONM  Songino Array   151.71   4             PKiKP      11 55 28.8 +0.4
```

SJA ***24*** *11:40:19.2±0.9, 20°.08S×71°.28W, h54km±29km, ML4.9, MW4.7*

IDC ***24*** *11:40:41.7±0.4, 19°.67S×70°.63W, h0km, mb4.9/24, mb1 4.9/26, mb1mx4.8/39, mbtmp4.9/26, ML4.6/2, MS5.3/18, Ms1 5.2/18, ms1mx5.1/36, Error ellipse: s-maj=16.3km s-min=9.9km az=66.0*

VAO ***24*** *11:40:41.4±0.3, 19°.86S×70°.90W, h10km, mb5.4*

MOS ***24*** *11:40:43.1±1.1, 19°.78S×70°.82W, h27km, mb5.4/20, Error ellipse: s-maj=12.7km s-min=7.2km az=103.6*

NEIC ***24*** *11:40:43.5±1.3, 19°.83S±0°.03×70°.88W±0°.04, h15km±2km, mb5.5/317, Ms_20 5.6/63, Mwr5.5/39, Mww5.6, ML5.3(GUC), Mwc5.7(GCMT), Error ellipse: s-maj=5.1km s-min=4.1km az=117.0*

NEIC ***24*** *11:40:43.5, 19°.83S×70°.86W, h15km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.37; $M_{\theta\theta}$0.32; $M_{\phi\phi}$-0.69; $M_{r\theta}$0.62; $M_{\theta\phi}$0.12; $M_{\phi r}$-2.28; Fault plane solution: $M_0$2.45000×10^{17} NP1:ϕ_s164.44000°, δ83.73000°, λ86.20000°. NP2:ϕ_s15.76000°, δ7.32000°, λ121.12000°. Principal axes: T 2.2745, Plg51.0000°, Azm70.0000°; N 0.3113, Plg4.0000°, Azm165.0000°; P -2.5858, Plg39.0000°, Azm258.0000°;*

GUC ***24*** *11:40:44.8±0.8, 19°.82S×70°.87W, h41km±3km, ML5.3*

BJI ***24*** *11:40:46.0±0.0, 19°.80S×70°.80W, h20km, mB5.6/36, Ms5.8/37, Ms7 5.7/38*

NEIC ***24*** *11:40:47, 19°.81S×70°.94W, h26km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.36; $M_{\theta\theta}$-0.11; $M_{\phi\phi}$-1.25; $M_{r\theta}$0.87; $M_{\theta\phi}$0.46; $M_{\phi r}$-2.40; Fault plane solution: $M_0$2.91000×10^{17} NP1:ϕ_s160.00000°, δ76.00000°, λ90.00000°. NP2:ϕ_s341.00000°, δ14.00000°, λ91.00000°. Principal axes: T 2.8829, Plg59.0000°, Azm70.0000°; N 0.0475, Plg0.0000°, Azm160.0000°; P -2.9304, Plg31.0000°, Azm250.0000°;*

NEIC ***24*** *11:40:50, 19°.83S×71°.10W, h24km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.69; $M_{\theta\theta}$-0.00; $M_{\phi\phi}$-2.69; $M_{r\theta}$0.43; $M_{\theta\phi}$0.45; $M_{\phi r}$-2.44; Fault plane solution: $M_0$3.68000×10^{17} NP1:ϕ_s170.00000°, δ66.00000°, λ90.00000°. NP2:ϕ_s351.00000°, δ24.00000°, λ91.00000°. Principal axes: T 3.6476, Plg69.0000°, Azm80.0000°; N 0.0721, Plg0.0000°, Azm170.0000°; P -3.7198, Plg21.0000°, Azm261.0000°;*

GCMT ***24*** *11:40:50.5±0.2, 19°.80S±0°.01×71°.12W±0°.01, h27km, MW5.7/138, Moment Tensor Solution. s83,c111; s138,c247; Duration: 1ˢ.7 Moment tensor: Scale 10^{17} Nm; M_{rr}2.57±.07; $M_{\theta\theta}$0.05±.04; $M_{\phi\phi}$-2.62±.05; $M_{r\theta}$0.46±.07; $M_{\theta\phi}$0.38±.02; $M_{\phi r}$-3.02±.11; Best double couple: $M_0$4.02600×10^{17} NP1:ϕ_s353.00000°, δ20.00000°, λ91.00000°. NP2:ϕ_s171.00000°, δ70.00000°, λ90.00000°. Principal axes: T 3.9750, Plg65.0000°, Azm81.0000°; N 0.1030, Plg0.0000°, Azm172.0000°; P -4.0770, Plg25.0000°, Azm262.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 11:40:44.0±0.7**, 19°.85S**±0°.02×**70°.83W**±0°.03**, h19**km±2km**, n1021, σ1ˢ.08**/884**, mb5.5**/181**, MS5.5**/52**, 14C-4D, Near coast of northern Chile**

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Code  Station Name       Δ°   AZ°     Phase ID            Time      Res
                                    Op       ISC         h  m  s    ISC
PSGC  Pisagua           0.71  70⇓iP       Pg         11 40 58.3 +0.2
PSGC                              i S        Sg         11 41 08.1 +0.4
PSGCX Pisagua           0.71  70    Pg       Pg         11 40 58.2 +0.1
PSGCX                               Sg       Sg         11 41 08.2 +0.5
TA01  Diego Aracena     0.94 139⇑iP       Pg         11 41 02.8 +0.5
TA01                              i S        Sn         11 41 16.4 +1.2
TA01                                IAML                11 41 18.9
      comp=E,99µm,0.5s
PB11  IPOC Station P    1.11  86  eP       Pb         11 41 05.1 +0.4
PB11                              i S        Sg         11 41 20.8 +0.6
PB11                                IAML                11 41 28.3
      comp=N,55µm,0.4s
PB11  IPOC Station P    1.11  86    Pn       Pg         11 41 05.3 -0.3
PB11                                Sn       Sg         11 41 20.8 +0.6
PATCX Punta Patache     1.16 147⇑iP       Pb         11 41 05.8 +0.3
PATCX                             i S        Sg         11 41 21.4 -0.3
PATCX                               IAML                11 41 30.7
      comp=E,106µm,0.7s
PATCX Punta Patache     1.16 147    Pn       Pb         11 41 05.7 +0.3
PATCX                               Sn       Sg         11 41 21.5 -0.3
PB12  IPOC Station P    1.32  21⇑iP       Pn         11 41 07.6 +0.1
PB12                              i S        Sb         11 41 24.9 +0.1
PB12                                IAML                11 41 30.3
      comp=N,61µm,0.7s
PB12  IPOC Station P    1.32  21    Pn       Pn         11 41 07.5  0.0
PB12                                Sn       Sb         11 41 24.7  0.0
AP01  Chacalluta        1.54  18⇑iP       Pn         11 41 10.8 +0.3
AP01                              i S        Sn         11 41 30.1 +0.1
AP01                                IAML                11 41 34.2
      comp=N,132µm,0.6s
GO01  Chusmiza          1.55  84  eP       Pb         11 41 12.8 +0.3
GO01                              i S        Sg         11 41 34.1 -0.3
GO01                                IAML                11 41 35.6
      comp=N,64µm,0.2s
GO01  Chusmiza          1.55  84    Pn       Pb         11 41 12.6 +0.2
GO01                                Sn       Sb         11 41 31.5 -0.5
PB08  IPOC Station P    1.61 101⇑iP       Pb         11 41 13.2 -0.1
PB08                              i S        Sg         11 41 35.2 -0.8
PB08                                IAML                11 41 38.3
      comp=N,28µm,0.4s
PB02  IPOC Station P    1.71 149⇑iP       Pn         11 41 13.8 +0.9
PB02                              i S        Sb         11 41 35.6 -0.4
PB02                                IAML                11 41 47.3
      comp=E,204µm,0.6s
PB01  IPOC Station P    1.73 134⇑iP       Pb         11 41 14.7 -0.6
PB01                              i S        Sb         11 41 36.7  0.0
PB01                                IAML                11 41 44.4
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	comp=N,47µm,0.4s						
PB01	IPOC Station P	1.73	134	Pn	Pn	11 41 14.0	+0.8
PB01				Sn	Sb	11 41 36.4	-0.4
PB16	IPOC Station P	1.96	40⇑	*i*P	Pn	11 41 17.9	+1.1
PB16				*e*S	Sb	11 41 44.7	+1.0
PB16				IAML		11 41 50.3	
	comp=N,42µm,0.7s						
PB16	IPOC Station P	1.96	40	Pn	Pn	11 41 17.7	+0.9
PB07	IPOC Station P	2.07	155	Pn	Pn	11 41 18.5	+0.6
PB07				Sn	Sn	11 41 44.0	+0.7
PB09	IPOC Station P	2.44	143⇑	*i*P	Pn	11 41 25.2	+2.1
PB09				*i* S	Sb	11 41 56.0	-1.3
PB09				IAML		11 42 10.3	
	comp=N,40µm,0.5s						
PB09	IPOC Station P	2.44	143	Pn	Pn	11 41 24.6	+1.6
PB09				Sn	Sb	11 41 55.6	-1.7
PB04	IPOC Station P	2.55	166	Pn	Pn	11 41 24.9	+0.3
LVC	Limon Verde	3.28	147	Pn	Pn	11 41 36.5	+1.8
	comp=N,113nm,0.3s,baz=350,slow=9.5,SNR=61						
LVC				Sn	Sn	11 42 17.2	+3.7
	comp=N,408nm,0.3s,baz=311,slow=4.6,SNR=4.8						
LVC				LR	LR	11 42 20.8	
	comp=N,6µm,18.2s,baz=320,slow=30						
LVC				Lg	Lg	11 42 27.4	
	comp=N,1µm,0.3s,baz=50,slow=16,SNR=14						
LVC	Limon Verde	3.28	147	P	Pn	11 41 36.2	+1.5
LVC	Limon Verde	3.28	147		Pn	11 41 36.2	+1.5
LVC	Limon Verde	3.28	147	*e*P	Pn	11 41 33.3	-1.5
LVC				*e*S	Sn	11 42 15.3	+1.8
PB15	IPOC Station P	3.58	159	Pn	Pn	11 41 38.7	0.0
PB10	IPOC Station P	3.66	176		Pn	11 41 38.6	-0.9
I08BO	LAS PENAS INFR	4.26	32	*i*		12 02 10.0	
	baz=205,slow=323,SNR=1.4						
LPAZ	La Paz	4.38	36	Pn	Pn	11 41 54.1	+4.1
	comp=N,4.4nm,0.3s,baz=214,slow=10.0,SNR=17						
LPAZ	La Paz	4.38	36	P	Pn	11 41 52.0	+1.9
LPAZ	La Paz	4.38	36		Pn	11 41 52.0	+1.9
LPAZ	La Paz	4.38	36	*e*P	Pn	11 41 49.3	-0.8
PB14	IPOC Station P	4.77	175		Pn	11 41 53.9	-1.3
GO02	Mina Guanaco	5.41	168		Pn	11 42 03.4	-0.6
GO03	Copiap	7.73	176		Pn	11 42 35.6	0.0
NNA	Nana	9.72	323	P	Pn	11 43 03.3	+0.3
NNA				pmax	pmax		
	comp=Z,85nm,0.8s						
SIV	San Ignacio	10.05	69	Pn	Pn	11 43 06.9	-0.6
	comp=Z,15nm,0.3s,baz=275,slow=9.1,SNR=69						
GO04	Tololo Observa	10.28	180		Pn	11 43 11.0	+0.3
ROC1	El Roble	13.07	181	Pn	Pn	11 43 50.3	+1.3
SAML	Samuel	13.12	35	P	Pn	11 43 48.3	-1.2
SAML	Samuel	13.12	35		Pn	11 43 48.3	-1.2
SAML	Samuel	13.12	35	*e*P	Pn	11 43 48.7	-0.8
SAML				*e*S	Sn	11 46 17.1	+2.0
PEL	Peldehue	13.24	179	P	Pn	11 43 51.1	0.0
PEL	Peldehue	13.24	179		Pn	11 43 51.0	0.0
CPUP	Villa Florida	14.00	120	Pn	Pn	11 44 01.6	+0.2
	comp=Z,0.4nm,0.3s,baz=299,slow=12,SNR=15						
CPUP				LR	LR	11 50 27.8	
	comp=Z,15µm,18.1s,baz=300,slow=42						
CPUP	Villa Florida	14.00	120	*e*P	Pn	11 44 00.6	-0.8
AQDB	Aquidauana	14.23	95	*e*P	Pn	11 44 03.8	-0.8
ATAH	Atahualpa	14.61	329	LR	LR	11 49 04.8	
	comp=Z,3µm,20.9s,baz=82,slow=35						
SALV	Santo Antonio	14.94	77	*e*P	Pn	11 44 13.9	-0.4
GO05	Huala	15.13	183		Pn	11 44 16.3	-0.5
GO05				IAmb	IAmb	11 44 49.0	
	comp=Z,230nm,1.4s						
ITQB	Itaqui	16.18	130	*e*P	Pn	11 44 29.4	-1.0
CLDB	Colider	17.01	61	*e*P	Pn	11 44 40.2	-0.9
C2SB	Chapadao do Su	17.02	89	*e*P	Pn	11 44 40.2	-1.0
TRCB	Terra Rica	17.21	103	*e*P	Pn	11 44 42.4	-1.1
PTGB	Pitanga	18.03	109	*e*P	Pn	11 44 53.3	-0.4
PCMB	Pacaembu	18.39	99	*e*P	P	11 44 57.2	-0.8
ARAG	Araguaiana, MT	18.57	80	*e*P	P	11 44 58.5	-1.5
ITAB	Concordia	18.64	117	*e*P	P	11 44 58.8	-1.9
CPSB	Cacapava Do Su	18.91	127	*e*P	P	11 45 02.6	-1.1
ITRB	Iturama	19.27	93	*e*P	P	11 45 07.1	-0.6
PLTB	Pedras Altas	19.50	131	*e*P	P	11 45 09.1	-1.0
GO06	Curarrehue	19.68	181	P	P	11 45 12.1	0.0
FRTB	Fartura	20.08	104	*e*P	P	11 45 15.8	-0.7
CNLB	Canela	20.44	121	*e*P	P	11 45 20.0	-0.4
PLCA	Paso Flores	20.82	179	P	Pn	11 45 26.4	-0.5
	comp=Z,48nm,1.1s,baz=26,slow=14,SNR=22						
PLCA				LR	LR	11 53 50.4	
	comp=Z,5µm,19.1s,baz=16,slow=38						
PLCA	Paso Flores	20.82	179	P	Pn	11 45 25.9	-1.0
PLCA				pmax	pmax		
	comp=Z,289nm,1.6s						
PLCA	Paso Flores	20.82	179	P	Pn	11 45 25.9	-1.0
PLCA				IAmb	IAmb	11 45 34.4	
	comp=Z,289nm,1.6s						
PLCA	Paso Flores	20.82	179	*e*P	P	11 45 22.6	-1.8
BB19B	Bebedouro	20.93	97	*e*P	P	11 45 25.1	-0.7
IPMB	Ipameri, GO	21.48	89	*e*P	P	11 45 30.3	-1.5
PTGA	Pitinga	21.78	31	P	P	11 45 32.5	-2.3
	comp=Z,34nm,0.3s,baz=300,slow=23,SNR=53						
PTGA				LR	LR	11 55 05.0	
	comp=Z,12µm,18.7s,baz=209,slow=40						
PTGA	Pitinga	21.78	31	P	P	11 45 33.0	-1.9
PTGA				IAmb	IAmb	11 45 41.7	
	comp=Z,256nm,1.1s						
PTGA				IAMs_20	IAMs_20	11 54 33.8	
	comp=Z,14µm,19.0s						
PTGA	Pitinga	21.78	31	*e*P	P	11 45 33.3	-1.6
FLOC	Florencia	21.82	347	*e*P	P	11 45 37.8	+2.5
FLOC	Florencia	21.82	347	P	P	11 45 35.4	+0.1
RCLB	Rio Claro- Sao	21.88	101	*e*P	P	11 45 35.3	-0.8
GCUF	Volcan Galeras	21.90	342	*e*P	P	11 45 49.8	+13
SPB	Sao Paulo	22.05	104	P	P	11 45 36.5	-1.3
SPB				IAmb	IAmb	11 45 41.4	
	comp=Z,199nm,1.3s						
SPB				IAMs_20	IAMs_20	11 55 24.0	
	comp=Z,13µm,19.0s						
SPB	Sao Paulo	22.05	104	*e*P	P	11 45 37.0	-0.7
CRUC	La Cruz	22.11	344	*e*P	P	11 45 43.3	+4.4
BDFB	Brasilia	22.13	83	P	P	11 45 37.8	-1.0
	comp=Z,59nm,0.9s,baz=268,slow=13,SNR=10						
BDFB				LR	LR	11 55 46.5	
	comp=Z,14µm,19.9s,baz=265,slow=41						
BDFB	Brasilia	22.13	83	P	P	11 45 38.4	-0.4
BDFB				IAmb	IAmb	11 46 01.8	
	comp=Z,156nm,1.1s						
BDFB				IAMs_20	IAMs_20	11 55 44.4	
	comp=Z,25µm,18.0s						
GARC	Garzon, Huila	22.37	348	*e*P	P	11 45 42.2	+0.7
VAO	Valinhos	22.43	102	*e*P	P	11 45 40.6	-1.4
SOTA	Rioblanco	22.57	345	*e*P	P	11 45 48.6	+4.7
PCON	Cinco Dias	22.71	345	*e*P	P	11 45 52.0	+6.6
GO07	Milladeo Hill,	23.32	185	P	P	11 45 50.6	-0.3
GO07				IAmb	IAmb	11 46 05.2	
	comp=Z,262nm,1.6s						
PARB	Paraibuna	23.69	103	*e*P	P	11 45 53.8	-1.0
PTGC	Puerto Gaitan,	23.93	357	*e*P	P	11 46 01.5	+4.4
VILC	Villavicencio,	23.98	353	*e*P	P	11 46 00.7	+3.0
ORTC	Ortega, Tolima	24.00	349	*e*P	P	11 45 58.3	+0.5
YOTC	Yotoco, Valle	24.30	347	*e*P	P	11 46 00.7	+0.1
CVER	Cruz Verde, Cu	24.43	352	*e*P	P	11 45 57.4	-4.8
BSCB	Bom Sucesso	24.44	97	*e*P	P	11 46 01.2	-0.6
CHIC	Chingaza	24.49	353	*e*P	P	11 46 00.6	-2.1
ANIL	Santa Ana	24.60	349	*e*P	P	11 46 11.5	+7.9
ROSC	El Rosal	24.77	352	P	P	11 46 05.5	+0.3
	comp=Z,7.2nm,0.5s,baz=175,slow=23,SNR=2.5						
ROSC				LR	LR	11 56 09.9	
	comp=Z,10µm,19.9s,baz=205,slow=38						
ROSC	El Rosal	24.77	352	*e*P	P	11 46 11.0	+5.8
ROSC	El Rosal	24.77	352	P	P	11 46 04.3	-0.9
ROSC				IAmb	IAmb	11 46 31.1	
	comp=Z,161nm,1.2s						
SMTB	Santa Maria do	24.99	67	*e*P	P	11 46 05.9	-0.9
RREF	El Recreo	24.99	349	*e*P	P	11 46 07.8	+0.4
SPBC	San Pablo de B	25.54	353	*e*P	P	11 46 08.7	-3.1
NORC	Norcasia	25.56	351	*e*P	P	11 46 14.2	+2.2
RUSC	La Rusia	25.68	355	*e*P	P	11 46 16.7	+3.2
RUSC	La Rusia	25.68	355	P	P	11 46 13.5	0.0
JANB	Januaria	25.73	84	*e*P	P	11 46 12.5	-1.1
CBOC	Ciudad Bolivar	26.05	348	*e*P	P	11 46 18.0	+1.4
TAMC	Tame, Arauca	26.14	358	*e*P	P	11 46 04.7	-13
HELC	Santa Helena	26.29	349	*e*P	P	11 46 20.2	+1.3
BARC	Barichara	26.38	355	*e*P	P	11 46 19.1	-0.5
PTBC	PUERTO BERRIO,	26.46	352	*e*P	P	11 46 17.4	-2.7
PAYG	Puerto Ayora	26.94	313	P	P	11 46 23.4	-1.1
PAMC	Pamplona, Colo	27.08	356	*e*P	P	11 46 25.3	-0.9
PTAC	Punta Ardita,	27.69	345	*e*P	P	11 46 42.8	+12
UREC	San Jos de Ur	27.82	350	*e*P	P	11 46 28.8	-3.5
SJMB	Sao Joao De Ma	28.00	93	*e*P	P	11 46 33.4	-0.5
BSFB	Barra de Sao F	28.30	93	*e*P	P	11 46 35.2	-1.4
SDV	Santo Domingo	28.55	0	P	P	11 46 37.8	-1.2
	comp=Z,29nm,1.1s,baz=151,slow=6.0,SNR=5.8						
SDV	Santo Domingo	28.55	0	*e*P	P	11 46 32.8	-6.3
SDV	Santo Domingo	28.55	0	P	P	11 46 37.5	-1.5
SDV	Santo Domingo	28.55	0	IAMs_20	IAMs_20	11 56 51.9	
	comp=Z,8µm,20.0s						
SDV	Santo Domingo	28.55	0	*e*P	P	11 46 38.0	-1.0
SMLC	San Martn de	28.65	353	*e*P	P	11 46 40.8	+1.2
CODC	Agustn Codazz	29.71	355	*e*P	P	11 46 38.6	-10
SJCC	San Jacinto, C	29.87	351	*e*P	P	11 46 48.9	-1.7
PLCV	Puerto La Cruz	30.45	12	P	P	11 46 54.8	-0.9
PCRV	Puerto La Cruz	30.45	12	P	P	11 46 54.8	-0.9
	comp=Z,8.0nm,0.6s,baz=179,slow=18,SNR=2.6						
PCRV				LR	LR	12 00 29.4	
	comp=Z,27µm,18.4s,slow=39						
MDP	Montagnes des	30.58	38	P	P	11 46 55.3	-1.5
	comp=Z,8.7nm,0.6s,baz=221,slow=8.7,SNR=5.3						
MDP				LR	LR	11 59 57.5	
	comp=Z,17µm,18.7s,baz=217,slow=38						
URIC	Uribia, Colomb	31.37	358	P	P	11 47 02.7	-1.0
TOSP	Speyside	32.57	19	P	P	11 47 14.2	-0.1
GRGR	Grenville	33.04	17	P	P	11 47 16.9	-1.5
EFI	East Falkland	33.31	165	IAMs_20	IAMs_20	12 03 20.3	
	comp=Z,6µm,18.0s						
SVB	Belmont	34.24	17	P	P	11 47 27.4	-1.5
NBMO	Morrinhos-CE	34.24	65	*e*P	P	11 47 27.4	-1.6
NBLI	Livramento-PB	35.11	74	*e*P	P	11 47 35.7	-0.8
FDF	Fort de France	35.66	16	P	P	11 47 40.9	-0.3
FDF				pmax	pmax		
	comp=Z,213nm,1.0s						
FDF	Fort de France	35.66	16	P	P	11 47 40.9	-0.3
RPN	Rapa Nui	35.94	251	LR	LR	11 58 32.8	
	comp=Z,11µm,20.2s,baz=85,slow=30						
RCBR	Riachuelo	36.70	72	P	P	11 47 48.4	-1.8
	comp=Z,89nm,0.9s,baz=237,slow=8.8,SNR=19						
RCBR				LR	LR	12 03 58.7	
	comp=Z,11µm,20.2s,baz=226,slow=38						
RCBR	Riachuelo	36.70	72	P	P	11 47 49.4	-0.8
RCBR	Riachuelo	36.70	72	*e*P	P	11 47 49.8	-0.4
CRPR	Cabo Rojo, PR	37.80	6	P	P	11 47 58.1	-1.2
OBIP	Obispado Ponce	37.88	7	P	P	11 47 57.7	-2.3
OBIP				IAmb	IAmb	11 48 08.3	
	comp=Z,135nm,1.1s						
PDPR	Patillas Dam,	37.93	7	IAmb	IAmb	11 48 10.1	
	comp=Z,115nm,1.0s						
SJG	San Juan	38.00	7	P	P	11 47 58.8	-2.1
	comp=Z,28nm,0.8s,baz=212,slow=5.5,SNR=12						
SJG	San Juan	38.00	7	P	P	11 47 58.9	-2.1
SJG				pmax	pmax		
	comp=Z,119nm,1.0s						
SJG	San Juan	38.00	7	P	P	11 47 58.9	-2.1
SJG				IAmb	IAmb	11 48 08.5	
	comp=Z,119nm,0.9s						
HUMP	Col San Antoni	38.07	8	IAmb	IAmb	11 48 10.6	
	comp=Z,72nm,0.9s						
CUPR	Culebra, Puert	38.31	9	IAmb	IAmb	11 48 10.9	
	comp=Z,112nm,0.9s						
SDDR	Presa de Saban	38.59	359	P	P	11 48 05.2	-0.8
APG	El Apazote	39.65	329	LR	LR	12 02 32.1	
	comp=Z,3µm,18.6s,baz=132,slow=33						
GRTK	Grand Turk	41.11	360	P	P	11 48 26.0	-0.9
CCIG	Comitan	41.56	328	P	P	11 48 30.2	-0.7
TEIG	Tepich	43.34	336	P	P	11 48 44.6	-0.4
	comp=Z,9.2nm,0.7s,baz=107,slow=0.0						
TEIG	Tepich	43.34	336	P	P	11 48 44.3	-0.8
CMIG	Matias Romero	43.65	326	P	P	11 48 46.9	-0.8
	comp=Z,8.0nm,1.1s,baz=151,slow=6.2,SNR=3.5						
CMIG				LR	LR	12 04 20.2	
	comp=Z,3µm,21.1s,baz=141,slow=32						
PMSA	Palmer Station	45.13	176	LR	LR	12 06 27.9	
	comp=Z,836nm,19.0s,baz=346,slow=34						
PMSA	Palmer Station	45.13	176	P	P	11 48 59.6	+0.8
PMSA	Palmer Station	45.13	176	*e*P	P	11 48 57.4	-1.5
TLIG	Tlapa	46.09	322	P	P	11 49 07.0	-0.2
DWPF	Disney Wildern	48.77	348	P	P	11 49 27.8	0.0
	baz=167						
TIGA	Tifton	52.44	346	P	P	11 49 55.2	-0.3
	baz=165						
ZAIG	Zacatecas	52.48	322	P	P	11 49 56.0	-0.3
158A	Hollywood	53.05	350	P	P	11 50 00.2	+0.3
	baz=169						
157A	Early Branch	53.13	349	P	P	11 50 00.7	+0.2
	baz=168						
Z59A	Georgetown, SC	53.41	351	P	P	11 50 02.9	+0.4
	baz=170						
NHSC	New Hope	53.41	350	P	P	11 50 03.0	+0.5
	baz=169						
Z58A	St. Stephen	53.58	351	P	P	11 50 04.4	+0.6
	baz=170						
Z57A	Bowman	53.68	350	P	P	11 50 04.7	+0.1
	baz=168						
Z56A	Williston	53.82	349	P	P	11 50 06.0	+0.4
	baz=168						
Y60A	Bolivia	54.01	352	P	P	11 50 07.3	+0.3
	baz=171						
Y58A	Scranton	54.11	351	P	P	11 50 07.3	-0.4
	baz=170						
Y56A	Pelion	54.27	349	P	P	11 50 08.7	-0.1
	baz=168						
GOGA	Godfrey	54.32	347	P	P	11 50 08.6	-0.6
	baz=165						
Y57A	Sumter	54.34	350	P	P	11 50 09.0	-0.3
	baz=169						
Y55A	Saluda	54.51	349	P	P	11 50 09.8	-0.8
	baz=167,SNR=5.6						
X60A	Albert Glenn T	54.55	353	P	P	11 50 10.6	-0.3
	baz=172						
X59A	McDuffie Farm,	54.62	352	P	P	11 50 11.6	+0.2
	baz=171						
X58A	Rowland	54.70	351	P	P	11 50 11.9	0.0
	baz=170						
X57A	Johnson Farm,	54.73	351	P	P	11 50 12.1	-0.1
	baz=169						
Z50A	Ashland	54.74	345	P	P	11 50 11.8	-0.5
	baz=163,SNR=7.1						
LRAL	Lakeview Retre	54.81	343	P	P	11 50 12.1	-0.6
	baz=161						
Y52A	Lilburn	54.88	347	P	P	11 50 12.7	-0.6
	baz=165						
X56A	White Oak	54.90	350	P	P	11 50 12.9	-0.5
	baz=168						
BIRD	Birdtown, Kers	54.96	350	IAmb	IAmb	11 50 28.7	
	comp=Z,52nm,0.9s						
X55A	Gracelyn & Ava	54.99	349	P	P	11 50 13.8	-0.2
	baz=168						
W60A	Pink Hill	54.99	353	P	P	11 50 13.4	-0.6
	baz=172						
W61A	Ground Anchor	55.03	354	P	P	11 50 14.2	-0.1
	baz=173						
HKT	Hockley	55.06	333	P	P	11 50 14.4	-0.2
HKT				pmax	pmax		
	comp=Z,58nm,1.6s						
HKT	Hockley	55.06	333	P	P	11 50 14.4	-0.2
HKT				IAmb	IAmb	11 50 57.1	
	comp=Z,58nm,1.6s						
VBMS	Vicksburg	55.10	340	P	P	11 50 14.7	-0.1
	baz=157						
W58A	Raeford	55.15	352	P	P	11 50 15.3	+0.1
	baz=170,SNR=8.7						
W59A	Clinton	55.19	352	P	P	11 50 15.8	+0.3
	baz=171						
CNNC	Cliffs of the	55.19	353	P	P	11 50 15.6	+0.1
	baz=172						
X54A	Belton	55.20	348	P	P	11 50 15.7	+0.1
	baz=167						
V62A	Hyde County Ai	55.32	355	P	P	11 50 16.0	-0.5
	baz=174						
X53A	Estanollee	55.34	347	P	P	11 50 15.9	-0.7
	baz=166						
PAULI	Pauline	55.36	349	IAmb	IAmb	11 50 56.3	
	comp=Z,48nm,1.2s						
W57A	Gilead	55.39	351	P	P	11 50 16.5	-0.4
	baz=170						
W56A	Indian Trail	55.46	350	P	P	11 50 17.2	-0.3
	baz=169						
KMSC	Kings Mountain	55.59	350	P	P	11 50 18.1	-0.3
	baz=168,SNR=6.1						
V61A	Roper	55.60	354	P	P	11 50 18.2	-0.2
	baz=174						
V60A	Jim Taylor Roa	55.64	354	P	P	11 50 18.7	0.0
	baz=173						
W54A	Cherokee Point	55.69	349	P	P	11 50 18.9	-0.2
	baz=167,SNR=6.6						
X51A	Calhoun	55.73	346	IAmb	IAmb	11 51 13.3	
	comp=Z,33nm,1.0s						
X51A	Calhoun	55.73	346	P	P	11 50 19.0	-0.5
	baz=164						
V59A	Middlesex	55.75	353	P	P	11 50 19.4	-0.1
	baz=172,SNR=8.0						
V58A	Windy Hill, Pi	55.89	352	IAmb	IAmb	11 50 47.9	
	comp=Z,124nm,1.6s						
V58A	Windy Hill, Pi	55.89	352	P	P	11 50 20.6	+0.1
	baz=171,SNR=5.8						
W52A	Murphy	56.04	347	IAmb	IAmb	11 51 11.8	
	comp=Z,43nm,1.1s						
V57A	Coltrane Farms	56.08	351	P	P	11 50 21.8	-0.1
	baz=170						
V56A	Mocksville	56.11	351	P	P	11 50 22.4	+0.3
	baz=169,SNR=7.9						
U61A	Possum Corner	56.13	355	P	P	11 50 22.3	+0.1
	baz=174						
X48A	Hartselle	56.16	344	IAmb	IAmb	11 50 47.0	
	comp=Z,39nm,1.2s						
NATX	Nacogdoches	56.17	336	P	P	11 50 22.5	-0.1
	baz=153						
V55A	Taylorsville	56.26	350	IAmb	IAmb	11 51 02.7	
	comp=Z,73nm,1.1s						
V55A	Taylorsville	56.26	350	P	P	11 50 23.1	-0.1
	baz=168,SNR=6.7						
U59A	Littleton	56.28	353	IAmb	IAmb	11 50 55.3	
	comp=Z,73nm,1.3s						
U59A	Littleton	56.28	353	P	P	11 50 23.6	+0.3
	baz=172,SNR=6.6						
V54A	Nebo	56.32	349	P	P	11 50 23.3	-0.3
	baz=167,SNR=7.6						
U60A	Pendleton	56.33	354	P	P	11 50 23.8	+0.1
	baz=173						
U58A	Oxford	56.41	353	P	P	11 50 24.6	+0.3
	baz=171,SNR=7.5						
W50A	Signal Mountai	56.45	346	IAmb	IAmb	11 50 51.9	
	comp=Z,39nm,1.1s						
435B	Jarrell	56.53	332	P	P	11 50 25.1	-0.1
	baz=150						
U57A	Blanch	56.55	352	P	P	11 50 25.0	-0.3
	baz=170,SNR=7.0						
U56A	King	56.62	351	IAmb	IAmb	11 51 05.9	
	comp=Z,65nm,1.1s						
U56A	King	56.62	351	P	P	11 50 25.9	+0.2
	baz=169,SNR=5.8						
V52A	Sevierville	56.69	348	IAmb	IAmb	11 51 07.3	
	comp=Z,47nm,0.9s						
T59A	Double "B" Far	56.87	354	IAmb	IAmb	11 50 59.4	
	comp=Z,69nm,1.1s						
T59A	Double "B" Far	56.87	354	P	P	11 50 27.9	+0.5
	baz=172,SNR=8.5						
U55A	TA2, Sparta	56.87	350	P	P	11 50 26.9	-0.7
	baz=168						
OXF	Oxford	56.88	342	IAmb	IAmb	11 51 25.5	
	comp=Z,85nm,1.2s						
OXF	Oxford	56.88	342	P	P	11 50 26.3	-1.3
	baz=159						
T58A	Grand View Acr	56.95	353	P	P	11 50 28.8	+0.7
	baz=171,SNR=14						
T60A	Surry	56.95	354	P	P	11 50 28.1	0.0
	baz=173						
U54A	Nelsons Funny	57.02	349	IAmb	IAmb	11 51 13.0	
	comp=Z,57nm,1.0s						
U54A	Nelsons Funny	57.02	349	P	P	11 50 28.5	-0.2
	baz=168						
T57A	Hurt	57.10	352	IAmb	IAmb	11 51 16.6	
	comp=Z,108nm,1.6s						
T57A	Hurt	57.10	352	P	P	11 50 29.5	+0.4
	baz=171,SNR=8.9						
T56A	Rocky Mt	57.23	351	P	P	11 50 30.6	+0.5
	baz=170,SNR=6.0						
JCT	Junction City	57.27	330	P	P	11 50 29.7	-0.9
JCT				pmax	pmax		
	comp=Z,28nm,1.2s						
JCT	Junction City	57.27	330	P	P	11 50 29.7	-0.9
JCT	Junction City	57.27	330	P	P	11 50 30.6	0.0
	baz=147						
V48A	Smith Brothers	57.32	345	IAmb	IAmb	11 50 55.2	
	comp=Z,89nm,1.4s						
X43A	Marvell	57.33	340	P	P	11 50 31.1	+0.3
	baz=158						
TZTN	Tazewell	57.36	348	P	P	11 50 30.7	-0.3
	baz=166						
S61A	Accomac	57.40	355	P	P	11 50 30.6	-0.6
	baz=175						
T55A	Pulaski	57.43	351	P	P	11 50 31.4	-0.1
	baz=169						
BLA	Blacksburg	57.47	351	IAmb	IAmb	11 51 20.0	
	comp=Z,108nm,1.4s						
BLA	Blacksburg	57.47	351	P	P	11 50 31.9	+0.1
	baz=169						
T54A	Tazewell	57.50	350	P	P	11 50 31.9	-0.1
	baz=168						
S60A	Water View	57.51	355	P	P	11 50 32.1	+0.1
	baz=174						
WHTX	Lake Whitney,	57.51	333	IAmb	IAmb	11 51 05.6	
	comp=Z,61nm,1.2s						
WHTX	Lake Whitney,	57.51	333	P	P	11 50 32.1	-0.1
	baz=150						
S58A	Poland Farm, P	57.56	353	P	P	11 50 32.2	-0.1
	baz=172						
T53A	Wise	57.59	349	P	P	11 50 32.5	-0.3
	baz=167,SNR=5.8						
S59A	Mechanicsville	57.62	354	P	P	11 50 32.7	-0.1
	baz=173						
T52A	Hallie	57.80	349	IAmb	IAmb	11 50 49.8	
	comp=Z,47nm,1.1s						
T52A	Hallie	57.80	349	P	P	11 50 33.5	-0.5
	baz=166						
S56A	Natural Bridge	57.81	352	P	P	11 50 34.0	-0.2
	baz=170						
S57A	Dark Hollow, R	57.81	352	P	P	11 50 34.2	+0.1
	baz=171						
T51A	Gray	57.85	348	P	P	11 50 33.9	-0.5
	baz=165,SNR=7.3						
R58B	Mineral	57.88	353	IAmb	IAmb	11 50 36.7	
	comp=Z,91nm,1.4s						
R58B	Mineral	57.88	353	P	P	11 50 35.1	+0.5
	baz=172,SNR=7.9						
X40A	Basin Creek Fa	57.95	339	P	P	11 50 35.0	-0.1
	baz=156						
WVT	Waverly	57.95	344	P	P	11 50 34.0	-1.1
WVT				pmax	pmax		
	comp=Z,29nm,0.9s						
WVT	Waverly	57.95	344	P	P	11 50 34.0	-1.1
WVT				IAmb	IAmb	11 50 59.6	
	comp=Z,29nm,0.8s						
WVT	Waverly	57.95	344	P	P	11 50 34.3	-0.8
	baz=161						
R61A	Willards	58.02	356	P	P	11 50 34.8	-0.8
	baz=175						
S55A	Lewisburg	58.03	351	P	P	11 50 36.0	+0.3
	baz=169,SNR=11						
R59A	King George, V	58.04	354	P	P	11 50 35.4	-0.3
	baz=173						
UALR	University of	58.04	339	IAmb	IAmb	11 51 03.2	
	comp=Z,69nm,1.3s						
R60A	Leonardtown, M	58.06	355	P	P	11 50 35.8	-0.1
	baz=174						
CBN	Corbin Frederi	58.07	354	P	P	11 50 35.7	-0.2
	baz=173						
T50A	Nancy	58.09	347	P	P	11 50 35.5	-0.5
	baz=164,SNR=7.2						
LPAR	Lepanto	58.16	341	IAmb	IAmb	11 51 04.7	
	comp=Z,69nm,0.9s						
S54A	Dingess, Beckl	58.18	350	IAmb	IAmb	11 51 25.3	
	comp=Z,86nm,1.2s						
S54A	Dingess, Beckl	58.18	350	P	P	11 50 36.6	-0.2
	baz=168						
S53A	Williamson	58.20	349	P	P	11 50 36.4	-0.5
	baz=168						
R58A	Rapidan	58.23	353	P	P	11 50 37.5	+0.5
	baz=172,SNR=6.4						
TX32	Lajitas Array	58.26	326	P	P	11 50 37.4	-0.2
TXAR	Lajitas Array	58.26	326	P	P	11 50 37.6	0.0
	comp=Z,0.8nm,0.7s,baz=148,slow=8.0,SNR=5.9						
TXAR				LR	LR	12 16 00.5	
	comp=Z,1µm,18.5s,baz=0.0,slow=36						
TXAR	Lajitas Array	58.26	326	P	P	11 50 37.4	-0.2
MIAR	Mount Ida	58.26	338	P	P	11 50 37.8	+0.4
MIAR				pmax	pmax		
	comp=Z,60nm,1.1s						
MIAR	Mount Ida	58.26	338	IAmb	IAmb	11 50 52.3	
	comp=Z,45nm,1.1s						
MIAR	Mount Ida	58.26	338	P	P	11 50 37.2	-0.2
	baz=155,SNR=9.9						
R57A	Stanardsville	58.29	353	P	P	11 50 38.2	+0.8
	baz=172,SNR=11						
T49A	Edmonton	58.32	346	P	P	11 50 36.7	-1.0

	baz=164,SNR=19						
S52A	Salyersville	58.37	349	P	P	11 50 37.4	-0.6
	baz=166						
W41B	Gary Mavity, V	58.38	339	P	P	11 50 37.8	-0.3
	baz=156,SNR=6.2						
S51A	Beattyville	58.43	348	P	P	11 50 38.0	-0.5
	baz=166						
R55A	Marlinton	58.48	351	P	P	11 50 38.9	0.0
	baz=170						
R56A	Bull Pasture M	58.50	352	P	P	11 50 39.3	+0.2
	baz=171						
R54A	Victor	58.51	351	P	P	11 50 38.9	-0.1
	baz=169						
T47A	Sharon Grove	58.58	345	IAmb	IAmb	11 51 04.4	
	comp=Z,56nm,0.9s						
S50A	Richmond	58.63	347	P	P	11 50 39.0	-0.9
	baz=165,SNR=11						
Q59A	Harwood	58.66	355	P	P	11 50 40.1	+0.1
	baz=174						
Q60A	Greensboro	58.73	355	P	P	11 50 41.2	+0.7
	baz=174						
R53A	Hurricane	58.80	350	IAmb	IAmb	11 51 35.0	
	comp=Z,42nm,1.2s						
R53A	Hurricane	58.80	350	P	P	11 50 40.8	-0.3
	baz=168						
Q58A	Fox Den Farm,	58.83	354	P	P	11 50 41.7	+0.5
	baz=172,SNR=9.4						
S49A	Springfield	58.92	347	P	P	11 50 41.0	-0.9
	baz=164						
W39A	Magazine	58.92	338	IAmb	IAmb	11 51 13.8	
	comp=Z,57nm,1.2s						
W39A	Magazine	58.92	338	P	P	11 50 42.4	+0.4
	baz=155,SNR=8.6						
R52A	Catlettsburg	58.93	349	P	P	11 50 41.3	-0.6
	baz=167						
Q57A	Strasburg	59.00	353	P	P	11 50 43.1	+0.7
	baz=172,SNR=10.0						
ABTX	Abilene, Hawle	59.01	332	IAmb	IAmb	11 50 54.2	
	comp=Z,50nm,1.2s						
ABTX	Abilene, Hawle	59.01	332	P	P	11 50 42.6	0.0
	baz=148						
R51A	Hillsboro	59.07	348	P	P	11 50 42.2	-0.7
	baz=166						
Q56A	Snyder Ridge,	59.10	352	P	P	11 50 43.9	+0.8
	baz=171,SNR=8.5						
Q55A	Buckhannon	59.17	352	P	P	11 50 43.8	+0.2
	baz=170						
R50A	Paris	59.20	348	IAmb	IAmb	11 51 11.0	
	comp=Z,36nm,1.1s						
R50A	Paris	59.20	348	P	P	11 50 43.3	-0.5
	baz=165						
Q53A	Leroy	59.25	350	P	P	11 50 44.1	0.0
	baz=168,SNR=6.6						
Q54A	Coxs Mills	59.27	351	IAmb	IAmb	11 51 42.9	
	comp=Z,44nm,1.2s						
Q54A	Coxs Mills	59.27	351	P	P	11 50 44.0	-0.2
	baz=169						
PBMO	Poplar Bluff	59.28	342	IAmb	IAmb	11 51 12.5	
	comp=Z,28nm,0.9s						
P61A	Hammonton	59.33	356	P	P	11 50 44.5	-0.2
	baz=176						
P58A	Pank, Wackersv	59.34	354	P	P	11 50 45.0	+0.3
	baz=173						
P59A	Jarrettsville	59.38	355	P	P	11 50 45.6	+0.6
	baz=174						
R49A	Shelbyville	59.38	347	IAmb	IAmb	11 51 28.7	
	comp=Z,81nm,1.8s						
R49A	Shelbyville	59.38	347	P	P	11 50 44.3	-0.7
	baz=164						
P57A	Homestead Farm	59.40	354	IAmb	IAmb	11 50 47.8	
	comp=Z,71nm,1.4s						
P57A	Homestead Farm	59.40	354	P	P	11 50 46.2	+1.1
	baz=172,SNR=6.5						
Q52A	Bidwell	59.47	350	P	P	11 50 45.5	-0.2
	baz=168						
P56A	Dayton Farm, R	59.52	353	P	P	11 50 46.3	+0.4
	baz=171						
P60A	Greenville	59.52	356	P	P	11 50 45.7	-0.3
	baz=175						
WCI	Wyandotte Cave	59.57	346	P	P	11 50 45.7	-0.7
WCI				pmax	pmax		
	comp=Z,38nm,1.0s						
WCI	Wyandotte Cave	59.57	346	P	P	11 50 45.7	-0.7
WCI				IAmb	IAmb	11 51 13.4	
	comp=Z,38nm,0.9s						
WCI	Wyandotte Cave	59.57	346	P	P	11 50 45.6	-0.7
	baz=163						
PSUB	Penn St. - Bra	59.62	356	IAmb	IAmb	11 50 48.4	
	comp=Z,67nm,1.4s						
P55A	Reedsville	59.64	352	P	P	11 50 46.7	-0.2
	baz=170						
U40A	Yellville	59.65	339	P	P	11 50 46.8	-0.2
	baz=156,SNR=8.4						
Q50A	Georgetown	59.67	348	P	P	11 50 46.2	-0.8
	baz=166						
Q51A	Peebles	59.73	349	P	P	11 50 46.8	-0.6
	baz=166						
O61A	Allentown	59.73	357	P	P	11 50 47.0	-0.4
	baz=176						
MVL	Millersville	59.76	355	IAmb	IAmb	11 51 19.9	
	comp=Z,62nm,1.3s						
MCWV	Mont Chateau	59.79	352	P	P	11 50 48.1	+0.2
	baz=170						
P54A	Burton	59.82	351	P	P	11 50 48.2	+0.1
	baz=170,SNR=12						
P53A	Whipple	59.84	351	IAmb	IAmb	11 51 32.7	
	comp=Z,46nm,0.8s						
P53A	Whipple	59.84	351	P	P	11 50 48.1	-0.1
	baz=168,SNR=7.7						
O58A	Lewisberry	59.93	355	P	P	11 50 48.6	-0.2
	baz=173						
HHAR	Hobbs	59.95	339	IAmb	IAmb	11 51 16.7	
	comp=Z,78nm,1.4s						
O60A	Telford	60.01	356	P	P	11 50 49.0	-0.3
	baz=175						
Q49A	Aurora	60.01	347	P	P	11 50 48.5	-0.8
	baz=165						
O59A	Robesonia	60.06	355	P	P	11 50 49.1	-0.5
	baz=174						
O57A	Amberson	60.08	354	P	P	11 50 50.6	+0.7
	baz=173,SNR=11						
P52A	Corning	60.11	350	P	P	11 50 49.2	-0.8
	baz=168						
Q48A	North Vernon	60.11	347	P	P	11 50 48.4	-1.6
	baz=164						
P51A	Williamsport	60.12	349	P	P	11 50 49.3	-0.8
	baz=167						
O56A	Blue Knob Stat	60.24	353	P	P	11 50 51.1	+0.1
	baz=172,SNR=11						
U38A	Gravette	60.25	338	IAmb	IAmb	11 51 11.8	
	comp=Z,47nm,1.4s						
O55A	Ligonier	60.27	353	P	P	11 50 51.2	+0.1
	baz=171,SNR=9.2						
TUL1	Leonard	60.28	337	IAmb	IAmb	11 51 06.4	
	comp=Z,49nm,1.1s						
TUL1	Leonard	60.28	337	P	P	11 50 50.8	-0.5
	baz=153						
N61A	South Mountain	60.37	357	P	P	11 50 51.6	-0.3
	baz=176						
P50A	Jamestown	60.38	348	P	P	11 50 51.1	-0.8
	baz=166						
O54A	Avella	60.38	352	IAMs_20	IAMs_20	12 18 10.8	
	comp=Z,3μm,20.0s						
O54A	Avella	60.38	352	P	P	11 50 51.6	-0.3
	baz=170						
WMOK	Wichita Mounta	60.44	334	P	P	11 50 52.5	0.0
WMOK				pmax	pmax		
	comp=Z,14nm,1.5s						
WMOK	Wichita Mounta	60.44	334	P	P	11 50 51.9	-0.5
	baz=150						
OLIL	Olney	60.48	345	IAmb	IAmb	11 51 22.8	
	comp=Z,32nm,1.1s						
P49A	Miami Univ. Ec	60.48	348	P	P	11 50 51.7	-0.9
	baz=165						
N62A	Caumsett State	60.52	358	P	P	11 50 51.9	-0.9
	baz=177						
O52A	Adamsville	60.53	350	IAmb	IAmb	11 50 53.9	
	comp=Z,65nm,1.4s						
O52A	Adamsville	60.53	350	P	P	11 50 52.0	-0.9
	baz=168						
SSPA	Standing Stone	60.53	354	P	P	11 50 53.1	+0.2
SSPA	Standing Stone	60.53	354	P	P	11 50 52.8	-0.1
	baz=172						
N60A	Cedar Hill Far	60.54	356	P	P	11 50 52.8	-0.2
	baz=175						
P48A	Milroy	60.56	347	IAmb	IAmb	11 51 04.2	
	comp=Z,34nm,1.2s						
P48A	Milroy	60.56	347	P	P	11 50 51.8	-1.3
	baz=164						
O53A	New Philadelph	60.56	351	P	P	11 50 52.7	-0.5
	baz=169						
PAL	Palisades	60.61	357	IAmb	IAmb	11 50 55.5	
	comp=Z,65nm,1.3s						
PAL	Palisades	60.61	357	P	P	11 50 53.3	-0.1
	baz=177						
N58A	Sunbury	60.62	355	P	P	11 50 54.0	+0.5
	baz=174						
N59A	State Game Lan	60.63	356	P	P	11 50 53.5	-0.1
	baz=175						
O51A	Pataskala	60.69	350	P	P	11 50 53.4	-0.6
	baz=167						
CCM	Cathedral Cave	60.71	342	P	P	11 50 53.8	-0.4
CCM				pmax	pmax		
	comp=Z,36nm,1.1s						
CCM	Cathedral Cave	60.71	342	P	P	11 50 53.8	-0.4
CCM				IAmb	IAmb	11 51 34.9	
	comp=Z,36nm,1.1s						
CCM	Cathedral Cave	60.71	342	P	P	11 50 53.7	-0.4
	baz=158						
ODNJ	Ogdensburg	60.72	357	IAmb	IAmb	11 50 55.8	
	comp=Z,38nm,1.3s						
N55A	Marion Center	60.79	353	P	P	11 50 55.1	+0.3
	baz=171,SNR=20						
ACSO	Alum Creek Sta	60.83	349	IAmb	IAmb	11 51 10.8	
	comp=Z,48nm,1.1s						
ACSO	Alum Creek Sta	60.83	349	P	P	11 50 54.3	-0.7
	baz=167,SNR=8.3						
N56A	West Decatur	60.85	354	P	P	11 50 55.4	+0.2
	baz=172,SNR=6.6						
O50A	Cable	60.86	349	P	P	11 50 54.6	-0.6
	baz=166						
Q44A	Meyer Farm, Va	60.88	344	IAmb	IAmb	11 51 20.4	
	comp=Z,38nm,1.0s						
M61A	Granite Spring	60.91	357	P	P	11 50 55.5	+0.1
	baz=177						
M63A	Gales Ferry	60.95	359	P	P	11 50 55.8	+0.1
	baz=179						
M60A	Port Jervis	60.96	357	P	P	11 50 55.7	-0.2
	baz=176						
M62A	Hamden	61.01	358	P	P	11 50 56.1	0.0
	baz=178						
S39A	Bolivar	61.02	340	IAmb	IAmb	11 51 10.3	
	comp=Z,37nm,1.1s						
O49A	Covington	61.04	348	IAmb	IAmb	11 51 12.0	
	comp=Z,37nm,1.1s						
O49A	Covington	61.04	348	P	P	11 50 55.6	-0.8
	baz=166,SNR=5.5						
N53A	Lisbon	61.06	351	IAmb	IAmb	11 51 33.3	
	comp=Z,64nm,1.3s						
N53A				IAMs_20	IAMs_20	12 18 41.8	
	comp=Z,3μm,20.0s						
N53A	Lisbon	61.06	351	P	P	11 50 56.2	-0.3
	baz=169						
M64A	Tiverton	61.09	360	P	P	11 50 56.5	-0.1
	baz=180						
N54A	Moraine State	61.09	352	P	P	11 50 57.0	+0.2
	baz=170,SNR=10						
M58A	Price's Panora	61.13	355	P	P	11 50 57.5	+0.5
	baz=174,SNR=11						
M57A	Sunshine Farm,	61.15	355	P	P	11 50 58.0	+0.8
	baz=173,SNR=7.2						
N52A	McGinn's Farm,	61.19	351	P	P	11 50 56.8	-0.6
	baz=168						
M59A	Waymart	61.23	356	P	P	11 50 58.5	+0.8
	baz=175,SNR=7.8						
R40A	Maddies Statio	61.24	341	IAmb	IAmb	11 51 12.1	
	comp=Z,100nm,1.7s						
KSPA	Keystone Colle	61.26	356	IAmb	IAmb	11 50 59.9	
	comp=Z,76nm,1.5s						
O48A	Farmland	61.27	348	P	P	11 50 56.7	-1.3
	baz=165,SNR=7.4						
KSCT	Kent School, K	61.31	358	IAmb	IAmb	11 50 59.9	
	comp=Z,70nm,1.4s						
N50A	Nevada	61.39	349	P	P	11 50 57.8	-0.9
	baz=167,SNR=6.2						
M56A	Emporium	61.40	354	P	P	11 50 59.2	+0.4
	baz=172,SNR=11						
N51A	Ashland	61.40	350	IAmb	IAmb	11 51 14.4	
	comp=Z,32nm,1.0s						
N51A	Ashland	61.40	350	P	P	11 50 58.0	-0.8
	baz=168						
L63A	North Scituate	61.40	359	P	P	11 50 58.9	+0.1
	baz=179,SNR=5.2						
T35A	Sooner Cattle	61.44	337	IAmb	IAmb	11 51 24.7	
	comp=Z,47nm,1.1s						
M55A	Ridgway	61.45	353	P	P	11 50 59.3	+0.1
	baz=172,SNR=16						
L64A	Middleborough	61.47	360	P	P	11 51 00.0	+0.8
	baz=180						
MSTX	Muleshoe	61.57	330	IAmb	IAmb	11 51 12.1	
	comp=Z,63nm,1.2s						
MSTX	Muleshoe	61.57	330	P	P	11 51 00.3	+0.1
	baz=146						
M54A	Oil Creek Stat	61.59	352	P	P	11 51 00.1	0.0
	baz=171,SNR=12						
L60A	Shokan	61.60	357	P	P	11 51 00.7	+0.5
	baz=176						
M53A	WI Miller and	61.66	352	P	P	11 51 00.1	-0.4
	baz=170,SNR=8.6						
SRIG	Santa Rosalia	61.70	318	P	P	11 51 01.0	-0.2
SRIG				IAmb	IAmb	11 51 14.6	
	comp=Z,30nm,1.1s						
N49A	Columbus Grove	61.72	349	P	P	11 50 60.0	-1.0
	baz=166,SNR=15						
L58A	Harry Jones Me	61.76	356	P	P	11 51 01.3	0.0
	baz=175,SNR=9.4						
M51A	Elyria	61.77	350	P	P	11 51 00.3	-1.0
	baz=168						
L61A	Hillsdale 1, H	61.78	358	P	P	11 51 01.4	+0.1
	baz=177						
L57A	Andrews Acres	61.79	355	P	P	11 50 60.0	-1.5
	baz=174						
SFIN	Lafayette	61.80	346	IAmb	IAmb	11 51 09.3	
	comp=Z,30nm,1.0s						
SFIN	Lafayette	61.80	346	P	P	11 51 00.0	-1.5
	baz=163,SNR=6.7						
AMTX	Amarillo	61.82	331	P	P	11 51 01.2	-0.8
	baz=147						
N48A	Decatur	61.82	348	P	P	11 51 00.7	-0.9
	baz=165,SNR=6.1						
L59A	Walton	61.85	356	P	P	11 51 02.2	+0.3
	baz=176,SNR=9.1						
M52A	Chesterland	61.85	351	IAmb	IAmb	11 51 02.9	
	comp=Z,74nm,1.5s						
M52A	Chesterland	61.85	351	P	P	11 51 01.4	-0.4
	baz=169						
O44A	Mansfield	61.91	345	IAmb	IAmb	11 51 25.3	
	comp=Z,31nm,1.1s						
BINY	Binghamton	61.92	356	P	P	11 51 03.2	+0.8
	baz=174,SNR=10						
N47A	Urbana	61.98	347	P	P	11 51 01.2	-1.5
	baz=164,SNR=6.6						
M50A	Fremont	61.98	350	P	P	11 51 02.0	-0.8
	baz=167						
L56A	Greenwood	61.98	354	P	P	11 51 03.1	+0.3
	baz=173,SNR=9.3						
L61B	Northampton	62.01	358	P	P	11 51 03.0	+0.1
	baz=178						
HRV	Adam Dziewonsk	62.05	359	P	P	11 51 02.4	-0.7
HRV				pmax	pmax		
	comp=Z,122nm,1.4s						
HRV	Adam Dziewonsk	62.05	359	P	P	11 51 02.4	-0.7
HRV	Adam Dziewonsk	62.05	359	P	P	11 51 03.2	+0.1
	baz=179						
L53A	Girard	62.11	352	P	P	11 51 03.6	0.0
	baz=170,SNR=13						
L55A	Hinsdale	62.12	354	P	P	11 51 04.0	+0.3
	baz=172,SNR=13						
HSIG		62.12	320	P	P	11 51 04.1	+0.1
HSIG				IAmb	IAmb	11 51 18.0	
	comp=Z,57nm,1.7s						
VNA3	Neumayer Olymp	62.21	161	P	P	11 51 05.6	+1.6
K62A	Royalston	62.21	359	P	P	11 51 04.1	-0.1
	baz=178						
K60A	Five Rivers En	62.22	357	P	P	11 51 03.1	-1.1
	baz=177						
M49A	Liberty Center	62.22	349	P	P	11 51 03.7	-0.6
	baz=166,SNR=7.2						
K63A	Dunstable	62.23	359	P	P	11 51 03.9	-0.5
	baz=179						
ERPA	Erie	62.23	352	P	P	11 51 04.4	0.0
	baz=170,SNR=11						
K61A	Williamstown	62.24	358	P	P	11 51 03.6	-0.8
	baz=177						
L54A	Sinclairville	62.27	353	P	P	11 51 04.8	+0.1
	baz=171,SNR=15						
K59A	Cooperstown	62.42	357	P	P	11 51 06.3	+0.6
	baz=176,SNR=17						
M47A	Cromwell	62.42	347	P	P	11 51 04.7	-1.0
	baz=164						
VNA1	Neumayer--Stat	62.43	161	P	P	11 51 08.1	+2.6
K58A	Earlville	62.46	356	P	P	11 51 06.1	+0.2
	baz=175,SNR=8.2						
K57A	Scipio Center	62.49	355	P	P	11 51 06.2	+0.1
	baz=174,SNR=9.3						
HDIL	Hopedale	62.50	344	IAmb	IAmb	11 51 31.8	
	comp=Z,61nm,1.1s						
HDIL	Hopedale	62.50	344	P	P	11 51 04.6	-1.7
	baz=160						
K56A	Middlesex	62.52	355	P	P	11 51 05.5	-0.9
	baz=173						
K54A	Basiliko Farm,	62.57	353	P	P	11 51 06.8	+0.1
	baz=172,SNR=16						
L50A	Kingsville	62.57	350	P	P	11 51 05.5	-1.1
	baz=167						
K55A	Perry	62.62	354	P	P	11 51 07.2	+0.1
	baz=172,SNR=8.6						
L48A	N Adams	62.76	349	P	P	11 51 06.9	-1.0
	baz=166,SNR=7.2						
J62A	Henniker	62.77	359	P	P	11 51 06.6	-1.4
	baz=179						
L49A	Milan	62.80	349	P	P	11 51 06.9	-1.2
	baz=166						
VNA2	Neumayer--Watz	62.80	161	P	P	11 51 09.7	+1.8
J63A	Strafford	62.81	360	P	P	11 51 07.4	-0.8
	baz=180						
J60A	Lant Hill Farm	62.82	358	P	P	11 51 08.6	+0.3
	baz=177						
P38A	Dawn	62.85	340	IAmb	IAmb	11 51 23.5	
	comp=Z,28nm,0.9s						
319A	Douglas	62.89	323	IAmb	IAmb	11 51 22.5	
	comp=Z,49nm,1.1s						
J61A	Chester	62.90	359	P	P	11 51 09.4	+0.5
	baz=178						
J58A	Remsen	63.03	356	IAmb	IAmb	11 51 11.5	
	comp=Z,81nm,1.6s						
J58A	Remsen	63.03	356	P	P	11 51 09.7	-0.1
	baz=175						
K51A	Iona Station	63.03	351	P	P	11 51 09.2	-0.5
	baz=169						
J56A	Wolcott	63.05	355	P	P	11 51 10.1	+0.2
	baz=174						
N41A	Harden Midland	63.06	343	IAmb	IAmb	11 51 23.1	
	comp=Z,47nm,1.0s						
J59A	Piesco	63.09	357	P	P	11 51 10.9	+0.7
	baz=176,SNR=18						
J57A	Williamstown	63.12	356	P	P	11 51 10.6	+0.3
	baz=175,SNR=6.5						
J55A	Hilton	63.13	354	P	P	11 51 09.5	-0.8
	baz=173						
L46A	Eue Claire	63.19	347	P	P	11 51 09.2	-1.6
	baz=164						
J54A	Appleton	63.22	354	P	P	11 51 10.7	-0.2
	baz=172						
K50A	Casco	63.25	350	IAmb	IAmb	11 51 26.7	
	comp=Z,52nm,0.9s						
K50A	Casco	63.25	350	P	P	11 51 10.2	-1.0
	baz=168						
I58A	Old Forge	63.34	357	P	P	11 51 11.9	+0.1
	baz=176,SNR=7.4						
K49A	Clarkson	63.40	350	P	P	11 51 11.0	-1.1
	baz=167						
J52A	Paris	63.40	352	P	P	11 51 12.1	-0.1
	baz=170,SNR=19						
I62A	Tamworth	63.41	360	P	P	11 51 12.9	+0.7
	baz=180						
I60A	Shoreham	63.42	358	P	P	11 51 12.8	+0.6
	baz=177						
I64A	Boothbay	63.46	1	P	P	11 51 12.0	-0.5
	baz=181						
I61A	Oroboro, Fairl	63.48	359	P	P	11 51 13.7	+1.0
	baz=179,SNR=8.8						
K48A	Perry	63.53	349	P	P	11 51 11.9	-1.1
	baz=166,SNR=7.1						
K47A	Vermontville	63.56	348	P	P	11 51 11.8	-1.5
	baz=165,SNR=5.4						
NCB	Newcomb	63.58	357	IAmb	IAmb	11 51 16.5	
	comp=Z,53nm,1.3s						
I63A	Otisfield	63.59	0	P	P	11 51 13.9	+0.6
I63A	Otisfield	63.59	0	P	P	11 51 13.8	+0.5
	baz=180						
R32A	Long Quarter,	63.60	336	IAmb	IAmb	11 51 33.7	
	comp=Z,60nm,1.3s						
I57A	Carthage	63.63	356	P	P	11 51 13.8	+0.2
	baz=175,SNR=8.1						
Y22D	IRIS PASSCAL I	63.69	327	P	P	11 51 12.7	-1.8
	baz=142						
L44A	Lake County Fo	63.70	346	IAMs_20	IAMs_20	12 09 08.7	
	comp=Z,3μm,18.0s						
L44A	Lake County Fo	63.70	346	P	P	11 51 12.9	-1.3
	baz=162						
K46A	Dorr	63.73	348	P	P	11 51 12.9	-1.5
	baz=164						
LBNH	Lisbon	63.78	359	P	P	11 51 15.3	+0.7
	baz=179,SNR=6.3						
J49A	Marlette	63.91	350	P	P	11 51 14.4	-1.1
	baz=167						
J48A	Bridge Port	63.95	350	P	P	11 51 15.0	-0.8
	baz=166						
H58A	Gabriels	64.03	357	P	P	11 51 16.6	+0.3
	baz=176,SNR=14						
I51A	Listowel	64.03	352	P	P	11 51 15.6	-0.6
	baz=169,SNR=14						
I55A	Frankford	64.06	355	P	P	11 51 16.6	+0.1
	baz=173,SNR=8.0						
H61A	Lyndonville	64.08	359	P	P	11 51 17.5	+0.9
	baz=179,SNR=6.3						
J47A	Sunmer	64.08	349	IAmb	IAmb	11 52 01.9	
	comp=Z,52nm,1.0s						
J47A	Sunmer	64.08	349	P	P	11 51 15.7	-0.9
	baz=165,SNR=5.9						
WVL	Waterville	64.11	1	P	P	11 51 16.3	-0.5
H62A	Milan	64.11	360	P	P	11 51 17.5	+0.7
	baz=180						
H60A	Morristown	64.12	359	P	P	11 51 17.8	+0.9
	baz=178						
H57A	Richville	64.13	356	P	P	11 51 17.2	+0.2
	baz=175,SNR=14						
ANMO	Albuquerque	64.14	328	P	P	11 51 17.2	-0.3
	comp=Z,0.8nm,0.5s,baz=147,slow=14,SNR=5.0						
ANMO				LR	LR	12 18 50.7	
	comp=Z,925nm,19.1s,baz=176,slow=36						
ANMO	Albuquerque	64.14	328	*e*P	P	11 51 16.9	-0.6
ANMO	Albuquerque	64.14	328	P	P	11 51 16.9	-0.6
ANMO				IAmb	IAmb	11 51 45.7	
	comp=Z,67nm,1.9s						
I52A	Shelburne	64.18	353	P	P	11 51 17.2	-0.1
	baz=170						
H64A	Troy	64.19	1	P	P	11 51 17.7	+0.3
	baz=182						
H63A	New Sharon	64.20	1	P	P	11 51 18.3	+0.9
	baz=181,SNR=6.5						
H59A	Cadyville	64.23	358	P	P	11 51 17.9	+0.3
	baz=177,SNR=10						
LONY	Lake Ozonia	64.25	357	P	P	11 51 17.8	+0.1
	baz=176,SNR=7.7						
H65A	Eastbrook	64.27	2	P	P	11 51 17.6	-0.2
	baz=183						
H56A	Elgin	64.32	356	P	P	11 51 18.4	+0.2
	baz=174,SNR=7.6						
CBKS	Cedar Bluff	64.34	335	P	P	11 51 18.3	-0.2
	baz=150						
J46A	Howard City	64.34	348	P	P	11 51 17.0	-1.4
	baz=165						
H55A	Tweed	64.35	355	P	P	11 51 18.5	+0.1
	baz=173,SNR=7.0						
DELO	Deloro Mine	64.35	355	IAmb	IAmb	11 51 19.9	
	comp=Z,60nm,1.3s						
H66A	Whiting	64.40	3	P	P	11 51 19.0	+0.4
	baz=184,SNR=5.5						
SNAA	Sanae	64.42	161	P	P	11 51 20.1	+1.4
SNAA	Sanae	64.42	161	P	P	11 51 19.3	+0.6
	comp=Z,22nm,1.0s,baz=270,slow=4.2,SNR=19						
SNAA	Sanae	64.42	161	*i* P	P	11 51 20.7	+2.0
SNAA	Sanae	64.42	161	P	P	11 51 18.9	+0.2
SNAA				IAmb	IAmb	11 51 43.2	
	comp=Z,59nm,1.2s						
I49A	Point Hope	64.42	350	IAmb	IAmb	11 51 31.1	
	comp=Z,46nm,0.9s						
I49A	Point Hope	64.42	350	P	P	11 51 18.1	-0.7
	baz=168,SNR=6.4						
L40A	Anamosa	64.42	343	IAmb	IAmb	11 52 00.1	
	comp=Z,69nm,1.3s						
H53A	Bobcaygeon	64.50	354	P	P	11 51 19.2	-0.1

	baz=172,SNR=9.1						
HAL	Halifax	64.51	6	P	P	11 51 19.6	+0.2
HAL				pmax	pmax		
	comp=Z,68nm,1.1s						
HAL	Halifax	64.51	6	P	P	11 51 19.6	+0.2
G60A	Masonville	64.65	359	P	P	11 51 20.9	+0.5
	baz=178,SNR=5.7						
G59A	Clarenceville	64.65	358	P	P	11 51 20.4	+0.1
	baz=178						
G63A	Kingsbury	64.66	1	P	P	11 51 20.6	+0.2
	baz=181						
H52A	Wyevale	64.71	353	P	P	11 51 20.1	-0.6
	baz=171						
G57A	Newington	64.75	357	P	P	11 51 21.4	+0.5
	baz=176,SNR=12						
G58A	Ormstown	64.75	357	P	P	11 51 21.4	+0.5
	baz=177,SNR=6.7						
G62A	West of Eustis	64.75	0	P	P	11 51 22.1	+1.1
	baz=180,SNR=15						
I47A	Gladwin	64.78	349	P	P	11 51 20.4	-0.8
	baz=166						
G65A	Princeton	64.80	3	IAmb	IAmb	11 51 32.8	
	comp=Z,59nm,1.1s						
G65A	Princeton	64.80	3	P	P	11 51 21.2	-0.1
	baz=183						
I48A	Sherman Twp	64.80	350	P	P	11 51 20.8	-0.5
	baz=167,SNR=8.0						
G64A	Maxfield	64.81	2	P	P	11 51 22.2	+0.8
	baz=182,SNR=6.1						
PKME	Peaks-Kenny Pk	64.81	1	IAmb	IAmb	11 51 36.2	
	comp=Z,35nm,0.9s						
PKME	Peaks-Kenny Pk	64.81	1	P	P	11 51 21.4	0.0
	baz=182						
G61A	St-Isidore-de-	64.82	359	P	P	11 51 22.6	+1.1
	baz=179,SNR=12						
PLVO	Plevna	64.83	355	IAmb	IAmb	11 51 23.2	
	comp=Z,67nm,1.5s						
SCIA	State Center	64.84	342	P	P	11 51 21.2	-0.5
	baz=157						
I46A	Reed City	64.88	348	P	P	11 51 20.5	-1.4
	baz=165						
T25A	Trinidad	64.93	331	P	P	11 51 21.4	-1.2
	baz=145						
JFWS	Jewell Farm	64.96	344	IAmb	IAmb	11 51 50.1	
	comp=Z,36nm,0.9s						
JFWS	Jewell Farm	64.96	344	P	P	11 51 21.6	-0.9
	baz=160,SNR=7.0						
G55A	Calabogie	65.01	355	P	P	11 51 22.8	+0.1
	baz=174,SNR=9.5						
G53A	Haliburton	65.05	354	P	P	11 51 23.0	+0.1
	baz=172,SNR=17						
H48A	Harrisville	65.24	350	P	P	11 51 23.2	-1.0
	baz=167,SNR=6.7						
F63A	Nahmakanta, Br	65.26	1	P	P	11 51 23.0	-1.3
	baz=182						
G54A	Lake Saint Pet	65.27	354	P	P	11 51 24.2	-0.2
	baz=172,SNR=9.6						
214A	Organ Pipe Nat	65.35	321	P	P	11 51 26.1	+0.8
214A				IAmb	IAmb	11 51 39.8	
	comp=Z,37nm,1.2s						
H46A	Fife Lake	65.41	349	P	P	11 51 25.2	-0.1
	baz=165						
F59A	Saint Guilaume	65.41	359	P	P	11 51 25.6	+0.4
	baz=178						
F64A	Sherman	65.44	2	IAmb	IAmb	11 51 40.2	
	comp=Z,45nm,1.0s						
F64A	Sherman	65.44	2	P	P	11 51 25.6	+0.2
	baz=183,SNR=6.6						
F58A	St-Lin Laurent	65.46	358	P	P	11 51 25.6	0.0
	baz=177						
F61A	St Evariste	65.51	360	P	P	11 51 26.1	+0.2
	baz=180,SNR=6.2						
F60A	Warwick	65.51	359	P	P	11 51 25.9	0.0
	baz=179,SNR=8.2						
I42A	Draeger Farm,	65.56	346	IAmb	IAmb	11 51 27.3	
	comp=Z,76nm,1.4s						
GLMI	Grayling	65.58	349	P	P	11 51 25.3	-1.1
	baz=166						
LMN	Caledonia Moun	65.61	5	P	P	11 51 26.3	-0.3
LMN				IAmb	IAmb	11 51 27.3	
	comp=Z,54nm,1.1s						
H45A	Beulah	65.65	348	P	P	11 51 25.8	-1.0
	baz=164						
KSCO	Kaye Shedlock'	65.69	333	P	P	11 51 27.3	-0.1
	baz=147						
F52A	Sundridge	65.78	353	P	P	11 51 27.5	-0.2
	baz=171,SNR=13						
G47A	Hillman	65.79	350	P	P	11 51 27.3	-0.4
	baz=167,SNR=7.0						
ALGO	Algonquin Park	65.82	354	P	P	11 51 27.5	-0.4
	baz=173,SNR=6.8						
H43A	Windswept, Lux	65.85	347	IAmb	IAmb	11 51 44.4	
	comp=Z,25nm,0.7s						
E60A	Ste Agathe de	65.91	360	P	P	11 51 28.9	+0.5
	baz=179,SNR=5.7						
SDCO	Great Sand Dun	65.92	330	IAmb	IAmb	11 51 42.3	
	comp=Z,44nm,1.2s						
SDCO	Great Sand Dun	65.92	330	P	P	11 51 28.3	-0.8
	baz=144						
E58A	La Victoria	65.94	358	P	P	11 51 29.0	+0.3
	baz=178,SNR=8.8						
E61A	Lac Etchemin	65.97	0	P	P	11 51 29.7	+0.9
	baz=180,SNR=8.0						
G45A	Suttons Bay	65.98	349	P	P	11 51 27.9	-1.0
	baz=165						
F51A	Arnstein	65.98	353	P	P	11 51 28.3	-0.6
	baz=171,SNR=6.4						
E63A	Oxbow	65.99	2	P	P	11 51 29.0	0.0
E63A				IAmb	IAmb	11 51 31.0	
	comp=Z,62nm,1.3s						
E63A	Oxbow	65.99	2	P	P	11 51 29.6	+0.6
	baz=182						
BGNE	Belgrade	66.00	338	P	P	11 51 29.3	+0.1
	baz=152						
E64A	Bridgewater	66.01	2	P	P	11 51 29.3	+0.2
	baz=183,SNR=6.2						
E57A	Chemin Saint G	66.01	357	P	P	11 51 29.6	+0.4
	baz=177,SNR=8.2						
F49A	Sandfield	66.09	351	P	P	11 51 28.7	-1.0
	baz=168,SNR=6.1						
G46A	Petoskey	66.10	349	P	P	11 51 28.8	-0.9
	baz=166						
E55A	Montcerf-Lytto	66.16	356	P	P	11 51 30.1	0.0
	baz=175						
E56A	St. Veronique	66.19	357	P	P	11 51 30.2	0.0
	baz=176,SNR=11						
E52A	Mattawa	66.20	354	P	P	11 51 29.9	-0.5
	baz=172,SNR=8.7						
E53A	Dumoine, Ponti	66.20	355	P	P	11 51 30.3	0.0
	baz=173,SNR=7.4						
E54A	Lac Daplat, Po	66.22	355	P	P	11 51 30.1	-0.4
	baz=174,SNR=9.5						
F48A	Evansville	66.23	351	P	P	11 51 29.7	-0.8
	baz=168,SNR=5.8						
PQI	Presque Isle	66.25	2	P	P	11 51 30.7	0.0
PQI				IAmb	IAmb	11 51 45.4	
	comp=Z,41nm,1.1s						
X16A	Lo Mia Camp, P	66.37	324	IAmb	IAmb	11 52 23.9	
	comp=Z,48nm,1.4s						
D60A	Saint Jean D'O	66.45	360	P	P	11 51 32.5	+0.6
	baz=180,SNR=7.1						
E51A	G1948 Merrick	66.53	353	P	P	11 51 32.5	+0.1
	baz=171,SNR=8.0						
D59A	Saint-Raymond	66.55	359	P	P	11 51 33.0	+0.5
	baz=179						
F45A	CMU Biological	66.57	349	P	P	11 51 32.0	-0.7
	baz=165						
D57A	Chemin Vers le	66.61	358	P	P	11 51 33.4	+0.4
	baz=177,SNR=16						
D63A	Stockholm	66.62	2	P	P	11 51 33.7	+0.7
	baz=183,SNR=5.5						
D62A	Allapoint, All	66.64	1	P	P	11 51 33.8	+0.7
	baz=182,SNR=9.6						
D58A	Chemin du LacG	66.66	358	P	P	11 51 33.5	+0.2
	baz=178,SNR=20						
D56A	ZEC Mazanza, M	66.68	357	P	P	11 51 33.6	+0.2
	baz=176,SNR=7.7						
D55A	Sainte-Anne-du	66.69	357	P	P	11 51 33.4	0.0
	baz=175,SNR=11						
D61A	St Aubert, Com	66.74	0	P	P	11 51 34.6	+0.8
	baz=181,SNR=7.3						
Q24A	Divide	66.75	331	P	P	11 51 33.1	-1.4
	baz=145						
E48A	Lockeyer	66.81	352	P	P	11 51 33.7	-0.5
	baz=168,SNR=6.4						
D54A	Lac Fusel, La	66.89	356	P	P	11 51 34.5	-0.3
	baz=174,SNR=7.0						
D53A	Lac Vacive, Po	66.90	355	IAmb	IAmb	11 51 46.7	
	comp=Z,25nm,0.9s						
D53A	Lac Vacive, Po	66.90	355	P	P	11 51 35.0	+0.2
	baz=173,SNR=7.2						
LATQ	La Tuque	66.94	359	IAmb	IAmb	11 51 36.9	
	comp=Z,42nm,1.6s						
LATQ	La Tuque	66.94	359	P	P	11 51 35.5	+0.5
	baz=178,SNR=6.5						
MVCO	Mesa Verde	66.94	328	P	P	11 51 36.1	+0.4
	baz=141						
E47A	Iron Bridge	66.94	351	P	P	11 51 34.5	-0.6
	baz=167,SNR=8.9						
E46A	Sault Ste Mari	67.02	350	IAmb	IAmb	11 51 50.5	
	comp=Z,28nm,0.9s						
D51A	Lot 18 Range I	67.07	354	P	P	11 51 35.7	-0.1
	baz=171,SNR=9.9						
OGNE	Ogallala	67.07	335	P	P	11 51 35.6	-0.5
	baz=148						
WUAZ	Wupatki	67.15	325	P	P	11 51 35.5	-1.4
	baz=138						
D50A	G1974 Best Tow	67.19	353	P	P	11 51 36.8	+0.1
	baz=171,SNR=22						
D48A	Paudash Townsh	67.44	352	P	P	11 51 37.4	-0.9
	baz=169,SNR=6.0						
D46A	Sault St. Mari	67.49	350	P	P	11 51 37.5	-1.1
	baz=167						
D47A	Chapleau	67.50	351	P	P	11 51 37.8	-0.9
	baz=168,SNR=6.3						
E43A	Lone Tree Farm	67.52	348	IAmb	IAmb	11 52 01.1	
	comp=Z,54nm,1.6s						
E44A	Grand Marais A	67.55	349	IAmb	IAmb	11 52 31.6	
	comp=Z,90nm,1.7s						
E44A	Grand Marais A	67.55	349	P	P	11 51 39.0	0.0
	baz=165						
ECSD	EROS Data Cent	67.55	340	IAmb	IAmb	11 51 52.5	
	comp=Z,71nm,1.6s						
ECSD	EROS Data Cent	67.55	340	P	P	11 51 38.7	-0.3
	baz=154,SNR=18						
ISCO	Idaho Springs	67.64	332	P	P	11 51 39.5	-0.6
ISCO				pmax	pmax		
	comp=Z,14nm,1.2s						
ISCO	Idaho Springs	67.64	332	P	P	11 51 39.5	-0.6
ISCO	Idaho Springs	67.64	332	P	P	11 51 40.9	+0.8
	baz=145,SNR=8.7						
TAOE	Nuku Hiva Isla	67.65	268	*e*S	S	12 00 26.5	-11
	comp=Z,3µm,24.2s						
TAOE	Nuku Hiva Isla	67.65	268	*e*LR	LR	12 11 57.2	
	comp=Z,1µm,24.2s,baz=110						
TAOE	Nuku Hiva Isla	67.65	268	*e*T	T	13 05 14.1	
	comp=Z,22nm,0.2s						
PV01	Paradox Valley	67.70	329	IAmb	IAmb	11 52 11.1	
	comp=Z,50nm,1.6s						
SPMN	Marine on St.	67.78	343	IAmb	IAmb	11 51 57.0	
	comp=Z,29nm,1.0s						
SPMN	Marine on St.	67.78	343	P	P	11 51 39.9	-0.5
	baz=158						
IKP	In-Ko-Pah, Jac	67.82	320	P	P	11 51 40.0	-1.0
	baz=134						
SWSC	Sam W. Stewart	67.83	320	P	P	11 51 41.4	+0.4
	baz=134						
VLDQ	Val d'Or	67.91	355	IAmb	IAmb	11 51 43.4	
	comp=Z,55nm,1.2s						
BC3	Big Chuckawall	68.12	321	P	P	11 51 42.9	-0.1
	baz=135						
MONP2	Monument Peak	68.17	320	P	P	11 51 43.2	-0.3
	baz=134						
BAR	Barrett	68.18	319	P	P	11 51 43.9	+0.6
BAR				IAmb	IAmb	11 51 57.9	
	comp=Z,51nm,1.2s						
IRM	Iron Mountain	68.29	321	P	P	11 51 45.8	+1.8
	baz=135,SNR=15						
U15A	North Rim	68.32	325	IAmb	IAmb	11 52 02.0	
	comp=Z,39nm,1.2s						
D41A	Chassel	68.49	347	IAmb	IAmb	11 51 46.1	
	comp=Z,79nm,1.4s						
N23A	Red Feather La	68.68	332	P	P	11 51 45.8	-0.7
	baz=145						
BELC	Belle Mtn. Jos	68.69	321	P	P	11 51 47.5	+1.0
	baz=134						
PFO	Pinyon Flats O	68.69	320	*i* P	P	11 51 45.6	-1.0
PFO				pmax	pmax		
	comp=Z,45nm,1.3s						
PFO	Pinyon Flats O	68.69	320	P	P	11 51 45.9	-0.7
	baz=134						
E38A	The Farm, Brul	68.75	345	IAmb	IAmb	11 52 06.1	
	comp=Z,30nm,1.1s						
PHWY	Pilot Hill	68.80	333	IAmb	IAmb	11 52 01.8	
	comp=Z,35nm,1.4s						
LSQQ	Lebel-sur-Quev	68.81	356	P	P	11 51 46.8	0.0
	baz=174						
SUSD	Miller	68.95	339	IAmb	IAmb	11 52 25.1	
	comp=Z,31nm,0.8s						
SUSD	Miller	68.95	339	P	P	11 51 47.6	-0.2
	baz=152						
NVL	N'lazarevskaya	69.01	159	*e*P	P	11 51 47.5	-0.3
NVL				*e*S	S	12 00 52.2	+0.7
NVL				pmax	pmax		
	comp=Z,91nm,1.5s						
GMRC	Granite Mounta	69.03	322	P	P	11 51 50.3	+1.6
	baz=135,SNR=13						
O20A	White River Ci	69.11	330	IAmb	IAmb	11 52 04.2	
	comp=Z,81nm,1.6s						
O20A	White River Ci	69.11	330	P	P	11 51 50.1	+0.9
	baz=142						
MURC	Murrieta	69.13	320	P	P	11 51 50.4	+1.2
	baz=133						
BBRC	Big Bear Solar	69.42	320	P	P	11 51 50.5	-0.7
	baz=134						
HEC	Hector,Ludlow	69.46	321	P	P	11 51 51.8	+0.5
	baz=134,SNR=9.8						
SCI2	San Clemente I	69.55	318	P	P	11 51 51.1	-0.6
	baz=132						
MATQ	Matagami	69.56	355	P	P	11 51 50.9	-0.5
	baz=173,SNR=9.2						
TUQ	Turquoise Moun	69.64	322	P	P	11 51 51.9	-0.6
	baz=135						
LIC	Lamto	69.68	75	*e*P	P	11 51 51.8	-1.2
	comp=Z,87nm,1.4s						
CIS	Catalina Islan	69.75	319	P	P	11 51 52.7	-0.3
	baz=132						
DRLN	Deer Lake	69.81	9	P	P	11 51 52.3	-0.6
BFSC	Mount Baldy Ra	69.85	320	P	P	11 51 53.8	+0.1
	baz=133,SNR=8.4						
TIC	Toumodi	69.86	75	*e*P	P	11 51 53.0	-1.1
	comp=Z,167nm,1.4s						
FMP	Fort Macarthur	69.88	319	P	P	11 51 53.3	-0.5
	baz=132						
RWWY	Rawlins	69.88	332	IAmb	IAmb	11 52 06.2	
	comp=Z,82nm,1.7s						
RRX	Edison Barstow	69.89	321	P	P	11 51 52.2	-1.6
	baz=134						
EYMN	Ely	69.98	345	P	P	11 51 53.4	-0.7
	baz=159,SNR=11						
KIC	Kosan Boka	70.00	75	*e*P	P	11 51 53.8	-1.2
	comp=Z,145nm,1.3s						
DBIC	Dimbokro	70.02	75	P	P	11 51 53.9	-1.1
	comp=Z,39nm,1.1s,baz=227,slow=5.2,SNR=23						
DBIC	Dimbokro	70.02	75	P	P	11 51 53.9	-1.1
DBIC				IAmb	IAmb	11 51 55.4	
	comp=Z,66nm,1.1s						
GSC	Goldstone, Bar	70.07	321	P	P	11 51 54.1	-0.9
	baz=134						
SHOC	Shoshone, Teco	70.17	322	P	P	11 51 55.6	0.0
	baz=135						
QSPA	South Pole Qui	70.33	180	P	P	11 51 56.9	+0.6
QSPA				IAmb	IAmb	11 52 11.2	
	comp=Z,70nm,1.1s						
SNCC	San Nicolas Is	70.33	318	P	P	11 51 55.3	-1.3
	baz=131						
K22A	Casper	70.36	333	IAmb	IAmb	11 52 09.6	
	comp=Z,41nm,1.4s						
K22A	Casper	70.36	333	P	P	11 51 56.5	-0.2
	baz=144						
EDW2	Edwards Air Fo	70.48	320	P	P	11 51 55.1	-2.5
	baz=133						
RSSD	Black Hills	70.54	335	P	P	11 51 57.9	0.0
RSSD				pmax	pmax		
	comp=Z,59nm,1.8s						
RSSD	Black Hills	70.54	335	P	P	11 51 57.9	0.0
RSSD				IAmb	IAmb	11 52 05.4	
	comp=Z,59nm,1.8s						
RSSD	Black Hills	70.54	335	P	P	11 51 57.0	-0.9
	baz=147						
BLG	Laguna Peak, P	70.62	319	P	P	11 51 57.6	-0.7
	baz=132						
LRMC	Laurel Mtn Rad	70.71	321	P	P	11 51 54.7	-4.2
	baz=133						
OSI	Osito Audit: C	70.75	320	P	P	11 51 58.4	-0.8
	baz=132						
TPNV	Topopah Spring	70.89	323	P	P	11 52 01.8	+1.7
	baz=135,SNR=25						
SCZ2	Santa Cruz Isl	70.90	319	P	P	11 51 58.6	-1.5
	baz=132						
FURC	Furnace Creek,	70.91	322	P	P	11 52 01.5	+1.5
	baz=134,SNR=10						
MPMC	Manual Prospec	70.99	321	P	P	11 52 00.1	-0.7
	baz=134						
ARVC	Arvin	71.16	320	P	P	11 52 01.1	-0.5
	baz=132						
SBC	Santa Barbara	71.24	319	P	P	11 52 01.9	-0.1
	baz=132						
ISA	Isabella, Lake	71.30	321	P	P	11 52 02.7	+0.2
ISA				pmax	pmax		
	comp=Z,44nm,1.3s						
ISA	Isabella, Lake	71.30	321	P	P	11 52 02.7	+0.2
ISA				IAmb	IAmb	11 52 16.7	
	comp=Z,44nm,1.2s						
DUG	Dugway, Tooele	71.40	327	P	P	11 52 05.1	+2.0
DUG				pmax	pmax		
	comp=Z,33nm,1.5s						
DUG	Dugway, Tooele	71.40	327	IAmb	IAmb	11 52 17.0	
	comp=Z,49nm,1.4s						
DUG	Dugway, Tooele	71.40	327	P	P	11 52 04.7	+1.7
	baz=138,SNR=14						
AGMN	Agassiz Nation	71.44	343	P	P	11 52 03.9	+0.9
	baz=155						
R11A	Troy Canyon, C	71.52	324	P	P	11 52 04.7	+0.8
	baz=136,SNR=19						
GRAC	Grapevine Rang	71.57	322	P	P	11 52 04.8	+0.7
	baz=134						
PKM	Mcpherson Peak	71.60	319	P	P	11 52 03.8	-0.6
	baz=132						
CWC	Cottonwood Cre	71.60	321	P	P	11 52 05.4	+1.0
	baz=133						
VES	Vestal, Richgr	71.79	320	P	P	11 52 07.1	+1.7
	baz=132,SNR=11						
BW06	Boulder Array	71.79	331	P	P	11 52 05.8	+0.3
	baz=142,SNR=7.6						
PD31	Pinedale Array	71.79	331	P	P	11 52 05.7	+0.2
PDAR	Pinedale Array	71.79	331	P	P	11 52 06.2	+0.6
	comp=Z,1.8nm,0.8s,baz=150,slow=6.7,SNR=14						
PDAR	Pinedale Array	71.79	331	P	P	11 52 05.3	-0.2
HWUT	Hardware Ranch	71.84	329	IAmb	IAmb	11 52 18.8	
	comp=Z,30nm,1.0s						
SMMC	Simmler	71.99	319	P	P	11 52 06.7	0.0
	baz=132						
TIN	Tinemaha, Big	72.11	322	P	P	11 52 07.4	0.0
	baz=133						
MDND	Maddock	72.16	340	P	P	11 52 07.8	+0.5
	baz=152,SNR=5.9						
VOG	Valley Oaks Go	72.29	321	P	P	11 52 07.9	-0.4
	baz=132						
TBI	Tubuai	72.33	251	*e*LR	LR	12 14 12.8	
	comp=Z,5µm,26.5s,baz=104						
MEH	Mehetia	72.48	257	*e*T	T	13 11 19.3	
	comp=Z,8.1nm,0.2s						
MLAC	Mammoth, Mammo	72.85	322	P	P	11 52 10.4	-1.6
	baz=133						
REDW	Red Top Meadow	72.85	331	IAmb	IAmb	11 52 27.6	
	comp=Z,52nm,1.4s						
NV11	Mina Array Sit	73.01	323	P	P	11 52 13.4	+0.6
ELK	Elko	73.05	326	LR	LR	12 25 08.5	
	comp=Z,2µm,18.1s,baz=133,slow=36						
NVAR	Mina Array Bea	73.09	323	P	P	11 52 14.6	+1.3
	comp=Z,1.9nm,0.8s,baz=153,slow=6.4,SNR=18						
NVAR	Mina Array Bea	73.09	323	P	P	11 52 13.7	+0.4
ULM	Lac du Bonnet	73.22	344	P	P	11 52 13.5	0.0
	comp=Z,8.3nm,0.9s,baz=138,slow=5.5,SNR=12						
ULM	Lac du Bonnet	73.22	344	IAmb	IAmb	11 52 26.4	
	comp=Z,56nm,1.4s						
RLMT	Red Lodge	73.52	333	IAmb	IAmb	11 52 29.8	
	comp=Z,77nm,1.6s						
RLMT	Red Lodge	73.52	333	P	P	11 52 16.9	+1.2
	baz=142,SNR=15						
H17A	Grant Village	73.53	331	P	P	11 52 16.7	+0.8
	baz=141						
LAO	LASA Array	73.53	335	IAmb	IAmb	11 52 28.6	
	comp=Z,56nm,1.4s						
LAO	LASA Array	73.53	335	P	P	11 52 16.3	+0.8
	baz=145,SNR=6.4						
PPT2	Papeete2	73.94	257	*e*LR	LR	12 14 53.4	
	comp=Z,4µm,24.2s,baz=107						
PPT	Papeete	73.95	257	LR	LR	12 16 40.8	
	comp=Z,1µm,19.8s,baz=106,slow=29						
DGMT	Dagmar	74.26	338	IAmb	IAmb	11 52 33.6	
	comp=Z,99nm,1.5s						
DGMT	Dagmar	74.26	338	P	P	11 52 20.7	+1.0
	baz=148,SNR=8.1						
SCHQ	Schefferville	74.46	2	P	P	11 52 20.9	+0.2
	comp=Z,4.1nm,0.8s,baz=174,slow=6.5,SNR=5.7						
DLMT	Dillon	75.19	331	IAmb	IAmb	11 52 39.7	
	comp=Z,51nm,1.4s						
MFID	Camas Ranch	75.29	328	IAmb	IAmb	11 52 40.7	
	comp=Z,82nm,1.5s						
GDXM	Geysers	75.97	321	P	P	11 52 29.5	-0.4
GDXM				IAmb	IAmb	11 53 54.7	
	comp=Z,22nm,0.3s						
EGMT	Eagleton	76.03	334	IAmb	IAmb	11 52 42.8	
	comp=Z,58nm,1.2s						
EGMT	Eagleton	76.03	334	P	P	11 52 30.2	+0.2
	baz=142,SNR=12						
WVOR	Wild Horse Val	76.05	326	P	P	11 52 33.4	+3.1
WVOR				pmax	pmax		
	comp=Z,14nm,1.8s						
O02D	Mt. Diablo Mer	76.85	322	P	P	11 52 33.1	-1.7
	baz=130						
MSO	Missoula	76.91	331	IAmb	IAmb	11 53 05.1	
	comp=Z,50nm,1.4s						
MSO	Missoula	76.91	331	P	P	11 52 36.5	+1.5
	baz=139,SNR=7.5						
BMO	Blue Mountains	77.06	328	IAmb	IAmb	11 52 50.2	
	comp=Z,72nm,1.6s						
N02D	Trinity Center	77.31	322	P	P	11 52 36.7	-0.8
	baz=131						
M04C	Macdoel	77.35	323	P	P	11 52 36.9	-0.8
	baz=132						
KMRM	Mail Ridge	77.41	321	P	P	11 52 37.9	-0.2
KMRM				IAmb	IAmb	11 52 52.3	
	comp=Z,51nm,1.3s						
M02C	Callahan	77.67	323	P	P	11 52 39.6	+0.1
	baz=131						
K04D	Chiloquin, OR	77.86	324	P	P	11 52 39.7	-0.8
	baz=132						
L04D	Klamath Falls	77.90	324	P	P	11 52 40.5	-0.2
	baz=131						
J05D	Fort Rock, OR	78.02	325	P	P	11 52 41.2	-0.2
	baz=132						
TTIG	Tnine Tigouga,	78.13	51	P	P	11 52 44.0	+1.7
	SNR=6.9						
VNDA	Vanda	78.15	190	P	P	11 52 44.4	+2.8
	comp=Z,3.0nm,0.9s,baz=129,slow=6.3,SNR=4.0						
VNDA	Vanda	78.15	190	P	P	11 52 42.3	+0.8
VNDA				pmax	pmax		
	comp=Z,30nm,1.4s						
VNDA	Vanda	78.15	190	P	P	11 52 42.3	+0.8
J04D	Umpqua Nationa	78.47	324	P	P	11 52 43.1	-0.9
	baz=132						
TOA0	Torodi Ar. Sit	78.52	71	P	P	11 52 43.3	-1.4
TORD	Torodi Ar. Bea	78.52	71	P	P	11 52 43.7	-0.9
	comp=Z,82nm,1.1s,baz=254,slow=3.0,SNR=103						
TORD	Torodi Ar. Bea	78.52	71	P	P	11 52 43.2	-1.4
HUMO	Hull Mountain	78.52	324	P	P	11 52 44.3	+0.3
WALA	Waterton Lakes	78.58	333	IAmb	IAmb	11 52 57.0	
	comp=Z,36nm,1.1s						
L02E	Cave Junction	78.59	323	P	P	11 52 43.1	-1.3
	baz=130						
SYO	Syowa Base	78.67	160⇑	*e*P	P	11 52 43.6	-0.9
SYO	Syowa Base	78.67	160⇓	*i*pP	pP	11 52 49.5	-0.7
SYO	Syowa Base	78.67	160⇓	*i*PcP	PcP	11 52 54.2	+0.8
I05D	Terrebonne, OR	78.78	326	P	P	11 52 43.9	-1.6
	baz=132						
FFC	Flin Flon	78.91	342	*e*P	P	11 52 45.2	-0.6
FFC	Flin Flon	78.91	342	P	P	11 52 45.2	-0.6
K02D	Willamette Mer	78.98	323	P	P	11 52 46.1	-0.5
	baz=130						
I04A	Tendick Farm,	79.00	325	P	P	11 52 44.5	-2.2
	baz=131						
HAWA	Hanford	79.26	328	IAmb	IAmb	11 53 02.6	
	comp=Z,67nm,1.5s						
G05D	Wamic, OR	79.38	326	P	P	11 52 50.0	+1.3
	baz=132,SNR=7.0						
NEW	Newport	79.43	331	P	P	11 52 50.3	+1.4
NEW				pmax	pmax		
	comp=Z,11nm,1.2s						
NEW	Newport	79.43	331	P	P	11 52 49.3	+0.4
	baz=136						

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I02D  Swisshome        79.99 324  P        P        11 52 51.3 -0.6
      baz=130
ZGR   Zagora           80.01  53  P        P        11 52 54.0 +1.4
      SNR=12
ZGR                               P        P        11 52 54.0 +1.4
      SNR=12
TZRR  Tazzarine        80.38  52  P        P        11 52 56.0 +1.4
      SNR=6.4
TZRR                              P        P        11 52 56.0 +1.4
      SNR=6.4
LTY   Liberty          80.42 328  IAmb     IAmb     11 53 08.6
      comp=Z,73nm,1.4s
E04D  Cinebar          80.91 327  P        P        11 52 55.7 -1.2
      baz=132
ZHG   ZHG              80.94  50  P        P        11 52 59.0 +1.6
      SNR=6.1
ZHG                               P        P        11 52 59.0 +1.6
      SNR=6.1
SUR   Sutherland       80.97 121  P        P        11 52 57.6 -0.3
SUR                               IAmb     IAmb     11 53 01.1
      comp=Z,128nm,1.6s
C06D  Leavenworth      80.99 329  P        P        11 52 57.3  0.0
      baz=133
B05A  Bryant           81.81 328  P        P        11 53 01.7 +0.1
      baz=132
D03D  Eldon            81.82 327  P        P        11 53 00.2 -1.5
      baz=131
CZD   Col de Zad       81.89  51  P        P        11 53 05.0 +2.3
      SNR=6.0
PNCL  Nicolau / Gran   82.09  45 eP        P        11 53 04.5 +1.2
      comp=Z,47nm,1.4s
MDT   Midelt           82.10  51  P        P        11 53 04.5 +0.8
      SNR=11
TSUM  Tsumeb           82.25 108  P        P        11 53 05.2 +0.3
TSUM                              IAmb     IAmb     11 53 07.1
      comp=Z,70nm,1.4s
A04D  Lummi Island     82.42 328  P        P        11 53 04.8 +0.1
      baz=132
PMTG  Montargil        82.80  44 eP        P        11 53 08.2 +1.2
      comp=Z,77nm,1.7s
LLLB  Lillooet         83.29 330  IAmb     IAmb     11 53 22.9
      comp=Z,55nm,1.3s
FRB   Frobisher Bay    83.34   1  P        P        11 53 08.9 -0.3
FRB                               pmax     pmax
      comp=Z,11nm,1.2s
PMRV  Marv??o          83.54  44 eP        P        11 53 11.6 +0.7
MTE   Manteigas        83.96  43 eP        P        11 53 13.9 +0.8
      comp=Z,113nm,1.8s
HORN  Hornachuelos     84.15  46  P        P        11 53 14.7 +0.7
      SNR=6.4
MVO   Moncorvo         84.70  43 eP        P        11 53 17.5 +0.7
      comp=Z,79nm,1.4s
PBRG  Braganca         85.22  42 eP        P        11 53 20.1 +0.7
      comp=Z,85nm,1.6s
PAB   San Pablo        85.62  45  P        P        11 53 21.5  0.0
PAB                               pmax     pmax
      comp=Z,38nm,1.3s
PAB   San Pablo        85.62  45  P        P        11 53 21.5  0.0
PAB                               IAmb     IAmb     11 53 23.2
      comp=Z,38nm,1.2s
TAM   Tamanrasset      85.70  64  P        P        11 53 22.5 +0.1
TAM                               pmax     pmax
      comp=Z,89nm,1.3s
TAM   Tamanrasset      85.70  64  P        P        11 53 22.5 +0.1
BOSA  Boshof           85.81 119  P        P        11 53 22.5 -0.4
      comp=Z,17nm,1.1s,baz=255,slow=4.6,SNR=9.4
BOSA  Boshof           85.81 119  P        P        11 53 23.2 +0.3
BOSA                              IAmb     IAmb     11 53 24.6
      comp=Z,33nm,1.3s
MAW   Mawson           86.41 164  P        P        11 53 26.2 +1.4
      comp=Z,14nm,1.0s,baz=234,slow=6.1,SNR=8.9
MAW   Mawson           86.41 164  P        P        11 53 25.6 +0.7
MAW                               pmax     pmax
      comp=Z,8.0nm,1.3s
MAW   Mawson           86.41 164  P        P        11 53 25.6 +0.7
LBTB  Lobatse          87.35 116  P        P        11 53 30.2 -0.3
LBTB                              pmax     pmax
      comp=Z,28nm,1.3s
LBTB  Lobatse          87.35 116  P        P        11 53 30.2 -0.3
LBTB                              IAmb     IAmb     11 53 32.4
      comp=Z,28nm,1.2s
SFJD  Kangerlussuaq    87.89   8  IAMs_20  IAMs_20  12 19 54.8
      comp=Z,2µm,19.0s
YKA   Yellowknife Ar   89.05 341  P        P        11 53 37.2 -0.1
      comp=Z,23nm,1.1s,baz=138,slow=5.2,SNR=69
DLBC  Dease Lake       91.92 333  IAMs_20  IAMs_20  12 27 17.1
      comp=Z,1µm,18.0s
EKA   Eskdalemuir Ar   94.17  32  P        P        11 54 01.7 +0.4
      comp=Z,3.4nm,0.9s,baz=230,slow=6.4,SNR=5.4
SUMG  Summit           94.72   9 i P       P        11 54 04.6 +0.6
      comp=Z,39nm,1.1s
SUMG  Summit           94.72   9 i P       P        11 54 04.6 +0.6
SUMG                              pmax     pmax
      comp=Z,39nm,1.1s
SUMG  Summit           94.72   9  P        P        11 54 03.9 -0.1
SUMG                              IAmb     IAmb     11 54 29.4
      comp=Z,27nm,1.2s
C36M  Paulatuk         96.64 343  IAMs_20  IAMs_20  12 25 36.9
      comp=Z,2µm,21.0s
ECH   Echery           96.89  41  P        P        11 54 13.9  0.0
ECH                               pmax     pmax
      comp=Z,11nm,1.3s
ECH   Echery           96.89  41  IAmb     IAmb     11 55 46.0
      comp=Z,38nm,1.8s
CORL  Corleone         97.49  53  IAMs_20  IAMs_20  12 28 31.5
      comp=Z,4µm,19.0s
FETA  Feichten         98.72  43 i Pdiff   Pdif     11 54 22.7 +0.2
      comp=Z,10.0nm,1.4s
INK   Inuvik           98.79 340  P        Pdif     11 54 23.4 +1.5
INK                               pmax     pmax
      comp=Z,7.0nm,2.8s
EPYK  Eagle Plains     98.85 338  IAMs_20  IAMs_20  12 28 37.4
      comp=Z,2µm,19.0s
NRCA  Norcia           98.95  48  IAMs_20  IAMs_20  12 25 23.8
      comp=Z,3µm,22.0s
MOTA  Moosalm          99.07  43 i Pdiff   Pdif     11 54 23.6 -0.4
      comp=Z,10.0nm,1.2s
SQTA  Sankt Quirin     99.10  43 i Pdiff   Pdif     11 54 23.6 -0.5
      comp=Z,16nm,1.5s
RAGM  Ragged Mountai   99.37 331  IAMs_20  IAMs_20  12 28 28.4
      comp=Z,2µm,20.0s
WATA  Walderalm        99.37  43 i Pdiff   Pdif     11 54 25.1 -0.2
      comp=Z,5.6nm,0.5s
WTTA  Wattenberg       99.39  43 i Pdiff   Pdif     11 54 24.6 -0.8
      comp=Z,10nm,1.0s
EYAK  Cordova Ski Ar   99.93 331  IAMs_20  IAMs_20  12 34 22.0
      comp=Z,2µm,18.0s
TIP   Timpagrande     100.46  52  IAMs_20  IAMs_20  12 30 26.2
      comp=Z,4µm,20.0s
MYKA  Terra Mystica   100.49  44 i Pdiff   Pdif     11 54 30.6 +0.4
      comp=Z,8.7nm,1.0s
PAX   Paxson          100.74 333  IAMs_20  IAMs_20  12 32 55.3
      comp=Z,2µm,18.0s
CLL   Collm           101.50  40 ePdif     Pdif     11 54 36.0 +1.6
CLL                              ePP       PP       11 58 41.0 -3.6
CLL                               Lm       MLR      12 36 00.0
      comp=N,1µm,20.8s
CLL                               Lm       MLR      12 36 00.0
      comp=E,2µm,21.1s
CLL                               Lm       MLR      12 36 00.0
      comp=Z,2µm,20.5s
CLL   Collm           101.50  40 eP        Pdif     11 54 36.0 +1.6
CLL                              e                  11 58 41.0
CLL                               MLR      MLR
      comp=Z,2µm,20.5s
PRP   Porcupine Dome  101.73 336  IAMs_20  IAMs_20  12 34 45.4
      comp=Z,1µm,19.0s
RND   Reindeer        102.33 333  IAMs_20  IAMs_20  12 35 01.4
      comp=Z,2µm,19.0s
COLA  College         102.41 335  P        Pdif     11 54 39.4 +1.3
TRF   Thorofare Moun  102.95 333  IAMs_20  IAMs_20  12 35 22.0
      comp=Z,2µm,18.0s
KTH   Kantishna Hill  103.25 333  IAMs_20  IAMs_20  12 37 06.9
      comp=Z,2µm,19.0s
PPLA  Purkeypile      103.61 332  IAMs_20  IAMs_20  12 31 16.2
      comp=Z,1µm,21.0s
DZM   Mont Dzumac     110.24 236 eLR       LR       12 31 49.3
      comp=Z,2µm,22.4s,baz=135
ISP   Isparta         110.66  56  IAMs_20  IAMs_20  12 42 35.2
      comp=Z,1µm,20.0s
BRTR  Keskin Array B  113.35  54  PKiKP    PKiKP    11 59 21.2 +0.2
      comp=Z,2.3nm,1.1s,baz=174,slow=3.7,SNR=8.4
APA   Apatity         113.61  24⇑iPKIKP    PKiKP    11 59 20.0 -0.4
APA                               pmax     pmax
      comp=Z,10.0nm,0.7s
MOS   Moscow          116.55  37 ePKIKP    PKPdf    11 59 11.1  -15
MOS                              e                  12 00 37.5
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KLMR  Klimovskoe      117.04  31 ePKIKP    PKPdf    11 59 23.6 -3.6
KLMR                              pmax     pmax
      comp=Z,42nm,1.9s
KLMR  Klimovskoe      117.04  31 ePKPdf    PKPdf    11 59 23.7 -3.5
KLMR                              AMP               11 59 30.8
      comp=Z,42nm,1.9s
SOC   Sochi           118.16  51 i PKIKP   PKPdf    11 59 29.3 -0.6
SOC                              e                  12 00 43.8
SOC                              ePPP      PPP      12 03 15.9
SOC                              e                  12 06 20.7
SOC                              eSS       SS       12 16 56.6 -3.4
SOC                              eSSS      SSS      12 21 24.0
SOC                               pmax     pmax
      comp=Z,7.0nm,0.5s
SOC                               MLR      MLR
      comp=Z,613nm,19.0s
KIV   Kislovodsk      120.31  50 ePKIKP    PKPdf    11 59 34.1 -0.1
KIV                               pmax     pmax
      comp=Z,26nm,1.1s
KBZ   Khabaz          120.47  50  PKP      PKiKP    11 59 34.9 +0.5
      comp=Z,8.3nm,1.1s,baz=248,slow=2.2,SNR=7.5
KBZ   Khabaz          120.47  50 i PKIKP   PKiKP    11 59 34.5 +0.1
AKH   Akhalkalaki     120.94  53  PKIKP    PKiKP    11 59 35.8 +0.1
AKH   Akhalkalaki     120.94  53  PKPdf    PKiKP    11 59 35.8 +0.1
NCK   Nalchik         120.98  51 i PKIKP   PKiKP    11 59 35.8 +0.3
RAYN  Ar Rayn         121.15  74  PKIKP    PKiKP    11 59 36.8 +0.3
RAYN  Ar Rayn         121.15  74           PKiKP    11 59 36.8 +0.3
ZEI   Tsey            121.22  51 i PKIKP   PKiKP    11 59 36.3 +0.1
ZEI                               pmax     pmax
      comp=Z,8.0nm,1.3s
TBLG  Delisi          121.87  53  PKIKP    PKiKP    11 59 37.4 +0.1
TBLG  Delisi          121.87  53  PKPdf    PKiKP    11 59 37.4 +0.1
H11S2 WAKE ISLAND Hy125.86 279    T        T        14 19 05.3
      baz=100,slow=75,SNR=297
H11S1 WAKE ISLAND Hy125.87 279    T        T        14 19 05.7
      baz=100,slow=75,SNR=285
H11S3 WAKE ISLAND Hy125.88 279    T        T        14 19 06.5
      baz=100,slow=75,SNR=178
H11N3 WAKE ISLAND Hy125.91 280    T        T        14 19 06.2
      baz=100,slow=75,SNR=71
H11N2 WAKE ISLAND Hy125.92 280    T        T        14 19 07.3
      baz=100,slow=75,SNR=91
H11N1 WAKE ISLAND Hy125.93 280    T        T        14 19 12.9
      baz=100,slow=75,SNR=58
WAKE  Wake Island     126.07 280  IAMs_20  IAMs_20  12 43 05.2
      comp=Z,28nm,21.0s
SOCY  Socotra         126.61  89  PKPdf    PKiKP    11 59 47.4 -0.1
TIXI  Tiksi           126.93 352  PKP      PKPdf    11 59 44.3 -1.6
      comp=Z,1.7nm,0.9s,baz=54,slow=3.6,SNR=4.0
TIXI  Tiksi           126.93 352c iPKIKP   PKPdf    11 59 45.4 -0.5
TIXI                              pmax     pmax
      comp=Z,5.0nm,1.7s
ARU   Arti            127.77  33  PKP      PKiKP    11 59 48.5  0.0
      comp=Z,1.8nm,0.2s,baz=263,slow=0.6,SNR=6.2
ARU   Arti            127.77  33 i PKIKP   PKiKP    11 59 49.2 +0.7
ARU                                                 12 01 48.3
ARU                                                 12 06 59.0
ARU                               SS       SS       12 18 55.7 -5.2
ARU   Arti            127.77  33           PKiKP    11 59 48.9 +0.4
SEY   Seymchan        127.88 337  PKP      PKiKP    11 59 49.3 +0.8
      comp=Z,7.5nm,1.1s,baz=27,slow=3.6,SNR=9.3
SEY   Seymchan        127.88 337 i PKIKP   PKiKP    11 59 49.1 +0.6
NRIK  Noril'sk        128.77  10 i PKIKP   PKiKP    11 59 50.7 +0.6
AKTO  Aktyubinsk      129.57  40  PKP      PKPdf    11 59 51.8 +0.2
      comp=Z,7.3nm,1.2s,baz=276,slow=2.3,SNR=8.7
AS31  Alice Springs   130.48 210           PKiKP    11 59 54.8 -0.3
ASAR  Alice Springs   130.48 210  PKP      PKiKP    11 59 55.3 +0.2
      comp=Z,2.8nm,0.9s,baz=123,slow=1.8,SNR=11
ASAR  Alice Springs   130.48 210  PKIKP    PKiKP    11 59 54.8 -0.3
ASAR  Alice Springs   130.48 210           PKPpre   11 59 45.6
ASAR                                       PKiKP    11 59 54.8 -0.3
UOSS  Minazif         131.02  74  IAMs_20  IAMs_20  12 46 30.8
      comp=Z,3µm,19.0s
ABKAR Akbulak array   131.13  41  PKPdf    PKiKP    11 59 55.7 +0.2
ABKAR Akbulak array   131.13  41           PKiKP    11 59 55.7 +0.2
GEYT  Alibeck         132.42  56  PKP      PKPdf    11 59 57.1 -0.3
      comp=Z,3.5nm,0.9s,baz=180,slow=0.3,SNR=5.6
GEYT  Alibeck         132.42  56           PKPdf    11 59 57.3 -0.1
GYA0B ALIBECK ARRAY   132.42  56  PKPdf    PKPdf    11 59 57.6 +0.2
WR0   Warramunga Arr  133.28 214           PKiKP    12 00 00.2 -0.5
WR9   Warramunga Arr  133.29 214  IAMs_20  IAMs_20  12 51 10.6
      comp=Z,1µm,20.0s
WC4   Warramunga Arr  133.38 213  IAMs_20  IAMs_20  12 51 00.9
      comp=Z,1µm,20.0s
WB2   Warramunga Arr  133.39 213  PKPdf    PKiKP    12 00 00.9 -0.1
WRA   Warramunga Arr  133.39 213  PKP      PKPdf    12 00 00.2 +0.4
      comp=Z,1.8nm,0.8s,baz=140,slow=1.6,SNR=9.1
WRA   Warramunga Arr  133.39 213           PKiKP    12 00 00.7 -0.3
WRAB  Tennant Creek   133.40 213 i PKIKP   PKiKP    12 00 00.7 -0.3
WB0   Warramunga Arr  133.51 214           PKPdf    12 00 00.5 +0.5
BRVK  Borovoye        135.35  33c iPKIKP   PKPdf    12 00 02.2 -0.2
BRVK                              pmax     pmax
      comp=Z,7.0nm,1.7s
BRVK  Borovoye        135.35  33           PKiKP    12 00 03.3 -0.6
BVAR  Borovoye Array  135.42  33  PKP      PKPdf    12 00 02.6 +0.1
      comp=Z,1.2nm,0.8s,baz=291,slow=1.3,SNR=7.0
HRA   Herat           136.17  61  PKPdf    PKPdf    12 00 05.1 +0.3
FITZ  Fitzroy Crossi  138.97 204  PKP      PKPdf    12 00 08.8 -1.4
      comp=Z,2.8nm,0.9s,baz=186,slow=8.3,SNR=3.7
FITZ  Fitzroy Crossi  138.97 204           PKPdf    12 00 09.8 -0.3
KKAR  Karatay Array   140.19  46  PKIKP    PKPdf    12 00 11.7  0.0
KKAR  Karatay Array   140.19  46           PKPdf    12 00 11.7  0.0
CHGR  Chuyangaron     140.76  53  PKPdf    PKPdf    12 00 13.8 +0.9
KURK  Kurchatov       140.89  31 i PKIKP   PKPdf    12 00 13.3 +0.7
KURK  Kurchatov       140.89  31           PKPdf    12 00 13.8 +1.2
KURBB Kurchatov Arra  140.90  31  PKP      PKPdf    12 00 12.5 -0.1
      comp=Z,4.7nm,1.1s,baz=306,slow=2.9,SNR=3.1
KURBB                             PP       PP       12 03 13.4 +0.3
      comp=Z,0.5nm,0.6s,baz=327,slow=6.8,SNR=4.9
MTN   Manton Dam      140.97 215  PKPdf    PKPdf    12 00 13.6 -0.3
ZAA0  Zalesovo Array  141.19  23           PKPdf    12 00 14.0 +1.0
ZALV  Zalesovo Beam   141.19  23  PKP      PKPdf    12 00 14.1 +1.0
      comp=Z,6.1nm,0.9s,baz=236,slow=2.7,SNR=13
ZALV  Zalesovo Beam   141.19  23  PKHKP    PKPpre   12 00 07.2
ZALV                                                12 00 13.4
ZALV  Zalesovo Beam   141.19  23           PKPpre   12 00 07.2
ZALV                                       PKPdf    12 00 13.4 +0.3
GAR   Garm            141.52  52  PKPdf    PKPdf    12 00 15.4 +1.1
YSS   Yuzh-Sakhalins  141.54 322 ePKIKP    PKiKP    12 00 15.9 -0.8
KBL   Kabul           141.69  59  PKIKP    PKPdf    12 00 14.7 -0.2
KBL   Kabul           141.69  59  PKPdf    PKPdf    12 00 14.7 -0.2
BOD   Bodaibo         141.91 356 ePKHKP    PKPpre   12 00 05.4
BOD                               pmax     pmax
      comp=Z,9.0nm,1.9s
ARSB  Arslanbob       142.59  47  IAMs_20  IAMs_20  12 54 23.0
      comp=Z,2µm,22.0s
AAK   Ala-Archa       143.04  44  PKP      PKPdf    12 00 16.2 -0.8
      comp=Z,13nm,1.2s,baz=331,slow=1.9,SNR=3.1
AAK   Ala-Archa       143.04  44 i PKIKP   PKPdf    12 00 15.6 -1.4
AAK   Ala-Archa       143.04  44  IAMs_20  IAMs_20  13 01 02.0
      comp=Z,1µm,20.0s
FRU1  Bishkek         143.05  44  IAMs_20  IAMs_20  13 00 35.2
      comp=Z,1µm,20.0s
ZEA   Zeya            143.43 342 ePKIKP    PKPdf    12 00 17.8 +0.7
ZEA                               pmax     pmax
      comp=Z,14nm,1.2s
BOOM  Boomskoye usch144.05  44    PKIKP    PKPdf    12 00 19.4 +0.6
BOOM                              MLR      MLR
      comp=Z,1µm,20.0s
BOOM  Boomskoye usch144.05  44    PKPdf    PKPdf    12 00 19.4 +0.6
MAKZ  Makanchi        145.13  33  PKIKP    PKPdf    12 00 20.1 -0.2
MAKZ  Makanchi        145.13  33           PKPdf    12 00 20.1 -0.2
NIL   Nilore          145.29  59  PKIKP    PKPbc    12 00 20.3 -0.5
NIL   Nilore          145.29  59           PKPbc    12 00 20.3 -0.5
NIL   Nilore          145.29  59  IAMs_20  IAMs_20  12 56 20.9
      comp=Z,2µm,19.0s
MK31  Makanchi Array  145.30  33  PKIKP    PKPdf    12 00 20.6  0.0
MK31  Makanchi Array  145.30  33           PKPdf    12 00 20.6  0.0
MKAR  Makanchi Array  145.30  33  PKPbc    PKPdf    12 00 20.6  0.0
      comp=Z,21nm,1.0s,baz=318,slow=3.3,SNR=87
MKAR  Makanchi Array  145.30  33  PKIKP    PKPbc    12 00 20.4  0.0
MKAR  Makanchi Array  145.30  33           PKPbc    12 00 20.4  0.0
KSH   Kashi           145.41  48  PKPbc    PKPab    12 00 21.9 +0.6
KSH                               pPKP     sPKPbc   12 00 32.9 +4.2
KSH                               PKS      PKSdf    12 04 00.1 +3.4
KSH                               SKKS              12 10 32.5
KSH                               AMB      AMB
      comp=Z,330nm,3.9s
KSH                               LR       LR
      comp=Z,310nm,13.1s
KSH                               LR       LR
      comp=Z,180nm,13.7s
KSH                               LR       LR
      comp=Z,200nm,12.9s
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DGZ   Jazzator, Alta  145.53  25 i PKIKP   PKPab    12 00 22.6 +1.2
KLR   Kul'dur         145.55 334  PKPbc    PKPab    12 00 21.4 +0.1
      comp=Z,18nm,1.1s,baz=47,slow=4.1,SNR=27
KLR   Kul'dur         145.55 334 i PKP2    PKPab    12 00 22.0 +0.7
TEY   Ternei          146.14 324⇓ePKP2     PKPab    12 00 24.4 +0.8
TEY                               pmax     pmax
      comp=E,10.0nm,1.7s
TEY                               pmax     pmax
      comp=Z,20nm,1.2s
POO   Poona           146.65  86⇑iP        PKPdf    12 00 20.4 -3.3
      comp=Z,60nm,0.8s
SOEI  Soe             147.04 208  PKPbc    PKPbc    12 00 26.3 -0.3
IRK   Irkutsk         147.44   6 ePKIKP    PKPdf    12 00 24.3 +0.3
MOY   Mondy           147.60  10 ePKP2     PKPbc    12 00 26.9 -0.2
MOY                               pmax     pmax
      comp=Z,103nm,2.8s
CIT   Chita           147.71 355 ePKIKP    PKPbc    12 00 26.7 -0.6
TLY   Talaya          147.94   6  PKPbc    PKPbc    12 00 27.0 -0.9
      comp=Z,0.9nm,0.2s,baz=305,slow=0.8,SNR=9.3
TLY   Talaya          147.94   6 ePKIKP    PKPdf    12 00 26.2 +1.4
TLY                              e                  12 03 52.5
TLY                               pmax     pmax
      comp=Z,53nm,1.5s
TLY   Talaya          147.94   6           PKPdf    12 00 26.3 +1.4
FAKI  Fak Fak         147.97 228           PKPdf    12 00 27.4 +1.4
BHK   Bhakra          148.42  62 ex        PKPbc    12 00 30.6 +0.8
MMRI  Maumere         148.91 206  PKP      PKPdf    12 00 28.9 +1.3
MMRI  Maumere         148.91 206           PKPdf    12 00 28.8 +1.3
WBSI  Waikabubak, Su  149.01 200  PKP      PKPbc    12 00 30.2 -1.6
USA0B Ussuriysk Arra  149.15 327  PKIKP    PKPbc    12 00 30.0 -1.3
USA0B Ussuriysk Arra  149.15 327           PKPbc    12 00 30.0 -1.3
USRK  Ussuriysk Ar.   149.15 327  PKPbc    PKiKP    12 00 32.4  0.0
      comp=Z,14nm,1.1s,baz=23,slow=6.2,SNR=4.4
USRK  Ussuriysk Ar.   149.15 327           PKPdf    12 00 27.0 -0.1
USRK                              PKPbc    PKiKP    12 00 32.5  0.0
KLRI  Killari         149.17  88 ePKPdf    PKPdf    12 00 28.2 +0.3
ZAK   Zakamensk       149.18   7 ePKIKP    PKPdf    12 00 27.9 +0.8
ZAK                               pmax     pmax
      comp=Z,19nm,1.3s
URV   Uravakonda      149.19  94 ePKPbc    PKPbc    12 00 31.5 -0.7
HIA   Hailar          149.45 346           PKPbc    12 00 32.2 +0.3
HIA   Hailar          149.45 346  IAMs_20  IAMs_20  13 14 58.4
      comp=Z,1µm,19.0s
MJAR  Matsushiro Arr  149.64 309  PKPbc    PKiKP    12 00 33.5 -0.3
      comp=Z,12nm,1.1s,baz=66,slow=1.8,SNR=8.9
MJAR  Matsushiro Arr  149.64 309           PKiKP    12 00 33.3 -0.5
MAJO  Matsushiro      149.64 309           PKPbc    12 00 32.9 +0.1
MAT   Matsushiro      149.64 309  PKP      PKiKP    12 00 33.5 -0.3
MJB9  Matsu-Tunnel    149.64 309           PKPbc    12 00 33.2 +0.4
PALK  Pallekele       149.70 110  PKPbc    PKiKP    12 00 34.5 -0.1
      comp=Z,17nm,1.1s,baz=217,slow=2.7,SNR=10
PALK  Pallekele       149.70 110           PKPbc    12 00 33.8 +0.2
MDJ   Mudanjiang      150.03 330  PKPbc    PKPbc    12 00 33.0 -0.4
MDJ                               LR       LR
      comp=Z,730nm,19.6s
MDJ                               LR       LR
      comp=Z,880nm,22.1s
MDJ                               LR       LR
      comp=Z,1µm,19.9s
MDJ   Mudanjiang      150.03 330           PKPbc    12 00 33.4  0.0
WMQ   Urumqi          150.11  32 ePKPbc    PKPdf    12 00 27.9 -0.8
WMQ                               pPKP     PKiKP    12 00 34.4 -0.2
WMQ                               PKPab    pPKPab   12 00 45.1 -0.3
WMQ                               PP       PP       12 04 14.6 +6.8
WMQ                               SS       SS       12 23 25.6 +1.6
WMQ                               AMB      AMB
      comp=Z,290nm,8.1s
WMQ                               LR       LR
      comp=Z,2µm,21.7s
WMQ                               LR       LR
      comp=Z,2µm,24.7s
WMQ                               LR       LR
      comp=Z,1µm,18.9s
WMQ   Urumqi          150.11  32  IAMs_20  IAMs_20  12 52 15.6
      comp=Z,2µm,22.0s
SIJI  Sorong          150.11 229  PKPbc    PKiKP    12 00 35.9 +0.4
      comp=Z,16nm,0.8s,baz=42,slow=4.6,SNR=8.6
HYBB  Hyderabad (bro  150.91  90 ePKPdf    PKPdf    12 00 29.9 -0.8
HYB   Hyderabad       150.91  90 i PKP     PKPdf    12 00 32.0 +1.4
SRSP  Sriramsagar     150.93  87 ePKPdf    PKPdf    12 00 30.8 +0.2
SRLM  Srisailam       150.98  92 ePKPdf    PKPdf    12 00 31.4 +0.6
SKHT  Srikalahasti    151.18  98 ePKiKP    PKiKP    12 00 37.5  0.0
SKHT                              IVMs_BB  IVMs_BB  12 55 02.3
      comp=Z,192nm,19.4s
NJS   Nagarjunasagar  151.46  92 ePKPdf    PKPdf    12 00 32.0 +0.6
ADKI  Addanki         151.94  93 ePKPdf    PKPdf    12 00 33.0 +0.9
SONM  Songino Array   151.99   4  PKP      PKPdf    12 00 31.5  0.0
      comp=Z,4.4nm,1.2s,baz=301,slow=0.3,SNR=13
SONM                              PKPbc    PKPbc    12 00 39.1 +1.0
      comp=Z,11nm,1.1s,baz=280,slow=0.8,SNR=27
SONM  Songino Array   151.99   4           PKPdf    12 00 31.7 +0.2
SONM                                       PKiKP    12 00 38.6 +0.2
GGR   Gangavaram      152.53  89 ePKPdf    PKPdf    12 00 33.6 +0.5
MYLAV Mylavaram       152.75  92 ePKPdf    PKPdf    12 00 34.1 +0.7
KAPI  Kappang         153.19 204  PKPbc    PKiKP    12 00 43.3 +1.6
      comp=Z,13nm,0.3s,baz=225,slow=2.4,SNR=5.1
PVM   Polavaram       153.77  91 ePKPdf    PKPdf    12 00 35.5 +0.7
PVM                               IVMs_BB  IVMs_BB  12 57 14.0
      comp=Z,315nm,18.8s
KSRS  Korea Array     156.02 321  PKP      PKPdf    12 00 37.8 +0.4
      comp=Z,3.6nm,1.0s,baz=40,slow=1.5,SNR=11
KSAR  Wonju Array Be  156.06 321  PKIKP    PKPdf    12 00 38.1 +0.7
KSAR  Wonju Array Be  156.06 321           PKPdf    12 00 38.0 +0.7
CHLP  Challavanipeta  156.25  89 ePKPdf    PKPdf    12 00 38.5 +0.3
CHLP                              IVMs_BB  IVMs_BB  12 54 21.9
      comp=Z,322nm,22.7s
GTA   Gaotai          158.90  20  PKP      PKPdf    12 00 42.3 +1.2
GTA                               SS       SS       12 25 05.0 +5.9
GTA                               AMB      AMB
      comp=Z,230nm,6.9s
GTA                               LR       LR
      comp=Z,550nm,22.3s
GTA                               LR       LR
      comp=Z,590nm,19.9s
GTA                               LR       LR
      comp=Z,930nm,19.6s
HHC   Hu-ho-hao-te    158.97 355 ePKP      PKPdf    12 00 43.1 +2.0
HHC                               PP       PP       12 05 07.8  +11
HHC                               SS       SS       12 25 03.3 +4.1
HHC                               AMB      AMB
      comp=Z,220nm,8.5s
HHC                               LR       LR
      comp=Z,390nm,20.2s
HHC                               LR       LR
      comp=Z,430nm,19.4s
HHC                               LR       LR
      comp=Z,860nm,20.0s
BKNI  Bangkinang      159.03 157  IAMs_20  IAMs_20  13 00 28.3
      comp=Z,1µm,19.0s
LZH   Lanzhou         163.16  15 ePKP      PKPdf    12 00 42.3 -3.5
LZH                               pPKP     sPKPdf   12 00 55.8 +2.5
LZH                               sPKP              12 00 59.6
LZH                               LR       LR
      comp=Z,650nm,17.9s
LZH                               LR       LR
      comp=Z,610nm,18.1s
LZH                               LR       LR
      comp=Z,620nm,20.1s
NJ2   Nanjing         165.06 326 ePKP      PKPdf    12 00 45.6 -1.8
NJ2                               LR       LR
      comp=Z,1µm,16.6s
NJ2                               LR       LR
      comp=Z,760nm,16.6s
NJ2                               LR       LR
      comp=Z,2µm,20.8s
XAN   Xi'an           165.86   1  PKP      PKPdf    12 00 48.8 +0.7
XAN                               pPKP     sPKPdf   12 00 59.6 +3.4
XAN                               sPKP              12 01 03.3
XAN                               PKPab    sPKPab   12 01 55.1 +0.3
XAN                               PP       PP       12 05 39.3 +5.8
XAN                               SKS      SKSdf    12 07 46.6 -4.9
XAN                               SS       SS       12 26 11.0 +0.3
XAN                               AMB      AMB
      comp=Z,530nm,7.4s
XAN                               LR       LR
      comp=Z,750nm,20.1s
XAN                               LR       LR
      comp=Z,800nm,20.6s
XAN                               LR       LR
      comp=Z,1µm,22.2s
CD2   Chengdu         167.95  23  PKP      PKPdf    12 00 48.0 -1.8
WHN   Wuhan           168.37 337  PKP      PKPdf    12 00 51.4 +1.4
ENH   Enshi           169.62 358           PKPdf    12 00 51.3 +0.4
CMAR  Chiang Mai Arr  170.24  96  PKP      PKPdf    12 00 52.5 +1.1
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	comp=Z,0.7nm,0.3s,baz=284,slow=1.5,SNR=10						
CMAR				PKPab	PKPab	12 02 07.5	-0.1
	comp=Z,1.6nm,0.4s,baz=268,slow=5.3,SNR=12						
CMAR	Chiang Mai Arr	170.24	96		PKPdf	12 00 52.2	+0.7
CMAR					PKPab	12 02 07.8	+0.2
CHTO	Chiang Mai	170.29	94	PKIKP	PKPdf	12 00 53.3	+1.8
CHTO	Chiang Mai	170.29	94		PKPdf	12 00 51.7	+0.2
CHTO					PKPab	12 02 07.8	0.0
PBKT	Sadao Pong	171.56	111		PKPdf	12 00 52.2	0.0
KMI	Kunming	172.07	47	PKP	PKPdf	12 00 52.3	-0.2
GYA	Guiyang	173.03	19	PKP	PKPdf	12 00 51.0	-1.8
GYA				PKPab	PKPab	12 02 20.6	+1.1
GYA				PKS		12 04 22.8	
GYA				PP	PP	12 06 12.3	+2.3
GYA				AMB	AMB		
	comp=Z,140nm,8.2s						
SLVN	Son La	174.85	72		PKPdf	12 00 53.8	+0.3
QIZ	Qiongzhong	178.97	218	PKP	PKPdf	12 00 52.8	-1.4
QIZ				PP	PP	12 06 40.1	+1.3
QIZ				SS	SS	12 28 22.8	+2.7
QIZ				AMB	AMB		
	comp=Z,650nm,5.9s						

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*IDC **24** 11:43:22.8±1.3, 12°.48N×86°.14W, h0^{km}, mb3.5/5, mb1 3.9/8, mb1mx3.8/50, mbtmp3.6/8, ML3.3/3, Error ellipse: s-maj=63.2km s-min=19.9km az=55.0*

*UCR **24** 11:43:26.2±2.2, 11°.71N×86°.96W, h24^{km}±11^{km}, MD4.2, ML3.7*

*INET **24** 11:43:26.9, 11°.66N×87°.00W, h19^{km}, ML4.2*

*SNET **24** 11:43:26.0±0.8, 11°.63N×87°.18W, h20^{km}±117^{km}, ML3.8*

ISC 24 11:43:25.8±1.5, **11°.69N**±0°.06×**86°.96W**±0°.06, **h30**^{km}±12^{km}, **n41**, σ**1^{s}.38**/49, **mb3.4**/5, **1C, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASN	Masaya	0.84	70	eP	Pn	11 43 43.0	+1.3
MASN				eS	Sb	11 43 52.4	-0.7
CRIN	San Cristobal	1.00	355	eP	Pn	11 43 44.7	+0.7
CRIN				eS	Sn	11 43 58.1	+1.0
CSGN	Cosiguina Volc	1.40	335⇑	eP	Pb	11 43 50.9	-0.6
CSGN				eS	Sb	11 44 09.6	+0.5
MATN	Matagalpa	1.59	39	eP	Pn	11 43 53.3	+1.3
ACON	Acoyapa	1.77	81	eP	Pn	11 43 54.8	+0.4
CNCH	Conchagua	1.79	332	eP	Pn	11 43 55.5	+0.7
CNCH				IAML		11 44 20.6	
	comp=Z,1μm,0.4s						
CNCH	Conchagua	1.79	332	eP	Pn	11 43 55.5	+0.7
CNCH				IAML		11 44 20.6	
	comp=Z,1μm,0.4s						
GPS3	Bodega del ICE	1.82	121	iP	Pn	11 43 57.0	+1.9
LIM1	Limonal	1.95	120	iP	Pn	11 43 57.3	+0.4
CUI	Cuipilapa	2.04	120	eP	Pn	11 43 59.2	+1.0
CUI				iS	Sn	11 44 23.9	+1.2
PLVR	Palo Verde	2.07	130	eP	Pn	11 43 59.0	+0.3
BLLM	Bellamira	2.14	324	eP	Pn	11 44 00.3	+0.8
BLLM	Bellamira	2.14	324	eP	Pn	11 44 00.3	+0.8
VSM	San Miguel	2.15	324	eP	Pn	11 44 00.7	+0.8
VSM	San Miguel	2.15	324	eP	Pn	11 44 00.7	+0.8
LCY	Lacayo	2.16	323	eP	Pn	11 44 00.7	+0.9
LCY	Lacayo	2.16	323	eP	Pn	11 44 00.7	+0.9
ACAL	Aguas Claras	2.16	119	iP	Pn	11 44 01.1	+1.3
PACA	Pacayal	2.21	323	eP	Pn	11 44 00.7	+0.1
PACA				eS	Sn	11 44 28.4	+1.5
PACA	Pacayal	2.21	323	eP	Pn	11 44 00.7	+0.1
PACA				eS	Sn	11 44 28.4	+1.5
TECA	Tecapa	2.34	320	eP	Pn	11 44 02.3	-0.1
TECA	Tecapa	2.34	320	eP	Pn	11 44 02.3	-0.1
TGUH	Tegucigalpa,Un	2.37	353	eP	Pn	11 44 04.4	+1.6
TGUH	Tegucigalpa,Un	2.37	353	eP	Pn	11 44 04.4	+1.6
JTS	Las Juntas de	2.42	125	Pn	Pn	11 44 04.1	+0.8
	comp=Z,14nm,0.3s,baz=353,slow=22,SNR=52						
JTS				Sn	Sb	11 44 37.0	-1.1
	comp=Z,35nm,0.3s,baz=313,slow=20,SNR=2.6						
JTS	Las Juntas de	2.42	125	eP	Pn	11 44 04.0	+0.8
ARE1	Arenal 1	2.52	119	eP	Pn	11 44 06.3	+1.5
CASO	Castillo	2.52	120	iP	Pn	11 44 05.7	+0.9
CEDE	Laguna Cedeo	2.52	118	eP	Pn	11 44 06.7	+2.0
FORC	Fortuna	2.56	118	iP	Pn	11 44 06.7	+1.4
ESPN	Las Esperanzas	2.65	79	eP	Pn	11 44 08.1	+1.6
LFRS	El Faro	2.81	313	eP	Pn	11 44 09.0	+0.2
LFRS				eS	Sn	11 44 42.1	+0.4
SRA1	San Ramn	2.91	123	eP	Pn	11 44 13.9	+3.6
LCR2	La Lucha 2	3.49	123	eP	Pn	11 44 19.4	+1.1
APG	El Apazote	4.74	314	Pn	Pn	11 44 38.1	+2.6
	comp=Z,0.4nm,0.3s,baz=25,slow=9.2,SNR=4.2						
CMIG	Matias Romero	9.36	306	Pn	Pn	11 45 40.6	+1.8
	comp=Z,0.5nm,0.3s,baz=121,slow=11,SNR=6.9						
TXAR	Lajitas Array	23.46	321	P	P	11 48 33.1	+0.1
	comp=Z,2.2nm,0.6s,baz=138,slow=11,SNR=13						
PDAR	Pinedale Array	36.66	332	P	P	11 50 29.2	-0.9
	comp=Z,0.3nm,0.5s,baz=131,slow=10,SNR=3.8						
NVAR	Mina Array Bea	38.58	319	P	P	11 50 49.2	+2.8
	comp=Z,0.2nm,0.5s,baz=130,slow=7.4,SNR=3.7						
YKA	Yellowknife Ar	54.46	345	P	P	11 52 47.9	-2.4
	comp=Z,0.5nm,0.7s,baz=136,slow=8.0,SNR=8.0						
ILAR	Eielson Array	66.90	336	P	P	11 54 12.9	-2.0
	comp=Z,0.2nm,0.6s,baz=106,slow=5.7,SNR=2.1						

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*IDC **24** 11:46:21.1±3.0, 5°.41S×147°.42E, h175^{km}±28^{km}, mb3.5/8, mb1 3.8/11, mb1mx3.4/47, mbtmp4.1/11, MS3.4/1, Ms1 3.4/1, ms1mx2.8/34, Error ellipse: s-maj=30.2km s-min=19.9km az=105.0*

*NEIC **24** 11:46:23.7±1.3, 5°.52S±0°.06×147°.3E±0°.1, h200^{km}±5^{km}, mb4.3/25, Error ellipse: s-maj=19.0km s-min=9.2km az=95.0*

ISC 24 11:46:23.4±0.5, **5°.57S**±0°.06×**147°.27E**±0°.09, **h200**^{km}, **n48**, σ**1^{s}.28**/49, **mb4.2**/18, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	3.50	2		Pn	11 47 19.7	+0.5
PMG	Port Moresby	3.81	182	P	Pn	11 47 21.7	-1.1
	44nm,0.3s,baz=22,slow=4.6,SNR=138						
PMG				S	Sn	11 48 05.7	-3.9
	35nm,0.3s,baz=0.0,slow=20,SNR=8.6						
KRVT	Keravat (AS076	4.91	75	LR	LR	11 49 40.9	
	comp=Z,437nm,18.8s,baz=161,slow=42						
COEN	Coen	9.26	206		Pn	11 48 34.7	+1.7
COEN				Sn	Sn	11 50 16.6	-0.3
HNR	Honiara	13.14	108	P	P	11 49 25.7	-0.1
	3.7nm,0.3s,baz=252,slow=3.2,SNR=4.3						
HNR	Honiara	13.14	108	P	P	11 49 25.9	+0.1
CTA	Charters Tower	14.46	184	P	P	11 49 41.2	+0.8
	0.5nm,0.3s,baz=356,slow=12,SNR=6.2						
MTN	Manton Dam	17.48	244		Pn	11 50 15.1	-0.3
MTN				IAmb	IAmb	11 50 15.8	
	comp=Z,12nm,0.8s						
WB0	Warramunga Arr	18.87	220	P	Pn	11 50 29.9	-1.8
WR0	Warramunga Arr	18.91	220	P	Pn	11 50 30.5	-1.7
WRAB	Tennant Creek	19.02	220	P	Pn	11 50 31.3	-2.2
WB2	Warramunga Arr	19.02	220	P	Pn	11 50 31.7	-1.8
WRA	Warramunga Arr	19.03	220	P	Pn	11 50 31.8	-1.9
	comp=Z,2.4nm,0.3s,baz=48,slow=12,SNR=67						
KNRA	Kununurra	20.75	240	P	P	11 50 49.4	+0.4
AS31	Alice Springs	22.12	214	P	P	11 51 04.3	+1.4
ASAR	Alice Springs	22.12	214	P	P	11 51 04.3	+1.5
	comp=Z,9.3nm,0.8s,baz=50,slow=8.7,SNR=70						
ASAR	Alice Springs	22.12	214	P	P	11 51 04.0	+1.1
FITZ	Fitzroy Crossi	24.52	238	P	P	11 51 26.8	+2.1
	comp=Z,2.3nm,0.5s,baz=50,slow=8.1,SNR=12						
FITZ	Fitzroy Crossi	24.52	238	P	P	11 51 26.1	+1.5
FITZ				IAmb	IAmb	11 51 43.1	
	comp=Z,10nm,1.4s						
DZM	Mont Dzumac	24.76	133	P	P	11 51 27.1	+0.1
DZM				IAmb	IAmb	11 51 30.7	
	comp=Z,9.7nm,1.0s						
ARMA	Armidale	25.06	171	P	P	11 51 30.3	+0.7
ARMA				IAmb	IAmb	11 51 37.2	
	comp=Z,16nm,1.4s						
PSA00	Pilbara Seismi	30.95	236	P	P	11 52 22.4	+0.5
PSA00				IAmb	IAmb	11 52 39.5	
	comp=Z,10nm,1.3s						
OUZ	Omahuta	38.21	144	P	P	11 53 24.8	+0.8
OUZ				IAmb	IAmb	11 53 32.4	
	comp=Z,14nm,1.4s						
URZ	Urewera	42.34	144	P	P	11 53 58.2	+0.4
URZ				IAmb	IAmb	11 54 10.8	
	comp=Z,12nm,1.1s						
PET	Petropavlovsk	59.16	8	P	P	11 56 02.4	-0.6
SONM	Songino Array	64.16	331	P	P	11 56 37.6	+0.8
	comp=Z,0.7nm,0.7s,baz=116,slow=3.4,SNR=2.3						
SONM	Songino Array	64.16	331	P	P	11 56 37.5	+0.8
VNDA	Vanda	72.32	177	P	P	11 57 28.1	+1.4
	comp=Z,0.8nm,0.5s,baz=338,slow=6.0,SNR=8.7						
VNDA	Vanda	72.32	177	P	P	11 57 27.7	+1.0
MK31	Makanchi Array	77.34	320	P	P	11 57 56.2	+0.1
MKAR	Makanchi Array	77.34	320	P	P	11 57 56.5	+0.4
	comp=Z,0.3nm,0.4s,baz=96,slow=7.8,SNR=5.4						
MKAR	Makanchi Array	77.34	320	P	P	11 57 56.7	+0.7
ZALV	Zalesovo Beam	78.79	328	P	P	11 58 03.2	-0.6
	comp=Z,0.6nm,0.4s,baz=143,slow=5.0,SNR=2.6						
ZALV	Zalesovo Beam	78.79	328	P	P	11 58 03.0	-0.8
SVW2	Sparrevohn	79.75	25	P	P	11 58 09.3	+0.5
KURK	Kurchatov	81.03	323	P	P	11 58 15.8	-0.1
KURK				IAmb	IAmb	11 58 28.5	
	comp=Z,5.3nm,1.4s						
PPLA	Purkeypile	82.04	24	P	P	11 58 21.0	-0.1
PPLA				IAmb	IAmb	11 58 36.8	
	comp=Z,9.1nm,1.4s						
PMR	Palmer	82.71	26	P	P	11 58 24.5	+0.1
PMR				IAmb	IAmb	11 58 33.5	
	comp=Z,6.4nm,1.4s						
IMAR	Indian Mountai	83.00	21	P	P	11 58 26.0	+0.2
MCK	McKinley	83.73	24	P	P	11 58 29.1	-0.5
QSPA	South Pole Qui	84.39	180	P	P	11 58 33.1	0.0
QSPA				IAmb	IAmb	11 58 45.3	
	comp=Z,5.4nm,1.3s						
IL31		84.98	23	P	P	11 58 35.5	-0.4
ILAR	Eielson Array	84.98	23	P	P	11 58 35.1	-0.7
	comp=Z,1.2nm,0.6s,baz=251,slow=4.8,SNR=18						
ILAR	Eielson Array	84.98	23	P	P	11 58 35.3	-0.6
BARN	Barnard Glacie	85.83	27	P	P	11 58 41.6	+1.2
BARN				IAmb	IAmb	11 58 44.0	
	comp=Z,4.4nm,0.8s						
BVAR	Borovoye Array	86.58	324	P	P	11 58 43.4	-0.6
	comp=Z,0.4nm,0.6s,baz=98,slow=8.9,SNR=2.9						
ABKAR	Akbulak array	92.43	319	P	P	11 59 10.4	-1.1
TORD	Torodi Ar. Bea	145.24	285	PKPbc	PKiKP	12 05 38.8	-3.5
	comp=Z,1.9nm,0.6s,baz=79,slow=4.3,SNR=7.4						

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*GUC **24** 11:48:39.8±0.6, 19°.83S×70°.94W, h33^{km}±3^{km}, ML3.4*

*SJA **24** 11:48:41.5±0.9, 20°.29S×71°.14W, h65^{km}±60^{km}, ML3.5, MW3.3*

ISC 24 11:48:37.8±2.5, **19°.85S**±0°.05×**71°.01W**±0°.09, **h28**^{km}±22^{km}, **n16**, σ**1^{s}.10**/22, **2C-1D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.87	73⇓	iP	Pn	11 48 53.4	-0.9
PSGC				iS	Sn	11 49 04.2	-2.0
TA01	Diego Aracena	1.05	133⇑	iP	Pn	11 48 56.9	+0.2
TA01				iS	Sn	11 49 10.2	-0.3
TA01				IAML		11 49 16.3	
	comp=E,1μm,0.4s						
PATCX	Punta Patache	1.25	140⇑	eP	Pn	11 48 59.9	+0.2
PATCX				eS	Sn	11 49 16.7	+1.1
PATCX				IAML		11 49 23.0	
	comp=E,1μm,0.6s						
PB11	IPOC Station P	1.28	86	eP	Pn	11 49 00.2	+0.2
PB11				eS	Sn	11 49 16.0	-0.2
PB11				IAML		11 49 18.6	
	comp=N,1μm,0.7s						
PB12	IPOC Station P	1.39	28	eP	Pn	11 49 02.4	+0.9
PB12				eS	Sb	11 49 21.2	+0.6
PB12				IAML		11 49 26.4	
	comp=E,559nm,0.4s						
GO01	Chusmiza	1.72	84	eP	Pn	11 49 07.6	+1.3
GO01				eS	Sb	11 49 29.3	-1.1
PB08	IPOC Station P	1.77	100	eP	Pn	11 49 08.0	+1.0
PB08				IAML		11 49 32.2	
	comp=N,523nm,0.3s						
PB02	IPOC Station P	1.79	145	eP	Pn	11 49 07.7	+0.7
PB02				IAML		11 49 41.2	
	comp=N,2μm,0.4s						
PB09	IPOC Station P	2.54	140	iP	Pn	11 49 19.2	+1.7
PB04	IPOC Station P	2.59	162	iP	Pn	11 49 18.3	+0.2
PB05	IPOC Station P	3.08	166	iP	Pn	11 49 24.6	-0.2
PB05				IAML		11 50 31.7	
	comp=Z,92nm,0.6s						
PB06	IPOC Station P	3.14	155	iP	Pn	11 49 25.8	+0.2
PB06				IAML		11 50 20.7	
	comp=Z,196nm,1.1s						
LVC	Limon Verde	3.37	145	iP	Pn	11 49 31.3	+2.4
PB15	IPOC Station P	3.63	157	iP	Pn	11 49 31.7	-0.8
PB15				IAML		11 50 39.7	
	comp=Z,158nm,0.4s						
PB10	IPOC Station P	3.67	173	iP	Pn	11 49 32.7	0.0
PB10				IAML		11 50 24.3	
	comp=Z,103nm,2.8s						
PB14	IPOC Station P	4.78	173	iP	Pn	11 49 47.6	-0.8
PB14				IAML		11 50 40.6	
	comp=Z,71nm,4.4s						

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*IDC **24** 11:52:58.1±0.8, 19°.60S×70°.58W, h0^{km}, mb4.0/8, mb1 4.3/11, mb1mx4.1/33, mbtmp4.1/11, ML4.0/3, Error ellipse: s-maj=26.5km s-min=14.8km az=63.0*

*NEIC **24** 11:53:01.2±1.9, 19°.71S±0°.03×70°.78W±0°.05, h22^{km}±4^{km}, mb4.5/15, Error ellipse: s-maj=6.7km s-min=3.0km az=109.0*

*GUC **24** 11:53:02.7±0.7, 19°.71S×70°.70W, h44^{km}±2^{km}, ML4.2*

ISC 24 11:53:00.4±1.2, **19°.66S**±0°.03×**70°.69W**±0°.05, **h16**^{km}±7^{km}, **n76**, σ**1^{s}.25**/83, **mb4.5**/11, **4C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.54	84⇓	eP	Pn	11 53 13.6	0.0
PSGC				eS	Sn	11 53 22.0	-0.4
PSGCX	Pisagua	0.54	84		Pn	11 53 13.0	-0.6
PSGCX				Sg	Sn	11 53 22.0	-0.4
PB11	IPOC Station P	0.98	96⇓	eP	Pn	11 53 20.6	+0.9
PB11				eS	Sn	11 53 34.6	+1.3
PB11				IAML		11 53 38.0	
	comp=E,15μm,0.4s						
PB11	IPOC Station P	0.98	96		Pn	11 53 20.4	+0.7
TA01	Diego Aracena	1.02	152⇓	eP	Pb	11 53 20.1	+0.4
TA01				eS	Sg	11 53 34.0	+0.4
TA01				IAML		11 53 37.2	
	comp=E,7μm,0.4s						
PB12	IPOC Station P	1.09	18	eP	Pg	11 53 22.6	+0.9
PB12				eS	Sg	11 53 38.2	+2.3
PB12				IAML		11 53 41.2	
	comp=N,11μm,0.6s						
PB12	IPOC Station P	1.09	18		Pg	11 53 22.5	+0.9
PB12				Sn	Sg	11 53 38.0	+2.1
PATCX	Punta Patache	1.26	156⇑	iP	Pn	11 53 23.6	+0.1
PATCX				eS	Sb	11 53 39.9	-0.1
PATCX				IAML		11 53 54.6	
	comp=E,5μm,0.4s						
PATCX	Punta Patache	1.26	156		Pn	11 53 23.6	+0.1
PATCX				Sn	Sn	11 53 40.3	0.0
AP01	Chacalluta	1.32	15⇑	iP	Pg	11 53 26.2	+0.3
AP01				eS	Sg	11 53 43.9	+0.7
GO01	Chusmiza	1.41	91⇓	eP	Pg	11 53 28.0	+0.4
GO01				eS	Sg	11 53 47.0	+0.8
GO01	Chusmiza	1.41	91	Pn	Pg	11 53 28.0	+0.4
PB08	IPOC Station P	1.53	109⇓	eP	Pg	11 53 29.2	-0.6
PB08				eS	Sg	11 53 49.2	-0.5
PB08				IAML		11 53 51.0	
	comp=N,3μm,0.2s						
PB16	IPOC Station P	1.73	41⇑	iP	Pg	11 53 33.4	-0.4
PB16				iS	Sg	11 53 57.2	+0.9
PB16				IAML		11 54 03.6	
	comp=N,4μm,0.3s						
PB16	IPOC Station P	1.73	41		Pg	11 53 33.2	-0.5
PB01	IPOC Station P	1.78	141⇑	iP	Pb	11 53 31.7	-1.1
PB01				iS	Sb	11 53 54.3	-0.6
PB01				IAML		11 53 59.3	
	comp=E,3μm,0.3s						
PB01	IPOC Station P	1.78	141		Pb	11 53 31.7	-1.1
PB07	IPOC Station P	2.19	160	IAML		11 54 13.9	
	comp=E,2μm,0.3s						
PB07	IPOC Station P	2.19	160		Pn	11 53 36.5	+0.2
PB09	IPOC Station P	2.52	148	IAML		11 54 26.3	
	comp=N,2μm,0.7s						
PB09	IPOC Station P	2.52	148		Pn	11 53 42.4	+1.5
PB04	IPOC Station P	2.71	169		Pn	11 53 42.7	-0.8
LVC	Limon Verde	3.38	151	Pn	Pn	11 53 54.2	+1.3
	comp=N,20nm,0.3s,baz=329,slow=11,SNR=21						
LVC				Sn	Sn	11 54 34.3	+1.5
	comp=N,73nm,0.3s,baz=96,slow=22,SNR=7.7						
LVC				Lg	Lg	11 54 45.4	
	comp=N,86nm,0.3s,baz=228,slow=18,SNR=9.2						
LVC	Limon Verde	3.38	151		Pn	11 53 54.4	+1.6
PB15	IPOC Station P	3.71	162		Pn	11 53 57.0	-0.3
PB10	IPOC Station P	3.84	178		Pn	11 53 56.9	-2.0
LPAZ	La Paz	4.15	36	Pn	Pb	11 54 09.3	-4.1
	comp=N,4.2nm,0.3s,baz=184,slow=6.0,SNR=32						
PB14	IPOC Station P	4.95	177		Pn	11 54 12.4	-2.0
GO02	Mina Guanaco	5.57	170		Pn	11 54 21.9	-1.1
GO03	Copiap	7.91	177	Pn	Pn	11 54 53.0	-1.9
SIV	San Ignacio	9.86	70	Pn	Pn	11 55 21.5	-0.2
	comp=N,1.9nm,0.3s,baz=271,slow=9.5,SNR=20						
GO04	Tololo Observa	10.47	181	Pn	Pn	11 55 27.1	-3.0
SAML	Samuel	12.89	35	Pn	Pn	11 56 02.8	-0.3
CPUP	Villa Florida	13.98	121	Pn	Pn	11 56 18.9	+1.0
	comp=N,0.1nm,0.3s,baz=283,slow=19,SNR=1.6						
CPUP	Villa Florida	13.98	121		Pn	11 56 17.9	0.0
GO06	Curarrehue	19.87	182	P	P	11 57 30.4	-0.7
PLCA	Paso Flores	21.01	180	P	P	11 57 43.8	+0.5
	comp=N,4.1nm,0.8s,baz=30,slow=5.8,SNR=2.9						
PLCA	Paso Flores	21.01	180	P	P	11 57 43.5	+0.2
PTGA	Pitinga	21.55	30	P	P	11 57 48.6	-0.6
	comp=N,10nm,0.3s,baz=300,slow=23,SNR=37						
PTGA	Pitinga	21.55	30	P	P	11 57 48.3	-0.9
PTGA				IAmb	IAmb	11 57 49.6	
	comp=Z,27nm,1.2s						
FLOC	Florencia	21.66	346	P	P	11 57 51.4	+0.8
BDFB	Brasilia	21.97	83	P	P	11 57 53.6	-0.3
BDFB				IAmb	IAmb	11 58 01.8	
	comp=Z,26nm,1.4s						
RUSC	La Rusia	25.50	354	P	P	11 58 29.8	+1.0
CRPR	Cabo Rojo, PR	37.60	6	P	P	12 00 13.0	-1.4
MTP	Monte Pirata	37.86	8	P	P	12 00 17.1	+0.4
MTP				IAmb	IAmb	12 00 25.3	
	comp=Z,8.1nm,1.0s						
WVT	Waverly	57.81	344	P	P	12 02 50.7	-0.4
TXAR	Lajitas Array	58.17	326	P	P	12 02 53.7	-0.2
	comp=Z,0.6nm,1.0s,baz=142,slow=6.2,SNR=3.9						
TXAR	Lajitas Array	58.17	326	P	P	12 02 53.1	-0.8
SNAA	Sanae	64.56	161	P	P	12 03 37.1	+0.6
SNAA				IAmb	IAmb	12 03 54.0	
	comp=Z,4.0nm,1.1s						
DBIC	Dimbokro	69.84	75	P	P	12 04 09.4	-1.5
	comp=Z,1.9nm,0.7s,baz=217,slow=4.9,SNR=4.0						
DBIC	Dimbokro	69.84	75	P	P	12 04 08.8	-2.1
DBIC				IAmb	IAmb	12 04 15.5	
	comp=Z,3.4nm,0.8s						
QSPA	South Pole Qui	70.52	180	P	P	12 04 15.4	+1.0
PDAR	Pinedale Array	71.69	331	P	P	12 04 23.3	+1.5
	comp=Z,0.3nm,0.7s,baz=150,slow=6.2,SNR=3.2						
PDAR	Pinedale Array	71.69	331	P	P	12 04 22.2	+0.4
NVAR	Mina Array Bea	73.02	323	P	P	12 04 30.2	+0.4
	comp=Z,0.5nm,0.8s,baz=170,slow=7.7,SNR=4.0						
NVAR	Mina Array Bea	73.02	323	P	P	12 04 29.4	-0.5
YNE	Yellowstone No	73.65	332	P	P	12 04 34.0	+0.5
TOA0	Torodi Ar. Sit	78.33	71	P	P	12 04 58.7	-1.8
TORD	Torodi Ar. Bea	78.33	71	P	P	12 04 59.5	-1.1
	comp=Z,3.6nm,0.7s,baz=255,slow=4.9,SNR=12						
TORD	Torodi Ar. Bea	78.33	71	P	P	12 04 59.2	-1.3
YKA	Yellowknife Ar	88.91	341	P	P	12 05 53.7	+0.1
	comp=Z,1.7nm,0.8s,baz=135,slow=5.1,SNR=29						
H11S2	WAKE ISLAND Hy	125.97	279	T	T	14 31 14.5	
	baz=101,slow=75,SNR=87						
H11S1	WAKE ISLAND Hy	125.97	279	T	T	14 31 15.6	
	baz=101,slow=75,SNR=53						
H11S3	WAKE ISLAND Hy	125.98	279	T	T	14 31 14.2	
	baz=101,slow=75,SNR=60						
H11N3	WAKE ISLAND Hy	126.00	280	T	T	14 31 15.9	
	baz=100,slow=74,SNR=18						
H11N2	WAKE ISLAND Hy	126.02	281	T	T	14 31 20.1	
	baz=100,slow=74,SNR=30						
H11N1	WAKE ISLAND Hy	126.02	280	T	T	14 31 16.8	
	baz=100,slow=74,SNR=14						
ASAR	Alice Springs	130.71	210	PKP	PKPdf	12 12 11.3	-0.4
	comp=Z,0.8nm,1.1s,baz=139,slow=1.5,SNR=2.8						
ASAR	Alice Springs	130.71	210		PKPdf	12 12 12.2	+0.6
WRA	Warramunga Arr	133.62	213	PKP	PKPdf	12 12 17.8	+0.6
	comp=Z,0.3nm,0.5s,baz=156,slow=1.5,SNR=2.6						
ZALV	Zalesovo Beam	140.96	23	PKP	PKiKP	12 12 31.5	-0.7
	comp=Z,0.5nm,0.5s,baz=358,slow=4.3,SNR=2.1						
MAKZ	Makanchi	144.90	33		PKPbc	12 12 36.4	+0.4
MK31	Makanchi Array	145.07	33		PKPab	12 12 37.0	+0.4
MKAR	Makanchi Array	145.07	33	PKP	PKPdf	12 12 37.0	-0.1
	comp=Z,3.3nm,0.8s,baz=323,slow=3.7,SNR=18						
KSH	Kashi	145.19	48	PKPbc	PKPdf	12 12 38.8	+1.1
KSH				PP	PP	12 16 01.4	+4.8
KSH				PKS	PKSdf	12 16 15.3	+2.0
SONM	Songino Array	151.79	4	PKPbc	PKiKP	12 12 55.2	+0.2
	comp=Z,0.3nm,0.4s,baz=16,slow=2.1,SNR=3.3						

MAN 24 11:56:19.8, 7°.12N×123°.52E, h7^{km}, mb4.4, ML3.2, MS3.2, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.73	82⇓	iP	Pg	11 56 33.9	+0.1
CTBH				iS	Sg	11 56 43.5	+0.3
PAGZ	Pagadian	0.73	349	eP	Pg	11 56 34.2	+0.3
PAGZ				eS	Sb	11 56 45.0	-0.2
SKMP	Bagumbayan, Su	1.18	120	eP	Pg	11 56 41.6	-0.8
SKMP				eS	Sg	11 56 56.7	-1.1
KCP	Kidapawan	1.56	94⇓	iP	Pn	11 56 47.5	-0.5
KCP				iS	Sb	11 57 09.2	+0.1
BUKP	Musuan	1.70	64	eP	Pn	11 56 49.4	-0.6
BUKP				eS	Sb	11 57 12.8	-0.4
GSPH	General Santos	1.75	126⇑	iP	Pg	11 56 56.9	+3.5
DDMP	Don Marcelino,	2.40	115	eP	Pn	11 57 00.3	+0.8
DDMP				eS	Sn	11 57 29.1	-0.2
TBP	Tagbilaran	2.58	8	eP	Pn	11 57 00.3	-1.7
TBP				iS	Sn	11 57 33.6	+0.1

HEL 24 11:57:02.9±0.4, **61°.60N×23°.95E, h0**^{km}**, ML1.0, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF	Keuruu	0.71	37	SG	Sg	11 57 25.2	-0.6
FIA0	FINESS Array S	1.03	98	PG	Pg	11 57 20.9	-1.7
	baz=279						
FIA0				SB	Sg	11 57 35.6	-0.3
NUR	Nurmijrvi	1.15	163	PG	Pg	11 57 23.5	-1.4
NUR				SG	Sg	11 57 38.5	-1.3
PVF	Pernaja	1.41	138	PG	Pn	11 57 27.7	-2.1
PVF				MSG		11 57 45.4	
	comp=Z,1.0nm,0.2s						
VAF	Ylistaro	1.56	338	MSG		11 57 49.8	
	comp=Z,0.8nm,0.2s						
VAF				SN	Sg	11 57 53.1	+0.1

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*IDC **24** 12:04:18.6±1.1, 7°.47S×156°.18E, h0^{km}, mb4.0/10, mb1 4.1/11, mb1mx3.9/43, mbtmp4.0/11, ML3.6/1, Error ellipse: s-maj=31.8km s-min=25.6km az=107.0*

ISC 24 12:04:25.1±0.7, **7°.5S**±0°.2×**156°.1E**±0°.1, **h44**^{km}, **n15**, σ**1^{s}.31**/13, **mb4.1**/10, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.28	118	Pn	Pn	12 05 25.6	-2.1
	3.6nm,0.3s,baz=233,slow=3.9,SNR=1.7						
HNR				Sn	Sn	12 06 19.3	+2.9
	27nm,0.3s,baz=311,slow=4.7,SNR=3.7						
HNR	Honiara	4.28	118	P	Pn	12 05 16.0	-12
WRA	Warramunga Arr	24.48	237	P	P	12 09 40.3	0.0
	0.6nm,0.8s,baz=62,slow=9.8,SNR=6.1						
WRA				PcP	PcP	12 13 18.0	-0.3
	0.3nm,0.5s,baz=59,slow=2.0,SNR=2.1						
ASAR	Alice Springs	26.72	230	P	P	12 10 00.1	-0.5
	0.1nm,0.4s,baz=60,slow=9.7,SNR=1.5						
H11S3	WAKE ISLAND Hy	27.82	22	T	T	12 38 29.9	
	baz=202,slow=75,SNR=48						
H11S2	WAKE ISLAND Hy	27.82	22	T	T	12 38 39.4	
	baz=202,slow=75,SNR=38						
H11S1	WAKE ISLAND Hy	27.83	22	T	T	12 38 38.4	
	baz=202,slow=75,SNR=18						
MJAR	Matsushiro Arr	46.88	340	P	P	12 12 50.3	-0.8
	0.9nm,0.7s,baz=125,slow=7.6,SNR=2.3						
KSRS	Korea Array	51.86	331	P	P	12 13 29.6	+0.5
	1.3nm,0.5s,baz=144,slow=6.8,SNR=6.5						
CMAR	Chiang Mai Arr	61.98	295	P	P	12 14 41.5	+0.3
	0.4nm,0.3s,baz=121,slow=5.0,SNR=4.8						
SONM	Songino Array	70.32	327	P	P	12 15 35.6	+1.3

	4.6nm,0.8s,baz=138,slow=6.6,SNR=24						
ILAR	Eielson Array	83.39	21	P	P	12 16 46.4	-1.0
	0.3nm,0.6s,baz=228,slow=5.6,SNR=4.6						
MKAR	Makanchi Array	84.47	318	P	P	12 16 54.0	+0.6
	7.0nm,0.6s,baz=100,slow=6.3,SNR=80						
ZALV	Zalesovo Beam	85.17	326	P	P	12 16 56.3	-0.3
	2.8nm,0.4s,baz=114,slow=4.8,SNR=16						
AAK	Ala-Archa	88.87	313	P	P	12 17 15.6	+0.6
	1.0nm,0.6s,baz=186,slow=18,SNR=3.6						

IDC ***24*** *12:09:31.9±1.6, 19°.46S×177°.55W, h557^{km}±19^{km}, mb3.1/9, mb1 3.3/12, mb1mx3.1/40, mbtmp4.1/12, Error ellipse: s-maj=23.7km s-min=13.2km az=145.0*

NEIC ***24*** *12:09:32.8±1.4, 19°.3S±0°.1×177°.6W±0°.2, h563^{km}±9^{km}, mb4.0/19, Error ellipse: s-maj=22.3km s-min=18.9km az=123.0*

ISC 24 12:09:31.8±0.6**, 19°.4S**±0°.1×**177°.5W**±0°.1**, h550**^{km}**, n42,** σ**1^{s}.28**/45**, mb3.9**/19**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.51	290	P	P	12 11 01.7	+3.9
AFI	Afiamalu	7.72	46	P	P	12 11 26.9	-0.1
	5.2nm,0.3s,baz=205,slow=21,SNR=7.0						
AFI	Afiamalu	7.72	46	P	P	12 11 27.6	+0.6
DZM	Mont Dzumac	15.25	257	P	P	12 12 44.6	+0.6
	0.3nm,0.3s,baz=75,slow=19,SNR=2.1						
DZM	Mont Dzumac	15.25	257	P	P	12 12 45.4	+1.4
OUZ	Omahuta	17.65	205	P	P	12 13 08.9	+2.5
OUZ				IAmb	IAmb	12 13 27.9	
	comp=Z,6.5nm,1.1s						
URZ	Urewera	19.41	193	P	P	12 13 19.3	-3.0
	comp=Z,0.6nm,0.3s,baz=219,slow=3.1,SNR=6.4						
URZ	Urewera	19.41	193	P	P	12 13 21.2	-1.2
MLZ	Mavora Lakes	28.54	201	P	P	12 14 44.2	+0.7
MLZ				IAmb	IAmb	12 14 46.6	
	comp=Z,3.7nm,0.7s						
WHZ	Wether Hill Ro	29.06	201	P	P	12 14 49.0	+1.0
CTA	Charters Tower	34.08	263	P	P	12 15 30.2	-0.9
	comp=Z,2.0nm,0.5s,baz=127,slow=12,SNR=5.6						
TOO	Toolangi	36.95	233	P	P	12 15 54.9	+0.2
TOO				IAmb	IAmb	12 15 56.1	
	comp=Z,3.4nm,0.7s						
COEN	Coen	37.98	272	P	P	12 16 03.8	+0.3
COEN				IAmb	IAmb	12 16 12.5	
	comp=Z,4.5nm,1.1s						
STKA	Stephens Creek	38.70	243	P	P	12 16 08.3	-0.8
	comp=Z,2.3nm,0.8s,baz=70,slow=8.6,SNR=4.5						
STKA	Stephens Creek	38.70	243	P	P	12 16 09.4	+0.3
BBOO	Buckleboo	43.47	242	P	P	12 16 46.7	-0.2
WB0	Warramunga Arr	45.20	261	P	P	12 16 59.7	-0.7
WB0				IAmb	IAmb	12 16 60.0	
	comp=Z,4.6nm,1.1s						
WB2	Warramunga Arr	45.21	261	P	P	12 16 59.8	-0.7
WB2				IAmb	IAmb	12 16 59.8	
	comp=Z,1.6nm,0.6s						
WRA	Warramunga Arr	45.22	261	P	P	12 16 59.8	-0.8
	comp=Z,1.1nm,0.3s,baz=98,slow=7.8,SNR=46						
WRA				PcP	PcP	12 18 27.5	-1.5
	comp=Z,0.5nm,0.6s,baz=99,slow=3.3,SNR=4.6						
AS31	Alice Springs	45.23	256	P	P	12 17 00.3	-0.4
ASAR	Alice Springs	45.24	256	P	P	12 17 00.2	-0.5
	comp=Z,2.4nm,0.5s,baz=86,slow=8.3,SNR=85						
ASAR				PcP	PcP	12 18 28.1	-0.9
	comp=Z,0.9nm,0.6s,baz=102,slow=3.9,SNR=7.8						
ASAR				S	S	12 22 57.9	-3.2
	comp=Z,0.8nm,0.8s,baz=95,slow=16,SNR=10.0						
ASAR	Alice Springs	45.24	256	P	P	12 17 00.0	-0.7
MTN	Manton Dam	49.62	269	P	P	12 17 32.9	-0.7
MTN				IAmb	IAmb	12 17 42.3	
	comp=Z,6.4nm,1.1s						
KNRA	Kununurra	51.20	265	P	P	12 17 44.3	-0.8
KNRA				IAmb	IAmb	12 17 45.4	
	comp=Z,7.0nm,0.8s						
FITZ	Fitzroy Crossi	53.64	261	P	P	12 18 02.2	-0.3
PSA00	Pilbara Seismi	58.38	256	P	P	12 18 34.4	-0.8
PSA00				IAmb	IAmb	12 18 35.1	
	comp=Z,5.4nm,0.7s						
VNDA	Vanda	59.08	185	P	P	12 18 39.6	+0.7
	comp=Z,1.0nm,0.8s,baz=347,slow=4.6,SNR=3.0						
VNDA	Vanda	59.08	185	P	P	12 18 40.2	+1.2
QSPA	South Pole Qui	70.71	180	P	P	12 19 52.8	+0.4
QSPA				IAmb	IAmb	12 20 10.4	
	comp=Z,2.6nm,1.1s						
NVAR	Mina Array Bea	79.88	43	P	P	12 20 44.4	+0.4
	comp=Z,0.2nm,0.6s,baz=234,slow=8.7,SNR=1.9						
IPM	Ipoh	83.44	277	P	P	12 21 02.4	-0.1
IPM				IAmb	IAmb	12 21 05.8	
	comp=Z,5.3nm,0.9s						
SEY	Seymchan	85.37	347	P	P	12 21 09.4	-1.3
	comp=Z,0.6nm,0.6s,baz=82,slow=19,SNR=4.2						
IMAR	Indian Mountai	86.96	10	P	P	12 21 17.8	-0.4
ILAR	Eielson Array	87.10	13	P	P	12 21 18.1	-0.8
	comp=Z,0.6nm,1.1s,baz=237,slow=5.1,SNR=4.7						
CMAR	Chiang Mai Arr	90.17	289	P	P	12 21 35.0	+0.7
	comp=Z,0.4nm,0.3s,baz=121,slow=2.2,SNR=4.3						
CMAR	Chiang Mai Arr	90.17	289	P	P	12 21 34.5	+0.2
MKAR	Makanchi Array	110.75	314	PKiKP	PKiKP	12 27 00.7	-1.7
	comp=Z,0.3nm,0.5s,baz=251,slow=1.3,SNR=2.9						
ARCES	ARCESS Array B	127.88	350	PKP	PKPdf	12 27 33.8	-0.9
	comp=Z,3.3nm,1.0s,baz=20,slow=3.9,SNR=5.9						
BURAR	Bucovina Array	146.28	332		PKPbc	12 28 11.6	+0.4
BRTR	Keskin Array B	146.40	314	PKPbc	PKPdf	12 28 11.1	+1.6
	comp=Z,1.1nm,0.6s,baz=136,slow=5.3,SNR=4.6						
GERES	GERESS Array B	149.22	345	PKPbc	PKPbc	12 28 18.0	-0.7
	comp=Z,0.5nm,0.4s,baz=34,slow=3.4,SNR=5.3						
GERES	GERESS Array B	149.22	345		PKPbc	12 28 18.1	-0.6

IDC ***24*** *12:22:20.1±1.1, 19°.48S×70°.85W, h0^{km}, mb4.0/5, mb1 4.1/7, mb1mx3.8/29, mbtmp4.0/7, ML3.7/2, Error ellipse: s-maj=32.8km s-min=23.7km az=81.0*

NEIC ***24*** *12:22:21.9±1.4, 19°.68S±0°.02×71°.09W±0°.03, h20^{km}±5^{km}, mb4.1/5, Error ellipse: s-maj=4.9km s-min=1.7km az=60.0*

GUC ***24*** *12:22:22.6±0.8, 19°.69S×71°.13W, h34^{km}±3^{km}, ML3.8*

SJA ***24*** *12:22:34.6±1.0, 20°.81S×71°.12W, h71^{km}±38^{km}, ML3.2, MW3.4*

ISC 24 12:22:19.4±1.7**, 19°.64S**±0°.04×**71°.08W**±0°.05**, h4**^{km}±10^{km}**, n54,** σ**1^{s}.22**/64**, mb4.1**/6**, 8C-4D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.90	87	⇓*i*P	Pn	12 22 38.5	-0.5
PSGC				*e*S	Sn	12 22 51.3	-1.3
PSGC				IAML		12 22 54.5	
	comp=E,3μm,0.3s						
PSGCX	Pisagua	0.90	87		Pn	12 22 38.5	-0.5
PSGCX				Sg	Sn	12 22 51.1	-1.5
PB12	IPOC Station P	1.25	35	⇑*i*P	Pg	12 22 44.0	+0.7
PB12				*e*S	Sn	12 23 02.1	+1.0
PB12				IAML		12 23 03.0	
	comp=N,3μm,0.4s						
PB12	IPOC Station P	1.25	35		Pg	12 22 44.0	+0.7
PB12				Sn	Sn	12 23 01.6	+0.5
TA01	Diego Aracena	1.25	138	⇑*i*P	Pn	12 22 43.5	-0.1
TA01				*e*S	Sb	12 22 59.1	-0.9
TA01				IAML		12 23 06.3	
	comp=E,3μm,0.7s						
PB11	IPOC Station P	1.34	95	⇑*i*P	Pg	12 22 45.8	+0.5
PB11				*e*S	Sg	12 23 03.6	+0.9
PB11				IAML		12 23 05.3	
	comp=N,5μm,0.4s						
PB11	IPOC Station P	1.34	95		Pg	12 22 45.7	+0.5
PB11				Sn	Sg	12 23 03.6	+0.9
AP01	Chacalluta	1.45	29	⇓*i*P	Pb	12 22 47.1	+0.2
AP01				*i* S	Sg	12 23 05.8	-0.1
PATCX	Punta Patache	1.46	144	⇑*i*P	Pn	12 22 46.5	-0.2
PATCX	Punta Patache	1.46	144		Pn	12 22 46.5	-0.2
GO01	Chusmiza	1.77	91	⇑*i*P	Pb	12 22 52.4	-0.4
GO01				*i* S	Sg	12 23 16.2	-0.4
GO01	Chusmiza	1.77	91		Pb	12 22 52.2	-0.6
GO01					Sg	12 23 16.9	+0.3
PB08	IPOC Station P	1.88	106	⇑*i*P	Pn	12 22 53.6	+0.8
PB08				*e*S	Sb	12 23 18.2	-0.3
PB08				IAML		12 23 20.3	
	comp=N,1μm,0.6s						
PB16	IPOC Station P	1.98	49	⇓*i*P	Pb	12 22 55.7	-0.6
PB16				*e*S	Sg	12 23 22.7	-0.2
PB16				IAML		12 23 28.4	
	comp=N,966nm,0.6s						
PB16	IPOC Station P	1.98	49		Pb	12 22 55.3	-1.0
PB16					Sg	12 23 23.4	+0.5
PB02	IPOC Station P	2.00	147	⇓*i*P	Pn	12 22 54.5	+0.3
PB02				IAML		12 23 33.0	
	comp=E,2μm,0.4s						
PB01	IPOC Station P	2.04	133	⇑*i*P	Pn	12 22 55.3	+0.6
PB01	IPOC Station P	2.04	133		Pn	12 22 55.2	+0.6
PB07	IPOC Station P	2.35	152		Pn	12 22 59.0	-0.1
PB03	IPOC Station P	2.69	153	⇑*i*P	Pn	12 23 03.8	0.0
PB09	IPOC Station P	2.75	142		Pn	12 23 05.3	+0.9
PB04	IPOC Station P	2.81	162		Pn	12 23 04.5	-0.9
PB04	IPOC Station P	2.81	162	*i* P	Pn	12 23 04.8	-0.6
PB05	IPOC Station P	3.30	166	*i* P	Pn	12 23 10.9	-1.1
PB05				IAML		12 24 15.8	
	comp=Z,129nm,1.0s						
PB06	IPOC Station P	3.35	156	*i* P	Pn	12 23 14.2	+1.3
PB06				IAML		12 24 14.1	
	comp=Z,250nm,1.0s						
LVC	Limon Verde	3.58	146	Pn	Pn	12 23 17.4	+1.3
	comp=Z,5.8nm,0.3s,baz=332,slow=11,SNR=10						
LVC				Sn	Sn	12 23 58.3	-0.8
	comp=Z,13nm,0.3s,baz=85,slow=16,SNR=6.9						
LVC	Limon Verde	3.58	146	*i* P	Pn	12 23 18.0	+1.9
LVC				IAML		12 24 20.5	
	comp=Z,80nm,0.6s						
LVC				IAML		12 24 47.0	
	comp=Z,82nm,0.7s						
PB15	IPOC Station P	3.85	157		Pn	12 23 19.1	-0.6
PB15	IPOC Station P	3.85	157	*i* P	Pn	12 23 22.0	+2.3
PB15				IAML		12 24 34.8	
	comp=Z,269nm,0.4s						
PB10	IPOC Station P	3.88	173		Pn	12 23 18.3	-1.6
PB10	IPOC Station P	3.88	173	*i* P	Pn	12 23 18.5	-1.5
PB10				IAML		12 24 04.4	
	comp=Z,48nm,0.4s						
LPAZ	La Paz	4.36	41	Pn	Pb	12 23 32.4	-4.6
	comp=Z,1.9nm,0.3s,baz=252,slow=4.7,SNR=24						
PB14	IPOC Station P	5.00	173		Pn	12 23 33.8	-1.8
PB14	IPOC Station P	5.00	173	*i* P	Pn	12 23 33.8	-1.8
PB14				IAML		12 24 32.1	
	comp=Z,40nm,0.7s						
GO02	Mina Guanaco	5.66	166		Pn	12 23 44.4	-0.3
YJA	Yavi	5.78	117	*i* P	Pb	12 23 55.7	-5.4
YJA				IAML		12 23 58.7	
	comp=Z,4.2nm,0.6s						
YJA				IAML		12 25 15.3	
	comp=Z,5.6nm,3.0s						
GO03	Copiap	7.95	175	Pn	Pn	12 24 15.8	-0.1
SIV	San Ignacio	10.20	71	Pn	Pn	12 24 46.2	-0.6
	comp=Z,0.9nm,0.3s,baz=258,slow=12,SNR=10						
GO06	Curarrehue	19.88	181	P	P	12 26 50.8	-1.1
GO06				IAmb	IAmb	12 27 09.9	
	comp=Z,13nm,1.4s						
PLCA	Paso Flores	21.02	179	P	P	12 27 08.0	+3.7
	comp=Z,0.7nm,0.6s,baz=27,slow=12,SNR=4.0						
PLCA	Paso Flores	21.02	179	P	P	12 27 04.6	+0.3
FLOC	Florencia	21.57	347	P	P	12 27 10.6	+0.3
PTGA	Pitinga	21.72	31	P	P	12 27 10.3	-1.5
	comp=Z,2.9nm,0.3s,baz=212,slow=18,SNR=7.9						
PTGA	Pitinga	21.72	31	P	P	12 27 10.4	-1.5
PTGA				IAmb	IAmb	12 27 22.6	
	comp=Z,3.8nm,0.7s						
RUSC	La Rusia	25.45	355	P	P	12 27 50.0	+0.8
APG	El Apazote	39.36	330	P	P	12 29 52.1	+1.6
	comp=Z,2.0nm,0.4s,baz=185,slow=11,SNR=1.8						
QSPA	South Pole Qui	70.54	180	P	P	12 33 36.7	+1.3
QSPA				IAmb	IAmb	12 33 54.5	
	comp=Z,6.0nm,1.4s						
TORD	Torodi Ar. Bea	78.67	72	P	P	12 34 22.5	-0.9
	comp=Z,1.0nm,0.6s,baz=250,slow=5.0,SNR=9.3						
YKA	Yellowknife Ar	88.78	341	P	P	12 35 14.7	+0.7
	comp=Z,0.7nm,0.8s,baz=138,slow=5.4,SNR=8.2						
H11S2	WAKE ISLAND Hy	125.61	279	T	T	15 00 43.4	
	baz=101,slow=74,SNR=5.8						
H11S1	WAKE ISLAND Hy	125.61	279	T	T	15 00 43.9	
	baz=101,slow=74,SNR=5.3						
H11S3	WAKE ISLAND Hy	125.62	279	T	T	15 00 44.7	
	baz=101,slow=74,SNR=7.1						
ASAR	Alice Springs	130.54	211	PKP	PKiKP	12 41 32.9	-0.4
	comp=Z,0.1nm,0.7s,baz=101,slow=1.7,SNR=1.0						
MKAR	Makanchi Array	145.25	33	PKPbc	PKPdf	12 41 58.7	+0.1
	comp=Z,0.8nm,0.9s,baz=328,slow=3.8,SNR=6.6						

IDC ***24*** *12:26:57.6±1.7, 25°.28S×69°.93E, h0^{km}, mb3.7/6, mb1 3.8/6, mb1mx3.6/35, mbtmp3.7/6, Error ellipse: s-maj=67.9km s-min=27.8km az=31.0*

NEIC ***24*** *12:26:59.4±1.6, 25°.1S±0°.2×69°.9E±0°.2, h10^{km}±1^{km}, mb4.6/7, Error ellipse: s-maj=35.0km s-min=14.0km az=218.0*

ISC 24 12:26:59.0±1.2**, 25°.2S**±0°.2×**69°.8E**±0°.1**, h10**^{km}**, n23,** σ**0^{s}.90**/20**, mb4.0**/11**, Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RER	Riviere de l'E	13.50	285	Pn	Pn	12 30 09.5	-1.3
H08S1	Diego Carcia H	17.66	9	T	T	12 49 19.4	
	baz=186,slow=74,SNR=4.2						
H08S2	Diego Garcia H	17.66	9	T	T	12 49 22.2	
	baz=186						
H08S3	Diego Garcia H	17.68	9	T	T	12 49 23.4	
	baz=186,slow=74,SNR=5.5						
DGAR	Diego Garcia	17.88	9		Pn	12 31 07.2	-0.8
RAYN	Ar Rayn	53.84	332	P	P	12 36 22.7	+0.3
RAYN				IAmb	IAmb	12 36 26.9	
	comp=Z,6.0nm,1.3s						
ASAR	Alice Springs	57.91	103	P	P	12 36 50.4	-1.4
	comp=Z,0.2nm,0.5s,baz=256,slow=6.7,SNR=6.4						
ASAR	Alice Springs	57.91	103	P	P	12 36 50.5	-1.2
LSA	Lhasa	58.33	22	P	P	12 36 54.9	0.0
LSA				IAmb	IAmb	12 37 10.8	
	comp=Z,3.1nm,0.6s						
WRA	Warramunga Arr	59.38	99	P	P	12 37 01.2	-0.8
	comp=Z,1.2nm,1.0s,baz=255,slow=6.9,SNR=5.0						
WB2	Warramunga Arr	59.39	99	P	P	12 37 03.0	+0.9
WB2				IAmb	IAmb	12 37 19.9	
	comp=Z,16nm,1.9s						
HRA	Herat	59.70	353	P	P	12 37 03.5	-0.4
HRA				IAmb	IAmb	12 37 09.2	
	comp=Z,3.1nm,0.5s						
KK31	Karatay Array	67.97	1	P	P	12 37 57.3	-0.8
KK31				IAmb	IAmb	12 38 10.4	
	comp=Z,3.2nm,1.4s						
KKAR	Karatay Array	67.97	1	P	P	12 37 58.4	+0.3
MK31	Makanchi Array	72.56	9	P	P	12 38 26.6	+0.5
MKAR	Makanchi Array	72.56	9	P	P	12 38 26.4	+0.3
	comp=Z,0.6nm,0.7s,baz=197,slow=6.1,SNR=5.8						
MKAR	Makanchi Array	72.56	9	P	P	12 38 25.9	-0.2
BRTR	Keskin Array B	72.86	332	P	P	12 38 28.6	+0.4
	comp=Z,0.8nm,0.9s,baz=155,slow=7.2,SNR=1.2						
BRTR	Keskin Array B	72.86	332	P	P	12 38 28.2	0.0
ABKAR	Akbulak array	74.64	353	P	P	12 38 38.7	+0.5
TORD	Torodi Ar. Bea	76.47	292	P	P	12 38 51.1	+1.5
	comp=Z,0.9nm,1.0s,baz=104,slow=6.1,SNR=2.8						
ZALV	Zalesovo Beam	79.90	9	P	P	12 39 09.1	+1.4
	comp=Z,0.4nm,0.6s,baz=205,slow=6.4,SNR=2.3						
ZALV	Zalesovo Beam	79.90	9	P	P	12 39 08.4	+0.8

AEIC ***24*** *12:31:05.4±2.0, 51°.7N±0°.2×176°.99W±0°.08, h80^{km}±5^{km}, ML3.5/23, mb4.0/24(NEIC), Error ellipse: s-maj=22.6km s-min=5.2km az=168.0*

IDC ***24*** *12:31:05.0±0.8, 51°.91N×177°.05W, h83^{km}±6^{km}, mb3.4/11, mb1 3.6/12, mb1mx3.3/45, mbtmp3.7/12, Error ellipse: s-maj=24.5km s-min=15.1km az=168.0*

NEIC ***24*** *12:31:05.5±1.3, 51°.7N±0°.1×177°.00W±0°.08, h84^{km}±5^{km}, Error ellipse: s-maj=19.0km s-min=5.8km az=165.0*

ISC 24 12:31:04.8±0.7**, 51°.7N**±0°.1×**177°.01W**±0°.04**, h84**^{km}±4^{km}**, n70,** σ**1^{s}.03**/77**, mb3.9**/15**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	0.17	303		Pn	12 31 17.5	+0.5
KIWB	Kanaga Island	0.20	334	Pn	Pn	12 31 18.2	+1.1
KIKV	Kanaga Island	0.23	334		Pn	12 31 17.9	+0.6
KICM	Kanaga Island	0.28	335		Pn	12 31 18.0	+0.6
ADK	Adak	0.29	43		Pn	12 31 17.1	-0.4
ADK	Adak	0.29	43	Sn	Sn	12 31 26.9	0.0
ETKA	Kagalaska Isla	0.42	62		Pn	12 31 18.0	-0.3
ETKA					Sn	12 31 28.9	+0.6
TAPA	Tanaga Point A	0.52	287		Pn	12 31 19.8	+0.7
GSCK	Great Sitkin C	0.63	56		Pn	12 31 20.8	+0.7
GSCK					Sn	12 31 32.1	+0.7
TAFP	Tanaga Falls P	0.65	291		Pn	12 31 20.6	+0.4
GSTD	Great Sitkin T	0.66	54		Pn	12 31 20.7	+0.2
TASE	Tanaga Southea	0.66	285		Pn	12 31 21.2	+0.7
GSMY	Great Sitkin M	0.70	57		Pn	12 31 21.2	+0.4
GSTR	Great Sitkin T	0.73	54		Pn	12 31 21.4	+0.3
GSTR				Sn	Sn	12 31 34.0	+0.8
GAEA	Gareloi East	1.09	277		Pn	12 31 26.2	+1.1
GAEA					Sn	12 31 41.8	+1.5
ATKA	Atka Island	1.82	72		Pn	12 31 34.8	+0.5
ATKA					Sn	12 31 56.1	-0.8
KOKL	Mount Kliuchef	1.85	68		Pn	12 31 35.6	+0.7
KOFP	Korovin Flat P	1.90	70		Pn	12 31 36.5	+1.1
KOSE	Korovin Southe	1.95	69		Pn	12 31 37.2	+1.1
NIKH	Nikolski High	5.17	72	Pn	Pn	12 32 21.5	+2.0
MGOD	Makushin Gods	6.51	67		Pn	12 32 40.3	+2.4
UNV	Unalaska Valle	6.74	67	Pn	Pn	12 32 42.7	+1.8
SPIA	Saint Paul Isl	6.78	33	Pn	Pn	12 32 43.3	+1.9
AKUT	Akutan	7.23	66	Pn	Pn	12 32 48.2	+0.6
SVW2	Sparrevohn	15.09	43	Pn	Pn	12 34 34.1	+1.0
CNPM	China Poot	16.46	51	Pn	Pn	12 34 49.9	-0.4
CNPM				IAmb	IAmb	12 35 02.1	
	comp=Z,16nm,1.0s						
BRLK	Bradley Lake	16.70	51	Pn	Pn	12 34 52.4	-0.9
SKT	Skwentna	17.22	43		P	12 35 00.5	+0.6
SKT				IAmb	IAmb	12 35 03.6	
	comp=Z,7.7nm,1.2s						
SUA	Susitna One	17.35	45		Pn	12 35 01.3	0.0
PPLA	Purkeypile	17.37	40		P	12 35 03.0	+1.3
PPLA				IAmb	IAmb	12 35 10.4	
	comp=Z,14nm,1.4s						
KTH	Kantishna Hill	18.19	39	P	P	12 35 10.5	0.0
KTH				IAmb	IAmb	12 35 13.9	
	comp=Z,5.6nm,0.8s						
TRF	Thorofare Moun	18.39	40	P	P	12 35 13.1	+0.2
TRF				IAmb	IAmb	12 35 17.2	
	comp=Z,10nm,1.4s						
IMAR	Indian Mountai	18.55	31	P	P	12 35 14.5	+0.1
RND	Reindeer	18.95	41	P	P	12 35 18.1	-0.8
HIN	Hinchinbrook I	18.99	51	P	P	12 35 19.4	+0.1
MLY	Manley	19.01	35	P	P	12 35 20.0	+0.5
MLY				IAmb	IAmb	12 35 20.6	
	comp=Z,4.4nm,0.6s						
SEY	Seymchan	19.79	317	P	P	12 35 27.2	-0.8
	comp=Z,0.1nm,0.3s,baz=92,slow=18,SNR=6.8						
IL31		20.32	38	P	P	12 35 32.9	-0.7
ILAR	Eielson Array	20.32	38	P	P	12 35 31.6	-2.1
	comp=Z,0.4nm,0.6s,baz=234,slow=8.4,SNR=10						
ILAR				PcP	PcP	12 39 42.5	-0.8
	comp=Z,0.1nm,0.3s,baz=258,slow=3.2,SNR=4.1						
ILAR				ScP	ScP	12 43 09.7	-2.1
	comp=Z,0.4nm,0.5s,baz=259,slow=3.0,SNR=7.5						
ILAR	Eielson Array	20.32	38	P	P	12 35 32.6	-1.1
TOLK	Toolik Lake Re	21.49	27	P	P	12 35 45.8	-0.4
TOLK				IAmb	IAmb	12 35 47.4	
	comp=Z,9.0nm,1.2s						
BMAR	Burnt Mountain	22.38	33	P	P	12 35 55.0	-0.8
EGAK	Eagle	22.60	41	P	P	12 35 56.7	-1.3
EGAK				IAmb	IAmb	12 36 15.5	
	comp=Z,3.4nm,0.8s						
INK	Inuvik	26.58	35	P	P	12 36 33.2	-1.2
	comp=Z,0.5nm,0.4s,baz=267,slow=7.4,SNR=4.8						
TIXI	Tiksi	30.94	330	P	P	12 37 15.1	+2.0
TIXI				IAmb	IAmb	12 37 34.2	
	comp=Z,3.8nm,1.4s						
YKA	Yellowknife Ar	34.22	47	P	P	12 37 40.4	-1.4
	comp=Z,0.4nm,0.5s,baz=284,slow=8.1,SNR=12						
YKA				PcP	PcP	12 40 16.6	+0.2
	comp=Z,0.4nm,0.7s,baz=288,slow=2.7,SNR=6.3						
YKA				ScP	ScP	12 43 52.0	-1.6
	comp=Z,0.2nm,0.6s,baz=290,slow=2.8,SNR=4.3						
H11N2	WAKE ISLAND Hy	34.29	208	T	T	13 14 19.7	
	baz=18,slow=76,SNR=739						
H11N3	WAKE ISLAND Hy	34.30	208	T	T	13 14 19.0	
	baz=18,slow=76,SNR=589						
H11N1	WAKE ISLAND Hy	34.30	208	T	T	13 14 21.1	
	baz=18,slow=76,SNR=523						
USA0B	Ussuriysk Arra	34.37	278	P	P	12 37 42.8	-0.5
H11S1	WAKE ISLAND Hy	35.50	207	T	T	13 15 52.4	
	baz=17,slow=76,SNR=464						
H11S2	WAKE ISLAND Hy	35.52	207	T	T	13 15 53.7	
	baz=17,slow=76,SNR=202						
H11S3	WAKE ISLAND Hy	35.52	207	T	T	13 15 52.5	
	baz=17,slow=76,SNR=195						
LON	Longmire	35.66	76	P	P	12 37 56.2	+1.7
LON				IAmb	IAmb	12 37 58.1	
	comp=Z,2.1nm,0.7s						
LTY	Liberty	36.10	74	P	P	12 37 59.1	+0.9
B08A	Colville Reser	36.38	72	P	P	12 38 01.4	+0.7
KSRS	Korea Array	40.75	272	P	P	12 38 38.6	+1.4
	comp=Z,1.5nm,0.7s,baz=51,slow=7.9,SNR=5.4						
NVAR	Mina Array Bea	42.41	84	P	P	12 38 52.0	+1.0
	comp=Z,0.4nm,0.7s,baz=307,slow=7.5,SNR=4.2						
BW06	Boulder Array	45.15	74	P	P	12 39 13.4	+0.4
BW06				IAmb	IAmb	12 39 14.7	
	comp=Z,4.0nm,0.8s						
PD31	Pinedale Array	45.15	74	P	P	12 39 13.3	+0.3
PD31				IAmb	IAmb	12 39 14.6	
	comp=Z,3.7nm,0.8s						
PDAR	Pinedale Array	45.15	74	P	P	12 39 13.5	+0.5
	comp=Z,3.4nm,0.7s,baz=306,slow=3.8,SNR=40						
PDAR				pP	pP	12 39 33.9	+0.5
	comp=Z,0.5nm,0.5s,baz=294,slow=3.4,SNR=2.4						
PDAR				sP	sP	12 39 42.7	-0.2
	comp=Z,0.7nm,0.6s,baz=298,slow=4.1,SNR=3.2						
PDAR	Pinedale Array	45.15	74	P	P	12 39 13.2	+0.2
TXAR	Lajitas Array	57.50	83	P	P	12 40 45.6	+0.4
	comp=Z,0.2nm,0.3s,baz=290,slow=5.0,SNR=7.5						
TXAR				pP	pP	12 41 06.1	-0.2
	comp=Z,0.2nm,0.6s,baz=303,slow=5.0,SNR=2.1						
TXAR				sP	sP	12 41 14.9	-0.8
	comp=Z,0.4nm,0.6s,baz=310,slow=5.6,SNR=4.3						
TXAR	Lajitas Array	57.50	83	P	P	12 40 45.8	+0.6
ARCES	ARCESS Array B	57.99	351	P	P	12 40 46.6	-1.4
	comp=Z,1.6nm,0.8s,baz=23,slow=7.9,SNR=1.6						
KURBB	Kurchatov Arra	59.73	314	P	P	12 40 58.4	-1.8
	comp=Z,0.6nm,0.6s,baz=39,slow=6.4,SNR=4.2						
WRA	Warramunga Arr	83.01	225	P	P	12 43 20.5	-0.1
	comp=Z,0.3nm,0.7s,baz=31,slow=5.7,SNR=1.9						
ASAR	Alice Springs	86.47	224	P	P	12 43 39.2	+1.4
	comp=Z,0.5nm,0.8s,baz=29,slow=5.5,SNR=9.4						
ASAR	Alice Springs	86.47	224	P	P	12 43 38.9	+1.0
BOSA	Boshof	151.58	316	PKPbc	PKPbc	12 50 48.1	-0.9
	comp=Z,1.7nm,0.5s,baz=6.1,slow=2.4,SNR=4.8						

IDC ***24*** *12:32:48.3±0.6, 19°.65S×70°.48W, h0^{km}, mb4.5/15, mb1 4.5/18, mb1mx4.4/32, mbtmp4.5/18, ML4.2/3, MS4.2/9, Ms1 4.2/9, ms1mx4.0/27, Error ellipse: s-maj=19.6km s-min=12.2km az=58.0*

NEIC ***24*** *12:32:50.6, 19°.79S×70°.84W, h22^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.36; $M_{\theta\theta}$0.10; $M_{\phi\phi}$-1.46; $M_{r\theta}$0.96; $M_{\theta\phi}$-0.21; $M_{\phi r}$-2.30; Fault plane solution: $M_0$2.87000×10^{16} NP1:ϕ_s27.17000°, δ18.94000°, λ133.34000°. NP2:ϕ_s162.23000°, δ76.34000°, λ76.75000°. Principal axes: T 2.9539, Plg57.0000°, Azm55.0000°; N -0.1797, Plg13.0000°, Azm165.0000°; P -2.7742, Plg30.0000°, Azm263.0000°;*

NEIC ***24*** *12:32:50.4±1.4, 19°.79S±0°.03×70°.81W±0°.05, h18^{km}±3^{km}, mb5.0/111, Mwr4.9/32, Mww5.0, ML4.7(GUC) Error ellipse: s-maj=6.6km s-min=4.2km az=90.0*

GUC ***24*** *12:32:51.7±0.5, 19°.78S×70°.80W, h43^{km}±1^{km}, ML4.7*

NEIC ***24*** *12:32:52, 19°.79S×71°.02W, h26^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}2.16; $M_{\theta\theta}$0.10; $M_{\phi\phi}$-2.26; $M_{r\theta}$1.55; $M_{\theta\phi}$0.45; $M_{\phi r}$-3.14; Fault plane solution: $M_0$4.17000×10^{16} NP1:ϕ_s156.00000°, δ74.00000°, λ82.00000°. NP2:ϕ_s4.00000°, δ18.00000°, λ116.00000°. Principal axes: T 4.1410, Plg60.0000°, Azm55.0000°; N 0.0514, Plg8.0000°, Azm159.0000°; P -4.1924, Plg29.0000°, Azm253.0000°;*

VAO ***24*** *12:32:53.7±0.8, 19°.76S×70°.69W, h50^{km}±6^{km}, mb4.7*

SJA ***24*** *12:32:54.1±0.6, 20°.18S×71°.01W, h97^{km}±57^{km}, ML4.5, MW4.6*

GCMT ***24*** *12:32:56.4±0.4, 19°.72S±0°.02×71°.15W±0°.03, h34^{km}±1^{km}, MW5.1/72, Moment Tensor Solution. s37,c39; s72,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.30±.34; $M_{\theta\theta}$-0.26±.19; $M_{\phi\phi}$-5.04±.22; $M_{r\theta}$0.58±.19; $M_{\theta\phi}$0.45±.10; $M_{\phi r}$-3.25±.21; Best double couple: $M_0$6.15200×10^{16} NP1:ϕ_s357.00000°, δ29.00000°, λ94.00000°. NP2: ϕ_s172.00000°, δ61.00000°, λ88.00000°. Principal axes: T 6.2660, Plg74.0000°, Azm76.0000°; N -0.2260,* *Plg2.0000°, Azm173.0000°; P -6.0370, Plg16.0000°, Azm264.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 12:32:51.0±1.1**,19°.80S**±0°.03×**70°.79W**±0°.05**,h22**^{km}±7^{km}**,**
n511,σ**1**^{s}**.17**/494**,mb5.0**/64**,5C-5D,Near coast of northern Chile**

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Code   Station Name      Δ°   AZ°    Phase ID           Time     Res
                                    Op       ISC       h  m  s    ISC
PSGC   Pisagua          0.66   72 ⇓iP       Pb        12 33 04.2 +0.1
PSGC                              i S       Sb        12 33 13.7 +0.8
PSGCX  Pisagua          0.66   72  Pg       Pb        12 33 04.1  0.0
PSGCX                              Sg       Sb        12 33 12.0 -0.8
TA01   Diego Aracena    0.95  143 eP        Pn        12 33 08.8 -0.3
TA01                              eS        Sb        12 33 22.0 +0.9
TA01                               IAML               12 33 24.9
       comp=E,48µm,0.3s
PB11   IPOC Station P   1.07   88 ⇓iP       Pn        12 33 10.9  0.0
PB11                              i S       Sb        12 33 26.0 +1.3
PB11                               IAML               12 33 29.2
       comp=N,29µm,0.2s
PB11   IPOC Station P   1.07   88           Pn        12 33 10.8  0.0
PB11                                        Sb        12 33 26.0 +1.3
PATCX  Punta Patache    1.18  149 ⇑iP       Pn        12 33 12.4 +0.1
PATCX                             eS        Sb        12 33 28.5 +0.8
PATCX                              IAML               12 33 34.7
       comp=E,20µm,0.7s
PATCX  Punta Patache    1.18  149           Pn        12 33 12.4 +0.1
PATCX                                       Sb        12 33 28.5 +0.8
PB12   IPOC Station P   1.26   20 ⇑iP       Pn        12 33 13.6 +0.2
PB12                              eS        Sn        12 33 29.8 +0.2
PB12                               IAML               12 33 35.7
       comp=N,22µm,0.5s
PB12   IPOC Station P   1.26   20           Pn        12 33 13.5 +0.1
PB12                                        Sn        12 33 29.9 +0.2
AP01   Chacalluta       1.49   17 eP        Pn        12 33 16.6 +0.2
AP01                              eS        Sn        12 33 35.2 +0.1
AP01                               IAML               12 33 46.0
       comp=E,32µm,0.6s
GO01   Chusmiza         1.51   85 ⇓eP       Pn        12 33 18.4 +1.2
GO01                              i S       Sb        12 33 38.6 +1.0
GO01                               IAML               12 33 41.1
       comp=N,26µm,0.1s
GO01   Chusmiza         1.51   85           Pn        12 33 18.2 +1.0
GO01                                        Sb        12 33 38.6 +1.0
PB08   IPOC Station P   1.58  103 ⇓iP       Pn        12 33 19.3 +1.3
PB08                              i S       Sb        12 33 40.4 +0.9
PB02   IPOC Station P   1.73  151 eP        Pn        12 33 20.4 +0.5
PB02                              eS        Sn        12 33 42.7 +1.4
PB01   IPOC Station P   1.74  135 ⇑iP       Pn        12 33 21.1 +1.1
PB01                              i S       Sb        12 33 43.2 -0.6
PB01                               IAML               12 33 47.6
       comp=E,9µm,0.3s
PB01   IPOC Station P   1.74  135  Pn       Pn        12 33 20.4 +0.4
PB01                               Sn       Sn        12 33 42.6 +1.0
PB16   IPOC Station P   1.90   40 ⇑iP       Pn        12 33 23.9 +1.3
PB16                              i S       Sb        12 33 48.9  0.0
PB16                               IAML               12 33 58.7
       comp=N,9µm,0.5s
PB16   IPOC Station P   1.90   40  Pn       Pn        12 33 23.5 +0.9
PB16                               Sn       Sn        12 33 47.5 +1.3
PB07   IPOC Station P   2.10  156  Pn       Pn        12 33 25.6 +0.6
PB09   IPOC Station P   2.46  144  Pn       Pn        12 33 30.5 +0.5
PB09   IPOC Station P   2.46  144 i P       Pn        12 33 32.4 +2.4
PB09                               IAML               12 34 15.6
       comp=Z,10µm,0.8s
PB04   IPOC Station P   2.59  167  Pn       Pn        12 33 32.6 +0.8
PB04   IPOC Station P   2.59  167 i P       Pn        12 33 31.7 -0.1
PB05   IPOC Station P   3.09  170 i P       Pn        12 33 38.0 -0.6
PB05                               IAML               12 34 34.6
       comp=Z,2µm,0.6s
PB06   IPOC Station P   3.11  159 i P       Pn        12 33 39.2 +0.3
PB06                               IAML               12 34 44.5
       comp=Z,4µm,1.0s
LVC    Limon Verde      3.30  148  Pn       Pn        12 33 42.6 +0.9
       comp=Z,36nm,0.3s,baz=322,slow=9.8,SNR=12
LVC                                Sn       Sn        12 34 22.6 +2.2
       comp=Z,129nm,0.3s,baz=140,slow=23,SNR=7.4
LVC                                LR       LR        12 34 26.6
       comp=Z,728nm,18.5s,baz=324,slow=30
LVC                                Lg       Lg        12 34 33.8
       comp=Z,302nm,0.3s,baz=245,slow=23,SNR=10
LVC    Limon Verde      3.30  148  Pn       Pn        12 33 42.4 +0.7
LVC                                         Sn        12 34 20.4 -0.1
LVC    Limon Verde      3.30  148 eP        Pn        12 33 43.0 +1.3
LVC                               eS        Sn        12 34 20.9 +0.4
PB15   IPOC Station P   3.61  160  Pn       Pn        12 33 44.7 -1.1
PB10   IPOC Station P   3.70  177           Pn        12 33 45.4 -1.5
PB10   IPOC Station P   3.70  177 i P       Pn        12 33 45.8 -1.1
PB10                               IAML               12 35 03.7
       comp=Z,829nm,0.9s
LPAZ   La Paz           4.32   36  Pn       Pn        12 34 00.5 +4.6
       comp=Z,11nm,0.3s,baz=225,slow=4.8,SNR=22
LPAZ   La Paz           4.32   36  Pn       Pn        12 33 58.0 +2.1
LPAZ   La Paz           4.32   36 eP        Pn        12 33 56.9 +1.0
PB14   IPOC Station P   4.81  176           Pn        12 34 01.0 -1.6
PB14   IPOC Station P   4.81  176 i P       Pn        12 34 01.6 -0.9
PB14                               IAML               12 35 31.7
       comp=Z,631nm,0.8s
GO02   Mina Guanaco     5.45  168           Pn        12 34 10.7 -0.5
YJA    Yavi             5.47  117 i P       Pn        12 34 15.8 +4.2
YJA                                IAML               12 35 39.6
       comp=Z,148nm,2.7s
AZAP   Zapla            6.90  131 i P       Pn        12 34 35.6 +4.5
AZAP                               IAML               12 34 58.0
       comp=Z,28nm,0.6s
AZAP                               IAML               12 36 15.8
       comp=Z,59nm,2.1s
GO03   Copiap           7.77  176           Pn        12 34 41.8 -1.1
AGUA   GUANDACOL        9.87  168 i P       Pn        12 35 12.7 +1.0
AGUA                               IAML               12 35 33.6
       comp=Z,12nm,0.6s
SIV    San Ignacio     10.00   69  Pn       Pn        12 35 10.4 -3.0
       comp=Z,5.3nm,0.3s,baz=290,slow=9.4,SNR=54
SIV                                LR       LR        12 39 22.0
       comp=Z,1µm,21.3s,baz=273,slow=41
GO04   Tololo Observa  10.33  180  Pn       Pn        12 35 15.5 -2.6
AROD   Rodeo           10.39  174 i P       Pn        12 35 19.0 -0.1
ACDV   Cuesta del Vie  10.44  172 i P       Pn        12 35 20.6 +1.1
ACDV                               IAML               12 35 51.5
       comp=Z,13nm,0.6s
ACCO   Cerro Coronel   10.85  172 i P       Pn        12 35 24.9 -0.5
CFA    Coronel Fontan  11.98  169  LR       LR        12 40 27.3
       comp=Z,2µm,21.2s,slow=38
SAML   Samuel          13.06   35           Pn        12 35 52.6 -2.7
SAML   Samuel          13.06   35 eP        Pn        12 35 53.8 -1.5
SAML                              eS        Sn        12 38 19.6 -0.5
ROC1   El Roble        13.12  181  Pn       Pn        12 35 54.1 -2.3
PEL    Peldehue        13.29  180  Pn       Pn        12 35 56.8 -1.6
MRA    San Martin      13.36  161 i P       Pn        12 35 55.6 -3.9
CPUP   Villa Florida   13.99  120  Pn       Pn        12 36 06.4 -1.6
       comp=Z,0.1nm,0.3s,baz=287,slow=11,SNR=2.5
CPUP                               LR       LR        12 42 11.8
       comp=Z,2µm,20.2s,baz=303,slow=41
AQDB   Aquidauana      14.19   95 eP        Pn        12 36 10.9 +0.2
SALV   Santo Antonio   14.89   77 eP        Pn        12 36 19.4 -0.9
GO05   Huala           15.18  184  Pn       Pn        12 36 24.1 -0.1
CLDB   Colider         16.96   61 eP        Pn        12 36 45.6 -1.4
C2SB   Chapadao do Su  16.98   90 eP        Pn        12 36 46.8 -0.5
PTGB   Pitanga         18.01  109 eP        P         12 37 01.0 +0.5
PCMB   Pacaembu        18.36   99 eP        P         12 37 02.6 -1.7
ARAG   Araguaiana, MT  18.53   80 eP        P         12 37 05.0 -1.2
PLTB   Pedras Altas    19.50  131 eP        P         12 37 16.5 -0.3
GO06   Curarrehue      19.73  182  P        P         12 37 18.7 -0.5
PLCA   Paso Flores     20.86  179  P        Pn        12 37 33.3 -0.8
       comp=Z,4.1nm,0.8s,baz=18,slow=11,SNR=10.0
PLCA                               LR       LR        12 44 31.7
       comp=Z,509nm,19.6s,baz=22,slow=34
PLCA   Paso Flores     20.86  179  P        P         12 37 31.6  0.0
IPMB   Ipameri, GO     21.44   89 eP        P         12 37 36.5 -1.5
PTGA   Pitinga         21.72   31  P        P         12 37 39.2 -1.6
       comp=Z,22nm,0.3s,baz=329,slow=23,SNR=33
PTGA   Pitinga         21.72   31  P        P         12 37 38.4 -2.4
PTGA   Pitinga         21.72   31 eP        P         12 37 39.2 -1.6
FLOC   Florencia       21.78  347 eP        P         12 37 41.2 -0.3
FLOC   Florencia       21.78  347  P        P         12 37 41.1 -0.4
RCLB   Rio Claro- Sao  21.85  101 eP        P         12 37 41.2 -1.1
GCUF   Volcan Galeras  21.86  342 eP        P         12 37 47.4 +4.5
SPB    Sao Paulo       22.02  104 eP        P         12 37 43.1 -1.0
BDFB   Brasilia        22.08   83  P        P         12 37 42.7 -2.2
       comp=Z,3.8nm,0.4s,baz=257,slow=7.9,SNR=6.4
BDFB                               LR       LR        12 47 17.2
       comp=Z,2µm,19.1s,baz=272,slow=40
BDFB   Brasilia        22.08   83  P        P         12 37 44.1 -0.8
GARC   Garzon, Huila   22.33  348 eP        P         12 37 48.6 +0.9
VAO    Valinhos        22.41  102 eP        P         12 37 47.0 -1.3
PCON   Cinco Dias      22.67  345 eP        P         12 37 55.8 +4.2
PARB   Paraibuna       23.66  103 eP        P         12 38 00.8 -0.3
ORTC   Ortega, Tolima  23.96  349 eP        P         12 38 03.2 -0.8
ROSC   El Rosal        24.73  352  P        P         12 38 12.1 +0.6
       comp=Z,5.9nm,0.4s,baz=49,slow=22,SNR=4.1
ROSC                               LR       LR        12 47 30.5
       comp=Z,692nm,18.8s,baz=198,slow=36
ROSC   El Rosal        24.73  352  P        P         12 38 10.5 -0.9
SMTB   Santa Maria do  24.94   67 eP        P         12 38 11.8 -1.1
RREF   El Recreo       24.95  349 eP        P         12 38 15.9 +2.3
GUY2C  Guyana, Caldas  25.27  349 eP        P         12 38 15.9 -0.5
RUSC   La Rusia        25.63  355 eP        P         12 38 20.1 +0.4
RUSC   La Rusia        25.63  355  P        P         12 38 19.8 +0.1
JANB   Januaria        25.69   84 eP        P         12 38 17.5 -2.3
PAMC   Pamplona, Colo  27.04  356 eP        P         12 38 29.7 -2.6
UREC   San Jos de Ur   27.77  350 eP        P         12 38 34.2 -4.2
SDV    Santo Domingo   28.51    0  P        P         12 38 44.6 -0.6
       comp=Z,7.4nm,0.9s,baz=237,slow=7.0,SNR=6.6
SDV    Santo Domingo   28.51    0 eP        P         12 38 45.8 +0.6
SDV    Santo Domingo   28.51    0  P        P         12 38 43.9 -1.3
SDV    Santo Domingo   28.51    0 eP        P         12 38 44.0 -1.2
SJCC   San Jacinto, C  29.82  351 eP        P         12 38 57.0 +0.3
RCBR   Riachuelo       36.64   72  P        P         12 39 52.2 -4.1
       comp=Z,19nm,1.1s,baz=240,slow=9.6,SNR=5.4
RCBR   Riachuelo       36.64   72  P        P         12 39 55.8 -0.5
RCBR                               IAmb     IAmb      12 39 57.1
       comp=Z,43nm,1.3s
RCBR   Riachuelo       36.64   72 eP        P         12 39 55.0 -1.3
MLPR   Magueyes Islan  37.72    6  P        P         12 40 04.0 -1.1
CRPR   Cabo Rojo, PR   37.75    6  P        P         12 40 04.8 -0.6
SJG    San Juan        37.95    7  P        P         12 40 05.4 -1.7
       comp=Z,12nm,0.2s,baz=222,slow=13,SNR=4.9
SJG    San Juan        37.95    7  P        P         12 40 05.5 -1.6
SMRT   St. Maarten     38.37   12  P        P         12 40 09.9 -0.8
SMRT                               IAmb     IAmb      12 40 16.8
       comp=Z,30nm,0.8s
CMIG   Matias Romero   43.64  326  P        P         12 40 55.9 +1.8
       comp=Z,0.7nm,0.3s,baz=87,slow=9.9,SNR=2.2
CMIG                               LR       LR        12 56 38.7
       comp=Z,349nm,20.1s,baz=132,slow=33
ZAIG   Zacatecas       52.47  322  P        P         12 42 02.0 -0.7
Z58A   St. Stephen     53.53  351  P        P         12 42 10.0  0.0
       baz=170
Z57A   Bowman          53.64  350  P        P         12 42 10.8  0.0
       baz=168
Y55A   Saluda          54.47  349  P        P         12 42 17.4 +0.6
       baz=167
Z50A   Ashland         54.70  344  P        P         12 42 18.3 -0.2
Z50A                               IAmb     IAmb      12 42 19.2
       comp=Z,17nm,1.1s
Z50A   Ashland         54.70  344  P        P         12 42 18.3 -0.2
       baz=163
LRAL   Lakeview Retre  54.77  343  P        P         12 42 19.2 +0.1
       baz=161
Y52A   Lilburn         54.84  346  P        P         12 42 19.4 -0.2
       baz=165
X56A   White Oak       54.86  350  P        P         12 42 20.2 +0.5
       baz=168
X55A   Gracelyn & Ava  54.95  349  P        P         12 42 20.7 +0.4
       baz=168
HKT    Hockley         55.03  333  P        P         12 42 21.2 +0.3
HKT                                IAmb     IAmb      12 42 23.0
       comp=Z,17nm,1.4s
W58A   Raeford         55.11  352  P        P         12 42 22.1 +0.6
       baz=170
PAULI  Pauline         55.32  349  P        P         12 42 22.9 -0.1
PAULI                              IAmb     IAmb      12 42 24.2
       comp=Z,17nm,1.0s
KMSC   Kings Mountain  55.55  350  P        P         12 42 25.2 +0.6
       baz=168
W54A   Cherokee Point  55.65  349  P        P         12 42 26.6 +1.2
       baz=167
X51A   Calhoun         55.70  346  P        P         12 42 26.1 +0.4
       baz=164
V59A   Middlesex       55.71  353  P        P         12 42 26.7 +0.9
       baz=172
V58A   Windy Hill, Pi  55.85  352  P        P         12 42 27.9 +1.1
       baz=171
V57A   Coltrane Farms  56.03  351  P        P         12 42 28.8 +0.7
       baz=170
V56A   Mocksville      56.07  350  P        P         12 42 29.2 +0.8
       baz=169
X48A   Hartselle       56.13  344  P        P         12 42 28.2 -0.6
X48A                               IAmb     IAmb      12 42 30.7
       comp=Z,10nm,1.0s
NATX   Nacogdoches     56.15  335  P        P         12 42 29.4 +0.4
NATX                               IAmb     IAmb      12 42 31.3
       comp=Z,21nm,0.9s
V55A   Taylorsville    56.22  350  P        P         12 42 30.7 +1.3
       baz=168
V54A   Nebo            56.28  349  P        P         12 42 30.6 +0.7
       baz=167
U58A   Oxford          56.37  352  P        P         12 42 31.0 +0.5
       baz=171
CPCT   Cooper Cave     56.47  347  P        P         12 42 31.3  0.0
CPCT                               IAmb     IAmb      12 42 32.0
       comp=Z,13nm,1.1s
U57A   Blanch          56.51  352  P        P         12 42 32.2 +0.8
       baz=170
U56A   King            56.58  351  IAmb     IAmb      12 42 33.2
       comp=Z,33nm,1.3s
U56A   King            56.58  351  P        P         12 42 33.2 +1.2
       baz=169
T59A   Double "B" Far  56.83  354  P        P         12 42 35.0 +1.3
       baz=172
U55A   TA2, Sparta     56.83  350  P        P         12 42 35.0 +1.1
       baz=168
OXF    Oxford          56.84  342  P        P         12 42 34.8 +0.9
       baz=159
T58A   Grand View Acr  56.91  353  P        P         12 42 35.2 +0.9
       baz=171
U54A   Nelsons Funny   56.98  349  P        P         12 42 35.7 +0.7
       baz=168
T56A   Rocky Mt        57.19  351  P        P         12 42 37.8 +1.4
       baz=170
JCT    Junction City   57.25  330  P        P         12 42 37.5 +0.6
       baz=147
V48A   Smith Brothers  57.29  345  IAmb     IAmb      12 42 38.2
       comp=Z,28nm,1.4s
TZTN   Tazewell        57.32  348  P        P         12 42 38.4 +1.1
       baz=166
S61A   Accomac         57.36  355  P        P         12 42 38.6 +1.2
       baz=175
T55A   Pulaski         57.39  351  P        P         12 42 38.4 +0.6
       baz=169
T54A   Tazewell        57.46  350  P        P         12 42 39.1 +0.8
       baz=168
CLTN   Cedars of Leba  57.50  345  IAmb     IAmb      12 42 39.6
       comp=Z,14nm,1.1s
S58A   Poland Farm, P  57.51  353  P        P         12 42 39.4 +0.8
       baz=172
T53A   Wise            57.55  349  P        P         12 42 39.7 +0.7
       baz=167
T52A   Hallie          57.76  348  P        P         12 42 40.8 +0.5
       baz=166
S56A   Natural Bridge  57.76  352  P        P         12 42 41.2 +0.9
       baz=170
S57A   Dark Hollow, R  57.77  352  IAmb     IAmb      12 42 42.2
       comp=Z,27nm,1.2s
S57A   Dark Hollow, R  57.77  352  P        P         12 42 41.6 +1.2
       baz=171
T51A   Gray            57.81  348  P        P         12 42 40.8 +0.1
       baz=165
R58B   Mineral         57.84  353  P        P         12 42 41.9 +1.0
       baz=172
WVT    Waverly         57.92  344  P        P         12 42 41.4 -0.1
WVT                                IAmb     IAmb      12 42 42.8
       comp=Z,45nm,1.9s
WVT    Waverly         57.92  344  P        P         12 42 41.1 -0.4
       baz=161
X40A   Basin Creek Fa  57.92  339  P        P         12 42 41.8 +0.3
       baz=156
S55A   Lewisburg       57.99  351  P        P         12 42 43.1 +1.2
       baz=169
T50A   Nancy           58.05  347  P        P         12 42 42.3 -0.1
       baz=164
S54A   Dingess, Beckl  58.14  350  P        P         12 42 43.5 +0.5
       baz=168
R58A   Rapidan         58.19  353  P        P         12 42 44.2 +0.9
       baz=172
MIAR   Mount Ida       58.23  338  P        P         12 42 43.6 -0.1
MIAR                               IAmb     IAmb      12 42 45.0
       comp=Z,10nm,1.0s
MIAR   Mount Ida       58.23  338  P        P         12 42 44.5 +0.8
       baz=155
TXAR   Lajitas Array   58.24  326  P        P         12 42 44.8 +0.8
       comp=Z,0.8nm,0.8s,baz=134,slow=5.4,SNR=7.0
TXAR   Lajitas Array   58.24  326  P        P         12 42 43.7 -0.3
TX32   Lajitas Array   58.24  326  P        P         12 42 44.1 +0.1
R57A   Stanardsville   58.24  353  P        P         12 42 45.2 +1.5
       baz=172
T49A   Edmonton        58.28  346  P        P         12 42 43.1 -0.9
       baz=164,SNR=6.8
W41B   Gary Mavity, V  58.34  339  P        P         12 42 44.6 +0.2
       baz=156
S51A   Beattyville     58.39  348  P        P         12 42 45.7 +1.0
       baz=166
R55A   Marlinton       58.44  351  P        P         12 42 46.0 +0.9
       baz=170
R54A   Victor          58.47  351  P        P         12 42 46.2 +0.9
       baz=169
T47A   Sharon Grove    58.54  345  IAmb     IAmb      12 42 46.3
       comp=Z,23nm,1.1s
S50A   Richmond        58.59  347  P        P         12 42 46.7 +0.6
       baz=165
Q58A   Fox Den Farm,   58.79  354  P        P         12 42 48.5 +1.1
       baz=172
S49A   Springfield     58.88  347  P        P         12 42 48.3 +0.1
       baz=164
W39A   Magazine        58.89  338  IAmb     IAmb      12 43 02.9
       comp=Z,14nm,1.3s
W39A   Magazine        58.89  338  P        P         12 42 49.0 +0.7
       baz=155
FCAR   Ozark Folk Cen  58.96  340  IAmb     IAmb      12 42 49.8
       comp=Z,17nm,1.5s
Q57A   Strasburg       58.96  353  P        P         12 42 49.3 +0.6
       baz=172
ABTX   Abilene, Hawle  58.98  332  P        P         12 42 49.5 +0.4
       baz=148
R51A   Hillsboro       59.03  348  P        P         12 42 49.3 +0.2
       baz=166
Q56A   Snyder Ridge,   59.06  352  P        P         12 42 50.2 +0.8
       baz=171
Q55A   Buckhannon      59.13  352  P        P         12 42 50.6 +0.7
       baz=170
R50A   Paris           59.16  348  P        P         12 42 50.3 +0.3
       baz=165
Q53A   Leroy           59.21  350  P        P         12 42 51.4 +1.0
       baz=168
P59A   Jarrettsville   59.34  355  P        P         12 42 52.3 +1.1
       baz=174
P57A   Homestead Farm  59.36  354  P        P         12 42 52.8 +1.4
       baz=172
Q52A   Bidwell         59.44  350  P        P         12 42 52.2 +0.2
       baz=168
WCI    Wyandotte Cave  59.53  346  P        P         12 42 53.1 +0.5
       baz=163
P55A   Reedsville      59.60  352  P        P         12 42 53.7 +0.5
       baz=170
U40A   Yellville       59.62  339  P        P         12 42 53.4  0.0
       baz=156
MCWV   Mont Chateau    59.75  352  P        P         12 42 55.0 +0.9
       baz=170
P54A   Burton          59.78  351  P        P         12 42 55.1 +0.8
       baz=170
P53A   Whipple         59.80  351  P        P         12 42 55.2 +0.7
       baz=168
HHAR   Hobbs           59.92  338  IAmb     IAmb      12 42 56.5
       comp=Z,20nm,1.3s
Q49A   Aurora          59.97  347  P        P         12 42 55.6 -0.1
       baz=165
O57A   Amberson        60.04  354  P        P         12 42 57.2 +1.0
       baz=173
P52A   Corning         60.07  350  P        P         12 42 56.5 +0.2
       baz=168
Q48A   North Vernon    60.08  347  P        P         12 42 56.5 +0.2
       baz=164
MGMO   Mountain Grove  60.16  340  P        P         12 42 56.7 -0.4
MGMO                               IAmb     IAmb      12 42 59.2
       comp=Z,19nm,1.4s
O56A   Blue Knob Stat  60.20  353  P        P         12 42 58.7 +1.4
       baz=172
O55A   Ligonier        60.22  352  P        P         12 42 58.6 +1.2
       baz=171
TUL1   Leonard         60.26  337  P        P         12 42 59.0 +1.4
       baz=153
WMOK   Wichita Mounta  60.41  334  P        P         12 42 59.0 +0.2
       baz=150
P49A   Miami Univ. Ec  60.44  348  P        P         12 42 59.4 +0.5
       baz=165
SSPA   Standing Stone  60.49  354  P        P         12 43 00.1 +0.9
       baz=172
N60A   Cedar Hill Far  60.49  356  P        P         12 42 59.8 +0.6
       baz=175
N58A   Sunbury         60.58  355  P        P         12 43 01.0 +1.2
       baz=174
O51A   Pataskala       60.65  350  P        P         12 43 00.5 +0.2
       baz=167
CCM    Cathedral Cave  60.68  342  P        P         12 42 59.8 -0.7
CCM    Cathedral Cave  60.68  342  P        P         12 43 00.5  0.0
       baz=158
N55A   Marion Center   60.75  353  P        P         12 43 01.5 +0.6
       baz=171,SNR=6.9
M66A   Nantucket       60.75    1  P        P         12 43 01.1 +0.2
       baz=181
ACSO   Alum Creek Sta  60.79  349  P        P         12 43 01.5 +0.2
       baz=167
O50A   Cable           60.83  349  P        P         12 43 02.1 +0.6
       baz=166
S39A   Bolivar         60.99  340  IAmb     IAmb      12 43 03.6
       comp=Z,15nm,1.1s
MNTX   Cornudas Mount  61.01  326  P        P         12 43 02.7 -0.2
MNTX   Cornudas Mount  61.01  326  P        P         12 43 02.8 -0.2
       baz=142,SNR=6.5
N53A   Lisbon          61.02  351  P        P         12 43 03.7 +0.9
       baz=169
N54A   Moraine State   61.05  352  P        P         12 43 03.9 +0.9
       baz=170
M58A   Price's Panora  61.09  355  P        P         12 43 04.2 +0.9
       baz=174
M57A   Sunshine Farm,  61.11  355  P        P         12 43 04.5 +1.1
       baz=173
M59A   Waymart         61.18  356  P        P         12 43 04.8 +0.9
       baz=175
O48A   Farmland        61.23  347  P        P         12 43 04.2 -0.1
       baz=165
N50A   Nevada          61.35  349  P        P         12 43 05.3 +0.3
       baz=167
L63A   North Scituate  61.36  359  P        P         12 43 06.0 +1.0
       baz=179
M56A   Emporium        61.36  354  P        P         12 43 06.1 +1.0
       baz=172
M55A   Ridgway         61.40  353  P        P         12 43 05.8 +0.3
       baz=172,SNR=5.6
T35A   Sooner Cattle   61.41  337  IAmb     IAmb      12 43 07.5
       comp=Z,20nm,1.2s
MSTX   Muleshoe        61.54  330  IAmb     IAmb      12 43 07.7
       comp=Z,19nm,1.3s
MSTX   Muleshoe        61.54  330  P        P         12 43 07.3 +0.6
       baz=146
M54A   Oil Creek Stat  61.55  352  P        P         12 43 06.6 +0.2
       baz=171,SNR=5.4
L60A   Shokan          61.56  357  P        P         12 43 08.4 +2.0
       baz=176
M53A   WI Miller and   61.61  352  P        P         12 43 06.7 -0.1
       baz=170
N49A   Columbus Grove  61.68  349  P        P         12 43 06.3 -0.9
       baz=166,SNR=6.4
L58A   Harry Jones Me  61.71  356  P        P         12 43 08.6 +1.2
       baz=175
L57A   Andrews Acres   61.74  355  P        P         12 43 08.4 +0.7
       baz=174
SFIN   Lafayette       61.77  346  P        P         12 43 07.1 -0.7
       baz=163
N48A   Decatur         61.78  348  P        P         12 43 07.7 -0.3
       baz=165
L59A   Walton          61.80  356  P        P         12 43 09.0 +0.9
       baz=176
M52A   Chesterland     61.81  351  P        P         12 43 08.6 +0.5
       baz=169
BINY   Binghamton      61.87  356  P        P         12 43 09.4 +0.8
       baz=174
N47A   Urbana          61.94  347  P        P         12 43 08.7 -0.3
       baz=164
L56A   Greenwood       61.94  354  P        P         12 43 10.1 +1.0
       baz=173
M50A   Fremont         61.94  350  P        P         12 43 09.4 +0.4
       baz=167
L61B   Northampton     61.96  358  P        P         12 43 10.0 +0.9
       baz=178
HRV    Adam Dziewonsk  62.00  359  P        P         12 43 10.4 +1.0
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	baz=179						
L53A	Girard	62.06	352	P	P	12 43 09.4	-0.4
	baz=170,SNR=6.0						
L55A	Hinsdale	62.08	354	P	P	12 43 10.8	+0.9
	baz=172						
K62A	Royalston	62.17	359	P	P	12 43 11.0	+0.6
	baz=178						
M49A	Liberty Center	62.18	349	P	P	12 43 10.5	-0.1
	baz=166						
K63A	Dunstable	62.18	359	P	P	12 43 11.2	+0.7
	baz=179						
ERPA	Erie	62.19	352	P	P	12 43 11.1	+0.5
	baz=170						
K61A	Williamstown	62.20	358	P	P	12 43 12.0	+1.3
	baz=177						
L54A	Sinclairville	62.22	353	P	P	12 43 10.9	0.0
	baz=171,SNR=8.8						
VNA3	Neumayer Olymp	62.24	161	P	P	12 43 12.5	+1.8
K59A	Cooperstown	62.38	357	P	P	12 43 13.0	+1.1
	baz=176						
K58A	Earlville	62.41	356	P	P	12 43 12.7	+0.5
	baz=175						
K57A	Scipio Center	62.44	355	P	P	12 43 13.1	+0.7
	baz=174						
VNA1	Neumayer--Stat	62.47	161	P	P	12 43 14.3	+2.1
K54A	Basiliko Farm,	62.52	353	P	P	12 43 14.0	+1.1
	baz=172						
K55A	Perry	62.58	354	P	P	12 43 14.1	+0.8
	baz=172						
J63A	Strafford	62.77	360	P	P	12 43 15.0	+0.6
	baz=180						
J60A	Lant Hill Farm	62.78	358	P	P	12 43 15.5	+0.9
	baz=177						
VNA2	Neumayer--Watz	62.83	161	P	P	12 43 15.5	+0.9
K52A	Tillsonburg	62.94	352	P	P	12 43 15.9	+0.3
	baz=170						
J59A	Piesco	63.04	357	P	P	12 43 17.0	+0.6
	baz=176						
J57A	Williamstown	63.08	356	P	P	12 43 17.2	+0.7
	baz=175						
J55A	Hilton	63.09	354	P	P	12 43 17.1	+0.6
	baz=173						
J54A	Appleton	63.17	354	P	P	12 43 19.3	+2.1
	baz=172						
I58A	Old Forge	63.29	357	P	P	12 43 18.0	-0.1
	baz=176						
J52A	Paris	63.36	352	P	P	12 43 17.9	-0.5
	baz=170,SNR=6.7						
I60A	Shoreham	63.37	358	P	P	12 43 19.4	+0.9
	baz=177						
I61A	Oroboro, Fairl	63.43	359	P	P	12 43 19.8	+0.9
	baz=178						
K48A	Perry	63.49	349	P	P	12 43 19.0	-0.3
	baz=166						
K47A	Vermontville	63.52	348	P	P	12 43 19.2	-0.3
	baz=165						
I57A	Carthage	63.58	356	P	P	12 43 20.8	+0.9
	baz=175						
LBNH	Lisbon	63.73	359	P	P	12 43 22.1	+1.2
	baz=179						
J49A	Marlette	63.87	350	P	P	12 43 21.1	-0.7
	baz=167						
J48A	Bridge Port	63.91	349	P	P	12 43 22.3	+0.3
	baz=166						
H58A	Gabriels	63.98	357	P	P	12 43 23.7	+1.2
	baz=176						
I51A	Listowel	63.98	352	P	P	12 43 22.8	+0.3
	baz=169						
I55A	Frankford	64.02	354	P	P	12 43 23.8	+1.1
	baz=173						
H61A	Lyndonville	64.03	359	P	P	12 43 23.7	+0.9
	baz=179						
J47A	Sunmer	64.04	349	P	P	12 43 22.9	0.0
	baz=165						
H62A	Milan	64.06	360	P	P	12 43 24.1	+1.0
	baz=180						
H60A	Morristown	64.07	358	P	P	12 43 23.9	+0.8
	baz=178						
H57A	Richville	64.09	356	P	P	12 43 23.9	+0.7
	baz=175						
ANMO	Albuquerque	64.12	328	P	P	12 43 23.8	-0.1
ANMO	Albuquerque	64.12	328	P	P	12 43 25.0	+1.1
	baz=142						
H64A	Troy	64.14	1	P	P	12 43 24.5	+0.9
	baz=182						
H63A	New Sharon	64.15	1	P	P	12 43 24.8	+1.2
	baz=181						
H59A	Cadyville	64.19	358	P	P	12 43 24.8	+0.9
	baz=177						
LONY	Lake Ozonia	64.20	357	P	P	12 43 24.6	+0.7
	baz=176						
H56A	Elgin	64.27	356	P	P	12 43 25.7	+1.3
	baz=174						
H55A	Tweed	64.30	355	P	P	12 43 24.9	+0.3
	baz=173						
H66A	Whiting	64.35	3	P	P	12 43 25.3	+0.4
	baz=184						
I49A	Point Hope	64.38	350	P	P	12 43 25.0	-0.1
	baz=168						
L40A	Anamosa	64.39	343	IAmb	IAmb	12 43 26.3	
	comp=Z,19nm,1.1s						
SNAA	Sanae	64.45	161	P	P	12 43 26.8	+1.4
SNAA	Sanae	64.45	161	P	P	12 43 26.0	+0.6
H53A	Bobcaygeon	64.45	354	P	P	12 43 25.8	+0.2
	baz=172						
G60A	Masonville	64.60	359	P	P	12 43 27.7	+1.1
	baz=178						
G59A	Clarenceville	64.60	358	P	P	12 43 27.6	+1.1
	baz=178						
G63A	Kingsbury	64.61	1	P	P	12 43 28.1	+1.5
	baz=181						
G57A	Newington	64.70	357	P	P	12 43 28.0	+0.8
	baz=176						
G58A	Ormstown	64.70	357	P	P	12 43 28.1	+0.9
	baz=177						
G62A	West of Eustis	64.71	0	P	P	12 43 27.8	+0.6
G62A	West of Eustis	64.71	0	P	P	12 43 28.1	+0.9
	baz=180,SNR=5.2						
I48A	Sherman Twp	64.76	350	P	P	12 43 26.7	-0.9
	baz=167,SNR=5.7						
PKME	Peaks-Kenny Pk	64.77	1	P	P	12 43 28.2	+0.6
	baz=182						
G61A	St-Isidore-de-	64.77	359	P	P	12 43 28.7	+1.0
	baz=179						
SCIA	State Center	64.81	342	P	P	12 43 28.7	+0.8
	baz=157						
T25A	Trinidad	64.90	331	P	P	12 43 29.3	+0.3
	baz=145						
JFWS	Jewell Farm	64.93	344	P	P	12 43 29.3	+0.6
	baz=160						
G55A	Calabogie	64.97	355	P	P	12 43 29.5	+0.6
	baz=174						
G53A	Haliburton	65.00	354	P	P	12 43 28.6	-0.6
	baz=172,SNR=7.5						
H48A	Harrisville	65.20	350	P	P	12 43 30.6	+0.2
	baz=167						
G54A	Lake Saint Pet	65.22	354	P	P	12 43 31.1	+0.5
	baz=172						
214A	Organ Pipe Nat	65.34	321	IAmb	IAmb	12 43 35.3	
	comp=Z,13nm,1.4s						
214A	Organ Pipe Nat	65.34	321	P	P	12 43 32.7	+1.0
	baz=136						
F59A	Saint Guilaume	65.36	358	P	P	12 43 33.0	+1.5
	baz=178						
F64A	Sherman	65.39	2	P	P	12 43 32.1	+0.5
	baz=183						
F61A	St Evariste	65.46	360	P	P	12 43 32.9	+0.8
	baz=180						
F60A	Warwick	65.46	359	P	P	12 43 32.7	+0.6
	baz=179						
F52A	Sundridge	65.74	353	P	P	12 43 33.4	-0.5
	baz=171,SNR=5.4						
G47A	Hillman	65.75	350	P	P	12 43 33.5	-0.5
	baz=167						
ALGO	Algonquin Park	65.77	354	P	P	12 43 34.1	0.0
	baz=173						
E60A	Ste Agathe de	65.86	360	P	P	12 43 35.9	+1.3
	baz=179						
E58A	La Victoria	65.90	358	P	P	12 43 36.1	+1.2
	baz=178						
SDCO	Great Sand Dun	65.90	330	P	P	12 43 35.9	+0.4
	baz=144,SNR=10						
E61A	Lac Etchemin	65.92	0	P	P	12 43 36.4	+1.3
	baz=180						
G45A	Suttons Bay	65.94	349	P	P	12 43 35.3	+0.1
	baz=165						
F51A	Arnstein	65.94	353	P	P	12 43 35.3	+0.1
	baz=171						
E63A	Oxbow	65.94	2	P	P	12 43 35.7	+0.5
	baz=182						
E64A	Bridgewater	65.96	2	P	P	12 43 36.3	+0.9
	baz=183						
E57A	Chemin Saint G	65.97	357	P	P	12 43 36.0	+0.5
	baz=177						
BGNE	Belgrade	65.97	338	P	P	12 43 35.8	+0.3
	baz=152						
F49A	Sandfield	66.05	351	P	P	12 43 35.7	-0.2
	baz=168						
G46A	Petoskey	66.06	349	P	P	12 43 36.0	0.0
	baz=166						
E56A	St. Veronique	66.14	357	P	P	12 43 36.7	+0.2
	baz=176						
E52A	Mattawa	66.16	354	P	P	12 43 36.8	+0.2
	baz=172						
E53A	Dumoine, Ponti	66.16	355	P	P	12 43 36.6	0.0
	baz=173						
E54A	Lac Daplat, Po	66.17	355	P	P	12 43 37.3	+0.6
	baz=174						
F48A	Evansville	66.19	351	P	P	12 43 36.9	+0.1
	baz=168						
D60A	Saint Jean D'O	66.40	360	P	P	12 43 38.3	+0.2
	baz=180						
E51A	G1948 Merrick	66.49	353	P	P	12 43 39.1	+0.4
	baz=171						
E50A	Wahnapitae	66.52	353	P	P	12 43 39.8	+0.9
	baz=170						
S22A	4UR Ranch, Cre	66.53	329	P	P	12 43 39.1	-0.5
	baz=143						
F45A	CMU Biological	66.53	349	P	P	12 43 39.0	0.0
	baz=165						
D57A	Chemin Vers le	66.56	358	P	P	12 43 40.2	+1.0
	baz=177						
D62A	Allapoint, All	66.59	1	P	P	12 43 39.9	+0.6
	baz=182						
D58A	Chemin du LacG	66.61	358	P	P	12 43 40.3	+0.8
	baz=178,SNR=6.6						
D56A	ZEC Mazanza, M	66.63	357	P	P	12 43 39.7	+0.1
	baz=176						
D55A	Sainte-Anne-du	66.64	357	P	P	12 43 40.2	+0.6
	baz=175						
D61A	St Aubert, Com	66.69	0	P	P	12 43 39.8	-0.2
	baz=181						
Q24A	Divide	66.73	331	P	P	12 43 40.5	-0.3
	baz=145						
E48A	Lockeyer	66.77	351	P	P	12 43 40.6	0.0
	baz=168						
D54A	Lac Fusel, La	66.85	356	P	P	12 43 41.5	+0.4
	baz=174						
D53A	Lac Vacive, Po	66.86	355	P	P	12 43 41.5	+0.4
	baz=173						
E47A	Iron Bridge	66.90	351	P	P	12 43 41.2	-0.2
	baz=167						
MVCO	Mesa Verde	66.92	328	P	P	12 43 42.1	+0.1
	baz=141						
D51A	Lot 18 Range I	67.03	354	P	P	12 43 42.5	+0.3
	baz=171						
WUAZ	Wupatki	67.13	325	P	P	12 43 43.5	+0.2
WUAZ	Wupatki	67.13	325	P	P	12 43 44.3	+1.0
	baz=138						
D50A	G1974 Best Tow	67.15	353	P	P	12 43 41.8	-1.2
	baz=171,SNR=6.0						
D48A	Paudash Townsh	67.40	352	P	P	12 43 43.6	-0.9
	baz=169						
ECSD	EROS Data Cent	67.52	340	IAmb	IAmb	12 43 46.5	
	comp=Z,19nm,1.3s						
ECSD	EROS Data Cent	67.52	340	P	P	12 43 44.7	-0.7
	baz=154,SNR=8.3						
ISCO	Idaho Springs	67.62	332	P	P	12 43 46.3	-0.2
ISCO	Idaho Springs	67.62	332	P	P	12 43 47.3	+0.8
	baz=145						
PV01	Paradox Valley	67.68	329	IAmb	IAmb	12 43 50.1	
	comp=Z,20nm,1.8s						
PDMCI	Parker Dam,Lak	67.80	322	P	P	12 43 49.2	+1.9
	baz=136						
SWSC	Sam W. Stewart	67.82	320	P	P	12 43 49.4	+1.9
	baz=134						
VLDQ	Val d'Or	67.86	355	IAmb	IAmb	12 43 49.0	
	comp=Z,14nm,1.1s						
BC3	Big Chuckawall	68.11	321	P	P	12 43 51.2	+1.8
	baz=135						
MONP2	Monument Peak	68.16	320	P	P	12 43 51.8	+1.9
	baz=134						
IRM	Iron Mountain	68.28	321	P	P	12 43 51.9	+1.5
	baz=135,SNR=6.5						
U15A	North Rim	68.31	325	P	P	12 43 51.6	+0.8
D41A	Chassel	68.45	347	IAmb	IAmb	12 43 52.1	
	comp=Z,15nm,1.1s						
N23A	Red Feather La	68.65	332	P	P	12 43 53.3	+0.5
	baz=144						
BELC	Belle Mtn. Jos	68.67	321	P	P	12 43 54.4	+1.4
	baz=134						
PFO	Pinyon Flats O	68.68	320	P	P	12 43 54.0	+0.9
	baz=134						
LSQQ	Lebel-sur-Quev	68.77	356	P	P	12 43 53.5	+0.4
	baz=174						
PHWY	Pilot Hill	68.77	333	IAmb	IAmb	12 43 55.7	
	comp=Z,16nm,1.6s						
GMRC	Granite Mounta	69.02	322	P	P	12 43 56.6	+1.4
	baz=135						
O20A	White River Ci	69.09	330	P	P	12 43 56.4	+0.8
	baz=142						
MTPU	Mount Pierson	69.45	326	P	P	12 43 58.4	+0.4
MATQ	Matagami	69.52	355	P	P	12 43 57.4	-0.2
	baz=173						
LIC	Lamto	69.64	75	*e*PKP1	P	12 43 58.8	-0.4
	comp=Z,65nm,1.6s						
DRLN	Deer Lake	69.76	9	P	P	12 43 58.8	-0.4
TIC	Toumodi	69.81	75	*e*PKP1	P	12 43 59.0	-1.3
BFSC	Mount Baldy Ra	69.83	320	P	P	12 44 01.8	+1.6
	baz=133						
EYMN	Ely	69.95	345	IAmb	IAmb	12 44 14.3	
	comp=Z,13nm,1.4s						
EYMN	Ely	69.95	345	P	P	12 44 00.2	-0.2
	baz=159						
KIC	Kosan Boka	69.95	75	*e*PKP1	P	12 43 59.8	-1.4
	comp=Z,52nm,1.4s						
DBIC	Dimbokro	69.97	75	P	P	12 43 59.7	-1.6
	comp=Z,7.4nm,1.0s,baz=234,slow=5.9,SNR=5.5						
DBIC	Dimbokro	69.97	75	P	P	12 44 00.4	-0.9
GSC	Goldstone, Bar	70.05	321	IAmb	IAmb	12 44 05.3	
	comp=Z,17nm,1.7s						
GSC	Goldstone, Bar	70.05	321	P	P	12 44 03.4	+2.0
	baz=134						
K22A	Casper	70.33	333	P	P	12 44 03.8	+0.7
	baz=144						
QSPA	South Pole Qui	70.38	180	P	P	12 44 04.0	+0.9
EDW2	Edwards Air Fo	70.47	320	P	P	12 44 04.6	+0.6
	baz=133						
RSSD	Black Hills	70.52	335	P	P	12 44 05.5	+1.2
	baz=147						
BLG	Laguna Peak, P	70.61	319	P	P	12 44 06.2	+1.4
	baz=132						
LRMC	Laurel Mtn Rad	70.69	321	P	P	12 44 07.3	+1.9
	baz=133						
TPNV	Topopah Spring	70.88	323	P	P	12 44 08.1	+1.5
	baz=135,SNR=6.0						
FURC	Furnace Creek,	70.89	322	P	P	12 44 08.7	+2.3
	baz=134						
MPMC	Manual Prospec	70.98	321	P	P	12 44 08.8	+1.6
	baz=134						
ISA	Isabella, Lake	71.29	321	P	P	12 44 10.1	+1.2
	baz=133,SNR=5.3						
DUG	Dugway, Tooele	71.38	327	IAmb	IAmb	12 44 24.7	
	comp=Z,14nm,1.4s						
DUG	Dugway, Tooele	71.38	327	P	P	12 44 10.8	+1.3
	baz=138,SNR=7.4						
AGMN	Agassiz Nation	71.41	343	P	P	12 44 10.1	+0.8
	baz=155						
R11A	Troy Canyon, C	71.50	324	P	P	12 44 11.3	+1.0
R11A	Troy Canyon, C	71.50	324	P	P	12 44 11.7	+1.4
	baz=136						
CWC	Cottonwood Cre	71.59	321	P	P	12 44 11.9	+1.1
	baz=133						
PKM	Mcpherson Peak	71.59	319	P	P	12 44 11.9	+1.0
	baz=132						
BW06	Boulder Array	71.77	331	P	P	12 44 12.9	+1.0
	baz=142						
PDAR	Pinedale Array	71.77	331	P	P	12 44 12.8	+0.8
	comp=Z,0.9nm,0.8s,baz=170,slow=4.4,SNR=9.2						
PDAR	Pinedale Array	71.77	331	P	P	12 44 12.2	+0.2
HWUT	Hardware Ranch	71.82	329	IAmb	IAmb	12 44 24.2	
	comp=Z,11nm,1.3s						
MDND	Maddock	72.13	340	P	P	12 44 15.3	+1.6
	baz=152						
NV11	Mina Array Sit	73.00	323	P	P	12 44 19.3	+0.1
ELK	Elko	73.03	326	P	P	12 44 19.4	-0.2
NVAR	Mina Array Bea	73.08	323	P	P	12 44 21.7	+1.9
	comp=Z,1.6nm,0.9s,baz=150,slow=7.8,SNR=13						
NVAR	Mina Array Bea	73.08	323	P	P	12 44 19.8	0.0
ULM	Lac du Bonnet	73.19	343	P	P	12 44 19.4	-0.4
	comp=Z,4.5nm,1.1s,baz=154,slow=4.3,SNR=5.0						
ULM	Lac du Bonnet	73.19	343	IAmb	IAmb	12 44 33.8	
	comp=Z,14nm,1.4s						
IMW	Indian Meadow	73.28	331	IAmb	IAmb	12 44 36.3	
	comp=Z,27nm,1.9s						
FLWY	Flagg Ranch	73.32	331	IAmb	IAmb	12 44 23.9	
	comp=Z,15nm,1.1s						
RLMT	Red Lodge	73.50	333	IAmb	IAmb	12 44 25.1	
	comp=Z,33nm,1.8s						
RLMT	Red Lodge	73.50	333	P	P	12 44 22.8	+0.6
	baz=142,SNR=8.6						
LAO	LASA Array	73.51	335	IAmb	IAmb	12 44 24.1	
	comp=Z,21nm,1.2s						
LAO	LASA Array	73.51	335	P	P	12 44 23.1	+1.2
	baz=145						
YERR	Yerington	73.99	323	IAmb	IAmb	12 44 37.7	
	comp=Z,18nm,1.7s						
DGMT	Dagmar	74.23	338	IAmb	IAmb	12 44 28.4	
	comp=Z,16nm,1.0s						
DGMT	Dagmar	74.23	338	P	P	12 44 27.2	+1.1
	baz=148						
SCHQ	Schefferville	74.41	2	LR	LR	13 19 56.9	
	comp=Z,96nm,19.0s,baz=142,slow=38						
DLMT	Dillon	75.17	331	IAmb	IAmb	12 44 47.2	
	comp=Z,16nm,1.5s						
MFID	Camas Ranch	75.27	328	IAmb	IAmb	12 44 48.2	
	comp=Z,16nm,1.3s						
ORV	Oroville	75.68	322	IAmb	IAmb	12 44 37.8	
	comp=Z,14nm,1.2s						
EGMT	Eagleton	76.00	334	IAmb	IAmb	12 44 38.3	
	comp=Z,16nm,1.1s						
EGMT	Eagleton	76.00	334	P	P	12 44 36.4	0.0
	baz=142,SNR=6.7						
O02D	Mt. Diablo Mer	76.83	322	P	P	12 44 43.7	+2.4
	baz=130						
MSO	Missoula	76.89	331	P	P	12 44 42.9	+1.4
	baz=139						
N02D	Trinity Center	77.30	322	P	P	12 44 44.5	+0.6
	baz=131						
M04C	Macdoel	77.34	323	P	P	12 44 45.6	+1.4
	baz=132						
M02C	Callahan	77.66	323	P	P	12 44 47.0	+1.1
	baz=131						
L04D	Klamath Falls	77.89	324	P	P	12 44 48.6	+1.4
	baz=131						
J05D	Fort Rock, OR	78.00	325	P	P	12 44 49.7	+1.9
	baz=132						
TOA0	Torodi Ar. Sit	78.47	71	P	P	12 44 50.2	-0.7
TOA0				IAmb	IAmb	12 44 51.1	
	comp=Z,24nm,1.1s						
TORD	Torodi Ar. Bea	78.47	71	P	P	12 44 49.8	-1.1
	comp=Z,17nm,1.1s,baz=256,slow=5.5,SNR=30						
TORD	Torodi Ar. Bea	78.47	71	P	P	12 44 49.5	-1.4
WALA	Waterton Lakes	78.55	333	IAmb	IAmb	12 44 53.0	
	comp=Z,11nm,1.1s						
SYO	Syowa Base	78.70	160	⇊ *e*P	P	12 44 50.0	-1.2
SYO	Syowa Base	78.70	160	⇈ *e*pP	P	12 44 54.6	+3.4
I05D	Terrebonne, OR	78.77	326	P	P	12 44 53.4	+1.5
	baz=132						
FFC	Flin Flon	78.87	342	P	P	12 44 52.1	0.0
G05D	Wamic, OR	79.36	326	P	P	12 44 56.4	+1.3
	baz=132						
F04A	Amboy	80.40	326	IAmb	IAmb	12 45 03.8	
	comp=Z,23nm,1.3s						
LTY	Liberty	80.40	328	IAmb	IAmb	12 45 15.5	
	comp=Z,17nm,1.4s						
D05A	Enumclaw	81.02	327	IAmb	IAmb	12 45 07.4	
	comp=Z,38nm,1.6s						
D03D	Eldon	81.81	327	P	P	12 45 08.9	+0.8
	baz=131						
TSUM	Tsumeb	82.22	108	P	P	12 45 11.8	+0.6
LLLB	Lillooet	83.27	330	IAmb	IAmb	12 45 18.9	
	comp=Z,17nm,1.4s						
TAM	Tamanrasset	85.65	64	P	P	12 45 28.9	+0.3
YKA	Yellowknife Ar	89.01	341	P	P	12 45 43.5	-0.2
	comp=Z,6.9nm,1.0s,baz=139,slow=5.3,SNR=50						
H11S2	WAKE ISLAND Hy	125.89	279	T	T	15 11 12.3	
	baz=101,slow=74,SNR=481						
H11S1	WAKE ISLAND Hy	125.90	279	T	T	15 11 07.4	
	baz=101,slow=74,SNR=209						
H11S3	WAKE ISLAND Hy	125.91	279	T	T	15 11 11.3	
	baz=101,slow=74,SNR=240						
H11N3	WAKE ISLAND Hy	125.94	280	T	T	15 11 09.7	
	baz=100,slow=74,SNR=55						
H11N2	WAKE ISLAND Hy	125.95	280	T	T	15 11 16.5	
	baz=100,slow=74,SNR=75						
H11N1	WAKE ISLAND Hy	125.95	280	T	T	15 11 12.6	
	baz=100,slow=74,SNR=26						
ASAR	Alice Springs	130.54	210	PKP	PKPdf	12 52 00.0	-0.9
	comp=Z,1.2nm,1.0s,baz=122,slow=1.7,SNR=7.4						
ASAR	Alice Springs	130.54	210		PKPdf	12 52 00.9	+0.1
ABKAR	Akbulak array	131.07	41		PKiKP	12 52 02.0	+0.1
WRA	Warramunga Arr	133.46	213	PKP	PKiKP	12 52 06.8	-0.9
	comp=Z,0.6nm,0.7s,baz=153,slow=1.8,SNR=6.2						
WRA	Warramunga Arr	133.46	213		PKPdf	12 52 06.6	+0.2
KURK	Kurchatov	140.83	31		PKiKP	12 52 20.5	-1.2
KURBB	Kurchatov Arra	140.84	31	PKP	PKiKP	12 52 20.6	-1.1
	comp=Z,0.6nm,0.8s,baz=310,slow=2.9,SNR=4.5						
ZALV	Zalesovo Beam	141.13	23	PKP	PKPdf	12 52 19.9	+0.5
	comp=Z,1.0nm,0.4s,baz=318,slow=2.0,SNR=8.1						
AAK	Ala-Archa	142.98	44	PKP	PKPdf	12 52 23.1	-0.3
	comp=Z,0.7nm,0.4s,baz=63,slow=5.8,SNR=3.6						
AAK	Ala-Archa	142.98	44		PKPdf	12 52 22.4	-0.9
MAKZ	Makanchi	145.07	33		PKPdf	12 52 26.2	-0.5
NIL	Nilore	145.24	59		PKPdf	12 52 27.2	-0.2
MK31	Makanchi Array	145.24	33		PKPdf	12 52 27.0	0.0
MKAR	Makanchi Array	145.24	33	PKP	PKPdf	12 52 26.9	-0.1
	comp=Z,5.2nm,0.9s,baz=321,slow=3.1,SNR=41						
KSH	Kashi	145.35	48	PKPbc	PKPab	12 52 28.8	+1.2
KSH				pPKP	sPKPdf	12 52 39.1	+2.2
KSH				PP	PP	12 55 51.1	+3.9
KSH				PKS	PKSdf	12 56 07.4	+4.3
KLR	Kul'dur	145.53	334	PKPbc	PKPab	12 52 27.8	+0.1
	comp=Z,6.0nm,1.1s,baz=32,slow=3.1,SNR=11						
TLY	Talaya	147.89	7	PKPbc	PKPbc	12 52 34.5	+0.2
	comp=Z,0.5nm,0.4s,baz=181,slow=4.9,SNR=5.1						
TLY	Talaya	147.89	7		PKPbc	12 52 33.5	-0.7
USRK	Ussuriysk Ar.	149.13	327	PKPbc	PKiKP	12 52 38.6	-0.3
	comp=Z,6.6nm,1.1s,baz=22,slow=2.1,SNR=8.6						
USRK	Ussuriysk Ar.	149.13	327		PKiKP	12 52 38.1	-0.8
MJAR	Matsushiro Arr	149.64	309	PKPbc	PKiKP	12 52 40.4	+0.1
	comp=Z,7.8nm,1.1s,baz=183,slow=0.5,SNR=12						
MJAR	Matsushiro Arr	149.64	309		PKiKP	12 52 39.7	-0.6
MAJO	Matsushiro	149.64	309		PKiKP	12 52 40.0	-0.2
MAT	Matsushiro	149.64	309	PKP	PKiKP	12 52 40.0	-0.3
WMQ	Urumqi	150.05	32	*e*P	PKPdf	12 52 35.0	-0.1
HYB	Hyderabad	150.87	90	*i* PKP	PKiKP	12 52 43.0	-0.4
SONM	Songino Array	151.94	4	PKP	PKPdf	12 52 39.3	+1.4
	comp=Z,0.3nm,0.4s,baz=259,slow=1.5,SNR=4.8						
SONM				PKPbc	pPKPdf	12 52 45.6	+0.6
	comp=Z,2.9nm,1.0s,baz=339,slow=1.0,SNR=12						
SONM	Songino Array	151.94	4		PKPdf	12 52 38.9	+0.9
SONM					PKiKP	12 52 45.3	+0.5
SONM					PKPab	12 52 54.0	+0.4
GTA	Gaotai	158.85	21	*e*PKP	PKPdf	12 52 49.0	+1.5
HHC	Hu-ho-hao-te	158.92	355	*e*P	PKPdf	12 52 44.1	-3.5
HHC				PP	PP	12 57 05.4	+2.2
LZH	Lanzhou	163.10	15	*e*PKP	PKPdf	12 52 48.3	-4.0
LZH				pPKP	pPKPdf	12 53 00.8	+1.5
LZH				sPKP		12 53 03.8	
NJ2	Nanjing	165.04	327	*e*P	PKPdf	12 52 52.3	-1.6
CD2	Chengdu	167.90	23	PKP	PKPdf	12 52 54.1	-2.1
WHN	Wuhan	168.34	338	PKPbc	PKPdf	12 52 54.5	-1.9
CMAR	Chiang Mai Arr	170.21	96	PKP	PKPdf	12 52 58.9	+0.9
	comp=Z,0.5nm,0.7s,baz=230,slow=2.7,SNR=4.5						
CMAR				PKPab	PKPab	12 54 13.9	0.0
	comp=Z,0.2nm,0.3s,baz=293,slow=4.6,SNR=5.2						
CMAR	Chiang Mai Arr	170.21	96		PKPdf	12 52 58.6	+0.6
CMAR					PKPab	12 54 13.7	-0.2

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*CNRM **24** 12:33:26.8±1.2, 35°.57N×4°.64W, h112^{km}±11^{km}, Error ellipse: s-maj=9.5km s-min=7.3km az=83.0*

*INMG **24** 12:33:30.9±1.7, 35°.70N×4°.67W, h75^{km}±5^{km}, ML2.8, Error ellipse: s-maj=4.3km s-min=4.1km az=94.0*

*IGIL **24** 12:33:30.7, 35°.70N×4°.72W, h12^{km}, ML2.9*

*MDD **24** 12:33:31.0±0.9, 35°.68N×4°.59W, h81^{km}±9^{km}, mb3.1/14, Error ellipse: s-maj=7.2km s-min=4.9km az=14.0, PRXIMO*

*SFS **24** 12:33:31.0, 35°.70N×4°.50W, ML3.0, ALBORAN W.*

ISC 24 12:33:26.9±1.2**, 35°.62N**±0°.03×**4°.56W**±0°.03**, h113**^{km}±6^{km}**,**

n90,$\sigma 2^{s}08$/157,7C-2D,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVLZ	Peæn de	0.49	154	P	Pn	12 33 44.4	+0.5
PVLZ				S	Sn	12 33 54.8	-1.9
PVLZ	Peæn de	0.49	154	⇑iP	Pn	12 33 44.4	+0.5
PVLZ				eS	Sn	12 33 54.8	-1.9
PALE	Palemas	0.64	128	P	Pn	12 33 46.0	+0.9
PALE				S	Sn	12 33 57.5	-1.2
SMIR	Smir Dam	0.67	276	P	Pn	12 33 46.8	+1.5
SMIR				S	Sn	12 33 57.7	-1.4
CEU	Ceuta	0.72	293	⇓iP	Pn	12 33 45.6	0.0
CEU				eS	Sn	12 33 56.6	-3.1
ECEU	Ceuta	0.72	293	P	Pn	12 33 46.6	+0.9
	40nm,0.1s,SNR=28						
ECEU				S	Sn	12 33 56.4	-3.5
	10nm,0.1s,SNR=5.3						
CHEFC	Chefchaouen	0.82	232	P	Pn	12 33 47.8	+1.2
CHEFC				S	Sn	12 34 00.1	-1.4
EMIJ	Mijas	0.96	350	⇑P	Pn	12 33 47.8	-0.1
	8.3nm,0.1s,SNR=18						
EMIJ				S	Sn	12 34 00.5	-3.4
	72nm,0.3s,SNR=6.3						
REAL	Reales	1.01	329	P	Pn	12 33 50.3	+1.8
REAL				S	Sn	12 34 06.6	+1.6
REAL	Reales	1.01	329	eP	Pn	12 33 50.3	+1.8
REAL				eS	Sn	12 34 06.6	+1.6
EMAL	Malaga-Limoner	1.15	5	⇓iP	Pn	12 33 50.6	+0.8
EMAL				eS	Sn	12 34 05.0	-2.2
AKLM	AKL	1.24	152	P	Pn	12 33 53.0	+2.0
AKLM				S	Sn	12 34 07.0	-2.2
RSA	Sarsar	1.27	235	P	Pn	12 33 54.1	+2.9
RSA				S	Sn	12 34 09.9	+0.3
ALJ	Aljibe	1.27	316	P	Pn	12 33 54.0	+2.8
ALJ				S	Sn	12 34 12.6	+2.9
ALJ	Aljibe	1.27	316	eP	Pn	12 33 54.0	+2.8
ALJ				eS	Sn	12 34 12.6	+2.9
EALB	Alboran	1.28	75	P	Pn	12 33 52.7	+1.5
	3.4nm,0.1s,SNR=7.9						
EALB				S	Sn	12 34 08.8	-0.9
	7.9nm,0.2s,SNR=7.9						
GOG	Mont Gurugu	1.33	107	P	Pn	12 33 52.8	+0.8
GOG				S	Sn	12 34 10.7	-0.4
CNIL	Conil	1.43	302	P	Pn	12 33 55.6	+2.6
CNIL	Conil	1.43	302	eP	Pn	12 33 55.6	+2.6
LIJA	Lijar	1.46	332	P	Pn	12 33 55.9	+2.5
LIJA				S	Sn	12 34 14.5	+0.9
LIJA	Lijar	1.46	332	i P	Pn	12 33 55.9	+2.5
LIJA				eS	Sn	12 34 14.5	+0.9
ESPR	Espera	1.63	320	⇑P	Pn	12 33 57.4	+2.0
	5.2nm,0.1s,SNR=18						
ESPR				S	Sn	12 34 15.0	-2.2
	48nm,0.2s,SNR=12						
EBER	Berja	1.86	46	P	Pn	12 33 59.7	+1.3
	2.5nm,0.2s,SNR=6.6						
EBER				S	Sn	12 34 21.2	-1.2
	16nm,0.3s,SNR=6.2						
LCRM	LCR	1.94	187	P	Pn	12 34 00.2	+0.8
LCRM				S	Sn	12 34 25.1	+0.9
IFR	Ifrane	2.15	193	eP	Pn	12 34 03.8	+1.7
IFR				eS	Sn	12 34 27.8	-1.0
HORN	Hornachuelos	2.30	346	P	Pn	12 34 03.4	-0.4
HORN				S	Sn	12 34 29.6	-2.5
EQES	Quesada	2.49	28	P	Pn	12 34 08.7	+2.4
	1.7nm,0.1s,SNR=8.5						
EQES				S	Sn	12 34 36.7	+0.1
	17nm,0.7s,SNR=4.7						
EADA	Adamuz	2.55	360	P	Pn	12 34 09.3	+2.3
	2.5nm,0.1s,SNR=27						
EADA				S	Sn	12 34 37.0	-0.8
	15nm,0.1s,SNR=26						
ECAB	El Cabril	2.55	345	P	Pn	12 34 08.6	+1.5
	0.9nm,0.2s,SNR=5.8						
ECAB				S	Sn	12 34 36.3	-1.7
	63nm,0.2s,SNR=56						
CZD	Col de Zad	2.61	189	P	Pn	12 34 09.6	+1.5
CZD				S	Sn	12 34 37.9	-1.8
EMIN	Mina Concepcio	2.74	322	⇑P	Pn	12 34 11.1	+1.6
	3.4nm,0.1s,SNR=18						
EMIN				S	Sn	12 34 40.3	-1.9
	12nm,0.1s,SNR=18						
MD31	MD31	2.75	184	P	Pn	12 34 11.7	+2.0
MD31				S	Sn	12 34 41.0	-1.6
ZHG	ZHG	2.76	219	P	Pn	12 34 10.3	+0.4
MDT	Midelt	2.79	181	P	Pn	12 34 11.9	+1.6
	SNR=29						
MDT				S	Sn	12 34 43.2	-0.6
EGRO	El Granado	3.04	310	⇑P	Pn	12 34 15.0	+1.6
	13nm,0.1s,SNR=18						
EGRO				S	Sn	12 34 47.3	-1.9
	48nm,0.1s,SNR=32						
PVAQ	Vaqueiros	3.11	306	P	Pn	12 34 15.7	+1.4
PVAQ				S	Sn	12 34 49.0	-2.0
	29nm,0.5s						
PVAQ	Vaqueiros	3.11	306	P	Pn	12 34 14.6	+0.2
PVAQ	Vaqueiros	3.11	306	eP	Pn	12 34 15.7	+1.4
PVAQ				eS	Sn	12 34 49.0	-2.0
PVAQ				A	A	12 34 49.8	
	29nm,0.5s						
PBDV	Barranco-do-Ve	3.17	302	P	Pn	12 34 16.7	+1.5
PBDV				S	Sn	12 34 50.9	-1.5
	19nm,0.3s						
PBDV	Barranco-do-Ve	3.17	302	⇑iP	Pn	12 34 16.7	+1.5
PBDV				eS	Sn	12 34 50.9	-1.5
PBDV				A	A	12 34 54.0	
	19nm,0.3s						
PBAR	Barrancos	3.24	323	P	Pn	12 34 17.9	+1.9
PBAR				S	Sn	12 34 52.3	-1.7
	27nm,0.2s						
PBAR	Barrancos	3.24	323	eP	Pn	12 34 17.9	+1.9
PBAR				eS	Sn	12 34 52.3	-1.7
PBAR				A	A	12 34 54.0	
	27nm,0.2s						
PCVE	Castro Verde	3.45	307	P	Pn	12 34 20.4	+1.6
PCVE				S	Sn	12 34 57.4	-1.6
	17nm,0.2s						
PCVE	Castro Verde	3.45	307	eP	Pn	12 34 20.4	+1.6
PCVE				eS	Sn	12 34 57.4	-1.6
PCVE				A	A	12 34 59.6	
	17nm,0.2s						
PBEJ	Beja	3.58	313	P	Pn	12 34 22.6	+2.0
PBEJ				S	Sn	12 35 00.3	-1.9
	7.8nm,0.1s						
PBEJ	Beja	3.58	313	eP	Pn	12 34 22.6	+2.0
PBEJ				eS	Sn	12 35 00.3	-1.9
PBEJ				A	A	12 35 01.0	
	16nm,0.1s						
MESJ	Messejana	3.69	308	eP	Pn	12 34 23.7	+1.7
MESJ				eS	Sn	12 35 02.3	-2.4
MESJ				AML	AML	12 35 05.3	
	comp=N,30nm,0.2s						
MESJ	Messejana	3.69	308	P	Pn	12 34 23.7	+1.7
MESJ				S	Sn	12 35 02.3	-2.4
	comp=N,30nm,0.2s						
MESJ	Messejana	3.69	308	eP	Pn	12 34 23.7	+1.7
MESJ				eS	Sn	12 35 02.7	-2.0
MESJ				A	A	12 35 04.3	
	comp=N,21nm,0.5s						
EBAD	Badajoz	3.70	329	⇑P	Pn	12 34 24.2	+2.1
	comp=N,2.7nm,0.1s,SNR=18						
EBAD				S	Sn	12 35 03.6	-1.4
	comp=N,32nm,0.1s						
PFVI	Vila Bisbo	3.76	295	P	Pn	12 34 24.8	+1.8
	comp=N,6.5nm,0.1s,SNR=7.0						
PFVI				S	Sn	12 35 04.5	-2.1
	comp=N,21nm,0.1s,SNR=11						
PFVI	Vila Bisbo	3.76	295	eP	Pn	12 34 24.8	+1.8
PFVI				eS	Sn	12 35 04.6	-1.9
PFVI				A	A	12 35 06.6	
	comp=N,13nm,0.1s						
ETOB	Tobarra	3.86	38	P	Pn	12 34 27.7	+3.2
	comp=N,2.2nm,0.3s,SNR=7.9						
PTEO	Sao Teotonio	3.87	301	P	Pn	12 34 25.6	+1.2
PTEO				S	Sn	12 35 07.5	-1.5
	comp=N,12nm,0.5s						
PTEO	Sao Teotonio	3.87	301	eP	Pn	12 34 25.6	+1.2
PTEO				eS	Sn	12 35 07.5	-1.5
PTEO				A	A	12 35 10.4	
	comp=N,25nm,0.5s						
PAB	San Pablo	3.93	2	P	Pn	12 34 27.5	+2.2
	comp=N,1.4nm,0.2s,SNR=7.9						
PAB				S	Sn	12 35 08.4	-2.3
	comp=N,5.3nm,0.2s,SNR=7.9						
PNCL	Nicolau / Gran	4.04	309	P	Pn	12 34 28.6	+1.8
PNCL				S	Sn	12 35 10.7	-2.5
	comp=N,14nm,0.4s						
PNCL	Nicolau / Gran	4.04	309	eP	Pn	12 34 28.6	+1.8
PNCL				eS	Sn	12 35 10.7	-2.5
PNCL				A	A	12 35 14.7	
	comp=N,14nm,0.4s						
PESTR	Estremoz	4.05	324	eP	Pn	12 34 29.1	+2.2
PESTR				eS	Sn	12 35 11.5	-1.9
PESTR				A	A	12 35 12.2	
	comp=N,13nm,0.2s						
PMRV	Marv??o	4.42	330	P	Pn	12 34 33.9	+2.0
PMRV				S	Sn	12 35 20.0	-2.4
	comp=N,15nm,0.6s						
PMRV	Marv??o	4.42	330	eP	Pn	12 34 33.9	+2.0
PMRV				eS	Sn	12 35 20.0	-2.4
PMRV				A	A	12 35 35.2	
	comp=N,15nm,0.6s						
PMTG	Montargil	4.52	321	P	Pn	12 34 35.4	+2.2
PMTG				S	Sn	12 35 22.1	-2.6
	comp=N,7.9nm,0.3s						
PMTG	Montargil	4.52	321	eP	Pn	12 34 35.4	+2.2
PMTG				eS	Sn	12 35 22.1	-2.6
PMTG				A	A	12 35 36.2	
	comp=N,7.9nm,0.3s						
EPLA	Plasencia	4.60	345	P	Pn	12 34 36.8	+2.4
	comp=N,1.6nm,0.2s,SNR=14						
EPLA				S	Sn	12 35 24.4	-2.3
	comp=N,9.4nm,0.1s,SNR=7.9						
PCBR	Castelo Branco	4.81	332	P	Pn	12 34 39.3	+2.2
PCBR				S	Sn	12 35 29.1	-2.6
	comp=N,4.4nm,0.5s						
PCBR	Castelo Branco	4.81	332	eP	Pn	12 34 39.3	+2.2
PCBR				eS	Sn	12 35 29.1	-2.6
PCBR				A	A	12 35 32.3	
	comp=N,8.9nm,0.5s						
GUD	Guadarrama	5.03	4	S	Sn	12 35 34.4	-2.9
	comp=N,2.7nm,0.3s,SNR=6.1						
PMAFR	Mafra	5.03	313	S	Sn	12 35 34.9	-2.2
	comp=N,67nm,0.6s,SNR=7.9						
PMAFR	Mafra	5.03	313	eS	Sn	12 35 34.9	-2.2
PTOM	Tomar	5.03	324	S	Sn	12 35 34.5	-2.6
	comp=N,5.0nm,0.3s						
PTOM	Tomar	5.03	324	eS	Sn	12 35 34.5	-2.6
PTOM				A	A	12 35 37.4	
	comp=N,10.0nm,0.3s						
OUZM	OUZ	5.04	202	P	Pn	12 34 41.1	+0.7
OUZM				S	Sn	12 35 37.3	-0.4
PSBE	So Bento	5.14	320	eP	Pn	12 34 44.5	+2.9
PSBE				eS	Sn	12 35 38.4	-1.5
OUK	Oukaimeden	5.19	213	P	Pn	12 34 41.3	-1.4
OUK				S	Sn	12 35 38.3	-3.3
MTE	Manteigas	5.33	335	S	Sn	12 35 43.8	-0.5
	comp=N,4.2nm,0.2s						
MTE	Manteigas	5.33	335	eS	Sn	12 35 43.8	-0.5
MTE				A	A	12 35 46.7	
	comp=N,8.4nm,0.2s						
PCAS	Casmilo, Conde	5.42	326	S	Sn	12 35 43.9	-2.5
	comp=N,7.1nm,0.4s						
PCAS	Casmilo, Conde	5.42	326	eS	Sn	12 35 43.9	-2.5
PCAS				A	A	12 35 47.0	
	comp=N,7.1nm,0.4s						
ETOR	Torete	5.56	20	S	Sn	12 35 46.3	-3.6
	comp=N,4.5nm,0.2s						
PVIS	Viseu	5.73	334	S	Sn	12 35 51.2	-2.9
	comp=N,4.1nm,0.6s						
PVIS	Viseu	5.73	334	eS	Sn	12 35 51.2	-2.9
PVIS				A	A	12 35 54.9	
	comp=N,8.1nm,0.6s						
MVO	Moncorvo	5.87	341	P	Pn	12 34 54.6	+3.2
	comp=N,0.6nm,0.1s,SNR=7.9						
MVO				S	Sn	12 35 55.0	-2.5
	comp=N,10nm,0.5s,SNR=7.9						
MVO	Moncorvo	5.87	341	eP	Pn	12 34 54.4	+2.9
MVO				eS	Sn	12 35 55.2	-2.3
MVO				A	A	12 35 57.9	
	comp=N,4.6nm,0.5s						
PVRL	Vila Real	6.17	337	S	Sn	12 36 00.8	-3.9
	comp=N,8.9nm,0.2s						
PVRL	Vila Real	6.17	337	eS	Sn	12 36 00.8	-3.9
PVRL				A	A	12 36 05.8	
	comp=N,18nm,0.2s						
PCAB	Cabril	6.66	337	S	Sn	12 36 14.1	-2.5
PCAB	Cabril	6.66	337	eS	Sn	12 36 14.1	-2.5
ELOB	Lobios	6.82	337	P	Pn	12 35 07.6	+3.3
	comp=N,0.3nm,0.1s,SNR=7.9						
ELOB				S	Sn	12 36 16.9	-3.5
	comp=N,3.8nm,0.3s,SNR=7.9						
PGAV	Gavieira, Arco	6.97	337	S	Sn	12 36 21.8	-2.4
PGAV	Gavieira, Arco	6.97	337	eS	Sn	12 36 21.8	-2.4

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*VAO **24** 12:48:01.4±0.5,19°.93S×71°.08W,h10^{km},mb4.3*

*IDC **24** 12:48:02.9±0.7,19°.80S×70°.62W,h0^{km},mb3.8/8,mb1 4.1/10,mb1mx3.9/28,mbtmp3.9/10,ML3.8/2,MS3.8/2,Ms1 3.8/2,ms1mx3.4/27,Error ellipse: s-maj=25.2km s-min=14.9km az=60.0*

*SJA **24** 12:48:03.2±0.9,20°.04S×71°.27W,h64^{km}±22^{km},ML4.2,MW4.2*

*NEIC **24** 12:48:04.2,19°.92S×70°.90W,h20^{km},Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}3.39; $M_{\theta\theta}$0.05; $M_{\phi\phi}$-3.44; $M_{r\theta}$0.99; $M_{\theta\phi}$0.79; $M_{\phi r}$-2.43; Fault plane solution: $M_0$4.38000×10^{15} NP1:ϕ_s354.52000°,δ27.11000°,λ101.47000°. NP2:ϕ_s161.67000°,δ63.47000°,λ84.19000°. Principal axes: T 4.2860, Plg71.0000°, Azm59.0000°; N 0.1812, Plg5.0000°, Azm164.0000°; P -4.4672, Plg18.0000°, Azm256.0000°;*

*NEIC **24** 12:48:04.2±1.7,19°.93S±0°.03×70°.89W±0°.04,h15^{km}±3^{km},mb4.5/18,Mwr4.4/40 Error ellipse: s-maj=5.7km s-min=4.0km az=96.0*

*GUC **24** 12:48:06.2±0.8,19°.90S×70°.90W,h34^{km}±3^{km},ML4.3*

ISC 24 12:48:02.5±1.6**,19°.94S**±0°.03×**70°.92W**±0°.05**,h8**^{km}±9^{km}**,n122,**$\sigma 1^{s}24$/132**,mb4.4**/13**,10C-3D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.82	65	⇓iP	Pb	12 48 19.3	+0.1
PSGC				eS	Sb	12 48 30.6	+0.1
PSGCX	Pisagua	0.82	65		Pb	12 48 19.2	0.0
PSGCX				Sg	Sb	12 48 30.2	-0.3
TA01	Diego Aracena	0.93	132	⇓iP	Pn	12 48 22.2	+0.3
TA01				eS	Sn	12 48 35.0	-0.5
TA01				IAML		12 48 36.4	
	comp=N,14μm,0.3s						
PATCX	Punta Patache	1.13	141	⇑eP	Pg	12 48 25.5	+1.2
PATCX				i S	Sn	12 48 41.1	+0.5
PATCX	Punta Patache	1.13	141		Pg	12 48 25.1	+0.8
PATCX					Sn	12 48 40.3	-0.4
PB11	IPOC Station P	1.20	82	⇓iP	Pg	12 48 25.9	+0.3
PB11				eS	Sn	12 48 41.4	-1.1
PB11				IAML		12 48 43.2	
	comp=E,12μm,0.7s						
PB11	IPOC Station P	1.20	82		Pb	12 48 25.8	+0.1
PB11				Sg	Sn	12 48 41.2	-1.3
PB12	IPOC Station P	1.43	23	⇑iP	Pb	12 48 29.3	-0.4
PB12				eS	Sb	12 48 47.5	-0.6
PB12				IAML		12 48 55.1	
	comp=E,7μm,0.5s						
PB12	IPOC Station P	1.43	23	Pn	Pb	12 48 29.2	-0.4
PB12				Sn	Sb	12 48 47.8	-0.3
GO01	Chusmiza	1.65	81	⇑iP	Pb	12 48 33.3	-0.2
GO01				i S	Sg	12 48 55.1	-0.5
GO01	Chusmiza	1.65	81		Pb	12 48 33.2	-0.2
GO01				Sn	Sg	12 48 55.0	-0.5
PB08	IPOC Station P	1.67	97	⇑iP	Pb	12 48 33.5	-0.3
PB08				eS	Sb	12 48 55.3	0.0
PB08				IAML		12 48 57.5	
	comp=E,5μm,0.6s						
PB02	IPOC Station P	1.67	145	⇑iP	Pb	12 48 33.3	-0.4
PB02				i S	Sn	12 48 53.7	-0.3
PB02				IAML		12 49 03.8	
	comp=E,9μm,0.6s						
PB01	IPOC Station P	1.73	129	⇑iP	Pb	12 48 34.3	-0.4
PB01				eS	Sb	12 48 56.3	-0.4
PB01				IAML		12 49 02.8	
	comp=E,7μm,0.1s						
PB01	IPOC Station P	1.73	129	Pn	Pb	12 48 34.3	-0.4
PB01				Sn	Sb	12 48 56.6	0.0
PB07	IPOC Station P	2.02	152	⇑iP	Pn	12 48 37.9	+0.8
PB07				IAML		12 49 15.7	
	comp=E,3μm,0.4s						
PB07	IPOC Station P	2.02	152		Pn	12 48 37.9	+0.8
PB16	IPOC Station P	2.08	40	⇑iP	Pn	12 48 39.3	+1.0
PB16				i S	Sb	12 49 06.0	-1.3
PB16				IAML		12 49 14.4	
	comp=N,4μm,0.4s						
PB16	IPOC Station P	2.08	40		Pn	12 48 39.3	+1.0
PB03	IPOC Station P	2.36	153	⇑iP	Pn	12 48 42.6	+0.8
PB03				IAML		12 49 29.0	
	comp=N,1μm,0.6s						
PB09	IPOC Station P	2.42	140	⇑iP	Pb	12 48 44.7	-1.8
PB09				i S	Sb	12 49 15.8	-0.8
PB09	IPOC Station P	2.42	140		Pn	12 48 44.2	+1.6
PB04	IPOC Station P	2.48	163		Pn	12 48 43.8	+0.2
PB04	IPOC Station P	2.48	163	i P	Pn	12 48 44.0	+0.4
PB05	IPOC Station P	2.97	167	i P	Pn	12 48 50.3	+0.1
PB05				IAML		12 49 58.1	
	comp=Z,531nm,0.6s						
PB06	IPOC Station P	3.02	156	i P	Pn	12 48 51.6	+0.6
PB06				IAML		12 49 46.0	
	comp=Z,1μm,0.5s						
LVC	Limon Verde	3.25	145	Pn	Pn	12 48 56.8	+2.6
	comp=Z,13nm,0.3s,baz=342,slow=6.6,SNR=39						
LVC				Sn	Sn	12 49 34.3	+1.0
	comp=Z,36nm,0.3s,baz=2.1,slow=8.9,SNR=4.5						
LVC				Lg	Lg	12 49 43.4	
	comp=Z,61nm,0.3s,baz=56,slow=5.9,SNR=6.6						
LVC	Limon Verde	3.25	145		Pn	12 48 55.6	+1.4
LVC	Limon Verde	3.25	145	eS	Sn	12 49 34.7	+1.4
LVC	Limon Verde	3.25	145	i P	Pn	12 48 56.9	+2.6
LVC				IAML		12 49 55.6	
	comp=Z,554nm,0.8s						
PB15	IPOC Station P	3.52	158		Pn	12 48 58.4	+0.6
PB15	IPOC Station P	3.52	158	i P	Pn	12 48 58.4	+0.6
PB15				IAML		12 50 01.7	
	comp=Z,1μm,1.1s						
PB10	IPOC Station P	3.57	175		Pn	12 48 58.0	-0.3
PB10	IPOC Station P	3.57	175	i P	Pn	12 48 58.2	-0.2
PB10				IAML		12 50 25.1	
	comp=Z,168nm,1.0s						
LPAZ	La Paz	4.50	37	Pn	Pn	12 49 15.8	+4.2
	comp=Z,2.0nm,0.3s,baz=217,slow=7.3,SNR=18						
LPAZ				LR	LR	12 51 04.8	
	comp=Z,827nm,18.3s,baz=241,slow=43						
LPAZ	La Paz	4.50	37	Pn	Pn	12 49 14.3	+2.7
LPAZ	La Paz	4.50	37	i P	Pn	12 49 15.5	+3.9
PB14	IPOC Station P	4.69	174		Pn	12 49 13.2	-0.8
GO02	Mina Guanaco	5.34	167		Pn	12 49 23.1	+0.2
YJA	Yavi	5.51	115	i P	Pn	12 49 31.8	+6.4
YJA				IAML		12 51 02.4	
	comp=Z,27nm,1.9s						
GO03	Copiap	7.64	175	Pn	Pn	12 49 55.2	+0.9
SIV	San Ignacio	10.16	69	Pn	Pn	12 50 27.8	-1.1
	comp=Z,0.6nm,0.3s,baz=260,slow=12,SNR=17						
GO04	Tololo Observa	10.19	179	Pn	Pn	12 50 31.1	+1.7
ACDV	Cuesta del Vie	10.31	171	i P	Pn	12 50 34.3	+3.2
SAML	Samuel	13.24	35		Pn	12 51 11.8	+0.8
SAML	Samuel	13.24	35	eP	Pn	12 51 10.8	-0.3
AQDB	Aquidauana	14.30	95	eP	Pn	12 51 25.0	-0.5
SALV	Santo Antonio	15.03	77	eP	Pn	12 51 35.2	-0.3
C2SB	Chapadao do Su	17.10	89	eP	P	12 52 03.2	-0.7
TRCB	Terra Rica	17.27	103	eP	P	12 52 05.2	-0.5
PTGB	Pitanga	18.07	109	eP	P	12 52 15.6	+0.8
PCMB	Pacaembu	18.46	99	eP	Pn	12 52 19.7	+0.7
ARAG	Araguaiana, MT	18.67	80	eP	P	12 52 19.8	-1.4
ITAB	Concordia	18.67	116	eP	Pn	12 52 21.1	-0.5
CPSB	Cacapava Do Su	18.92	127	eP	Pn	12 52 24.2	-0.3
ITRB	Iturama	19.34	93	eP	Pn	12 52 29.1	-0.7
PLTB	Pedras Altas	19.50	131	eP	P	12 52 30.2	0.0
GO06	Curarrehue	19.58	181	P	Pn	12 52 32.0	-0.5
FRTB	Fartura	20.13	104	eP	P	12 52 37.5	+0.2
CNLB	Canela	20.46	121	eP	P	12 52 40.9	+0.1
PLCA	Paso Flores	20.73	179	P	Pn	12 52 48.4	+2.4
	comp=Z,1.6nm,0.9s,baz=18,slow=13,SNR=2.4						
PLCA	Paso Flores	20.73	179	P	Pn	12 52 45.3	-0.7
PLCA	Paso Flores	20.73	179	eP	P	12 52 41.8	-1.8
BB19B	Bebedouro	21.00	97	eP	P	12 52 46.5	-0.3
IPMB	Ipameri, GO	21.56	89	eP	P	12 52 51.6	-1.2
FLOC	Florencia	21.89	347	P	P	12 52 56.4	+0.1
PTGA	Pitinga	21.90	31	P	P	12 52 55.2	-1.1
	comp=Z,5.0nm,0.5s,baz=215,slow=15,SNR=8.5						
PTGA	Pitinga	21.90	31	P	P	12 52 55.0	-1.3
PTGA				IAmb	IAmb	12 53 06.7	
	comp=Z,23nm,1.4s						
PTGA	Pitinga	21.90	31	eP	P	12 52 55.0	-1.3
SPB	Sao Paulo	22.11	104	eP	P	12 52 58.5	-0.1
BDFB	Brasilia	22.22	83	P	P	12 52 58.6	-1.3
	comp=Z,2.9nm,0.6s,baz=221,slow=14,SNR=2.5						
BDFB				LR	LR	13 02 31.1	
	comp=Z,328nm,19.8s,baz=283,slow=40						
BDFB	Brasilia	22.22	83	P	P	12 52 59.6	-0.3
VAO	Valinhos	22.49	102	eP	P	12 53 03.1	+0.3
BSCB	Bom Sucesso	24.51	97	eP	P	12 53 22.9	+0.2
ROSC	El Rosal	24.85	352	P	P	12 53 25.7	-0.5
SMTB	Santa Maria do	25.10	67	eP	P	12 53 28.3	+0.2
RUSC	La Rusia	25.76	355	P	P	12 53 33.7	-0.8
JANB	Januaria	25.82	83	eP	P	12 53 33.1	-1.6
SDV	Santo Domingo	28.65	1	eP	P	12 53 58.2	-2.0
TXAR	Lajitas Array	58.29	326	P	P	12 57 59.4	+1.2
	comp=Z,0.4nm,0.8s,baz=184,slow=7.5,SNR=3.8						
TXAR	Lajitas Array	58.29	326	P	P	12 57 59.0	+0.8
T47A	Sharon Grove	58.65	345	P	P	12 58 00.9	+0.5
X37A	Clayton	59.01	337	P	P	12 58 03.8	+0.9
SDCO	Great Sand Dun	65.96	330	P	P	12 58 51.1	+1.3
SDCO				IAmb	IAmb	12 58 53.3	
	comp=Z,6.2nm,1.4s						
QSPA	South Pole Qui	70.24	180	P	P	12 59 17.3	+1.1
K22A	Casper	70.40	333	P	P	12 59 16.8	-0.6
K22A				IAmb	IAmb	12 59 22.8	
	comp=Z,7.4nm,1.3s						
PDAR	Pinedale Array	71.84	331	P	P	12 59 28.4	+2.2
	comp=Z,0.5nm,0.9s,baz=93,slow=6.6,SNR=2.8						
PDAR	Pinedale Array	71.84	331	P	P	12 59 27.4	+1.2
NVAR	Mina Array Bea	73.12	323	P	P	12 59 36.1	+2.2
	comp=Z,0.2nm,0.5s,baz=146,slow=6.6,SNR=2.9						
NVAR	Mina Array Bea	73.12	323	P	P	12 59 33.9	-0.1
ULM	Lac du Bonnet	73.29	344	P	P	12 59 33.9	-0.4
ULM				IAmb	IAmb	12 59 44.6	
	comp=Z,4.1nm,1.1s						
FLWY	Flagg Ranch	73.38	331	P	P	12 59 35.8	+0.4
FLWY				IAmb	IAmb	12 59 49.1	
	comp=Z,4.9nm,0.9s						
YNE	Yellowstone No	73.80	332	P	P	12 59 38.5	+0.7
WALA	Waterton Lakes	78.62	333	P	P	13 00 05.3	+0.2
WALA				IAmb	IAmb	13 00 19.0	
	comp=Z,3.6nm,0.9s						
TOA0	Torodi Ar. Sit	78.63	71	P	P	13 00 04.8	-0.9
TOA0				IAmb	IAmb	13 00 05.7	
	comp=Z,6.0nm,0.9s						
TORD	Torodi Ar. Bea	78.63	71	P	P	13 00 04.6	-1.0
	comp=Z,4.0nm,0.8s,baz=254,slow=4.9,SNR=13						
TORD	Torodi Ar. Bea	78.63	71	P	P	13 00 04.6	-1.0
YKA	Yellowknife Ar	89.11	341	P	P	13 00 58.7	+0.7
	comp=Z,0.6nm,0.8s,baz=139,slow=5.3,SNR=13						
H11S2	WAKE ISLAND Hy	125.80	279	T	T	15 26 29.4	
	baz=101,slow=74,SNR=106						
H11S1	WAKE ISLAND Hy	125.81	279	T	T	15 26 31.1	
	baz=101,slow=74,SNR=53						
H11S3	WAKE ISLAND Hy	125.82	279	T	T	15 26 27.9	
	baz=101,slow=74,SNR=55						
H11N3	WAKE ISLAND Hy	125.85	280	T	T	15 26 40.6	
	baz=101,slow=74,SNR=26						
H11N2	WAKE ISLAND Hy	125.86	280	T	T	15 26 30.3	
	baz=101,slow=74,SNR=24						
H11N1	WAKE ISLAND Hy	125.86	280	T	T	15 26 44.7	
	baz=101,slow=74,SNR=12						
SEY	Seymchan	127.93	337	PKP	PKiKP	13 07 10.1	+0.9
	comp=Z,1.4nm,0.8s,baz=122,slow=6.2,SNR=4.9						
ASAR	Alice Springs	130.36	210	PKP	PKiKP	13 07 15.4	0.0
	comp=Z,0.3nm,0.8s,baz=115,slow=1.5,SNR=2.1						
ABKAR	Akbulak array	131.25	41		PKiKP	13 07 16.6	+0.4
ZALV	Zalesovo Beam	141.30	23	PKP	PKPdf	13 07 32.9	-0.8
	comp=Z,0.6nm,0.3s,baz=298,slow=3.2,SNR=4.1						
ZALV	Zalesovo Beam	141.30	23		PKiKP	13 07 34.6	-1.9
MAKZ	Makanchi	145.25	33		PKPdf	13 07 41.1	+0.1
MK31	Makanchi Array	145.42	33		PKPab	13 07 41.6	+0.2
MKAR	Makanchi Array	145.42	33	PKPbc	PKPab	13 07 41.8	+0.3
	comp=Z,2.7nm,0.8s,baz=325,slow=4.2,SNR=25						
MKAR	Makanchi Array	145.42	33		PKPab	13 07 41.5	+0.1
KSH	Kashi	145.53	48	PKPbc	PKPab	13 07 43.3	+1.1
KSH				PP	PP	13 11 07.4	+5.2
KLR	Kul'dur	145.60	333	PKPbc	PKPab	13 07 42.7	+0.8
	comp=Z,0.8nm,0.5s,baz=294,slow=1.3,SNR=5.2						
USRK	Ussuriysk Ar.	149.19	327	PKPbc	PKiKP	13 07 53.1	+0.1
	comp=Z,1.8nm,0.8s,baz=340,slow=4.5,SNR=4.2						

USRK	Ussuriysk Ar.	149.19	327		PKiKP	13 07 52.9	-0.1
MJAR	Matsushiro Arr	149.63	309	PKPbc	PKiKP	13 07 55.1	+0.9
	comp=Z,2.4nm,1.0s,baz=82,slow=1.3,SNR=5.6						
MJAR	Matsushiro Arr	149.63	309		PKiKP	13 07 53.9	-0.4
SONM	Songino Array	152.09	4	PKPbc	PKiKP	13 07 59.8	+0.7
	comp=Z,0.9nm,0.6s,baz=344,slow=1.2,SNR=5.4						
SONM	Songino Array	152.09	4		PKiKP	13 07 59.3	+0.1
LZH	Lanzhou	163.27	15	*e*PKP	PKPdf	13 08 02.3	-4.1
LZH				pPKP	sPKPdf	13 08 13.4	+4.9
LZH				sPKP		13 08 17.9	

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*IDC **24** 13:07:11.1±1.6, 46°.78N×145°.63E, h340^{km}±19^{km}, mb2.7/6, mb1 2.9/12, mb1mx2.8/52, mbtmp3.5/12, Error ellipse: s-maj=23.8km s-min=16.2km az=141.0*

*JMA **24** 13:07:12.8±0.5, 46°.17N×145°.80E, h366^{km}, M3.5*

ISC 24 13:07:11.0±0.8**, 46°.36N**±0°.08×**145°.7E**±0°.1**, h367**^{km}**, n27, σ1ˢ.65**/34**, mb3.0**/6**, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JRA	Rausu	2.46	190	P	Pn	13 08 07.9	+0.6
JSE	Soyaes	2.60	239	P	Pn	13 08 08.9	+0.6
JTKR	Abashiri--Toko	2.71	209	P	Pn	13 08 10.3	+1.0
JTKR				*e*S	S	13 08 54.7	-1.4
NEM2	Nemuro 2	2.99	180	P	Pn	13 08 10.7	-1.0
NEM2				*e*S	S	13 08 57.7	-2.8
ASAJ	Asahikawa	3.14	226	P	Pn	13 08 14.0	+1.0
	1.3nm,0.3s,baz=52,slow=7.5,SNR=16						
JAR	Ashorobuto	3.36	205	P	Pn	13 08 16.3	+1.3
JAK	Akkeshi	3.44	193	P	Pn	13 08 15.4	-0.3
JAK				*e*S	S	13 09 06.1	-1.7
JFR	Furan	3.89	216	P	Pn	13 08 21.9	+1.8
JCH	Churui	4.10	205	P	Pn	13 08 21.9	-0.2
JCH				*e*S	S	13 09 17.1	-2.5
JNBK	Urakawa-nobuka	4.60	209	P	Pn	13 08 27.1	-0.1
JEW	Eniwo	4.65	222	P	Pn	13 08 30.0	+2.2
JKB	Kayabe	5.60	219	P	Pn	13 08 38.6	+0.6
JKB				*e*S	S	13 09 45.6	-2.9
JOT	Ohata	6.01	216	P	Pn	13 08 42.9	+0.3
JOT				*e*S	S	13 09 53.5	-3.4
JANG	Nango	6.72	209	P	Pn	13 08 51.1	+0.5
JOM	Ohasama	7.61	207	P	Pn	13 09 02.0	+1.1
JOM				*e*S	S	13 10 29.2	-1.4
JMK	Ichinoseki	8.11	206	P	Pn	13 09 07.7	+1.0
JMK				*e*S	S	13 10 40.6	-0.7
KLR	Kul'dur	9.83	292	P	Pn	13 09 24.3	-2.5
	0.2nm,0.3s,baz=99,slow=13,SNR=5.8						
USRK	Ussuriysk Ar.	9.92	262	P	Pn	13 09 28.4	+0.5
	baz=67,slow=12,SNR=12						
MJAR	Matsushiro Arr	11.30	212	P	P	13 09 47.4	+3.1
	0.1nm,0.3s,baz=25,slow=11,SNR=10						
KSRS	Korea Array	15.93	242	P	P	13 10 36.1	+1.2
	0.1nm,0.3s,baz=49,slow=13,SNR=2.3						
SEY	Seymchan	17.04	10	P	P	13 10 45.0	-1.4
	0.1nm,0.3s,baz=136,slow=13,SNR=7.7						
SONM	Songino Array	26.62	288	P	P	13 12 18.0	+0.7
	0.4nm,0.4s,baz=70,slow=8.7,SNR=4.0						
ILAR	Eielson Array	40.02	38	P	P	13 14 10.8	-0.6
	0.3nm,0.4s,baz=276,slow=9.0,SNR=6.0						
MKAR	Makanchi Array	42.52	295	P	P	13 14 31.9	+0.2
	0.4nm,0.5s,baz=70,slow=8.1,SNR=5.5						
INK	Inuvik	44.68	31	P	P	13 14 47.2	-1.2
	0.9nm,1.1s,baz=297,slow=9.8,SNR=8.9						
PDAR	Pinedale Array	69.00	50	P	P	13 17 39.9	+2.0
	0.2nm,0.6s,baz=249,slow=4.7,SNR=2.2						
ASAR	Alice Springs	70.51	191	P	P	13 17 52.7	+5.8
	0.1nm,0.3s,baz=7.9,slow=6.4,SNR=1.6						

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*IDC **24** 13:12:02.5±0.6, 17°.24N×119°.42E, h0^{km}, mb4.0/18, mb1 4.1/19, mb1mx4.0/60, mbtmp4.0/19, ML4.1/1, MS4.0/1, Ms1 4.0/1, ms1mx3.4/42, Error ellipse: s-maj=25.7km s-min=14.1km az=70.0*

*MAN **24** 13:12:05.7, 17°.33N×119°.28E, h15^{km}, mb5.4, ML4.3, MS4.5*

*NEIC **24** 13:12:09.9±1.8, 17°.41N±0°.07×119°.48E±0°.08, h47^{km}±7^{km}, mb4.4/23, Error ellipse: s-maj=11.3km s-min=9.9km az=127.0*

ISC 24 13:12:05.8±2.0**, 17°.27N**±0°.04×**119°.31E**±0°.07**, h19**^{km}±7^{km}**, n69, σ1ˢ.14**/75**, mb4.2**/27**, 1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLP	Bolinao	1.06	147	*e*P	Pb	13 12 24.9	-0.6
SZP	Santa	1.13	76		Pn	13 12 25.6	-1.0
SZP				Sn	Sb	13 12 39.7	-1.4
SIPP	Brgy, Tapao	1.27	59	⇑*e*P	Pn	13 12 27.0	-1.6
SIPP				*e*S	Sb	13 12 46.0	+0.9
ABRA	Dolores	1.39	74	*e*P	Pn	13 12 29.7	-0.5
ABRA				*e*S	Sb	13 12 49.6	+1.1
SCZP	Santa Cruz	1.60	159	*e*P	Pn	13 12 33.1	+0.1
SCZP				*e*S	Sn	13 12 52.2	-1.0
SMPP	San Manuel, Pa	1.72	130	*e*P	Pn	13 12 34.3	-0.5
SMPP				*e*S	Sn	13 12 56.8	+0.5
APYP	Conner	1.94	72	*e*P	Pn	13 12 38.0	+0.3
APYP				*e*S	Sn	13 13 02.9	+1.3
CAUP	Cauayan	2.42	97	*e*P	Pb	13 12 47.6	-1.2
CAUP				*e*S	Sb	13 13 19.6	+1.2
BALP	Baler	2.65	125	*e*P	Pn	13 12 49.9	+2.2
BALP				*e*S	Sb	13 13 22.8	-2.2
SGCP	Mt. Cagua	2.78	69	*e*P	Pn	13 12 51.5	+2.1
PALP	Palanan	2.98	94	*e*P	Pn	13 12 54.5	+2.3
PALP				*e*S	Sb	13 13 35.2	+0.7
TGY	Tagaytay City	3.52	153	Pn	Pn	13 13 03.7	+4.1
	38nm,0.3s,baz=309,slow=6.5,SNR=1.9						
LQP	Lukban	3.81	145	*e*P	Pn	13 12 56.4	-7.3
YULB	Yu-li	6.37	17	Pn	Pn	13 13 38.2	-0.5
CMAR	Chiang Mai Arr	19.42	277	P	Pn	13 16 33.1	+0.7
	0.2nm,0.3s,baz=90,slow=8.4,SNR=1.0						
KSRS	Korea Array	21.49	19	P	P	13 16 51.6	-1.8
	2.1nm,0.7s,baz=197,slow=12,SNR=7.4						
KAPI	Kappang	22.15	179	LR	LR	13 25 45.8	
	comp=Z,477nm,21.7s,baz=332,slow=37						
SONM	Songino Array	32.27	344	P	P	13 18 34.0	+0.6
	0.4nm,0.5s,baz=157,slow=7.8,SNR=2.7						
KLR	Kul'dur	33.44	15	P	P	13 18 44.0	+0.6
	1.1nm,0.7s,baz=228,slow=7.9,SNR=4.1						
WB0	Warramunga Arr	39.68	157	P	P	13 19 36.3	-0.6
WB0				IAmb	IAmb	13 20 36.4	
	comp=Z,19nm,1.9s						
WRA	Warramunga Arr	39.82	158	P	P	13 19 36.5	-1.6
	comp=Z,1.2nm,0.6s,baz=339,slow=9.1,SNR=18						
WRA	Warramunga Arr	39.82	158	P	P	13 19 36.0	-2.1
WB2	Warramunga Arr	39.82	158	P	P	13 19 36.5	-1.6
WB2				IAmb	IAmb	13 19 39.8	
	comp=Z,17nm,1.8s						
WR0	Warramunga Arr	39.91	157	P	P	13 19 37.3	-1.6
WR0				IAmb	IAmb	13 19 44.6	
	comp=Z,11nm,1.6s						
MK31	Makanchi Array	42.39	322	P	P	13 19 59.7	+0.6
MKAR	Makanchi Array	42.39	322	P	P	13 20 00.5	+1.5
	comp=Z,1.9nm,0.9s,baz=128,slow=7.9,SNR=18						
MKAR				PcP	PcP	13 21 51.4	-0.7
	comp=Z,1.0nm,0.7s,baz=106,slow=3.9,SNR=8.7						
MKAR	Makanchi Array	42.39	322	P	P	13 20 00.1	+1.1
MKAR					PcP	13 21 51.9	-0.3
MAKZ	Makanchi	42.58	322	P	P	13 20 01.2	+0.6
AS31	Alice Springs	43.11	160	P	P	13 20 04.5	-0.6
ASAR	Alice Springs	43.11	160	P	P	13 20 04.7	-0.5
	comp=Z,0.8nm,0.5s,baz=340,slow=6.9,SNR=62						
ZAA0	Zalesovo Array	45.29	332	P	P	13 20 22.7	+0.5
ZAA0				IAmb	IAmb	13 20 23.6	
	comp=Z,5.1nm,1.1s						
ZALV	Zalesovo Beam	45.29	332	P	P	13 20 22.3	+0.1
	comp=Z,1.7nm,0.5s,baz=127,slow=7.3,SNR=11						
ZALV	Zalesovo Beam	45.29	332	P	P	13 20 22.6	+0.4
KURK	Kurchatov	46.50	325	P	P	13 20 32.9	+1.1
PETK	Petropavlovsk-	46.61	31	P	P	13 20 32.7	0.0
	comp=Z,2.2nm,0.9s,baz=260,slow=8.6,SNR=1.1						
GAR	Garm	47.66	307	P	P	13 20 41.9	+0.6
GAR				IAmb	IAmb	13 20 43.5	
	comp=Z,7.4nm,1.0s						
KK31	Karatay Array	48.56	313	P	P	13 20 48.5	+0.6
KK31				IAmb	IAmb	13 20 49.7	
	comp=Z,2.4nm,0.8s						
KKAR	Karatay Array	48.56	313	P	P	13 20 48.6	+0.6
KKAR	Karatay Array	48.56	313	P	P	13 20 48.5	+0.6
KKAR				IAmb	IAmb	13 20 49.7	
	comp=Z,2.4nm,0.8s						
BRVK	Borovoye	52.16	325	P	P	13 21 16.1	+1.0
BRVK				IAmb	IAmb	13 21 17.0	
	comp=Z,5.2nm,1.1s						
BBOO	Buckleboo	52.31	162	P	P	13 21 15.6	-0.8
STKA	Stephens Creek	53.34	156	P	P	13 21 23.3	-0.7
	comp=Z,0.8nm,0.5s,baz=346,slow=6.0,SNR=5.2						
STKA	Stephens Creek	53.34	156	IAmb	IAmb	13 21 31.5	
	comp=Z,0.7nm,0.7s						
TIXI	Tiksi	54.67	4	P	P	13 21 32.5	-0.7
	comp=Z,0.7nm,0.5s,baz=175,slow=3.2,SNR=5.5						
TIXI	Tiksi	54.67	4	IAmb	IAmb	13 21 33.9	
	comp=Z,1.9nm,0.9s						
NRIK	Noril'sk	55.65	347	P	P	13 21 40.5	+0.2
	comp=Z,5.4nm,0.7s,baz=128,slow=7.5,SNR=9.6						
GEYT	Alibeck	56.99	304	P	P	13 21 51.0	+0.5
	comp=Z,1.9nm,0.6s,baz=150,slow=10,SNR=4.7						
GEYT	Alibeck	56.99	304	IAmb	IAmb	13 21 52.8	
	comp=Z,1.9nm,0.8s						
ABKAR	Akbulak array	57.19	318	P	P	13 21 51.7	+0.1
BILL	Bilibino	58.75	19	P	P	13 22 02.7	+0.4
BILL				IAmb	IAmb	13 22 55.4	
	comp=Z,7.9nm,1.6s						
TTA	Tatalina	72.36	29	P	P	13 23 31.4	+1.0
IMAR	Indian Mountai	73.14	25	P	P	13 23 35.6	+0.7
TOLK	Toolik Lake Re	74.47	22	P	P	13 23 43.5	+0.8
MLY	Manley	74.48	26	P	P	13 23 44.0	+1.1
MLY				IAmb	IAmb	13 23 44.6	
	comp=Z,3.8nm,0.7s						
BPAW	Bear Paw Mtn.	74.50	27	P	P	13 23 43.5	+0.7
ARCES	ARCESS Array B	75.29	339	P	P	13 23 46.9	-0.4
	comp=Z,1.8nm,0.8s,baz=60,slow=8.5,SNR=5.4						
RND	Reindeer	75.54	28	P	P	13 23 48.8	-0.2
ILAR	Eielson Array	76.14	26	P	P	13 23 52.1	-0.2
	comp=Z,0.4nm,0.6s,baz=263,slow=5.0,SNR=5.9						
ILAR	Eielson Array	76.14	26	P	P	13 23 51.2	-1.1
BMAR	Burnt Mountain	76.53	23	P	P	13 23 55.5	+1.1
FINES	FINESS Array B	76.53	330	P	P	13 23 54.3	-0.2
	comp=Z,0.8nm,0.4s,baz=53,slow=5.2,SNR=13						
FINES	FINESS Array B	76.53	330	P	P	13 23 54.1	-0.4
BCAR	Beaver Creek A	78.73	27	P	P	13 24 08.0	+1.1
HFS	Hagfors	82.72	331	P	P	13 24 27.6	-0.5
	comp=Z,0.8nm,0.4s,baz=95,slow=3.3,SNR=9.0						
NB2	NORSAR Subarra	83.49	332	P	P	13 24 31.6	-0.6
	comp=Z,3.1nm,0.9s,baz=66,slow=4.8						
NOA	NORSAR Array B	83.49	332	P	P	13 24 31.3	-1.0
	comp=Z,1.9nm,0.8s,baz=64,slow=4.9,SNR=7.2						
TXAR	Lajitas Array	117.81	42	PKP	PKPdf	13 30 51.8	0.0
	comp=Z,0.4nm,0.8s,baz=225,slow=0.2,SNR=3.6						
TXAR	Lajitas Array	117.81	42		PKPdf	13 30 50.2	-1.6
SDV	Santo Domingo	152.21	21	PKPbc	PKPbc	13 32 01.0	-0.5
	comp=Z,5.2nm,0.7s,baz=319,slow=4.0,SNR=7.1						

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*IDC **24** 13:12:41.4±0.8, 19°.60S×70°.73W, h0^{km}, mb3.8/8, mb1 4.1/11, mb1mx4.0/34, mbtmp3.9/11, ML3.9/3, Error ellipse: s-maj=27.4km s-min=14.7km az=68.0*

*NEIC **24** 13:12:43.8, 19°.81S×71°.04W, h29^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.24; $M_{\theta\theta}$0.43; $M_{\phi\phi}$-1.67; $M_{r\theta}$0.28; $M_{\theta\phi}$0.28; $M_{\phi r}$-0.67; Fault plane solution: $M_0$1.69000×10^{15} NP1:ϕ_s162.62000°, δ58.62000°, λ77.78000°. NP2:ϕ_s5.19000°, δ33.45000°, λ109.13000°. Principal axes: T 1.4331, Plg73.0000°, Azm41.0000°; N 0.4333, Plg10.0000°, Azm169.0000°; P -1.8664, Plg13.0000°, Azm261.0000°;*

*NEIC **24** 13:12:43.5±2.2, 19°.78S±0°.04×70°.81W±0°.02, h16^{km}±4^{km}, mb4.3/5, Mwr4.1/36 Error ellipse: s-maj=6.2km s-min=1.8km az=165.0*

*GUC **24** 13:12:45.6±0.8, 19°.79S×70°.81W, h33^{km}±3^{km}, ML4.1*

ISC 24 13:12:41.6±2.2**, 19°.79S**±0°.03×**70°.89W**±0°.06**, h6**^{km}±14^{km}**, n55, σ1ˢ.04**/57**, mb3.8**/7**, 4C-7D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.74	75	⇓*i*P	Pb	13 12 56.9	-0.1
PSGC				*i* S	Sb	13 13 06.6	-0.9
PSGCX	Pisagua	0.74	75		Pb	13 12 56.9	-0.1
PSGCX					Sg	13 13 04.7	-0.9
TA01	Diego Aracena	1.01	139	⇓*i*P	Pb	13 13 01.8	+0.3
TA01				*i* S	Sg	13 13 15.2	+1.0
TA01				IAML		13 13 22.4	
	comp=E,6μm,0.4s						
PB11	IPOC Station P	1.16	89	⇓*i*P	Pb	13 13 03.8	-0.3
PB11				*i* S	Sb	13 13 18.5	-1.0
PB11				IAML		13 13 23.7	
	comp=N,5μm,0.3s						
PB11	IPOC Station P	1.16	89		Pb	13 13 03.6	-0.5
PATCX	Punta Patache	1.23	146	⇓*i*P	Pn	13 13 05.5	+0.1
PATCX				*i* S	Sb	13 13 21.4	0.0
PATCX				IAML		13 13 33.5	
	comp=E,4μm,0.5s						
PATCX	Punta Patache	1.23	146		Pn	13 13 05.5	+0.1
PB12	IPOC Station P	1.29	24	⇑*i*P	Pn	13 13 06.4	+0.2
PB12				*i* S	Sn	13 13 23.1	-0.7
PB12				IAML		13 13 24.3	
	comp=N,7μm,0.5s						
PB12	IPOC Station P	1.29	24		Pn	13 13 06.2	0.0
AP01	Chacalluta	1.51	20	*e*P	Pb	13 13 10.0	+0.1
AP01				*e*S	Sb	13 13 29.1	-0.2
GO01	Chusmiza	1.60	86	⇓*i*P	Pb	13 13 11.3	-0.5
GO01				*i* S	Sb	13 13 31.9	-0.5
GO01				IAML		13 13 36.6	
	comp=N,6μm,0.3s						
GO01	Chusmiza	1.60	86		Pb	13 13 11.3	-0.5
PB08	IPOC Station P	1.67	102	⇓*i*P	Pn	13 13 12.1	+0.5
PB08				*i* S	Sb	13 13 33.1	-1.2
PB08				IAML		13 13 36.0	
	comp=N,3μm,0.5s						
PB02	IPOC Station P	1.78	149	*i* P	Pn	13 13 13.5	+0.5
PB02				*i* S	Sn	13 13 34.8	-1.2
PB02				IAML		13 13 45.4	
	comp=E,5μm,0.4s						
PB01	IPOC Station P	1.81	134	⇑*i*P	Pn	13 13 14.2	+0.9
PB01				*i* S	Sn	13 13 36.2	-0.4
PB01				IAML		13 13 37.3	
	comp=N,1μm,0.2s						
PB01	IPOC Station P	1.81	134		Pn	13 13 13.9	+0.5
PB16	IPOC Station P	1.95	42	⇑*i*P	Pn	13 13 16.8	+1.1
PB16				*i* S	Sb	13 13 42.6	0.0
PB16				IAML		13 13 45.7	
	comp=N,4μm,0.2s						
PB16	IPOC Station P	1.95	42		Pb	13 13 17.0	-0.9
PB07	IPOC Station P	2.14	154	⇓*i*P	Pn	13 13 18.2	+0.3
PB07	IPOC Station P	2.14	154		Pn	13 13 18.3	+0.3
PB09	IPOC Station P	2.52	143	⇑*i*P	Pn	13 13 24.7	+1.6
PB09				IAML		13 14 09.4	
	comp=N,1μm,0.7s						
PB09	IPOC Station P	2.52	143		Pn	13 13 24.6	+1.4
PB04	IPOC Station P	2.62	165	IAML		13 14 12.4	
	comp=N,1μm,0.7s						
PB04	IPOC Station P	2.62	165		Pn	13 13 24.1	-0.4
PB06	IPOC Station P	3.15	157	IAML		13 14 28.1	
	comp=N,668nm,0.2s						
LVC	Limon Verde	3.35	147	Pn	Pn	13 13 36.6	+1.7
	comp=N,8.3nm,0.3s,baz=352,slow=8.8,SNR=31						
LVC				Sn	Sn	13 14 15.7	+0.5
	comp=N,33nm,0.3s,baz=149,slow=23,SNR=7.9						
LVC				Lg	Lg	13 14 28.5	
	comp=N,37nm,0.3s,baz=217,slow=12,SNR=6.7						
LVC	Limon Verde	3.35	147		Pn	13 13 36.2	+1.4
PB15	IPOC Station P	3.64	159		Pn	13 13 38.2	-0.5
PB10	IPOC Station P	3.71	175		Pn	13 13 38.1	-1.4
LPAZ	La Paz	4.36	37	Pn	Pb	13 13 54.4	-4.7
	comp=N,7.5nm,0.3s,baz=228,slow=7.7,SNR=55						
LPAZ	La Paz	4.36	37		Pn	13 13 52.1	+3.1
PB14	IPOC Station P	4.83	175		Pn	13 13 53.4	-1.7
GO02	Mina Guanaco	5.47	168		Pn	13 14 03.3	-0.7
SIV	San Ignacio	10.08	70	Pn	Pn	13 15 06.6	-0.3
	comp=N,4.0nm,0.3s,baz=276,slow=9.9,SNR=67						
CPUP	Villa Florida	14.07	120	Pn	Pn	13 16 02.9	+1.5
	comp=N,0.1nm,0.3s,baz=325,slow=14,SNR=3.4						
GO06	Curarrehue	19.73	181	P	P	13 17 10.4	-1.7
GO06				IAmb	IAmb	13 17 47.5	
	comp=Z,11nm,1.4s						
PLCA	Paso Flores	20.87	179	P	Pn	13 17 29.2	+2.3
	comp=Z,4.5nm,0.9s,baz=20,slow=11,SNR=5.5						
PLCA	Paso Flores	20.87	179	P	P	13 17 25.1	+0.6
PTGA	Pitinga	21.75	31	P	P	13 17 32.0	-2.0
	comp=Z,6.2nm,0.3s,baz=42,slow=23,SNR=18						
PTGA	Pitinga	21.75	31	P	P	13 17 32.0	-2.0
PTGA				IAmb	IAmb	13 17 51.0	
	comp=Z,18nm,1.5s						
TXAR	Lajitas Array	58.18	326	P	P	13 22 36.6	-0.1
	comp=Z,0.5nm,0.8s,baz=157,slow=8.1,SNR=5.8						
QSPA	South Pole Qui	70.39	180	P	P	13 23 58.1	+1.8
	comp=Z,1.4nm,0.6s,baz=258,slow=0.5,SNR=11						
QSPA	South Pole Qui	70.39	180	IAmb	IAmb	13 23 59.2	
	comp=Z,11nm,1.4s						
PDAR	Pinedale Array	71.72	331	P	P	13 24 05.1	+0.3
	comp=Z,0.2nm,0.4s,baz=135,slow=7.1,SNR=4.2						
NVAR	Mina Array Bea	73.02	323	P	P	13 24 13.0	+0.4
	comp=Z,0.6nm,0.7s,baz=160,slow=6.6,SNR=5.8						
YNE	Yellowstone No	73.68	332	P	P	13 24 18.0	+1.6
TORD	Torodi Ar. Bea	78.55	71	P	P	13 24 43.3	-1.2
	comp=Z,1.0nm,1.0s,baz=258,slow=4.9,SNR=3.2						
YKA	Yellowknife Ar	88.98	341	P	P	13 25 36.6	-0.1
	comp=Z,0.4nm,0.7s,baz=131,slow=5.7,SNR=6.0						
H11S2	WAKE ISLAND Hy	125.81	279	T	T	15 51 01.0	
	baz=101,slow=75,SNR=26						
H11S1	WAKE ISLAND Hy	125.82	279	T	T	15 51 01.8	
	baz=101,slow=75,SNR=24						
H11S3	WAKE ISLAND Hy	125.83	279	T	T	15 51 05.2	
	baz=101,slow=75,SNR=23						
H11N3	WAKE ISLAND Hy	125.85	280	T	T	15 51 03.8	
	baz=100,slow=74,SNR=9.5						
H11N2	WAKE ISLAND Hy	125.86	280	T	T	15 51 06.5	
	baz=100,slow=74,SNR=15						
H11N1	WAKE ISLAND Hy	125.87	280	T	T	15 51 05.9	
	baz=100,slow=74,SNR=3.0						
MKAR	Makanchi Array	145.28	33	PKPbc	PKPdf	13 32 20.4	0.0
	comp=Z,0.2nm,0.4s,baz=312,slow=3.9,SNR=2.5						

WEL 24 13:14:56.7, 40°.7S±0°.6×**175°.8E**±0°.8**, h24**^{km}±1^{km}**, M3.7**/85**, ML3.9**/19**, MLv3.7**/85**, Error ellipse: s-maj=0.0km s-min=0.0km az=104.2, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIWZ	Tintock	0.12	165	P	Pb	13 15 01.8	+0.3
PRWZ	Pori Road	0.14	43	P	Pb	13 15 02.1	+0.5
PRWZ				S	Sb	13 15 06.2	+1.2
MRZ	Mangatainoka R	0.20	269	P	Pb	13 15 02.8	+0.4
MRZ				S	Sb	13 15 07.2	+1.1
POWZ	Post Office Ro	0.27	348	P	Pb	13 15 03.8	+0.5
POWZ				S	Sb	13 15 08.8	+1.1
BFZ	Birch Farm	0.31	94	P	Pb	13 15 04.1	+0.4
BFZ				S	Sn	13 15 10.1	-1.4
HOWZ	Holdsworth Sta	0.34	226	P	Pb	13 15 04.9	+0.5
HOWZ				S	Sb	13 15 10.9	+1.3
CPWZ	Castlepoint	0.37	133	P	Pn	13 15 06.1	-0.4
CPWZ				S	Sn	13 15 14.8	+1.8
DVHZ	Dannevirke	0.44	35	P	Pb	13 15 06.1	+0.3
DVHZ				S	Sb	13 15 12.8	+0.7
TMWZ	Te Maipa	0.45	175	P	Pb	13 15 06.8	+0.7
TMWZ				S	Sn	13 15 14.4	-0.6
ANWZ	Angora Road	0.52	68	P	Pb	13 15 07.8	+0.6
OGWZ	Otaki Gorge	0.54	253	P	Pn	13 15 08.2	-0.6
MTW	Mount Morrison	0.56	207	P	Pb	13 15 08.5	+0.6
OHWZ	Ohakea	0.61	318	P	Pn	13 15 10.1	+0.3
TSZ	Takapari Road	0.61	9	P	Pb	13 15 09.0	+0.2
PRHZ	Porangahau	0.72	57	P	Pb	13 15 10.8	+0.1
KIW	Kapiti Island	0.74	254	P	Pn	13 15 11.7	+0.1
CAW	Cannon Point	0.74	232	P	Pn	13 15 11.5	-0.2
TRWZ	Traveller	0.75	189	P	Pb	13 15 11.2	0.0
WPHZ	Waipukurau	0.75	38	P	Pn	13 15 11.8	0.0
PAWZ	Paruwai Farm	0.79	203	P	Pn	13 15 12.2	-0.1
PNHZ	Pukenui	0.79	20	P	Pn	13 15 12.2	-0.2
MSWZ	Moikau Station	0.88	210	P	Pb	13 15 12.7	-0.6
PXZ	Pawanui	1.00	51	P	Pn	13 15 14.5	-0.7
PLWZ	Palliser	1.01	206	P	Pn	13 15 14.3	-1.1
WEL	Wellington	1.03	232	P	Pn	13 15 15.4	-0.2
BHW	Baring Head	1.05	224	P	Pn	13 15 15.3	-0.6
KRHZ	Kereru	1.09	22	P	Pn	13 15 16.5	-0.1
WAZ	Wanganui	1.12	324	P	Pb	13 15 18.8	+1.4
KAHZ	Kahuranaki	1.17	43	P	Pn	13 15 17.2	-0.4
BHHZ	Black Hill Sta	1.18	8	P	Pn	13 15 18.1	+0.3
MOVZ	Moawhango	1.25	357	P	Pb	13 15 19.5	-0.2
MTVZ	Mangateitei	1.30	347	P	Pb	13 15 21.0	+0.4
TCW	Tory Channel	1.31	245	P	Pn	13 15 19.2	-0.2
KWHZ	Kaweka Forest	1.31	20	P	Pn	13 15 19.6	+0.1
TRVZ	Turoa	1.38	350	P	Pb	13 15 21.9	-0.1
MCHZ	McNeill Hill	1.38	29	P	Pn	13 15 20.4	0.0
WHVZ	Whangaehu Hut	1.39	352	P	Pb	13 15 22.4	+0.2
TUVZ	Tukino	1.40	354	P	Pb	13 15 22.2	0.0
DRZ	Dome Shelter	1.40	351	P	Pb	13 15 23.7	+1.4
FWVZ	Far West T-bar	1.42	351	P	Pb	13 15 22.4	-0.2
PKVZ	Pokaka	1.42	344	P	Pb	13 15 22.6	0.0
DUWZ	D'Urville Isla	1.47	264	P	Pn	13 15 22.2	+0.6
NGZ	Ngauruhoe	1.49	353	P	Pb	13 15 23.6	-0.2
WTVZ	West Tongariro	1.55	353	P	Pb	13 15 24.1	-0.7
KRVZ	Karewarewa	1.57	354	P	Pb	13 15 24.5	-0.6
BKZ	Black Stump Fm	1.57	19	P	Pn	13 15 22.9	-0.3
TWVZ	Taurewa	1.62	349	P	Pb	13 15 25.1	-0.8
LREZ	Lake Rotokare	1.63	317	P	Pb	13 15 26.9	+0.8
TUWZ	Tuamarina	1.63	241	P	Pn	13 15 24.7	+0.8
ARHZ	Aropaoanui	1.65	33	P	Pn	13 15 24.3	+0.1
RITZ	Rihia Road	1.68	0	P	Pn	13 15 25.6	+1.0
KATZ	Kakaramea	1.69	356	P	Pb	13 15 26.8	-0.3
NMHZ	Naumai	1.73	26	P	Pn	13 15 25.3	0.0
VRZ	Vera Road	1.75	331	P	Pb	13 15 27.0	-1.0
RATZ	Rangitukua	1.79	358	P	Pn	13 15 27.0	+0.8
BSWZ	Blackbirch Sta	1.82	234	P	Pn	13 15 25.8	-0.8
MRHZ	Matea Rd	1.88	14	P	Pn	13 15 27.1	-0.2
NNZ	Nelson	1.95	253	P	Pn	13 15 28.7	+0.4
WATZ	Wairara	1.95	357	P	Pn	13 15 28.7	+0.4
MTHZ	Maungataniwha	1.96	23	P	Pn	13 15 28.0	-0.5
RAHZ	Arahi	1.99	29	P	Pn	13 15 28.2	-0.6
KUTZ	Kaahu Road	2.17	360	P	Pn	13 15 31.7	+0.4
MHGZ	Mahia Peninsul	2.19	47	P	Pn	13 15 30.3	-1.3
SNGZ	Shannon Statio	2.20	32	P	Pn	13 15 30.8	-1.0
HIZ	Hauiti	2.27	340	P	Pn	13 15 34.0	+1.3
MUGZ	Murupara	2.29	19	P	Pn	13 15 32.5	-0.6
TLZ	Tolley Road	2.34	354	P	Pn	13 15 34.6	+1.0
PRGZ	Paritu Road	2.34	43	P	Pn	13 15 32.7	-1.0
HSRZ	Hossack Road	2.37	8	P	Pn	13 15 34.0	0.0
RIGZ	Rimuhau	2.45	38	P	Pn	13 15 33.9	-1.3
KHZ	Kahutara	2.46	224	P	Pn	13 15 33.4	-1.9
TARZ	Mount Tarawera	2.47	12	P	Pn	13 15 35.1	-0.5
RAGZ	Rawiri	2.48	30	P	Pn	13 15 34.2	-1.4
QRZ	Quartz Range	2.52	265	P	Pn	13 15 37.8	+1.6
URZ	Urewera	2.59	23	P	Pn	13 15 35.4	-1.7
MWZ	Matawai	2.66	30	P	Pn	13 15 36.3	-1.9
TOZ	Tahuroa Road	2.94	355	P	Pn	13 15 42.4	+0.6
RUGZ	Raukumara Rang	3.04	28	P	Pn	13 15 41.8	-1.6
PUZ	Puketiti	3.19	37	P	Pn	13 15 43.2	-2.2
DSZ	Denniston Nort	3.23	249	P	Pn	13 15 46.8	+0.8
PKGZ	Pakihiroa	3.27	33	P	Pn	13 15 44.7	-1.8
HAZ	Te Kaha	3.27	28	P	Pn	13 15 44.9	-1.4
LTZ	Lake Taylor	3.41	230	P	Pn	13 15 47.6	-0.8
WMGZ	Waiomatatini S	3.47	36	P	Pn	13 15 47.5	-1.7
MKAZ	Moumakai	3.59	351	P	Pn	13 15 51.9	+1.1
AWAZ	Awhitu Peninsu	3.71	345	P	Pn	13 15 53.9	+1.5
AKCZ	Akaroa Harbour	3.88	213	P	Pn	13 15 53.9	-0.9
INZ	Inchbonnie	3.89	236	P	Pn	13 15 54.7	-0.2
WIAZ	Waiheke Island	3.90	352	P	Pn	13 15 56.0	+0.9
MBAZ	Motutapu North	3.95	349	P	Pn	13 15 56.8	+1.0
CTZ	Chatham Island	6.39	121	P	Pn	13 16 27.8	-1.4

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*IDC **24** 13:19:49.8±1.3, 6°.96S×130°.15E, h0^{km}, mb3.7/3, mb1 4.3/7, mb1mx3.8/47, mbtmp4.2/7, ML4.4/4, Error ellipse: s-maj=48.8km s-min=20.1km az=75.0*

*DJA **24** 13:19:56.8±0.3, 7°S±2°×13°1E±°, h145^{km}±9^{km}, M4.4/13, mB5.1/5, mb4.3/12, MLv4.4/13, Mw(mB)4.5/5*

*NEIC **24** 13:19:57.2±0.1, 6°.87S±0°.07×130°.5E±0°.2, h133^{km}±20^{km}, mb4.2/3, Error ellipse: s-maj=22.7km s-min=10.7km az=88.0*

ISC 24 13:19:57.5±0.6**, 6°.92S**±0°.05×**130°.83E**±0°.08**, h150**^{km}**, n40, σ2ˢ.38**/41**, mb3.6**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.15	156	P	Pn	13 20 23.8	+0.2
SAUI	Saumlaki	1.15	156		Pn	13 20 24.0	+0.4
BNDI	Bandanaira	2.56	339	P	Pn	13 20 37.9	-1.4
MSAI	Masohi	4.03	332	P	Pn	13 20 58.0	-0.1
AAI	Ambon	4.15	321	P	Pn	13 20 58.5	-1.2
FAKI	Fak Fak	4.22	20	P	Pn	13 21 01.2	+0.5
FAKI				S	Sn	13 21 47.1	-2.8
FAKI	Fak Fak	4.22	20		Pn	13 21 00.9	+0.2
NLAI	Namlea	5.21	314	P	Pn	13 21 14.1	+0.3
	0.2nm1μm36nm,1.0s						
MTN	Manton Dam	5.89	177		Pn	13 21 23.6	+0.8
SIJI	Sorong	6.03	4	Pn	Pn	13 21 23.9	-0.7
	9.3nm,0.3s,baz=221,slow=22,SNR=73						

SIJI				Sn	Sn	13 22 27.4	-5.5
	5.4nm,0.3s,baz=270,slow=20,SNR=2.4						
SWI	Sorong	6.04	4	P	Pn	13 21 24.5	-0.2
	0.4nm4µm38nm,0.7s						
SANI	Sanana	6.83	315	P	Pn	13 21 35.3	-0.1
	0.1nm14nm,0.8s						
LBMI	Labuha	7.07	332	P	Pn	13 21 38.0	-0.5
	0.2nm19nm,0.9s						
SOEI	Soe	7.07	246	P	Pn	13 21 37.2	-1.5
	0.9nm35nm,0.5s						
SOEI	Soe	7.07	246		Pn	13 21 36.5	-2.2
KNRA	Kununurra	8.93	193		Pn	13 22 02.3	-1.0
APSI	Ampana	10.93	303	P	Pn	13 22 30.8	+1.0
	11nm,1.0s						
MRSI	Marisa	11.52	309	P	Pn	13 22 38.3	+0.8
	13nm,1.1s						
WBSI	Waikabubak, Su	11.63	256	P	Pn	13 22 37.7	-1.4
	25nm,0.8s						
FITZ	Fitzroy Crossi	12.20	204	Pn	Pn	13 22 43.2	-3.3
	2.4nm,0.3s,baz=22,slow=11,SNR=90						
FITZ				Sn	Sn	13 24 49.3	-12
	2.3nm,0.3s,baz=177,slow=12,SNR=8.8						
FITZ	Fitzroy Crossi	12.20	204		Pn	13 22 43.3	-3.2
WB0	Warramunga Arr	13.23	165		Pn	13 22 59.5	-0.2
WRA	Warramunga Arr	13.38	166	Pn	Pn	13 23 01.9	+0.2
	1.7nm,0.3s,baz=346,slow=13,SNR=59						
WRA				Sn	Sn	13 25 22.9	-7.0
	2.7nm,0.3s,baz=343,slow=21,SNR=12						
WRA	Warramunga Arr	13.38	166		Pn	13 23 01.2	-0.4
WB2	Warramunga Arr	13.39	166		Pn	13 23 01.7	0.0
WR0	Warramunga Arr	13.45	165		Pn	13 23 02.4	-0.1
COEN	Coen	14.01	121	P	P	13 23 14.8	+2.0
AS31	Alice Springs	16.91	170	P	Pn	13 23 48.3	+2.9
AS31				IAmb	IAmb	13 23 51.6	
	comp=Z,2.6nm,0.7s						
ASAR	Alice Springs	16.91	170	Pn	Pn	13 23 48.0	+2.6
	comp=Z,1.1nm,0.3s,baz=348,slow=14,SNR=36						
ASAR				Sn	S	13 26 50.7	-2.8
	comp=Z,0.5nm,0.3s,baz=357,slow=23,SNR=11						
ASAR	Alice Springs	16.91	170	P	Pn	13 23 48.4	+3.1
KKM	Kota Kinabalu	19.45	311	P	P	13 24 10.9	-2.0
KKM				IAmb	IAmb	13 24 23.4	
	comp=Z,14nm,1.1s						
FORT	Forrest	23.87	186	P	P	13 24 58.8	+1.6
FORT				IAmb	IAmb	13 25 34.5	
	comp=Z,16nm,0.9s						
DBJI	Dramaga	23.91	269	P	P	13 25 02.8	+5.0
STKA	Stephens Creek	26.79	159	P	P	13 25 34.1	+11
	comp=Z,1.1nm,0.7s,baz=348,slow=9.3,SNR=3.1						
CMAR	Chiang Mai Arr	40.31	309	P	P	13 27 25.8	+5.3
	comp=Z,0.8nm,0.8s,baz=144,slow=7.4,SNR=5.1						
LZH	Lanzhou	49.73	331	eP	P	13 28 37.4	+2.7
LZH				pP	pP	13 29 07.8	0.0
LZH				sP	sP	13 29 25.1	+1.0
LZH				PP	PP	13 30 28.9	-2.0
HHC	Hu-ho-hao-te	50.73	341	eP	P	13 28 45.0	+2.9
GTA	Gaotai	54.30	331	eP	P	13 29 12.9	+4.4
GTA				pP	pP	13 29 39.5	-1.8
GTA				sP	pwP	13 29 51.8	+2.4
WMQ	Urumqi	63.78	327	eP	P	13 30 15.3	+1.7
MKAR	Makanchi Array	68.61	326	P	P	13 30 51.6	+7.3
	comp=Z,0.5nm,0.5s,baz=115,slow=8.9,SNR=9.4						

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*IDC **24** 14:28:31.5±3.9, 20°.50S×70°.35W, h0^{km}, mb3.7/1, mb1 3.7/2, mb1mx3.4/19, mbtmp3.6/2, ML3.4/1, Error ellipse: s-maj=147.4km s-min=65.2km az=105.0*

*GUC **24** 14:28:36.0±0.7, 19°.79S×70°.78W, h43^{km}±2^{km}, ML3.5*

ISC 24 14:28:33.2±2.2, **19°.88S**±0°.04×**70°.82W**±0°.09, **h10**^{km}±11^{km}, **n16**, σ**1ˢ.28**/23, **6C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.72	67	⇓iP	Pg	14 28 48.0	+0.9
PSGC				eS	Sb	14 28 57.4	-0.5
TA01	Diego Aracena	0.91	139	⇓iP	Pn	14 28 52.8	+0.7
TA01				IAML		14 29 08.0	
	comp=E,2µm,0.3s						
PB11	IPOC Station P	1.10	84	⇓iP	Pg	14 28 54.8	+0.3
PB11				eS	Sn	14 29 09.6	-0.7
PB11				IAML		14 29 14.5	
	comp=N,2µm,0.4s						
PATCX	Punta Patache	1.13	146	⇑iP	Pn	14 28 56.5	+1.3
PATCX				eS	Sn	14 29 12.7	+1.8
PB12	IPOC Station P	1.34	20	⇑iP	Pn	14 28 57.6	-0.5
PB12				eS	Sn	14 29 14.5	-1.6
PB12				IAML		14 29 19.9	
	comp=N,1µm,0.7s						
GO01	Chusmiza	1.55	83	⇓iP	Pb	14 29 02.3	0.0
GO01				eS	Sg	14 29 22.8	-0.3
PB08	IPOC Station P	1.59	100	⇓iP	Pg	14 29 03.1	-0.7
PB08				eS	Sg	14 29 24.0	-0.5
PB08				IAML		14 29 28.3	
	comp=E,615nm,0.3s						
PB02	IPOC Station P	1.68	149	⇑iP	Pb	14 29 04.5	+0.2
PB02				eS	Sg	14 29 27.2	0.0
PB02				IAML		14 29 36.1	
	comp=E,1µm,0.6s						
PB01	IPOC Station P	1.71	133	⇑iP	Pb	14 29 05.2	+0.4
PB01				eS	Sg	14 29 26.8	-1.4
PB01				IAML		14 29 27.9	
	comp=N,1µm,0.9s						
PB16	IPOC Station P	1.98	39	⇑iP	Pn	14 29 07.9	+0.6
PB16				i S	Sn	14 29 33.9	+1.5
PB07	IPOC Station P	2.04	155	IAML		14 29 50.5	
	comp=E,316nm,0.4s						
PB09	IPOC Station P	2.42	143	⇑iP	Pb	14 29 15.6	-1.3
PB04	IPOC Station P	2.52	166	IAML		14 30 04.3	
	comp=N,339nm,0.5s						
LPAZ	La Paz	4.39	36	Pn	Pn	14 29 44.1	+3.5
	comp=N,1.0nm,0.3s,baz=180,slow=3.1,SNR=17						
TORD	Torodi Ar. Bea	78.52	71	P	P	14 40 34.0	-1.3
	comp=N,0.5nm,0.6s,baz=246,slow=4.6,SNR=2.1						
MKAR	Makanchi Array	145.32	33	PKPbc	PKPbc	14 48 11.2	0.0
	comp=N,0.4nm,0.7s,baz=323,slow=2.2,SNR=5.3						

IDC 24 14:32:27.1±594.0, **53°.83N**×**1°.18E, h0**^{km}, **Error ellipse: s-maj=331.3km s-min=182.8km az=108.0, North Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I26DE	FREYUNG INFRAS	9.29	117	i		15 27 00.0	
	baz=307,slow=327,SNR=2.3						
I43RU	DUBNA INFRASON	20.58	67	i		16 40 35.9	
	baz=278,slow=320,SNR=1.9						
I31KZ	AKTYUBINSK INF	34.28	72	i		18 02 50.0	
	baz=303,slow=327,SNR=0.6						

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*IDC **24** 14:33:37.0±1.0, 10°.15N×122°.05E, h0^{km}, mb3.5/9, mb1 3.6/9, mb1mx3.5/49, mbtmp3.5/9, Error ellipse: s-maj=48.5km s-min=18.8km az=67.0*

*MAN **24** 14:33:40.6, 10°.30N×121°.87E, h27^{km}, mb4.7, ML3.6, MS3.6*

MAN Intensity II - Anini-y Antique.

ISC 24 14:33:39.8±1.8, **10°.29N**±0°.04×**121°.91E**±0°.04, **h14**^{km}±12^{km}, **n24**, σ**1ˢ.49**/35, **mb3.6**/9, **2C-4D, Panay**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUYO	Cuyo Island	1.04	302	eP	Pb	14 33 59.4	-0.3
CUYO				eS	Sg	14 34 15.5	+2.0
RCP	Roxas	1.50	33	⇓eP	Pn	14 34 06.7	+0.4
SNPH	Sibulan	1.61	126	⇑iP	Pn	14 34 07.2	-0.7
SNPH				i S	Sn	14 34 29.2	+0.8
TBP	Tagbilaran	2.01	107	eP	Pn	14 34 13.3	0.0
TBP				i S	Sb	14 34 42.5	+1.5
LLP	Lapu-Lapu	2.02	89	⇓eP	Pn	14 34 14.2	+0.7
LLP				i S	Sn	14 34 39.9	+1.3
OTRP	Odiongan	2.06	3	eP	Pn	14 34 13.1	-1.0
OTRP				eS	Sn	14 34 35.2	-4.3
DCPH	Dipolog City	2.21	140	⇓eP	Pn	14 34 16.1	0.0
SJMP	San Jose	2.29	340	eP	Pn	14 34 16.9	-0.3
SJMP				eS	Sb	14 34 50.6	+1.4
ENPP	El Nido	2.61	291	eP	Pn	14 34 21.5	-0.1
ENPP				eS	Sn	14 34 51.8	-1.3
OCLP	Ormoc	2.75	74	eP	Pn	14 34 23.9	+0.3
OCLP				eS	Sg	14 35 07.7	-0.6
PAGZ	Pagadian	2.83	149	eP	Pn	14 34 25.9	+1.3
PAGZ				eS	Sn	14 34 59.9	+1.4
MSLP	Maasin	2.90	93	eP	Pn	14 34 26.7	+1.0
MSLP				eS	Sn	14 35 02.5	+2.1
BOAC	Boac	3.15	359	eP	Pn	14 34 29.2	+0.2
BOAC				eS	Sn	14 35 06.9	+0.5
CTBH	Cotabato--PC H	3.82	143	⇓iP	Pn	14 34 38.5	+0.2
KCP	Kidapawan	4.53	136	⇑eP	Pb	14 34 56.2	-2.9
CMAR	Chiang Mai Arr	23.66	293	P	P	14 38 52.1	+1.0
	0.4nm,0.7s,baz=106,slow=8.6,SNR=1.9						
WRA	Warramunga Arr	32.44	158	P	P	14 40 06.9	-2.9
	0.3nm,0.8s,baz=330,slow=11,SNR=2.1						
ASAR	Alice Springs	35.73	161	P	P	14 40 36.5	-1.8
	0.3nm,0.5s,baz=341,slow=7.6,SNR=11						
SONM	Songino Array	39.64	344	P	P	14 41 12.5	+1.2
	0.3nm,0.4s,baz=156,slow=7.3,SNR=4.2						
KLR	Kul'dur	39.67	10	P	P	14 41 11.6	+0.2
	1.5nm,1.0s,baz=248,slow=5.0,SNR=5.9						
MKAR	Makanchi Array	49.48	325	P	P	14 42 30.9	+1.1
	0.4nm,0.6s,baz=125,slow=8.9,SNR=5.7						
ZALV	Zalesovo Beam	52.62	333	P	P	14 42 54.5	+1.3
	0.3nm,0.3s,baz=126,slow=7.4,SNR=2.3						
KURBB	Kurchatov Arra	53.67	327	P	P	14 43 01.4	+0.4
	0.4nm,0.6s,baz=129,slow=6.6,SNR=4.6						
FINES	FINESS Array B	83.82	331	P	P	14 46 08.2	-0.5
	0.6nm,0.5s,baz=83,slow=4.4,SNR=6.6						

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*IDC **24** 14:57:50.8±3.8, 20°.63S×70°.42W, h0^{km}, mb3.9/1, mb1 3.9/2, mb1mx3.2/24, mbtmp3.8/2, ML3.3/1, MS3.9/1, Ms1 3.9/1, ms1mx2.9/23, Error ellipse: s-maj=142.1km s-min=68.2km az=106.0*

*GUC **24** 14:57:54.3±0.5, 19°.82S×70°.92W, h42^{km}±2^{km}, ML3.5*

*SJA **24** 14:57:54.8±0.7, 20°.14S×71°.22W, h61^{km}±13^{km}, ML3.2, MW2.9*

ISC 24 14:57:54.5±1.7, **19°.85S**±0°.04×**71°.0W**±0°.1, **h39**^{km}±5^{km}, **n23**, σ**1ˢ.09**/29, **7C-3D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.88	74	⇓iP	Pn	14 58 08.6	-1.9
PSGC				i S	Sn	14 58 19.6	-2.6
TA01	Diego Aracena	1.06	132	⇓iP	Pn	14 58 12.5	-0.4
TA01				i S	Sn	14 58 26.0	-0.4
TA01				IAML		14 58 31.5	
	comp=E,2µm,0.4s						
PATCX	Punta Patache	1.26	140	⇑iP	Pn	14 58 15.7	-0.1
PATCX				eS	Sn	14 58 31.9	+0.3
PATCX				IAML		14 58 39.3	
	comp=E,1µm,0.6s						
PB11	IPOC Station P	1.29	86	⇓iP	Pn	14 58 15.4	-0.8
PB11				i S	Sn	14 58 31.4	-0.8
PB11				IAML		14 58 34.0	
	comp=E,2µm,0.3s						
PB12	IPOC Station P	1.39	28	⇑iP	Pn	14 58 17.9	+0.3
PB12				i S	Sn	14 58 35.3	+0.6
PB12				IAML		14 58 48.0	
	comp=N,781nm,0.6s						
GO01	Chusmiza	1.73	84	eP	Pn	14 58 22.6	+0.1
GO01				i S	Sn	14 58 44.6	+1.1
GO01				IAML		14 58 48.1	
	comp=N,2µm,0.2s						
PB08	IPOC Station P	1.78	100	⇑iP	Pn	14 58 23.3	+0.2
PB08				i S	Sn	14 58 45.7	+1.0
PB08				IAML		14 58 53.6	
	comp=N,854nm,0.4s						
PB02	IPOC Station P	1.80	144	⇑iP	Pn	14 58 23.5	+0.3
PB02				IAML		14 58 52.7	
	comp=E,2µm,0.5s						
PB01	IPOC Station P	1.86	130	⇑iP	Pn	14 58 24.4	+0.4
PB01				i S	Sn	14 58 47.9	+1.5
PB01				IAML		14 58 54.5	
	comp=N,680nm,0.4s						
PB16	IPOC Station P	2.08	44	⇑iP	Pn	14 58 28.1	+0.7
PB16				i S	Sn	14 58 54.2	+1.9
PB16				IAML		14 59 00.6	
	comp=N,503nm,0.5s						
PB07	IPOC Station P	2.15	151	⇑iP	Pn	14 58 28.2	+0.1
PB07				IAML		14 59 06.1	
	comp=E,700nm,0.3s						
PB09	IPOC Station P	2.55	140	i P	Pn	14 58 35.0	+1.4
PB04	IPOC Station P	2.60	162	i P	Pn	14 58 34.1	-0.1
PB06	IPOC Station P	3.15	155	i P	Pn	14 58 41.6	-0.1
LVC	Limon Verde	3.38	145	i P	Pn	14 58 46.8	+1.6
LVC				IAML		14 59 39.9	
	comp=Z,54nm,0.6s						
PB15	IPOC Station P	3.64	157	i P	Pn	14 58 48.7	+0.1
PB10	IPOC Station P	3.67	173	i P	Pn	14 58 48.3	-0.5
LPAZ	La Paz	4.48	38	Pn	Pn	14 59 05.4	+4.9
	comp=Z,0.8nm,0.3s,baz=218,slow=7.9,SNR=3.9						
LPAZ	La Paz	4.48	38	i P	Pn	14 59 07.9	+7.4
PB14	IPOC Station P	4.79	173	i P	Pn	14 59 03.4	-1.0
PCRV	Puerto La Cruz	30.49	12	LR	LR	15 19 10.4	
	comp=Z,207nm,18.4s,slow=41						
TORD	Torodi Ar. Bea	78.69	72	P	P	15 09 53.9	+0.7
	comp=Z,0.7nm,0.6s,baz=256,slow=5.8,SNR=3.5						
MKAR	Makanchi Array	145.39	33	PKPbc	PKiKP	15 17 30.9	-1.4
	comp=Z,0.6nm,0.7s,baz=337,slow=3.7,SNR=6.6						

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*IDC **24** 15:03:37.3±1.5, 0°.97N×123°.83E, h0^{km}, mb3.7/4, mb1 3.9/4, mb1mx3.4/43, mbtmp3.8/4, Error ellipse: s-maj=178.6km s-min=21.6km az=62.0*

*NEIC **24** 15:04:01.1±1.6, 0°.93N±0°.08×124°.2E±0°.2, h215^{km}±12^{km}, mb4.2/9, Error ellipse: s-maj=26.5km s-min=11.9km az=91.0*

*DJA **24** 15:04:06.4±0.7, 0°N±7°×12°4E±°, h230^{km}±9^{km}, M3.5/6, MLv3.4/6, MLv3.6/2*

ISC 24 15:04:04.8±1.0, **0°.5N**±0°.1×**123°.67E**±0°.07, **h250**^{km}, **n21**, σ**1ˢ.26**/24, **mb3.8**/6, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	1.73	269	P	Pn	15 04 45.4	+0.5
MRSI				S	S	15 05 14.3	-2.2
LUWI	Luwuk	1.79	210	P	Pn	15 04 45.2	-0.2
LUWI				S	S	15 05 15.4	-2.1
LUWI	Luwuk	1.79	210	Pn	Pn	15 04 45.8	+0.4
LUWI				S	S	15 05 15.3	-2.1
APSI	Ampana	2.47	235	P	Pn	15 04 51.7	0.0
SANI	Sanana	3.44	138	P	Pn	15 05 02.0	-0.2
SANI				S	S	15 05 44.7	-2.9
MPSI	Mapaga	3.78	267	P	Pn	15 05 06.7	+0.7
LBMI	Labuha	4.00	107	P	Pn	15 05 08.8	+0.2
DAV	Davao City (W)	6.79	16	Pn	Pn	15 05 31.4	-11
MTN	Manton Dam	15.19	151	Pn	Pn	15 07 28.8	+1.4
MTN				IAmb	IAmb	15 07 35.8	
	comp=Z,21nm,1.4s						
KNRA	Kununurra	16.85	163	Pn	Pn	15 07 47.7	+0.7
FITZ	Fitzroy Crossi	18.59	174	P	P	15 08 05.4	+1.5
FITZ				IAmb	IAmb	15 08 08.7	
	comp=Z,14nm,1.8s						
WB0	Warramunga Arr	22.73	153	P	P	15 08 46.0	+0.5
WB0				IAmb	IAmb	15 09 27.4	
	comp=Z,15nm,1.9s						
WRA	Warramunga Arr	22.86	153	P	P	15 08 46.5	-0.3
	comp=Z,1.3nm,0.4s,baz=334,slow=10,SNR=23						
WRA	Warramunga Arr	22.86	153	P	P	15 08 46.6	-0.1
ASAR	Alice Springs	26.01	158	P	P	15 09 14.8	-0.4
	comp=Z,0.3nm,0.4s,baz=345,slow=14,SNR=12						
FORT	Forrest	31.40	173	P	P	15 10 03.3	+0.7
STKA	Stephens Creek	36.41	154	P	P	15 10 46.7	+1.0
	comp=Z,1.3nm,1.0s,baz=335,slow=7.2,SNR=3.8						
MK31	Makanchi Array	58.54	328	P	P	15 13 34.8	-0.5
MKAR	Makanchi Array	58.54	328	P	P	15 13 33.5	-1.7
	comp=Z,0.8nm,0.4s,baz=124,slow=8.2,SNR=25						
MKAR	Makanchi Array	58.54	328	P	P	15 13 34.8	-0.5
MAKZ	Makanchi	58.71	328	P	P	15 13 36.1	-0.4
MAKZ				IAmb	IAmb	15 15 21.6	
	comp=Z,8.1nm,1.9s						

IDC 24 15:08:28.2±2.1, **6°.77S**×**129°.50E, h0**^{km}, **mb3.4**/1, **mb1 3.6**/4, **mb1mx3.3**/33, **mbtmp3.4**/4, **ML3.3**/3, **Error ellipse: s-maj=85.3km s-min=28.3km az=76.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.87	198	Pn	Pn	15 11 20.8	+1.8
	0.1nm,0.3s,baz=18,slow=15,SNR=1.8						
FITZ				Sn	Sn	15 13 21.3	-11
	0.5nm,0.3s,baz=130,slow=16,SNR=8.4						
WRA	Warramunga Arr	13.91	161	Pn	Pn	15 11 46.4	-0.4
	0.3nm,0.3s,baz=338,slow=13,SNR=10.0						
WRA				Sn	Sn	15 14 07.8	-14
	0.6nm,0.3s,baz=331,slow=22,SNR=10						
ASAR	Alice Springs	17.33	166	P	Pn	15 12 30.6	-1.1
	0.1nm,0.3s,baz=342,slow=10.0,SNR=13						
ASAR				S	Sn	15 15 29.6	-16
	0.1nm,0.3s,baz=350,slow=26,SNR=2.9						
MKAR	Makanchi Array	67.76	327	P	P	15 19 27.9	0.0
	0.2nm,0.4s,baz=132,slow=6.0,SNR=6.5						

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*IDC **24** 15:11:41.2±1.1, 19°.49S×70°.62W, h0^{km}, mb4.2/6, mb1 4.3/9, mb1mx3.9/29, mbtmp4.2/9, ML3.9/3, MS3.3/4, Ms1 3.2/4, ms1mx3.1/22, Error ellipse: s-maj=27.5km s-min=16.7km az=66.0*

*NEIC **24** 15:11:44.3±1.8, 19°.59S±0°.04×70°.80W±0°.05, h22^{km}±3^{km}, mb4.5/4, Mwr4.0/38, Error ellipse: s-maj=7.5km s-min=5.0km az=70.0*

*NEIC **24** 15:11:44.2, 19°.61S×70°.84W, h25^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.00; $M_{\theta\theta}$-0.09; $M_{\phi\phi}$-0.91; $M_{r\theta}$0.56; $M_{\theta\phi}$0.38; $M_{\phi r}$-0.74; Fault plane solution: $M_0 1.39000\times10^{15}$ NP1:ϕ_s349.94000°, δ25.39000°, λ110.00000°. NP2:ϕ_s147.99000°, δ66.24000°, λ80.78000°. Principal axes: T 1.3790, Plg67.0000°, Azm41.0000°; N 0.0212, Plg8.0000°, Azm152.0000°; P -1.4002, Plg21.0000°, Azm245.0000°;*

*GUC **24** 15:11:45.5±0.7, 19°.59S×70°.77W, h44^{km}±2^{km}, ML3.9*

*SJA **24** 15:11:56.1±0.9, 20°.58S×70°.78W, h73^{km}±15^{km}, ML3.5, MW3.6*

ISC 24 15:11:42.2±1.7, **19°.61S**±0°.03×**70°.89W**±0°.06, **h11**^{km}±10^{km}, **n66**, σ**1ˢ.40**/74, **mb4.3**/6, **4C-6D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.72	89	⇓iP	Pb	15 11 57.1	+0.4
PSGC				eS	Sg	15 12 06.3	+0.7
PSGCX	Pisagua	0.72	89		Pb	15 11 57.0	+0.2
PSGCX					Sg	15 12 06.1	+0.5
PB12	IPOC Station P	1.12	28	⇓iP	Pn	15 12 03.9	+0.1
PB12				eS	Sb	15 12 18.8	+0.6
PB12				IAML		15 12 19.9	
	comp=N,4µm,0.4s						
PB12	IPOC Station P	1.12	28		Pn	15 12 03.6	-0.3
TA01	Diego Aracena	1.16	145	⇑iP	Pn	15 12 05.3	+1.0
TA01				eS	Sg	15 12 20.3	+0.7
TA01				IAML		15 12 24.7	
	comp=E,5µm,0.5s						
PB11	IPOC Station P	1.17	98	⇓iP	Pg	15 12 04.6	-0.1
PB11				eS	Sg	15 12 19.8	-0.2
PB11				IAML		15 12 22.3	
	comp=N,9µm,0.3s						
PB11	IPOC Station P	1.17	98		Pg	15 12 04.4	-0.3
PB11				Sn	Sg	15 12 19.4	-0.5
AP01	Chacalluta	1.34	23	eP	Pb	15 12 07.7	+0.5
AP01				eS	Sb	15 12 24.1	-0.2
AP01				IAML		15 12 28.9	
	comp=N,9µm,0.5s						
PATCX	Punta Patache	1.39	150	⇓iP	Pn	15 12 08.6	+1.0
PATCX				eS	Sg	15 12 26.7	-0.3
PATCX				IAML		15 12 28.8	
	comp=E,2µm,0.2s						
PATCX	Punta Patache	1.39	150		Pn	15 12 08.5	+1.0
GO01	Chusmiza	1.60	92	⇓iP	Pn	15 12 11.9	+1.1
GO01				eS	Sn	15 12 32.0	+0.4
GO01				IAML		15 12 34.0	
	comp=N,4µm,0.3s						
GO01	Chusmiza	1.60	92		Pn	15 12 11.7	+1.0
PB08	IPOC Station P	1.71	108	⇓iP	Pn	15 12 13.7	+1.4
PB08				eS	Sn	15 12 35.0	+0.6
PB08				IAML		15 12 40.2	
	comp=N,1µm,0.5s						
PB16	IPOC Station P	1.82	46	⇑iP	Pb	15 12 15.8	0.0
PB16				eS	Sn	15 12 38.3	+1.1
PB16				IAML		15 12 47.7	
	comp=N,2µm,0.7s						
PB16	IPOC Station P	1.82	46		Pb	15 12 15.2	-0.6
PB01	IPOC Station P	1.94	138	⇑iP	Pn	15 12 16.4	+1.3
PB01				eS	Sn	15 12 39.6	+0.1
PB01				IAML		15 12 46.4	
	comp=E,2µm,0.5s						
PB01	IPOC Station P	1.94	138		Pn	15 12 16.3	+1.2
PB02	IPOC Station P	1.94	152	⇑iP	Pn	15 12 16.6	+1.5
PB02				IAML		15 12 44.9	
	comp=E,2µm,0.6s						
PB07	IPOC Station P	2.31	156		Pn	15 12 21.6	+1.3
PB09	IPOC Station P	2.67	145		Pn	15 12 27.4	+2.2
PB09	IPOC Station P	2.67	145	i P	Pn	15 12 27.7	+2.5
PB09				IAML		15 13 13.3	
	comp=Z,1µm,0.5s						
PB04	IPOC Station P	2.80	166		Pn	15 12 27.4	+0.5
PB05	IPOC Station P	3.29	169	i P	Pn	15 12 34.7	+1.0
PB05				IAML		15 13 33.8	
	comp=Z,210nm,0.6s						
PB06	IPOC Station P	3.32	159	i P	Pn	15 12 34.9	+0.7
PB06				IAML		15 13 42.4	
	comp=Z,342nm,0.7s						
LVC	Limon Verde	3.51	149	Pn	Pn	15 12 39.2	+2.2
	comp=Z,8.8nm,0.3s,baz=339,slow=11,SNR=22						
LVC				Sn	Sn	15 13 20.0	+1.4
	comp=Z,22nm,0.3s,baz=331,slow=5.7,SNR=7.5						
LVC				Lg	Lg	15 13 32.0	
	comp=Z,24nm,0.3s,baz=151,slow=13,SNR=4.8						
LVC				LR	LR	15 14 07.9	
	comp=Z,323nm,19.0s,baz=344,slow=42						
LVC	Limon Verde	3.51	149	i P	Pn	15 12 39.5	+2.6
LVC				IAML		15 13 35.8	
	comp=Z,132nm,0.7s						
PB15	IPOC Station P	3.82	160		Pn	15 12 41.7	+0.6
PB15	IPOC Station P	3.82	160	i P	Pn	15 12 42.0	+0.9
PB15				IAML		15 13 50.3	
	comp=Z,387nm,0.6s						
PB10	IPOC Station P	3.90	175		Pn	15 12 41.9	-0.1
PB10	IPOC Station P	3.90	175	i P	Pn	15 12 42.6	+0.6
PB10				IAML		15 14 02.9	
	comp=Z,52nm,0.7s						
LPAZ	La Paz	4.22	39	Pn	Pn	15 12 50.1	+3.1
	comp=Z,2.5nm,0.3s,baz=211,slow=6.2,SNR=24						
LPAZ	La Paz	4.22	39		Pn	15 12 51.4	+4.5
PB14	IPOC Station P	5.01	175		Pn	15 12 56.9	-0.7
PB14	IPOC Station P	5.01	175	i P	Pn	15 12 57.1	-0.5
PB14				IAML		15 14 30.6	
	comp=Z,40nm,0.6s						
YJA	Yavi	5.63	118	i P	Pn	15 13 13.7	+7.4
YJA				IAML		15 14 35.1	
	comp=Z,8.2nm,2.1s						
GO02	Mina Guanaco	5.66	168		Pn	15 13 07.2	+0.8
SIV	San Ignacio	10.02	70	Pn	Pn	15 14 04.6	-1.5
	comp=Z,2.0nm,0.3s,baz=280,slow=9.4,SNR=25						
SIV				LR	LR	15 18 31.8	
	comp=Z,234nm,19.6s,baz=268,slow=42						
SAML	Samuel	12.96	36		Pn	15 14 46.4	+0.1
CPUP	Villa Florida	14.16	121	Pn	Pn	15 15 00.8	-1.9
	comp=Z,0.1nm,0.3s,baz=260,slow=6.1,SNR=2.1						
CPUP				LR	LR	15 20 41.2	
	comp=Z,68nm,19.6s,baz=304,slow=39						
PTGA	Pitinga	21.60	31	P	P	15 16 30.7	-1.4
	comp=Z,9.3nm,0.3s,baz=208,slow=15,SNR=34						
PTGA	Pitinga	21.60	31	P	P	15 16 30.9	-1.2
PTGA				IAmb	IAmb	15 16 32.1	
	comp=Z,30nm,1.4s						
BDFB	Brasilia	22.15	83	P	P	15 16 35.4	-2.8
	comp=Z,2.7nm,0.5s,baz=152,slow=4.5,SNR=3.0						
BDFB				LR	LR	15 26 43.4	
	comp=Z,85nm,19.0s,baz=290,slow=41						
YOTC	Yotoco, Valle	24.05	347	eP	P	15 16 59.1	+1.5
RREF	El Recreo	24.75	349	eP	P	15 17 07.7	+3.1
GUY2C	Guyana, Caldas	25.07	349	eP	P	15 17 09.1	+1.8
RUSC	La Rusia	25.43	355	eP	P	15 17 11.5	+0.9
RUSC	La Rusia	25.43	355	P	P	15 17 11.7	+1.1
HELC	Santa Helena	26.04	349	eP	P	15 17 16.6	+0.6
PTBC	PUERTO BERRIO,	26.22	352	eP	P	15 17 16.2	-1.0
MDP	Montagnes des	30.42	38	P	P	15 17 53.6	-1.1
	comp=Z,22nm,1.0s,baz=207,slow=4.5,SNR=2.0						
TXAR	Lajitas Array	58.03	326	P	P	15 21 36.6	+1.2
	comp=Z,0.3nm,0.6s,baz=147,slow=12,SNR=2.8						
TORD	Torodi Ar. Bea	78.49	72	P	P	15 23 42.3	-1.6
	comp=Z,1.8nm,0.7s,baz=253,slow=5.0,SNR=7.4						
YKA	Yellowknife Ar	88.80	341	P	P	15 24 36.6	+1.0
	comp=Z,1.2nm,0.7s,baz=134,slow=5.1,SNR=24						
H11S2	WAKE ISLAND Hy	125.78	279	T	T	17 49 55.1	
	baz=101,slow=75,SNR=24						
H11S1	WAKE ISLAND Hy	125.79	279	T	T	17 49 57.3	
	baz=101,slow=75,SNR=21						
H11S3	WAKE ISLAND Hy	125.80	279	T	T	17 49 57.7	

	baz=101,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	125.82	281	T	T	17 49 59.4	
	baz=173,slow=74,SNR=6.7						
H11N2	WAKE ISLAND Hy	125.83	281	T	T	17 50 01.0	
	baz=101,slow=74,SNR=4.1						
ASAR	Alice Springs	130.66	210	PKP	PKiKP	15 30 55.2	+0.3
	comp=Z,0.2nm,0.5s,baz=124,slow=1.6,SNR=7.6						
WRA	Warramunga Arr	133.56	214	PKP	PKPdf	15 31 00.5	+0.9
	comp=Z,0.4nm,0.7s,baz=142,slow=1.9,SNR=5.2						
MAKZ	Makanchi	144.96	33		PKPab	15 31 19.1	+0.4
MK31	Makanchi Array	145.13	33		PKPbc	15 31 19.4	+0.2
MKAR	Makanchi Array	145.13	33	PKP	PKPab	15 31 19.9	+0.5
	comp=Z,1.9nm,0.7s,baz=322,slow=3.9,SNR=26						
MKAR	Makanchi Array	145.13	33		PKPbc	15 31 19.7	+0.5
KSH	Kashi	145.29	48	PKPbc	PKPbc	15 31 18.3	-1.8
KSH				pPKP	PKiKP	15 31 29.1	+4.8
KSH				PP	PP	15 34 41.3	+1.6
LZH	Lanzhou	162.94	15	*e*PKP	PKPdf	15 31 42.1	-3.0
LZH				pPKP	sPKPdf	15 31 54.8	+5.5
LZH				sPKP		15 31 57.0	

DJA ***24*** *15:14:42.3±0.3, 8°S±4°×12°8E±°, h121^{km}±12^{km}, M4.3/7, mB4.7/1, mb4.0/6, MLv4.4/7, Mw(mB)4.0/1*

NEIC ***24*** *15:14:48.2±2.8, 8°.3S±0°.1×127°.7E±0°.1, h141^{km}±21^{km}, mb4.0/5, Error ellipse: s-maj=21.3km s-min=14.0km az=207.0*

IDC ***24*** *15:14:50.0±8.5, 8°.44S×127°.82E, h150^{km}±68^{km}, mb3.4/1, mb1 3.6/4, mb1mx3.0/33, mbtmp3.9/4, Error ellipse: s-maj=65.3km s-min=53.5km az=10.0*

ISC 24 15:14:42.1±1.0**, 7°.92S**±0°.09×**127°.90E**±0°.09**, h100**^{km}**, n24, σ2^{s}.09**/24**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	4.03	243	P	Pn	15 15 43.3	+1.5
SOEI	Soe	4.03	243	Pn	Pn	15 15 44.1	+2.3
MMRI	Maumere	5.65	262	Pn	Pn	15 16 07.1	+3.4
MTN	Manton Dam	5.84	147	Pn	Pn	15 16 10.4	+4.2
FAKI	Fak Fak	6.59	41	P	Pn	15 16 14.2	-2.2
	0.2nm41nm,1.3s						
BASI	Baing, Sumba	7.58	252	P	Pn	15 16 29.6	-0.4
	0.1nm23nm,0.7s						
KNRA	Kununurra	7.76	174		Pn	15 16 34.9	+2.6
SWI	Sorong	7.77	26	P	Pn	15 16 31.1	-1.3
	0.1nm21nm,0.9s						
LUWI	Luwuk	8.53	323	Pn	Pn	15 16 53.1	+10
FITZ	Fitzroy Crossi	10.36	192	P	Pn	15 17 07.4	-0.3
	1.2nm,0.3s,baz=12,slow=9.1,SNR=22						
FITZ				S	Sn	15 18 58.5	-3.3
	1.0nm,0.3s,baz=98,slow=20,SNR=4.3						
FITZ	Fitzroy Crossi	10.36	192		Pn	15 17 06.8	-0.9
WB0	Warramunga Arr	13.36	153		Pn	15 17 46.7	-1.0
WRA	Warramunga Arr	13.48	153	P	Pn	15 17 48.5	-0.9
	0.4nm,0.3s,baz=332,slow=12,SNR=9.9						
WRA				S	Sn	15 20 13.2	-4.6
	1.2nm,0.3s,baz=330,slow=23,SNR=8.8						
WRA	Warramunga Arr	13.48	153	Pn	Pn	15 17 49.7	+0.3
WB2	Warramunga Arr	13.49	153		Pn	15 17 48.8	-0.7
WR0	Warramunga Arr	13.59	152	Pn	Pn	15 17 50.5	-0.3
PSA00	Pilbara Seismi	15.64	209	Pn	Pn	15 18 13.6	-3.3
COEN	Coen	16.15	113	P	Pn	15 18 25.3	+1.9
COEN				IAmb	IAmb	15 18 33.3	
	comp=Z,35nm,1.9s						
AS31	Alice Springs	16.68	160	P	Pn	15 18 31.3	+1.4
ASAR	Alice Springs	16.68	160	P	Pn	15 18 31.3	+1.4
	comp=Z,1.0nm,0.3s,baz=339,slow=12,SNR=73						
ASAR				S	Sn	15 21 31.2	-4.0
	comp=Z,0.3nm,0.3s,baz=327,slow=24,SNR=8.8						
ASAR	Alice Springs	16.68	160	P	Pn	15 18 31.6	+1.7
BBOO	Buckleboo	25.90	164	P	P	15 20 04.4	-0.4
STKA	Stephens Creek	27.04	154	P	P	15 20 14.7	-0.4
	comp=Z,0.9nm,0.6s,baz=337,slow=12,SNR=4.4						
STKA	Stephens Creek	27.04	154	P	P	15 20 14.4	-0.6
STKA				IAmb	IAmb	15 20 50.8	
	comp=Z,2.9nm,1.6s						

GUC ***24*** *15:33:52.1±0.7, 25°.30S×70°.73W, h35^{km}±3^{km}, ML4.8*

NEIC ***24*** *15:33:53.8±1.2, 25°.17S±0°.04×70°.69W±0°.07, h41^{km}±4^{km}, mb5.0/47, ML4.8(GUC), Error ellipse: s-maj=9.1km s-min=5.8km az=79.0*

IDC ***24*** *15:33:53.4±0.6, 25°.26S×70°.64W, h35^{km}±3^{km}, mb4.3/13, mb1 4.3/17, mb1mx4.2/28, mbtmp4.3/17, ML3.9/4, MS3.3/3, Ms1 3.3/3, ms1mx3.0/29, Error ellipse: s-maj=18.7km s-min=14.0km az=90.0*

VAO ***24*** *15:34:12.7±1.6, 24°.33S×69°.90W, h10^{km}, mb3.6*

ISC 24 15:33:52.7±0.6**, 25°.26S**±0°.03×**70°.74W**±0°.05**, h33**^{km}±3^{km}**, n165, σ1^{s}.18**/176**, mb4.9**/31**, 2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB14	IPOC Station P	0.70	26	⇓ *i*P	Pn	15 34 06.5	-0.2
PB14				*i* S	Sn	15 34 16.5	0.0
PB14	IPOC Station P	0.70	26		Pn	15 34 06.5	-0.2
PB14				Sn	Sn	15 34 15.2	-1.3
GO02	Mina Guanaco	1.04	85	*e*P	Pb	15 34 11.7	-0.8
GO02				*e*S	Sb	15 34 25.3	-0.7
GO02				IAML		15 34 26.5	
	comp=E,67µm,0.4s						
GO02	Mina Guanaco	1.04	85		Pb	15 34 11.9	-0.6
GO02				Sn	Sb	15 34 25.6	-0.4
PB10	IPOC Station P	1.75	6	*e*P	Pb	15 34 23.2	-0.9
PB10				*e*S	Sb	15 34 45.0	-0.7
PB10	IPOC Station P	1.75	6		Pn	15 34 20.1	-0.6
PB15	IPOC Station P	2.35	30	*e*P	Pn	15 34 31.2	+2.0
PB15				*e*S	Sb	15 35 00.8	-2.3
PB15	IPOC Station P	2.35	30		Pn	15 34 30.6	+1.4
GO03	Copiap	2.37	169	⇓ *i*P	Pn	15 34 30.1	+0.8
GO03				*i* S	Sb	15 34 58.8	-4.8
GO03	Copiap	2.37	169		Pn	15 34 30.1	+0.8
PB05	IPOC Station P	2.45	12	*e*P	Pn	15 34 32.8	+2.4
PB05				*e*S	Sb	15 35 03.2	-2.7
PB05				IAML		15 35 15.7	
	comp=N,3µm,0.4s						
PB06	IPOC Station P	2.76	23	*e*P	Pn	15 34 36.9	+2.1
PB06				*e*S	Sn	15 35 10.8	+3.8
PB06				IAML		15 35 25.1	
	comp=N,3µm,0.5s						
PB04	IPOC Station P	2.96	11	*e*P	Pn	15 34 39.6	+2.0
PB04				*i* S	Sn	15 35 15.9	+3.8
PB04				IAML		15 35 31.5	
	comp=E,4µm,0.8s						
PB04	IPOC Station P	2.96	11		Pn	15 34 36.6	-1.0
LVC	Limon Verde	3.12	33	Pn	Pn	15 34 41.1	+1.1
	comp=E,18nm,0.3s,baz=182,slow=3.8,SNR=58						
LVC				Pg	Pb	15 34 46.0	-1.7
	comp=E,123nm,0.3s,baz=177,slow=7.5,SNR=92						
LVC				Lg	Lg	15 35 27.0	
	comp=E,1µm,0.3s,baz=80,slow=10,SNR=24						
LVC				LR	LR	15 36 02.6	
	comp=E,1µm,20.2s,baz=192,slow=42						
LVC	Limon Verde	3.12	33		Pn	15 34 41.3	+1.3
LVC	Limon Verde	3.12	33	*e*P	Pb	15 34 45.7	-2.1
PB03	IPOC Station P	3.32	16	*e*P	Pn	15 34 42.1	-0.5
PB03				IAML		15 35 39.8	
	comp=E,2µm,0.6s						
PB07	IPOC Station P	3.60	13	*e*P	Pn	15 34 45.9	-0.5
PB07	IPOC Station P	3.60	13		Pn	15 34 45.9	-0.5
PB09	IPOC Station P	3.71	22		Pn	15 34 48.7	+0.8
PB01	IPOC Station P	4.35	16		Pn	15 34 56.1	-0.5
PATCX	Punta Patache	4.45	7		Pn	15 34 57.8	-0.2
PB11	IPOC Station P	5.56	11	Pn	Pn	15 35 13.1	-0.3
PSGCX	Pisagua	5.66	6	Pn	Pn	15 35 09.3	-5.4
GO01	Chusmiza	5.75	15		Pn	15 35 12.4	-3.8
PB12	IPOC Station P	6.62	3	Pn	Pn	15 35 26.3	-1.6
LPAZ	La Paz	9.25	16	Pn	Pn	15 36 05.5	+1.1
	comp=E,0.6nm,0.3s,baz=160,slow=5.1,SNR=12						
LPAZ				LR	LR	15 40 01.3	
	comp=E,356nm,21.7s,baz=190,slow=40						
LPAZ	La Paz	9.25	16		Pn	15 36 05.3	+0.8
GO05	Huala	9.77	186	Pn	Pn	15 36 13.5	+2.6
CPUP	Villa Florida	12.13	98	Pn	Pn	15 36 43.0	-0.2
	comp=E,0.1nm,0.3s,baz=289,slow=12,SNR=4.9						
CPUP				LR	LR	15 40 58.2	
	comp=E,31nm,20.4s,baz=266,slow=35						
CPUP	Villa Florida	12.13	98	Pn	Pn	15 36 43.1	-0.1
SIV	San Ignacio	12.91	46	Pn	Pn	15 36 51.8	-2.3
	comp=E,0.6nm,0.3s,baz=253,slow=9.0,SNR=26						
AQDB	Aquidauana	14.65	74	*e*P	P	15 37 27.1	+3.5
TRQA	Tornquist	14.77	152	*e*P	P	15 37 48.2	+23
SAML	Samuel	17.75	25	P	Pn	15 37 56.8	-0.5
ARAG	Araguaiana, MT	20.09	65	*e*P	Pn	15 38 34.4	+8.7
BDFB	Brasilia	23.31	70	P	P	15 38 56.2	-1.9
	comp=E,2.8nm,0.6s,baz=245,slow=15,SNR=2.8						
BDFB	Brasilia	23.31	70	P	P	15 38 56.2	-1.9
PTGA	Pitinga	26.51	25	P	P	15 39 26.2	-1.2
	comp=E,1.4nm,0.3s,baz=212,slow=12,SNR=5.6						
GRGR	Grenville	38.21	14	P	P	15 41 07.7	-1.8
RCBR	Riachuelo	38.54	66	P	P	15 41 12.7	+0.2
	comp=E,5.8nm,0.6s,baz=234,slow=7.8,SNR=5.7						
RCBR	Riachuelo	38.54	66	IAmb	IAmb	15 41 30.2	
	comp=Z,35nm,1.4s						
TEIG	Tepich	48.32	338	P	P	15 42 31.7	+0.5
TEIG				IAmb	IAmb	15 43 33.0	
	comp=Z,33nm,1.5s						
VNA3	Neumayer Olymp	57.09	160	P	P	15 43 36.1	+0.6
VNA2	Neumayer--Watz	57.70	160	P	P	15 43 39.9	+0.2
	baz=287,slow=8.3						
SNAA	Sanae	59.31	160	P	P	15 43 50.8	-0.2
SNAA	Sanae	59.31	160	P	P	15 43 50.2	-0.8
	comp=Z,5.7nm,0.8s,baz=282,slow=9.6,SNR=13						
SNAA	Sanae	59.31	160	P	P	15 43 50.6	-0.4
SNAA				IAmb	IAmb	15 43 52.0	
	comp=Z,6.3nm,0.9s						
344A	Westbrook Farm	59.55	340	P	P	15 43 50.4	-2.5
Y55A	Saluda	59.81	349	P	P	15 43 54.8	0.0
	baz=168						
Z50A	Ashland	59.96	345	P	P	15 43 55.1	-0.7
Z50A				IAmb	IAmb	15 43 56.6	
	comp=Z,10nm,0.9s						
Z50A	Ashland	59.96	345	P	P	15 43 55.5	-0.3
	baz=164						
Y49A	Blount Mountai	60.65	345	P	P	15 43 59.7	-0.8
X48A	Hartselle	61.37	345	P	P	15 44 04.3	-1.0
X48A				IAmb	IAmb	15 44 05.8	
	comp=Z,8.8nm,0.8s						
V54A	Nebo	61.62	350	P	P	15 44 07.3	+0.2
	baz=168						
W50A	Signal Mountai	61.70	346	P	P	15 44 07.2	-0.4
W50A				IAmb	IAmb	15 45 10.1	
	comp=Z,21nm,1.2s						
CPCT	Cooper Cave	61.77	347	P	P	15 44 07.5	-0.5
SWET	Sewanee	61.84	346	P	P	15 44 08.1	-0.5
V48A	Smith Brothers	62.55	345	P	P	15 44 12.7	-0.6
V48A				IAmb	IAmb	15 44 13.7	
	comp=Z,8.7nm,0.8s						
CLTN	Cedars of Leba	62.77	346	P	P	15 44 14.1	-0.7
CLTN				IAmb	IAmb	15 44 15.2	
	comp=Z,6.9nm,0.7s						
TXAR	Lajitas Array	62.82	328	P	P	15 44 16.8	+1.4
	comp=Z,0.8nm,0.6s,baz=147,slow=8.3,SNR=7.4						
TXAR				pP	pP	15 44 26.5	+1.4
	comp=Z,0.7nm,0.7s,baz=160,slow=8.4,SNR=5.0						
TXAR	Lajitas Array	62.82	328	P	P	15 44 16.1	+0.7
WVT	Waverly	63.16	345	P	P	15 44 16.2	-1.1
WVT				IAmb	IAmb	15 44 17.3	
	comp=Z,7.1nm,0.6s						
WVT	Waverly	63.16	345	P	P	15 44 16.8	-0.5
	baz=163						
W41B	Gary Mavity, V	63.46	340	P	P	15 44 19.3	-0.1
W41B				IAmb	IAmb	15 45 21.9	
	comp=Z,32nm,1.9s						
W41B	Gary Mavity, V	63.46	340	P	P	15 44 19.4	+0.1
	baz=158						
T49A	Edmonton	63.58	347	P	P	15 44 19.8	-0.3
	baz=165						
WHAR	Wooly Hollow	63.58	340	P	P	15 44 20.0	-0.1
WHAR				IAmb	IAmb	15 44 25.6	
	comp=Z,10nm,1.2s						
W39A	Magazine	63.97	339	P	P	15 44 23.9	+1.2
	baz=157						
LCAR	Lake Charles	63.98	342	P	P	15 44 22.4	-0.3
LCAR				IAmb	IAmb	15 44 23.3	
	comp=Z,5.3nm,0.6s						
Q57A	Strasburg	64.36	353	P	P	15 44 25.1	-0.1
	baz=172						
U40A	Yellville	64.74	340	P	P	15 44 27.8	0.0
U40A				IAmb	IAmb	15 44 28.6	
	comp=Z,7.0nm,0.7s						
U40A	Yellville	64.74	340	P	P	15 44 28.0	+0.3
	baz=158						
QSPA	South Pole Qui	64.95	180	P	P	15 44 29.9	+0.9
	comp=Z,7.1nm,0.6s,baz=185,slow=0.8,SNR=58						
QSPA				pP	pP	15 44 39.8	+0.9
	comp=Z,3.0nm,0.9s,baz=260,slow=3.6,SNR=2.5						
QSPA	South Pole Qui	64.95	180	P	P	15 44 29.9	+0.9
QSPA				IAmb	IAmb	15 44 30.4	
	comp=Z,7.2nm,0.7s						
S44A	Carbondale	64.99	344	P	P	15 44 28.7	-0.6
S44A				IAmb	IAmb	15 44 29.8	
	comp=Z,14nm,0.7s						
SIUC	Southern Illin	65.00	344	P	P	15 44 28.7	-0.7
SIUC				IAmb	IAmb	15 44 29.9	
	comp=Z,16nm,0.8s						
MGMO	Mountain Grove	65.31	341	P	P	15 44 31.2	-0.2
MNTX	Cornudas Mount	65.60	328	P	P	15 44 33.4	-0.1
MNTX	Cornudas Mount	65.60	328	P	P	15 44 33.8	+0.3
	baz=146						
CCM	Cathedral Cave	65.86	342	P	P	15 44 34.2	-0.7
CCM				IAmb	IAmb	15 44 35.7	
	comp=Z,5.8nm,0.7s						
CCM	Cathedral Cave	65.86	342	P	P	15 44 35.2	+0.3
	baz=160						
S39A	Bolivar	66.12	341	P	P	15 44 36.6	-0.1
N55A	Marion Center	66.15	353	P	P	15 44 37.2	+0.4
	baz=172						
R40A	Maddies Statio	66.36	342	P	P	15 44 37.9	-0.3
M56A	Emporium	66.76	354	P	P	15 44 40.7	0.0
M56A	Emporium	66.76	354	P	P	15 44 41.2	+0.5
	baz=173						
M55A	Ridgway	66.81	353	P	P	15 44 41.0	0.0
M55A	Ridgway	66.81	353	P	P	15 44 41.0	0.0
	baz=172						
N49A	Columbus Grove	67.02	349	P	P	15 44 41.5	-0.7
N49A	Columbus Grove	67.02	349	P	P	15 44 41.8	-0.5
	baz=167						
N41A	Harden Midland	68.25	344	P	P	15 44 49.2	-0.8
N41A				IAmb	IAmb	15 44 50.8	
	comp=Z,15nm,1.1s						
ANMO	Albuquerque	68.78	329	P	P	15 44 54.9	+1.1
H61A	Lyndonville	69.46	359	P	P	15 44 59.4	+1.9
	baz=179						
H59A	Cadyville	69.62	358	P	P	15 44 59.9	+1.4
	baz=177						
H56A	Elgin	69.70	356	P	P	15 44 59.2	+0.3
	baz=175						
H53A	Bobcaygeon	69.86	354	P	P	15 45 00.3	+0.3
	baz=172						
SADO	Sadowa	70.11	354	P	P	15 45 01.1	-0.4
G53A	Haliburton	70.41	354	P	P	15 45 04.1	+0.7
	baz=172						
F64A	Sherman	70.82	2	P	P	15 45 06.2	+0.4
F64A	Sherman	70.82	2	P	P	15 45 07.0	+1.2
	baz=182						
F52A	Sundridge	71.14	354	P	P	15 45 08.4	+0.6
	baz=172						
ALGO	Algonquin Park	71.19	355	P	P	15 45 08.4	+0.4
	baz=173						
TRQ	Mont Tremblant	71.23	357	P	P	15 45 08.4	0.0
F51A	Arnstein	71.34	353	P	P	15 45 09.2	+0.3
	baz=171						
DBIC	Dimbokro	71.42	73	P	P	15 45 10.2	0.0
	comp=Z,4.5nm,0.8s,baz=230,slow=3.2,SNR=5.8						
DBIC	Dimbokro	71.42	73	P	P	15 45 09.6	-0.6
DBIC				IAmb	IAmb	15 45 32.8	
	comp=Z,26nm,1.4s						
E54A	Lac Daplat, Po	71.59	355	P	P	15 45 10.7	+0.2
	baz=174						
F45A	CMU Biological	71.87	349	P	P	15 45 12.0	-0.2
	baz=166						
E51A	G1948 Merrick	71.89	354	P	P	15 45 12.6	+0.3
	baz=172						
D62A	Allapoint, All	72.02	1	P	P	15 45 13.4	+0.4
D62A				IAmb	IAmb	15 45 24.9	
	comp=Z,29nm,1.1s						
D62A	Allapoint, All	72.02	1	P	P	15 45 14.2	+1.2
	baz=182						
D56A	ZEC Mazanza, M	72.06	357	P	P	15 45 13.8	+0.5
	baz=176						
D55A	Sainte-Anne-du	72.07	357	P	P	15 45 13.6	+0.3
	baz=176						
E48A	Lockeyer	72.15	352	P	P	15 45 14.2	+0.3
	baz=169						
D53A	Lac Vacive, Po	72.27	355	P	P	15 45 14.5	-0.1
D53A				IAmb	IAmb	15 45 25.2	
	comp=Z,14nm,1.4s						
D53A	Lac Vacive, Po	72.27	355	P	P	15 45 14.2	-0.4
	baz=173						
E47A	Iron Bridge	72.28	351	P	P	15 45 14.4	-0.1
	baz=168						
D50A	G1974 Best Tow	72.55	354	P	P	15 45 16.6	+0.3
	baz=171						
ECSD	EROS Data Cent	72.65	341	P	P	15 45 17.6	+0.7
	baz=156						
EYMN	Ely	75.22	346	P	P	15 45 31.9	0.0
	baz=161						
TPNV	Topopah Spring	75.27	324	P	P	15 45 35.1	+2.5
	baz=138						
R11A	Troy Canyon, C	75.96	325	P	P	15 45 38.8	+2.2
	baz=139						
HWUT	Hardware Ranch	76.52	330	P	P	15 45 40.5	+0.9
PDAR	Pinedale Array	76.56	332	P	P	15 45 40.3	+0.4
	comp=Z,0.3nm,0.6s,baz=153,slow=10.0,SNR=3.9						
AGMN	Agassiz Nation	76.61	343	P	P	15 45 40.1	+0.4
	baz=157						
SPUT	South Promonto	76.69	329	P	P	15 45 40.8	+0.2
RLMT	Red Lodge	78.36	333	P	P	15 45 51.4	+1.5
	baz=145						
ULM	Lac du Bonnet	78.41	344	P	P	15 45 49.1	-0.6
	comp=Z,3.3nm,1.0s,baz=167,slow=8.3,SNR=4.1						
ULM	Lac du Bonnet	78.41	344	IAmb	IAmb	15 48 40.2	
	comp=Z,21nm,1.9s						
YNE	Yellowstone No	78.57	333	P	P	15 45 52.3	+1.2
YHH	Holmes Hill	78.75	332	P	P	15 45 53.6	+1.5
MCMT	McKenzie Canyo	79.64	331	P	P	15 45 58.6	+1.6
TOA0	Torodi Ar. Sit	80.19	70	P	P	15 45 60.0	-0.3
TOA0				IAmb	IAmb	15 46 01.0	
	comp=Z,12nm,0.7s						
TORD	Torodi Ar. Bea	80.19	70	P	P	15 46 00.2	-0.1
	comp=Z,9.7nm,0.6s,baz=257,slow=5.0,SNR=34						
TORD				pP	pP	15 46 11.5	+1.0
	comp=Z,6.3nm,0.8s,baz=252,slow=5.3,SNR=8.7						
MOD	Modoc Plateau	81.02	325	P	P	15 46 04.3	-0.1
MAW	Mawson	81.22	164	P	P	15 46 05.4	+0.5
	comp=Z,8.8nm,0.7s,baz=219,slow=6.8,SNR=13						
MAW	Mawson	81.22	164	IAmb	IAmb	15 46 06.5	
	comp=Z,2.7nm,0.9s						
M04C	Macdoel	81.75	324	P	P	15 46 09.9	+1.7
	baz=135						
BOSA	Boshof	83.16	118	P	P	15 46 16.0	0.0
	comp=Z,6.4nm,0.8s,baz=223,slow=5.0,SNR=9.3						
BOSA	Boshof	83.16	118	P	P	15 46 15.7	-0.4
YKA	Yellowknife Ar	94.17	341	P	P	15 47 07.8	+0.2
	comp=Z,0.9nm,0.7s,baz=140,slow=4.7,SNR=22						
YKA				pP	pP	15 47 18.2	+0.6
	comp=Z,1.1nm,0.8s,baz=140,slow=5.1,SNR=8.1						
AS31	Alice Springs	125.82	208		PKiKP	15 52 51.5	-0.8
ASAR	Alice Springs	125.82	208	PKP	PKiKP	15 52 51.7	-0.5
	comp=Z,1.6nm,0.8s,baz=134,slow=1.9,SNR=32						
ASAR	Alice Springs	125.82	208		PKiKP	15 52 51.4	-0.9
ABKAR	Akbulak array	135.02	45		PKiKP	15 53 08.6	-1.2
GAR	Garm	144.56	58		PKPdf	15 53 25.4	-0.7
KURK	Kurchatov	145.37	35		PKPab	15 53 27.3	+0.2
ARSB	Arslanbob	145.99	53	PKPbc	PKPab	15 53 30.1	+0.2
ZAA0	Zalesovo Array	146.05	26		PKPbc	15 53 28.3	-0.6
ZALV	Zalesovo Beam	146.05	26	PKPbc	PKPab	15 53 29.0	-0.5
	comp=Z,12nm,0.6s,baz=305,slow=3.8,SNR=57						
ZALV				pPKPbc	pPKPab	15 53 40.2	+0.4
	comp=Z,16nm,0.7s,baz=298,slow=3.9,SNR=21						
ZALV	Zalesovo Beam	146.05	26	PKPbc	PKPab	15 53 28.7	-0.8
AAK	Ala-Archa	146.65	50		PKPbc	15 53 30.6	-0.6
NIL	Nilore	147.68	67		PKPbc	15 53 33.6	-0.6
KSH	Kashi	148.70	55	PKPbc	PKPdf	15 53 32.4	-0.7
KSH				pPKP	pPKPdf	15 53 43.3	-0.3
KSH				PKS	PP	15 57 06.8	-0.4
KSH				PP	PP	15 57 09.5	+2.3
MAKZ	Makanchi	149.45	38		PKiKP	15 53 38.2	-1.3
MK31	Makanchi Array	149.63	38		PKiKP	15 53 39.0	-0.9
MKAR	Makanchi Array	149.63	38	PKPbc	PKiKP	15 53 39.2	-0.7
	comp=Z,5.5nm,0.6s,baz=313,slow=2.7,SNR=79						
MKAR				pPKPbc	pPKPbc	15 53 50.0	+0.7
	comp=Z,8.5nm,0.7s,baz=325,slow=1.9,SNR=31						
MKAR	Makanchi Array	149.63	38		PKiKP	15 53 39.0	-0.9
HYB	Hyderabad	150.40	99	*i* PKP	PKPbc	15 53 41.0	-0.6
GTA	Gaotai	163.80	27	PKP	PKPdf	15 53 53.9	+1.2
HHC	Hu-ho-hao-te	164.34	354	*e*P	PKPdf	15 53 53.3	+0.2
LZH	Lanzhou	168.25	22	*e*PKP	PKPdf	15 53 57.8	+1.4
LZH				pPKP	pPKPdf	15 54 07.9	+0.9
LZH				sPKP		15 54 13.6	
NJ2	Nanjing	169.20	311	*e*P	PKPdf	15 53 55.9	-1.0

ROM 24 15:39:20.2±0.2**, 43°.487N**±0°.005×**12°.383E**±0°.007**, h6**^{km}±1^{km}**, Md0.6**/5**, 1D, Error ellipse: s-maj=0.6km s-min=0.4km az=310.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATPI	Pietralunga -	0.04	159	P	Pg	15 39 21.6	0.0
ATPI				S	Sg	15 39 22.6	+0.1
ATPI				END			
BADI	Badiali	0.10	283	P	Pg	15 39 22.8	+0.4
BADI				S	Sg	15 39 24.8	+0.8
BADI				END			
ATVO	AVT- Monte Val	0.11	171	P	Pg	15 39 22.9	+0.4
ATVO				S	Sg	15 39 24.9	+0.9
ATVO				AML	AML		
	comp=E,490µm,1.4s						
ATVO				AML	AML		
	comp=N,311µm,0.1s						
ATVO				AML	AML		
	comp=N,310µm,0.1s						
ATVO				AML	AML		
	comp=E,490µm,1.4s						
ATVO				END			
PIEI	Pieia	0.12	66	P	Pg	15 39 23.0	+0.3
PIEI				S	Sg	15 39 25.8	+1.3
PIEI				END			
NARO	Abbazia di Nar	0.19	49	P	Pg	15 39 24.2	+0.3
NARO				S	Sg	15 39 27.6	+1.1
FRON	Frontone	0.25	83	P	Pn	15 39 29.8	-0.7
MPAG	Monte Paganucc	0.31	62	S	Sb	15 39 34.0	+0.5
CAFI	Castiglion Fio	0.34	243	⇓P	Pn	15 39 33.9	+2.3
OSSC	Osservatorio P	0.83	273	S	Sg	15 39 44.0	-2.8
MCIV	Monte Civitell	0.88	216	P	Pg	15 39 32.6	-4.4

ROM 24 15:39:26.5±0.1**, 43°.490N**±0°.003×**12°.392E**±0°.004**, h8**^{km}**, ML1.5**/3**, 6C-2D, Error ellipse: s-maj=0.3km s-min=0.2km az=179.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATPI	Pietralunga -	0.04	169	⇑ *i*P	Pg	15 39 28.3	+0.1
ATPI				S	Sg	15 39 29.3	-0.1
ATPI				AML	AML		
	comp=E,1145µm,0.2s						
ATPI				AML	AML		
	comp=N,985µm,0.5s						
ATPI				AML	AML		
	comp=E,1146µm,0.2s						
ATPI				AML	AML		
	comp=N,988µm,0.5s						
ATVO	AVT- Monte Val	0.11	174	⇑P	Pg	15 39 29.6	+0.5
ATVO				S	Sg	15 39 31.6	+0.8
BADI	Badiali	0.11	281	⇑P	Pg	15 39 29.4	+0.4
BADI				S	Sg	15 39 31.5	+0.7
BADI				AML	AML		
	comp=N,660µm,0.9s						
BADI				AML	AML		
	comp=E,666µm,0.3s						
PIEI	Pieia	0.11	66	⇑P	Pg	15 39 29.7	+0.5
PIEI				S	Sg	15 39 32.2	+1.2
PIEI				AML	AML		
	comp=N,318µm,0.3s						
PIEI				AML	AML		
	comp=E,592µm,0.5s						
PIEI				AML	AML		
	comp=N,318µm,0.3s						
CDCA	Citt‘ di Caste	0.12	255	⇓P	Pg	15 39 29.7	+0.5
CDCA	Citt‘ di Caste	0.12	255	P	Pg	15 39 29.7	+0.5
CDCA				S	Sg	15 39 31.9	+0.9
ATFO	Monte Foce - G	0.18	133	⇑P	Pg	15 39 30.8	+0.5
ATFO				AML	AML		
	comp=E,150µm,0.5s						
ATFO				AML	AML		
	comp=N,110µm,1.1s						
ATFO				AML	AML		
	comp=E,150µm,0.5s						
ATFO				AML	AML		
	comp=N,110µm,1.1s						

ATFO				AML	AML		
	comp=E,150µm,0.5s						
ATFO				AML	AML		
	comp=N,110µm,1.1s						
ATFO	Monte Foce - G	0.18	133	P	Pg	15 39 30.8	+0.5
ATFO				S	Sg	15 39 34.2	+1.4
ATMI	Monte Miggiano	0.18	210	⇓P	Pg	15 39 31.1	+0.8
ATMI				AML	AML		
	comp=E,160µm,1.1s						
ATMI				AML	AML		
	comp=N,184µm,0.2s						
ATMI				AML	AML		
	comp=E,160µm,1.1s						
ATMI				AML	AML		
	comp=N,184µm,0.2s						
ATMI				AML	AML		
	comp=N,184µm,0.2s						
ATMI				AML	AML		
	comp=E,160µm,1.1s						
ATMI	Monte Miggiano	0.18	210	P	Pg	15 39 31.3	+1.0
NARO	Abbazia di Nar	0.18	48	P	Pg	15 39 30.7	+0.4
NARO				S	Sg	15 39 34.2	+1.3
NARO				AML	AML		
	comp=N,136µm,0.8s						
NARO				AML	AML		
	comp=E,164µm,0.3s						
PARC	Parchiule	0.19	325	P	Pg	15 39 31.1	+0.5
PARC				S	Sg	15 39 34.9	+1.6
FRON	Frontone	0.24	83	P	Pg	15 39 32.0	+0.5
FRON				S	Sg	15 39 36.3	+1.6
MURB	Monte Urbino	0.25	157	⇑P	Pg	15 39 32.1	+0.6
MURB				AML	AML		
	comp=E,345µm,0.2s						
MURB				AML	AML		
	comp=N,250µm,0.2s						
MURB				AML	AML		
	comp=E,345µm,0.2s						
MURB				AML	AML		
	comp=N,250µm,0.2s						
MURB				AML	AML		
	comp=E,345µm,0.2s						
MURB				AML	AML		
	comp=N,250µm,0.2s						
MURB	Monte Urbino	0.25	157	P	Pg	15 39 32.1	+0.6
MURB				S	Sg	15 39 36.7	+1.9
ATTE	AVT- Monte Tez	0.29	186	P	Pg	15 39 33.0	+0.6
ATTE				AML	AML		
	comp=E,76µm,1.4s						
ATTE				AML	AML		
	comp=N,61µm,1.4s						
ATTE				AML	AML		
	comp=E,76µm,1.4s						
ATTE				AML	AML		
	comp=N,61µm,1.4s						
ATTE				AML	AML		
	comp=N,61µm,1.4s						
ATTE				AML	AML		
	comp=E,76µm,1.4s						
ATTE	AVT- Monte Tez	0.29	186	P	Pg	15 39 32.9	+0.5
ATTE				S	Sg	15 39 37.7	+1.4
MPAG	Monte Paganucc	0.30	62	P	Pg	15 39 33.1	+0.5
MPAG				S	Sb	15 39 38.5	-0.9
FOSV	Fossato di Vic	0.33	126	P	Pb	15 39 34.0	-0.7
FOSV				S	Sb	15 39 39.6	-0.7
FSSB	Fossombrone	0.34	54	S	Pg	15 39 34.0	+0.6
FSSB	Fossombrone	0.34	54	P	Pg	15 39 34.0	+0.6
ATCC	AVT- Casa Cast	0.35	149	P	Pb	15 39 34.4	-0.8
ATCC	AVT- Casa Cast	0.35	149	P	Pg	15 39 34.1	+0.7
ATCC				S	Sb	15 39 40.7	-0.2

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*IDC **24** 15:45:29.2±0.4, 19.°46S×70.°54W, h0^{km}, mb5.0/22, mb1 5.0/27, mb1mx4.9/33, mbtmp5.0/27, ML4.6/4, MS5.3/5, Ms1 5.3/5, ms1mx5.0/8, Error ellipse: s-maj=15.9km s-min=9.5km az=75.0*

*VAO **24** 15:45:29.1±0.6, 19.°55S×70.°78W, h10^{km}±4^{km}, mb5.3*

*NEIC **24** 15:45:31.1±2.1, 19.°59S±0.°04×70.°82W±0.°04, h17^{km}±2^{km}, mb5.6/446, Ms_20 5.3/642, Mwb5.6/54, Mwr5.5/29, Mww5.7, ML5.5(GUC), Mwc5.7(GCMT), Error ellipse: s-maj=5.9km s-min=5.8km az=53.0*

*NEIC **24** 15:45:31.4, 19.°61S×70.°80W, h22^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.42; $M_{\theta\theta}$-0.25; $M_{\phi\phi}$-0.17; $M_{r\theta}$0.31; $M_{\theta\phi}$0.58; $M_{\phi r}$-2.40; Fault plane solution: $M_0$2.52000×10^{17} NP1:ϕ_s279.91000°, δ13.90000°, λ19.40000°. NP2:ϕ_s171.03000°, δ85.42000°, λ103.14000°. Principal axes: T 2.5568, Plg48.0000°, Azm95.0000°; N -0.0781, Plg13.0000°, Azm350.0000°; P -2.4786, Plg39.0000°, Azm249.0000°;*

*NEIC **24** 15:45:31.4, 19.°61S×70.°80W, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.46; $M_{\theta\theta}$0.35; $M_{\phi\phi}$-2.81; $M_{r\theta}$0.04; $M_{\theta\phi}$0.83; $M_{\phi r}$-1.77; Fault plane solution: $M_0$3.30000×10^{17} NP1:ϕ_s336.05000°, δ29.58000°, λ74.14000°. NP2:ϕ_s174.14000°, δ61.65000°, λ98.82000°. Principal axes: T 3.0141, Plg72.0000°, Azm105.0000°; N 0.5041, Plg8.0000°, Azm350.0000°; P -3.5182, Plg16.0000°, Azm258.0000°;*

*MOS **24** 15:45:31.0±1.1, 19.°24S×70.°59W, h17^{km}, mb5.6/43, MS5.3/40 Error ellipse: s-maj=10.8km s-min=5.7km az=107.9*

*GUC **24** 15:45:32.8±0.7, 19.°59S×70.°79W, h43^{km}±2^{km}, ML5.5*

*BJI **24** 15:45:34.0±0.0, 19.°60S×70.°80W, h30^{km}, mB5.5/49, Ms5.7/57, Ms7 5.6/56*

*NEIC **24** 15:45:36, 19.°50S×70.°61W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.15; $M_{\theta\theta}$-0.12; $M_{\phi\phi}$-2.02; $M_{r\theta}$0.98; $M_{\theta\phi}$0.84; $M_{\phi r}$-3.41; Fault plane solution: $M_0$4.20000×10^{17} NP1:ϕ_s163.00000°, δ74.00000°, λ92.00000°. NP2:ϕ_s334.00000°, δ16.00000°, λ81.00000°. Principal axes: T 4.1091, Plg61.0000°, Azm77.0000°; N 0.1799, Plg2.0000°, Azm343.0000°; P -4.2890, Plg29.0000°, Azm251.0000°;*

*NEIC **24** 15:45:38, 19.°56S×71.°03W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.78; $M_{\theta\theta}$0.07; $M_{\phi\phi}$-2.85; $M_{r\theta}$0.88; $M_{\theta\phi}$0.94; $M_{\phi r}$-2.93; Fault plane solution: $M_0$4.26000×10^{17} NP1:ϕ_s163.00000°, δ68.00000°, λ90.00000°. NP2:ϕ_s344.00000°, δ22.00000°, λ91.00000°. Principal axes: T 4.0781, Plg67.0000°, Azm73.0000°; N 0.3460, Plg0.0000°, Azm163.0000°; P -4.4241, Plg23.0000°, Azm254.0000°;*

*GCMT **24** 15:45:38.1±0.1, 19.°54S±0.°01×71.°06W±0.°01, h29^{km}, MW5.7/139, Moment Tensor Solution. s131,c242; s139,c277; Duration: 1^{s}.8 Moment tensor: Scale 10^{17} Nm; M_{rr}2.95±.04; $M_{\theta\theta}$0.09±.03; $M_{\phi\phi}$-3.04±.04; $M_{r\theta}$0.81±.06; $M_{\theta\phi}$0.80±.03; $M_{\phi r}$-3.36±.09; Best double couple: $M_0$4.63600×10^{17} NP1:ϕ_s347.00000°, δ21.00000°, λ90.00000°. NP2:ϕ_s166.00000°, δ69.00000°, λ90.00000°. Principal axes: T 4.4960, Plg66.0000°, Azm76.0000°; N 0.2840, Plg0.0000°, Azm166.0000°; P -4.7770, Plg24.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 15:45:30.7±0.8**, 19.°55S**±0.°02×**70.°72W**±0.°03**, h13**^{km}±4^{km}**, n1499, σ1^{s}.31**/1407**, mb5.6**/253**, MS5.3**/364**, 24C-7D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.56	95	⇓iP	Pn	15 45 44.6	0.0
PSGC				eS	Sn	15 45 53.8	0.0
PSGCX	Pisagua	0.56	95		Pn	15 45 44.5	0.0
PB12	IPOC Station P	1.00	22	⇓iP	Pn	15 45 51.3	+0.7
PB12				i S	Sn	15 46 06.2	+1.6
PB12				IAML		15 46 09.6	
	comp=N,159µm,0.5s						
PB12	IPOC Station P	1.00	22	Pn	Pn	15 45 51.7	+1.1
PB11	IPOC Station P	1.02	102	⇓iP	Pn	15 45 52.0	+1.1
PB11				i S	Sn	15 46 07.3	+2.0
PB11				IAML		15 46 09.9	
	comp=N,316µm,0.3s						
PB11	IPOC Station P	1.02	102	Pn	Pn	15 45 52.2	+1.3
TA01	Diego Aracena	1.13	154	⇑iP	Pg	15 45 52.8	+0.3
TA01				i S	Sn	15 46 07.4	-0.3
TA01				IAML		15 46 11.9	
	comp=E,152µm,0.5s						
AP01	Chacalluta	1.22	17	⇑iP	Pg	15 45 55.2	+0.9
AP01				eS	Sg	15 46 12.1	+1.9
AP01				IAML		15 46 18.9	
	comp=E,182µm,0.4s						
PATCX	Punta Patache	1.37	157	⇑iP	Pb	15 45 56.0	-0.3
PATCX				eS	Sn	15 46 13.5	-0.3
PATCX	Punta Patache	1.37	157	Pn	Pb	15 45 56.3	0.0
GO01	Chusmiza	1.44	95	⇓iP	Pg	15 45 59.3	+0.9
GO01				eS	Sg	15 46 19.9	+2.7
GO01				IAML		15 46 21.9	
	comp=N,129µm,0.3s						
GO01	Chusmiza	1.44	95	Pn	Pg	15 45 59.4	+0.9
PB08	IPOC Station P	1.58	112	⇓iP	Pg	15 46 01.1	-0.1
PB08				i S	Sg	15 46 22.8	+0.9
PB08				IAML		15 46 27.9	
	comp=N,67µm,0.5s						
PB16	IPOC Station P	1.66	44	⇑iP	Pg	15 46 03.2	+0.4
PB16				i S	Sg	15 46 26.1	+1.7
PB16				IAML		15 46 35.2	
	comp=N,45µm,0.5s						
PB16	IPOC Station P	1.66	44	Pn	Pg	15 46 03.5	+0.8
PB01	IPOC Station P	1.88	142	⇑iP	Pb	15 46 04.2	-0.8
PB01				eS	Sb	15 46 27.8	-0.8
PB01				IAML		15 46 35.0	
	comp=E,53µm,0.5s						
PB01	IPOC Station P	1.88	142	Pn	Pb	15 46 03.9	-1.1
PB02	IPOC Station P	1.92	157	⇑iP	Pn	15 46 04.0	+0.7
PB02				eS	Sn	15 46 28.1	+0.7
PB02				IAML		15 46 40.3	
	comp=E,125µm,0.3s						
PB07	IPOC Station P	2.30	160	Pn	Pn	15 46 09.7	+1.1
PB09	IPOC Station P	2.63	149		Pn	15 46 15.2	+2.1
PB04	IPOC Station P	2.82	169		Pn	15 46 15.3	-0.4
LVC	Limon Verde	3.48	151	Pn	Pn	15 46 26.8	+1.8
	comp=E,151nm,0.3s,baz=335,slow=9.0,SNR=329						
LVC				Sn	Sn	15 47 08.6	+2.3
	comp=E,488nm,0.3s,baz=168,slow=23,SNR=6.4						
LVC				Lg	Lg	15 47 19.2	
	comp=E,937nm,0.3s,baz=110,slow=7.9,SNR=12						
LVC				LR	LR	15 48 08.0	
	comp=E,49µm,21.1s,baz=338,slow=46						
PB15	IPOC Station P	3.82	163		Pn	15 46 29.2	-0.3
PB10	IPOC Station P	3.95	178		Pn	15 46 29.6	-1.5
LPAZ	La Paz	4.07	38	Pn	Pb	15 46 38.5	-4.2
	comp=E,26nm,0.3s,baz=222,slow=12,SNR=142						
LPAZ				LR	LR	15 48 22.9	
	comp=E,67µm,18.3s,baz=224,slow=44						
LPAZ	La Paz	4.07	38		Pb	15 46 39.0	-3.7
PB14	IPOC Station P	5.06	177		Pn	15 46 44.8	-1.9
GO02	Mina Guanaco	5.68	170		Pn	15 46 54.3	-0.9
GO03	Copiap	8.02	177		Pn	15 47 24.5	-2.6
NNA	Nana	9.55	321	Pn	Pn	15 47 50.2	+2.1
	comp=E,6.7nm,0.3s,baz=192,slow=13,SNR=8.4						
NNA				Sn	Sn	15 49 31.1	-4.4
	comp=E,24nm,0.3s,baz=267,slow=18,SNR=9.8						
NNA	Nana	9.55	321		Pn	15 47 48.9	+0.7
SIV	San Ignacio	9.84	70	Pn	Pn	15 47 51.4	-0.8
	comp=E,4.8nm,0.3s,baz=265,slow=12,SNR=127						
SIV				LR	LR	15 52 20.0	
	comp=E,47µm,19.0s,baz=276,slow=42						
SAML	Samuel	12.81	36	P	Pn	15 48 30.6	-2.2
SAML	Samuel	12.81	36		Pn	15 48 30.6	-2.2
SAML	Samuel	12.81	36	eP	Pn	15 48 31.1	-1.6
ROC1	El Roble	13.38	181		Pn	15 48 40.5	0.0
PEL	Peldehue	13.54	180	P	Pn	15 48 43.3	+0.7
PEL	Peldehue	13.54	180		Pn	15 48 43.3	+0.7
CPUP	Villa Florida	14.05	121	Pn	Pn	15 48 47.9	-1.8
	comp=E,0.4nm,0.3s,baz=304,slow=12,SNR=20						
CPUP	Villa Florida	14.05	121		Pn	15 48 49.0	-0.7
CPUP	Villa Florida	14.05	121	eP	Pn	15 48 49.1	-0.5
AQDB	Aquidauana	14.15	96	eP	Pn	15 48 50.5	-0.4
ATAH	Atahualpa	14.42	328	Pn	Pn	15 48 55.5	+0.4
	baz=55,slow=18,SNR=1.7						
SALV	Santo Antonio	14.76	78	eP	Pn	15 48 58.7	-0.7
GO05	Huala	15.44	184		Pn	15 49 06.9	-1.5
ITQB	Itaqui	16.29	131	eP	Pn	15 49 18.9	-0.4
CLDB	Colider	16.77	61	eP	Pn	15 49 24.5	-1.1
C2SB	Chapadao do Su	16.91	90	eP	Pn	15 49 26.7	-0.6
TRCB	Terra Rica	17.17	104	eP	Pn	15 49 30.0	-0.6
PTGB	Pitanga	18.02	110	eP	Pn	15 49 41.0	-0.2
PCMB	Pacaembu	18.33	100	eP	Pn	15 49 44.1	-0.8
PCMB				eS	S	15 53 14.5	+0.1
ARAG	Araguaiana, MT	18.42	81	eP	P	15 49 44.1	-1.8
ITAB	Concordia	18.68	118	eP	P	15 49 47.6	-1.2
CPSB	Cacapava Do Su	19.00	128	eP	P	15 49 51.4	-0.9
ITRB	Iturama	19.18	94	eP	P	15 49 53.9	-0.4
PLTB	Pedras Altas	19.61	132	eP	P	15 49 57.9	-1.0
GO06	Curarrehue	19.98	182		P	15 50 03.8	+0.8
FRTB	Fartura	20.04	105	eP	P	15 50 03.0	-0.7
CNLB	Canela	20.51	122	eP	P	15 50 07.9	-0.9
CNLB				eS	S	15 53 58.0	-0.1
BB19B	Bebedouro	20.86	98	eP	P	15 50 11.4	-1.2
IPMB	Ipameri, GO	21.36	90	eP	P	15 50 16.3	-1.8
IPMB				eS	S	15 54 14.9	-0.4
PTGA	Pitinga	21.46	31	P	P	15 50 17.9	-1.2
	comp=E,142nm,0.3s,baz=207,slow=14,SNR=402						
PTGA	Pitinga	21.46	31	P	P	15 50 17.7	-1.4
PTGA				IAMs_20	IAMs_20	15 59 37.3	
	comp=Z,15µm,18.0s						
PTGA	Pitinga	21.46	31	eP	P	15 50 17.9	-1.2
FLOC	Florencia	21.55	346	eP	P	15 50 20.1	+0.1
FLOC	Florencia	21.55	346	P	P	15 50 21.0	+0.9
GCUF	Volcan Galeras	21.65	342	eP	P	15 50 24.9	+3.3
RCLB	Rio Claro- Sao	21.83	102	eP	P	15 50 22.8	-0.3
RCLB				eS	S	15 54 25.6	+1.2
CRUC	La Cruz	21.86	343	⇑eP	P	15 50 29.6	+5.8
BDFB	Brasilia	21.98	83	P	P	15 50 23.9	-0.9
	comp=Z,28nm,0.8s,baz=248,slow=14,SNR=17						
BDFB	Brasilia	21.98	83	P	P	15 50 23.6	-1.2
BDFB				IAmb	IAmb	15 50 43.3	
	comp=Z,450nm,2.0s						
BDFB				IAMs_20	IAMs_20	16 00 20.4	
	comp=Z,16µm,19.0s						
SPB	Sao Paulo	22.02	105	P	P	15 50 23.5	-1.5
SPB				IAmb	IAmb	15 50 29.2	
	comp=Z,373nm,1.5s						
SPB				IAMs_20	IAMs_20	16 00 18.8	
	comp=Z,11µm,20.0s						
SPB	Sao Paulo	22.02	105	eP	P	15 50 25.1	+0.1
GARC	Garzon, Huila	22.10	347	eP	P	15 50 28.2	+2.0
SOTA	Rioblanco	22.31	344	⇑eP	P	15 50 29.3	+0.5
VAO	Valinhos	22.39	103	eP	P	15 50 28.6	-0.5
VAO				eS	S	15 54 35.4	+0.3
PCON	Cinco Dias	22.45	345	eP	P	15 50 33.7	+3.5
POPC	Popayan, Colom	22.72	344	eP	P	15 50 35.0	+2.3
GR1C	Gorgona, Isla	23.58	341	⇑eP	P	15 50 43.0	+1.7
PTGC	Puerto Gaitan,	23.64	356	⇑eP	P	15 50 37.3	-4.6
PARB	Paraibuna	23.65	104	eP	P	15 50 42.5	+0.4
VILC	Villavicencio,	23.69	353	eP	P	15 50 33.3	-9.3
ORTC	Ortega, Tolima	23.73	349	eP	P	15 50 44.4	+1.6
YOTC	Yotoco, Valle	24.03	346	eP	P	15 50 45.4	-0.4
CHIC	Chingaza	24.21	353	eP	P	15 50 46.3	-1.4
ANIL	Santa Ana	24.33	349	eP	P	15 50 47.2	-1.6
BSCB	Bom Sucesso	24.37	98	eP	P	15 50 48.5	-0.4
BSCB				eS	S	15 55 09.1	+0.7
ROSC	El Rosal	24.49	351	P	P	15 50 51.9	+1.5
	comp=Z,39nm,0.5s,baz=176,slow=6.3,SNR=17						
ROSC	El Rosal	24.49	351	⇑eP	P	15 50 57.5	+7.2
ROSC	El Rosal	24.49	351	P	P	15 50 49.8	-0.5
ROSC				IAMs_20	IAMs_20	16 01 06.5	
	comp=Z,13µm,19.0s						
RREF	El Recreo	24.72	349	eP	P	15 50 49.4	-3.2
SMTB	Santa Maria do	24.77	68	eP	P	15 50 51.4	-1.1
GUY2C	Guyana, Caldas	25.04	349	eP	P	15 50 56.4	+1.1
PIZC	Pizarro, Choco	25.22	344	eP	P	15 50 59.2	+2.7
NORC	Norcasia	25.29	350	eP	P	15 50 52.5	-4.7
RUSC	La Rusia	25.39	355	P	P	15 50 58.1	-0.5
JANB	Januaria	25.59	84	eP	P	15 50 58.9	-1.1
CBOC	Ciudad Bolivar	25.79	348	eP	P	15 50 59.8	-2.0
TAMC	Tame, Arauca	25.84	358	eP	P	15 51 01.5	-0.6
HELC	Santa Helena	26.01	349	eP	P	15 51 01.8	-2.3
BARC	Barichara	26.09	354	⇑eP	P	15 51 04.5	-0.1
PTBC	PUERTO BERRIO,	26.18	352	eP	P	15 51 09.6	+4.4
ELOV	Elorza	26.41	3	eP	P	15 51 09.2	+1.9
SOLC	Bahia Solano	26.45	345	⇑eP	P	15 51 01.5	-6.1
BRRC	Barranca, Sant	26.65	353	eP	P	15 51 07.2	-2.3
PAMC	Pamplona, Colo	26.79	356	eP	P	15 51 12.6	+1.3
UREC	San Jos de Ur	27.54	350	eP	P	15 51 09.6	-7.9
SJMB	Sao Joao De Ma	27.90	93	eP	P	15 51 19.8	-1.0
BSFB	Barra de Sao F	28.20	94	eP	P	15 51 22.5	-0.9
SDV	Santo Domingo	28.26	0	P	P	15 51 23.9	-0.1
	comp=Z,12nm,1.1s,baz=206,slow=8.6,SNR=14						
SDV	Santo Domingo	28.26	0	P	P	15 51 22.1	-2.0
SDV	Santo Domingo	28.26	0	IAMs_20	IAMs_20	16 04 21.5	
	comp=Z,7µm,18.0s						
SDV	Santo Domingo	28.26	0	eP	P	15 51 23.3	-0.8
BAUV	El Baul	28.43	6	eP	P	15 51 21.0	-4.4
ORIV	Oritupano	29.34	15	eP	P	15 51 32.4	-1.0
SJCC	San Jacinto, C	29.59	351	⇑eP	P	15 51 33.8	-1.9
BCIP	Isla Barro Col	29.92	342	IAMs_20	IAMs_20	16 04 47.5	
	comp=Z,8µm,21.0s						
PLCV	Puerto La Cruz	30.14	12	P	P	15 51 40.6	+0.1
PCRV	Puerto La Cruz	30.14	12	P	P	15 51 40.6	0.0
	comp=Z,47nm,1.0s,baz=13,slow=2.9,SNR=8.8						
MDP	Montagnes des	30.27	38	P	P	15 51 40.8	-1.0
	comp=Z,17nm,0.5s,baz=210,slow=9.1,SNR=21						
TPP	Pointe-a-Pierr	31.05	18	eP	P	15 51 49.9	+1.3
GUIV	Guiria	31.15	16	eP	P	15 51 43.2	-6.2
TRN	Trinidad (W)	31.38	18	eP	P	15 51 49.0	-2.5
HDC	Heredia	32.20	335	IAMs_20	IAMs_20	16 04 34.5	
	comp=Z,7µm,21.0s						
TOSP	Speyside	32.25	19	eP	P	15 51 59.5	+0.3
TOSP	Speyside	32.25	19	P	P	15 51 59.3	+0.1
GRGR	Grenville	32.72	17	eP	P	15 52 00.2	-3.1
GRGR	Grenville	32.72	17	P	P	15 52 03.4	+0.1
JTS	Las Juntas de	32.80	333	i P	P	15 52 05.3	+1.3
JTS				pmax	pmax		
	comp=Z,38nm,2.1s						
JTS	Las Juntas de	32.80	333	P	P	15 52 03.1	-1.0
JTS	Las Juntas de	32.80	333	IAMs_20	IAMs_20	16 04 47.5	
	comp=Z,7µm,21.0s						
GRHS	Sauteurs	32.81	17	eP	P	15 52 01.8	-2.2
GRSS	Sisters	32.89	17	eP	P	15 52 03.7	-1.1
GCMP	Grenada, Carri	33.12	17	eP	P	15 51 59.7	-7.1
EFI	East Falkland	33.57	166	IAMs_20	IAMs_20	16 07 02.3	
	comp=Z,7µm,19.0s						
SVB	Belmont	33.92	17	eP	P	15 52 10.4	-3.3
SVCV	St. Vincent, C	33.95	17	eP	P	15 52 08.8	-5.3
SVV	Soufriere Volc	33.97	17	eP	P	15 52 13.7	-0.5
SSV	Crater Summit	33.99	17	eP	P	15 52 13.0	-1.4
NBMO	Morrinhos-CE	34.02	66	eP	P	15 52 13.8	-0.9
ESPN	Las Esperanzas	34.27	336	IAMs_20	IAMs_20	16 08 28.4	
	comp=Z,6µm,18.0s						
BBSP	Saint Philip	34.29	20	eP	P	15 52 16.9	-0.1
BBGH	Gun Hill	34.29	20	eP	P	15 52 16.0	-1.0
BBGH	Gun Hill	34.29	20	IAMs_20	IAMs_20	16 06 20.2	
	comp=Z,8µm,22.0s						
ACON	Acoyapa	34.40	334	IAMs_20	IAMs_20	16 08 09.0	
	comp=Z,6µm,20.0s						
MCLT	Moule a Chique	34.42	17	eP	P	15 52 15.8	-2.3
MCLT	Moule a Chique	34.42	17	P	P	15 52 17.1	-1.0
SLB	Belfond	34.51	17	eP	P	15 52 18.1	-0.8
SLBI	Saint Lucia, B	34.71	17	eP	P	15 52 18.8	-1.8
NBLI	Livramento-PB	34.92	74	eP	P	15 52 22.0	-0.6
USHA	Ushuaia	35.27	178	P	P	15 52 25.8	+0.8
	comp=Z,12nm,0.8s,baz=2.2,slow=9.0,SNR=2.2						
FDF	Fort de France	35.34	16	eP	P	15 52 22.8	-3.3
FDF	Fort de France	35.34	16	P	P	15 52 24.3	-1.8
FDF				pmax	pmax		
	comp=Z,375nm,1.5s						
FDF				MLR	MLR		
	comp=Z,11µm,18.0s						
FDF	Fort de France	35.34	16	P	P	15 52 24.3	-1.8
DWS	Wesley	36.10	16	eP	P	15 52 32.1	-0.5
RCBR	Riachuelo	36.50	73	P	P	15 52 35.6	-0.6
RCBR				pmax	pmax		
	comp=Z,239nm,1.7s						
RCBR				MLR	MLR		
	comp=Z,13µm,19.0s						
RCBR	Riachuelo	36.50	73	P	P	15 52 35.6	-0.6
RCBR	Riachuelo	36.50	73	eP	P	15 52 36.3	+0.2
ICMP	Isla Caja de M	37.43	7	P	P	15 52 42.1	-1.7
MLPR	Magueyes Islan	37.46	6	P	P	15 52 42.9	-1.2
SKI	Saint Kitts	37.48	13	P	P	15 52 42.9	-1.4
SKI	Saint Kitts	37.48	13	P	P	15 52 42.9	-1.4
CRPR	Cabo Rojo, PR	37.49	6	P	P	15 52 42.9	-1.4
CDVI	St. Croix	37.53	9	P	P	15 52 43.5	-1.1
CDVI				IAmb	IAmb	15 53 00.8	
	comp=Z,141nm,0.9s						
OBIP	Obispado Ponce	37.58	6	P	P	15 52 42.6	-2.5
SEUS	St. Eustatius	37.59	12	eP	P	15 52 40.7	-4.5
SEUS	St. Eustatius	37.59	12	P	P	15 52 44.2	-1.0
SEUS				IAmb	IAmb	15 52 44.9	
	comp=Z,135nm,0.9s						
PDPR	Patillas Dam,	37.62	7	P	P	15 52 43.5	-1.9
SABA	Saba	37.66	12	eP	P	15 52 38.1	-7.7
SABA	Saba	37.66	12	P	P	15 52 43.8	-2.1
SABA				IAmb	IAmb	15 52 54.6	
	comp=Z,76nm,0.9s						
MPR	Mayaguez	37.69	6	P	P	15 52 44.7	-1.3
SJG	San Juan	37.69	7	P	P	15 52 43.7	-2.4
SJG				pmax	pmax		
	comp=Z,51nm,0.8s						
SJG				MLR	MLR		
	comp=Z,5µm,20.0s						
SJG	San Juan	37.69	7	P	P	15 52 43.7	-2.4
SJG				IAmb	IAmb	15 52 54.1	
	comp=Z,51nm,0.8s						
SJG	San Juan	37.69	7	IAMs_20	IAMs_20	16 09 24.3	
	comp=Z,5µm,20.0s						
BANI	BANI	37.71	1	P	P	15 52 45.6	-0.7
MTP	Monte Pirata	37.75	8	P	P	15 52 44.2	-2.3
MTP				IAmb	IAmb	15 52 58.3	
	comp=Z,64nm,0.8s						
SDD	Santo Domingo	37.78	1	P	P	15 52 45.1	-1.7
AOPR	Arecibo Observ	37.86	6	P	P	15 52 45.4	-2.1
AOPR				IAmb	IAmb	15 53 13.1	
	comp=Z,65nm,0.7s						
GCPR	Guaynabo City	37.90	7	P	P	15 52 45.9	-1.9
PCDR	Punta Cana, DR	37.90	4	P	P	15 52 46.2	-1.5
CUPR	Culebra, Puert	38.00	8	P	P	15 52 46.3	-2.3
ANWB	Willy Bob	38.01	14	eP	P	15 52 47.0	-1.7
ANWB	Willy Bob	38.01	14	P	P	15 52 44.9	-3.8
ANWB				IAMs_20	IAMs_20	16 09 22.4	
	comp=Z,7µm,20.0s						
EMPR	Esperanza - Ma	38.01	6	P	P	15 52 46.9	-1.8
STVI	Saint Thomas	38.09	9	P	P	15 52 47.9	-1.5
SMRT	St. Maarten	38.11	12	P	P	15 52 46.5	-3.1
DR12	Loma Pena Alta	38.12	2	P	P	15 52 47.8	-2.0
MTDJ	Mount Denham	38.13	349	P	P	15 52 48.3	-1.6
MTDJ				IAmb	IAmb	15 53 10.4	
	comp=Z,96nm,1.1s						
SDDR	Presa de Saban	38.30	359	IAMs_20	IAMs_20	16 09 38.6	
	comp=Z,4µm,22.0s						
GTBY	Guantanamo Bay	39.47	353	P	P	15 53 00.6	-0.4
GTBY				IAmb	IAmb	15 53 02.4	
	comp=Z,115nm,1.4s						
FSCY	Frank Sound, G	39.96	345	P	P	15 53 03.6	-1.5
GRTK	Grand Turk	40.81	359	P	P	15 53 10.9	-1.2
GRTK				IAMs_20	IAMs_20	16 11 16.2	
	comp=Z,5µm,22.0s						
CCIG	Comitan	41.37	328	P	P	15 53 15.9	-1.1
CCIG				IAMs_20	IAMs_20	16 08 39.2	
	comp=Z,5µm,19.0s						
TEIG	Tepich	43.11	336	P	P	15 53 30.9	-0.1
TEIG	Tepich	43.11	336	IAMs_20	IAMs_20	16 10 51.8	
	comp=Z,4µm,21.0s						
HOPE	Hope Point	43.40	151	P	P	15 53 33.0	+0.1
HOPE				pmax	pmax		
	comp=Z,164nm,1.4s						
HOPE	Hope Point	43.40	151	P	P	15 53 33.0	+0.1
HOPE				IAmb	IAmb	15 54 20.8	
	comp=Z,164nm,1.4s						
PMSA	Palmer Station	45.42	176	P	P	15 53 50.2	+1.3
	comp=Z,34nm,1.0s,baz=354,slow=7.6,SNR=4.0						
PMSA	Palmer Station	45.42	176	P	P	15 53 48.6	-0.3
PMSA	Palmer Station	45.42	176	eP	P	15 53 47.4	-1.5
TLIG	Tlapa	45.92	322	IAMs_20	IAMs_20	16 09 39.2	
	comp=Z,4µm,22.0s						
061Z	Ochoppi	46.22	347	IAMs_20	IAMs_20	16 17 04.8	
	comp=Z,2µm,18.0s						
UNM	Universidad Na	47.66	322	IAMs_20	IAMs_20	16 12 15.5	
	comp=Z,3µm,20.0s						
DWPF	Disney Wildern	48.50	347	P	P	15 54 13.9	+0.5
	baz=167						
656A	Willston	49.95	346	P	P	15 54 24.9	+0.4
656A				IAmb	IAmb	15 55 35.1	
	comp=Z,102nm,1.1s						
456A	Hilliard	51.15	347	IAMs_20	IAMs_20	16 19 56.0	
	comp=Z,3µm,20.0s						
553A	Crawfordville	51.18	345	P	P	15 54 34.6	+0.8
553A				IAMs_20	IAMs_20	16 16 16.2	
	comp=Z,3µm,21.0s						
BBSR	BB Station	51.95	6	P	P	15 54 39.1	-0.4
BBSR				IAmb	IAmb	15 55 49.2	
	comp=Z,143nm,1.4s						
TIGA	Tifton	52.18	346	P	P	15 54 40.2	-1.0
TIGA				IAmb	IAmb	15 55 17.4	
	comp=Z,57nm,0.8s						

TIGA				IAMs_20	IAMs_20	16 17 30.6	
	comp=Z,3µm,20.0s						
TIGA	Tifton	52.18	346	P	P	15 54 41.2	0.0
	baz=165						
ZAIG	Zacatecas	52.31	322	P	P	15 54 41.2	-1.5
ZAIG				IAMs_20	IAMs_20	16 14 28.6	
	comp=Z,3µm,20.0s						
255A	Hazlehurst	52.41	347	P	P	15 54 43.1	+0.3
352A	Blakely	52.54	345	P	P	15 54 43.4	-0.5
352A				IAMs_20	IAMs_20	16 18 39.0	
	comp=Z,2µm,21.0s						
158A	Hollywood	52.77	350	P	P	15 54 46.5	+1.0
	baz=169						
157A	Early Branch	52.85	349	P	P	15 54 46.8	+0.6
	baz=168						
545A	Edgard	52.86	338	IAMs_20	IAMs_20	16 19 37.1	
	comp=Z,3µm,20.0s						
Z59A	Georgetown, SC	53.13	351	P	P	15 54 49.4	+1.2
	baz=170						
NHSC	New Hope	53.13	350	P	P	15 54 47.9	-0.3
NHSC				IAMs_20	IAMs_20	16 19 14.1	
	comp=Z,3µm,21.0s						
NHSC	New Hope	53.13	350	P	P	15 54 49.1	+0.9
	baz=169						
154A	Montrose	53.20	347	IAMs_20	IAMs_20	16 17 55.8	
	comp=Z,2µm,20.0s						
Z58A	St. Stephen	53.30	350	P	P	15 54 50.0	+0.5
	baz=170						
250A	Grady	53.36	344	P	P	15 54 49.2	-0.7
Z57A	Bowman	53.41	350	P	P	15 54 50.4	+0.1
	baz=168						
Z56A	Williston	53.55	349	P	P	15 54 51.8	+0.5
	baz=168						
152A	Waverly Hall	53.62	345	P	P	15 54 51.2	-0.7
152A				IAMs_20	IAMs_20	16 18 03.8	
	comp=Z,4µm,22.0s						
KVTX	Kingsville	53.71	330	P	P	15 54 52.6	0.0
Y60A	Bolivia	53.73	352	IAMs_20	IAMs_20	16 19 00.1	
	comp=Z,3µm,21.0s						
Y60A	Bolivia	53.73	352	P	P	15 54 53.0	+0.3
	baz=171						
346A	Big Creek Wild	53.75	340	P	P	15 54 51.5	-1.3
346A				IAmb	IAmb	15 55 19.4	
	comp=Z,111nm,1.4s						
Y59A	Loris	53.80	352	IAMs_20	IAMs_20	16 19 13.0	
	comp=Z,4µm,21.0s						
Y59A	Loris	53.80	352	P	P	15 54 53.7	+0.6
	baz=171						
Y58A	Scranton	53.84	351	P	P	15 54 53.7	+0.3
	baz=170						
Y56A	Pelion	53.99	349	P	P	15 54 54.5	-0.1
	baz=168						
GOGA	Godfrey	54.05	347	P	P	15 54 54.5	-0.5
GOGA				pmax	pmax		
	comp=Z,26nm,1.0s						
GOGA				MLR	MLR		
	comp=Z,2µm,20.0s						
GOGA	Godfrey	54.05	347	P	P	15 54 54.5	-0.5
GOGA	Godfrey	54.05	347	IAMs_20	IAMs_20	16 18 30.7	
	comp=Z,2µm,20.0s						
GOGA	Godfrey	54.05	347	P	P	15 54 55.0	+0.1
	baz=165						
Y57A	Sumter	54.06	350	IAMs_20	IAMs_20	16 19 40.6	
	comp=Z,3µm,21.0s						
Y57A	Sumter	54.06	350	P	P	15 54 55.8	+0.7
	baz=169						
344A	Westbrook Farm	54.23	339	P	P	15 54 56.1	-0.1
344A				IAmb	IAmb	15 55 23.3	
	comp=Z,62nm,1.0s						
Y55A	Saluda	54.24	349	P	P	15 54 56.7	+0.3
	baz=167						
X60A	Albert Glenn T	54.27	353	P	P	15 54 57.0	+0.5
	baz=172						
X59A	McDuffie Farm,	54.34	352	P	P	15 54 57.5	+0.5
	baz=171						
Z51A	Franklin	54.35	345	P	P	15 54 56.3	-0.9
Z51A				IAMs_20	IAMs_20	16 18 26.1	
	comp=Z,4µm,22.0s						
X58A	Rowland	54.42	351	IAMs_20	IAMs_20	16 19 32.4	
	comp=Z,3µm,22.0s						
X58A	Rowland	54.42	351	P	P	15 54 58.4	+0.8
	baz=170						
X57A	Johnson Farm,	54.45	350	P	P	15 54 58.4	+0.5
	baz=169						
JSC	Jenkinsville	54.47	349	P	P	15 54 58.1	+0.1
JSC				pmax	pmax		
	comp=Z,15nm,1.1s						
JSC				MLR	MLR		
	comp=Z,2µm,21.0s						
JSC	Jenkinsville	54.47	349	P	P	15 54 58.1	+0.1
Z50A	Ashland	54.48	344	P	P	15 54 57.8	-0.4
Z50A				IAmb	IAmb	15 55 12.6	
	comp=Z,39nm,0.9s						
Z50A	Ashland	54.48	344	P	P	15 54 57.3	-0.8
	baz=162,SNR=9.0						
LRAL	Lakeview Retre	54.55	343	P	P	15 54 58.2	-0.4
LRAL	Lakeview Retre	54.55	343	P	P	15 54 58.3	-0.4
	baz=161						
HODGE	Hodges	54.60	348	P	P	15 54 58.3	-0.6
HODGE				IAMs_20	IAMs_20	16 22 41.8	
	comp=Z,3µm,18.0s						
Y52A	Lilburn	54.62	346	P	P	15 54 58.6	-0.5
Y52A				IAMs_20	IAMs_20	16 18 26.2	
	comp=Z,3µm,21.0s						
Y52A	Lilburn	54.62	346	P	P	15 54 58.7	-0.4
	baz=165						
X56A	White Oak	54.63	350	P	P	15 54 58.9	-0.3
	baz=168						
BIRD	Birdtown, Kers	54.69	350	P	P	15 54 59.2	-0.3
BIRD				IAmb	IAmb	15 55 14.6	
	comp=Z,74nm,1.1s						
W60A	Pink Hill	54.71	353	P	P	15 54 59.9	+0.3
	baz=172						
X55A	Gracelyn & Ava	54.72	349	P	P	15 54 59.9	+0.1
	baz=168,SNR=6.7						
342A	Flagon Creek P	54.72	337	P	P	15 54 59.2	-0.7
342A				IAmb	IAmb	15 55 24.4	
	comp=Z,76nm,0.9s						
342A				IAMs_20	IAMs_20	16 19 28.3	
	comp=Z,2µm,22.0s						
W61A	Ground Anchor	54.75	354	P	P	15 55 00.3	+0.3
	baz=173						
146A	Union	54.78	341	P	P	15 55 00.5	+0.2
146A				IAmb	IAmb	15 55 01.7	
	comp=Z,95nm,1.2s						
HKT	Hockley	54.84	333	P	P	15 55 00.7	0.0
HKT				pmax	pmax		
	comp=Z,64nm,1.4s						
HKT				MLR	MLR		
	comp=Z,1µm,21.0s						
HKT	Hockley	54.84	333	P	P	15 55 00.7	0.0
HKT				IAmb	IAmb	15 55 03.2	
	comp=Z,64nm,1.4s						
VBMS	Vicksburg	54.86	339	P	P	15 55 00.7	-0.2
	baz=157						
W58A	Raeford	54.87	351	P	P	15 55 01.4	+0.6
	baz=170,SNR=7.9						
W59A	Clinton	54.91	352	P	P	15 55 01.5	+0.4
	baz=171						
CNNC	Cliffs of the	54.91	353	P	P	15 55 01.8	+0.6
	baz=172						
X54A	Belton	54.93	348	P	P	15 55 01.6	+0.2
	baz=167						
Z47A	Carrollton	55.01	342	P	P	15 55 00.7	-1.3
V62A	Hyde County Ai	55.03	355	P	P	15 55 02.2	+0.2
	baz=174						
X53A	Estanollee	55.07	347	P	P	15 55 03.4	+1.0
	baz=166						
833A	Chaparral WMA,	55.08	329	P	P	15 55 02.9	+0.3
	baz=147						
PAULI	Pauline	55.09	349	IAMs_20	IAMs_20	16 23 02.2	
	comp=Z,3µm,18.0s						
W57A	Gilead	55.11	351	P	P	15 55 02.0	-0.6
W57A				IAmb	IAmb	15 55 17.4	
	comp=Z,44nm,1.1s						
W57A				IAMs_20	IAMs_20	16 20 26.4	
	comp=Z,3µm,21.0s						
W57A	Gilead	55.11	351	P	P	15 55 03.2	+0.5
	baz=170						
Y49A	Blount Mountai	55.18	344	P	P	15 55 01.3	-1.9
Y49A				IAMs_20	IAMs_20	16 20 42.9	
	comp=Z,2µm,20.0s						
W56A	Indian Trail	55.18	350	P	P	15 55 03.3	+0.2
	baz=169						
KMSC	Kings Mountain	55.32	349	IAMs_20	IAMs_20	16 20 59.9	
	comp=Z,3µm,20.0s						
KMSC	Kings Mountain	55.32	349	P	P	15 55 04.5	+0.4
	baz=168						
V61A	Roper	55.32	354	P	P	15 55 02.6	-1.5
V61A	Roper	55.32	354	P	P	15 55 04.6	+0.5
	baz=173						
V60A	Jim Taylor Roa	55.36	354	IAMs_20	IAMs_20	16 19 55.2	
	comp=Z,2µm,22.0s						
V60A	Jim Taylor Roa	55.36	354	P	P	15 55 03.9	-0.5
	baz=173						
W54A	Cherokee Point	55.41	349	P	P	15 55 04.4	-0.5
	baz=167						
BG3	Lake Jocassee	55.47	348	IAMs_20	IAMs_20	16 23 19.8	
	comp=Z,2µm,18.0s						
V59A	Middlesex	55.47	353	P	P	15 55 05.7	+0.5
	baz=172,SNR=7.3						
X51A	Calhoun	55.47	346	P	P	15 55 04.5	-0.8
X51A				IAMs_20	IAMs_20	16 18 52.8	
	comp=Z,2µm,21.0s						
X51A	Calhoun	55.47	346	P	P	15 55 04.6	-0.6
	baz=164						
V58A	Windy Hill, Pi	55.61	352	P	P	15 55 06.3	+0.1
V58A				IAmb	IAmb	15 55 08.9	
	comp=Z,108nm,1.6s						
V58A				IAMs_20	IAMs_20	16 20 17.5	
	comp=Z,3µm,21.0s						
V58A	Windy Hill, Pi	55.61	352	P	P	15 55 06.1	-0.1
	baz=171,SNR=8.7						
FPAL	Fort Paine	55.62	345	P	P	15 55 05.5	-1.0
FPAL				IAMs_20	IAMs_20	16 19 14.8	
	comp=Z,3µm,22.0s						
W52A	Murphy	55.77	347	P	P	15 55 06.5	-0.9
W52A				IAmb	IAmb	15 55 08.8	
	comp=Z,69nm,1.5s						
W52A				IAMs_20	IAMs_20	16 19 23.8	
	comp=Z,2µm,20.0s						
V57A	Coltrane Farms	55.80	351	P	P	15 55 07.7	+0.1
	baz=170,SNR=6.9						
V56A	Mocksville	55.83	350	P	P	15 55 08.4	+0.6
	baz=169,SNR=6.1						
U61A	Possum Corner	55.84	354	P	P	15 55 07.5	-0.4
	baz=174						
X48A	Hartselle	55.91	344	P	P	15 55 07.2	-1.1
X48A				IAmb	IAmb	15 55 09.3	
	comp=Z,94nm,1.6s						
NATX	Nacogdoches	55.95	335	P	P	15 55 09.4	+0.7
NATX				IAmb	IAmb	15 55 11.4	
	comp=Z,109nm,1.2s						
NATX	Nacogdoches	55.95	335	P	P	15 55 08.7	0.0
	baz=153						
V55A	Taylorsville	55.99	350	P	P	15 55 07.4	-1.6
V55A				IAmb	IAmb	15 55 42.1	
	comp=Z,46nm,0.9s						
V55A	Taylorsville	55.99	350	P	P	15 55 07.7	-1.2
	baz=168,SNR=5.6						
U59A	Littleton	56.00	353	P	P	15 55 09.2	+0.2
U59A				IAmb	IAmb	15 55 11.0	
	comp=Z,47nm,1.2s						
U59A				IAMs_20	IAMs_20	16 20 26.1	
	comp=Z,2µm,21.0s						
U59A	Littleton	56.00	353	P	P	15 55 09.4	+0.4
	baz=172,SNR=5.9						
V54A	Nebo	56.04	349	P	P	15 55 09.3	-0.1
	baz=167						
U60A	Pendleton	56.05	354	P	P	15 55 09.2	-0.2
	baz=173						
Y45A	Yeager Farm, C	56.07	341	P	P	15 55 09.0	-0.5
Y45A				IAmb	IAmb	15 55 51.1	
	comp=Z,78nm,1.3s						
V53A	Saluda	56.10	348	P	P	15 55 09.4	-0.4
U58A	Oxford	56.13	352	P	P	15 55 10.2	+0.2
	baz=171,SNR=6.1						
W50A	Signal Mountai	56.18	346	P	P	15 55 09.4	-1.0
W50A				IAMs_20	IAMs_20	16 19 24.6	
	comp=Z,3µm,21.0s						
CPCT	Cooper Cave	56.24	346	P	P	15 55 10.4	-0.4
CPCT				IAMs_20	IAMs_20	16 19 27.2	
	comp=Z,3µm,22.0s						
U57A	Blanch	56.27	352	P	P	15 55 11.5	+0.6
	baz=170,SNR=8.3						
435B	Jarrell	56.32	332	P	P	15 55 11.9	+0.4
435B				IAmb	IAmb	15 55 13.2	
	comp=Z,122nm,1.8s						
435B	Jarrell	56.32	332	P	P	15 55 11.3	-0.1
	baz=149						
U56A	King	56.34	351	P	P	15 55 12.1	+0.6
U56A				IAmb	IAmb	15 55 27.0	
	comp=Z,76nm,1.2s						
U56A				IAMs_20	IAMs_20	16 21 12.7	
	comp=Z,3µm,21.0s						
U56A	King	56.34	351	P	P	15 55 12.1	+0.6
	baz=169						
SWET	Sewanee	56.35	345	P	P	15 55 10.8	-0.8
SWET				IAMs_20	IAMs_20	16 20 22.9	
	comp=Z,3µm,22.0s						
V52A	Sevierville	56.42	347	P	P	15 55 11.6	-0.5
V52A				IAmb	IAmb	15 55 13.1	
	comp=Z,120nm,1.4s						
V52A				IAMs_20	IAMs_20	16 22 08.5	
	comp=Z,2µm,19.0s						
T59A	Double "B" Far	56.58	353	P	P	15 55 13.1	-0.1
T59A				IAmb	IAmb	15 55 15.1	
	comp=Z,131nm,1.5s						
T59A				IAMs_20	IAMs_20	16 20 41.7	
	comp=Z,3µm,21.0s						
T59A	Double "B" Far	56.58	353	P	P	15 55 13.6	+0.4
	baz=172,SNR=9.8						
Z41A	Richland Creek	56.59	338	P	P	15 55 13.4	+0.1
	baz=155						
U55A	TA2, Sparta	56.60	350	P	P	15 55 13.7	+0.3
	baz=168						
237A	Washetta, Mont	56.62	334	P	P	15 55 14.4	+0.9
OXF	Oxford	56.63	342	P	P	15 55 12.7	-0.8
OXF				pmax	pmax		
	comp=Z,58nm,1.1s						
OXF				MLR	MLR		
	comp=Z,1µm,19.0s						
OXF	Oxford	56.63	342	P	P	15 55 12.7	-0.8
OXF				IAmb	IAmb	15 55 26.9	
	comp=Z,58nm,1.1s						
OXF	Oxford	56.63	342	P	P	15 55 12.4	-1.1
	baz=159						
T60A	Surry	56.67	354	P	P	15 55 13.6	-0.1
	baz=173						
T58A	Grand View Acr	56.67	353	P	P	15 55 14.4	+0.6
	baz=171,SNR=12						
PLAL	Pickwick Lake	56.68	343	P	P	15 55 12.7	-1.3
U54A	Nelsons Funny	56.74	349	IAMs_20	IAMs_20	16 22 02.7	
	comp=Z,2µm,20.0s						
U54A	Nelsons Funny	56.74	349	P	P	15 55 14.5	+0.1
	baz=168						
T57A	Hurt	56.82	352	P	P	15 55 15.2	+0.4
T57A				IAmb	IAmb	15 55 18.4	
	comp=Z,77nm,1.2s						
T57A				IAMs_20	IAMs_20	16 21 02.3	
	comp=Z,3µm,21.0s						
T57A	Hurt	56.82	352	P	P	15 55 15.1	+0.2
	baz=170,SNR=9.8						
T56A	Rocky Mt	56.95	351	P	P	15 55 16.5	+0.6
	baz=170,SNR=7.1						
V48A	Smith Brothers	57.07	344	P	P	15 55 15.6	-1.0
V48A				IAMs_20	IAMs_20	16 20 20.9	
	comp=Z,3µm,22.0s						
JCT	Junction City	57.07	330	P	P	15 55 16.6	-0.2
JCT				pmax	pmax		
	comp=Z,24nm,1.0s						
JCT				MLR	MLR		
	comp=Z,900nm,22.0s						
JCT	Junction City	57.07	330	P	P	15 55 16.6	-0.2
JCT	Junction City	57.07	330	P	P	15 55 16.4	-0.5
	baz=147						
X43A	Marvell	57.09	340	P	P	15 55 16.8	0.0
	baz=157						
TZTN	Tazewell	57.09	348	P	P	15 55 15.3	-1.5
TZTN				IAmb	IAmb	15 55 31.9	
	comp=Z,57nm,1.3s						
TZTN				IAMs_20	IAMs_20	16 24 11.8	
	comp=Z,2µm,18.0s						
TZTN	Tazewell	57.09	348	P	P	15 55 16.2	-0.6
	baz=166						
T55A	Pulaski	57.16	350	P	P	15 55 17.1	-0.2
	baz=169,SNR=6.0						
BLA	Blacksburg	57.19	351	P	P	15 55 16.8	-0.8
BLA				pmax	pmax		
	comp=Z,106nm,1.5s						
BLA				MLR	MLR		
	comp=Z,3µm,20.0s						
BLA	Blacksburg	57.19	351	P	P	15 55 16.8	-0.8
BLA				IAmb	IAmb	15 55 47.0	
	comp=Z,106nm,1.4s						
BLA				IAMs_20	IAMs_20	16 21 38.6	
	comp=Z,3µm,20.0s						
BLA	Blacksburg	57.19	351	P	P	15 55 18.0	+0.5
	baz=169						
S60A	Water View	57.22	354	P	P	15 55 17.7	+0.1
	baz=174						
T54A	Tazewell	57.23	350	P	P	15 55 17.7	-0.2
	baz=168						
S58A	Poland Farm, P	57.27	353	IAMs_20	IAMs_20	16 22 54.9	
	comp=Z,2µm,20.0s						
S58A	Poland Farm, P	57.27	353	P	P	15 55 18.4	+0.4
	baz=172						
CLTN	Cedars of Leba	57.28	345	P	P	15 55 17.1	-1.0
CLTN				IAMs_20	IAMs_20	16 23 34.5	
	comp=Z,2µm,19.0s						
WHTX	Lake Whitney,	57.30	333	P	P	15 55 17.2	-1.1
WHTX				IAmb	IAmb	15 55 20.3	
	comp=Z,113nm,1.4s						
WHTX	Lake Whitney,	57.30	333	P	P	15 55 18.2	-0.1
	baz=150,SNR=8.1						
HPIG		57.30	323	IAMs_20	IAMs_20	16 19 06.9	
	comp=Z,2µm,20.0s						
T53A	Wise	57.32	349	P	P	15 55 18.2	-0.3
	baz=167						
S59A	Mechanicsville	57.34	354	P	P	15 55 18.3	-0.2
	baz=173						
S56A	Natural Bridge	57.53	352	P	P	15 55 19.8	0.0
	baz=170						
S57A	Dark Hollow, R	57.53	352	P	P	15 55 20.2	+0.3
	baz=171,SNR=7.4						
T52A	Hallie	57.53	348	P	P	15 55 19.1	-0.8
T52A				IAMs_20	IAMs_20	16 21 15.3	
	comp=Z,4µm,22.0s						
T52A	Hallie	57.53	348	P	P	15 55 19.4	-0.5
	baz=166						
U49A	Red Boiling Sp	57.55	346	P	P	15 55 19.4	-0.6
U49A				IAmb	IAmb	15 55 20.9	
	comp=Z,105nm,1.6s						
U49A				IAMs_20	IAMs_20	16 20 15.7	
	comp=Z,3µm,21.0s						
T51A	Gray	57.58	347	P	P	15 55 20.0	-0.2
	baz=165,SNR=6.7						
R58B	Mineral	57.60	353	IAMs_20	IAMs_20	16 23 15.1	
	comp=Z,2µm,20.0s						
R58B	Mineral	57.60	353	P	P	15 55 21.3	+1.0
	baz=172,SNR=6.2						
SACV	Santiago Islan	57.66	57	IAMs_20	IAMs_20	16 17 56.9	
	comp=Z,2µm,19.0s						
WVT	Waverly	57.70	344	P	P	15 55 19.6	-1.5
WVT				pmax	pmax		
	comp=Z,123nm,1.7s						
WVT				MLR	MLR		
	comp=Z,2µm,21.0s						
WVT	Waverly	57.70	344	P	P	15 55 19.6	-1.5
WVT				IAmb	IAmb	15 55 21.2	
	comp=Z,123nm,1.6s						
WVT	Waverly	57.70	344	P	P	15 55 20.1	-0.9
	baz=161						
X40A	Basin Creek Fa	57.71	338	P	P	15 55 20.8	-0.4
	baz=155						
R61A	Willards	57.73	356	P	P	15 55 20.9	-0.3
	baz=175						
S55A	Lewisburg	57.75	351	P	P	15 55 22.3	+0.8
	baz=169,SNR=7.4						
R59A	King George, V	57.76	354	P	P	15 55 21.3	-0.1
	baz=173						
R60A	Leonardtown, M	57.77	355	P	P	15 55 22.1	+0.5
	baz=174						
CBN	Corbin Frederi	57.79	354	P	P	15 55 21.9	+0.3
	baz=173						
UALR	University of	57.80	339	P	P	15 55 21.2	-0.6
UALR				IAmb	IAmb	15 55 23.3	
	comp=Z,83nm,1.5s						
T50A	Nancy	57.82	347	P	P	15 55 21.2	-0.7
	baz=164,SNR=8.4						
S54A	Dingess, Beckl	57.91	350	P	P	15 55 20.6	-1.9
S54A				IAmb	IAmb	15 55 55.4	
	comp=Z,39nm,0.8s						
S54A	Dingess, Beckl	57.91	350	P	P	15 55 22.7	+0.1
	baz=168						
S53A	Williamson	57.93	349	P	P	15 55 22.2	-0.6
	baz=167						
R58A	Rapidan	57.95	353	P	P	15 55 23.4	+0.6
	baz=172						
R57A	Stanardsville	58.00	353	P	P	15 55 24.2	+1.1
	baz=172,SNR=6.9						
MIAR	Mount Ida	58.02	338	P	P	15 55 23.5	0.0
MIAR				pmax	pmax		
	comp=Z,61nm,1.1s						
MIAR				MLR	MLR		
	comp=Z,800nm,20.0s						
MIAR	Mount Ida	58.02	338	P	P	15 55 23.5	0.0
MIAR				IAmb	IAmb	15 55 45.7	
	comp=Z,61nm,1.1s						
MIAR	Mount Ida	58.02	338	P	P	15 55 23.4	0.0
	baz=155,SNR=17						
T49A	Edmonton	58.06	346	P	P	15 55 22.9	-0.7
T49A				IAMs_20	IAMs_20	16 20 32.2	
	comp=Z,3µm,22.0s						
T49A	Edmonton	58.06	346	P	P	15 55 22.9	-0.7
	baz=164,SNR=21						
TXAR	Lajitas Array	58.07	326	P	P	15 55 24.9	+0.9
	comp=Z,2.0nm,0.5s,baz=145,slow=8.9,SNR=33						
TXAR	Lajitas Array	58.07	326	P	P	15 55 23.1	-0.9
TX31	Lajitas Ar. Si	58.07	326	P	P	15 55 23.3	-0.7
TX32	Lajitas Array	58.07	326	P	P	15 55 24.0	0.0
S52A	Salyersville	58.10	348	P	P	15 55 23.2	-0.7
	baz=166						
W41B	Gary Mavity, V	58.13	339	P	P	15 55 23.7	-0.4
W41B	Gary Mavity, V	58.13	339	P	P	15 55 24.0	-0.2
	baz=156,SNR=8.8						
S51A	Beattyville	58.16	348	P	P	15 55 23.4	-0.9
S51A				IAMs_20	IAMs_20	16 22 54.1	
	comp=Z,2µm,20.0s						
S51A	Beattyville	58.16	348	P	P	15 55 23.5	-0.8
	baz=166						
UTMT	University of	58.18	343	P	P	15 55 24.4	0.0
R55A	Marlinton	58.20	351	P	P	15 55 24.1	-0.5
R55A				IAmb	IAmb	15 55 55.2	
	comp=Z,75nm,1.2s						
R55A				IAMs_20	IAMs_20	16 21 46.3	
	comp=Z,3µm,22.0s						
R55A	Marlinton	58.20	351	P	P	15 55 25.3	+0.7
	baz=170						
R56A	Bull Pasture M	58.22	352	P	P	15 55 25.5	+0.7
	baz=170						
R54A	Victor	58.23	350	P	P	15 55 25.0	+0.2
	baz=169,SNR=6.4						
WHAR	Wooly Hollow	58.26	339	P	P	15 55 24.7	-0.3
T47A	Sharon Grove	58.32	345	P	P	15 55 24.5	-0.9
T47A				IAmb	IAmb	15 56 04.7	
	comp=Z,77nm,1.0s						
T47A				IAMs_20	IAMs_20	16 24 08.1	
	comp=Z,2µm,19.0s						
S50A	Richmond	58.36	347	P	P	15 55 25.2	-0.5
	baz=165,SNR=9.9						
Z35A	Perchaven, San	58.37	334	P	P	15 55 25.5	-0.4
Q59A	Harwood	58.37	355	P	P	15 55 26.3	+0.6
	baz=174						
Q60A	Greensboro	58.44	355	IAMs_20	IAMs_20	16 24 05.4	
	comp=Z,2µm,19.0s						
Q60A	Greensboro	58.44	355	P	P	15 55 26.5	+0.3
	baz=174						
HICK	Hickman	58.47	343	P	P	15 55 26.5	0.0
R53A	Hurricane	58.53	350	P	P	15 55 26.9	+0.1
	baz=168						
Q58A	Fox Den Farm,	58.55	354	P	P	15 55 27.7	+0.7
	baz=172,SNR=6.3						
LCAR	Lake Charles	58.60	341	P	P	15 55 26.4	-1.0
LCAR				IAmb	IAmb	15 55 40.6	
	comp=Z,44nm,1.2s						
S49A	Springfield	58.65	347	P	P	15 55 27.0	-0.7
	baz=164,SNR=7.5						
R52A	Catlettsburg	58.66	349	P	P	15 55 27.1	-0.6
	baz=167						
W39A	Magazine	58.68	338	P	P	15 55 28.3	+0.3
W39A				IAmb	IAmb	15 55 30.2	
	comp=Z,107nm,1.5s						
W39A	Magazine	58.68	338	P	P	15 55 28.7	+0.7
	baz=155,SNR=12						
Q57A	Strasburg	58.72	353	P	P	15 55 28.9	+0.7
	baz=172,SNR=10						
X37A	Clayton	58.73	336	P	P	15 55 28.5	+0.2
X37A				IAMs_20	IAMs_20	16 22 04.4	
	comp=Z,2µm,22.0s						
PARMO	Parma	58.73	342	P	P	15 55 27.9	-0.3

FCAR	Ozark Folk Cen	58.75	340	P	P	15 55 27.4	-1.0
T45A	Paducah	58.75	343	P	P	15 55 27.0	-1.5
ABTX	Abilene, Hawle	58.80	331	P	P	15 55 28.8	0.0
ABTX	Abilene, Hawle	58.80	331	P	P	15 55 28.9	0.0
	baz=148,SNR=9.8						
R51A	Hillsboro	58.80	348	P	P	15 55 28.2	-0.5
	baz=166,SNR=6.8						
Q56A	Snyder Ridge,	58.82	352	P	P	15 55 28.3	-0.6
Q56A				IAmb	IAmb	15 55 44.5	
	comp=Z,53nm,0.9s						
Q56A	Snyder Ridge,	58.82	352	P	P	15 55 29.8	+0.9
	baz=171,SNR=8.5						
Q55A	Buckhannon	58.89	351	P	P	15 55 30.3	+0.8
	baz=170						
R50A	Paris	58.93	348	P	P	15 55 28.5	-1.1
R50A				IAmb	IAmb	15 55 30.6	
	comp=Z,52nm,1.4s						
R50A				IAMs_20	IAMs_20	16 21 03.4	
	comp=Z,2µm,22.0s						
R50A	Paris	58.93	348	P	P	15 55 29.0	-0.7
	baz=165,SNR=5.9						
SDMD	Soldier's Deli	58.93	354	P	P	15 55 29.2	-0.4
Q53A	Leroy	58.98	350	P	P	15 55 30.3	+0.3
	baz=168,SNR=8.2						
Q54A	Coxs Mills	58.99	351	P	P	15 55 29.7	-0.4
Q54A				IAmb	IAmb	15 55 31.5	
	comp=Z,92nm,1.6s						
Q54A				IAMs_20	IAMs_20	16 22 22.2	
	comp=Z,4µm,22.0s						
Q54A	Coxs Mills	58.99	351	P	P	15 55 29.9	-0.1
	baz=169,SNR=6.6						
P61A	Hammonton	59.03	356	P	P	15 55 30.6	+0.3
	baz=176						
PBMO	Poplar Bluff	59.04	342	P	P	15 55 29.2	-1.2
PBMO				IAmb	IAmb	15 55 46.9	
	comp=Z,38nm,0.7s						
P58A	Pank, Wackersv	59.05	354	P	P	15 55 30.6	+0.2
	baz=173						
P59A	Jarrettsville	59.09	355	P	P	15 55 30.8	+0.1
	baz=174						
R49A	Shelbyville	59.11	347	P	P	15 55 29.6	-1.3
R49A				IAmb	IAmb	15 55 31.6	
	comp=Z,77nm,1.6s						
R49A				IAMs_20	IAMs_20	16 21 18.3	
	comp=Z,3µm,21.0s						
R49A	Shelbyville	59.11	347	P	P	15 55 30.2	-0.7
	baz=164						
P57A	Homestead Farm	59.12	353	P	P	15 55 31.6	+0.7
P57A				IAmb	IAmb	15 55 33.8	
	comp=Z,96nm,1.5s						
P57A				IAMs_20	IAMs_20	16 21 57.7	
	comp=Z,2µm,21.0s						
P57A	Homestead Farm	59.12	353	P	P	15 55 32.2	+1.3
	baz=172,SNR=6.8						
Q52A	Bidwell	59.20	350	P	P	15 55 31.2	-0.3
	baz=168						
P60A	Greenville	59.23	356	P	P	15 55 31.5	-0.1
P60A				IAMs_20	IAMs_20	16 22 10.3	
	comp=Z,2µm,20.0s						
P60A	Greenville	59.23	356	P	P	15 55 31.6	-0.1
	baz=175						
P56A	Dayton Farm, R	59.23	353	P	P	15 55 32.7	+0.9
	baz=171,SNR=5.6						
WCI	Wyandotte Cave	59.31	346	P	P	15 55 31.1	-1.2
WCI				pmax	pmax		
	comp=Z,33nm,0.9s						
WCI				MLR	MLR		
	comp=Z,3µm,21.0s						
WCI	Wyandotte Cave	59.31	346	P	P	15 55 31.1	-1.2
WCI				IAmb	IAmb	15 56 12.1	
	comp=Z,33nm,0.9s						
WCI	Wyandotte Cave	59.31	346	IAMs_20	IAMs_20	16 21 32.3	
	comp=Z,3µm,21.0s						
WCI	Wyandotte Cave	59.31	346	P	P	15 55 31.3	-1.0
	baz=163						
PSUB	Penn St. - Bra	59.33	356	P	P	15 55 32.3	-0.1
PSUB				IAmb	IAmb	15 55 34.3	
	comp=Z,111nm,1.8s						
P55A	Reedsville	59.36	352	P	P	15 55 33.1	+0.4
	baz=170						
USIN	University of	59.39	344	IAMs_20	IAMs_20	16 24 49.9	
	comp=Z,2µm,19.0s						
Q50A	Georgetown	59.40	348	P	P	15 55 32.0	-0.9
	baz=166						
U40A	Yellville	59.41	339	P	P	15 55 32.0	-1.1
U40A				IAmb	IAmb	15 55 46.6	
	comp=Z,41nm,1.1s						
U40A	Yellville	59.41	339	P	P	15 55 32.8	-0.3
	baz=156,SNR=11						
O61A	Allentown	59.44	357	P	P	15 55 33.1	0.0
	baz=176						
Q51A	Peebles	59.46	349	P	P	15 55 32.1	-1.2
Q51A				IAMs_20	IAMs_20	16 22 36.4	
	comp=Z,3µm,21.0s						
Q51A	Peebles	59.46	349	P	P	15 55 32.3	-1.0
	baz=166						
T42A	Van Buren	59.47	341	P	P	15 55 31.9	-1.5
T42A				IAmb	IAmb	15 55 46.2	
	comp=Z,39nm,1.2s						
MVL	Millersville	59.47	355	P	P	15 55 32.6	-0.7
MVL				IAmb	IAmb	15 55 35.5	
	comp=Z,72nm,1.5s						
MCWV	Mont Chateau	59.51	352	P	P	15 55 32.5	-1.2
MCWV	Mont Chateau	59.51	352	P	P	15 55 34.2	+0.6
	baz=170						
P54A	Burton	59.55	351	P	P	15 55 34.2	+0.3
	baz=170,SNR=10						
S44A	Carbondale	59.55	343	P	P	15 55 33.2	-0.8
SIUC	Southern Illin	59.56	343	P	P	15 55 33.7	-0.3
P53A	Whipple	59.57	350	P	P	15 55 34.2	+0.1
P53A				IAmb	IAmb	15 56 05.2	
	comp=Z,57nm,0.9s						
P53A				IAMs_20	IAMs_20	16 22 52.5	
	comp=Z,3µm,22.0s						
P53A	Whipple	59.57	350	P	P	15 55 33.8	-0.3
	baz=168,SNR=7.0						
O58A	Lewisberry	59.64	354	P	P	15 55 35.3	+0.7
	baz=173						
X34A	Smith Ranch, M	59.71	334	P	P	15 55 34.6	-0.5
X34A				IAmb	IAmb	15 56 15.6	
	comp=Z,42nm,0.9s						
HHAR	Hobbs	59.72	338	P	P	15 55 34.4	-0.8
HHAR				IAmb	IAmb	15 55 36.5	
	comp=Z,36nm,1.0s						
O60A	Telford	59.72	356	P	P	15 55 35.0	0.0
	baz=175						
PAGS	Pennsylvania G	59.73	355	IAMs_20	IAMs_20	16 25 18.0	
	comp=Z,2µm,20.0s						
Q49A	Aurora	59.74	347	P	P	15 55 34.5	-0.8
	baz=165,SNR=5.4						
O59A	Robesonia	59.77	355	P	P	15 55 35.2	-0.3
	baz=174						
O57A	Amberson	59.80	354	P	P	15 55 36.8	+1.2
	baz=173,SNR=8.1						
W35A	Tecumseh	59.80	335	P	P	15 55 35.0	-0.8
P52A	Corning	59.83	350	P	P	15 55 35.3	-0.6
	baz=168						
P51A	Williamsport	59.85	349	P	P	15 55 35.0	-1.0
P51A				IAMs_20	IAMs_20	16 22 48.7	
	comp=Z,2µm,20.0s						
P51A	Williamsport	59.85	349	P	P	15 55 35.2	-0.7
	baz=167						
Q48A	North Vernon	59.85	346	P	P	15 55 35.2	-0.8
	baz=164						
MGMO	Mountain Grove	59.95	340	P	P	15 55 35.9	-0.9
MGMO				IAmb	IAmb	15 55 37.9	
	comp=Z,78nm,1.4s						
O56A	Blue Knob Stat	59.95	353	P	P	15 55 36.9	+0.1
O56A				IAMs_20	IAMs_20	16 24 45.9	
	comp=Z,2µm,20.0s						
O56A	Blue Knob Stat	59.95	353	P	P	15 55 38.0	+1.2
	baz=172,SNR=9.4						
O55A	Ligonier	59.98	352	P	P	15 55 37.7	+0.8
	baz=171,SNR=7.8						
U38A	Gravette	60.01	338	P	P	15 55 37.0	-0.3
U38A				IAmb	IAmb	15 55 38.6	
	comp=Z,42nm,1.4s						
BRNJ	Basking Ridge	60.03	357	IAMs_20	IAMs_20	16 21 32.5	
	comp=Z,3µm,22.0s						
TUL1	Leonard	60.05	337	P	P	15 55 37.5	+0.1
TUL1				IAmb	IAmb	15 55 39.0	
	comp=Z,85nm,1.2s						
TUL1	Leonard	60.05	337	P	P	15 55 37.3	-0.2
	baz=153,SNR=7.5						
N61A	South Mountain	60.08	357	P	P	15 55 38.1	+0.6
	baz=176						
O54A	Avella	60.10	351	P	P	15 55 37.2	-0.5
O54A				IAMs_20	IAMs_20	16 22 32.2	
	comp=Z,4µm,22.0s						
O54A	Avella	60.10	351	P	P	15 55 38.0	+0.3
	baz=170						
FNO	Franklin	60.10	335	P	P	15 55 37.8	-0.1
P50A	Jamestown	60.10	348	P	P	15 55 37.2	-0.5
	baz=166						
P49A	Miami Univ. Ec	60.21	348	P	P	15 55 37.6	-0.9
	baz=165,SNR=6.0						
WMOK	Wichita Mounta	60.22	333	P	P	15 55 37.7	-1.0
WMOK				pmax	pmax		
	comp=Z,12nm,1.0s						
WMOK				MLR	MLR		
	comp=Z,1µm,21.0s						
WMOK	Wichita Mounta	60.22	333	P	P	15 55 37.6	-1.0
N62A	Caumsett State	60.22	358	P	P	15 55 38.4	-0.1
	baz=177						
OLIL	Olney	60.22	344	IAMs_20	IAMs_20	16 25 16.5	
	comp=Z,2µm,20.0s						
SSPA	Standing Stone	60.24	354	P	P	15 55 38.4	-0.3
SSPA	Standing Stone	60.24	354	IAMs_20	IAMs_20	16 22 53.6	
	comp=Z,2µm,22.0s						
SSPA	Standing Stone	60.24	354	P	P	15 55 38.7	+0.1
	baz=172						
N60A	Cedar Hill Far	60.25	356	P	P	15 55 38.7	0.0
	baz=175						
O52A	Adamsville	60.25	350	P	P	15 55 38.0	-0.8
O52A				IAMs_20	IAMs_20	16 23 15.6	
	comp=Z,3µm,22.0s						
O52A	Adamsville	60.25	350	P	P	15 55 38.2	-0.6
	baz=168						
BLO	Bloomington	60.26	346	IAMs_20	IAMs_20	16 22 13.5	
	comp=Z,3µm,21.0s						
OKCFA	Oklahoma City	60.26	335	IAMs_20	IAMs_20	16 22 46.0	
	comp=Z,2µm,22.0s						
O53A	New Philadelph	60.29	351	P	P	15 55 38.9	-0.1
	baz=169						
P48A	Milroy	60.29	347	P	P	15 55 37.3	-1.7
P48A				IAmb	IAmb	15 55 52.4	
	comp=Z,77nm,1.6s						
P48A				IAMs_20	IAMs_20	16 22 05.4	
	comp=Z,3µm,21.0s						
P48A	Milroy	60.29	347	P	P	15 55 38.0	-1.0
	baz=164						
PAL	Palisades	60.32	357	IAMs_20	IAMs_20	16 21 37.1	
	comp=Z,3µm,21.0s						
PAL	Palisades	60.32	357	P	P	15 55 39.4	+0.3
	baz=177						
N58A	Sunbury	60.34	355	P	P	15 55 39.3	0.0
N58A				IAmb	IAmb	15 56 11.0	
	comp=Z,29nm,0.9s						
N58A				IAMs_20	IAMs_20	16 25 35.0	
	comp=Z,2µm,20.0s						
N58A	Sunbury	60.34	355	P	P	15 55 40.0	+0.7
	baz=174						
N59A	State Game Lan	60.34	356	P	P	15 55 39.5	+0.2
	baz=175						
O51A	Pataskala	60.41	350	P	P	15 55 39.2	-0.6
	baz=167						
ODNJ	Ogdensburg	60.43	357	IAMs_20	IAMs_20	16 21 32.1	
	comp=Z,3µm,22.0s						
CCM	Cathedral Cave	60.46	341	P	P	15 55 39.0	-1.2
CCM				pmax	pmax		
	comp=Z,34nm,1.0s						
CCM				MLR	MLR		
	comp=Z,900nm,19.0s						
CCM	Cathedral Cave	60.46	341	P	P	15 55 39.0	-1.2
CCM				IAmb	IAmb	15 55 53.5	
	comp=Z,34nm,0.9s						
CCM	Cathedral Cave	60.46	341	P	P	15 55 39.7	-0.5
	baz=158						
M66A	Nantucket	60.50	1	P	P	15 55 41.6	+1.2
	baz=181						
N55A	Marion Center	60.51	353	P	P	15 55 41.6	+1.0
	baz=171,SNR=15						
ACSO	Alum Creek Sta	60.56	349	P	P	15 55 40.1	-0.8
ACSO				IAMs_20	IAMs_20	16 22 50.7	
	comp=Z,2µm,21.0s						
ACSO	Alum Creek Sta	60.56	349	P	P	15 55 40.5	-0.4
	baz=167,SNR=6.8						
N56A	West Decatur	60.57	353	P	P	15 55 41.4	+0.5
	baz=172						
YLE	Yale	60.59	358	IAMs_20	IAMs_20	16 21 40.3	
	comp=Z,2µm,20.0s						
O50A	Cable	60.59	349	P	P	15 55 40.1	-1.0
	baz=166						
M61A	Granite Spring	60.61	357	P	P	15 55 41.5	+0.4
	baz=177						
Q44A	Meyer Farm, Va	60.62	344	P	P	15 55 40.0	-1.3
Q44A				IAmb	IAmb	15 55 41.5	
	comp=Z,107nm,1.5s						
Q44A				IAMs_20	IAMs_20	16 26 31.0	
	comp=Z,2µm,18.0s						
M63A	Gales Ferry	60.65	359	P	P	15 55 41.0	-0.4
	baz=179						
M60A	Port Jervis	60.67	357	P	P	15 55 41.8	+0.2
	baz=176						
M62A	Hamden	60.71	358	P	P	15 55 41.9	+0.1
	baz=178						
O49A	Covington	60.77	348	P	P	15 55 41.4	-0.9
O49A				IAmb	IAmb	15 55 55.2	
	comp=Z,42nm,1.2s						
O49A				IAMs_20	IAMs_20	16 26 59.1	
	comp=Z,2µm,18.0s						
O49A	Covington	60.77	348	P	P	15 55 41.4	-0.9
	baz=165,SNR=5.5						
N53A	Lisbon	60.78	351	P	P	15 55 42.4	+0.1
N53A				IAmb	IAmb	15 56 13.3	
	comp=Z,37nm,1.0s						
N53A				IAMs_20	IAMs_20	16 22 42.2	
	comp=Z,3µm,22.0s						
N53A	Lisbon	60.78	351	P	P	15 55 42.4	+0.1
	baz=169						
S39A	Bolivar	60.78	340	P	P	15 55 41.7	-0.7
S39A				IAmb	IAmb	15 55 43.6	
	comp=Z,107nm,1.5s						
S39A				IAMs_20	IAMs_20	16 27 05.0	
	comp=Z,1µm,18.0s						
M64A	Tiverton	60.79	360	P	P	15 55 43.3	+1.0
	baz=180						
M65A	Busby, Falmout	60.80	0	IAMs_20	IAMs_20	16 21 04.0	
	comp=Z,3µm,22.0s						
M65A	Busby, Falmout	60.80	0	P	P	15 55 42.8	+0.4
	baz=180						
N54A	Moraine State	60.81	352	P	P	15 55 42.4	-0.2
N54A	Moraine State	60.81	352	P	P	15 55 43.2	+0.6
	baz=170,SNR=9.8						
MNTX	Cornudas Mount	60.84	326	P	P	15 55 42.1	-0.9
MNTX	Cornudas Mount	60.84	326	P	P	15 55 42.7	-0.2
	baz=142,SNR=28						
P46A	Rosedale	60.84	345	P	P	15 55 41.5	-1.3
P46A				IAmb	IAmb	15 56 20.8	
	comp=Z,30nm,0.9s						
P46A				IAMs_20	IAMs_20	16 22 39.9	
	comp=Z,3µm,21.0s						
M58A	Price's Panora	60.84	355	P	P	15 55 43.8	+1.0
	baz=174,SNR=8.9						
M57A	Sunshine Farm,	60.87	354	P	P	15 55 42.8	-0.1
M57A				IAmb	IAmb	15 55 45.5	
	comp=Z,103nm,1.5s						
M57A				IAMs_20	IAMs_20	16 25 53.0	
	comp=Z,2µm,20.0s						
M57A	Sunshine Farm,	60.87	354	P	P	15 55 44.0	+1.1
	baz=173,SNR=8.2						
N52A	McGinn's Farm,	60.91	350	P	P	15 55 42.5	-0.7
	baz=168						
M59A	Waymart	60.94	356	P	P	15 55 44.1	+0.6
	baz=175,SNR=7.5						
KSPA	Keystone Colle	60.97	356	P	P	15 55 42.8	-0.8
KSPA				IAmb	IAmb	15 55 45.9	
	comp=Z,100nm,1.6s						
R40A	Maddies Statio	60.99	341	P	P	15 55 42.5	-1.3
R40A				IAmb	IAmb	15 55 44.8	
	comp=Z,84nm,1.5s						
O48A	Farmland	61.00	347	P	P	15 55 43.1	-0.8
	baz=165,SNR=10						
KSCT	Kent School, K	61.02	358	IAMs_20	IAMs_20	16 22 15.7	
	comp=Z,2µm,21.0s						
L63A	North Scituate	61.10	359	P	P	15 55 45.1	+0.6
	baz=179						
N50A	Nevada	61.11	349	P	P	15 55 44.0	-0.6
	baz=167						
M56A	Emporium	61.12	354	P	P	15 55 44.8	+0.2
M56A				IAMs_20	IAMs_20	16 23 29.6	
	comp=Z,2µm,22.0s						
M56A	Emporium	61.12	354	P	P	15 55 45.1	+0.5
	baz=172,SNR=13						
N51A	Ashland	61.12	350	P	P	15 55 43.8	-0.9
N51A				IAmb	IAmb	15 55 45.6	
	comp=Z,85nm,1.5s						
N51A				IAMs_20	IAMs_20	16 23 52.7	
	comp=Z,3µm,21.0s						
N51A	Ashland	61.12	350	P	P	15 55 44.4	-0.3
	baz=168						
BRYW	Bryant College	61.16	359	P	P	15 55 45.2	+0.3
BRYW				IAMs_20	IAMs_20	16 21 40.5	
	comp=Z,2µm,20.0s						
M55A	Ridgway	61.16	353	P	P	15 55 44.5	-0.5
M55A				IAMs_20	IAMs_20	16 23 10.8	
	comp=Z,2µm,22.0s						
M55A	Ridgway	61.16	353	P	P	15 55 45.3	+0.3
	baz=172,SNR=10						
L64A	Middleborough	61.17	360	P	P	15 55 45.4	+0.4
	baz=180						
T35A	Sooner Cattle	61.21	337	P	P	15 55 44.6	-0.8
T35A				IAmb	IAmb	15 55 47.1	
	comp=Z,79nm,1.2s						
L62A	Suffield	61.30	358	P	P	15 55 46.4	+0.6
	baz=178						
M54A	Oil Creek Stat	61.31	352	P	P	15 55 45.5	-0.4
M54A	Oil Creek Stat	61.31	352	P	P	15 55 46.3	+0.3
	baz=170,SNR=10						
L60A	Shokan	61.31	357	P	P	15 55 46.6	+0.7
	baz=176						
MSTX	Muleshoe	61.36	330	P	P	15 55 46.0	-0.6
MSTX				IAmb	IAmb	15 55 48.0	
	comp=Z,72nm,1.2s						
MSTX	Muleshoe	61.36	330	P	P	15 55 46.4	-0.2
	baz=146,SNR=18						
M53A	WI Miller and	61.38	351	P	P	15 55 45.9	-0.5
	baz=169,SNR=6.1						
P43A	Skaggs, Pawnee	61.45	344	P	P	15 55 45.8	-1.1
P43A				IAMs_20	IAMs_20	16 27 05.8	
	comp=Z,2µm,18.0s						
N49A	Columbus Grove	61.45	348	P	P	15 55 45.6	-1.2
N49A	Columbus Grove	61.45	348	P	P	15 55 46.4	-0.5
	baz=166,SNR=17						
L58A	Harry Jones Me	61.47	356	P	P	15 55 47.6	+0.6
	baz=175,SNR=7.7						
L61A	Hillsdale 1, H	61.49	358	P	P	15 55 46.9	-0.2
	baz=177						
EPT	El Paso	61.49	325	IAMs_20	IAMs_20	16 20 39.0	
	comp=Z,2µm,20.0s						
M51A	Elyria	61.50	350	P	P	15 55 46.8	-0.4
	baz=168						
L57A	Andrews Acres	61.50	355	P	P	15 55 46.7	-0.5
	baz=174						
ALLY	Alegheny Colle	61.51	352	P	P	15 55 47.1	-0.2
ALLY				IAMs_20	IAMs_20	16 27 05.0	
	comp=Z,2µm,18.0s						
QUA2	Belchertown	61.53	359	IAMs_20	IAMs_20	16 23 40.4	
	comp=Z,3µm,20.0s						
SFIN	Lafayette	61.54	346	P	P	15 55 46.1	-1.4
SFIN				IAmb	IAmb	15 55 46.8	
	comp=Z,29nm,0.7s						
SFIN				IAMs_20	IAMs_20	16 23 02.4	
	comp=Z,3µm,21.0s						
SFIN	Lafayette	61.54	346	P	P	15 55 45.9	-1.6
	baz=163,SNR=12						
N48A	Decatur	61.55	348	P	P	15 55 46.7	-0.9
	baz=165,SNR=7.7						
L59A	Walton	61.56	356	P	P	15 55 47.9	+0.3
L59A				IAMs_20	IAMs_20	16 23 10.9	
	comp=Z,2µm,20.0s						
L59A	Walton	61.56	356	P	P	15 55 48.3	+0.6
	baz=176,SNR=7.2						
BCX	Boston College	61.57	360	IAMs_20	IAMs_20	16 21 51.0	
	comp=Z,2µm,19.0s						
M52A	Chesterland	61.57	351	P	P	15 55 46.8	-0.9
M52A				IAmb	IAmb	15 56 18.5	
	comp=Z,43nm,0.9s						
M52A				IAMs_20	IAMs_20	16 23 50.2	
	comp=Z,3µm,21.0s						
M52A	Chesterland	61.57	351	P	P	15 55 47.6	-0.1
	baz=169,SNR=5.9						
AMTX	Amarillo	61.61	331	P	P	15 55 47.7	-0.5
AMTX				IAmb	IAmb	15 57 04.7	
	comp=Z,44nm,1.4s						
AMTX	Amarillo	61.61	331	P	P	15 55 47.3	-1.0
	baz=147						
WES	Weston	61.62	359	P	P	15 55 47.8	-0.2
WES				pmax	pmax		
	comp=Z,64nm,1.3s						
WES				MLR	MLR		
	comp=Z,2µm,20.0s						
WES	Weston	61.62	359	P	P	15 55 47.8	-0.2
WES				IAmb	IAmb	15 55 49.2	
	comp=Z,64nm,1.3s						
WES				IAMs_20	IAMs_20	16 21 53.8	
	comp=Z,2µm,20.0s						
BINY	Binghamton	61.63	356	P	P	15 55 48.0	-0.1
BINY	Binghamton	61.63	356	P	P	15 55 48.6	+0.5
	baz=174,SNR=6.4						
O44A	Mansfield	61.66	345	P	P	15 55 46.8	-1.5
O44A				IAmb	IAmb	15 55 48.3	
	comp=Z,92nm,1.5s						
O44A				IAMs_20	IAMs_20	16 23 59.4	
	comp=Z,2µm,21.0s						
L56A	Greenwood	61.70	354	P	P	15 55 49.1	+0.5
L56A				IAmb	IAmb	15 56 03.7	
	comp=Z,67nm,1.2s						
L56A				IAMs_20	IAMs_20	16 26 29.1	
	comp=Z,2µm,20.0s						
L56A	Greenwood	61.70	354	P	P	15 55 49.2	+0.5
	baz=173,SNR=6.8						
M50A	Fremont	61.71	349	P	P	15 55 48.0	-0.6
M50A				IAMs_20	IAMs_20	16 24 00.1	
	comp=Z,3µm,22.0s						
M50A	Fremont	61.71	349	P	P	15 55 47.8	-0.8
	baz=167,SNR=5.3						
N47A	Urbana	61.71	347	P	P	15 55 47.4	-1.3
N47A				IAMs_20	IAMs_20	16 22 48.0	
	comp=Z,3µm,22.0s						
N47A	Urbana	61.71	347	P	P	15 55 47.3	-1.4
	baz=164,SNR=8.5						
L61B	Northampton	61.71	358	P	P	15 55 48.7	0.0
	baz=178						
U32A	Winter Ranch,	61.72	334	P	P	15 55 48.5	-0.4
HRV	Adam Dziewonsk	61.75	359	P	P	15 55 48.8	-0.1
HRV				pmax	pmax		
	comp=Z,90nm,1.3s						
HRV	Adam Dziewonsk	61.75	359	P	P	15 55 48.8	-0.1
HRV	Adam Dziewonsk	61.75	359	IAMs_20	IAMs_20	16 21 45.1	
	comp=Z,2µm,21.0s						
HRV	Adam Dziewonsk	61.75	359	P	P	15 55 48.6	-0.3
	baz=179						
L53A	Girard	61.83	352	P	P	15 55 49.6	+0.2
	baz=170,SNR=12						
L55A	Hinsdale	61.83	353	P	P	15 55 50.3	+0.8
	baz=172,SNR=9.7						
K62A	Royalston	61.92	359	P	P	15 55 50.4	+0.4
K62A				IAmb	IAmb	15 56 17.1	
	comp=Z,65nm,1.4s						
K62A				IAMs_20	IAMs_20	16 23 51.6	
	comp=Z,2µm,20.0s						
K62A	Royalston	61.92	359	P	P	15 55 51.1	+1.1
	baz=178						
K60A	Five Rivers En	61.92	357	P	P	15 55 50.6	+0.6
	baz=177						
K63A	Dunstable	61.93	359	P	P	15 55 49.8	-0.3
	baz=179						
M49A	Liberty Center	61.95	349	P	P	15 55 49.5	-0.7
	baz=166,SNR=11						
K61A	Williamstown	61.95	358	P	P	15 55 50.4	+0.1
	baz=177						
ERPA	Erie	61.95	352	P	P	15 55 50.4	+0.1
ERPA	Erie	61.95	352	P	P	15 55 50.6	+0.4
	baz=170,SNR=11						
HSIG		61.96	320	P	P	15 55 51.0	+0.3
HSIG				IAMs_20	IAMs_20	16 20 49.2	
	comp=Z,2µm,19.0s						
L54A	Sinclairville	61.98	353	P	P	15 55 51.1	+0.6
	baz=171,SNR=16						
TRY	Troy	62.03	358	P	P	15 55 51.4	+0.7
TRY				IAMs_20	IAMs_20	16 22 46.4	
	comp=Z,2µm,21.0s						
WVNY	West Valley, N	62.07	353	P	P	15 55 51.8	+0.8
WVNY				IAMs_20	IAMs_20	16 23 36.9	
	comp=Z,2µm,22.0s						
K59A	Cooperstown	62.13	357	P	P	15 55 52.1	+0.6
	baz=176,SNR=11						
M47A	Cromwell	62.16	347	P	P	15 55 50.7	-0.9
	baz=164						
K58A	Earlville	62.17	356	P	P	15 55 52.2	+0.5

K58A				IAMs_20	IAMs_20	16 26 10.1	
	comp=Z,2µm,18.0s						
K58A	Earlville	62.17	356	P	P	15 55 52.2	+0.5
	baz=175,SNR=8.0						
K57A	Scipio Center	62.20	355	P	P	15 55 51.9	0.0
	baz=174						
K56A	Middlesex	62.23	354	P	P	15 55 52.2	0.0
	baz=173						
HDIL	Hopedale	62.25	344	P	P	15 55 51.2	-1.0
HDIL				IAmb	IAmb	15 56 20.1	
	comp=Z,36nm,0.7s						
HDIL				IAMs_20	IAMs_20	16 24 41.0	
	comp=Z,2µm,21.0s						
HDIL	Hopedale	62.25	344	P	P	15 55 51.3	-1.0
	baz=160						
K54A	Basiliko Farm,	62.28	353	P	P	15 55 53.3	+0.8
	baz=172,SNR=12						
L50A	Kingsville	62.29	350	P	P	15 55 51.8	-0.7
	baz=167						
K55A	Perry	62.33	354	P	P	15 55 53.0	+0.2
	baz=172,SNR=5.3						
VNA3	Neumayer Olymp	62.46	161	P	P	15 55 54.7	+1.3
J62A	Henniker	62.47	359	P	P	15 55 53.7	0.0
	baz=179						
L48A	N Adams	62.48	348	P	P	15 55 52.8	-1.0
	baz=166,SNR=11						
J63A	Strafford	62.52	360	P	P	15 55 54.2	+0.2
	baz=180						
L49A	Milan	62.52	349	P	P	15 55 53.5	-0.6
	baz=166						
J60A	Lant Hill Farm	62.53	358	P	P	15 55 55.1	+1.1
	baz=177						
J61A	Chester	62.60	358	P	P	15 55 55.7	+1.1
	baz=178						
P38A	Dawn	62.61	340	P	P	15 55 53.6	-1.1
P38A				IAmb	IAmb	15 56 18.9	
	comp=Z,24nm,0.7s						
ACCN	Adirondack Com	62.68	358	P	P	15 55 55.0	-0.1
ACCN				IAmb	IAmb	15 55 57.5	
	comp=Z,68nm,1.4s						
VNA1	Neumayer--Stat	62.68	161	P	P	15 55 56.3	+1.5
AAM	Ann Arbor	62.69	349	IAMs_20	IAMs_20	16 27 11.7	
	comp=Z,3µm,18.0s						
AAM	Ann Arbor	62.69	349	P	P	15 55 54.7	-0.5
	baz=166						
K52A	Tillsonburg	62.70	352	P	P	15 55 54.9	-0.3
	baz=170,SNR=5.3						
319A	Douglas	62.72	323	P	P	15 55 56.5	+0.7
319A				IAmb	IAmb	15 56 17.0	
	comp=Z,76nm,1.4s						
319A				IAMs_20	IAMs_20	16 20 08.9	
	comp=Z,2µm,22.0s						
M44A	Midewin, Midew	62.72	345	P	P	15 55 54.0	-1.4
M44A				IAmb	IAmb	15 55 55.5	
	comp=Z,89nm,1.7s						
M44A				IAMs_20	IAMs_20	16 23 48.7	
	comp=Z,2µm,22.0s						
J58A	Remsen	62.74	356	P	P	15 55 55.2	-0.3
J58A				IAmb	IAmb	15 55 57.7	
	comp=Z,87nm,1.6s						
J58A				IAMs_20	IAMs_20	16 23 36.2	
	comp=Z,2µm,20.0s						
J58A	Remsen	62.74	356	P	P	15 55 56.3	+0.8
	baz=175						
K51A	Iona Station	62.75	351	P	P	15 55 55.2	-0.4
	baz=169						
121A	Cookes Peak, D	62.77	325	P	P	15 55 57.3	+1.2
121A				IAmb	IAmb	15 56 07.2	
	comp=Z,84nm,1.6s						
121A				IAMs_20	IAMs_20	16 23 00.7	
	comp=Z,3µm,19.0s						
121A	Cookes Peak, D	62.77	325	P	P	15 55 56.9	+0.8
	baz=140,SNR=14						
J56A	Wolcott	62.77	355	P	P	15 55 55.4	-0.2
J56A	Wolcott	62.77	355	P	P	15 55 55.8	+0.1
	baz=174						
J59A	Piesco	62.80	357	P	P	15 55 56.1	+0.2
J59A				IAMs_20	IAMs_20	16 23 22.8	
	comp=Z,3µm,21.0s						
J59A	Piesco	62.80	357	P	P	15 55 56.9	+1.0
	baz=176,SNR=11						
MEDO	Medina	62.81	354	P	P	15 55 55.4	-0.5
MEDO				IAmb	IAmb	15 55 57.8	
	comp=Z,53nm,1.0s						
MEDO				IAMs_20	IAMs_20	16 26 25.9	
	comp=Z,2µm,19.0s						
N41A	Harden Midland	62.81	343	P	P	15 55 54.7	-1.3
N41A				IAMs_20	IAMs_20	16 27 41.8	
	comp=Z,2µm,18.0s						
J57A	Williamstown	62.83	356	P	P	15 55 55.9	-0.2
J57A				IAmb	IAmb	15 55 58.0	
	comp=Z,96nm,1.5s						
J57A				IAMs_20	IAMs_20	16 26 30.7	
	comp=Z,2µm,18.0s						
J57A	Williamstown	62.83	356	P	P	15 55 56.5	+0.3
	baz=174,SNR=6.5						
J55A	Hilton	62.84	354	P	P	15 55 54.6	-1.5
J55A				IAMs_20	IAMs_20	16 24 45.9	
	comp=Z,2µm,20.0s						
J55A	Hilton	62.84	354	P	P	15 55 56.4	+0.2
	baz=173						
L46A	Eue Claire	62.92	347	P	P	15 55 54.9	-1.9
L46A				IAmb	IAmb	15 56 34.6	
	comp=Z,56nm,1.0s						
L46A				IAMs_20	IAMs_20	16 23 35.6	
	comp=Z,3µm,21.0s						
L46A	Eue Claire	62.92	347	P	P	15 55 55.1	-1.7
	baz=164						
J54A	Appleton	62.93	354	P	P	15 55 56.9	+0.1
J54A				IAMs_20	IAMs_20	16 23 50.3	
	comp=Z,2µm,22.0s						
J54A	Appleton	62.93	354	P	P	15 55 56.4	-0.4
	baz=172						
HNH	Hanover	62.96	359	IAMs_20	IAMs_20	16 24 33.1	
	comp=Z,2µm,20.0s						
K50A	Casco	62.98	350	P	P	15 55 56.4	-0.6
K50A	Casco	62.98	350	P	P	15 55 55.9	-1.1
	baz=168						
VNA2	Neumayer--Watz	63.04	161	P	P	15 55 58.6	+1.3
	baz=277,slow=6.9						
I58A	Old Forge	63.05	357	P	P	15 55 58.1	+0.5
	baz=176,SNR=8.3						
I59A	Olmsteadville	63.10	357	P	P	15 55 58.2	+0.3
	baz=177						
I62A	Tamworth	63.11	359	IAMs_20	IAMs_20	16 22 14.2	
	comp=Z,2µm,22.0s						
I62A	Tamworth	63.11	359	P	P	15 55 58.5	+0.5
	baz=179						
J52A	Paris	63.12	352	P	P	15 55 58.1	0.0
	baz=170,SNR=16						
K49A	Clarkson	63.12	350	P	P	15 55 56.9	-1.2
	baz=167						
I60A	Shoreham	63.12	358	P	P	15 55 58.6	+0.6
	baz=177						
I64A	Boothbay	63.16	1	P	P	15 55 58.7	+0.5
	baz=181						
KSU1	Kansas State U	63.18	338	P	P	15 55 57.7	-0.8
KSU1				IAmb	IAmb	15 57 42.5	
	comp=Z,43nm,1.0s						
I61A	Oroboro, Fairl	63.18	359	P	P	15 55 59.4	+1.0
	baz=178,SNR=8.3						
K48A	Perry	63.26	349	P	P	15 55 58.2	-0.7
	baz=166,SNR=9.8						
I63A	Otisfield	63.29	0	IAMs_20	IAMs_20	16 22 27.8	
	comp=Z,3µm,22.0s						
I63A	Otisfield	63.29	0	P	P	15 55 58.7	-0.4
	baz=180						
NCB	Newcomb	63.29	357	P	P	15 55 59.3	+0.2
NCB				IAMs_20	IAMs_20	16 23 03.9	
	comp=Z,2µm,21.0s						
K47A	Vermontville	63.29	348	P	P	15 55 58.4	-0.7
	baz=165,SNR=5.5						
I57A	Carthage	63.34	356	P	P	15 55 59.7	+0.2
	baz=175,SNR=5.3						
R32A	Long Quarter,	63.37	336	P	P	15 55 59.5	-0.4
R32A				IAmb	IAmb	15 56 27.2	
	comp=Z,45nm,1.1s						
PECO	Prince Edward	63.43	355	P	P	15 55 59.7	-0.3
PECO				IAmb	IAmb	15 56 01.9	
	comp=Z,88nm,1.3s						
L44A	Lake County Fo	63.44	346	P	P	15 55 59.1	-1.0
L44A	Lake County Fo	63.44	346	P	P	15 55 58.9	-1.3
	baz=162						
K46A	Dorr	63.46	348	P	P	15 55 59.2	-1.1
	baz=164						
LBNH	Lisbon	63.48	359	P	P	15 56 01.1	+0.7
LBNH				pmax	pmax		
	comp=Z,65nm,1.2s						
LBNH	Lisbon	63.48	359	P	P	15 56 01.1	+0.7
LBNH				IAmb	IAmb	15 56 02.3	
	comp=Z,65nm,1.2s						
LBNH				IAMs_20	IAMs_20	16 22 50.1	
	comp=Z,2µm,22.0s						
LBNH	Lisbon	63.48	359	P	P	15 56 01.2	+0.7
	baz=179						
Y22D	IRIS PASSCAL I	63.50	327	P	P	15 56 01.5	+0.6
	baz=142						
I53A	Kortright Cn E	63.58	353	P	P	15 56 01.1	+0.1
	baz=171						
J49A	Marlette	63.63	350	P	P	15 56 00.2	-1.2
	baz=167,SNR=5.8						
J48A	Bridge Port	63.68	349	P	P	15 56 00.9	-0.8
J48A				IAMs_20	IAMs_20	16 25 09.9	
	comp=Z,3µm,22.0s						
J48A	Bridge Port	63.68	349	P	P	15 56 01.0	-0.8
	baz=166,SNR=6.1						
L42A	Oliver, Polo	63.70	344	P	P	15 56 00.7	-1.2
L42A				IAmb	IAmb	15 56 14.6	
	comp=Z,71nm,1.4s						
L42A				IAMs_20	IAMs_20	16 28 25.6	
	comp=Z,2µm,18.0s						
H58A	Gabriels	63.73	357	P	P	15 56 02.6	+0.5
	baz=176,SNR=9.4						
I51A	Listowel	63.74	352	P	P	15 56 01.7	-0.4
	baz=169,SNR=12						
I55A	Frankford	63.77	354	P	P	15 56 02.6	+0.3
	baz=173,SNR=7.7						
H61A	Lyndonville	63.78	359	P	P	15 56 03.3	+0.9
	baz=179,SNR=6.4						
WVL	Waterville	63.81	1	P	P	15 56 03.3	+0.8
WVL				IAmb	IAmb	15 56 04.9	
	comp=Z,71nm,1.4s						
WVL				IAMs_20	IAMs_20	16 22 41.7	
	comp=Z,3µm,22.0s						
J47A	Sunmer	63.81	349	P	P	15 56 01.5	-1.0
J47A				IAMs_20	IAMs_20	16 26 56.6	
	comp=Z,2µm,19.0s						
J47A	Sunmer	63.81	349	P	P	15 56 01.7	-0.8
	baz=165						
H62A	Milan	63.81	360	IAMs_20	IAMs_20	16 22 45.7	
	comp=Z,3µm,22.0s						
H62A	Milan	63.81	360	P	P	15 56 03.1	+0.5
	baz=180						
H60A	Morristown	63.82	358	P	P	15 56 03.5	+0.8
	baz=178						
H57A	Richville	63.84	356	P	P	15 56 03.1	+0.4
	baz=175,SNR=15						
H64A	Troy	63.89	1	P	P	15 56 04.0	+0.9
	baz=182,SNR=6.0						
H63A	New Sharon	63.90	1	P	P	15 56 03.9	+0.8
	baz=181						
H59A	Cadyville	63.94	358	P	P	15 56 04.2	+0.8
	baz=177,SNR=8.3						
ANMO	Albuquerque	63.95	328	*e*P	P	15 56 03.7	-0.3
ANMO	Albuquerque	63.95	328	P	P	15 56 03.7	-0.3
ANMO				IAmb	IAmb	15 56 06.6	
	comp=Z,63nm,1.9s						
ANMO	Albuquerque	63.95	328	P	P	15 56 05.0	+1.0
	baz=142						
LONY	Lake Ozonia	63.95	357	P	P	15 56 04.0	+0.5
LONY				IAMs_20	IAMs_20	16 23 57.4	
	comp=Z,3µm,21.0s						
LONY	Lake Ozonia	63.95	357	P	P	15 56 04.1	+0.5
	baz=176,SNR=6.7						
H65A	Eastbrook	63.97	2	P	P	15 56 04.3	+0.7
	baz=183						
EMMW	East Machias	64.02	3	IAMs_20	IAMs_20	16 22 42.1	
	comp=Z,2µm,22.0s						
H56A	Elgin	64.03	356	P	P	15 56 04.3	+0.4
	baz=174,SNR=9.5						
K43A	Burlington	64.04	346	P	P	15 56 03.1	-1.0
K43A				IAMs_20	IAMs_20	16 24 39.5	
	comp=Z,3µm,22.0s						
H55A	Tweed	64.06	355	P	P	15 56 04.6	+0.5
	baz=173,SNR=6.8						
DELO	Deloro Mine	64.06	355	P	P	15 56 04.2	-0.1
DELO				IAMs_20	IAMs_20	16 25 34.7	
	comp=Z,2µm,20.0s						
J46A	Howard City	64.07	348	P	P	15 56 03.3	-1.0
	baz=164						
H66A	Whiting	64.10	3	P	P	15 56 04.8	+0.3
	baz=184						
CBKS	Cedar Bluff	64.11	335	P	P	15 56 04.8	+0.1
CBKS				pmax	pmax		
	comp=Z,139nm,1.7s						
CBKS				MLR	MLR		
	comp=Z,900nm,19.0s						
CBKS	Cedar Bluff	64.11	335	P	P	15 56 04.8	+0.1
CBKS	Cedar Bluff	64.11	335	P	P	15 56 05.0	+0.3
	baz=150						
FRNY	Flat Rock	64.12	358	P	P	15 56 04.9	+0.3
FRNY				IAMs_20	IAMs_20	16 23 03.9	
	comp=Z,2µm,21.0s						
I49A	Point Hope	64.14	350	P	P	15 56 04.0	-0.7
I49A	Point Hope	64.14	350	P	P	15 56 04.1	-0.7
	baz=168,SNR=7.3						
L40A	Anamosa	64.17	343	P	P	15 56 04.3	-0.7
L40A				IAMs_20	IAMs_20	16 26 02.8	
	comp=Z,2µm,20.0s						
HAL	Halifax	64.20	6	P	P	15 56 05.5	+0.4
HAL				pmax	pmax		
	comp=Z,159nm,1.7s						
HAL	Halifax	64.20	6	P	P	15 56 05.5	+0.4
H53A	Bobcaygeon	64.21	354	P	P	15 56 05.4	+0.2
	baz=172,SNR=14						
J45A	Montague	64.31	347	IAMs_20	IAMs_20	16 29 05.4	
	comp=Z,2µm,18.0s						
J45A	Montague	64.31	347	P	P	15 56 04.9	-1.0
	baz=164						
G60A	Masonville	64.35	359	P	P	15 56 07.3	+1.2
	baz=178,SNR=6.7						
G59A	Clarenceville	64.36	358	P	P	15 56 06.7	+0.6
	baz=178						
G63A	Kingsbury	64.36	1	P	P	15 56 06.6	+0.4
	baz=181						
N35A	Tabor	64.41	339	P	P	15 56 06.2	-0.4
N35A				IAmb	IAmb	15 56 47.5	
	comp=Z,63nm,1.1s						
H52A	Wyevale	64.43	353	P	P	15 56 06.5	-0.1
	baz=171						
GGN	Saint George	64.45	3	IAMs_20	IAMs_20	16 22 52.7	
	comp=Z,2µm,22.0s						
G62A	West of Eustis	64.45	0	P	P	15 56 07.6	+0.8
G62A				IAMs_20	IAMs_20	16 23 13.7	
	comp=Z,3µm,22.0s						
G62A	West of Eustis	64.45	0	P	P	15 56 08.0	+1.2
	baz=180,SNR=15						
G57A	Newington	64.46	357	P	P	15 56 07.4	+0.6
	baz=176,SNR=10.0						
G58A	Ormstown	64.46	357	P	P	15 56 07.6	+0.9
	baz=177,SNR=7.0						
SADO	Sadowa	64.47	353	P	P	15 56 06.0	-0.8
SADO				IAMs_20	IAMs_20	16 24 25.8	
	comp=Z,2µm,22.0s						
G65A	Princeton	64.50	2	P	P	15 56 06.8	-0.2
G65A				IAMs_20	IAMs_20	16 25 33.0	
	comp=Z,2µm,20.0s						
G65A	Princeton	64.50	2	P	P	15 56 07.4	+0.3
	baz=183						
I47A	Gladwin	64.51	349	P	P	15 56 06.0	-1.2
I47A				IAMs_20	IAMs_20	16 24 52.1	
	comp=Z,2µm,20.0s						
I47A	Gladwin	64.51	349	P	P	15 56 06.4	-0.7
	baz=166						
G64A	Maxfield	64.51	2	P	P	15 56 07.9	+0.8
	baz=182						
PKME	Peaks-Kenny Pk	64.51	1	P	P	15 56 07.7	+0.6
PKME				IAMs_20	IAMs_20	16 23 12.3	
	comp=Z,3µm,22.0s						
PKME	Peaks-Kenny Pk	64.51	1	P	P	15 56 07.9	+0.8
	baz=182						
G61A	St-Isidore-de-	64.52	359	P	P	15 56 08.2	+0.9
	baz=179,SNR=10						
I48A	Sherman Twp	64.53	350	P	P	15 56 06.6	-0.7
	baz=167,SNR=13						
PLVO	Plevna	64.54	355	P	P	15 56 07.5	+0.2
PLVO				IAmb	IAmb	15 56 22.2	
	comp=Z,64nm,1.3s						
PLVO				IAMs_20	IAMs_20	16 25 49.8	
	comp=Z,2µm,20.0s						
SCIA	State Center	64.59	342	P	P	15 56 07.3	-0.5
SCIA	State Center	64.59	342	P	P	15 56 07.0	-0.7
	baz=157						
I46A	Reed City	64.61	348	P	P	15 56 06.3	-1.6
	baz=165						
SNAA	Sanae	64.67	161	P	P	15 56 09.2	+1.2
SNAA	Sanae	64.67	161	P	P	15 56 08.9	+0.9
	comp=Z,21nm,0.8s,baz=278,slow=6.8,SNR=59						
SNAA	Sanae	64.67	161	*i* P	P	15 56 08.1	+0.1
SNAA	Sanae	64.67	161	P	P	15 56 08.4	+0.4
JFWS	Jewell Farm	64.70	344	P	P	15 56 07.9	-0.6
JFWS				pmax	pmax		
	comp=Z,160nm,1.6s						
JFWS				MLR	MLR		
	comp=Z,2µm,18.0s						
JFWS	Jewell Farm	64.70	344	P	P	15 56 07.9	-0.6
JFWS	Jewell Farm	64.70	344	IAMs_20	IAMs_20	16 28 04.1	
	comp=Z,2µm,18.0s						
JFWS	Jewell Farm	64.70	344	P	P	15 56 07.9	-0.6
	baz=160,SNR=7.9						
T25A	Trinidad	64.72	331	P	P	15 56 09.6	+0.6
T25A				IAmb	IAmb	15 56 11.5	
	comp=Z,66nm,1.5s						
T25A	Trinidad	64.72	331	P	P	15 56 09.8	+0.8
	baz=145,SNR=14						
G55A	Calabogie	64.72	355	P	P	15 56 08.6	+0.1
	baz=174,SNR=9.1						
G53A	Haliburton	64.76	354	P	P	15 56 08.9	+0.1
	baz=172,SNR=21						
I45A	Fountain	64.85	348	IAMs_20	IAMs_20	16 29 31.2	
	comp=Z,2µm,18.0s						
I45A	Fountain	64.85	348	P	P	15 56 07.8	-1.5
	baz=164						
N33A	J Bar K, Exete	64.93	338	P	P	15 56 10.0	-0.1
F63A	Nahmakanta, Br	64.95	1	P	P	15 56 11.0	+0.9
F63A				IAMs_20	IAMs_20	16 23 26.0	
	comp=Z,2µm,21.0s						
F63A	Nahmakanta, Br	64.95	1	P	P	15 56 10.3	+0.3
	baz=182						
H48A	Harrisville	64.97	350	P	P	15 56 09.4	-0.7
H48A	Harrisville	64.97	350	P	P	15 56 09.4	-0.7
	baz=167,SNR=5.5						
G54A	Lake Saint Pet	64.98	354	P	P	15 56 10.4	+0.2
	baz=172,SNR=12						
H47A	Mio	65.02	349	P	P	15 56 09.6	-0.8
	baz=166						
F59A	Saint Guilaume	65.11	358	P	P	15 56 11.3	+0.3
	baz=178						
F64A	Sherman	65.13	2	P	P	15 56 11.7	+0.6
F64A				IAMs_20	IAMs_20	16 23 29.8	
	comp=Z,2µm,22.0s						
F64A	Sherman	65.13	2	P	P	15 56 12.0	+0.8
	baz=183,SNR=6.5						
H46A	Fife Lake	65.14	349	P	P	15 56 10.4	-0.9
	baz=165						
K38A	Parkersburg	65.14	342	P	P	15 56 10.8	-0.6
GBN	Guysborough	65.18	7	IAMs_20	IAMs_20	16 22 55.3	
	comp=Z,2µm,22.0s						
214A	Organ Pipe Nat	65.19	321	IAMs_20	IAMs_20	16 22 39.6	
	comp=Z,2µm,19.0s						
214A	Organ Pipe Nat	65.19	321	P	P	15 56 13.5	+1.5
	baz=136,SNR=9.3						
F60A	Warwick	65.21	359	P	P	15 56 12.1	+0.4
	baz=179,SNR=7.4						
F55A	Otter Lake	65.27	356	P	P	15 56 12.2	+0.1
	baz=174						
I42A	Draeger Farm,	65.30	346	P	P	15 56 11.2	-1.1
I42A				IAMs_20	IAMs_20	16 25 27.8	
	comp=Z,3µm,22.0s						
GLMI	Grayling	65.31	349	IAMs_20	IAMs_20	16 25 26.9	
	comp=Z,3µm,20.0s						
GLMI	Grayling	65.31	349	P	P	15 56 11.4	-1.0
	baz=166						
LMN	Caledonia Moun	65.31	5	P	P	15 56 11.9	-0.4
LMN				IAmb	IAmb	15 56 25.8	
	comp=Z,64nm,1.2s						
LMN				IAMs_20	IAMs_20	16 26 56.5	
	comp=Z,2µm,19.0s						
H45A	Beulah	65.38	348	P	P	15 56 12.1	-0.7
	baz=164						
X18A	Snowflake	65.46	325	P	P	15 56 14.6	+0.8
X18A				IAmb	IAmb	15 56 16.9	
	comp=Z,52nm,1.6s						
KSCO	Kaye Shedlock’	65.47	333	P	P	15 56 14.1	+0.4
KSCO	Kaye Shedlock’	65.47	333	P	P	15 56 13.2	-0.5
	baz=147						
F52A	Sundridge	65.50	353	P	P	15 56 13.4	-0.2
	baz=171,SNR=18						
G47A	Hillman	65.51	350	P	P	15 56 13.2	-0.5
	baz=166,SNR=9.5						
ALGO	Algonquin Park	65.53	354	P	P	15 56 13.6	-0.1
	baz=172,SNR=8.2						
TRQ	Mont Tremblant	65.55	357	P	P	15 56 14.3	+0.3
H43A	Windswept, Lux	65.59	347	P	P	15 56 13.5	-0.7
H43A				IAMs_20	IAMs_20	16 25 28.3	
	comp=Z,3µm,22.0s						
E60A	Ste Agathe de	65.61	359	P	P	15 56 14.5	+0.3
	baz=179						
E58A	La Victoria	65.65	358	P	P	15 56 15.2	+0.7
	baz=178,SNR=10						
E61A	Lac Etchemin	65.67	0	P	P	15 56 15.8	+1.2
	baz=180,SNR=6.2						
E63A	Oxbow	65.69	2	P	P	15 56 14.9	+0.1
E63A				IAmb	IAmb	15 56 17.0	
	comp=Z,96nm,1.4s						
E63A				IAMs_20	IAMs_20	16 23 46.5	
	comp=Z,2µm,22.0s						
E63A	Oxbow	65.69	2	P	P	15 56 15.4	+0.6
	baz=182,SNR=5.6						
F51A	Arnstein	65.70	353	P	P	15 56 14.6	-0.3
	baz=171,SNR=8.8						
G45A	Suttons Bay	65.70	348	P	P	15 56 14.0	-0.9
G45A				IAmb	IAmb	15 56 56.2	
	comp=Z,97nm,1.4s						
G45A				IAMs_20	IAMs_20	16 29 05.5	
	comp=Z,2µm,19.0s						
G45A	Suttons Bay	65.70	348	P	P	15 56 14.2	-0.7
	baz=165,SNR=6.8						
E64A	Bridgewater	65.71	2	P	P	15 56 15.9	+1.0
	baz=183						
I40A	Norwalk	65.71	344	P	P	15 56 14.3	-0.7
I40A				IAmb	IAmb	15 56 16.1	
	comp=Z,92nm,1.7s						
I40A				IAMs_20	IAMs_20	16 28 44.8	
	comp=Z,2µm,19.0s						
SDCO	Great Sand Dun	65.72	330	P	P	15 56 16.3	+0.8
SDCO				IAmb	IAmb	15 56 18.1	
	comp=Z,72nm,1.4s						
SDCO	Great Sand Dun	65.72	330	P	P	15 56 16.3	+0.8
	baz=144,SNR=32						
E57A	Chemin Saint G	65.72	357	P	P	15 56 15.6	+0.5
	baz=177,SNR=8.5						
E59A	St. Maurice	65.74	359	P	P	15 56 15.6	+0.5
	baz=178						
BGNE	Belgrade	65.77	338	P	P	15 56 15.3	-0.2
BGNE	Belgrade	65.77	338	P	P	15 56 15.5	+0.1
	baz=152,SNR=6.5						
W18A	Petrified Fore	65.78	326	P	P	15 56 16.6	+0.7
W18A				IAmb	IAmb	15 57 00.4	
	comp=Z,96nm,1.6s						
W18A				IAMs_20	IAMs_20	16 25 41.8	
	comp=Z,2µm,19.0s						
W18A	Petrified Fore	65.78	326	P	P	15 56 16.6	+0.7
	baz=140						
F49A	Sandfield	65.81	351	P	P	15 56 14.7	-0.9
	baz=168,SNR=8.0						
G46A	Petoskey	65.83	349	P	P	15 56 15.1	-0.6
	baz=166						
E55A	Montcerf-Lytto	65.87	356	P	P	15 56 16.0	+0.1
	baz=175						
E56A	St. Veronique	65.89	357	P	P	15 56 16.1	0.0
	baz=176,SNR=16						
E52A	Mattawa	65.92	354	P	P	15 56 16.2	0.0
	baz=172,SNR=10						
E53A	Dumoine, Ponti	65.92	355	P	P	15 56 16.4	+0.2
	baz=173,SNR=6.9						
E54A	Lac Daplat, Po	65.93	355	P	P	15 56 16.3	0.0
	baz=173,SNR=9.6						
PQI	Presque Isle	65.95	2	P	P	15 56 17.0	+0.5
PQI				IAmb	IAmb	15 56 18.7	
	comp=Z,94nm,1.4s						
PQI				IAMs_20	IAMs_20	16 24 15.4	
	comp=Z,2µm,21.0s						
F48A	Evansville	65.96	351	P	P	15 56 16.0	-0.6
	baz=168,SNR=10.0						
D60A	Saint Jean D’O	66.15	360	P	P	15 56 18.5	+0.8
	baz=180,SNR=6.1						
X16A	Lo Mia Camp, P	66.19	324	P	P	15 56 20.0	+1.5
X16A				IAMs_20	IAMs_20	16 23 47.3	
	comp=Z,2µm,20.0s						
E51A	G1948 Merrick	66.25	353	P	P	15 56 18.3	-0.1

	baz=171,SNR=15						
D59A	Saint-Raymond	66.25	359	P	P	15 56 17.3	-1.1
	baz=179						
F45A	CMU Biological	66.30	349	P	P	15 56 17.9	-0.8
	baz=165,SNR=12						
D57A	Chemin Vers le	66.31	358	P	P	15 56 19.3	+0.5
	baz=177,SNR=17						
D63A	Stockholm	66.31	2	P	P	15 56 19.8	+1.0
	baz=183						
D62A	Allapoint, All	66.33	1	P	P	15 56 19.6	+0.7
D62A				IAMs_20	IAMs_20	16 24 28.5	
	comp=Z,3μm,21.0s						
D62A	Allapoint, All	66.33	1	P	P	15 56 19.8	+0.9
	baz=182,SNR=11						
S22A	4UR Ranch, Cre	66.35	329	P	P	15 56 20.4	+0.7
S22A	4UR Ranch, Cre	66.35	329	P	P	15 56 20.8	+1.2
	baz=143,SNR=11						
D58A	Chemin du LacG	66.36	358	P	P	15 56 19.8	+0.7
	baz=178,SNR=25						
D56A	ZEC Mazanza, M	66.39	357	P	P	15 56 19.5	+0.2
	baz=176,SNR=9.6						
D55A	Sainte-Anne-du	66.39	356	P	P	15 56 19.4	+0.1
	baz=175,SNR=15						
D61A	St Aubert, Com	66.44	0	P	P	15 56 20.4	+0.9
	baz=181,SNR=8.7						
E48A	Lockeyer	66.53	351	P	P	15 56 19.7	-0.5
	baz=168,SNR=11						
Q24A	Divide	66.54	331	IAMs_20	IAMs_20	16 28 23.4	
	comp=Z,2μm,21.0s						
I37A	Lemond, Waseca	66.58	342	P	P	15 56 19.7	-0.9
D54A	Lac Fusel, La	66.60	356	P	P	15 56 20.5	-0.1
	baz=174,SNR=11						
D53A	Lac Vacive, Po	66.61	355	P	P	15 56 19.9	-0.8
D53A				IAmb	IAmb	15 56 21.7	
	comp=Z,25nm,0.8s						
D53A				IAMs_20	IAMs_20	16 26 41.7	
	comp=Z,3μm,20.0s						
D53A	Lac Vacive, Po	66.61	355	P	P	15 56 20.9	+0.2
	baz=173,SNR=11						
BATG	Bathurst New B	66.64	3	P	P	15 56 20.9	0.0
BATG				IAmb	IAmb	15 56 45.9	
	comp=Z,35nm,0.9s						
BATG				IAMs_20	IAMs_20	16 23 55.8	
	comp=Z,2μm,22.0s						
LATQ	La Tuque	66.65	358	P	P	15 56 20.9	0.0
LATQ				IAmb	IAmb	15 56 23.9	
	comp=Z,72nm,1.8s						
LATQ	La Tuque	66.65	358	P	P	15 56 22.0	+1.1
	baz=178						
E47A	Iron Bridge	66.67	351	P	P	15 56 20.5	-0.6
	baz=167,SNR=14						
E46A	Sault Ste Mari	66.75	350	P	P	15 56 20.7	-0.8
E46A				IAmb	IAmb	15 57 01.1	
	comp=Z,30nm,0.9s						
MVCO	Mesa Verde	66.75	328	P	P	15 56 21.4	-0.7
MVCO				IAmb	IAmb	15 56 24.8	
	comp=Z,96nm,1.8s						
MVCO				IAMs_20	IAMs_20	16 25 36.4	
	comp=Z,2μm,18.0s						
MVCO	Mesa Verde	66.75	328	P	P	15 56 23.2	+1.1
	baz=141,SNR=13						
D51A	Lot 18 Range I	66.78	354	P	P	15 56 21.6	-0.2
	baz=171,SNR=10						
OGNE	Ogallala	66.85	335	P	P	15 56 22.9	+0.4
OGNE				IAmb	IAmb	15 56 24.5	
	comp=Z,81nm,1.4s						
OGNE	Ogallala	66.85	335	P	P	15 56 23.3	+0.8
	baz=148,SNR=5.2						
F42A	Maple Grove Fa	66.89	347	IAMs_20	IAMs_20	16 26 17.9	
	comp=Z,3μm,21.0s						
G40A	Rib Lake	66.90	345	P	P	15 56 21.4	-1.2
G40A				IAmb	IAmb	15 56 37.9	
	comp=Z,59nm,1.7s						
G40A				IAMs_20	IAMs_20	16 26 17.3	
	comp=Z,2μm,21.0s						
D50A	G1974 Best Tow	66.91	353	P	P	15 56 22.3	-0.3
	baz=171,SNR=30						
WUAZ	Wupatki	66.97	325	P	P	15 56 24.7	+1.2
WUAZ				IAmb	IAmb	15 56 54.3	
	comp=Z,34nm,1.1s						
WUAZ				IAMs_20	IAMs_20	16 24 01.0	
	comp=Z,2μm,20.0s						
WUAZ	Wupatki	66.97	325	P	P	15 56 25.1	+1.7
	baz=138,SNR=13						
D48A	Paudash Townsh	67.16	352	P	P	15 56 23.5	-0.7
	baz=169,SNR=9.1						
GLA	Glamis	67.16	321	P	P	15 56 26.1	+1.5
GLA				pmax	pmax		
	comp=Z,52nm,1.6s						
GLA	Glamis	67.16	321	P	P	15 56 26.1	+1.5
GLA				IAmb	IAmb	15 56 27.9	
	comp=Z,52nm,1.6s						
GLA	Glamis	67.16	321	P	P	15 56 26.3	+1.7
	baz=135,SNR=5.8						
D46A	Sault St. Mari	67.21	350	P	P	15 56 23.8	-0.7
	baz=166						
D47A	Chapleau	67.23	351	P	P	15 56 23.8	-0.8
	baz=168,SNR=9.8						
E43A	Lone Tree Farm	67.25	348	P	P	15 56 24.1	-0.6
E43A				IAmb	IAmb	15 56 37.6	
	comp=Z,29nm,1.0s						
E43A				IAMs_20	IAMs_20	16 29 00.3	
	comp=Z,2μm,20.0s						
E44A	Grand Marais A	67.28	349	P	P	15 56 24.7	-0.2
E44A				IAmb	IAmb	15 56 38.3	
	comp=Z,58nm,1.2s						
E44A				IAMs_20	IAMs_20	16 27 35.1	
	comp=Z,3μm,21.0s						
E44A	Grand Marais A	67.28	349	P	P	15 56 24.7	-0.2
	baz=165						
ECSD	EROS Data Cent	67.31	340	P	P	15 56 24.8	-0.5
ECSD	EROS Data Cent	67.31	340	P	P	15 56 25.3	+0.1
	baz=154,SNR=29						
ISCO	Idaho Springs	67.43	331	P	P	15 56 26.2	-0.3
ISCO				pmax	pmax		
	comp=Z,47nm,1.5s						
ISCO				MLR	MLR		
	comp=Z,800nm,21.0s						
ISCO	Idaho Springs	67.43	331	P	P	15 56 26.2	-0.3
ISCO				IAmb	IAmb	15 56 28.9	
	comp=Z,47nm,1.5s						
ISCO	Idaho Springs	67.43	331	P	P	15 56 26.5	0.0
	baz=144,SNR=16						
COWI	Conover	67.44	346	P	P	15 56 25.4	-0.7
Y12C	Blythe	67.47	321	P	P	15 56 26.6	+0.2
Y12C	Blythe	67.47	321	P	P	15 56 27.8	+1.3
	baz=135						
PV01	Paradox Valley	67.50	328	P	P	15 56 27.9	+1.0
PV01				IAmb	IAmb	15 56 29.8	
	comp=Z,48nm,1.4s						
SPMN	Marine on St.	67.53	343	P	P	15 56 26.0	-0.6
SPMN				IAmb	IAmb	15 56 27.5	
	comp=Z,54nm,1.3s						
SPMN				IAMs_20	IAMs_20	16 30 40.6	
	comp=Z,2μm,18.0s						
SPMN	Marine on St.	67.53	343	P	P	15 56 26.1	-0.5
	baz=158,SNR=5.6						
SMCO	Snowmass	67.56	330	IAMs_20	IAMs_20	16 28 13.1	
	comp=Z,1μm,19.0s						
PV15	Paradox Valley	67.62	329	P	P	15 56 28.6	+1.0
PV15				IAmb	IAmb	15 56 30.7	
	comp=Z,67nm,1.3s						
VLDQ	Val d'Or	67.62	355	P	P	15 56 27.3	+0.2
VLDQ				IAmb	IAmb	15 56 28.9	
	comp=Z,71nm,1.4s						
VLDQ				IAMs_20	IAMs_20	16 27 02.0	
	comp=Z,2μm,20.0s						
PDMCI	Parker Dam,Lak	67.64	322	P	P	15 56 27.1	-0.4
	baz=136						
PV02	Paradox Valley	67.64	328	P	P	15 56 28.4	+0.7
PV13	Radium Mtn., P	67.64	328	P	P	15 56 28.5	+0.7
PV13				IAmb	IAmb	15 56 30.5	
	comp=Z,50nm,1.4s						
PV13				IAMs_20	IAMs_20	16 28 32.1	
	comp=Z,2μm,19.0s						
IKP	In-Ko-Pah, Jac	67.66	320	P	P	15 56 29.3	+1.5
	baz=134,SNR=7.7						
SWSC	Sam W. Stewart	67.67	320	P	P	15 56 29.4	+1.7
	baz=134						
PV05	Paradox Valley	67.72	328	P	P	15 56 28.6	+0.3
PV05				IAmb	IAmb	15 56 37.8	
	comp=Z,38nm,1.3s						
PV05				IAMs_20	IAMs_20	16 28 32.9	
	comp=Z,2μm,20.0s						
PV03	Paradox Valley	67.73	328	P	P	15 56 28.3	0.0
PV03				IAmb	IAmb	15 56 31.0	
	comp=Z,47nm,1.6s						
PV18	Skein Mesa, Pa	67.76	328	P	P	15 56 28.4	-0.1
PV12	Saucer Basin,	67.76	328	P	P	15 56 29.2	+0.7
TAOE	Nuku Hiva Isla	67.77	268	*e*LR	LR	16 16 44.6	
	comp=Z,2μm,26.4s,baz=113						
TAOE	Nuku Hiva Isla	67.77	268	*e*T	T	17 09 48.1	
	comp=Z,42nm,0.2s						
PV07	Paradox Valley	67.78	329	P	P	15 56 29.4	+0.8
PV07				IAmb	IAmb	15 56 38.5	
	comp=Z,49nm,1.6s						
PV11	David Mesa, Pa	67.78	328	P	P	15 56 28.9	+0.4
PV17	East Wray Mesa	67.81	328	P	P	15 56 29.1	+0.3
PV17				IAmb	IAmb	15 56 38.5	
	comp=Z,67nm,1.8s						
PV16	Nyswonger Mesa	67.81	328	P	P	15 56 29.2	+0.4
PV16				IAmb	IAmb	15 56 31.5	
	comp=Z,56nm,1.6s						
PV16				IAMs_20	IAMs_20	16 27 58.5	
	comp=Z,2μm,18.0s						
PV19	Morning Glory	67.84	328	P	P	15 56 29.2	+0.2
PV19				IAMs_20	IAMs_20	16 28 36.4	
	comp=Z,2μm,20.0s						
PV20	West Nyswonger	67.86	328	P	P	15 56 28.7	-0.4
PV20				IAMs_20	IAMs_20	16 28 37.8	
	comp=Z,2μm,20.0s						
PV04	Paradox Valley	67.87	328	P	P	15 56 29.0	-0.1
PV04				IAmb	IAmb	15 56 49.2	
	comp=Z,78nm,1.9s						
PV14	Lion Creek, Pa	67.91	328	P	P	15 56 29.6	+0.1
PV22	Blue Mesa, Par	67.92	329	P	P	15 56 29.4	0.0
PV10	Paradox Valley	67.92	328	P	P	15 56 29.4	-0.1
BC3	Big Chuckawall	67.96	321	P	P	15 56 31.4	+1.7
	baz=134,SNR=6.9						
PV23	Carpenter Ridg	67.97	328	P	P	15 56 29.4	-0.5
MONP2	Monument Peak	68.02	320	P	P	15 56 32.0	+1.8
	baz=134,SNR=7.1						
BAR	Barrett	68.03	319	P	P	15 56 30.5	+0.5
BAR				IAmb	IAmb	15 56 52.4	
	comp=Z,34nm,1.1s						
PV21	Cone Mtn., Par	68.03	328	P	P	15 56 30.2	0.0
PV21				IAmb	IAmb	15 56 40.0	
	comp=Z,103nm,1.9s						
W13A	Hualapai Mount	68.06	323	P	P	15 56 31.1	+0.6
PV09	Paradox Valley	68.06	328	P	P	15 56 31.0	+0.5
IRM	Iron Mountain	68.13	321	P	P	15 56 32.4	+1.8
	baz=135,SNR=14						
U15A	North Rim	68.14	325	P	P	15 56 32.0	+1.0
U15A				IAMs_20	IAMs_20	16 24 28.1	
	comp=Z,2μm,19.0s						
D41A	Chassel	68.22	347	P	P	15 56 30.9	0.0
D41A				IAmb	IAmb	15 56 46.4	
	comp=Z,49nm,0.9s						
D41A				IAMs_20	IAMs_20	16 26 47.1	
	comp=Z,3μm,22.0s						
NEE2	Needles Airpor	68.25	322	P	P	15 56 32.8	+1.4
	baz=136						
109C	Camp Elliot, M	68.44	319	P	P	15 56 33.8	+1.3
	baz=133						
N23A	Red Feather La	68.47	332	P	P	15 56 33.4	+0.4
N23A				IAmb	IAmb	15 56 35.4	
	comp=Z,42nm,1.4s						
N23A	Red Feather La	68.47	332	P	P	15 56 33.7	+0.8
	baz=144,SNR=12						
E38A	The Farm, Brul	68.49	345	P	P	15 56 32.0	-0.6
E38A				IAMs_20	IAMs_20	16 28 00.2	
	comp=Z,2μm,21.0s						
BELC	Belle Mtn. Jos	68.52	321	P	P	15 56 35.0	+1.7
	baz=134,SNR=6.0						
LSQQ	Lebel-sur-Quev	68.52	356	P	P	15 56 32.4	-0.4
	baz=174						
XPFO	Pion Flat	68.53	320	P	P	15 56 34.4	+1.1
XPFO				IAmb	IAmb	15 56 36.8	
	comp=Z,55nm,1.6s						
PFO	Pinyon Flats O	68.53	320	*i* P	P	15 56 34.5	+1.2
PFO				pmax	pmax		
	comp=Z,48nm,1.6s						
PFO	Pinyon Flats O	68.53	320	P	P	15 56 34.5	+1.2
PFO				IAmb	IAmb	15 56 36.8	
	comp=Z,59nm,1.7s						
PFO	Pinyon Flats O	68.53	320	P	P	15 56 34.6	+1.2
	baz=134,SNR=7.4						
PHWY	Pilot Hill	68.58	333	P	P	15 56 34.4	+0.7
PHWY				IAmb	IAmb	15 56 36.9	
	comp=Z,79nm,1.6s						
SUSD	Miller	68.72	339	P	P	15 56 34.2	+0.1
SUSD				IAmb	IAmb	15 56 35.4	
	comp=Z,76nm,1.2s						
SUSD	Miller	68.72	339	P	P	15 56 34.0	-0.1
	baz=152						
KNB	Kanab	68.86	325	P	P	15 56 37.5	+2.1
KNB				pmax	pmax		
	comp=Z,190nm,1.7s						
KNB	Kanab	68.86	325	P	P	15 56 37.5	+2.1
GMRC	Granite Mounta	68.87	321	P	P	15 56 37.3	+1.9
	baz=135,SNR=13						
PKCU	Pink Cliffs	68.90	326	P	P	15 56 37.1	+1.3
O20A	White River Ci	68.91	330	P	P	15 56 36.4	+0.7
O20A				IAmb	IAmb	15 56 53.2	
	comp=Z,104nm,1.8s						
O20A				IAMs_20	IAMs_20	16 27 39.7	
	comp=Z,2μm,19.0s						
O20A	White River Ci	68.91	330	P	P	15 56 36.6	+1.0
	baz=142,SNR=8.5						
MURC	Murrieta	68.97	320	P	P	15 56 37.0	+1.0
	baz=133						
LCMT	Little Creek M	69.09	325	P	P	15 56 38.1	+1.4
SRU	San Rafael Swe	69.23	328	P	P	15 56 38.8	+1.2
SRU				pmax	pmax		
	comp=Z,54nm,1.4s						
SRU	San Rafael Swe	69.23	328	P	P	15 56 38.8	+1.2
NVL	N'lazarevskaya	69.25	159⇑	*i*P	P	15 56 34.4	-2.7
NVL				*e*PPP	PPP	16 00 53.3	
NVL				*i* S	S	16 05 37.5	-5.2
NVL				pmax	pmax		
	comp=Z,69nm,1.2s						
BBRC	Big Bear Solar	69.26	320	P	P	15 56 39.4	+1.5
	baz=134						
MATQ	Matagami	69.27	355	P	P	15 56 37.0	-0.4
	baz=173,SNR=12						
MTPU	Mount Pierson	69.28	326	P	P	15 56 39.5	+1.3
HEC	Hector,Ludlow	69.30	321	P	P	15 56 39.5	+1.5
	baz=134						
SCI2	San Clemente I	69.39	318	P	P	15 56 39.4	+0.9
	baz=132						
Q16A	Castle Valley	69.41	327	P	P	15 56 40.5	+1.7
SZCU	Shurtz Canyon	69.43	325	P	P	15 56 40.5	+1.6
TUQ	Turquoise Moun	69.48	322	P	P	15 56 40.6	+1.5
	baz=135						
DRLN	Deer Lake	69.50	9	P	P	15 56 38.8	0.0
LIC	Lamto	69.50	75	*e*P	P	15 56 38.5	-1.1
	comp=Z,79nm,1.2s						
CCUT	Cedar City	69.55	325	P	P	15 56 42.0	+2.3
CIS	Catalina Islan	69.59	319	P	P	15 56 40.8	+1.0
	baz=132						
P17A	Butcher Ranch,	69.61	328	P	P	15 56 41.3	+1.4
MSU	Marysvale	69.62	326	P	P	15 56 41.7	+1.6
MSU	Marysvale	69.62	326	P	P	15 56 41.7	+1.6
RWWY	Rawlins	69.67	332	P	P	15 56 40.1	-0.2
RWWY				IAmb	IAmb	15 56 42.0	
	comp=Z,95nm,1.6s						
TIC	Toumodi	69.67	75	*e*P	P	15 56 39.7	-1.0
	comp=Z,38nm,0.9s						
BFSC	Mount Baldy Ra	69.69	320	P	P	15 56 41.4	+0.9
	baz=133,SNR=5.0						
TMUT	Trail Mountain	69.71	328	P	P	15 56 41.0	+0.3
EYMN	Ely	69.72	345	P	P	15 56 39.1	-1.1
EYMN				IAmb	IAmb	15 56 53.1	
	comp=Z,62nm,1.5s						
EYMN	Ely	69.72	345	IAMs_20	IAMs_20	16 28 03.9	
	comp=Z,2μm,20.0s						
EYMN	Ely	69.72	345	P	P	15 56 39.6	-0.7
	baz=159,SNR=9.9						
RRX	Edison Barstow	69.72	321	P	P	15 56 42.0	+1.4
	baz=134						
FMP	Fort Macarthur	69.72	319	P	P	15 56 40.9	+0.4
	baz=132						
SHPR	Sheep Range	69.79	323	P	P	15 56 42.3	+1.2
KIC	Kosan Boka	69.82	75	*e*P	P	15 56 40.7	-0.9
	comp=Z,52nm,0.9s						
DBIC	Dimbokro	69.83	75	P	P	15 56 40.6	-1.1
	comp=Z,20nm,0.9s,baz=208,slow=7.7,SNR=18						
DBIC	Dimbokro	69.83	75	P	P	15 56 39.4	-2.2
DBIC				IAmb	IAmb	15 56 41.5	
	comp=Z,39nm,1.1s						
RDMU	Red Mountain	69.88	329	P	P	15 56 42.5	+0.9
GSC	Goldstone, Bar	69.90	321	P	P	15 56 42.5	+0.8
	baz=134,SNR=5.4						
MWC	Mount Wilson	69.92	320	P	P	15 56 42.1	+0.1
MWC				pmax	pmax		
	comp=Z,91nm,1.6s						
MWC	Mount Wilson	69.92	320	P	P	15 56 42.1	+0.1
MWC				IAmb	IAmb	15 56 45.3	
	comp=Z,91nm,1.6s						
PASC	Pasadena Art C	69.97	319	P	P	15 56 43.7	+1.7
PASC				IAmb	IAmb	15 56 45.4	
	comp=Z,49nm,1.3s						
DECC	Green Verdugo	70.11	319	P	P	15 56 44.3	+1.4
	baz=132						
K22A	Casper	70.14	333	P	P	15 56 42.9	-0.2
K22A				IAmb	IAmb	15 56 45.6	
	comp=Z,79nm,1.6s						
K22A	Casper	70.14	333	P	P	15 56 44.3	+1.2
	baz=144,SNR=7.0						
SNCC	San Nicolas Is	70.19	318	P	P	15 56 44.4	+1.0
	baz=131						
RSSD	Black Hills	70.32	335	P	P	15 56 43.2	-1.1
RSSD				pmax	pmax		
	comp=Z,57nm,1.6s						
RSSD				MLR	MLR		
	comp=Z,1μm,21.0s						
RSSD	Black Hills	70.32	335	P	P	15 56 43.1	-1.1
RSSD				IAmb	IAmb	15 57 01.2	
	comp=Z,57nm,1.6s						
RSSD	Black Hills	70.32	335	IAMs_20	IAMs_20	16 29 59.2	
	comp=Z,1μm,21.0s						
RSSD	Black Hills	70.32	335	P	P	15 56 45.1	+0.9
	baz=147						
EDW2	Edwards Air Fo	70.33	320	P	P	15 56 45.8	+1.5
	baz=133,SNR=11						
BLG	Laguna Peak, P	70.47	319	P	P	15 56 46.8	+1.7
	baz=132						
MPU	Maple Canyon	70.47	328	P	P	15 56 46.2	+0.9
D32A	Dogwood Acres,	70.48	341	IAMs_20	IAMs_20	16 33 44.6	
	comp=Z,2μm,18.0s						
PSUT	Pine Spring	70.53	325	P	P	15 56 47.2	+1.5
LRMC	Laurel Mtn Rad	70.55	321	P	P	15 56 47.4	+1.6
	baz=133,SNR=5.9						
OSI	Osito Audit: C	70.59	319	P	P	15 56 47.6	+1.7
	baz=132						
QSPA	South Pole Qui	70.63	180	P	P	15 56 47.4	+1.6
	comp=Z,23nm,0.7s,baz=173,slow=1.0,SNR=138						
QSPA	South Pole Qui	70.63	180	P	P	15 56 46.8	+0.9
QSPA				IAmb	IAmb	15 56 48.0	
	comp=Z,41nm,0.9s						
NLU	North Lily Min	70.65	327	P	P	15 56 46.0	-0.4
TPNV	Topopah Spring	70.72	323	P	P	15 56 48.3	+1.5
TPNV				pmax	pmax		
	comp=Z,32nm,1.0s						
TPNV				MLR	MLR		
	comp=Z,900nm,22.0s						
TPNV	Topopah Spring	70.72	323	P	P	15 56 48.3	+1.5
TPNV				IAmb	IAmb	15 57 16.9	
	comp=Z,32nm,1.0s						
TPNV	Topopah Spring	70.72	323	P	P	15 56 49.1	+2.3
	baz=135,SNR=19						
FURC	Furnace Creek,	70.74	322	P	P	15 56 48.3	+1.6
	baz=134						
SCZ2	Santa Cruz Isl	70.75	318	P	P	15 56 48.3	+1.4
	baz=131						
JLU	Jordanelle	70.82	328	P	P	15 56 48.0	+0.6
MPMC	Manual Prospec	70.83	321	P	P	15 56 48.5	+1.0
	baz=134,SNR=11						
ARVC	Arvin	71.00	320	P	P	15 56 49.9	+1.5
	baz=132						
SBC	Santa Barbara	71.09	319	P	P	15 56 49.6	+0.7
	baz=131						
ISA	Isabella, Lake	71.14	320	P	P	15 56 50.5	+1.2
ISA				pmax	pmax		
	comp=Z,76nm,1.6s						
ISA	Isabella, Lake	71.14	320	P	P	15 56 50.5	+1.2
ISA				IAmb	IAmb	15 56 52.7	
	comp=Z,76nm,1.6s						
ISA	Isabella, Lake	71.14	320	P	P	15 56 50.6	+1.3
	baz=133,SNR=15						
E28A	Huff	71.17	339	P	P	15 56 48.7	-0.5
AGMN	Agassiz Nation	71.19	343	P	P	15 56 47.6	-1.6
AGMN				IAMs_20	IAMs_20	16 32 55.4	
	comp=Z,2μm,18.0s						
AGMN	Agassiz Nation	71.19	343	P	P	15 56 49.0	-0.2
	baz=155,SNR=8.1						
TCUT	Toone Canyon	71.19	329	P	P	15 56 49.4	-0.3
DUG	Dugway, Tooele	71.21	327	P	P	15 56 50.2	+0.5
DUG				pmax	pmax		
	comp=Z,71nm,1.4s						
DUG				MLR	MLR		
	comp=Z,2μm,20.0s						
DUG	Dugway, Tooele	71.21	327	P	P	15 56 50.2	+0.5
DUG				IAmb	IAmb	15 56 52.9	
	comp=Z,70nm,1.4s						
DUG				IAMs_20	IAMs_20	16 29 11.9	
	comp=Z,2μm,20.0s						
DUG	Dugway, Tooele	71.21	327	P	P	15 56 50.9	+1.3
	baz=138,SNR=20						
R11A	Troy Canyon, C	71.34	324	P	P	15 56 52.1	+1.5
R11A				IAmb	IAmb	15 57 01.3	
	comp=Z,100nm,2.0s						
R11A	Troy Canyon, C	71.34	324	P	P	15 56 52.2	+1.6
	baz=136,SNR=34						
GRAC	Grapevine Rang	71.40	322	P	P	15 56 52.4	+1.6
	baz=134						
CWC	Cottonwood Cre	71.44	321	P	P	15 56 52.3	+1.2
	baz=133						
PKM	Mcpherson Peak	71.44	319	P	P	15 56 53.0	+1.7
	baz=132,SNR=13						
BW06	Boulder Array	71.59	331	P	P	15 56 51.6	-0.4
BW06				IAMs_20	IAMs_20	16 29 35.6	
	comp=Z,1μm,20.0s						
BW06	Boulder Array	71.59	331	P	P	15 56 52.2	+0.2
	baz=142,SNR=16						
PD31	Pinedale Array	71.59	331	P	P	15 56 51.5	-0.5
PDAR	Pinedale Array	71.59	331	P	P	15 56 52.8	+0.8
	comp=Z,3.0nm,0.7s,baz=141,slow=5.7,SNR=24						
PDAR	Pinedale Array	71.59	331	P	P	15 56 52.0	0.0
VES	Vestal, Richgr	71.63	320	P	P	15 56 53.7	+1.6
	baz=132						
HWUT	Hardware Ranch	71.64	329	P	P	15 56 52.3	-0.1
HWUT				IAmb	IAmb	15 56 54.7	
	comp=Z,50nm,1.4s						
HWUT				IAMs_20	IAMs_20	16 26 41.0	
	comp=Z,1μm,20.0s						
SMMC	Simmler	71.84	319	P	P	15 56 54.8	+1.3
	baz=132						
SPUT	South Promonto	71.85	328	P	P	15 56 54.1	+0.5
BGU	Big Grassy Mou	71.86	328	P	P	15 56 53.8	+0.2
MDND	Maddock	71.92	340	P	P	15 56 53.6	0.0
MDND				IAMs_20	IAMs_20	16 32 08.8	
	comp=Z,1μm,20.0s						
MDND	Maddock	71.92	340	P	P	15 56 54.0	+0.4
	baz=152,SNR=5.6						
TIN	Tinemaha, Big	71.94	322	P	P	15 56 55.7	+1.6
	baz=133						
VOG	Valley Oaks Go	72.13	320	P	P	15 56 55.9	+0.8
	baz=132						
PAGB	Antelope Grade	72.27	319	P	P	15 56 57.4	+1.4
PAGB				IAmb	IAmb	15 56 59.5	
	comp=Z,105nm,1.6s						
AHID	Auburn Hatcher	72.30	330	P	P	15 56 56.8	+0.5
AHID				IAmb	IAmb	15 56 58.5	
	comp=Z,57nm,1.4s						
AHID				IAMs_20	IAMs_20	16 29 38.5	
	comp=Z,2μm,21.0s						
HVU	Hansel Valley	72.37	328	P	P	15 56 57.0	+0.3
HVU				pmax	pmax		
	comp=Z,74nm,1.6s						
HVU	Hansel Valley	72.37	328	P	P	15 56 57.0	+0.3
TBI	Tubuai	72.53	251	*e*S	S	16 06 22.3	-0.1
	comp=Z,3μm,28.0s						
TBI	Tubuai	72.53	251	*e*LR	LR	16 19 01.3	
	comp=Z,6μm,26.8s,baz=102						
REDW	Red Top Meadow	72.65	330	P	P	15 56 58.4	0.0
REDW				IAmb	IAmb	15 57 15.8	
	comp=Z,75nm,1.6s						
REDW				IAMs_20	IAMs_20	16 29 30.6	
	comp=Z,1μm,20.0s						
SNOW	Snow King Moun	72.68	331	P	P	15 56 58.8	+0.2
SNOW				IAMs_20	IAMs_20	16 29 43.5	
	comp=Z,1μm,19.0s						
MLAC	Mammoth, Mammo	72.69	322	P	P	15 56 59.8	+1.1
	baz=133						
OMMB	Old Mammoth Mi	72.77	322	P	P	15 56 59.7	+0.4
OMMB				IAmb	IAmb	15 57 03.3	
	comp=Z,109nm,1.8s						
TPAW	Teton Pass	72.79	331	P	P	15 56 59.6	+0.4

MDPB	**Devils Postpil**	**72.83**	**322**	P	**P**	**15 56 59.4**	**-0.2**
NV11	**Mina Array Sit**	**72.84**	**323**	P	**P**	**15 56 60.0**	**+0.5**
ELK	**Elko**	**72.87**	**326**	P	**P**	**15 57 00.4**	**+0.6**
ELK				pmax	pmax		
	comp=Z,37nm,1.6s						
ELK				MLR	MLR		
	comp=Z,2μm,19.0s						
ELK	**Elko**	**72.87**	**326**	P	**P**	**15 57 00.3**	**+0.6**
ELK				IAMs_20	IAMs_20	16 28 03.2	
	comp=Z,2μm,19.0s						
NVAR	**Mina Array Bea**	**72.92**	**323**	P	**P**	**15 57 01.9**	**+1.8**
	comp=Z,3.9nm,0.7s,baz=137,slow=5.7,SNR=35						
NVAR				LR	LR	16 27 54.3	
	comp=Z,589nm,20.9s,baz=148,slow=35						
NVAR	**Mina Array Bea**	**72.92**	**323**	P	**P**	**15 57 00.7**	**+0.6**
FXWY	**Fox Creek**	**72.94**	**331**	P	**P**	**15 56 59.8**	**-0.3**
FXWY				IAMs_20	IAMs_20	16 32 00.4	
	comp=Z,1μm,18.0s						
ULM	**Lac du Bonnet**	**72.97**	**343**	P	**P**	**15 56 59.0**	**-0.7**
	comp=Z,14nm,1.0s,baz=149,slow=5.7,SNR=19						
ULM	**Lac du Bonnet**	**72.97**	**343**	*i*P	**P**	**15 56 58.6**	**-1.2**
ULM	**Lac du Bonnet**	**72.97**	**343**	P	**P**	**15 56 58.9**	**-0.9**
ULM				IAmb	IAmb	15 57 00.7	
	comp=Z,76nm,1.6s						
ULM				IAMs_20	IAMs_20	16 30 49.4	
	comp=Z,2μm,22.0s						
PMOZ	**Porto Moniz, M**	**72.98**	**45**	*e*LR	LR	16 26 22.8	
	comp=Z,1μm,18.0s						
IMW	**Indian Meadow**	**73.10**	**331**	P	**P**	**15 57 00.4**	**-0.7**
IMW				IAmb	IAmb	15 57 03.8	
	comp=Z,68nm,1.5s						
IMW				IAMs_20	IAMs_20	16 32 22.7	
	comp=Z,1μm,19.0s						
FLWY	**Flagg Ranch**	**73.13**	**331**	P	**P**	**15 57 01.8**	**+0.6**
FLWY				IAmb	IAmb	15 57 15.3	
	comp=Z,87nm,1.3s						
FLWY				IAMs_20	IAMs_20	16 31 50.5	
	comp=Z,1μm,18.0s						
RYN	**Ryan**	**73.18**	**323**	P	**P**	**15 57 02.1**	**+0.5**
KVN	**Kaiserville**	**73.23**	**323**	P	**P**	**15 57 01.7**	**-0.2**
KVN				pmax	pmax		
	comp=Z,48nm,1.5s						
KVN				MLR	MLR		
	comp=Z,800nm,19.0s						
KVN	**Kaiserville**	**73.23**	**323**	P	**P**	**15 57 01.7**	**-0.2**
RLMT	**Red Lodge**	**73.31**	**333**	P	**P**	**15 57 01.8**	**-0.4**
RLMT				IAmb	IAmb	15 57 04.9	
	comp=Z,91nm,1.6s						
RLMT				IAMs_20	IAMs_20	16 28 36.2	
	comp=Z,1μm,21.0s						
RLMT	**Red Lodge**	**73.31**	**333**	P	**P**	**15 57 03.4**	**+1.2**
	baz=142,SNR=13						
LAO	**LASA Array**	**73.31**	**335**	P	**P**	**15 57 01.9**	**-0.1**
LAO				IAmb	IAmb	15 57 04.4	
	comp=Z,69nm,1.2s						
LAO	**LASA Array**	**73.31**	**335**	P	**P**	**15 57 02.7**	**+0.7**
	baz=145,SNR=6.3						
H17A	**Grant Village**	**73.32**	**331**	P	**P**	**15 57 02.2**	**-0.1**
H17A	**Grant Village**	**73.32**	**331**	P	**P**	**15 57 03.9**	**+1.5**
	baz=141,SNR=14						
YPP	**Pitchstone Pla**	**73.33**	**331**	P	**P**	**15 57 03.0**	**+0.6**
LKWY	**Lake**	**73.37**	**332**	P	**P**	**15 57 03.6**	**+0.9**
LKWY				pmax	pmax		
	comp=Z,193nm,2.0s						
LKWY				MLR	MLR		
	comp=Z,3μm,21.0s						
LKWY	**Lake**	**73.37**	**332**	P	**P**	**15 57 03.6**	**+0.9**
YMP	**Mirror Lake Pl**	**73.40**	**332**	P	**P**	**15 57 03.8**	**+0.9**
YUF	**Upper Falls**	**73.54**	**332**	P	**P**	**15 57 04.0**	**+0.4**
YNE	**Yellowstone No**	**73.54**	**332**	P	**P**	**15 57 04.2**	**+0.5**
WAKR	**Walker**	**73.63**	**322**	P	**P**	**15 57 05.7**	**+1.5**
SAO	**San Andreas Ge**	**73.67**	**320**	P	**P**	**15 57 04.6**	**+0.3**
SAO				pmax	pmax		
	comp=Z,60nm,1.9s						
SAO	**San Andreas Ge**	**73.67**	**320**	P	**P**	**15 57 04.6**	**+0.3**
YMR	**Madison River**	**73.71**	**331**	P	**P**	**15 57 05.3**	**+0.7**
YHH	**Holmes Hill**	**73.75**	**331**	P	**P**	**15 57 05.7**	**+0.8**
YERR	**Yerington**	**73.84**	**323**	P	**P**	**15 57 07.0**	**+1.5**
YERR				IAmb	IAmb	15 57 08.9	
	comp=Z,58nm,1.5s						
CMB	**Columbia Colle**	**73.87**	**321**	P	**P**	**15 57 06.4**	**+0.9**
CMB				pmax	pmax		
	comp=Z,27nm,1.5s						
CMB				MLR	MLR		
	comp=Z,1μm,21.0s						
CMB	**Columbia Colle**	**73.87**	**321**	P	**P**	**15 57 06.4**	**+0.9**
YHB	**Horse Butte**	**73.88**	**331**	P	**P**	**15 57 06.5**	**+0.9**
YHL	**Hebgen Lake**	**73.95**	**331**	P	**P**	**15 57 07.3**	**+1.2**
GCMT	**Greycliff**	**74.01**	**333**	P	**P**	**15 57 06.9**	**+0.7**
DGMT	**Dagmar**	**74.03**	**338**	P	**P**	**15 57 06.9**	**+0.8**
DGMT				IAmb	IAmb	15 57 08.7	
	comp=Z,116nm,1.4s						
DGMT	**Dagmar**	**74.03**	**338**	IAMs_20	IAMs_20	16 34 18.4	
	comp=Z,1μm,20.0s						
DGMT	**Dagmar**	**74.03**	**338**	P	**P**	**15 57 07.1**	**+1.0**
	baz=147,SNR=10						
QLMT	**Earthquake Lak**	**74.04**	**331**	P	**P**	**15 57 07.0**	**+0.5**
PNTR	**Pine Nut**	**74.11**	**322**	P	**P**	**15 57 07.6**	**+0.5**
PNTR				IAMs_20	IAMs_20	16 28 06.0	
	comp=Z,1μm,19.0s						
PPT2	**Papeete2**	**74.12**	**257**	*e*S	**S**	**16 06 40.9**	**+0.2**
	comp=Z,5μm,25.8s						
PPT2	**Papeete2**	**74.12**	**257**	*e*LR	LR	16 19 44.8	
	comp=Z,4μm,24.5s,baz=108						
SCHQ	**Schefferville**	**74.15**	**2**	P	**P**	**15 57 06.3**	**-0.3**
	comp=Z,14nm,0.9s,baz=190,slow=3.9,SNR=10						
SCHQ	**Schefferville**	**74.15**	**2**	P	**P**	**15 57 06.2**	**-0.5**
SCHQ				IAmb	IAmb	15 57 19.1	
	comp=Z,58nm,1.4s						
SCHQ				IAMs_20	IAMs_20	16 31 28.4	
	comp=Z,2μm,20.0s						
PAHR	**Pah Rah Range**	**74.41**	**323**	P	**P**	**15 57 10.2**	**+1.5**
PAHR				IAmb	IAmb	15 57 12.2	
	comp=Z,122nm,1.6s						
MCMT	**McKenzie Canyo**	**74.69**	**330**	P	**P**	**15 57 11.3**	**+0.9**
AFDM	**Forest Hills D**	**74.82**	**322**	P	**P**	**15 57 11.6**	**+0.7**
DLMT	**Dillon**	**74.98**	**331**	P	**P**	**15 57 12.7**	**+0.8**
DLMT				IAmb	IAmb	15 57 15.6	
	comp=Z,70nm,1.6s						
DLMT				IAMs_20	IAMs_20	16 31 02.4	
	comp=Z,1μm,20.0s						
BEKR	**Beckworth**	**75.07**	**323**	P	**P**	**15 57 13.3**	**+0.8**
MFID	**Camas Ranch**	**75.10**	**328**	P	**P**	**15 57 13.3**	**+0.8**
MFID				IAmb	IAmb	15 57 15.8	
	comp=Z,101nm,1.4s						
MFID				IAMs_20	IAMs_20	16 31 55.3	
	comp=Z,1μm,18.0s						
MCCM	**Marconi Confer**	**75.43**	**320**	P	**P**	**15 57 15.5**	**+1.1**
ORV	**Oroville**	**75.52**	**322**	P	**P**	**15 57 16.2**	**+1.2**
ORV				pmax	pmax		
	comp=Z,140nm,1.6s						
ORV	**Oroville**	**75.52**	**322**	P	**P**	**15 57 16.2**	**+1.2**
GDXM	**Geysers**	**75.81**	**321**	P	**P**	**15 57 17.9**	**+1.2**
EGMT	**Eagleton**	**75.81**	**334**	P	**P**	**15 57 16.7**	**+0.2**
EGMT				IAmb	IAmb	15 57 19.4	
	comp=Z,103nm,1.5s						
EGMT				IAMs_20	IAMs_20	16 32 38.4	
	comp=Z,2μm,20.0s						
EGMT	**Eagleton**	**75.81**	**334**	P	**P**	**15 57 17.0**	**+0.5**
	baz=142,SNR=24						
WVOR	**Wild Horse Val**	**75.86**	**325**	P	**P**	**15 57 17.9**	**+0.9**
WVOR				pmax	pmax		
	comp=Z,33nm,1.5s						
WVOR				MLR	MLR		
	comp=Z,1μm,19.0s						
WVOR	**Wild Horse Val**	**75.86**	**325**	P	**P**	**15 57 17.9**	**+0.9**
MOD	**Modoc Plateau**	**76.40**	**324**	P	**P**	**15 57 20.8**	**+0.7**
MOD				IAmb	IAmb	15 57 24.1	
	comp=Z,95nm,1.7s						
MOD				IAMs_20	IAMs_20	16 34 52.6	
	comp=Z,1μm,18.0s						
J08A	**Circle Bar Ran**	**76.42**	**326**	P	**P**	**15 57 20.8**	**+0.7**
J08A				IAmb	IAmb	15 57 23.1	
	comp=Z,66nm,1.8s						
J08A				IAMs_20	IAMs_20	16 31 44.2	
	comp=Z,2μm,18.0s						
O02D	**Mt. Diablo Mer**	**76.68**	**322**	P	**P**	**15 57 21.5**	**-0.1**
	baz=130,SNR=6.0						
MSO	**Missoula**	**76.70**	**331**	P	**P**	**15 57 22.5**	**+0.8**
MSO				IAmb	IAmb	15 57 24.9	
	comp=Z,59nm,1.4s						
MSO				IAMs_20	IAMs_20	16 30 25.9	
	comp=Z,1μm,22.0s						
MSO	**Missoula**	**76.70**	**331**	P	**P**	**15 57 23.0**	**+1.3**
	baz=139,SNR=18						
WDC	**Whiskeytown Da**	**76.80**	**322**	P	**P**	**15 57 21.7**	**-0.5**
WDC				pmax	pmax		
	comp=Z,46nm,1.7s						
WDC				MLR	MLR		
	comp=Z,700nm,20.0s						
WDC	**Whiskeytown Da**	**76.80**	**322**	P	**P**	**15 57 21.7**	**-0.5**
BMO	**Blue Mountains**	**76.87**	**328**	P	**P**	**15 57 23.1**	**+0.5**
BMO				pmax	pmax		
	comp=Z,72nm,1.6s						
BMO				MLR	MLR		
	comp=Z,1μm,19.0s						
BMO	**Blue Mountains**	**76.87**	**328**	P	**P**	**15 57 23.1**	**+0.5**
BMO				IAmb	IAmb	15 57 25.3	
	comp=Z,72nm,1.6s						
BMO				IAMs_20	IAMs_20	16 30 19.7	
	comp=Z,1μm,19.0s						
N02D	**Trinity Center**	**77.15**	**322**	P	**P**	**15 57 24.6**	**+0.4**
	baz=131,SNR=9.9						
M04C	**Macdoel**	**77.18**	**323**	P	**P**	**15 57 25.8**	**+1.3**
	baz=131,SNR=12						
KMRM	**Mail Ridge**	**77.25**	**321**	P	**P**	**15 57 25.1**	**+0.2**
KMRM				IAmb	IAmb	15 57 43.5	
	comp=Z,41nm,1.1s						
I07A	**Izee**	**77.46**	**326**	P	**P**	**15 57 26.8**	**+0.8**
I07A				IAMs_20	IAMs_20	16 34 36.5	
	comp=Z,1μm,18.0s						
M02C	**Callahan**	**77.50**	**323**	P	**P**	**15 57 27.1**	**+0.8**
	baz=130,SNR=5.3						
JTMT	**Jette**	**77.54**	**332**	P	**P**	**15 57 27.0**	**+0.7**
F10A	**Beach Ranch, E**	**77.63**	**329**	P	**P**	**15 57 27.3**	**+0.5**
F10A				IAmb	IAmb	15 57 36.9	
	comp=Z,134nm,2.0s						
YBH	**Yreka Blue Hor**	**77.64**	**323**	P	**P**	**15 57 26.5**	**-0.5**
YBH				pmax	pmax		
	comp=Z,12nm,0.9s						
YBH				MLR	MLR		
	comp=Z,1μm,22.0s						
YBH	**Yreka Blue Hor**	**77.64**	**323**	P	**P**	**15 57 26.4**	**-0.5**
KHMM	**Horse Mountain**	**77.68**	**322**	P	**P**	**15 57 26.5**	**-0.8**
KHMM				IAmb	IAmb	15 57 44.0	
	comp=Z,115nm,1.9s						
K04D	**Chiloquin, OR**	**77.69**	**324**	P	**P**	**15 57 27.9**	**+0.6**
	baz=132						
L04D	**Klamath Falls**	**77.73**	**323**	P	**P**	**15 57 28.5**	**+0.9**
	baz=131,SNR=5.7						
JCC	**Jacoby Creek,**	**77.82**	**321**	P	**P**	**15 57 28.2**	**+0.3**
JCC				IAmb	IAmb	15 57 44.7	
	comp=Z,77nm,1.4s						
J05D	**Fort Rock, OR**	**77.84**	**325**	P	**P**	**15 57 29.4**	**+1.2**
	baz=132,SNR=14						
TTIG	**Tnine Tigouga,**	**77.86**	**51**	P	**P**	**15 57 31.0**	**+2.4**
	SNR=6.3						
G08A	**Pilot Rock**	**78.01**	**327**	P	**P**	**15 57 28.8**	**-0.2**
G08A				IAMs_20	IAMs_20	16 31 21.4	
	comp=Z,2μm,19.0s						
PINE	**Pine Mountain**	**78.02**	**325**	P	**P**	**15 57 30.1**	**+0.9**
PINE				IAMs_20	IAMs_20	16 35 13.5	
	comp=Z,1μm,19.0s						
KRMB	**Red Mountain**	**78.19**	**322**	P	**P**	**15 57 31.2**	**+1.1**
J04D	**Umpqua Nationa**	**78.29**	**324**	P	**P**	**15 57 31.5**	**+0.7**
	baz=131						
TOA0	**Torodi Ar. Sit**	**78.32**	**71**	P	**P**	**15 57 29.9**	**-1.4**
TOA0				IAmb	IAmb	15 57 31.7	
	comp=Z,55nm,0.9s						
TORD	**Torodi Ar. Bea**	**78.32**	**71**	P	**P**	**15 57 30.2**	**-1.0**
	comp=Z,36nm,0.9s,baz=255,slow=5.1,SNR=113						
HUMO	**Hull Mountain**	**78.35**	**323**	P	**P**	**15 57 31.1**	**+0.3**
WALA	**Waterton Lakes**	**78.36**	**333**	P	**P**	**15 57 31.4**	**+0.5**
WALA				IAmb	IAmb	15 57 33.4	
	comp=Z,63nm,1.4s						
WALA				IAMs_20	IAMs_20	16 33 50.9	
	comp=Z,1μm,22.0s						
L02E	**Cave Junction**	**78.42**	**323**	P	**P**	**15 57 32.7**	**+1.5**
	baz=130,SNR=7.6						
E09A	**Wood Farm, Sta**	**78.46**	**329**	P	**P**	**15 57 31.6**	**+0.3**
E09A				IAMs_20	IAMs_20	16 31 44.6	
	comp=Z,1μm,21.0s						
VNDA	**Vanda**	**78.47**	**190**	P	**P**	**15 57 33.7**	**+2.7**
	comp=Z,2.3nm,0.8s,baz=141,slow=4.5,SNR=7.4						
VNDA	**Vanda**	**78.47**	**190**	P	**P**	**15 57 32.1**	**+1.1**
VNDA				pmax	pmax		
	comp=Z,57nm,1.7s						
VNDA	**Vanda**	**78.47**	**190**	P	**P**	**15 57 32.1**	**+1.1**
I05D	**Terrebonne, OR**	**78.60**	**326**	P	**P**	**15 57 34.1**	**+1.9**
	baz=132,SNR=5.7						
OUK	**Oukaimeden**	**78.62**	**51**	P	**P**	**15 57 35.0**	**+1.9**
	SNR=7.9						
OUK				P	**P**	**15 57 35.0**	**+1.9**
	SNR=7.9						
FFC	**Flin Flon**	**78.66**	**342**	P	**P**	**15 57 32.0**	**-0.2**
FFC				pmax	pmax		
	comp=Z,29nm,1.5s						
FFC				MLR	MLR		
	comp=Z,1μm,18.0s						
FFC	**Flin Flon**	**78.66**	**342**	P	**P**	**15 57 32.0**	**-0.2**
FFC	**Flin Flon**	**78.66**	**342**	IAMs_20	IAMs_20	16 38 06.4	
	comp=Z,1μm,18.0s						
K02D	**Willamette Mer**	**78.80**	**323**	P	**P**	**15 57 34.7**	**+1.3**
	baz=130,SNR=12						
I04A	**Tendick Farm,**	**78.82**	**325**	P	**P**	**15 57 33.9**	**+0.5**
	baz=131						
G06A	**Carlson Farm,**	**78.83**	**327**	P	**P**	**15 57 34.1**	**+0.6**
G06A				IAMs_20	IAMs_20	16 33 32.2	
	comp=Z,1μm,20.0s						
E08A	**Dider Farm, El**	**78.90**	**328**	P	**P**	**15 57 34.2**	**+0.5**
E08A				IAMs_20	IAMs_20	16 33 21.9	
	comp=Z,2μm,21.0s						
SYO	**Syowa Base**	**78.91**	**160**	⇑*e*P	**P**	**15 57 30.4**	**-3.1**
SYO	**Syowa Base**	**78.91**	**160**	⇑*i*X	**P**	**15 57 33.0**	**-0.5**
SYO	**Syowa Base**	**78.91**	**160**	⇓*i*X	**P**	**15 57 35.6**	**+2.1**
F07A	**Phinny Hill Vi**	**78.92**	**327**	P	**P**	**15 57 34.6**	**+0.8**
F07A				IAmb	IAmb	15 57 37.5	
	comp=Z,64nm,1.5s						
F07A				IAMs_20	IAMs_20	16 31 59.5	
	comp=Z,2μm,19.0s						
HAWA	**Hanford**	**79.06**	**328**	P	**P**	**15 57 35.4**	**+0.7**
HAWA				IAmb	IAmb	15 57 37.8	
	comp=Z,98nm,1.6s						
HAWA				IAMs_20	IAMs_20	16 32 25.1	
	comp=Z,2μm,20.0s						
G05D	**Wamic, OR**	**79.19**	**326**	P	**P**	**15 57 37.1**	**+1.6**
	baz=132,SNR=6.8						
NEW	**Newport**	**79.22**	**330**	P	**P**	**15 57 35.4**	**-0.2**
NEW				pmax	pmax		
	comp=Z,11nm,1.0s						
NEW				MLR	MLR		
	comp=Z,1μm,19.0s						
NEW	**Newport**	**79.22**	**330**	P	**P**	**15 57 35.4**	**-0.2**
NEW	**Newport**	**79.22**	**330**	IAMs_20	IAMs_20	16 36 31.5	
	comp=Z,1μm,19.0s						
NEW	**Newport**	**79.22**	**330**	P	**P**	**15 57 36.3**	**+0.8**
	baz=136,SNR=6.5						
D08A	**Wollman Farm,**	**79.22**	**329**	P	**P**	**15 57 36.3**	**+0.8**
D08A				IAMs_20	IAMs_20	16 33 10.5	
	comp=Z,1μm,19.0s						
J01E	**Myrtle Point**	**79.25**	**323**	P	**P**	**15 57 36.9**	**+1.2**
	baz=130						
I03D	**Drain, OR**	**79.27**	**324**	P	**P**	**15 57 37.0**	**+1.1**
	baz=130						
H04A	**Detroit Lake**	**79.28**	**325**	P	**P**	**15 57 35.8**	**-0.1**
H04A				IAMs_20	IAMs_20	16 35 59.9	
	comp=Z,1μm,20.0s						
E07A	**Sunnyside**	**79.34**	**328**	P	**P**	**15 57 37.2**	**+1.0**
E07A				IAMs_20	IAMs_20	16 32 42.6	
	comp=Z,2μm,20.0s						
C09A	**Chrisman Ranch**	**79.43**	**330**	P	**P**	**15 57 37.6**	**+1.0**
C09A				IAmb	IAmb	15 57 40.4	
	comp=Z,96nm,1.4s						
C09A				IAMs_20	IAMs_20	16 34 48.3	
	comp=Z,1μm,18.0s						
H04D	**Lebanon**	**79.47**	**325**	P	**P**	**15 57 37.7**	**+0.8**
	baz=131						
F05D	**White Salmon**	**79.70**	**327**	P	**P**	**15 57 39.2**	**+1.1**
	baz=132						
ZGR	**Zagora**	**79.75**	**53**	P	**P**	**15 57 40.1**	**+1.2**
	SNR=11						
ZGR				P	**P**	**15 57 40.1**	**+1.2**
	SNR=11						
I02D	**Swisshome**	**79.81**	**324**	P	**P**	**15 57 39.4**	**+0.7**
	baz=130						
COR	**Corvallis**	**79.82**	**325**	P	**P**	**15 57 39.6**	**+0.8**
COR				pmax	pmax		
	comp=Z,82nm,1.3s						
COR				MLR	MLR		
	comp=Z,1μm,19.0s						
COR	**Corvallis**	**79.82**	**325**	P	**P**	**15 57 39.6**	**+0.8**
COR				IAmb	IAmb	15 57 51.9	
	comp=Z,82nm,1.2s						
TZRR	**Tazzarine**	**80.11**	**52**	P	**P**	**15 57 43.1**	**+2.2**
	SNR=5.8						
TZRR				P	**P**	**15 57 43.1**	**+2.2**
	SNR=5.8						
G03D	**McMinnville, O**	**80.21**	**325**	P	**P**	**15 57 42.1**	**+1.3**
	baz=131						
LTY	**Liberty**	**80.22**	**328**	P	**P**	**15 57 42.1**	**+1.1**
LTY				IAmb	IAmb	15 57 44.6	
	comp=Z,113nm,1.7s						
LTY				IAMs_20	IAMs_20	16 34 11.9	
	comp=Z,2μm,20.0s						
F04A	**Amboy**	**80.23**	**326**	P	**P**	**15 57 42.1**	**+1.1**
F04A				IAMs_20	IAMs_20	16 36 23.1	
	comp=Z,1μm,20.0s						
B08A	**Colville Reser**	**80.33**	**329**	P	**P**	**15 57 42.4**	**+0.8**
LON	**Longmire**	**80.46**	**327**	P	**P**	**15 57 43.0**	**+0.7**
LON				pmax	pmax		
	comp=Z,59nm,1.9s						
LON				MLR	MLR		
	comp=Z,2μm,19.0s						
LON	**Longmire**	**80.46**	**327**	P	**P**	**15 57 43.0**	**+0.7**
LON				IAMs_20	IAMs_20	16 35 44.2	
	comp=Z,2μm,19.0s						
F04D	**Rainier, OR**	**80.64**	**326**	P	**P**	**15 57 44.7**	**+1.5**
	baz=131						
E04D	**Cinebar**	**80.72**	**327**	P	**P**	**15 57 44.1**	**+0.5**
	baz=132						
C06D	**Leavenworth**	**80.79**	**328**	P	**P**	**15 57 44.5**	**+0.5**
	baz=133						
D05A	**Enumclaw**	**80.84**	**327**	P	**P**	**15 57 45.5**	**+1.3**
D05A				IAmb	IAmb	15 57 46.6	
	comp=Z,109nm,1.4s						
D05A				IAMs_20	IAMs_20	16 36 04.3	
	comp=Z,2μm,18.0s						
PFVI	**Vila Bisbo**	**81.07**	**46**	*e*SKS	**SKSac**	**16 08 04.7**	**+0.1**
E03A	**Lebam**	**81.23**	**326**	P	**P**	**15 57 47.4**	**+1.1**
E03A				IAmb	IAmb	15 57 49.2	
	comp=Z,99nm,1.5s						
E03A				IAMs_20	IAMs_20	16 33 02.5	
	comp=Z,2μm,22.0s						
D04E	**Lakebay**	**81.24**	**327**	P	**P**	**15 57 47.7**	**+1.4**
	baz=131						
MORF	**Marmelete**	**81.28**	**45**	*e*P	**P**	**15 57 47.5**	**+0.5**
MORF				*e*S	**S**	**16 07 58.2**	**+0.8**
MORF				AMS	AMS	16 34 36.8	
	comp=Z,1μm,13.8s						
MORF	**Marmelete**	**81.28**	**45**	*e*P	**P**	**15 57 47.4**	**+0.5**
MORF				*e*S	**S**	**16 07 58.2**	**+0.8**
MORF	**Marmelete**	**81.28**	**45**	*e*P	**P**	**15 57 47.5**	**+0.5**
	comp=Z,69nm,1.5s						
MORF	**Marmelete**	**81.28**	**45**	*e*SKS	**SKSac**	**16 08 08.9**	**+2.8**
B06A	**Marblemount**	**81.48**	**329**	P	**P**	**15 57 48.5**	**+0.9**
B06A				IAmb	IAmb	15 57 49.5	
	comp=Z,68nm,1.4s						
B06A				IAMs_20	IAMs_20	16 33 35.3	
	comp=Z,1μm,19.0s						
CZD	**Col de Zad**	**81.61**	**51**	P	**P**	**15 57 51.0**	**+1.9**
	SNR=6.0						
B05A	**Bryant**	**81.61**	**328**	P	**P**	**15 57 49.0**	**+0.7**
	baz=132,SNR=8.7						
D03D	**Eldon**	**81.63**	**327**	P	**P**	**15 57 49.8**	**+1.3**
	baz=131,SNR=6.1						
LIS	**Lisbon**	**81.72**	**44**	*e*P	**P**	**15 57 49.6**	**+0.5**
LIS				AMS	AMS	16 35 30.6	
	comp=Z,2μm,19.4s						
LIS	**Lisbon**	**81.72**	**44**	*e*P	**P**	**15 57 49.6**	**+0.5**
PBDV	**Barranco-do-Ve**	**81.74**	**46**	*e*P	**P**	**15 57 49.0**	**-0.3**
	comp=Z,60nm,1.8s						
PBDV	**Barranco-do-Ve**	**81.74**	**46**	*e*SKS	**SKSac**	**16 08 13.2**	**+4.0**
PNCL	**Nicolau / Gran**	**81.80**	**45**	*e*SKS	**SKSac**	**16 08 12.9**	**+3.5**
MDT	**Midelt**	**81.82**	**51**	P	**P**	**15 57 50.2**	**+0.3**
	comp=Z,34nm,1.3s,baz=241,slow=6.2,SNR=11						
MESJ	**Messejana**	**81.86**	**45**	*e*P	**P**	**15 57 50.4**	**+0.5**
MESJ				*e*S	**S**	**16 08 04.1**	**+0.9**
MESJ				AMS	AMS	16 35 23.1	
	comp=Z,1μm,21.5s						
MESJ	**Messejana**	**81.86**	**45**	*e*P	**P**	**15 57 50.3**	**+0.5**
MESJ				*e*S	**S**	**16 08 04.1**	**+0.9**
MESJ	**Messejana**	**81.86**	**45**	*e*P	**P**	**15 57 51.8**	**+1.9**
	comp=Z,50nm,1.2s						
PCVE	**Castro Verde**	**81.87**	**45**	*e*P	**P**	**15 57 51.4**	**+1.5**
	comp=Z,59nm,1.9s						
NLWA	**Neilton Lookou**	**81.94**	**327**	P	**P**	**15 57 50.5**	**+0.3**
NLWA				IAmb	IAmb	15 57 53.8	
	comp=Z,89nm,1.8s						
NLWA				IAMs_20	IAMs_20	16 35 42.4	
	comp=Z,2μm,22.0s						
PVAQ	**Vaqueiros**	**81.97**	**46**	IAMs_20	IAMs_20	16 34 32.4	
	comp=Z,2μm,19.0s						
PVAQ	**Vaqueiros**	**81.97**	**46**	*e*P	**P**	**15 57 50.1**	**-0.3**
	comp=Z,42nm,1.8s						
PVAQ	**Vaqueiros**	**81.97**	**46**	*e*SKS	**SKSac**	**16 08 16.9**	**+6.3**
PVAQ	**Vaqueiros**	**81.97**	**46**	*e*LR	LR	16 24 53.3	
	comp=Z,2μm,18.0s						
PBEJ	**Beja**	**82.19**	**45**	*e*P	**P**	**15 57 53.0**	**+1.4**
	comp=Z,42nm,1.4s						
A04D	**Lummi Island**	**82.22**	**328**	P	**P**	**15 57 53.1**	**+1.6**
	baz=132						
TSUM	**Tsumeb**	**82.23**	**108**	P	**P**	**15 57 52.6**	**+0.1**
IVI	**Ivigtut**	**82.49**	**11**	P	**P**	**15 57 53.4**	**+0.8**
PMTG	**Montargil**	**82.51**	**44**	*e*SKS	**SKSac**	**16 08 19.5**	**+5.3**
PGC	**Sidney**	**82.55**	**328**	P	**P**	**15 57 54.4**	**+1.2**
PGC				IAmb	IAmb	15 57 56.0	
	comp=Z,88nm,1.5s						
PESTR	**Estremoz**	**82.82**	**45**	*e*SKS	**SKSac**	**16 08 24.7**	**+8.3**
PCAS	**Casmilo, Conde**	**82.86**	**43**	*e*SKS	**S**	**16 08 22.1**	**+8.6**
LLLB	**Lillooet**	**83.08**	**330**	P	**P**	**15 57 56.4**	**+0.4**
LLLB				IAmb	IAmb	15 57 58.0	
	comp=Z,70nm,1.4s						
LLLB				IAMs_20	IAMs_20	16 34 33.7	
	comp=Z,1μm,21.0s						
PMRV	**Marv??o**	**83.25**	**44**	*e*S	S	16 08 27.3	+10
PMRV	**Marv??o**	**83.25**	**44**	*e*LR	LR	16 25 29.6	
	comp=Z,2μm,16.0s						
PCBR	**Castelo Branco**	**83.41**	**44**	*e*P	**P**	**15 57 58.9**	**+1.0**
	comp=Z,68nm,1.7s						
MTE	**Manteigas**	**83.67**	**43**	P	**P**	**15 58 00.0**	**+0.7**
MTE				IAmb	IAmb	15 58 01.1	
	comp=Z,51nm,1.2s						
MTE	**Manteigas**	**83.67**	**43**	*e*P	**P**	**15 58 00.3**	**+1.0**
	comp=Z,82nm,1.4s						
MTE	**Manteigas**	**83.67**	**43**	*e*LR	LR	16 28 09.9	
	comp=Z,4μm,18.0s						
HORN	**Hornachuelos**	**83.86**	**46**	P	**P**	**15 58 01.1**	**+0.8**
	SNR=5.8						
PVRL	**Vila Real**	**84.02**	**42**	*e*P	**P**	**15 58 01.9**	**+0.8**
PGAV	**Gavieira, Arco**	**84.05**	**42**	*e*LR	LR	16 28 10.2	
	comp=Z,4μm,20.0s						
MVO	**Moncorvo**	**84.40**	**43**	*e*P	**P**	**15 58 04.4**	**+1.3**
	comp=Z,103nm,1.5s						
MVO	**Moncorvo**	**84.40**	**43**	*e*SKS	**SKSac**	**16 08 34.2**	**+7.5**
MVO	**Moncorvo**	**84.40**	**43**	*e*LR	LR	16 28 46.9	
	comp=Z,3μm,18.0s						
PBRG	**Braganca**	**84.92**	**42**	*e*P	**P**	**15 58 06.3**	**+0.6**
	comp=Z,112nm,1.5s						
PAB	**San Pablo**	**85.33**	**45**	P	**P**	**15 58 08.7**	**+0.9**
PAB				pmax	pmax		
	comp=Z,33nm,1.0s						
PAB				MLR	MLR		
	comp=Z,2μm,19.0s						
PAB	**San Pablo**	**85.33**	**45**	P	**P**	**15 58 08.7**	**+0.9**
PAB				IAmb	IAmb	15 58 35.6	
	comp=Z,33nm,1.0s						
TAM	**Tamanrasset**	**85.47**	**64**	P	**P**	**15 58 09.6**	**+0.6**
TAM				pmax	pmax		
	comp=Z,60nm,1.3s						
TAM				MLR	MLR		
	comp=Z,4μm,22.0s						
TAM	**Tamanrasset**	**85.47**	**64**	P	**P**	**15 58 09.6**	**+0.6**
TAM				IAmb	IAmb	15 58 11.3	
	comp=Z,60nm,1.3s						
BOSA	**Boshof**	**85.86**	**119**	P	**P**	**15 58 12.3**	**+1.4**
MAW	**Mawson**	**86.67**	**164**	P	**P**	**15 58 14.8**	**+0.9**
	comp=Z,19nm,1.0s,baz=222,slow=4.9,SNR=9.7						
MAW	**Mawson**	**86.67**	**164**	P	**P**	**15 58 14.8**	**+0.9**
CART	**Cartagena**	**86.69**	**48**	IAMs_20	IAMs_20	16 36 23.7	
	comp=Z,979nm,20.0s						
LBTB	**Lobatse**	**87.38**	**115**	P	**P**	**15 58 18.4**	**+0.1**
LBTB				pmax	pmax		
	comp=Z,78nm,1.9s						
LBTB	**Lobatse**	**87.38**	**115**	P	**P**	**15 58 18.4**	**+0.1**
LBTB				IAmb	IAmb	15 58 19.1	
	comp=Z,78nm,1.9s						
ANGG	**Ammassalik, Gr**	**88.54**	**13**	P	**P**	**15 58 23.4**	**+0.8**

YKA	Yellowknife Ar	88.80	341	P	P	15 58 24.2	+0.2
	comp=Z,14nm,0.7s,baz=136,slow=5.1,SNR=197						
DLBC	Dease Lake	91.70	333	P	P	15 58 39.0	+1.3
DLBC				IAmb	IAmb	15 58 39.8	
	comp=Z,33nm,1.2s						
SKAG	Skagway	94.56	332	IAMs_20	IAMs_20	16 44 47.4	
	comp=Z,1µm,20.0s						
RPZ	Rata Peaks	95.42	220	LR	LR	16 30 50.5	
	comp=Z,1µm,22.0s,baz=120,slow=28						
HYT	Haines Junctio	96.19	333	IAMs_20	IAMs_20	16 45 28.5	
	comp=Z,1µm,19.0s						
WLF	Walferdange	96.52	40	P	P	15 59 03.2	+3.3
ECH	Echery	96.59	41	P	P	15 58 59.9	-0.5
ECH				pmax	pmax		
	comp=Z,22nm,1.3s						
ECH	Echery	96.59	41	P	P	15 58 59.9	-0.5
ECH				IAmb	IAmb	15 59 01.1	
	comp=Z,22nm,1.3s						
PCA	Pinnacle	97.05	332	IAMs_20	IAMs_20	16 50 29.7	
	comp=Z,1µm,18.0s						
OSSC	Osservatorio P	97.60	47	IAMs_20	IAMs_20	16 48 37.4	
	comp=Z,1µm,19.0s						
CTGM	Chitina Glacie	97.91	332	IAMs_20	IAMs_20	16 46 53.1	
	comp=Z,1µm,22.0s						
BALM	Baldy	98.39	332	IAMs_20	IAMs_20	16 47 30.6	
	comp=Z,1µm,22.0s						
TGL	Tana Glacier	98.48	332	IAMs_20	IAMs_20	16 47 24.1	
	comp=Z,2µm,22.0s						
INK	Inuvik	98.54	340	P	P	15 59 07.9	-0.7
	comp=Z,4.6nm,1.1s,baz=111,slow=3.8,SNR=7.7						
INK	Inuvik	98.54	340	P	P	15 59 08.4	-0.2
EPYK	Eagle Plains	98.62	338	IAMs_20	IAMs_20	16 47 33.5	
	comp=Z,1µm,20.0s						
EPYK	Eagle Plains	98.62	338	P	Pdif	15 59 09.9	+0.8
	baz=120						
CRQM	Cirque	98.62	332	IAMs_20	IAMs_20	16 47 27.2	
	comp=Z,1µm,22.0s						
MCARA	McCarthy VSAT	98.83	332	IAMs_20	IAMs_20	16 51 01.3	
	comp=Z,1µm,18.0s						
VRDI	Verde Repeater	98.96	332	IAMs_20	IAMs_20	16 46 25.6	
	comp=Z,899nm,21.0s						
BCAR	Beaver Creek A	99.02	334	P	Pdif	15 59 10.6	-0.4
RAGM	Ragged Mountai	99.17	331	IAMs_20	IAMs_20	16 47 13.1	
	comp=Z,1µm,22.0s						
GLB	Gilahina Butte	99.20	332	IAMs_20	IAMs_20	16 51 57.1	
	comp=Z,1000nm,20.0s						
CEL	Celeste	99.28	53	IAMs_20	IAMs_20	16 47 56.1	
	comp=Z,1µm,20.0s						
EGAK	Eagle	99.51	336	IAMs_20	IAMs_20	16 48 43.3	
	comp=Z,1µm,20.0s						
GRF	Grafenberg Arr	99.62	41	ePdiff	Pdif	15 59 13.5	-0.4
	baz=251,slow=5.2						
GRF				eL	L	16 40 18.7	
	comp=Z,1µm,21.3s						
EYAK	Cordova Ski Ar	99.72	331	IAMs_20	IAMs_20	16 51 17.8	
	comp=Z,1µm,20.0s						
MENT	Mentasta	99.77	334	IAMs_20	IAMs_20	16 51 36.7	
	comp=Z,1µm,18.0s						
MOX	Moxa	100.16	40	eL	L	16 40 58.3	
	comp=Z,3µm,21.1s						
SCRK	Sand Creek	100.30	335	IAMs_20	IAMs_20	16 47 43.0	
	comp=Z,1µm,20.0s						
PAX	Paxson	100.52	333	IAMs_20	IAMs_20	16 51 54.9	
	comp=Z,1µm,18.0s						
GEC2	GERESS Array S	100.90	42	IAMs_20	IAMs_20	16 41 59.4	
	comp=Z,1µm,20.0s						
GERES	GERESS Array B	100.90	42	P	Pdif	15 59 19.1	-0.7
	comp=Z,2.0nm,1.0s,baz=217,slow=3.3,SNR=6.9						
GERES				PP	PP	16 03 24.6	-3.5
	comp=Z,0.9nm,0.9s,baz=278,slow=3.8,SNR=4.0						
GERES	GERESS Array B	100.90	42	P	Pdif	15 59 19.1	-0.7
GERES				e		16 03 29.0	
GERES				eS	Sdif	16 11 02.0	+4.3
GERES				MLR	MLR		
	comp=Z,3µm,21.1s						
GERES	GERESS Array B	100.90	42	P	Pdif	15 59 18.7	-1.0
GERES	GERESS Array B	100.90	42		Pdif	15 59 18.7	-1.1
CLL	Collm	101.20	39	ePdif	Pdif	15 59 22.0	+1.2
	comp=Z,19nm,1.6s						
CLL				ePP	PP	16 03 29.0	-1.1
CLL				epPP		16 03 37.0	
CLL				eSKSac	SKSac	16 10 07.0	+7.3
CLL				eSdif	Sdif	16 11 02.0	+2.2
CLL				ePS	PS	16 12 36.0	+3.2
CLL				ePPS	PPS	16 13 30.0	
CLL				eSS	SS	16 17 54.0	-6.1
CLL				eSSS	SSS	16 21 24.0	
CLL				e		16 22 54.0	
CLL				e		16 27 30.0	
CLL				Lm	MLR	16 41 00.0	
	comp=Z,3µm,21.1s						
CLL	Collm	101.20	39	eP	Pdif	15 59 22.0	+1.2
CLL				pmax	pmax		
	comp=Z,2.0nm,1.6s						
CLL				MLR	MLR		
	comp=Z,3µm,21.1s						
KNK	Knik Glacier	101.26	331	IAMs_20	IAMs_20	16 53 32.6	
	comp=Z,1µm,21.0s						
PRP	Porcupine Dome	101.50	336	IAMs_20	IAMs_20	16 46 22.8	
	comp=Z,1µm,20.0s						
BRG	Berggiesshubel	101.64	40	eP	Pdif	15 59 23.9	+1.1
	comp=Z,21nm,1.6s						
BRG	Berggiesshubel	101.64	40	eP	Pdif	15 59 23.9	+1.1
BRG				pmax	pmax		
	comp=Z,21nm,1.6s						
ILAR	Eielson Array	101.77	335	PP	PP	16 03 25.2	-8.8
	comp=Z,1.3nm,1.1s,baz=136,slow=6.1,SNR=4.8						
FYU	Fort Yukon	101.78	337	IAMs_20	IAMs_20	16 48 01.2	
	comp=Z,1µm,20.0s						
CCB	Clear Creek Bu	102.09	335	IAMs_20	IAMs_20	16 50 21.4	
	comp=Z,1µm,20.0s						
POKR	Poker Plat Res	102.11	335	P	Pdif	15 59 24.2	-0.4
	baz=110						
COLA	College	102.19	335	IAMs_20	IAMs_20	16 50 33.1	
	comp=Z,1µm,19.0s						
TCOL	CIGO, UAF Yank	102.19	335	P	Pdif	15 59 24.3	-0.7
	baz=110						
MCK	McKinley	102.25	334	IAMs_20	IAMs_20	16 52 20.7	
	comp=Z,1µm,18.0s						
MDM	Murphy Dome	102.37	335	IAMs_20	IAMs_20	16 43 57.8	
	comp=Z,896nm,22.0s						
BWN	Browne	102.62	334	IAMs_20	IAMs_20	16 46 57.5	
	comp=Z,1µm,21.0s						
BPAW	Bear Paw Mtn.	103.23	334	IAMs_20	IAMs_20	16 47 29.5	
	comp=Z,1µm,22.0s						
PPLA	Purkeypile	103.39	332	IAMs_20	IAMs_20	16 52 17.9	
	comp=Z,1µm,20.0s						
MLY	Manley	103.40	335	IAMs_20	IAMs_20	16 51 20.2	
	comp=Z,979nm,18.0s						
MORC	Moravsky Berou	103.57	42	IAMs_20	IAMs_20	16 43 28.0	
	comp=Z,1µm,21.0s						
ITM	Ithomi	103.58	55	IAMs_20	IAMs_20	16 48 03.2	
	comp=Z,1µm,21.0s						
TOLK	Toolik Lake Re	104.05	338	IAMs_20	IAMs_20	16 50 09.1	
	comp=Z,1µm,22.0s						
SVW2	Sparrevohn	104.46	330	IAMs_20	IAMs_20	16 51 36.7	
	comp=Z,791nm,20.0s						
VTS	Vitosha	105.81	50	IAMs_20	IAMs_20	16 50 31.6	
	comp=Z,1µm,19.0s						
ALN	Alexandroupoli	107.52	52	IAMs_20	IAMs_20	16 54 12.4	
	comp=Z,880nm,19.0s						
VOIR		107.63	47	⇑P	PP	16 04 12.5	-5.7
KBS	Kingsbay	107.64	12	IAMs_20	IAMs_20	16 48 19.1	
	comp=Z,1µm,22.0s						
MLR	Muntele Rosu	108.26	47	⇑P	PP	16 04 22.2	-0.7
ANM	Nome	109.45	333	IAMs_20	IAMs_20	16 58 31.1	
	comp=Z,920nm,18.0s						
CFR	Carcaliu	109.74	48	⇑P	PKiKP	16 03 59.5	-2.0
ISP	Isparta	110.41	56	IAMs_20	IAMs_20	16 53 02.7	
	comp=Z,952nm,20.0s						
DZM	Mont Dzumac	110.50	236	ePP	PP	16 04 35.5	-3.5
	comp=Z,152nm,25.9s						
DZM				eSKSac	SKSac	16 10 46.9	+3.9
	comp=Z,266nm,26.7s						
DZM	Mont Dzumac	110.50	236	ePS	PS	16 14 02.6	-7.0
	comp=Z,517nm,27.7s						
DZM				eSS	SS	16 20 07.7	+0.4
	comp=Z,1µm,27.6s						
DZM	Mont Dzumac	110.50	236	eLR	LR	16 36 37.3	
	comp=Z,3µm,22.4s,baz=132						
AKASG	Malin Array Be	111.11	42	i PKIKP	PKiKP	16 04 07.9	+4.0
ANTO	Ankara	112.45	54	IAMs_20	IAMs_20	16 54 12.9	
	comp=Z,815nm,20.0s						
BRTR	Keskin Array B	113.08	54	PKiKP	PKiKP	16 04 08.1	-0.2
	comp=Z,0.3nm,0.3s,baz=197,slow=3.9,SNR=4.1						
BRTR				PP	PP	16 04 57.0	-0.9
	comp=Z,1.0nm,0.8s,baz=223,slow=4.7,SNR=4.8						
ILGA	Ilgaz	113.29	53	IAMs_20	IAMs_20	16 54 36.0	
	comp=Z,1µm,21.0s						
APA	Apatity	113.29	24	⇑iPKIKP	PKiKP	16 04 07.1	-0.5
APA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GAZ	Gaziantep	115.59	57	IAMs_20	IAMs_20	16 59 13.3	
	comp=Z,767nm,19.0s						
OBN	Obninsk	115.67	37	⇑iPKIKP	PKPdf	16 04 13.3	+0.8
OBN				e		16 05 11.3	
OBN				ePPP	PPP	16 07 39.0	
OBN				i SS	SS	16 21 09.0	-6.1
OBN				pmax	pmax		
	comp=Z,14nm,0.6s						
OBN				MLR	MLR		
	comp=Z,2µm,20.0s						
KLMR	Klimovskoe	116.72	31	ePKIKP	PKPdf	16 04 12.1	-2.3
KLMR				pmax	pmax		
	comp=Z,21nm,1.6s						
KLMR	Klimovskoe	116.72	31	ePKPdf	PKPdf	16 04 12.2	-2.2
KLMR				AMP		16 04 17.1	
	comp=Z,21nm,1.6s						
KLMR				ePP	PP	16 05 17.6	-5.0
SOC	Sochi	117.89	50	i PKIKP	PKPdf	16 04 14.5	-2.7
SOC				ePPP	PPP	16 07 56.5	
SOC				e		16 11 01.8	
SOC				ePS	PKKPdf	16 15 11.3	+3.9
SOC				eSS	SS	16 21 45.9	+1.1
PRGR	Permogore	119.48	29	ePKIKP	PKPdf	16 04 18.6	-1.0
PRGR				pmax	pmax		
	comp=Z,13nm,1.2s						
KIV	Kislovodsk	120.04	50	i PKIKP	PKiKP	16 04 22.5	+1.0
KIV				e		16 05 47.7	
KIV				ePS	PS	16 15 38.4	+2.0
KIV				eSS	SS	16 22 15.3	+2.5
KIV				pmax	pmax		
	comp=Z,13nm,1.1s						
KIV				MLR	MLR		
	comp=Z,1µm,22.0s						
NEY	Neytrino	120.08	51	i PKIKP	PKiKP	16 04 22.7	+1.0
BILL	Bilibino	120.10	339	⇓ePKIKP	PKiKP	16 04 20.9	+0.1
BILL				e		16 05 45.1	
BILL				ePPP	PPP	16 08 24.7	
BILL				e		16 11 33.6	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KBZ	Khabaz	120.20	50	PKP	PKPdf	16 04 21.5	-0.1
	comp=Z,3.6nm,0.9s,baz=96,slow=1.5,SNR=5.9						
STKA	Stephens Creek	120.22	212	PKP	PKiKP	16 04 22.8	+0.5
	comp=Z,1.7nm,0.6s,baz=80,slow=2.2,SNR=5.9						
AKH	Akhalkalaki	120.67	53	IAMs_20	IAMs_20	16 58 44.2	
	comp=Z,798nm,22.0s						
ZEI	Tsey	120.95	51	i PKIKP	PKPdf	16 04 22.3	-1.1
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RAYN	Ar Rayn	120.96	74	PKIKP	PKPdf	16 04 23.7	0.0
RAYN				MLR	MLR		
	comp=Z,2µm,19.0s						
RAYN	Ar Rayn	120.96	74		PKPdf	16 04 23.7	0.0
GNI	Garni	121.62	54	IAMs_20	IAMs_20	17 01 05.7	
	comp=Z,733nm,20.0s						
H11S2	WAKE ISLAND Hy	125.93	279	T	T	18 23 44.3	
	baz=101,slow=74,SNR=618						
H11S1	WAKE ISLAND Hy	125.94	279	T	T	18 23 44.7	
	baz=101,slow=74,SNR=700						
H11S3	WAKE ISLAND Hy	125.94	279	T	T	18 23 46.1	
	baz=101,slow=74,SNR=556						
H11N3	WAKE ISLAND Hy	125.96	281	T	T	18 23 46.3	
	baz=101,slow=74,SNR=101						
H11N2	WAKE ISLAND Hy	125.98	281	T	T	18 23 48.0	
	baz=101,slow=74,SNR=406						
H11N1	WAKE ISLAND Hy	125.98	281	T	T	18 24 16.5	
	baz=101,slow=74,SNR=74						
CTA	Charters Tower	126.48	225	PKP	PKPdf	16 04 34.6	+0.2
	comp=Z,2.7nm,0.7s,baz=77,slow=4.5,SNR=2.5						
TIXI	Tiksi	126.65	352	PKIKP	PKPdf	16 04 32.7	-0.5
TIXI	Tiksi	126.65	352		PKPdf	16 04 32.7	-0.5
TIXI				IAMs_20	IAMs_20	17 00 03.1	
	comp=Z,993nm,22.0s						
NWAO	Narrogin (SRO)	127.27	188	PKP	PKPdf	16 04 35.3	-0.4
	comp=Z,8.0nm,0.9s,baz=240,slow=4.9,SNR=3.8						
NWAO	Narrogin (SRO)	127.27	188	IAMs_20	IAMs_20	17 00 19.7	
	comp=Z,818nm,20.0s						
ARU	Arti	127.46	33	i PKIKP	PKPdf	16 04 35.1	0.0
ARU						16 06 32.9	
ARU						16 11 45.0	
ARU				SS	SS	16 23 38.6	-6.8
ARU				MLR	MLR		
	comp=Z,1µm,21.0s						
SEY	Seymchan	127.65	337	i PKIKP	PKiKP	16 04 36.4	+0.6
NRIK	Noril'sk	128.45	10	i PKIKP	PKiKP	16 04 37.0	-0.3
AKTO	Aktyubinsk	129.28	40	PKP	PKPdf	16 04 38.2	-0.6
	comp=Z,3.8nm,1.0s,baz=271,slow=2.8,SNR=9.1						
MA2	Magadan	130.23	334	IAMs_20	IAMs_20	17 10 06.9	
	comp=Z,670nm,19.0s						
ASAR	Alice Springs	130.79	210	PKP	PKPdf	16 04 42.7	+0.1
	comp=Z,3.9nm,0.6s,baz=130,slow=1.8,SNR=32						
ASAR	Alice Springs	130.79	210	PKIKP	PKPdf	16 04 42.0	-0.6
ASAR	Alice Springs	130.79	210		PKPdf	16 04 42.0	-0.6
AS31	Alice Springs	130.79	210		PKPdf	16 04 42.0	-0.6
ABKAR	Akbulak array	130.83	41		PKiKP	16 04 42.2	-0.5
GEYT	Alibeck	132.16	56	PKP	PKPdf	16 04 44.1	-0.6
	comp=Z,1.7nm,0.7s,baz=300,slow=32,SNR=5.7						
GEYT				PP	PP	16 07 09.2	+2.3
	comp=Z,0.6nm,0.5s,baz=306,slow=13,SNR=3.6						
GEYT	Alibeck	132.16	56		PKPdf	16 04 44.6	-0.1
GYA0B	ALIBECK ARRAY	132.16	56	IAMs_20	IAMs_20	17 11 07.8	
	comp=Z,814nm,20.0s						
ASHT	Ashkhabad	132.37	56	IAMs_20	IAMs_20	17 11 22.3	
	comp=Z,616nm,19.0s						
COEN	Coen	132.87	228	PKPdf	PKPdf	16 04 45.6	-1.1
WR0	Warramunga Arr	133.59	214		PKPdf	16 04 47.7	-0.3
WB2	Warramunga Arr	133.70	213		PKPdf	16 04 47.9	-0.3
WRA	Warramunga Arr	133.70	213	PKP	PKPdf	16 04 48.4	+0.2
	comp=Z,4.3nm,0.6s,baz=148,slow=1.6,SNR=23						
WRA	Warramunga Arr	133.70	213	PKIKP	PKPdf	16 04 47.9	-0.3
WRA	Warramunga Arr	133.70	213		PKPdf	16 04 47.9	-0.3
WB0	Warramunga Arr	133.82	214		PKPdf	16 04 48.0	-0.4
BRVK	Borovoye	135.04	33	PKIKP	PKPdf	16 04 50.0	+0.4
BRVK				MLR	MLR		
	comp=Z,2µm,21.0s						
BRVK	Borovoye	135.04	33		PKPdf	16 04 50.0	+0.4
BVAR	Borovoye Array	135.11	33	PKP	PKPdf	16 04 48.5	-1.2
	comp=Z,0.5nm,0.5s,baz=325,slow=2.3,SNR=4.9						
KUR	Kuril'sk	139.14	318	i PKIKP	PKiKP	16 04 59.5	-0.1
KUR				e		16 07 48.3	
FITZ	Fitzroy Crossi	139.29	204		PKPdf	16 04 58.6	+0.1
KKAR	Karatay Array	139.90	45	PKIKP	PKPdf	16 04 59.9	+1.0
KKAR	Karatay Array	139.90	45		PKPdf	16 04 59.9	+1.0
CHGR	Chuyangaron	140.49	52		PKPdf	16 04 59.2	-1.0
KURK	Kurchatov	140.57	31	PKIKP	PKPdf	16 05 00.7	+0.9
KURK	Kurchatov	140.57	31		PKPdf	16 04 59.4	-0.4
KURK	Kurchatov	140.57	31		PKPpre	16 04 53.8	
KURK	Kurchatov	140.57	31		PP	16 07 58.3	-0.5
KURBB	Kurchatov Arra	140.59	31	PKhKP	PKPpre	16 04 53.8	
	comp=Z,0.7nm,0.5s,baz=313,slow=2.9,SNR=16						
KURBB				PKP	PKPdf	16 05 00.7	+0.8
	comp=Z,1.8nm,0.7s,baz=301,slow=2.5,SNR=9.0						
KURBB				PP	PP	16 07 58.3	-0.6
	comp=Z,0.7nm,0.8s,baz=306,slow=6.6,SNR=5.7						
ZAA0	Zalesovo Array	140.87	23		PKPdf	16 05 00.1	-0.1
ZAA0				IAMs_20	IAMs_20	17 18 35.4	
	comp=Z,740nm,20.0s						
ZALV	Zalesovo Beam	140.87	23	PKhKP	PKPpre	16 04 53.8	
	comp=Z,3.7nm,0.6s,baz=305,slow=3.0,SNR=5.5						
ZALV				PKP	PKiKP	16 05 01.6	-1.3
	comp=Z,7.0nm,0.8s,baz=307,slow=3.0,SNR=6.3						
ZALV	Zalesovo Beam	140.87	23		PKPpre	16 04 52.6	
ZALV				PKPdf	PKPdf	16 05 00.4	+0.2
YSS	Yuzh-Sakhalins	141.37	323	ePKIKP	PKPdf	16 05 00.0	-1.4
YSS				eSS	SS	16 26 31.3	-1.8
YSS	Yuzh-Sakhalins	141.37	323	IAMs_20	IAMs_20	17 18 14.0	
	comp=Z,796nm,20.0s						
BOD	Bodaibo	141.62	356	ePKHKP	PKPpre	16 04 55.3	
BOD				pmax	pmax		
	comp=Z,10.0nm,2.1s						
ARSB	Arslanbob	142.30	47	PKIKP	PKPdf	16 05 02.9	-0.6
ARSB	Arslanbob	142.30	47		PKPdf	16 05 02.9	-0.6
AAK	Ala-Archa	142.75	44	PKP	PKPdf	16 05 02.9	-1.4
	comp=Z,6.6nm,0.9s,baz=180,slow=2.8,SNR=12						
AAK	Ala-Archa	142.75	44		PKPdf	16 05 02.8	-1.5
AAK	Ala-Archa	142.75	44	IAMs_20	IAMs_20	17 18 48.6	
	comp=Z,673nm,20.0s						
FRU1	Bishkek	142.76	44	IAMs_20	IAMs_20	17 16 33.8	
	comp=Z,725nm,20.0s						
MAKZ	Makanchi	144.82	33	PKIKP	PKPab	16 05 06.5	0.0
MAKZ				MLR	MLR		
	comp=Z,1µm,21.0s						
MAKZ	Makanchi	144.82	33		PKPab	16 05 06.5	0.0
MK31	Makanchi Array	144.99	33	PKIKP	PKPab	16 05 06.9	-0.2
MK31	Makanchi Array	144.99	33		PKPab	16 05 06.9	-0.2
MKAR	Makanchi Array	144.99	33	PKP	PKPbc	16 05 07.2	+0.1
	comp=Z,21nm,0.7s,baz=326,slow=4.3,SNR=217						
MKAR	Makanchi Array	144.99	33	PKIKP	PKPab	16 05 06.9	-0.2
MKAR	Makanchi Array	144.99	33		PKPab	16 05 06.9	-0.2
NIL	Nilore	145.04	59	PKIKP	PKPbc	16 05 07.0	-0.8
NIL				MLR	MLR		
	comp=Z,2µm,19.0s						
NIL	Nilore	145.04	59		PKPbc	16 05 07.0	-0.8
KSH	Kashi	145.13	48	PKPbc	PKPbc	16 05 07.3	-0.7
KSH				sPKP		16 05 21.6	
KSH				PP	PP	16 08 31.3	+4.2
KSH				PKS		16 08 44.8	
KSH				SKKS		16 15 18.8	
KSH				AMB	AMB		
	comp=Z,340nm,4.6s						
KSH				LR	LR		
	comp=Z,210nm,12.8s						
KSH				LR	LR		
	comp=Z,93nm,9.0s						
KSH				LR	LR		
	comp=Z,900nm,14.7s						
TEY	Ternei	145.96	324	⇑ePKP2	PKPab	16 05 10.8	+0.1
TEY				pmax	pmax		
	comp=N,10.0nm,1.1s						
TEY				pmax	pmax		
	comp=Z,40nm,1.4s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.3s						
POO	Poona	146.52	86	eP	PKPdf	16 05 09.6	-1.7
IRK	Irkutsk	147.14	6	ePKP2	PKPbc	16 05 12.9	-0.5
IRK				pmax	pmax		
	comp=Z,139nm,2.9s						
MOY	Mondy	147.29	10	ePKP2	PKPbc	16 05 13.5	-0.5
MOY				pmax	pmax		
	comp=Z,120nm,2.1s						
SOEI	Soe	147.35	208	PKP	PKPbc	16 05 16.0	+0.7
SOEI	Soe	147.35	208		PKPbc	16 05 14.3	-1.0
CIT	Chita	147.42	355	ePKP2	PKPbc	16 05 13.1	-1.2
CIT				e		16 08 49.4	
CIT				pmax	pmax		
	comp=Z,77nm,1.6s						
TLY	Talaya	147.63	7	ePKP2	PKPdf	16 05 13.3	+1.1
TLY				eSS	SS	16 27 38.3	-5.2
TLY				pmax	pmax		
	comp=Z,132nm,1.8s						
TLY	Talaya	147.63	7		PKPbc	16 05 13.9	-0.9
TLY				IAMs_20	IAMs_20	17 15 52.4	
	comp=Z,521nm,20.0s						
BHK	Bhakra	148.18	62	ex	PKPbc	16 05 17.5	+0.5
FAKI	Fak Fak	148.25	228		PKPbc	16 05 17.4	-0.2
ZAK	Zakamensk	148.87	7	ePKIKP	PKPdf	16 05 14.1	-0.2
ZAK				pmax	pmax		
	comp=Z,24nm,1.4s						
USA0B	Ussuriysk Arra	148.96	327	PKP2	PKPbc	16 05 18.4	-0.1
USA0B				MLR	MLR		
	comp=Z,800nm,22.0s						
USA0B	Ussuriysk Arra	148.96	327		PKPbc	16 05 18.4	-0.1
USA0B				IAMs_20	IAMs_20	17 16 38.9	
	comp=Z,772nm,22.0s						
USRK	Ussuriysk Ar.	148.96	327	PKPbc	PKPbc	16 05 17.7	-0.8
	comp=Z,7.5nm,0.7s,baz=48,slow=2.8,SNR=21						
USRK	Ussuriysk Ar.	148.96	327		PKPbc	16 05 18.7	+0.1
KLRI	Killari	149.05	87	ePKPdf	PKPdf	16 05 15.5	0.0
KLRI				IVMs_BB	IVMs_BB	17 11 38.8	
	comp=Z,274nm,22.8s						
URV	Uravakonda	149.10	93	ePKPdf	PKPdf	16 05 15.6	0.0
URV				IVMs_BB	IVMs_BB	17 11 24.3	
	comp=Z,280nm,21.7s						
HIA	Hailar	149.18	347	PKP2	PKPbc	16 05 18.6	-0.4
HIA				MLR	MLR		
	comp=Z,700nm,20.0s						
HIA	Hailar	149.18	347		PKPbc	16 05 18.6	-0.4
MMRI	Maumere	149.22	206	PKP	PKPbc	16 05 19.6	-0.5
MMRI	Maumere	149.22	206		PKPdf	16 05 14.2	-1.7
MMRI				PKPbc	PKPbc	16 05 19.4	-0.7
MJAR	Matsushiro Arr	149.53	310	PKPbc	PKPbc	16 05 20.7	+0.5
	comp=Z,9.7nm,1.0s,baz=198,slow=0.3,SNR=23						
MJAR	Matsushiro Arr	149.53	310	PKPab	PKPab	16 05 24.7	-0.6
MAJO	Matsushiro	149.53	310	PKP2	PKPbc	16 05 19.4	-0.9
MAJO				MLR	MLR		
	comp=Z,1µm,21.0s						
MAJO	Matsushiro	149.53	310		PKPbc	16 05 19.4	-0.9
MAT	Matsushiro	149.53	310	PKP	PKPbc	16 05 20.5	+0.2
MJB9	Matsu-Tunnel	149.53	310		PKPbc	16 05 19.7	-0.5
PALK	Pallekele	149.70	110	PKPbc	PKPbc	16 05 20.9	-0.4
	comp=Z,17nm,1.1s,baz=287,slow=2.7,SNR=11						
PALK	Pallekele	149.70	110	PKIKP	PKPdf	16 05 15.7	-1.0
PALK				MLR	MLR		
	comp=Z,1µm,20.0s						
PALK	Pallekele	149.70	110		PKPdf	16 05 15.7	-1.0
WMQ	Urumqi	149.79	32	ePKPbc	PKPdf	16 05 16.8	+0.8
WMQ				PP	PP	16 08 54.0	+0.2
WMQ				SKS	SKSdf	16 12 15.3	-8.6
WMQ				SS	SS	16 28 10.8	+1.9
WMQ				AMB	AMB		
	comp=Z,350nm,5.3s						
WMQ				LR	LR		
	comp=Z,1µm,22.1s						
WMQ				LR	LR		
	comp=Z,1µm,22.1s						
WMQ				LR	LR		
	comp=Z,1µm,20.9s						
MDJ	Mudanjiang	149.82	330	PKPbc	PKPdf	16 05 16.0	+0.1
MDJ				PP	PP	16 08 55.9	+2.1
MDJ				AMB	AMB		
	comp=Z,290nm,12.8s						
MDJ				LR	LR		
	comp=Z,610nm,19.1s						
MDJ				LR	LR		
	comp=Z,780nm,22.1s						
MDJ				LR	LR		
	comp=Z,970nm,21.4s						
MDJ	Mudanjiang	149.82	330		PKPbc	16 05 20.4	-0.2
AAI	Ambon	150.35	221	PKP	PKPdf	16 05 17.7	0.0
SIJI	Sorong	150.39	229	PKPbc	PKiKP	16 05 23.6	-0.2
	comp=Z,18nm,0.7s,baz=31,slow=4.8,SNR=9.9						
PLAI	Plampang	150.59	197	PKP	PKiKP	16 05 23.9	-0.2
HYB	Hyderabad	150.79	89	i PKP	PKPdf	16 05 19.0	+0.7
HYBB	Hyderabad (bro	150.79	89	ePKPdf	PKPdf	16 05 18.2	0.0
HYBB				IVMs_BB	IVMs_BB	17 10 14.0	
	comp=Z,323nm,22.2s						
SRSP	Sriramsagar	150.80	86	ePKPdf	PKPdf	16 05 18.0	-0.2
SRSP				IVMs_BB	IVMs_BB	17 11 40.0	
	comp=Z,181nm,22.1s						
SRLM	Srisailam	150.88	92	ePKPdf	PKPdf	16 05 18.7	+0.2
SRLM				IVMs_BB	IVMs_BB	17 09 07.8	
	comp=Z,181nm,21.1s						
INU	Inuyama	150.92	308	IAMs_20	IAMs_20	17 13 40.6	
	comp=Z,616nm,20.0s						
SKHT	Srikalahasti	151.11	97	ePKPdf	PKPdf	16 05 19.1	+0.4
SKHT				IVMs_BB	IVMs_BB	17 11 16.7	
	comp=Z,188nm,17.7s						
NJS	Nagarjunasagar	151.36	91	ePKPdf	PKPdf	16 05 18.6	-0.5
NJS				IVMs_BB	IVMs_BB	17 12 08.6	
	comp=Z,196nm,20.0s						
RPR	Rampur	151.69	86	ePKPdf	PKPdf	16 05 19.6	+0.1
SONM	Songino Array	151.69	4	PKP	PKPdf	16 05 19.2	+0.3
	comp=Z,4.0nm,1.2s,baz=313,slow=0.5,SNR=14						
SONM				PKPbc	PKiKP	16 05 26.0	+0.4
	comp=Z,8.1nm,0.8s,baz=328,slow=1.2,SNR=37						
SONM	Songino Array	151.69	4		PKPdf	16 05 18.6	-0.3
SONM				PKPbc	PKPbc	16 05 25.1	0.0
JAGI	Jajag, Banyuwa	151.75	190		PKPbc	16 05 25.7	-0.5
JAGI				IAMs_20	IAMs_20	17 10 58.9	
	comp=Z,576nm,22.0s						
ADKI	Addanki	151.85	93	ePKPdf	PKPdf	16 05 20.2	+0.4
ADKI				IVMs_BB	IVMs_BB	17 11 57.1	
	comp=Z,231nm,19.5s						
GGR	Gangavaram	152.41	89	ePKPdf	PKPdf	16 05 20.8	+0.1
GGR				ePKPab	PKPab	16 05 37.8	+0.1
GGR				IVMs_BB	IVMs_BB	17 09 03.2	
	comp=Z,330nm,23.6s						
MYLAV	Mylavaram	152.65	91	ePKPdf	PKPdf	16 05 21.8	+0.8
MYLAV				IVMs_BB	IVMs_BB	17 09 36.2	
	comp=Z,248nm,24.0s						
SANI	Sanana	152.98	219	PKP	PKPbc	16 05 28.5	-0.4
CISI	Cisompet, Garu	153.03	177		PKPbc	16 05 28.7	-0.4
CISI				IAMs_20	IAMs_20	17 08 02.3	
	comp=Z,660nm,22.0s						

PVM	Polavaram	153.66	90	*e*PKPdf	PKPdf	16 05 23.1	+0.7
PVM				IVMs_BB	IVMs_BB	17 10 26.0	
	comp=Z,160nm,21.4s						
DANN	Dangsing	155.12	65	*e*P	PKPdf	16 05 25.0	+0.4
KSRS	Korea Array	155.86	322	PKP	PKPdf	16 05 24.7	-0.2
	comp=Z,1.3nm,0.8s,baz=288,slow=0.7,SNR=7.6						
KSAR	Wonju Array Be	155.89	322	PKIKP	PKPdf	16 05 24.0	-1.0
KSAR	Wonju Array Be	155.89	322		PKPdf	16 05 24.0	-1.0
GKN	Gorkha	155.96	65	*e*P	PKPdf	16 05 25.3	-0.3
CHLP	Challavanipeta	156.13	88	*e*PKPdf	PKPdf	16 05 25.9	+0.1
CHLP				*e*PKPab	PKPab	16 05 53.3	-0.2
CHLP				IVMs_BB	IVMs_BB	17 12 12.3	
	comp=Z,205nm,22.1s						
DMN	Daman	156.46	66	*e*P	PKPdf	16 05 26.5	+0.1
KKN	Kakani	156.56	65	*e*P	PKPdf	16 05 26.5	0.0
INCN	Inchon	156.58	323	IAMs_20	IAMs_20	17 21 36.4	
	comp=Z,702nm,21.0s						
PKIN	Phulchoki	156.72	65	*e*P	PKPdf	16 05 26.4	-0.3
PKI	Pulchoki	156.73	65	*e*P	PKPdf	16 05 26.6	-0.2
GUN	Gumba	157.04	64	*e*P	PKPdf	16 05 26.9	-0.4
JIRN	Jiri	157.38	65	*e*P	PKPdf	16 05 27.2	-0.5
RAMN	Ramite	157.91	66	*e*P	PKPdf	16 05 28.4	+0.2
DL2	Dalian	157.95	334	PKP	PKPdf	16 05 30.0	+2.4
DL2				PP	PP	16 09 46.8	+7.4
DL2				AMB	AMB		
	comp=Z,220nm,8.2s						
DL2				LR	LR		
	comp=Z,500nm,20.2s						
DL2				LR	LR		
	comp=Z,300nm,15.1s						
DL2				LR	LR		
	comp=Z,680nm,21.0s						
GSI	Gunungsitoli	158.55	146		PKPdf	16 05 28.1	-1.0
GTA	Gaotai	158.59	20	PKP	PKPdf	16 05 29.3	+0.8
GTA				PP	PP	16 09 47.5	+4.6
GTA				SS	SS	16 29 50.4	+6.3
GTA				AMB	AMB		
	comp=Z,130nm,6.2s						
GTA				LR	LR		
	comp=Z,630nm,22.0s						
GTA				LR	LR		
	comp=Z,710nm,21.6s						
GTA				LR	LR		
	comp=Z,1µm,20.3s						
ODAN	Odare	158.62	66	*e*P	PKPdf	16 05 29.0	-0.1
HHC	Hu-ho-hao-te	158.68	355	*e*PKP	PKPdf	16 05 30.1	+1.5
HHC				PP	PP	16 09 43.6	+0.5
HHC				SS	SS	16 29 44.0	-0.6
HHC				AMB	AMB		
	comp=Z,190nm,8.4s						
HHC				LR	LR		
	comp=Z,380nm,20.9s						
HHC				LR	LR		
	comp=Z,260nm,21.2s						
HHC				LR	LR		
	comp=Z,550nm,19.9s						
BJI	Beijing	158.74	345	PKP	PKPdf	16 05 28.9	+0.4
BJI				PP	PP	16 09 44.8	+1.4
BJI				SS	SS	16 29 47.4	+2.3
BJI				AMB	AMB		
	comp=Z,120nm,4.5s						
BJI				LR	LR		
	comp=Z,370nm,18.5s						
BJI				LR	LR		
	comp=Z,430nm,23.5s						
BJI				LR	LR		
	comp=Z,740nm,27.4s						
TAPN	Taplejung	158.76	65	*e*P	PKPdf	16 05 29.2	-0.1
RPSI	Rantau Prapat	160.43	148	PKPdf	PKPdf	16 05 29.7	-1.5
RPSI					PKPab	16 06 11.5	-0.4
RPSI	Rantau Prapat	160.43	148		PKPdf	16 05 30.6	-0.6
RPSI					PKPab	16 06 13.0	+1.0
PSI	Prapat	160.52	147	PKP	PKPdf	16 05 30.6	-0.9
	comp=Z,3.3nm,0.8s,baz=227,slow=5.8,SNR=5.8						
PSI				PKPab	PKPab	16 06 13.0	+0.5
	comp=Z,12nm,0.8s,baz=177,slow=5.1,SNR=12						
PSI	Prapat	160.52	147	PKIKP	PKPdf	16 05 29.7	-1.8
PSI						16 06 11.5	
TIA	Tai'an	162.03	339	PKP	PKPdf	16 05 31.3	-1.0
TIA				LR	LR		
	comp=Z,470nm,21.6s						
TIA				LR	LR		
	comp=Z,390nm,24.5s						
TIA				LR	LR		
	comp=Z,770nm,22.1s						
LZH	Lanzhou	162.84	15	⇑PKP	PKPdf	16 05 32.4	-0.9
LZH				sPKP		16 05 47.1	
LZH				SS	SS	16 30 31.9	+3.3
LZH				AMB	AMB		
	comp=Z,440nm,12.5s						
LZH				LR	LR		
	comp=Z,820nm,18.2s						
LZH				LR	LR		
	comp=Z,830nm,19.1s						
LZH				LR	LR		
	comp=Z,840nm,20.3s						
NJ2	Nanjing	164.87	327	*e*PKP	PKPdf	16 05 34.9	-0.1
NJ2				LR	LR		
	comp=Z,700nm,19.9s						
NJ2				LR	LR		
	comp=Z,460nm,19.4s						
NJ2				LR	LR		
	comp=Z,940nm,22.6s						
XAN	Xi'an	165.56	1	PKP	PKPdf	16 05 36.5	+0.8
XAN				pPKP	sPKPdf	16 05 47.3	+6.2
XAN				sPKP		16 05 50.8	
XAN				PP	PP	16 10 19.3	-0.4
XAN				SKS	SKSdf	16 12 34.5	-5.4
XAN				SKKS	SKKSac	16 17 01.8	-6.7
XAN				AMB	AMB		
	comp=Z,300nm,10.0s						
XAN				LR	LR		
	comp=Z,690nm,21.1s						
XAN				LR	LR		
	comp=Z,520nm,19.5s						
XAN				LR	LR		
	comp=Z,940nm,23.8s						
CD2	Chengdu	167.63	23	PKP	PKPdf	16 05 35.3	-2.0
WHN	Wuhan	168.13	338	PKP	PKPdf	16 05 37.4	-0.2
WHN				LR	LR		
	comp=Z,2µm,22.0s						
WHN				LR	LR		
	comp=Z,2µm,22.2s						
WHN				LR	LR		
	comp=Z,2µm,21.5s						
ENH	Enshi	169.32	359		PKPdf	16 05 38.0	-0.4
QZH	Quanzhou	169.85	304	PKP	PKPdf	16 05 39.3	+0.5
QZH				PP	PP	16 10 47.9	+4.7
QZH				SS	SS	16 31 44.1	+2.1
QZH				LR	LR		
	comp=Z,500nm,17.8s						
QZH				LR	LR		
	comp=Z,580nm,21.8s						
QZH				LR	LR		
	comp=Z,680nm,21.6s						
CMAR	Chiang Mai Arr	170.16	95	PKP	PKPdf	16 05 38.5	-0.7
	comp=Z,1.2nm,1.0s,baz=278,slow=2.8,SNR=10						
CMAR				PKPab	PKPab	16 06 55.2	+0.2
	comp=Z,2.9nm,0.9s,baz=256,slow=5.8,SNR=10.0						
CMAR				PP	PP	16 10 43.0	-2.5
	comp=Z,0.5nm,0.8s,baz=270,slow=6.3,SNR=2.3						
CHTO	Chiang Mai	170.20	93	PKIKP	PKPdf	16 05 37.9	-1.4
CHTO	Chiang Mai	170.20	93		PKPdf	16 05 37.9	-1.4
PBKT	Sadao Pong	171.56	109	PKPdf	PKPdf	16 05 38.6	-1.3
KMI	Kunming	171.79	46	PKP	PKPdf	16 05 40.6	+0.4
KMI				pPKP	sPKPdf	16 05 46.8	+1.1
KMI				sPKP		16 05 49.5	
KMI				PP	PP	16 10 58.3	+5.5
KMI				SKKS		16 17 39.0	
KMI				LR	LR		
	comp=Z,350nm,23.7s						
KMI				LR	LR		
	comp=Z,900nm,20.5s						
KMI				LR	LR		
	comp=Z,990nm,20.5s						
GYA	Guiyang	172.71	19	PKP	PKPdf	16 05 38.9	-1.5
GYA				PKPab	PKPab	16 07 06.0	+0.1
GYA				PKS		16 09 10.3	
GYA				PP	PP	16 10 58.6	+2.4
GYA				AMB	AMB		
	comp=Z,140nm,8.0s						
QIZ	Qiongzhong	179.26	226	PKP	PKPdf	16 05 43.0	+1.0
QIZ				PKPab	pPKPab	16 07 38.3	-0.9
QIZ				PP	PP	16 11 29.1	+0.8
QIZ				SKKS		16 18 14.8	
QIZ				SS	SS	16 33 09.4	-2.5
QIZ				LR	LR		
	comp=Z,540nm,21.1s						
QIZ				LR	LR		
	comp=Z,540nm,19.6s						
QIZ				LR	LR		
	comp=Z,970nm,18.6s						

MOS ***24*** *15:46:31.9±1.0, 3.°34S×103.°97E, h293^{km}, mb4.6/48, Error ellipse: s-maj=11.5km s-min=5.5km az=119.0*

NEIC ***24*** *15:46:32.6±2.5, 3.°38S±0.°06×104.°01E±0.°07, h293^{km}±4^{km}, mb4.7/96, Error ellipse: s-maj=10.2km s-min=8.2km az=49.0*

DJA ***24*** *15:46:32.5±0.1, 4°S±2°×10°4E±°, h281^{km}±2^{km}, M4.5/75, mb4.9/75, mB5.1/47, MLv5.2/26, Mw(mB)4.5/47, Mwp4.8/1*

KLM ***24*** *15:46:33.0, 3.°51S×103.°95E, h292^{km}, mb4.8*

IDC ***24*** *15:46:34.1±0.6, 3.°35S×104.°03E, h302^{km}±5^{km}, mb4.2/29, mb1 4.2/30, mb1mx4.2/37, mbtmp4.8/30, Error ellipse: s-maj=9.7km s-min=6.0km az=55.0*

ISC 24 15:46:33.1±0.5, **3.°43S**±0.°04×**103.°94E**±0.°04, **h298**^{km}±4^{km}, **h298**^{km}**:pP-P, n393,** σ1.^{s}**49**/418, **mb4.7**/103, **34C-10D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMBI	Palembang	0.97	59	P	Pn	15 47 11.7	-1.4
PMBI	Palembang	0.97	59		Pn	15 47 11.5	-1.5
MDSI	Maura Dua	1.07	167	P	Pn	15 47 11.2	-2.4
MNAI	Manna	1.35	227	P	Pn	15 47 13.7	-1.4
MNAI	Manna	1.35	227		Pn	15 47 13.6	-1.4
KSI	Kapahiang	1.36	261	P	Pn	15 47 14.2	-1.0
KSI	Kapahiang	1.36	261	P	Pn	15 47 14.5	-0.7
LWLI	Liwa	1.58	176	P	Pn	15 47 14.6	-2.1
KASI	Kota Agung	2.15	165	P	Pn	15 47 17.8	-3.1
KRJI	Kerinci	2.81	298	P	Pn	15 47 27.0	+0.1
SDSI	Sungai Dareh	3.53	315	P	Pn	15 47 33.8	-0.3
TNG	Tangerang	3.83	135	P	Pn	15 47 35.7	-1.6
PPSI	Pulau Pagai	3.98	279	P	Pn	15 47 38.1	-0.9
DBJI	Dramaga	4.18	138	P	Pn	15 47 38.9	-2.3
PDSI	Padang	4.28	306	P	Pn	15 47 41.4	-1.0
TPRI	Tanjung Pinang	4.36	8	P	Pn	15 47 43.3	+0.1
SKJI	Sukabumi	4.40	144	P	Pn	15 47 40.1	-3.6
BKNI	Bangkinang	4.73	322	P	Pn	15 47 47.6	+0.2
BKNI	Bangkinang	4.73	322		Pn	15 47 46.6	-0.8
LEM	Lembang	4.98	133	P	Pn	15 47 49.2	-1.3
	25nm,0.3s,baz=351,slow=6.0,SNR=54						
LEM	Lembang	4.98	133	P	Pn	15 47 48.6	-1.9
CNJI	Cibinong	4.99	141	P	Pn	15 47 45.9	-4.5
MYKOM	Kota Tinggi	5.19	359		Pn	15 47 52.4	-0.3
MYKOM	Kota Tinggi	5.19	359	P	Pn	15 47 53.0	+0.3
SISI	Saibi	5.28	293	P	Pn	15 47 52.5	-1.3
	3.6nm2µm8µm435nm,0.9s						
CISI	Cisompet, Garu	5.63	137	P	Pn	15 47 53.7	-4.3
	4.3nm16µm332nm,0.5s						
CISI	Cisompet, Garu	5.63	137		Pn	15 47 54.0	-4.0
XMIS	Christmas Isla	7.21	166		Pn	15 48 12.5	-4.5
SMRI	Semarang	7.40	119	P	Pn	15 48 19.0	-0.4
	1.3nm441nm,1.0s						
SMRI	Semarang	7.40	119		Pn	15 48 17.9	-1.5
UWJI	Ujung Watu	7.59	113	P	Pn	15 48 19.0	-2.6
	0.6nm2µm202nm,1.0s						
RPSI	Rantau Prapat	7.88	320		Pn	15 48 24.3	-0.9
RPSI	Rantau Prapat	7.88	320		Pn	15 48 24.6	-0.7
RPSI					S	15 49 50.6	-5.6
GSI	Gunungsitoli	7.91	306	P	Pn	15 48 23.8	-1.8
GSI	Gunungsitoli	7.91	306		Pn	15 48 23.6	-2.0
UGM	Wanagama	7.92	124	P	Pn	15 48 23.6	-2.1
	1.1nm4µm271nm,1.0s						
UGM	Wanagama	7.92	124		Pn	15 48 23.7	-2.0
PSI	Prapat	7.97	321	P	Pn	15 48 24.6	-1.8
	43nm,0.3s,baz=169,slow=5.2,SNR=87						
PSI				S	S	15 49 50.6	-7.7
	1.5nm,0.3s,baz=263,slow=21,SNR=9.2						
PSI	Prapat	7.97	321	P	Pn	15 48 24.8	-1.6
PSI				pmax	pmax		
	comp=Z,104nm,0.4s						
KSM	Kuching	8.02	53		Pn	15 48 26.8	-0.1
WOJI	Wonogiri, Jawa	8.21	123	P	Pn	15 48 27.5	-1.8
	comp=Z,0.4nmcomp=Z,2µmcomp=Z,80nm,0.7s						
IPM	Ipoh	8.38	340		Pn	15 48 32.2	+0.8
PCJI	Pacitan	8.61	124	P	Pn	15 48 30.4	-3.8
	comp=Z,3µmcomp=Z,90nm,0.5s						
PWJI	Pagerwojo	9.05	121	P	Pn	15 48 38.5	-1.2
	comp=Z,2µmcomp=Z,97nm,0.9s						
GRJI	Gresik	9.18	112	P	Pn	15 48 40.2	-1.0
	comp=Z,776nmcomp=Z,118nm,1.0s						
KCSI	Kotacane, Aceh	9.26	318	P	Pn	15 48 40.6	-1.6
KULM	Kulim	9.27	339		Pn	15 48 42.5	+0.2
KULM	Kulim	9.27	339	P	Pn	15 48 43.0	+0.7
TPTI		9.48	314	P	Pn	15 48 43.9	-1.0
	comp=Z,2µmcomp=Z,95nm,0.5s						
SBUM	Sibu	10.13	55	P	Pn	15 48 54.4	+1.5
SBUM	Sibu	10.13	55	P	P	15 48 55.0	-1.4
KMMI	Kalianget	10.61	110	P	Pn	15 48 58.5	-0.3
	comp=Z,2µmcomp=Z,71nm,0.7s						
MLSI	Meulaboh, Aceh	10.73	315	P	Pn	15 48 59.3	-1.0
	comp=Z,8µmcomp=Z,468nm,0.6s						
LHMI	Lhok Sumawe	11.08	321		Pn	15 49 02.7	-1.9
JAGI	Jajag, Banyuwa	11.32	117	P	Pn	15 49 06.6	-0.9
	comp=Z,1µmcomp=Z,41nm,0.4s						
JAGI	Jajag, Banyuwa	11.32	117		Pn	15 49 04.3	-3.2
SRBI	Singaraja	12.13	113	P	P	15 49 18.4	-0.2
	comp=Z,1µmcomp=Z,139nm,0.8s						
KBKI	Kotabaru	12.21	90	P	Pn	15 49 18.8	+0.5
	comp=Z,378nmcomp=Z,44nm,0.7s						
BKB	Balikpapan	13.12	81	P	P	15 49 32.0	+2.3
	comp=Z,3µmcomp=Z,309nm,1.1s						
BKB	Balikpapan	13.12	81	P	P	15 49 30.6	+0.9
SMKI	Samarinda	13.59	78	P	Pn	15 49 36.1	+1.2
PLAI	Plampang	14.76	112	P	P	15 49 45.0	-2.8
	comp=Z,2µmcomp=Z,180nm,0.6s						
KKM	Kota Kinabalu	15.45	53	Pn	Pn	15 49 56.6	-0.5
KKM				IAmb	IAmb	15 50 18.5	
	comp=Z,23nm,0.8s						
SPSI	Sidrap Palu	15.80	92	P	P	15 49 59.1	-0.1
	comp=Z,822nmcomp=Z,80nm,1.0s						
KAPI	Kappang	15.85	96	P	P	15 49 59.8	+0.1
	comp=Z,21nm,0.3s,baz=258,slow=9.9,SNR=98						
KAPI				ScP	ScP	15 57 45.5	-0.1
	comp=Z,0.4nm,0.3s,baz=208,slow=1.5,SNR=4.1						
DLV	T Lat	15.93	16		Pn	15 50 02.8	0.0
DLV				IAmb	IAmb	15 50 04.6	
	comp=Z,31nm,0.7s						
BNSI	Bone	16.16	94	P	Pn	15 50 05.3	+0.1
	comp=Z,2µmcomp=Z,251nm,1.1s						
BKSI	Bulukumba	16.24	97	P	Pn	15 50 05.6	-0.7
	comp=Z,4µmcomp=Z,366nm,0.8s						
MPSI	Mapaga	16.38	77	P	Pn	15 50 07.5	-0.4
	comp=Z,1µmcomp=Z,107nm,0.6s						
WBSI	Waikabubak, Su	16.54	113	P	P	15 50 04.7	-2.6
	comp=Z,1µmcomp=Z,191nm,0.8s						
BASI	Baing, Sumba	17.83	113	P	P	15 50 22.7	+1.5
	comp=Z,1µmcomp=Z,103nm,0.7s						
APSI	Ampana	17.87	82	P	Pn	15 50 23.5	-1.8
	comp=Z,2µmcomp=Z,249nm,0.8s						
MRSI	Marisa	18.41	78	P	P	15 50 28.3	+0.9
	comp=Z,2µmcomp=Z,147nm,0.7s						
BBSI	Bau Bau	18.68	97	P	P	15 50 31.9	+1.5
	comp=Z,364nmcomp=Z,35nm,1.0s						
MMRI	Maumere	18.91	107	P	P	15 50 29.3	-3.5
	comp=Z,1µmcomp=Z,34nm,0.7s						
MMRI	Maumere	18.91	107	P	P	15 50 30.3	-2.5
MMRI				IAmb	IAmb	15 50 37.3	
	comp=Z,24nm,0.6s						
LUWI	Luwuk	18.96	83	P	P	15 50 34.2	+0.8
	comp=Z,2µmcomp=Z,172nm,0.9s						
LUWI	Luwuk	18.96	83	P	P	15 50 33.8	+0.4
PBKT	Sadao Pong	20.09	352	P	P	15 50 45.7	+0.5
PBKT				IAmb	IAmb	15 50 48.1	
	comp=Z,22nm,1.0s						
KMSI	Cibinong	20.42	79	P	P	15 50 47.9	-0.7
	comp=Z,1µmcomp=Z,141nm,0.6s						
SOEI	Soe	21.14	108	P	P	15 50 53.4	-2.3
	comp=Z,46nm,0.9s						
SOEI	Soe	21.14	108	P	P	15 50 52.7	-3.1
SOEI				IAmb	IAmb	15 51 18.6	
	comp=Z,35nm,0.7s						
SANI	Sanana	22.07	87	P	P	15 51 04.5	+0.4
	comp=Z,1µmcomp=Z,127nm,1.0s						
CM31	Chiang Mai Arr	22.30	347	P	P	15 51 06.5	+0.4
CM31				IAmb	IAmb	15 51 08.8	
	comp=Z,28nm,0.8s						
CMAR	Chiang Mai Arr	22.30	347	P	P	15 51 06.3	+0.2
	comp=Z,18nm,0.7s,baz=181,slow=8.9,SNR=100						
CMAR				S	S	15 54 50.5	+1.3
	comp=Z,3.8nm,1.1s,baz=182,slow=16,SNR=8.0						
CMAR				ScP	ScP	15 57 59.9	-0.2
	comp=Z,3.6nm,0.8s,baz=200,slow=3.1,SNR=20						
CMAR	Chiang Mai Arr	22.30	347	*i* P	P	15 51 06.8	+0.7
CMAR				pmax	pmax		
	comp=Z,18nm,0.7s						
CMAR	Chiang Mai Arr	22.30	347	P	P	15 51 05.7	-0.4
CHTO	Chiang Mai	22.65	348	P	P	15 51 08.0	-1.3
CHTO				pmax	pmax		
	comp=Z,23nm,0.8s						
CHTO	Chiang Mai	22.65	348	P	P	15 51 09.0	-0.3
CHTO				IAmb	IAmb	15 51 10.7	
	comp=Z,23nm,0.8s						
CTBH	Cotabato--PC H	22.86	62	⇓*i*P	P	15 51 13.0	+1.7
NLAI	Namlea	23.12	90	P	P	15 51 16.0	+2.3
	comp=Z,676nmcomp=Z,69nm,0.7s						
KCP	Kidapawan	23.52	64	⇑*e*P	P	15 51 18.6	+1.3
LBMI	Labuha	23.71	84	P	P	15 51 20.5	+1.5
	comp=Z,3µmcomp=Z,237nm,1.0s						
PSA00	Pilbara Seismi	23.75	141	P	P	15 51 19.7	+0.4
PSA00				IAmb	IAmb	15 51 23.3	
	comp=Z,30nm,1.1s						
PSA00	Pilbara Seismi	23.75	141	P	P	15 51 20.2	+0.9
PSA00				IAmb	IAmb	15 51 24.7	
	comp=Z,12nm,0.8s						
TNTI	Ternate	23.78	80	P	P	15 51 20.7	+1.0
AAI	Ambon	24.21	91	P	P	15 51 26.7	+3.2
	comp=Z,34nm,0.6s						
SLVN	Son La	24.61	360	P	P	15 51 28.5	+1.4
MSAI	Masohi	24.94	91	P	P	15 51 30.5	+0.3
	comp=Z,461nmcomp=Z,17nm,0.9s						
PALK	Pallekele	25.51	295	P	P	15 51 36.0	+0.7
	comp=Z,14nm,0.9s,baz=111,slow=5.3,SNR=8.4						
PALK	Pallekele	25.51	295	P	P	15 51 37.5	+2.2
PALK	Pallekele	25.51	295	P	P	15 51 37.0	+1.7
PALK				pmax	pmax		
	comp=Z,28nm,1.1s						
PALK	Pallekele	25.51	295	P	P	15 51 37.0	+1.7
PALK				IAmb	IAmb	15 51 38.8	
	comp=Z,28nm,1.1s						
FITZ	Fitzroy Crossi	25.77	126	P	P	15 51 36.7	-0.8
	comp=Z,8.6nm,0.8s,baz=318,slow=6.6,SNR=26						
FITZ				PcP	PcP	15 54 59.5	+0.7
	comp=Z,4.9nm,0.8s,baz=354,slow=0.4,SNR=3.4						
FITZ				ScP	ScP	15 58 09.4	-0.3
	comp=Z,5.6nm,0.7s,baz=1.6,slow=6.9,SNR=4.1						
FITZ	Fitzroy Crossi	25.77	126	P	P	15 51 36.6	-0.9
KNRA	Kununurra	27.29	118	P	P	15 51 49.0	-2.0
KNRA				IAmb	IAmb	15 52 48.0	
	comp=Z,22nm,0.8s						
SWI	Sorong	27.42	85	P	P	15 51 52.8	+0.6
	comp=Z,2µmcomp=Z,181nm,0.9s						
SIJI	Sorong	27.42	85	P	P	15 51 52.6	+0.3
	comp=Z,95nm,0.8s,baz=234,slow=6.3,SNR=45						
FAKI	Fak Fak	28.27	90	P	P	15 52 00.3	+0.5
	comp=Z,103nm,0.9s						
FAKI	Fak Fak	28.27	90	P	P	15 51 59.9	+0.2
MTN	Manton Dam	28.46	111	P	P	15 52 00.1	-1.4
NWAO	Narrogin (SRO)	31.88	159	P	P	15 52 32.4	+1.3
	comp=Z,6.8nm,0.9s,baz=32,slow=9.5,SNR=1.9						
NWAO	Narrogin (SRO)	31.88	159	P	P	15 52 32.3	+1.2
NWAO				IAmb	IAmb	15 53 44.7	
	comp=Z,56nm,1.6s						
NWAO	Narrogin (SRO)	31.88	159	IAmb	IAmb	15 53 44.7	
	comp=Z,42nm,1.5s						
NACB	Ninganchiao	32.37	31	P	P	15 52 34.5	-1.1
NACB				IAmb	IAmb	15 53 23.8	
	comp=Z,18nm,0.8s						
HYB	Hyderabad	32.51	310	*i* P	P	15 52 36.5	-0.3
WB0	Warramunga Arr	33.86	121	P	P	15 52 47.0	-1.5
WB0				IAmb	IAmb	15 52 49.0	
	comp=Z,27nm,0.8s						
WRA	Warramunga Arr	33.88	121	P	P	15 52 47.8	-0.9
	comp=Z,9.1nm,0.4s,baz=298,slow=9.6,SNR=103						
WRA				pP	pP	15 53 46.4	-0.4
	comp=Z,5.1nm,1.0s,baz=295,slow=10,SNR=2.7						
WRA				PcP	PcP	15 55 19.9	-0.1
	comp=Z,3.5nm,0.7s,baz=299,slow=2.7,SNR=6.5						
WRA				S	S	15 57 45.8	-5.1
	comp=Z,2.5nm,1.0s,baz=298,slow=16,SNR=5.2						
WRA	Warramunga Arr	33.88	121	P	P	15 52 46.8	-1.9
WRA	Warramunga Arr	33.88	121	P	P	15 52 46.8	-1.9
WRA	Warramunga Arr	33.88	121		PcP	15 55 20.0	0.0
WB2	Warramunga Arr	33.90	121	P	P	15 52 47.6	-1.2
WB2				IAmb	IAmb	15 52 48.8	
	comp=Z,19nm,0.9s						
ENH	Enshi	33.93	9	P	P	15 52 49.2	+0.3
ENH				IAmb	IAmb	15 52 50.1	
	comp=Z,9.1nm,0.6s						
WR0	Warramunga Arr	34.06	121	P	P	15 52 49.1	-1.1
ODAN	Odare	34.10	333	*e*P	P	15 52 50.9	+0.3
	comp=Z,58nm,0.6s						
CD2	Chengdu	34.15	360	PKP		15 53 57.8	
CD2	Chengdu	34.15	360	P	P	15 52 51.8	+1.0
TAPN	Taplejung	34.38	334	*e*P	P	15 52 53.8	+0.7
	comp=Z,49nm,0.5s						
RAMN	Ramite	34.54	332	*e*P	P	15 52 54.9	+0.5
	comp=Z,28nm,0.6s						
LSA	Lhasa	35.15	340	P	P	15 53 00.8	+1.0
LSA	Lhasa	35.15	340	P	P	15 53 00.5	+0.7
LSA				pmax	pmax		
	comp=Z,21nm,0.6s						
LSA	Lhasa	35.15	340	P	P	15 53 00.5	+0.7
LSA				IAmb	IAmb	15 53 01.9	
	comp=Z,21nm,0.6s						
WHN	Wuhan	35.22	16	P	P	15 53 01.6	+1.8
ASAR	Alice Springs	35.25	127	P	P	15 53 00.1	-0.2
	comp=Z,24nm,0.8s,baz=301,slow=7.7,SNR=728						
ASAR				pP	pP	15 53 58.3	-0.5
	comp=Z,2.5nm,0.6s,baz=297,slow=9.2,SNR=1.9						
ASAR				PcP	PcP	15 55 24.6	+0.7
	comp=Z,5.5nm,0.8s,baz=306,slow=3.1,SNR=11						
ASAR				S	S	15 58 07.0	-4.6
	comp=Z,5.7nm,0.7s,baz=292,slow=16,SNR=17						
ASAR				ScP	ScP	15 58 41.0	0.0
	comp=Z,2.5nm,0.7s,baz=318,slow=3.5,SNR=6.2						
ASAR	Alice Springs	35.25	127	P	P	15 52 59.8	-0.5
ASAR	Alice Springs	35.25	127	P	P	15 52 59.8	-0.5
ASAR	Alice Springs	35.25	127		PcP	15 55 24.5	+0.6
AS31	Alice Springs	35.25	127	P	P	15 52 59.9	-0.4
AS31				IAmb	IAmb	15 53 00.8	
	comp=Z,12nm,1.0s						
FORT	Forrest	35.47	143	P	P	15 53 03.2	+1.2
PKI	Pulchoki	35.63	331	*e*P	P	15 53 03.5	-0.2
PKIN	Phulchoki	35.64	331	*e*P	P	15 53 03.4	-0.4
GUN	Gumba	35.69	332	*e*P	P	15 53 04.7	+0.4
DMN	Daman	35.81	331	*e*P	P	15 53 05.1	-0.1
KKN	Kakani	35.87	331	*e*P	P	15 53 05.7	0.0
GENI	Genyem	36.19	90	P	P	15 53 09.3	+1.0
	comp=Z,68nm,1.1s						
GKN	Gorkha	36.36	330	*e*P	P	15 53 09.8	0.0
DANN	Dangsing	37.09	330	*e*P	P	15 53 16.0	0.0
	comp=Z,145nm,0.8s						
XAN	Xi'an	37.56	7	P	P	15 53 20.3	+0.7
XAN				S	S	15 58 46.3	0.0
XAN	Xi'an	37.56	7	P	P	15 53 20.0	+0.4
XAN				pmax	pmax		
	comp=Z,23nm,1.0s						
XAN	Xi'an	37.56	7	P	P	15 53 20.0	+0.4
XAN				IAmb	IAmb	15 53 21.1	
	comp=Z,23nm,1.0s						
NJ2	Nanjing	38.03	21	*e*P	P	15 53 24.6	+1.2
LZH	Lanzhou	39.31	360	*e*P	P	15 53 36.0	+1.9
LZH				pP	pP	15 54 35.3	+1.5
LZH				sP	PP	15 55 10.3	-1.3
LZH				PP	PnPn	15 55 22.9	+5.4
COEN	Coen	40.10	108	P	P	15 53 39.4	-1.4
BBOO	Buckleboo	41.92	138	P	P	15 53 55.5	+0.2
BBOO				IAmb	IAmb	15 53 58.4	
	comp=Z,45nm,0.6s						
GTA	Gaotai	42.80	355	⇓P	P	15 54 03.6	+1.3
GTA				pP	pP	15 55 06.0	+3.0
GTA				sP	sP	15 55 36.3	-0.4
GTA				ScP	ScP	15 59 09.0	-0.9
GTA				ScS	SS	16 03 26.5	-0.3
PMG	Port Moresby	43.33	100	P	P	15 54 06.8	+0.1
	comp=Z,35nm,0.7s						
PMG				pP	pP	15 55 06.8	-0.7
	comp=Z,15nm,0.9s,baz=296,slow=9.7,SNR=2.6						
PMG	Port Moresby	43.33	100	*ce*P	P	15 54 06.8	+0.1
PMG				pmax	pmax		
	comp=Z,109nm,0.7s						

PMG	Port Moresby	43.33	100	P	P	15 54 06.5	-0.3
PMG				IAmb	IAmb	15 54 08.0	
	comp=Z,39nm,0.8s						
CTA	Charters Tower	44.43	115	P	P	15 54 14.8	-0.6
	comp=Z,14nm,0.8s,baz=303,slow=10,SNR=6.5						
CTAO	Charters Tower	44.43	115	P	P	15 54 15.7	+0.3
HHC	Hu-ho-hao-te	44.62	8	eP	P	15 54 18.8	+2.2
STKA	Stephens Creek	45.28	133	P	P	15 54 22.6	+0.6
	comp=Z,76nm,0.8s,baz=319,slow=7.6,SNR=144						
STKA				S	S	16 00 37.2	-2.2
	comp=Z,3.7nm,0.9s,baz=78,slow=20,SNR=5.6						
STKA	Stephens Creek	45.28	133	P	P	15 54 22.3	+0.4
STKA				pmax	pmax		
	comp=Z,16nm,1.0s						
STKA	Stephens Creek	45.28	133	P	P	15 54 22.3	+0.4
KSRS	Korea Array	46.38	27	P	P	15 54 31.6	+1.4
	comp=Z,1.2nm,0.6s,baz=219,slow=8.5,SNR=8.1						
NIL	Nilore	46.90	324	P	P	15 54 33.2	-1.2
NIL				pmax	pmax		
	comp=Z,63nm,0.7s						
NIL	Nilore	46.90	324	P	P	15 54 33.2	-1.2
WMQ	Urumqi	49.26	344	eP	P	15 54 53.8	+1.6
WMQ				pP	pP	15 56 02.3	+7.6
WMQ				sP	sP	15 56 28.5	+0.6
KSH	Kashi	49.89	332	P	P	15 54 55.8	-1.3
KSH				PcP	PcP	15 56 12.1	-0.6
KSH				pP	PP	15 56 56.3	+1.0
KSH				PcS	PcS	16 00 02.9	-7.3
KSH				S	S	16 01 38.4	-5.5
KBL	Kabul	50.04	322	P	P	15 54 57.4	-1.0
KBL				pmax	pmax		
	comp=Z,15nm,0.8s						
KBL	Kabul	50.04	322	P	P	15 54 57.4	-1.0
EIDS	Eidsvold	50.24	120	P	P	15 54 59.8	-0.1
TOO	Toolangi	50.97	137	P	P	15 55 06.6	+1.5
TOO				pmax	pmax		
	comp=Z,38nm,1.3s						
TOO	Toolangi	50.97	137	P	P	15 55 06.6	+1.5
TOO				IAmb	IAmb	15 55 08.3	
	comp=Z,39nm,1.4s						
MAT	Matsushiro	51.02	36	P	P	15 55 05.0	-0.4
MJAR	Matsushiro Arr	51.02	36	P	P	15 55 05.5	+0.1
	comp=Z,4.0nm,0.8s,baz=221,slow=7.5,SNR=12						
MJAR	Matsushiro Arr	51.02	36	IAmb	IAmb	15 55 06.1	
	comp=Z,2.7nm,1.0s						
SONM	Songino Array	51.10	2	P	P	15 55 07.6	+1.7
	comp=Z,17nm,0.7s,baz=181,slow=9.0,SNR=74						
SONM				ScP	ScP	15 59 42.5	-2.0
	comp=Z,2.8nm,0.8s,baz=178,slow=4.6,SNR=8.5						
SONM	Songino Array	51.10	2	P	P	15 55 07.0	+1.1
SONM				pmax	pmax		
	comp=Z,14nm,0.8s						
SONM	Songino Array	51.10	2	P	P	15 55 07.0	+1.1
SONM					ScP	15 59 43.1	-1.5
ULN	Ulaanbaatar	51.16	3	ceP	P	15 55 08.1	+1.7
ULN				pmax	pmax		
	comp=Z,14nm,1.3s						
ULN	Ulaanbaatar	51.16	3	P	P	15 55 07.6	+1.2
SOCY	Socotra	52.01	288	P	P	15 55 14.1	+0.9
SOCY				IAmb	IAmb	15 55 16.4	
	comp=Z,14nm,0.6s						
SHAO	Shalim	52.16	296	i P	P	15 55 15.2	+1.0
	SNR=6.2						
KZA	Kyzart	52.25	333	P	P	15 55 15.1	+0.2
	SNR=12						
CAN	Canberra	52.35	133	P	P	15 55 16.3	+1.0
CAN				pmax	pmax		
	comp=Z,38nm,0.8s						
CAN	Canberra	52.35	133	P	P	15 55 16.3	+1.0
CAN				IAmb	IAmb	15 55 17.3	
	comp=Z,38nm,0.8s						
GAR	Garm	52.38	327	P	P	15 55 14.2	-1.4
GAR				IAmb	IAmb	15 55 15.0	
	comp=Z,27nm,0.7s						
ARMA	Armidale	52.38	126	P	P	15 55 17.2	+1.5
ARMA				IAmb	IAmb	15 55 18.5	
	comp=Z,27nm,0.8s						
UCH	Uchtor	52.70	333	P	P	15 55 18.4	+0.1
	SNR=7.3						
ARSB	Arslanbob	52.73	331	P	P	15 55 17.5	-0.6
ARSB				pmax	pmax		
	comp=Z,35nm,1.1s						
ARSB	Arslanbob	52.73	331	P	P	15 55 17.5	-0.6
ARSB				IAmb	IAmb	15 55 18.9	
	comp=Z,35nm,1.1s						
CHGR	Chuyangaron	52.78	326	P	P	15 55 16.4	-2.0
KBK	Karagaybulak	52.84	333	P	P	15 55 19.2	+0.3
	SNR=8.5						
AML	Almayashu	53.01	332	P	P	15 55 20.4	0.0
	SNR=14						
AAK	Ala-Archa	53.03	333	P	P	15 55 20.5	+0.2
	SNR=5.5						
AAK	Ala-Archa	53.03	333	i P	P	15 55 20.4	+0.2
	SNR=7.3						
AAK	Ala-Archa	53.03	333	ceP	P	15 55 20.7	+0.4
AAK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
AAK	Ala-Archa	53.03	333	P	P	15 55 19.9	-0.3
FRU1	Bishkek	53.11	333	P	P	15 55 21.5	+0.8
FRU1				pmax	pmax		
	comp=Z,39nm,1.4s						
FRU1	Bishkek	53.11	333	P	P	15 55 21.5	+0.8
FRU1				IAmb	IAmb	15 55 21.8	
	comp=Z,39nm,1.4s						
EKS2	Erkin-Say	53.38	332	P	P	15 55 23.0	+0.2
	SNR=20						
MK31	Makanchi Array	53.54	342	P	P	15 55 23.4	-0.3
MK31				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MK31	Makanchi Array	53.54	342	P	P	15 55 23.4	-0.3
MKAR	Makanchi Array	53.54	342	P	P	15 55 23.6	-0.1
	comp=Z,7.1nm,0.5s,baz=153,slow=8.5,SNR=69						
MKAR				ScP	ScP	15 59 54.1	-0.9
	comp=Z,1.7nm,0.8s,baz=148,slow=7.1,SNR=7.1						
MKAR				S	S	16 02 32.5	-0.6
	comp=Z,0.9nm,0.8s,baz=152,slow=14,SNR=5.8						
MKAR	Makanchi Array	53.54	342	P	P	15 55 23.2	-0.4
ZAK	Zakamensk	53.60	359	eP	P	15 55 25.4	+1.2
ZAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MAKZ	Makanchi	53.65	341	P	P	15 55 24.0	-0.5
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
MAKZ	Makanchi	53.65	341	P	P	15 55 24.1	-0.5
USA0B	Ussuriysk Arra	53.68	25	⇓iP	P	15 55 25.4	+0.7
USA0B	Ussuriysk Arra	53.68	25	P	P	15 55 25.9	+1.2
USRK	Ussuriysk Ar.	53.68	25	P	P	15 55 26.1	+1.4
	comp=Z,4.3nm,0.7s,baz=223,slow=6.3,SNR=12						
USRK	Ussuriysk Ar.	53.68	25	P	P	15 55 25.9	+1.2
UOSS	Minazif	54.23	304	P	P	15 55 29.2	+0.2
UOSS	Minazif	54.23	304	P	P	15 55 29.1	0.0
UOSS				IAmb	IAmb	15 56 59.4	
	comp=Z,30nm,1.3s						
HATD	Hatta, Dubai	54.24	304	P	P	15 55 29.8	+0.7
ASHO	Ashiyiah	54.24	304	P	P	15 55 29.8	+0.6
ALNE	Al Ain	54.25	303	P	P	15 55 30.0	+0.8
MSFE	Esma-Masafi	54.44	305	P	P	15 55 31.5	+0.9
SHME	Shamm	54.74	305	P	P	15 55 33.8	+1.0
DGZ	Jazzator, Alta	54.81	347	d iP	P	15 55 33.7	+0.8
DGZ				pmax	pmax		
	comp=Z,40nm,0.6s						
ASUD	Al Ashush, Dub	54.83	303	P	P	15 55 34.2	+0.9
TLY	Talaya	54.90	360	d iP	P	15 55 35.3	+2.0
TLY				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TLY	Talaya	54.90	360	P	P	15 55 35.1	+1.8
MOY	Mondy	54.95	358	eP	P	15 55 35.3	+1.5
KK31	Karatay Array	55.27	331	P	P	15 55 35.0	-1.2
KKAR	Karatay Array	55.27	331	P	P	15 55 34.7	-1.4
KKAR	Karatay Array	55.27	331	P	P	15 55 34.9	-1.2
KKAR				IAmb	IAmb	15 55 36.0	
	comp=Z,7.8nm,1.3s						
HNR	Honiara	55.92	99	P	P	15 55 40.8	-0.4
	comp=Z,49nm,0.9s						
HNR	Honiara	55.92	99	P	P	15 55 38.8	-2.5
HNR				pmax	pmax		
	comp=Z,57nm,0.9s						
HNR	Honiara	55.92	99	P	P	15 55 38.8	-2.5
HNR				IAmb	IAmb	15 55 41.4	
	comp=Z,57nm,0.9s						
KLR	Kul'dur	57.73	21	c iP	P	15 55 54.2	+1.0
KLR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KURK	Kurchatov	58.15	341	ceP	P	15 55 56.2	+0.2
KURK				pmax	pmax		
	comp=Z,11nm,0.9s						
KURK	Kurchatov	58.15	341	P	P	15 55 55.6	-0.4
GEYT	Alibeck	59.09	319	P	P	15 56 02.3	-0.5
	comp=Z,16nm,0.7s,baz=161,slow=6.3,SNR=34						
GEYT	Alibeck	59.09	319	P	P	15 56 02.0	-0.9
GYA0B	ALIBECK ARRAY	59.09	319	P	P	15 56 02.0	-0.8
GYA0B				IAmb	IAmb	15 56 03.2	
	comp=Z,20nm,0.8s						
ZAA0	Zalesovo Array	59.37	347	P	P	15 56 03.8	-0.5
ZAA0				IAmb	IAmb	15 56 05.2	
	comp=Z,15nm,0.7s						
ZALV	Zalesovo Beam	59.37	347	P	P	15 56 04.1	-0.2
	comp=Z,12nm,0.5s,baz=163,slow=5.7,SNR=36						
ZALV				pP	pP	15 57 12.3	+2.9
	comp=Z,3.4nm,0.7s,baz=167,slow=6.7,SNR=3.2						
ZALV				ScP	ScP	16 00 18.4	-2.2
	comp=Z,1.2nm,0.8s,baz=197,slow=1.5,SNR=3.6						
ZALV				S	S	16 03 47.5	-1.4
	comp=Z,2.2nm,0.8s,baz=156,slow=11,SNR=8.5						
ZALV	Zalesovo Beam	59.37	347	i P	P	15 56 04.0	-0.3
ZALV				pmax	pmax		
	comp=Z,12nm,0.5s						
ZALV	Zalesovo Beam	59.37	347	P	P	15 56 03.8	-0.5
ZEA	Zeya	60.21	16	eP	P	15 56 11.4	+1.3
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS	Yuzh-Sakhalins	60.69	29	⇑eP	P	15 56 13.9	+0.5
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
DAMY	Dhamar	61.64	288	P	P	15 56 23.4	+2.6
DAMY				IAmb	IAmb	15 56 24.5	
	comp=Z,41nm,0.9s						
RAYN	Ar Rayn	62.87	299	i P	P	15 56 28.5	+0.1
	SNR=12						
RAYN	Ar Rayn	62.87	299	P	P	15 56 27.7	-0.7
RAYN				pmax	pmax		
	comp=Z,14nm,1.1s						
RAYN	Ar Rayn	62.87	299	P	P	15 56 27.7	-0.7
RAYN				IAmb	IAmb	15 56 29.5	
	comp=Z,14nm,1.1s						
CASY	Casey	62.90	177	P	P	15 56 29.8	+2.1
CASY				IAmb	IAmb	15 57 15.2	
	comp=Z,74nm,1.9s						
BRVK	Borovoye	62.99	338	ceP	P	15 56 27.9	-0.7
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BRVK	Borovoye	62.99	338	P	P	15 56 27.6	-0.9
ABKAR	Akbulak array	64.81	330	P	P	15 56 39.3	-1.1
KMBO	Kilima Mbogo	66.66	270	P	P	15 56 55.0	+1.7
	comp=Z,3.2nm,0.7s,baz=68,slow=8.9,SNR=9.0						
KMBO	Kilima Mbogo	66.66	270	P	P	15 56 56.2	+3.0
YAK	Yakutsk	68.19	13	eP	P	15 57 01.2	-0.2
YAK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
YAK				pmax	pmax		
	comp=N,1.0nm,0.6s						
YAK	Yakutsk	68.19	13	P	P	15 57 01.2	-0.2
YAK				IAmb	IAmb	15 57 02.0	
	comp=Z,11nm,0.7s						
LGD	Lagodekhi	68.95	317	P	P	15 57 07.3	+0.7
SVE	Sverdlovsk	69.53	336	eP	P	15 57 10.0	+0.2
SVE				pmax	pmax		
	comp=Z,16nm,1.1s						
MAW	Mawson	69.92	196	P	P	15 57 15.0	+3.1
	comp=Z,6.8nm,0.5s,baz=58,slow=5.9,SNR=27						
MAW	Mawson	69.92	196	P	P	15 57 14.9	+3.0
MAW				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MAW	Mawson	69.92	196	P	P	15 57 14.9	+3.0
TBLG	Delisi	69.93	317	P	P	15 57 12.9	+0.3
TBLG				pmax	pmax		
	comp=Z,30nm,1.1s						
TBLG	Delisi	69.93	317	P	P	15 57 12.9	+0.3
TBLG				IAmb	IAmb	15 57 13.9	
	comp=Z,31nm,1.1s						
KZRT	Kazreti	70.03	316	P	P	15 57 13.7	+0.5
ARU	Arti	70.12	335	c iP	P	15 57 13.1	-0.2
ARU						15 59 50.2	
ARU				S	S	16 06 03.1	+3.6
ARU				SS	SS	16 10 33.5	-2.7
ARU				pmax	pmax		
	comp=Z,18nm,1.2s						
ARU	Arti	70.12	335	P	P	15 57 12.8	-0.5
ARU				IAmb	IAmb	15 57 13.9	
	comp=Z,20nm,1.2s						
GUDG	Gudauri	70.41	317	P	P	15 57 16.9	+1.2
LBZ	Lake Benmore	70.75	136	P	P	15 57 17.3	-0.1
ZEI	Tsey	70.93	318	eP	P	15 57 18.2	-0.6
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ONI	Oni	71.15	317	P	P	15 57 21.0	+1.1
RPZ	Rata Peaks	71.19	135	P	P	15 57 20.1	0.0
RPZ	Rata Peaks	71.19	135	P	P	15 57 20.1	0.0
NCK	Nalchik	71.42	318	⇑iP	P	15 57 21.8	+0.3
NCK				pmax	pmax		
	comp=Z,13nm,0.9s						
OUZ	Omahuta	71.44	126	P	P	15 57 22.3	+0.6
QRZ	Quartz Range	71.62	132	P	P	15 57 23.6	+0.9
OXZ	Oxford	71.80	135	P	P	15 57 23.6	-0.1
LTZ	Lake Taylor	71.84	134	P	P	15 57 23.8	-0.3
NEY	Neytrino	71.91	318	i P	P	15 57 24.2	-0.3
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KBZ	Khabaz	71.98	318	P	P	15 57 24.6	0.0
	comp=Z,8.6nm,0.9s,baz=141,slow=5.9,SNR=18						
KBZ	Khabaz	71.98	318	⇓iP	P	15 57 24.5	-0.2
KBZ				pmax	pmax		
	comp=Z,12nm,0.9s						
PEA0B	Petropavlovsk-	72.04	31	P	P	15 57 25.5	+0.6
PETK	Petropavlovsk-	72.04	31	P	P	15 57 25.7	+0.8
	comp=Z,3.1nm,0.6s,baz=247,slow=4.9,SNR=10						
PETK	Petropavlovsk-	72.04	31	P	P	15 57 25.5	+0.6
THZ	Tophouse	72.09	133	P	P	15 57 25.5	-0.1
KIV	Kislovodsk	72.21	318	eP	P	15 57 28.2	+2.0
KIV				pmax	pmax		
	comp=Z,27nm,1.1s						
MQZ	McQueen's Vall	72.32	135	P	P	15 57 27.5	+0.7
PET	Petropavlovsk	72.48	31	P	P	15 57 27.9	+0.4
PET				IAmb	IAmb	15 59 49.5	
	comp=Z,34nm,1.0s						
KHZ	Kahutara	72.68	133	P	P	15 57 28.2	-0.7
MA2	Magadan	72.76	23	i P	P	15 57 29.9	+0.9
MA2				pmax	pmax		
	comp=Z,11nm,0.9s						
MA2	Magadan	72.76	23	P	P	15 57 29.5	+0.5
MA2				IAmb	IAmb	15 57 30.9	
	comp=Z,10nm,0.8s						
BSWZ	Blackbirch Sta	72.79	133	P	P	15 57 29.2	-0.4
HIZ	Hauiti	72.97	129	P	P	15 57 30.9	+0.2
MBAR	Mbarara	73.20	270	P	P	15 57 34.5	+1.8
MBAR				pmax	pmax		
	comp=Z,13nm,1.1s						
MBAR	Mbarara	73.20	270	P	P	15 57 34.5	+1.8
MBAR				IAmb	IAmb	15 57 36.4	
	comp=Z,13nm,1.1s						
MALT	Malatya	73.22	312	P	P	15 57 33.2	+1.0
NRIK	Noril'sk	73.48	354	P	P	15 57 32.5	-0.4
	comp=Z,2.3nm,0.4s,baz=129,slow=4.3,SNR=7.9						
NRIK	Noril'sk	73.48	354	⇑iP	P	15 57 33.1	+0.1
NRIK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MSWZ	Moikau Station	73.75	132	P	P	15 57 35.6	+0.4
PLWZ	Palliser	73.78	132	P	P	15 57 35.7	+0.3
GAZ	Gaziantep	73.78	310	P	P	15 57 35.7	+0.2
GAZ				IAmb	IAmb	15 57 36.6	
	comp=Z,15nm,0.8s						
BKZ	Black Stump Fm	74.33	130	P	P	15 57 38.5	-0.1
BFZ	Birch Farm	74.38	131	P	P	15 57 38.8	0.0
URZ	Urewera	74.68	129	P	P	15 57 40.3	-0.3
URZ				IAmb	IAmb	15 57 45.4	
	comp=Z,33nm,1.4s						
MATP	Matopo	75.17	250	i P	P	15 57 42.7	-1.1
MATP	Matopo	75.17	250	i P	P	15 57 42.7	-1.1
SEY	Seymchan	75.52	21	i P	P	15 57 46.2	+1.5
MXZ	Matakaoa Point	75.53	128	P	P	15 57 45.6	+0.2
VRH	Novokhopyorsk	75.73	325	eP	P	15 57 45.1	-1.1
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
CSS	Mathiatis	76.22	307	P	P	15 57 48.7	-0.7
CSS				IAmb	IAmb	15 57 50.3	
	comp=Z,12nm,0.8s						
TIXI	Tiksi	76.68	8	i P	P	15 57 52.6	+1.5
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.0s						
TIXI	Tiksi	76.68	8	P	P	15 57 50.7	-0.4
VORD	Divnogorie	77.04	324	eP	P	15 57 52.0	-1.5
VORD				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BR131	Keskin Array S	77.19	312	⇑iP	P	15 57 54.4	-0.4
BR131	Keskin Array S	77.19	312	P	P	15 57 53.8	-1.1
BRTR	Keskin Array B	77.19	312	P	P	15 57 54.1	-0.7
	comp=Z,5.1nm,0.8s,baz=130,slow=6.8,SNR=27						
BRTR	Keskin Array B	77.19	312	P	P	15 57 53.7	-1.1
VSR	Storozhevoye	77.21	324	eP	P	15 57 52.9	-1.6
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SYO	Syowa Base	77.81	199	⇓iX	P	15 57 50.2	-7.2
SYO	Syowa Base	77.81	199	⇑iPcP	PcP	15 58 06.4	+0.3
SYO	Syowa Base	77.81	199	⇓ipP	pP	15 59 04.4	-2.3
LPSR	Galich'ya Gora	77.87	326	eP	P	15 57 57.3	-0.8
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LBTB	Lobatse	78.00	245	P	P	15 58 01.3	+1.7
SIM	Simferopol'	78.31	317	eP	P	15 58 00.7	0.0
SIM				pmax	pmax		
	comp=Z,12nm,0.6s						
BOSA	Boshof	78.43	242	i	P	15 58 03.5	+1.7
	baz=39,slow=8.6						
BOSA				i P	P	15 58 03.5	+1.7
BOSA	Boshof	78.43	242	P	P	15 58 03.9	+2.0
	comp=Z,5.2nm,0.5s,baz=94,slow=3.7,SNR=14						
BOSA	Boshof	78.43	242	i	P	15 58 03.5	+1.7
	baz=39,slow=8.6						
BOSA				i P	P	15 58 03.5	+1.7
BOSA	Boshof	78.43	242	P	P	15 58 03.2	+1.3
BOSA				pmax	pmax		
	comp=Z,40nm,1.4s						
BOSA	Boshof	78.43	242	P	P	15 58 03.2	+1.3
PRGR	Permogore	78.57	336	eP	P	15 58 00.6	-1.1
PRGR				pmax	pmax		
	comp=Z,16nm,0.6s						
VNDA	Vanda	80.02	169	P	P	15 58 10.3	+1.1
	comp=Z,5.6nm,0.6s,baz=316,slow=7.4,SNR=23						
VNDA	Vanda	80.02	169	P	P	15 58 10.6	+1.4
VNDA				pmax	pmax		
	comp=Z,39nm,1.5s						
VNDA	Vanda	80.02	169	P	P	15 58 10.6	+1.4
VNDA				IAmb	IAmb	15 58 11.7	
	comp=Z,39nm,1.5s						
OBN	Obninsk	80.10	327	⇑eP	P	15 58 10.1	+0.1
OBN				e*PP	pP	15 59 19.1	-0.3
OBN				e		16 01 13.8	
OBN				ePPP	PPP	16 03 12.6	
OBN				eS	S	16 08 58.9	+70
OBN				eSSS	SSS	16 16 33.6	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KLMR	Klimovskoe	80.84	333	eP	P	15 58 12.4	-1.4
KLMR				pmax	pmax		
	comp=Z,17nm,1.3s						
KLMR	Klimovskoe	80.84	333	eP	P	15 58 12.4	-1.4
KLMR				AMP		15 58 15.3	
	comp=Z,17nm,1.3s						
SORM	Soroca	82.98	319	⇑P	P	15 58 25.2	0.0
SORM	Soroca	82.98	319	⇑P	P	15 58 25.2	0.0
AKASG	Malin Array Be	83.02	322	P	P	15 58 24.8	-0.6
	comp=Z,2.5nm,0.7s,baz=81,slow=5.2,SNR=12						
AKASG				PP	PP	16 01 39.1	-1.8
	comp=Z,0.6nm,0.5s,baz=82,slow=6.3,SNR=5.2						
AKASG	Malin Array Be	83.02	322	i P	P	15 58 24.7	-0.6
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AKASG	Malin Array Be	83.02	322	IAmb	IAmb	15 58 25.2	
	comp=Z,1.5nm,0.8s						
AKBB	Malin Array Si	83.02	322	P	P	15 58 24.4	-1.0
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AKBB	Malin Array Si	83.02	322	P	P	15 58 24.4	-1.0
BILL	Bilibino	83.15	20	⇑eP	P	15 58 25.7	0.0
BILL				e*PP	pP	15 59 35.9	+0.3
BILL				eS	S	16 08 22.2	+2.5
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BISRR	Bisoca	83.53	316	⇑P	P	15 58 28.3	+0.1
VRI	Vrincioaia	83.58	317	⇑P	P	15 58 29.4	+1.0
VRI	Vrincioaia	83.58	317	⇑P	P	15 58 29.4	+1.0
PLOR	Plostina	83.63	317	⇓P	P	15 58 28.9	+0.3
PLOR	Plostina	83.63	317	⇓P	P	15 58 28.9	+0.3
TESR	Tescani	83.76	317	⇑P	P	15 58 30.0	+0.7
MLR	Muntele Rosu	84.04	316	⇑P	P	15 58 31.6	+0.7
MLR	Muntele Rosu	84.04	316	⇑P	P	15 58 31.6	+0.7
MLR	Muntele Rosu	84.04	316	P	P	15 58 30.2	-0.6
MLR				IAmb	IAmb	15 58 32.4	
	comp=Z,14nm,1.2s						
BIZ	Bicaz	84.21	318	⇑P	P	15 58 32.3	+0.8
VOIR		84.65	316	⇑P	P	15 58 33.9	+0.1
VOIR		84.65	316	⇑P	P	15 58 33.9	+0.1
BURAR	Bucovina Array	84.94	318	⇑P	P	15 58 36.6	+1.4
BURAR	Bucovina Array	84.94	318	⇑P	P	15 58 36.6	+1.4
BURAR	Bucovina Array	84.94	318	P	P	15 58 36.0	+0.8
BUR08	Bucovina Ar. S	84.95	318	P	P	15 58 36.1	+0.9
GZR	Gura Zlata	86.22	316	⇑P	P	15 58 40.8	-0.7
GZR	Gura Zlata	86.22	316	⇑P	P	15 58 40.8	-0.7
MDVR	Moldovita	86.88	315	⇑P	P	15 58 45.3	+0.6
BZS	Buzias	87.06	316	⇑P	P	15 58 46.0	+0.6
BZS	Buzias	87.06	316	⇑P	P	15 58 46.0	+0.6
SIRR	Siria	87.12	317	⇑P	P	15 58 46.6	+0.9
FINES	FINESS Array B	87.21	332	P	P	15 58 45.9	+0.1
	comp=Z,1.9nm,0.5s,baz=103,slow=6.0,SNR=16						
ARCES	ARCESS Array B	89.16	340	P	P	15 58 55.0	+0.3
	comp=Z,4.5nm,0.9s,baz=102,slow=6.2,SNR=7.0						
GERES	GERESS Array B	92.72	319	P	P	15 59 11.7	-0.1
	comp=Z,0.5nm,0.6s,baz=123,slow=4.9,SNR=4.6						
ILAR	Eielson Array	101.20	24	PKKPbc	PKKPbc	16 15 59.4	-2.5
	comp=Z,0.4nm,0.6s,baz=109,slow=1.7,SNR=6.6						
NVAR	Mina Array Bea	128.11	42	PKP	PKiKP	16 05 05.1	-0.2
	comp=Z,0.6nm,0.7s,baz=304,slow=1.7,SNR=3.9						
PDAR	Pinedale Array	130.78	32	PKP	PKPdf	16 05 09.7	+0.1
	comp=Z,0.3nm,0.7s,baz=10,slow=1.0,SNR=2.3						
PDAR				SKPbc	SKPbc	16 08 03.5	-1.9
	comp=Z,0.4nm,0.5s,baz=188,slow=1.3,SNR=4.4						
TXAR	Lajitas Array	143.26	43	PKP	PKPbc	16 05 31.3	+0.5
	comp=Z,1.1nm,0.8s,baz=269,slow=2.6,SNR=9.9						
TXAR				pPKP	pPKPdf	16 06 50.2	+2.6
	comp=Z,0.5nm,0.5s,baz=246,slow=0.7,SNR=2.6						
TXAR				SKPbc	SKPbc	16 08 42.4	-0.3
	comp=Z,0.8nm,0.6s,baz=238,slow=0.4,SNR=4.4						
TXAR	Lajitas Array	143.26	43	PKIKP	PKPbc	16 05 31.1	+0.4
TXAR	Lajitas Array	143.26	43		PKPbc	16 05 31.1	+0.3
TXAR	Lajitas Array	143.26	43		SKPbc	16 08 40.8	-1.9
ROC1	El Roble	143.48	187		PKPbc	16 05 32.2	+0.8
WCI	Wyandotte Cave	144.12	14	PKIKP	PKPab	16 05 32.4	+0.1
WCI	Wyandotte Cave	144.12	14		PKPab	16 05 32.4	+0.1
PBMO	Poplar Bluff	144.27	20		PKPab	16 05 32.8	-0.2
R49A	Shelbyville	144.32	12		PKPab	16 05 32.9	-0.2
Q56A	Snyder Ridge,	144.44	4		PKPbc	16 05 33.7	0.0
FCAR	Ozark Folk Cen	144.45	23		PKPab	16 05 32.9	-0.8
LCAR	Lake Charles	144.66	21		PKPbc	16 05 34.2	-0.2
JCT	Junction City	144.97	37	PKIKP	PKPbc	16 05 35.6	-0.1
JCT	Junction City	144.97	37		PKPbc	16 05 35.6	-0.1
MIAR	Mount Ida	145.02	26	PKIKP	PKPbc	16 05 35.7	+0.1
MIAR	Mount Ida	145.02	26		PKPbc	16 05 35.7	+0.1
CPUP	Villa Florida	145.30	210	PKPbc	PKPab	16 05 38.0	+0.8
	comp=Z,10nm,0.7s,baz=140,slow=3.0,SNR=24						
CPUP	Villa Florida	145.30	210	PKP2	PKPab	16 05 37.6	+0.4
CPUP	Villa Florida	145.30	210		PKPab	16 05 37.6	+0.4
WVT	Waverly	145.69	17	PKP2	PKPbc	16 05 37.2	-0.4
WVT	Waverly	145.69	17	PKPbc	PKPbc	16 05 37.2	-0.4
GO04	Tololo Observa	146.21	188		PKPdf	16 05 38.8	+0.7
BDFB	Brasilia	146.40	235	PKPbc	PKPab	16 05 42.1	+0.2
	comp=Z,7.3nm,0.6s,baz=130,slow=4.5,SNR=7.0						

IDC ***24*** *15:46:35.6±1.1, 19°.36S×71°.18W, h0^{km}, mb4.9/3, mb1 5.1/4, mb1mx4.3/28, mbtmp5.0/4, ML4.8/1, Error ellipse: s-maj=54.5km s-min=35.9km az=46.0*

NEIC ***24*** *15:46:42.0±1.5, 19°.61S±0°.05×70°.71W±0°.07, h30^{km}±4^{km}, mb4.8/3, Error ellipse: s-maj=9.9km s-min=6.9km az=72.0*

ISC 24 15:46:39.4±0.8**, 19°.59S**±0°.07×**70°.93W**±0°.08**, h22**^{km}**, n18,** σ1ˢ.**51**/17**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PSGCX	Pisagua	0.76	90	Pn	Pb	15 46 53.4	-0.5
PSGCX				Sn	Sb	15 47 01.6	-2.2
PB12	IPOC Station P	1.13	30	Pn	Pb	15 47 01.2	+1.0
PB11	IPOC Station P	1.21	98	Pn	Pn	15 47 01.2	+0.2

PATCX	**Punta Patache**	**1.42**	**149**	Pn	**Pb**	**15 47 05.1**	**-0.1**
GO01	**Chusmiza**	**1.63**	**93**	Pn	**Pb**	**15 47 08.8**	**-0.3**
CPUP	**Villa Florida**	**14.20**	**121**	Pn	**Pn**	**15 50 01.6**	**+2.5**
	1.1nm,0.3s,baz=305,slow=12,SNR=3.2						
CPUP	**Villa Florida**	**14.20**	**121**		**Pn**	**15 50 00.5**	**+1.3**
PTGA	**Pitinga**	**21.60**	**31**	P	**P**	**15 51 27.6**	**-0.3**
TOSP	**Speyside**	**32.36**	**19**	P	**P**	**15 53 08.5**	**+1.2**
TXAR	**Lajitas Array**	**58.00**	**326**	P	**P**	**15 56 26.9**	**-3.8**
	2.3nm,0.8s,baz=140,slow=7.1,SNR=1.3						
TORD	**Torodi Ar. Bea**	**78.52**	**72**	P	**P**	**15 58 39.6**	**+0.1**
	20nm,0.8s,baz=250,slow=5.2,SNR=1.7						
TORD	**Torodi Ar. Bea**	**78.52**	**72**	IAmb	IAmb	15 59 37.9	
	comp=Z,133nm,0.7s						
MAW	**Mawson**	**86.68**	**164**	P	**P**	**15 59 22.1**	**+1.1**
	comp=Z,20nm,1.1s,baz=234,slow=4.7,SNR=4.1						
MAW	**Mawson**	**86.68**	**164**	IAmb	IAmb	15 59 24.7	
	comp=Z,7.1nm,1.1s						
ASAR	**Alice Springs**	**130.65**	**210**	PKP	**PKPdf**	**16 05 48.7**	**-0.8**
	comp=Z,4.2nm,0.8s,baz=142,slow=2.2,SNR=5.2						
WRA	**Warramunga Arr**	**133.56**	**214**	PKP	**PKiKP**	**16 05 56.6**	**+0.3**
	comp=Z,4.4nm,0.8s,baz=159,slow=1.6,SNR=2.5						
MKAR	**Makanchi Array**	**145.13**	**33**	PKPbc	**PKPdf**	**16 06 15.8**	**+0.7**
	comp=Z,20nm,0.8s,baz=318,slow=3.3,SNR=6.0						
CMAR	**Chiang Mai Arr**	**170.35**	**95**	PKPab	**PKPab**	**16 08 03.3**	**+0.4**
	comp=Z,2.0nm,0.9s,baz=260,slow=5.4,SNR=2.0						

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*TAP **24** 15:52:49.5, 24°.77N×122°.17E, h84^{km}±1^{km}, ML2.6, C*
*JMA **24** 15:52:49.1±0.1, 24°.77N×122°.18E, h88^{km}±2^{km}, M1.9*
ISC 24 15:52:49.4±1.4**, 24°.77N**±0°.04×**122°.19E**±0°.03**, h86**^{km}±7^{km}**,**
n65, σ0^{s}.74/116**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.23**	**193**	P	**Pn**	**15 53 02.5**	**+0.5**
	baz=190						
EOS1				*e*S	**Sn**	**15 53 12.3**	**+1.0**
	baz=190						
TWC	**Suao**	**0.35**	**242**	P	**Pn**	**15 53 02.6**	**-0.1**
	baz=241						
TWC				*e*S	**Sn**	**15 53 11.6**	**-0.9**
	baz=241						
TIPB	**Shuangxi**	**0.38**	**301**	⇑*i*P	**Pn**	**15 53 03.2**	**+0.2**
	baz=303						
TIPB				*e*S	**Sn**	**15 53 13.0**	**0.0**
	baz=303						
WFSB	**Wu-fen Shan**	**0.47**	**309**	*e*P	**Pn**	**15 53 03.9**	**+0.3**
	baz=310						
WFSB				*e*S	**Sn**	**15 53 12.9**	**-1.2**
	baz=310						
TWE	**Neicheng**	**0.47**	**264**	*i* P	**Pn**	**15 53 03.7**	**+0.2**
	baz=263						
TWE				*e*S	**Sn**	**15 53 14.4**	**+0.3**
	baz=263						
SLBB	**Yuanshan**	**0.50**	**268**	*i* P	**Pn**	**15 53 03.0**	**-0.8**
	baz=268						
ENA	**Nanau**	**0.53**	**230**	P	**Pn**	**15 53 04.2**	**+0.2**
	baz=228						
ENA				*e*S	**Sn**	**15 53 14.3**	**-0.5**
	baz=228						
ENTT	**Nioudou**	**0.58**	**257**	P	**Pn**	**15 53 04.9**	**+0.4**
	baz=256						
ENTT				*e*S	**Sn**	**15 53 16.9**	**+1.3**
	baz=256						
TWA	**Mucha**	**0.58**	**291**	*i* P	**Pn**	**15 53 04.6**	**0.0**
	baz=291						
TWA				*e*S	**Sn**	**15 53 15.8**	**0.0**
	baz=291						
NWLT	**Wulai**	**0.62**	**271**	P	**Pn**	**15 53 04.6**	**-0.2**
	baz=271						
NWLT				*e*S	**Sn**	**15 53 16.7**	**+0.3**
	baz=271						
NHDH	**Xindian Distri**	**0.63**	**288**	*i* P	**Pn**	**15 53 04.9**	**0.0**
	baz=288						
NHDH				*e*S	**Sn**	**15 53 15.8**	**-0.6**
	baz=288						
NDT	**Datong Townshi**	**0.64**	**255**	P	**Pn**	**15 53 05.5**	**+0.5**
	baz=254						
NDT				*e*S	**Sn**	**15 53 17.1**	**+0.6**
	baz=254						
TATO	**Taipei**	**0.67**	**288**	*e*P	**Pn**	**15 53 05.0**	**-0.3**
	baz=288						
TATO				*e*S	**Sn**	**15 53 16.3**	**-0.8**
	baz=288						
YM01	**YM01**	**0.67**	**304**	*i* P	**Pn**	**15 53 05.4**	**0.0**
	baz=304						
YM01				*e*S	**Sn**	**15 53 16.9**	**-0.3**
	baz=304						
YM11	**YM11**	**0.68**	**305**	P	**Pn**	**15 53 05.6**	**+0.1**
	baz=306						
YM10	**YM10**	**0.68**	**304**	P	**Pn**	**15 53 05.6**	**+0.1**
	baz=305						
YM10				*e*S	**Sn**	**15 53 17.4**	**-0.1**
	baz=305						
YM05	**YM05**	**0.69**	**305**	P	**Pn**	**15 53 05.6**	**+0.1**
	baz=305						
YM05				*e*S	**Sn**	**15 53 17.4**	**-0.1**
	baz=305						
YM04	**YM04**	**0.70**	**303**	P	**Pn**	**15 53 05.5**	**-0.2**
	baz=303						
YM04				*e*S	**Sn**	**15 53 17.2**	**-0.5**
	baz=303						
YM03	**YM03**	**0.71**	**305**	P	**Pn**	**15 53 05.9**	**+0.1**
	baz=305						
ANP	**Anpu**	**0.73**	**304**	P	**Pn**	**15 53 06.1**	**+0.1**
	baz=305						
ANP				*e*S	**Sn**	**15 53 18.1**	**-0.3**
	baz=305						
TWY	**Chenhua**	**0.73**	**313**	*e*P	**Pn**	**15 53 06.5**	**+0.6**
	baz=314						
TWY				*e*S	**Sn**	**15 53 18.9**	**+0.7**
	baz=314						
YHNB	**Yeheng**	**0.74**	**262**	P	**Pn**	**15 53 06.3**	**+0.2**
	baz=262						
YHNB				*e*S	**Sn**	**15 53 18.8**	**+0.2**
	baz=262						
NSK	**Sanguang**	**0.76**	**263**	*i* P	**Pn**	**15 53 06.5**	**+0.2**
	baz=262						
NSK				*e*S	**Sn**	**15 53 18.9**	**0.0**
	baz=262						
JYNG	**Yonagunijimaku**	**0.76**	**115**	P	**Pn**	**15 53 06.3**	**+0.1**
JYNG				*e*S	**Sn**	**15 53 19.2**	**+0.5**
NTST	**Danshui**	**0.78**	**300**	*e*P	**Pn**	**15 53 06.7**	**+0.3**
	baz=301						
NTST				*e*S	**Sn**	**15 53 19.5**	**+0.5**
	baz=301						
NACB	**Ninganchiao**	**0.80**	**222**	P	**Pn**	**15 53 06.4**	**-0.3**
	baz=221						
NACB				S	**Sn**	**15 53 18.6**	**-0.9**
	baz=221						
NNSB	**Datong**	**0.81**	**245**	P	**Pn**	**15 53 07.0**	**+0.2**
	baz=244						
NNSB				*e*S	**Sn**	**15 53 19.2**	**-0.7**
	baz=244						
NNSH	**Datong**	**0.81**	**245**	P	**Pn**	**15 53 07.0**	**+0.2**
	baz=244						
NNSH				*e*S	**Sn**	**15 53 19.4**	**-0.4**
	baz=244						
NNS	**Nan Shan**	**0.81**	**246**	P	**Pn**	**15 53 06.9**	**0.0**
	baz=245						
NNS				*e*S	**Sn**	**15 53 19.8**	**-0.1**
	baz=245						
YOJ	**Yonaguni jima**	**0.81**	**112**	P	**Pn**	**15 53 06.9**	**+0.1**
	baz=111						
YOJ				*e*S	**Sn**	**15 53 19.4**	**-0.3**
	baz=111						
YOJ	**Yonaguni jima**	**0.81**	**112**	P	**Pn**	**15 53 06.8**	**+0.1**
YOJ				*e*S	**Sn**	**15 53 19.7**	**0.0**
ETLH	**Xiulin Townshi**	**0.85**	**229**	P	**Pn**	**15 53 06.9**	**-0.4**
	baz=228						
ETLH				*e*S	**Sn**	**15 53 19.3**	**-1.4**
	baz=228						
TWD	**Chiawan**	**0.87**	**218**	*e*S	**Sn**	**15 53 20.1**	**-0.8**
	baz=217						
NCUH	**Zhongli**	**0.93**	**282**	*e*S	**Sn**	**15 53 22.8**	**+0.8**
	baz=282						
WHF	**Hehuan Shan**	**1.05**	**234**	P	**Pn**	**15 53 09.7**	**-0.1**
	baz=232						
WHF				*e*S	**Sn**	**15 53 24.0**	**-1.1**
	baz=232						
TWT	**Tachien**	**1.05**	**241**	*e*P	**Pn**	**15 53 10.3**	**+0.6**
	baz=240						
TWT				*e*S	**Sn**	**15 53 24.8**	**-0.1**
	baz=240						
NHW	**Xinwu Township**	**1.06**	**283**	*e*P	**Pn**	**15 53 10.2**	**+0.6**
	baz=283						
NHW				*e*S	**Sn**	**15 53 25.7**	**+1.0**
	baz=283						
TDCB	**Techi**	**1.07**	**241**	P	**Pn**	**15 53 10.2**	**+0.4**
	baz=241						
TDCB				*e*S	**Sn**	**15 53 24.9**	**-0.3**
	baz=241						
LIOB	**Emei**	**1.07**	**264**	P	**Pn**	**15 53 09.8**	**+0.1**
	baz=263						
LIOB				*e*S	**Sn**	**15 53 24.9**	**-0.1**
	baz=263						
NSTT	**Nanjuang**	**1.09**	**263**	P	**Pn**	**15 53 09.8**	**0.0**
	baz=262						
NSTT				S	**Sn**	**15 53 24.9**	**-0.3**
	baz=262						
CHGB	**Renai**	**1.16**	**233**	P	**Pn**	**15 53 11.2**	**+0.1**
	baz=232						
CHGB				*e*S	**Sn**	**15 53 26.5**	**-0.8**
	baz=232						
OWD	**Renai**	**1.23**	**229**	P	**Pn**	**15 53 11.6**	**-0.2**
	baz=228						
OWD				*e*S	**Sn**	**15 53 27.4**	**-1.2**
	baz=228						
WHP	**Taichung City**	**1.23**	**247**	P	**Pn**	**15 53 12.4**	**+0.7**
	baz=246						
WHP				*e*S	**Sn**	**15 53 28.5**	**-0.1**
	baz=246						
DPDB	**Guoxing**	**1.36**	**238**	*e*P	**Pn**	**15 53 13.7**	**+0.3**
	baz=237						
DPDB				*e*S	**Sn**	**15 53 32.5**	**+1.1**
	baz=237						
VWDT	**VWDT**	**1.39**	**223**	*e*P	**Pn**	**15 53 14.1**	**+0.5**
	baz=223						
VWDT				*e*S	**Sn**	**15 53 30.9**	**-1.0**
	baz=223						
HGSD	**Ruisui**	**1.45**	**209**	*e*P	**Pn**	**15 53 13.9**	**-0.5**
	baz=208						
HGSD				*e*S	**Sn**	**15 53 32.8**	**-0.5**
	baz=208						
SMLT	**Sun Moon Lake**	**1.47**	**233**	*e*P	**Pn**	**15 53 15.1**	**+0.4**
	baz=232						
SMLT				*e*S	**Sn**	**15 53 34.1**	**+0.3**
	baz=232						
IRIF	**Iriomote-Funau**	**1.47**	**107**	P	**Pn**	**15 53 14.9**	**+0.3**
IRIF				*e*S	**Sn**	**15 53 33.8**	**+0.1**
TYC	**Yuchr**	**1.49**	**235**	P	**Pn**	**15 53 16.0**	**+1.1**
	baz=234						
TYC				*e*S	**Sn**	**15 53 34.9**	**+0.8**
	baz=234						
SSLB	**Suanglung**	**1.49**	**229**	P	**Pn**	**15 53 15.3**	**+0.4**
	baz=228						
SSLB				*e*S	**Sn**	**15 53 34.6**	**+0.4**
	baz=228						
YULB	**Yu-li**	**1.59**	**211**	*e*P	**Pn**	**15 53 15.2**	**-1.1**
	baz=210						
WHYT	**Xinyi Township**	**1.62**	**229**	P	**Pn**	**15 53 17.4**	**+0.8**
	baz=228						
WHYT				*e*S	**Sn**	**15 53 38.6**	**+1.4**
	baz=228						
TWF1	**Yuli**	**1.63**	**210**	*e*S	**Sn**	**15 53 34.9**	**-2.5**
	baz=209						
WJS	**Zhushan**	**1.63**	**235**	*e*S	**Sn**	**15 53 39.3**	**+1.9**
	baz=234						
JKRS	**Kuro-shima**	**1.74**	**107**	P	**Pn**	**15 53 18.3**	**+0.2**
JKRS				S	**Sn**	**15 53 40.1**	**+0.1**
FULB	**Fuli**	**1.77**	**208**	*e*S	**Sn**	**15 53 38.8**	**-1.7**
	baz=207						
ALS	**Alishan**	**1.78**	**225**	P	**Pn**	**15 53 19.7**	**+0.8**
	baz=224						
ALS				*e*S	**Sn**	**15 53 42.1**	**+0.8**
	baz=224						
CHN5	**Tsauling**	**1.81**	**230**	*e*P	**Pn**	**15 53 20.1**	**+1.0**
	baz=229						
CHN5				*e*S	**Sn**	**15 53 42.4**	**+0.8**
	baz=229						
JIJ	**Ishigaki jima**	**1.83**	**102**	P	**Pn**	**15 53 19.3**	**+0.1**
JIJ				*e*S	**Sn**	**15 53 41.2**	**-0.7**
JISG	**Ishigakijimahi**	**1.94**	**95**	P	**Pn**	**15 53 21.1**	**+0.4**
CHN4	**Tsaushan**	**2.03**	**226**	*e*S	**Sn**	**15 53 47.6**	**+0.9**
	baz=225						
TPUB	**Ta-pu**	**2.04**	**224**	*e*S	**Sn**	**15 53 48.4**	**+1.4**
	baz=224						
STYT	**Tauyuan**	**2.07**	**220**	*e*S	**Sn**	**15 53 48.5**	**+0.8**
	baz=218						
MATB	**Ma-tsu**	**2.45**	**305**	*e*S	**Sn**	**15 53 55.0**	**-1.6**
	baz=304						
VWUC	**VWUC**	**2.50**	**276**	*e*P	**Pn**	**15 53 28.0**	**-0.1**
	baz=275						
VWUC				*e*S	**Sn**	**15 53 55.0**	**-2.8**
	baz=275						

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*IDC **24** 16:09:41.2±2.5, 18°.31S×72°.14W, h0^{km}, mb3.8/1, mb1 3.7/2, mb1mx3.1/22, mbtmp3.7/2, ML3.3/1, Error ellipse: s-maj=332.7km s-min=32.1km az=153.0*
*GUC **24** 16:09:44.3±0.7, 19°.58S×70°.79W, h44^{km}±3^{km}, ML3.5*
ISC 24 16:09:40.3±2.1**, 19°.52S**±0°.04×**70°.86W**±0°.08**, h7**^{km}±14^{km}**,**
n12, σ1^{s}.13/20**, 4C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.70**	**96**	⇓*i*P	**Pn**	**16 09 56.2**	**-0.6**
PSGC				*e*S	**Sb**	**16 10 05.2**	**+0.3**
PSGC				IAML		16 10 06.3	
	comp=E,3µm,0.6s						
PB12	**IPOC Station P**	**1.04**	**29**	⇓*i*P	**Pn**	**16 10 02.9**	**+1.5**
PB12				*e*S	**Sn**	**16 10 17.5**	**+1.4**
PB12				IAML		16 10 19.6	
	comp=N,1µm,0.4s						
PB11	**IPOC Station P**	**1.16**	**102**	⇓*i*P	**Pn**	**16 10 03.6**	**+0.5**
PB11				*e*S	**Sn**	**16 10 18.8**	**-0.6**
PB11				IAML		16 10 21.4	
	comp=N,6µm,0.4s						
TA01	**Diego Aracena**	**1.22**	**148**	⇑*i*P	**Pg**	**16 10 04.2**	**+0.4**
TA01				*e*S	**Sn**	**16 10 19.7**	**-0.9**
TA01				IAML		16 10 23.8	
	comp=E,2µm,0.4s						
PATCX	**Punta Patache**	**1.46**	**153**	⇑*i*P	**Pb**	**16 10 07.4**	**-0.4**
PATCX				*e*S	**Sb**	**16 10 26.2**	**-0.4**
PATCX				IAML		16 10 28.7	
	comp=E,861nm,0.5s						
GO01	**Chusmiza**	**1.58**	**96**	⇓*i*P	**Pb**	**16 10 10.9**	**+0.7**
GO01				*e*S	**Sb**	**16 10 31.0**	**+0.5**
PB08	**IPOC Station P**	**1.72**	**111**	*e*P	**Pb**	**16 10 12.7**	**+0.1**
PB08				*e*S	**Sb**	**16 10 34.2**	**-0.4**
PB08				IAML		16 10 39.7	
	comp=N,579nm,0.3s						
PB01	**IPOC Station P**	**1.99**	**140**	⇑*i*P	**Pn**	**16 10 15.4**	**+0.9**
PB01				*e*S	**Sn**	**16 10 39.3**	**-0.4**
PB01				IAML		16 10 43.8	
	comp=E,658nm,0.1s						
PB02	**IPOC Station P**	**2.01**	**153**	⇑*i*P	**Pn**	**16 10 15.5**	**+0.8**
PB02				*e*S	**Sb**	**16 10 41.2**	**-1.3**
PB02				IAML		16 10 44.8	
	comp=E,1µm,0.3s						
LPAZ	**La Paz**	**4.14**	**39**	Pn	**Pb**	**16 10 50.8**	**-3.1**
	comp=E,1.0nm,0.3s,baz=249,slow=4.3,SNR=17						
LPAZ				Lg	Lg	16 11 57.5	
	comp=E,0.6nm,0.3s,baz=298,slow=17,SNR=1.3						
TORD	**Torodi Ar. Bea**	**78.44**	**72**	P	P	16 21 48.7	+6.2
	comp=E,0.5nm,0.5s,baz=248,slow=6.3,SNR=4.1						
MKAR	**Makanchi Array**	**145.04**	**33**	PKP	**PKPdf**	**16 29 19.0**	**+0.4**
	comp=E,0.2nm,0.6s,baz=300,slow=2.8,SNR=4.1						

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*IDC **24** 16:22:32.7±1.7, 19°.52S×70°.74W, h0^{km}, mb4.2/3, mb1 4.2/6, mb1mx3.7/37, mbtmp4.1/6, ML4.0/3, Error ellipse: s-maj=42.7km s-min=18.3km az=69.0*
*NEIC **24** 16:22:34.0±1.8, 19°.63S±0°.04×70°.85W±0°.04, h10^{km}±1^{km}, mb4.8/2, Error ellipse: s-maj=7.5km s-min=5.8km az=180.0*
*GUC **24** 16:22:37.1±0.7, 19°.60S×70°.75W, h42^{km}±3^{km}, ML4.0*
ISC 24 16:22:35.4±0.9**, 19°.62S**±0°.03×**70°.83W**±0°.08**, h22**^{km}±5^{km}**,**
n44, σ1^{s}.38/49**, mb4.0**/3**, 4C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.67**	**88**	*e*P	**Pb**	**16 22 48.4**	**-0.1**
PSGC				*e*S	**Sb**	**16 22 57.0**	**-0.4**
PSGCX	**Pisagua**	**0.67**	**88**	Pg	**Pb**	**16 22 47.9**	**-0.7**
PSGCX				Sg	**Sb**	**16 22 56.0**	**-1.5**
PB12	**IPOC Station P**	**1.11**	**25**	*e*P	**Pn**	**16 22 55.8**	**0.0**
PB12				*e*S	**Sb**	**16 23 10.2**	**+0.2**
PB12				IAML		16 23 13.3	
	comp=N,4µm,0.7s						
PB12				IAML		16 23 14.4	
	comp=E,4µm,0.7s						
PB12	**IPOC Station P**	**1.11**	**25**	Pn	**Pn**	**16 22 55.6**	**-0.2**
PB11	**IPOC Station P**	**1.11**	**97**	*e*P	**Pn**	**16 22 56.0**	**0.0**
PB11				*e*S	**Sb**	**16 23 09.9**	**-0.4**
PB11				IAML		16 23 13.6	
	comp=E,5µm,0.3s						
PB11	**IPOC Station P**	**1.11**	**97**	Pn	**Pn**	**16 22 55.6**	**-0.3**
TA01	**Diego Aracena**	**1.12**	**147**	*e*P	**Pn**	**16 22 56.6**	**+0.7**
TA01				*e*S	**Sb**	**16 23 11.3**	**+1.0**
TA01				IAML		16 23 15.1	
	comp=E,8µm,0.3s						
AP01	**Chacalluta**	**1.33**	**20**	*e*P	**Pn**	**16 22 59.1**	**+0.4**
AP01				*e*S	**Sb**	**16 23 16.1**	**-0.1**
AP01				IAML		16 23 18.4	
	comp=E,5µm,0.4s						
PATCX	**Punta Patache**	**1.35**	**152**	⇑*i*P	**Pn**	**16 22 60.0**	**+0.8**
PATCX				*e*S	**Sb**	**16 23 18.1**	**+1.0**
PATCX				IAML		16 23 24.2	
	comp=E,3µm,0.1s						
PATCX	**Punta Patache**	**1.35**	**152**	Pn	**Pn**	**16 22 59.0**	**-0.1**
GO01	**Chusmiza**	**1.54**	**92**	*e*P	**Pb**	**16 23 03.2**	**-0.5**
GO01				*e*S	**Sb**	**16 23 23.6**	**+0.7**
GO01				IAML		16 23 28.0	
	comp=N,7µm,0.1s						
GO01	**Chusmiza**	**1.54**	**92**	Pn	**Pb**	**16 23 02.9**	**-0.7**
PB08	**IPOC Station P**	**1.66**	**108**	*e*P	**Pb**	**16 23 04.8**	**-0.7**
PB08				*e*S	**Sb**	**16 23 26.4**	**+0.1**
PB08				IAML		16 23 32.5	
	comp=N,2µm,0.4s						
PB16	**IPOC Station P**	**1.79**	**45**	Pn	**Pb**	**16 23 07.1**	**-0.8**
PB01	**IPOC Station P**	**1.90**	**139**	⇑*i*P	**Pn**	**16 23 07.8**	**+1.2**
PB01				*e*S	**Sn**	**16 23 31.0**	**+1.1**
PB01				IAML		16 23 38.8	
	comp=N,3µm,0.5s						
PB01	**IPOC Station P**	**1.90**	**139**	Pn	**Pn**	**16 23 07.4**	**+0.8**
PB02	**IPOC Station P**	**1.91**	**153**	⇑*i*P	**Pn**	**16 23 07.9**	**+1.2**
PB02				*e*S	**Sn**	**16 23 30.5**	**+0.3**
PB02				IAML		16 23 41.4	
	comp=E,3µm,0.5s						
PB07	**IPOC Station P**	**2.27**	**157**	Pn	**Pn**	**16 23 13.5**	**+1.5**
PB09	**IPOC Station P**	**2.63**	**146**	Pn	**Pn**	**16 23 18.4**	**+1.6**
PB04	**IPOC Station P**	**2.77**	**167**	Pn	**Pn**	**16 23 19.0**	**+0.3**
LVC	**Limon Verde**	**3.47**	**149**	Pn	**Pn**	**16 23 30.8**	**+2.2**
	comp=E,30nm,0.3s,baz=338,slow=10,SNR=11						
LVC				Sn	**Sn**	**16 24 11.2**	**+2.0**
	comp=E,42nm,0.3s,baz=343,slow=8.6,SNR=3.7						
LVC				Lg	Lg	16 24 23.8	
	comp=E,42nm,0.3s,baz=133,slow=16,SNR=4.3						
LVC	**Limon Verde**	**3.47**	**149**		**Pn**	**16 23 29.8**	**+1.2**
PB15	**IPOC Station P**	**3.79**	**161**	Pn	**Pn**	**16 23 35.0**	**+2.2**
PB10	**IPOC Station P**	**3.88**	**176**		**Pn**	**16 23 33.3**	**-0.6**
LPAZ	**La Paz**	**4.19**	**38**	Pn	**Pn**	**16 23 43.3**	**+4.6**
	comp=E,2.7nm,0.3s,baz=263,slow=4.0,SNR=35						
LPAZ	**La Paz**	**4.19**	**38**	Pn	**Pn**	**16 23 43.0**	**+4.3**
PB14	**IPOC Station P**	**5.00**	**176**		**Pn**	**16 23 48.0**	**-1.5**
SIV	**San Ignacio**	**9.97**	**70**	Pn	**Pn**	**16 24 56.7**	**-0.8**
	comp=E,1.5nm,0.3s,baz=267,slow=13,SNR=21						
CPUP	**Villa Florida**	**14.11**	**121**	Pn	**Pn**	**16 25 54.3**	**+0.2**
	comp=E,0.1nm,0.3s,baz=306,slow=13,SNR=2.4						
PTGA	**Pitinga**	**21.58**	**31**	P	**P**	**16 27 22.9**	**-0.9**
	comp=E,9.6nm,0.3s,baz=195,slow=19,SNR=19						
PTGA	**Pitinga**	**21.58**	**31**	P	**P**	**16 27 22.9**	**-0.9**
PTGA				IAmb	IAmb	16 27 23.1	
	comp=Z,13nm,0.3s						
TORD	**Torodi Ar. Bea**	**78.44**	**72**	P	**P**	**16 34 34.5**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=241,slow=6.4,SNR=4.9						
TORD	**Torodi Ar. Bea**	**78.44**	**72**	IAmb	IAmb	16 34 35.2	
	comp=Z,1.0nm,0.8s						
SYO	**Syowa Base**	**78.88**	**160**	⇑*e*P	**P**	**16 34 34.2**	**-2.5**
SYO	**Syowa Base**	**78.88**	**160**	⇓*i*pP	**P**	**16 34 36.0**	**-0.7**
YKA	**Yellowknife Ar**	**88.83**	**341**	P	**P**	**16 35 27.8**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=137,slow=5.2,SNR=7.9						
H11S2	**WAKE ISLAND Hy**	**125.83**	**279**	T	T	19 00 46.8	
	baz=101,slow=74,SNR=41						
H11S1	**WAKE ISLAND Hy**	**125.84**	**279**	T	T	19 00 50.3	
	baz=101,slow=74,SNR=25						
H11S3	**WAKE ISLAND Hy**	**125.85**	**279**	T	T	19 00 48.1	
	baz=101,slow=74,SNR=24						
H11N3	**WAKE ISLAND Hy**	**125.87**	**281**	T	T	19 00 51.9	
	baz=100,slow=74,SNR=11						
H11N2	**WAKE ISLAND Hy**	**125.89**	**281**	T	T	19 00 50.7	
	baz=100,slow=74,SNR=12						
H11N1	**WAKE ISLAND Hy**	**125.89**	**281**	T	T	19 00 51.9	
	baz=100,slow=74,SNR=7.2						
MKAR	**Makanchi Array**	**145.11**	**33**	PKP	**PKPdf**	**16 42 11.6**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=327,slow=2.9,SNR=13						
MKAR	**Makanchi Array**	**145.11**	**33**		**PKPab**	**16 42 11.4**	**+0.6**

IDC 24 16:34:38.6±1.9**, 7°.70N**×**93°.33E, h0**^{km}**, mb3.9**/5**, mb1 4.0**/6**,**
mb1mx3.6/40**, mbtmp3.8**/6**, ML4.0**/1**, Error ellipse: s-maj=67.5km s-min=31.3km az=58.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**12.01**	**27**	Pn	Pn	16 37 31.0	-0.1
	0.3nm,0.3s,baz=213,slow=14,SNR=7.5						
H08S3	**Diego Garcia H**	**25.77**	**234**	T	T	17 06 54.9	
	baz=56,slow=76,SNR=9.1						
H08S2	**Diego Garcia H**	**25.77**	**234**	T	T	17 06 48.7	
	baz=56,slow=76,SNR=8.2						
H08S1	**Diego Carcia H**	**25.78**	**234**	T	T	17 06 50.3	
	baz=56,slow=76,SNR=7.1						
MKAR	**Makanchi Array**	**40.09**	**348**	P	P	16 42 15.9	0.0
	0.7nm,0.6s,baz=152,slow=6.5,SNR=7.8						
ZALV	**Zalesovo Beam**	**46.62**	**353**	P	P	16 43 08.4	-0.1
	1.2nm,0.4s,baz=180,slow=7.9,SNR=6.2						
WRA	**Warramunga Arr**	**48.82**	**125**	P	P	16 43 26.0	-0.1
	0.5nm,0.7s,baz=306,slow=8.3,SNR=2.6						
FINES	**FINESS Array B**	**72.49**	**332**	P	P	16 46 07.0	0.0
	0.8nm,0.7s,baz=90,slow=8.3,SNR=2.0						
ARCES	**ARCESS Array B**	**75.16**	**340**	P	P	16 46 22.4	-0.1
	2.6nm,0.9s,baz=106,slow=8.5,SNR=2.2						

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*IDC **24** 16:35:01.0±2.5, 6°.58S×129°.87E, h134^{km}±30^{km}, mb3.7/2, mb1 3.4/6, mb1mx3.1/32, mbtmp3.8/6, Error ellipse: s-maj=51.1km s-min=14.5km az=85.0*
ISC 24 16:35:00.7±0.9**, 6°.74S**±0°.06×**130°.0E**±0°.2**, h146**^{km}**, n6,**
σ3^{s}.70/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.96**	**12**	P	**Pn**	**16 36 27.4**	**+0.4**
	1.5nm,0.3s,baz=129,slow=13,SNR=32						
SIJI				S	**Sn**	**16 37 30.5**	**-3.9**
	4.5nm,0.3s,baz=260,slow=23,SNR=12						
FITZ	**Fitzroy Crossi**	**12.06**	**200**	P	**Pn**	**16 37 49.8**	**+1.8**
	0.2nm,0.3s,baz=22,slow=10,SNR=11						
FITZ				S	**Sn**	**16 39 55.5**	**-5.9**
	0.8nm,0.3s,baz=253,slow=22,SNR=8.6						
WRA	**Warramunga Arr**	**13.79**	**163**	P	**Pn**	**16 38 11.9**	**+1.6**
	0.5nm,0.3s,baz=334,slow=13,SNR=25						
WRA				S	**Sn**	**16 40 38.4**	**-4.6**
	0.5nm,0.3s,baz=351,slow=18,SNR=6.6						
ASAR	**Alice Springs**	**17.25**	**168**	P	**Pn**	**16 38 56.1**	**+3.2**
	0.3nm,0.3s,baz=342,slow=9.1,SNR=45						
ASAR				S	**S**	**16 42 04.2**	**-0.4**
	0.2nm,0.3s,baz=355,slow=27,SNR=5.2						
STKA	**Stephens Creek**	**27.26**	**158**	P	**P**	**16 40 34.2**	**+2.9**
	0.5nm,0.3s,baz=319,slow=8.6,SNR=4.4						
MKAR	**Makanchi Array**	**68.00**	**327**	P	**P**	**16 45 44.5**	**+0.4**
	1.3nm,0.4s,baz=124,slow=7.8,SNR=32						

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*NEIC **24** 17:07:55.7±2.7, 19°.1S±0°.1×169°.5E±0°.1, h288^{km}±8^{km}, mb4.2/35, Error ellipse: s-maj=15.8km s-min=13.8km az=165.0*
*IDC **24** 17:07:55.9±2.8, 19°.02S×169°.55E, h286^{km}±29^{km}, mb3.7/8, mb1 3.9/9, mb1mx3.4/29, mbtmp4.3/9, Error ellipse: s-maj=52.2km s-min=18.8km az=151.0*
ISC 24 17:07:56.7±0.6**, 19°.1S**±0°.1×**169°.57E**±0°.09**, h300**^{km}**, n53,**
σ1^{s}.16/53**, mb4.1**/22**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.15**	**224**	P	**Pn**	**17 09 03.8**	**-0.9**
	2.4nm,0.3s,baz=61,slow=19,SNR=26						
DZM	**Mont Dzumac**	**4.15**	**224**		**Pn**	**17 09 03.6**	**-1.1**
MSVF	**Nonsavu**	**8.17**	**82**		**Pn**	**17 09 51.6**	**-0.9**
LHI	**Lord Howe Isla**	**15.57**	**215**	P	**Pn**	**17 11 21.2**	**-0.6**
OUZ	**Omahuta**	**16.44**	**168**	P	**Pn**	**17 11 31.3**	**-0.6**
EIDS	**Eidsvold**	**18.20**	**247**	P	**P**	**17 11 49.3**	**+0.7**
EIDS				IAmb	IAmb	17 11 54.8	
	comp=Z,18nm,1.4s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARMA	Armidale	19.77	232	P	P	17 12 06.7	+1.3
ARMA				IAmb	IAmb	17 12 07.8	
	comp=Z,9.0nm,0.8s						
BKZ	Black Stump Fm	20.87	165	P	P	17 12 17.8	+1.6
BKZ				IAmb	IAmb	17 12 35.5	
	comp=Z,18nm,1.4s						
CTA	Charters Tower	21.98	264	P	P	17 12 28.0	+1.3
	comp=Z,3.2nm,0.6s,baz=120,slow=15,SNR=3.8						
PLWZ	Palliser	22.91	169	P	P	17 12 35.8	+0.9
TOO	Toolangi	27.93	224	P	P	17 13 21.2	+1.3
STKA	Stephens Creek	28.18	238	P	P	17 13 23.2	+1.0
	comp=Z,7.7nm,0.7s,baz=59,slow=8.4,SNR=24						
STKA	Stephens Creek	28.18	238	P	P	17 13 23.3	+1.1
BBOO	Buckleboo	32.92	239	P	P	17 14 04.2	+0.5
WR0	Warramunga Arr	32.99	263	P	P	17 14 03.6	-0.7
WB0	Warramunga Arr	33.14	263	P	P	17 14 05.2	-0.6
WB2	Warramunga Arr	33.16	263	P	P	17 14 05.4	-0.5
WB2				IAmb	IAmb	17 14 06.9	
	comp=Z,6.4nm,1.2s						
WRA	Warramunga Arr	33.18	263		P	17 14 05.5	-0.6
	comp=Z,1.2nm,0.3s,baz=82,slow=5.9,SNR=35						
WRA	Warramunga Arr	33.18	263	P	P	17 14 05.0	-1.0
AS31	Alice Springs	33.46	256	P	P	17 14 08.6	+0.1
ASAR	Alice Springs	33.46	256	P	P	17 14 08.4	0.0
	comp=Z,16nm,0.5s,baz=80,slow=9.3,SNR=647						
ASAR	Alice Springs	33.46	256	P	P	17 14 07.6	-0.8
MTN	Manton Dam	37.41	274	P	P	17 14 41.4	-0.6
MTN				IAmb	IAmb	17 15 05.0	
	comp=Z,13nm,1.4s						
KNRA	Kununurra	39.03	268	P	P	17 14 55.4	+0.1
KNRA				IAmb	IAmb	17 15 04.6	
	comp=Z,8.8nm,1.1s						
FORT	Forrest	39.18	245	P	P	17 14 56.6	+0.2
FORT				IAmb	IAmb	17 15 10.9	
	comp=Z,15nm,1.2s						
FITZ	Fitzroy Crossi	41.56	264	P	P	17 15 16.6	+0.7
	comp=Z,4.8nm,0.7s,baz=94,slow=5.8,SNR=16						
FITZ	Fitzroy Crossi	41.56	264	P	P	17 15 16.1	+0.1
PSAC2	Pilbara Seismi	46.48	258	P	P	17 15 53.8	-1.0
PSAC2				IAmb	IAmb	17 16 07.4	
	comp=Z,16nm,1.4s						
PSAB2	Pilbara Seismi	46.52	258	P	P	17 15 54.0	-1.1
PSAB2				IAmb	IAmb	17 16 13.2	
	comp=Z,11nm,1.1s						
PSAB3	Pilbara Seismi	46.52	258	P	P	17 15 53.8	-1.2
PSAB3				IAmb	IAmb	17 15 56.4	
	comp=Z,6.4nm,0.8s						
PSAA3	Pilbara Seismi	46.52	258	P	P	17 15 55.9	+0.8
PSAA3				IAmb	IAmb	17 15 56.3	
	comp=Z,12nm,0.9s						
PSA00	Pilbara Seismi	46.53	258	P	P	17 15 53.1	-2.1
PSA00				IAmb	IAmb	17 15 56.4	
	comp=Z,8.9nm,0.9s						
PSA00	Pilbara Seismi	46.53	258	P	P	17 15 53.1	-2.1
PSAA2	Pilbara Seismi	46.53	258	P	P	17 15 53.1	-2.1
PSAA2				IAmb	IAmb	17 15 56.4	
	comp=Z,7.3nm,0.8s						
PSAA1	Pilbara Seismi	46.54	258	P	P	17 15 53.4	-1.9
PSAC3	Pilbara Seismi	46.54	258	P	P	17 15 53.1	-2.1
PSAB1	Pilbara Seismi	46.55	258	P	P	17 15 55.0	-0.4
PSAD1	Pilbara Seismi	46.56	258	P	P	17 15 53.2	-2.2
PSAC1	Pilbara Seismi	46.57	258	P	P	17 15 54.5	-1.0
PSAC1				IAmb	IAmb	17 16 17.4	
	comp=Z,16nm,1.4s						
PSAD3	Pilbara Seismi	46.58	258	P	P	17 15 54.9	-0.7
PSAD3				IAmb	IAmb	17 15 56.8	
	comp=Z,9.2nm,0.9s						
QSPA	South Pole Qui	70.94	180	P	P	17 18 41.9	+0.1
QSPA				IAmb	IAmb	17 19 01.5	
	comp=Z,5.9nm,1.4s						
PEA0B	Petropavlovsk-	72.64	353	P	P	17 18 52.6	+1.0
PETK	Petropavlovsk-	72.64	353	P	P	17 18 52.2	+0.6
	comp=Z,2.2nm,0.8s,baz=150,slow=6.4,SNR=5.0						
PETK	Petropavlovsk-	72.64	353	P	P	17 18 52.7	+1.0
NIKH	Nikolski High	74.18	13	P	P	17 19 00.1	-0.5
NVAR	Mina Array Bea	88.48	48	P	P	17 20 16.6	+0.8
	comp=Z,0.9nm,0.8s,baz=225,slow=7.4,SNR=5.9						
ILAR	Eielson Array	90.02	17	P	P	17 20 20.6	-1.4
	comp=Z,0.4nm,0.8s,baz=243,slow=5.4,SNR=4.8						
I07A	Izee	90.17	43	P	P	17 20 25.1	+1.7
EGAK	Eagle	91.70	19	P	P	17 20 29.8	-0.1
EGAK				IAmb	IAmb	17 20 56.1	
	comp=Z,6.3nm,1.4s						
YKA	Yellowknife Ar	100.41	27	P	Pdif	17 21 10.7	+1.4
	comp=Z,0.3nm,0.7s,baz=248,slow=4.6,SNR=2.8						
MKAR	Makanchi Array	101.86	315	P	Pdif	17 21 18.2	+2.1
	comp=Z,0.1nm,0.5s,baz=108,slow=4.5,SNR=1.6						
GERES	GERESS Array B	144.52	332	PKP	PKPdf	17 26 57.0	-0.5
	comp=Z,0.6nm,0.6s,baz=38,slow=5.0,SNR=5.5						
DAVOX	Davos/Dischmat	147.76	333	PKPbc	PKiKP	17 27 06.6	-1.6
	comp=Z,1.4nm,0.4s,baz=198,slow=3.2,SNR=2.4						

IDC 24 17:08:40.1±3.1**, 33°.46S**×**178°.78W, h0**^{km}**, mb3.7**/2**, mb1 3.9**/3**, mb1mx3.5**/34**, mbtmp3.7**/3**, ML3.8**/1**, Error ellipse: s-maj=73.8km s-min=36.3km az=116.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	5.84	214	Pn	Pn	17 10 08.0	+0.1
	2.3nm,0.3s,baz=273,slow=6.8,SNR=16						
URZ				Sn	Sn	17 11 14.8	-0.8
	2.1nm,0.3s,baz=102,slow=17,SNR=9.2						
ASAR	Alice Springs	42.38	271	P	P	17 16 36.1	-0.3
	0.6nm,0.7s,baz=102,slow=7.6,SNR=4.8						
WRA	Warramunga Arr	43.65	276	P	P	17 16 46.9	+0.2
	0.7nm,0.5s,baz=115,slow=8.0,SNR=5.5						
FINES	FINESS Array B	147.75	338	PKPbc	PKPbc	17 28 25.2	-0.8
	0.3nm,0.4s,baz=45,slow=2.8,SNR=5.2						

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*IDC **24** 17:15:50.1±1.8, 8°.70S×124°.66E, h0^{km}, mb3.5/1, mb1 3.9/4, mb1mx3.5/33, mbtmp3.7/4, ML3.5/3, Error ellipse: s-maj=102.2km s-min=27.1km az=65.0*

*DJA **24** 17:16:00.2±0.7, 9°S±11°×12°4E±°, h77^{km}±9^{km}, M4.0/6, mb4.1/4, MLv4.0/6*

ISC 24 17:15:55.5±1.3**, 9°.1S**±0°.1×**124°.7E**±0°.1**, h35**^{km}**, n9, σ2^{s}.49**/11**, Timor region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SOEI	Soe	0.81	212	P	Pn	17 16 17.3	+6.8
MMRI	Maumere	2.46	280	P	Pn	17 16 34.4	+1.2
BASI	Baing, Sumba	4.22	254	P	Pn	17 16 57.5	+0.2
WBSI	Waikabubak, Su	5.26	263	P	Pn	17 17 10.0	-1.8
PLAI	Plampang	6.84	271	P	Pn	17 17 33.3	-0.1
	0.1nm18nm,0.6s						
FITZ	Fitzroy Crossi	9.03	174	Pn	Pn	17 18 06.7	+3.3
	0.6nm,0.3s,baz=349,slow=10,SNR=21						
FITZ				Sn	Sn	17 19 41.5	-2.4
	3.7nm,0.3s,baz=314,slow=23,SNR=17						
WRA	Warramunga Arr	14.28	140	Pn	Pn	17 19 17.6	+2.3
	0.4nm,0.3s,baz=316,slow=13,SNR=20						
WRA				Sn	Sn	17 21 50.0	-2.6
	0.8nm,0.3s,baz=314,slow=24,SNR=18						
ASAR	Alice Springs	16.98	150	P	P	17 19 53.9	+1.8
	0.0nm,0.3s,baz=322,slow=12,SNR=5.8						
ASAR				S	Sn	17 22 55.4	-2.9
	0.2nm,0.3s,baz=313,slow=20,SNR=9.3						
MKAR	Makanchi Array	67.21	330	P	P	17 26 44.1	-2.0
	0.3nm,0.6s,baz=152,slow=6.8,SNR=5.6						

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*IDC **24** 17:19:49.5±1.0, 19°.52S×70°.70W, h0^{km}, mb4.2/4, mb1 4.3/7, mb1mx3.8/33, mbtmp4.1/7, ML3.9/3, MS2.8/1, Ms1 2.9/1, ms1mx2.7/27, Error ellipse: s-maj=31.5km s-min=16.9km az=63.0*

*NEIC **24** 17:19:50.2, 19°.66S×70°.96W, h26^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.37; $M_{\theta\theta}$-0.66; $M_{\phi\phi}$-0.71; $M_{r\theta}$0.14; $M_{\theta\phi}$0.71; $M_{\phi r}$-0.24; Fault plane solution: $M_0$1.41000×10^{15} NP1:ϕ_s313.22000°, δ39.52000°, λ85.78000°. NP2:ϕ_s138.69000°, δ50.61000°, λ93.48000°. Principal axes: T 1.3953, Plg84.0000°, Azm72.0000°; N 0.0279, Plg3.0000°, Azm316.0000°; P -1.4232, Plg6.0000°, Azm226.0000°;*

*NEIC **24** 17:19:51.1±2.8, 19°.66S±0°.04×70°.87W±0°.05, h16^{km}±5^{km}, mb4.4/2, Mwr4.0/31 Error ellipse: s-maj=7.0km s-min=6.0km az=128.0*

*GUC **24** 17:19:53.6±0.7, 19°.61S×70°.77W, h42^{km}±2^{km}, ML4.2*

ISC 24 17:19:50.8±1.3**, 19°.61S**±0°.02×**70°.80W**±0°.05**, h11**^{km}±8^{km}**, n54, σ1^{s}.86**/63**, mb4.3**/4**, 3C-7D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	0.64	89	⇓iP	Pn	17 20 05.1	-0.8
PSGC				eS	Sn	17 20 13.9	-2.2
PSGCX	Pisagua	0.64	89		Pn	17 20 04.9	-1.0
PSGCX					Sn	17 20 13.5	-2.7
PB12	IPOC Station P	1.09	24	⇓iP	Pg	17 20 12.2	+0.4
PB12				eS	Sn	17 20 26.9	-0.3
PB12				IAML		17 20 28.2	
	comp=N,6µm,0.4s						
PB12	IPOC Station P	1.09	24	Pn	Pg	17 20 11.8	+0.1
PB11	IPOC Station P	1.09	98	⇓iP	Pg	17 20 12.5	+0.7
PB11				eS	Sn	17 20 27.6	+0.2
PB11				IAML		17 20 30.3	
	comp=N,11µm,0.2s						
PB11	IPOC Station P	1.09	98	Pn	Pg	17 20 12.3	+0.5
TA01	Diego Aracena	1.12	149	⇑iP	Pg	17 20 13.1	+0.8
TA01				eS	Sg	17 20 27.6	+0.8
TA01				IAML		17 20 32.0	
	comp=E,11µm,0.4s						
AP01	Chacalluta	1.31	20	⇓iP	Pg	17 20 15.9	-0.1
AP01				eS	Sg	17 20 33.5	+0.5
AP01				IAML		17 20 34.9	
	comp=N,21µm,0.3s						
PATCX	Punta Patache	1.35	153	⇑iP	Pg	17 20 16.6	-0.2
PATCX				eS	Sb	17 20 33.4	-0.1
PATCX	Punta Patache	1.35	153	Pn	Pn	17 20 15.2	-0.5
GO01	Chusmiza	1.52	92	⇓iP	Pg	17 20 19.9	-0.2
GO01				eS	Sg	17 20 40.1	+0.3
GO01				IAML		17 20 41.3	
	comp=N,7µm,0.2s						
GO01	Chusmiza	1.52	92	Pn	Pb	17 20 19.1	-0.2
PB08	IPOC Station P	1.64	109	⇑iP	Pg	17 20 21.7	-0.6
PB08				eS	Sg	17 20 42.9	-0.8
PB16	IPOC Station P	1.76	44	⇓iP	Pb	17 20 23.8	+0.3
PB16				eS	Sg	17 20 47.3	-0.4
PB16				IAML		17 20 56.9	
	comp=N,2µm,0.4s						
PB16	IPOC Station P	1.76	44	Pn	Pb	17 20 23.8	+0.3
PB01	IPOC Station P	1.89	139	i P	Pb	17 20 24.4	-1.0
PB01				eS	Sb	17 20 47.5	-1.4
PB01				IAML		17 20 57.1	
	comp=N,2µm,0.5s						
PB01	IPOC Station P	1.89	139	Pn	Pb	17 20 23.9	-1.5
PB02	IPOC Station P	1.90	154	⇓iP	Pb	17 20 24.7	-0.9
PB02				eS	Sn	17 20 47.2	-0.1
PB02				IAML		17 20 57.8	
	comp=E,5µm,0.4s						
PB07	IPOC Station P	2.27	158	Pn	Pn	17 20 25.8	-2.7
PB09	IPOC Station P	2.62	146		Pn	17 20 31.6	-1.7
PB04	IPOC Station P	2.78	167		Pn	17 20 32.5	-2.9
LVC	Limon Verde	3.47	150	Pn	Pn	17 20 47.5	+2.4
	comp=E,10nm,0.3s,baz=342,slow=11,SNR=24						
LVC				Sn	Sn	17 21 27.9	+1.5
	comp=E,29nm,0.3s,baz=72,slow=13,SNR=12						
LVC				Lg	Lg	17 21 39.1	
	comp=E,36nm,0.3s,baz=243,slow=21,SNR=3.4						
LVC	Limon Verde	3.47	150		Pn	17 20 46.0	+0.9
PB15	IPOC Station P	3.79	161		Pn	17 20 49.2	-0.2
PB10	IPOC Station P	3.89	177		Pn	17 20 49.6	-0.9
LPAZ	La Paz	4.17	38	Pn	Pb	17 20 60.0	-4.6
	comp=E,2.6nm,0.3s,baz=209,slow=8.2,SNR=36						
LPAZ				LR	LR	17 22 08.3	
	comp=E,107nm,19.7s,baz=170,slow=34						
LPAZ	La Paz	4.17	38		Pn	17 20 58.6	+3.7
PB14	IPOC Station P	5.00	176		Pn	17 21 04.1	-2.1
GO02	Mina Guanaco	5.64	169		Pn	17 21 14.8	0.0
SIV	San Ignacio	9.94	70	Pn	Pn	17 22 13.7	-0.1
	comp=E,1.5nm,0.3s,baz=276,slow=11,SNR=20						
SAML	Samuel	12.91	36		Pn	17 22 55.9	+1.6
CPUP	Villa Florida	14.09	121	Pn	Pn	17 23 12.0	+1.5
	comp=E,0.1nm,0.3s,baz=287,slow=11,SNR=4.9						
PTGA	Pitinga	21.56	31	P	P	17 24 39.1	-1.3
	comp=E,13nm,0.3s,baz=308,slow=21,SNR=40						
PTGA	Pitinga	21.56	31	P	P	17 24 39.2	-1.3
PTGA				IAmb	IAmb	17 24 40.2	
	comp=Z,10nm,0.7s						
GUY2C	Guyana, Caldas	25.08	349	eP	P	17 25 17.2	+1.1
RUSC	La Rusia	25.44	355	eP	P	17 25 20.8	+1.5
PTBC	PUERTO BERRIO,	26.23	352	eP	P	17 25 24.5	-1.5
TXAR	Lajitas Array	58.08	326	P	P	17 29 44.7	+0.3
	comp=Z,0.2nm,0.5s,baz=149,slow=9.9,SNR=3.8						
TORD	Torodi Ar. Bea	78.42	72	P	P	17 31 51.1	-1.0
	comp=Z,2.3nm,0.7s,baz=252,slow=4.6,SNR=10						
TORD	Torodi Ar. Bea	78.42	72	P	P	17 31 51.0	-1.1
YKA	Yellowknife Ar	88.83	341	P	P	17 32 44.8	+0.4
	comp=Z,1.3nm,0.7s,baz=136,slow=5.2,SNR=29						
H11S2	WAKE ISLAND Hy	125.86	279	T	T	19 58 03.2	
	baz=101,slow=74,SNR=49						
H11S1	WAKE ISLAND Hy	125.86	279	T	T	19 58 03.8	
	baz=101,slow=74,SNR=33						
H11S3	WAKE ISLAND Hy	125.87	279	T	T	19 58 01.9	
	baz=101,slow=74,SNR=33						
H11N3	WAKE ISLAND Hy	125.89	281	T	T	19 58 07.2	
	baz=100,slow=74,SNR=9.4						
H11N2	WAKE ISLAND Hy	125.91	281	T	T	19 58 08.3	
	baz=100,slow=74,SNR=11						
H11N1	WAKE ISLAND Hy	125.91	281	T	T	19 58 08.1	
	baz=100,slow=74,SNR=2.7						
ASAR	Alice Springs	130.70	210	PKP	PKiKP	17 39 03.4	-0.3
	comp=Z,0.5nm,0.6s,baz=116,slow=1.5,SNR=14						
WRA	Warramunga Arr	133.61	214	PKP	PKiKP	17 39 08.6	-1.0
	comp=Z,0.6nm,0.8s,baz=155,slow=1.9,SNR=8.4						
MKAR	Makanchi Array	145.09	33	PKP	PKPdf	17 39 28.2	-0.1
	comp=Z,2.4nm,0.7s,baz=320,slow=3.9,SNR=28						
MKAR	Makanchi Array	145.09	33		PKPdf	17 39 27.8	-0.6
KSH	Kashi	145.23	48	PKPbc	PKPdf	17 39 29.8	+0.8
KSH				pPKP	sPKPdf	17 39 41.1	+7.7
KSH				PP	PP	17 42 53.3	+5.3
KSH				PKS	PKSdf	17 43 09.6	+5.0
SONM	Songino Array	151.75	4	PKPbc	PKiKP	17 39 46.1	+0.1
	comp=Z,0.3nm,0.4s,baz=325,slow=2.3,SNR=5.2						
LZH	Lanzhou	162.92	15	ePKP	PKPdf	17 39 47.3	-6.5
LZH				pPKP	sPKPdf	17 39 59.3	+1.1
LZH				sPKP		17 40 05.8	

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*IDC **24** 17:30:41.3±1.0, 19°.53S×70°.78W, h0^{km}, mb4.2/5, mb1 4.3/8, mb1mx3.9/36, mbtmp4.2/8, ML4.1/3, MS3.4/6, Ms1 3.4/6, ms1mx3.2/29, Error ellipse: s-maj=28.7km s-min=16.7km az=61.0*

*SJA **24** 17:30:43.4±1.2, 19°.63S×70°.78W, h16^{km}±8^{km}, ML4.2, MW4.2*

*NEIC **24** 17:30:44.7, 19°.66S×70°.86W, h27^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.07; $M_{\theta\theta}$-0.13; $M_{\phi\phi}$-1.93; $M_{r\theta}$0.03; $M_{\theta\phi}$0.88; $M_{\phi r}$-0.94; Fault plane solution: $M_0$2.38000×10^{15} NP1:ϕ_s328.50000°, δ34.67000°, λ75.05000°. NP2:ϕ_s166.49000°, δ56.66000°, λ100.12000°. Principal axes: T 2.2914, Plg76.0000°, Azm107.0000°; N 0.1745, Plg8.0000°, Azm341.0000°; P -2.4659, Plg11.0000°, Azm249.0000°;*

*NEIC **24** 17:30:45.1±2.1, 19°.62S±0°.04×70°.78W±0°.07, h27^{km}±1^{km}, mb4.5/4, Mwr4.2/35, ML4.3(GUC) Error ellipse: s-maj=11.8km s-min=5.4km az=293.0*

*GUC **24** 17:30:46.1±0.7, 19°.60S×70°.72W, h43^{km}±2^{km}, ML4.3*

*VAO **24** 17:30:48.1±1.1, 19°.55S×70°.61W, h51^{km}±8^{km}, mb4.2*

ISC 24 17:30:41.1±1.5**, 19°.57S**±0°.02×**70°.86W**±0°.05**, h1**^{km}±9^{km}**, n100, σ1^{s}.42**/117**, mb4.5**/6**, 5C-7D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	0.70	92	⇓iP	Pb	17 30 57.1	+0.9
PSGC				eS	Sb	17 31 05.4	-0.9
PSGCX	Pisagua	0.70	92		Pb	17 30 56.8	+0.6
PSGCX	Pisagua	0.70	92	eP	Pb	17 30 56.9	+0.8
PSGCX				eS	Sb	17 31 05.6	-0.7
PSGCX				IAML		17 31 06.0	
	comp=Z,11µm,0.7s						
PB12	IPOC Station P	1.07	28	⇓iP	Pn	17 31 04.4	+1.0
PB12				eS	Sn	17 31 18.9	-0.1
PB12				IAML		17 31 21.2	
	comp=N,10µm,0.1s						
PB12	IPOC Station P	1.07	28		Pn	17 31 04.2	+0.8
PB12	IPOC Station P	1.07	28	eP	Pn	17 31 04.4	+1.0
PB12				eS	Sn	17 31 19.2	+0.2
PB12				IAML		17 31 20.6	
	comp=Z,7µm,0.9s						
PB11	IPOC Station P	1.15	100	⇓iP	Pn	17 31 04.5	-0.1
PB11				eS	Sb	17 31 18.4	-1.1
PB11	IPOC Station P	1.15	100	Pn	Pn	17 31 04.5	-0.1
PB11	IPOC Station P	1.15	100	eP	Pn	17 31 04.5	-0.1
PB11				eS	Sb	17 31 18.4	-1.1
PB11				IAML		17 31 22.2	
	comp=Z,5µm,0.4s						
TA01	Diego Aracena	1.18	147	⇑iP	Pn	17 31 05.4	+0.7
TA01				eS	Sb	17 31 19.9	-0.2
TA01				IAML		17 31 23.8	
	comp=E,9µm,0.5s						
AP01	Chacalluta	1.29	23	⇓iP	Pn	17 31 07.8	+1.6
AP01				eS	Sn	17 31 25.2	+1.0
AP01				IAML		17 31 29.2	
	comp=E,18µm,0.2s						
PATCX	Punta Patache	1.41	152	⇑iP	Pb	17 31 08.8	+0.4
PATCX				eS	Sb	17 31 26.7	-0.2
PATCX	Punta Patache	1.41	152		Pb	17 31 08.7	+0.4
PATCX	Punta Patache	1.41	152	i P	Pb	17 31 08.8	+0.4
PATCX				eS	Sg	17 31 26.4	-0.2
PATCX				IAML		17 31 33.7	
	comp=Z,2µm,0.8s						
GO01	Chusmiza	1.57	94	⇓iP	Pg	17 31 11.7	+0.4
GO01				eS	Sn	17 31 31.4	-0.5
GO01	Chusmiza	1.57	94	Pn	Pg	17 31 11.8	+0.4
PB08	IPOC Station P	1.71	110	⇓iP	Pb	17 31 13.5	0.0
PB08				eS	Sn	17 31 34.2	-0.9
PB08	IPOC Station P	1.71	110	eP	Pb	17 31 13.5	0.0
PB08				eS	Sb	17 31 34.7	-1.0
PB08				IAML		17 31 35.4	
	comp=Z,5µm,0.4s						
PB16	IPOC Station P	1.77	46	⇓iP	Pg	17 31 15.7	+0.6
PB16				eS	Sg	17 31 38.4	+0.2
PB16				IAML		17 31 43.2	
	comp=E,3µm,0.4s						
PB16	IPOC Station P	1.77	46	Pn	Pg	17 31 15.8	+0.6
PB16	IPOC Station P	1.77	46	eP	Pg	17 31 15.8	+0.6
PB16				eS	Sg	17 31 38.4	+0.2
PB16				IAML		17 31 42.5	
	comp=Z,6µm,0.4s						
PB01	IPOC Station P	1.95	139	⇑iP	Pn	17 31 16.5	+1.0
PB01				eS	Sn	17 31 39.7	-1.1
PB01	IPOC Station P	1.95	139	Pn	Pn	17 31 16.6	+1.0
PB02	IPOC Station P	1.96	153	⇑iP	Pn	17 31 16.8	+1.1
PB02				eS	Sn	17 31 38.9	-2.1
PB02				IAML		17 31 49.9	
	comp=E,5µm,0.3s						
PB02	IPOC Station P	1.96	153	i P	Pn	17 31 16.7	+1.1
PB02				eS	Sn	17 31 39.8	-1.2
PB02				IAML		17 31 53.2	
	comp=Z,3µm,0.5s						
PB07	IPOC Station P	2.33	157		Pn	17 31 20.4	-0.4
PB07	IPOC Station P	2.33	157	eP	Pn	17 31 21.8	+1.0
PB07				eS	Sg	17 31 57.7	+1.5
PB07				IAML		17 32 02.5	
	comp=Z,2µm,0.6s						
PB03	IPOC Station P	2.68	157	⇑iP	Pn	17 31 26.2	+0.7
PB03				IAML		17 32 09.7	
	comp=E,1µm,0.5s						
PB03	IPOC Station P	2.68	157	eP	Pn	17 31 26.4	+0.9
PB03				eS	Sg	17 32 07.0	-0.2
PB03				IAML		17 32 08.3	
	comp=Z,970nm,1.4s						
PB09	IPOC Station P	2.69	146		Pn	17 31 27.5	+1.9
PB09	IPOC Station P	2.69	146	eP	Pn	17 31 27.6	+1.9
PB09				IAML		17 32 11.9	
	comp=Z,3µm,0.9s						
PB04	IPOC Station P	2.83	167		Pn	17 31 27.8	+0.1
PB04	IPOC Station P	2.83	167	i P	Pn	17 31 28.1	+0.4
PB05	IPOC Station P	3.33	169	i P	Pn	17 31 34.4	0.0
PB05				eS	Sg	17 32 25.9	-2.1
PB05				IAML		17 32 42.8	
	comp=Z,394nm,0.8s						
PB06	IPOC Station P	3.35	159	eP	Pn	17 31 35.0	+0.3
PB06				eS	Sg	17 32 27.0	-1.6
PB06				IAML		17 32 39.8	
	comp=Z,779nm,0.8s						
LVC	Limon Verde	3.53	149	Pn	Pn	17 31 39.5	+2.0
	comp=Z,14nm,0.3s,baz=340,slow=9.7,SNR=42						
LVC				Sn	Sn	17 32 20.0	-0.1
	comp=Z,66nm,0.3s,baz=252,slow=21,SNR=11						
LVC				LR	LR	17 32 25.9	
	comp=Z,153nm,18.9s,baz=335,slow=30						
LVC				Lg	Lg	17 32 32.2	
	comp=Z,43nm,0.3s,baz=126,slow=12,SNR=13						
LVC	Limon Verde	3.53	149		Pn	17 31 39.4	+2.0
LVC	Limon Verde	3.53	149	eP	Pn	17 31 39.5	+2.0
LVC	Limon Verde	3.53	149	i P	Pn	17 31 39.5	+2.0
LVC				eS	Sb	17 32 29.5	+1.3
LVC				IAML		17 32 40.1	
	comp=Z,207nm,0.7s						
PB15	IPOC Station P	3.85	161		Pn	17 31 39.9	-1.8
PB15	IPOC Station P	3.85	161	i P	Pn	17 31 42.2	+0.6
PB15				IAML		17 32 50.1	
	comp=Z,866nm,0.4s						
PB10	IPOC Station P	3.94	176		Pn	17 31 42.4	-0.3
PB10	IPOC Station P	3.94	176	i P	Pn	17 31 42.7	0.0
PB10				IAML		17 33 18.0	
	comp=Z,120nm,1.0s						
LPAZ	La Paz	4.17	39	Pn	Pb	17 31 51.8	-4.0
	comp=Z,4.2nm,0.3s,baz=210,slow=2.7,SNR=69						
LPAZ				LR	LR	17 33 34.4	
	comp=Z,550nm,18.2s,baz=256,slow=42						
LPAZ	La Paz	4.17	39		Pb	17 31 51.6	-4.1
PB14	IPOC Station P	5.05	175		Pn	17 31 57.4	-0.9
PB14	IPOC Station P	5.05	175	i P	Pn	17 31 57.5	-0.9
PB14				IAML		17 33 32.0	
	comp=Z,104nm,0.9s						
YJA	Yavi	5.63	118	i P	Pn	17 32 11.2	+4.8
GO02	Mina Guanaco	5.69	168		Pn	17 32 06.9	-0.2
AZAP	Zapla	7.10	132	i P	Pn	17 32 30.5	+4.1
ASTB	Santa Barbara	7.38	127	i P	Pn	17 32 34.6	+4.4
NNA	Nana	9.48	322	LR	LR	17 36 24.6	
	comp=Z,128nm,21.6s,baz=132,slow=36						
SIV	San Ignacio	9.98	71	Pn	Pn	17 33 05.6	-0.2
	comp=Z,2.7nm,0.3s,baz=260,slow=11,SNR=27						
SIV				LR	LR	17 37 21.7	
	comp=Z,402nm,18.9s,baz=292,slow=40						
GO04	Tololo Observa	10.56	180	Pn	Pn	17 33 13.3	-0.6
SAML	Samuel	12.91	36		Pn	17 33 47.5	+1.6
SAML	Samuel	12.91	36	eP	Pn	17 33 46.5	+0.6
CPUP	Villa Florida	14.16	121	Pn	Pn	17 34 03.6	+0.7
	comp=Z,0.1nm,0.3s,baz=308,slow=12,SNR=9.3						
CPUP				LR	LR	17 40 17.5	
	comp=Z,122nm,19.0s,baz=290,slow=41						
CPUP	Villa Florida	14.16	121	eP	Pn	17 34 02.5	-0.4
AQDB	Aquidauana	14.28	96	eP	Pn	17 34 05.4	+0.8
CLDB	Colider	16.90	61	eP	Pn	17 34 38.4	-0.7
C2SB	Chapadao do Su	17.05	90	eP	Pn	17 34 39.7	-1.2
PTGB	Pitanga	18.15	110	eP	P	17 34 55.2	+0.2
PCMB	Pacaembu	18.46	100	eP	Pn	17 34 58.0	-0.5
ARAG	Araguaiana, MT	18.55	81	eP	P	17 34 59.0	-0.5
ITAB	Concordia	18.80	117	eP	P	17 35 01.1	-1.0
PLTB	Pedras Altas	19.70	131	eP	P	17 35 11.1	-0.9
TRQA	Tornquist	19.98	159	eP	P	17 35 15.1	+0.2
BB19B	Bebedouro	21.00	98	eP	P	17 35 23.7	-2.5
IPMB	Ipameri, GO	21.50	90	eP	P	17 35 29.6	-2.1
PTGA	Pitinga	21.55	31	P	P	17 35 31.2	-1.0
	comp=Z,15nm,0.3s,baz=211,slow=16,SNR=51						
PTGA	Pitinga	21.55	31	P	P	17 35 31.1	-1.0
PTGA	Pitinga	21.55	31	eP	P	17 35 31.4	-0.7
BDFB	Brasilia	22.12	83	P	P	17 35 37.6	-0.8
	comp=Z,1.9nm,0.4s,baz=258,slow=8.1,SNR=3.1						
BDFB	Brasilia	22.12	83	IAmb	IAmb	17 35 40.1	
	comp=Z,19nm,1.4s						
ROSC	El Rosal	24.49	352	LR	LR	17 47 02.6	
	comp=Z,210nm,18.6s,baz=150,slow=40						
RUSC	La Rusia	25.39	355	P	P	17 36 12.4	+1.7
JANB	Januaria	25.73	84	eP	P	17 36 11.0	-2.4
RCBR	Riachuelo	36.64	73	eP	P	17 37 48.5	-1.1
TXAR	Lajitas Array	58.01	326	P	P	17 40 37.5	+1.7
	comp=Z,0.2nm,0.6s,baz=148,slow=8.6,SNR=3.1						
VNA3	Neumayer Olymp	62.48	161	P	P	17 41 04.5	-1.3
SNAA	Sanae	64.69	161	P	P	17 41 21.5	+1.0
TOA0	Torodi Ar. Sit	78.46	72	P	P	17 42 43.1	-1.2
TOA0				IAmb	IAmb	17 42 43.8	
	comp=Z,6.6nm,0.8s						
TORD	Torodi Ar. Bea	78.46	72	P	P	17 42 43.1	-1.2
	comp=Z,3.7nm,0.7s,baz=251,slow=5.2,SNR=15						
TORD	Torodi Ar. Bea	78.46	72	P	P	17 42 43.1	-1.2
YKA	Yellowknife Ar	88.77	341	P	P	17 43 36.9	+0.7
	comp=Z,1.5nm,0.6s,baz=136,slow=5.0,SNR=32						
H11S2	WAKE ISLAND Hy	125.79	279	T	T	20 08 55.8	
	baz=101,slow=74,SNR=153						
H11S1	WAKE ISLAND Hy	125.80	279	T	T	20 08 56.3	
	baz=101,slow=74,SNR=63						

H11S3	WAKE ISLAND Hy	125.81	279	T	T	20 08 59.6	
	baz=101,slow=74,SNR=62						
H11N3	WAKE ISLAND Hy	125.83	281	T	T	20 08 58.1	
	baz=100,slow=75,SNR=30						
H11N2	WAKE ISLAND Hy	125.85	281	T	T	20 08 59.2	
	baz=100,slow=75,SNR=38						
H11N1	WAKE ISLAND Hy	125.85	281	T	T	20 08 59.5	
	baz=100,slow=75,SNR=16						
ASAR	Alice Springs	130.71	210	PKP	PKPdf	17 49 55.1	+0.2
	comp=Z,0.5nm,0.5s,baz=127,slow=1.7,SNR=17						
WRA	Warramunga Arr	133.61	214	PKP	PKPdf	17 50 00.8	+0.4
	comp=Z,0.7nm,0.7s,baz=156,slow=1.6,SNR=10						
WRA	Warramunga Arr	133.61	214		PKPdf	17 50 01.1	+0.6
MAKZ	Makanchi	144.91	33		PKPab	17 50 19.6	+0.3
MK31	Makanchi Array	145.08	33		PKPbc	17 50 19.9	+0.1
MKAR	Makanchi Array	145.08	33	PKPbc	PKPbc	17 50 20.2	+0.4
	comp=Z,3.5nm,0.8s,baz=319,slow=4.0,SNR=39						
MKAR	Makanchi Array	145.08	33		PKPbc	17 50 20.0	+0.2
KSH	Kashi	145.24	48	PKPbc	PKPbc	17 50 21.1	+0.4
KSH				pPKP	PKiKP	17 50 32.1	+7.1
KSH				PP	PP	17 53 43.5	+3.4
KSH				PKS	PKSdf	17 53 59.1	+2.4
LZH	Lanzhou	162.90	15	*e*PKP	PKPdf	17 50 43.3	-2.5
LZH				pPKP		17 50 52.9	
LZH				sPKP		17 50 56.3	

*IDC **24** 17:36:27.9±1.3, 5°.08S×150°.92E, h0^{km}, mb3.4/2, mb1 3.8/2, mb1mx3.3/29, mbtmp3.5/2, Error ellipse: s-maj=91.3km s-min=13.0km az=142.0*

*NEIC **24** 17:36:29.3±1.7, 5°.8S±0°.1×151°.8E±0°.5, h37^{km}±23^{km}, mb4.2/6, Error ellipse: s-maj=78.3km s-min=6.7km az=103.0*

ISC 24 17:36:31.4±2.7**, 5°.5S**±0°.4×**151°.7E**±0°.7**, h57**^{km}**, n13, σ1^{s}16**/13**, mb4.1**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.26	14	Pg	Pn	17 36 52.9	+0.1
	75nm,0.3s,baz=258,slow=14,SNR=80						
KRVT				Lg	Lg	17 37 11.5	
	222nm,0.3s,baz=82,slow=16,SNR=32						
RABL	Rabaul	1.41	18		Pn	17 36 54.6	-0.2
WB0	Warramunga Arr	22.00	228	P	P	17 41 20.1	-1.0
WB0				IAmb	IAmb	17 41 44.7	
	comp=Z,12nm,1.5s						
WB2	Warramunga Arr	22.14	228	P	P	17 41 22.7	+0.1
WB2				IAmb	IAmb	17 41 51.3	
	comp=Z,16nm,2.0s						
WRA	Warramunga Arr	22.15	228	P	P	17 41 23.7	+1.0
	comp=Z,0.7nm,0.6s,baz=52,slow=10.0,SNR=11						
KNRA	Kununurra	24.68	244	P	P	17 41 47.0	-0.2
KNRA				IAmb	IAmb	17 42 04.3	
	comp=Z,13nm,1.1s						
AS31	Alice Springs	24.88	222	P	P	17 41 47.6	-1.5
ASAR	Alice Springs	24.88	222	P	P	17 41 50.8	+1.7
	comp=Z,1.3nm,0.7s,baz=57,slow=8.6,SNR=26						
ASAR	Alice Springs	24.88	222	P	P	17 41 47.8	-1.3
FITZ	Fitzroy Crossi	28.36	242	P	P	17 42 18.8	-1.7
PSA00	Pilbara Seismi	34.73	240	P	P	17 43 17.7	+1.4
TORD	Torodi Ar. Bea	149.50	286	PKPbc	PKiKP	17 56 16.5	0.0
	comp=Z,0.3nm,0.6s,baz=96,slow=1.4,SNR=2.0						
TORD	Torodi Ar. Bea	149.50	286		PKiKP	17 56 16.9	+0.4

*IDC **24** 17:53:24.9±2.2, 3°.46N×126°.94E, h0^{km}, mb3.2/4, mb1 3.4/4, mb1mx3.2/40, mbtmp3.3/4, Error ellipse: s-maj=132.0km s-min=27.8km az=69.0*

*DJA **24** 17:53:33.4±0.9, 3°N±13°×12°7E±°, h108^{km}±16^{km}, M4.1/7, mB4.5/1, mb4.4/3, MLv3.9/7, Mw(mB)3.6/1*

ISC 24 17:53:32.2±1.7**, 3°.3N**±0°.2×**126°.6E**±0°.2**, h53**^{km}**, n10, σ2^{s}59**/9**, mb3.1**/4**, 1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	3.80	224	P	Pn	17 54 27.7	-0.5
KCP	Kidapawan	3.99	337	⇓*e*P	Pn	17 54 43.9	+13
SANI	Sanana	5.36	187	P	Pn	17 54 45.7	-4.0
MRSI	Marisa	5.47	239	P	Pn	17 54 51.5	+0.3
	0.1nm526nm38nm,0.7s						
APSI	Ampana	6.51	230	P	Pn	17 55 08.9	+3.4
BKB	Balikpapan	10.74	245	P	Pn	17 56 00.6	-2.8
FITZ	Fitzroy Crossi	21.29	183	P	P	17 58 15.7	+1.3
	0.8nm,0.7s,baz=12,slow=11,SNR=1.5						
WRA	Warramunga Arr	24.31	162	P	P	17 58 43.8	-1.2
	0.2nm,0.3s,baz=340,slow=11,SNR=7.9						
ASAR	Alice Springs	27.73	166	P	P	17 59 17.1	+1.3
	0.1nm,0.3s,baz=347,slow=12,SNR=5.8						
MKAR	Makanchi Array	57.85	325	P	P	18 03 18.4	-0.1
	0.2nm,0.5s,baz=122,slow=8.3,SNR=2.4						

*IDC **24** 18:19:25.1±1.7, 19°.57S×70°.70W, h0^{km}, mb4.2/3, mb1 4.2/5, mb1mx3.7/25, mbtmp4.1/5, ML3.7/2, Error ellipse: s-maj=44.6km s-min=18.2km az=70.0*

*SJA **24** 18:19:26.7±1.2, 19°.66S×70°.81W, h23^{km}±5^{km}, ML3.8, MW4.0*

*NEIC **24** 18:19:27.4±2.5, 19°.60S±0°.04×70°.87W±0°.08, h20^{km}±4^{km}, mb4.6/3, Error ellipse: s-maj=10.3km s-min=5.4km az=86.0*

*GUC **24** 18:19:29.5±0.6, 19°.63S×70°.73W, h43^{km}±2^{km}, ML3.8*

ISC 24 18:19:28.4±1.5**, 19°.62S**±0°.03×**70°.78W**±0°.06**, h28**^{km}±11^{km}**, n59, σ1^{s}00**/68**, mb4.2**/4**, 4C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.62	88	⇓*i*P	Pn	18 19 40.5	-0.9
PSGC				*i* S	Sn	18 19 49.2	-1.2
PSGCX	Pisagua	0.62	88		Pb	18 19 40.2	-0.5
PSGCX	Pisagua	0.62	88	*e*P	Pn	18 19 40.5	-0.9
PSGCX				*e*S	Sn	18 19 49.2	-1.2
PSGCX				IAML		18 19 49.6	
	comp=Z,3µm,0.6s						
PB11	IPOC Station P	1.07	98	⇓*i*P	Pb	18 19 47.8	-0.5
PB11				*i* S	Sn	18 20 02.1	+0.5
PB11				IAML		18 20 05.5	
	comp=N,3µm,0.4s						
PB11	IPOC Station P	1.07	98		Pb	18 19 47.8	-0.5
PB11	IPOC Station P	1.07	98	*e*P	Pb	18 19 47.9	-0.4
PB11				IAML		18 20 48.7	
	comp=Z,2µm,0.2s						
PB12	IPOC Station P	1.08	23	*e*P	Pb	18 19 48.4	-0.2
PB12				*e*S	Sn	18 20 03.1	+1.2
PB12	IPOC Station P	1.08	23		Pb	18 19 48.3	-0.2
PB12	IPOC Station P	1.08	23	*e*P	Pb	18 19 48.1	-0.4
PB12				*e*S	Sn	18 20 04.5	+2.5
PB12				IAML		18 20 04.8	
	comp=Z,3µm,0.5s						
TA01	Diego Aracena	1.10	149	⇑*i*P	Pn	18 19 48.4	+0.5
TA01				*e*S	Sn	18 20 02.7	+0.6
TA01				IAML		18 20 06.5	
	comp=E,4µm,0.4s						
AP01	Chacalluta	1.30	18	*e*P	Pb	18 19 52.0	-0.3
AP01				*i* S	Sb	18 20 09.5	+0.9
AP01				IAML		18 20 13.0	
	comp=E,5µm,0.5s						
PATCX	Punta Patache	1.33	154	⇑*i*P	Pn	18 19 51.8	+0.5
PATCX				*i* S	Sn	18 20 09.3	+1.2
PATCX				IAML		18 20 16.7	
	comp=E,2µm,0.5s						
PATCX	Punta Patache	1.33	154		Pn	18 19 51.8	+0.5
PATCX	Punta Patache	1.33	154	*i* P	Pn	18 19 51.8	+0.5
PATCX				IAML		18 20 19.6	
	comp=Z,1µm,0.7s						
GO01	Chusmiza	1.49	92	⇓*i*P	Pb	18 19 55.2	-0.6
GO01				*e*S	Sb	18 20 15.0	+0.5
GO01	Chusmiza	1.49	92		Pb	18 19 55.2	-0.6
PB08	IPOC Station P	1.61	109	⇓*i*P	Pb	18 19 56.8	-0.9
PB08				*i* S	Sb	18 20 17.7	-0.2
PB08				IAML		18 20 23.1	
	comp=N,1µm,0.4s						
PB08	IPOC Station P	1.61	109	*e*P	Pb	18 19 56.8	-0.9
PB08				IAML		18 20 23.3	
	comp=Z,805nm,0.3s						
PB16	IPOC Station P	1.75	44	⇑*i*P	Pb	18 19 59.6	-0.5
PB16				*i* S	Sb	18 20 22.8	+0.8
PB16				IAML		18 20 27.2	
	comp=N,1µm,0.5s						
PB16	IPOC Station P	1.75	44		Pb	18 19 59.7	-0.5
PB16	IPOC Station P	1.75	44	*e*P	Pb	18 19 59.7	-0.5
PB16				*e*S	Sb	18 20 23.0	+1.0
PB16				IAML		18 20 27.4	
	comp=Z,1µm,0.5s						
PB01	IPOC Station P	1.86	140	*e*P	Pn	18 19 59.6	+1.0
PB01				*i* S	Sn	18 20 22.7	+1.4
PB01				IAML		18 20 31.6	
	comp=N,1µm,0.5s						
PB01	IPOC Station P	1.86	140		Pn	18 19 59.6	+1.0
PB02	IPOC Station P	1.89	154	⇑*i*P	Pn	18 19 59.8	+0.9
PB02				*i* S	Sn	18 20 22.1	+0.3
PB02				IAML		18 20 32.2	
	comp=N,2µm,0.4s						
PB02	IPOC Station P	1.89	154	*e*P	Pn	18 19 59.8	+0.9
PB02				IAML		18 20 32.3	
	comp=Z,2µm,0.4s						
PB07	IPOC Station P	2.26	159		Pn	18 20 04.5	+0.4
PB07	IPOC Station P	2.26	159	*e*P	Pn	18 20 04.6	+0.6
PB07				IAML		18 20 43.7	
	comp=Z,871nm,0.5s						
PB09	IPOC Station P	2.60	147		Pn	18 20 10.7	+1.9
PB09	IPOC Station P	2.60	147	*i* P	Pn	18 20 10.7	+1.9
PB09				IAML		18 20 54.9	
	comp=Z,801nm,0.6s						
PB03	IPOC Station P	2.60	159	*e*P	Pn	18 20 09.3	+0.5
PB03				IAML		18 20 54.2	
	comp=Z,464nm,0.4s						
PB04	IPOC Station P	2.77	168		Pn	18 20 11.3	+0.2
PB04	IPOC Station P	2.77	168	*i* P	Pn	18 20 11.1	+0.1
PB05	IPOC Station P	3.27	171	*e*P	Pn	18 20 16.9	-0.9
PB05				IAML		18 21 27.6	
	comp=Z,147nm,0.6s						
PB06	IPOC Station P	3.27	160	*i* P	Pn	18 20 18.1	+0.1
PB06				IAML		18 21 25.4	
	comp=Z,320nm,0.6s						
LVC	Limon Verde	3.45	150	Pn	Pn	18 20 22.1	+1.5
	comp=Z,5.4nm,0.3s,baz=333,slow=10,SNR=18						
LVC				Sn	Sn	18 21 03.1	+2.4
	comp=Z,15nm,0.3s,baz=321,slow=10,SNR=6.4						
LVC				Lg	Lg	18 21 13.8	
	comp=Z,28nm,0.3s,baz=223,slow=19,SNR=10						
LVC	Limon Verde	3.45	150		Pn	18 20 22.3	+1.7
LVC	Limon Verde	3.45	150	*i* P	Pn	18 20 22.6	+1.9
LVC				IAML		18 21 19.1	
	comp=Z,89nm,0.7s						
PB15	IPOC Station P	3.78	161		Pn	18 20 25.0	0.0
PB15	IPOC Station P	3.78	161	*i* P	Pn	18 20 25.3	+0.4
PB15				IAML		18 21 41.5	
	comp=Z,354nm,0.3s						
PB10	IPOC Station P	3.88	177	Pn	Pn	18 20 25.5	-0.8
PB10	IPOC Station P	3.88	177	*i* P	Pn	18 20 25.5	-0.8
PB10				IAML		18 22 10.8	
	comp=Z,46nm,0.4s						
LPAZ	La Paz	4.16	38	Pn	Pb	18 20 35.4	-5.8
	comp=Z,1.5nm,0.3s,baz=196,slow=7.0,SNR=21						
LPAZ	La Paz	4.16	38		Pn	18 20 31.1	+0.6
PB14	IPOC Station P	5.00	176		Pn	18 20 40.8	-1.0
PB14	IPOC Station P	5.00	176	*i* P	Pn	18 20 40.5	-1.4
PB14				IAML		18 22 36.3	
	comp=Z,60nm,0.8s						
YJA	Yavi	5.54	118	*i* P	Pb	18 20 58.3	-6.3
GO02	Mina Guanaco	5.63	169		Pn	18 20 50.1	-0.4
SIV	San Ignacio	9.92	70	Pn	Pn	18 21 49.0	-0.2
	comp=Z,0.8nm,0.3s,baz=232,slow=12,SNR=11						
PTGA	Pitinga	21.55	31	P	P	18 24 15.1	-0.5
	comp=Z,13nm,0.3s,baz=232,slow=17,SNR=30						
PTGA	Pitinga	21.55	31	P	P	18 24 15.2	-0.5
PTGA				IAmb	IAmb	18 24 15.5	
	comp=Z,15nm,0.3s						
PAPH	Port-au-Prince	37.93	358	P	P	18 26 41.3	-2.3
STVI	Saint Thomas	38.16	9		P	18 26 45.8	+0.3
STVI				IAmb	IAmb	18 26 47.3	
	comp=Z,5.5nm,0.8s						
TORD	Torodi Ar. Bea	78.40	71	P	P	18 31 26.5	-0.5
	comp=Z,0.8nm,0.7s,baz=235,slow=6.2,SNR=3.6						
TORD	Torodi Ar. Bea	78.40	71	P	P	18 31 26.5	-0.5
YKA	Yellowknife Ar	88.84	341	P	P	18 32 20.4	+1.0
	comp=Z,0.5nm,0.6s,baz=137,slow=5.3,SNR=8.8						
H11S2	WAKE ISLAND Hy	125.88	279	T	T	20 57 11.4	
	baz=101,slow=74,SNR=1.8						
H11S1	WAKE ISLAND Hy	125.89	279	T	T	20 57 41.9	
	baz=101,slow=74,SNR=8.8						
H11S3	WAKE ISLAND Hy	125.90	279	T	T	20 57 13.7	
	baz=101,slow=74,SNR=1.1						
MKAR	Makanchi Array	145.08	33	PKPbc	PKPbc	18 39 03.8	+1.2
	comp=Z,1.1nm,0.7s,baz=317,slow=4.0,SNR=9.9						

*IDC **24** 18:20:23.9±1.4, 19°.63S×70°.68W, h0^{km}, mb4.4/3, mb1 4.5/4, mb1mx3.7/24, mbtmp4.3/4, ML3.9/1, MS2.8/4, Ms1 2.9/4, ms1mx2.8/30, Error ellipse: s-maj=55.0km s-min=36.1km az=146.0*

*GUC **24** 18:20:29.2±0.6, 19°.61S×70°.69W, h42^{km}±2^{km}, ML3.8*

ISC 24 18:20:28.1±1.5**, 19°.60S**±0°.03×**70°.72W**±0°.07**, h29**^{km}±10^{km}**, n19, σ1^{s}13**/27**, mb4.3**/3**, 6C, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.56	90	*e*P	Pn	18 20 39.6	-0.6
PSGC				*e*S	Sn	18 20 48.2	-0.4
PB11	IPOC Station P	1.01	99	⇑*i*P	Pn	18 20 47.1	+0.6
PB11				*e*S	Sn	18 21 00.2	+0.4
PB11				IAML		18 21 04.2	
	comp=N,7µm,0.4s						
PB12	IPOC Station P	1.05	21	⇑*i*P	Pn	18 20 47.5	+0.7
PB12				*e*S	Sn	18 21 02.0	+1.5
PB12				IAML		18 21 03.3	
	comp=N,3µm,0.6s						
TA01	Diego Aracena	1.09	152	⇑*i*P	Pn	18 20 47.6	+0.3
TA01				*e*S	Sn	18 21 02.2	+0.8
TA01				IAML		18 21 05.8	
	comp=E,8µm,0.4s						
AP01	Chacalluta	1.27	16	⇑*i*P	Pb	18 20 51.0	-0.4
AP01				*e*S	Sb	18 21 08.3	+1.0
PATCX	Punta Patache	1.33	157	*e*P	Pb	18 20 51.5	-0.9
PATCX				*e*S	Sb	18 21 09.5	+0.4
PATCX				IAML		18 21 17.2	
	comp=E,2µm,0.5s						
GO01	Chusmiza	1.44	93	⇑*i*P	Pb	18 20 54.5	0.0
GO01				*e*S	Sb	18 21 14.0	+1.3
PB08	IPOC Station P	1.57	110	⇑*i*P	Pb	18 20 55.6	-1.1
PB08				*e*S	Sb	18 21 16.5	+0.2
PB08				IAML		18 21 22.2	
	comp=E,2µm,0.3s						
PB16	IPOC Station P	1.70	43	*e*P	Pb	18 20 58.7	-0.3
PB16				*e*S	Sb	18 21 21.8	+1.5
PB16				IAML		18 21 30.1	
	comp=N,2µm,0.7s						
LVC	Limon Verde	3.44	151	LR	LR	18 21 59.4	
	comp=N,78nm,20.9s,baz=340,slow=28						
LVC				Sn	Sn	18 22 01.6	+1.6
	comp=N,12nm,0.3s,baz=344,slow=16,SNR=1.3						
LVC				Lg	Lg	18 22 13.0	
	comp=N,50nm,0.3s,baz=94,slow=21,SNR=3.1						
LPAZ	La Paz	4.11	37	Pn	Pb	18 21 36.6	-3.5
	comp=N,2.5nm,0.3s,baz=168,slow=8.1,SNR=4.3						
LPAZ				LR	LR	18 23 17.3	
	comp=N,160nm,18.5s,baz=247,slow=42						
NNA	Nana	9.59	321	LR	LR	18 26 12.5	
	comp=N,66nm,21.4s,baz=187,slow=36						
SIV	San Ignacio	9.86	70	Pn	Pn	18 22 48.6	+0.6
	comp=N,1.1nm,0.3s,baz=266,slow=14,SNR=4.8						
SIV				LR	LR	18 26 57.5	
	comp=N,66nm,19.2s,baz=270,slow=40						
PTGA	Pitinga	21.51	31	P	P	18 25 14.3	-0.4
	comp=N,15nm,0.3s,baz=210,slow=17,SNR=21						
TORD	Torodi Ar. Bea	78.34	71	P	P	18 32 25.4	-0.8
	comp=N,1.4nm,0.7s,baz=252,slow=5.1,SNR=5.6						
YKA	Yellowknife Ar	88.84	341	P	P	18 33 19.5	+0.6
	comp=N,0.9nm,0.6s,baz=135,slow=5.1,SNR=12						
ASAR	Alice Springs	130.75	210	PKP	PKiKP	18 39 37.5	-0.6
	comp=N,0.3nm,0.5s,baz=125,slow=1.5,SNR=6.2						
WRA	Warramunga Arr	133.66	213	PKP	PKiKP	18 39 43.5	-0.6
	comp=N,0.3nm,0.5s,baz=154,slow=1.7,SNR=2.1						
MKAR	Makanchi Array	145.03	33	PKPbc	PKPdf	18 40 02.7	+0.1
	comp=N,2.2nm,0.7s,baz=320,slow=4.0,SNR=17						

*NEIC **24** 18:29:54.9±1.5, 7°.1N±0°.1×124°.3E±0°.1, h485^{km}±9^{km}, mb4.0/11, Error ellipse: s-maj=19.9km s-min=14.9km az=88.0*

*IDC **24** 18:29:58.5±4.2, 6°.94N×124°.24E, h530^{km}±55^{km}, mb3.0/9, mb1 3.2/9, mb1mx2.8/38, mbtmp3.9/9, Error ellipse: s-maj=57.0km s-min=14.3km az=62.0*

*DJA **24** 18:29:58.5±1.5, 7°N±14°×12°4E±°, h436^{km}±22^{km}, M4.2/6, mB4.5/3, mb4.1/6, MLv4.4/6, Mw(mB)3.7/3*

ISC 24 18:29:55.1±0.6**, 7°.00N**±0°.08×**124°.4E**±0°.1**, h500**^{km}**, n37, σ1^{s}30**/40**, mb3.7**/15**, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKMP	Bagumbayan, Su	0.50	163	*e*P	P	18 30 53.8	-1.7
KCP	Kidapawan	0.69	89	⇑*i*P	P	18 30 55.2	-0.6
BUKP	Musuan	1.09	37	*e*P	P	18 30 55.8	-0.9
DDMP	Don Marcelino,	1.58	124	*e*P	P	18 30 56.6	-1.8
DDMP				*e*S	S	18 31 45.7	-3.9
MATI	Mati	1.85	92	*e*P	P	18 30 57.7	-1.8
TNTI	Ternate	6.86	154	P	P	18 31 40.2	+0.2
TNTI	Ternate	6.86	154	P	P	18 31 39.9	-0.1
TNTI					S	18 33 03.5	-2.3
KKM	Kota Kinabalu	8.19	264	P	P	18 31 51.4	-2.3
LBMI	Labuha	8.20	158	P	P	18 31 54.4	+0.7
	20nm,0.5s						
SANI	Sanana	9.13	170	P	P	18 32 02.5	-0.9
FAKI	Fak Fak	12.59	141	P	P	18 32 42.0	+2.0
SBUM	Sibu	12.95	250	P	P	18 32 43.8	-0.1
TPUB	Ta-pu	16.61	348	P	P	18 33 21.2	-0.9
CMAR	Chiang Mai Arr	27.27	297	P	P	18 34 59.2	+0.4
	0.5nm,0.6s,baz=115,slow=6.5,SNR=4.9						
CMAR	Chiang Mai Arr	27.27	297	P	P	18 34 59.0	+0.2
GSI	Gunungsitoli	27.33	259	P	P	18 34 58.1	-1.3
GSI				IAmb	IAmb	18 34 58.8	
	comp=Z,7.4nm,0.6s						
WRA	Warramunga Arr	28.51	160	P	P	18 35 10.6	+0.9
	comp=Z,0.4nm,0.4s,baz=330,slow=11,SNR=10						
WB2	Warramunga Arr	28.51	160	P	P	18 35 10.5	+0.8
WB2				IAmb	IAmb	18 35 23.1	
	comp=Z,6.5nm,1.4s						
KS19	Wonju Array Si	30.52	5	P	P	18 35 25.9	-1.0
AS31	Alice Springs	31.86	163	P	P	18 35 40.3	+1.7
ASAR	Alice Springs	31.86	163	P	P	18 35 40.4	+1.8
	comp=Z,1.1nm,0.4s,baz=342,slow=7.3,SNR=33						
SONM	Songino Array	43.49	342	P	P	18 37 15.0	+1.4
	comp=Z,1.1nm,0.4s,baz=147,slow=7.6,SNR=7.7						
SONM	Songino Array	43.49	342	P	P	18 37 15.0	+1.4
MK31	Makanchi Array	53.56	325	P	P	18 38 29.5	+0.9
MKAR	Makanchi Array	53.56	325	P	P	18 38 29.5	+0.9
	comp=Z,1.2nm,0.4s,baz=116,slow=7.7,SNR=38						
MKAR				PcP	PcP	18 39 28.0	+0.5
	comp=Z,0.4nm,0.5s,baz=105,slow=4.3,SNR=3.5						
MKAR	Makanchi Array	53.56	325	P	P	18 38 29.3	+0.7
MAKZ	Makanchi	53.75	325	P	P	18 38 30.9	+1.0
MAKZ				IAmb	IAmb	18 38 32.2	
	comp=Z,7.9nm,1.5s						
ZALV	Zalesovo Beam	56.64	333	P	P	18 38 50.3	+0.4
	comp=Z,0.9nm,0.4s,baz=125,slow=6.5,SNR=4.9						
ZALV	Zalesovo Beam	56.64	333	P	P	18 38 50.1	+0.2
BRVK	Borovoye	63.40	327	P	P	18 39 35.9	+0.9
BRVK				IAmb	IAmb	18 39 36.5	
	comp=Z,2.7nm,0.8s						
ABKAR	Akbulak array	68.17	320	P	P	18 40 05.5	+0.6
ARU	Arti	70.95	328	P	P	18 40 21.4	0.0
ARU				IAmb	IAmb	18 40 22.3	
	comp=Z,4.5nm,0.5s						
RAYN	Ar Rayn	77.08	292	P	P	18 40 57.3	+0.3
RAYN				IAmb	IAmb	18 40 57.9	
	comp=Z,2.1nm,0.8s						
BRTR	Keskin Array B	86.16	309	P	P	18 41 43.7	+0.3
	comp=Z,0.5nm,0.7s,baz=116,slow=2.9,SNR=3.6						
FINES	FINESS Array B	87.87	332	P	P	18 41 51.0	+0.3
	comp=Z,0.9nm,0.5s,baz=52,slow=3.9,SNR=6.8						
FINES	FINESS Array B	87.87	332	P	P	18 41 50.6	0.0
NOA	NORSAR Array B	94.84	333	P	P	18 42 22.4	-0.6
	comp=Z,0.6nm,0.8s,baz=64,slow=4.7,SNR=3.7						

MAN 24 18:31:16.6, 9°.83N×125°.97E, h1^{km}, mb4.3, ML3.1, MS2.9, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.47	265	⇓*i*P	Pb	18 31 28.9	+1.2
SCPH				*i* S	Sb	18 31 38.4	+3.2
BUTP	Butuan	0.92	202	*e*P	Pg	18 31 34.6	+0.5
BUTP				*e*S	Sn	18 31 49.9	-0.5
MSLP	Maasin	1.14	286	*e*P	Pg	18 31 38.7	+0.3
MSLP				*e*S	Sn	18 31 55.7	-0.1
OCLP	Ormoc	1.81	312	*e*P	Pn	18 31 48.4	-0.5
OCLP				*e*S	Sb	18 32 13.7	0.0
CGP	Cagayan de Oro	1.85	223	⇓*e*P	Pn	18 31 49.2	-0.3
CGP				*e*S	Sn	18 32 08.1	-5.5
TBP	Tagbilaran	2.08	267	*e*P	Pn	18 31 52.5	-0.2
BUKP	Musuan	2.13	205	*e*P	Pn	18 31 54.2	+0.8
BUKP				*e*S	Sb	18 32 21.8	-1.2

IDC 24 18:37:51.2±2.1**, 6°.18N×122°.94E, h0**^{km}**, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.3**/41**, mbtmp3.6**/3**, Error ellipse: s-maj=246.4km s-min=24.8km az=63.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	28.28	157	P	P	18 43 45.9	-0.6
	0.3nm,0.4s,baz=335,slow=10,SNR=12						
ASAR	Alice Springs	31.54	161	P	P	18 44 16.0	+0.6
	0.5nm,0.5s,baz=346,slow=7.3,SNR=15						
MKAR	Makanchi Array	53.41	326	P	P	18 47 12.8	-0.1
	0.4nm,0.5s,baz=125,slow=7.3,SNR=8.7						

*IDC **24** 18:43:09.3±0.5, 19°.51S×70°.57W, h0^{km}, mb4.7/21, mb1 4.8/25, mb1mx4.7/35, mbtmp4.7/25, ML4.5/4, MS4.3/21, Ms1 4.3/21, ms1mx4.2/28, Error ellipse: s-maj=17.8km s-min=11.2km az=58.0*

*MOS **24** 18:43:11.2±1.0, 19°.38S×70°.56W, h22^{km}, mb5.4/4, Error ellipse: s-maj=14.3km s-min=7.2km az=117.0*

*NEIC **24** 18:43:12.2±2.5, 19°.61S±0°.04×70°.74W±0°.06, h22^{km}±3^{km}, mb5.0/200, Mww5.0, ML4.9(GUC), Error ellipse: s-maj=7.9km s-min=6.2km az=85.0*

*BJI **24** 18:43:13.0±0.0, 19°.60S×70°.70W, h20^{km}, mB5.3/10, Ms5.2/7, Ms7 4.9/7*

*GUC **24** 18:43:13.2±0.6, 19°.62S×70°.74W, h43^{km}±2^{km}, ML4.9*

*VAO **24** 18:43:14.0±0.6, 19°.49S×70°.59W, h34^{km}±4^{km}, mb5.0*

*GCMT **24** 18:43:17.2±0.3, 19°.66S±0°.02×70°.98W±0°.03, h31^{km}, MW5.1/71, Moment Tensor Solution. s50,c59; s71,c83; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.97±.19; $M_{\theta\theta}$-0.35±.13; $M_{\phi\phi}$-3.62±.14; $M_{r\theta}$0.92±.15; $M_{\theta\phi}$1.04±.10; $M_{\phi r}$-2.62±.17; Best double couple: $M_0$4.82600×10^{16} NP1:ϕ_s346.00000°,δ27.00000°,λ93.00000°. NP2: ϕ_s162.00000°,δ63.00000°,λ88.00000°. Principal axes: T 4.8510, Plg72.0000°, Azm68.0000°; N -0.0520, Plg1.0000°, Azm163.0000°; P -4.8000, Plg18.0000°, Azm253.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **24** 18:43:20, 19°.73S×70°.51W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}2.26; $M_{\theta\theta}$-0.35; $M_{\phi\phi}$-1.91; $M_{r\theta}$1.47; $M_{\theta\phi}$0.91; $M_{\phi r}$-3.06; Fault plane solution: $M_0$4.10000×10^{16} NP1:ϕ_s154.00000°, δ73.00000°,λ89.00000°. NP2:ϕ_s336.00000°,δ17.00000°, λ92.00000°. Principal axes: T 4.0656, Plg62.0000°, Azm64.0000°; N 0.0629, Plg0.0000°, Azm155.0000°; P -4.1285, Plg28.0000°, Azm245.0000°;*

ISC 24 18:43:12.0±1.1**, 19°.61S**±0°.03×**70°.74W**±0°.05**, h22**^{km}±7^{km}**, n705, σ1^{s}09**/698**, mb5.0**/119**, MS4.5**/24**, 5C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.58	89	⇓*i*P	Pb	18 43 24.4	+0.8
PSGC				*i* S	Sn	18 43 33.1	-0.8
PSGCX	Pisagua	0.58	89		Pb	18 43 23.7	+0.1
PSGCX				Sg	Sn	18 43 33.1	-0.8
PB11	IPOC Station P	1.03	99	⇓*i*P	Pb	18 43 31.7	+0.5
PB11				*i* S	Sn	18 43 46.0	+0.9
PB11				IAML		18 43 49.5	
	comp=N,46µm,0.2s						
PB11	IPOC Station P	1.03	99		Pb	18 43 30.9	-0.3
PB12	IPOC Station P	1.06	21	⇓*i*P	Pn	18 43 32.1	+0.3
PB12				*i* S	Sn	18 43 46.9	+1.0
PB12				IAML		18 43 48.8	
	comp=N,43µm,0.6s						
PB12	IPOC Station P	1.06	21		Pn	18 43 32.0	+0.3
TA01	Diego Aracena	1.08	151	⇑*i*P	Pn	18 43 32.3	+0.5
TA01				*i* S	Sb	18 43 46.8	+1.0

TA01				IAML		18 43 49.2	
	comp=E,39µm,0.6s						
PATCX	Punta Patache	1.32	156	⇑*i*P	Pn	18 43 35.7	+0.4
PATCX				*i*S	Sn	18 43 53.2	+0.9
PATCX	Punta Patache	1.32	156	Pn	Pn	18 43 35.3	+0.1
GO01	Chusmiza	1.45	93	⇓*i*P	Pb	18 43 39.1	+0.5
GO01				*i*S	Sb	18 43 59.1	+2.2
GO01	Chusmiza	1.45	93		Pb	18 43 38.9	+0.3
PB08	IPOC Station P	1.58	110	⇓*i*P	Pb	18 43 40.6	-0.1
PB08				*i*S	Sb	18 44 01.7	+1.3
PB08				IAML		18 44 07.2	
	comp=N,22µm,0.6s						
PB16	IPOC Station P	1.72	43	⇑*i*P	Pb	18 43 43.5	+0.3
PB16				*i*S	Sb	18 44 06.3	+1.7
PB16				IAML		18 44 10.7	
	comp=N,21µm,0.5s						
PB16				IAML		18 44 12.1	
	comp=E,21µm,0.5s						
PB16	IPOC Station P	1.72	43	Pn	Pb	18 43 43.4	+0.1
PB01	IPOC Station P	1.84	141	⇑*i*P	Pn	18 43 43.5	+1.1
PB01				*i*S	Sn	18 44 06.7	+1.5
PB01				IAML		18 44 15.2	
	comp=N,19µm,0.7s						
PB01	IPOC Station P	1.84	141	Pn	Pn	18 43 43.3	+0.9
PB02	IPOC Station P	1.87	155	⇑*i*P	Pn	18 43 43.6	+0.7
PB02				*i*S	Sn	18 44 06.0	+0.1
PB07	IPOC Station P	2.25	159	*e*P	Pn	18 43 48.2	+0.2
PB07	IPOC Station P	2.25	159	Pn	Pn	18 43 48.3	+0.2
PB09	IPOC Station P	2.59	148	Pn	Pn	18 43 54.4	+1.7
PB04	IPOC Station P	2.77	169	Pn	Pn	18 43 54.7	-0.4
LVC	Limon Verde	3.44	151	Pn	Pn	18 44 06.4	+1.8
	comp=N,33nm,0.3s,baz=335,slow=11,SNR=20						
LVC				Sn	Sn	18 44 47.3	+2.4
	comp=N,140nm,0.3s,baz=162,slow=22,SNR=8.4						
LVC				Lg	Lg	18 45 00.4	
	comp=N,450nm,0.3s,baz=102,slow=20,SNR=12						
LVC				LR	LR	18 45 45.8	
	comp=N,4µm,20.7s,baz=340,slow=45						
LVC	Limon Verde	3.44	151		Pn	18 44 06.2	+1.6
LVC	Limon Verde	3.44	151	*e*P	Pn	18 44 06.4	+1.8
PB15	IPOC Station P	3.77	162	Pn	Pn	18 44 08.9	-0.1
PB10	IPOC Station P	3.89	178		Pn	18 44 08.6	-1.9
LPAZ	La Paz	4.13	37	Pn	Pn	18 44 19.3	+5.0
	comp=N,9.1nm,0.3s,baz=233,slow=6.0,SNR=25						
LPAZ				LR	LR	18 46 03.3	
	comp=N,6µm,18.3s,baz=224,slow=44						
LPAZ	La Paz	4.13	37	P	Pn	18 44 18.3	+3.9
LPAZ	La Paz	4.13	37		Pn	18 44 18.3	+3.9
PB14	IPOC Station P	5.00	177		Pn	18 44 23.5	-2.6
GO02	Mina Guanaco	5.63	169		Pn	18 44 30.8	-3.8
GO03	Copiap	7.96	177		Pn	18 45 04.0	-2.4
NNA	Nana	9.59	321	Pn	Pn	18 45 29.3	+0.5
	comp=N,1.5nm,0.3s,baz=149,slow=18,SNR=1.7						
NNA				Sn	Sn	18 47 15.0	-1.0
	comp=N,5.9nm,0.3s,baz=259,slow=16,SNR=2.6						
NNA	Nana	9.59	321	*e*P	Pn	18 45 28.4	-0.4
NNA	Nana	9.59	321		Pn	18 45 28.4	-0.4
SIV	San Ignacio	9.88	70	Pn	Pn	18 45 32.3	-0.5
	comp=N,10.0nm,0.3s,baz=267,slow=11,SNR=80						
SIV				LR	LR	18 49 59.4	
	comp=N,4µm,18.6s,baz=276,slow=42						
GO04	Tololo Observa	10.52	180		Pn	18 45 38.8	-2.9
SAML	Samuel	12.88	36	P	Pn	18 46 12.0	-1.8
SAML	Samuel	12.88	36		Pn	18 46 11.9	-1.8
SAML	Samuel	12.88	36	*e*P	Pn	18 46 12.1	-1.8
PEL	Peldehue	13.48	180	P	Pn	18 46 19.2	-2.8
PEL	Peldehue	13.48	180		Pn	18 46 19.1	-2.8
CPUP	Villa Florida	14.04	121	Pn	Pn	18 46 29.5	-0.1
	comp=N,1.2nm,0.3s,baz=306,slow=12,SNR=14						
CPUP	Villa Florida	14.04	121		Pn	18 46 28.9	-0.7
AQDB	Aquidauana	14.16	96	*e*P	Pn	18 46 30.8	-0.5
SALV	Santo Antonio	14.79	78	*e*P	Pn	18 46 39.7	-0.3
CLDB	Colider	16.82	61	*e*S	Sn	18 50 09.1	-3.5
PTGB	Pitanga	18.02	110	*e*P	P	18 47 22.3	+0.7
ARAG	Araguaiana, MT	18.44	81	*e*P	P	18 47 25.6	-0.6
PLTB	Pedras Altas	19.59	132	*e*P	P	18 47 38.5	-0.2
GO06	Curarrehue	19.92	182	P	P	18 47 41.5	-0.9
IPMB	Ipameri, GO	21.38	89	*e*P	P	18 47 55.9	-2.5
PTGA	Pitinga	21.52	31	P	P	18 47 58.3	-1.4
	comp=N,103nm,0.5s,baz=209,slow=14,SNR=239						
PTGA	Pitinga	21.52	31	P	P	18 47 57.7	-2.1
PTGA	Pitinga	21.52	31	*e*P	P	18 47 58.5	-1.2
RCLB	Rio Claro- Sao	21.84	101	*e*P	P	18 48 02.3	-0.9
BDFB	Brasilia	22.01	83	P	P	18 48 03.8	-1.3
	comp=N,11nm,0.5s,baz=247,slow=13,SNR=12						
BDFB				LR	LR	18 58 10.6	
	comp=N,1µm,18.6s,baz=283,slow=41						
BDFB	Brasilia	22.01	83	P	P	18 48 03.5	-1.6
SPB	Sao Paulo	22.02	105	P	P	18 48 04.0	-1.0
SPB				IAmb	IAmb	18 48 09.1	
	comp=Z,132nm,1.5s						
SPB	Sao Paulo	22.02	105	*e*P	P	18 48 04.8	-0.3
PARB	Paraibuna	23.65	104	*e*P	P	18 48 20.8	-1.3
BSCB	Bom Sucesso	24.38	98	*e*P	P	18 48 27.9	-1.0
ROSC	El Rosal	24.55	351	P	P	18 48 32.7	+1.9
	comp=Z,35nm,0.5s,baz=152,slow=8.5,SNR=19						
ROSC				LR	LR	18 58 59.6	
	comp=Z,1µm,20.5s,baz=202,slow=39						
ROSC	El Rosal	24.55	351	P	P	18 48 31.4	+0.6
ROSC				IAmb	IAmb	18 48 36.3	
	comp=Z,42nm,0.6s						
SMTB	Santa Maria do	24.82	68	*e*P	P	18 48 32.0	-0.8
JANB	Januaria	25.61	84	*e*P	P	18 48 38.6	-1.4
BSFB	Barra de Sao F	28.22	93	*e*P	P	18 49 02.2	-1.3
SDV	Santo Domingo	28.32	0	P	P	18 49 03.8	-0.6
	comp=Z,9.2nm,0.8s,baz=219,slow=5.5,SNR=11						
SDV	Santo Domingo	28.32	0	P	P	18 49 03.2	-1.2
SDV	Santo Domingo	28.32	0	*e*P	P	18 49 03.3	-1.2
PLCV	Puerto La Cruz	30.20	12	P	P	18 49 20.9	-0.1
PCRV	Puerto La Cruz	30.20	12	P	P	18 49 20.9	-0.2
	comp=Z,12nm,0.7s,baz=261,slow=7.0,SNR=2.7						
MDP	Montagnes des	30.33	38	P	P	18 49 21.4	-0.8
	comp=Z,12nm,0.5s,baz=212,slow=9.0,SNR=21						
RPN	Rapa Nui	36.10	251	LR	LR	19 00 56.6	
	comp=Z,1µm,19.4s,baz=30,slow=29						
RCBR	Riachuelo	36.54	73	*e*P	P	18 50 16.6	+0.3
ICMP	Isla Caja de M	37.49	7	P	P	18 50 23.8	-0.4
SABA	Saba	37.72	12	P	P	18 50 23.9	-2.3
SJG	San Juan	37.76	7	P	P	18 50 24.9	-1.6
SJG				pmax	pmax		
	comp=Z,29nm,0.9s						
SMRT	St. Maarten	38.17	12	P	P	18 50 27.2	-2.8
SMRT				IAmb	IAmb	18 50 27.9	
	comp=Z,24nm,0.7s						
SDDR	Presa de Saban	38.36	359	P	P	18 50 30.5	-1.1
SDDR				IAmb	IAmb	18 50 47.4	
	comp=Z,28nm,1.3s						
TEIG	Tepich	43.16	336	P	P	18 51 11.9	+0.7
TEIG				IAmb	IAmb	18 51 12.8	
	comp=Z,19nm,0.8s						
PMSA	Palmer Station	45.36	176	LR	LR	19 09 32.5	
	comp=Z,164nm,18.2s,baz=18,slow=35						
ZAIG	Zacatecas	52.35	322	P	P	18 52 23.8	+1.0
Z59A	Georgetown, SC	53.18	351	P	P	18 52 30.0	+1.6
	baz=170						
Z58A	St. Stephen	53.36	351	P	P	18 52 30.4	+0.7
	baz=169						
Z57A	Bowman	53.46	350	P	P	18 52 31.3	+0.8
	baz=168						
152A	Waverly Hall	53.68	345	P	P	18 52 31.2	-0.9
152A				IAmb	IAmb	18 52 32.8	
	comp=Z,15nm,0.9s						
Y60A	Bolivia	53.79	352	P	P	18 52 32.8	0.0
	baz=171						
Y55A	Saluda	54.29	349	P	P	18 52 36.9	+0.3
	baz=167						
Z50A	Ashland	54.53	344	P	P	18 52 37.6	-0.7
Z50A				IAmb	IAmb	18 52 39.0	
	comp=Z,16nm,0.8s						
Z50A	Ashland	54.53	344	P	P	18 52 38.1	-0.3
	baz=162,SNR=9.0						
LRAL	Lakeview Retre	54.61	343	P	P	18 52 38.6	-0.3
	baz=161						
Y52A	Lilburn	54.67	346	P	P	18 52 39.0	-0.4
	baz=164						
X56A	White Oak	54.69	350	P	P	18 52 39.7	+0.3
	baz=168						
BIRD	Birdtown, Kers	54.74	350	P	P	18 52 39.4	-0.4
BIRD				IAmb	IAmb	18 52 42.4	
	comp=Z,14nm,0.8s						
X55A	Gracelyn & Ava	54.77	349	P	P	18 52 40.4	+0.3
	baz=167						
HKT	Hockley	54.89	333	P	P	18 52 41.4	+0.6
HKT				pmax	pmax		
	comp=Z,13nm,1.1s						
HKT	Hockley	54.89	333	P	P	18 52 41.4	+0.6
HKT				IAmb	IAmb	18 52 43.2	
	comp=Z,13nm,1.1s						
W58A	Raeford	54.93	351	P	P	18 52 41.4	+0.2
	baz=170,SNR=6.2						
X54A	Belton	54.98	348	P	P	18 52 41.9	+0.3
	baz=166						
833A	Chaparral WMA,	55.12	329	P	P	18 52 43.2	+0.5
	baz=147						
X53A	Estanollee	55.13	347	P	P	18 52 42.7	+0.1
	baz=166						
W56A	Indian Trail	55.24	350	P	P	18 52 43.7	+0.3
	baz=169						
W54A	Cherokee Point	55.47	349	P	P	18 52 45.6	+0.5
	baz=167						
X51A	Calhoun	55.53	346	P	P	18 52 45.9	+0.4
	baz=164						
V59A	Middlesex	55.53	353	P	P	18 52 46.0	+0.6
	baz=171						
V58A	Windy Hill, Pi	55.67	352	P	P	18 52 46.9	+0.4
	baz=170						
V57A	Coltrane Farms	55.85	351	P	P	18 52 47.8	0.0
	baz=170						
V56A	Mocksville	55.89	350	P	P	18 52 48.6	+0.5
	baz=169						
X48A	Hartselle	55.96	344	P	P	18 52 47.7	-0.9
V55A	Taylorsville	56.05	350	P	P	18 52 49.6	+0.4
	baz=168						
U59A	Littleton	56.06	353	P	P	18 52 49.8	+0.6
	baz=172						
V54A	Nebo	56.10	349	P	P	18 52 50.2	+0.6
	baz=167						
W50A	Signal Mountai	56.24	346	P	P	18 52 50.0	-0.7
W50A				IAmb	IAmb	18 52 51.2	
	comp=Z,15nm,0.8s						
U57A	Blanch	56.33	352	P	P	18 52 51.7	+0.6
	baz=170						
SWET	Sewanee	56.40	345	P	P	18 52 51.1	-0.7
SWET				IAmb	IAmb	18 52 51.8	
	comp=Z,14nm,0.6s						
V52A	Sevierville	56.48	347	P	P	18 52 51.9	-0.4
T59A	Double "B" Far	56.64	353	P	P	18 52 53.9	+0.5
T59A				IAmb	IAmb	18 52 56.0	
	comp=Z,14nm,0.8s						
T59A	Double "B" Far	56.64	353	P	P	18 52 54.0	+0.6
	baz=172						
U55A	TA2, Sparta	56.65	350	P	P	18 52 54.3	+0.7
	baz=168						
OXF	Oxford	56.68	342	P	P	18 52 54.0	+0.3
	baz=159						
T60A	Surry	56.73	354	P	P	18 52 54.7	+0.7
	baz=173						
T58A	Grand View Acr	56.73	353	P	P	18 52 54.9	+0.9
	baz=171						
PLAL	Pickwick Lake	56.74	343	P	P	18 52 52.5	-1.7
PLAL				IAmb	IAmb	18 52 54.2	
	comp=Z,15nm,1.1s						
U54A	Nelsons Funny	56.80	349	P	P	18 52 54.7	0.0
U54A				IAmb	IAmb	18 52 55.8	
	comp=Z,18nm,0.8s						
U54A	Nelsons Funny	56.80	349	P	P	18 52 54.9	+0.2
	baz=167						
T57A	Hurt	56.87	352	P	P	18 52 55.7	+0.7
	baz=170						
T56A	Rocky Mt	57.01	351	P	P	18 52 56.7	+0.6
	baz=170						
JCT	Junction City	57.12	330	P	P	18 52 57.3	+0.4
	baz=147						
V48A	Smith Brothers	57.12	344	P	P	18 52 56.1	-0.8
V48A				IAmb	IAmb	18 52 57.3	
	comp=Z,15nm,0.8s						
WLAR	White Oak Lake	57.14	338	P	P	18 52 57.7	+0.7
TZTN	Tazewell	57.15	348	P	P	18 52 58.2	+1.1
	baz=166						
T55A	Pulaski	57.21	350	P	P	18 52 58.2	+0.7
	baz=169						
BLA	Blacksburg	57.25	351	P	P	18 52 58.6	+0.8
	baz=169						
T54A	Tazewell	57.29	350	P	P	18 52 58.5	+0.5
	baz=168						
CLTN	Cedars of Leba	57.33	345	P	P	18 52 57.3	-1.0
CLTN				IAmb	IAmb	18 52 58.9	
	comp=Z,12nm,0.9s						
WHTX	Lake Whitney,	57.34	333	P	P	18 52 58.7	+0.2
WHTX				IAmb	IAmb	18 53 00.2	
	comp=Z,21nm,0.9s						
WHTX	Lake Whitney,	57.34	333	P	P	18 52 58.5	+0.1
	baz=150						
T53A	Wise	57.38	349	P	P	18 52 58.9	+0.1
	baz=167						
Z38A	Mt. Pleasant	57.45	336	P	P	18 53 00.1	+0.9
S56A	Natural Bridge	57.58	352	P	P	18 53 00.9	+0.8
	baz=170						
T52A	Hallie	57.58	348	P	P	18 52 60.0	-0.1
	baz=166						
S57A	Dark Hollow, R	57.59	352	P	P	18 53 00.5	+0.4
	baz=171						
U49A	Red Boiling Sp	57.60	346	P	P	18 52 59.7	-0.5
U49A				IAmb	IAmb	18 53 00.6	
	comp=Z,11nm,0.7s						
T51A	Gray	57.63	347	P	P	18 53 00.3	-0.1
	baz=165						
WVT	Waverly	57.75	344	P	P	18 52 59.7	-1.6
WVT				pmax	pmax		
	comp=Z,19nm,0.7s						
WVT	Waverly	57.75	344	P	P	18 52 59.7	-1.6
WVT	Waverly	57.75	344	P	P	18 53 00.3	-0.9
	baz=161						
S55A	Lewisburg	57.81	351	P	P	18 53 02.5	+0.7
	baz=169						
R59A	King George, V	57.81	354	P	P	18 53 02.1	+0.5
	baz=173						
T50A	Nancy	57.88	347	P	P	18 53 01.9	-0.2
	baz=164						
S54A	Dingess, Beckl	57.96	350	P	P	18 53 03.0	+0.2
	baz=168						
R58A	Rapidan	58.00	353	P	P	18 53 03.6	+0.6
	baz=172						
HBAR	Harrisburg	58.02	341	P	P	18 53 03.5	+0.3
R57A	Stanardsville	58.06	353	P	P	18 53 04.1	+0.7
	baz=171						
MIAR	Mount Ida	58.08	338	P	P	18 53 03.8	+0.2
MIAR				pmax	pmax		
	comp=Z,12nm,0.8s						
MIAR	Mount Ida	58.08	338	P	P	18 53 03.8	+0.2
MIAR				IAmb	IAmb	18 53 04.5	
	comp=Z,12nm,0.8s						
MIAR	Mount Ida	58.08	338	P	P	18 53 03.7	+0.2
	baz=154,SNR=8.5						
TXAR	Lajitas Array	58.11	326	P	P	18 53 04.9	+0.8
	comp=Z,2.6nm,0.8s,baz=149,slow=8.5,SNR=22						
TXAR				LR	LR	19 15 43.9	
	comp=Z,83nm,21.2s,baz=0.0,slow=34						
T49A	Edmonton	58.11	346	P	P	18 53 02.7	-1.1
T49A	Edmonton	58.11	346	P	P	18 53 03.5	-0.3
	baz=164,SNR=16						
W41B	Gary Mavity, V	58.19	339	P	P	18 53 03.6	-0.7
W41B	Gary Mavity, V	58.19	339	P	P	18 53 04.3	0.0
	baz=156						
S51A	Beattyville	58.22	348	P	P	18 53 04.3	-0.2
	baz=166						
R55A	Marlinton	58.26	351	P	P	18 53 05.1	+0.2
	baz=170						
R54A	Victor	58.29	351	P	P	18 53 05.2	+0.1
	baz=168						
WHAR	Wooly Hollow	58.31	339	P	P	18 53 04.6	-0.6
WHAR				IAmb	IAmb	18 53 06.2	
	comp=Z,10nm,0.9s						
T47A	Sharon Grove	58.38	345	P	P	18 53 04.0	-1.6
S50A	Richmond	58.42	347	P	P	18 53 05.7	-0.2
	baz=165,SNR=5.5						
R53A	Hurricane	58.59	350	P	P	18 53 07.2	+0.1
	baz=168						
S49A	Springfield	58.71	347	P	P	18 53 07.2	-0.8
	baz=164						
R52A	Catlettsburg	58.71	349	P	P	18 53 08.2	+0.2
	baz=167						
W39A	Magazine	58.73	338	P	P	18 53 08.7	+0.5
W39A				IAmb	IAmb	18 53 10.1	
	comp=Z,15nm,0.8s						
W39A	Magazine	58.73	338	P	P	18 53 08.9	+0.7
	baz=154,SNR=7.9						
X37A	Clayton	58.77	336	P	P	18 53 09.0	+0.5
Q57A	Strasburg	58.78	353	P	P	18 53 09.5	+1.1
	baz=171						
ABTX	Abilene, Hawle	58.84	332	P	P	18 53 09.1	+0.1
ABTX				IAmb	IAmb	18 53 10.5	
	comp=Z,16nm,0.8s						
ABTX	Abilene, Hawle	58.84	332	P	P	18 53 09.4	+0.3
	baz=148						
R51A	Hillsboro	58.85	348	P	P	18 53 08.6	-0.3
	baz=166						
Q56A	Snyder Ridge,	58.88	352	P	P	18 53 09.0	-0.1
Q56A				IAmb	IAmb	18 53 11.3	
	comp=Z,16nm,0.8s						
Q56A	Snyder Ridge,	58.88	352	P	P	18 53 10.1	+1.0
	baz=171						
Q55A	Buckhannon	58.95	352	P	P	18 53 10.5	+0.8
	baz=170						
R50A	Paris	58.98	348	P	P	18 53 09.4	-0.5
	baz=165						
Q53A	Leroy	59.03	350	P	P	18 53 10.3	+0.1
	baz=168						
Q54A	Coxs Mills	59.05	351	P	P	18 53 10.7	+0.5
	baz=169						
P58A	Pank, Wackersv	59.11	354	P	P	18 53 10.6	-0.1
	baz=173						
R49A	Shelbyville	59.17	347	P	P	18 53 10.9	-0.2
	baz=164						
P57A	Homestead Farm	59.18	353	P	P	18 53 11.8	+0.7
	baz=172						
Q52A	Bidwell	59.26	350	P	P	18 53 11.7	0.0
	baz=167						
P56A	Dayton Farm, R	59.29	353	P	P	18 53 12.6	+0.7
	baz=171						
WCI	Wyandotte Cave	59.36	346	P	P	18 53 12.0	-0.4
	baz=163						
P55A	Reedsville	59.42	352	P	P	18 53 13.3	+0.4
	baz=170						
Q50A	Georgetown	59.46	348	P	P	18 53 13.1	0.0
	baz=165						
U40A	Yellville	59.46	339	P	P	18 53 12.5	-0.8
U40A				IAmb	IAmb	18 53 14.1	
	comp=Z,9.8nm,0.8s						
U40A	Yellville	59.46	339	P	P	18 53 12.9	-0.3
	baz=156,SNR=7.5						
Q51A	Peebles	59.51	349	P	P	18 53 13.4	-0.1
	baz=166						
T42A	Van Buren	59.52	341	P	P	18 53 12.6	-1.0
T42A				IAmb	IAmb	18 54 08.0	
	comp=Z,41nm,1.9s						
P54A	Burton	59.60	351	P	P	18 53 14.1	0.0
	baz=169						
S44A	Carbondale	59.60	343	P	P	18 53 13.4	-0.8
SIUC	Southern Illin	59.61	343	P	P	18 53 13.6	-0.6
P53A	Whipple	59.63	350	P	P	18 53 14.5	+0.2
	baz=168						
O58A	Lewisberry	59.70	355	P	P	18 53 15.1	+0.3
	baz=173						
X34A	Smith Ranch, M	59.76	334	P	P	18 53 14.1	-1.2
X34A				IAmb	IAmb	18 53 16.8	
	comp=Z,18nm,0.9s						
HHAR	Hobbs	59.77	338	P	P	18 53 15.1	-0.2
HHAR				IAmb	IAmb	18 53 16.5	
	comp=Z,22nm,1.3s						
Q49A	Aurora	59.80	347	P	P	18 53 15.1	-0.3
	baz=164						
P52A	Corning	59.89	350	P	P	18 53 15.9	-0.2
	baz=168						
Q48A	North Vernon	59.90	347	P	P	18 53 15.9	-0.3
	baz=164						
MGMO	Mountain Grove	60.00	340	P	P	18 53 16.0	-0.9
MGMO				IAmb	IAmb	18 53 17.9	
	comp=Z,18nm,1.2s						
O56A	Blue Knob Stat	60.01	353	P	P	18 53 17.7	+0.7
	baz=171						
O55A	Ligonier	60.04	352	P	P	18 53 17.9	+0.8
	baz=171						
U38A	Gravette	60.06	338	P	P	18 53 16.4	-1.0
U38A				IAmb	IAmb	18 53 18.4	
	comp=Z,10nm,1.1s						
TUL1	Leonard	60.10	337	P	P	18 53 18.2	+0.6
	baz=153						
O54A	Avella	60.16	351	P	P	18 53 18.7	+0.8
	baz=169						
P50A	Jamestown	60.16	348	P	P	18 53 18.0	0.0
	baz=166						
WMOK	Wichita Mounta	60.27	334	P	P	18 53 18.3	-0.5
WMOK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WMOK	Wichita Mounta	60.27	334	P	P	18 53 18.2	-0.5
SSPA	Standing Stone	60.30	354	P	P	18 53 19.5	+0.6
	baz=172						
O52A	Adamsville	60.31	350	P	P	18 53 18.7	-0.2
	baz=168						
PAL	Palisades	60.38	357	P	P	18 53 20.7	+1.4
	baz=176						
N57A	Milroy	60.39	354	P	P	18 53 20.6	+1.1
	baz=172						
N58A	Sunbury	60.40	355	P	P	18 53 20.2	+0.7
	baz=173						
N59A	State Game Lan	60.40	356	P	P	18 53 20.3	+0.7
	baz=174						
CCM	Cathedral Cave	60.51	341	P	P	18 53 19.7	-0.7
CCM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CCM	Cathedral Cave	60.51	341	P	P	18 53 19.6	-0.7
CCM				IAmb	IAmb	18 54 06.2	
	comp=Z,8.0nm,0.8s						
CCM	Cathedral Cave	60.51	341	P	P	18 53 20.4	0.0
	baz=158						
N55A	Marion Center	60.57	353	P	P	18 53 21.6	+0.9
	baz=171,SNR=8.2						
ACSO	Alum Creek Sta	60.62	349	P	P	18 53 20.4	-0.7
ACSO	Alum Creek Sta	60.62	349	P	P	18 53 21.3	+0.2
	baz=167						
N56A	West Decatur	60.62	353	P	P	18 53 21.9	+0.7
	baz=172						
O50A	Cable	60.65	349	P	P	18 53 21.4	+0.1
	baz=166						
S39A	Bolivar	60.83	340	P	P	18 53 22.1	-0.5
S39A				IAmb	IAmb	18 53 23.5	
	comp=Z,13nm,0.9s						
M64A	Tiverton	60.85	360	P	P	18 53 24.4	+1.8
	baz=179						
N54A	Moraine State	60.87	352	P	P	18 53 23.0	+0.2
N54A	Moraine State	60.87	352	P	P	18 53 23.3	+0.6
	baz=170						
MNTX	Cornudas Mount	60.88	326	P	P	18 53 22.6	-0.5
MNTX	Cornudas Mount	60.88	326	P	P	18 53 22.8	-0.3
	baz=142,SNR=7.1						
M58A	Price's Panora	60.90	355	P	P	18 53 23.7	+0.7
	baz=174						
M57A	Sunshine Farm,	60.92	354	P	P	18 53 23.7	+0.5
	baz=173						
M59A	Waymart	60.99	356	P	P	18 53 23.8	+0.2
	baz=175						
R40A	Maddies Statio	61.04	341	P	P	18 53 22.7	-1.3
R40A				IAmb	IAmb	18 53 24.7	
	comp=Z,13nm,1.1s						
O48A	Farmland	61.06	347	P	P	18 53 23.4	-0.7
	baz=164						
L63A	North Scituate	61.17	359	P	P	18 53 25.1	+0.4
	baz=179						
N50A	Nevada	61.17	349	P	P	18 53 24.2	-0.6
	baz=167						
M56A	Emporium	61.17	354	P	P	18 53 23.0	-1.9
M56A	Emporium	61.17	354	P	P	18 53 24.6	-0.3
	baz=172						
M55A	Ridgway	61.22	353	P	P	18 53 25.1	-0.1
M55A	Ridgway	61.22	353	P	P	18 53 25.6	+0.4
	baz=171,SNR=5.0						
L64A	Middleborough	61.23	360	P	P	18 53 25.5	+0.3
	baz=180						
T35A	Sooner Cattle	61.26	337	P	P	18 53 25.4	-0.2
M54A	Oil Creek Stat	61.37	352	P	P	18 53 25.8	-0.4
M54A	Oil Creek Stat	61.37	352	P	P	18 53 26.3	+0.1
	baz=170,SNR=5.2						
MSTX	Muleshoe	61.41	330	P	P	18 53 26.1	-0.6
MSTX				IAmb	IAmb	18 53 28.5	
	comp=Z,20nm,0.9s						
MSTX	Muleshoe	61.41	330	P	P	18 53 26.6	-0.1
	baz=145,SNR=7.2						
M53A	WI Miller and	61.43	352	P	P	18 53 26.8	+0.2
	baz=169						
P43A	Skaggs, Pawnee	61.50	344	P	P	18 53 25.8	-1.3
N49A	Columbus Grove	61.51	348	P	P	18 53 26.4	-0.7
N49A	Columbus Grove	61.51	348	P	P	18 53 26.4	-0.7
	baz=166,SNR=7.4						
L58A	Harry Jones Me	61.52	356	P	P	18 53 27.8	+0.6
	baz=174						
L61A	Hillsdale 1, H	61.55	358	P	P	18 53 27.8	+0.5
	baz=177						

L57A	Andrews Acres	61.56	355	P	P	18 53 27.5	+0.1
	baz=173						
SFIN	Lafayette	61.59	346	P	P	18 53 26.1	-1.6
SFIN	Lafayette	61.59	346	P	P	18 53 26.3	-1.4
	baz=162,SNR=5.2						
N48A	Decatur	61.61	348	P	P	18 53 27.4	-0.3
	baz=165						
L59A	Walton	61.62	356	P	P	18 53 28.4	+0.6
	baz=175						
M52A	Chesterland	61.63	351	P	P	18 53 27.3	-0.6
	baz=168						
BINY	Binghamton	61.69	356	P	P	18 53 29.1	+0.7
	baz=174						
L56A	Greenwood	61.76	354	P	P	18 53 29.1	+0.3
	baz=173						
N47A	Urbana	61.77	347	P	P	18 53 27.6	-1.2
N47A	Urbana	61.77	347	P	P	18 53 28.3	-0.6
	baz=164						
M50A	Fremont	61.77	350	P	P	18 53 28.4	-0.4
	baz=167						
L61B	Northampton	61.77	358	P	P	18 53 29.2	+0.4
	baz=178						
HRV	Adam Dziewonsk	61.81	359	P	P	18 53 29.7	+0.6
	baz=179						
L53A	Girard	61.88	352	P	P	18 53 29.8	+0.2
	baz=170						
L55A	Hinsdale	61.89	354	P	P	18 53 30.4	+0.7
	baz=172						
K62A	Royalston	61.98	359	P	P	18 53 30.9	+0.7
	baz=178						
M49A	Liberty Center	62.00	349	P	P	18 53 30.1	-0.3
	baz=166						
ERPA	Erie	62.01	352	P	P	18 53 30.7	+0.2
	baz=170						
K61A	Williamstown	62.01	358	P	P	18 53 31.2	+0.7
	baz=177						
L54A	Sinclairville	62.04	353	P	P	18 53 31.0	+0.3
	baz=171,SNR=7.0						
WVNY	West Valley, N	62.13	353	P	P	18 53 31.9	+0.6
K59A	Cooperstown	62.19	357	P	P	18 53 32.5	+0.8
	baz=176						
M47A	Cromwell	62.21	347	P	P	18 53 31.3	-0.6
	baz=164						
K58A	Earlville	62.23	356	P	P	18 53 31.9	0.0
K58A				IAmb	IAmb	18 53 43.2	
	comp=Z,19nm,1.0s						
K58A	Earlville	62.23	356	P	P	18 53 32.3	+0.4
	baz=175						
K57A	Scipio Center	62.26	355	P	P	18 53 32.2	+0.1
	baz=174						
K56A	Middlesex	62.29	355	P	P	18 53 32.7	+0.3
	baz=173						
HDIL	Hopedale	62.30	344	P	P	18 53 31.4	-1.0
HDIL	Hopedale	62.30	344	P	P	18 53 31.7	-0.7
	baz=160						
K54A	Basiliko Farm,	62.34	353	P	P	18 53 33.1	+0.4
	baz=171						
K55A	Perry	62.39	354	P	P	18 53 33.5	+0.4
	baz=172						
VNA3	Neumayer Olymp	62.41	161	P	P	18 53 34.4	+1.5
L48A	N Adams	62.54	349	P	P	18 53 33.5	-0.6
	baz=165						
L49A	Milan	62.58	349	P	P	18 53 34.3	0.0
	baz=166						
VNA1	Neumayer--Stat	62.63	161	P	P	18 53 36.3	+2.0
P38A	Dawn	62.66	340	P	P	18 53 33.9	-1.0
P38A				IAmb	IAmb	18 53 36.7	
	comp=Z,11nm,0.8s						
ACCN	Adirondack Com	62.74	358	P	P	18 53 35.9	+0.6
K52A	Tillsonburg	62.76	352	P	P	18 53 35.3	-0.1
	baz=169						
J58A	Remsen	62.80	356	P	P	18 53 36.3	+0.6
	baz=175						
121A	Cookes Peak, D	62.81	325	P	P	18 53 36.5	+0.3
	baz=140						
J59A	Piesco	62.86	357	P	P	18 53 36.0	-0.1
J59A				IAmb	IAmb	18 53 38.0	
	comp=Z,18nm,1.0s						
J59A	Piesco	62.86	357	P	P	18 53 37.1	+1.0
	baz=176						
N41A	Harden Midland	62.86	343	P	P	18 53 35.2	-1.0
VNA2	Neumayer--Watz	62.99	161	P	P	18 53 38.3	+1.6
I58A	Old Forge	63.11	357	P	P	18 53 37.9	+0.2
	baz=175,SNR=5.9						
I59A	Olmsteadville	63.16	357	P	P	18 53 38.7	+0.6
	baz=177						
J52A	Paris	63.18	352	P	P	18 53 38.0	-0.2
	baz=170,SNR=8.8						
I60A	Shoreham	63.18	358	P	P	18 53 39.1	+0.9
	baz=177						
I61A	Oroboro, Fairl	63.24	359	P	P	18 53 39.8	+1.2
	baz=178						
K48A	Perry	63.31	349	P	P	18 53 38.1	-1.0
	baz=166,SNR=6.1						
NCB	Newcomb	63.35	357	P	P	18 53 39.8	+0.4
K47A	Vermontville	63.35	348	P	P	18 53 38.9	-0.4
	baz=165						
I57A	Carthage	63.40	356	P	P	18 53 40.0	+0.3
	baz=175						
J49A	Marlette	63.69	350	P	P	18 53 40.9	-0.7
	baz=167						
J48A	Bridge Port	63.74	349	P	P	18 53 40.6	-1.3
J48A	Bridge Port	63.74	349	P	P	18 53 41.8	-0.1
	baz=166						
H58A	Gabriels	63.79	357	P	P	18 53 42.0	-0.3
	baz=176						
I51A	Listowel	63.80	352	P	P	18 53 42.1	-0.2
	baz=169,SNR=6.3						
I55A	Frankford	63.83	354	P	P	18 53 42.7	+0.2
	baz=173						
H61A	Lyndonville	63.84	359	P	P	18 53 42.6	0.0
	baz=179						
H62A	Milan	63.87	360	P	P	18 53 43.5	+0.7
	baz=179						
H60A	Morristown	63.88	358	P	P	18 53 43.6	+0.7
	baz=178						
H57A	Richville	63.90	356	P	P	18 53 43.1	+0.2
	baz=175,SNR=7.1						
H64A	Troy	63.95	1	P	P	18 53 44.0	+0.7
	baz=182						
I52A	Shelburne	63.95	352	P	P	18 53 44.4	+1.0
	baz=170						
H63A	New Sharon	63.96	1	P	P	18 53 44.3	+1.0
	baz=181						
ANMO	Albuquerque	63.99	328	*e*P	P	18 53 43.5	-0.6
ANMO	Albuquerque	63.99	328	P	P	18 53 43.5	-0.6
ANMO	Albuquerque	63.99	328	P	P	18 53 45.0	+0.9
	baz=142						
H59A	Cadyville	64.00	358	P	P	18 53 44.2	+0.6
	baz=177,SNR=6.2						
H65A	Eastbrook	64.03	2	P	P	18 53 44.5	+0.7
	baz=182						
H56A	Elgin	64.09	356	P	P	18 53 44.6	+0.5
	baz=174						
H55A	Tweed	64.12	355	P	P	18 53 44.8	+0.5
	baz=173						
CBKS	Cedar Bluff	64.16	335	P	P	18 53 45.1	+0.3
	baz=150						
FRNY	Flat Rock	64.19	358	P	P	18 53 43.9	-0.9
FRNY				IAmb	IAmb	18 53 46.2	
	comp=Z,15nm,0.8s						
I49A	Point Hope	64.20	350	P	P	18 53 44.6	-0.3
	baz=167						
L40A	Anamosa	64.22	343	P	P	18 53 44.3	-0.8
L40A				IAmb	IAmb	18 53 45.6	
	comp=Z,15nm,0.8s						
H53A	Bobcaygeon	64.27	354	P	P	18 53 45.2	-0.2
	baz=172,SNR=5.1						
G60A	Masonville	64.41	359	P	P	18 53 46.5	+0.2
	baz=178						
G59A	Clarenceville	64.42	358	P	P	18 53 46.9	+0.6
	baz=177						
G63A	Kingsbury	64.42	1	P	P	18 53 47.2	+0.8
	baz=181						
H52A	Wyevale	64.48	353	P	P	18 53 47.4	+0.6
	baz=170						
G62A	West of Eustis	64.52	0	P	P	18 53 48.1	+1.0
G62A	West of Eustis	64.52	0	P	P	18 53 48.0	+1.0
	baz=180,SNR=8.5						
G57A	Newington	64.52	357	P	P	18 53 47.6	+0.7
	baz=175,SNR=6.8						
G58A	Ormstown	64.52	357	P	P	18 53 47.6	+0.7
	baz=176						
SADO	Sadowa	64.53	353	LR	LR	19 25 18.6	
	comp=Z,132nm,19.5s,baz=178,slow=39						
SADO	Sadowa	64.53	353	P	P	18 53 46.8	-0.3
G65A	Princeton	64.56	2	P	P	18 53 47.8	+0.6
	baz=183						
I47A	Gladwin	64.56	349	P	P	18 53 47.0	-0.3
	baz=166						
PKME	Peaks-Kenny Pk	64.57	1	P	P	18 53 48.1	+0.7
	baz=181						
G64A	Maxfield	64.58	2	P	P	18 53 48.1	+0.7
	baz=182						
G61A	St-Isidore-de-	64.58	359	P	P	18 53 48.6	+1.2
	baz=179						
I48A	Sherman Twp	64.59	350	P	P	18 53 47.0	-0.4
	baz=166						
PLVO	Plevna	64.60	355	P	P	18 53 47.3	-0.2
PLVO				IAmb	IAmb	18 53 48.4	
	comp=Z,12nm,0.9s						
SNAA	Sanae	64.61	161	P	P	18 53 48.7	+1.2
SNAA	Sanae	64.61	161	*e*P	P	18 53 48.5	+1.0
SNAA	Sanae	64.61	161	P	P	18 53 48.5	+1.0
SNAA				IAmb	IAmb	18 53 49.7	
	comp=Z,16nm,0.9s						
SCIA	State Center	64.65	342	P	P	18 53 47.7	-0.3
	baz=156						
JFWS	Jewell Farm	64.76	344	P	P	18 53 48.1	-0.5
JFWS				pmax	pmax		
	comp=Z,15nm,0.7s						
JFWS	Jewell Farm	64.76	344	P	P	18 53 48.1	-0.5
JFWS	Jewell Farm	64.76	344	P	P	18 53 48.2	-0.5
	baz=160						
T25A	Trinidad	64.76	331	P	P	18 53 49.9	+0.9
	baz=145						
G55A	Calabogie	64.78	355	P	P	18 53 48.9	+0.2
	baz=174						
G53A	Haliburton	64.82	354	P	P	18 53 49.0	0.0
	baz=172,SNR=10						
F63A	Nahmakanta, Br	65.02	1	P	P	18 53 51.7	+1.5
	baz=182						
H48A	Harrisville	65.02	350	P	P	18 53 49.9	-0.4
	baz=167						
G54A	Lake Saint Pet	65.04	354	P	P	18 53 50.5	+0.1
	baz=172						
F64A	Sherman	65.20	2	P	P	18 53 51.8	+0.4
F64A	Sherman	65.20	2	P	P	18 53 52.3	+0.9
	baz=182						
214A	Organ Pipe Nat	65.22	321	P	P	18 53 53.1	+1.2
F61A	St Evariste	65.27	360	P	P	18 53 52.5	+0.6
	baz=180						
F60A	Warwick	65.28	359	P	P	18 53 52.4	+0.5
	baz=179						
I42A	Draeger Farm,	65.35	346	P	P	18 53 51.8	-0.7
I42A				IAmb	IAmb	18 53 52.8	
	comp=Z,12nm,0.8s						
F52A	Sundridge	65.56	353	P	P	18 53 53.5	-0.3
	baz=171,SNR=7.6						
G47A	Hillman	65.57	350	P	P	18 53 53.6	-0.2
	baz=166						
ALGO	Algonquin Park	65.59	354	P	P	18 53 53.7	-0.3
	baz=172,SNR=6.7						
TRQ	Mont Tremblant	65.61	357	P	P	18 53 53.2	-1.0
E60A	Ste Agathe de	65.67	359	P	P	18 53 55.0	+0.5
	baz=179						
E58A	La Victoria	65.71	358	P	P	18 53 55.3	+0.6
	baz=177,SNR=6.0						
E61A	Lac Etchemin	65.73	0	P	P	18 53 55.6	+0.7
	baz=180						
E63A	Oxbow	65.75	2	P	P	18 53 55.5	+0.5
	baz=182						
F51A	Arnstein	65.76	353	P	P	18 53 54.8	-0.2
	baz=170,SNR=5.6						
G45A	Suttons Bay	65.76	348	P	P	18 53 54.3	-0.8
	baz=164						
SDCO	Great Sand Dun	65.76	330	P	P	18 53 56.0	+0.4
SDCO				IAmb	IAmb	18 53 58.0	
	comp=Z,14nm,1.0s						
SDCO	Great Sand Dun	65.76	330	P	P	18 53 56.7	+1.0
	baz=144,SNR=10						
E64A	Bridgewater	65.77	2	P	P	18 53 55.7	+0.6
	baz=183						
E57A	Chemin Saint G	65.78	357	P	P	18 53 55.5	+0.3
	baz=176						
BGNE	Belgrade	65.82	338	P	P	18 53 55.6	0.0
	baz=152						
F49A	Sandfield	65.87	351	P	P	18 53 55.1	-0.7
	baz=168						
G46A	Petoskey	65.88	349	P	P	18 53 55.6	-0.2
	baz=165						
E55A	Montcerf-Lytto	65.93	356	P	P	18 53 56.1	0.0
	baz=174						
E56A	St. Veronique	65.95	357	P	P	18 53 56.5	+0.2
	baz=176,SNR=8.3						
E52A	Mattawa	65.97	354	P	P	18 53 56.6	+0.2
	baz=172						
E53A	Dumoine, Ponti	65.97	355	P	P	18 53 56.6	+0.2
	baz=173						
E54A	Lac Daplat, Po	65.99	355	P	P	18 53 56.3	-0.2
	baz=173,SNR=5.4						
F48A	Evansville	66.01	351	P	P	18 53 56.1	-0.5
	baz=168						
D60A	Saint Jean D'O	66.21	360	P	P	18 53 58.4	+0.5
	baz=180						
X16A	Lo Mia Camp, P	66.23	324	P	P	18 53 57.1	-1.5
E51A	G1948 Merrick	66.31	353	P	P	18 53 58.6	0.0
	baz=171,SNR=7.6						
F45A	CMU Biological	66.36	349	P	P	18 53 58.4	-0.4
	baz=165						
D57A	Chemin Vers le	66.38	358	P	P	18 53 59.5	+0.5
	baz=177,SNR=5.9						
D63A	Stockholm	66.38	2	P	P	18 53 59.6	+0.6
	baz=183						
S22A	4UR Ranch, Cre	66.39	329	P	P	18 54 00.5	+0.8
S22A	4UR Ranch, Cre	66.39	329	P	P	18 54 00.7	+1.1
	baz=143						
D62A	Allapoint, All	66.40	1	P	P	18 53 59.4	+0.3
D62A	Allapoint, All	66.40	1	P	P	18 53 59.8	+0.7
	baz=182,SNR=5.4						
D58A	Chemin du LacG	66.42	358	P	P	18 53 59.9	+0.6
	baz=178,SNR=11						
D56A	ZEC Mazanza, M	66.44	357	P	P	18 53 59.8	+0.3
	baz=176,SNR=5.8						
D55A	Sainte-Anne-du	66.45	356	P	P	18 53 59.7	+0.2
	baz=175,SNR=6.3						
D61A	St Aubert, Com	66.50	0	P	P	18 54 00.6	+0.8
	baz=180						
E48A	Lockeyer	66.59	351	P	P	18 54 00.1	-0.2
	baz=168						
I37A	Lemond, Waseca	66.63	342	P	P	18 54 00.5	-0.2
I37A				IAmb	IAmb	18 54 01.5	
	comp=Z,16nm,0.8s						
D54A	Lac Fusel, La	66.66	356	P	P	18 54 00.4	-0.4
	baz=174,SNR=5.9						
D53A	Lac Vacive, Po	66.67	355	P	P	18 54 00.3	-0.6
D53A				IAmb	IAmb	18 54 02.1	
	comp=Z,12nm,0.8s						
D53A	Lac Vacive, Po	66.67	355	P	P	18 54 00.9	0.0
	baz=173,SNR=8.9						
LATQ	La Tuque	66.71	358	P	P	18 54 01.4	+0.2
LATQ	La Tuque	66.71	358	P	P	18 54 01.3	+0.2
	baz=178						
E47A	Iron Bridge	66.72	351	P	P	18 54 01.0	-0.2
	baz=167						
MVCO	Mesa Verde	66.79	328	P	P	18 54 03.0	+0.9
	baz=141						
E46A	Sault Ste Mari	66.80	350	P	P	18 54 00.7	-1.0
E46A				IAmb	IAmb	18 54 02.1	
	comp=Z,13nm,0.9s						
D51A	Lot 18 Range I	66.84	354	P	P	18 54 02.0	0.0
	baz=171						
D50A	G1974 Best Tow	66.97	353	P	P	18 54 02.8	0.0
	baz=171,SNR=10						
WUAZ	Wupatki	67.01	325	P	P	18 54 04.1	+0.6
WUAZ				IAmb	IAmb	18 54 06.5	
	comp=Z,8.2nm,0.9s						
WUAZ	Wupatki	67.01	325	P	P	18 54 05.5	+2.0
	baz=138						
D48A	Paudash Townsh	67.22	352	P	P	18 54 04.6	+0.2
	baz=169						
D46A	Sault St. Mari	67.27	350	P	P	18 54 04.2	-0.5
	baz=166						
D47A	Chapleau	67.28	351	P	P	18 54 04.2	-0.6
	baz=167						
E43A	Lone Tree Farm	67.30	348	P	P	18 54 03.9	-1.0
E43A				IAmb	IAmb	18 54 05.3	
	comp=Z,9.9nm,0.8s						
ECSD	EROS Data Cent	67.36	340	P	P	18 54 05.2	-0.2
ECSD	EROS Data Cent	67.36	340	P	P	18 54 05.1	-0.2
	baz=154,SNR=7.5						
ISCO	Idaho Springs	67.47	332	P	P	18 54 06.8	+0.3
ISCO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ISCO	Idaho Springs	67.47	332	P	P	18 54 06.8	+0.3
ISCO	Idaho Springs	67.47	332	P	P	18 54 07.6	+1.0
	baz=144,SNR=5.6						
COWI	Conover	67.49	346	P	P	18 54 05.6	-0.6
COWI				IAmb	IAmb	18 54 07.0	
	comp=Z,12nm,1.2s						
Y12C	Blythe	67.51	321	P	P	18 54 08.2	+1.6
	baz=135						
PV01	Paradox Valley	67.55	328	P	P	18 54 07.8	+0.9
PV01				IAmb	IAmb	18 54 09.6	
	comp=Z,18nm,1.4s						
PV15	Paradox Valley	67.66	329	P	P	18 54 08.2	+0.5
PV15				IAmb	IAmb	18 54 10.6	
	comp=Z,18nm,1.0s						
VLDQ	Val d'Or	67.68	355	P	P	18 54 07.5	+0.3
VLDQ				IAmb	IAmb	18 54 08.3	
	comp=Z,12nm,0.9s						
PV13	Radium Mtn., P	67.69	328	P	P	18 54 09.0	+1.2
PV13				IAmb	IAmb	18 54 10.3	
	comp=Z,27nm,1.6s						
IKP	In-Ko-Pah, Jac	67.69	320	P	P	18 54 09.7	+1.9
	baz=134						
SWSC	Sam W. Stewart	67.71	320	P	P	18 54 09.4	+1.6
	baz=134						
PV03	Paradox Valley	67.78	328	P	P	18 54 08.7	+0.4
PV22	Blue Mesa, Par	67.96	329	P	P	18 54 10.3	+0.8
PV22				IAmb	IAmb	18 54 12.0	
	comp=Z,18nm,1.6s						
BC3	Big Chuckawall	67.99	321	P	P	18 54 11.7	+2.0
	baz=134,SNR=5.4						
MONP2	Monument Peak	68.05	320	P	P	18 54 12.1	+1.8
	baz=133,SNR=5.4						
BAR	Barrett	68.06	319	P	P	18 54 10.8	+0.8
BAR				IAmb	IAmb	18 54 13.2	
	comp=Z,13nm,0.9s						
W13A	Hualapai Mount	68.10	323	P	P	18 54 11.4	+0.9
IRM	Iron Mountain	68.16	321	P	P	18 54 12.5	+1.8
	baz=135,SNR=7.2						
U15A	North Rim	68.18	325	P	P	18 54 12.7	+1.7
D41A	Chassel	68.28	347	P	P	18 54 10.8	-0.2
D41A				IAmb	IAmb	18 54 12.1	
	comp=Z,18nm,0.9s						
N23A	Red Feather La	68.51	332	P	P	18 54 13.6	+0.6
N23A				IAmb	IAmb	18 54 15.8	
	comp=Z,26nm,1.7s						
N23A	Red Feather La	68.51	332	P	P	18 54 14.2	+1.2
	baz=144						
BELC	Belle Mtn. Jos	68.56	321	P	P	18 54 15.1	+1.8
	baz=134						
XPFO	Pion Flat	68.56	320	P	P	18 54 15.3	+1.9
PFO	Pinyon Flats O	68.57	320	*e*P	P	18 54 15.1	+1.7
PFO	Pinyon Flats O	68.57	320	P	P	18 54 15.1	+1.7
PFO	Pinyon Flats O	68.57	320	P	P	18 54 15.1	+1.7
	baz=134						
LSQQ	Lebel-sur-Quev	68.58	356	P	P	18 54 13.2	+0.3
	baz=174						
KNB	Kanab	68.90	325	P	P	18 54 17.4	+2.0
KNB				pmax	pmax		
	comp=Z,48nm,1.6s						
KNB	Kanab	68.90	325	P	P	18 54 17.4	+2.0
GMRC	Granite Mounta	68.90	321	P	P	18 54 17.3	+1.9
	baz=134,SNR=10						
O20A	White River Ci	68.95	330	P	P	18 54 15.7	0.0
O20A	White River Ci	68.95	330	P	P	18 54 17.1	+1.4
	baz=142						
LCMT	Little Creek M	69.13	325	P	P	18 54 18.4	+1.6
NVL	N'lazarevskaya	69.20	159	*e*P	P	18 54 12.7	-3.8
NVL				pmax	pmax		
	comp=Z,39nm,1.3s						
SRU	San Rafael Swe	69.27	328	P	P	18 54 18.6	+0.9
SRU				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SRU	San Rafael Swe	69.27	328	P	P	18 54 18.6	+0.9
MTPU	Mount Pierson	69.32	326	P	P	18 54 18.9	+0.7
MATQ	Matagami	69.33	355	P	P	18 54 17.5	-0.1
	baz=173,SNR=7.1						
HEC	Hector,Ludlow	69.33	321	P	P	18 54 20.4	+2.3
	baz=134,SNR=7.0						
Q16A	Castle Valley	69.45	327	P	P	18 54 20.3	+1.5
SZCU	Shurtz Canyon	69.47	325	P	P	18 54 18.2	-0.8
LIC	Lamto	69.54	75	*e*P	P	18 54 17.8	-1.8
	comp=Z,22nm,1.0s						
DRLN	Deer Lake	69.56	9	P	P	18 54 18.5	-0.4
CCUT	Cedar City	69.59	325	P	P	18 54 22.4	+2.7
P17A	Butcher Ranch,	69.65	328	P	P	18 54 21.0	+1.0
MSU	Marysvale	69.67	326	P	P	18 54 21.5	+1.3
MSU	Marysvale	69.67	326	P	P	18 54 21.5	+1.3
TIC	Toumodi	69.71	75	*e*P	P	18 54 19.5	-1.2
BFSC	Mount Baldy Ra	69.72	320	P	P	18 54 22.3	+1.8
	baz=133						
TMUT	Trail Mountain	69.76	328	P	P	18 54 22.1	+1.3
EYMN	Ely	69.78	345	P	P	18 54 19.6	-0.7
EYMN	Ely	69.78	345	P	P	18 54 20.1	-0.3
	baz=159						
SHPR	Sheep Range	69.83	323	P	P	18 54 23.2	+2.1
KIC	Kosan Boka	69.85	75	*e*P	P	18 54 20.4	-1.2
	comp=Z,21nm,0.8s						
DBIC	Dimbokro	69.87	75	P	P	18 54 20.8	-0.8
	comp=Z,9.3nm,0.7s,baz=230,slow=7.5,SNR=15						
DBIC				LR	LR	19 23 28.8	
	comp=Z,269nm,20.2s,baz=230,slow=35						
DBIC	Dimbokro	69.87	75	P	P	18 54 20.6	-1.1
DBIC				IAmb	IAmb	18 54 21.2	
	comp=Z,13nm,0.8s						
RDMU	Red Mountain	69.93	329	P	P	18 54 22.8	+1.1
GSC	Goldstone, Bar	69.94	321	P	P	18 54 22.7	+0.9
GSC				pmax	pmax		
	comp=Z,36nm,1.9s						
GSC	Goldstone, Bar	69.94	321	P	P	18 54 22.7	+0.9
GSC				IAmb	IAmb	18 54 25.0	
	comp=Z,36nm,1.9s						
GSC	Goldstone, Bar	69.94	321	P	P	18 54 23.7	+1.9
	baz=134,SNR=5.8						
K22A	Casper	70.19	333	P	P	18 54 23.8	+0.6
K22A	Casper	70.19	333	P	P	18 54 24.4	+1.1
	baz=144						
SNCC	San Nicolas Is	70.22	318	P	P	18 54 26.4	+3.0
	baz=131						
EDW2	Edwards Air Fo	70.36	320	P	P	18 54 26.1	+1.8
	baz=133,SNR=7.2						
RSSD	Black Hills	70.37	335	P	P	18 54 24.8	+0.4
RSSD				pmax	pmax		
	comp=Z,8.0nm,0.8s						
RSSD	Black Hills	70.37	335	P	P	18 54 24.8	+0.4
RSSD				IAmb	IAmb	18 54 26.3	
	comp=Z,7.8nm,0.8s						
RSSD	Black Hills	70.37	335	P	P	18 54 25.6	+1.2
	baz=147						
PSUT	Pine Spring	70.57	325	P	P	18 54 27.8	+2.1
QSPA	South Pole Qui	70.57	180	P	P	18 54 26.5	+1.3
QSPA				IAmb	IAmb	18 54 28.1	
	comp=Z,13nm,0.8s						
LRMC	Laurel Mtn Rad	70.58	321	P	P	18 54 27.9	+2.2
	baz=133						
NLU	North Lily Min	70.69	327	P	P	18 54 27.9	+1.5
TPNV	Topopah Spring	70.76	323	P	P	18 54 29.1	+2.2
	baz=135						
SCZ2	Santa Cruz Isl	70.78	318	P	P	18 54 29.2	+2.4
	baz=131						
MPMC	Manual Prospec	70.86	321	P	P	18 54 29.2	+1.7
	baz=133,SNR=7.6						
JLU	Jordanelle	70.87	328	P	P	18 54 29.1	+1.6
ISA	Isabella, Lake	71.18	320	P	P	18 54 30.7	+1.4
ISA				pmax	pmax		
	comp=Z,11nm,0.8s						
ISA	Isabella, Lake	71.18	320	P	P	18 54 30.7	+1.4
ISA				IAmb	IAmb	18 54 32.5	
	comp=Z,11nm,0.8s						
ISA	Isabella, Lake	71.18	320	P	P	18 54 31.7	+2.4
	baz=133						
TCUT	Toone Canyon	71.24	329	P	P	18 54 31.1	+1.3
AGMN	Agassiz Nation	71.24	343	P	P	18 54 29.1	-0.2
AGMN				IAmb	IAmb	18 54 41.6	
	comp=Z,18nm,1.4s						
AGMN	Agassiz Nation	71.24	343	P	P	18 54 29.8	+0.5
	baz=155						
DUG	Dugway, Tooele	71.25	327	P	P	18 54 31.3	+1.6
DUG				pmax	pmax		
	comp=Z,16nm,1.3s						
DUG	Dugway, Tooele	71.25	327	P	P	18 54 31.3	+1.6
DUG				IAmb	IAmb	18 54 32.7	
	comp=Z,16nm,1.2s						
DUG	Dugway, Tooele	71.25	327	P	P	18 54 31.6	+1.9
	baz=138,SNR=10.0						
R11A	Troy Canyon, C	71.38	324	P	P	18 54 31.7	+1.1

	baz=136						
CWC	Cottonwood Cre	71.47	321	P	P	18 54 33.0	+1.8
	baz=133						
PKM	Mcpherson Peak	71.48	319	P	P	18 54 32.9	+1.6
	baz=131						
BW06	Boulder Array	71.63	331	P	P	18 54 32.1	0.0
BW06	Boulder Array	71.63	331	P	P	18 54 33.2	+1.1
	baz=142						
PD31	Pinedale Array	71.63	331	P	P	18 54 32.1	0.0
PDAR	Pinedale Array	71.63	331	P	P	18 54 32.7	+0.7
	comp=Z,1.3nm,0.5s,baz=142,slow=7.4,SNR=12						
PDAR				LR	LR	19 27 28.4	
	comp=Z,102nm,19.7s,baz=141,slow=37						
PDAR	Pinedale Array	71.63	331	P	P	18 54 32.1	0.0
HWUT	Hardware Ranch	71.69	329	P	P	18 54 33.1	+0.7
HWUT				IAmb	IAmb	18 54 34.4	
	comp=Z,20nm,1.4s						
SMMC	Simmler	71.87	319	P	P	18 54 36.0	+2.6
	baz=131,SNR=6.0						
SPUT	South Promonto	71.89	328	P	P	18 54 34.1	+0.5
BGU	Big Grassy Mou	71.90	328	P	P	18 54 34.7	+1.0
MDND	Maddock	71.97	340	P	P	18 54 34.5	+0.8
MDND	Maddock	71.97	340	P	P	18 54 34.9	+1.2
	baz=151						
TIN	Tinemaha, Big	71.98	322	P	P	18 54 36.3	+2.1
	baz=133						
AHID	Auburn Hatcher	72.35	330	P	P	18 54 36.6	+0.3
AHID				IAmb	IAmb	18 54 38.4	
	comp=Z,13nm,1.0s						
TBI	Tubuai	72.49	251	*e*S	S	19 03 58.6	-2.2
	comp=Z,378nm,28.0s						
TBI	Tubuai	72.49	251	*e*LR	LR	19 16 51.7	
	comp=Z,500nm,27.0s						
REDW	Red Top Meadow	72.69	331	P	P	18 54 39.1	+0.7
REDW				IAmb	IAmb	18 54 40.8	
	comp=Z,31nm,1.6s						
OMMB	Old Mammoth Mi	72.81	322	P	P	18 54 40.5	+1.1
TPAW	Teton Pass	72.83	331	P	P	18 54 40.5	+1.2
MDPB	Devils Postpil	72.87	322	P	P	18 54 40.5	+0.9
NV11	Mina Array Sit	72.88	323	P	P	18 54 41.1	+1.6
ELK	Elko	72.91	326	P	P	18 54 40.9	+1.1
	comp=Z,2.6nm,0.7s,baz=129,slow=4.7,SNR=13						
ELK	Elko	72.91	326	P	P	18 54 40.9	+1.1
NVAR	Mina Array Bea	72.96	323	P	P	18 54 42.0	+1.9
	comp=Z,3.3nm,0.8s,baz=151,slow=6.5,SNR=26						
NVAR	Mina Array Bea	72.96	323	P	P	18 54 41.2	+1.1
FXWY	Fox Creek	72.98	331	P	P	18 54 41.2	+1.1
ULM	Lac du Bonnet	73.02	343	P	P	18 54 39.6	-0.3
	comp=Z,3.5nm,0.6s,baz=152,slow=6.6,SNR=7.1						
ULM				LR	LR	19 28 53.6	
	comp=Z,150nm,21.9s,baz=112,slow=38						
ULM	Lac du Bonnet	73.02	343	P	P	18 54 38.8	-1.1
ULM				IAmb	IAmb	18 54 41.4	
	comp=Z,31nm,1.8s						
IMW	Indian Meadow	73.14	331	P	P	18 54 42.5	+1.3
IMW				IAmb	IAmb	18 54 43.5	
	comp=Z,29nm,1.6s						
FLWY	Flagg Ranch	73.18	331	P	P	18 54 42.5	+1.3
FLWY				IAmb	IAmb	18 54 44.1	
	comp=Z,16nm,0.8s						
RYN	Ryan	73.22	323	P	P	18 54 43.3	+1.7
KVN	Kaiserville	73.27	323	P	P	18 54 42.9	+1.0
KVN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KVN	Kaiserville	73.27	323	P	P	18 54 42.9	+1.0
RLMT	Red Lodge	73.35	333	P	P	18 54 43.3	+1.0
RLMT				IAmb	IAmb	18 54 44.6	
	comp=Z,26nm,1.4s						
RLMT	Red Lodge	73.35	333	P	P	18 54 43.6	+1.4
	baz=142,SNR=8.2						
H17A	Grant Village	73.36	331	P	P	18 54 44.8	+2.4
YNE	Yellowstone No	73.59	332	P	P	18 54 44.6	+1.0
WAKR	Walker	73.66	322	P	P	18 54 46.0	+1.8
YMR	Madison River	73.75	331	P	P	18 54 44.8	+0.2
YHH	Holmes Hill	73.79	331	P	P	18 54 46.5	+1.6
YERR	Yerington	73.87	323	P	P	18 54 45.5	+0.1
YERR				IAmb	IAmb	18 54 48.8	
	comp=Z,16nm,1.4s						
CMB	Columbia Colle	73.90	321	P	P	18 54 46.7	+1.2
CMB				pmax	pmax		
	comp=Z,11nm,1.6s						
CMB	Columbia Colle	73.90	321	P	P	18 54 46.6	+1.2
YHB	Horse Butte	73.92	331	P	P	18 54 47.0	+1.4
YHL	Hebgen Lake	73.99	331	P	P	18 54 48.1	+2.0
GCMT	Greycliff	74.05	333	P	P	18 54 47.0	+0.7
DGMT	Dagmar	74.08	338	P	P	18 54 46.6	+0.4
DGMT	Dagmar	74.08	338	P	P	18 54 47.6	+1.5
	baz=147						
PPT2	Papeete2	74.08	257	*e*S	SKiKP	19 04 16.8	+2.6
	comp=Z,140nm,24.8s						
PPT2	Papeete2	74.08	257	*e*LR	LR	19 17 37.5	
	comp=Z,327nm,24.5s						
PPT	Papeete	74.09	257	LR	LR	19 19 36.7	
	comp=Z,93nm,18.1s,baz=144,slow=30						
PNTR	Pine Nut	74.15	322	P	P	18 54 48.4	+1.3
SCHQ	Schefferville	74.22	2	P	P	18 54 47.0	+0.2
	comp=Z,7.2nm,0.8s,baz=188,slow=4.6,SNR=9.2						
SCHQ				LR	LR	19 29 40.8	
	comp=Z,126nm,19.1s,baz=203,slow=38						
SCHQ	Schefferville	74.22	2	P	P	18 54 46.6	-0.2
SCHQ				IAmb	IAmb	18 54 47.5	
	comp=Z,9.4nm,0.8s						
PAHR	Pah Rah Range	74.44	323	P	P	18 54 50.6	+1.9
PAHR				IAmb	IAmb	18 54 52.0	
	comp=Z,15nm,0.9s						
MCMT	McKenzie Canyo	74.74	330	P	P	18 54 51.8	+1.4
AFDM	Forest Hills D	74.85	322	P	P	18 54 50.8	-0.1
MFID	Camas Ranch	75.14	328	P	P	18 54 54.0	+1.4
MFID				IAmb	IAmb	18 54 55.7	
	comp=Z,14nm,1.1s						
ORV	Oroville	75.56	322	P	P	18 54 56.9	+1.9
ORV				pmax	pmax		
	comp=Z,19nm,1.1s						
ORV	Oroville	75.56	322	P	P	18 54 56.9	+1.9
ORV				IAmb	IAmb	18 54 58.2	
	comp=Z,19nm,1.1s						
EGMT	Eagleton	75.85	334	P	P	18 54 57.1	+0.5
EGMT				IAmb	IAmb	18 54 58.5	
	comp=Z,25nm,1.3s						
EGMT	Eagleton	75.85	334	P	P	18 54 57.3	+0.7
	baz=142,SNR=8.3						
MOD	Modoc Plateau	76.44	324	P	P	18 55 01.0	+0.8
MOD				IAmb	IAmb	18 55 11.3	
	comp=Z,34nm,1.8s						
O02D	Mt. Diablo Mer	76.72	322	P	P	18 55 02.0	+0.4
	baz=130						
MSO	Missoula	76.75	331	P	P	18 55 03.1	+1.5
MSO				IAmb	IAmb	18 55 04.7	
	comp=Z,26nm,1.6s						
MSO	Missoula	76.75	331	P	P	18 55 03.4	+1.7
	baz=138						
WDC	Whiskeytown Da	76.83	322	P	P	18 55 01.8	-0.3
WDC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WDC	Whiskeytown Da	76.83	322	P	P	18 55 01.8	-0.3
BMO	Blue Mountains	76.91	328	P	P	18 55 02.8	+0.2
BMO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BMO	Blue Mountains	76.91	328	P	P	18 55 02.8	+0.2
N02D	Trinity Center	77.18	322	P	P	18 55 05.1	+0.9
	baz=130						
M04C	Macdoel	77.22	323	P	P	18 55 05.9	+1.4
	baz=131,SNR=5.3						
I07A	Izee	77.50	326	P	P	18 55 06.5	+0.5
M02C	Callahan	77.54	323	P	P	18 55 06.8	+0.6
	baz=130						
F10A	Beach Ranch, E	77.67	329	P	P	18 55 08.1	+1.2
YBH	Yreka Blue Hor	77.68	323	P	P	18 55 07.5	+0.5
	comp=Z,2.9nm,0.9s,baz=237,slow=1.0,SNR=3.6						
YBH	Yreka Blue Hor	77.68	323	IAmb	IAmb	18 55 17.0	
	comp=Z,4.1nm,1.1s						
L04D	Klamath Falls	77.77	323	P	P	18 55 08.8	+1.2
	baz=131						
J05D	Fort Rock, OR	77.88	325	P	P	18 55 09.9	+1.7
	baz=132						
PINE	Pine Mountain	78.06	325	P	P	18 55 11.0	+1.7
PINE				IAmb	IAmb	18 55 12.4	
	comp=Z,21nm,1.4s						
TOA0	Torodi Ar. Sit	78.36	71	P	P	18 55 09.9	-1.3
TORD	Torodi Ar. Bea	78.36	71	P	P	18 55 10.4	-0.8
	comp=Z,22nm,0.8s,baz=254,slow=4.9,SNR=90						
TORD				LR	LR	19 28 03.9	
	comp=Z,384nm,20.9s,baz=265,slow=34						
TORD	Torodi Ar. Bea	78.36	71	P	P	18 55 09.2	-2.0
VNDA	Vanda	78.40	190	P	P	18 55 12.4	+2.0
	comp=Z,1.2nm,0.7s,baz=121,slow=6.9,SNR=4.0						
WALA	Waterton Lakes	78.41	333	P	P	18 55 11.3	+0.4
WALA				IAmb	IAmb	18 55 13.2	
	comp=Z,14nm,1.0s						
L02E	Cave Junction	78.46	323	P	P	18 55 13.2	+1.9
	baz=130						
I05D	Terrebonne, OR	78.64	326	P	P	18 55 14.3	+2.1
	baz=132						
FFC	Flin Flon	78.71	342	*e*P	P	18 55 12.3	0.0
FFC	Flin Flon	78.71	342	P	P	18 55 12.3	0.0
K02D	Willamette Mer	78.84	323	P	P	18 55 15.3	+1.9
	baz=130						
I04A	Tendick Farm,	78.86	325	P	P	18 55 14.2	+0.8
	baz=131						
HAWA	Hanford	79.11	328	P	P	18 55 15.3	+0.7
HAWA				IAmb	IAmb	18 55 17.5	
	comp=Z,11nm,0.9s						
NEW	Newport	79.26	331	P	P	18 55 16.4	+0.9
	comp=Z,2.5nm,0.7s,baz=128,slow=12,SNR=4.4						
NEW	Newport	79.26	331	IAmb	IAmb	18 55 19.6	
	comp=Z,3.0nm,0.8s						
NEW	Newport	79.26	331	P	P	18 55 17.6	+2.1
	baz=136						
C09A	Chrisman Ranch	79.47	330	P	P	18 55 18.0	+1.3
C09A				IAmb	IAmb	18 55 19.3	
	comp=Z,14nm,0.8s						
H04D	Lebanon	79.51	325	P	P	18 55 18.1	+1.2
	baz=131						
LTY	Liberty	80.27	328	P	P	18 55 22.3	+1.2
LTY				IAmb	IAmb	18 55 23.6	
	comp=Z,14nm,1.2s						
F04A	Amboy	80.27	326	P	P	18 55 22.4	+1.4
F04A				IAmb	IAmb	18 55 23.4	
	comp=Z,21nm,0.9s						
B08A	Colville Reser	80.37	330	P	P	18 55 22.2	+0.6
D05A	Enumclaw	80.88	327	P	P	18 55 25.4	+1.1
B05A	Bryant	81.66	328	P	P	18 55 29.2	+0.9
	baz=132						
D03D	Eldon	81.67	327	P	P	18 55 30.2	+1.8
	baz=131						
TSUM	Tsumeb	82.23	108	P	P	18 55 31.8	-0.5
TSUM				IAmb	IAmb	18 55 34.0	
	comp=Z,11nm,0.9s						
NRS	Narsarsuaq	83.03	12	P	P	18 55 37.5	+2.3
NRS				pmax	pmax		
	comp=Z,56nm,0.8s						
NRS	Narsarsuaq	83.03	12	P	P	18 55 37.5	+2.3
LLLB	Lillooet	83.13	330	P	P	18 55 36.7	+0.7
LLLB				IAmb	IAmb	18 55 37.8	
	comp=Z,10nm,0.9s						
PAB	San Pablo	85.39	45	P	P	18 55 48.0	+0.2
PAB				pmax	pmax		
	comp=Z,14nm,1.2s						
TAM	Tamanrasset	85.52	64	P	P	18 55 49.5	+0.5
TAM				pmax	pmax		
	comp=Z,15nm,1.2s						
TAM	Tamanrasset	85.52	64	P	P	18 55 49.5	+0.5
TAM				IAmb	IAmb	18 55 50.8	
	comp=Z,15nm,1.2s						
BOSA	Boshof	85.85	119	P	P	18 55 51.3	+0.7
	comp=Z,2.0nm,0.7s,baz=148,slow=0.6,SNR=4.0						
BOSA				LR	LR	19 31 08.0	
	comp=Z,300nm,19.6s,baz=204,slow=34						
MAW	Mawson	86.62	164	P	P	18 55 54.5	+1.1
	comp=Z,6.8nm,0.9s,baz=216,slow=7.2,SNR=5.6						
MAW				LR	LR	19 35 09.2	
	comp=Z,125nm,18.1s,baz=240,slow=36						
MAW	Mawson	86.62	164	IAmb	IAmb	18 55 55.8	
	comp=Z,3.1nm,1.1s						
YKA	Yellowknife Ar	88.85	341	P	P	18 56 04.3	+0.4
	comp=Z,12nm,0.7s,baz=136,slow=5.1,SNR=206						
YKA				LR	LR	19 39 34.5	
	comp=Z,190nm,19.9s,baz=0.0,slow=38						
DLBC	Dease Lake	91.75	333	P	P	18 56 18.7	+1.0
	comp=Z,7.5nm,0.9s,baz=158,slow=4.6						
DLBC	Dease Lake	91.75	333	IAmb	IAmb	18 56 19.6	
	comp=Z,10nm,0.9s						
KEST	Kesra	93.55	53	LR	LR	19 38 57.3	
	comp=Z,178nm,20.1s,baz=231,slow=36						
RAO	Raoul Island	94.66	237	LR	LR	19 28 44.9	
	comp=Z,118nm,21.8s,baz=111,slow=29						
RPZ	Rata Peaks	95.36	220	LR	LR	19 29 47.1	
	comp=Z,268nm,21.5s,baz=100,slow=29						
CLL	Collm	101.25	40	*e*Pdif	Pdif	18 57 02.0	+1.2
CLL				*e*PS	PS	19 10 12.0	-1.4
CLL				LmV		19 39 00.0	
	comp=Z,200nm,20.6s						
CLL	Collm	101.25	40	*e*P	Pdif	18 57 02.0	+1.2
DZM	Mont Dzumac	110.44	236	*e*PS	PS	19 11 43.1	-6.0
	comp=Z,58nm,26.0s						
DZM	Mont Dzumac	110.44	236	*e*LR	LR	19 34 21.4	
	comp=Z,246nm,23.8s						
KIV	Kislovodsk	120.09	50	*i* PKIKP	PKPdf	19 01 59.3	-1.9
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
KIV				MLR	MLR		
	comp=Z,146nm,22.0s						
STKA	Stephens Creek	120.16	212	PKP	PKPdf	19 02 02.6	+0.9
	comp=Z,1.1nm,0.6s,baz=59,slow=0.6,SNR=3.7						
KBZ	Khabaz	120.25	50	PKP	PKPdf	19 02 02.0	+0.6
	comp=Z,2.4nm,0.7s,baz=27,slow=2.3,SNR=6.5						
H11S2	WAKE ISLAND Hy	125.92	279	T	T	21 21 27.5	
	baz=100,slow=75,SNR=166						
H11S1	WAKE ISLAND Hy	125.93	279	T	T	21 21 24.3	
	baz=100,slow=75,SNR=168						
H11S3	WAKE ISLAND Hy	125.94	279	T	T	21 21 29.2	
	baz=100,slow=75,SNR=140						
H11N3	WAKE ISLAND Hy	125.96	281	T	T	21 21 26.9	
	baz=100,slow=74,SNR=76						
H11N2	WAKE ISLAND Hy	125.97	281	T	T	21 21 28.0	
	baz=100,slow=74,SNR=69						
H11N1	WAKE ISLAND Hy	125.97	281	T	T	21 21 30.4	
	baz=100,slow=74,SNR=51						
AS31	Alice Springs	130.73	210		PKPdf	19 02 22.4	+0.2
ASAR	Alice Springs	130.73	210	PKP	PKPdf	19 02 22.4	+0.2
	comp=Z,3.8nm,0.8s,baz=122,slow=1.9,SNR=35						
ASAR	Alice Springs	130.73	210	PKIKP	PKPdf	19 02 21.4	-0.9
ASAR	Alice Springs	130.73	210		PKPdf	19 02 21.4	-0.9
ABKAR	Akbulak array	130.89	41		PKPdf	19 02 21.7	+0.1
WR0	Warramunga Arr	133.52	214		PKPdf	19 02 27.6	+0.1
WB2	Warramunga Arr	133.64	213		PKPdf	19 02 28.4	+0.7
WRA	Warramunga Arr	133.64	213	PKP	PKPdf	19 02 28.5	+0.7
	comp=Z,4.7nm,0.8s,baz=157,slow=1.8,SNR=42						
WRA	Warramunga Arr	133.64	213	PKIKP	PKPdf	19 02 28.0	+0.2
WRA	Warramunga Arr	133.64	213		PKPdf	19 02 28.0	+0.2
WB0	Warramunga Arr	133.76	214		PKPdf	19 02 28.4	+0.4
ZALV	Zalesovo Beam	140.93	23	PKhKP	PKPpre	19 02 33.9	
	comp=Z,2.6nm,0.7s,baz=329,slow=3.3,SNR=7.5						
ZALV				PKP	PKPdf	19 02 40.9	+0.8
	comp=Z,2.5nm,0.6s,baz=264,slow=3.0,SNR=7.3						
ZALV	Zalesovo Beam	140.93	23		PKPpre	19 02 32.6	
AAK	Ala-Archa	142.81	44	PKIKP	PKPdf	19 02 42.5	-1.6
AAK	Ala-Archa	142.81	44		PKPdf	19 02 42.5	-1.6
MAKZ	Makanchi	144.88	33	PKIKP	PKPab	19 02 46.6	+0.1
MAKZ	Makanchi	144.88	33		PKPab	19 02 46.5	+0.1
MK31	Makanchi Array	145.05	33	PKIKP	PKPbc	19 02 46.9	-0.2
MK31	Makanchi Array	145.05	33		PKPbc	19 02 46.9	-0.2
MKAR	Makanchi Array	145.05	33	PKP	PKPbc	19 02 47.6	+0.6
	comp=Z,23nm,0.7s,baz=322,slow=4.0,SNR=248						
MKAR	Makanchi Array	145.05	33	PKIKP	PKPbc	19 02 46.3	-0.8
MKAR	Makanchi Array	145.05	33		PKPbc	19 02 46.3	-0.8
NIL	Nilore	145.09	59	PKIKP	PKPbc	19 02 47.1	-0.5
NIL	Nilore	145.09	59		PKPbc	19 02 47.1	-0.5
KSH	Kashi	145.18	48	PKPbc	PKPdf	19 02 49.3	+1.0
KSH				PP	PP	19 06 11.4	+4.2
KSH				PKS	PKSdf	19 06 24.3	+0.4
KSH				SKKS		19 13 01.4	
KSH				AMB	AMB		
	comp=Z,170nm,6.6s						
KSH				LR	LR		
	comp=Z,240nm,13.1s						
KSH				LR	LR		
	comp=Z,330nm,13.7s						
KSH				LR	LR		
	comp=Z,71nm,14.7s						
KLR	Kul'dur	145.38	334	PKPbc	PKPbc	19 02 48.3	+0.3
	comp=Z,4.8nm,0.7s,baz=91,slow=3.7,SNR=20						
SOEI	Soe	147.29	208		PKPbc	19 02 56.2	+1.4
MOY	Mondy	147.35	10	*e*PKP2	PKPbc	19 02 55.4	+1.5
MOY				pmax	pmax		
	comp=Z,19nm,1.7s						
TLY	Talaya	147.69	7	*e*PKP2	PKPbc	19 02 55.7	+1.0
TLY				pmax	pmax		
	comp=Z,9.0nm,0.6s						
FAKI	Fak Fak	148.20	228		PKPdf	19 02 55.6	+1.7
ZAK	Zakamensk	148.93	7	*e*PKP2	PKPbc	19 02 58.2	+0.1
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
USRK	Ussuriysk Ar.	149.00	327	PKPbc	PKPbc	19 02 59.1	+0.8
	comp=Z,4.5nm,0.8s,baz=118,slow=1.9,SNR=7.3						
USRK	Ussuriysk Ar.	149.00	327		PKPbc	19 02 58.5	+0.2
MMRI	Maumere	149.16	206		PKPbc	19 02 59.6	-0.1
MJAR	Matsushiro Arr	149.56	310	PKPbc	PKPbc	19 03 00.6	+0.5
	comp=Z,5.1nm,0.8s,baz=138,slow=1.3,SNR=12						
MJAR	Matsushiro Arr	149.56	310	PKP2	PKPbc	19 03 00.7	+0.7
MJAR	Matsushiro Arr	149.56	310		PKPbc	19 03 00.7	+0.7
MAJO	Matsushiro	149.56	310	PKP2	PKPbc	19 03 00.3	+0.3
MAJO	Matsushiro	149.56	310		PKPbc	19 03 00.3	+0.3
MAT	Matsushiro	149.56	310	PKP	PKPbc	19 03 00.7	+0.7
WMQ	Urumqi	149.86	32	*e*PKPbc	PKPdf	19 02 55.3	-0.5
WMQ				LR	LR		
	comp=Z,66nm,20.1s						
WMQ				LR	LR		
	comp=Z,410nm,22.7s						
WMQ				LR	LR		
	comp=Z,91nm,16.9s						
HYB	Hyderabad	150.81	89	*i* PKP	PKPbc	19 03 04.0	+0.4
JAGI	Jajag, Banyuwa	151.68	190		PKPbc	19 03 04.8	-0.9
SONM	Songino Array	151.75	4	PKPbc	PKPbc	19 03 05.6	+0.6
	comp=Z,5.1nm,0.8s,baz=326,slow=1.5,SNR=30						
SONM	Songino Array	151.75	4	PKIKP	PKPbc	19 03 05.0	0.0
SONM	Songino Array	151.75	4		PKPbc	19 03 05.0	0.0
CISI	Cisompet, Garu	152.97	177		PKPbc	19 03 07.7	-0.9
GTA	Gaotai	158.65	20	*e*P	PKPab	19 03 43.6	+0.1
GTA				pP	pPKPab	19 03 47.9	-2.6
GTA				sP	sPKPab	19 03 50.8	-2.2
GTA	Gaotai	158.65	20	PKP	PKPdf	19 03 09.6	+1.3
HHC	Hu-ho-hao-te	158.74	355	*e*PKP	PKPdf	19 03 03.8	-4.5
LZH	Lanzhou	162.91	15	PKP	PKPdf	19 03 10.9	-2.2
LZH				pPKP	pPKPdf	19 03 20.3	+0.1
LZH				sPKP		19 03 27.3	
LZH				LR	LR		
	comp=Z,170nm,18.0s						
LZH				LR	LR		
	comp=Z,160nm,18.1s						
LZH				LR	LR		
	comp=Z,200nm,20.3s						
NJ2	Nanjing	164.91	327	*e*PKP	PKPdf	19 03 15.3	+0.5
CD2	Chengdu	167.70	23	PKP	PKPdf	19 03 14.8	-2.3
WHN	Wuhan	168.18	338	PKPbc	PKPdf	19 03 11.5	-5.8
CMAR	Chiang Mai Arr	170.17	95	PKP	PKPdf	19 03 19.4	+0.5
	comp=Z,0.7nm,0.8s,baz=254,slow=2.6,SNR=5.5						
CMAR				PKPab	PKPab	19 04 34.7	-0.1
	comp=Z,1.4nm,0.8s,baz=251,slow=6.6,SNR=12						
CMAR	Chiang Mai Arr	170.17	95		PKPdf	19 03 18.7	-0.2
CMAR					PKPab	19 04 33.1	-1.7

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*IDC **24** 18:47:42.0±1.2, 29°.59S×179°.07W, h323km±11km, mb3.6/5, mb1 3.7/6, mb1mx3.2/42, mbtmp4.4/6, Error ellipse: s-maj=22.0km s-min=20.8km az=38.0*

ISC 24 18:47:41.3±0.6, **29°.93S**±0°.07×**179°.2W**±0°.1, **h300km**, **n64**, σ**1s.88**/82, **mb3.9**/5, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.32	60	P	Pn	18 48 25.0	+1.7
GLKZ				S	S	18 48 57.0	+0.2
RIZ	Raoul Island	1.33	59	P	Pn	18 48 25.0	+1.7
RAO	Raoul Island	1.33	60	P	Pn	18 48 25.5	+2.1
	284nm,0.3s,baz=322,slow=20,SNR=5.5						
RAO				S	S	18 48 57.2	+0.3
	509nm,0.3s,baz=278,slow=22,SNR=19						
RUGZ	Raukumara Rang	8.41	197	P	Pn	18 49 37.7	-2.2
RUGZ				S	S	18 51 14.2	-2.1
TWGZ	Tauwhareparae	8.54	195	P	P	18 49 47.3	+0.6
TWGZ				S	S	18 51 19.4	+0.3
CNGZ	Carnagh Statio	8.79	193	P	Pn	18 49 45.4	+1.1
MWZ	Matawai	8.80	197	P	P	18 49 47.6	-2.0
MWZ				S	S	18 51 25.2	+0.3
MWZ	Matawai	8.80	197	P	S	18 51 27.1	+2.3
TKGZ	Te Karaka	8.82	195	P	Pn	18 49 45.5	+0.7
TKGZ				S	S	18 51 27.5	+2.2
TKGZ	Te Karaka	8.82	195	P	S	18 51 27.0	+1.8
URZ	Urewera	8.84	199	P	P	18 49 49.0	-0.9
	5.8nm,0.3s,baz=72,slow=9.6,SNR=34						
URZ				S	S	18 51 26.4	+0.7
	9.0nm,0.3s,baz=258,slow=22,SNR=14						
URZ	Urewera	8.84	199	P	P	18 49 48.6	-1.3
URZ				S	S	18 51 25.1	-0.6
RAGZ	Rawiri	8.98	197	P	Pn	18 49 49.1	+2.3
RAGZ				S	S	18 51 32.8	+3.8
RAGZ	Rawiri	8.98	197	P	S	18 51 32.5	+3.5
RIGZ	Rimuhau	9.10	195	P	P	18 49 50.7	-2.1
RIGZ				S	S	18 51 31.6	+0.1
RIGZ	Rimuhau	9.10	195	P	S	18 51 32.6	+1.1
MUGZ	Murupara	9.14	200	P	Pn	18 49 50.0	+1.3
MUGZ				S	S	18 51 28.2	-4.4
RTZ	Ruatahuna	9.21	199	P	Pn	18 49 48.7	-0.9
RTZ				S	S	18 51 26.3	-7.9
RTZ	Ruatahuna	9.21	199	P	S	18 51 35.7	+1.5
KNZ	Kokohu	9.42	195	P	Pn	18 49 53.4	+1.3
KNZ				S	S	18 51 36.0	-2.8
RAHZ	Arahi	9.46	198	P	P	18 49 56.0	-0.9
RAHZ				S	S	18 51 39.7	-0.1
RAHZ	Arahi	9.46	198	P	S	18 51 41.5	+1.7
KUTZ	Kaahu Road	9.46	204	P	P	18 49 59.1	+2.2
MTHZ	Maungataniwha	9.47	199	P	P	18 49 56.5	-0.5
MTHZ				S	S	18 51 41.2	+1.2
MTHZ	Maungataniwha	9.47	199	P	S	18 51 40.6	+0.6
MHGZ	Mahia Peninsul	9.50	194	P	Pn	18 49 54.8	+1.8
MHGZ				S	S	18 51 39.0	-1.5
MHGZ	Mahia Peninsul	9.50	194	P	S	18 51 38.3	-2.2
WHHZ	Waihua	9.58	197	P	S	18 51 43.2	+0.9
WATZ	Wairara	9.69	204	P	P	18 50 01.3	+1.8
ARHZ	Aropaoanui	9.81	197	P	S	18 51 47.2	-0.5
BKZ	Black Stump Fm	9.86	200	P	Pn	18 49 57.2	-0.5
BKZ				S	S	18 51 48.0	-0.9
FWVZ	Far West T-bar	10.24	203	P	P	18 50 06.2	+0.4
BHHZ	Black Hill Sta	10.29	201	P	Pn	18 50 04.1	+1.2
MOVZ	Moawhango	10.31	202	P	P	18 50 05.3	-1.0
KRHZ	Kereru	10.34	199	P	Pn	18 50 04.0	+0.6
KAHZ	Kahuranaki	10.34	197	P	P	18 50 05.9	-0.8
VRZ	Vera Road	10.42	207	P	P	18 50 09.7	+2.2
PXZ	Pawanui	10.57	197	P	Pn	18 50 06.9	+0.7
PNHZ	Pukenui	10.64	199	P	Pn	18 50 07.9	+0.8
TSZ	Takapari Road	10.84	200	P	Pn	18 50 10.3	+0.7
PRHZ	Porangahau	10.85	197	P	Pn	18 50 08.6	-1.0
DVHZ	Dannevirke	11.01	199	P	P	18 50 13.2	-0.8
ANWZ	Angora Road	11.07	197	P	P	18 50 14.9	+0.1
BFZ	Birch Farm	11.34	198	P	P	18 50 17.2	-0.5
TMWZ	Te Maipa	11.83	198	P	P	18 50 22.5	-0.7
MTW	Mount Morrison	11.99	199	P	Pn	18 50 24.0	+0.5
MSWZ	Moikau Station	12.30	200	P	P	18 50 28.4	0.0
DZM	Mont Dzumac	15.06	298	P	Pn	18 51 04.1	+3.6
	1.0nm,0.3s,baz=186,slow=19,SNR=9.9						
RPZ	Rata Peaks	15.79	207	S	S	18 53 54.9	-2.5
	1.4nm,0.3s,baz=347,slow=19,SNR=2.6						
CTA	Charters Tower	32.67	279	P	P	18 53 45.7	-0.4
	1.7nm,0.4s,baz=8.1,slow=7.1,SNR=1.8						
ASAR	Alice Springs	42.07	267	P	P	18 55 04.3	-0.2
	0.7nm,0.7s,baz=99,slow=6.6,SNR=16						
ASAR				ScP	ScP	19 00 11.1	-3.4
	1.1nm,1.0s,baz=106,slow=3.0,SNR=5.2						
WRA	Warramunga Arr	43.01	272	P	P	18 55 12.0	-0.1
	3.8nm,0.6s,baz=111,slow=7.2,SNR=47						
QSPA	South Pole Qui	60.18	180	P	P	18 57 19.3	+1.6
	7.1nm,0.7s,baz=64,slow=1.9,SNR=6.8						
SNAA	Sanae	78.65	179	P	P	18 59 09.8	-0.1
VNA3	Neumayer Olymp	78.84	177	P	P	18 59 10.7	-0.2
VNA2	Neumayer--Watz	79.26	177	P	P	18 59 13.4	+0.3
	baz=176,slow=4.6						
VNA1	Neumayer--Stat	79.50	177	P	P	18 59 14.3	0.0
PETK	Petropavlovsk-	85.10	346	P	P	18 59 40.8	-2.5
	6.3nm,1.1s,baz=117,slow=8.5,SNR=5.5						
FINES	FINESS Array B	144.34	339	PKP	PKPab	19 06 36.8	-3.2
	3.3nm,0.3s,baz=52,slow=3.8,SNR=54						
NB2	NORSAR Subarra	148.12	350	PKP	PKPdf	19 06 47.8	+0.4
	comp=Z,0.6nm,0.5s,baz=15,slow=2.8						
NOA	NORSAR Array B	148.12	350	PKPbc	PKPdf	19 06 47.6	+0.2
	comp=Z,1.0nm,0.6s,baz=17,slow=4.2,SNR=6.6						
AKASG	Malin Array Be	150.28	322	PKPbc	PKPdf	19 06 53.8	+2.7
	comp=Z,1.2nm,0.5s,baz=45,slow=2.9,SNR=7.4						
BRTR	Keskin Array B	151.44	299	PKPbc	PKPbc	19 06 57.4	-2.5
	comp=Z,0.2nm,0.4s,baz=36,slow=3.7,SNR=2.1						
TORD	Torodi Ar. Bea	163.28	183	PKPab	PKPab	19 07 60.0	-0.8
	comp=Z,1.1nm,0.5s,baz=176,slow=3.4,SNR=7.8						

NEIC ***24*** *18:57:58.4±1.7, 44°.70N±0°.02×114°.31W±0°.05, h2^{km}±8^{km}, ML3.1/98, Error ellipse: s-maj=5.1km s-min=2.1km az=101.0*

IDC ***24*** *18:57:58.2±0.8, 44°.67N×114°.24W, h0^{km}, mb1 3.5/6, mb1mx3.3/50, mbtmp3.1/6, ML3.3/6, Error ellipse: s-maj=11.3km s-min=7.8km az=48.0*

ISC 24 18:57:58.3±0.9, **44°.70N**±0°.04×**114°.32W**±0°.04, **h5^{km}, n64, σ1^{s}44**/67, **Western Idaho**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCMT	McKenzie Canyo	1.06	82		Pg	18 58 17.7	-0.9
MCMT				Sg	Sg	18 58 31.2	-1.1
DLMT	Dillon	1.39	61		Pn	18 58 24.7	+0.1
MFID	Camas Ranch	1.68	221		Pn	18 58 27.0	-1.4
QLMT	Earthquake Lak	2.07	85		Pn	18 58 33.4	-0.4
BMO	Blue Mountains	2.13	275		Pn	18 58 34.3	-0.3
MSO	Missoula	2.15	7		Pn	18 58 35.6	+0.7
MSO				IAML		18 59 10.7	
	126nm,0.5s						
MSO				IAML		18 59 12.0	
	150nm,0.7s						
YHB	Horse Butte	2.23	88		Pn	18 58 35.8	-0.3
YHL	Hebgen Lake	2.24	85		Pn	18 58 36.4	+0.1
YMR	Madison River	2.40	90		Pn	18 58 38.5	+0.1
F10A	Beach Ranch, E	2.41	303		Pn	18 58 39.7	+1.2
YHH	Holmes Hill	2.48	87		Pn	18 58 39.8	+0.2
YPP	Pitchstone Pla	2.56	98		Pn	18 58 40.6	0.0
IMW	Indian Meadow	2.56	107		Pn	18 58 40.5	-0.2
YNM	Yellowstone No	2.58	88		Pn	18 58 41.5	+0.6
FXWY	Fox Creek	2.60	113		Pn	18 58 41.1	-0.1
YNR	Norris Junctio	2.60	88		Pn	18 58 43.1	+1.9
FLWY	Flagg Ranch	2.67	102		Pn	18 58 42.6	+0.4
FLWY				IAML		18 59 24.4	
	127nm,0.7s						
FLWY				IAML		18 59 32.5	
	101nm,0.8s						
H17A	Grant Village	2.70	95		Pn	18 58 43.7	+1.2
TPAW	Teton Pass	2.71	115		Pn	18 58 43.2	+0.4
TPAW				IAML		18 59 26.7	
	114nm,0.7s						
TPAW				IAML		18 59 31.7	
	71nm,0.8s						
YUF	Upper Falls	2.72	88		Pn	18 58 43.6	+0.8
LKWY	Lake	2.81	91		Pn	18 58 44.8	+0.8
LKWY				IAML		18 59 31.4	
	80nm,1.1s						
LKWY				IAML		18 59 33.5	
	68nm,0.9s						
REDW	Red Top Meadow	2.84	117		Pn	18 58 44.3	-0.2
REDW				IAML		18 59 27.1	
	64nm,0.5s						
REDW				IAML		18 59 34.2	
	57nm,0.6s						
SNOW	Snow King Moun	2.85	114		Pn	18 58 46.3	+1.6
SNOW				IAML		18 59 29.8	
	67nm,0.5s						
SNOW				IAML		18 59 36.6	
	52nm,0.9s						
AHID	Auburn Hatcher	3.03	128		Pn	18 58 48.6	+1.5
AHID				IAML		18 59 36.6	
	comp=E,61nm,0.9s						
AHID				IAML		18 59 39.7	
	comp=N,82nm,0.5s						
JTMT	Jette	3.05	1		Pn	18 58 48.7	+1.4
JTMT				IAML		18 59 39.3	
	comp=E,80nm,0.5s						
JTMT				IAML		18 59 42.6	
	comp=N,62nm,0.5s						
YNE	Yellowstone No	3.08	83		Pn	18 58 48.2	+0.3
HVU	Hansel Valley	3.13	158		Pn	18 58 49.5	+1.1
E09A	Wood Farm, Sta	3.24	305		Pn	18 58 53.4	+3.6
E09A				IAML		18 59 50.1	
	comp=N,45nm,1.0s						
J08A	Circle Bar Ran	3.28	247		Pn	18 58 50.3	-0.1
J08A				IAML		18 59 47.3	
	comp=E,47nm,0.8s						
J08A				IAML		18 59 49.8	
	comp=N,60nm,0.8s						
G08A	Pilot Rock	3.34	282		Pn	18 58 52.0	+0.7
GCMT	Greycliff	3.47	70		Pn	18 58 53.9	+0.9
RLMT	Red Lodge	3.62	81		Pn	18 58 56.5	+1.3
SPUT	South Promonto	3.66	157		Pn	18 58 57.3	+1.6
HWUT	Hardware Ranch	3.69	146		Pn	18 58 57.0	+0.9
HWUT				IAML		18 59 57.1	
	comp=N,32nm,1.0s						
HWUT				IAML		18 59 58.1	
	comp=N,26nm,1.1s						
I07A	Izee	3.76	262		Pn	18 58 57.6	+0.5
I07A				IAML		18 59 59.7	
	comp=N,31nm,1.5s						
I07A				IAML		19 00 01.0	
	comp=E,26nm,0.9s						
WVOR	Wild Horse Val	3.87	236		Pn	18 58 59.0	+0.5
BGU	Big Grassy Mou	3.89	165		Pn	18 59 01.1	+2.3
BW06	Boulder Array	3.96	118		Pn	18 59 00.7	+0.9
PD31	Pinedale Array	3.96	118		Pn	18 59 00.7	+0.8
PDAR	Pinedale Array	3.96	118	Pn	Pn	18 59 02.5	+2.7
	comp=E,0.7nm,0.3s,baz=298,slow=12,SNR=26						
PDAR				Pg	Pb	18 59 08.4	-0.2
	comp=E,2.2nm,0.3s,baz=308,slow=15,SNR=35						
PDAR				Lg	Lg	18 59 58.8	
	baz=321,slow=31,SNR=0.9						
PDAR	Pinedale Array	3.96	118		Pn	18 59 01.0	+1.2
ELK	Elko	4.01	190	Pn	Pn	18 59 01.3	+0.7
	comp=E,1.3nm,0.3s,baz=3.6,slow=17,SNR=37						
ELK				Lg	Lg	18 59 56.4	
	comp=E,6.7nm,0.3s,baz=180,slow=14,SNR=11						
ELK	Elko	4.01	190		Pn	18 59 00.5	-0.1
ELK				IAML		18 59 58.4	
	comp=E,20nm,0.6s						
NEW	Newport	4.06	333	Pn	Pn	18 59 03.0	+2.0
	comp=E,0.7nm,0.3s,baz=154,slow=11,SNR=6.9						
NEW				Lg	Lg	19 00 07.2	
	comp=E,8.4nm,0.3s,baz=70,slow=20,SNR=19						
NEW	Newport	4.06	333		Pn	18 59 00.5	-0.5
NEW				IAML		19 00 11.9	
	comp=E,38nm,1.3s						
C09A	Chrisman Ranch	4.14	320		Pn	18 59 02.7	+0.5
TCUT	Toone Canyon	4.17	148		Pn	18 59 03.1	+0.3
WALA	Waterton Lakes	4.37	4		Pn	18 59 06.8	+1.4
WALA				IAML		19 00 22.2	
	comp=N,27nm,0.7s						
WALA				IAML		19 00 26.6	
	comp=E,30nm,0.9s						
CTU	Camp Tracy	4.43	154		Pn	18 59 06.6	+0.3
G06A	Carlson Farm,	4.51	279	Pn	Pn	18 59 03.7	-3.5
G06A				IAML		19 00 24.9	
	comp=E,15nm,4.5s						
EGMT	Eagleton	4.59	42		Pn	18 59 08.6	+0.2
JLU	Jordanelle	4.61	152		Pn	18 59 11.1	+2.2
DUG	Dugway, Tooele	4.64	166		Pn	18 59 08.4	-0.7
PINE	Pine Mountain	4.84	262		Pn	18 59 12.8	+0.9
PINE				IAML		19 00 06.3	
	comp=N,11nm,4.8s						
PINE				IAML		19 00 38.0	
	comp=E,13nm,2.8s						
B08A	Colville Reser	5.04	318	Pn	Pn	18 59 15.9	+1.4
B08A				IAML		19 00 45.0	
	comp=E,17nm,0.8s						
B08A				IAML		19 00 51.4	
	comp=N,20nm,0.8s						
LTY	Liberty	5.11	302		Pn	18 59 18.1	+2.6
LTY				IAML		19 00 50.7	
	comp=N,13nm,1.4s						
LTY				IAML		19 01 35.4	
	comp=E,9.5nm,4.8s						
MOD	Modoc Plateau	5.18	239		Pn	18 59 16.9	+0.4
K22A	Casper	6.01	107	Pg	Pb	18 59 41.7	-1.9
O20A	White River Ci	6.41	133		Pn	18 59 32.2	-1.3
NV11	Mina Array Sit	6.89	206		Pb	19 00 02.6	+4.1
NVAR	Mina Array Bea	6.94	207	Pn	Pn	18 59 44.1	+3.4
	comp=E,0.2nm,0.3s,baz=19,slow=13,SNR=3.5						
NVAR				Pg	Pb	18 59 57.4	-2.0
	comp=E,0.5nm,0.3s,baz=24,slow=16,SNR=9.3						
NVAR				Lg	Lg	19 01 37.6	
	comp=E,0.4nm,0.3s,baz=308,slow=20,SNR=2.2						
N23A	Red Feather La	7.24	119		Pn	18 59 46.9	+1.9
TXAR	Lajitas Array	17.51	148	P	P	19 02 04.6	+0.2
	comp=E,0.0nm,0.3s,baz=351,slow=10.0,SNR=3.3						
YKA	Yellowknife Ar	17.83	360	P	P	19 02 08.3	+0.7
	comp=E,0.1nm,0.3s,baz=178,slow=12,SNR=6.4						

IDC ***24*** *19:00:07.9±1.9, 19°.58S×70°.69W, h0^{km}, mb3.8/3, mb1 3.8/5, mb1mx3.5/32, mbtmp3.7/5, ML3.3/2, MS2.5/1, Ms1 2.5/1, ms1mx2.3/32, Error ellipse: s-maj=47.8km s-min=18.8km az=71.0*

GUC ***24*** *19:00:12.2±0.5, 19°.64S×70°.72W, h42^{km}±1^{km}, ML3.1*

ISC 24 19:00:09.9±1.7, **19°.63S**±0°.03×**70°.76W**±0°.07, **h11^{km}**±10^{km}, **n21, σ1^{s}22**/30, **mb3.6**/3, **4C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.60	87	⇓iP	Pb	19 00 23.0	+0.5
PSGC				i S	Sb	19 00 31.3	+0.3
PB11	IPOC Station P	1.04	97	⇓iP	Pb	19 00 30.3	+0.2
PB11				i S	Sn	19 00 44.5	-0.8
PB11				IAML		19 00 48.8	
	comp=E,865nm,0.5s						
TA01	Diego Aracena	1.08	150	⇓iP	Pg	19 00 31.1	+0.4
TA01				i S	Sb	19 00 45.4	+0.6
TA01				IAML		19 00 48.9	
	comp=E,816nm,0.3s						
PB12	IPOC Station P	1.09	22	eP	Pb	19 00 31.0	+0.1
PB12				i S	Sb	19 00 45.8	+0.7
PB12				IAML		19 00 48.3	
	comp=N,1µm,0.4s						
AP01	Chacalluta	1.31	17	eP	Pn	19 00 34.8	+0.6
AP01				i S	Sb	19 00 52.0	+0.5
PATCX	Punta Patache	1.31	155	⇑iP	Pn	19 00 34.5	+0.1
PATCX				i S	Sg	19 00 51.6	-0.7
PATCX				IAML		19 01 00.3	
	comp=E,462nm,0.6s						
GO01	Chusmiza	1.47	92	⇑iP	Pb	19 00 37.6	0.0
GO01				i S	Sn	19 00 57.4	+1.0
PB08	IPOC Station P	1.59	109	eP	Pb	19 00 39.3	-0.3
PB08				i S	Sg	19 00 59.9	-1.3
PB08				IAML		19 01 05.2	
	comp=N,493nm,0.3s						
PB16	IPOC Station P	1.75	43	⇑iP	Pb	19 00 42.3	-0.1
PB16				i S	Sg	19 01 05.2	-1.1
PB16				IAML		19 01 06.2	
	comp=N,506nm,0.2s						
PB01	IPOC Station P	1.84	140	eP	Pn	19 00 42.3	+0.7
PB01				i S	Sn	19 01 05.5	+0.5
PB01				IAML		19 01 10.9	
	comp=E,346nm,0.6s						
PB02	IPOC Station P	1.86	155	⇑iP	Pn	19 00 42.5	+0.6
PB02				i S	Sb	19 01 07.8	+0.3
LVC	Limon Verde	3.43	150	Pn	Pn	19 01 04.6	+0.9
	comp=E,2.5nm,0.3s,baz=332,slow=9.5,SNR=2.5						
LVC				Sn	Sn	19 01 46.3	+1.7
	comp=E,3.0nm,0.3s,baz=357,slow=18,SNR=2.2						
LVC				Lg	Lg	19 01 56.3	
	comp=E,9.6nm,0.3s,baz=190,slow=14,SNR=6.9						
LVC				LR	LR	19 02 17.8	
	comp=E,68nm,19.5s,baz=306,slow=38						
LPAZ	La Paz	4.16	37	Pn	Pn	19 01 18.4	+4.4
	comp=E,0.8nm,0.3s,baz=201,slow=8.9,SNR=14						
SIV	San Ignacio	9.91	70	Pn	Pn	19 02 32.4	0.0
	comp=E,0.3nm,0.3s,baz=265,slow=13,SNR=5.9						
PTGA	Pitinga	21.55	31	P	P	19 04 57.7	-1.9
	comp=E,4.9nm,0.3s,baz=210,slow=20,SNR=11						
TORD	Torodi Ar. Bea	78.38	71	P	P	19 12 09.3	-1.9
	comp=E,0.4nm,0.7s,baz=235,slow=6.3,SNR=2.1						
YKA	Yellowknife Ar	88.86	341	P	P	19 13 03.6	-0.2
	comp=E,0.2nm,0.6s,baz=148,slow=4.9,SNR=2.1						
H11S2	WAKE ISLAND Hy	125.90	279	T	T	21 38 25.7	
	baz=100,slow=74,SNR=4.6						
H11S1	WAKE ISLAND Hy	125.91	279	T	T	21 38 23.1	
	baz=100,slow=74,SNR=3.1						
H11S3	WAKE ISLAND Hy	125.92	279	T	T	21 38 26.7	
	baz=100,slow=74,SNR=2.6						
MKAR	Makanchi Array	145.07	33	PKPbc	PKPbc	19 19 46.4	-0.6
	comp=E,0.3nm,0.5s,baz=318,slow=3.1,SNR=6.4						

SKHL ***24*** *19:03:10.4±0.6, 45°.17N×151°.46E, h41^{km}±3^{km}, mb4.2/4*

JMA ***24*** *19:03:13.8±0.6, 45°.19N×150°.99E, h144^{km}, M3.9*

ISC 24 19:03:12.9±4.1, **45°.0N**±0°.1×**151°.3E**±0°.2, **h35^{km}, n27, σ1^{s}75**/43, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.41	277	i P	Pn	19 03 49.2	-0.7
KUR				AMB	AMB	19 03 50.0	
	30nm,0.3s						
KUR				i S	Sn	19 04 18.3	+0.1
KUR				A	A	19 04 19.0	
	60nm,0.4s						
KUR				A	A	19 04 19.0	
	310nm,0.4s						
YUK	Yuzh-Kuril'sk	3.97	258	eP	Pn	19 04 12.6	+1.3
YUK				AMB	AMB	19 04 15.0	
	20nm,0.4s						
YUK				eS	Sn	19 04 58.9	+2.4
YUK				A	A	19 05 02.0	
	100nm,0.4s						
YUK				A	A	19 05 02.0	
	60nm,0.4s						
GRPR	Tuman	4.04	258	eP	Pn	19 04 13.7	+1.4
GRPR				AMB	AMB	19 04 14.0	
	10.0nm,0.3s						
GRPR				eS	Sn	19 05 00.8	+2.4
GRPR				A	A	19 05 04.0	
	70nm,0.5s						
GRPR				A	A	19 05 04.0	
	140nm,0.5s						
NEM2	Nemuro 2	4.28	250	P	Pn	19 04 16.7	+1.2
NEM2				eS	Sn	19 05 05.8	+1.7
NMR	Nemuro--Hokkai	4.29	250	eP	Pn	19 04 16.8	+1.2
NMR				eS	Sn	19 05 07.2	+2.9
GLVR	Golovnino	4.29	255	eP	Pn	19 04 17.1	+1.4
GLVR				AMB	AMB	19 04 18.0	
	10.0nm,0.3s						
GLVR				eS	Sn	19 05 08.4	+3.9
GLVR				A	A	19 05 13.0	
	20nm,0.4s						
GLVR				A	A	19 05 13.0	
	130nm,0.4s						
JRA	Rausu	4.51	259	P	Pn	19 04 19.8	+1.1
JNK	Nakash	4.89	256	P	Pn	19 04 25.1	+1.1
JAK	Akkeshi	5.13	250	P	Pn	19 04 27.9	+0.8
JAK				eS	Sn	19 05 26.4	+1.3
JTKR	Abashiri--Toko	5.35	262	P	Pn	19 04 30.3	+0.1
JAR	Ashorobuto	5.64	255	P	Pn	19 04 35.3	+1.1
JOB	Onbets	5.74	252	P	Pn	19 04 36.4	+0.8
JOB				eS	Sn	19 05 40.5	+0.3
JCH	Churui	6.18	250	P	Pn	19 04 42.0	+0.4
JCH				eS	Sn	19 05 50.6	-0.4
JKK2	Kamakawa 2	6.19	263	P	Pn	19 04 41.5	-0.3
ASAJ	Asahikawa	6.25	265	P	Pn	19 04 42.6	+0.1
JNBK	Urakawa-nobuka	6.73	249	P	Pn	19 04 48.9	-0.3
JNBK				eS	Sn	19 06 03.2	-1.3
JBT2	Biratori 2	6.79	254	P	Pn	19 04 49.7	-0.3
JNB	Noboribetsu	7.81	255	P	Pn	19 05 02.7	-1.3
JNB				eS	Sn	19 06 29.9	-1.3
JKB	Kayabe	8.05	251	P	Pn	19 05 06.1	-1.2
JKB				eS	Sn	19 06 32.4	-4.6
JYM2	Yakumo 2	8.40	254	P	Pn	19 05 10.9	-1.2
JSH	Shimam	8.44	258	P	Pn	19 05 11.5	-1.0
JANG	Nango	8.52	241	P	Pn	19 05 12.9	-0.8
JANG				eS	Sn	19 06 46.4	-2.1
JTM	Tenmabayashi	8.57	244	P	Pn	19 05 13.6	-0.8
JTM				eS	Sn	19 06 44.6	-5.1
JTH	Tanohata	8.57	237	P	Pn	19 05 14.2	-0.2
JTH				eS	Sn	19 06 48.1	-1.7
OFUJ	Ofunato	9.24	234	P	Pn	19 05 24.9	+1.2
OFUJ				eS	Sn	19 07 06.9	+0.5
JRG	Rokugo	9.65	238	P	Pn	19 05 29.9	+0.7
JIO	Ouri	9.86	232	eS	Sn	19 07 21.1	-0.3

IDC ***24*** *19:03:52.9±1.8, 19°.58S×70°.73W, h0^{km}, mb3.8/3, mb1 3.9/5, mb1mx3.5/35, mbtmp3.7/5, ML3.2/2, Error ellipse: s-maj=47.3km s-min=18.5km az=69.0*

GUC ***24*** *19:03:56.9±0.6, 19°.63S×70°.78W, h42^{km}±2^{km}, ML3.5*

ISC 24 19:03:55.9±0.9, **19°.63S**±0°.03×**70°.78W**±0°.07, **h22^{km}**±5^{km}, **n27, σ1^{s}07**/31, **mb3.6**/3, **4C-6D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.62	87	⇓iP	Pn	19 04 08.6	-0.9
PSGC				i S	Sn	19 04 17.4	-1.5
PB11	IPOC Station P	1.07	97	⇓iP	Pn	19 04 16.0	+0.2
PB11				eS	Sn	19 04 30.6	+0.6
PB11				IAML		19 04 33.4	
	comp=N,2µm,0.2s						
TA01	Diego Aracena	1.09	149	⇑iP	Pb	19 04 16.6	+0.6
TA01				i S	Sn	19 04 31.2	+1.0
TA01				IAML		19 04 35.0	
	comp=E,2µm,0.4s						
PB12	IPOC Station P	1.10	23	⇓iP	Pn	19 04 16.0	0.0
PB12				i S	Sn	19 04 30.9	+0.3
PB12				IAML		19 04 32.2	
	comp=N,1µm,0.5s						
AP01	Chacalluta	1.32	18	eP	Pb	19 04 19.7	-0.3
AP01				i S	Sb	19 04 37.3	+0.8
AP01				IAML		19 04 40.3	
	comp=E,2µm,0.5s						
PATCX	Punta Patache	1.32	154	⇑iP	Pb	19 04 20.0	-0.1
PATCX				i S	Sb	19 04 36.7	+0.1
PATCX				IAML		19 04 44.6	
	comp=E,977nm,0.6s						
GO01	Chusmiza	1.50	92	⇓iP	Pb	19 04 23.3	0.0
GO01				i S	Sb	19 04 43.4	+1.4
PB08	IPOC Station P	1.61	109	⇓iP	Pb	19 04 25.0	-0.3
PB08				i S	Sb	19 04 46.5	+1.1
PB08				IAML		19 04 53.1	
	comp=N,625nm,0.2s						
PB16	IPOC Station P	1.77	43	⇓iP	Pb	19 04 27.5	-0.4
PB16				i S	Sb	19 04 50.7	+0.9
PB16				IAML		19 04 56.4	
	comp=E,489nm,0.7s						
PB01	IPOC Station P	1.86	139	eP	Pb	19 04 27.6	-1.6
PB01				i S	Sb	19 04 50.8	-1.3
PB01				IAML		19 05 00.1	
	comp=N,650nm,0.6s						
PB02	IPOC Station P	1.87	154	⇑iP	Pb	19 04 27.9	-1.6
PB02				i S	Sb	19 04 50.6	-2.0
PB02				IAML		19 04 59.7	
	comp=N,1µm,0.5s						
PB07	IPOC Station P	2.25	158	eP	Pn	19 04 32.8	+0.9
PB07				IAML		19 05 14.2	
	comp=E,356nm,0.5s						
PB03	IPOC Station P	2.59	158	⇑iP	Pn	19 04 37.6	+0.9
PB03				IAML		19 05 19.9	
	comp=E,220nm,0.4s						
PB09	IPOC Station P	2.59	146	IAML		19 05 25.6	
	comp=E,413nm,0.6s						
LVC	Limon Verde	3.44	150	Pn	Pn	19 04 49.7	+1.2
	comp=E,2.0nm,0.3s,baz=354,slow=8.7,SNR=8.8						
LVC				Sn	Sn	19 05 31.1	+2.3
	comp=E,7.1nm,0.3s,baz=304,slow=23,SNR=7.6						
LVC				Lg	Lg	19 05 42.0	
	comp=E,16nm,0.3s,baz=203,slow=21,SNR=8.5						
LPAZ	La Paz	4.17	38	Pn	Pb	19 05 03.7	-5.3
	comp=E,0.4nm,0.3s,baz=190,slow=6.5,SNR=8.0						
SIV	San Ignacio	9.93	70	Pn	Pn	19 06 18.2	+0.8
	comp=E,0.2nm,0.3s,baz=264,slow=10,SNR=3.1						
PTGA	Pitinga	21.57	31	P	P	19 08 43.1	-1.0
	comp=E,2.0nm,0.2s,baz=313,slow=23,SNR=5.9						
TORD	Torodi Ar. Bea	78.41	71	P	P	19 15 54.4	-1.0
	comp=E,0.5nm,0.8s,baz=249,slow=4.9,SNR=2.3						
YKA	Yellowknife Ar	88.86	341	P	P	19 16 48.1	+0.3
	comp=E,0.1nm,0.4s,baz=136,slow=5.0,SNR=6.6						
H11S2	WAKE ISLAND Hy	125.88	279	T	T	21 42 07.7	
	baz=100,slow=74,SNR=3.0						
H11S1	WAKE ISLAND Hy	125.89	279	T	T	21 42 11.8	
	baz=100,slow=74,SNR=3.9						
H11S3	WAKE ISLAND Hy	125.90	279	T	T	21 42 10.9	
	baz=100,slow=74,SNR=3.6						
H11N3	WAKE ISLAND Hy	125.92	281	T	T	21 42 11.9	
	baz=105						
H11N2	WAKE ISLAND Hy	125.93	281	T	T	21 42 12.9	
	baz=105						
H11N1	WAKE ISLAND Hy	125.93	281	T	T	21 42 11.2	
	baz=105						
MKAR	Makanchi Array	145.09	33	PKPbc	PKPdf	19 23 31.8	+0.2
	comp=E,0.7nm,0.7s,baz=307,slow=3.6,SNR=7.4						

IDC 24 19:08:34.6±519.0, **54°.36N**×**1°.23E, h0^{km}, Error ellipse: s-maj=280.3km s-min=130.2km az=110.0, North Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I26DE	FREYUNG INFRAS	9.52	120	i		20 10 10.0	
	baz=310,slow=387,SNR=4.3						
I48TN	KESRA INFRASON	19.39	160	i		21 09 20.0	
	baz=348,slow=362,SNR=2.0						
I43RU	DUBNA INFRASON	20.35	69	i		21 16 00.0	
	baz=278,slow=326,SNR=0.7						
I31KZ	AKTYUBINSK INF	34.09	73	i		22 37 20.0	
	baz=305,slow=324,SNR=1.0						

KRNET ***24*** *19:11:54.2±0.1, 42°.73N×79°.07E, h13^{km}, mb2.4*

SOME ***24*** *19:11:54.6, 42°.73N×79°.05E, h10^{km}*

NNC ***24*** *19:11:55.3±0.7, 42°.80N×79°.08E, h0^{km}, mb2.9, mpv2.5, Error ellipse: s-maj=5.0km s-min=2.0km az=159.0*

ISC 24 19:11:53.2±1.4, **42°.69N**±0°.04×**79°.10E**±0°.04, **h1^{km}**±11^{km}, **n35, σ0^{s}97**/66, **12C-11D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.46	353	⇓eP	Pg	19 12 02.3	+0.2
	baz=55						
UZB				⇓eS	Sg	19 12 07.9	-0.2
	baz=55						
UZB	Uzynbulak	0.46	353	⇓eP	Pg	19 12 02.3	+0.2
	4.1nm,0.1s						
UZB				eS	Sg	19 12 07.9	-0.2
	18nm,0.1s						
UZB	Uzynbulak	0.46	353	P	Pg	19 12 02.3	+0.2
	8.2nm,0.1s						
UZB				S	Sg	19 12 07.9	-0.2
	18nm,0.1s						
SHLS	Shalkode	0.54	29	eP	Pn	19 12 08.4	+0.3
	baz=54						
SHLS				eS	Sn	19 12 18.4	+0.5
	baz=54						
SHLS	Shalkode	0.54	29	eP	Pn	19 12 08.4	+0.3
	1.4nm,0.1s						
SHLS				eS	Sn	19 12 18.5	+0.5
	13nm,0.2s						
SHLS	Shalkode	0.54	29	P	Pn	19 12 08.4	+0.3
	3.5nm,0.2s						
SHLS				S	Sn	19 12 18.5	+0.5
	15nm,0.2s						
PRZ	Przheval'sk	0.56	249	⇑iP	Pg	19 12 04.4	+0.5
	baz=43						
PRZ				⇑iS	Sg	19 12 12.0	+0.9
	baz=43						
SATY	Saty	0.63	306	eP	Pg	19 12 06.0	+0.6
	2.9nm,0.1s						
SATY				eS	Sg	19 12 14.2	+0.7
	11nm,0.1s						
SATY	Saty	0.63	306	P	Pg	19 12 06.0	+0.6
	2.9nm,0.1s						
SATY				S	Sg	19 12 14.2	+0.7
	11nm,0.1s						
PDGK	Podgornoye	0.70	24	P	Pg	19 12 06.7	0.0
	0.7nm,0.2s						
PDGK				S	Sg	19 12 15.5	-0.3
	3.7nm,0.4s						
PDGK	Podgornoye	0.70	24	⇓P	Pg	19 12 07.6	+0.9
	1.2nm,0.3s						
PDGK				⇓S	Sg	19 12 15.4	-0.4
	5.0nm,0.6s						
ANVS	Anan'yevo	1.06	276	⇓eP	Pg	19 12 14.2	+0.6
	baz=74						
ANVS				⇓iS	Sb	19 12 28.5	-0.4
	baz=74						
KDJ	Kajisay	1.53	249	⇑iP	Pb	19 12 22.4	-0.1
	baz=47						
KDJ				⇑iS	Sb	19 12 42.4	0.0
	baz=47						
MDOK	Medeo	1.58	288	⇓Pg	Pb	19 12 22.9	-0.5
MDOK				⇓Lg	Lg	19 12 42.9	
DJR	Jarkent	1.72	17	eP	Pb	19 12 25.4	-0.2
	0.3nm,0.1s						
DJR				eS	Sb	19 12 47.4	-0.3
	2.1nm,0.1s						
DJR	Jarkent	1.72	17	P	Pb	19 12 25.4	-0.2
DJR				S	Sb	19 12 47.4	-0.3
ARXS	Arharly	1.79	329	eP	Pb	19 12 26.1	-0.7
	1.7nm,0.2s						
ARXS				eS	Sb	19 12 48.6	-1.1
	2.3nm,0.2s						
ARXS	Arharly	1.79	329	P	Pb	19 12 26.1	-0.7

	1.7nm,0.3s						
ARXS				S	Sb	19 12 48.6	-1.1
	3.5nm,0.2s						
IZV	Izvestkoviy	1.86	282	eP	Pb	19 12 28.6	+0.4
	baz=80						
IZV				eS	Sg	19 12 52.8	-0.3
	baz=80						
IZV	Izvestkoviy	1.86	282	eP	Pb	19 12 28.6	+0.4
	1.1nm,0.1s						
IZV				eS	Sg	19 12 52.8	-0.3
	7.9nm,0.2s						
IZV	Izvestkoviy	1.86	282	P	Pb	19 12 28.6	+0.4
	1.7nm,0.4s						
IZV				S	Sg	19 12 52.8	-0.3
	12nm,0.4s						
CHKK	Chushkaly	1.93	308	eP	Pb	19 12 29.4	+0.2
	baz=7.0						
CHKK				eS	Sg	19 12 54.5	-0.8
	baz=7.0						
CHKK	Chushkaly	1.93	308	eP	Pb	19 12 29.4	+0.2
	1.0nm,0.1s						
CHKK				eS	Sg	19 12 54.6	-0.8
	3.5nm,0.2s						
CHKK	Chushkaly	1.93	308	P	Pb	19 12 29.5	+0.2
CHKK				S	Sg	19 12 54.6	-0.8
KTBS	Karatobe	2.04	301	eP	Pb	19 12 31.0	-0.1
	1.8nm,0.2s						
KTBS				eS	Sg	19 12 57.2	-1.7
	4.8nm,0.3s						
KTBS	Karatobe	2.04	301	Pg	Pb	19 12 31.0	-0.1
	1.8nm,0.2s						
KTBS				Lg	Lg	19 12 57.2	
	5.0nm,0.4s						
ULHL	Ulahol	2.16	259	⇑eP	Pb	19 12 32.7	-0.6
	baz=58						
ULHL				⇑iS	Sb	19 13 00.9	+0.3
	baz=58						
KST	Kastek	2.33	280	eP	Pg	19 12 37.8	-0.2
	2.3nm,0.5s						
KST				eS	Sg	19 13 08.5	+0.3
	3.0nm,0.4s						
KST	Kastek	2.33	280	Pg	Pg	19 12 37.7	-0.2
	2.3nm,0.5s						
KST				Lg	Lg	19 13 08.5	
	3.8nm,0.8s						
BOOM	Boomskoye usch	2.34	266	⇓iP	Pb	19 12 35.0	-1.3
	baz=65						
BOOM				⇓iS	Sb	19 13 04.9	-0.9
	baz=65						
KUU	Kurty	2.35	302	eP	Pb	19 12 36.4	0.0
	0.4nm,0.2s						
KUU				eS	Sb	19 13 06.2	+0.4
	3.9nm,0.3s						
KUU	Kurty	2.35	302	Pg	Pb	19 12 36.4	0.0
	1.2nm,0.3s						
KUU				Lg	Lg	19 13 06.2	
	3.9nm,0.4s						
NRN	Naryn	2.63	243	⇑iP	Pb	19 12 39.6	-1.7
	baz=42						
NRN				⇑iS	Sb	19 13 12.8	-1.4
	baz=42						
KZA	Kyzart	2.92	259	⇑iP	Pn	19 12 43.2	+2.1
	baz=58						
KZA				⇑iS	Sb	19 13 19.1	-3.5
	baz=58						
KBK	Karagaybulak	3.06	271	⇑iP	Pn	19 12 44.7	+1.8
	baz=70						
KBK				⇑iS	Sb	19 13 22.6	-3.9
	baz=70						

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*NEIC **24** 19:15:54.6±1.9, 18°.7N±0°.1×145°.3E±0°.2, h572^{km}±11^{km}, mb4.5/10, Error ellipse: s-maj=26.3km s-min=19.5km az=108.0*

*IDC **24** 19:15:55.0±1.0, 18°.70N×145°.28E, h569^{km}±12^{km}, mb3.2/22, mb1 3.4/28, mb1mx3.2/54, mbtmp4.2/28, Error ellipse: s-maj=14.1km s-min=9.0km az=90.0*

ISC 24 19:15:53.6±0.5**, 18°.74N**±0°.07×**145°.3E**±0°.1**, h550**^{km}**, n57,** σ1^{s}.**13**/60**, mb3.8**/22**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.14	185	P	P	19 17 26.3	+1.5
	16nm,0.3s,baz=175,slow=20,SNR=8.0						
GUMO				S	S	19 18 41.1	+2.1
	6.3nm,0.3s,baz=141,slow=20,SNR=1.5						
GUMO	Guam	5.14	185	P	P	19 17 26.1	+1.4
JCJ	Chichijima	8.81	341	P	P	19 18 01.9	+2.6
	7.5nm,0.3s,baz=284,slow=21,SNR=6.5						
JHJ2	Mitsune	15.15	342	P	P	19 19 04.9	+0.4
JHJ	Hachijo jima 2	15.16	342	P	P	19 19 05.2	+0.6
	13nm,0.3s,baz=68,slow=22,SNR=12						
INU	Inuyama	18.11	338	P	P	19 19 31.7	-0.7
INU				IAmb	IAmb	19 19 34.9	
	comp=Z,14nm,0.6s						
MJAR	Matsushiro Arr	18.81	342	P	P	19 19 38.6	-0.2
	comp=Z,0.2nm,0.3s,baz=161,slow=9.0,SNR=12						
MJAR	Matsushiro Arr	18.81	342	P	P	19 19 38.2	-0.7
MAJO	Matsushiro	18.82	342	P	P	19 19 38.0	-0.9
MAJO				IAmb	IAmb	19 19 41.5	
	comp=Z,14nm,1.1s						
MJB9	Matsu-Tunnel	18.82	342		P	19 19 37.9	-1.0
MJB9				IAmb	IAmb	19 19 41.4	
	comp=Z,15nm,1.1s						
JNU	Nakatsue	19.31	321	P	P	19 19 43.6	+0.1
	comp=Z,0.9nm,0.3s,baz=52,slow=1.6,SNR=8.5						
JNU	Nakatsue	19.31	321	P	P	19 19 43.5	+0.1
JNU				IAmb	IAmb	19 20 01.4	
	comp=Z,13nm,1.2s						
SIJI	Sorong	23.89	217	P	P	19 20 24.9	+0.1
	comp=Z,2.2nm,0.4s,baz=318,slow=23,SNR=1.8						
KSRS	Korea Array	24.09	324	P	P	19 20 26.1	0.0
	comp=Z,3.1nm,0.6s,baz=147,slow=9.1,SNR=15						
JKA	Kamikawa-asahi	25.41	355	P	P	19 20 39.7	+1.9
ASAJ	Asahikawa	25.41	355	P	P	19 20 39.7	+1.9
	comp=Z,4.1nm,0.6s,baz=148,slow=12,SNR=5.4						
USRK	Ussuriysk Ar.	27.75	339	P	P	19 20 58.9	+0.6
	comp=Z,1.1nm,0.7s,baz=124,slow=8.2,SNR=4.9						
PETK	Petropavlovsk-	35.63	13	P	P	19 22 06.7	+1.4
	comp=Z,2.1nm,0.9s,baz=157,slow=7.7,SNR=7.3						
WRA	Warramunga Arr	39.92	196	P	P	19 22 40.4	-0.4
	comp=Z,0.9nm,0.5s,baz=7.7,slow=8.4,SNR=10						
WRA				PcP	PcP	19 24 32.3	-0.3
	comp=Z,0.3nm,0.6s,baz=19,slow=3.8,SNR=2.1						
MA2	Magadan	40.98	4	P	P	19 22 49.4	+0.9
	comp=Z,3.5nm,0.8s,baz=189,slow=11,SNR=4.9						
SONM	Songino Array	42.90	322	P	P	19 23 04.5	+0.4
	comp=Z,2.5nm,0.6s,baz=136,slow=6.7,SNR=21						
ASAR	Alice Springs	43.60	195	P	P	19 23 09.2	-0.5
	comp=Z,0.3nm,0.6s,baz=17,slow=7.8,SNR=9.4						
ASAR				PcP	PcP	19 24 44.4	-0.5
	comp=Z,0.2nm,0.4s,baz=28,slow=3.9,SNR=2.3						
CMAR	Chiang Mai Arr	43.87	277	P	P	19 23 12.5	+0.5
	comp=Z,1.3nm,0.7s,baz=76,slow=6.7,SNR=9.9						
BILL	Bilibino	51.04	10	P	P	19 24 05.1	+0.2
TAPN	Taplejung	53.33	291	eP	P	19 24 23.0	+0.6
ODAN	Odare	53.65	290	eP	P	19 24 24.5	0.0
	comp=Z,3.9nm,0.4s						
RAMN	Ramite	54.34	290	eP	P	19 24 29.9	+0.4
JIRN	Jiri	54.65	291	eP	P	19 24 32.0	+0.2
	comp=Z,23nm,0.6s						
GUN	Gumba	54.91	291	eP	P	19 24 33.6	+0.1
	comp=Z,8.1nm,0.6s						
PKI	Pulchoki	55.35	291	eP	P	19 24 36.1	-0.5
PKIN	Phulchoki	55.36	291	eP	P	19 24 36.1	-0.5
KKN	Kakani	55.45	291	eP	P	19 24 36.8	-0.3
DMN	Daman	55.62	291	eP	P	19 24 38.1	-0.3
	comp=Z,5.7nm,0.5s						
GKN	Gorkha	56.00	292	eP	P	19 24 40.7	-0.2
	comp=Z,4.9nm,0.3s						
DANN	Dangsing	56.74	292	eP	P	19 24 46.1	-0.1
	comp=Z,35nm,0.7s						
ZALV	Zalesovo Beam	57.77	323	P	P	19 24 51.6	-0.7
	comp=Z,2.2nm,0.4s,baz=114,slow=7.6,SNR=15						
MKAR	Makanchi Array	58.19	314	P	P	19 24 55.4	+0.1
	comp=Z,2.6nm,0.5s,baz=89,slow=8.4,SNR=70						
MKAR				PcP	PcP	19 25 38.6	-0.8
	comp=Z,0.5nm,0.5s,baz=87,slow=3.5,SNR=2.2						
NRIK	Noril'sk	61.46	340	P	P	19 25 16.4	-0.2
	comp=Z,2.3nm,0.5s,baz=98,slow=10,SNR=4.0						
KSH	Kashi	62.57	305	SKKS		19 52 34.1	
ILAR	Eielson Array	63.76	26	P	P	19 25 30.6	-0.9
	comp=Z,1.0nm,0.5s,baz=245,slow=6.0,SNR=19						
ILAR	Eielson Array	63.76	26	P	P	19 25 30.4	-1.1
INK	Inuvik	69.47	23	P	P	19 26 06.3	-0.3
	comp=Z,1.2nm,0.7s,baz=292,slow=13,SNR=4.4						
INK	Inuvik	69.47	23	P	P	19 26 06.8	+0.1
DLBC	Dease Lake	71.45	34	P	P	19 26 20.0	+1.4
	comp=Z,1.5nm,0.9s,baz=337,slow=3.6,SNR=4.3						
DLBC	Dease Lake	71.45	34	P	P	19 26 18.8	+0.1
DLBC				IAmb	IAmb	19 26 31.1	
	comp=Z,14nm,1.4s						
YKA	Yellowknife Ar	78.11	28	P	P	19 26 55.5	-0.3
	comp=Z,1.1nm,0.5s,baz=285,slow=4.6,SNR=11						
ARCES	ARCESS Array B	82.35	342	P	P	19 27 17.1	-0.6
	comp=Z,3.5nm,0.7s,baz=87,slow=7.4,SNR=6.2						
ARCES	ARCESS Array B	82.35	342	P	P	19 27 16.8	-0.9
NVAR	Mina Array Bea	83.39	52	P	P	19 27 24.4	+0.5
	comp=Z,0.7nm,0.6s,baz=271,slow=5.8,SNR=8.3						
NVAR	Mina Array Bea	83.39	52	P	P	19 27 24.0	+0.1
FINES	FINESS Array B	86.70	335	P	P	19 27 36.8	-2.3
	comp=Z,0.8nm,0.3s,baz=63,slow=4.7,SNR=17						
FINES	FINESS Array B	86.70	335	P	P	19 27 36.7	-2.4
NOA	NORSAR Array B	92.42	340	P	P	19 28 03.7	-2.0
	comp=Z,0.2nm,0.5s,baz=32,slow=5.2,SNR=1.2						
BRTR	Keskin Array B	93.84	314	P	P	19 28 10.6	-2.3
	comp=Z,0.6nm,0.7s,baz=108,slow=4.0,SNR=5.1						
TORD	Torodi Ar. Bea	132.16	309	PKP	PKPdf	19 34 05.5	-0.6
	comp=Z,0.1nm,0.4s,baz=10,slow=1.3,SNR=1.2						
LPAZ	La Paz	148.02	91	PKPbc	PKPbc	19 34 39.5	+0.4
	comp=Z,1.1nm,0.5s,baz=243,slow=4.5,SNR=3.0						
SPB	Sao Paulo	167.15	114		PKPdf	19 34 53.6	-3.6

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*IDC **24** 19:18:25.5±0.8, 44°.58N×114°.42W, h0^{km}, mb1 3.5/6, mb1mx3.2/46, mbtmp3.1/6, ML3.2/6, Error ellipse: s-maj=9.5km s-min=7.9km az=62.0*

*NEIC **24** 19:18:26.3±1.5, 44°.65N±0°.05×114°.31W±0°.05, h5^{km}±2^{km}, ML3.3/106, Error ellipse: s-maj=8.5km s-min=5.3km az=335.0*

ISC 24 19:18:25.9±0.9**, 44°.67N**±0°.05×**114°.37W**±0°.04**, h5**^{km}**, n80,** σ1^{s}.**43**/81**, Western Idaho**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCMT	McKenzie Canyo	1.09	81		Pg	19 18 45.6	-1.2
DLMT	Dillon	1.44	60		Pn	19 18 52.3	-0.5
MFID	Camas Ranch	1.63	221		Pn	19 18 55.1	-0.3
QLMT	Earthquake Lak	2.10	84		Pn	19 19 01.4	-0.5
BMO	Blue Mountains	2.10	276		Pn	19 19 02.4	+0.6
BMO				IAML		19 19 35.0	
	149nm,0.6s						
MSO	Missoula	2.19	8		Pn	19 19 03.5	+0.6
MSO				IAML		19 19 40.3	
	158nm,0.8s						
YHB	Horse Butte	2.26	87		Pn	19 19 04.0	-0.2
YHL	Hebgen Lake	2.28	84		Pn	19 19 04.2	-0.2
F10A	Beach Ranch, E	2.40	304		Pn	19 19 07.9	+2.0
YMR	Madison River	2.43	89		Pn	19 19 05.8	-0.6
YHH	Holmes Hill	2.51	86		Pn	19 19 07.4	-0.3
IMW	Indian Meadow	2.58	106		Pn	19 19 08.1	-0.4
YPP	Pitchstone Pla	2.58	98		Pn	19 19 08.7	+0.1
YNM	Yellowstone No	2.61	87		Pn	19 19 08.9	-0.1
FXWY	Fox Creek	2.62	112		Pn	19 19 09.2	+0.2
YNR	Norris Junctio	2.63	88		Pn	19 19 08.4	-0.8
FLWY	Flagg Ranch	2.69	101		Pn	19 19 10.4	+0.4
FLWY				IAML		19 19 51.6	
	124nm,0.8s						
H17A	Grant Village	2.73	94		Pn	19 19 10.3	-0.2
TPAW	Teton Pass	2.73	114		Pn	19 19 11.1	+0.5
TPAW				IAML		19 19 52.4	
	104nm,0.8s						
TPAW				IAML		19 19 54.2	
	160nm,0.7s						
YUF	Upper Falls	2.75	88		Pn	19 19 11.7	+0.8
LKWY	Lake	2.84	91		Pn	19 19 10.7	-1.3
LKWY				IAML		19 19 59.3	
	96nm,0.7s						
LKWY				IAML		19 19 59.4	
	129nm,1.1s						
REDW	Red Top Meadow	2.85	116		Pn	19 19 12.4	+0.2
REDW				IAML		19 20 02.2	
	80nm,0.8s						
SNOW	Snow King Moun	2.87	114		Pn	19 19 13.9	+1.4
SNOW				IAML		19 20 06.6	
	94nm,1.1s						
SNOW				IAML		19 20 15.2	
	76nm,1.0s						
AHID	Auburn Hatcher	3.04	128		Pn	19 19 16.6	+1.9
AHID				IAML		19 20 04.6	
	comp=E,78nm,0.7s						
AHID				IAML		19 20 07.7	
	comp=N,98nm,0.5s						
JTMT	Jette	3.08	1		Pn	19 19 17.4	+2.0
JTMT				IAML		19 20 10.5	
	comp=N,73nm,0.6s						
JTMT				IAML		19 20 12.2	
	comp=E,79nm,0.5s						
HVU	Hansel Valley	3.11	157		Pn	19 19 15.4	-0.4
YNE	Yellowstone No	3.12	82		Pn	19 19 15.1	-0.8
E09A	Wood Farm, Sta	3.23	306		Pn	19 19 17.6	+0.3
E09A				IAML		19 20 15.9	
	comp=E,98nm,1.1s						
E09A				IAML		19 20 18.1	
	comp=N,61nm,1.1s						
J08A	Circle Bar Ran	3.24	248		Pn	19 19 18.3	+0.9
J08A				IAML		19 20 15.3	
	comp=E,98nm,0.7s						
J08A				IAML		19 20 17.8	
	comp=N,81nm,0.8s						
G08A	Pilot Rock	3.32	282		Pn	19 19 19.1	+0.6
G08A				IAML		19 20 11.4	
	comp=E,70nm,0.9s						
GCMT	Greycliff	3.51	70		Pn	19 19 20.4	-0.8
SPUT	South Promonto	3.64	157		Pn	19 19 23.5	+0.5
RLMT	Red Lodge	3.65	81		Pn	19 19 24.4	+1.1
HWUT	Hardware Ranch	3.68	145		Pn	19 19 24.6	+1.0
HWUT				IAML		19 20 27.4	
	comp=E,46nm,0.8s						
I07A	Izee	3.73	263		Pn	19 19 25.3	+1.1
I07A				IAML		19 20 27.6	
	comp=N,61nm,1.4s						
I07A				IAML		19 20 28.9	
	comp=E,59nm,0.8s						
E08A	Dider Farm, El	3.77	301		Pn	19 19 25.9	+1.4
WVOR	Wild Horse Val	3.82	236		Pn	19 19 25.8	+0.4
BGU	Big Grassy Mou	3.87	165		Pn	19 19 26.2	+0.1
BW06	Boulder Array	3.97	117		Pn	19 19 29.8	+2.2
PD31	Pinedale Array	3.97	117		Pn	19 19 27.8	+0.2
PDAR	Pinedale Array	3.97	117	Pn	Pn	19 19 30.4	+2.8
	comp=E,0.9nm,0.3s,baz=295,slow=12,SNR=35						
PDAR				Pg	Pb	19 19 37.0	+0.6
	comp=E,3.4nm,0.3s,baz=305,slow=14,SNR=42						
PDAR				Lg	Lg	19 20 28.7	
	baz=304,slow=37,SNR=1.4						
PDAR	Pinedale Array	3.97	117		Pn	19 19 28.9	+1.2
ELK	Elko	3.97	190	Pn	Pn	19 19 28.4	+0.8
	comp=E,1.8nm,0.3s,baz=2.8,slow=14,SNR=21						
ELK				Pg	Pb	19 19 34.1	-2.3
	comp=E,5.2nm,0.3s,baz=357,slow=16,SNR=28						
ELK				Lg	Lg	19 20 23.7	
	comp=E,12nm,0.3s,baz=146,slow=14,SNR=13						
ELK	Elko	3.97	190		Pn	19 19 28.6	+0.9
ELK	Elko	3.97	190	IAML		19 20 26.6	
	comp=E,30nm,0.5s						
HAWA	Hanford	4.02	297	Pn	Pn	19 19 29.3	+1.3
HAWA				IAML		19 20 39.1	
	comp=E,32nm,0.8s						
NEW	Newport	4.07	333	Pn	Pn	19 19 30.2	+1.4
	comp=E,0.5nm,0.3s,baz=154,slow=11,SNR=5.8						
NEW				Lg	Lg	19 20 36.3	
	comp=E,11nm,0.3s,baz=256,slow=20,SNR=19						
NEW	Newport	4.07	333		Pn	19 19 30.3	+1.5
NEW				IAML		19 20 42.2	
	comp=E,44nm,1.1s						
C09A	Chrisman Ranch	4.14	321	Pn	Pn	19 19 31.2	+1.4
TCUT	Toone Canyon	4.16	147		Pn	19 19 31.5	+1.3
E07A	Sunnyside	4.29	298	Pn	Pn	19 19 32.1	+0.3
E07A				IAML		19 20 47.2	
	comp=N,45nm,1.0s						
E07A				IAML		19 21 03.6	
	comp=E,42nm,1.0s						
WALA	Waterton Lakes	4.41	4		Pn	19 19 32.6	-0.9
WALA				IAML		19 20 48.4	
	comp=E,36nm,1.3s						
WALA				IAML		19 20 50.5	
	comp=N,34nm,0.7s						
CTU	Camp Tracy	4.42	153		Pn	19 19 34.5	+0.8
JLU	Jordanelle	4.60	151		Pn	19 19 37.5	+1.3
DUG	Dugway, Tooele	4.61	165		Pn	19 19 36.5	+0.1
EGMT	Eagleton	4.63	42		Pn	19 19 36.6	0.0
PINE	Pine Mountain	4.80	262	Pn	Pn	19 19 40.3	+1.3
PINE				IAML		19 21 12.5	
	comp=E,19nm,2.8s						
PINE				IAML		19 21 52.6	
	comp=N,16nm,4.9s						
NLU	North Lily Min	5.00	159		Pn	19 19 42.8	+1.0
B08A	Colville Reser	5.04	319		Pn	19 19 41.2	-0.9
B08A				IAML		19 21 12.8	
	comp=E,27nm,0.8s						
B08A				IAML		19 21 19.7	
	comp=N,25nm,1.1s						
LTY	Liberty	5.10	303		Pn	19 19 42.2	-0.8
LTY				IAML		19 21 18.6	
	comp=N,16nm,1.3s						
LTY				IAML		19 21 28.6	
	comp=E,19nm,1.2s						
MOD	Modoc Plateau	5.14	240		Pn	19 19 43.9	+0.3
MOD				IAML		19 21 20.6	
	comp=E,12nm,0.8s						
RDMU	Red Mountain	5.41	137		Pn	19 19 46.0	-1.4
PSUT	Pine Spring	6.14	176	Pn	Pn	19 20 03.1	+5.7
PAHR	Pah Rah Range	6.20	219		Pn	19 19 57.1	-1.0
SRU	San Rafael Swe	6.25	151	Pn	Pn	19 19 55.5	-3.4
KVN	Kaiserville	6.26	208		Pn	19 20 02.3	+3.2
MSU	Marysvale	6.36	164	Pn	Pn	19 20 01.4	+0.9
R11A	Troy Canyon, C	6.38	189		Pn	19 20 03.8	+3.2
O20A	White River Ci	6.41	133		Pn	19 20 03.9	+2.8
RYN	Ryan	6.79	209		Pn	19 20 09.2	+3.0
NVAR	Mina Array Bea	6.89	207	Pn	Pn	19 20 09.0	+1.2
	comp=E,0.1nm,0.3s,baz=21,slow=13,SNR=3.7						
NVAR				Pg	Pb	19 20 24.2	-2.0
	comp=E,0.4nm,0.3s,baz=20,slow=13,SNR=8.8						
NVAR				Lg	Lg	19 21 58.2	
	comp=E,0.4nm,0.3s,baz=18,slow=34,SNR=1.5						
NVAR	Mina Array Bea	6.89	207		Pn	19 20 05.1	-2.7
WAKR	Walker	7.23	213		Pn	19 20 14.6	+2.2
N23A	Red Feather La	7.25	118		Pn	19 20 11.1	-1.7
PV21	Cone Mtn., Par	7.31	145		Pn	19 20 15.9	+2.4
PV16	Nyswonger Mesa	7.55	145		Pn	19 20 17.1	+0.3
PV11	David Mesa, Pa	7.58	145		Pn	19 20 19.5	+2.4
PV05	Paradox Valley	7.68	147		Pn	19 20 20.6	+2.0
TXAR	Lajitas Array	17.50	147	Pn	P	19 22 33.9	+2.0
	comp=E,0.0nm,0.3s,baz=334,slow=14,SNR=2.2						
YKA	Yellowknife Ar	17.86	360	P	Pn	19 22 35.7	+0.9
	comp=E,0.0nm,0.3s,baz=178,slow=12,SNR=7.6						

JMA 24 19:18:48.0±0.3**, 28°.12N**×**128°.07E, h19**^{km}±4^{km}**, M2.2, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTK	Tokunoshima	0.85	113	P	Pb	19 19 03.7	-0.4
JTK				S	Sb	19 19 14.9	-0.2
JOKE	Okinoerabujima	0.88	149	P	Pb	19 19 04.7	+0.1
JOKE				eS	Sb	19 19 16.1	+0.2
JAMN	Amaminishikomi	0.98	83	P	Pb	19 19 06.3	-0.1
JAMN				eS	Sb	19 19 19.1	+0.1
JIH	Iheya	1.08	185	P	Pb	19 19 07.4	-0.8
JIH				eS	Sb	19 19 21.9	0.0
JYRO	Yoronjima	1.14	163	P	Pn	19 19 08.8	-0.2
JYRO				eS	Sb	19 19 23.4	-0.2
JOW	Kunigami	1.30	172	P	Pn	19 19 11.0	-0.1
JOW	Kunigami	1.30	172	P	Sb	19 19 28.2	+0.1
	0.8nm,0.3s,baz=137,slow=13,SNR=5.1						
JOW	Kunigami	1.30	172	P	Sb	19 19 27.7	-0.3
JOW	Kunigami	1.30	172	eS	Sb	19 19 28.0	0.0
JAM	Amami Oshima	1.39	78	P	Pb	19 19 13.5	+0.2
JAM				eS	Sb	19 19 31.2	+0.6
JNTH	Nagotoyohara	1.60	182	P	Pb	19 19 16.3	-0.6
JNTH				eS	Sb	19 19 36.6	0.0

IDC 24 19:20:14.3±79.0**, 22°.99S**×**179°.67W, h0**^{km}**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.5**/27**, mbtmp3.7**/3**, Error ellipse: s-maj=1418.0km s-min=175.2km az=86.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.35	247	P	P	19 27 11.8	+0.1
	0.8nm,0.5s,baz=89,slow=10,SNR=4.6						
ASAR	Alice Springs	42.49	260	P	P	19 28 11.4	-0.3
	0.5nm,0.7s,baz=93,slow=8.4,SNR=6.1						
WRA	Warramunga Arr	42.78	265	P	P	19 28 13.9	-0.2
	0.6nm,0.4s,baz=103,slow=8.5,SNR=4.3						

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*IDC **24** 19:22:43.4±1.0, 19°.55S×70°.65W, h0^{km}, mb3.9/4, mb1 4.1/7, mb1mx3.7/30, mbtmp3.9/7, ML3.8/3, MS3.2/4, Ms1 3.2/4, ms1mx3.0/21, Error ellipse: s-maj=32.9km s-min=16.8km az=65.0*

*NEIC **24** 19:22:44.9, 19°.59S×70°.96W, h28^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.49; $M_{\theta\theta}$0.18; $M_{\phi\phi}$-1.68; $M_{r\theta}$0.51; $M_{\theta\phi}$0.37; $M_{\phi r}$-0.06; Fault plane solution: M_{0}1.72000×10^{15} NP1:ϕ_{s}7.50000°, δ45.31000°, λ117.26000°. NP2:ϕ_{s}151.27000°, δ50.81000°, λ65.15000°. Principal axes: T 1.6718, Plg71.0000°, Azm357.0000°; N 0.0850, Plg19.0000°, Azm168.0000°; P -1.7568, Plg3.0000°, Azm259.0000°;*

*NEIC **24** 19:22:47.4±2.4, 19°.62S±0°.04×70°.72W±0°.07, h28^{km}±1^{km}, Mwr4.1/32 Error ellipse: s-maj=11.7km s-min=7.2km az=274.0*

*GUC **24** 19:22:47.4±0.5, 19°.63S×70°.75W, h42^{km}±1^{km}, ML4.0*

ISC 24 19:22:46.2±2.1**, 19°.64S**±0°.03×**70°.81W**±0°.07**, h20**^{km}±9^{km}**, n51,** σ1^{s}.**17**/56**, 4C-6D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.65	87	⇓iP	Pb	19 22 58.7	-0.2
PSGC				iS	Sb	19 23 07.4	-0.2
PSGCX	Pisagua	0.65	87		Pb	19 22 58.5	-0.4
PB11	IPOC Station P	1.10	97	⇓iP	Pb	19 23 06.1	-0.5
PB11				eS	Sb	19 23 20.4	-0.1
PB11				IAML		19 23 23.9	
	comp=N,10μm,0.4s						
PB11	IPOC Station P	1.10	97		Pb	19 23 06.0	-0.7
TA01	Diego Aracena	1.10	147	⇑iP	Pb	19 23 06.8	+0.2
TA01				iS	Sn	19 23 21.3	+0.1
TA01				IAML		19 23 25.1	
	comp=E,8μm,0.3s						
PB12	IPOC Station P	1.11	24	⇓iP	Pn	19 23 06.2	-0.6
PB12				iS	Sb	19 23 21.0	-0.1
PB12				IAML		19 23 24.0	
	comp=E,5μm,0.5s						
PB12	IPOC Station P	1.11	24		Pn	19 23 05.8	-1.0
PATCX	Punta Patache	1.33	152	⇑iP	Pn	19 23 10.1	+0.3
PATCX				iS	Sb	19 23 27.6	+0.3
PATCX				IAML		19 23 37.3	
	comp=E,3μm,0.6s						
PATCX	Punta Patache	1.33	152		Pn	19 23 09.9	+0.1
AP01	Chacalluta	1.33	20	eP	Pn	19 23 09.8	+0.1
AP01				iS	Sb	19 23 27.4	+0.2
GO01	Chusmiza	1.53	91	⇓iP	Pn	19 23 13.4	+0.6
GO01				iS	Sb	19 23 33.2	-0.1
GO01	Chusmiza	1.53	91		Pn	19 23 13.4	+0.6
PB08	IPOC Station P	1.64	108	⇓iP	Pn	19 23 15.1	+0.8
PB08				eS	Sb	19 23 36.2	-0.2
PB08				IAML		19 23 43.3	
	comp=E,2μm,0.1s						
PB16	IPOC Station P	1.79	44	⇓iP	Pb	19 23 17.6	-1.0
PB16				iS	Sb	19 23 40.9	0.0
PB16				IAML		19 23 47.7	
	comp=N,2μm,0.4s						
PB16	IPOC Station P	1.79	44		Pn	19 23 17.4	+0.8
PB01	IPOC Station P	1.87	139	⇑iP	Pn	19 23 18.0	+0.7
PB01				iS	Sn	19 23 41.0	+0.6
PB01				IAML		19 23 50.3	
	comp=N,2μm,0.6s						
PB01	IPOC Station P	1.87	139		Pn	19 23 17.7	+0.5
PB02	IPOC Station P	1.88	153	⇑iP	Pn	19 23 18.1	+0.7
PB02				iS	Sn	19 23 40.5	-0.2
PB02				IAML		19 23 49.8	
	comp=N,4μm,0.6s						
PB07	IPOC Station P	2.25	158	eP	Pn	19 23 22.9	+0.3
PB07	IPOC Station P	2.25	158		Pn	19 23 22.7	+0.1
PB09	IPOC Station P	2.60	146		Pn	19 23 28.8	+1.4
PB04	IPOC Station P	2.75	167		Pn	19 23 29.2	-0.3
LVC	Limon Verde	3.45	149	Pn	Pn	19 23 40.8	+1.6
	comp=N,12nm,0.3s,baz=335,slow=11,SNR=22						
LVC				Sn	Sn	19 24 21.1	+1.3
	comp=N,26nm,0.3s,baz=294,slow=14,SNR=4.4						

LVC				LR	LR	19 24 25.4	
	comp=N,71nm,21.5s,baz=336,slow=30						
LVC				Lg	Lg	19 24 32.2	
	comp=N,34nm,0.3s,baz=90,slow=17,SNR=12						
LVC	Limon Verde	3.45	149		Pn	19 23 40.7	+1.5
PB15	IPOC Station P	3.77	161		Pn	19 23 43.0	-0.4
LPAZ	La Paz	4.20	38	Pn	Pn	19 23 54.0	+4.3
	comp=N,2.4nm,0.3s,baz=190,slow=5.8,SNR=28						
LPAZ	La Paz	4.20	38		Pn	19 23 53.4	+3.7
PB14	IPOC Station P	4.98	176		Pn	19 23 58.4	-1.8
GO02	Mina Guanaco	5.62	169		Pn	19 24 08.5	-0.5
NNA	Nana	9.56	322	LR	LR	19 28 57.3	
	comp=N,135nm,20.7s,baz=45,slow=39						
SIV	San Ignacio	9.96	70	Pn	Pn	19 25 07.5	-0.9
	comp=N,0.6nm,0.3s,baz=262,slow=12,SNR=3.7						
SIV				LR	LR	19 29 33.0	
	comp=N,274nm,18.7s,baz=256,slow=42						
CPUP	Villa Florida	14.09	121	Pn	Pn	19 26 04.4	-0.3
	comp=N,0.1nm,0.3s,baz=290,slow=12,SNR=1.5						
PTGA	Pitinga	21.58	31	P	P	19 27 33.3	-1.6
	comp=N,14nm,0.3s,baz=313,slow=22,SNR=45						
PTGA	Pitinga	21.58	31	P	P	19 27 33.1	-1.8
BDFB	Brasilia	22.08	83	LR	LR	19 37 52.4	
	comp=N,118nm,18.2s,baz=312,slow=42						
RUSC	La Rusia	25.47	355	P	P	19 28 13.4	-0.3
TXAR	Lajitas Array	58.09	326	P	P	19 32 39.7	+1.2
	comp=N,0.1nm,0.5s,baz=149,slow=9.0,SNR=1.6						
TORD	Torodi Ar. Bea	78.44	72	P	P	19 34 44.6	-1.7
	comp=N,0.3nm,0.4s,baz=252,slow=4.9,SNR=6.2						
YKA	Yellowknife Ar	88.85	341	P	P	19 35 38.7	+0.2
	comp=N,0.3nm,0.5s,baz=134,slow=4.9,SNR=8.2						
H11S2	WAKE ISLAND Hy	125.85	279	T	T	22 00 59.4	
	baz=100,slow=74,SNR=74						
H11S1	WAKE ISLAND Hy	125.86	279	T	T	22 00 59.8	
	baz=100,slow=74,SNR=45						
H11S3	WAKE ISLAND Hy	125.87	279	T	T	22 01 00.7	
	baz=100,slow=74,SNR=34						
H11N3	WAKE ISLAND Hy	125.89	281	T	T	22 01 01.3	
	baz=100,slow=74,SNR=20						
H11N2	WAKE ISLAND Hy	125.90	281	T	T	22 01 02.3	
	baz=100,slow=74,SNR=21						
H11N1	WAKE ISLAND Hy	125.91	281	T	T	22 00 57.6	
	baz=100,slow=74,SNR=8.1						
ASAR	Alice Springs	130.67	210	PKP	PKPdf	19 41 56.8	+0.1
	comp=N,0.2nm,0.4s,baz=116,slow=1.5,SNR=9.0						
WRA	Warramunga Arr	133.58	214	PKP	PKPdf	19 42 02.7	+0.5
	comp=N,0.1nm,0.3s,baz=142,slow=1.3,SNR=1.8						
MKAR	Makanchi Array	145.11	33	PKP	PKPbc	19 42 21.9	0.0
	comp=N,0.9nm,0.6s,baz=314,slow=3.2,SNR=24						
KSH	Kashi	145.25	48	PKPbc	PKPbc	19 42 22.0	-0.7
KSH				PP	PP	19 45 44.8	+2.6
KSH				PKS	PKSdf	19 45 58.0	-0.6
SONM	Songino Array	151.78	4	PKPbc	PKiKP	19 42 39.9	-0.1
	comp=N,0.4nm,0.9s,baz=26,slow=3.8,SNR=3.6						
LZH	Lanzhou	162.95	15	ePKP	PKPdf	19 42 39.1	-8.6
LZH				pPKP	pPKPdf	19 42 51.1	-2.8
LZH				sPKP		19 42 56.3	

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*ISK **24** 19:24:36.8, 38°.84N×25°.94E, h5^{km}, ML2.6/22*
*ATH **24** 19:24:36.5, 38°.84N×26°.02E, h30^{km}±1^{km}, ML2.5/4, Error ellipse: s-maj=2.1km s-min=1.1km az=95.0*
*DDA **24** 19:24:37.4, 38°.84N×25°.97E, h11^{km}±2^{km}, ML2.4*
*THE **24** 19:24:37.1, 38°.85N×25°.92E, h12^{km}±1^{km}, ML2.4/6, Error ellipse: s-maj=2.2km s-min=0.8km az=82.0*
ISC 24 19:24:37.2±0.9**, 38°.85N**±0°.02×**25°.98E**±0°.03**, h15**^{km}±8^{km}**, n49, σ0^{s}.67**/72**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIGR	SIGRI	0.37	345	P	Pg	19 24 44.7	-0.1
SIGR				S	Sg	19 24 49.7	-0.3
	370nm,0.2s						
SIGR	SIGRI	0.37	345	P	Pg	19 24 44.8	+0.1
SIGR				S	Sg	19 24 50.6	+0.6
SIGR				AML	AML	19 24 52.0	
	comp=N,859µm,0.2s						
SIGR				AML	AML	19 24 53.4	
	comp=E,647µm,0.3s						
SIGR	SIGRI	0.37	345	PG	Pg	19 24 44.9	+0.1
SIGR				SG	Sg	19 24 50.3	+0.3
PSRA	Psara	0.45	227	P	Pb	19 24 47.3	+0.5
PSRA				S	Sb	19 24 53.5	+0.2
PRK	Paraskevi	0.46	30	P	Pb	19 24 47.1	+0.1
PRK				S	Sb	19 24 53.5	-0.1
	comp=E,508nm,0.4s						
PRK	Paraskevi	0.46	30	P	Pb	19 24 47.0	+0.1
PRK				S	Sb	19 24 53.4	-0.2
PRK				AML	AML	19 24 55.1	
	comp=N,1186µm,0.4s						
PRK				AML	AML	19 24 58.5	
	comp=E,823µm,0.5s						
CHOS	Chios island	0.47	173	P	Pg	19 24 46.5	0.0
CHOS				S	Sg	19 24 53.0	+0.2
	comp=E,965nm,0.2s						
CHOS	Chios island	0.47	173	P	Pg	19 24 46.6	0.0
CHOS				S	Sg	19 24 53.0	+0.2
CHOS				AML	AML	19 24 53.8	
	comp=N,1304µm,0.3s						
CHOS				AML	AML	19 24 54.3	
	comp=E,2575µm,0.2s						
CHOS	Chios island	0.47	173	PG	Pg	19 24 46.6	0.0
CHOS				SG	Sb	19 24 53.2	-0.7
KRBN	Karaburun	0.52	120	PG	Pb	19 24 47.9	-0.1
FOCM	Foa	0.60	103	PG	Pb	19 24 50.3	+0.9
URLA	Izmir	0.69	135	PG	Pg	19 24 50.5	-0.1
URLA				SG	Sb	19 25 01.4	+1.2
URLA	Izmir	0.69	135	i P	Pg	19 24 50.2	-0.4
AYVA	Ayvalik	0.72	50	i P	Pg	19 24 50.9	-0.3
AYVA				i S	Sg	19 25 00.5	-0.1
AYVA				IAML		19 25 03.0	
	comp=E,234nm,0.4s						
DKL	Dikili	0.75	73	PG	Pb	19 24 52.3	+0.3
DKL				SG	Sn	19 25 03.9	-0.6
ZEDA	zmir-Bergama	0.86	82	i P	Pg	19 24 53.7	-0.2
ZEDA				i S	Sg	19 25 04.8	-0.4
BLCB	Balcova	0.95	119	PG	Pg	19 24 55.4	-0.2
BLCB				SG	Sn	19 25 10.0	+0.6
BAYC	CANAKKALE_Bayr	0.99	26	i P	Pb	19 24 54.8	-1.4
BAYC				i S	Sg	19 25 08.7	-0.7
BOZC	Bozcaada	0.99	3	PG	Pb	19 24 55.9	-0.2
BOZC				SG	Sn	19 25 10.6	+0.2
BOZC	Bozcaada	0.99	3	i P	Pb	19 24 55.3	-0.8
EZN	Ezine	1.01	15	P	Pb	19 24 56.1	-0.3
EZN				S	Sb	19 25 09.9	+0.4
	comp=E,192nm,0.4s						
EZN	Ezine	1.01	15	PG	Pn	19 24 57.1	+0.2
DGB	zmir	1.06	138	i P	Pb	19 24 56.7	-0.6
DGB				i S	Sb	19 25 10.1	-1.0
LIA	Limnos Island	1.22	330	P	Pn	19 24 59.1	-0.6
LIA				S	Sb	19 25 14.8	-0.6
	comp=E,142nm,0.4s						
LIA	Limnos Island	1.22	330	P	Pn	19 24 59.9	+0.2
LIA				S	Sn	19 25 16.2	+0.3
SMG	Samos	1.32	149	P	Pn	19 25 00.1	-1.1
SMG				S	Sg	19 25 19.9	0.0
	comp=E,298nm,0.5s						
SMG	Samos	1.32	149	P	Pn	19 25 00.3	-0.9
SMG				AML	AML	19 25 22.5	
	comp=E,580µm,0.4s						
SMG				AML	AML	19 25 22.6	
	comp=N,608µm,0.6s						
STEP	BALIKESIR_Sava	1.45	68	i P	Pn	19 25 02.5	-0.5
STEP				i S	Sn	19 25 21.8	+0.1
STEP				IAML		19 25 27.0	
	comp=N,64nm,0.4s						
KARY	Karystos	1.46	237	P	Pn	19 25 03.3	+0.2
GCAM	G?zelcaml?	1.51	139	PN	Pg	19 25 05.9	-0.4
GCAM	G?zelcaml?	1.51	139	i P	Pb	19 25 05.5	+0.6
GCAM				i S	Sg	19 25 26.3	+0.4
GCAM				IAML		19 25 28.0	
	comp=N,44nm,0.4s						
GELI	Tayfur-Gelibol	1.59	14	PN	Pb	19 25 06.7	+0.4
LPK	Lapseki	1.64	21	PN	Pb	19 25 06.7	-0.4
SMTH	Samothraki Isl	1.66	348	P	Pn	19 25 06.3	+0.5
BALB	Balikesir	1.67	61	PN	Pb	19 25 07.7	0.0
AYDB	Zeytinkoy-Aydi	1.75	120	PN	Pb	19 25 09.6	+0.5
APE	Apeiranthos	1.81	191	P	Pn	19 25 07.7	-0.3
APE	Apeiranthos	1.81	191	PN	Pn	19 25 08.9	+0.9
KRBG	Karabiga-Canak	1.85	33	PN	Pb	19 25 10.6	-0.1
ERIK	Erikli-Kesan	1.86	13	PN	Pb	19 25 10.2	-0.8
AMGA	Amorgos Island	2.02	182	P	Pn	19 25 09.9	-0.9
ALN	Alexandroupoli	2.04	1	P	Pn	19 25 11.3	+0.2
ALN	Alexandroupoli	2.04	1	PN	Pb	19 25 12.9	-1.2
RKY	Sarkoy-Tekirda	2.05	26	PN	Pb	19 25 13.6	-0.6
EDC	Edincik	2.08	44	PN	Pb	19 25 13.8	-0.9
MRMT	Marmara Adasi	2.15	35	PN	Pn	19 25 14.1	+1.5
UKOP	Uzunkopru-Edir	2.33	12	PN	Pn	19 25 17.2	+2.2
ANAF	Anafi Island	2.50	184	P	Pn	19 25 17.0	-0.3
ARMT	Armutlu	2.81	51	PN	Pn	19 25 23.5	+1.9

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*ATH **24** 19:32:47.9, 38°.25N×20°.37E, h14^{km}±1^{km}, ML2.7/16, Error ellipse: s-maj=1.8km s-min=0.9km az=257.0*
*THE **24** 19:32:48.1, 38°.25N×20°.35E, h11^{km}, ML2.9/8, Error ellipse: s-maj=1.0km s-min=0.4km az=255.0*
ISC 24 19:32:47.6±0.9**, 38°.25N**±0°.03×**20°.34E**±0°.03**, h14**^{km}±4^{km}**, n66, σ0^{s}.75**/100**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGT1	Agia Thekli	0.03	93	P	Pg	19 32 49.5	-0.6
AGT1				S	Sg	19 32 51.6	-0.2
KEF4	Livadi, Kephal	0.07	85	P	Pg	19 32 50.2	-0.1
KEF4				S	Sg	19 32 51.5	-0.7
CHV1	Chavriata, Kef	0.07	155	P	Pg	19 32 50.6	+0.2
CHV1				S	Sg	19 32 52.8	+0.4
LXRA	Lixouri, Kepha	0.09	125	P	Pg	19 32 50.9	+0.3
LXRA				S	Sg	19 32 52.8	+0.2
LXR1	Lixouri, Cepha	0.09	124	P	Pg	19 32 50.9	+0.3
KEF1	Kardakata, Kep	0.10	76	P	Pg	19 32 50.6	-0.2
KEF1				S	Sg	19 32 52.0	-0.9
ARGA	Argostoli. Kep	0.13	125	P	Pg	19 32 51.4	+0.3
ARGA				S	Sg	19 32 53.3	-0.1
ARG2	Argostoli	0.14	123	P	Pg	19 32 51.5	+0.3
ARG2				S	Sg	19 32 53.3	-0.3
	16µm,0.2s						
KEF2	Argostoli. Kep	0.14	127	P	Pg	19 32 51.7	+0.4
KEF2				S	Sg	19 32 53.8	0.0
VLS	Valsamata	0.21	111	P	Pg	19 32 52.3	0.0
VLS				S	Sg	19 32 55.2	-0.3
	10µm,0.2s						
VLS	Valsamata	0.21	111	P	Pg	19 32 52.4	0.0
VLS				S	Sg	19 32 55.2	-0.3
VLS				AML	AML	19 32 55.3	
	comp=E,20591µm,0.1s						
VLS				AML	AML	19 32 55.3	
	comp=N,19565µm,0.3s						
VSK1	VASILIKIADES	0.23	48	P	Pg	19 32 52.9	+0.2
VSK1				S	Sg	19 32 56.7	+0.5
	comp=N,7µm,0.2s						
KONA	Konidatara, Ke	0.25	46	P	Pg	19 32 53.2	+0.2
KONA				S	Sg	19 32 55.7	-0.9
KONA				AML	AML	19 32 57.1	
	comp=N,7394µm,0.3s						
KONA				AML	AML	19 32 58.6	
	comp=E,5936µm,0.4s						
FSK	Fiskardo	0.27	40	P	Pg	19 32 53.5	+0.2
FSK				S	Sg	19 32 57.5	+0.3
	comp=E,3µm,0.2s						
FSK	Fiskardo	0.27	40	P	Pg	19 32 53.5	+0.2
FSK				S	Sg	19 32 57.6	+0.4
FSK				AML	AML	19 32 57.9	
	comp=N,5282µm,0.2s						
FSK				AML	AML	19 32 58.0	
	comp=E,6766µm,0.3s						
KFL	Anninata	0.38	112	P	Pg	19 32 55.3	+0.1
KFL				S	Sg	19 33 01.1	+0.6
	comp=E,2µm,0.3s						
KFL	Anninata	0.38	112	P	Pg	19 32 55.3	+0.1
KFL				S	Sg	19 33 01.1	+0.6
KFL				AML	AML	19 33 01.6	
	comp=N,4008µm,0.2s						
KFL				AML	AML	19 33 03.5	
	comp=E,5548µm,0.3s						
EVGI	Lefkada island	0.44	34	P	Pg	19 32 56.7	+0.3
EVGI				S	Sg	19 33 03.3	+0.9
EVGI	Lefkada island	0.44	34	P	Pg	19 32 56.7	+0.3
EVGI				S	Sb	19 33 03.5	-0.2
MGNA	Meganis	0.54	41	P	Pg	19 32 58.0	-0.1
MGNA				S	Sg	19 33 05.8	+0.5
MGNA				AML	AML	19 33 06.5	
	comp=E,1764µm,0.1s						
MGNA				AML	AML	19 33 06.7	
	comp=N,1307µm,0.1s						
LKD2	Lefkada island	0.59	25	P	Pg	19 32 59.0	-0.2
LKD2	Lefkada island	0.59	25	P	Pg	19 32 59.2	0.0
LKD2				AML	AML	19 33 11.7	
	comp=N,786µm,0.3s						
LKD2				AML	AML	19 33 12.4	
	comp=E,716µm,0.3s						
TSLK	Tsoukalades, L	0.62	23	P	Pg	19 32 59.8	0.0
TSLK	Tsoukalades, L	0.62	23	P	Pg	19 32 60.0	+0.2
VTN	Vitineika	0.74	116	P	Pg	19 33 02.1	0.0
PDO	Prodromos	0.75	62	P	Pg	19 33 01.8	-0.3
PDO				S	Sb	19 33 13.2	+0.8
PDO	Prodromos	0.75	62	P	Pg	19 33 02.0	-0.1
PDO				S	Sb	19 33 12.9	+0.5
PDO				AML	AML	19 33 14.2	
	comp=E,1806µm,0.5s						
PDO				AML	AML	19 33 15.1	
	comp=N,1944µm,0.3s						
RLS	Riolos of Patr	0.91	102	P	Pg	19 33 03.9	-1.3
RLS	Riolos of Patr	0.91	102	P	Pg	19 33 04.6	-0.5
RLS				AML	AML	19 33 24.1	
	comp=N,432µm,0.5s						
RLS				AML	AML	19 33 26.5	
	comp=E,383µm,0.4s						
PVO	Paravola	1.00	68	P	Pb	19 33 06.8	+0.2
PVO				S	Sn	19 33 22.7	+1.6
	comp=E,448nm,0.4s						
PVO	Paravola	1.00	68	P	Pb	19 33 06.9	+0.2
PVO				AML	AML	19 33 23.8	
	comp=E,976µm,0.4s						
PVO				AML	AML	19 33 30.1	
	comp=N,835µm,0.4s						
DRO	Drossia	1.12	105	P	Pb	19 33 08.5	-0.2
DRO				S	Sn	19 33 24.2	+0.1
	comp=N,528nm,0.7s						
DRO	Drossia	1.12	105	P	Pb	19 33 08.5	-0.2
DRO				AML	AML	19 33 32.2	
	comp=N,989µm,0.6s						
DRO				AML	AML	19 33 33.6	
	comp=E,860µm,0.5s						
EFP	Efpalio	1.24	81	P	Pn	19 33 10.3	-0.2
EFP				AML	AML	19 33 35.3	
	comp=N,428µm,0.4s						
EFP				AML	AML	19 33 35.4	
	comp=E,830µm,0.4s						
IGT	Igoumenitsa	1.28	360	P	Pn	19 33 11.7	+0.6
IGT				S	Sn	19 33 28.9	+0.9
IGT	Igoumenitsa	1.28	360	P	Pb	19 33 12.2	+0.8
ANX	Ano Chora	1.29	74	P	Pn	19 33 11.1	-0.1
ANX				S	Sb	19 33 27.6	-0.5
	comp=E,425nm,0.5s						
ANX	Ano Chora	1.29	74	P	Pn	19 33 11.4	+0.1
ANX				AML	AML	19 33 36.8	
	comp=E,836µm,0.5s						
ANX				AML	AML	19 33 38.7	
	comp=N,889µm,0.6s						
LAKA	Lakka	1.29	90	P	Pn	19 33 11.4	+0.2
LAKA				S	Sg	19 33 29.2	0.0
AMT	Artemida-Makis	1.30	123	P	Pg	19 33 12.4	-0.2
AMT	Artemida-Makis	1.30	123	P	Pg	19 33 12.8	+0.2
EVR	Evrytania	1.33	60	P	Pn	19 33 12.1	+0.3
EVR	Evrytania	1.33	60	P	Pn	19 33 12.0	+0.2
SERG	Sergoula	1.36	83	P	Pn	19 33 12.3	+0.2
SERG	Sergoula	1.36	83	P	Pn	19 33 12.3	+0.2
SERG				AML	AML	19 33 38.3	
	comp=N,363µm,0.3s						
SERG				AML	AML	19 33 39.1	
	comp=E,393µm,0.3s						
TRIZ	Trizonia	1.37	85	P	Pn	19 33 12.0	-0.3
ALIK	Aliki, Aigiali	1.39	89	P	Pb	19 33 13.3	-0.1
ALIK				S	Sg	19 33 32.0	-0.5
KALE	Kalithea	1.42	84	P	Pn	19 33 13.6	+0.5
KALE				AML	AML	19 33 41.0	
	comp=N,315µm,0.7s						
KALE				AML	AML	19 33 42.2	
	comp=E,359µm,0.6s						
KLV	Kalavryta, Ach	1.44	98	P	Pn	19 33 14.0	+0.7
KLV				S	Sn	19 33 31.2	-0.9
KLV	Kalavryta, Ach	1.44	98	P	Pb	19 33 14.1	-0.1
KLV				AML	AML	19 33 41.9	
	comp=E,153µm,0.7s						
KLV				AML	AML	19 33 48.7	
	comp=N,157µm,0.5s						
KEK	Kerkira	1.52	344	P	Pb	19 33 15.8	+0.2
MAKR	Makrakomi, Fth	1.59	61	P	Pb	19 33 17.6	+0.7
MAKR				AML	AML	19 33 45.3	
	comp=N,256µm,1.0s						
MAKR				AML	AML	19 33 49.7	
	comp=E,370µm,0.4s						
ITM	Ithomi	1.65	130	P	Pb	19 33 18.3	+0.5
DSF	Desfina	1.73	84	P	Pb	19 33 19.3	+0.2
AGG	Agios Georgios	1.74	63	P	Pg	19 33 20.4	-0.6
PYL	PYLOS	1.75	140	P	Pn	19 33 18.9	+1.3
THL	Klokotos Trika	1.85	44	P	Pb	19 33 22.0	+0.8
PROD	Prodromos	2.01	89	P	Pb	19 33 23.5	-0.5
VIL2	Platees	2.31	90	P	Pb	19 33 28.2	-0.8
DBRK	Dubrovnik	4.72	340	ePn	Pn	19 33 58.9	+0.6
STON	Ston	5.03	337	i Pn	Pn	19 34 03.2	+0.6
STON				Sn	Sn	19 34 58.6	-2.0
MAKA	Makarska	5.63	334	ePn	Pn	19 34 11.6	+0.8
MAKA				Sn	Sn	19 35 12.3	-2.8
RICI	Ricice	5.77	336	ePn	Pn	19 34 13.2	+0.4
RICI				Sn	Sn	19 35 17.5	-1.4
ZIRJ	Zirje	6.46	328	i Pn	Pn	19 34 22.8	+0.5
ZIRJ				Sn	Sn	19 35 34.5	-1.3
MORI	Morici	6.61	329	ePn	Pn	19 34 25.5	+1.2
MORI				Sn	Sn	19 35 37.5	-1.9
DUGI	Dugi Otok	6.98	327	i Pn	Pn	19 34 31.3	+1.8
DUGI				Sn	Sn	19 35 46.0	-2.6

HEL 24 19:34:55.9±0.6**, 67°.64N×33°.62E, h0**^{km}**, ML1.5, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRF	Varrio	1.54	276	PN	Pn	19 35 24.2	-0.4
	baz=93						
VRF				MSG		19 35 42.0	
	comp=Z,2.4nm,0.2s						
VRF				SG	Sn	19 35 43.2	-2.0
KU6	Riekki	2.19	224	PG	Pb	19 35 35.0	-1.4
	baz=36						
KU6				MSG		19 36 00.7	
	comp=Z,3.6nm,0.2s						
KU6				SB	Sn	19 36 00.8	-0.5
MSF	Maaselka	2.51	228	PG	Pb	19 35 41.0	-0.8
MSF				SG	Sg	19 36 14.9	-1.5
SGF	Sodankyl	2.73	269	PG	Pb	19 35 44.1	-1.5
SGF				SG	Sb	19 36 18.8	-0.7
KEV	Kevo	3.22	314	SN	Sn	19 36 25.9	-0.7
KEV				MSG		19 36 30.5	
	comp=Z,0.7nm,0.2s						
ARE0	ARCESS Array S	3.54	306	PN	Pn	19 35 51.1	-0.9
	baz=117						
ARE0				SN	Sn	19 36 32.5	-1.9
ERTU	Ertsjaerv	4.60	262	SB	Sb	19 37 07.8	-5.3

HEL 24 19:36:18.9±0.4**, 67°.86N×20°.34E, h0**^{km}**, ML1.4, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANU	Lannavaara	0.65	73	PG	Pg	19 36 31.2	-0.1
LANU				SG	Sg	19 36 38.5	-1.2
KIF	Kilpisjarvi	1.16	8	PG	Pg	19 36 40.4	-0.7
KIF				SG	Sg	19 36 54.0	-2.0
KIF				MSG		19 36 55.2	
	comp=Z,4.3nm,0.2s						
HEF	Hetta	1.36	65	SN	Pg	19 36 43.7	-1.2
HEF	Hetta	1.36	65	PG	Pg	19 36 43.7	-1.2
	baz=251						
HEF				MSG		19 36 59.9	
	comp=Z,2.1nm,0.2s						
HEF				SN	Sn	19 37 06.4	+2.6
ERTU	Ertsjaerv	1.50	150	PG	Pn	19 36 45.6	-1.4
	baz=330						
ERTU				SG	Sg	19 37 05.1	-1.9
TOF	Tornio	2.38	137	MSG		19 37 29.4	
	comp=Z,1.6nm,0.2s						
TOF				SB	Sb	19 37 31.0	-1.4
SGF	Sodankyl	2.40	97	SB	Sn	19 37 31.1	+1.6
RNF	Rovaniemi	2.54	117	SB	Sn	19 37 34.5	+1.6

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*IDC **24** 19:38:39.4±1.0, 36°.16N×27°.29E, h81^{km}±16^{km}, mb3.6/4, mb1 3.6/10, mb1mx3.2/41, mbtmp3.8/10, Error ellipse: s-maj=18.5km s-min=8.8km az=164.0*
*ISK **24** 19:38:40.3, 36°.19N×27°.28E, h87^{km}, ML3.4/23*
*ATH **24** 19:38:40.5, 36°.17N×27°.23E, h83^{km}±3^{km}, ML3.4/14, Error ellipse: s-maj=3.2km s-min=1.1km az=134.0*
*NIC **24** 19:38:41.9±0.0, 35°.89N×27°.48E, h88^{km}±1^{km}, Ml3.6/3*
*THE **24** 19:38:42.2, 36°.19N×27°.24E, h85^{km}±3^{km}, ML3.4/7, Error ellipse: s-maj=3.5km s-min=0.6km az=104.0*
*DDA **24** 19:38:42.0, 36°.24N×27°.25E, h70^{km}±7^{km}, MW3.5*
*GII **24** 19:38:45.1±0.5, 35°.83N×27°.71E, h65^{km}, MD3.1/5, Mm3.3/7*
*HLW **24** 19:38:45.2, 35°.57N×27°.40E, h27^{km}±23^{km}, Md4.6, Ml4.4*
ISC 24 19:38:39.9±0.8**, 36°.12N**±0°.03×**27°.35E**±0°.03**, h88**^{km}±6^{km}**, n168, σ1^{s}.67**/227**, mb3.5**/4**, 1C-1D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.59	195	P	Pn	19 38 56.4	+1.2
KARP				S	Sn	19 39 07.5	+0.9
	6µm,0.2s						
KARP	Karpathos	0.59	195	P	Pn	19 38 56.7	+1.4
KARP				S	Sn	19 39 07.5	+0.9
KARP				AML	AML	19 39 07.9	
	comp=N,13380µm,0.3s						
KARP				AML	AML	19 39 08.9	
	comp=E,10311µm,0.3s						
KARP	Karpathos	0.59	195	PG	Pn	19 38 56.6	+1.4
KARP				SG	Sn	19 39 07.9	+1.3
KARP	Karpathos	0.59	195	P	Pn	19 38 56.6	+1.4
KARP				S	Sn	19 39 07.1	+0.6
KARP				AML	AML	19 39 07.8	
	comp=E,12nm,0.3s						
KARP				AML	AML	19 39 07.8	
	comp=E,12nm,0.3s						
KARP				AML	AML	19 39 08.5	
	comp=E,10nm,0.3s						
KARP				AML	AML	19 39 08.5	
	comp=E,10nm,0.3s						
ARG	Arkhangelos	0.64	81	P	Pn	19 38 57.5	+1.9
ARG				S	Sn	19 39 09.2	+1.9
ARG	Arkhangelos	0.64	81	P	Pn	19 38 57.5	+1.9
ARG				S	Sn	19 39 09.1	+1.8
ARG				AML	AML	19 39 09.7	
	comp=N,10940µm,0.3s						
ARG				AML	AML	19 39 09.8	
	comp=E,23395µm,0.3s						
ARG	Arkhangelos	0.64	81	P	Pn	19 38 57.5	+1.9
ARG				S	Sn	19 39 09.4	+2.1
DAT	Datca	0.64	17	P	Pn	19 38 56.5	+0.7
DAT				S	Sn	19 39 07.2	-0.4
DAT	Datca	0.64	17	PG	Pn	19 38 56.5	+0.7
DAT				SG	Sn	19 39 07.5	-0.1
DAT	Datca	0.64	17	i P	Pn	19 38 56.2	+0.4
DAT				i S	Sn	19 39 05.6	-2.0
DAT				IAML		19 39 07.0	
	comp=N,567nm,0.2s						
DATC	Datca-Mugla	0.69	21	PG	Pn	19 38 56.9	+0.8
DATC				SG	Sn	19 39 08.7	+0.5
KOSK	Kos Island	0.70	335	PG	Pn	19 38 56.6	+0.4
KOSK				SG	Sn	19 39 08.1	-0.3
MRSB	Marmaris-Mugla	0.91	48	PG	Pn	19 38 59.6	+1.1
MRSB				SG	Sn	19 39 12.9	+0.6
BODT	Bodrum	0.95	358	PG	Pn	19 38 59.1	+0.2
BODT				SG	Sn	19 39 12.9	-0.1
BDRM	Kayabasi	0.95	5	i P	Pn	19 38 57.8	-1.2
BDRM				IAML		19 39 13.0	
	comp=E,313nm,0.4s						
TURN	Turunc	1.26	53	PG	Pn	19 39 00.4	-2.2
TURN				SG	Sn	19 39 14.3	-5.3
TURN	Turunc	1.26	53	i P	Pn	19 39 00.4	-2.2
TURN				i S	Sn	19 39 11.6	-8.0
TURN				IAML		19 39 14.0	
	comp=N,1µm,0.3s						
TURN				IAML		19 39 14.0	
	comp=E,1µm,0.4s						
DALY	Dalyan (Mula)	1.26	56	PN	Pn	19 39 04.7	+2.1
DALY				SN	Sn	19 39 21.5	+1.9

DALY	Dalyan (Mula)	1.26	56	*i* P	Pn	19 39 04.7	+2.1
DALY				*i* S	Sn	19 39 21.0	+1.4
DALY				IAML		19 39 22.0	
	comp=N,422nm,0.2s						
DALY				IAML		19 39 23.0	
	comp=E,431nm,0.4s						
YER	Yerkesik	1.27	36	P	Pn	19 39 04.2	+1.5
YER				S	Sn	19 39 20.0	+0.2
YER	Yerkesik	1.27	36	PN	Pn	19 39 04.2	+1.5
ANAF	Anafi Island	1.30	281	P	Pn	19 39 03.3	+0.3
ANAF				S	Sn	19 39 18.8	-1.6
	comp=E,2µm,0.4s						
ANAF	Anafi Island	1.30	281	P	Pn	19 39 03.2	+0.2
ANAF				S	Sn	19 39 19.0	-1.5
ANAF				AML	AML	19 39 19.7	
	comp=E,4119µm,0.4s						
ANAF				AML	AML	19 39 20.6	
	comp=N,5714µm,0.5s						
ZKR	Zakros	1.36	223	P	Pn	19 39 05.4	+1.6
ZKR				S	Sn	19 39 23.0	+1.2
	comp=N,635nm,0.4s						
ZKR	Zakros	1.36	223	P	Pn	19 39 05.5	+1.8
ZKR				S	Sn	19 39 22.5	+0.7
ZKR				AML	AML	19 39 24.3	
	comp=N,709µm,0.3s						
ZKR				AML	AML	19 39 24.7	
	comp=E,1764µm,0.3s						
ZKR	Zakros	1.36	223	PN	Pn	19 39 05.4	+1.6
ZKR	Zakros	1.36	223	P	Pn	19 39 05.5	+1.6
ZKR				S	Sn	19 39 23.3	+1.5
ZKR				AML	AML	19 39 24.3	
	comp=E,1.8nm,0.3s						
ZKR				AML	AML	19 39 24.3	
	comp=E,1.8nm,0.3s						
STIA	Sitia Lasithi	1.37	229	P	Pn	19 39 05.8	+1.9
STIA				S	Sn	19 39 22.7	+0.7
AMGA	Amorgos Island	1.37	302	P	Pn	19 39 03.8	-0.2
AMGA				S	Sn	19 39 20.2	-1.9
	comp=E,362nm,0.7s						
AMGA	Amorgos Island	1.37	302	P	Pn	19 39 03.7	-0.3
FETY	Fethiye	1.49	69	P	Pn	19 39 07.6	+2.1
FETY				S	Sn	19 39 26.2	+1.4
FETY	Fethiye	1.49	69	PN	Pn	19 39 07.4	+1.9
FETY	Fethiye	1.49	69	*i* P	Pn	19 39 07.4	+1.9
FETY				IAML		19 39 27.0	
	comp=E,261nm,0.2s						
FETY				IAML		19 39 28.0	
	comp=N,296nm,0.2s						
THR8	Santorini-Mono	1.54	281	P	Pn	19 39 06.2	+0.2
THR8	Santorini-Mono	1.54	281	P	Pn	19 39 06.1	+0.2
SANT	Santorini	1.55	280	P	Pn	19 39 06.3	+0.1
SANT				AML	AML	19 39 26.2	
	comp=N,327µm,0.4s						
SANT				AML	AML	19 39 31.1	
	comp=E,668µm,0.3s						
SANT	Santorini	1.55	280	PN	Pn	19 39 06.7	+0.5
SAP2K	Karterados	1.57	281	P	Pn	19 39 06.8	+0.4
THT1	Athinios (Pele	1.57	280	P	Pn	19 39 06.7	+0.2
THR2	Thira island,	1.58	283	P	Pn	19 39 06.9	+0.3
THR7	Fira-Santorini	1.58	282	P	Pn	19 39 07.1	+0.5
GCAM	G?zelcaml?	1.58	357	PN	Pn	19 39 07.3	+0.7
THT2	Imerovigli	1.59	282	PN	Pn	19 39 07.3	+0.6
THR6	Thira Island,	1.60	279	P	Pn	19 39 07.2	+0.4
SAP1	Santorini-Akro	1.60	279	P	Pn	19 39 07.2	+0.4
STAX	Taxiarchis Har	1.60	281	P	Pn	19 39 07.1	+0.4
THR3	Thira Island,	1.60	281	P	Pn	19 39 07.2	+0.4
THR3	Thira Island,	1.60	281	P	Pn	19 39 07.2	+0.4
CMBO	Columbo, Santo	1.61	283	P	Pn	19 39 07.2	+0.3
SMG	Samos	1.64	346	P	Pn	19 39 07.6	+0.2
SMG	Samos	1.64	346	P	Pn	19 39 07.8	+0.3
SMG				AML	AML	19 39 27.9	
	comp=E,744µm,0.5s						
SMG				AML	AML	19 39 28.3	
	comp=N,320µm,0.5s						
THR5	Thira Island,	1.65	281	P	Pn	19 39 07.9	+0.6
NPS	Neapolis	1.65	239	P	Pn	19 39 08.2	+0.7
NPS				S	Sn	19 39 27.8	-0.6
	comp=N,1µm,0.3s						
NPS	Neapolis	1.65	239	P	Pn	19 39 08.2	+0.7
NPS				S	Sn	19 39 27.8	-0.6
NPS				AML	AML	19 39 28.3	
	comp=N,1780µm,0.3s						
NPS				AML	AML	19 39 29.4	
	comp=E,3277µm,0.3s						
SAP3	Santorini-Thir	1.65	282	P	Pn	19 39 06.9	-0.5
FRMA	Ierapetra Chan	1.71	231	P	Pn	19 39 09.0	+0.7
FRMA				S	Sn	19 39 29.5	-0.3
	comp=E,252nm,0.5s						
APE	Apeiranthos	1.75	304	P	Pn	19 39 08.6	-0.2
APE	Apeiranthos	1.75	304	PN	Pn	19 39 09.1	+0.3
IOSP	Ios island	1.77	291	P	Pn	19 39 09.2	+0.2
LAST	Lasithi	1.80	239	P	Pn	19 39 10.3	+0.8
LAST				S	Sn	19 39 31.2	-0.7
LAST	Lasithi	1.80	239	P	Pn	19 39 10.3	+0.8
LAST				S	Sn	19 39 31.7	-0.2
LAST				AML	AML	19 39 36.7	
	comp=N,555µm,0.4s						
LAST				AML	AML	19 39 43.4	
	comp=E,555µm,0.6s						
KSL	Kastellorizon	1.81	88	P	Pn	19 39 11.8	+2.3
KSL				S	Sn	19 39 34.3	+2.3
	comp=E,705nm,0.5s						
KSL	Kastellorizon	1.81	88	P	Pn	19 39 11.9	+2.3
KSL				AML	AML	19 39 36.2	
	comp=N,1063µm,0.5s						
KSL				AML	AML	19 39 36.4	
	comp=E,1808µm,0.3s						
KSL	Kastellorizon	1.81	88	P	Pn	19 39 11.9	+2.3
KSL				S	Sn	19 39 33.7	+1.7
KSL				AML	AML	19 39 35.6	
	comp=E,1.8nm,0.6s						
KSL				AML	AML	19 39 35.6	
	comp=E,1.8nm,0.6s						
KSL				AML	AML	19 39 36.4	
	comp=E,1.1nm,0.3s						
KSL				AML	AML	19 39 36.4	
	comp=E,1.1nm,0.3s						
AKAS	Kas	1.83	86	PN	Pn	19 39 12.2	+2.2
AKAS	Kas	1.83	86	*i* P	Pn	19 39 12.2	+2.2
TAVA	DENIZLI_Tavas	1.84	43	*i* P	Pn	19 39 11.4	+1.3
TAVA				IAML		19 39 37.0	
	comp=E,81nm,0.5s						
TAVA				IAML		19 39 38.0	
	comp=N,87nm,0.4s						
AYDB	Zeytinkoy-Aydi	1.88	13	PN	Pn	19 39 11.3	+0.7
DGB	zmir	1.97	349	*i* P	Pn	19 39 11.3	-0.3
DGB				*i* S	Sn	19 39 35.1	-0.6
HRKL	Herakleio	2.00	247	PN	Pn	19 39 13.8	+1.8
IACM	Heraklion	2.02	247	P	Pn	19 39 12.6	+0.3
IACM				S	Sn	19 39 36.5	-0.5
GOLH	Golhisar	2.10	57	*i* P	Pn	19 39 15.9	+2.4
GOLH				IAML		19 39 48.0	
	comp=N,255nm,0.4s						
GOLH				IAML		19 40 30.0	
	comp=E,113nm,2.5s						
DENT	Denizli	2.12	39	PN	Pn	19 39 14.4	+0.7
ELL	Elmali	2.16	72	PN	Pn	19 39 17.1	+2.8
ELL	Elmali	2.16	72	P	Pn	19 39 17.1	+2.8
ELL				S	Sn	19 39 43.4	+2.9
IDI	Anoyia	2.16	248	P	Pn	19 39 14.6	+0.3
	comp=E,22nm,0.3s,baz=82,slow=14,SNR=226						
IDI				S	Sn	19 39 39.3	-1.2
	comp=E,43nm,0.3s,baz=282,slow=23,SNR=25						
IDI	Anoyia	2.16	248	P	Pn	19 39 14.6	+0.3
IDI				S	Sn	19 39 39.5	-1.0
IDI				AML	AML	19 39 41.7	
	comp=N,635µm,0.3s						
IDI				AML	AML	19 39 44.2	
	comp=E,796µm,0.4s						
IDI	Anoyia	2.16	248	PN	Pn	19 39 15.0	+0.7
URLA	Izmir	2.32	345	PN	Pn	19 39 17.2	+0.9
SIVA	Sivas	2.34	243	P	Pn	19 39 18.3	+1.8
SIVA				AML	AML	19 39 50.6	
	comp=N,908µm,0.8s						
SIVA				AML	AML	19 39 55.7	
	comp=E,1191µm,0.4s						
CHOS	Chios island	2.49	336	P	Pn	19 39 18.8	+0.2
CHOS	Chios island	2.49	336	PN	Pn	19 39 18.8	+0.2
SERI	Serifos	2.53	295	P	Pn	19 39 19.4	+0.3
MANT	Manisa	2.56	22	*i* P	Pn	19 39 20.6	+0.9
KORT	Korkueli	2.57	69	PN	Pn	19 39 22.8	+3.0
KULA	Kula-Manisa	2.61	23	PN	Pn	19 39 21.4	+1.1
VAM	Vamos	2.66	256	P	Pn	19 39 21.2	+0.4
VAM				S	Sn	19 39 50.8	-1.4
VAM				AML	AML	19 39 54.2	
	comp=E,682µm,0.2s						
VAM				AML	AML	19 39 55.1	
	comp=N,694µm,0.3s						
BRDR	BURDUR-Merkez	2.69	53	*i* P	Pn	19 39 22.8	+1.5
ANTB	Antalya	2.78	73	PN	Pn	19 39 24.7	+2.4
AKHS	Akhisar	2.78	7	*i* P	Pn	19 39 22.7	+0.2
BASM	Basmaki-Afyon	2.81	49	PN	Pn	19 39 24.0	+1.0
IMMV	Iera Moni Meta	2.81	258	P	Pn	19 39 24.1	+1.2
IMMV				S	Sn	19 39 54.2	-1.7
IMMV				AML	AML	19 40 01.7	
	comp=E,619µm,0.3s						
IMMV				AML	AML	19 40 01.8	
	comp=N,738µm,0.3s						
KHAL	Karahalli	2.83	37	*i* P	Pn	19 39 24.3	+1.1
USAK	Uak-Merkez	2.92	27	*i* P	Pn	19 39 25.6	+1.3
USAK				IAML		19 41 07.0	
	comp=N,32nm,3.4s						
BCK	Bucak	2.93	62	PN	Pn	19 39 26.4	+1.9
GVD	Gavdhos	2.95	245	P	Pn	19 39 26.5	+1.8
GVD				AML	AML	19 40 02.0	
	comp=N,612µm,0.3s						
GVD				AML	AML	19 40 06.2	
	comp=E,607µm,0.4s						
KARY	Karystos	3.01	310	P	Pn	19 39 26.1	+0.6
ISP	Isparta	3.06	55	PN	Pn	19 39 27.9	+1.6
ANKY	Antikythira Is	3.29	267	P	Pn	19 39 30.2	+0.9
ANKY				S	Sn	19 40 06.7	-0.7
VLY	Voula,Athens	3.33	302	P	Pn	19 39 30.9	+1.0
PTL	Penteli	3.39	306	P	Pn	19 39 31.5	+0.9
DID	Didima	3.58	294	P	Pn	19 39 33.5	+0.3
KRND	KRANIDI	3.60	292	P	Pn	19 39 34.7	+1.3
VLI	Veliai	3.61	281	P	Pn	19 39 34.2	+0.6
AKMS	Akamas	4.21	104	⇓P	Pn	19 39 42.5	+0.7
ALFC	Alefka	4.38	101	P	Pn	19 39 44.8	+0.6
NATA	Nata	4.47	106	⇑P	Pn	19 39 46.1	+0.8
SZAC	Souni	4.72	105	P	Pn	19 39 49.4	+0.7
MATC	Matruh	4.76	181	P	Pn	19 39 50.0	+0.8
	baz=183						
MATC				AMP		19 40 00.0	
	baz=183						
MATC				S	Sn	19 40 32.3	-11
	baz=183						
SLUM	Salum	4.94	202	P	Pn	19 39 51.7	-0.1
	baz=205						
SLUM				S	Sn	19 40 40.3	-7.3
	baz=205						
ASGA	Asgata	5.00	104	P	Pn	19 39 53.0	+0.6
CSS	Mathiatis	5.01	102	Pn	Pn	19 39 53.1	+0.4
CSS	Mathiatis	5.01	102	P	Pn	19 39 54.0	+1.3
OSC2	CSNet OBS 4	5.06	125	P	Pn	19 39 52.5	-0.8
OSC2				S	Sn	19 40 50.3	-0.3
PARAL	Paralimni	5.57	100	P	Pn	19 40 02.5	+2.2
BRTR	Keskin Array B	6.14	52	P	Pn	19 40 08.6	+0.5
	comp=E,0.5nm,0.3s,baz=228,slow=14,SNR=13						
BRTR				S	Sn	19 41 17.8	+0.8
	comp=E,0.3nm,0.3s,baz=223,slow=25,SNR=10						
HNAT	Natroun	7.02	156	P	Pn	19 40 20.7	+0.6
	baz=154						
SWA2		7.04	194	P	Pn	19 40 19.6	-0.7
	baz=196						
SWA2				AMP		19 41 00.0	
	baz=196						
SWA2				S	Sn	19 41 27.5	-11
	baz=196						
HNTI	Hanita	7.13	113	Pn	Pn	19 40 21.8	+0.3
HNTI				Sn	Sn	19 41 37.3	-3.6
KOT	Kottamia	7.23	147	P	Pn	19 40 22.9	0.0
	baz=145						
HWQ	Hawqa	7.27	102	*e*P	Pn	19 40 24.0	+0.4
HHAG	Hagoal	7.32	146	P	Pn	19 40 24.7	+0.5
	baz=143						
HHAG				AMP		19 41 00.0	
	baz=143						
HHAG				S	Sn	19 41 38.0	-7.9
	baz=143						
MMA0B	Mount Meron ar	7.33	113	Pn	Pn	19 40 24.4	+0.1
MMA0B				Sn	Sn	19 41 43.1	-2.9
MMAI	Mount Meron Ar	7.33	113	P	Pn	19 40 24.2	-0.1
	comp=E,7.8nm,0.3s,baz=317,slow=12,SNR=48						
MMAI				S	Sn	19 41 43.2	-2.8
	comp=E,8.6nm,0.3s,baz=308,slow=26,SNR=10						
HSAF	As Saff	7.38	150	P	Pn	19 40 25.5	+0.5
	baz=148						
KSDI	Kefar Szold	7.44	111	Pn	Pn	19 40 25.6	-0.2
KSDI				Sn	Sn	19 41 45.7	-2.9
RCY	Rachaya	7.45	108	*e*P	Pn	19 40 26.0	-0.1
SLTI	Sal'it	7.45	119	Pn	Pn	19 40 26.5	+0.5
NATI	Neve Ativ	7.47	110	Pn	Pn	19 40 26.2	0.0
NATI				Sn	Sn	19 41 46.1	-3.2
GLL	Jalalah	7.48	149	P	Pn	19 40 26.4	0.0
	baz=147						
MMLI	Mount Malkishu	7.62	116	Pn	Pn	19 40 29.1	+0.8
MMLI				Sn	Sn	19 41 49.9	-3.2
KSHT	Keshet	7.65	112	Pn	Pn	19 40 28.9	+0.2
SUZ	Suez	7.77	142	P	Pn	19 40 30.9	+0.6
	baz=139						
AMAZ	Amatzia	7.78	124	Pn	Pn	19 40 30.4	0.0
AMAZ				Sn	Sn	19 41 53.3	-3.6
HMDT	Nahal Hemdat	7.79	117	Pn	Pn	19 40 31.2	+0.6
KZIT	Kziot	7.85	129	Pn	Pn	19 40 31.3	-0.1
KZIT				Sn	Sn	19 41 55.2	-3.4
YTIR	Yattir	8.02	124	Pn	Pn	19 40 33.8	+0.1
DSI	Dead Sea	8.07	122	Pn	Pn	19 40 34.7	+0.3
DSI				Sn	Sn	19 42 00.7	-3.3
ZAF	Zafarana	8.10	146	P	Pn	19 40 35.5	+0.7
	baz=143						
ZNM	Zenema	8.17	144	P	Pn	19 40 37.1	+1.3
	baz=141						
GHAJ	Ghor Haditha	8.36	123	Pn	Pn	19 40 38.9	+0.6
ZFRI	Zfri	8.58	128	Pn	Pn	19 40 41.1	-0.2
KRMI	Paran Flat	8.60	132	Pn	Pn	19 40 41.6	-0.1
PRNI	Paran	8.61	130	Pn	Pn	19 40 41.5	-0.2
PRNI				Sn	Sn	19 42 12.6	-4.6
ASF	Jabal al Asfar	8.84	114	P	Pn	19 40 46.0	+1.1
	comp=E,0.4nm,0.3s,baz=286,slow=7.4,SNR=3.9						
ASF				S	Sn	19 42 22.7	-0.1
	comp=E,0.2nm,0.3s,baz=182,slow=19,SNR=1.5						
HRFI	Mount Harif	8.85	131	Pn	Pn	19 40 45.1	+0.1
MBRI	Mt Berech	8.95	133	Pn	Pn	19 40 46.7	+0.3
MBRI				Sn	Sn	19 42 21.4	-4.2
HFRF	Wahat Farafira	8.98	174	P	Pn	19 40 46.5	-0.2
	baz=174						
HFRF				AMP		19 42 00.0	
	baz=174						
EIL	Elat	9.06	133	P	Pn	19 40 48.2	+0.3
	comp=E,1.2nm,0.3s,baz=337,slow=13,SNR=33						
EIL				S	Sn	19 42 23.8	-4.4
	comp=E,3.0nm,0.3s,baz=302,slow=14,SNR=10						
EIL	Elat	9.06	133	Pn	Pn	19 40 48.0	+0.1
EIL				Sn	Sn	19 42 23.4	-4.8
GRB	Gharib	9.07	148	P	Pn	19 40 48.0	-0.1
	baz=146						
HBST	Basata	9.27	136	P	Pn	19 40 51.6	+0.8
	baz=133						
HKAT	Jabal Katrina	9.43	142	P	Pn	19 40 53.5	+0.5
	baz=139						
HDHB	Dhahab	9.59	138	P	Pn	19 40 55.7	+0.6
	baz=136						
TR1	Tor 1	9.83	143	P	Pn	19 40 58.1	-0.3
	baz=141						
HHRG	Al Ghardaqah	10.33	147	P	Pn	19 41 07.3	+2.1
	baz=146						
VYHS	Vyhne	13.87	336	*e*	P	19 42 01.0	+3.2
KBA	Koelnbreinsper	15.13	321	*e*Pn	P	19 42 12.3	+0.3
	comp=E,2.8nm,0.3s						
ABTA	Abfaltersbach	15.36	318	*e*Pn	P	19 42 15.3	+0.9
	comp=E,4.2nm,0.6s						
WTTA	Wattenberg	16.15	318	*e*P	P	19 42 25.4	+2.0
	comp=E,2.4nm,0.4s						
GERES	GERESS Array B	16.19	326	P	P	19 42 22.3	-1.4
	comp=E,0.2nm,0.3s,baz=144,slow=12,SNR=6.7						
WATA	Walderalm	16.22	319	P	P	19 42 26.5	+2.3
	comp=E,0.8nm,0.2s						
MOTA	Moosalm	16.48	318	*e*Pn	P	19 42 27.3	+0.3
	comp=E,1.1nm,0.4s						
FETA	Feichten	16.50	316	*e*P	P	19 42 29.7	+2.5
	comp=E,3.3nm,0.6s						
FINES	FINESS Array B	25.36	359	P	P	19 43 57.6	-0.9
	comp=E,0.8nm,0.8s,baz=168,slow=9.5,SNR=6.1						
HFS	Hagfors	25.60	344	P	P	19 44 00.1	-0.5
	comp=E,0.6nm,0.3s,baz=144,slow=10,SNR=8.7						
TORD	Torodi Ar. Bea	32.47	232	P	P	19 45 03.2	+1.1
	comp=E,0.5nm,0.6s,baz=37,slow=8.8,SNR=7.0						
ARCES	ARCESS Array B	33.49	359	P	P	19 45 09.3	-1.1
	comp=E,8.0nm,1.2s,baz=173,slow=8.2,SNR=5.5						

IDC **24** *19:59:41.1±1.4, 19°.52S×70°.66W, h0^{km}, mb4.3/3, mb1 4.3/5, mb1mx3.8/30, mbtmp4.2/5, ML3.8/2, MS2.9/4, Ms1 3.0/4, ms1mx2.7/25, Error ellipse: s-maj=39.2km s-min=18.2km az=71.0*

NEIC **24** *19:59:43.3, 19°.57S×70°.83W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}2.15; $M_{\theta\theta}$0.24; $M_{\phi\phi}$-2.39; $M_{r\theta}$2.10; $M_{\theta\phi}$1.98; $M_{\phi r}$-6.46; Fault plane solution: $M_0$7.43000×10^{14} NP1:ϕ_s162.31000°, δ79.14000°, λ96.45000°. NP2:ϕ_s311.37000°, δ12.61000°, λ59.67000°. Principal axes: T 6.7837, Plg55.0000°, Azm80.0000°; N 1.1651, Plg6.0000°, Azm341.0000°; P -7.9488, Plg34.0000°, Azm247.0000°;*

NEIC **24** *19:59:43.3±2.8, 19°.57S±0°.04×70°.83W±0°.08, h17^{km}±5^{km}, mb4.6/4, Mwr3.8/17 Error ellipse: s-maj=10.6km s-min=6.4km az=95.0*

GUC **24** *19:59:46.0±0.8, 19°.58S×70°.82W, h33^{km}±3^{km}, ML3.9*

ISC 24 19:59:42.5±1.7**, 19°.56S**±0°.03×**70°.84W**±0°.06**, h11^{km}**±10^{km}**, n55,** σ**1^{s}.25**/56**, mb4.4**/4**, 6C-6D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.68	93	⇓*i*P	Pn	19 59 57.1	-1.0
PSGC				*i* S	Sb	20 00 06.0	+0.3
PSGC				IAML		20 00 07.7	
	comp=N,5µm,0.6s						
PSGCX	Pisagua	0.68	93		Pb	19 59 57.0	+0.7
PB12	IPOC Station P	1.05	27	⇓*i*P	Pn	20 00 03.6	+0.3
PB12				*e*S	Sn	20 00 18.8	+0.8
PB12				IAML		20 00 19.5	
	comp=E,3µm,0.6s						
PB12	IPOC Station P	1.05	27		Pn	20 00 03.4	+0.1
PB11	IPOC Station P	1.13	101	⇓*i*P	Pg	20 00 04.6	+0.3
PB11				*e*S	Sg	20 00 19.6	+0.4
PB11				IAML		20 00 22.4	
	comp=N,16µm,0.3s						
PB11	IPOC Station P	1.13	101		Pn	20 00 04.3	-0.2
TA01	Diego Aracena	1.18	148	⇑*i*P	Pb	20 00 05.2	+0.3
TA01				*i* S	Sn	20 00 20.1	-0.9
TA01				IAML		20 00 22.1	
	comp=E,5µm,0.6s						
AP01	Chacalluta	1.27	22	⇑*i*P	Pb	20 00 07.0	+0.6
AP01				*e*S	Sg	20 00 24.4	+0.9
AP01				IAML		20 00 26.3	
	comp=E,7µm,0.4s						
PATCX	Punta Patache	1.41	153	⇑*i*P	Pb	20 00 08.6	-0.4
PATCX				*e*S	Sb	20 00 27.0	0.0
PATCX				IAML		20 00 36.1	
	comp=E,2µm,0.5s						
PATCX	Punta Patache	1.41	153		Pn	20 00 08.4	+0.1
GO01	Chusmiza	1.55	94	⇓*i*P	Pb	20 00 11.8	+0.2
GO01				*i* S	Sg	20 00 32.4	-0.3
GO01	Chusmiza	1.55	94		Pb	20 00 11.7	+0.1
PB08	IPOC Station P	1.69	110	⇓*i*P	Pb	20 00 13.8	-0.1
PB08				*e*S	Sb	20 00 35.1	-0.1
PB08				IAML		20 00 38.0	
	comp=E,2µm,0.2s						
PB16	IPOC Station P	1.75	46	⇓*i*P	Pb	20 00 15.3	+0.3
PB16				*i* S	Sg	20 00 38.6	-0.3
PB16				IAML		20 00 44.5	
	comp=N,2µm,0.6s						
PB16	IPOC Station P	1.75	46		Pb	20 00 15.2	+0.3
PB01	IPOC Station P	1.95	140	⇑*i*P	Pn	20 00 16.4	+0.8
PB01				*e*S	Sb	20 00 40.6	-1.8
PB01				IAML		20 00 46.5	
	comp=N,2µm,0.4s						
PB01	IPOC Station P	1.95	140		Pn	20 00 16.4	+0.8
PB02	IPOC Station P	1.96	153	⇑*i*P	Pn	20 00 16.5	+0.7
PB02				*e*S	Sb	20 00 42.1	-0.8
PB02				IAML		20 00 48.6	
	comp=E,3µm,0.5s						
PB07	IPOC Station P	2.33	158	IAML		20 01 01.0	
	comp=E,927nm,0.6s						
PB07	IPOC Station P	2.33	158		Pn	20 00 21.0	0.0
PB09	IPOC Station P	2.68	146	⇑*i*P	Pn	20 00 27.4	+1.6
PB09				IAML		20 01 13.7	
	comp=N,2µm,0.9s						
PB09	IPOC Station P	2.68	146		Pn	20 00 27.3	+1.6
PB04	IPOC Station P	2.84	167		Pn	20 00 27.1	-0.8
LVC	Limon Verde	3.53	150	Pn	Pn	20 00 38.1	+0.4
	comp=N,6.0nm,0.3s,baz=337,slow=10,SNR=15						
LVC				Sn	Sn	20 01 20.4	+0.7
	comp=N,19nm,0.3s,baz=195,slow=15,SNR=3.7						
LVC				Lg	Lg	20 01 30.7	
	comp=N,34nm,0.3s,baz=185,slow=8.3,SNR=13						
LVC				LR	LR	20 01 53.0	
	comp=N,52nm,18.3s,baz=348,slow=38						
LVC	Limon Verde	3.53	150		Pn	20 00 38.7	+1.1
PB15	IPOC Station P	3.85	161		Pn	20 00 41.1	-0.8
PB10	IPOC Station P	3.95	176	Pn	Pn	20 00 42.0	-1.1
LPAZ	La Paz	4.15	39	Pn	Pb	20 00 51.5	-4.4
	comp=N,5.8nm,0.3s,baz=237,slow=1.8,SNR=32						
LPAZ				LR	LR	20 02 35.1	
	comp=N,197nm,18.3s,baz=260,slow=43						
LPAZ	La Paz	4.15	39		Pn	20 00 51.3	+4.9
PB14	IPOC Station P	5.06	176		Pn	20 00 57.1	-1.5
GO02	Mina Guanaco	5.70	169		Pn	20 01 06.9	-0.5
SIV	San Ignacio	9.96	71	Pn	Pn	20 02 04.7	-0.9
	comp=N,1.1nm,0.3s,baz=270,slow=12,SNR=15						
SIV				LR	LR	20 06 22.2	
	comp=N,112nm,18.9s,baz=296,slow=41						
CPUP	Villa Florida	14.15	121	LR	LR	20 09 06.8	
	comp=N,77nm,19.0s,baz=274,slow=40						
PTGA	Pitinga	21.53	31	P	P	20 04 30.7	-1.1
	comp=N,11nm,0.3s,baz=206,slow=15,SNR=38						
PTGA	Pitinga	21.53	31	P	P	20 04 30.6	-1.2
PTGA				IAmb	IAmb	20 04 31.1	
	comp=Z,10nm,0.5s						
SOTA	Rioblanco	22.29	345	*e*P	P	20 04 45.5	+5.0
GUY2C	Guyana, Caldas	25.02	349	*e*P	P	20 05 09.5	+2.2
NORC	Norcasia	25.28	351	*e*P	P	20 05 09.5	+0.4
RUSC	La Rusia	25.39	355	*e*P	P	20 05 11.1	+0.5
RUSC	La Rusia	25.39	355	P	P	20 05 09.5	-1.0
HELC	Santa Helena	26.00	349	*e*P	P	20 05 17.1	+1.1
SOLC	Bahia Solano	26.43	345	*e*P	P	20 05 35.9	+16
QSPA	South Pole Qui	70.62	180	P	P	20 10 59.3	+1.4
QSPA				IAmb	IAmb	20 11 12.3	
	comp=Z,8.0nm,1.4s						
TORD	Torodi Ar. Bea	78.43	72	P	P	20 11 42.9	-1.0
	comp=Z,1.4nm,0.8s,baz=257,slow=5.3,SNR=6.0						
YKA	Yellowknife Ar	88.77	341	P	P	20 12 36.3	+0.5
	comp=Z,0.6nm,0.7s,baz=135,slow=5.1,SNR=14						
H11S2	WAKE ISLAND Hy	125.81	279	T	T	22 37 57.6	
	baz=100,slow=74,SNR=53						
H11S1	WAKE ISLAND Hy	125.82	279	T	T	22 37 55.6	
	baz=100,slow=74,SNR=31						
H11S3	WAKE ISLAND Hy	125.83	279	T	T	22 37 56.4	
	baz=100,slow=74,SNR=28						
H11N3	WAKE ISLAND Hy	125.85	281	T	T	22 38 00.7	
	baz=100,slow=75,SNR=13						
H11N2	WAKE ISLAND Hy	125.87	281	T	T	22 38 01.7	
	baz=100,slow=75,SNR=15						
H11N1	WAKE ISLAND Hy	125.87	281	T	T	22 38 01.9	
	baz=100,slow=75,SNR=8.9						
WRA	Warramunga Arr	133.63	214	PKP	PKiKP	20 19 01.1	-0.3
	comp=Z,0.2nm,0.6s,baz=160,slow=1.6,SNR=1.9						
MAKZ	Makanchi	144.89	33		PKPbc	20 19 18.8	-0.1
MKAR	Makanchi Array	145.06	33	PKP	PKPdf	20 19 19.6	-0.5
	comp=Z,1.1nm,0.7s,baz=313,slow=3.6,SNR=15						
MKAR	Makanchi Array	145.06	33		PKPab	20 19 19.4	0.0

IDC **24** *20:05:15.6±2.0, 43°.77N×105°.42W, h0^{km}, mb1 3.6/4, mb1mx3.3/39, mbtmp3.3/4, ML2.9/3, Error ellipse: s-maj=56.5km s-min=8.4km az=149.0*

NEIC **24** *20:05:17.1±1.2, 43°.83N±0°.05×105°.22W±0°.04, h0^{km}±2^{km}, ML3.4/62, Error ellipse: s-maj=9.2km s-min=3.5km az=158.0*

ISC 24 20:05:15.4±0.9**, 43°.85N**±0°.06×**105°.10W**±0°.06**, h0^{km}, n61,** σ**1^{s}.15**/62**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.81	70		Pn	20 05 34.7	+0.4
K22A	Casper	1.59	221		Pn	20 05 43.6	-1.4
K22A				IAML		20 06 07.5	
	comp=N,646nm,0.3s						
K22A				IAML		20 06 09.3	
	comp=E,637nm,0.3s						

PHWY	Pilot Hill	2.56	186		Pn	20 05 59.0	+0.5
RWWY	Rawlins	2.67	216		Pn	20 06 00.1	+0.2
RWWY				IAML		20 06 36.0	
	comp=E,165nm,0.7s						
LAO	LASA Array	2.94	345		Pn	20 06 05.4	+1.9
N23A	Red Feather La	3.02	192		Pn	20 06 06.1	+1.3
N23A				IAML		20 06 53.4	
	comp=N,142nm,0.7s						
N23A				IAML		20 06 56.9	
	comp=E,93nm,0.7s						
RLMT	Red Lodge	3.24	294		Pn	20 06 08.8	+1.0
RLMT				IAML		20 07 03.0	
	comp=E,65nm,0.7s						
RLMT				IAML		20 07 04.7	
	comp=E,77nm,0.7s						
BW06	Boulder Array	3.43	253		Pn	20 06 10.4	0.0
BW06				IAML		20 06 60.0	
	comp=N,52nm,0.7s						
PD31	Pinedale Array	3.43	253		Pn	20 06 10.3	-0.1
PDAR	Pinedale Array	3.43	253	Pn	Pn	20 06 10.7	+0.3
	comp=N,6.6nm,0.3s,baz=65,slow=17,SNR=64						
PDAR				Pg	Pb	20 06 16.4	-0.8
	comp=N,21nm,0.3s,baz=68,slow=18,SNR=70						
PDAR				Lg	Lg	20 06 54.8	
	comp=N,8.6nm,0.3s,baz=80,slow=32,SNR=6.5						
PDAR	Pinedale Array	3.43	253		Pn	20 06 10.5	+0.1
OGNE	Ogallala	3.69	141		Pn	20 06 15.5	+1.7
YMP	Mirror Lake Pl	3.74	285		Pn	20 06 15.5	+0.8
GCMT	Greycliff	3.79	302		Pn	20 06 16.4	+1.2
H17A	Grant Village	3.98	280		Pn	20 06 19.6	+1.6
H17A				IAML		20 07 29.6	
	comp=N,32nm,0.9s						
FLWY	Flagg Ranch	4.05	275		Pn	20 06 19.2	+0.3
FLWY				IAML		20 07 38.8	
	comp=N,48nm,1.0s						
FLWY				IAML		20 07 43.1	
	comp=N,32nm,1.0s						
ISCO	Idaho Springs	4.07	186		Pn	20 06 20.5	+1.3
SNOW	Snow King Moun	4.12	267		Pn	20 06 19.8	-0.2
SNOW				IAML		20 07 25.7	
	comp=N,38nm,0.7s						
SNOW				IAML		20 07 50.2	
	comp=N,57nm,1.5s						
YPP	Pitchstone Pla	4.14	278		Pn	20 06 20.5	+0.4
REDW	Red Top Meadow	4.21	265		Pn	20 06 21.8	+0.7
IMW	Indian Meadow	4.22	273		Pn	20 06 22.0	+0.6
IMW				IAML		20 07 32.8	
	comp=N,42nm,0.7s						
IMW				IAML		20 07 36.1	
	comp=N,48nm,0.7s						
YHH	Holmes Hill	4.23	285		Pn	20 06 21.8	+0.3
YMR	Madison River	4.29	283		Pn	20 06 22.2	0.0
FXWY	Fox Creek	4.30	269		Pn	20 06 23.4	+1.0
O20A	White River Ci	4.39	213		Pn	20 06 24.4	+0.9
O20A				IAML		20 07 43.0	
	comp=E,62nm,0.8s						
O20A				IAML		20 07 53.1	
	comp=N,48nm,0.9s						
SUSD	Miller	4.46	80	Pn	Pn	20 06 24.7	+0.4
YHB	Horse Butte	4.47	284		Pn	20 06 25.0	+0.4
YHL	Hebgen Lake	4.48	285		Pn	20 06 24.8	0.0
AHID	Auburn Hatcher	4.51	258		Pn	20 06 26.7	+1.4
AHID				IAML		20 07 48.0	
	comp=N,56nm,0.7s						
AHID				IAML		20 07 52.8	
	comp=E,42nm,0.8s						
DGMT	Dagmar	4.66	7		Pn	20 06 30.4	+3.3
RDMU	Red Mountain	4.67	227		Pn	20 06 28.3	+0.9
KSCO	Kaye Shedlock'	5.18	158		Pn	20 06 35.3	+0.9
HWUT	Hardware Ranch	5.27	247		Pn	20 06 36.8	+1.2
HWUT				IAML		20 08 11.4	
	comp=E,32nm,0.8s						
EGMT	Eagleton	5.29	324		Pn	20 06 36.5	+0.8
TCUT	Toone Canyon	5.41	242		Pn	20 06 36.6	-1.0
MDND	Maddock	5.54	42		Pg	20 07 01.1	-0.4
LRM	Limekiln Ridge	5.59	293		Pn	20 06 40.5	+0.4
SPUT	South Promonto	5.99	247		Pn	20 06 46.5	+0.9
PV22	Blue Mesa, Par	6.00	209		Pn	20 06 47.1	+1.5
PV21	Cone Mtn., Par	6.04	210		Pn	20 06 45.9	-0.4
ECSD	EROS Data Cent	6.14	88		Pn	20 06 50.9	+3.5
PV23	Carpenter Ridg	6.15	210		Pn	20 06 49.0	+1.2
PV09	Paradox Valley	6.16	211		Pn	20 06 48.9	+1.0
PV04	Paradox Valley	6.17	209		Pn	20 06 48.3	+0.4
PV14	Lion Creek, Pa	6.23	210		Pn	20 06 49.8	+1.0
PV16	Nyswonger Mesa	6.24	209		Pn	20 06 50.2	+1.2
SRU	San Rafael Swe	6.25	223	Pn	Pn	20 06 49.3	+0.3
PV02	Paradox Valley	6.28	207		Pn	20 06 51.1	+1.6
PV13	Radium Mtn., P	6.35	208		Pn	20 06 50.8	+0.4
TMUT	Trail Mountain	6.46	227		Pn	20 06 52.8	+0.7
Q16A	Castle Valley	6.72	225		Pn	20 06 55.9	+0.4
T25A	Trinidad	6.73	175		Pn	20 06 57.0	+1.4
JTMT	Jette	7.51	304	Pn	Pn	20 07 07.0	+0.8
AGMN	Agassiz Nation	7.81	52		Pg	20 07 41.9	-3.1
MTPU	Mount Pierson	7.90	225	Pn	Pn	20 07 12.1	+0.2
WALA	Waterton Lakes	8.01	314		Pn	20 07 13.3	+0.2
PSUT	Pine Spring	8.47	234		Pn	20 07 20.7	+1.1
ULM	Lac du Bonnet	8.97	41	Pn	Pn	20 07 26.8	+0.7
	comp=E,1.2nm,0.3s,baz=228,slow=10,SNR=8.7						
ULM				Lg	Lg	20 09 59.7	
	comp=E,0.6nm,0.3s,baz=145,slow=21,SNR=3.4						
FFC	Flin Flon	11.07	9		Pn	20 07 55.7	+0.8
NVAR	Mina Array Bea	11.33	246	Pn	Pn	20 07 58.3	-0.5
	comp=E,0.1nm,0.3s,baz=52,slow=12,SNR=2.6						
YKA	Yellowknife Ar	19.48	347	P	P	20 09 44.2	+0.5
	comp=E,0.1nm,0.3s,baz=160,slow=11,SNR=5.5						

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*MEX **24** 20:17:40.6±0.8, 14°.76N×91°.99W, h99km±5km, MD3.8*
*GCG **24** 20:17:44.0±0.4, 14°.74N×92°.12W, h48km±20km, MD3.4*
ISC 24 20:17:44.4±1.4**, 15°.27N**±0°.09×**91°.88W**±0°.06**, h35**km**, n6, σ1s.16**/11**, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.52	226	*i* P	Pn	20 17 54.3	-1.1
THIG				*i* S	Sn	20 18 04.5	+1.4
STG3	Santiaguito 3,	0.63	152	*e*P	Pn	20 17 56.2	-0.9
FUG	Fuego 3	1.29	129	*e*P	Pn	20 18 05.8	-0.3
FUG				*e*S	Sn	20 18 23.2	+0.9
PCIG		1.36	288	*e*P	Pn	20 18 05.9	-1.1
PCIG				*e*S	Sn	20 18 25.0	+1.2
IXG	Ixpaco	1.77	128	*e*P	Pn	20 18 12.4	-0.3
IXG				*e*S	Sn	20 18 34.2	+0.2
CMIG	Matias Romero	3.41	302	*i* P	Pn	20 18 34.1	-1.0
CMIG				*i* S	Sn	20 19 15.9	+1.5

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*IDC **24** 20:18:18.5±1.8, 4°.69S×70°.84E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.6/32, mbtmp3.8/8, ML4.5/1, MS3.2/1, Ms1 3.2/1, ms1mx2.7/30, Error ellipse: s-maj=49.4km s-min=29.4km az=58.0*
ISC 24 20:18:19.9±1.5**, 4°.7S**±0°.2×**70°.8E**±0°.2**, h10**km**, n9, σ0s.57**/10**, mb3.8**/7**, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALK	Pallekele	15.46	40	Pn	Pn	20 21 58.6	+0.3
	1.8nm,0.3s,baz=226,slow=12,SNR=14						
PALK				Sn	Sn	20 24 31.3	-19
	0.3nm,0.3s,baz=223,slow=12,SNR=2.3						
PALK				LR	LR	20 26 28.1	
	comp=Z,94nm,19.0s,baz=212,slow=32						
CMAR	Chiang Mai Arr	36.04	50	P	P	20 25 22.0	+0.2
	1.4nm,0.9s,baz=242,slow=9.5,SNR=10						
MKAR	Makanchi Array	52.28	10	P	P	20 27 30.6	-0.9
	0.3nm,0.6s,baz=179,slow=6.1,SNR=5.6						
MKAR				PcP	PcP	20 28 42.8	-0.1
	0.4nm,0.6s,baz=208,slow=3.9,SNR=4.4						
ZALV	Zalesovo Beam	59.61	10	P	P	20 28 23.3	-0.6
	0.5nm,0.4s,baz=185,slow=7.2,SNR=4.0						
SONM	Songino Array	60.93	27	P	P	20 28 33.3	+0.1
	1.2nm,0.7s,baz=216,slow=7.3,SNR=9.7						
ASAR	Alice Springs	63.51	114	P	P	20 28 50.4	-0.6
	0.3nm,0.9s,baz=238,slow=5.3,SNR=2.3						
WRA	Warramunga Arr	63.54	110	P	P	20 28 51.3	+0.2
	0.3nm,0.8s,baz=290,slow=7.1,SNR=3.6						
FINES	FINESS Array B	74.41	339	P	P	20 29 58.2	+0.4
	0.9nm,0.9s,baz=45,slow=5.7,SNR=1.5						
NVAR	Mina Array Bea	145.43	13	PKPbc	PKPdf	20 37 59.7	+0.7
	0.8nm,0.7s,baz=35,slow=3.3,SNR=5.4						

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*SJA **24** 20:18:48.3±0.6, 27°.73S×71°.95W, h10km, ML4.7, MW4.4*
*IDC **24** 20:18:52.8±0.6, 27°.92S×71°.11W, h0km, mb4.4/11, mb1 4.4/15, mb1mx4.3/35, mbtmp4.3/15, ML3.8/4, MS3.7/6, Ms1 3.8/6, ms1mx3.3/30, Error ellipse: s-maj=24.6km s-min=15.9km az=78.0*
*VAO **24** 20:18:54.6±2.8, 27°.97S×71°.63W, h44km±14km, mb4.3*
*GUC **24** 20:18:54.2±0.4, 27°.81S×71°.46W, h38km±7km, ML4.6*
*NEIC **24** 20:18:55.2±1.3, 27°.89S±0°.05×71°.22W±0°.10, h15km±3km, mb4.8/44, ML5.0(GUC), Error ellipse: s-maj=12.3km s-min=6.7km az=92.0*
ISC 24 20:18:54.1±0.9**, 27°.85S**±0°.03×**71°.34W**±0°.05**, h11**km±5km**, n149, σ1s.51**/152**, mb4.9**/31**, 3C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO03	Copiap	1.01	75	⇓*i*P	Pb	20 19 13.7	+0.1
GO03				IAML		20 19 32.8	
	comp=E,12μm,0.2s						
GO03	Copiap	1.01	75		Pg	20 19 13.6	+0.1
LCO	Las Campanas	1.28	154	Pn	Pn	20 19 17.9	-0.3
GO04	Tololo Observa	2.36	169	⇑*i*P	Pn	20 19 33.6	+0.6
GO04				*i* S	Sn	20 20 03.7	+1.6
GO04	Tololo Observa	2.36	169		Pn	20 19 33.4	+0.4
AROD	Rodeo	2.83	145	*i* P	Pn	20 19 43.0	+3.5
AROD				*e*S	Sb	20 20 20.2	+0.7
VCA	Vinchina	2.90	108	*i* P	Pb	20 19 45.4	-0.5
VCA				*e*S	Sg	20 20 26.9	-0.3
VCA				IAML		20 20 28.3	
	comp=Z,2μm,0.6s						
AGUA	GUANDACOL	2.98	124	*e*P	Pb	20 19 46.3	-1.0
AGUA				*e*S	Sg	20 20 28.8	-1.2
AGUA				IAML		20 20 38.6	
	comp=Z,873nm,0.6s						
ACDV	Cuesta del Vie	3.02	140	*e*P	Pn	20 19 39.9	-2.1
ACDV				*e*S	Sb	20 20 27.4	+2.5
ACDV				IAML		20 20 41.1	
	comp=Z,893nm,1.0s						
CO03	El Pedregal	3.03	169	*e*P	Pn	20 19 42.7	+0.6
CO03				IAML		20 20 37.3	
	comp=E,3μm,0.4s						
GO02	Mina Guanaco	3.10	31	⇑*i*P	Pn	20 19 44.5	+1.3
GO02				*i* S	Sn	20 20 21.0	+0.5
GO02				IAML		20 20 37.0	
	comp=N,3μm,0.5s						
GO02	Mina Guanaco	3.10	31		Pn	20 19 44.5	+1.3
PB14	IPOC Station P	3.32	15	⇑*i*P	Pn	20 19 46.0	-0.4
PB14				IAML		20 20 43.5	
	comp=E,498nm,0.4s						
PB14	IPOC Station P	3.32	15		Pn	20 19 45.9	-0.4
PB14	IPOC Station P	3.32	15	*e*P	Pn	20 19 46.1	-0.2
PB14				*e*S	Sg	20 20 41.6	+0.8
PB14				IAML		20 20 45.9	
	comp=Z,1μm,0.4s						
ACCO	Cerro Coronel	3.37	144	*i* P	Pn	20 19 50.8	+3.8
ACCO				IAML		20 20 44.1	
	comp=Z,1μm,0.7s						
CO04	Los Peladeros	4.19	176	⇓*i*P	Pn	20 19 58.7	+0.5
RTLL	Cerro Villicun	4.27	145	*i* P	Pn	20 20 02.7	+3.6
RTLL				IAML		20 21 04.6	
	comp=Z,859nm,0.9s						
RTLS	Leoncito	4.31	156	*i* P	Pn	20 20 03.6	+3.7
RTLS				*e*S	Sb	20 21 06.6	+4.3
RTLS				IAML		20 21 19.7	
	comp=Z,1μm,0.7s						
ZON	Zonda	4.35	148	*i* P	Pn	20 20 03.6	+3.4
ZON				IAML		20 21 23.5	
	comp=Z,403nm,1.1s						
PB10	IPOC Station P	4.38	9		Pn	20 19 59.2	-1.4
RTCV	Cerro Valdivia	4.68	149	*i* P	Pn	20 20 07.6	+2.9
RTCV				IAML		20 21 26.8	
	comp=Z,383nm,1.1s						
APLL	PUNTA DE LOS L	4.91	122	*i* P	Pn	20 20 09.9	+2.0
APLL				IAML		20 21 15.9	
	comp=Z,383nm,0.4s						
CYA	Choya	4.92	98	*e*P	Pn	20 20 10.7	+2.6
CYA				IAML		20 21 14.1	
	comp=Z,346nm,0.6s						
PB15	IPOC Station P	4.92	20	⇓*i*P	Pn	20 20 09.1	+0.8
PB15	IPOC Station P	4.92	20		Pn	20 20 08.7	+0.5
ROC1	El Roble	5.11	177		Pn	20 20 10.4	-0.5
ROC1	El Roble	5.11	177	*i* P	Pn	20 20 10.8	-0.1
PEL	Peldehue	5.30	174		Pn	20 20 13.6	+0.3
PEL	Peldehue	5.30	174	*i* P	Pn	20 20 13.8	+0.5
PB04	IPOC Station P	5.60	11		Pn	20 20 15.9	-1.6
PB04	IPOC Station P	5.60	11	*i* P	Pn	20 20 16.4	-1.1
LVC	Limon Verde	5.66	23	Pn	Pn	20 20 19.3	+0.7
	comp=Z,18nm,0.3s,baz=178,slow=8.7,SNR=34						
LVC				Sn	Sn	20 21 24.8	+1.0
	comp=Z,13nm,0.3s,baz=176,slow=17,SNR=4.9						
LVC				Lg	Lg	20 21 47.4	
	comp=Z,28nm,0.3s,baz=26,slow=20,SNR=7.1						
LVC				LR	LR	20 22 39.5	
	comp=Z,885nm,18.8s,baz=212,slow=40						
LVC	Limon Verde	5.66	23		Pn	20 20 18.7	+0.1
LVC	Limon Verde	5.66	23	*e*P	Pn	20 20 18.9	+0.4
PB07	IPOC Station P	6.24	13		Pn	20 20 24.8	-1.5
PB09	IPOC Station P	6.32	18		Pn	20 20 27.6	+0.1
PB01	IPOC Station P	6.99	14		Pn	20 20 34.8	-1.7
PATCX	Punta Patache	7.08	9	Pn	Pn	20 20 35.7	-2.1
GO05	Huala	7.15	184		Pn	20 20 36.5	-2.2
PB11	IPOC Station P	8.20	11	Pn	Pn	20 20 50.5	-2.7
PSGCX	Pisagua	8.29	8		Pn	20 20 51.6	-2.8
GO01	Chusmiza	8.38	14	Pn	Pn	20 20 55.0	-1.0
PB12	IPOC Station P	9.24	6	Pn	Pn	20 21 05.4	-2.0
PB16	IPOC Station P	9.62	10	Pn	Pn	20 21 12.4	-0.7
GO06	Curarrehue	11.70	181	Pn	Pn	20 21 40.4	-0.7
LPAZ	La Paz	11.88	15	Pn	Pn	20 21 44.0	-0.2
	comp=Z,1.1nm,0.3s,baz=211,slow=6.6,SNR=7.9						
LPAZ				LR	LR	20 26 49.0	
	comp=Z,265nm,19.4s,baz=180,slow=40						
LPAZ	La Paz	11.88	15		Pn	20 21 43.4	-0.8
LPAZ	La Paz	11.88	15	*e*P	Pn	20 21 43.5	-0.7
CPUP	Villa Florida	12.57	86	Pn	Pn	20 21 49.4	-3.5
	comp=Z,0.1nm,0.3s,baz=63,slow=3.3,SNR=1.2						
CPUP				LR	LR	20 27 08.3	
	comp=Z,429nm,18.1s,baz=238,slow=40						
PLCA	Paso Flores	12.87	177	Pn	Pn	20 21 55.9	-1.1
	comp=Z,0.0nm,0.3s,baz=9.1,slow=17,SNR=1.4						
SIV	San Ignacio	15.15	41	Pn	Pn	20 22 22.3	-6.0
	comp=Z,1.7nm,0.3s,baz=236,slow=14,SNR=15						
AQDB	Aquidauana	16.04	66	*e*P	P	20 22 41.6	-1.5
NNA	Nana	16.61	341	LR	LR	20 27 40.9	
	comp=Z,101nm,20.2s,baz=180,slow=32						
CNLB	Canela	18.05	99	*e*P	Pn	20 23 05.3	+0.2
SALV	Santo Antonio	18.74	54	*e*P	Pn	20 23 14.0	+0.5
PCMB	Pacaembu	19.26	76	*e*P	P	20 23 18.5	-0.2
SAML	Samuel	20.32	24	P	Pn	20 23 31.1	-1.2
SAML	Samuel	20.32	24	*e*P	Pn	20 23 30.9	-1.4
ARAG	Araguaiana, MT	21.75	60	*e*P	P	20 23 44.6	-1.1
RCLB	Rio Claro- Sao	22.20	81	*e*P	P	20 23 49.7	-1.0
CLDB	Colider	22.32	44	*e*P	P	20 23 49.6	-2.3
VAO	Valinhos	22.52	83	*e*P	P	20 23 53.0	-1.1
IPMB	Ipameri, GO	23.42	70	*e*P	P	20 24 01.9	-1.6
BDFB	Brasilia	24.79	65	LR	LR	20 35 26.6	
	comp=Z,411nm,18.4s,baz=272,slow=40						
JANB	Januaria	28.11	69	*e*P	P	20 24 45.4	-0.9
PTGA	Pitinga	29.09	24	P	P	20 24 54.9	+0.1
	comp=Z,2.9nm,0.7s,baz=168,slow=9.9,SNR=6.2						
PTGA	Pitinga	29.09	24	IAmb	IAmb	20 24 55.9	
	comp=Z,7.0nm,1.1s						
RUSC	La Rusia	33.59	357	P	P	20 25 36.7	+1.7
TEIG	Tepich	50.53	339	P	P	20 27 54.2	+1.7
	comp=Z,5.6nm,0.5s						
TEIG	Tepich	50.53	339	IAmb	IAmb	20 27 55.1	
	comp=Z,42nm,1.4s						
VNA3	Neumayer Olymp	54.85	160	P	P	20 28 23.2	-0.8
VNA1	Neumayer--Stat	55.12	159	P	P	20 28 23.5	-2.4
VNA2	Neumayer--Watz	55.47	159	P	P	20 28 28.6	+0.1
	baz=306,slow=7.4						
SNAA	Sanae	57.07	159	P	P	20 28 39.6	-0.4
SNAA	Sanae	57.07	159	P	P	20 28 39.9	-0.1
	comp=Z,6.2nm,0.8s,baz=281,slow=7.9,SNR=17						
SNAA				LR	LR	20 52 07.2	
	comp=Z,80nm,18.4s,baz=3.0,slow=35						
SNAA	Sanae	57.07	159	P	P	20 28 39.7	-0.3
SNAA				IAmb	IAmb	20 28 40.8	
	comp=Z,8.5nm,0.9s						
QSPA	South Pole Qui	62.37	180	P	P	20 29 17.1	+0.5
QSPA				IAmb	IAmb	20 29 18.0	
	comp=Z,8.2nm,1.0s						
JCT	Junction City	64.06	333	P	P	20 29 30.0	+1.9
JCT				IAmb	IAmb	20 29 31.0	
	comp=Z,6.8nm,0.8s						
CPCT	Cooper Cave	64.18	348	P	P	20 29 29.5	+0.8
CPCT				IAmb	IAmb	20 29 30.7	
	comp=Z,8.2nm,0.9s						
SWET	Sewanee	64.23	347	P	P	20 29 29.8	+0.8
TX31	Lajitas Ar. Si	64.74	329	P	P	20 29 34.3	+1.7
TX32	Lajitas Array	64.74	329	P	P	20 29 34.3	+1.7
TXAR	Lajitas Array	64.74	329	P	P	20 29 34.6	+2.0
	comp=Z,1.0nm,0.7s,baz=151,slow=7.8,SNR=13						
TXAR	Lajitas Array	64.74	329	P	P	20 29 34.3	+1.7
WVT	Waverly	65.51	345	P	P	20 29 37.6	+0.3
WVT				IAmb	IAmb	20 29 38.5	
	comp=Z,7.6nm,0.9s						
T47A	Sharon Grove	66.18	346	P	P	20 29 42.2	+0.6
T47A				IAmb	IAmb	20 29 43.1	
	comp=Z,12nm,1.1s						
W39A	Magazine	66.20	340	P	P	20 29 43.1	+1.3
W39A				IAmb	IAmb	20 30 41.6	
	comp=Z,7.2nm,0.8s						
LCAR	Lake Charles	66.27	343	P	P	20 29 43.0	+0.7
LCAR				IAmb	IAmb	20 29 44.0	
	comp=Z,8.0nm,0.8s						
PBMO	Poplar Bluff	66.75	343	P	P	20 29 46.3	+1.0
U40A	Yellville	67.00	341	P	P	20 29 47.5	+0.6
MNTX	Cornudas Mount	67.52	329	P	P	20 29 50.5	+0.2
MNTX				IAmb	IAmb	20 29 52.7	
	comp=Z,2.8nm,0.9s						
CCM	Cathedral Cave	68.17	343	P	P	20 29 55.3	+1.0
CCM				IAmb	IAmb	20 29 56.2	
	comp=Z,9.2nm,0.8s						
S39A	Bolivar	68.38	341	P	P	20 29 56.7	+1.1
S39A				IAmb	IAmb	20 29 57.8	
	comp=Z,8.5nm,0.9s						
R40A	Maddies Statio	68.66	342	P	P	20 29 58.5	+1.2
P43A	Skaggs, Pawnee	69.25	345	P	P	20 30 01.9	+0.9
SYO	Syowa Base	71.36	159	⇓*e*PcP	PcP	20 30 26.4	-6.9
L40A	Anamosa	71.95	345	P	P	20 30 18.2	+0.8
L40A				IAmb	IAmb	20 30 19.5	
	comp=Z,12nm,0.7s						
LIC	Lamto	72.32	73	*e*P	P	20 30 19.7	-0.6
	comp=Z,19nm,0.8s						
JFWS	Jewell Farm	72.54	346	P	P	20 30 21.4	+0.5
JFWS				IAmb	IAmb	20 32 43.9	
	comp=Z,13nm,1.4s						
TIC	Toumodi	72.55	72	*e*P	P	20 30 19.7	-2.0
	comp=Z,4.2nm,0.3s						
SADO	Sadowa	72.62	354	P	P	20 30 22.1	+0.8
KIC	Kosan Boka	72.64	73	*e*P	P	20 30 21.8	-0.4
	comp=Z,24nm,0.9s						
X16A	Lo Mia Camp, P	72.64	326	P	P	20 30 21.9	-0.1
DBIC	Dimbokro	72.70	73	P	P	20 30 22.4	-0.1
	comp=Z,9.7nm,0.7s,baz=220,slow=6.3,SNR=13						
DBIC	Dimbokro	72.70	73	P	P	20 30 22.3	-0.2
DBIC				IAmb	IAmb	20 30 23.1	
	comp=Z,16nm,0.9s						
I42A	Draeger Farm,	73.19	347	P	P	20 30 25.6	+0.9
W13A	Hualapai Mount	74.40	325	P	P	20 30 35.0	+2.6
PV13	Radium Mtn., P	74.46	330	P	P	20 30 33.1	+0.4
PV13				IAmb	IAmb	20 30 35.5	
	comp=Z,3.8nm,0.8s						
ECSD	EROS Data Cent	74.92	341	P	P	20 30 36.1	+1.2
ECSD				IAmb	IAmb	20 30 37.0	
	comp=Z,6.4nm,0.9s						
E43A	Lone Tree Farm	75.23	349	P	P	20 30 37.2	+0.6
E43A				IAmb	IAmb	20 30 37.3	
	comp=Z,30nm,2.0s						
D41A	Chassel	76.17	348	P	P	20 30 42.9	+0.9
D41A				IAmb	IAmb	20 30 44.2	
	comp=Z,11nm,0.9s						
PD31	Pinedale Array	78.59	332	P	P	20 30 57.9	+2.0
PD31				IAmb	IAmb	20 30 59.3	
	comp=Z,5.2nm,1.4s						
PDAR	Pinedale Array	78.59	332	P	P	20 30 57.3	+1.4
	comp=Z,0.6nm,0.8s,baz=134,slow=6.4,SNR=5.1						
SPUT	South Promonto	78.64	330	P	P	20 30 57.4	+1.3
MAW	Mawson	78.89	164	P	P	20 30 57.6	+0.5
	comp=Z,4.2nm,0.9s,baz=101,slow=13,SNR=3.1						
ELK	Elko	79.48	328	P	P	20 31 02.5	+1.6
RYN	Ryan	79.49	324	P	P	20 31 02.3	+1.4
ULM	Lac du Bonnet	80.75	344	P	P	20 31 07.7	+0.6
	comp=Z,5.8nm,1.0s,baz=166,slow=5.4,SNR=7.2						
ULM	Lac du Bonnet	80.75	344	P	P	20 31 07.8	+0.6
ULM				IAmb	IAmb	20 31 08.4	
	comp=Z,6.8nm,1.1s						
YHH	Holmes Hill	80.79	333	P	P	20 31 09.3	+1.4
TOA0	Torodi Ar. Sit	81.56	70	P	P	20 31 12.0	-0.4
TOA0				IAmb	IAmb	20 31 13.0	
	comp=Z,9.4nm,0.9s						
TORD	Torodi Ar. Bea	81.56	70	P	P	20 31 12.0	-0.4
	comp=Z,5.9nm,0.8s,baz=263,slow=4.9,SNR=21						
TORD	Torodi Ar. Bea	81.56	70	P	P	20 31 11.7	-0.7
BOSA	Boshof	82.41	118	P	P	20 31 15.7	-1.2
	comp=Z,2.3nm,0.6s,baz=259,slow=4.1,SNR=6.0						
YKA	Yellowknife Ar	96.45	341	P	P	20 32 23.2	+0.5
	comp=Z,0.5nm,0.8s,baz=139,slow=4.7,SNR=8.9						
ASAR	Alice Springs	123.29	208	PKP	PKPdf	20 37 51.4	-0.4
	comp=Z,0.8nm,0.7s,baz=137,slow=1.8,SNR=7.7						
H11S2	WAKE ISLAND Hy	126.25	273	T	T	22 57 08.9	
	baz=112,slow=75,SNR=26						
H11S1	WAKE ISLAND Hy	126.26	273	T	T	22 57 09.8	
	baz=112,slow=75,SNR=42						
H11S3	WAKE ISLAND Hy	126.27	273	T	T	22 57 10.2	
	baz=112,slow=75,SNR=35						
WRA	Warramunga Arr	126.38	210	PKP	PKPdf	20 37 57.7	-0.1
	comp=Z,1.3nm,0.6s,baz=160,slow=1.7,SNR=7.9						
CHGR	Chuyangaron	145.49	62		PKPdf	20 38 32.6	+0.1
KKAR	Karatay Array	145.73	53		PKPbc	20 38 33.0	-0.1
KKAR	Karatay Array	145.73	53		PKPdf	20 38 32.5	-0.2
GAR	Garm	146.34	61		PKPbc	20 38 35.2	0.0
KURK	Kurchatov	147.78	37		PKPdf	20 38 36.8	+0.9
KURK				PKPbc	pPKPdf	20 38 39.2	+0.1
ARSB	Arslanbob	147.93	56		PKPbc	20 38 40.6	+0.9
ZAA0	Zalesovo Array	148.60	27		PKPdf	20 38 37.6	+0.5
ZAA0				PKPbc	sPKPdf	20 38 41.3	+0.4
ZALV	Zalesovo Beam	148.60	27	PKPbc	PKPbc	20 38 41.4	+0.6
	comp=Z,6.7nm,0.7s,baz=302,slow=3.5,SNR=31						
ZALV	Zalesovo Beam	148.60	27		PKPdf	20 38 37.4	+0.3
AAK	Ala-Archa	148.68	53		PKPdf	20 38 38.4	+0.5
AAK				PKPbc	PKiKP	20 38 42.7	-0.4
NIL	Nilore	149.12	70		PKPbc	20 38 42.9	0.0
KSH	Kashi	150.57	58	PKPbc	PKPdf	20 38 38.8	-2.1
KSH				pPKP	pPKPbc	20 38 49.9	+0.3
KSH				PKS	PKSdf	20 42 14.1	-1.6
KSH				PP	PP	20 42 23.3	+0.5
MAKZ	Makanchi	151.78	41		PKPbc	20 38 48.8	+0.1
MK31	Makanchi Array	151.97	41		PKPbc	20 38 49.1	-0.1
MKAR	Makanchi Array	151.97	41	PKPbc	PKPbc	20 38 49.4	+0.2
	comp=Z,3.2nm,0.7s,baz=322,slow=2.0,SNR=40						
MKAR	Makanchi Array	151.97	41		PKPbc	20 38 49.2	0.0
LZH	Lanzhou	170.83	25	*e*PKP	PKPdf	20 38 59.3	-3.5
LZH				pPKP	sPKPdf	20 39 09.5	+2.8
LZH				sPKP		20 39 12.5	
CD2	Chengdu	174.75	53	PKP	PKPdf	20 39 03.1	-1.3

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*VAO **24** 20:28:29.0±0.8, 7°.57N×74°.44W, h14km±1km, mb4.5*
*NEIC **24** 20:28:33.1±1.9, 8°.27N±0°.06×74°.45W±0°.06, h77km±6km, mb4.5/41, Error ellipse: s-maj=9.1km s-min=8.1km az=168.0*
*RSNC **24** 20:28:34.2±0.9, 8°.38N×74°.48W, h46km±9km, ML4.4, Mw4.2, Fault plane solution: NP1:φs118.00000°, δ38.00000°, λ77.00000°.*
*IDC **24** 20:28:34.5±1.5, 8°.25N×74°.36W, h89km±14km, mb3.8/18, mb1 4.1/24, mb1mx4.0/32, mbtmp4.3/24, MS3.1/12, Ms1 3.1/12, ms1mx3.0/30, Error ellipse: s-maj=11.6km s-min=10.5km az=33.0*
ISC 24 20:28:32.4±0.6**, 8°.40N**±0°.02×**74°.48W**±0°.03**, h60**km±6km**, n165, σ2s.01**/166**, mb4.3**/37**, MS3.1**/6**, 4C-19D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMLC	San Martn de	0.57	45	⇓*i*P	Pn	20 28 45.5	+0.4
SMLC				*e*S	Sn	20 28 54.7	+0.4
SMLC				*i*		20 28 55.2	
	comp=Z,15μm,0.3s						
ZARC	Zaragoza, Cauc	0.98	203	⇑*e*P	Pn	20 28 50.5	+0.4
ZARC				*e*S	Sn	20 29 04.1	+0.9
ZARC				*i*		20 29 05.7	
	comp=Z,14μm,0.4s						
OCAC	Ocana	1.16	98	⇓*i*P	Pn	20 28 53.0	+0.4
OCAC				*e*S	Sn	20 29 08.2	+0.5
UREC	San Jos de Ur	1.23	238	⇓*i*P	Pn	20 28 53.7	+0.3
UREC				*e*S	Sn	20 29 10.7	+1.6

UREC				i		20 29 14.0	
	comp=Z,7µm,0.3s						
ARGC	Ariguani, Magd	1.47	9	⇓eP	Pn	20 28 58.7	+2.1
ARGC				eS	Sn	20 29 17.2	+2.3
ARGC				i		20 29 43.5	
	comp=Z,3µm,1.6s						
BRRC	Barranca, Sant	1.49	149	⇓eP	Pn	20 28 57.2	+0.3
BRRC				eS	Sn	20 29 16.5	+1.0
BRRC				i		20 29 17.0	
	comp=Z,2µm,0.6s						
SJCC	San Jacinto, C	1.64	335	eP	Pn	20 29 00.3	+1.2
SJCC				eS	Sn	20 29 20.9	+1.7
SJCC				i		20 29 27.7	
	comp=Z,2µm,1.3s						
CODC	Agustn Codazz	1.84	34	⇓iP	Pn	20 29 02.3	+0.6
CODC				eS	Sn	20 29 25.0	+1.2
CODC				i		20 29 32.2	
	comp=Z,2µm,0.4s						
PTBC	PUERTO BERRIO,	1.85	179	⇓iP	Pn	20 29 02.6	+0.8
PTBC				eS	Sn	20 29 25.1	+0.9
PTBC				i		20 29 27.6	
	comp=Z,4µm,0.9s						
LCBC	Los crdobas,	1.92	284	⇓eP	Pn	20 29 04.2	+1.4
	comp=Z,2µm,0.5s						
LCBC				eS	Sn	20 29 30.2	+4.3
LCBC				i		20 29 38.3	
	comp=Z,2µm,0.5s						
PAMC	Pamplona, Colo	2.05	121	⇑eP	Pn	20 29 06.3	+1.3
PAMC				eS	Sn	20 29 31.5	+1.7
PAMC				i		20 29 33.5	
	comp=Z,6µm,0.3s						
BARC	Barichara	2.21	144	⇓iPg	Pn	20 29 07.8	+0.9
BARC				eS	Sn	20 29 32.8	-0.5
BARC				i		20 29 39.6	
	comp=Z,5µm,0.4s						
HELC	Santa Helena	2.43	205	⇓eP	Pn	20 29 09.7	-0.3
HELC				eS	Sn	20 29 42.8	+4.1
HELC				i		20 29 47.9	
	comp=Z,2µm,0.5s						
SMRC	Santa Marta, M	2.76	5	eP	Pn	20 29 15.9	+1.7
SMRC				eS	Sn	20 29 52.6	+6.3
SMRC				i		20 29 59.7	
	comp=Z,860nm,0.5s						
SPBC	San Pablo de B	2.76	172	⇓iP	Pn	20 29 15.3	+1.0
SPBC				eS	Sn	20 29 49.2	+2.7
SPBC				i		20 29 55.3	
	comp=Z,1µm,0.7s						
NORC	Norcasia	2.84	188	⇓iP	Pn	20 29 15.3	-0.1
NORC				eS	Sn	20 29 54.1	+5.6
NORC				i		20 29 54.9	
	comp=Z,2µm,0.4s						
CAPC	Capurgana	2.85	275	⇓eP	Pn	20 29 14.4	-1.1
CAPC				i		20 29 49.5	
	comp=Z,312nm,0.4s						
RUSC	La Rusia	2.85	151	⇑eP	Pn	20 29 17.0	+1.1
RUSC				eS	Sn	20 29 51.2	+1.9
RUSC				i		20 29 54.1	
	comp=Z,2µm,1.0s						
RUSC	La Rusia	2.85	151		Pn	20 29 16.8	+0.9
CBOC	Ciudad Bolivar	2.94	211	⇓eP	Pn	20 29 16.9	+0.1
CBOC				eS	Sn	20 30 03.2	+12
CBOC				i		20 30 05.9	
	comp=Z,1µm,0.6s						
GUY2C	Guyana, Caldas	3.27	196	⇓eP	Pn	20 29 22.2	+0.5
GUY2C				eS	Sn	20 30 11.6	+12
GUY2C				i		20 30 18.3	
	comp=Z,2µm,0.7s						
TAMC	Tame, Arauca	3.30	126	⇑eP	Pn	20 29 23.3	+1.6
TAMC				eS	Sn	20 30 02.2	+2.4
TAMC				i		20 30 24.2	
	comp=Z,637nm,0.4s						
PTAC	Punta Ardita,	3.52	250	⇓eP	Pn	20 29 24.9	+0.3
PTAC				eS	Sn	20 30 05.2	0.0
PTAC				i		20 30 07.8	
	comp=Z,2µm,0.3s						
ROSC	El Rosal	3.54	177	P	Pn	20 29 26.0	+0.7
	comp=Z,19nm,0.3s,baz=28,slow=2.7,SNR=24						
ROSC				S	Sn	20 30 13.4	+7.4
	comp=Z,160nm,0.3s,baz=14,slow=22,SNR=3.7						
ROSC	El Rosal	3.54	177	⇓eP	Pn	20 29 26.6	+1.3
ROSC				eS	Sn	20 30 13.1	+7.0
ROSC				i		20 30 21.4	
	comp=Z,675nm,0.5s						
RREF	El Recreo	3.58	194	eS	Sn	20 30 17.4	+10
RREF				i		20 30 27.6	
	comp=Z,2µm,0.6s						
SOLC	Bahia Solano	3.62	234	eP	Pn	20 29 26.7	+0.7
SOLC				eS	Sn	20 30 07.1	-0.4
SOLC				i		20 30 12.8	
	comp=Z,414nm,0.6s						
CHIC	Chingaza	3.82	169	⇓eP	Pn	20 29 30.3	+1.2
CHIC				eS	Sn	20 30 20.1	+7.2
CHIC				i		20 30 22.4	
	comp=Z,672nm,0.7s						
SDV	Santo Domingo	3.83	82	P	Pn	20 29 31.1	+1.9
	comp=Z,172nm,0.3s,baz=268,slow=9.8,SNR=982						
SDV				S	Sn	20 30 14.9	+1.9
	comp=Z,825nm,0.3s,baz=334,slow=16,SNR=20						
SDV	Santo Domingo	3.83	82	⇓eP	Pn	20 29 31.0	+1.9
	comp=Z,2µm,0.5s						
SDV				eS	Sn	20 30 13.8	+0.7
SDV				i		20 30 16.6	
	comp=Z,2µm,0.5s						
SDV	Santo Domingo	3.83	82		Pn	20 29 30.7	+1.6
SDV	Santo Domingo	3.83	82	eP	Pn	20 29 31.0	+1.9
CVER	Cruz Verde, Cu	3.87	174	eP	Pn	20 29 31.4	+1.5
TOLC	Tolima	3.88	192	eP	Pn	20 29 32.0	+2.1
TOLC				eS	Sn	20 30 25.9	+11
TOLC				i		20 30 36.4	
	comp=Z,413nm,0.6s						
PLMC	San Jos del P	3.91	207	eP	Pn	20 29 30.6	+0.6
PLMC				i		20 30 39.9	
	comp=Z,562nm,0.7s						
ANIL	Santa Ana	3.99	193	eP	Pn	20 29 33.1	+1.8
ANIL				eS	Sn	20 30 29.6	+13
ANIL				i		20 30 33.3	
	comp=Z,1µm,0.4s						
URIC	Uribia, Colomb	4.09	37	eP	Pn	20 29 32.2	-0.3
URIC				eS	Sn	20 30 20.7	+1.6
URIC				i		20 30 28.9	
	comp=Z,582nm,0.8s						
URIC	Uribia, Colomb	4.09	37		Pn	20 29 32.2	-0.3
VILC	Villavicencio,	4.33	170	eP	Pn	20 29 36.9	+1.0
VILC				eS	Sn	20 30 30.1	+5.0
VILC				i		20 30 42.5	
	comp=Z,1µm,0.4s						
PIZC	Pizarro, Choco	4.45	220	eP	Pn	20 29 39.0	+1.6
PIZC				eS	Sn	20 30 42.8	+15
PIZC				i		20 31 11.5	
	comp=Z,261nm,1.0s						
ORTC	Ortega, Tolima	4.53	190	eP	Pn	20 29 39.3	+0.8
ORTC				eS	Sn	20 30 41.1	+11
ORTC				i		20 30 50.3	
	comp=Z,760nm,0.8s						
YOTC	Yotoco, Valle	4.76	203	eP	Pn	20 29 42.4	+0.6
YOTC				eS	Sn	20 30 57.0	+21
YOTC				i		20 31 00.5	
	comp=Z,176nm,0.7s						
PTGC	Puerto Gaitan,	4.78	151	eP	Pn	20 29 42.7	+0.8
PTGC				eS	Sn	20 30 36.4	+0.4
PTGC				i		20 30 49.2	
	comp=Z,500nm,0.4s						
MALC	Bahia Malaga	5.20	213	eP	Pn	20 29 52.4	+4.7
MALC				i		20 31 16.6	
	comp=Z,152nm,0.9s						
BCIP	Isla Barro Col	5.35	279	eP	Pn	20 29 48.8	-0.9
BCIP				eS	Sn	20 30 46.2	-3.9
BCIP				i		20 30 54.2	
	comp=Z,142nm,0.5s						
BCIP	Isla Barro Col	5.35	279		Pn	20 29 48.6	-1.1
GUVC	San Jose del G	6.10	162	eP	Pn	20 30 01.3	+1.2
GUVC				eS	Sn	20 31 09.4	+0.9
GUVC				i		20 31 15.7	
	comp=Z,432nm,0.3s						
POPC	Popayan, Colom	6.22	201	eP	Pn	20 30 01.3	-0.5
POPC				i		20 31 39.9	
	comp=Z,36nm,2.0s						
MACC	Macarena, Meta	6.24	174	eP	Pn	20 29 59.4	-2.6
MACC				eS	Sn	20 31 15.7	+3.7
MACC				i		20 31 20.8	
	comp=Z,251nm,0.5s						
GARC	Garzon, Huila	6.25	189	eP	Pn	20 30 02.1	-0.2
GARC				eS	Sn	20 31 19.5	+6.9
GARC				i		20 31 52.7	
	comp=Z,118nm,0.3s						
PCON	Cinco Dias	6.33	198	eP	Pn	20 30 05.3	+1.7
PCON				i		20 31 41.5	
	comp=Z,101nm,0.6s						
SOTA	Rioblanco	6.57	199	eP	Pn	20 30 08.2	+1.3
SOTA				i		20 31 47.1	
	comp=Z,86nm,0.8s						
FLOC	Florencia	6.87	190	eP	Pn	20 30 09.5	-1.1
FLOC				eS	Sn	20 31 37.8	+10
FLOC				i		20 32 04.4	
	comp=Z,155nm,1.1s						
FLOC	Florencia	6.87	190		Pn	20 30 09.7	-0.9
CRUC	La Cruz	7.22	200	eP	Pn	20 30 16.1	+0.4
CRUC				i		20 32 04.2	
	comp=Z,46nm,0.8s						
GCUF	Volcan Galeras	7.68	202	eP	Pn	20 30 23.1	+1.1
GCUF				i		20 32 09.5	
	comp=Z,40nm,0.8s						
PRVC	Isla de Provid	8.38	307	eP	Pn	20 30 28.4	-2.7
PRVC				eS	Sn	20 31 57.5	-6.8
PRVC				i		20 32 01.7	
	comp=Z,61nm,0.5s						
PCRV	Puerto La Cruz	9.88	79	P	Pn	20 30 51.2	-0.5
	comp=Z,15nm,0.3s,baz=219,slow=7.7,SNR=27						
PCRV				S	Sn	20 32 39.1	-2.0
	comp=Z,7.7nm,0.3s,baz=120,slow=22,SNR=8.4						
PLCV	Puerto La Cruz	9.92	79		Pn	20 30 51.2	-1.1
PLCV					Sn	20 32 39.1	-3.0
JTS	Las Juntas de	10.50	281	P	Pn	20 31 00.7	+0.4
	comp=Z,1.9nm,0.3s,baz=21,slow=20,SNR=5.6						
JTS				S	Sn	20 32 56.5	0.0
	comp=Z,1.1nm,0.3s,baz=39,slow=22,SNR=2.0						
JTS				LR	LR	20 36 30.5	
	comp=Z,93nm,18.9s,baz=167,slow=45						
JTS	Las Juntas de	10.50	281		Pn	20 30 59.4	-0.9
SDDR	Presa de Saban	10.97	16		Pn	20 31 07.1	+0.5
DR12	Loma Pena Alta	11.45	25		Pn	20 31 12.1	-1.2
CRPR	Cabo Rojo, PR	11.94	36		Pn	20 31 16.0	-3.9
SJG	San Juan	12.60	39	P	Pn	20 31 25.3	-3.6
	comp=Z,6.1nm,0.3s,baz=226,slow=14,SNR=18						
SJG				S	Sn	20 33 40.5	-7.2
	comp=Z,3.5nm,0.3s,baz=207,slow=19,SNR=3.9						
SJG				LR	LR	20 36 25.4	
	comp=Z,45nm,21.0s,baz=236,slow=37						
SJG	San Juan	12.60	39		Pn	20 31 24.7	-4.2
PDPR	Patillas Dam,	12.61	40		Pn	20 31 24.3	-4.8
GCPR	Guaynabo City	12.79	39		Pn	20 31 27.9	-3.6
CBYP	Canovanas	12.91	40		Pn	20 31 28.5	-4.6
MTP	Monte Pirata	12.97	41		Pn	20 31 29.0	-5.0
CUPR	Culebra, Puert	13.30	41		Pn	20 31 33.6	-4.8
STVI	Saint Thomas	13.55	42		Pn	20 31 39.1	-2.7
SVB	Belmont	13.86	68		Pn	20 31 42.4	-3.7
FDF	Fort de France	14.49	63		Pn	20 31 49.6	-4.8
SMRT	St. Maarten	14.66	48		Pn	20 31 53.5	-3.1
ATAH	Atahualpa	15.92	194	P	Pn	20 32 12.9	-0.2
	comp=Z,1.5nm,0.3s,baz=9.9,slow=6.2,SNR=8.3						
ATAH				LR	LR	20 38 39.6	
	comp=Z,86nm,20.3s,baz=18,slow=38						
APG	El Apazote	16.97	294	P	Pn	20 32 28.8	+2.7
	comp=Z,4.1nm,0.3s,baz=61,slow=8.2,SNR=5.8						
APG				LR	LR	20 40 00.7	
	comp=Z,35nm,20.3s,baz=96,slow=40						
PTGA	Pitinga	17.07	121	P	Pn	20 32 24.4	-2.7
	comp=Z,1.9nm,0.3s,baz=299,slow=14,SNR=35						
PTGA				LR	LR	20 39 29.3	
	comp=Z,179nm,18.7s,baz=271,slow=39						
PTGA	Pitinga	17.07	121		Pn	20 32 24.9	-2.3
PTGA				IAmb	IAmb	20 32 37.6	
	comp=Z,26nm,0.8s						
PTGA	Pitinga	17.07	121	eP	Pn	20 32 24.5	-2.7
TEIG	Tepich	17.79	313	P	Pn	20 32 37.7	+1.8
	comp=Z,0.4nm,0.3s,baz=309,slow=0.0,SNR=3.2						
TEIG				LR	LR	20 40 53.8	
	comp=Z,49nm,18.4s,baz=55,slow=41						
TEIG	Tepich	17.79	313	IAmb	IAmb	20 32 38.4	
	comp=Z,24nm,1.2s						
NNA	Nana	20.39	187	P	P	20 33 03.5	-1.0
	comp=Z,5.9nm,0.4s,baz=0.3,slow=6.5,SNR=2.0						
NNA				LR	LR	20 42 18.3	
	comp=Z,80nm,20.3s,baz=8.5,slow=41						
NNA	Nana	20.39	187	IAmb	IAmb	20 33 42.3	
	comp=Z,98nm,2.0s						
SAML	Samuel	20.58	147	P	P	20 33 02.7	-3.9
CMIG	Matias Romero	21.68	295	P	P	20 33 18.6	+0.2
	comp=Z,1.2nm,0.5s,baz=82,slow=14,SNR=1.8						
CMIG				LR	LR	20 41 45.7	
	comp=Z,48nm,21.3s,baz=57,slow=36						
MDP	Montagnes des	21.93	97	P	P	20 33 19.7	-1.4
	comp=Z,22nm,1.0s,baz=269,slow=12,SNR=11						
LPAZ	La Paz	25.32	166	P	P	20 33 52.4	-2.0
	comp=Z,3.1nm,0.5s,baz=339,slow=11,SNR=13						
LPAZ	La Paz	25.32	166	P	P	20 33 52.6	-1.7
LPAZ	La Paz	25.32	166	eP	P	20 33 48.8	-5.6
LPAZ				epP	pP	20 33 52.7	-17
LPAZ				eS	S	20 38 09.9	-7.0
CLDB	Colider	26.69	136	eP	P	20 34 00.4	-5.7
CLDB				epP	pP	20 34 05.3	-16
CLDB				eS	S	20 38 33.4	-4.1
SIV	San Ignacio	27.63	151	P	P	20 34 11.3	-3.3
	comp=Z,1.7nm,0.8s,baz=337,slow=6.3,SNR=8.1						
SALV	Santo Antonio	30.48	142	eP	P	20 34 35.5	-4.3
SMTB	Santa Maria do	31.81	122	eP	P	20 34 49.2	-2.4
SMTB				epP	pP	20 34 53.0	-14
U40A	Yellville	32.48	332	P	P	20 34 58.0	+0.7
U40A				IAmb	IAmb	20 34 58.8	
	comp=Z,7.7nm,0.7s						
ARAG	Araguaiana, MT	32.83	137	eP	P	20 34 57.1	-3.4
ARAG				epP	pP	20 35 00.3	-15
CCM	Cathedral Cave	33.18	335	P	P	20 35 03.8	+0.4
TX31	Lajitas Ar. Si	34.41	311	P	P	20 35 14.2	-0.1
TX31				IAmb	IAmb	20 35 37.5	
	comp=Z,4.9nm,1.1s						
TX32	Lajitas Array	34.41	311	P	P	20 35 14.3	0.0
TX32				IAmb	IAmb	20 35 37.5	
	comp=Z,5.0nm,1.1s						
TXAR	Lajitas Array	34.41	311	P	P	20 35 14.7	+0.3
	comp=Z,1.8nm,0.7s,baz=130,slow=9.1,SNR=20						
TXAR				PcP	PcP	20 37 49.4	+0.5
	comp=Z,0.3nm,0.5s,baz=126,slow=4.6,SNR=3.4						
TXAR				LR	LR	20 51 37.4	
	comp=Z,7.0nm,18.5s,baz=0.0,slow=40						
TXAR	Lajitas Array	34.41	311	P	P	20 35 14.1	-0.3
C2SB	Chapadao do Su	34.42	142	eP	P	20 35 10.4	-3.9
WMOK	Wichita Mounta	34.42	323	P	P	20 35 13.6	-0.6
P38A	Dawn	35.46	334	P	P	20 35 22.9	-0.1
BDFB	Brasilia	35.47	132	P	P	20 35 20.7	-2.8
	comp=Z,1.4nm,0.4s,baz=89,slow=20,SNR=1.9						
BDFB				LR	LR	20 50 52.2	
	comp=Z,100nm,18.2s,baz=292,slow=38						
IPMB	Ipameri, GO	36.88	135	eP	P	20 35 31.5	-4.0
IPMB				epP	pP	20 35 35.9	-15
MNTX	Cornudas Mount	36.91	313	P	P	20 35 35.5	-0.1
MNTX				IAmb	IAmb	20 35 37.3	
	comp=Z,3.6nm,0.8s						
PCMB	Pacaembu	37.53	143	eP	P	20 35 37.8	-3.2
PCMB				epP	pP	20 35 40.9	-15
JANB	Januaria	37.91	128	eP	P	20 35 40.8	-3.5
CPUP	Villa Florida	38.33	155	P	P	20 35 42.1	-5.5
	comp=Z,1.2nm,0.8s,baz=334,slow=10,SNR=4.8						
CPUP	Villa Florida	38.33	155	eP	P	20 35 42.4	-5.1
CPUP				epP	pP	20 35 46.9	-16
121A	Cookes Peak, D	39.09	313	P	P	20 35 54.4	+0.3
121A				IAmb	IAmb	20 36 20.6	
	comp=Z,5.7nm,0.9s						
S22A	4UR Ranch, Cre	41.32	320	P	P	20 36 12.8	+0.2
S22A				IAmb	IAmb	20 36 37.2	
	comp=Z,8.2nm,1.4s						
PARB	Paraibuna	42.33	139	eP	P	20 36 17.1	-3.6
X16A	Lo Mia Camp, P	42.67	313	P	P	20 36 24.5	+0.9
PV15	Paradox Valley	42.72	320	P	P	20 36 24.1	+0.1
PV15				IAmb	IAmb	20 36 26.4	
	comp=Z,6.1nm,0.8s						
PV13	Radium Mtn., P	42.84	319	P	P	20 36 24.7	-0.3
PV12	Saucer Basin,	42.91	319	P	P	20 36 26.7	+1.1
WUAZ	Wupatki	43.16	314	P	P	20 36 28.6	+1.1
WUAZ				IAmb	IAmb	20 36 51.9	
	comp=Z,6.5nm,0.8s						
LCMT	Little Creek M	45.21	315	P	P	20 36 40.0	-3.9
BW06	Boulder Array	46.02	324	P	P	20 36 50.4	+0.1
BW06				IAmb	IAmb	20 37 09.8	
	comp=Z,7.0nm,1.4s						
PD31	Pinedale Array	46.02	324	P	P	20 36 50.4	+0.1
PDAR	Pinedale Array	46.02	324	P	P	20 36 50.6	+0.4
	comp=Z,0.9nm,0.8s,baz=116,slow=10,SNR=6.3						
PDAR				PcP	PcP	20 38 25.2	-0.9
	comp=Z,0.7nm,0.5s,baz=128,slow=6.9,SNR=5.7						
PDAR	Pinedale Array	46.02	324	P	P	20 36 50.2	-0.1
TCUT	Toone Canyon	46.16	321	P	P	20 36 51.5	0.0
DUG	Dugway, Tooele	46.55	319	P	P	20 36 55.6	+1.2
SCHQ	Schefferville	46.71	6	P	P	20 36 55.4	+0.2
	comp=Z,2.4nm,0.6s,baz=202,slow=7.3,SNR=6.4						
BGU	Big Grassy Mou	47.08	320	P	P	20 36 59.0	+0.5
REDW	Red Top Meadow	47.13	324	P	P	20 36 59.4	+0.3
REDW				IAmb	IAmb	20 37 01.0	
	comp=Z,5.7nm,0.9s						
SNOW	Snow King Moun	47.14	324	P	P	20 36 59.2	+0.2
R11A	Troy Canyon, C	47.48	315	P	P	20 37 02.6	+0.8
R11A				IAmb	IAmb	20 37 24.1	
	comp=Z,8.8nm,1.9s						
PLCA	Paso Flores	49.02	176	P	P	20 37 11.1	-2.2
	comp=Z,0.8nm,0.4s,baz=156,slow=9.2,SNR=8.5						
PLCA	Paso Flores	49.02	176	eP	P	20 37 09.6	-3.7
PLCA				epP	pP	20 37 13.2	-16
MCMT	McKenzie Canyo	49.16	324	P	P	20 37 13.5	-1.1
NVAR	Mina Array Bea	49.42	314	P	P	20 37 17.3	+0.6
	comp=Z,0.8nm,0.6s,baz=118,slow=7.2,SNR=8.6						
NVAR				PcP	PcP	20 38 37.8	-0.6
	comp=Z,0.9nm,0.7s,baz=136,slow=4.5,SNR=4.5						
NVAR				LR	LR	21 00 04.4	
	comp=Z,21nm,21.1s,baz=312,slow=38						
NVAR	Mina Array Bea	49.42	314	P	P	20 37 15.9	-0.9
PNTR	Pine Nut	50.62	314	P	P	20 37 24.5	-1.3
PNTR				IAmb	IAmb	20 37 29.5	
	comp=Z,4.0nm,0.8s						
WVOR	Wild Horse Val	51.46	319	P	P	20 37 30.7	-1.2
PINE	Pine Mountain	53.59	319	P	P	20 37 47.8	+0.1
PINE				IAmb	IAmb	20 37 50.5	
	comp=Z,6.3nm,0.9s						
YKA	Yellowknife Ar	61.33	340	P	P	20 38 41.1	-0.5
	comp=Z,1.4nm,0.7s,baz=131,slow=7.4,SNR=26						
TIC	Toumodi	68.81	86	eP	P	20 39 28.4	-2.6
LIC	Lamto	68.84	87	eP	P	20 39 30.4	-0.8
	comp=Z,21nm,1.3s						
DBIC	Dimbokro	68.97	86	P	P	20 39 29.3	-2.6
	comp=Z,1.7nm,0.4s,baz=261,slow=3.3,SNR=10.0						
KIC	Kosan Boka	69.11	86	eP	P	20 39 30.2	-2.7
	comp=Z,5.1nm,0.5s						
INK	Inuvik	71.10	340	P	P	20 39 43.4	-0.7
INK				IAmb	IAmb	20 40 08.9	
	comp=Z,4.6nm,0.8s						
BCAR	Beaver Creek A	72.36	334	P	P	20 39 49.9	-1.9
TORD	Torodi Ar. Bea	74.75	79	P	P	20 40 04.3	-2.3
	comp=Z,1.5nm,0.4s,baz=288,slow=6.3,SNR=32						
HDA	Harding Lake	74.92	335	P	P	20 40 04.4	-2.3
HDA				IAmb	IAmb	20 40 30.6	
	comp=Z,6.8nm,0.8s						
ILAR	Eielson Array	74.97	335	P	P	20 40 06.7	-0.3
	comp=Z,0.5nm,0.6s,baz=96,slow=5.5,SNR=5.4						
ILAR	Eielson Array	74.97	335	P	P	20 40 06.1	-0.9
RND	Reindeer	75.55	333	P	P	20 40 11.2	+0.8
RND				IAmb	IAmb	20 40 35.1	
	comp=Z,8.7nm,0.7s						
TAM	Tamanrasset	77.62	69	P	P	20 40 22.4	-0.6
TAM				IAmb	IAmb	20 40 24.4	
	comp=Z,2.9nm,0.6s						
NB2	NORSAR Subarra	80.62	29	P	P	20 40 39.0	+0.4
	comp=Z,0.8nm,0.9s,baz=271,slow=5.6						
NOA	NORSAR Array B	80.62	29	P	P	20 40 38.5	0.0
	comp=Z,0.8nm,0.8s,baz=274,slow=3.5,SNR=5.2						
KHC	Kasperske Hory	82.45	41	eP	P	20 40 48.5	+0.1
GERES	GERESS Array B	82.55	42	P	P	20 40 48.7	-0.3
	comp=Z,2.2nm,0.8s,baz=268,slow=3.7,SNR=16						
GERES				LR	LR	21 17 07.8	
	comp=Z,24nm,18.5s,baz=274,slow=35						
GERES	GERESS Array B	82.55	42	P	P	20 40 48.5	-0.6
ARCES	ARCESS Array B	85.67	20	P	P	20 41 04.0	-0.4
	comp=Z,5.7nm,1.0s,baz=286,slow=8.7,SNR=3.7						
MLR	Muntele Rosu	91.31	44	P	P	20 41 32.2	+0.3
MKAR	Makanchi Array	121.28	18	PKP	PKPdf	20 47 17.5	-1.5
	comp=Z,0.1nm,0.4s,baz=300,slow=2.8,SNR=1.8						
KSH	Kashi	125.02	28	PKP	PKPdf	20 47 28.1	+1.6
KSH				sPKP		20 47 43.3	
KSH				PP	PP	20 49 22.9	+8.1
KSH				PKS	PKSdf	20 51 04.3	+1.0
KSH				SKKS		20 56 11.0	
ASAR	Alice Springs	148.88	237	PKPbc	PKPdf	20 48 12.8	+2.5
	comp=Z,2.2nm,0.6s,baz=120,slow=3.5,SNR=32						
ASAR	Alice Springs	148.88	237		PKPdf	20 48 09.2	-1.1
WRA	Warramunga Arr	149.85	245	PKPbc	PKPdf	20 48 15.0	+3.1
	comp=Z,1.7nm,0.5s,baz=106,slow=2.8,SNR=18						
CMAR	Chiang Mai Arr	152.54	14	PKPbc	PKPdf	20 48 22.1	+6.0
	comp=Z,0.6nm,0.8s,baz=334,slow=1.4,SNR=5.9						

IDC ***24*** *20:41:21.8±0.8, 19°.51S×70°.66W, h0^{km}, mb4.0/7, mb1 4.1/9, mb1mx3.9/32, mbtmp4.0/9, ML4.1/2, MS3.2/3, Ms1 3.2/3, ms1mx2.9/18, Error ellipse: s-maj=23.9km s-min=15.2km az=77.0*

SJA ***24*** *20:41:23.8±0.9, 19°.64S×70°.81W, h23^{km}±3^{km}, ML4.0, MW4.0*

GUC ***24*** *20:41:26.5±0.7, 19°.61S×70°.80W, h34^{km}±2^{km}, ML4.1*

ISC 24 20:41:24.4±1.5**, 19°.63S**±0°.03×**70°.82W**±0°.05**, h16**^{km}±9^{km}**, n65,** σ1^{s}.**00**/73**, mb4.2**/8**, 6C-8D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.66	88	⇓iP	Pg	20 41 37.3	-0.2
PSGC				i S	Sg	20 41 46.1	-0.1
PSGCX	Pisagua	0.66	88	⇓eP	Pg	20 41 37.3	-0.1
PSGCX				⇓eS	Sb	20 41 46.2	-0.4
PSGCX				IAML		20 41 46.7	
	comp=Z,5µm,0.6s						
PB11	IPOC Station P	1.11	97	⇓iP	Pb	20 41 44.7	-0.7
PB11				i S	Sb	20 41 59.6	0.0
PB11				IAML		20 42 03.6	
	comp=N,6µm,0.5s						
PB11	IPOC Station P	1.11	97	eP	Pb	20 41 45.1	-0.2
PB11				IAML		20 42 02.4	
	comp=Z,4µm,0.2s						
PB12	IPOC Station P	1.11	25	⇓iP	Pb	20 41 44.6	-0.7
PB12				i S	Sb	20 41 59.6	+0.1
PB12				IAML		20 42 01.9	
	comp=N,6µm,0.3s						
PB12	IPOC Station P	1.11	25	eP	Pb	20 41 45.0	-0.3
PB12				eS	Sg	20 42 01.1	+0.7
PB12				IAML		20 42 01.2	
	comp=Z,5µm,0.5s						
TA01	Diego Aracena	1.11	147	⇑iP	Pb	20 41 45.2	-0.1
TA01				i S	Sb	20 41 59.8	+0.2
TA01				IAML		20 42 03.8	
	comp=E,8µm,0.5s						
AP01	Chacalluta	1.33	20	⇓iP	Pn	20 41 48.2	-0.1
AP01				i S	Sn	20 42 05.4	-0.3
AP01				IAML		20 42 09.3	
	comp=E,13µm,0.4s						
PATCX	Punta Patache	1.35	152	⇑iP	Pn	20 41 48.5	-0.1
PATCX				i S	Sb	20 42 06.3	-0.1
PATCX				IAML		20 42 10.3	
	comp=E,3µm,0.3s						
PATCX	Punta Patache	1.35	152	eP	Pn	20 41 48.6	-0.1
PATCX				eS	Sg	20 42 08.0	0.0
PATCX				IAML		20 42 11.8	
	comp=Z,2µm,0.4s						
GO01	Chusmiza	1.54	92	i P	Pn	20 41 52.0	+0.4
GO01				i S	Sb	20 42 12.4	+0.2
PB08	IPOC Station P	1.65	108	⇓iP	Pn	20 41 53.7	+0.6
PB08				i S	Sb	20 42 14.8	-0.7
PB08				IAML		20 42 21.8	
	comp=E,2µm,0.3s						
PB08	IPOC Station P	1.65	108	eP	Pn	20 41 53.7	+0.6
PB08				⇓eS	Sb	20 42 15.4	-0.1
PB08				IAML		20 42 16.4	
	comp=Z,2µm,0.3s						
PB16	IPOC Station P	1.79	44	i P	Pb	20 41 56.2	-1.0
PB16				i S	Sb	20 42 19.4	-0.2
PB16				IAML		20 42 25.8	
	comp=N,2µm,0.5s						
PB16	IPOC Station P	1.79	44	eP	Pb	20 41 56.4	-0.8
PB16				eS	Sb	20 42 20.1	+0.5
PB16				IAML		20 42 21.1	
	comp=Z,2µm,0.3s						
PB01	IPOC Station P	1.89	139	⇑iP	Pn	20 41 56.4	+0.3
PB01				i S	Sn	20 42 19.8	+0.1
PB01				IAML		20 42 28.9	
	comp=N,2µm,0.5s						
PB01	IPOC Station P	1.89	139	eP	Pn	20 41 56.8	+0.6
PB01				IAML		20 42 25.2	
	comp=Z,2µm,0.4s						

PB02	**IPOC Station P**	**1.90**	**153**	⇑*i*P	**Pn**	**20 41 56.6**	**+0.3**
PB02				*i* S	**Sn**	**20 42 19.1**	**-0.9**
PB02	**IPOC Station P**	**1.90**	**153**	*e*P	**Pn**	**20 41 56.6**	**+0.3**
PB02				IAML		20 42 25.8	
	comp=Z,3µm,0.7s						
PB07	**IPOC Station P**	**2.27**	**157**	*e*P	**Pn**	**20 42 01.4**	**0.0**
PB07				IAML		20 42 42.2	
	comp=E,1µm,0.4s						
PB07	**IPOC Station P**	**2.27**	**157**	*e*P	**Pn**	**20 42 02.5**	**+1.0**
PB07				IAML		20 42 40.9	
	comp=Z,2µm,0.8s						
PB03	**IPOC Station P**	**2.61**	**158**	⇑*i*P	**Pn**	**20 42 06.0**	**-0.1**
PB03				IAML		20 42 51.7	
	comp=E,763nm,0.5s						
PB03	**IPOC Station P**	**2.61**	**158**	*e*P	**Pn**	**20 42 06.3**	**+0.1**
PB03				IAML		20 42 50.5	
	comp=Z,637nm,0.7s						
PB09	**IPOC Station P**	**2.62**	**146**	⇑*i*P	**Pn**	**20 42 07.4**	**+1.2**
PB09				*i* S	**Sn**	**20 42 38.9**	**+1.1**
PB09				IAML		20 42 51.8	
	comp=E,2µm,0.5s						
PB09	**IPOC Station P**	**2.62**	**146**	*e*P	**Pn**	**20 42 07.5**	**+1.2**
PB09				IAML		20 42 56.9	
	comp=Z,1µm,0.5s						
PB04	**IPOC Station P**	**2.77**	**167**	IAML		20 42 57.6	
	comp=E,1µm,0.9s						
PB04	**IPOC Station P**	**2.77**	**167**	*i* P	**Pn**	**20 42 07.7**	**-0.6**
PB05	**IPOC Station P**	**3.26**	**170**	*i* P	**Pn**	**20 42 14.7**	**-0.4**
PB05				IAML		20 43 15.9	
	comp=Z,246nm,0.6s						
PB06	**IPOC Station P**	**3.28**	**159**	*i* P	**Pn**	**20 42 14.8**	**-0.5**
PB06				IAML		20 43 15.1	
	comp=Z,526nm,0.5s						
LVC	**Limon Verde**	**3.47**	**149**	Pn	**Pn**	**20 42 19.3**	**+1.3**
	comp=Z,14nm,0.3s,baz=335,slow=10,SNR=41						
LVC				Sn	**Sn**	**20 42 59.5**	**+0.5**
	comp=Z,37nm,0.3s,baz=150,slow=22,SNR=11						
LVC				Lg	Lg	20 43 11.5	
	comp=Z,51nm,0.3s,baz=91,slow=18,SNR=6.3						
LVC				LR	LR	20 43 49.9	
	comp=Z,273nm,19.7s,baz=336,slow=42						
LVC	**Limon Verde**	**3.47**	**149**	*e*P	**Pn**	**20 42 19.2**	**+1.1**
LVC				*i* S	**Sn**	**20 42 59.0**	**0.0**
LVC	**Limon Verde**	**3.47**	**149**	*i* P	**Pn**	**20 42 19.3**	**+1.3**
LVC				IAML		20 43 16.7	
	comp=Z,210nm,0.5s						
PB15	**IPOC Station P**	**3.78**	**161**	*i* P	**Pn**	**20 42 21.8**	**-0.5**
PB15				IAML		20 43 34.4	
	comp=Z,711nm,0.7s						
LPAZ	**La Paz**	**4.19**	**38**	Pn	**Pn**	**20 42 32.1**	**+3.8**
	comp=Z,1.9nm,0.3s,baz=186,slow=4.6,SNR=22						
PB14	**IPOC Station P**	**4.99**	**176**	*i* P	**Pn**	**20 42 37.2**	**-1.9**
PB14				IAML		20 44 11.8	
	comp=Z,63nm,0.8s						
YJA	**Yavi**	**5.58**	**118**	*i* P	Pn	20 42 53.3	+6.2
YJA				IAML		20 44 07.8	
	comp=Z,8.4nm,3.0s						
AZAP	**Zapla**	**7.04**	**132**	*i* P	Pn	20 43 13.3	+6.3
ASTB	**Santa Barbara**	**7.32**	**127**	*i* P	Pn	20 43 17.3	+6.5
ASTB				IAML		20 44 46.4	
	comp=Z,16nm,1.9s						
SIV	**San Ignacio**	**9.96**	**70**	Pn	**Pn**	**20 43 45.6**	**-1.5**
	comp=Z,1.8nm,0.3s,baz=282,slow=11,SNR=11						
SIV				LR	LR	20 48 03.1	
	comp=Z,91nm,20.9s,baz=316,slow=41						
CPUP	**Villa Florida**	**14.10**	**121**	Pn	**Pn**	**20 44 44.7**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=341,slow=12,SNR=4.4						
PLCA	**Paso Flores**	**21.04**	**179**	P	**P**	**20 46 09.1**	**+1.4**
	comp=Z,1.5nm,0.9s,baz=156,slow=9.2,SNR=5.5						
PTGA	**Pitinga**	**21.58**	**31**	P	**P**	**20 46 11.4**	**-2.1**
	comp=Z,15nm,0.3s,baz=198,slow=20,SNR=59						
ORTC	**Ortega, Tolima**	**23.79**	**349**	*e*P	**P**	**20 46 36.6**	**0.0**
ROSC	**El Rosal**	**24.55**	**352**	LR	LR	20 57 31.6	
	comp=Z,89nm,18.8s,baz=84,slow=40						
GUY2C	**Guyana, Caldas**	**25.09**	**349**	*e*P	**P**	**20 46 50.5**	**+1.5**
NORC	**Norcasia**	**25.34**	**351**	*e*P	**P**	**20 46 50.6**	**-0.3**
RUSC	**La Rusia**	**25.45**	**355**	*e*P	**P**	**20 46 52.8**	**+0.4**
HELC	**Santa Helena**	**26.07**	**349**	*e*P	**P**	**20 46 57.0**	**-0.7**
PTBC	**PUERTO BERRIO,**	**26.24**	**352**	*e*P	**P**	**20 46 56.5**	**-2.5**
SMLC	**San Martn de**	**28.43**	**353**	*e*P	**P**	**20 47 15.5**	**-3.0**
RPN	**Rapa Nui**	**36.02**	**251**	P	**P**	**20 48 25.8**	**+0.7**
	comp=Z,32nm,0.6s,baz=74,slow=6.2,SNR=1.4						
TXAR	**Lajitas Array**	**58.08**	**326**	P	**P**	**20 51 17.9**	**+0.7**
	comp=Z,0.1nm,0.4s,baz=153,slow=8.0,SNR=1.4						
SNAA	**Sanae**	**64.63**	**161**	P	**P**	**20 52 01.6**	**+0.7**
	comp=Z,1.9nm,0.8s,baz=285,slow=4.0,SNR=3.7						
QSPA	**South Pole Qui**	**70.56**	**180**	P	**P**	**20 52 39.6**	**+1.1**
	comp=Z,1.0nm,0.5s,baz=284,slow=1.7,SNR=13						
TORD	**Torodi Ar. Bea**	**78.44**	**72**	P	**P**	**20 53 23.3**	**-1.8**
	comp=Z,1.7nm,0.7s,baz=260,slow=5.0,SNR=8.2						
YKA	**Yellowknife Ar**	**88.84**	**341**	P	**P**	**20 54 16.8**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=136,slow=5.1,SNR=17						
H11S2	**WAKE ISLAND Hy**	**125.84**	**279**	T	T	23 19 31.8	
	baz=100,slow=74,SNR=65						
H11S1	**WAKE ISLAND Hy**	**125.85**	**279**	T	T	23 19 35.4	
	baz=100,slow=74,SNR=43						
H11S3	**WAKE ISLAND Hy**	**125.86**	**279**	T	T	23 19 41.3	
	baz=100,slow=74,SNR=41						
H11N3	**WAKE ISLAND Hy**	**125.88**	**281**	T	T	23 19 36.7	
	baz=100,slow=74,SNR=14						
H11N2	**WAKE ISLAND Hy**	**125.89**	**281**	T	T	23 19 31.3	
	baz=100,slow=74,SNR=18						
H11N1	**WAKE ISLAND Hy**	**125.89**	**281**	T	T	23 19 31.2	
	baz=100,slow=74,SNR=8.8						
ASAR	**Alice Springs**	**130.68**	**210**	PKP	**PKPdf**	**21 00 35.3**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=143,slow=2.3,SNR=5.1						
WRA	**Warramunga Arr**	**133.59**	**214**	PKP	**PKPdf**	**21 00 41.0**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=154,slow=2.0,SNR=4.6						
MKAR	**Makanchi Array**	**145.11**	**33**	PKP	**PKPbc**	**21 01 00.2**	**-0.4**
	comp=Z,1.8nm,0.7s,baz=320,slow=3.7,SNR=23						

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*IDC **24** 21:03:11.0±1.7, 19°.54S×70°.75W, h0^{km}, mb4.0/3, mb1 4.0/5, mb1mx3.7/25, mbtmp3.9/5, ML3.7/2, Error ellipse: s-maj=45.0km s-min=18.5km az=70.0*

*NEIC **24** 21:03:14.7±2.8, 19°.63S±0°.04×70°.75W±0°.06, h23^{km}±6^{km}, mb4.1/3, Error ellipse: s-maj=8.5km s-min=4.4km az=67.0*

*GUC **24** 21:03:15.5±0.8, 19°.58S×70°.80W, h33^{km}±3^{km}, ML3.7*

ISC 24 21:03:12.6±2.1, **19°.60S**±0°.03×**70°.86W**±0°.06, **h14**^{km}±13^{km}, **n46,** σ**1^{s}.06**/52, **mb3.9**/3, **5C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.69**	**90**	⇓*i*P	**Pb**	**21 03 26.4**	**-0.1**
PSGC				*i* S	**Sg**	**21 03 35.2**	**-0.1**
PSGCX	**Pisagua**	**0.69**	**90**		**Pb**	**21 03 26.2**	**-0.2**
PB12	**IPOC Station P**	**1.10**	**27**	⇓*i*P	**Pb**	**21 03 33.5**	**0.0**
PB12				*i* S	**Sb**	**21 03 48.1**	**+0.3**
PB12				IAML		21 03 51.1	
	comp=N,4µm,0.5s						
PB12	**IPOC Station P**	**1.10**	**27**		**Pb**	**21 03 33.5**	**0.0**
PB11	**IPOC Station P**	**1.14**	**98**	⇓*i*P	**Pn**	**21 03 33.8**	**-0.5**
PB11				*i* S	**Sb**	**21 03 48.7**	**-0.2**
PB11				IAML		21 03 51.9	
	comp=N,4µm,0.4s						
PB11	**IPOC Station P**	**1.14**	**98**		**Pn**	**21 03 33.9**	**-0.4**
TA01	**Diego Aracena**	**1.15**	**147**	*i* P	**Pb**	**21 03 34.6**	**+0.4**
TA01				*i* S	**Sn**	**21 03 49.5**	**-0.3**
TA01				IAML		21 03 53.5	
	comp=E,5µm,0.3s						
AP01	**Chacalluta**	**1.32**	**22**	*e*P	**Pn**	**21 03 36.6**	**0.0**
AP01				*i* S	**Sg**	**21 03 54.9**	**-0.3**
AP01				IAML		21 03 56.5	
	comp=E,4µm,0.5s						
PATCX	**Punta Patache**	**1.38**	**152**	⇑*i*P	**Pn**	**21 03 38.1**	**+0.6**
PATCX				*i* S	**Sn**	**21 03 55.7**	**0.0**
PATCX				IAML		21 04 01.4	
	comp=E,1µm,0.3s						
PATCX	**Punta Patache**	**1.38**	**152**		**Pb**	**21 03 38.3**	**+0.1**
PATCX					**Sb**	**21 03 55.8**	**+0.1**
GO01	**Chusmiza**	**1.57**	**93**	⇓*i*P	**Pn**	**21 03 41.1**	**+0.6**
GO01				*i* S	**Sb**	**21 04 01.3**	**-0.3**
GO01	**Chusmiza**	**1.57**	**93**		**Pn**	**21 03 41.1**	**+0.6**
PB08	**IPOC Station P**	**1.69**	**109**	⇓*i*P	**Pn**	**21 03 42.9**	**+0.8**
PB08				*i* S	**Sb**	**21 04 04.7**	**-0.3**
PB08				IAML		21 04 11.0	
	comp=N,1µm,0.3s						
PB16	**IPOC Station P**	**1.79**	**46**	*e*P	**Pb**	**21 03 45.0**	**-0.6**
PB16				*i* S	**Sb**	**21 04 08.0**	**-0.2**
PB16				IAML		21 04 12.9	
	comp=N,965nm,0.6s						
PB16	**IPOC Station P**	**1.79**	**46**		**Pb**	**21 03 45.1**	**-0.5**
PB01	**IPOC Station P**	**1.92**	**138**	⇑*i*P	**Pn**	**21 03 45.9**	**+0.9**
PB01				*i* S	**Sn**	**21 04 09.6**	**+0.5**
PB01				IAML		21 04 10.6	
	comp=E,1µm,0.3s						
PB01	**IPOC Station P**	**1.92**	**138**		**Pn**	**21 03 45.8**	**+0.8**
PB01				Sg	**Sn**	**21 04 09.8**	**+0.7**
PB02	**IPOC Station P**	**1.93**	**152**	⇑*i*P	**Pn**	**21 03 46.1**	**+0.9**
PB02				*i* S	**Sn**	**21 04 09.0**	**-0.3**
PB02				IAML		21 04 23.2	
	comp=E,2µm,0.5s						
PB07	**IPOC Station P**	**2.30**	**157**	*e*P	**Pn**	**21 03 51.0**	**+0.8**
PB07	**IPOC Station P**	**2.30**	**157**		**Pn**	**21 03 51.1**	**+0.8**
PB03	**IPOC Station P**	**2.64**	**157**	⇑*i*P	**Pn**	**21 03 55.6**	**+0.6**
PB03				IAML		21 04 39.2	
	comp=E,357nm,0.7s						
PB09	**IPOC Station P**	**2.65**	**146**	⇑*i*P	**Pn**	**21 03 57.0**	**+1.8**
PB09				IAML		21 04 41.2	
	comp=N,743nm,0.7s						
PB09	**IPOC Station P**	**2.65**	**146**		**Pn**	**21 03 57.2**	**+2.1**
PB04	**IPOC Station P**	**2.80**	**166**		**Pn**	**21 03 57.3**	**+0.2**
LVC	**Limon Verde**	**3.50**	**149**	Pn	**Pn**	**21 04 08.9**	**+1.9**
	comp=N,8.7nm,0.3s,baz=332,slow=12,SNR=11						
LVC				Sn	**Sn**	**21 04 49.5**	**+1.1**
	comp=N,18nm,0.3s,baz=156,slow=23,SNR=7.8						
LVC				Lg	Lg	21 05 01.0	
	comp=N,20nm,0.3s,baz=77,slow=16,SNR=8.8						
LVC	**Limon Verde**	**3.50**	**149**		**Pn**	**21 04 09.1**	**+2.2**
PB15	**IPOC Station P**	**3.81**	**160**		**Pn**	**21 04 11.6**	**+0.5**
PB10	**IPOC Station P**	**3.90**	**176**	Pn	**Pn**	**21 04 11.5**	**-0.6**
LPAZ	**La Paz**	**4.19**	**39**	Pn	**Pn**	**21 04 21.2**	**+4.5**
	comp=N,1.6nm,0.3s,baz=277,slow=4.6,SNR=23						
LPAZ	**La Paz**	**4.19**	**39**		Pn	21 04 21.7	+5.0
PB14	**IPOC Station P**	**5.02**	**175**	Pn	**Pn**	**21 04 27.0**	**-0.8**
GO02	**Mina Guanaco**	**5.66**	**168**	Pn	**Pn**	**21 04 37.1**	**+0.6**
SIV	**San Ignacio**	**9.99**	**70**	Pn	**Pn**	**21 05 35.6**	**-0.2**
	comp=N,0.6nm,0.3s,baz=281,slow=13,SNR=6.0						
PTGA	**Pitinga**	**21.58**	**31**	P	**P**	**21 08 00.5**	**-1.5**
	comp=N,5.3nm,0.3s,baz=326,slow=22,SNR=26						
PTGA	**Pitinga**	**21.58**	**31**	P	**P**	**21 08 00.5**	**-1.5**
PTGA				IAmb	IAmb	21 08 04.1	
	comp=Z,10nm,1.4s						
RUSC	**La Rusia**	**25.43**	**355**	P	**P**	**21 08 40.2**	**-0.4**
TORD	**Torodi Ar. Bea**	**78.46**	**72**	P	**P**	**21 15 12.6**	**-1.1**
	comp=Z,0.7nm,0.7s,baz=250,slow=6.1,SNR=3.8						
TORD	**Torodi Ar. Bea**	**78.46**	**72**	IAmb	IAmb	21 15 13.6	
	comp=Z,0.9nm,0.8s						
YKA	**Yellowknife Ar**	**88.81**	**341**	P	**P**	**21 16 06.5**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=136,slow=5.0,SNR=6.0						
H11S2	**WAKE ISLAND Hy**	**125.81**	**279**	T	T	23 41 26.2	
	baz=109,slow=74						
H11S1	**WAKE ISLAND Hy**	**125.81**	**279**	T	T	23 41 23.1	
	baz=109,slow=74						
H11S3	**WAKE ISLAND Hy**	**125.82**	**279**	T	T	23 41 25.0	
	baz=109,slow=74						
H11N3	**WAKE ISLAND Hy**	**125.84**	**281**	T	T	23 41 27.1	
	baz=100,slow=75,SNR=12						
H11N2	**WAKE ISLAND Hy**	**125.86**	**281**	T	T	23 41 28.9	
	baz=100,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	**125.86**	**281**	T	T	23 41 28.6	
	baz=100,slow=75,SNR=3.6						
MKAR	**Makanchi Array**	**145.10**	**33**	PKPbc	**PKPdf**	**21 22 49.6**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=309,slow=3.6,SNR=11						

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*IDC **24** 21:08:29.5±1.2, 19°.46S×70°.60W, h0^{km}, mb4.0/4, mb1 4.1/7, mb1mx3.8/26, mbtmp4.0/7, ML3.9/3, MS3.0/8, Ms1 3.0/8, ms1mx2.9/32, Error ellipse: s-maj=34.0km s-min=17.0km az=76.0*

*NEIC **24** 21:08:31.9, 19°.60S×70°.87W, h34^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.86; M$_{\theta\theta}$0.08; M$_{\phi\phi}$-0.94; M$_{r\theta}$0.25; M$_{\theta\phi}$0.15; M$_{\phi r}$-0.93; Fault plane solution: M$_0$1.32000×10^{15} NP1:φ$_s$358.36000°, δ22.09000°, λ100.95000°. NP2:φ$_s$166.57000°, δ68.33000°, λ85.59000°. Principal axes: T 1.2737, Plg66.0000°, Azm69.0000°; N 0.0947, Plg4.0000°, Azm168.0000°; P -1.3684, Plg23.0000°, Azm260.0000°;*

*NEIC **24** 21:08:33.0±2.8, 19°.61S±0°.04×70°.76W±0°.07, h30^{km}±3^{km}, mb4.3/3, Mwr4.0/40 Error ellipse: s-maj=10.2km s-min=5.5km az=99.0*

*GUC **24** 21:08:34.0±0.5, 19°.61S×70°.74W, h32^{km}±2^{km}, ML3.9*

ISC 24 21:08:30.6±1.7, **19°.63S**±0°.03×**70°.85W**±0°.06, **h13**^{km}±10^{km}, **n59,** σ**1^{s}.28**/63, **mb4.1**/4, **MS3.0**/3, **4C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.69**	**88**	⇓*i*P	**Pg**	**21 08 44.4**	**+0.4**
PSGC				*i* S	**Sg**	**21 08 52.7**	**-0.4**
PSGC				IAML		21 08 53.7	
	comp=N,7µm,0.5s						
PSGCX	**Pisagua**	**0.69**	**88**		**Pg**	**21 08 44.3**	**+0.3**
PSGCX					**Sg**	**21 08 52.8**	**-0.4**
PB12	**IPOC Station P**	**1.12**	**26**	*e*P	**Pb**	**21 08 52.0**	**+0.1**
PB12				*e*S	**Sb**	**21 09 06.3**	**-0.2**
PB12				IAML		21 09 09.2	
	comp=N,3µm,0.3s						
PB12	**IPOC Station P**	**1.12**	**26**		**Pb**	**21 08 49.9**	**-2.1**
PB12					**Sb**	**21 09 06.7**	**+0.2**
TA01	**Diego Aracena**	**1.13**	**146**	*e*P	**Pn**	**21 08 51.7**	**-0.4**
TA01				*e*S	**Sb**	**21 09 06.1**	**-0.4**
TA01				IAML		21 09 08.6	
	comp=E,5µm,0.4s						
PB11	**IPOC Station P**	**1.14**	**97**	⇓*i*P	**Pb**	**21 08 51.6**	**-0.5**
PB11				*i* S	**Sb**	**21 09 05.4**	**-1.5**
PB11				IAML		21 09 07.2	
	comp=N,5µm,0.7s						
PB11	**IPOC Station P**	**1.14**	**97**		**Pb**	**21 08 50.2**	**-1.9**
AP01	**Chacalluta**	**1.34**	**21**	*e*P	**Pn**	**21 08 55.4**	**+0.4**
AP01				*e*S	**Sn**	**21 09 12.5**	**-0.2**
AP01				IAML		21 09 16.5	
	comp=N,8µm,0.4s						
PATCX	**Punta Patache**	**1.36**	**151**	⇑*i*P	**Pn**	**21 08 56.0**	**+0.7**
PATCX				*i* S	**Sn**	**21 09 13.0**	**-0.2**
PATCX				IAML		21 09 18.4	
	comp=E,3µm,0.3s						
PATCX	**Punta Patache**	**1.36**	**151**		**Pn**	**21 08 56.0**	**+0.7**
GO01	**Chusmiza**	**1.56**	**92**	⇓*i*P	**Pn**	**21 08 59.0**	**+0.5**
GO01				*e*S	**Sn**	**21 09 18.3**	**-0.6**
GO01	**Chusmiza**	**1.56**	**92**		**Pn**	**21 08 59.1**	**+0.5**
GO01					**Sn**	**21 09 18.6**	**-0.3**
PB08	**IPOC Station P**	**1.68**	**108**	*e*P	**Pn**	**21 09 00.8**	**+0.7**
PB16	**IPOC Station P**	**1.81**	**45**	⇓*i*P	**Pb**	**21 09 03.4**	**-0.6**
PB16				*i* S	**Sb**	**21 09 26.0**	**-0.7**
PB16				IAML		21 09 32.3	
	comp=N,1µm,0.6s						
PB16	**IPOC Station P**	**1.81**	**45**		**Pn**	**21 09 02.8**	**+0.8**
PB01	**IPOC Station P**	**1.90**	**138**	⇑*i*P	**Pn**	**21 09 03.8**	**+0.9**
PB01				*i* S	**Sn**	**21 09 27.0**	**+0.2**
PB01				IAML		21 09 31.9	
	comp=N,2µm,0.2s						
PB01	**IPOC Station P**	**1.90**	**138**		**Pn**	**21 09 03.7**	**+0.9**
PB02	**IPOC Station P**	**1.91**	**152**	⇑*i*P	**Pn**	**21 09 04.0**	**+1.1**
PB02				*i* S	**Sn**	**21 09 26.4**	**-0.5**
PB02				IAML		21 09 37.3	
	comp=E,3µm,0.5s						
PB07	**IPOC Station P**	**2.28**	**157**	*e*P	**Pn**	**21 09 09.0**	**+1.0**
PB07				IAML		21 09 46.6	
	comp=E,1µm,0.8s						
PB07	**IPOC Station P**	**2.28**	**157**		**Pn**	**21 09 09.1**	**+1.0**
PB03	**IPOC Station P**	**2.62**	**157**	IAML		21 09 56.9	
	comp=E,746nm,0.4s						
PB09	**IPOC Station P**	**2.63**	**145**	⇑*i*P	**Pn**	**21 09 14.8**	**+1.9**
PB09	**IPOC Station P**	**2.63**	**145**		**Pn**	**21 09 14.5**	**+1.6**
PB04	**IPOC Station P**	**2.77**	**166**		**Pn**	**21 09 15.3**	**+0.4**
LVC	**Limon Verde**	**3.48**	**149**	Pn	**Pn**	**21 09 26.8**	**+2.0**
	comp=E,4.2nm,0.3s,baz=346,slow=7.3,SNR=12						
LVC				Sn	**Sn**	**21 10 07.6**	**+1.6**
	comp=E,19nm,0.3s,baz=182,slow=12,SNR=6.5						
LVC				Lg	Lg	21 10 19.9	
	comp=E,26nm,0.3s,baz=139,slow=12,SNR=12						
LVC				LR	LR	21 10 58.5	
	comp=E,291nm,20.6s,baz=338,slow=42						
LVC	**Limon Verde**	**3.48**	**149**		**Pn**	**21 09 26.6**	**+1.8**
PB15	**IPOC Station P**	**3.79**	**160**		**Pn**	**21 09 29.5**	**+0.6**
PB10	**IPOC Station P**	**3.88**	**176**	Pn	**Pn**	**21 09 29.7**	**-0.2**
PB10					**Sn**	**21 10 12.1**	**-3.2**
LPAZ	**La Paz**	**4.21**	**38**	Pn	Pn	21 09 39.7	+4.6
	comp=E,2.4nm,0.3s,baz=212,slow=6.8,SNR=25						
LPAZ				LR	LR	21 11 14.5	
	comp=E,120nm,21.5s,baz=266,slow=42						
LPAZ	**La Paz**	**4.21**	**38**		**Pn**	**21 09 38.3**	**+3.2**
PB14	**IPOC Station P**	**4.99**	**175**		**Pn**	**21 09 45.0**	**-0.5**
GO02	**Mina Guanaco**	**5.63**	**168**		**Pn**	**21 09 54.4**	**+0.1**
GO03	**Copiap**	**7.95**	**176**	Pn	**Pn**	**21 10 26.7**	**+0.8**
GO03					**Sn**	**21 11 53.8**	**-2.0**
NNA	**Nana**	**9.53**	**322**	LR	LR	21 13 32.3	
	comp=E,29nm,20.4s,baz=179,slow=32						
SIV	**San Ignacio**	**9.99**	**70**	Pn	**Pn**	**21 10 52.5**	**-1.5**
	comp=E,0.9nm,0.3s,baz=270,slow=12,SNR=16						
SIV				LR	LR	21 15 19.9	
	comp=E,170nm,20.2s,baz=277,slow=42						
GO04	**Tololo Observa**	**10.50**	**180**	Pn	**Pn**	**21 11 00.9**	**-0.1**
SAML	**Samuel**	**12.96**	**36**	Pn	**Pn**	**21 11 33.8**	**-0.7**
CPUP	**Villa Florida**	**14.12**	**121**	Pn	**Pn**	**21 11 51.2**	**+0.8**
	comp=E,0.3nm,0.3s,baz=308,slow=13,SNR=6.3						
ATAH	**Atahualpa**	**14.42**	**328**	LR	LR	21 17 05.3	
	comp=E,51nm,21.0s,baz=172,slow=36						
PLCA	**Paso Flores**	**21.04**	**179**	P	**P**	**21 13 18.6**	**+4.3**
	comp=E,1.5nm,0.9s,baz=145,slow=13,SNR=2.8						
PLCA	**Paso Flores**	**21.04**	**179**	P	**P**	**21 13 15.1**	**+0.9**
PTGA	**Pitinga**	**21.60**	**31**	P	**P**	**21 13 19.0**	**-1.3**
	comp=E,9.0nm,0.4s,baz=208,slow=16,SNR=38						
PTGA				LR	LR	21 22 38.9	
	comp=E,55nm,19.6s,baz=220,slow=40						
PTGA	**Pitinga**	**21.60**	**31**	P	**P**	**21 13 19.1**	**-1.3**
PTGA				IAmb	IAmb	21 13 19.9	
	comp=Z,7.5nm,0.6s						
BDFB	**Brasilia**	**22.12**	**83**	LR	LR	21 21 48.0	
	comp=Z,35nm,19.1s,baz=300,slow=36						
ROSC	**El Rosal**	**24.55**	**352**	LR	LR	21 24 28.4	
	comp=Z,93nm,18.9s,baz=211,slow=39						
RUSC	**La Rusia**	**25.45**	**355**	P	**P**	**21 14 00.4**	**+1.4**
AGPR	**Aguadilla, PR**	**38.04**	**6**	P	**P**	**21 15 48.6**	**-0.2**
TORD	**Torodi Ar. Bea**	**78.47**	**72**	P	**P**	**21 20 30.1**	**-1.8**
	comp=Z,1.9nm,0.8s,baz=251,slow=6.1,SNR=7.0						
TORD	**Torodi Ar. Bea**	**78.47**	**72**	P	**P**	**21 20 30.7**	**-1.2**
YKA	**Yellowknife Ar**	**88.83**	**341**	P	**P**	**21 21 24.7**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=136,slow=5.2,SNR=9.9						
H11S2	**WAKE ISLAND Hy**	**125.81**	**279**	T	T	23 46 44.0	
	baz=101,slow=74,SNR=52						
H11S1	**WAKE ISLAND Hy**	**125.82**	**279**	T	T	23 46 44.0	
	baz=101,slow=74,SNR=42						
H11S3	**WAKE ISLAND Hy**	**125.83**	**279**	T	T	23 46 46.7	
	baz=101,slow=74,SNR=28						
H11N3	**WAKE ISLAND Hy**	**125.85**	**281**	T	T	23 46 45.6	
	baz=100,slow=74,SNR=12						
H11N2	**WAKE ISLAND Hy**	**125.86**	**281**	T	T	23 46 48.7	
	baz=100,slow=74,SNR=19						
H11N1	**WAKE ISLAND Hy**	**125.87**	**281**	T	T	23 46 45.7	
	baz=100,slow=74,SNR=3.5						
ASAR	**Alice Springs**	**130.66**	**210**	PKP	**PKiKP**	**21 27 43.3**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=122,slow=1.2,SNR=2.7						
MKAR	**Makanchi Array**	**145.12**	**33**	PKP	**PKPab**	**21 28 07.7**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=316,slow=3.1,SNR=17						
MKAR	**Makanchi Array**	**145.12**	**33**		**PKPab**	**21 28 07.6**	**+0.2**

JMA 24 21:30:49.6±0.1, **25°.00N**×**123°.56E, h33**^{km}**, M1.4, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.68**	**167**	P	Pn	21 31 02.6	-0.3
YOJ	**Yonaguni jima**	**0.73**	**223**	S	Sn	21 31 13.5	-0.2
JISG	**Ishigakijimahi**	**0.80**	**121**	P	Pn	21 31 04.4	-0.1
JIJ	**Ishigaki jima**	**0.83**	**140**	P	Pn	21 31 04.7	-0.2
JIJ				*e*S	Sn	21 31 15.3	-0.7
JKRS	**Kuro-shima**	**0.86**	**152**	*e*S	Sb	21 31 17.2	-0.2

TAP 24 21:31:45.9, 24°.71N×121°.64E, h68^{km}**, ML2.4, A, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWE	**Neicheng**	**0.03**	**74**	P	Pn	21 31 56.1	+0.5
	baz=83						
TWE				*e*S	Sn	21 32 03.3	+0.4
	baz=83						
SLBB	**Yuanshan**	**0.04**	**1**	*i* P	Pn	21 31 55.2	-0.6
	baz=1.0						
SLBB				S	Sn	21 32 03.3	+0.3
	baz=1.0						
ENTT	**Nioudou**	**0.10**	**221**	*i* P	Pn	21 31 56.2	+0.4
	baz=216						
ENTT				S	Sn	21 32 03.8	+0.7
	baz=216						
NWLT	**Wulai**	**0.14**	**298**	P	Pn	21 31 56.1	+0.1
	baz=298						
NWLT				S	Sn	21 32 03.3	0.0
	baz=298						
NDT	**Datong Townshi**	**0.16**	**225**	P	Pn	21 31 56.3	+0.3
	baz=225						
NDT				*e*S	Sn	21 32 03.9	+0.5
	baz=225						
TWC	**Suao**	**0.22**	**118**	P	Pn	21 31 56.4	+0.2
	baz=117						
TWC				*e*S	Sn	21 32 04.0	+0.2
	baz=117						
YHNB	**Yeheng**	**0.24**	**260**	*i* P	Pn	21 31 56.5	0.0
	baz=259						
YHNB				S	Sn	21 32 05.3	+1.0
	baz=259						
NSK	**Sanguang**	**0.26**	**262**	P	Pn	21 31 56.1	-0.5
	baz=260						
NSK				*e*S	Sn	21 32 05.0	+0.6
	baz=260						
ENA	**Nanau**	**0.30**	**161**	P	Pn	21 31 57.7	+0.9
	baz=159						
ENA				*e*S	Sn	21 32 04.9	+0.2
	baz=159						
TIPB	**Shuangxi**	**0.31**	**34**	P	Pn	21 31 57.2	+0.3
	baz=33						
TIPB				S	Sn	21 32 05.7	+0.8
	baz=33						
NNS	**Nan Shan**	**0.36**	**221**	P	Pn	21 31 57.5	+0.1
	baz=220						
NNS				*e*S	Sn	21 32 06.2	+0.4
	baz=220						
NNSB	**Datong**	**0.36**	**219**	P	Pn	21 31 57.4	0.0
	baz=218						
NNSB				*e*S	Sn	21 32 07.1	+1.3
	baz=218						
NNSH	**Datong**	**0.36**	**219**	P	Pn	21 31 57.6	+0.2
	baz=218						
NNSH				*e*S	Sn	21 32 06.2	+0.4
	baz=218						
YM01	**YM01**	**0.44**	**352**	P	Pn	21 31 58.3	+0.4
	baz=352						
YM01				S	Sn	21 32 07.3	+0.6
	baz=352						
YM10	**YM10**	**0.45**	**351**	*e*P	Pn	21 31 58.0	-0.1
	baz=351						
YM10				*e*S	Sn	21 32 07.8	+0.9
	baz=351						
YM04	**YM04**	**0.45**	**348**	P	Pn	21 31 58.4	+0.3
	baz=348						
YM04				S	Sn	21 32 07.4	+0.5
	baz=348						
YM05	**YM05**	**0.45**	**352**	*e*P	Pn	21 31 58.5	+0.4
	baz=352						
YM05				S	Sn	21 32 07.7	+0.6
	baz=352						
YM11	**YM11**	**0.45**	**353**	*e*S	Sn	21 32 07.7	+0.6
	baz=353						
YM03	**YM03**	**0.47**	**349**	P	Pn	21 31 59.0	+0.7
	baz=349						
YM03				*e*S	Sn	21 32 07.6	+0.3
	baz=349						
EOS1	**EOS1**	**0.48**	**110**	*e*P	Pn	21 31 59.4	+1.2
	baz=109						
ETLH	**Xiulin Townshi**	**0.52**	**196**	*e*S	Sn	21 32 07.7	-0.5
	baz=195						
LIOB	**Emei**	**0.57**	**263**	P	Pn	21 31 59.5	+0.4
	baz=263						
LIOB				*e*S	Sn	21 32 09.4	+0.5
	baz=263						
TDCB	**Techi**	**0.63**	**224**	P	Pn	21 32 00.6	+0.6
	baz=223						
TDCB				*e*S	Sn	21 32 11.0	+0.6
	baz=223						
TWD	**Chiawan**	**0.63**	**183**	*e*P	Pn	21 31 59.9	+0.1
	baz=182						
TWD				*e*S	Sn	21 32 10.4	+0.3
	baz=182						
WHF	**Hehuan Shan**	**0.66**	**211**	P	Pn	21 32 01.3	+0.7
	baz=210						
WHF				*e*S	Sn	21 32 11.3	-0.1
	baz=210						
WHP	**Taichung City**	**0.76**	**236**	P	Pn	21 32 02.0	+0.6
	baz=235						
WHP				*e*S	Sn	21 32 13.8	+1.0

	baz=235						
CHGB	**Renai**	**0.77**	**213**	P	Pn	21 32 02.1	+0.5
	baz=212						
CHGB				*e*S	Sn	21 32 13.8	+0.4
	baz=212						
SSLB	**Suanglung**	**1.11**	**214**	P	Pn	21 32 06.0	+0.3
	baz=213						
SSLB				*e*S	Sn	21 32 21.3	+0.8
	baz=213						
HGSD	**Ruisui**	**1.23**	**189**	*e*P	Pn	21 32 07.6	+0.4
	baz=188						
HGSD				*e*S	Sn	21 32 23.6	+0.5
	baz=188						

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*IDC **24** 21:35:16.2±1.8, 19°.48S×70°.65W, h0^{km}, mb3.9/3, mb1 3.9/5, mb1mx3.6/36, mbtmp3.8/5, ML3.4/2, MS3.5/2, Ms1 3.5/2, ms1mx2.7/34, Error ellipse: s-maj=45.2km s-min=18.5km az=72.0*

*GUC **24** 21:35:21.0±0.6, 19°.57S×70°.70W, h44^{km}±2^{km}, ML3.5*

ISC 24 21:35:19.4±1.5**, 19°.56S**±0°.03×**70°.72W**±0°.07**, h23**^{km}±12^{km}**, n20, σ1ˢ46**/30**, mb3.8**/3**, 2C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.57**	**94**	⇓*i*P	**Pn**	**21 35 31.9**	**-0.3**
PSGC				*i* S	**Sn**	**21 35 40.2**	**-0.6**
PB12	**IPOC Station P**	**1.01**	**22**	⇓*i*P	**Pn**	**21 35 38.9**	**+0.6**
PB12				*i* S	**Sn**	**21 35 53.0**	**+1.2**
PB12				IAML		21 35 55.7	
	comp=N,3µm,0.3s						
PB11	**IPOC Station P**	**1.03**	**102**	*e*P	**Pn**	**21 35 38.6**	**+0.1**
PB11				*e*S	**Sn**	**21 35 52.9**	**+0.6**
PB11				IAML		21 35 56.2	
	comp=N,2µm,0.4s						
TA01	**Diego Aracena**	**1.13**	**153**	⇑*i*P	**Pb**	**21 35 40.6**	**+0.4**
TA01				*i* S	**Sn**	**21 35 55.1**	**+0.6**
AP01	**Chacalluta**	**1.23**	**17**	*e*P	**Pb**	**21 35 42.5**	**+0.5**
AP01				*e*S	**Sb**	**21 35 59.1**	**+1.6**
PATCX	**Punta Patache**	**1.37**	**157**	⇑*i*P	**Pb**	**21 35 43.9**	**-0.4**
PATCX				*i* S	**Sb**	**21 36 01.7**	**+0.2**
GO01	**Chusmiza**	**1.45**	**95**	*e*P	**Pb**	**21 35 46.1**	**+0.2**
GO01				*i* S	**Sb**	**21 36 05.8**	**+1.7**
PB08	**IPOC Station P**	**1.59**	**112**	*e*P	**Pb**	**21 35 48.5**	**+0.3**
PB08				*i* S	**Sb**	**21 36 08.8**	**+0.7**
PB08				IAML		21 36 14.0	
	comp=N,825nm,0.6s						
PB16	**IPOC Station P**	**1.67**	**44**	⇓*i*P	**Pb**	**21 35 50.3**	**+0.4**
PB16				*i* S	**Sb**	**21 36 12.5**	**+1.7**
PB16				IAML		21 36 17.4	
	comp=N,914nm,0.5s						
PB01	**IPOC Station P**	**1.88**	**142**	*e*P	**Pb**	**21 35 51.8**	**-1.3**
PB01				*i* S	**Sb**	**21 36 14.5**	**-1.7**
PB01				IAML		21 36 16.2	
	comp=E,691nm,0.4s						
PB02	**IPOC Station P**	**1.92**	**156**	*i* P	**Pb**	**21 35 51.9**	**-1.9**
PB02				*i* S	**Sn**	**21 36 14.5**	**+0.2**
LVC	**Limon Verde**	**3.48**	**151**	Pn	**Pn**	**21 36 14.5**	**+2.0**
	comp=E,3.2nm,0.3s,baz=336,slow=9.4,SNR=15						
LVC				Sn	**Sn**	**21 36 55.9**	**+2.8**
	comp=E,13nm,0.3s,baz=104,slow=19,SNR=8.6						
LVC				Lg	Lg	21 37 06.7	
	comp=E,20nm,0.3s,baz=184,slow=16,SNR=14						
LPAZ	**La Paz**	**4.08**	**38**	Pn	**Pb**	**21 36 26.4**	**-4.6**
	comp=E,1.7nm,0.3s,baz=245,slow=6.3,SNR=27						
SIV	**San Ignacio**	**9.85**	**70**	Pn	**Pn**	**21 37 39.0**	**-0.8**
	comp=E,0.4nm,0.3s,baz=261,slow=12,SNR=6.5						
PTGA	**Pitinga**	**21.47**	**31**	P	**P**	**21 40 05.7**	**-0.8**
	comp=E,3.0nm,0.3s,baz=181,slow=17,SNR=15						
JTS	**Las Juntas de**	**32.81**	**333**	LR	LR	21 55 00.6	
	comp=E,68nm,20.9s,baz=31,slow=36						
DBIC	**Dimbokro**	**69.84**	**75**	LR	LR	22 14 55.2	
	comp=E,44nm,19.0s,baz=134,slow=34						
TORD	**Torodi Ar. Bea**	**78.33**	**71**	P	**P**	**21 47 17.8**	**-0.6**
	comp=E,0.7nm,0.7s,baz=235,slow=4.9,SNR=3.4						
YKA	**Yellowknife Ar**	**88.80**	**341**	P	**P**	**21 48 11.4**	**+0.4**
	comp=E,0.4nm,0.8s,baz=136,slow=5.2,SNR=5.2						
MKAR	**Makanchi Array**	**145.00**	**33**	PKP	**PKPdf**	**21 54 54.4**	**-0.5**
	comp=E,0.4nm,0.6s,baz=328,slow=3.5,SNR=6.1						

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*IDC **24** 21:37:26.5±7.3, 7°.92N×93°.86E, h0^{km}, mb3.7/7, mb1 3.7/8, mb1mx3.5/62, mbtmp3.7/8, ML4.0/1, MS3.2/2, Ms1 3.2/2, ms1mx2.7/40, Error ellipse: s-maj=157.2km s-min=44.3km az=146.0*

ISC 24 21:37:30.1±6.5**, 8°.0N**±0°.8×**93°.8E**±0°.6**, h18**^{km}**, n12, σ1ˢ27**/8**, mb3.8**/7**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**11.56**	**25**	Pn	**Pn**	**21 40 15.0**	**+0.5**
	0.3nm,0.3s,baz=213,slow=15,SNR=2.6						
H08S3	**Diego Garcia H**	**26.29**	**234**	T	T	22 09 53.3	
	baz=54,slow=75,SNR=7.0						
H08S2	**Diego Garcia H**	**26.29**	**234**	T	T	22 09 49.3	
	baz=54,slow=75,SNR=4.0						
H08S1	**Diego Carcia H**	**26.31**	**234**	T	T	22 09 54.5	
	baz=54,slow=75,SNR=3.8						
WSAR	**Wadi Sarin**	**36.97**	**298**	LR	LR	22 00 17.4	
	comp=Z,25nm,18.2s,baz=104,slow=37						
MKAR	**Makanchi Array**	**39.92**	**348**	P	**P**	**21 45 01.1**	**-2.1**
	1.0nm,0.8s,baz=170,slow=8.8,SNR=4.4						
SONM	**Songino Array**	**41.15**	**13**	P	**P**	**21 45 13.8**	**+0.4**
	0.4nm,0.8s,baz=215,slow=7.0,SNR=2.5						
SONM				LR	LR	22 04 19.0	
	comp=Z,42nm,18.3s,baz=162,slow=39						
GEYT	**Alibeck**	**43.89**	**318**	P	**P**	**21 45 37.1**	**+1.3**
	0.6nm,0.5s,baz=138,slow=6.7,SNR=2.1						
ZALV	**Zalesovo Beam**	**46.41**	**353**	P	**P**	**21 45 54.8**	**-0.7**
	1.3nm,0.6s,baz=181,slow=7.4,SNR=6.4						
BRTR	**Keskin Array B**	**62.10**	**311**	P	**P**	**21 47 50.9**	**+0.6**
	0.4nm,0.6s,baz=116,slow=10,SNR=4.1						
FINES	**FINESS Array B**	**72.46**	**332**	P	**P**	**21 48 54.6**	**-0.7**
	0.8nm,0.8s,baz=94,slow=4.2,SNR=2.3						
HFS	**Hagfors**	**78.19**	**330**	P	**P**	**21 49 27.7**	**-0.7**
	0.9nm,0.7s,baz=139,slow=9.0,SNR=2.2						

NNC 24 21:37:36.2±3.5**, 44°.97N×91°.98E, h0**^{km}**, mb3.6, mpv3.0, 5C-4D, Error ellipse: s-maj=40.2km s-min=32.6km az=30.0, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**7.00**	**289**	⇑Pn	Pn	21 39 19.2	-0.9
	0.2nm,0.4s,baz=92,slow=15,SNR=13						
MK31				⇑Pg	Pb	21 39 44.2	+5.5
	0.6nm,0.5s,baz=95,slow=17,SNR=3.6						
MK31				Lg	Lg	21 41 19.3	
	2.3nm,0.4s,baz=90,slow=31,SNR=4.1						
MAKZ	**Makanchi**	**7.22**	**288**	⇓Pn	Pn	21 39 22.7	-0.2
	1.7nm,1.1s						
MAKZ				⇑Pg	Pb	21 39 47.0	+4.7
	0.7nm,0.5s						
MAKZ				⇓Lg	Lg	21 41 26.6	
	4.3nm,0.5s						
PDGK	**Podgornoye**	**9.13**	**264**	⇑Pn	Pn	21 39 49.5	+0.2
	2.2nm,0.5s						
KURK	**Kurchatov**	**10.65**	**307**	⇓Pn	Pn	21 40 09.2	-0.7
	1.5nm,0.6s						
KURBB	**Kurchatov Arra**	**10.66**	**307**	⇓Pn	Pn	21 40 12.4	+2.3
	1.2nm,0.8s						
KURBB				⇑Lg	Lg	21 43 13.6	
	16nm,0.9s						

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*IDC **24** 21:39:20.2±1.4, 6°.31S×128°.33E, h369^{km}±17^{km}, mb3.1/7, mb1 3.4/13, mb1mx3.2/44, mbtmp4.2/13, Error ellipse: s-maj=19.0km s-min=12.3km az=79.0*

*NEIC **24** 21:39:20.0±1.7, 6°.36S±0°.08×128°.25E±0°.09, h373^{km}±11^{km}, mb4.1/7, Error ellipse: s-maj=12.7km s-min=11.6km az=122.0*

*DJA **24** 21:39:20.7±0.4, 6°S±3°×12°8E±°, h376^{km}±8^{km}, M4.4/12, mB4.7/6, mb4.5/10, MLv4.5/12, MLv4.5/4, Mw(mB)3.9/6*

ISC 24 21:39:20.1±0.5**, 6°.42S**±0°.05×**128°.25E**±0°.06**, h376**^{km}**, n46, σ1ˢ41**/54**, mb3.5**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**2.50**	**41**	P	**Pn**	**21 40 19.1**	**+1.6**
NLAI	**Namlea**	**3.36**	**340**	P	**Pn**	**21 40 25.3**	**+0.6**
NLAI				S	**S**	**21 41 17.1**	**+0.3**
SAUI	**Saumlaki**	**3.40**	**117**	Pn	**Pn**	**21 40 25.3**	**+0.2**
SAUI					**S**	**21 41 16.1**	**-1.4**
SANI	**Sanana**	**4.89**	**332**	P	**Pn**	**21 40 38.7**	**-1.2**
SOEI	**Soe**	**5.15**	**230**	P	**Pn**	**21 40 42.5**	**-0.3**
	1.9nm44nm,0.5s						
SOEI	**Soe**	**5.15**	**230**		**Pn**	**21 40 43.0**	**+0.2**
SOEI				S	**S**	**21 41 45.6**	**-4.2**
FAKI	**Fak Fak**	**5.29**	**49**	P	**Pn**	**21 40 44.2**	**+0.1**
	0.9nm2µm218nm,0.8s						
FAKI	**Fak Fak**	**5.29**	**49**		**Pn**	**21 40 44.6**	**+0.5**
BBSI	**Bau Bau**	**5.72**	**279**	P	**Pn**	**21 40 50.4**	**+1.5**
	0.1nm18nm,1.2s						
LBMI	**Labuha**	**5.79**	**353**	P	**Pn**	**21 40 49.8**	**+0.2**
	0.6nm2µm188nm,0.6s						
SIJI	**Sorong**	**6.28**	**29**	P	**Pn**	**21 40 54.8**	**-0.3**
	12nm,0.3s,baz=169,slow=8.1,SNR=29						
SIJI				S	**S**	**21 42 07.4**	**-4.9**
	11nm,0.3s,baz=56,slow=22,SNR=18						
SWI	**Sorong**	**6.28**	**29**	P	**Pn**	**21 40 54.5**	**-0.6**
	0.6nm1µm67nm,0.5s						
MMRI	**Maumere**	**6.36**	**249**	P	**Pn**	**21 40 58.2**	**+2.3**
	0.3nm27nm,0.7s						
MMRI	**Maumere**	**6.36**	**249**		**Pn**	**21 40 58.8**	**+2.9**
MTN	**Manton Dam**	**6.99**	**156**		**Pn**	**21 41 04.5**	**+1.4**
LUWI	**Luwuk**	**7.64**	**314**	P	**P**	**21 41 11.9**	**+0.4**
	0.2nm755nm49nm,0.8s						
LUWI	**Luwuk**	**7.64**	**314**		**Pn**	**21 41 10.6**	**0.0**
KAPI	**Kappang**	**8.57**	**279**	P	**P**	**21 41 23.0**	**+0.4**
	1.9nm,0.3s,baz=117,slow=8.9,SNR=6.3						
KNRA	**Kununurra**	**9.22**	**177**	P	**Pn**	**21 41 30.1**	**+1.2**
FITZ	**Fitzroy Crossi**	**11.89**	**192**	P	**P**	**21 41 60.0**	**+0.5**
	2.3nm,0.3s,baz=31,slow=8.7,SNR=27						
FITZ	**Fitzroy Crossi**	**11.89**	**192**	P	**P**	**21 42 00.0**	**+0.5**
WB0	**Warramunga Arr**	**14.55**	**156**	P	**P**	**21 42 29.8**	**+1.0**
WB0				S	**S**	**21 45 03.6**	**-1.5**
WRA	**Warramunga Arr**	**14.69**	**157**	P	**P**	**21 42 31.2**	**+0.9**
	1.7nm,0.3s,baz=332,slow=12,SNR=67						
WRA				S	**S**	**21 45 05.8**	**-2.0**
	0.8nm,0.3s,baz=333,slow=17,SNR=11						
WRA	**Warramunga Arr**	**14.69**	**157**	P	**P**	**21 42 30.6**	**+0.3**
WRA					**S**	**21 45 06.5**	**-1.3**
WB2	**Warramunga Arr**	**14.70**	**157**	P	**P**	**21 42 31.2**	**+0.9**
WR0	**Warramunga Arr**	**14.79**	**156**	P	**P**	**21 42 32.3**	**+1.0**
WR0					**S**	**21 45 07.9**	**-1.8**
COEN	**Coen**	**16.48**	**118**	P	**P**	**21 42 51.2**	**+1.4**
PSA00	**Pilbara Seismi**	**17.12**	**208**	P	**P**	**21 42 56.4**	**-0.1**
PSA00				IAmb	IAmb	21 42 57.0	
	comp=Z,8.8nm,0.8s						
AS31	**Alice Springs**	**17.99**	**163**	P	**P**	**21 43 06.7**	**+0.9**
AS31				IAmb	IAmb	21 43 07.2	
	comp=Z,2.5nm,0.5s						
ASAR	**Alice Springs**	**17.99**	**163**	P	**P**	**21 43 06.5**	**+0.8**
	comp=Z,1.6nm,0.3s,baz=343,slow=12,SNR=129						
ASAR				S	**S**	**21 46 11.4**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=340,slow=19,SNR=22						
ASAR	**Alice Springs**	**17.99**	**163**	P	**P**	**21 43 06.4**	**+0.6**
PMG	**Port Moresby**	**18.96**	**100**	P	**P**	**21 43 17.8**	**+1.7**
	baz=297,slow=16,SNR=3.8						
GIRL	**Giralia**	**21.05**	**219**	P	**P**	**21 43 35.6**	**-0.3**
GIRL				IAmb	IAmb	21 43 35.9	
	comp=Z,18nm,0.9s						
FORT	**Forrest**	**24.24**	**180**	P	**P**	**21 44 03.0**	**-1.6**
FORT				IAmb	IAmb	21 44 03.7	
	comp=Z,8.7nm,0.8s						
BBOO	**Buckleboo**	**27.25**	**166**	P	**P**	**21 44 32.1**	**+0.6**
STKA	**Stephens Creek**	**28.23**	**155**	P	**P**	**21 44 40.9**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=330,slow=14,SNR=1.4						
CMAR	**Chiang Mai Arr**	**38.03**	**311**	P	**P**	**21 46 06.0**	**+1.9**
	comp=Z,0.4nm,0.3s,baz=140,slow=6.8,SNR=4.4						
WHN	**Wuhan**	**39.09**	**341**	P	P	21 46 04.8	-7.9
KSRS	**Korea Array**	**43.64**	**360**	P	**P**	**21 46 49.2**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=178,slow=10,SNR=7.6						
PALK	**Pallekele**	**49.34**	**285**	P	**P**	**21 47 34.1**	**+0.8**
	comp=Z,3.3nm,0.7s,baz=127,slow=10,SNR=1.9						
PALK	**Pallekele**	**49.34**	**285**	P	**P**	**21 47 33.7**	**+0.3**
PALK				IAmb	IAmb	21 47 34.4	
	comp=Z,7.9nm,1.1s						
USRK	**Ussuriysk Ar.**	**50.49**	**3**	P	**P**	**21 47 41.0**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=188,slow=7.7,SNR=4.4						
USRK	**Ussuriysk Ar.**	**50.49**	**3**	P	**P**	**21 47 40.4**	**-0.9**
SONM	**Songino Array**	**57.35**	**343**	P	**P**	**21 48 30.7**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=164,slow=5.8,SNR=3.6						
MKAR	**Makanchi Array**	**66.80**	**327**	P	**P**	**21 49 31.9**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=132,slow=7.6,SNR=8.6						
MKAR	**Makanchi Array**	**66.80**	**327**	P	**P**	**21 49 31.6**	**-0.9**

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*IDC **24** 21:39:31.8±1.9, 19°.52S×70°.79W, h0^{km}, mb3.6/2, mb1 3.7/4, mb1mx3.5/40, mbtmp3.6/4, ML3.4/2, Error ellipse: s-maj=54.8km s-min=20.1km az=66.0*

*GUC **24** 21:39:35.8±0.6, 19°.62S×70°.81W, h42^{km}±3^{km}, ML3.6*

ISC 24 21:39:34.9±1.1**, 19°.60S**±0°.04×**70°.84W**±0°.08**, h22**^{km}±7^{km}**, n16, σ0ˢ71**/26**, 5C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.68**	**90**	⇓*i*P	**Pb**	**21 39 48.0**	**-0.2**
PSGC				*e*S	**Sb**	**21 39 57.0**	**-0.2**
PB12	**IPOC Station P**	**1.10**	**26**	⇓*i*P	**Pb**	**21 39 54.7**	**-0.6**
PB12				*e*S	**Sb**	**21 40 09.9**	**+0.8**
PB12				IAML		21 40 11.3	
	comp=N,2µm,0.4s						
PB11	**IPOC Station P**	**1.13**	**98**	⇓*i*P	**Pb**	**21 39 55.4**	**-0.4**
PB11				*e*S	**Sb**	**21 40 10.7**	**+0.5**
PB11				IAML		21 40 13.3	
	comp=N,3µm,0.3s						
TA01	**Diego Aracena**	**1.14**	**147**	⇑*i*P	**Pb**	**21 39 55.7**	**-0.3**
TA01				*e*S	**Sb**	**21 40 10.9**	**+0.5**
TA01				IAML		21 40 15.5	
	comp=E,2µm,0.4s						
AP01	**Chacalluta**	**1.31**	**21**	*e*P	**Pb**	**21 39 58.3**	**-0.6**
AP01				*e*S	**Sb**	**21 40 16.0**	**+0.7**
AP01				IAML		21 40 17.7	
	comp=E,3µm,0.6s						
PATCX	**Punta Patache**	**1.37**	**152**	⇑*i*P	**Pn**	**21 39 58.9**	**0.0**
PATCX				*e*S	**Sb**	**21 40 16.8**	**-0.4**
GO01	**Chusmiza**	**1.56**	**93**	⇓*i*P	**Pb**	**21 40 02.7**	**-0.6**
GO01				*e*S	**Sb**	**21 40 23.1**	**+0.4**
GO01				IAML		21 40 27.1	
	comp=N,2µm,0.3s						
PB08	**IPOC Station P**	**1.68**	**109**	⇑*i*P	**Pb**	**21 40 04.4**	**-1.0**
PB08				*e*S	**Sb**	**21 40 26.0**	**-0.2**
PB01	**IPOC Station P**	**1.92**	**139**	⇑*i*P	**Pn**	**21 40 06.9**	**+0.6**
PB01				*e*S	**Sn**	**21 40 30.5**	**+0.7**
PB01				IAML		21 40 38.5	
	comp=E,638nm,0.6s						
PB02	**IPOC Station P**	**1.93**	**153**	⇑*i*P	**Pn**	**21 40 06.9**	**+0.4**
PB02				*e*S	**Sb**	**21 40 32.8**	**-0.3**
PB02				IAML		21 40 40.5	
	comp=E,1µm,0.7s						
LVC	**Limon Verde**	**3.50**	**149**	Pn	**Pn**	**21 40 29.2**	**+0.9**
	comp=E,2.7nm,0.3s,baz=327,slow=11,SNR=6.6						
LVC				Sn	**Sn**	**21 41 10.7**	**+1.5**
	comp=E,6.2nm,0.3s,baz=277,slow=10,SNR=7.0						
LVC				Lg	Lg	21 41 25.0	
	comp=E,15nm,0.3s,baz=240,slow=22,SNR=10.0						
LPAZ	**La Paz**	**4.19**	**38**	Pn	Pn	21 40 32.7	-5.4
	comp=E,0.6nm,0.3s,baz=243,slow=16,SNR=12						
SIV	**San Ignacio**	**9.97**	**70**	Pn	**Pn**	**21 41 56.8**	**-0.2**
	comp=E,0.5nm,0.3s,baz=270,slow=14,SNR=6.6						
TORD	**Torodi Ar. Bea**	**78.45**	**72**	P	**P**	**21 51 33.7**	**-1.0**
	comp=E,0.5nm,0.7s,baz=248,slow=5.7,SNR=1.5						
YKA	**Yellowknife Ar**	**88.81**	**341**	P	**P**	**21 52 27.4**	**+0.7**
	comp=E,0.3nm,0.7s,baz=138,slow=5.1,SNR=3.0						
MKAR	**Makanchi Array**	**145.10**	**33**	PKPbc	**PKPdf**	**21 59 09.6**	**-1.0**
	comp=E,0.5nm,0.7s,baz=317,slow=4.0,SNR=5.9						

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*IDC **24** 21:49:13.6±2.7, 13°.86N×92°.42W, h0^{km}, mb3.6/1, mb1 3.9/5, mb1mx3.5/50, mbtmp3.6/5, ML3.1/3, MS3.0/3, Ms1 3.0/3, ms1mx2.6/37, Error ellipse: s-maj=44.8km s-min=25.0km az=177.0*

*MEX **24** 21:49:14.8±0.6, 13°.85N×92°.25W, h108^{km}±14^{km}, MD4.0*

*GCG **24** 21:49:15.4±0.4, 13°.73N×92°.39W, h35^{km}±129^{km}, MD4.1*

ISC 24 21:49:14.3±3.7**, 13°.9N**±0°.1×**92°.45W**±0°.05**, h8**^{km}±24^{km}**, n16, σ1ˢ55**/24**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**1.04**	**10**	*e*P	**Pn**	**21 49 35.1**	**-0.1**
THIG				*e*S	**Sn**	**21 49 50.8**	**+0.9**
STG3	**Santiaguito 3,**	**1.19**	**46**	*e*P	**Pb**	**21 49 37.1**	**-0.1**
FUG	**Fuego 3**	**1.66**	**70**	*e*P	**Pn**	**21 49 42.8**	**-1.1**
FUG				*e*S	**Sn**	**21 50 03.9**	**-1.6**
PCIG		**1.96**	**338**	*e*P	**Pn**	**21 49 47.1**	**-0.8**
PCIG				*e*S	**Sn**	**21 50 12.6**	**-0.2**
IXG	**Ixpaco**	**1.97**	**81**	*e*P	**Pn**	**21 49 46.5**	**-1.6**
NBG	**Las Nubes**	**2.16**	**71**	*e*P	**Pn**	**21 49 51.8**	**+1.0**
APG	**El Apazote**	**2.23**	**60**	Pn	**Pn**	**21 49 51.7**	**0.0**
	6.5nm,0.3s,baz=235,slow=11,SNR=58						
APG				Sn	**Sn**	**21 50 20.5**	**+0.9**
	14nm,0.3s,baz=309,slow=11,SNR=3.8						
APG				LR	LR	21 50 57.8	
	comp=Z,278nm,18.5s,baz=3.0,slow=47						
CCIG	**Comitan**	**2.41**	**7**	*i* P	**Pn**	**21 49 52.7**	**-1.6**
CCIG				*i* S	**Sn**	**21 50 21.3**	**-2.7**
TGIG		**2.96**	**347**	*e*P	**Pn**	**21 50 00.0**	**-1.7**
TGIG				*i* S	**Sn**	**21 50 35.2**	**-2.2**
CMIG	**Matias Romero**	**3.96**	**324**	Pn	**Pn**	**21 50 17.0**	**+1.6**
	0.5nm,0.3s,baz=148,slow=14,SNR=7.7						
CMIG				Sn	**Sn**	**21 51 03.9**	**+1.7**
	1.1nm,0.3s,baz=110,slow=15,SNR=3.6						
CMIG	**Matias Romero**	**3.96**	**324**	*i* P	**Pn**	**21 50 15.0**	**-0.5**
CMIG				*i* S	**Sn**	**21 51 01.2**	**-1.0**
TEIG	**Tepich**	**7.47**	**32**	Pn	**Pn**	**21 51 04.5**	**+0.9**
TEIG				Sn	**Sn**	**21 52 31.7**	**+3.1**
	SNR=2.3						
TEIG				LR	LR	21 54 21.5	
	comp=Z,112nm,20.7s,baz=24,slow=41						
TXAR	**Lajitas Array**	**18.56**	**328**	P	**Pn**	**21 53 33.8**	**+1.8**
	0.0nm,0.3s,baz=159,slow=15,SNR=4.1						
TKL	**Tuckaleechee C**	**23.05**	**18**	LR	LR	22 04 27.1	
	comp=Z,56nm,18.9s,baz=206,slow=40						
YKA	**Yellowknife Ar**	**51.05**	**347**	P	**P**	**21 58 15.9**	**-0.9**
	0.6nm,0.7s,baz=149,slow=8.0,SNR=12						
CMAR	**Chiang Mai Arr**	**145.96**	**340**	PKPbc	**PKPab**	**22 08 56.3**	**+0.4**
	0.7nm,0.3s,baz=328,slow=4.0,SNR=5.2						

NNC 24 21:59:26.1±6.5**, 37°.00N×70°.84E, h0**^{km}**, mb3.5, mpv3.2, 1C-1D, Error ellipse: s-maj=55.6km s-min=51.5km az=86.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.11**	**358**	P	Pn	22 00 59.2	+1.6
	0.6nm,0.2s,baz=12,slow=16,SNR=8.0						
KK31				S	Sn	22 02 08.7	+0.5
	5.5nm,0.4s,baz=185,slow=25,SNR=13						
AAK	**Ala-Archa**	**6.30**	**25**	⇓P	Pn	22 01 00.9	+0.5
	0.8nm,0.3s						
AAK				⇑S	Sn	22 02 14.8	+1.7
	3.1nm,0.5s						
MK31	**Makanchi Array**	**12.97**	**37**	P	Pn	22 02 28.5	-3.2
	0.5nm,0.7s,baz=211,slow=8.9,SNR=5.6						
AB31	**Akbulak array**	**14.59**	**331**	P	Pn	22 02 51.4	-2.3
	0.2nm,0.3s,baz=160,slow=10,SNR=5.2						

IDC 24 22:03:29.6±3.2**, 33°.61S×178°.57W, h0**^{km}**, mb3.7**/2**, mb1 4.0**/3**, mb1mx3.7**/32**, mbtmp3.8**/3**, ML4.0**/1**, Error ellipse: s-maj=74.0km s-min=37.6km az=118.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**5.82**	**216**	Pn	Pn	22 04 58.2	+1.1
	4.6nm,0.3s,baz=44,slow=15,SNR=4.1						
URZ				Sn	Sn	22 06 03.4	-1.1
	2.7nm,0.3s,baz=41,slow=20,SNR=6.9						
ASAR	**Alice Springs**	**42.56**	**271**	P	P	22 11 27.2	-0.1
	0.5nm,0.6s,baz=109,slow=7.0,SNR=8.1						
WRA	**Warramunga Arr**	**43.84**	**276**	P	P	22 11 37.4	-0.3
	0.6nm,0.3s,baz=118,slow=8.0,SNR=5.8						
FINES	**FINESS Array B**	**147.96**	**338**	PKPbc	PKPbc	22 23 15.3	-0.7
	0.7nm,0.7s,baz=30,slow=3.7,SNR=4.2						

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*SJA **24** 22:04:40.9±1.1, 20°.72S×67°.95W, h187^{km}±9^{km}, ML3.3, MW3.4*

*IDC **24** 22:04:41.7±0.8, 20°.76S×67°.76W, h160^{km}±13^{km}, mb3.1/4, mb1 3.3/8, mb1mx3.2/34, mbtmp3.6/8, Error ellipse: s-maj=27.1km s-min=10.1km az=102.0*

*GUC **24** 22:04:43.4±0.5, 20°.77S×67°.98W, h176^{km}±4^{km}, ML3.4*

ISC 24 22:04:42.4±0.8**, 20°.74S**±0°.04×**67°.97W**±0°.07**, h174**^{km}±9^{km}**, n44, σ0ˢ90**/66**, mb3.5**/3**, 13C-4D, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**1.26**	**298**	⇑*i*P	**Pn**	**22 05 12.8**	**+0.6**
PB08				*i* S	**Sn**	**22 05 35.6**	**+0.6**
PB08				IAML		22 05 37.9	
	comp=E,270nm,0.3s						
PB08	**IPOC Station P**	**1.26**	**298**	*e*P	**Pn**	**22 05 12.7**	**+0.6**
PB08				*e*S	**Sn**	**22 05 35.5**	**+0.6**
PB08				IAML		22 05 37.7	
	comp=Z,124nm,0.4s						
PB01	**IPOC Station P**	**1.45**	**258**	⇑*i*P	**Pn**	**22 05 13.5**	**0.0**
PB01				*i* S	**Sn**	**22 05 37.3**	**-0.2**
PB01				IAML		22 05 38.6	
	comp=E,258nm,0.3s						
GO01	**Chusmiza**	**1.57**	**313**	⇑*i*P	**Pn**	**22 05 15.6**	**+0.5**
GO01				*i* S	**Sn**	**22 05 40.7**	**+0.4**
PB09	**IPOC Station P**	**1.59**	**228**	⇑*i*P	**Pn**	**22 05 15.7**	**+0.9**
PB09				*i* S	**Sn**	**22 05 39.9**	**-0.2**
PB09				IAML		22 05 42.0	
	comp=N,86nm,0.3s						
PB09	**IPOC Station P**	**1.59**	**228**	*i* P	**Pn**	**22 05 15.8**	**+0.9**
PB09				⇓*e*S	**Sn**	**22 05 40.5**	**+0.5**
PB09				IAML		22 05 41.6	
	comp=Z,98nm,1.4s						
PB11	**IPOC Station P**	**1.86**	**301**	⇑*i*P	**Pn**	**22 05 18.0**	**+0.3**
PB11				*i* S	**Sn**	**22 05 44.8**	**-0.2**
PB11				IAML		22 05 47.7	
	comp=N,591nm,0.3s						
PB11	**IPOC Station P**	**1.86**	**301**	*e*P	**Pn**	**22 05 18.0**	**+0.3**
PB11				*e*S	**Sn**	**22 05 45.7**	**+0.7**
PB11				IAML		22 05 46.8	
	comp=Z,210nm,0.4s						
PB02	**IPOC Station P**	**1.89**	**252**	⇑*i*P	**Pn**	**22 05 18.1**	**+0.1**
PB02				*i* S	**Sn**	**22 05 44.8**	**-0.8**
PB02				IAML		22 05 45.8	
	comp=N,470nm,0.3s						
PB02	**IPOC Station P**	**1.89**	**252**	*e*P	**Pn**	**22 05 18.3**	**+0.3**
PB02				⇓*e*S	**Sn**	**22 05 45.0**	**-0.5**
PB02				IAML		22 05 46.6	
	comp=Z,392nm,0.3s						
PB07	**IPOC Station P**	**2.04**	**241**	*e*P	**Pn**	**22 05 20.0**	**+0.3**
PB07				*i* S	**Sn**	**22 05 47.7**	**-0.9**
PB07				IAML		22 05 50.2	
	comp=E,161nm,0.5s						
PB07	**IPOC Station P**	**2.04**	**241**	*e*P	**Pn**	**22 05 20.3**	**+0.6**
PB07				IAML		22 05 51.8	
	comp=Z,80nm,0.3s						
PATCX	**Punta Patache**	**2.05**	**267**	*i* P	**Pn**	**22 05 19.9**	**+0.2**
PATCX				*i* S	**Sn**	**22 05 47.7**	**-0.8**
PATCX				IAML		22 05 49.6	
	comp=N,301nm,0.2s						
PATCX	**Punta Patache**	**2.05**	**267**	*e*P	**Pn**	**22 05 19.6**	**0.0**
PATCX				*e*S	**Sn**	**22 05 48.1**	**-0.4**
PATCX				IAML		22 05 51.2	
	comp=Z,93nm,0.1s						
LVC	**Limon Verde**	**2.06**	**205**	P	**Pn**	**22 05 20.6**	**+0.5**
	comp=Z,7.8nm,0.3s,baz=39,slow=8.6,SNR=34						
LVC				S	**Sn**	**22 05 48.3**	**-1.0**
	comp=Z,6.6nm,0.3s,baz=90,slow=20,SNR=19						
LVC	**Limon Verde**	**2.06**	**205**	*e*P	**Pn**	**22 05 20.6**	**+0.5**
LVC	**Limon Verde**	**2.06**	**205**	*i* P	**Pn**	**22 05 20.6**	**+0.5**
TA01	**Diego Aracena**	**2.08**	**274**	⇑*i*P	**Pn**	**22 05 19.9**	**-0.1**
TA01				*i* S	**Sn**	**22 05 47.6**	**-1.4**
TA01				IAML		22 05 48.7	
	comp=E,272nm,0.2s						
PB03	**IPOC Station P**	**2.11**	**232**	⇑*i*P	**Pn**	**22 05 20.6**	**+0.2**
PB03				*i* S	**Sn**	**22 05 49.3**	**-0.7**
PB03				IAML		22 05 50.1	
	comp=E,186nm,0.3s						
PB03	**IPOC Station P**	**2.11**	**232**	*e*P	**Pn**	**22 05 21.2**	**+0.7**
PB03				IAML		22 05 53.1	
	comp=Z,113nm,0.4s						
PSGC	**Pisagua**	**2.32**	**299**	⇑*i*P	**Pn**	**22 05 22.5**	**-0.3**
PSGC				*i* S	**Sn**	**22 05 52.7**	**-1.4**
PSGC				IAML		22 05 54.8	
	comp=E,291nm,0.4s						
PSGCX	**Pisagua**	**2.32**	**299**	*e*P	**Pn**	**22 05 22.9**	**+0.1**
PSGCX				⇓*e*S	**Sn**	**22 05 53.4**	**-0.8**
PSGCX				IAML		22 05 55.0	
	comp=Z,189nm,0.7s						
PB06	**IPOC Station P**	**2.46**	**217**	⇑*i*P	**Pn**	**22 05 24.7**	**+0.3**
PB06				*i* S	**Sn**	**22 05 56.5**	**-0.7**

PB06				IAML		22 06 01.0	
	comp=N,138nm,0.3s						
PB06	IPOC Station P	2.46	217	i P	Pn	22 05 25.0	+0.5
PB06				IAML		22 06 00.2	
	comp=Z,74nm,0.3s						
PB04	IPOC Station P	2.58	232	eP	Pn	22 05 25.8	0.0
PB04	IPOC Station P	2.58	232	i P	Pn	22 05 26.2	+0.4
YJA	Yavi	2.69	122	i P	Pn	22 05 27.6	+0.1
PB16	IPOC Station P	2.80	328	⇑iP	Pn	22 05 30.5	+1.5
PB16				i S	Sn	22 06 06.6	+1.6
PB16				IAML		22 06 08.4	
	comp=E,105nm,0.5s						
PB16	IPOC Station P	2.80	328	eP	Pn	22 05 30.6	+1.6
PB16				IAML		22 06 11.4	
	comp=Z,55nm,0.6s						
PB15	IPOC Station P	2.83	209	⇑iP	Pn	22 05 29.4	+0.5
PB15	IPOC Station P	2.83	209	i P	Pn	22 05 29.7	+0.8
PB15				IAML		22 06 11.3	
	comp=Z,343nm,0.1s						
PB05	IPOC Station P	2.96	224	⇓iP	Pn	22 05 30.3	0.0
PB05				IAML		22 06 09.2	
	comp=E,59nm,0.4s						
PB05	IPOC Station P	2.96	224	i P	Pn	22 05 30.4	0.0
PB05				IAML		22 06 12.3	
	comp=Z,33nm,0.9s						
PB12	IPOC Station P	3.07	313	⇑iP	Pn	22 05 31.0	-0.7
PB12				i S	Sn	22 06 07.7	-2.4
PB12	IPOC Station P	3.07	313	eP	Pn	22 05 31.1	-0.7
PB12				IAML		22 06 15.2	
	comp=Z,45nm,0.2s						
AZAP	Zapla	4.38	143	i P	Pn	22 05 47.8	-0.7
AZAP				IAML		22 06 41.3	
	comp=Z,5.5nm,0.4s						
LPAZ	La Paz	4.43	358	P	Pn	22 05 50.7	+1.2
	comp=Z,0.9nm,0.3s,baz=181,slow=6.2,SNR=26						
LPAZ				S	Sn	22 06 41.2	-0.7
	baz=98,slow=17,SNR=1.1						
PB14	IPOC Station P	4.47	210	i P	Pn	22 05 49.1	-0.6
PB14				IAML		22 06 44.3	
	comp=Z,25nm,0.4s						
SIV	San Ignacio	8.07	55	P	Pn	22 06 33.5	-3.2
	comp=Z,0.4nm,0.3s,baz=248,slow=12,SNR=12						
CPUP	Villa Florida	11.23	122	P	Pn	22 07 17.4	-0.7
	comp=Z,0.2nm,0.3s,baz=310,slow=12,SNR=1.9						
PLCA	Paso Flores	20.05	186	P	P	22 09 02.9	+0.8
	comp=Z,1.3nm,0.8s,baz=30,slow=20,SNR=1.3						
PTGA	Pitinga	21.37	22	P	P	22 09 15.1	-1.3
	comp=Z,0.6nm,0.3s,baz=136,slow=6.1,SNR=1.6						
TORD	Torodi Ar. Bea	76.27	70	P	P	22 16 12.0	-0.4
	comp=Z,0.6nm,0.4s,baz=264,slow=5.4,SNR=10.0						
YKA	Yellowknife Ar	90.77	340	P	P	22 17 27.0	+1.9
	comp=Z,0.1nm,0.5s,baz=128,slow=5.1,SNR=2.5						

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*ANF **24** 22:05:51.0±0.1, 33.°81N×118.°10W, h14^{km}±1^{km}, ML2.7/28, Error ellipse: s-maj=0.9km s-min=0.8km az=139.0*

*SCEDC **24** 22:05:52.0, 33.°80N×118.°10W, h9^{km}*

IDC 24 22:07:02.1±575.0**, 34.°15N×121.°04W, h0**^{km}**, Error ellipse: s-maj=240.2km s-min=91.2km az=91.0, Off coast of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FMP	Fort Macarthur	0.19	240	P	Pg	22 05 55.5	+0.2
	baz=61,SNR=12						
FMP				S	Sg	22 05 58.3	+0.1
	baz=61						
CIS	Catalina Islan	0.48	213	P	Pg	22 06 00.7	+0.2
	baz=33,SNR=24						
DECC	Green Verdugo	0.48	336	P	Pg	22 06 00.6	0.0
	baz=157						
DECC				S	Sg	22 06 07.6	+0.5
	baz=157						
BFSC	Mount Baldy Ra	0.56	40	P	Pg	22 06 02.2	+0.1
	baz=220,SNR=46						
BFSC				S	Sg	22 06 10.1	+0.5
	baz=220						
MURC	Murrieta	0.78	105	P	Pg	22 06 06.1	0.0
	baz=285,SNR=12						
MURC				S	Sb	22 06 17.1	+0.3
	baz=285						
BLG	Laguna Peak, P	0.86	291	P	Pg	22 06 07.6	0.0
	baz=111						
BLG				S	Sb	22 06 19.6	+0.5
	baz=111						
SCI2	San Clemente I	0.91	205	P	Pg	22 06 08.5	0.0
	baz=24						
SCI2				S	Sb	22 06 21.1	+0.6
	baz=24						
OSI	Osito Audit: C	0.96	327	S	Sg	22 06 22.6	+0.6
	baz=148						
EDW2	Edwards Air Fo	1.07	5	P	Pb	22 06 11.3	-0.1
	baz=185,SNR=71						
EDW2				S	Sn	22 06 26.3	-0.1
	baz=185						
109C	Camp Elliot, M	1.24	138	P	Pn	22 06 13.0	-0.9
	baz=318						
109C				S	Sb	22 06 28.9	-1.0
	baz=318						
SCZ2	Santa Cruz Isl	1.29	279	Pb	Pb	22 06 15.2	+0.1
	baz=98,SNR=5.3						
SCZ2				Sb	Sg	22 06 33.5	+0.9
	baz=98						
SNCC	San Nicolas Is	1.32	245	Pb	Pb	22 06 15.5	0.0
	baz=65						
SNCC				S	Sn	22 06 32.7	+0.4
	baz=65						
PFO	Pinyon Flats O	1.38	98	P	Pn	22 06 15.9	-0.1
	baz=278,SNR=19						
PFO				S	Sb	22 06 34.7	+0.5
	baz=278						
I57US	PINON FLAT INF	1.39	98	i		22 26 57.7	
	baz=282,slow=317,SNR=1.8						
RRX	Edison Barstow	1.40	40	Pb	Pb	22 06 17.1	+0.1
	baz=221						
RRX				Sb	Sg	22 06 36.2	+0.1
	baz=221						
ARVC	Arvin	1.45	335	Sb	Sg	22 06 37.6	0.0
	baz=156						
MONP2	Monument Peak	1.67	123	P	Pn	22 06 19.9	-0.1
	baz=303						
MONP2				S	Sn	22 06 42.0	+0.6
	baz=303						
LRMC	Laurel Mtn Rad	1.70	11	P	Pn	22 06 20.8	+0.4
	baz=192,SNR=35						
LRMC				S	Sn	22 06 42.2	+0.2
	baz=192						
BELC	Belle Mtn. Jos	1.76	83	Pb	Pb	22 06 22.6	-0.5
	baz=264,SNR=29						
BELC				Sb	Sg	22 06 46.7	-0.9
	baz=264						
HEC	Hector,Ludlow	1.78	55	Pb	Pb	22 06 23.9	+0.5
	baz=235						
HEC				Sb	Sg	22 06 47.6	-0.6
	baz=235						
PKM	Mcpherson Peak	1.78	308	Pg	Pg	22 06 24.9	-0.3
	baz=127						
PKM				Sb	Sb	22 06 47.1	+1.2
	baz=127						
GSC	Goldstone, Bar	1.83	35	S	Sb	22 06 46.2	-0.9
	baz=216						
ISA	Isabella, Lake	1.88	351	P	Pg	22 06 26.7	-0.3
	baz=171,SNR=8.7						
ISA				Pg	Pb	22 06 26.9	+1.9
	baz=171						
ISA				S	Sn	22 06 47.0	+0.7
	baz=171						
IKP	In-Ko-Pah, Jac	2.03	124	Pg	Pg	22 06 29.8	-0.1
	baz=305						
IKP				Sb	Sb	22 06 53.7	+1.0
	baz=305						
SWSC	Sam W. Stewart	2.11	113	Pb	Pb	22 06 29.0	+0.1
	baz=295						
SWSC				Sb	Sg	22 06 57.0	-1.7
	baz=295						
GMRC	Granite Mounta	2.24	64	Pb	Pb	22 06 31.9	+0.6
	baz=245						
GMRC				Sb	Sg	22 07 01.3	-1.7
	baz=245						
MPMC	Manual Prospec	2.30	12	Pb	Pb	22 06 33.6	+1.2
	baz=193						
MPMC				Sb	Sg	22 07 03.4	-1.5
	baz=193						
TUQ	Turquoise Moun	2.42	47	Pb	Pb	22 06 34.9	+0.5
	baz=228						
TUQ				Sb	Sg	22 07 06.7	-2.0
	baz=228						
IRM	Iron Mountain	2.48	81	Pb	Pb	22 06 35.7	+0.4
	baz=262						
IRM				Sb	Sg	22 07 08.3	-2.3
	baz=262						
I56US	NEWPORT INFRAS	14.46	3	i		23 29 10.0	
	baz=196,slow=325,SNR=1.3						
I10CA	LAC DU BONNET	23.05	38	i		00 42 30.0	
	baz=235,slow=341,SNR=1.3						

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*IDC **24** 22:18:24.7±0.6, 11.°17S×116.°81E, h0^{km}, mb4.3/16, mb1 4.5/18, mb1mx4.3/35, mbtmp4.4/18, ML4.2/2, MS3.2/6, Ms1 3.2/6, ms1mx2.9/33, Error ellipse: s-maj=23.3km s-min=14.5km az=62.0*

*NEIC **24** 22:18:26.8±2.7, 11.°48S±0.°06×116.°73E±0.°06, h23^{km}±3^{km}, mb4.6/34, Error ellipse: s-maj=9.8km s-min=7.7km az=211.0*

*DJA **24** 22:18:26.0±0.2, 12°S±2°×11°7E±°, h10^{km}, M4.9/31, mb4.9/31, mB5.3/13, MLv5.1/15, Mw(mB)4.7/13*

*MOS **24** 22:18:28.0±1.2, 11.°27S×116.°82E, h39^{km}, mb4.8/11, Error ellipse: s-maj=12.1km s-min=7.1km az=119.7*

ISC 24 22:18:28.6±0.3**, 11.°43S**±0.°05×**116.°78E**±0.°04**, h35**^{km}**, n167, σ1^{s}87**/162**, mb4.5**/37**, MS3.3**/4**, 1C-3D, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	2.76	21	P	Pn	22 19 10.4	-0.1
WBSI	Waikabubak, Su	3.12	56	P	Pn	22 19 15.6	+0.2
DNP	Denpasar	3.14	330	P	Pn	22 19 16.5	+0.8
DNP	Denpasar	3.14	330	P	Pn	22 19 15.0	-0.7
SRBI	Singaraja	3.67	335	P	Pn	22 19 23.1	+0.2
JAGI	Jajag, Banyuwa	3.92	318	P	Pn	22 19 24.2	-2.2
JAGI	Jajag, Banyuwa	3.92	318		Pn	22 19 24.5	-1.9
JAGI				Sn	Sn	22 20 06.1	-5.1
BASI	Baing, Sumba	3.92	72	P	Pn	22 19 26.1	-0.3
KMMI	Kalianget	5.16	327	P	Pn	22 19 44.9	+1.4
	2µm0.6nm126nm,0.7s						
MMRI	Maumere	6.05	63	P	Pn	22 19 58.7	+3.1
	1.1nm6µm92nm,0.5s						
MMRI	Maumere	6.05	63		Pn	22 19 55.4	-0.2
MMRI				Sn	Sn	22 21 03.0	-0.7
PCJI	Pacitan	6.39	300	P	Pn	22 19 59.3	-1.0
	0.9nm105nm,0.5s						
BKSI	Bulukumba	6.91	29	P	Pn	22 20 09.3	+1.8
	1.2nm4µm349nm,0.6s						
KAPI	Kappang	7.02	25	Pn	Pn	22 20 10.8	+1.8
	28nm,0.3s,baz=190,slow=5.7,SNR=43						
KAPI				Sn	Sn	22 21 22.8	-4.8
	22nm,0.3s,baz=108,slow=19,SNR=7.7						
KAPI				LR	LR	22 23 14.5	
	comp=Z,101nm,21.0s,baz=258,slow=43						
UGM	Wanagama	7.09	299		Pn	22 20 09.3	-0.6
UGM				Sn	Sn	22 21 24.8	-4.6
SOEI	Soe	7.54	78	P	Pn	22 20 18.3	+1.9
	0.6nm1µm63nm,0.7s						
SOEI	Soe	7.54	78		Pn	22 20 18.2	+1.9
SOEI					Sn	22 21 39.7	-1.1
SMRI	Semarang	7.62	304	Pn	Pn	22 20 16.7	-0.6
BNSI	Bone	7.72	26	P	Pn	22 20 21.9	+3.3
	0.5nm1µm133nm,1.0s						
SPSI	Sidrap Palu	7.98	22	P	Pn	22 20 24.4	+2.2
	684nm54nm,0.6s						
KBKI	Kotabaru	8.10	356	P	Pn	22 20 25.6	+1.8
	0.2nm648nm49nm,0.6s						
CISI	Cisompet, Garu	9.64	293	P	Pn	22 20 42.4	-2.7
	1µm85nm,0.5s						
CISI	Cisompet, Garu	9.64	293		Pn	22 20 43.2	-1.9
CISI					Sn	22 22 22.6	-10
MBWA	Marble Bar	10.08	164	Pn	Pn	22 20 48.0	-3.0
PSA00	Pilbara Seismi	10.51	164		Pn	22 20 53.4	-3.4
PSA00	Pilbara Seismi	10.51	164	Pn	Pn	22 20 54.5	-2.3
FITZ	Fitzroy Crossi	10.83	129	Pn	Pn	22 20 59.8	-1.5
	3.0nm,0.3s,baz=272,slow=6.8,SNR=21						
FITZ				Sn	Sn	22 22 51.9	-9.5
	5.5nm,0.3s,baz=210,slow=23,SNR=11						
FITZ				LR	LR	22 25 07.1	
	comp=Z,92nm,21.2s,baz=306,slow=37						
XMIS	Christmas Isla	10.97	274	Pn	Pn	22 21 00.1	-3.1
GIRL	Giralia	11.41	192		Pn	22 21 06.9	-2.3
LUWI	Luwuk	11.91	30	P	Pn	22 21 19.0	+2.9
	1µm45nm,0.8s						
LUWI	Luwuk	11.91	30		Pn	22 21 18.1	+2.1
MPSI	Mapaga	12.09	15	P	Pn	22 21 23.0	+4.4
	23nm,0.6s						
KNRA	Kununurra	12.39	111		Pn	22 21 22.4	-0.2
KNRA				Sn	Sn	22 23 35.0	-4.5
MRSI	Marisa	12.89	24	P	P	22 21 40.1	+0.4
MTN	Manton Dam	14.10	97	Pn	Pn	22 21 46.1	0.0
SBUM	Sibu	14.52	342	Pn	Pn	22 21 50.8	-0.9
LBMI	Labuha	15.11	46	P	P	22 22 11.3	+6.9
MNAI	Manna	15.38	296	Pn	Pn	22 21 59.8	-3.4
KSI	Kapahiang	16.04	298	P	P	22 22 12.6	-2.2
	59nm,0.5s						
KSI	Kapahiang	16.04	298	P	Pn	22 22 10.2	-1.5
KSI				pmax	pmax		
	comp=Z,59nm,0.5s						
TNTI	Ternate	16.05	42	P	P	22 22 12.9	-2.0
	comp=Z,65nm,0.9s						
FAKI	Fak Fak	17.51	62	Pn	Pn	22 22 28.5	-1.7
FAKI				IAmb	IAmb	22 22 45.4	
	comp=Z,24nm,0.9s						
MORW	Morawa	17.57	182	P	Pn	22 22 28.1	-2.7
MORW				IAmb	IAmb	22 22 28.6	
	comp=Z,25nm,0.6s						
SWI	Sorong	17.80	55	P	P	22 22 47.5	+13
SWI	Sorong	17.80	55	P	Pn	22 22 33.3	-0.5
SWI				pmax	pmax		
	comp=Z,41nm,0.7s						
SIJI	Sorong	17.80	55	P	Pn	22 22 31.8	-2.0
	comp=Z,0.7nm,0.3s,baz=211,slow=18,SNR=2.7						
KRJI	Kerinci	17.80	300	P	P	22 22 35.6	+1.2
	comp=Z,2µmcomp=Z,174nm,1.0s						
WRA	Warramunga Arr	18.89	119	P	Pn	22 22 47.6	+0.6
	comp=Z,0.9nm,0.3s,baz=289,slow=15,SNR=11						
WRA				S	Sn	22 26 04.5	-13
	comp=Z,0.6nm,0.3s,baz=283,slow=25,SNR=5.7						
WRA	Warramunga Arr	18.89	119	P	Pn	22 22 46.8	-0.3
WRA	Warramunga Arr	18.89	119	P	Pn	22 22 46.8	-0.3
WRAB	Tennant Creek	18.90	119	i P	P	22 22 46.3	0.0
WRAB				pmax	pmax		
	comp=Z,12nm,1.2s						
PDSI	Padang	19.28	302	P	Pn	22 22 52.1	+0.3
	comp=Z,11nm,0.7s						
KCP	Kidapawan	20.10	25	⇑iP	Pn	22 23 01.4	-0.1
AS31	Alice Springs	20.34	129	P	P	22 23 02.7	+0.7
ASAR	Alice Springs	20.34	129	P	Pn	22 23 04.6	+0.4
	comp=Z,2.5nm,0.5s,baz=302,slow=10,SNR=51						
ASAR				S	S	22 26 39.0	-9.3
	comp=Z,3.7nm,0.7s,baz=297,slow=24,SNR=7.5						
ASAR	Alice Springs	20.34	129	P	Pn	22 23 04.7	+0.5
ASAR	Alice Springs	20.34	129	P	Pn	22 23 04.7	+0.5
NWAO	Narrogin (SRO)	21.40	179	P	P	22 23 17.7	+4.3
	comp=Z,36nm,0.5s,baz=1.0,slow=11,SNR=52						
NWAO				LR	LR	22 32 10.9	
	comp=Z,115nm,19.1s,baz=316,slow=38						
NWAO	Narrogin (SRO)	21.40	179	P	P	22 23 16.5	+3.1
NWAO				pmax	pmax		
	comp=Z,31nm,0.6s						
NWAO	Narrogin (SRO)	21.40	179	P	P	22 23 17.1	+3.7
NWAO	Narrogin (SRO)	21.40	179	P	P	22 23 16.5	+3.1
NWAO				IAmb	IAmb	22 23 18.7	
	comp=Z,31nm,0.6s						
FORT	Forrest	21.91	153	P	P	22 23 21.5	+2.6
IPM	Ipoh	22.26	314	P	P	22 23 21.4	-1.4
IPM				IAmb	IAmb	22 23 26.4	
	comp=Z,12nm,0.6s						
RPSI	Rantau Prapat	22.63	307	P	P	22 23 26.5	-0.3
RPSI				IAmb	IAmb	22 23 39.7	
	comp=Z,15nm,1.0s						
RPSI	Rantau Prapat	22.63	307	P	P	22 23 26.0	-0.8
PSI	Prapat	22.70	307	P	P	22 23 26.0	-1.7
	comp=Z,6.9nm,0.8s,baz=156,slow=18,SNR=4.2						
PSI	Prapat	22.70	307	P	P	22 23 26.5	-1.1
PSI				pmax	pmax		
	comp=Z,15nm,1.0s						
GSI	Gunungsitoli	22.90	302	P	P	22 23 28.8	-0.8
GSI				IAmb	IAmb	22 23 45.5	
	comp=Z,8.8nm,0.8s						
KULM	Kulim	23.10	315	P	P	22 23 31.5	-0.1
KULM				IAmb	IAmb	22 23 46.8	
	comp=Z,23nm,1.2s						
COEN	Coen	25.87	98	P	P	22 23 59.2	+1.9
BBOO	Buckleboo	27.68	143	P	P	22 24 15.6	+2.1
BBOO				IAmb	IAmb	22 24 21.9	
	comp=Z,12nm,1.1s						
STKA	Stephens Creek	30.62	135	P	P	22 24 42.6	+3.0
	comp=Z,2.6nm,0.7s,baz=313,slow=14,SNR=1.6						
STKA				PcP	PcP	22 27 38.4	+0.9
	comp=Z,1.7nm,0.7s,baz=14,slow=4.2,SNR=3.1						
STKA				LR	LR	22 37 52.9	
	comp=Z,70nm,19.6s,baz=269,slow=38						
STKA	Stephens Creek	30.62	135	P	P	22 24 42.6	+3.0
STKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PBKT	Sadao Pong	31.91	330	P	P	22 24 51.3	+0.3
PBKT				IAmb	IAmb	22 24 58.8	
	comp=Z,6.3nm,0.9s						
CM31	Chiang Mai Arr	34.52	329	P	P	22 25 12.9	-0.9
CMAR	Chiang Mai Arr	34.52	329	P	P	22 25 12.7	-1.1
	comp=Z,0.9nm,0.3s,baz=162,slow=9.5,SNR=2.4						
CMAR				PcP	PcP	22 27 49.5	+1.1
	comp=Z,0.8nm,0.3s,baz=151,slow=2.1,SNR=1.8						
CMAR	Chiang Mai Arr	34.52	329	P	P	22 25 12.5	-1.3
CHTO	Chiang Mai	34.82	329	P	P	22 25 17.5	+1.1
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CHTO	Chiang Mai	34.82	329	P	P	22 25 17.5	+1.1
CHTO				IAmb	IAmb	22 25 23.9	
	comp=Z,4.7nm,0.8s						
WHN	Wuhan	41.80	357	P	P	22 26 25.3	+10
NJ2	Nanjing	43.28	3	eP	P	22 26 28.4	+1.5
H08S2	Diego Garcia H	43.80	271	T	T	23 13 32.3	
	baz=99						
H08S3	Diego Garcia H	43.82	271	T	T	23 13 32.5	
	baz=99						
H08S1	Diego Carcia H	43.82	271	T	T	23 13 31.1	
	baz=99						
XAN	Xi'an	45.83	351	P	P	22 27 00.4	+13
ODAN	Odare	47.57	324	eP	P	22 27 01.8	+0.4
TAPN	Taplejung	47.76	324	eP	P	22 27 03.5	+0.6
LSA	Lhasa	47.77	329	P	P	22 27 03.9	+0.7
LSA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
LSA	Lhasa	47.77	329	P	P	22 27 03.9	+0.7
LSA				IAmb	IAmb	22 27 17.3	
	comp=Z,5.6nm,0.8s						
RAMN	Ramite	48.10	323	eP	P	22 27 05.9	+0.4
LZH	Lanzhou	48.81	346	eP	P	22 27 11.8	+1.1
LZH				pP	pP	22 27 16.0	-3.1
LZH				sP	sP	22 27 19.0	-3.4
LZH				PP	PP	22 29 10.8	+6.5
JIRN	Jiri	48.88	323	eP	P	22 27 11.9	+0.3
	comp=Z,51nm,0.5s						
GUN	Gumba	49.24	323	eP	P	22 27 14.8	+0.4
	comp=Z,33nm,0.6s						
PKI	Pulchoki	49.27	322	eP	P	22 27 14.4	-0.2
PKIN	Phulchoki	49.28	322	eP	P	22 27 14.1	-0.5
	comp=Z,16nm,0.9s						
DMN	Daman	49.48	322	eP	P	22 27 16.3	+0.2
KKN	Kakani	49.51	323	eP	P	22 27 16.4	+0.1
KSRS	Korea Array	49.74	12	P	P	22 27 15.7	-1.8
	comp=Z,0.6nm,0.3s,baz=184,slow=8.5,SNR=2.7						
GKN	Gorkha	50.05	322	eP	P	22 27 20.6	+0.3
DANN	Dangsing	50.84	322	eP	P	22 27 26.3	-0.1
	comp=Z,43nm,0.7s						
MJAR	Matsushiro Arr	51.81	22	P	P	22 27 31.7	-1.5
	comp=Z,2.1nm,0.8s,baz=202,slow=8.7,SNR=4.2						
HHC	Hu-ho-hao-te	52.24	355	eP	P	22 27 39.1	+2.7
GTA	Gaotai	52.99	344	eP	P	22 27 43.8	+1.8
GTA				pP	sP	22 27 51.6	-2.2
GTA				sP	pwP	22 27 55.3	-3.8
USRK	Ussuriysk Ar.	57.06	13	P	P	22 28 11.0	-0.2
	comp=Z,1.9nm,0.7s,baz=198,slow=12,SNR=4.7						
ULN	Ulaanbaatar	59.66	352	i P	P	22 28 29.1	-0.4
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SONM	Songino Array	59.72	352	P	P	22 28 29.7	-0.1
	comp=Z,1.7nm,0.8s,baz=168,slow=9.2,SNR=16						
SONM	Songino Array	59.72	352	P	P	22 28 29.9	0.0
SONM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM	Songino Array	59.72	352	P	P	22 28 29.9	0.0
WMQ	Urumqi	61.03	336	eP	P	22 28 40.4	+1.6
WMQ				pP	pP	22 28 45.8	-1.7
KLR	Kul'dur	61.82	11	i P	P	22 28 43.2	-0.8
KLR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KSH	Kashi	63.30	326	P	P	22 28 54.5	+0.3
KSH				pP	pP	22 28 59.3	-3.6
KSH				PP	PP	22 31 15.6	+1.7
KSH				PcS		22 33 31.6	
KSH				S	S	22 37 23.3	-0.9
KBL	Kabul	64.33	317	P	P	22 29 00.3	-0.9
KBL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KBL	Kabul	64.33	317	P	P	22 29 00.3	-0.9
KBL				IAmb	IAmb	22 29 01.7	
	comp=Z,5.8nm,0.7s						
MK31	Makanchi Array	65.66	335	i P	P	22 29 09.6	+0.2
MKAR	Makanchi Array	65.66	335	P	P	22 29 10.2	+0.8
	comp=Z,11nm,0.4s,baz=146,slow=7.4,SNR=297						
MKAR	Makanchi Array	65.66	335	i P	P	22 29 09.8	+0.4
MKAR				pmax	pmax		
	comp=Z,11nm,0.4s						
MKAR	Makanchi Array	65.66	335	P	P	22 29 09.4	+0.1
MAKZ	Makanchi	65.80	335	P	P	22 29 09.8	-0.5
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MAKZ	Makanchi	65.80	335	P	P	22 29 09.8	-0.5
MAKZ				IAmb	IAmb	22 29 11.5	
	comp=Z,4.5nm,0.6s						
DGZ	Jazzator, Alta	66.10	340	d iP	P	22 29 12.8	+0.5
DGZ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GAR	Garm	66.25	322	P	P	22 29 13.5	0.0
AAK	Ala-Archa	66.28	327	⇓eP	P	22 29 14.0	+0.4
AAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AAK	Ala-Archa	66.28	327	P	P	22 29 13.7	+0.1
AAK				IAmb	IAmb	22 29 22.1	
	comp=Z,3.6nm,0.8s						
CHGR	Chuyangaron	66.74	321	P	P	22 29 15.0	-1.6
CHGR				IAmb	IAmb	22 29 33.9	
	comp=Z,6.3nm,0.7s						
KKAR	Karatay Array	68.76	325	P	P	22 29 28.4	-0.7
KKAR	Karatay Array	68.76	325	P	P	22 29 28.4	-0.7
KURK	Kurchatov	70.24	335	⇓iP	P	22 29 38.5	+0.5
KURK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KURK	Kurchatov	70.24	335	P	P	22 29 38.8	+0.8
ZAA0	Zalesovo Array	70.56	341	IAmb	IAmb	22 29 46.8	
	comp=Z,7.9nm,0.7s						
ZALV	Zalesovo Beam	70.56	341	P	P	22 29 39.7	-0.2
	comp=Z,5.1nm,0.6s,baz=152,slow=4.6,SNR=25						
ZALV	Zalesovo Beam	70.56	341	P	P	22 29 39.2	-0.6
PETK	Petropavlovsk-	73.17	24	P	P	22 29 56.7	+1.1
	comp=Z,2.1nm,0.6s,baz=214,slow=3.5,SNR=4.1						
GEYT	Alibeck	73.58	315	P	P	22 29 59.5	+1.0
	comp=Z,3.6nm,0.7s,baz=147,slow=3.5,SNR=9.1						
GEYT	Alibeck	73.58	315	P	P	22 29 59.4	+1.0
YAK	Yakutsk	73.92	6	i P	P	22 29 58.3	-1.5
YAK				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MA2	Magadan	75.86	17	LR	LR	23 07 48.5	
	comp=Z,11nm,18.4s,baz=299,slow=39						
RAYN	Ar Rayn	77.83	297	P	P	22 30 23.4	+0.3
RAYN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
RAYN	Ar Rayn	77.83	297	P	P	22 30 23.4	+0.3
ABKAR	Akbulak array	78.31	326	P	P	22 30 25.7	+0.6
KMBO	Kilima Mbogo	79.51	271	i P	P	22 30 36.7	+3.9
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ARU	Arti	82.92	332	P	P	22 30 48.6	-1.1
NRIK	Noril'sk	83.13	350	i P	P	22 30 50.8	+0.4
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TIXI	Tiksi	83.28	4	LR	LR	23 10 56.4	
	comp=Z,22nm,18.1s,baz=270,slow=38						
TIXI	Tiksi	83.28	4	i P	P	22 30 49.8	-1.4
TIXI				pmax	pmax		
	comp=Z,7.0nm,2.3s						
ZEI	Tsey	85.46	315	eP	P	22 31 04.2	+1.1
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BOSA	Boshof	85.94	242	P	P	22 31 07.0	+1.2
	comp=Z,1.1nm,0.6s,baz=127,slow=5.1,SNR=1.8						
BOSA	Boshof	85.94	242	P	P	22 31 07.1	+1.2

BOSA				pmax	pmax		
	comp=Z,11nm,1.4s						
BOSA	**Boshof**	**85.94**	**242**	IAmb	IAmb	22 31 08.3	
	comp=Z,11nm,1.4s						
KBZ	**Khabaz**	**86.46**	**316**	P	**P**	**22 31 09.2**	**+1.4**
	comp=Z,2.5nm,1.0s,baz=115,slow=11,SNR=3.0						
BRTR	**Keskin Array B**	**92.01**	**310**	P	**P**	**22 31 35.0**	**+0.7**
	comp=Z,1.5nm,0.9s,baz=121,slow=4.8,SNR=9.0						
BRTR	**Keskin Array B**	**92.01**	**310**	*i* P	**P**	**22 31 35.2**	**+0.9**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRTR	**Keskin Array B**	**92.01**	**310**	P	**P**	**22 31 34.6**	**+0.3**
TORD	**Torodi Ar. Bea**	**116.71**	**279**	PKP	**PKiKP**	**22 37 11.7**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=145,slow=1.7,SNR=2.0						
YKA	**Yellowknife Ar**	**117.29**	**24**	PKP	**PKiKP**	**22 37 11.1**	**+1.1**
	comp=Z,1.0nm,0.7s,baz=302,slow=1.7,SNR=9.8						
SCHQ	**Schefferville**	**136.61**	**3**	PKP	**PKiKP**	**22 37 49.1**	**+0.3**
	comp=Z,1.2nm,0.5s,baz=65,slow=5.2,SNR=4.0						
SCHQ	**Schefferville**	**136.61**	**3**		**PKiKP**	**22 37 47.6**	**-1.2**
LCAR	**Lake Charles**	**144.80**	**41**		**PKPdf**	**22 38 02.2**	**-0.1**
N49A	**Columbus Grove**	**145.31**	**28**		**PKPdf**	**22 38 03.9**	**+0.8**
WCI	**Wyandotte Cave**	**146.27**	**34**	PKP2	**PKPab**	**22 38 06.1**	**-0.6**
WCI	**Wyandotte Cave**	**146.27**	**34**		**PKPab**	**22 38 06.1**	**-0.6**
WVT	**Waverly**	**146.84**	**38**	PKP2	**PKPab**	**22 38 08.5**	**-0.5**
WVT	**Waverly**	**146.84**	**38**		**PKPab**	**22 38 08.5**	**-0.5**
PLAL	**Pickwick Lake**	**147.44**	**40**		**PKPbc**	**22 38 08.2**	**-1.1**
BDFB	**Brasilia**	**149.18**	**210**	PKPbc	**PKPab**	**22 38 16.8**	**-2.1**
	comp=Z,1.9nm,0.6s,baz=3.6,slow=3.2,SNR=3.4						
LPAZ	**La Paz**	**152.04**	**170**	PKPbc	**PKiKP**	**22 38 23.9**	**+1.6**
	comp=Z,1.9nm,0.7s,baz=152,slow=4.0,SNR=8.2						
LPAZ	**La Paz**	**152.04**	**170**	PKIKP	**PKiKP**	**22 38 24.2**	**+1.9**
LPAZ	**La Paz**	**152.04**	**170**		**PKiKP**	**22 38 24.2**	**+1.9**

TIF ***24*** *22:19:38.4, 41°.52N×45°.86E, h24km±1km*
NORS ***24*** *22:19:38.4±0.0, 41°.45N×45°.98E, h9km, MPVA3.7*
DDA ***24*** *22:19:38.1, 41°.46N×45°.86E, h13km±1km, ML2.5*
NSSP ***24*** *22:19:38.0, 41°.47N×45°.77E, h10km, Ms3.0*
DRS ***24*** *22:19:45.0±0.0, 42°.09N×45°.87E, h10km*
ISC 24 22:19:38.3±1.1**, 41°.46N**±0°.02×**45°.88E**±0°.02**, h12**km±10km**,**
n35, σ0s.84/66**, 4C, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGRG	**David-gareji**	**0.38**	**268**	P	**Pb**	**22 19 48.3**	**+1.3**
DGRG				S	**Sb**	**22 19 55.1**	**+2.2**
LGD	**Lagodekhi**	**0.46**	**36**	P	**Pg**	**22 19 47.7**	**+0.3**
LGD				S	**Sb**	**22 19 54.7**	**-0.5**
BTNK	**Botanikuri**	**0.84**	**286**	P	**Pg**	**22 19 54.2**	**-0.3**
BTNK				S	**Sb**	**22 20 06.4**	**+0.3**
SEAG	**Tbilisi Sea**	**0.86**	**291**	P	**Pg**	**22 19 54.1**	**-0.9**
SEAG				S	**Sg**	**22 20 06.0**	**-0.2**
TBLG	**Delisi**	**0.90**	**288**	P	**Pg**	**22 19 55.1**	**-0.5**
TBLG				S	**Sb**	**22 20 07.8**	**+0.1**
TBLG	**Delisi**	**0.90**	**288**	*i* P	**Pg**	**22 19 55.1**	**-0.5**
TBLG				*i* S	**Sb**	**22 20 07.7**	**0.0**
TBLG				IAML		22 20 08.0	
	comp=E,175nm,0.4s						
BTLR	**Botlikh**	**1.23**	**12**	*i* Pg	**Pn**	**22 20 00.7**	**-0.6**
BTLR				*e*Sg	**Sb**	**22 20 17.1**	**-0.2**
GNBR	**Gunib**	**1.23**	**41**	*e*Pg	**Pn**	**22 20 00.9**	**-0.5**
GNBR				*e*Sg	**Sb**	**22 20 17.1**	**-0.2**
STE	**Stepanavan**	**1.23**	**248**	⇑*e*P	**Pn**	**22 20 01.2**	**-0.2**
STE				⇑*e*S	**Sg**	**22 20 17.6**	**-0.4**
TRLG	**Trialeti**	**1.34**	**274**	P	**Pn**	**22 20 02.2**	**-0.7**
TRLG				S	**Sb**	**22 20 20.0**	**-0.6**
AKT	**Akhty**	**1.39**	**89**	*e*Pg	**Pn**	**22 20 03.5**	**-0.1**
AKT				*e*Sg	**Sn**	**22 20 22.4**	**+0.4**
ARKR	**Arakani**	**1.41**	**36**	*i* Pg	**Pb**	**22 20 05.0**	**+0.4**
	comp=E,50nm,0.2s						
ARKR				*e*Sg	**Sg**	**22 20 25.0**	**+1.3**
	comp=E,218nm,0.4s						
UNCR	**Uncukul**	**1.42**	**28**	*e*Pg	**Pn**	**22 20 04.0**	**0.0**
UNCR				*e*Sg	**Sn**	**22 20 21.0**	**-1.7**
	comp=E,283nm,0.6s						
GUDG	**Gudauri**	**1.45**	**314**	P	**Pn**	**22 20 04.0**	**-0.5**
GUDG				S	**Sn**	**22 20 23.1**	**-0.4**
KAPZ	**Kaputan**	**1.45**	**219**	*i* P	**Pb**	**22 20 05.2**	**-0.1**
KAPZ				*i* S	**Sg**	**22 20 25.2**	**+0.2**
GNI	**Garni**	**1.57**	**214**	⇑*i*P	**Pb**	**22 20 07.9**	**+0.5**
GNI				⇑S	**Sg**	**22 20 30.0**	**+1.2**
DBC	**Dubki**	**1.71**	**24**	*e*Pg	**Pb**	**22 20 09.3**	**-0.4**
DBC				*e*Sg	**Sb**	**22 20 32.1**	**+1.0**
BGD	**Bogdanovka**	**1.73**	**264**	P	**Pb**	**22 20 09.4**	**-0.6**
BGD				S	**Sb**	**22 20 32.5**	**+0.6**
GROC	**Groznyy**	**1.74**	**358**	*e*Pg	**Pb**	**22 20 10.8**	**+0.7**
GROC				*e*Sg	**Sg**	**22 20 34.8**	**+0.5**
KMGR	**Komgaron**	**1.76**	**335**	*e*Pg	**Pb**	**22 20 11.1**	**+0.5**
KMGR				*e*Sg	**Sg**	**22 20 35.2**	**+0.2**
LACR	**Lac**	**1.80**	**320**	*e*Pg	**Pn**	**22 20 10.2**	**+0.9**
LACR				*e*Sg	**Sb**	**22 20 33.7**	**-0.1**
EAK	**Akyaka**	**1.89**	**246**	*i* P	**Pb**	**22 20 11.7**	**-1.0**
EAK				*i* S	**Sb**	**22 20 37.1**	**+0.8**
EAK				IAML		22 20 40.0	
	comp=N,52nm,0.6s						
METS	**Metsamor**	**1.89**	**227**	*i* P	**Pb**	**22 20 12.9**	**+0.1**
METS				*i* S	**Sg**	**22 20 38.5**	**-0.7**
ZEI	**Tsey**	**1.98**	**313**	*e*Pg	**Pb**	**22 20 13.5**	**-0.8**
ZEI				*e*Sg	**Sb**	**22 20 40.1**	**+1.0**
VNNZ	**Vanand**	**2.07**	**230**	*i* P	**Pb**	**22 20 15.9**	**0.0**
VNNZ				*i* S	**Sg**	**22 20 43.5**	**-1.3**
ARNR	**Ardon**	**2.08**	**326**	*e*Pg	**Pb**	**22 20 15.7**	**-0.3**
ARNR				*e*Sg	**Sg**	**22 20 44.6**	**-0.6**
IGDI	**IGDIR**	**2.10**	**221**	*i* P	**Pb**	**22 20 15.6**	**-0.7**
IGDI				*i* S	**Sg**	**22 20 44.2**	**-1.7**
KORR	**Kora**	**2.11**	**321**	*e*Pg	**Pb**	**22 20 16.7**	**+0.3**
KORR				*e*Sg	**Sg**	**22 20 44.7**	**-1.3**
ONI	**Oni**	**2.13**	**303**	P	**Pn**	**22 20 15.3**	**+1.5**
ONI				S	**Sb**	**22 20 43.2**	**-0.1**
DIGO	**Kars**	**2.17**	**242**	*i* P	**Pb**	**22 20 17.1**	**-0.5**
DIGR	**Digorskoe uzhe**	**2.23**	**311**	*e*Pn	**Pb**	**22 20 17.9**	**-0.8**
DIGR				*e*Sn	**Sb**	**22 20 46.3**	**0.0**
TKB	**Tkibuli**	**2.33**	**293**	P	**Pn**	**22 20 18.2**	**+1.8**
TKB				S	**Sb**	**22 20 48.1**	**-0.8**
DAGI	**Agillar**	**3.01**	**264**	*i* P	**Pg**	**22 20 36.9**	**+0.9**
BATM	**Batumi**	**3.15**	**274**	*i* P	**Pb**	**22 20 35.8**	**+1.7**
DBAD	**Bademkaya**	**3.19**	**263**	*i* P	**Pb**	**22 20 35.9**	**+1.0**

IDC 24 22:39:01.1±693.0**, 34°.19N×121°.19W, h0**km**, Error ellipse: s-maj=250.6km s-min=93.7km az=92.0, Off coast of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I57US	**PINON FLAT INF**	**3.98**	**97**	*i*		23 05 41.6	
	baz=280,slow=318,SNR=2.7						
I56US	**NEWPORT INFRAS**	**14.39**	**11**	*i*		00 03 20.0	
	baz=194,slow=326,SNR=1.6						
I10CA	**LAC DU BONNET**	**24.40**	**41**	*i*		01 15 50.5	
	baz=232,slow=338,SNR=1.5						

SJA ***24*** *22:40:11.1±0.9, 27°.77S×71°.75W, h10km, ML3.2, MW3.1*
GUC ***24*** *22:40:16.7±0.4, 27°.93S×71°.07W, h65km, ML3.4*
ISC 24 22:40:11.8±1.6**, 27°.81S**±0°.05×**71°.58W**±0°.08**, h10**km**, n26,**
σ3s.22/36**, 1C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO03	**Copiap**	**1.21**	**80**	⇓*i*P	**Pn**	**22 40 33.7**	**-1.1**
GO03				IAML		22 40 52.1	
	comp=E,1μm,0.1s						
GO03	**Copiap**	**1.21**	**80**	*e*P	**Pn**	**22 40 33.7**	**-1.1**
GO04	**Tololo Observa**	**2.45**	**164**	*e*P	**Pn**	**22 40 53.8**	**+1.7**
GO04				*i* S	**Sn**	**22 41 22.1**	**-0.1**
GO04	**Tololo Observa**	**2.45**	**164**	*e*P	**Pn**	**22 40 53.8**	**+1.7**
GO04				*e*S	**Sn**	**22 41 23.1**	**+0.8**
GO04	**Tololo Observa**	**2.45**	**164**	*e*P	**Pn**	**22 40 53.9**	**+1.7**
GO04				*e*S	**Sb**	**22 41 23.2**	**-3.3**
AROD	**Rodeo**	**2.99**	**142**	*i* P	**Pb**	**22 41 03.0**	**-2.3**
AROD				*e*P	**Sn**	**22 41 40.1**	**+4.5**
AROD	**Rodeo**	**2.99**	**142**	*e*P	**Pb**	**22 41 02.9**	**-2.4**
AROD				*e*S	**Sn**	**22 41 37.7**	**+2.1**
VCA	**Vinchina**	**3.12**	**108**	*i* P	**Pn**	**22 41 05.9**	**+4.7**
VCA				*e*S	**Sb**	**22 41 45.2**	**-0.3**
VCA	**Vinchina**	**3.12**	**108**	*e*P	**Pb**	**22 41 06.0**	**-1.4**
VCA				IAML		22 42 15.5	
	comp=Z,46nm,0.5s						
CO03	**El Pedregal**	**3.12**	**166**	⇓*i*P	**Pn**	**22 41 02.9**	**+1.8**
CO03				*i* S	**Sn**	**22 41 37.1**	**-1.3**
CO03				IAML		22 41 54.8	
	comp=N,174nm,0.3s						
GO02	**Mina Guanaco**	**3.18**	**35**	⇑*i*P	**Pn**	**22 41 04.5**	**+2.4**
GO02				IAML		22 42 00.4	
	comp=N,191nm,0.4s						
AGUA	**GUANDACOL**	**3.19**	**122**	*e*P	**Pn**	**22 41 06.2**	**+4.1**
AGUA				*e*S	**Sb**	**22 41 47.9**	**+0.3**
AGUA				IAML		22 41 54.1	
	comp=Z,39nm,0.4s						
PB14	**IPOC Station P**	**3.34**	**19**	IAML		22 42 03.3	
	comp=E,43nm,0.6s						
PB14	**IPOC Station P**	**3.34**	**19**	⇓*e*P	**Pn**	**22 41 06.9**	**+2.5**
ACCO	**Cerro Coronel**	**3.54**	**142**	*i* P	**Pb**	**22 41 11.3**	**-3.3**
ACCO				*e*S	**Sb**	**22 41 57.1**	**-0.7**
ACCO				IAML		22 42 05.7	
	comp=Z,61nm,0.6s						
ACCO	**Cerro Coronel**	**3.54**	**142**	*e*P	**Pb**	**22 41 11.3**	**-3.3**
ACCO				*e*S	**Sb**	**22 41 57.4**	**-0.3**
ACCO				IAML		22 42 05.1	
	comp=Z,80nm,0.6s						
RTLS	**Leoncito**	**4.44**	**154**	*i* P	**Pn**	**22 41 23.9**	**+4.4**
RTLS				*e*S	**Sb**	**22 42 26.1**	**+2.2**
RTLS				IAML		22 42 29.1	
	comp=Z,17nm,0.6s						
RTLS	**Leoncito**	**4.44**	**154**	*e*P	**Pn**	**22 41 23.9**	**+4.4**
RTLS				IAML		22 42 39.7	
	comp=Z,46nm,0.9s						
ZON	**Zonda**	**4.50**	**147**	*i* P	**Pb**	**22 41 27.7**	**-3.2**
ZON				IAML		22 42 45.1	
	comp=Z,19nm,0.6s						
RTCV	**Cerro Valdivia**	**4.83**	**148**	*i* P	Pn	22 41 29.9	+5.3
CYA	**Choya**	**5.14**	**98**	*i* P	**Pn**	**22 41 30.8**	**+1.9**
CYA				IAML		22 43 02.0	
	comp=Z,6.8nm,1.4s						
CYA	**Choya**	**5.14**	**98**	*e*P	**Pn**	**22 41 30.7**	**+1.9**
ROC1	**El Roble**	**5.17**	**175**	*i* P	**Pn**	**22 41 33.6**	**+4.1**
ASAL	**Salagasta**	**5.33**	**154**	*i* P	**Pn**	**22 41 35.4**	**+3.9**
ASAL				IAML		22 43 11.2	
	comp=Z,19nm,1.2s						
ARCO	**CERRO ARCO**	**5.51**	**156**	*i* P	**Pn**	**22 41 38.2**	**+4.1**
ARCO				*e*S	**Sb**	**22 42 45.8**	**-8.7**
AAGR	**Agrelo**	**5.77**	**156**	*i* P	**Pn**	**22 41 41.6**	**+4.0**

IDC ***24*** *22:40:30.2±3.1, 34°.22N×22°.43E, h0km, mb3.9/7, mb1 3.8/12, mb1mx3.5/56, mbtmp3.7/12, ML3.4/5, MS3.2/1, Ms1 3.2/1, ms1mx2.4/47, Error ellipse: s-maj=53.8km s-min=23.1km az=21.0*
NEIC ***24*** *22:40:33.0±3.0, 34°.27N±0°.02×22°.49E±0°.08, h10km±2km, mb4.1/6, Error ellipse: s-maj=11.1km s-min=4.8km az=272.0*
ATH ***24*** *22:40:33.9, 34°.35N×22°.53E, h19km±4km, ML2.8/8, Error ellipse: s-maj=12.8km s-min=2.0km az=30.0*
THE ***24*** *22:40:40.7, 34°.57N×22°.87E, h8km, ML2.6/5, Error ellipse: s-maj=2.2km s-min=1.1km az=178.0*
ISC 24 22:40:34.7±2.4**, 34°.5N**±0°.1×**22°.35E**±0°.07**, h23**km±14km**,**
n74, σ2s.26/86**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDR	**Palaiochora Ch**	**1.33**	**55**	P	**Pn**	**22 40 58.0**	**+0.1**
GVD	**Gavdhos**	**1.48**	**76**	P	**Pn**	**22 40 59.8**	**-0.1**
GVD				S	**Sn**	**22 41 15.4**	**-3.2**
	450nm,0.4s						
GVD	**Gavdhos**	**1.48**	**76**	P	**Pn**	**22 40 59.8**	**-0.1**
GVD				AML	AML	22 41 25.4	
	comp=E,948μm,0.4s						
GVD				AML	AML	22 41 29.5	
	comp=N,841μm,0.4s						
GVDS	**Gavdos**	**1.48**	**75**	P	**Pn**	**22 40 59.6**	**-0.4**
GVDS				S	**Sn**	**22 41 14.2**	**-4.4**
	comp=N,280nm,0.4s						
ANKY	**Antikythira Is**	**1.59**	**29**	P	**Pb**	**22 41 04.9**	**+1.5**
IMMV	**Iera Moni Meta**	**1.66**	**53**	P	**Pn**	**22 41 04.0**	**+1.6**
IMMV				S	**Sn**	**22 41 21.3**	**-1.8**
	comp=N,280nm,0.8s						
IMMV	**Iera Moni Meta**	**1.66**	**53**	P	**Pn**	**22 41 04.1**	**+1.6**
IMMV				AML	AML	22 41 50.4	
	comp=N,582μm,0.7s						
IMMV				AML	AML	22 41 59.5	
	comp=E,530μm,0.7s						
VAM	**Vamos**	**1.78**	**58**	P	**Pn**	**22 41 05.1**	**+1.0**
VAM	**Vamos**	**1.78**	**58**	P	**Pn**	**22 41 05.2**	**+1.1**
VAM				AML	AML	22 42 04.5	
	comp=N,382μm,0.9s						
VAM				AML	AML	22 42 06.9	
	comp=E,349μm,0.8s						
SIVA	**Sivas**	**2.10**	**75**	P	**Pn**	**22 41 09.1**	**+0.7**
SIVA				S	**Sn**	**22 41 31.5**	**-2.3**
	comp=E,295nm,0.7s						
SIVA	**Sivas**	**2.10**	**75**	P	**Pn**	**22 41 08.1**	**-0.4**
SIVA				AML	AML	22 41 44.1	
	comp=N,311μm,0.4s						
SIVA				AML	AML	22 42 03.7	
	comp=E,716μm,0.7s						
IDI	**Anoyia**	**2.24**	**68**	P	**Pn**	**22 41 10.8**	**+0.3**
IDI	**Anoyia**	**2.24**	**68**	Pn	**Pn**	**22 41 11.1**	**+0.6**
	comp=E,3.3nm,0.3s,baz=236,slow=8.0,SNR=56						
IDI				Sn	**Sn**	**22 41 37.5**	**0.0**
	comp=E,2.9nm,0.3s,baz=263,slow=19,SNR=6.1						
IDI	**Anoyia**	**2.24**	**68**	P	**Pn**	**22 41 11.3**	**+0.8**
IDI				AML	AML	22 41 48.1	
	comp=E,169μm,0.6s						
IDI				AML	AML	22 41 51.2	
	comp=N,156μm,0.5s						
DYR	**Agios Nikonas**	**2.28**	**360**	P	**Pb**	**22 41 15.1**	**-0.1**
VLI	**Veliai**	**2.28**	**12**	P	**Pb**	**22 41 15.0**	**-0.3**
VLI				AML	AML	22 41 55.4	
	comp=N,203μm,0.6s						
VLI				AML	AML	22 42 18.1	
	comp=E,173μm,0.8s						
PYL	**PYLOS**	**2.46**	**349**	P	**Pb**	**22 41 17.5**	**-0.7**
LAST	**Lasithi**	**2.67**	**74**	P	**Pn**	**22 41 17.2**	**+0.9**
LAST				S	**Sn**	**22 41 45.3**	**-2.6**
	comp=E,60nm,1.6s						
LAST	**Lasithi**	**2.67**	**74**	P	**Pn**	**22 41 17.3**	**+0.9**
LAST				AML	AML	22 42 23.0	
	comp=E,95μm,1.3s						
LAST				AML	AML	22 42 39.5	
	comp=N,116μm,0.9s						
ITM	**Ithomi**	**2.71**	**353**	P	**Pb**	**22 41 20.5**	**-2.1**
ITM	**Ithomi**	**2.71**	**353**	Pn	**Pb**	**22 41 21.5**	**-1.1**
NPS	**Neapolis**	**2.80**	**73**	P	**Pn**	**22 41 18.9**	**+0.8**
NPS	**Neapolis**	**2.80**	**73**	P	**Pn**	**22 41 18.9**	**+0.8**
NPS				AML	AML	22 42 17.8	
	comp=E,112μm,0.8s						
NPS				AML	AML	22 42 30.6	
	comp=N,116μm,1.0s						
KRND	**KRANIDI**	**2.97**	**12**	P	**Pn**	**22 41 24.0**	**+3.5**
AMT	**Artemida-Makis**	**3.09**	**351**	P	**Pb**	**22 41 27.1**	**-1.9**
DID	**Didima**	**3.10**	**13**	P	**Pn**	**22 41 25.5**	**+3.2**
SANT	**Santorini**	**3.17**	**53**	Pn	**Pn**	**22 41 23.4**	**+0.3**
ZKR	**Zakros**	**3.25**	**78**	P	**Pn**	**22 41 24.9**	**+0.7**
ANAF	**Anafi Island**	**3.37**	**55**	P	**Pn**	**22 41 26.6**	**+0.7**
DRO	**Drossia**	**3.50**	**352**	P	**Pn**	**22 41 32.4**	**+4.6**
KLV	**Kalavryta, Ach**	**3.56**	**358**	P	**Pn**	**22 41 33.4**	**+4.8**
VLY	**Voula,Athens**	**3.56**	**19**	P	**Pn**	**22 41 30.8**	**+2.2**
RLS	**Riolos of Patr**	**3.64**	**349**	P	Pn	22 41 34.5	+4.9
ATHU	**Athens Univers**	**3.67**	**18**	P	**Pn**	**22 41 32.5**	**+2.4**
AMGA	**Amorgos Island**	**3.72**	**50**	P	**Pn**	**22 41 31.3**	**+0.5**
PTL	**Penteli**	**3.77**	**19**	P	**Pn**	**22 41 33.6**	**+2.2**
KARP	**Karpathos**	**4.09**	**74**		**Pn**	**22 41 36.7**	**+0.8**
AGG	**Agios Georgios**	**4.53**	**360**	Pn	**Pn**	**22 41 45.4**	**+3.5**
AGG				Sn	**Sn**	**22 42 39.6**	**+5.7**
LIT	**Litokhoron**	**5.61**	**1**	Pn	**Pn**	**22 41 57.0**	**+0.3**
LIT				Sn	**Sn**	**22 43 04.2**	**+3.7**
FNA	**Florina**	**6.34**	**353**	Pn	**Pn**	**22 42 09.0**	**+2.2**
FNA				Sn	**Sn**	**22 43 19.5**	**+1.0**
SCTE	**Santa Cesarea**	**6.38**	**332**	Pn	**Pn**	**22 42 10.5**	**+3.3**
TIP	**Timpagrande**	**6.49**	**318**	Pn	**Pn**	**22 42 11.9**	**+3.1**
ELL	**Elmali**	**6.56**	**68**		**Pn**	**22 42 07.9**	**-2.0**
DBRK	**Dubrovnik**	**8.81**	**339**	Sn	**Sn**	**22 44 16.0**	**-3.2**
STON	**Ston**	**9.13**	**338**	Sn	**Sn**	**22 44 22.8**	**-4.2**
MAKA	**Makarska**	**9.72**	**336**	*e*Pn	**Pn**	**22 42 54.4**	**+1.3**
MAKA				Sn	**Sn**	**22 44 37.0**	**-4.5**
RICI	**Ricice**	**9.87**	**337**	*e*Pn	**Pn**	**22 42 56.3**	**+1.2**
RICI				Sn	**Sn**	**22 44 42.6**	**-2.6**
BRTR	**Keskin Array B**	**10.42**	**57**	Pn	**Pn**	**22 43 04.0**	**+1.2**
	comp=N,0.1nm,0.3s,baz=236,slow=15,SNR=6.5						
ZIRJ	**Zirje**	**10.53**	**332**	*e*Pn	**Pn**	**22 43 06.6**	**+2.4**
ZIRJ				Sn	**Sn**	**22 44 58.3**	**-3.1**
MORI	**Morici**	**10.69**	**333**	*i* Pn	**Pn**	**22 43 08.5**	**+2.1**
MORI				Sn	**Sn**	**22 45 02.0**	**-3.3**
MMAI	**Mount Meron Ar**	**10.97**	**94**	Pn	**Pn**	**22 43 08.4**	**-1.9**
	comp=N,0.8nm,0.3s,baz=270,slow=11,SNR=4.4						
MMAI				Sn	Sn	22 44 59.3	-13
	comp=N,0.4nm,0.3s,baz=266,slow=39,SNR=1.2						
DUGI	**Dugi Otok**	**11.05**	**331**	*e*Pn	**Pn**	**22 43 12.4**	**+1.2**
DUGI				Sn	**Sn**	**22 45 09.0**	**-5.1**
UDBI	**Udbina**	**11.24**	**335**	Sn	**Sn**	**22 45 17.1**	**-1.8**
MLR	**Muntele Rosu**	**11.34**	**13**	Pn	**Pn**	**22 43 18.4**	**+3.1**
	comp=N,0.1nm,0.3s,baz=153,slow=9.0,SNR=1.2						
NVLJ	**Novalja**	**11.60**	**332**	Sn	**Sn**	**22 45 23.6**	**-3.9**
GERES	**GERESS Array B**	**15.72**	**339**	Pn	**P**	**22 44 18.7**	**+0.1**
	comp=N,0.1nm,0.3s,baz=148,slow=13,SNR=1.6						
GERES				LR	LR	22 52 51.2	
	comp=N,73nm,18.3s,baz=94,slow=46						
KHC	**Kasperske Hory**	**16.01**	**339**	Pn	**Pn**	**22 44 19.5**	**+1.1**
AKASG	**Malin Array Be**	**16.97**	**15**	P	**Pn**	**22 44 27.9**	**-2.5**
	baz=199,slow=11,SNR=2.6						
SUW	**Suwalki**	**19.54**	**1**	P	**Pn**	**22 45 03.1**	**+1.3**
SUW				IAmb	IAmb	22 45 05.5	
	comp=Z,21nm,1.1s						
HFS	**Hagfors**	**26.28**	**350**	P	**P**	**22 46 09.3**	**+1.2**
	comp=Z,0.5nm,0.5s,baz=159,slow=5.9,SNR=4.9						
FINES	**FINESS Array B**	**27.09**	**4**	P	**P**	**22 46 16.8**	**+1.5**
	comp=Z,0.7nm,0.8s,baz=157,slow=10,SNR=5.1						
NAO01	**NORSAR Array S**	**27.40**	**348**	P	**P**	**22 46 17.7**	**-0.5**
NAO01				IAmb	IAmb	22 46 20.7	
	comp=Z,2.2nm,1.1s						
NOA	**NORSAR Array B**	**27.53**	**348**	P	**P**	**22 46 20.1**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=169,slow=12,SNR=2.7						
NBO00	**NORSAR Array S**	**27.59**	**348**	P	**P**	**22 46 19.9**	**0.0**
NC204	**NORSAR Array S**	**27.83**	**348**	P	**P**	**22 46 24.7**	**+2.6**
ARCES	**ARCESS Array B**	**35.15**	**2**	P	**P**	**22 47 27.6**	**+1.3**
	comp=Z,2.6nm,0.9s,baz=200,slow=7.7,SNR=1.9						
ARCES	**ARCESS Array B**	**35.15**	**2**	P	**P**	**22 47 28.9**	**+2.6**
KKAR	**Karatay Array**	**38.07**	**62**	P	**P**	**22 47 51.7**	**+0.1**
MKAR	**Makanchi Array**	**46.07**	**56**	P	**P**	**22 48 56.7**	**-0.1**
	comp=Z,2.2nm,0.4s,baz=270,slow=7.9,SNR=52						
MKAR	**Makanchi Array**	**46.07**	**56**	P	**P**	**22 48 56.5**	**-0.3**
MK31	**Makanchi Array**	**46.07**	**56**	P	**P**	**22 48 56.8**	**0.0**
ZALV	**Zalesovo Beam**	**47.14**	**46**	P	**P**	**22 49 04.6**	**-0.3**
	comp=Z,1.6nm,0.4s,baz=266,slow=9.6,SNR=6.4						
SONM	**Songino Array**	**61.70**	**50**	P	**P**	**22 50 50.3**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=294,slow=11,SNR=3.9						
SONM	**Songino Array**	**61.70**	**50**	IAmb	IAmb	22 50 53.0	
	comp=Z,0.9nm,1.0s						

IDC ***24*** *22:42:05.0±22.0, 19°.80S×70°.65W, h0km, mb3.6/2, mb1 3.8/2, mb1mx3.4/29, mbtmp3.6/2, Error ellipse: s-maj=957.2km s-min=73.7km az=21.0*
GUC ***24*** *22:42:10.0±0.7, 19°.63S×70°.76W, h42km±2km, ML3.1*
ISC 24 22:42:10.1±3.0**, 19°.64S**±0°.04×**70°.8W**±0°.1**, h28**km±19km**,**
n15, σ1s.10/26**, 2C-8D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.61**	**87**	⇓*i*P	**Pn**	**22 42 21.2**	**-1.8**
PSGC				*e*S	**Sb**	**22 42 30.0**	**-0.6**
PB11	**IPOC Station P**	**1.05**	**97**	⇓*i*P	**Pn**	**22 42 28.6**	**-0.6**
PB11				*e*S	**Sb**	**22 42 43.5**	**+0.1**
PB11				IAML		22 42 46.2	
	comp=E,669nm,0.2s						
TA01	**Diego Aracena**	**1.08**	**149**	⇓*i*P	**Pn**	**22 42 29.1**	**-0.3**
TA01				*e*S	**Sn**	**22 42 43.3**	**-0.1**
TA01				IAML		22 42 45.1	
	comp=E,520nm,0.5s						
PB12	**IPOC Station P**	**1.10**	**22**	⇓*i*P	**Pn**	**22 42 28.6**	**-1.1**
PB12				*e*S	**Sn**	**22 42 43.6**	**-0.4**
PB12				IAML		22 42 46.2	
	comp=N,725nm,0.3s						
PATCX	**Punta Patache**	**1.31**	**154**	⇑*i*P	**Pn**	**22 42 32.6**	**-0.2**
PATCX				*e*S	**Sn**	**22 42 50.4**	**+1.0**
PATCX				IAML		22 42 55.2	
	comp=E,443nm,0.3s						
AP01	**Chacalluta**	**1.32**	**18**	*e*P	**Pn**	**22 42 32.6**	**-0.1**
AP01				*e*S	**Sn**	**22 42 50.4**	**+1.0**
AP01				IAML		22 42 54.1	
	comp=N,2μm,0.2s						
GO01	**Chusmiza**	**1.48**	**92**	⇓*i*P	**Pn**	**22 42 35.9**	**+0.5**
GO01				*e*S	**Sb**	**22 42 56.1**	**+0.1**
PB08	**IPOC Station P**	**1.60**	**109**	⇓*i*P	**Pn**	**22 42 37.5**	**+0.6**
PB08				*e*S	**Sb**	**22 42 59.0**	**-0.3**
PB08				IAML		22 43 01.8	
	comp=E,265nm,0.2s						
PB16	**IPOC Station P**	**1.76**	**43**	⇓*i*P	**Pn**	**22 42 40.2**	**+0.9**
PB16				*e*S	**Sb**	**22 43 03.8**	**-0.2**
PB16				IAML		22 43 05.2	
	comp=N,254nm,0.3s						
PB01	**IPOC Station P**	**1.85**	**140**	⇓*i*P	**Pn**	**22 42 40.6**	**+0.5**
PB01				*e*S	**Sn**	**22 43 03.8**	**+1.3**
PB01				IAML		22 43 11.5	
	comp=N,269nm,0.3s						
PB02	**IPOC Station P**	**1.86**	**154**	⇑*i*P	**Pn**	**22 42 40.5**	**+0.2**
PB02				*e*S	**Sn**	**22 43 04.8**	**+1.7**
PB02				IAML		22 43 11.5	
	comp=E,556nm,0.5s						
LPAZ	**La Paz**	**4.17**	**37**	Pn	**Pn**	**22 43 15.8**	**+3.3**
	comp=E,0.5nm,0.3s,baz=215,slow=5.4,SNR=7.9						
TORD	**Torodi Ar. Bea**	**78.39**	**71**	P	**P**	**22 54 07.5**	**-1.2**
	comp=E,0.6nm,0.9s,baz=256,slow=5.8,SNR=2.4						
YKA	**Yellowknife Ar**	**88.86**	**341**	P	**P**	**22 55 01.2**	**0.0**
	comp=E,0.2nm,0.7s,baz=142,slow=5.5,SNR=3.2						
MKAR	**Makanchi Array**	**145.09**	**33**	PKPbc	**PKPbc**	**23 01 44.1**	**-0.4**
	comp=E,0.2nm,0.6s,baz=315,slow=3.5,SNR=4.7						

IDC ***24*** *22:42:10.7±2.5, 3°.28N×124°.58E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/28, mbtmp3.2/3, Error ellipse: s-maj=272.7km s-min=30.4km az=64.0*
ISC 24 22:42:11.8±1.3**, 3°.4N**±0°.1×**124°.9E**±0°.4**, h10**km**, n4, σ0s.79**/5**,**
mb3.2/3**, 1C, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**3.57**	**3**	⇑*e*P	**Pn**	**22 43 06.7**	**-0.7**
KCP				*i* S	**Sn**	**22 43 50.5**	**+0.8**
WRA	**Warramunga Arr**	**25.01**	**159**	P	**P**	**22 47 36.2**	**+0.1**
	0.5nm,0.5s,baz=338,slow=10,SNR=3.0						
ASAR	**Alice Springs**	**28.32**	**162**	P	**P**	**22 48 06.2**	**+0.2**
	0.2nm,0.6s,baz=342,slow=15,SNR=2.6						
MKAR	**Makanchi Array**	**56.77**	**326**	P	**P**	**22 51 56.3**	**+0.1**
	0.1nm,0.4s,baz=109,slow=6.7,SNR=1.8						

IDC ***24*** *22:50:56.0±22.0, 19°.86S×70°.24W, h0km, mb3.6/2, mb1 3.8/2, mb1mx3.5/19, mbtmp3.6/2, MS2.7/1, Ms1 2.8/1, ms1mx2.5/26, Error ellipse: s-maj=955.0km s-min=72.5km az=21.0*
GUC ***24*** *22:51:01.5±0.7, 19°.56S×70°.76W, h44km±2km, ML3.6*
ISC 24 22:51:01.5±1.6**, 19°.57S**±0°.04×**70°.81W**±0°.10**, h43**km±15km**,**
n15, σ1s.45/25**, 1C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.65**	**93**	⇓*i*P	**Pn**	**22 51 12.9**	**-1.6**
PSGC				*i* S	**Sn**	**22 51 21.8**	**-2.1**
PB12	**IPOC Station P**	**1.05**	**26**	*i* P	**Pn**	**22 51 19.4**	**-0.5**
PB12				*i* S	**Sn**	**22 51 33.9**	**+0.4**
PB12				IAML		22 51 37.1	
	comp=E,2μm,0.6s						
PB11	**IPOC Station P**	**1.11**	**100**	⇓*i*P	**Pn**	**22 51 20.4**	**-0.4**
PB11				*e*S	**Sn**	**22 51 35.3**	**+0.3**
TA01	**Diego Aracena**	**1.16**	**149**	⇑*i*P	**Pn**	**22 51 21.6**	**+0.3**
TA01				*i* S	**Sn**	**22 51 36.6**	**+0.6**
TA01				IAML		22 51 40.6	
	comp=E,3μm,0.4s						
AP01	**Chacalluta**	**1.27**	**21**	*e*P	**Pn**	**22 51 23.0**	**+0.2**
AP01				*i* S	**Sn**	**22 51 39.6**	**+0.9**
AP01				IAML		22 51 44.7	
	comp=E,3μm,0.4s						
PATCX	**Punta Patache**	**1.39**	**154**	*i* P	**Pn**	**22 51 24.5**	**-0.1**
PATCX				*i* S	**Sn**	**22 51 43.0**	**+1.1**
PATCX				IAML		22 51 48.4	
	comp=E,1μm,0.7s						
GO01	**Chusmiza**	**1.53**	**94**	⇓*i*P	**Pn**	**22 51 27.6**	**+0.8**
GO01				*i* S	**Sn**	**22 51 47.6**	**+1.8**
GO01				IAML		22 51 50.8	
	comp=N,2μm,0.2s						
PB08	**IPOC Station P**	**1.66**	**110**	⇓*i*P	**Pn**	**22 51 29.6**	**+1.0**
PB08				*i* S	**Sn**	**22 51 50.9**	**+2.0**
PB08				IAML		22 51 56.7	
	comp=E,675nm,0.2s						
PB16	**IPOC Station P**	**1.74**	**45**	⇓*i*P	**Pn**	**22 51 31.0**	**+1.2**
PB16				*i* S	**Sn**	**22 51 53.4**	**+2.4**

PB16				IAML		22 51 58.0	
	comp=N,803nm,0.6s						
PB01	IPOC Station P	1.93	140	eP	Pn	22 51 32.6	+0.7
PB01				iS	Sn	22 51 56.2	+1.2
PB01				IAML		22 51 57.2	
	comp=E,810nm,0.3s						
PB02	IPOC Station P	1.95	154	iP	Pn	22 51 33.0	+0.7
PB02				iS	Sn	22 51 55.8	+0.2
PB02				IAML		22 52 01.5	
	comp=E,1µm,0.6s						
LPAZ	La Paz	4.14	38	Pn	Pn	22 52 07.5	+4.7
	comp=E,2.1nm,0.3s,baz=216,slow=2.3,SNR=33						
LPAZ				LR	LR	22 53 50.4	
	comp=E,99nm,20.2s,baz=277,slow=43						
TORD	Torodi Ar. Bea	78.41	72	P	P	23 02 56.0	-2.3
	comp=E,0.5nm,0.7s,baz=253,slow=5.4,SNR=2.5						
YKA	Yellowknife Ar	88.78	341	P	P	23 03 52.4	+2.2
	comp=E,0.2nm,0.6s,baz=135,slow=5.3,SNR=3.7						
MKAR	Makanchi Array	145.05	33	PKPbc	PKiKP	23 10 35.6	-2.4
	comp=E,0.3nm,0.5s,baz=325,slow=4.1,SNR=5.0						

*SNET **24** 22:56:43.4±0.8, 13°.00N×90°.02W, h22^{km}±4^{km}, ML3.4*
*GCG **24** 22:56:44.8±0.3, 13°.66N×89°.56W, h91^{km}±14^{km}, MD3.7*
ISC 24 22:56:43.2±2.5**, 13°.0N**±0°.2×**90°.02W**±0°.07**, h21**^{km}±7^{km}**, n10, σ0^{s}46**/15**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEVE	Cerro Verde	0.93	25	eP	Pb	22 57 00.7	-0.1
CEVE				eS	Sn	22 57 14.3	+0.3
CEVE				IAML		22 57 17.9	
	comp=Z,1µm,0.3s						
SBLS	San Blas	0.94	25	eP	Pb	22 57 00.7	-0.2
SBLS				eS	Sn	22 57 14.2	-0.1
SNJE	San Jose	0.97	25	eP	Pb	22 57 01.1	-0.3
RTR	El Retiro	0.98	22	eP	Pb	22 57 01.2	-0.5
LOMA	Loma Larga	1.06	51	eP	Pb	22 57 02.8	-0.1
LOMA				eS	Sn	22 57 17.3	+0.1
IXG	Ixpaco	1.25	341	eP	Pn	22 57 05.3	-0.3
MTO3	Montecristo	1.55	25	eP	Pn	22 57 10.2	+0.4
MTO3				eS	Sb	22 57 31.0	+0.4
TECA	Tecapa	1.57	71	eP	Pn	22 57 09.7	-0.2
FUG	Fuego 3	1.66	332	eP	Pn	22 57 11.0	-0.3
FUG				eS	Sn	22 57 31.4	-0.6
STG3	Santiaguito 3,	2.28	319	eP	Pn	22 57 20.8	+1.0

*NEIC **24** 23:19:28.9±2.7, 3°.88N±0°.06×71°.19W±0°.04, h15^{km}±5^{km}, mb4.0/2, Error ellipse: s-maj=9.8km s-min=3.7km az=213.0*
*IDC **24** 23:19:28.2±1.0, 4°.03N×71°.17W, h0^{km}, mb3.5/6, mb1 3.8/10, mb1mx3.6/43, mbtmp3.7/10, ML3.0/4, MS2.9/3, Ms1 2.9/3, ms1mx2.6/30, Error ellipse: s-maj=18.5km s-min=13.6km az=37.0*
*RSNC **24** 23:19:31.0±0.9, 3°.85N×71°.39W, h4^{km}±5^{km}, ML3.9, Mw3.9*
ISC 24 23:19:28.5±2.2**, 3°.91N**±0°.03×**71°.23W**±0°.04**, h9**^{km}±15^{km}**, n57, σ2^{s}14**/91**, mb3.6**/5**, 2C, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTGC	Puerto Gaitan,	0.94	288	⇑iPg	Pb	23 19 44.9	-2.2
PTGC				eSg	Sb	23 19 56.2	-3.6
PTGC				i		23 20 02.9	
	comp=Z,3µm,0.2s						
GUVC	San Jose del G	1.95	226	eP	Pn	23 20 00.0	-1.8
GUVC				eS	Sn	23 20 25.1	-1.4
GUVC				i		23 20 29.0	
	comp=Z,2µm,0.3s						
VILC	Villavicencio,	2.46	275	eP	Pn	23 20 09.5	+0.4
VILC				eS	Sn	23 20 38.7	-0.7
VILC				i		23 20 51.5	
	comp=Z,3µm,0.4s						
TAMC	Tame, Arauca	2.57	348	eP	Pn	23 20 12.4	+2.0
TAMC				eS	Sb	23 20 45.1	-1.5
TAMC				i		23 20 58.7	
	comp=Z,597nm,0.5s						
CHIC	Chingaza	2.59	286	eP	Pn	23 20 11.4	+0.3
CHIC				eS	Sn	23 20 41.7	-1.2
CHIC				i		23 20 52.0	
	comp=Z,798nm,0.4s						
RUSC	La Rusia	2.69	317	⇑eP	Pn	23 20 13.6	+1.1
RUSC				eS	Sn	23 20 47.5	+1.9
RUSC				i		23 21 06.2	
	comp=Z,369nm,0.7s						
RUSC	La Rusia	2.69	317		Pn	23 20 13.7	+1.1
MACC	Macarena, Meta	3.15	236	eP	Pn	23 20 20.1	+1.8
MACC				eS	Sb	23 21 00.7	-2.6
MACC				i		23 21 07.1	
	comp=Z,813nm,0.5s						
ROSC	El Rosal	3.21	287	Pn	Pn	23 20 21.1	+1.5
	comp=Z,8.3nm,0.3s,baz=92,slow=15,SNR=10						
ROSC				Sn	Sn	23 21 00.5	+2.2
	comp=Z,49nm,0.3s,baz=20,slow=23,SNR=6.1						
ROSC				Lg	Lg	23 21 11.0	
	comp=Z,68nm,0.3s,baz=4.8,slow=17,SNR=9.0						
ROSC	El Rosal	3.21	287	eP	Pn	23 20 21.9	+2.3
ROSC				eS	Sg	23 21 11.7	-0.2
ROSC				i		23 21 19.9	
	comp=Z,344nm,0.6s						
ROSC	El Rosal	3.21	287		Pn	23 20 21.9	+2.2
ROSC					Sn	23 20 55.9	-2.3
BARC	Barichara	3.29	324	eP	Pn	23 20 21.4	+0.8
BARC				i		23 21 25.7	
	comp=Z,554nm,0.4s						
SPBC	San Pablo de B	3.31	302	eP	Pn	23 20 20.7	0.0
SPBC				eS	Sb	23 21 08.7	+0.5
SPBC				i		23 21 13.2	
	comp=Z,438nm,0.4s						
ELOV	Elorza	3.53	30	eP	Pn	23 20 24.7	+1.1
PAMC	Pamplona, Colo	3.70	337	eP	Pn	23 20 27.7	+1.3
PAMC				eS	Sb	23 21 24.6	+4.8
PAMC				i		23 21 31.9	
	comp=Z,310nm,0.3s						
NORC	Norcasia	3.98	294	eP	Pn	23 20 30.5	+0.6
NORC				eS	Sb	23 21 30.0	+2.8
NORC				i		23 21 42.8	
	comp=Z,147nm,0.6s						
ORTC	Ortega, Tolima	4.00	270	eP	Pn	23 20 30.2	0.0
ORTC				eS	Sn	23 21 19.6	+2.2
ORTC				i		23 21 44.8	
	comp=Z,448nm,0.5s						
PTBC	PUERTO BERRIO,	4.14	309	eP	Pn	23 20 31.3	-0.7
PTBC				eS	Sn	23 21 18.2	-2.4
PTBC				i		23 21 39.1	
	comp=Z,121nm,0.8s						
ANIL	Santa Ana	4.20	278	eP	Pn	23 20 33.6	+0.5
ANIL				eS	Sb	23 21 34.0	+0.2
ANIL				i		23 21 42.9	
	comp=Z,629nm,0.3s						
RREF	El Recreo	4.22	284	eP	Pn	23 20 34.3	+0.7
RREF				eS	Sb	23 21 35.6	+0.9
RREF				i		23 21 47.1	
	comp=Z,176nm,0.8s						
GUY2C	Guyana, Caldas	4.32	288	eP	Pn	23 20 35.7	+0.8
GUY2C				eS	Sn	23 21 21.5	-4.3
GUY2C				i		23 21 28.2	
	comp=Z,94nm,0.6s						
GARC	Garzon, Huila	4.59	248	eP	Pn	23 20 38.0	-0.4
GARC				eS	Sb	23 21 45.0	+0.1
GARC				i		23 21 51.6	
	comp=Z,976nm,0.3s						
OCAC	Ocana	4.77	334	eP	Pn	23 20 42.0	+1.1
OCAC				eS	Sn	23 21 37.9	+1.5
OCAC				i		23 22 04.2	
	comp=Z,88nm,0.4s						
HELC	Santa Helena	4.84	298	eP	Pn	23 20 42.8	+0.8
HELC				eS	Sn	23 21 36.9	-1.5
HELC				i		23 21 57.3	
	comp=Z,50nm,0.6s						
SDV	Santo Domingo	4.98	7	Pn	Pn	23 20 44.1	+0.4
	comp=Z,2.5nm,0.3s,baz=130,slow=6.9,SNR=13						
SDV				Sn	Sn	23 21 40.8	-0.8
	comp=Z,18nm,0.3s,baz=219,slow=18,SNR=6.6						
SDV				Lg	Lg	23 22 01.6	
	comp=Z,38nm,0.3s,baz=246,slow=21,SNR=4.7						
SDV				LR	LR	23 22 51.7	
	comp=Z,113nm,18.3s,baz=250,slow=42						
SDV	Santo Domingo	4.98	7	eP	Pn	23 20 45.0	+1.3
SDV				eS	Sn	23 21 43.7	+2.2
SDV	Santo Domingo	4.98	7		Pn	23 20 43.6	-0.1
FLOC	Florencia	4.98	242	eP	Pn	23 20 44.2	+0.5
FLOC				eS	Sb	23 21 56.9	+0.7
FLOC				i		23 22 06.7	
	comp=Z,525nm,0.6s						
FLOC	Florencia	4.98	242	Pn	Pn	23 20 41.6	-2.1
FLOC					Pb	23 20 57.5	+1.4
ZARC	Zaragoza, Cauc	5.06	315	eP	Pn	23 20 46.4	+1.7
ZARC				eS	Sn	23 21 42.9	-0.5
ZARC				i		23 21 46.5	
	comp=Z,61nm,0.5s						
YOTC	Yotoco, Valle	5.10	271	eP	Pn	23 20 45.6	+0.3
YOTC				eS	Sn	23 21 39.9	-4.6
YOTC				i		23 22 04.7	
	comp=Z,48nm,0.4s						
CBOC	Ciudad Bolivar	5.14	292	eP	Pn	23 20 45.4	-0.6
CBOC				i		23 22 09.3	
	comp=Z,31nm,0.6s						
PCON	Cinco Dias	5.39	253	eP	Pb	23 20 58.9	-4.5
PCON				eS	Sb	23 22 09.9	+1.5
PCON				i		23 22 19.5	
	comp=Z,246nm,0.9s						
POPC	Popayan, Colom	5.60	256	eP	Pn	23 20 54.2	+1.9
POPC				eS	Sb	23 22 15.8	+1.6
POPC				i		23 22 24.9	
	comp=Z,48nm,1.0s						
SMLC	San Martn de	5.62	330	eP	Pn	23 20 51.4	-1.0
SMLC				eS	Sn	23 21 58.4	+1.3
SMLC				i		23 22 00.4	
	comp=Z,40nm,0.5s						
SOTA	Rioblanco	5.65	252	eP	Pn	23 20 54.1	+0.8
SOTA				eS	Sb	23 22 19.2	+3.4
SOTA				i		23 22 24.2	
	comp=Z,122nm,0.6s						
UREC	San Jos de Ur	5.73	312	eP	Pn	23 20 53.4	-0.5
UREC				eS	Sn	23 21 59.0	-0.9
UREC				i		23 22 02.4	
	comp=Z,26nm,0.3s						
CODC	Agustn Codazz	6.37	340	eP	Pn	23 21 02.5	-0.2
CODC				eS	Sn	23 22 13.5	-2.2
CODC				i		23 22 28.4	
	comp=Z,17nm,0.4s						
ARGC	Ariguani, Magd	6.62	333	eP	Pn	23 20 58.2	-7.9
ARGC				eS	Sn	23 22 22.7	+0.8
ARGC				i		23 22 46.5	
	comp=Z,24nm,0.9s						
GCUF	Volcan Galeras	6.66	247	eP	Pb	23 21 23.0	-2.0
GCUF				eS	Sb	23 22 53.5	+8.5
GCUF				i		23 23 03.1	
	comp=Z,66nm,0.8s						
SJCC	San Jacinto, C	7.12	327	eP	Pn	23 21 13.2	+0.2
SJCC				eS	Sn	23 22 30.7	-3.5
SJCC				i		23 22 53.8	
	comp=Z,22nm,1.0s						
URIC	Uribia, Colomb	7.77	354	eP	Pn	23 21 23.4	+1.4
URIC				eS	Sn	23 22 42.1	-8.1
URIC				i		23 22 58.9	
	comp=Z,21nm,1.2s						
URIC	Uribia, Colomb	7.77	354	Pn	Pn	23 21 22.1	+0.1
URIC				Sn	Sn	23 22 49.2	-1.1
PCRV	Puerto La Cruz	9.03	46	Pn	Pn	23 21 38.9	-0.4
	comp=Z,0.9nm,0.3s,baz=265,slow=12,SNR=2.0						
PLCV	Puerto La Cruz	9.05	46		Pn	23 21 38.9	-0.7
PTGA	Pitinga	12.17	112	Pn	Pn	23 22 22.0	-0.3
	comp=Z,0.2nm,0.3s,baz=315,slow=20,SNR=1.4						
PTGA				Sn	Sn	23 24 38.3	+0.1
	comp=Z,0.6nm,0.3s,baz=246,slow=20,SNR=4.6						
PTGA				Lg	Lg	23 25 51.4	
	comp=Z,1.7nm,0.3s,baz=22,slow=22,SNR=12						
PTGA	Pitinga	12.17	112		Sn	23 24 35.2	-3.1
SJG	San Juan	14.96	19	LR	LR	23 29 47.3	
	comp=Z,26nm,18.2s,baz=124,slow=42						
SAML	Samuel	15.09	148		Pn	23 22 59.8	-2.4
SAML				IAmb	IAmb	23 23 01.0	
	comp=Z,5.4nm,0.6s						
LPAZ	La Paz	20.30	171	P	Pn	23 24 08.1	+0.5
	comp=Z,3.8nm,0.7s,baz=348,slow=15,SNR=14						
LPAZ	La Paz	20.30	171	P	P	23 24 04.7	-0.9
LPAZ				IAmb	IAmb	23 24 10.4	
	comp=Z,4.6nm,0.8s						
SIV	San Ignacio	22.19	153	P	P	23 24 26.9	+1.6
	comp=Z,1.2nm,0.6s,baz=344,slow=9.5,SNR=8.4						
TXAR	Lajitas Array	39.80	313	P	P	23 27 03.6	+1.2
	comp=Z,0.2nm,0.6s,baz=116,slow=8.2,SNR=2.9						
SADO	Sadowa	41.28	351	LR	LR	23 44 53.7	
	comp=Z,23nm,19.3s,baz=173,slow=37						
YKA	Yellowknife Ar	66.62	340	P	P	23 30 17.9	-1.3
	comp=Z,0.3nm,0.8s,baz=130,slow=6.5,SNR=4.5						
TORD	Torodi Ar. Bea	72.50	78	P	P	23 30 57.5	+1.0
	comp=Z,0.6nm,1.1s,baz=294,slow=5.6,SNR=1.9						
GERES	GERESS Array B	83.74	41	P	P	23 31 59.9	+1.6
	comp=Z,0.3nm,0.6s,baz=272,slow=7.8,SNR=1.8						

*IDC **24** 23:35:47.2±0.7, 19°.47S×70°.55W, h0^{km}, mb4.5/16, mb1 4.5/19, mb1mx4.4/31, mbtmp4.4/19, ML4.0/3, MS3.9/10, Ms1 3.8/10, ms1mx3.7/23, Error ellipse: s-maj=22.1km s-min=12.5km az=63.0*
*NEIC **24** 23:35:50.4, 19°.56S×70°.77W, h28^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$5.46; M$_{\theta\theta}$-0.71; M$_{\phi\phi}$-4.75; M$_{r\theta}$2.04; M$_{\theta\phi}$2.24; M$_{\phi r}$-6.36; Fault plane solution: M$_0$8.72000×10^{15} NP1:φ$_s$330.77000°, δ20.25000°, λ80.52000°. NP2:φ$_s$160.87000°, δ70.04000°, λ93.48000°. Principal axes: T 8.5941, Plg65.0000°, Azm77.0000°; N 0.2435, Plg3.0000°, Azm340.0000°; P -8.8376, Plg25.0000°, Azm248.0000°;*
*NEIC **24** 23:35:50.4±2.3, 19°.60S±0°.04×70°.78W±0°.06, h25^{km}±2^{km}, mb4.6/44, Mwr4.6/42 Error ellipse: s-maj=7.6km s-min=5.9km az=89.0*
*GUC **24** 23:35:51.6±0.7, 19°.56S×70°.71W, h43^{km}±2^{km}, ML4.7*
*VAO **24** 23:35:55.2±0.8, 19°.49S×70°.48W, h56^{km}±7^{km}, mb4.7*
ISC 24 23:35:50.8±1.2**, 19°.55S**±0°.03×**70°.71W**±0°.05**, h27**^{km}±8^{km}**, n168, σ1^{s}36**/155**, mb4.6**/37**, MS4.0**/10**, 5C-7D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.56	95	⇓iP	Pb	23 36 02.4	+0.3
PSGC				eS	Sb	23 36 10.6	+0.7
PSGCX	Pisagua	0.56	95		Pb	23 36 02.5	+0.3
PSGCX					Sb	23 36 10.5	+0.7
PB12	IPOC Station P	1.00	21	⇓iP	Pb	23 36 09.2	-0.3
PB12				eS	Sb	23 36 23.2	+0.8
PB12				IAML		23 36 25.6	
	comp=N,29µm,0.4s						
PB12	IPOC Station P	1.00	21		Pn	23 36 08.8	-0.3
PB11	IPOC Station P	1.02	102	⇓iP	Pn	23 36 09.8	+0.4
PB11				eS	Sb	23 36 24.1	+1.1
PB11				IAML		23 36 28.2	
	comp=N,41µm,0.3s						
PB11	IPOC Station P	1.02	102		Pn	23 36 09.8	+0.4
PB11					Sn	23 36 20.4	-2.5
TA01	Diego Aracena	1.13	154	⇑iP	Pn	23 36 11.4	+0.6
TA01				eS	Sn	23 36 26.0	+0.5
AP01	Chacalluta	1.22	17	⇓iP	Pb	23 36 12.9	-0.4
AP01				eS	Sb	23 36 29.4	+0.8
PATCX	Punta Patache	1.37	158	⇑iP	Pn	23 36 14.8	+0.5
PATCX				eS	Sn	23 36 32.7	+1.2
PATCX	Punta Patache	1.37	158		Pn	23 36 14.8	+0.5
GO01	Chusmiza	1.44	95	⇓iP	Pb	23 36 17.0	-0.2
GO01				eS	Sb	23 36 36.6	+1.3
GO01				IAML		23 36 42.6	
	comp=N,28µm,0.1s						
GO01	Chusmiza	1.44	95		Pb	23 36 17.0	-0.2
PB08	IPOC Station P	1.58	112	⇓iP	Pb	23 36 19.1	-0.5
PB08				eS	Sb	23 36 39.5	+0.1
PB08				IAML		23 36 43.2	
	comp=N,14µm,0.4s						
PB16	IPOC Station P	1.66	44	⇓iP	Pb	23 36 20.7	-0.4
PB16				eS	Sb	23 36 43.0	+1.2
PB16	IPOC Station P	1.66	44		Pb	23 36 20.2	-0.9
PB01	IPOC Station P	1.88	143	⇑iP	Pn	23 36 22.2	+0.9
PB01				eS	Sn	23 36 46.2	+2.0
PB01				IAML		23 36 49.1	
	comp=E,6µm,0.5s						
PB01	IPOC Station P	1.88	143		Pn	23 36 22.1	+0.9
PB02	IPOC Station P	1.92	157	⇑iP	Pn	23 36 22.6	+0.8
PB02				eS	Sn	23 36 45.4	+0.2
PB02				IAML		23 36 55.6	
	comp=E,14µm,0.4s						
PB07	IPOC Station P	2.30	161	⇑iP	Pn	23 36 28.4	+1.2
PB07				IAML		23 37 11.3	
	comp=E,5µm,0.5s						
PB07	IPOC Station P	2.30	161		Pn	23 36 27.5	+0.3
PB09	IPOC Station P	2.63	149		Pn	23 36 33.5	+1.9
PB03	IPOC Station P	2.65	160	eP	Pn	23 36 32.6	+0.8
PB03				IAML		23 37 17.4	
	comp=E,6µm,0.8s						
PB04	IPOC Station P	2.82	169		Pn	23 36 33.9	-0.4
LVC	Limon Verde	3.48	151	Pn	Pn	23 36 45.0	+1.5
	comp=E,36nm,0.3s,baz=340,slow=9.0,SNR=94						
LVC				Sn	Sn	23 37 25.8	+1.7
	comp=E,70nm,0.3s,baz=294,slow=9.4,SNR=3.7						
LVC				Lg	Lg	23 37 37.8	
	comp=E,148nm,0.3s,baz=217,slow=20,SNR=3.9						
LVC				LR	LR	23 38 26.3	
	comp=E,1µm,22.0s,baz=345,slow=46						
LVC	Limon Verde	3.48	151		Pn	23 36 45.3	+1.8
LVC	Limon Verde	3.48	151	eP	Pn	23 36 45.4	+1.9
PB15	IPOC Station P	3.82	163		Pn	23 36 48.1	0.0
PB15				Sn	Sn	23 37 30.4	-1.9
PB10	IPOC Station P	3.95	178		Pn	23 36 48.1	-1.5
LPAZ	La Paz	4.07	38	Pn	Pb	23 36 56.8	-5.3
	comp=E,7.1nm,0.3s,baz=230,slow=5.5,SNR=55						
LPAZ	La Paz	4.07	38	eP	Pn	23 36 53.1	+1.3
PB14	IPOC Station P	5.06	177	Sn	Sn	23 37 57.5	-5.5
GO03	Copiap	8.02	177		Pn	23 37 44.8	-0.9
GO03				Sn	Sn	23 39 13.5	-2.0
NNA	Nana	9.55	321	Pn	Pn	23 38 07.0	+0.3
	comp=E,1.7nm,0.3s,baz=107,slow=20,SNR=2.5						
NNA				LR	LR	23 42 09.6	
	comp=E,453nm,18.5s,baz=173,slow=40						
NNA	Nana	9.55	321		Pn	23 38 08.3	+1.5
SIV	San Ignacio	9.84	70	Pn	Pn	23 38 11.3	+0.7
	comp=E,6.0nm,0.3s,baz=266,slow=11,SNR=62						
SIV				LR	LR	23 42 36.4	
	comp=E,1µm,18.9s,baz=280,slow=42						
GO04	Tololo Observa	10.58	180		Pn	23 38 19.2	-1.7
SAML	Samuel	12.81	36		Pn	23 38 52.4	+1.1
ROC1	El Roble	13.38	181	Pn	Pn	23 38 58.8	-0.3
CPUP	Villa Florida	14.05	121	Pn	Pn	23 39 04.8	-3.3
	comp=E,0.1nm,0.3s,baz=128,slow=6.7,SNR=1.0						
CPUP	Villa Florida	14.05	121		Pn	23 39 06.7	-1.4
SALV	Santo Antonio	14.76	78	eP	Pn	23 39 18.9	+1.1
CLDB	Colider	16.77	61	eP	Pn	23 39 43.7	-0.2
C2SB	Chapadao do Su	16.91	90	eP	Pn	23 39 45.8	+0.2
TRCB	Terra Rica	17.17	104	eP	Pn	23 39 47.9	-1.1
PTGB	Pitanga	18.02	110	eP	P	23 40 01.0	+1.2
PCMB	Pacaembu	18.33	100	eP	P	23 40 02.7	-0.4
ARAG	Araguaiana, MT	18.41	81	eP	P	23 40 03.6	-0.4
ITAB	Concordia	18.68	118	eP	P	23 40 06.9	0.0
GO06	Curarrehue	19.98	182	P	P	23 40 19.8	-1.4
FRTB	Fartura	20.04	105	eP	Pn	23 40 23.1	-0.8
PLCA	Paso Flores	21.12	180	P	P	23 40 34.9	+1.5
	comp=E,4.5nm,0.8s,baz=329,slow=18,SNR=12						
PLCA				LR	LR	23 47 40.6	
	comp=E,244nm,18.3s,baz=201,slow=34						
PLCA	Paso Flores	21.12	180	P	P	23 40 32.7	-0.8
PLCA	Paso Flores	21.12	180	eP	P	23 40 36.3	+2.9
IPMB	Ipameri, GO	21.36	90	eP	P	23 40 34.9	-1.4
PTGA	Pitinga	21.46	31	P	P	23 40 36.1	-1.1
	comp=E,38nm,0.3s,baz=216,slow=16,SNR=111						
PTGA	Pitinga	21.46	31	P	P	23 40 36.0	-1.3
PTGA	Pitinga	21.46	31	eP	P	23 40 36.0	-1.3
FLOC	Florencia	21.55	346	eP	P	23 40 37.8	-0.4
GCUF	Volcan Galeras	21.65	342	eP	P	23 40 47.0	+7.2
RCLB	Rio Claro- Sao	21.83	102	eP	P	23 40 40.1	-1.2
CRUC	La Cruz	21.86	343	eP	P	23 40 47.6	+5.7
BDFB	Brasilia	21.98	83	P	P	23 40 41.6	-1.3
	comp=E,7.6nm,0.5s,baz=268,slow=10,SNR=12						
BDFB				LR	LR	23 50 48.7	
	comp=E,363nm,20.0s,baz=279,slow=41						
GARC	Garzon, Huila	22.10	347	eP	P	23 40 45.5	+1.0
SOTA	Rioblanco	22.31	344	eP	P	23 40 50.9	+4.0
PCON	Cinco Dias	22.45	345	eP	P	23 40 52.3	+3.9
POPC	Popayan, Colom	22.72	344	eP	P	23 40 52.4	+1.4
PTGC	Puerto Gaitan,	23.64	356	eP	P	23 41 00.6	+0.6
ORTC	Ortega, Tolima	23.73	349	eP	P	23 41 01.5	+0.6
YOTC	Yotoco, Valle	24.03	346	eP	P	23 41 05.2	+1.3
ANIL	Santa Ana	24.33	349	eP	P	23 41 08.4	+1.6
ROSC	El Rosal	24.49	351	P	P	23 41 09.5	+1.1
	comp=E,16nm,0.5s,baz=155,slow=7.8,SNR=8.1						
ROSC				LR	LR	23 51 36.7	
	comp=E,445nm,20.9s,baz=198,slow=39						
ROSC	El Rosal	24.49	351	eP	P	23 41 08.3	0.0
ROSC	El Rosal	24.49	351	P	P	23 41 09.2	+0.8
RREF	El Recreo	24.72	349	eP	P	23 41 13.4	+2.7
SMTB	Santa Maria do	24.77	68	eP	P	23 41 09.8	-0.7
PLMC	San Jos del P	24.91	347	eP	P	23 41 13.7	+1.9
GUY2C	Guyana, Caldas	25.04	349	eP	P	23 41 14.8	+1.4
SPBC	San Pablo de B	25.26	352	eP	P	23 41 15.1	+0.1
NORC	Norcasia	25.29	350	eP	P	23 41 15.4	+0.2
RUSC	La Rusia	25.39	354	eP	P	23 41 17.0	+0.4
JANB	Januaria	25.59	84	eP	P	23 41 16.6	-1.3
CBOC	Ciudad Bolivar	25.79	348	eP	P	23 41 21.6	+1.7
TAMC	Tame, Arauca	25.84	358	eP	P	23 41 20.8	+0.6
HELC	Santa Helena	26.01	349	eP	P	23 41 22.2	+0.1
BARC	Barichara	26.09	354	eP	P	23 41 22.8	+0.1
PTBC	PUERTO BERRIO,	26.18	352	eP	P	23 41 22.3	-1.0
ZARC	Zaragoza, Cauc	27.18	351	eP	P	23 41 32.1	-0.2
UREC	San Jos de Ur	27.54	350	eP	P	23 41 35.4	-0.1
SDV	Santo Domingo	28.25	0	P	P	23 41 42.3	+0.2
	comp=E,3.2nm,0.4s,baz=247,slow=18,SNR=6.0						
SDV	Santo Domingo	28.25	0	eP	P	23 41 43.0	+1.0
SDV	Santo Domingo	28.25	0	P	P	23 41 41.5	-0.5
SDV	Santo Domingo	28.25	0	eP	P	23 41 43.3	+1.2
SMLC	San Martn de	28.36	353	eP	P	23 41 41.4	-1.4
SJCC	San Jacinto, C	29.59	351	eP	P	23 41 42.8	-11
MDP	Montagnes des	30.27	38	P	P	23 41 59.4	-0.4
	comp=E,8.3nm,0.6s,baz=215,slow=9.0,SNR=12						
SJG	San Juan	37.69	7	P	P	23 43 03.5	-0.6
SJG				IAmb	IAmb	23 43 06.4	
	comp=Z,14nm,1.0s						
HUMP	Col San Antoni	37.76	8	IAmb	IAmb	23 43 08.8	
	comp=Z,9.4nm,0.8s						
SMRT	St. Maarten	38.11	12	P	P	23 43 05.3	-2.3
TKL	Tuckaleechee C	56.28	347	P	P	23 45 28.3	-0.7
	comp=Z,4.8nm,0.8s,baz=153,slow=11,SNR=4.1						
TKL	Tuckaleechee C	56.28	347	IAmb	IAmb	23 45 36.4	
	comp=Z,5.8nm,0.8s						
WLAR	White Oak Lake	57.09	338	P	P	23 45 34.2	-0.5
WVT	Waverly	57.70	344	P	P	23 45 38.1	-0.9
WVT				IAmb	IAmb	23 45 40.5	
	comp=Z,7.8nm,0.8s						
TXAR	Lajitas Array	58.07	326	P	P	23 45 41.7	-0.2
	comp=Z,0.5nm,0.6s,baz=139,slow=9.7,SNR=3.5						
TXAR				LR	LR	00 08 22.7	
	comp=Z,33nm,21.2s,baz=0.0,slow=34						
TXAR	Lajitas Array	58.07	326	P	P	23 45 40.6	-1.3
MNTX	Cornudas Mount	60.84	326	P	P	23 46 01.0	+0.1
MNTX				IAmb	IAmb	23 46 02.7	
	comp=Z,7.2nm,1.5s						
N49A	Columbus Grove	61.45	348	P	P	23 46 04.1	-0.7
VNA3	Neumayer Olymp	62.46	161	P	P	23 46 12.1	+0.8
SADO	Sadowa	64.47	353	P	P	23 46 24.9	+0.1
	comp=Z,6.7nm,0.7s,baz=214,slow=2.0,SNR=6.1						
SADO	Sadowa	64.47	353	P	P	23 46 24.1	-0.6
SNAA	Sanae	64.67	161	P	P	23 46 27.1	+1.1
SNAA	Sanae	64.67	161	P	P	23 46 26.8	+0.8
SNAA				IAmb	IAmb	23 46 30.6	
	comp=Z,4.6nm,0.9s						
D53A	Lac Vacive, Po	66.61	355	IAmb	IAmb	23 46 40.9	
	comp=Z,5.0nm,0.7s						
GLA	Glamis	67.16	321	P	P	23 46 41.5	-1.0
GLA				IAmb	IAmb	23 46 42.7	
	comp=Z,4.7nm,0.8s						
E43A	Lone Tree Farm	67.25	348	IAmb	IAmb	23 46 44.5	
	comp=Z,4.8nm,0.8s						
LIC	Lamto	69.50	75	eP	P	23 46 56.7	-0.8
	comp=Z,20nm,1.1s						
MSU	Marysvale	69.63	326	P	P	23 46 58.3	+0.3
TIC	Toumodi	69.67	75	eP	P	23 46 59.6	+1.0
	comp=Z,3.6nm,0.2s						
KIC	Kosan Boka	69.81	75	eP	P	23 46 58.5	-0.9
	comp=Z,11nm,0.6s						
DBIC	Dimbokro	69.83	75	P	P	23 46 58.9	-0.6
	comp=Z,4.4nm,0.6s,baz=206,slow=6.5,SNR=9.3						
QSPA	South Pole Qui	70.63	180	P	P	23 47 05.4	+1.7
QSPA				IAmb	IAmb	23 47 06.1	
	comp=Z,3.9nm,0.7s						
TPNV	Topopah Spring	70.72	323	P	P	23 47 06.8	+2.1
JLU	Jordanelle	70.83	328	P	P	23 47 06.1	+0.8
PDAR	Pinedale Array	71.59	331	P	P	23 47 10.3	+0.5
	comp=Z,0.6nm,0.8s,baz=142,slow=7.5,SNR=4.6						
HWUT	Hardware Ranch	71.64	329	IAmb	IAmb	23 47 26.8	
	comp=Z,6.9nm,1.3s						
TBI	Tubuai	72.53	251	eLR	LR	00 09 31.8	
	comp=Z,144nm,26.0s						
NVAR	Mina Array Bea	72.92	323	P	P	23 47 20.1	+2.1

	comp=Z,0.8nm,0.8s,baz=159,slow=7.2,SNR=5.4						
NVAR	**Mina Array Bea**	**72.92**	**323**	P	**P**	**23 47 18.6**	**+0.6**
ULM	**Lac du Bonnet**	**72.97**	**343**	P	**P**	**23 47 17.6**	**0.0**
	comp=Z,1.6nm,0.5s,baz=147,slow=4.2,SNR=4.5						
ULM				LR	LR	00 21 19.6	
	comp=Z,54nm,21.9s,baz=346,slow=38						
ULM	**Lac du Bonnet**	**72.97**	**343**	IAmb	IAmb	23 47 21.2	
	comp=Z,8.5nm,1.2s						
FLWY	**Flagg Ranch**	**73.13**	**331**	IAmb	IAmb	23 47 31.4	
	comp=Z,6.3nm,1.0s						
RLMT	**Red Lodge**	**73.31**	**333**	IAmb	IAmb	23 47 22.4	
	comp=Z,6.4nm,1.1s						
PPT2	**Papeete2**	**74.12**	**257**	*e*S	**S**	**23 57 00.4**	**+3.2**
	comp=Z,80nm,25.0s						
PPT2	**Papeete2**	**74.12**	**257**	*e*LR	LR	00 10 10.2	
	comp=Z,135nm,26.5s						
SCHQ	**Schefferville**	**74.15**	**2**	P	**P**	**23 47 24.7**	**+0.2**
	comp=Z,3.1nm,0.7s,baz=210,slow=5.1,SNR=9.2						
SCHQ	**Schefferville**	**74.15**	**2**	P	**P**	**23 47 24.4**	**-0.1**
PAHR	**Pah Rah Range**	**74.41**	**323**	P	**P**	**23 47 27.3**	**+0.7**
PAHR				IAmb	IAmb	23 47 31.3	
	comp=Z,5.4nm,0.9s						
MFID	**Camas Ranch**	**75.10**	**328**	IAmb	IAmb	23 47 35.0	
	comp=Z,11nm,1.4s						
ORV	**Oroville**	**75.53**	**322**	P	**P**	**23 47 34.4**	**+1.6**
ORV				IAmb	IAmb	23 47 45.5	
	comp=Z,7.4nm,1.1s						
EGMT	**Eagleton**	**75.81**	**334**	IAmb	IAmb	23 47 37.8	
	comp=Z,9.8nm,1.2s						
BMO	**Blue Mountains**	**76.87**	**328**	IAmb	IAmb	23 47 48.0	
	comp=Z,7.1nm,1.3s						
TOA0	**Torodi Ar. Sit**	**78.32**	**71**	P	**P**	**23 47 48.3**	**-0.8**
TORD	**Torodi Ar. Bea**	**78.32**	**71**	P	**P**	**23 47 48.3**	**-0.8**
	comp=Z,11nm,0.8s,baz=249,slow=4.8,SNR=55						
WALA	**Waterton Lakes**	**78.36**	**333**	IAmb	IAmb	23 48 08.4	
	comp=Z,9.3nm,1.4s						
RAR	**Rarotonga**	**82.30**	**250**	LR	LR	00 16 32.7	
	comp=Z,94nm,20.7s,baz=146,slow=30						
TAM	**Tamanrasset**	**85.47**	**64**	P	**P**	**23 48 27.7**	**+0.9**
YKA	**Yellowknife Ar**	**88.80**	**341**	P	**P**	**23 48 42.1**	**+0.4**
	comp=Z,3.3nm,0.7s,baz=136,slow=5.2,SNR=58						
YKA				LR	LR	00 32 12.0	
	comp=Z,90nm,19.1s,baz=0.0,slow=38						
DZM	**Mont Dzumac**	**110.50**	**236**	*e*LR	LR	00 27 04.4	
	comp=Z,97nm,24.1s						
H11S2	**WAKE ISLAND Hy**	**125.93**	**279**	T	T	02 14 01.3	
	baz=101,slow=75,SNR=830						
H11S1	**WAKE ISLAND Hy**	**125.94**	**279**	T	T	02 13 59.3	
	baz=101,slow=75,SNR=267						
H11S3	**WAKE ISLAND Hy**	**125.95**	**279**	T	T	02 14 01.6	
	baz=101,slow=75,SNR=203						
H11N3	**WAKE ISLAND Hy**	**125.97**	**281**	T	T	02 14 02.2	
	baz=100,slow=75,SNR=138						
H11N2	**WAKE ISLAND Hy**	**125.98**	**281**	T	T	02 14 03.3	
	baz=100,slow=75,SNR=158						
H11N1	**WAKE ISLAND Hy**	**125.98**	**281**	T	T	02 14 03.5	
	baz=100,slow=75,SNR=85						
ASAR	**Alice Springs**	**130.79**	**210**	PKP	**PKiKP**	**23 55 00.8**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=132,slow=2.0,SNR=9.2						
ASAR	**Alice Springs**	**130.79**	**210**		**PKPdf**	**23 55 00.2**	**-0.2**
ABKAR	**Akbulak array**	**130.83**	**41**		**PKPdf**	**23 54 59.2**	**-0.3**
WRA	**Warramunga Arr**	**133.71**	**213**	PKP	**PKiKP**	**23 55 06.3**	**-0.9**
	comp=Z,1.4nm,0.6s,baz=150,slow=1.8,SNR=8.4						
ZALV	**Zalesovo Beam**	**140.87**	**23**	PKhKP	PKPpre	23 55 11.0	
	comp=Z,0.4nm,0.4s,baz=294,slow=4.6,SNR=1.7						
ZALV				PKP	**PKPdf**	**23 55 17.8**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=312,slow=2.4,SNR=4.7						
MAKZ	**Makanchi**	**144.81**	**33**		**PKPdf**	**23 55 24.9**	**-0.4**
MKAR	**Makanchi Array**	**144.99**	**33**	PKP	**PKPdf**	**23 55 25.7**	**+0.1**
	comp=Z,6.0nm,0.7s,baz=320,slow=3.4,SNR=74						
MKAR	**Makanchi Array**	**144.99**	**33**		**PKPdf**	**23 55 25.1**	**-0.4**
NIL	**Nilore**	**145.04**	**59**		**PKPdf**	**23 55 26.1**	**0.0**
KSH	**Kashi**	**145.12**	**48**	PKPbc	**PKPdf**	**23 55 27.3**	**+1.1**
KSH	**Kashi**	**145.12**	**48**	pPKP	pPKPdf	23 55 37.1	+2.1
KSH	**Kashi**	**145.12**	**48**	PP	PP	23 58 49.3	+4.4
KSH	**Kashi**	**145.12**	**48**	PKS		23 59 04.3	
SONM	**Songino Array**	**151.69**	**4**	PKPbc	**PKiKP**	**23 55 43.6**	**+0.3**
	comp=Z,2.1nm,0.8s,baz=328,slow=1.4,SNR=14						
LZH	**Lanzhou**	**162.84**	**15**	*e*PKP	**PKPdf**	**23 55 50.9**	**-0.1**
LZH				pPKP	pPKPdf	23 55 57.4	-2.4
LZH				sPKP		23 56 02.9	

DRS 24 23:38:14.6±0.0**, 42°.31N×48°.16E, h13^{km}, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRN	**Derbent**	**0.31**	**156**	*i* Pg	Pg	23 38 20.8	-0.2
	54nm,0.8s						
DRN				*e*Sg	Sg	23 38 25.7	+0.5
	578nm,0.6s						
URKR	**Urkarakh**	**0.42**	**249**	*i* Pg	Pg	23 38 22.2	-0.8
	23nm,0.1s						
URKR				*e*Sg	Sg	23 38 28.2	-0.4
	93nm,0.2s						
KMKR	**Kumukh**	**0.81**	**257**	*e*Pg	Pg	23 38 30.0	-0.3
KMKR				*e*Sg	Sg	23 38 39.0	-1.9
	39nm,0.2s						
GNBR	**Gunib**	**0.89**	**275**	*e*Pg	Pg	23 38 31.4	-0.4
	12nm,0.1s						
GNBR				*e*Sg	Sb	23 38 44.0	+0.2
	76nm,0.2s						
AKT	**Akhty**	**0.89**	**201**	*i* Pg	Pg	23 38 25.2	-6.7
	106nm,0.2s						
AKT				*e*Sg	Sg	23 38 32.7	-11
	176nm,0.3s						
XNZR	**Khunzakh**	**1.10**	**282**	*e*Pg	Pn	23 38 36.2	+0.3
XNZR				*e*Sg	Sn	23 38 52.2	+1.2
DBC	**Dubki**	**1.21**	**306**	*e*Pg	Pg	23 38 38.3	+0.5
	3.0nm,0.6s						
DBC				*e*Sg	Sg	23 38 56.6	+3.0
	17nm,0.7s						
BTLR	**Botlikh**	**1.48**	**284**	*e*Pg	Pb	23 38 42.4	+0.5
	6.0nm,0.5s						
BTLR				*e*Sg	Sg	23 39 02.3	+0.2
	12nm,0.7s						

ROM 24 23:48:33.6±0.1**, 43°.414N**±0°.003×**12°.469E**±0°.005**,**
h6^{km}±1^{km}**, Md1.0**/5**, 4C, Error ellipse: s-maj=0.4km**
s-min=0.2km az=54.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATVO	**AVT- Monte Val**	**0.06**	**235**	P	Pg	23 48 35.2	0.0
ATVO				S	Sg	23 48 36.3	+0.1
ATVO				AML	AML		
	comp=E,153μm,0.3s						
ATVO				AML	AML		
	comp=N,153μm,0.1s						
ATVO				END			
ATPI	**Pietralunga -**	**0.06**	**307**	P	Pg	23 48 35.5	+0.2
ATPI				S	Sg	23 48 36.8	+0.4
ATPI				END			
ATFO	**Monte Foce - G**	**0.09**	**122**	⇑P	Pg	23 48 35.9	+0.2
ATFO				S	Sg	23 48 37.7	+0.6
ATFO				END			
MURB	**Monte Urbino**	**0.16**	**165**	⇑P	Pg	23 48 37.3	+0.5
MURB				S	Sg	23 48 40.2	+1.3
MURB				END			
BADI	**Badiali**	**0.19**	**301**	⇑P	Pg	23 48 38.0	+0.6
BADI				S	Sg	23 48 41.5	+1.5
BADI				END			
NARO	**Abbazia di Nar**	**0.21**	**22**	P	Pg	23 48 38.3	+0.4
NARO				S	Sg	23 48 42.0	+1.3
ATTE	**AVT- Monte Tez**	**0.23**	**201**	⇑P	Pg	23 48 38.6	+0.4

UCR ***24*** *23:49:48.3±0.8, 12°.48N×87°.90W, h28^{km}±2^{km}, ML3.7*
INET ***24*** *23:49:48.5, 12°.52N×87°.74W, h64^{km}, ML4.2*
SNET ***24*** *23:49:48.4±0.7, 12°.49N×87°.90W, h29^{km}±2^{km}, ML3.7*
ISC 24 23:49:44.9±1.8**, 12°.36N**±0°.08×**87°.76W**±0°.05**, h23^{km}**±15^{km}**,**
n32, σ**0^{s}64**/60**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**0.91**	**355**	*e*P	**Pn**	**23 50 03.3**	**+0.8**
CNCH				*e*S	**Sn**	**23 50 14.9**	**-0.1**
CNCH				IAML		23 50 21.6	
	comp=Z,7μm,0.4s						
CNCH	**Conchagua**	**0.91**	**355**	*e*P	**Pn**	**23 50 03.3**	**+0.8**
CNCH				*e*S	**Sn**	**23 50 14.9**	**-0.1**
CNCH				IAML		23 50 21.6	
	comp=Z,7μm,0.4s						
LCND	**La Caada**	**0.95**	**352**	*e*P	**Pn**	**23 50 03.4**	**+0.5**
LCND				*e*S	**Sn**	**23 50 15.6**	**-0.2**
LCND				IAML		23 50 17.8	
	comp=Z,3μm,0.4s						
LCND	**La Caada**	**0.95**	**352**	*e*P	**Pn**	**23 50 03.4**	**+0.5**
LCND				*e*S	**Sn**	**23 50 15.6**	**-0.2**
LCND				IAML		23 50 17.8	
	comp=Z,3μm,0.4s						
JUCU	**Jucuar¡n**	**1.01**	**332**	*e*P	**Pb**	**23 50 04.1**	**+0.4**
JUCU				*e*S	**Sb**	**23 50 16.0**	**-0.7**
JUCU				IAML		23 50 21.3	
	comp=Z,2μm,0.4s						
JUCU	**Jucuar¡n**	**1.01**	**332**	*e*P	**Pb**	**23 50 04.1**	**+0.4**
JUCU				*e*S	**Sb**	**23 50 16.0**	**-0.7**
JUCU				IAML		23 50 21.3	
	comp=Z,2μm,0.4s						
BLLM	**Bellamira**	**1.17**	**336**	*e*P	**Pb**	**23 50 06.8**	**+0.3**
BLLM				*e*S	**Sn**	**23 50 20.8**	**-0.6**
BLLM	**Bellamira**	**1.17**	**336**	*e*P	**Pb**	**23 50 06.8**	**+0.3**
BLLM				*e*S	**Sn**	**23 50 20.8**	**-0.6**
LCY	**Lacayo**	**1.18**	**334**	*e*P	**Pb**	**23 50 07.0**	**+0.4**
LCY				*e*S	**Sn**	**23 50 21.1**	**-0.5**
LCY	**Lacayo**	**1.18**	**334**	*e*P	**Pb**	**23 50 07.0**	**+0.4**
LCY				*e*S	**Sn**	**23 50 21.1**	**-0.5**
MOMN	**Momotombo**	**1.19**	**88**	*e*P	**Pn**	**23 50 05.4**	**-0.8**
MOMN				*e*S	**Sn**	**23 50 22.7**	**+0.9**
MOMN	**Momotombo**	**1.19**	**88**	*e*P	**Pn**	**23 50 05.4**	**-0.8**
MOMN				*e*S	**Sn**	**23 50 22.7**	**+0.9**
PACA	**Pacayal**	**1.23**	**333**	*e*P	**Pb**	**23 50 07.6**	**0.0**
PACA				*e*S	**Sb**	**23 50 22.9**	**-0.2**
PACA	**Pacayal**	**1.23**	**333**	*e*P	**Pb**	**23 50 07.6**	**0.0**
PACA				*e*S	**Sb**	**23 50 22.9**	**-0.2**
ALJI	**Alcalda de J**	**1.25**	**321**	*e*P	**Pb**	**23 50 07.7**	**0.0**
ALJI				*e*S	**Sn**	**23 50 21.8**	**-1.2**
ALJI	**Alcalda de J**	**1.25**	**321**	*e*P	**Pb**	**23 50 07.7**	**0.0**
ALJI				*e*S	**Sn**	**23 50 21.8**	**-1.2**
TECA	**Tecapa**	**1.34**	**327**	*e*P	**Pn**	**23 50 08.7**	**+0.3**
TECA				*e*S	**Sn**	**23 50 25.1**	**-0.6**
TECA	**Tecapa**	**1.34**	**327**	*e*P	**Pn**	**23 50 08.7**	**+0.3**
TECA				*e*S	**Sn**	**23 50 25.1**	**-0.6**
COEB	**Comit de Eme**	**1.36**	**326**	*e*P	**Pn**	**23 50 08.7**	**0.0**
COEB				*e*S	**Sn**	**23 50 25.4**	**-0.6**
COEB	**Comit de Eme**	**1.36**	**326**	*e*P	**Pn**	**23 50 08.7**	**0.0**
COEB				*e*S	**Sn**	**23 50 25.4**	**-0.6**
FAGO	**Alcalda de S**	**1.37**	**346**	*e*P	**Pn**	**23 50 09.0**	**+0.3**
FAGO				*e*S	**Sn**	**23 50 26.0**	**-0.2**
FAGO				IAML		23 50 32.9	
	comp=Z,328nm,0.4s						
FAGO	**Alcalda de S**	**1.37**	**346**	*e*P	**Pn**	**23 50 09.0**	**+0.3**
FAGO				*e*S	**Sn**	**23 50 26.0**	**-0.2**
FAGO				IAML		23 50 32.9	
	comp=Z,328nm,0.4s						
LFRS	**El Faro**	**1.79**	**315**	*e*P	**Pn**	**23 50 15.1**	**+0.6**
LFRS				*e*S	**Sn**	**23 50 35.6**	**-0.9**
LBRS	**Las Brisas**	**1.86**	**318**	*e*P	**Pn**	**23 50 16.3**	**+0.9**
LBRS				*e*S	**Sn**	**23 50 37.5**	**-0.8**
LOMA	**Loma Larga**	**1.88**	**313**	*e*P	**Pn**	**23 50 16.6**	**+0.8**
LOMA				*e*S	**Sn**	**23 50 38.0**	**-0.9**
LOMA				IAML		23 50 39.2	
	comp=Z,876nm,0.3s						
LOMA	**Loma Larga**	**1.88**	**313**	*e*P	**Pn**	**23 50 16.6**	**+0.8**
LOMA				*e*S	**Sn**	**23 50 38.0**	**-0.9**
LOMA				IAML		23 50 39.2	
	comp=Z,876nm,0.3s						
CEVE	**Cerro Verde**	**2.33**	**309**	*e*P	**Pn**	**23 50 23.2**	**+1.0**
CEVE				*e*S	**Sn**	**23 50 50.4**	**+0.2**
CEVE	**Cerro Verde**	**2.33**	**309**	*e*P	**Pn**	**23 50 23.2**	**+1.0**
CEVE				*e*S	**Sn**	**23 50 50.4**	**+0.2**
SBLS	**San Blas**	**2.34**	**309**	*e*P	**Pn**	**23 50 23.1**	**+0.9**
SBLS	**San Blas**	**2.34**	**309**	*e*P	**Pn**	**23 50 23.1**	**+0.9**
MTO3	**Montecristo**	**2.56**	**323**	*e*P	**Pn**	**23 50 26.0**	**+0.8**
MTO3	**Montecristo**	**2.56**	**323**	*e*P	**Pn**	**23 50 26.0**	**+0.8**

IDC ***25*** *00:07:51.7±11.0, 40°.62N×141°.83E, h0^{km}, mb3.4/3, mb1 3.5/4, mb1mx3.2/53, mbtmp3.4/4, ML2.2/1, Error ellipse: s-maj=224.7km s-min=43.4km az=93.0*
JMA ***25*** *00:07:57.8, 40°.13N×141°.90E, h63^{km}±1^{km}, M3.1*
JMA Felt I J1.
ISC 25 00:07:57.3±1.4**, 40°.15N**±0°.04×**142°.0E**±0°.1**, h64^{km}**±7^{km}**,**
n21, σ**0^{s}67**/25**, mb3.4**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKEN	**Kujiedanarisaw**	**0.19**	**286**	P	**Pn**	**00 08 07.6**	**+0.4**
JKEN				S	**Sn**	**00 08 14.6**	**+0.3**
JTH	**Tanohata**	**0.22**	**198**	P	**Pn**	**00 08 07.8**	**+0.4**
JTH				S	**Sn**	**00 08 14.8**	**+0.2**
JANG	**Nango**	**0.40**	**304**	P	**Pn**	**00 08 08.8**	**+0.1**
JANG				S	**Sn**	**00 08 16.9**	**-0.1**
JKZ	**Kuzumaki**	**0.51**	**251**	P	**Pn**	**00 08 09.8**	**+0.1**
JKZ				S	**Sn**	**00 08 18.2**	**-0.6**
JOM	**Ohasama**	**0.85**	**217**	P	**Pn**	**00 08 13.3**	**-0.3**
JOM				*e*S	**Sn**	**00 08 25.2**	**-0.4**
JTM	**Tenmabayashi**	**0.93**	**314**	P	**Pn**	**00 08 14.7**	**+0.1**
JTM				S	**Sn**	**00 08 27.4**	**+0.1**
JAH	**Hinai**	**1.01**	**273**	P	**Pn**	**00 08 15.5**	**-0.1**
JAH				*e*S	**Sn**	**00 08 29.6**	**+0.4**
JRG	**Rokugo**	**1.27**	**234**	P	**Pn**	**00 08 19.0**	**0.0**
JRG				*e*S	**Sn**	**00 08 35.5**	**+0.3**
JMK	**Ichinoseki**	**1.32**	**205**	P	**Pn**	**00 08 19.6**	**-0.2**
JMK				*e*S	**Sn**	**00 08 36.0**	**-0.6**
JOT	**Ohata**	**1.41**	**331**	P	**Pn**	**00 08 21.3**	**+0.5**
JOT				S	**Sn**	**00 08 38.9**	**+0.4**
JIW	**Iwasaki**	**1.55**	**287**	P	**Pn**	**00 08 23.2**	**+0.4**
MJAR	**Matsushiro Arr**	**4.65**	**220**	Pn	**Pn**	**00 09 07.5**	**+2.4**
	0.1nm,0.3s,baz=31,slow=14,SNR=5.3						
SONM	**Songino Array**	**26.52**	**299**	P	**P**	**00 13 29.1**	**+0.1**
	0.2nm,0.4s,baz=94,slow=8.7,SNR=1.9						
H11N2	**WAKE ISLAND Hy**	**29.52**	**126**	T	T	00 44 38.9	
	baz=318,slow=75,SNR=26						
H11N1	**WAKE ISLAND Hy**	**29.53**	**126**	T	T	00 44 49.0	
	baz=318,slow=75,SNR=35						
H11N3	**WAKE ISLAND Hy**	**29.54**	**126**	T	T	00 44 55.3	
	baz=318,slow=75,SNR=30						
H11S1	**WAKE ISLAND Hy**	**30.33**	**128**	T	T	00 45 45.0	
	baz=320,slow=76,SNR=9.1						
H11S3	**WAKE ISLAND Hy**	**30.33**	**128**	T	T	00 45 44.8	
	baz=320,slow=76,SNR=7.0						
H11S2	**WAKE ISLAND Hy**	**30.34**	**128**	T	T	00 45 46.6	
	baz=320,slow=76,SNR=7.3						
ZALV	**Zalesovo Beam**	**40.19**	**310**	P	**P**	**00 15 26.4**	**-0.7**
	0.5nm,0.4s,baz=105,slow=7.6,SNR=4.0						
MKAR	**Makanchi Array**	**42.89**	**299**	P	**P**	**00 15 48.5**	**-0.8**
	0.5nm,0.8s,baz=88,slow=9.4,SNR=5.2						

IDC 25 00:08:07.8±11.0**, 20°.63S**×**178°.02W, h273^{km}**±104^{km}**,**
mb3.3/4**, mb1 3.6**/4**, mb1mx3.1**/42**, mbtmp3.8**/4**, Error ellipse: s-maj=133.3km s-min=38.1km az=155.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**44.47**	**257**	P	P	00 15 52.5	-0.2
	3.0nm,0.8s,baz=92,slow=8.1,SNR=32						
ASAR				PcP	PcP	00 17 31.6	+0.6
	0.9nm,0.7s,baz=99,slow=3.5,SNR=7.7						
WRA	**Warramunga Arr**	**44.57**	**262**	P	P	00 15 53.2	-0.2
	2.7nm,0.9s,baz=98,slow=8.1,SNR=12						
TXAR	**Lajitas Array**	**87.14**	**57**	P	P	00 20 23.0	-0.4
	0.2nm,0.7s,baz=208,slow=7.1,SNR=2.0						
YKA	**Yellowknife Ar**	**96.64**	**25**	P	P	00 21 07.4	+1.0
	0.3nm,0.9s,baz=246,slow=4.0,SNR=2.6						
AKASG	**Malin Array Be**	**143.12**	**331**	PKP	PKPbc	00 27 06.1	-0.7
	0.4nm,0.3s,baz=48,slow=4.3,SNR=4.5						
BRTR	**Keskin Array B**	**146.91**	**312**	PKPbc	PKPdf	00 27 17.3	+1.2
	0.5nm,0.6s,baz=128,slow=6.8,SNR=4.6						
MMAI	**Mount Meron Ar**	**147.86**	**300**	PKPbc	PKPbc	00 27 20.9	-0.3
	1.0nm,0.5s,baz=68,slow=5.5,SNR=5.4						
GERES	**GERESS Array B**	**150.32**	**344**	PKPbc	PKPbc	00 27 26.4	-0.3
	0.7nm,0.8s,baz=64,slow=4.6,SNR=5.6						

IDC ***25*** *00:12:45.4±0.9, 36°.82N×5°.60E, h0^{km}, mb3.5/9, mb1 3.6/12, mb1mx3.5/60, mbtmp3.5/12, ML3.3/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/54, Error ellipse: s-maj=21.9km s-min=18.6km az=132.0*
NEIC ***25*** *00:12:47.4±2.5, 36°.94N±0°.07×5°.61E±0°.07, h10^{km}±1^{km}, mb4.2/5, ML4.1(ALG), Error ellipse: s-maj=12.3km s-min=9.1km az=187.0*
CRAAG ***25*** *00:12:47.1, 36°.87N×5°.61E, Ml4.1*
MDD ***25*** *00:12:48.9±0.6, 36°.91N×5°.69E, h17^{km}±10^{km}, mb4.9/31, Error ellipse: s-maj=7.0km s-min=4.6km az=146.0, PRXIMO*
LDG ***25*** *00:12:49.3±0.1, 36°.93N×5°.70E, h10^{km}, Ml3.7/42, Error ellipse: s-maj=2.3km s-min=2.2km az=94.0*
ISC 25 00:12:47.6±0.5**, 37°.01N**±0°.04×**5°.59E**±0°.03**, h18^{km}, n233,**
σ**2^{s}67**/341**, mb3.6**/11**, 1C-1D, Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DFRA	**Djebel Bou Aff**	**0.52**	**154**	P	**Pg**	**00 12 56.4**	**-1.7**
DFRA	**Djebel Bou Aff**	**0.52**	**154**	P	**Pg**	**00 12 56.4**	**-1.7**
DFRA	**Djebel Bou Aff**	**0.52**	**154**	P	**Pg**	**00 12 56.4**	**-1.7**
SET	**Setif**	**0.82**	**191**	P	**Pb**	**00 13 02.0**	**-1.4**
SET	**Setif**	**0.82**	**191**	P	**Pb**	**00 13 02.0**	**-1.4**
SET	**Setif**	**0.82**	**191**	P	**Pb**	**00 13 02.0**	**-1.4**
CKHR	**Kef el Ahmar**	**0.99**	**184**	P	**Pb**	**00 13 05.4**	**-0.9**
CKHR	**Kef el Ahmar**	**0.99**	**184**	P	**Pb**	**00 13 05.4**	**-0.9**
CKHR	**Kef el Ahmar**	**0.99**	**184**	P	**Pb**	**00 13 05.4**	**-0.9**
CAEH	**'Ain El Ouahch**	**1.04**	**102**	P	**Pn**	**00 13 06.7**	**-0.5**
CAEH	**'Ain El Ouahch**	**1.04**	**102**	P	**Pn**	**00 13 06.7**	**-0.5**
CAEH	**'Ain El Ouahch**	**1.04**	**102**	P	**Pn**	**00 13 06.7**	**-0.5**
CASM	**Ain Smara**	**1.04**	**136**	P	**Pb**	**00 13 05.8**	**-1.3**
CASM	**Ain Smara**	**1.04**	**136**	P	**Pb**	**00 13 05.8**	**-1.3**
CASM	**Ain Smara**	**1.04**	**136**	P	**Pb**	**00 13 05.8**	**-1.3**
CKFL	**Kef-Lekhel**	**1.09**	**124**	P	**Pb**	**00 13 07.0**	**-1.0**
CKFL	**Kef-Lekhel**	**1.09**	**124**	P	**Pb**	**00 13 07.0**	**-1.0**
CKFL	**Kef-Lekhel**	**1.09**	**124**	P	**Pb**	**00 13 07.0**	**-1.0**
CTEI	**Djebel Teioual**	**1.15**	**145**	P	**Pn**	**00 13 07.6**	**-1.3**
CTEI	**Djebel Teioual**	**1.15**	**145**	P	**Pn**	**00 13 07.6**	**-1.3**
CTEI	**Djebel Teioual**	**1.15**	**145**	P	**Pn**	**00 13 07.6**	**-1.3**
CMAH	**Djebel Manchou**	**1.52**	**104**	P	**Pn**	**00 13 13.0**	**-0.9**
CMAH	**Djebel Manchou**	**1.52**	**104**	P	**Pn**	**00 13 13.0**	**-0.9**
CMAH	**Djebel Manchou**	**1.52**	**104**	P	**Pn**	**00 13 13.0**	**-0.9**
ATAF	**Djebel Tarf**	**1.55**	**223**	P	**Pg**	**00 13 20.0**	**+2.5**
ATAF	**Djebel Tarf**	**1.55**	**223**	P	**Pg**	**00 13 20.0**	**+2.5**
ATAF	**Djebel Tarf**	**1.55**	**223**	P	**Pg**	**00 13 20.0**	**+2.5**
ABMS	**Boumerdes**	**1.71**	**262**	P	**Pn**	**00 13 16.6**	**+0.1**
ABMS	**Boumerdes**	**1.71**	**262**	P	**Pn**	**00 13 16.6**	**+0.1**
ABMS	**Boumerdes**	**1.71**	**262**	P	**Pn**	**00 13 16.6**	**+0.1**
ADJB	**Djebel Djouab**	**1.93**	**244**	P	**Pn**	**00 13 20.0**	**+0.4**
ADJB	**Djebel Djouab**	**1.93**	**244**	P	**Pn**	**00 13 20.0**	**+0.4**
ADJB	**Djebel Djouab**	**1.93**	**244**	P	**Pn**	**00 13 20.0**	**+0.4**
ABA	**Alger-Bouzarea**	**2.06**	**265**	P	**Pn**	**00 13 20.0**	**-1.3**
ABA	**Alger-Bouzarea**	**2.06**	**265**	P	**Pn**	**00 13 20.0**	**-1.3**
ABA	**Alger-Bouzarea**	**2.06**	**265**	P	**Pn**	**00 13 20.0**	**-1.3**
MAHO	**Mahon**	**3.06**	**341**	P	**Pn**	**00 13 36.0**	**+1.0**
MAHO				S	**Sn**	**00 14 09.7**	**-1.5**
MAHO	**Mahon**	**3.06**	**341**	*e*P	**Pn**	**00 13 36.0**	**+1.0**
MAHO				*e*S	**Sn**	**00 14 09.7**	**-1.5**
KEST	**Kesra**	**3.29**	**112**	Pn	**Pn**	**00 13 38.5**	**+0.3**
	3.2nm,0.3s,baz=129,slow=2.3,SNR=52						
KEST				Sn	**Sn**	**00 14 16.0**	**-0.9**
	10nm,0.3s,baz=143,slow=19,SNR=9.1						
KEST	**Kesra**	**3.29**	**112**		**Pn**	**00 13 38.4**	**+0.1**
KEST					**Sn**	**00 14 17.6**	**+0.6**
EBNR	**Beni Rached**	**3.34**	**259**	P	**Pb**	**00 13 43.0**	**-3.3**
EBNR	**Beni Rached**	**3.34**	**259**	P	**Pb**	**00 13 43.0**	**-3.3**
ECHA	**Ech Chlef**	**3.51**	**257**	P	**Pn**	**00 13 44.0**	**+2.9**
ECHA	**Ech Chlef**	**3.51**	**257**	P	**Pn**	**00 13 44.0**	**+2.9**
ECHF	**Ech Chlef**	**3.52**	**257**	P	**Pn**	**00 13 44.0**	**+2.6**
EANR	**'Ain N'Sour**	**3.77**	**255**	P	**Pn**	**00 13 45.0**	**+0.1**
EANR	**'Ain N'Sour**	**3.77**	**255**	P	**Pn**	**00 13 45.0**	**+0.1**
EANR	**'Ain N'Sour**	**3.77**	**255**	P	**Pn**	**00 13 45.0**	**+0.1**
ETRT	**Tiaret**	**3.83**	**246**	P	**Pn**	**00 13 46.0**	**+0.3**
ETRT	**Tiaret**	**3.83**	**246**	P	**Pn**	**00 13 46.0**	**+0.3**
ETRT	**Tiaret**	**3.83**	**246**	P	**Pn**	**00 13 46.0**	**+0.3**
EIBI	**Ibiza**	**3.91**	**302**	P	**Pn**	**00 13 49.6**	**+2.9**
	42nm,0.1s,SNR=99						
EIBI				S	**Sn**	**00 14 32.7**	**+0.5**
	42nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**3.91**	**302**		**Pn**	**00 13 49.6**	**+2.9**
EIBI					**Sn**	**00 14 32.6**	**+0.5**
OKGL	**Djebel Kef Gue**	**4.10**	**258**	P	**Pn**	**00 13 49.5**	**+0.1**
	60nm,0.1s,SNR=7.9						
OKGL				S	**Sn**	**00 14 36.1**	**-0.8**
	80nm,0.3s,SNR=7.9						
OKGL	**Djebel Kef Gue**	**4.10**	**258**		**Sn**	**00 14 36.1**	**-0.8**
EBEN2	**Beniarda presa**	**4.87**	**292**	P	**Pn**	**00 14 02.5**	**+2.6**
	14nm,0.2s,SNR=7.9						
EBEN2				S	**Sn**	**00 14 54.9**	**-0.9**
	0.6nm,0.2s,SNR=7.9						
EBEN2	**Beniarda presa**	**4.87**	**292**		**Pn**	**00 14 02.5**	**+2.6**
EBEN2					**Sn**	**00 14 54.9**	**-0.9**
ETRV	**Los Montesinos**	**5.15**	**283**	P	**Pn**	**00 14 05.3**	**+1.5**
	36nm,0.1s,SNR=7.9						
ETRV				S	**Sn**	**00 15 01.3**	**-1.4**
	5.8nm,0.3s,SNR=7.9						
ETRV	**Los Montesinos**	**5.15**	**283**		**Pn**	**00 14 05.3**	**+1.5**
ETRV					**Sn**	**00 15 02.0**	**-0.7**
CART	**Cartagena**	**5.29**	**278**	P	**Pn**	**00 14 07.0**	**+1.4**
CART				S	**Sn**	**00 15 05.4**	**-0.7**
CART	**Cartagena**	**5.29**	**278**	*e*P	**Pn**	**00 14 07.0**	**+1.4**
CART				*e*S	**Sn**	**00 15 05.4**	**-0.7**
CART	**Cartagena**	**5.29**	**278**	Pn	**Pn**	**00 14 07.0**	**+1.4**
CART				Sn	**Sn**	**00 15 05.1**	**-1.0**
CFON	**Fontmartina**	**5.34**	**334**	P	**Pn**	**00 14 08.0**	**+1.6**
	15nm,0.1s,SNR=49						
CFON				S	**Sn**	**00 15 04.6**	**-2.8**
	32nm,0.3s,SNR=7.2						
CFON	**Fontmartina**	**5.34**	**334**		**Pn**	**00 14 08.1**	**+1.6**
CFON					**Sn**	**00 15 06.6**	**-0.9**
EMUR	**La Murta**	**5.50**	**281**	P	**Pn**	**00 14 10.0**	**+1.4**
	23nm,0.3s,SNR=22						
EMUR				S	**Sn**	**00 15 10.3**	**-1.1**
	12nm,0.5s,SNR=7.9						
EMUR	**La Murta**	**5.50**	**281**		**Pn**	**00 14 10.0**	**+1.4**
EMUR					**Sn**	**00 15 10.3**	**-1.1**
EPOB	**Poblet**	**5.57**	**322**	P	**Pn**	**00 14 11.8**	**+2.1**
	9.0nm,0.1s,SNR=42						
EPOB				S	**Sn**	**00 15 10.6**	**-2.7**
	3.2nm,0.5s,SNR=7.9						
EPOB	**Poblet**	**5.57**	**322**		**Pn**	**00 14 11.8**	**+2.1**
EPOB					**Sn**	**00 15 10.6**	**-2.7**
ERTA	**Horta de San J**	**5.68**	**316**	P	**Pn**	**00 14 13.5**	**+2.4**
	2.5nm,0.1s,SNR=8.3						
ERTA				S	**Sn**	**00 15 14.4**	**-1.4**
	8.1nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**5.68**	**316**		**Pn**	**00 14 14.5**	**+3.4**
ERTA					**Sn**	**00 15 15.4**	**-0.5**
EMOS	**Mosqueruela**	**5.80**	**307**	P	**Pn**	**00 14 16.3**	**+3.4**
	19nm,0.2s,SNR=35						
EMOS				S	**Sn**	**00 15 17.7**	**-1.4**
	2.8nm,0.1s,SNR=7.9						
EJON	**La Jonquera**	**5.82**	**340**	P	**Pn**	**00 14 14.0**	**+1.1**
	9.1nm,0.1s,SNR=55						
EJON				S	**Sn**	**00 15 17.7**	**-1.4**
	8.6nm,0.2s,SNR=7.9						
EMIR	**Miracle**	**5.82**	**329**	P	**Pn**	**00 14 16.5**	**+3.5**
	30nm,0.2s,SNR=106						
EMIR				S	**Sn**	**00 15 19.0**	**-0.3**
	31nm,0.3s,SNR=6.7						
SJAF	**Saint Jean de**	**5.85**	**340**	P	**Pn**	**00 14 14.5**	**+1.1**
	3.3nm,0.1s,SNR=7.9						
SJAF				S	**Sn**	**00 15 18.8**	**-1.2**
	5.9nm,0.2s,SNR=7.9						
SJAF	**Saint Jean de**	**5.85**	**340**		**Pn**	**00 14 15.2**	**+1.8**
ETOB	**Tobarra**	**5.88**	**288**	P	**Pn**	**00 14 17.0**	**+3.1**
	6.2nm,0.2s,SNR=15						
ETOB				S	**Sn**	**00 15 20.3**	**-0.6**
	12nm,0.4s,SNR=7.9						
CLTB	**Caltabellotta**	**6.11**	**82**	Pn	**Pn**	**00 14 17.8**	**+0.8**
PGF	**Pioggiola**	**6.12**	**24**	*e*Pn	**Pn**	**00 14 17.7**	**+0.5**
PGF	**Pioggiola**	**6.12**	**24**	*e*P	Pn	00 14 22.6	+5.4
PGF				*e*Sn	**Sn**	**00 15 24.0**	**-2.8**
	26nm,0.2s						
PGF	**Pioggiola**	**6.12**	**24**	Pn	**Pn**	**00 14 17.7**	**+0.5**
PGF				Sn	**Sn**	**00 15 24.0**	**-2.8**
	13nm,0.2s						
CLLI	**Llivia**	**6.13**	**334**	P	**Pn**	**00 14 20.2**	**+2.9**
	11nm,0.2s,SNR=102						
CLLI				S	**Sn**	**00 15 26.0**	**-1.0**
	6.5nm,0.2s,SNR=7.9						
CORL	**Corleone**	**6.20**	**80**	Pn	**Pn**	**00 14 19.1**	**+0.8**
ENIJ	**Nijar**	**6.24**	**272**	P	**Pn**	**00 14 18.8**	**0.0**
	5.7nm,0.2s,SNR=7.9						
ENIJ				S	**Sn**	**00 15 25.9**	**-3.7**
	6.1nm,0.3s,SNR=7.9						
ENIJ	**Nijar**	**6.24**	**272**		**Pn**	**00 14 19.2**	**+0.4**
LMR	**La Mourre**	**6.36**	**6**	*e*Pn	**Pn**	**00 14 20.9**	**+0.6**
LMR				*e*Sn	**Sn**	**00 15 29.0**	**-3.4**
	22nm,0.2s						
LMR	**La Mourre**	**6.36**	**6**	Pn	**Pn**	**00 14 20.9**	**+0.6**

LMR				Sn	Sn	00 15 29.0	-3.4
	11nm,0.2s						
CSOR	Sort	6.36	329	P	Pn	00 14 24.4	+3.9
	12nm,0.2s,SNR=107						
CSOR				S	Sn	00 15 32.7	-0.1
	14nm,0.4s,SNR=7.9						
SESP	Santiago Espad	6.56	282	P	Pn	00 14 26.0	+2.7
SESP				S	Sn	00 15 39.0	+1.4
FRF	La Foret Royal	6.59	7	*e*Pn	Pn	00 14 24.3	+0.7
FRF				*e*Sn	Sn	00 15 34.9	-3.3
	18nm,0.2s						
FRF	La Foret Royal	6.59	7	Pn	Pn	00 14 24.3	+0.7
FRF				Sn	Sn	00 15 34.9	-3.3
	8.8nm,0.2s						
ESAC	San Caprasio	6.64	317	⇑P	Pn	00 14 27.9	+3.5
	59nm,0.3s,SNR=18						
ESAC				S	Sn	00 15 38.4	-1.2
	51nm,0.4s,SNR=7.9						
EBER	Berja	6.79	272	P	Pn	00 14 26.7	+0.2
	6.5nm,0.2s,SNR=13						
EBER				S	Sn	00 15 41.6	-1.8
	3.8nm,0.4s,SNR=7.9						
MTLF	Montolieu	6.83	339	*e*Pn	Pn	00 14 28.0	+1.2
MTLF	Montolieu	6.83	339	*e*P	Pn	00 14 33.7	+6.9
MTLF				*e*Sn	Sn	00 15 41.3	-2.8
	12nm,0.3s						
MTLF	Montolieu	6.83	339	Pn	Pn	00 14 28.0	+1.2
MTLF				Sn	Sn	00 15 41.3	-2.8
	6.0nm,0.3s						
GORA	Gorafe	6.90	276	P	Pn	00 14 29.9	+2.0
	2.9nm,0.1s,SNR=7.9						
GORA				S	Sn	00 15 48.4	+2.4
	19nm,0.3s,SNR=7.9						
GORA	Gorafe	6.90	276		Pn	00 14 30.9	+3.0
EQES	Quesada	6.94	279	P	Pn	00 14 32.0	+3.6
	12nm,0.3s,SNR=31						
EQES				S	Sn	00 15 45.6	-1.3
	0.2nm,0.4s,SNR=7.9						
SMRF	Simiane la Rot	6.96	360	*e*Pn	Pn	00 14 30.7	+2.1
SMRF	Simiane la Rot	6.96	360	*e*P	Pn	00 14 35.2	+6.6
SMRF				*e*Sn	Sn	00 15 45.5	-1.8
	6.3nm,0.3s						
SMRF	Simiane la Rot	6.96	360	Pn	Pn	00 14 30.7	+2.1
SMRF				Sn	Sn	00 15 45.5	-1.8
	6.3nm,0.3s						
SBF	Sospel	6.99	11	*e*Pn	Pn	00 14 29.7	+0.7
SBF				*e*Sn	Sn	00 15 44.1	-4.0
	36nm,0.3s						
SBF	Sospel	6.99	11	Pn	Pn	00 14 29.7	+0.7
SBF				Sn	Sn	00 15 44.1	-4.0
	18nm,0.3s						
ECHI	Chisagues Biel	7.01	325	P	Pn	00 14 33.1	+3.7
	5.1nm,0.2s,SNR=7.9						
ECHI				S	Sn	00 15 47.8	-0.8
	2.5nm,0.2s,SNR=7.9						
CASP	Castiglione de	7.05	33	Pn	Pn	00 14 30.7	+0.8
CASP				Sn	Sn	00 15 49.7	+0.1
ETOR	Torete	7.07	305	P	Pn	00 14 33.5	+3.3
	19nm,0.2s,SNR=14						
ETOR				S	Sn	00 15 50.4	+0.3
	2.0nm,0.2s,SNR=7.9						
JBK	JBK	7.16	251	P	Pn	00 14 33.0	+1.5
JBK				S	Sn	00 15 48.8	-3.6
LASF	Ste Croix	7.18	350	*e*Pn	Pn	00 14 32.3	+0.7
LASF				*e*Sn	Sn	00 15 50.5	-2.2
	19nm,0.4s						
LASF	Ste Croix	7.18	350	Pn	Pn	00 14 32.3	+0.7
LASF				Sn	Sn	00 15 50.5	-2.2
	9.5nm,0.4s						
EPF	Esparros	7.24	328	*e*Pn	Pn	00 14 36.5	+4.1
EPF	Esparros	7.24	328	*e*P	Pn	00 14 39.6	+7.2
EPF				*e*Sn	Sn	00 15 53.7	-0.5
	29nm,0.4s						
EPF	Esparros	7.24	328	Pn	Pn	00 14 36.5	+4.1
EPF				Sn	Sn	00 15 53.7	-0.5
	14nm,0.4s						
LATE	Laterza	7.36	39	Pn	Pn	00 14 35.9	+1.8
FIGM	Figuig	7.46	231	P	Pn	00 14 35.5	0.0
FIGM				S	Sn	00 15 57.7	-2.1
ETSF	Etsaut	7.54	323	*e*Pn	Pn	00 14 40.5	+3.9
ETSF				*e*Sn	Sn	00 16 01.1	-0.6
	20nm,0.4s						
ETSF	Etsaut	7.54	323	Pn	Pn	00 14 40.5	+3.9
ETSF				Sn	Sn	00 16 01.1	-0.6
	9.9nm,0.4s						
ATE	Arette	7.75	323	⇓P	Pn	00 14 43.7	+4.3
	7.3nm,0.2s,SNR=18						
ATE				S	Sn	00 16 05.2	-1.5
	7.2nm,0.2s,SNR=7.9						
MBDF	Montbardon	7.76	6	*e*Pn	Pn	00 14 41.5	+1.8
MBDF				*e*Sn	Sn	00 16 03.6	-3.6
	5.3nm,0.3s						
MBDF	Montbardon	7.76	6	Pn	Pn	00 14 41.5	+1.8
MBDF				Sn	Sn	00 16 03.6	-3.6
	2.7nm,0.3s						
OSSC	Osservatorio P	7.81	32	Pn	Pn	00 14 42.4	+2.2
VIVF	Saint-Julien-l	7.87	355	*e*Pn	Pn	00 14 41.2	+0.1
VIVF				*e*Sn	Sn	00 16 06.1	-3.6
	17nm,0.3s						
VIVF	Saint-Julien-l	7.87	355	Pn	Pn	00 14 41.2	+0.1
VIVF				Sn	Sn	00 16 06.1	-3.6
	8.5nm,0.3s						
MSSA	Maissana	7.88	21	Pn	Pn	00 14 43.4	+2.0
ORIF	Oris-en-Rattie	7.90	2	*e*Pn	Pn	00 14 44.0	+2.4
ORIF				*e*Sn	Sn	00 16 06.5	-4.1
	6.3nm,0.4s						
ORIF	Oris-en-Rattie	7.90	2	Pn	Pn	00 14 44.0	+2.4
ORIF				Sn	Sn	00 16 06.5	-4.1
	3.2nm,0.4s						
EORO	Oroz-Betelu	7.91	320	P	Pn	00 14 45.6	+4.0
	9.6nm,0.2s,SNR=27						
EORO				S	Sn	00 16 08.7	-2.1
	0.1nm,0.3s,SNR=7.9						
ESDC	Sonseca Array	7.96	292	P	Pn	00 14 45.2	+2.8
	0.5nm,0.1s,baz=104,slow=14,SNR=11						
ESDC	Sonseca Array	7.96	292		Pn	00 14 45.2	+2.8
VLC	Villacollemand	8.02	26	Pn	Pn	00 14 46.4	+3.2
SJPF	Ste Jean	8.03	322	*e*Pn	Pn	00 14 47.0	+3.8
SJPF				*e*Sn	Sn	00 16 10.8	-2.7
	19nm,0.5s						
SJPF	Ste Jean	8.03	322	Pn	Pn	00 14 47.0	+3.8
SJPF				Sn	Sn	00 16 10.8	-2.7
	9.4nm,0.5s						
BNI	Bardonecchia	8.07	6	Pn	Pn	00 14 46.4	+2.3
BNI				Sn	Sn	00 16 15.3	+0.4
EADA	Adamuz	8.15	281	P	Pn	00 14 46.7	+1.7
	0.4nm,0.1s,SNR=7.9						
EADA				S	Sn	00 16 14.6	-2.2
	0.0nm,0.4s,SNR=7.9						
NRCA	Norcia	8.20	43	Pn	Pn	00 14 49.6	+3.9
PAB	San Pablo	8.21	291	P	Pn	00 14 47.9	+2.0
	1.2nm,0.2s,SNR=7.9						
PAB	San Pablo	8.21	291		Pn	00 14 47.9	+2.0
EALK	Alkurruntz	8.24	321	P	Pn	00 14 50.2	+3.9
	12nm,0.2s,SNR=7.9						
EALK				S	Sn	00 16 17.1	-1.9
	43nm,0.3s,SNR=7.9						
SSB	Saint Sauveur	8.30	355	Pn	Pn	00 14 48.1	+1.1
EMIJ	Mijas	8.33	270	P	Pn	00 14 46.8	-0.6
	6.1nm,0.3s,SNR=7.9						
EMIJ				S	Sn	00 16 17.9	-3.1
	3.3nm,0.4s,SNR=7.9						
EMIJ	Mijas	8.33	270		Pn	00 14 46.8	-0.6
CAF	Calviac	8.34	342	*e*Pn	Pn	00 14 49.5	+1.9
CAF	Calviac	8.34	342	*e*P	Pn	00 14 54.7	+7.1
CAF				*e*Sn	Sn	00 16 17.4	-4.0
	5.4nm,0.4s						
CAF	Calviac	8.34	342	Pn	Pn	00 14 49.5	+1.9
CAF				Sn	Sn	00 16 17.4	-4.0
	2.7nm,0.4s						
LPG	La Plagne	8.52	6	*e*Pn	Pn	00 14 52.8	+2.5
LPG	La Plagne	8.52	6	*e*P	Pn	00 14 57.2	+6.9
LPG				*e*Sn	Sn	00 16 21.3	-4.9
	3.9nm,0.4s						
LPG	La Plagne	8.52	6	Pn	Pn	00 14 52.8	+2.5
LPG				Sn	Sn	00 16 21.3	-4.9
	1.9nm,0.4s						
LPL	La Plagne	8.54	5	*e*Pn	Pn	00 14 53.3	+2.8
LPL	La Plagne	8.54	5	*e*P	Pn	00 14 57.3	+6.8
LPL				*e*Sn	Sn	00 16 21.8	-4.7
	8.2nm,0.5s						
LPL	La Plagne	8.54	5	Pn	Pn	00 14 53.3	+2.8
LPL				Sn	Sn	00 16 21.8	-4.7
	4.1nm,0.5s						
LFF	La Frestale	8.73	337	*e*Pn	Pn	00 14 55.6	+2.8
LFF	La Frestale	8.73	337	*e*P	Pn	00 14 59.9	+7.1
LFF				*e*Sn	Sn	00 16 27.3	-3.4
	9.0nm,0.4s						
LFF	La Frestale	8.73	337	Pn	Pn	00 14 55.6	+2.8
LFF				Sn	Sn	00 16 27.3	-3.4
	4.5nm,0.4s						
ECAB	El Cabril	8.81	280	P	Pn	00 14 55.6	+1.6
	1.5nm,0.2s,SNR=12						
ECAB				S	Sn	00 16 29.2	-3.6
	0.1nm,0.1s,SNR=7.9						
RJF	Les Rejaudoux	8.84	341	*e*Pn	Pn	00 14 57.0	+2.7
RJF	Les Rejaudoux	8.84	341	*e*P	Pn	00 15 00.7	+6.4
RJF				*e*Sn	Sn	00 16 31.2	-2.2
	5.8nm,0.3s						
RJF	Les Rejaudoux	8.84	341	Pn	Pn	00 14 57.0	+2.7
RJF				Sn	Sn	00 16 31.2	-2.2
	2.9nm,0.3s						
ELAN	Lanestosa	9.29	315	P	Pn	00 15 04.1	+3.5
	5.2nm,0.4s,SNR=7.9						
ELAN				S	Sn	00 16 41.9	-2.7
	0.1nm,0.4s,SNR=7.9						
MDT	Midelt	9.36	246	Pn	Pn	00 15 01.9	+0.2
	0.2nm,0.3s,baz=55,slow=15,SNR=8.2						
MDT				Sn	Sn	00 16 44.2	-2.4
	0.2nm,0.3s,baz=284,slow=17,SNR=1.5						
SENIN	Lac Senin/Sane	9.43	7	Pn	Pn	00 15 05.4	+2.7
CABF	La Chapelle	9.60	2	*e*Pn	Pn	00 15 06.0	+1.1
CABF				*e*Sn	Sn	00 16 46.2	-6.1
	1.3nm,0.4s						
CABF	La Chapelle	9.60	2	Pn	Pn	00 15 06.0	+1.1
CABF				Sn	Sn	00 16 46.2	-6.1
	0.6nm,0.4s						
TCF	Toulx Ste Croi	9.61	346	*e*Pn	Pn	00 15 06.2	+1.3
TCF	Toulx Ste Croi	9.61	346	*e*P	Pn	00 15 12.1	+7.2
TCF				*e*Sn	Sn	00 16 48.0	-4.4
	0.9nm,0.2s						
TCF	Toulx Ste Croi	9.61	346	Pn	Pn	00 15 06.2	+1.3
TCF				Sn	Sn	00 16 48.0	-4.4
	0.4nm,0.2s						
SMF	Signal de Mont	9.71	353	*e*Pn	Pn	00 15 08.1	+1.7
SMF	Signal de Mont	9.71	353	*e*P	Pn	00 15 13.4	+7.0
SMF				*e*Sn	Sn	00 16 51.2	-3.8
	1.9nm,0.3s						
SMF	Signal de Mont	9.71	353	Pn	Pn	00 15 08.1	+1.7
SMF				Sn	Sn	00 16 51.2	-3.8
	0.9nm,0.3s						
BGF	Bois d'Agland	9.76	349	*e*Pn	Pn	00 15 08.2	+1.3
BGF	Bois d'Agland	9.76	349	*e*P	Pn	00 15 14.1	+7.2
BGF				*e*Sn	Sn	00 16 52.1	-3.9
	5.5nm,0.4s						
BGF	Bois d'Agland	9.76	349	Pn	Pn	00 15 08.2	+1.3
BGF				Sn	Sn	00 16 52.1	-3.9
	2.8nm,0.4s						
EMIN	Mina Concepcio	9.79	278	P	Pn	00 15 09.2	+1.8
	0.4nm,0.1s,SNR=7.9						
AVF	Avril sur Loir	9.91	351	*e*Pn	Pn	00 15 10.0	+0.9
AVF	Avril sur Loir	9.91	351	*e*P	Pn	00 15 16.0	+6.9
AVF				*e*Sn	Sn	00 16 57.0	-2.8
	0.8nm,0.3s						
AVF	Avril sur Loir	9.91	351	Pn	Pn	00 15 10.0	+0.9
AVF				Sn	Sn	00 16 57.0	-2.8
	0.4nm,0.3s						
SSF	Saint Saulge	10.16	352	*e*Pn	Pn	00 15 13.4	+0.9
SSF				*e*Sn	Sn	00 17 02.9	-3.0
	0.6nm,0.4s						
SSF	Saint Saulge	10.16	352	Pn	Pn	00 15 13.4	+0.9
SSF				Sn	Sn	00 17 02.9	-3.0
	0.3nm,0.4s						
LOR	Lormes	10.33	353	*e*Pn	Pn	00 15 16.1	+1.3
	baz=175						
LOR				*e*Sn	Sn	00 17 06.5	-3.6
	1.2nm,0.4s,baz=176						
LOR	Lormes	10.33	353	Pn	Pn	00 15 16.1	+1.3
LOR				Sn	Sn	00 17 06.5	-3.6
	0.6nm,0.4s						
EARI	Arriondas	10.38	311	P	Pn	00 15 19.5	+4.0
	10nm,0.5s,SNR=7.9						
EARI				S	Sn	00 17 08.0	-3.3
	0.2nm,0.3s,SNR=7.9						
EARI	Arriondas	10.38	311		Pn	00 15 19.6	+4.0
MFF	Saint Martin d	10.49	338	*e*Pn	Pn	00 15 19.7	+2.7
MFF				*e*Sn	Sn	00 17 08.8	-5.2
	3.5nm,0.5s						
MFF	Saint Martin d	10.49	338	Pn	Pn	00 15 19.7	+2.7
MFF				Sn	Sn	00 17 08.8	-5.2
	1.8nm,0.5s						
ECAL	Calabor	10.72	301	P	Pn	00 15 24.2	+4.0
	8.3nm,0.2s,SNR=7.9						
ECAL	Calabor	10.72	301		Pn	00 15 24.2	+4.0
HINF	Hinteralfeld	10.84	5	*e*Pn	Pn	00 15 22.1	+0.3
HINF				*e*Sn	Sn	00 17 16.6	-6.0
	2.6nm,0.4s						
HINF	Hinteralfeld	10.84	5	Pn	Pn	00 15 22.1	+0.3
HINF				Sn	Sn	00 17 16.6	-6.0
	1.3nm,0.4s						
HAU	Haudompre	11.00	3	*e*Pn	Pn	00 15 24.9	+0.9
HAU				*e*Sn	Sn	00 17 21.0	-5.6
	2.8nm,0.3s						
HAU	Haudompre	11.00	3	Pn	Pn	00 15 24.9	+0.9
HAU				Sn	Sn	00 17 21.0	-5.6
	1.4nm,0.3s						
SFTF	Sexfontaines	11.20	358	*e*Pn	Pn	00 15 27.4	+0.8
SFTF				*e*Sn	Sn	00 17 25.1	-6.2
	2.5nm,0.5s						
SFTF	Sexfontaines	11.20	358	Pn	Pn	00 15 27.4	+0.8
SFTF				Sn	Sn	00 17 25.1	-6.2
	2.5nm,0.5s						
ECH	Echery	11.26	5	Pn	Pn	00 15 28.6	+1.1
CDF	Champ du Feu	11.46	6	*e*Pn	Pn	00 15 30.5	+0.1
CDF				*e*Sn	Sn	00 17 31.2	-6.7
	0.8nm,0.3s						
CDF	Champ du Feu	11.46	6	Pn	Pn	00 15 30.5	+0.1
CDF				Sn	Sn	00 17 31.2	-6.7
	0.4nm,0.3s						
MEZF	Maizieres J'vi	11.49	358	*e*Pn	Pn	00 15 32.0	+1.3
MEZF	Maizieres J'vi	11.49	358	Pn	Pn	00 15 32.0	+1.3
PAGF	Fort de Pagny	11.54	0	*e*Pn	Pn	00 15 32.4	+1.1
	baz=182						
PAGF				*e*Sn	Sn	00 17 33.2	-6.5
	5.1nm,0.5s						
LDF	La Druitiere	12.31	342	*e*Pn	Pn	00 15 43.8	+2.0
LDF				*e*Sn	Sn	00 17 52.3	-6.1
	2.2nm,0.5s						
GRR	Gorron	12.31	339	*e*Pn	Pn	00 15 43.5	+1.6
GRR				*e*Sn	Sn	00 17 52.5	-6.1
	3.5nm,0.6s						
GRR	Gorron	12.31	339	Pn	Pn	00 15 43.5	+1.6
GRR				Sn	Sn	00 17 52.5	-6.1
	1.8nm,0.6s						
FLN	La Foliniere	12.55	341	*e*Pn	Pn	00 15 46.9	+1.7
	baz=162						
FLN	La Foliniere	12.55	341	Pn	Pn	00 15 46.9	+1.7
QUIF	Quistinic	12.66	332	*e*Pn	Pn	00 15 48.1	+1.5
QUIF				*e*Sn	Sn	00 18 01.0	-6.1
	3.4nm,0.5s						
QUIF	Quistinic	12.66	332	Pn	Pn	00 15 48.1	+1.5
QUIF				Sn	Sn	00 18 01.0	-6.1
	1.7nm,0.5s						
SGMF	Saint Gilles	12.73	335	*e*Pn	Pn	00 15 49.3	+1.8
SGMF				*e*Sn	Sn	00 18 02.8	-5.9
	6.5nm,0.6s						
SGMF	Saint Gilles	12.73	335	Pn	Pn	00 15 49.3	+1.8
SGMF				Sn	Sn	00 18 02.8	-5.9
	3.2nm,0.6s						
ROSF	Rostrenen	13.05	333	*e*Pn	Pn	00 15 53.4	+1.4
ROSF				*e*Sn	Sn	00 18 09.9	-6.7
	1.3nm,0.3s						
ROSF	Rostrenen	13.05	333	Pn	Pn	00 15 53.4	+1.4
ROSF				Sn	Sn	00 18 09.9	-6.7
	0.6nm,0.3s						
BAIF	Baives	13.08	356	*e*Pn	Pn	00 15 52.0	-0.4
BAIF	Baives	13.08	356	Pn	Pn	00 15 52.0	-0.4
GERES	GERESS Array B	13.23	24	Pn	Pn	00 15 57.2	+2.8
	0.1nm,0.3s,baz=205,slow=13,SNR=1.7						
SNF	Seneffe	13.53	356	Pn	Pn	00 16 00.2	+1.8
SNF				PgPg	PbPb	00 17 07.6	+25
MEM	Membach	13.60	1	Pn	Pn	00 16 01.2	+1.8
SANT	Santorini	15.96	86	Pn	Pn	00 16 31.1	0.0
AKASG	Malin Array Be	21.73	44	P	P	00 17 38.9	+1.2
	1.6nm,0.7s,baz=241,slow=9.9,SNR=2.6						
BRTR	Keskin Array B	22.12	74	P	P	00 17 43.1	+0.9
	0.3nm,0.6s,baz=284,slow=5.8,SNR=2.2						
HFS	Hagfors	23.72	10	P	P	00 17 59.7	+1.4
	0.9nm,0.6s,baz=201,slow=12,SNR=1.9						
TOA0	Torodi Ar. Sit	24.02	189	P	P	00 18 01.1	-0.4
TOA0				IAmb	IAmb	00 18 13.6	
	comp=Z,6.6nm,1.4s						
TORD	Torodi Ar. Bea	24.02	189	P	P	00 18 00.5	-1.0
	comp=Z,1.1nm,0.6s,baz=359,slow=10.0,SNR=14						
TORD				PcP	PcP	00 21 42.1	-1.0
	comp=Z,0.4nm,1.0s,baz=14,slow=1.8,SNR=1.2						
FINES	FINESS Array B	27.63	21	P	P	00 18 37.3	+3.5
	comp=Z,1.3nm,0.8s,baz=230,slow=14,SNR=2.5						
FINES	FINESS Array B	27.63	21	P	P	00 18 36.2	+2.5
OBN	Obninsk	27.76	39	LR	LR	00 29 21.3	
	comp=Z,21nm,19.3s,baz=182,slow=36						
GAR	Garm	50.06	67	P	P	00 21 42.0	+0.6
GAR				IAmb	IAmb	00 21 56.1	
	comp=Z,4.9nm,1.3s						
ZALV	Zalesovo Beam	55.12	45	P	P	00 22 19.9	+1.5
	comp=Z,0.6nm,0.6s,baz=317,slow=6.1,SNR=2.4						
MK31	Makanchi Array	55.80	54	P	P	00 22 24.9	+1.3
MKAR	Makanchi Array	55.80	54	P	P	00 22 24.7	+1.2
	comp=Z,0.7nm,0.4s,baz=291,slow=6.2,SNR=22						
MKAR	Makanchi Array	55.80	54	P	P	00 22 24.9	+1.3
WMQ	Urumqi	60.45	56	*e*P	P	00 22 59.6	+3.4
WMQ				pP	pP	00 23 01.8	+0.6
YKA	Yellowknife Ar	69.88	335	P	P	00 23 58.8	+1.9
	comp=Z,0.2nm,0.4s,baz=50,slow=6.3,SNR=7.9						
GTA	Gaotai	70.53	55	*e*P	P	00 24 04.9	+3.4
GTA				pP	pwP	00 24 09.4	-0.4
GTA				sP	sP	00 24 12.0	+3.6
LZH	Lanzhou	75.02	56	*e*P	P	00 24 29.3	+1.0
LZH				pP	pP	00 24 33.3	-0.1
LZH				sP	pwP	00 24 36.8	+0.2
LZH				PP	PP	00 27 09.6	-6.2
HHC	Hu-ho-hao-te	77.09	48	*e*P	P	00 24 40.5	+0.6
YHL	Hebgen Lake	80.51	320	P	P	00 24 58.5	-0.4
PDAR	Pinedale Array	81.08	318	P	P	00 25 03.4	+1.5
	comp=Z,0.3nm,0.6s,baz=66,slow=9.0,SNR=3.2						

SJA ***25*** *00:15:08.8±0.6, 19°.87S×71°.02W, h3^{km}±7^{km}, ML5.2, MW4.9*

IDC ***25*** *00:15:10.9±0.4, 19°.66S×70°.58W, h0^{km}, mb4.9/29, mb1 4.9/33, mb1mx4.9/37, mbtmp4.9/33, ML4.0/4, MS4.8/26, Ms1 4.8/26, ms1mx4.7/30, Error ellipse: s-maj=15.1km s-min=8.9km az=69.0*

NEIC ***25*** *00:15:12.7±2.5, 19°.79S±0°.02×70°.83W±0°.06, h15^{km}±3^{km}, mb5.3/347, Mww5.2, ML5.2(GUC), Error ellipse: s-maj=8.1km s-min=1.8km az=101.0*

MOS ***25*** *00:15:13.5±1.4, 19°.61S×70°.57W, h26^{km}, mb5.4/22, Error ellipse: s-maj=12.7km s-min=7.0km az=104.8*

VAO ***25*** *00:15:13.7±0.9, 19°.67S×70°.54W, h14^{km}±5^{km}, mb5.2*

GUC ***25*** *00:15:14.2±0.7, 19°.78S×70°.82W, h41^{km}±2^{km}, ML5.2*

BJI ***25*** *00:15:15.0±0.0, 19°.80S×70°.80W, h22^{km}, mB5.3/26, Ms5.3/29, Ms7 5.2/31*

NEIC ***25*** *00:15:16, 19°.74S×71°.01W, h22^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.69; M$_{\theta\theta}$-0.37; M$_{\phi\phi}$-4.32; M$_{r\theta}$3.48; M$_{\theta\phi}$1.90; M$_{\phi r}$-5.09; Fault plane solution: M$_0$7.87000×10^{16} NP1:ϕ_s148.00000°, δ71.00000°, λ83.00000°. NP2:ϕ_s349.00000°, δ20.00000°, λ109.00000°. Principal axes: T 7.7525, Plg63.0000°, Azm47.0000°; N 0.2383, Plg7.0000°, Azm150.0000°; P -7.9908, Plg26.0000°, Azm244.0000°;*

GCMT ***25*** *00:15:16.7±0.2, 19°.83S±0°.01×71°.01W±0°.01, h24^{km}, MW5.3/122, Moment Tensor Solution. s89,c134; s122,c202; Duration: 1s.1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.78±.02; M$_{\theta\theta}$-0.04±.01; M$_{\phi\phi}$-0.74±.02; M$_{r\theta}$0.27±.02; M$_{\theta\phi}$0.34±.01; M$_{\phi r}$-0.68±.03; Best double couple: M$_0$1.10600×10^{17} NP1:ϕ_s338.00000°, δ24.00000°, λ90.00000°. NP2:ϕ_s158.00000°, δ66.00000°, λ90.00000°. Principal axes: T 1.0550, Plg69.0000°, Azm68.0000°; N 0.1020, Plg0.0000°, Azm158.0000°; P -1.1560, Plg21.0000°, Azm248.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 00:15:14.2±0.8**, 19°.75S**±0°.02×**70°.81W**±0°.04**, h25**^{km}±4^{km}**, n908, σ1s.31**/796**, mb5.3**/192**, MS5.0**/34**, 14C-16D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.66	77	⇓*i*P	Pb	00 15 27.0	-0.2
PSGC				*i* S	Sb	00 15 36.7	+0.6
PSGCX	Pisagua	0.66	77		Pb	00 15 27.0	-0.2
TA01	Diego Aracena	1.00	144	⇓*i*P	Pn	00 15 32.0	-0.7
TA01				*i* S	Sn	00 15 45.8	-0.2
TA01				IAML		00 15 47.8	
	comp=E,112µm,0.6s						
PB11	IPOC Station P	1.08	91	⇓*i*P	Pn	00 15 33.9	0.0
PB11				*i* S	Sn	00 15 48.8	+0.5
PB11				IAML		00 15 53.5	
	comp=N,52µm,0.3s						
PB11	IPOC Station P	1.08	91		Pn	00 15 33.9	0.0
PB11					Sn	00 15 49.4	+1.2
PB11	IPOC Station P	1.08	91	*e*P	Pb	00 15 34.0	-0.3
PB11				⇓*e*S	Sn	00 15 49.0	+0.8
PB11				IAML		00 15 54.3	
	comp=Z,65µm,1.1s						
PB12	IPOC Station P	1.22	22	⇑*i*P	Pn	00 15 36.1	+0.4
PB12				*i* S	Sb	00 15 52.3	+0.4
PB12				IAML		00 16 00.5	
	comp=N,31µm,0.5s						
PB12				IAML		00 16 02.5	
	comp=E,29µm,0.5s						
PB12	IPOC Station P	1.22	22		Pn	00 15 36.2	+0.4
PB12					Sb	00 15 53.2	+1.2
PB12	IPOC Station P	1.22	22	*e*P	Pb	00 15 36.3	-0.4
PB12				⇓*e*S	Sb	00 15 52.4	+0.4
PB12				IAML		00 16 00.8	
	comp=Z,24µm,1.0s						
PATCX	Punta Patache	1.23	150	⇑*i*P	Pn	00 15 35.4	-0.4
PATCX				*i* S	Sn	00 15 51.1	-0.5
PATCX				IAML		00 15 57.2	
	comp=E,84µm,0.4s						
PATCX	Punta Patache	1.23	150		Pn	00 15 35.5	-0.4
PATCX					Sn	00 15 51.4	-0.2
AP01	Chacalluta	1.44	18	⇑*i*P	Pn	00 15 39.2	+0.5
AP01				*i* S	Sb	00 15 58.5	+0.1
AP01				IAML		00 16 10.3	
	comp=E,122µm,0.6s						
GO01	Chusmiza	1.52	87	⇓*i*P	Pb	00 15 41.3	-0.7
GO01	Chusmiza	1.52	87	Pn	Pb	00 15 41.5	-0.5
PB08	IPOC Station P	1.60	104	⇑*i*P	Pb	00 15 42.2	-1.1
PB08				*i* S	Sb	00 16 03.7	+0.4
PB08				IAML		00 16 05.3	
	comp=N,27µm,0.4s						
PB08	IPOC Station P	1.60	104	*e*P	Pb	00 15 42.4	-0.9
PB08				⇓*e*S	Sb	00 16 03.6	+0.3
PB08				IAML		00 16 10.0	
	comp=Z,36µm,0.7s						
PB02	IPOC Station P	1.78	152	⇑*i*P	Pn	00 15 43.3	-0.1
PB02				*i* S	Sn	00 16 04.5	-0.8
PB02				IAML		00 16 15.5	
	comp=E,182µm,0.6s						
PB02	IPOC Station P	1.78	152	*e*P	Pn	00 15 43.4	0.0
PB02				*e*S	Sb	00 16 08.3	+0.2
PB01	IPOC Station P	1.78	136	⇑*i*P	Pn	00 15 43.9	+0.4
PB01				*i* S	Sn	00 16 06.2	+0.7
PB01				IAML		00 16 07.7	
	comp=N,28µm,0.7s						
PB01	IPOC Station P	1.78	136	Pn	Pn	00 15 44.1	+0.6
PB01	IPOC Station P	1.78	136	*e*P	Pn	00 15 44.2	+0.7
PB01				*e*S	Sn	00 16 06.0	+0.5
PB01				IAML		00 16 17.9	
	comp=Z,39µm,0.8s						
PB16	IPOC Station P	1.87	41	⇑*i*P	Pn	00 15 46.5	+1.4
PB16				*i* S	Sb	00 16 12.4	+1.2
PB16				IAML		00 16 19.8	
	comp=E,27µm,0.6s						
PB16	IPOC Station P	1.87	41		Pn	00 15 46.6	+1.4
PB07	IPOC Station P	2.15	157	⇑*i*P	Pn	00 15 48.0	-0.6
PB07				IAML		00 16 24.6	
	comp=E,32µm,0.6s						
PB07	IPOC Station P	2.15	157		Pn	00 15 48.0	-0.6
PB07	IPOC Station P	2.15	157	*e*P	Pn	00 15 48.2	-0.4
PB07				⇓*e*S	Sb	00 16 20.2	+1.4
PB03	IPOC Station P	2.49	157	⇑*i*P	Pn	00 15 52.8	-0.5
PB03				IAML		00 16 38.4	
	comp=N,13µm,0.7s						
PB03	IPOC Station P	2.49	157	*e*P	Pn	00 15 53.0	-0.3
PB03				⇓*e*S	Sb	00 16 30.0	+1.4
PB03				IAML		00 16 33.9	

	comp=Z,19µm,1.1s						
PB09	IPOC Station P	2.50	145	⇑iP	Pn	00 15 54.4	+0.9
PB09				i S	Sn	00 16 24.7	+1.3
PB09				IAML		00 16 36.1	
	comp=E,34µm,0.7s						
PB09	IPOC Station P	2.50	145		Pn	00 15 54.6	+1.1
PB09	IPOC Station P	2.50	145	eP	Pn	00 15 54.7	+1.2
PB04	IPOC Station P	2.64	167		Pn	00 15 54.4	-1.0
PB04	IPOC Station P	2.64	167	eP	Pn	00 15 54.3	-1.0
PB04				eS	Sb	00 16 36.8	+3.8
PB05	IPOC Station P	3.14	170	eP	Pn	00 16 01.0	-1.2
PB05				⇓eS	Sb	00 16 52.4	+5.2
PB05				IAML		00 17 04.0	
	comp=Z,11µm,0.8s						
PB06	IPOC Station P	3.16	159	eP	Pn	00 16 02.0	-0.4
PB06				⇓eS	Sb	00 16 52.0	+4.2
LVC	Limon Verde	3.35	148	Pn	Pn	00 16 06.4	+1.1
	comp=Z,77nm,0.3s,baz=317,slow=8.4,SNR=132						
LVC				Sn	Sn	00 16 45.2	+0.8
	comp=Z,357nm,0.3s,baz=95,slow=23,SNR=9.2						
LVC				LR	LR	00 16 49.3	
	comp=Z,1µm,20.4s,baz=326,slow=30						
LVC				Lg	Lg	00 16 56.3	
	comp=Z,915nm,0.3s,baz=53,slow=19,SNR=9.7						
LVC	Limon Verde	3.35	148	eP	Pn	00 16 06.6	+1.3
LVC				eS	Sn	00 16 45.3	+0.8
PB15	IPOC Station P	3.66	160	⇑iP	Pn	00 16 08.3	-1.1
PB15				i S	Sn	00 16 51.8	0.0
PB15	IPOC Station P	3.66	160		Pn	00 16 08.4	-1.1
PB15	IPOC Station P	3.66	160	eP	Pn	00 16 08.3	-1.1
PB10	IPOC Station P	3.75	176		Pn	00 16 08.1	-2.4
PB10	IPOC Station P	3.75	176	eP	Pn	00 16 08.2	-2.2
PB10				IAML		00 17 27.5	
	comp=Z,3µm,0.8s						
I08BO	LAS PENAS INFR	4.17	33	Pn	Pn	00 16 19.4	+2.7
	baz=218,slow=23,SNR=1.6						
I08BO				i		00 30 20.0	
	baz=205,slow=331,SNR=3.2						
LPAZ	La Paz	4.28	37	Pn	Pn	00 16 22.6	+4.2
	comp=Z,7.9nm,0.3s,baz=228,slow=5.2,SNR=83						
LPAZ				Lg	Lg	00 17 28.6	
	comp=Z,31nm,0.3s,baz=94,slow=19,SNR=1.4						
LPAZ	La Paz	4.28	37	P	Pn	00 16 22.7	+4.3
LPAZ	La Paz	4.28	37		Pn	00 16 22.7	+4.3
PB14	IPOC Station P	4.87	176		Pn	00 16 24.1	-2.0
PB14					Sn	00 17 17.6	-4.2
PB14	IPOC Station P	4.87	176	eP	Pn	00 16 23.0	-3.1
PB14				IAML		00 17 48.5	
	comp=Z,3µm,0.8s						
YJA	Yavi	5.50	117	eP	Pn	00 16 40.9	+5.9
YJA				IAML		00 18 13.8	
	comp=Z,328nm,1.6s						
LCO	Las Campanas	9.22	179	P	Pn	00 17 24.9	-0.9
LCO	Las Campanas	9.22	179	Pn	Pn	00 17 24.9	-0.9
NNA	Nana	9.66	322	Pn	Pn	00 17 33.1	+1.4
	comp=Z,2.0nm,0.3s,baz=233,slow=15,SNR=2.8						
NNA				Sn	Sn	00 19 13.6	-6.0
	comp=Z,5.4nm,0.3s,baz=192,slow=14,SNR=1.8						
NNA				LR	LR	00 21 19.3	
	comp=Z,2µm,18.7s,baz=162,slow=38						
NNA	Nana	9.66	322	P	Pn	00 17 36.3	+4.6
NNA				pmax	pmax		
	comp=Z,80nm,0.9s						
NNA	Nana	9.66	322		Pn	00 17 32.0	+0.3
SIV	San Ignacio	9.99	70	Pn	Pn	00 17 35.3	-1.0
	comp=Z,19nm,0.3s,baz=266,slow=10,SNR=113						
SIV				Sn	Sn	00 19 30.9	+3.2
	comp=Z,2.3nm,0.3s,baz=309,slow=15,SNR=1.5						
SIV				LR	LR	00 21 55.8	
	comp=Z,9µm,21.7s,baz=274,slow=42						
SAML	Samuel	13.03	36	P	Pn	00 18 15.6	-2.2
SAML	Samuel	13.03	36		Pn	00 18 15.6	-2.2
ROC1	El Roble	13.17	181		Pn	00 18 18.9	-1.0
PEL	Peldehue	13.34	180	P	Pn	00 18 23.2	+1.2
PEL	Peldehue	13.34	180		Pn	00 18 23.2	+1.2
CPUP	Villa Florida	14.02	120	Pn	Pn	00 18 29.4	-1.9
	comp=Z,0.2nm,0.3s,baz=300,slow=12,SNR=16						
CPUP				LR	LR	00 24 56.5	
	comp=Z,4µm,18.6s,baz=300,slow=42						
CPUP	Villa Florida	14.02	120	P	Pn	00 18 30.5	-0.8
CPUP	Villa Florida	14.02	120		Pn	00 18 30.5	-0.8
ATAH	Atahualpa	14.54	329	Pn	Pn	00 18 38.5	-0.5
	comp=Z,0.1nm,0.3s,baz=105,slow=15,SNR=1.8						
SALV	Santo Antonio	14.89	77	eP	Pn	00 18 41.0	-2.2
GO05	Huala	15.23	184		Pn	00 18 45.8	-1.9
GO05				IAmb	IAmb	00 19 14.1	
	comp=Z,156nm,1.2s						
CLDB	Colider	16.94	61	eP	Pn	00 19 08.9	-0.9
PTGB	Pitanga	18.03	109	eP	Pn	00 19 21.1	-2.2
PCMB	Pacaembu	18.38	99	eP	P	00 19 25.3	-2.1
ARAG	Araguaiana, MT	18.53	80	eP	P	00 19 27.1	-1.9
ITAB	Concordia	18.66	117	eP	P	00 19 29.6	-0.8
LPA	La Plata	18.91	146	eP	P	00 19 19.0	-14
LPA				PPP	PPP	00 19 56.1	
LPA				S	Sn	00 23 01.8	-3.0
LPA				SS	SnSn	00 23 16.6	-2.4
LPA				SSS	SSS	00 23 32.3	
LPA				SCS	ScS	00 31 18.0	+3.7
PLTB	Pedras Altas	19.54	131	eP	P	00 19 38.8	-1.2
GO06	Curarrehue	19.77	182	P	P	00 19 42.0	-0.5
PLCA	Paso Flores	20.91	179	P	P	00 19 55.9	+0.9
	comp=Z,23nm,0.8s,baz=157,slow=12,SNR=33						
PLCA				LR	LR	00 28 21.6	
	comp=Z,2µm,18.2s,baz=138,slow=38						
PLCA	Paso Flores	20.91	179	P	Pn	00 19 56.2	-1.3
PLCA				pmax	pmax		
	comp=Z,309nm,1.6s						
PLCA	Paso Flores	20.91	179		Pn	00 19 56.1	-1.4
PLCA				IAmb	IAmb	00 20 08.0	
	comp=Z,309nm,1.6s						
PLCA	Paso Flores	20.91	179	eP	P	00 19 55.8	+0.9
IPMB	Ipameri, GO	21.45	89	eP	P	00 19 58.2	-2.6
PTGA	Pitinga	21.68	31	P	P	00 20 01.8	-1.5
	comp=Z,70nm,0.3s,baz=216,slow=14,SNR=197						
PTGA				LR	LR	00 29 02.8	
	comp=Z,5µm,18.5s,baz=208,slow=39						
PTGA	Pitinga	21.68	31	P	P	00 20 01.1	-2.2
PTGA				IAmb	IAmb	00 20 02.5	
	comp=Z,149nm,1.1s						
PTGA	Pitinga	21.68	31	eP	P	00 20 01.8	-1.5
PTGA				eS	S	00 24 01.3	-0.9
FLOC	Florencia	21.73	347	eP	P	00 20 01.7	-2.1
FLOC	Florencia	21.73	347	P	P	00 20 04.6	+0.8
GCUF	Volcan Galeras	21.81	342	eP	P	00 20 09.4	+4.2
RCLB	Rio Claro- Sao	21.87	101	eP	P	00 20 04.1	-1.3
CRUC	La Cruz	22.03	343	eP	P	00 20 11.6	+4.2
SPB	Sao Paulo	22.05	104	P	P	00 20 06.2	-1.0
SPB	Sao Paulo	22.05	104	eP	P	00 20 06.0	-1.2
BDFB	Brasilia	22.09	83	P	P	00 20 04.4	-3.3
	comp=Z,16nm,0.5s,baz=253,slow=8.6,SNR=28						
BDFB				LR	LR	00 29 39.9	
	comp=Z,5µm,19.5s,baz=268,slow=40						
BDFB	Brasilia	22.09	83	P	P	00 20 05.1	-2.7
BDFB				pmax	pmax		
	comp=Z,158nm,1.5s						
BDFB	Brasilia	22.09	83	P	P	00 20 05.1	-2.7
BDFB				IAmb	IAmb	00 20 36.0	
	comp=Z,158nm,1.5s						
GARC	Garzon, Huila	22.28	348	eP	P	00 20 07.7	-2.3
VAO	Valinhos	22.43	103	eP	P	00 20 08.0	-3.4
VAO				eS	S	00 24 14.4	-2.1
SOTA	Rioblanco	22.48	345	eP	P	00 20 14.6	+2.2
PCON	Cinco Dias	22.62	345	eP	P	00 20 16.4	+2.5
POPC	Popayan, Colom	22.89	345	eP	P	00 20 18.0	+1.6
GO07	Milladeo Hill,	23.42	185	P	P	00 20 19.9	-1.4
GO07				IAmb	IAmb	00 20 56.1	
	comp=Z,139nm,1.2s						
PARB	Paraibuna	23.68	103	eP	P	00 20 21.9	-2.3
PTGC	Puerto Gaitan,	23.84	357	eP	P	00 20 23.8	-1.8
VILC	Villavicencio,	23.88	353	eP	P	00 20 24.1	-2.1
ORTC	Ortega, Tolima	23.91	349	eP	P	00 20 26.1	-0.2
YOTC	Yotoco, Valle	24.21	346	eP	P	00 20 29.4	+0.3
CHIC	Chingaza	24.40	353	eP	P	00 20 30.1	-1.1
BSCB	Bom Sucesso	24.43	97	eP	P	00 20 29.6	-1.5
BSCB				eS	S	00 24 49.7	-0.1
ANIL	Santa Ana	24.51	349	eP	P	00 20 31.0	-1.1
ROSC	El Rosal	24.68	352	P	P	00 20 35.1	+1.3
	comp=Z,44nm,0.5s,baz=130,slow=14,SNR=17						
ROSC				LR	LR	00 31 04.0	
	comp=Z,3µm,18.5s,baz=202,slow=39						
ROSC	El Rosal	24.68	352	eP	P	00 20 33.1	-0.7
RREF	El Recreo	24.90	349	eP	P	00 20 38.2	+2.2
SMTB	Santa Maria do	24.93	68	eP	P	00 20 34.3	-1.3
PLMC	San Jos del P	25.09	347	eP	P	00 20 38.2	+1.1
GUY2C	Guyana, Caldas	25.22	349	eP	P	00 20 38.7	0.0
SPBC	San Pablo de B	25.45	352	eP	P	00 20 39.9	-0.4
NORC	Norcasia	25.47	351	eP	P	00 20 40.5	0.0
RUSC	La Rusia	25.58	355	eP	P	00 20 41.7	-0.3
RUSC	La Rusia	25.58	355	P	P	00 20 42.7	+0.7
JANB	Januaria	25.69	84	eP	P	00 20 40.5	-2.1
CBOC	Ciudad Bolivar	25.97	348	eP	P	00 20 45.2	+0.1
TAMC	Tame, Arauca	26.04	358	eP	P	00 20 45.1	-0.6
HELC	Santa Helena	26.20	349	eP	P	00 20 46.5	-1.0
BARC	Barichara	26.28	355	eP	P	00 20 46.9	-1.2
PTBC	PUERTO BERRIO,	26.37	352	eP	P	00 20 46.9	-1.8
PAMC	Pamplona, Colo	26.98	356	eP	P	00 20 53.9	-0.8
ZARC	Zaragoza, Cauc	27.36	351	eP	P	00 20 56.7	-0.9
UREC	San Jos de Ur	27.72	350	eP	P	00 21 00.1	-0.7
OCAC	Ocana	27.92	355	eP	P	00 21 03.1	+0.4
SDV	Santo Domingo	28.46	0	P	P	00 21 06.4	-1.1
	comp=Z,16nm,0.8s,baz=190,slow=9.5,SNR=12						
SDV				LR	LR	00 33 32.9	
	comp=Z,2µm,18.6s,baz=210,slow=39						
SDV	Santo Domingo	28.46	0	eP	P	00 21 07.0	-0.5
SDV	Santo Domingo	28.46	0	P	P	00 21 05.7	-1.9
SDV				IAmb	IAmb	00 21 18.6	
	comp=Z,42nm,1.0s						
SDV	Santo Domingo	28.46	0	eP	P	00 21 06.8	-0.8
SMLC	San Martn de	28.55	353	eP	P	00 21 05.7	-2.5
BAUV	El Baul	28.64	6	eP	P	00 21 08.3	-0.7
BAUV	El Baul	28.64	6	e		00 26 04.3	
BAUV	El Baul	28.64	6	P	P	00 21 08.3	-0.7
ARGC	Ariguani, Magd	29.62	353	eP	P	00 21 16.6	-1.0
SJCC	San Jacinto, C	29.77	351	eP	P	00 21 18.6	-0.5
PLCV	Puerto La Cruz	30.35	12	P	P	00 21 25.0	+0.9
PCRV	Puerto La Cruz	30.35	12	P	P	00 21 25.0	+0.9
	comp=Z,17nm,0.8s,baz=335,slow=3.7,SNR=3.4						
MDP	Montagnes des	30.48	38	P	P	00 21 24.6	-0.7
	comp=Z,12nm,0.5s,baz=209,slow=8.1,SNR=20						
MDP				LR	LR	00 34 24.4	
	comp=Z,6µm,19.1s,baz=214,slow=38						
GUIV	Guiria	31.37	16	eP	P	00 21 32.3	-0.8
GUIV	Guiria	31.37	16	P	P	00 21 32.3	-0.8
GRGR	Grenville	32.94	17	eP	P	00 21 47.2	+0.3
GRGR	Grenville	32.94	17	P	P	00 21 46.0	-0.9
JTS	Las Juntas de	32.95	334	i P	P	00 21 49.0	+2.0
JTS				pmax	pmax		
	comp=Z,16nm,1.2s						
GCMP	Grenada, Carri	33.34	17	eP	P	00 21 50.2	-0.1
EFI	East Falkland	33.39	166	i P	P	00 21 50.8	+0.3
EFI				pmax	pmax		
	comp=Z,40nm,0.8s						
SLBI	Saint Lucia, B	34.93	17	eP	P	00 22 08.2	+4.0
SLBI	Saint Lucia, B	34.93	17	P	P	00 22 08.2	+4.0
USHA	Ushuaia	35.07	178	P	P	00 22 04.8	-0.2
	comp=Z,12nm,0.9s,baz=336,slow=20,SNR=2.1						
FDF	Fort de France	35.56	16	eP	P	00 22 11.2	+1.5
FDF	Fort de France	35.56	16	P	P	00 22 07.9	-1.7
FDF				pmax	pmax		
	comp=Z,152nm,0.9s						
FDF	Fort de France	35.56	16	P	P	00 22 07.9	-1.7
RPN	Rapa Nui	36.00	251	P	P	00 22 11.8	-1.5
	comp=Z,83nm,0.9s,baz=123,slow=5.2,SNR=3.7						
RPN				LR	LR	00 33 22.3	
	comp=Z,3µm,18.4s,baz=108,slow=30						
DWS	Wesley	36.32	16	eP	P	00 22 12.2	-3.9
DWS	Wesley	36.32	16	P	P	00 22 12.2	-3.9
RCBR	Riachuelo	36.64	73	P	P	00 22 17.6	-1.4
	comp=Z,54nm,0.9s,baz=242,slow=10,SNR=18						
RCBR				LR	LR	00 38 25.8	
	comp=Z,4µm,19.8s,baz=241,slow=38						
RCBR	Riachuelo	36.64	73	P	P	00 22 18.0	-1.0
RCBR				pmax	pmax		
	comp=Z,80nm,1.0s						
RCBR	Riachuelo	36.64	73	P	P	00 22 18.0	-1.0
RCBR				IAmb	IAmb	00 22 19.7	
	comp=Z,80nm,1.0s						
RCBR	Riachuelo	36.64	73	eP	P	00 22 18.2	-0.8
SJG	San Juan	37.91	7	P	P	00 22 27.7	-1.9
	comp=Z,25nm,0.8s,baz=162,slow=5.1,SNR=17						
SJG	San Juan	37.91	7	P	P	00 22 27.6	-1.9
SJG				pmax	pmax		
	comp=Z,97nm,1.0s						
SJG	San Juan	37.91	7	P	P	00 22 27.6	-1.9
SMRT	St. Maarten	38.33	12	eP	P	00 22 26.1	-7.0
SDDR	Presa de Saban	38.50	359	P	P	00 22 33.7	-0.8
SDDR				IAmb	IAmb	00 22 55.0	
	comp=Z,116nm,1.5s						
APG	El Apazote	39.58	329	P	P	00 22 45.0	+1.0
	comp=Z,3.7nm,0.6s,baz=211,slow=5.6,SNR=3.2						
GRTK	Grand Turk	41.01	360	IAmb	IAmb	00 23 07.8	
	comp=Z,100nm,0.9s						
TEIG	Tepich	43.26	336	P	P	00 23 14.1	+0.4
	comp=Z,14nm,0.5s,baz=206,slow=0.0,SNR=25						
TEIG	Tepich	43.26	336	P	P	00 23 13.3	-0.4
CMIG	Matias Romero	43.59	326	P	P	00 23 17.8	+1.3
	comp=Z,2.9nm,0.7s,baz=129,slow=3.3,SNR=3.6						
PMSA	Palmer Station	45.22	176	LR	LR	00 41 05.8	
	comp=Z,482nm,18.0s,baz=10,slow=34						
DWPF	Disney Wildern	48.68	347	P	P	00 23 55.5	-0.9
	baz=167						
TIGA	Tifton	52.36	346	P	P	00 24 24.1	0.0
	baz=165						
352A	Blakely	52.71	345	IAmb	IAmb	00 24 41.8	
	comp=Z,79nm,1.3s						
Z59A	Georgetown, SC	53.31	351	P	P	00 24 31.0	-0.2
	baz=170						
NHSC	New Hope	53.32	350	P	P	00 24 30.3	-0.9
	baz=169						
Z58A	St. Stephen	53.48	351	P	P	00 24 31.9	-0.5
	baz=170						
250A	Grady	53.53	344	IAmb	IAmb	00 25 08.0	
	comp=Z,45nm,1.1s						
Z57A	Bowman	53.59	350	P	P	00 24 33.6	+0.4
	baz=168						
Z56A	Williston	53.73	349	P	P	00 24 34.3	0.0
	baz=168						
Y60A	Bolivia	53.92	352	P	P	00 24 35.9	+0.3
	baz=171						
Y59A	Loris	53.99	352	P	P	00 24 36.2	+0.1
	baz=171						
Y58A	Scranton	54.02	351	P	P	00 24 36.6	+0.3
	baz=170						
Y56A	Pelion	54.18	349	P	P	00 24 37.4	-0.1
	baz=168						
GOGA	Godfrey	54.23	347	IAmb	IAmb	00 24 38.7	
	comp=Z,95nm,1.9s						
GOGA	Godfrey	54.23	347	P	P	00 24 37.4	-0.5
	baz=165						
Y57A	Sumter	54.24	350	P	P	00 24 38.1	+0.2
	baz=169						
Y55A	Saluda	54.42	349	P	P	00 24 39.4	+0.2
	baz=167,SNR=6.5						
X60A	Albert Glenn T	54.46	353	P	P	00 24 39.7	+0.2
	baz=172						
X59A	McDuffie Farm,	54.53	352	P	P	00 24 40.3	+0.3
	baz=171,SNR=5.2						
X58A	Rowland	54.61	351	IAmb	IAmb	00 24 41.6	
	comp=Z,26nm,0.7s						
X58A	Rowland	54.61	351	P	P	00 24 40.8	+0.2
	baz=170						
X57A	Johnson Farm,	54.63	351	P	P	00 24 41.2	+0.4
	baz=169						
Z50A	Ashland	54.65	344	IAmb	IAmb	00 24 41.1	
	comp=Z,21nm,0.7s						
Z50A	Ashland	54.65	344	P	P	00 24 40.5	-0.5
	baz=162,SNR=12						
LRAL	Lakeview Retre	54.72	343	IAmb	IAmb	00 24 42.4	
	comp=Z,83nm,2.0s						
LRAL	Lakeview Retre	54.72	343	P	P	00 24 40.7	-0.7
	baz=161						
HODGE	Hodges	54.78	348	IAmb	IAmb	00 24 42.9	
	comp=Z,46nm,1.6s						
Y52A	Lilburn	54.79	346	IAmb	IAmb	00 24 42.6	
	comp=Z,51nm,1.6s						
Y52A	Lilburn	54.79	346	P	P	00 24 41.1	-0.9
	baz=165						
X56A	White Oak	54.81	350	P	P	00 24 42.2	+0.1
	baz=168,SNR=6.2						
BIRD	Birdtown, Kers	54.87	350	IAmb	IAmb	00 24 43.9	
	comp=Z,33nm,0.9s						
342A	Flagon Creek P	54.87	337	IAmb	IAmb	00 24 54.3	
	comp=Z,64nm,1.1s						
W60A	Pink Hill	54.90	353	P	P	00 24 43.1	+0.5
	baz=172						
X55A	Gracelyn & Ava	54.90	349	P	P	00 24 42.9	+0.2
	baz=168,SNR=5.8						
W61A	Ground Anchor	54.94	354	P	P	00 24 43.2	+0.2
	baz=173						
HKT	Hockley	54.98	333	P	P	00 24 44.0	+0.7
HKT				pmax	pmax		
	comp=Z,18nm,1.1s						
HKT	Hockley	54.98	333	P	P	00 24 44.0	+0.7
VBMS	Vicksburg	55.02	340	P	P	00 24 43.2	-0.4
	baz=157						
W58A	Raeford	55.06	352	P	P	00 24 44.3	+0.5
	baz=170,SNR=12						
W59A	Clinton	55.10	352	P	P	00 24 44.4	+0.3
	baz=171						
CNNC	Cliffs of the	55.10	353	P	P	00 24 44.0	-0.1
	baz=172						
X54A	Belton	55.11	348	P	P	00 24 44.3	+0.1
	baz=167,SNR=5.3						
833A	Chaparral WMA,	55.21	329	P	P	00 24 45.6	+0.5
	baz=147						
X53A	Estanollee	55.25	347	P	P	00 24 44.8	-0.4
	baz=166						
PAULI	Pauline	55.27	349	IAmb	IAmb	00 24 46.2	
	comp=Z,21nm,1.0s						
W57A	Gilead	55.30	351	IAmb	IAmb	00 25 02.1	
	comp=Z,50nm,1.2s						
W57A	Gilead	55.30	351	P	P	00 24 45.4	-0.1
	baz=170						
W56A	Indian Trail	55.37	350	P	P	00 24 46.1	0.0
	baz=169,SNR=7.2						
KMSC	Kings Mountain	55.50	350	IAmb	IAmb	00 25 00.4	
	comp=Z,24nm,1.1s						
KMSC	Kings Mountain	55.50	350	P	P	00 24 47.2	+0.2
	baz=168,SNR=5.3						
V60A	Jim Taylor Roa	55.55	354	P	P	00 24 47.5	+0.1
	baz=173						
W54A	Cherokee Point	55.60	349	P	P	00 24 48.1	+0.3
	baz=167,SNR=5.7						
X51A	Calhoun	55.65	346	P	P	00 24 47.8	-0.3
	baz=164						
V59A	Middlesex	55.66	353	P	P	00 24 48.7	+0.5
	baz=172,SNR=7.5						
V58A	Windy Hill, Pi	55.80	352	IAmb	IAmb	00 24 59.4	
	comp=Z,39nm,1.1s						
V58A	Windy Hill, Pi	55.80	352	P	P	00 24 49.4	+0.2
	baz=171,SNR=5.4						
W52A	Murphy	55.95	347	IAmb	IAmb	00 24 51.4	
	comp=Z,64nm,1.6s						
V57A	Coltrane Farms	55.98	351	P	P	00 24 50.6	+0.1
	baz=170						
V56A	Mocksville	56.02	351	P	P	00 24 51.2	+0.5
	baz=169,SNR=10						
U61A	Possum Corner	56.03	355	P	P	00 24 51.3	+0.5
	baz=174						
NATX	Nacogdoches	56.09	335	IAmb	IAmb	00 25 03.1	
	comp=Z,65nm,1.2s						
NATX	Nacogdoches	56.09	335	P	P	00 24 52.5	+1.1
	baz=153						
V55A	Taylorsville	56.17	350	IAmb	IAmb	00 25 06.0	
	comp=Z,34nm,1.1s						
V55A	Taylorsville	56.17	350	P	P	00 24 52.3	+0.4
	baz=168,SNR=6.7						
U59A	Littleton	56.19	353	P	P	00 24 52.2	+0.3
	baz=172,SNR=5.3						
V54A	Nebo	56.23	349	P	P	00 24 52.4	+0.1
	baz=167,SNR=7.1						
Y45A	Yeager Farm, C	56.23	341	IAmb	IAmb	00 25 02.7	
	comp=Z,44nm,1.1s						
U60A	Pendleton	56.24	354	P	P	00 24 52.8	+0.5
	baz=173						
U58A	Oxford	56.32	352	P	P	00 24 53.3	+0.4
	baz=171,SNR=6.5						
W50A	Signal Mountai	56.36	346	IAmb	IAmb	00 25 07.8	
	comp=Z,29nm,1.1s						
CPCT	Cooper Cave	56.42	347	IAmb	IAmb	00 24 54.5	
	comp=Z,42nm,1.4s						
435B	Jarrell	56.46	332	P	P	00 24 54.4	+0.4
	baz=150						
U57A	Blanch	56.46	352	P	P	00 24 53.9	0.0
	baz=170,SNR=7.4						
TKL	Tuckaleechee C	56.46	347	IAmb	IAmb	00 24 54.6	
	comp=Z,35nm,1.1s						
SWET	Sewanee	56.52	345	IAmb	IAmb	00 24 54.3	
	comp=Z,20nm,0.6s						
U56A	King	56.52	351	IAmb	IAmb	00 24 56.3	
	comp=Z,22nm,0.8s						
U56A	King	56.52	351	P	P	00 24 54.8	+0.4
	baz=169						
V52A	Sevierville	56.60	348	IAmb	IAmb	00 24 55.6	
	comp=Z,36nm,0.9s						
V51A	Loudon	56.72	347	IAmb	IAmb	00 24 56.5	
	comp=Z,90nm,1.7s						
Z41A	Richland Creek	56.74	338	P	P	00 24 56.7	+0.8
	baz=155						
237A	Washetta, Mont	56.76	335	IAmb	IAmb	00 25 08.0	
	comp=Z,64nm,1.1s						
T59A	Double "B" Far	56.78	354	IAmb	IAmb	00 25 06.4	
	comp=Z,51nm,1.1s						
T59A	Double "B" Far	56.78	354	P	P	00 24 56.6	+0.5
	baz=172,SNR=6.8						
U55A	TA2, Sparta	56.78	350	P	P	00 24 56.7	+0.4
	baz=168						
OXF	Oxford	56.79	342	P	P	00 24 55.0	-1.3
	baz=159						
T58A	Grand View Acr	56.86	353	P	P	00 24 57.2	+0.4
	baz=171,SNR=11						
T60A	Surry	56.86	354	P	P	00 24 57.1	+0.4
	baz=173						
U54A	Nelsons Funny	56.93	349	IAmb	IAmb	00 24 58.4	
	comp=Z,44nm,1.0s						
U54A	Nelsons Funny	56.93	349	P	P	00 24 57.4	+0.1
	baz=168,SNR=6.5						
T57A	Hurt	57.00	352	IAmb	IAmb	00 24 59.5	
	comp=Z,55nm,1.4s						
T57A	Hurt	57.00	352	P	P	00 24 58.2	+0.4
	baz=170,SNR=6.5						
T56A	Rocky Mt	57.14	351	P	P	00 24 59.3	+0.5
	baz=170						
JCT	Junction City	57.20	330	P	P	00 24 59.4	0.0
	baz=147						
WLAR	White Oak Lake	57.24	338	PP	PP	00 27 03.7	-3.3
X43A	Marvell	57.25	340	P	P	00 24 59.6	0.0
	baz=158						
TZTN	Tazewell	57.27	348	P	P	00 24 59.4	-0.3
	baz=166						
T55A	Pulaski	57.34	351	P	P	00 25 00.9	+0.7
	baz=169,SNR=7.0						
BLA	Blacksburg	57.38	351	IAmb	IAmb	00 26 09.4	
	comp=Z,28nm,1.1s						
BLA	Blacksburg	57.38	351	P	P	00 25 00.8	+0.4
	baz=169						
T54A	Tazewell	57.41	350	P	P	00 25 00.6	-0.1
	baz=168						
S60A	Water View	57.41	354	P	P	00 25 00.8	+0.2
	baz=174						
WHTX	Lake Whitney,	57.44	333	IAmb	IAmb	00 25 12.0	
	comp=Z,34nm,1.1s						
WHTX	Lake Whitney,	57.44	333	P	P	00 25 01.5	+0.5
	baz=150,SNR=6.4						
CLTN	Cedars of Leba	57.45	345	IAmb	IAmb	00 25 01.5	
	comp=Z,21nm,1.0s						
S58A	Poland Farm, P	57.46	353	IAmb	IAmb	00 25 02.8	
	comp=Z,45nm,1.4s						
S58A	Poland Farm, P	57.46	353	P	P	00 25 01.5	+0.5
	baz=172						
T53A	Wise	57.50	349	P	P	00 25 01.1	-0.2
	baz=167						
S59A	Mechanicsville	57.53	354	P	P	00 25 01.8	+0.4
	baz=173						
Z38A	Mt. Pleasant	57.55	336	IAmb	IAmb	00 25 03.3	
	comp=Z,33nm,0.8s						
T52A	Hallie	57.71	348	P	P	00 25 01.9	-0.9
	baz=166						
S56A	Natural Bridge	57.71	352	P	P	00 25 03.2	+0.4
	baz=170						
S57A	Dark Hollow, R	57.72	352	IAmb	IAmb	00 25 04.6	
	comp=Z,86nm,1.6s						
S57A	Dark Hollow, R	57.72	352	P	P	00 25 03.3	+0.5
	baz=171,SNR=7.1						
U49A	Red Boiling Sp	57.72	346	IAmb	IAmb	00 25 04.0	
	comp=Z,18nm,0.7s						
T51A	Gray	57.76	348	P	P	00 25 02.7	-0.4
	baz=165,SNR=5.9						
R58B	Mineral	57.79	353	IAmb	IAmb	00 25 13.9	
	comp=Z,39nm,1.2s						
R58B	Mineral	57.79	353	P	P	00 25 03.9	+0.6
	baz=172,SNR=6.9						
WVT	Waverly	57.87	344	P	P	00 25 02.7	-1.1
WVT				pmax	pmax		
	comp=Z,21nm,0.7s						
WVT	Waverly	57.87	344	P	P	00 25 02.7	-1.1
WVT				IAmb	IAmb	00 25 03.8	

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      comp=Z,21nm,0.7s
WVT   Waverly          57.87 344  P     P     00 25 02.7 -1.1
      baz=161
S55A  Lewisburg        57.94 351  P     P     00 25 05.0 +0.6
      baz=169,SNR=9.7
R59A  King George, V   57.95 354  P     P     00 25 05.0 +0.6
      baz=173
UALR  University of    57.96 339  IAmb  IAmb  00 25 24.4
      comp=Z,28nm,1.1s
CBN   Corbin Frederi   57.98 354  IAmb  IAmb  00 25 14.9
      comp=Z,57nm,1.4s
CBN   Corbin Frederi   57.98 354  P     P     00 25 04.6  0.0
      baz=173
T50A  Nancy            58.00 347  P     P     00 25 04.1 -0.7
      baz=164,SNR=9.6
S54A  Dingess, Beckl   58.09 350  IAmb  IAmb  00 25 15.9
      comp=Z,53nm,1.2s
S54A  Dingess, Beckl   58.09 350  P     P     00 25 05.5  0.0
      baz=168
S53A  Williamson       58.11 349  P     P     00 25 05.2 -0.4
      baz=168
R58A  Rapidan          58.14 353  P     P     00 25 06.3 +0.6
      baz=172,SNR=5.5
MIAR  Mount Ida        58.18 338  IAmb  IAmb  00 25 16.9
      comp=Z,38nm,1.1s
MIAR  Mount Ida        58.18 338  P     P     00 25 06.3 +0.2
      baz=155,SNR=17
TXAR  Lajitas Array    58.19 326  P     P     00 25 07.0 +0.5
      comp=Z,2.2nm,0.6s,baz=151,slow=8.7,SNR=34
TXAR                              LR    LR    00 50 28.9
      comp=Z,269nm,18.2s,baz=0.0,slow=36
R57A  Stanardsville    58.19 353  P     P     00 25 07.0 +0.9
      baz=172,SNR=9.3
T49A  Edmonton         58.23 346  P     P     00 25 06.0 -0.4
      baz=164,SNR=22
S52A  Salyersville     58.28 349  P     P     00 25 06.4 -0.4
      baz=166
W41B  Gary Mavity, V   58.30 339  P     P     00 25 06.7 -0.2
      baz=156,SNR=5.5
S51A  Beattyville      58.34 348  P     P     00 25 06.6 -0.5
      baz=166
R55A  Marlinton        58.38 351  IAmb  IAmb  00 25 31.9
      comp=Z,44nm,1.2s
R55A  Marlinton        58.38 351  P     P     00 25 08.3 +0.7
      baz=170,SNR=6.6
R56A  Bull Pasture M   58.41 352  P     P     00 25 08.4 +0.7
      baz=170
R54A  Victor           58.41 351  P     P     00 25 07.8 +0.1
      baz=169,SNR=5.7
Z35A  Perchaven, San   58.51 334  IAmb  IAmb  00 25 19.7
      comp=Z,56nm,1.1s
S50A  Richmond         58.54 347  P     P     00 25 08.1 -0.4
      baz=165,SNR=7.6
Q59A  Harwood          58.56 355  P     P     00 25 09.3 +0.6
      baz=174
Q60A  Greensboro       58.63 355  P     P     00 25 09.7 +0.5
      baz=174
R53A  Hurricane        58.72 350  P     P     00 25 09.7  0.0
      baz=168
Q58A  Fox Den Farm,    58.74 354  P     P     00 25 10.3 +0.4
      baz=172,SNR=6.4
S49A  Springfield      58.83 347  P     P     00 25 09.7 -0.8
      baz=164,SNR=5.9
R52A  Catlettsburg     58.84 349  P     P     00 25 09.9 -0.7
      baz=167
W39A  Magazine         58.84 338  IAmb  IAmb  00 25 21.4
      comp=Z,42nm,1.2s
W39A  Magazine         58.84 338  P     P     00 25 11.1 +0.4
      baz=155,SNR=12
Q57A  Strasburg        58.91 353  P     P     00 25 12.2 +1.1
      baz=172,SNR=11
ABTX  Abilene, Hawle   58.94 332  P     P     00 25 10.7 -0.8
ABTX                              IAmb  IAmb  00 25 22.4
      comp=Z,29nm,0.9s
ABTX                              PP    PP    00 27 14.1 -8.1
ABTX  Abilene, Hawle   58.94 332  P     P     00 25 11.9 +0.4
      baz=148,SNR=6.1
R51A  Hillsboro        58.98 348  P     P     00 25 11.1 -0.5
      baz=166,SNR=5.6
Q56A  Snyder Ridge,    59.01 352  IAmb  IAmb  00 25 13.5
      comp=Z,33nm,0.8s
Q56A  Snyder Ridge,    59.01 352  P     P     00 25 12.8 +1.0
      baz=171,SNR=5.4
Q55A  Buckhannon       59.08 352  P     P     00 25 13.2 +0.9
      baz=170
R50A  Paris            59.11 348  IAmb  IAmb  00 25 13.2
      comp=Z,44nm,1.4s
R50A  Paris            59.11 348  P     P     00 25 12.0 -0.5
      baz=165
Q53A  Leroy            59.16 350  P     P     00 25 12.9  0.0
      baz=168,SNR=6.3
Q54A  Coxs Mills       59.18 351  IAmb  IAmb  00 25 13.4
      comp=Z,18nm,0.8s
Q54A  Coxs Mills       59.18 351  P     P     00 25 12.8 -0.1
      baz=169,SNR=6.1
PBMO  Poplar Bluff     59.20 342  IAmb  IAmb  00 25 25.8
      comp=Z,20nm,0.8s
P58A  Pank, Wackersv   59.24 354  P     P     00 25 13.8 +0.4
      baz=173
P59A  Jarrettsville    59.28 355  P     P     00 25 13.8 +0.2
      baz=174
R49A  Shelbyville      59.29 347  IAmb  IAmb  00 25 14.0
      comp=Z,57nm,1.6s
P57A  Homestead Farm   59.31 354  IAmb  IAmb  00 25 16.3
      comp=Z,51nm,1.4s
P57A  Homestead Farm   59.31 354  P     P     00 25 14.9 +1.1
      baz=172,SNR=7.6
Q52A  Bidwell          59.38 350  P     P     00 25 14.0 -0.3
      baz=168
P56A  Dayton Farm, R   59.42 353  P     P     00 25 15.7 +1.1
      baz=171,SNR=5.8
P60A  Greenville       59.42 356  P     P     00 25 14.8 +0.2
      baz=175
WCI   Wyandotte Cave   59.48 346  P     P     00 25 14.0 -1.1
WCI                               pmax  pmax
      comp=Z,22nm,1.0s
WCI   Wyandotte Cave   59.48 346  P     P     00 25 14.0 -1.1
WCI                               IAmb  IAmb  00 25 24.6
      comp=Z,22nm,0.9s
WCI   Wyandotte Cave   59.48 346  P     P     00 25 14.3 -0.7
      baz=163
PSUB  Penn St. - Bra   59.53 356  IAmb  IAmb  00 25 25.5
      comp=Z,20nm,1.1s
P55A  Reedsville       59.55 352  P     P     00 25 16.3 +0.8
      baz=170
U40A  Yellville        59.57 339  IAmb  IAmb  00 25 26.0
      comp=Z,17nm,0.9s
U40A  Yellville        59.57 339  P     P     00 25 15.5 -0.2
      baz=156,SNR=12
Q50A  Georgetown       59.58 348  P     P     00 25 15.1 -0.6
      baz=166
O61A  Allentown        59.64 357  P     P     00 25 16.5 +0.4
      baz=176
Q51A  Peebles          59.64 349  IAmb  IAmb  00 25 26.9
      comp=Z,18nm,0.8s
Q51A  Peebles          59.64 349  P     P     00 25 15.8 -0.4
      baz=166
MVL   Millersville     59.66 355  IAmb  IAmb  00 25 29.0
      comp=Z,15nm,0.9s
MCWV  Mont Chateau     59.70 352  IAmb  IAmb  00 25 27.6
      comp=Z,21nm,1.1s
MCWV  Mont Chateau     59.70 352  P     P     00 25 17.1 +0.6
      baz=170
P54A  Burton           59.73 351  P     P     00 25 17.1 +0.3
      baz=170,SNR=12
P53A  Whipple          59.75 351  IAmb  IAmb  00 25 34.6
      comp=Z,36nm,0.9s
P53A  Whipple          59.75 351  P     P     00 25 17.0 +0.1
      baz=168,SNR=6.2
O58A  Lewisberry       59.84 355  P     P     00 25 16.7 -0.8
      baz=173
X34A  Smith Ranch, M   59.85 334  IAmb  IAmb  00 25 28.7
      comp=Z,38nm,1.0s
HHAR  Hobbs            59.87 338  IAmb  IAmb  00 25 38.4
      comp=Z,27nm,1.1s
O60A  Telford          59.91 356  P     P     00 25 18.5 +0.5
      baz=175
Q49A  Aurora           59.92 347  P     P     00 25 17.1 -1.0
      baz=165,SNR=6.2
O59A  Robesonia        59.96 355  P     P     00 25 18.8 +0.5
      baz=174
O57A  Amberson         59.99 354  P     P     00 25 19.4 +0.8
      baz=173,SNR=7.4
P52A  Corning          60.02 350  P     P     00 25 18.3 -0.5
      baz=168
Q48A  North Vernon     60.02 347  P     P     00 25 18.2 -0.6
      baz=164
P51A  Williamsport     60.03 349  IAmb  IAmb  00 25 28.5
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      comp=Z,32nm,1.1s
P51A  Williamsport     60.03 349  P     P     00 25 18.1 -0.7
      baz=167
O56A  Blue Knob Stat   60.15 353  P     P     00 25 20.5 +0.8
      baz=172,SNR=12
O55A  Ligonier         60.17 353  P     P     00 25 20.5 +0.7
      baz=171,SNR=8.7
TUL1  Leonard          60.21 337  IAmb  IAmb  00 25 30.9
      comp=Z,44nm,0.9s
TUL1  Leonard          60.21 337  P     P     00 25 20.3 +0.2
      baz=153,SNR=7.1
N61A  South Mountain   60.28 357  P     P     00 25 20.6 +0.1
      baz=176
P50A  Jamestown        60.29 348  P     P     00 25 19.9 -0.7
      baz=166,SNR=5.9
O54A  Avella           60.29 352  P     P     00 25 20.7 +0.1
      baz=170
WMOK  Wichita Mounta   60.36 334  P     P     00 25 20.6 -0.6
      baz=150
P49A  Miami Univ. Ec   60.39 348  P     P     00 25 20.1 -1.2
      baz=165,SNR=5.3
BLO   Bloomington      60.43 346  P     P     00 25 20.7 -0.9
BLO                               pmax  pmax
      comp=Z,33nm,1.1s
BLO   Bloomington      60.43 346  P     P     00 25 20.7 -0.9
BLO                               IAmb  IAmb  00 25 33.6
      comp=Z,33nm,1.1s
SSPA  Standing Stone   60.44 354  P     P     00 25 21.6 +0.1
SSPA                              IAmb  IAmb  00 25 23.6
      comp=Z,42nm,1.2s
SSPA  Standing Stone   60.44 354  P     P     00 25 22.2 +0.6
      baz=172
O52A  Adamsville       60.44 350  IAmb  IAmb  00 25 21.8
      comp=Z,16nm,0.7s
O52A  Adamsville       60.44 350  P     P     00 25 21.3 -0.3
      baz=168
N60A  Cedar Hill Far   60.44 356  P     P     00 25 21.8 +0.2
      baz=175
N63A  Mattituck        60.45 359  P     P     00 25 22.3 +0.7
      baz=178
P48A  Milroy           60.47 347  IAmb  IAmb  00 25 21.8
      comp=Z,65nm,1.6s
P48A  Milroy           60.47 347  P     P     00 25 20.3 -1.5
      baz=164
O53A  New Philadelph   60.47 351  P     P     00 25 21.5 -0.3
      baz=169
PAL   Palisades        60.51 357  P     P     00 25 20.7 -1.4
      baz=177
N57A  Milroy           60.52 354  P     P     00 25 22.6 +0.4
      baz=173,SNR=6.8
N58A  Sunbury          60.53 355  IAmb  IAmb  00 25 24.1
      comp=Z,41nm,1.2s
N58A  Sunbury          60.53 355  P     P     00 25 23.0 +0.8
      baz=174,SNR=6.1
N59A  State Game Lan   60.53 356  IAmb  IAmb  00 25 25.0
      comp=Z,51nm,1.6s
N59A  State Game Lan   60.53 356  P     P     00 25 22.7 +0.5
      baz=175
O51A  Pataskala        60.60 350  P     P     00 25 22.0 -0.7
      baz=167
CCM   Cathedral Cave   60.63 342  P     P     00 25 22.8 -0.1
CCM                               pmax  pmax
      comp=Z,26nm,1.2s
CCM   Cathedral Cave   60.63 342  P     P     00 25 22.8 -0.1
CCM                               IAmb  IAmb  00 25 32.4
      comp=Z,26nm,1.1s
CCM   Cathedral Cave   60.63 342  P     P     00 25 22.4 -0.5
      baz=158
N55A  Marion Center    60.70 353  P     P     00 25 24.3 +0.9
      baz=171,SNR=25
ACSO  Alum Creek Sta   60.74 349  IAmb  IAmb  00 25 24.3
      comp=Z,48nm,1.1s
ACSO  Alum Creek Sta   60.74 349  P     P     00 25 23.2 -0.5
      baz=167,SNR=8.6
N56A  West Decatur     60.76 353  P     P     00 25 24.5 +0.7
      baz=172,SNR=8.1
O50A  Cable            60.77 349  P     P     00 25 23.3 -0.6
      baz=166,SNR=5.4
M61A  Granite Spring   60.81 357  P     P     00 25 25.0 +0.9
      baz=177
M63A  Gales Ferry      60.85 359  P     P     00 25 24.8 +0.5
      baz=179
M60A  Port Jervis      60.87 357  P     P     00 25 24.8 +0.3
      baz=176
M62A  Hamden           60.91 358  P     P     00 25 25.1 +0.3
      baz=178
O49A  Covington        60.95 348  IAmb  IAmb  00 25 25.4
      comp=Z,46nm,1.4s
O49A  Covington        60.95 348  P     P     00 25 24.3 -0.8
      baz=165
MNTX  Cornudas Mount   60.96 326  P     P     00 25 25.3 -0.1
      baz=142,SNR=20
N53A  Lisbon           60.97 351  IAmb  IAmb  00 25 42.8
      comp=Z,16nm,0.8s
N53A  Lisbon           60.97 351  P     P     00 25 25.3 +0.2
      baz=169,SNR=5.5
M64A  Tiverton         60.99 360  P     P     00 25 25.2 -0.1
      baz=180
N54A  Moraine State    61.00 352  P     P     00 25 26.1 +0.6
      baz=170,SNR=13
P46A  Rosedale         61.02 346  IAmb  IAmb  00 25 34.3
      comp=Z,33nm,1.0s
M58A  Price's Panora   61.04 355  P     P     00 25 26.5 +0.8
      baz=174,SNR=9.3
M57A  Sunshine Farm,   61.06 355  P     P     00 25 26.7 +0.9
      baz=173,SNR=7.1
N52A  McGinn's Farm,   61.10 351  P     P     00 25 25.6 -0.4
      baz=168
M59A  Waymart          61.13 356  P     P     00 25 27.0 +0.7
      baz=175,SNR=6.7
R40A  Maddies Statio   61.15 341  IAmb  IAmb  00 25 45.8
      comp=Z,28nm,1.1s
O48A  Farmland         61.18 347  P     P     00 25 25.7 -1.0
      baz=165,SNR=5.3
KSCT  Kent School, K   61.22 358  IAmb  IAmb  00 25 37.1
      comp=Z,34nm,1.2s
N50A  Nevada           61.30 349  P     P     00 25 26.6 -0.8
      baz=167
L63A  North Scituate   61.31 359  P     P     00 25 27.9 +0.5
      baz=179
M56A  Emporium         61.31 354  P     P     00 25 28.0 +0.5
      baz=172,SNR=14
N51A  Ashland          61.31 350  IAmb  IAmb  00 25 27.9
      comp=Z,49nm,1.4s
N51A  Ashland          61.31 350  P     P     00 25 26.7 -0.8
      baz=168
M55A  Ridgway          61.35 353  P     P     00 25 28.3 +0.5
      baz=172,SNR=17
T35A  Sooner Cattle    61.36 337  IAmb  IAmb  00 25 46.8
      comp=Z,23nm,0.9s
L64A  Middleborough    61.38 360  P     P     00 25 28.7 +0.8
      baz=180
MSTX  Muleshoe         61.50 330  IAmb  IAmb  00 25 40.4
      comp=Z,40nm,1.1s
MSTX  Muleshoe         61.50 330  P     P     00 25 29.1  0.0
      baz=146,SNR=7.3
M54A  Oil Creek Stat   61.50 352  P     P     00 25 29.2 +0.4
      baz=170,SNR=19
L60A  Shokan           61.51 357  P     P     00 25 29.7 +0.9
      baz=176
M53A  WI Miller and    61.56 352  P     P     00 25 29.3 +0.1
      baz=169,SNR=7.3
N49A  Columbus Grove   61.63 349  P     P     00 25 29.1 -0.6
      baz=166,SNR=18
L58A  Harry Jones Me   61.66 356  P     P     00 25 30.8 +0.9
      baz=175,SNR=11
M51A  Elyria           61.68 350  P     P     00 25 29.6 -0.5
      baz=168,SNR=5.0
L61A  Hillsdale 1, H   61.68 358  P     P     00 25 30.4 +0.4
      baz=177
L57A  Andrews Acres    61.69 355  P     P     00 25 30.7 +0.6
      baz=174,SNR=5.1
SFIN  Lafayette        61.72 346  P     P     00 25 28.9 -1.3
      baz=163,SNR=11
N48A  Decatur          61.73 348  P     P     00 25 29.5 -0.9
      baz=165,SNR=6.4
AMTX  Amarillo         61.75 331  P     P     00 25 30.3 -0.4
      baz=147
L59A  Walton           61.75 356  P     P     00 25 31.1 +0.6
      baz=176,SNR=10
M52A  Chesterland      61.76 351  IAmb  IAmb  00 25 31.0
      comp=Z,25nm,0.7s
M52A  Chesterland      61.76 351  P     P     00 25 30.3 -0.2
      baz=169,SNR=5.4
BINY  Binghamton       61.82 356  P     P     00 25 31.5 +0.5
      baz=174,SNR=12
N47A  Urbana           61.89 347  P     P     00 25 30.2 -1.2
      baz=164,SNR=6.8
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L56A  Greenwood        61.89 354  P     P     00 25 32.0 +0.5
      baz=173,SNR=6.7
M50A  Fremont          61.89 350  IAmb  IAmb  00 25 41.8
      comp=Z,24nm,0.9s
M50A  Fremont          61.89 350  P     P     00 25 30.8 -0.6
      baz=167
L61B  Northampton      61.91 358  P     P     00 25 31.7 +0.2
      baz=178
HRV   Adam Dziewonsk   61.95 359  P     P     00 25 31.6 -0.2
HRV                               pmax  pmax
      comp=Z,70nm,1.3s
HRV   Adam Dziewonsk   61.95 359  P     P     00 25 31.6 -0.2
HRV   Adam Dziewonsk   61.95 359  P     P     00 25 32.3 +0.6
      baz=179
L53A  Girard           62.01 352  P     P     00 25 32.3  0.0
      baz=170,SNR=13
L55A  Hinsdale         62.02 354  P     P     00 25 32.7 +0.4
      baz=172,SNR=13
K62A  Royalston        62.12 359  P     P     00 25 33.2 +0.3
      baz=178
M49A  Liberty Center   62.13 349  P     P     00 25 32.3 -0.7
      baz=166,SNR=10
K63A  Dunstable        62.13 359  P     P     00 25 33.4 +0.5
      baz=179
ERPA  Erie             62.14 352  P     P     00 25 33.2 +0.1
      baz=170,SNR=14
K61A  Williamstown     62.15 358  P     P     00 25 33.4 +0.3
      baz=177
L54A  Sinclairville    62.17 353  P     P     00 25 33.9 +0.5
      baz=171,SNR=33
M48A  Edgerton         62.28 348  IAmb  IAmb  00 25 43.1
      comp=Z,40nm,1.1s
M48A  Edgerton         62.28 348  P     P     00 25 33.2 -0.8
      baz=165
VNA3  Neumayer Olymp   62.29 161  P     P     00 25 34.5 +0.6
K59A  Cooperstown      62.33 357  P     P     00 25 34.9 +0.5
      baz=176,SNR=15
M47A  Cromwell         62.34 347  P     P     00 25 33.5 -0.9
      baz=164
K58A  Earlville        62.36 356  P     P     00 25 35.2 +0.6
      baz=175,SNR=9.0
K57A  Scipio Center    62.39 355  P     P     00 25 34.9 +0.2
      baz=174,SNR=5.4
HDIL  Hopedale         62.42 344  P     P     00 25 33.7 -1.3
      baz=160
K56A  Middlesex        62.43 355  P     P     00 25 35.3 +0.3
      baz=173,SNR=5.6
K54A  Basiliko Farm,   62.47 353  P     P     00 25 35.9 +0.6
      baz=172,SNR=12
L50A  Kingsville       62.48 350  P     P     00 25 34.6 -0.7
      baz=167
VNA1  Neumayer--Stat   62.52 161  P     P     00 25 37.0 +1.8
K55A  Perry            62.53 354  P     P     00 25 36.0 +0.3
      baz=172,SNR=6.0
L48A  N Adams          62.67 349  P     P     00 25 35.8 -0.8
      baz=166,SNR=7.1
L62A  Henniker         62.67 359  P     P     00 25 37.0 +0.4
      baz=179
L49A  Milan            62.70 349  P     P     00 25 36.2 -0.6
      baz=166,SNR=6.7
J63A  Strafford        62.72 360  P     P     00 25 37.6 +0.7
      baz=180
J60A  Lant Hill Farm   62.73 358  P     P     00 25 37.8 +0.8
      baz=177
J61A  Chester          62.80 359  P     P     00 25 38.5 +1.0
      baz=178
319A  Douglas          62.83 323  IAmb  IAmb  00 25 55.4
      comp=Z,19nm,0.9s
VNA2  Neumayer--Watz   62.88 161  P     P     00 25 38.8 +1.0
121A  Cookes Peak, D   62.88 325  IAmb  IAmb  00 26 13.0
      comp=Z,25nm,1.2s
121A  Cookes Peak, D   62.88 325  P     P     00 25 40.1 +1.6
      baz=141,SNR=5.4
K52A  Tillsonburg      62.89 352  P     P     00 25 38.0 -0.1
      baz=170,SNR=6.8
J58A  Remsen           62.93 356  P     P     00 25 38.4 +0.1
      baz=175
K51A  Iona Station     62.94 351  P     P     00 25 37.8 -0.6
      baz=169
J56A  Wolcott          62.96 355  P     P     00 25 38.5  0.0
      baz=174
J59A  Piesco           62.99 357  P     P     00 25 39.5 +0.7
      baz=176,SNR=14
J57A  Williamstown     63.03 356  P     P     00 25 39.3 +0.4
      baz=174,SNR=5.4
J55A  Hilton           63.03 354  P     P     00 25 39.2 +0.2
      baz=173
L46A  Eue Claire       63.10 347  P     P     00 25 38.2 -1.2
      baz=164
J54A  Appleton         63.12 354  P     P     00 25 39.2 -0.3
      baz=172
K50A  Casco            63.16 350  P     P     00 25 38.8 -1.1
      baz=168
I58A  Old Forge        63.24 357  P     P     00 25 40.9 +0.4
      baz=176,SNR=9.9
I59A  Olmsteadville    63.30 358  P     P     00 25 41.5 +0.7
      baz=177,SNR=11
K49A  Clarkson         63.31 350  P     P     00 25 40.1 -0.8
      baz=167
J52A  Paris            63.31 352  P     P     00 25 40.8 -0.1
      baz=170,SNR=21
I60A  Shoreham         63.32 358  P     P     00 25 41.8 +0.9
      baz=177,SNR=8.1
KSU1  Kansas State U   63.33 338  P     P     00 25 40.6 -0.6
      baz=153
I64A  Boothbay         63.37   1  P     P     00 25 42.1 +0.9
      baz=181
I61A  Oroboro, Fairl   63.38 359  P     P     00 25 42.6 +1.2
      baz=178,SNR=9.5
K48A  Perry            63.44 349  P     P     00 25 40.9 -0.9
      baz=166,SNR=7.3
K47A  Vermontville     63.48 348  P     P     00 25 41.0 -1.0
      baz=165
NCB   Newcomb          63.49 357  IAmb  IAmb  00 25 43.9
      comp=Z,61nm,1.6s
I63A  Otisfield        63.49   0  IAmb  IAmb  00 25 44.3
      comp=Z,25nm,0.8s
I63A  Otisfield        63.49   0  P     P     00 25 42.0  0.0
      baz=180
R32A  Long Quarter,    63.52 336  IAmb  IAmb  00 25 53.3
      comp=Z,26nm,0.9s
I57A  Carthage         63.53 356  P     P     00 25 42.2 -0.1
      baz=175
L44A  Lake County Fo   63.62 346  P     P     00 25 41.9 -1.0
      baz=162
K46A  Dorr             63.64 348  P     P     00 25 41.5 -1.6
      baz=164
LBNH  Lisbon           63.69 359  P     P     00 25 44.3 +1.0
      baz=179,SNR=5.9
I53A  Kortright Cn E   63.77 353  P     P     00 25 43.5 -0.4
      baz=171
J49A  Marlette         63.81 350  P     P     00 25 43.4 -0.7
      baz=167
J48A  Bridge Port      63.86 349  P     P     00 25 43.5 -1.0
      baz=166
L42A  Oliver, Polo     63.87 344  IAmb  IAmb  00 26 15.6
      comp=Z,21nm,1.1s
H58A  Gabriels         63.93 357  P     P     00 25 45.3 +0.4
      baz=176,SNR=10
I51A  Listowel         63.93 352  P     P     00 25 44.7 -0.3
      baz=169,SNR=11
I55A  Frankford        63.97 355  P     P     00 25 45.3 +0.1
      baz=173,SNR=7.4
H61A  Lyndonville      63.98 359  P     P     00 25 46.5 +1.2
      baz=179,SNR=7.3
J47A  Sunmer           63.99 349  P     P     00 25 44.6 -0.7
      baz=165,SNR=6.6
H62A  Milan            64.01 360  P     P     00 25 46.0 +0.6
      baz=180
H60A  Morristown       64.02 358  P     P     00 25 46.5 +1.0
      baz=178
H57A  Richville        64.04 356  P     P     00 25 46.1 +0.5
      baz=175,SNR=14
ANMO  Albuquerque      64.08 328  eP    P     00 25 47.3 +0.9
ANMO  Albuquerque      64.08 328  P     P     00 25 45.8 -0.6
I52A  Shelburne        64.08 353  P     P     00 25 46.1 +0.2
      baz=170
H64A  Troy             64.09   1  P     P     00 25 47.0 +1.0
      baz=182
H63A  New Sharon       64.10   1  P     P     00 25 47.4 +1.3
      baz=181,SNR=11
H59A  Cadyville        64.14 358  P     P     00 25 47.0 +0.7
      baz=177,SNR=14
LONY  Lake Ozonia      64.15 357  IAmb  IAmb  00 26 20.9
      comp=Z,35nm,0.9s
LONY  Lake Ozonia      64.15 357  P     P     00 25 46.9 +0.6
      baz=176,SNR=5.5
H65A  Eastbrook        64.18   2  P     P     00 25 47.2 +0.7
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	baz=183						
H56A	Elgin	64.22	356	P	P	00 25 47.3	+0.5
	baz=174,SNR=6.6						
H55A	Tweed	64.25	355	P	P	00 25 47.3	+0.2
	baz=173,SNR=5.3						
CBKS	Cedar Bluff	64.26	335	IAmb	IAmb	00 25 58.4	
	comp=Z,43nm,1.1s						
CBKS	Cedar Bluff	64.26	335	P	P	00 25 47.7	+0.4
	baz=150						
H66A	Whiting	64.30	3	P	P	00 25 47.8	+0.5
	baz=184						
I49A	Point Hope	64.33	350	P	P	00 25 46.8	-0.7
	baz=168						
L40A	Anamosa	64.34	343	IAmb	IAmb	00 25 57.5	
	comp=Z,32nm,1.0s						
H53A	Bobcaygeon	64.41	354	P	P	00 25 48.1	+0.1
	baz=172,SNR=13						
SNAA	Sanae	64.50	161	P	P	00 25 49.5	+1.0
SNAA	Sanae	64.50	161	P	P	00 25 49.2	+0.7
	comp=Z,18nm,0.9s,baz=274,slow=6.9,SNR=34						
SNAA	Sanae	64.50	161	⇑iP	P	00 25 49.7	+1.2
SNAA	Sanae	64.50	161	P	P	00 25 49.2	+0.7
SNAA				IAmb	IAmb	00 25 59.9	
	comp=Z,29nm,1.0s						
G60A	Masonville	64.55	359	P	P	00 25 49.8	+0.8
	baz=178,SNR=7.0						
G59A	Clarenceville	64.56	358	P	P	00 25 49.5	+0.6
	baz=178,SNR=5.7						
G63A	Kingsbury	64.56	1	P	P	00 25 49.7	+0.7
	baz=181						
H52A	Wyevale	64.62	353	P	P	00 25 49.2	-0.2
	baz=171,SNR=12						
G57A	Newington	64.65	357	P	P	00 25 50.2	+0.5
	baz=176,SNR=14						
G58A	Ormstown	64.66	357	P	P	00 25 50.1	+0.5
	baz=177,SNR=5.5						
G62A	West of Eustis	64.66	0	P	P	00 25 51.0	+1.3
	baz=180,SNR=24						
I47A	Gladwin	64.69	349	IAmb	IAmb	00 25 59.9	
	comp=Z,25nm,0.8s						
I47A	Gladwin	64.69	349	P	P	00 25 49.7	-0.2
	baz=166						
G65A	Princeton	64.70	3	P	P	00 25 50.5	+0.6
	baz=183						
I48A	Sherman Twp	64.71	350	P	P	00 25 49.5	-0.6
	baz=167,SNR=5.2						
G64A	Maxfield	64.72	2	P	P	00 25 50.8	+0.7
	baz=182,SNR=5.1						
PKME	Peaks-Kenny Pk	64.72	1	P	P	00 25 51.0	+1.0
PKME	Peaks-Kenny Pk	64.72	1	P	P	00 25 50.9	+0.9
	baz=182,SNR=6.2						
G61A	St-Isidore-de-	64.72	359	P	P	00 25 51.5	+1.3
	baz=179,SNR=12						
PLVO	Plevna	64.73	355	IAmb	IAmb	00 25 51.0	
	comp=Z,20nm,0.9s						
SCIA	State Center	64.76	342	P	P	00 25 50.1	-0.3
	baz=157						
I46A	Reed City	64.79	348	P	P	00 25 49.3	-1.2
	baz=165,SNR=6.3						
T25A	Trinidad	64.85	331	P	P	00 25 52.5	+1.1
	baz=145,SNR=6.2						
JFWS	Jewell Farm	64.88	344	IAmb	IAmb	00 26 08.6	
	comp=Z,22nm,0.8s						
JFWS	Jewell Farm	64.88	344	P	P	00 25 50.7	-0.5
	baz=160						
G55A	Calabogie	64.92	355	P	P	00 25 51.6	+0.3
	baz=174,SNR=8.8						
G53A	Haliburton	64.95	354	P	P	00 25 51.9	+0.3
	baz=172,SNR=20						
I45A	Fountain	65.03	348	P	P	00 25 52.5	+0.4
	baz=164						
H48A	Harrisville	65.15	350	P	P	00 25 52.3	-0.6
	baz=167,SNR=5.2						
F63A	Nahmakanta, Br	65.16	1	P	P	00 25 53.2	+0.2
	baz=182						
G54A	Lake Saint Pet	65.17	354	P	P	00 25 53.2	+0.2
	baz=172,SNR=9.7						
H47A	Mio	65.20	349	P	P	00 25 52.5	-0.8
	baz=166						
214A	Organ Pipe Nat	65.29	321	IAmb	IAmb	00 26 12.8	
	comp=Z,26nm,1.4s						
214A	Organ Pipe Nat	65.29	321	P	P	00 25 56.0	+1.9
	baz=136,SNR=7.5						
F64A	Sherman	65.34	2	P	P	00 25 54.7	+0.7
	baz=182,SNR=8.9						
F61A	St Evariste	65.41	360	P	P	00 25 54.9	+0.3
	baz=180,SNR=6.1						
F60A	Warwick	65.42	359	P	P	00 25 54.9	+0.4
	baz=179,SNR=11						
I42A	Draeger Farm,	65.47	346	IAmb	IAmb	00 26 04.7	
	comp=Z,38nm,1.2s						
GLMI	Grayling	65.49	349	P	P	00 25 54.4	-0.7
	baz=166						
H45A	Beulah	65.56	348	P	P	00 25 54.5	-1.0
	baz=164						
F52A	Sundridge	65.69	353	P	P	00 25 56.3	-0.1
	baz=171,SNR=17						
G47A	Hillman	65.70	350	P	P	00 25 55.7	-0.7
	baz=166						
ALGO	Algonquin Park	65.72	354	P	P	00 25 56.5	0.0
	baz=172,SNR=9.7						
E60A	Ste Agathe de	65.81	360	P	P	00 25 57.4	+0.3
	baz=179,SNR=5.8						
E58A	La Victoria	65.85	358	P	P	00 25 57.8	+0.5
	baz=177,SNR=12						
SDCO	Great Sand Dun	65.85	330	IAmb	IAmb	00 26 09.8	
	comp=Z,29nm,1.1s						
SDCO	Great Sand Dun	65.85	330	P	P	00 25 59.0	+1.1
	baz=144,SNR=18						
E61A	Lac Etchemin	65.87	0	P	P	00 25 58.2	+0.7
	baz=180,SNR=7.2						
G45A	Suttons Bay	65.89	349	IAmb	IAmb	00 26 28.7	
	comp=Z,23nm,0.7s						
F51A	Arnstein	65.89	353	P	P	00 25 57.3	-0.4
	baz=171,SNR=11						
E63A	Oxbow	65.89	2	IAmb	IAmb	00 25 59.5	
	comp=Z,37nm,1.0s						
E63A	Oxbow	65.89	2	P	P	00 25 58.4	+0.7
	baz=182,SNR=7.4						
E57A	Chemin Saint G	65.92	357	P	P	00 25 58.1	+0.2
	baz=177,SNR=7.5						
BGNE	Belgrade	65.92	338	P	P	00 25 58.2	+0.1
	baz=152,SNR=5.4						
E59A	St. Maurice	65.94	359	P	P	00 25 58.3	+0.4
	baz=178						
F49A	Sandfield	66.00	351	P	P	00 25 57.4	-1.0
	baz=168,SNR=5.4						
G46A	Petoskey	66.01	349	P	P	00 25 57.4	-1.0
	baz=166,SNR=5.3						
E55A	Montcerf-Lytto	66.06	356	P	P	00 25 58.8	+0.1
	baz=175,SNR=5.8						
E56A	St. Veronique	66.09	357	P	P	00 25 59.3	+0.3
	baz=176,SNR=17						
E52A	Mattawa	66.11	354	P	P	00 25 58.7	-0.3
	baz=172,SNR=6.3						
E53A	Dumoine, Ponti	66.11	355	P	P	00 25 59.1	0.0
	baz=173,SNR=6.8						
E54A	Lac Daplat, Po	66.12	355	P	P	00 25 59.3	+0.1
	baz=173,SNR=9.2						
F48A	Evansville	66.14	351	P	P	00 25 58.8	-0.5
	baz=168						
PQI	Presque Isle	66.16	2	P	P	00 26 00.3	+0.9
X16A	Lo Mia Camp, P	66.30	324	IAmb	IAmb	00 26 17.2	
	comp=Z,43nm,1.8s						
D60A	Saint Jean D'O	66.35	360	P	P	00 26 01.4	+0.8
	baz=180						
E51A	G1948 Merrick	66.44	353	P	P	00 26 01.3	+0.1
	baz=171,SNR=15						
D59A	Saint-Raymond	66.45	359	P	P	00 26 01.6	+0.4
	baz=179						
F45A	CMU Biological	66.48	349	P	P	00 26 00.7	-0.7
	baz=165,SNR=8.3						
D57A	Chemin Vers le	66.51	358	P	P	00 26 02.2	+0.6
	baz=177,SNR=14						
D63A	Stockholm	66.52	2	P	P	00 26 02.5	+0.8
	baz=183,SNR=5.1						
D62A	Allapoint, All	66.54	1	P	P	00 26 02.6	+0.8
	baz=182,SNR=12						
D58A	Chemin du LacG	66.56	358	P	P	00 26 02.7	+0.7
	baz=178,SNR=20						
D56A	ZEC Mazanza, M	66.58	357	P	P	00 26 02.3	+0.2
	baz=176,SNR=10						
D55A	Sainte-Anne-du	66.59	357	P	P	00 26 02.3	+0.1
	baz=175,SNR=15						
D61A	St Aubert, Com	66.64	0	P	P	00 26 03.2	+0.8
	baz=181						
Q24A	Divide	66.68	331	P	P	00 26 03.5	+0.2
	baz=145						
E48A	Lockeyer	66.72	351	P	P	00 26 02.5	-0.5
	baz=168,SNR=7.3						
D54A	Lac Fusel, La	66.80	356	P	P	00 26 03.1	-0.3
	baz=174,SNR=10						
D53A	Lac Vacive, Po	66.81	355	IAmb	IAmb	00 26 04.2	
	comp=Z,21nm,0.8s						
D53A	Lac Vacive, Po	66.81	355	P	P	00 26 03.7	+0.2
	baz=173,SNR=12						
LATQ	La Tuque	66.84	359	IAmb	IAmb	00 26 05.3	
	comp=Z,74nm,1.9s						
LATQ	La Tuque	66.84	359	P	P	00 26 04.4	+0.6
	baz=178,SNR=6.3						
BATG	Bathurst New B	66.85	4	IAmb	IAmb	00 26 05.0	
	comp=Z,23nm,0.7s						
E47A	Iron Bridge	66.85	351	P	P	00 26 03.2	-0.6
	baz=167,SNR=6.9						
MVCO	Mesa Verde	66.88	328	IAmb	IAmb	00 27 09.8	
	comp=Z,24nm,1.3s						
MVCO	Mesa Verde	66.88	328	P	P	00 26 05.7	+1.2
	baz=141,SNR=5.3						
E46A	Sault Ste Mari	66.93	350	IAmb	IAmb	00 26 13.4	
	comp=Z,30nm,1.1s						
D51A	Lot 18 Range I	66.98	354	P	P	00 26 04.5	0.0
	baz=171,SNR=8.0						
WUAZ	Wupatki	67.08	325	P	P	00 26 07.6	+1.9
	baz=138,SNR=8.0						
D50A	G1974 Best Tow	67.10	353	P	P	00 26 05.4	0.0
	baz=171,SNR=17						
D48A	Paudash Townsh	67.35	352	P	P	00 26 06.2	-0.7
	baz=169,SNR=5.7						
D47A	Chapleau	67.41	351	P	P	00 26 06.5	-0.9
	baz=168,SNR=6.8						
E44A	Grand Marais A	67.46	349	P	P	00 26 07.6	-0.1
	baz=165						
ECSD	EROS Data Cent	67.47	340	IAmb	IAmb	00 26 09.1	
	comp=Z,48nm,1.4s						
ECSD	EROS Data Cent	67.47	340	P	P	00 26 07.7	-0.1
	baz=154,SNR=16						
ISCO	Idaho Springs	67.57	332	P	P	00 26 09.9	+1.0
	baz=144,SNR=9.0						
Y12C	Blythe	67.58	321	P	P	00 26 10.3	+1.6
	baz=135						
PV01	Paradox Valley	67.63	329	IAmb	IAmb	00 26 21.5	
	comp=Z,21nm,1.1s						
TAOE	Nuku Hiva Isla	67.68	268	*e*S	S	00 35 01.6	-4.8
	comp=Z,175nm,23.4s						
TAOE	Nuku Hiva Isla	67.68	268	*e*LR	LR	00 46 35.0	
	comp=Z,416nm,23.5s						
SMCO	Snowmass	67.69	330	IAmb	IAmb	00 26 21.3	
	comp=Z,22nm,1.1s						
SPMN	Marine on St.	67.70	343	P	P	00 26 08.8	-0.4
	baz=158,SNR=5.2						
PV13	Radium Mtn., P	67.77	328	IAmb	IAmb	00 27 16.2	
	comp=Z,18nm,1.2s						
PV05	Paradox Valley	67.85	328	IAmb	IAmb	00 26 22.4	
	comp=Z,19nm,1.1s						
PV07	Paradox Valley	67.91	329	IAmb	IAmb	00 26 33.6	
	comp=Z,21nm,1.3s						
PV17	East Wray Mesa	67.94	328	IAmb	IAmb	00 26 33.5	
	comp=Z,26nm,1.4s						
BC3	Big Chuckawall	68.06	321	P	P	00 26 13.8	+1.9
	baz=135,SNR=5.5						
MONP2	Monument Peak	68.12	320	P	P	00 26 13.9	+1.5
	baz=134						
BAR	Barrett	68.12	319	P	P	00 26 14.0	+1.8
BAR				IAmb	IAmb	00 26 26.0	
	comp=Z,28nm,1.2s						
PV21	Cone Mtn., Par	68.16	329	IAmb	IAmb	00 26 27.4	
	comp=Z,28nm,1.5s						
IRM	Iron Mountain	68.23	321	P	P	00 26 14.8	+1.9
	baz=135,SNR=7.4						
D41A	Chassel	68.40	347	IAmb	IAmb	00 26 24.1	
	comp=Z,34nm,1.0s						
N23A	Red Feather La	68.60	332	P	P	00 26 16.4	+1.0
	baz=144,SNR=7.0						
BELC	Belle Mtn. Jos	68.63	321	P	P	00 26 17.2	+1.8
	baz=134						
XPFO	Pion Flat	68.63	320	P	P	00 26 16.7	+1.2
XPFO				IAmb	IAmb	00 26 29.2	
	comp=Z,25nm,1.6s						
PFO	Pinyon Flats O	68.64	320	*e*P	P	00 26 17.5	+2.0
PFO	Pinyon Flats O	68.64	320	P	P	00 26 16.9	+1.4
PFO				IAmb	IAmb	00 26 29.2	
	comp=Z,25nm,1.6s						
PFO	Pinyon Flats O	68.64	320	P	P	00 26 16.7	+1.2
	baz=134,SNR=5.6						
LSQQ	Lebel-sur-Quev	68.72	356	P	P	00 26 15.6	+0.1
	baz=174						
PHWY	Pilot Hill	68.72	333	IAmb	IAmb	00 26 27.2	
	comp=Z,27nm,1.4s						
GMRC	Granite Mounta	68.97	322	P	P	00 26 19.7	+2.1
	baz=135,SNR=9.3						
O20A	White River Ci	69.04	330	IAmb	IAmb	00 26 42.6	
	comp=Z,23nm,1.2s						
O20A	White River Ci	69.04	330	P	P	00 26 19.2	+1.2
	baz=142						
NVL	N'lazarevskaya	69.09	159	⇓*i*P	P	00 26 17.8	+0.2
NVL				pmax	pmax		
	comp=Z,37nm,1.0s						
HEC	Hector,Ludlow	69.40	321	P	P	00 26 22.3	+2.1
	baz=134,SNR=7.3						
MATQ	Matagami	69.47	355	P	P	00 26 19.7	-0.4
	baz=173,SNR=11						
LIC	Lamto	69.63	75	*e*P	P	00 26 20.5	-1.5
	comp=Z,32nm,1.1s						
DRLN	Deer Lake	69.71	9	P	P	00 26 21.1	-0.5
BFSC	Mount Baldy Ra	69.79	320	P	P	00 26 22.9	+0.3
	baz=133						
TIC	Toumodi	69.81	75	*e*P	P	00 26 21.6	-1.5
EYMN	Ely	69.90	345	P	P	00 26 22.1	-0.7
	baz=159						
SHPR	Sheep Range	69.90	323	IAmb	IAmb	00 26 39.9	
	comp=Z,38nm,1.7s						
KIC	Kosan Boka	69.95	75	*e*P	P	00 26 22.6	-1.3
	comp=Z,52nm,0.8s						
DBIC	Dimbokro	69.97	75	P	P	00 26 22.9	-1.2
	comp=Z,23nm,0.8s,baz=221,slow=5.7,SNR=30						
DBIC				LR	LR	00 55 34.0	
	comp=Z,1μm,20.4s,baz=226,slow=35						
DBIC	Dimbokro	69.97	75	P	P	00 26 23.0	-1.0
DBIC				pmax	pmax		
	comp=Z,38nm,1.0s						
DBIC	Dimbokro	69.97	75	IAmb	IAmb	00 26 23.9	
	comp=Z,38nm,1.1s						
GSC	Goldstone, Bar	70.01	321	P	P	00 26 25.9	+1.9
	baz=134,SNR=9.4						
MWC	Mount Wilson	70.02	320	P	P	00 26 23.3	-0.9
MWC				pmax	pmax		
	comp=Z,28nm,1.3s						
MWC	Mount Wilson	70.02	320	P	P	00 26 23.3	-0.9
MWC				IAmb	IAmb	00 26 39.6	
	comp=Z,28nm,1.2s						
K22A	Casper	70.28	333	IAmb	IAmb	00 26 27.5	
	comp=Z,12nm,0.7s						
K22A	Casper	70.28	333	P	P	00 26 26.5	+1.0
	baz=144,SNR=8.6						
EDW2	Edwards Air Fo	70.43	320	P	P	00 26 28.0	+1.6
	baz=133,SNR=8.4						
QSPA	South Pole Qui	70.43	180	P	P	00 26 27.6	+1.4
	comp=Z,15nm,0.7s,baz=161,slow=1.4,SNR=88						
QSPA	South Pole Qui	70.43	180	P	P	00 26 26.9	+0.7
QSPA				IAmb	IAmb	00 26 38.7	
	comp=Z,48nm,1.1s						
RSSD	Black Hills	70.47	335	P	P	00 26 26.7	0.0
RSSD				pmax	pmax		
	comp=Z,11nm,0.7s						
RSSD	Black Hills	70.47	335	P	P	00 26 26.7	0.0
RSSD	Black Hills	70.47	335	P	P	00 26 27.5	+0.8
	baz=147						
LRMC	Laurel Mtn Rad	70.65	321	P	P	00 26 29.8	+1.9
	baz=133						
TPNV	Topopah Spring	70.83	323	IAmb	IAmb	00 26 48.5	
	comp=Z,17nm,0.9s						
TPNV	Topopah Spring	70.83	323	P	P	00 26 31.4	+2.3
	baz=135,SNR=14						
FURC	Furnace Creek,	70.85	322	P	P	00 26 31.1	+2.3
	baz=134,SNR=5.6						
MPMC	Manual Prospec	70.93	321	P	P	00 26 31.4	+1.7
	baz=134,SNR=9.7						
ISA	Isabella, Lake	71.25	321	IAmb	IAmb	00 26 44.8	
	comp=Z,17nm,0.9s						
ISA	Isabella, Lake	71.25	321	P	P	00 26 33.6	+2.2
	baz=133,SNR=13						
DUG	Dugway, Tooele	71.33	327	P	P	00 26 33.8	+1.9
	baz=138,SNR=17						
AGMN	Agassiz Nation	71.36	343	P	P	00 26 31.2	-0.5
	baz=155,SNR=6.2						
R11A	Troy Canyon, C	71.45	324	P	P	00 26 34.9	+2.1
	baz=136,SNR=14						
CWC	Cottonwood Cre	71.54	321	P	P	00 26 35.1	+1.7
	baz=133						
PKM	Mcpherson Peak	71.54	319	P	P	00 26 35.5	+2.1
	baz=132,SNR=8.3						
PDAR	Pinedale Array	71.72	331	P	P	00 26 34.9	+0.5
	comp=Z,3.0nm,0.7s,baz=131,slow=7.3,SNR=32						
PDAR				LR	LR	00 59 21.9	
	comp=Z,333nm,18.6s,baz=132,slow=37						
PDAR	Pinedale Array	71.72	331	P	P	00 26 33.6	-0.8
BW06	Boulder Array	71.72	331	P	P	00 26 34.9	+0.5
	baz=142,SNR=8.5						
HWUT	Hardware Ranch	71.77	329	IAmb	IAmb	00 26 46.8	
	comp=Z,19nm,0.9s						
SMMC	Simmler	71.94	319	P	P	00 26 37.8	+2.3
	baz=132,SNR=5.3						
TIN	Tinemaha, Big	72.05	322	P	P	00 26 38.0	+1.7
	baz=133						
TBI	Tubuai	72.38	251	*e*S	S	00 35 57.9	-3.1
	comp=Z,735nm,27.0s						
TBI	Tubuai	72.38	251	*e*LR	LR	00 48 48.5	
	comp=Z,2μm,26.8s,baz=106						
AHID	Auburn Hatcher	72.44	330	IAmb	IAmb	00 26 50.3	
	comp=Z,29nm,1.1s						
REDW	Red Top Meadow	72.78	331	IAmb	IAmb	00 26 52.7	
	comp=Z,20nm,1.1s						
ELK	Elko	72.99	326	LR	LR	00 59 36.2	
	comp=Z,427nm,18.3s,baz=120,slow=36						
NVAR	Mina Array Bea	73.03	323	P	P	00 26 44.2	+1.9
	comp=Z,3.9nm,0.8s,baz=151,slow=5.3,SNR=28						
NVAR				LR	LR	00 56 15.9	
	comp=Z,163nm,20.4s,baz=176,slow=34						
NVAR	Mina Array Bea	73.03	323	P	P	00 26 42.5	+0.2
ULM	Lac du Bonnet	73.13	343	P	P	00 26 41.7	-0.6
	comp=Z,3.8nm,0.4s,baz=149,slow=6.7,SNR=11						
ULM				LR	LR	01 00 47.6	
	comp=Z,566nm,21.4s,baz=139,slow=37						
FLWY	Flagg Ranch	73.27	331	IAmb	IAmb	00 26 56.4	
	comp=Z,35nm,0.9s						
RLMT	Red Lodge	73.45	333	IAmb	IAmb	00 26 58.6	
	comp=Z,32nm,1.3s						
RLMT	Red Lodge	73.45	333	P	P	00 26 45.8	+1.2
	baz=142,SNR=22						
H17A	Grant Village	73.46	331	P	P	00 26 46.4	+1.7
	baz=141,SNR=7.5						
LAO	LASA Array	73.46	335	IAmb	IAmb	00 26 55.5	
	comp=Z,35nm,1.1s						
LAO	LASA Array	73.46	335	P	P	00 26 45.5	+1.1
	baz=145						
LKWY	Lake	73.51	332	IAmb	IAmb	00 27 12.1	
	comp=Z,18nm,0.8s						
PPT2	Papeete2	73.99	257	*e*S	SKiKP	00 36 15.0	-0.5
	comp=Z,438nm,24.5s						
PPT2	Papeete2	73.99	257	*e*LR	LR	00 49 32.9	
	comp=Z,1μm,24.5s,baz=109						
PPT	Papeete	73.99	257	LR	LR	00 51 00.7	
	comp=Z,518nm,20.6s,baz=143,slow=29						
DGMT	Dagmar	74.18	338	P	P	00 26 49.6	+1.0
	baz=148,SNR=6.9						
PNTR	Pine Nut	74.22	323	IAmb	IAmb	00 27 19.9	
	comp=Z,29nm,1.3s						
SCHQ	Schefferville	74.36	2	P	P	00 26 49.4	0.0
	comp=Z,12nm,0.9s,baz=192,slow=3.8,SNR=17						
SCHQ				LR	LR	01 01 46.0	
	comp=Z,310nm,19.4s,baz=180,slow=38						
DLMT	Dillon	75.12	331	IAmb	IAmb	00 27 07.1	
	comp=Z,32nm,1.4s						
MFID	Camas Ranch	75.22	328	IAmb	IAmb	00 27 10.1	
	comp=Z,33nm,1.2s						
ORV	Oroville	75.63	322	IAmb	IAmb	00 27 13.4	
	comp=Z,39nm,1.4s						
GDXM	Geysers	75.91	321	P	P	00 26 57.6	-1.2
EGMT	Eagleton	75.95	334	IAmb	IAmb	00 27 00.8	
	comp=Z,22nm,0.9s						
EGMT	Eagleton	75.95	334	P	P	00 26 59.7	+0.9
	baz=142,SNR=8.0						
O02D	Mt. Diablo Mer	76.79	322	P	P	00 27 04.7	+0.9
	baz=130						
MSO	Missoula	76.84	331	P	P	00 27 05.5	+1.6
	baz=139,SNR=8.0						
N02D	Trinity Center	77.25	322	P	P	00 27 07.2	+0.8
	baz=131						
M04C	Macdoel	77.29	323	P	P	00 27 07.6	+0.9
	baz=131						
KMRM	Mail Ridge	77.36	321	IAmb	IAmb	00 27 26.3	
	comp=Z,21nm,1.1s						
M02C	Callahan	77.61	323	P	P	00 27 09.2	+0.8
	baz=131						
F10A	Beach Ranch, E	77.76	329	IAmb	IAmb	00 27 25.3	
	comp=Z,31nm,1.4s						
J05D	Fort Rock, OR	77.96	325	P	P	00 27 12.0	+1.7
	baz=132,SNR=5.9						
VNDA	Vanda	78.25	190	P	P	00 27 13.4	+2.1
	comp=Z,3.7nm,1.1s,baz=164,slow=4.2,SNR=5.6						
VNDA	Vanda	78.25	190	P	P	00 27 13.1	+1.8
VNDA				pmax	pmax		
	comp=Z,16nm,1.3s						
VNDA	Vanda	78.25	190	P	P	00 27 13.1	+1.8
J04D	Umpqua Nationa	78.41	324	P	P	00 27 14.2	+1.3
	baz=132						
TOA0	Torodi Ar. Sit	78.47	71	P	P	00 27 12.4	-1.2
TORD	Torodi Ar. Bea	78.47	71	P	P	00 27 12.5	-1.0
	comp=Z,43nm,0.9s,baz=254,slow=5.1,SNR=167						
TORD				LR	LR	01 01 38.7	
	comp=Z,1μm,18.2s,baz=270,slow=36						
TORD	Torodi Ar. Bea	78.47	71	P	P	00 27 12.6	-1.0
WALA	Waterton Lakes	78.50	333	IAmb	IAmb	00 27 24.5	
	comp=Z,23nm,0.9s						
L02E	Cave Junction	78.53	323	P	P	00 27 15.0	+1.6
	baz=130						
SYO	Syowa Base	78.75	160	⇓*e*P	P	00 27 13.6	-0.6
SYO	Syowa Base	78.75	160	⇑*i*pP	P	00 27 17.0	+2.8
SYO	Syowa Base	78.75	160	⇓*e*sP	sP	00 27 19.2	-5.2
SYO	Syowa Base	78.75	160	⇓*e*PcP	PcP	00 27 22.0	-1.0
FFC	Flin Flon	78.82	342	P	P	00 27 14.5	-0.2
FFC				pmax	pmax		
	comp=Z,13nm,1.4s						
FFC	Flin Flon	78.82	342	P	P	00 27 14.5	-0.2
K02D	Willamette Mer	78.92	323	P	P	00 27 16.3	+0.7
	baz=130						
I04A	Tendick Farm,	78.94	325	P	P	00 27 16.7	+1.1
	baz=131						
NEW	Newport	79.36	331	LR	LR	01 04 17.7	
	comp=Z,196nm,18.2s,baz=127,slow=37						
NEW	Newport	79.36	331	P	P	00 27 19.7	+1.9
	baz=136						
F05D	White Salmon	79.82	327	P	P	00 27 22.1	+1.7
	baz=132						
F04A	Amboy	80.35	326	IAmb	IAmb	00 27 37.8	
	comp=Z,35nm,1.1s						
LTY	Liberty	80.35	328	IAmb	IAmb	00 27 38.0	
	comp=Z,42nm,1.4s						
B08A	Colville Reser	80.46	330	P	P	00 27 23.9	+0.1
SUR	Sutherland	80.99	121	P	P	00 27 28.7	+1.3
	comp=Z,8.7nm,0.8s,baz=259,slow=3.6,SNR=9.5						
B05A	Bryant	81.74	328	P	P	00 27 31.6	+1.1
	baz=132						
D03D	Eldon	81.76	327	P	P	00 27 31.9	+1.3
	baz=131						
MDT	Midelt	82.02	51	P	P	00 27 32.9	+0.5
	comp=Z,12nm,1.0s,baz=284,slow=4.5,SNR=8.8						
MESJ	Messejana	82.06	45	*e*P	P	00 27 32.5	+0.1
	comp=Z,46nm,1.5s						
PCVE	Castro Verde	82.07	45	*e*P	P	00 27 33.7	+1.2
PVAQ	Vaqueiros	82.17	46	*e*P	P	00 27 33.5	+0.5
PVAQ	Vaqueiros	82.17	46	*e*LR	LR	00 54 57.0	
	comp=Z,445nm,18.0s						
TSUM	Tsumeb	82.25	108	P	P	00 27 34.7	+0.6
TSUM				IAmb	IAmb	00 27 35.8	
	comp=Z,34nm,1.2s						
PBEJ	Beja	82.40	45	*e*P	P	00 27 35.1	+0.9
	comp=Z,38nm,1.7s						
PMTG	Montargil	82.72	44	*e*P	P	00 27 36.3	+0.5
	comp=Z,54nm,1.9s						
PCAS	Casmilo, Conde	83.07	43	*e*P	P	00 27 37.7	0.0
LLLB	Lillooet	83.22	330	IAmb	IAmb	00 27 52.9	
	comp=Z,34nm,1.4s						
PMRV	Marv??o	83.45	44	*e*LR	LR	01 01 14.4	
	comp=Z,620nm,20.0s						
MTE	Manteigas	83.87	43	*e*LR	LR	00 59 42.0	
	comp=Z,1μm,18.0s						
PVRL	Vila Real	84.23	42	*e*P	P	00 27 44.2	+0.5
	comp=Z,68nm,1.5s						
PGAV	Gavieira, Arco	84.25	42	*e*LR	LR	01 00 31.7	
	comp=Z,1μm,20.0s						
MVO	Moncorvo	84.61	43	*e*P	P	00 27 45.9	+0.3
	comp=Z,60nm,1.5s						

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MVO   Moncorvo          84.61  43 eLR      LR      00 58 54.2
            comp=Z,932nm,18.0s
PBRG  Braganca          85.13  42 eP       P       00 27 48.6 +0.4
            comp=Z,65nm,1.6s
PAB   San Pablo         85.53  45  P       P       00 27 50.9 +0.6
PAB                                pmax    pmax
            comp=Z,19nm,1.0s
PAB   San Pablo         85.53  45  P       P       00 27 50.9 +0.6
PAB                                IAmb    IAmb    00 27 51.7
            comp=Z,19nm,0.9s
BOSA  Boshof            85.84 119  P       P       00 27 51.8 -0.5
            comp=Z,15nm,1.1s,baz=259,slow=4.6,SNR=9.6
BOSA                               LR      LR      01 03 09.9
            comp=Z,680nm,19.3s,baz=248,slow=34
BOSA  Boshof            85.84 119  P       P       00 27 51.5 -0.8
BOSA                               pmax    pmax
            comp=Z,30nm,1.4s
BOSA  Boshof            85.84 119  P       P       00 27 51.5 -0.8
BOSA                               IAmb    IAmb    00 27 54.6
            comp=Z,30nm,1.4s
MAW   Mawson            86.50 164  P       P       00 27 55.2 +0.7
            comp=Z,22nm,1.2s,baz=241,slow=8.9,SNR=7.1
MAW                                LR      LR      01 07 04.1
            comp=Z,360nm,18.9s,baz=236,slow=36
MAW   Mawson            86.50 164  P       P       00 27 55.6 +1.1
YKA   Yellowknife Ar    88.96 341  P       P       00 28 06.2 +0.1
            comp=Z,19nm,1.0s,baz=136,slow=5.1,SNR=154
YKA                                LR      LR      01 11 29.2
            comp=Z,754nm,19.9s,baz=0.0,slow=38
KEST  Kesra             93.68  53  LR      LR      01 11 14.5
            comp=Z,733nm,20.4s,baz=194,slow=36
EKA   Eskdalemuir Ar    94.07  32  P       P       00 28 28.9 -1.2
            comp=Z,3.2nm,0.9s,baz=225,slow=4.6,SNR=3.7
SUMG  Summit            94.62   9 i P      P       00 28 33.3 +0.5
SUMG  Summit            94.62   9 i P      P       00 28 33.3 +0.5
INK   Inuvik            98.71 340  P       Pdif    00 28 51.1 +0.3
            baz=116,slow=2.5
INK   Inuvik            98.71 340  P       Pdif    00 28 51.1 +0.3
INK                                pmax    pmax
            comp=Z,12nm,1.5s
INK   Inuvik            98.71 340  IAmb    IAmb    00 28 52.2
            comp=Z,12nm,1.5s
GRF   Grafenberg Arr    99.82  41 ePdiff   Pdif    00 28 56.0 -0.3
GRF                               eL       L       01 09 44.3
            comp=Z,351nm,21.9s
MOX   Moxa             100.37  40 eL       L       01 10 23.8
            comp=Z,762nm,21.4s
GERES GERESS Array B   101.11  42  P       Pdif    00 29 01.8 -0.4
            comp=Z,0.9nm,0.8s,baz=222,slow=1.8,SNR=6.2
GERES GERESS Array B   101.11  42  P       Pdif    00 28 59.3 -2.8
GERES GERESS Array B   101.11  42          Pdif    00 28 59.3 -2.8
CLL   Collm            101.41  40 ePdif    Pdif    00 29 05.0 +1.8
CLL                               ePP      PP      00 33 10.0 -3.3
CLL                               eSKSac   SKSac   00 39 48.0 +7.2
CLL                               ePS      PS      00 42 16.0 -0.8
CLL                               ePPS     PPS     00 43 11.0
CLL                               eSS      SS      00 47 36.0 -7.4
CLL                                Lm      MLR     01 11 00.0
            comp=N,300nm,19.2s
CLL                                Lm      MLR     01 11 00.0
            comp=E,600nm,21.8s
CLL   Collm            101.41  40 eP       Pdif    00 29 05.0 +1.8
CLL                               e                00 33 10.0
ILAR  Eielson Array    101.91 335  PP      PP      00 33 12.9 -3.8
            comp=E,1.2nm,1.1s,baz=116,slow=5.2,SNR=5.3
NOA   NORSAR Array B   103.29  30  Pdiff   Pdif    00 29 12.2 +0.8
            comp=E,0.9nm,0.9s,baz=250,slow=4.4,SNR=4.0
UZH   Uzhgorod         106.57  44 eP       Pdif    00 29 32.1 +5.8
DZM   Mont Dzumac      110.31 236 eLR      LR      01 06 26.0
            comp=E,785nm,22.6s
AKASG Malin Array Be   111.32  42  PP      PP      00 34 27.7 +1.5
            comp=E,0.4nm,0.3s,baz=261,slow=7.0,SNR=4.7
BRTR  Keskin Array B   113.27  54  PKiKP   PKiKP   00 33 50.2 +0.1
            comp=E,1.4nm,0.9s,baz=197,slow=3.9,SNR=7.2
BRTR                               PP      PP      00 34 41.0 +0.3
            comp=E,0.8nm,0.9s,baz=258,slow=5.9,SNR=4.4
OBN   Obninsk          115.88  38⇓iPKIKP   PKPdf   00 33 53.7 -0.6
OBN                               i                00 34 57.9
OBN                                pmax    pmax
            comp=Z,4.0nm,1.0s
SOC   Sochi            118.08  50 i PKIKP  PKPdf   00 33 58.5 -0.5
SOC                               e                00 35 14.0
SOC                               ePS      PKKPdf  00 44 53.8 +5.4
SOC                               eSSS     SSS     00 55 50.1
STKA  Stephens Creek   120.00 212  PKP     PKiKP   00 34 03.4 +0.2
            comp=Z,0.7nm,0.5s,baz=189,slow=13,SNR=2.0
KIV   Kislovodsk       120.23  50 i PKIKP  PKiKP   00 34 03.5 +0.2
KIV                                pmax    pmax
            comp=Z,19nm,1.1s
KIV                                MLR     MLR
            comp=Z,479nm,22.0s
BILL  Bilibino         120.25 339 i PKIKP  PKiKP   00 34 03.1 +0.6
BILL                              e                00 35 27.5
BILL                               pmax    pmax
            comp=Z,2.0nm,1.1s
KBZ   Khabaz           120.39  50  PKP     PKiKP   00 34 04.2 +0.8
            comp=Z,5.1nm,0.8s,baz=224,slow=5.8,SNR=8.9
RAYN  Ar Rayn          121.10  74  PKIKP   PKiKP   00 34 06.2 +0.6
RAYN  Ar Rayn          121.10  74          PKiKP   00 34 06.2 +0.6
ZEI   Tsey             121.14  51 i PKIKP  PKiKP   00 34 05.3  0.0
ZEI                                pmax    pmax
            comp=Z,3.0nm,0.8s
H11S2 WAKE ISLAND Hy125.88 279     T       T       02 53 32.5
            baz=101,slow=74,SNR=682
H11S1 WAKE ISLAND Hy125.88 279     T       T       02 53 34.0
            baz=101,slow=74,SNR=132
H11S3 WAKE ISLAND Hy125.89 279     T       T       02 53 34.0
            baz=101,slow=74,SNR=174
H11N3 WAKE ISLAND Hy125.92 280     T       T       02 53 34.4
            baz=100,slow=75,SNR=130
H11N2 WAKE ISLAND Hy125.93 280     T       T       02 53 35.4
            baz=100,slow=75,SNR=135
H11N1 WAKE ISLAND Hy125.93 280     T       T       02 53 37.2
            baz=100,slow=75,SNR=94
TIXI  Tiksi            126.84 352  PKP     PKPdf   00 34 15.2 +0.2
            comp=Z,1.4nm,0.3s,baz=105,slow=4.0,SNR=4.7
ARU   Arti             127.68  33 i PKIKP  PKPdf   00 34 16.3 -0.7
ARU                                                00 36 14.7
ARU                                                00 41 26.2
ARU                                MLR     MLR
            comp=Z,423nm,21.0s
SEY   Seymchan         127.80 337  PKP     PKiKP   00 34 18.2 +0.6
            comp=Z,4.3nm,0.7s,baz=113,slow=3.4,SNR=19
ASAR  Alice Springs    130.57 210  PKP     PKPdf   00 34 23.9 +0.2
            comp=Z,4.2nm,1.0s,baz=152,slow=2.4,SNR=19
ASAR  Alice Springs    130.57 210          PKPdf   00 34 23.4 -0.2
AS31  Alice Springs    130.57 210          PKPdf   00 34 22.3 -1.3
ABKAR Akbulak array    131.04  41          PKiKP   00 34 24.4 -0.1
GEYT  Alibeck          132.34  56  PKP     PKPdf   00 34 26.6 +0.1
            comp=Z,1.6nm,0.7s,baz=267,slow=5.9,SNR=7.3
GEYT  Alibeck          132.34  56          PKiKP   00 34 27.3 -0.3
WR0   Warramunga Arr   133.37 214          PKPdf   00 34 27.9 -1.1
WRA   Warramunga Arr   133.49 213  PKP     PKPdf   00 34 29.5 +0.3
            comp=Z,2.1nm,0.6s,baz=158,slow=1.8,SNR=7.0
WRA                                SKPbc   SKPbc   00 37 54.6 -1.6
            comp=Z,7.8nm,1.3s,baz=145,slow=3.0,SNR=8.7
KKAR  Karatay Array    140.11  46  PKIKP   PKPdf   00 34 40.8 +0.1
KKAR  Karatay Array    140.11  46          PKPdf   00 34 40.8 +0.1
KURK  Kurchatov        140.79  31  PKIKP   PKPdf   00 34 42.9 +1.2
KURK  Kurchatov        140.79  31  PKPdf   PKPdf   00 34 42.9 +1.2
ZALV  Zalesovo Beam    141.09  23  PKhKP   PKPpre  00 34 35.5
            comp=Z,1.3nm,0.6s,baz=324,slow=7.3,SNR=3.1
ZALV                               PKP     PKPdf   00 34 42.8 +0.7
            comp=Z,6.2nm,0.7s,baz=294,slow=2.5,SNR=15
BOD   Bodaibo          141.82 356 ePKHKP   PKPpre  00 34 36.8
BOD                                pmax    pmax
            comp=Z,6.0nm,2.0s
AAK   Ala-Archa        142.95  44  PKIKP   PKPdf   00 34 44.5 -1.5
AAK   Ala-Archa        142.95  44          PKPdf   00 34 44.5 -1.5
MAKZ  Makanchi         145.03  33  PKIKP   PKPdf   00 34 49.1 -0.3
MAKZ  Makanchi         145.03  33          PKPdf   00 34 49.1 -0.3
MKAR  Makanchi Array   145.20  33  PKPbc   PKPdf   00 34 49.6 -0.1
            comp=Z,22nm,0.7s,baz=324,slow=4.3,SNR=262
MKAR  Makanchi Array   145.20  33  PKIKP   PKPdf   00 34 49.8 +0.1
MKAR  Makanchi Array   145.20  33          PKPdf   00 34 49.8 +0.1
NIL   Nilore           145.22  59  PKIKP   PKPbc   00 34 49.8  0.0
NIL   Nilore           145.22  59          PKPbc   00 34 49.8  0.0
KSH   Kashi            145.33  48  PKPbc   PKPdf   00 34 51.0 +0.8
KSH                                pPKP    sPKPdf  00 35 02.1 +1.3
KSH                                PP      PP      00 38 13.8 +4.0
KSH                                SKS     SKSdf   00 42 00.3 +2.3
KSH                                SKKS    SKKSac  00 45 02.3 +1.5
KSH                                AMB     AMB
            comp=Z,220nm,4.4s
KSH                                LR      LR
            comp=Z,100nm,12.9s
KSH                                LR      LR
            comp=Z,88nm,10.0s
KSH                                LR      LR
            comp=Z,320nm,15.0s
KLR   Kul'dur          145.48 334  PKPbc   PKPab   00 34 50.4 +0.2
            comp=Z,13nm,1.1s,baz=20,slow=4.2,SNR=18
TEY   Ternei           146.07 324⇑ePKP2    PKPab   00 34 52.9 +0.3
TEY                                pmax    pmax
            comp=Z,20nm,1.0s
TEY                                pmax    pmax
            comp=E,10.0nm,1.4s
TEY                                pmax    pmax
            comp=N,10.0nm,1.1s
SOEI  Soe              147.13 208          PKPab   00 34 57.6 -0.1
IRK   Irkutsk          147.35   6 ePKP2    PKPab   00 34 56.8 -0.5
IRK                                pmax    pmax
            comp=Z,38nm,2.0s
TLY   Talaya           147.84   6 ePKP2    PKPbc   00 34 57.5 +0.6
TLY                               eSS      SS      00 57 20.2 -5.9
TLY                                pmax    pmax
            comp=Z,17nm,0.9s
TLY   Talaya           147.84   6          PKPbc   00 34 56.8 -0.1
ZAK   Zakamensk        149.08   7 ePKIKP   PKPdf   00 34 56.9 +0.8
ZAK                               e                00 38 26.8
ZAK                                pmax    pmax
            comp=Z,10.0nm,1.2s
ZAK                                pmax    pmax
            comp=Z,3.0nm,1.4s
USA0B Ussuriysk Arra   149.09 327  PKP2    PKPbc   00 35 00.6 +0.3
USA0B Ussuriysk Arra   149.09 327          PKPbc   00 35 00.6 +0.3
USRK  Ussuriysk Ar.    149.09 327  PKPbc   PKiKP   00 35 01.5 -0.1
            comp=Z,13nm,1.0s,baz=19,slow=2.3,SNR=23
USRK  Ussuriysk Ar.    149.09 327  PKP2    PKiKP   00 35 01.1 -0.5
USRK  Ussuriysk Ar.    149.09 327          PKiKP   00 35 01.1 -0.5
MJAR  Matsushiro Arr   149.60 309  PKPbc   PKiKP   00 35 03.0 +0.1
            comp=Z,12nm,0.8s,baz=164,slow=0.6,SNR=25
MJAR  Matsushiro Arr   149.60 309  PKP2    PKPab   00 35 06.7 -0.3
MJAR  Matsushiro Arr   149.60 309  PKPab   PKPab   00 35 06.7 -0.3
MAJO  Matsushiro       149.60 309  PKP2    PKiKP   00 35 03.0 +0.1
MAJO  Matsushiro       149.60 309          PKiKP   00 35 03.0 +0.1
MAT   Matsushiro       149.60 309  PKP     PKiKP   00 35 02.9  0.0
MJB9  Matsu-Tunnel     149.60 309          PKiKP   00 35 03.0 +0.1
PALK  Pallekele        149.71 110  PKP2    PKiKP   00 35 03.6 -0.2
PALK  Pallekele        149.71 110          PKiKP   00 35 03.6 -0.2
WMQ   Urumqi           150.01  32 ePKPbc   PKPdf   00 34 57.9 +0.1
WMQ                                LR      LR
            comp=Z,360nm,24.1s
WMQ                                LR      LR
            comp=Z,720nm,25.9s
WMQ                                LR      LR
            comp=Z,430nm,20.3s
HYB   Hyderabad        150.88  89 i PKP    PKPdf   00 35 00.0 +0.2
JAGI  Jajag, Banyuwa   151.53 190          PKPbc   00 35 06.2 -0.9
JAGI                               PKPab   sPKPbc  00 35 17.4 -0.2
SONM  Songino Array    151.89   4  PKP     PKPdf   00 35 01.9 +1.2
            comp=Z,1.6nm,0.9s,baz=338,slow=1.0,SNR=12
SONM                               PKPbc   PKiKP   00 35 07.6 +0.1
            comp=Z,7.6nm,0.9s,baz=303,slow=1.1,SNR=31
SONM  Songino Array    151.89   4  PKIKP   PKiKP   00 35 07.6 +0.1
SONM                                               00 35 17.5
SONM  Songino Array    151.89   4  PKPab   PKPab   00 35 17.5 +1.4
SONM  Songino Array    151.89   4          PKPdf   00 35 01.5 +0.9
CN2   Changchun        152.43 334 ePKPbc   PKPdf   00 35 00.0 -1.4
KSRS  Korea Array      155.97 321  PKP     PKPdf   00 35 06.5  0.0
            comp=Z,3.3nm,1.0s,baz=13,slow=1.1,SNR=12
KSAR  Wonju Array Be   156.00 321  PKIKP   PKPdf   00 35 06.0 -0.6
KSAR  Wonju Array Be   156.00 321          PKPdf   00 35 06.0 -0.6
GSI   Gunungsitoli     158.43 147  PKPdf   PKPdf   00 35 08.8 -1.5
GSI                                        PKPab   00 35 45.8 +1.0
GTA   Gaotai           158.80  20 ePKP     PKPdf   00 35 11.1 +0.9
GTA                                LR      LR
            comp=Z,170nm,21.0s
GTA                                LR      LR
            comp=Z,160nm,22.3s
GTA                                LR      LR
            comp=Z,250nm,18.5s
HHC   Hu-ho-hao-te     158.87 355 ePKP     PKPdf   00 35 09.5 -0.7
HHC                                PP      PP      00 39 31.1 +5.4
HHC                                SS      SS      00 59 30.4 +3.5
HHC                                AMB     AMB
            comp=Z,70nm,9.9s
HHC                                LR      LR
            comp=Z,160nm,19.4s
HHC                                LR      LR
            comp=Z,190nm,21.0s
HHC                                LR      LR
            comp=Z,150nm,19.8s
RPSI  Rantau Prapat    160.30 148  PKPdf   PKPdf   00 35 11.9 -0.6
RPSI                                       PKPab   00 35 54.1 +1.2
PSI   Prapat           160.39 148  PKIKP   PKPdf   00 35 11.9 -0.9
PSI                                                00 35 54.1
TIA   Tai'an           162.18 339  PKP     PKPdf   00 35 15.3 +1.4
LZH   Lanzhou          163.06  15 ePKP     PKPdf   00 35 12.3 -2.6
LZH                                pPKP    pPKPdf  00 35 22.6 -0.3
LZH                                sPKP            00 35 26.3
LZH                                LR      LR
            comp=Z,170nm,18.0s
LZH                                LR      LR
            comp=Z,160nm,18.1s
LZH                                LR      LR
            comp=Z,200nm,20.3s
NJ2   Nanjing          164.99 327 ePKP     PKPdf   00 35 16.4 -0.2
XAN   Xi'an            165.77   1  PKP     PKPdf   00 35 18.0 +0.7
XAN                                pPKP    sPKPdf  00 35 28.6 +0.7
XAN                                PP      PP      00 40 06.3 +4.0
XAN                                SS      SS      01 00 39.8 +1.5
XAN                                AMB     AMB
            comp=Z,170nm,6.5s
XAN                                LR      LR
            comp=Z,310nm,21.1s
XAN                                LR      LR
            comp=Z,170nm,22.8s
XAN                                LR      LR
            comp=Z,270nm,23.9s
CD2   Chengdu          167.85  23  PKP     PKPdf   00 35 17.9 -1.0
CMAR  Chiang Mai Arr   170.22  96  PKP     PKPdf   00 35 20.9 +0.2
            comp=Z,0.8nm,0.4s,baz=267,slow=2.1,SNR=10
CMAR                               PKPab   PKPab   00 36 36.8  0.0
            comp=Z,2.6nm,0.8s,baz=261,slow=5.6,SNR=10
CHTO  Chiang Mai       170.27  94  PKIKP   PKPdf   00 35 22.7 +2.0
PBKT  Sadao Pong       171.56 111          PKPdf   00 35 21.4  0.0
GYA   Guiyang          172.93  19  PKP     PKPdf   00 35 21.3 -0.7
GYA                                PKPab   PKPab   00 36 49.8 +1.5
GYA                                PKS             00 38 52.0
GYA                                PP      PP      00 40 42.4 +3.7
GYA                                AMB     AMB
            comp=Z,130nm,8.5s
SLVN  Son La           174.80  71  PKPdf   PKPdf   00 35 22.7  0.0
QIZ   Qiongzhong       179.06 221  PKP     PKPdf   00 35 24.1 +0.7
QIZ                                SS      SS      01 02 49.3 -0.5
QIZ                                LR      LR
            comp=Z,220nm,17.6s
QIZ                                LR      LR
            comp=Z,240nm,18.1s
QIZ                                LR      LR
            comp=Z,290nm,17.7s
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*SJA **25** 00:19:04.6±0.5, 19°.08S×71°.86W, h10^{km}, ML4.3, MW4.2*
*IDC **25** 00:19:22.3±0.9, 19°.67S×70°.44W, h0^{km}, mb4.2/6, mb1 4.4/7, mb1mx4.1/32, mbtmp4.2/7, ML4.1/1, Error ellipse: s-maj=32.8km s-min=16.9km az=60.0*
*NEIC **25** 00:19:23.5±2.8, 19°.88S±0°.04×70°.91W±0°.07, h22^{km}±5^{km}, mb4.5/7, Error ellipse: s-maj=9.9km s-min=4.6km az=113.0*
*GUC **25** 00:19:25.3±0.7, 19°.86S×70°.83W, h42^{km}±3^{km}, ML4.1*
ISC 25 00:19:24.5±1.5**, 19°.83S**±0°.03×**70°.85W**±0°.06**, h26**^{km}±10^{km}**,**
n67, σ1^{s}61/70**, mb4.4**/7**, 7C, Near coast of northern Chile**

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Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                    Op      ISC      h  m  s     ISC
PSGC  Pisagua           0.73  71⇑iP       Pb       00 19 38.1 -0.5
PSGC                              eS       Sb       00 19 48.4 +0.1
PSGC                               IAML             00 19 50.6
            comp=N,7µm,0.5s
PSGCX Pisagua           0.73  71   Pn      Pb       00 19 38.3 -0.3
PSGCX                                      Sb       00 19 46.1 -2.2
TA01  Diego Aracena     0.96 139⇑iP       Pn       00 19 41.4 -1.0
TA01                              eS       Sb       00 19 54.5 -0.4
TA01                               IAML             00 19 56.6
            comp=N,8µm,0.3s
PB11  IPOC Station P    1.13  87⇑iP       Pn       00 19 45.0 +0.2
PB11                              eS       Sb       00 20 00.3 +0.5
PB11                               IAML             00 20 03.3
            comp=N,19µm,0.6s
PB11  IPOC Station P    1.13  87   Pn      Pn       00 19 45.0 +0.2
PATCX Punta Patache     1.18 146⇑iP       Pn       00 19 45.0 -0.4
PATCX                             eS       Sn       00 20 01.2 +0.4
PATCX                              IAML             00 20 04.7
            comp=E,5µm,0.7s
PATCX Punta Patache     1.18 146   Pn      Pn       00 19 45.1 -0.3
PB12  IPOC Station P    1.31  22⇑iP       Pb       00 19 48.5  0.0
PB12                              eS       Sb       00 20 06.0 +1.0
PB12                               IAML             00 20 12.7
            comp=E,14µm,0.6s
PB12  IPOC Station P    1.31  22   Pn      Pb       00 19 48.5  0.0
GO01  Chusmiza          1.57  84⇑iP       Pn       00 19 52.3 +1.2
GO01                              eS       Sb       00 20 13.4 +0.6
GO01  Chusmiza          1.57  84   Pn      Pb       00 19 52.5 -0.7
PB08  IPOC Station P    1.63 101⇑iP       Pn       00 19 52.9 +1.1
PB08                              eS       Sb       00 20 14.2 -0.2
PB08                               IAML             00 20 17.6
            comp=N,3µm,0.5s
PB01  IPOC Station P    1.76 133   Pn      Pn       00 19 54.0 +0.6
PB16  IPOC Station P    1.96  41   Pn      Pb       00 19 59.5 -0.4
PB07  IPOC Station P    2.09 155   Pn      Pn       00 19 58.1 +0.1
PB09  IPOC Station P    2.47 143   Pn      Pn       00 20 04.7 +1.4
PB09  IPOC Station P    2.47 143  i P      Pn       00 20 04.8 +1.6
PB09                              eS       Sn       00 20 35.4 +2.7
PB04  IPOC Station P    2.57 165   Pn      Pn       00 20 03.3 -1.4
PB04  IPOC Station P    2.57 165  i P      Pn       00 20 03.4 -1.3
PB04                              eS       Sb       00 20 44.0 +2.6
PB05  IPOC Station P    3.06 169  i P      Pn       00 20 10.0 -1.4
PB05                               IAML             00 21 15.5
            comp=Z,108nm,0.8s
PB06  IPOC Station P    3.10 158  i P      Pn       00 20 10.7 -1.2
PB06                              eS       Sb       00 21 01.9 +5.4
LVC   Limon Verde       3.31 147   Pn      Pn       00 20 16.7 +1.8
            comp=Z,19nm,0.3s,baz=330,slow=9.7,SNR=1.9
LVC                                Sn      Sn       00 20 55.0 +1.5
            comp=Z,31nm,0.3s,baz=4.8,slow=12,SNR=2.0
LVC                                Lg      Lg       00 21 04.5
            comp=Z,50nm,0.3s,baz=243,slow=18,SNR=2.6
LVC   Limon Verde       3.31 147           Pn       00 20 13.4 -1.5
LVC   Limon Verde       3.31 147  eP       Pn       00 20 16.4 +1.5
LVC                                IAML             00 21 33.0
            comp=Z,246nm,1.2s
PB15  IPOC Station P    3.60 159   Pn      Pn       00 20 16.9 -1.9
PB15  IPOC Station P    3.60 159  eP       Pn       00 20 18.5 -0.3
PB15                               IAML             00 21 33.8
            comp=Z,826nm,0.9s
PB10  IPOC Station P    3.67 176   Pn      Pn       00 20 17.9 -1.8
PB10  IPOC Station P    3.67 176  i P      Pn       00 20 17.3 -2.3
LPAZ  La Paz            4.38  37   Pn      Pn       00 20 34.4 +4.5
            comp=Z,0.8nm,0.3s,baz=208,slow=4.4,SNR=0.7
LPAZ  La Paz            4.38  37           Pn       00 20 29.6 -0.3
PB14  IPOC Station P    4.79 175   Pn      Pn       00 20 33.7 -1.6
PB14  IPOC Station P    4.79 175  i P      Pn       00 20 33.3 -2.0
GO02  Mina Guanaco      5.43 168   Pn      Pn       00 20 43.0 -1.1
NNA   Nana              9.70 323   Sn      Sn       00 23 33.3 +2.7
            comp=Z,1.5nm,0.3s,baz=61,slow=19,SNR=1.5
SIV   San Ignacio      10.06  69   Pn      Pn       00 21 49.1 +1.6
            comp=Z,1.2nm,0.3s,baz=253,slow=12,SNR=1.4
PLCA  Paso Flores      20.83 179   P       P        00 24 03.6 -0.7
            comp=Z,3.0nm,0.8s,baz=293,slow=15,SNR=1.5
PLCA  Paso Flores      20.83 179   P       P        00 24 03.5 -0.7
PTGA  Pitinga          21.77  31   P       P        00 24 12.9 -1.6
            comp=Z,5.5nm,0.3s,baz=204,slow=20,SNR=2.2
PTGA  Pitinga          21.77  31   P       P        00 24 13.5 -0.9
GRGR  Grenville        33.03  17  e                 00 27 07.2
SLBI  Saint Lucia, B   35.02  17  e                 00 27 25.1
RCBR  Riachuelo        36.71  72   P       P        00 26 27.8 -2.0
            comp=Z,8.7nm,0.8s,baz=238,slow=12,SNR=4.7
RCBR  Riachuelo        36.71  72   IAmb    IAmb     00 26 32.4
            comp=Z,10nm,0.9s
TXAR  Lajitas Array    58.23 326   P       P        00 29 18.6 +1.7
            comp=Z,0.6nm,1.0s,baz=135,slow=9.0,SNR=2.4
TXAR  Lajitas Array    58.23 326   P       P        00 29 17.2 +0.3
OMMB  Old Mammoth Mi   72.91 322   P       P        00 30 51.0 -0.9
OMMB                               IAmb    IAmb     00 30 56.1
            comp=Z,2.8nm,1.0s
NVAR  Mina Array Bea   73.07 323   P       P        00 30 56.0 +3.3
            comp=Z,0.5nm,0.8s,baz=159,slow=8.5,SNR=2.7
NVAR  Mina Array Bea   73.07 323   P       P        00 30 52.4 -0.3
YNE   Yellowstone No   73.73 332   P       P        00 30 55.0 -1.4
PAHR  Pah Rah Range    74.56 323           PcP      00 31 14.4 -1.2
TORD  Torodi Ar. Bea   78.53  71   P       P        00 31 23.3 -0.8
            comp=Z,5.3nm,0.9s,baz=247,slow=5.2,SNR=11
TORD  Torodi Ar. Bea   78.53  71   P       P        00 31 20.8 -3.4
YKA   Yellowknife Ar   89.03 341   P       P        00 32 17.0 +0.3
            comp=Z,2.2nm,1.1s,baz=133,slow=5.1,SNR=4.1
H11S2 WAKE ISLAND Hy125.84 279     T       T        02 57 40.9
            baz=107
H11S1 WAKE ISLAND Hy125.85 279     T       T        02 57 45.2
            baz=107,slow=74
H11S3 WAKE ISLAND Hy125.86 279     T       T        02 57 45.8
            baz=107,slow=74
H11N3 WAKE ISLAND Hy125.89 280     T       T        02 57 48.3
            baz=108
H11N2 WAKE ISLAND Hy125.90 280     T       T        02 57 49.4
            baz=108
H11N1 WAKE ISLAND Hy125.90 280     T       T        02 57 49.1
            baz=108
ZALV  Zalesovo Beam   141.18  23   PKP     PKiKP    00 38 55.5 +0.3
            comp=Z,1.5nm,0.7s,baz=296,slow=4.6,SNR=2.9
MAKZ  Makanchi        145.12  33           PKPdf    00 39 00.2 +0.5
MKAR  Makanchi Array  145.30  33   PKP     PKPdf    00 39 00.8 +0.8
            comp=Z,1.6nm,0.7s,baz=322,slow=3.0,SNR=4.6
USRK  Ussuriysk Ar.   149.13 327   PKPbc   PKPab    00 39 13.4 -1.5
            comp=Z,2.2nm,0.8s,baz=93,slow=2.9,SNR=3.9
USRK  Ussuriysk Ar.   149.13 327           PKPbc    00 39 11.0 +0.4
MJAR  Matsushiro Arr  149.61 309   PKPbc   PKiKP    00 39 14.0 +0.9
            comp=Z,1.4nm,0.6s,baz=76,slow=7.4,SNR=2.6
SONM  Songino Array   151.98   4   PKPbc   PKiKP    00 39 19.0 +1.2
            comp=Z,1.2nm,0.9s,baz=303,slow=1.3,SNR=3.7
CMAR  Chiang Mai Arr  170.26  96   PKPab   PKPab    00 40 47.7 +0.6
            comp=Z,0.4nm,0.3s,baz=292,slow=6.8,SNR=4.1
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*IGIL **25** 00:20:10.5, 36°.77N×3°.52W, h20^{km}, ML2.7*
*MDD **25** 00:20:10.6±0.3, 36°.92N×3°.72W, h0^{km}, mbLg3.4/39, Error ellipse: s-maj=3.1km s-min=2.0km az=165.0, PRXIMO*
MDD EMS: IV INTENSIDAD MAXIMA.
*INMG **25** 00:20:10.9±1.5, 36°.92N×3°.71W, h0^{km}, ML3.2, Error ellipse: s-maj=2.0km s-min=1.7km az=165.0*
*NEIC **25** 00:20:11.0±2.1, 36°.93N±0°.06×3°.69W±0°.07, h10^{km}±2^{km}, mb3.8/2, mb_Lg3.3(MDD), Error ellipse: s-maj=10.1km s-min=8.5km az=212.0*
*SFS **25** 00:20:10.0, 36°.90N×3°.70W, ML3.3, ALBUUELAS (GRANADA)*
*IDC **25** 00:20:11.1±1.6, 36°.76N×3°.66W, h0^{km}, mb3.5/3, mb1 3.8/5, mb1mx3.4/59, mbtmp3.6/5, ML3.1/2, MS4.0/4, Ms1 4.0/4, ms1mx3.1/45, Error ellipse: s-maj=36.7km s-min=24.2km az=105.0*
*CNRM **25** 00:20:12.5, 36°.87N×3°.70W, h26^{km}*
*LDG **25** 00:20:12.0±0.2, 36°.88N×3°.67W, h10^{km}, Ml3.4/13, Error ellipse: s-maj=3.9km s-min=2.7km az=162.0*
ISC 25 00:20:10.9±1.0**, 37°.00N**±0°.02×**3°.63W**±0°.02**, h16**^{km}±7^{km}**,**
n176, σ2^{s}22/302**, mb3.7**/3**, MS4.0**/4**, 8C-3D, Spain**

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Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                    Op      ISC      h  m  s     ISC
EQUE  Quentar           0.26  37 ⇑Pg      Pb       00 20 16.9 -0.4
            1µm,0.3s,SNR=2976
EQUE                               Lg      Lg       00 20 22.2
            6µm,0.2s
EBER  Berja             0.60 100 ⇑Pg      Pb       00 20 23.5 +0.2
            534nm,0.3s,SNR=1043
EBER                               Lg      Lg       00 20 31.4
            4µm,0.4s,SNR=25
GORA  Gorafe            0.67  45 ⇑Pg      Pb       00 20 24.5 +0.2
            78nm,0.2s,SNR=18
GORA                               Lg      Lg       00 20 35.5
            664nm,0.2s,SNR=7.9
EMAL  Malaga-Limoner    0.68 250   P       Pg       00 20 21.0 -3.3
EMAL                               S       Sg       00 20 29.0 -4.3
EMAL  Malaga-Limoner    0.68 250⇑iP       Pg       00 20 21.0 -3.3
EMAL                              eS       Sg       00 20 29.0 -4.3
EQES  Quesada           0.92  29 ⇑Pg      Pn       00 20 29.3 +0.1
            196nm,0.3s,SNR=370
EQES                               Lg      Lg       00 20 44.3
            659nm,0.2s,SNR=9.9
EMIJ  Mijas             1.01 245 ⇑Pg      Pg       00 20 26.0 -4.6
            141nm,0.3s,SNR=286
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EMIJ				Lg	Lg	00 20 39.2	
	347nm,0.2s,SNR=10						
ENIJ	**Nijar**	**1.14**	**91**	⇑Pg	**Pn**	**00 20 32.8**	**+0.5**
	12nm,0.4s,SNR=7.9						
ENIJ				Lg	Lg	00 20 47.1	
	446nm,0.2s,SNR=7.9						
EALB	**Alboran**	**1.16**	**155**	Pg	**Pb**	**00 20 30.8**	**-1.8**
	15nm,0.2s,SNR=7.9						
EALB				Lg	Lg	00 20 46.3	
	221nm,0.2s,SNR=7.9						
REAL	**Reales**	**1.37**	**248**	P	**Pg**	**00 20 37.8**	**+0.5**
REAL				S	**Sg**	**00 20 59.0**	**+3.9**
REAL	**Reales**	**1.37**	**248**	⇓*i*P	**Pg**	**00 20 37.8**	**+0.5**
REAL				*e*S	**Sg**	**00 20 59.0**	**+3.9**
EADA	**Adamuz**	**1.38**	**327**	⇑Pg	**Pb**	**00 20 36.3**	**-0.1**
	130nm,0.2s,SNR=314						
EADA				Lg	Lg	00 20 55.7	
	459nm,0.3s,SNR=19						
SESP	**Santiago Espad**	**1.41**	**37**	P	**Pg**	**00 20 38.7**	**+0.5**
SESP				S	**Sg**	**00 21 00.3**	**+3.7**
LIJA	**Lijar**	**1.42**	**267**	P	**Pg**	**00 20 38.5**	**+0.2**
LIJA				S	**Sg**	**00 21 00.3**	**+3.4**
LIJA	**Lijar**	**1.42**	**267**	⇓*i*P	**Pg**	**00 20 38.5**	**+0.2**
LIJA				*e*S	**Sg**	**00 21 00.3**	**+3.4**
HORN	**Hornachuelos**	**1.54**	**304**	P	**Pb**	**00 20 38.6**	**-0.5**
HORN				S	**Sg**	**00 20 59.5**	**-1.3**
TLOR	**Lorca, Murcia**	**1.68**	**67**	Pg	**Pg**	**00 20 42.6**	**-0.7**
	402nm,0.3s,SNR=7.9						
TLOR				Lg	Lg	00 21 07.2	
	2µm,0.6s,SNR=7.9						
ALJ	**Aljibe**	**1.69**	**254**	P	**Pg**	**00 20 42.7**	**-0.7**
ALJ				S	**Sg**	**00 21 11.8**	**+6.5**
ALJ	**Aljibe**	**1.69**	**254**	*e*P	**Pg**	**00 20 42.7**	**-0.7**
ALJ				*e*S	**Sg**	**00 21 11.8**	**+6.5**
ECAB	**El Cabril**	**1.78**	**308**	Pn	**Pn**	**00 20 41.5**	**+0.4**
	42nm,0.4s,SNR=94						
ECAB				Pg	**Pb**	**00 20 43.4**	**+0.2**
	48nm,0.3s,SNR=6.7						
ECAB				Sn	**Sn**	**00 21 02.9**	**-0.5**
	73nm,0.4s,SNR=7.7						
ECAB				Lg	Lg	00 21 06.5	
	245nm,0.4s,SNR=12						
CEU	**Ceuta**	**1.78**	**232**	P	Pn	00 20 35.3	-5.8
CEU				S	Sn	00 20 54.1	-9.3
CEU	**Ceuta**	**1.78**	**232**	*e*P	Pn	00 20 35.3	-5.8
CEU				*e*S	Sn	00 20 54.1	-9.3
ESPR	**Espera**	**1.79**	**266**	Pg	**Pb**	**00 20 42.5**	**-0.8**
	69nm,0.4s,SNR=12						
ESPR				Lg	Lg	00 21 02.2	
	376nm,0.5s,SNR=6.4						
GOG	**Mont Gurugu**	**1.85**	**164**	P	**Pn**	**00 20 39.9**	**-2.2**
GOG				S	**Sn**	**00 21 02.0**	**-3.1**
GIBL	**Gibalbin**	**1.88**	**265**	P	**Pg**	**00 20 46.2**	**-0.9**
GIBL				S	**Sg**	**00 21 14.5**	**+3.1**
GIBL	**Gibalbin**	**1.88**	**265**	*e*P	**Pg**	**00 20 46.2**	**-0.9**
GIBL				*e*S	**Sg**	**00 21 14.5**	**+3.1**
SMIR	**Smir Dam**	**1.93**	**227**	S	**Sn**	**00 21 05.5**	**-1.5**
CNIL	**Conil**	**2.05**	**253**	P	**Pn**	**00 20 42.0**	**-2.6**
CNIL				S	**Sn**	**00 21 05.6**	**-4.2**
CNIL	**Conil**	**2.05**	**253**	*e*P	**Pn**	**00 20 42.0**	**-2.6**
CNIL				*e*S	**Sn**	**00 21 05.6**	**-4.2**
EMUR	**La Murta**	**2.08**	**66**	Pn	**Pb**	**00 20 47.2**	**-1.1**
	103nm,0.7s,SNR=32						
EMUR				Pg	**Pg**	**00 20 51.5**	**+0.6**
	60nm,0.3s,SNR=5.7						
EMUR				Sn	**Sn**	**00 21 12.3**	**+1.5**
	103nm,0.5s,SNR=5.0						
EMUR				Lg	Lg	00 21 18.1	
	170nm,0.5s,SNR=7.9						
CART	**Cartagena**	**2.18**	**74**	P	**Pn**	**00 20 47.6**	**+1.1**
CART				S	**Sg**	**00 21 20.4**	**-0.6**
CART	**Cartagena**	**2.18**	**74**	*e*P	**Pn**	**00 20 47.6**	**+1.1**
CART				*e*S	**Sg**	**00 21 20.4**	**-0.6**
CART	**Cartagena**	**2.18**	**74**		**Pn**	**00 20 47.5**	**+1.1**
ETOB	**Tobarra**	**2.33**	**45**	Pn	**Pn**	**00 20 50.9**	**+2.2**
	17nm,0.3s,SNR=23						
ETOB				Pg	**Pg**	**00 20 55.0**	**-0.6**
	72nm,0.3s,SNR=14						
ETOB				Sn	**Sb**	**00 21 20.2**	**-0.9**
	46nm,0.5s,SNR=4.0						
ETOB				Lg	Lg	00 21 28.1	
	175nm,0.4s						
CHEFC	**Chefchaouen**	**2.34**	**217**	P	**Pn**	**00 20 48.3**	**-0.5**
ETRV	**Los Montesinos**	**2.50**	**65**	Pn	**Pn**	**00 20 52.1**	**+1.2**
	38nm,0.2s,SNR=7.9						
ETRV				Pg	**Pg**	**00 20 59.5**	**+0.6**
	181nm,0.5s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.54**	**288**	Pn	**Pn**	**00 20 50.9**	**-0.6**
	6.5nm,0.4s,SNR=58						
EMIN				Sn	**Sn**	**00 21 21.4**	**-0.6**
	16nm,0.4s,SNR=7.1						
EMIN				Lg	Lg	00 21 29.9	
	144nm,0.5s,SNR=6.6						
PAB	**San Pablo**	**2.60**	**348**	Pn	**Pn**	**00 20 53.1**	**+0.7**
	2.4nm,0.4s,SNR=7.9						
PAB				Pg	**Pg**	**00 20 59.0**	**-1.8**
	1.1nm,0.4s,SNR=7.9						
PAB				Sn	**Sn**	**00 21 25.0**	**+1.2**
	17nm,0.3s,SNR=7.9						
PAB				Lg	Lg	00 21 34.7	
	95nm,0.6s,SNR=7.9						
PAB	**San Pablo**	**2.60**	**348**		**Pn**	**00 20 54.7**	**+2.3**
ESDC	**Sonseca Array**	**2.68**	**355**	Pn	**Pn**	**00 20 55.2**	**+1.7**
	1.7nm,0.3s,baz=172,slow=13,SNR=16						
ESDC				Pg	**Pg**	**00 21 01.7**	**-0.7**
	16nm,0.3s,baz=168,slow=18,SNR=7.9						
ESDC				Sn	**Sn**	**00 21 27.2**	**+1.6**
	7.4nm,0.3s,baz=123,slow=53,SNR=8.8						
ESDC				Lg	Lg	00 21 39.1	
	187nm,0.9s,baz=175,slow=31,SNR=7.1						
RSA	**Sarsar**	**2.76**	**221**	P	**Pn**	**00 20 54.3**	**-0.3**
JBK	**JBK**	**2.80**	**162**	P	**Pn**	**00 20 53.6**	**-1.6**
JBK				S	**Sn**	**00 21 26.0**	**-2.8**
EGRO	**El Granado**	**3.12**	**281**	Pn	**Pn**	**00 20 59.6**	**+0.2**
	11nm,0.3s,SNR=15						
EGRO				Sn	**Sn**	**00 21 35.3**	**-0.9**
	14nm,0.4s,SNR=5.6						
EGRO				Lg	Lg	00 21 48.3	
	69nm,0.5s						
EBAD	**Badajoz**	**3.20**	**304**	Pn	**Pn**	**00 21 00.7**	**+0.2**
	6.0nm,0.3s,SNR=24						
EBAD				Pg	**Pb**	**00 21 08.8**	**+1.5**
	3.8nm,0.3s,SNR=43						
EBAD				Sn	**Sn**	**00 21 37.4**	**-0.9**
	14nm,0.4s,SNR=48						
EBAD				Lg	Lg	00 21 53.4	
	69nm,0.2s						
EBEN2	**Beniarda presa**	**3.20**	**57**	Pn	**Pn**	**00 21 03.3**	**+2.8**
	6.2nm,0.2s,SNR=4.0						
EBEN2				Pg	**Pg**	**00 21 11.4**	**-0.8**
	61nm,0.5s,SNR=7.9						
EBEN2				Sn	**Sn**	**00 21 38.7**	**+0.4**
	1.8nm,0.4s,SNR=7.9						
PVAQ	**Vaqueiros**	**3.29**	**278**	Pn	**Pn**	**00 21 00.9**	**-0.8**
PVAQ				Sn	**Sn**	**00 21 40.9**	**+0.4**
	38nm,0.6s						
PVAQ	**Vaqueiros**	**3.29**	**278**	P	**Pn**	**00 21 00.9**	**-0.8**
PVAQ				S	**Sn**	**00 21 39.3**	**-1.1**
PVAQ	**Vaqueiros**	**3.29**	**278**	Pn	**Pn**	**00 21 00.8**	**-0.8**
PVAQ				Sn	**Sn**	**00 21 39.6**	**-0.8**
PVAQ	**Vaqueiros**	**3.29**	**278**	*e*Pn	**Pn**	**00 21 00.9**	**-0.8**
PVAQ				*e*Sn	**Sn**	**00 21 40.9**	**+0.4**
PVAQ				A	A	00 22 23.7	
	38nm,0.6s						
UCM	**Universidad Co**	**3.31**	**5**	P	**Pg**	**00 21 13.3**	**-1.1**
UCM				S	**Sg**	**00 21 58.0**	**+0.6**
UCM	**Universidad Co**	**3.31**	**5**	*e*P	**Pg**	**00 21 13.3**	**-1.1**
UCM				*e*S	**Sg**	**00 21 58.0**	**+0.6**
ECHE	**Chera**	**3.33**	**38**	Pn	**Pn**	**00 21 04.7**	**+2.4**
	2.2nm,0.2s,SNR=7.9						
PBDV	**Barranco-do-Ve**	**3.44**	**275**	Pn	**Pn**	**00 21 04.5**	**+0.6**
PBDV				Sn	**Sn**	**00 21 44.9**	**+0.5**
	41nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.44**	**275**	*e*Pn	**Pn**	**00 21 04.5**	**+0.6**
PBDV				*e*Sn	**Sn**	**00 21 44.9**	**+0.5**
PBDV				A	A	00 22 09.7	
	41nm,0.5s						
PBEJ	**Beja**	**3.52**	**288**	Pn	**Pn**	**00 21 05.5**	**+0.6**
PBEJ				Lg	Lg	00 22 03.4	
	18nm,0.4s						
PBEJ	**Beja**	**3.52**	**288**	*e*Pn	**Pn**	**00 21 05.5**	**+0.6**
PBEJ				*e*Sg	**Sg**	**00 22 03.4**	**-0.5**
PBEJ				A	A	00 22 09.1	
	37nm,0.4s						
PCVE	**Castro Verde**	**3.57**	**281**	Pn	**Pn**	**00 21 06.0**	**+0.4**
PCVE				Lg	Lg	00 22 03.9	
	40nm,0.5s						
PCVE	**Castro Verde**	**3.57**	**281**	*e*Pn	**Pn**	**00 21 06.0**	**+0.4**
PCVE				*e*Sg	**Sg**	**00 22 03.9**	**-1.7**
PCVE				A	A	00 22 10.2	
	40nm,0.5s						
EPLA	**Plasencia**	**3.61**	**329**	⇓Pn	**Pn**	**00 21 07.9**	**+1.7**
	12nm,0.3s,SNR=18						
EPLA				Sn	**Sn**	**00 21 49.5**	**+1.0**
	12nm,0.5s,SNR=6.1						
EPLA				Lg	Lg	00 22 04.7	
	46nm,0.3s						
PESTR	**Estremoz**	**3.64**	**302**	P	**Pn**	**00 21 08.2**	**+1.6**
PESTR				S	**Sn**	**00 21 49.4**	**+0.1**
PESTR	**Estremoz**	**3.64**	**302**	Pn	**Pn**	**00 21 08.0**	**+1.4**
PESTR				Sn	**Sn**	**00 21 48.8**	**-0.5**
PESTR	**Estremoz**	**3.64**	**302**	*e*Pn	**Pn**	**00 21 08.2**	**+1.6**
PESTR				*e*Sg	**Sg**	**00 22 07.9**	**0.0**
PESTR				A	A	00 22 12.6	
	63nm,0.6s						
GUD	**Guadarrama**	**3.66**	**354**	Pn	**Pn**	**00 21 09.0**	**+2.1**
	11nm,0.4s,SNR=5.8						
GUD				Pg	**Pg**	**00 21 19.6**	**-1.5**
	13nm,0.6s,SNR=9.3						
GUD				Sn	**Sn**	**00 21 50.2**	**+0.4**
	38nm,0.3s,SNR=6.6						
GUD				Lg	Lg	00 22 06.5	
	50nm,0.5s,SNR=13						
IFR	**Ifrane**	**3.69**	**200**	*e*P	**Pn**	**00 21 07.0**	**-0.4**
IFR				*e*S	**Sn**	**00 21 47.6**	**-3.0**
MESJ	**Messejana**	**3.75**	**284**	*e*P	**Pn**	**00 21 07.5**	**-0.5**
MESJ				*e*S	**Sn**	**00 21 49.6**	**-2.2**
MESJ				AML	AML	00 21 53.2	
	comp=E,18nm,0.6s						
MESJ	**Messejana**	**3.75**	**284**	Pn	**Pn**	**00 21 07.7**	**-0.3**
MESJ				Sn	**Sn**	**00 21 52.8**	**+1.0**
	comp=E,37nm,0.5s						
MESJ	**Messejana**	**3.75**	**284**	*e*Pn	**Pn**	**00 21 07.7**	**-0.3**
MESJ				*e*Sn	**Sn**	**00 21 52.8**	**+1.0**
MESJ				A	A	00 22 21.9	
	comp=E,37nm,0.5s						
PMRV	**Marv??o**	**3.83**	**310**	Pn	**Pn**	**00 21 10.6**	**+1.4**
PMRV				Lg	Lg	00 22 13.2	
	comp=E,44nm,0.4s						
PMRV	**Marv??o**	**3.83**	**310**	*e*Pn	**Pn**	**00 21 10.6**	**+1.4**
PMRV				*e*Sg	**Sg**	**00 22 13.2**	**-0.6**
PMRV				A	A	00 22 24.3	
	comp=E,44nm,0.4s						
ETOR	**Torete**	**4.01**	**17**	Pn	**Pn**	**00 21 13.6**	**+1.9**
	comp=E,14nm,0.4s,SNR=34						
ETOR				Pg	**Pg**	**00 21 25.3**	**-2.4**
	comp=E,74nm,0.4s,SNR=7.3						
ETOR				Sn	**Sn**	**00 22 00.7**	**+2.3**
	comp=E,15nm,0.3s,SNR=11						
ETOR				Lg	Lg	00 22 20.3	
	comp=E,196nm,0.4s						
MORF	**Marmelete**	**4.02**	**276**	*e*P	**Pn**	**00 21 11.4**	**-0.5**
MORF	**Marmelete**	**4.02**	**276**	Pn	**Pn**	**00 21 11.8**	**-0.1**
MORF				Sn	**Sn**	**00 21 58.3**	**-0.4**
	comp=E,19nm,0.4s						
MORF	**Marmelete**	**4.02**	**276**	*e*Pn	**Pn**	**00 21 11.8**	**-0.1**
MORF				*e*Sn	**Sn**	**00 21 58.3**	**-0.4**
MORF				A	A	00 22 11.7	
	comp=E,19nm,0.4s						
PNCL	**Nicolau / Gran**	**4.04**	**287**	Pn	**Pn**	**00 21 11.8**	**-0.4**
PNCL				Lg	Lg	00 22 20.5	
	comp=E,31nm,0.5s						
PNCL	**Nicolau / Gran**	**4.04**	**287**	*e*Pn	**Pn**	**00 21 11.8**	**-0.4**
PNCL				*e*Sg	**Sg**	**00 22 20.5**	**-0.3**
PNCL				A	A	00 22 22.8	
	comp=E,31nm,0.5s						
PTEO	**Sao Teotonio**	**4.10**	**279**	Pn	**Pn**	**00 21 13.1**	**+0.2**
PTEO				Sn	**Sn**	**00 21 59.7**	**-0.8**
	comp=E,25nm,0.6s						
PTEO	**Sao Teotonio**	**4.10**	**279**	*e*Pn	**Pn**	**00 21 13.1**	**+0.2**
PTEO				*e*Sn	**Sn**	**00 21 59.7**	**-0.8**
PTEO				A	A	00 22 34.4	
	comp=E,50nm,0.6s						
CZD	**Col de Zad**	**4.13**	**197**	P	**Pn**	**00 21 13.6**	**+0.1**
CZD				S	**Sn**	**00 22 02.1**	**+0.5**
PCBR	**Castelo Branco**	**4.14**	**314**	Pn	**Pn**	**00 21 14.9**	**+1.4**
PCBR				Sn	**Sn**	**00 22 00.4**	**-1.1**
PCBR				Lg	Lg	00 22 25.7	
	comp=E,17nm,0.5s						
PCBR	**Castelo Branco**	**4.14**	**314**	*e*Pn	**Pn**	**00 21 14.9**	**+1.4**
PCBR				*e*Sn	**Sn**	**00 22 00.4**	**-1.1**
PCBR				*e*Sg	**Sg**	**00 22 25.7**	**+1.8**
PCBR				A	A	00 22 29.5	
	comp=E,34nm,0.5s						
PFVI	**Vila Bisbo**	**4.16**	**273**	Pn	**Pn**	**00 21 14.6**	**+0.9**
	comp=E,16nm,0.4s,SNR=6.0						
PFVI				Sn	**Sn**	**00 21 59.4**	**-2.5**
	comp=E,6.5nm,0.7s,SNR=7.9						
PFVI	**Vila Bisbo**	**4.16**	**273**	P	**Pn**	**00 21 14.7**	**+0.9**
PFVI				S	**Sn**	**00 22 01.9**	**0.0**
PFVI	**Vila Bisbo**	**4.16**	**273**	Pn	**Pn**	**00 21 14.1**	**+0.4**
PFVI	**Vila Bisbo**	**4.16**	**273**	*e*Pn	**Pn**	**00 21 14.8**	**+1.1**
PFVI				*e*Sn	**Sn**	**00 22 01.9**	**0.0**
PFVI				A	A	00 22 11.0	
	comp=E,32nm,0.7s						
TDRA	**Tendrara**	**4.17**	**161**	P	**Pn**	**00 21 13.3**	**-0.7**
TDRA				S	**Sn**	**00 22 01.9**	**-0.6**
EMOS	**Mosqueruela**	**4.17**	**35**	Pn	**Pn**	**00 21 16.7**	**+2.6**
	comp=E,32nm,0.6s,SNR=8.3						
EMOS				Pg	**Pg**	**00 21 28.4**	**-2.4**
	comp=E,5.7nm,0.2s,SNR=15						
EMOS				Lg	Lg	00 22 26.6	
	comp=E,40nm,0.7s,SNR=6.4						
PMTG	**Montargil**	**4.17**	**301**	Pn	**Pn**	**00 21 14.2**	**+0.3**
PMTG				Sn	**Sn**	**00 22 00.9**	**-1.4**
PMTG				Lg	Lg	00 22 24.6	
	comp=E,42nm,0.4s						
PMTG	**Montargil**	**4.17**	**301**	*e*Pn	**Pn**	**00 21 14.2**	**+0.3**
PMTG				*e*Sn	**Sn**	**00 22 00.9**	**-1.4**
PMTG				*e*Sg	**Sg**	**00 22 24.6**	**-0.3**
PMTG				A	A	00 22 38.1	
	comp=E,42nm,0.4s						
MD31	**MD31**	**4.23**	**193**	P	**Pn**	**00 21 14.3**	**-0.4**
MD31				S	**Sn**	**00 22 02.0**	**-1.8**
MDT	**Midelt**	**4.25**	**191**	Pn	**Pn**	**00 21 14.8**	**-0.4**
	comp=E,0.6nm,0.3s,baz=12,slow=9.8,SNR=25						
MDT				Sn	**Sn**	**00 22 03.7**	**-0.8**
	comp=E,1.9nm,0.3s,baz=159,slow=21,SNR=11						
EIBI	**Ibiza**	**4.42**	**61**	Pn	**Pn**	**00 21 19.7**	**+2.4**
	comp=E,0.4nm,0.1s,SNR=17						
EIBI				Sn	**Sn**	**00 22 09.8**	**+1.4**
	comp=E,41nm,0.8s						
MTE	**Manteigas**	**4.57**	**319**	Pn	**Pn**	**00 21 20.6**	**+1.2**
MTE				Sn	**Sn**	**00 22 12.5**	**+0.3**
MTE				Lg	Lg	00 22 35.8	
	comp=E,35nm,0.6s						
MTE	**Manteigas**	**4.57**	**319**	Pn	**Pn**	**00 21 20.5**	**+1.2**
MTE				Sn	**Sn**	**00 22 11.5**	**-0.7**
MTE	**Manteigas**	**4.57**	**319**	*e*Pn	**Pn**	**00 21 20.6**	**+1.2**
MTE				*e*Sn	**Sn**	**00 22 12.5**	**+0.3**
MTE				*e*Sg	**Sg**	**00 22 35.8**	**-1.8**
MTE				A	A	00 22 49.9	
	comp=E,70nm,0.6s						
PTOM	**Tomar**	**4.58**	**306**	Pn	**Pn**	**00 21 20.4**	**+0.9**
PTOM				Sn	**Sn**	**00 22 12.9**	**+0.6**
PTOM				Lg	Lg	00 22 35.1	
	comp=E,28nm,0.7s						
PTOM	**Tomar**	**4.58**	**306**	*e*Pn	**Pn**	**00 21 20.4**	**+0.9**
PTOM				*e*Sn	**Sn**	**00 22 12.9**	**+0.6**
PTOM				*e*Sg	**Sg**	**00 22 35.1**	**-2.7**
PTOM				A	A	00 23 00.1	
	comp=E,57nm,0.7s						
PSBE	**So Bento**	**4.78**	**303**	*e*Pn	**Pn**	**00 21 23.6**	**+1.4**
PSBE				*e*Sn	**Sn**	**00 22 15.5**	**-1.7**
PSBE				A	A	00 22 53.6	
	comp=E,57nm,0.6s						
AVE	**Averroes**	**4.82**	**221**	*e*P	**Pn**	**00 21 21.9**	**-1.0**
AVE				*e*S	**Sn**	**00 22 16.2**	**-2.2**
PMAFR	**Mafra**	**4.87**	**295**	Pn	**Pn**	**00 21 24.2**	**+0.7**
	comp=E,16nm,0.3s,SNR=7.0						
PMAFR				Sn	**Sn**	**00 22 17.6**	**-2.0**
	comp=E,9.0nm,0.6s,SNR=7.9						
PMAFR				Lg	Lg	00 22 46.2	
	comp=E,122nm,0.4s						
PMAFR	**Mafra**	**4.87**	**295**	*e*Pn	**Pn**	**00 21 24.2**	**+0.7**
PMAFR				A	A	00 23 02.9	
	comp=E,43nm,0.5s						
PCAS	**Casmilo, Conde**	**4.88**	**310**	Pn	**Pn**	**00 21 25.0**	**+1.3**
PCAS				Sn	**Sn**	**00 22 19.0**	**-0.8**
PCAS				Lg	Lg	00 22 48.8	
	comp=E,50nm,0.6s						
PCAS	**Casmilo, Conde**	**4.88**	**310**	*e*Pn	**Pn**	**00 21 25.0**	**+1.3**
PCAS				*e*Sn	**Sn**	**00 22 19.0**	**-0.8**
PCAS				*e*Sg	**Sg**	**00 22 48.8**	**+1.2**
PCAS				A	A	00 22 59.6	
	comp=E,50nm,0.6s						
COI	**Coimbra**	**4.92**	**312**	Pn	**Pn**	**00 21 25.9**	**+1.7**
COI				Sn	**Sn**	**00 22 19.6**	**-1.3**
	comp=E,30nm,0.6s						
COI	**Coimbra**	**4.92**	**312**	Pn	**Pn**	**00 21 25.7**	**+1.4**
COI				Sn	**Sn**	**00 22 19.5**	**-1.3**
COI	**Coimbra**	**4.92**	**312**	*e*Pn	**Pn**	**00 21 25.9**	**+1.7**
COI				*e*Sn	**Sn**	**00 22 19.6**	**-1.3**
COI				A	A	00 23 08.2	
	comp=E,59nm,0.6s						
MVO	**Moncorvo**	**4.92**	**329**	Pn	**Pn**	**00 21 25.9**	**+1.6**
	comp=E,30nm,0.3s,SNR=29						
MVO				Sn	**Sn**	**00 22 19.9**	**-1.1**
	comp=E,14nm,0.4s,SNR=7.9						
MVO				Lg	Lg	00 22 49.1	
	comp=E,40nm,0.4s						
MVO	**Moncorvo**	**4.92**	**329**	*e*Pn	**Pn**	**00 21 25.9**	**+1.6**
MVO				*e*Sn	**Sn**	**00 22 20.9**	**-0.1**
MVO				A	A	00 22 57.7	
	comp=E,40nm,0.4s						
PVIS	**Viseu**	**4.98**	**319**	Pn	**Pn**	**00 21 25.9**	**+0.8**
PVIS				Sn	**Sn**	**00 22 20.9**	**-1.4**
PVIS				Lg	Lg	00 22 48.9	
	comp=E,14nm,0.7s						
PVIS	**Viseu**	**4.98**	**319**	*e*Pn	**Pn**	**00 21 25.9**	**+0.8**
PVIS				*e*Sn	**Sn**	**00 22 20.9**	**-1.4**
PVIS				*e*Sg	**Sg**	**00 22 48.9**	**-1.9**
PVIS				A	A	00 23 00.6	
	comp=E,28nm,0.7s						
ERTA	**Horta de San J**	**5.01**	**37**	Pn	**Pn**	**00 21 28.3**	**+2.8**
	comp=E,7.1nm,0.5s,SNR=5.7						
ESAC	**San Caprasio**	**5.31**	**26**	Lg	Lg	00 23 03.8	
	comp=E,130nm,0.4s,SNR=6.6						
PVRL	**Vila Real**	**5.32**	**325**	Pn	**Pn**	**00 21 31.3**	**+1.6**
PVRL				Sn	**Sn**	**00 22 30.3**	**-0.3**
	comp=E,12nm,0.4s						
PVRL	**Vila Real**	**5.32**	**325**	*e*Pn	**Pn**	**00 21 31.3**	**+1.6**
PVRL				*e*Sn	**Sn**	**00 22 30.3**	**-0.3**
PVRL				A	A	00 23 09.2	
	comp=E,24nm,0.4s						
PBRG	**Braganca**	**5.37**	**334**	Pn	**Pn**	**00 21 31.3**	**+0.9**
PBRG				Lg	Lg	00 23 00.8	
	comp=E,11nm,0.6s						
PBRG	**Braganca**	**5.37**	**334**	*e*Pn	**Pn**	**00 21 31.3**	**+0.9**
PBRG				*e*Sg	**Sg**	**00 23 00.8**	**-2.4**
PBRG				A	A	00 23 20.4	
	comp=E,21nm,0.6s						
ECAL	**Calabor**	**5.49**	**335**	Pn	**Pn**	**00 21 33.9**	**+1.8**
	comp=E,2.0nm,0.3s,SNR=7.9						
ECAL				Sn	**Sn**	**00 22 34.4**	**-0.4**
	comp=E,9.6nm,0.4s,SNR=4.6						
ECAL				Lg	Lg	00 23 06.8	
	comp=E,53nm,0.5s,SNR=4.9						
EPOB	**Poblet**	**5.68**	**39**	Pn	**Pn**	**00 21 37.5**	**+2.8**
	comp=E,0.9nm,0.1s,SNR=11						
EPOB				Sn	**Sn**	**00 22 40.1**	**+0.5**
	comp=E,7.4nm,0.5s,SNR=6.1						
EPOB				Lg	Lg	00 23 14.2	
	comp=E,7.4nm,0.7s						
PCAB	**Cabril**	**5.80**	**325**	Pn	**Pn**	**00 21 37.7**	**+1.3**
PCAB				Lg	Lg	00 23 14.9	
	comp=E,15nm,0.5s						
PCAB	**Cabril**	**5.80**	**325**	*e*Pn	**Pn**	**00 21 37.7**	**+1.3**
PCAB				*e*Sg	**Sg**	**00 23 14.9**	**-2.3**
PCAB				A	A	00 23 32.6	
	comp=E,29nm,0.5s						
ELOB	**Lobios**	**5.95**	**326**	Pn	**Pn**	**00 21 39.5**	**+1.2**
	comp=E,3.0nm,0.2s,SNR=7.9						
ELOB				Sn	**Sn**	**00 22 43.3**	**-2.9**
	comp=E,4.2nm,0.6s,SNR=12						
ELOB				Lg	Lg	00 23 20.6	
	comp=E,27nm,0.5s						
PGAV	**Gavieira, Arco**	**6.12**	**326**	Pn	**Pn**	**00 21 42.8**	**+2.1**
PGAV				Lg	Lg	00 23 24.4	
	comp=E,22nm,0.6s						
PGAV	**Gavieira, Arco**	**6.12**	**326**	*e*Pn	**Pn**	**00 21 42.8**	**+2.1**
PGAV				*e*Sg	**Sg**	**00 23 24.4**	**-2.8**
PGAV				A	A	00 23 40.3	
	comp=E,22nm,0.6s						
EORO	**Oroz-Betelu**	**6.15**	**16**	Pn	**Pn**	**00 21 44.1**	**+3.0**
	comp=E,0.1nm,0.0s,SNR=15						
EORO				Sn	**Sn**	**00 22 50.9**	**-0.2**
	comp=E,11nm,0.4s,SNR=4.0						
EORO				Lg	Lg	00 23 30.0	
	comp=E,58nm,0.6s						
ELAN	**Lanestosa**	**6.22**	**1**	Pn	**Pn**	**00 21 44.7**	**+2.5**
	comp=E,2.6nm,0.2s,SNR=7.5						
ELAN				Sn	**Sn**	**00 22 52.8**	**-0.1**
	comp=E,15nm,0.8s,SNR=4.0						
ELAN				Lg	Lg	00 23 31.9	
	comp=E,26nm,0.9s						
EMIR	**Miracle**	**6.32**	**38**	Pn	**Pn**	**00 21 45.9**	**+2.4**
	comp=E,7.8nm,0.3s,SNR=8.3						
EMIR				Lg	Lg	00 23 34.9	
	comp=E,18nm,0.6s						
ETSF	**Etsaut**	**6.34**	**21**	*e*P	**Pn**	**00 21 46.9**	**+3.1**
ETSF				*e*Sn	**Sn**	**00 22 53.4**	**-2.6**
ETSF				*e*Sg	**Sg**	**00 23 32.7**	**-1.8**
	comp=E,3.6nm,0.4s						
ETSF	**Etsaut**	**6.34**	**21**	Sn	**Sn**	**00 22 53.4**	**-2.6**
ETSF				Lg	Lg	00 23 32.7	
	comp=E,1.8nm,0.4s						
ECHI	**Chisagues Biel**	**6.38**	**26**	Pn	**Pn**	**00 21 47.1**	**+2.7**
	comp=E,0.4nm,0.1s,SNR=4.0						
SJPF	**Ste Jean**	**6.38**	**16**	*e*P	**Pn**	**00 21 47.4**	**+3.2**
SJPF				*e*Sn	**Sn**	**00 22 53.2**	**-3.5**
SJPF				*e*Sg	**Sg**	**00 23 33.2**	**-2.3**
	comp=E,5.0nm,0.4s						
SJPF	**Ste Jean**	**6.38**	**16**	Sn	**Sn**	**00 22 53.2**	**-3.5**
SJPF				Lg	Lg	00 23 33.2	
	comp=E,2.5nm,0.4s						
EARI	**Arriondas**	**6.41**	**350**	Pn	**Pn**	**00 21 46.9**	**+2.3**
	comp=E,3.9nm,0.6s,SNR=8.3						
EARI				Sn	**Sn**	**00 22 55.8**	**-1.6**
	comp=E,1.7nm,0.9s,SNR=7.9						
EARI				Lg	Lg	00 23 34.0	
	comp=E,58nm,0.9s						
EALK	**Alkurruntz**	**6.42**	**14**	Pn	**Pn**	**00 21 47.4**	**+2.6**
	comp=E,1.2nm,0.1s,SNR=6.5						
EALK				Sn	**Sn**	**00 22 57.5**	**-0.3**
	comp=E,5.0nm,0.7s,SNR=7.9						
EALK				Lg	Lg	00 23 39.5	
	comp=E,35nm,0.5s						
ATE	**Arette**	**6.48**	**19**	Pn	**Pn**	**00 21 47.8**	**+2.2**
	comp=E,0.4nm,0.2s,SNR=7.9						
ATE				Sn	**Sn**	**00 22 58.9**	**-0.3**
	comp=E,21nm,1.0s,SNR=7.9						
ATE				Lg	Lg	00 23 40.2	
	comp=E,16nm,0.8s,SNR=7.9						
CSOR	**Sort**	**6.50**	**33**	Pn	**Pn**	**00 21 48.4**	**+2.3**
	comp=E,0.5nm,0.2s,SNR=5.5						
CSOR				Sn	**Sn**	**00 22 59.9**	**-0.1**
	comp=E,0.3nm,0.2s,SNR=5.0						
CSOR				Lg	Lg	00 23 38.8	
	comp=E,24nm,0.7s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.73**	**331**	Pn	**Pn**	**00 21 50.7**	**+1.7**
	comp=E,1.2nm,0.2s,SNR=7.9						
EAGO				Sn	**Sn**	**00 23 04.0**	**-1.4**
	comp=E,28nm,1.1s,SNR=7.9						
EAGO				Lg	Lg	00 23 46.1	
	comp=E,18nm,0.5s,SNR=7.9						
EPF	**Esparros**	**6.75**	**26**	*e*Pn	**Pn**	**00 21 48.8**	**-0.5**
EPF	**Esparros**	**6.75**	**26**	*e*P	**Pn**	**00 21 53.9**	**+4.6**
EPF				*e*Sn	**Sn**	**00 23 01.7**	**-4.2**
EPF				*e*Sg	**Sg**	**00 23 44.3**	**-3.1**
	comp=E,15nm,0.6s						
EPF	**Esparros**	**6.75**	**26**	Pn	**Pn**	**00 21 48.8**	**-0.5**
EPF				Sn	**Sn**	**00 23 01.7**	**-4.2**
EPF				Lg	Lg	00 23 44.3	
	comp=E,7.7nm,0.6s						
EPON	**Pontenova**	**6.87**	**338**	Pn	**Pn**	**00 21 52.9**	**+2.0**
	comp=E,0.4nm,0.1s,SNR=7.9						
EPON				Sn	**Sn**	**00 23 05.7**	**-3.1**
	comp=E,5.7nm,1.0s,SNR=7.9						
EPON				Lg	Lg	00 23 52.4	
	comp=E,32nm,0.9s,SNR=7.9						
CLLI	**Llivia**	**6.97**	**37**	Pn	**Pn**	**00 21 55.0**	**+2.5**
	comp=E,0.3nm,0.1s,SNR=4.0						
MTLF	**Montolieu**	**7.75**	**33**	*e*Pn	**Pn**	**00 22 02.2**	**-0.9**
MTLF	**Montolieu**	**7.75**	**33**	*e*P	Pn	00 22 08.4	+5.3

MTLF				eSn	Sn	00 23 25.7	-4.8
MTLF				eSg		00 24 15.8	
	comp=E,0.9nm,0.3s						
MTLF	Montolieu	7.75	33	Pn	Pn	00 22 02.2	-0.9
MTLF				Sn	Sn	00 23 25.7	-4.8
MTLF				Lg	Lg	00 24 15.8	
	comp=E,0.4nm,0.3s						
LFF	La Frestale	8.59	21	ePn	Pn	00 22 14.6	+0.1
LFF	La Frestale	8.59	21	eP	Pn	00 22 19.2	+4.7
LFF				eSn	Sn	00 23 45.9	-5.1
	comp=E,270nm,1.9s						
LFF	La Frestale	8.59	21	Pn	Pn	00 22 14.6	+0.1
LFF				Sn	Sn	00 23 45.9	-5.1
	comp=E,135nm,1.9s						
CAF	Calviac	9.01	27	ePn	Pn	00 22 18.8	-1.5
CAF	Calviac	9.01	27	eP	Pn	00 22 25.3	+5.0
CAF	Calviac	9.01	27	Pn	Pn	00 22 18.8	-1.5
RJF	Les Rejaudoux	9.16	23	ePn	Pn	00 22 22.9	+0.6
RJF	Les Rejaudoux	9.16	23	Pn	Pn	00 22 22.9	+0.6
MFF	Saint Martin d	9.94	14	ePn	Pn	00 22 33.3	+0.3
MFF				eSn	Sn	00 24 18.3	-5.8
	comp=E,0.4nm,0.3s						
MFF	Saint Martin d	9.94	14	Pn	Pn	00 22 33.3	+0.3
MFF				Sn	Sn	00 24 18.3	-5.8
	comp=E,0.2nm,0.3s						
KEST	Kesra	10.54	93	Pn	Pn	00 22 45.2	+3.8
	comp=E,0.3nm,0.3s,baz=280,slow=11,SNR=8.1						
KEST	Kesra	10.54	93	Pn	Pn	00 22 45.8	+4.4
QUIF	Quistinic	10.91	2	ePn	Pn	00 22 47.5	+1.2
QUIF	Quistinic	10.91	2	Pn	Pn	00 22 47.5	+1.2
SGMF	Saint Gilles	11.27	4	ePn	Pn	00 22 52.0	+0.7
SGMF				eSn	Sn	00 24 50.1	-6.8
	comp=E,3.0nm,0.4s						
SGMF	Saint Gilles	11.27	4	Pn	Pn	00 22 52.0	+0.7
SGMF				Sn	Sn	00 24 50.1	-6.8
	comp=E,1.5nm,0.4s						
ROSF	Rostrenen	11.33	1	ePn	Pn	00 22 51.1	-1.0
ROSF				eSn	Sn	00 24 51.6	-6.7
	comp=E,0.6nm,0.2s						
ROSF	Rostrenen	11.33	1	Pn	Pn	00 22 51.1	-1.0
ROSF				Sn	Sn	00 24 51.6	-6.7
	comp=E,0.3nm,0.2s						
SSF	Saint Saulge	11.36	26	eSn	Sn	00 24 56.3	-2.7
	comp=E,0.3nm,0.3s						
SSF	Saint Saulge	11.36	26	Sn	Sn	00 24 56.3	-2.7
	comp=E,0.2nm,0.3s						
GRR	Gorron	11.56	9	ePn	Pn	00 22 55.1	-0.1
GRR				eSn	Sn	00 24 57.0	-6.9
	comp=E,1.6nm,0.3s						
GRR	Gorron	11.56	9	Pn	Pn	00 22 55.1	-0.1
GRR				Sn	Sn	00 24 57.0	-6.9
	comp=E,0.8nm,0.3s						
LDF	La Druitiere	11.87	11	ePn	Pn	00 22 58.9	-0.5
LDF				eSn	Sn	00 25 04.2	-7.2
	comp=E,0.3nm,0.3s						
CASP	Castiglione de	12.54	58	Pn	Pn	00 23 10.4	+1.8
MLR	Muntele Rosu	23.70	60	P	P	00 25 25.5	+3.4
	comp=E,1.8nm,0.7s,baz=263,slow=15,SNR=5.8						
MLR	Muntele Rosu	23.70	60	P	P	00 25 23.0	+1.0
MLR				IAmb	IAmb	00 25 28.7	
	comp=Z,2.8nm,0.9s						
TORD	Torodi Ar. Bea	24.23	167	P	P	00 25 26.5	-0.5
	comp=Z,0.7nm,0.9s,baz=341,slow=9.0,SNR=2.4						
TORD	Torodi Ar. Bea	24.23	167	P	P	00 25 26.8	-0.3
MDP	Montagnes des	54.83	247	LR	LR	00 49 19.2	
	comp=Z,356nm,19.9s,baz=312,slow=32						
ZALV	Zalesovo Beam	60.25	43	LR	LR	00 59 24.1	
	comp=Z,47nm,18.7s,baz=180,slow=39						
MKAR	Makanchi Array	61.67	51	LR	LR	00 58 25.0	
	comp=Z,85nm,19.6s,baz=258,slow=37						
YKA	Yellowknife Ar	66.56	332	P	P	00 31 04.3	+4.5
	comp=Z,0.3nm,0.5s,baz=64,slow=6.7,SNR=2.5						
TEIG	Tepich	73.97	283	LR	LR	01 02 03.7	
	comp=Z,92nm,18.4s,baz=16,slow=34						

SJA 25 00:24:36.2±1.2, 29.15°S×69.45°W, h111km±7km, ML3.1, MW3.2, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGUA	GUANDACOL	0.90	112	eP	Pn	00 24 58.1	+1.4
AGUA				eS	Sn	00 25 13.9	+1.9
AGUA				IAML		00 25 14.3	
	comp=Z,355nm,0.5s						
AGUA	GUANDACOL	0.90	112	i P	Pn	00 24 57.9	+1.3
AGUA				eS	Sn	00 25 13.8	+1.8
AGUA				IAML		00 25 14.3	
	comp=Z,886nm,0.5s						
AROD	Rodeo	1.01	181	eP	Pn	00 24 59.1	+1.2
AROD				eS	Sn	00 25 15.3	+1.0
AROD	Rodeo	1.01	181	i P	Pn	00 24 59.0	+1.1
AROD				eS	Sn	00 25 15.3	+1.0
AROD				IAML		00 25 15.6	
	comp=Z,130nm,0.4s						
ACDV	Cuesta del Vie	1.06	164	eP	Pn	00 24 59.3	+1.1
ACDV				eS	Sn	00 25 16.2	+1.3
ACDV				IAML		00 25 17.9	
	comp=Z,282nm,0.6s						
ACDV	Cuesta del Vie	1.06	164	i P	Pn	00 24 59.4	+1.2
ACDV				IAML		00 25 17.9	
	comp=Z,192nm,0.6s						
VCA	Vinchina	1.17	70	eP	Pn	00 25 01.8	+2.4
VCA				eS	Sn	00 25 20.6	+3.7
ACCO	Cerro Coronel	1.47	167	eP	Pn	00 25 04.2	+1.1
ACCO				eS	Sn	00 25 25.7	+2.3
ACCO				IAML		00 25 26.3	
	comp=Z,289nm,0.2s						
ACCO	Cerro Coronel	1.47	167	i P	Pn	00 25 04.2	+1.2
ACCO				eS	Sn	00 25 24.8	+1.4
ACCO				IAML		00 25 26.1	
	comp=Z,240nm,0.3s						
GO04	Tololo Observa	1.55	229	eP	Pn	00 25 03.7	-0.3
GO04				eS	Sn	00 25 24.8	-0.2
RTLL	Cerro Villicun	2.33	159	i P	Pn	00 25 14.7	+1.2
RTLL				eP	Pn	00 25 14.7	+1.2
RTLL				eS	Sn	00 25 43.1	+1.0
RTLL				IAML		00 25 46.0	
	comp=Z,45nm,0.3s						
ZON	Zonda	2.48	165	i P	Pn	00 25 16.7	+1.3
ZON				IAML		00 25 54.5	
	comp=Z,38nm,0.4s						
ZON				IAML		00 25 54.6	
	comp=Z,38nm,0.4s						
RTLS	Leoncito	2.64	177	eP	Pn	00 25 19.4	+1.6
RTLS				eS	Sn	00 25 52.2	+2.5
RTLS				IAML		00 25 53.6	
	comp=Z,34nm,0.8s						
RTLS	Leoncito	2.64	177	i P	Pn	00 25 19.5	+1.7
RTLS				eS	Sn	00 25 51.9	+2.1
RTLS				IAML		00 25 53.6	
	comp=Z,84nm,0.8s						
RTCV	Cerro Valdivia	2.81	164	eP	Pn	00 25 21.1	+1.2
RTCV				eS	Sn	00 25 54.6	+1.2
RTCV				IAML		00 25 56.4	
	comp=Z,48nm,0.4s						
RTCV	Cerro Valdivia	2.81	164	i P	Pn	00 25 21.2	+1.3
RTCV				eS	Sn	00 25 54.6	+1.2
RTCV				IAML		00 25 56.4	
	comp=Z,48nm,0.4s						
CYA	Choya	3.28	78	eP	Pn	00 25 26.9	+1.0
CYA				IAML		00 26 07.3	
	comp=Z,41nm,0.9s						
CYA	Choya	3.28	78	i P	Pn	00 25 26.8	+0.8
CYA				i P		00 25 26.9	
CYA				IAML		00 25 28.2	
	comp=Z,80nm,0.7s						
ASAL	Salagasta	3.47	171	i P	Pn	00 25 30.6	+2.1
ASAL				eS	Sn	00 26 01.8	-7.2
ASAL				IAML		00 26 19.6	
	comp=Z,30nm,0.8s						
ARCO	CERRO ARCO	3.71	173	i P	Pn	00 25 34.3	+2.5
ARCO				IAML		00 26 20.9	
	comp=Z,26nm,0.3s						
AAGR	Agrelo	3.96	172	i P	Pn	00 25 36.6	+1.5
ROC1	El Roble	4.04	199	i P	Pn	00 25 35.4	-0.9
PEL	Peldehue	4.12	195	i P	Pn	00 25 38.3	+1.1
MRA	San Martin	4.58	136	i P	Pn	00 25 43.8	+0.4
MRA				IAML		00 25 45.2	
	comp=Z,41nm,0.3s						
MRA				eS	Sn	00 26 34.6	-1.0

SJA 25 00:29:21.8±0.7, 19.99°S×71.16°W, h10km, ML3.1, MW3.3

IDC 25 00:29:23.4±2.1, 19.79°S×70.89°W, h0km, mb3.8/1, mb1 3.8/3, mb1mx3.5/26, mbtmp3.8/3, ML3.5/2, Error ellipse: s-maj=56.7km s-min=20.6km az=65.0

GUC 25 00:29:26.1±0.7, 19.93°S×71.02°W, h42km±3km, ML3.4

ISC 25 00:29:22.1±1.8, 19.91°S±0.03°×71.16°W±0.07°, h9km±10km, n37, σ1.50/57, 10C-1D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	1.02	73	⇓iP	Pg	00 29 41.8	0.0
PSGC				i S	Sb	00 29 54.9	-0.8
PSGC				IAML		00 29 56.5	
	comp=N,1μm,0.3s						
PSGCX	Pisagua	1.02	73	eP	Pb	00 29 41.8	-0.3
PSGCX				eS	Sb	00 29 54.7	-1.1
TA01	Diego Aracena	1.13	126	⇑iP	Pn	00 29 44.8	+0.6
TA01				i S	Sn	00 29 58.4	-1.5
TA01				IAML		00 30 04.5	
	comp=E,1μm,0.5s						
PATCX	Punta Patache	1.31	134	⇑iP	Pg	00 29 47.6	+0.3
PATCX				i S	Sb	00 30 03.1	-0.9
PATCX				IAML		00 30 10.8	
	comp=E,770nm,0.3s						
PATCX	Punta Patache	1.31	134	eP	Pg	00 29 47.6	+0.3
PATCX				eS	Sb	00 30 03.0	-1.0
PB11	IPOC Station P	1.42	84	⇑iP	Pb	00 29 48.7	-0.3
PB11				i S	Sb	00 30 06.3	-1.0
PB11				IAML		00 30 07.3	
	comp=E,2μm,0.5s						
PB11	IPOC Station P	1.42	84	eP	Pb	00 29 48.6	-0.3
PB11				eS	Sb	00 30 06.3	-1.0
PB12	IPOC Station P	1.51	32	IAML		00 30 17.7	
	comp=N,578nm,0.5s						
PB12	IPOC Station P	1.51	32	eP	Pn	00 29 49.9	+0.4
PB12				IAML		00 30 13.5	
	comp=Z,260nm,0.4s						
PB02	IPOC Station P	1.84	140	⇑iP	Pb	00 29 55.3	-0.7
PB02				i S	Sn	00 30 16.7	-0.8
PB02				IAML		00 30 25.6	
	comp=E,1μm,0.7s						
PB02	IPOC Station P	1.84	140	eP	Pb	00 29 55.3	-0.7
PB02				eS	Sb	00 30 17.9	-1.3
PB02				IAML		00 30 26.9	
	comp=Z,222nm,0.5s						
GO01	Chusmiza	1.87	83	⇑iP	Pb	00 29 55.5	-1.3
GO01				i S	Sn	00 30 18.5	-0.2
PB08	IPOC Station P	1.90	97	⇑iP	Pn	00 29 55.8	+0.7
PB08				i S	Sb	00 30 19.4	-1.8
PB08				IAML		00 30 22.5	
	comp=N,551nm,0.4s						
PB08	IPOC Station P	1.90	97	eP	Pb	00 29 56.8	-0.5
PB08				eS	Sb	00 30 19.5	-1.8
PB08				IAML		00 30 21.8	
	comp=Z,105nm,0.5s						
PB01	IPOC Station P	1.93	126	⇑iP	Pb	00 29 56.5	-1.1
PB01				i S	Sn	00 30 18.5	-1.3
PB01				IAML		00 30 28.6	
	comp=N,698nm,0.4s						
PB07	IPOC Station P	2.17	147	⇑iP	Pn	00 29 59.8	+1.2
PB07	IPOC Station P	2.17	147	eP	Pn	00 29 59.8	+1.2
PB07				eS	Sn	00 30 24.6	-1.1
PB16	IPOC Station P	2.21	45	⇑iP	Pb	00 30 02.0	-0.6
PB16				i S	Sb	00 30 29.8	-0.6
PB16				IAML		00 30 38.2	
	comp=N,497nm,0.5s						
PB16	IPOC Station P	2.21	45	eP	Pb	00 30 02.0	-0.6
PB16				eS	Sb	00 30 29.6	-0.8
PB04	IPOC Station P	2.59	159	i P	Pn	00 30 05.6	+1.1
PB04				eS	Sn	00 30 35.0	-1.2
PB09	IPOC Station P	2.60	137	⇑iP	Pb	00 30 06.8	-2.1
PB09				i S	Sn	00 30 37.7	+1.3
PB09	IPOC Station P	2.60	137	i P	Pb	00 30 06.9	-2.1
PB09				eS	Sg	00 30 46.9	+1.2
PB05	IPOC Station P	3.06	163	i P	Pn	00 30 12.1	+1.1
PB05				eS	Sn	00 30 45.0	-2.7
PB06	IPOC Station P	3.15	152	i P	Pn	00 30 13.2	+1.0
PB06				eS	Sn	00 30 46.4	-3.6
LVC	Limon Verde	3.41	142	Pn	Pn	00 30 18.2	+2.3
	comp=N,2.8nm,0.3s,baz=324,slow=11,SNR=31						
LVC				Sn	Sn	00 30 57.8	+1.1
	comp=N,14nm,0.3s,baz=316,slow=23,SNR=12						
LVC				Lg	Lg	00 31 10.9	
	comp=N,12nm,0.3s,baz=175,slow=12,SNR=7.8						
LVC	Limon Verde	3.41	142	i P	Pn	00 30 18.8	+2.9
LVC				IAML		00 31 23.6	
	comp=Z,53nm,0.5s						
PB10	IPOC Station P	3.63	171	i P	Pn	00 30 19.6	+1.0
PB10				eP	Pn	00 30 19.6	+1.0
PB10				eS	Sn	00 30 58.9	-2.8
PB15	IPOC Station P	3.64	155	i P	Pn	00 30 20.3	+1.3
LPAZ	La Paz	4.61	39	Pn	Pb	00 30 39.9	-3.7
	comp=Z,1.2nm,0.3s,baz=241,slow=8.9,SNR=20						
PB14	IPOC Station P	4.75	172	i P	Pn	00 30 35.4	+1.2
SIV	San Ignacio	10.36	70	Pn	Pn	00 31 51.4	+0.3
	comp=Z,0.7nm,0.3s,baz=269,slow=8.2,SNR=10						
TORD	Torodi Ar. Bea	78.83	72	P	P	00 41 26.2	0.0
	comp=Z,0.5nm,0.6s,baz=246,slow=5.6,SNR=9.2						
H11S2	WAKE ISLAND Hy	125.57	279	T	T	03 07 56.7	
	baz=97,slow=74,SNR=3.1						
H11S1	WAKE ISLAND Hy	125.58	279	T	T	03 07 48.1	
	baz=97,slow=74,SNR=2.8						
H11S3	WAKE ISLAND Hy	125.59	279	T	T	03 07 52.4	
	baz=97						
MKAR	Makanchi Array	145.51	33	PKPbc	PKPab	00 49 03.2	+2.0
	comp=Z,0.2nm,0.8s,baz=306,slow=3.4,SNR=2.1						
SONM	Songino Array	152.07	4	PKPbc	PKiKP	00 49 20.7	+2.2
	comp=Z,0.2nm,0.4s,baz=29,slow=3.3,SNR=2.0						

KRSC 25 00:33:10.0±0.6, 56.01°N×161.41°E, h100km±6km, ML4.2

MOS 25 00:33:10.4±0.7, 56.08°N×161.37°E, h96km, mb4.1/5, Error ellipse: s-maj=12.3km s-min=4.3km az=74.7

IDC 25 00:33:12.9±2.2, 56.01°N×161.15°E, h111km±21km, mb3.5/21, mb1 3.7/23, mb1mx3.6/40, mbtmp3.9/23, MS4.0/5, Ms1 4.0/5, ms1mx3.2/35, Error ellipse: s-maj=16.1km s-min=12.0km az=162.0

NEIC 25 00:33:13.3±1.2, 56.00°N±0.09°×161.2°E±0.1°, h118km±7km, mb4.1/20, Error ellipse: s-maj=13.5km s-min=11.7km az=188.0

ISC 25 00:33:11.5±0.6, 56.02°N±0.03°×161.38°E±0.03°, h97km±4km, n159, σ0.98/198, mb4.0/29, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZLN	Zelenaya	0.32	271	eP	Pn	00 33 26.3	+0.3
ZLN	Zelenaya	0.32	271	PN	Pn	00 33 26.3	+0.3
CIRR	Tsirk	0.37	286	eP	Pn	00 33 26.1	-0.2
CIRR				eS	Sn	00 33 38.0	+0.7
CIRR	Tsirk	0.37	286	PN	Pn	00 33 26.1	-0.2
CIRR				S	Sn	00 33 38.0	+0.7
BZGR	Bezymyannyi-Gr	0.39	259	eP	Pn	00 33 26.3	-0.1
BZGR				eS	Sn	00 33 38.1	+0.6
BZGR	Bezymyannyi-Gr	0.39	259	PN	Pn	00 33 26.3	-0.1
BZGR				S	Sn	00 33 38.1	+0.6
LGNR	Loginova	0.39	280	eP	Pn	00 33 26.6	0.0
LGNR				eS	Sn	00 33 38.5	+0.6
LGNR	Loginova	0.39	280	PN	Pn	00 33 26.6	0.0
LGNR				S	Sn	00 33 38.5	+0.6
KRSR	Krestovskiy	0.50	294	eP	Pn	00 33 26.6	-0.5
KRSR				eS	Sn	00 33 38.4	-0.3
KRSR	Krestovskiy	0.50	294	PN	Pn	00 33 26.6	-0.5
KRSR				S	Sn	00 33 38.4	-0.3
KLY	Klyuchi	0.50	307	eP	Pn	00 33 26.1	-0.8
KLY				eS	Sn	00 33 37.0	-1.5
KLY	Klyuchi	0.50	307	PN	Pn	00 33 26.1	-0.8
KLY				S	Sn	00 33 37.0	-1.5
BZMR	Bezymyannaya	0.51	261	eP	Pn	00 33 27.1	-0.1
BZMR				eS	Sn	00 33 39.1	+0.2
BZMR	Bezymyannaya	0.51	261	PN	Pn	00 33 27.1	-0.1
BZMR				S	Sn	00 33 39.1	+0.2
BDR	Baidarnaya	0.56	350	eP	Pn	00 33 27.7	+0.2
BDR				eS	Sn	00 33 41.0	+1.4
BDR	Baidarnaya	0.56	350	PN	Pn	00 33 27.7	+0.2
BDR				S	Sn	00 33 41.0	+1.4
SMKR	Semkarok	0.57	5	eP	Pn	00 33 27.8	+0.2
SMKR	Semkarok	0.57	5	PN	Pn	00 33 27.8	+0.2
KIRR	Kirishev	0.59	264	eP	Pn	00 33 27.3	-0.5
KIRR				eS	Sn	00 33 39.7	-0.3
KIRR	Kirishev	0.59	264	PN	Pn	00 33 27.3	-0.5
KIRR				S	Sn	00 33 39.7	-0.3
SRKR	Sorokina	0.65	350	eP	Pn	00 33 28.4	+0.1
SRKR				eS	Sn	00 33 41.7	+0.9
SRKR	Sorokina	0.65	350	PN	Pn	00 33 28.4	+0.1
SRKR				S	Sn	00 33 41.7	+0.9
KMNR	Kamenistaya	0.69	248	eP	Pn	00 33 28.4	-0.3
KMNR	Kamenistaya	0.69	248	PN	Pn	00 33 28.4	-0.3
KBG	Krutoberegovo	0.78	72	eP	Pn	00 33 29.1	-0.2
KBG				eS	Sn	00 33 43.5	+0.8
KBG	Krutoberegovo	0.78	72	PN	Pn	00 33 29.1	-0.2
KBG				S	Sn	00 33 43.5	+0.8
KBTR	Krutoberegovo	0.83	76	eP	Pn	00 33 29.7	-0.1
KBTR				eS	Sn	00 33 44.3	+0.7
KBTR	Krutoberegovo	0.83	76	PN	Pn	00 33 29.7	-0.1
KBTR				S	Sn	00 33 44.3	+0.7
KOZ	Kozyrevsk	0.85	274	eP	Pn	00 33 30.0	0.0
KOZ				eS	Sn	00 33 44.6	+0.6
KOZ	Kozyrevsk	0.85	274	PN	Pn	00 33 30.0	0.0
KOZ				S	Sn	00 33 44.6	+0.6
SRDR	Sredinnyy	0.98	289	eP	Pn	00 33 31.2	-0.3
SRDR				eS	Sn	00 33 46.4	-0.1
SRDR	Sredinnyy	0.98	289	PN	Pn	00 33 31.2	-0.3
SRDR				S	Sn	00 33 46.4	-0.1
TUMD	Tumrok D	0.99	215	eP	Pn	00 33 31.4	-0.1
TUMD				eS	Sn	00 33 46.2	-0.4
TUMR	Tumrok	1.01	224	eP	Pn	00 33 32.2	+0.3
TUMR				eS	Sn	00 33 47.7	+0.4
TUMR	Tumrok	1.01	224	PN	Pn	00 33 31.4	-0.5
TUMR				S	Sn	00 33 46.2	-1.1
KZV	Kizimen	1.09	215	eP	Pn	00 33 32.6	-0.3
KZV				eS	Sn	00 33 48.3	-0.7
KZV	Kizimen	1.09	215	PN	Pn	00 33 32.6	-0.3
KZV				S	Sn	00 33 48.3	-0.7
ESO	Esso	1.51	268	eP	Pn	00 33 37.6	-0.1
ESO	Esso	1.51	268	PN	Pn	00 33 37.6	-0.1
KII	Karymskiy	2.27	210	eP	Pn	00 33 47.8	+0.3
KII	Karymskiy	2.27	210	PN	Pn	00 33 47.8	+0.3
BKI	Bering	2.73	105	eP	Pn	00 33 53.6	+0.2
BKI				eS	Sn	00 34 24.2	-1.5
BKI	Bering	2.73	105	PN	Pn	00 33 53.6	+0.2
BKI				S	Sn	00 34 24.2	-1.5
SPN	Mys Shipunski	3.03	196	eP	Pn	00 33 56.7	-0.8
SPN				eS	Sn	00 34 31.1	-1.8
SPN	Mys Shipunski	3.03	196	PN	Pn	00 33 56.7	-0.8
SPN				S	Sn	00 34 31.1	-1.8
NLC	Nalytchevo	3.09	203	eP	Pn	00 33 58.6	+0.4
NLC				eS	Sn	00 34 34.4	+0.1
NLC	Nalytchevo	3.09	203	PN	Pn	00 33 58.6	+0.4
NLC				S	Sn	00 34 34.4	+0.1
KRX	Arik	3.10	212	eP	Pn	00 33 59.7	+1.2
KRX	Arik	3.10	212	PN	Pn	00 33 59.7	+1.2
SDLR	Sedlovina	3.10	209	eP	Pn	00 33 59.2	+0.6
SDLR	Sedlovina	3.10	209	PN	Pn	00 33 59.2	+0.6
KRER	Koryakskii	3.12	210	eP	Pn	00 34 00.4	+1.6
KRER	Koryakskii	3.12	210	PN	Pn	00 34 00.4	+1.6
SMAR	Somma	3.14	210	eP	Pn	00 34 00.7	+1.5
SMAR				eS	Sn	00 34 37.5	+1.6
SMAR	Somma	3.14	210	PN	Pn	00 34 00.7	+1.5
SMAR				S	Sn	00 34 37.5	+1.6
AVH	Avacha	3.15	210	eP	Pn	00 34 00.9	+1.7
AVH	Avacha	3.15	210	PN	Pn	00 34 00.9	+1.7
KOK	Koryaka	3.16	211	eP	Pn	00 34 00.7	+1.4
KOK	Koryaka	3.16	211	PN	Pn	00 34 00.7	+1.4
PALN	Palana	3.17	347	eP	Pn	00 34 00.2	+0.8
PALN	Palana	3.17	347	PN	Pn	00 34 00.2	+0.8
UGLR	Uglovaya	3.18	209	eP	Pn	00 34 01.0	+1.4
UGLR	Uglovaya	3.18	209	PN	Pn	00 34 01.0	+1.4
DALK	Dalny	3.36	208	eP	Pn	00 34 02.9	+1.0
DALK				eS	Sn	00 34 41.0	+0.2
DALK	Dalny	3.36	208	PN	Pn	00 34 02.9	+1.0
DALK				S	Sn	00 34 41.0	+0.2
OSSR	Ossora	3.37	15	eP	Pn	00 34 02.4	+0.5
OSSR				eS	Sn	00 34 40.2	-0.7
OSSR	Ossora	3.37	15	PN	Pn	00 34 02.4	+0.5
OSSR				S	Sn	00 34 40.2	-0.7
PET	Petropavlovsk	3.39	209	eP	Pn	00 34 04.1	+1.8
PET	Petropavlovsk	3.39	209	ePN	Pn	00 34 04.1	+1.8
PET				eS	Sn	00 34 45.9	+4.3
PET				pmax	pmax		
	comp=Z,188nm,0.6s						
PET				smax	smax		
	comp=E,109nm,0.6s						
PET				smax	smax		
	comp=N,118nm,0.5s						
PET	Petropavlovsk	3.39	209		Pn	00 34 04.2	+1.9
PET				Sn	Sn	00 34 42.6	+1.0
PEA0B	Petropavlovsk-	3.62	218	i PN	Pn	00 34 05.6	+0.2
PEA0B	Petropavlovsk-	3.62	218		Pn	00 34 05.7	+0.4
PETK	Petropavlovsk-	3.62	218	P	Pn	00 34 05.7	+0.3
	comp=N,5.8nm,0.3s,baz=64,slow=16,SNR=41						
PETK				LR	LR	00 36 03.9	
	comp=N,55nm,19.6s,baz=62,slow=48						
PETK	Petropavlovsk-	3.62	218	PN	Pn	00 34 05.9	+0.5
PETK	Petropavlovsk-	3.62	218		Pn	00 34 05.8	+0.5
KRMR	Karymshinskiy	3.71	212	eP	Pn	00 34 08.0	+1.4
KRMR				eS	Sn	00 34 49.6	+0.2
KRMR	Karymshinskiy	3.71	212	PN	Pn	00 34 08.0	+1.4
KRMR				S	Sn	00 34 49.6	+0.2
APC	Apacha	3.96	220	eP	Pn	00 34 10.9	+1.0
APC	Apacha	3.96	220	PN	Pn	00 34 10.9	+1.0
RUS	Russkaya	3.96	206	eP	Pn	00 34 10.0	0.0
RUS	Russkaya	3.96	206	PN	Pn	00 34 10.0	0.0
GRL	Gorelyy	3.97	211	eP	Pn	00 34 11.8	+1.5
GRL	Gorelyy	3.97	211	PN	Pn	00 34 11.8	+1.5
MTVR	Mutnovka	4.00	209	eP	Pn	00 34 12.1	+1.4
MTVR	Mutnovka	4.00	209	PN	Pn	00 34 12.1	+1.4
ASAK	Asacha	4.17	211	eP	Pn	00 34 14.3	+1.3
ASAK	Asacha	4.17	211	PN	Pn	00 34 14.3	+1.3
MIPR	Malaya Ipel'ka	4.63	218	eP	Pn	00 34 19.9	+0.9
MIPR	Malaya Ipel'ka	4.63	218	PN	Pn	00 34 19.9	+0.9
PAU	Pauzhetka	5.30	213	eP	Pn	00 34 29.8	+1.7
PAU	Pauzhetka	5.30	213	PN	Pn	00 34 29.8	+1.7
MA2	Magadan	6.70	307	P	Pn	00 34 47.4	+0.3
	comp=N,0.5nm,0.3s,baz=123,slow=17,SNR=2.0						
MA2	Magadan	6.70	307	PN	Pn	00 34 48.5	+1.4
MA2	Magadan	6.70	307		Pn	00 34 48.5	+1.4
JKA	Kamikawa-asahi	16.88	233	P	Pn	00 37 02.2	+0.7
ASAJ	Asahikawa	16.88	233	P	Pn	00 37 02.2	+0.7
	comp=N,1.6nm,0.3s,baz=293,slow=29,SNR=5.0						
TIXI	Tiksi	20.80	331	P	P	00 37 45.5	+1.1
	comp=N,4.5nm,0.6s,baz=119,slow=12,SNR=8.9						
TIXI	Tiksi	20.80	331	P	P	00 37 45.3	+0.9
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TIXI	Tiksi	20.80	331	P	P	00 37 45.3	+0.9
TIXI				IAmb	IAmb	00 37 47.8	
	comp=Z,5.1nm,0.6s						
IMAR	Indian Mountai	23.39	47	P	P	00 38 11.1	0.0
PPLA	Purkeypile	24.10	54	P	P	00 38 18.4	+0.7
PPLA				IAmb	IAmb	00 38 21.9	
	comp=Z,15nm,1.4s						
RSO	Redoubt South	24.15	60	P	P	00 38 19.8	+1.6
KTH	Kantishna Hill	24.62	53	P	P	00 38 23.3	+1.0
KTH				IAmb	IAmb	00 38 40.3	
	comp=Z,8.5nm,1.4s						
MLY	Manley	24.62	49	P	P	00 38 23.4	+1.0
TRF	Thorofare Moun	24.91	53	P	P	00 38 26.0	+0.9
TRF				IAmb	IAmb	00 38 27.9	
	comp=Z,9.8nm,1.2s						
MJAR	Matsushiro Arr	25.00	229	P	P	00 38 24.5	-1.5
	comp=Z,1.3nm,0.6s,baz=31,slow=11,SNR=2.1						
MJAR				LR	LR	00 49 20.7	
	comp=Z,80nm,20.1s,baz=70,slow=39						
MJAR	Matsushiro Arr	25.00	229	IAmb	IAmb	00 38 28.2	
	comp=Z,1.5nm,0.8s						
CNPM	China Poot	25.08	62	P	P	00 38 27.4	+0.8
TOLK	Toolik Lake Re	25.21	41	P	P	00 38 25.1	-2.6
TOLK				IAmb	IAmb	00 38 31.2	
	comp=Z,5.2nm,0.8s						
GHO	Glory Hole Cre	25.76	57	P	P	00 38 33.6	+0.9
GHO				IAmb	IAmb	00 38 47.8	
	comp=Z,13nm,1.3s						
WRH	Wood River Hil	25.79	50	P	P	00 38 33.7	+0.8
CCB	Clear Creek Bu	25.90	50	P	P	00 38 33.7	-0.1
DHY	Denali Highway	26.27	53	P	P	00 38 36.8	-0.5
DHY				IAmb	IAmb	00 38 52.4	
	comp=Z,10nm,1.5s						
IL31		26.28	49	P	P	00 38 37.7	+0.5
ILAR	Eielson Array	26.28	49	P	P	00 38 37.2	-0.1
	comp=Z,0.8nm,0.6s,baz=260,slow=7.7,SNR=15						
ILAR	Eielson Array	26.28	49	eP	P	00 38 37.1	-0.2
ILAR				pmax	pmax		

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               comp=Z,1.0nm,0.6s
SCM    Sheep Creek Mo    26.49  56   P       P        00 38 39.8 +0.5
SCM                                  pmax    pmax
               comp=Z,24nm,1.5s
SCM    Sheep Creek Mo    26.49  56   P       P        00 38 39.8 +0.5
BMAR   Burnt Mountain    27.05  43   P       P        00 38 45.3 +1.1
RAGM   Ragged Mountai    28.08  59   P       P        00 38 54.4 +0.9
BCAR   Beaver Creek A    28.77  52   P       P        00 39 00.5 +0.9
INK    Inuvik            31.12  41   P       P        00 39 21.0 +0.8
               comp=Z,1.3nm,0.6s,baz=291,slow=9.8,SNR=5.6
INK    Inuvik            31.12  41   P       P        00 39 21.0 +0.8
INK    Inuvik            31.12  41   IAmb    IAmb     00 39 26.6
               comp=Z,3.1nm,1.2s
SONM   Songino Array     34.05 280   ScP     ScP      00 45 55.7 -1.4
               comp=Z,0.3nm,0.6s,baz=90,slow=1.5,SNR=3.9
C36M   Paulatuk          34.24  37   P       P        00 39 48.2 +0.9
C36M                                 IAmb    IAmb     00 39 48.8
               comp=Z,6.0nm,0.7s
H11N2  WAKE ISLAND Hy    36.47 171   T       T        01 19 19.3
               baz=357,slow=76,SNR=6.3
H11N3  WAKE ISLAND Hy    36.48 171   T       T        01 19 31.0
               baz=357,slow=76,SNR=6.8
H11N1  WAKE ISLAND Hy    36.48 171   T       T        01 19 22.4
               baz=357,slow=76,SNR=7.7
RES    Resolute Bay      40.33  24   P       P        00 40 39.6 +0.9
RES                                  pmax    pmax
               comp=Z,4.0nm,1.2s
RES    Resolute Bay      40.33  24   P       P        00 40 39.5 +0.9
RES                                  IAmb    IAmb     00 40 40.2
               comp=Z,4.2nm,1.2s
YKA    Yellowknife Ar    40.53  45   P       P        00 40 41.1 +0.6
               comp=Z,1.0nm,0.8s,baz=299,slow=7.6,SNR=15
KURK   Kurchatov         46.87 300   P       P        00 41 30.7 -0.6
KURBB  Kurchatov Arra    46.97 300   P       P        00 41 30.7 -1.4
               comp=Z,0.8nm,0.2s,baz=54,slow=8.0,SNR=2.4
MKAR   Makanchi Array    47.60 294   P       P        00 41 35.8 -1.4
               comp=Z,0.3nm,0.4s,baz=51,slow=5.7,SNR=6.5
MKAR   Makanchi Array    47.60 294 i P       P        00 41 36.0 -1.2
BVAR   Borovoye Array    49.19 307   P       P        00 41 48.7 -0.5
               comp=Z,0.6nm,0.5s,baz=78,slow=7.5,SNR=1.9
ARCES  ARCESS Array B    50.74 342   P       P        00 42 01.6 +0.9
               comp=Z,4.1nm,1.0s,baz=31,slow=11,SNR=2.0
ARCES  ARCESS Array B    50.74 342   P       P        00 41 59.4 -1.3
NVAR   Mina Array Bea    54.10  73   P       P        00 42 28.2 +2.0
               comp=Z,1.1nm,0.6s,baz=302,slow=7.6,SNR=12
NVAR   Mina Array Bea    54.10  73   P       P        00 42 27.7 +1.5
AAK    Ala-Archa         54.48 295   P       P        00 42 28.2 -0.6
               comp=Z,0.8nm,0.5s,baz=301,slow=8.3,SNR=3.5
PDAR   Pinedale Array    55.49  63   P       P        00 42 37.5 +1.4
               comp=Z,0.8nm,0.6s,baz=336,slow=2.8,SNR=11
PDAR   Pinedale Array    55.49  63   P       P        00 42 36.2 +0.1
KKAR   Karatay Array     56.14 298   P       P        00 42 39.4 -1.2
KKAR   Karatay Array     56.14 298   P       P        00 42 39.4 -1.2
FINES  FINESS Array B    57.73 336   P       P        00 42 50.6 -0.8
               comp=Z,1.3nm,0.6s,baz=39,slow=8.9,SNR=9.4
NB2    NORSAR Subarra    60.94 344   P       P        00 43 12.8 -0.8
               comp=Z,0.8nm,0.6s,baz=19,slow=6.9
NOA    NORSAR Array B    60.94 344   P       P        00 43 12.9 -0.7
               comp=Z,1.2nm,0.6s,baz=19,slow=6.9,SNR=8.3
NOA                                  LR      LR       01 12 17.1
               comp=Z,71nm,19.9s,baz=255,slow=38
SCHQ   Schefferville     62.72  29   P       P        00 43 24.7 -0.8
               comp=Z,3.7nm,1.2s,baz=321,slow=8.5,SNR=3.9
SCHQ   Schefferville     62.72  29   IAmb    IAmb     00 43 33.4
               comp=Z,11nm,1.4s
GEYT   Alibeck           66.13 303   P       P        00 43 47.6 -0.5
               comp=Z,0.7nm,0.6s,baz=2.9,slow=2.9,SNR=2.3
GEYT   Alibeck           66.13 303   IAmb    IAmb     00 43 47.8
               comp=Z,0.7nm,0.8s
AKASG  Malin Array Be    66.49 329   LR      LR       01 17 16.6
               comp=Z,168nm,20.3s,baz=275,slow=40
TXAR   Lajitas Array     68.84  69   P       P        00 44 06.2 +0.9
               comp=Z,0.7nm,0.5s,baz=282,slow=4.1,SNR=8.8
GERES  GERESS Array B    72.08 338   P       P        00 44 24.7  0.0
               comp=Z,0.2nm,0.4s,baz=60,slow=5.8,SNR=2.6
BRTR   Keskin Array B    74.83 321   P       P        00 44 41.0 -0.1
               comp=Z,0.2nm,0.5s,baz=28,slow=6.7,SNR=1.6
BRTR                                 LR      LR       01 23 18.4
               comp=Z,158nm,19.0s,baz=184,slow=40
WRA    Warramunga Arr    79.05 206   P       P        00 45 03.7 -0.9
               comp=Z,1.0nm,0.9s,baz=15,slow=5.8,SNR=3.5
ASAR   Alice Springs     82.73 205   P       P        00 45 24.1 -0.1
               comp=Z,0.5nm,0.4s,baz=14,slow=5.4,SNR=5.3
ASAR                                 LR      LR       01 21 13.3
               comp=Z,190nm,20.8s,baz=160,slow=35
```

HEL ***25*** *00:34:05.2, 67°.84N×20°.08E, h0^{km}, ML1.9, Explosion*

UPP 25 00:34:08.4±0.2**, 67°.86N×20°.23E, h0**^{km}**, ML2.3, Explosion, Sweden**

```
Code   Station Name       Δ°   AZ°    Phase ID         Time       Res
                                     Op      ISC       h  m  s    ISC
KUA    Kurravaara         0.11  22 i P       Pg       00 34 07.6 -2.9
KOVU   Salmi              0.37 356   P       Pg       00 34 15.5 +0.1
KOVU                                 S       Sg       00 34 20.4 +0.2
KOVU   Salmi              0.37 356 i P       Pg       00 34 12.5 -3.0
LANU   Lannavaara         0.69  73   P       Pg       00 34 21.4 -0.2
LANU                                 S       Sg       00 34 30.9 +0.3
LANU   Lannavaara         0.69  73   eP      Pg       00 34 18.6 -3.0
DUNU   Dundret            0.75 170   S       Sg       00 34 32.4  0.0
MASU   Masugnsbyn         0.79 120   P       Pg       00 34 23.2 -0.2
MASU   Masugnsbyn         0.79 120 i P       Pg       00 34 20.5 -2.9
KIF    Kilpisjarvi        1.17  10   eP      Pn       00 34 32.0 +0.1
KIF    Kilpisjarvi        1.17  10   ePN     Pg       00 34 30.7 -0.1
KIF                                  MSG              00 34 42.8
               comp=Z,17nm,0.2s
KIF                                  eSN     Sg       00 34 46.5 +0.5
PAJU   Pajala             1.39 126   P       Pg       00 34 33.7 -1.3
PAJU                                 S       Sg       00 34 52.2 -0.7
PAJU   Pajala             1.39 126   eP      Pg       00 34 31.3 -3.7
PAJU                                 eS      Sg       00 34 50.4 -2.6
HEF    Hetta              1.40  65   eP      Pn       00 34 34.2 -0.9
HEF    Hetta              1.40  65   eP      Pn       00 34 31.2 -4.0
               baz=244
HEF                                  MSG              00 34 49.0
               comp=Z,7.1nm,0.2s
HEF                                  eSN     Sg       00 34 52.7 -0.6
ERTU   Ertsjaerv          1.51 149   eP      Pn       00 34 33.6 -3.1
HARU   Harads             1.73 170   eP      Pn       00 34 37.5 -2.0
TOF    Tornio             2.40 136   ePG     Pn       00 34 50.3 +1.4
TOF                                  MSG              00 35 17.0
               comp=Z,4.7nm,0.2s
TOF                                  eSG     Sn       00 35 20.6 +1.6
SGF    Sodankyl           2.44  97   ePG     Pb       00 34 51.4 -1.7
SGF                                  eSG     Sn       00 35 21.4 +1.5
ARE0   ARCESS Array S     2.56  46   ePG     Pn       00 34 52.0 +0.9
ARE0                                 eSB     Sn       00 35 21.3 -1.6
RNF    Rovaniemi          2.57 116   ePG     Pn       00 34 53.1 +1.9
RNF                                  eSB     Sn       00 35 24.2 +1.0
MSF    Maaselka           3.98 115   eS      Sn       00 35 51.9 -6.1
```

UPP 25 00:34:25.2±0.5**, 67°.84N×20°.19E, h0**^{km}**, ML2.3, Explosion, Sweden**

```
Code   Station Name       Δ°   AZ°    Phase ID         Time       Res
                                     Op      ISC       h  m  s    ISC
KUA    Kurravaara         0.13  26   P       Pg       00 34 27.8 +0.2
KUA                                  S       Sg       00 34 29.8 +0.5
KOVU   Salmi              0.39 358   S       Sg       00 34 37.9 +0.3
PAJU   Pajala             1.39 125   S       Sg       00 35 09.0 -0.9
```

ECX ***25*** *00:49:47.4±0.6, 30°.35N×114°.04W, h13^{km}±6^{km}, MD3.0, ML3.3*

MEX ***25*** *00:49:51.8±0.5, 30°.61N×114°.06W, h7^{km}±5^{km}, MD4.0*

ISC 25 00:49:47.8±2.7**, 30°.4N**±0°.1×**114°.04W**±0°.06**, h28**^{km}±15^{km}**, n12, σ1^{s}.01**/19**, 1C-1D, Gulf of California**

```
Code   Station Name       Δ°   AZ°    Phase ID         Time       Res
                                     Op      ISC       h  m  s    ISC
SFX    San Felipe         0.94 312   eP      Pn       00 50 04.0 -1.1
SFX                                  eS      Sb       00 50 18.0 +0.5
PIX    Pinacate           1.25  23   eP      Pn       00 50 09.8 +0.3
PIX                                  eS      Sb       00 50 27.6 +1.1
ECBX   El Chinero         1.37 321   eP      Pn       00 50 11.4 +0.3
SPX    San Pedro Mart     1.38 297   eP      Pb       00 50 12.2 -0.9
SPX                                  eS      Sb       00 50 30.7 +0.2
SPX                                   IAML            00 50 43.6
               comp=E,267nm,0.7s
SPX                                ⇑e                 00 50 43.6
SPX                                   IAML            00 50 44.5
               comp=N,229nm,0.5s
SPX                                  e                00 50 44.5
SPX    San Pedro Mart     1.38 297   eP      Pb       00 50 12.6 -0.6
SPX                                  eS      Sn       00 50 28.5 -0.5
SPIG   San Pedro Mart     1.38 298   eP      Pn       00 50 12.1 +0.5
SPIG   San Pedro Mart     1.38 298   eP      Pb       00 50 12.4 -0.8
SPIG                                 eS      Sn       00 50 29.4 +0.3
SQX    San Quintin        1.59 276   eP      Pn       00 50 14.8 +0.6
SQX                                   IAML            00 50 40.1
               comp=E,421nm,0.3s
214A   Organ Pipe Nat     1.87  34   eP      Pn       00 50 18.8 +0.7
214A                                 eS      Sn       00 50 39.4 -1.3
ESJX   Sierra Juarez      2.28 315   eP      Pn       00 50 25.3 +1.5
CBX    Cerro Bola         2.94 311   eP      Pn       00 50 34.8 +1.9
CBX                                ⇓e                 00 51 30.1
CBX                                   IAML            00 51 30.1
               comp=E,146nm,0.9s
CBX                                   IAML            00 51 37.2
               comp=N,139nm,1.0s
CBX                                  e                00 51 37.2
CBX    Cerro Bola         2.94 311   eP      Pn       00 50 33.7 +0.9
CBX                                i S       Sn       00 51 06.5 -0.7
```

JMA ***25*** *00:56:10.1, 38°.46N×141°.84E, h55^{km}±1^{km}, M3.9*

JMA Felt II J1.

IDC ***25*** *00:56:11.8±2.4, 38°.50N×141°.79E, h73^{km}±21^{km}, mb3.3/15, mb1 3.5/19, mb1mx3.4/46, mbtmp3.7/19, MS2.1/1, Ms1 2.1/1, ms1mx2.0/23, Error ellipse: s-maj=21.7km s-min=15.5km az=112.0*

ISC 25 00:56:09.4±0.7**, 38°.40N**±0°.04×**141°.92E**±0°.07**, h55**^{km}±6^{km}**, n42, σ1^{s}.21**/52**, mb3.6**/15**, Near east coast of eastern Honshu**

```
Code   Station Name       Δ°   AZ°    Phase ID         Time       Res
                                     Op      ISC       h  m  s    ISC
JIKH   Ishinomakikobu     0.36 256   P       Pn       00 56 19.9 +0.3
JIKH                                 S       Sn       00 56 26.8 -0.1
JIO    Ouri               0.45 278   P       Pn       00 56 20.5 +0.1
JIO                                  S       Sn       00 56 27.6 -0.8
JKMT   Kesennumamotoy     0.54 320   P       Pn       00 56 21.2 -0.3
JKMT                                 S       Sn       00 56 29.0 -1.2
OFUJ   Ofunato            0.71 344   P       Pn       00 56 23.2 -0.3
OFUJ                                 eS      Sn       00 56 32.7 -1.1
JMK    Ichinoseki         0.78 316   P       Pn       00 56 24.2 -0.2
JMK                                  S       Sn       00 56 34.2 -1.1
JOU    Okura              0.98 269   P       Pn       00 56 27.1  0.0
JOU                                  eS      Sn       00 56 39.6 -0.5
JMM    Marumori           1.03 239   P       Pn       00 56 27.8 +0.1
JMM                                  eS      Sn       00 56 40.8 -0.4
JOM    Ohasama            1.18 336   P       Pn       00 56 29.5 -0.2
JOM                                  eS      Sn       00 56 44.0 -0.8
JFK    Kawauchi           1.32 219   P       Pn       00 56 32.2 +0.6
JFK                                  eS      Sn       00 56 48.5 +0.3
JYK    Kaneyama           1.32 294   P       Pn       00 56 31.6 -0.1
JYK                                  S       Sn       00 56 47.7 -0.6
JRG    Rokugo             1.41 315   P       Pn       00 56 32.6 -0.2
JYS    Shirataka          1.47 264   P       Pn       00 56 34.1 +0.5
JYS                                  eS      Sn       00 56 52.0 +0.3
JFT    Otama              1.53 235   P       Pn       00 56 34.9 +0.5
JFT                                  eS      Sn       00 56 53.6 +0.4
MJAR   Matsushiro Arr     3.48 239   P       Pn       00 57 03.9 +2.7
               0.6nm,0.3s,baz=62,slow=26,SNR=12
MJAR                                 LR      LR       00 58 03.9
               comp=Z,30nm,20.8s,baz=40,slow=33
MAT    Matsushiro         3.48 239   P       Pn       00 57 03.6 +2.5
MAT                                  eS      Sn       00 57 40.1 -1.0
JHJ    Hachijo jima 2     5.54 199   P       Pn       00 57 29.2 -0.1
               13nm,0.3s,baz=175,slow=21,SNR=6.5
JHJ                                  S       Sn       00 58 30.1 -1.7
               29nm,0.3s,baz=114,slow=23,SNR=6.9
ASAJ   Asahikawa          5.74   5   P       Pn       00 57 31.4 -0.6
               5.5nm,0.3s,baz=225,slow=14,SNR=7.5
ASAJ                                 S       Sn       00 58 41.2 +4.7
               0.9nm,0.3s,baz=248,slow=19,SNR=1.9
USRK   Ussuriysk Ar.      9.45 311   P       Pn       00 58 23.6 +0.8
               baz=119,slow=14,SNR=4.5
JNU    Nakatsue          10.40 243   P       Pn       00 58 37.9 +2.0
               0.4nm,0.3s,baz=22,slow=16,SNR=1.9
KSRS   Korea Array       11.10 269   P       Pn       00 58 54.6 +9.3
               0.3nm,0.3s,baz=81,slow=14,SNR=2.6
JCJ    Chichijima        11.27 179   P       Pn       00 58 46.0 -1.8
               2.1nm,0.3s,baz=300,slow=20,SNR=1.6
JCJ                                  S       Sn       01 00 43.6 -8.7
               3.0nm,0.3s,baz=259,slow=19,SNR=1.2
SEY    Seymchan          25.38  11   P       P        01 01 31.9 +0.7
               1.0nm,0.4s,baz=194,slow=7.9,SNR=6.7
SONM   Songino Array     27.38 302   P       P        01 01 48.9 -0.7
               0.2nm,0.5s,baz=110,slow=7.8,SNR=1.9
H11N2  WAKE ISLAND Hy    28.54 124   T       T        01 32 18.3
               baz=316,slow=75,SNR=88
H11N1  WAKE ISLAND Hy    28.54 124   T       T        01 32 19.0
               baz=316,slow=75,SNR=586
H11N3  WAKE ISLAND Hy    28.55 124   T       T        01 32 23.0
               baz=316,slow=75,SNR=381
H11S1  WAKE ISLAND Hy    29.30 126   T       T        01 33 17.8
               baz=318,slow=76,SNR=86
H11S3  WAKE ISLAND Hy    29.30 126   T       T        01 33 17.9
               baz=318,slow=76,SNR=281
H11S2  WAKE ISLAND Hy    29.31 126   T       T        01 33 19.1
               baz=318,slow=76,SNR=44
ZALV   Zalesovo Beam     41.30 311   P       P        01 03 49.0 -0.3
               1.2nm,0.4s,baz=88,slow=7.1,SNR=5.4
MKAR   Makanchi Array    43.75 301   P       P        01 04 08.8 -0.5
               0.7nm,0.7s,baz=86,slow=9.1,SNR=9.7
ILAR   Eielson Array     48.13  33   P       P        01 04 43.1 -0.4
               0.2nm,0.6s,baz=268,slow=6.3,SNR=4.5
ILAR                                 pP      pP       01 04 59.6 +1.7
               0.5nm,0.7s,baz=263,slow=6.5,SNR=6.9
WRA    Warramunga Arr    58.46 188   P       P        01 06 00.2 +0.4
               1.0nm,0.8s,baz=8.1,slow=7.3,SNR=5.7
WRA                                  pP      pP       01 06 15.3 +0.7
               0.8nm,0.7s,baz=6.2,slow=7.3,SNR=5.0
RES    Resolute Bay      61.18  15   P       P        01 06 18.0 +0.2
               0.5nm,0.5s,baz=299,slow=5.5,SNR=5.0
ASAR   Alice Springs     62.19 188   P       P        01 06 25.8 +0.6
               0.4nm,0.7s,baz=8.9,slow=6.6,SNR=4.1
YKA    Yellowknife Ar    62.43  31   P       P        01 06 25.7 -0.6
               0.3nm,0.7s,baz=299,slow=6.1,SNR=4.8
FINES  FINESS Array B    67.80 332   P       P        01 07 00.2 -0.9
               1.4nm,1.0s,baz=32,slow=12,SNR=2.0
NOA    NORSAR Array B    73.08 337   P       P        01 07 33.2 -0.2
               0.5nm,0.7s,baz=38,slow=14,SNR=4.1
AKASG  Malin Array Be    73.46 322   P       P        01 07 34.1 -1.7
               0.5nm,0.4s,baz=44,slow=7.4,SNR=1.8
PDAR   Pinedale Array    76.43  46   P       P        01 07 54.4 +1.0
               0.3nm,0.7s,baz=259,slow=1.8,SNR=3.8
BRTR   Keskin Array B    78.25 312   P       P        01 08 03.0 -0.5
               0.2nm,0.5s,baz=295,slow=34,SNR=1.9
TXAR   Lajitas Array     88.98  53   P       P        01 09 00.1 +1.6
               0.3nm,0.8s,baz=305,slow=6.4,SNR=4.3
```

IDC ***25*** *01:05:43.8±2.0, 1°.50N×126°.87E, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.5/31, mbtmp3.9/3, Error ellipse: s-maj=166.5km s-min=23.2km az=66.0*

DJA ***25*** *01:05:47.8±0.5, 1°N±8°×12°6E±°, h10^{km}, M4.0/6, MLv4.0/6*

NEIC ***25*** *01:05:52.2±0.9, 1°.3N±0°.2×126°.8E±0°.3, h74^{km}±10^{km}, mb4.0/9, Error ellipse: s-maj=52.0km s-min=7.7km az=57.0*

ISC 25 01:05:48.6±1.1**, 1°.3N**±0°.1×**126°.5E**±0°.1**, h35**^{km}**, n18, σ1^{s}.84**/18**, mb4.0**/7**, Northern Molucca Sea**

```
Code   Station Name       Δ°   AZ°    Phase ID         Time       Res
                                     Op      ISC       h  m  s    ISC
TNTI   Ternate            1.03 117   P       Pn       01 06 08.6 +2.1
TNTI   Ternate            1.03 117           Pn       01 06 08.7 +2.1
TNTI                                 Sn      Sn       01 06 20.1 +0.4
LBMI   Labuha             2.15 151   P       Pn       01 06 24.7 +2.8
KMSI   Cibinong           2.56 255   P       Pn       01 06 29.3 +1.7
WB0    Warramunga Arr    22.29 160   P       P        01 10 43.2 +0.1
WB0                                  IAmb    IAmb     01 10 48.9
               comp=Z,8.6nm,1.1s
COEN   Coen              22.42 133   P       P        01 10 39.3 -5.2
WRA    Warramunga Arr    22.43 160   P       P        01 10 45.1 +0.5
               comp=Z,2.8nm,0.5s,baz=340,slow=11,SNR=20
WRA    Warramunga Arr    22.43 160   P       P        01 10 45.1 +0.5
WB2    Warramunga Arr    22.44 160   P       P        01 10 45.4 +0.8
WB2                                  IAmb    IAmb     01 10 47.4
               comp=Z,7.3nm,1.1s
WR0    Warramunga Arr    22.52 160   P       P        01 10 45.9 +0.4
WR0                                  IAmb    IAmb     01 10 48.2
               comp=Z,3.7nm,0.8s
ASAR   Alice Springs     25.80 164   P       P        01 11 18.4 +1.7
               comp=Z,0.7nm,0.5s,baz=343,slow=7.8,SNR=12
ASAR   Alice Springs     25.80 164   P       P        01 11 16.2 -0.5
FORT   Forrest           31.89 177   P       P        01 12 10.7  0.0
STKA   Stephens Creek    35.94 158   P       P        01 12 44.6 -1.2
MK31   Makanchi Array    59.44 326   P       P        01 15 48.2 +0.3
MK31                                 IAmb    IAmb     01 15 52.0
               comp=Z,1.5nm,1.1s
MKAR   Makanchi Array    59.44 326   P       P        01 15 48.6 +0.7
               comp=Z,0.6nm,0.4s,baz=120,slow=8.2,SNR=19
MKAR   Makanchi Array    59.44 326   P       P        01 15 48.1 +0.2
KURK   Kurchatov         63.68 328   P       P        01 16 17.1 +0.7
```

IDC ***25*** *01:17:01.4±0.9, 19°.85S×70°.79W, h0^{km}, mb3.6/7, mb1 3.9/9, mb1mx3.8/29, mbtmp3.7/9, ML3.7/2, MS2.5/1, Ms1 2.5/1, ms1mx2.3/22, Error ellipse: s-maj=30.8km s-min=13.8km az=62.0*

SJA ***25*** *01:17:02.4±1.0, 19°.89S×70°.88W, h21^{km}±6^{km}, ML3.5, MW3.7*

GUC ***25*** *01:17:04.5±0.8, 19°.91S×70°.87W, h34^{km}±3^{km}, ML3.8*

ISC 25 01:17:03.5±1.1**, 19°.86S**±0°.02×**70°.82W**±0°.04**, h19**^{km}±3^{km}**, n51, σ1^{s}.30**/73**, mb3.5**/6**, 6C-5D, Near coast of northern Chile**

```
Code   Station Name       Δ°   AZ°    Phase ID         Time       Res
                                     Op      ISC       h  m  s    ISC
PSGC   Pisagua            0.70  68⇑i P       Pn       01 17 18.2 -0.3
PSGC                               i S       Sn       01 17 28.4 -0.5
PSGCX  Pisagua            0.70  68 i P       Pn       01 17 18.1 -0.4
PSGCX                                eS      Sn       01 17 29.1 +0.2
TA01   Diego Aracena      0.92 140⇓i P       Pg       01 17 21.4 -0.1
TA01                               i S       Sn       01 17 34.5 +0.4
TA01                                  IAML            01 17 35.9
               comp=N,4µm,0.4s
PB11   IPOC Station P     1.10  85⇑i P       Pg       01 17 24.8  0.0
PB11                               i S       Sg       01 17 40.3 +1.1
PB11                                  IAML            01 17 42.9
               comp=N,5µm,0.4s
PB11   IPOC Station P     1.10  85   eP      Pg       01 17 24.8  0.0
PB11                                 eS      Sg       01 17 40.5 +1.2
PB11                                  IAML            01 17 43.3
               comp=Z,2µm,0.3s
PATCX  Punta Patache      1.14 147⇓i P       Pb       01 17 24.6  0.0
PATCX                              i S       Sn       01 17 39.5 -0.2
PATCX                                 IAML            01 17 46.5
               comp=E,2µm,0.4s
PATCX  Punta Patache      1.14 147   eP      Pb       01 17 24.7  0.0
PATCX                                eS      Sg       01 17 40.6  0.0
PB12   IPOC Station P     1.32  20⇓i P       Pg       01 17 27.9 -1.2
PB12                               i S       Sg       01 17 46.9 +0.6
PB12                                  IAML            01 17 48.3
               comp=N,2µm,0.4s
PB12   IPOC Station P     1.32  20   eP      Pg       01 17 27.8 -1.2
PB12                                 eS      Sg       01 17 45.9 -0.5
PB12                                  IAML            01 17 51.5
               comp=Z,2µm,0.5s
GO01   Chusmiza           1.54  83⇑i P       Pg       01 17 32.3 -0.9
GO01                               i S       Sg       01 17 53.9 +0.5
AP01   Chacalluta         1.55  17⇑i P       Pg       01 17 31.8 -1.5
AP01                               i S       Sg       01 17 53.4 -0.1
PB08   IPOC Station P     1.59 100⇑i P       Pg       01 17 32.6 -1.6
PB08                               i S       Sg       01 17 54.6 -0.3
PB08                                  IAML            01 17 56.7
               comp=E,1µm,0.5s
PB08   IPOC Station P     1.59 100   eP      Pg       01 17 32.8 -1.3
PB08                                 eS      Sg       01 17 54.3 -0.7
PB02   IPOC Station P     1.69 150⇓i P       Pn       01 17 32.5 +0.4
PB02                                  IAML            01 18 01.0
               comp=N,3µm,0.5s
PB02   IPOC Station P     1.69 150   eP      Pb       01 17 32.6 -1.4
PB02                                 eS      Sb       01 17 55.0  0.0
PB02                                  IAML            01 18 01.1
               comp=Z,508nm,0.5s
PB01   IPOC Station P     1.71 134 i P       Pb       01 17 33.4 -1.0
PB01                               i S       Sb       01 17 55.7 +0.1
PB01                                  IAML            01 18 02.8
               comp=E,1µm,0.4s
PB16   IPOC Station P     1.96  39⇑i P       Pg       01 17 39.4 -1.8
PB16                               i S       Sg       01 18 06.0 -0.7
PB16   IPOC Station P     1.96  39   eP      Pg       01 17 39.3 -1.8
PB16                                 eS      Sg       01 18 06.5 -0.2
PB07   IPOC Station P     2.05 155   eP      Pn       01 17 37.2  0.0
PB07                                 eS      Sb       01 18 04.4 -1.1
PB07                                  IAML            01 18 15.2
               comp=E,953nm,0.6s
PB07   IPOC Station P     2.05 155   eP      Pn       01 17 37.2  0.0
PB07                                 eS      Sg       01 18 08.6 -1.0
PB03   IPOC Station P     2.39 156   eP      Pn       01 17 42.0 +0.1
PB03                                 eS      Sn       01 18 11.7 +0.9
PB03                                  IAML            01 18 23.0
               comp=E,372nm,0.3s
PB03   IPOC Station P     2.39 156   eP      Pn       01 17 42.0 +0.1
PB03                                 eS      Sg       01 18 21.5 +0.9
PB03                                  IAML            01 18 27.8
               comp=Z,87nm,0.6s
PB09   IPOC Station P     2.42 143 i P       Pb       01 17 44.2 -2.4
PB09                                 eS      Sg       01 18 19.7 -1.9
PB04   IPOC Station P     2.54 166⇓i P       Pn       01 17 43.1 -0.8
PB04                                 eS      Sb       01 18 17.3 -2.2
PB04                                  IAML            01 18 34.7
               comp=N,665nm,0.3s
PB04   IPOC Station P     2.54 166 i P       Pn       01 17 43.1 -0.8
PB04                                 eS      Sg       01 18 26.8 +1.5
PB05   IPOC Station P     3.03 169 i P       Pn       01 17 49.3 -1.3
PB05                                 eS      Sn       01 18 27.1 +0.6
PB06   IPOC Station P     3.06 158 i P       Pn       01 17 50.6 -0.4
PB06                                 eS      Sg       01 18 39.4 -2.5
LVC    Limon Verde        3.26 147   Pn      Pn       01 17 55.9 +1.9
               comp=N,5.4nm,0.3s,baz=359,slow=7.3,SNR=77
LVC                                  Pg      Pb       01 18 02.5 +1.5
               comp=N,12nm,0.3s,baz=321,slow=11,SNR=25
LVC                                  Sn      Sn       01 18 34.3 +1.8
               comp=N,16nm,0.3s,baz=67,slow=22,SNR=9.7
LVC                                  LR      LR       01 18 40.1
               comp=N,68nm,18.6s,baz=224,slow=30
LVC                                  Lg      Lg       01 18 43.2
               comp=N,14nm,0.3s,baz=175,slow=10,SNR=11
LVC    Limon Verde        3.26 147 i P       Pn       01 17 55.9 +1.9
LVC                                  eS      Sg       01 18 45.6 -2.8
LVC                                   IAML            01 18 55.0
               comp=Z,66nm,0.5s
PB15   IPOC Station P     3.56 160 i P       Pn       01 17 57.6 -0.4
PB15                                 eS      Sg       01 18 56.7 -1.2
PB15                                  IAML            01 19 02.8
               comp=Z,264nm,0.9s
PB10   IPOC Station P     3.65 176 i P       Pn       01 17 57.2 -1.7
LPAZ   La Paz             4.37  36   Pn      Pb       01 18 18.2 -1.9
               comp=Z,1.8nm,0.3s,baz=236,slow=9.3,SNR=40
PB14   IPOC Station P     4.76 175 i P       Pn       01 18 12.5 -2.1
YJA    Yavi               5.46 116 i P       Pb       01 18 34.3 -4.2
YJA                                   IAML            01 20 06.4
               comp=Z,5.8nm,3.7s
AZAP   Zapla              6.88 130 i P       Pb       01 18 52.7  -10
AZAP                                  IAML            01 20 45.2
               comp=Z,5.6nm,2.9s
SIV    San Ignacio       10.04  69   Pn      Pn       01 19 28.7 +1.9
               comp=Z,1.2nm,0.3s,baz=271,slow=10,SNR=22
PLCA   Paso Flores       20.81 179   P       Pn       01 21 44.9 -1.4
               comp=Z,0.8nm,0.5s,baz=166,slow=8.3,SNR=1.7
PTGA   Pitinga           21.78  30   P       P        01 21 55.3 +0.9
               comp=Z,1.9nm,0.3s,baz=225,slow=18,SNR=6.6
TXAR   Lajitas Array     58.27 326   P       P        01 26 57.9 +0.8
               comp=Z,0.1nm,0.5s,baz=145,slow=8.8,SNR=4.7
PDAR   Pinedale Array    71.81 331   P       P        01 28 26.8 +1.7
               comp=Z,0.2nm,0.4s,baz=105,slow=6.8,SNR=2.1
NVAR   Mina Array Bea    73.11 323   P       P        01 28 34.0 +1.1
               comp=Z,0.2nm,0.4s,baz=170,slow=5.5,SNR=2.5
TORD   Torodi Ar. Bea    78.51  71   P       P        01 29 03.5 -0.6
               comp=Z,0.9nm,0.6s,baz=246,slow=5.0,SNR=7.7
YKA    Yellowknife Ar    89.06 341   P       P        01 29 57.5 +0.7
               comp=Z,0.1nm,0.5s,baz=137,slow=4.8,SNR=4.1
H11S2  WAKE ISLAND Hy   125.88 279   T       T        03 55 25.3
               baz=101,slow=74,SNR=23
H11S1  WAKE ISLAND Hy   125.89 279   T       T        03 55 25.8
               baz=101,slow=74,SNR=13
H11S3  WAKE ISLAND Hy   125.90 279   T       T        03 55 26.6
               baz=101,slow=74,SNR=13
H11N3  WAKE ISLAND Hy   125.93 280   T       T        03 55 28.3
               baz=101,slow=74
H11N2  WAKE ISLAND Hy   125.94 280   T       T        03 55 29.4
               baz=101,slow=74
H11N1  WAKE ISLAND Hy   125.94 280   T       T        03 55 29.7
               baz=101
MKAR   Makanchi Array   145.30  33   PKPbc   PKPdf    01 36 40.5 +0.4
```

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,0.5nm,0.6s,baz=325,slow=3.5,SNR=7.2						
SONM	Songino Array	152.00	4	PKPbc	PKiKP	01 36 58.3	+0.4
	comp=Z,0.3nm,0.6s,baz=17,slow=0.7,SNR=3.1						

JMA 25 01:31:09.0, 38°.46N×141°.84E, h55^{km}±1^{km}, M3.9, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.33	243	P	Pn	01 31 18.9	+0.1
JIKH				S	Sn	01 31 25.7	-0.2
JIO	Ouri	0.39	269	P	Pn	01 31 19.4	0.0
JIO				S	Sn	01 31 26.6	-0.2
JKMT	Kesennumamotoy	0.45	321	P	Pn	01 31 20.2	+0.1
JKMT				S	Sn	01 31 27.9	-0.1
OFUJ	Ofunato	0.63	348	P	Pn	01 31 22.2	0.0
OFUJ				*e*S	Sn	01 31 31.6	-0.1
JMK	Ichinoseki	0.69	316	P	Pn	01 31 23.2	+0.4
JMK				*e*S	Sn	01 31 33.1	+0.2
JOU	Okura	0.93	265	P	Pn	01 31 26.0	+0.1
JOU				S	Sn	01 31 38.5	+0.1
JMM	Marumori	1.02	235	P	Pn	01 31 26.8	-0.3
JMM				*e*S	Sn	01 31 39.8	-0.6
JOM	Ohasama	1.10	337	P	Pn	01 31 28.5	+0.3
JYK	Kaneyama	1.25	292	P	Pn	01 31 30.5	+0.4
JYK				*e*S	Sn	01 31 46.8	+0.9
JRG	Rokugo	1.33	315	P	Pn	01 31 31.5	+0.3
JFK	Kawauchi	1.33	215	P	Pn	01 31 31.2	-0.1
JFK				*e*S	Sn	01 31 47.6	-0.5
JYS	Shirataka	1.42	261	P	Pn	01 31 33.0	+0.6
JFT	Otama	1.52	232	P	Pn	01 31 34.3	+0.5
JFT				*e*S	Sn	01 31 52.5	+0.1
MAT	Matsushiro	3.46	238	P	Pn	01 32 03.1	+2.6
MAT				*e*S	Sn	01 32 44.1	+3.8

*IDC **25** 01:50:44.0±1.5, 36°.20N×141°.52E, h0^{km}, mb3.3/3, mb1 3.5/5, mb1mx3.3/38, mbtmp3.3/5, ML2.7/2, MS3.7/1, Ms1 3.7/1, ms1mx2.7/28, Error ellipse: s-maj=29.7km s-min=27.9km az=133.0*
*JMA **25** 01:50:50.8±0.1, 35°.79N×140°.90E, h12^{km}±1^{km}, M3.6*
JMA Felt I J1.
ISC 25 01:50:50.3±0.9, **35°.74N**±0°.04×**140°.76E**±0°.07, **h14**^{km}±7^{km}, **n21**, σ**1^{s}20**/19, **4C-1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.09	115	⇓P	Pg	01 50 53.5	+0.1
CHOJ				S	Sg	01 50 55.3	-0.1
JSMT	Sammumatsuo	0.27	249	⇑P	Pn	01 50 59.2	-0.7
JIHU	Itakohorinouch	0.30	320	⇑P	Pb	01 50 58.6	+1.2
JHYU	Hitachinakayam	0.62	347	⇑P	Pb	01 51 02.9	0.0
JHYU				S	Sb	01 51 11.2	-0.2
JYT	Yasato	0.67	317	P	Pg	01 51 04.3	+0.9
JYT				S	Sn	01 51 14.1	-1.5
BSO4	Boso 4	0.82	205	P	Pn	01 51 08.7	+1.3
JHO	Hitachi	0.88	350	⇑P	Pb	01 51 06.5	-0.9
BSO3	Boso 3	0.96	192	P	Pg	01 51 10.2	+1.4
MJAR	Matsushiro Arr	2.22	292	Pn	Pn	01 51 28.0	+1.4
	0.7nm,0.3s,baz=95,slow=10,SNR=18						
MJAR				Sn	Sg	01 52 00.4	-1.2
	0.8nm,0.3s,baz=97,slow=14,SNR=5.2						
MAT	Matsushiro	2.22	292	P	Pn	01 51 28.1	+1.4
MAT				*e*S	Sb	01 51 56.9	-0.6
JHJ	Hachijo jima 2	2.74	197	Pn	Pb	01 51 37.1	-1.8
	3.7nm,0.3s,baz=227,slow=20,SNR=1.6						
JHJ				Sn	Sn	01 52 08.0	+1.4
	6.8nm,0.3s,baz=43,slow=16,SNR=1.8						
H11N2	WAKE ISLAND Hy	27.97	118	T	T	02 25 37.5	
	baz=310,slow=75,SNR=50						
H11N1	WAKE ISLAND Hy	27.98	118	T	T	02 25 48.6	
	baz=310,slow=75,SNR=37						
H11N3	WAKE ISLAND Hy	27.99	118	T	T	02 25 40.8	
	baz=310,slow=75,SNR=52						
H11S1	WAKE ISLAND Hy	28.63	120	T	T	02 26 30.7	
	baz=312,slow=75,SNR=62						
H11S3	WAKE ISLAND Hy	28.63	120	T	T	02 26 30.6	
	baz=312,slow=75,SNR=71						
H11S2	WAKE ISLAND Hy	28.65	120	T	T	02 26 27.4	
	baz=312,slow=75,SNR=51						
DAV	Davao City (W)	31.75	210	LR	LR	02 08 52.9	
	comp=Z,151nm,21.8s,baz=1.0,slow=34						
MKAR	Makanchi Array	44.37	303	P	P	01 58 59.2	-0.9
	0.2nm,0.7s,baz=84,slow=8.8,SNR=2.3						
WRA	Warramunga Arr	55.71	187	P	P	02 00 26.5	+0.2
	0.1nm,0.4s,baz=4.4,slow=7.6,SNR=1.3						
YKA	Yellowknife Ar	65.19	30	P	P	02 01 21.5	-9.1
	0.0nm,0.3s,baz=307,slow=8.2,SNR=3.9						

*NIED **25** 01:52:00, 29°.40N×130°.80E, h23^{km}, Mw4.1 Best double couple: M$_0$1.60000×10^{15} NP1:φ$_s$24.00000°, δ68.00000°, λ88.00000°. NP2:φ$_s$210.00000°, δ22.00000°, λ95.00000°.*
*JMA **25** 01:52:37.1±0.2, 29°.44N×130°.76E, h38^{km}±4^{km}, M3.6*
*IDC **25** 01:52:40.0±1.4, 30°.00N×129°.72E, h0^{km}, mb3.4/5, mb1 3.6/7, mb1mx3.5/35, mbtmp3.4/7, ML3.3/2, MS3.9/2, Ms1 3.9/2, ms1mx3.0/35, Error ellipse: s-maj=35.4km s-min=25.0km az=97.0*
ISC 25 01:52:37.4±1.1, **29°.43N**±0°.03×**130°.81E**±0°.06, **h45**^{km}±17^{km}, **n29**, σ**1^{s}08**/43, **mb3.3**/5, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYAK	Yakushimahirau	0.84	342	P	Pn	01 52 52.1	-0.8
JYAK				S	Sn	01 53 03.6	-0.6
JNN	Nakanoshima	0.91	297	P	Pn	01 52 52.9	-0.9
JNN				S	Sn	01 53 05.6	-0.3
JMTN	Minamitane	0.96	5	P	Pn	01 52 54.6	+0.1
JMTN				S	Sn	01 53 08.2	+1.1
JKC	Kuchinoerabu	1.16	333	P	Pn	01 52 56.7	-0.5
JKC				S	Sn	01 53 11.5	-0.3
JTN	Tanegashima 3	1.22	7	P	Pn	01 52 58.4	+0.3
JTN				S	Sn	01 53 14.4	+0.9
JTAJ	Takarajima	1.43	259	P	Pn	01 53 01.1	+0.2
JAM	Amami Oshima	1.47	226	P	Pn	01 53 02.0	+0.6
JAM				*e*S	Sn	01 53 19.7	+0.2
JTSR	Tashiro 2	1.73	3	P	Pn	01 53 05.8	+0.8
JTSR				*e*S	Sn	01 53 27.1	+1.2
JAMN	Amaminishikomi	1.86	231	P	Pn	01 53 07.3	+0.5
JAMN				*e*S	Sn	01 53 29.2	0.0
JSU	Suzuyama	2.09	352	P	Pn	01 53 09.8	-0.2
JNAR	Kushima--Naru	2.12	11	P	Pn	01 53 11.5	+1.1
JNAR				*e*S	Sn	01 53 38.0	+2.5
JTK	Tokunoshima	2.32	225	P	Pn	01 53 14.2	+1.1
JTK				S	Sn	01 53 42.5	+2.1
JOKE	Okinoerabujima	2.86	224	P	Pn	01 53 21.3	+0.8
JOKE				S	Sn	01 53 54.3	+0.6
JYRO	Yoronjima	3.18	222	P	Pn	01 53 25.3	+0.4
JYRO				*e*S	Sn	01 54 01.9	+0.3
JOW	Kunigami	3.43	221	Pn	Pn	01 53 28.6	+0.3
	1.7nm,0.3s,baz=90,slow=16,SNR=15						
JOW				Sn	Sn	01 54 09.9	+2.2
	1.1nm,0.3s,baz=240,slow=20,SNR=1.8						
JKDJ	Kitadaitoujima	3.50	173	P	Pn	01 53 29.8	+0.5
JKDJ				S	Sn	01 54 08.1	-1.3
JMZ	Minamidaito 2	3.62	174	P	Pn	01 53 31.2	+0.2
JMZ				*e*S	Sn	01 54 10.1	-2.3
JNU	Nakatsue	3.68	1	Pn	Pn	01 53 33.0	+1.2
	3.2nm,0.3s,baz=189,slow=12,SNR=23						
JNU				Sn	Sn	01 54 14.4	+0.5
	1.9nm,0.3s,baz=200,slow=15,SNR=2.1						
JNTH	Nagotoyohara	3.81	221	P	Pn	01 53 34.2	+0.6
JNTH				*e*S	Sn	01 54 17.2	0.0
JAGN	Aguni-jima	4.24	229	P	Pn	01 53 41.2	+1.7
JAGN				*e*S	Sn	01 54 28.8	+1.0
JKE	Kume jima 2	4.72	230	P	Pn	01 53 46.1	0.0
JKE				*e*S	Sn	01 54 40.9	+1.3
KLR	Kul'dur	19.78	2	P	Pn	01 57 04.3	-1.2
	0.2nm,0.3s,baz=205,slow=10,SNR=4.5						
SONM	Songino Array	26.30	321	P	P	01 58 07.3	-1.6
	0.5nm,0.7s,baz=133,slow=8.9,SNR=4.3						
MKAR	Makanchi Array	41.22	309	P	P	02 00 18.1	+0.3
	0.7nm,0.5s,baz=91,slow=10,SNR=9.8						
WRA	Warramunga Arr	49.21	176	P	P	02 01 34.9	+14
	0.4nm,0.6s,baz=352,slow=8.3,SNR=2.6						
ARU	Arti	56.34	321	LR	LR	02 28 43.7	
	comp=Z,89nm,18.8s,baz=132,slow=39						
AKTO	Aktyubinsk	57.26	313	LR	LR	02 27 47.9	
	comp=Z,93nm,18.8s,baz=103,slow=38						
ILAR	Eielson Array	60.54	29	P	P	02 02 52.1	+9.4
	0.1nm,0.5s,baz=281,slow=5.4,SNR=2.6						
YKA	Yellowknife Ar	74.66	26	P	P	02 04 20.1	+8.4
	0.3nm,0.9s,baz=296,slow=5.8,SNR=2.9						

IDC 25 02:01:47.9±3.4, **8°.09N**×**93°.82E**, **h0**^{km}, **mb3.8**/5, **mb1 3.9**/5, **mb1mx3.5**/44, **mbtmp3.8**/5, **MS3.0**/1, **Ms1 3.2**/1, **ms1mx2.7**/43, **Error ellipse: s-maj=134.0km s-min=30.0km az=58.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.44	25	LR	LR	02 09 06.6	
	comp=Z,70nm,18.4s,baz=10.0,slow=38						
H08S3	Diego Garcia H	26.39	234	T	T	02 34 02.4	
	baz=54,slow=74						
H08S2	Diego Garcia H	26.39	234	T	T	02 34 02.5	
	baz=54,slow=74						
H08S1	Diego Carcia H	26.40	234	T	T	02 34 04.7	
	baz=54						
MKAR	Makanchi Array	39.81	348	P	P	02 09 22.7	-0.1
	1.6nm,0.7s,baz=169,slow=7.7,SNR=15						
SONM	Songino Array	41.02	13	P	P	02 09 32.8	-0.2
	0.7nm,0.8s,baz=207,slow=7.9,SNR=4.0						
KURBB	Kurchatov Arra	44.26	346	P	P	02 09 58.9	-0.2
	1.6nm,0.7s,baz=166,slow=7.1,SNR=18						
ZALV	Zalesovo Beam	46.30	353	P	P	02 10 15.2	0.0
	2.5nm,0.8s,baz=189,slow=7.0,SNR=10						
WRA	Warramunga Arr	48.65	125	P	P	02 10 34.0	-0.1
	0.6nm,0.8s,baz=305,slow=8.4,SNR=2.7						

*IDC **25** 02:11:58.5±1.9, 19°.39S×70°.85W, h0^{km}, mb3.7/3, mb1 3.8/5, mb1mx3.5/34, mbtmp3.7/5, ML3.4/2, Error ellipse: s-maj=46.8km s-min=20.8km az=71.0*
*GUC **25** 02:12:02.6±0.5, 19°.51S×70°.85W, h41^{km}±2^{km}, ML3.3*
ISC 25 02:12:02.5±2.6, **19°.52S**±0°.05×**70°.9W**±0°.1, **h25**^{km}±16^{km}, **n21**, σ**1^{s}30**/24, **mb3.5**/3, **3C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.69	96	⇓*i*P	Pb	02 12 15.3	-0.6
PSGC				*i* S	Sb	02 12 25.0	-0.1
PSGC				IAML		02 12 26.9	
	comp=N,1μm,0.4s						
PB12	IPOC Station P	1.03	29	⇓*i*P	Pn	02 12 20.7	-0.7
PB12				*i* S	Sb	02 12 34.5	-0.4
PB12				IAML		02 12 39.1	
	comp=N,2μm,0.5s						
PB11	IPOC Station P	1.15	102	⇓*i*P	Pn	02 12 22.9	-0.2
PB11				*i* S	Sn	02 12 39.4	+1.2
TA01	Diego Aracena	1.21	149	⇑*i*P	Pn	02 12 23.9	0.0
TA01				*i* S	Sn	02 12 39.8	+0.3
TA01				IAML		02 12 44.9	
	comp=N,642nm,0.3s						
PB08	IPOC Station P	1.71	111	⇓*i*P	Pn	02 12 32.2	+1.1
PB08				*i* S	Sb	02 12 55.0	+0.2
PB08				IAML		02 12 57.0	
	comp=N,543nm,0.3s						
PB16	IPOC Station P	1.73	47	⇓*i*P	Pn	02 12 32.7	+1.2
PB16				*i* S	Sb	02 12 55.9	+0.4
PB16				IAML		02 12 58.4	
	comp=N,477nm,0.5s						
PB01	IPOC Station P	1.98	140	⇑*i*P	Pn	02 12 35.0	+0.5
PB01				*i* S	Sn	02 12 58.9	+0.3
PB01				IAML		02 13 06.3	
	comp=E,328nm,0.3s						
PB02	IPOC Station P	2.00	154	⇑*i*P	Pn	02 12 35.1	+0.3
PB02				*i* S	Sn	02 12 58.8	-0.3
PB02				IAML		02 13 06.0	
	comp=E,632nm,0.3s						
LVC	Limon Verde	3.57	150	Pn	Pn	02 12 57.9	+1.3
	comp=E,2.7nm,0.3s,baz=334,slow=12,SNR=32						
LVC				Sn	Sn	02 13 39.6	+1.4
	comp=E,4.5nm,0.3s,baz=48,slow=21,SNR=7.4						
LVC				Lg	Lg	02 13 55.4	
	comp=E,11nm,0.3s,baz=190,slow=17,SNR=8.2						
LPAZ	La Paz	4.13	39	Pn	Pn	02 13 08.9	+4.4
	comp=E,0.7nm,0.3s,baz=216,slow=4.6,SNR=21						
SIV	San Ignacio	9.95	71	Pn	Pn	02 14 24.0	-0.1
	comp=E,0.5nm,0.3s,baz=264,slow=10,SNR=10						
PTGA	Pitinga	21.50	31	P	P	02 16 47.8	-1.9
	comp=E,3.4nm,0.3s,baz=309,slow=22,SNR=10						
TORD	Torodi Ar. Bea	78.43	72	P	P	02 24 00.6	-1.1
	comp=E,0.4nm,0.7s,baz=229,slow=4.8,SNR=4.5						
YKA	Yellowknife Ar	88.73	341	P	P	02 24 53.3	-0.1
	comp=E,0.1nm,0.7s,baz=142,slow=4.5,SNR=2.3						
H11S2	WAKE ISLAND Hy	125.80	279	T	T	04 50 12.6	
	baz=100						
H11S1	WAKE ISLAND Hy	125.81	279	T	T	04 50 17.2	
	baz=100						
H11S3	WAKE ISLAND Hy	125.82	279	T	T	04 50 16.1	
	baz=100						
H11N3	WAKE ISLAND Hy	125.83	281	T	T	04 50 11.1	
	baz=99						
H11N2	WAKE ISLAND Hy	125.85	281	T	T	04 50 15.9	
	baz=99						
H11N1	WAKE ISLAND Hy	125.85	281	T	T	04 50 03.3	
	baz=99						
MKAR	Makanchi Array	145.03	33	PKP	PKPbc	02 31 37.3	+0.2
	comp=E,0.1nm,0.5s,baz=296,slow=4.2,SNR=4.5						

*NEIC **25** 02:13:42.3±1.5, 19°.52S±0°.03×70°.89W±0°.02, h23^{km}±1^{km}, mb4.4/9, Mwr4.2/42, ML4.2(GUC), Error ellipse: s-maj=5.8km s-min=3.5km az=219.0*
*NEIC **25** 02:13:43.2, 19°.49S×70°.85W, h23^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.27; M$_{\theta\theta}$-0.04; M$_{\phi\phi}$-1.23; M$_{r\theta}$0.64; M$_{\theta\phi}$-0.10; M$_{\phi r}$-1.75; Fault plane solution: M$_0$2.24000×10^{15} NP1:φ$_s$18.67000°, δ19.47000°, λ122.21000°. NP2:φ$_s$164.92000°, δ73.62000°, λ79.33000°. Principal axes: T 2.3236, Plg60.0000°, Azm60.0000°; N -0.1736, Plg10.0000°, Azm168.0000°; P -2.1500, Plg28.0000°, Azm263.0000°;*
*IDC **25** 02:13:43.5±5.7, 19°.53S×70°.57W, h20^{km}±37^{km}, mb3.8/11, mb1 4.0/13, mb1mx3.9/32, mbtmp4.0/13, ML4.1/2, MS3.3/3, Ms1 3.3/3, ms1mx3.1/21 Error ellipse: s-maj=22.4km s-min=18.9km az=87.0*
*GUC **25** 02:13:44.5±0.6, 19°.52S×70°.77W, h43^{km}±2^{km}, ML4.2*
*VAO **25** 02:13:48.7±0.9, 19°.55S×70°.47W, h62^{km}±6^{km}, mb4.3*
ISC 25 02:13:43.6±1.2, **19°.54S**±0°.03×**70°.77W**±0°.05, **h31**^{km}±6^{km}, **n100**, σ**1^{s}66**/112, **mb4.3**/14, **3C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.62	96	⇓*e*P	Pn	02 13 56.4	0.0
PSGC				*e*S	Sn	02 14 05.3	0.0
PSGCX	Pisagua	0.62	96		Pn	02 13 55.8	-0.6
PSGCX				Sg	Sn	02 14 05.6	+0.3
PB12	IPOC Station P	1.01	25	⇓*e*P	Pn	02 14 02.1	+0.3
PB12				*e*S	Sn	02 14 16.1	+1.0
PB12				IAML		02 14 19.0	
	comp=N,14μm,0.6s						
PB12	IPOC Station P	1.01	25	Pn	Pn	02 14 01.3	-0.5
PB12					Sn	02 14 15.7	+0.7
PB11	IPOC Station P	1.08	102	⇓*e*P	Pn	02 14 04.0	+1.2
PB11				*e*S	Sn	02 14 18.6	+1.8
PB11				IAML		02 14 22.2	
	comp=N,17μm,0.1s						
PB11	IPOC Station P	1.08	102	Pn	Pn	02 14 03.8	+1.0
PB11				Sn	Sn	02 14 19.4	+2.6
TA01	Diego Aracena	1.17	152	⇑*i*P	Pb	02 14 04.9	-0.3
TA01				*e*S	Sn	02 14 20.8	+2.0
PATCX	Punta Patache	1.40	156	Pn	Pb	02 14 07.8	-1.5
PATCX				Sn	Sb	02 14 26.1	-0.8
GO01	Chusmiza	1.50	95	Pn	Pb	02 14 10.3	-0.8
GO01				Sn	Sb	02 14 30.7	+0.8
PB08	IPOC Station P	1.64	112	⇓*e*P	Pb	02 14 13.2	-0.3
PB08				*e*S	Sb	02 14 34.5	+0.5
PB08				IAML		02 14 41.1	
	comp=N,3μm,0.4s						
PB16	IPOC Station P	1.69	45	⇓*e*P	Pb	02 14 14.2	-0.3
PB16				*e*S	Sb	02 14 36.5	+0.9
PB16				IAML		02 14 44.2	
	comp=N,5μm,0.6s						
PB16	IPOC Station P	1.69	45	Pn	Pn	02 14 11.6	-0.1
PB16				Sn	Sb	02 14 33.2	-2.4
PB01	IPOC Station P	1.92	141	⇑*i*P	Pb	02 14 16.0	-2.2
PB01				IAML		02 14 47.1	
	comp=E,3μm,0.7s						
PB01	IPOC Station P	1.92	141	Pn	Pb	02 14 16.0	-2.2
PB01				Sn	Sb	02 14 39.4	-2.4
PB02	IPOC Station P	1.96	155	⇑*i*P	Pn	02 14 16.2	+1.3
PB02				*e*S	Sn	02 14 39.9	+1.4
PB02				IAML		02 14 49.8	
	comp=N,3μm,0.5s						
PB07	IPOC Station P	2.33	159	Pn	Pn	02 14 21.9	+1.8
PB09	IPOC Station P	2.67	148	Pn	Pn	02 14 27.0	+2.3
PB04	IPOC Station P	2.84	168	Pn	Pn	02 14 26.2	-0.9
LVC	Limon Verde	3.52	151	Pn	Pn	02 14 38.3	+1.8
	comp=N,9.9nm,0.3s,baz=322,slow=11,SNR=2.2						
LVC				Pg	Pb	02 14 45.0	-0.4
	comp=N,21nm,0.3s,baz=3.1,slow=9.5,SNR=9.6						
LVC				Sn	Sn	02 15 19.9	+2.5
	comp=N,28nm,0.3s,baz=276,slow=17,SNR=4.7						
LVC				Lg	Lg	02 15 31.6	
	comp=N,36nm,0.3s,baz=64,slow=21,SNR=9.5						
LVC	Limon Verde	3.52	151	Pn	Pn	02 14 37.0	+0.4
LVC					Sn	02 15 18.6	+1.2
LVC	Limon Verde	3.52	151	*e*P	Pn	02 14 38.9	+2.3
PB10	IPOC Station P	3.96	177	Pn	Pn	02 14 41.1	-1.3
LPAZ	La Paz	4.09	38	Pn	Pb	02 14 50.0	-5.5
	comp=N,6.3nm,0.3s,baz=205,slow=1.9,SNR=18						
LPAZ	La Paz	4.09	38	Pn	Pn	02 14 44.6	-0.1
LPAZ	La Paz	4.09	38	*e*P	Pn	02 14 46.8	+2.0
PB14	IPOC Station P	5.08	176	Pn	Pn	02 14 56.9	-1.0
GO02	Mina Guanaco	5.71	169	Pn	Pn	02 15 06.4	-0.2
GO03	Copiap	8.04	177	Pn	Pn	02 15 38.2	-0.2
NNA	Nana	9.51	321	Pn	Pn	02 16 06.8	+8.2
	comp=N,0.6nm,0.3s,baz=225,slow=16,SNR=1.8						
NNA				Sn	Sn	02 17 35.4	-9.2
	baz=41,slow=20,SNR=1.7						
NNA				LR	LR	02 20 06.9	
	comp=N,148nm,18.0s,baz=170,slow=40						
SIV	San Ignacio	9.89	71	Pn	Pn	02 16 04.0	+0.2
	comp=N,2.5nm,0.3s,baz=271,slow=9.1,SNR=24						
SIV				Sn	Sn	02 17 57.1	+3.2
	baz=308,slow=17,SNR=1.2						
SIV				LR	LR	02 20 31.6	
	comp=N,335nm,20.3s,baz=287,slow=42						
SAML	Samuel	12.84	36		Pn	02 16 43.4	-0.8
SAML	Samuel	12.84	36	*e*P	Pn	02 16 46.6	+2.4
SAML				*e*S	Sn	02 19 05.3	-0.7
PEL	Peldehue	13.55	180	Pn	Pn	02 16 54.4	+0.5
CPUP	Villa Florida	14.11	121	Pn	Pn	02 17 03.5	+2.1
	comp=N,0.2nm,0.3s,baz=300,slow=12,SNR=13						
CPUP				LR	LR	02 23 08.3	
	comp=N,100nm,21.8s,baz=300,slow=40						
CPUP	Villa Florida	14.11	121		Pn	02 17 02.1	+0.7
CPUP	Villa Florida	14.11	121	*e*P	Pn	02 17 01.7	+0.3
AQDB	Aquidauana	14.20	96	*e*P	Pn	02 17 04.2	+1.5
SALV	Santo Antonio	14.81	78	*e*P	Pn	02 17 11.8	+0.7
ITQB	Itaqui	16.34	131	*e*P	Pn	02 17 29.4	-1.4
CLDB	Colider	16.81	61	*e*P	Pn	02 17 37.1	+0.1
TRCB	Terra Rica	17.23	104	*e*P	Pn	02 17 42.4	+0.2
ARAG	Araguaiana, MT	18.47	81	*e*P	P	02 17 56.8	-0.3
ITAB	Concordia	18.74	118	*e*P	Pn	02 18 00.6	0.0
CPSB	Cacapava Do Su	19.05	128	*e*P	P	02 18 03.4	-0.1
CNLB	Canela	20.56	122	*e*P	P	02 18 19.1	-0.8
BB19B	Bebedouro	20.92	98	*e*P	P	02 18 22.4	-1.6
PLCA	Paso Flores	21.13	180	P	P	02 18 27.5	+1.5
	comp=N,1.4nm,1.0s,baz=133,slow=7.8,SNR=3.3						
PLCA	Paso Flores	21.13	180	P	P	02 18 26.3	+0.2
PLCA	Paso Flores	21.13	180	*e*P	P	02 18 28.3	+2.3
IPMB	Ipameri, GO	21.42	90	*e*P	P	02 18 28.1	-1.3
PTGA	Pitinga	21.48	31	P	P	02 18 29.4	-0.5
	comp=N,30nm,0.3s,baz=211,slow=13,SNR=80						
PTGA	Pitinga	21.48	31	P	P	02 18 29.6	-0.3
FLOC	Florencia	21.53	347	*e*P	P	02 18 30.6	+0.2
FLOC	Florencia	21.53	347	P	P	02 18 31.8	+1.4
CRUC	La Cruz	21.83	343	*e*P	P	02 18 39.3	+5.2
BDFB	Brasilia	22.03	83	P	P	02 18 35.0	-1.0
	comp=N,1.7nm,0.3s,baz=242,slow=10,SNR=5.8						
BDFB	Brasilia	22.03	83	P	P	02 18 35.7	-0.3
BDFB				IAmb	IAmb	02 18 41.9	
	comp=Z,3.9nm,0.6s						
SOTA	Rioblanco	22.29	344	*e*P	P	02 18 42.5	+3.4
PCON	Cinco Dias	22.42	345	*e*P	P	02 18 46.6	+6.0
ORTC	Ortega, Tolima	23.71	349	*e*P	P	02 18 53.4	+0.2
BSCB	Bom Sucesso	24.43	98	*e*P	P	02 18 58.9	-1.0
ROSC	El Rosal	24.47	351	P	P	02 19 03.9	+3.3
	comp=Z,5.5nm,0.5s,baz=66,slow=20,SNR=2.6						
SMTB	Santa Maria do	24.82	68	*e*P	P	02 19 03.6	+0.2
GUY2C	Guyana, Caldas	25.02	349	*e*P	P	02 19 07.3	+1.6
RUSC	La Rusia	25.37	355	*e*P	P	02 19 08.8	0.0
RUSC	La Rusia	25.37	355	P	P	02 19 09.5	+0.6
JANB	Januaria	25.64	84	*e*P	P	02 19 10.0	-0.9
CBOC	Ciudad Bolivar	25.76	348	*e*P	P	02 19 12.8	+0.7
PTBC	PUERTO BERRIO,	26.16	352	*e*P	P	02 19 14.5	-1.0
SDV	Santo Domingo	28.24	0	P	P	02 19 33.6	-0.8
	comp=Z,0.6nm,0.3s,baz=315,slow=14,SNR=1.9						
SDV	Santo Domingo	28.24	0	P	P	02 19 33.3	-1.1
SMLC	San Martn de	28.35	353	*e*P	P	02 19 32.9	-2.2
MDP	Montagnes des	30.30	38	P	P	02 19 52.7	+0.3
	comp=Z,21nm,1.0s,baz=68,slow=11,SNR=2.9						
RCBR	Riachuelo	36.55	73	P	P	02 20 47.4	+0.4
	comp=Z,4.6nm,0.6s,baz=243,slow=11,SNR=4.5						
RCBR	Riachuelo	36.55	73	P	P	02 20 47.0	0.0
RCBR	Riachuelo	36.55	73	*e*P	P	02 20 47.0	0.0
TXAR	Lajitas Array	58.03	326	P	P	02 23 35.6	+1.6
	comp=Z,0.3nm,0.8s,baz=117,slow=17,SNR=2.5						
TXAR	Lajitas Array	58.03	326	P	P	02 23 32.5	-1.4
DBIC	Dimbokro	69.88	75	P	P	02 24 52.0	-0.2
	comp=Z,1.8nm,0.7s,baz=214,slow=11,SNR=1.9						
DBIC	Dimbokro	69.88	75	P	P	02 24 51.7	-0.5
DBIC				IAmb	IAmb	02 25 05.1	
	comp=Z,4.2nm,1.0s						
PDAR	Pinedale Array	71.55	331	P	P	02 25 04.7	+2.7
	comp=Z,0.3nm,0.8s,baz=124,slow=8.1,SNR=1.8						
NVAR	Mina Array Bea	72.88	323	P	P	02 25 13.2	+3.1
	comp=Z,0.2nm,0.6s,baz=105,slow=3.1,SNR=2.3						
TOA0	Torodi Ar. Sit	78.37	72	P	P	02 25 41.5	-0.2
TOA0				IAmb	IAmb	02 25 42.6	
	comp=Z,5.1nm,0.9s						
TORD	Torodi Ar. Bea	78.37	72	P	P	02 25 41.7	0.0
	comp=Z,3.4nm,0.7s,baz=249,slow=4.9,SNR=19						
YKA	Yellowknife Ar	88.77	341	P	P	02 26 35.0	+1.0
	comp=Z,1.0nm,0.7s,baz=134,slow=5.0,SNR=26						
H11S2	WAKE ISLAND Hy	125.87	279	T	T	04 51 56.4	
	baz=101,slow=75,SNR=150						
H11S1	WAKE ISLAND Hy	125.88	279	T	T	04 51 59.4	
	baz=101,slow=75,SNR=69						
H11S3	WAKE ISLAND Hy	125.89	279	T	T	04 51 57.7	
	baz=101,slow=75,SNR=66						
H11N3	WAKE ISLAND Hy	125.91	281	T	T	04 52 01.4	
	baz=100,slow=75,SNR=16						
H11N2	WAKE ISLAND Hy	125.92	281	T	T	04 51 59.4	
	baz=100,slow=75,SNR=17						
H11N1	WAKE ISLAND Hy	125.92	281	T	T	04 51 53.0	
	baz=100,slow=75,SNR=13						
ASAR	Alice Springs	130.77	210	PKP	PKiKP	02 32 53.8	+0.2
	comp=Z,0.1nm,0.3s,baz=102,slow=2.2,SNR=2.7						
WRA	Warramunga Arr	133.68	214	PKP	PKPdf	02 32 59.2	+1.0
	comp=Z,0.5nm,0.7s,baz=159,slow=1.6,SNR=5.1						
ZALV	Zalesovo Beam	140.88	23	PKP	PKiKP	02 33 12.3	-0.7
	comp=Z,0.5nm,0.3s,baz=354,slow=5.8,SNR=1.7						
MKAR	Makanchi Array	145.01	33	PKP	PKPdf	02 33 18.6	+0.6
	comp=Z,2.7nm,0.7s,baz=308,slow=3.5,SNR=31						
MKAR	Makanchi Array	145.01	33		PKPbc	02 33 18.1	+0.8
KSH	Kashi	145.16	48	PKPbc	PKPbc	02 33 15.8	-2.4
KSH				sPKP		02 33 29.6	
KSH				PP	PP	02 36 36.5	-1.0
KSH				SKS	SKSdf	02 40 19.8	-6.1
SONM	Songino Array	151.68	4	PKPbc	PKiKP	02 33 36.4	+0.7
	comp=Z,1.0nm,0.6s,baz=321,slow=1.9,SNR=9.0						
SONM	Songino Array	151.68	4		PKPbc	02 33 35.9	+0.7
LZH	Lanzhou	162.84	15	*e*PKP	PKPdf	02 33 40.6	-2.8
LZH				pPKP	pPKPdf	02 33 50.4	-2.5
LZH				sPKP		02 33 55.5	

*NAO **25** 02:16:53.7±0.7, 67°.14N×20°.87E, ML2.5*
*HEL **25** 02:16:54.4±0.1, 67°.18N×20°.64E, h1^{km}, ML2.2, ML2.4(UPP), Confirmed Induced event*
*IDC **25** 02:16:54.7±0.8, 67°.11N×21°.07E, h0^{km}, mb1 2.8/4, mb1mx2.7/48, mbtmp2.8/4, ML2.4/5, Error ellipse: s-maj=14.7km s-min=7.4km az=108.0*
*BER **25** 02:16:56.0±3.5, 67°.15N×20°.76E, h0^{km}, ML2.2, ML2.5(NAO), Confirmed Induced event*
ISC 25 02:16:52.6±0.7, **67°.13N**±0°.02×**20°.60E**±0°.02, **h0**^{km}, **n52**, σ**1^{s}56**/99, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASU	**Masugnsbyn**	**0.64**	**58**	*i*P	**Pg**	**02 17 05.0**	**+0.2**
MASU				*i*S	**Sg**	**02 17 13.2**	**+0.1**
KUA	**Kurravaara**	**0.84**	**353**	*i*P	**Pg**	**02 17 08.2**	**-0.5**
KUA				*i*S	**Sg**	**02 17 19.0**	**-0.5**
ERTU	**Ertsjaerv**	**0.85**	**132**	*e*P	**Pg**	**02 17 09.8**	**+0.9**
ERTU				*e*S	**Sb**	**02 17 21.6**	**-0.6**
ERTU	**Ertsjaerv**	**0.85**	**132**	*e*P	**Pg**	**02 17 09.8**	**+0.9**
ERTU				*e*S	**Sb**	**02 17 21.6**	**-0.6**
HARU	**Harads**	**0.98**	**171**	*e*P	**Pg**	**02 17 12.6**	**+1.3**
HARU				*e*S	**Sb**	**02 17 26.6**	**+0.8**
PAJU	**Pajala**	**0.99**	**95**	*e*P	**Pg**	**02 17 11.7**	**+0.2**
PAJU				*e*S	**Sg**	**02 17 24.8**	**+0.4**
LANU	**Lannavaara**	**1.07**	**29**	*e*P	**Pg**	**02 17 12.1**	**-1.0**
LANU				*e*S	**Sg**	**02 17 25.3**	**-1.7**
LANU	**Lannavaara**	**1.07**	**29**	*e*P	**Pg**	**02 17 12.1**	**-1.0**
LANU				*e*S	**Sg**	**02 17 25.3**	**-1.7**
SJUU	**Sjulsmark**	**1.67**	**165**	*e*P	**Pb**	**02 17 24.8**	**+0.6**
KALU	**Kalix**	**1.69**	**138**	*e*P	**Pb**	**02 17 24.6**	**+0.2**
KALU				*e*S	**Sg**	**02 17 47.6**	**+1.0**
KALU	**Kalix**	**1.69**	**138**	*e*P	**Pb**	**02 17 24.6**	**+0.2**
KALU				*e*S	**Sg**	**02 17 47.6**	**+1.0**
HEF	**Hetta**	**1.74**	**41**	Pg	**Pn**	**02 17 23.9**	**-0.1**
HEF				Lg	Lg	02 17 46.2	
HEF	**Hetta**	**1.74**	**41**	*e*P	**Pn**	**02 17 23.9**	**-0.1**
HEF				*e*S	**Sn**	**02 17 45.6**	**-1.3**
HEF				MSG		02 17 49.5	
	comp=Z,13nm,0.2s						
HEF	**Hetta**	**1.74**	**41**	*e*P	**Pn**	**02 17 23.9**	**-0.1**
HEF				*e*S	**Sn**	**02 17 45.6**	**-1.3**
HEF				MSG		02 17 49.5	
	comp=Z,13nm,0.2s						
TOF	**Tornio**	**1.82**	**123**	*e*P	**Pb**	**02 17 26.9**	**+0.2**
TOF				*e*S	**Sg**	**02 17 50.9**	**-0.1**
TOF				MSG		02 17 53.1	
	comp=Z,18nm,0.2s						
TOF	**Tornio**	**1.82**	**123**	*e*P	**Pb**	**02 17 26.9**	**+0.2**
TOF				*e*S	**Sg**	**02 17 50.9**	**-0.1**
TOF				MSG		02 17 53.1	
	comp=Z,18nm,0.2s						
KIF	**Kilpisjarvi**	**1.89**	**2**	Pn	**Pn**	**02 17 27.1**	**+1.0**
KIF				Lg	Lg	02 17 53.4	
KIF	**Kilpisjarvi**	**1.89**	**2**	*e*P	**Pn**	**02 17 27.2**	**+1.1**
KIF				*e*S	**Sn**	**02 17 51.5**	**+1.0**
KIF				MSG		02 17 55.2	
	comp=Z,24nm,0.2s						
KIF	**Kilpisjarvi**	**1.89**	**2**	*e*P	**Pn**	**02 17 27.2**	**+1.1**
KIF				*e*S	**Sn**	**02 17 51.5**	**+1.0**
KIF				MSG		02 17 55.2	
	comp=Z,24nm,0.2s						
KTK1	**Kautokeino**	**2.14**	**26**	Pn	**Pn**	**02 17 31.2**	**+1.7**
KTK1				Sn	**Sn**	**02 17 56.8**	**0.0**
KTK1	**Kautokeino**	**2.14**	**26**	*e*P	**Pn**	**02 17 31.1**	**+1.7**
KTK1				*e*S	**Sn**	**02 17 57.0**	**+0.2**
KTK1				IAML		02 18 00.7	
	comp=Z,31nm,0.4s						
RNF	**Rovaniemi**	**2.20**	**101**	*e*PB	**Pb**	**02 17 32.3**	**-0.9**
RNF				*e*SB	**Sb**	**02 18 00.7**	**-0.3**
RNF				MSG		02 18 02.4	
	comp=Z,14nm,0.2s						
RNF	**Rovaniemi**	**2.20**	**101**	*e*PB	**Pb**	**02 17 32.3**	**-0.9**
RNF				*e*SB	**Sb**	**02 18 00.7**	**-0.3**
RNF				MSG		02 18 02.4	
	comp=Z,14nm,0.2s						
STEI	**Steigen**	**2.21**	**294**	*e*P	**Pn**	**02 17 31.9**	**+1.4**
SGF	**Sodankyl**	**2.32**	**79**	*e*PB	**Pn**	**02 17 33.6**	**+1.6**
SGF				*e*SB	**Sb**	**02 18 03.2**	**-1.3**
SGF				MSG		02 18 05.7	
	comp=Z,12nm,0.2s						
SGF	**Sodankyl**	**2.32**	**79**	*e*P	**Pn**	**02 17 33.6**	**+1.6**
SGF				*e*SB	**Sb**	**02 18 03.2**	**-1.3**
SGF				MSG		02 18 05.7	
	comp=Z,12nm,0.2s						
BURU	**Burvik**	**2.57**	**172**	*e*P	**Pn**	**02 17 38.1**	**+2.6**
BURU	**Burvik**	**2.57**	**172**	*e*P	**Pn**	**02 17 38.1**	**+2.6**
TRO	**Tromso**	**2.59**	**347**	Pn	**Pn**	**02 17 37.2**	**+1.5**
TRO				Sn	**Sn**	**02 18 09.3**	**+1.4**
TRO	**Tromso**	**2.59**	**347**	*e*P	**Pn**	**02 17 37.1**	**+1.3**
TRO				*e*S	**Sn**	**02 18 08.7**	**+0.8**
TRO				IAML		02 18 15.1	
	comp=Z,10.0nm,0.3s						
TRO	**Tromso**	**2.59**	**347**	*e*P	**Pn**	**02 17 37.0**	**+1.3**
TRO				*e*S	**Sn**	**02 18 08.4**	**+0.5**
LOF	**Lofoten**	**2.88**	**294**	*e*Pg	**Pb**	**02 17 47.0**	**+2.2**
OBF4	**Vikkela, Lumij**	**2.96**	**139**	*e*P	**Pn**	**02 17 42.8**	**+2.0**
OBF4	**Vikkela, Lumij**	**2.96**	**139**	*e*P	**Pn**	**02 17 42.8**	**+2.0**
ARA0	**ARCESS Array S**	**3.03**	**35**	Pn	**Pn**	**02 17 42.4**	**+0.6**
	baz=210,slow=16						
ARA0				Sn	**Sn**	**02 18 18.7**	**0.0**
	baz=211,slow=28						
ARA0	**ARCESS Array S**	**3.03**	**35**	Pn	**Pn**	**02 17 42.4**	**+0.6**
	baz=210,slow=16						
ARA0				Sn	**Sn**	**02 18 18.7**	**0.0**
	baz=211,slow=28						
ARCES	**ARCESS Array B**	**3.03**	**35**	Pn	**Pn**	**02 17 42.7**	**+0.9**
	comp=Z,1.4nm,0.3s,baz=212,slow=13,SNR=35						
ARCES				Sn	**Sn**	**02 18 18.6**	**-0.1**
	comp=Z,3.6nm,0.3s,baz=216,slow=24,SNR=14						
KEV	**Kevo**	**3.55**	**39**	Pn	**Pn**	**02 17 49.6**	**+0.8**
KEV				Sn	**Sn**	**02 18 30.5**	**-0.9**
KEV				Lg	Lg	02 18 43.2	
APA0	**Apatity Array**	**4.81**	**79**	Pn	**Pn**	**02 18 06.7**	**+0.4**
	baz=263,slow=16						
APA0				Sn	**Sn**	**02 19 01.2**	**-1.4**
	baz=272,slow=28						
APA0				Lg	Lg	02 19 19.3	
	baz=280,slow=28						
APA0	**Apatity Array**	**4.81**	**79**	Pn	**Pn**	**02 18 06.7**	**+0.4**
	baz=263,slow=16						
APA0				Sn	**Sn**	**02 19 01.2**	**-1.4**
	baz=272,slow=28						
APA0				Sg	**Sb**	**02 19 19.3**	**+3.2**
	baz=280,slow=28						
FIA0	**FINESS Array S**	**6.18**	**155**	Pn	**Pn**	**02 18 27.6**	**+2.7**
	baz=350,slow=16						
FIA0				Sn	**Sn**	**02 19 34.5**	**-1.7**
	baz=345,slow=28						
FIA0				Lg	Lg	02 20 07.2	
	baz=339,slow=28						
FIA0	**FINESS Array S**	**6.18**	**155**	Pn	**Pn**	**02 18 27.6**	**+2.7**
	baz=350,slow=16						
FIA0				Sn	**Sn**	**02 19 34.5**	**-1.7**
	baz=345,slow=28						
FIA0				Sg	**Sg**	**02 20 07.2**	**-3.7**
	baz=339,slow=28						
FINES	**FINESS Array B**	**6.18**	**155**	Pn	**Pn**	**02 18 27.2**	**+2.2**
	comp=Z,0.2nm,0.3s,baz=353,slow=15,SNR=8.4						
FINES				Sn	**Sn**	**02 19 34.8**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=345,slow=23,SNR=7.9						
FINES				Lg	Lg	02 20 05.5	
	comp=Z,0.6nm,0.3s,baz=346,slow=26,SNR=6.9						
NB2	**NORSAR Subarra**	**7.35**	**218**	Pn	**Pn**	**02 18 43.4**	**+2.2**
NB2				Sn	**Sn**	**02 20 03.4**	**-1.8**
	baz=31,slow=28						
NB2				Lg	Lg	02 20 42.8	
	baz=24,slow=37						
NB2	**NORSAR Subarra**	**7.35**	**218**	Pn	**Pn**	**02 18 43.4**	**+2.2**
NB2				Sn	**Sn**	**02 20 03.4**	**-1.8**
	baz=31,slow=28						
NB2				Sg	**Sg**	**02 20 42.8**	**-5.7**
	baz=24,slow=37						
NOA	**NORSAR Array B**	**7.35**	**218**	Pn	**Pn**	**02 18 43.5**	**+2.4**
	comp=Z,0.0nm,0.3s,baz=34,slow=11,SNR=1.3						
NOA				Sn	**Sn**	**02 20 05.0**	**-0.2**
	comp=Z,0.0nm,0.3s,baz=94,slow=17,SNR=7.7						
NOA				Lg	Lg	02 20 42.4	
	comp=Z,0.0nm,0.3s,baz=98,slow=16,SNR=4.7						
NRA0	**NORESS Array S**	**7.54**	**216**	Pn	**Pn**	**02 18 45.4**	**+1.7**
	baz=34,slow=12						
NRA0				Sn	**Sn**	**02 20 07.5**	**-2.3**
	baz=28,slow=28						
NRA0				Lg	Lg	02 20 52.3	
	baz=32,slow=28						
NRA0	**NORESS Array S**	**7.54**	**216**	Pn	**Pn**	**02 18 45.4**	**+1.7**
	baz=34,slow=12						
NRA0				Sn	**Sn**	**02 20 07.5**	**-2.3**
	baz=28,slow=28						
NRA0				Sg	**Sg**	**02 20 52.3**	**-2.3**
	baz=32,slow=28						
HFS	**Hagfors**	**7.66**	**207**	Pn	**Pn**	**02 18 46.0**	**+0.7**
	baz=25,slow=14						
HFS				Sn	**Sn**	**02 20 11.2**	**-1.4**
	baz=30,slow=22						
HFS				Lg	Lg	02 20 56.0	
	baz=23,slow=28						
HFS	**Hagfors**	**7.66**	**207**	Pn	**Pn**	**02 18 46.3**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=24,slow=13,SNR=8.0						
HFS				Sn	**Sn**	**02 20 09.4**	**-3.1**
	comp=Z,0.5nm,0.3s,baz=33,slow=25,SNR=8.4						
HFS				Lg	Lg	02 20 55.6	
	comp=Z,0.4nm,0.3s,baz=14,slow=25,SNR=2.5						
HFS	**Hagfors**	**7.66**	**207**	Pn	**Pn**	**02 18 46.0**	**+0.7**
	baz=25,slow=14						
HFS				Sn	**Sn**	**02 20 11.2**	**-1.4**
	baz=30,slow=22						
HFS				Sg	**Sg**	**02 20 56.0**	**-2.2**
	baz=23,slow=28						
SPITS	**Spitsbergen Ar**	**11.18**	**356**	Pn	**Pn**	**02 19 33.7**	**+0.4**
	baz=161,slow=18,SNR=1.5						

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*GCG **25** 02:21:34.8±0.4, 15°.01N×91°.68W, h5^{km}, MD3.2*

*MEX **25** 02:21:35.3±0.5, 14°.81N×91°.70W, h20^{km}, MD3.5*

ISC 25 02:21:36.1±1.4**, 14°.9N**±0°.1×**91°.78W**±0°.09**, h35**^{km}**, n5, σ1^{s}.23**/8**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**0.29**	**135**	*e*P	**Pn**	**02 21 42.2**	**-1.9**
FUG	**Fuego 3**	**1.02**	**117**	*e*P	**Pn**	**02 21 53.4**	**-0.7**
FUG				*e*S	**Sn**	**02 22 08.4**	**+1.1**
CCIG	**Comitan**	**1.40**	**346**	*i*P	**Pn**	**02 21 58.5**	**-0.8**
CCIG				*i*S	**Sn**	**02 22 17.0**	**+0.3**
IXG	**Ixpaco**	**1.49**	**120**	*e*P	**Pn**	**02 22 01.8**	**+1.2**
PCIG		**1.60**	**300**	*i*P	**Pn**	**02 22 02.1**	**+0.2**
PCIG				*i*S	**Sn**	**02 22 21.7**	**+0.4**

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*UPA **25** 02:36:59.2±1.2, 9°.63N×84°.47W, h13^{km}±7^{km}, MD4.2*

*UCR **25** 02:37:00.9±1.8, 9°.74N×84°.41W, h39^{km}±10^{km}, MD3.8, MW3.8*

*INET **25** 02:37:01.5, 9°.93N×84°.31W, h8^{km}, ML3.2*

ISC 25 02:37:01.2±2.3**, 9°.73N**±0°.06×**84°.42W**±0°.06**, h37**^{km}±2^{km}**, n33, σ0^{s}.73**/47**, 1C-1D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRA1	**San Ramn**	**0.35**	**351**	*e*P	**Pn**	**02 37 09.7**	**-0.2**
SRA1				*e*S	**Sn**	**02 37 17.1**	**+0.3**
HDC	**Heredia**	**0.40**	**49**	⇓*i*P	**Pn**	**02 37 10.3**	**-0.2**
HDC				*e*S	**Sn**	**02 37 17.9**	**+0.5**
HDC	**Heredia**	**0.40**	**49**	*e*P	**Pn**	**02 37 10.2**	**-0.2**
HDC				*e*S	**Sn**	**02 37 17.9**	**+0.5**
LCR2	**La Lucha 2**	**0.41**	**89**	*e*P	**Pn**	**02 37 10.0**	**-0.6**
LCR2				*e*S	**Sn**	**02 37 17.7**	**0.0**
SJS	**Escuela Geolog**	**0.42**	**60**	*e*P	**Pn**	**02 37 10.2**	**-0.4**
SJS				*e*S	**Sn**	**02 37 18.1**	**+0.5**
EDDO	**Dominical**	**0.73**	**131**	*e*P	**Pn**	**02 37 14.8**	**-0.2**
CASO	**Castillo**	**0.76**	**336**	*i*P	**Pn**	**02 37 15.0**	**-0.5**
JTS	**Las Juntas de**	**0.76**	**317**	*e*P	**Pn**	**02 37 15.2**	**-0.3**
JTS				*e*S	**Sn**	**02 37 26.2**	**+0.4**
JTS	**Las Juntas de**	**0.76**	**317**	*e*P	**Pn**	**02 37 15.2**	**-0.3**
JTS				*e*S	**Sn**	**02 37 26.7**	**+0.9**
FORC	**Fortuna**	**0.77**	**342**	*i*P	**Pn**	**02 37 15.1**	**-0.4**
FORC				*i*S	**Sn**	**02 37 26.4**	**+0.5**
ARE1	**Arenal 1**	**0.78**	**338**	*e*P	**Pn**	**02 37 15.6**	**-0.2**
CEDE	**Laguna Cedeo**	**0.80**	**340**	*i*P	**Pn**	**02 37 15.7**	**-0.3**
CEDE				*i*S	**Sn**	**02 37 27.3**	**+0.5**
EDLM	**Las Mercedes**	**0.94**	**119**	*e*P	**Pn**	**02 37 17.8**	**-0.2**
ACAL	**Aguas Claras**	**1.08**	**326**	⇑*i*P	**Pn**	**02 37 19.8**	**-0.1**
PLVR	**Palo Verde**	**1.10**	**304**	*e*P	**Pn**	**02 37 19.7**	**-0.6**
PTEN	**Parque Tenorio**	**1.12**	**330**	*i*P	**Pn**	**02 37 20.3**	**-0.1**
PTEN				*i*S	**Sn**	**02 37 35.7**	**+1.0**
CUI	**Cuipilapa**	**1.17**	**322**	*e*P	**Pn**	**02 37 20.9**	**-0.2**
CUI				*i*S	**Sn**	**02 37 36.5**	**+0.6**
EDPN	**Palmar Norte**	**1.22**	**129**	*e*P	**Pn**	**02 37 21.7**	**0.0**
GUAB	**Guayabo de Bag**	**1.25**	**321**	*i*P	**Pn**	**02 37 22.0**	**-0.2**
LIM1	**Limonal**	**1.26**	**320**	*i*P	**Pn**	**02 37 22.1**	**-0.3**
EDBA	**Buenos Aires**	**1.27**	**116**	*e*P	**Pn**	**02 37 21.7**	**-0.7**
GPS2	**Hotel Rincn d**	**1.37**	**318**	*i*P	**Pn**	**02 37 23.6**	**-0.2**
GPS2				*i*S	**Sn**	**02 37 41.4**	**+0.7**
GPS3	**Bodega del ICE**	**1.38**	**318**	*i*P	**Pn**	**02 37 23.9**	**-0.1**
BUAI	**Buenos Aires**	**1.45**	**322**	*i*P	**Pn**	**02 37 24.3**	**-0.6**
PTJ1	**Puerto Jimnez**	**1.62**	**137**	*e*S	**Sn**	**02 37 45.3**	**-1.7**
BRU2	**Volcan**	**1.95**	**118**	*e*P	**Pn**	**02 37 32.2**	**+0.3**
BRU2				*e*S	**Sn**	**02 37 53.8**	**-1.4**
BRU2	**Volcan**	**1.95**	**118**	*e*P	**Pn**	**02 37 32.1**	**+0.3**
BCO2	**Palmira**	**2.12**	**118**	*e*P	**Pn**	**02 37 34.1**	**-0.2**
BCO2				*e*S	**Sn**	**02 38 00.6**	**+1.1**
LNBQ3	**Los Naranjos,**	**2.17**	**115**	*e*S	**Sn**	**02 38 02.1**	**+1.5**
DVD	**David**	**2.33**	**123**	*e*S	**Sn**	**02 38 05.5**	**+1.0**
ACON	**Acoyapa**	**2.34**	**342**	*e*P	**Pn**	**02 37 36.4**	**-0.8**
CHGR2	**Aguacate**	**2.38**	**109**	*e*S	**Sn**	**02 38 07.8**	**+2.1**
ESPN	**Las Esperanzas**	**2.45**	**3**	*e*P	**Pn**	**02 37 37.5**	**-1.1**

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*JMA **25** 03:03:23.9±0.1, 33°.52N×140°.89E, h55^{km}±4^{km}, M3.6*

*IDC **25** 03:03:25.5±2.5, 33°.34N×140°.71E, h57^{km}±19^{km}, mb3.7/4, mb1 3.9/6, mb1mx3.3/52, mbtmp4.0/6, ML3.5/2, MS2.8/3, Ms1 2.9/3, ms1mx2.4/40, Error ellipse: s-maj=33.9km s-min=12.6km az=78.0*

ISC 25 03:03:22.7±1.6**, 33°.43N**±0°.04×**141°.01E**±0°.09**, h42**^{km}±17^{km}**, n30, σ1^{s}.38**/33**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.05**	**253**	P	**Pn**	**03 03 41.8**	**+0.9**
JHJ2				*e*S	**Sn**	**03 03 55.1**	**+0.8**
JHJ	**Hachijo jima 2**	**1.07**	**254**	P	**Pn**	**03 03 41.9**	**+0.6**
	945nm,0.3s,baz=306,slow=19,SNR=306						
JHJ				S	**Sn**	**03 03 52.9**	**-2.1**
	456nm,0.3s,baz=60,slow=21,SNR=12						
JHCJ	**Hachijojimakas**	**1.08**	**251**	P	**Pn**	**03 03 42.1**	**+0.8**
JHCJ				S	**Sn**	**03 03 54.9**	**-0.1**
BSO1	**Boso 1**	**1.22**	**359**	P	**Pn**	**03 03 43.9**	**+1.1**
JMKN	**Mikurajimanish**	**1.27**	**292**	P	**Pn**	**03 03 44.0**	**0.0**
JAOM	**Aogashimamukai**	**1.42**	**228**	P	**Pn**	**03 03 48.0**	**+2.0**
BSO3	**Boso 3**	**1.43**	**343**	P	**Pn**	**03 03 46.5**	**+0.6**
BSO3				S	**Sn**	**03 04 03.0**	**-0.4**
BSO4	**Boso 4**	**1.66**	**340**	P	**Pn**	**03 03 50.1**	**+1.0**
JKO	**Kozu shima**	**1.73**	**296**	P	**Pn**	**03 03 50.7**	**+0.4**
JTHY	**Toshimahigashi**	**1.80**	**308**	P	**Pn**	**03 03 51.5**	**+0.3**
JTHY				S	**Sn**	**03 04 12.3**	**-0.6**
JIM2	**Oshima 3**	**1.84**	**315**	P	**Pn**	**03 03 51.8**	**0.0**
JIM2				*e*S	**Sn**	**03 04 12.6**	**-1.2**
JIZS	**Izushimoda**	**2.19**	**307**	P	**Pn**	**03 03 57.3**	**+0.8**
JIZS				S	**Sn**	**03 04 21.5**	**-0.9**
KTJ3	**Kamata3**	**2.20**	**314**	P	**Pn**	**03 03 56.7**	**0.0**
KTJ3				S	**Sn**	**03 04 20.2**	**-2.5**
JOD2	**Odawara 2**	**2.43**	**320**	P	**Pn**	**03 04 00.0**	**+0.2**
JOD2				*e*S	**Sn**	**03 04 26.0**	**-2.3**
MJAR	**Matsushiro Arr**	**3.87**	**324**	P	**Pn**	**03 04 21.7**	**+2.1**
	1.1nm,0.3s,baz=139,slow=17,SNR=35						
MJAR				S	**Sn**	**03 05 04.8**	**+1.0**
	0.4nm,0.3s,baz=112,slow=42,SNR=3.1						
MAT	**Matsushiro**	**3.87**	**324**	P	**Pn**	**03 04 21.4**	**+1.8**
MAT				S	**Sn**	**03 05 04.0**	**+0.2**
JCJ	**Chichijima**	**6.39**	**171**	P	**Pn**	**03 04 55.1**	**+0.8**
	3.4nm,0.3s,baz=88,slow=23,SNR=9.1						
JCJ				S	**Sn**	**03 06 01.8**	**-4.2**
	3.4nm,0.3s,baz=295,slow=19,SNR=1.4						
KSRS	**Korea Array**	**11.41**	**294**	LR	LR	03 10 04.0	
	comp=Z,20nm,20.7s,baz=25,slow=35						
H11N2	**WAKE ISLAND Hy**	**26.78**	**114**	T	T	03 37 47.9	
	baz=306,slow=75,SNR=40						
H11N1	**WAKE ISLAND Hy**	**26.78**	**114**	T	T	03 37 46.6	
	baz=306,slow=75,SNR=27						
H11N3	**WAKE ISLAND Hy**	**26.80**	**114**	T	T	03 37 53.3	
	baz=306,slow=75,SNR=24						
H11S3	**WAKE ISLAND Hy**	**27.36**	**117**	T	T	03 38 37.0	
	baz=310,slow=74						
H11S1	**WAKE ISLAND Hy**	**27.36**	**116**	T	T	03 38 35.6	
	baz=310,slow=74						
H11S2	**WAKE ISLAND Hy**	**27.38**	**117**	T	T	03 38 38.4	
	baz=310						
SONM	**Songino Array**	**29.67**	**309**	P	**P**	**03 09 24.3**	**-0.2**
	0.4nm,0.8s,baz=112,slow=12,SNR=2.4						
TLY	**Talaya**	**32.55**	**315**	LR	LR	03 22 37.6	
	comp=Z,36nm,18.9s,baz=154,slow=36						
CMAR	**Chiang Mai Arr**	**40.38**	**259**	LR	LR	03 28 20.6	
	comp=Z,12nm,18.0s,baz=225,slow=37						
MKAR	**Makanchi Array**	**45.84**	**305**	P	**P**	**03 11 40.5**	**0.0**
	0.6nm,0.7s,baz=91,slow=12,SNR=3.1						
WRA	**Warramunga Arr**	**53.45**	**188**	P	**P**	**03 12 38.9**	**+0.3**
	4.2nm,0.4s,baz=4.2,slow=7.6,SNR=106						
ASAR	**Alice Springs**	**57.18**	**188**	P	**P**	**03 13 05.8**	**+0.5**
	1.0nm,0.5s,baz=6.2,slow=7.0,SNR=21						

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*IDC **25** 03:05:44.9±1.6, 42°.98N×87°.49E, h0^{km}, mb3.5/2, mb1 3.6/6, mb1mx3.3/55, mbtmp3.5/6, ML3.1/4, Error ellipse: s-maj=60.8km s-min=19.4km az=54.0*

ISC 25 03:05:50.0±1.4**, 43°.1N**±0°.1×**87°.5E**±0°.1**, h35**^{km}**, n8, σ1^{s}.55**/12**, 3C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**5.24**	**317**	⇑Pn	**Pn**	**03 07 06.0**	**+0.2**
	1.9nm,0.3s,baz=132,slow=14,SNR=208						
MK31				⇓Sn	**Sn**	**03 08 05.3**	**+0.2**
	4.5nm,0.5s						
MK31				Lg	Lg	03 08 27.4	
	8.1nm,0.6s,baz=131,slow=27,SNR=3.7						
MKAR	**Makanchi Array**	**5.24**	**317**	Pn	**Pn**	**03 07 05.8**	**-0.1**
	2.4nm,0.3s,baz=131,slow=14,SNR=127						
MKAR				Sn	**Sn**	**03 08 08.3**	**+3.3**
	1.4nm,0.3s,baz=137,slow=18,SNR=3.9						
MKAR				Lg	Lg	03 08 29.4	
	1.8nm,0.3s,baz=131,slow=28,SNR=5.3						
PDGK	**Podgornoye**	**5.86**	**275**	⇑Pn	**Pn**	**03 07 14.9**	**+0.6**
	1.5nm,0.3s						
PDGK				⇑Sn	**Sn**	**03 08 19.3**	**-1.0**
	6.7nm,0.6s						
PDGK				⇓Lg	Lg	03 08 45.8	
	12nm,0.7s						
KURBB	**Kurchatov Arra**	**9.73**	**324**	Pn	**Pn**	**03 08 05.4**	**-1.9**
	0.1nm,0.3s,baz=133,slow=13,SNR=26						
KURBB				Sn	**Sn**	**03 09 55.1**	**-0.1**
	0.1nm,0.3s,baz=280,slow=25,SNR=4.4						
KURBB				Lg	Lg	03 10 53.0	
	0.0nm,0.3s,baz=146,slow=31,SNR=2.5						
ZALV	**Zalesovo Beam**	**11.03**	**352**	Pn	**Pn**	**03 08 24.0**	**-1.1**
	0.2nm,0.3s,baz=169,slow=11,SNR=3.7						
BVAR	**Borovoye Array**	**15.13**	**317**	Pn	**Pn**	**03 09 18.8**	**-2.1**
	0.2nm,0.3s,baz=114,slow=13,SNR=3.5						
WRA	**Warramunga Arr**	**76.07**	**135**	P	**P**	**03 17 34.6**	**+0.7**
	0.4nm,0.8s,baz=313,slow=3.6,SNR=2.1						
TORD	**Torodi Ar. Bea**	**78.11**	**277**	P	**P**	**03 17 45.5**	**-0.1**
	0.2nm,0.4s,baz=47,slow=6.0,SNR=5.6						

IDC 25 03:40:10.4±1.7**, 2°.76S**×**128°.28E, h0**^{km}**, mb3.2**/2**, mb1 3.4**/4**, mb1mx3.3**/30**, mbtmp3.3**/4**, ML3.2**/2**, Error ellipse: s-maj=44.7km s-min=27.8km az=79.0, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.53**	**58**	Pn	Pn	03 41 04.9	-1.6
	2.8nm,0.3s,baz=182,slow=23,SNR=6.4						
SIJI				Sn	Sn	03 41 40.9	-8.0
	1.5nm,0.3s,baz=203,slow=22,SNR=1.6						
WRA	**Warramunga Arr**	**18.07**	**161**	P	Pn	03 44 23.2	+0.2
	0.1nm,0.3s,baz=335,slow=12,SNR=4.6						
ASAR	**Alice Springs**	**21.48**	**166**	P	P	03 45 01.2	+0.5
	0.7nm,0.5s,baz=349,slow=11,SNR=8.4						
MKAR	**Makanchi Array**	**63.77**	**327**	P	P	03 50 44.4	+0.2
	0.2nm,0.6s,baz=134,slow=8.3,SNR=2.4						

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*NEIC **25** 04:10:17.8±1.1, 17°.8S±0°.1×178°.52W±0°.10, h580^{km}±8^{km}, mb4.3/44, Error ellipse: s-maj=20.8km s-min=13.0km az=171.0*

*IDC **25** 04:10:17.9±0.8, 17°.97S×178°.55W, h571^{km}±9^{km}, mb3.5/11, mb1 3.8/12, mb1mx3.6/25, mbtmp4.4/12, Error ellipse: s-maj=22.1km s-min=11.6km az=141.0*

ISC 25 04:10:17.7±0.4**, 17°.86S**±0°.09×**178°.46W**±0°.07**, h579**^{km}**, n79, σ1^{s}.08**/79**, mb4.2**/41**, 3C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.33**	**272**	P	**P**	**04 11 38.2**	**+1.0**
MSVF				S	**S**	**04 12 41.6**	**-0.4**
AFI	**Afiamalu**	**7.53**	**60**	P	**P**	**04 12 10.0**	**-2.0**
	14nm,0.3s,baz=346,slow=6.4,SNR=15						
AFI				S	**S**	**04 13 41.1**	**-4.4**
	2.1nm,0.3s,baz=319,slow=19,SNR=2.4						
AFI	**Afiamalu**	**7.53**	**60**	P	**P**	**04 12 10.9**	**-1.0**
AFI					**S**	**04 13 44.3**	**-1.3**
NIUE	**Niue**	**8.19**	**100**	P	**P**	**04 12 18.8**	**+0.6**
DZM	**Mont Dzumac**	**14.80**	**251**	P	**P**	**04 13 22.5**	**-2.2**
	1.5nm,0.3s,baz=82,slow=17,SNR=13						
DZM	**Mont Dzumac**	**14.80**	**251**	P	**P**	**04 13 23.1**	**-1.6**
URZ	**Urewera**	**20.69**	**190**	P	**P**	**04 14 16.5**	**-1.9**
	3.3nm,0.4s,baz=28,slow=16,SNR=3.8						
URZ	**Urewera**	**20.69**	**190**	P	**P**	**04 14 16.4**	**-2.1**
EIDS	**Eidsvold**	**29.24**	**250**	P	**P**	**04 15 33.8**	**-0.2**
ARMA	**Armidale**	**29.92**	**240**	P	**P**	**04 15 39.8**	**-0.3**
COEN	**Coen**	**37.06**	**270**	P	**P**	**04 16 39.7**	**-0.3**
TOO	**Toolangi**	**37.16**	**231**	P	**P**	**04 16 40.6**	**+0.1**
STKA	**Stephens Creek**	**38.61**	**241**	P	**P**	**04 16 53.0**	**+0.7**
	23nm,0.6s,baz=88,slow=9.5,SNR=54						
STKA	**Stephens Creek**	**38.61**	**241**	P	**P**	**04 16 51.5**	**-0.8**
STKA				IAmb	IAmb	04 16 54.1	
	comp=Z,13nm,1.1s						
GENI	**Genyem**	**43.31**	**286**	P	**P**	**04 17 30.5**	**+0.8**
	comp=Z,72nm,1.2s						
BBOO	**Buckleboo**	**43.39**	**241**	P	**P**	**04 17 30.0**	**-0.1**
WR0	**Warramunga Arr**	**44.40**	**259**	P	**P**	**04 17 37.9**	**-0.3**
WR0				IAmb	IAmb	04 17 39.8	
	comp=Z,8.8nm,1.1s						
WB0	**Warramunga Arr**	**44.56**	**260**	P	**P**	**04 17 38.8**	**-0.6**
WB0				IAmb	IAmb	04 17 39.5	
	comp=Z,19nm,0.9s						
WB2	**Warramunga Arr**	**44.58**	**259**	P	**P**	**04 17 38.6**	**-0.9**
WB2				IAmb	IAmb	04 17 39.3	
	comp=Z,17nm,0.9s						
WRA	**Warramunga Arr**	**44.59**	**259**	P	**P**	**04 17 38.5**	**-1.1**
	comp=Z,9.6nm,0.7s,baz=92,slow=7.6,SNR=54						
WRA				PcP	**PcP**	**04 19 10.2**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=88,slow=3.3,SNR=4.8						
WRA	**Warramunga Arr**	**44.59**	**259**	P	**P**	**04 17 39.5**	**-0.1**
ASAR	**Alice Springs**	**44.76**	**254**	P	**P**	**04 17 40.7**	**-0.2**
	comp=Z,90nm,0.8s,baz=88,slow=8.3,SNR=764						
ASAR				PcP	**PcP**	**04 19 10.7**	**+0.3**
	comp=Z,3.1nm,0.8s,baz=93,slow=4.4,SNR=4.9						
ASAR	**Alice Springs**	**44.76**	**254**	P	**P**	**04 17 40.3**	**-0.5**
ASAR					**PcP**	**04 19 10.7**	**+0.3**
MTN	**Manton Dam**	**48.75**	**268**	IAmb	IAmb	04 18 10.7	
	comp=Z,11nm,0.8s						
SWI	**Sorong**	**52.19**	**283**	P	**P**	**04 18 36.6**	**+0.7**
	comp=Z,2µmcomp=Z,57nm,1.0s						
NLAI	**Namlea**	**55.24**	**279**	P	**P**	**04 18 57.9**	**+0.4**
	comp=Z,17nm,0.7s						
SOEI	**Soe**	**56.02**	**270**	P	**P**	**04 19 02.6**	**-0.4**
	comp=Z,1µmcomp=Z,51nm,1.0s						
SANI	**Sanana**	**56.69**	**280**	P	**P**	**04 19 07.5**	**+0.1**
	comp=Z,29nm,0.9s						
MMRI	**Maumere**	**58.25**	**271**	P	**P**	**04 19 18.0**	**-0.1**
	comp=Z,12µmcomp=Z,47nm,0.4s						
LUWI	**Luwuk**	**60.05**	**279**	P	**P**	**04 19 29.9**	**-0.2**
LUWI				IAmb	IAmb	04 19 33.8	
	comp=Z,30nm,0.9s						
VNDA	**Vanda**	**60.49**	**185**	P	**P**	**04 19 31.7**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=34,slow=8.3,SNR=3.7						
BNSI	**Bone**	**61.49**	**275**	P	**P**	**04 19 39.8**	**+0.3**
	comp=Z,11nm,0.5s						
SPSI	**Sidrap Palu**	**61.94**	**275**	P	**P**	**04 19 41.5**	**-1.0**
	comp=Z,5.8nm,0.6s						
PLAI	**Plampang**	**62.45**	**269**	P	**P**	**04 19 45.7**	**0.0**
	comp=Z,30nm,1.1s						
MPSI	**Mapaga**	**63.22**	**280**	P	**P**	**04 19 51.0**	**+0.3**
	comp=Z,13nm,0.9s						
JAGI	**Jajag, Banyuwa**	**65.99**	**269**	P	**P**	**04 20 07.2**	**-1.0**
JAGI	**Jajag, Banyuwa**	**65.99**	**269**	P	**P**	**04 20 06.6**	**-1.6**
JAGI				IAmb	IAmb	04 20 07.9	
	comp=Z,16nm,0.8s						
MJAR	**Matsushiro Arr**	**67.84**	**323**	P	**P**	**04 20 19.7**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=159,slow=7.0,SNR=2.3						
QSPA	**South Pole Qui**	**72.20**	**180**	P	**P**	**04 20 45.3**	**+0.7**
QSPA				IAmb	IAmb	04 20 46.2	
	comp=Z,9.4nm,0.8s						
WAKR	**Walker**	**78.72**	**43**	IAmb	IAmb	04 21 24.5	
	comp=Z,6.1nm,1.0s						
PNTR	**Pine Nut**	**78.94**	**43**	IAmb	IAmb	04 21 25.6	
	comp=Z,9.7nm,1.0s						
NVAR	**Mina Array Bea**	**79.42**	**44**	P	**P**	**04 21 26.4**	**+1.5**
	comp=Z,2.5nm,0.8s,baz=224,slow=8.3,SNR=18						
NVAR				pP	**pP**	**04 23 27.0**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=219,slow=7.0,SNR=3.0						
MOD	**Modoc Plateau**	**80.08**	**40**	P	**P**	**04 21 28.9**	**+0.7**

WVOR	Wild Horse Val	81.40	40	IAmb	IAmb	04 21 38.1	
	comp=Z,8.6nm,1.1s						
I07A	Izee	81.80	39	P	P	04 21 38.3	+1.3
I07A				IAmb	IAmb	04 21 40.1	
	comp=Z,4.9nm,1.0s						
J08A	Circle Bar Ran	82.01	40	P	P	04 21 38.3	+0.3
J08A				IAmb	IAmb	04 21 41.1	
	comp=Z,8.4nm,1.2s						
U15A	North Rim	82.52	48	P	P	04 21 41.3	+0.3
U15A				IAmb	IAmb	04 21 44.6	
	comp=Z,7.1nm,0.9s						
TRF	Thorofare Moun	83.97	12	P	P	04 21 47.6	+0.2
TRF				IAmb	IAmb	04 21 49.1	
	comp=Z,7.1nm,0.9s						
F10A	Beach Ranch, E	84.19	38	IAmb	IAmb	04 21 51.3	
	comp=Z,5.1nm,1.0s						
ILAR	Eielson Array	85.85	13	P	P	04 21 56.5	+0.2
	comp=Z,0.9nm,0.9s,baz=226,slow=5.3,SNR=7.3						
TX31	Lajitas Ar. Si	86.01	58	IAmb	IAmb	04 22 01.5	
	comp=Z,5.7nm,1.1s						
TX32	Lajitas Array	86.01	58	P	P	04 21 57.1	-0.9
TX32				IAmb	IAmb	04 22 01.5	
	comp=Z,5.7nm,1.1s						
TXAR	Lajitas Array	86.01	58	P	P	04 22 00.9	+2.9
	comp=Z,2.5nm,0.8s,baz=216,slow=6.1,SNR=21						
TXAR				pP	pP	04 24 03.1	+1.4
	comp=Z,0.3nm,0.8s,baz=237,slow=5.0,SNR=1.8						
TXAR	Lajitas Array	86.01	58	P	P	04 21 58.1	+0.1
REDW	Red Top Meadow	86.78	42	IAmb	IAmb	04 22 05.1	
	comp=Z,4.6nm,1.1s						
IMW	Indian Meadow	86.98	42	IAmb	IAmb	04 22 05.2	
	comp=Z,3.1nm,0.9s						
PDAR	Pinedale Array	87.35	43	P	P	04 22 05.3	+1.1
	comp=Z,0.8nm,0.6s,baz=200,slow=3.3,SNR=10.0						
PDAR				pP	pP	04 24 09.6	+0.8
	comp=Z,1.2nm,1.0s,baz=238,slow=5.1,SNR=4.8						
PDAR	Pinedale Array	87.35	43	P	P	04 22 04.6	+0.4
LKWY	Lake	87.64	42	IAmb	IAmb	04 22 09.3	
	comp=Z,3.2nm,0.8s						
CMAR	Chiang Mai Arr	88.82	290	P	P	04 22 12.6	+1.3
	comp=Z,1.8nm,0.3s,baz=112,slow=2.9,SNR=6.8						
CMAR	Chiang Mai Arr	88.82	290	P	P	04 22 10.4	-0.9
VNA3	Neumayer Olymp	90.79	176	P	P	04 22 20.0	+0.6
VNA2	Neumayer--Watz	91.23	177	P	P	04 22 22.6	+1.2
VNA1	Neumayer--Stat	91.46	177	P	P	04 22 23.7	+1.3
YKA	Yellowknife Ar	94.31	25	P	P	04 22 36.2	+0.7
	comp=Z,0.8nm,1.0s,baz=240,slow=4.7,SNR=6.2						
YKA				pP	pwP	04 24 43.1	-1.1
	comp=Z,0.5nm,1.0s,baz=222,slow=8.9,SNR=3.2						
BURAR	Bucovina Array	144.55	332	⇑P	PKPab	04 28 50.7	+0.9
BIZ	Bicaz	144.64	331	⇓P	PKPab	04 28 51.1	+1.0
BR131	Keskin Array S	144.71	315		PKPdf	04 28 48.2	-1.4
BRTR	Keskin Array B	144.71	315	PKP	PKPbc	04 28 50.3	+0.3
	comp=Z,2.6nm,0.9s,baz=152,slow=2.8,SNR=13						
BRTR	Keskin Array B	144.71	315		PKPdf	04 28 48.2	-1.4
CLL	Collm	145.40	347	*e*PKPbc	PKPab	04 28 53.0	+0.1
LANS	Liptovska Anna	145.58	339	*e*PKP	PKPab	04 28 54.2	+0.5
DOPR	Dopca	145.69	330	⇑P	PKPab	04 28 54.3	0.0
VYHS	Vyhne	146.35	339	*e*PKP	PKiKP	04 28 55.9	-0.6
ARR	Arges	146.49	330	⇑P	PKiKP	04 28 56.8	-0.2
MODS	Modra-Piesok	146.97	341	*e*PKP	PKPbc	04 28 56.8	+0.8
GERES	GERESS Array B	147.55	345	PKPbc	PKPbc	04 28 58.2	+0.6
	comp=Z,1.2nm,0.6s,baz=28,slow=3.2,SNR=8.1						
GERES	GERESS Array B	147.55	345	PKPdf	PKPdf	04 28 53.7	-0.2
TORD	Torodi Ar. Bea	175.31	182	PKPab	PKPab	04 31 03.5	+0.5
	comp=Z,0.5nm,1.0s,baz=151,slow=3.3,SNR=1.6						

CNRM ***25*** *04:27:15.6, 36.°56N×10.°86W, h0km*

MDD ***25*** *04:27:15.7±1.0, 36.°69N×11.°36W, h26km±10km, mbLg3.6/42, Error ellipse: s-maj=6.5km s-min=5.8km az=128.0, PRXIMO*

INMG ***25*** *04:27:17.2±2.1, 36.°63N×11.°32W, h31km±7km, MD3.3, ML3.5, Error ellipse: s-maj=3.8km s-min=2.1km az=117.0*

IGIL ***25*** *04:27:17.7, 36.°61N×11.°28W, h31km, ML3.5*

LDG ***25*** *04:27:17.6±0.1, 36.°70N×11.°30W, h30km, Ml3.7/7, Error ellipse: s-maj=2.1km s-min=1.9km az=108.0*

ISC 25 04:27:12.7±0.8**, 36.°62N**±0.°04×**11.°34W**±0.°05**, h35km, n177,** σ**2.s78**/295**, 18C-1D, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.08	75	⇑P	Pn	04 27 47.9	+2.8
	307nm,0.1s,SNR=18						
PFVI				S	Sn	04 28 09.7	-0.1
	415nm,0.1s,SNR=7.6						
PFVI	Vila Bisbo	2.08	75	P	Pn	04 27 47.5	+2.4
PFVI				S	Sn	04 28 10.1	+0.3
PFVI	Vila Bisbo	2.08	75	⇑*i*Pn	Pn	04 27 47.9	+2.8
PFVI				*e*Sn	Sn	04 28 09.9	+0.1
PFVI				A	A	04 28 10.9	
	179nm,0.1s						
MORF	Marmelete	2.26	72	*e*P	Pn	04 27 50.4	+2.7
MORF				*e*S	Sn	04 28 14.1	-0.2
MORF				AML	AML	04 28 16.8	
	comp=N,212nm,0.2s						
MORF	Marmelete	2.26	72	Pn	Pn	04 27 50.4	+2.7
MORF				Sn	Sn	04 28 14.6	+0.2
	comp=N,135nm,0.1s						
MORF	Marmelete	2.26	72	⇑*i*Pn	Pn	04 27 50.4	+2.7
MORF				*e*Sn	Sn	04 28 14.6	+0.2
MORF				A	A	04 28 19.6	
	comp=N,135nm,0.1s						
PTEO	Sao Teotonio	2.29	65	Pn	Pn	04 27 50.9	+2.9
PTEO				Sn	Sn	04 28 15.5	+0.6
	comp=N,59nm,0.5s						
PTEO	Sao Teotonio	2.29	65	⇑*i*Pn	Pn	04 27 50.9	+2.9
PTEO				*e*Sn	Sn	04 28 15.5	+0.6
PTEO				A	A	04 28 18.0	
	comp=N,118nm,0.5s						
PNCL	Nicolau / Gran	2.69	56	Pn	Pn	04 27 56.5	+3.0
PNCL				Sn	Sn	04 28 25.2	+0.4
	comp=N,133nm,0.1s						
PNCL	Nicolau / Gran	2.69	56	⇑*i*Pn	Pn	04 27 56.5	+3.0
PNCL				*e*Sn	Sn	04 28 25.2	+0.4
PNCL				A	A	04 28 27.4	
	comp=N,133nm,0.1s						
LIS	Lisbon	2.72	39	*e*P	Pn	04 27 56.9	+3.0
LIS				*e*S	Sn	04 28 25.6	+0.1
LIS				AML	AML	04 28 30.5	
	comp=N,542nm,0.4s						
LIS	Lisbon	2.72	39	Pn	Pn	04 27 57.1	+3.2
LIS				Sn	Sn	04 28 27.2	+1.6
	comp=N,171nm,0.2s						
LIS	Lisbon	2.72	39	⇓*i*Pn	Pn	04 27 57.1	+3.2
LIS				*e*Sn	Sn	04 28 27.2	+1.6
LIS				A	A	04 28 29.1	
	comp=N,171nm,0.2s						
MESJ	Messejana	2.77	63	*e*P	Pn	04 27 57.4	+2.8
MESJ				*e*S	Sn	04 28 26.6	-0.3
MESJ				AML	AML	04 28 29.4	
	comp=N,98nm,0.1s						
MESJ	Messejana	2.77	63	Pn	Pn	04 27 57.4	+2.8
MESJ				Sn	Sn	04 28 27.5	+0.6
	comp=N,68nm,0.3s						
MESJ	Messejana	2.77	63	⇑*e*Pn	Pn	04 27 57.4	+2.8
MESJ				*e*Sn	Sn	04 28 27.5	+0.6
MESJ				A	A	04 28 36.6	
	comp=N,68nm,0.3s						
INMG	Instituto de M	2.78	39	Pn	Pn	04 27 57.1	+2.4
INMG	Instituto de M	2.78	39	⇑*i*Pn	Pn	04 27 57.1	+2.4
PBDV	Barranco-do-Ve	2.80	76	Pn	Pn	04 27 58.1	+3.0
PBDV				Sn	Sn	04 28 28.2	+0.5
	comp=N,47nm,0.2s						
PBDV	Barranco-do-Ve	2.80	76	⇑*e*Pn	Pn	04 27 58.1	+3.0
PBDV				*e*Sn	Sn	04 28 28.2	+0.5
PBDV				A	A	04 28 33.5	
	comp=N,47nm,0.2s						
PCVE	Castro Verde	2.83	68	Pn	Pn	04 27 59.0	+3.6
PCVE				Sn	Sn	04 28 29.3	+1.1
	comp=N,79nm,0.3s						
PCVE	Castro Verde	2.83	68	⇑*e*Pn	Pn	04 27 59.0	+3.6
PCVE				*e*Sn	Sn	04 28 29.3	+1.1
PCVE				A	A	04 28 32.8	
	comp=N,79nm,0.3s						
PMAFR	Mafra	2.84	34	⇑P	Pn	04 27 58.5	+2.9
	comp=N,34nm,0.1s,SNR=18						
PMAFR				S	Sn	04 28 28.8	+0.2
	comp=N,467nm,0.3s,SNR=34						
PMAFR	Mafra	2.84	34	⇑*e*Pn	Pn	04 27 58.5	+2.9
PMAFR				*e*Sn	Sn	04 28 29.6	+1.0
PMAFR				A	A	04 28 31.0	
	comp=N,318nm,0.2s						
PVAQ	Vaqueiros	3.01	74	Pn	Pn	04 28 00.9	+3.1
PVAQ				Sn	Sn	04 28 32.4	-0.2
	comp=N,91nm,0.1s						
PVAQ	Vaqueiros	3.01	74	P	Pn	04 28 00.6	+2.8
PVAQ				S	Sn	04 28 32.4	-0.2
PVAQ	Vaqueiros	3.01	74	⇑*e*Pn	Pn	04 28 00.9	+3.1
PVAQ				*e*Sn	Sn	04 28 32.4	-0.2
PVAQ				A	A	04 28 39.2	
	comp=N,91nm,0.1s						
PBEJ	Beja	3.11	62	Pn	Pn	04 28 01.8	+2.6
PBEJ				Sn	Sn	04 28 34.7	-0.4
	comp=N,33nm,0.2s						
PBEJ	Beja	3.11	62	⇑*e*Pn	Pn	04 28 01.8	+2.6
PBEJ				*e*Sn	Sn	04 28 34.7	-0.4
PBEJ				A	A	04 28 40.1	
	comp=N,66nm,0.2s						
EGRO	El Granado	3.22	72	P	Pn	04 28 03.6	+2.8
	comp=N,15nm,0.1s,SNR=98						
EGRO				S	Sn	04 28 38.6	+0.7
	comp=N,30nm,0.1s,SNR=114						
PMTG	Montargil	3.47	44	Pn	Pn	04 28 06.7	+2.5
PMTG				Sn	Sn	04 28 44.3	+0.2
	comp=N,64nm,0.1s						
PMTG	Montargil	3.47	44	⇑*i*Pn	Pn	04 28 06.7	+2.5
PMTG				*e*Sn	Sn	04 28 44.3	+0.2
PMTG				A	A	04 28 47.6	
	comp=N,64nm,0.1s						
PESTR	Estremoz	3.72	52	P	Pn	04 28 10.4	+2.7
PESTR				S	Sn	04 28 49.9	-0.5
PESTR	Estremoz	3.72	52	*e*Pn	Pn	04 28 10.5	+2.8
PESTR				*e*Sn	Sn	04 28 50.2	-0.2
PESTR				A	A	04 28 52.1	
	comp=N,37nm,0.2s						
PBAR	Barrancos	3.76	64	Pn	Pn	04 28 11.0	+2.8
PBAR				Sn	Sn	04 28 50.9	-0.4
	comp=N,41nm,0.6s						
PBAR	Barrancos	3.76	64	*e*Pn	Pn	04 28 11.0	+2.8
PBAR				*e*Sn	Sn	04 28 50.9	-0.4
PBAR				A	A	04 29 00.3	
	comp=N,41nm,0.6s						
PTOM	Tomar	3.78	37	Pn	Pn	04 28 11.6	+3.1
PTOM				Sn	Sn	04 28 52.8	+1.1
	comp=N,45nm,0.4s						
PTOM	Tomar	3.78	37	*e*Pn	Pn	04 28 11.6	+3.1
PTOM				*e*Sn	Sn	04 28 52.8	+1.1
PTOM				A	A	04 28 56.5	
	comp=N,90nm,0.4s						
EMIN	Mina Concepcio	3.90	72	P	Pn	04 28 12.7	+2.5
	comp=N,19nm,0.1s,SNR=365						
EMIN				S	Sn	04 28 54.4	-0.3
	comp=N,31nm,0.3s,SNR=8.2						
EBAD	Badajoz	4.04	57	⇑P	Pn	04 28 14.3	+2.2
	comp=N,18nm,0.1s,SNR=18						
EBAD				S	Sn	04 28 57.6	-0.6
	comp=N,101nm,0.2s,SNR=8.8						
PCAS	Casmilo, Conde	4.09	32	Pn	Pn	04 28 15.6	+2.9
PCAS				Sn	Sn	04 28 59.8	+0.4
	comp=N,55nm,0.2s						
PCAS	Casmilo, Conde	4.09	32	*e*Pn	Pn	04 28 15.6	+2.9
PCAS				*e*Sn	Sn	04 28 59.8	+0.4
PCAS				A	A	04 29 02.6	
	comp=N,55nm,0.2s						
PMRV	Marv??o	4.19	47	Pn	Pn	04 28 16.6	+2.4
PMRV				Sn	Sn	04 29 00.6	-1.3
	comp=N,81nm,0.2s						
PMRV	Marv??o	4.19	47	⇑*e*Pn	Pn	04 28 16.6	+2.4
PMRV				*e*Sn	Sn	04 29 00.6	-1.3
PMRV				A	A	04 29 02.5	
	comp=N,81nm,0.2s						
COI	Coimbra	4.25	32	Pn	Pn	04 28 18.3	+3.3
COI				Sn	Sn	04 29 03.9	+0.5
	comp=N,35nm,0.3s						
COI	Coimbra	4.25	32	*e*Pn	Pn	04 28 18.3	+3.3
COI				*e*Sn	Sn	04 29 03.9	+0.5
COI				A	A	04 29 07.7	
	comp=N,70nm,0.3s						
CNIL	Conil	4.27	92	P	Pn	04 28 19.7	+4.5
CNIL				S	Sn	04 29 03.0	-0.8
CNIL	Conil	4.27	92	*e*P	Pn	04 28 19.7	+4.5
CNIL				*e*S	Sn	04 29 03.0	-0.8
GIBL	Gibalbin	4.32	86	P	Pn	04 28 20.0	+4.0
GIBL	Gibalbin	4.32	86	*e*P	Pn	04 28 20.0	+4.0
ESPR	Espera	4.41	85	⇑P	Pn	04 28 20.0	+2.9
	comp=N,86nm,0.1s,SNR=18						
ESPR				S	Sn	04 29 07.0	-0.3
	comp=N,60nm,0.2s,SNR=7.9						
PCBR	Castelo Branco	4.42	42	Pn	Pn	04 28 19.9	+2.6
PCBR				Sn	Sn	04 29 07.1	-0.5
	comp=N,17nm,0.4s						
PCBR	Castelo Branco	4.42	42	*e*Pn	Pn	04 28 19.9	+2.6
PCBR				*e*Sn	Sn	04 29 07.1	-0.5
PCBR				A	A	04 29 09.6	
	comp=N,34nm,0.4s						
ALJ	Aljibe	4.58	89	P	Pn	04 28 24.0	+4.4
ALJ				S	Sn	04 29 10.0	-1.6
ALJ	Aljibe	4.58	89	*e*P	Pn	04 28 24.0	+4.4
ALJ				*e*S	Sn	04 29 10.0	-1.6
AVE	Averroes	4.63	135	P	Pn	04 28 22.9	+2.7
AVE				S	Sn	04 29 11.1	-1.6
LIJA	Lijar	4.78	85	P	Pn	04 28 26.1	+3.8
LIJA				S	Sn	04 29 13.0	-3.5
LIJA	Lijar	4.78	85	*e*P	Pn	04 28 26.1	+3.8
LIJA				*e*S	Sn	04 29 13.0	-3.5
MTE	Manteigas	4.81	37	Pn	Pn	04 28 25.3	+2.7
MTE				Sn	Sn	04 29 16.4	-0.7
	comp=N,22nm,0.3s						
MTE	Manteigas	4.81	37	*e*Pn	Pn	04 28 25.3	+2.7
MTE				*e*Sn	Sn	04 29 16.4	-0.7
MTE				A	A	04 29 19.8	
	comp=N,44nm,0.3s						
ECEU	Ceuta	4.88	97	P	Pn	04 28 27.5	+3.9
	comp=N,6.3nm,0.1s,SNR=4.0						
PVIS	Viseu	4.90	32	Pn	Pn	04 28 26.2	+2.3
PVIS				Sn	Sn	04 29 19.0	-0.3
	comp=N,29nm,0.1s						
PVIS	Viseu	4.90	32	*e*Pn	Pn	04 28 26.2	+2.3
PVIS				*e*Sn	Sn	04 29 19.0	-0.3
PVIS				A	A	04 29 21.6	
	comp=N,58nm,0.1s						
SMIR	Smir Dam	4.92	99	P	Pn	04 28 27.3	+3.2
SMIR				S	Sn	04 29 19.8	+0.1
ECAB	El Cabril	4.94	71	⇑P	Pn	04 28 27.0	+2.5
	comp=N,45nm,0.2s,SNR=18						
ECAB				S	Sn	04 29 18.5	-1.8
	comp=N,11nm,0.2s						
HORN	Hornachuelos	5.01	74	P	Pn	04 28 28.0	+2.6
SRHM	Skhour des Reh	5.02	145	P	Pn	04 28 28.2	+2.5
CHEFC	Chefchaouen	5.11	105	P	Pn	04 28 30.3	+3.5
EAH	EAH	5.17	163	P	Pn	04 28 30.1	+2.5
EMIJ	Mijas	5.29	89	P	Pn	04 28 31.7	+2.5
	comp=N,5.2nm,0.1s,SNR=33						
EMIJ				S	Sn	04 29 28.9	-0.1
	comp=N,5.8nm,0.2s						
EPLA	Plasencia	5.38	49	P	Pn	04 28 32.9	+2.5
	comp=N,8.7nm,0.1s,SNR=97						
EPLA				S	Sn	04 29 29.7	-1.4
	comp=N,20nm,0.3s,SNR=15						
PMPST	Porto Santo, M	5.42	231	*e*Pn	Pn	04 28 33.5	+2.5
PMPST				*e*Sn	Sn	04 29 27.6	-4.5
PMPST				A	A	04 29 33.3	
	comp=N,34nm,0.5s						
PMPS	Porto Santo	5.43	231	Pn	Pn	04 28 33.5	+2.4
PMPS				Pn	Pn	04 28 33.8	+2.7
PMPS				Sn	Sn	04 29 27.6	-4.8
	comp=N,17nm,0.5s						
PMPS	Porto Santo	5.43	231	*e*Pn	Pn	04 28 33.8	+2.7
PMPS				*e*Sn	Sn	04 29 27.9	-4.5
PMPS				A	A	04 29 32.3	
	comp=N,31nm,0.8s						
PVRL	Vila Real	5.44	30	Pn	Pn	04 28 33.8	+2.5
PVRL				Sn	Sn	04 29 31.2	-1.4
	comp=N,22nm,0.1s						
PVRL	Vila Real	5.44	30	*e*Pn	Pn	04 28 33.8	+2.5
PVRL				*e*Sn	Sn	04 29 31.2	-1.4
PVRL				A	A	04 29 35.2	
	comp=N,44nm,0.1s						
EMAL	Malaga-Limoner	5.56	87	P	Pn	04 28 36.5	+3.6
EMAL	Malaga-Limoner	5.56	87	*e*P	Pn	04 28 36.5	+3.6
EADA	Adamuz	5.60	72	P	Pn	04 28 35.9	+2.3
	comp=N,26nm,0.2s,SNR=216						
EADA				S	Sn	04 29 35.4	-1.4
	comp=N,7.5nm,0.1s,SNR=5.7						
MVO	Moncorvo	5.65	35	P	Pn	04 28 36.6	+2.4
	comp=N,9.6nm,0.1s,SNR=70						
MVO				S	Sn	04 29 35.6	-2.2
	comp=N,50nm,0.4s,SNR=11						
MVO	Moncorvo	5.65	35	*e*Pn	Pn	04 28 36.5	+2.3
MVO				*e*Sn	Sn	04 29 36.2	-1.6
MVO				A	A	04 29 39.7	
	comp=N,66nm,0.6s						
PCAB	Cabril	5.70	26	Pn	Pn	04 28 37.5	+2.7
PCAB				Sn	Sn	04 29 37.4	-1.6
	comp=N,16nm,0.4s						
PCAB	Cabril	5.70	26	*e*Pn	Pn	04 28 37.5	+2.7
PCAB				*e*Sn	Sn	04 29 37.4	-1.6
PCAB				A	A	04 29 52.4	
	comp=N,31nm,0.4s						
ELOB	Lobios	5.82	25	P	Pn	04 28 39.2	+2.6
	comp=N,15nm,0.1s,SNR=27						
ELOB				S	Sn	04 29 39.3	-2.9
	comp=N,11nm,0.1s,SNR=9.7						
PGAV	Gavieira, Arco	5.84	23	Pn	Pn	04 28 39.4	+2.5
PGAV				Sn	Sn	04 29 41.1	-1.6
	comp=N,29nm,0.1s						
PGAV	Gavieira, Arco	5.84	23	*e*Pn	Pn	04 28 39.4	+2.5
PGAV				*e*Sn	Sn	04 29 41.1	-1.6
PGAV				A	A	04 29 44.6	
	comp=N,29nm,0.1s						
EZAM	Zamans	5.89	20	P	Pn	04 28 39.3	+1.9
	comp=N,4.2nm,0.1s,SNR=7.9						
EZAM				S	Sn	04 29 41.2	-2.5
	comp=N,28nm,0.1s,SNR=7.9						
IFR	Ifrane	5.97	119	*e*P	Pn	04 28 40.6	+1.9
IFR				*e*S	Sn	04 29 40.3	-5.6
PMAR	Madeira	6.01	231	Pn	Pn	04 28 42.8	+3.4
PMAR				Sn	Sn	04 29 46.2	-0.9
	comp=N,21nm,0.2s						
PMAR	Madeira	6.01	231	*e*Pn	Pn	04 28 42.8	+3.4
PMAR				*e*Sn	Sn	04 29 46.2	-0.9
PMAR				A	A	04 29 50.8	
	comp=N,43nm,0.2s						
FUL	Funchal	6.05	231	Pn	Pn	04 28 42.3	+2.6
FUL				Sn	Sn	04 29 43.3	-4.4
	comp=N,22nm,0.2s						
FUL	Funchal	6.05	231	*e*Pn	Pn	04 28 42.3	+2.6
FUL				*e*Sn	Sn	04 29 43.3	-4.4
FUL				A	A	04 29 49.9	
	comp=N,44nm,0.2s						
OUK	Oukaimeden	6.13	151	P	Pn	04 28 44.2	+3.1
PMOZ	Porto Moniz, M	6.13	234	P	Pn	04 28 44.7	+3.8
	comp=N,28nm,0.2s,SNR=7.9						
PMOZ				S	Sn	04 29 50.8	+1.0
	comp=N,12nm,0.3s,SNR=7.9						
PMOZ	Porto Moniz, M	6.13	234	*e*Pn	Pn	04 28 44.1	+3.2
PMOZ				*e*Sn	Sn	04 29 48.7	-1.1
PAB	San Pablo	6.24	60	P	Pn	04 28 44.6	+2.2
	comp=N,9.1nm,0.1s,SNR=7.9						
PAB				S	Sn	04 29 49.4	-3.2
	comp=N,2.4nm,0.1s,SNR=7.9						
PBRG	Braganca	6.29	33	Pn	Pn	04 28 45.4	+2.4
PBRG				Sn	Sn	04 29 51.2	-2.4
	comp=N,10nm,0.2s						
PBRG	Braganca	6.29	33	*e*Pn	Pn	04 28 45.4	+2.4
PBRG				*e*Sn	Sn	04 29 51.2	-2.4
PBRG				A	A	04 29 54.4	
	comp=N,21nm,0.2s						
CZD	Col de Zad	6.30	123	P	Pn	04 28 45.6	+2.2
EQUE	Quentar	6.36	82	P	Pn	04 28 47.7	+3.7
	comp=N,5.7nm,0.2s,SNR=12						
EQUE				S	Sn	04 29 54.2	-1.3
	comp=N,2.7nm,0.4s						
ECAL	Calabor	6.40	33	P	Pn	04 28 47.0	+2.4
	comp=N,13nm,0.2s,SNR=18						
ECAL				S	Sn	04 29 53.9	-2.5
	comp=N,26nm,0.3s,SNR=7.9						
ESDC	Sonseca Array	6.56	60	P	Pn	04 28 49.2	+2.4
	comp=N,4.7nm,0.3s,baz=247,slow=13,SNR=195						
ESDC				S	Sn	04 29 58.2	-2.2
	comp=N,3.8nm,0.3s,baz=247,slow=23,SNR=11						
EMAZ	Mazaricos	6.58	15	P	Pn	04 28 49.4	+2.6
	comp=N,5.9nm,0.1s,SNR=7.9						
EMAZ				S	Sn	04 29 56.5	-4.1
	comp=N,14nm,0.1s,SNR=7.9						
MD31	MD31	6.59	123	P	Pn	04 28 49.3	+2.1
EAGO	Agolada(Pontev	6.66	21	P	Pn	04 28 49.7	+1.6
	comp=N,12nm,0.1s,SNR=7.9						
EAGO				S	Sn	04 29 59.7	-3.0
	comp=N,14nm,0.1s,SNR=7.9						
GORA	Gorafe	6.70	80	P	Pn	04 28 51.6	+3.0
	comp=N,8.2nm,0.2s,SNR=7.9						
GORA				S	Sn	04 30 01.9	-1.8
	comp=N,8.2nm,0.2s,SNR=7.9						
EQES	Quesada	6.71	77	P	Pn	04 28 51.1	+2.3
	comp=N,6.9nm,0.2s,SNR=30						
EQES				S	Sn	04 30 01.9	-2.1
	comp=N,5.0nm,0.1s,SNR=5.1						
MDT	Midelt	6.72	122	P	Pn	04 28 51.3	+2.2
EBER	Berja	6.79	85	P	Pn	04 28 52.8	+2.7
	comp=N,9.2nm,0.5s,SNR=6.3						
EBER				S	Sn	04 30 05.1	-1.2
	comp=N,1.2nm,0.2s,SNR=7.9						
OUZM	OUZ	6.86	145	P	Pn	04 28 53.5	+2.6
OUZM				P		04 28 54.0	
	SNR=15						
GUD	Guadarrama	6.91	52	P	Pn	04 28 54.3	+2.7
	comp=N,5.1nm,0.2s,SNR=9.8						
GUD				S	Sn	04 30 05.9	-3.2
	comp=N,5.5nm,0.4s						
GOLM	Goulmima	7.22	131	P	Pn	04 28 58.8	+3.0
ENIJ	Nijar	7.34	85	P	Pn	04 29 00.5	+3.1
	comp=N,12nm,0.4s,SNR=7.9						
ENIJ				S	Sn	04 30 17.6	-1.9
	comp=N,1.3nm,0.2s,SNR=7.9						
UCM	Universidad Co	7.34	57	P	Pn	04 29 00.3	+2.8
UCM				S	Sn	04 30 16.5	-3.0
UCM	Universidad Co	7.34	57	*e*P	Pn	04 29 00.3	+2.8
UCM				*e*S	Sn	04 30 16.5	-3.0
EPON	Pontenova	7.43	24	P	Pn	04 29 00.7	+2.1
	comp=N,11nm,0.1s,SNR=31						
EPON				S	Sn	04 30 17.9	-3.7
	comp=N,10nm,0.3s,SNR=5.5						
JBK	JBK	7.51	105	P	Pn	04 29 01.0	+1.0
TZRR	Tazzarine	7.55	139	P	Pn	04 29 03.1	+2.6
	SNR=7.3						
ETOB	Tobarra	8.03	73	P	Pn	04 29 08.7	+1.8
	comp=N,5.1nm,0.1s,SNR=17						
ETOB				S	Sn	04 30 33.4	-3.1
	comp=N,1.2nm,0.2s,SNR=7.9						
EMUR	La Murta	8.15	78	P	Pn	04 29 10.9	+2.3
	comp=N,3.5nm,0.3s,SNR=9.2						
EMUR				S	Sn	04 30 37.0	-2.5
	comp=N,5.1nm,0.3s,SNR=7.9						
EARI	Arriondas	8.16	33	P	Pn	04 29 11.2	+2.6
	comp=N,2.6nm,0.3s,SNR=14						
EARI				S	Sn	04 30 35.0	-4.7
	comp=N,13nm,0.9s,SNR=5.2						
CFUE	Fuerteventura	8.25	196	S	Sn	04 30 38.3	-3.5
	comp=N,2.6nm,0.1s,SNR=7.9						
CART	Cartagena	8.32	80	P	Pn	04 29 12.0	+1.2
CART	Cartagena	8.32	80	*e*P	Pn	04 29 12.0	+1.2
ETOR	Torete	8.38	57	P	Pn	04 29 14.3	+2.6
	comp=N,57nm,0.2s,SNR=92						
ETOR				S	Sn	04 30 41.4	-3.8
	comp=N,16nm,0.4s,SNR=8.2						
ELAN	Lanestosa	8.97	40	P	Pn	04 29 22.4	+2.7
	comp=N,1.4nm,0.2s,SNR=7.9						
ELAN				S	Sn	04 30 55.2	-4.3
	comp=N,0.5nm,0.2s,SNR=7.9						
EOSO	Osorio	9.24	204	S	Sn	04 31 00.2	-6.1
	comp=N,4.1nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	9.30	63	P	Pn	04 29 28.3	+3.8
	comp=N,4.2nm,0.3s,SNR=14						
EMOS				S	Sn	04 31 04.0	-3.9
	comp=N,11nm,0.6s,SNR=6.4						
CGUI	Guimar, Teneri	9.33	209	S	Sn	04 31 01.5	-7.0
	comp=N,15nm,0.2s,SNR=7.9						
MACI	Morro de la Ar	9.42	209	S	Sn	04 31 02.7	-8.1
	comp=N,4.4nm,0.4s,SNR=7.9						
CRAJ	Montana Rajada	9.44	209	S	Sn	04 31 05.1	-6.5
	comp=N,6.3nm,0.2s,SNR=7.9						
CCAN	Las Canadas	9.48	209	S	Sn	04 31 03.7	-8.8
	comp=N,0.5nm,0.2s,SNR=7.9						
TBT	Taburiente	9.66	217	S	Sn	04 31 07.3	-9.2
	comp=N,2.1nm,0.2s,SNR=7.9						
ESAC	San Caprasio	9.86	56	S	Sn	04 31 20.1	-1.3
	comp=N,35nm,0.4s,SNR=7.9						
EORO	Oroz-Betelu	9.94	48	P	Pn	04 29 36.0	+2.9
	comp=N,2.0nm,0.1s,SNR=6.6						
EORO				S	Sn	04 31 18.3	-5.0
	comp=N,4.5nm,0.3s,SNR=4.0						
EALK	Alkurruntz	10.02	46	P	Pn	04 29 36.7	+2.5
	comp=N,5.2nm,0.3s,SNR=6.9						

EALK				S	**Sn**	**04 31 19.7**	**-5.7**
	comp=N,9.2nm,0.4s,SNR=7.9						
ERTA	**Horta de San J**	**10.09**	**61**	P	**Pn**	**04 29 37.6**	**+2.5**
	comp=N,1.3nm,0.2s,SNR=4.0						
ERTA				S	**Sn**	**04 31 21.9**	**-5.0**
	comp=N,7.7nm,0.4s,SNR=4.0						
SJPF	**Ste Jean**	**10.12**	**47**	*e*Pn	**Pn**	**04 29 37.6**	**+2.1**
SJPF				*e*Sn	**Sn**	**04 31 22.4**	**-5.3**
	comp=N,2.7nm,0.2s						
SJPF	**Ste Jean**	**10.12**	**47**	Pn	**Pn**	**04 29 37.6**	**+2.1**
SJPF				Sn	**Sn**	**04 31 22.4**	**-5.3**
	comp=N,1.4nm,0.2s						
ETSF	**Etsaut**	**10.40**	**50**	*e*Pn	**Pn**	**04 29 41.3**	**+2.0**
ETSF				*e*Sn	**Sn**	**04 31 29.2**	**-5.4**
	comp=N,1.1nm,0.3s						
ETSF	**Etsaut**	**10.40**	**50**	Pn	**Pn**	**04 29 41.3**	**+2.0**
ETSF				Sn	**Sn**	**04 31 29.2**	**-5.4**
	comp=N,0.6nm,0.3s						
ATE	**Arette**	**10.42**	**48**	P	**Pn**	**04 29 42.6**	**+3.0**
	comp=N,4.3nm,0.2s,SNR=7.9						
ATE				S	**Sn**	**04 31 29.7**	**-5.3**
	comp=N,7.7nm,0.7s,SNR=7.9						
ECHI	**Chisagues Biel**	**10.74**	**52**	P	**Pn**	**04 29 46.6**	**+2.4**
	comp=N,3.5nm,0.2s,SNR=7.9						
ECHI				S	**Sn**	**04 31 37.3**	**-5.9**
	comp=N,1.8nm,0.8s,SNR=7.9						
EPOB	**Poblet**	**10.76**	**60**	P	**Pn**	**04 29 46.1**	**+1.8**
	comp=N,1.8nm,0.2s,SNR=7.9						
EPF	**Esparros**	**11.03**	**51**	*e*Pn	**Pn**	**04 29 49.8**	**+1.9**
EPF				*e*Sn	**Sn**	**04 31 44.4**	**-5.5**
	comp=N,1.3nm,0.2s						
EPF	**Esparros**	**11.03**	**51**	Pn	**Pn**	**04 29 49.8**	**+1.9**
EPF				Sn	**Sn**	**04 31 44.4**	**-5.5**
	comp=N,0.6nm,0.2s						
CSOR	**Sort**	**11.22**	**55**	P	**Pn**	**04 29 52.7**	**+2.1**
	comp=N,0.9nm,0.1s,SNR=10						
CSOR				S	**Sn**	**04 31 50.4**	**-4.3**
	comp=N,0.6nm,0.2s,SNR=7.9						
EMIR	**Miracle**	**11.29**	**58**	P	**Pn**	**04 29 54.0**	**+2.5**
	comp=N,1.4nm,0.2s,SNR=5.7						
EMIR				S	**Sn**	**04 31 53.1**	**-3.2**
	comp=N,2.6nm,0.3s,SNR=7.9						
CLLI	**Llivia**	**11.82**	**56**	P	**Pn**	**04 30 01.5**	**+2.6**
	comp=N,0.6nm,0.2s,SNR=6.3						
CLLI				S	**Sn**	**04 32 04.3**	**-5.3**
	comp=N,2.1nm,0.4s,SNR=7.9						
CFON	**Fontmartina**	**11.86**	**60**	P	**Pn**	**04 30 01.7**	**+2.4**
	comp=N,1.4nm,0.2s,SNR=5.9						
LFF	**La Frestale**	**12.35**	**44**	*e*Pn	**Pn**	**04 30 07.5**	**+1.5**
LFF	**La Frestale**	**12.35**	**44**	Pn	**Pn**	**04 30 07.5**	**+1.5**
QUIF	**Quistinic**	**12.80**	**26**	*e*Pn	**Pn**	**04 30 14.1**	**+2.1**
QUIF				*e*Sn	**Sn**	**04 32 26.6**	**-6.5**
	comp=N,1.5nm,0.3s						
QUIF	**Quistinic**	**12.80**	**26**	Pn	**Pn**	**04 30 14.1**	**+2.1**
QUIF				Sn	**Sn**	**04 32 26.6**	**-6.5**
	comp=N,0.8nm,0.3s						
MFF	**Saint Martin d**	**13.01**	**37**	*e*Pn	**Pn**	**04 30 16.9**	**+2.0**
MFF	**Saint Martin d**	**13.01**	**37**	Pn	**Pn**	**04 30 16.9**	**+2.0**
RJF	**Les Rejaudoux**	**13.01**	**44**	*e*Pn	**Pn**	**04 30 16.1**	**+1.1**
RJF	**Les Rejaudoux**	**13.01**	**44**	Pn	**Pn**	**04 30 16.1**	**+1.1**
CAF	**Calviac**	**13.10**	**47**	*e*Pn	**Pn**	**04 30 18.2**	**+1.9**
CAF	**Calviac**	**13.10**	**47**	Pn	**Pn**	**04 30 18.2**	**+1.9**
ROSF	**Rostrenen**	**13.12**	**24**	*e*Pn	**Pn**	**04 30 18.2**	**+1.7**
ROSF				*e*Sn	**Sn**	**04 32 34.6**	**-6.5**
	comp=N,0.7nm,0.2s						
ROSF	**Rostrenen**	**13.12**	**24**	Pn	**Pn**	**04 30 18.2**	**+1.7**
ROSF				Sn	**Sn**	**04 32 34.6**	**-6.5**
	comp=N,0.3nm,0.2s						
SGMF	**Saint Gilles**	**13.30**	**26**	*e*Pn	**Pn**	**04 30 20.9**	**+2.0**
SGMF				*e*Sn	**Sn**	**04 32 38.4**	**-7.0**
SGMF	**Saint Gilles**	**13.30**	**26**	Pn	**Pn**	**04 30 20.9**	**+2.0**
SGMF				Sn	**Sn**	**04 32 38.4**	**-7.0**
LASF	**Ste Croix**	**13.76**	**53**	*e*Pn	**Pn**	**04 30 26.6**	**+1.3**
LASF	**Ste Croix**	**13.76**	**53**	Pn	**Pn**	**04 30 26.6**	**+1.3**
TCF	**Toulx Ste Croi**	**14.00**	**42**	*e*Pn	**Pn**	**04 30 29.6**	**+1.1**
TCF	**Toulx Ste Croi**	**14.00**	**42**	Pn	**Pn**	**04 30 29.6**	**+1.1**
GRR	**Gorron**	**14.05**	**30**	*e*Pn	**Pn**	**04 30 31.3**	**+2.1**
GRR	**Gorron**	**14.05**	**30**	Pn	**Pn**	**04 30 31.3**	**+2.1**
BGF	**Bois d'Agland**	**14.51**	**42**	*e*Pn	**Pn**	**04 30 36.6**	**+1.1**
BGF				*e*Sn	Sn	04 33 07.7	-7.3
	comp=N,6.6nm,0.4s						
BGF	**Bois d'Agland**	**14.51**	**42**	Pn	**Pn**	**04 30 36.6**	**+1.1**
BGF				Sn	Sn	04 33 07.7	-7.3
	comp=N,3.3nm,0.4s						
LDF	**La Druitiere**	**14.52**	**31**	*e*Pn	**Pn**	**04 30 37.5**	**+2.0**
VIVF	**Saint-Julien-l**	**14.65**	**51**	*e*Pn	**Pn**	**04 30 39.3**	**+2.0**
VIVF	**Saint-Julien-l**	**14.65**	**51**	Pn	**Pn**	**04 30 39.3**	**+2.0**
AVF	**Avril sur Loir**	**14.93**	**43**	*e*Pn	**Pn**	**04 30 43.3**	**+2.2**
AVF	**Avril sur Loir**	**14.93**	**43**	Pn	**Pn**	**04 30 43.3**	**+2.2**

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*IDC **25** 05:06:56.6±1.2, 50°.41N×87°.62E, h0^{km}, mb3.5/3, mb1 3.8/8, mb1mx3.5/44, mbtmp3.7/8, ML3.7/5, Error ellipse: s-maj=13.3km s-min=12.2km az=94.0*

*ASRS **25** 05:06:57.6±0.4, 50°N±2°×8°8E±°, h12^{km}±2^{km}, MLv4.1/11, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*

*MOS **25** 05:06:57.6±1.3, 50°.28N×87°.60E, h11^{km}, mb4.0/2, Error ellipse: s-maj=10.9km s-min=6.4km az=88.4*

*BJI **25** 05:07:00.0±0.0, 50°.30N×87°.50E, h5^{km}, ML3.8/4*

*NNC **25** 05:07:00.1±2.0, 50°.38N×87°.32E, h0^{km}, mb4.4, mpv4.0, Error ellipse: s-maj=17.8km s-min=10.5km az=102.0*

ISC 25 05:06:58.3±0.8, **50°.41N**±0°.03×**87°.61E**±0°.03, **h14**^{km}±5^{km}, **n56**, σ**2^{s}.01**/74, **mb3.6**/3, **8C-9D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKAR	**Aktash**	**0.09**	**175**	P	**Pg**	**05 07 01.4**	**-0.1**
AKAR				S	**Sg**	**05 07 03.4**	**-0.2**
AKAR	**Aktash**	**0.09**	**175**	PG	**Pg**	**05 07 01.3**	**-0.1**
CHBI	**Chibit, Altay**	**0.12**	**214**	P	**Pg**	**05 07 00.8**	**-0.9**
CHBI				S	**Sg**	**05 07 02.5**	**-1.6**
CHBI	**Chibit, Altay**	**0.12**	**214**	PG	**Pg**	**05 07 00.8**	**-0.9**
ULGR	**Ulagan, Altay**	**0.31**	**47**	P	**Pb**	**05 07 06.9**	**+1.1**
ULGR				S	**Sb**	**05 07 12.7**	**+1.9**
ULGR	**Ulagan, Altay**	**0.31**	**47**	PG	**Pb**	**05 07 06.8**	**+1.1**
ULGR						05 07 12.5	
DGZ	**Jazzator, Alta**	**0.72**	**189**	P	**Pg**	**05 07 09.9**	**-2.5**
DGZ				S	**Sg**	**05 07 17.4**	**-4.4**
DGZ	**Jazzator, Alta**	**0.72**	**189**	*i* PG	**Pg**	**05 07 09.9**	**-2.5**
ARTR	**Artybash**	**1.40**	**352**	P	**Pb**	**05 07 25.4**	**+1.0**
ARTR				S	**Sb**	**05 07 43.6**	**+1.4**
ARTR	**Artybash**	**1.40**	**352**	P*	**Pb**	**05 07 25.3**	**+1.0**
ARTR						05 07 44.4	
GALT	**Gorno-Altaysk,**	**1.87**	**327**	P	**Pb**	**05 07 33.8**	**+1.6**
GALT				S	**Sg**	**05 07 59.2**	**+0.8**
GALT	**Gorno-Altaysk,**	**1.87**	**327**	PN	**Pb**	**05 07 33.9**	**+1.6**
GALT						05 07 57.9	
UKR	**Ust'-Kan**	**1.88**	**287**	P	**Pn**	**05 07 31.2**	**+1.1**
UKR				S	**Sn**	**05 07 53.9**	**+0.2**
UKR	**Ust'-Kan**	**1.88**	**287**	PN	**Pb**	**05 07 32.2**	**-0.3**
UKR						05 07 56.2	
TASR	**Tashtagol**	**2.36**	**4**	P	**Pb**	**05 07 41.9**	**+1.3**
TASR				S	**Sg**	**05 08 12.9**	**-1.1**
TASR	**Tashtagol**	**2.36**	**4**	PN	**Pb**	**05 07 42.1**	**+1.5**
TASR						05 08 13.3	
ELT	**Eltsovka**	**2.98**	**344**	P	**Pb**	**05 07 48.8**	**-2.3**
ELT				S	**Sb**	**05 08 26.3**	**-1.1**
ELT	**Eltsovka**	**2.98**	**344**	PN	**Pb**	**05 07 49.2**	**-1.9**
ELT						05 08 30.2	
DJO	**Djoy, Khakassi**	**3.27**	**42**	P	**Pb**	**05 07 54.0**	**-2.2**
DJO	**Djoy, Khakassi**	**3.27**	**42**	PN	**Pg**	**05 08 00.0**	**-1.0**
DJO						05 08 43.1	
DJOS	**Djoyskaya Sosn**	**3.36**	**43**	PN	**Pg**	**05 08 01.1**	**-1.5**
DJOS						05 08 46.6	
CERR	**Cheremushki**	**3.41**	**43**	PN	**Pg**	**05 08 02.5**	**-1.1**
CERR						05 08 47.9	
ZAA0	**Zalesovo Array**	**3.94**	**335**	⇓Pn	**Pn**	**05 08 00.3**	**+2.0**
	1.7nm,0.4s						
ZALV	**Zalesovo Beam**	**3.94**	**335**	Pn	**Pn**	**05 08 00.4**	**+2.1**
	9.7nm,0.3s,baz=157,slow=14,SNR=38						
ZALV				Sn	**Sn**	**05 08 46.2**	**+2.0**
	7.2nm,0.3s,baz=153,slow=19,SNR=2.1						
ZALV				Lg	Lg	05 09 02.8	
	25nm,0.3s,baz=156,slow=26,SNR=11						
ABNR	**Abakan**	**4.07**	**34**	PN	**Pg**	**05 08 13.5**	**-2.8**
ABNR						05 09 07.4	
ARDR	**Aradan**	**4.24**	**57**	P	**Pn**	**05 08 05.4**	**+2.9**
ARDR	**Aradan**	**4.24**	**57**	*i* PN	**Pn**	**05 08 05.3**	**+2.8**
KZLR	**Kyzyl**	**4.51**	**71**	PN	**Pg**	**05 08 22.3**	**-2.3**
MK31	**Makanchi Array**	**5.05**	**226**	⇑Pn	**Pn**	**05 08 15.9**	**+2.2**
	14nm,0.5s,baz=52,slow=13,SNR=814						
MK31				⇑Pg	**Pb**	**05 08 29.2**	**+2.7**
	16nm,0.5s,baz=45,slow=16,SNR=10						
MK31				Sn	**Sn**	**05 09 14.2**	**+2.3**
	9.7nm,0.3s,baz=55,slow=22,SNR=5.6						
MK31				⇓Lg	Lg	05 09 33.6	
	94nm,0.6s,baz=46,slow=31,SNR=5.7						
MK31	**Makanchi Array**	**5.05**	**226**	*i* PN	**Pn**	**05 08 15.9**	**+2.2**
MK31				pmax	pmax		
	comp=Z,14nm,0.4s						
MKAR	**Makanchi Array**	**5.05**	**226**	Pn	**Pn**	**05 08 16.0**	**+2.3**
	comp=Z,20nm,0.3s,baz=43,slow=14,SNR=989						
MKAR				Sn	**Sn**	**05 09 13.4**	**+1.5**
	comp=Z,7.6nm,0.3s,baz=48,slow=18,SNR=3.6						
MKAR				Lg	Lg	05 09 34.0	
	comp=Z,29nm,0.3s,baz=47,slow=30,SNR=7.6						
MKAR	**Makanchi Array**	**5.05**	**226**	P	**Pn**	**05 08 16.0**	**+2.3**
MKAR	**Makanchi Array**	**5.05**	**226**	*i* PN	**Pn**	**05 08 16.0**	**+2.3**
MKAR				pmax	pmax		
	comp=Z,33nm,0.3s						
BSTK	**Bystrovka, Nov**	**5.14**	**326**	P	**Pn**	**05 08 17.5**	**+2.6**
BSTK	**Bystrovka, Nov**	**5.14**	**326**	PN	**Pn**	**05 08 17.0**	**+2.1**
BSTK				S	**Sg**	**05 09 40.3**	**-3.1**
NVS	**Novosibirsk**	**5.17**	**331**	*i* PN	**Pn**	**05 08 17.1**	**+1.8**
MAKZ	**Makanchi**	**5.19**	**228**	P	**Pn**	**05 08 17.8**	**+2.2**
MAKZ	**Makanchi**	**5.19**	**228**	⇑Pn	**Pn**	**05 08 17.5**	**+1.9**
	comp=Z,17nm,0.5s						
MAKZ				⇓Sn	**Sn**	**05 09 15.0**	**-0.2**
	comp=Z,53nm,0.6s						
MAKZ				⇓Lg	Lg	05 09 37.3	
	comp=Z,45nm,0.5s						
MAKZ	**Makanchi**	**5.19**	**228**	PN	**Pn**	**05 08 17.5**	**+1.9**
MAKZ				S	**Sn**	**05 09 15.2**	**-0.1**
KURK	**Kurchatov**	**5.74**	**276**	⇓Pn	**Pn**	**05 08 23.7**	**+0.7**
	comp=Z,7.7nm,0.5s						
KURK				⇓Sn	**Sn**	**05 09 32.4**	**+3.8**
	comp=Z,9.4nm,0.5s						
KURK				⇑Lg	Lg	05 09 54.0	
	comp=Z,124nm,0.7s						
KURK	**Kurchatov**	**5.74**	**276**	*c i*PN	**Pn**	**05 08 23.7**	**+0.7**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KURBB	**Kurchatov Arra**	**5.79**	**276**	Pn	**Pn**	**05 08 24.6**	**+0.8**
	comp=Z,1.5nm,0.3s,baz=84,slow=10,SNR=101						
KURBB				Sn	**Sn**	**05 09 30.0**	**0.0**
	comp=Z,1.1nm,0.3s,baz=92,slow=25,SNR=6.3						
KURBB				Lg	Lg	05 09 57.1	
	comp=Z,2.4nm,0.3s,baz=88,slow=31,SNR=5.5						
KURBB	**Kurchatov Arra**	**5.79**	**276**	⇑Pn	**Pn**	**05 08 24.9**	**+1.0**
	comp=Z,12nm,0.4s						
KURBB				⇓Sn	**Sn**	**05 09 29.8**	**-0.3**
	comp=Z,38nm,0.6s						
KURBB				⇑Lg	Lg	05 09 55.9	
	comp=Z,187nm,0.7s						
KURBB	**Kurchatov Arra**	**5.79**	**276**	PN	**Pn**	**05 08 24.8**	**+1.0**
TLY	**Talaya**	**10.18**	**77**	Lg	Lg	05 12 18.6	
	comp=Z,0.0nm,0.3s,baz=309,slow=12,SNR=1.6						
TLY	**Talaya**	**10.18**	**77**	⇓*i*P	**Pn**	**05 09 25.2**	**+1.2**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BVAR	**Borovoye Array**	**11.00**	**290**	Pn	**Pn**	**05 09 32.5**	**-2.6**
	comp=Z,0.2nm,0.3s,baz=96,slow=15,SNR=4.2						
BVAR				Sn	**Sn**	**05 11 33.5**	**-4.4**
	comp=Z,0.5nm,0.3s,baz=94,slow=24,SNR=3.2						
BVAR				Lg	Lg	05 12 48.4	
	baz=99,slow=24,SNR=0.9						
AAK	**Ala-Archa**	**11.90**	**234**	Pn	**Pn**	**05 09 48.2**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=312,slow=23,SNR=3.6						
AAK				Sn	**Sn**	**05 11 54.7**	**-5.7**
	comp=Z,0.2nm,0.3s,baz=264,slow=18,SNR=2.5						
AAK				Lg	Lg	05 13 08.8	
	comp=Z,0.2nm,0.3s,baz=289,slow=22,SNR=2.0						
AAK	**Ala-Archa**	**11.90**	**234**	⇑*i*P	**Pn**	**05 09 47.9**	**+0.2**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM	**Songino Array**	**12.57**	**95**	Lg	Lg	05 13 33.8	
	comp=Z,0.1nm,0.3s,baz=286,slow=27,SNR=7.0						
KK31	**Karatay Array**	**13.79**	**245**	*e*P	**Pn**	**05 10 10.7**	**-2.7**
HIA	**Hailar**	**20.68**	**81**	⇓*i*P	Pn	05 11 41.7	+1.6
HIA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	**Keskin Array B**	**38.79**	**275**	P	**P**	**05 14 23.5**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=80,slow=6.3,SNR=6.8						
BRTR	**Keskin Array B**	**38.79**	**275**	*i* P	**P**	**05 14 23.6**	**+1.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	**Yellowknife Ar**	**66.07**	**11**	P	**P**	**05 17 43.6**	**-0.6**
	comp=Z,0.1nm,0.6s,baz=340,slow=6.5,SNR=3.0						
WRA	**Warramunga Arr**	**81.26**	**136**	P	**P**	**05 19 13.4**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=335,slow=6.0,SNR=3.9						

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*ECX **25** 05:24:12.8±0.9, 30°.26N×114°.07W, h10^{km}±12^{km}, MD3.2, ML3.4*

*MEX **25** 05:24:15.7±0.7, 30°.58N×114°.15W, h110^{km}±15^{km}, MD4.1*

ISC 25 05:24:13.3±3.4, **30°.4N**±0°.2×**114°.13W**±0°.09, **h8**^{km}±14^{km}, **n11**, σ**0^{s}.50**/14, **3C-2D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFX	**San Felipe**	**0.88**	**316**	*e*P	**Pg**	**05 24 30.3**	**+0.1**
SFX				*e*S	**Sn**	**05 24 44.6**	**-0.2**
PIX	**Pinacate**	**1.28**	**27**	*e*P	**Pn**	**05 24 36.8**	**-0.6**
PIX				*e*S	**Sn**	**05 24 56.0**	**+1.1**
SPX	**San Pedro Mart**	**1.30**	**299**	*e*P	**Pn**	**05 24 38.4**	**+0.3**
SPX				IAML		05 25 14.8	
	comp=N,277nm,0.7s						
SPX				*e*		05 25 14.8	
SPX				IAML		05 25 15.6	
	comp=E,333nm,1.1s						
SPX				⇑*e*		05 25 15.6	
SPX	**San Pedro Mart**	**1.30**	**299**	*e*P	**Pn**	**05 24 38.1**	**0.0**
SPX				*e*S	**Sn**	**05 24 56.1**	**+0.2**
SPIG	**San Pedro Mart**	**1.31**	**299**	*e*P	**Pn**	**05 24 38.2**	**0.0**
SPIG	**San Pedro Mart**	**1.31**	**299**	*e*P	**Pn**	**05 24 38.1**	**0.0**
SPIG				*e*S	**Sn**	**05 24 55.8**	**-0.2**
ECBX	**El Chinero**	**1.32**	**324**	*e*P	**Pn**	**05 24 37.3**	**-0.7**
SQX	**San Quintin**	**1.51**	**277**	*e*P	**Pn**	**05 24 40.3**	**-0.3**
SQX				*e*S	**Sn**	**05 25 00.8**	**+0.2**
SQX				⇑*e*		05 25 04.4	
SQX				IAML		05 25 04.4	
	comp=E,474nm,0.4s						
VTX	**Valle De La Tr**	**1.72**	**305**	*e*P	**Pn**	**05 24 43.5**	**-0.1**
CPBX	**Cerro Prieto**	**2.24**	**334**	IAML		05 26 10.2	
	comp=N,511nm,0.6s						
CPBX				⇑*e*		05 26 13.1	
CPBX				IAML		05 26 13.1	
	comp=E,487nm,0.6s						
CBX	**Cerro Bola**	**2.88**	**312**	IAML		05 26 00.8	
	comp=E,152nm,1.4s						
CBX				⇓*e*		05 26 00.8	
CBX				⇓*e*		05 26 05.1	
CBX				IAML		05 26 05.1	
	comp=N,162nm,0.7s						

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*ECX **25** 05:27:35.5±0.8, 30°.33N×114°.12W, h10^{km}, MD3.4, ML3.6*

*NEIC **25** 05:27:36.0±1.4, 31°.47N±0°.04×114°.06W±0°.04, h15^{km}±7^{km}, Md4.3/12(MEX), Error ellipse: s-maj=6.6km s-min=2.7km az=137.0*

*MEX **25** 05:27:37.9±0.5, 31°.57N×113°.92W, h16^{km}±16^{km}, MD4.3*

ISC 25 05:27:37.3±1.4, **31°.46N**±0°.03×**113°.99W**±0°.03, **h34**^{km}±3^{km}, **n25**, σ**1^{s}.25**/39, **4C-6D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFX	**San Felipe**	**0.85**	**241**	⇑*e*P	**Pb**	**05 27 51.6**	**-1.9**
SFX				*e*S	**Sn**	**05 28 05.3**	**+1.3**
ECBX	**El Chinero**	**0.91**	**271**	*e*P	**Pb**	**05 27 58.7**	**+4.1**
ECBX				⇑*e*P	Pn	05 27 59.1	+5.6
214A	**Organ Pipe Nat**	**1.12**	**63**	Pn	**Pb**	**05 27 58.6**	**+0.4**
SPIG	**San Pedro Mart**	**1.33**	**252**	*e*P	**Pn**	**05 27 59.4**	**-0.3**
SPIG				*e*S	**Sb**	**05 28 17.5**	**-1.2**
SPIG	**San Pedro Mart**	**1.33**	**252**	*e*P	**Pn**	**05 27 59.6**	**-0.2**
SPIG				*e*S	**Sn**	**05 28 16.4**	**-0.1**
SPIG	**San Pedro Mart**	**1.33**	**252**		**Pn**	**05 27 59.6**	**-0.2**
SPIG					**Sn**	**05 28 16.4**	**-0.1**
SPX	**San Pedro Mart**	**1.33**	**252**	⇓*e*P	**Pn**	**05 27 59.5**	**-0.2**
SPX				*e*S	**Sb**	**05 28 17.5**	**-1.3**
SPX				⇑*e*		05 28 36.8	
SPX				IAML		05 28 36.8	
	comp=E,647nm,1.0s						
SPX	**San Pedro Mart**	**1.33**	**252**	*e*P	**Pn**	**05 27 59.6**	**-0.1**
SPX				*e*S	**Sn**	**05 28 16.5**	**0.0**
SPX	**San Pedro Mart**	**1.33**	**252**		**Pn**	**05 27 59.6**	**-0.1**
SPX					**Sn**	**05 28 16.5**	**0.0**
CPBX	**Cerro Prieto**	**1.47**	**311**	⇓*e*		05 29 31.4	
CPBX				IAML		05 29 31.4	
	comp=N,952nm,0.7s						
BAHB	**Baha de los**	**1.56**	**166**	⇓*e*P	**Pn**	**05 28 00.9**	**-1.6**
GLA	**Glamis**	**1.74**	**336**	Pn	**Pn**	**05 28 05.6**	**+0.4**
GLA				Sn	**Sn**	**05 28 27.1**	**+1.0**
SQX	**San Quintin**	**1.84**	**242**	⇓*e*P	Pn	05 28 01.3	-5.1
SQX				⇓*e*		05 28 35.9	
SQX				IAML		05 28 35.9	
	comp=N,1µm,0.5s						
SQX				IAML		05 28 40.9	
	comp=E,517nm,0.7s						
SQX				⇑*e*		05 28 40.9	
Y12C	**Blythe**	**2.33**	**349**	Pn	**Pn**	**05 28 11.3**	**-1.9**
Y12C				Sn	**Sn**	**05 28 42.3**	**+1.6**
CBX	**Cerro Bola**	**2.43**	**291**	IAML		05 29 26.3	
	comp=N,288nm,0.7s						
CBX				⇓*e*		05 29 26.3	
BAR	**Barrett**	**2.58**	**299**	Pn	**Pn**	**05 28 16.8**	**+0.1**
Y14A	**Wickenburg**	**2.61**	**18**	Pn	**Pn**	**05 28 17.7**	**+0.6**
Y14A				Sn	**Sn**	**05 28 47.2**	**-0.4**
XPFO	**Pion Flat**	**2.99**	**317**	Pn	**Pn**	**05 28 22.1**	**-0.3**
XPFO					**Sn**	**05 28 56.8**	**-0.3**
PFO	**Pinyon Flats O**	**2.99**	**317**	Pn	**Pn**	**05 28 20.0**	**-2.4**
PFO					**Sn**	**05 28 57.3**	**+0.1**
HSIG		**3.58**	**132**	*i* P	**Pn**	**05 28 31.0**	**+0.5**
HSIG				*i* S	**Sn**	**05 29 12.5**	**+0.9**
HSIG		**3.58**	**132**		**Pn**	**05 28 31.0**	**+0.5**
HSIG					**Sn**	**05 29 12.5**	**+0.9**
HSIG		**3.58**	**132**	Pn	**Pn**	**05 28 32.1**	**+1.6**
HSIG					**Sn**	**05 29 12.5**	**+0.9**
W13A	**Hualapai Mount**	**3.63**	**1**	Pn	**Pn**	**05 28 29.9**	**-1.4**
NZIG	**Nacozari, Sono**	**3.96**	**105**	*i* P	**Pn**	**05 28 34.8**	**-1.0**
NZIG				*i* S	**Sn**	**05 29 19.9**	**-1.3**
GUYB	**Guaymas**	**4.47**	**142**	*e*P	**Pn**	**05 28 43.9**	**+1.3**
GUYB				*i* S	**Sn**	**05 29 33.4**	**0.0**

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*IDC **25** 05:32:09.8±1.6, 8°.71S×130°.00E, h0^{km}, mb3.8/3, mb1 4.0/6, mb1mx3.8/25, mbtmp3.8/6, ML3.9/3, Error ellipse: s-maj=87.0km s-min=24.4km az=80.0*

ISC 25 05:32:14.8±1.1, **8°.92S**±0°.08×**130°.0E**±0°.2, **h35**^{km}, **n8**, σ**1^{s}.57**/10, **mb3.9**/3, **Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**8.10**	**9**	Sn	Sn	05 35 30.7	-10
	1.0nm,0.3s,baz=254,slow=22,SNR=1.6						
FITZ	**Fitzroy Crossi**	**10.05**	**204**	Pn	**Pn**	**05 34 38.2**	**+1.6**
	0.7nm,0.3s,baz=22,slow=12,SNR=44						
FITZ				Sn	**Sn**	**05 36 26.6**	**-1.7**
	2.7nm,0.3s,baz=114,slow=7.4,SNR=8.5						
WRA	**Warramunga Arr**	**11.75**	**159**	Pn	**Pn**	**05 35 01.6**	**+1.6**
	0.8nm,0.3s,baz=339,slow=12,SNR=22						
WRA				Sn	**Sn**	**05 37 07.9**	**-2.2**
	2.3nm,0.3s,baz=327,slow=22,SNR=12						
ASAR	**Alice Springs**	**15.15**	**166**	Pn	**Pn**	**05 35 46.1**	**-0.2**
	0.4nm,0.3s,baz=336,slow=8.9,SNR=16						
ASAR				Sn	**Sn**	**05 38 33.0**	**0.0**
	0.7nm,0.3s,baz=356,slow=28,SNR=8.1						
SONM	**Songino Array**	**60.24**	**342**	P	**P**	**05 42 19.5**	**-0.1**
	0.2nm,0.4s,baz=147,slow=8.6,SNR=2.6						
MKAR	**Makanchi Array**	**69.80**	**327**	P	**P**	**05 43 21.2**	**-0.4**
	0.7nm,0.5s,baz=122,slow=7.2,SNR=7.5						
ZALV	**Zalesovo Beam**	**73.27**	**334**	P	**P**	**05 43 40.7**	**-1.7**
	1.4nm,0.7s,baz=137,slow=6.1,SNR=5.4						
TORD	**Torodi Ar. Bea**	**129.11**	**280**	PKP	**PKiKP**	**05 51 22.2**	**+1.2**
	0.4nm,0.6s,baz=60,slow=2.0,SNR=2.5						

IDC 25 05:45:43.4±2.2, **8°.59S**×**129°.99E**, **h0**^{km}, **mb3.4**/1, **mb1 3.5**/4, **mb1mx3.4**/31, **mbtmp3.3**/4, **ML3.4**/3, **MS2.9**/1, **Ms1 3.1**/1, **ms1mx2.4**/25, **Error ellipse: s-maj=75.3km s-min=29.9km az=77.0, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.36**	**204**	Pn	Pn	05 48 13.2	-0.2
	0.2nm,0.3s,baz=24,slow=10,SNR=26						
FITZ				Sn	Sn	05 50 01.0	-9.3
	0.5nm,0.3s,baz=166,slow=20,SNR=7.0						
WRA	**Warramunga Arr**	**12.05**	**160**	Pn	Pn	05 48 36.9	+0.4
	0.3nm,0.3s,baz=343,slow=13,SNR=20						
WRA				Sn	Sn	05 50 41.2	-11
	0.2nm,0.3s,baz=336,slow=22,SNR=4.4						
ASAR	**Alice Springs**	**15.46**	**166**	Pn	Pn	05 49 22.6	-0.4
	0.1nm,0.3s,baz=342,slow=8.5,SNR=5.0						
CMAR	**Chiang Mai Arr**	**40.76**	**311**	LR	LR	06 10 32.7	
	comp=Z,19nm,21.6s,baz=175,slow=36						
MKAR	**Makanchi Array**	**69.55**	**327**	P	P	05 56 54.2	0.0
	0.3nm,0.7s,baz=132,slow=7.9,SNR=3.4						

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*SKO **25** 05:48:13.8, 40°.72N×21°.33E, h21^{km}*

*ATH **25** 05:48:14.2, 40°.75N×21°.34E, h20^{km}±2^{km}, ML2.5/5, Error ellipse: s-maj=3.6km s-min=1.5km az=311.0*

*THE **25** 05:48:15.2, 40°.76N×21°.36E, h12^{km}, ML2.4/8, Error ellipse: s-maj=1.0km s-min=0.7km az=260.0*

ISC 25 05:48:14.6±0.8, **40°.73N**±0°.03×**21°.32E**±0°.03, **h14**^{km}±5^{km}, **n23**, σ**0^{s}.50**/38, **1D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNA	**Florina**	**0.06**	**38**	P	**Pg**	**05 48 17.6**	**+0.1**
FNA				S	**Sg**	**05 48 19.4**	**-0.1**
	6µm,0.1s						
FNA	**Florina**	**0.06**	**38**	P	**Pg**	**05 48 17.6**	**+0.1**
FNA				S	**Sg**	**05 48 19.3**	**-0.2**
FNA				AML	AML	05 48 19.7	
	comp=N,14286µm,0.2s						
FNA				AML	AML	05 48 20.3	
	comp=E,10508µm,0.1s						
NEST	**Nestorio**	**0.38**	**213**	P	**Pb**	**05 48 22.7**	**-0.5**
NEST				S	**Sb**	**05 48 29.9**	**+0.9**
	comp=E,870nm,0.3s						
NEST	**Nestorio**	**0.38**	**213**	P	**Pb**	**05 48 22.7**	**-0.5**
NEST				S	**Sb**	**05 48 28.5**	**-0.5**
NEST				AML	AML	05 48 30.4	
	comp=E,1554µm,0.3s						
NEST				AML	AML	05 48 30.4	
	comp=N,1914µm,0.2s						
KZN	**Kozani**	**0.55**	**141**	P	**Pg**	**05 48 25.2**	**-0.1**
KZN				S	**Sb**	**05 48 33.4**	**-0.3**
	comp=N,852nm,0.5s						
KZN	**Kozani**	**0.55**	**141**	P	**Pg**	**05 48 25.2**	**-0.1**
KZN				S	**Sg**	**05 48 32.7**	**0.0**
KZN				AML	AML	05 48 35.0	
	comp=N,1967µm,0.5s						
KZN				AML	AML	05 48 35.7	
	comp=E,1474µm,0.3s						
OHR	**Ohrid**	**0.55**	**314**	⇓*i*Pg	**Pg**	**05 48 25.3**	**-0.1**
OHR				*i* Sg	**Sb**	**05 48 34.3**	**+0.6**
OHR				*e*Lg	Lg	05 48 35.2	
	comp=E,203nm,0.3s						
OHR				*e*Lg	Lg	05 48 35.4	
	comp=N,119nm,0.3s						
PENT	**Pentalofos**	**0.56**	**195**	P	**Pb**	**05 48 26.0**	**-0.2**
PENT				S	**Sn**	**05 48 36.0**	**-1.2**
	comp=N,275nm,0.5s						
PENT	**Pentalofos**	**0.56**	**195**	P	**Pg**	**05 48 25.7**	**+0.2**
PENT				S	**Sb**	**05 48 33.6**	**-0.4**
PENT				AML	AML	05 48 39.4	
	comp=E,546µm,0.5s						
PENT				AML	AML	05 48 40.2	
	comp=N,480µm,0.3s						
KTI	**Kastanea**	**0.69**	**119**	P	**Pg**	**05 48 27.9**	**-0.2**
KPRO	**Kipourio**	**0.78**	**178**	P	**Pb**	**05 48 30.0**	**+0.1**
KPRO				S	**Sn**	**05 48 42.9**	**+0.2**
	comp=N,262nm,0.3s						
KPRO	**Kipourio**	**0.78**	**178**	P	**Pb**	**05 48 30.1**	**+0.2**
KPRO				S	**Sn**	**05 48 42.0**	**-0.7**
KPRO				AML	AML	05 48 46.6	
	comp=E,602µm,0.3s						
KPRO				AML	AML	05 48 48.3	
	comp=N,458µm,0.3s						
GRG	**Griva**	**0.85**	**74**	P	**Pg**	**05 48 30.5**	**-0.6**
GRG	**Griva**	**0.85**	**74**	P	**Pg**	**05 48 30.4**	**-0.6**
LIT	**Litokhoron**	**1.09**	**125**	P	**Pn**	**05 48 35.5**	**0.0**
LIT				S	**Sn**	**05 48 51.4**	**+1.1**
	comp=N,150nm,0.3s						
LIT	**Litokhoron**	**1.09**	**125**	P	**Pb**	**05 48 35.3**	**+0.1**
VAY	**Valandovo**	**1.11**	**58**	*i* Pg	**Pg**	**05 48 35.9**	**-0.1**
PHP	**Peshkopia**	**1.16**	**325**	P	**Pb**	**05 48 35.9**	**-0.6**

PHP				S	Sn	05 48 53.1	+1.0
KNT	Kendrikon	1.27	70	P	Pn	05 48 37.8	0.0
KNT				S	Sn	05 48 54.9	+0.2
	comp=N,28nm,0.2s						
KNT	Kendrikon	1.27	70	P	Pn	05 48 37.9	0.0
THL	Klokotos Trika	1.28	155	P	Pn	05 48 38.0	-0.1
THL				S	Sg	05 48 56.7	+0.8
	comp=N,72nm,0.3s						
THL	Klokotos Trika	1.28	155	P	Pn	05 48 37.9	-0.1
AGG	Agios Georgios	1.88	155	P	Pn	05 48 46.9	+0.6

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*NEIC **25** 05:54:10.4±1.7, 18°.2S±0°.6×176°.7E±0°.3, h42^{km}±12^{km}, mb4.3/9, Error ellipse: s-maj=94.4km s-min=6.6km az=158.0*

*IDC **25** 05:54:11.5±1.6, 16°.98S×175°.59E, h0^{km}, mb4.2/6, mb1 4.5/6, mb1mx4.1/28, mbtmp4.2/6, MS3.8/8, Ms1 3.8/8, ms1mx3.4/28, Error ellipse: s-maj=89.1km s-min=26.0km az=149.0*

ISC 25 05:54:10.6±1.0**, 18°.3S**±0°.4×**176°.8E**±0°.2**, h35^{km}, n29, σ2^{s}.59**/20**, mb4.2**/10**, MS3.9**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	1.35	67		Pn	05 54 31.9	-1.2
DZM	Mont Dzumac	10.38	247	*e*LR	LR	05 58 38.8	
	comp=Z,1μm,28.1s						
DZM	Mont Dzumac	10.38	247	Pn	Pn	05 56 34.8	-2.3
TBI	Tubuai	31.94	105	*e*LR	LR	06 08 38.4	
	comp=Z,343nm,30.5s						
PPT2	Papeete2	32.02	94	*e*LQ	LQ	06 07 19.7	
	193nm,25.5s						
PPT2				*e*LR	LR	06 08 45.7	
	comp=Z,384nm,28.8s,baz=264						
STKA	Stephens Creek	34.43	240	P	P	06 00 58.3	+3.4
	4.2nm,0.8s,baz=80,slow=10,SNR=7.5						
STKA				LR	LR	06 13 04.2	
	comp=Z,119nm,20.7s,baz=57,slow=33						
STKA	Stephens Creek	34.43	240	P	P	06 00 54.4	-0.5
BBOO	Buckleboo	39.21	240	P	P	06 01 35.6	0.0
WR0	Warramunga Arr	39.84	261	P	P	06 01 39.9	-1.1
WR0				IAmb	IAmb	06 01 50.5	
	comp=Z,4.6nm,0.8s						
WB0	Warramunga Arr	39.99	261	P	P	06 01 41.6	-0.7
WB2	Warramunga Arr	40.02	261	P	P	06 01 41.9	-0.6
WB2				IAmb	IAmb	06 01 49.2	
	comp=Z,4.7nm,0.8s						
WRA	Warramunga Arr	40.03	261	P	P	06 01 41.7	-0.9
	comp=Z,3.1nm,0.8s,baz=94,slow=8.7,SNR=17						
WRA	Warramunga Arr	40.03	261	P	P	06 01 41.7	-0.9
AS31	Alice Springs	40.25	255	P	P	06 01 43.6	-0.8
AS31				IAmb	IAmb	06 01 51.3	
	comp=Z,2.2nm,0.7s						
ASAR	Alice Springs	40.25	255	P	P	06 01 43.7	-0.7
	comp=Z,3.9nm,0.8s,baz=84,slow=8.8,SNR=34						
ASAR				PcP	PcP	06 03 53.5	+5.6
	comp=Z,1.3nm,1.0s,baz=116,slow=4.2,SNR=5.0						
ASAR				LR	LR	06 16 31.8	
	comp=Z,59nm,18.9s,baz=77,slow=34						
ASAR	Alice Springs	40.25	255	P	P	06 01 42.7	-1.8
TAOE	Nuku Hiva Isla	42.84	83	*e*LR	LR	06 13 49.7	
	comp=Z,102nm,25.9s						
FITZ	Fitzroy Crossi	48.42	262	P	P	06 02 47.7	-2.0
MAW	Mawson	81.92	201	LR	LR	06 38 26.8	
	comp=Z,114nm,18.1s,baz=225,slow=32						
NVAR	Mina Array Bea	82.93	46	LR	LR	06 35 12.1	
	comp=Z,40nm,21.0s,baz=268,slow=30						
NV11	Mina Array Sit	83.03	46	P	P	06 06 28.9	-3.9
NV11				IAmb	IAmb	06 06 32.9	
	comp=Z,7.1nm,1.4s						
CMAR	Chiang Mai Arr	84.69	291	P	P	06 06 40.4	-1.0
	comp=Z,1.8nm,0.3s,baz=139,slow=4.6,SNR=1.7						
ILAR	Eielson Array	87.34	15	P	P	06 06 55.3	+1.8
	comp=Z,0.7nm,1.1s,baz=242,slow=5.7,SNR=4.1						
ILAR				LR	LR	06 38 58.9	
	comp=Z,56nm,20.3s,baz=255,slow=31						
TXAR	Lajitas Array	90.11	59	P	P	06 07 14.9	+7.4
	comp=Z,0.3nm,0.7s,baz=213,slow=4.3,SNR=3.2						
PDAR	Pinedale Array	90.83	45	LR	LR	06 42 14.1	
	comp=Z,33nm,18.7s,baz=332,slow=32						
PLCA	Paso Flores	94.36	135	LR	LR	06 43 43.8	
	comp=Z,53nm,19.2s,baz=83,slow=31						
YKA	Yellowknife Ar	96.63	26	LR	LR	06 43 40.0	
	comp=Z,53nm,21.8s,baz=0.0,slow=31						
CLL	Collm	144.61	342	*e*PKPdf	PKiKP	06 13 52.8	+5.8
	comp=Z,17nm,1.5s						
GERES	GERESS Array B	146.55	340	PKP	PKPab	06 13 49.3	-0.1
	comp=Z,0.3nm,0.2s,baz=38,slow=5.0,SNR=1.8						

DJA 25 05:55:36.5±0.4**, 5°S**±3°×**10°4E**±°**, h10^{km}, M3.7**/5**, MLv3.7**/5**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LWLI	Liwa	0.17	174	P	Pg	05 55 40.7	+0.5
MDSI	Maura Dua	0.39	21	P	Pb	05 55 45.5	0.0
MDSI				S	Sb	05 55 50.6	-0.9
KASI	Kota Agung	0.81	146	P	Pb	05 55 52.7	0.0
MNAI	Manna	1.19	294	P	Pb	05 55 58.7	-0.4
MNAI				S	Sb	05 56 13.8	-0.7
KSI	Kapahiang	1.87	309	P	Pn	05 56 08.7	0.0
PMBI	Palembang	2.04	21	S	Sg	05 56 42.8	+0.5

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*RSPR **25** 06:04:09.8, 19°.30N×67°.29W, h26^{km}±17^{km}, MD2.9/10*

*NEIC **25** 06:04:09.5±2.5, 19°.24N±0°.04×67°.03W±0°.04, h30^{km}±10^{km}, Error ellipse: s-maj=7.2km s-min=1.4km az=222.0*

ISC 25 06:04:05.8±1.4**, 19°.40N**±0°.07×**67°.13W**±0°.04**, h25^{km}, n42, σ0^{s}.72**/52**, 5C-6D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	0.92	179	⇓*e*P	Pn	06 04 23.5	+0.3
AGPR	Aguadilla, PR	0.92	179	*e*S	Sb	06 04 34.5	-0.5
AGPR	Aguadilla, PR	0.92	179		Pn	06 04 23.5	+0.3
AGPR					Sb	06 04 34.5	-0.5
EMPR	Esperanza - Ma	1.08	148	⇑*e*P	Pb	06 04 27.2	+1.5
EMPR	Esperanza - Ma	1.08	148	*e*S	Sn	06 04 40.9	+1.5
EMPR	Esperanza - Ma	1.08	148		Pb	06 04 27.2	+1.5
EMPR					Sn	06 04 40.9	+1.5
AOPR	Arecibo Observ	1.10	161	⇓*e*P	Pb	06 04 26.6	+0.4
AOPR	Arecibo Observ	1.10	161	*e*S	Sn	06 04 40.4	+0.3
AOPR	Arecibo Observ	1.10	161		Pb	06 04 26.6	+0.4
AOPR					Sn	06 04 40.4	+0.3
MPR	Mayaguez	1.18	180		Pb	06 04 27.2	-0.2
LSP	Las Mesas	1.21	178	⇑*e*P	Pb	06 04 28.0	-0.1
LSP	Las Mesas	1.21	178	*e*S	Sn	06 04 42.3	-0.5
LSP	Las Mesas	1.21	178		Pb	06 04 28.0	-0.1
LSP					Sn	06 04 42.3	-0.5
CRPR	Cabo Rojo, PR	1.38	179	⇓*e*P	Pb	06 04 30.4	-0.5
CRPR	Cabo Rojo, PR	1.38	179	*e*S	Sn	06 04 46.3	-0.6
CRPR	Cabo Rojo, PR	1.38	179		Pb	06 04 30.4	-0.5
CRPR					Sn	06 04 46.3	-0.6
MLPR	Magueyes Islan	1.42	177	⇓*e*P	Pb	06 04 31.0	-0.6
MLPR	Magueyes Islan	1.42	177	*e*S	Sn	06 04 47.2	-0.7
MLPR	Magueyes Islan	1.42	177		Pb	06 04 31.0	-0.6
MLPR					Sn	06 04 47.2	-0.7
OBIP	Obispado Ponce	1.43	160	⇑*e*P	Pb	06 04 31.3	-0.6
OBIP	Obispado Ponce	1.43	160	*e*S	Sn	06 04 48.4	+0.1
OBIP	Obispado Ponce	1.43	160		Pb	06 04 31.3	-0.6
OBIP					Sn	06 04 48.4	+0.1
GCPR	Guaynabo City	1.47	137	⇑*e*P	Pb	06 04 32.8	+0.4
GCPR	Guaynabo City	1.47	137	*e*S	Sb	06 04 51.3	+0.6
GCPR	Guaynabo City	1.47	137		Pb	06 04 32.8	+0.4
GCPR					Sb	06 04 51.3	+0.6
PCDR	Punta Cana, DR	1.47	234		Pb	06 04 33.0	+0.5
SJG	San Juan	1.58	144		Pb	06 04 34.6	+0.3
ICMP	Isla Caja de M	1.61	159	Pn	Pb	06 04 35.1	+0.4
IGPR	InterUniversit	1.72	145	⇓*e*P	Pb	06 04 36.5	-0.2
IGPR	InterUniversit	1.72	145	*e*S	Sb	06 04 57.4	-0.6
IGPR	InterUniversit	1.72	145		Sb	06 04 57.4	-0.6
IGPR	InterUniversit	1.72	145	Pn	Pb	06 04 37.3	+0.6
PDPR	Patillas Dam,	1.73	142	⇓*e*P	Pb	06 04 37.0	+0.2
PDPR	Patillas Dam,	1.73	142	*e*S	Sb	06 04 57.6	-0.5
PDPR	Patillas Dam,	1.73	142		Pb	06 04 37.0	+0.2
PDPR					Sb	06 04 57.6	-0.5
CUPR	Culebra, Puert	2.06	121	Pn	Pb	06 04 41.9	-0.6
DR12	Loma Pena Alta	2.21	255	Pn	Pb	06 04 44.3	-0.8
STVI	Saint Thomas	2.31	116	⇑*e*P	Pb	06 04 45.9	-0.9
STVI	Saint Thomas	2.31	116	*e*S	Sb	06 05 13.8	-1.1
STVI	Saint Thomas	2.31	116		Pb	06 04 45.9	-0.9
STVI					Sb	06 05 13.8	-1.1
CDVI	St. Croix	2.78	126	Pn	Pb	06 04 53.5	-1.2
SDDR	Presa de Saban	3.95	265	Pn	Pn	06 05 06.1	+1.2

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*IDC **25** 06:31:20.2±0.7, 19°.45S×70°.55W, h0^{km}, mb4.3/17, mb1 4.3/20, mb1mx4.3/34, mbtmp4.3/20, ML4.2/3, MS3.7/8, Ms1 3.7/8, ms1mx3.5/26, Error ellipse: s-maj=20.4km s-min=15.0km az=51.0*

*NEIC **25** 06:31:23.7±2.2, 19°.65S±0°.03×70°.80W±0°.04, h24^{km}±1^{km}, mb4.6/30, Mwr4.3/40, ML4.6(GUC), Error ellipse: s-maj=7.2km s-min=5.0km az=271.0*

*NEIC **25** 06:31:23.7, 19°.65S×70°.80W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.76; $M_{\theta\theta}$-0.56; $M_{\phi\phi}$-2.20; $M_{r\theta}$0.56; $M_{\theta\phi}$0.92; $M_{\phi r}$-3.09; Fault plane solution: $M_0$4.13000×10^{15} NP1:ϕ_s327.63000°, δ21.11000°, λ72.70000°. NP2:ϕ_s166.09000°, δ69.89000°, λ96.55000°. Principal axes: T 4.2444, Plg65.0000°, Azm87.0000°; N -0.2316, Plg6.0000°, Azm344.0000°; P -4.0129, Plg25.0000°, Azm251.0000°;*

*GUC **25** 06:31:24.6±0.7, 19°.62S×70°.74W, h44^{km}±2^{km}, ML4.6*

*VAO **25** 06:31:28.6±1.0, 19°.61S×70°.55W, h76^{km}±4^{km}, mb4.5*

ISC 25 06:31:25.1±0.4**, 19°.61S**±0°.03×**70°.76W**±0°.05**, h39^{km}**±4^{km}**, n147, σ1^{s}.74**/161**, mb4.5**/23**, MS3.7**/5**, 4C-7D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.60	89	*e*P	Pn	06 31 35.9	-1.5
PSGC				*e*S	Sn	06 31 44.5	-1.5
PSGCX	Pisagua	0.60	89		Pn	06 31 35.8	-1.5
PSGCX				Sg	Sn	06 31 44.2	-1.7
PB11	IPOC Station P	1.05	99	⇓*e*P	Pn	06 31 43.2	-0.3
PB11				*e*S	Sn	06 31 57.4	+0.3
PB11				IAML		06 32 01.4	
	comp=N,16μm,0.4s						
PB11	IPOC Station P	1.05	99		Pn	06 31 43.0	-0.5
PB12	IPOC Station P	1.07	23	⇓*e*P	Pn	06 31 43.3	-0.4
PB12				*e*S	Sn	06 31 58.0	+0.6
PB12				IAML		06 32 01.5	
	comp=N,20μm,0.5s						
PB12	IPOC Station P	1.07	23		Pn	06 31 43.0	-0.7
PB12				Sn	Sn	06 31 58.4	+1.0
TA01	Diego Aracena	1.10	150	⇓*e*P	Pn	06 31 43.8	-0.3
TA01				*e*S	Sn	06 31 57.6	-0.3
TA01				IAML		06 32 02.4	
	comp=E,21μm,0.3s						
AP01	Chacalluta	1.29	18	⇓*e*P	Pn	06 31 46.9	+0.2
AP01				*e*S	Sn	06 32 04.1	+1.4
AP01				IAML		06 32 08.7	
	comp=N,35μm,0.5s						
PATCX	Punta Patache	1.33	155	⇑*i*P	Pn	06 31 47.2	-0.1
PATCX				*e*S	Sn	06 32 04.1	+0.2
PATCX	Punta Patache	1.33	155		Pn	06 31 47.1	-0.3
PATCX				Sn	Sn	06 32 03.6	-0.4
GO01	Chusmiza	1.48	93	⇓*e*P	Pn	06 31 50.6	+0.9
GO01				*e*S	Sn	06 32 10.0	+2.0
GO01	Chusmiza	1.48	93		Pn	06 31 50.4	+0.8
GO01				Sn	Sn	06 32 10.4	+2.4
PB08	IPOC Station P	1.60	110	⇓*e*P	Pn	06 31 52.2	+0.9
PB08				*e*S	Sn	06 32 12.9	+2.0
PB16	IPOC Station P	1.73	43	⇓*e*P	Pn	06 31 54.8	+1.5
PB16				*e*S	Sn	06 32 17.8	+3.3
PB16				IAML		06 32 21.8	
	comp=E,5μm,0.5s						
PB16	IPOC Station P	1.73	43		Pn	06 31 54.7	+1.4
PB16				Sn	Sn	06 32 17.6	+3.1
PB01	IPOC Station P	1.86	140	⇑*i*P	Pn	06 31 55.1	+0.5
PB01				*e*S	Sn	06 32 18.1	+1.2
PB01				IAML		06 32 26.1	
	comp=N,10μm,0.4s						
PB01	IPOC Station P	1.86	140		Pn	06 31 54.7	+0.1
PB01				Sn	Sn	06 32 17.6	+0.6
PB02	IPOC Station P	1.89	155	⇑*i*P	Pn	06 31 55.3	+0.3
PB02				*e*S	Sn	06 32 18.0	+0.4
PB02				IAML		06 32 26.2	
	comp=E,10μm,0.5s						
PB07	IPOC Station P	2.26	159	⇑*i*P	Pn	06 32 00.0	-0.1
PB07				*e*S	Sn	06 32 27.9	+1.0
PB07				IAML		06 32 45.2	
	comp=E,4μm,0.6s						
PB07	IPOC Station P	2.26	159		Pn	06 32 00.1	-0.1
PB09	IPOC Station P	2.60	147	*i* P	Pn	06 32 06.0	+1.1
PB09				*e*S	Sn	06 32 36.7	+1.4
PB09				IAML		06 32 51.2	
	comp=E,6μm,0.4s						
PB09	IPOC Station P	2.60	147		Pn	06 32 05.8	+1.0
PB04	IPOC Station P	2.77	168	*e*P	Pn	06 32 06.2	-1.0
PB04				*e*S	Sn	06 32 48.3	+8.8
PB04				IAML		06 33 00.7	
	comp=E,3μm,0.5s						
PB04	IPOC Station P	2.77	168		Pn	06 32 06.5	-0.8
PB06	IPOC Station P	3.28	160	*e*P	Pn	06 32 13.5	-0.7
PB06				*e*S	Sn	06 32 59.4	+7.5
PB06				IAML		06 33 14.4	
	comp=N,2μm,0.4s						
LVC	Limon Verde	3.45	150	Pn	Pn	06 32 17.7	+1.0
	comp=N,36nm,0.3s,baz=331,slow=11,SNR=168						
LVC				Sn	Sn	06 32 57.8	+1.2
	comp=N,102nm,0.3s,baz=328,slow=2.6,SNR=9.5						
LVC				Lg	Lg	06 33 08.8	
	comp=N,100nm,0.3s,baz=148,slow=19,SNR=6.4						
LVC				LR	LR	06 33 58.0	
	comp=N,713nm,20.9s,baz=334,slow=45						
LVC	Limon Verde	3.45	150	*e*P	Pn	06 32 17.9	+1.2
LVC				*e*S	Sn	06 32 58.3	+1.8
LVC	Limon Verde	3.45	150	*e*P	Pn	06 32 17.9	+1.2
LVC				*e*S	Sn	06 32 58.2	+1.6
PB15	IPOC Station P	3.78	162		Pn	06 32 20.3	-0.8
PB10	IPOC Station P	3.89	177	*e*P	Pn	06 32 20.4	-2.1
PB10				*e*S	Sn	06 33 02.6	-4.3
PB10				IAML		06 33 43.0	
	comp=E,360nm,0.6s						
PB10	IPOC Station P	3.89	177		Pn	06 32 20.8	-1.6
LPAZ	La Paz	4.14	38	Pn	Pn	06 32 30.9	+4.4
	comp=E,7.9nm,0.3s,baz=226,slow=3.9,SNR=133						
LPAZ	La Paz	4.14	38		Pn	06 32 30.6	+4.1
GO03	Copiap	7.96	177	Pn	Pn	06 33 17.8	-0.6
NNA	Nana	9.57	321	Pn	Pn	06 33 40.8	+0.3
	comp=E,1.5nm,0.3s,baz=164,slow=15,SNR=2.3						
NNA				Sn	Sn	06 35 20.2	-6.7
	comp=E,4.5nm,0.3s,baz=260,slow=14,SNR=5.4						
NNA				LR	LR	06 37 17.8	
	comp=E,144nm,21.2s,baz=178,slow=37						
NNA	Nana	9.57	321	Pn	Pn	06 33 41.0	+0.5
SIV	San Ignacio	9.90	70	Pn	Pn	06 33 44.5	-0.5
	comp=E,4.1nm,0.3s,baz=274,slow=10,SNR=51						
SIV				Sn	Sn	06 35 36.3	+1.3
	comp=E,0.6nm,0.3s,baz=304,slow=17,SNR=1.3						
SIV				LR	LR	06 38 10.9	
	comp=E,765nm,18.9s,baz=282,slow=42						
GO04	Tololo Observa	10.52	180	Pn	Pn	06 33 52.5	-1.1
SAML	Samuel	12.88	36		Pn	06 34 24.6	-1.1
ROC1	El Roble	13.32	181	Pn	Pn	06 34 30.0	-1.8
CPUP	Villa Florida	14.06	121	Pn	Pn	06 34 40.6	-1.1
	comp=E,0.3nm,0.3s,baz=306,slow=12,SNR=11						
CPUP	Villa Florida	14.06	121	Pn	Pn	06 34 42.8	+1.0
AQDB	Aquidauana	14.18	96	*e*P	Pn	06 34 43.9	+0.5
SALV	Santo Antonio	14.82	78	*e*P	Pn	06 34 52.6	+0.6
CLDB	Colider	16.84	61	*e*P	Pn	06 35 17.1	-0.9
C2SB	Chapadao do Su	16.95	90	*e*P	Pn	06 35 18.0	-1.4
TRCB	Terra Rica	17.20	104	*e*P	Pn	06 35 21.6	-0.9
PCMB	Pacaembu	18.36	100	*e*P	P	06 35 34.9	-1.7
ARAG	Araguaiana, MT	18.47	81	*e*P	P	06 35 37.0	-0.7
ITAB	Concordia	18.69	117	*e*P	P	06 35 39.5	-0.6
PLTB	Pedras Altas	19.60	132	*e*P	P	06 35 49.8	-0.4
GO06	Curarrehue	19.92	182	Pn	Pn	06 35 54.7	-0.8
FRTB	Fartura	20.07	104	*e*P	P	06 35 54.3	-1.0
CNLB	Canela	20.51	122	*e*P	P	06 35 58.8	-1.3
PLCA	Paso Flores	21.06	180	P	P	06 36 07.3	+1.4
	comp=E,3.8nm,0.9s,baz=157,slow=12,SNR=13						
PLCA	Paso Flores	21.06	180	Pn	P	06 36 08.0	+2.1
IPMB	Ipameri, GO	21.41	89	*e*P	P	06 36 07.7	-2.1
PTGA	Pitinga	21.53	31	P	P	06 36 09.6	-1.5
	comp=E,53nm,0.3s,baz=212,slow=16,SNR=187						
PTGA				LR	LR	06 45 38.6	
	comp=E,184nm,18.3s,baz=206,slow=40						
PTGA	Pitinga	21.53	31	P	P	06 36 10.3	-0.8
PTGA	Pitinga	21.53	31	*e*P	P	06 36 09.9	-1.2
FLOC	Florencia	21.60	347	*e*P	P	06 36 12.5	+0.7
FLOC	Florencia	21.60	347	P	P	06 36 12.4	+0.6
GCUF	Volcan Galeras	21.69	342	*e*P	P	06 36 18.9	+5.6
RCLB	Rio Claro- Sao	21.86	101	*e*P	P	06 36 13.2	-1.4
CRUC	La Cruz	21.90	343	*e*P	P	06 36 20.9	+5.5
BDFB	Brasilia	22.03	83	P	P	06 36 13.9	-2.6
	comp=E,4.6nm,0.5s,baz=245,slow=8.4,SNR=11						
BDFB				LR	LR	06 45 46.5	
	comp=E,241nm,19.5s,baz=222,slow=40						
BDFB	Brasilia	22.03	83	P	P	06 36 15.0	-1.6
GARC	Garzon, Huila	22.15	347	*e*P	P	06 36 18.3	+0.4
SOTA	Rioblanco	22.36	344	*e*P	P	06 36 24.4	+4.0
PCON	Cinco Dias	22.49	345	*e*P	P	06 36 24.7	+2.8
PARB	Paraibuna	23.68	104	*e*P	P	06 36 31.1	-2.3
ORTC	Ortega, Tolima	23.78	349	*e*P	P	06 36 34.5	+0.2
YOTC	Yotoco, Valle	24.08	346	*e*P	P	06 36 37.1	0.0
CHIC	Chingaza	24.26	353	*e*P	P	06 36 39.2	+0.1
BSCB	Bom Sucesso	24.40	98	*e*P	P	06 36 39.3	-0.8
ROSC	El Rosal	24.54	351	P	P	06 36 41.0	-0.8
	comp=E,2.7nm,0.3s,baz=152,slow=19,SNR=1.8						
ROSC	El Rosal	24.54	351	IAmb	IAmb	06 36 47.6	
	comp=Z,13nm,0.7s						
RREF	El Recreo	24.77	349	*e*P	P	06 36 46.0	+2.0
SMTB	Santa Maria do	24.84	68	*e*P	P	06 36 43.2	-0.8
PLMC	San Jos del P	24.96	347	*e*P	P	06 36 46.5	+1.4
GUY2C	Guyana, Caldas	25.09	349	*e*P	P	06 36 48.5	+1.8
SPBC	San Pablo de B	25.31	352	*e*P	P	06 36 48.2	-0.1
NORC	Norcasia	25.34	350	*e*P	P	06 36 49.3	+0.8
RUSC	La Rusia	25.44	355	*e*P	P	06 36 50.8	+0.8
RUSC	La Rusia	25.44	355	P	P	06 36 51.4	+1.4
JANB	Januaria	25.64	84	*e*P	P	06 36 49.8	-1.5
CBOC	Ciudad Bolivar	25.83	348	*e*P	P	06 36 54.6	+1.4
HELC	Santa Helena	26.06	349	*e*P	P	06 36 56.6	+1.2
BARC	Barichara	26.14	355	*e*P	P	06 36 55.2	-0.9
PTBC	PUERTO BERRIO,	26.23	352	*e*P	P	06 36 55.2	-1.4
ZARC	Zaragoza, Cauc	27.23	351	*e*P	P	06 37 05.5	-0.1
UREC	San Jos de Ur	27.59	350	*e*P	P	06 37 07.3	-1.5
SDV	Santo Domingo	28.31	0	P	P	06 37 14.4	-1.0
	comp=Z,2.3nm,0.7s,baz=253,slow=10,SNR=2.3						
SDV	Santo Domingo	28.31	0	P	P	06 37 15.2	-0.2
SDV				IAmb	IAmb	06 37 25.4	
	comp=Z,11nm,1.4s						
SMLC	San Martn de	28.42	353	*e*P	P	06 37 14.0	-2.2
SJCC	San Jacinto, C	29.64	351	*e*P	P	06 37 23.2	-3.9
MDP	Montagnes des	30.34	38	P	P	06 37 31.8	-1.5
	comp=Z,6.6nm,0.5s,baz=209,slow=7.9,SNR=11						
NBCP	Cabaceiras do	31.09	82	*e*P	P	06 37 37.9	-2.1
RCBR	Riachuelo	36.56	73	P	P	06 38 25.9	-1.6
	comp=Z,8.6nm,0.8s,baz=262,slow=2.9,SNR=5.1						
RCBR	Riachuelo	36.56	73	IAmb	IAmb	06 38 26.9	
	comp=Z,30nm,1.2s						
RCBR	Riachuelo	36.56	73	*e*P	P	06 38 24.9	-2.6
RCBR				*e*pP	sP	06 38 44.1	+1.0
CRPR	Cabo Rojo, PR	37.55	6	P	P	06 38 36.4	+0.7
OBIP	Obispado Ponce	37.64	6	P	P	06 38 35.3	-1.1
OBIP				IAmb	IAmb	06 38 49.9	
	comp=Z,7.7nm,0.7s						
SJG	San Juan	37.76	7	P	P	06 38 36.4	-1.0
	comp=Z,2.4nm,0.3s,baz=53,slow=4.0,SNR=3.8						
SJG	San Juan	37.76	7	IAmb	IAmb	06 38 46.4	
	comp=Z,7.0nm,0.7s						
CUPR	Culebra, Puert	38.06	8	P	P	06 38 39.0	-1.0
CUPR				IAmb	IAmb	06 38 49.4	
	comp=Z,7.3nm,0.7s						
WVT	Waverly	57.74	344	P	P	06 41 12.1	0.0
WVT				IAmb	IAmb	06 41 12.5	
	comp=Z,7.0nm,0.8s						
MIAR	Mount Ida	58.06	338	P	P	06 41 15.3	+0.9
MIAR				IAmb	IAmb	06 41 17.8	
	comp=Z,3.3nm,0.7s						
TXAR	Lajitas Array	58.09	326	P	P	06 41 14.5	-0.3
	comp=Z,0.3nm,0.5s,baz=156,slow=11,SNR=4.5						
VNA2	Neumayer--Watz	63.00	161	P	P	06 41 50.1	+2.5
SNAA	Sanae	64.62	161	P	P	06 42 00.0	+1.7
PFO	Pinyon Flats O	68.55	320	P	P	06 42 25.4	+1.4
	comp=Z,1.6nm,0.7s,baz=146,slow=3.6,SNR=2.5						
SRU	San Rafael Swe	69.25	328	P	P	06 42 30.9	+2.5
DBIC	Dimbokro	69.89	75	P	P	06 42 32.1	-0.4
	comp=Z,3.8nm,0.8s,baz=239,slow=8.6,SNR=4.5						
DBIC	Dimbokro	69.89	75	IAmb	IAmb	06 42 34.9	
	comp=Z,6.1nm,0.9s						
PDAR	Pinedale Array	71.62	331	P	P	06 42 43.4	+0.7
	comp=Z,0.6nm,0.7s,baz=131,slow=5.8,SNR=5.3						
PDAR				LR	LR	07 18 32.2	
	comp=Z,42nm,18.8s,baz=358,slow=40						
NVAR	Mina Array Bea	72.94	323	P	P	06 42 52.2	+1.4
	comp=Z,0.8nm,0.8s,baz=161,slow=5.7,SNR=7.6						
ULM	Lac du Bonnet	73.01	343	P	P	06 42 50.5	0.0
	comp=Z,1.2nm,0.5s,baz=177,slow=7.6,SNR=3.6						
ULM	Lac du Bonnet	73.01	343	IAmb	IAmb	06 43 07.2	
	comp=Z,7.2nm,1.4s						
SCHQ	Schefferville	74.21	2	P	P	06 42 57.8	+0.2
	comp=Z,2.3nm,0.8s,baz=225,slow=2.7,SNR=4.0						
SCHQ	Schefferville	74.21	2	IAmb	IAmb	06 43 03.1	
	comp=Z,10nm,1.3s						
TOA0	Torodi Ar. Sit	78.38	71	P	P	06 43 21.8	-0.3
TOA0				IAmb	IAmb	06 43 22.7	
	comp=Z,6.7nm,0.8s						
TORD	Torodi Ar. Bea	78.38	71	P	P	06 43 21.6	-0.4
	comp=Z,5.5nm,0.7s,baz=255,slow=5.0,SNR=30						
TORD				LR	LR	07 17 55.7	
	comp=Z,71nm,18.1s,baz=115,slow=36						
TORD	Torodi Ar. Bea	78.38	71	IAmb	IAmb	06 43 22.3	
	comp=Z,7.7nm,0.8s						
WALA	Waterton Lakes	78.39	333	P	P	06 43 23.8	+2.2
BOSA	Boshof	85.87	119	P	P	06 44 01.4	0.0
	comp=Z,1.9nm,0.8s,baz=249,slow=4.4,SNR=2.2						
BOSA				LR	LR	07 19 36.9	
	comp=Z,71nm,18.2s,baz=182,slow=34						
YKA	Yellowknife Ar	88.84	341	P	P	06 44 15.6	+1.1
	comp=Z,3.4nm,0.6s,baz=137,slow=5.2,SNR=64						
H11S2	WAKE ISLAND Hy	125.90	279	T	T	09 09 33.2	
	baz=101,slow=74,SNR=183						
H11S1	WAKE ISLAND Hy	125.90	279	T	T	09 09 38.6	
	baz=101,slow=74,SNR=64						
H11S3	WAKE ISLAND Hy	125.91	279	T	T	09 09 34.5	
	baz=101,slow=74,SNR=138						
H11N3	WAKE ISLAND Hy	125.93	281	T	T	09 09 41.4	
	baz=100,slow=74,SNR=36						
H11N2	WAKE ISLAND Hy	125.95	281	T	T	09 09 42.1	
	baz=100,slow=74,SNR=40						
H11N1	WAKE ISLAND Hy	125.95	281	T	T	09 09 43.1	
	baz=100,slow=74,SNR=26						
ASAR	Alice Springs	130.72	210	PKP	PKiKP	06 50 34.0	+0.3
	comp=Z,1.0nm,0.5s,baz=128,slow=1.8,SNR=17						
ASAR	Alice Springs	130.72	210		PKiKP	06 50 33.6	0.0
ABKAR	Akbulak array	130.90	41		PKPdf	06 50 32.6	+0.4
WRA	Warramunga Arr	133.63	213	PKP	PKiKP	06 50 39.4	-0.2
	comp=Z,1.4nm,0.7s,baz=154,slow=1.9,SNR=22						
WRA	Warramunga Arr	133.63	213		PKiKP	06 50 40.0	+0.4
ZALV	Zalesovo Beam	140.94	23	PKhKP	PKPpre	06 50 44.9	
	comp=Z,0.6nm,0.5s,baz=323,slow=3.6,SNR=1.8						
MK31	Makanchi Array	145.06	33		PKPdf	06 50 59.0	+0.8
MKAR	Makanchi Array	145.06	33	PKP	PKPdf	06 50 58.8	+0.5
	comp=Z,6.5nm,0.7s,baz=321,slow=4.0,SNR=68						
NIL	Nilore	145.11	59		PKPdf	06 50 59.3	+0.5
KSH	Kashi	145.20	48	PKPbc	PKPbc	06 50 58.3	-0.2
KSH				pPKP	pPKPab	06 51 09.3	-1.3
KSH				PP	PP	06 54 20.5	+2.5
KSH				PKS	PKSdf	06 54 32.8	-1.7
KLR	Kul'dur	145.37	334	PKPbc	PKPab	06 50 59.8	+1.0
	comp=Z,1.3nm,0.5s,baz=37,slow=3.1,SNR=6.2						
SONM	Songino Array	151.75	4	PKPbc	PKiKP	06 51 16.8	+0.8
	comp=Z,1.3nm,0.7s,baz=348,slow=2.0,SNR=9.7						
SONM	Songino Array	151.75	4		PKiKP	06 51 17.1	+1.1
LZH	Lanzhou	162.91	15	*e*PKP	PKPdf	06 51 21.0	-2.7
LZH				pPKP	pPKPdf	06 51 31.5	-4.1
LZH				sPKP		06 51 36.3	

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*IDC **25** 06:35:23.1±1.1, 17°.37N×91°.20W, h0^{km}, mb3.5/3, mb1 3.7/6, mb1mx3.5/38, mbtmp3.4/6, ML2.8/3, MS3.0/5, Ms1 3.0/5, ms1mx2.7/26, Error ellipse: s-maj=17.5km s-min=12.9km az=78.0*

*MEX **25** 06:35:24.9±0.7, 17°.46N×90°.94W, h24^{km}±15^{km}, MD4.0*

*NEIC **25** 06:35:25.6±4.4, 17°.47N±0°.08×91°.16W±0°.03, h92^{km}±8^{km}, Error ellipse: s-maj=11.2km s-min=2.5km az=194.0*

ISC 25 06:35:24.4±3.2**, 17°.34N**±0°.05×**91°.20W**±0°.04**, h6^{km}**±22^{km}**, n24, σ0^{s}.96**/34**, mb3.6**/3**, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	Comitan	1.38	220	*e*P	Pn	06 35 49.3	-1.1
CCIG				*e*S	Sn	06 36 09.6	+0.5
CCIG	Comitan	1.38	220		Pn	06 35 49.4	-1.1
CCIG				Sn	Sn	06 36 10.0	+0.9

CCIG	**Comitan**	**1.38**	**220**		**Pn**	**06 35 49.3**	**-1.1**
CCIG					**Sn**	**06 36 09.6**	**+0.5**
TGIG		**1.92**	**253**	*e*P	**Pn**	**06 35 58.1**	**+0.5**
TGIG				*i* S	**Sn**	**06 36 22.6**	**+0.5**
TGIG		**1.92**	**253**		**Pn**	**06 35 58.1**	**+0.5**
TGIG					**Sn**	**06 36 22.6**	**+0.5**
APG	**El Apazote**	**2.43**	**163**	Pn	**Pn**	**06 36 04.8**	**-0.1**
	3.2nm,0.3s,baz=342,slow=19,SNR=23						
APG				Pg	**Pb**	**06 36 09.2**	**+0.5**
	15nm,0.3s,baz=330,slow=17,SNR=56						
APG				Sn	**Sn**	**06 36 34.5**	**-0.6**
	9.4nm,0.3s,baz=340,slow=14,SNR=5.6						
APG				Lg	Lg	06 36 39.9	
	30nm,0.3s,baz=238,slow=24,SNR=8.3						
PCIG		**2.53**	**230**	*e*P	**Pn**	**06 36 05.7**	**-0.3**
PCIG				*i* S	**Sn**	**06 36 37.9**	**+0.8**
PCIG		**2.53**	**230**		**Pn**	**06 36 05.7**	**-0.3**
PCIG					**Sn**	**06 36 37.9**	**+0.8**
CMIG	**Matias Romero**	**3.53**	**266**	Pn	**Pn**	**06 36 19.3**	**-0.4**
	0.4nm,0.3s,baz=86,slow=15,SNR=4.1						
CMIG				Pg	**Pb**	**06 36 26.8**	**-0.4**
	2.5nm,0.3s,baz=85,slow=14,SNR=8.7						
CMIG				Lg	Lg	06 37 11.6	
	4.0nm,0.3s,baz=346,slow=9.3,SNR=5.4						
CMIG				LR	LR	06 38 09.8	
	comp=Z,97nm,19.4s,baz=74,slow=47						
CMIG	**Matias Romero**	**3.53**	**266**	*i* P	**Pn**	**06 36 20.2**	**+0.5**
CMIG				*i* S	**Sn**	**06 37 03.0**	**+1.2**
CMIG	**Matias Romero**	**3.53**	**266**		**Pn**	**06 36 20.2**	**+0.5**
CMIG					**Sn**	**06 37 03.0**	**+1.2**
TEIG	**Tepich**	**3.99**	**44**	Pn	**Pn**	**06 36 25.3**	**-0.7**
	54nm,0.3s,baz=345,slow=0.0,SNR=68						
TEIG				Sn	**Sn**	**06 37 12.6**	**-0.5**
	baz=329,slow=0.0						
TEIG				Lg	Lg	06 37 29.3	
	baz=151,slow=0.0						
TEIG				LR	LR	06 38 31.2	
	comp=Z,136nm,18.1s,baz=250,slow=47						
TEIG	**Tepich**	**3.99**	**44**	*e*P	**Pn**	**06 36 25.9**	**-0.1**
TEIG	**Tepich**	**3.99**	**44**		**Pn**	**06 36 25.9**	**-0.1**
TGUH	**Tegucigalpa,Un**	**5.00**	**130**	Pn	**Pn**	**06 36 41.0**	**+0.9**
TLIG	**Tlapa**	**7.03**	**273**	Pn	**Pn**	**06 37 08.5**	**+0.5**
TLIG					**Sn**	**06 38 25.3**	**-3.1**
TXAR	**Lajitas Array**	**16.52**	**318**	Pn	**Pn**	**06 39 16.7**	**-0.2**
	0.0nm,0.3s,baz=143,slow=7.9,SNR=2.3						
LPIG	**La Paz**	**19.08**	**294**	LR	LR	06 46 57.3	
	comp=Z,47nm,21.9s,baz=139,slow=36						
SDV	**Santo Domingo**	**21.71**	**110**	P	**P**	**06 40 16.9**	**+0.3**
	4.3nm,0.9s,baz=297,slow=6.8,SNR=3.3						
N35A	**Tabor**	**23.75**	**352**		PcP	06 44 09.1	-12
SJG	**San Juan**	**23.87**	**84**	LR	LR	06 51 23.5	
	comp=Z,41nm,18.0s,baz=248,slow=40						
NVAR	**Mina Array Bea**	**31.66**	**317**	P	**P**	**06 41 50.0**	**+1.2**
	0.3nm,0.7s,baz=134,slow=8.9,SNR=2.9						
SCHQ	**Schefferville**	**41.84**	**21**	LR	LR	07 01 43.8	
	comp=Z,56nm,18.6s,baz=329,slow=38						
YKA	**Yellowknife Ar**	**47.98**	**346**	P	**P**	**06 44 02.0**	**-1.7**
	0.4nm,0.7s,baz=144,slow=7.9,SNR=7.4						

IDC ***25*** *06:52:09.3±2.4, 18°.01S×71°.64W, h0^{km}, mb3.7/3, mb1 3.9/4, mb1mx3.7/22, mbtmp3.6/4, ML3.1/1, MS2.7/1, Ms1 2.8/1, ms1mx2.6/20, Error ellipse: s-maj=80.9km s-min=28.5km az=178.0*

NEIC ***25*** *06:52:25.3±1.4, 17°.38S±0°.07×71°.13W±0°.07, h65^{km}±35^{km}, ML4.3(ARE), Error ellipse: s-maj=12.5km s-min=5.1km az=224.0*

ISC 25 06:52:18.7±1.0**, 17°.13S**±0°.07×**71°.5W**±0°.1**, h40^{km}, n28, σ1^{s}.34**/23**, mb3.8**/3**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB12	**IPOC Station P**	**1.88**	**142**		**Pn**	**06 52 49.1**	**+0.7**
PB16	**IPOC Station P**	**2.28**	**122**		**Pn**	**06 52 55.2**	**+0.8**
PSGCX	**Pisagua**	**2.80**	**152**		**Pn**	**06 53 02.5**	**+1.3**
PB11	**IPOC Station P**	**3.17**	**146**		**Pn**	**06 53 07.2**	**+0.9**
GO01	**Chusmiza**	**3.37**	**139**		**Pn**	**06 53 10.9**	**+1.5**
LPAZ	**La Paz**	**3.37**	**76**	Pn	**Pn**	**06 53 10.9**	**+1.5**
	1.0nm,0.3s,baz=258,slow=11,SNR=38						
LPAZ				Pg		06 53 17.9	
	1.4nm,0.3s,baz=248,slow=10,SNR=11						
LPAZ				LR	LR	06 54 52.0	
	comp=Z,93nm,19.1s,baz=288,slow=43						
LPAZ	**La Paz**	**3.37**	**76**		**Pn**	**06 53 10.8**	**+1.3**
PATCX	**Punta Patache**	**3.90**	**161**		**Pn**	**06 53 17.7**	**+1.4**
PB01	**IPOC Station P**	**4.35**	**154**		**Pn**	**06 53 23.7**	**+1.2**
PB07	**IPOC Station P**	**4.84**	**161**		**Pn**	**06 53 31.1**	**+1.9**
PB07				Sn	**Sn**	**06 54 23.4**	**-0.6**
PB09	**IPOC Station P**	**5.13**	**155**		**Pn**	**06 53 34.9**	**+1.7**
PB04	**IPOC Station P**	**5.34**	**166**		**Pn**	**06 53 37.2**	**+1.0**
LVC	**Limon Verde**	**5.99**	**156**		**Pn**	**06 53 47.0**	**+1.7**
PB15	**IPOC Station P**	**6.36**	**163**		**Pn**	**06 53 51.0**	**+0.9**
PB10	**IPOC Station P**	**6.42**	**172**	Pn	**Pn**	**06 53 52.0**	**+1.2**
NNA	**Nana**	**7.24**	**314**	Pn	Pn	06 54 16.3	+14
PB14	**IPOC Station P**	**7.54**	**172**		**Pn**	**06 54 06.9**	**+0.4**
PB14					**Sn**	**06 55 30.0**	**-0.8**
GO02	**Mina Guanaco**	**8.20**	**168**	Pn	**Pn**	**06 54 16.8**	**+1.2**
TXAR	**Lajitas Array**	**55.64**	**326**	P	**P**	**07 01 51.2**	**+0.2**
	0.3nm,0.8s,baz=152,slow=6.0,SNR=2.5						
TORD	**Torodi Ar. Bea**	**78.31**	**72**	P	**P**	**07 04 12.7**	**-2.7**
	0.7nm,0.7s,baz=266,slow=4.4,SNR=5.9						
YKA	**Yellowknife Ar**	**86.27**	**341**	P	**P**	**07 04 56.4**	**+0.6**
	0.4nm,0.5s,baz=134,slow=5.3,SNR=14						
H11N3	**WAKE ISLAND Hy**	**124.72**	**282**	T	T	09 28 15.1	
	baz=98,slow=74,SNR=5.9						
H11N2	**WAKE ISLAND Hy**	**124.73**	**282**	T	T	09 28 13.5	
	baz=98,slow=74,SNR=6.4						
H11N1	**WAKE ISLAND Hy**	**124.73**	**282**	T	T	09 28 14.1	
	baz=98,slow=74,SNR=6.7						
H11S2	**WAKE ISLAND Hy**	**124.74**	**281**	T	T	09 28 12.1	
	baz=99,slow=75,SNR=5.7						
H11S1	**WAKE ISLAND Hy**	**124.75**	**281**	T	T	09 28 11.8	
	baz=99,slow=75,SNR=3.3						
H11S3	**WAKE ISLAND Hy**	**124.76**	**281**	T	T	09 28 12.5	
	baz=99,slow=75,SNR=5.9						
SONM	**Songino Array**	**149.33**	**3**	PKPbc	**PKPbc**	**07 12 03.8**	**+0.3**
	1.1nm,0.6s,baz=350,slow=3.4,SNR=7.3						

IDC ***25*** *07:00:11.8±1.4, 8°.20S×118°.48E, h0^{km}, mb3.9/3, mb1 4.1/6, mb1mx3.7/52, mbtmp3.9/6, ML3.8/3, MS2.7/1, Ms1 2.7/1, ms1mx2.4/43, Error ellipse: s-maj=52.0km s-min=21.2km az=63.0*

DJA ***25*** *07:00:14.3±0.6, 8°S±3°×11°8E±°, h11^{km}±4^{km}, M4.0/7, MLv4.0/7*

ISC 25 07:00:16.1±0.8**, 8°.22S**±0°.05×**118°.46E**±0°.05**, h35^{km}, n14, σ1^{s}.14**/18**, mb3.8**/3**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.90**	**228**	P	**Pn**	**07 00 31.4**	**-0.9**
PLAI				S	**Sn**	**07 00 43.9**	**-0.2**
WBSI	**Waikabubak, Su**	**1.69**	**147**	P	**Pn**	**07 00 43.7**	**+0.5**
WBSI				S	**Sn**	**07 01 04.0**	**+0.4**
BASI	**Baing, Sumba**	**2.89**	**134**	P	**Pn**	**07 01 01.0**	**+1.4**
BKSI	**Bulukumba**	**3.32**	**30**	P	**Pn**	**07 01 05.9**	**+0.3**
KAPI	**Kappang**	**3.44**	**22**	Pn	**Pn**	**07 01 07.2**	**+0.1**
	12nm,0.3s,baz=199,slow=4.4,SNR=19						
KAPI				Sn	**Sn**	**07 01 44.9**	**-1.8**
	6.0nm,0.3s,baz=157,slow=16,SNR=3.9						
KAPI				LR	LR	07 02 45.1	
	comp=Z,119nm,20.3s,baz=141,slow=45						
BNSI	**Bone**	**4.13**	**23**	P	**Pn**	**07 01 17.7**	**+0.9**
JAGI	**Jajag, Banyuwa**	**4.26**	**266**	P	**Pn**	**07 01 19.6**	**+1.0**
GMJI	**Gumukmas**	**4.96**	**269**	P	**Pn**	**07 01 28.8**	**+0.7**
FITZ	**Fitzroy Crossi**	**12.05**	**145**	Pn	**Pn**	**07 03 04.9**	**-0.6**
	0.7nm,0.3s,baz=327,slow=6.7,SNR=28						
FITZ				Sn	**Sn**	**07 05 15.9**	**-2.8**
	0.3nm,0.3s,baz=164,slow=17,SNR=6.9						
WRA	**Warramunga Arr**	**19.30**	**129**	P	**P**	**07 04 37.6**	**-0.6**
	0.2nm,0.3s,baz=302,slow=12,SNR=13						
ASAR	**Alice Springs**	**21.33**	**138**	P	**P**	**07 05 00.9**	**+0.7**
	3.7nm,0.8s,baz=320,slow=9.5,SNR=32						
STKA	**Stephens Creek**	**31.89**	**141**	P	**P**	**07 06 39.0**	**+0.7**
	1.8nm,0.4s,baz=328,slow=8.6,SNR=9.7						
MKAR	**Makanchi Array**	**63.52**	**333**	P	**P**	**07 10 43.3**	**+0.4**
	0.3nm,0.6s,baz=163,slow=5.8,SNR=4.7						
CPUP	**Villa Florida**	**145.41**	**187**	PKPbc	**PKPab**	**07 19 52.1**	**+0.9**
	1.3nm,0.6s,baz=186,slow=7.6,SNR=4.8						

IDC ***25*** *07:01:27.6±2.1, 23°.77S×179°.65W, h499^{km}±21^{km}, mb3.7/15, mb1 3.8/17, mb1mx3.6/36, mbtmp4.6/17, Error ellipse: s-maj=16.5km s-min=13.8km az=63.0*

NEIC ***25*** *07:01:28.5±1.8, 23°.71S±0°.09×179°.7W±0°.1, h511^{km}±7^{km}, mb4.5/22, Error ellipse: s-maj=18.9km s-min=13.5km az=99.0*

ISC 25 07:01:28.4±0.4**, 23°.75S**±0°.05×**179°.64W**±0°.07**, h512^{km}, n80, σ1^{s}.66**/97**, mb4.4**/25**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**5.70**	**165**	P	**P**	**07 03 04.0**	**+1.7**
GLKZ				S	**S**	**07 04 19.9**	**+0.7**
MSVF	**Nonsavu**	**6.37**	**340**	P	**P**	**07 03 10.4**	**+1.4**
AFI	**Afiamalu**	**12.30**	**39**	P	**P**	**07 04 08.3**	**-2.0**
	4.2nm,0.3s,baz=0.4,slow=1.9,SNR=6.4						
AFI				S	**S**	**07 06 17.3**	**-6.3**
	1.5nm,0.3s,baz=8.8,slow=21,SNR=2.0						
AFI	**Afiamalu**	**12.30**	**39**	P	**P**	**07 04 08.6**	**-1.6**
AFI					**S**	**07 06 22.5**	**-1.1**
OUZ	**Omahuta**	**12.85**	**206**	P	**P**	**07 04 17.3**	**+1.6**
WMGZ	**Waiomatatini S**	**14.12**	**186**	P	**P**	**07 04 32.6**	**+3.6**
WMGZ				S	**S**	**07 06 58.4**	**+0.4**
HAZ	**Te Kaha**	**14.13**	**188**	P	**P**	**07 04 29.5**	**+0.4**
HAZ				S	**S**	**07 06 50.9**	**-7.3**
RUGZ	**Raukumara Rang**	**14.35**	**189**	P	**P**	**07 04 33.6**	**+2.1**
RUGZ				S	**S**	**07 06 59.4**	**-3.3**
URZ	**Urewera**	**14.72**	**190**	P	**P**	**07 04 32.9**	**-2.4**
	2.2nm,0.3s,baz=64,slow=2.0,SNR=15						
URZ				S	**S**	**07 07 07.9**	**-1.6**
	1.8nm,0.3s,baz=62,slow=20,SNR=17						
URZ	**Urewera**	**14.72**	**190**	P	**P**	**07 04 34.5**	**-0.8**
URZ	**Urewera**	**14.72**	**190**	P	**P**	**07 04 35.0**	**-0.3**
URZ				S	**S**	**07 07 05.9**	**-3.6**
MWZ	**Matawai**	**14.73**	**189**	P	**P**	**07 04 34.5**	**-1.0**
MWZ				S	**S**	**07 07 08.0**	**-1.8**
HIZ	**Hauiti**	**15.44**	**196**	P	**P**	**07 04 48.2**	**+5.4**
BKZ	**Black Stump Fm**	**15.71**	**191**	P	**P**	**07 04 44.6**	**-1.1**
BHHZ	**Black Hill Sta**	**16.11**	**192**	P	**P**	**07 04 48.7**	**-1.1**
KRHZ	**Kereru**	**16.20**	**191**	P	**P**	**07 04 49.7**	**-1.0**
KAHZ	**Kahuranaki**	**16.26**	**190**	P	**P**	**07 04 50.8**	**-0.5**
DVHZ	**Dannevirke**	**16.87**	**191**	P	**P**	**07 04 57.6**	**+0.1**
MRZ	**Mangatainoka R**	**17.33**	**192**	P	**P**	**07 05 00.6**	**-1.3**
RPZ	**Rata Peaks**	**21.33**	**199**	P	**P**	**07 05 37.9**	**-0.4**
	7.7nm,0.5s,baz=108,slow=7.6,SNR=1.4						
RPZ	**Rata Peaks**	**21.33**	**199**	P	**P**	**07 05 39.0**	**+0.8**
ARMA	**Armidale**	**26.38**	**249**	P	**P**	**07 06 24.4**	**+0.8**
ARMA				IAmb	IAmb	07 06 27.9	
	comp=Z,24nm,1.4s						
EIDS	**Eidsvold**	**26.65**	**260**	P	**P**	**07 06 26.2**	**+0.4**
EIDS				IAmb	IAmb	07 06 27.0	
	comp=Z,7.4nm,0.6s						
PPT2	**Papeete2**	**28.76**	**83**	*e*LR	LR	07 05 36.1	
	comp=Z,67nm,25.0s						
CAN	**Canberra**	**29.50**	**240**	P	**P**	**07 06 50.9**	**+0.2**
CAN				IAmb	IAmb	07 07 03.2	
	comp=Z,37nm,1.4s						
CTA	**Charters Tower**	**31.80**	**270**	P	**P**	**07 07 11.2**	**+0.5**
	comp=Z,16nm,0.4s,baz=96,slow=11,SNR=35						
TOO	**Toolangi**	**32.80**	**237**	P	**P**	**07 07 19.2**	**+0.2**
TOO				IAmb	IAmb	07 07 27.6	
	comp=Z,25nm,1.4s						
TAU	**Tasmania Unive**	**33.27**	**227**	P	**P**	**07 07 23.0**	**+0.2**
PMG	**Port Moresby**	**34.76**	**289**	P	**P**	**07 07 35.6**	**-0.1**
	comp=Z,6.9nm,0.3s,baz=117,slow=5.5,SNR=4.2						
PMG	**Port Moresby**	**34.76**	**289**	P	**P**	**07 07 35.4**	**-0.3**
PMG				IAmb	IAmb	07 07 36.6	
	comp=Z,16nm,0.9s						
STKA	**Stephens Creek**	**35.08**	**248**	P	**P**	**07 07 38.2**	**-0.1**
	comp=Z,2.1nm,0.5s,baz=92,slow=9.0,SNR=5.6						
STKA				PcP	**PcP**	**07 09 56.5**	**+0.7**
	comp=Z,1.5nm,0.5s,baz=94,slow=2.1,SNR=3.4						
STKA	**Stephens Creek**	**35.08**	**248**	P	**P**	**07 07 38.5**	**+0.2**
BBOO	**Buckleboo**	**39.80**	**247**	P	**P**	**07 08 16.0**	**-1.0**
BBOO				IAmb	IAmb	07 08 16.8	
	comp=Z,11nm,1.1s						
AS31	**Alice Springs**	**42.38**	**260**	P	**P**	**07 08 37.3**	**-0.3**
ASAR	**Alice Springs**	**42.38**	**260**	P	**P**	**07 08 37.3**	**-0.3**
	comp=Z,9.7nm,0.8s,baz=94,slow=7.6,SNR=64						
ASAR				PcP	**PcP**	**07 10 20.0**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=108,slow=2.1,SNR=3.2						
ASAR				ScP	**ScP**	**07 13 21.2**	**0.0**
	comp=Z,0.5nm,0.9s,baz=94,slow=5.8,SNR=3.2						
ASAR				S	**S**	**07 14 18.1**	**-3.7**
	comp=Z,0.5nm,0.8s,baz=96,slow=17,SNR=5.1						
ASAR	**Alice Springs**	**42.38**	**260**	P	**P**	**07 08 37.1**	**-0.6**
WR0	**Warramunga Arr**	**42.55**	**266**	P	**P**	**07 08 38.2**	**-0.7**
WR0				IAmb	IAmb	07 08 38.5	
	comp=Z,7.2nm,0.6s						
WB2	**Warramunga Arr**	**42.73**	**266**	P	**P**	**07 08 39.7**	**-0.7**
WB2				IAmb	IAmb	07 08 40.3	
	comp=Z,17nm,0.9s						
WB0	**Warramunga Arr**	**42.73**	**266**	P	**P**	**07 08 39.6**	**-0.8**
WB0				IAmb	IAmb	07 08 40.3	
	comp=Z,18nm,0.7s						
WRA	**Warramunga Arr**	**42.74**	**266**	P	**P**	**07 08 39.5**	**-1.0**
	comp=Z,7.8nm,0.3s,baz=97,slow=8.4,SNR=31						
WRA				PcP	**PcP**	**07 10 21.3**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=96,slow=3.2,SNR=3.6						
WRA				S	**S**	**07 14 24.8**	**-2.3**
	comp=Z,0.7nm,1.0s,baz=107,slow=17,SNR=2.3						
WRA	**Warramunga Arr**	**42.74**	**266**	P	**P**	**07 08 39.5**	**-1.0**
FORT	**Forrest**	**46.67**	**249**	P	**P**	**07 09 09.7**	**-0.8**
MTN	**Manton Dam**	**47.77**	**274**	P	**P**	**07 09 18.1**	**-0.9**
MTN				IAmb	IAmb	07 09 18.9	
	comp=Z,6.4nm,0.7s						
KNRA	**Kununurra**	**49.01**	**270**	P	**P**	**07 09 28.3**	**-0.1**
KNRA				IAmb	IAmb	07 09 28.8	
	comp=Z,12nm,0.8s						
FITZ	**Fitzroy Crossi**	**51.16**	**265**	P	**P**	**07 09 44.2**	**+0.1**
	comp=Z,5.0nm,0.6s,baz=110,slow=7.4,SNR=19						
SIJI	**Sorong**	**52.70**	**288**	P	**P**	**07 09 55.0**	**-0.2**
	comp=Z,13nm,0.4s,baz=96,slow=8.9,SNR=8.4						
VNDA	**Vanda**	**54.55**	**185**	P	**P**	**07 10 07.9**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=8.8,slow=6.7,SNR=2.2						
VNDA	**Vanda**	**54.55**	**185**	P	**P**	**07 10 08.9**	**+1.5**
MORW	**Morawa**	**57.23**	**250**	P	**P**	**07 10 25.9**	**-0.9**
GIRL	**Giralia**	**60.27**	**257**	P	**P**	**07 10 47.0**	**-0.3**
QSPA	**South Pole Qui**	**66.33**	**180**	P	**P**	**07 11 26.3**	**+0.7**
	comp=Z,4.6nm,0.7s,baz=4.1,slow=0.4,SNR=24						
QSPA	**South Pole Qui**	**66.33**	**180**	P	**P**	**07 11 26.7**	**+1.0**
KSRS	**Korea Array**	**78.34**	**320**	P	**P**	**07 12 35.6**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=129,slow=5.8,SNR=5.1						
PEA0B	**Petropavlovsk-**	**79.03**	**346**	P	**P**	**07 12 39.6**	**+0.8**
PETK	**Petropavlovsk-**	**79.03**	**346**	P	**P**	**07 12 39.9**	**+1.1**
	comp=Z,2.7nm,0.6s,baz=163,slow=10,SNR=3.1						
PETK	**Petropavlovsk-**	**79.03**	**346**	P	**P**	**07 12 39.4**	**+0.7**
USRK	**Ussuriysk Ar.**	**80.82**	**327**	P	**P**	**07 12 50.0**	**+1.7**
	comp=Z,1.1nm,0.5s,baz=158,slow=4.7,SNR=3.0						
CMAR	**Chiang Mai Arr**	**89.78**	**290**	P	**P**	**07 13 34.5**	**+2.0**
	comp=Z,0.7nm,0.3s,baz=104,slow=2.3,SNR=8.0						
CMAR	**Chiang Mai Arr**	**89.78**	**290**	P	**P**	**07 13 33.2**	**+0.8**
TXAR	**Lajitas Array**	**90.08**	**58**	P	**P**	**07 13 35.3**	**+1.6**
	comp=Z,0.3nm,0.7s,baz=205,slow=4.0,SNR=3.8						
TXAR	**Lajitas Array**	**90.08**	**58**	P	**P**	**07 13 36.0**	**+2.2**
MKAR	**Makanchi Array**	**112.29**	**313**	PKiKP	**PKiKP**	**07 19 05.0**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=94,slow=1.1,SNR=6.0						
KURBB	**Kurchatov Arra**	**115.36**	**316**	PKP	**PKPdf**	**07 19 10.3**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=92,slow=1.8,SNR=6.6						
BVAR	**Borovoye Array**	**120.55**	**319**	PKP	**PKPdf**	**07 19 20.5**	**-0.8**
	comp=Z,0.7nm,0.3s,baz=132,slow=2.2,SNR=7.1						
AKTO	**Aktyubinsk**	**128.42**	**316**	PKP	**PKPdf**	**07 19 36.4**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=44,slow=5.6,SNR=4.0						
ARCES	**ARCESS Array B**	**131.81**	**348**	PKP	**PKPdf**	**07 19 42.1**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=29,slow=2.1,SNR=5.9						
FINES	**FINESS Array B**	**138.41**	**342**	PKP	**PKPdf**	**07 19 55.5**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=81,slow=4.4,SNR=3.8						
HFS	**Hagfors**	**142.47**	**349**	PKhKP	PKPpre	07 19 58.8	
	comp=Z,3.3nm,0.5s,baz=64,slow=3.4,SNR=19						
AKASG	**Malin Array Be**	**145.02**	**328**	PKPbc	**PKPdf**	**07 20 07.1**	**+0.2**
	comp=Z,2.0nm,0.5s,baz=40,slow=4.5,SNR=11						
AKASG	**Malin Array Be**	**145.02**	**328**		**PKPdf**	**07 20 06.9**	**0.0**
BR131	**Keskin Array S**	**147.75**	**308**		**PKPbc**	**07 20 15.2**	**-0.4**
BR131				PKPab	**PKPab**	**07 20 20.6**	**+0.7**
BRTR	**Keskin Array B**	**147.75**	**308**	PKPbc	**PKPbc**	**07 20 15.4**	**-0.3**
	comp=Z,1.2nm,0.6s,baz=149,slow=4.1,SNR=6.7						
BRTR				PKPab	**PKPab**	**07 20 19.7**	**-0.2**
	comp=Z,2.0nm,0.6s,baz=82,slow=3.0,SNR=10						
BRTR	**Keskin Array B**	**147.75**	**308**		**PKPbc**	**07 20 15.4**	**-0.3**
BRTR				PKPab	**PKPab**	**07 20 20.7**	**+0.9**
EKA	**Eskdalemuir Ar**	**148.35**	**4**	PKPbc	**PKPbc**	**07 20 16.3**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=278,slow=1.7,SNR=4.5						
KWP	**Kalwaria Pacla**	**148.80**	**331**		**PKPbc**	**07 20 18.4**	**+0.6**
BURAR	**Bucovina Array**	**149.03**	**326**		**PKPbc**	**07 20 18.9**	**+0.4**
MLR	**Muntele Rosu**	**150.00**	**323**	PKPbc	**PKPbc**	**07 20 21.1**	**+0.2**
	comp=Z,1.6nm,0.5s,baz=292,slow=12,SNR=3.5						
CLL	**Collm**	**150.81**	**344**	*i* PKPbc	**PKiKP**	**07 20 23.8**	**+1.0**
	comp=Z,7.0nm,0.8s						
CLL				Lm	MLR	10 48 00.0	
	comp=Z,200nm,19.5s						
GERES	**GERESS Array B**	**152.83**	**340**	PKPbc	**PKPbc**	**07 20 27.4**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=5.7,slow=2.7,SNR=3.6						
TORD	**Torodi Ar. Bea**	**169.38**	**187**	PKP	**PKPdf**	**07 20 35.7**	**-1.8**
	comp=Z,0.6nm,0.9s,baz=163,slow=1.5,SNR=2.8						
TORD				PKPab	**PKPab**	**07 21 53.4**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=172,slow=4.4,SNR=6.3						

NIED ***25*** *07:09:00, 35°.80N×141°.00E, h17^{km}, Mw3.4 Best double couple: $M_0$1.47000×10^{14} NP1:ϕ_s233.00000°, δ63.00000°, λ-51.00000°. NP2:ϕ_s352.00000°, δ47.00000°, λ-141.00000°.*

IDC ***25*** *07:09:46.5±1.4, 35°.44N×140°.46E, h0^{km}, mb3.3/4, mb1 3.5/5, mb1mx3.3/53, mbtmp3.3/5, ML2.4/1, MS1.7/1, Ms1 1.7/1, ms1mx1.7/22, Error ellipse: s-maj=40.4km s-min=26.5km az=68.0*

JMA ***25*** *07:09:46.8±0.2, 35°.78N×140°.92E, h14^{km}±1^{km}, M3.6*

JMA Felt I J1.

ISC 25 07:09:47.3±1.0**, 35°.78N**±0°.04×**140°.87E**±0°.06**, h11^{km}**±6^{km}**, n19, σ1^{s}.54**/19**, mb3.4**/4**, 6C, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.08**	**185**	⇑P	**Pg**	**07 09 49.8**	**+0.1**
CHOJ				S	**Sg**	**07 09 51.6**	**+0.1**
JIHU	**Itakohorinouch**	**0.33**	**304**	⇑P	**Pg**	**07 09 54.8**	**+0.8**
JIHU				S	**Sb**	**07 10 00.6**	**0.0**
JSMT	**Sammumatsuo**	**0.37**	**248**	P	**Pg**	**07 09 55.4**	**+0.8**
JHYU	**Hitachinakayam**	**0.60**	**338**	⇑P	**Pg**	**07 09 59.1**	**+0.1**
JHYU				S	**Sg**	**07 10 07.2**	**+0.2**
JYT	**Yasato**	**0.71**	**310**	⇑P	**Pg**	**07 10 00.5**	**-0.4**
JYT				S	**Sg**	**07 10 09.7**	**-0.5**
JHO	**Hitachi**	**0.86**	**344**	⇑P	**Pg**	**07 10 02.7**	**-1.3**
JHO				S	**Sg**	**07 10 14.5**	**-0.8**
BSO1	**Boso 1**	**1.13**	**175**	⇑P	**Pn**	**07 10 06.7**	**-1.7**
MJAR	**Matsushiro Arr**	**2.28**	**290**	Pn	**Pn**	**07 10 23.7**	**-1.2**
	1.2nm,0.3s,baz=101,slow=9.8,SNR=22						
MJAR				LR	LR	07 11 20.3	
	comp=Z,19nm,22.0s,baz=105,slow=45						
MAT	**Matsushiro**	**2.28**	**290**	P	**Pn**	**07 10 24.2**	**-0.7**
MAT				S	**Sn**	**07 10 52.9**	**-0.1**
H11N2	**WAKE ISLAND Hy**	**27.92**	**118**	T	T	07 44 33.8	
	baz=311,slow=75,SNR=55						
H11N1	**WAKE ISLAND Hy**	**27.92**	**118**	T	T	07 44 35.7	
	baz=311,slow=75,SNR=45						
H11N3	**WAKE ISLAND Hy**	**27.93**	**118**	T	T	07 44 32.1	
	baz=311,slow=75,SNR=60						
H11S1	**WAKE ISLAND Hy**	**28.58**	**120**	T	T	07 45 24.7	
	baz=312,slow=75,SNR=137						
H11S3	**WAKE ISLAND Hy**	**28.58**	**120**	T	T	07 45 18.9	
	baz=312,slow=75,SNR=137						
H11S2	**WAKE ISLAND Hy**	**28.59**	**120**	T	T	07 45 24.9	
	baz=312,slow=75,SNR=111						
KURBB	**Kurchatov Arra**	**46.44**	**309**	P	**P**	**07 18 13.5**	**-0.3**
	0.3nm,0.4s,baz=82,slow=7.3,SNR=4.6						
ILAR	**Eielson Array**	**50.79**	**32**	P	**P**	**07 18 51.7**	**+4.6**
	0.3nm,0.8s,baz=255,slow=5.5,SNR=2.7						
WRA	**Warramunga Arr**	**55.76**	**187**	P	**P**	**07 19 21.9**	**-2.2**
	0.3nm,0.7s,baz=2.5,slow=7.6,SNR=2.6						
ASAR	**Alice Springs**	**59.49**	**187**	P	**P**	**07 19 49.3**	**-1.1**
	0.2nm,0.7s,baz=21,slow=13,SNR=1.5						

NEIC ***25*** *07:21:29.7±1.1, 5°.59S±0°.09×80°.91W±0°.06, h42^{km}±10^{km}, Error ellipse: s-maj=14.3km s-min=7.3km az=203.0*

ARE ***25*** *07:21:29±1.8, 5°.57S±0°.07×81°.0W±0°.1, h36^{km}±7^{km}, ML4.2, mb4.1/8(NEIC), Error ellipse: s-maj=16.9km s-min=8.7km az=69.0*

IDC ***25*** *07:21:31.7±1.0, 5°.35S×80°.86W, h35^{km}±6^{km}, mb3.4/8, mb1 3.7/11, mb1mx3.5/33, mbtmp3.6/11, ML3.4/3, MS3.1/6, Ms1 3.1/6, ms1mx2.9/28, Error ellipse: s-maj=41.3km s-min=12.4km az=45.0*

ISC 25 07:21:30.8±0.6**, 5°.38S**±0°.08×**81°.01W**±0°.09**, h35^{km}, n28, σ2^{s}.52**/33**, mb3.8**/9**, Near coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**3.13**	**124**	Pn	**Pn**	**07 22 19.5**	**+1.5**
	5.2nm,0.3s,baz=321,slow=6.5,SNR=36						
ATAH				Sn	**Sn**	**07 22 59.4**	**+4.9**
	17nm,0.3s,baz=134,slow=18,SNR=3.5						
ATAH				Lg	Lg	07 23 08.2	
	45nm,0.3s,baz=29,slow=13,SNR=5.8						
ATAH				LR	LR	07 23 50.1	
	comp=Z,236nm,21.0s,baz=304,slow=46						
NNA	**Nana**	**7.75**	**148**	Pn	**Pn**	**07 23 22.6**	**+1.3**
	1.0nm,0.3s,baz=232,slow=13,SNR=2.7						
NNA				Sn	**Sn**	**07 24 56.1**	**+8.2**
	1.7nm,0.3s,baz=264,slow=22,SNR=1.7						
NNA				LR	LR	07 26 44.8	
	comp=Z,97nm,19.7s,baz=256,slow=41						
NNA	**Nana**	**7.75**	**148**	Pn	**Pn**	**07 23 16.9**	**-4.4**
FLOC	**Florencia**	**8.74**	**38**	Pn	**Pn**	**07 23 35.1**	**+0.3**
PAYG	**Puerto Ayora**	**10.37**	**296**	Pn	**Pn**	**07 23 58.6**	**+1.4**
JTS	**Las Juntas de**	**16.05**	**346**	LR	LR	07 30 33.6	
	comp=Z,58nm,19.7s,baz=182,slow=34						
LPAZ	**La Paz**	**16.65**	**132**	Pn	**Pn**	**07 25 21.7**	**-0.4**
	0.1nm,0.3s,baz=96,slow=22,SNR=2.3						
LPAZ				LR	LR	07 32 33.5	
	comp=Z,83nm,20.9s,baz=5.5,slow=40						
LPAZ	**La Paz**	**16.65**	**132**	P	**Pn**	**07 25 19.3**	**-2.8**
LPAZ				IAmb	IAmb	07 25 36.7	
	comp=Z,5.0nm,1.2s						
PSGCX	**Pisagua**	**17.67**	**144**	Pn	**Pn**	**07 25 29.5**	**-4.9**
PSGCX				IAmb	IAmb	07 25 30.4	
	comp=Z,16nm,1.3s						
SAML	**Samuel**	**18.04**	**102**	Pn	**Pn**	**07 25 35.0**	**-3.8**
LVC	**Limon Verde**	**20.74**	**147**	P	**P**	**07 26 08.7**	**-0.2**
	comp=Z,2.5nm,0.7s,baz=296,slow=6.4,SNR=2.0						
PTGA	**Pitinga**	**21.50**	**78**	P	**P**	**07 26 16.6**	**-0.3**
	comp=Z,2.0nm,0.8s,baz=277,slow=18,SNR=1.5						
PTGA				LR	LR	07 35 07.8	
	comp=Z,44nm,19.5s,baz=301,slow=38						
PTGA	**Pitinga**	**21.50**	**78**	P	**P**	**07 26 15.1**	**-1.8**
PTGA				IAmb	IAmb	07 26 25.7	
	comp=Z,9.1nm,1.4s						
SIV	**San Ignacio**	**22.22**	**120**	P	**P**	**07 26 24.3**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=335,slow=14,SNR=3.9						
SIV				LR	LR	07 35 47.4	
	comp=Z,86nm,20.0s,baz=288,slow=39						
X40A	**Basin Creek Fa**	**41.19**	**345**	P	**P**	**07 29 12.2**	**+0.1**
HWUT	**Hardware Ranch**	**54.45**	**332**	P	**P**	**07 30 54.5**	**-0.5**
HWUT				IAmb	IAmb	07 31 08.3	
	comp=Z,5.0nm,0.8s						
PDAR	**Pinedale Array**	**54.47**	**334**	P	**P**	**07 30 57.1**	**+1.9**
	comp=Z,0.4nm,0.7s,baz=160,slow=9.0,SNR=4.1						
PDAR				pP	**pP**	**07 31 07.3**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=133,slow=8.3,SNR=5.7						
NVAR	**Mina Array Bea**	**55.63**	**325**	P	**P**	**07 31 05.1**	**+1.5**
	comp=Z,0.5nm,0.8s,baz=148,slow=7.1,SNR=3.6						
NVAR				pP	**pP**	**07 31 16.6**	**+2.4**
	comp=Z,0.8nm,0.8s,baz=134,slow=6.8,SNR=6.6						
NVAR	**Mina Array Bea**	**55.63**	**325**	P	**P**	**07 31 02.2**	**-1.4**
YHL	**Hebgen Lake**	**56.85**	**335**	P	**P**	**07 31 11.9**	**-0.4**
ULM	**Lac du Bonnet**	**56.88**	**349**	P	**P**	**07 31 12.6**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=158,slow=5.4,SNR=3.4						
GCMT	**Greycliff**	**56.99**	**336**	P	**P**	**07 31 12.9**	**-0.2**
YKA	**Yellowknife Ar**	**72.38**	**344**	P	**P**	**07 32 53.9**	**+0.9**
	comp=Z,0.2nm,0.7s,baz=136,slow=6.5,SNR=4.4						
YKA				pP	**pP**	**07 33 04.3**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=139,slow=6.2,SNR=6.0						
SNAA	**Sanae**	**81.21**	**162**	P	**P**	**07 33 41.3**	**-1.5**
TORD	**Torodi Ar. Bea**	**84.14**	**76**	P	**P**	**07 33 59.1**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=274,slow=3.8,SNR=7.4						
TORD				pP	**pP**	**07 34 09.2**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=259,slow=3.7,SNR=2.7						
QSPA	**South Pole Qui**	**84.71**	**180**	P	**P**	**07 33 59.4**	**-1.7**
QSPA				IAmb	IAmb	07 34 02.0	
	comp=Z,2.7nm,1.1s						
ASAR	**Alice Springs**	**135.36**	**228**	PKP	**PKPdf**	**07 40 47.6**	**-0.3**
	comp=Z,0.5nm,0.9s,baz=108,slow=1.2,SNR=4.1						
WRA	**Warramunga Arr**	**137.09**	**233**	PKP	**PKPdf**	**07 40 51.0**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=117,slow=2.0,SNR=7.4						

MEX ***25*** *07:41:20.5±1.0, 14°.25N×92°.90W, h4^{km}±37^{km}, MD4.1*

NEIC ***25*** *07:41:21.2±2.3, 14°.36N±0°.06×92°.85W±0°.02, h17^{km}±7^{km}, Error ellipse: s-maj=9.4km s-min=1.7km az=198.0*

SNET ***25*** *07:41:22.8±0.9, 14°.30N×92°.72W, h27^{km}±61^{km}, ML4.3*

*UCR **25** 07:41:22.9±1.1, 14°.31N×92°.72W, h28^{km}±72^{km}, ML4.0, mb4.2(NEIC)*
*IDC **25** 07:41:25.5±3.1, 14°.67N×92°.77W, h41^{km}±21^{km}, mb3.5/5, mb1 3.9/9, mb1mx3.6/44, mbtmp3.8/9, ML4.0/5, MS3.3/2, Ms1 3.3/2, ms1mx2.7/25, Error ellipse: s-maj=38.9km s-min=8.4km az=22.0*
*GCG **25** 07:41:27.2±0.4, 14°.16N×92°.43W, h29^{km}, MD4.5*
ISC 25 07:41:20.8±1.6, **14°.52N**±0°.05×**92°.74W**±0°.04, **h10**^{km}±9^{km}, **n88**, σ**1^{s}60**/102, **mb4.1**/14, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.60	50	i P	Pn	07 41 35.9	+0.5
THIG				eS	Sn	07 41 47.5	+2.4
THIG		0.60	50		Pn	07 41 35.9	+0.5
THIG					Sn	07 41 47.5	+2.4
STG3	Santiaguito 3,	1.15	80	eP	Pg	07 41 43.9	+0.9
PCIG		1.26	339	eP	Pb	07 41 43.6	-1.1
PCIG				i S	Sg	07 42 01.9	+0.3
PCIG		1.26	339		Pb	07 41 43.6	-1.1
PCIG					Sg	07 42 01.9	+0.3
FUG	Fuego 3	1.84	92	eP	Pb	07 41 53.4	-1.2
CCIG	Comitan	1.84	18	eP	Pb	07 41 54.1	-0.7
CCIG				i S	Sb	07 42 19.5	+1.6
CCIG	Comitan	1.84	18		Pg	07 41 55.4	-0.9
CCIG				Sn	Sg	07 42 20.8	+0.5
PCG	Pacaya	2.07	93	eP	Pb	07 41 57.1	-1.5
APG	El Apazote	2.25	77	P	Pb	07 42 00.2	-1.5
	34nm,0.3s,baz=197,slow=13,SNR=238						
APG				S	Sn	07 42 27.8	+1.5
	35nm,0.3s,baz=181,slow=11,SNR=7.0						
IXG	Ixpaco	2.25	99	eP	Pn	07 41 58.7	+0.4
TGIG		2.27	351	eP	Pb	07 42 00.0	-2.0
TGIG				eS	Sb	07 42 29.8	-0.4
TGIG		2.27	351		Pb	07 42 00.0	-2.0
TGIG					Sb	07 42 29.8	-0.4
NBG	Las Nubes	2.32	88	eP	Pb	07 42 02.0	-0.9
MRL	Marmol	3.01	79	eP	Pn	07 42 10.1	+1.4
MRL	Marmol	3.01	79	eP	Pn	07 42 10.1	+1.4
MRL	Marmol	3.01	79	eP	Pb	07 42 11.2	-3.4
RTR	El Retiro	3.06	101	eP	Pn	07 42 09.9	+0.5
RTR	El Retiro	3.06	101	eP	Pn	07 42 09.9	+0.5
SBLS	San Blas	3.10	102	eP	Pn	07 42 09.9	-0.1
SBLS	San Blas	3.10	102	eP	Pn	07 42 09.9	-0.1
CEVE	Cerro Verde	3.10	102	eP	Pn	07 42 09.9	-0.1
CEVE				eS	Sn	07 42 47.2	0.0
CEVE				IAML		07 43 00.1	
	comp=Z,1μm,0.3s						
CEVE	Cerro Verde	3.10	102	eP	Pn	07 42 09.9	-0.1
CEVE				eS	Sn	07 42 47.2	0.0
CEVE				IAML		07 43 00.1	
	comp=Z,1μm,0.3s						
SNJE	San Jose	3.11	102	eP	Pn	07 42 09.4	-0.7
SNJE	San Jose	3.11	102	eP	Pn	07 42 09.4	-0.7
MTO3	Montecristo	3.27	92	eP	Pn	07 42 12.3	-0.1
MTO3	Montecristo	3.27	92	eP	Pn	07 42 12.3	-0.1
CMIG	Matias Romero	3.29	321	P	Pn	07 42 11.8	-0.6
	comp=Z,8.1nm,0.3s,baz=144,slow=18,SNR=36						
CMIG				S	Sn	07 42 49.4	-2.0
	comp=Z,59nm,0.3s,baz=21,slow=18,SNR=13						
CMIG	Matias Romero	3.29	321	eP	Pn	07 42 11.8	-0.6
CMIG				i S	Sn	07 42 51.1	-0.4
CMIG	Matias Romero	3.29	321		Pn	07 42 11.8	-0.6
CMIG					Sn	07 42 51.1	-0.4
BOQS	Boqueron	3.45	103	eP	Pn	07 42 15.3	+0.6
BOQS				eS	Sn	07 42 55.1	-0.6
UEES	Universidad Ev	3.49	103	eP	Pn	07 42 14.7	-0.5
UEES				eS	Sn	07 42 55.3	-1.3
UEES	Universidad Ev	3.49	103	eP	Pn	07 42 14.7	-0.5
UEES				eS	Sn	07 42 55.3	-1.3
SNET	Serv Nac Est T	3.50	103		Pn	07 42 15.4	0.0
LOMA	Loma Larga	3.57	104	eP	Pn	07 42 16.2	-0.1
LOMA				eS	Sn	07 42 58.2	-0.4
LOMA				IAML		07 43 18.8	
	comp=Z,370nm,0.6s						
LOMA	Loma Larga	3.57	104	eP	Pn	07 42 16.2	-0.1
LOMA				eS	Sn	07 42 58.2	-0.4
LOMA				IAML		07 43 18.8	
	comp=Z,370nm,0.6s						
LBRS	Las Brisas	3.67	102	eP	Pn	07 42 18.1	+0.4
LFRS	El Faro	3.68	104	eP	Pn	07 42 17.9	+0.1
LFRS				eS	Sn	07 43 00.5	-0.9
COEB	Comit de Eme	4.21	103	eP	Pn	07 42 24.3	-0.9
COEB				eS	Sn	07 43 13.1	-1.3
COEB	Comit de Eme	4.21	103	eP	Pn	07 42 24.3	-0.9
COEB				eS	Sn	07 43 13.1	-1.3
ALJI	Alcalda de J	4.22	106	eP	Pn	07 42 25.1	-0.1
ALJI	Alcalda de J	4.22	106	eP	Pn	07 42 25.1	-0.1
TECA	Tecapa	4.24	103	eP	Pn	07 42 25.7	+0.1
TECA	Tecapa	4.24	103	eP	Pn	07 42 25.7	+0.1
LCND	La Caada	4.86	104	eP	Pn	07 42 33.4	-0.7
LCND				eS	Sn	07 43 28.8	-1.6
LCND	La Caada	4.86	104	eP	Pn	07 42 33.4	-0.7
LCND				eS	Sn	07 43 28.8	-1.6
CNCH	Conchagua	4.92	104	eP	Pn	07 42 35.1	+0.1
CNCH	Conchagua	4.92	104	eP	Pn	07 42 35.1	+0.1
CSGN	Cosiguina Volc	5.26	106		Pn	07 42 40.2	+0.6
TGUH	Tegucigalpa,Un	5.32	94	eP	Pn	07 42 40.5	0.0
TGUH	Tegucigalpa,Un	5.32	94	eP	Pn	07 42 40.5	0.0
TGUH	Tegucigalpa,Un	5.32	94		Pn	07 42 40.6	+0.1
TLIG	Tlapa	6.37	299		Pn	07 42 54.4	-0.4
TEIG	Tepich	7.09	36	P	Pn	07 43 05.4	+0.8
	comp=Z,18nm,0.3s,baz=199,slow=0.0,SNR=21						
TEIG				S	Sn	07 44 17.0	-8.4
	baz=165,slow=0.0,SNR=1.9						
TEIG	Tepich	7.09	36		Pn	07 43 06.0	+1.4
ACON	Acoyapa	7.79	108	Pn	Pn	07 43 13.4	-0.8
JTS	Las Juntas de	8.69	118	P	Pn	07 43 30.0	+3.3
	comp=Z,0.8nm,0.3s,baz=346,slow=11,SNR=7.9						
JTS				S	Sn	07 45 12.4	+7.6
	comp=Z,0.6nm,0.3s,baz=157,slow=21,SNR=2.2						
JTS				LR	LR	07 46 35.4	
	comp=Z,103nm,19.4s,baz=4.0,slow=35						
JTS	Las Juntas de	8.69	118	Pn	Pn	07 43 27.0	+0.3
TX31	Lajitas Ar. Si	17.87	327	P	P	07 45 31.9	+1.5
TX32	Lajitas Array	17.87	327	P	P	07 45 31.9	+1.5
TXAR	Lajitas Array	17.87	327	P	P	07 45 30.9	+0.6
	comp=Z,0.1nm,0.3s,baz=150,slow=12,SNR=10						
TXAR	Lajitas Array	17.87	327	P	P	07 45 31.8	+1.5
H06E1	SOCORRO T-PHAS	17.93	286	T	T	08 03 35.8	
250A	Grady	18.36	18	P	Pn	07 45 39.2	+3.7
250A				IAmb	IAmb	07 45 55.6	
	comp=Z,22nm,1.2s						
MIAR	Mount Ida	19.95	358	P	Pn	07 45 55.6	+0.8
MIAR				IAmb	IAmb	07 45 59.0	
	comp=Z,14nm,1.0s						
Y52A	Lilburn	20.80	21	P	Pn	07 46 04.9	+0.2
FPAL	Fort Paine	20.95	17	P	P	07 46 05.0	+1.1
FPAL				IAmb	IAmb	07 46 17.6	
	comp=Z,12nm,1.1s						
RUSC	La Rusia	21.14	112	P	P	07 46 05.7	-1.0
FLOC	Florencia	21.22	126	P	P	07 46 05.5	-1.5
MSTX	Muleshoe	21.39	337	P	P	07 46 11.2	+2.4
MSTX				IAmb	IAmb	07 46 12.2	
	comp=Z,5.3nm,0.7s						
AMTX	Amarillo	21.82	340	IAmb	IAmb	07 46 22.5	
	comp=Z,5.1nm,0.7s						
121A	Cookes Peak, D	22.57	325	P	P	07 46 23.4	+1.8
121A				IAmb	IAmb	07 46 25.1	
	comp=Z,4.6nm,0.9s						
ANMO	Albuquerque	23.80	331	P	P	07 46 34.6	+0.6
	comp=Z,1.2nm,0.7s,baz=146,slow=10,SNR=5.8						
ANMO	Albuquerque	23.80	331	P	P	07 46 34.2	+0.2
S22A	4UR Ranch, Cre	26.30	334	IAmb	IAmb	07 46 59.3	
	comp=Z,4.3nm,0.9s						
MVCO	Mesa Verde	26.60	331	IAmb	IAmb	07 47 02.1	
	comp=Z,7.3nm,0.8s						
PV13	Radium Mtn., P	27.52	332	IAmb	IAmb	07 47 10.4	
	comp=Z,4.5nm,0.8s						
PFO	Pinyon Flats O	28.69	316	LR	LR	07 58 36.0	
	comp=Z,90nm,19.7s,baz=134,slow=36						
PDAR	Pinedale Array	31.65	336	P	P	07 47 44.3	-0.2
	comp=Z,0.5nm,0.7s,baz=160,slow=9.0,SNR=4.1						
PDAR	Pinedale Array	31.65	336	P	P	07 47 44.9	+0.4
TPAW	Teton Pass	32.82	335	IAmb	IAmb	07 48 00.4	
	comp=Z,4.2nm,1.0s						
NVAR	Mina Array Bea	32.82	321	P	P	07 47 55.5	+0.7
	comp=Z,0.8nm,0.8s,baz=129,slow=8.4,SNR=7.2						
NVAR	Mina Array Bea	32.82	321	P	P	07 47 55.6	+0.8
DLMT	Dillon	35.03	335	IAmb	IAmb	07 48 16.1	
	comp=Z,4.9nm,1.1s						
F10A	Beach Ranch, E	37.51	332	IAmb	IAmb	07 48 36.9	
	comp=Z,3.6nm,1.0s						
YKA	Yellowknife Ar	50.36	347	P	P	07 50 15.3	-2.4
	comp=Z,1.7nm,0.7s,baz=150,slow=7.8,SNR=36						
ILAR	Eielson Array	62.08	337	P	P	07 51 40.6	-0.8
	comp=Z,0.6nm,0.8s,baz=143,slow=5.5,SNR=6.9						
RND	Reindeer	62.26	335	P	P	07 51 42.5	-0.2

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*IDC **25** 07:53:22.3±4.9, 23°.53S×68°.87W, h0^{km}, mb3.8/1, mb1 3.5/2, mb1mx3.4/28, mbtmp3.5/2, ML2.9/1, Error ellipse: s-maj=150.0km s-min=60.5km az=74.0*
*SJA **25** 07:53:38.4±0.4, 22°.63S×68°.78W, h123^{km}±3^{km}, ML3.4, MW3.5*
*GUC **25** 07:53:39.3±0.6, 22°.47S×68°.70W, h104^{km}±3^{km}, ML3.5*
ISC 25 07:53:40.0±1.0, **22°.49S**±0°.04×**68°.76W**±0°.05, **h110**^{km}±7^{km}, **n33**, σ**1^{s}07**/45, **6C-5D**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	0.18	229	eP	Pn	07 53 54.9	-1.0
LVC				i S	Sn	07 54 06.3	-1.5
PB06	IPOC Station P	0.78	254	⇑iP	Pn	07 53 59.1	-0.2
PB06				i S	Sn	07 54 14.3	+0.5
PB06				IAML		07 54 15.9	
	comp=N,2μm,0.1s						
PB06	IPOC Station P	0.78	254	eP	Pn	07 53 59.3	+0.1
PB06				eS	Sn	07 54 14.4	+0.6
PB06				IAML		07 54 16.4	
	comp=Z,1μm,0.2s						
PB09	IPOC Station P	0.82	327	⇑iP	Pn	07 53 59.7	0.0
PB09				i S	Sn	07 54 14.7	+0.2
PB09				IAML		07 54 17.1	
	comp=E,937nm,0.4s						
PB15	IPOC Station P	0.97	222	⇑iP	Pn	07 54 01.2	+0.1
PB15				i S	Sn	07 54 17.8	+0.6
PB15	IPOC Station P	0.97	222	i P	Pn	07 54 01.5	+0.4
PB15				eS	Sn	07 54 17.9	+0.8
PB03	IPOC Station P	1.02	295	⇑iP	Pn	07 54 01.6	0.0
PB03				i S	Sn	07 54 18.0	+0.1
PB03				IAML		07 54 18.6	
	comp=E,5μm,0.2s						
PB07	IPOC Station P	1.29	306	⇑iP	Pn	07 54 04.6	+0.1
PB07				i S	Sn	07 54 23.5	+0.4
PB07				IAML		07 54 25.1	
	comp=N,2μm,0.2s						
PB04	IPOC Station P	1.29	277	eP	Pn	07 54 04.6	0.0
PB04				i S	Sn	07 54 24.2	+0.9
PB04				IAML		07 54 26.0	
	comp=E,1μm,0.2s						
PB04	IPOC Station P	1.29	277	i P	Pn	07 54 04.8	+0.2
PB04				eS	Sn	07 54 24.4	+1.2
PB05	IPOC Station P	1.38	255	⇑iP	Pn	07 54 05.5	0.0
PB05				i S	Sn	07 54 25.4	+0.5
PB05				IAML		07 54 28.9	
	comp=E,474nm,0.3s						
PB02	IPOC Station P	1.57	318	⇓iP	Pn	07 54 07.8	0.0
PB02				i S	Sn	07 54 29.1	+0.2
PB02				IAML		07 54 35.5	
	comp=E,1μm,0.3s						
PB01	IPOC Station P	1.59	335	⇓iP	Pn	07 54 07.8	-0.2
PB01				i S	Sn	07 54 29.3	0.0
PB01				IAML		07 54 30.8	
	comp=N,1μm,0.2s						
PB10	IPOC Station P	1.94	238	eP	Pn	07 54 12.9	+0.6
PB10				IAML		07 54 45.2	
	comp=N,149nm,0.3s						
PB10	IPOC Station P	1.94	238	i P	Pn	07 54 13.3	+1.0
PB10				eS	Sn	07 54 35.4	-1.5
PB10				IAML		07 54 36.9	
	comp=Z,162nm,0.5s						
PATCX	Punta Patache	2.11	322	⇓iP	Pn	07 54 13.8	-0.7
PATCX				i S	Sn	07 54 40.9	+0.1
PATCX				IAML		07 54 45.7	
	comp=E,641nm,0.2s						
TA01	Diego Aracena	2.33	325	IAML		07 54 53.5	
	comp=E,212nm,0.2s						
PB08	IPOC Station P	2.37	351	⇓iP	Pn	07 54 18.3	+0.2
PB08				IAML		07 54 52.9	
	comp=N,93nm,0.2s						
PB14	IPOC Station P	2.61	215	eP	Pn	07 54 21.8	+0.6
PB14	IPOC Station P	2.61	215	eP	Pn	07 54 20.8	-0.3
PB14				eS	Sn	07 54 48.7	-4.0
PB14				IAML		07 55 01.4	
	comp=Z,149nm,0.4s						
GO01	Chusmiza	2.84	352	⇓iP	Pn	07 54 24.1	-0.2
PB11	IPOC Station P	2.84	343	eP	Pn	07 54 22.9	-1.1
PB11				i S	Sn	07 54 57.0	-1.0
PB11				IAML		07 55 00.5	
	comp=N,141nm,0.2s						
YJA	Yavi	3.02	85	i P	Pn	07 54 27.7	+1.0
AZAP	Zapla	3.81	118	i P	Pn	07 54 36.6	-0.4
LPAZ	La Paz	6.20	6	Pn	Pn	07 55 09.9	+0.3
	comp=N,0.1nm,0.3s,baz=206,slow=7.5,SNR=2.0						
LPAZ	La Paz	6.20	6	i P	Pn	07 55 11.2	+1.5
ACDV	Cuesta del Vie	7.66	182	i P	Pn	07 55 34.7	+5.7
MRA	San Martin	10.25	165	i P	Pn	07 56 07.3	+3.3
TORD	Torodi Ar. Bea	77.56	70	P	P	08 05 23.2	-1.1
	comp=N,0.4nm,0.4s,baz=248,slow=5.5,SNR=7.2						
H11S2	WAKE ISLAND Hy	128.13	276	T	T	10 32 55.2	
	baz=115						
H11S1	WAKE ISLAND Hy	128.14	276	T	T	10 32 58.2	
	baz=115						
H11S3	WAKE ISLAND Hy	128.15	276	T	T	10 32 57.7	
	baz=115						
MKAR	Makanchi Array	146.34	37	PKPbc	PKPdf	08 13 06.8	+0.3
	comp=N,0.5nm,0.8s,baz=326,slow=2.1,SNR=4.0						

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*IDC **25** 07:54:09.3±2.0, 51°.81N×161°.29E, h0^{km}, mb3.5/6, mb1 3.9/8, mb1mx3.5/62, mbtmp3.6/8, ML3.9/2, Error ellipse: s-maj=51.6km s-min=20.8km az=12.0*
*KRSC **25** 07:54:09.3±1.9, 51°.40N×160°.98E, h84^{km}±35^{km}, ML4.3*
*MOS **25** 07:54:11.5±0.7, 51°.43N×160°.91E, h84^{km}, mb4.0/1, Error ellipse: s-maj=10.4km s-min=4.0km az=101.4*
ISC 25 07:54:10.9±0.8, **51°.32N**±0°.05×**161°.13E**±0°.04, **h35**^{km}, **n92**, σ**1^{s}37**/153, **mb3.5**/6, **3C-1D**, **Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	1.90	339	eP	Pn	07 54 39.8	-1.0
SPN	Mys Shipunski	1.90	339	PN	Pn	07 54 39.8	-1.0
RUS	Russkaya	1.97	305	eP	Pn	07 54 40.8	-0.9
RUS				eS	Sn	07 55 02.7	-2.4
RUS	Russkaya	1.97	305	PN	Pn	07 54 40.8	-0.9
RUS				S	Sn	07 55 02.7	-2.4
MTVR	Mutnovka	2.16	304	eP	Pn	07 54 44.1	-0.4
MTVR				eS	Sn	07 55 08.1	-2.1
MTVR	Mutnovka	2.16	304	PN	Pn	07 54 44.1	-0.4
MTVR				S	Sn	07 55 08.1	-2.1
DALK	Dalny	2.25	320	eP	Pn	07 54 45.2	-0.4
DALK				eS	Sn	07 55 10.4	-1.7
DALK	Dalny	2.25	320	PN	Pn	07 54 45.2	-0.4
DALK				S	Sn	07 55 10.4	-1.7
GRL	Gorelyy	2.26	304	eP	Pn	07 54 46.0	+0.2
GRL				eS	Sn	07 55 11.8	-0.7
GRL	Gorelyy	2.26	304	PN	Pn	07 54 46.0	+0.2
GRL				S	Sn	07 55 11.8	-0.7
ASAK	Asacha	2.27	299	eP	Pn	07 54 46.0	+0.1
ASAK				eS	Sn	07 55 11.2	-1.5
ASAK	Asacha	2.27	299	PN	Pn	07 54 46.0	+0.1
ASAK				S	Sn	07 55 11.2	-1.5
PET	Petropavlovsk	2.29	319	eP	Pn	07 54 45.8	-0.3
PET				eS	Sn	07 55 10.7	-2.3
PET	Petropavlovsk	2.29	319	⇑iPN	Pn	07 54 45.7	-0.3
PET				eS	Sn	07 55 10.7	-2.3
PET				pmax	pmax		
	comp=Z,458nm,0.6s						
PET				smax	smax		
	comp=E,329nm,0.6s						
PET				smax	smax		
	comp=N,493nm,0.4s						
UGLR	Uglovaya	2.36	324	eP	Pn	07 54 47.1	-0.1
UGLR	Uglovaya	2.36	324	PN	Pn	07 54 47.1	-0.1
KRMR	Karymshinskiy	2.39	310	eP	Pn	07 54 46.4	-1.1
KRMR				eS	Sn	07 55 13.3	-2.2
KRMR	Karymshinskiy	2.39	310	PN	Pn	07 54 46.4	-1.1
KRMR				S	Sn	07 55 13.3	-2.2
SDLR	Sedlovina	2.40	326	eP	Pn	07 54 47.3	-0.4
SDLR				eS	Sn	07 55 14.7	-1.2
SDLR	Sedlovina	2.40	326	PN	Pn	07 54 47.3	-0.4
SDLR				S	Sn	07 55 14.7	-1.2
SMAR	Somma	2.41	325	eP	Pn	07 54 47.6	-0.4
SMAR				eS	Sn	07 55 14.3	-2.1
SMAR	Somma	2.41	325	PN	Pn	07 54 47.6	-0.4
SMAR				S	Sn	07 55 14.3	-2.1
AVH	Avacha	2.44	324	eP	Pn	07 54 48.2	0.0
AVH	Avacha	2.44	324	PN	Pn	07 54 48.2	0.0
KRER	Koryakskii	2.46	325	eP	Pn	07 54 48.7	0.0
KRER				eS	Sn	07 55 16.8	-0.9
KRER	Koryakskii	2.46	325	PN	Pn	07 54 48.7	0.0
KRER				S	Sn	07 55 16.8	-0.9
KOK	Koryaka	2.50	323	eP	Pn	07 54 49.0	-0.1
KOK				eS	Sn	07 55 17.0	-1.3
KOK	Koryaka	2.50	323	PN	Pn	07 54 49.0	-0.1
KOK				S	Sn	07 55 17.0	-1.3
KRX	Arik	2.54	324	eP	Pn	07 54 49.7	-0.1
KRX	Arik	2.54	324	PN	Pn	07 54 49.7	-0.1
PAU	Pauzhetka	2.71	275	eP	Pn	07 54 52.1	+0.2
PAU				eS	Sn	07 55 22.4	-1.0
PAU	Pauzhetka	2.71	275	PN	Pn	07 54 52.1	+0.2
PAU				S	Sn	07 55 22.4	-1.0
PEA0B	Petropavlovsk-	2.77	312	c iPN	Pn	07 54 52.6	-0.1
PETK	Petropavlovsk-	2.77	312	Pn	Pn	07 54 52.7	0.0
	comp=N,19nm,0.3s,baz=122,slow=18,SNR=288						
PETK				Sn	Sn	07 55 24.5	-0.4
	comp=N,26nm,0.3s,baz=118,slow=17,SNR=5.9						
MIPR	Malaya Ipel'ka	2.88	291	eP	Pn	07 54 54.6	+0.4
MIPR				eS	Sn	07 55 26.5	-1.1
MIPR	Malaya Ipel'ka	2.88	291	PN	Pn	07 54 54.6	+0.4
MIPR				S	Sn	07 55 26.5	-1.1
KII	Karymskiy	2.90	340	eP	Pn	07 54 55.0	+0.4
KII	Karymskiy	2.90	340	PN	Pn	07 54 55.0	+0.4
APC	Apacha	2.93	305	eP	Pn	07 54 55.4	+0.5
APC				eS	Sn	07 55 29.5	+0.7
APC	Apacha	2.93	305	PN	Pn	07 54 55.4	+0.5
APC				S	Sn	07 55 29.5	+0.7
SKR	Severo-Kuril’s	3.23	260	eP	Pn	07 54 59.0	-0.1
SKR				eS	Sn	07 55 33.7	-2.6
SKR	Severo-Kuril’s	3.23	260	ePN	Pn	07 54 58.6	-0.5
SKR				eS	Sn	07 55 33.3	-3.0
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				smax	smax		
	comp=N,177nm,0.5s						
SKR				smax	smax		
	comp=E,189nm,0.4s						
ALID	Alaid	3.55	265	eP	Pn	07 55 03.8	+0.2
ALID				eS	Sn	07 55 42.3	-2.0
ALID	Alaid	3.55	265	PN	Pn	07 55 03.8	+0.2
ALID				S	Sn	07 55 42.3	-2.0
KZV	Kizimen	3.83	353	eP	Pn	07 55 07.9	+0.5
KZV				eS	Sn	07 55 49.3	-1.9
KZV	Kizimen	3.83	353	PN	Pn	07 55 07.9	+0.5
KZV				S	Sn	07 55 49.3	-1.9
TUMD	Tumrok D	3.91	354	eP	Pn	07 55 08.4	0.0
TUMD				eS	Sn	07 55 50.3	-2.8
TUMR	Tumrok	4.01	352	eP	Pn	07 55 10.7	+0.8
TUMR				eS	Sn	07 55 54.3	-1.3
TUMR	Tumrok	4.01	352	PN	Pn	07 55 08.4	-1.5
TUMR				S	Sn	07 55 50.3	-5.3
KMNR	Kamenistaya	4.47	353	eP	Pn	07 55 17.5	+1.3
KMNR				eS	Sn	07 56 07.4	+0.4
KMNR	Kamenistaya	4.47	353	PN	Pn	07 55 17.5	+1.3
KMNR				S	Sn	07 56 07.4	+0.4
BZGR	Bezymyannyi-Gr	4.63	357	eP	Pn	07 55 19.4	+1.0
BZGR				eS	Sn	07 56 11.4	+0.4
BZGR	Bezymyannyi-Gr	4.63	357	PN	Pn	07 55 19.4	+1.0
BZGR				S	Sn	07 56 11.4	+0.4
KIRR	Kirishev	4.66	355	eP	Pn	07 55 19.7	+0.9
KIRR				eS	Sn	07 56 11.7	0.0
KIRR	Kirishev	4.66	355	PN	Pn	07 55 19.7	+0.9
KIRR				S	Sn	07 56 11.7	0.0
ZLN	Zelenaya	4.71	358	eP	Pn	07 55 20.4	+1.0
ZLN	Zelenaya	4.71	358	PN	Pn	07 55 20.4	+1.0
LGNR	Loginova	4.78	357	eP	Pn	07 55 22.0	+1.5
LGNR				eS	Sn	07 56 15.1	+0.4
LGNR	Loginova	4.78	357	PN	Pn	07 55 22.0	+1.5
LGNR				S	Sn	07 56 15.1	+0.4
KOZ	Kozyrevsk	4.80	352	eP	Pn	07 55 21.9	+1.3
KOZ	Kozyrevsk	4.80	352	PN	Pn	07 55 21.9	+1.3
CIRR	Tsirk	4.81	357	eP	Pn	07 55 22.1	+1.3
CIRR				eS	Sn	07 56 15.4	+0.1
CIRR	Tsirk	4.81	357	PN	Pn	07 55 22.1	+1.3
CIRR				S	Sn	07 56 15.4	+0.1
ESO	Esso	4.83	344	eP	Pn	07 55 21.9	+0.8
ESO	Esso	4.83	344	PN	Pn	07 55 21.9	+0.8
BKI	Bering	4.85	35	eP	Pn	07 55 20.7	-0.6
BKI				eS	Sn	07 56 10.8	-5.4
BKI	Bering	4.85	35	PN	Pn	07 55 20.7	-0.6
KRSR	Krestovskiy	4.91	356	eP	Pn	07 55 23.1	+0.8
KRSR				eS	Sn	07 56 16.0	-1.9
KRSR	Krestovskiy	4.91	356	PN	Pn	07 55 23.1	+0.8
KRSR				S	Sn	07 56 16.0	-1.9
KBTR	Krutoberegovo	5.00	11	eP	Pn	07 55 23.3	0.0
KBTR				eS	Sn	07 56 16.7	-3.0
KBTR	Krutoberegovo	5.00	11	PN	Pn	07 55 23.3	0.0
KBTR				S	Sn	07 56 16.7	-3.0
KLY	Klyuchi	5.01	357	eP	Pn	07 55 24.3	+0.9
KLY				eS	Sn	07 56 19.5	-0.5
KLY	Klyuchi	5.01	357	PN	Pn	07 55 24.3	+0.9
KLY				S	Sn	07 56 19.5	-0.5
KBG	Krutoberegovo	5.03	10	eP	Pn	07 55 23.9	+0.2
KBG				eS	Sn	07 56 18.0	-2.5
KBG	Krutoberegovo	5.03	10	PN	Pn	07 55 23.9	+0.2
KBG				S	Sn	07 56 18.0	-2.5
SRDR	Sredinnyy	5.07	351	eP	Pn	07 55 25.0	+0.6
SRDR	Sredinnyy	5.07	351	PN	Pn	07 55 25.0	+0.6
BDR	Baidarnaya	5.25	0	eP	Pn	07 55 28.5	+1.6
BDR				eS	Sn	07 56 25.5	-0.7
BDR	Baidarnaya	5.25	0	PN	Pn	07 55 28.5	+1.6
BDR				S	Sn	07 56 25.5	-0.7
SRKR	Sorokina	5.34	0	eP	Pn	07 55 28.8	+0.7
SRKR				eS	Sn	07 56 25.9	-2.4
SRKR	Sorokina	5.34	0	PN	Pn	07 55 28.8	+0.7
SRKR				S	Sn	07 56 25.9	-2.4
YUK	Yuzh-Kuril'sk	12.60	241	⇓iPN	Pn	07 57 07.2	-0.2
ASAJ	Asahikawa	14.39	247	Pn	P	07 57 37.8	-0.5
	comp=E,1.8nm,0.3s,baz=60,slow=17,SNR=2.3						
BILL	Bilibino	16.96	7	eP	P	07 58 06.6	-0.1
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TIXI	Tiksi	24.96	336	P	P	07 59 29.9	-0.6
	comp=Z,1.9nm,0.4s,baz=132,slow=4.6,SNR=9.9						
TIXI	Tiksi	24.96	336	⇑iP	P	07 59 29.5	-1.0
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ILAR	Eielson Array	29.64	43	P	P	08 00 13.3	+0.7
	comp=Z,0.2nm,0.9s,baz=247,slow=7.3,SNR=1.8						
YKA	Yellowknife Ar	44.05	42	P	P	08 02 14.0	-0.7
	comp=Z,0.2nm,0.8s,baz=300,slow=7.6,SNR=3.1						
YKA	Yellowknife Ar	44.05	42	P	P	08 02 14.0	-0.7
NVAR	Mina Array Bea	55.75	70	P	P	08 03 46.9	+2.7
	comp=Z,0.3nm,0.6s,baz=307,slow=7.5,SNR=4.3						
PDAR	Pinedale Array	57.84	60	P	P	08 04 00.2	+1.3
	comp=Z,0.3nm,0.7s,baz=289,slow=2.8,SNR=4.0						
TXAR	Lajitas Array	70.74	67	P	P	08 05 25.2	+1.7
	comp=Z,0.6nm,0.6s,baz=299,slow=4.9,SNR=9.4						

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*PDG **25** 07:56:50.1±0.1, 39°.35N×16°.66E, h17^{km}±1^{km}, ML3.6/13, Error ellipse: s-maj=1.3km s-min=1.3km az=90.0*
*ROM **25** 07:56:52.0±0.1, 39°.290N±0°.005×16°.53E±0°.01, h30^{km}, ML3.6/26, Error ellipse: s-maj=1.0km s-min=0.4km az=75.0*
*IDC **25** 07:56:54.0±2.0, 39°.30N×16°.57E, h45^{km}±24^{km}, mb3.2/5, mb1 3.4/9, mb1mx3.2/48, mbtmp3.5/9, ML3.2/4, Error ellipse: s-maj=27.4km s-min=20.8km az=108.0*
ISC 25 07:56:52.2±0.8, **39°.28N**±0°.03×**16°.57E**±0°.03, **h31**^{km}±6^{km}, **n93**, σ**1^{s}21**/96, **mb3.5**/5, **13C-8D**, **Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CELI	Celico	0.13	340	⇓P	Pn	07 56 57.4	-0.9
CELI				S	Sb	07 57 02.0	-0.1
TIP	Timpagrande	0.18	124	⇓P	Pn	07 56 58.0	-0.9
TIP				⇑S	Sn	07 57 03.2	+0.1
TIP	Timpagrande	0.18	124	⇓P	Pn	07 56 58.3	-0.6
TIP				S	Sn	07 57 03.3	+0.3
TIP				AML	AML		
	comp=E,13250μm,0.6s						
TIP				AML	AML		
	comp=N,20100μm,0.7s						

TIP				AML	AML		
	comp=E,15500µm,0.6s						
TIP				AML	AML		
	comp=N,25550µm,0.7s						
TIP				AML	AML		
	comp=N,20100µm,0.7s						
SERS	**Sersale**	**0.26**	**158**	⇑P	**Pn**	**07 56 59.2**	**-0.8**
SERS				S	**Sn**	**07 57 05.0**	**-0.1**
SERS				AML	AML		
	comp=E,28100µm,0.3s						
SERS				AML	AML		
	comp=N,34100µm,0.3s						
SERS				AML	AML		
	comp=N,34150µm,0.3s						
SERS				AML	AML		
	comp=E,33200µm,0.3s						
SERS				AML	AML		
	comp=N,29350µm,0.3s						
SERS				AML	AML		
	comp=E,28100µm,0.3s						
SERS				AML	AML		
	comp=N,34100µm,0.3s						
SERS				AML	AML		
	comp=E,33200µm,0.3s						
SERS				AML	AML		
	comp=N,29350µm,0.3s						
CAR1	**CAROLEI**	**0.28**	**265**	P	**Pn**	**07 56 58.8**	**-1.4**
CAR1				AML	AML		
	comp=N,17300µm,0.9s						
CAR1				AML	AML		
	comp=E,16500µm,1.0s						
CAR1				AML	AML		
	comp=N,17300µm,0.9s						
CAR1				AML	AML		
	comp=E,21050µm,0.9s						
CAR1				AML	AML		
	comp=N,15600µm,0.5s						
CAR1				AML	AML		
	comp=E,21050µm,0.9s						
CAR1				AML	AML		
	comp=N,17300µm,0.8s						
LADO	**San Nicola del**	**0.32**	**89**	⇓P	**Pb**	**07 56 59.8**	**-0.3**
LADO				S	**Sn**	**07 57 07.9**	**+1.4**
LADO				AML	AML		
	comp=N,9560µm,1.1s						
LADO				AML	AML		
	comp=E,8165µm,0.9s						
LADO				AML	AML		
	comp=N,9565µm,1.1s						
LADO				AML	AML		
	comp=E,8170µm,0.9s						
LADO				AML	AML		
	comp=N,9530µm,1.1s						
GRI	**Girifalco**	**0.47**	**194**	⇑P	**Pb**	**07 57 01.9**	**-0.3**
GRI				S	**Sb**	**07 57 10.3**	**+1.2**
GRI				AML	AML		
	comp=E,5965µm,0.5s						
GRI				AML	AML		
	comp=E,5970µm,0.5s						
GRI				AML	AML		
	comp=N,6685µm,0.9s						
CET2	**Cetraro**	**0.53**	**298**	⇑P	**Pb**	**07 57 02.4**	**-0.9**
CET2				S	**Sb**	**07 57 10.6**	**-0.2**
CET2				AML	AML		
	comp=E,18500µm,0.5s						
CET2				AML	AML		
	comp=N,20700µm,0.8s						
T0702	**Acquaformosa (**	**0.58**	**320**	⇑P	**Pb**	**07 57 03.1**	**-0.8**
T0702				AML	AML		
	comp=E,3645µm,0.4s						
T0702				AML	AML		
	comp=N,3205µm,0.5s						
T0702				AML	AML		
	comp=E,3650µm,0.4s						
T0702				AML	AML		
	comp=N,3200µm,0.5s						
SALB	**San Lorenzo Be**	**0.62**	**344**	P	**Pn**	**07 57 03.7**	**-1.3**
SALB				AML	AML		
	comp=N,3110µm,0.4s						
SALB				AML	AML		
	comp=E,6305µm,0.3s						
SALB				AML	AML		
	comp=N,3325µm,0.4s						
SALB				AML	AML		
	comp=E,6145µm,0.3s						
SALB				AML	AML		
	comp=N,3105µm,0.4s						
MMN	**Mormanno**	**0.75**	**324**	P	**Pn**	**07 57 06.2**	**-0.5**
MMN				AML	AML		
	comp=E,2150µm,0.8s						
MMN				AML	AML		
	comp=N,2780µm,0.5s						
ORI	**Oriolo Calabro**	**0.79**	**354**	P	**Pn**	**07 57 07.5**	**+0.3**
ORI				AML	AML		
	comp=E,9015µm,0.4s						
ORI				AML	AML		
	comp=N,11220µm,0.4s						
PLAC	**Placanica**	**0.83**	**187**	P	**Pn**	**07 57 08.2**	**+0.3**
PLAC				AML	AML		
	comp=E,5390µm,0.9s						
PLAC				AML	AML		
	comp=N,5360µm,0.4s						
PLAC				AML	AML		
	comp=N,5460µm,0.9s						
PLAC				AML	AML		
	comp=E,5395µm,0.9s						
PLAC				AML	AML		
	comp=N,5365µm,0.4s						
PLAC				AML	AML		
	comp=E,5560µm,0.4s						
JOPP	**Joppolo**	**0.86**	**218**	⇓P	**Pn**	**07 57 08.2**	**0.0**
JOPP				S	**Sn**	**07 57 20.8**	**+1.1**
JOPP				AML	AML		
	comp=N,4110µm,0.3s						
JOPP				AML	AML		
	comp=E,3425µm,0.5s						
CUC	**Castrocucco**	**0.92**	**321**	P	**Pn**	**07 57 08.8**	**-0.2**
CUC				AML	AML		
	comp=E,3635µm,0.7s						
CUC				AML	AML		
	comp=N,2675µm,0.6s						
CUC				AML	AML		
	comp=E,4460µm,0.7s						
CUC				AML	AML		
	comp=N,3255µm,0.6s						
SIRI	**Monte Sirino -**	**1.05**	**329**	P	**Pn**	**07 57 11.4**	**+0.5**
SIRI				AML	AML		
	comp=N,2475µm,0.5s						
SIRI				AML	AML		
	comp=E,4365µm,1.6s						
SIRI				AML	AML		
	comp=E,4370µm,1.6s						
SIRI				AML	AML		
	comp=E,4430µm,1.6s						
SIRI				AML	AML		
	comp=N,2510µm,0.5s						
CRAC	**Craco**	**1.09**	**355**	P	**Pn**	**07 57 13.3**	**+1.9**
CRAC				AML	AML		
	comp=E,3810µm,1.1s						
CRAC				AML	AML		
	comp=N,4375µm,1.2s						
IST3	**Stromboli F**	**1.15**	**246**	AML	AML		
	comp=N,2245µm,0.7s						
IST3				AML	AML		
	comp=E,2005µm,0.4s						
CEL	**Celeste**	**1.15**	**207**	P	**Pn**	**07 57 12.9**	**+0.7**
MGR	**Morigerati**	**1.16**	**318**	P	**Pn**	**07 57 12.1**	**-0.2**
MGR				AML	AML		
	comp=E,1675µm,0.8s						
MGR				AML	AML		
	comp=N,1580µm,0.4s						
MGR				AML	AML		
	comp=N,1585µm,0.4s						
MGR				AML	AML		
	comp=N,3095µm,0.5s						
MGR				AML	AML		
	comp=E,1480µm,0.8s						
MTSN	**Montesano sull**	**1.17**	**328**	P	**Pn**	**07 57 13.3**	**+0.7**
MTSN				AML	AML		
	comp=E,2750µm,0.8s						
MTSN				AML	AML		
	comp=N,2535µm,1.1s						
MCEL	**Monticello**	**1.20**	**331**	P	**Pn**	**07 57 14.3**	**+1.4**
MCEL				AML	AML		
	comp=N,2005µm,0.9s						
MCEL				AML	AML		
	comp=E,1740µm,0.8s						
MSCL	**Scilla**	**1.21**	**210**	P	**Pn**	**07 57 13.4**	**+0.4**
MSCL				AML	AML		
	comp=N,7995µm,0.8s						
MSCL				AML	AML		
	comp=E,6420µm,0.7s						
BULG	**Bulgheria - Ca**	**1.21**	**311**	P	**Pn**	**07 57 13.2**	**+0.1**
BULG				AML	AML		
	comp=E,2340µm,0.5s						
BULG				AML	AML		
	comp=N,4900µm,0.5s						
BULG				AML	AML		
	comp=N,5045µm,0.5s						
BULG				AML	AML		
	comp=N,4895µm,0.5s						
BULG				AML	AML		
	comp=E,2335µm,0.5s						
BULG				AML	AML		
	comp=E,2335µm,0.5s						
GMB	**Gambarie**	**1.25**	**208**	P	**Pn**	**07 57 14.2**	**+0.5**
GMB				AML	AML		
	comp=E,8800µm,0.5s						
GMB				AML	AML		
	comp=N,7155µm,0.6s						
GMB				AML	AML		
	comp=N,7150µm,0.6s						
GMB				AML	AML		
	comp=E,8795µm,0.5s						
SOI	**Samo**	**1.27**	**198**	P	**Pn**	**07 57 15.4**	**+1.6**
SOI				AML	AML		
	comp=E,1625µm,0.5s						
SOI				AML	AML		
	comp=N,1445µm,0.6s						
SOI				AML	AML		
	comp=E,1620µm,0.5s						
MSRU	**Castanea**	**1.31**	**219**	P	**Pn**	**07 57 13.7**	**-0.6**
MSRU				AML	AML		
	comp=N,2315µm,0.5s						
MSRU				AML	AML		
	comp=E,3725µm,0.5s						
SLCN	**Sala Consilina**	**1.32**	**327**	P	**Pn**	**07 57 16.0**	**+1.4**
SLCN				AML	AML		
	comp=E,296µm,1.6s						
SLCN				AML	AML		
	comp=N,426µm,1.2s						
SLCN				AML	AML		
	comp=E,2110µm,0.5s						
SLCN				AML	AML		
	comp=N,2385µm,0.6s						
SLCN				AML	AML		
	comp=E,296µm,1.6s						
SLCN				AML	AML		
	comp=N,320µm,1.6s						
MIGL	**Miglionico**	**1.33**	**356**	P	**Pn**	**07 57 15.1**	**+0.4**
MIGL				AML	AML		
	comp=N,4695µm,1.0s						
MIGL				AML	AML		
	comp=E,4475µm,0.6s						
MIGL				AML	AML		
	comp=N,4835µm,0.6s						
MIGL				AML	AML		
	comp=E,4480µm,0.6s						
TAR1	**Taranto**	**1.36**	**24**	*e*Pn	**Pn**	**07 57 15.4**	**+0.3**
MATE	**Matera**	**1.37**	**4**	⇓P	**Pn**	**07 57 17.9**	**+2.7**
MATE				⇑S	**Sb**	**07 57 38.5**	**+4.2**
MATE	**Matera**	**1.37**	**4**	P	**Pn**	**07 57 15.3**	**+0.1**
MPAZ	**Palizzi**	**1.40**	**198**	P	**Pn**	**07 57 17.3**	**+1.7**
MPAZ				AML	AML		
	comp=E,1610µm,1.0s						
MPAZ				AML	AML		
	comp=N,1530µm,0.8s						
CMPR	**Campora**	**1.42**	**317**	P	**Pn**	**07 57 16.1**	**+0.1**
CMPR				AML	AML		
	comp=E,1430µm,0.7s						
CMPR				AML	AML		
	comp=N,827µm,0.5s						
MTTG	**Motta San Giov**	**1.45**	**208**	P	**Pn**	**07 57 16.8**	**+0.5**
MILZ	**Milazzo**	**1.45**	**226**	AML	AML		
	comp=E,2220µm,0.6s						
MILZ				AML	AML		
	comp=N,1485µm,0.4s						
MILZ				AML	AML		
	comp=E,2215µm,0.6s						
MPNC	**Port Mandanici**	**1.48**	**220**	P	**Pn**	**07 57 15.4**	**-1.3**
MPNC				S	**Sn**	**07 57 35.8**	**+0.8**
MPNC				AML	AML		
	comp=E,3470µm,0.5s						
MPNC				AML	AML		
	comp=N,2695µm,0.5s						
VPL	**Vulcano Piano**	**1.53**	**234**	P	**Pn**	**07 57 17.3**	**-0.1**
CDRU	**Civita di Ruta**	**1.55**	**322**	P	**Pn**	**07 57 17.8**	**+0.1**
CDRU				AML	AML		
	comp=E,470µm,0.6s						
CDRU				AML	AML		
	comp=N,412µm,0.6s						
NOCI	**Noci**	**1.56**	**14**	AML	AML		
	comp=E,949µm,0.7s						
NOCI				AML	AML		
	comp=N,1203µm,0.7s						
SG1	**Sgolgore (BA)**	**1.56**	**3**	⇓*i*Pn	**Pn**	**07 57 17.8**	**-0.1**
MCSR	**Castroreale**	**1.59**	**221**	P	**Pn**	**07 57 18.1**	**-0.3**
MCSR				AML	AML		
	comp=E,2025µm,1.4s						
MCSR				AML	AML		
	comp=N,1940µm,0.4s						
MCSR				AML	AML		
	comp=E,2000µm,0.4s						
AMUR	**Altamura**	**1.62**	**1**	AML	AML		
	comp=N,580µm,0.5s						
AMUR				AML	AML		
	comp=E,750µm,1.3s						
MESG	**Mesagne**	**1.64**	**37**	P	**Pn**	**07 57 19.0**	**+0.1**
SCTE	**Santa Cesarea**	**1.67**	**61**	P	**Pn**	**07 57 19.1**	**-0.2**
AIO	**Antillo**	**1.67**	**219**	P	**Pn**	**07 57 19.6**	**+0.2**
AIO				AML	AML		
	comp=E,660µm,0.5s						
AIO				AML	AML		
	comp=N,824µm,0.5s						
NOV	**Novara**	**1.68**	**222**	P	**Pn**	**07 57 19.5**	**0.0**
NOV				AML	AML		
	comp=E,1275µm,0.8s						
NOV				AML	AML		
	comp=N,945µm,1.6s						
MUCR	**Ucria**	**1.81**	**228**	P	**Pn**	**07 57 20.0**	**-1.4**
MUCR				AML	AML		
	comp=E,620µm,0.5s						
MUCR				AML	AML		
	comp=N,653µm,0.6s						
MUCR				AML	AML		
	comp=N,602µm,1.2s						
BAI	**Bari**	**1.84**	**7**	*e*Pn	**Pn**	**07 57 23.7**	**+2.0**
MCPD	**Capo d'Orlando**	**1.84**	**232**	P	**Pn**	**07 57 20.7**	**-1.0**
GALF	**Gagliano Caste**	**2.22**	**226**	AML	AML		
	comp=E,636µm,0.7s						
GALF				AML	AML		
	comp=N,578µm,0.8s						
HAGA	**Augusta**	**2.28**	**210**	AML	AML		
	comp=E,336µm,0.7s						
HAGA				AML	AML		
	comp=N,434µm,0.7s						
HLNI	**Lentini**	**2.34**	**215**	AML	AML		
	comp=E,308µm,1.0s						
HLNI				AML	AML		
	comp=N,228µm,0.6s						
PETRA	**Petralia Sopra**	**2.40**	**234**	AML	AML		
	comp=N,364µm,1.0s						
PETRA				AML	AML		
	comp=E,407µm,0.6s						
VAE	**Valguarnera**	**2.47**	**224**	P	**Pn**	**07 57 33.4**	**+3.0**
	comp=E,5.9nm,0.3s,baz=180,slow=4.6,SNR=8.1						
MSAG	**Monte S. Angel**	**2.48**	**349**	AML	AML		
	comp=N,520µm,0.5s						
MSAG				AML	AML		
	comp=E,325µm,1.1s						
MEU	**Monte Lauro**	**2.53**	**211**	AML	AML		
	comp=N,350µm,0.3s						
MEU				AML	AML		
	comp=E,351µm,0.8s						
HAVL	**Avola**	**2.58**	**207**	AML	AML		
	comp=N,319µm,1.6s						
HAVL				AML	AML		
	comp=E,446µm,0.8s						
HMDC	**Modica**	**2.71**	**212**	AML	AML		
	comp=N,256µm,1.5s						
HMDC				AML	AML		
	comp=E,319µm,1.2s						
TIR	**Tirane**	**3.26**	**50**	⇑P	**Pb**	**07 57 48.4**	**-0.9**
HCY	**Herceg Novi**	**3.49**	**24**	*e*Pn	**Pn**	**07 57 43.4**	**-0.9**
DRME	**Dracevica, Mon**	**3.52**	**34**	*e*Pn	**Pn**	**07 57 44.6**	**-0.2**
DBRK	**Dubrovnik**	**3.59**	**19**	*e*Pn	**Pn**	**07 57 45.6**	**-0.1**
DBRK				Sn	**Sn**	**07 58 25.8**	**-1.3**
STON	**Ston**	**3.69**	**13**	*e*Pn	**Pn**	**07 57 46.5**	**-0.6**
STON				Sn	**Sn**	**07 58 26.1**	**-3.4**
STON	**Ston**	**3.69**	**13**	AML	AML		
	comp=E,64µm,1.1s						
STON				AML	AML		
	comp=N,70µm,1.6s						
STON	**Ston**	**3.69**	**13**	*e*Pn	**Pn**	**07 57 46.5**	**-0.6**
TREB	**Trebinje**	**3.69**	**21**	*e*Pn	**Pn**	**07 57 46.1**	**-1.0**
PDG	**Podgorica**	**3.75**	**32**	⇓P	**Pn**	**07 57 48.3**	**+0.4**
PDG				⇑S	**Sn**	**07 58 31.1**	**+0.1**
PDG	**Podgorica**	**3.75**	**32**	*e*Pn	**Pn**	**07 57 48.6**	**+0.7**
BRY	**Bratogost**	**3.91**	**22**	*e*Pn	**Pn**	**07 57 49.2**	**-1.1**
MAKA	**Makarska**	**4.02**	**5**	*e*Pn	**Pn**	**07 57 52.1**	**+0.5**
RICI	**Ricice**	**4.23**	**6**	*e*Pn	**Pn**	**07 57 54.9**	**+0.4**
RICI				Sn	**Sn**	**07 58 41.1**	**-1.8**
UPM	**Unac-Piva**	**4.30**	**23**	*e*Pn	**Pn**	**07 57 56.2**	**+0.6**
ZIRJ	**Zirje**	**4.42**	**351**	*e*Pn	**Pn**	**07 57 57.2**	**0.0**
MORI	**Morici**	**4.63**	**352**	*e*Pn	**Pn**	**07 57 59.8**	**-0.2**
DUGI	**Dugi Otok**	**4.84**	**347**	*e*Pn	**Pn**	**07 58 02.0**	**-1.0**
BBLS	**Lazići**	**5.05**	**24**	*e*Pn	**Pn**	**07 58 06.7**	**+0.8**
DIVS	**Divibare**	**5.45**	**27**	*e*Pn	**Pn**	**07 58 11.1**	**-0.3**
BLY	**Banja Luka**	**5.48**	**5**	⇑P	**Pn**	**07 58 14.6**	**+2.9**
VTS	**Vitosha**	**6.05**	**54**	⇑P	**Pn**	**07 58 18.8**	**-0.9**
MOSL	**Moslavina**	**6.33**	**1**	*i* Pn	**Pn**	**07 58 22.5**	**-0.9**
MOSL				Sn	**Sn**	**07 59 31.6**	**-3.0**
CRES	**Cresnjev**	**6.59**	**353**	*e*Pn	**Pn**	**07 58 26.2**	**-0.8**
MDVR	**Moldovita**	**6.70**	**33**	⇑P	**Pn**	**07 58 29.4**	**+0.9**
BZS	**Buzias**	**7.35**	**29**	⇑P	**Pn**	**07 58 37.2**	**-0.1**
GZR	**Gura Zlata**	**7.65**	**35**	⇑P	**Pn**	**07 58 41.1**	**-0.4**
IDI	**Anoyia**	**7.74**	**118**	P	**Pn**	**07 58 42.3**	**-0.5**
	comp=N,0.3nm,0.3s,baz=287,slow=17,SNR=1.2						
IDI				S	**Sn**	**08 00 06.1**	**-3.3**
	comp=N,1.0nm,0.3s,baz=183,slow=23,SNR=1.5						
DAVOX	**Davos/Dischmat**	**8.95**	**329**	P	**Pn**	**07 59 00.3**	**+0.8**
	comp=N,0.2nm,0.3s,baz=144,slow=18,SNR=1.6						
GERES	**GERESS Array B**	**9.78**	**349**	P	**Pn**	**07 59 12.9**	**+2.1**
	comp=N,0.2nm,0.3s,baz=166,slow=13,SNR=1.9						
GERES				S	**Sn**	**08 00 59.5**	**0.0**
	comp=N,0.1nm,0.3s,baz=163,slow=24,SNR=2.8						
FINES	**FINESS Array B**	**22.95**	**12**	P	**P**	**08 01 53.3**	**-0.4**
	comp=N,1.6nm,0.9s,baz=200,slow=12,SNR=4.4						
TORD	**Torodi Ar. Bea**	**29.16**	**211**	P	**P**	**08 02 51.1**	**+0.4**
	comp=N,0.2nm,0.5s,baz=8.7,slow=10,SNR=2.0						
MKAR	**Makanchi Array**	**47.36**	**58**	P	**P**	**08 05 24.0**	**+0.8**
	comp=N,0.2nm,0.4s,baz=281,slow=7.5,SNR=4.9						
SONM	**Songino Array**	**62.13**	**50**	P	**P**	**08 07 11.1**	**+0.8**
	comp=N,0.3nm,0.4s,baz=305,slow=5.1,SNR=2.5						
YKA	**Yellowknife Ar**	**71.26**	**338**	P	**P**	**08 08 07.3**	**-0.8**
	comp=N,0.2nm,0.8s,baz=41,slow=5.9,SNR=5.1						

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*IDC **25** 08:00:23.5±2.3, 23°.92S×179°.89W, h512^{km}±23^{km}, mb3.4/9, mb1 3.7/10, mb1mx3.5/24, mbtmp4.3/10, Error ellipse: s-maj=36.1km s-min=18.2km az=155.0*

*NEIC **25** 08:00:27.4±1.7, 23°.8S±0°.1×179°.9E±0°.1, h547^{km}±6^{km}, mb4.2/14, Error ellipse: s-maj=20.0km s-min=13.3km az=65.0*

ISC 25 08:00:25.3±0.7**, 24°.01S**±0°.09×**180°.0E**±0°.1**, h526**^{km}**, n37,**
σ**1^{s}75**/46**, mb4.1**/16**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.50**	**344**	P	**P**	**08 02 07.5**	**-0.2**
OUZ	**Omahuta**	**12.45**	**205**	P	**P**	**08 03 12.6**	**+4.2**
DZM	**Mont Dzumac**	**12.59**	**276**	P	**P**	**08 03 11.4**	**+1.3**
URZ	**Urewera**	**14.41**	**189**	P	**P**	**08 03 28.2**	**-0.5**
	1.2nm,0.3s,baz=292,slow=3.2,SNR=9.2						
URZ				S	**S**	**08 05 55.2**	**-4.8**
	0.4nm,0.3s,baz=53,slow=24,SNR=8.6						
URZ	**Urewera**	**14.41**	**189**	P	**P**	**08 03 30.3**	**+1.5**
QRZ	**Quartz Range**	**17.88**	**199**	P	**P**	**08 04 05.5**	**+2.4**
LTZ	**Lake Taylor**	**19.77**	**197**	P	**P**	**08 04 21.5**	**+1.2**
ARMA	**Armidale**	**25.94**	**250**	P	**P**	**08 05 16.8**	**+1.0**
ARMA				IAmb	IAmb	08 05 20.2	
	comp=Z,5.0nm,0.9s						
EIDS	**Eidsvold**	**26.24**	**261**	P	**P**	**08 05 19.3**	**+0.9**
EIDS				IAmb	IAmb	08 05 20.6	
	comp=Z,7.7nm,0.7s						
CAN	**Canberra**	**29.04**	**240**	P	**P**	**08 05 45.0**	**+2.1**
CAN				IAmb	IAmb	08 06 01.6	
	comp=Z,9.5nm,1.1s						
TOO	**Toolangi**	**32.35**	**237**	P	**P**	**08 06 12.9**	**+1.7**
TOO				IAmb	IAmb	08 06 13.7	
	comp=Z,5.5nm,0.8s						
STKA	**Stephens Creek**	**34.64**	**248**	P	**P**	**08 06 31.9**	**+1.3**
	comp=Z,2.6nm,0.7s,baz=80,slow=13,SNR=5.5						
STKA	**Stephens Creek**	**34.64**	**248**	P	**P**	**08 06 31.7**	**+1.1**
BBOO	**Buckleboo**	**39.36**	**247**	P	**P**	**08 07 09.2**	**-0.1**
AS31	**Alice Springs**	**41.97**	**261**	P	**P**	**08 07 30.5**	**+0.1**
ASAR	**Alice Springs**	**41.97**	**261**	P	**P**	**08 07 30.6**	**+0.3**
	comp=Z,8.9nm,0.8s,baz=94,slow=8.0,SNR=76						
ASAR				PcP	**PcP**	**08 09 12.4**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=101,slow=4.0,SNR=4.5						
ASAR				ScP	**ScP**	**08 12 15.0**	**+1.1**
	comp=Z,1.7nm,0.8s,baz=117,slow=3.7,SNR=10.0						
ASAR				S	**S**	**08 13 06.9**	**-4.2**
	comp=Z,0.4nm,1.0s,baz=98,slow=16,SNR=2.9						
ASAR	**Alice Springs**	**41.97**	**261**	P	**P**	**08 07 30.4**	**0.0**
WR0	**Warramunga Arr**	**42.16**	**266**	P	**P**	**08 07 31.3**	**-0.6**
WR0				IAmb	IAmb	08 07 32.3	
	comp=Z,7.7nm,0.8s						
WRA	**Warramunga Arr**	**42.35**	**266**	P	**P**	**08 07 33.0**	**-0.4**
	comp=Z,7.7nm,0.4s,baz=97,slow=8.3,SNR=94						
WRA				PcP	**PcP**	**08 09 14.6**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=110,slow=3.7,SNR=3.1						
WRA				ScP	**ScP**	**08 12 17.2**	**+1.8**
	comp=Z,1.3nm,1.0s,baz=93,slow=4.0,SNR=1.9						
WRA				S	**S**	**08 13 11.9**	**-4.7**
	comp=Z,0.4nm,0.7s,baz=96,slow=13,SNR=3.1						
WRA	**Warramunga Arr**	**42.35**	**266**	P	**P**	**08 07 33.1**	**-0.3**
FITZ	**Fitzroy Crossi**	**50.77**	**266**	P	**P**	**08 08 38.0**	**+0.8**
FITZ				IAmb	IAmb	08 08 38.5	
	comp=Z,11nm,1.1s						
MORW	**Morawa**	**56.79**	**250**	P	**P**	**08 09 19.4**	**-0.2**
MORW				IAmb	IAmb	08 09 20.5	
	comp=Z,8.8nm,1.0s						
QSPA	**South Pole Qui**	**66.07**	**180**	P	**P**	**08 10 21.4**	**+1.6**
KSRS	**Korea Array**	**78.31**	**320**	P	**P**	**08 11 31.1**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=137,slow=5.8,SNR=5.2						
USRK	**Ussuriysk Ar.**	**80.83**	**327**	P	**P**	**08 11 43.8**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=114,slow=4.6,SNR=4.4						
NVAR	**Mina Array Bea**	**84.87**	**44**	P	**P**	**08 12 03.7**	**-1.1**
	comp=Z,0.4nm,0.7s,baz=225,slow=7.7,SNR=4.1						
NVAR	**Mina Array Bea**	**84.87**	**44**	P	**P**	**08 12 04.7**	**-0.1**
MTPU	**Mount Pierson**	**88.64**	**47**	P	**P**	**08 12 23.2**	**+0.4**
CMAR	**Chiang Mai Arr**	**89.52**	**290**	P	**P**	**08 12 27.9**	**+0.9**
	comp=Z,1.7nm,0.3s,baz=128,slow=3.1,SNR=7.1						
CMAR	**Chiang Mai Arr**	**89.52**	**290**	P	**P**	**08 12 27.2**	**+0.3**
TXAR	**Lajitas Array**	**90.53**	**58**	P	**P**	**08 12 30.9**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=213,slow=6.5,SNR=8.1						
TXAR	**Lajitas Array**	**90.53**	**58**	P	**P**	**08 12 31.9**	**+0.4**
PDAR	**Pinedale Array**	**92.80**	**44**	P	**P**	**08 12 39.6**	**-2.2**
	comp=Z,0.6nm,1.0s,baz=269,slow=5.0,SNR=2.7						
PDAR	**Pinedale Array**	**92.80**	**44**	P	**P**	**08 12 39.7**	**-2.1**
AKASG	**Malin Array Be**	**145.04**	**327**	PKPbc	**PKPdf**	**08 19 00.7**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=40,slow=4.1,SNR=5.2						
BRTR	**Keskin Array B**	**147.61**	**307**	PKPbc	**PKPdf**	**08 19 08.4**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=158,slow=3.6,SNR=3.9						
BRTR				PKPab	**PKPab**	**08 19 14.4**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=83,slow=3.9,SNR=8.5						
BRTR	**Keskin Array B**	**147.61**	**307**		**PKPbc**	**08 19 09.5**	**-1.3**
BRTR					**PKPab**	**08 19 15.0**	**+0.1**

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*SOME **25** 08:14:36.7, 39°.42N×72°.03E, h0^{km}*

*KRNET **25** 08:14:41.4±0.1, 39°.32N×71°.68E, mb2.6*

ISC 25 08:14:43.9±3.5**, 39°.2N**±0°.2×**71°.33E**±0°.08**, h33**^{km}**, n14,**
σ**1^{s}14**/21**, 9C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	**Batken**	**0.98**	**336**	⇑*i*P	**Pn**	**08 15 00.2**	**-1.3**
	baz=18						
BTK				⇑*i*S	**Sn**	**08 15 14.6**	**+0.3**
	baz=18						
ARSB	**Arslanbob**	**2.50**	**30**	⇑*i*P	**Pn**	**08 15 21.5**	**-0.9**
	baz=26						
ARSB				⇑*i*S	**Sn**	**08 15 51.5**	**-0.4**
	baz=26						
ARK	**Arkit**	**2.68**	**10**	⇑*i*P	**Pn**	**08 15 25.4**	**+0.6**
	baz=5.0						

ARK				⇑iS	Sn	08 15 57.2	+1.0
	baz=5.0						
AML	Almayashu	3.47	30	P	Pn	08 15 35.1	-0.9
	SNR=9.3						
ARLS	Aral	3.53	39	⇓iP	Pn	08 15 36.5	-0.1
	baz=37						
ARLS				⇓iS	Sn	08 16 15.7	-1.6
	baz=37						
MRKS	Merke	3.86	21	eP	Pn	08 15 40.9	-0.1
	2.3nm,0.3s						
MRKS				eS	Sn	08 16 27.8	+2.5
	5.2nm,0.6s						
UCH	Uchtor	3.90	37	P	Pn	08 15 42.0	+0.1
	SNR=12						
KK31	Karatay Array	3.99	351	Pn	Pn	08 15 44.6	+1.9
	0.6nm,0.3s,baz=158,slow=12,SNR=16						
KK31				Pg	Pb	08 15 53.8	+0.3
	4.5nm,0.5s,baz=159,slow=13,SNR=18						
KK31				⇑Lg	Lg	08 16 44.1	
	4.8nm,0.5s,baz=156,slow=30,SNR=8.1						
BRLS	Borolday	4.03	344	eP	Pn	08 15 48.0	+4.7
	0.7nm,0.1s						
BRLS				eS	Sb	08 16 40.7	-1.8
	2.8nm,0.3s						
KZA	Kyzart	4.17	44	P	Pn	08 15 46.6	+1.1
	SNR=5.2						
AAK	Ala-Archa	4.22	34	P	Pn	08 15 46.9	+0.9
	SNR=6.0						
AAK	Ala-Archa	4.22	34	⇑Pn	Pn	08 15 46.6	+0.5
	5.6nm,0.6s						
AAK				⇑Sn	Sn	08 16 34.8	+0.5
	3.7nm,0.7s						
CHMS	Chumysh	4.62	33	P	Pn	08 15 51.0	-0.5
	SNR=8.5						
USP	Ospenovka	4.75	29	P	Pn	08 15 52.7	-0.5
	SNR=6.2						

IDC 25 08:23:38.5±1.1, 4°.77S×150°.86E, h0km, mb3.5/3, mb1 3.9/3, mb1mx3.5/41, mbtmp3.6/3, MS3.8/1, Ms1 3.8/1, ms1mx2.7/23, Error ellipse: s-maj=38.5km s-min=16.9km az=145.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.25	68	Pn	Pn	08 24 04.3	+1.0
	334nm,0.3s,baz=180,slow=2.0,SNR=91						
KRVT				LR	LR	08 24 21.2	
	comp=Z,118nm,18.7s,baz=100,slow=34						
KRVT				Sn	Sn	08 24 22.2	+1.4
	127nm,0.3s,baz=242,slow=22,SNR=6.7						
WRA	Warramunga Arr	22.05	225	P	P	08 28 35.8	+0.6
	0.7nm,0.4s,baz=51,slow=9.8,SNR=11						
ASAR	Alice Springs	24.91	219	P	P	08 29 03.5	0.0
	0.7nm,0.8s,baz=58,slow=8.8,SNR=10.0						
RAR	Rarotonga	50.56	114	LR	LR	08 49 53.8	
	comp=Z,104nm,21.5s,baz=309,slow=31						
ILAR	Eielson Array	82.87	22	P	P	08 36 03.2	-1.5
	0.6nm,0.7s,baz=247,slow=4.9,SNR=7.2						
TORD	Torodi Ar. Bea	148.46	287	PKPbc	PKPbc	08 43 28.2	-0.1
	0.6nm,0.9s,baz=48,slow=2.1,SNR=2.7						

SJA ***25*** *08:47:06.0±0.7, 24°.22S×67°.26W, h184km±6km, ML2.8, MW3.0*

GUC ***25*** *08:47:07.9±0.6, 24°.19S×67°.64W, h194km±9km, ML3.6*

ISC 25 08:47:05.8±2.0, 24°.20S±0°.05×67°.30W±0°.04, h189km±19km, n27, σ1s.35/42, 8C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.72	108	iP	Pn	08 47 41.3	+0.5
SLA				IAML		08 47 41.9	
	comp=Z,77nm,0.6s						
SLA				eS	Sn	08 48 07.0	-0.9
AZAP	Zapla	2.04	91	iP	Pn	08 47 44.2	+0.1
AZAP				IAML		08 47 45.0	
	comp=Z,35nm,0.4s						
AZAP				eS	Sn	08 48 13.0	-0.8
LVC	Limon Verde	2.17	317	eP	Pn	08 47 47.1	+1.4
LVC				iS	Sn	08 48 16.7	+0.1
LVC	Limon Verde	2.17	317	iP	Pn	08 47 47.0	+1.4
LVC				eS	Sn	08 48 16.5	-0.1
LVC				IAML		08 48 21.8	
	comp=Z,19nm,0.1s						
PB15	IPOC Station P	2.22	296	⇑iP	Pn	08 47 47.4	+1.3
PB15				iS	Sn	08 48 16.9	-0.4
PB15	IPOC Station P	2.22	296	iP	Pn	08 47 47.5	+1.4
PB15				eS	Sn	08 48 17.6	+0.2
GO02	Mina Guanaco	2.30	245	⇑iP	Pn	08 47 47.7	+0.8
GO02				iS	Sn	08 48 18.7	-0.3
GO02				IAML		08 48 19.5	
	comp=N,282nm,0.1s						
PB06	IPOC Station P	2.56	305	⇑iP	Pn	08 47 51.1	+1.2
PB06				iS	Sn	08 48 23.4	-0.8
PB06				IAML		08 48 27.0	
	comp=E,174nm,0.1s						
PB06	IPOC Station P	2.56	305	iP	Pn	08 47 51.1	+1.2
YJA	Yavi	2.60	40	iP	Pn	08 47 51.8	+1.2
PB14	IPOC Station P	2.86	261	⇓iP	Pn	08 47 54.1	+0.7
PB14				iS	Sn	08 48 28.9	-1.7
PB14	IPOC Station P	2.86	261	iP	Pn	08 47 54.2	+0.7
PB05	IPOC Station P	2.98	296	⇑iP	Pn	08 47 55.7	+1.0
PB05				iS	Sn	08 48 30.8	-2.1
PB05				IAML		08 48 33.9	
	comp=E,58nm,0.4s						
PB05	IPOC Station P	2.98	296	iP	Pn	08 47 55.8	+1.0
PB09	IPOC Station P	2.99	323	⇑iP	Pn	08 47 56.8	+1.9
PB09				IAML		08 48 36.3	
	comp=E,44nm,0.6s						
PB09	IPOC Station P	2.99	323	iP	Pn	08 47 56.5	+1.6
PB10	IPOC Station P	3.06	282	⇑iP	Pn	08 47 56.5	+1.0
PB10				iS	Sn	08 48 32.3	-2.1
PB10				IAML		08 48 38.2	
	comp=N,70nm,0.3s						
PB10	IPOC Station P	3.06	282	iP	Pn	08 47 56.8	+1.2
PB03	IPOC Station P	3.11	313	⇑iP	Pn	08 47 57.5	+1.1
PB03				iS	Sn	08 48 34.2	-1.7
PB03				IAML		08 48 35.4	
	comp=E,163nm,0.2s						
PB04	IPOC Station P	3.21	305	eP	Pn	08 47 58.8	+1.2
PB04	IPOC Station P	3.21	305	iP	Pn	08 47 58.8	+1.2
PB07	IPOC Station P	3.42	315	⇓iP	Pn	08 48 01.1	+0.9
PB07				eS	Sn	08 48 40.5	-2.2
PB07				IAML		08 48 41.6	
	comp=E,110nm,0.4s						
PB01	IPOC Station P	3.73	327	⇑iP	Pn	08 48 04.7	+0.7
PB01				iS	Sn	08 48 47.4	-2.1
PB01				IAML		08 48 48.5	
	comp=E,66nm,0.2s						
PB02	IPOC Station P	3.73	320	eP	Pn	08 48 05.9	+1.9
PB02				eS	Sn	08 48 47.1	-2.5
PB02				IAML		08 48 52.1	
	comp=E,76nm,0.3s						
VCA	Vinchina	4.59	190	iP	Pn	08 48 15.8	+1.0
AROD	Rodeo	6.25	198	iP	Pn	08 48 37.7	+1.2
ACCO	Cerro Coronel	6.56	193	iP	Pn	08 48 41.3	+0.9

IDC ***25*** *08:51:47.8±0.6, 6°.22S×147°.67E, h67km±5km, mb4.1/20, mb1 4.3/24, mb1mx4.1/57, mbtmp4.5/24, MS3.5/12, Ms1 3.5/12, ms1mx3.2/48, Error ellipse: s-maj=16.6km s-min=8.2km az=93.0*

NEIC ***25*** *08:51:48.7±1.4, 6°.31S±0°.06×147°.58E±0°.08, h75km±2km, mb4.8/40, Error ellipse: s-maj=11.3km s-min=8.5km az=104.0*

DJA ***25*** *08:51:50.5±0.4, 6°S±3°×14°8E±°, h79km±5km, M5.0/27, mb4.9/27, mB5.5/7, MLv5.2/3, Mw(mB)4.9/7*

ISC 25 08:51:47.7±0.3, 6°.30S±0°.04×147°.61E±0°.06, h63km, n142, σ1s.27/141, mb4.7/34, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.12	188	P	Pn	08 52 35.7	+1.2
	126nm,0.3s,baz=37,slow=5.5,SNR=126						
PMG				S	Sn	08 53 12.6	+1.9
	182nm,0.3s,baz=28,slow=21,SNR=6.4						
PMG				LR	LR	08 54 24.0	
	comp=Z,854nm,19.1s,baz=320,slow=49						
PMG	Port Moresby	3.12	188		Pn	08 52 35.4	+0.9
PMG				Sn	Sn	08 53 12.1	+1.4
MANU	Manus Island	4.23	357		Pn	08 52 51.4	+1.6
KRVT	Keravat (AS076	4.82	66	P	Pn	08 52 57.8	0.0
	20nm,0.3s,baz=254,slow=20,SNR=5.5						
KRVT				LR	LR	08 54 26.8	
	comp=Z,209nm,20.6s,baz=224,slow=34						
RABL	Rabaul	4.99	65		Pn	08 53 02.0	+1.8
JAY	Jayapura	7.84	298	P	Pn	08 53 46.2	+7.0
	21nm,0.9s						
GENI	Genyem	8.28	296	P	Pn	08 53 51.1	+5.9
	3µm95nm,0.8s						
COEN	Coen	8.78	209	P	Pn	08 53 52.8	+0.8
	baz=8.7,SNR=55						
COEN	Coen	8.78	209		Pn	08 53 52.9	+1.0
COEN				Sn	Sn	08 55 25.9	-3.6
MTSU	Mount Surprise	12.20	195	P	Pn	08 54 39.6	+0.9
	baz=12,SNR=57						
CTA	Charters Tower	13.77	185	P	Pn	08 55 00.4	+0.3
	1.2nm,0.3s,baz=1.4,slow=14,SNR=18						
CTA				LR	LR	09 01 01.6	
	comp=Z,248nm,20.3s,baz=31,slow=40						
FAKI	Fak Fak	15.67	282	Pn	Pn	08 55 25.7	+0.8
QIS	Mount Isa	16.16	208	P	Pn	08 55 31.7	+0.7
	baz=16,SNR=20						
KDU	Kakadu	16.22	246	P	Pn	08 55 32.7	+1.0
	baz=16,SNR=4.0						
SAUI	Saumlaki	16.27	263	P	Pn	08 55 33.1	+0.7
SAUI				IAmb	IAmb	08 55 48.8	
	comp=Z,162nm,1.3s						
PATS	Pohnpei	16.86	39	P	P	08 55 41.9	+1.1
PATS				IAmb	IAmb	08 55 45.6	
	comp=Z,118nm,1.2s						
SIJI	Sorong	17.18	288	P	Pn	08 55 43.0	-0.7
	comp=Z,0.5nm,0.3s,baz=86,slow=19,SNR=1.6						
MTN	Manton Dam	17.50	247	P	P	08 55 47.9	0.0
WB0	Warramunga Arr	18.56	223	P	P	08 55 59.8	+0.3
WB0				IAmb	IAmb	08 56 02.7	
	comp=Z,17nm,0.7s						
WR0	Warramunga Arr	18.59	222	P	P	08 55 59.8	-0.2
WB2	Warramunga Arr	18.71	222	P	P	08 56 00.5	-0.7
WB2				IAmb	IAmb	08 56 04.1	
	comp=Z,17nm,0.6s						
WRA	Warramunga Arr	18.71	222	P	P	08 56 01.6	+0.3
	comp=Z,2.2nm,0.3s,baz=44,slow=11,SNR=38						
WRA				pP	pP	08 56 15.7	+1.0
	comp=Z,1.6nm,0.3s,baz=49,slow=11,SNR=6.1						
WRA				S	S	08 59 23.7	-7.4
	comp=Z,0.2nm,0.3s,baz=41,slow=22,SNR=1.7						
WRA				LR	LR	09 04 33.9	
	comp=Z,163nm,18.3s,baz=40,slow=41						
MSAI	Masohi	18.84	278	P	Pn	08 56 05.3	+1.4
	comp=Z,13nm,0.6s						
EIDS	Eidsvold	19.25	170	P	Pn	08 56 08.7	0.0
	baz=19,SNR=44						
EIDS	Eidsvold	19.25	170	P	Pn	08 56 08.2	-0.5
EIDS				IAmb	IAmb	08 56 09.9	
	comp=Z,43nm,0.6s						
AAI	Ambon	19.52	277	P	Pn	08 56 12.3	+0.4
	comp=Z,189nm,0.8s						
GUMO	Guam	19.94	352	LR	LR	09 04 01.8	
	comp=Z,115nm,18.6s,baz=99,slow=37						
RMQ	Roma	20.11	177	P	Pn	08 56 17.9	-0.9
	baz=20,SNR=97						
QLP	Quilpie	20.43	189	P	Pn	08 56 21.3	-1.2
	baz=20,SNR=53						
NLAI	Namlea	20.66	278	P	Pn	08 56 25.3	-0.1
	comp=Z,867nmcomp=Z,50nm,0.7s						
KNRA	Kununurra	20.70	242	P	P	08 56 24.0	+1.1
	baz=21,SNR=8.2						
KNRA	Kununurra	20.70	242	P	P	08 56 23.0	+0.1
KNRA				IAmb	IAmb	08 56 41.5	
	comp=Z,23nm,0.8s						
AS31	Alice Springs	21.73	216	P	P	08 56 34.5	+0.6
ASAR	Alice Springs	21.73	216	P	P	08 56 34.5	+0.6
	comp=Z,24nm,0.6s,baz=54,slow=8.6,SNR=390						
ASAR				S	S	09 00 28.4	-2.7
	comp=Z,2.6nm,0.8s,baz=34,slow=22,SNR=5.4						
ASAR				ScP	ScP	09 04 06.5	+1.8
	comp=Z,2.2nm,0.9s,baz=40,slow=3.2,SNR=6.6						
ASAR				LR	LR	09 05 18.5	
	comp=Z,83nm,21.1s,baz=30,slow=37						
ASAR	Alice Springs	21.73	216	P	P	08 56 34.1	+0.2
SANI	Sanana	21.97	280	P	P	08 56 38.6	+2.0
	comp=Z,51nm,0.8s						
SOEI	Soe	23.37	260	P	P	08 56 50.9	-0.3
DZM	Mont Dzumac	24.02	133	P	P	08 56 55.8	-1.2
	comp=Z,11nm,1.0s,baz=282,slow=20,SNR=2.4						
DZM				LR	LR	09 03 38.5	
	comp=Z,124nm,21.7s,baz=23,slow=30						
DZM	Mont Dzumac	24.02	133	P	P	08 56 56.0	-1.0
DZM				IAmb	IAmb	08 56 57.5	
	comp=Z,36nm,1.4s						
ARMA	Armidale	24.29	172	P	P	08 57 00.6	+1.2
	baz=24,SNR=46						
ARMA	Armidale	24.29	172	P	P	08 57 00.0	+0.6
ARMA				IAmb	IAmb	08 57 03.1	
	comp=Z,36nm,0.7s						
FITZ	Fitzroy Crossi	24.43	239	P	P	08 57 01.9	+1.2
	baz=24,SNR=25						
FITZ	Fitzroy Crossi	24.43	239	P	P	08 57 01.8	+1.2
	comp=Z,20nm,0.7s,baz=65,slow=8.0,SNR=30						
FITZ				LR	LR	09 06 42.5	
	comp=Z,99nm,22.0s,baz=54,slow=36						
FITZ	Fitzroy Crossi	24.43	239	P	P	08 57 01.5	+0.8
FITZ				IAmb	IAmb	08 57 04.3	
	comp=Z,30nm,1.1s						
CMSA	Cobar Meteorol	25.18	184	P	P	08 57 08.5	+1.2
	baz=25,SNR=12						
MMRI	Maumere	25.26	263	P	P	08 57 09.9	+1.6
	comp=Z,50nm,0.5s						
MMRI	Maumere	25.26	263	P	P	08 57 07.6	-0.7
MMRI				IAmb	IAmb	08 57 27.0	
	comp=Z,55nm,0.9s						
LUWI	Luwuk	25.32	281	P	P	08 57 09.9	+1.0
	comp=Z,3µmcomp=Z,123nm,0.9s						
LUWI	Luwuk	25.32	281	P	P	08 57 08.7	-0.1
STKA	Stephens Creek	26.06	192	P	P	08 57 16.2	+0.8
	baz=26,SNR=19						
STKA	Stephens Creek	26.06	192	P	P	08 57 15.9	+0.6
	comp=Z,27nm,0.6s,baz=358,slow=8.8,SNR=70						
STKA				LR	LR	09 07 31.7	
	comp=Z,85nm,20.6s,baz=25,slow=36						
STKA	Stephens Creek	26.06	192	P	P	08 57 15.7	+0.3
WRKA	Warakurna	26.26	223	P	P	08 57 17.3	+0.1
	baz=26,SNR=34						
APSI	Ampana	26.45	281	P	P	08 57 20.5	+1.5
	comp=Z,849nmcomp=Z,42nm,1.1s						
MGCD	Mangrove Creek	26.98	174	P	P	08 57 23.1	-0.5
	baz=27,SNR=8.1						
YNG	Young	27.87	179	P	P	08 57 32.6	+0.9
	baz=28,SNR=5.4						
HTT	Hallett	28.18	196	P	P	08 57 35.1	+0.7
	baz=28,SNR=14						
BBOO	Buckleboo	28.49	201	P	P	08 57 38.0	+0.9
	baz=28,SNR=13						
BBOO	Buckleboo	28.49	201	P	P	08 57 37.2	+0.1
BBOO				IAmb	IAmb	08 57 55.2	
	comp=Z,12nm,0.8s						
CAN	Canberra	28.91	178	P	P	08 57 41.2	+0.3
CAN				IAmb	IAmb	08 57 44.6	
	comp=Z,46nm,1.4s						
FORT	Forrest	30.50	215	P	P	08 57 55.6	+0.7
	baz=30,SNR=14						
FORT	Forrest	30.50	215	P	P	08 57 55.0	+0.2
PSA00	Pilbara Seismi	30.85	238	P	P	08 57 58.7	+0.6
PSA00				IAmb	IAmb	08 58 00.1	
	comp=Z,9.9nm,0.8s						
H11S3	WAKE ISLAND Hy	31.00	37	T	T	09 30 53.0	
	baz=222,slow=75,SNR=6.4						
H11S2	WAKE ISLAND Hy	31.00	37	T	T	09 30 49.7	
	baz=222						
H11S1	WAKE ISLAND Hy	31.02	37	T	T	09 30 50.7	
	baz=222,slow=75,SNR=3.9						
TOO	Toolangi	31.19	183	P	P	08 58 02.0	+1.0
TOO				IAmb	IAmb	08 58 19.2	
	comp=Z,13nm,1.1s						
MEEK	Meekatharra	34.23	230	P	P	08 58 29.1	+1.4
	baz=34,SNR=12						
KMBL	Kambalda	34.67	221	P	P	08 58 32.2	+0.8
	baz=35,SNR=5.4						
MORW	Morawa	37.43	229	P	P	08 58 56.2	+1.1
	baz=37,SNR=4.9						
MORW	Morawa	37.43	229	P	P	08 58 55.4	+0.3
KLBR	Kellerberrin	37.58	224	P	P	08 58 56.8	+0.5
	baz=38,SNR=6.1						
NWAO	Narrogin (SRO)	38.72	223	P	P	08 59 06.8	+0.9
	comp=Z,8.2nm,0.8s,baz=38,slow=17,SNR=2.8						
NWAO	Narrogin (SRO)	38.72	223	P	P	08 59 06.3	+0.4
NWAO				IAmb	IAmb	08 59 18.2	
	comp=Z,27nm,1.4s						
LEM	Lembang	39.73	267	LR	LR	09 18 12.9	
	comp=Z,67nm,21.6s,baz=231,slow=40						
LTZ	Lake Taylor	42.37	153	P	P	08 59 36.7	+0.9
RPZ	Rata Peaks	42.58	155	P	P	08 59 37.8	+0.3
	comp=Z,21nm,1.0s,baz=248,slow=19,SNR=1.4						
RPZ	Rata Peaks	42.58	155	P	P	08 59 38.6	+1.1
LBZ	Lake Benmore	42.77	156	P	P	08 59 39.3	+0.2
LBZ				IAmb	IAmb	08 59 43.7	
	comp=Z,19nm,1.0s						
MJAR	Matsushiro Arr	43.52	349	P	P	08 59 44.1	-1.0
	comp=Z,3.2nm,0.9s,baz=151,slow=7.1,SNR=6.1						
MJAR				pP	pP	09 00 00.8	-0.1
	comp=Z,4.6nm,1.0s,baz=158,slow=8.8,SNR=4.1						
MAJO	Matsushiro	43.52	349	P	P	08 59 44.5	-0.6
MAJO				IAmb	IAmb	08 59 44.7	
	comp=Z,20nm,1.2s						
NJ2	Nanjing	46.96	326	eP	P	09 00 14.0	+1.5
KSRS	Korea Array	47.25	339	P	P	09 00 13.9	-0.6
	comp=Z,1.8nm,0.7s,baz=153,slow=8.6,SNR=9.0						
KSAR	Wonju Array Be	47.25	339	P	P	09 00 14.4	-0.2
RPSI	Rantau Prapat	49.43	279	P	P	09 00 31.2	-0.6
RPSI				IAmb	IAmb	09 00 32.7	
	comp=Z,9.5nm,0.8s						
PSI	Prapat	49.45	279	P	P	09 00 31.2	-0.9
	comp=Z,8.0nm,0.8s,baz=100,slow=12,SNR=3.0						
GSI	Gunungsitoli	50.52	277	P	P	09 00 39.7	-0.4
USRK	Ussuriysk Ar.	52.20	346	P	P	09 00 51.5	-0.6
	comp=Z,3.0nm,0.8s,baz=149,slow=8.5,SNR=3.9						
USRK	Ussuriysk Ar.	52.20	346	P	P	09 00 51.9	-0.3
CMAR	Chiang Mai Arr	53.92	298	P	P	09 01 05.8	+0.5
	comp=Z,1.7nm,0.3s,baz=119,slow=6.0,SNR=5.3						
CMAR	Chiang Mai Arr	53.92	298	P	P	09 01 05.3	0.0
KLR	Kul'dur	57.01	348	P	P	09 01 26.8	0.0
	comp=Z,2.8nm,0.7s,baz=165,slow=4.0,SNR=14						
HHC	Hu-ho-hao-te	57.40	328	eP	P	09 01 32.3	+2.3
LZH	Lanzhou	58.83	319	eP	P	09 01 42.5	+2.4
LZH				pP	sP	09 02 04.0	+0.1
LZH				sP	PcP	09 02 14.0	-15
LZH				PP	PP	09 03 52.5	+1.6
PEA0B	Petropavlovsk-	59.79	7	P	P	09 01 46.1	-0.1
PETK	Petropavlovsk-	59.79	7	P	P	09 01 46.0	-0.2
	comp=Z,6.3nm,0.7s,baz=180,slow=7.2,SNR=7.9						
PETK				LR	LR	09 24 48.7	
	comp=Z,44nm,20.5s,baz=241,slow=33						
PETK	Petropavlovsk-	59.79	7	P	P	09 01 45.9	-0.3
HIA	Hailar	60.44	339	P	P	09 01 50.5	-0.3
HIA				IAmb	IAmb	09 01 51.2	
	comp=Z,9.7nm,0.9s						
GTA	Gaotai	63.36	320	eP	P	09 02 12.0	+1.3
GTA				pP	sP	09 02 33.0	-2.5
GTA				sP	PcP	09 02 42.5	-4.7
ULN	Ulaanbaatar	64.66	331	P	P	09 02 18.6	-0.5
SONM	Songino Array	64.96	331	P	P	09 02 20.5	-0.5
	comp=Z,3.0nm,1.0s,baz=152,slow=7.8,SNR=15						
SONM	Songino Array	64.96	331	P	P	09 02 20.5	-0.5
MA2	Magadan	65.71	2	LR	LR	09 26 09.3	
	comp=Z,51nm,21.4s,baz=117,slow=31						
VNDA	Vanda	71.58	177	P	P	09 03 02.8	+1.0
	comp=Z,1.2nm,0.5s,baz=338,slow=7.4,SNR=6.0						
VNDA				pP	PcP	09 03 20.2	-0.5
	comp=Z,6.0nm,0.9s,baz=311,slow=7.8,SNR=8.5						
VNDA	Vanda	71.58	177	P	P	09 03 02.7	+1.0
VNDA				IAmb	IAmb	09 03 21.4	
	comp=Z,9.3nm,1.0s						
WMQ	Urumqi	73.41	319	eP	P	09 03 14.5	+1.2
MK31	Makanchi Array	78.11	320	P	P	09 03 38.2	-1.9
MKAR	Makanchi Array	78.11	320	P	P	09 03 39.0	-1.1
	comp=Z,1.4nm,0.7s,baz=106,slow=7.9,SNR=9.2						
MKAR	Makanchi Array	78.11	320	P	P	09 03 38.1	-2.0
ZALV	Zalesovo Beam	79.58	328	P	P	09 03 45.6	-2.3
	comp=Z,1.6nm,0.5s,baz=124,slow=5.3,SNR=5.8						
KSH	Kashi	80.03	312	P	P	09 03 53.0	+2.2
KSH				sP	sP	09 04 22.0	+6.4
KSH				S	S	09 13 50.8	+0.4
KSH	Kashi	80.03	312	SS	SS	09 19 06.5	+4.7
NIL	Nilore	80.59	305	P	P	09 03 52.6	-1.3
NIL				IAmb	IAmb	09 03 58.7	
	comp=Z,5.5nm,1.0s						
IMAR	Indian Mountai	83.55	21	P	P	09 04 08.0	-0.6
QSPA	South Pole Qui	83.67	180	P	P	09 04 10.1	+0.6
	comp=Z,3.2nm,0.6s,baz=355,slow=1.4,SNR=20						
QSPA	South Pole Qui	83.67	180	P	P	09 04 09.5	+0.1
MLY	Manley	84.16	22	P	P	09 04 11.1	-0.8
KKAR	Karatay Array	84.93	314	P	P	09 04 14.9	-1.3
KKAR	Karatay Array	84.93	314	P	P	09 04 14.8	-1.3
KKAR				IAmb	IAmb	09 04 16.0	
	comp=Z,5.4nm,1.4s						
ILAR	Eielson Array	85.51	23	P	P	09 04 16.0	-2.6
	comp=Z,0.9nm,0.7s,baz=248,slow=5.1,SNR=15						
BCAR	Beaver Creek A	86.94	25	P	P	09 04 24.4	-1.3
BVAR	Borovoye Array	87.36	324	P	P	09 04 24.9	-3.0
	comp=Z,0.8nm,0.6s,baz=118,slow=11,SNR=2.7						
YKA	Yellowknife Ar	99.15	28	P	Pdif	09 05 18.8	-3.1
	comp=Z,0.3nm,0.9s,baz=260,slow=5.6,SNR=3.8						
PLCA	Paso Flores	121.54	147	PKP	PKPdf	09 10 33.8	-0.9
	comp=Z,1.7nm,0.8s,baz=261,slow=0.5,SNR=4.2						
GERES	GERESS Array B	122.49	326	PKP	PKPdf	09 10 35.0	-1.2
	comp=Z,0.5nm,0.4s,baz=76,slow=1.7,SNR=4.0						
FLOC	Florencia	136.60	94		PKPdf	09 11 03.8	-0.1
LPAZ	La Paz	138.12	123	PKhKP	PKPpre	09 10 59.5	
	comp=Z,0.9nm,0.7s,baz=232,slow=10.0,SNR=2.3						
ROSC	El Rosal	138.25	90	PKP	PKPdf	09 11 07.3	-0.1
	comp=Z,8.8nm,0.5s,baz=180,slow=20,SNR=5.4						
RUSC	La Rusia	139.54	88		PKPdf	09 11 09.0	-0.9
TORD	Torodi Ar. Bea	145.75	284	PKPbc	PKPdf	09 11 20.1	-0.1
	comp=Z,14nm,0.9s,baz=75,slow=4.3,SNR=56						
TORD				pPKPbc	pPKPdf	09 11 39.1	-0.2
	comp=Z,7.6nm,0.8s,baz=80,slow=3.7,SNR=6.4						
TORD	Torodi Ar. Bea	145.75	284		PKPdf	09 11 19.7	-0.5
CUPR	Culebra, Puert	145.79	67		PKPdf	09 11 19.6	-0.5
STVI	Saint Thomas	146.08	66		PKPdf	09 11 20.3	-0.3
CDVI	St. Croix	146.41	67		PKPbc	09 11 22.0	-0.6
SMRT	St. Maarten	147.87	66		PKPbc	09 11 25.9	-0.8
PTGA	Pitinga	151.60	103		PKPdf	09 11 29.7	-0.1
KIC	Kosan Boka	152.52	272	ePKIKP	PKiKP	09 11 38.8	+0.5
	comp=Z,13nm,0.7s						
DBIC	Dimbokro	152.64	272	PKPbc	PKPbc	09 11 36.9	-1.4
	comp=Z,4.5nm,0.6s,baz=106,slow=1.8,SNR=8.5						
DBIC	Dimbokro	152.64	272		PKiKP	09 11 38.7	+0.1
LIC	Lamto	152.80	271	ePKIKP	PKPbc	09 11 38.7	0.0
	comp=Z,17nm,0.6s						
TIC	Toumodi	152.80	272	ePKIKP	PKiKP	09 11 38.9	0.0
BDFB	Brasilia	153.27	145	PKPbc	PKPbc	09 11 39.6	-0.2
	comp=Z,3.9nm,0.6s,baz=209,slow=6.3,SNR=7.7						

DJA 25 08:58:52.0±0.5, 10°S±4°×11°9E±°, h10km, M3.9/6, mb3.7/1, MLv4.0/6, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.44	48	P	Pb	08 59 01.9	0.0
WBSI				S	Sg	08 59 07.4	+0.9
BASI	Baing, Sumba	1.52	101	P	Pn	08 59 18.7	-0.6
BASI				S	Sb	08 59 39.7	0.0
PLAI	Plampang	1.68	311	P	Pn	08 59 20.6	-0.9
BKSI	Bulukumba	4.71	13	P	Pn	09 00 03.1	0.0
PWJI	Pagerwojo	7.42	284	P	Pn	09 00 40.2	-0.2

IDC 25 08:59:47.5±1.9, 8°.24S×118°.41E, h0km, mb3.7/3, mb1 3.9/6, mb1mx3.5/55, mbtmp3.8/6, ML3.7/2, MS3.3/3, Ms1 3.3/3, ms1mx2.8/53, Error ellipse: s-maj=63.2km s-min=22.7km az=65.0, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	3.47	23	Pn	Pn	09 00 43.2	+0.5
	6.1nm,0.3s,baz=200,slow=7.3,SNR=10						
KAPI				Sn	Sn	09 01 21.4	-3.1
	12nm,0.3s,baz=154,slow=22,SNR=10						
KAPI				LR	LR	09 02 28.7	
	comp=Z,239nm,18.4s,baz=7.5,slow=46						
FITZ	Fitzroy Crossi	12.06	145	Pn	Pn	09 02 41.3	+0.5
	0.4nm,0.3s,baz=332,slow=13,SNR=2.9						
FITZ				Sn	Sn	09 04 51.8	-4.4
	0.8nm,0.3s,baz=295,slow=6.0,SNR=2.9						
WRA	Warramunga Arr	19.32	129	P	P	09 04 13.6	-0.9
	baz=305,slow=12,SNR=1.9						
WRA				S	Sn	09 07 43.4	-9.5
	0.1nm,0.3s,baz=308,slow=26,SNR=3.0						
ASAR	Alice Springs	21.35	138	P	P	09 04 37.0	+0.5
	2.9nm,0.8s,baz=315,slow=9.5,SNR=12						
ASAR				S	S	09 08 30.4	-4.2
	0.1nm,0.3s,baz=313,slow=24,SNR=1.6						

STKA	**Stephens Creek**	**31.91**	**141**	P	P	09 06 14.8	-0.1
	1.1nm,0.4s,baz=308,slow=8.5,SNR=7.8						
MKAR	**Makanchi Array**	**63.52**	**333**	P	P	09 10 19.5	-0.2
	0.3nm,0.7s,baz=140,slow=7.0,SNR=2.5						
PETK	**Petropavlovsk-**	**69.61**	**24**	LR	LR	09 41 23.4	
	comp=Z,26nm,20.0s,baz=242,slow=36						
ILAR	**Eielson Array**	**99.40**	**26**	LR	LR	10 06 17.6	
	comp=Z,14nm,18.0s,baz=154,slow=40						

MAN ***25*** *09:08:38.2, 4°.72N×125°.66E, h32km, mb4.7, ML3.6, MS3.5*
IDC ***25*** *09:08:44.2±7.8, 3°.12N×127°.27E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.2/55, mbtmp3.4/4, Error ellipse: s-maj=134.0km s-min=107.6km az=121.0*
ISC 25 09:08:34.3±1.0**, 4°.50N**±0°.09×**125°.8E**±0°.2**, h35**km**, n8, σ1s.50**/11**, mb3.3**/4**, 1C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.60**	**357**	*e*P	**Pn**	**09 09 01.8**	**+1.7**
DDMP				*e*S	**Sn**	**09 09 17.8**	**-1.7**
GSPH	**General Santos**	**1.79**	**332**	⇑*i*P	Pn	09 09 18.1	+15
GSPH				*i* S	**Sn**	**09 09 23.8**	**-0.5**
SKMP	**Bagumbayan, Su**	**2.36**	**328**	*e*P	**Pn**	**09 09 11.5**	**+0.9**
SKMP				*e*S	**Sn**	**09 09 36.7**	**-1.6**
KCP	**Kidapawan**	**2.59**	**344**	⇓*e*P	**Pn**	**09 09 15.0**	**+1.2**
KCP				*i* S	**Sn**	**09 09 43.8**	**-0.4**
FITZ	**Fitzroy Crossi**	**22.45**	**180**	P	**P**	**09 13 32.0**	**+1.6**
	0.7nm,0.5s,baz=0.0,slow=9.1,SNR=1.3						
WRA	**Warramunga Arr**	**25.70**	**161**	P	**P**	**09 14 00.5**	**-0.9**
	0.2nm,0.3s,baz=339,slow=10,SNR=1.9						
ASAR	**Alice Springs**	**29.09**	**165**	P	**P**	**09 14 32.3**	**+0.5**
	0.3nm,0.5s,baz=347,slow=7.6,SNR=9.3						
STKA	**Stephens Creek**	**39.18**	**158**	P	**P**	**09 15 57.2**	**-1.8**
	0.6nm,0.4s,baz=337,slow=13,SNR=3.1						

MOS ***25*** *09:11:56.1±1.1, 7°.54N×136°.69E, h10km, mb4.8/30, Error ellipse: s-maj=11.6km s-min=6.1km az=102.0*
IDC ***25*** *09:11:56.3±0.5, 7°.51N×136°.79E, h0km, mb4.4/27, mb1 4.5/28, mb1mx4.3/56, mbtmp4.4/28, ML2.5/1, MS3.6/12, Ms1 3.7/12, ms1mx3.3/54, Error ellipse: s-maj=18.8km s-min=10.5km az=81.0*
NEIC ***25*** *09:11:57.7±2.1, 7°.48N±0°.08×136°.72E±0°.09, h10km±1km, mb4.7/55, Error ellipse: s-maj=16.5km s-min=11.8km az=295.0*
DJA ***25*** *09:12:01.0±1.6, 8°N±6°×13°7E±°, h69km±16km, M4.5/19, mb4.6/19, mB5.1/6, Mw(mB)4.4/6, Mwp5.8/1*
ISC 25 09:11:59.7±0.3**, 7°.47N**±0°.04×**136°.80E**±0°.06**, h22**km**, n193, σ1s.35**/189**, mb4.6**/68**, MS3.7**/12**, 5C-13D, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**9.99**	**52**	P	**Pn**	**09 14 23.9**	**+1.9**
GUMO	**Guam**	**9.99**	**52**	Pn	**Pn**	**09 14 23.9**	**+1.9**
DAV	**Davao City (W)**	**11.14**	**269**	LR	LR	09 19 13.8	
	comp=Z,181nm,18.3s,baz=95,slow=39						
FAKI	**Fak Fak**	**11.27**	**204**	Pn	**Pn**	**09 14 39.0**	**-0.6**
FAKI				Sn	**Sn**	**09 16 45.8**	**+0.8**
KCP	**Kidapawan**	**11.62**	**268**	⇑*e*P	**Pn**	**09 14 47.7**	**+3.2**
LUWI	**Luwuk**	**16.35**	**239**	P	**P**	**09 15 51.0**	**+0.3**
	51nm,1.2s						
LUWI	**Luwuk**	**16.35**	**239**	Pn	**Pn**	**09 15 46.1**	**-1.9**
LUWI				IAmb	IAmb	09 15 57.0	
	comp=Z,44nm,0.9s						
MRSI	**Marisa**	**16.36**	**246**	P	**Pn**	**09 15 48.5**	**+0.3**
	comp=Z,1µmcomp=Z,60nm,1.1s						
TGY	**Tagaytay City**	**16.91**	**294**	LR	LR	09 21 23.5	
	comp=Z,296nm,21.8s,baz=120,slow=34						
MPSI	**Mapaga**	**18.28**	**248**	P	P	09 16 22.8	+11
SZP	**Santa**	**18.82**	**304**	P	**P**	**09 16 16.7**	**-1.4**
RABL	**Rabaul**	**19.22**	**127**	P	**P**	**09 16 21.7**	**-0.8**
RABL				IAmb	IAmb	09 16 37.1	
	comp=Z,34nm,0.8s						
PMG	**Port Moresby**	**19.69**	**148**	P	**Pn**	**09 16 28.7**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=334,slow=18,SNR=4.0						
PMG	**Port Moresby**	**19.69**	**148**	⇑*i*P	**Pn**	**09 16 31.8**	**+2.7**
PMG				pmax	pmax		
	comp=Z,51nm,1.1s						
PMG	**Port Moresby**	**19.69**	**148**	P	**P**	**09 16 25.3**	**-2.3**
JCJ	**Chichijima**	**20.18**	**14**	P	**P**	**09 16 32.4**	**-0.4**
	comp=Z,121nm,0.8s,baz=220,slow=18,SNR=7.3						
JCJ				LR	LR	09 22 55.7	
	comp=Z,174nm,18.5s,baz=238,slow=33						
BNSI	**Bone**	**20.41**	**235**	P	Pn	09 16 36.5	-1.1
	comp=Z,36nm,1.0s						
SPSI	**Sidrap Palu**	**20.44**	**237**	P	Pn	09 16 37.4	-0.6
	comp=Z,757nmcomp=Z,24nm,1.2s						
KKM	**Kota Kinabalu**	**20.49**	**267**	P	**P**	**09 16 36.0**	**-0.4**
JOW	**Kunigami**	**20.89**	**338**	P	**P**	**09 16 39.6**	**-1.0**
JOW				IAmb	IAmb	09 16 46.6	
	comp=Z,29nm,0.9s						
BKSI	**Bulukumba**	**20.93**	**233**	P	**P**	**09 16 41.8**	**+0.7**
	comp=Z,487nmcomp=Z,14nm,1.2s						
MTN	**Manton Dam**	**20.95**	**196**	P	**P**	**09 16 42.0**	**+0.7**
SOEI	**Soe**	**21.18**	**216**	P	**P**	**09 16 43.4**	**-0.5**
	comp=Z,35nm,0.9s						
SOEI	**Soe**	**21.18**	**216**	P	**P**	**09 16 43.2**	**-0.7**
SOEI				IAmb	IAmb	09 17 00.9	
	comp=Z,23nm,0.8s						
TWG	**Pinlang**	**21.49**	**317**	P	**P**	**09 16 43.6**	**-3.5**
MMRI	**Maumere**	**21.60**	**222**	P	**P**	**09 16 49.6**	**+1.3**
	comp=Z,61nm,1.1s						
MMRI	**Maumere**	**21.60**	**222**	P	**P**	**09 16 48.1**	**-0.2**
YULB	**Yu-li**	**21.73**	**318**	P	**P**	**09 16 50.6**	**+1.0**
YULB				IAmb	IAmb	09 16 55.7	
	comp=Z,29nm,0.8s						
NACB	**Ninganchiao**	**22.09**	**320**	P	**P**	**09 16 51.9**	**-1.6**
NACB				IAmb	IAmb	09 16 57.5	
	comp=Z,37nm,1.0s						
TPUB	**Ta-pu**	**22.11**	**317**	P	**P**	**09 16 53.9**	**+0.1**
COEN	**Coen**	**22.21**	**163**	P	**P**	**09 16 54.0**	**-0.8**
SSLB	**Suanglung**	**22.23**	**319**	P	**P**	**09 16 52.6**	**-2.5**
YHNB	**Yeheng**	**22.59**	**321**	P	**P**	**09 16 58.9**	**0.0**
TATO	**Taipei**	**22.74**	**322**	P	**P**	**09 17 00.9**	**+0.5**
KNRA	**Kununurra**	**24.34**	**199**	P	**P**	**09 17 16.5**	**+0.4**
PLAI	**Plampang**	**24.93**	**230**	P	**P**	**09 17 20.4**	**-1.1**
	comp=Z,440nmcomp=Z,12nm,0.9s						
SBUM	**Sibu**	**24.98**	**260**	P	**P**	**09 17 21.4**	**-0.6**
JNU	**Nakatsue**	**26.11**	**349**	P	**P**	**09 17 31.9**	**-0.2**
	comp=Z,12nm,1.0s,baz=352,slow=7.1,SNR=4.0						
JNU				LR	LR	09 27 00.8	
	comp=Z,220nm,20.2s,baz=166,slow=35						
WB0	**Warramunga Arr**	**27.17**	**185**	P	**P**	**09 17 41.8**	**+0.1**
WB0				IAmb	IAmb	09 17 45.5	
	comp=Z,20nm,1.4s						
WRAB	**Tennant Creek**	**27.34**	**185**	⇓*i*P	**P**	**09 17 43.4**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.1s						
WRAB	**Tennant Creek**	**27.34**	**185**	P	**P**	**09 17 42.4**	**-0.9**
WR0	**Warramunga Arr**	**27.35**	**185**	P	**P**	**09 17 44.0**	**+0.6**
WR0				IAmb	IAmb	09 17 48.1	
	comp=Z,26nm,1.5s						
WRA	**Warramunga Arr**	**27.35**	**185**	P	**P**	**09 17 43.1**	**-0.2**
	comp=Z,2.3nm,0.7s,baz=2.7,slow=9.9,SNR=27						
WRA				PcP	**PcP**	**09 21 03.1**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=354,slow=3.2,SNR=2.1						
WRA				LR	LR	09 29 25.2	
	comp=Z,144nm,18.4s,baz=5.0,slow=38						
WRA	**Warramunga Arr**	**27.35**	**185**	P	**P**	**09 17 43.1**	**-0.2**
JAGI	**Jajag, Banyuwa**	**27.57**	**235**	P	**P**	**09 17 44.7**	**-0.7**
JAGI				IAmb	IAmb	09 17 49.6	
	comp=Z,25nm,1.0s						
FITZ	**Fitzroy Crossi**	**27.69**	**203**	P	**P**	**09 17 46.0**	**-0.3**
	comp=Z,4.7nm,1.0s,baz=36,slow=9.5,SNR=8.1						
FITZ	**Fitzroy Crossi**	**27.69**	**203**	P	**P**	**09 17 46.4**	**0.0**
MJAR	**Matsushiro Arr**	**28.97**	**2**	P	**P**	**09 17 55.3**	**-2.4**
	comp=Z,1.2nm,0.7s,baz=177,slow=11,SNR=4.0						
MJAR	**Matsushiro Arr**	**28.97**	**2**	P	**P**	**09 17 54.9**	**-2.7**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MJAR	**Matsushiro Arr**	**28.97**	**2**	P	**P**	**09 17 54.9**	**-2.7**
NJ2	**Nanjing**	**29.62**	**328**	*e*P	**P**	**09 18 04.8**	**+1.3**
KSRS	**Korea Array**	**30.92**	**346**	P	**P**	**09 18 15.6**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=167,slow=9.5,SNR=4.1						
H11S3	**WAKE ISLAND Hy**	**31.06**	**66**	T	T	09 50 48.2	
	baz=253,slow=75,SNR=78						
AS31	**Alice Springs**	**31.07**	**185**	P	**P**	**09 18 16.1**	**-0.3**
ASAR	**Alice Springs**	**31.07**	**185**	P	**P**	**09 18 17.0**	**+0.6**
	comp=Z,1.7nm,0.5s,baz=16,slow=12,SNR=41						
ASAR				PcP	**PcP**	**09 21 12.5**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=3.4,slow=1.9,SNR=7.6						
ASAR				LR	LR	09 32 14.2	
	comp=Z,123nm,18.2s,baz=322,slow=39						
ASAR	**Alice Springs**	**31.07**	**185**	P	**P**	**09 18 16.3**	**-0.1**
ASAR						09 21 12.5	
ASAR	**Alice Springs**	**31.07**	**185**	P	**P**	**09 18 16.3**	**-0.1**
H11S1	**WAKE ISLAND Hy**	**31.08**	**66**	T	T	09 50 49.3	
	baz=253,slow=75,SNR=67						
H11S2	**WAKE ISLAND Hy**	**31.08**	**66**	T	T	09 50 52.0	
	baz=253,slow=75,SNR=64						
H11N1	**WAKE ISLAND Hy**	**31.61**	**64**	T	T	09 51 45.1	
	baz=259,slow=75,SNR=4.8						
H11N2	**WAKE ISLAND Hy**	**31.62**	**64**	T	T	09 51 43.6	
	baz=259						
H11N3	**WAKE ISLAND Hy**	**31.63**	**64**	T	T	09 51 44.9	
	baz=259,slow=75,SNR=4.5						
GYA	**Guiyang**	**34.31**	**307**	*e*P	**P**	**09 18 47.3**	**+2.4**
PBKT	**Sadao Pong**	**36.13**	**288**	P	**P**	**09 18 60.0**	**-0.6**
PBKT				IAmb	IAmb	09 19 05.7	
	comp=Z,11nm,0.9s						
USA0B	**Ussuriysk Arra**	**36.83**	**354**	⇓*i*P	**P**	**09 19 05.8**	**-0.3**
USRK	**Ussuriysk Ar.**	**36.83**	**354**	P	**P**	**09 19 07.5**	**+1.4**
	comp=Z,2.9nm,0.8s,baz=169,slow=8.4,SNR=8.1						
USRK	**Ussuriysk Ar.**	**36.83**	**354**	P	**P**	**09 19 07.0**	**+0.9**
USRK	**Ussuriysk Ar.**	**36.83**	**354**	P	**P**	**09 19 07.0**	**+0.9**
ASAJ	**Asahikawa**	**36.85**	**7**	P	**P**	**09 19 06.5**	**+0.1**
	comp=Z,4.5nm,0.8s,baz=211,slow=12,SNR=3.5						
JKA	**Kamikawa-asahi**	**36.85**	**7**	P	**P**	**09 19 06.5**	**+0.1**
XAN	**Xi'an**	**36.88**	**320**	P	**P**	**09 19 04.8**	**-2.0**
YUK	**Yuzh-Kuril'sk**	**37.27**	**11**	⇓*i*P	**P**	**09 19 09.5**	**-0.4**
CN2	**Changchun**	**37.53**	**346**	*e*P	**P**	**09 19 13.0**	**+0.9**
PSI	**Prapat**	**37.99**	**265**	P	**P**	**09 19 17.4**	**+0.8**
	comp=Z,13nm,0.9s,baz=89,slow=2.9,SNR=5.5						
PSI	**Prapat**	**37.99**	**265**	P	**P**	**09 19 17.4**	**+0.8**
PSI				pmax	pmax		
	comp=Z,14nm,0.9s						
RPSI	**Rantau Prapat**	**38.01**	**265**	P	**P**	**09 19 15.2**	**-1.3**
RPSI				IAmb	IAmb	09 19 19.2	
	comp=Z,14nm,0.9s						
RPSI	**Rantau Prapat**	**38.01**	**265**	P	**P**	**09 19 17.4**	**+0.8**
CMAR	**Chiang Mai Arr**	**38.39**	**290**	P	**P**	**09 19 20.1**	**+0.4**
	comp=Z,1.6nm,0.3s,baz=99,slow=7.1,SNR=13						
CMAR				LR	LR	09 36 39.9	
	comp=Z,42nm,18.5s,baz=176,slow=39						
CMAR	**Chiang Mai Arr**	**38.39**	**290**	P	**P**	**09 19 19.7**	**0.0**
FORT	**Forrest**	**38.94**	**192**	P	**P**	**09 19 23.5**	**-0.7**
STKA	**Stephens Creek**	**39.39**	**174**	P	**P**	**09 19 27.6**	**-0.3**
	comp=Z,4.6nm,0.8s,baz=342,slow=8.3,SNR=8.2						
STKA				LR	LR	09 36 04.0	
	comp=Z,93nm,20.4s,baz=16,slow=37						
STKA	**Stephens Creek**	**39.39**	**174**	P	**P**	**09 19 28.4**	**+0.5**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
STKA	**Stephens Creek**	**39.39**	**174**	P	**P**	**09 19 28.4**	**+0.5**
YSS	**Yuzh-Sakhalins**	**39.67**	**6**	*e*P	**P**	**09 19 27.7**	**-2.3**
YSS				*e*		09 25 26.0	
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
HHC	**Hu-ho-hao-te**	**40.13**	**330**	*e*P	**P**	**09 19 34.5**	**+0.4**
HHC				pP	pP	09 19 40.3	+0.3
HHC				S	**S**	**09 25 44.3**	**+4.8**
LZH	**Lanzhou**	**41.43**	**318**	*e*P	**P**	**09 19 46.0**	**+1.0**
LZH				pP	pP	09 19 50.3	-0.6
LZH				sP	sP	09 19 52.3	-0.9
LZH				PP	**PP**	**09 21 21.5**	**+0.6**
KLR	**Kul'dur**	**41.84**	**355**	P	**P**	**09 19 48.5**	**+0.7**
	comp=Z,5.1nm,0.8s,baz=212,slow=4.2,SNR=18						
KLR	**Kul'dur**	**41.84**	**355**	⇓*i*P	**P**	**09 19 49.0**	**+1.1**
KLR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HIA	**Hailar**	**44.06**	**344**	P	**P**	**09 20 06.6**	**+0.6**
HIA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HIA	**Hailar**	**44.06**	**344**	P	**P**	**09 20 06.6**	**+0.6**
HIA				IAmb	IAmb	09 20 07.5	
	comp=Z,6.8nm,0.6s						
GTA	**Gaotai**	**45.95**	**320**	*e*P	**P**	**09 20 21.0**	**-0.3**
GTA				pP	pP	09 20 26.0	-1.2
GTA				sP	sP	09 20 29.3	-0.2
ULN	**Ulaanbaatar**	**47.53**	**333**	⇓*i*P	**P**	**09 20 33.9**	**+0.4**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ULN	**Ulaanbaatar**	**47.53**	**333**	P	**P**	**09 20 33.9**	**+0.4**
ULN				IAmb	IAmb	09 20 37.5	
	comp=Z,4.7nm,0.6s						
SONM	**Songino Array**	**47.80**	**333**	P	**P**	**09 20 36.0**	**+0.3**
	comp=Z,7.6nm,0.8s,baz=145,slow=7.4,SNR=28						
SONM	**Songino Array**	**47.80**	**333**	P	**P**	**09 20 35.6**	**0.0**
SONM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SONM	**Songino Array**	**47.80**	**333**	P	**P**	**09 20 35.6**	**0.0**
MSVF	**Nonsavu**	**47.82**	**122**	⇓*i*P	**P**	**09 20 38.8**	**+2.7**
MSVF				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PETK	**Petropavlovsk-**	**48.58**	**17**	P	**P**	**09 20 41.6**	**+0.2**
	comp=Z,3.2nm,0.9s,baz=187,slow=11,SNR=2.6						
PETK	**Petropavlovsk-**	**48.58**	**17**	P	**P**	**09 20 41.0**	**-0.4**
PETK	**Petropavlovsk-**	**48.58**	**17**	P	**P**	**09 20 41.0**	**-0.4**
PET	**Petropavlovsk**	**48.79**	**17**	⇑*i*P	**P**	**09 20 42.7**	**-0.2**
PET				pmax	pmax		
	comp=Z,20nm,1.0s						
ODAN	**Odare**	**50.62**	**299**	*e*Pn	**P**	**09 20 57.3**	**-0.4**
	comp=Z,35nm,0.9s						
ZAK	**Zakamensk**	**51.06**	**333**	*e*P	**P**	**09 21 00.1**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.5s						
RAMN	**Ramite**	**51.33**	**299**	*e*Pn	**P**	**09 21 03.1**	**+0.1**
TLY	**Talaya**	**51.83**	**334**	*e*P	**P**	**09 21 07.0**	**+0.9**
TLY				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TLY				MLR	MLR		
	comp=Z,264nm,15.0s						
JIRN	**Jiri**	**51.84**	**299**	*e*Pn	**P**	**09 21 06.9**	**-0.1**
	comp=Z,21nm,0.7s						
GUN	**Gumba**	**52.17**	**300**	*e*Pn	**P**	**09 21 09.2**	**-0.2**
	comp=Z,48nm,0.9s						
DMN	**Daman**	**52.77**	**299**	*e*Pn	**P**	**09 21 13.4**	**-0.4**
MA2	**Magadan**	**53.06**	**9**	⇑*i*P	**P**	**09 21 16.7**	**+1.7**
MA2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BOD	**Bodaibo**	**53.25**	**345**	*e*P	**P**	**09 21 16.1**	**-0.3**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.9s						
DANN	**Dangsing**	**54.09**	**300**	*e*Pn	**P**	**09 21 22.9**	**-0.6**
	comp=Z,27nm,0.8s						
YAK	**Yakutsk**	**54.70**	**356**	*e*P	**P**	**09 21 26.6**	**-0.3**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
WMQ	**Urumqi**	**56.01**	**319**	*e*P	**P**	**09 21 38.8**	**+2.0**
WMQ				pP	pwP	09 21 49.8	+3.3
SEY	**Seymchan**	**56.51**	**8**	⇓*i*P	**P**	**09 21 41.3**	**+1.4**
DGZ	**Jazzator, Alta**	**58.83**	**325**	⇓*i*P	**P**	**09 21 56.9**	**+0.1**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MK31	**Makanchi Array**	**60.70**	**320**	P	**P**	**09 22 09.1**	**-0.4**
MK31				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MK31	**Makanchi Array**	**60.70**	**320**	P	**P**	**09 22 09.1**	**-0.4**
MK31				IAmb	IAmb	09 22 15.6	
	comp=Z,7.5nm,1.1s						
MKAR	**Makanchi Array**	**60.70**	**320**	P	**P**	**09 22 09.2**	**-0.2**
	comp=Z,8.4nm,0.7s,baz=106,slow=7.7,SNR=58						
MKAR				LR	LR	09 48 21.9	
	comp=Z,49nm,20.0s,baz=98,slow=36						
MKAR	**Makanchi Array**	**60.70**	**320**	P	**P**	**09 22 09.4**	**-0.1**
MAKZ	**Makanchi**	**60.90**	**320**	P	**P**	**09 22 10.2**	**-0.7**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MAKZ	**Makanchi**	**60.90**	**320**	P	**P**	**09 22 10.2**	**-0.7**
MAKZ				IAmb	IAmb	09 22 13.1	
	comp=Z,6.9nm,0.8s						
ZAA0	**Zalesovo Array**	**62.28**	**328**	P	**P**	**09 22 18.5**	**-1.4**
ZAA0				IAmb	IAmb	09 22 34.8	
	comp=Z,8.4nm,1.0s						
ZALV	**Zalesovo Beam**	**62.28**	**328**	P	**P**	**09 22 19.1**	**-0.8**
	comp=Z,3.2nm,0.6s,baz=112,slow=5.5,SNR=10						
ZALV				LR	LR	09 48 51.9	
	comp=Z,69nm,21.8s,baz=124,slow=36						
KSH	**Kashi**	**62.88**	**311**	P	**P**	**09 22 27.5**	**+3.0**
KSH				pP	sP	09 22 32.3	-0.7
KSH				PcP	**PcP**	**09 23 05.0**	**+2.4**
KSH				PcS	**PcS**	**09 27 07.5**	**+1.3**
KSH				S	**S**	**09 30 57.8**	**+4.5**
BILL	**Bilibino**	**63.62**	**12**	⇓*i*P	**P**	**09 22 29.0**	**+0.4**
BILL				pmax	pmax		
	comp=Z,13nm,1.9s						
BILL	**Bilibino**	**63.62**	**12**	P	**P**	**09 22 28.1**	**-0.5**
BILL				IAmb	IAmb	09 22 29.1	
	comp=Z,4.2nm,0.8s						
NIL	**Nilore**	**63.91**	**304**	P	**P**	**09 22 30.9**	**-0.4**
NIL				pmax	pmax		
	comp=Z,21nm,0.9s						
NIL	**Nilore**	**63.91**	**304**	P	**P**	**09 22 30.9**	**-0.4**
TIXI	**Tiksi**	**64.30**	**357**	⇑*i*P	**P**	**09 22 32.0**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURK	**Kurchatov**	**64.40**	**323**	*d i*P	**P**	**09 22 33.7**	**-0.4**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KURK	**Kurchatov**	**64.40**	**323**	P	**P**	**09 22 33.6**	**-0.4**
KURBB	**Kurchatov Arra**	**64.42**	**323**	P	**P**	**09 22 33.9**	**-0.3**
	comp=Z,4.1nm,0.7s,baz=116,slow=5.4,SNR=25						
AAK	**Ala-Archa**	**64.71**	**314**	P	**P**	**09 22 35.7**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=138,slow=4.1,SNR=4.3						
AAK	**Ala-Archa**	**64.71**	**314**	P	**P**	**09 22 34.7**	**-1.8**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
AAK	**Ala-Archa**	**64.71**	**314**	P	**P**	**09 22 34.7**	**-1.8**
GAR	**Garm**	**67.09**	**309**	P	**P**	**09 22 50.1**	**-1.8**
KBL	**Kabul**	**67.49**	**304**	P	**P**	**09 22 53.7**	**-0.9**
KBL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KBL	**Kabul**	**67.49**	**304**	P	**P**	**09 22 53.7**	**-0.9**
KBL				IAmb	IAmb	09 22 54.3	
	comp=Z,3.7nm,0.6s						
KK31	**Karatay Array**	**67.67**	**314**	P	**P**	**09 22 54.2**	**-1.1**
KK31				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KK31	**Karatay Array**	**67.67**	**314**	P	**P**	**09 22 54.1**	**-1.1**
KK31				IAmb	IAmb	09 23 00.6	
	comp=Z,4.8nm,1.1s						
KKAR	**Karatay Array**	**67.67**	**314**	P	**P**	**09 22 54.0**	**-1.3**
KKAR				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KKAR	**Karatay Array**	**67.67**	**314**	P	**P**	**09 22 53.9**	**-1.4**
KKAR	**Karatay Array**	**67.67**	**314**	P	**P**	**09 22 54.0**	**-1.3**
KKAR				IAmb	IAmb	09 23 00.6	
	comp=Z,4.8nm,1.1s						
CHGR	**Chuyangaron**	**67.93**	**309**	P	**P**	**09 22 55.8**	**-1.4**
NRIK	**Noril'sk**	**69.48**	**343**	⇓*i*P	**P**	**09 23 05.6**	**-0.5**
ANM	**Nome**	**69.85**	**23**	P	**P**	**09 23 07.5**	**-0.9**
ANM				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ANM	**Nome**	**69.85**	**23**	P	**P**	**09 23 07.5**	**-0.9**
ANM				IAmb	IAmb	09 23 09.9	
	comp=Z,3.6nm,0.9s						
BVAR	**Borovoye Array**	**69.96**	**324**	P	**P**	**09 23 09.0**	**-0.3**
	comp=Z,4.6nm,0.7s,baz=101,slow=8.0,SNR=20						
BRVK	**Borovoye**	**70.03**	**324**	⇓*i*P	**P**	**09 23 09.7**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRVK	**Borovoye**	**70.03**	**324**	P	**P**	**09 23 08.9**	**-0.9**
BRVK				IAmb	IAmb	09 23 15.1	
	comp=Z,8.1nm,0.8s						
RDOG	**Red Dog Mine**	**72.28**	**20**	P	**P**	**09 23 24.2**	**+1.1**
RDOG				IAmb	IAmb	09 23 25.1	
	comp=Z,6.3nm,0.7s						
IMAR	**Indian Mountai**	**74.91**	**23**	P	**P**	**09 23 38.9**	**+0.3**
ABKAR	**Akbulak array**	**75.80**	**319**	P	**P**	**09 23 42.7**	**-1.3**
MLY	**Manley**	**75.89**	**25**	P	**P**	**09 23 45.0**	**+0.6**
MLY				IAmb	IAmb	09 23 46.1	
	comp=Z,7.6nm,1.2s						
MCK	**McKinley**	**76.39**	**26**	P	**P**	**09 23 45.8**	**-1.4**
MCK				pmax	pmax		
	comp=Z,13nm,1.2s						
MCK	**McKinley**	**76.39**	**26**	P	**P**	**09 23 45.8**	**-1.4**
MCK				IAmb	IAmb	09 23 48.8	
	comp=Z,13nm,1.2s						
GEYT	**Alibeck**	**76.53**	**307**	LR	LR	09 59 08.1	
	comp=Z,55nm,21.7s,baz=120,slow=37						
SCM	**Sheep Creek Mo**	**76.79**	**28**	P	**P**	**09 23 50.1**	**+0.6**
SCM				pmax	pmax		
	comp=Z,14nm,1.0s						
SCM	**Sheep Creek Mo**	**76.79**	**28**	P	**P**	**09 23 50.1**	**+0.6**
AKTO	**Aktyubinsk**	**77.13**	**320**	P	**P**	**09 23 53.1**	**+1.5**
	comp=Z,1.3nm,0.6s,baz=81,slow=12,SNR=4.0						
TOLK	**Toolik Lake Re**	**77.14**	**21**	P	**P**	**09 23 52.1**	**+0.8**
TOLK				IAmb	IAmb	09 23 57.9	
	comp=Z,6.6nm,1.0s						
ARU	**Arti**	**77.31**	**326**	*d i*P	**P**	**09 23 52.2**	**-0.2**
ARU				S	**S**	**09 33 43.9**	**+2.7**
ARU				SS	**SS**	**09 38 33.9**	**-5.5**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ILAR	**Eielson Array**	**77.45**	**25**	P	**P**	**09 23 51.8**	**-1.3**
	comp=Z,1.3nm,0.8s,baz=256,slow=6.0,SNR=16						
ILAR	**Eielson Array**	**77.45**	**25**	P	**P**	**09 23 51.6**	**-1.5**
ILAR	**Eielson Array**	**77.45**	**25**	P	**P**	**09 23 51.6**	**-1.5**
BMAR	**Burnt Mountain**	**78.78**	**23**	P	**P**	**09 24 01.8**	**+1.3**
BCAR	**Beaver Creek A**	**79.49**	**27**	P	**P**	**09 24 05.5**	**+1.0**
DAWY	**Dawson**	**80.62**	**26**	P	**P**	**09 24 11.1**	**+0.6**
INK	**Inuvik**	**82.99**	**22**	P	**P**	**09 24 23.2**	**+0.4**
INK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
INK	**Inuvik**	**82.99**	**22**	P	**P**	**09 24 23.2**	**+0.4**
PRGR	**Permogore**	**84.04**	**331**	*e*P	**P**	**09 24 26.5**	**-1.9**
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
VNDA	**Vanda**	**86.02**	**175**	P	**P**	**09 24 38.1**	**+0.1**
	comp=Z,2.0nm,0.9s,baz=342,slow=6.7,SNR=4.5						
KLMR	**Klimovskoe**	**87.07**	**331**	*e*P	**P**	**09 24 39.6**	**-3.9**
KLMR				pmax	pmax		
	comp=Z,19nm,1.4s						
KLMR	**Klimovskoe**	**87.07**	**331**	*e*P	**P**	**09 24 39.7**	**-3.8**
KLMR				AMP		09 24 43.2	
	comp=Z,19nm,1.4s						
ZEI	**Tsey**	**87.10**	**313**	*e*P	**P**	**09 24 42.7**	**-1.6**
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ARCES	**ARCESS Array B**	**90.33**	**341**	P	**P**	**09 24 57.5**	**-1.2**
	comp=Z,7.7nm,0.9s,baz=77,slow=5.4,SNR=6.2						
ARCES	**ARCESS Array B**	**90.33**	**341**	P	**P**	**09 24 57.9**	**-0.9**
ARCES	**ARCESS Array B**	**90.33**	**341**	P	**P**	**09 24 57.9**	**-0.9**
YKA	**Yellowknife Ar**	**91.86**	**26**	P	**P**	**09 25 06.2**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=289,slow=4.2,SNR=14						
FINES	**FINESS Array B**	**93.17**	**333**	P	**P**	**09 25 10.2**	**-1.9**
	comp=Z,2.1nm,0.9s,baz=74,slow=6.4,SNR=3.2						
EIL	**Elat**	**96.52**	**301**	LR	LR	10 13 56.0	
	comp=Z,37nm,19.2s,baz=94,slow=38						
NVAR	**Mina Array Bea**	**96.91**	**50**	P	**P**	**09 25 28.7**	**-1.3**
	comp=Z,1.1nm,0.9s,baz=263,slow=4.8,SNR=5.4						
TORD	**Torodi Ar. Bea**	**130.93**	**294**	PKP	**PKPdf**	**09 31 09.4**	**-1.1**
	comp=Z,1.0nm,1.0s,baz=117,slow=5.5,SNR=3.6						
PEL	**Peldehue**	**143.93**	**139**	PKIKP	PKPbc	09 31 32.8	+0.9
PEL	**Peldehue**	**143.93**	**139**		PKPbc	09 31 32.8	+0.9
ATAH	**Atahualpa**	**145.10**	**92**	PKPbc	**PKPdf**	**09 31 36.9**	**-0.2**
	comp=Z,11nm,1.0s,baz=272,slow=7.7,SNR=7.0						
ROSC	**El Rosal**	**146.63**	**69**	PKPbc	**PKPab**	**09 31 42.0**	**-0.4**
	comp=Z,5.9nm,0.4s,baz=216,slow=18,SNR=2.1						
SMRT	**St. Maarten**	**147.94**	**38**	PKPbc	**PKPbc**	**09 31 44.3**	**0.0**
PB11	**IPOC Station P**	**151.59**	**118**		**PKiKP**	**09 31 53.7**	**-0.2**
GO01	**Chusmiza**	**152.03**	**118**	PKPbc	**PKPbc**	**09 31 54.5**	**-0.3**
LPAZ	**La Paz**	**154.11**	**112**	PKPbc	**PKiKP**	**09 32 00.5**	**+0.8**
	comp=Z,2.2nm,0.9s,baz=307,slow=6.3,SNR=5.7						
LPAZ				PKPab	**PKPab**	**09 32 13.9**	**+0.7**
	comp=Z,2.5nm,0.9s,baz=205,slow=7.3,SNR=5.5						
LPAZ	**La Paz**	**154.11**	**112**	PKIKP	**PKiKP**	**09 32 01.0**	**+1.3**
CPUP	**Villa Florida**	**156.92**	**146**	PKPab	**PKPab**	**09 32 25.4**	**+1.3**
	comp=Z,2.1nm,1.0s,baz=198,slow=8.4,SNR=5.3						

IDC 25 09:15:34.1±7.6**, 29°.54S**×**61°.89E, h0**km**, mb3.6**/2**, mb1 3.9**/2**, mb1mx3.4**/56**, mbtmp3.6**/2**, Error ellipse: s-maj=443.6km s-min=56.0km az=34.0, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**63.73**	**103**	P	P	09 26 08.1	+0.1
	0.5nm,0.6s,baz=246,slow=6.0,SNR=12						
WRA	**Warramunga Arr**	**65.57**	**100**	P	P	09 26 19.9	-0.1
	0.3nm,0.7s,baz=246,slow=6.2,SNR=2.6						
YKA	**Yellowknife Ar**	**146.96**	**357**	PKPbc	PKPbc	09 35 17.1	-0.8
	0.1nm,0.5s,baz=351,slow=3.1,SNR=4.4						

NEIC ***25*** *09:24:04.2±2.5, 19°.70N±0°.07×109°.46W±0°.06, h10km±1km,* *mb4.2/122, Md4.3/12(MEX), Error ellipse: s-maj=12.2km s-min=7.4km az=148.0*

*IDC **25** 09:24:04.3±1.0, 19°.86N×109°.39W, h0^{km}, mb4.0/13, mb1 4.2/19, mb1mx4.1/47, mbtmp4.1/19, ML3.6/6, MS3.7/14, Ms1 3.7/14, ms1mx3.4/43, Error ellipse: s-maj=30.9km s-min=16.3km az=59.0*

*MEX **25** 09:24:06.0±0.6, 19°.70N×109°.35W, h15^{km}, MD4.3*

*GCMT **25** 09:24:07.2±0.4, 20°.02N±0°.02×109°.28W±0°.02, h22^{km}±1^{km}, MW4.8/80, Moment Tensor Solution. s15,c16; s80,c114; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.34±.11; $M_{\theta\theta}$-1.48±.08; $M_{\phi\phi}$1.82±.09; $M_{r\theta}$-0.14±.13; $M_{\theta\phi}$-0.78±.07; $M_{\phi r}$0.51±.13; Best double couple: $M_0$1.88200×10^{16} NP1:ϕ_s33.00000°, δ80.00000°, λ8.00000°. NP2: ϕ_s302.00000°, δ83.00000°, λ170.00000°. Principal axes: T 2.1080, Plg12.0000°, Azm257.0000°; N -0.4540, Plg78.0000°, Azm84.0000°; P -1.6570, Plg1.0000°, Azm348.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 09:24:04.6±0.5**, 19°.67N**±0°.06×**109°.43W**±0°.04**, h10**^{km}**, n318,** σ1^s**26**/310**, mb4.2**/26**, MS3.5**/14**, Revilla Gigedo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H06E		1.66	238	*e*P	Pn	09 24 32.6	-1.3
H06E				*e*S	Sn	09 24 52.8	-2.5
H06E		1.66	238		Pn	09 24 32.6	-1.3
H06E					Sn	09 24 52.8	-2.5
H06E1	SOCORRO T-PHAS	1.67	238	Pn	Pn	09 24 33.5	-0.5
H06E1				Sn	Sn	09 24 51.6	-3.9
H06E1				T	T	09 26 24.7	
	SNR=3166						
H06N1	SOCORRO T-PHAS	1.68	242	Pn	Pn	09 24 32.7	-1.3
H06N1				Sn	Sn	09 24 53.5	-2.0
H06N1				T	T	09 26 24.9	
	SNR=9.8						
H06N	Isla Socorro	1.68	242	*e*P	Pn	09 24 32.1	-1.9
H06N	Isla Socorro	1.68	242		Pn	09 24 32.1	-1.9
H06S1	SOCORRO T	1.72	238	Pn	Pn	09 24 34.0	-0.6
H06S1				Sn	Sn	09 24 54.2	-2.4
	SNR=319						
H06S1				T	T	09 26 30.2	
	SNR=8.2						
H06S		1.72	238	*e*P	Pn	09 24 33.9	-0.8
H06S				*e*S	Sn	09 24 53.9	-2.8
H06S		1.72	238		Pn	09 24 33.9	-0.8
H06S					Sn	09 24 53.9	-2.8
CJM	Chamela	4.14	92	*i* P	Pn	09 25 04.8	-3.1
CJM				*i* S	Sn	09 25 51.5	-4.8
LPIG	La Paz	4.49	350	Pn	Pn	09 25 10.6	-2.2
	22nm,0.3s,baz=158,slow=4.8,SNR=35						
LPIG				LR	LR	09 26 35.2	
	comp=Z,1µm,20.3s,baz=110,slow=35						
LPIG	La Paz	4.49	350	*e*P	Pn	09 25 10.6	-2.1
ANIG	Ahuacatlan	4.81	72	*i* P	Pn	09 25 14.8	-2.5
ANIG				*i* S	Sn	09 26 09.8	-3.3
ANIG	Ahuacatlan	4.81	72		Pn	09 25 14.8	-2.5
ANIG					Sn	09 26 09.8	-3.3
ZAIG	Zacatecas	7.11	63		Pn	09 25 48.5	-0.5
HPIG		8.02	25		Pn	09 26 01.6	+0.1
SRIG	Santa Rosalia	8.04	342		Pn	09 26 01.3	-0.3
HSIG		9.42	352	Pn	Pn	09 26 20.7	+0.3
TLIG	Tlapa	10.51	100		Pn	09 26 38.1	+2.5
NZIG	Nacozari, Sono	10.66	359	*i* P	Pn	09 26 37.6	0.0
TX31	Lajitas Ar. Si	10.96	27		Pn	09 26 43.9	+2.2
TX32	Lajitas Array	10.96	27		Pn	09 26 42.0	+0.3
TXAR	Lajitas Array	10.96	27	Pn	Pn	09 26 41.7	0.0
	0.4nm,0.3s,baz=198,slow=12,SNR=30						
TXAR	Lajitas Array	10.96	27		Pn	09 26 40.6	-1.1
319A	Douglas	11.66	1		Pn	09 26 53.1	+1.8
MNTX	Cornudas Mount	12.52	16	Pn	Pn	09 27 04.4	+1.4
MNTX	Cornudas Mount	12.52	16	P	Pn	09 27 04.0	+1.0
	baz=198						
833A	Chaparral WMA,	12.58	45		Pn	09 27 02.1	-1.6
833A	Chaparral WMA,	12.58	45	P	Pn	09 27 03.6	-0.1
	baz=229						
214A	Organ Pipe Nat	12.61	347		Pn	09 27 03.5	-0.7
214A	Organ Pipe Nat	12.61	347	P	Pn	09 27 05.6	+1.4
	baz=165,SNR=8.9						
121A	Cookes Peak, D	12.90	6		Pn	09 27 09.5	+1.3
121A	Cookes Peak, D	12.90	6	P	Pn	09 27 10.5	+2.2
	baz=187,SNR=11						
JCT	Junction City	13.85	37		Pn	09 27 21.2	+0.1
JCT	Junction City	13.85	37	P	Pn	09 27 21.5	+0.4
	baz=221						
735A	Kenedy	13.99	47	Pn	Pn	09 27 23.5	+0.5
CMIG	Matias Romero	14.04	98	Pn	Pn	09 27 24.3	+0.6
	0.2nm,0.3s,baz=281,slow=11,SNR=10						
CMIG				LR	LR	09 32 29.9	
	comp=Z,439nm,18.6s,baz=274,slow=36						
GLA	Glamis	14.18	341		Pn	09 27 27.1	+1.5
GLA	Glamis	14.18	341	P	Pn	09 27 26.8	+1.1
	baz=159,SNR=7.8						
IKP	In-Ko-Pah, Jac	14.25	336	P	Pn	09 27 26.3	-0.4
	baz=154						
SWSC	Sam W. Stewart	14.40	338	P	Pn	09 27 29.2	+0.5
	baz=155,SNR=6.6						
BAR	Barrett	14.49	335		Pn	09 27 30.6	+0.7
Y22D	IRIS PASSCAL I	14.52	8	Pn	Pn	09 27 30.8	+0.3
Y22D	IRIS PASSCAL I	14.52	8	P	Pn	09 27 30.3	-0.2
	baz=190						
Y14A	Wickenburg	14.57	348		Pn	09 27 32.2	+1.2
MONP2	Monument Peak	14.58	336	P	Pn	09 27 31.5	+0.2
	baz=153						
Y12C	Blythe	14.74	343		Pn	09 27 33.4	+0.1
Y12C	Blythe	14.74	343	P	Pn	09 27 34.2	+0.8
	baz=161,SNR=7.1						
X16A	Lo Mia Camp, P	14.80	353		Pn	09 27 35.1	+0.8
X18A	Snowflake	14.81	358		Pn	09 27 34.6	+0.1
BC3	Big Chuckawall	14.93	340	P	Pn	09 27 36.5	+0.5
	baz=158,SNR=9.0						
PDMCI	Parker Dam,Lak	15.17	345	P	Pn	09 27 40.1	+1.1
	baz=163,SNR=8.9						
XPFO	Pion Flat	15.24	337		Pn	09 27 40.0	-0.1
XPFO				IAmb	IAmb	09 27 49.6	
	comp=Z,8.7nm,0.9s						
PFO	Pinyon Flats O	15.24	337	Pn	Pn	09 27 40.0	-0.1
	comp=Z,0.1nm,0.3s,baz=171,slow=9.8,SNR=5.4						
PFO	Pinyon Flats O	15.24	337		Pn	09 27 39.8	-0.2
PFO				IAmb	IAmb	09 27 49.6	
	comp=Z,9.3nm,0.9s						
IRM	Iron Mountain	15.30	342	P	Pn	09 27 41.4	+0.5
	baz=159,SNR=20						
435B	Jarrell	15.39	42	Pn	Pn	09 27 41.9	-0.1
435B				IAmb	IAmb	09 27 49.4	
	comp=Z,12nm,0.8s						
435B	Jarrell	15.39	42	P	Pn	09 27 42.1	+0.1
	baz=227						
W18A	Petrified Fore	15.40	359	P	Pn	09 27 42.1	-0.1
	baz=179						
BELC	Belle Mtn. Jos	15.43	339	P	Pn	09 27 43.6	+1.0
	baz=156,SNR=16						
MSTX	Muleshoe	15.43	21	Pn	Pn	09 27 42.1	-0.5
MSTX				IAmb	IAmb	09 27 48.2	
	comp=Z,10nm,0.9s						
MSTX	Muleshoe	15.43	21	P	Pn	09 27 43.4	+0.8
	baz=204						
ANMO	Albuquerque	15.45	9	Pn	Pn	09 27 42.5	-0.4
	comp=Z,0.1nm,0.3s,baz=176,slow=13,SNR=3.9						
ANMO	Albuquerque	15.45	9		Pn	09 27 42.2	-0.6
ANMO	Albuquerque	15.45	9	P	Pn	09 27 43.3	+0.5
	baz=191						
MURC	Murrieta	15.51	335	P	Pn	09 27 45.1	+1.5
	baz=152						
SCI2	San Clemente I	15.57	330	P	Pn	09 27 45.4	+1.1
	baz=146						
ABTX	Abilene, Hawle	15.60	32	P	Pn	09 27 45.3	+0.6
	baz=216						
W13A	Hualapai Mount	15.87	347		Pn	09 27 48.3	-0.1
WUAZ	Wupatki	15.88	354	Pn	Pn	09 27 47.1	-1.5
WUAZ				IAmb	IAmb	09 27 54.8	
	comp=Z,18nm,0.9s						
WUAZ	Wupatki	15.88	354	P	Pn	09 27 50.0	+1.4
	baz=173,SNR=15						
HKT	Hockley	16.02	48		Pn	09 27 48.2	-1.9
GMRC	Granite Mounta	16.04	341	P	Pn	09 27 51.4	+0.9
	baz=158,SNR=11						
BFSC	Mount Baldy Ra	16.25	335	P	Pn	09 27 52.7	-0.5
	baz=151						
HEC	Hector,Ludlow	16.30	339	P	Pn	09 27 54.8	+1.0
	baz=156,SNR=11						
WHTX	Lake Whitney,	16.32	39	Pn	Pn	09 27 51.6	-2.3
WHTX	Lake Whitney,	16.32	39	P	Pn	09 27 54.1	+0.1
	baz=224						
MWC	Mount Wilson	16.40	334	Pn	Pn	09 27 54.4	-0.8
RRX	Edison Barstow	16.57	338	P	Pn	09 27 57.5	+0.3
	baz=154						
AMTX	Amarillo	16.64	23	P	Pn	09 27 58.5	+0.4
	baz=206						
TUQ	Turquoise Moun	16.73	341	P	Pn	09 28 00.7	+1.4
	baz=158,SNR=20						
BLG	Laguna Peak, P	16.74	331	P	Pn	09 27 59.8	+0.4
	baz=147						
GSC	Goldstone, Bar	16.89	339	P	Pn	09 28 00.3	-0.9
GSC				IAmb	IAmb	09 28 08.6	
	comp=Z,25nm,1.2s						
GSC	Goldstone, Bar	16.89	339	P	Pn	09 28 02.4	+1.2
	baz=156,SNR=13						
U15A	North Rim	16.89	352	P	Pn	09 28 00.6	-0.9
U15A				IAmb	IAmb	09 28 08.2	
	comp=Z,29nm,1.5s						
EDW2	Edwards Air Fo	16.95	335	P	Pn	09 28 02.6	+0.6
	baz=151						
OSI	Osito Audit: C	17.02	333	P	Pn	09 28 03.0	+0.1
	baz=149						
SHOC	Shoshone, Teco	17.26	341	P	Pn	09 28 07.0	+1.1
	baz=158,SNR=7.5						
SBC	Santa Barbara	17.32	330	P	Pn	09 28 07.0	+0.5
	baz=146						
LRMC	Laurel Mtn Rad	17.36	337	P	Pn	09 28 08.0	+0.9
	baz=153,SNR=9.1						
Z35A	Perchaven, San	17.41	36	P	Pn	09 28 05.1	-2.7
MVCO	Mesa Verde	17.50	2		Pn	09 28 08.9	-0.2
MVCO				IAmb	IAmb	09 28 19.9	
	comp=Z,18nm,1.1s						
MVCO	Mesa Verde	17.50	2	P	Pn	09 28 09.7	+0.6
	baz=183,SNR=12						
ARVC	Arvin	17.50	334	P	Pn	09 28 08.7	-0.2
	baz=149						
SHPR	Sheep Range	17.52	344		Pn	09 28 09.8	+0.6
KNB	Kanab	17.54	351	P	Pn	09 28 11.0	+1.5
LCMT	Little Creek M	17.60	350	P	Pn	09 28 10.8	+0.5
WMOK	Wichita Mounta	17.73	30	P	Pn	09 28 10.7	-1.0
WMOK	Wichita Mounta	17.73	30	P	Pn	09 28 11.3	-0.5
	baz=215						
PKM	Mcpherson Peak	17.73	331	P	Pn	09 28 12.4	+0.5
	baz=146						
MPMC	Manual Prospec	17.80	338	P	Pn	09 28 14.0	+1.2
	baz=154,SNR=6.8						
ISA	Isabella, Lake	17.82	335	P	Pn	09 28 13.1	+0.2
ISA	Isabella, Lake	17.82	335	P	Pn	09 28 12.7	-0.2
	baz=151						
PKCU	Pink Cliffs	17.89	353	P	Pn	09 28 12.7	-1.3
NATX	Nacogdoches	17.92	45	P	Pn	09 28 12.4	-1.7
NATX				IAmb	IAmb	09 28 18.4	
	comp=Z,15nm,0.9s						
NATX	Nacogdoches	17.92	45	P	Pn	09 28 13.1	-1.0
	baz=231						
T25A	Trinidad	17.95	13	P	Pn	09 28 13.7	-1.0
T25A				IAmb	IAmb	09 28 17.9	
	comp=Z,23nm,1.4s						
T25A	Trinidad	17.95	13	P	Pn	09 28 15.4	+0.8
	baz=196,SNR=9.7						
FURC	Furnace Creek,	17.97	340	P	Pn	09 28 15.1	+0.6
	baz=157						
X34A	Smith Ranch, M	18.08	32	P	Pn	09 28 15.7	-0.4
X34A				IAmb	IAmb	09 28 20.5	
	comp=Z,24nm,1.4s						
CCUT	Cedar City	18.15	350	P	Pn	09 28 16.6	-0.4
SZCU	Shurtz Canyon	18.15	351	P	Pn	09 28 15.2	-1.9
S22A	4UR Ranch, Cre	18.16	7	P	Pn	09 28 16.9	-0.4
S22A	4UR Ranch, Cre	18.16	7	P	Pn	09 28 18.3	+1.1
	baz=188,SNR=12						
SMMC	Simmler	18.17	331	P	Pn	09 28 17.3	+0.2
	baz=146						
VES	Vestal, Richgr	18.22	334	P	Pn	09 28 18.4	+0.7
	baz=150						
TPNV	Topopah Spring	18.23	342	P	Pn	09 28 19.5	+1.5
	baz=159,SNR=22						
SDCO	Great Sand Dun	18.34	10	P	Pn	09 28 20.4	+1.0
	baz=192,SNR=16						
PV05	Paradox Valley	18.35	1	P	Pn	09 28 19.4	-0.1
PV05				IAmb	IAmb	09 28 26.8	
	comp=Z,20nm,1.1s						
CWC	Cottonwood Cre	18.36	337	P	Pn	09 28 20.2	+0.6
	baz=153						
PV01	Paradox Valley	18.42	2	P	P	09 28 18.9	-1.5
PV13	Radium Mtn., P	18.44	2	P	P	09 28 20.8	+0.2
MTPU	Mount Pierson	18.47	353	P	P	09 28 19.8	-1.3
PV02	Paradox Valley	18.49	2	P	P	09 28 19.6	-1.5
PV18	Skein Mesa, Pa	18.52	1	P	P	09 28 19.0	-2.4
PV18				IAmb	IAmb	09 28 26.1	
	comp=Z,23nm,1.3s						
PV03	Paradox Valley	18.53	1	P	P	09 28 20.6	-0.9
PV17	East Wray Mesa	18.55	1	P	P	09 28 21.4	-0.4
PV17				IAmb	IAmb	09 28 24.1	
	comp=Z,16nm,1.1s						
PV11	David Mesa, Pa	18.57	1	P	P	09 28 22.6	+0.5
PV11				IAmb	IAmb	09 28 28.8	
	comp=Z,24nm,1.2s						
PV19	Morning Glory	18.58	1	P	P	09 28 20.8	-1.3
PV19				IAmb	IAmb	09 28 24.4	
	comp=Z,16nm,1.1s						
PV16	Nyswonger Mesa	18.59	1	P	P	09 28 21.3	-0.9
PV12	Saucer Basin,	18.59	2	P	P	09 28 22.6	+0.3
GRAC	Grapevine Rang	18.61	340	P	P	09 28 22.6	+0.3
	baz=156						
PV20	West Nyswonger	18.62	1	P	P	09 28 19.0	-3.5
PV20				IAmb	IAmb	09 28 28.2	
	comp=Z,15nm,1.1s						
PAGB	Antelope Grade	18.63	331	P	P	09 28 19.4	-3.1
PAGB				IAmb	IAmb	09 28 28.9	
	comp=Z,17nm,1.3s						
PV14	Lion Creek, Pa	18.65	1	P	P	09 28 20.8	-2.0
PV14				IAmb	IAmb	09 28 25.1	
	comp=Z,19nm,1.2s						
PV04	Paradox Valley	18.67	1	P	P	09 28 20.4	-2.7
PV04				IAmb	IAmb	09 28 28.8	
	comp=Z,20nm,1.4s						
APG	El Apazote	18.68	101	P	P	09 28 25.4	+1.9
	comp=Z,0.1nm,0.3s,baz=254,slow=4.2,SNR=5.1						
PV07	Paradox Valley	18.72	2	P	P	09 28 21.4	-2.2
PV07				IAmb	IAmb	09 28 27.7	
	comp=Z,18nm,1.3s						
PV23	Carpenter Ridg	18.73	1	P	P	09 28 21.0	-2.8
PV23				IAmb	IAmb	09 28 26.1	
	comp=Z,17nm,1.1s						
VOG	Valley Oaks Go	18.76	334	P	P	09 28 24.9	+1.1
	baz=150						
PV09	Paradox Valley	18.77	1	P	P	09 28 21.8	-2.5
PV22	Blue Mesa, Par	18.81	2	P	P	09 28 21.6	-3.1
PV22				IAmb	IAmb	09 28 28.6	
	comp=Z,20nm,1.3s						
MSU	Marysvale	18.93	353	P	P	09 28 26.0	0.0
TIN	Tinemaha, Big	18.96	338	P	P	09 28 27.3	+1.1
	baz=154						
U32A	Winter Ranch,	19.00	27	P	P	09 28 26.3	-0.3
U32A				IAmb	IAmb	09 28 28.1	
	comp=Z,23nm,1.3s						
PSUT	Pine Spring	19.19	349	P	P	09 28 28.0	-0.8
Q16A	Castle Valley	19.25	356	P	P	09 28 27.1	-2.3
R11A	Troy Canyon, C	19.37	345	P	P	09 28 31.3	+0.6
R11A	Troy Canyon, C	19.37	345	P	P	09 28 31.9	+1.1
	baz=162						
SRU	San Rafael Swe	19.40	357	P	P	09 28 30.9	-0.2
SMCO	Snowmass	19.56	6	P	P	09 28 33.4	+0.3
SMCO				IAmb	IAmb	09 28 39.1	
	comp=Z,21nm,1.1s						
Q24A	Divide	19.59	10	P	P	09 28 33.9	+0.7
Q24A				IAmb	IAmb	09 28 37.6	
	comp=Z,22nm,1.4s						
Q24A	Divide	19.59	10	P	P	09 28 32.6	-0.6
	baz=192						
TMUT	Trail Mountain	19.62	356	P	P	09 28 34.3	+0.6
MLAC	Mammoth, Mammo	19.69	337	P	P	09 28 33.7	-0.6
	baz=153						
OMMB	Old Mammoth Mi	19.74	337	P	P	09 28 32.3	-2.6
P17A	Butcher Ranch,	19.77	357	P	P	09 28 36.9	+1.7
MDPB	Devils Postpil	19.78	337	P	P	09 28 34.8	-0.5
MDPB				IAmb	IAmb	09 28 39.8	
	comp=Z,14nm,1.1s						
TEIG	Tepich	19.89	85	LR	LR	09 36 23.5	
	comp=Z,199nm,19.4s,baz=260,slow=37						
Z41A	Richland Creek	20.08	44	P	P	09 28 38.5	+0.2
	baz=232						
TUL1	Leonard	20.15	34	P	P	09 28 38.6	-0.5
TUL1				IAmb	IAmb	09 28 49.8	
	comp=Z,22nm,1.4s						
TUL1	Leonard	20.15	34	P	P	09 28 39.6	+0.6
	baz=220						
NV11	Mina Array Sit	20.18	340	P	P	09 28 37.5	-2.0
NVAR	Mina Array Bea	20.22	339	P	P	09 28 41.0	+0.9
	comp=Z,8.4nm,1.0s,baz=160,slow=11,SNR=29						
NVAR				LR	LR	09 35 36.5	
	comp=Z,265nm,20.9s,baz=178,slow=35						
NVAR	Mina Array Bea	20.22	339	P	P	09 28 40.1	0.0
ISCO	Idaho Springs	20.33	8	P	P	09 28 40.1	-1.3
ISCO	Idaho Springs	20.33	8	P	P	09 28 41.9	+0.5
	baz=190						
MPU	Maple Canyon	20.37	355	P	P	09 28 39.7	-2.0
MIAR	Mount Ida	20.42	40	P	P	09 28 41.3	-0.8
	baz=227						
O20A	White River Ci	20.43	3	P	P	09 28 40.5	-1.8
O20A				IAmb	IAmb	09 28 53.3	
	comp=Z,17nm,1.2s						
O20A	White River Ci	20.43	3	P	P	09 28 42.9	+0.7
	baz=183,SNR=6.0						
RYN	Ryan	20.48	339	P	P	09 28 41.2	-1.6
RYN				IAmb	IAmb	09 28 48.3	
	comp=Z,26nm,1.5s						
DUG	Dugway, Tooele	20.67	353	P	P	09 28 45.5	+0.7
DUG				IAmb	IAmb	09 28 47.0	
	comp=Z,17nm,1.1s						
DUG	Dugway, Tooele	20.67	353	P	P	09 28 45.7	+0.9
	baz=171,SNR=17						
WAKR	Walker	20.68	337	P	P	09 28 44.6	-0.4
WAKR				IAmb	IAmb	09 28 49.9	
	comp=Z,13nm,1.0s						
143A	Socs Landing,	20.70	48	P	P	09 28 44.3	-0.8
KVN	Kaiserville	20.72	341	P	P	09 28 44.8	-0.7
KVN				IAmb	IAmb	09 28 54.3	
	comp=Z,12nm,1.1s						
W39A	Magazine	20.74	39	P	P	09 28 44.9	-0.7
W39A				IAmb	IAmb	09 28 48.3	
	comp=Z,19nm,1.1s						
W39A	Magazine	20.74	39	P	P	09 28 45.3	-0.2
	baz=226,SNR=5.9						
RDMU	Red Mountain	20.84	360	P	P	09 28 45.6	-1.2
X40A	Basin Creek Fa	20.84	42	P	P	09 28 45.8	-0.8
	baz=229						
CBKS	Cedar Bluff	20.85	22	P	P	09 28 47.4	+0.7
	baz=206						
R32A	Long Quarter,	20.88	24	P	P	09 28 46.2	-0.7
R32A				IAmb	IAmb	09 28 55.4	
	comp=Z,16nm,0.9s						
JLU	Jordanelle	20.94	356	P	P	09 28 47.2	-0.7
CTU	Camp Tracy	21.05	355	P	P	09 28 47.9	-1.1
VBMS	Vicksburg	21.06	50	P	P	09 28 48.9	-0.1
	baz=238						
U38A	Gravette	21.30	35	P	P	09 28 50.1	-1.4
U38A				IAmb	IAmb	09 28 58.7	
	comp=Z,13nm,1.1s						
UALR	University of	21.34	42	P	P	09 28 51.4	-0.5
UALR				IAmb	IAmb	09 28 57.6	
	comp=Z,12nm,0.9s						
N23A	Red Feather La	21.37	7	P	P	09 28 52.1	-0.4
	baz=189						
BGU	Big Grassy Mou	21.41	353	P	P	09 28 50.8	-2.1
HHAR	Hobbs	21.43	36	P	P	09 28 50.5	-2.4
RUBR	Rubicon Trail	21.43	337	P	P	09 28 51.2	-1.9
TCUT	Toone Canyon	21.45	356	P	P	09 28 51.4	-2.0
VCNR	Virginia City	21.46	338	P	P	09 28 53.0	-0.4
ELK	Elko	21.59	348	P	P	09 28 54.6	-0.3
	comp=Z,2.6nm,0.9s,baz=175,slow=9.7,SNR=8.7						
ELK				LR	LR	09 37 20.9	
	comp=Z,134nm,19.1s,baz=164,slow=37						
ELK	Elko	21.59	348	P	P	09 28 55.2	+0.3
W41B	Gary Mavity, V	21.66	41	P	P	09 28 54.0	-1.3
W41B	Gary Mavity, V	21.66	41	P	P	09 28 55.7	+0.4
	baz=229						
AFDM	Forest Hills D	21.66	335	P	P	09 28 55.1	-0.3
SPUT	South Promonto	21.73	354	P	P	09 28 54.3	-1.9
PAHR	Pah Rah Range	21.74	339	P	P	09 28 57.1	+0.8
PHWY	Pilot Hill	21.83	8	P	P	09 28 56.7	-0.8
PHWY				IAmb	IAmb	09 28 58.6	
	comp=Z,10.0nm,1.1s						
TGUH	Tegucigalpa,Un	21.91	101	P	P	09 29 00.0	+1.6
HWUT	Hardware Ranch	21.95	356	P	P	09 28 58.5	-0.2
U40A	Yellville	22.09	38	P	P	09 28 59.3	-0.8
	baz=226						
BEKR	Beckworth	22.22	337	P	P	09 29 00.5	-1.1
BEKR				IAmb	IAmb	09 29 06.0	
	comp=Z,12nm,1.0s						
ORV	Oroville	22.39	335	P	P	09 29 01.3	-1.9
ORV				IAmb	IAmb	09 29 11.3	
	comp=Z,14nm,1.4s						
PDAR	Pinedale Array	23.03	360	P	P	09 29 09.2	-1.1
	comp=Z,0.7nm,0.7s,baz=173,slow=11,SNR=7.1						
PDAR				LR	LR	09 37 42.3	
	comp=Z,157nm,18.7s,baz=195,slow=36						
K22A	Casper	23.05	5	P	P	09 29 09.8	-0.5
K22A	Casper	23.05	5	P	P	09 29 10.3	0.0
	baz=187,SNR=12						
AHID	Auburn Hatcher	23.07	357	P	P	09 29 09.3	-1.3
AHID				IAmb	IAmb	09 29 12.0	
	comp=Z,6.7nm,1.1s						
Z47A	Carrollton	23.34	50	P	P	09 29 12.5	-0.6
O02D	Mt. Diablo Mer	23.44	334	P	P	09 29 14.1	-0.1
	baz=147						
T42A	Van Buren	23.59	39	P	P	09 29 14.7	-0.9
W45A	Hickory Valley	23.61	45	P	P	09 29 14.9	-1.0
REDW	Red Top Meadow	23.66	357	P	P	09 29 16.1	-0.4
REDW				IAmb	IAmb	09 29 20.8	
	comp=Z,10nm,1.2s						
BGNE	Belgrade	23.71	21	P	P	09 29 16.3	-0.5
	baz=207						
SNOW	Snow King Moun	23.75	358	P	P	09 29 16.9	-0.5
SNOW				IAmb	IAmb	09 29 26.0	
	comp=Z,8.0nm,1.0s						
TPAW	Teton Pass	23.79	357	P	P	09 29 17.5	-0.3
TPAW				IAmb	IAmb	09 29 18.4	
	comp=Z,8.1nm,1.2s						
FXWY	Fox Creek	23.94	357	P	P	09 29 18.5	-0.7
WVOR	Wild Horse Val	24.00	343	P	P	09 29 19.0	-0.7
WVOR				IAmb	IAmb	09 29 23.8	
	comp=Z,7.9nm,1.1s						
MOD	Modoc Plateau	24.01	340	P	P	09 29 20.1	+0.2
LRAL	Lakeview Retre	24.05	52	P	P	09 29 19.7	-0.4
	baz=242						
IMW	Indian Meadow	24.20	357	P	P	09 29 21.1	-0.5
CCM	Cathedral Cave	24.20	37	P	P	09 29 20.8	-0.6
	baz=226						
PLAL	Pickwick Lake	24.27	47	P	P	09 29 20.7	-1.4
MFID	Camas Ranch	24.28	349	P	P	09 29 21.5	-0.8
H17A	Grant Village	24.68	358	P	P	09 29 26.5	+0.5
	baz=177						
YBH	Yreka Blue Hor	24.73	336	LR	LR	09 38 28.5	
	comp=Z,105nm,19.4s,baz=183,slow=35						
RSSD	Black Hills	24.80	9	P	P	09 29 26.2	-0.9
RSSD				IAmb	IAmb	09 29 36.1	
	comp=Z,3.2nm,0.8s						
RSSD	Black Hills	24.80	9	P	P	09 29 27.2	+0.2
	baz=192						
J08A	Circle Bar Ran	24.82	344	P	P	09 29 26.9	-0.3
J08A				IAmb	IAmb	09 29 31.8	
	comp=Z,5.1nm,0.9s						
Z50A	Ashland	24.95	52	P	P	09 29 28.2	-0.1
	baz=243						
L04D	Klamath Falls	24.99	337	P	P	09 29 28.8	+0.1
	baz=150						
WVT	Waverly	25.08	45	P	P	09 29 27.1	-2.3
WVT				IAmb	IAmb	09 29 42.7	
	comp=Z,11nm,1.4s						
WVT	Waverly	25.08	45	P	P	09 29 28.9	-0.5
	baz=235						
K04D	Chiloquin, OR	25.15	338	P	P	09 29 30.6	+0.5
	baz=152						
YHL	Hebgen Lake	25.16	357	P	P	09 29 27.9	-2.5
YNE	Yellowstone No	25.28	359	P	P	09 29 30.4	-1.0
RLMT	Red Lodge	25.39	0	P	P	09 29 32.4	0.0
	baz=180						
L02E	Cave Junction	25.44	335	P	P	09 29 33.2	+0.6
	baz=148						
J05D	Fort Rock, OR	25.56	340	P	P	09 29 34.6	+0.7
	baz=154						
FPAL	Fort Paine	25.78	50	P	P	09 29 35.0	-0.8
SWET	Sewanee	25.88	48	P	P	09 29 34.9	-1.9
T47A	Sharon Grove	26.05	44	P	P	09 29 37.4	-0.9
GCMT	Greycliff	26.06	360	P	P	09 29 37.2	-1.2
W50A	Signal Mountai	26.31	49	P	P	09 29 40.3	-0.4
T49A	Edmonton	27.15	45	P	P	09 29 47.2	-1.0

	baz=237						
T50A	Nancy	27.58	46	P	P	09 29 51.0	-1.0
	baz=238						
TKL	Tuckaleechee C	27.63	49	LR	LR	09 41 36.6	
	comp=Z,112nm,18.5s,baz=234,slow=38						
S49A	Springfield	27.69	44	P	P	09 29 51.7	-1.3
	baz=236						
G03D	McMinnville, O	27.94	339	P	P	09 29 55.4	+0.3
	baz=151						
S51A	Beattyville	28.74	46	P	P	09 30 01.0	-1.5
	baz=239						
V54A	Nebo	29.01	51	P	P	09 30 05.3	+0.5
	baz=244						
NEW	Newport	29.20	349	LR	LR	09 42 10.4	
	comp=Z,82nm,18.0s,baz=171,slow=37						
Q51A	Peebles	29.65	44	P	P	09 30 09.2	-1.2
	baz=237						
B05A	Bryant	30.32	343	P	P	09 30 17.1	+0.9
	baz=156						
U56A	King	30.40	51	P	P	09 30 17.1	0.0
	baz=245						
L48A	N Adams	30.69	38	P	P	09 30 19.0	-0.5
	baz=231						
W58A	Raeford	30.73	54	P	P	09 30 18.9	-1.0
	baz=248						
N50A	Nevada	30.75	41	P	P	09 30 20.2	0.0
	baz=235						
P52A	Corning	30.77	44	P	P	09 30 20.2	-0.1
	baz=238						
Y60A	Bolivia	31.15	56	P	P	09 30 24.0	+0.3
	baz=251						
P53A	Whipple	31.18	45	P	P	09 30 24.1	+0.1
	baz=239						
N51A	Ashland	31.32	42	P	P	09 30 25.6	+0.4
	baz=236						
R55A	Marlinton	31.45	48	P	P	09 30 26.3	-0.2
R55A	Marlinton	31.45	48	P	P	09 30 25.9	-0.5
	baz=242						
ULM	Lac du Bonnet	32.37	16	P	P	09 30 33.8	-0.4
	comp=Z,3.0nm,0.9s,baz=218,slow=7.1,SNR=5.2						
ULM				LR	LR	09 42 02.4	
	comp=Z,86nm,18.3s,baz=350,slow=34						
ULM	Lac du Bonnet	32.37	16	P	P	09 30 33.6	-0.6
F45A	CMU Biological	32.60	32	P	P	09 30 36.6	+0.3
	baz=225						
M53A	WI Miller and	32.68	42	P	P	09 30 36.6	-0.4
	baz=237						
O55A	Ligonier	32.93	45	P	P	09 30 38.7	-0.6
	baz=240						
L53A	Girard	33.22	42	P	P	09 30 41.6	-0.2
	baz=237						
S59A	Mechanicsville	33.23	50	P	P	09 30 41.6	-0.4
	baz=246						
N56A	West Decatur	33.95	45	P	P	09 30 48.7	+0.4
	baz=241						
P58A	Pank, Wackersv	33.96	47	P	P	09 30 47.9	-0.3
	baz=244						
M56A	Emporium	34.30	44	P	P	09 30 51.3	0.0
	baz=240						
S61A	Accomac	34.38	51	P	P	09 30 52.6	+0.6
	baz=248						
O58A	Lewisberry	34.50	47	P	P	09 30 52.6	-0.4
	baz=243						
FFC	Flin Flon	35.46	7	P	P	09 30 59.8	-1.2
K56A	Middlesex	35.46	42	P	P	09 31 00.5	-0.8
	baz=240						
SADO	Sadowa	35.47	38	LR	LR	09 44 47.2	
	comp=Z,162nm,19.2s,baz=220,slow=35						
BBB	Bella Bella	35.59	340	LR	LR	09 44 49.4	
	comp=Z,93nm,21.8s,baz=163,slow=35						
G53A	Haliburton	35.97	38	P	P	09 31 05.5	-0.1
	baz=235						
K57A	Scipio Center	35.99	43	P	P	09 31 05.1	-0.7
	baz=240						
M59A	Waymart	36.15	45	P	P	09 31 06.9	-0.3
	baz=243						
L59A	Walton	36.70	45	P	P	09 31 11.7	-0.2
	baz=243						
I58A	Old Forge	37.44	42	P	P	09 31 18.4	+0.2
	baz=241						
SDV	Santo Domingo	39.00	100	P	P	09 31 30.3	-1.6
TAOE	Nuku Hiva Isla	41.46	230	*e*LR	LR	09 43 16.4	
	comp=Z,197nm,26.3s						
TAOE	Nuku Hiva Isla	41.46	230	*e*T	T	10 15 47.3	
	comp=Z,16nm,0.2s						
DLBC	Dease Lake	41.54	344	PcP	PcP	09 33 50.8	+1.3
	comp=Z,3.2nm,0.8s,baz=240,slow=7.9,SNR=3.6						
PKME	Peaks-Kenny Pk	41.78	43	P	P	09 31 54.9	+0.6
	baz=246						
YKA	Yellowknife Ar	42.94	356	P	P	09 32 02.4	-1.1
	comp=Z,1.6nm,0.8s,baz=170,slow=8.4,SNR=30						
YKA				PcP	PcP	09 33 54.7	+0.8
	comp=Z,0.1nm,0.4s,baz=163,slow=3.2,SNR=1.4						
YKA				LR	LR	09 50 12.8	
	comp=Z,130nm,18.2s,baz=0.0,slow=37						
SCHQ	Schefferville	47.61	32	P	P	09 32 39.2	-1.4
	comp=Z,3.5nm,0.9s,baz=286,slow=15,SNR=3.2						
SCHQ	Schefferville	47.61	32	IAmb	IAmb	09 32 41.4	
	comp=Z,13nm,1.4s						
INK	Inuvik	50.92	349	P	P	09 33 05.5	-0.2
	comp=Z,4.3nm,0.9s,baz=130,slow=8.4,SNR=16						
INK	Inuvik	50.92	349	P	P	09 33 05.7	-0.1
ILAR	Eielson Array	51.48	341	P	P	09 33 10.2	+0.2
	comp=Z,1.2nm,1.0s,baz=154,slow=5.9,SNR=9.0						
ILAR	Eielson Array	51.48	341	P	P	09 33 09.7	-0.3
POKR	Poker Plat Res	51.88	341	P	P	09 33 13.1	0.0
	baz=132						
BMAR	Burnt Mountain	52.70	344	P	P	09 33 19.1	0.0
LPAZ	La Paz	54.08	128	P	P	09 33 32.6	+2.0
	comp=Z,1.0nm,0.8s,baz=332,slow=3.9,SNR=4.0						
PPT2	Papeete2	54.08	229	*e*LR	LR	09 49 08.0	
	comp=Z,209nm,24.8s,baz=29						
TOLK	Toolik Lake Re	54.89	343	P	P	09 33 35.1	-0.1
TOLK				IAmb	IAmb	09 33 43.9	
	comp=Z,2.7nm,0.8s						
TOLK	Toolik Lake Re	54.89	343	P	P	09 33 35.5	+0.3
	baz=132						
RAR	Rarotonga	63.84	233	LR	LR	09 54 24.5	
	comp=Z,83nm,21.3s,baz=12,slow=28						
BDFB	Brasilia	69.83	116	P	P	09 35 17.9	+1.8
	comp=Z,2.3nm,0.7s,baz=229,slow=18,SNR=3.6						
BDFB	Brasilia	69.83	116	IAmb	IAmb	09 35 26.1	
	comp=Z,3.0nm,0.8s						
SEY	Seymchan	76.35	332	P	P	09 35 54.7	+1.0
	comp=Z,0.2nm,0.3s,baz=60,slow=20,SNR=1.6						
TIXI	Tiksi	80.77	344	P	P	09 36 17.8	-0.2
	comp=Z,2.0nm,0.8s,baz=13,slow=6.3,SNR=4.3						
ARCES	ARCESS Array B	85.47	14	P	P	09 36 42.4	0.0
	comp=Z,5.2nm,1.1s,baz=320,slow=4.1,SNR=1.3						
DZM	Mont Dzumac	92.04	247	*e*LR	LR	10 06 47.1	
	comp=Z,191nm,27.1s						
WMQ	Urumqi	114.90	346	*e*P	PKiKP	09 42 45.3	-0.8
LZH	Lanzhou	116.23	330	*e*PKP	PKiKP	09 42 41.8	-7.2
LZH				pPKP	pPKPdf	09 42 54.8	+3.5
LZH				sPKP		09 42 59.3	
WRA	Warramunga Arr	120.35	258	PKP	PKPdf	09 42 57.3	+0.3
	comp=Z,0.1nm,0.5s,baz=74,slow=2.7,SNR=1.3						
KSH	Kashi	120.91	355	PKP	PKPdf	09 42 58.5	+0.7
KSH				PP	PP	09 44 31.5	+6.4
KSH				PKS	PKSdf	09 46 32.0	-2.7
KSH				SKKS		09 51 22.3	
ASAR	Alice Springs	121.42	254	PKP	PKPdf	09 43 00.9	+1.8
	comp=Z,0.3nm,0.5s,baz=77,slow=1.7,SNR=2.0						

IDC 25 09:32:22.2±1.7, 16°.26N×146°.19E, h0^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.3/47, mbtmp3.5/4, Error ellipse: s-maj=56.5km s-min=33.4km az=93.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	37.82	198	P	P	09 39 40.3	-0.3
	0.1nm,0.3s,baz=13,slow=8.3,SNR=1.9						
MKAR	Makanchi Array	60.49	315	P	P	09 42 34.6	+0.6
	0.5nm,0.4s,baz=91,slow=8.7,SNR=11						
KURBB	Kurchatov Arra	63.44	319	P	P	09 42 53.4	-0.4
	0.5nm,0.4s,baz=96,slow=7.2,SNR=6.2						
ILAR	Eielson Array	65.62	26	P	P	09 43 07.5	-0.3
	0.2nm,0.5s,baz=247,slow=6.2,SNR=2.0						

MAN 25 09:38:59.2, 10°.00N×124°.23E, h9^{km}, mb4.0, ML2.8, MS2.5, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LLP	Lapu-Lapu	0.41	320	⇓*i*P	Pg	09 39 07.7	+0.5
LLP				*i* S	Sb	09 39 14.0	-1.0
TBP	Tagbilaran	0.48	230	*e*P	Pg	09 39 08.6	+0.1
TBP				*i* S	Sg	09 39 14.4	-0.3
MSLP	Maasin	0.63	78	*e*P	Pb	09 39 13.2	+0.8
MSLP				*e*S	Sn	09 39 24.0	-0.5
SNPH	Sibulan	1.18	237	*i* P	Pb	09 39 21.6	-0.1
SNPH				*i* S	Sn	09 39 38.0	-0.1

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*IDC **25** 09:54:34.2±1.1, 2°.02S×79°.11W, h0^{km}, mb3.4/6, mb1 3.8/7, mb1mx3.6/38, mbtmp3.5/7, ML3.6/1, Error ellipse: s-maj=67.7km s-min=20.1km az=66.0*

*IGQ **25** 09:54:34.1±0.3, 2°S±2°×7°9W±°, h9^{km}, M4.0*

ISC 25 09:54:34.7±0.7, 2°.29S±0°.03×79°.26W±0°.03, h14^{km}, n42, σ0^{s}.99/43, mb3.5/6, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COHC	Cochancay	0.17	180	P	Pb	09 54 39.5	-0.2
COHC	Cochancay	0.17	180	S	Sb	09 54 42.9	0.0
AMIL	Milagro (Trans	0.37	295	S	Sg	09 54 47.2	-0.1
AMIL	Milagro (Trans	0.37	295	P	Pg	09 54 41.1	-1.2
AGUAY	Guayaquil	0.73	289	P	Pg	09 54 47.9	-1.1
BMAS	Trigal station	1.10	45	P	Pb	09 54 54.8	-1.0
BIL2	Estacion Bilba	1.12	42	P	Pb	09 54 55.0	-1.0
MORR	Playas El Morr	1.14	252	P	Pb	09 54 55.8	-0.3
MORR				S	Sn	09 55 13.0	+1.5
BBIL	Ulba Tungurahu	1.14	43	P	Pb	09 54 55.5	-0.9
BPAT	Tungurahua Vol	1.14	46	P	Pb	09 54 55.4	-1.1
BPAT	Tungurahua Vol	1.14	46	S	Sb	09 55 10.3	-0.9
RETU	Refugio	1.16	44	P	Pb	09 54 56.1	-0.8
BULB	Ulba Tungurahu	1.20	45	P	Pn	09 54 56.0	-1.4
RUN5	Runtun	1.21	44	P	Pn	09 54 56.2	-1.2
BRUN	Tungurahua Vol	1.21	44	P	Pn	09 54 56.2	-1.3
PISA	Pisayambo	1.50	35	P	Pb	09 55 02.7	0.0
APUY	Puyo	1.51	57	P	Pg	09 55 03.4	-0.2
PPLP	Puerto Lpez	1.69	296	P	Pn	09 55 01.9	-1.9
SALI	Salinas	1.74	273	P	Pn	09 55 04.0	-0.5
BMOR	Cotopaxi Volca	1.74	27	P	Pb	09 55 06.6	-0.2
BNAS	Cotopaxi Volca	1.79	26	P	Pb	09 55 07.4	-0.2
BREF	Cotopaxi Volca	1.81	27	P	Pg	09 55 09.0	-0.5
BTAM	Cotopaxi Volca	1.82	28	P	Pb	09 55 08.1	-0.1
VC1	Cotopaxi 1	1.85	27	P	Pb	09 55 08.6	0.0
ATEN	Tena	1.93	49	P	Pn	09 55 07.2	+0.1
GONZ	Gonzanam	1.94	184	S	Sg	09 55 36.2	-0.9
GONZ	Gonzanam	1.94	184	P	Pg	09 55 11.3	-0.6
ANTM	Antisana-La Mi	2.03	31	P	Pb	09 55 11.6	-0.1
ANTG	Antisana-Guama	2.04	29	P	Pb	09 55 11.6	-0.3
ANTS	Antisana-Sarah	2.09	31	P	Pb	09 55 12.0	-0.7
TERV	Terraza Guagua	2.20	17	P	Pb	09 55 14.6	0.0
PINO	Pino	2.22	17	P	Pb	09 55 14.5	-0.4
MAG1	Magdalena	2.27	347	P	Pb	09 55 14.7	-0.7
YANA	Yana	2.27	18	P	Pb	09 55 15.4	-0.3
CASC	Dorado de Casc	3.08	38	P	Pb	09 55 28.6	-0.8
ATAH	Atahualpa	4.89	170	Pn	Pn	09 55 53.5	+5.3
	2.2nm,0.3s,baz=4.1,slow=12,SNR=17						
ATAH				Pg	Pg	09 56 06.3	-2.1
	3.0nm,0.3s,baz=12,slow=7.5,SNR=6.6						
ATAH				Lg	Lg	09 57 11.8	
	1.8nm,0.3s,baz=356,slow=15,SNR=3.7						
SIV	San Ignacio	22.49	128	P	P	09 59 36.7	+2.6
	0.7nm,0.7s,baz=318,slow=15,SNR=4.0						
PDAR	Pinedale Array	52.53	332	P	P	10 03 48.0	+0.2
	0.3nm,0.6s,baz=132,slow=6.2,SNR=2.7						
NVAR	Mina Array Bea	54.21	322	P	P	10 04 02.2	+1.9
	0.1nm,0.3s,baz=133,slow=8.8,SNR=1.9						
YKA	Yellowknife Ar	69.93	343	P	P	10 05 45.0	-0.1
	0.3nm,0.7s,baz=141,slow=6.1,SNR=6.4						
INK	Inuvik	79.63	342	P	P	10 06 41.9	+0.7
	0.8nm,0.7s,baz=116,slow=8.3,SNR=3.9						
ILAR	Eielson Array	82.70	336	P	P	10 06 58.4	+0.7
	0.4nm,0.8s,baz=100,slow=4.7,SNR=4.5						

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*IGQ **25** 09:56:27.4±0.2, 2°S±3°×7°9W±°, h8^{km}, M5.6*

*IDC **25** 09:56:27.1±0.5, 2°.09S×79°.16W, h0^{km}, mb4.7/23, mb1 4.8/30, mb1mx4.7/45, mbtmp4.6/30, ML3.3/5, MS4.5/31, Ms1 4.5/31, ms1mx4.4/43, Error ellipse: s-maj=16.5km s-min=9.4km az=64.0*

*GCMT **25** 09:56:28.1±0.1, 2°.57S±0°.01×79°.32W±0°.01, h12^{km}, MW5.2/119, Moment Tensor Solution. s101,c134; s119,c200; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.70±.01; M$_{\theta\theta}$0.10±.01; M$_{\phi\phi}$-0.79±.01; M$_{r\theta}$0.06±.03; M$_{\theta\phi}$0.15±.01; M$_{\phi r}$0.02±.03; Best double couple: M$_0$0.76200×10^{17} NP1:ϕ_s164.00000°, δ45.00000°, λ81.00000°. NP2:ϕ_s357.00000°, δ46.00000°, λ99.00000°. Principal axes: T 0.7050, Plg84.0000°, Azm348.0000°; N 0.1140, Plg6.0000°, Azm171.0000°; P -0.8190, Plg0.0000°, Azm81.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **25** 09:56:30.6±1.3, 2°.14S×79°.37W, h35^{km}, mb5.4/46 Error ellipse: s-maj=13.0km s-min=5.4km az=107.4*

*NEIC **25** 09:56:31.1±2.2, 2°.25S±0°.06×79°.28W±0°.08, h35^{km}±1^{km}, mb5.3/444, Error ellipse: s-maj=13.7km s-min=10.1km az=92.0*

*UCR **25** 09:56:34.0, 2°.34S×79°.15W, h69^{km}, mb5.3(NEIC)*

*VAO **25** 09:56:34.9±0.6, 2°.44S×79°.05W, h47^{km}±1^{km}, mb5.1*

ISC 25 09:56:28.1±0.2, 2°.23S±0°.03×79°.28W±0°.02, h10^{km}, n1045, σ1^{s}.52/955, mb5.2/229, MS4.6/33, 3C-4D, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COHC	Cochancay	0.23	174	P	Pg	09 56 32.7	-0.2
COHC	Cochancay	0.23	174	S	Sg	09 56 36.5	+0.3
AMIL	Milagro (Trans	0.33	287	P	Pg	09 56 34.2	-0.5
AMIL	Milagro (Trans	0.33	287	S	Sg	09 56 40.2	+1.0
AGUAY	Guayaquil	0.70	285	P	Pg	09 56 41.0	-0.6
ARIO	Riobamba	0.81	45	P	Pg	09 56 43.6	-0.3
ARIO	Riobamba	0.81	45	S	Sg	09 56 55.2	+0.5
BMAS	Trigal station	1.08	48	P	Pg	09 56 47.9	-1.0
BIL2	Estacion Bilba	1.09	45	P	Pg	09 56 48.9	-0.3
BBIL	Ulba Tungurahu	1.11	45	P	Pg	09 56 48.3	-1.1
BPAT	Tungurahua Vol	1.11	49	P	Pg	09 56 48.6	-1.0
MORR	Playas El Morr	1.14	249	S	Sn	09 57 06.7	+1.0
MORR	Playas El Morr	1.14	249	P	Pb	09 56 49.0	-0.8
RETU	Refugio	1.14	47	P	Pg	09 56 48.9	-1.2
BULB	Ulba Tungurahu	1.17	48	P	Pg	09 56 49.6	-1.1
RUN5	Runtun	1.18	46	P	Pb	09 56 49.9	-0.8
BRUN	Tungurahua Vol	1.18	47	P	Pb	09 56 49.6	-1.2
AQUE	Quevedo	1.20	350	S	Sn	09 57 07.7	+0.5
AQUE	Quevedo	1.20	350	P	Pb	09 56 50.3	-0.5
PISA	Pisayambo	1.47	37	P	Pn	09 56 55.4	+0.3
APUY	Puyo	1.49	59	S	Sg	09 57 17.8	+1.6
APUY	Puyo	1.49	59	P	Pb	09 56 56.4	+0.4
PPLP	Puerto Lpez	1.65	294	P	Pn	09 56 54.7	-2.4
BMOR	Cotopaxi Volca	1.70	29	P	Pb	09 57 00.1	+0.2
SALI	Salinas	1.71	272	P	Pn	09 56 57.5	-0.5
BNAS	Cotopaxi Volca	1.74	27	P	Pb	09 57 00.9	+0.4
BREF	Cotopaxi Volca	1.76	28	P	Pb	09 57 00.8	-0.1
TAMB	Tambo	1.78	31	P	Pb	09 57 01.4	+0.2
BTAM	Cotopaxi Volca	1.78	30	P	Pb	09 57 01.5	+0.3
VC1	Cotopaxi 1	1.81	29	P	Pb	09 57 01.6	0.0
ATEN	Tena	1.91	50	P	Pn	09 57 00.1	-0.6
ANTM	Antisana-La Mi	1.99	32	P	Pb	09 57 04.5	-0.3
GONZ	Gonzanam	2.00	183	P	Pn	09 57 03.8	+1.6
ANTG	Antisana-Guama	2.00	31	P	Pb	09 57 05.0	+0.1
ANTS	Antisana-Sarah	2.05	33	P	Pb	09 57 05.6	-0.2
GGPC	Guagua Pichinc	2.15	18	P	Pb	09 57 07.4	-0.1
TERV	Terraza Guagua	2.15	18	P	Pb	09 57 07.4	-0.1
GGP	Refugio Guagua	2.15	18	P	Pb	09 57 07.3	-0.3
PINO	Pino	2.17	18	P	Pb	09 57 07.4	-0.4
MAG1	Magdalena	2.20	347	P	Pb	09 57 07.3	-0.8
YANA	Yana	2.22	19	P	Pb	09 57 07.6	-1.0
APR2	Miler	2.31	8	P	Pn	09 57 08.3	+1.9
CASC	Dorado de Casc	3.05	39	P	Pb	09 57 21.6	-1.0
CMBC	Cumbal	3.47	25	*e*P	Pb	09 57 27.9	-2.1
GCUF	Volcan Galeras	3.94	29	*e*P	Pn	09 57 33.3	+4.2
CRUC	La Cruz	4.43	32	*e*P	Pb	09 57 44.2	-2.1
ATAH	Atahualpa	4.95	170	Pn	Pn	09 57 46.4	+3.4
	34nm,0.3s,baz=11,slow=8.7,SNR=32						
ATAH				Lg	Lg	09 59 07.2	
	52nm,0.3s,baz=30,slow=21,SNR=6.0						
ATAH				LR	LR	10 00 06.3	
	comp=Z,3μm,21.9s,baz=325,slow=43						
SOTA	Rioblanco	5.09	32	*e*P	Pn	09 57 50.5	+5.5
FLOC	Florencia	5.24	44	*e*P	Pn	09 57 49.7	+3.1
FLOC	Florencia	5.24	44	Pn	Pn	09 57 49.6	+2.9
FLOC				Sn	Sn	09 58 48.3	+1.0
PCON	Cinco Dias	5.37	32	*e*P	Pn	09 57 53.8	+5.0
GARC	Garzon, Huila	5.79	41	*e*P	Pn	09 57 59.3	+4.8
MALC	Bahia Malaga	6.50	17	*e*P	Pn	09 58 07.5	+3.6
YOTC	Yotoco, Valle	6.83	25	*e*P	Pn	09 58 12.2	+3.6
MACC	Macarena, Meta	6.96	51	*e*P	Pn	09 58 12.9	+2.8
ORTC	Ortega, Tolima	7.31	33	*e*P	Pn	09 58 19.8	+4.7
PLMC	San Jos del P	7.70	23	*e*P	Pn	09 58 22.5	+2.1
ANIL	Santa Ana	7.72	30	*e*P	Pn	09 58 22.5	+1.6
TOLC	Tolima	7.84	30	*e*P	Pn	09 58 28.1	+5.4
RREF	El Recreo	8.10	29	*e*P	Pn	09 58 33.4	+7.0
GUVC	San Jose del G	8.17	55	*e*P	Pn	09 58 27.9	+1.1
GUY2C	Guyana, Caldas	8.38	28	*e*P	Pn	09 58 32.0	+2.0
VILC	Villavicencio,	8.42	42	*e*P	Pn	09 58 36.5	+6.1
ROSC	El Rosal	8.60	35	Pn	Pn	09 58 33.0	-0.1
	1.8nm,0.3s,baz=229,slow=17,SNR=1.6						
ROSC				Lg	Lg	10 00 55.6	
	5.2nm,0.3s,baz=217,slow=20,SNR=2.2						
ROSC				LR	LR	10 02 42.7	
	comp=Z,3μm,19.4s,baz=214,slow=45						
ROSC	El Rosal	8.60	35	*e*P	Pn	09 58 37.5	+4.5
ROSC	El Rosal	8.60	35		Pn	09 58 35.4	+2.4
CBOC	Ciudad Bolivar	8.68	22	*e*P	Pn	09 58 36.1	+2.2
CHIC	Chingaza	8.78	39	*e*P	Pn	09 58 41.6	+6.0
NORC	Norcasia	8.91	30	*e*P	Pn	09 58 41.6	+4.6
HELC	Santa Helena	9.17	24	*e*P	Pn	09 58 47.1	+6.2
SPBC	San Pablo de B	9.40	34	*e*P	Pn	09 58 47.5	+3.7
PTGC	Puerto Gaitan,	9.58	48	*e*P	Pn	09 58 53.9	+7.7
PTBC	PUERTO BERRIO,	9.95	29	*e*P	Pn	09 58 53.9	+2.6
NNA	Nana	9.99	166	Pn	Pn	09 58 54.5	+2.6
	28nm,0.3s,baz=326,slow=11,SNR=28						
NNA				Sn	Sn	10 00 42.7	-1.4
	4.5nm,0.3s,baz=22,slow=16,SNR=1.1						
NNA				Lg	Lg	10 01 44.5	
	7.6nm,0.3s,baz=293,slow=3.9,SNR=4.4						
NNA	Nana	9.99	166	*c i*P	Pn	09 58 54.8	+3.0
NNA				pmax	pmax		
	comp=Z,349nm,0.8s						
NNA	Nana	9.99	166		Pn	09 58 51.7	-0.1
AZU	Azuero	10.01	354	*e*P	Pn	09 58 55.2	+3.2
RUSC	La Rusia	10.17	37	*e*P	Pn	09 58 59.0	+4.3
RUSC	La Rusia	10.17	37		Pn	09 58 55.8	+1.1
UREC	San Jos de Ur	10.60	21	*e*P	Pn	09 59 07.4	+7.2
ZARC	Zaragoza, Cauc	10.62	24	*e*P	Pn	09 59 04.3	+3.8
BARC	Barichara	10.67	35	*e*P	Pn	09 59 04.8	+3.5
PAYG	Puerto Ayora	11.11	278		Pn	09 59 07.5	+0.3
ZANG	Zanguenga, Cho	11.13	357	*e*P	Pn	09 59 12.8	+5.4
UPA	Univ. de Panam	11.14	359	*e*P	Pn	09 59 11.9	+4.3
BCIP	Isla Barro Col	11.34	357	P	Pn	09 59 11.3	+1.0
BCIP	Isla Barro Col	11.34	357	*e*P	Pn	09 59 14.2	+4.0
BCIP	Isla Barro Col	11.34	357		Pn	09 59 11.3	+1.0
TAMC	Tame, Arauca	11.40	41	*e*P	Pn	09 59 14.0	+2.8
PTJ1	Puerto Jimnez	11.43	339	*e*P	Pn	09 59 19.2	+7.7
BRU2	Volcan	11.47	343	*e*P	Pn	09 59 15.3	+3.0
PAMC	Pamplona, Colo	11.55	35	*e*P	Pn	09 59 19.9	+6.2
EDSV	San Vito	11.58	342	*e*P	Pn	09 59 20.6	+6.9
OCAC	Ocana	11.98	30	*e*P	Pn	09 59 23.9	+4.7
SMLC	San Martn de	12.13	25	*e*P	Pn	09 59 23.7	+2.6
EDLM	Las Mercedes	12.22	339	*e*P	Pn	09 59 28.1	+5.7
SJCC	San Jacinto, C	12.72	19	*e*P	Pn	09 59 35.2	+5.9
LCR2	La Lucha 2	12.79	338	*e*P	Pn	09 59 33.7	+3.3
HDC	Heredia	13.07	338	⇓*e*P	Pn	09 59 37.7	+3.6
HDC	Heredia	13.07	338		Pn	09 59 38.1	+4.0
JTS	Las Juntas de	13.66	336	Pn	Pn	09 59 46.2	+4.1
	comp=Z,0.2nm,0.3s,baz=214,slow=20,SNR=26						
JTS				LR	LR	10 04 09.0	
	comp=Z,2μm,20.2s,baz=216,slow=34						
JTS	Las Juntas de	13.66	336	*d i*P	Pn	09 59 46.2	+4.1
JTS				pmax	pmax		
	comp=Z,54nm,1.3s						
JTS	Las Juntas de	13.66	336	*e*P	Pn	09 59 46.2	+4.1
JTS	Las Juntas de	13.66	336		Pn	09 59 45.8	+3.6
ARE1	Arenal 1	13.72	337	⇑*e*P	Pn	09 59 45.0	+2.1
CEDE	Laguna Cedeo	13.74	337	*e*P	Pn	09 59 43.0	-0.2
PLVR	Palo Verde	13.88	334	*e*P	P	09 59 50.0	-3.6
SDV	Santo Domingo	14.01	38	Pn	Pn	09 59 44.9	-2.1
	comp=Z,0.2nm,0.3s,baz=199,slow=12,SNR=1.8						
SDV				Lg	Lg	10 03 42.1	
	comp=Z,0.8nm,0.3s,baz=292,slow=19,SNR=2.0						
SDV				LR	LR	10 05 00.9	
	comp=Z,4μm,21.1s,baz=226,slow=37						
SDV	Santo Domingo	14.01	38	*e*P	P	09 59 51.5	-3.5
SDV	Santo Domingo	14.01	38		Pn	09 59 49.1	+2.1
SDV	Santo Domingo	14.01	38	*e*P	P	09 59 51.6	-3.5
CUI	Cuipilapa	14.08	336	*e*P	P	09 59 53.2	-2.5
ESPN	Las Esperanzas	15.18	341	*e*P	P	10 00 05.5	-2.3
ESPN	Las Esperanzas	15.18	341	Pn	Pn	10 00 02.1	-0.6
ESPN				IAmb	IAmb	10 00 14.9	
	comp=Z,206nm,1.1s						
ACON	Acoyapa	15.28	338	*e*P	P	10 00 07.1	-1.8
ACON	Acoyapa	15.28	338	Pn	Pn	10 00 05.4	+1.4
ACON				IAmb	IAmb	10 00 15.3	
	comp=Z,143nm,1.1s						
URIC	Uribia, Colomb	15.62	27	*e*P	Pn	10 00 08.8	+0.2
BAUV	El Baul	15.77	45	*e*P	P	10 00 13.0	-1.4
MATN	Matagalpa	16.45	337	*e*P	P	10 00 21.0	-1.0
CSGN	Cosiguina Volc	17.20	332	*e*P	P	10 00 32.3	+2.0
CSGN	Cosiguina Volc	17.20	332	P	Pn	10 00 28.9	+0.1
CSGN				IAmb	IAmb	10 00 50.8	
	comp=Z,267nm,1.2s						
SAML	Samuel	17.34	113	P	Pn	10 00 28.4	-2.1
SAML				pmax	pmax		
	comp=Z,168nm,0.8s						
SAML	Samuel	17.34	113	P	Pn	10 00 28.4	-2.1
SAML				IAmb	IAmb	10 00 46.9	
	comp=Z,168nm,0.8s						
SAML	Samuel	17.34	113	*e*P	Pn	10 00 27.8	-2.7
LPAZ	La Paz	17.76	143	P	Pn	10 00 35.5	-0.7
	comp=Z,0.2nm,0.3s,baz=322,slow=8.9,SNR=12						
LPAZ				LR	LR	10 08 30.5	
	comp=Z,2μm,19.3s,baz=308,slow=41						
LPAZ	La Paz	17.76	143	P	Pn	10 00 32.7	-3.6
LPAZ				pmax	pmax		
	comp=Z,82nm,0.9s						
LPAZ	La Paz	17.76	143	P	Pn	10 00 32.7	-3.6
LPAZ	La Paz	17.76	143	*e*P	Pn	10 00 34.6	-1.6
TGUH	Tegucigalpa,Un	18.02	334	P	Pn	10 00 38.2	-0.8
TGUH				IAmb	IAmb	10 01 00.8	
	comp=Z,209nm,1.1s						
PB12	IPOC Station P	18.49	152	P	P	10 00 43.4	-1.2
PB12				IAmb	IAmb	10 00 52.6	
	comp=Z,298nm,1.4s						
SNET	Serv Nac Est T	18.64	328	P	Pn	10 00 47.9	+1.3
SNET				IAmb	IAmb	10 00 53.7	
	comp=Z,212nm,1.2s						
PB16	IPOC Station P	18.65	150	P	P	10 00 46.4	-0.5
PCRV	Puerto La Cruz	19.09	50	P	P	10 00 50.1	-1.1
	comp=Z,0.3nm,0.3s,baz=196,slow=11,SNR=1.8						
PCRV				LR	LR	10 08 50.5	
	comp=Z,3μm,18.1s,slow=39						
PLCV	Puerto La Cruz	19.12	50	P	P	10 00 50.1	-1.4
PTGA	Pitinga	19.36	86	P	P	10 00 53.3	-0.8
	comp=Z,0.2nm,0.3s,baz=259,slow=17,SNR=2.7						
PTGA				Sn	Sn	10 04 25.5	-7.1
	comp=Z,0.6nm,0.3s,baz=300,slow=20,SNR=1.2						
PTGA				Lg	Lg	10 06 18.8	
	comp=Z,1.2nm,0.3s,baz=191,slow=17,SNR=4.4						
PTGA				LR	LR	10 08 40.1	
	comp=Z,4μm,20.8s,baz=267,slow=38						
PTGA	Pitinga	19.36	86	P	P	10 00 54.5	+0.4
PTGA	Pitinga	19.36	86	*e*P	P	10 00 54.6	+0.4
ORIV	Oritupano	19.39	54	*e*P	Pn	10 00 59.7	+4.1
PB11	IPOC Station P	19.80	152	P	P	10 00 57.5	-1.5
PB11				IAmb	IAmb	10 01 19.8	
	comp=Z,92nm,0.8s						
APG	El Apazote	20.39	327	P	P	10 01 06.4	+0.8
	comp=Z,68nm,1.2s,baz=151,slow=12,SNR=14						
APG				LR	LR	10 07 42.2	
	comp=Z,2μm,20.1s,baz=144,slow=33						
MTDJ	Mount Denham	20.40	5	P	P	10 01 06.7	+1.2
MTDJ				IAmb	IAmb	10 01 25.9	
	comp=Z,147nm,0.9s						
PATCX	Punta Patache	20.51	155	P	P	10 01 06.8	+0.2
PATCX				IAmb	IAmb	10 01 22.1	
	comp=Z,297nm,1.5s						
PB01	IPOC Station P	20.99	154	P	P	10 01 10.3	-1.6
GUIV	Guiria	21.25	53	*e*P	P	10 01 14.4	-0.3
PB07	IPOC Station P	21.42	155	P	P	10 01 17.4	+0.7
PB07				IAmb	IAmb	10 01 30.0	
	comp=Z,225nm,1.3s						
FSCY	Frank Sound, G	21.49	355	P	P	10 01 18.5	+1.3
PAPH	Port-au-Prince	21.74	18	P	P	10 01 19.9	+0.1
PB09	IPOC Station P	21.76	154	P	P	10 01 21.2	+0.9

CBCY	The Bluff, Cay	21.84	359	P	P	10 01 20.8	0.0
PB04	IPOC Station P	21.86	157	P	P	10 01 20.4	-0.9
PB04				IAmb	IAmb	10 01 31.7	
	comp=Z,138nm,1.2s						
CCIG	Comitan	22.36	326	P	P	10 01 28.1	+1.4
CCIG				IAmb	IAmb	10 02 15.1	
	comp=Z,123nm,1.5s						
GTBY	Guantanamo Bay	22.40	10	P	P	10 01 27.4	+0.5
SDDR	Presa de Saban	22.50	20	P	P	10 01 29.1	+1.1
SDDR				IAmb	IAmb	10 01 50.1	
	comp=Z,110nm,1.3s						
SIV	San Ignacio	22.55	128	P	P	10 01 29.2	+0.5
	comp=Z,26nm,0.9s,baz=307,slow=9.9,SNR=31						
GRGR	Grenville	22.59	50	eP	P	10 01 25.7	-3.3
LVC	Limon Verde	22.62	154	P	P	10 01 31.0	+1.4
	comp=Z,2.3nm,0.5s,baz=307,slow=10,SNR=1.7						
LVC	Limon Verde	22.62	154	P	P	10 01 28.4	-1.3
LVC				pmax	pmax		
	comp=Z,301nm,1.4s						
LVC	Limon Verde	22.62	154	P	P	10 01 28.4	-1.3
LVC	Limon Verde	22.62	154	eP	P	10 01 28.3	-1.3
PB10	IPOC Station P	22.78	159	P	P	10 01 30.5	-0.5
PB10				IAmb	IAmb	10 01 43.3	
	comp=Z,263nm,1.7s						
PB15	IPOC Station P	22.92	156	P	P	10 01 30.4	-2.2
TOSP	Speyside	22.98	54	P	P	10 01 32.8	-0.3
TOSP				IAmb	IAmb	10 01 48.9	
	comp=Z,62nm,0.8s						
GCMP	Grenada, Carri	22.98	50	eP	P	10 01 19.7	-13
DR12	Loma Pena Alta	23.05	25	P	P	10 01 33.5	-0.3
PCDR	Punta Cana, DR	23.24	27	P	P	10 01 36.1	+0.4
CRPR	Cabo Rojo, PR	23.41	30	P	P	10 01 37.3	-0.1
CRPR				IAmb	IAmb	10 01 48.4	
	comp=Z,74nm,1.0s						
MLPR	Magueyes Islan	23.41	30	P	P	10 01 37.4	-0.1
MPR	Mayaguez	23.57	30	P	P	10 01 38.2	-0.8
MPR				IAmb	IAmb	10 01 47.3	
	comp=Z,88nm,0.8s						
SVB	Belmont	23.61	49	eP	P	10 01 34.7	-4.8
ICMP	Isla Caja de M	23.61	32	P	P	10 01 37.2	-2.2
OBIP	Obispado Ponce	23.70	31	P	P	10 01 38.6	-1.7
OBIP				IAmb	IAmb	10 01 49.2	
	comp=Z,107nm,1.2s						
AGPR	Aguadilla, PR	23.80	30	P	P	10 01 42.5	+1.2
PB14	IPOC Station P	23.86	160	P	P	10 01 40.3	-1.9
AOPR	Arecibo Observ	23.88	31	P	P	10 01 41.5	-0.6
IGPR	InterUniversit	23.90	32	P	P	10 01 41.2	-1.0
PDPR	Patillas Dam,	23.99	32	P	P	10 01 41.9	-1.2
PDPR				IAmb	IAmb	10 01 50.0	
	comp=Z,114nm,0.9s						
SJG	San Juan	24.00	32	P	P	10 01 42.6	-0.5
	comp=Z,39nm,0.8s,baz=282,slow=14,SNR=5.7						
SJG				LR	LR	10 11 36.0	
	comp=Z,2µm,20.8s,baz=212,slow=38						
SJG	San Juan	24.00	32	P	P	10 01 42.9	-0.2
SJG				pmax	pmax		
	comp=Z,92nm,1.0s						
SJG	San Juan	24.00	32	P	P	10 01 42.9	-0.2
SJG				IAmb	IAmb	10 01 53.9	
	comp=Z,92nm,0.9s						
TEIG	Tepich	24.00	339	P	P	10 01 42.9	-0.3
	comp=Z,21nm,0.6s,baz=163,slow=19						
TEIG				LR	LR	10 10 30.1	
	comp=Z,584nm,18.9s,baz=182,slow=35						
TEIG	Tepich	24.00	339	P	P	10 01 43.0	-0.2
EMPR	Esperanza - Ma	24.10	31	P	P	10 01 44.4	+0.2
GCPR	Guaynabo City	24.20	32	P	P	10 01 45.1	+0.1
CBYP	Canovanas	24.29	32	P	P	10 01 46.0	+0.1
SLBI	Saint Lucia, B	24.29	48	eP	P	10 01 55.4	+9.5
CDVI	St. Croix	24.47	35	P	P	10 01 47.5	0.0
CMIG	Matias Romero	24.61	322	P	P	10 01 50.2	+1.4
	comp=Z,6.5nm,0.5s,baz=122,slow=9.7,SNR=13						
CMIG				LR	LR	10 09 50.8	
	comp=Z,916nm,21.1s,baz=147,slow=33						
FDF	Fort de France	24.62	46	eP	P	10 02 00.7	+12
FDF	Fort de France	24.62	46	P	P	10 01 48.3	-0.7
FDF				pmax	pmax		
	comp=Z,210nm,1.6s						
FDF	Fort de France	24.62	46	P	P	10 01 48.3	-0.7
FDF				IAmb	IAmb	10 02 17.2	
	comp=Z,210nm,1.6s						
CUPR	Culebra, Puert	24.63	33	P	P	10 01 46.9	-2.0
BBGH	Gun Hill	24.83	52	eP	P	10 02 05.1	+14
CLDB	Colider	24.84	111	eP	P	10 01 48.6	-2.3
STVI	Saint Thomas	24.84	34	P	P	10 01 49.5	-1.4
DLPL	La Plaine	24.96	45	eP	P	10 02 08.6	+17
DWS	Wesley	25.07	45	eP	P	10 02 04.7	+12
SKI	Saint Kitts	25.38	39	eP	P	10 01 52.6	-3.2
SKI	Saint Kitts	25.38	39	P	P	10 01 54.6	-1.2
SKI				pmax	pmax		
	comp=Z,44nm,0.8s						
SKI	Saint Kitts	25.38	39	P	P	10 01 54.6	-1.2
SMRT	St. Maarten	25.71	38	eP	P	10 01 46.6	-12
SMRT	St. Maarten	25.71	38	P	P	10 01 58.5	-0.3
ANWB	Willy Bob	26.24	40	eP	P	10 01 50.4	-13
ANWB	Willy Bob	26.24	40	P	P	10 02 00.5	-3.0
ANWB				IAmb	IAmb	10 02 23.3	
	comp=Z,83nm,0.9s						
SALV	Santo Antonio	26.91	122	eP	P	10 02 10.2	+0.5
TLIG	Tlapa	27.36	317	P	P	10 02 13.1	-0.8
TLIG				IAmb	IAmb	10 02 19.8	
	comp=Z,90nm,1.7s						
MDP	Montagnes des	27.59	75	P	P	10 02 15.3	-0.5
	comp=Z,12nm,0.7s,baz=253,slow=8.7,SNR=6.4						
MDP				LR	LR	10 13 38.3	
	comp=Z,5µm,19.0s,baz=258,slow=38						
AQDB	Aquidauana	29.29	130	eP	P	10 02 30.8	-0.1
ARAG	Araguaiana, MT	30.19	118	eP	P	10 02 38.8	-0.2
MOIG	Morelia	30.61	316	P	P	10 02 39.7	-3.2
C2SB	Chapadao do Su	30.67	124	eP	P	10 02 42.0	-1.2
ROC1	El Roble	31.55	167	P	P	10 02 50.8	-0.2
CPUP	Villa Florida	31.91	141	P	P	10 02 56.5	+2.5
	comp=Z,3.3nm,0.8s,baz=327,slow=9.8,SNR=5.9						
CPUP				LR	LR	10 18 38.6	
	comp=Z,1µm,18.9s,baz=328,slow=42						
CPUP	Villa Florida	31.91	141	P	P	10 02 58.2	+4.2
CPUP				pmax	pmax		
	comp=Z,5.0nm,1.6s						
CPUP	Villa Florida	31.91	141	eP	P	10 02 54.3	+0.3
SMTB	Santa Maria do	32.20	103	eP	P	10 02 56.5	-0.3
TRCB	Terra Rica	32.95	130	eP	P	10 03 02.5	-0.8
TRCB				epP	sP	10 03 14.5	+6.7
PCMB	Pacaembu	33.38	127	eP	P	10 03 05.6	-1.4
PCMB				epP	sP	10 03 18.1	+6.6
BDFB	Brasilia	33.56	115	P	P	10 03 09.8	+1.0
	comp=Z,21nm,1.0s,baz=269,slow=12,SNR=9.9						
BDFB				LR	LR	10 17 57.6	
	comp=Z,3µm,18.5s,baz=290,slow=38						
BDFB	Brasilia	33.56	115	P	P	10 03 08.0	-0.7
BDFB				pmax	pmax		
	comp=Z,110nm,1.5s						
BDFB	Brasilia	33.56	115	P	P	10 03 08.0	-0.7
ZAIG	Zacatecas	33.67	319	P	P	10 03 07.6	-2.2
ZAIG				IAmb	IAmb	10 03 16.1	
	comp=Z,49nm,1.3s						
TIGA	Tifton	33.74	353	P	P	10 03 08.4	-1.5
	baz=172						
IPMB	Ipameri, GO	34.26	119	eP	P	10 03 14.2	-0.5
IPMB				epP	sP	10 03 27.4	+8.0
PTGB	Pitanga	34.48	133	eP	P	10 03 16.3	-0.4
PTGB				epP	sP	10 03 28.0	+6.8
250A	Grady	34.66	350	P	P	10 03 15.1	-2.8
157A	Early Branch	34.76	357	P	P	10 03 19.2	+0.4
	baz=177						
158A	Hollywood	34.79	359	P	P	10 03 19.7	+0.8
	baz=178						
346A	Big Creek Wild	34.81	345	P	P	10 03 17.1	-2.1
154A	Montrose	34.84	354	P	P	10 03 19.5	+0.1
152A	Waverly Hall	35.09	352	P	P	10 03 21.6	0.0
152A				IAmb	IAmb	10 03 27.7	
	comp=Z,39nm,1.1s						
NHSC	New Hope	35.16	359	P	P	10 03 22.7	+0.5
	baz=178						
344A	Westbrook Farm	35.23	343	P	P	10 03 20.9	-1.9
344A				IAmb	IAmb	10 03 33.2	
	comp=Z,54nm,1.2s						
Z58A	St. Stephen	35.38	359	P	P	10 03 23.8	-0.3
	baz=179						
Z56A	Williston	35.42	357	P	P	10 03 24.2	-0.3
	baz=176						
FRTB	Fartura	35.62	129	eP	P	10 03 26.7	+0.3
FRTB				epP	sP	10 03 38.9	+7.9
342A	Flagon Creek P	35.65	341	P	P	10 03 27.0	+0.6
GOGA	Godfrey	35.67	354	P	P	10 03 26.6	0.0
GOGA				pmax	pmax		
	comp=Z,65nm,1.5s						
GOGA	Godfrey	35.67	354	P	P	10 03 26.6	0.0
GOGA				IAmb	IAmb	10 03 30.3	
	comp=Z,65nm,1.5s						
GOGA	Godfrey	35.67	354	P	P	10 03 26.1	-0.5
	baz=173						
HKT	Hockley	35.70	335	P	P	10 03 25.5	-1.3
HKT				pmax	pmax		
	comp=Z,70nm,2.0s						
HKT	Hockley	35.70	335	P	P	10 03 25.5	-1.3
HKT				IAmb	IAmb	10 03 31.5	
	comp=Z,70nm,2.0s						
Z51A	Franklin	35.79	352	P	P	10 03 27.8	+0.2
LRAL	Lakeview Retre	35.83	349	P	P	10 03 27.5	-0.5
LRAL				IAmb	IAmb	10 03 31.3	
	comp=Z,27nm,0.9s						
LRAL	Lakeview Retre	35.83	349	P	P	10 03 27.7	-0.2
	baz=167,SNR=11						
Z50A	Ashland	35.85	350	P	P	10 03 27.8	-0.4
Z50A				IAmb	IAmb	10 03 35.8	
	comp=Z,30nm,0.9s						
Z50A	Ashland	35.85	350	P	P	10 03 28.0	-0.1
	baz=168,SNR=9.0						
VBMS	Vicksburg	35.88	344	P	P	10 03 25.9	-2.5
VBMS	Vicksburg	35.88	344	P	P	10 03 29.6	+1.2
	baz=160						
146A	Union	35.90	346	P	P	10 03 27.1	-1.4
Y58A	Scranton	35.95	359	P	P	10 03 30.4	+1.4
ITAB	Concordia	35.97	136	eP	P	10 03 28.6	-0.6
ITAB				epP	sP	10 03 41.0	+7.1
833A	Chaparral WMA,	36.01	329	P	P	10 03 30.2	+0.7
833A				IAmb	IAmb	10 03 34.7	
	comp=Z,28nm,0.9s						
Y59A	Loris	36.03	1	P	P	10 03 30.4	+0.8
Y55A	Saluda	36.06	356	P	P	10 03 30.8	+0.9
	baz=175						
Y52A	Lilburn	36.19	353	P	P	10 03 31.8	+0.8
	baz=172						
Z47A	Carrollton	36.21	347	P	P	10 03 30.0	-1.2
Z47A				IAmb	IAmb	10 03 34.3	
	comp=Z,34nm,0.8s						
JSC	Jenkinsville	36.37	357	P	P	10 03 33.6	+1.0
JSC				pmax	pmax		
	comp=Z,13nm,1.1s						
JSC	Jenkinsville	36.37	357	P	P	10 03 33.6	+1.0
HODGE	Hodges	36.38	356	P	P	10 03 33.1	+0.5
HODGE				IAmb	IAmb	10 03 36.0	
	comp=Z,42nm,1.2s						
Y49A	Blount Mountai	36.52	350	P	P	10 03 33.1	-0.8
X55A	Gracelyn & Ava	36.58	357	P	P	10 03 35.2	+0.9
	baz=176						
143A	Socs Landing,	36.59	343	P	P	10 03 34.0	-0.4
143A				IAmb	IAmb	10 03 42.1	
	comp=Z,74nm,1.4s						
X58A	Rowland	36.59	360	P	P	10 03 34.6	+0.2
X58A				IAmb	IAmb	10 03 49.1	
	comp=Z,45nm,1.4s						
X54A	Belton	36.70	356	P	P	10 03 36.4	+1.0
	baz=175						
X53A	Estanollee	36.74	354	P	P	10 03 36.7	+1.0
	baz=173						
JANB	Januaria	36.76	112	eP	P	10 03 35.5	-0.8
NATX	Nacogdoches	36.83	338	P	P	10 03 36.8	+0.3
NATX	Nacogdoches	36.83	338	P	P	10 03 37.2	+0.7
	baz=154						
FPAL	Fort Paine	37.06	351	P	P	10 03 37.8	-0.7
FPAL				IAmb	IAmb	10 03 44.1	
	comp=Z,38nm,1.2s						
435B	Jarrell	37.18	333	P	P	10 03 39.4	-0.1
435B				IAmb	IAmb	10 03 44.4	
	comp=Z,25nm,0.8s						
435B	Jarrell	37.18	333	P	P	10 03 40.4	+0.9
	baz=149						
Y45A	Yeager Farm, C	37.19	346	P	P	10 03 39.3	-0.2
BG3	Lake Jocassee	37.19	355	P	P	10 03 39.6	0.0
W56A	Indian Trail	37.19	358	P	P	10 03 40.8	+1.3
	baz=178						
W57A	Gilead	37.20	359	P	P	10 03 40.6	+1.0
	baz=179						
X48A	Hartselle	37.21	349	P	P	10 03 39.3	-0.5
W54A	Cherokee Point	37.22	356	P	P	10 03 41.0	+1.2
	baz=175						
KMSC	Kings Mountain	37.23	357	P	P	10 03 39.4	-0.5
KMSC				IAmb	IAmb	10 03 46.1	
	comp=Z,33nm,1.1s						
KMSC	Kings Mountain	37.23	357	P	P	10 03 40.9	+1.0
	baz=176,SNR=6.9						
W61A	Ground Anchor	37.28	3	P	P	10 03 41.4	+1.2
	baz=184						
W52A	Murphy	37.39	354	P	P	10 03 41.0	-0.3
W52A				IAmb	IAmb	10 03 47.3	
	comp=Z,34nm,1.1s						
237A	Washetta, Mont	37.49	337	P	P	10 03 39.8	-2.3
237A				IAmb	IAmb	10 03 46.7	
	comp=Z,61nm,1.0s						
W50A	Signal Mountai	37.66	352	P	P	10 03 43.2	-0.4
OXF	Oxford	37.77	346	P	P	10 03 43.7	-0.8
OXF				pmax	pmax		
	comp=Z,37nm,1.1s						
OXF	Oxford	37.77	346	P	P	10 03 43.7	-0.8
OXF				IAmb	IAmb	10 03 50.4	
	comp=Z,37nm,1.1s						
OXF	Oxford	37.77	346	P	P	10 03 44.7	+0.2
	baz=163						
SWET	Sewanee	37.77	351	P	P	10 03 44.2	-0.3
SWET				IAmb	IAmb	10 04 01.8	
	comp=Z,75nm,1.7s						
CPCT	Cooper Cave	37.81	353	P	P	10 03 44.4	-0.4
CPCT				IAmb	IAmb	10 03 50.9	
	comp=Z,38nm,1.0s						
V59A	Middlesex	37.81	1	P	P	10 03 44.9	+0.2
	baz=182						
NBPS	Pedro II - PI	37.83	94	eP	P	10 03 46.0	+0.7
V58A	Windy Hill, Pi	37.83	0	P	P	10 03 46.2	+1.2
	baz=180						
V60A	Jim Taylor Roa	37.85	3	P	P	10 03 44.3	-0.8
V60A				IAmb	IAmb	10 04 01.4	
	comp=Z,35nm,0.9s						
V60A	Jim Taylor Roa	37.85	3	P	P	10 03 46.3	+1.2
	baz=183						
V53A	Saluda	37.85	355	P	P	10 03 44.9	-0.3
GO06	Curarrehue	37.85	170	P	P	10 03 43.7	-1.5
GO06				IAmb	IAmb	10 03 55.6	
	comp=Z,34nm,1.1s						
V56A	Mocksville	37.86	358	P	P	10 03 46.7	+1.5
	baz=178						
V54A	Nebo	37.90	356	P	P	10 03 46.2	+0.7
	baz=176						
V61A	Roper	37.91	4	P	P	10 03 47.1	+1.5
	baz=184						
V57A	Coltrane Farms	37.92	359	P	P	10 03 47.3	+1.6
	baz=179						
TKL	Tuckaleechee C	37.93	354	P	P	10 03 45.3	-0.5
TKL				pmax	pmax		
	comp=Z,43nm,1.3s						
TKL	Tuckaleechee C	37.93	354	P	P	10 03 45.3	-0.5
TKL				IAmb	IAmb	10 03 52.3	
	comp=Z,43nm,1.2s						
PLAL	Pickwick Lake	37.93	348	P	P	10 03 44.8	-1.0
JCT	Junction City	37.97	331	P	P	10 03 45.3	-1.0
JCT				pmax	pmax		
	comp=Z,144nm,1.6s						
JCT	Junction City	37.97	331	P	P	10 03 45.3	-1.0
JCT	Junction City	37.97	331	P	P	10 03 47.7	+1.4
	baz=145,SNR=29						
WLAR	White Oak Lake	38.03	341	P	P	10 03 45.9	-0.8
PLTB	Pedras Altas	38.06	143	eP	P	10 03 46.6	-0.4
PLTB				epP	sP	10 03 57.8	+6.5
V52A	Sevierville	38.09	354	P	P	10 03 45.1	-2.1
V52A				IAmb	IAmb	10 03 53.6	
	comp=Z,46nm,1.1s						
V51A	Loudon	38.13	353	P	P	10 03 47.2	-0.4
V51A				IAmb	IAmb	10 03 53.6	
	comp=Z,59nm,1.2s						
WHTX	Lake Whitney,	38.16	335	P	P	10 03 47.0	-0.8
WHTX				IAmb	IAmb	10 03 52.4	
	comp=Z,78nm,1.2s						
WHTX	Lake Whitney,	38.16	335	P	P	10 03 49.0	+1.2
	baz=150,SNR=9.0						
Z38A	Mt. Pleasant	38.29	339	P	P	10 03 48.2	-0.7
Z38A				IAmb	IAmb	10 03 53.3	
	comp=Z,50nm,1.1s						
W45A	Hickory Valley	38.34	347	P	P	10 03 47.8	-1.4
W45A				IAmb	IAmb	10 03 51.7	
	comp=Z,58nm,1.1s						
U56A	King	38.40	359	P	P	10 03 47.8	-1.9
U56A	King	38.40	359	P	P	10 03 50.8	+1.1
	baz=178						
U59A	Littleton	38.41	2	P	P	10 03 47.6	-2.3
U59A	Littleton	38.41	2	P	P	10 03 50.9	+1.1
	baz=182						
V48A	Smith Brothers	38.43	350	P	P	10 03 48.2	-1.8
V48A				IAmb	IAmb	10 03 57.2	
	comp=Z,28nm,0.8s						
U58A	Oxford	38.43	1	P	P	10 03 51.4	+1.3
	baz=181						
BSCB	Bom Sucesso	38.44	122	eP	P	10 03 49.4	-1.1
BSCB				epP	sP	10 04 01.0	+5.9
U61A	Possum Corner	38.46	4	P	P	10 03 51.8	+1.6
	baz=184						
U57A	Blanch	38.47	360	P	P	10 03 51.7	+1.4
	baz=180						
U60A	Pendleton	38.56	3	P	P	10 03 51.9	+0.8
	baz=183						
U55A	TA2, Sparta	38.57	358	P	P	10 03 52.6	+1.3
	baz=177						
HPIG		38.59	320	P	P	10 03 49.8	-1.9
U54A	Nelsons Funny	38.63	357	P	P	10 03 51.9	+0.1
	baz=176						
X40A	Basin Creek Fa	38.69	342	P	P	10 03 54.0	+1.9
	baz=158						
CLTN	Cedars of Leba	38.69	351	P	P	10 03 48.9	-3.3
TZTN	Tazewell	38.78	355	P	P	10 03 52.3	-0.7
TZTN	Tazewell	38.78	355	P	P	10 03 52.3	-0.7
	baz=173						
UALR	University of	38.80	343	P	P	10 03 52.7	-0.4
UALR				IAmb	IAmb	10 03 56.4	
	comp=Z,38nm,1.1s						
MIAR	Mount Ida	38.97	341	P	P	10 03 54.6	0.0
MIAR				pmax	pmax		
	comp=Z,53nm,1.7s						
MIAR	Mount Ida	38.97	341	P	P	10 03 54.6	0.0
MIAR	Mount Ida	38.97	341	P	P	10 03 55.4	+0.8
	baz=157,SNR=7.1						
T58A	Grand View Acr	38.98	1	P	P	10 03 55.0	+0.4
	baz=181						
WVT	Waverly	38.99	349	P	P	10 03 53.0	-1.7
WVT				pmax	pmax		
	comp=Z,56nm,1.7s						
WVT	Waverly	38.99	349	P	P	10 03 53.0	-1.7
U49A	Red Boiling Sp	39.02	352	P	P	10 03 54.1	-0.9
LPAR	Lepanto	39.02	346	P	P	10 03 53.0	-2.0
T59A	Double "B" Far	39.04	2	P	P	10 03 54.0	-1.0
T59A	Double "B" Far	39.04	2	P	P	10 03 56.1	+1.1
	baz=182,SNR=6.3						
TXAR	Lajitas Array	39.12	325	P	P	10 03 57.2	+1.2
	comp=Z,12nm,1.1s,baz=141,slow=6.3,SNR=31						
TXAR				PcP	PcP	10 06 06.4	+0.6
	comp=Z,2.2nm,0.8s,baz=164,slow=8.8,SNR=4.8						
TXAR	Lajitas Array	39.12	325	P	P	10 03 56.4	+0.3
TXAR	Lajitas Array	39.12	325	P	P	10 03 56.4	+0.3
TX31	Lajitas Ar. Si	39.12	325	P	P	10 03 57.1	+1.0
TX32	Lajitas Array	39.12	325	P	P	10 03 57.0	+0.9
PLCA	Paso Flores	39.13	169	P	P	10 03 57.2	+1.3
	comp=Z,9.0nm,0.6s,baz=135,slow=9.2,SNR=47						
PLCA	Paso Flores	39.13	169	P	P	10 03 56.9	+0.9
PLCA				pmax	pmax		
	comp=Z,52nm,1.5s						
PLCA	Paso Flores	39.13	169	P	P	10 03 56.9	+0.9
PLCA	Paso Flores	39.13	169	eP	P	10 03 56.9	+0.9
T53A	Wise	39.13	356	P	P	10 03 56.7	+0.7
	baz=175						
W41B	Gary Mavity, V	39.15	343	P	P	10 03 55.8	-0.2
W41B	Gary Mavity, V	39.15	343	P	P	10 03 56.8	+0.7
	baz=159,SNR=7.7						
T54A	Tazewell	39.15	357	P	P	10 03 56.6	+0.5
	baz=176						
Z35A	Perchaven, San	39.23	336	P	P	10 03 56.4	-0.4
T51A	Gray	39.24	354	P	P	10 03 57.0	+0.2
	baz=172,SNR=6.1						
WHAR	Wooly Hollow	39.27	343	P	P	10 03 55.9	-1.2
T52A	Hallie	39.29	355	P	P	10 03 57.0	-0.3
	baz=174,SNR=6.9						
T50A	Nancy	39.39	353	P	P	10 03 57.3	-0.8
	baz=171						
T49A	Edmonton	39.57	352	P	P	10 03 58.0	-1.5
T49A				IAmb	IAmb	10 04 02.0	
	comp=Z,55nm,1.4s						
T49A	Edmonton	39.57	352	P	P	10 03 59.1	-0.4
	baz=170						
W39A	Magazine	39.64	341	P	P	10 03 59.1	-1.1
W39A	Magazine	39.64	341	P	P	10 04 00.4	+0.2
	baz=157,SNR=15						
ABTX	Abilene, Hawle	39.67	333	P	P	10 03 59.5	-1.0
ABTX				IAmb	IAmb	10 04 05.5	
	comp=Z,102nm,1.2s						
ABTX	Abilene, Hawle	39.67	333	P	P	10 04 01.3	+0.8
	baz=147,SNR=14						
HICK	Hickman	39.67	347	P	P	10 03 59.7	-0.8
LCAR	Lake Charles	39.69	345	P	P	10 03 59.4	-1.1
T47A	Sharon Grove	39.70	350	P	P	10 03 59.0	-1.6
S56A	Natural Bridge	39.71	360	P	P	10 04 00.6	-0.1
	baz=179						
NBPN	Ponto Novo - B	39.71	104	eP	P	10 04 00.1	-1.1
NBPB	Pedra_Branca-C	39.73	96	eP	P	10 04 01.2	-0.1
FCAR	Ozark Folk Cen	39.78	344	P	P	10 04 00.4	-0.9
S53A	Williamson	39.80	356	P	P	10 04 00.7	-0.8
	baz=175						
S55A	Lewisburg	39.82	358	P	P	10 04 02.5	+0.8
	baz=178						
S51A	Beattyville	39.87	355	P	P	10 04 01.4	-0.7
	baz=173,SNR=6.4						
PARMO	Parma	39.91	347	P	P	10 04 01.1	-1.3
LPIG	La Paz	39.94	313	LR	LR	10 17 29.6	
	comp=Z,256nm,19.1s,baz=113,slow=32						
S50A	Richmond	39.99	354	P	P	10 04 02.2	-0.9
	baz=172,SNR=7.5						
T45A	Paducah	40.01	348	P	P	10 04 01.1	-2.1
T45A				IAmb	IAmb	10 04 17.2	
	comp=Z,67nm,0.8s						
R58B	Mineral	40.02	2	P	P	10 04 03.8	+0.5
	baz=182						
PBMO	Poplar Bluff	40.18	346	P	P	10 04 03.4	-1.2
PBMO				IAmb	IAmb	10 04 19.7	
	comp=Z,60nm,1.6s						
S49A	Springfield	40.20	353	P	P	10 04 04.3	-0.6
	baz=170,SNR=6.9						
R54A	Victor	40.24	358	P	P	10 04 05.3	+0.2
	baz=177						
R59A	King George, V	40.28	3	P	P	10 04 06.8	+1.4
	baz=183						
R55A	Marlinton	40.32	359	P	P	10 04 06.0	+0.1
R55A	Marlinton	40.32	359	P	P	10 04 06.7	+0.9
	baz=178						
R58A	Rapidan	40.35	2	P	P	10 04 06.0	0.0
	baz=182,SNR=7.6						
U40A	Yellville	40.42	343	P	P	10 04 06.5	-0.2
U40A	Yellville	40.42	343	P	P	10 04 07.0	+0.3
	baz=159,SNR=20						
R53A	Hurricane	40.44	357	P	P	10 04 07.0	+0.2
R53A				IAmb	IAmb	10 04 38.2	
	comp=Z,62nm,1.4s						
R53A	Hurricane	40.44	357	P	P	10 04 05.1	-1.7
	baz=176						
R52A	Catlettsburg	40.49	356	P	P	10 04 06.7	-0.5
	baz=175						
R61A	Willards	40.52	5	P	P	10 04 06.1	-1.3
	baz=186						
R51A	Hillsboro	40.53	355	P	P	10 04 06.4	-1.0
	baz=173,SNR=7.9						
X34A	Smith Ranch, M	40.57	336	P	P	10 04 08.8	+0.8
T42A	Van Buren	40.58	345	P	P	10 04 07.0	-0.9
R50A	Paris	40.58	354	P	P	10 04 07.5	-0.4
R50A	Paris	40.58	354	P	P	10 04 07.2	-0.7
	baz=172						
NBMA	Muriti-CE	40.67	99	eP	P	10 04 09.2	+0.1
W35A	Tecumseh	40.68	338	P	P	10 04 06.7	-2.2
HHAR	Hobbs	40.69	342	P	P	10 04 07.3	-1.6
R49A	Shelbyville	40.69	353	P	P	10 04 07.3	-1.5
	baz=171,SNR=5.6						
SJMB	Sao Joao De Ma	40.73	116	eP	P	10 04 06.4	-3.1
USIN	University of	40.74	350	P	P	10 04 06.5	-2.8
USIN				IAmb	IAmb	10 04 14.2	
	comp=Z,82nm,1.2s						
WCI	Wyandotte Cave	40.78	352	P	P	10 04 08.4	-1.2
WCI				pmax	pmax		
	comp=Z,23nm,0.9s						
WCI	Wyandotte Cave	40.78	352	P	P	10 04 08.4	-1.2
WCI	Wyandotte Cave	40.78	352	P	P	10 04 08.8	-0.8
	baz=169						

S44A	Carbondale	40.79	348	P	P	10 04 08.5	-1.2
S44A				IAmb	IAmb	10 04 25.2	
	comp=Z,62nm,1.2s						
SIUC	Southern Illin	40.80	348	P	P	10 04 08.5	-1.3
SIUC				IAmb	IAmb	10 04 25.3	
	comp=Z,49nm,1.1s						
Q53A	Leroy	40.94	357	P	P	10 04 10.8	-0.1
	baz=176,SNR=6.1						
TUL1	Leonard	40.96	339	P	P	10 04 10.9	-0.2
TUL1				IAmb	IAmb	10 04 15.1	
	comp=Z,91nm,1.5s						
TUL1	Leonard	40.96	339	P	P	10 04 11.9	+0.7
	baz=154,SNR=9.2						
NBCL	Cascavel-CE	40.97	94	*e*P	P	10 04 12.0	+0.5
U38A	Gravette	40.97	341	P	P	10 04 10.8	-0.4
FNO	Franklin	40.98	337	P	P	10 04 10.1	-1.2
Q58A	Fox Den Farm,	41.00	2	P	P	10 04 12.3	+0.9
	baz=182						
MGMO	Mountain Grove	41.00	344	P	P	10 04 09.4	-2.1
Q55A	Buckhannon	41.03	359	P	P	10 04 11.9	+0.2
	baz=179						
Q54A	Coxs Mills	41.04	358	P	P	10 04 11.2	-0.5
Q54A	Coxs Mills	41.04	358	P	P	10 04 11.6	-0.1
	baz=178						
Q57A	Strasburg	41.07	1	P	P	10 04 11.8	-0.1
	baz=181						
BSFB	Barra de Sao F	41.08	116	*e*P	P	10 04 12.5	+0.1
WMOK	Wichita Mounta	41.08	335	P	P	10 04 12.5	+0.4
WMOK				pmax	pmax		
	comp=Z,40nm,1.1s						
WMOK	Wichita Mounta	41.08	335	P	P	10 04 12.5	+0.4
WMOK	Wichita Mounta	41.08	335	P	P	10 04 12.6	+0.4
	baz=150,SNR=39						
Q52A	Bidwell	41.08	356	P	P	10 04 12.7	+0.6
	baz=175						
Q50A	Georgetown	41.10	354	P	P	10 04 12.0	-0.3
	baz=173						
OKCFA	Oklahoma City	41.14	337	P	P	10 04 11.4	-1.2
OKCFA				IAmb	IAmb	10 04 16.5	
	comp=Z,148nm,1.7s						
Q51A	Peebles	41.23	355	P	P	10 04 13.7	+0.4
Q51A	Peebles	41.23	355	P	P	10 04 13.2	-0.1
	baz=174,SNR=8.0						
Q49A	Aurora	41.36	353	P	P	10 04 14.0	-0.3
	baz=171						
Q48A	North Vernon	41.39	352	P	P	10 04 13.9	-0.7
	baz=170						
P56A	Dayton Farm, R	41.53	1	P	P	10 04 17.0	+1.2
	baz=180,SNR=5.3						
NBTA	Tacaratu-PE	41.55	101	*e*P	P	10 04 16.4	0.0
P58A	Pank, Wackersv	41.56	2	P	P	10 04 16.2	+0.3
	baz=183						
P53A	Whipple	41.56	358	P	P	10 04 14.7	-1.3
	baz=177						
OLIL	Olney	41.57	350	P	P	10 04 14.9	-1.1
OLIL				IAmb	IAmb	10 04 18.0	
	comp=Z,44nm,0.9s						
CCM	Cathedral Cave	41.59	346	P	P	10 04 14.9	-1.3
CCM				pmax	pmax		
	comp=Z,47nm,1.5s						
CCM	Cathedral Cave	41.59	346	P	P	10 04 14.9	-1.3
CCM	Cathedral Cave	41.59	346	P	P	10 04 16.0	-0.3
	baz=162						
P51A	Williamsport	41.66	356	P	P	10 04 15.8	-0.9
P51A				IAmb	IAmb	10 04 23.2	
	comp=Z,72nm,1.8s						
P51A	Williamsport	41.66	356	P	P	10 04 16.9	+0.2
	baz=174						
P59A	Jarrettsville	41.72	3	P	P	10 04 17.9	+0.6
	baz=184						
BLO	Bloomington	41.74	352	P	P	10 04 16.4	-1.1
BLO				pmax	pmax		
	comp=Z,29nm,1.0s						
BLO	Bloomington	41.74	352	P	P	10 04 16.4	-1.1
P52A	Corning	41.74	357	P	P	10 04 17.3	-0.2
	baz=176						
S39A	Bolivar	41.80	343	P	P	10 04 17.6	-0.4
P50A	Jamestown	41.84	355	P	P	10 04 17.4	-0.9
	baz=173						
P49A	Miami Univ. Ec	41.86	354	P	P	10 04 17.3	-1.2
	baz=172						
MNTX	Cornudas Mount	41.87	326	P	P	10 04 18.3	-0.4
MNTX	Cornudas Mount	41.87	326	P	P	10 04 19.2	+0.5
	baz=139,SNR=27						
P48A	Milroy	41.87	353	P	P	10 04 16.8	-1.7
P48A	Milroy	41.87	353	P	P	10 04 17.4	-1.2
	baz=171						
Q44A	Meyer Farm, Va	41.91	349	P	P	10 04 17.6	-1.2
Q44A				IAmb	IAmb	10 04 20.8	
	comp=Z,49nm,0.9s						
P60A	Greenville	41.97	4	P	P	10 04 20.3	+0.9
	baz=185						
NBLA	Lagarto - SE	42.07	104	*e*P	P	10 04 20.4	-0.2
R40A	Maddies Statio	42.07	345	P	P	10 04 19.0	-1.2
MVL	Millersville	42.11	3	P	P	10 04 20.4	-0.1
T35A	Sooner Cattle	42.12	339	P	P	10 04 20.2	-0.4
T35A				IAmb	IAmb	10 04 24.9	
	comp=Z,121nm,1.4s						
NBPA	Parau_RN	42.20	96	*e*P	P	10 04 20.8	-0.9
O58A	Lewisberry	42.21	3	P	P	10 04 22.2	+0.9
	baz=183						
O52A	Adamsville	42.21	357	P	P	10 04 22.1	+0.8
O52A				IAmb	IAmb	10 04 37.0	
	comp=Z,68nm,1.6s						
O52A	Adamsville	42.21	357	P	P	10 04 22.0	+0.7
	baz=176						
O54A	Avella	42.22	359	P	P	10 04 22.3	+0.9
O54A	Avella	42.22	359	P	P	10 04 22.5	+1.1
	baz=178						
O55A	Ligonier	42.24	360	P	P	10 04 22.6	+1.1
	baz=180						
MSTX	Muleshoe	42.26	330	P	P	10 04 21.2	-0.7
MSTX	Muleshoe	42.26	330	P	P	10 04 22.9	+1.0
	baz=144,SNR=53						
O57A	Amberson	42.27	2	P	P	10 04 22.7	+0.9
	baz=182						
P46A	Rosedale	42.28	351	P	P	10 04 20.6	-1.3
O51A	Pataskala	42.28	356	P	P	10 04 22.0	+0.1
	baz=175						
O56A	Blue Knob Stat	42.30	1	P	P	10 04 21.0	-1.1
O56A	Blue Knob Stat	42.30	1	P	P	10 04 22.6	+0.5
	baz=181						
O53A	New Philadelph	42.31	358	P	P	10 04 21.8	-0.4
	baz=177						
O50A	Cable	42.36	355	P	P	10 04 22.0	-0.6
	baz=173						
ACSO	Alum Creek Sta	42.40	356	P	P	10 04 20.8	-2.0
ACSO	Alum Creek Sta	42.40	356	P	P	10 04 22.3	-0.5
	baz=174						
O59A	Robesonia	42.43	4	P	P	10 04 25.3	+2.2
	baz=184,SNR=6.7						
O49A	Covington	42.47	354	P	P	10 04 23.2	-0.2
O49A	Covington	42.47	354	P	P	10 04 23.4	0.0
	baz=172						
AMTX	Amarillo	42.48	332	P	P	10 04 24.0	+0.3
AMTX				IAmb	IAmb	10 04 28.3	
	comp=Z,43nm,0.9s						
AMTX	Amarillo	42.48	332	P	P	10 04 23.6	-0.1
	baz=146						
O60A	Telford	42.49	4	P	P	10 04 23.6	0.0
	baz=186						
U32A	Winter Ranch,	42.59	336	P	P	10 04 25.0	+0.5
O48A	Farmland	42.63	353	P	P	10 04 24.3	-0.4
	baz=171						
SSPA	Standing Stone	42.68	2	P	P	10 04 25.0	-0.2
SSPA	Standing Stone	42.68	2	P	P	10 04 24.7	-0.4
	baz=182						
P43A	Skaggs, Pawnee	42.72	348	P	P	10 04 24.4	-1.0
P43A				IAmb	IAmb	10 04 31.0	
	comp=Z,51nm,1.2s						
LUPA	Lehigh Univers	42.77	4	P	P	10 04 24.5	-1.3
N55A	Marion Center	42.81	0	P	P	10 04 25.8	-0.4
	baz=180						
N57A	Milroy	42.81	2	P	P	10 04 25.8	-0.4
	baz=182						
N53A	Lisbon	42.86	358	P	P	10 04 26.4	-0.1
	baz=178						
N52A	McGinn’s Farm,	42.90	357	P	P	10 04 26.7	-0.1
	baz=176						
N58A	Sunbury	42.93	3	P	P	10 04 27.4	+0.2
	baz=184						
N50A	Nevada	42.94	356	P	P	10 04 27.5	+0.2
	baz=174						
N56A	West Decatur	42.95	1	P	P	10 04 27.6	+0.2
	baz=181						
N54A	Moraine State	42.99	359	P	P	10 04 26.7	-1.0
N54A				IAmb	IAmb	10 04 43.2	
	comp=Z,71nm,1.5s						
N54A	Moraine State	42.99	359	P	P	10 04 27.8	+0.2
	baz=179						
SFIN	Lafayette	43.01	351	P	P	10 04 26.1	-1.7
	baz=168						
O44A	Mansfield	43.01	350	P	P	10 04 27.2	-0.7
O44A				IAmb	IAmb	10 04 33.8	
	comp=Z,103nm,1.6s						
N61A	South Mountain	43.02	6	P	P	10 04 27.5	-0.4
	baz=187						
N51A	Ashland	43.04	357	P	P	10 04 28.1	+0.1
N51A	Ashland	43.04	357	P	P	10 04 27.7	-0.4
	baz=175						
N59A	State Game Lan	43.06	4	P	P	10 04 29.0	+0.7
N59A	State Game Lan	43.06	4	P	P	10 04 28.2	-0.1
	baz=185						
N60A	Cedar Hill Far	43.07	5	P	P	10 04 28.4	+0.2
	baz=186						
N49A	Columbus Grove	43.18	355	P	P	10 04 29.4	+0.3
	baz=173						
N48A	Decatur	43.21	354	P	P	10 04 29.3	-0.1
	baz=172						
N47A	Urbana	43.30	353	IAmb	IAmb	10 04 44.8	
	comp=Z,51nm,1.2s						
NBAN	Anadia - AL	43.37	102	*e*P	P	10 04 28.3	-2.8
RCBR	Riachuelo	43.41	96	*e*P	P	10 04 32.3	+0.8
M57A	Sunshine Farm,	43.41	2	P	P	10 04 31.9	+0.9
	baz=183,SNR=6.1						
M51A	Elyria	43.44	357	P	P	10 04 32.0	+0.8
	baz=176						
M58A	Price’s Panora	43.48	3	P	P	10 04 32.2	+0.6
	baz=184						
M53A	WI Miller and	43.48	358	P	P	10 04 32.3	+0.6
	baz=178						
M55A	Ridgway	43.50	1	P	P	10 04 30.4	-1.4
	baz=181						
M56A	Emporium	43.52	1	IAmb	IAmb	10 04 49.5	
	comp=Z,52nm,1.2s						
M56A	Emporium	43.52	1	P	P	10 04 31.8	-0.1
	baz=181						
M54A	Oil Creek Stat	43.54	360	P	P	10 04 31.9	-0.2
	baz=179						
HDIL	Hopedale	43.56	349	IAmb	IAmb	10 04 33.8	
	comp=Z,43nm,1.0s						
HDIL	Hopedale	43.56	349	P	P	10 04 31.1	-1.1
	baz=165						
M50A	Fremont	43.56	356	IAmb	IAmb	10 04 34.5	
	comp=Z,47nm,1.1s						
M50A	Fremont	43.56	356	P	P	10 04 31.8	-0.4
	baz=174						
M59A	Waymart	43.71	4	P	P	10 04 33.5	0.0
	baz=185						
M49A	Liberty Center	43.71	355	P	P	10 04 34.0	+0.6
	baz=173						
M47A	Cromwell	43.77	353	P	P	10 04 34.3	+0.4
	baz=171						
121A	Cookes Peak, D	43.86	324	IAmb	IAmb	10 04 41.1	
	comp=Z,57nm,1.1s						
121A	Cookes Peak, D	43.86	324	P	P	10 04 37.1	+2.0
	baz=137,SNR=13						
M63A	Gales Ferry	43.93	8	P	P	10 04 35.4	+0.2
	baz=190						
L53A	Girard	43.99	359	P	P	10 04 35.8	+0.2
	baz=178						
L57A	Andrews Acres	44.08	3	P	P	10 04 37.3	+0.9
	baz=183,SNR=6.5						
KSU1	Kansas State U	44.12	341	P	P	10 04 37.1	+0.3
	baz=155						
ERPA	Erie	44.15	359	P	P	10 04 37.0	0.0
	baz=179						
L58A	Harry Jones Me	44.18	4	P	P	10 04 37.2	-0.1
	baz=185						
L50A	Kingsville	44.19	356	P	P	10 04 37.2	0.0
	baz=175						
L56A	Greenwood	44.19	2	P	P	10 04 37.3	-0.1
	baz=182						
L55A	Hinsdale	44.22	1	P	P	10 04 37.2	-0.4
	baz=181						
L48A	N Adams	44.22	354	P	P	10 04 37.5	0.0
	baz=172						
L60A	Shokan	44.25	5	P	P	10 04 38.0	+0.2
	baz=187						
L54A	Sinclairville	44.26	360	P	P	10 04 38.2	+0.3
	baz=180						
L49A	Milan	44.32	355	P	P	10 04 38.3	0.0
	baz=173						
BINY	Binghamton	44.33	4	IAmb	IAmb	10 04 54.0	
	comp=Z,32nm,0.9s						
BINY	Binghamton	44.33	4	P	P	10 04 38.7	+0.3
	baz=184						
L59A	Walton	44.38	4	IAmb	IAmb	10 04 56.1	
	comp=Z,101nm,1.9s						
L59A	Walton	44.38	4	P	P	10 04 39.1	+0.2
	baz=186						
NBRF	Rio Formoso -	44.38	100	*e*P	P	10 04 40.3	+1.0
L46A	Eue Claire	44.50	353	P	P	10 04 39.8	+0.1
	baz=170						
L61A	Hillsdale 1, H	44.52	6	P	P	10 04 40.4	+0.5
	baz=188						
K54A	Basiliko Farm,	44.64	1	P	P	10 04 41.4	+0.5
	baz=181						
K56A	Middlesex	44.76	2	P	P	10 04 42.4	+0.5
	baz=183						
K55A	Perry	44.77	1	P	P	10 04 42.4	+0.5
	baz=182						
K52A	Tillsonburg	44.83	358	P	P	10 04 42.7	+0.4
	baz=178						
K57A	Scipio Center	44.83	3	P	P	10 04 43.0	+0.6
	baz=184,SNR=7.0						
L61B	Northampton	44.88	7	P	P	10 04 42.5	-0.3
	baz=189						
K50A	Casco	44.90	357	IAmb	IAmb	10 04 58.7	
	comp=Z,44nm,1.1s						
K50A	Casco	44.90	357	P	P	10 04 42.9	0.0
	baz=175						
K58A	Earlville	44.91	4	IAmb	IAmb	10 04 59.9	
	comp=Z,54nm,1.4s						
K58A	Earlville	44.91	4	P	P	10 04 42.3	-0.8
	baz=185						
ANMO	Albuquerque	44.91	328	P	P	10 04 45.0	+1.6
ANMO				pmax	pmax		
	comp=Z,79nm,1.0s						
ANMO	Albuquerque	44.91	328	P	P	10 04 45.0	+1.6
K59A	Cooperstown	44.98	5	P	P	10 04 43.4	-0.2
	baz=186						
CBKS	Cedar Bluff	44.99	337	P	P	10 04 43.4	-0.4
CBKS				pmax	pmax		
	comp=Z,106nm,1.2s						
CBKS	Cedar Bluff	44.99	337	P	P	10 04 43.4	-0.4
CBKS	Cedar Bluff	44.99	337	P	P	10 04 44.9	+1.1
	baz=150,SNR=15						
K47A	Vermontville	44.99	354	P	P	10 04 42.2	-1.5
	baz=172,SNR=6.8						
L42A	Oliver, Polo	45.03	349	P	P	10 04 43.7	-0.3
L42A				IAmb	IAmb	10 04 49.1	
	comp=Z,49nm,1.1s						
K48A	Perry	45.04	355	P	P	10 04 43.9	-0.2
	baz=173						
TRY	Troy	45.04	6	P	P	10 04 46.8	+2.7
TRY				IAmb	IAmb	10 04 59.3	
	comp=Z,30nm,1.1s						
K46A	Dorr	45.10	353	P	P	10 04 44.4	-0.1
	baz=171						
J52A	Paris	45.28	359	P	P	10 04 46.2	+0.2
	baz=178						
N35A	Tabor	45.41	343	IAmb	IAmb	10 05 02.2	
	comp=Z,55nm,1.2s						
J48A	Bridge Port	45.51	355	P	P	10 04 47.9	+0.2
	baz=174						
J49A	Marlette	45.52	356	P	P	10 04 46.5	-1.3
	baz=174						
J58A	Remsen	45.53	4	P	P	10 04 47.9	0.0
	baz=185						
J57A	Williamstown	45.53	3	P	P	10 04 47.9	-0.1
	baz=184						
J47A	Sunmer	45.54	354	IAmb	IAmb	10 04 52.8	
	comp=Z,52nm,0.9s						
J47A	Sunmer	45.54	354	P	P	10 04 47.7	-0.3
	baz=172						
J60A	Lant Hill Farm	45.58	6	P	P	10 04 49.5	+1.2
	baz=188						
T25A	Trinidad	45.60	332	P	P	10 04 51.1	+2.3
	baz=144,SNR=31						
ACCN	Adirondack Com	45.69	6	IAmb	IAmb	10 05 03.1	
	comp=Z,42nm,1.4s						
J59A	Piesco	45.69	5	P	P	10 04 49.1	-0.1
	baz=186						
SCIA	State Center	45.72	345	P	P	10 04 48.3	-1.1
SCIA				IAmb	IAmb	10 05 05.6	
	comp=Z,46nm,0.8s						
SCIA	State Center	45.72	345	P	P	10 04 49.6	+0.2
	baz=160						
J46A	Howard City	45.73	354	P	P	10 04 49.5	0.0
	baz=171						
I51A	Listowel	45.86	358	P	P	10 04 50.7	+0.2
	baz=177						
N33A	J Bar K, Exete	45.87	341	P	P	10 04 49.4	-1.3
I58A	Old Forge	45.88	4	P	P	10 04 50.5	-0.3
	baz=186						
JFWS	Jewell Farm	46.02	349	P	P	10 04 50.2	-1.6
JFWS				pmax	pmax		
	comp=Z,33nm,0.9s						
JFWS	Jewell Farm	46.02	349	P	P	10 04 50.2	-1.6
JFWS				IAmb	IAmb	10 04 57.1	
	comp=Z,33nm,0.8s						
JFWS	Jewell Farm	46.02	349	P	P	10 04 50.7	-1.1
	baz=165						
I57A	Carthage	46.08	4	P	P	10 04 51.5	-0.8
	baz=185						
I60A	Shoreham	46.18	6	P	P	10 04 53.6	+0.6
	baz=188,SNR=7.3						
I47A	Gladwin	46.28	355	P	P	10 04 52.3	-1.5
	baz=173,SNR=8.0						
I46A	Reed City	46.30	354	P	P	10 04 53.7	-0.3
	baz=171						
K38A	Parkersburg	46.31	346	IAmb	IAmb	10 04 56.1	
	comp=Z,56nm,1.1s						
KSCO	Kaye Shedlock’	46.33	335	P	P	10 04 55.3	+0.8
	baz=147,SNR=14						
I48A	Sherman Twp	46.38	356	P	P	10 04 54.7	0.0
	baz=174						
X18A	Snowflake	46.55	325	IAmb	IAmb	10 05 01.9	
	comp=Z,48nm,1.2s						
214A	Organ Pipe Nat	46.56	320	P	P	10 04 56.2	-0.1
	baz=131,SNR=26						
DELO	Deloro Mine	46.57	2	IAmb	IAmb	10 05 13.6	
	comp=Z,29nm,1.2s						
H53A	Bobcaygeon	46.60	1	P	P	10 04 56.3	0.0
	baz=181						
SDCO	Great Sand Dun	46.61	331	P	P	10 04 58.0	+1.1
SDCO	Great Sand Dun	46.61	331	P	P	10 04 56.8	-0.1
	baz=143,SNR=95						
H55A	Tweed	46.61	2	P	P	10 04 56.2	-0.3
	baz=183						
H57A	Richville	46.62	4	P	P	10 04 56.0	-0.4
	baz=185						
H58A	Gabriels	46.67	5	P	P	10 04 56.8	-0.1
	baz=187						
H52A	Wyevale	46.67	359	P	P	10 04 57.0	+0.1
	baz=179						
H56A	Elgin	46.70	3	P	P	10 04 57.4	+0.3
	baz=184						
BGNE	Belgrade	46.71	340	P	P	10 04 57.1	-0.1
BGNE	Belgrade	46.71	340	P	P	10 04 57.2	-0.1
	baz=154,SNR=5.1						
VT1	Waterbury	46.72	6	P	P	10 04 56.8	-0.6
VT1				IAmb	IAmb	10 05 48.3	
	comp=Z,51nm,1.6s						
I42A	Draeger Farm,	46.72	350	IAmb	IAmb	10 05 12.6	
	comp=Z,54nm,1.2s						
H47A	Mio	46.83	355	P	P	10 04 58.0	-0.2
	baz=173						
LONY	Lake Ozonia	46.83	5	IAmb	IAmb	10 05 01.5	
	comp=Z,63nm,1.6s						
LONY	Lake Ozonia	46.83	5	P	P	10 04 58.0	-0.2
	baz=186						
W18A	Petrified Fore	46.85	325	P	P	10 04 59.8	+1.1
	baz=136,SNR=6.5						
H48A	Harrisville	46.87	356	IAmb	IAmb	10 05 00.4	
	comp=Z,47nm,1.4s						
H48A	Harrisville	46.87	356	P	P	10 04 58.3	-0.1
	baz=174						
H59A	Cadyville	46.94	5	P	P	10 04 58.8	-0.2
	baz=187						
I40A	Norwalk	47.03	349	IAmb	IAmb	10 05 14.8	
	comp=Z,51nm,1.3s						
G53A	Haliburton	47.15	1	P	P	10 04 59.9	-0.8
	baz=181						
H62A	Milan	47.16	8	P	P	10 05 00.5	-0.2
	baz=191						
S22A	4UR Ranch, Cre	47.26	330	P	P	10 05 03.5	+1.5
	baz=141,SNR=26						
G57A	Newington	47.28	4	P	P	10 05 01.2	-0.4
	baz=186						
G55A	Calabogie	47.33	2	P	P	10 05 01.1	-1.0
	baz=183						
X16A	Lo Mia Camp, P	47.35	323	P	P	10 05 01.9	-0.7
X16A				IAmb	IAmb	10 05 08.2	
	comp=Z,26nm,0.9s						
G47A	Hillman	47.37	356	P	P	10 05 03.4	+1.0
	baz=174,SNR=9.3						
G58A	Ormstown	47.40	5	P	P	10 05 02.7	+0.1
	baz=187						
G45A	Suttons Bay	47.41	354	P	P	10 05 01.7	-0.9
G45A				IAmb	IAmb	10 05 06.8	
	comp=Z,26nm,0.8s						
G45A	Suttons Bay	47.41	354	P	P	10 05 02.6	-0.1
	baz=171						
Q24A	Divide	47.41	332	P	P	10 05 01.1	-2.1
Q24A				IAmb	IAmb	10 05 08.8	
	comp=Z,38nm,1.1s						
Q24A	Divide	47.41	332	P	P	10 05 04.2	+1.0
	baz=144,SNR=14						
G59A	Clarenceville	47.42	6	P	P	10 05 02.6	-0.1
	baz=188						
G54A	Lake Saint Pet	47.44	1	P	P	10 05 03.2	+0.3
	baz=181						
G60A	Masonville	47.53	7	P	P	10 05 03.8	+0.2
	baz=189						
MVCO	Mesa Verde	47.70	328	P	P	10 05 03.1	-2.3
MVCO				IAmb	IAmb	10 05 13.8	
	comp=Z,40nm,1.1s						
MVCO	Mesa Verde	47.70	328	P	P	10 05 06.4	+1.0
	baz=139,SNR=20						
OGNE	Ogallala	47.72	337	P	P	10 05 03.7	-1.5
OGNE	Ogallala	47.72	337	P	P	10 05 06.3	+1.0
	baz=148,SNR=10						
H65A	Eastbrook	47.75	11	P	P	10 05 05.2	-0.1
	baz=195						
F52A	Sundridge	47.82	360	P	P	10 05 05.4	-0.4
	baz=180						
F49A	Sandfield	47.85	357	P	P	10 05 05.4	-0.7
	baz=176						
F55A	Otter Lake	47.93	3	P	P	10 05 06.7	0.0
	baz=184						
F48A	Evansville	47.95	357	P	P	10 05 07.0	+0.2
	baz=175						
F51A	Arnstein	47.96	359	P	P	10 05 07.1	+0.2
	baz=179						
Y14A	Wickenburg	47.98	322	IAmb	IAmb	10 05 12.5	
	comp=Z,63nm,1.8s						
ALGO	Algonquin Park	47.99	1	P	P	10 05 07.4	+0.3
	baz=182						
F45A	CMU Biological	48.03	354	P	P	10 05 07.8	+0.4
	baz=172						
WUAZ	Wupatki	48.07	324	P	P	10 05 09.6	+1.4
	baz=134,SNR=104						
F59A	Saint Guilaume	48.22	6	P	P	10 05 09.7	+0.7
	baz=188						
ISCO	Idaho Springs	48.30	333	P	P	10 05 10.4	+0.3
ISCO				pmax	pmax		
	comp=Z,21nm,1.2s						
ISCO	Idaho Springs	48.30	333	P	P	10 05 10.4	+0.3
ISCO	Idaho Springs	48.30	333	P	P	10 05 11.8	+1.7
	baz=144,SNR=20						
E52A	Mattawa	48.31	1	P	P	10 05 09.8	+0.1
	baz=181						
ECSD	EROS Data Cent	48.34	343	P	P	10 05 08.8	-1.1
ECSD	EROS Data Cent	48.34	343	P	P	10 05 10.4	+0.5
	baz=156,SNR=10						
E53A	Dumoine, Ponti	48.42	1	P	P	10 05 10.2	-0.4
	baz=182						
F42A	Maple Grove Fa	48.43	352	P	P	10 05 09.8	-0.8
F42A				IAmb	IAmb	10 05 23.8	
	comp=Z,36nm,1.1s						
TRQ	Mont Tremblant	48.43	4	P	P	10 05 09.5	-1.1
F60A	Warwick	48.43	7	P	P	10 05 10.4	-0.1
	baz=190						
PV01	Paradox Valley	48.44	329	IAmb	IAmb	10 05 16.2	
	comp=Z,59nm,1.3s						
SMCO	Snowmass	48.45	331	IAmb	IAmb	10 05 26.2	
	comp=Z,65nm,1.5s						
E54A	Lac Daplat, Po	48.49	2	P	P	10 05 11.3	+0.2
	baz=183						

PV15	Paradox Valley	48.55	329	P	P	10 05 12.1	+0.2
E51A	G1948 Merrick	48.56	360	P	P	10 05 10.3	-1.2
	baz=180,SNR=8.8						
GLA	Glamis	48.56	319	P	P	10 05 11.7	-0.2
GLA				pmax	pmax		
	comp=Z,94nm,1.7s						
GLA	Glamis	48.56	319	P	P	10 05 11.7	-0.2
GLA	Glamis	48.56	319	P	P	10 05 13.2	+1.3
	baz=129,SNR=6.2						
E48A	Lockeyer	48.57	357	P	P	10 05 09.6	-2.1
	baz=176,SNR=8.4						
E47A	Iron Bridge	48.61	356	P	P	10 05 09.8	-2.1
	baz=174						
E57A	Chemin Saint G	48.65	5	P	P	10 05 11.4	-0.9
	baz=187,SNR=15						
PV05	Paradox Valley	48.67	328	P	P	10 05 12.6	-0.3
E58A	La Victoria	48.69	6	P	P	10 05 11.9	-0.7
	baz=188						
E56A	St. Veronique	48.71	4	P	P	10 05 12.2	-0.5
	baz=186						
PV16	Nyswonger Mesa	48.75	329	P	P	10 05 13.8	+0.4
SPMN	Marine on St.	48.76	347	IAmb	IAmb	10 05 28.0	
	comp=Z,31nm,1.2s						
SPMN	Marine on St.	48.76	347	P	P	10 05 12.8	-0.4
	baz=162						
PV19	Morning Glory	48.78	329	IAmb	IAmb	10 05 18.4	
	comp=Z,59nm,1.3s						
Y12C	Blythe	48.81	320	IAmb	IAmb	10 05 19.1	
	comp=Z,81nm,1.9s						
Y12C	Blythe	48.81	320	P	P	10 05 15.0	+1.3
	baz=130,SNR=5.1						
PV22	Blue Mesa, Par	48.85	329	IAmb	IAmb	10 05 19.0	
	comp=Z,46nm,1.3s						
E43A	Lone Tree Farm	48.88	353	P	P	10 05 11.8	-2.2
PDMCI	Parker Dam,Lak	48.93	321	P	P	10 05 15.6	+1.0
	baz=131,SNR=7.1						
PV21	Cone Mtn., Par	48.97	329	IAmb	IAmb	10 05 19.9	
	comp=Z,58nm,1.6s						
E61A	Lac Etchemin	49.08	8	P	P	10 05 15.2	-0.3
	baz=191						
D53A	Lac Vacive, Po	49.12	1	P	P	10 05 14.9	-1.0
D53A	Lac Vacive, Po	49.12	1	P	P	10 05 15.1	-0.8
	baz=182						
SWSC	Sam W. Stewart	49.13	319	P	P	10 05 17.2	+1.0
	baz=128,SNR=9.3						
D55A	Sainte-Anne-du	49.16	3	P	P	10 05 15.4	-0.7
	baz=185						
IKP	In-Ko-Pah, Jac	49.16	318	P	P	10 05 17.4	+0.8
	baz=128,SNR=8.7						
D50A	G1974 Best Tow	49.20	359	P	P	10 05 15.7	-0.7
	baz=179						
D47A	Chapleau	49.20	357	P	P	10 05 15.8	-0.7
	baz=175						
D54A	Lac Fusel, La	49.23	2	P	P	10 05 15.6	-1.1
	baz=183						
D56A	ZEC Mazanza, M	49.23	4	P	P	10 05 16.1	-0.7
	baz=186						
U15A	North Rim	49.24	325	IAmb	IAmb	10 05 23.0	
	comp=Z,43nm,1.2s						
D48A	Paudash Townsh	49.25	358	P	P	10 05 15.7	-1.1
	baz=176						
D57A	Chemin Vers le	49.27	5	P	P	10 05 16.8	-0.2
	baz=187						
W13A	Hualapai Mount	49.29	322	P	P	10 05 19.1	+1.5
N23A	Red Feather La	49.33	333	P	P	10 05 19.3	+1.4
N23A				IAmb	IAmb	10 05 22.5	
	comp=Z,28nm,1.1s						
N23A	Red Feather La	49.33	333	P	P	10 05 18.8	+0.9
	baz=144,SNR=15						
BC3	Big Chuckawall	49.35	320	P	P	10 05 19.0	+1.0
	baz=129,SNR=15						
E63A	Oxbow	49.39	10	P	P	10 05 17.7	-0.2
	baz=194						
D58A	Chemin du LacG	49.44	6	P	P	10 05 18.5	+0.2
	baz=188						
PHWY	Pilot Hill	49.44	334	P	P	10 05 19.1	+0.3
PHWY				IAmb	IAmb	10 05 23.3	
	comp=Z,28nm,1.1s						
IRM	Iron Mountain	49.47	320	P	P	10 05 19.9	+1.1
	baz=130,SNR=26						
D60A	Saint Jean D’O	49.49	8	P	P	10 05 19.2	+0.6
	baz=191						
MONP2	Monument Peak	49.52	318	P	P	10 05 20.0	+0.6
	baz=128,SNR=6.6						
BAR	Barrett	49.55	318	P	P	10 05 20.1	+0.6
BAR				IAmb	IAmb	10 05 24.6	
	comp=Z,25nm,1.2s						
SUSD	Miller	49.69	342	P	P	10 05 19.7	-0.5
SUSD	Miller	49.69	342	P	P	10 05 20.4	+0.1
	baz=154,SNR=5.3						
LATQ	La Tuque	49.74	6	P	P	10 05 20.3	-0.3
LATQ	La Tuque	49.74	6	P	P	10 05 19.9	-0.7
	baz=188						
D41A	Chassel	49.76	352	IAmb	IAmb	10 05 34.5	
	comp=Z,40nm,1.1s						
O20A	White River Ci	49.80	331	IAmb	IAmb	10 05 26.4	
	comp=Z,61nm,1.5s						
O20A	White River Ci	49.80	331	P	P	10 05 22.4	+0.9
	baz=141,SNR=13						
D61A	St Aubert, Com	49.87	8	P	P	10 05 22.1	+0.5
	baz=192						
BELC	Belle Mtn. Jos	49.92	320	P	P	10 05 23.6	+1.2
	baz=129,SNR=11						
D62A	Allapoint, All	49.92	9	IAmb	IAmb	10 05 36.5	
	comp=Z,34nm,1.1s						
D62A	Allapoint, All	49.92	9	P	P	10 05 22.9	+0.9
	baz=193,SNR=5.9						
KNB	Kanab	49.95	325	P	P	10 05 21.8	-0.8
KNB				pmax	pmax		
	comp=Z,53nm,1.2s						
KNB	Kanab	49.95	325	P	P	10 05 21.8	-0.8
109C	Camp Elliot, M	49.97	318	P	P	10 05 22.9	+0.3
109C				IAmb	IAmb	10 05 27.7	
	comp=Z,46nm,1.2s						
XPFO	Pion Flat	49.98	319	P	P	10 05 24.2	+1.4
XPFO				IAmb	IAmb	10 05 28.2	
	comp=Z,39nm,1.4s						
PFO	Pinyon Flats O	49.98	319	LR	LR	10 24 31.2	
	comp=Z,334nm,20.8s,baz=138,slow=34						
PFO	Pinyon Flats O	49.98	319	P	P	10 05 23.8	+0.9
PFO				pmax	pmax		
	comp=Z,35nm,1.4s						
PFO	Pinyon Flats O	49.98	319	P	P	10 05 23.8	+0.9
PFO				IAmb	IAmb	10 05 28.2	
	comp=Z,35nm,1.4s						
PFO	Pinyon Flats O	49.98	319	P	P	10 05 24.0	+1.1
	baz=128,SNR=9.2						
D63A	Stockholm	50.04	10	P	P	10 05 23.4	+0.5
	baz=194						
VLDQ	Val d'Or	50.16	2	P	P	10 05 24.6	+0.8
SRU	San Rafael Swe	50.18	328	P	P	10 05 25.1	+0.8
SRU				pmax	pmax		
	comp=Z,73nm,1.3s						
SRU	San Rafael Swe	50.18	328	P	P	10 05 25.1	+0.8
GMRC	Granite Mounta	50.20	321	P	P	10 05 25.1	+0.6
	baz=130,SNR=10						
MTPU	Mount Pierson	50.31	326	P	P	10 05 24.2	-1.3
Q16A	Castle Valley	50.38	328	P	P	10 05 24.4	-1.5
MURC	Murrieta	50.46	318	P	P	10 05 27.3	+1.0
	baz=127,SNR=6.6						
SZCU	Shurtz Canyon	50.51	325	P	P	10 05 26.2	-0.7
RWWY	Rawlins	50.54	333	IAmb	IAmb	10 05 30.7	
	comp=Z,45nm,1.1s						
P17A	Butcher Ranch,	50.56	328	P	P	10 05 27.7	+0.5
CCUT	Cedar City	50.63	325	P	P	10 05 28.8	+1.0
MSU	Marysvale	50.64	327	P	P	10 05 28.9	+1.0
MSU	Marysvale	50.64	327	P	P	10 05 28.9	+1.0
BATG	Bathurst New B	50.65	12	P	P	10 05 27.8	+0.3
HEC	Hector,Ludlow	50.65	320	P	P	10 05 29.2	+1.3
	baz=129,SNR=22						
BBRC	Big Bear Solar	50.68	319	P	P	10 05 29.6	+1.3
	baz=128,SNR=23						
TMUT	Trail Mountain	50.68	328	P	P	10 05 28.5	+0.2
TUQ	Turquoise Moun	50.78	321	P	P	10 05 30.0	+1.2
	baz=130,SNR=14						
RDMU	Red Mountain	50.79	330	P	P	10 05 29.4	+0.4
TCRU	Three Creeks R	50.86	326	P	P	10 05 30.5	+0.9
SHPR	Sheep Range	50.99	323	P	P	10 05 31.1	+0.6
SHPR				IAmb	IAmb	10 05 36.0	
	comp=Z,56nm,1.3s						
K22A	Casper	51.00	334	P	P	10 05 31.5	+1.0
K22A				IAmb	IAmb	10 05 34.9	
	comp=Z,29nm,1.1s						
K22A	Casper	51.00	334	P	P	10 05 31.0	+0.6
	baz=144,SNR=8.9						
EYMN	Ely	51.10	349	P	P	10 05 29.9	-1.0
EYMN	Ely	51.10	349	P	P	10 05 30.4	-0.5
	baz=164						
LSQQ	Lebel-sur-Quev	51.12	2	P	P	10 05 30.1	-0.9
	baz=183						
BFSC	Mount Baldy Ra	51.15	319	P	P	10 05 32.5	+0.8
	baz=127,SNR=9.4						
CIS	Catalina Islan	51.16	317	P	P	10 05 32.5	+0.8
	baz=126,SNR=5.6						
RSSD	Black Hills	51.20	337	P	P	10 05 32.5	+0.6
RSSD				pmax	pmax		
	comp=Z,41nm,1.0s						
RSSD	Black Hills	51.20	337	P	P	10 05 32.5	+0.6
RSSD				IAmb	IAmb	10 05 36.8	
	comp=Z,41nm,1.0s						
RSSD	Black Hills	51.20	337	P	P	10 05 32.7	+0.8
	baz=148						
GSC	Goldstone, Bar	51.25	320	P	P	10 05 33.8	+1.4
	baz=129,SNR=35						
SHOC	Shoshone, Teco	51.29	321	P	P	10 05 34.1	+1.5
	baz=130,SNR=17						
MWC	Mount Wilson	51.41	318	P	P	10 05 32.1	-1.6
MWC				pmax	pmax		
	comp=Z,78nm,1.7s						
MWC	Mount Wilson	51.41	318	P	P	10 05 32.1	-1.6
MWC				IAmb	IAmb	10 05 38.9	
	comp=Z,78nm,1.6s						
PASC	Pasadena Art C	51.46	318	IAmb	IAmb	10 05 40.1	
	comp=Z,90nm,1.7s						
EDW2	Edwards Air Fo	51.76	319	P	P	10 05 37.3	+1.2
	baz=127,SNR=28						
JLU	Jordanelle	51.76	329	P	P	10 05 36.2	-0.1
MATQ	Matagami	51.81	1	P	P	10 05 36.5	+0.4
	baz=182						
LRMC	Laurel Mtn Rad	51.92	320	P	P	10 05 39.0	+1.5
	baz=128,SNR=23						
TPNV	Topopah Spring	51.95	322	IAmb	IAmb	10 05 43.3	
	comp=Z,34nm,1.2s						
TPNV	Topopah Spring	51.95	322	P	P	10 05 39.6	+1.9
	baz=130,SNR=21						
CTU	Camp Tracy	51.98	329	P	P	10 05 38.0	+0.2
BLG	Laguna Peak, P	52.01	318	P	P	10 05 38.9	+0.9
	baz=126						
FURC	Furnace Creek,	52.02	321	P	P	10 05 39.6	+1.7
	baz=129,SNR=16						
MPMC	Manual Prospec	52.16	321	P	P	10 05 40.6	+1.4
	baz=129,SNR=19						
DUG	Dugway, Tooele	52.18	328	P	P	10 05 41.2	+1.9
DUG				pmax	pmax		
	comp=Z,46nm,1.5s						
DUG	Dugway, Tooele	52.18	328	IAmb	IAmb	10 05 45.4	
	comp=Z,59nm,1.4s						
DUG	Dugway, Tooele	52.18	328	P	P	10 05 40.8	+1.5
	baz=136,SNR=34						
AGMN	Agassiz Nation	52.36	346	IAmb	IAmb	10 05 46.5	
	comp=Z,38nm,1.2s						
AGMN	Agassiz Nation	52.36	346	P	P	10 05 40.3	0.0
	baz=159						
ARVC	Arvin	52.46	319	P	P	10 05 42.9	+1.7
	baz=127,SNR=15						
BW06	Boulder Array	52.46	332	IAmb	IAmb	10 05 45.5	
	comp=Z,45nm,1.4s						
BW06	Boulder Array	52.46	332	P	P	10 05 41.8	+0.4
	baz=141,SNR=11						
PD31	Pinedale Array	52.46	332	IAmb	IAmb	10 05 45.5	
	comp=Z,35nm,1.4s						
PDAR	Pinedale Array	52.46	332	P	P	10 05 41.6	+0.2
	comp=Z,8.1nm,0.9s,baz=133,slow=6.5,SNR=36						
PDAR				PcP	PcP	10 06 51.8	-0.3
	comp=Z,9.2nm,1.3s,baz=134,slow=6.4,SNR=1.5						
PDAR				LR	LR	10 28 32.8	
	comp=Z,324nm,18.2s,baz=146,slow=37						
PDAR	Pinedale Array	52.46	332	P	P	10 05 40.5	-1.0
R11A	Troy Canyon, C	52.47	324	IAmb	IAmb	10 05 47.0	
	comp=Z,60nm,1.5s						
R11A	Troy Canyon, C	52.47	324	P	P	10 05 42.9	+1.4
	baz=132,SNR=41						
ISA	Isabella, Lake	52.55	320	P	P	10 05 42.7	+0.7
ISA				pmax	pmax		
	comp=Z,64nm,1.4s						
ISA	Isabella, Lake	52.55	320	P	P	10 05 42.7	+0.7
ISA				IAmb	IAmb	10 05 47.5	
	comp=Z,64nm,1.4s						
ISA	Isabella, Lake	52.55	320	P	P	10 05 43.5	+1.5
	baz=127,SNR=28						
GRAC	Grapevine Rang	52.66	322	P	P	10 05 44.3	+1.4
	baz=129,SNR=18						
CWC	Cottonwood Cre	52.77	321	P	P	10 05 45.0	+1.3
	baz=128						
MDND	Maddock	52.95	343	P	P	10 05 43.0	-1.7
MDND	Maddock	52.95	343	P	P	10 05 45.2	+0.6
	baz=154,SNR=11						
PKM	Mcpherson Peak	52.97	318	P	P	10 05 45.7	+0.5
	baz=126,SNR=6.2						
VES	Vestal, Richgr	53.05	319	P	P	10 05 46.6	+1.0
	baz=127,SNR=30						
USHA	Ushuaia	53.18	172	P	P	10 05 47.4	+1.2
	comp=Z,4.6nm,0.6s,baz=27,slow=9.0,SNR=1.6						
AHID	Auburn Hatcher	53.20	331	IAmb	IAmb	10 05 50.8	
	comp=Z,38nm,1.1s						
SMMC	Simmler	53.34	318	P	P	10 05 49.4	+1.6
	baz=126,SNR=12						
REDW	Red Top Meadow	53.53	332	P	P	10 05 48.5	-0.8
SNOW	Snow King Moun	53.56	332	P	P	10 05 50.1	+0.5
SNOW				IAmb	IAmb	10 05 54.0	
	comp=Z,55nm,1.4s						
TPAW	Teton Pass	53.67	332	IAmb	IAmb	10 05 59.4	
	comp=Z,34nm,1.1s						
FXWY	Fox Creek	53.82	332	IAmb	IAmb	10 05 57.5	
	comp=Z,29nm,1.4s						
ELK	Elko	53.89	326	IAmb	IAmb	10 05 56.8	
	comp=Z,40nm,1.8s						
NV11	Mina Array Sit	54.06	322	IAmb	IAmb	10 06 02.0	
	comp=Z,30nm,1.2s						
MDPB	Devils Postpil	54.13	321	IAmb	IAmb	10 05 59.0	
	comp=Z,47nm,1.2s						
NVAR	Mina Array Bea	54.15	322	P	P	10 05 54.9	+0.9
	comp=Z,9.4nm,0.9s,baz=135,slow=7.1,SNR=42						
NVAR	Mina Array Bea	54.15	322	P	P	10 05 54.5	+0.6
RLMT	Red Lodge	54.17	334	P	P	10 05 53.5	-0.5
RLMT	Red Lodge	54.17	334	P	P	10 05 54.2	+0.3
	baz=142,SNR=17						
LAO	LASA Array	54.19	337	P	P	10 05 54.0	+0.1
LAO	LASA Array	54.19	337	P	P	10 05 54.1	+0.3
	baz=146,SNR=12						
H17A	Grant Village	54.19	333	P	P	10 05 54.3	+0.2
H17A	Grant Village	54.19	333	P	P	10 05 54.7	+0.5
	baz=140						
ULM	Lac du Bonnet	54.19	347	P	P	10 05 52.8	-1.0
	comp=Z,8.7nm,0.5s,baz=156,slow=8.0,SNR=24						
ULM				LR	LR	10 31 12.6	
	comp=Z,270nm,20.2s,baz=152,slow=39						
ULM	Lac du Bonnet	54.19	347	P	P	10 05 52.6	-1.1
ULM				pmax	pmax		
	comp=Z,29nm,1.6s						
ULM	Lac du Bonnet	54.19	347	IAmb	IAmb	10 05 56.0	
	comp=Z,50nm,1.4s						
RYN	Ryan	54.40	322	IAmb	IAmb	10 06 00.9	
	comp=Z,38nm,1.5s						
KVN	Kaiserville	54.41	323	P	P	10 05 54.6	-1.2
KVN				pmax	pmax		
	comp=Z,31nm,1.3s						
KVN	Kaiserville	54.41	323	P	P	10 05 54.6	-1.2
KVN				IAmb	IAmb	10 06 00.6	
	comp=Z,31nm,1.3s						
YNR	Norris Junctio	54.48	333	P	P	10 05 53.5	-2.7
YMR	Madison River	54.58	333	P	P	10 05 57.1	+0.2
YHH	Holmes Hill	54.62	333	P	P	10 05 57.5	+0.2
WAKR	Walker	54.89	322	IAmb	IAmb	10 06 04.7	
	comp=Z,54nm,1.5s						
DGMT	Dagmar	54.95	340	P	P	10 05 59.5	+0.1
	baz=149,SNR=6.0						
YERR	Yerington	55.06	322	IAmb	IAmb	10 06 05.7	
	comp=Z,58nm,1.6s						
PNTR	Pine Nut	55.35	322	IAmb	IAmb	10 06 07.9	
	comp=Z,70nm,1.8s						
VCNR	Virginia City	55.51	322	IAmb	IAmb	10 06 08.9	
	comp=Z,36nm,1.5s						
MCMT	McKenzie Canyo	55.58	332	P	P	10 06 03.9	-0.3
PAHR	Pah Rah Range	55.60	323	P	P	10 06 02.5	-1.9
PAHR				IAmb	IAmb	10 06 09.6	
	comp=Z,74nm,1.8s						
DLMT	Dillon	55.86	332	P	P	10 06 06.1	0.0
DLMT				IAmb	IAmb	10 06 14.1	
	comp=Z,31nm,1.2s						
BEKR	Beckworth	56.29	323	IAmb	IAmb	10 06 14.3	
	comp=Z,51nm,1.5s						
EGMT	Eagleton	56.67	336	P	P	10 06 09.9	-1.9
EGMT				IAmb	IAmb	10 06 16.0	
	comp=Z,50nm,1.1s						
EGMT	Eagleton	56.67	336	P	P	10 06 10.9	-0.9
	baz=143,SNR=7.8						
WVOR	Wild Horse Val	56.91	326	P	P	10 06 13.6	0.0
WVOR				pmax	pmax		
	comp=Z,71nm,1.3s						
WVOR	Wild Horse Val	56.91	326	P	P	10 06 13.6	0.0
J08A	Circle Bar Ran	57.43	327	IAmb	IAmb	10 06 21.4	
	comp=Z,43nm,1.5s						
MOD	Modoc Plateau	57.52	324	IAmb	IAmb	10 06 22.4	
	comp=Z,50nm,1.6s						
MSO	Missoula	57.58	332	P	P	10 06 18.8	+0.5
MSO				IAmb	IAmb	10 06 23.4	
	comp=Z,47nm,1.2s						
MSO	Missoula	57.58	332	P	P	10 06 19.4	+1.1
	baz=138,SNR=11						
SCHQ	Schefferville	57.79	8	P	P	10 06 18.4	-1.1
	comp=Z,7.8nm,0.8s,baz=171,slow=7.2,SNR=7.2						
SCHQ	Schefferville	57.79	8	P	P	10 06 18.5	-0.9
SCHQ				IAmb	IAmb	10 07 15.6	
	comp=Z,70nm,2.0s						
BMO	Blue Mountains	57.81	329	P	P	10 06 18.0	-1.9
BMO				pmax	pmax		
	comp=Z,23nm,1.4s						
BMO	Blue Mountains	57.81	329	P	P	10 06 18.0	-1.9
O02D	Mt. Diablo Mer	57.97	322	P	P	10 06 20.5	-0.6
	baz=126						
M04C	Macdoel	58.35	324	P	P	10 06 23.7	-0.1
	baz=128,SNR=7.3						
N02D	Trinity Center	58.38	322	P	P	10 06 23.4	-0.6
	baz=126						
JTMT	Jette	58.41	333	IAmb	IAmb	10 06 28.7	
	comp=Z,43nm,1.5s						
I07A	Izee	58.47	327	IAmb	IAmb	10 06 30.0	
	comp=Z,37nm,1.3s						
F10A	Beach Ranch, E	58.55	330	P	P	10 06 24.7	-0.3
M02C	Callahan	58.72	323	P	P	10 06 25.7	-0.6
	baz=126						
YBH	Yreka Blue Hor	58.84	323	P	P	10 06 26.4	-0.7
YBH				pmax	pmax		
	comp=Z,15nm,1.0s						
YBH	Yreka Blue Hor	58.84	323	P	P	10 06 26.4	-0.7
L04D	Klamath Falls	58.89	324	P	P	10 06 27.7	+0.1
	baz=127,SNR=9.4						
J05D	Fort Rock, OR	58.92	325	P	P	10 06 28.4	+0.6
	baz=129,SNR=14						
G08A	Pilot Rock	58.97	328	P	P	10 06 25.3	-2.8
PINE	Pine Mountain	59.08	326	P	P	10 06 26.1	-2.7
WALA	Waterton Lakes	59.22	334	P	P	10 06 29.8	0.0
WALA				IAmb	IAmb	10 06 34.0	
	comp=Z,30nm,0.9s						
E09A	Wood Farm, Sta	59.38	330	P	P	10 06 30.2	-0.5
E09A				IAmb	IAmb	10 06 40.8	
	comp=Z,20nm,1.1s						
J04D	Umpqua Nationa	59.40	325	P	P	10 06 31.3	+0.2
	baz=128						
KRMB	Red Mountain	59.44	322	P	P	10 06 30.8	-0.5
I05D	Terrebonne, OR	59.64	326	P	P	10 06 32.4	-0.2
	baz=129,SNR=6.1						
FFC	Flin Flon	59.79	345	P	P	10 06 32.9	-0.4
FFC				pmax	pmax		
	comp=Z,26nm,1.3s						
FFC	Flin Flon	59.79	345	P	P	10 06 32.9	-0.4
FFC				IAmb	IAmb	10 06 36.8	
	comp=Z,26nm,1.3s						
E08A	Dider Farm, El	59.83	329	P	P	10 06 35.5	+1.7
E08A				IAmb	IAmb	10 06 39.5	
	comp=Z,25nm,1.2s						
G06A	Carlson Farm,	59.83	327	P	P	10 06 35.1	+1.2
I04A	Tendick Farm,	59.91	325	P	P	10 06 34.3	-0.2
	baz=128						
K02D	Willamette Mer	59.98	323	P	P	10 06 35.3	+0.3
	baz=126,SNR=7.8						
HAWA	Hanford	60.01	329	P	P	10 06 34.3	-0.7
HAWA				IAmb	IAmb	10 07 25.4	
	comp=Z,40nm,1.6s						
NEW	Newport	60.10	332	P	P	10 06 34.8	-0.9
NEW				pmax	pmax		
	comp=Z,34nm,1.2s						
NEW	Newport	60.10	332	P	P	10 06 34.8	-0.9
NEW				IAmb	IAmb	10 06 39.7	
	comp=Z,34nm,1.1s						
NEW	Newport	60.10	332	P	P	10 06 36.1	+0.4
	baz=135,SNR=9.7						
D08A	Wollman Farm,	60.14	330	P	P	10 06 36.1	+0.1
D08A				IAmb	IAmb	10 06 58.6	
	comp=Z,34nm,1.6s						
G05D	Wamic, OR	60.20	327	P	P	10 06 37.1	+0.7
	baz=130						
E07A	Sunnyside	60.28	329	P	P	10 06 36.4	-0.6
E07A				IAmb	IAmb	10 06 41.7	
	comp=Z,25nm,0.9s						
H04A	Detroit Lake	60.33	326	P	P	10 06 36.6	-0.7
H04A				IAmb	IAmb	10 06 44.3	
	comp=Z,45nm,1.3s						
I03D	Drain, OR	60.39	325	P	P	10 06 38.0	+0.3
	baz=127						
TAOE	Nuku Hiva Isla	60.88	261	*e*S	S	10 15 02.0	+1.9
	comp=Z,658nm,27.9s						
TAOE				*e*LR	LR	10 24 44.8	
	comp=Z,1µm,27.7s,baz=90						
B08A	Colville Reser	61.23	331	P	P	10 06 43.4	0.0
B08A				IAmb	IAmb	10 07 33.7	
	comp=Z,33nm,1.6s						
E04D	Cinebar	61.71	327	P	P	10 06 46.8	+0.2
	baz=129						
D05A	Enumclaw	61.80	328	P	P	10 06 47.9	+0.7
D05A				IAmb	IAmb	10 06 51.5	
	comp=Z,32nm,1.0s						
D04E	Lakebay	62.21	328	P	P	10 06 50.5	+0.6
	baz=129						
E03A	Lebam	62.24	327	P	P	10 06 48.5	-1.7
B05A	Bryant	62.55	329	P	P	10 06 52.3	+0.1
	baz=130						
D03D	Eldon	62.60	328	P	P	10 06 53.2	+0.7
	baz=129						
LLLB	Lillooet	63.97	331	P	P	10 07 00.3	-1.4
FRB	Frobisher Bay	66.30	5	P	P	10 07 15.8	-0.6
YKA	Yellowknife Ar	69.86	343	P	P	10 07 38.4	-0.4
	comp=Z,8.7nm,0.8s,baz=141,slow=6.5,SNR=57						
YKA				LR	LR	10 41 30.4	
	comp=Z,252nm,18.1s,baz=0.0,slow=39						
PPT	Papeete	70.55	252	LR	LR	10 33 02.9	
	comp=Z,225nm,18.2s,baz=76,slow=31						
PPT2	Papeete2	70.55	252	*e*S	S	10 16 59.6	+1.4
	comp=Z,843nm,28.8s						
PPT2	Papeete2	70.55	252	*e*LR	LR	10 29 22.6	
	comp=Z,2µm,26.8s,baz=86						
TBI	Tubuai	70.94	246	*e*S	S	10 17 04.9	+2.5
	comp=Z,470nm,30.5s						
TBI	Tubuai	70.94	246	*e*LR	LR	10 29 27.1	
	comp=Z,1µm,26.8s,baz=86						
SFJD	Kangerlussuaq	72.00	11	P	P	10 07 56.5	+4.8
DLBC	Dease Lake	72.56	335	P	P	10 07 54.6	-0.8
DLBC				IAmb	IAmb	10 08 00.1	
	comp=Z,48nm,1.1s						
LIC	Lamto	74.60	83	*e*PKP1	P	10 08 09.5	+1.3
	comp=Z,46nm,1.5s						
TIC	Toumodi	74.64	83	*e*PKP1	P	10 08 09.3	+0.8
DBIC	Dimbokro	74.81	83	P	P	10 08 09.1	-0.3
	comp=Z,6.8nm,0.9s,baz=233,slow=4.4,SNR=6.5						
DBIC				LR	LR	10 39 14.5	
	comp=Z,502nm,18.8s,baz=238,slow=34						
DBIC	Dimbokro	74.81	83	P	P	10 08 12.3	+2.9
DBIC				pmax	pmax		
	comp=Z,21nm,1.4s						
KIC	Kosan Boka	74.90	83	*e*PKP1	P	10 08 10.1	+0.2
	comp=Z,123nm,1.7s						
PNCL	Nicolau / Gran	76.34	50	*e*PcP	PcP	10 08 27.6	-2.0
PMTG	Montargil	76.80	49	*e*PcP	PcP	10 08 29.0	-2.5
RES	Resolute Bay	77.38	356	P	P	10 08 21.0	-1.8
	comp=Z,3.6nm,1.0s,baz=178,slow=8.3,SNR=9.9						
RES				LR	LR	10 45 22.2	
	comp=Z,125nm,18.2s,baz=136,slow=38						
RES	Resolute Bay	77.38	356	P	P	10 08 21.5	-1.3
RES				pmax	pmax		
	comp=Z,9.0nm,1.3s						
RES	Resolute Bay	77.38	356	P	P	10 08 21.5	-1.3
PVIS	Viseu	77.45	48	*e*PcP	PcP	10 08 32.8	-1.6
C36M	Paulatuk	77.56	345	P	P	10 08 24.2	+0.3
	baz=134						
MTE	Manteigas	77.63	48	*e*PcP	PcP	10 08 30.5	-4.7
KULLO	Kullorsuaq	77.85	6	*i* P	P	10 08 25.1	-0.3
KULLO	Kullorsuaq	77.85	6	*e*P	P	10 08 25.1	-0.3
MVO	Moncorvo	78.19	47	*e*PcP	P	10 08 32.7	+4.6

BARN	Barnard Glacie	78.96	334	P	P	10 08 31.1	-1.0
BARN				IAmb	IAmb	10 08 40.8	
	comp=Z,47nm,1.3s						
SUMG	Summit	78.99	12	*i*P	P	10 08 32.0	-0.3
SUMG	Summit	78.99	12	*i*P	P	10 08 32.0	-0.3
SUMG	Summit	78.99	12	P	P	10 08 31.6	-0.7
SUMG				IAmb	IAmb	10 08 35.8	
	comp=Z,53nm,1.5s						
BALM	Baldy	79.25	334	P	P	10 08 34.4	+0.8
BALM				pmax	pmax		
	comp=Z,18nm,1.0s						
BALM	Baldy	79.25	334	P	P	10 08 34.4	+0.8
TGL	Tana Glacier	79.35	333	P	P	10 08 35.0	+0.8
TGL				IAmb	IAmb	10 08 38.4	
	comp=Z,38nm,1.1s						
DAWY	Dawson	79.39	337	P	P	10 08 34.2	0.0
CRQM	Cirque	79.49	333	P	P	10 08 32.5	-2.5
CRQM				IAmb	IAmb	10 08 38.5	
	comp=Z,26nm,1.2s						
EPYK	Eagle Plains	79.55	340	P	P	10 08 34.0	-1.1
EPYK				IAmb	IAmb	10 08 39.0	
	comp=Z,37nm,1.1s						
EPYK	Eagle Plains	79.55	340	P	P	10 08 34.9	-0.1
	baz=121						
INK	Inuvik	79.56	342	P	P	10 08 35.3	+0.3
	comp=Z,50nm,1.1s,baz=116,slow=7.1,SNR=26						
INK				LR	LR	10 45 42.5	
	comp=Z,399nm,21.9s,baz=142,slow=37						
INK	Inuvik	79.56	342	P	P	10 08 35.4	+0.4
INK				pmax	pmax		
	comp=Z,60nm,1.2s						
MCARA	McCarthy VSAT	79.70	334	P	P	10 08 34.3	-1.5
VRDI	Verde Repeater	79.82	334	IAmb	IAmb	10 08 40.9	
	comp=Z,39nm,1.1s						
PAB	San Pablo	79.84	49	P	P	10 08 40.0	+2.8
PAB				pmax	pmax		
	comp=Z,22nm,1.4s						
BCAR	Beaver Creek A	79.89	336	P	P	10 08 35.4	-1.6
RAGM	Ragged Mountai	80.04	333	P	P	10 08 36.2	-1.6
GLB	Gilahina Butte	80.06	334	P	P	10 08 38.3	+0.4
GLB				IAmb	IAmb	10 08 42.1	
	comp=Z,38nm,1.1s						
GUD	Guadarrama	80.21	48	P	P	10 08 42.3	+3.0
GUD				pmax	pmax		
	comp=Z,26nm,2.8s						
EGAK	Eagle	80.40	337	P	P	10 08 39.3	-0.2
EGAK				IAmb	IAmb	10 08 43.5	
	comp=Z,50nm,1.1s						
SCRK	Sand Creek	81.17	336	P	P	10 08 42.8	-1.1
VNA3	Neumayer Olymp	81.42	162	P	P	10 08 45.6	+0.6
RIDG	Independent Ri	81.42	336	P	P	10 08 44.6	-0.5
RIDG				IAmb	IAmb	10 08 49.0	
	comp=Z,38nm,1.1s						
TOA0	Torodi Ar. Sit	81.72	76	P	P	10 08 45.5	-2.2
TORD	Torodi Ar. Bea	81.72	76	P	P	10 08 46.6	-1.1
	comp=Z,1.7nm,0.5s,baz=283,slow=4.7,SNR=11						
TORD				LR	LR	10 46 26.4	
	comp=Z,307nm,18.3s,baz=300,slow=37						
TORD	Torodi Ar. Bea	81.72	76	P	P	10 08 45.6	-2.0
SCM	Sheep Creek Mo	81.77	334	P	P	10 08 47.3	+0.3
SCM				pmax	pmax		
	comp=Z,38nm,1.0s						
SCM	Sheep Creek Mo	81.77	334	P	P	10 08 47.3	+0.3
SCM				IAmb	IAmb	10 08 50.7	
	comp=Z,38nm,1.0s						
VNA2	Neumayer--Watz	82.03	162	P	P	10 08 49.3	+1.1
KNK	Knik Glacier	82.13	333	P	P	10 08 48.0	-0.9
KNK				IAmb	IAmb	10 08 52.6	
	comp=Z,29nm,1.1s						
SEW	Seward	82.17	332	P	P	10 08 48.7	-0.3
SEW				IAmb	IAmb	10 08 52.3	
	comp=Z,36nm,1.0s						
SML	Sawmill	82.21	333	P	P	10 08 48.7	-0.7
SML				IAmb	IAmb	10 08 52.8	
	comp=Z,40nm,1.0s						
GHO	Glory Hole Cre	82.46	333	P	P	10 08 49.4	-1.2
GHO				IAmb	IAmb	10 08 54.1	
	comp=Z,34nm,0.9s						
PMR	Palmer	82.50	333	IAmb	IAmb	10 08 54.0	
	comp=Z,24nm,1.2s						
HDA	Harding Lake	82.53	336	IAmb	IAmb	10 08 54.1	
	comp=Z,31nm,1.0s						
HDA	Harding Lake	82.53	336	P	P	10 08 50.6	-0.3
	baz=111						
RC01	Rabbit Creek A	82.61	332	IAmb	IAmb	10 08 54.9	
	comp=Z,33nm,1.0s						
IL31		82.64	336	P	P	10 08 49.5	-1.8
IL31				IAmb	IAmb	10 08 54.6	
	comp=Z,22nm,1.1s						
ILAR	Eielson Array	82.64	336	P	P	10 08 50.9	-0.5
	comp=Z,10nm,0.9s,baz=128,slow=3.9,SNR=36						
ILAR				PP	PP	10 12 03.2	+2.1
	comp=Z,6.6nm,1.1s,baz=110,slow=6.5,SNR=13						
ILAR				LR	LR	10 47 54.4	
	comp=Z,271nm,18.5s,baz=130,slow=37						
ILAR	Eielson Array	82.64	336	P	P	10 08 50.7	-0.7
ILAR	Eielson Array	82.64	336	P	P	10 08 50.7	-0.7
FYU	Fort Yukon	82.68	338	P	P	10 08 51.6	0.0
BRLK	Bradley Lake	82.75	331	P	P	10 08 52.0	-0.2
BRLK				IAmb	IAmb	10 08 55.5	
	comp=Z,43nm,1.1s						
BMAR	Burnt Mountain	82.79	339	P	P	10 08 52.2	0.0
CCB	Clear Creek Bu	82.96	336	P	P	10 08 52.9	-0.2
POKR	Poker Plat Res	82.98	337	P	P	10 08 52.9	-0.3
	baz=111						
COLA	College	83.06	336	P	P	10 08 53.7	+0.1
COLA				pmax	pmax		
	comp=Z,35nm,1.5s						
COLA	College	83.06	336	P	P	10 08 53.7	+0.1
COLA				IAmb	IAmb	10 08 59.6	
	comp=Z,35nm,1.4s						
TCOL	CIGO, UAF Yank	83.06	336	P	P	10 08 53.2	-0.4
	baz=110						
MCK	McKinley	83.11	335	P	P	10 08 53.5	-0.5
MCK				pmax	pmax		
	comp=Z,28nm,1.2s						
MCK	McKinley	83.11	335	P	P	10 08 53.5	-0.5
MCK				IAmb	IAmb	10 08 57.4	
	comp=Z,28nm,1.2s						
MDM	Murphy Dome	83.24	336	P	P	10 08 54.1	-0.5
MDM				IAmb	IAmb	10 08 58.1	
	comp=Z,32nm,1.0s						
SNAA	Sanae	83.64	162	P	P	10 08 55.6	-1.0
SNAA	Sanae	83.64	162	⇑*i*P	P	10 08 51.6	-5.0
SNAA				pmax	pmax		
	comp=Z,109nm,1.2s						
EKA	Eskdalemuir Ar	83.96	34	P	P	10 08 58.7	+0.3
	comp=Z,2.2nm,0.8s,baz=270,slow=5.0,SNR=2.7						
COLD	Coldfoot	84.75	338	IAmb	IAmb	10 09 09.6	
	comp=Z,17nm,1.2s						
TOLK	Toolik Lake Re	84.98	340	IAmb	IAmb	10 09 07.2	
	comp=Z,54nm,2.0s						
TOLK	Toolik Lake Re	84.98	340	P	P	10 09 03.2	-0.2
	baz=109,SNR=7.0						
SVW2	Sparrevohn	85.35	332	IAmb	IAmb	10 09 08.9	
	comp=Z,46nm,1.7s						
DAG	Danmarks Havn	85.69	12	*i*P	P	10 09 06.0	-0.7
	comp=Z,10nm,1.1s						
DAG	Danmarks Havn	85.69	12	*i*P	P	10 09 06.0	-0.7
DAG				pmax	pmax		
	comp=Z,11nm,1.1s						
IMAR	Indian Mountai	85.75	337	P	P	10 09 06.7	-0.5
DOU	Dourbes	87.76	40	pP	pP	10 09 28.5	+7.7
QSPA	South Pole Qui	87.83	180	LR	LR	10 41 01.0	
	comp=Z,155nm,21.8s,baz=160,slow=30						
QSPA	South Pole Qui	87.83	180	P	P	10 09 16.2	-1.4
QSPA				IAmb	IAmb	10 09 30.2	
	comp=Z,21nm,1.1s						
FALS	False Pass	88.43	325	P	P	10 09 20.2	-0.3
RDOG	Red Dog Mine	89.67	338	P	P	10 09 24.8	-1.2
RDOG				IAmb	IAmb	10 09 30.2	
	comp=Z,28nm,1.4s						
SLE	Schleitheim	90.13	42	P	P	10 09 30.1	+1.4
SLE				pmax	pmax		
	comp=Z,17nm,0.7s						
KEST	Kesra	90.17	54	LR	LR	10 46 52.9	
	comp=Z,126nm,20.9s,baz=246,slow=34						
ANM	Nome	90.32	334	P	P	10 09 28.5	-0.6
ANM				pmax	pmax		
	comp=Z,18nm,1.2s						
ANM	Nome	90.32	334	P	P	10 09 28.5	-0.6
ANM				IAmb	IAmb	10 09 33.5	
	comp=Z,18nm,1.2s						
CLL	Collm	93.16	39	*e*P	P	10 09 47.0	+4.4
GERES	GERESS Array B	93.63	41	LR	LR	10 48 01.8	
	comp=Z,90nm,21.6s,baz=256,slow=33						
BRG	Berggiesshubel	93.75	39	*e*P	P	10 09 50.8	+5.5
	comp=Z,15nm,1.5s						
BRG	Berggiesshubel	93.75	39	*e*P	P	10 09 50.8	+5.5
BRG				pmax	pmax		
	comp=Z,15nm,1.5s						
VNDA	Vanda	93.85	191	LR	LR	10 43 36.7	
	comp=Z,265nm,18.7s,baz=115,slow=30						
ARCES	ARCESS Array B	97.23	20	LR	LR	10 51 51.4	
	comp=Z,61nm,20.6s,baz=206,slow=34						
SYO	Syowa Base	97.92	161	⇓*e*sP	sP	10 10 17.4	+8.9
FINES	FINESS Array B	99.27	28	LR	LR	10 51 18.0	
	comp=Z,183nm,20.1s,baz=268,slow=33						
APA	Apatity	100.58	21	⇓*i*P	Pdif	10 10 17.9	+2.1
APA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
DZM	Mont Dzumac	111.51	245	*e*LR	LR	10 48 25.0	
	comp=Z,468nm,25.6s						
ABKAR	Akbulak array	121.67	30		PKPdf	10 15 22.5	+0.1
BVAR	Borovoye Array	123.49	21	PKP	PKPdf	10 15 25.9	+0.1
	comp=Z,0.2nm,0.4s,baz=260,slow=2.6,SNR=1.8						
KLR	Kul'dur	126.20	335	*i* PKIKP	PKPdf	10 15 28.0	-3.1
ZALV	Zalesovo Beam	126.82	12	PKP	PKPdf	10 15 32.5	+0.4
	comp=Z,1.8nm,0.4s,baz=291,slow=4.0,SNR=7.4						
ZALV	Zalesovo Beam	126.82	12	PKIKP	PKPdf	10 15 31.6	-0.5
ZALV	Zalesovo Beam	126.82	12		PKPdf	10 15 31.6	-0.5
KURK	Kurchatov	128.20	18	PKIKP	PKPdf	10 15 34.7	-0.1
KURK	Kurchatov	128.20	18		PKPdf	10 15 34.7	-0.1
STKA	Stephens Creek	128.50	225	PKP	PKPdf	10 15 36.0	0.0
	comp=Z,3.0nm,0.9s,baz=130,slow=10,SNR=4.0						
STKA	Stephens Creek	128.50	225	PKIKP	PKPdf	10 15 35.3	-0.7
STKA	Stephens Creek	128.50	225		PKPdf	10 15 35.3	-0.7
ZAK	Zakamensk	131.98	358	*e*PKIKP	PKiKP	10 15 43.1	-0.1
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.7s						
MK31	Makanchi Array	132.80	17	PKIKP	PKPdf	10 15 43.1	-0.6
MK31	Makanchi Array	132.80	17		PKPdf	10 15 43.1	-0.6
MKAR	Makanchi Array	132.80	17	PKP	PKPdf	10 15 42.5	-1.2
	comp=Z,1.0nm,0.8s,baz=309,slow=2.7,SNR=12						
MKAR	Makanchi Array	132.80	17	PKIKP	PKPdf	10 15 42.9	-0.9
MKAR	Makanchi Array	132.80	17		PKPdf	10 15 42.9	-0.9
SONM	Songino Array	134.31	355	PKP	PKPdf	10 15 46.4	-0.3
	comp=Z,1.2nm,0.9s,baz=289,slow=1.0,SNR=6.6						
SONM	Songino Array	134.31	355	PKIKP	PKPdf	10 15 44.9	-1.8
SONM	Songino Array	134.31	355		PKPdf	10 15 44.9	-1.8
KSH	Kashi	136.59	28	PKP	PKPdf	10 15 46.0	-5.2
KSH				LR	LR		
	comp=Z,130nm,12.7s						
KSH				LR	LR		
	comp=Z,83nm,12.8s						
KSH				LR	LR		
	comp=Z,900nm,11.3s						
KSRS	Korea Array	136.94	328	PKP	PKPdf	10 15 52.2	+0.5
	comp=Z,1.9nm,0.9s,baz=10,slow=1.1,SNR=8.6						
WMQ	Urumqi	137.00	14	*e*PKP	PKPdf	10 15 50.3	-1.5
WMQ				LR	LR		
	comp=Z,1μm,22.5s						
WMQ				LR	LR		
	comp=Z,2μm,29.1s						
WMQ				LR	LR		
	comp=Z,240nm,25.9s						
ASAR	Alice Springs	138.71	230	PKhKP	PKPpre	10 15 48.2	
	comp=Z,1.3nm,0.8s,baz=115,slow=2.5,SNR=8.0						
ASAR	Alice Springs	138.71	230	PKIKP	PKPdf	10 15 51.2	-4.3
ASAR	Alice Springs	138.71	230		PKPdf	10 15 51.1	-4.3
HHC	Hu-ho-hao-te	140.33	347	*e*PKP	PKiKP	10 15 59.8	-0.7
HHC				PP	PP	10 19 00.0	+5.3
WRA	Warramunga Arr	140.33	235	PKhKP	PKPpre	10 15 50.1	
	comp=Z,0.6nm,0.5s,baz=124,slow=2.4,SNR=14						
WRA	Warramunga Arr	140.33	235	PKIKP	PKPdf	10 15 53.0	-5.5
WRA	Warramunga Arr	140.33	235		PKPdf	10 15 53.0	-5.5
WB0	Warramunga Arr	140.37	235	PKPdf	PKPdf	10 15 54.2	-4.4
GTA	Gaotai	142.99	1	PKP	PKiKP	10 16 09.5	+3.5
GTA				pPKP	sPKPdf	10 16 28.0	+21
GTA				sPKP		10 16 36.0	
NJ2	Nanjing	145.78	332	*e*PKPbc	PKPdf	10 16 07.0	-0.7
LZH	Lanzhou	146.19	355	*e*PKPbc	PKPdf	10 16 03.3	-5.2
LZH				LR	LR		
	comp=Z,280nm,17.8s						
LZH				LR	LR		
	comp=Z,380nm,19.0s						
LZH				LR	LR		
	comp=Z,460nm,20.1s						
MTN	Manton Dam	146.30	243		PKPbc	10 16 09.9	-0.3
KNRA	Kununurra	147.05	236		PKPbc	10 16 12.3	0.0
XAN	Xi'an	147.44	347	PKPbc	PKPdf	10 16 11.5	+1.0
XAN				AMB	AMB		
	comp=Z,140nm,4.9s						
XAN				LR	LR		
	comp=Z,160nm,19.8s						
XAN				LR	LR		
	comp=Z,250nm,18.4s						
XAN				LR	LR		
	comp=Z,350nm,24.4s						
FITZ	Fitzroy Crossi	148.21	230	PKPbc	PKPdf	10 16 12.4	+0.3
WHN	Wuhan	149.02	337	PKPbc	PKPbc	10 16 17.8	+0.6
DANN	Dangsing	149.39	30	*e*P	PKPbc	10 16 18.4	-0.2
	comp=Z,118nm,0.9s						
GKN	Gorkha	150.12	29	*e*P	PKPbc	10 16 19.4	-0.8
GUN	Gumba	150.79	28	*e*P	PKPbc	10 16 20.2	-1.9
PKI	Pulchoki	150.85	29	*e*P	PKPdf	10 16 19.3	+2.7
	comp=Z,54nm,0.9s						
JIRN	Jiri	151.14	27	*e*P	PKPbc	10 16 20.3	-2.6
	comp=Z,43nm,0.7s						
CD2	Chengdu	151.33	355	PKPbc	PKPdf	10 16 12.8	-4.1
RAMN	Ramite	151.94	28	*e*P	PKPdf	10 16 19.8	+1.7
GYA	Guiyang	155.25	347	PKP	PKPdf	10 16 19.5	-3.2
GYA				pPKP	sPKPbc	10 16 40.0	+3.7
GYA				PKPab	PKPab	10 16 47.3	-0.1
GYA				PKS	PKSdf	10 19 52.0	-5.1
GYA				PP	PP	10 20 25.8	+3.7
GYA				AMB	AMB		
	comp=Z,130nm,8.4s						
KMI	Kunming	157.16	355	PKP	PKPdf	10 16 29.3	+3.9
KMI				pPKP	sPKPdf	10 16 34.0	+3.9
KMI				LR	LR		
	comp=Z,270nm,22.1s						
KMI				LR	LR		
	comp=Z,200nm,24.0s						
KMI				LR	LR		
	comp=Z,320nm,27.0s						
QIZ	Qiongzhong	161.07	332	PKP	PKPdf	10 16 27.3	-2.5
QIZ				PP	PP	10 20 52.3	-2.0
QIZ				SS	SS	10 41 05.5	-3.1
QIZ				LR	LR		
	comp=Z,150nm,19.1s						
QIZ				LR	LR		
	comp=Z,210nm,20.1s						
QIZ				LR	LR		
	comp=Z,230nm,21.6s						
CMAR	Chiang Mai Arr	163.78	6	PKP	PKPdf	10 16 32.8	+0.2
	comp=Z,1.2nm,0.3s,baz=327,slow=3.1,SNR=6.1						
CMAR				PKPab	PKPab	10 17 25.9	+1.5
	comp=Z,1.8nm,0.3s,baz=341,slow=4.3,SNR=4.4						
CMAR	Chiang Mai Arr	163.78	6	PKP2	PKPab	10 17 21.3	-3.1
CMAR						11 16 30.5	
CMAR	Chiang Mai Arr	163.78	6		PKPdf	10 16 30.4	-2.1
CMAR					PKPab	10 17 21.3	-3.1

MAN 25 09:58:38.9, $17^{\circ}.60$N×$120^{\circ}.09$E, h29^{km}, mb4.7, ML3.6, MS3.4, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIPP	Brgy, Tapao	0.47	47	⇑*i*P	Pn	09 58 49.6	-0.1
SIPP				*e*S	Sn	09 58 58.2	+1.1
ABRA	Dolores	0.59	85	*e*P	Pn	09 58 51.4	+0.1
ABRA				*e*S	Sn	09 59 01.1	+1.2
APYP	Conner	1.13	76	*e*P	Pb	09 58 59.6	-0.1
APYP				*e*S	Sb	09 59 15.9	+1.9
BOLP	Bolinao	1.22	188	*e*P	Pn	09 59 00.3	+0.2
BOLP				*e*S	Sn	09 59 15.9	+0.3
SMPP	San Manuel, Pa	1.55	159	*e*P	Pn	09 59 03.8	-0.7
SMPP				*e*S	Sn	09 59 24.2	+0.6
CAUP	Cauayan	1.78	111	*e*P	Pb	09 59 11.9	+1.1

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*IDC **25** 10:08:27.4±1.8, $2^{\circ}.05$S×$78^{\circ}.99$W, h0^{km}, mb3.6/6, mb1 3.9/7, mb1mx3.6/42, mbtmp3.6/7, ML3.1/1, Error ellipse: s-maj=128.9km s-min=18.0km az=78.0*

*IGQ **25** 10:08:28.2±0.3, 2°S±2°×7°9W±°, h4^{km}, M4.1*

*NEIC **25** 10:08:34.1±1.9, $2^{\circ}.12$S±$0^{\circ}.08$×$79^{\circ}.2$W±$0^{\circ}.2$, h35^{km}±2^{km}, mb4.2/4, Error ellipse: s-maj=37.6km s-min=10.3km az=102.0*

ISC 25 10:08:29.0±0.6, $2^{\circ}.21$S±$0^{\circ}.03$×$79^{\circ}.28$W±$0^{\circ}.03$, h10^{km}, n55, σ$1^{s}.27$/56, mb3.7/7, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COHC	Cochancay	0.25	175	P	Pg	10 08 33.5	-0.6
COHC	Cochancay	0.25	175	S	Sg	10 08 37.1	-0.5
AMIL	Milagro (Trans	0.33	284	P	Pg	10 08 35.0	-0.6
AGUAY	Guayaquil	0.69	283	P	Pg	10 08 41.7	-0.7
AGUAY	Guayaquil	0.69	283	S	Sg	10 08 51.4	-0.1
BMAS	Trigal station	1.06	48	P	Pg	10 08 48.0	-1.4
BBIL	Ulba Tungurahu	1.09	46	P	Pg	10 08 49.3	-0.8
BPAT	Tungurahua Vol	1.10	50	S	Sg	10 09 04.0	-0.5
BPAT	Tungurahua Vol	1.10	50	P	Pg	10 08 48.9	-1.3
RETU	Refugio	1.12	48	P	Pg	10 08 49.5	-1.1
MORR	Playas El Morr	1.14	248	P	Pn	10 08 50.4	-0.7
BULB	Ulba Tungurahu	1.16	48	P	Pg	10 08 49.9	-1.4
BULB	Ulba Tungurahu	1.16	48	S	Sg	10 09 05.7	-0.7
BRUN	Tungurahua Vol	1.17	48	P	Pb	10 08 49.8	-1.6
PISA	Pisayambo	1.45	38	P	Pg	10 08 56.1	-0.8
APUY	Puyo	1.48	60	S	Sg	10 09 17.4	+0.7
APUY	Puyo	1.48	60	P	Pg	10 08 57.0	-0.4
PPLP	Puerto Lpez	1.64	294	P	Pn	10 08 55.4	-2.5
BMOR	Cotopaxi Volca	1.68	29	P	Pg	10 09 00.6	-0.8
BMOR	Cotopaxi Volca	1.68	29	S	Sg	10 09 22.6	-0.6
SALI	Salinas	1.71	271	P	Pn	10 08 57.8	-1.1
BNAS	Cotopaxi Volca	1.73	27	P	Pb	10 09 00.9	-0.2
BREF	Cotopaxi Volca	1.75	29	P	Pg	10 09 01.4	-1.1
TAMB	Tambo	1.76	31	P	Pb	10 09 01.2	-0.5
VC1	Cotopaxi 1	1.79	29	P	Pb	10 09 01.3	-0.9
ATEN	Tena	1.89	51	S	Sn	10 09 25.5	+0.1
ATEN	Tena	1.89	51	P	Pn	10 09 00.5	-0.9
ANTM	Antisana-La Mi	1.97	32	S	Sg	10 09 31.4	-1.0
ANTM	Antisana-La Mi	1.97	32	P	Pb	10 09 05.2	0.0
ANTG	Antisana-Guama	1.98	31	P	Pb	10 09 05.0	-0.4
ANTS	Antisana-Sarah	2.03	33	P	Pb	10 09 05.4	-0.9
GGPC	Guagua Pichinc	2.13	19	P	Pb	10 09 08.1	0.0
PINO	Pino	2.15	18	P	Pb	10 09 07.8	-0.6
YANA	Yana	2.20	19	P	Pb	10 09 08.3	-0.8
PULU	Pululahua	2.35	19	P	Pb	10 09 10.3	-1.3
PAC1	Pacto, Paraso	2.51	11	P	Pn	10 09 11.2	+1.2
CAYA	Cayambe	2.61	30	P	Pb	10 09 16.7	+0.5
CUIC	Cuicocha-Domo	2.66	20	P	Pb	10 09 16.2	-0.9
URCU	Urcuqui	2.82	21	P	Pb	10 09 20.4	+0.7
YAHU	Yahuarcocha	2.83	25	P	Pb	10 09 20.8	+0.8
ATAH	Atahualpa	4.97	170	Pn	Pn	10 09 47.2	+3.2
	0.8nm,0.3s,baz=312,slow=15,SNR=1.3						
ATAH				Pg	Pg	10 10 02.0	-2.2
	3.9nm,0.3s,baz=4.9,slow=7.5,SNR=8.0						
ATAH				Lg	Lg	10 11 05.7	
	1.2nm,0.3s,baz=27,slow=16,SNR=1.6						
FLOC	Florencia	5.23	44	Pn	Pn	10 09 48.2	+0.9
ANMO	Albuquerque	44.90	328	P	P	10 16 43.6	-0.6
	1.6nm,0.8s,baz=150,slow=9.1,SNR=8.8						
ANMO	Albuquerque	44.90	328	P	P	10 16 45.7	+1.5
ANMO				IAmb	IAmb	10 16 46.6	
	comp=Z,2.1nm,0.9s						
PV12	Saucer Basin,	48.68	329	P	P	10 17 16.6	+2.8
PV12				IAmb	IAmb	10 17 18.6	
	comp=Z,5.7nm,1.2s						
RSSD	Black Hills	51.18	337	P	P	10 17 34.6	+2.0
PDAR	Pinedale Array	52.45	332	P	P	10 17 42.5	+0.3
	comp=Z,0.5nm,1.0s,baz=134,slow=5.2,SNR=2.2						
NVAR	Mina Array Bea	54.13	322	P	P	10 17 55.7	+1.0
	comp=Z,0.4nm,0.7s,baz=139,slow=8.4,SNR=1.4						
GCMT	Greycliff	54.85	334	P	P	10 18 00.8	+1.1
YKA	Yellowknife Ar	69.85	343	P	P	10 19 38.9	-0.7
	comp=Z,0.4nm,0.7s,baz=140,slow=6.3,SNR=7.6						
INK	Inuvik	79.55	342	P	P	10 20 35.2	-0.5
	comp=Z,1.2nm,0.8s,baz=146,slow=7.3,SNR=4.6						
VNA3	Neumayer Olymp	81.44	162	P	P	10 20 49.8	+3.9
VNA1	Neumayer--Stat	81.69	161	P	P	10 20 47.6	+0.4
ILAR	Eielson Array	82.62	336	P	P	10 20 52.0	-0.2
	comp=Z,0.5nm,0.8s,baz=147,slow=5.2,SNR=6.1						
BRLK	Bradley Lake	82.73	331	P	P	10 20 51.4	-1.6

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*IDC **25** 10:15:36.5±3.6, $52^{\circ}.65$N×$160^{\circ}.17$E, h0^{km}, mb3.5/2, mb1 3.7/2, mb1mx3.2/47, mbtmp3.5/2, Error ellipse: s-maj=66.6km s-min=36.5km az=171.0*

*KRSC **25** 10:15:42.2±1.4, $52^{\circ}.49$N×$159^{\circ}.88$E, h42^{km}±19^{km}, ML3.9*

ISC 25 10:15:39.4±1.7, $52^{\circ}.56$N±$0^{\circ}.06$×$160^{\circ}.28$E±$0^{\circ}.06$, h33^{km}±7^{km}, n43, σ$1^{s}.57$/52, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DALK	Dalny	1.04	298	*e*P	Pb	10 15 58.6	-0.2
DALK				*e*S	Sn	10 16 09.7	-1.3
RUS	Russkaya	1.08	264	*e*P	Pn	10 15 58.4	+0.1
RUS				*e*S	Sn	10 16 10.0	-2.1
PET	Petropavlovsk	1.09	296	*e*P	Pb	10 15 59.1	-0.6
PET				*e*S	Sn	10 16 11.0	-1.3
UGLR	Uglovaya	1.09	307	*e*P	Pb	10 16 00.4	+0.5
UGLR				*e*S	Sb	10 16 13.3	-0.6
SDLR	Sedlovina	1.11	311	*e*P	Pb	10 16 00.5	+0.4
SMAR	Somma	1.14	309	*e*P	Pb	10 16 01.0	+0.3
AVH	Avacha	1.17	308	*e*P	Pb	10 16 01.5	+0.4
AVH				*e*S	Sb	10 16 15.3	-0.7
KRER	Koryakskii	1.19	310	*e*P	Pb	10 16 01.9	+0.4
KOK	Koryaka	1.23	307	*e*P	Pb	10 16 02.4	+0.2
KRX	Arik	1.27	310	*e*P	Pb	10 16 02.8	0.0
MTVR	Mutnovka	1.28	267	*e*P	Pb	10 16 01.6	-1.4
MTVR				*e*S	Sn	10 16 15.6	-1.6
KRMR	Karymshinskiy	1.33	283	*e*P	Pn	10 16 01.7	0.0
KRMR				*e*S	Sn	10 16 16.0	-2.3
GRL	Gorelyy	1.34	271	*e*P	Pb	10 16 03.2	-0.9
GRL				*e*S	Sn	10 16 18.8	0.0
ASAK	Asacha	1.46	264	*e*P	Pb	10 16 04.8	-1.3
ASAK				*e*S	Sn	10 16 21.1	-0.5
KII	Karymskiy	1.56	342	*e*P	Pb	10 16 09.1	+1.4
KII				*e*S	Sb	10 16 29.0	+1.9
PETK	Petropavlovsk-	1.66	290	Pn	Pn	10 16 07.4	+1.2
	30nm,0.3s,baz=103,slow=19,SNR=90						
PETK				Sn	Sn	10 16 25.9	-0.4
	26nm,0.3s,baz=123,slow=17,SNR=5.3						
MIPR	Malaya Ipel'ka	2.17	264	*e*P	Pb	10 16 16.0	-2.0
KZV	Kizimen	2.56	0	*e*P	Pb	10 16 25.0	+0.3
KZV				*e*S	Sb	10 16 57.4	+1.6
TUMR	Tumrok	2.73	358	*e*P	Pb	10 16 27.7	+0.1
SKR	Severo-Kuril's	3.20	236	*e*P	Pn	10 16 30.5	+3.2
SKR				*e*S	Sn	10 17 03.9	-0.4
KMNR	Kamenistaya	3.20	360	*e*P	Pb	10 16 34.6	-1.0
BZGR	Bezymyannyi-Gr	3.40	4	*e*P	Pb	10 16 37.5	-1.4
KIRR	Kirishev	3.40	1	*e*P	Pb	10 16 38.2	-0.8
ZLN	Zelenaya	3.48	5	*e*P	Pb	10 16 39.9	-0.4
ZLN				*e*S	Sb	10 17 22.6	+0.5
ESO	Esso	3.50	345	*e*P	Pb	10 16 37.0	-3.5
KOZ	Kozyrevsk	3.51	356	*e*P	Pb	10 16 39.4	-1.4
LGNR	Loginova	3.54	4	*e*P	Pb	10 16 40.7	-0.7
LGNR				*e*S	Sb	10 17 22.9	-1.1
CIRR	Tsirk	3.58	4	*e*P	Pb	10 16 40.2	-1.7
KRSR	Krestovskiy	3.67	3	*e*P	Pb	10 16 40.8	-2.7
KLY	Klyuchi	3.77	3	*e*P	Pb	10 16 44.2	-0.9
SRDR	Sredinnyy	3.78	355	*e*P	Pb	10 16 42.1	-3.3
KBTR	Krutoberegovo	3.95	21	*e*P	Pb	10 16 45.6	-2.6
KBG	Krutoberegovo	3.97	20	*e*P	Pb	10 16 46.1	-2.4
BDR	Baidarnaya	4.05	7	*e*P	Pb	10 16 48.2	-1.9
SRKR	Sorokina	4.14	7	*e*P	Pb	10 16 48.6	-2.8
H11N2	WAKE ISLAND Hy	33.17	169	T	T	10 57 52.7	
	baz=352,slow=76,SNR=16						
H11N3	WAKE ISLAND Hy	33.18	169	T	T	10 57 53.8	
	baz=352,slow=76,SNR=14						
H11N1	WAKE ISLAND Hy	33.18	169	T	T	10 57 53.8	
	baz=352,slow=76,SNR=16						
H11S1	WAKE ISLAND Hy	34.35	169	T	T	10 59 32.2	
	baz=350						
H11S3	WAKE ISLAND Hy	34.36	169	T	T	10 59 34.0	
	baz=350						
H11S2	WAKE ISLAND Hy	34.37	169	T	T	10 59 35.2	
	baz=350						
MKAR	Makanchi Array	48.49	296	P	P	10 24 18.0	-0.7
	0.2nm,0.5s,baz=55,slow=6.4,SNR=3.6						
NOA	NORSAR Array B	64.09	344	P	P	10 26 11.9	+2.2
	0.4nm,0.5s,baz=24,slow=6.8,SNR=2.1						

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*IDC **25** 10:33:00.4±1.0, $2^{\circ}.04$S×$79^{\circ}.11$W, h0^{km}, mb3.5/7, mb1 3.8/8, mb1mx3.6/44, mbtmp3.5/8, ML3.1/1, Error ellipse: s-maj=60.4km s-min=16.3km az=71.0*

ISC 25 10:33:02.8±0.9**, 2°.0S**±0°.1×**79°.0W**±0°.3**, h14km, n8, σ0s.93**/9, **mb3.6**/7**, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	Atahualpa	5.18	174	Pn	Pn	10 34 19.4	-0.9
	0.7nm,0.3s,baz=80,slow=19,SNR=1.7						
ATAH				Pg	Pb	10 34 34.2	+0.7
	1.6nm,0.3s,baz=8.0,slow=11,SNR=6.6						
ATAH				Lg	Lg	10 35 41.8	
	2.9nm,0.3s,baz=259,slow=24,SNR=4.2						
SIV	San Ignacio	22.48	129	P	P	10 38 02.1	+0.1
	0.5nm,0.5s,baz=309,slow=13,SNR=2.7						
ANMO	Albuquerque	44.84	327	P	P	10 41 16.9	-0.1
	1.5nm,0.9s,baz=152,slow=11,SNR=6.5						
PDAR	Pinedale Array	52.36	332	P	P	10 42 13.8	-1.0
	0.4nm,0.8s,baz=149,slow=9.3,SNR=3.3						
NVAR	Mina Array Bea	54.12	322	P	P	10 42 27.8	+0.1
	0.2nm,0.5s,baz=138,slow=7.2,SNR=2.6						
YKA	Yellowknife Ar	69.69	343	P	P	10 44 11.3	-0.5
	0.3nm,0.6s,baz=143,slow=5.9,SNR=6.7						
INK	Inuvik	79.39	342	P	P	10 45 09.7	+1.6
	2.4nm,1.1s,baz=131,slow=6.6,SNR=4.3						
ILAR	Eielson Array	82.50	336	P	P	10 45 24.4	-0.4
	0.4nm,0.8s,baz=121,slow=3.5,SNR=4.1						

IGQ ***25*** *10:35:56.0±0.3, 2°S±3°×7°9W±°, h5km, M4.0*
IDC ***25*** *10:35:56.1±1.0, 2°.05S×79°.26W, h0km, mb3.6/8, mb1 3.8/11, mb1mx3.7/41, mbtmp3.6/11, ML3.3/3, Error ellipse: s-maj=44.9km s-min=17.3km az=59.0*
NEIC ***25*** *10:36:00.5±2.3, 2°.13S±0°.07×79°.1W±0°.1, h35km±2km, mb4.3/19, Error ellipse: s-maj=22.0km s-min=12.5km az=95.0*
ISC 25 10:35:56.3±0.5**, 2°.23S**±0°.03×**79°.26W**±0°.03**, h10km, n80, σ1s.19**/82**, mb4.2**/17**, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COHC	Cochancay	0.24	179	S	Sg	10 36 04.8	+0.3
COHC	Cochancay	0.24	179	P	Pg	10 36 01.1	-0.1
AMIL	Milagro (Trans	0.35	285	P	Pg	10 36 02.8	-0.4
AMIL	Milagro (Trans	0.35	285	S	Sg	10 36 08.5	+0.6
AGUAY	Guayaquil	0.71	284	S	Sb	10 36 19.8	-0.9
AGUAY	Guayaquil	0.71	284	P	Pg	10 36 09.7	-0.4
BMAS	Trigal station	1.06	47	P	Pg	10 36 16.0	-0.7
BIL2	Estacion Bilba	1.07	45	P	Pn	10 36 18.0	+0.3
BBIL	Ulba Tungurahu	1.09	45	P	Pg	10 36 16.9	-0.4
BPAT	Tungurahua Vol	1.09	49	P	Pg	10 36 16.6	-0.7
RETU	Refugio	1.12	47	P	Pg	10 36 17.2	-0.6
BULB	Ulba Tungurahu	1.15	47	P	Pg	10 36 17.5	-1.0
MORR	Playas El Morr	1.16	249	P	Pn	10 36 18.1	-0.4
RUN5	Runtun	1.16	46	P	Pb	10 36 17.6	-1.0
BRUN	Tungurahua Vol	1.16	47	P	Pb	10 36 17.7	-1.0
PISA	Pisayambo	1.45	37	P	Pb	10 36 23.5	-0.2
APUY	Puyo	1.47	59	P	Pg	10 36 24.6	0.0
PPLP	Puerto Lpez	1.66	294	P	Pn	10 36 23.5	-2.0
BMOR	Cotopaxi Volca	1.69	28	P	Pb	10 36 28.0	+0.2
BNAS	Cotopaxi Volca	1.73	27	P	Pb	10 36 28.8	+0.3
SALI	Salinas	1.73	271	P	Pn	10 36 25.7	-0.8
BREF	Cotopaxi Volca	1.75	28	P	Pg	10 36 30.2	+0.3
TAMB	Tambo	1.76	30	P	Pb	10 36 29.2	+0.2
BTAM	Cotopaxi Volca	1.76	29	P	Pb	10 36 29.4	+0.3
VC1	Cotopaxi 1	1.79	29	P	Pb	10 36 29.8	+0.3
ANTM	Antisana-La Mi	1.97	32	P	Pb	10 36 32.5	-0.1
ANTG	Antisana-Guama	1.98	30	P	Pb	10 36 33.0	+0.2
GONZ	Gonzanam	2.00	184	P	Pb	10 36 32.8	-0.3
ANTS	Antisana-Sarah	2.03	32	P	Pb	10 36 33.6	0.0
GGPC	Guagua Pichinc	2.14	18	P	Pb	10 36 35.7	+0.2
TERV	Terraza Guagua	2.14	18	P	Pb	10 36 35.9	+0.4
GGP	Refugio Guagua	2.14	18	P	Pb	10 36 34.7	-0.9
PINO	Pino	2.15	18	P	Pb	10 36 35.8	0.0
MAG1	Magdalena	2.20	346	P	Pb	10 36 35.9	-0.3
YANA	Yana	2.20	18	P	Pb	10 36 36.6	+0.1
APR2	Miler	2.31	7	P	Pb	10 36 37.1	-0.9
PULU	Pululahua	2.36	19	P	Pb	10 36 39.5	+0.4
PAC1	Pacto, Paraso	2.52	11	P	Pb	10 36 39.8	-1.9
CAYA	Cayambe	2.61	29	P	Pb	10 36 44.6	+1.1
CUIC	Cuicocha-Domo	2.67	20	P	Pb	10 36 44.4	-0.1
IMBA	Imbabura, San	2.70	23	P	Pb	10 36 46.3	+1.3
URCU	Urcuqui	2.83	21	P	Pb	10 36 46.3	-0.9
YAHU	Yahuarcocha	2.84	25	P	Pb	10 36 47.2	-0.1
CASC	Dorado de Casc	3.03	39	P	Pb	10 36 48.9	-1.5
ATAH	Atahualpa	4.95	170	Pn	Pn	10 37 15.3	+4.1
	1.6nm,0.3s,baz=1.1,slow=18,SNR=1.0						
ATAH				Pg	Pg	10 37 28.9	-2.4
	3.0nm,0.3s,baz=9.5,slow=6.8,SNR=4.4						
ATAH				Lg	Lg	10 38 32.0	
	4.6nm,0.3s,baz=304,slow=12,SNR=3.9						
FLOC	Florencia	5.22	44	Pn	Pn	10 37 15.1	+0.5
FLOC				Sn	Sn	10 38 13.3	-1.6
NNA	Nana	9.99	166	Pn	Pn	10 38 18.5	-1.5
RUSC	La Rusia	10.15	37	Pn	Pn	10 38 18.8	-3.8
SAML	Samuel	17.33	113		Pn	10 39 57.6	-0.9
LPAZ	La Paz	17.76	143	P	P	10 40 08.4	+3.1
	0.1nm,0.3s,baz=338,slow=11,SNR=1.6						
LPAZ	La Paz	17.76	143	P	P	10 40 05.6	+0.4
PTGA	Pitinga	19.34	86	P	Pn	10 40 25.1	+2.0
	0.0nm,0.3s,baz=270,slow=20,SNR=1.9						
PTGA				Lg	Lg	10 46 01.2	
	0.2nm,0.3s,baz=287,slow=19,SNR=3.4						
PSGCX	Pisagua	19.44	153	P	Pn	10 40 25.3	+0.9
PB11	IPOC Station P	19.80	152	P	Pn	10 40 28.4	-0.3
PATCX	Punta Patache	20.50	155	P	P	10 40 33.5	-1.3
PB07	IPOC Station P	21.42	156	P	P	10 40 47.1	+2.3
PB07				IAmb	IAmb	10 40 53.5	
	comp=Z,19nm,1.3s						
PB09	IPOC Station P	21.76	154	P	P	10 40 50.2	+1.8
PB09				IAmb	IAmb	10 41 01.2	
	comp=Z,7.9nm,0.6s						
SIV	San Ignacio	22.54	128	P	P	10 40 58.0	+1.3
	comp=Z,0.7nm,0.6s,baz=288,slow=13,SNR=2.8						
CPCT	Cooper Cave	37.80	353	P	P	10 43 13.1	+0.2
CPCT				IAmb	IAmb	10 43 14.6	
	comp=Z,5.4nm,1.1s						
TZTN	Tazewell	38.78	354	P	P	10 43 21.2	+0.1
WVT	Waverly	38.99	349	P	P	10 43 22.2	-0.6
WHAR	Wooly Hollow	39.27	343	P	P	10 43 25.8	+0.6
WHAR				IAmb	IAmb	10 43 34.7	
	comp=Z,10nm,1.4s						
LCAR	Lake Charles	39.68	345	P	P	10 43 28.1	-0.6
LCAR				IAmb	IAmb	10 43 43.5	
	comp=Z,7.0nm,1.5s						
U40A	Yellville	40.42	343	P	P	10 43 35.3	+0.4
U40A				IAmb	IAmb	10 43 36.0	
	comp=Z,9.2nm,1.4s						
T42A	Van Buren	40.58	345	P	P	10 43 35.3	-0.8
T42A				IAmb	IAmb	10 43 38.8	
	comp=Z,7.7nm,1.4s						
M48A	Edgerton	43.79	354	P	P	10 44 02.2	0.0
M48A				IAmb	IAmb	10 44 11.2	
	comp=Z,17nm,1.4s						
ANMO	Albuquerque	44.92	328	P	P	10 44 12.4	+0.7
	comp=Z,1.0nm,0.7s,baz=140,slow=9.8,SNR=4.4						
ANMO	Albuquerque	44.92	328	P	P	10 44 11.9	+0.3
PDAR	Pinedale Array	52.47	332	P	P	10 45 10.6	+0.9
	comp=Z,0.2nm,0.5s,baz=128,slow=8.1,SNR=2.0						
PDAR	Pinedale Array	52.47	332	P	P	10 45 09.0	-0.6
NVAR	Mina Array Bea	54.15	322	P	P	10 45 23.9	+1.8
	comp=Z,0.2nm,0.5s,baz=148,slow=4.1,SNR=2.3						
NVAR	Mina Array Bea	54.15	322	P	P	10 45 23.8	+1.6
ULM	Lac du Bonnet	54.19	347	P	P	10 45 20.9	-1.0
	comp=Z,0.8nm,0.5s,baz=161,slow=8.8,SNR=3.8						
ULM	Lac du Bonnet	54.19	347	P	P	10 45 20.6	-1.3
ULM				IAmb	IAmb	10 45 37.7	
	comp=Z,6.8nm,1.5s						
YKA	Yellowknife Ar	69.86	343	P	P	10 47 06.8	-0.2
	comp=Z,0.4nm,0.6s,baz=142,slow=6.6,SNR=14						
INK	Inuvik	79.56	342	P	P	10 48 03.0	-0.1
	comp=Z,0.7nm,0.7s,baz=140,slow=3.3,SNR=3.3						
INK	Inuvik	79.56	342	P	P	10 48 03.2	0.0
INK				IAmb	IAmb	10 48 10.3	
	comp=Z,2.9nm,1.3s						
ILAR	Eielson Array	82.64	336	P	P	10 48 20.2	+0.6
	comp=Z,0.4nm,0.8s,baz=133,slow=4.3,SNR=5.2						
ILAR	Eielson Array	82.64	336	P	P	10 48 18.1	-1.5
RND	Reindeer	82.97	335	P	P	10 48 23.1	+1.7
RND				IAmb	IAmb	10 48 34.7	
	comp=Z,4.1nm,1.2s						

MOS ***25*** *10:36:18.3±1.0, 28°.07S×74°.26E, h10km, mb4.8/29, Error ellipse: s-maj=15.9km s-min=9.2km az=92.2*
IDC ***25*** *10:36:18.4±0.6, 28°.06S×74°.12E, h0km, mb4.2/16, mb1 4.4/16, mb1mx4.1/45, mbtmp4.2/16, MS4.2/20, Ms1 4.2/20, ms1mx4.0/43, Error ellipse: s-maj=18.8km s-min=17.6km az=6.0*
NEIC ***25*** *10:36:19.4±1.7, 28°.1S±0°.1×74°.1E±0°.1, h10km±1km, mb4.9/41, Error ellipse: s-maj=20.5km s-min=19.8km az=167.0*
GCMT ***25*** *10:36:21.4±0.2, 27°.86S±0°.02×74°.18E±0°.02, h12km, MW5.0/112, Moment Tensor Solution. s39,c47; s112,c160; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.51±.08; $M_{\theta\theta}$1.83±.08; $M_{\phi\phi}$1.68±.08; $M_{r\theta}$0.24±.30; $M_{\theta\phi}$-1.55±.06; $M_{\phi r}$1.03±.34; Best double couple: $M_0$3.55500×10^{16} NP1:ϕ_s301.00000°, δ42.00000°, λ-109.00000°. NP2:ϕ_s147.00000°, δ51.00000°, λ-74.00000°. Principal axes: T 3.3510, Plg5.0000°, Azm225.0000°; N 0.4090, Plg13.0000°, Azm316.0000°; P -3.7600, Plg76.0000°, Azm115.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 25 10:36:20.2±0.5**, 28°.19S**±0°.08×**73°.98E**±0°.09**, h12km, n165, σ1s.66**/154**, mb4.7**/50**, MS4.3**/23**, 13C-4D, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	20.48	356	T	T	11 01 50.2	
	baz=177,slow=76,SNR=54						
H08S1	Diego Carcia H	20.48	356	T	T	11 01 52.5	
	baz=177,slow=76,SNR=48						
H08S3	Diego Garcia H	20.50	356	T	T	11 01 52.0	
	baz=177,slow=76,SNR=148						
H01W2	Cape Leeuwin H	34.69	111	T	T	11 19 43.4	
	baz=271,slow=74,SNR=6.9						
H01W3	Cape Leeuwin H	34.70	111	T	T	11 19 44.4	
	baz=271,slow=74,SNR=7.9						
H01W1	Cape Leeuwin H	34.71	111	T	T	11 19 45.1	
	baz=271,slow=74,SNR=6.7						
PALK	Pallekele	35.84	11	⇑iP	P	10 43 17.3	-2.7
PALK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
PSI	Prapat	39.04	42	LR	LR	10 56 53.3	
	comp=Z,645nm,19.8s,baz=216,slow=32						
MAW	Mawson	40.01	187	LR	LR	10 58 37.1	
	comp=Z,311nm,18.9s,baz=12,slow=33						
MATP	Matopo	41.97	270	P	P	10 44 10.6	-1.0
	comp=Z,3.4nm,0.8s,baz=63,slow=12,SNR=3.7						
BOSA	Boshof	42.62	257	P	P	10 44 17.7	+1.0
	comp=Z,2.4nm,0.7s,baz=99,slow=8.2,SNR=4.0						
BOSA	Boshof	42.62	257	P	P	10 44 19.9	+3.2
BOSA				pmax	pmax		
	comp=Z,22nm,1.2s						
FITZ	Fitzroy Crossi	48.24	90	P	P	10 44 60.0	-1.3
FITZ				IAmb	IAmb	10 45 13.4	
	comp=Z,10nm,1.1s						
KAPI	Kappang	49.14	71	LR	LR	11 01 41.6	
	comp=Z,144nm,21.8s,baz=224,slow=31						
MMRI	Maumere	49.36	76	P	P	10 45 08.1	-1.8
PBKT	Sadao Pong	51.60	34	P	P	10 45 26.5	-0.1
PBKT				IAmb	IAmb	10 45 33.7	
	comp=Z,17nm,1.2s						
KNRA	Kununurra	51.93	88	P	P	10 45 26.3	-3.0
KNRA				IAmb	IAmb	10 45 36.3	
	comp=Z,21nm,1.2s						
CM31	Chiang Mai Arr	52.28	30	P	P	10 45 30.3	-1.5
CM31				IAmb	IAmb	10 45 48.8	
	comp=Z,15nm,1.2s						
CMAR	Chiang Mai Arr	52.28	30	P	P	10 45 30.5	-1.2
	comp=Z,3.1nm,0.8s,baz=214,slow=7.2,SNR=19						
CMAR				LR	LR	11 04 54.1	
	comp=Z,294nm,19.3s,baz=204,slow=33						
CMAR	Chiang Mai Arr	52.28	30	i P	P	10 45 31.7	0.0
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMAR	Chiang Mai Arr	52.28	30	P	P	10 45 30.8	-1.0
CHTO	Chiang Mai	52.60	30	P	P	10 45 32.8	-1.2
CHTO				pmax	pmax		
	comp=Z,27nm,1.5s						
CHTO	Chiang Mai	52.60	30	P	P	10 45 32.8	-1.2
CHTO				IAmb	IAmb	10 45 40.9	
	comp=Z,26nm,1.4s						
ASAR	Alice Springs	53.61	100	P	P	10 45 41.0	-0.7
	comp=Z,6.0nm,0.8s,baz=250,slow=6.6,SNR=66						
ASAR	Alice Springs	53.61	100	P	P	10 45 40.6	-1.1
ASAR	Alice Springs	53.61	100	P	P	10 45 40.6	-1.1
AS31	Alice Springs	53.62	100	P	P	10 45 40.5	-1.3
MTN	Manton Dam	55.19	86	P	P	10 45 52.7	-0.6
MTN				IAmb	IAmb	10 46 04.9	
	comp=Z,20nm,1.2s						
WRA	Warramunga Arr	55.24	96	P	P	10 45 52.9	-0.7
	comp=Z,7.6nm,0.8s,baz=252,slow=7.5,SNR=36						
WRA				LR	LR	11 08 01.5	
	comp=Z,499nm,19.0s,baz=250,slow=34						
WRA	Warramunga Arr	55.24	96	P	P	10 45 52.7	-0.9
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	Warramunga Arr	55.24	96	P	P	10 45 52.6	-0.9
WB2	Warramunga Arr	55.26	96	P	P	10 45 53.4	-0.3
WB2				IAmb	IAmb	10 46 05.6	
	comp=Z,18nm,1.1s						
WRAB	Tennant Creek	55.26	96	d iP	P	10 45 53.0	-0.7
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WRAB	Tennant Creek	55.26	96	P	P	10 45 52.4	-1.3
WB0	Warramunga Arr	55.35	95	P	P	10 45 53.5	-0.9
WR0	Warramunga Arr	55.41	96	P	P	10 45 53.9	-0.9
STKA	Stephens Creek	57.79	112	P	P	10 46 10.8	-0.8
	comp=Z,2.0nm,0.9s,baz=302,slow=19,SNR=2.9						
STKA	Stephens Creek	57.79	112	P	P	10 46 11.8	+0.2
STKA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
STKA	Stephens Creek	57.79	112	P	P	10 46 11.8	+0.2
QIZ	Qiongzhong	58.37	41	P	P	10 46 18.3	+2.7
QIZ				S	S	10 54 19.5	+1.2
SNAA	Sanae	59.38	201	P	P	10 46 24.6	+2.5
	comp=Z,1.8nm,1.0s,baz=90,slow=19,SNR=2.4						
SNAA				LR	LR	11 09 08.2	
	comp=Z,325nm,19.8s,baz=46,slow=33						
SNAA	Sanae	59.38	201	P	P	10 46 22.3	+0.3
SNAA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
SNAA	Sanae	59.38	201	P	P	10 46 22.3	+0.3
KMI	Kunming	59.80	30	P	P	10 46 26.8	+1.1
KMI				pP	sP	10 46 31.3	+1.6
KMI				sP	pwP	10 46 32.8	+0.4
KMI				PP	PP	10 48 43.0	+5.1
KMI				S	S	10 54 39.5	+2.4
KMI	Kunming	59.80	30	SS	SS	10 58 39.0	+5.4
QSPA	South Pole Qui	61.95	180	P	P	10 46 40.1	+0.3
	comp=Z,3.7nm,0.8s,baz=280,slow=2.1,SNR=9.5						
QSPA	South Pole Qui	61.95	180	P	P	10 46 41.1	+1.3
QSPA				IAmb	IAmb	10 46 42.2	
	comp=Z,6.9nm,1.1s						
KBL	Kabul	62.56	355	P	P	10 46 43.7	-0.5
KBL				pmax	pmax		
	comp=Z,11nm,1.4s						
KBL	Kabul	62.56	355	P	P	10 46 43.7	-0.5
KBL				IAmb	IAmb	10 46 56.4	
	comp=Z,11nm,1.4s						
HRA	Herat	63.22	349	P	P	10 46 48.6	0.0
HRA				IAmb	IAmb	10 46 59.5	
	comp=Z,8.9nm,1.4s						
KSH	Kashi	67.38	2	P	P	10 47 17.5	+2.1
KSH				sP	pwP	10 47 24.5	+2.3
KSH				PcP	PcP	10 47 44.8	+1.9
KSH				S	S	10 56 11.5	+0.6
KSH				sS	sS	10 56 19.5	+3.8
KSH	Kashi	67.38	2	SS	SS	11 00 32.8	+1.2
GEYT	Alibeck	67.43	346	LR	LR	11 12 30.7	
	comp=Z,189nm,21.8s,baz=0.0,slow=32						
GEYT	Alibeck	67.43	346	P	P	10 47 15.0	-0.6
ARSB	Arslanbob	69.17	359	P	P	10 47 25.7	-0.9
ARSB				pmax	pmax		
	comp=Z,26nm,1.4s						
ARSB	Arslanbob	69.17	359	P	P	10 47 25.7	-0.9
LZH	Lanzhou	69.85	25	eP	P	10 47 33.5	+2.6
LZH				pP	pwP	10 47 38.0	+0.3
LZH				sP	sP	10 47 40.0	+5.0
LZH				PP	PP	10 50 09.0	+3.2
AAK	Ala-Archa	70.47	0	⇓iP	P	10 47 34.5	-0.1
AAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
AAK	Ala-Archa	70.47	0	P	P	10 47 33.6	-1.0
AAK				IAmb	IAmb	10 47 46.7	
	comp=Z,16nm,1.4s						
PMG	Port Moresby	70.83	91	⇑iP	P	10 47 35.3	-2.0
PMG				pmax	pmax		
	comp=Z,51nm,1.0s						
PMG	Port Moresby	70.83	91	P	P	10 47 35.0	-2.2
PMG				IAmb	IAmb	10 47 41.4	
	comp=Z,11nm,0.8s						
KK31	Karatay Array	71.01	357	P	P	10 47 38.2	+0.5
KK31				pmax	pmax		
	comp=Z,15nm,1.2s						
KK31	Karatay Array	71.01	357	P	P	10 47 38.2	+0.5
KK31				IAmb	IAmb	10 47 50.6	
	comp=Z,15nm,1.2s						
KKAR	Karatay Array	71.01	357	P	P	10 47 38.3	+0.6
KKAR				pmax	pmax		
	comp=Z,15nm,1.2s						
KKAR	Karatay Array	71.01	357	P	P	10 47 38.0	+0.3
KKAR	Karatay Array	71.01	357	P	P	10 47 38.3	+0.6
KKAR				IAmb	IAmb	10 47 50.5	
	comp=Z,15nm,1.2s						
GTA	Gaotai	71.43	21	eP	P	10 47 41.3	+0.8
GTA				pP	sP	10 47 45.5	+0.9
GTA				sP	pwP	10 47 48.5	+1.2
WMQ	Urumqi	72.75	10	eP	P	10 47 49.0	+0.8
WMQ				pP	sP	10 47 54.3	+2.0
WMQ				S	S	10 56 52.0	-22
WMQ	Urumqi	72.75	10	SS	SS	11 01 57.0	+3.0
WMQ	Urumqi	72.75	10	P	P	10 47 48.4	+0.2
WMQ				pmax	pmax		
	comp=Z,17nm,1.3s						
WMQ	Urumqi	72.75	10	P	P	10 47 48.4	+0.2
WMQ				IAmb	IAmb	10 48 06.1	
	comp=Z,17nm,1.3s						
NJ2	Nanjing	73.56	39	eP	P	10 47 54.3	+1.2
GAZ	Gaziantep	73.61	330	P	P	10 47 52.1	-1.3
GAZ				IAmb	IAmb	10 47 57.4	
	comp=Z,7.3nm,0.8s						
AKH	Akhalkalaki	74.78	337	P	P	10 47 57.9	-2.4
AKH				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKH	Akhalkalaki	74.78	337	P	P	10 47 57.9	-2.4
MAKZ	Makanchi	74.99	6	P	P	10 47 59.1	-2.1
MAKZ				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MAKZ	Makanchi	74.99	6	P	P	10 47 59.0	-2.1
MK31	Makanchi Array	75.01	6	P	P	10 48 00.0	-1.3
MK31				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MK31	Makanchi Array	75.01	6	P	P	10 47 60.0	-1.3
MKAR	Makanchi Array	75.01	6	P	P	10 48 00.2	-1.1
	comp=Z,3.1nm,0.8s,baz=189,slow=6.2,SNR=23						
MKAR				LR	LR	11 19 01.7	
	comp=Z,191nm,20.8s,baz=224,slow=34						
MKAR	Makanchi Array	75.01	6	P	P	10 47 59.3	-2.0
HHC	Hu-ho-hao-te	77.03	28	eP	P	10 48 15.8	+2.8
HHC				sP	PcP	10 48 24.8	+0.9
HHC				S	S	10 58 06.0	+4.6
KBZ	Khabaz	77.03	337	P	P	10 48 13.4	+0.6
	comp=Z,1.0nm,0.4s,baz=117,slow=17,SNR=2.8						
KBZ				LR	LR	11 19 46.4	
	comp=Z,108nm,19.8s,baz=146,slow=34						
BR131	Keskin Array S	77.31	329	⇑iP	P	10 48 15.3	+0.6
BR131	Keskin Array S	77.31	329	P	P	10 48 13.0	-1.7
BRTR	Keskin Array B	77.31	329	P	P	10 48 15.3	+0.6
	comp=Z,2.4nm,0.9s,baz=139,slow=6.6,SNR=15						
BRTR				LR	LR	11 20 17.3	
	comp=Z,98nm,19.3s,baz=140,slow=34						
BRTR	Keskin Array B	77.31	329	P	P	10 48 14.3	-0.4
KIV	Kislovodsk	77.31	337	eP	P	10 48 15.9	+1.4
KIV				pmax	pmax		
	comp=Z,17nm,1.1s						
ABKAR	Akbulak array	78.11	351	P	P	10 48 17.5	-1.2
DGZ	Jazzator, Alta	78.46	9	⇑iP	P	10 48 20.7	-0.2
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.8s						
KURK	Kurchatov	78.66	3	⇑iP	P	10 48 21.8	+0.1
KURK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KURK	Kurchatov	78.66	3	P	P	10 48 21.3	-0.4
KURK				IAmb	IAmb	10 48 34.0	
	comp=Z,17nm,1.4s						
MANT	Manisa	78.76	325	P	P	10 48 19.5	-3.4
AKTO	Aktyubinsk	79.54	350	LR	LR	11 23 18.6	
	comp=Z,86nm,19.1s,baz=137,slow=36						
BRVK	Borovoye	80.97	358	⇑iP	P	10 48 34.6	+0.4
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BRVK	Borovoye	80.97	358	P	P	10 48 34.4	+0.2
BRVK				IAmb	IAmb	10 48 46.8	
	comp=Z,15nm,1.1s						
TORD	Torodi Ar. Bea	81.06	290	P	P	10 48 36.9	+1.3
	comp=Z,1.8nm,0.9s,baz=124,slow=4.8,SNR=7.4						
TORD				LR	LR	11 22 26.7	
	comp=Z,75nm,19.9s,baz=175,slow=34						
TORD	Torodi Ar. Bea	81.06	290	P	P	10 48 36.4	+0.7
SONM	Songino Array	81.09	21	P	P	10 48 34.6	-0.6
	comp=Z,0.9nm,0.9s,baz=199,slow=6.8,SNR=8.1						
SONM	Songino Array	81.09	21	P	P	10 48 34.7	-0.5
SONM				pmax	pmax		
	comp=Z,5.0nm,1.5s						
SONM	Songino Array	81.09	21	P	P	10 48 34.7	-0.5
ULN	Ulaanbaatar	81.33	22	⇑iP	P	10 48 36.4	-0.1
ULN				pmax	pmax		
	comp=Z,3.0nm,1.4s						
ULN	Ulaanbaatar	81.33	22	P	P	10 48 36.2	-0.3
PMSA	Palmer Station	81.76	197	LR	LR	11 22 50.9	
	comp=Z,114nm,18.1s,baz=117,slow=34						
DZM	Mont Dzumac	81.93	111	eLR	LR	11 14 22.3	
	comp=Z,157nm,22.7s						
ZAA0	Zalesovo Array	82.33	6	P	P	10 48 40.5	-0.8
ZALV	Zalesovo Beam	82.33	6	P	P	10 48 40.4	-1.0
	comp=Z,0.8nm,0.3s,baz=204,slow=3.3,SNR=8.6						
ZALV				LR	LR	11 24 39.8	
	comp=Z,142nm,18.2s,baz=224,slow=35						
ZAK	Zakamensk	82.42	18	eP	P	10 48 41.9	-0.2
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.9s						
KSAR	Wonju Array Be	82.56	40	P	P	10 48 42.0	-1.0
KSAR	Wonju Array Be	82.56	40	P	P	10 48 42.0	-1.0
KSRS	Korea Array	82.59	40	P	P	10 48 41.9	-1.3
	comp=Z,1.7nm,0.8s,baz=222,slow=5.3,SNR=6.0						
KSRS				LR	LR	11 23 07.8	
	comp=Z,272nm,20.8s,baz=252,slow=34						
DBIC	Dimbokro	83.37	281	LR	LR	11 23 46.3	
	comp=Z,134nm,20.0s,baz=111,slow=34						
CFR	Carcaliu	84.10	329	P	P	10 48 51.4	+0.7
CFR				pmax	pmax		
	comp=Z,9.0nm,1.6s						
VTS	Vitosha	84.53	325	P	P	10 48 54.3	+1.1
VTS				pmax	pmax		
	comp=Z,7.0nm,1.2s						
VRI	Vrincioaia	85.27	329	⇓P	P	10 48 57.2	+0.5
PLOR	Plostina	85.29	329	⇓P	P	10 48 56.5	-0.4
ARU	Arti	85.30	351	LR	LR	11 26 11.9	
	comp=Z,103nm,18.2s,baz=179,slow=35						
ARU	Arti	85.30	351	c iP	P	10 48 57.1	+0.6
ARU						10 52 13.5	
ARU				S	S	10 59 21.8	-4.6
ARU				SS	SS	11 04 57.9	-3.9
ARU				pmax	pmax		
	comp=Z,19nm,1.4s						
ARU	Arti	85.30	351	P	P	10 48 55.4	-1.1
MLR	Muntele Rosu	85.34	328	⇑P	P	10 48 58.2	+1.0
MLR	Muntele Rosu	85.34	328	P	P	10 48 57.0	-0.2
MLR				pmax	pmax		
	comp=Z,42nm,1.3s						
MLR	Muntele Rosu	85.34	328	P	P	10 48 57.0	-0.2
VOIR		85.72	328	⇑P	P	10 48 58.7	-0.3
VOIR		85.72	328	P	P	10 48 59.0	0.0
VOIR				pmax	pmax		
	comp=Z,10.0nm,1.8s						
BURAR	Bucovina Array	87.27	329	P	P	10 49 04.0	-2.6
BURAR	Bucovina Array	87.27	329	P	P	10 49 03.4	-3.2
BZS	Buzias	87.50	326	⇑P	P	10 49 09.0	+1.4
BZS	Buzias	87.50	326	P	P	10 49 09.1	+1.5
BZS				pmax	pmax		
	comp=Z,12nm,2.3s						
AKASG	Malin Array Be	87.94	333	P	P	10 49 09.7	+0.1
	comp=Z,0.9nm,0.5s,baz=124,slow=4.3,SNR=11						
AKASG	Malin Array Be	87.94	333	i P	P	10 49 10.3	+0.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	87.94	333	P	P	10 49 09.2	-0.4
AKBB	Malin Array Si	87.94	333	⇑iP	P	10 49 10.2	+0.6
AKBB	Malin Array Si	87.94	333	P	P	10 49 09.4	-0.2

MJAR	Matsushiro Arr	88.25	47	LR	LR	11 25 26.0	
	comp=Z,120nm,21.8s,baz=90,slow=34						
OBN	Obninsk	88.96	340⇑	eP	P	10 49 12.2	-2.0
OBN				e		10 52 41.5	
OBN				pmax	pmax		
	comp=Z,14nm,0.4s						
MOS	Moscow	89.17	340	eP	P	10 49 23.2	+8.0
MOS				e		10 52 41.4	
MOS				e		10 54 44.3	
USRK	Ussuriysk Ar.	89.43	38	LR	LR	11 29 04.6	
	comp=Z,262nm,18.9s,baz=226,slow=36						
KLMR	Klimovskoe	93.06	344	eP	P	10 49 37.9	+4.7
KLMR				pmax	pmax		
	comp=Z,29nm,1.7s						
KLMR	Klimovskoe	93.06	344	eP	P	10 49 37.9	+4.7
KLMR				AMP		10 49 45.7	
	comp=Z,29nm,1.7s						
NRIK	Noril'sk	97.75	5	LR	LR	11 34 24.9	
	comp=Z,88nm,19.5s,baz=190,slow=36						
TBI	Tubuai	113.82	136	eLR	LR	11 29 14.0	
	comp=Z,65nm,34.5s						
PPT2	Papeete2	117.97	132	eLR	LR	11 31 04.9	
	comp=Z,85nm,23.8s						
ILAR	Eielson Array	135.29	23	PKP	PKPdf	10 55 39.8	+0.7
	comp=Z,0.1nm,0.4s,baz=300,slow=2.0,SNR=2.2						
INK	Inuvik	136.66	14	PKP	PKPdf	10 55 41.6	+0.1
	comp=Z,0.6nm,0.6s,baz=243,slow=11,SNR=2.2						
YKA	Yellowknife Ar	145.23	7	PKPbc	PKPbc	10 55 56.0	-0.8
	comp=Z,2.1nm,0.9s,baz=337,slow=3.4,SNR=24						
YKA	Yellowknife Ar	145.23	7	PKIKP	PKPbc	10 55 56.0	-0.8
DLBC	Dease Lake	145.46	22	PKPbc	PKPbc	10 55 58.1	+0.4
	comp=Z,6.6nm,0.9s,baz=276,slow=6.2,SNR=5.7						
DLBC	Dease Lake	145.46	22		PKPab	10 55 58.8	+0.8
LONY	Lake Ozonia	150.09	312	PKPdf	PKPdf	10 56 03.6	-2.1
LONY					pPKPdf	10 56 10.3	+1.4
LONY				PKPab	PKPab	10 56 17.4	+0.7
FFC	Flin Flon	153.32	355	PKIKP	PKPbc	10 56 17.9	+0.1
FFC						10 56 28.8	
FFC	Flin Flon	153.32	355		PKPbc	10 56 17.9	+0.1
FFC				PKPab	PKPab	10 56 28.8	-0.9
JTMT	Jette	159.44	16		PKPab	10 56 55.5	-0.9
YPP	Pitchstone Pla	163.50	12		PKPab	10 57 15.3	+0.9
IMW	Indian Meadow	163.83	13		PKPab	10 57 15.6	-0.3
PDAR	Pinedale Array	165.17	10	PKPab	PKPab	10 57 18.9	-2.8
	comp=Z,0.3nm,0.7s,baz=16,slow=2.2,SNR=3.7						
PDAR	Pinedale Array	165.17	10		PKPab	10 57 17.9	-3.8
NVAR	Mina Array Bea	165.53	42	PKPab	PKPab	10 57 23.2	-0.3
	comp=Z,0.3nm,0.6s,baz=278,slow=2.5,SNR=2.5						
NVAR	Mina Array Bea	165.53	42		PKPab	10 57 21.7	-1.8
RDMU	Red Mountain	167.31	12		PKPab	10 57 28.6	-2.6
KNB	Kanab	169.49	31	PKP2	PKPab	10 57 39.2	-1.8
KNB	Kanab	169.49	31		PKPab	10 57 39.2	-1.8
PV13	Radium Mtn., P	169.78	13	PKPdf	PKPdf	10 56 24.5	-3.7
PV13					PKPab	10 57 41.4	-0.8
PV01	Paradox Valley	169.85	12		PKPab	10 57 41.2	-1.3
U15A	North Rim	170.22	31	PKPdf	PKPdf	10 56 26.7	-1.9
U15A					PKPab	10 57 44.0	-0.4
TXAR	Lajitas Array	177.64	300	PKPab	PKPab	10 58 17.6	+0.1
	comp=Z,0.3nm,0.8s,baz=78,slow=4.7,SNR=1.9						

IDC 25 10:48:50.2±3.3, 5°.23S×131°.65E, h132^{km}±65^{km}, mb3.1/1, mb1 3.0/4, mb1mx2.9/36, mbtmp3.4/4, MS3.8/1, Ms1 3.8/1, ms1mx2.9/7, Error ellipse: s-maj=250.6km s-min=19.9km az=78.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.35	355	P	Pn	10 49 56.4	+1.6
	2.6nm,0.3s,baz=228,slow=16,SNR=28						
SIJI				S	Sn	10 50 44.5	-0.3
	2.3nm,0.3s,baz=204,slow=22,SNR=11						
WRA	Warramunga Arr	14.86	170	P	Pn	10 52 12.3	-1.6
	0.1nm,0.3s,baz=348,slow=11,SNR=1.1						
WRA				S	Sn	10 54 45.0	-14
	0.2nm,0.3s,baz=347,slow=21,SNR=5.2						
ASAR	Alice Springs	18.46	173	P	P	10 52 55.9	0.0
	0.1nm,0.3s,baz=351,slow=9.7,SNR=9.6						
ASAR				S	S	10 56 07.7	-12
	0.0nm,0.3s,baz=359,slow=28,SNR=1.9						
STKA	Stephens Creek	28.10	162	LR	LR	11 05 25.2	
	comp=Z,219nm,20.5s,baz=204,slow=35						
MKAR	Makanchi Array	67.67	326	P	P	10 59 33.5	+0.3
	0.2nm,0.3s,baz=116,slow=6.6,SNR=2.6						

*IDC **25** 11:08:41.8±0.8, 26°.89N×54°.84E, h0^{km}, mb3.9/18, mb1 4.0/21, mb1mx3.9/46, mbtmp3.9/21, ML3.5/3, Error ellipse: s-maj=18.3km s-min=15.9km az=9.0*
*DSN **25** 11:08:42.9±1.5, 27°.18N×54°.91E, h15^{km}, ML4.0/9, Error ellipse: s-maj=20.6km s-min=7.8km az=19.0*
*OMAN **25** 11:08:42.4±0.1, 27°.26N×55°.00E, h126^{km}±1^{km}, ml4.1/14, Error ellipse: s-maj=0.7km s-min=0.2km az=242.0*
*THR **25** 11:08:42.4±0.7, 26°.84N×54°.96E, h14^{km}±21^{km}, ML4.0*
*TEH **25** 11:08:45.1, 26°.93N×54°.91E, h16^{km}, ML4.0*
*NEIC **25** 11:08:48.0±1.6, 26°.89N±0°.06×54°.95E±0°.05, h45^{km}±6^{km}, Error ellipse: s-maj=8.9km s-min=6.9km az=192.0*
ISC 25 11:08:46.9±1.1, 26°.99N±0°.04×54°.91E±0°.04, h33^{km}±7^{km}, n142, $\sigma 1^{s}37$/155, mb4.1/27, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAR1	LAR	0.83	325	ePg	Pn	11 09 01.9	-0.5
BNDS	Bandar-Abbas	1.20	70	ePg	Pn	11 09 05.0	-2.5
BNDS				eSg	Sn	11 09 21.6	-1.1
GENO	Geno	1.20	70	ePg	Pn	11 09 08.5	+1.0
GENO	Geno	1.20	70		Pn	11 09 08.7	+1.2
SHME	Shamm	1.45	130	eP	Pn	11 09 10.7	-0.1
	SNR=46						
SHME				S	Sb	11 09 31.4	0.0
SHME	Shamm	1.45	130	ePn	Pn	11 09 10.3	-0.5
IBND	Bandar-abas	1.52	72	ePg	Pn	11 09 13.4	+1.6
LMD1	Lamerd	1.59	283	ePn	Pb	11 09 14.4	-1.4
LMD1				e		11 09 50.7	
LMD1	Lamerd	1.59	283	Pn	Pb	11 09 14.5	-1.4
LMD1				Sg	Sb	11 09 37.4	+1.8
UMQ	Umm Al-Quwin	1.60	155	P	Pn	11 09 13.4	+0.5
UMQ	Umm Al-Quwin	1.60	155	P	Pb	11 09 15.5	-0.5
UMQ				S	Sb	11 09 38.6	+2.7
	SNR=5.8						
UMQ	Umm Al-Quwin	1.60	155	ePn	Pb	11 09 14.6	-1.3
BANOM	Banah	1.63	130	eP	Pn	11 09 13.6	+0.2
	SNR=84						
BANOM	Banah	1.63	130	P	Pn	11 09 13.8	+0.4
	SNR=84						
BANOM				P	Pn	11 09 13.8	+0.4
BANOM				S	Sb	11 09 37.1	+0.3
BANOM				S	Sb	11 09 37.1	+0.3
BANOM	Banah	1.63	130	ePn	Pn	11 09 13.8	+0.4
NIAN	Nian	1.81	71	ePn	Pn	11 09 17.1	+1.3
NIAN				e		11 09 59.5	
NIAN	Nian	1.81	71	Pn	Pn	11 09 17.3	+1.5
JHRM	Jahrom	1.92	322	ePn	Pb	11 09 19.6	-1.8
JHRM				e		11 10 03.3	
MSFE	Esma-Masafi	1.97	145	eP	Pn	11 09 17.1	-1.0
	SNR=12						
MSFE	Esma-Masafi	1.97	145	ePn	Pn	11 09 18.8	+0.7
MDH	Madha	2.09	143	eP	Pn	11 09 18.8	-0.9
	SNR=13						
MDH	Madha	2.09	143	P	Pn	11 09 20.4	+0.7
	SNR=13						
MDH	Madha	2.09	143	ePn	Pn	11 09 20.1	+0.4
NAZ	Nazwa, Dubai	2.10	161	eP	Pn	11 09 19.5	-0.4
	SNR=13						
NAZ	Nazwa, Dubai	2.10	161	P	Pn	11 09 21.0	+1.2
	SNR=13						
NAZ				S	Sb	11 09 54.1	+4.0
NAZ	Nazwa, Dubai	2.10	161	ePn	Pn	11 09 20.9	+1.1
FAQ	Al Faqa, Dubai	2.31	164	P	Pn	11 09 23.7	+0.9
FAQ	Al Faqa, Dubai	2.31	164	ePn	Pn	11 09 23.3	+0.5
UOSS	Minazif	2.34	150	eP	Pn	11 09 23.0	-0.1
	SNR=9.4						
UOSS	Minazif	2.34	150	ePn	Pn	11 09 23.4	+0.2
UOSS	Minazif	2.34	150	Pn	Pn	11 09 23.3	+0.2
AJN	Ajban	2.42	178	P	Pn	11 09 24.9	+0.8
	SNR=6.2						
AJN				S	Sb	11 10 02.2	+3.1
AJN	Ajban	2.42	178	ePn	Pn	11 09 25.3	+1.2
HATD	Hatta, Dubai	2.42	153	eP	Pn	11 09 24.4	+0.3
	SNR=14						
HATD	Hatta, Dubai	2.42	153	P	Pn	11 09 24.8	+0.6
	SNR=14						
HATD				S	Sb	11 09 59.0	-0.2
HATD	Hatta, Dubai	2.42	153	ePn	Pn	11 09 24.9	+0.7
ASHO	Ashiyiah	2.52	155	eP	Pn	11 09 25.9	+0.3
	SNR=24						
ASHO	Ashiyiah	2.52	155	P	Pn	11 09 26.2	+0.6
	SNR=24						
ASHO	Ashiyiah	2.52	155	ePn	Pn	11 09 26.2	+0.6
JRN	Qarnain Island	2.75	223	ePn	Pn	11 09 30.7	+1.9
ISRV	Sarvestan	2.87	327	ePn	Pn	11 09 32.3	+1.7
ISRV				e		11 10 38.9	
ALNE	Al Ain	3.02	165	ePn	Pn	11 09 33.0	+0.6
NGRK	Negar Kerman	3.10	31	ePn	Pn	11 09 36.0	+2.1
NGRK				e		11 10 52.4	
NGRK	Negar Kerman	3.10	31	Pn	Pn	11 09 35.7	+1.8
GHB	Gharebagh	3.17	319	ePn	Pn	11 09 36.8	+1.9
GHB				e		11 10 43.3	
SOHO	SOHO	3.20	152	ePn	Pn	11 09 34.6	-0.3
SHI	Shiraz	3.39	322	ePn	Pn	11 09 38.9	+1.2
KRBR	Kerman	3.40	28	ePn	Pn	11 09 39.3	+1.4
TVBK	TV Kerman	3.40	28	ePn	Pn	11 09 40.1	+2.0
TVBK				e		11 10 52.2	
TVBK	TV Kerman	3.40	28	Pn	Pn	11 09 40.6	+2.5
CHMN	Cheshme madani	3.68	38	ePn	Pn	11 09 45.1	+3.2
CHMN				e		11 09 50.2	
IKAZ	Kazeroun	3.88	317	ePn	Pn	11 09 46.2	+1.6
IKAZ				e		11 11 07.1	
ARQ	Araqi	3.92	158	P	Pn	11 09 45.4	+0.5
HOQ	Hoqain	4.03	147	P	Pn	11 09 45.4	-0.9
HOQ				S	Sn	11 10 33.6	+1.2
UMZA	Um Al Zommool	4.26	177	ePn	Pn	11 09 49.7	+0.2
IMEH	Mehriz	4.40	357	ePn	Pn	11 09 54.3	+2.7
IBAF	Bafgh	4.62	7	ePn	Pn	11 09 57.2	+2.5
BSY	Bisya	4.71	153	P	Pn	11 09 56.9	+1.2
	SNR=5.6						
BSY				S	Sn	11 10 50.2	+1.0
SMDO	Samad	4.84	143	P	Pn	11 09 58.6	+1.1
	SNR=17						
SMDO				S	Sn	11 10 54.7	+2.1
KLNJ	Kolanjah	4.95	325	ePn	Pn	11 09 59.6	+0.3
ISAD	Sadrabad	5.03	348	ePn	Pn	11 10 02.9	+2.6
WSAR	Wadi Sarin	5.03	137	Pn	Pn	11 09 59.2	-0.9
	2.6nm,0.3s,baz=329,slow=9.9,SNR=14						
WSAR				Sn	Sn	11 10 56.8	-0.4
	3.6nm,0.3s,baz=328,slow=21,SNR=5.9						
WSAR	Wadi Sarin	5.03	137	P	Pn	11 10 01.4	+1.3
IRAM	Ramesheh	5.29	336	ePn	Pn	11 10 05.3	+1.4
YZKH	Yazd	5.39	357	ePn	Pn	11 10 06.5	+1.3
JMDO	Jabal Madar	5.44	147	P	Pn	11 10 05.8	+0.1
WBK	Wadi Bani Khal	5.71	139	P	Pn	11 10 09.9	+0.5
	SNR=13						
IGAR	Gharneh	5.95	336	ePn	Pn	11 10 14.7	+1.8
TPRV	Parvadeh(Tabas	6.21	14	ePn	Pn	11 10 19.0	+2.5
ANAR	Anarak	6.27	351	ePn	Pn	11 10 18.8	+1.6
IZEF	Zefreh	6.30	340	ePn	Pn	11 10 18.3	+0.5
ROKH	ROKH	6.32	329	ePn	Pn	11 10 20.6	+2.6
MHTO	MHTO	6.59	154	P	Pn	11 10 21.2	-0.4
	SNR=6.8						
MHTO				S	Sn	11 11 33.3	-2.4
IPIR	Pirpir	6.67	329	ePn	Pn	11 10 23.9	+1.1
TKDS	Koohdasht(Taba	6.88	16	ePn	Pn	11 10 27.8	+2.2
TABS	Tabas	6.91	15	ePn	Pn	11 10 27.3	+1.3
IKLH	Kolahrood	6.94	336	ePn	Pn	11 10 27.1	+0.5
KRSH	Karshahi	7.36	342	ePn	Pn	11 10 33.0	+0.7
IMON	Monand	7.43	33	ePn	Pn	11 10 36.7	+3.4
IVRN	Varamin	8.44	342	ePn	Pn	11 10 48.3	+1.4
IANJ	Anjilo	8.50	354	ePn	Pn	11 10 49.6	+1.7
ASAO	Ashtian	8.63	332	IAML		11 10 53.0	
	comp=E,5.1nm,0.5s						
SHAO	Shalim	8.95	176	P	Pn	11 10 52.0	-1.9
	SNR=31						
WHFO	Wadi Hawf	9.09	187	P	Pn	11 10 54.4	-1.5
	SNR=21						
IALA	Alasht	9.24	349	ePn	Pn	11 11 00.8	+2.6
IPRN	Peran	9.48	347	ePn	Pn	11 11 03.8	+2.5
IKOM	Komasi	9.59	320	ePn	Pn	11 11 03.2	+0.4
ABTO	Aybut	9.70	189	P	Pn	11 11 02.8	-1.5
	SNR=35						
GEYT	Alibeck	11.24	13	Pn	Pn	11 11 27.0	+1.6
	comp=E,0.4nm,0.3s,baz=221,slow=14,SNR=1.8						
SOCY	Socotra	14.75	184	Pn	Pn	11 12 08.8	-4.5
KBZ	Khabaz	19.33	333	P	P	11 13 08.2	-1.2
	comp=E,0.1nm,0.3s,baz=104,slow=17,SNR=2.9						
KKAR	Karatay Array	20.48	34	P	P	11 13 22.9	+1.0
KKAR	Karatay Array	20.48	34	P	P	11 13 22.8	+0.8
KKAR				IAmb	IAmb	11 13 30.5	
	comp=Z,5.2nm,1.1s						
ARSB	Arslanbob	20.63	42	P	P	11 13 23.8	0.0
ARSB				IAmb	IAmb	11 13 25.3	
	comp=Z,5.0nm,0.7s						
BR131	Keskin Array S	21.78	311	P	P	11 13 36.1	0.0
BR131				IAmb	IAmb	11 13 44.9	
	comp=Z,6.9nm,0.7s						
BRTR	Keskin Array B	21.78	311	P	P	11 13 36.5	+0.5
	comp=Z,4.5nm,0.7s,baz=130,slow=14,SNR=18						
BRTR	Keskin Array B	21.78	311	P	P	11 13 36.1	0.0
AAK	Ala-Archa	22.33	41	P	P	11 13 42.5	+0.5
	comp=Z,1.2nm,0.5s,baz=174,slow=18,SNR=3.6						
AAK	Ala-Archa	22.33	41	P	P	11 13 42.3	+0.3
ABKAR	Akbulak array	22.57	9	P	P	11 13 44.4	+0.1
AKTO	Aktyubinsk	23.54	5	P	P	11 13 55.2	+1.1
	comp=Z,2.6nm,0.6s,baz=197,slow=9.0,SNR=9.4						
BRVK	Borovoye	28.45	20	P	P	11 14 38.7	+0.1
BRVK				IAmb	IAmb	11 14 41.0	
	comp=Z,4.9nm,1.4s						
BVAR	Borovoye Array	28.46	20	P	P	11 14 38.8	+0.1
	comp=Z,1.2nm,0.6s,baz=191,slow=7.1,SNR=8.6						
MKAR	Makanchi Array	29.26	40	P	P	11 14 47.0	+1.0
	comp=Z,0.4nm,0.5s,baz=225,slow=8.2,SNR=4.6						
MKAR	Makanchi Array	29.26	40	P	P	11 14 44.8	-1.2
KURBB	Kurchatov Arra	29.69	31	P	P	11 14 50.5	+0.9
	comp=Z,0.9nm,0.7s,baz=234,slow=8.1,SNR=4.9						
KURK	Kurchatov	29.79	31	P	P	11 14 50.0	-0.5
KURK				IAmb	IAmb	11 15 05.7	
	comp=Z,2.9nm,1.1s						
AKASG	Malin Array Be	30.71	327	P	P	11 14 58.0	-0.7
	comp=Z,1.5nm,0.5s,baz=125,slow=8.3,SNR=4.4						
BURAR	Bucovina Array	31.04	319	P	P	11 15 03.1	+1.4
BUR08	Bucovina Ar. S	31.06	319	P	P	11 15 02.7	+0.7
ZAA0	Zalesovo Array	34.79	31	P	P	11 15 34.9	+0.7
ZALV	Zalesovo Beam	34.79	31	P	P	11 15 34.7	+0.5
	comp=Z,4.5nm,0.6s,baz=234,slow=9.7,SNR=20						
ZALV	Zalesovo Beam	34.79	31	P	P	11 15 35.1	+0.9
GERES	GERESS Array B	38.53	316	P	P	11 16 05.8	-0.6
	comp=Z,0.3nm,0.4s,baz=98,slow=8.2,SNR=4.8						
GERES	GERESS Array B	38.53	316	P	P	11 16 06.5	+0.2
KHC	Kasperske Hory	38.70	316	eP	P	11 16 07.5	-0.2
GTA	Gaotai	39.19	60	eP	P	11 16 18.3	+6.2
GTA				pP	pP	11 16 21.8	0.0
GTA				sP	sP	11 16 24.3	-1.4
WTTA	Wattenberg	39.38	313	eP	P	11 16 13.5	-0.1
	comp=Z,5.7nm,0.6s						
FIA1	FINESS Array S	39.52	339	P	P	11 16 14.8	+0.5
FIA1				IAmb	IAmb	11 16 15.1	
	comp=Z,8.3nm,1.1s						
FINES	FINESS Array B	39.52	339	P	P	11 16 14.6	+0.3
	comp=Z,2.3nm,0.4s,baz=140,slow=9.3,SNR=26						
SQTA	Sankt Quirin	39.65	312	i P	P	11 16 15.5	-0.3
	comp=Z,7.3nm,0.5s						
FETA	Feichten	39.91	312	eP	P	11 16 18.0	0.0
	comp=Z,4.4nm,0.6s						
DAVA	Damuels	40.54	312	eP	P	11 16 23.0	-0.2
	comp=Z,13nm,0.5s						
NC405	NORSAR Array S	44.73	332	P	P	11 16 56.7	-0.1
NB2	NORSAR Subarra	44.90	332	P	P	11 16 57.5	-0.8
	comp=Z,4.0nm,0.8s,baz=120,slow=7.9						
NOA	NORSAR Array B	44.90	332	P	P	11 16 57.8	-0.4
	comp=Z,1.3nm,0.6s,baz=120,slow=8.1,SNR=7.7						
SONM	Songino Array	44.93	48	P	P	11 17 00.2	+1.4
	comp=Z,0.8nm,0.6s,baz=262,slow=9.5,SNR=6.5						
ARCES	ARCESS Array B	45.90	346	P	P	11 17 03.9	-2.1
ARE0	ARCESS Array S	45.90	346	P	P	11 17 03.7	-2.3
TOA0	Torodi Ar. Sit	51.50	265	P	P	11 17 49.3	-0.4
TOA0				IAmb	IAmb	11 18 02.0	
	comp=Z,7.5nm,1.4s						
TORD	Torodi Ar. Bea	51.50	265	P	P	11 17 49.2	-0.5
	comp=Z,2.0nm,0.7s,baz=66,slow=8.7,SNR=14						
TORD	Torodi Ar. Bea	51.50	265	P	P	11 17 48.6	-1.1
DBIC	Dimbokro	60.11	262	P	P	11 18 51.5	+0.1
	comp=Z,1.4nm,0.4s,baz=47,slow=7.0,SNR=5.5						
DBIC	Dimbokro	60.11	262	P	P	11 18 50.6	-0.9
TOLK	Toolik Lake Re	82.97	9	P	P	11 21 09.4	+1.1
TOLK				IAmb	IAmb	11 21 22.3	
	comp=Z,2.6nm,1.4s						
BMAR	Burnt Mountain	84.74	7	P	P	11 21 19.1	+1.7
IMAR	Indian Mountai	84.76	11	P	P	11 21 18.0	+0.5
ILAR	Eielson Array	86.98	9	P	P	11 21 28.2	-0.3
	comp=Z,0.2nm,0.6s,baz=325,slow=4.7,SNR=4.4						
ILAR	Eielson Array	86.98	9	P	P	11 21 28.7	+0.2
WRA	Warramunga Arr	89.94	112	P	P	11 21 43.0	-0.3
	comp=Z,0.6nm,0.5s,baz=312,slow=4.0,SNR=4.0						
YKA	Yellowknife Ar	90.44	355	P	P	11 21 45.6	+0.7
	comp=Z,0.2nm,0.6s,baz=7.1,slow=4.3,SNR=6.6						
ASAR	Alice Springs	91.37	116	P	P	11 21 49.2	-0.7
	comp=Z,0.3nm,0.6s,baz=307,slow=4.4,SNR=5.0						

*IDC **25** 11:26:47.7±1.2, 36°.34N×28°.13E, h51^{km}±19^{km}, mb3.4/3, mb1 3.9/13, mb1mx3.5/49, mbtmp3.9/13, ML3.9/9, Error ellipse: s-maj=16.7km s-min=8.7km az=160.0*
*ATH **25** 11:26:47.4, 36°.51N×28°.08E, h63^{km}±3^{km}, ML3.9/17, Error ellipse: s-maj=3.2km s-min=1.0km az=123.0*
*ISK **25** 11:26:48.2, 36°.51N×28°.04E, h62^{km}, ML4.0/29*
*NIC **25** 11:26:48.2±0.0, 36°.41N×28°.15E, h66^{km}±2^{km}, Ml4.3/3*
*NEIC **25** 11:26:48.2±2.0, 36°.43N±0°.06×28°.08E±0°.06, h71^{km}±9^{km}, Error ellipse: s-maj=9.3km s-min=6.0km az=152.0*
*DDA **25** 11:26:49.6, 36°.63N×28°.03E, h51^{km}±1^{km}, MW3.8*
*THE **25** 11:26:49.1, 36°.50N×28°.09E, h62^{km}±1^{km}, ML4.0/9, Error ellipse: s-maj=1.4km s-min=0.3km az=161.0*
*GII **25** 11:26:51.9±0.3, 36°.04N×28°.32E, h49^{km}, MD3.1/6, Mm3.4/5*
*HLW **25** 11:26:51.7, 36°.03N×28°.18E, h31^{km}±9^{km}, Md4.4, Ml4.5*
ISC 25 11:26:47.6±0.7, 36°.44N±0°.03×28°.11E±0°.03, h59^{km}±5^{km}, n203, $\sigma 1^{s}83$/270, mb3.8/5, 4C, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	Arkhangelos	0.22	176	P	Pn	11 26 58.9	+1.8
ARG				S	Sn	11 27 06.3	+2.5
	27µm,0.3s						
ARG	Arkhangelos	0.22	176	P	Pn	11 26 58.8	+1.8
ARG				S	Sn	11 27 05.6	+1.8
ARG				AML	AML	11 27 06.2	
	comp=N,46650µm,0.4s						
ARG				AML	AML	11 27 06.6	
	comp=E,58705µm,0.2s						
ARG	Arkhangelos	0.22	176	PG	Pn	11 26 58.9	+1.8
ARG				SG	Sn	11 27 06.0	+2.2
ARG	Arkhangelos	0.22	176	P	Pn	11 26 58.9	+1.8
ARG				S	Sn	11 27 05.8	+2.0
MRSB	Marmaris-Mugla	0.28	15	PG	Pn	11 26 58.6	+1.1
MRSB				SG	Sn	11 27 06.1	+1.4
DATC	Datca-Mugla	0.48	312	PG	Pn	11 26 59.9	+0.7
DATC				SG	Sn	11 27 08.3	+0.6
DAT	Datca	0.52	304	i P	Pn	11 27 00.4	+0.6
DAT				i S	Sn	11 27 08.3	-0.3
DAT				IAML		11 27 09.0	
	comp=E,7µm,0.3s						
DAT				IAML		11 27 10.0	
	comp=N,7µm,0.3s						
DALY	Dalyan (Mula)	0.58	49	PG	Pn	11 27 02.1	+1.8
DALY				SG	Sn	11 27 11.6	+2.0
DALY	Dalyan (Mula)	0.58	49	i P	Pn	11 27 02.1	+1.8
DALY				IAML		11 27 11.0	
	comp=N,8µm,0.6s						
DALY				i S	Sn	11 27 11.2	+1.7
DALY				IAML		11 27 13.0	
	comp=E,3µm,0.4s						
TURN	Turunc	0.59	43	PG	Pn	11 26 59.2	-1.2
TURN				SG	Sn	11 27 06.8	-3.0
TURN	Turunc	0.59	43	i P	Pn	11 26 59.2	-1.2
TURN				i S	Sn	11 27 05.8	-4.0
TURN				IAML		11 27 07.0	
	comp=N,9µm,0.3s						
TURN				IAML		11 27 07.0	
	comp=E,11µm,0.2s						
YER	Yerkesik	0.71	11	PG	Pn	11 27 03.3	+1.3
FETY	Fethiye	0.81	76	PG	Pn	11 27 04.9	+1.7
FETY	Fethiye	0.81	76	i P	Pn	11 27 04.9	+1.7
FETY				i S	Sn	11 27 16.8	+2.2
FETY				IAML		11 27 19.0	
	comp=N,1µm,0.8s						
BDRM	Kayabasi	0.82	320	i P	Pn	11 27 03.7	+0.4
BDRM				IAML		11 27 14.0	
	comp=E,7µm,0.3s						
BDRM				i S	Sn	11 27 14.2	-0.6
BODT	Bodrum	0.89	314	PG	Pn	11 27 04.5	+0.3
BODT				SG	Sn	11 27 16.3	-0.1
KOSK	Kos Island	0.96	289	PG	Pn	11 27 05.5	+0.5
KOSK				SG	Sn	11 27 18.2	+0.3
KARP	Karpathos	1.18	221	P	Pn	11 27 09.3	+1.4
KARP				S	Sn	11 27 25.1	+2.0
	comp=E,5µm,0.3s						
KARP	Karpathos	1.18	221	P	Pn	11 27 09.3	+1.4
KARP				S	Sn	11 27 25.0	+1.9
KARP				AML	AML	11 27 30.6	
	comp=E,10328µm,0.2s						
KARP				AML	AML	11 27 30.9	
	comp=N,12563µm,0.2s						
KARP	Karpathos	1.18	221	PN	Pn	11 27 09.5	+1.5
KARP	Karpathos	1.18	221		Pn	11 27 09.5	+1.5
KARP				Sn	Sn	11 27 24.1	+1.0
KARP	Karpathos	1.18	221	P	Pn	11 27 09.4	+1.5
KARP				S	Sn	11 27 25.1	+2.0
KARP				AML	AML	11 27 30.1	
	comp=N,10nm,0.2s						
KARP				AML	AML	11 27 30.1	
	comp=N,10nm,0.2s						
KARP				AML	AML	11 27 30.4	
	comp=N,13nm,0.2s						
KARP				AML	AML	11 27 30.4	
	comp=N,13nm,0.2s						
TAVA	DENIZLI_Tavas	1.21	32	i P	Pn	11 27 10.2	+1.7
TAVA				i S	Sn	11 27 26.4	+2.4
TAVA				IAML		11 27 30.0	
	comp=E,4µm,0.5s						
TAVA				IAML		11 27 30.0	
	comp=N,3µm,0.3s						
AKAS	Kas	1.23	99	PN	Pn	11 27 10.3	+1.5
AKAS	Kas	1.23	99	i P	Pn	11 27 10.2	+1.5
AKAS				i S	Sn	11 27 26.1	+1.6
AKAS				IAML		11 27 47.0	
	comp=N,626nm,0.7s						
KSL	Kastellorizon	1.23	103	P	Pn	11 27 10.1	+1.5
KSL				S	Sn	11 27 26.2	+1.9
	comp=N,998nm,0.4s						
KSL	Kastellorizon	1.23	103	P	Pn	11 27 10.1	+1.5
KSL				S	Sn	11 27 26.1	+1.9
KSL				AML	AML	11 27 26.9	
	comp=E,2098µm,0.4s						
KSL				AML	AML	11 27 28.1	
	comp=N,1912µm,0.4s						
KSL	Kastellorizon	1.23	103	P	Pn	11 27 10.2	+1.5
KSL				S	Sn	11 27 26.2	+1.9
GOLH	Golhisar	1.41	55	i P	Pn	11 27 13.8	+2.6
GOLH				i S	Sn	11 27 32.5	+3.6
GOLH				IAML		11 27 43.0	
	comp=N,1µm,0.5s						
GCAM	G?zelcaml?	1.44	331	PN	Pn	11 27 12.1	+0.7
GCAM	G?zelcaml?	1.44	331	i P	Pn	11 27 12.1	+0.7
GCAM				i S	Sn	11 27 28.3	-1.0
GCAM				IAML		11 27 29.0	
	comp=N,2µm,0.4s						
GCAM				IAML		11 27 29.0	
	comp=E,3µm,0.3s						
ELL	Elmali	1.48	77	PN	Pn	11 27 14.7	+2.6
ELL	Elmali	1.48	77		Pn	11 27 15.0	+2.9
DENT	Denizli	1.51	29	PN	Pn	11 27 13.9	+1.5
AYDB	Zeytinkoy-Aydi	1.51	354	PN	Pn	11 27 13.2	+0.6
SMG	Samos	1.62	322	P	Pn	11 27 14.2	+0.3
SMG				S	Sn	11 27 33.4	-0.4
SMG	Samos	1.62	322	P	Pn	11 27 14.0	0.0
SMG				S	Sn	11 27 32.9	-1.0
SMG				AML	AML	11 27 34.4	
	comp=N,9743µm,0.2s						
SMG				AML	AML	11 27 35.0	
	comp=E,12583µm,0.3s						
AKUM	Antalya-Kumluc	1.81	93	i P	Pn	11 27 18.5	+2.1
AKUM				i S	Sn	11 27 37.5	-0.8
AKUM				IAML		11 27 44.0	
	comp=E,313nm,0.7s						
AKUM				IAML		11 27 53.0	
	comp=N,244nm,1.2s						
AMGA	Amorgos Island	1.82	283	P	Pn	11 27 17.2	+0.5
AMGA	Amorgos Island	1.82	283	P	Pn	11 27 17.1	+0.5
AMGA				AML	AML	11 27 54.4	
	comp=N,766µm,0.4s						
AMGA				AML	AML	11 27 54.9	

	comp=E,1044µm,0.5s						
DGB	zmir	1.88	329	*i* P	Pn	11 27 17.8	+0.3
DGB				*i* S	Sn	11 27 38.0	-2.1
DGB				IAML		11 27 40.0	
	comp=E,1µm,0.2s						
DGB				IAML		11 27 40.0	
	comp=N,920nm,0.6s						
ANAF	Anafi Island	1.89	268	P	Pn	11 27 19.0	+1.5
ANAF				AML	AML	11 27 42.4	
	comp=N,5682µm,0.3s						
ANAF				AML	AML	11 27 54.4	
	comp=E,5964µm,0.4s						
KORT	Korkueli	1.89	72	PN	Pn	11 27 19.8	+2.2
KORT	Korkueli	1.89	72	*i* P	Pn	11 27 21.6	+4.0
KORT				*i* S	Sn	11 27 44.1	+3.6
KORT				IAML		11 27 49.0	
	comp=E,643nm,0.6s						
KORT				IAML		11 27 49.0	
	comp=N,523nm,0.5s						
BRDR	BURDUR-Merkez	2.00	51	*i* P	Pn	11 27 21.1	+1.9
BRDR				*i* S	Sn	11 27 54.1	+11
BRDR				IAML		11 28 02.0	
	comp=E,538nm,0.6s						
BRDR				IAML		11 28 04.0	
	comp=N,524nm,0.6s						
ZKR	Zakros	2.03	230	P	Pn	11 27 21.1	+1.7
ZKR				S	Sn	11 27 45.4	+1.8
	comp=N,2µm,0.6s						
ZKR	Zakros	2.03	230	P	Pn	11 27 21.2	+1.7
ZKR				S	Sn	11 27 46.2	+2.6
ZKR				AML	AML	11 27 53.0	
	comp=N,2016µm,0.6s						
ZKR				AML	AML	11 27 54.8	
	comp=E,6182µm,0.5s						
ZKR	Zakros	2.03	230	PN	Pn	11 27 21.4	+2.0
ZKR	Zakros	2.03	230	P	Pn	11 27 21.3	+1.8
ZKR				S	Sn	11 27 46.1	+2.4
ZKR				AML	AML	11 27 54.2	
	comp=E,6.2nm,0.5s						
ZKR				AML	AML	11 27 54.2	
	comp=E,6.2nm,0.5s						
MANT	Manisa	2.08	10	*i* P	Pn	11 27 20.9	+0.6
MANT				*i* S	Sn	11 27 45.0	-0.2
MANT				IAML		11 27 47.0	
	comp=E,263nm,0.5s						
MANT				IAML		11 27 47.0	
	comp=N,295nm,0.3s						
MANT	Manisa	2.08	10		Pn	11 27 20.5	+0.2
ANTB	Antalya	2.10	77	PN	Pn	11 27 22.9	+2.5
KULA	Kula-Manisa	2.12	12	PN	Pn	11 27 21.9	+1.2
BLCB	Balcova	2.12	337	PN	Pn	11 27 21.0	+0.3
SANT	Santorini	2.14	269	P	Pn	11 27 22.3	+1.4
SANT	Santorini	2.14	269		Pn	11 27 22.1	+1.1
THR2	Thira island,	2.15	271	P	Pn	11 27 22.5	+1.4
THR2	Thira island,	2.15	271	P	Pn	11 27 22.5	+1.4
APE	Apeiranthos	2.16	288	P	Pn	11 27 22.2	+0.9
APE				S	Sn	11 27 46.0	-1.0
	comp=N,300nm,0.5s						
APE	Apeiranthos	2.16	288	P	Pn	11 27 22.1	+0.9
APE				S	Sn	11 27 46.8	-0.1
APE				AML	AML	11 27 47.2	
	comp=N,660µm,0.4s						
APE				AML	AML	11 27 48.8	
	comp=E,535µm,0.7s						
APE	Apeiranthos	2.16	288	PN	Pn	11 27 22.2	+0.9
APE	Apeiranthos	2.16	288	P	Pn	11 27 22.2	+0.9
THT2	Imerovigli	2.17	271	PN	Pn	11 27 22.7	+1.4
STAX	Taxiarchis Har	2.18	270	P	Pn	11 27 23.3	+1.8
STAX	Taxiarchis Har	2.18	270	P	Pn	11 27 23.0	+1.5
THR3	Thira Island,	2.18	270	P	Pn	11 27 23.0	+1.5
THR3	Thira Island,	2.18	270	P	Pn	11 27 23.2	+1.7
THR6	Thira Island,	2.19	269	P	Pn	11 27 23.1	+1.5
THR6	Thira Island,	2.19	269	P	Pn	11 27 23.0	+1.5
KHAL	Karahalli	2.22	29	*i* P	Pn	11 27 23.3	+1.2
KHAL				*i* S	Sn	11 27 48.8	+0.3
KHAL				IAML		11 27 52.0	
	comp=E,351nm,0.6s						
KHAL				IAML		11 27 54.0	
	comp=N,291nm,0.5s						
BCK	Bucak	2.23	62	PN	Pn	11 27 24.6	+2.3
URLA	Izmir	2.26	328	PN	Pn	11 27 22.9	+0.3
URLA	Izmir	2.26	328	*i* P	Pn	11 27 23.0	+0.3
URLA				*i* S	Sn	11 27 47.8	-1.7
URLA				IAML		11 27 50.0	
	comp=E,450nm,0.7s						
URLA				IAML		11 27 50.0	
	comp=N,432nm,0.9s						
IOSP	Ios island	2.29	278	P	Pn	11 27 24.1	+1.2
IOSP	Ios island	2.29	278	P	Pn	11 27 24.1	+1.2
IOSP				AML	AML	11 28 05.6	
	comp=N,1375µm,0.4s						
IOSP				AML	AML	11 28 08.8	
	comp=E,837µm,0.7s						
NPS	Neapolis	2.34	241	P	Pn	11 27 25.1	+1.4
NPS				S	Sn	11 27 51.9	+0.6
	comp=E,2µm,0.4s						
NPS	Neapolis	2.34	241	P	Pn	11 27 24.9	+1.2
NPS				S	Sn	11 27 52.7	+1.3
NPS				AML	AML	11 27 56.7	
	comp=N,3931µm,0.4s						
NPS				AML	AML	11 27 58.1	
	comp=E,5126µm,0.7s						
ISP	Isparta	2.37	54	PN	Pn	11 27 26.2	+2.0
ISP	Isparta	2.37	54	Pn	Pn	11 27 30.2	+6.0
ISP	Isparta	2.37	54	Pn	Pn	11 27 25.8	+1.5
USAK	Uak-Merkez	2.38	17	*i* P	Pn	11 27 25.5	+1.1
USAK				*i* S	Sn	11 27 53.1	+0.7
USAK				IAML		11 27 56.0	
	comp=E,202nm,0.6s						
KZIL	AFYON_Kizioren	2.43	41	*i* P	Pn	11 27 25.7	+0.7
KZIL				IAML		11 28 12.0	
	comp=E,150nm,0.6s						
KZIL				IAML		11 28 15.0	
	comp=N,161nm,0.5s						
AKHS	Akhisar	2.45	355	*i* P	Pn	11 27 25.6	+0.5
AKHS				*i* S	Sn	11 27 52.5	-1.4
AKHS				IAML		11 27 55.0	
	comp=E,299nm,0.4s						
AKS	Akhisar	2.45	355	PN	Pn	11 27 25.3	+0.2
KRBN	Karaburun	2.48	331	PN	Pn	11 27 26.1	+0.5
LAST	Lasithi	2.49	240	P	Pn	11 27 27.2	+1.4
LAST	Lasithi	2.49	240	P	Pn	11 27 27.1	+1.4
LAST				S	Sn	11 27 55.9	+0.9
LAST				AML	AML	11 28 00.9	
	comp=N,1938µm,0.4s						
LAST				AML	AML	11 28 02.0	
	comp=E,1332µm,0.7s						
FOCM	Foa	2.52	335	PN	Pn	11 27 26.8	+0.7
CHOS	Chios island	2.54	321	P	Pn	11 27 27.0	+0.5
CHOS				S	Sn	11 27 54.9	-1.3
	comp=E,2µm,0.4s						
CHOS	Chios island	2.54	321	PN	Pn	11 27 27.3	+0.8
BAGO	Egridir - ISPA	2.64	53	*i* P	Pn	11 27 29.7	+1.8
DEMI	Demirci	2.64	10	*i* P	Pn	11 27 29.0	+1.1
DEMI				*i* S	Sn	11 27 57.2	-1.6
DEMI				IAML		11 28 00.0	
	comp=E,451nm,0.5s						
DEMI				IAML		11 28 02.0	
	comp=N,282nm,0.7s						
HRKL	Herakleio	2.69	246	PN	Pn	11 27 30.1	+1.7
DKL	Dikili	2.79	340	PN	Pn	11 27 30.8	+0.9
IDI	Anoyia	2.85	247	P	Pn	11 27 31.6	+0.8
IDI				S	Sn	11 28 03.4	-0.6
	comp=N,968nm,0.6s						
IDI	Anoyia	2.85	247	P	Pn	11 27 31.4	+0.7
	comp=N,22nm,0.3s,baz=72,slow=19,SNR=75						
IDI				S	Sn	11 28 03.6	-0.3
	comp=N,63nm,0.3s,baz=103,slow=19,SNR=17						
IDI	Anoyia	2.85	247	P	Pn	11 27 31.8	+1.0
IDI				S	Sn	11 28 04.6	+0.7
IDI				AML	AML	11 28 06.9	
	comp=E,2235µm,0.6s						
IDI				AML	AML	11 28 08.7	
	comp=N,1678µm,0.6s						
IDI	Anoyia	2.85	247	PN	Pn	11 27 32.2	+1.4
SHUT	Suhut-Afyon	2.87	42	PN	Pn	11 27 32.6	+1.6
STEP	BALIKESIR_Sava	2.95	354	*i* P	Pn	11 27 32.6	+0.6
STEP				*i* S	Sn	11 28 04.8	-1.4
STEP				IAML		11 28 08.0	
	comp=E,304nm,0.5s						
STEP				IAML		11 28 09.0	
	comp=N,313nm,0.5s						
SIVA	Sivas	3.03	243	P	Pn	11 27 34.6	+1.5
SIVA				S	Sn	11 28 09.9	+1.6
	comp=N,2µm,0.7s						
SIVA	Sivas	3.03	243	P	Pn	11 27 35.6	+2.5
SIVA				S	Sn	11 28 07.8	-0.5
SIVA				AML	AML	11 28 17.5	
	comp=N,1758µm,0.5s						
SIVA				AML	AML	11 28 25.8	
	comp=E,4164µm,0.6s						
PRK	Paraskevi	3.16	333	P	Pn	11 27 36.6	+1.8
PRK	Paraskevi	3.16	333	P	Pn	11 27 36.5	+1.7
PRK				S	Sn	11 28 10.2	-1.0
PRK				AML	AML	11 28 13.8	
	comp=N,2365µm,0.4s						
PRK				AML	AML	11 28 14.1	
	comp=E,2042µm,0.5s						
TVSB	Tavsanli	3.19	19	PN	Pn	11 27 36.7	+1.3
DOGA	KONYA_Doganhis	3.29	59	*i* P	Pn	11 27 39.3	+2.5
DOGA				IAML		11 28 19.0	
	comp=N,143nm,0.8s						
DOGA				IAML		11 28 32.0	
	comp=E,90nm,0.5s						
VAM	Vamos	3.33	253	P	Pn	11 27 39.3	+2.1
VAM				AML	AML	11 28 20.7	
	comp=N,1314µm,0.5s						
VAM				AML	AML	11 28 23.5	
	comp=E,1255µm,0.4s						
GAZI	Gazipasa	3.40	92	*i* P	Pn	11 27 38.8	+0.5
IMMV	Iera Moni Meta	3.49	255	P	Pn	11 27 41.5	+2.1
GONE	Gonen-Balikesi	3.62	355	PN	Pn	11 27 42.4	+1.3
GVD	Gavdhos	3.64	245	P	Pn	11 27 44.4	+2.9
GVD	Gavdhos	3.64	245	PN	Pn	11 27 44.4	+2.9
EZN	Ezine	3.66	338	PN	Pn	11 27 42.6	+0.9
AKMS	Akamas	3.72	111	P	Pn	11 27 43.4	+0.9
VLY	Voula,Athens	3.72	294	P	Pn	11 27 44.6	+2.0
BOZC	Bozcaada	3.76	335	PN	Pn	11 27 44.1	+1.0
KNDR	Palaiochora Ch	3.79	253	PN	Pn	11 27 47.2	+3.8
ALFC	Alefka	3.87	108	P	Pn	11 27 45.3	+0.6
ALFC				AML	AML	11 28 29.8	
	comp=E,1.9nm,0.2s						
ALFC				AML	AML	11 28 29.9	
	comp=E,1.9nm,0.4s						
NATA	Nata	4.00	113	P	Pn	11 27 47.4	+1.1
DID	Didima	4.04	287	P	Pn	11 27 49.3	+2.3
LIA	Limnos Island	4.15	327	P	Pn	11 27 49.5	+1.1
LIA	Limnos Island	4.15	327	P	Pn	11 27 49.8	+1.4
LIA				S	Sn	11 28 34.7	-0.9
LIA				AML	AML	11 28 35.8	
	comp=E,378µm,0.6s						
LIA				AML	AML	11 28 38.1	
	comp=N,391µm,0.5s						
VLI	Veliai	4.17	275	P	Pn	11 27 50.8	+2.1
VLI	Veliai	4.17	275	P	Pn	11 27 51.3	+2.6
SZAC	Souni	4.24	112	P	Pn	11 27 50.6	+1.0
LTK	Loutraki	4.40	293	P	Pn	11 27 54.0	+2.2
CSS	Mathiatis	4.50	108	Pn	Pn	11 27 53.8	+0.6
CSS				Sn	Sn	11 28 41.8	-2.5
CSS	Mathiatis	4.50	108		Pn	11 27 53.2	-0.1
CSS	Mathiatis	4.50	108	P	Pn	11 27 54.1	+0.8
ASGA	Asgata	4.50	110	P	Pn	11 27 54.1	+0.9
SMTH	Samothraki Isl	4.50	334	P	Pn	11 27 54.2	+0.9
SMTH	Samothraki Isl	4.50	334	P	Pn	11 27 54.2	+0.9
SMTH				AML	AML	11 28 46.2	
	comp=N,310µm,0.4s						
SMTH				AML	AML	11 28 47.4	
	comp=E,266µm,0.5s						
MDUB	Mudurnu	4.70	30	Pn	Pn	11 27 53.7	-2.4
ALN	Alexandroupoli	4.73	341	P	Pn	11 27 57.5	+1.1
OSC2	CSNet OBS 4	4.79	133	P	Pn	11 27 57.9	+0.6
OSC2				S	Sn	11 28 52.8	+1.3
BR231	Keskin MP Arra	5.01	46		Pn	11 28 01.9	+1.6
ANTO	Ankara	5.04	46		Pn	11 28 02.7	+2.1
PARAL	Paralimni	5.04	105	P	Pn	11 28 02.7	+2.1
MATC	Matruh	5.13	188	P	Pn	11 28 00.9	-1.0
	baz=190						
AGG	Agios Georgios	5.25	301		Pn	11 28 03.6	0.0
BR131	Keskin Array S	5.46	51		Pn	11 28 07.8	+1.3
BRTR	Keskin Array B	5.46	51	P	Pn	11 28 08.7	+2.2
	comp=E,5.3nm,0.3s,baz=235,slow=12,SNR=44						
BRTR				S	Sn	11 29 09.0	+1.0
	comp=E,0.5nm,0.3s,baz=228,slow=26,SNR=2.4						
BRTR	Keskin Array B	5.46	51		Pn	11 28 07.4	+0.9
SLUM	Salum	5.49	207	P	Pn	11 28 06.7	-0.1
	baz=210						
SLUM				AMP		11 29 00.0	
	baz=210						
SLUM				S	Sn	11 29 01.4	-7.2
	baz=210						
HBRG	Burj al `Arab	6.03	166	P	Pn	11 28 13.2	-1.0
	baz=165						
HBRG				AMP		11 29 00.0	
	baz=165						
MMB	Musomiste	6.17	328	*e*P	Sn	11 29 22.6	-2.7
KKB	Krupnik	6.68	326	*e*P	Sn	11 29 36.1	-1.6
HWQ	Hawqa	6.76	106	*e*P	Pn	11 28 24.4	+0.1
OFRI	`Ofer	6.83	122	Pn	Pn	11 28 25.0	-0.3
OFRI				Sn	Sn	11 29 38.0	-3.7
MMA0B	Mount Meron ar	6.91	118	Pn	Pn	11 28 26.6	+0.3
MMA0B				Sn	Sn	11 29 40.7	-2.9
MMAI	Mount Meron Ar	6.91	118	P	Pn	11 28 25.9	-0.4
	comp=E,33nm,0.3s,baz=316,slow=13,SNR=71						
MMAI				S	Sn	11 29 38.8	-4.8
	comp=E,25nm,0.3s,baz=307,slow=28,SNR=12						
RCY	Rachaya	6.99	113	*e*P	Pn	11 28 27.7	+0.2
HMYD	Mayadein	7.00	160	P	Pn	11 28 26.9	-0.7
	baz=159						
KSDI	Kefar Szold	7.00	115	Pn	Pn	11 28 27.4	-0.1
KSDI				Sn	Sn	11 29 42.8	-3.0
NATI	Neve Ativ	7.03	115	Pn	Pn	11 28 28.3	+0.5
HNAT	Natroun	7.11	162	S	Sn	11 29 38.4	-10
	baz=161						
KOT	Kottamia	7.20	153	P	Pn	11 28 29.6	-0.7
	baz=152						
KOT				AMP		11 29 00.0	
	baz=152						
KOT				S	Sn	11 29 41.6	-9.1
	baz=152						
MMLI	Mount Malkishu	7.24	121	Pn	Pn	11 28 31.2	+0.4
MMLI				Sn	Sn	11 29 48.8	-2.9
HHAG	Hagoal	7.28	152	P	Pn	11 28 31.2	-0.2
	baz=150						
HHAG				S	Sn	11 29 43.1	-10
	baz=150						
HSAF	As Saff	7.39	156	P	Pn	11 28 32.5	-0.4
	baz=155						
QRNJ	Al-Qirein	7.41	121	Pn	Pn	11 28 32.7	-0.3
HMDT	Nahal Hemdat	7.42	122	Pn	Pn	11 28 33.5	+0.3
HMDT				Sn	Sn	11 29 53.9	-2.1
GLL	Jalalah	7.48	155	P	Pn	11 28 33.8	-0.3
	baz=154						
SWA2		7.51	198	P	Pn	11 28 34.2	-0.3
	baz=200						
SWA2				AMP		11 29 00.0	
	baz=200						
SWA2				S	Sn	11 29 49.8	-8.5
	baz=200						
KZIT	Kziot	7.61	135	Pn	Pn	11 28 35.1	-0.8
SUZ	Suez	7.68	148	P	Pn	11 28 37.0	+0.1
	baz=146						
YTIR	Yattir	7.72	129	Pn	Pn	11 28 36.5	-0.9
YTIR				Sn	Sn	11 29 59.3	-4.1
DSI	Dead Sea	7.75	127	Pn	Pn	11 28 37.5	-0.2
GHAJ	Ghor Haditha	8.04	127	Pn	Pn	11 28 41.6	-0.1
ZAF	Zafarana	8.05	151	P	Pn	11 28 41.8	-0.1
	baz=150						
ASF	Jabal al Asfar	8.43	118	P	Pn	11 28 47.0	0.0
	comp=E,2.6nm,0.3s,baz=280,slow=6.0,SNR=17						
ASF				S	Sn	11 30 19.0	-1.8
	comp=E,1.1nm,0.3s,baz=315,slow=8.6,SNR=2.1						
HRFI	Mount Harif	8.63	136	Pn	Pn	11 28 49.1	-0.7
HRFI				Sn	Sn	11 30 21.2	-4.4
MBRI	Mt Berech	8.74	137	Pn	Pn	11 28 50.8	-0.6
EIL	Elat	8.86	138	P	Pn	11 28 51.5	-1.5
	comp=E,0.9nm,0.3s,baz=311,slow=4.5,SNR=14						
EIL				S	Sn	11 30 26.1	-5.3
	comp=E,4.7nm,0.3s,baz=329,slow=12,SNR=11						
EIL	Elat	8.86	138	Pn	Pn	11 28 51.7	-1.3
TAMRE	El Minia	9.05	164	P	Pn	11 28 54.8	-0.8
	baz=163						
HBST	Basata	9.11	140	P	Pn	11 28 56.5	+0.2
	baz=139						
MLR	Muntele Rosu	9.19	350	P	Pn	11 28 59.4	+1.9
	comp=E,0.2nm,0.3s,baz=196,slow=10,SNR=3.9						
MLR	Muntele Rosu	9.19	350		Pn	11 28 58.2	+0.7
HFRF	Wahat Farafira	9.27	179	P	Pn	11 28 57.7	-0.8
	baz=179						
HDHB	Dhahab	9.45	143	P	Pn	11 29 02.0	+0.9
	baz=141						
HERR	Herculane	9.47	335	⇑P	Sn	11 30 51.5	+5.3
LOT	Lotru	9.58	341	⇑P	Sn	11 30 44.7	-4.2
MDVR	Moldovita	9.64	332	⇑P	Sn	11 30 52.1	+1.7
GZR	Gura Zlata	9.81	337	⇑P	Sn	11 30 50.3	-4.2
ACER	Acerenza	10.46	298		Pn	11 29 16.3	+1.5
AKASG	Malin Array Be	14.28	3	P	Pn	11 30 09.5	+2.9
	comp=E,1.0nm,0.3s,baz=171,slow=30,SNR=4.4						
KEST	Kesra	15.19	273	P	Pn	11 30 20.6	+2.0
	comp=E,0.3nm,0.3s,baz=159,slow=9.8,SNR=2.4						
KEST	Kesra	15.19	273	Pn	Pn	11 30 16.1	-2.4
KEST				IAmb	IAmb	11 30 25.8	
	comp=Z,7.3nm,0.7s						
GERES	GERESS Array B	16.27	324	P	P	11 30 34.6	+0.2
	comp=Z,0.2nm,0.3s,baz=133,slow=12,SNR=7.3						
GERES	GERESS Array B	16.27	324	P	Pn	11 30 30.8	-1.6
DAVOX	Davos/Dischmat	17.06	313	P	P	11 30 45.0	+1.8
	comp=Z,0.2nm,0.3s,baz=30,slow=16,SNR=2.3						
CLL	Collm	18.37	329	*e*(P)	Pn	11 31 00.0	+2.0
FINES	FINESS Array B	25.06	358	P	P	11 32 06.0	-0.1
	comp=Z,2.2nm,0.8s,baz=175,slow=18,SNR=2.5						
FINES	FINESS Array B	25.06	358	P	P	11 32 05.6	-0.5
TOA0	Torodi Ar. Sit	33.16	232	P	P	11 33 18.8	+0.3
TORD	Torodi Ar. Bea	33.16	232	P	P	11 33 19.3	+0.8
	comp=Z,0.6nm,0.4s,baz=32,slow=9.2,SNR=18						
TORD	Torodi Ar. Bea	33.16	232	P	P	11 33 17.4	-1.1
MKAR	Makanchi Array	41.07	58	P	P	11 34 26.9	+1.5
	comp=Z,0.1nm,0.4s,baz=272,slow=9.8,SNR=2.8						
MKAR	Makanchi Array	41.07	58	P	P	11 34 25.8	+0.4
BATG	Bathurst New B	66.84	312	P	P	11 37 32.5	-0.7
C36M	Paulatuk	72.55	350	P	P	11 38 06.5	-1.4
C36M				IAmb	IAmb	11 38 11.8	
	comp=Z,3.1nm,1.4s						
PPLA	Purkeypile	81.00	0	P	P	11 38 55.6	-0.2
PPLA				IAmb	IAmb	11 39 09.0	
	comp=Z,7.5nm,1.4s						

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*LVSN **25** 11:31:54.3±0.7, 59°.62N×21°.48E, h0^{km}±9^{km}, ML1.1*

HEL 25 11:31:52.4±0.1, 60°.14N×23°.84E, h0^{km}, ML1.5, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUR	Nurmijrvi	0.55	47	PG	Pg	11 32 02.0	-0.9
	baz=226						
NUR				SG	Sg	11 32 09.5	-0.5
PVF	Pernaja	1.08	67	PB	Pg	11 32 12.0	-1.2
	baz=250						
PVF				MSG		11 32 25.3	
	comp=Z,3.0nm,0.2s						
ARBE	Arbavere	1.29	122	SN	Sn	11 32 36.8	+1.2
RAF	Rauma	1.36	312	*e*P	Pg	11 32 18.4	0.0
RAF				*e*S	Sb	11 32 36.3	-0.2
RAF				AML	AML	11 32 40.9	
	comp=N,4.4nm,0.8s						
RAF				AML	AML	11 32 44.0	
	comp=E,5.2nm,0.6s						
RAF				AML	AML	11 32 45.7	
	comp=Z,3.8nm,0.8s						
RAF	Rauma	1.36	312	PN	Pg	11 32 18.1	-0.3
RAF				MSG		11 32 33.4	
	comp=Z,2.8nm,0.2s						
MTSE	Matsula	1.43	181	*e*P	Pn	11 32 19.3	-0.2
MTSE				*e*S	Sn	11 32 38.7	-0.2
MTSE	Matsula	1.43	181	PN	Pn	11 32 19.4	0.0
FIA0	FINESS Array S	1.71	39	PG	Pn	11 32 23.0	-0.4
FIA0				SN	Sb	11 32 46.4	-0.3
VJF	Virojoki	1.89	76	PG	Pn	11 32 26.4	+0.5
VJF				MSG		11 32 48.6	
	comp=Z,4.3nm,0.2s						
VJF				SG	Sn	11 32 50.9	+0.5
KEF	Keuruu	2.10	13	PG	Pb	11 32 30.5	-0.8
KEF				MSG		11 32 54.6	
	comp=Z,2.6nm,0.2s						
KEF				SG	Sb	11 32 57.4	-0.5
KAF	Kangasniemi	2.32	30	PG	Pb	11 32 33.5	-1.5
KAF				SG	Sb	11 33 04.0	-0.1
SUF	Sumiainen	2.82	22	MSG		11 33 15.3	
	comp=Z,0.7nm,0.2s						
SUF				SB	Sb	11 33 16.6	-2.0

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*IGIL **25** 11:34:58.1, 37°.17N×14°.90W, h31^{km}, ML2.3*

*MDD **25** 11:34:58.3±3.1, 37°.24N×14°.47W, h0^{km}, mb4.4/1, Error ellipse: s-maj=37.7km s-min=25.2km az=167.0, PRXIMO*

*INMG **25** 11:35:00.7±1.3, 37°.13N×14°.81W, h10^{km}, ML2.4, Error ellipse: s-maj=14.0km s-min=12.2km az=120.0*

ISC 25 11:35:01.3±4.3, 37°.4N±0°.1×14°.2W±0°.2, h10^{km}, n27, σ0^{s}85/40, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMAFR	Mafra	4.20	66	Pn	Pn	11 36 06.3	+1.0
	1.5nm,0.1s,SNR=7.9						
PMAFR				Sn	Sn	11 36 56.6	+2.3
	0.8nm,0.1s,SNR=7.9						
PMAFR	Mafra	4.20	66	*e*Pn	Pn	11 36 06.4	+1.0
PMAFR				*e*Sn	Sn	11 36 55.6	+1.2
PFVI	Vila Bisbo	4.29	91	*e*Sn	Sn	11 36 56.3	-0.5
PTEO	Sao Teotonio	4.36	86	Pn	Pn	11 36 08.0	+0.4
PTEO				Sn	Sn	11 36 57.9	-0.6
PTEO	Sao Teotonio	4.36	86	*e*Pn	Pn	11 36 08.0	+0.4
PTEO				*e*Sn	Sn	11 36 57.9	-0.6
MORF	Marmelete	4.42	89	*e*P	Pn	11 36 08.6	+0.1
MORF	Marmelete	4.42	89	Pn	Pn	11 36 08.6	+0.1
MORF	Marmelete	4.42	89	*e*Pn	Pn	11 36 08.6	+0.1
PNCL	Nicolau / Gran	4.56	79	Pn	Pn	11 36 10.8	+0.5
PNCL				Sn	Sn	11 37 02.5	-0.8
	2.4nm,0.3s						
PNCL	Nicolau / Gran	4.56	79	*e*Pn	Pn	11 36 10.8	+0.5
PNCL				*e*Sn	Sn	11 37 02.5	-0.8
PNCL				A	A	11 37 10.9	
	2.4nm,0.3s						
MESJ	Messejana	4.78	82	*e*P	Pn	11 36 13.4	+0.1
MESJ				*e*S	Sn	11 37 08.3	-0.3
MESJ				AML	AML	11 37 12.6	
	comp=N,3.8nm,0.5s						
MESJ	Messejana	4.78	82	Pn	Pn	11 36 13.4	+0.1
MESJ				Sn	Sn	11 37 08.3	-0.3
	comp=N,3.8nm,0.5s						
MESJ	Messejana	4.78	82	*e*Pn	Pn	11 36 14.9	+1.7
MESJ				*e*Sn	Sn	11 37 08.0	-0.6
MESJ				A	A	11 37 16.3	
	comp=N,2.3nm,0.5s						
PCVE	Castro Verde	4.91	85	Sn	Sn	11 37 11.4	-0.5
	comp=N,2.6nm,0.8s						
PCVE	Castro Verde	4.91	85	*e*Sn	Sn	11 37 11.4	-0.5
PCVE				A	A	11 37 15.9	
	comp=N,2.6nm,0.8s						
PBDV	Barranco-do-Ve	5.00	89	Sn	Sn	11 37 14.5	+0.3
	comp=N,3.2nm,0.5s						
PBDV	Barranco-do-Ve	5.00	89	*e*Sn	Sn	11 37 14.5	+0.3
PBDV				A	A	11 37 16.9	
	comp=N,3.2nm,0.5s						
PMTG	Montargil	5.01	68	Pn	Pn	11 36 16.5	0.0
PMTG				Sn	Sn	11 37 14.4	0.0
	comp=N,2.5nm,0.4s						
PMTG	Montargil	5.01	68	*e*Pn	Pn	11 36 16.5	0.0
PMTG				*e*Sn	Sn	11 37 14.4	0.0
PMTG				A	A	11 37 18.5	
	comp=N,2.5nm,0.4s						
PVAQ	Vaqueiros	5.16	87	Sn	Sn	11 37 18.7	+0.5
	comp=N,3.1nm,0.6s						
PVAQ	Vaqueiros	5.16	87	*e*Sn	Sn	11 37 18.7	+0.5
PVAQ				A	A	11 37 23.5	
	comp=N,3.1nm,0.6s						
EGRO	El Granado	5.35	86	Pn	Pn	11 36 20.7	-0.4
	comp=N,0.2nm,0.0s,SNR=7.9						
EGRO				Sn	Sn	11 37 22.8	0.0
	comp=N,0.7nm,0.1s,SNR=7.9						
PESTR	Estremoz	5.43	72	*e*Sn	Sn	11 37 25.1	+0.3
PMRV	Marv??o	5.74	67	Sn	Sn	11 37 32.1	-0.3
	comp=N,2.6nm,0.6s						
PMRV	Marv??o	5.74	67	*e*Sn	Sn	11 37 32.1	-0.3
PMRV				A	A	11 37 34.8	
	comp=N,2.6nm,0.6s						
EMIN	Mina Concepcio	6.00	84	Pn	Pn	11 36 29.6	-0.5
	comp=N,0.1nm,0.1s,SNR=4.0						
EMIN				Sn	Sn	11 37 37.1	-1.6
	comp=N,0.1nm,0.1s,SNR=7.9						
ELOB	Lobios	6.54	44	Sn	Sn	11 37 49.8	-2.6
	SNR=7.9						

NNC ***25*** *11:37:32.0±6.2, 36°.88N×70°.06E, h0^{km}, mb4.8, mpv4.6, Error ellipse: s-maj=56.4km s-min=47.9km az=153.0*
IDC ***25*** *11:37:35.6±0.8, 36°.47N×70°.29E, h212^{km}±7^{km}, mb3.5/17, mb1 3.6/23, mb1mx3.4/56, mbtmp4.1/23, Error ellipse: s-maj=11.3km s-min=10.2km az=148.0*
NEIC ***25*** *11:37:35.2±2.2, 36°.51N±0°.06×70°.28E±0°.10, h210^{km}±6^{km}, mb4.2/21, Error ellipse: s-maj=11.3km s-min=8.2km az=99.0*
BJI ***25*** *11:37:35.6±0.0, 36°.86N×70°.24E, h216^{km}, mB4.5/15, mb4.5/21*
ISC 25 11:37:34.7±0.4**, 36°.51N**±0°.04×**70°.37E**±0°.04**, h200^{km}, n107, σ1^{s}82**/123**, mb4.0**/28**, 5C-7D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	2.24	209		Pn	11 38 16.8	+0.8
KBL					Sn	11 38 48.3	+0.2
CHGR	Chuyangaron	2.35	336		Pn	11 38 17.8	+0.8
CHGR					Sn	11 38 49.7	-0.4
GAR	Garm	2.49	359		Pn	11 38 19.9	+1.4
GAR					Sn	11 38 53.2	+0.4
CEP	Cherat	2.96	154	P	Pn	11 38 24.2	+0.1
CEP				S	Sn	11 39 04.0	+1.4
CHCP	Chirah Chowk	3.71	139	P	Pn	11 38 34.9	+2.0
NIL	Nilore	3.71	139		Pn	11 38 35.1	+2.2
THW	Thamme Wali	3.88	163	P	Pn	11 38 36.2	+1.2
SARP	Sargodha	4.96	157	P	Pn	11 38 49.0	+0.4
ARSB	Arslanbob	5.22	22		Pn	11 38 52.7	+0.7
JMU	Jammu	5.32	134	*e*SG	Sn	11 39 49.0	-6.1
KSH	Kashi	5.35	54	P	Pn	11 38 50.3	-3.3
KSH				S	Sn	11 39 47.0	-8.9
KSH				smax	smax		
	comp=N,740nm,0.6s						
KSH				smax	smax		
	comp=E,760nm,0.9s						
THN	Thein Dam	6.00	131	*e*PG	Pn	11 39 02.5	+0.5
THN				*e*SG	Sn	11 40 05.5	-5.5
AML	Almayashu	6.18	24	P	Pn	11 39 05.1	+0.6
	SNR=220						
DHRM	DHARAMSHALA	6.49	129	*e*PG	Pn	11 39 09.4	+0.9
DHRM				*e*SG	Sn	11 40 18.8	-4.0
DHRM				IAML		11 40 22.2	
	comp=E,332nm,0.4s						
DHRM				IAML		11 40 24.8	
	comp=N,277nm,0.3s						
UCH	Uchtor	6.55	28	P	Pn	11 39 10.3	+0.9
	SNR=38						
KK31	Karatay Array	6.59	1	P	Pn	11 39 09.8	+0.3
	comp=N,5.8nm,0.3s,baz=184,slow=13,SNR=134						
KK31				⇓S	Sn	11 40 17.9	-6.7
	comp=N,19nm,0.4s,baz=178,slow=21,SNR=8.5						
KK31	Karatay Array	6.59	1		Pn	11 39 09.5	0.0
KKAR	Karatay Array	6.59	1		Pn	11 39 09.7	+0.2
KKAR	Karatay Array	6.59	1	Pn	Pn	11 39 09.6	+0.2
EKS2	Erkin-Say	6.68	22	P	Pn	11 39 11.3	+0.5
	SNR=38						
KZA	Kyzart	6.73	33	P	Pn	11 39 12.2	+0.5
	SNR=39						
AAK	Ala-Archa	6.90	26	P	Pn	11 39 14.7	+1.0
	comp=N,9.5nm,0.3s,baz=181,slow=5.6,SNR=101						
AAK				S	Sn	11 40 30.4	-1.9
	comp=N,15nm,0.3s,baz=131,slow=19,SNR=27						
AAK	Ala-Archa	6.90	26	P	Pn	11 39 14.8	+1.0
	SNR=45						
AAK	Ala-Archa	6.90	26	⇑P	Pn	11 39 14.5	+0.8
	comp=N,11nm,0.6s						
AAK				⇑S	Sn	11 40 30.1	-2.1
	comp=N,205nm,0.6s						
HRA	Herat	6.96	255		Pn	11 39 14.1	-0.5
KBK	Karagaybulak	7.08	29	P	Pn	11 39 17.4	+1.3
	SNR=31						
FRU1	Bishkek	7.10	26	Pn	Pn	11 39 17.8	+1.6
BHK	Bhakra	7.15	134	*e*x	Sn	11 40 33.6	-4.4
CHMS	Chumysh	7.31	26	P	Pn	11 39 19.6	+0.8
	SNR=19						
CHMS	Chumysh	7.31	26	⇓P	Pn	11 39 18.1	-0.8
	comp=N,34nm,1.1s						
CHMS				⇑S	Sn	11 40 39.0	-2.6
	comp=N,107nm,0.8s						
ULHL	Ulahol	7.31	37	P	Pn	11 39 20.1	+1.0
	SNR=25						
BOOM	Boomskoye usch	7.36	34	Pn	Pn	11 39 20.6	+0.9
USP	Ospenovka	7.46	24	P	Pn	11 39 21.2	+0.4
	SNR=20						
SMLA	Simla	7.80	132	*e*PG	Pn	11 39 25.5	+0.2
SMLA				*e*SG	Sn	11 40 47.5	-5.9
SMLA				IAML		11 40 52.7	
	comp=N,102nm,0.7s						
SMLA				IAML		11 40 56.1	
	comp=N,91nm,0.2s						
MDOK	Medeo	8.40	36	⇑P	Pn	11 39 33.7	+0.5
	comp=N,53nm,1.0s						
KNDC	Almaty	8.40	35	⇓P	Pn	11 39 34.2	+1.0
	comp=N,126nm,0.9s						
NDI	New Delhi	9.71	142	*e*x	Pn	11 39 43.0	-7.2
NDI				*e*x	x	11 41 19.0	
GEYT	Alibeck	9.87	282	P	Pn	11 39 50.5	-1.8
	comp=N,1.3nm,0.3s,baz=96,slow=9.3,SNR=9.5						
GEYT				S	Sn	11 41 38.7	-3.9
	comp=N,0.9nm,0.3s,baz=104,slow=29,SNR=1.2						
MAKZ	Makanchi	13.45	36	⇑P	Pn	11 40 37.5	-0.1
	comp=N,21nm,0.5s						
MAKZ	Makanchi	13.45	36		Pn	11 40 38.1	+0.5
MK31	Makanchi Array	13.59	37	Pn	Pn	11 40 39.7	+0.3
MKAR	Makanchi Array	13.59	37	P	Pn	11 40 39.5	+0.2
	comp=N,1.2nm,0.3s,baz=221,slow=16,SNR=53						
MKAR	Makanchi Array	13.59	37	Pn	Pn	11 40 39.1	-0.3
DANN	Dangsing	13.92	122	*e*P	Pn	11 40 43.8	-0.2
	comp=N,27nm,0.6s						
BHPL	Bhopal	14.56	153	*e*P	P	11 40 54.7	+1.9
GKN	Gorkha	14.74	121	*e*P	P	11 40 55.8	+0.9
	comp=N,27nm,0.2s						
AB31	Akbulak array	14.83	332	⇓P	Pn	11 40 53.7	-1.0
	comp=N,1.2nm,0.4s						
ABKAR	Akbulak array	14.83	332		Pn	11 40 53.9	-0.7
WMQ	Urumqi	15.11	56	*e*P	Pn	11 40 59.0	+0.8
WMQ				sP	sP	11 41 49.0	-9.5
WMQ				pmax	pmax		
	comp=N,12nm,0.7s						
WMQ				LR	LR		
	comp=N,930nm,25.3s						
WMQ				LR	LR		
	comp=N,200nm,21.1s						
WMQ				LR	LR		
	comp=N,39nm,21.1s						
WMQ	Urumqi	15.11	56		P	11 40 59.8	+1.1
KURBB	Kurchatov Arra	15.28	20	P	Pn	11 40 59.6	-0.5
	comp=N,0.4nm,0.3s,baz=208,slow=10,SNR=18						
KURBB	Kurchatov Arra	15.28	20	⇓P	Pn	11 40 59.2	-0.9
	comp=N,12nm,0.8s						
KURK	Kurchatov	15.39	20		Pn	11 41 01.3	-0.1
KURK				IAmb	IAmb	11 41 04.4	
	comp=Z,9.0nm,0.9s						
PKI	Pulchoki	15.55	121	*e*P	Pn	11 41 05.0	+1.1
	comp=Z,33nm,0.6s						
JIRN	Jiri	16.04	119	*e*P	Pn	11 41 12.4	+2.5
	comp=Z,45nm,0.4s						
BVAR	Borovoye Array	16.51	0	P	Pn	11 41 15.1	+0.1
	comp=Z,1.6nm,0.3s,baz=166,slow=10,SNR=27						
AKTO	Aktyubinsk	16.52	331	P	P	11 41 14.5	+0.4
	comp=Z,0.5nm,0.3s,baz=141,slow=11,SNR=16						
AKTO				S	S	11 44 15.7	-0.9
	comp=Z,0.1nm,0.3s,baz=162,slow=20,SNR=1.8						
AKTO	Aktyubinsk	16.52	331	⇓P	Pn	11 41 15.0	0.0
BRVK	Borovoye	16.55	360	⇓P	P	11 41 15.1	+0.8
	comp=Z,12nm,0.9s						
BRVK	Borovoye	16.55	360	P	Pn	11 41 15.8	+0.5
RAMN	Ramite	16.76	120	*e*P	P	11 41 18.4	+1.1
	comp=Z,19nm,0.5s						
TAPN	Taplejung	17.30	117	*e*P	Pn	11 41 25.5	+0.6
	comp=Z,11nm,0.4s						
ODAN	Odare	17.37	119	*e*P	Pn	11 41 26.5	+0.9
	comp=Z,21nm,0.6s						
ZAA0	Zalesovo Array	20.12	25	P	P	11 41 53.5	+0.4
ZALV	Zalesovo Beam	20.12	25	P	P	11 41 53.6	+0.5
	comp=Z,9.1nm,0.3s,baz=223,slow=11,SNR=41						
GTA	Gaotai	23.35	74	*e*P	P	11 42 28.0	+2.7
GTA				pP	pP	11 43 09.8	+6.5
GTA				sP	sP	11 43 37.5	+8.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,85nm,5.1s						
GTA				LR	LR		
	comp=Z,86nm,14.8s						
GTA				LR	LR		
	comp=Z,120nm,16.1s						
GTA				LR	LR		
	comp=Z,100nm,18.9s						
LZH	Lanzhou	26.91	81	*e*P	P	11 42 58.0	+0.5
LZH				pP	pP	11 43 40.5	+1.3
LZH				PP	PnPn	11 43 53.5	+1.4
LZH				sP	sP	11 44 04.3	+1.2
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH				pmax	pmax		
	comp=Z,90nm,5.0s						
SONM	Songino Array	28.75	55	P	P	11 43 15.3	+1.7
	comp=Z,1.2nm,0.6s,baz=266,slow=9.2,SNR=9.2						
BRTR	Keskin Array B	28.94	288	P	P	11 43 16.2	+0.8
	comp=Z,0.6nm,0.5s,baz=112,slow=8.5,SNR=4.5						
KMI	Kunming	29.90	103	P	P	11 43 28.5	+4.4
KMI				pmax	pmax		
	comp=Z,27nm,0.6s						
KMI				pmax	pmax		
	comp=Z,93nm,4.0s						
KMI				LR	LR		
	comp=Z,140nm,6.2s						
KMI				LR	LR		
	comp=Z,110nm,5.2s						
KMI				LR	LR		
	comp=Z,97nm,6.8s						
CMAR	Chiang Mai Arr	30.91	118	P	P	11 43 33.2	+0.5
	comp=Z,0.6nm,0.6s,baz=304,slow=7.8,SNR=6.2						
HHC	Hu-ho-hao-te	32.24	70	*e*P	P	11 43 45.8	+1.5
HHC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,50nm,7.0s						
AKASG	Malin Array Be	32.54	309	P	P	11 43 46.4	-0.2
	comp=Z,0.6nm,0.4s,baz=84,slow=6.7,SNR=1.9						
NRIK	Noril'sk	34.21	11	P	P	11 44 02.2	+1.4
	comp=Z,1.2nm,0.3s,baz=180,slow=15,SNR=2.3						
FIA1	FINESS Array S	37.19	326	P	P	11 44 26.3	+0.1
FIA1				IAmb	IAmb	11 44 28.9	
	comp=Z,11nm,1.2s						
FINES	FINESS Array B	37.19	326	P	P	11 44 25.8	-0.4
	comp=Z,2.2nm,0.7s,baz=120,slow=11,SNR=6.9						
ARCES	ARCESS Array B	40.94	338	P	P	11 44 58.0	+0.7
	comp=Z,1.8nm,0.6s,baz=108,slow=7.6,SNR=13						
NB2	NORSAR Subarra	44.06	323	P	P	11 45 22.1	-0.4
	comp=Z,1.2nm,0.8s,baz=93,slow=7.9						
NOA	NORSAR Array B	44.06	323	P	P	11 45 21.5	-1.0
	comp=Z,1.4nm,0.8s,baz=96,slow=7.9,SNR=4.4						
NOA				pP	pP	11 46 07.5	+1.9
	comp=Z,0.8nm,0.6s,baz=98,slow=8.0,SNR=3.0						
TEOL	Teolo	44.34	300	P	P	11 45 24.0	-0.8
TIXI	Tiksi	45.96	22	P	P	11 45 38.0	+0.9
KMBO	Kilima Mbogo	48.46	227	P	P	11 45 58.0	+0.4
	comp=Z,2.5nm,0.5s,baz=33,slow=11,SNR=9.6						
KMBO	Kilima Mbogo	48.46	227	P	P	11 45 57.9	+0.4
MBAR	Mbarara	52.10	234	P	P	11 46 22.3	-2.4
MBAR				IAmb	IAmb	11 46 25.2	
	comp=Z,4.7nm,0.5s						
INU	Inuyama	52.97	70	P	P	11 46 27.6	-3.1
SEY	Seymchan	54.69	34	P	P	11 46 44.3	+1.6
	comp=Z,0.4nm,0.4s,baz=265,slow=15,SNR=3.5						
TOA0	Torodi Ar. Sit	65.21	268	P	P	11 47 52.4	-2.5
TOA0				IAmb	IAmb	11 47 54.8	
	comp=Z,4.4nm,1.4s						
TORD	Torodi Ar. Bea	65.21	268	P	P	11 47 52.8	-2.1
	comp=Z,1.5nm,0.6s,baz=48,slow=5.7,SNR=9.9						
TORD	Torodi Ar. Bea	65.21	268	P	P	11 47 53.0	-1.9
TOLK	Toolik Lake Re	71.04	14	P	P	11 48 30.3	-0.1
C36M	Paulatuk	73.92	5	P	P	11 48 47.4	+0.2
C36M				IAmb	IAmb	11 48 48.5	
	comp=Z,1.9nm,0.5s						
INK	Inuvik	73.98	9	P	P	11 48 48.0	+0.4
LBTB	Lobatse	74.34	222	P	P	11 48 48.8	-1.6
ILAR	Eielson Array	74.91	16	P	P	11 48 52.5	-0.6
	comp=Z,0.2nm,0.6s,baz=300,slow=4.5,SNR=4.4						
ILAR	Eielson Array	74.91	16	P	P	11 48 52.6	-0.5
PPLA	Purkeypile	75.24	19	P	P	11 48 56.0	+0.8
PPLA				IAmb	IAmb	11 48 60.0	
	comp=Z,8.0nm,1.4s						
KNRA	Kununurra	75.66	122	P	P	11 48 56.6	-1.4
KNRA				IAmb	IAmb	11 49 13.9	
	comp=Z,4.7nm,1.1s						
BOSA	Boshof	77.43	220	P	P	11 49 06.5	-1.4
	comp=Z,4.9nm,1.1s,baz=48,slow=9.4,SNR=2.6						
BOSA	Boshof	77.43	220	P	P	11 49 07.1	-0.7
BOSA				IAmb	IAmb	11 49 07.5	
	comp=Z,6.0nm,1.1s						
MCARA	McCarthy VSAT	78.73	16	P	P	11 49 16.1	+1.6
VRDI	Verde Repeater	78.78	16	P	P	11 49 14.4	-0.6
VRDI				IAmb	IAmb	11 49 29.0	
	comp=Z,3.2nm,1.0s						
YKA	Yellowknife Ar	81.26	2	P	P	11 49 28.0	0.0
	comp=Z,0.7nm,0.7s,baz=350,slow=4.8,SNR=16						
YKA				pP	pP	11 50 19.4	+2.3
	comp=Z,1.8nm,0.8s,baz=352,slow=5.1,SNR=16						
WRA	Warramunga Arr	82.43	121	P	P	11 49 32.8	-1.9
	comp=Z,4.7nm,0.3s,baz=31,slow=30,SNR=8.8						
WB2	Warramunga Arr	82.44	121	P	P	11 49 33.0	-1.7
WB2				IAmb	IAmb	11 49 33.4	
	comp=Z,4.3nm,1.1s						
AS31	Alice Springs	84.68	124	P	P	11 49 43.9	-2.3
ASAR	Alice Springs	84.68	124	P	P	11 49 44.5	-1.7
	comp=Z,0.9nm,0.6s,baz=313,slow=4.9,SNR=25						
ASAR				pP	pP	11 50 38.6	+2.2
	comp=Z,0.4nm,0.8s,baz=318,slow=5.0,SNR=2.7						
ASAR	Alice Springs	84.68	124	P	P	11 49 44.2	-1.9

PGC 25 11:46:39.8±7.7**, 50°.75N**×**139°.01W, h10^{km}, MLSn3.8**/4**, Mw4.4**/4**, 565km Wsw of Sandspit, Bc West Of Vancouver Island, West of Vancouver Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VIB	Van Inlet	4.72	55	Pn	Pn	11 47 50.4	-0.7
VIB				Sn	Sn	11 48 42.4	-3.4
DIB	Dawson Inlet,	4.73	56	Pn	Pn	11 47 50.2	-0.9
DIB				Sn	Sn	11 48 42.2	-3.7
BNB	Barry Inlet	4.87	65	Pn	Pn	11 47 52.6	-0.6
BNB				Sn	Sn	11 48 46.4	-3.2
NDB	Naden	4.91	47	Pn	Pn	11 47 53.6	-0.1
NDB				Sn	Sn	11 48 48.3	-2.3
PNL	Peninsula	8.94	359	Pn	Pn	11 48 50.3	+1.4
PCA	Pinnacle	9.39	356	Pn	Pn	11 48 55.7	+0.6
YUK7	Dusty Glacier	9.81	3	Pn	Pn	11 49 03.2	+2.2
GRNC	Granite Creek	10.12	352	Pn	Pn	11 49 05.5	+0.3
HYT	Haines Junctio	10.13	4	Pn	Pn	11 49 07.3	+2.0
WHY	Whitehorse	10.20	12	Pn	Pn	11 49 09.1	+2.9
YUK6	Outpost Mounta	10.22	2	Pn	Pn	11 49 08.9	+2.2
CTGM	Chitina Glacie	10.32	354	Pn	Pn	11 49 08.6	+0.7
KIAG	Kiagna River	10.37	351	Pn	Pn	11 49 08.5	0.0
YUK5	Granite Creek	10.43	3	Pn	Pn	11 49 11.6	+2.2
BALM	Baldy	10.47	351	Pn	Pn	11 49 10.4	+0.4
YUK4	Talbot Arm	10.62	1	Pn	Pn	11 49 16.2	+4.1
YUK3	Moose Creek	11.08	356	Pn	Pn	11 49 21.1	+2.7
YUK2	White River	11.11	355	Pn	Pn	11 49 21.0	+2.4
YUK1	Sand Pete Hill	11.46	356	Pn	Pn	11 49 26.0	+2.5
DAWY	Dawson	13.35	359	Pn	Pn	11 49 52.0	+2.8

MAN 25 12:02:32.1, 9°.75N×**123°.83E, h8^{km}, mb3.7, ML2.4, MS1.9, 2C, Negros**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBP	Tagbilaran	0.07	154	*e*P	Pg	12 02 34.8	+0.7
TBP				*i* S	Sg	12 02 37.2	+1.7
LLP	Lapu-Lapu	0.58	13	*e*P	Pg	12 02 43.5	+0.2
LLP				*i* S	Sb	12 02 51.9	-1.0
SNPH	Sibulan	0.71	235	⇑*i*P	Pg	12 02 46.2	+0.3
SNPH				*i* S	Sb	12 02 56.7	-0.2
MSLP	Maasin	1.08	69	*e*P	Pg	12 02 52.5	-0.4
MSLP				*e*S	Sn	12 03 08.6	-0.2
DCPH	Dipolog City	1.25	202	⇑*i*P	Pn	12 02 54.7	-1.3

IDC ***25*** *12:09:47.2±0.9, 25°.88N×64°.12E, h0^{km}, mb4.0/17, mb1 4.1/19, mb1mx3.9/57, mbtmp4.0/19, ML4.3/2, MS3.9/26, Ms1 3.9/26, ms1mx3.7/44, Error ellipse: s-maj=20.0km s-min=15.5km az=178.0*
NEIC ***25*** *12:09:48.7±2.2, 25°.90N±0°.09×64°.16E±0°.06, h20^{km}±4^{km}, mb4.4/23, Error ellipse: s-maj=13.8km s-min=7.1km az=169.0*
OMAN ***25*** *12:09:54.5±2.1, 25°.88N×63°.71E, h20^{km}, ms3.3/4, Error ellipse: s-maj=39.4km s-min=16.8km az=96.0*
DSN ***25*** *12:10:00.0±2.2, 26°.25N×63°.17E, h15^{km}, ML4.5/7, Error ellipse: s-maj=62.9km s-min=14.6km az=7.0*
ISC 25 12:09:50.9±0.4**, 25°.96N**±0°.05×**64°.15E**±0°.04**, h35^{km}, n126, σ2^{s}53**/133**, mb4.2**/28**, MS3.8**/25**, Southwestern Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BHUJ	Bhuj	5.69	117	*e*P	Pn	12 11 13.1	+0.1
BHUJ				*e*S	Sn	12 12 15.8	-1.3
BHUJ				IAML		12 12 18.5	
	comp=E,245nm,0.3s						
BHUJ				IAML		12 12 20.1	
	comp=N,263nm,0.5s						
WSAR	Wadi Sarin	5.71	243	Pn	Pn	12 11 12.3	-0.9
	comp=N,20nm,0.3s,baz=97,slow=12,SNR=69						
WSAR				Sn	Sn	12 12 10.5	-7.0
	comp=N,6.1nm,0.3s,baz=61,slow=2.0,SNR=6.6						
WSAR	Wadi Sarin	5.71	243	P	Pn	12 11 12.6	-0.6
	SNR=22						
JLN	Jalan Bani Buh	5.75	230	P	Pn	12 11 13.5	-0.4
	SNR=5.4						
WBK	Wadi Bani Khal	5.78	236	P	Pn	12 11 13.5	-0.8
	SNR=95						
WBK				S	Sn	12 12 13.3	-6.1
BIDO	Bidbid	5.99	247	P	Pn	12 11 17.1	0.0
	SNR=19						
BIDO				S	Sn	12 12 23.6	-0.9
JASL	Jaisalmer	6.13	80	*e*P	Pn	12 11 19.3	+0.2
JASL				*e*S	Sn	12 12 28.4	+0.3
SMDO	Samad	6.26	244	P	Pn	12 11 20.4	-0.5
	SNR=37						
JMDO	Jabal Madar	6.57	238	P	Pn	12 11 25.2	0.0
	SNR=77						
HOQ	Hoqain	6.65	251	P	Pn	12 11 25.2	-1.0
	SNR=21						
BANOM	Banah	7.06	271	*i* P	Pn	12 11 30.8	-1.1
	SNR=23						
BANOM				S	Sn	12 12 42.1	-8.9
BANOM	Banah	7.06	271	P	Pn	12 11 31.2	-0.7
	SNR=23						
BSY	Bisya	7.10	245	P	Pn	12 11 33.1	+0.7
	SNR=90						
MDH	Madha	7.11	266	*i* P	Pn	12 11 31.0	-1.5
	SNR=21						
MDH	Madha	7.11	266	P	Pn	12 11 31.4	-1.1
	SNR=21						
MDH				S	Sn	12 12 46.1	-6.0
SOHO	SOHO	7.14	257	P	Pn	12 11 31.4	-1.5
	SNR=17						
SOHO				S	Sn	12 12 48.4	-4.4
SHME	Shamm	7.20	272	*i* P	Pn	12 11 33.3	-0.5
	SNR=18						
MSFE	Esma-Masafi	7.23	267	*i* P	Pn	12 11 32.8	-1.5
	SNR=20						
UOSS	Minazif	7.25	264	*i* P	Pn	12 11 32.2	-2.2
	SNR=16						
UOSS	Minazif	7.25	264	P	Pn	12 11 32.5	-1.9
UOSS				S	Sn	12 12 50.5	-5.1
UOSS	Minazif	7.25	264		Pn	12 11 32.5	-1.9
UOSS				Sn	Sn	12 12 50.4	-5.1
HATD	Hatta, Dubai	7.33	263	*i* P	Pn	12 11 34.3	-1.3
	SNR=22						
HATD	Hatta, Dubai	7.33	263	P	Pn	12 11 34.8	-0.8
	SNR=22						
ARQ	Araqi	7.41	251	P	Pn	12 11 38.4	+1.7
	SNR=14						
ASHO	Ashiyiah	7.43	262	*i* P	Pn	12 11 37.5	+0.6
	SNR=45						
ASHO	Ashiyiah	7.43	262	P	Pn	12 11 39.0	+2.1
	SNR=21						
ASHO				S	Sn	12 13 00.3	+0.3
MHTO	MHTO	7.53	230	P	Pn	12 11 38.9	+0.7
	SNR=7.3						
MHTO				S	Sn	12 12 58.0	-4.4
NAZ	Nazwa, Dubai	7.73	265	*i* P	Pn	12 11 41.9	+0.9
	SNR=14						
NAZ	Nazwa, Dubai	7.73	265	P	Pn	12 11 43.1	+2.1
	SNR=13						
FAQ	Al Faqa, Dubai	7.83	263	P	Pn	12 11 44.4	+2.0
	SNR=5.5						
FAQ				S	Sn	12 13 10.6	+0.7
ALNE	Al Ain	7.85	258	*i* P	Pn	12 11 43.6	+0.9
	SNR=12						
DQM	DQM	8.55	227	P	Pn	12 11 51.8	-0.5
DQM				S	Sn	12 13 23.6	-3.9
HRA	Herat	8.56	349		Pn	12 11 52.3	-0.2
THW	Thamme Wali	9.50	42	P	Pn	12 12 03.9	-1.4
KBL	Kabul	9.54	25	Pn	Pn	12 12 06.5	+0.5
KBL				Sn	Sn	12 13 50.2	-1.9
CEP	Cherat	10.33	39	P	Pn	12 12 16.0	-0.7
CEP				S	Sn	12 14 04.0	-7.4
NIL	Nilore	11.01	44	Pn	Pn	12 12 24.5	-1.4
NIL				Sn	Sn	12 14 23.3	-4.5
CHCP	Chirah Chowk	11.02	44	P	Pn	12 12 24.1	-2.0
THN	Thein Dam	11.98	55	*e*P	Pn	12 12 38.5	-0.8
THN				*e*S	Sn	12 14 43.5	-8.2
BHK	Bhakra	12.06	60	*e*x	Pn	12 12 40.9	+0.5
DHRM	DHARAMSHALA	12.33	57	*e*P	Pn	12 12 42.9	-1.3
DHRM				*e*S	Sn	12 14 53.6	-7.0
DHRM				IAML		12 15 03.8	
	comp=E,132nm,0.6s						
DHRM				*i* x	x	12 18 47.1	
SMLA	Simla	12.55	63	*e*P	Pn	12 12 45.7	-1.2
SMLA				*e*S	Sn	12 14 57.9	-7.5
SMLA				IAML		12 15 02.2	
	comp=E,56nm,0.2s						
CHGR	Chuyangaron	13.35	17		Pn	12 12 58.3	+0.4
GAR	Garm	14.00	20	Pn	Pn	12 13 07.4	+0.5
HYB	Hyderabad	15.85	120	*i* P	P	12 13 36.0	+1.1
KSH	Kashi	16.76	33	P	Pn	12 13 41.0	-2.1
KSH				pP	P	12 13 44.8	-0.2
KSH				S	Sn	12 16 42.5	-5.7
KSH				sS	S	12 16 49.3	-9.0
KSH				SS	SnSn	12 17 02.0	+0.3
DANN	Dangsing	17.62	78	*e*P	Pn	12 13 51.2	-2.8
KK31	Karatay Array	17.88	15		P	12 13 57.0	-0.2
KKAR	Karatay Array	17.88	15		P	12 13 57.2	0.0
KKAR	Karatay Array	17.88	15		P	12 13 57.5	+0.3
KKAR				IAmb	IAmb	12 14 01.7	
	comp=Z,4.9nm,0.8s						
AAK	Ala-Archa	18.68	24	P	Pn	12 14 07.4	+0.7
	comp=Z,0.4nm,0.3s,baz=193,slow=11,SNR=6.2						
AAK				LR	LR	12 23 26.9	
	comp=Z,308nm,18.1s,baz=198,slow=44						
AAK	Ala-Archa	18.68	24	P	Pn	12 14 08.3	+1.6
DMN	Daman	18.79	80	*e*P	P	12 14 05.7	-1.9
PKI	Pulchoki	19.05	80	*e*P	P	12 14 09.0	-1.6
	comp=Z,24nm,0.7s						
GUN	Gumba	19.47	79	*e*P	P	12 14 14.2	-1.0
	comp=Z,84nm,0.9s						
JIRN	Jiri	19.75	80	*e*P	Pn	12 14 19.1	-0.8
RAMN	Ramite	20.13	82	*e*P	P	12 14 22.8	+0.6
	comp=Z,35nm,0.7s						
ODAN	Odare	20.84	82	*e*P	Pn	12 14 32.4	-0.1
	comp=Z,16nm,0.2s						
TAPN	Taplejung	21.10	81	*e*P	P	12 14 34.8	+1.9
	comp=Z,30nm,0.8s						
GNI	Garni	21.49	316	LR	LR	12 23 38.7	
	comp=Z,163nm,20.5s,baz=125,slow=39						
TBLG	Delisi	22.44	319	P	P	12 14 44.5	-2.3
TBLG				IAmb	IAmb	12 14 59.5	
	comp=Z,8.5nm,0.8s						
AKH	Akhalkalaki	23.00	317	P	P	12 14 54.9	+2.1
AKH				IAmb	IAmb	12 15 12.9	
	comp=Z,7.9nm,1.0s						
ABKAR	Akbulak array	23.48	353	P	P	12 14 56.9	-0.5
LSA	Lhasa	24.15	75	P	P	12 15 05.6	+1.3
LSA				IAmb	IAmb	12 15 08.0	
	comp=Z,15nm,1.1s						
PALK	Pallekele	24.38	137	LR	LR	12 25 52.0	
	comp=Z,166nm,20.4s,baz=308,slow=40						
ASF	Jabal al Asfar	24.57	291	LR	LR	12 26 38.6	
	comp=Z,284nm,18.3s,baz=48,slow=41						
ATD	Arta Tunnel	24.70	238	LR	LR	12 25 37.2	
	comp=Z,167nm,19.4s,baz=46,slow=39						
KBZ	Khabaz	24.75	321	P	P	12 15 12.7	+3.6
	comp=Z,3.9nm,0.8s,baz=129,slow=10,SNR=4.9						
AKTO	Aktyubinsk	24.89	351	P	P	12 15 11.2	+0.9
	comp=Z,2.5nm,0.7s,baz=207,slow=5.0,SNR=4.7						
AKTO				LR	LR	12 26 39.1	
	comp=Z,206nm,18.9s,baz=156,slow=40						

MAKZ	Makanchi	25.16	30	P	P	12 15 11.9	-1.0
BRDH	Bariadhala	25.25	92	LR	LR	12 27 09.7	
	comp=Z,358nm,18.4s,baz=305,slow=41						
MK31	Makanchi Array	25.30	30	P	P	12 15 14.2	+0.1
MK31				IAmb	IAmb	12 15 19.6	
	comp=Z,4.9nm,0.8s						
MKAR	Makanchi Array	25.30	30	P	P	12 15 15.8	+1.7
	comp=Z,4.0nm,0.6s,baz=213,slow=11,SNR=20						
MKAR				LR	LR	12 27 29.2	
	comp=Z,591nm,18.6s,baz=213,slow=42						
MKAR	Makanchi Array	25.30	30	P	P	12 15 15.0	+0.9
MMAI	Mount Meron Ar	25.94	293	LR	LR	12 27 03.3	
	comp=Z,220nm,20.8s,baz=80,slow=40						
EIL	Elat	26.05	285	P	P	12 15 22.8	+1.7
	comp=Z,8.1nm,1.0s,baz=39,slow=6.5,SNR=4.1						
EIL				LR	LR	12 26 26.8	
	comp=Z,102nm,21.2s,baz=90,slow=38						
WMQ	Urumqi	26.14	41	eP	P	12 15 23.8	+2.0
WMQ				pP	pP	12 15 28.8	-3.2
WMQ				sP	sP	12 15 33.3	-3.0
KURBB	Kurchatov Arra	26.99	20	P	P	12 15 31.6	+2.3
	comp=Z,0.6nm,0.3s,baz=214,slow=8.9,SNR=8.0						
KURK	Kurchatov	27.10	20	P	P	12 15 29.7	-0.6
BVAR	Borovoye Array	27.43	8	P	P	12 15 36.7	+3.4
	comp=Z,2.9nm,0.6s,baz=182,slow=11,SNR=15						
BRVK	Borovoye	27.45	8	P	P	12 15 33.1	-0.3
BRVK				IAmb	IAmb	12 15 43.1	
	comp=Z,4.7nm,0.8s						
BRTR	Keskin Array B	28.92	306	P	P	12 15 49.3	+2.5
	comp=Z,0.2nm,0.3s,baz=124,slow=13,SNR=1.6						
BRTR				LR	LR	12 28 54.0	
	comp=Z,203nm,19.1s,baz=109,slow=40						
BRTR	Keskin Array B	28.92	306	P	P	12 15 47.6	+0.7
ZAA0	Zalesovo Array	31.89	23	P	P	12 16 15.0	+2.3
ZAA0				IAmb	IAmb	12 16 18.7	
	comp=Z,8.8nm,1.4s						
ZALV	Zalesovo Beam	31.89	23	P	P	12 16 14.4	+1.7
	comp=Z,1.2nm,0.4s,baz=223,slow=11,SNR=6.7						
ZALV				LR	LR	12 32 05.5	
	comp=Z,168nm,18.8s,baz=210,slow=42						
ZALV	Zalesovo Beam	31.89	23	P	P	12 16 13.3	+0.5
GTA	Gaotai	32.66	57	eP	P	12 16 22.0	+2.1
GTA				pP	pP	12 16 29.0	-1.1
GTA				sP	sP	12 16 32.5	-1.9
CHTO	Chiang Mai	32.88	95	P	P	12 16 21.2	-0.6
CHTO				IAmb	IAmb	12 16 27.1	
	comp=Z,7.4nm,1.5s						
CMAR	Chiang Mai Arr	32.99	96	P	P	12 16 24.3	+1.5
	comp=Z,0.3nm,0.4s,baz=285,slow=10.0,SNR=5.9						
CMAR				LR	LR	12 31 05.6	
	comp=Z,64nm,18.5s,baz=126,slow=39						
CMAR	Chiang Mai Arr	32.99	96	P	P	12 16 22.6	-0.3
LZH	Lanzhou	35.27	64	eP	P	12 16 43.5	+0.8
LZH				pP	pP	12 16 50.0	-3.0
LZH				sP	sP	12 16 53.0	-4.3
LZH				PP	PnPn	12 17 58.5	-2.7
PBKT	Sadao Pong	35.46	98	P	P	12 16 43.2	-1.0
PBKT				IAmb	IAmb	12 16 58.4	
	comp=Z,4.7nm,0.9s						
MLR	Muntele Rosu	36.19	313	P	P	12 16 46.5	-3.8
BURAR	Bucovina Array	37.40	316	P	P	12 17 01.0	+0.5
BUR08	Bucovina Ar. S	37.42	316	P	P	12 17 00.9	+0.2
BUR08				IAmb	IAmb	12 17 12.6	
	comp=Z,7.9nm,1.1s						
KLMR	Klimovskoe	38.72	341	e	P	12 17 16.7	+5.4
KLMR				AMP		12 17 31.4	
	comp=Z,30nm,2.3s						
XAN	Xi'an	39.35	67	P	P	12 17 16.5	-0.6
XAN	Xi'an	39.35	67	P	P	12 17 18.5	+1.4
XAN				IAmb	IAmb	12 17 19.1	
	comp=Z,8.2nm,1.1s						
SONM	Songino Array	39.58	45	P	P	12 17 21.4	+2.5
	comp=Z,2.1nm,1.0s,baz=246,slow=8.8,SNR=9.9						
SONM				LR	LR	12 36 49.7	
	comp=Z,372nm,18.5s,baz=247,slow=41						
SONM	Songino Array	39.58	45	P	P	12 17 21.8	+2.9
PSI	Prapat	40.56	119	P	P	12 17 29.1	+1.7
	comp=Z,8.3nm,0.9s,baz=356,slow=16,SNR=1.7						
RPSI	Rantau Prapat	40.63	119	P	P	12 17 29.1	+1.3
HHC	Hu-ho-hao-te	41.77	57	eP	P	12 17 39.0	+1.9
FIA1	FINESS Array S	43.75	335	P	P	12 17 52.8	+0.2
FINES	FINESS Array B	43.75	335	P	P	12 17 53.7	+1.0
	comp=Z,1.1nm,0.5s,baz=116,slow=6.6,SNR=5.1						
FINES				LR	LR	12 40 10.0	
	comp=Z,91nm,19.6s,baz=178,slow=42						
FINES	FINESS Array B	43.75	335	P	P	12 17 51.6	-1.0
GERES	GERESS Array B	45.12	314	P	P	12 18 04.5	+0.5
	comp=Z,0.3nm,0.2s,baz=88,slow=8.9,SNR=1.4						
GERES				LR	LR	12 39 52.5	
	comp=Z,64nm,18.1s,baz=104,slow=40						
GERES	GERESS Array B	45.12	314	P	P	12 18 04.1	+0.2
NRIK	Noril'sk	45.55	11	LR	LR	12 40 09.3	
	comp=Z,194nm,18.8s,baz=199,slow=40						
ARCES	ARCESS Array B	49.09	343	P	P	12 18 35.7	+1.3
	comp=Z,5.8nm,1.1s,baz=137,slow=7.8,SNR=6.7						
ARCES				LR	LR	12 43 00.7	
	comp=Z,155nm,18.1s,baz=139,slow=41						
NOA	NORSAR Array B	49.88	329	P	P	12 18 42.3	+1.7
	comp=Z,0.4nm,0.7s,baz=127,slow=7.2,SNR=1.0						
KSRS	Korea Array	54.53	61	LR	LR	12 46 17.2	
	comp=Z,162nm,18.6s,baz=275,slow=40						
TOA0	Torodi Ar. Sit	59.74	270	P	P	12 19 51.8	-0.8
TOA0				IAmb	IAmb	12 19 55.1	
	comp=Z,2.5nm,0.7s						
TORD	Torodi Ar. Bea	59.74	270	P	P	12 19 53.9	+1.3
	comp=Z,2.1nm,0.6s,baz=61,slow=4.2,SNR=16						
TORD				LR	LR	12 47 52.1	
	comp=Z,75nm,19.5s,baz=335,slow=38						
TORD	Torodi Ar. Bea	59.74	270	P	P	12 19 51.7	-0.9
MJB9	Matsu-Tunnel	62.79	61	P	P	12 20 10.9	-2.1
MAJO	Matsushiro	62.79	61	P	P	12 20 10.9	-2.2
MJAR	Matsushiro Arr	62.80	61	LR	LR	12 50 48.5	
	comp=Z,50nm,18.7s,baz=185,slow=39						
MA2	Magadan	66.31	34	LR	LR	12 52 31.6	
	comp=Z,85nm,18.6s,baz=270,slow=39						
DBIC	Dimbokro	68.24	267	LR	LR	12 55 13.2	
	comp=Z,126nm,19.2s,baz=46,slow=40						
PETK	Petropavlovsk-	71.72	39	LR	LR	12 56 38.7	
	comp=Z,174nm,18.5s,baz=241,slow=39						
TULEG	Thule	73.77	350	P	P	12 21 21.9	+0.9
ASAR	Alice Springs	83.58	120	P	P	12 22 17.6	+1.7
	comp=Z,0.6nm,1.0s,baz=301,slow=5.6,SNR=3.5						
BMAR	Burnt Mountain	84.44	11	P	P	12 22 20.6	+1.0
ILAR	Eielson Array	86.40	13	LR	LR	13 05 00.1	
	comp=Z,67nm,21.7s,baz=330,slow=38						
SCHQ	Schefferville	89.22	334	LR	LR	13 05 01.3	
	comp=Z,85nm,18.4s,baz=352,slow=37						

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*KRNET **25** 13:31:21.7±0.1, 41˚.86N×78˚.29E, h12^{km}, mb2.5*
*SOME **25** 13:31:21.8, 41˚.82N×78˚.33E, h15^{km}*
*NNC **25** 13:31:22.2±0.8, 41˚.84N×78˚.33E, h0^{km}, mb2.8, mpv2.9, Error ellipse: s-maj=5.1km s-min=2.9km az=166.0*
ISC 25 13:31:21.0±1.7**, 41˚.80N**±0˚.06×**78˚.32E**±0˚.04**, h8**^{km}±11^{km}**, n40,** σ**0ˢ.94**/72**, 18C-4D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	Przheval'sk	0.68	5	⇑iP	Pg	13 31 34.0	-0.2
	baz=8.0						
PRZ				⇑iS	Sg	13 31 43.6	+0.5
	baz=8.0						
KDJ	Kajisay	0.91	291	⇓iP	Pg	13 31 38.3	-0.2
	baz=89						
KDJ				⇓iS	Sg	13 31 51.0	+0.7
	baz=89						
ANVS	Anan'yevo	1.09	334	⇑iP	Pb	13 31 41.8	-0.5
	baz=34						
ANVS				⇑iS	Sg	13 31 56.1	-0.1
	baz=34						
SATY	Saty	1.26	3	eP	Pg	13 31 45.1	0.0
	1.8nm,0.1s						
SATY				eS	Sn	13 32 02.3	0.0
	22nm,0.1s						
SATY	Saty	1.26	3	P	Pg	13 31 45.1	0.0
	3.2nm,0.1s						
SATY				S	Sn	13 32 02.5	+0.3
	21nm,0.1s						
UZB	Uzynbulak	1.44	21	eP	Pg	13 31 48.5	-0.2
	0.8nm,0.1s						
UZB				eS	Sg	13 32 07.8	+0.4
	2.9nm,0.1s						
UZB	Uzynbulak	1.44	21	P	Pg	13 31 48.5	-0.2
	0.9nm,0.1s						
UZB				S	Sg	13 32 08.2	+0.9
	2.8nm,0.1s						
TNSS	Tian-Shan	1.60	321	eP	Pb	13 31 51.1	0.0
	9.5nm,0.1s						
TNSS				eS	Sg	13 32 12.4	+0.1
	11nm,0.2s						
TNSS	Tian-Shan	1.60	321	P	Pb	13 31 51.1	0.0
	9.5nm,0.1s						
TNSS				S	Sg	13 32 12.4	+0.1
	11nm,0.2s						
ULHL	Ulahol	1.61	287	⇑iP	Pb	13 31 51.4	+0.3
	baz=85						
ULHL				⇑iS	Sg	13 32 12.9	+0.2
	baz=85						
MDOK	Medeo	1.65	326	eP	Pb	13 31 52.0	+0.2
	1.4nm,0.2s						
MDOK				eS	Sg	13 32 14.0	-0.1
	7.4nm,0.2s						
MDOK	Medeo	1.65	326	Pg	Pb	13 31 51.5	-0.3
	0.3nm,0.2s						
MDOK				Lg	Lg	13 32 14.5	
	2.1nm,0.3s						
MDOK	Medeo	1.65	326	Pg	Pb	13 31 52.0	+0.2
	2.3nm,0.3s						
MDOK				Lg	Lg	13 32 14.0	
	9.8nm,0.3s						
KPKS	Kokpek	1.68	9	eP	Pb	13 31 52.0	-0.4
	6.1nm,0.1s						
KPKS				eS	Sb	13 32 13.6	-0.1
	9.8nm,0.4s						
KOTS	Kotyrbulak	1.69	329	eP	Pb	13 31 52.9	+0.5
	4.8nm,0.2s						
KOTS				eS	Sg	13 32 15.4	+0.3
	27nm,0.4s						
KOTS	Kotyrbulak	1.69	329	P	Pb	13 31 52.9	+0.5
	5.2nm,0.2s						
KOTS				S	Sg	13 32 15.4	+0.3
	24nm,0.3s						
KURS	Kuram	1.69	356	eP	Pb	13 31 52.6	+0.2
	0.9nm,0.1s						
KURS				eS	Sg	13 32 14.8	-0.4
	3.3nm,0.3s						
KURS	Kuram	1.69	356	P	Pb	13 31 52.6	+0.2
	0.9nm,0.5s						
KURS				S	Sg	13 32 15.3	0.0
	3.3nm,0.4s						
PDGK	Podgornoye	1.75	29	⇑Pg	Pb	13 31 52.8	-0.8
	0.2nm,0.2s						
PDGK				⇑Lg	Lg	13 32 14.9	
	1.7nm,0.4s						
IZV	Izvestkoviy	1.76	315	eP	Pb	13 31 54.5	+0.7
	5.1nm,0.2s						
IZV				eS	Sg	13 32 18.0	+0.3
	24nm,0.2s						
IZV	Izvestkoviy	1.76	315	P	Pb	13 31 54.5	+0.7
	5.1nm,0.2s						
IZV				S	Sg	13 32 18.0	+0.3
	24nm,0.2s						
NRN	Naryn	1.77	259	⇑iP	Pg	13 31 55.8	+0.7
	baz=57						
NRN				⇑iS	Sg	13 32 19.8	+1.7
	baz=57						
BOOM	Boomskoye usch	1.90	292	⇓iP	Pb	13 31 56.6	+0.6
	baz=91						
BOOM				⇓iS	Sb	13 32 21.3	+1.4
	baz=91						
MTBS	Maitube	1.93	314	eP	Pb	13 31 56.8	+0.4
	5.0nm,0.2s						
MTBS				eS	Sg	13 32 22.3	-0.6
	20nm,0.2s						
MTBS	Maitube	1.93	314	Pg	Pb	13 31 56.8	+0.4
	5.0nm,0.2s						
MTBS				Lg	Lg	13 32 22.6	
	20nm,0.2s						
KST	Kastek	2.14	306	eP	Pb	13 32 01.2	+1.1
	6.8nm,0.2s						
KST				eS	Sg	13 32 29.4	-0.3
	18nm,0.4s						
KST	Kastek	2.14	306	Pg	Pb	13 32 01.2	+1.1
	6.3nm,0.5s						
KST				Lg	Lg	13 32 29.5	
	17nm,0.4s						
KTBS	Karatobe	2.26	328	eP	Pb	13 32 02.8	+0.7
	3.2nm,0.2s						
KTBS				eS	Sg	13 32 32.1	-1.3
	46nm,0.2s						
KTBS	Karatobe	2.26	328	Pg	Pb	13 32 02.8	+0.7
	3.2nm,0.2s						
KTBS				Lg	Lg	13 32 32.1	
	46nm,0.2s						
CHKK	Chushkaly	2.27	335	eP	Pb	13 32 03.1	+0.8
	2.2nm,0.3s						
CHKK				eS	Sg	13 32 32.8	-1.1
	24nm,0.3s						
KZA	Kyzart	2.30	278	⇑eP	Pb	13 32 03.0	-0.1
	baz=77						
KZA				⇑iS	Sb	13 32 33.0	+1.1
	baz=77						
DGS	Degeres	2.37	308	eP	Pb	13 32 04.9	+0.9
	3.1nm,0.3s						
DGS				eS	Sg	13 32 36.0	-1.1
	16nm,0.6s						
DGS	Degeres	2.37	308	Pg	Pb	13 32 04.9	+0.9
	3.1nm,0.3s						
DGS				Lg	Lg	13 32 36.0	
	16nm,0.6s						
ARXS	Arharly	2.44	352	eP	Pb	13 32 05.8	+0.7
	3.5nm,0.5s						
ARXS				eS	Sg	13 32 37.6	-1.7
	22nm,0.4s						
ARXS	Arharly	2.44	352	Pg	Pb	13 32 05.8	+0.7
	3.5nm,0.5s						
ARXS				Lg	Lg	13 32 37.6	
	22nm,0.4s						
KBK	Karagaybulak	2.64	290	⇑iP	Pb	13 32 07.6	-1.1
	baz=89						
KBK				⇑iS	Sb	13 32 40.5	-0.9
	baz=89						
DJR	Jarkent	2.75	23	eP	Pb	13 32 11.2	+0.7
	0.6nm,0.2s						
DJR				eS	Sg	13 32 46.6	-2.7
	3.5nm,0.2s						
UCH	Uchtor	2.87	280	⇑iP	Pb	13 32 11.0	-1.7
	baz=79						
UCH				⇑iS	Sb	13 32 46.4	-1.7
	baz=79						
AAK	Ala-Archa	2.96	288	⇑iP	Pb	13 32 11.9	-2.2
	baz=87						
AAK				⇑iS	Sb	13 32 48.1	-2.4
	baz=87						
KAPS	Kapalarasan	3.56	12	eP	Pb	13 32 25.1	+0.7
	0.5nm,0.4s						
KAPS				eS	Sb	13 33 10.3	+2.6
	3.0nm,0.3s						

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*TUL **25** 14:01:19.1±1.2, 35˚.74N±0˚.04×97˚.56W±0˚.06, h6^{km}±6^{km}, ML3.2, Mwr3.0/3(SLM), Error ellipse: s-maj=6.9km s-min=5.3km az=74.0, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}-0.12; $M_{\theta\theta}$3.92; $M_{\phi\phi}$-3.80; $M_{r\theta}$-0.19; $M_{\theta\phi}$0.62; $M_{\phi r}$-0.74;*
*NEIC **25** 14:01:19.8±1.0, 35˚.74N±0˚.04×97˚.49W±0˚.06, h8^{km}±1^{km} Error ellipse: s-maj=7.6km s-min=6.0km az=58.0*
*ANF **25** 14:01:21.2±1.3, 35˚.72N×97˚.55W, h19^{km}±10^{km}, ML3.8/10, Error ellipse: s-maj=5.2km s-min=3.3km az=177.0*
ISC 25 14:01:19.9±1.2**, 35˚.73N**±0˚.04×**97˚.53W**±0˚.03**, h9**^{km}±8^{km}**, n56,** σ**0ˢ.67**/63**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.15	119	Pg	Pg	14 01 23.0	-0.1
ADOK				Sg	Sg	14 01 25.8	+0.5
OK009	Oakdale Elemen	0.17	148	Pg	Pg	14 01 23.3	-0.1
OK001	Jones High Sch	0.26	130	Pg	Pg	14 01 24.9	-0.1
OK005	Luther M Schoo	0.28	104	Pg	Pg	14 01 25.4	-0.1
OKCFA	Oklahoma City	0.32	168		Pg	14 01 25.9	-0.3
OKCSW	OKLAHOMA CITY	0.33	167		Pg	14 01 26.1	-0.2
FNO	Franklin	0.48	167		Pg	14 01 29.2	0.0
W35A	Tecumseh	0.78	137		Pg	14 01 34.3	-0.6
X34A	Smith Ranch, M	1.15	193		Pg	14 01 41.2	-0.7
WMOK	Wichita Mounta	1.42	226	Pn	Pn	14 01 44.9	-1.0
WMOK	Wichita Mounta	1.42	226	P	Pn	14 01 44.9	-1.0
	baz=44						
WMOK				S	Sb	14 02 03.7	-1.0
	baz=44						
TUL1	Leonard	1.43	82		Pn	14 01 44.9	-1.1
TUL1	Leonard	1.43	82	P	Pn	14 01 44.9	-1.1
	baz=264						
TUL1				S	Sn	14 02 04.8	0.0
	baz=264						
T35A	Sooner Cattle	1.45	34		Pn	14 01 45.4	-0.8
Z35A	Perchaven, San	2.40	174		Pn	14 02 00.2	+0.9
U38A	Gravette	2.65	73		Pn	14 02 02.2	-0.5
R32A	Long Quarter,	2.85	341		Pn	14 02 06.3	+0.7
HHAR	Hobbs	2.96	78		Pn	14 02 06.9	-0.2
W39A	Magazine	3.10	99		Pn	14 02 09.0	-0.1
W39A	Magazine	3.10	99	P	Pn	14 02 09.3	+0.3
	baz=281						
W39A				S	Sn	14 02 47.9	+1.6
	baz=281						
Z38A	Mt. Pleasant	3.23	139	Pn	Pn	14 02 10.7	-0.1
MIAR	Mount Ida	3.45	109		Pn	14 02 14.4	+0.7
MIAR	Mount Ida	3.45	109	P	Pn	14 02 14.9	+1.2
	baz=291						
MIAR				S	Sn	14 02 56.2	+1.4
	baz=291						
AMTX	Amarillo	3.50	257		Pn	14 02 15.4	+0.9
AMTX	Amarillo	3.50	257	P	Pn	14 02 15.6	+1.0
	baz=74						
CBKS	Cedar Bluff	3.55	331		Pn	14 02 15.4	+0.2
CBKS	Cedar Bluff	3.55	331	P	Pn	14 02 15.5	+0.2
	baz=150						
CBKS				S	Sn	14 02 57.8	+0.5
	baz=150						
ABTX	Abilene, Hawle	3.55	210	Pn	Pn	14 02 15.8	+0.5
WHTX	Lake Whitney,	3.72	179	Pn	Pn	14 02 17.8	+0.2
WHTX	Lake Whitney,	3.72	179	P	Pn	14 02 17.8	+0.2
	baz=359						
U40A	Yellville	3.84	79		Pn	14 02 18.8	-0.4
U40A	Yellville	3.84	79	P	Pn	14 02 19.1	-0.1
	baz=262						
S39A	Bolivar	3.91	59		Pn	14 02 19.8	-0.3
237A	Washetta, Mont	3.98	158	Pn	Pn	14 02 20.8	-0.2
X40A	Basin Creek Fa	4.04	106	Pn	Pn	14 02 22.5	+0.6
X40A	Basin Creek Fa	4.04	106	P	Pn	14 02 22.7	+0.8
	baz=289						
WHAR	Wooly Hollow	4.30	94	Pn	Pn	14 02 25.4	-0.1
W41B	Gary Mavity, V	4.35	96		Pn	14 02 25.9	-0.2
W41B	Gary Mavity, V	4.35	96	P	Pn	14 02 26.1	0.0
	baz=279						
W41B				S	Sn	14 03 17.0	+0.1
	baz=279						
UALR	University of	4.35	101	Pn	Pn	14 02 26.8	+0.7
FCAR	Ozark Folk Cen	4.40	86	Pn	Pn	14 02 26.2	-0.6
MGMO	Mountain Grove	4.48	70	Pn	Pn	14 02 27.8	-0.1
MSTX	Muleshoe	4.65	249	Pn	Pn	14 02 31.1	+0.7
435B	Jarrell	4.93	181	Pn	Pn	14 02 34.0	-0.1
R40A	Maddies Statio	4.93	57	Pn	Pn	14 02 33.5	-0.6
N33A	J Bar K, Exete	5.01	1	Pn	Pn	14 02 35.1	0.0
P38A	Dawn	5.02	38	Pn	Pn	14 02 35.4	0.0
LCAR	Lake Charles	5.19	84	Pn	Pn	14 02 36.5	-1.2
KSCO	Kaye Shedlock’	5.22	310	Pn	Pn	14 02 39.2	+1.0
T42A	Van Buren	5.36	74	Pn	Pn	14 02 39.6	-0.4
JCT	Junction City	5.57	201	Pn	Pn	14 02 43.2	+0.2
T25A	Trinidad	5.72	286	Pn	Pn	14 02 44.7	-0.5
OGNE	Ogallala	6.30	327	Pn	Pn	14 02 53.9	+0.9
SDCO	Great Sand Dun	6.71	290		Pn	14 02 59.0	+0.1
S44A	Carbondale	6.93	71	Pn	Pn	14 03 00.8	-0.8
ANMO	Albuquerque	7.34	267	Pn	Pn	14 03 06.3	-1.0

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*KRSC **25** 14:01:34.7±1.2, 56˚.17N×164˚.57E, h50^{km}±20^{km}, ML4.1*
*IDC **25** 14:01:35.3±1.4, 56˚.36N×164˚.24E, h0^{km}, mb3.5/7, mb1 3.8/9, mb1mx3.5/48, mbtmp3.6/9, ML3.3/2, MS3.4/13, Ms1 3.4/13, ms1mx3.2/45, Error ellipse: s-maj=40.0km s-min=18.0km az=144.0*
ISC 25 14:01:35.1±0.7**, 56˚.17N**±0˚.05×**164˚.47E**±0˚.04**, h10**^{km}**, n56,** σ**1ˢ.78**/54**, mb3.5**/7**, MS3.3**/12**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.93	273	eP	Pb	14 01 52.2	-1.1
KBTR				eS	Sb	14 02 05.2	-0.4
KBG	Krutoberegovo	0.99	276	eP	Pg	14 01 53.1	-1.1
KBG				eS	Sg	14 02 06.3	-0.8
BKI	Bering	1.29	138	eP	Pb	14 01 57.5	-1.9
BKI				eS	Sb	14 02 13.7	-2.3
SMKR	Semkarok	1.72	285	eP	Pb	14 02 05.6	-1.3
BDR	Baidarnaya	1.86	284	eP	Pb	14 02 07.6	-1.6
SRKR	Sorokina	1.90	286	eP	Pb	14 02 08.1	-1.8
ZLN	Zelenaya	2.06	267	eP	Pb	14 02 11.1	-1.6
CIRR	Tsirk	2.08	270	eP	Pb	14 02 11.1	-2.0
LGNR	Loginova	2.12	269	eP	Pb	14 02 11.9	-1.9
BZGR	Bezymyannyi-Gr	2.13	265	eP	Pb	14 02 11.8	-2.1
KLY	Klyuchi	2.14	275	eP	Pn	14 02 09.9	-0.9
KLY				eS	Sn	14 02 35.0	-2.4
KRSR	Krestovskiy	2.18	273	eP	Pn	14 02 12.0	+0.4
KRSR				eS	Sn	14 02 38.2	-0.5
KIRR	Kirishev	2.33	266	eP	Pb	14 02 14.7	-2.5
KMNR	Kamenistaya	2.42	262	eP	Pb	14 02 16.4	-2.4
TUMD	Tumrok D	2.50	249	eP	Pn	14 02 16.8	+0.9
TUMD				eS	Sn	14 02 47.5	+1.1
KOZ	Kozyrevsk	2.58	269	eP	Pb	14 02 18.9	-2.5
KOZ				eS	Sn	14 02 49.7	+1.4
KZV	Kizimen	2.60	248	eP	Pn	14 02 18.1	+0.8
TUMR	Tumrok	2.60	252	eP	Pb	14 02 18.8	-3.1
SRDR	Sredinnyy	2.66	275	eP	Pb	14 02 19.4	-3.4
OSSR	Ossora	3.18	347	eP	Pn	14 02 24.2	-0.9
ESO	Esso	3.25	268	eP	Pn	14 02 27.5	+1.4
SPN	Mys Shipunski	4.02	222	eP	Pn	14 02 36.1	-0.6
SPN				eS	Sn	14 03 20.2	-3.6
SDLR	Sedlovina	4.35	230	eP	Pn	14 02 42.4	+1.1
KRER	Koryakskii	4.39	231	eP	Pn	14 02 44.2	+2.2
SMAR	Somma	4.39	231	eP	Pn	14 02 43.1	+1.1
KRX	Arik	4.39	233	eP	Pn	14 02 43.7	+1.7
AVH	Avacha	4.42	231	eP	Pn	14 02 43.8	+1.5
UGLR	Uglovaya	4.42	230	eP	Pn	14 02 43.5	+1.2
KOK	Koryaka	4.45	232	eP	Pn	14 02 43.9	+1.2
DALK	Dalny	4.58	229	eP	Pn	14 02 45.0	+0.7
DALK				eS	Sn	14 03 37.2	-0.3
KRMR	Karymshinskiy	4.99	230	eP	Pn	14 02 51.5	+1.5
PETK	Petropavlovsk-	4.99	235	Pn	Pn	14 02 53.1	+3.1
	1.0nm,0.3s,baz=94,slow=18,SNR=9.9						
PETK				Sn	Sn	14 03 51.0	+3.3
	0.4nm,0.3s,baz=45,slow=29,SNR=1.4						
RUS	Russkaya	5.12	225	eP	Pn	14 02 52.7	+0.9
GRL	Gorelyy	5.21	229	eP	Pn	14 02 55.4	+2.2
MTVR	Mutnovka	5.22	227	eP	Pn	14 02 55.0	+1.7
KMSK	Kamenskaya	6.38	7	eP	Pn	14 03 09.4	+0.4
MA2	Magadan	8.06	301	LR	LR	14 06 25.9	
	comp=Z,18nm,18.9s,baz=74,slow=37						
ASAJ	Asahikawa	18.40	238	P	Pn	14 05 51.6	+1.5
	0.3nm,0.3s,baz=8.7,slow=2.2,SNR=5.6						
ASAJ				LR	LR	14 12 37.3	
	comp=Z,122nm,18.8s,baz=352,slow=36						
KLR	Kul'dur	20.86	264	LR	LR	14 15 07.8	
	comp=Z,72nm,19.6s,baz=54,slow=39						
TIXI	Tiksi	21.51	330	P	P	14 06 24.4	+0.6
	1.1nm,0.7s,baz=117,slow=9.7,SNR=7.4						
TIXI				LR	LR	14 15 30.2	
	comp=Z,61nm,18.7s,baz=131,slow=39						
KDAK	Kodiak Island	23.17	68	LR	LR	14 16 16.5	
	comp=Z,87nm,18.8s,baz=268,slow=38						
ILAR	Eielson Array	24.86	50	P	P	14 06 58.6	+1.3
	1.3nm,1.1s,baz=270,slow=9.0,SNR=7.9						
ILAR				LR	LR	14 17 28.4	
	comp=Z,60nm,18.2s,baz=275,slow=38						
MJAR	Matsushiro Arr	26.45	233	P	P	14 07 13.7	+1.7
	1.1nm,0.6s,baz=19,slow=7.0,SNR=2.5						
MJAR				LR	LR	14 18 24.6	
	comp=Z,60nm,19.6s,baz=355,slow=38						
KSRS	Korea Array	30.74	248	LR	LR	14 21 09.7	
	comp=Z,70nm,18.3s,baz=262,slow=38						
JNU	Nakatsue	32.67	239	LR	LR	14 20 46.9	
	comp=Z,41nm,19.4s,baz=33,slow=35						
SONM	Songino Array	35.73	282	P	P	14 08 33.5	-0.3
	0.7nm,0.6s,baz=78,slow=9.1,SNR=4.0						
H11N2	WAKE ISLAND Hy	36.43	176	T	T	14 47 38.2	
	baz=357,slow=76,SNR=126						
H11N3	WAKE ISLAND Hy	36.44	176	T	T	14 47 41.1	
	baz=357,slow=76,SNR=142						
H11N1	WAKE ISLAND Hy	36.45	176	T	T	14 47 36.8	
	baz=357,slow=76,SNR=105						
YKA	Yellowknife Ar	39.18	47	P	P	14 09 04.3	+1.7
	0.2nm,0.6s,baz=295,slow=7.8,SNR=2.8						
MKAR	Makanchi Array	49.11	296	P	P	14 10 21.5	-1.0
	0.3nm,0.6s,baz=39,slow=7.8,SNR=3.8						
PDAR	Pinedale Array	53.86	65	LR	LR	14 34 33.2	

	comp=Z,28nm,18.7s,baz=1.5,slow=37						
FINES	FINESS Array B	58.26	338	LR	LR	14 42 02.1	
	comp=Z,29nm,19.5s,baz=29,slow=42						
CMAR	Chiang Mai Arr	61.27	260	P	P	14 11 51.4	+1.0
	0.5nm,0.3s,baz=18,slow=6.0,SNR=6.3						
CMAR				LR	LR	14 40 03.1	
	comp=Z,72nm,18.4s,baz=197,slow=38						
GERES	GERESS Array B	72.55	340	LR	LR	14 53 12.1	
	comp=Z,16nm,18.3s,baz=340,slow=43						
DZM	Mont Dzumac	77.95	178	LR	LR	14 45 39.5	
	comp=Z,123nm,20.0s,baz=203,slow=34						

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*DJA **25** 14:12:47.2±1.3, 2°N±13°×12°6E±°, h10^{km}, M3.2/5, MLv3.2/5*

IDC 25 14:12:28.9±2.2, **2°.98N**×**126°.32E, h0^{km}, mb3.4**/3, **mb1 3.6**/3, **mb1mx3.2**/48, **mbtmp3.4**/3, **Error ellipse: s-maj=186.3km s-min=26.6km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	2.43	154	P	Pg	14 13 23.9	+8.3
LBMI	Labuha	3.79	162	P	Pg	14 13 39.7	-1.8
WRA	Warramunga Arr	24.11	161	P	P	14 17 46.6	+0.1
	0.6nm,0.4s,baz=341,slow=10.0,SNR=10.0						
ASAR	Alice Springs	27.50	165	P	P	14 18 17.0	-0.3
	0.2nm,0.5s,baz=339,slow=7.0,SNR=4.2						
MKAR	Makanchi Array	57.93	326	P	P	14 22 23.1	+0.1
	0.2nm,0.8s,baz=120,slow=5.7,SNR=1.5						

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*IDC **25** 14:33:29.5±2.4, 1°.46N×125°.95E, h0^{km}, mb3.1/3, mb1 3.4/3, mb1mx3.1/37, mbtmp3.2/3, Error ellipse: s-maj=224.2km s-min=28.6km az=65.0*

*DJA **25** 14:33:44.0±1.0, 1°N±13°×12°6E±°, h10^{km}, M3.6/5, MLv3.6/5*

ISC 25 14:33:31.3±1.6, **1°.4N**±0°.2×**125°.9E**±0°.2, **h10^{km}, n6,** σ**1^{s}.89**/7, **mb3.2**/3, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBMI	Labuha	2.59	141	P	Pg	14 34 23.1	+2.0
LBMI				S	Sg	14 34 54.2	-0.6
SANI	Sanana	3.42	178	P	Pb	14 34 32.8	+0.7
NLAI	Namlea	4.76	165	P	Pb	14 34 51.9	-3.1
WRA	Warramunga Arr	22.77	159	P	P	14 38 34.4	+0.2
	0.3nm,0.4s,baz=338,slow=10,SNR=2.4						
ASAR	Alice Springs	26.11	163	P	P	14 39 05.3	-0.2
	0.3nm,0.8s,baz=336,slow=7.6,SNR=8.2						
MKAR	Makanchi Array	58.99	326	P	P	14 43 31.1	-0.1
	0.1nm,0.4s,baz=115,slow=7.9,SNR=2.6						

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*NEIC **25** 14:38:24.9±1.3, 17°.53S±0°.06×70°.46W±0°.09, h85^{km}±4^{km}, mb5.1/72, ML4.8(ARE), ML4.7(GUC), Error ellipse: s-maj=13.5km s-min=7.9km az=69.0*

*MOS **25** 14:38:25.8±1.7, 17°.48S×70°.56W, h102^{km}, mb5.0/7, Error ellipse: s-maj=12.2km s-min=8.7km az=105.1*

*GUC **25** 14:38:26.3±0.6, 17°.76S×70°.78W, h104^{km}±4^{km}, ML4.7*

*IDC **25** 14:38:26.1±0.5, 17°.45S×70°.37W, h86^{km}±3^{km}, mb4.2/18, mb1 4.3/23, mb1mx4.1/50, mbtmp4.5/23, MS3.4/10, Ms1 3.4/10, ms1mx3.2/35, Error ellipse: s-maj=16.4km s-min=12.2km az=46.0*

*ARE **25** 14:38:26±3.5, 17°.80S±0°.06×70°.81W±0°.08, h67^{km}±4^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=148.0*

*VAO **25** 14:38:27.9±0.5, 17°.56S×70°.42W, h103^{km}±3^{km}, mb4.7*

ISC 25 14:38:25.5±0.4, **17°.64S**±0°.04×**70°.61W**±0°.05, **h95^{km}**±3^{km}, **h95^{km}:pP-P, n445,** σ**1^{s}.15**/466, **mb5.0**/55, **10C-3D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AP01	Chacalluta	0.77	160	eP	Pn	14 38 43.6	+0.4
AP01				i S	Sn	14 38 57.3	+1.0
PB12	IPOC Station P	1.00	164	eP	Pn	14 38 46.3	+0.6
PB12				i S	Sn	14 39 01.8	+0.9
PB12				IAML		14 39 03.3	
	comp=N,24µm,0.4s						
PB12	IPOC Station P	1.00	164	Pn	Pn	14 38 46.3	+0.6
PB12				Sn	Sn	14 39 01.4	+0.6
PB16	IPOC Station P	1.26	123	Pn	Pn	14 38 50.3	+1.1
PSGC	Pisagua	2.00	167	eP	Pn	14 38 58.2	+0.2
PSGC				i S	Sn	14 39 22.9	+0.1
PSGCX	Pisagua	2.00	167	Pn	Pn	14 38 58.7	+0.7
PB11	IPOC Station P	2.29	157	eP	Pn	14 39 02.3	+0.4
PB11				i S	Sn	14 39 30.3	+0.6
PB11				IAML		14 39 39.8	
	comp=N,5µm,0.4s						
PB11	IPOC Station P	2.29	157	Pn	Pn	14 39 02.4	+0.4
GO01	Chusmiza	2.42	146	eP	Pn	14 39 06.1	+2.2
GO01				i S	Sn	14 39 36.4	+3.1
GO01	Chusmiza	2.42	146	Pn	Pn	14 39 06.2	+2.2
LPAZ	La Paz	2.73	61	P	Pn	14 39 10.8	+2.6
	comp=N,191nm,0.3s,baz=263,slow=7.1,SNR=2831						
LPAZ				S	Sn	14 39 44.2	+3.4
	comp=N,18nm,0.3s,baz=45,slow=18,SNR=3.8						
LPAZ	La Paz	2.73	61	P	Pn	14 39 10.3	+2.1
PB08	IPOC Station P	2.84	151	eP	Pn	14 39 10.9	+1.5
PB08				i S	Sn	14 39 45.2	+2.0
TA01	Diego Aracena	2.93	172	eP	Pn	14 39 10.7	+0.4
TA01				i S	Sn	14 39 43.9	-0.9
TA01				IAML		14 40 04.5	
	comp=N,2µm,0.3s						
PATCX	Punta Patache	3.19	172	eP	Pn	14 39 14.0	+0.2
PATCX				eS	Sn	14 39 50.5	-0.6
PATCX				IAML		14 40 17.1	
	comp=N,2µm,0.5s						
PATCX	Punta Patache	3.19	172		Pn	14 39 13.9	+0.1
PB01	IPOC Station P	3.54	163		Pn	14 39 18.6	0.0
PB02	IPOC Station P	3.72	170	eP	Pn	14 39 21.1	+0.1
PB07	IPOC Station P	4.12	171	eP	Pn	14 39 26.6	+0.2
PB07	IPOC Station P	4.12	171	Pn	Pn	14 39 26.5	+0.1
PB09	IPOC Station P	4.33	163	eP	Pn	14 39 30.1	+0.8
PB09	IPOC Station P	4.33	163		Pn	14 39 30.1	+0.8
PB03	IPOC Station P	4.46	170	eP	Pn	14 39 31.0	0.0
PB03				eS	Sn	14 40 16.0	-5.8
PB04	IPOC Station P	4.69	175	eP	Pn	14 39 33.5	-0.6
PB04	IPOC Station P	4.69	175		Pn	14 39 33.5	-0.6
PB06	IPOC Station P	5.13	169	eP	Pn	14 39 39.8	-0.3
LVC	Limon Verde	5.19	162	P	Pn	14 39 42.2	+1.0
	comp=N,43nm,0.3s,baz=5.1,slow=7.2,SNR=148						
LVC				S	Sn	14 40 37.8	-2.1
	comp=N,44nm,0.3s,baz=225,slow=20,SNR=8.1						
LVC	Limon Verde	5.19	162	P	Pn	14 39 41.8	+0.6
LVC						14 40 37.9	
LVC	Limon Verde	5.19	162		Pn	14 39 41.8	+0.6
LVC	Limon Verde	5.19	162	eP	Pn	14 39 42.2	+1.0
PB05	IPOC Station P	5.20	176	eP	Pn	14 39 40.1	-0.9
PB15	IPOC Station P	5.64	169		Pn	14 39 46.3	-0.8
PB10	IPOC Station P	5.84	179		Pn	14 39 48.5	-1.2
PB14	IPOC Station P	6.95	178		Pn	14 40 03.0	-2.1
GO02	Mina Guanaco	7.54	173		Pn	14 40 11.2	-1.9
NNA	Nana	8.24	312	P	Pn	14 40 23.8	+1.4
	comp=N,3.8nm,0.3s,baz=160,slow=11,SNR=11						
NNA				S	Sn	14 41 55.8	+1.9
	comp=N,4.7nm,0.3s,baz=233,slow=20,SNR=1.7						
NNA				LR	LR	14 44 16.9	
	comp=N,49nm,18.1s,baz=150,slow=42						
NNA	Nana	8.24	312		Pn	14 40 24.0	+1.5
SIV	San Ignacio	9.28	81	P	Pn	14 40 35.4	-1.2
	comp=N,11nm,0.3s,baz=272,slow=13,SNR=90						
SIV				S	Sn	14 42 24.5	+5.2
	comp=N,0.4nm,0.3s,baz=242,slow=15,SNR=1.2						
GO03	Copiap	9.91	178		Pn	14 40 43.8	-1.3
SAML	Samuel	11.27	41	P	Pn	14 40 59.5	-4.0
SAML	Samuel	11.27	41		Pn	14 40 59.5	-4.0
SAML	Samuel	11.27	41	eS	Sn	14 43 05.9	-1.6
GO04	Tololo Observa	12.47	181		Pn	14 41 19.7	-0.2
AQDB	Aquidauana	14.38	104	eP	Pn	14 41 45.2	+0.6
SALV	Santo Antonio	14.39	85	eP	Pn	14 41 43.6	-1.2
CPUP	Villa Florida	15.04	127	P	Pn	14 41 54.5	+1.4
	comp=N,0.4nm,0.3s,baz=298,slow=11,SNR=5.0						
CPUP				LR	LR	14 48 05.8	
	comp=N,116nm,20.7s,baz=319,slow=39						
ROC1	El Roble	15.27	181	P	P	14 42 00.2	+1.3
PEL	Peldehue	15.43	180	P	P	14 41 59.1	-1.4
PEL				pmax	pmax		
	comp=Z,38nm,1.0s						
PEL	Peldehue	15.43	180		P	14 41 59.1	-1.4
CLDB	Colider	15.85	67	eP	Pn	14 42 01.5	-1.9
C2SB	Chapadao do Su	16.93	97	eP	Pn	14 42 18.5	+1.9
ITQB	Itaqui	17.52	136	eP	Pn	14 42 25.0	+1.3
TRCB	Terra Rica	17.63	110	eP	P	14 42 25.8	+1.0
ARAG	Araguaiana, MT	18.11	87	eP	P	14 42 31.3	+1.1
PCMB	Pacaembu	18.65	105	eP	P	14 42 36.4	+0.4
PCMB				eS	S	14 46 02.3	-1.2
PTGB	Pitanga	18.66	115	eP	P	14 42 37.7	+1.5
PTGB				eS	S	14 46 02.4	-1.5
ITRB	Iturama	19.30	99	eP	P	14 42 43.2	+0.1
ITAB	Concordia	19.55	122	eP	P	14 42 46.3	+0.6
ITAB				eS	S	14 46 20.8	-0.7
FLOC	Florencia	19.74	345	P	P	14 42 48.0	+0.1
PTGA	Pitinga	19.80	33	P	P	14 42 47.0	-1.6
	comp=Z,2.9nm,0.3s,baz=210,slow=11,SNR=25						
PTGA				LR	LR	14 50 41.0	
	comp=Z,197nm,19.1s,baz=198,slow=38						
PTGA	Pitinga	19.80	33	P	P	14 42 46.4	-2.2
PTGA	Pitinga	19.80	33	eP	P	14 42 47.1	-1.5
PTGA				eS	S	14 46 25.8	-0.9
CRUC	La Cruz	20.09	341	eP	P	14 42 53.4	+1.3
CPSB	Cacapava Do Su	20.15	132	eP	P	14 42 53.3	+1.1
GARC	Garzon, Huila	20.29	346	eP	P	14 42 54.1	0.0
FRTB	Fartura	20.51	110	eP	P	14 42 56.8	+0.5
FRTB				eS	S	14 46 40.3	-0.3
SOTA	Rioblanco	20.52	343	eP	Pn	14 42 59.5	-0.4
PCON	Cinco Dias	20.65	343	⇑eP	P	14 42 57.8	-0.5
PLTB	Pedras Altas	20.85	136	eP	P	14 43 00.8	+1.1
PLTB				eS	S	14 46 47.1	0.0
POPC	Popayan, Colom	20.93	343	eP	P	14 43 02.4	+1.4
BB19B	Bebedouro	21.11	103	eP	P	14 43 02.4	-0.3
BB19B				eS	S	14 46 50.0	-2.5
IPMB	Ipameri, GO	21.33	94	eP	P	14 43 04.3	-0.8
CNLB	Canela	21.49	126	eP	P	14 43 07.7	+1.0
BDFB	Brasilia	21.74	88	P	P	14 43 08.6	-1.0
	comp=Z,10nm,0.8s,baz=266,slow=12,SNR=12						
BDFB	Brasilia	21.74	88	P	P	14 43 08.5	-1.0
BDFB				pmax	pmax		
	comp=Z,15nm,0.8s						
BDFB	Brasilia	21.74	88	P	P	14 43 08.5	-1.0
OGAUY	Aigu	21.87	143	eP	P	14 43 12.3	+1.7
GO06	Curarrehue	21.87	182	P	P	14 43 12.1	+1.4
RCLB	Rio Claro- Sao	22.19	106	eP	P	14 43 14.5	+0.3
SPB	Sao Paulo	22.47	109	P	P	14 43 15.9	-1.2
SPB	Sao Paulo	22.47	109	eP	P	14 43 17.2	+0.1
SPB				eS	S	14 47 15.9	-1.3
ROSC	El Rosal	22.64	350	LR	LR	14 51 41.6	
	comp=Z,116nm,20.6s,baz=78,slow=35						
PLCA	Paso Flores	23.01	180	P	P	14 43 24.4	+1.9
	comp=Z,22nm,1.0s,baz=156,slow=12,SNR=25						
PLCA				LR	LR	14 52 01.1	
	comp=Z,69nm,19.8s,baz=168,slow=35						
PLCA	Paso Flores	23.01	180	eP	P	14 43 24.0	+1.6
PLCA	Paso Flores	23.01	180	P	P	14 43 24.1	+1.6
PLCA				IAmb	IAmb	14 43 26.9	
	comp=Z,47nm,1.1s						
PLCA	Paso Flores	23.01	180	eP	P	14 43 24.9	+2.4
PLCA				eS	S	14 47 28.7	+3.1
PRPB	Parauapebas	23.29	63	eP	P	14 43 23.7	-1.6
RUSC	La Rusia	23.51	354	P	P	14 43 25.3	-2.5
SMTB	Santa Maria do	24.03	72	eP	P	14 43 30.7	-1.2
SMTB				eS	S	14 47 41.1	-1.4
JANB	Januaria	25.36	88	eP	P	14 43 43.8	-0.3
SDV	Santo Domingo	26.36	360	P	P	14 43 51.6	-1.5
	comp=Z,1.1nm,0.3s,baz=246,slow=6.0,SNR=3.6						
SDV				LR	LR	14 55 08.8	
	comp=Z,84nm,20.8s,baz=194,slow=38						
BSFB	Barra de Sao F	28.28	97	eP	P	14 44 09.5	-0.7
MDP	Montagnes des	28.73	40	P	P	14 44 12.2	-2.0
	comp=Z,9.9nm,0.7s,baz=213,slow=8.1,SNR=6.2						
MDP				LR	LR	14 56 54.4	
	comp=Z,84nm,19.8s,baz=254,slow=39						
JTS	Las Juntas de	31.16	332	⇑iP	P	14 44 33.6	-2.1
JTS				pmax	pmax		
	comp=Z,4.0nm,1.5s						
NBPB	Pedra_Branca-C	32.62	72	eP	P	14 44 49.0	+0.5
Z58A	St. Stephen	51.45	350	P	P	14 47 22.4	+1.3
	baz=169						
Z57A	Bowman	51.56	349	P	P	14 47 22.9	+1.0
	baz=168						
GOGA	Godfrey	52.23	346	P	P	14 47 27.7	+0.8
	baz=164						
Y55A	Saluda	52.40	348	P	P	14 47 28.9	+0.7
	baz=166						
Z50A	Ashland	52.68	344	P	P	14 47 30.1	-0.1
Z50A				IAmb	IAmb	14 47 53.5	
	comp=Z,16nm,0.8s						
LRAL	Lakeview Retre	52.77	343	P	P	14 47 31.6	+0.7
	baz=160						
Y52A	Lilburn	52.80	346	P	P	14 47 30.1	-1.0
	baz=164						
BIRD	Birdtown, Kers	52.84	350	P	P	14 47 31.6	+0.3
BIRD				IAmb	IAmb	14 47 33.1	
	comp=Z,14nm,0.9s						
X55A	Gracelyn & Ava	52.88	349	P	P	14 47 32.6	+1.0
	baz=167						
W61A	Ground Anchor	52.88	353	P	P	14 47 32.1	+0.5
	baz=172						
W58A	Raeford	53.01	351	P	P	14 47 32.7	+0.1
	baz=170						
X54A	Belton	53.09	348	P	P	14 47 34.0	+0.8
	baz=166						
X53A	Estanollee	53.24	347	P	P	14 47 34.4	+0.1
	baz=165						
W57A	Gilead	53.26	350	P	P	14 47 35.1	+0.7
	baz=169						
W56A	Indian Trail	53.34	350	P	P	14 47 35.7	+0.7
	baz=168						
KMSC	Kings Mountain	53.47	349	P	P	14 47 36.9	+0.9
	baz=167						
W54A	Cherokee Point	53.58	348	P	P	14 47 37.4	+0.6
	baz=166						
V57A	Coltrane Farms	53.94	351	P	P	14 47 39.8	+0.4
	baz=169						
V56A	Mocksville	53.98	350	P	P	14 47 41.0	+1.3
	baz=168						
V55A	Taylorsville	54.14	349	P	P	14 47 42.0	+1.1
	baz=168						
V54A	Nebo	54.20	349	P	P	14 47 41.5	+0.2
	baz=167,SNR=5.6						
U56A	King	54.49	350	P	P	14 47 44.4	+1.0
	baz=168						
U55A	TA2, Sparta	54.75	350	P	P	14 47 46.0	+0.6
	baz=168						
T58A	Grand View Acr	54.81	352	P	P	14 47 47.4	+1.8
	baz=171						
U54A	Nelsons Funny	54.90	349	P	P	14 47 46.0	-0.4
U54A				IAmb	IAmb	14 47 47.6	
	comp=Z,28nm,0.8s						
U54A	Nelsons Funny	54.90	349	P	P	14 47 46.7	+0.3
	baz=167						
T57A	Hurt	54.96	352	P	P	14 47 47.9	+1.2
	baz=170						
T56A	Rocky Mt	55.10	351	P	P	14 47 48.9	+1.0
	baz=169						
TZTN	Tazewell	55.26	347	P	P	14 47 49.1	+0.1
	baz=165						
T55A	Pulaski	55.30	350	P	P	14 47 50.0	+0.7
	baz=168						
T54A	Tazewell	55.38	349	P	P	14 47 50.3	+0.4
	baz=167						
T53A	Wise	55.48	348	P	P	14 47 50.9	+0.3
	baz=166						
T52A	Hallie	55.69	348	P	P	14 47 52.5	+0.4
	baz=166						
R58B	Mineral	55.73	353	P	P	14 47 53.2	+0.9
	baz=172						
T51A	Gray	55.75	347	P	P	14 47 52.5	0.0
	baz=165,SNR=5.1						
R60A	Leonardtown, M	55.90	354	P	P	14 47 54.6	+1.2
	baz=173						
S55A	Lewisburg	55.90	351	P	P	14 47 54.6	+1.0
	baz=169						
T50A	Nancy	56.00	346	P	P	14 47 54.2	0.0
	baz=164						
S54A	Dingess, Beckl	56.06	350	P	P	14 47 54.7	+0.1
S54A	Dingess, Beckl	56.06	350	P	P	14 47 54.8	+0.1
	baz=168						
T49A	Edmonton	56.24	346	P	P	14 47 55.7	-0.3
T49A				IAmb	IAmb	14 47 56.8	
	comp=Z,28nm,0.9s						
T49A	Edmonton	56.24	346	P	P	14 47 55.7	-0.3
	baz=163,SNR=10						
MIAR	Mount Ida	56.31	337	P	P	14 47 57.0	+0.5
MIAR				pmax	pmax		
	comp=Z,33nm,1.8s						
MIAR	Mount Ida	56.31	337	P	P	14 47 57.0	+0.5
MIAR				IAmb	IAmb	14 48 02.1	
	comp=Z,34nm,1.8s						
MIAR	Mount Ida	56.31	337	P	P	14 47 56.9	+0.4
	baz=154						
S51A	Beattyville	56.33	348	P	P	14 47 56.3	-0.3
S51A				IAmb	IAmb	14 47 57.1	
	comp=Z,20nm,1.0s						
S51A	Beattyville	56.33	348	P	P	14 47 56.9	+0.4
	baz=165						
R55A	Marlinton	56.34	351	P	P	14 47 57.0	+0.3
R55A				IAmb	IAmb	14 47 59.0	
	comp=Z,21nm,1.2s						
R55A	Marlinton	56.34	351	P	P	14 47 58.1	+1.4
	baz=169						
R56A	Bull Pasture M	56.36	352	P	P	14 47 58.2	+1.3
	baz=170						
R54A	Victor	56.38	350	P	P	14 47 57.8	+0.9
	baz=168						
S50A	Richmond	56.54	347	P	P	14 47 58.5	+0.5
	baz=164						
TXAR	Lajitas Array	56.56	325	P	P	14 47 58.7	+0.2
	comp=Z,0.3nm,0.4s,baz=140,slow=7.1,SNR=3.2						
Q58A	Fox Den Farm,	56.67	353	P	P	14 47 59.7	+0.7
	baz=172						
R53A	Hurricane	56.69	349	P	P	14 47 59.2	+0.1
	baz=167						
R52A	Catlettsburg	56.82	349	P	P	14 48 00.1	0.0
	baz=166						
S49A	Springfield	56.84	346	P	P	14 48 00.3	+0.1
	baz=163						
Q57A	Strasburg	56.85	353	P	P	14 48 00.8	+0.6
	baz=171						
Q56A	Snyder Ridge,	56.96	352	P	P	14 48 01.9	+0.9
	baz=170						
R51A	Hillsboro	56.97	348	P	P	14 48 01.4	+0.4
	baz=165						
W39A	Magazine	56.97	337	P	P	14 48 02.0	+0.9
W39A				IAmb	IAmb	14 48 37.4	
	comp=Z,44nm,1.9s						
W39A	Magazine	56.97	337	P	P	14 48 01.5	+0.4
	baz=153						
Q55A	Buckhannon	57.03	351	P	P	14 48 02.0	+0.4
	baz=169						
R50A	Paris	57.10	347	P	P	14 48 01.8	-0.2
R50A				IAmb	IAmb	14 48 02.8	
	comp=Z,12nm,0.8s						
R50A	Paris	57.10	347	P	P	14 48 02.3	+0.3
	baz=164						
Q53A	Leroy	57.13	350	P	P	14 48 02.6	+0.4
	baz=168,SNR=8.2						
Q54A	Coxs Mills	57.14	351	P	P	14 48 02.0	-0.2
Q54A				IAmb	IAmb	14 48 03.3	
	comp=Z,13nm,0.8s						
Q54A	Coxs Mills	57.14	351	P	P	14 48 02.6	+0.3
	baz=168						
P57A	Homestead Farm	57.25	353	P	P	14 48 03.5	+0.5
	baz=172						
Q52A	Bidwell	57.36	349	P	P	14 48 04.1	+0.3
	baz=167						
Q50A	Georgetown	57.57	348	P	P	14 48 05.5	+0.2
	baz=165						
Q51A	Peebles	57.62	348	P	P	14 48 05.1	-0.6
Q51A				IAmb	IAmb	14 48 06.2	
	comp=Z,13nm,0.9s						
Q51A	Peebles	57.62	348	P	P	14 48 05.6	-0.1
	baz=166						
MCWV	Mont Chateau	57.65	352	P	P	14 48 06.5	+0.7
	baz=170						
U40A	Yellville	57.68	339	P	P	14 48 05.9	-0.3
U40A				IAmb	IAmb	14 48 29.9	
	comp=Z,6.9nm,0.8s						
U40A	Yellville	57.68	339	P	P	14 48 06.2	+0.1
	baz=155						
P54A	Burton	57.69	351	P	P	14 48 06.9	+0.8
	baz=169						
T42A	Van Buren	57.71	341	P	P	14 48 05.7	-0.7
P53A	Whipple	57.72	350	P	P	14 48 06.5	+0.1
P53A	Whipple	57.72	350	P	P	14 48 06.7	+0.4
	baz=168,SNR=6.3						
S44A	Carbondale	57.77	343	P	P	14 48 06.8	+0.1
SIUC	Southern Illin	57.78	343	P	P	14 48 06.6	-0.1
SIUC					pP	14 48 29.3	-1.7
P52A	Corning	57.99	350	P	P	14 48 07.8	-0.4
	baz=167						
P51A	Williamsport	58.01	349	P	P	14 48 08.3	-0.1
P51A				IAmb	IAmb	14 48 08.8	
	comp=Z,13nm,0.8s						
P51A	Williamsport	58.01	349	P	P	14 48 08.0	-0.4
	baz=166						
Q48A	North Vernon	58.03	346	P	P	14 48 08.3	-0.2
	baz=163						
O55A	Ligonier	58.12	352	P	P	14 48 09.1	0.0
	baz=170						
MGMO	Mountain Grove	58.20	340	P	P	14 48 09.8	0.0
MGMO				IAmb	IAmb	14 48 33.6	
	comp=Z,11nm,1.0s						
O54A	Avella	58.24	351	P	P	14 48 09.4	-0.6
	baz=169						
P50A	Jamestown	58.27	348	P	P	14 48 09.9	-0.3
	baz=165						
P49A	Miami Univ. Ec	58.39	347	P	P	14 48 10.3	-0.7
	baz=164						
O52A	Adamsville	58.41	350	P	P	14 48 11.0	-0.2
O52A				IAmb	IAmb	14 48 11.9	
	comp=Z,16nm,0.7s						
O52A	Adamsville	58.41	350	P	P	14 48 10.9	-0.2
	baz=167						
O53A	New Philadelph	58.44	350	P	P	14 48 11.5	+0.2
	baz=168						
N59A	State Game Lan	58.46	355	P	P	14 48 11.3	-0.2
	baz=174						
N58A	Sunbury	58.46	355	P	P	14 48 11.1	-0.4
	baz=173						
P48A	Milroy	58.47	347	P	P	14 48 10.5	-1.0
P48A	Milroy	58.47	347	P	P	14 48 10.8	-0.7
	baz=163						
O51A	Pataskala	58.57	349	P	P	14 48 12.1	-0.1
	baz=167						
N55A	Marion Center	58.64	353	P	P	14 48 12.9	+0.1
	baz=171						
CCM	Cathedral Cave	58.70	341	P	P	14 48 13.8	+0.6
CCM				pmax	pmax		
	comp=Z,18nm,1.0s						
ACSO	Alum Creek Sta	58.72	349	P	P	14 48 12.8	-0.5
ACSO	Alum Creek Sta	58.72	349	P	P	14 48 13.0	-0.3
	baz=166,SNR=5.0						
O50A	Cable	58.76	348	P	P	14 48 13.4	-0.2
	baz=166						
N53A	Lisbon	58.92	351	P	P	14 48 14.7	0.0
N53A	Lisbon	58.92	351	P	P	14 48 15.0	+0.3
	baz=169						
O49A	Covington	58.94	348	P	P	14 48 14.3	-0.5
O49A				IAmb	IAmb	14 48 15.2	
	comp=Z,23nm,1.0s						
O49A	Covington	58.94	348	P	P	14 48 14.7	-0.1
	baz=165						
N54A	Moraine State	58.95	352	P	P	14 48 15.1	+0.2
N54A	Moraine State	58.95	352	P	P	14 48 15.5	+0.6
	baz=170						
M57A	Sunshine Farm,	58.99	354	P	P	14 48 15.2	+0.1
	baz=173						
S39A	Bolivar	59.04	339	P	P	14 48 14.6	-1.0
M59A	Waymart	59.05	356	P	P	14 48 15.8	+0.2
	baz=175						
N52A	McGinn's Farm,	59.06	350	P	P	14 48 15.8	+0.1
	baz=168						
O48A	Farmland	59.17	347	P	P	14 48 16.3	-0.2
	baz=164						
L63A	North Scituate	59.21	359	P	P	14 48 16.3	-0.3
	baz=179						
R40A	Maddies Statio	59.24	340	P	P	14 48 16.8	-0.1
R40A				IAmb	IAmb	14 48 40.3	
	comp=Z,12nm,1.0s						
M56A	Emporium	59.24	353	P	P	14 48 16.8	-0.2
M56A				IAmb	IAmb	14 48 49.3	
	comp=Z,17nm,1.2s						
M56A	Emporium	59.24	353	P	P	14 48 16.9	0.0
	baz=172						
BRYW	Bryant College	59.27	359	P	P	14 48 17.0	-0.1
BRYW				IAmb	IAmb	14 48 17.3	
	comp=Z,16nm,0.8s						
N50A	Nevada	59.27	349	P	P	14 48 16.8	-0.3
	baz=166						
N51A	Ashland	59.28	350	P	P	14 48 16.5	-0.7
N51A				IAmb	IAmb	14 49 36.9	
	comp=Z,17nm,0.7s						

N51A	Ashland	59.28	350	P	P	14 48 16.9	-0.2
	baz=167						
M55A	Ridgway	59.30	353	P	P	14 48 17.6	+0.3
	baz=171						
M54A	Oil Creek Stat	59.45	352	P	P	14 48 17.8	-0.5
M54A	Oil Creek Stat	59.45	352	P	P	14 48 18.7	+0.4
	baz=170						
M53A	WI Miller and	59.52	351	P	P	14 48 19.0	+0.2
	baz=169,SNR=5.6						
L58A	Harry Jones Me	59.58	355	P	P	14 48 19.4	+0.2
	baz=174						
N49A	Columbus Grove	59.61	348	P	P	14 48 18.9	-0.6
N49A	Columbus Grove	59.61	348	P	P	14 48 19.1	-0.3
	baz=165,SNR=9.0						
L57A	Andrews Acres	59.62	355	P	P	14 48 18.9	-0.7
	baz=173						
ALLY	Alegheny Colle	59.65	352	P	P	14 48 19.6	-0.1
M51A	Elyria	59.65	350	P	P	14 48 19.5	-0.2
	baz=167						
P43A	Skaggs, Pawnee	59.66	343	P	P	14 48 19.3	-0.5
L59A	Walton	59.67	356	P	P	14 48 20.0	+0.1
	baz=175						
M52A	Chesterland	59.72	351	P	P	14 48 19.8	-0.4
M52A	Chesterland	59.72	351	P	P	14 48 20.2	0.0
	baz=168						
N48A	Decatur	59.73	347	P	P	14 48 20.0	-0.2
	baz=164						
BINY	Binghamton	59.75	355	P	P	14 48 20.0	-0.4
	baz=174						
L56A	Greenwood	59.82	354	P	P	14 48 20.7	-0.2
	baz=172						
HRV	Adam Dziewonsk	59.85	359	P	P	14 48 20.7	-0.3
	baz=179						
M50A	Fremont	59.87	349	P	P	14 48 21.1	-0.1
	baz=166						
L53A	Girard	59.96	352	P	P	14 48 21.8	0.0
	baz=169,SNR=8.1						
K63A	Dunstable	60.04	359	P	P	14 48 22.2	-0.1
	baz=179						
K61A	Williamstown	60.06	358	P	P	14 48 22.6	+0.1
	baz=177						
ERPA	Erie	60.09	352	P	P	14 48 21.9	-0.8
ERPA	Erie	60.09	352	P	P	14 48 22.8	+0.2
	baz=170						
M49A	Liberty Center	60.11	348	P	P	14 48 22.6	-0.2
	baz=165						
L54A	Sinclairville	60.12	353	P	P	14 48 22.8	-0.1
	baz=170						
K59A	Cooperstown	60.24	356	P	P	14 48 24.1	+0.3
	baz=175						
K54A	Basiliko Farm,	60.41	353	P	P	14 48 24.8	-0.1
	baz=171						
L50A	Kingsville	60.45	350	P	P	14 48 24.7	-0.4
	baz=167						
J60A	Lant Hill Farm	60.64	358	P	P	14 48 25.5	-0.9
	baz=177						
L48A	N Adams	60.65	348	P	P	14 48 26.2	-0.3
	baz=165						
L49A	Milan	60.68	349	P	P	14 48 26.2	-0.5
	baz=166						
J58A	Remsen	60.85	356	P	P	14 48 27.6	-0.3
J58A				IAmb	IAmb	14 49 15.4	
	comp=Z,51nm,1.9s						
P38A	Dawn	60.86	340	P	P	14 48 27.3	-0.7
P38A				IAmb	IAmb	14 49 10.5	
	comp=Z,18nm,1.5s						
J59A	Piesco	60.91	357	P	P	14 48 28.2	0.0
	baz=176						
K50A	Casco	61.13	350	P	P	14 48 29.3	-0.4
	baz=167						
J52A	Paris	61.26	352	P	P	14 48 30.3	-0.3
	baz=169,SNR=6.0						
I61A	Oroboro, Fairl	61.29	359	P	P	14 48 30.8	0.0
	baz=178						
I63A	Otisfield	61.39	0	P	P	14 48 31.7	+0.3
	baz=180						
K48A	Perry	61.42	349	P	P	14 48 31.5	-0.2
	baz=165						
K47A	Vermontville	61.46	348	P	P	14 48 31.5	-0.4
	baz=164						
LBNH	Lisbon	61.59	359	P	P	14 48 33.2	+0.4
	baz=179						
J49A	Marlette	61.78	350	P	P	14 48 33.4	-0.7
	baz=166						
J48A	Bridge Port	61.84	349	P	P	14 48 33.4	-1.1
J48A				IAmb	IAmb	14 48 34.9	
	comp=Z,20nm,0.8s						
J48A	Bridge Port	61.84	349	P	P	14 48 34.0	-0.5
	baz=166						
H58A	Gabriels	61.84	357	P	P	14 48 34.0	-0.6
	baz=176						
I51A	Listowel	61.89	351	P	P	14 48 34.4	-0.5
	baz=169,SNR=6.6						
H61A	Lyndonville	61.89	359	P	P	14 48 34.4	-0.5
	baz=179						
I55A	Frankford	61.90	354	P	P	14 48 34.3	-0.5
	baz=172						
H60A	Morristown	61.93	358	P	P	14 48 35.1	0.0
	baz=178						
H57A	Richville	61.96	356	P	P	14 48 35.1	-0.2
	baz=175						
J47A	Sunmer	61.97	348	P	P	14 48 35.0	-0.4
J47A				IAmb	IAmb	14 48 35.9	
	comp=Z,25nm,0.8s						
J47A	Sunmer	61.97	348	P	P	14 48 35.4	0.0
	baz=165						
H64A	Troy	61.99	1	P	P	14 48 35.7	+0.2
	baz=182						
H59A	Cadyville	62.05	358	P	P	14 48 35.5	-0.4
	baz=177						
H66A	Whiting	62.20	3	P	P	14 48 36.8	0.0
	baz=184						
K43A	Burlington	62.23	345	P	P	14 48 36.7	-0.5
I49A	Point Hope	62.30	350	P	P	14 48 35.5	-2.0
I49A	Point Hope	62.30	350	P	P	14 48 36.9	-0.6
	baz=167						
G62A	West of Eustis	62.56	0	P	P	14 48 39.7	+0.4
	baz=180						
G57A	Newington	62.57	357	P	P	14 48 38.8	-0.5
	baz=175						
SADO	Sadowa	62.60	353	P	P	14 48 39.0	-0.5
	comp=Z,2.5nm,0.4s,baz=198,slow=2.4,SNR=4.3						
SADO	Sadowa	62.60	353	IAmb	IAmb	14 49 32.3	
	comp=Z,66nm,2.0s						
G65A	Princeton	62.60	2	P	P	14 48 39.0	-0.5
	baz=183						
G64A	Maxfield	62.62	1	P	P	14 48 39.1	-0.5
	baz=182						
PKME	Peaks-Kenny Pk	62.62	1	P	P	14 48 39.5	-0.1
	baz=181						
G61A	St-Isidore-de-	62.63	359	P	P	14 48 39.9	+0.1
	baz=179						
I47A	Gladwin	62.67	349	P	P	14 48 39.7	-0.3
	baz=165						
I48A	Sherman Twp	62.68	349	P	P	14 48 40.0	-0.1
	baz=166						
G55A	Calabogie	62.84	355	P	P	14 48 40.9	-0.2
	baz=173						
G53A	Haliburton	62.89	354	P	P	14 48 41.4	-0.1
	baz=171						
JFWS	Jewell Farm	62.91	344	P	P	14 48 40.5	-1.2
JFWS				pmax	pmax		
	comp=Z,13nm,0.9s						
JFWS	Jewell Farm	62.91	344	P	P	14 48 40.5	-1.2
JFWS				IAmb	IAmb	14 48 43.5	
	comp=Z,13nm,0.8s						
G54A	Lake Saint Pet	63.11	354	P	P	14 48 42.9	0.0
	baz=172						
H48A	Harrisville	63.12	350	P	P	14 48 42.4	-0.6
H48A				IAmb	IAmb	14 48 43.4	
	comp=Z,20nm,0.8s						
H48A	Harrisville	63.12	350	P	P	14 48 42.8	-0.1
	baz=166						
H47A	Mio	63.17	349	P	P	14 48 43.2	-0.2
	baz=165						
F64A	Sherman	63.24	2	P	P	14 48 43.6	-0.1
F64A				IAmb	IAmb	14 49 50.9	
	comp=Z,44nm,1.6s						
F64A	Sherman	63.24	2	P	P	14 48 43.7	-0.1
	baz=182						
F61A	St Evariste	63.32	360	P	P	14 48 44.4	+0.2
	baz=180						
F60A	Warwick	63.32	359	P	P	14 48 43.7	-0.6
	baz=178						
LMN	Caledonia Moun	63.41	5	P	P	14 48 44.2	-0.8
LMN				IAmb	IAmb	14 50 32.3	
	comp=Z,37nm,1.6s						
H45A	Beulah	63.55	348	P	P	14 48 45.9	+0.1
	baz=164						
F52A	Sundridge	63.63	353	P	P	14 48 46.4	0.0
	baz=171						
ALGO	Algonquin Park	63.65	354	P	P	14 48 46.6	+0.1
	baz=172						
TRQ	Mont Tremblant	63.66	357	P	P	14 48 46.1	-0.5
G47A	Hillman	63.67	350	P	P	14 48 46.9	+0.3
	baz=166						
E60A	Ste Agathe de	63.72	359	P	P	14 48 46.8	0.0
	baz=179						
E58A	La Victoria	63.76	358	P	P	14 48 47.2	+0.1
	baz=177						
214A	Organ Pipe Nat	63.78	320	P	P	14 48 46.7	-1.0
	baz=134						
E63A	Oxbow	63.79	2	P	P	14 48 47.5	+0.1
E63A				IAmb	IAmb	14 50 10.0	
	comp=Z,27nm,1.5s						
E63A	Oxbow	63.79	2	P	P	14 48 47.5	+0.1
	baz=182						
F51A	Arnstein	63.83	353	P	P	14 48 47.6	-0.1
	baz=170						
G45A	Suttons Bay	63.87	348	P	P	14 48 47.9	0.0
G45A				IAmb	IAmb	14 48 49.8	
	comp=Z,11nm,0.8s						
G45A	Suttons Bay	63.87	348	P	P	14 48 47.6	-0.4
	baz=164						
F49A	Sandfield	63.95	351	P	P	14 48 47.8	-0.6
	baz=168,SNR=7.0						
G46A	Petoskey	63.99	349	P	P	14 48 48.5	-0.1
	baz=165						
E56A	St. Veronique	64.01	357	P	P	14 48 48.8	-0.1
	baz=175						
E53A	Dumoine, Ponti	64.04	355	P	P	14 48 49.2	+0.1
	baz=172						
E52A	Mattawa	64.04	354	P	P	14 48 49.2	+0.1
	baz=171						
E54A	Lac Daplat, Po	64.05	355	P	P	14 48 48.8	-0.3
	baz=173						
BGNE	Belgrade	64.06	337	P	P	14 48 49.6	+0.3
	baz=151						
F48A	Evansville	64.10	351	P	P	14 48 49.0	-0.5
	baz=167,SNR=6.1						
VNA3	Neumayer Olymp	64.22	162	P	P	14 48 52.9	+2.8
E51A	G1948 Merrick	64.38	353	P	P	14 48 51.6	+0.4
	baz=171						
D57A	Chemin Vers le	64.43	358	P	P	14 48 51.5	-0.1
	baz=176						
D62A	Allapoint, All	64.44	1	P	P	14 48 51.5	-0.1
	baz=182						
F45A	CMU Biological	64.46	348	P	P	14 48 51.5	-0.2
	baz=164						
D58A	Chemin du LacG	64.47	358	P	P	14 48 51.7	-0.2
	baz=178						
D56A	ZEC Mazanza, M	64.50	357	P	P	14 48 52.1	0.0
	baz=176						
D55A	Sainte-Anne-du	64.51	356	P	P	14 48 52.2	+0.2
	baz=175						
E48A	Lockeyer	64.67	351	P	P	14 48 53.0	-0.1
	baz=168,SNR=6.5						
D54A	Lac Fusel, La	64.72	355	P	P	14 48 53.1	-0.4
	baz=174						
D53A	Lac Vacive, Po	64.74	355	P	P	14 48 53.3	-0.2
D53A	Lac Vacive, Po	64.74	355	P	P	14 48 53.1	-0.4
	baz=172						
BATG	Bathurst New B	64.75	3	P	P	14 48 53.2	-0.4
BATG				IAmb	IAmb	14 51 06.1	
	comp=Z,53nm,2.0s						
VNA2	Neumayer--Watz	64.80	161	P	P	14 48 56.4	+2.7
E47A	Iron Bridge	64.82	350	P	P	14 48 54.0	-0.1
	baz=167						
E46A	Sault Ste Mari	64.90	350	P	P	14 48 54.1	-0.5
E46A				IAmb	IAmb	14 48 55.7	
	comp=Z,19nm,0.9s						
D51A	Lot 18 Range I	64.91	353	P	P	14 48 54.9	+0.1
	baz=171						
D50A	G1974 Best Tow	65.04	353	P	P	14 48 55.7	+0.1
	baz=170						
D48A	Paudash Townsh	65.30	352	P	P	14 48 57.1	-0.1
	baz=168						
D46A	Sault St. Mari	65.36	350	P	P	14 48 57.3	-0.4
	baz=166						
D47A	Chapleau	65.37	351	P	P	14 48 57.6	-0.1
	baz=167						
E43A	Lone Tree Farm	65.42	348	P	P	14 48 57.6	-0.4
VLDQ	Val d'Or	65.74	355	P	P	14 49 00.2	+0.2
SPMN	Marine on St.	65.74	343	P	P	14 49 00.6	+0.4
	baz=157						
IKP	In-Ko-Pah, Jac	66.29	319	P	P	14 49 05.6	+1.6
	baz=132						
SWSC	Sam W. Stewart	66.30	319	P	P	14 49 05.9	+2.0
	baz=132						
D41A	Chassel	66.40	347		pP	14 49 27.0	-2.4
SNAA	Sanae	66.43	161	P	P	14 49 06.7	+2.4
SNAA	Sanae	66.43	161	⇑*i*P	P	14 49 05.8	+1.5
SNAA	Sanae	66.43	161	P	P	14 49 06.2	+1.9
LSQQ	Lebel-sur-Quev	66.64	355	P	P	14 49 06.3	+0.5
	baz=173						
MONP2	Monument Peak	66.65	319	P	P	14 49 07.7	+1.2
	baz=132						
IRM	Iron Mountain	66.72	321	P	P	14 49 08.7	+2.1
	baz=133						
PFO	Pinyon Flats O	67.15	319	P	P	14 49 11.5	+2.0
	comp=Z,2.3nm,0.6s,baz=96,slow=3.4,SNR=4.4						
PFO	Pinyon Flats O	67.15	319	⇑*i*P	P	14 49 07.5	-2.0
PFO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MATQ	Matagami	67.39	355	P	P	14 49 10.3	-0.2
	baz=173,SNR=5.1						
GMRC	Granite Mounta	67.45	321	P	P	14 49 13.4	+2.0
	baz=133						
EYMN	Ely	67.92	345	P	P	14 49 13.7	-0.2
EYMN	Ely	67.92	345	P	P	14 49 14.3	+0.5
	baz=158						
RSSD	Black Hills	68.64	335	P	P	14 49 21.0	+2.2
	baz=146						
LIC	Lamto	68.94	76	*e*P	P	14 49 20.6	-0.4
	comp=Z,48nm,0.8s						
EDW2	Edwards Air Fo	68.94	320	P	P	14 49 22.3	+1.7
	baz=131						
TIC	Toumodi	69.10	76	*e*P	P	14 49 21.6	-0.4
	comp=Z,3.4nm,0.2s						
LRMC	Laurel Mtn Rad	69.15	320	P	P	14 49 24.0	+2.1
	baz=132						
KIC	Kosan Boka	69.25	76	*e*P	P	14 49 22.8	-0.1
	comp=Z,63nm,0.8s						
DBIC	Dimbokro	69.26	76	P	P	14 49 22.9	0.0
	comp=Z,28nm,0.7s,baz=224,slow=6.2,SNR=40						
DBIC				LR	LR	15 17 35.7	
	comp=Z,64nm,18.5s,baz=156,slow=34						
DBIC	Dimbokro	69.26	76	P	P	14 49 22.8	-0.1
DBIC				pmax	pmax		
	comp=Z,33nm,0.8s						
DBIC	Dimbokro	69.26	76	P	P	14 49 22.8	-0.1
DBIC				IAmb	IAmb	14 49 23.9	
	comp=Z,32nm,0.8s						
TPNV	Topopah Spring	69.28	322	P	P	14 49 25.0	+2.2
	baz=133						
FURC	Furnace Creek,	69.31	322	P	P	14 49 25.3	+2.6
	baz=133						
AGMN	Agassiz Nation	69.41	342		pP	14 49 46.2	-1.9
MPMC	Manual Prospec	69.41	321	P	P	14 49 25.6	+1.9
	baz=132						
ISA	Isabella, Lake	69.75	320	P	P	14 49 27.8	+2.1
	baz=131						
R11A	Troy Canyon, C	69.86	324	P	P	14 49 28.9	+2.5
	baz=134						
PDAR	Pinedale Array	69.98	330	P	P	14 49 28.7	+1.6
	comp=Z,0.6nm,0.7s,baz=138,slow=7.0,SNR=5.6						
PDAR				pP	PcP	14 49 49.8	+1.1
	comp=Z,1.1nm,0.9s,baz=134,slow=5.2,SNR=3.9						
CWC	Cottonwood Cre	70.02	321	P	P	14 49 29.6	+2.2
	baz=132						
PKM	Mcpherson Peak	70.08	319	P	P	14 49 29.8	+2.0
	baz=130						
ULM	Lac du Bonnet	71.18	343	P	P	14 49 33.7	-0.2
	comp=Z,3.5nm,0.5s,baz=141,slow=6.1,SNR=8.0						
ULM				pP	pP	14 49 57.5	-1.5
	comp=Z,6.7nm,0.7s,baz=143,slow=7.2,SNR=6.7						
ULM	Lac du Bonnet	71.18	343	P	P	14 49 33.1	-0.8
ULM	Lac du Bonnet	71.18	343	IAmb	IAmb	14 49 58.1	
	comp=Z,8.2nm,0.8s						
ELK	Elko	71.35	326	P	P	14 49 37.5	+2.0
	comp=Z,0.4nm,0.3s,baz=123,slow=7.6,SNR=3.7						
ELK	Elko	71.35	326	P	P	14 49 37.5	+2.0
ELK				pmax	pmax		
	comp=Z,8.0nm,1.8s						
NVAR	Mina Array Bea	71.48	322	P	P	14 49 38.2	+2.0
	comp=Z,1.0nm,0.7s,baz=131,slow=6.9,SNR=7.7						
NVAR				pP	pP	14 50 00.6	-0.4
	comp=Z,1.0nm,0.8s,baz=138,slow=5.6,SNR=3.5						
SCHQ	Schefferville	72.26	2	P	P	14 49 40.1	-0.1
	comp=Z,7.1nm,0.7s,baz=209,slow=3.3,SNR=14						
SCHQ				LR	LR	15 21 04.5	
	comp=Z,24nm,22.0s,baz=350,slow=36						
SCHQ	Schefferville	72.26	2	IAmb	IAmb	14 49 41.0	
	comp=Z,7.8nm,0.8s						
EGMT	Eagleton	74.15	334	P	P	14 49 54.6	+3.0
	baz=141						
J05D	Fort Rock, OR	76.35	324	P	P	14 50 06.9	+2.5
	baz=131						
TORD	Torodi Ar. Bea	77.63	72	P	P	14 50 12.0	-0.1
	comp=Z,32nm,0.8s,baz=257,slow=5.3,SNR=114						
TORD				pP	pP	14 50 34.1	-3.3
	comp=Z,6.1nm,0.8s,baz=252,slow=4.8,SNR=2.5						
TORD				S	S	14 59 52.5	-4.2
	comp=Z,0.5nm,0.6s,baz=261,slow=10,SNR=2.7						
TORD				LR	LR	15 23 15.3	
	comp=Z,46nm,18.6s,baz=185,slow=35						
TORD	Torodi Ar. Bea	77.63	72	P	P	14 50 11.1	-1.0
SYO	Syowa Base	80.66	160	⇑*e*P	P	14 50 28.0	+0.4
SYO	Syowa Base	80.66	160	⇑*e*PcP	PcP	14 50 34.6	+0.5
FRB	Frobisher Bay	81.14	1	P	P	14 50 30.2	+0.2
	comp=Z,1.8nm,0.4s,baz=174,slow=4.6,SNR=9.7						
TAM	Tamanrasset	84.56	64	P	P	14 50 49.6	+0.7
TAM				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TAM	Tamanrasset	84.56	64	P	P	14 50 49.6	+0.7
YKA	Yellowknife Ar	87.04	341	P	P	14 51 01.0	+1.0
	comp=Z,3.5nm,0.8s,baz=136,slow=5.2,SNR=51						
YKA				pP	pP	14 51 24.1	-1.5
	comp=Z,1.7nm,0.8s,baz=137,slow=5.9,SNR=3.5						
YKA				sP	sP	14 51 33.4	-2.7
	comp=Z,3.5nm,0.9s,baz=136,slow=5.2,SNR=4.8						
MAW	Mawson	88.46	164	P	P	14 51 09.1	+2.3
	comp=Z,5.1nm,0.9s,baz=222,slow=4.1,SNR=3.8						
MAW	Mawson	88.46	164	P	P	14 51 09.1	+2.3
MAW				pmax	pmax		
	comp=Z,7.0nm,1.6s						
SUMG	Summit	92.53	9	*i* P	P	14 51 27.0	+1.0
SUMG	Summit	92.53	9	*i* P	P	14 51 27.4	+1.4
SUMG	Summit	92.53	9	*i* P	P	14 51 27.4	+1.4
GERES	GERESS Array B	99.42	42	P	Pdif	14 51 57.2	-0.4
	comp=Z,0.9nm,0.8s,baz=258,slow=4.9,SNR=4.1						
KHC	Kasperske Hory	99.42	41	⇓*i*P	Pdif	14 51 55.8	-1.6
KHC				pmax	pmax		
	comp=Z,6.0nm,1.8s						
BR131	Keskin Array S	111.89	54	⇑*i*PKIKP	PKiKP	14 56 50.6	+0.7
OBN	Obninsk	114.11	37	*i* PKIKP	PKiKP	14 56 53.8	+0.4
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BILL	Bilibino	118.37	339	⇑*i*PKIKP	PKiKP	14 57 01.8	+0.5
KBZ	Khabaz	118.90	49	PKP	PKiKP	14 57 05.0	+1.9
	comp=Z,1.9nm,0.8s,baz=155,slow=2.8,SNR=3.7						
KBZ	Khabaz	118.90	49	PKIKP	PKiKP	14 57 05.0	+1.9
STKA	Stephens Creek	121.88	212	PKP	PKiKP	14 57 11.2	+1.8
	comp=Z,0.8nm,0.7s,baz=72,slow=16,SNR=3.4						
TIXI	Tiksi	124.78	353	⇓*i*PKIKP	PKPdf	14 57 11.2	-2.3
H11N3	WAKE ISLAND Hy	125.69	282	T	T	17 15 10.3	
	baz=99,slow=75,SNR=34						
H11N2	WAKE ISLAND Hy	125.70	282	T	T	17 15 10.2	
	baz=99,slow=75,SNR=43						
H11S2	WAKE ISLAND Hy	125.70	280	T	T	17 15 27.1	
	baz=100,slow=75,SNR=161						
H11N1	WAKE ISLAND Hy	125.71	282	T	T	17 15 11.6	
	baz=99,slow=75,SNR=32						
H11S1	WAKE ISLAND Hy	125.71	280	T	T	17 15 16.2	
	baz=100,slow=75,SNR=101						
H11S3	WAKE ISLAND Hy	125.72	280	T	T	17 15 30.2	
	baz=100,slow=75,SNR=126						
ARU	Arti	125.81	32	⇓*i*PKIKP	PKPdf	14 57 14.0	-1.9
ABKAR	Akbulak array	129.33	40		PKiKP	14 57 25.0	+1.4
ASAR	Alice Springs	132.47	211	PKP	PKiKP	14 57 31.1	+0.3
	comp=Z,0.5nm,0.5s,baz=139,slow=2.1,SNR=8.2						
BRVK	Borovoye	133.38	32	⇑*i*PKIKP	PKPdf	14 57 29.3	-1.1
WRA	Warramunga Arr	135.33	214	PKP	PKiKP	14 57 36.8	+0.1
	comp=Z,1.3nm,0.7s,baz=140,slow=1.8,SNR=15						
WRA	Warramunga Arr	135.33	214		PKiKP	14 57 36.7	0.0
KURK	Kurchatov	138.89	30	⇑*i*PKIKP	PKPdf	14 57 40.1	-0.6
ZALV	Zalesovo Beam	139.08	22	PKP	PKiKP	14 57 42.6	-0.6
	comp=Z,1.5nm,0.7s,baz=299,slow=1.2,SNR=5.9						
ZALV				SKPbc	SKiKP	15 01 09.8	-1.1
	comp=Z,2.0nm,0.8s,baz=308,slow=3.6,SNR=6.5						
ZALV	Zalesovo Beam	139.08	22	PKIKP	PKPdf	14 57 41.9	+1.0
ZALV	Zalesovo Beam	139.08	22		PKPdf	14 57 41.9	+1.0
MKAR	Makanchi Array	143.33	32	PKhKP	PKPpre	14 57 46.1	
	comp=Z,0.8nm,0.8s,baz=333,slow=3.1,SNR=8.6						
KSH	Kashi	143.76	46	PKP	PKPbc	14 57 48.0	+0.2
KSH				pPKP	pPKPdf	14 58 15.3	-1.5
KSH				PP	PP	15 01 04.8	+1.2
KSH				SKS	SKSdf	15 04 46.5	-4.7
KSH				SKKS	SKKSac	15 07 44.5	-3.3
KSH				AMB	AMB		
	comp=Z,280nm,5.0s						
KSH				LR	LR		
	comp=Z,210nm,14.2s						
KSH				LR	LR		
	comp=Z,100nm,11.8s						
KSH				LR	LR		
	comp=Z,120nm,10.3s						
MOY	Mondy	145.41	9	*e*PKIKP	PKiKP	14 57 55.0	-1.4
MOY				pmax	pmax		
	comp=Z,15nm,1.4s						
ZAK	Zakamensk	146.97	7	*e*PKP2	PKPab	14 57 59.0	+0.2
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
USRK	Ussuriysk Ar.	147.40	329	PKPbc	PKPab	14 58 00.6	+0.1
	comp=Z,1.8nm,0.8s,baz=16,slow=2.2,SNR=2.8						
USRK				pPKPbc	pPKPdf	14 58 24.2	+1.6
	comp=Z,2.1nm,0.7s,baz=57,slow=3.6,SNR=3.8						
WMQ	Urumqi	148.12	30	*e*PKPbc	PKPdf	14 57 56.8	-0.4
WMQ				LR	LR		
	comp=Z,60nm,19.5s						
WMQ				LR	LR		
	comp=Z,140nm,27.1s						
WMQ				LR	LR		
	comp=Z,69nm,18.5s						
MJAR	Matsushiro Arr	148.36	312	PKPbc	PKiKP	14 58 03.3	+0.4
	comp=Z,3.2nm,0.7s,baz=99,slow=1.7,SNR=10						
MJAR				pPKPbc	pPKPdf	14 58 26.4	+2.0
	comp=Z,2.3nm,0.8s,baz=65,slow=2.8,SNR=3.1						
MJAR	Matsushiro Arr	148.36	312	PKP2	PKiKP	14 58 02.7	-0.2
MJAR	Matsushiro Arr	148.36	312		PKiKP	14 58 02.7	-0.2
MAT	Matsushiro	148.36	312	PKP	PKiKP	14 58 03.1	+0.2
SONM	Songino Array	149.79	4	PKPbc	PKiKP	14 58 06.3	+0.7
	comp=Z,1.9nm,0.7s,baz=328,slow=2.4,SNR=8.8						
SONM				pPKPbc	pPKPdf	14 58 29.3	+2.7
	comp=Z,1.0nm,0.7s,baz=340,slow=1.4,SNR=1.8						
SONM	Songino Array	149.79	4	PKP2	PKiKP	14 58 06.0	+0.4
SONM	Songino Array	149.79	4		PKiKP	14 58 06.0	+0.4
KSRS	Korea Array	154.41	324	pPKPbc	pPKPbc	14 58 39.8	-2.0
	comp=Z,1.0nm,0.9s,baz=12,slow=2.6,SNR=3.0						
HHC	Hu-ho-hao-te	156.80	356	*e*PKP	PKPdf	14 58 08.5	-1.6
LZH	Lanzhou	160.98	14	*e*PKP	PKPdf	14 58 12.0	-3.3
LZH				pPKP	pPKPdf	14 58 39.3	-2.7
LZH				LR	LR		
	comp=Z,170nm,18.0s						
LZH				LR	LR		
	comp=Z,160nm,18.1s						
LZH				LR	LR		
	comp=Z,200nm,20.3s						
NJ2	Nanjing	163.29	331	*e*PKP	PKPdf	14 58 17.0	-0.5
CD2	Chengdu	165.84	20	PKP	PKPdf	14 58 19.5	-0.3
CMAR	Chiang Mai Arr	170.03	84	PKPab	PKPab	14 59 39.1	+0.3
	comp=Z,0.5nm,0.5s,baz=280,slow=5.4,SNR=4.7						

NIED ***25*** *14:43:00, 32°.00N×131°.60E, h29^{km}, Mw3.9   Best double couple: M$_0$8.29000×10^{14} NP1:φ$_s$189.00000°, δ82.00000°, λ-108.00000°.   NP2:φ$_s$75.00000°, δ19.00000°, λ-26.00000°.*

IDC ***25*** *14:43:10.7±8.5, 31°.68N×131°.40E, h33^{km}±54^{km}, mb3.6/4, mb1 3.7/7, mb1mx3.4/56, mbtmp3.7/7, ML3.1/3, MS3.0/5, Ms1 3.1/5, ms1mx2.7/47, Error ellipse: s-maj=53.9km s-min=29.1km az=11.0*

JMA ***25*** *14:43:13.1±0.1, 31°.98N×131°.60E, h37^{km}±1^{km}, M3.8 Broadband fault plane solution: P waves.   NP1: φ$_s$74.00000°, δ6.00000°, λ-14.00000°.   NP2:φ$_s$178.00000°, δ88.00000°, λ-96.00000°.   Principal axes: T Plg43.0000°, Azm274.0000°; N Plg6.0000°, Azm178.0000°; P*

Plg46.0000°, Azm82.0000°;
JMA Felt II J1.

ISC 25 14:43:12.8±1.2**, 31°.92N**±0°.05×**131°.63E**±0°.05**, h36**^{km}±1^{km}**,**
n27, σ1^{s}33/25**, mb3.8**/4**, MS2.9**/3**, 1C-7D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNKG	**Nichinankitago**	**0.34**	**219**	⇓P	**Pn**	**14 43 21.8**	**+0.7**
JNKG				*e*S	**Sn**	**14 43 28.3**	**+0.6**
JTSN	**Tsuno**	**0.34**	**342**	⇓P	**Pn**	**14 43 20.6**	**-0.5**
JTSN				*e*S	**Sn**	**14 43 26.2**	**-1.6**
JTZ	**Takazaki**	**0.46**	**267**	⇓P	**Pn**	**14 43 22.4**	**-0.3**
JTZ				*e*S	**Sn**	**14 43 29.6**	**-0.2**
JNAR	**Kushima--Naru**	**0.50**	**217**	⇓P	**Pn**	**14 43 24.1**	**+0.8**
JNAR				*e*S	**Sn**	**14 43 32.6**	**+1.9**
JHHC	**Hyugahichiya**	**0.52**	**1**	⇓P	**Pn**	**14 43 23.2**	**-0.5**
JHHC				*e*S	**Sn**	**14 43 30.8**	**-0.5**
JZO	**Okuchi**	**0.90**	**284**	⇓P	**Pn**	**14 43 29.0**	**+0.1**
JZO				*e*S	**Sn**	**14 43 40.6**	**-0.2**
JIU3	**Izumi3**	**0.93**	**312**	⇑P	**Pn**	**14 43 29.5**	**+0.2**
JIU3				*e*S	**Sn**	**14 43 41.5**	**0.0**
JNU	**Nakatsue**	**1.35**	**332**	Pn	**Pn**	**14 43 36.4**	**+1.2**
	175nm,0.3s,baz=183,slow=2.7,SNR=912						
JNU				Sn	**Sn**	**14 43 54.3**	**+2.5**
	164nm,0.3s,baz=302,slow=20,SNR=22						
JNU				LR	LR	14 44 24.0	
	comp=Z,234nm,19.9s,baz=169,slow=49						
JTO	**Tosashimizu**	**1.36**	**46**	⇓P	**Pn**	**14 43 34.6**	**-0.7**
KSRS	**Korea Array**	**6.30**	**332**	Pn	**Pn**	**14 44 44.8**	**+1.7**
	0.1nm,0.3s,baz=151,slow=15,SNR=2.7						
KSRS				Lg	Lg	14 46 31.1	
	0.3nm,0.3s,baz=157,slow=31,SNR=4.9						
KSRS				LR	LR	14 47 20.3	
	comp=Z,93nm,18.7s,baz=175,slow=39						
MAT	**Matsushiro**	**7.13**	**48**	P	**Pn**	**14 44 56.1**	**+1.5**
MJAR	**Matsushiro Arr**	**7.13**	**48**	Pn	**Pn**	**14 44 56.4**	**+1.8**
	0.3nm,0.3s,baz=240,slow=14,SNR=15						
JCJ	**Chichijima**	**10.38**	**115**	LR	LR	14 49 12.0	
	comp=Z,32nm,20.2s,baz=286,slow=35						
KLR	**Kul'dur**	**17.29**	**0**	P	**P**	**14 47 14.5**	**+2.1**
	0.1nm,0.3s,baz=186,slow=4.6,SNR=8.9						
SONM	**Songino Array**	**24.89**	**317**	P	**P**	**14 48 31.3**	**-0.9**
	1.9nm,0.7s,baz=129,slow=11,SNR=8.4						
PETK	**Petropavlovsk-**	**28.32**	**34**	LR	LR	15 01 14.9	
	comp=Z,29nm,20.5s,baz=241,slow=38						
CMAR	**Chiang Mai Arr**	**32.34**	**253**	LR	LR	15 04 05.3	
	comp=Z,24nm,19.3s,baz=35,slow=39						
H11N2	**WAKE ISLAND Hy**	**33.84**	**102**	T	T	15 25 45.4	
	baz=298,slow=75,SNR=7.4						
H11N1	**WAKE ISLAND Hy**	**33.84**	**102**	T	T	15 25 55.9	
	baz=298,slow=75,SNR=6.5						
H11N3	**WAKE ISLAND Hy**	**33.86**	**102**	T	T	15 25 55.1	
	baz=298,slow=75,SNR=3.0						
H11S3	**WAKE ISLAND Hy**	**34.26**	**104**	T	T	15 26 29.0	
	baz=303,slow=74						
H11S1	**WAKE ISLAND Hy**	**34.27**	**104**	T	T	15 26 27.6	
	baz=303,slow=74						
H11S2	**WAKE ISLAND Hy**	**34.28**	**104**	T	T	15 26 27.0	
	baz=303						
MKAR	**Makanchi Array**	**40.27**	**306**	P	**P**	**14 50 44.7**	**-1.5**
	1.1nm,0.5s,baz=90,slow=10,SNR=26						
KRVT	**Keravat (AS076**	**40.93**	**148**	LR	LR	15 08 24.7	
	comp=Z,87nm,18.2s,baz=213,slow=37						
ILAR	**Eielson Array**	**58.03**	**30**	P	**P**	**14 53 02.2**	**+0.5**
	0.2nm,0.7s,baz=277,slow=7.1,SNR=2.6						
FINES	**FINESS Array B**	**69.39**	**330**	P	**P**	**14 54 14.5**	**-2.1**
	0.9nm,0.5s,baz=72,slow=6.2,SNR=8.2						

IDC ***25*** *14:53:11.8±1.0, 16°.11S×174°.97W, h282^{km}±10^{km},*
mb3.8/15, mb1 4.0/17, mb1mx3.9/35, mbtmp4.4/17, Error
ellipse: s-maj=16.0km s-min=9.6km az=138.0
NEIC ***25*** *14:53:14.6±1.4, 16°.1S±0°.1×174°.9W±0°.1, h303^{km}±6^{km},*
mb4.4/94, Error ellipse: s-maj=16.7km s-min=12.9km
az=148.0

ISC 25 14:53:11.7±0.4**, 16°.23S**±0°.08×**174°.93W**±0°.07**, h278**^{km}**,**
n199, σ1^{s}00/200**, mb4.4**/65**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.82**	**53**	P	**Pn**	**14 54 16.7**	**+1.7**
	23nm,0.3s,baz=195,slow=1.6,SNR=26						
AFI				S	**S**	**14 55 04.7**	**-0.7**
	63nm,0.3s,baz=261,slow=6.4,SNR=11						
AFI	**Afiamalu**	**3.82**	**53**	Pn	**Pn**	**14 54 16.8**	**+1.8**
NIUE	**Niue**	**5.55**	**121**	Pn	**Pn**	**14 54 37.7**	**+2.7**
MSVF	**Nonsavu**	**6.88**	**256**		Pn	14 54 56.8	+5.5
DZM	**Mont Dzumac**	**18.52**	**249**	P	**P**	**14 57 09.2**	**+0.8**
	1.0nm,0.3s,baz=112,slow=15,SNR=8.6						
DZM	**Mont Dzumac**	**18.52**	**249**	P	**Pn**	**14 57 11.6**	**-0.6**
DZM				IAmb	IAmb	14 57 15.9	
	comp=Z,44nm,1.4s						
URZ	**Urewera**	**23.04**	**196**	P	**P**	**14 57 52.3**	**-0.4**
	comp=Z,13nm,0.6s,baz=350,slow=7.6,SNR=8.6						
URZ				S	**S**	**15 01 38.1**	**-4.2**
	comp=Z,12nm,1.0s,baz=80,slow=18,SNR=2.4						
COEN	**Coen**	**40.46**	**267**	P	**P**	**15 00 24.7**	**+0.7**
COEN				IAmb	IAmb	15 00 26.0	
	comp=Z,29nm,1.2s						
TOO	**Toolangi**	**40.80**	**231**	P	**P**	**15 00 26.0**	**-0.5**
TOO				IAmb	IAmb	15 00 27.6	
	comp=Z,25nm,0.9s						
STKA	**Stephens Creek**	**42.34**	**240**	P	**P**	**15 00 39.2**	**+0.2**
	comp=Z,16nm,0.9s,baz=93,slow=9.9,SNR=25						
STKA	**Stephens Creek**	**42.34**	**240**	P	**P**	**15 00 39.1**	**0.0**
BBOO	**Buckleboo**	**47.12**	**240**	P	**P**	**15 01 16.2**	**-0.4**
BBOO				IAmb	IAmb	15 01 17.1	
	comp=Z,12nm,0.8s						
WR0	**Warramunga Arr**	**48.03**	**258**	P	**P**	**15 01 22.7**	**-1.0**
WR0				IAmb	IAmb	15 01 24.8	
	comp=Z,24nm,1.2s						
WB0	**Warramunga Arr**	**48.18**	**258**	P	**P**	**15 01 23.8**	**-1.1**
WB2	**Warramunga Arr**	**48.21**	**258**	P	**P**	**15 01 24.1**	**-0.9**
WRAB	**Tennant Creek**	**48.21**	**258**	P	**P**	**15 01 24.0**	**-1.1**
WRA	**Warramunga Arr**	**48.22**	**258**	P	**P**	**15 01 24.2**	**-1.0**
	comp=Z,23nm,0.7s,baz=92,slow=7.6,SNR=277						
WRA	**Warramunga Arr**	**48.22**	**258**	P	**P**	**15 01 24.0**	**-1.2**
AS31	**Alice Springs**	**48.45**	**253**	P	**P**	**15 01 26.2**	**-0.7**
AS31				IAmb	IAmb	15 01 27.9	
	comp=Z,21nm,0.8s						
ASAR	**Alice Springs**	**48.45**	**253**	P	**P**	**15 01 26.5**	**-0.4**
	comp=Z,91nm,0.6s,baz=86,slow=7.9,SNR=1517						
ASAR				ScP	**ScP**	**15 06 15.5**	**-0.9**
	comp=Z,0.2nm,0.8s,baz=90,slow=2.8,SNR=4.3						
ASAR	**Alice Springs**	**48.45**	**253**	P	**P**	**15 01 25.8**	**-1.1**
MTN	**Manton Dam**	**52.20**	**266**	P	**P**	**15 01 54.0**	**-0.9**
SAUI	**Saumlaki**	**53.08**	**272**	P	**P**	**15 02 02.3**	**+1.0**
	comp=Z,5μmcomp=Z,28nm,0.7s						
FORT	**Forrest**	**53.73**	**244**	P	**P**	**15 02 04.8**	**-1.0**
KNRA	**Kununurra**	**53.99**	**262**	P	**P**	**15 02 07.0**	**-0.9**
KNRA				IAmb	IAmb	15 02 08.2	
	comp=Z,11nm,0.8s						
FITZ	**Fitzroy Crossi**	**56.60**	**259**	P	**P**	**15 02 25.9**	**-0.5**
AAI	**Ambon**	**57.20**	**276**	P	**P**	**15 02 31.6**	**+0.9**
	comp=Z,20nm,0.5s						
NLAI	**Namlea**	**58.38**	**276**	P	**P**	**15 02 39.2**	**+0.4**
	comp=Z,22nm,1.2s						
LBMI	**Labuha**	**58.78**	**279**	P	**P**	**15 02 42.0**	**+0.4**
	comp=Z,36nm,0.8s						
SOEI	**Soe**	**59.42**	**268**	P	**P**	**15 02 47.3**	**+1.2**
	comp=Z,62nm,1.1s						
SOEI	**Soe**	**59.42**	**268**	P	**P**	**15 02 47.0**	**+0.8**
SANI	**Sanana**	**59.79**	**277**	P	**P**	**15 02 47.4**	**-1.1**
	comp=Z,23nm,0.9s						
PSA00	**Pilbara Seismi**	**61.56**	**254**	P	**P**	**15 02 59.1**	**-1.1**
MMRI	**Maumere**	**61.63**	**269**	P	**P**	**15 03 00.8**	**0.0**
	comp=Z,40nm,0.8s						
MMRI	**Maumere**	**61.63**	**269**	P	**P**	**15 02 59.0**	**-1.8**
VNDA	**Vanda**	**62.41**	**186**	P	**P**	**15 03 06.1**	**+1.2**
	comp=Z,1.9nm,0.8s,baz=2.6,slow=8.3,SNR=4.4						
WBSI	**Waikabubak, Su**	**64.12**	**267**	P	**P**	**15 03 16.6**	**-0.7**
	comp=Z,18nm,0.7s						
KAPI	**Kappang**	**64.92**	**272**	P	**P**	**15 03 21.6**	**-0.8**
	comp=Z,5.3nm,0.3s,baz=125,slow=8.2						
TBP	**Tagbilaran**	**65.81**	**289**	*e*P	P	15 03 11.6	-16
PLAI	**Plampang**	**65.86**	**267**	P	**P**	**15 03 28.1**	**-0.3**
	comp=Z,19nm,0.8s						
MPSI	**Mapaga**	**66.31**	**278**	P	**P**	**15 03 31.5**	**+0.3**
	comp=Z,449nmcomp=Z,23nm,0.8s						
MJAR	**Matsushiro Arr**	**68.63**	**321**	P	**P**	**15 03 43.4**	**-1.9**
	comp=Z,1.5nm,0.8s,baz=142,slow=7.1,SNR=3.8						
MJAR	**Matsushiro Arr**	**68.63**	**321**	IAmb	IAmb	15 03 47.6	
	comp=Z,7.1nm,1.8s						
JAGI	**Jajag, Banyuwa**	**69.43**	**267**	P	**P**	**15 03 49.5**	**-1.1**
SCZ2	**Santa Cruz Isl**	**72.56**	**46**	P	**P**	**15 04 08.8**	**0.0**
	baz=236						
PETK	**Petropavlovsk-**	**72.98**	**343**	P	**P**	**15 04 09.0**	**-1.9**
	comp=Z,1.7nm,0.8s,baz=147,slow=8.6,SNR=2.0						
QSPA	**South Pole Qui**	**73.82**	**180**	P	**P**	**15 04 16.4**	**+0.6**
	comp=Z,4.7nm,0.7s,baz=87,slow=2.1,SNR=22						
QSPA	**South Pole Qui**	**73.82**	**180**	IAmb	IAmb	15 04 17.4	
	comp=Z,7.3nm,0.9s						
MURC	**Murrieta**	**74.04**	**47**	P	**P**	**15 04 16.8**	**-0.8**
	baz=238						
BFSC	**Mount Baldy Ra**	**74.06**	**46**	P	**P**	**15 04 17.1**	**-0.7**
	baz=237						
O02D	**Mt. Diablo Mer**	**74.14**	**39**	P	**P**	**15 04 18.5**	**+0.4**
	baz=232						
EDW2	**Edwards Air Fo**	**74.17**	**46**	P	**P**	**15 04 17.7**	**-0.7**
	baz=237,SNR=5.3						
MONP2	**Monument Peak**	**74.21**	**48**	P	**P**	**15 04 18.1**	**-0.7**
	baz=238						
ISA	**Isabella, Lake**	**74.28**	**45**	P	**P**	**15 04 19.0**	**0.0**
ISA				IAmb	IAmb	15 04 20.0	
	comp=Z,7.2nm,1.1s						
ISA	**Isabella, Lake**	**74.28**	**45**	P	**P**	**15 04 18.9**	**0.0**
	baz=236						
IKP	**In-Ko-Pah, Jac**	**74.31**	**49**	P	**P**	**15 04 18.0**	**-1.2**
	baz=238						
CMB	**Columbia Colle**	**74.36**	**42**	P	**P**	**15 04 17.1**	**-2.2**
AFDM	**Forest Hills D**	**74.53**	**41**	P	**P**	**15 04 19.8**	**-0.4**
ORV	**Oroville**	**74.56**	**40**	P	**P**	**15 04 19.3**	**-1.0**
PFO	**Pinyon Flats O**	**74.56**	**48**	P	**P**	**15 04 20.3**	**-0.4**
PFO				IAmb	IAmb	15 04 21.6	
	comp=Z,5.7nm,0.9s						
PFO	**Pinyon Flats O**	**74.56**	**48**	P	**P**	**15 04 20.5**	**-0.2**
	baz=238						
XPFO	**Pion Flat**	**74.57**	**48**	P	**P**	**15 04 20.3**	**-0.4**
XPFO				IAmb	IAmb	15 04 21.6	
	comp=Z,5.7nm,0.9s						
N02D	**Trinity Center**	**74.69**	**38**	P	**P**	**15 04 21.1**	**0.0**
	baz=232						
LRMC	**Laurel Mtn Rad**	**74.71**	**45**	P	**P**	**15 04 21.4**	**-0.1**
	baz=237						
O03E	**Paynes Creek**	**74.82**	**39**	P	**P**	**15 04 22.2**	**+0.3**
	baz=233						
M02C	**Callahan**	**74.86**	**38**	P	**P**	**15 04 23.1**	**+1.0**
	baz=232						
CWC	**Cottonwood Cre**	**74.97**	**44**	P	**P**	**15 04 23.0**	**0.0**
	baz=236						
MDPB	**Devils Postpil**	**74.98**	**43**	P	**P**	**15 04 22.6**	**-0.6**
OMMB	**Old Mammoth Mi**	**75.02**	**43**	P	**P**	**15 04 23.2**	**-0.3**
BELC	**Belle Mtn. Jos**	**75.09**	**47**	P	**P**	**15 04 23.5**	**-0.2**
	baz=238,SNR=6.1						
YBH	**Yreka Blue Hor**	**75.15**	**38**	P	**P**	**15 04 24.0**	**+0.2**
YBH				IAmb	IAmb	15 04 24.9	
	comp=Z,6.4nm,0.8s						
MPMC	**Manual Prospec**	**75.16**	**45**	P	**P**	**15 04 23.3**	**-0.8**
	baz=237,SNR=7.6						
GSC	**Goldstone, Bar**	**75.22**	**46**	P	**P**	**15 04 23.9**	**-0.4**
	baz=237						
WAKR	**Walker**	**75.24**	**42**	P	**P**	**15 04 24.5**	**0.0**
WAKR				IAmb	IAmb	15 04 25.6	
	comp=Z,5.6nm,0.8s						
HEC	**Hector,Ludlow**	**75.30**	**47**	P	**P**	**15 04 23.9**	**-0.9**
	baz=238,SNR=5.9						
BC3	**Big Chuckawall**	**75.30**	**48**	P	**P**	**15 04 25.2**	**+0.3**
	baz=239						
GLA	**Glamis**	**75.44**	**49**	P	**P**	**15 04 26.0**	**+0.4**
GLA				IAmb	IAmb	15 04 27.0	
	comp=Z,5.9nm,0.9s						
GLA	**Glamis**	**75.44**	**49**	P	**P**	**15 04 25.9**	**+0.4**
	baz=239						
PNTR	**Pine Nut**	**75.47**	**41**	P	**P**	**15 04 23.3**	**-2.6**
PNTR				IAmb	IAmb	15 04 26.9	
	comp=Z,7.7nm,0.9s						
HUMO	**Hull Mountain**	**75.55**	**37**	P	**P**	**15 04 26.3**	**+0.3**
VCNR	**Virginia City**	**75.56**	**41**	P	**P**	**15 04 25.8**	**-0.5**
VCNR				IAmb	IAmb	15 04 26.8	
	comp=Z,8.4nm,0.6s						
YERR	**Yerington**	**75.64**	**42**	P	**P**	**15 04 26.2**	**-0.6**
L04D	**Klamath Falls**	**75.69**	**38**	P	**P**	**15 04 26.7**	**-0.2**
	baz=232						
M04C	**Macdoel**	**75.70**	**38**	P	**P**	**15 04 27.4**	**+0.4**
	baz=232						
KSRS	**Korea Array**	**75.72**	**316**	P	**P**	**15 04 27.1**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=127,slow=6.8,SNR=6.0						
CISI	**Cisompet, Garu**	**75.73**	**266**	P	**P**	**15 04 28.5**	**+0.8**
GMRC	**Granite Mounta**	**75.74**	**47**	P	**P**	**15 04 27.0**	**-0.4**
	baz=238						
KSAR	**Wonju Array Be**	**75.74**	**316**	P	**P**	**15 04 27.1**	**0.0**
IRM	**Iron Mountain**	**75.78**	**48**	P	**P**	**15 04 27.0**	**-0.5**
	baz=239,SNR=5.6						
KSM	**Kuching**	**75.80**	**276**	P	**P**	**15 04 28.8**	**+0.8**
FURC	**Furnace Creek,**	**75.81**	**45**	P	**P**	**15 04 27.2**	**-0.3**
	baz=237						
RYN	**Ryan**	**75.90**	**42**	P	**P**	**15 04 27.3**	**-0.9**
TUQ	**Turquoise Moun**	**75.90**	**46**	P	**P**	**15 04 27.7**	**-0.5**
	baz=238						
NVAR	**Mina Array Bea**	**75.93**	**43**	P	**P**	**15 04 28.1**	**-0.3**
	comp=Z,3.8nm,0.8s,baz=227,slow=9.2,SNR=29						
NVAR	**Mina Array Bea**	**75.93**	**43**	P	**P**	**15 04 27.7**	**-0.7**
PAHR	**Pah Rah Range**	**75.97**	**41**	P	**P**	**15 04 28.3**	**-0.2**
I03D	**Drain, OR**	**76.01**	**36**	P	**P**	**15 04 28.0**	**-0.5**
	baz=231						
Y12C	**Blythe**	**76.02**	**48**	P	**P**	**15 04 28.9**	**+0.2**
Y12C				IAmb	IAmb	15 04 29.8	
	comp=Z,7.5nm,1.0s						
Y12C	**Blythe**	**76.02**	**48**	P	**P**	**15 04 29.0**	**+0.2**
	baz=239						
NV11	**Mina Array Sit**	**76.03**	**43**	P	**P**	**15 04 28.7**	**-0.3**
214A	**Organ Pipe Nat**	**76.38**	**51**	P	**P**	**15 04 30.8**	**-0.1**
214A				IAmb	IAmb	15 04 32.0	
	comp=Z,11nm,1.4s						
214A	**Organ Pipe Nat**	**76.38**	**51**	P	**P**	**15 04 31.1**	**+0.2**
	baz=241						
KVN	**Kaiserville**	**76.41**	**42**	P	**P**	**15 04 30.7**	**-0.4**
J04D	**Umpqua Nationa**	**76.43**	**37**	P	**P**	**15 04 30.9**	**-0.2**
	baz=232						
TPNV	**Topopah Spring**	**76.48**	**45**	P	**P**	**15 04 31.4**	**-0.1**
TPNV				IAmb	IAmb	15 04 32.4	
	comp=Z,5.6nm,0.9s						
TPNV	**Topopah Spring**	**76.48**	**45**	P	**P**	**15 04 31.4**	**-0.1**
	baz=238,SNR=5.7						
PDMCI	**Parker Dam,Lak**	**76.57**	**48**	P	**P**	**15 04 31.7**	**-0.1**
	baz=239,SNR=5.8						
J05D	**Fort Rock, OR**	**76.96**	**37**	P	**P**	**15 04 34.4**	**+0.4**
	baz=232						
SHPR	**Sheep Range**	**76.99**	**46**	P	**P**	**15 04 34.2**	**-0.2**
W13A	**Hualapai Mount**	**77.16**	**47**	P	**P**	**15 04 35.1**	**-0.2**
USRK	**Ussuriysk Ar.**	**77.17**	**324**	P	**P**	**15 04 35.2**	**+0.3**
Y14A	**Wickenburg**	**77.20**	**49**	P	**P**	**15 04 35.5**	**0.0**
Y14A				IAmb	IAmb	15 04 36.5	
	comp=Z,10nm,1.1s						
PINE	**Pine Mountain**	**77.44**	**37**	P	**P**	**15 04 36.8**	**+0.1**
R11A	**Troy Canyon, C**	**77.67**	**44**	P	**P**	**15 04 37.8**	**-0.3**
R11A	**Troy Canyon, C**	**77.67**	**44**	P	**P**	**15 04 38.0**	**-0.2**
	baz=238						
WVOR	**Wild Horse Val**	**78.00**	**39**	P	**P**	**15 04 38.4**	**-1.3**
I07A	**Izee**	**78.45**	**37**	P	**P**	**15 04 42.0**	**-0.1**
LCMT	**Little Creek M**	**78.57**	**46**	P	**P**	**15 04 42.8**	**-0.2**
X16A	**Lo Mia Camp, P**	**78.57**	**49**	P	**P**	**15 04 43.5**	**+0.4**
X16A				IAmb	IAmb	15 04 44.6	
	comp=Z,9.3nm,1.1s						
CCUT	**Cedar City**	**78.76**	**45**	P	**P**	**15 04 44.2**	**+0.1**
319A	**Douglas**	**78.76**	**53**	P	**P**	**15 04 44.4**	**+0.3**
PSUT	**Pine Spring**	**78.93**	**44**	P	**P**	**15 04 44.6**	**-0.4**
U15A	**North Rim**	**78.94**	**47**	P	**P**	**15 04 44.9**	**-0.3**
U15A				IAmb	IAmb	15 04 46.6	
	comp=Z,8.0nm,1.1s						
SZCU	**Shurtz Canyon**	**78.97**	**46**	P	**P**	**15 04 45.1**	**-0.1**
WUAZ	**Wupatki**	**79.15**	**48**	P	**P**	**15 04 46.1**	**-0.1**
WUAZ				IAmb	IAmb	15 04 47.0	
	comp=Z,7.0nm,1.1s						
WUAZ	**Wupatki**	**79.15**	**48**	P	**P**	**15 04 45.8**	**-0.4**
	baz=241						
ELK	**Elko**	**79.18**	**42**	P	**P**	**15 04 45.9**	**-0.5**
HKPS	**Hong Kong Po S**	**79.27**	**297**	P	**P**	**15 04 47.3**	**+0.3**
G08A	**Pilot Rock**	**79.47**	**37**	P	**P**	**15 04 47.3**	**-0.3**
G08A				IAmb	IAmb	15 04 47.8	
	comp=Z,6.9nm,1.2s						
B05A	**Bryant**	**79.57**	**33**	P	**P**	**15 04 48.1**	**+0.3**
	baz=231						
X18A	**Snowflake**	**79.71**	**49**	P	**P**	**15 04 49.6**	**+0.3**
X18A				IAmb	IAmb	15 05 00.5	
	comp=Z,15nm,1.8s						
E07A	**Sunnyside**	**79.72**	**35**	P	**P**	**15 04 48.8**	**0.0**
HAWA	**Hanford**	**79.80**	**35**	P	**P**	**15 04 48.9**	**-0.3**
HAWA				IAmb	IAmb	15 04 49.5	
	comp=Z,4.8nm,0.7s						
MSU	**Marysvale**	**80.05**	**45**	P	**P**	**15 04 51.5**	**+0.5**
BMO	**Blue Mountains**	**80.18**	**38**	P	**P**	**15 04 50.1**	**-1.3**
121A	**Cookes Peak, D**	**80.42**	**52**	P	**P**	**15 04 52.8**	**-0.2**
121A				IAmb	IAmb	15 04 54.6	
	comp=Z,7.1nm,0.9s						
121A	**Cookes Peak, D**	**80.42**	**52**	P	**P**	**15 04 53.7**	**+0.6**
	baz=244						
F10A	**Beach Ranch, E**	**80.86**	**37**	P	**P**	**15 04 54.1**	**-0.8**
F10A				IAmb	IAmb	15 04 55.0	
	comp=Z,6.5nm,0.9s						
TMUT	**Trail Mountain**	**81.10**	**45**	P	**P**	**15 04 56.9**	**+0.2**
SRU	**San Rafael Swe**	**81.47**	**45**	P	**P**	**15 04 58.1**	**-0.3**
TCUT	**Toone Canyon**	**81.86**	**43**	P	**P**	**15 05 00.2**	**-0.3**
MNTX	**Cornudas Mount**	**81.90**	**54**	P	**P**	**15 05 00.6**	**-0.1**
	baz=245						
PV14	**Lion Creek, Pa**	**82.16**	**46**	P	**P**	**15 05 01.4**	**-0.7**
PV14				IAmb	IAmb	15 05 02.8	
	comp=Z,7.9nm,0.9s						
PV20	**West Nyswonger**	**82.18**	**46**	P	**P**	**15 05 01.7**	**-0.5**
PV20				IAmb	IAmb	15 05 02.9	
	comp=Z,7.9nm,0.8s						
PV13	**Radium Mtn., P**	**82.20**	**47**	P	**P**	**15 05 01.9**	**-0.4**
PV13				IAmb	IAmb	15 05 02.9	
	comp=Z,5.5nm,1.0s						
PV23	**Carpenter Ridg**	**82.20**	**46**	P	**P**	**15 05 01.5**	**-0.9**
PV03	**Paradox Valley**	**82.22**	**47**	P	**P**	**15 05 01.2**	**-1.2**
PV03				IAmb	IAmb	15 05 03.1	
	comp=Z,7.7nm,1.1s						
NEW	**Newport**	**82.22**	**35**	P	**P**	**15 05 00.9**	**-1.1**
	baz=235						
PV04	**Paradox Valley**	**82.25**	**46**	P	**P**	**15 05 01.4**	**-1.1**
PV04				IAmb	IAmb	15 05 03.3	
	comp=Z,8.1nm,0.8s						
PV12	**Saucer Basin,**	**82.28**	**47**	P	**P**	**15 05 02.5**	**-0.3**
TX31	**Lajitas Ar. Si**	**82.30**	**57**	P	**P**	**15 05 03.1**	**+0.2**
TX31				IAmb	IAmb	15 05 04.4	
	comp=Z,15nm,1.6s						
TXAR	**Lajitas Array**	**82.30**	**57**	P	**P**	**15 05 02.8**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=220,slow=7.6,SNR=9.3						
TXAR	**Lajitas Array**	**82.30**	**57**	P	**P**	**15 05 02.2**	**-0.6**
ANMO	**Albuquerque**	**82.46**	**50**	P	**P**	**15 05 03.4**	**-0.3**
ANMO				IAmb	IAmb	15 05 04.7	
	comp=Z,4.6nm,0.8s						
ANMO	**Albuquerque**	**82.46**	**50**	P	**P**	**15 05 03.9**	**+0.2**
	baz=244						
MCMT	**McKenzie Canyo**	**82.83**	**39**	P	**P**	**15 05 05.1**	**-0.3**
WRH	**Wood River Hil**	**83.04**	**11**	P	**P**	**15 05 05.1**	**-0.6**
WRH				IAmb	IAmb	15 05 07.6	
	comp=Z,14nm,1.6s						
HDA	**Harding Lake**	**83.21**	**12**	P	**P**	**15 05 05.9**	**-0.7**
	baz=207						
MSO	**Missoula**	**83.23**	**37**	P	**P**	**15 05 06.5**	**-0.7**
	baz=238						
CCB	**Clear Creek Bu**	**83.26**	**11**	P	**P**	**15 05 05.5**	**-1.3**
CCB				IAmb	IAmb	15 05 06.5	
	comp=Z,7.9nm,1.3s						
REDW	**Red Top Meadow**	**83.33**	**41**	P	**P**	**15 05 07.6**	**-0.3**
REDW				IAmb	IAmb	15 05 09.2	
	comp=Z,11nm,1.4s						
S22A	**4UR Ranch, Cre**	**83.42**	**48**	P	**P**	**15 05 08.3**	**-0.3**
S22A				IAmb	IAmb	15 05 09.7	
	comp=Z,7.7nm,1.1s						
S22A	**4UR Ranch, Cre**	**83.42**	**48**	P	**P**	**15 05 09.1**	**+0.4**
	baz=244						
IL31		**83.55**	**12**	P	**P**	**15 05 06.9**	**-1.3**
IL31				IAmb	IAmb	15 05 48.0	
	comp=Z,19nm,1.9s						
ILAR	**Eielson Array**	**83.55**	**12**	P	**P**	**15 05 06.8**	**-1.5**
	comp=Z,0.9nm,0.5s,baz=232,slow=5.7,SNR=28						
POKR	**Poker Plat Res**	**83.75**	**11**	P	**P**	**15 05 08.4**	**-1.0**
	baz=206						
FLWY	**Flagg Ranch**	**83.78**	**41**	P	**P**	**15 05 10.2**	**-0.1**
FLWY				IAmb	IAmb	15 05 11.3	
	comp=Z,13nm,1.1s						
YHB	**Horse Butte**	**83.80**	**40**	P	**P**	**15 05 10.4**	**+0.1**
YHL	**Hebgen Lake**	**83.86**	**40**	P	**P**	**15 05 10.7**	**0.0**
BW06	**Boulder Array**	**83.87**	**42**	P	**P**	**15 05 09.8**	**-1.0**
BW06	**Boulder Array**	**83.87**	**42**	P	**P**	**15 05 10.1**	**-0.7**
	baz=241						
PD31	**Pinedale Array**	**83.87**	**42**	P	**P**	**15 05 09.6**	**-1.1**
PDAR	**Pinedale Array**	**83.87**	**42**	P	**P**	**15 05 09.8**	**-0.9**
	comp=Z,3.7nm,0.8s,baz=212,slow=3.4,SNR=25						
PDAR	**Pinedale Array**	**83.87**	**42**	P	**P**	**15 05 09.4**	**-1.3**
H17A	**Grant Village**	**84.01**	**41**	P	**P**	**15 05 12.0**	**+0.6**
	baz=240						
YHH	**Holmes Hill**	**84.03**	**40**	P	**P**	**15 05 11.4**	**-0.2**
SDCO	**Great Sand Dun**	**84.36**	**48**	P	**P**	**15 05 12.2**	**-1.3**
	baz=245						
YNE	**Yellowstone No**	**84.66**	**40**	P	**P**	**15 05 14.6**	**-0.1**
MSTX	**Muleshoe**	**84.83**	**53**	P	**P**	**15 05 15.3**	**-0.3**
	baz=247						
ISCO	**Idaho Springs**	**85.17**	**46**	P	**P**	**15 05 16.3**	**-1.1**
	baz=244						
RLMT	**Red Lodge**	**85.18**	**40**	P	**P**	**15 05 17.1**	**0.0**
	baz=241						
EGMT	**Eagleton**	**86.28**	**38**	P	**P**	**15 05 22.4**	**0.0**
	baz=241						
ABTX	**Abilene, Hawle**	**86.74**	**55**	P	**P**	**15 05 24.4**	**-0.4**
	baz=248						
RSSD	**Black Hills**	**88.07**	**43**	P	**P**	**15 05 31.0**	**-0.1**
	baz=245						
WMOK	**Wichita Mounta**	**88.18**	**53**	P	**P**	**15 05 31.1**	**-0.6**
	baz=249						
HHC	**Hu-ho-hao-te**	**88.51**	**313**	*e*P	**P**	**15 05 32.5**	**-0.6**
DGMT	**Dagmar**	**89.79**	**39**	P	**P**	**15 05 38.7**	**-0.2**
	baz=245						
YKA	**Yellowknife Ar**	**91.44**	**24**	P	**P**	**15 05 44.1**	**-2.0**
	comp=Z,0.3nm,0.6s,baz=253,slow=4.9,SNR=3.9						
CMAR	**Chiang Mai Arr**	**91.48**	**289**	P	**P**	**15 05 47.8**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=113,slow=2.0,SNR=9.7						
CMAR	**Chiang Mai Arr**	**91.48**	**289**	P	**P**	**15 05 47.4**	**+0.1**
LZH	**Lanzhou**	**92.53**	**307**	*e*P	**P**	**15 05 56.0**	**+4.0**
LZH				pP	pP	15 07 06.5	+8.5
LZH				sP	sP	15 07 39.5	+13
X54A	**Belton**	**101.08**	**57**	P	**Pdif**	**15 06 29.7**	**-0.7**
	baz=258						
N55A	**Marion Center**	**104.85**	**51**	P	**Pdif**	**15 06 47.0**	**-0.1**
	baz=261						
F51A	**Arnstein**	**104.92**	**46**	P	**Pdif**	**15 06 47.2**	**0.0**
	baz=262						
KSH	**Kashi**	**114.78**	**306**	PKP	**PKiKP**	**15 11 21.0**	**+1.4**
KSH				PP	**PP**	**15 12 29.3**	**+6.9**
KSH				sPKP		15 13 02.0	
KSH				PKS	**PKSdf**	**15 14 57.0**	**+0.6**
KSH				SKKS		15 18 53.5	
ARCES	**ARCESS Array B**	**125.21**	**351**	PKP	**PKPdf**	**15 11 37.8**	**-0.9**
	comp=Z,2.9nm,0.8s,baz=343,slow=2.8,SNR=3.9						
BRTR	**Keskin Array B**	**145.84**	**319**	PKPbc	**PKPbc**	**15 12 18.2**	**-0.6**
	comp=Z,1.4nm,0.7s,baz=57,slow=3.1,SNR=6.8						
GERES	**GERESS Array B**	**146.71**	**350**	PKPbc	**PKPdf**	**15 12 19.7**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=19,slow=4.3,SNR=1.9						
TORD	**Torodi Ar. Bea**	**175.53**	**133**	PKPab	**PKPab**	**15 14 27.9**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=247,slow=4.2,SNR=5.7						

IDC ***25*** *15:07:35.8±1.8, 0°.50S×124°.06E, h0^{km}, mb3.3/3,*
mb1 3.6/5, mb1mx3.4/46, mbtmp3.5/5, ML3.7/2, Error
ellipse: s-maj=53.0km s-min=26.9km az=65.0
DJA ***25*** *15:07:39.9±0.9, 1°S±3°×12°4E±°, h10^{km}±8^{km}, M4.2/10,*
mB4.7/1, mb4.5/1, MLv4.0/10, Mw(mB)4.0/1

ISC 25 15:07:42.1±0.9**, 0°.74S**±0°.05×**123°.93E**±0°.05**, h35**^{km}**, n14,**
σ1^{s}17/18**, mb3.3**/3**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.20**	**256**	P	**Pn**	**15 08 02.1**	**-0.2**
LUWI				S	**Sn**	**15 08 17.8**	**+0.4**
KMSI	**Cibinong**	**1.31**	**2**	P	**Pn**	**15 08 04.1**	**+0.2**
KMSI				S	**Sn**	**15 08 21.0**	**+0.8**
APSI	**Ampana**	**2.29**	**266**	P	**Pn**	**15 08 17.9**	**+0.5**
MRSI	**Marisa**	**2.33**	**301**	P	**Pn**	**15 08 17.1**	**-0.9**
MRSI				S	**Sn**	**15 08 47.8**	**+2.4**
SANI	**Sanana**	**2.43**	**122**	P	**Pn**	**15 08 19.2**	**-0.2**
LBMI	**Labuha**	**3.57**	**88**	P	**Pn**	**15 08 36.1**	**+1.0**
NLAI	**Namlea**	**4.02**	**128**	P	**Pn**	**15 08 41.1**	**-0.1**
MPSI	**Mapaga**	**4.17**	**285**	P	**Pn**	**15 08 43.3**	**0.0**
SPSI	**Sidrap Palu**	**5.25**	**232**	P	**Pn**	**15 08 59.3**	**+1.2**
KAPI	**Kappang**	**5.95**	**224**	Pn	**Pn**	**15 09 09.1**	**+1.3**
	5.7nm,0.3s,baz=75,slow=11,SNR=8.7						
KAPI				Sn	**Sn**	**15 10 12.9**	**-1.9**
	2.4nm,0.3s,baz=10,slow=24,SNR=9.3						
FITZ	**Fitzroy Crossi**	**17.33**	**175**	P	**Pn**	**15 11 42.4**	**+1.0**
	0.1nm,0.3s,baz=14,slow=8.3,SNR=1.9						
WRA	**Warramunga Arr**	**21.63**	**153**	P	**P**	**15 12 29.5**	**0.0**
	0.9nm,0.8s,baz=324,slow=12,SNR=7.3						
ASAR	**Alice Springs**	**24.76**	**158**	P	**P**	**15 13 00.8**	**+0.2**

	0.6nm,0.6s,baz=336,slow=8.1,SNR=21						
MKAR	**Makanchi Array**	**59.73**	**328**	P	**P**	**15 17 41.5**	**-1.9**
	0.1nm,0.5s,baz=129,slow=7.7,SNR=1.8						

*NAO **25** 15:10:19.0±0.8, 60°.47N×16°.16E, ML1.8*

*BER **25** 15:10:20.3±4.9, 60°.26N×16°.39E, h0^{km}±17^{km}, ML1.6, ML1.8(NAO)*

HEL 25 15:10:19.3±0.1**, 60°.32N×16°.24E, h0**^{km}**, ML1.9, ML2.0**(UPP)**, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OSTU	**Oestervaala**	**0.45**	**101**	*i* P	Pg	15 10 27.4	-0.6
OSTU				*i* S	Sg	15 10 33.5	-0.3
BACU	**Backbrunna**	**0.64**	**137**	*i* P	Pg	15 10 30.6	-0.9
BACU				*i* S	Sg	15 10 39.0	-0.7
FIBU	**Brunna**	**0.70**	**126**	*i* P	Pg	15 10 31.6	-1.0
FIBU				*i* S	Sg	15 10 40.5	-1.1
IGGU	**Iggoen**	**0.77**	**43**	*i* P	Pg	15 10 33.0	-1.0
IGGU				*i* S	Sg	15 10 43.2	-0.7
UPP	**Uppsala**	**0.83**	**123**	*i* P	Pg	15 10 34.3	-0.9
FLYU	**Flymyra**	**0.84**	**102**	*i* P	Pg	15 10 34.6	-0.8
NRAU	**Nora**	**0.96**	**219**	*e*P	Pg	15 10 36.8	-1.0
ESKU	**Eskilstuna**	**1.09**	**176**	*e*P	Pg	15 10 39.2	-1.0
ROTU	**Roteberg**	**1.12**	**349**	*e*P	Pg	15 10 39.4	-1.4
HFS	**Hagfors**	**1.28**	**263**	Pg	Pg	15 10 42.3	-1.6
	baz=90,slow=16						
HFS				Lg	Lg	15 10 58.7	
	baz=82,slow=37						
HFS	**Hagfors**	**1.28**	**263**	Pg	Pg	15 10 42.3	-1.6
	baz=90,slow=16						
HFS				Sg	Sg	15 10 58.7	-1.8
	baz=82,slow=37						
UDD	**Uddeholm**	**1.33**	**261**	*e*P	Pg	15 10 43.2	-1.7
NRTU	**Norrtaelje**	**1.36**	**117**	*e*P	Pg	15 10 44.3	-1.1
ARNU	**Arnoeviken**	**1.49**	**21**	*e*P	Pn	15 10 46.0	-1.3
HUDU	**Hudiksvall**	**1.49**	**16**	*e*P	Pn	15 10 45.9	-1.4
NYNU	**Nynaeshamn**	**1.59**	**145**	*e*P	Pn	15 10 48.1	-0.6
AAL	**Aland**	**1.88**	**93**	*e*P	Pn	15 10 52.2	-0.4
AAL				*e*S	Sn	15 11 15.8	-1.1
AAL				MSG		15 11 19.9	
	comp=Z,1.0nm,0.1s						
NC602	**NORSAR Array S**	**2.36**	**282**	*e*P	Pn	15 10 59.7	+0.5
NC602				*e*S	Sn	15 11 29.1	+0.2
NC602				IAML		15 11 34.5	
	comp=Z,6.4nm,0.3s						
NRA0	**NORESS Array S**	**2.36**	**282**	Pn	Pn	15 10 59.4	+0.1
	baz=94,slow=16						
NRA0				Sn	Sn	15 11 28.0	-0.9
	baz=88,slow=28						
NRA0				Lg	Lg	15 11 32.1	
	baz=86,slow=28						
NRA0	**NORESS Array S**	**2.36**	**282**	Pn	Pn	15 10 59.4	+0.1
	baz=94,slow=16						
NRA0				Sn	Sn	15 11 28.0	-0.9
	baz=88,slow=28						
NRA0				Sg	Sb	15 11 32.1	-0.2
	baz=86,slow=28						
HEMU	**Hemsoen**	**2.52**	**19**	*e*P	Pn	15 11 02.4	+1.0
HEMU				*e*S	Sn	15 11 34.4	+1.7
HEMU				MSG		15 11 36.5	
	comp=Z,1.0nm,0.3s						
NB201	**NORSAR Array S**	**2.54**	**289**	*e*P	Pn	15 11 02.6	+0.9
NB201				*e*S	Sn	15 11 35.5	+2.0
NB201				IAML		15 11 40.1	
	comp=Z,6.0nm,0.2s						
NC303	**NORSAR Array S**	**2.56**	**293**	*e*P	Pn	15 11 02.8	+0.8
NC303				*e*S	Sn	15 11 34.7	+0.9
NC303				IAML		15 11 39.3	
	comp=Z,9.0nm,0.2s						
NB2	**NORSAR Subarra**	**2.58**	**288**	Pn	Pn	15 11 02.4	+0.1
	baz=108,slow=12						
NB2				Lg	Lg	15 11 37.0	
	baz=103,slow=37						
NB2	**NORSAR Subarra**	**2.58**	**288**	Pn	Pn	15 11 02.4	+0.1
	baz=108,slow=12						
NAO01	**NORSAR Array S**	**2.69**	**284**	*e*P	Pn	15 11 04.6	+0.7
NAO01				*e*S	Sn	15 11 37.3	+0.1
NAO01				IAML		15 11 44.6	
	comp=Z,5.7nm,0.6s						
NBO00	**NORSAR Array S**	**2.78**	**287**	*e*P	Pn	15 11 05.1	0.0
NBO00				*e*S	Sn	15 11 38.9	-0.4
NBO00				IAML		15 11 48.1	
	comp=Z,4.8nm,0.2s						
RAF	**Rauma**	**2.81**	**73**	*e*PB	Pn	15 11 07.2	+1.8
RAF				*e*SB	Sn	15 11 42.0	+2.1
RAF				MSG		15 11 45.0	
	comp=Z,4.0nm,0.2s						
NC204	**NORSAR Array S**	**2.85**	**292**	*e*P	Pn	15 11 06.7	+0.6
NC204				*e*S	Sn	15 11 42.6	+1.5
NC204				IAML		15 11 51.0	
	comp=Z,4.4nm,0.3s						
STRU	**Stroemstad**	**2.87**	**246**	*e*P	Pn	15 11 06.0	-0.2
STRU				*e*S	Sn	15 11 40.8	-0.6
DOMB	**Dombas**	**3.88**	**300**	*e*P	Pn	15 11 21.6	+1.4
DOMB				*e*S	Sn	15 12 06.9	+0.4
DOMB				IAML		15 12 21.7	
	comp=Z,3.4nm,0.4s						
VAF	**Ylistaro**	**4.11**	**45**	*e*S	Sn	15 12 10.7	-1.1
FIA0	**FINESS Array S**	**4.94**	**73**	Pn	Pn	15 11 35.1	+0.5
	baz=258,slow=12						
FIA0				Sn	Sn	15 12 30.9	-1.4
	baz=259,slow=22						
FIA0				Lg	Lg	15 12 51.8	
	baz=248,slow=28						
FIA0	**FINESS Array S**	**4.94**	**73**	Pn	Pn	15 11 35.1	+0.5
	baz=258,slow=12						
FIA0				Sg	Sb	15 12 51.8	+5.5
	baz=248,slow=28						
ARA0	**ARCESS Array S**	**10.04**	**19**	Pn	Pn	15 12 39.4	-5.1
	baz=205,slow=14						
ARA0	**ARCESS Array S**	**10.04**	**19**	Pn	Pn	15 12 39.4	-5.1
	baz=205,slow=14						

*IDC **25** 15:11:37.9±0.9, 2°.04S×78°.95W, h0^{km}, mb3.7/7, mb1 4.0/10, mb1mx3.8/46, mbtmp3.8/10, ML3.7/3, MS2.9/2, Ms1 2.9/2, ms1mx2.5/33, Error ellipse: s-maj=56.0km s-min=14.7km az=70.0*

*IGQ **25** 15:11:38.7±0.3, 2°S±2°×7°9W±°, h5^{km}, M4.2*

*NEIC **25** 15:11:42.8±1.2, 2°.19S±0°.05×79°.0W±0°.2, h32^{km}±7^{km}, mb4.1/10, Error ellipse: s-maj=27.0km s-min=6.7km az=81.0*

ISC 25 15:11:39.1±0.6**, 2°.22S**±0°.03×**79°.26W**±0°.03**, h10**^{km}**, n66,** σ**1^{s}.06**/64**, mb3.8**/10**, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COHC	**Cochancay**	**0.24**	**178**	P	**Pg**	**15 11 43.5**	**-0.6**
COHC	**Cochancay**	**0.24**	**178**	S	**Sg**	**15 11 47.5**	**+0.1**
AMIL	**Milagro (Trans**	**0.34**	**285**	S	**Sb**	**15 11 52.0**	**-0.9**
AMIL	**Milagro (Trans**	**0.34**	**285**	P	**Pg**	**15 11 45.5**	**-0.5**
AGUAY	**Guayaquil**	**0.71**	**284**	P	**Pg**	**15 11 52.6**	**-0.3**
BMAS	**Trigal station**	**1.06**	**48**	P	**Pg**	**15 11 58.4**	**-1.2**
BBIL	**Ulba Tungurahu**	**1.09**	**45**	P	**Pg**	**15 11 59.9**	**-0.3**
BPAT	**Tungurahua Vol**	**1.09**	**49**	P	**Pg**	**15 11 59.1**	**-1.1**
RETU	**Refugio**	**1.12**	**47**	P	**Pg**	**15 11 59.5**	**-1.3**
MORR	**Playas El Morr**	**1.15**	**249**	P	**Pb**	**15 12 00.4**	**-0.8**
MORR	**Playas El Morr**	**1.15**	**249**	S	**Sn**	**15 12 18.4**	**+1.2**
BULB	**Ulba Tungurahu**	**1.16**	**47**	P	**Pg**	**15 12 00.2**	**-1.3**
RUN5	**Runtun**	**1.16**	**46**	P	**Pb**	**15 12 00.8**	**-0.7**
BRUN	**Tungurahua Vol**	**1.17**	**47**	P	**Pb**	**15 12 00.5**	**-1.1**
PISA	**Pisayambo**	**1.45**	**37**	P	**Pb**	**15 12 06.4**	**-0.2**
APUY	**Puyo**	**1.48**	**59**	P	**Pg**	**15 12 06.9**	**-0.6**
PPLP	**Puerto Lpez**	**1.66**	**294**	P	**Pn**	**15 12 06.1**	**-2.2**
BMOR	**Cotopaxi Volca**	**1.69**	**28**	P	**Pb**	**15 12 10.5**	**-0.1**
BNAS	**Cotopaxi Volca**	**1.73**	**27**	P	**Pb**	**15 12 11.0**	**-0.3**
SALI	**Salinas**	**1.73**	**271**	P	**Pn**	**15 12 08.9**	**-0.4**
BREF	**Cotopaxi Volca**	**1.75**	**28**	P	**Pb**	**15 12 11.8**	**+0.1**
TAMB	**Tambo**	**1.76**	**30**	P	**Pb**	**15 12 12.1**	**+0.1**
BTAM	**Cotopaxi Volca**	**1.76**	**29**	P	**Pb**	**15 12 12.1**	**+0.1**
VC1	**Cotopaxi 1**	**1.79**	**29**	P	**Pb**	**15 12 12.5**	**+0.2**
ANTM	**Antisana-La Mi**	**1.97**	**32**	P	**Pb**	**15 12 15.8**	**+0.3**
ANTG	**Antisana-Guama**	**1.98**	**31**	P	**Pb**	**15 12 15.4**	**-0.3**
GONZ	**Gonzanam**	**2.00**	**184**	P	**Pb**	**15 12 15.1**	**-0.9**
ANTS	**Antisana-Sarah**	**2.03**	**32**	P	**Pb**	**15 12 16.1**	**-0.4**
GGPC	**Guagua Pichinc**	**2.14**	**18**	P	**Pb**	**15 12 18.4**	**0.0**
TERV	**Terraza Guagua**	**2.14**	**18**	P	**Pb**	**15 12 18.7**	**+0.4**
PINO	**Pino**	**2.15**	**18**	P	**Pb**	**15 12 18.2**	**-0.4**
MAG1	**Magdalena**	**2.20**	**347**	P	**Pn**	**15 12 16.1**	**+0.3**
YANA	**Yana**	**2.20**	**18**	P	**Pb**	**15 12 19.3**	**-0.1**
PULU	**Pululahua**	**2.36**	**19**	P	**Pb**	**15 12 22.4**	**+0.4**
PAC1	**Pacto, Paraso**	**2.52**	**11**	P	**Pb**	**15 12 23.2**	**-1.4**
CAYA	**Cayambe**	**2.61**	**29**	P	**Pb**	**15 12 27.2**	**+0.8**
CUSW	**Cuicocha Oeste**	**2.65**	**20**	P	**Pg**	**15 12 29.1**	**-1.0**
CUIC	**Cuicocha-Domo**	**2.67**	**20**	P	**Pb**	**15 12 27.2**	**-0.1**
IMBA	**Imbabura, San**	**2.70**	**23**	P	**Pb**	**15 12 28.4**	**+0.6**
URCU	**Urcuqui**	**2.83**	**21**	P	**Pb**	**15 12 29.9**	**-0.1**
YAHU	**Yahuarcocha**	**2.84**	**25**	P	**Pb**	**15 12 31.1**	**+0.9**
CASC	**Dorado de Casc**	**3.03**	**39**	P	**Pb**	**15 12 32.5**	**-0.8**
TUMC	**Tumaco**	**4.05**	**8**	Pn	**Pn**	**15 12 42.8**	**+1.5**
ATAH	**Atahualpa**	**4.96**	**170**	Pn	**Pn**	**15 12 56.5**	**+2.5**
	0.8nm,0.3s,baz=21,slow=11,SNR=3.2						
ATAH				Lg	Lg	15 14 18.9	
	4.6nm,0.3s,baz=76,slow=22,SNR=4.6						
NNA	**Nana**	**9.99**	**166**	Pn	**Pn**	**15 14 05.1**	**+2.2**
	2.6nm,0.3s,baz=1.9,slow=12,SNR=4.0						
NNA				Lg	Lg	15 16 53.2	
	1.4nm,0.3s,baz=320,slow=6.9,SNR=4.8						
SDV	**Santo Domingo**	**13.99**	**38**	LR	LR	15 20 36.5	
	comp=Z,31nm,18.6s,baz=245,slow=39						
SDV	**Santo Domingo**	**13.99**	**38**	Pn	**Pn**	**15 14 56.2**	**-1.6**
URIC	**Uribia, Colomb**	**15.61**	**27**	Pn	**Pn**	**15 15 18.8**	**-0.6**
SAML	**Samuel**	**17.33**	**113**	P	**P**	**15 15 41.9**	**-0.9**
SAML				IAmb	IAmb	15 15 55.7	
	comp=Z,7.4nm,0.8s						
LPAZ	**La Paz**	**17.76**	**143**	P	**P**	**15 15 47.4**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=333,slow=11,SNR=2.0						
PB16	**IPOC Station P**	**18.65**	**150**	P	**P**	**15 15 55.8**	**-2.1**
GO01	**Chusmiza**	**19.94**	**151**	Pn	**Pn**	**15 16 13.5**	**-0.1**
GO01				IAmb	IAmb	15 16 19.1	
	comp=Z,6.3nm,1.1s						
SIV	**San Ignacio**	**22.54**	**128**	P	**P**	**15 16 39.1**	**-0.5**
	comp=Z,1.4nm,0.8s,baz=316,slow=14,SNR=4.0						
MDP	**Montagnes des**	**27.57**	**75**	LR	LR	15 29 05.7	
	comp=Z,45nm,19.2s,baz=194,slow=38						
PLCA	**Paso Flores**	**39.14**	**169**	P	**P**	**15 19 07.5**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=290,slow=15,SNR=4.4						
ANMO	**Albuquerque**	**44.91**	**328**	P	**P**	**15 19 56.4**	**+1.9**
ANMO				IAmb	IAmb	15 19 58.1	
	comp=Z,3.3nm,0.9s						
SDCO	**Great Sand Dun**	**46.61**	**331**	P	**P**	**15 20 09.1**	**+1.1**
SDCO				IAmb	IAmb	15 20 11.0	
	comp=Z,3.5nm,1.1s						
WUAZ	**Wupatki**	**48.07**	**324**	P	**P**	**15 20 21.8**	**+2.5**
PV13	**Radium Mtn., P**	**48.59**	**329**	P	**P**	**15 20 25.1**	**+1.8**
PV13				IAmb	IAmb	15 20 26.1	
	comp=Z,4.2nm,1.0s						
PDAR	**Pinedale Array**	**52.46**	**332**	P	**P**	**15 20 53.6**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=178,slow=7.4,SNR=3.5						
NVAR	**Mina Array Bea**	**54.15**	**322**	P	**P**	**15 21 06.7**	**+1.7**
	comp=Z,0.6nm,0.8s,baz=147,slow=5.7,SNR=4.4						
NVAR	**Mina Array Bea**	**54.15**	**322**	P	**P**	**15 21 06.1**	**+1.1**
YKA	**Yellowknife Ar**	**69.86**	**343**	P	**P**	**15 22 48.5**	**-1.3**
	comp=Z,0.4nm,0.8s,baz=138,slow=5.8,SNR=8.3						
INK	**Inuvik**	**79.56**	**342**	P	**P**	**15 23 46.4**	**+0.4**
	comp=Z,1.8nm,0.9s,baz=93,slow=8.4,SNR=4.7						
BCAR	**Beaver Creek A**	**79.88**	**336**	P	**P**	**15 23 48.5**	**+0.6**
ILAR	**Eielson Array**	**82.63**	**336**	P	**P**	**15 24 02.1**	**-0.3**
	comp=Z,0.7nm,0.9s,baz=134,slow=2.7,SNR=6.7						

*MOS **25** 15:18:14.6±0.9, 29°.21N×141°.14E, h92^{km}, mb4.6/30, Error ellipse: s-maj=8.6km s-min=4.3km az=91.8*

*JMA **25** 15:18:15.2±0.1, 29°.40N×141°.77E, h66^{km}, M5.0*

*BJI **25** 15:18:15.0±0.0, 29°.20N×141°.20E, h100^{km}, mB4.5/29, mb4.3/41*

*IDC **25** 15:18:16.5±1.1, 29°.22N×141°.14E, h94^{km}±9^{km}, mb4.1/40, mb1 4.3/46, mb1mx4.2/65, mbtmp4.5/46, MS2.8/6, Ms1 2.9/6, ms1mx2.6/43, Error ellipse: s-maj=10.9km s-min=8.0km az=94.0*

*NEIC **25** 15:18:16.8±1.3, 29°.21N±0°.06×141°.17E±0°.08, h97^{km}±4^{km}, mb4.9/202, Error ellipse: s-maj=10.6km s-min=8.1km az=72.0*

ISC 25 15:18:15.9±0.2**, 29°.24N**±0°.03×**141°.26E**±0°.05**, h90**^{km}**, n413,** σ**1^{s}.13**/446**, mb4.8**/157**, 12C-12D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.29**	**159**	⇓P	**Pn**	**15 18 52.0**	**0.0**
CBIJ				*e*S	**Sn**	**15 19 19.3**	**-0.3**
JCJ	**Chichijima**	**2.29**	**159**	P	**Pn**	**15 18 51.9**	**-0.2**
	378nm,0.3s,baz=294,slow=20,SNR=69						
JCJ				S	**Sn**	**15 19 19.8**	**+0.2**
	432nm,0.3s,baz=287,slow=22,SNR=5.3						
JCJ				LR	LR	15 19 39.9	
	comp=Z,92nm,20.4s,baz=228,slow=36						
JHH2	**Haha-jima-NKT2**	**2.73**	**162**	P	**Pn**	**15 18 58.2**	**+0.4**
JHH2				*e*S	**Sn**	**15 19 30.4**	**+0.4**
JAOM	**Aogashimamukai**	**3.46**	**339**	P	**Pn**	**15 19 08.6**	**+1.0**
JAOM				*e*S	**Sn**	**15 19 48.8**	**+1.2**
JHCJ	**Hachijojimakas**	**4.01**	**342**	P	**Pn**	**15 19 15.8**	**+0.6**
JHCJ				*e*S	**Sn**	**15 19 58.4**	**-2.7**
JHJ2	**Mitsune**	**4.05**	**343**	P	**Pn**	**15 19 16.2**	**+0.6**
JHJ2				*e*S	**Sn**	**15 20 00.1**	**-1.8**
JHJ2	**Mitsune**	**4.05**	**343**	Pn	**Pn**	**15 19 16.3**	**+0.6**
JHJ	**Hachijo jima 2**	**4.06**	**342**	P	**Pn**	**15 19 16.4**	**+0.5**
	38nm,0.3s,baz=312,slow=18,SNR=41						
JHJ				S	**Sn**	**15 19 59.8**	**-2.4**
	113nm,0.3s,baz=245,slow=24,SNR=8.2						
JMKN	**Mikurajimanish**	**4.85**	**343**	P	**Pn**	**15 19 27.5**	**+1.0**
JMKN				*e*S	**Sn**	**15 20 22.7**	**+1.4**
BSO1	**Boso 1**	**5.40**	**358**	P	**Pn**	**15 19 33.3**	**-0.2**
BSO1				*e*S	**Sn**	**15 20 31.8**	**-2.2**
JTHY	**Toshimahigashi**	**5.52**	**343**	P	**Pn**	**15 19 36.9**	**+1.2**
TATJ	**Tateyama 2**	**5.89**	**349**	P	**Pn**	**15 19 41.5**	**+0.9**
JKUC	**kamogawauchiur**	**5.97**	**352**	P	**Pn**	**15 19 41.5**	**-0.2**
JKUC				*e*S	**Sn**	**15 20 47.3**	**-1.3**
JYO	**Yokosk**	**6.11**	**348**	P	**Pn**	**15 19 44.5**	**+0.8**
JCN	**Nagara**	**6.22**	**352**	P	**Pn**	**15 19 45.4**	**+0.3**
JOD2	**Odawara 2**	**6.28**	**344**	P	**Pn**	**15 19 46.4**	**+0.5**
JOD2				*e*S	**Sn**	**15 20 57.5**	**+1.3**
JIE	**Ise**	**6.43**	**324**	P	**Pn**	**15 19 51.9**	**+3.9**
JTNC	**Tanabenakahech**	**6.63**	**315**	P	**Pn**	**15 19 53.9**	**+3.1**
JRY	**Ryogami san**	**7.04**	**344**	P	**Pn**	**15 19 56.9**	**+0.6**
JRY				*e*S	**Sn**	**15 21 13.0**	**-1.8**
INU	**Inuyama**	**7.07**	**331**		**Pn**	**15 19 57.5**	**+0.8**
JAG	**Ashikaga**	**7.32**	**349**	P	**Pn**	**15 19 59.0**	**-1.1**
JHO	**Hitachi**	**7.37**	**356**	P	**Pn**	**15 19 59.9**	**-0.9**
MJAR	**Matsushiro Arr**	**7.71**	**341**	P	**Pn**	**15 20 06.2**	**+0.7**
	1.0nm,0.3s,baz=156,slow=12,SNR=40						
MJAR	**Matsushiro Arr**	**7.71**	**341**		**Pn**	**15 20 06.3**	**+0.8**
MAJO	**Matsushiro**	**7.72**	**341**	P	**Pn**	**15 20 06.6**	**+1.1**
MAJO	**Matsushiro**	**7.72**	**341**		**Pn**	**15 20 06.6**	**+1.1**
MAT	**Matsushiro**	**7.72**	**341**	P	**Pn**	**15 20 07.1**	**+1.6**
MAT				S	**Sn**	**15 21 29.7**	**-1.6**
MJB9	**Matsu-Tunnel**	**7.72**	**341**		**Pn**	**15 20 06.6**	**+1.0**
JFFD	**Fukushimafurud**	**7.85**	**356**	P	**Pn**	**15 20 06.1**	**-1.2**
JMK	**Ichinoseki**	**9.68**	**360**	P	**Pn**	**15 20 30.8**	**-1.5**
JMK				*e*S	Sn	15 22 10.6	-8.6
JNU	**Nakatsue**	**9.69**	**296**	P	**Pn**	**15 20 32.2**	**-0.3**
	0.1nm,0.3s,baz=189,slow=3.3,SNR=2.5						
JNU				LR	LR	15 24 22.1	
	comp=Z,59nm,18.5s,baz=174,slow=38						
ERM	**Erimo**	**12.84**	**6**	P	**Pn**	**15 21 14.2**	**-0.7**
ERM	**Erimo**	**12.84**	**6**	Pn	**Pn**	**15 21 14.2**	**-0.7**
KSRS	**Korea Array**	**13.82**	**310**	P	**Pn**	**15 21 29.1**	**+1.3**
	0.2nm,0.3s,baz=114,slow=15,SNR=4.4						
KSRS				LR	LR	15 26 18.3	
	comp=Z,32nm,21.8s,baz=115,slow=35						
KSRS				ScP	**ScP**	**15 30 08.4**	**-1.2**
	0.1nm,0.3s,baz=140,slow=1.7,SNR=14						
NMR	**Nemuro--Hokkai**	**14.55**	**13**	⇓*i*P	**Pn**	**15 21 35.5**	**-1.7**
GLVR	**Golovnino**	**14.86**	**12**	P	**Pn**	**15 21 41.6**	**+0.4**
ASAJ	**Asahikawa**	**14.88**	**4**	P	**Pn**	**15 21 40.9**	**-0.6**
	1.1nm,0.3s,baz=210,slow=15,SNR=14						
ASAJ				S	**Sn**	**15 24 19.6**	**-5.8**
	1.0nm,0.3s,baz=49,slow=19,SNR=3.1						
ASAJ				LR	LR	15 28 19.5	
	comp=Z,42nm,21.8s,baz=179,slow=40						
JKA	**Kamikawa-asahi**	**14.88**	**4**		**Pn**	**15 21 40.9**	**-0.6**
JKA					**Sn**	**15 24 19.6**	**-5.8**
GRPR	**Tuman**	**15.16**	**13**	*e*P	**Pn**	**15 21 45.2**	**+0.2**
YUK	**Yuzh-Kuril'sk**	**15.21**	**13**	*e*P	**Pn**	**15 21 46.2**	**+0.5**
YUK				pmax	pmax		
	comp=Z,30nm,0.3s						
YUK				pmax	pmax		
	comp=N,6.0nm,0.2s						
YUK				pmax	pmax		
	comp=E,4.0nm,0.2s						
USA0B	**Ussuriysk Arra**	**16.65**	**336**	⇓*i*P	**Pn**	**15 22 03.8**	**+0.1**
USA0B	**Ussuriysk Arra**	**16.65**	**336**	Pn	**Pn**	**15 22 01.7**	**-2.0**
USRK	**Ussuriysk Ar.**	**16.65**	**336**	P	**Pn**	**15 22 02.2**	**-1.5**
	baz=143,slow=10,SNR=14						
USRK				LR	LR	15 28 53.2	
	comp=E,51nm,18.4s,baz=155,slow=38						
USRK	**Ussuriysk Ar.**	**16.65**	**336**	Pn	**Pn**	**15 22 01.5**	**-2.2**
KUR	**Kuril'sk**	**16.80**	**16**	P	**Pn**	**15 22 02.2**	**-3.2**
KUR				*e*S	Sn	15 25 02.1	-9.5
KUR				pmax	pmax		
	comp=Z,21nm,0.6s						
YSS	**Yuzh-Sakhalins**	**17.72**	**3**	*e*P	**Pn**	**15 22 18.4**	**+1.7**
YSS				*e*S	**Sn**	**15 25 30.8**	**-3.0**
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS	**Yuzh-Sakhalins**	**17.72**	**3**	P	**P**	**15 22 16.9**	**+0.6**
MDJ	**Mudanjiang**	**17.92**	**332**	P	**Pn**	**15 22 19.5**	**+0.3**
MDJ				S	**S**	**15 25 39.5**	**+0.4**
MDJ				PcS	**PcS**	**15 30 29.5**	**+3.0**
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,97nm,3.6s						
MDJ	**Mudanjiang**	**17.92**	**332**	P	**Pn**	**15 22 19.3**	**+0.1**
TATO	**Taipei**	**18.10**	**261**	P	**Pn**	**15 22 21.8**	**+0.3**
TATO				IAmb	IAmb	15 22 26.8	
	comp=Z,94nm,0.8s						
NACB	**Ninganchiao**	**18.27**	**259**	P	**Pn**	**15 22 23.4**	**-0.2**
YHNB	**Yeheng**	**18.29**	**260**	Pn	**Pn**	**15 22 24.4**	**+0.5**
YHNB				IAmb	IAmb	15 22 25.3	
	comp=Z,39nm,0.6s						
YULB	**Yu-li**	**18.81**	**257**	Pn	**Pn**	**15 22 29.9**	**0.0**
YULB				IAmb	IAmb	15 22 34.6	
	comp=Z,118nm,1.6s						
SSLB	**Suanglung**	**18.95**	**258**		**Pn**	**15 22 32.3**	**+0.6**
SSLB				IAmb	IAmb	15 22 37.1	
	comp=Z,47nm,0.7s						
TWG	**Pinlang**	**19.22**	**255**		**Pn**	**15 22 35.0**	**+0.2**
TPUB	**Ta-pu**	**19.41**	**257**	Pn	**Pn**	**15 22 37.3**	**+0.2**
TPUB				IAmb	IAmb	15 22 42.9	
	comp=Z,28nm,0.7s						
NJ2	**Nanjing**	**19.47**	**284**	*e*P	**Pn**	**15 22 36.3**	**-1.4**
NJ2				pP	**pP**	**15 22 51.3**	**-0.9**
NJ2				sP	**sP**	**15 23 05.3**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,18nm,0.6s						
UGL	**Uglegorsk**	**19.82**	**2**	*e*P	**P**	**15 22 40.8**	**+1.6**
UGL				S	S	15 26 04.4	-13
UGL				pmax	pmax		
	comp=Z,100nm,2.0s						
UGL				pmax	pmax		
	comp=Z,46nm,1.1s						
KLR	**Kul'dur**	**21.24**	**343**	P	**P**	**15 22 53.9**	**-0.7**
	comp=Z,3.6nm,0.5s,baz=147,slow=7.1,SNR=12						
KLR	**Kul'dur**	**21.24**	**343**	⇑*i*P	**P**	**15 22 54.3**	**-0.2**
KLR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GRNR	**Gornyy**	**21.81**	**352**	⇑*i*P	**P**	**15 22 59.7**	**-0.9**
GRNR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SKR	**Severo-Kuril’s**	**24.16**	**23**	⇑*i*P	**P**	**15 23 23.7**	**+0.2**
H11N2	**WAKE ISLAND Hy**	**25.14**	**106**	T	T	15 49 22.9	
	baz=296,slow=75,SNR=60						
H11N1	**WAKE ISLAND Hy**	**25.14**	**106**	T	T	15 49 26.5	
	baz=296,slow=75,SNR=38						
H11N3	**WAKE ISLAND Hy**	**25.15**	**106**	T	T	15 49 29.2	
	baz=296,slow=75,SNR=49						
H11S3	**WAKE ISLAND Hy**	**25.55**	**109**	T	T	15 49 51.5	
	baz=296,slow=74,SNR=5.0						
H11S1	**WAKE ISLAND Hy**	**25.55**	**109**	T	T	15 50 02.5	
	baz=150,slow=74,SNR=1.2						
ZEA	**Zeya**	**26.53**	**341**	*e*P	**P**	**15 23 45.7**	**+0.7**
ZEA				pmax	pmax		
	comp=N,26nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,26nm,0.8s						
PEA0B	**Petropavlovsk-**	**26.73**	**22**	⇓*i*P	**P**	**15 23 46.8**	**0.0**
PETK	**Petropavlovsk-**	**26.73**	**22**	P	**P**	**15 23 45.8**	**-1.0**
	comp=Z,1.0nm,0.4s,baz=195,slow=16,SNR=1.6						
PETK	**Petropavlovsk-**	**26.73**	**22**	P	**P**	**15 23 47.8**	**+1.0**
PETK	**Petropavlovsk-**	**26.73**	**22**	P	**P**	**15 23 47.8**	**+1.0**
HHC	**Hu-ho-hao-te**	**26.80**	**304**	*e*P	**P**	**15 23 48.0**	**+0.3**
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,42nm,5.5s						
PET	**Petropavlovsk**	**26.99**	**23**	⇓*i*P	**P**	**15 23 49.9**	**+0.8**
PET				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PET	**Petropavlovsk**	**26.99**	**23**	P	**P**	**15 23 49.7**	**+0.6**
PET				IAmb	IAmb	15 24 37.9	
	comp=Z,103nm,2.0s						
ENH	**Enshi**	**27.55**	**280**	P	**P**	**15 23 52.3**	**-2.2**
XAN	**Xi'an**	**27.87**	**288**	P	**P**	**15 23 54.3**	**-3.0**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
XAN				pmax	pmax		
	comp=Z,110nm,4.6s						
GYA	**Guiyang**	**30.65**	**273**	P	**P**	**15 24 23.0**	**+1.0**
GYA				pP	pwP	15 24 45.8	+0.8
GYA				sP	sP	15 24 58.0	+6.0
GYA				PP	**PnPn**	**15 25 26.5**	**+1.3**
GYA				S	**S**	**15 29 16.5**	**-1.6**
GYA				sS	sS	15 29 55.0	+3.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,4.9s						
MA2	**Magadan**	**31.01**	**9**	P	**P**	**15 24 25.0**	**+0.3**
	comp=Z,7.3nm,0.6s,baz=184,slow=13,SNR=3.2						
MA2	**Magadan**	**31.01**	**9**	⇑*i*P	**P**	**15 24 25.9**	**+1.2**
MA2				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MA2	**Magadan**	**31.01**	**9**	P	**P**	**15 24 24.8**	**+0.1**
TNTI	**Ternate**	**31.26**	**208**	P	**P**	**15 24 27.4**	**+0.1**
TNTI				IAmb	IAmb	15 25 09.8	
	comp=Z,28nm,1.0s						
SIJI	**Sorong**	**31.43**	**199**	P	**P**	**15 24 28.5**	**-0.3**
	comp=Z,4.4nm,0.5s,baz=4.3,slow=13,SNR=6.3						
KWAJ	**Kwajalein Atol**	**32.02**	**124**	P	**P**	**15 24 33.9**	**-0.1**
KWAJ	**Kwajalein Atol**	**32.02**	**124**	P	**P**	**15 24 33.9**	**-0.1**
LZH	**Lanzhou**	**32.08**	**292**	*e*P	**P**	**15 24 35.8**	**+1.2**
LZH				pP	pwP	15 24 57.0	-0.8
LZH				sP	sP	15 25 08.5	+4.0
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH				pmax	pmax		
	comp=Z,100nm,4.9s						
LZH				LR	LR		
	comp=Z,320nm,13.8s						
LZH				LR	LR		
	comp=Z,320nm,14.0s						
LZH				LR	LR		
	comp=Z,470nm,16.7s						
ULN	**Ulaanbaatar**	**32.22**	**315**	⇑*i*P	**P**	**15 24 35.4**	**-0.2**
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ULN	**Ulaanbaatar**	**32.22**	**315**	P	**P**	**15 24 35.0**	**-0.7**
SONM	**Songino Array**	**32.62**	**314**	P	**P**	**15 24 38.4**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=112,slow=8.9,SNR=5.6						
SONM				ScP	**ScP**	**15 30 58.7**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=111,slow=3.7,SNR=4.8						
SONM	**Songino Array**	**32.62**	**314**	P	**P**	**15 24 39.8**	**+0.7**
FAKI	**Fak Fak**	**33.13**	**197**	P	**P**	**15 24 45.2**	**+1.5**
FAKI				IAmb	IAmb	15 24 52.8	
	comp=Z,23nm,1.3s						
YAK	**Yakutsk**	**33.67**	**350**	P	**P**	**15 24 48.0**	**+0.1**
	comp=Z,10nm,0.4s,baz=175,slow=2.7,SNR=16						
YAK	**Yakutsk**	**33.67**	**350**	*i* P	**P**	**15 24 47.9**	**+0.1**
YAK				pmax	pmax		
	comp=Z,17nm,0.8s						
YAK	**Yakutsk**	**33.67**	**350**	P	**P**	**15 24 47.7**	**-0.1**
YAK				IAmb	IAmb	15 24 48.7	
	comp=Z,27nm,0.9s						
SEY	**Seymchan**	**34.47**	**9**	P	**P**	**15 24 55.8**	**+1.0**
	comp=Z,5.6nm,0.6s,baz=187,slow=8.0,SNR=60						
SLVN	**Son La**	**34.56**	**266**	P	**P**	**15 24 55.8**	**-0.5**
LUWI	**Luwuk**	**34.92**	**214**	P	**P**	**15 24 59.9**	**+0.7**
GTA	**Gaotai**	**35.42**	**298**	*e*P	**P**	**15 25 04.8**	**+1.3**
GTA				pP	pwP	15 25 27.5	-0.1
GTA				sP	sP	15 25 38.0	+4.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TLY	**Talaya**	**35.77**	**319**	⇓*i*P	**P**	**15 25 06.7**	**+0.5**
TLY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TLY	**Talaya**	**35.77**	**319**	P	**P**	**15 25 06.9**	**+0.7**
MIDW	**Midway**	**36.16**	**81**	P	**P**	**15 25 09.5**	**-0.3**
SBUM	**Sibu**	**38.37**	**231**	P	**P**	**15 25 28.8**	**+0.3**

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SBUM  Sibu             38.37 231   P      P      15 25 29.0 +0.5
ADK   Adak             38.41  42   P      P      15 25 29.1 +0.6
ADK                                pmax   pmax
      comp=Z,61nm,1.3s
ADK   Adak             38.41  42   P      P      15 25 29.1 +0.6
PMG   Port Moresby     38.84 171⇓iP      P      15 25 32.2 -0.2
PMG                                pmax   pmax
      comp=Z,25nm,1.1s
PBKT  Sadao Pong       39.01 260   P      P      15 25 33.5 -0.3
PBKT                               IAmb   IAmb   15 25 34.8
      comp=Z,8.1nm,0.6s
CHTO  Chiang Mai       39.83 265   P      P      15 25 39.6 -1.1
CHTO                               pmax   pmax
      comp=Z,8.0nm,0.9s
CHTO  Chiang Mai       39.83 265   P      P      15 25 39.6 -1.1
KAPI  Kappang          39.84 215   P      P      15 25 41.3 +0.6
      comp=Z,1.9nm,0.4s,baz=57,slow=7.2,SNR=3.7
ATKA  Atka Island      39.97  42   P      P      15 25 42.2 +0.8
CMAR  Chiang Mai Arr   39.97 264   P      P      15 25 42.0 +0.1
      comp=Z,1.4nm,0.6s,baz=70,slow=5.3,SNR=14
CMAR                               ScP    ScP    15 31 26.4 -0.1
      comp=Z,0.3nm,0.3s,baz=32,slow=4.2,SNR=4.6
CMAR                               LR     LR     15 43 49.3
      comp=Z,29nm,19.2s,baz=75,slow=38
CMAR  Chiang Mai Arr   39.97 264   P      P      15 25 40.4 -1.5
BILL  Bilibino         41.56  14⇓iP      P      15 25 55.0 +0.7
BILL                               pmax   pmax
      comp=Z,9.0nm,0.9s
BILL  Bilibino         41.56  14   P      P      15 25 54.7 +0.4
BILL                               IAmb   IAmb   15 25 56.1
      comp=Z,9.0nm,0.7s
MTN   Manton Dam       42.97 195   P      P      15 26 05.1 -1.2
MTN                                IAmb   IAmb   15 26 14.0
      comp=Z,14nm,0.8s
COEN  Coen             42.99 177   P      P      15 26 06.4 -0.1
COEN                               IAmb   IAmb   15 26 15.2
      comp=Z,10nm,0.9s
TIXI  Tiksi            43.00 354   P      P      15 26 06.1 +0.2
      comp=Z,8.0nm,0.5s,baz=150,slow=7.2,SNR=59
TIXI  Tiksi            43.00 354⇑iP      P      15 26 06.3 +0.4
TIXI                               pmax   pmax
      comp=Z,5.0nm,1.0s
TIXI  Tiksi            43.00 354   P      P      15 26 05.8 -0.1
TIXI                               IAmb   IAmb   15 26 06.7
      comp=Z,6.7nm,0.6s
NIKH  Nikolski High    43.31  42   P      P      15 26 08.9 +0.2
SPIA  Saint Paul Isl   43.70  36   P      P      15 26 12.4 +0.7
WMQ   Urumqi           44.68 304  eP      P      15 26 21.3 +1.4
WMQ                                pP     pwP    15 26 44.3 -0.6
WMQ                                pmax   pmax
      comp=Z,49nm,3.9s
WMQ                                LR     LR
      comp=Z,150nm,5.7s
WMQ                                LR     LR
      comp=Z,110nm,5.7s
WMQ                                LR     LR
      comp=Z,140nm,6.3s
UNV   Unalaska Valle   44.88  42   P      P      15 26 20.9 -0.3
KULM  Kulim            45.15 246   P      P      15 26 23.9 +0.1
KULM                               IAmb   IAmb   15 28 02.2
      comp=Z,36nm,1.6s
KULM  Kulim            45.15 246   P      P      15 26 24.0 +0.1
DGZ   Jazzator, Alta   45.20 312⇓iP      P      15 26 23.8 -0.3
DGZ                                pmax   pmax
      comp=Z,3.0nm,0.9s
IPM   Ipoh             45.34 245   P      P      15 26 25.0 -0.4
AKUT  Akutan           45.36  41   P      P      15 26 25.8 +0.9
GAMB  Gambell          45.57  27   P      P      15 26 27.1 +0.6
KNRA  Kununurra        46.26 197   P      P      15 26 32.2 -0.2
KNRA                               IAmb   IAmb   15 27 07.8
      comp=Z,24nm,1.6s
TAPN  Taplejung        46.84 281  eP      P      15 26 37.4  0.0
      comp=Z,4.9nm,0.4s
ODAN  Odare            47.25 281  eP      P      15 26 42.5 +2.0
      comp=Z,8.6nm,0.3s
ZALV  Zalesovo Beam    47.34 318   P      P      15 26 40.2 -0.3
      comp=Z,1.4nm,0.4s,baz=96,slow=7.2,SNR=8.7
ZALV                               PcP    PcP    15 28 09.8 -0.1
      comp=Z,3.4nm,0.4s,baz=117,slow=3.5,SNR=12
ZALV                               ScP    ScP    15 31 53.6 -2.2
      comp=Z,1.3nm,0.7s,baz=114,slow=3.7,SNR=4.9
ZALV  Zalesovo Beam    47.34 318   P      P      15 26 39.6 -1.0
ZALV                                      PcP    15 28 10.0 +0.1
PSI   Prapat           48.02 245   P      P      15 26 45.6 -0.8
      comp=Z,3.6nm,0.7s,baz=64,slow=3.2,SNR=6.2
JIRN  Jiri             48.06 282  eP      P      15 26 46.2 -0.7
      comp=Z,18nm,0.5s
RPSI  Rantau Prapat    48.08 245   P      P      15 26 45.6 -1.2
LHMI  Lhok Sumawe      48.18 249   P      P      15 26 47.4 -0.1
GUN   Gumba            48.26 283  eP      P      15 26 47.8 -0.6
      comp=Z,7.8nm,0.4s
ANM   Nome             48.43  28   P      P      15 26 50.3 +1.5
ANM                                pmax   pmax
      comp=Z,11nm,1.0s
ANM   Nome             48.43  28   P      P      15 26 50.3 +1.5
ANM                                IAmb   IAmb   15 26 51.6
      comp=Z,11nm,1.0s
MK31  Makanchi Array   48.49 308   P      P      15 26 48.3 -1.3
MK31                               pmax   pmax
      comp=Z,2.0nm,1.0s
MK31  Makanchi Array   48.49 308   P      P      15 26 48.3 -1.3
MKAR  Makanchi Array   48.49 308   P      P      15 26 48.8 -0.8
      comp=Z,1.0nm,0.6s,baz=91,slow=8.9,SNR=17
MKAR                               PcP    PcP    15 28 14.6 +0.3
      comp=Z,0.9nm,0.6s,baz=105,slow=5.1,SNR=4.7
MKAR                               ScP    ScP    15 31 58.8 -2.2
      comp=Z,1.3nm,0.6s,baz=75,slow=4.1,SNR=11
MKAR  Makanchi Array   48.49 308   P      P      15 26 48.1 -1.5
SDPT  Sand Point       48.59  40   P      P      15 26 49.9 -0.2
MAKZ  Makanchi         48.71 308   P      P      15 26 50.5 -0.7
MAKZ                               pmax   pmax
      comp=Z,2.0nm,0.7s
MAKZ  Makanchi         48.71 308   P      P      15 26 50.5 -0.7
CNBA  Chernabura Isl   49.03  41   P      P      15 26 54.0 +0.5
WB0   Warramunga Arr   49.17 189   P      P      15 26 54.0 -1.0
WRAB  Tennant Creek    49.34 189⇑iP      P      15 26 54.1 -2.1
WRAB                               pmax   pmax
      comp=Z,3.0nm,0.8s
WRAB  Tennant Creek    49.34 189   P      P      15 26 55.7 -0.5
WR0   Warramunga Arr   49.34 188   P      P      15 26 55.2 -1.1
WB2   Warramunga Arr   49.35 189   P      P      15 26 55.2 -1.1
WB2                                IAmb   IAmb   15 26 59.5
      comp=Z,9.3nm,0.4s
WRA   Warramunga Arr   49.35 189   P      P      15 26 55.3 -1.0
      comp=Z,11nm,0.4s,baz=3.5,slow=7.5,SNR=38
WRA                                ScP    ScP    15 32 02.4 -2.4
      comp=Z,2.8nm,0.8s,baz=4.9,slow=4.5,SNR=11
WRA                                S      S      15 33 51.8 -4.5
      comp=Z,0.6nm,0.7s,baz=7.8,slow=15,SNR=5.5
WRA   Warramunga Arr   49.35 189  i P     P      15 26 55.2 -1.1
WRA                                pmax   pmax
      comp=Z,11nm,0.4s
WRA   Warramunga Arr   49.35 189   P      P      15 26 55.3 -1.0
WRA                                       ScP    15 32 02.3 -2.4
FITZ  Fitzroy Crossi   49.42 200   P      P      15 26 56.7 -0.1
      comp=Z,1.9nm,0.5s,baz=53,slow=7.2,SNR=5.0
FITZ  Fitzroy Crossi   49.42 200   P      P      15 26 56.5 -0.4
FITZ                               IAmb   IAmb   15 27 28.0
      comp=Z,22nm,1.9s
GSI   Gunungsitoli     49.99 244   P      P      15 27 00.8 -0.6
NRIK  Noril'sk         50.36 338   P      P      15 27 02.6 -0.7
      comp=Z,4.0nm,0.7s,baz=97,slow=9.1,SNR=10
NRIK  Noril'sk         50.36 338  i P     P      15 27 02.9 -0.4
RDOG  Red Dog Mine     50.59  24   P      P      15 27 06.4 +1.3
RDOG                               IAmb   IAmb   15 27 07.6
      comp=Z,7.7nm,1.0s
KURK  Kurchatov        50.91 313⇑iP      P      15 27 07.3 -0.5
KURK                               pmax   pmax
      comp=Z,5.0nm,1.1s
KURK  Kurchatov        50.91 313   P      P      15 27 06.7 -1.1
CHIR  Chirikof Islan   51.38  40   P      P      15 27 12.6 +1.4
SVW2  Sparrevohn       51.94  33   P      P      15 27 17.1 +1.7
SVW2                               IAmb   IAmb   15 27 17.9
      comp=Z,8.8nm,1.1s
AS31  Alice Springs    53.08 188   P      P      15 27 23.5 -0.7
ASAR  Alice Springs    53.08 188   P      P      15 27 23.4 -0.8
      comp=Z,2.0nm,0.5s,baz=358,slow=4.0,SNR=19
ASAR                               ScP    ScP    15 32 18.8 -2.1
      comp=Z,1.1nm,0.7s,baz=6.5,slow=5.0,SNR=10
ASAR                               S      S      15 34 46.0 -1.7
      comp=Z,0.4nm,0.7s,baz=16,slow=17,SNR=4.2
ASAR  Alice Springs    53.08 188   P      P      15 27 22.8 -1.4
KDAK  Kodiak Island    53.16  38   P      P      15 27 25.0 +0.7
      comp=Z,6.2nm,0.3s,baz=253,slow=1.3,SNR=39
RSO   Redoubt South    53.25  34   P      P      15 27 25.6 +0.4
IMAR  Indian Mountai   53.51  27   P      P      15 27 27.5 +0.7
PPLA  Purkeypile       53.75  31   P      P      15 27 30.5 +1.7
PPLA                               IAmb   IAmb   15 27 33.0
      comp=Z,21nm,1.4s
KSH   Kashi            53.79 299   P      P      15 27 32.5 +3.0
KSH                                pP     pwP    15 27 56.0 +1.5
KSH                                PP     PP     15 29 37.0 +5.8
KSH                                PcS    PcS    15 32 33.5 -0.2
KSH                                S      S      15 34 58.5 +1.1
KSH                                SS     SS     15 38 41.0 +1.8
KSH                                pmax   pmax
      comp=Z,19nm,0.6s
KSH                                LR     LR
      comp=Z,160nm,9.8s
KSH                                LR     LR
      comp=Z,120nm,10.0s
KSH                                LR     LR
      comp=Z,120nm,13.7s
CNPM  China Poot       53.95  36   P      P      15 27 30.3 +0.2
BRLK  Bradley Lake     54.13  35   P      P      15 27 31.4 -0.1
KTH   Kantishna Hill   54.39  31   P      P      15 27 35.1 +1.7
KTH                                IAmb   IAmb   15 28 55.3
      comp=Z,30nm,1.9s
BPAW  Bear Paw Mtn.    54.41  30   P      P      15 27 34.9 +1.4
BPAW                               IAmb   IAmb   15 28 10.6
      comp=Z,7.9nm,1.2s
PSAD1 Pilbara Seismi   54.47 205   P      P      15 27 34.0 -0.3
PSAD1                              IAmb   IAmb   15 28 02.9
      comp=Z,9.9nm,0.7s
PSAC2 Pilbara Seismi   54.55 205   P      P      15 27 34.8 -0.1
PSAC2                              IAmb   IAmb   15 28 30.3
      comp=Z,16nm,1.2s
PSAC1 Pilbara Seismi   54.55 205   P      P      15 27 34.9  0.0
PSAC1                              IAmb   IAmb   15 28 03.4
      comp=Z,8.6nm,0.6s
PSAB2 Pilbara Seismi   54.55 205   P      P      15 27 34.8 -0.1
PSAB2                              IAmb   IAmb   15 28 03.8
      comp=Z,9.6nm,0.8s
PSAD2 Pilbara Seismi   54.57 204   P      P      15 27 35.2 +0.1
PSAD2                              IAmb   IAmb   15 28 03.9
      comp=Z,7.0nm,0.6s
PSA00 Pilbara Seismi   54.57 205   P      P      15 27 34.9 -0.1
PSA00                              IAmb   IAmb   15 28 04.9
      comp=Z,8.7nm,0.8s
PSAA3 Pilbara Seismi   54.58 205   P      P      15 27 35.0 -0.1
PSAA3                              IAmb   IAmb   15 28 03.6
      comp=Z,8.8nm,0.7s
PSAB1 Pilbara Seismi   54.58 205   P      P      15 27 35.0 -0.1
PSAB1                              IAmb   IAmb   15 28 05.3
      comp=Z,8.5nm,0.8s
PSAA1 Pilbara Seismi   54.58 205   P      P      15 27 34.8 -0.3
PSAA1                              IAmb   IAmb   15 27 42.5
      comp=Z,8.1nm,0.7s
PSAB3 Pilbara Seismi   54.59 205   P      P      15 27 34.9 -0.3
PSAB3                              IAmb   IAmb   15 28 05.0
      comp=Z,13nm,1.2s
MLY   Manley           54.62  29   P      P      15 27 35.7 +0.7
MLY                                IAmb   IAmb   15 27 37.0
      comp=Z,4.7nm,0.6s
PSAC3 Pilbara Seismi   54.62 205   P      P      15 27 34.8 -0.6
PSAC3                              IAmb   IAmb   15 28 03.9
      comp=Z,8.1nm,0.6s
TRF   Thorofare Moun   54.66  31   P      P      15 27 36.5 +1.0
TRF                                IAmb   IAmb   15 28 14.5
      comp=Z,29nm,1.8s
PSAD3 Pilbara Seismi   54.66 205   P      P      15 27 35.2 -0.5
PSAD3                              IAmb   IAmb   15 28 05.1
      comp=Z,29nm,1.5s
RC01  Rabbit Creek A   54.77  34   P      P      15 27 36.4 +0.4
RC01                               IAmb   IAmb   15 27 40.2
      comp=Z,22nm,1.5s
SEW   Seward           54.87  35   P      P      15 27 36.5 -0.2
PMR   Palmer           55.08  33   P      P      15 27 38.6 +0.4
PMR                                pmax   pmax
      comp=Z,8.0nm,0.8s
PMR   Palmer           55.08  33   P      P      15 27 38.6 +0.4
PMR                                IAmb   IAmb   15 27 39.5
      comp=Z,8.2nm,0.8s
BWN   Browne           55.08  30   P      P      15 27 39.5 +1.2
BWN                                IAmb   IAmb   15 27 42.5
      comp=Z,24nm,1.1s
EIDS  Eidsvold         55.12 169   P      P      15 27 39.0 +0.1
GHO   Glory Hole Cre   55.19  33   P      P      15 27 39.2  0.0
NEA   Nenana           55.28  29   P      P      15 27 40.7 +1.0
MCK   McKinley         55.29  31   P      P      15 27 40.1 +0.3
MCK                                pmax   pmax
      comp=Z,29nm,1.8s
MCK   McKinley         55.29  31   P      P      15 27 40.1 +0.3
MCK                                IAmb   IAmb   15 29 38.7
      comp=Z,29nm,1.8s
RND   Reindeer         55.30  31   P      P      15 27 40.3 +0.4
RND                                pmax   pmax
      comp=Z,9.0nm,0.7s
RND   Reindeer         55.30  31   P      P      15 27 40.3 +0.4
RND                                IAmb   IAmb   15 27 41.2
      comp=Z,8.8nm,0.7s
KNK   Knik Glacier     55.40  33   P      P      15 27 41.2 +0.6
KNK                                IAmb   IAmb   15 27 42.5
      comp=Z,12nm,1.0s
SML   Sawmill          55.47  33   P      P      15 27 41.8 +0.6
SML                                IAmb   IAmb   15 28 16.3
      comp=Z,20nm,1.2s
TOLK  Toolik Lake Re   55.52  25   P      P      15 27 42.5 +1.1
TOLK                               IAmb   IAmb   15 27 44.3
      comp=Z,7.5nm,0.8s
CCB   Clear Creek Bu   55.84  29   P      P      15 27 44.6 +1.0
CCB                                IAmb   IAmb   15 29 02.2
      comp=Z,19nm,2.0s
SCM   Sheep Creek Mo   55.95  33   P      P      15 27 45.6 +1.0
SCM                                pmax   pmax
      comp=Z,17nm,0.7s
SCM   Sheep Creek Mo   55.95  33   P      P      15 27 45.6 +1.0
DHY   Denali Highway   55.95  31   P      P      15 27 45.6 +0.9
DHY                                IAmb   IAmb   15 29 14.5
      comp=Z,30nm,2.0s
BRVK  Borovoye         55.98 316⇓iP      P      15 27 44.9  0.0
BRVK                               pmax   pmax
      comp=Z,5.0nm,1.0s
BRVK  Borovoye         55.98 316   P      P      15 27 44.4 -0.5
BRVK                               IAmb   IAmb   15 28 43.0
      comp=Z,4.3nm,0.6s
HDA   Harding Lake     56.20  30   P      P      15 27 46.5 +0.3
IL31                   56.24  29   P      P      15 27 46.4  0.0
IL31                               IAmb   IAmb   15 27 47.2
      comp=Z,16nm,1.7s
ILAR  Eielson Array    56.24  29   P      P      15 27 46.6 +0.1
      comp=Z,1.6nm,0.5s,baz=263,slow=5.2,SNR=43
ILAR  Eielson Array    56.24  29   P      P      15 27 46.5  0.0
HIN   Hinchinbrook I   56.34  35   P      P      15 27 48.5 +1.1
DZM   Mont Dzumac      56.50 152   P      P      15 27 50.1 +1.2
      comp=Z,6.6nm,0.6s,baz=150,slow=21,SNR=9.0
DZM   Mont Dzumac      56.50 152   P      P      15 27 50.1 +1.2
EYAK  Cordova Ski Ar   56.71  34   P      P      15 27 50.5 +0.6
RIDG  Independent Ri   57.10  31   P      P      15 27 53.4 +0.6
RIDG                               IAmb   IAmb   15 28 31.8
      comp=Z,31nm,1.9s
KK31  Karatay Array    57.18 305   P      P      15 27 52.5 -1.1
KK31                               pmax   pmax
      comp=Z,2.0nm,0.7s
KK31  Karatay Array    57.18 305   P      P      15 27 52.5 -1.1
KKAR  Karatay Array    57.18 305   P      P      15 27 52.3 -1.3
KKAR                               pmax   pmax
      comp=Z,2.0nm,0.7s
KKAR  Karatay Array    57.18 305   P      P      15 27 52.2 -1.3
KKAR  Karatay Array    57.18 305   P      P      15 27 52.3 -1.3
KKAR                               IAmb   IAmb   15 28 38.8
      comp=Z,2.2nm,0.7s
RAGM  Ragged Mountai   57.25  35   P      P      15 27 54.5 +0.7
BMAR  Burnt Mountain   57.29  26   P      P      15 27 55.8 +1.8
SCRK  Sand Creek       57.48  30   P      P      15 27 56.2 +0.8
SCRK                               IAmb   IAmb   15 27 57.4
      comp=Z,8.2nm,0.6s
GLB   Gilahina Butte   57.63  33   P      P      15 27 57.6 +1.1
GLB                                IAmb   IAmb   15 29 50.2
      comp=Z,27nm,1.8s
VRDI  Verde Repeater   57.81  34   P      P      15 27 58.9 +1.0
VRDI                               IAmb   IAmb   15 28 17.3
      comp=Z,23nm,1.6s
CRQM  Cirque           57.99  34   P      P      15 28 00.4 +1.3
MCARA McCarthy VSAT    58.01  33   P      P      15 28 00.3 +1.3
MCARA                              IAmb   IAmb   15 28 03.3
      comp=Z,25nm,1.5s
TGL   Tana Glacier     58.14  34   P      P      15 28 00.8 +0.7
GAR   Garm             58.20 300   P      P      15 27 60.0 -0.9
GAR                                IAmb   IAmb   15 29 14.5
      comp=Z,11nm,0.8s
BALM  Baldy            58.36  34   P      P      15 28 02.3 +0.7
BALM                               pmax   pmax
      comp=Z,6.0nm,0.7s
BALM  Baldy            58.36  34   P      P      15 28 02.3 +0.7
BALM                               IAmb   IAmb   15 28 03.4
      comp=Z,6.4nm,0.7s
BCAR  Beaver Creek A   58.50  31   P      P      15 28 03.5 +1.0
BARN  Barnard Glacie   58.69  34   P      P      15 28 05.0 +1.0
BARN                               IAmb   IAmb   15 28 05.8
      comp=Z,6.6nm,0.8s
EGAK  Eagle            58.69  29   P      P      15 28 04.2 +0.4
CTGM  Chitina Glacie   58.86  34   P      P      15 28 05.8 +0.7
CHGR  Chuyangaron      59.16 300   P      P      15 28 06.4 -1.1
DAWY  Dawson           59.50  30   P      P      15 28 10.9 +1.5
DAWY                               IAmb   IAmb   15 28 12.5
      comp=Z,5.5nm,0.9s
EPYK  Eagle Plains     60.42  27   P      P      15 28 17.2 +1.6
HYT   Haines Junctio   60.73  34   P      P      15 28 19.3 +1.3
HYT                                IAmb   IAmb   15 28 20.9
      comp=Z,16nm,1.3s
STKA  Stephens Creek   60.79 180   P      P      15 28 17.3 -1.1
      comp=Z,1.4nm,0.3s,baz=324,slow=13,SNR=3.5
FORT  Forrest          61.00 193   P      P      15 28 18.9 -0.9
FORT                               IAmb   IAmb   15 29 34.0
      comp=Z,18nm,0.9s
INK   Inuvik           61.43  25   P      P      15 28 23.2 +0.8
      comp=Z,9.7nm,0.6s,baz=288,slow=5.8,SNR=39
INK   Inuvik           61.43  25   P      P      15 28 22.9 +0.6
INK                                IAmb   IAmb   15 28 23.6
      comp=Z,9.1nm,0.6s
BBOO  Buckleboo        61.91 185   P      P      15 28 25.0 -1.0
WHY   Whitehorse       62.03  34   P      P      15 28 28.0 +1.3
WHY                                IAmb   IAmb   15 29 55.3
      comp=Z,27nm,1.8s
ARU   Arti             62.23 321 d iP     P      15 28 28.0  0.0
ARU                                *PP    pwP    15 28 55.0 +0.5
ARU                                              15 29 03.0
ARU                                              15 30 42.5
ARU                                S      S      15 36 47.8 +1.2
ARU                                SS     SS     15 40 46.9 -3.8
ARU                                pmax   pmax
      comp=Z,10.0nm,0.6s
ARU   Arti             62.23 321   P      P      15 28 27.6 -0.4
ARU                                IAmb   IAmb   15 28 28.7
      comp=Z,12nm,0.6s
JIS   Juneau Island    62.74  36   P      P      15 28 32.4 +1.1
ABKAR Akbulak array    63.02 313   P      P      15 28 32.4 -1.0
C36M  Paulatuk         64.59  23   P      P      15 28 43.9 +0.7
C36M                               IAmb   IAmb   15 28 44.6
      comp=Z,12nm,0.7s
DLBC  Dease Lake       64.93  35   P      P      15 28 47.3 +1.5
      comp=Z,3.3nm,0.8s,baz=198,slow=26,SNR=3.1
DLBC  Dease Lake       64.93  35   IAmb   IAmb   15 30 38.2
      comp=Z,33nm,1.6s
KIRV  Kirov            66.46 325⇑iP      P      15 28 56.4 +0.9
PRGR  Permogore        67.29 329  eP      P      15 28 58.7 -2.0
PRGR                               pmax   pmax
      comp=Z,10.0nm,0.9s
SPITS Spitsbergen Ar   68.13 349   P      P      15 29 06.5 +0.7
      comp=Z,10nm,0.9s,baz=103,slow=6.3,SNR=5.0
RES   Resolute Bay     70.17  14   P      P      15 29 18.9 +0.5
      comp=Z,5.8nm,0.8s,baz=338,slow=5.7,SNR=36
RES   Resolute Bay     70.17  14   P      P      15 29 18.4  0.0
YKA   Yellowknife Ar   70.65  29   P      P      15 29 21.6 +0.2
      comp=Z,3.2nm,0.6s,baz=293,slow=5.8,SNR=51
ARCES ARCESS Array B   71.25 340   P      P      15 29 25.6 +0.5
      comp=Z,5.0nm,1.0s,baz=57,slow=7.1,SNR=15
ARCES ARCESS Array B   71.25 340   P      P      15 29 25.7 +0.7
ARCES ARCESS Array B   71.25 340   P      P      15 29 25.7 +0.7
LLLB  Lillooet         72.06  42   P      P      15 29 31.3 +1.0
TULEG Thule            72.82   7   P      P      15 29 34.1 -0.2
TULEG                              IAmb   IAmb   15 30 04.5
      comp=Z,8.6nm,0.7s
OBN   Obninsk          74.31 325⇓eP      P      15 29 43.5 +0.2
OBN                               e              15 29 56.0
OBN                               e              15 32 31.8
OBN                                pmax   pmax
      comp=Z,4.0nm,0.8s
H04A  Detroit Lake     74.37  47   P      P      15 29 44.7 +0.7
H04A                               IAmb   IAmb   15 29 46.3
      comp=Z,9.4nm,0.9s
B08A  Colville Reser   74.52  43   P      P      15 29 45.2 +0.4
B08A                               IAmb   IAmb   15 29 46.9
      comp=Z,9.6nm,0.9s
YBH   Yreka Blue Hor   75.31  50   P      P      15 29 51.0 +1.5
      comp=Z,5.9nm,0.9s,baz=272,slow=5.6,SNR=9.2
YBH   Yreka Blue Hor   75.31  50   P      P      15 29 51.5 +2.0
D08A  Wollman Farm,    75.36  44   P      P      15 29 50.5 +0.9
D08A                               IAmb   IAmb   15 29 51.2
      comp=Z,20nm,1.5s
PINE  Pine Mountain    75.57  48   P      P      15 29 51.5 +0.4
PINE                               IAmb   IAmb   15 29 53.9
      comp=Z,14nm,0.9s
BKZ   Black Stump Fm   75.57 152   P      P      15 29 50.3 -0.4
FIA1  FINESS Array S   75.66 333   P      P      15 29 51.0  0.0
FIA1                               IAmb   IAmb   15 32 10.1
      comp=Z,45nm,1.6s
FINES FINESS Array B   75.67 333   P      P      15 29 51.3 +0.2
      comp=Z,2.7nm,0.5s,baz=67,slow=5.5,SNR=22
FINES FINESS Array B   75.67 333   P      P      15 29 50.9 -0.2
NEW   Newport          75.88  42   P      P      15 29 53.5 +0.9
      comp=Z,6.9nm,0.8s,baz=115,slow=2.4,SNR=9.0
NEW   Newport          75.88  42   P      P      15 29 52.7 +0.1
KBZ   Khabaz           75.95 312   P      P      15 29 53.4 +0.4
      comp=Z,6.0nm,0.9s,baz=131,slow=1.5,SNR=12
KBZ   Khabaz           75.95 312⇑iP      P      15 29 54.1 +1.1
KIV   Kislovodsk       75.99 313  eP      P      15 29 52.1 -1.3
KIV                                pmax   pmax
      comp=Z,21nm,1.0s
KIV                                MLR    MLR
      comp=Z,76nm,18.0s
NNZ   Nelson           76.15 156   P      P      15 29 53.7 -0.2
THZ   Tophouse         76.46 156   P      P      15 29 55.5 -0.2
TUWZ  Tuamarina        76.54 155   P      P      15 29 55.2 -0.9
SNZO  South Karori     76.72 155   P      P      15 29 56.6 -0.5
BSWZ  Blackbirch Sta   76.77 156   P      P      15 29 56.5 -0.9
ORV   Oroville         77.11  52   P      P      15 30 00.1 +0.4
ORV                                pmax   pmax
      comp=Z,7.0nm,1.0s
ORV   Oroville         77.11  52   P      P      15 30 00.1 +0.4
LTZ   Lake Taylor      77.14 157   P      P      15 30 00.2 +0.6
KHZ   Kahutara         77.26 156   P      P      15 29 59.1 -1.0
WALA  Waterton Lakes   77.36  41   P      P      15 30 02.0 +1.0
BMO   Blue Mountains   77.39  46   P      P      15 30 02.1 +0.9
BMO                                pmax   pmax
      comp=Z,4.0nm,0.8s
BMO   Blue Mountains   77.39  46   P      P      15 30 02.1 +0.9
RPZ   Rata Peaks       77.57 158   P      P      15 30 02.8 +0.9
WVOR  Wild Horse Val   77.69  48   P      P      15 30 03.8 +0.8
WVOR                               pmax   pmax
      comp=Z,25nm,2.0s
WVOR  Wild Horse Val   77.69  48   P      P      15 30 03.8 +0.8
WVOR                               IAmb   IAmb   15 30 38.8
      comp=Z,25nm,1.9s
BEKR  Beckworth        77.75  51   P      P      15 30 03.2 -0.2
BEKR                               IAmb   IAmb   15 32 02.4
      comp=Z,13nm,0.7s
AFDM  Forest Hills D   77.75  52   P      P      15 30 03.6 +0.3
JTMT  Jette            77.80  42   P      P      15 30 03.5  0.0
MLZ   Mavora Lakes     78.18 161   P      P      15 30 05.0 -0.2
SUMG  Summit           78.45 360   P      P      15 30 07.9 +0.9
SUMG                               pmax   pmax
      comp=Z,21nm,1.7s
SUMG  Summit           78.45 360   P      P      15 30 07.9 +0.9
SUMG                               IAmb   IAmb   15 30 08.6
      comp=Z,21nm,1.7s
CMB   Columbia Colle   78.59  53   P      P      15 30 08.8 +0.8
CMB                                pmax   pmax
      comp=Z,7.0nm,0.9s
CMB   Columbia Colle   78.59  53   P      P      15 30 08.8 +0.8
PNTR  Pine Nut         78.63  52   P      P      15 30 09.4 +1.0
YERR  Yerington        78.93  52   P      P      15 30 10.7 +0.7
YERR                               IAmb   IAmb   15 30 11.6
      comp=Z,6.3nm,0.6s
MFID  Camas Ranch      79.02  46   P      P      15 30 11.4 +1.1
RYN   Ryan             79.59  52   P      P      15 30 13.5  0.0
KVN   Kaiserville      79.67  51   P      P      15 30 14.7 +0.7
KVN                                pmax   pmax
      comp=Z,5.0nm,0.8s
KVN   Kaiserville      79.67  51   P      P      15 30 14.7 +0.7
NVAR  Mina Array Bea   79.84  52   P      P      15 30 16.2 +1.2
      comp=Z,5.6nm,0.7s,baz=287,slow=5.7,SNR=38
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NVAR	Mina Array Bea	79.84	52	P	P	15 30 15.7	+0.7
NV11	Mina Array Sit	79.94	52	P	P	15 30 16.1	+0.7
AKASG	Malin Array Be	80.41	323	P	P	15 30 17.4	0.0
	comp=Z,1.1nm,0.3s,baz=50,slow=5.2,SNR=9.3						
AKASG	Malin Array Be	80.41	323	IAmb	IAmb	15 30 25.4	
	comp=Z,0.9nm,0.8s						
AKBB	Malin Array Si	80.41	323	⇑iP	P	15 30 17.4	-0.1
AKBB	Malin Array Si	80.41	323	P	P	15 30 17.2	-0.3
AKBB				IAmb	IAmb	15 30 46.6	
	comp=Z,17nm,1.4s						
ELK	Elko	80.74	48	P	P	15 30 20.7	+0.9
	comp=Z,2.1nm,0.8s,baz=298,slow=8.7,SNR=7.7						
ELK	Elko	80.74	48	IAmb	IAmb	15 30 21.5	
	comp=Z,2.3nm,0.8s						
NB2	NORSAR Subarra	81.32	338	P	P	15 30 21.8	-0.4
	comp=Z,0.7nm,0.5s,baz=41,slow=5.1						
NOA	NORSAR Array B	81.32	338	P	P	15 30 21.9	-0.2
	comp=Z,1.6nm,0.8s,baz=42,slow=5.2,SNR=5.0						
NOA	NORSAR Array B	81.32	338	P	P	15 30 22.0	-0.2
NORES	NORESS Array B	81.43	338	P	P	15 30 24.5	+1.7
R11A	Troy Canyon, C	81.73	51	P	P	15 30 25.4	+0.3
H17A	Grant Village	81.75	43	P	P	15 30 27.7	+2.6
FLWY	Flagg Ranch	81.84	44	P	P	15 30 27.7	+2.2
FLWY				IAmb	IAmb	15 30 59.6	
	comp=Z,24nm,1.9s						
TPNV	Topopah Spring	81.98	52	P	P	15 30 27.0	+0.7
TPNV				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TPNV	Topopah Spring	81.98	52	P	P	15 30 27.0	+0.7
TPNV				IAmb	IAmb	15 30 28.1	
	comp=Z,9.0nm,0.7s						
RLMT	Red Lodge	82.13	42	P	P	15 30 28.1	+1.1
GSC	Goldstone, Bar	82.43	54	P	P	15 30 29.5	+0.9
GSC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GSC	Goldstone, Bar	82.43	54	P	P	15 30 29.4	+0.9
DUG	Dugway, Tooele	82.61	48	P	P	15 30 30.0	+0.5
DUG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
DUG	Dugway, Tooele	82.61	48	P	P	15 30 30.0	+0.5
HWUT	Hardware Ranch	82.65	46	P	P	15 30 30.8	+1.1
PSUT	Pine Spring	82.80	50	P	P	15 30 30.9	+0.3
PDAR	Pinedale Array	83.26	44	P	P	15 30 32.9	-0.1
	comp=Z,0.6nm,0.5s,baz=288,slow=1.4,SNR=6.8						
PDAR	Pinedale Array	83.26	44	P	P	15 30 33.1	+0.2
PFO	Pinyon Flats O	83.53	55	P	P	15 30 35.1	+0.7
	comp=Z,3.5nm,0.6s,baz=314,slow=4.7,SNR=5.9						
PFO	Pinyon Flats O	83.53	55	IAmb	IAmb	15 30 35.5	
	comp=Z,4.3nm,0.7s						
BR131	Keskin Array S	83.95	312	P	P	15 30 37.0	+0.6
BR131				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BR131	Keskin Array S	83.95	312	P	P	15 30 37.0	+0.6
BRTR	Keskin Array B	83.95	312	P	P	15 30 37.2	+0.8
	comp=Z,2.1nm,0.6s,baz=92,slow=3.6,SNR=14						
BRTR	Keskin Array B	83.95	312	P	P	15 30 36.8	+0.4
LCMT	Little Creek M	84.01	51	P	P	15 30 37.7	+1.0
MTPU	Mount Pierson	84.17	50	P	P	15 30 39.1	+1.2
KNB	Kanab	84.29	51	P	P	15 30 38.9	+0.6
KNB				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KNB	Kanab	84.29	51	P	P	15 30 38.9	+0.6
BUR08	Bucovina Ar. S	84.35	322	P	P	15 30 38.4	+0.2
BUR08				IAmb	IAmb	15 32 11.5	
	comp=Z,20nm,1.9s						
BURAR	Bucovina Array	84.36	322	P	P	15 30 38.2	-0.1
BURAR	Bucovina Array	84.36	322	P	P	15 30 38.2	-0.1
Q16A	Castle Valley	84.36	48	P	P	15 30 39.7	+1.1
FRB	Frobisher Bay	84.37	13	P	P	15 30 38.1	+0.3
FRB				pmax	pmax		
	comp=Z,10.0nm,2.4s						
RDMU	Red Mountain	84.48	46	P	P	15 30 40.0	+0.8
SRU	San Rafael Swe	84.68	48	P	P	15 30 40.3	+0.1
SRU				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SRU	San Rafael Swe	84.68	48	P	P	15 30 40.3	+0.1
U15A	North Rim	84.97	51	P	P	15 30 42.4	+0.6
O20A	White River Ci	85.56	46	P	P	15 30 45.1	+0.5
O20A				IAmb	IAmb	15 31 18.7	
	comp=Z,9.1nm,1.1s						
Y14A	Wickenburg	85.81	53	P	P	15 30 46.6	+0.8
PV09	Paradox Valley	85.92	48	P	P	15 30 47.2	+0.7
PV21	Cone Mtn., Par	85.99	48	P	P	15 30 47.6	+0.8
PV21				IAmb	IAmb	15 30 48.5	
	comp=Z,10nm,0.7s						
PV23	Carpenter Ridg	86.03	48	P	P	15 30 47.9	+0.9
PV23				IAmb	IAmb	15 30 49.2	
	comp=Z,13nm,0.9s						
PV14	Lion Creek, Pa	86.06	48	P	P	15 30 47.9	+0.7
PV14				IAmb	IAmb	15 30 48.8	
	comp=Z,14nm,0.7s						
WUAZ	Wupatki	86.09	51	P	P	15 30 48.0	+0.8
PV20	West Nyswonger	86.12	48	P	P	15 30 47.8	+0.4
PV20				IAmb	IAmb	15 30 49.1	
	comp=Z,11nm,0.8s						
PV19	Morning Glory	86.12	48	P	P	15 30 48.0	+0.6
PV19				IAmb	IAmb	15 30 49.2	
	comp=Z,13nm,0.8s						
PV04	Paradox Valley	86.13	48	P	P	15 30 47.5	+0.1
PV04				IAmb	IAmb	15 30 49.3	
	comp=Z,6.6nm,0.9s						
PV17	East Wray Mesa	86.16	48	P	P	15 30 47.9	+0.3
PV17				IAmb	IAmb	15 30 49.3	
	comp=Z,14nm,0.8s						
PV16	Nyswonger Mesa	86.17	48	P	P	15 30 48.0	+0.3
PV16				IAmb	IAmb	15 30 49.4	
	comp=Z,10nm,0.8s						
PV05	Paradox Valley	86.18	48	P	P	15 30 48.5	+0.8
PV05				IAmb	IAmb	15 30 49.5	
	comp=Z,12nm,0.8s						
PV11	David Mesa, Pa	86.20	48	P	P	15 30 48.5	+0.8
PV11				IAmb	IAmb	15 30 49.5	
	comp=Z,12nm,0.8s						
PV18	Skein Mesa, Pa	86.21	48	P	P	15 30 48.5	+0.6
PV18				IAmb	IAmb	15 30 49.5	
	comp=Z,9.3nm,0.8s						
PV03	Paradox Valley	86.24	48	P	P	15 30 47.8	-0.2
PV03				IAmb	IAmb	15 30 49.7	
	comp=Z,10nm,1.0s						
PV13	Radium Mtn., P	86.31	48	P	P	15 30 48.4	0.0
PV13				IAmb	IAmb	15 30 49.9	
	comp=Z,5.9nm,0.6s						
GERES	GERESS Array B	89.25	328	P	P	15 31 01.2	-0.8
	comp=Z,0.5nm,0.4s,baz=19,slow=5.7,SNR=5.0						
TX31	Lajitas Ar. Si	94.96	53	P	P	15 31 29.4	+0.6
TX31				IAmb	IAmb	15 31 30.4	
	comp=Z,3.3nm,0.8s						
TX32	Lajitas Array	94.96	53	P	P	15 31 29.6	+0.8
TX32				IAmb	IAmb	15 31 30.5	
	comp=Z,3.3nm,0.8s						
TXAR	Lajitas Array	94.97	53	P	P	15 31 30.1	+1.3
	comp=Z,1.8nm,0.5s,baz=308,slow=1.8,SNR=16						
TXAR	Lajitas Array	94.97	53	P	P	15 31 29.8	+1.0
TXAR	Lajitas Array	94.97	53	P	P	15 31 29.8	+1.0
PLVO	Plevna	98.24	26	P	Pdif	15 31 44.9	+1.7
TORD	Torodi Ar. Bea	122.55	311	PKP	PKPdf	15 37 00.9	-0.8
	comp=Z,0.5nm,0.6s,baz=88,slow=4.1,SNR=4.1						
SNAA	Sanae	133.24	195	PKPdf	PKPdf	15 37 20.5	0.0
SNAA	Sanae	133.24	195	⇑ePKIKP	PKPdf	15 37 19.5	-0.9
VNA2	Neumayer--Watz	134.78	194	PKPdf	PKPdf	15 37 23.9	+0.6
VNA3	Neumayer Olymp	134.99	193	PKPdf	PKiKP	15 37 24.8	-0.3
PTGA	Pitinga	145.16	39		PKPbc	15 37 43.3	-0.2
PB12	IPOC Station P	149.34	77		PKPbc	15 37 54.9	-0.2
SAML	Samuel	149.45	54	PKP2	PKPbc	15 37 54.8	-0.6
SAML	Samuel	149.45	54	PKPbc	PKPbc	15 37 54.8	-0.6
PB16	IPOC Station P	149.91	76		PKPbc	15 37 56.5	-0.6
LPAZ	La Paz	150.09	71	PKP	PKPdf	15 37 53.1	+0.6
	comp=Z,1.4nm,0.6s,baz=274,slow=1.6,SNR=5.9						
LPAZ				PKPbc	PKiKP	15 37 58.5	0.0
	comp=Z,15nm,0.8s,baz=342,slow=2.3,SNR=45						
LPAZ	La Paz	150.09	71	PKPbc	PKPbc	15 37 57.9	+0.3
PATCX	Punta Patache	150.40	81		PKPbc	15 37 58.0	+0.4
PB11	IPOC Station P	150.41	78		PKPbc	15 37 57.9	+0.1
GO01	Chusmiza	150.76	78		PKPbc	15 37 59.5	+0.5
PB04	IPOC Station P	150.96	84		PKPbc	15 37 59.4	+0.4
PB07	IPOC Station P	150.97	82		PKPbc	15 37 59.3	+0.2
PB01	IPOC Station P	151.06	81		PKPbc	15 37 59.5	+0.3
PB14	IPOC Station P	151.45	88		PKPbc	15 38 00.4	+0.1
PB09	IPOC Station P	151.55	82		PKiKP	15 38 01.2	+0.4
PLCA	Paso Flores	151.68	122	PKPbc	PKiKP	15 38 00.6	+0.1
	comp=Z,5.8nm,0.6s,baz=38,slow=1.9,SNR=27						
PB15	IPOC Station P	151.84	85		PKiKP	15 38 01.8	+0.4
ROC1	El Roble	152.18	106		PKPbc	15 38 01.7	0.0
GO04	Tololo Observa	152.19	100		PKPbc	15 38 01.7	0.0
GO02	Mina Guanaco	152.31	89		PKiKP	15 38 02.7	+0.2
CPUP	Villa Florida	163.30	84	PKPab	PKPab	15 38 59.0	-0.5
	comp=Z,2.3nm,0.6s,baz=268,slow=4.4,SNR=7.1						

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*IDC **25** 15:20:24.6±1.8, 1.°70N×126.°12E, h0^{km}, mb3.9/3, mb1 4.0/4, mb1mx3.5/50, mbtmp3.8/4, ML3.7/1, Error ellipse: s-maj=121.7km s-min=23.0km az=68.0*

*DJA **25** 15:20:30.1±0.6, 2°N±6°×12°6E±°, h10^{km}, M4.0/8, mB4.5/1, mb4.3/2, MLv3.8/8, Mw(mB)3.6/1*

*NEIC **25** 15:20:32.0±1.5, 1.°7N±0.°1×126.°38E±0.°09, h62^{km}±13^{km}, mb4.1/13, Error ellipse: s-maj=19.4km s-min=11.8km az=196.0*

ISC 25 15:20:31.6±1.1**, 1.°7N**±0.°1×**126.°39E**±0.°06**, h47**^{km}**, n26,** σ**1.^{s}61**/27**, mb4.1**/6**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.36	134	P	Pn	15 20 55.1	+0.9
TNTI				S	Sn	15 21 14.7	+3.6
TNTI	Ternate	1.36	134	Pn	Pn	15 20 54.9	+0.7
LBMI	Labuha	2.60	155	P	Pn	15 21 12.6	+1.4
KMSI	Cibinong	2.67	245	P	Pn	15 21 13.0	+0.8
KMSI				S	Sn	15 21 43.4	+0.1
SANI	Sanana	3.77	186	P	Pn	15 21 26.9	-0.5
LUWI	Luwuk	4.55	233	Pn	Pn	15 21 38.6	+0.6
MRSI	Marisa	4.62	254	P	Pn	15 21 42.6	+3.6
NLAI	Namlea	4.99	172	P	Pn	15 21 44.6	+0.6
APSI	Ampana	5.42	241	P	Pn	15 21 51.8	+1.8
MTN	Manton Dam	15.22	162	Pn	Pn	15 24 02.4	-1.3
MTN				IAmb	IAmb	15 24 12.3	
	comp=Z,18nm,1.6s						
KNRA	Kununurra	17.45	172	P	Pn	15 24 31.4	-0.4
FITZ	Fitzroy Crossi	19.72	182	P	P	15 24 55.9	-1.5
	comp=Z,0.2nm,0.3s,baz=3.8,slow=11,SNR=6.7						
FITZ	Fitzroy Crossi	19.72	182	IAmb	IAmb	15 25 13.7	
	comp=Z,18nm,1.9s						
WB0	Warramunga Arr	22.76	160	P	P	15 25 29.2	-1.0
COEN	Coen	22.79	134	P	P	15 25 31.9	+1.4
WRAB	Tennant Creek	22.90	160	P	P	15 25 28.6	-3.0
WRA	Warramunga Arr	22.91	160	P	P	15 25 30.5	-1.1
	comp=Z,1.7nm,0.4s,baz=338,slow=11,SNR=41						
WRA	Warramunga Arr	22.91	160	P	P	15 25 30.4	-1.3
WB2	Warramunga Arr	22.91	160	P	P	15 25 31.0	-0.7
WR0	Warramunga Arr	22.99	160	P	P	15 25 31.1	-1.4
WR0				IAmb	IAmb	15 25 47.4	
	comp=Z,21nm,1.8s						
PMG	Port Moresby	23.46	119	P	P	15 25 37.7	+0.5
PMG				IAmb	IAmb	15 26 32.0	
	comp=Z,9.8nm,1.1s						
AS31	Alice Springs	26.28	164	P	P	15 26 02.4	-0.5
ASAR	Alice Springs	26.28	164	P	P	15 26 02.6	-0.2
	comp=Z,0.6nm,0.4s,baz=345,slow=8.1,SNR=47						
MK31	Makanchi Array	59.01	326	P	P	15 30 25.5	-1.1
MK31				IAmb	IAmb	15 31 59.4	
	comp=Z,1.1nm,0.7s						
MKAR	Makanchi Array	59.01	326	P	P	15 30 25.4	-1.3
	comp=Z,0.6nm,0.4s,baz=123,slow=7.4,SNR=8.3						
KURK	Kurchatov	63.24	328	P	P	15 30 53.5	-1.8

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*BER **25** 15:57:42.8±3.6, 75.°79N×7.°22E, h10^{km}, ML2.4, Confirmed Earthquake*

*DNK **25** 15:57:43.9±2.0, 76.°20N×5.°98E, h0^{km}±37^{km}, ML2.6, Hypocentre not reviewed by the ISC*

*NAO **25** 15:57:45.1±7.8, 75.°85N×7.°54E, h19^{km}±86^{km}, ML3.2*

*IDC **25** 15:57:46.1±1.5, 75.°82N×8.°93E, h0^{km}, mb3.2/2, mb1 3.5/5, mb1mx3.2/40, mbtmp3.4/5, ML3.0/3, MS3.0/3, Ms1 2.9/3, ms1mx2.5/28, Error ellipse: s-maj=23.7km s-min=11.5km az=76.0*

*IEPN **25** 15:57:48.0, 75.°95N×8.°46E, h15^{km}*

ISC 25 15:57:42.9±1.2**, 75.°84N**±0.°06×**7.°77E**±0.°09**, h10**^{km}**, n29,** σ**2.^{s}69**/42**, 2C-1D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HSPB	Hornsund (broa	2.17	54	Pn	Pn	15 58 20.0	+1.0
HSPB				Sn	Sn	15 58 44.0	-1.9
HSPB	Hornsund (broa	2.17	54	eP	Pn	15 58 20.0	+1.0
HSPB				eS	Sn	15 58 44.3	-1.6
HSPB	Hornsund (broa	2.17	54	⇑iP	Pn	15 58 20.0	+1.0
HSPB				eS	Sn	15 58 43.4	-2.5
BRBB	Barentsburg B	2.69	30	Pn	Pn	15 58 26.4	+0.3
BRBB	Barentsburg B	2.69	30	Pn	Pn	15 58 26.4	+0.3
SPA0	Spitsbergen Ar	3.04	35	Pn	Pn	15 58 32.3	+1.3
	baz=203,slow=14						
SPA0				Sn	Sn	15 59 06.2	-1.3
	baz=225,slow=18						
SPA0	Spitsbergen Ar	3.04	35	Pn	Pn	15 58 32.3	+1.3
	baz=203,slow=14						
SPA0				Sn	Sn	15 59 06.2	-1.3
	baz=225,slow=18						
SPITS	Spitsbergen Ar	3.04	35	Pn	Pn	15 58 32.2	+1.2
	baz=219,slow=17,SNR=186						
SPITS				Sn	Sn	15 59 05.9	-1.5
	baz=218,slow=20,SNR=6.4						
BJO1	Bjornoya	3.18	109	eP	Pn	15 58 35.7	+2.8
BJO1				eS	Sn	15 59 09.9	-0.9
KBS	Kingsbay	3.23	14	Pn	Pn	15 58 33.4	-0.1
KBS				Sn	Sn	15 59 09.1	-3.0
KBS	Kingsbay	3.23	14	eP	Pn	15 58 33.8	+0.3
KBS				eS	Sn	15 59 09.4	-2.6
KBS	Kingsbay	3.23	14	eP	Pn	15 58 33.4	-0.1
KBS				eS	Sn	15 59 07.5	-4.6
KBS	Kingsbay	3.23	14	i P		15 58 34.2	
KBS				i S		15 59 08.6	
HOPEN	Hopen	4.18	72	Pn	Pn	15 58 48.2	+1.6
HOPEN				Sn	Sn	15 59 33.3	-2.1
HOPEN	Hopen	4.18	72	eP	Pn	15 58 48.2	+1.6
HOPEN				eS	Sn	15 59 32.9	-2.5
HOPEN				IAML		15 59 36.0	
	comp=Z,71nm,0.2s						
HOPEN	Hopen	4.18	72	⇑iP	Pn	15 58 48.1	+1.6
HOPEN				i S	Sn	15 59 32.6	-2.8
DAG	Danmarks Havn	6.31	291	i P	Pn	15 59 09.1	-6.7
DAG				i S	Sn	16 00 14.7	-13
DAG	Danmarks Havn	6.31	291	i P	Pn	15 59 09.2	-6.6
DAG				i S	Sn	16 00 14.8	-13
DAG				IAML		16 00 19.4	
	comp=Z,7.4nm,0.5s						
DAG	Danmarks Havn	6.31	291	i P		15 59 09.2	
DAG				i S		16 00 14.8	
DAG				IAML		16 00 19.4	
	comp=Z,7.4nm,0.5s						
DBG	Daneborg	7.34	272	i P	Pn	15 59 25.7	-4.3
DBG				eS	Sn	16 00 39.8	-13
DBG				IAML		16 00 46.2	
	comp=Z,1.0nm,0.4s						
DBG	Daneborg	7.34	272	i P		15 59 25.7	
DBG				eS		16 00 39.8	
DBG				IAML		16 00 46.2	
	comp=Z,1.0nm,0.4s						
ARA0	ARCESS Array S	8.20	131	Pn	Pn	15 59 42.3	+0.5
	baz=330,slow=12						
ARA0				Sn	Sn	16 01 07.7	-6.7
	baz=333,slow=18						
ARA0	ARCESS Array S	8.20	131	Pn	Pn	15 59 42.3	+0.5
	baz=330,slow=12						
ARA0				Sn	Sn	16 01 07.7	-6.7
	baz=333,slow=18						
ARCES	ARCESS Array B	8.20	131	Pn	Pn	15 59 41.1	-0.6
	comp=Z,0.3nm,0.3s,baz=326,slow=12,SNR=12						
ARCES				Sn	Sn	16 01 09.6	-4.8
	comp=Z,0.7nm,0.3s,baz=328,slow=21,SNR=6.7						
ARCES				LR	LR	16 02 50.1	
	comp=Z,62nm,20.2s,baz=150,slow=38						
ZFI2	Zemlya Franca-	9.25	40	⇓iP	Pn	15 59 57.3	+1.2
ZFI2				eS	Sn	16 01 34.4	-5.6
	comp=Z,5.6nm,1.5s						
APA0	Apatity Array	11.31	124	Pn	Pn	16 00 25.2	+1.0
	baz=343,slow=28						
APA0	Apatity Array	11.31	124	Pn	Pn	16 00 25.2	+1.0
	baz=343,slow=28						
FINES	FINESS Array B	15.78	146	Pn	Pn	16 01 26.7	+1.9
	comp=Z,0.1nm,0.3s,baz=345,slow=8.6,SNR=1.5						
KIRV	Kirov	22.78	116	LR	LR	16 11 05.6	
	comp=Z,43nm,18.3s,baz=333,slow=36						
RES	Resolute Bay	23.07	319	P	P	16 02 55.9	+7.9
	comp=Z,0.7nm,0.7s,baz=54,slow=13,SNR=3.5						
RES				LR	LR	16 11 17.2	
	comp=Z,38nm,20.3s,baz=26,slow=35						
MKAR	Makanchi Array	41.46	90	P	P	16 05 32.9	+3.6
	comp=Z,0.2nm,0.7s,baz=341,slow=6.6,SNR=2.4						
ASAR	Alice Springs	121.33	60	PKP	PKiKP	16 16 37.3	+1.7
	comp=Z,0.1nm,0.5s,baz=329,slow=1.1,SNR=5.7						

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*IDC **25** 16:40:14.8±0.6, 23.°27S×179.°94W, h528^{km}±6^{km}, mb4.0/27, mb1 4.1/30, mb1mx4.0/46, mbtmp4.8/30, Error ellipse: s-maj=10.1km s-min=8.9km az=60.0*

*MOS **25** 16:40:14.6±0.8, 23.°32S×179.°99W, h535^{km}, mb4.8/7, Error ellipse: s-maj=10.7km s-min=8.8km az=128.6*

*NEIC **25** 16:40:15.1±1.8, 23.°29S±0.°09×179.°91W±0.°10, h539^{km}±5^{km}, mb4.8/120, Error ellipse: s-maj=13.3km s-min=12.7km az=119.0*

*BGR **25** 16:40:18.2±0.0, 23.°40S×179.°85W, h564^{km}*

*GCMT **25** 16:40:19.1±0.4, 23.°42S±0.°04×179.°87W±0.°05, h554^{km}±2^{km}, MW5.2/56, Moment Tensor Solution. s56,c67; Duration: 1.^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.45±.03; $M_{\theta\theta}$-0.71±.05; $M_{\phi\phi}$0.25±.05; $M_{r\theta}$-0.45±.05; $M_{\theta\phi}$-0.27±.05; $M_{\phi r}$-0.38±.05; Best double couple: $M_0$0.87600×10^{17} NP1:ϕ_s107.00000°, δ33.00000°, λ141.00000°. NP2:ϕ_s232.00000°, δ70.00000°, λ64.00000°. Principal axes: T 0.7750, Plg57.0000°, Azm107.0000°; N 0.2030, Plg25.0000°, Azm241.0000°; P -0.9780, Plg21.0000°, Azm341.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 25 16:40:14.9±0.4**, 23.°35S**±0.°05×**179.°93W**±0.°05**, h536**^{km}±4^{km}**, h536**^{km}**:pP-P, n413,** σ**1.^{s}11**/444**, mb4.8**/101**, 37C-15D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	5.90	341	d iP	P	16 41 52.2	0.0
MSVF				pmax	pmax		
	comp=Z,201nm,0.8s						
MSVF	Nonsavu	5.90	341	P	P	16 41 52.0	-0.2
RAO	Raoul Island	6.14	163	P	P	16 41 53.3	-0.8
	comp=Z,474nm,0.3s,baz=19,slow=3.5,SNR=10						
RAO	Raoul Island	6.14	163	P	P	16 41 54.9	+0.8
RAO	Raoul Island	6.14	163	P	P	16 41 54.9	+0.8
NIUE	Niue	10.25	67	P	P	16 42 35.0	-0.4
AFI	Afiamalu	12.16	41	P	P	16 42 52.2	-3.1
	comp=Z,28nm,0.3s,baz=105,slow=1.0,SNR=21						
AFI				S	S	16 44 55.6	-12
	comp=Z,4.4nm,0.3s,baz=30,slow=20,SNR=2.6						
AFI	Afiamalu	12.16	41	P	P	16 42 52.4	-2.9
AFI				pmax	pmax		
	comp=Z,162nm,0.7s						
AFI	Afiamalu	12.16	41	P	P	16 42 51.6	-3.7
DZM	Mont Dzumac	12.64	273	eP	P	16 43 01.5	+1.2
	comp=Z,64nm,0.8s						
DZM	Mont Dzumac	12.64	273	P	P	16 42 59.2	-1.1
	comp=Z,2.6nm,0.3s,baz=89,slow=15,SNR=23						
DZM	Mont Dzumac	12.64	273	P	P	16 43 01.1	+0.8
OUZ	Omahuta	13.10	204	P	P	16 43 07.5	+2.8
FUNA	Funafuti	14.77	357	P	P	16 43 20.9	-1.5
URZ	Urewera	15.07	189	P	P	16 43 24.8	-0.4
	comp=Z,41nm,0.3s,baz=39,slow=1.7,SNR=66						
URZ				S	S	16 45 56.0	-6.0
	comp=Z,3.2nm,0.3s,baz=210,slow=20,SNR=3.3						
URZ	Urewera	15.07	189	P	P	16 43 23.3	-1.9
HIZ	Hauiti	15.76	195	P	P	16 43 33.4	+1.1
BKZ	Black Stump Fm	16.06	190	P	P	16 43 32.1	-3.2
BFZ	Birch Farm	17.58	190	P	P	16 43 47.9	-1.6
MSWZ	Moikau Station	18.46	192	P	P	16 43 57.0	-0.5
SNZO	South Karori	18.46	193	P	P	16 43 57.1	-0.4
BHW	Baring Head	18.52	192	P	P	16 43 57.5	-0.6
QRZ	Quartz Range	18.54	198	P	P	16 43 59.4	+1.2
PLWZ	Palliser	18.61	191	P	P	16 43 58.8	-0.1
NNZ	Nelson	18.68	196	P	P	16 43 59.5	0.0
TUWZ	Tuamarina	18.74	194	P	P	16 43 59.8	-0.3
RAR	Rarotonga	18.77	87	P	P	16 44 00.4	-0.3
	comp=Z,0.9nm,0.3s,baz=39,slow=16,SNR=3.5						
RAR	Rarotonga	18.77	87	P	P	16 44 01.0	+0.4
RAR				pmax	pmax		
	comp=Z,17nm,1.0s						
RAR	Rarotonga	18.77	87	P	P	16 44 01.0	+0.4
RAR				IAmb	IAmb	16 44 33.2	
	comp=Z,17nm,0.9s						
BSWZ	Blackbirch Sta	19.03	194	P	P	16 44 03.0	+0.3
THZ	Tophouse	19.31	196	P	P	16 44 05.6	+0.3
LHI	Lord Howe Isla	20.32	242	P	P	16 44 15.6	+1.0
LTZ	Lake Taylor	20.43	197	P	P	16 44 14.3	-1.1
OXZ	Oxford	21.00	197	P	P	16 44 20.2	-0.3
RPZ	Rata Peaks	21.63	198	P	P	16 44 25.8	-0.4
	comp=Z,9.3nm,0.5s,baz=294,slow=1.7,SNR=9.6						
RPZ	Rata Peaks	21.63	198	P	P	16 44 26.1	-0.1
FOZ	Fox Glacier	21.84	200	P	P	16 44 27.7	-0.4
LBZ	Lake Benmore	22.50	199	P	P	16 44 32.6	-1.4
LBZ				IAmb	IAmb	16 44 34.5	
	comp=Z,46nm,1.3s						
WKZ	Wanaka	23.25	200	P	P	16 44 39.9	-0.9
HNR	Honiara	23.71	302	P	P	16 44 44.5	-0.7
	comp=Z,31nm,0.3s,baz=35,slow=5.0,SNR=5.1						
HNR	Honiara	23.71	302	P	P	16 44 43.9	-1.3
HNR				pmax	pmax		
	comp=Z,154nm,0.8s						
HNR	Honiara	23.71	302	P	P	16 44 43.9	-1.3
MLZ	Mavora Lakes	24.02	201	P	P	16 44 47.5	-0.2
MLZ				IAmb	IAmb	16 44 55.5	
	comp=Z,27nm,0.6s						
DCZ	Deep Cove	24.44	202	P	P	16 44 51.8	+0.6
DCZ				IAmb	IAmb	16 44 52.8	
	comp=Z,29nm,0.7s						
WHZ	Wether Hill Ro	24.54	201	P	P	16 44 52.0	-0.1
TARA	Tarawa	25.53	343	P	P	16 44 59.7	-1.5
ARMA	Armidale	26.28	248	P	P	16 45 10.2	+2.3
ARMA				IAmb	IAmb	16 45 10.9	
	comp=Z,15nm,0.7s						
EIDS	Eidsvold	26.47	260	P	P	16 45 10.0	+0.6
PPT2	Papeete2	28.97	84	eP	P	16 45 32.7	+1.1
	comp=Z,57nm,1.1s						
TIAR	Tiarei	29.19	84	eP	P	16 45 34.5	+1.1
	comp=Z,24nm,0.9s						
TVO	Taravao	29.21	85	eP	P	16 45 34.0	+0.3
	comp=Z,23nm,0.8s						
CAN	Canberra	29.48	239	P	P	16 45 37.4	+1.7
CAN				pmax	pmax		
	comp=Z,18nm,0.6s						
CAN	Canberra	29.48	239	P	P	16 45 37.4	+1.7
CAN				IAmb	IAmb	16 45 38.4	
	comp=Z,18nm,0.6s						
CTA	Charters Tower	31.54	269	P	P	16 45 54.4	+0.7
	comp=Z,34nm,0.4s,baz=94,slow=11,SNR=61						
CTAO	Charters Tower	31.54	269	P	P	16 45 54.4	+0.7
CTAO				pmax	pmax		
	comp=Z,49nm,0.5s						
TOO	Toolangi	32.80	236	P	P	16 46 04.8	+0.6
TOO				pmax	pmax		
	comp=Z,51nm,1.5s						
TOO	Toolangi	32.80	236	P	P	16 46 04.8	+0.6
TOO				IAmb	IAmb	16 46 06.9	
	comp=Z,52nm,1.4s						
RABL	Rabaul	33.01	301	P	P	16 46 05.6	-0.5
RABL				IAmb	IAmb	16 46 23.5	
	comp=Z,22nm,0.5s						
KRVT	Keravat (AS076	33.04	301	P	P	16 46 05.2	-1.2
	comp=Z,43nm,0.7s,baz=201,slow=1.5,SNR=7.9						
PMG	Port Moresby	34.38	288	P	P	16 46 17.6	0.0
	comp=Z,71nm,1.0s,baz=114,slow=5.8,SNR=35						
PMG	Port Moresby	34.38	288	d iP	P	16 46 17.5	-0.2
PMG				pmax	pmax		
	comp=Z,281nm,1.1s						
PMG	Port Moresby	34.38	288	P	P	16 46 17.0	-0.6
STKA	Stephens Creek	34.99	247	P	P	16 46 24.1	+1.5
	comp=Z,15nm,0.6s,baz=96,slow=11,SNR=31						
STKA	Stephens Creek	34.99	247	P	P	16 46 23.3	+0.7
STKA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
STKA	Stephens Creek	34.99	247	P	P	16 46 23.3	+0.7
MANU	Manus Island	38.11	299	P	P	16 46 47.9	-0.6
MANU				IAmb	IAmb	16 46 49.0	
	comp=Z,60nm,1.4s						
BBOO	Buckleboo	39.72	246	P	P	16 47 00.9	-0.4
BBOO				IAmb	IAmb	16 48 06.9	
	comp=Z,47nm,1.6s						
TAOE	Nuku Hiva Isla	40.69	76	eP	P	16 47 09.3	0.0
	comp=Z,158nm,1.0s						
TAOE	Nuku Hiva Isla	40.69	76	P	P	16 47 09.3	0.0
AS31	Alice Springs	42.19	260	P	P	16 47 20.9	-0.2
ASAR	Alice Springs	42.19	260	P	P	16 47 21.1	0.0
	comp=Z,10.0nm,0.5s,baz=102,slow=7.0,SNR=122						
ASAR				pP	pP	16 48 56.1	+0.4

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      comp=Z,1.9nm,0.5s,baz=86,slow=8.4,SNR=2.9
ASAR                              ScP      ScP      16 52 05.6 +3.0
      comp=Z,3.0nm,0.5s,baz=111,slow=4.4,SNR=11
ASAR                              S        S        16 52 59.6 -3.1
      comp=Z,2.5nm,0.8s,baz=98,slow=14,SNR=10
ASAR  Alice Springs     42.19 260 P        P        16 47 20.7 -0.4
ASAR  Alice Springs     42.19 260          ScP      16 52 05.0 +2.4
ASAR  Alice Springs     42.19 260 P        P        16 47 20.7 -0.4
WR0   Warramunga Arr    42.32 266 P        P        16 47 21.3 -0.8
WR0                               IAmb     IAmb     16 47 23.1
      comp=Z,9.7nm,0.5s
WB2   Warramunga Arr    42.50 266 P        P        16 47 22.9 -0.7
WB2                               IAmb     IAmb     16 47 24.9
      comp=Z,16nm,0.6s
WB0   Warramunga Arr    42.50 266 P        P        16 47 22.7 -0.8
WB0                               IAmb     IAmb     16 47 24.9
      comp=Z,22nm,0.7s
WRAB  Tennant Creek     42.51 266⇓iP       P        16 47 22.9 -0.7
WRAB                              pmax     pmax
      comp=Z,9.0nm,0.8s
WRAB  Tennant Creek     42.51 266 P        P        16 47 22.5 -1.1
WRAB                              IAmb     IAmb     16 47 24.8
      comp=Z,14nm,0.7s
WRA   Warramunga Arr    42.51 266 P        P        16 47 23.0 -0.6
      comp=Z,6.8nm,0.3s,baz=90,slow=5.8,SNR=242
WRA                               pP       pP       16 48 59.4 +0.9
      comp=Z,1.5nm,0.6s,baz=96,slow=8.1,SNR=1.5
WRA                               ScP      ScP      16 52 06.4 +2.5
      comp=Z,2.1nm,0.7s,baz=101,slow=3.8,SNR=7.9
WRA                               S        S        16 53 03.9 -3.5
      comp=Z,1.2nm,0.7s,baz=98,slow=14,SNR=4.6
WRA   Warramunga Arr    42.51 266 P        P        16 47 22.6 -1.0
JAY   Jayapura          43.36 293 P        P        16 47 30.0 -0.4
      comp=Z,25nm,1.1s
JAY   Jayapura          43.36 293 P        P        16 47 30.2 -0.2
JAY                               pmax     pmax
      comp=Z,40nm,1.1s
GENI  Genyem            43.78 292 P        P        16 47 32.3 -1.2
      comp=Z,67nm,1.0s
FORT  Forrest           46.57 249 P        P        16 47 54.4 -0.3
MTN   Manton Dam        47.48 274 P        P        16 48 00.7 -1.1
MTN                               IAmb     IAmb     16 48 02.7
      comp=Z,16nm,0.3s
KNRA  Kununurra         48.76 269 P        P        16 48 10.9 -0.3
KNRA                              IAmb     IAmb     16 48 13.2
      comp=Z,21nm,1.0s
SAUI  Saumlaki          49.13 280 P        P        16 48 14.7 +0.6
      comp=Z,66nm,1.0s
SAUI  Saumlaki          49.13 280 P        P        16 48 13.3 -0.8
SAUI                              IAmb     IAmb     16 48 16.4
      comp=Z,70nm,1.1s
FAKI  Fak Fak           50.49 286 P        P        16 48 23.4 -0.7
FITZ  Fitzroy Crossi    50.94 265 P        P        16 48 27.2  0.0
FITZ                              IAmb     IAmb     16 50 17.7
      comp=Z,24nm,1.1s
BNDI  Bandanaira        51.85 283 P        P        16 48 33.3 -0.6
      comp=Z,59nm,0.8s
SIJI  Sorong            52.33 288 P        P        16 48 37.0 -0.4
      comp=Z,53nm,0.7s,baz=96,slow=5.5,SNR=42
AAI   Ambon             53.74 283 P        P        16 48 46.7 -0.8
      comp=Z,44nm,0.9s
SOEI  Soe               54.87 274 P        P        16 48 55.8 +0.3
      comp=Z,47nm,1.0s
SOEI  Soe               54.87 274 P        P        16 48 56.5 +1.0
SOEI                              IAmb     IAmb     16 49 03.7
      comp=Z,37nm,0.8s
NLAI  Namlea            54.92 283 P        P        16 48 55.8 +0.1
      comp=Z,32nm,0.4s
VNDA  Vanda             54.93 185 P        P        16 48 57.1 +2.4
      comp=Z,5.0nm,0.5s,baz=4.1,slow=7.0,SNR=27
VNDA  Vanda             54.93 185 P        P        16 48 56.4 +1.7
VNDA                              pmax     pmax
      comp=Z,7.0nm,0.8s
VNDA  Vanda             54.93 185 P        P        16 48 56.4 +1.7
PSA00 Pilbara Seismi    55.33 259 P        P        16 48 58.0 -0.5
PSA00 Pilbara Seismi    55.33 259 P        P        16 48 57.9 -0.6
PSA00                             IAmb     IAmb     16 48 59.8
      comp=Z,22nm,1.3s
SANI  Sanana            56.44 284 P        P        16 49 05.4 -0.9
      comp=Z,13nm,0.9s
MMRI  Maumere           57.14 275 P        P        16 49 10.5 -0.6
      comp=Z,524nmcomp=Z,36nm,0.4s
MMRI  Maumere           57.14 275 P        P        16 49 10.2 -0.9
MMRI                              IAmb     IAmb     16 49 12.4
      comp=Z,31nm,0.4s
CASY  Casey             60.63 206 P        P        16 49 33.6  0.0
KAPI  Kappang           60.82 278 P        P        16 49 35.2 -0.5
      comp=Z,3.6nm,0.4s,baz=124,slow=13,SNR=3.7
QSPA  South Pole Qui    66.73 180 P        P        16 50 14.4 +1.7
      comp=Z,45nm,0.7s,baz=345,slow=0.5,SNR=234
QSPA  South Pole Qui    66.73 180 P        P        16 50 14.2 +1.4
JHJ2  Mitsune           68.02 324 P        P        16 50 20.6 -0.3
UGM   Wanagama          68.16 271 P        P        16 50 22.9 +0.6
KKM   Kota Kinabalu     68.81 287 P        P        16 50 25.9 -0.3
KKM                               IAmb     IAmb     16 50 28.0
      comp=Z,12nm,0.6s
JOW   Kunigami          70.68 312 P        P        16 50 37.4 +0.4
JOW                               IAmb     IAmb     16 50 39.4
      comp=Z,69nm,1.4s
SBUM  Sibu              70.77 281 P        P        16 50 38.0 +0.2
SBUM  Sibu              70.77 281 P        P        16 50 39.0 +1.2
CISI  Cisompet, Garu    70.78 270 P        P        16 50 37.7 -0.3
CISI                              IAmb     IAmb     16 52 58.2
      comp=Z,75nm,1.6s
INU   Inuyama           71.22 324 P        P        16 50 40.8 +0.8
MJAR  Matsushiro Arr    71.49 325 P        P        16 50 41.7 +0.1
      comp=Z,12nm,0.9s,baz=156,slow=5.9,SNR=23
MJAR  Matsushiro Arr    71.49 325 P        P        16 50 41.4 -0.2
MJAR                              pmax     pmax
      comp=Z,6.0nm,1.1s
MJAR  Matsushiro Arr    71.49 325 P        P        16 50 41.4 -0.2
MAJO  Matsushiro        71.49 325 P        P        16 50 41.1 -0.5
MAJO                              pmax     pmax
      comp=Z,14nm,0.9s
MAJO  Matsushiro        71.49 325 P        P        16 50 41.1 -0.5
MAT   Matsushiro        71.49 325 P        P        16 50 41.1 -0.5
MAT                               S        S        16 59 18.6 +1.1
MJB9  Matsu-Tunnel      71.49 325 P        P        16 50 41.1 -0.5
KSM   Kuching           72.08 280 P        P        16 50 44.7 -0.8
KSM                               IAmb     IAmb     16 50 47.4
      comp=Z,36nm,1.4s
KSM   Kuching           72.08 280 P        P        16 50 46.0 +0.5
YOJ   Yonaguni jima     72.96 307 P        P        16 50 50.8 +0.5
YOJ                               pmax     pmax
      comp=Z,106nm,1.2s
YOJ   Yonaguni jima     72.96 307 P        P        16 50 50.8 +0.5
JNU   Nakatsue          73.16 318 P        P        16 50 51.7 +0.4
JNU                               IAmb     IAmb     16 52 01.1
      comp=Z,49nm,1.4s
TWG   Pinlang           73.46 304 P        P        16 50 51.3 -1.9
YULB  Yu-li             73.61 305 P        P        16 50 53.1 -1.0
YULB                              IAmb     IAmb     16 50 56.0
      comp=Z,54nm,1.8s
NACB  Ninganchiao       73.84 306 P        P        16 50 54.7 -0.7
NACB                              IAmb     IAmb     16 50 56.4
      comp=Z,65nm,1.1s
YUK   Yuzh-Kuril'sk     74.03 335⇓iP       P        16 50 57.0 +1.1
TPUB  Ta-pu             74.06 305 P        P        16 50 55.2 -1.5
TPUB                              IAmb     IAmb     16 50 57.0
      comp=Z,34nm,1.0s
SSLB  Suanglung         74.10 305 P        P        16 50 55.5 -1.4
SSLB                              IAmb     IAmb     16 50 57.7
      comp=Z,29nm,1.1s
YHNB  Yeheng            74.29 306 P        P        16 50 57.7 -0.3
YHNB                              IAmb     IAmb     16 50 59.3
      comp=Z,46nm,1.2s
TATO  Taipei            74.38 306 P        P        16 50 57.8 -0.6
ADK   Adak              74.96   2 P        P        16 51 00.6 -0.4
ADK                               pmax     pmax
      comp=Z,63nm,1.2s
ADK   Adak              74.96   2 P        P        16 51 00.6 -0.4
ADK                               IAmb     IAmb     16 51 02.1
      comp=Z,63nm,1.2s
GSTR  Great Sitkin T    75.20   2 P        P        16 51 02.7 +0.3
ATKA  Atka Island       75.40   4 P        P        16 51 03.7 +0.3
NIKH  Nikolski High     76.61   7 P        P        16 51 09.8 -0.3
SKR   Severo-Kuril’s    76.69 345⇓iP       P        16 51 09.9 -0.7
TJN   Taejon            77.49 319⇓iP       P        16 51 17.2 +1.9
YSS   Yuzh-Sakhalins    77.67 335⇓eP       P        16 51 17.8 +1.8
YSS                               e                 16 51 25.6
YSS                               e*PP     pwP      16 53 14.8 +1.1
YSS                               eS       S        17 00 26.8 +2.7
YSS                               e                 17 00 40.7
YSS                               pmax     pmax
      comp=Z,30nm,1.3s
YSS                               smax     smax
      comp=N,200nm,7.9s
YSS   Yuzh-Sakhalins    77.67 335 P        P        16 51 17.0 +1.0
YSS                               IAmb     IAmb     16 51 19.1
      comp=Z,42nm,1.1s
UNV   Unalaska Valle    77.75   8 P        P        16 51 16.1 -0.1
KSRS  Korea Array       77.87 320 P        P        16 51 18.4 +1.1
      comp=Z,6.1nm,0.9s,baz=139,slow=5.8,SNR=20
KSAR  Wonju Array Be    77.89 320 P        P        16 51 17.8 +0.4
KSAR  Wonju Array Be    77.89 320 P        P        16 51 17.8 +0.4
MYKOM Kota Tinggi       78.08 277 P        P        16 51 20.0 +1.0
AKUT  Akutan            78.13   8 P        P        16 51 17.8 -0.5
AKUT                              IAmb     IAmb     16 51 21.3
      comp=Z,108nm,1.4s
MAW   Mawson            78.28 200 P        P        16 51 20.6 +1.5
      comp=Z,7.1nm,0.5s,baz=136,slow=7.9,SNR=18
MAW   Mawson            78.28 200 P        P        16 51 19.3 +0.2
MAW                               pmax     pmax
      comp=Z,15nm,1.8s
MAW   Mawson            78.28 200 P        P        16 51 19.3 +0.2
PEA0B Petropavlovsk-    78.59 346⇓iP       P        16 51 21.5 +0.7
PETK  Petropavlovsk-    78.59 346 P        P        16 51 20.9 +0.1
      comp=Z,9.0nm,0.7s,baz=112,slow=8.2,SNR=14
PETK  Petropavlovsk-    78.59 346 P        P        16 51 20.9  0.0
MSHR  Mys Shultsa       79.61 326⇑iP       P        16 51 28.5 +2.0
VLA   Vladivostok       79.62 326⇑iP       P        16 51 27.4 +0.9
VLA                               pmax     pmax
      comp=Z,10.0nm,1.0s
CNBA  Chernabura Isl    79.79  12 P        P        16 51 27.1  0.0
CNBA                              IAmb     IAmb     16 53 08.9
      comp=Z,95nm,1.6s
USA0B Ussuriysk Arra    80.34 327⇑iP       P        16 51 31.5 +1.2
USA0B Ussuriysk Arra    80.34 327 P        P        16 51 30.6 +0.4
USA0B                             IAmb     IAmb     16 51 33.2
      comp=Z,33nm,1.2s
USRK  Ussuriysk Ar.     80.34 327 P        P        16 51 31.4 +1.2
      comp=Z,4.6nm,0.5s,baz=137,slow=3.9,SNR=21
USRK  Ussuriysk Ar.     80.34 327 P        P        16 51 30.8 +0.5
USRK  Ussuriysk Ar.     80.34 327 P        P        16 51 30.8 +0.5
NJ2   Nanjing           80.35 311 eP       P        16 51 32.0 +1.4
IPM   Ipoh              81.75 278 P        P        16 51 37.5 -0.8
IPM                               IAmb     IAmb     16 51 40.6
      comp=Z,13nm,0.6s
IPM   Ipoh              81.75 278 P        P        16 51 39.0 +0.7
MDJ   Mudanjiang        81.85 326 P        P        16 51 39.0 +1.0
MDJ   Mudanjiang        81.85 326 P        P        16 51 38.1 +0.1
MDJ                               IAmb     IAmb     16 51 40.8
      comp=Z,21nm,1.1s
ISA   Isabella, Lake    82.60  46 P        P        16 51 43.0 +0.9
ISA                               pmax     pmax
      comp=Z,8.0nm,1.0s
ISA   Isabella, Lake    82.60  46 P        P        16 51 43.0 +0.9
WHN   Wuhan             82.72 308 P        P        16 51 43.5 +0.7
CMB   Columbia Colle    82.76  43 P        P        16 51 43.2 +0.3
CMB                               pmax     pmax
      comp=Z,6.0nm,0.9s
CMB   Columbia Colle    82.76  43 P        P        16 51 43.2 +0.3
RPSI  Rantau Prapat     82.94 276 P        P        16 51 43.9 -0.5
AFDM  Forest Hills D    82.94  42 P        P        16 51 43.8  0.0
PSI   Prapat            82.99 276 P        P        16 51 43.9 -0.8
      comp=Z,3.9nm,0.7s,baz=182,slow=10.0,SNR=4.1
GSC   Goldstone, Bar    83.51  47 P        P        16 51 46.9 +0.2
GSC                               pmax     pmax
      comp=Z,6.0nm,0.6s
GSC   Goldstone, Bar    83.51  47 P        P        16 51 46.9 +0.2
SYO   Syowa Base        83.56 193⇓eP       P        16 51 44.8 -1.5
SYO   Syowa Base        83.56 193⇓ePcP     P        16 51 47.4 +1.1
SYO   Syowa Base        83.56 193⇑esP      sP       16 54 35.7 -0.2
WAKR  Walker            83.64  43 P        P        16 51 48.8 +1.4
WAKR                              IAmb     IAmb     16 51 50.0
      comp=Z,53nm,1.9s
TIA   Tai'an            83.90 314 P        P        16 51 50.0 +1.4
KLR   Kul'dur           84.09 331 P        P        16 51 50.0 +0.9
      comp=Z,2.3nm,0.8s,baz=145,slow=7.4
KLR   Kul'dur           84.09 331⇓iP       P        16 51 50.8 +1.6
KLR                               pmax     pmax
      comp=Z,6.0nm,1.3s
NVAR  Mina Array Bea    84.31  44 P        P        16 51 52.0 +1.2
      comp=Z,1.5nm,0.8s,baz=218,slow=7.5,SNR=9.1
NVAR  Mina Array Bea    84.31  44 P        P        16 51 50.3 -0.5
NV11  Mina Array Sit    84.41  44 P        P        16 51 51.6 +0.4
KVN   Kaiserville       84.81  44 P        P        16 51 53.5 +0.3
KVN                               pmax     pmax
      comp=Z,3.0nm,0.9s
KVN   Kaiserville       84.81  44 P        P        16 51 53.5 +0.3
SNAA  Sanae             85.21 179 P        P        16 51 54.2 -0.3
SNAA  Sanae             85.21 179⇓iP       P        16 51 53.5 -1.0
SNAA  Sanae             85.21 179 P        P        16 51 54.0 -0.5
SNAA                              IAmb     IAmb     16 53 59.3
      comp=Z,24nm,1.6s
VNA3  Neumayer Olymp    85.42 177 P        P        16 51 55.3 -0.1
VNA2  Neumayer--Watz    85.83 178 P        P        16 51 57.8 +0.3
      baz=192,slow=5.2
PINE  Pine Mountain     85.92  38 P        P        16 51 59.0 +0.5
PINE                              IAmb     IAmb     16 52 01.4
      comp=Z,46nm,1.6s
MA2   Magadan           86.07 346⇓iP       P        16 51 58.8 +0.3
MA2                               pmax     pmax
      comp=Z,16nm,1.0s
MA2   Magadan           86.07 346 P        P        16 51 58.2 -0.3
MA2                               IAmb     IAmb     16 51 59.4
      comp=Z,18nm,0.9s
VNA1  Neumayer--Stat    86.07 177 P        P        16 51 59.3 +0.7
ENH   Enshi             86.18 305 P        P        16 51 59.9 +0.1
ENH                               IAmb     IAmb     16 52 01.9
      comp=Z,21nm,1.0s
SVW2  Sparrevohn        86.43  12 P        P        16 52 00.2  0.0
SVW2                              IAmb     IAmb     16 52 03.1
      comp=Z,19nm,1.5s
BJI   Beijing           86.68 316 P        P        16 52 04.0 +2.2
BJI                               S        S        17 01 58.3 +4.0
X16A  Lo Mia Camp, P    86.74  50 P        P        16 52 00.7 -1.9
GAMB  Gambell           87.08   4 P        P        16 52 03.3 +0.2
J08A  Circle Bar Ran    87.09  40 P        P        16 52 03.1 -0.8
J08A                              IAmb     IAmb     16 52 06.1
      comp=Z,38nm,1.8s
U15A  North Rim         87.19  48 P        P        16 52 04.5 -0.2
ELK   Elko              87.58  43 P        P        16 52 06.9 +0.5
      comp=Z,0.8nm,0.5s,baz=264,slow=8.9,SNR=4.4
ELK   Elko              87.58  43 P        P        16 52 06.9 +0.5
ELK                               pmax     pmax
      comp=Z,3.0nm,1.1s
ELK   Elko              87.58  43 IAmb     IAmb     16 52 09.3
      comp=Z,2.5nm,1.1s
RC01  Rabbit Creek A    87.62  14 P        P        16 52 06.2 +0.4
RC01                              IAmb     IAmb     16 52 06.8
      comp=Z,26nm,1.3s
G08A  Pilot Rock        87.96  38 P        P        16 52 08.0 +0.1
G08A                              IAmb     IAmb     16 52 10.2
      comp=Z,14nm,1.4s
MTPU  Mount Pierson     88.11  47 P        P        16 52 08.7 -0.4
GHO   Glory Hole Cre    88.41  14 P        P        16 52 09.4 -0.1
GHO                               IAmb     IAmb     16 52 11.2
      comp=Z,16nm,0.9s
XAN   Xi'an             88.46 308 P        P        16 52 11.8 +1.4
PLCA  Paso Flores       88.60 134 P        P        16 52 11.4 +0.3
      comp=Z,2.1nm,0.6s,baz=49,slow=3.5,SNR=10.0
PLCA  Paso Flores       88.60 134 P        P        16 52 11.5 +0.3
PLCA                              pmax     pmax
      comp=Z,20nm,1.7s
PLCA  Paso Flores       88.60 134 IAmb     IAmb     16 53 35.0
      comp=Z,20nm,1.7s
MFID  Camas Ranch       88.70  41 P        P        16 52 11.4  0.0
SEY   Seymchan          88.75 348⇓iP       P        16 52 11.6 +0.6
Q16A  Castle Valley     89.24  47 P        P        16 52 13.7 -0.5
ZEA   Zeya              89.26 332 eP       P        16 52 14.1 +0.5
ZEA                               pmax     pmax
      comp=Z,15nm,1.0s
CMAR  Chiang Mai Arr    89.40 290 P        P        16 52 17.4 +2.3
      comp=Z,9.1nm,1.1s,baz=132,slow=3.0,SNR=35
CMAR                              pP       pP       16 54 12.8 +1.2
      comp=Z,1.0nm,0.9s,baz=131,slow=3.4,SNR=2.1
CMAR  Chiang Mai Arr    89.40 290 P        P        16 52 14.6 -0.5
CMAR  Chiang Mai Arr    89.40 290 P        P        16 52 14.6 -0.5
TMUT  Trail Mountain    89.42  46 P        P        16 52 15.6 +0.5
MCARA McCarthy VSAT     89.52  17 P        P        16 52 15.5 +0.8
MCARA                             IAmb     IAmb     16 52 17.9
      comp=Z,25nm,1.2s
CHTO  Chiang Mai        89.55 291 P        P        16 52 16.3 +0.6
CHTO                              pmax     pmax
      comp=Z,16nm,1.2s
CHTO  Chiang Mai        89.55 291 P        P        16 52 16.3 +0.6
CHTO                              IAmb     IAmb     16 52 19.1
      comp=Z,16nm,1.2s
TRF   Thorofare Moun    89.61  13 P        P        16 52 14.4 -0.8
TRF                               IAmb     IAmb     16 52 15.5
      comp=Z,20nm,1.3s
BARN  Barnard Glacie    89.62  18 P        P        16 52 15.6 +0.2
BARN                              IAmb     IAmb     16 52 16.9
      comp=Z,27nm,1.4s
SRU   San Rafael Swe    89.78  47 P        P        16 52 16.6  0.0
SRU                               pmax     pmax
      comp=Z,8.0nm,1.0s
SRU   San Rafael Swe    89.78  47 P        P        16 52 16.6  0.0
RND   Reindeer          89.87  13 P        P        16 52 16.4 +0.1
RND                               pmax     pmax
      comp=Z,17nm,1.2s
RND   Reindeer          89.87  13 P        P        16 52 16.4 +0.1
RND                               IAmb     IAmb     16 52 18.2
      comp=Z,17nm,1.2s
HHC   Hu-ho-hao-te      90.08 315 eP       P        16 52 17.5 -0.4
TX31  Lajitas Ar. Si    90.09  58 P        P        16 52 18.8 +0.6
TX32  Lajitas Array     90.09  58 P        P        16 52 18.5 +0.3
TXAR  Lajitas Array     90.09  58 P        P        16 52 19.7 +1.5
      comp=Z,1.9nm,0.8s,baz=210,slow=6.6,SNR=18
TXAR  Lajitas Array     90.09  58 P        P        16 52 18.9 +0.7
TXAR  Lajitas Array     90.09  58 P        P        16 52 18.9 +0.7
MCK   McKinley          90.14  13 P        P        16 52 17.4  0.0
MCK                               pmax     pmax
      comp=Z,8.0nm,1.0s
MCK   McKinley          90.14  13 P        P        16 52 17.4  0.0
MCK                               IAmb     IAmb     16 52 20.6
      comp=Z,8.5nm,1.0s
CD2   Chengdu           90.84 303 P        P        16 52 23.8 +2.3
WRH   Wood River Hil    90.97  13 P        P        16 52 19.9 -1.3
WRH                               IAmb     IAmb     16 52 22.3
      comp=Z,14nm,1.4s
CCB   Clear Creek Bu    91.18  13 P        P        16 52 21.3 -0.9
BCAR  Beaver Creek A    91.25  16 P        P        16 52 22.4 -0.3
IMAR  Indian Mountai    91.26  10 P        P        16 52 22.4 -0.2
ILAR  Eielson Array     91.49  14 P        P        16 52 23.1 -0.6
      comp=Z,0.7nm,0.8s,baz=219,slow=5.1,SNR=8.9
ILAR                              pP       pP       16 54 20.4 -0.9
      comp=Z,1.2nm,1.1s,baz=230,slow=5.6,SNR=3.3
ILAR  Eielson Array     91.49  14 P        P        16 52 22.4 -1.2
ILAR  Eielson Array     91.49  14 P        P        16 52 22.4 -1.2
BILL  Bilibino          91.69 355⇓iP       P        16 52 25.1 +0.6
BILL                              pmax     pmax
      comp=Z,7.0nm,1.0s
FXWY  Fox Creek         91.77  43 P        P        16 52 25.8  0.0
PDAR  Pinedale Array    92.25  44 P        P        16 52 28.3 +0.3
      comp=Z,0.8nm,0.7s,baz=204,slow=2.4,SNR=7.6
PDAR  Pinedale Array    92.25  44 P        P        16 52 27.4 -0.6
LZH   Lanzhou           93.09 308 eP       P        16 52 32.5 +0.6
LZH                               pP       pP       16 54 30.3 +1.4
LZH                               sP       sP       16 55 17.5 -4.6
YAK   Yakutsk           94.09 339⇑iP       P        16 52 35.7 +0.1
YAK                               pmax     pmax
      comp=Z,7.0nm,1.0s
SONM  Songino Array     96.73 319 P        P        16 52 48.6 +0.5
      comp=Z,0.7nm,0.8s,baz=132,slow=2.2,SNR=5.0
SONM                              PP       PP       16 56 50.0 -2.3
      comp=Z,1.2nm,0.9s,baz=124,slow=7.9,SNR=4.1
SONM                              PKKPbc   PKKPbc   17 09 28.6 -0.8
      comp=Z,0.6nm,0.5s,baz=295,slow=3.9,SNR=3.8
SONM  Songino Array     96.73 319 P        P        16 52 47.4 -0.7
SONM                              pmax     pmax
      comp=Z,4.0nm,1.6s
SONM  Songino Array     96.73 319 P        P        16 52 47.4 -0.7
NDI   New Delhi        111.58 293 eP       Pdif     16 53 49.0 -5.4
MK31  Makanchi Array   111.83 313⇑iPKIKP   PKiKP    16 57 48.2 -0.7
MKAR  Makanchi Array   111.83 313 PKiKP    PKiKP    16 57 47.9 -1.0
      comp=Z,0.5nm,0.4s,baz=163,slow=0.5,SNR=14
MKAR                              PKKPbc   PKKPbc   17 08 43.6 -0.5
      comp=Z,0.4nm,0.8s,baz=281,slow=1.9,SNR=3.9
MKAR  Makanchi Array   111.83 313 i PKIKP  PKiKP    16 57 47.6 -1.4
MKAR                                                17 08 42.5
MKAR  Makanchi Array   111.83 313          PKiKP    16 57 47.6 -1.4
MKAR                                       PKKPbc   17 08 42.5 -1.7
KURK  Kurchatov        114.85 317⇑iPKIKP   PKPdf    16 57 53.7 -0.8
KURK  Kurchatov        114.85 317          PKKPbc   17 08 35.8 +1.7
KURBB Kurchatov Arra   114.90 317 PKKPbc   PKKPbc   17 08 35.8 +1.8
      comp=Z,0.3nm,0.4s,baz=282,slow=4.8,SNR=4.2
KSH   Kashi            115.02 304 PKP      PKPdf    16 57 53.8 -1.6
KSH                               PP       PP       16 59 09.8 +4.6
KSH                               sPKP              17 00 52.8
KSH                               SKS      SKSdf    17 04 14.0 -2.9
KSH                               SKKS     SKKSac   17 05 06.5 -3.9
AAK   Ala-Archa        116.62 307 PKKPbc   PKKPbc   17 08 28.6 +0.5
      comp=Z,1.5nm,0.6s,baz=233,slow=3.0,SNR=8.0
PTGA  Pitinga          117.00 104 PKP      PKPdf    16 57 58.3 -1.5
      comp=Z,1.1nm,0.3s,baz=315,slow=19
GAR   Garm             119.28 303          PKPdf    16 58 03.1 -0.5
KKAR  Karatay Array    119.59 307 PKIKP    PKPdf    16 58 03.0 -1.0
KKAR  Karatay Array    119.59 307          PKPdf    16 58 03.0 -1.0
BVAR  Borovoye Array   120.07 319 PKP      PKPdf    16 58 03.8 -0.7
      comp=Z,2.1nm,0.4s,baz=127,slow=1.9,SNR=41
BVAR                              PKKPbc   PKKPbc   17 08 15.2 -0.7
      comp=Z,0.2nm,0.4s,baz=255,slow=5.7,SNR=4.3
BRVK  Borovoye         120.14 319⇑iPKIKP   PKPdf    16 58 04.6 -0.1
BRVK  Borovoye         120.14 319          PKPdf    16 58 03.5 -1.1
SCHQ  Schefferville    122.01  39 PKP      PKPdf    16 58 07.0 -1.2
      comp=Z,1.7nm,0.5s,baz=262,slow=4.8,SNR=3.8
BOSA  Boshof           122.92 206 PKP      PKiKP    16 58 11.4 +0.1
      comp=Z,1.4nm,0.5s,baz=167,slow=2.2,SNR=4.5
ARU   Arti             126.48 324 PKP      PKPdf    16 58 16.4 -0.3
      comp=Z,1.9nm,0.4s,baz=73,slow=3.3,SNR=12
ARU   Arti             126.48 324 i PKIKP  PKiKP    16 58 17.8 +0.6
ARU                                                 17 00 22.9
ARU                                                 17 04 37.3
ARU                               SS       SS       17 16 45.5 +1.1
ARU   Arti             126.48 324          PKPdf    16 58 15.8 -0.9
ABKAR Akbulak array    126.87 315          PKPdf    16 58 17.1 -0.5
AKTO  Aktyubinsk       127.95 317 PKP      PKPdf    16 58 19.8 +0.1
      comp=Z,1.2nm,0.5s,baz=63,slow=3.7,SNR=4.8
GEYT  Alibeck          128.75 301 SKPbc    SKPbc    17 00 53.4
      comp=Z,2.1nm,0.6s,baz=153,slow=1.3,SNR=5.2
ARCES ARCESS Array B   131.37 348 PKhKP    PKPpre   16 58 16.9
      comp=Z,3.9nm,1.0s,baz=40,slow=2.1,SNR=7.4
ARCES                             PKP      PKPdf    16 58 25.8 +0.1
      comp=Z,1.6nm,0.5s,baz=29,slow=1.5,SNR=14
ARCES                             SKPbc    SKPab    17 01 01.6 -0.4
      comp=Z,6.6nm,0.9s,baz=40,slow=6.4,SNR=5.3
KMBO  Kilima Mbogo     136.42 241 SKPbc    SKPbc    17 01 21.5 +2.2
      comp=Z,2.2nm,0.8s,baz=102,slow=2.2,SNR=5.9
KMBO  Kilima Mbogo     136.42 241          SKPdf    17 01 22.0 +0.6
FINES FINESS Array B   137.95 342 PKhKP    PKPpre   16 58 28.4
      comp=Z,1.1nm,0.4s,baz=60,slow=3.4,SNR=12
FINES                             PKP      PKPdf    16 58 38.0  0.0
      comp=Z,1.5nm,0.4s,baz=86,slow=2.2,SNR=14
FINES                             SKPbc    SKPbc    17 01 21.9 +0.1
      comp=Z,4.0nm,0.5s,baz=56,slow=2.8,SNR=18
NB2   NORSAR Subarra141.55 351 PKP      PKPdf    16 58 39.5 -5.2
      comp=Z,1.0nm,0.4s,baz=12,slow=3.1
NOA   NORSAR Array B 141.55 351 PKhKP    PKPpre   16 58 39.8
      comp=Z,1.0nm,0.4s,baz=14,slow=4.5,SNR=11
NOA                               SKPbc    SKPbc    17 01 31.8 +0.3
      comp=Z,0.8nm,0.5s,baz=14,slow=4.1,SNR=4.4
KONO  Kongsberg        143.11 352 PKHKP    PKPpre   16 58 44.6
KONO  Kongsberg        143.11 352 PKPpre   PKPpre   16 58 44.6
AKASG Malin Array Be   144.55 328 PKP      PKPdf    16 58 49.6 -0.5
      comp=Z,5.1nm,0.4s,baz=44,slow=4.0,SNR=36
AKASG                             SKPbc    SKiKP    17 01 39.4 -0.1
      comp=Z,3.6nm,0.6s,baz=43,slow=2.9,SNR=9.4
AKASG Malin Array Be   144.55 328          SKPbc    17 01 38.6 -0.2
SUW   Suwalki          144.79 336 ePKP     PKPab    16 58 51.5 -0.1
SUW   Suwalki          144.79 336 PKIKP    PKPbc    16 58 50.9 -0.1
SUW   Suwalki          144.79 336          PKPbc    16 58 50.9 -0.1
GAZ   Gaziantep        145.32 302 PKPdf    PKPdf    16 58 51.3 -0.8
BSD   Bornholm Skovb   146.41 345 i P      PKPbc    16 58 55.9 +0.3
      comp=Z,5.6nm,0.4s
BSD   Bornholm Skovb   146.41 345 i PKP2   PKPbc    16 58 55.9 +0.3
BSD                               pmax     pmax
      comp=Z,6.0nm,0.4s
SORM  Soroca           146.60 325 ⇑P       PKPbc    16 58 55.8 -0.5
ILGA  Ilgaz            146.77 310 PKPbc    PKPdf    16 58 55.7 +1.1
LLD   Lille Linde      146.81 347 i P      PKPdf    16 58 54.8 +0.9
LLD   Lille Linde      146.81 347 i PKIKP  PKPdf    16 58 54.8 +0.9
BR131 Keskin Array S   147.30 308 PKP2     PKPbc    16 58 58.4 -0.3
BR131 Keskin Array S   147.30 308          PKPbc    16 58 58.4 -0.3
BRTR  Keskin Array B   147.30 308 PKPbc    PKPbc    16 58 58.2 -0.5
      comp=Z,2.5nm,0.5s,baz=146,slow=5.4,SNR=15
BRTR  Keskin Array B   147.30 308 PKP2     PKPbc    16 58 58.7  0.0
BRTR  Keskin Array B   147.30 308 PKPbc    PKPbc    16 58 58.7  0.0
BEL   Belsk            147.40 336 ePKP     PKiKP    16 58 59.4 -0.6
BEL   Belsk            147.40 336 ePKP2    PKiKP    16 58 59.4 -0.6
TLCR                   148.05 320 ⇑P       PKPbc    16 58 59.8 -0.4
KWP   Kalwaria Pacla   148.32 332 ePKP     PKPbc    16 59 01.1 +0.3
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KWP	Kalwaria Pacla	148.32	332	ePKP2	PKPbc	16 59 01.1	+0.3
KWP	Kalwaria Pacla	148.32	332		PKPbc	16 59 00.9	+0.2
CFR	Carcaliu	148.46	321	⇑P	PKiKP	16 59 01.9	-0.5
TOPG	Topolog	148.48	320	⇑P	PKiKP	16 59 02.2	-0.2
BSEG	Bad Segeberg	148.50	348	ePKPbc	PKiKP	16 59 02.0	-0.2
	baz=20,slow=2.2						
BUR08	Bucovina Ar. S	148.54	327		PKPbc	16 59 01.4	-0.2
BURAR	Bucovina Array	148.55	327	⇑P	PKiKP	16 59 02.8	+0.1
BURAR	Bucovina Array	148.55	327	PKPbc	PKPbc	16 59 01.8	+0.3
HARR	Harsova	148.85	320	⇑P	PKPbc	16 59 02.6	+0.4
VRI	Vrincioaia	148.86	323	⇑P	PKPbc	16 59 02.5	+0.3
CSS	Mathiatis	148.88	299		PKPbc	16 59 02.8	+0.2
PLOR	Plostina	148.91	323	⇑P	PKPab	16 59 08.4	-0.2
OJC	Ojcow	149.07	335	ePKP	PKPbc	16 59 02.8	+0.2
OJC	Ojcow	149.07	335		PKPbc	16 59 02.6	+0.1
UZH	Uzhgorod	149.24	331	ePKP2	PKiKP	16 59 03.8	-0.1
TRPA	Tarpa	149.50	330	⇑P	PKiKP	16 59 04.2	-0.2
NIE	Niedzica	149.50	334	ePKP	PKiKP	16 59 04.5	0.0
MLR	Muntele Rosu	149.52	323	⇑P	PKiKP	16 59 04.5	-0.3
MLR	Muntele Rosu	149.52	323		PKPbc	16 59 03.6	-0.4
DOPR	Dopca	149.53	324	⇑P	PKiKP	16 59 04.4	-0.2
KSP	Ksiaz	149.80	339	ePKP	PKiKP	16 59 04.9	-0.1
NRDL	Niedersach Rie	149.91	348	ePKPbc	PKiKP	16 59 05.1	+0.1
	baz=20,slow=2.2						
OKC	Ostrava-Krasne	150.01	336	⇑ePKP	PKiKP	16 59 06.1	+0.7
OKC				ePKPAB	PKPab	16 59 13.9	+1.0
OSTC	Ostas	150.07	339	⇑ePKP	PKiKP	16 59 05.8	+0.2
ASSE	Asse, Remlinge	150.14	347	ePKPbc	PKiKP	16 59 05.7	+0.2
	baz=20,slow=2.2						
DPC	Dobruska-Polom	150.22	339	⇑ePKP	PKiKP	16 59 05.8	-0.1
DPC				ePKPAB	PKPab	16 59 14.5	+0.7
DPC	Dobruska-Polom	150.22	339	ePKIKP	PKiKP	16 59 05.8	-0.1
DPC				e		16 59 14.5	
MORC	Moravsky Berou	150.28	337	⇑P	PKiKP	16 59 06.5	+0.5
MORC	Moravsky Berou	150.28	337	PKIKP	PKPbc	16 59 05.4	-0.1
MORC	Moravsky Berou	150.28	337	ePKP	PKiKP	16 59 06.0	-0.1
MORC				e		16 59 14.8	
MORC	Moravsky Berou	150.28	337		PKPbc	16 59 05.4	-0.1
KRLC	Kraliky	150.29	338	⇑ePKP	PKPbc	16 59 04.8	-0.8
KRLC				ePKPAB	PKPab	16 59 15.3	+1.1
KRLC	Kraliky	150.29	338	ePKIKP	PKPbc	16 59 04.8	-0.8
KRLC				e		16 59 15.3	
ARR	Arges	150.32	324	⇑P	PKiKP	16 59 06.8	+0.5
CLL	Collm	150.35	344	⇑iPKPbc	PKiKP	16 59 06.6	+0.5
	comp=Z,24nm,1.1s						
CLL				i PKPab	PKPab	16 59 15.9	+1.6
	comp=Z,16nm,1.1s						
CLL				epPKPbc	pPKPbc	17 01 10.0	+0.6
CLL				epPKPab	pPKPab	17 01 15.0	+1.7
CLL	Collm	150.35	344	PKIKP	PKPbc	16 59 05.7	+0.1
CLL	Collm	150.35	344		PKPbc	16 59 05.7	+0.1
CLZ	Clausthal	150.47	347	ePKPbc	PKiKP	16 59 06.4	0.0
	baz=20,slow=2.2						
BRG	Berggiesshubel	150.49	342	ePKP	PKPdf	16 59 00.3	+0.4
	comp=Z,13nm,1.6s						
BRG	Berggiesshubel	150.49	342	i PKP	PKiKP	16 59 06.2	-0.2
	comp=Z,15nm,0.6s						
BRG	Berggiesshubel	150.49	342	ePKP	PKPab	16 59 13.7	-1.2
	comp=Z,20nm,1.4s						
BRG				epPKP	pPKPbc	17 01 11.6	+1.9
	comp=Z,5.1nm,1.0s						
BRG				eSKP		17 01 51.7	
	comp=Z,2.6nm,1.0s						
BRG	Berggiesshubel	150.49	342	ePKPbc	PKiKP	16 59 06.6	+0.2
	baz=20,slow=2.2						
BRG	Berggiesshubel	150.49	342	ePKIKP	PKPdf	16 59 00.3	+0.4
BRG				pmax	pmax		
	comp=Z,13nm,1.6s						
IBBN	Ibbenburen	150.50	350	ePKPbc	PKiKP	16 59 06.3	0.0
	baz=20,slow=2.2						
IBBN				ePKPab	PKPab	16 59 15.5	+0.6
	baz=19,slow=4.3						
FBE	Freiberg	150.61	343	ePKPbc	PKiKP	16 59 07.1	+0.4
	baz=20,slow=2.2						
FBE				ePKPab	PKPab	16 59 16.4	+1.0
	baz=19,slow=4.3						
PVCC	Panska Ves	150.61	341	⇑ePKP	PKiKP	16 59 06.6	-0.1
PVCC	Panska Ves	150.61	341	ePKIKP	PKiKP	16 59 06.6	-0.1
VYHS	Vyhne	150.83	334	ePKIKP	PKPbc	16 59 06.8	0.0
VYHS				e		16 59 17.2	
VYHS	Vyhne	150.83	334	ePKP	PKPbc	16 59 06.8	0.0
VYHS				e		16 59 17.2	
GTTG	Gottingen	150.84	347	ePKPab	PKPab	16 59 17.0	+0.7
	baz=19,slow=4.3						
JAVC	Velka Javorina	150.99	336	ePKP	PKiKP	16 59 08.8	+1.2
JAVC				e		16 59 18.9	
VRAC	Vranov	151.01	337	⇑P	PKPab	16 59 18.5	+1.4
VRAC	Vranov	151.01	337	ePKP	PKiKP	16 59 07.8	+0.3
VRAC				e		16 59 18.3	
ELND	Elena	151.07	319	⇑P	PKiKP	16 59 08.2	+0.4
PRU	Pruhonice	151.10	341	⇑ePKP	PKPbc	16 59 07.3	0.0
PRU	Pruhonice	151.10	341	ePKIKP	PKPbc	16 59 07.3	0.0
SIRR	Siria	151.25	328	⇑P	PKiKP	16 59 08.0	-0.1
KRUC	Moravsky	151.29	337	ePKP	PKiKP	16 59 07.9	-0.2
KRUC				e		16 59 18.8	
GZR	Gura Zlata	151.29	326	⇑P	PKPbc	16 59 07.0	-1.0
TANN	Tannenbergstha	151.31	343	ePKPbc	PKiKP	16 59 08.1	-0.1
	baz=20,slow=2.2						
TANN				ePKPab	PKPab	16 59 18.6	+0.2
	baz=19,slow=4.3						
MOX	Moxa	151.31	345	ePKPbc	PKPbc	16 59 07.8	0.0
	baz=20,slow=2.2						
MOX				ePKPab	PKPab	16 59 18.6	+0.2
	baz=19,slow=4.3						
MOX				epPKPbc	pPKPab	17 01 17.8	+0.5
PLN	Plauen	151.32	344	ePKPab	PKPab	16 59 19.1	+0.6
	baz=19,slow=4.3						
GUNZ	Gunzen	151.39	344	ePKPab	PKPab	16 59 19.6	+0.9
	baz=19,slow=4.3						
WERN	Wernitzgruen	151.45	343	ePKPbc	PKiKP	16 59 08.8	+0.3
	baz=20,slow=2.2						
WERN				ePKPab	PKPab	16 59 20.0	+1.0
	baz=19,slow=4.3						
UBBA	Unterbreizbach	151.52	347	ePKPbc	PKiKP	16 59 09.0	+0.6
	baz=20,slow=2.2						
MODS	Modra-Piesok	151.54	336	ePKP	PKPab	16 59 20.1	+0.7
BZS	Buzias	151.73	327	⇑P	PKPbc	16 59 08.1	-0.8
MANZ	Manzenberg	151.79	343	ePKPbc	PKiKP	16 59 09.5	+0.4
	baz=20,slow=2.2						
HERR	Herculane	151.83	325	⇑P	PKPbc	16 59 09.0	-0.1
KHC	Kasperske Hory	152.15	341	⇑ePKP	PKiKP	16 59 10.0	+0.1
KHC				ePKPAB	PKPab	16 59 22.4	+0.4
KHC				ex	x	17 01 19.0	
KHC	Kasperske Hory	152.15	341	ePKIKP	PKiKP	16 59 10.0	+0.1
KHC				e		16 59 22.4	
MDVR	Moldovita	152.26	326	⇑P	PKiKP	16 59 10.9	+0.6
GRF	Grafenberg Arr	152.29	344	ePKPab	PKPab	16 59 23.5	+0.9
	baz=19,slow=4.3						
GERES	GERESS Array B	152.37	340	PKPbc	PKiKP	16 59 10.6	+0.1
	comp=Z,0.5nm,0.4s,baz=96,slow=1.3,SNR=7.6						
GERES				PKPab	PKPab	16 59 23.3	+0.3
	comp=Z,0.5nm,0.4s,baz=41,slow=5.5,SNR=5.2						
GERES				pPKPbc	pPKPbc	17 01 15.3	+0.9
	comp=Z,1.2nm,0.9s,baz=90,slow=5.3,SNR=3.4						
CONA	Conrad Observa	152.43	337	ePKPab	PKPab	16 59 24.7	+1.4
	comp=Z,8.1nm,0.8s						
VTS	Vitosha	152.82	321	⇑P	PKPab	16 59 27.2	+1.9
VTS	Vitosha	152.82	321	PKIKP	PKPbc	16 59 11.4	-0.2
VTS	Vitosha	152.82	321	PKPbc	PKPbc	16 59 11.4	-0.2
RJOB	Jochberg	153.63	340	ePKPab	PKPab	16 59 29.5	+1.1
	baz=19,slow=4.3						
FUR	Furstenfeldbru	153.68	343	ePKPab	PKPab	16 59 29.5	+0.9
	baz=19,slow=4.3						
SOKA	Soboth	153.79	336	ePKPab	PKPab	16 59 30.0	+0.8
	comp=Z,2.3nm,0.5s						
WATA	Walderalm	154.35	342	i PKPab	PKPab	16 59 32.6	+1.0
	comp=Z,4.1nm,0.5s						
WTTA	Wattenberg	154.40	342	i PKPab	PKPab	16 59 33.0	+1.1
	comp=Z,3.3nm,0.4s						
RETA	Reutte	154.44	343	i PKPab	PKPab	16 59 32.8	+0.9
	comp=Z,5.5nm,0.6s						
MOTA	Moosalm	154.48	342	ePKPab	PKPab	16 59 32.9	+0.8
	comp=Z,4.7nm,0.6s						
SQTA	Sankt Quirin	154.56	342	ePKPab	PKPab	16 59 33.5	+1.0
	comp=Z,6.7nm,0.9s						
ABTA	Abfaltersbach	154.60	340	ePKPab	PKPab	16 59 32.5	-0.1
	comp=Z,7.8nm,1.2s						
DAVA	Damuels	154.86	344	i PKPab	PKPab	16 59 30.7	-3.1
	comp=Z,12nm,1.3s						
NRCA	Norcia	157.76	334		PKPab	16 59 46.9	+0.5
LIC	Lamto	162.28	163	ePKP1	PKPab	17 00 07.9	+1.3
	comp=Z,12nm,0.6s						
KIC	Kosan Boka	162.48	164	ePKP1	PKPab	17 00 08.2	+0.7
	comp=Z,10.0nm,0.6s						
TIC	Toumodi	162.68	163	ePKP1	PKPab	17 00 09.0	+0.6
DBIC	Dimbokro	162.75	163	PKP	PKPdf	16 59 15.6	-0.9
	comp=Z,2.3nm,0.7s,baz=206,slow=4.2,SNR=4.4						
DBIC				PKPab	PKPab	17 00 09.6	+0.9
	comp=Z,8.4nm,1.0s,baz=155,slow=4.7,SNR=4.4						
DBIC	Dimbokro	162.75	163	PKP2	PKPab	17 00 09.6	+0.9
DBIC						17 59 15.6	
TOA0	Torodi Ar. Sit	169.73	189		PKPab	17 00 38.9	-0.5
TORD	Torodi Ar. Bea	169.73	189	PKP	PKPdf	16 59 20.8	-1.1
	comp=Z,0.9nm,0.6s,baz=71,slow=0.5,SNR=5.2						
TORD				PKPab	PKPab	17 00 39.1	-0.3
	comp=Z,2.1nm,0.6s,baz=168,slow=5.4,SNR=11						
TORD	Torodi Ar. Bea	169.73	189	PKPdf	PKPdf	16 59 20.5	-1.4
TORD					PKPab	17 00 38.9	-0.5

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*TIR **25** 16:47:49.6, 42˚42N×20˚05E, h3^{km}, Md2.6/4*
*RHSSO **25** 16:47:52.1±2.1, 42˚36N×20˚05E, h0^{km}, ML0.0*
*BEO **25** 16:47:53.0±0.3, 42˚39N×19˚98E, h13^{km}±3^{km}, ML2.3/8*
ISC 25 16:47:52.5±1.2, **42˚42N**±0˚02×**20˚00E**±0˚02, **h1**^{km}±11^{km}, **n32**, σ**1^{s}90**/49, **Northwestern Balkan Peninsula**
PDG 25 16:47:52.0±0.2, **42˚38N**×**20˚04E**, **h15**^{km}, **MD2.5**/1, **ML2.4**/12, **Error ellipse: s-maj=0.2km s-min=0.3km az=0.0**, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUK	Puka	0.39	192	i PG	Pg	16 47 58.1	-1.7
PUK				i SG	Sg	16 48 03.9	-0.9
PDG	Podgorica	0.55	271	ePg	Pg	16 48 02.6	-0.5
PDG				eSg	Sb	16 48 11.8	-1.6
PDG	Podgorica	0.55	271	ePg	Pg	16 48 02.6	-0.5
DRME	Dracevica, Mon	0.65	249	ePg	Pg	16 48 03.9	-1.0
PHP	Peshkopia	0.80	156	i PG	Pn	16 48 14.4	+3.4
PHP				i SG	Sn	16 48 26.9	+3.2
SJES	Sjenica	0.84	359	ePg	Pg	16 48 08.6	0.0
SJES				eSg	Sg	16 48 21.0	+1.5
TIR	Tirane	1.08	186	ePg	Pb	16 48 12.5	-1.4
TIR	Tirane	1.08	186	i PG	Pn	16 48 20.3	+5.6
TIR				i SG	Sn	16 48 36.6	+6.4
HCY	Herceg Novi	1.12	272	ePn	Pb	16 48 12.8	-1.8
UPM	Unac-Piva	1.12	314	ePn	Pb	16 48 14.7	-0.2
SELS	Selova	1.15	45	ePg	Pn	16 48 13.9	-1.8
SELS				eSg	Sb	16 48 30.0	-0.5
SKO	Skopje	1.16	112	ePg	Pb	16 48 14.0	-1.3
SKO				eSg	Sb	16 48 29.5	-1.3
SKO	Skopje	1.16	112	i Pg	Pb	16 48 14.4	-0.8
SKO				eSg	Sn	16 48 31.0	-1.3
IVAS	Ivanjica	1.16	5	ePg	Pn	16 48 13.9	-2.1
IVAS				eSg	Sg	16 48 31.3	+1.5
BRY	Bratogost	1.18	295	ePn	Pn	16 48 13.8	-2.5
TREB	Trebinje	1.26	284	ePg	Pn	16 48 15.9	-1.3
TREB				eSg	Sn	16 48 33.1	-1.7
TREB	Trebinje	1.26	284	ePn	Pn	16 48 15.6	-1.6
RUDO	Rudo	1.28	339	ePn	Pn	16 48 15.8	-1.8
DBRK	Dubrovnik	1.39	281	ePn	Pg	16 48 19.5	+0.3
DBRK				Sn	Sg	16 48 42.0	+4.8
BARS	Barje	1.40	73	ePg	Pn	16 48 17.7	-1.4
BARS				eSg	Sg	16 48 38.3	+1.0
OHR	Ohrid	1.44	155	i Pg	Pg	16 48 19.8	-0.2
OHR				eSg	Sg	16 48 38.7	+0.1
BBLS	Lazići	1.51	343	ePn	Pb	16 48 20.9	-0.5
BBLS				eSg	Sg	16 48 42.3	+1.3
BBLS	Lazići	1.51	343	ePn	Pn	16 48 20.2	-0.6
GRUS	Gruza	1.56	19	ePn	Pn	16 48 21.5	+0.1
GRUS				eSg	Sb	16 48 42.7	+0.3
DIVS	Divibare	1.68	360	ePn	Pb	16 48 24.3	+0.1
BOVS	Bovan	1.74	45	ePn	Pn	16 48 22.8	-1.1
BOVS				eSg	Sg	16 48 50.8	+2.4
STON	Ston	1.76	286	ePn	Pb	16 48 25.6	+0.1
STON				Sn	Sg	16 48 51.6	+2.7
STON	Ston	1.76	286	ePn	Pb	16 48 25.2	-0.3
TRUS	Trudelj	1.83	9	ePn	Pn	16 48 24.7	-0.4
BOSS	Bosilegrad	1.83	87	ePn	Pn	16 48 23.7	-1.5
ZAPS	Zavoj	2.12	65	ePn	Pn	16 48 28.8	-0.2
ZAPS				eSg	Sg	16 49 02.3	+1.9
ZAGS	Zajecar	2.15	49	ePn	Pn	16 48 28.0	-1.4

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*ANF **25** 16:55:33.9±0.6, 44˚48N×114˚15W, h0^{km}, ML4.1/7, Error ellipse: s-maj=8.0km s-min=5.3km az=30.0*
*IDC **25** 16:55:34.8±0.6, 44˚61N×114˚39W, h0^{km}, mb3.9/4, mb1 4.0/12, mb1mx3.6/74, mbtmp3.7/12, ML3.6/7, MS2.6/5, Ms1 2.6/5, ms1mx2.5/58, Error ellipse: s-maj=10.3km s-min=7.7km az=64.0*
*NEIC **25** 16:55:35.8±1.4, 44˚65N±0˚04×114˚31W±0˚05, h5^{km}±2^{km}, Mwr3.7/66, Error ellipse: s-maj=7.6km s-min=5.1km az=141.0*
*NEIC **25** 16:55:35.8, 44˚65N×114˚31W, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.89; $M_{\theta\theta}$1.96; $M_{\phi\phi}$-0.07; $M_{r\theta}$0.63; $M_{\theta\phi}$-3.92; $M_{\phi r}$2.85; Fault plane solution: $M_0$5.25000×10^{14} NP1:ϕ_s166.03000°, δ72.00000°, λ-37.82000°. NP2:ϕ_s269.52000°, δ54.33000°, λ-157.64000°. Principal axes: T 5.2433, Plg11.0000°, Azm221.0000°; N 0.0169, Plg49.0000°, Azm324.0000°; P -5.2602, Plg39.0000°, Azm122.0000°;*
ISC 25 16:55:35.4±0.7, **44˚66N**±0˚04×**114˚34W**±0˚04, **h5**^{km}, **n103**, σ**1^{s}00**/105, **mb4.2**/4, **Western Idaho**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCMT	McKenzie Canyo	1.08	80	Pg	Pg	16 55 54.8	-1.3
DLMT	Dillon	1.42	60		Pn	16 56 01.7	-0.4
MFID	Camas Ranch	1.64	221	Pn	Pn	16 56 04.6	-0.4
QLMT	Earthquake Lak	2.08	84		Pn	16 56 11.1	-0.1
BMO	Blue Mountains	2.12	276		Pn	16 56 12.0	+0.3
MSO	Missoula	2.19	7		Pn	16 56 12.7	+0.1
MSO	Missoula	2.19	7	P	Pn	16 56 13.3	+0.7
	baz=187						
MSO				S	Sb	16 56 45.6	+2.5
	baz=187						
YHB	Horse Butte	2.25	87		Pn	16 56 13.2	-0.3
YHL	Hebgen Lake	2.26	84		Pn	16 56 13.7	0.0
YMR	Madison River	2.41	89		Pn	16 56 16.0	+0.3
F10A	Beach Ranch, E	2.42	304		Pn	16 56 16.9	+1.1
YHH	Holmes Hill	2.49	86		Pn	16 56 17.0	+0.1
IMW	Indian Meadow	2.56	106		Pn	16 56 17.9	0.0
YPP	Pitchstone Pla	2.56	97		Pn	16 56 18.2	+0.3
FXWY	Fox Creek	2.59	112		Pn	16 56 18.6	+0.3
YNM	Yellowstone No	2.59	87		Pn	16 56 18.6	+0.3
YNR	Norris Junctio	2.61	87		Pn	16 56 19.6	+1.1
FLWY	Flagg Ranch	2.67	101		Pn	16 56 19.7	+0.4
H17A	Grant Village	2.71	94		Pn	16 56 20.6	+0.8
H17A	Grant Village	2.71	94	Pb	Pn	16 56 21.2	+1.4
	baz=277						
TPAW	Teton Pass	2.71	114		Pn	16 56 20.3	+0.4
YUF	Upper Falls	2.73	88		Pn	16 56 20.2	0.0
LKWY	Lake	2.82	91		Pn	16 56 22.4	+1.1
REDW	Red Top Meadow	2.83	116		Pn	16 56 21.7	+0.2
SNOW	Snow King Moun	2.85	114		Pn	16 56 22.1	+0.3
YMP	Mirror Lake Pl	2.98	87	Pn	Pn	16 56 24.3	+0.6
AHID	Auburn Hatcher	3.02	128		Pn	16 56 24.8	+0.8
JTMT	Jette	3.09	1		Pn	16 56 26.0	+1.0
HVU	Hansel Valley	3.10	158		Pn	16 56 25.8	+0.7
YNE	Yellowstone No	3.10	82		Pn	16 56 25.7	+0.4
E09A	Wood Farm, Sta	3.25	306		Pn	16 56 28.0	+0.9
J08A	Circle Bar Ran	3.25	248		Pn	16 56 27.4	+0.2
G08A	Pilot Rock	3.34	283		Pn	16 56 28.9	+0.5
GCMT	Greycliff	3.49	69		Pn	16 56 30.9	+0.4
SPUT	South Promonto	3.62	157		Pn	16 56 33.2	+0.8
RLMT	Red Lodge	3.63	81		Pn	16 56 33.3	+0.7
RLMT	Red Lodge	3.63	81	Sb	Sb	16 57 26.5	+1.7
	baz=264						
HWUT	Hardware Ranch	3.66	145		Pn	16 56 33.6	+0.7
I07A	Izee	3.75	263		Pn	16 56 34.6	+0.6
E08A	Dider Farm, El	3.79	301		Pn	16 56 34.8	+0.4
WVOR	Wild Horse Val	3.83	236		Pn	16 56 34.2	-1.0
BGU	Big Grassy Mou	3.85	165		Pn	16 56 35.3	-0.2
BW06	Boulder Array	3.95	117		Pn	16 56 38.4	+1.5
BW06	Boulder Array	3.95	117	Pb	Pn	16 56 39.8	+2.9
	baz=300						
PD31	Pinedale Array	3.95	117		Pn	16 56 37.5	+0.6
PDAR	Pinedale Array	3.95	117	Pn	Pn	16 56 39.9	+2.9
	2.8nm,0.3s,baz=296,slow=12,SNR=66						
PDAR				Lg	Lg	16 57 38.4	
	baz=294,slow=27,SNR=1.0						
PDAR	Pinedale Array	3.95	117		Pn	16 56 38.9	+2.0
ELK	Elko	3.97	190	Pn	Pn	16 56 37.9	+0.8
	2.1nm,0.3s,baz=350,slow=12,SNR=25						
ELK				Lg	Lg	16 57 33.5	
	13nm,0.3s,baz=68,slow=14,SNR=9.0						
ELK				LR	LR	16 58 24.6	
	comp=Z,115nm,20.5s,baz=295,slow=43						
ELK	Elko	3.97	190		Pn	16 56 37.8	+0.6
D08A	Wollman Farm,	4.00	308		Pn	16 56 38.8	+1.5
HAWA	Hanford	4.04	297		Pn	16 56 38.5	+0.6
NEW	Newport	4.09	333	Pn	Pn	16 56 40.1	+1.5
	3.8nm,0.3s,baz=158,slow=13,SNR=24						
NEW				Lg	Lg	16 57 45.6	
	26nm,0.3s,baz=236,slow=18,SNR=24						
NEW				LR	LR	16 57 54.0	
	comp=Z,16nm,21.9s,baz=154,slow=34						
NEW	Newport	4.09	333		Pn	16 56 38.9	+0.3
NEW	Newport	4.09	333	P	Pn	16 56 40.8	+2.2
	baz=151						
NEW				Sb	Sg	16 57 45.7	-0.9
	baz=151						
F07A	Phinny Hill Vi	4.13	289		Pn	16 56 39.0	-0.2
TCUT	Toone Canyon	4.14	148		Pn	16 56 39.1	-0.5
C09A	Chrisman Ranch	4.16	320	Pn	Pn	16 56 40.2	+0.6
E07A	Sunnyside	4.31	298		Pn	16 56 42.6	+0.9
CTU	Camp Tracy	4.40	153	Pn	Pn	16 56 43.1	+0.1
WALA	Waterton Lakes	4.41	4		Pn	16 56 44.2	+1.0
JLU	Jordanelle	4.58	151		Pn	16 56 45.3	-0.3
DUG	Dugway, Tooele	4.60	165		Pn	16 56 45.5	-0.2
EGMT	Eagleton	4.63	42		Pn	16 56 46.1	+0.1
EGMT	Eagleton	4.63	42	P	Pn	16 56 46.3	+0.2
	baz=225						
EGMT				S	Sn	16 57 40.9	+0.7
	baz=225						
PINE	Pine Mountain	4.82	262		Pn	16 56 49.0	+0.1
NLU	North Lily Min	4.99	160		Pn	16 56 49.7	-1.5
B08A	Colville Reser	5.06	319		Pn	16 56 52.1	+0.2
LTY	Liberty	5.12	303		Pn	16 56 53.3	+0.4
MOD	Modoc Plateau	5.15	240		Pn	16 56 53.5	+0.1
J05D	Fort Rock, OR	5.16	257	P	Pn	16 56 54.8	+1.3
	baz=72						
RDMU	Red Mountain	5.39	138		Pn	16 56 57.5	+0.8
H04A	Detroit Lake	5.60	273		Pn	16 56 59.4	+0.1
LON	Longmire	5.63	294		Pn	16 57 00.5	+0.7
P17A	Butcher Ranch,	5.83	151	Pn	Pn	16 57 03.1	+0.4
RWWY	Rawlins	6.00	117		Pn	16 57 05.3	+0.2
K22A	Casper	6.01	107	Pn	Pn	16 57 04.5	-0.7
LAO	LASA Array	6.04	68	Pn	Pn	16 57 04.6	-0.8
PSUT	Pine Spring	6.13	176		Pn	16 57 06.4	-0.5
PAHR	Pah Rah Range	6.21	219	Pn	Pn	16 57 08.9	+1.1
SRU	San Rafael Swe	6.23	152		Pn	16 57 08.6	+0.4
MSU	Marysvale	6.35	164	Pn	Pn	16 57 09.2	-0.8
O20A	White River Ci	6.39	133	Pn	Pn	16 57 12.3	+2.0
HUMO	Hull Mountain	6.58	255	Pn	Pn	16 57 12.3	-0.5
YERR	Yerington	6.75	215	Pn	Pn	16 57 13.9	-1.3
YBH	Yreka Blue Hor	6.78	247	Pn	Pn	16 57 16.3	+0.7
	0.4nm,0.3s,baz=55,slow=10,SNR=2.6						
YBH				LR	LR	17 00 28.8	
	comp=Z,76nm,21.0s,baz=38,slow=44						
YBH	Yreka Blue Hor	6.78	247	Pn	Pn	16 57 16.0	+0.3
NVAR	Mina Array Bea	6.90	207	Pn	Pn	16 57 18.7	+1.3
	0.3nm,0.3s,baz=20,slow=13,SNR=6.7						
NVAR				LR	LR	16 59 35.6	
	comp=Z,54nm,19.7s,baz=115,slow=36						
NVAR	Mina Array Bea	6.90	207	Pn	Pn	16 57 16.1	-1.3
N23A	Red Feather La	7.23	118		Pn	16 57 23.1	+1.1
PV07	Paradox Valley	7.54	144		Pn	16 57 26.7	+0.6
ISCO	Idaho Springs	8.09	124		Pn	16 57 35.0	+1.1
U15A	North Rim	8.37	169		Pn	16 57 36.2	-1.5
SDCO	Great Sand Dun	9.59	133		Pn	16 57 55.8	+1.4
AGMN	Agassiz Nation	13.24	68		Pn	16 58 42.6	-1.4
ULM	Lac du Bonnet	13.68	59	Pn	Pn	16 58 48.7	-1.2
	0.2nm,0.3s,baz=264,slow=7.4,SNR=4.0						
ULM				Lg	Lg	17 02 37.2	
	0.3nm,0.3s,baz=158,slow=4.4,SNR=4.8						
TXAR	Lajitas Array	17.49	147	P	Pn	16 59 41.6	+1.5
	0.0nm,0.3s,baz=345,slow=9.1,SNR=6.8						
TXAR	Lajitas Array	17.49	147	P	Pn	16 59 41.3	+1.2
YKA	Yellowknife Ar	17.87	360	P	Pn	16 59 43.3	-1.2
	0.1nm,0.3s,baz=178,slow=13,SNR=23						
YKA				Lg	Lg	17 04 49.8	
	0.1nm,0.3s,baz=169,slow=26,SNR=4.4						
SADO	Sadowa	24.90	77	LR	LR	17 11 05.9	
	comp=Z,39nm,20.3s,baz=180,slow=37						
ILAR	Eielson Array	27.04	330	P	P	17 01 19.3	+1.1
	0.4nm,0.8s,baz=141,slow=5.8,SNR=1.8						
RES	Resolute Bay	31.34	10	P	P	17 01 56.9	+0.6
	1.4nm,0.4s,baz=95,slow=2.0,SNR=14						
SCHQ	Schefferville	31.76	54	P	P	17 01 59.7	-0.6
	2.7nm,0.7s,baz=267,slow=6.7,SNR=6.2						
FINES	FINESS Array B	69.51	19	P	P	17 06 44.3	-0.2
	0.7nm,0.5s,baz=25,slow=5.0,SNR=4.8						

PRU 25 16:56:58.2±0.0, **49˚82N**×**18˚57E**, **h0**^{km}, **Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.27	274	ePG	Pg	16 57 03.2	-0.2
OKC				eSG	Sg	16 57 07.6	+0.6
	3.0nm,0.4s						
MORC	Moravsky Berou	0.67	267	ePG	Pg	16 57 11.5	+0.5
MORC				eSG	Sg	16 57 20.0	+0.4
KRLC	Kraliky	1.18	283	ePG	Pg	16 57 19.0	-1.9
KRLC				eSG	Sg	16 57 35.7	-0.5
DPC	Dobruska-Polom	1.54	291	eSG	Sg	16 57 46.6	-1.1

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*NEIC **25** 16:57:30.5±1.2, 16˚7S±0˚1×175˚9W±0˚1, h392^{km}±8^{km}, mb4.3/13, Error ellipse: s-maj=19.7km s-min=12.9km az=118.0*
*IDC **25** 16:57:30.9±2.1, 16˚80S×175˚82W, h397^{km}±29^{km}, mb3.4/4, mb1 3.6/5, mb1mx3.1/35, mbtmp4.1/5, Error ellipse: s-maj=44.9km s-min=22.1km az=132.0*
ISC 25 16:57:31.0±0.8, **16˚7S**±0˚2×**175˚9W**±0˚1, **h400**^{km}, **n20**, σ**1^{s}05**/20, **mb4.1**/10, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.88	55	P	Pn	16 58 51.2	-0.8
	5.0nm,0.3s,baz=126,slow=1.6,SNR=5.1						
MSVF	Nonsavu	5.86	259	Pn	Pn	16 59 00.9	-1.3
URZ	Urewera	22.30	195	P	P	17 01 56.1	-0.2
	5.2nm,0.7s,baz=29,slow=10,SNR=1.8						
BBOO	Buckleboo	46.06	240	P	P	17 05 18.9	+1.9
BBOO				IAmb	IAmb	17 06 58.1	
	comp=Z,44nm,1.7s						
WR0	Warramunga Arr	47.01	258	P	P	17 05 25.2	+0.7
WB0	Warramunga Arr	47.17	258	P	P	17 05 25.4	-0.3
WB2	Warramunga Arr	47.19	258	P	P	17 05 25.5	-0.4
WB2				IAmb	IAmb	17 05 50.8	
	comp=Z,6.9nm,0.5s						
WRAB	Tennant Creek	47.19	258	P	P	17 05 25.2	-0.7
WRAB				IAmb	IAmb	17 06 48.8	
	comp=Z,4.8nm,0.5s						
WRA	Warramunga Arr	47.20	258	P	P	17 05 26.3	+0.3
	comp=Z,0.3nm,0.3s,baz=96,slow=7.7,SNR=20						
WRA	Warramunga Arr	47.20	258	P	P	17 05 25.5	-0.5
AS31	Alice Springs	47.41	253	P	P	17 05 28.2	+0.7
ASAR	Alice Springs	47.41	253	P	P	17 05 28.4	+0.8
	comp=Z,3.6nm,0.3s,baz=90,slow=7.7,SNR=193						
ASAR	Alice Springs	47.41	253	P	P	17 05 27.9	+0.3
MTN	Manton Dam	51.24	267	P	P	17 05 56.0	-0.2
MTN				IAmb	IAmb	17 07 13.4	
	comp=Z,14nm,1.4s						
VNDA	Vanda	61.82	185	P	P	17 07 10.3	+1.6
VNDA				IAmb	IAmb	17 08 50.0	
	comp=Z,20nm,2.0s						
CASY	Casey	68.19	205	P	P	17 07 46.9	-2.5
MAJO	Matsushiro	68.44	322	P	P	17 07 51.6	+0.2
MAJO				IAmb	IAmb	17 10 23.0	
	comp=Z,26nm,1.6s						
MJB9	Matsu-Tunnel	68.45	322	P	P	17 07 51.6	+0.2
ILAR	Eielson Array	84.23	12	P	P	17 09 19.4	+1.0
	comp=Z,0.4nm,0.6s,baz=219,slow=5.4,SNR=6.6						
BRTR	Keskin Array B	145.60	318	PKPbc	PKPdf	17 16 22.5	-0.3
	comp=Z,0.3nm,0.5s,baz=118,slow=2.1,SNR=1.9						

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*GUC **25** 16:58:43.6±0.7, 19˚68S×71˚01W, h42^{km}±2^{km}, ML3.2*
*IDC **25** 16:58:48.4±1.8, 19˚47S×69˚28W, h0^{km}, mb3.6/2, mb1 3.7/3, mb1mx3.5/34, mbtmp3.5/3, ML3.0/1, Error ellipse: s-maj=76.9km s-min=20.5km az=87.0*
ISC 25 16:58:42.8±2.2, **19˚70S**±0˚03×**70˚96W**±0˚08, **h10**^{km}±11^{km}, **n17**, σ**1^{s}15**/28, **7C-1D**, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.79	83	⇓iP	Pg	16 58 58.4	+0.3
PSGC				i S	Sb	16 59 10.3	+0.8
TA01	Diego Aracena	1.13	140	⇑iP	Pb	16 59 04.2	-0.2
TA01				i S	Sg	16 59 19.7	+0.4
TA01				IAML		16 59 24.4	
	comp=E,944nm,0.5s						
PB11	IPOC Station P	1.23	93	⇑iP	Pb	16 59 06.1	-0.1
PB11				i S	Sn	16 59 23.1	+0.2
PB11				IAML		16 59 25.0	
	comp=E,1µm,0.6s						
PB12	IPOC Station P	1.23	29	⇑iP	Pn	16 59 05.5	-0.7
PB12				i S	Sb	16 59 21.9	-0.3
PB12				IAML		16 59 24.0	
	comp=N,616nm,0.3s						
PATCX	Punta Patache	1.35	146	⇑iP	Pn	16 59 07.3	-0.5
PATCX				i S	Sb	16 59 25.7	+0.1
PATCX				IAML		16 59 34.6	
	comp=E,524nm,0.3s						
AP01	Chacalluta	1.44	24	eP	Pn	16 59 08.4	-0.6
AP01				i S	Sn	16 59 26.8	-1.2
GO01	Chusmiza	1.66	89	⇑iP	Pn	16 59 12.9	+0.5
GO01				i S	Sg	16 59 36.2	-0.1
PB08	IPOC Station P	1.75	105	⇑iP	Pn	16 59 14.0	+0.4
PB08				i S	Sg	16 59 38.0	-1.3
PB08				IAML		16 59 39.6	
	comp=N,356nm,0.3s						
PB02	IPOC Station P	1.90	149	eP	Pn	16 59 15.3	0.0
PB02				eS	Sn	16 59 38.5	-0.9
PB01	IPOC Station P	1.92	134	⇑iP	Pn	16 59 16.0	+0.3
PB01				i S	Sn	16 59 39.5	-0.4
PB01				IAML		16 59 40.0	
	comp=N,312nm,0.3s						
PB16	IPOC Station P	1.93	46	eP	Pn	16 59 16.4	+0.2
PB16				eS	Sb	16 59 42.7	-0.1
PB16				IAML		16 59 50.0	
	comp=N,236nm,0.3s						
PB09	IPOC Station P	2.63	143	eP	Pn	16 59 26.9	+1.3
PB09				eS	Sb	17 00 00.8	-1.9
PB09				IAML		17 00 17.0	
	comp=E,235nm,0.6s						
LVC	Limon Verde	3.47	147	Pn	Pn	16 59 38.4	+1.2
	comp=E,1.6nm,0.3s,baz=342,slow=9.4,SNR=9.1						
LVC				Lg	Lg	17 00 29.2	
	comp=E,4.9nm,0.3s,baz=158,slow=18,SNR=6.4						
LPAZ	La Paz	4.33	39	Pn	Pn	16 59 51.2	+1.9
	comp=E,0.2nm,0.3s,baz=242,slow=13,SNR=2.8						
TORD	Torodi Ar. Bea	78.58	72	P	P	17 10 43.5	-1.7
	comp=E,0.4nm,0.8s,baz=252,slow=5.0,SNR=2.3						
YKA	Yellowknife Ar	88.87	341	P	P	17 11 45.0	+8.2
	comp=E,0.2nm,0.6s,baz=132,slow=4.9,SNR=3.7						
MKAR	Makanchi Array	145.24	33	PKP	PKiKP	17 18 28.2	+3.4
	comp=E,0.3nm,0.7s,baz=339,slow=3.6,SNR=4.1						

IDC **25** *17:04:37.1±0.7, 44°.95N×36°.64E, h0^{km}, mb3.4/7, mb1 3.4/12, mb1mx3.3/47, mbtmp3.4/12, ML3.1/5, Error ellipse: s-maj=10.4km s-min=9.0km az=7.0*

SIGU **25** *17:04:40.5±0.1, 44°.69N×36°.53E, h13^{km}±7^{km}, mb3.0/7*

ISC 25 17:04:37.0±3.0, **44°.86N**±0°.04×**36°.62E**±0°.02, **h2**^{km}±21^{km}, **n40, σ1^{s}87**/70, **mb3.3**/6, **1C-5D, Crimea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KERU	Kerch	0.46	346	⇓ePg	Pn	17 04 51.6	+1.0
	baz=354						
KERU				i Pg	Pb	17 04 52.0	+4.1
	baz=354						
KERU				Pgm		17 04 52.5	
	baz=354						
KERU				i Sg	Sb	17 05 00.9	+5.7
	baz=354						
KERU				Sgm		17 05 01.8	
	baz=354						
KERU				Sgm		17 05 02.5	
	baz=354						
KERU	Kerch	0.46	346	i Pg	Pn	17 04 51.6	+1.0
KERU				eSg	Sb	17 05 00.9	+5.7
ANN	Anapa	0.58	96	⇑iPg	Pn	17 04 52.3	0.0
	baz=72						
ANN				Pgm		17 04 52.5	
	baz=72						
ANN				i Sg	Sb	17 05 00.8	+2.2
	baz=72						
ANN				Sgm		17 05 01.3	
	baz=72						
ANN	Anapa	0.58	96	i Pg	Pn	17 04 52.3	0.0
ANN				i Sg	Sb	17 05 00.8	+2.2
FEO	Feodosiya	0.89	281	⇓iPg	Pn	17 04 58.7	+2.3
	baz=292						
FEO				Pgm		17 05 02.2	
	baz=292						
FEO				eSg	Sn	17 05 11.8	+2.0
	baz=292						
FEO				Sgm		17 05 13.5	
	baz=292						
FEO				Sgm		17 05 14.2	
	baz=292						
SUDU	Sudak	1.15	272	⇓iPg	Pn	17 05 01.9	+1.8
	baz=279						
SUDU				Pgm		17 05 03.6	
	baz=279						
SUDU				eSg	Sn	17 05 17.3	+1.0
	baz=279						
SUDU				Sgm		17 05 20.3	
	baz=279						
SUDU				Sgm		17 05 20.7	
	baz=279						
SUDU	Sudak	1.15	272	i Pg	Pn	17 05 00.9	+0.8
SUDU				eSg	Sb	17 05 15.3	+0.4
ALU	Alushta	1.59	264	ePn	Pn	17 05 07.2	+1.1
	baz=269						
ALU				Pnm		17 05 09.5	
	baz=269						
ALU				i Sn	Sn	17 05 27.0	-0.1
	baz=269						
ALU				Snm		17 05 32.4	
	baz=269						
ALU				Snm		17 05 32.5	
	baz=269						
ALU	Alushta	1.59	264	ePg	Pn	17 05 07.2	+1.1
ALU				eSg	Sn	17 05 27.0	-0.1
SIM	Simferopol'	1.78	274	ePn	Pb	17 05 10.1	-0.2
	baz=278						
SIM				Pnm		17 05 11.8	
	baz=278						
SIM				eSn	Sn	17 05 31.8	-0.1
	baz=278						
SIM				Snm		17 05 32.3	
	baz=278						
SIM				Snm		17 05 32.8	
	baz=278						
SIM	Simferopol'	1.78	274	ePg	Pb	17 05 10.1	-0.2
SIM				eSg	Sn	17 05 31.8	-0.1
YAL	Yalta	1.79	259	⇓iPn	Pn	17 05 10.3	+1.4
	baz=263						
YAL				eSn	Sn	17 05 32.3	0.0
	baz=263						
YAL	Yalta	1.79	259	ePg	Pn	17 05 10.3	+1.4
YAL				eSg	Sn	17 05 32.3	0.0
AGYR	Agha	1.87	112	ePn	Pb	17 05 12.8	+0.9
	baz=106						
AGYR				eSn	Sb	17 05 36.8	+1.1
	baz=106						
AGYR	Agha	1.87	112	ePg	Pb	17 05 12.5	+0.6
AGYR				eSg	Sb	17 05 36.4	+0.7
TPSR	Tuapse	1.94	113	i Sn	Sb	17 05 38.4	+0.8
	baz=108						
TPSR	Tuapse	1.94	113	ePg	Pb	17 05 13.2	+0.2
TPSR				i Sg	Sn	17 05 37.8	+2.0
SEV	Sevastopol'	2.13	262	⇓ePn	Pn	17 05 14.6	+1.1
	baz=268						
SEV				Pnm		17 05 16.1	
	baz=268						
SEV				i Sn	Sn	17 05 40.0	-0.4
	baz=268						
SEV				Snm		17 05 41.7	
	baz=268						
SEV				Snm		17 05 41.7	
	baz=268						
SEV	Sevastopol'	2.13	262	ePg	Pn	17 05 14.6	+1.1
SEV				eSg	Sn	17 05 40.0	-0.4
LZRR	Lazarevskoye	2.19	114	ePn	Pb	17 05 16.7	-0.5
	baz=109						
LZRR				eSn	Sn	17 05 43.5	+1.6
	baz=109						
LZRR	Lazarevskoye	2.19	114	ePg	Pn	17 05 16.2	+1.9
LZRR				eSg	Sn	17 05 43.1	+1.2
SOC	Sochi	2.57	119	ePn	Pn	17 05 22.4	+2.9
SOC				eSn	Sn	17 05 53.4	+2.0
GUZR	Guzeripl'	2.65	108	ePn	Pb	17 05 23.6	-1.6
GUZR				eSn	Sn	17 05 54.8	+1.2
RPOR	Krasnaya Polya	2.87	113	ePn	Pn	17 05 25.4	+1.7
RPOR				eSn	Sn	17 05 59.7	+0.9
TARU	Tarkhankut	2.94	282	ePn	Pn	17 05 25.4	+0.8
	baz=284						
TARU				eSn	Sn	17 05 59.8	-0.6
	baz=284						
ARXR	Arkhyz	3.59	110	ePn	Pn	17 05 36.6	+2.8
ARXR				i Sn	Sn	17 06 17.2	+0.4
DOMR	Dombai	3.93	112	ePn	Pn	17 05 41.4	+2.9
DOMR				i Sn	Sn	17 06 25.1	-0.2
KVAR	Kislovodsk Arr	4.45	100	Pn	Pn	17 05 48.2	+2.7
	baz=281,slow=19,SNR=1.5						
KVAR				Sn	Sn	17 06 37.4	-0.6
	baz=335,slow=17,SNR=5.9						
SHA1	Shidzhatmaz	4.48	102	ePn	Pn	17 05 49.1	+3.0
SHA1				eSn	Sn	17 06 39.6	+0.8
KBZ	Khabaz	4.65	102	Pn	Pn	17 05 48.9	+0.8
	0.3nm,0.3s,baz=297,slow=8.9,SNR=8.3						
KBZ				Sn	Sn	17 06 42.1	-0.6
	0.9nm,0.3s,baz=218,slow=8.8,SNR=5.0						
BRTR	Keskin Array B	5.59	204	Pn	Pn	17 06 04.8	+3.6
	0.6nm,0.3s,baz=22,slow=10,SNR=25						
BRTR				Sn	Sn	17 07 07.8	+1.8
	0.6nm,0.3s,baz=48,slow=23,SNR=14						
AKASG	Malin Array Be	7.67	322	Pn	Pn	17 06 27.9	-1.7
	2.0nm,0.3s,baz=138,slow=11,SNR=6.8						
AKASG				Sn	Sn	17 07 47.6	-9.5
	2.9nm,0.3s,baz=134,slow=24,SNR=7.5						
FINES	FINESS Array B	17.73	343	Pn	Pn	17 08 38.9	-5.8
	0.1nm,0.3s,baz=172,slow=14,SNR=1.1						
HFS	Hagfors	20.54	326	P	P	17 09 14.7	-1.7
	1.8nm,0.7s,baz=134,slow=11,SNR=5.2						
NOA	NORSAR Array B	22.06	326	P	P	17 09 31.8	-1.0
	0.9nm,0.9s,baz=128,slow=11,SNR=3.5						
BVAR	Borovoye Array	23.46	58	P	P	17 09 47.6	+0.1
	0.3nm,0.6s,baz=311,slow=7.1,SNR=2.2						
ARCES	ARCESS Array B	25.37	351	P	P	17 10 04.3	-0.8
	2.2nm,0.9s,baz=168,slow=10,SNR=1.7						
KURBB	Kurchatov Arra	28.47	63	P	P	17 10 33.4	+0.2
	0.2nm,0.4s,baz=281,slow=9.4,SNR=1.5						
MKAR	Makanchi Array	31.55	70	P	P	17 11 00.3	-0.2
	0.3nm,0.4s,baz=273,slow=7.9,SNR=8.8						
TORD	Torodi Ar. Bea	43.37	234	P	P	17 12 40.7	-0.1
	0.3nm,0.4s,baz=35,slow=9.2,SNR=2.1						

BUC 25 17:06:51.7±0.5, **44°.67N**×**28°.75E, h24**^{km}±3^{km}, **ml1.9**/8, **30C-6D, Error ellipse: s-maj=4.5km s-min=2.2km az=100.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JURR	Jurilovca	0.14	44	⇑P	Pb	17 06 57.1	+0.6
JURR	Jurilovca	0.14	44	⇑P	Pb	17 06 57.1	+0.6
TIRR	Tirgusor	0.32	229	⇓P	Pb	17 06 58.1	-0.7
TIRR				⇑S	Sb	17 07 04.7	+1.0
TIRR	Tirgusor	0.32	229	⇓P	Pb	17 06 58.1	-0.7
TIRR				⇑S	Sb	17 07 04.7	+1.0
TOPG	Topolog	0.33	309	⇑P	Pb	17 06 58.4	-0.8
TOPG				⇑S	Sb	17 07 05.3	+1.1
TOPG	Topolog	0.33	309	⇑P	Pb	17 06 58.4	-0.8
TOPG				⇑S	Sb	17 07 05.3	+1.1
TLCR		0.52	5	⇑P	Pb	17 07 01.7	-0.5
TLCR		0.52	5	⇑P	Pb	17 07 01.7	-0.5
MFTR	Murfatlar	0.54	205	⇑S	Sb	17 07 09.8	-0.1
MFTR	Murfatlar	0.54	205	⇑S	Sb	17 07 09.8	-0.1
HARR	Harsova	0.58	272	⇓P	Pb	17 07 03.7	+0.5
HARR	Harsova	0.58	272	⇓P	Pb	17 07 03.7	+0.5
CFR	Carcaliu	0.67	320	⇑P	Pb	17 07 04.8	+0.1
CFR				⇓S	Sb	17 07 13.3	-0.2
CFR	Carcaliu	0.67	320	⇑P	Pb	17 07 04.8	+0.1
CFR				⇓S	Sb	17 07 13.3	-0.2
ICOR	Ion Corvin	0.87	231	⇑P	Pn	17 07 08.8	+0.3
ICOR				⇑S	Sn	17 07 20.2	-0.2
ICOR	Ion Corvin	0.87	231	⇑P	Pn	17 07 08.8	+0.3
ICOR				⇑S	Sn	17 07 20.2	-0.2
GIUM	Giurgiulesti	0.90	335	⇑S	Sn	17 07 20.9	-0.2
GIUM	Giurgiulesti	0.90	335	⇑S	Sn	17 07 20.9	-0.2
VRI	Vrincioaia	1.86	311	⇑P	Pn	17 07 22.6	+0.5
VRI	Vrincioaia	1.86	311	⇑P	Pn	17 07 22.6	+0.5
PLOR	Plostina	1.89	309	⇑P	Pn	17 07 21.9	-0.6
PLOR	Plostina	1.89	309	⇑P	Pn	17 07 21.9	-0.6
MLR	Muntele Rosu	2.15	293	⇑P	Pn	17 07 26.4	+0.3
MLR				⇑S	Sn	17 07 52.7	+0.6
MLR	Muntele Rosu	2.15	293	Sn	Sn	17 07 52.6	+0.5
	0.8nm,0.3s,baz=243,slow=21,SNR=7.5						
MLR	Muntele Rosu	2.15	293	⇑P	Pn	17 07 26.4	+0.3
MLR				⇑S	Sn	17 07 52.7	+0.6
TESR	Tescani	2.36	322	⇑P	Pn	17 07 29.6	+0.7
TESR	Tescani	2.36	322	⇑P	Pn	17 07 29.6	+0.7

SJA **25** *17:07:59.3±0.8, 26°.31S×71°.27W, h20^{km}, ML4.6, MW4.6*

IDC **25** *17:07:59.6±0.6, 26°.45S×70°.72W, h0^{km}, mb4.6/13, mb1 4.6/16, mb1mx4.4/32, mbtmp4.6/16, ML4.5/3, MS3.7/7, Ms1 3.7/7, ms1mx3.4/27, Error ellipse: s-maj=20.0km s-min=14.3km az=103.0*

VAO **25** *17:08:00.0±0.5, 26°.70S×71°.44W, h50^{km}, mb4.7*

GUC **25** *17:08:03.7±0.7, 26°.45S×71°.06W, h55^{km}±17^{km}, ML4.6*

NEIC **25** *17:08:03.1, 26°.43S×70°.92W, h34^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}3.62; $M_{\theta\theta}$0.36; $M_{\phi\phi}$-3.98; $M_{r\theta}$0.26; $M_{\theta\phi}$0.82; $M_{\phi r}$-1.36; Fault plane solution: $M_0$4.14000×10^{15} NP1:ϕ_s349.91000°, δ35.13000°, λ90.35000°. NP2:ϕ_s169.49000°, δ54.87000°, λ89.76000°. Principal axes: T 3.8586, Plg80.0000°, Azm78.0000°; N 0.5070, Plg0.0000°, Azm170.0000°; P -4.3656, Plg10.0000°, Azm260.0000°;*

NEIC **25** *17:08:04.4±2.8, 26°.42S±0°.04×70°.90W±0°.10, h32^{km}±3^{km}, mb4.7/36, Mwr4.3/21, ML4.5(GUC) Error ellipse: s-maj=12.5km s-min=5.8km az=86.0*

ISC 25 17:08:03.2±0.6, **26°.44S**±0°.03×**70°.94W**±0°.06, **h27**^{km}±3^{km}, **n185, σ1^{s}45**/212, **mb4.8**/22, **1C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO03	Copiap	1.31	152	⇓iP	Pn	17 08 26.2	+0.3
GO03				i S	Sn	17 08 42.3	-0.2
GO03				IAML		17 08 44.8	
	comp=N,15µm,0.4s						
GO03	Copiap	1.31	152		Pn	17 08 26.2	+0.3
GO03				Sn	Sn	17 08 42.1	-0.5
GO02	Mina Guanaco	1.76	44	eP	Pn	17 08 33.4	+1.1
GO02				i S	Sb	17 08 55.4	-1.3
GO02				IAML		17 09 04.8	
	comp=N,8µm,0.5s						
GO02	Mina Guanaco	1.76	44		Pn	17 08 33.3	+1.1
PB14	IPOC Station P	1.87	15	eP	Pn	17 08 33.7	0.0
PB14				i S	Sn	17 08 56.6	-0.1
PB14				IAML		17 09 04.2	
	comp=E,7µm,0.5s						
PB14	IPOC Station P	1.87	15		Pn	17 08 33.9	+0.1
PB14	IPOC Station P	1.87	15	i P	Pn	17 08 34.3	+0.5
PB14				eS	Sn	17 08 56.9	+0.2
PB10	IPOC Station P	2.93	7	eP	Pn	17 08 47.2	-0.8
PB10				eS	Sn	17 09 25.3	+2.8
PB10				IAML		17 09 43.5	
	comp=N,1µm,0.3s						
PB10	IPOC Station P	2.93	7		Pn	17 08 47.3	-0.8
PB10	IPOC Station P	2.93	7	i P	Pn	17 08 47.8	-0.4
PB10				eS	Sn	17 09 20.7	-1.8
VCA	Vinchina	3.33	134	i P	Pb	17 08 58.4	-3.3
VCA				IAML		17 10 04.7	
	comp=Z,1µm,2.3s						
PB15	IPOC Station P	3.48	23		Pn	17 08 56.2	+0.4
PB15	IPOC Station P	3.48	23	i P	Pn	17 08 56.8	+1.0
PB15				eS	Sn	17 09 36.5	+0.2
PB05	IPOC Station P	3.63	11	eP	Pn	17 08 57.2	-0.6
PB05				eS	Sn	17 09 37.5	-2.4
PB05				IAML		17 10 04.1	
	comp=E,1µm,0.6s						
PB05	IPOC Station P	3.63	11	i P	Pn	17 08 57.3	-0.6
GO04	Tololo Observa	3.72	178		Pn	17 09 00.1	+1.0
AGUA	GUANDACOL	3.73	145	i P	Pn	17 09 03.2	+4.1
AGUA				IAML		17 10 03.3	
	comp=Z,462nm,0.7s						
AROD	Rodeo	3.93	161	i P	Pn	17 09 06.3	+4.2
PB04	IPOC Station P	4.15	10	⇑iP	Pn	17 09 03.9	-1.1
PB04				eS	Sn	17 09 53.0	+0.2
PB04	IPOC Station P	4.15	10		Pn	17 09 04.0	-1.1
LVC	Limon Verde	4.24	26	Pn	Pn	17 09 06.4	0.0
	comp=Z,22nm,0.3s,baz=207,slow=8.2,SNR=116						
LVC				Lg	Lg	17 10 10.9	
	comp=Z,514nm,0.3s,baz=328,slow=19,SNR=12						
LVC				LR	LR	17 10 42.1	
	comp=Z,737nm,19.3s,baz=222,slow=39						
LVC	Limon Verde	4.24	26		Pn	17 09 07.0	+0.7
LVC	Limon Verde	4.24	26	eP	Pn	17 09 07.2	+0.8
LVC	Limon Verde	4.24	26	i P	Pn	17 09 07.2	+0.8
LVC				IAML		17 10 16.3	
	comp=Z,906nm,0.4s						
ACCO	Cerro Coronel	4.45	159	i P	Pn	17 09 13.2	+3.9
PB03	IPOC Station P	4.50	14	eP	Pn	17 09 09.0	-0.9
PB03				eS	Sb	17 10 13.3	-2.3
PB07	IPOC Station P	4.79	12		Pn	17 09 12.7	-1.1
PB09	IPOC Station P	4.88	19		Pn	17 09 15.1	+0.2
CYA	Choya	4.98	115	i P	Pn	17 09 18.4	+2.1
CYA				IAML		17 10 22.1	
	comp=Z,287nm,1.2s						
RTLL	Cerro Villicun	5.33	157	i P	Pn	17 09 24.2	+3.1
RTLL				IAML		17 10 41.2	
	comp=Z,561nm,0.5s						
ZON	Zonda	5.46	159	i P	Pn	17 09 25.7	+2.8
ZON				IAML		17 10 55.7	
	comp=Z,215nm,1.8s						
RTLS	Leoncito	5.53	165	i P	Pn	17 09 27.4	+3.3
RTLS				IAML		17 11 07.7	
	comp=Z,438nm,0.9s						
PB01	IPOC Station P	5.53	14		Pn	17 09 22.9	-1.0
PATCX	Punta Patache	5.64	8		Pn	17 09 23.3	-2.1
AZAP	Zapla	5.75	69	i P	Pn	17 09 30.6	+3.5
AZAP				IAML		17 10 54.4	
	comp=Z,70nm,2.1s						
ROC1	El Roble	6.51	181		Pn	17 09 36.9	-0.7
ROC1	El Roble	6.51	181	i P	Pn	17 09 35.2	-2.4
PEL	Peldehue	6.69	178		Pn	17 09 38.1	-1.6
PB11	IPOC Station P	6.75	10		Pn	17 09 38.6	-2.1
PSGCX	Pisagua	6.85	6		Pn	17 09 39.7	-2.4
GO01	Chusmiza	6.93	14		Pn	17 09 41.5	-1.9
MRA	San Martin	7.50	144	i P	Pn	17 09 52.2	+1.3
MRA				IAML		17 11 24.1	
	comp=Z,115nm,0.7s						
PB12	IPOC Station P	7.81	4		Pn	17 09 53.3	-1.9
PB16	IPOC Station P	8.17	10		Pn	17 09 59.0	-1.6
GO05	Huala	8.59	185		Pn	17 10 02.8	-2.9
LPAZ	La Paz	10.43	15	Pn	Pn	17 10 31.8	0.0
	comp=Z,2.2nm,0.3s,baz=192,slow=4.5,SNR=44						
LPAZ				LR	LR	17 15 02.4	
	comp=Z,249nm,20.6s,baz=158,slow=41						
LPAZ	La Paz	10.43	15		Pn	17 10 31.6	0.0
LPAZ	La Paz	10.43	15	eP	Pn	17 10 31.6	0.0
CPUP	Villa Florida	12.20	93	Pn	Pn	17 10 55.8	+0.5
	comp=Z,0.1nm,0.3s,baz=278,slow=14,SNR=3.4						
CPUP				LR	LR	17 16 08.7	
	comp=Z,577nm,18.7s,baz=260,slow=41						
CPUP	Villa Florida	12.20	93		Pn	17 10 57.4	+2.1
GO06	Curarrehue	13.12	182	Pn	Pn	17 11 07.5	-0.4
SIV	San Ignacio	13.87	43	Pn	Pn	17 11 14.2	-4.0
	comp=Z,2.8nm,0.3s,baz=263,slow=6.5,SNR=26						
PLCA	Paso Flores	14.26	179	LR	LR	17 17 04.1	
	comp=Z,438nm,18.8s,baz=158,slow=38						
PLCA	Paso Flores	14.26	179	Pn	P	17 11 28.4	-2.0
NNA	Nana	15.41	338	LR	LR	17 16 25.1	
	comp=Z,118nm,21.0s,baz=169,slow=33						
PLTB	Pedras Altas	16.05	113	eP	Pn	17 11 45.9	-1.2
ITAB	Concordia	16.81	97	eP	Pn	17 11 57.4	+0.7
TRCB	Terra Rica	17.04	82	eP	P	17 12 01.1	-0.2
TRCB				epP	sP	17 12 12.4	+0.6
PTGB	Pitanga	17.12	88	eP	P	17 12 02.2	-0.1
PTGB				epP	sP	17 12 12.7	-0.1
SALV	Santo Antonio	17.65	57	eP	P	17 12 08.4	+0.3
CNLB	Canela	17.99	104	eP	Pn	17 12 10.6	-0.8
C2SB	Chapadao do Su	18.36	69	eP	Pn	17 12 16.6	+0.7
C2SB				epP	sP	17 12 29.0	+2.5
PCMB	Pacaembu	18.60	79	eP	Pn	17 12 19.0	+0.1
PCMB				epP	sP	17 12 30.9	+1.8
SAML	Samuel	18.89	24	P	P	17 12 21.9	+0.2
SAML	Samuel	18.89	24	eP	P	17 12 21.9	+0.2
SAML				epP	sP	17 12 33.2	+1.1
FRTB	Fartura	19.63	86	eP	P	17 12 29.8	-0.1
FRTB				epP	sP	17 12 41.4	+1.0
ITRB	Iturama	20.07	75	eP	P	17 12 35.3	+0.6
ATAH	Atahualpa	20.47	338	P	P	17 12 38.5	-0.9
	comp=Z,3.5nm,0.6s,baz=25,slow=5.9,SNR=3.9						
ARAG	Araguaiana, MT	20.77	63	eP	P	17 12 41.3	-1.0
ARAG				epP	sP	17 12 53.0	+0.1
CLDB	Colider	21.07	46	eP	P	17 12 43.7	-1.8
CLDB				epP	sP	17 12 55.9	0.0
BB19B	Bebedouro	21.19	80	eP	P	17 12 46.8	0.0
BB19B				epP	sP	17 12 57.0	-0.4
SPB	Sao Paulo	21.48	88	eP	P	17 12 49.0	-0.9
SPB				epP	sP	17 13 00.8	+0.3
RCLB	Rio Claro- Sao	21.68	84	eP	P	17 12 50.9	-1.2
RCLB				epP	sP	17 13 03.6	+0.9
VAO	Valinhos	22.04	86	eP	P	17 12 54.8	-1.2
VAO				epP	sP	17 13 05.9	-0.6
IPMB	Ipameri, GO	22.64	73	eP	P	17 13 00.0	-2.3
IPMB				epP	sP	17 13 11.6	-1.4
PARB	Paraibuna	23.16	88	eP	P	17 13 05.9	-1.9
PARB				epP	sP	17 13 18.4	-0.1
BDFB	Brasilia	23.90	68	P	P	17 13 13.0	-2.0
	comp=Z,11nm,0.6s,baz=247,slow=9.4,SNR=11						
BDFB	Brasilia	23.90	68	P	P	17 13 13.2	-1.9
BDFB				IAmb	IAmb	17 13 26.7	
	comp=Z,43nm,1.0s						
ESAR	Angra dos Reis	24.29	88	eP	P	17 13 17.1	-1.5
BSCB	Bom Sucesso	24.54	83	eP	P	17 13 19.6	-1.3
BSCB				epP	sP	17 13 31.9	+0.2
GO09	Cerro Castillo	24.82	182	P	P	17 13 25.4	+2.4
EFI	East Falkland	27.03	162	P	P	17 13 43.4	+0.4
JANB	Januaria	27.30	71	eP	P	17 13 43.6	-2.2
JANB				epP	sP	17 13 56.8	+0.2
PTGA	Pitinga	27.66	24	P	P	17 13 48.8	-0.2
	comp=Z,4.0nm,0.8s,baz=173,slow=24,SNR=5.9						
PTGA	Pitinga	27.66	24	P	P	17 13 48.7	-0.2
PTGA	Pitinga	27.66	24	eP	P	17 13 49.0	+0.1
PTGA				epP	sP	17 14 00.7	+0.8
SMTB	Santa Maria do	28.21	56	eP	P	17 13 54.1	+0.2
SMTB				epP	sP	17 14 06.1	+1.3
SJMB	Sao Joao De Ma	28.48	81	eP	P	17 13 54.6	-1.7
SJMB				epP	sP	17 14 09.1	+1.9
PRPB	Parauapebas	28.49	49	eP	P	17 13 55.8	-0.7
BSFB	Barra de Sao F	28.74	81	eP	P	17 13 57.7	-1.0
BSFB				epP	sP	17 14 10.4	+1.0
NBIT	Itapeh - BA	31.53	75	eP	P	17 14 22.1	-1.3
RUSC	La Rusia	32.21	356		P	17 14 30.8	+1.0
NBPN	Ponto Novo - B	32.88	68	eP	P	17 14 33.9	-1.3
NBLA	Lagarto - SE	34.82	70	eP	P	17 14 50.5	-1.6
SDV	Santo Domingo	35.12	1	eP	P	17 14 51.4	-3.4
NBTA	Tacaratu-PE	35.58	67	eP	P	17 14 57.2	-1.4
NBPS	Pedro II - PI	35.72	57	eP	P	17 14 58.4	-1.5
NBMA	Muriti-CE	35.99	64	eP	P	17 15 00.9	-1.2
MDP	Montagnes des	36.02	32	P	P	17 15 03.8	+1.5
	comp=Z,34nm,1.3s,baz=210,slow=7.0,SNR=4.7						
NBPB	Pedra_Branca-C	36.43	61	eP	P	17 15 04.4	-1.4
NBAN	Anadia - AL	36.77	70	eP	P	17 15 07.4	-1.5
NBMO	Morrinhos-CE	37.49	57	eP	P	17 15 13.6	-1.3
URIC	Uribia, Colomb	37.92	358	P	P	17 15 19.4	+0.9
NBCL	Cascavel-CE	38.25	60	eP	P	17 15 19.9	-1.4
NBRF	Rio Formoso -	38.26	69	eP	P	17 15 19.6	-1.7
PMSA	Palmer Station	38.59	175	eP	P	17 15 15.6	-8.0
RCBR	Riachuelo	39.19	65	P	P	17 15 28.7	-0.6
	comp=Z,19nm,1.1s,baz=220,slow=7.2,SNR=4.0						
RCBR	Riachuelo	39.19	65	P	P	17 15 29.7	+0.4
RCBR				IAmb	IAmb	17 15 30.6	
	comp=Z,30nm,1.2s						
RCBR	Riachuelo	39.19	65	eP	P	17 15 27.9	-1.4
VNA3	Neumayer Olymp	56.05	160	P	P	17 17 39.8	+0.5
VNA2	Neumayer--Watz	56.66	159	P	P	17 17 43.8	+0.1
	baz=297,slow=9.0						
SNAA	Sanae	58.27	160	P	P	17 17 55.6	+0.5
SNAA	Sanae	58.27	160	P	P	17 17 55.6	+0.5
	comp=Z,9.2nm,0.6s,baz=280,slow=8.4,SNR=25						
SNAA	Sanae	58.27	160	P	P	17 17 55.3	+0.1
SNAA				IAmb	IAmb	17 17 56.4	

	comp=Z,10.0nm,0.8s						
JCT	**Junction City**	**62.98**	**332**	P	**P**	**17 18 29.1**	**+1.5**
JCT				IAmb	IAmb	17 18 30.6	
	comp=Z,8.4nm,0.8s						
TX32	**Lajitas Array**	**63.72**	**328**	P	**P**	**17 18 34.6**	**+1.9**
TXAR	**Lajitas Array**	**63.72**	**328**	P	**P**	**17 18 34.9**	**+2.3**
	comp=Z,1.3nm,0.8s,baz=149,slow=7.2,SNR=11						
TXAR	**Lajitas Array**	**63.72**	**328**	P	**P**	**17 18 34.7**	**+2.1**
TX31	**Lajitas Ar. Si**	**63.72**	**328**	P	**P**	**17 18 34.4**	**+1.8**
QSPA	**South Pole Qui**	**63.77**	**180**	P	**P**	**17 18 34.3**	**+1.6**
X34A	**Smith Ranch, M**	**65.84**	**336**	P	**P**	**17 18 47.6**	**+1.3**
MNTX	**Cornudas Mount**	**66.50**	**328**	P	**P**	**17 18 51.8**	**+1.2**
MNTX				IAmb	IAmb	17 18 53.1	
	comp=Z,4.1nm,0.8s						
S39A	**Bolivar**	**67.17**	**341**	P	**P**	**17 18 55.3**	**+0.6**
S39A				IAmb	IAmb	17 18 56.9	
	comp=Z,7.3nm,0.8s						
MSTX	**Muleshoe**	**67.25**	**332**	P	**P**	**17 18 56.8**	**+1.4**
MSTX				IAmb	IAmb	17 18 58.2	
	comp=Z,9.9nm,0.9s						
LIC	**Lamto**	**71.57**	**73**	*e*P	**P**	**17 19 21.4**	**-1.1**
	comp=Z,20nm,0.8s						
TIC	**Toumodi**	**71.79**	**73**	*e*P	**P**	**17 19 23.9**	**+0.1**
KIC	**Kosan Boka**	**71.89**	**73**	*e*P	**P**	**17 19 23.9**	**-0.5**
	comp=Z,18nm,0.6s						
DBIC	**Dimbokro**	**71.94**	**73**	P	**P**	**17 19 24.0**	**-0.7**
	comp=Z,9.0nm,0.6s,baz=222,slow=6.5,SNR=18						
DBIC	**Dimbokro**	**71.94**	**73**	P	**P**	**17 19 24.3**	**-0.4**
SMCO	**Snowmass**	**73.45**	**332**	P	**P**	**17 19 36.0**	**+2.4**
SMCO				IAmb	IAmb	17 19 37.7	
	comp=Z,4.3nm,0.9s						
ECSD	**EROS Data Cent**	**73.70**	**341**	P	**P**	**17 19 35.0**	**+0.5**
ECSD				IAmb	IAmb	17 19 36.8	
	comp=Z,7.9nm,1.2s						
KNB	**Kanab**	**74.41**	**326**	P	**P**	**17 19 41.5**	**+2.6**
MTPU	**Mount Pierson**	**74.90**	**327**	P	**P**	**17 19 43.8**	**+1.8**
SRU	**San Rafael Swe**	**74.97**	**329**	P	**P**	**17 19 43.7**	**+1.5**
CCUT	**Cedar City**	**75.09**	**326**	P	**P**	**17 19 45.8**	**+2.8**
MSU	**Marysvale**	**75.27**	**328**	P	**P**	**17 19 46.0**	**+2.0**
P17A	**Butcher Ranch,**	**75.36**	**329**	P	**P**	**17 19 46.2**	**+1.8**
PSUT	**Pine Spring**	**76.10**	**327**	P	**P**	**17 19 51.0**	**+2.3**
HWUT	**Hardware Ranch**	**77.44**	**330**	P	**P**	**17 19 57.7**	**+1.5**
HWUT				IAmb	IAmb	17 19 59.1	
	comp=Z,3.6nm,0.8s						
NVAR	**Mina Array Bea**	**78.30**	**324**	P	**P**	**17 20 02.9**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=140,slow=7.2,SNR=3.8						
NVAR	**Mina Array Bea**	**78.30**	**324**	P	**P**	**17 20 02.5**	**+1.5**
FXWY	**Fox Creek**	**78.84**	**332**	P	**P**	**17 20 05.9**	**+1.9**
FLWY	**Flagg Ranch**	**79.06**	**332**	P	**P**	**17 20 07.6**	**+2.4**
FLWY				IAmb	IAmb	17 20 21.5	
	comp=Z,21nm,1.6s						
ULM	**Lac du Bonnet**	**79.49**	**344**	P	**P**	**17 20 08.0**	**+0.9**
	comp=Z,1.2nm,0.4s,baz=222,slow=2.8,SNR=4.5						
ULM	**Lac du Bonnet**	**79.49**	**344**	P	**P**	**17 20 07.3**	**+0.3**
ULM				IAmb	IAmb	17 20 09.6	
	comp=Z,6.5nm,1.1s						
YNE	**Yellowstone No**	**79.53**	**333**	P	**P**	**17 20 08.9**	**+1.2**
YHH	**Holmes Hill**	**79.70**	**332**	P	**P**	**17 20 10.0**	**+1.3**
YHB	**Horse Butte**	**79.81**	**332**	P	**P**	**17 20 10.1**	**+0.9**
MAW	**Mawson**	**80.14**	**164**	P	**P**	**17 20 11.2**	**+0.7**
	comp=Z,5.5nm,0.5s,baz=222,slow=7.1,SNR=10.0						
MAW	**Mawson**	**80.14**	**164**	P	**P**	**17 20 11.0**	**+0.5**
MAW				IAmb	IAmb	17 20 12.4	
	comp=Z,5.1nm,1.2s						
TOA0	**Torodi Ar. Sit**	**80.76**	**70**	P	**P**	**17 20 14.1**	**-0.6**
TORD	**Torodi Ar. Bea**	**80.76**	**70**	P	**P**	**17 20 14.4**	**-0.3**
	comp=Z,16nm,0.8s,baz=265,slow=5.1,SNR=71						
TORD	**Torodi Ar. Bea**	**80.76**	**70**	P	**P**	**17 20 14.0**	**-0.7**
YKA	**Yellowknife Ar**	**95.23**	**341**	P	**P**	**17 21 24.6**	**+0.8**
	comp=Z,1.1nm,0.8s,baz=138,slow=4.4,SNR=15						
KEST	**Kesra**	**97.72**	**54**	LR	LR	18 07 04.4	
	comp=Z,88nm,18.9s,baz=232,slow=36						
BORG	**Borgarnes**	**98.67**	**19**	LR	LR	18 01 40.8	
	comp=Z,34nm,18.5s,baz=251,slow=33						
ASAR	**Alice Springs**	**124.70**	**208**	PKP	**PKPdf**	**17 27 01.0**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=138,slow=1.7,SNR=15						
ASAR	**Alice Springs**	**124.70**	**208**		**PKPdf**	**17 27 00.5**	**-0.6**
H11S2	**WAKE ISLAND Hy**	**126.51**	**274**	T	T	19 46 34.9	
	baz=110,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy**	**126.52**	**274**	T	T	19 46 29.3	
	baz=110,slow=75,SNR=35						
H11S3	**WAKE ISLAND Hy**	**126.53**	**274**	T	T	19 46 31.9	
	baz=110,slow=75,SNR=44						
WRA	**Warramunga Arr**	**127.78**	**211**	PKP	**PKPdf**	**17 27 07.3**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=162,slow=1.7,SNR=16						
WRA	**Warramunga Arr**	**127.78**	**211**		**PKPdf**	**17 27 07.0**	**-0.1**
SEY	**Seymchan**	**133.80**	**334**	PKP	**PKiKP**	**17 27 18.1**	**-0.2**
	comp=Z,3.0nm,0.3s,baz=63,slow=2.3,SNR=6.6						
ABKAR	**Akbulak array**	**135.97**	**45**		**PKPdf**	**17 27 21.9**	**+0.5**
GAR	**Garm**	**145.33**	**59**		**PKPbc**	**17 27 38.2**	**-0.5**
SIJI	**Sorong**	**145.42**	**222**	PKPbc	**PKPab**	**17 27 40.4**	**+0.7**
	comp=Z,5.8nm,0.8s,baz=37,slow=6.3,SNR=5.1						
KURK	**Kurchatov**	**146.44**	**36**		**PKPbc**	**17 27 41.1**	**-0.4**
ZAA0	**Zalesovo Array**	**147.19**	**27**		**PKPdf**	**17 27 42.2**	**+0.8**
ZALV	**Zalesovo Beam**	**147.19**	**27**	PKPbc	**PKPdf**	**17 27 42.1**	**+0.8**
	comp=Z,17nm,0.7s,baz=291,slow=3.4,SNR=52						
ZALV	**Zalesovo Beam**	**147.19**	**27**		**PKPdf**	**17 27 41.2**	**-0.1**
AAK	**Ala-Archa**	**147.53**	**51**		**PKPdf**	**17 27 43.8**	**+1.2**
FRU1	**Bishkek**	**147.57**	**51**		**PKPbc**	**17 27 45.0**	**-0.1**
KSH	**Kashi**	**149.51**	**56**	PKPbc	**PKPdf**	**17 27 45.8**	**0.0**
KSH				pPKP	PKPab	17 27 56.3	+1.0
KSH				PP	**PP**	**17 31 26.0**	**+2.7**
KSH				SKS	**SKSdf**	**17 34 49.5**	**-2.7**
KSH	**Kashi**	**149.51**	**56**	SKKS		17 38 12.3	
KSH				AMB	AMB		
	comp=Z,250nm,5.5s						
KSH				LR	LR		
	comp=N,220nm,13.8s						
KSH				LR	LR		
	comp=E,410nm,14.0s						
KSH				LR	LR		
	comp=Z,240nm,15.5s						
MAKZ	**Makanchi**	**150.48**	**39**		**PKPbc**	**17 27 51.8**	**-0.5**
MK31	**Makanchi Array**	**150.66**	**39**		**PKPbc**	**17 27 52.9**	**+0.2**
MKAR	**Makanchi Array**	**150.66**	**39**	PKPbc	**PKPbc**	**17 27 53.0**	**+0.3**
	comp=Z,13nm,0.7s,baz=320,slow=2.3,SNR=77						
MKAR	**Makanchi Array**	**150.66**	**39**		**PKPbc**	**17 27 52.5**	**-0.2**
KLR	**Kul'dur**	**151.25**	**328**	PKPbc	**PKPbc**	**17 27 54.2**	**+0.2**
	comp=Z,2.1nm,0.6s,baz=68,slow=3.6,SNR=11						
SONM	**Songino Array**	**158.54**	**5**	PKP	**PKPdf**	**17 27 59.0**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=339,slow=3.8,SNR=4.8						
SONM				PKPab	**PKPab**	**17 28 33.2**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=334,slow=3.2,SNR=4.9						
SONM	**Songino Array**	**158.54**	**5**		**PKPdf**	**17 27 58.6**	**+0.4**
SONM					**PKPab**	**17 28 33.4**	**+0.2**
CMAR	**Chiang Mai Arr**	**167.73**	**128**	PKP	**PKPdf**	**17 28 07.9**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=264,slow=2.1,SNR=5.9						
CMAR	**Chiang Mai Arr**	**167.73**	**128**		**PKPdf**	**17 28 08.0**	**+0.2**
CMAR				PKPab	**PKPab**	**17 29 13.4**	**-0.8**
LZH	**Lanzhou**	**169.40**	**24**	*e*PKP	**PKPdf**	**17 28 08.8**	**+0.3**
LZH				pPKP	pPKPdf	17 28 16.3	-0.8
LZH				sPKP		17 28 20.3	

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*NIED **25** 17:21:00,36°.40N×141°.10E,h50^{km},Mw3.7 Best double couple: M$_0$3.70000×10^{14} NP1:ϕ_s27.00000°,δ72.00000°, λ98.00000°. NP2:ϕ_s181.00000°,δ20.00000°,λ66.00000°.*
*IDC **25** 17:21:24.4±1.2,36°.38N×141°.33E,h0^{km},mb3.5/5, mb1 3.6/9,mb1mx3.4/58,mbtmp3.5/9,ML3.2/4,MS2.3/2, Ms1 2.3/2,ms1mx2.1/49,Error ellipse: s-maj=24.7km s-min=19.7km az=101.0*
*JMA **25** 17:21:29.7±0.1,36°.40N×141°.03E,h46^{km}±1^{km},M3.6*
JMA Felt I J1.
ISC 25 17:21:28.7±1.4**,36°.42N**±0°.04×**141°.17E**±0°.07**,h28**^{km}±9^{km}**,n22,**σ**1^{s}.12**/34**,mb3.5**/5**,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.47**	**261**	P	**Pb**	**17 21 39.1**	**+0.4**
JHYU				S	**Sb**	**17 21 45.6**	**+0.2**
JHO	**Hitachi**	**0.52**	**292**	P	**Pb**	**17 21 39.6**	**+0.2**
JHO				S	**Sb**	**17 21 46.5**	**-0.2**
JIHU	**Itakohorinouch**	**0.69**	**229**	P	**Pb**	**17 21 42.7**	**+0.5**
JIHU				S	**Sb**	**17 21 51.8**	**+0.4**
ONAJ	**Iwakimizuishiy**	**0.74**	**337**	P	**Pb**	**17 21 43.2**	**0.0**
ONAJ				S	**Sb**	**17 21 52.2**	**-0.9**
JYT	**Yasato**	**0.81**	**257**	P	**Pb**	**17 21 43.1**	**-1.1**
JYT				S	**Sb**	**17 21 52.6**	**-2.2**
JFK	**Kawauchi**	**0.97**	**346**	P	**Pn**	**17 21 46.4**	**-0.2**
JFK				S	**Sb**	**17 21 58.2**	**-1.4**
JFT	**Otama**	**1.28**	**329**	P	**Pn**	**17 21 51.8**	**+1.0**
JFT				S	**Sn**	**17 22 07.4**	**+0.3**
JAG	**Ashikaga**	**1.38**	**271**	P	**Pn**	**17 21 51.4**	**-0.8**
JAG				S	**Sn**	**17 22 07.3**	**-2.2**
JMM	**Marumori**	**1.48**	**348**	P	**Pn**	**17 21 54.0**	**+0.6**
JMM				S	**Sn**	**17 22 11.7**	**-0.1**
JFY	**Yanaizu**	**1.53**	**311**	P	**Pn**	**17 21 54.6**	**+0.4**
JKT	**Katashina**	**1.58**	**283**	P	**Pn**	**17 21 54.9**	**-0.1**
JKT				S	**Sn**	**17 22 13.8**	**-0.8**
MJAR	**Matsushiro Arr**	**2.39**	**274**	Pn	**Pn**	**17 22 06.2**	**+0.2**
	3.0nm,0.3s,baz=111,slow=9.4,SNR=161						
MJAR				Sn	**Sb**	**17 22 39.8**	**-0.2**
	1.5nm,0.3s,baz=38,slow=49,SNR=3.0						
MJAR				LR	LR	17 23 16.6	
	comp=Z,57nm,21.6s,baz=150,slow=45						
MAT	**Matsushiro**	**2.39**	**274**	P	**Pn**	**17 22 06.3**	**+0.3**
MAT				S	**Sn**	**17 22 37.2**	**+2.8**
JHJ	**Hachijo jima 2**	**3.48**	**199**	Pn	**Pn**	**17 22 21.6**	**+0.6**
	9.4nm,0.3s,baz=85,slow=22,SNR=5.1						
JHJ				Sn	**Sn**	**17 23 01.1**	**-0.3**
	16nm,0.3s,baz=82,slow=23,SNR=6.1						
ASAJ	**Asahikawa**	**7.77**	**8**	Pn	**Pn**	**17 23 20.1**	**+0.3**
	0.5nm,0.3s,baz=239,slow=14,SNR=10						
USRK	**Ussuriysk Ar.**	**10.46**	**321**	Pn	Pn	17 24 02.4	+5.7
	baz=136,slow=9.3,SNR=4.5						
KSRS	**Korea Array**	**10.65**	**280**	Pn	**Pn**	**17 24 02.5**	**+3.1**
	0.1nm,0.3s,baz=91,slow=14,SNR=3.0						
KSRS				LR	LR	17 28 09.7	
	comp=Z,17nm,19.1s,baz=250,slow=38						
ZALV	**Zalesovo Beam**	**42.19**	**313**	P	**P**	**17 29 18.5**	**-0.2**
	0.9nm,0.5s,baz=79,slow=7.5,SNR=1.7						
MKAR	**Makanchi Array**	**44.28**	**303**	P	**P**	**17 29 35.6**	**-0.2**
	0.8nm,0.7s,baz=90,slow=5.8,SNR=2.0						
ILAR	**Eielson Array**	**50.12**	**32**	P	**P**	**17 30 21.0**	**0.0**
	0.4nm,0.7s,baz=258,slow=6.6,SNR=6.1						
WRA	**Warramunga Arr**	**56.42**	**188**	P	**P**	**17 31 06.5**	**-1.3**
	0.2nm,0.5s,baz=4.9,slow=7.5,SNR=2.4						
ASAR	**Alice Springs**	**60.15**	**188**	P	**P**	**17 31 34.3**	**+0.5**
	0.1nm,0.7s,baz=0.6,slow=8.5,SNR=1.7						

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*IDC **25** 17:24:26.8±0.8,44°.52N×114°.48W,h0^{km},mb1 3.5/4, mb1mx3.2/58,mbtmp3.2/4,ML3.3/4,Error ellipse: s-maj=11.8km s-min=7.2km az=79.0*
*NEIC **25** 17:24:28.0±2.1,44°.69N±0°.05×114°.31W±0°.04,h5^{km}±2^{km}, ML3.2/110,Error ellipse: s-maj=8.4km s-min=4.8km az=183.0*
ISC 25 17:24:26.7±1.0**,44°.66N**±0°.04×**114°.33W**±0°.04**,h5**^{km}**,n83,**σ**1^{s}.71**/84**,Western Idaho**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCMT	**McKenzie Canyo**	**1.07**	**80**		**Pg**	**17 24 47.1**	**-0.1**
DLMT	**Dillon**	**1.42**	**60**		**Pn**	**17 24 54.0**	**+0.7**
MFID	**Camas Ranch**	**1.64**	**222**		**Pn**	**17 24 56.5**	**+0.2**
LRM	**Limekiln Ridge**	**1.77**	**48**		**Pn**	**17 24 58.8**	**+0.6**
QLMT	**Earthquake Lak**	**2.08**	**84**		**Pn**	**17 25 02.8**	**+0.4**
BMO	**Blue Mountains**	**2.13**	**276**		**Pn**	**17 25 03.8**	**+0.8**
BMO				IAML		17 25 37.9	
	124nm,0.5s						
BMO				IAML		17 25 38.9	
	110nm,0.3s						
MSO	**Missoula**	**2.19**	**7**		**Pn**	**17 25 04.0**	**+0.1**
MSO				IAML		17 25 40.3	
	106nm,0.5s						
MSO				IAML		17 25 41.6	
	124nm,0.8s						
YHB	**Horse Butte**	**2.24**	**86**		**Pn**	**17 25 05.4**	**+0.7**
YHL	**Hebgen Lake**	**2.25**	**84**		**Pn**	**17 25 05.8**	**+0.9**
YMR	**Madison River**	**2.40**	**88**		**Pn**	**17 25 08.4**	**+1.5**
F10A	**Beach Ranch, E**	**2.43**	**304**		**Pn**	**17 25 09.3**	**+2.2**
YHH	**Holmes Hill**	**2.49**	**86**		**Pn**	**17 25 09.1**	**+1.0**
IMW	**Indian Meadow**	**2.55**	**106**		**Pn**	**17 25 10.2**	**+1.2**
YPP	**Pitchstone Pla**	**2.56**	**97**		**Pn**	**17 25 10.3**	**+1.2**
FXWY	**Fox Creek**	**2.59**	**112**		**Pn**	**17 25 11.4**	**+1.9**
YNM	**Yellowstone No**	**2.59**	**87**		**Pn**	**17 25 11.7**	**+2.2**
YNR	**Norris Junctio**	**2.61**	**87**		**Pn**	**17 25 11.8**	**+2.1**
FLWY	**Flagg Ranch**	**2.67**	**101**		**Pn**	**17 25 11.8**	**+1.3**
FLWY				IAML		17 25 53.9	
	110nm,1.2s						
FLWY				IAML		17 26 02.0	
	89nm,0.8s						
H17A	**Grant Village**	**2.70**	**94**		**Pn**	**17 25 12.8**	**+1.8**
TPAW	**Teton Pass**	**2.70**	**114**		**Pn**	**17 25 12.3**	**+1.3**
TPAW				IAML		17 25 53.9	
	72nm,0.7s						
TPAW				IAML		17 25 55.7	
	112nm,0.7s						
YUF	**Upper Falls**	**2.73**	**87**		**Pn**	**17 25 13.2**	**+1.8**
LKWY	**Lake**	**2.81**	**90**		**Pn**	**17 25 14.4**	**+1.9**
LKWY				IAML		17 26 00.0	
	58nm,1.1s						
LKWY				IAML		17 26 00.5	
	66nm,0.9s						
REDW	**Red Top Meadow**	**2.82**	**116**		**Pn**	**17 25 14.0**	**+1.3**
REDW				IAML		17 26 01.7	
	74nm,0.6s						
SNOW	**Snow King Moun**	**2.84**	**114**		**Pn**	**17 25 14.8**	**+1.8**
SNOW				IAML		17 25 59.3	
	62nm,0.6s						
YMP	**Mirror Lake Pl**	**2.98**	**87**		**Pn**	**17 25 17.0**	**+2.1**
AHID	**Auburn Hatcher**	**3.01**	**128**		**Pn**	**17 25 18.0**	**+2.8**
AHID				IAML		17 26 00.1	
	comp=E,69nm,0.5s						
AHID				IAML		17 26 03.2	
	comp=N,84nm,0.5s						
HVU	**Hansel Valley**	**3.09**	**158**		**Pn**	**17 25 19.4**	**+3.1**
JTMT	**Jette**	**3.09**	**1**		**Pn**	**17 25 18.1**	**+1.8**
JTMT				IAML		17 26 12.3	
	comp=N,57nm,0.5s						
JTMT				IAML		17 26 14.2	
	comp=E,63nm,0.6s						
YNE	**Yellowstone No**	**3.10**	**82**		**Pn**	**17 25 18.0**	**+1.6**
J08A	**Circle Bar Ran**	**3.26**	**248**		**Pn**	**17 25 20.0**	**+1.5**
J08A				IAML		17 26 16.8	
	comp=E,58nm,0.8s						
J08A				IAML		17 26 19.4	
	comp=N,44nm,0.7s						
E09A	**Wood Farm, Sta**	**3.26**	**306**		**Pn**	**17 25 18.9**	**+0.5**
E09A				IAML		17 26 17.1	
	comp=E,47nm,1.2s						
G08A	**Pilot Rock**	**3.34**	**283**		**Pn**	**17 25 21.1**	**+1.4**
GCMT	**Greycliff**	**3.49**	**69**		**Pn**	**17 25 22.9**	**+1.1**
SPUT	**South Promonto**	**3.62**	**157**		**Pn**	**17 25 25.7**	**+2.2**
RLMT	**Red Lodge**	**3.63**	**81**		**Pn**	**17 25 25.4**	**+1.7**
HWUT	**Hardware Ranch**	**3.66**	**145**		**Pn**	**17 25 26.8**	**+2.7**
HWUT				IAML		17 26 25.2	
	comp=E,30nm,0.7s						
HWUT				IAML		17 26 26.6	
	comp=E,35nm,1.0s						
I07A	**Izee**	**3.75**	**263**		**Pn**	**17 25 27.1**	**+1.8**
I07A				IAML		17 26 29.3	
	comp=N,31nm,1.4s						
I07A				IAML		17 26 30.5	
	comp=E,37nm,0.9s						
WVOR	**Wild Horse Val**	**3.84**	**236**	Pn	**Pn**	**17 25 28.0**	**+1.5**
BGU	**Big Grassy Mou**	**3.85**	**165**		**Pn**	**17 25 31.2**	**+4.5**
BW06	**Boulder Array**	**3.94**	**117**		**Pn**	**17 25 30.7**	**+2.6**
PD31	**Pinedale Array**	**3.94**	**117**		**Pn**	**17 25 30.2**	**+2.1**
PDAR	**Pinedale Array**	**3.94**	**117**	Pn	**Pn**	**17 25 31.4**	**+3.3**
	comp=E,0.8nm,0.3s,baz=294,slow=11,SNR=27						
PDAR				Lg	Lg	17 26 33.6	
	baz=308,slow=37,SNR=1.5						
PDAR	**Pinedale Array**	**3.94**	**117**		**Pn**	**17 25 30.9**	**+2.9**
ELK	**Elko**	**3.96**	**190**	Pn	**Pn**	**17 25 29.6**	**+1.3**
	comp=E,1.9nm,0.3s,baz=12,slow=12,SNR=23						
ELK				Pg	**Pb**	**17 25 34.1**	**-3.1**
	comp=E,2.5nm,0.3s,baz=8.5,slow=16,SNR=23						
ELK				Lg	Lg	17 26 25.7	
	comp=E,7.5nm,0.3s,baz=138,slow=14,SNR=9.6						
ELK	**Elko**	**3.96**	**190**		**Pn**	**17 25 29.9**	**+1.5**
ELK				IAML		17 26 30.4	
	comp=E,22nm,0.5s						
D08A	**Wollman Farm,**	**4.01**	**308**		**Pn**	**17 25 30.1**	**+1.4**
HAWA	**Hanford**	**4.05**	**297**	Pn	**Pn**	**17 25 31.1**	**+1.9**
NEW	**Newport**	**4.09**	**333**	Pn	**Pn**	**17 25 32.6**	**+2.6**
	comp=E,1.1nm,0.3s,baz=144,slow=13,SNR=11						
NEW				Lg	Lg	17 26 38.4	
	comp=E,8.4nm,0.3s,baz=85,slow=21,SNR=15						
NEW	**Newport**	**4.09**	**333**		**Pn**	**17 25 31.1**	**+1.1**
NEW				IAML		17 26 49.9	
	comp=E,31nm,1.3s						
TCUT	**Toone Canyon**	**4.14**	**148**		**Pn**	**17 25 31.2**	**+0.5**
F07A	**Phinny Hill Vi**	**4.14**	**289**		**Pn**	**17 25 31.6**	**+1.1**
F07A				IAML		17 26 40.3	
	comp=E,30nm,0.7s						
C09A	**Chrisman Ranch**	**4.17**	**320**	Pn	**Pn**	**17 25 30.2**	**-0.8**
E07A	**Sunnyside**	**4.32**	**298**	Pn	**Pn**	**17 25 35.1**	**+2.1**
E07A				IAML		17 27 00.1	
	comp=E,28nm,1.0s						
E07A				IAML		17 27 02.4	
	comp=N,24nm,0.6s						
CTU	**Camp Tracy**	**4.39**	**153**	Pn	**Pn**	**17 25 36.1**	**+1.9**
WALA	**Waterton Lakes**	**4.42**	**4**		**Pn**	**17 25 36.5**	**+2.1**
WALA				IAML		17 26 51.8	
	comp=N,23nm,1.1s						
WALA				IAML		17 26 56.2	
	comp=E,28nm,0.7s						
G06A	**Carlson Farm,**	**4.51**	**280**		**Pn**	**17 25 36.7**	**+0.9**
G06A				IAML		17 26 59.2	
	comp=E,20nm,3.0s						
JLU	**Jordanelle**	**4.57**	**151**		**Pn**	**17 25 37.3**	**+0.5**
DUG	**Dugway, Tooele**	**4.60**	**165**		**Pn**	**17 25 38.4**	**+1.4**
DUG				IAML		17 27 03.1	
	comp=E,25nm,1.7s						
EGMT	**Eagleton**	**4.63**	**42**		**Pn**	**17 25 37.9**	**+0.5**
PINE	**Pine Mountain**	**4.83**	**262**		**Pn**	**17 25 40.7**	**+0.5**
PINE				IAML		17 28 17.0	
	comp=N,21nm,3.6s						
NLU	**North Lily Min**	**4.99**	**160**		**Pn**	**17 25 43.5**	**+1.1**
B08A	**Colville Reser**	**5.06**	**319**	Pn	**Pn**	**17 25 42.4**	**-0.8**
B08A				IAML		17 27 12.0	
	comp=N,17nm,1.2s						
LTY	**Liberty**	**5.13**	**303**		**Pn**	**17 25 44.1**	**-0.1**
LTY				IAML		17 26 47.0	
	comp=E,14nm,3.5s						
LTY				IAML		17 27 28.8	
	comp=N,14nm,4.8s						
MOD	**Modoc Plateau**	**5.15**	**240**		**Pn**	**17 25 45.7**	**+1.1**
MOD				IAML		17 26 26.0	
	comp=N,11nm,4.4s						
MOD				IAML		17 26 40.9	
	comp=E,12nm,4.7s						
H04A	**Detroit Lake**	**5.60**	**273**	Pn	**Pn**	**17 25 50.9**	**+0.2**
LON	**Longmire**	**5.64**	**294**	Pn	**Pn**	**17 25 50.5**	**-0.7**
TMUT	**Trail Mountain**	**5.84**	**155**	Pn	**Pn**	**17 25 57.3**	**+3.1**
K22A	**Casper**	**6.01**	**107**		**Pn**	**17 25 56.4**	**0.0**
LAO	**LASA Array**	**6.04**	**67**	Pn	**Pn**	**17 25 57.8**	**+1.2**
PSUT	**Pine Spring**	**6.13**	**176**	Pn	**Pn**	**17 26 00.2**	**+2.1**
SRU	**San Rafael Swe**	**6.22**	**152**	Pn	**Pn**	**17 26 00.7**	**+1.3**
KVN	**Kaiserville**	**6.26**	**208**	Pn	**Pn**	**17 26 03.4**	**+3.4**
R11A	**Troy Canyon, C**	**6.37**	**189**		**Pn**	**17 26 02.2**	**+0.8**
O20A	**White River Ci**	**6.38**	**133**		**Pn**	**17 26 01.8**	**+0.3**
BEKR	**Beckworth**	**6.55**	**225**		**Pn**	**17 26 03.3**	**-0.5**
HUMO	**Hull Mountain**	**6.58**	**255**	Pn	**Pn**	**17 26 04.6**	**+0.5**
F03A	**Seaside**	**6.63**	**284**	Pn	**Pn**	**17 26 05.1**	**+0.3**
E03A	**Lebam**	**6.75**	**290**	Pn	**Pn**	**17 26 08.0**	**+1.7**
MTPU	**Mount Pierson**	**6.80**	**166**	Pn	**Pn**	**17 26 06.9**	**-0.5**
NV11	**Mina Array Sit**	**6.84**	**206**		**Pn**	**17 26 07.4**	**-0.4**
NVAR	**Mina Array Bea**	**6.89**	**207**	Pg	**Pb**	**17 26 25.1**	**-1.9**
	comp=E,0.4nm,0.3s,baz=28,slow=17,SNR=8.1						
NVAR				Lg	Lg	17 28 05.7	
	comp=E,0.5nm,0.3s,baz=25,slow=37,SNR=4.1						
NVAR	**Mina Array Bea**	**6.89**	**207**	Pn	**Pn**	**17 26 08.5**	**-0.1**
YKA	**Yellowknife Ar**	**17.87**	**360**	P	**Pn**	**17 28 37.0**	**+1.2**
	comp=E,0.0nm,0.3s,baz=179,slow=12,SNR=6.5						

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*IDC **25** 17:36:49.7±1.0,36°.30N×71°.66E,h0^{km},mb3.6/6, mb1 3.7/13,mb1mx3.5/68,mbtmp3.6/13,ML3.4/7,MS3.4/2, Ms1 3.4/2,ms1mx2.6/45,Error ellipse: s-maj=19.6km s-min=17.9km az=85.0*
*NNC **25** 17:36:55.7±4.4,36°.51N×71°.18E,h0^{km},mb4.1,mpv3.6, Error ellipse: s-maj=48.8km s-min=24.8km az=140.0*
ISC 25 17:36:58.7±0.6**,36°.32N**±0°.06×**71°.62E**±0°.07**,h100**^{km}**,n32,**σ**2^{s}.83**/34**,mb3.3**/6**,3C-2D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMU	**Jammu**	**4.49**	**142**	*e*x	**Sn**	**17 38 54.0**	**-1.7**
THN	**Thein Dam**	**5.14**	**138**	*e*P	**Pn**	**17 38 13.0**	**-0.3**
THN				*e*S	**Sn**	**17 39 13.0**	**+1.6**
DHRM	**DHARAMSHALA**	**5.61**	**135**	*e*P	**Pn**	**17 38 19.3**	**-0.6**
DHRM				*e*S	**Sn**	**17 39 24.4**	**+1.4**
DHRM				IAML		17 39 54.7	
	comp=E,108nm,0.5s						
DHRM				IAML		17 39 55.7	
	comp=N,104nm,0.8s						
BHK	**Bhakra**	**6.30**	**139**	*e*S	**Sn**	**17 39 37.6**	**-2.2**
AAK	**Ala-Archa**	**6.69**	**18**	Pn	**Pn**	**17 38 32.3**	**-2.2**
	comp=N,1.5nm,0.3s,baz=158,slow=6.9,SNR=19						
AAK				Sn	**Sn**	**17 39 51.1**	**+1.8**
	comp=N,0.3nm,0.3s,baz=143,slow=20,SNR=1.7						
AAK	**Ala-Archa**	**6.69**	**18**	⇑Pn	**Pn**	**17 38 35.0**	**+0.5**
	comp=N,2.9nm,0.6s						
AAK				Sn	**Sn**	**17 39 51.4**	**+2.0**
	comp=N,14nm,0.8s						
KK31	**Karatay Array**	**6.83**	**353**	⇑Pn	**Pn**	**17 38 34.6**	**-1.7**
	comp=N,1.7nm,0.3s,baz=173,slow=9.1,SNR=51						
KK31				⇓Sn	**Sn**	**17 39 52.7**	**+0.1**
	comp=N,4.1nm,0.6s,baz=176,slow=22,SNR=4.4						
SMLA	**Simla**	**6.93**	**137**	*e*P	**Pn**	**17 38 36.9**	**-0.8**
SMLA				*e*S	**Sn**	**17 39 54.2**	**-0.8**
SMLA				IAML		17 39 58.5	
	comp=N,75nm,0.5s						
SMLA				IAML		17 39 59.3	
	comp=E,90nm,0.2s						
GEYT	**Alibeck**	**10.90**	**283**	Pn	**Pn**	**17 39 28.9**	**-2.8**
	comp=E,0.9nm,0.3s,baz=129,slow=10,SNR=7.4						
GEYT				Sn	**Sn**	**17 41 29.9**	**-1.8**
	comp=E,0.9nm,0.3s,baz=154,slow=14,SNR=5.3						
DANN	**Dangsing**	**12.97**	**124**	*e*P	**Pn**	**17 39 54.9**	**-4.6**
	comp=E,17nm,0.4s						
MKAR	**Makanchi Array**	**13.15**	**34**	Pn	**Pn**	**17 39 59.0**	**-2.5**
	comp=E,0.1nm,0.3s,baz=210,slow=14,SNR=21						
GKN	**Gorkha**	**13.78**	**123**	*e*P	**Pn**	**17 40 05.5**	**-4.5**
	comp=E,12nm,0.2s						
DMN	**Daman**	**14.35**	**123**	*e*P	Pn	17 40 12.5	-4.9
	comp=E,36nm,1.0s						
PKI	**Pulchoki**	**14.58**	**123**	*e*P	Pn	17 40 15.4	-5.0
	comp=E,17nm,0.7s						
GUN	**Gumba**	**14.69**	**121**	*e*P	Pn	17 40 16.3	-5.5
	comp=E,7.5nm,0.4s						
JIRN	**Jiri**	**15.06**	**121**	*e*P	**Pn**	**17 40 21.5**	**-5.1**
	comp=E,30nm,0.4s						
KURBB	**Kurchatov Arra**	**15.14**	**17**	Pn	**Pn**	**17 40 23.6**	**-3.5**
	comp=E,0.0nm,0.3s,baz=206,slow=12,SNR=2.7						
AB31	**Akbulak array**	**15.49**	**330**	⇑P	**Pn**	**17 40 28.3**	**-3.1**
	comp=E,2.3nm,0.3s,baz=140,slow=13,SNR=28						
RAMN	**Ramite**	**15.79**	**122**	*e*P	**Pn**	**17 40 31.8**	**-3.8**
	comp=E,9.9nm,0.5s						
TAPN	**Taplejung**	**16.32**	**119**	*e*P	**Pn**	**17 40 37.7**	**-4.5**
	comp=E,7.5nm,0.4s						
BVAR	**Borovoye Array**	**16.73**	**357**	Pn	**Pn**	**17 40 42.7**	**-4.1**
	comp=E,0.1nm,0.3s,baz=158,slow=12,SNR=2.4						
AKTO	**Aktyubinsk**	**17.19**	**329**	P	**Pn**	**17 40 52.9**	**+0.4**
	comp=E,0.6nm,0.3s,baz=130,slow=11,SNR=8.8						
AKTO	**Aktyubinsk**	**17.19**	**329**	⇓P	**Pn**	**17 40 53.1**	**+0.7**
	comp=E,4.8nm,0.8s						
ZALV	**Zalesovo Beam**	**19.88**	**23**	P	**P**	**17 41 21.5**	**-0.3**
	comp=E,0.2nm,0.3s,baz=229,slow=9.4,SNR=6.9						
TLY	**Talaya**	**27.41**	**46**	LR	LR	17 53 19.4	
	comp=E,51nm,21.1s,baz=165,slow=36						
SONM	**Songino Array**	**28.03**	**55**	P	**P**	**17 42 40.8**	**+0.3**
	comp=E,0.3nm,0.5s,baz=278,slow=10.0,SNR=1.8						
CMAR	**Chiang Mai Arr**	**29.93**	**119**	P	**P**	**17 43 00.2**	**+2.9**
	comp=E,0.2nm,0.3s,baz=303,slow=8.3,SNR=2.9						
FINES	**FINESS Array B**	**37.92**	**326**	P	**P**	**17 44 09.6**	**+3.7**
	comp=E,3.2nm,1.0s,baz=124,slow=8.9,SNR=2.3						
ARCES	**ARCESS Array B**	**41.51**	**338**	LR	LR	18 02 49.5	
	comp=E,76nm,18.2s,baz=164,slow=38						
TORD	**Torodi Ar. Bea**	**66.22**	**269**	P	**P**	**17 47 38.5**	**+2.3**
	comp=E,0.3nm,0.4s,baz=43,slow=6.3,SNR=5.0						
WRA	**Warramunga Arr**	**81.47**	**122**	P	**P**	**17 49 09.1**	**+4.0**
	comp=E,0.5nm,0.8s,baz=324,slow=4.9,SNR=5.1						
ASAR	**Alice Springs**	**83.74**	**125**	P	**P**	**17 49 21.0**	**+4.2**
	comp=E,0.2nm,0.8s,baz=312,slow=4.8,SNR=5.7						

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*BJI **25** 17:37:43.6±0.0,52°.88N×177°.50W,h171^{km},mB4.8/31, mb4.5/33*
*MOS **25** 17:37:47.6±0.9,52°.64N×177°.15W,h210^{km},mb4.6/27, Error ellipse: s-maj=6.4km s-min=4.6km az=84.4*
*PMR **25** 17:37:48±2.4,52°.50N±0°.07×177°.15W±0°.05,h197^{km}±1^{km}, Error ellipse: s-maj=12.6km s-min=4.2km az=163.0*
*NEIC **25** 17:37:48.5±1.9,52°.58N±0°.08×177°.16W±0°.09, h211^{km}±3^{km},mb5.2/534,Error ellipse: s-maj=11.6km s-min=7.8km az=171.0*

*AEIC **25** 17:37:48.5±2.4, 52°.32N±0°.08×177°.04W±0°.09, h214^{km}±3^{km}, Error ellipse: s-maj=11.9km s-min=7.7km az=172.0*

*IDC **25** 17:37:49.4±0.6, 52°.64N×177°.13W, h216^{km}±4^{km}, mb4.2/39, mb1 4.2/42, mb1mx4.1/62, mbtmp4.8/42, Error ellipse: s-maj=9.3km s-min=5.9km az=168.0*

*GCMT **25** 17:37:49.5±0.3, 52°.64N±0°.02×177°.19W±0°.04, h210^{km}±2^{km}, MW5.0/97, Moment Tensor Solution. s28,c34; s97,c133; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.19±.12; M$_{\theta\theta}$-2.31±.17; M$_{\phi\phi}$0.11±.15; M$_{r\theta}$2.12±.12; M$_{\theta\phi}$-1.92±.11; M$_{\phi r}$-0.76±.10; Best double couple: M$_0$3.71800×10^{16} NP1:ϕ$_s$211.00000°, δ40.00000°, λ37.00000°. NP2:ϕ$_s$91.00000°, δ67.00000°, λ124.00000°. Principal axes: T 3.6570, Plg55.0000°, Azm44.0000°; N 0.1140, Plg31.0000°, Azm256.0000°; P -3.7790, Plg15.0000°, Azm157.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **25** 17:37:57.0±0.0, 53°.14N×178°.71W, h244^{km}, mb5.0*

ISC 25 17:37:48.3±0.3, **52°.53N**±0°.05×**177°.16W**±0°.03, **h211**^{km}±2^{km}, **h211**^{km}**:pP-P, n1366,** σ1^{s}.**11**/1525, **mb5.1**/375, **35C-6D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KINC	**Kanaga Island**	0.60	178		Pn	17 38 16.4	-0.7
KICM	**Kanaga Island**	0.61	182		Pn	17 38 16.4	-0.8
KIKV	**Kanaga Island**	0.65	181		Pn	17 38 16.3	-1.0
KIWB	**Kanaga Island**	0.68	179		Pn	17 38 16.6	-0.8
ADK	**Adak**	0.71	155	P	Pn	17 38 16.1	-1.5
ADK				S	S	17 38 36.9	-3.4
ADK	**Adak**	0.71	155		Pn	17 38 16.1	-1.5
ADK					S	17 38 36.9	-3.4
KIMD	**Kanaga Island**	0.77	183		Pn	17 38 16.7	-1.2
GSTD	**Great Sitkin T**	0.78	127		Pn	17 38 16.7	-1.4
GSTD					S	17 38 39.1	-2.0
GSTR	**Great Sitkin T**	0.81	122		Pn	17 38 17.0	-1.1
TAFP	**Tanaga Falls P**	0.81	219		Pn	17 38 17.3	-0.8
TAFP					S	17 38 40.6	-0.6
TAPA	**Tanaga Point A**	0.82	210		Pn	17 38 17.3	-0.9
GSMY	**Great Sitkin M**	0.83	125		Pn	17 38 16.9	-1.3
TANO	**Tanaga North**	0.85	224		Pn	17 38 18.0	-0.3
TASE	**Tanaga Southea**	0.88	218		Pn	17 38 17.9	-0.6
KOWE	**Korovin West**	1.79	94		Pn	17 38 25.5	0.0
KOKL	**Mount Kliuchef**	1.82	95		Pn	17 38 25.4	-0.5
ATKA	**Atka Island**	1.85	99		Pn	17 38 24.8	-1.3
ATKA	**Atka Island**	1.85	99		S	17 38 53.0	-2.2
KOFP	**Korovin Flat P**	1.89	97		Pn	17 38 26.0	-0.6
NIKH	**Nikolski High**	5.07	82		Pn	17 39 03.2	-0.4
SMY	**Shemya**	5.33	276	P	Pn	17 39 07.2	+0.2
SMY	**Shemya**	5.33	276		Pn	17 39 07.2	+0.2
OKSP	**Okmok Steeple**	5.42	79		Pn	17 39 08.4	+0.2
OKFG	**Magazine Ridge**	5.66	77		Pn	17 39 11.1	-0.1
SPIA	**Saint Paul Isl**	6.13	38		Pn	17 39 17.4	+0.3
MGOD	**Makushin Gods**	6.32	74		Pn	17 39 20.0	+0.3
MSW	**Makushin Switc**	6.39	73		Pn	17 39 20.5	0.0
MREP	**Makushin Rep't**	6.39	74		Pn	17 39 21.2	+0.5
MNAT	**Makushin Natee**	6.44	74		Pn	17 39 21.6	+0.4
UNV	**Unalaska Valle**	6.54	74		Pn	17 39 22.6	+0.2
AKRB	**Akutan Reef Bi**	6.83	72		Pn	17 39 26.6	+0.3
AKMO	**Akutan Morgan**	6.86	72		Pn	17 39 26.7	+0.1
AHB	**Akutan Harbor**	6.98	72		Pn	17 39 28.9	+0.7
AKUT	**Akutan**	7.01	72		Pn	17 39 29.3	+0.8
WESP	**Westdahl Peak**	7.67	70		Pn	17 39 37.6	+0.4
SSBA	**Shishaldin**	8.06	69		Pn	17 39 43.0	+0.8
FALS	**False Pass**	8.48	69		Pn	17 39 47.4	-0.1
DT1	**Dutton Round H**	9.17	68		Pn	17 39 57.1	+0.6
SDPT	**Sand Point**	10.23	67		Pn	17 40 08.9	-1.2
CNBA	**Chernabura Isl**	10.67	71		Pn	17 40 13.9	-1.9
CHGN	**Chignik**	11.55	63		Pn	17 40 25.4	-1.4
GAMB	**Gambell**	11.63	12		Pn	17 40 29.5	+1.7
CHIR	**Chirikof Islan**	13.03	67		Pn	17 40 42.9	-2.5
ANM	**Nome**	13.51	22	P	Pn	17 40 51.8	+0.4
ANM	**Nome**	13.51	22	P	Pn	17 40 51.8	+0.4
SII	**Sitkinak Islan**	13.91	64		Pn	17 40 55.5	-0.9
OHAK	**Old Harbor**	14.49	62		Pn	17 41 01.1	-2.3
SVW2	**Sparrevohn**	14.54	45	P	P	17 41 05.3	+0.3
PET	**Petropavlovsk**	14.63	282	*e*P	P	17 41 07.3	+1.2
PET				*e*S	S	17 43 42.8	-4.3
PET				pmax	pmax		
	comp=Z,38nm,1.3s						
PET				MLR	MLR		
	comp=Z,200nm,17.0s						
PET	**Petropavlovsk**	14.63	282	P	P	17 41 07.0	+1.0
KDAK	**Kodiak Island**	14.95	60	P	Pn	17 41 07.6	-1.5
	comp=Z,122nm,0.3s,baz=253,slow=4.9,SNR=470						
KDAK				S	S	17 43 47.4	-7.1
	comp=Z,6.1nm,0.3s,baz=20,slow=22,SNR=6.5						
KDAK				ScP	ScP	17 49 14.8	-1.2
	comp=Z,0.7nm,0.3s,baz=236,slow=0.7,SNR=8.1						
KDAK	**Kodiak Island**	14.95	60	P	Pn	17 41 07.6	-1.5
KDAK					S	17 43 48.7	-5.8
PETK	**Petropavlovsk-**	15.19	282	P	P	17 41 12.6	+0.2
	comp=Z,2.3nm,0.3s,baz=94,slow=13,SNR=98						
PETK				PcP	PcP	17 46 03.5	+0.5
	comp=Z,0.9nm,0.3s,baz=140,slow=2.2,SNR=11						
PETK				ScP	ScP	17 49 15.2	-1.3
	comp=Z,1.5nm,0.3s,baz=108,slow=1.0,SNR=40						
PETK				PKiKP	PKiKP	17 53 55.9	-1.3
	comp=Z,0.3nm,0.3s,baz=85,slow=2.8,SNR=11						
PETK	**Petropavlovsk-**	15.19	282		ScP	17 49 15.1	-1.5
TTA	**Tatalina**	15.28	39	P	P	17 41 14.6	+1.3
TTA	**Tatalina**	15.28	39	P	P	17 41 14.6	+1.3
RSO	**Redoubt South**	15.56	50	P	Pn	17 41 17.8	+1.1
HOM	**Homer**	15.85	53	P	Pn	17 41 21.2	+1.3
CNPM	**China Poot**	16.02	54	P	P	17 41 20.9	-0.5
SKR	**Severo-Kuril's**	16.67	274	*e*P	Pn	17 41 40.4	+11
SKR				*e*S	S	17 44 29.9	-1.9
SKR				pmax	pmax		
	comp=Z,100nm,3.1s						
SKR				pmax	pmax		
	comp=Z,300nm,3.3s						
SKR				MLR	MLR		
	comp=Z,100nm,18.0s						
PPLA	**Purkeypile**	16.78	42	P	Pn	17 41 32.0	+0.9
RDOG	**Red Dog Mine**	17.02	18	P	Pn	17 41 34.6	+0.8
RDOG				IAmb	IAmb	17 41 41.8	
	comp=Z,176nm,1.0s						
SEW	**Seward**	17.03	53	P	Pn	17 41 34.0	0.0
RC01	**Rabbit Creek A**	17.17	49	P	P	17 41 33.6	-0.3
RC01				IAmb	IAmb	17 41 42.0	
	comp=Z,110nm,0.9s						
BILL	**Bilibino**	17.48	339	⇑*i*P	Pn	17 41 38.6	-0.6
BILL				*i* S	S	17 44 51.4	+3.8
BILL				pmax	pmax		
	comp=Z,103nm,1.2s						
BILL	**Bilibino**	17.48	339	P	Pn	17 41 39.0	-0.2
BILL				IAmb	IAmb	17 41 40.6	
	comp=Z,118nm,1.2s						
KTH	**Kantishna Hill**	17.59	41	P	Pn	17 41 40.4	-0.2
PMR	**Palmer**	17.60	48	P	P	17 41 39.0	+0.4
PMR				pmax	pmax		
	comp=Z,123nm,0.7s						
PMR	**Palmer**	17.60	48	P	P	17 41 39.0	+0.4
PMR				IAmb	IAmb	17 41 44.7	
	comp=Z,123nm,0.7s						
GHO	**Glory Hole Cre**	17.75	48	P	P	17 41 40.3	-0.1
GHO					S	17 44 57.7	+4.5
TRF	**Thorofare Moun**	17.80	42	P	Pn	17 41 42.2	-0.9
BPAW	**Bear Paw Mtn.**	17.82	39	P	Pn	17 41 43.1	-0.1
KNK	**Knik Glacier**	17.86	49	P	P	17 41 40.8	-0.7
IMAR	**Indian Mountai**	17.86	32	P	Pn	17 41 43.0	-0.7
SML	**Sawmill**	18.03	48	P	P	17 41 43.4	0.0
SML				pmax	pmax		
	comp=Z,316nm,0.8s						
SML	**Sawmill**	18.03	48	P	P	17 41 43.4	0.0
MLY	**Manley**	18.37	37	P	Pn	17 41 49.2	-0.5
RND	**Reindeer**	18.37	43	P	P	17 41 46.9	-0.1
RND				pmax	pmax		
	comp=Z,296nm,0.7s						
RND	**Reindeer**	18.37	43	P	P	17 41 46.9	-0.1
BWN	**Browne**	18.44	40	P	Pn	17 41 49.4	-1.1
MID	**Middleton Isla**	18.45	56	P	Pn	17 41 50.3	-0.2
MID				pmax	pmax		
	comp=Z,481nm,0.8s						
MID	**Middleton Isla**	18.45	56	P	Pn	17 41 50.3	-0.2
MCK	**McKinley**	18.47	42	P	P	17 41 48.3	+0.3
MCK				S	S	17 45 06.8	-0.5
MCK				pmax	pmax		
	comp=Z,151nm,0.8s						
MCK	**McKinley**	18.47	42	P	P	17 41 48.3	+0.3
MCK					S	17 45 06.8	-0.5
SCM	**Sheep Creek Mo**	18.49	48	P	P	17 41 48.5	+0.1
SCM				pmax	pmax		
	comp=Z,588nm,0.9s						
SCM	**Sheep Creek Mo**	18.49	48	P	P	17 41 48.5	+0.1
HIN	**Hinchinbrook I**	18.53	53	P	P	17 41 49.0	+0.2
NEA	**Nenana**	18.77	39	P	P	17 41 52.4	+1.1
DHY	**Denali Highway**	18.87	44	P	P	17 41 53.1	+0.6
DHY					S	17 45 15.9	+0.5
EYAK	**Cordova Ski Ar**	18.93	53	P	P	17 41 53.1	+0.1
MA2	**Magadan**	19.10	304	*i* P	Pn	17 41 56.9	-1.4
MA2				pmax	pmax		
	comp=Z,13nm,0.8s						
MA2	**Magadan**	19.10	304	P	Pn	17 41 56.9	-1.4
MA2				IAmb	IAmb	17 42 02.7	
	comp=Z,47nm,0.8s						
SEY	**Seymchan**	19.11	315	P	Pn	17 41 56.6	-1.7
	comp=Z,1.8nm,0.3s,baz=115,slow=10,SNR=77						
SEY				ScP	ScP	17 49 22.8	-1.7
	comp=Z,0.8nm,0.3s,baz=135,slow=3.6,SNR=22						
SEY	**Seymchan**	19.11	315	⇓*i*P	Pn	17 41 57.4	-0.9
WRH	**Wood River Hil**	19.11	40	P	P	17 41 54.7	-0.3
MDM	**Murphy Dome**	19.27	39	P	P	17 41 57.2	+0.5
CCB	**Clear Creek Bu**	19.30	40	P	P	17 41 56.3	-0.6
TCOL	**CIGO, UAF Yank**	19.37	39	P	P	17 41 57.6	-0.1
	baz=244,SNR=52						
COLA	**College**	19.38	39	P	P	17 41 57.9	+0.1
COLA				pmax	pmax		
	comp=Z,356nm,1.0s						
COLA	**College**	19.38	39	P	P	17 41 57.9	+0.1
RAGM	**Ragged Mountai**	19.42	53	P	P	17 41 58.2	-0.2
HDA	**Harding Lake**	19.54	41	P	P	17 41 58.2	-1.4
HDA	**Harding Lake**	19.54	41	P	P	17 41 58.4	-1.1
	baz=247,SNR=128						
POKR	**Poker Plat Res**	19.64	39	P	P	17 42 00.6	0.0
	baz=244,SNR=82						
PAX	**Paxson**	19.66	46	P	P	17 42 01.2	+0.3
PAX				S	S	17 45 34.8	+4.0
PAX				pmax	pmax		
	comp=Z,369nm,0.9s						
PAX	**Paxson**	19.66	46	P	P	17 42 01.2	+0.3
PAX					S	17 45 31.1	+0.3
IL31		19.71	40	P	P	17 41 59.9	-1.4
ILAR	**Eielson Array**	19.71	40	P	P	17 42 00.0	-1.3
	comp=Z,12nm,0.3s,baz=238,slow=9.3,SNR=134						
ILAR				ScP	ScP	17 49 24.1	-1.8
	comp=Z,0.7nm,0.3s,baz=276,slow=3.3,SNR=29						
ILAR	**Eielson Array**	19.71	40	P	P	17 41 59.0	-2.3
ILAR					ScP	17 49 23.8	-2.0
COLD	**Coldfoot**	19.74	31	P	P	17 42 03.1	+1.4
GLB	**Gilahina Butte**	20.03	50	P	P	17 42 04.6	-0.3
VRDI	**Verde Repeater**	20.16	51	P	P	17 42 06.0	-0.4
RIDG	**Independent Ri**	20.16	44	P	P	17 42 05.9	-0.4
CRQM	**Cirque**	20.23	53	P	P	17 42 07.2	0.0
TGL	**Tana Glacier**	20.38	53	P	P	17 42 08.3	-0.4
MCARA	**McCarthy VSAT**	20.39	51	P	P	17 42 08.5	-0.2
MENT	**Mentasta**	20.41	46	P	P	17 42 09.3	+0.4
PRP	**Porcupine Dome**	20.54	39	P	P	17 42 09.0	-1.4
SCRK	**Sand Creek**	20.60	43	P	P	17 42 10.2	-0.8
BALM	**Baldy**	20.66	52	P	P	17 42 11.0	-0.6
BALM				pmax	pmax		
	comp=Z,97nm,0.8s						
BALM	**Baldy**	20.66	52	P	P	17 42 11.0	-0.6
BALM				IAmb	IAmb	17 42 13.9	
	comp=Z,97nm,0.8s						
TOLK	**Toolik Lake Re**	20.77	29	P	P	17 42 13.4	+0.8
TOLK	**Toolik Lake Re**	20.77	29	P	P	17 42 13.9	+1.2
	baz=233,SNR=400						
BARN	**Barnard Glacie**	20.99	52	P	P	17 42 15.3	+0.1
FYU	**Fort Yukon**	21.09	36	P	P	17 42 16.2	+0.2
CTGM	**Chitina Glacie**	21.14	52	P	P	17 42 16.7	0.0
BCAR	**Beaver Creek A**	21.30	47	P	P	17 42 18.4	+0.2
PCA	**Pinnacle**	21.58	55	P	P	17 42 21.0	-0.1
BMAR	**Burnt Mountain**	21.71	34	P	P	17 42 23.2	+0.8
EGAK	**Eagle**	22.01	42	P	P	17 42 25.4	+0.2
DAWY	**Dawson**	22.57	45	P	P	17 42 30.8	+0.4
DHAK	**Deception Hill**	22.58	58	P	P	17 42 31.0	+0.5
HYT	**Haines Junctio**	22.99	53	P	P	17 42 34.4	+0.2
SKAG	**Skagway**	24.06	57	P	P	17 42 44.0	+0.2
SKAG				IAmb	IAmb	17 42 46.0	
	comp=Z,60nm,0.8s						
EPYK	**Eagle Plains**	24.23	40	P	P	17 42 44.7	-0.6
EPYK	**Eagle Plains**	24.23	40	P	P	17 42 45.5	+0.2
	baz=255,SNR=19						
SIT	**Sitka**	24.25	63	P	P	17 42 45.1	-0.5
SIT				pmax	pmax		
	comp=Z,124nm,1.6s						
SIT	**Sitka**	24.25	63	P	P	17 42 45.1	-0.5
SIT				IAmb	IAmb	17 43 13.6	
	comp=Z,124nm,1.6s						
WHY	**Whitehorse**	24.27	54	P	P	17 42 46.9	+1.0
WHY				IAmb	IAmb	17 42 48.2	
	comp=Z,70nm,0.7s						
BESE	**Bessie Mountai**	24.35	59	P	P	17 42 46.7	+0.1
JIS	**Juneau Island**	24.62	59	P	P	17 42 48.8	-0.1
JIS				IAmb	IAmb	17 42 51.1	
	comp=Z,60nm,0.9s						
INK	**Inuvik**	25.93	36	P	P	17 43 01.6	+1.0
	comp=Z,48nm,0.5s,baz=249,slow=5.7,SNR=130						
INK				PcP	PcP	17 46 23.1	+0.2
	comp=Z,6.2nm,0.6s,baz=347,slow=2.9,SNR=3.3						
INK				ScP	ScP	17 49 41.5	-0.6
	comp=Z,7.7nm,0.8s,baz=294,slow=4.3,SNR=9.2						
INK	**Inuvik**	25.93	36	P	P	17 43 01.4	+0.8
INK					PcP	17 46 22.7	-0.3
INK					ScP	17 49 40.9	-1.2
WRAK	**Wrangell Islan**	25.97	63	P	P	17 43 02.7	+1.7
WRAK				IAmb	IAmb	17 43 04.1	
	comp=Z,40nm,0.9s						
DIB	**Dawson Inlet,**	26.66	71	P	P	17 43 08.0	+0.7
DLBC	**Dease Lake**	26.88	58	P	P	17 43 09.7	+0.3
	comp=Z,12nm,0.6s,baz=210,slow=11,SNR=18						
DLBC	**Dease Lake**	26.88	58	P	P	17 43 09.5	+0.2
JKA	**Kamikawa-asahi**	27.74	269	P	P	17 43 17.8	+0.8
ASAJ	**Asahikawa**	27.74	269	P	P	17 43 17.8	+0.8
	comp=Z,6.2nm,0.8s,baz=80,slow=22,SNR=5.8						
ERM	**Erimo**	28.56	264	P	P	17 43 24.8	+0.5
ERM				pmax	pmax		
	comp=Z,50nm,1.2s						
ERM	**Erimo**	28.56	264	P	P	17 43 24.8	+0.5
ERM				IAmb	IAmb	17 43 44.5	
	comp=Z,50nm,1.1s						
YAK	**Yakutsk**	29.44	310	P	P	17 43 32.2	+0.4
	comp=Z,6.2nm,0.3s,baz=101,slow=1.3,SNR=5.1						
YAK				ScP	ScP	17 49 50.1	-2.8
	comp=Z,9.7nm,0.6s,baz=232,slow=0.5,SNR=9.5						
YAK	**Yakutsk**	29.44	310	*e*P	P	17 43 31.2	-0.6
YAK				*e**PP	pP	17 44 12.4	-0.9
YAK				*e*		17 44 33.9	
YAK				*e*		17 46 30.8	
YAK				*e*S	S	17 48 06.7	-3.0
YAK				*e**SS	sS	17 49 23.8	-0.2
YAK				*e*		17 53 43.2	
YAK				pmax	pmax		
	comp=Z,11nm,1.3s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,30nm,1.3s						
YAK				pmax	pmax		
	comp=E,29nm,1.3s						
YAK				smax	smax		
	comp=N,65nm,2.2s						
YAK				smax	smax		
	comp=E,44nm,1.9s						
YAK	**Yakutsk**	29.44	310	P	P	17 43 31.8	0.0
YAK				IAmb	IAmb	17 44 26.0	
	comp=Z,21nm,0.6s						
YAK					ScP	17 49 51.1	-1.9
BBB	**Bella Bella**	29.50	71	P	P	17 43 32.6	+0.3
	comp=Z,22nm,0.8s,baz=300,slow=9.9,SNR=6.9						
BBB	**Bella Bella**	29.50	71	P	P	17 43 32.7	+0.3
C36M	**Paulatuk**	29.50	35	P	P	17 43 33.2	+1.0
C36M				IAmb	IAmb	17 43 34.3	
	comp=Z,74nm,1.0s						
C36M	**Paulatuk**	29.50	35	P	P	17 43 33.2	+1.0
	baz=263,SNR=53						
TIXI	**Tiksi**	30.15	329	P	P	17 43 38.5	+0.6
	comp=Z,8.2nm,0.5s,baz=110,slow=11,SNR=35						
TIXI				PcP	PcP	17 46 32.7	-0.6
	comp=Z,5.4nm,0.5s,baz=128,slow=5.3,SNR=7.6						
TIXI				ScP	ScP	17 49 52.8	-2.3
	comp=Z,5.9nm,0.5s,baz=118,slow=5.2,SNR=28						
TIXI	**Tiksi**	30.15	329	*i* P	P	17 43 38.9	+1.0
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TIXI	**Tiksi**	30.15	329	P	P	17 43 38.5	+0.6
TIXI					ScP	17 49 52.8	-2.3
PGC	**Sidney**	33.66	75	P	P	17 44 10.8	+2.1
PGC				IAmb	IAmb	17 44 12.3	
	comp=Z,32nm,0.7s						
YKA	**Yellowknife Ar**	33.70	48	P	P	17 44 09.7	+0.7
	comp=Z,130nm,0.8s,baz=281,slow=7.6,SNR=812						
YKA				PcP	PcP	17 46 43.6	+0.3
	comp=Z,6.3nm,0.7s,baz=281,slow=2.6,SNR=6.5						
YKA				ScP	ScP	17 50 06.8	-0.6
	comp=Z,2.1nm,0.6s,baz=286,slow=3.2,SNR=11						
YKA				PKiKP	PKiKP	17 54 05.5	-1.5
	comp=Z,0.4nm,0.6s,baz=264,slow=0.8,SNR=7.0						
YKA	**Yellowknife Ar**	33.70	48	*i* P	P	17 44 09.7	+0.7
YKA				pmax	pmax		
	comp=Z,139nm,0.8s						
LLLB	**Lillooet**	33.71	71	P	P	17 44 10.5	+1.3
NLWA	**Neilton Lookou**	34.00	77	P	P	17 44 13.8	+1.9
NLWA				IAmb	IAmb	17 44 15.3	
	comp=Z,40nm,0.7s						
A04D	**Lummi Island**	34.06	74	P	P	17 44 13.5	+1.3
	baz=298						
USRK	**Ussuriysk Ar.**	34.16	277	P	P	17 44 13.5	+0.3
	comp=Z,2.3nm,0.6s,baz=51,slow=7.7,SNR=2.4						
USRK				PcP	PcP	17 46 45.7	+0.8
	comp=Z,5.6nm,0.7s,baz=75,slow=2.8,SNR=8.6						
USRK				ScP	ScP	17 50 09.5	+0.1
	comp=Z,1.6nm,0.6s,baz=5.8,slow=6.3,SNR=5.5						
USRK	**Ussuriysk Ar.**	34.16	277	P	P	17 44 13.5	+0.3
USRK					ScP	17 50 08.6	-0.8
KIP	**Kipapa**	34.39	147	P	P	17 44 18.3	+3.0
KIP				pmax	pmax		
	comp=Z,199nm,1.4s						
KIP	**Kipapa**	34.39	147	P	P	17 44 18.3	+3.0
D03D	**Eldon**	34.40	76	P	P	17 44 17.0	+1.9
	baz=299,SNR=31						
E03A	**Lebam**	34.60	78	P	P	17 44 19.1	+2.2
E03A				IAmb	IAmb	17 44 20.7	
	comp=Z,66nm,0.8s						
B05A	**Bryant**	34.64	75	P	P	17 44 18.6	+1.4
	baz=298,SNR=18						
D04E	**Lakebay**	34.76	77	P	P	17 44 20.1	+1.8
	baz=300						
VLA	**Vladivostok**	34.82	275	⇓*i*P	P	17 44 19.7	+1.0
VLA				pmax	pmax		
	comp=Z,13nm,1.0s						
B06A	**Marblemount**	34.88	74	P	P	17 44 19.9	+0.7
B06A				IAmb	IAmb	17 44 21.6	
	comp=Z,35nm,0.4s						
F03A	**Seaside**	34.92	79	P	P	17 44 22.0	+2.4
F03A				IAmb	IAmb	17 44 23.2	
	comp=Z,72nm,0.7s						
MJAR	**Matsushiro Arr**	34.97	261	P	P	17 44 21.4	+1.2
	comp=Z,3.4nm,0.5s,baz=44,slow=7.2,SNR=17						
MJAR				PcP	PcP	17 46 48.2	+0.8
	comp=Z,6.6nm,0.6s,baz=91,slow=0.8,SNR=15						
MJAR				ScP	ScP	17 50 11.9	-0.5
	comp=Z,1.9nm,0.9s,baz=55,slow=3.0,SNR=4.2						
MJAR	**Matsushiro Arr**	34.97	261	P	P	17 44 21.1	+0.9
MJAR					pP	17 45 01.7	-1.6
MJAR					PcP	17 46 47.9	+0.5
MJAR					ScP	17 50 11.8	-0.7
MJB9	**Matsu-Tunnel**	34.97	261	P	P	17 44 20.7	+0.5
MJB9					pP	17 45 02.4	-0.9
MJB9					PcP	17 46 47.9	+0.4
MAJO	**Matsushiro**	34.97	261	P	P	17 44 20.9	+0.7
MAJO					pP	17 45 01.5	-1.9
MAJO					PcP	17 46 47.8	+0.4
MAT	**Matsushiro**	34.97	261	P	P	17 44 21.8	+1.6
F04D	**Rainier, OR**	35.17	78	P	P	17 44 22.7	+1.0
	baz=301,SNR=7.6						
E04D	**Cinebar**	35.19	77	P	P	17 44 24.1	+2.2
	baz=300,SNR=17						
D05A	**Enumclaw**	35.22	76	P	P	17 44 23.6	+1.5
D05A				IAmb	IAmb	17 44 25.6	
	comp=Z,54nm,0.7s						
G03D	**McMinnville, O**	35.47	80	P	P	17 44 26.0	+1.7
	baz=302						
LON	**Longmire**	35.55	77	P	P	17 44 26.0	+1.0
LON				pmax	pmax		
	comp=Z,50nm,0.6s						
LON	**Longmire**	35.55	77	P	P	17 44 26.0	+1.0
LON				IAmb	IAmb	17 44 28.7	
	comp=Z,50nm,0.6s						
MSHR	**Mys Shultsa**	35.56	275	*i* P	P	17 44 27.3	+2.2
F04A	**Amboy**	35.60	78	P	P	17 44 26.7	+1.3
I02D	**Swisshome**	35.71	82	P	P	17 44 28.2	+1.8
	baz=303						
COR	**Corvallis**	35.77	81	P	P	17 44 28.7	+1.8
COR				pmax	pmax		
	comp=Z,92nm,0.7s						
COR	**Corvallis**	35.77	81	P	P	17 44 28.7	+1.8
LTY	**Liberty**	35.97	75	P	P	17 44 28.9	+0.3
LTY				IAmb	IAmb	17 44 30.8	
	comp=Z,50nm,0.5s						
H04D	**Lebanon**	36.15	80	P	P	17 44 32.1	+2.0
	baz=303,SNR=17						
J01E	**Myrtle Point**	36.17	83	P	P	17 44 32.5	+2.2
	baz=304						
F05D	**White Salmon**	36.20	78	P	P	17 44 32.0	+1.5
	baz=301						
B08A	**Colville Reser**	36.21	73	P	P	17 44 31.0	+0.3
I03D	**Drain, OR**	36.23	82	P	P	17 44 33.1	+2.4
	baz=304,SNR=7.2						
H04A	**Detroit Lake**	36.40	80	P	P	17 44 33.5	+1.3
INU	**Inuyama**	36.48	260	P	P	17 44 34.6	+1.5
K02D	**Willamette Mer**	36.60	84	P	P	17 44 36.4	+2.3
	baz=305,SNR=9.8						
G05D	**Wamic, OR**	36.62	79	P	P	17 44 35.6	+1.5
	baz=302,SNR=19						
HUH	**Hualalai**	36.74	145	P	P	17 44 38.5	+2.9
I04A	**Tendick Farm,**	36.74	81	P	P	17 44 36.7	+1.5
	baz=304,SNR=21						
E07A	**Sunnyside**	36.80	76	P	P	17 44 36.4	+0.8
E07A				IAmb	IAmb	17 44 38.1	
	comp=Z,45nm,0.6s						
G06A	**Carlson Farm,**	37.03	78	P	P	17 44 38.4	+0.8
HAWA	**Hanford**	37.08	76	P	P	17 44 38.5	+0.6
HUMO	**Hull Mountain**	37.08	83	P	P	17 44 40.2	+2.2
HUMO				IAmb	IAmb	17 44 42.7	
	comp=Z,31nm,0.7s						
I05D	**Terrebonne, OR**	37.09	80	P	P	17 44 39.8	+1.6
	baz=303,SNR=9.4						
D08A	**Wollman Farm,**	37.10	75	P	P	17 44 39.0	+0.9
D08A				IAmb	IAmb	17 44 40.0	
	comp=Z,42nm,0.5s						
F07A	**Phinny Hill Vi**	37.10	77	P	P	17 44 39.1	+0.9
C09A	**Chrisman Ranch**	37.10	73	P	P	17 44 38.6	+0.5
C09A				IAmb	IAmb	17 44 40.0	
	comp=Z,46nm,0.5s						
KRMB	**Red Mountain**	37.13	85	P	P	17 44 41.1	+2.5
KRMB				IAmb	IAmb	17 44 42.6	
	comp=Z,124nm,1.3s						
J04D	**Umpqua Nationa**	37.23	82	P	P	17 44 41.2	+1.6
	baz=304,SNR=9.7						
E08A	**Dider Farm, El**	37.31	75	P	P	17 44 40.5	+0.7
E08A				IAmb	IAmb	17 44 42.4	
	comp=Z,40nm,0.6s						
JCC	**Jacoby Creek,**	37.47	86	P	P	17 44 43.5	+2.3
JCC				IAmb	IAmb	17 44 46.3	
	comp=Z,61nm,0.7s						
JCC				PcP	PcP	17 46 55.3	+0.5
NEW	**Newport**	37.54	72	P	P	17 44 41.7	-0.2
NEW				pmax	pmax		
	comp=Z,68nm,0.5s						
NEW	**Newport**	37.54	72	P	P	17 44 41.6	-0.2
NEW	**Newport**	37.54	72	P	P	17 44 42.1	+0.2
	baz=300,SNR=64						
KHMM	**Horse Mountain**	37.62	86	P	P	17 44 45.5	+2.8
PINE	**Pine Mountain**	37.63	80	P	P	17 44 44.6	+1.8
L04D	**Klamath Falls**	37.70	83	P	P	17 44 45.7	+2.4
	baz=305,SNR=24						
YBH	**Yreka Blue Hor**	37.73	84	P	P	17 44 46.2	+2.6
YBH				pmax	pmax		
	comp=Z,95nm,0.6s						
YBH	**Yreka Blue Hor**	37.73	84	P	P	17 44 46.1	+2.6
J05D	**Fort Rock, OR**	37.74	81	P	P	17 44 46.0	+2.4
	baz=304,SNR=28						
K04D	**Chiloquin, OR**	37.80	82	P	P	17 44 45.4	+1.3
	baz=305						
E09A	**Wood Farm, Sta**	37.84	75	P	P	17 44 44.1	-0.2
E09A				IAmb	IAmb	17 44 46.2	

	comp=Z,25nm,0.6s						
M02C	**Callahan**	37.84	85	P	P	17 44 47.5	+2.9
	baz=306,SNR=12						
G08A	**Pilot Rock**	38.00	77	P	P	17 44 46.4	+0.6
KMRM	**Mail Ridge**	38.02	87	P	P	17 44 48.7	+2.7
BOD	**Bodaibo**	38.11	306	*e*P	P	17 44 45.4	-1.0
BOD				pmax	pmax		
	comp=Z,5.0nm,2.3s						
N02D	**Trinity Center**	38.18	85	P	P	17 44 50.1	+2.8
	baz=307,SNR=39						
M04C	**Macdoel**	38.23	84	P	P	17 44 50.2	+2.4
	baz=306,SNR=49						
RES	**Resolute Bay**	38.27	25	P	P	17 44 47.9	+0.4
RES				pmax	pmax		
	comp=Z,16nm,0.9s						
RES	**Resolute Bay**	38.27	25	P	P	17 44 47.9	+0.4
I07A	**Izee**	38.33	79	P	P	17 44 49.8	+1.2
I07A				IAmb	IAmb	17 44 51.6	
	comp=Z,32nm,0.6s						
KCPM	**Cahto Peak**	38.42	88	P	P	17 44 52.1	+2.7
KCPM				IAmb	IAmb	17 44 53.8	
	comp=Z,93nm,1.1s						
WDC	**Whiskeytown Da**	38.52	86	P	P	17 44 52.4	+2.4
WDC				pmax	pmax		
	comp=Z,63nm,1.0s						
WDC	**Whiskeytown Da**	38.52	86	P	P	17 44 52.4	+2.4
WDC				IAmb	IAmb	17 44 53.6	
	comp=Z,63nm,1.0s						
O02D	**Mt. Diablo Mer**	38.61	86	P	P	17 44 53.8	+2.9
	baz=307,SNR=27						
F10A	**Beach Ranch, E**	38.66	75	P	P	17 44 51.1	-0.1
F10A				IAmb	IAmb	17 44 53.2	
	comp=Z,21nm,0.6s						
HIA	**Hailar**	38.81	291	P	P	17 44 52.6	+0.3
HIA				pmax	pmax		
	comp=Z,25nm,1.3s						
HIA	**Hailar**	38.81	291	P	P	17 44 52.6	+0.3
WALA	**Waterton Lakes**	39.00	69	P	P	17 44 54.2	+0.1
WALA				IAmb	IAmb	17 44 56.4	
	comp=Z,55nm,1.1s						
WALA				PcP	PcP	17 47 00.9	+1.3
MOD	**Modoc Plateau**	39.09	82	P	P	17 44 56.4	+1.4
MOD				IAmb	IAmb	17 44 58.9	
	comp=Z,44nm,0.6s						
HOPS	**Hopland Field**	39.16	88	P	P	17 44 57.4	+2.0
HOPS				IAmb	IAmb	17 44 60.0	
	comp=Z,84nm,0.8s						
BMO	**Blue Mountains**	39.22	77	P	P	17 44 56.3	+0.4
BMO				pmax	pmax		
	comp=Z,32nm,0.6s						
BMO	**Blue Mountains**	39.22	77	P	P	17 44 56.3	+0.4
BMO				IAmb	IAmb	17 44 58.3	
	comp=Z,32nm,0.6s						
J08A	**Circle Bar Ran**	39.36	79	P	P	17 44 56.9	-0.2
J08A				IAmb	IAmb	17 45 00.0	
	comp=Z,25nm,0.5s						
GDXM	**Geysers**	39.45	88	P	P	17 45 00.7	+2.9
GDXM				IAmb	IAmb	17 45 01.8	
	comp=Z,59nm,1.0s						
JTMT	**Jette**	39.45	71	P	P	17 44 57.8	0.0
JTMT				IAmb	IAmb	17 44 59.5	
	comp=Z,31nm,0.5s						
JCJ	**Chichijima**	39.48	246	P	P	17 44 59.3	+1.2
	comp=Z,47nm,0.8s,baz=293,slow=22,SNR=8.5						
ORV	**Oroville**	39.77	86	P	P	17 45 01.9	+1.5
ORV				pmax	pmax		
	comp=Z,45nm,0.8s						
ORV	**Oroville**	39.77	86	P	P	17 45 01.9	+1.5
ORV				IAmb	IAmb	17 45 02.9	
	comp=Z,45nm,0.8s						
ORV				PcP	PcP	17 47 02.8	+0.6
WVOR	**Wild Horse Val**	39.79	81	P	P	17 45 01.9	+1.2
WVOR				pmax	pmax		
	comp=Z,43nm,1.1s						
WVOR	**Wild Horse Val**	39.79	81	P	P	17 45 01.9	+1.2
MCCM	**Marconi Confer**	39.81	89	P	P	17 45 03.2	+2.5
MCCM				IAmb	IAmb	17 45 26.5	
	comp=Z,110nm,1.4s						
MSO	**Missoula**	40.13	72	P	P	17 45 03.2	-0.1
MSO				IAmb	IAmb	17 45 04.9	
	comp=Z,54nm,0.5s						
MSO					PcP	17 47 03.7	+0.4
MSO	**Missoula**	40.13	72	P	P	17 45 03.3	-0.1
	baz=302,SNR=52						
BEKR	**Beckworth**	40.28	85	P	P	17 45 06.0	+1.2
BEKR				IAmb	IAmb	17 45 08.7	
	comp=Z,49nm,0.5s						
AFDM	**Forest Hills D**	40.47	87	P	P	17 45 07.6	+1.4
AFDM				PcP	PcP	17 47 05.7	+1.2
KSRS	**Korea Array**	40.64	271	P	P	17 45 09.2	+1.7
	comp=Z,3.7nm,0.8s,baz=56,slow=8.0,SNR=17						
KSRS				pP	pP	17 45 52.3	+0.5
	comp=Z,2.7nm,0.8s,baz=62,slow=7.6,SNR=3.9						
KSRS				PcP	PcP	17 47 05.5	+0.6
	comp=Z,2.4nm,0.8s,baz=46,slow=4.6,SNR=4.9						
KSRS				ScP	ScP	17 50 34.4	+0.6
	comp=Z,1.9nm,0.7s,baz=64,slow=4.2,SNR=8.9						
KSAR	**Wonju Array Be**	40.67	271	P	P	17 45 08.7	+0.9
KSAR						17 47 05.1	
KSAR	**Wonju Array Be**	40.67	271	P	P	17 45 08.7	+0.9
KSAR				PcP	PcP	17 47 05.0	0.0
RUBR	**Rubicon Trail**	40.91	86	P	P	17 45 12.4	+2.4
RUBR				IAmb	IAmb	17 45 30.1	
	comp=Z,107nm,0.9s						
MFID	**Camas Ranch**	40.91	78	P	P	17 45 10.2	+0.4
MFID				PcP	PcP	17 47 06.5	+0.6
PAHR	**Pah Rah Range**	40.97	84	P	P	17 45 12.1	+1.7
PAHR				IAmb	IAmb	17 45 13.2	
	comp=Z,60nm,0.9s						
PAHR				PcP	PcP	17 47 07.2	+1.0
VCNR	**Virginia City**	41.06	85	P	P	17 45 12.9	+1.8
VCNR				IAmb	IAmb	17 45 14.4	
	comp=Z,74nm,0.8s						
PNTR	**Pine Nut**	41.22	85	P	P	17 45 14.5	+2.0
CMB	**Columbia Colle**	41.40	87	P	P	17 45 15.9	+2.1
CMB				pmax	pmax		
	comp=Z,80nm,1.3s						
CMB	**Columbia Colle**	41.40	87	P	P	17 45 15.9	+2.1
CMB				IAmb	IAmb	17 45 17.1	
	comp=Z,80nm,1.4s						
CMB				PcP	PcP	17 47 07.9	+0.4
YERR	**Yerington**	41.50	85	P	P	17 45 16.3	+1.5
YERR				IAmb	IAmb	17 45 17.8	
	comp=Z,71nm,0.9s						
LRM	**Limekiln Ridge**	41.55	72	P	P	17 45 14.7	-0.4
LRM				PcP	PcP	17 47 08.3	+0.2
SAO	**San Andreas Ge**	41.57	89	P	P	17 45 16.6	+1.5
SAO				pmax	pmax		
	comp=Z,33nm,0.9s						
SAO	**San Andreas Ge**	41.57	89	P	P	17 45 16.6	+1.5
WAKR	**Walker**	41.68	86	P	P	17 45 18.0	+1.7
WAKR				IAmb	IAmb	17 45 19.6	
	comp=Z,84nm,0.7s						
JNU	**Nakatsue**	41.72	263	P	P	17 45 18.5	+2.1
	comp=Z,14nm,0.9s,baz=92,slow=5.0,SNR=6.1						
JNU	**Nakatsue**	41.72	263	P	P	17 45 17.5	+1.1
DLMT	**Dillon**	41.72	73	P	P	17 45 16.9	+0.5
DLMT					PcP	17 47 09.4	+0.8
MCMT	**McKenzie Canyo**	41.87	74	P	P	17 45 17.6	-0.2
EGMT	**Eagleton**	41.90	68	P	P	17 45 17.2	-0.5
EGMT				IAmb	IAmb	17 45 19.8	
	comp=Z,56nm,0.8s						
EGMT				PcP	PcP	17 47 09.2	+0.2
EGMT	**Eagleton**	41.90	68	P	P	17 45 17.1	-0.6
	baz=302,SNR=31						
KVN	**Kaiserville**	42.16	84	P	P	17 45 21.8	+1.7
KVN				pmax	pmax		
	comp=Z,95nm,1.4s						
KVN	**Kaiserville**	42.16	84	P	P	17 45 21.4	+1.4
KVN				IAmb	IAmb	17 45 22.8	
	comp=Z,95nm,1.4s						
KVN				PcP	PcP	17 47 11.1	+0.9
RYN	**Ryan**	42.16	85	P	P	17 45 21.9	+1.8
RYN				IAmb	IAmb	17 45 22.9	
	comp=Z,83nm,1.0s						
PMPB	**Monarch Peak**	42.32	90	P	P	17 45 23.6	+2.4
PMPB				IAmb	IAmb	17 45 26.3	
	comp=Z,50nm,0.8s						
PMPB				PcP	PcP	17 47 12.5	+1.9
NVAR	**Mina Array Bea**	42.42	85	P	P	17 45 24.3	+2.0
	comp=Z,53nm,0.7s,baz=298,slow=7.9,SNR=219						
NVAR				PcP	PcP	17 47 12.2	+1.1
	comp=Z,8.2nm,0.8s,baz=280,slow=2.5,SNR=4.4						
NVAR				ScP	ScP	17 50 41.7	+0.4
	comp=Z,3.4nm,0.7s,baz=290,slow=4.7,SNR=9.4						
NVAR	**Mina Array Bea**	42.42	85	P	P	17 45 24.2	+2.0
NVAR				PcP	PcP	17 47 12.9	+1.7
NVAR					ScP	17 50 41.4	+0.1
MDPB	**Devils Postpil**	42.45	87	P	P	17 45 25.1	+2.6
MDPB				IAmb	IAmb	17 45 25.9	
	comp=Z,96nm,0.7s						
NV11	**Mina Array Sit**	42.51	85	P	P	17 45 24.3	+1.4
OMMB	**Old Mammoth Mi**	42.52	87	P	P	17 45 25.0	+1.9
OMMB				IAmb	IAmb	17 45 26.5	
	comp=Z,107nm,1.2s						
MLAC	**Mammoth, Mammo**	42.60	86	P	P	17 45 26.3	+2.5
	baz=310						
FFC	**Flin Flon**	42.65	56	P	P	17 45 23.0	-0.6
FFC				pmax	pmax		
	comp=Z,33nm,0.6s						
FFC	**Flin Flon**	42.65	56	P	P	17 45 23.0	-0.6
FFC				IAmb	IAmb	17 45 24.9	
	comp=Z,32nm,0.6s						
QLMT	**Earthquake Lak**	42.70	73	P	P	17 45 24.4	0.0
QLMT					PcP	17 47 12.9	+1.0
YHL	**Hebgen Lake**	42.83	73	P	P	17 45 25.8	+0.3
YHL				PcP	PcP	17 47 13.6	+1.1
ELK	**Elko**	42.84	80	P	P	17 45 26.8	+1.2
ELK				pmax	pmax		
	comp=Z,29nm,0.6s						
ELK	**Elko**	42.84	80	P	P	17 45 26.8	+1.2
ELK				IAmb	IAmb	17 45 28.6	
	comp=Z,29nm,0.6s						
YHB	**Horse Butte**	42.88	73	P	P	17 45 26.2	+0.4
YHB				PcP	PcP	17 47 14.2	+1.6
PAGB	**Antelope Grade**	42.98	90	P	P	17 45 28.4	+1.9
PAGB				IAmb	IAmb	17 45 29.8	
	comp=Z,74nm,0.7s						
PAGB				PcP	PcP	17 47 14.1	+1.3
YHH	**Holmes Hill**	43.06	73	P	P	17 45 27.3	-0.1
YMR	**Madison River**	43.06	73	P	P	17 45 27.6	+0.3
VOG	**Valley Oaks Go**	43.12	88	P	P	17 45 29.0	+1.4
	baz=311,SNR=5.1						
GCMT	**Greycliff**	43.18	71	P	P	17 45 28.6	+0.5
YNM	**Yellowstone No**	43.18	73	P	P	17 45 29.5	+1.2
YNR	**Norris Junctio**	43.20	73	P	P	17 45 29.3	+0.9
YUF	**Upper Falls**	43.30	73	P	P	17 45 30.0	+0.7
TIN	**Tinemaha, Big**	43.34	87	P	P	17 45 32.0	+2.4
	baz=310,SNR=42						
YPP	**Pitchstone Pla**	43.38	73	P	P	17 45 30.9	+0.9
SMMC	**Simmler**	43.41	90	P	P	17 45 32.0	+2.0
	baz=312,SNR=5.7						
YNE	**Yellowstone No**	43.42	72	P	P	17 45 30.3	+0.1
H17A	**Grant Village**	43.45	73	P	P	17 45 32.0	+1.6
H17A				IAmb	IAmb	17 45 33.7	
	comp=Z,51nm,0.6s						
H17A					PP	17 47 15.3	-0.4
H17A	**Grant Village**	43.45	73	P	P	17 45 31.9	+1.5
	baz=306,SNR=65						
LKWY	**Lake**	43.45	73	P	P	17 45 31.5	+1.1
LKWY				pmax	pmax		
	comp=Z,35nm,0.7s						
LKWY	**Lake**	43.45	73	P	P	17 45 31.5	+1.1
LKWY				IAmb	IAmb	17 45 33.6	
	comp=Z,35nm,0.7s						
YMP	**Mirror Lake Pl**	43.49	72	P	P	17 45 31.5	+0.7
IMW	**Indian Meadow**	43.52	74	P	P	17 45 31.8	+0.7
FLWY	**Flagg Ranch**	43.56	74	P	P	17 45 32.1	+0.8
FLWY				IAmb	IAmb	17 45 34.2	
	comp=Z,74nm,0.7s						
TULEG	**Thule**	43.56	19	P	P	17 45 31.1	+0.6
TULEG					PcP	17 47 13.5	-0.5
VES	**Vestal, Richgr**	43.61	89	P	P	17 45 32.8	+1.3
	baz=311,SNR=36						
FXWY	**Fox Creek**	43.62	74	P	P	17 45 32.4	+0.5
HVU	**Hansel Valley**	43.69	77	P	P	17 45 33.0	+0.7
HVU						17 47 16.3	
HVU				pmax	pmax		
	comp=Z,73nm,0.6s						
HVU	**Hansel Valley**	43.69	77	P	P	17 45 33.0	+0.7
HVU				PcP	PcP	17 47 16.3	+1.0
TPAW	**Teton Pass**	43.76	74	P	P	17 45 33.3	+0.4
RLMT	**Red Lodge**	43.79	71	P	P	17 45 33.4	+0.4
RLMT				IAmb	IAmb	17 45 36.2	
	comp=Z,46nm,0.7s						
RLMT	**Red Lodge**	43.79	71	P	P	17 45 33.5	+0.4
	baz=305,SNR=73						
PKM	**Mcpherson Peak**	43.80	90	P	P	17 45 35.5	+2.2
	baz=312,SNR=16						
CWC	**Cottonwood Cre**	43.84	87	P	P	17 45 35.5	+2.0
	baz=311						
SNOW	**Snow King Moun**	43.89	74	P	P	17 45 34.2	+0.3
REDW	**Red Top Meadow**	43.89	74	P	P	17 45 34.1	+0.2
GRAC	**Grapevine Rang**	43.91	86	P	P	17 45 36.1	+2.2
	baz=311						
NRIK	**Noril'sk**	43.93	329	P	P	17 45 34.7	+1.1
	comp=Z,11nm,0.6s,baz=79,slow=8.7,SNR=24						
BGU	**Big Grassy Mou**	44.06	79	P	P	17 45 35.5	+0.3
BGU					PcP	17 47 17.8	+1.2
AHID	**Auburn Hatcher**	44.10	75	P	P	17 45 35.9	+0.4
ISA	**Isabella, Lake**	44.10	88	P	P	17 45 36.2	+0.7
ISA				pmax	pmax		
	comp=Z,76nm,1.1s						
ISA	**Isabella, Lake**	44.10	88	P	P	17 45 36.2	+0.7
ISA				IAmb	IAmb	17 45 38.3	
	comp=Z,76nm,1.1s						
ISA	**Isabella, Lake**	44.10	88	P	P	17 45 36.7	+1.2
	baz=312,SNR=52						
R11A	**Troy Canyon, C**	44.12	83	P	P	17 45 36.7	+0.9
R11A				IAmb	IAmb	17 45 38.2	
	comp=Z,58nm,0.9s						
R11A	**Troy Canyon, C**	44.12	83	P	P	17 45 37.2	+1.4
	baz=310,SNR=164						
SBC	**Santa Barbara**	44.16	91	P	P	17 45 37.3	+1.5
	baz=312						
SPUT	**South Promonto**	44.17	78	P	P	17 45 36.7	+0.6
ARVC	**Arvin**	44.24	89	P	P	17 45 37.9	+1.3
	baz=312,SNR=6.5						
MPMC	**Manual Prospec**	44.45	87	P	P	17 45 40.3	+1.9
	baz=311,SNR=88						
SCZ2	**Santa Cruz Isl**	44.51	91	P	P	17 45 40.4	+1.7
	baz=313,SNR=7.4						
HWUT	**Hardware Ranch**	44.52	77	P	P	17 45 39.3	+0.4
HWUT				PcP	PcP	17 47 18.5	+0.3
FURC	**Furnace Creek,**	44.56	86	P	P	17 45 41.0	+2.0
	baz=311,SNR=72						
TPNV	**Topopah Spring**	44.62	85	P	P	17 45 41.5	+1.8
TPNV				pmax	pmax		
	comp=Z,204nm,0.7s						
TPNV	**Topopah Spring**	44.62	85	P	P	17 45 41.5	+1.8
TPNV	**Topopah Spring**	44.62	85	P	P	17 45 41.7	+2.0
	baz=311,SNR=269						
LAO	**LASA Array**	44.63	68	P	P	17 45 39.8	+0.2
LAO	**LASA Array**	44.63	68	P	P	17 45 40.1	+0.5
	baz=305,SNR=40						
DUG	**Dugway, Tooele**	44.64	79	P	P	17 45 40.9	+1.1
DUG				pmax	pmax		
	comp=Z,62nm,0.6s						
DUG	**Dugway, Tooele**	44.64	79	P	P	17 45 40.9	+1.1
DUG				IAmb	IAmb	17 45 43.1	
	comp=Z,62nm,0.6s						
DUG	**Dugway, Tooele**	44.64	79	P	P	17 45 41.0	+1.1
	baz=309,SNR=51						
OSI	**Osito Audit: C**	44.65	90	P	P	17 45 41.5	+1.7
OSI				IAmb	IAmb	17 45 45.0	
	comp=Z,97nm,0.8s						
OSI	**Osito Audit: C**	44.65	90	P	P	17 45 41.7	+1.9
	baz=312,SNR=7.1						
LRMC	**Laurel Mtn Rad**	44.71	88	P	P	17 45 41.8	+1.4
	baz=312,SNR=37						
DGMT	**Dagmar**	44.76	65	P	P	17 45 39.9	-0.6
DGMT				IAmb	IAmb	17 45 41.6	
	comp=Z,53nm,0.7s						
DGMT	**Dagmar**	44.76	65	P	P	17 45 40.3	-0.2
	baz=304,SNR=15						
BLG	**Laguna Peak, P**	44.78	91	P	P	17 45 42.3	+1.5
	baz=313,SNR=7.9						
TCUT	**Toone Canyon**	44.91	77	P	P	17 45 42.6	+0.6
EDW2	**Edwards Air Fo**	44.92	89	P	P	17 45 43.4	+1.5
	baz=312,SNR=20						
CTU	**Camp Tracy**	44.97	78	P	P	17 45 42.9	+0.5
BW06	**Boulder Array**	45.01	74	P	P	17 45 42.9	+0.1
BW06				IAmb	IAmb	17 45 45.0	
	comp=Z,106nm,0.6s						
BW06	**Boulder Array**	45.01	74	P	P	17 45 43.0	+0.2
	baz=307,SNR=168						
PD31	**Pinedale Array**	45.01	74	P	P	17 45 43.0	+0.2
PD31				IAmb	IAmb	17 45 45.0	
	comp=Z,90nm,0.6s						
PDAR	**Pinedale Array**	45.01	74	P	P	17 45 43.0	+0.2
	comp=Z,89nm,0.5s,baz=312,slow=3.1,SNR=401						
PDAR				ScP	ScP	17 50 51.0	-0.7
	comp=Z,0.9nm,0.9s,baz=323,slow=2.2,SNR=4.2						
PDAR	**Pinedale Array**	45.01	74	P	P	17 45 43.0	+0.2
PDAR					ScP	17 50 50.5	-1.3
PSUT	**Pine Spring**	45.06	82	P	P	17 45 44.4	+1.2
SNCC	**San Nicolas Is**	45.09	92	P	P	17 45 44.8	+1.6
SNCC				IAmb	IAmb	17 45 46.2	
	comp=Z,48nm,0.8s						
SNCC	**San Nicolas Is**	45.09	92	P	P	17 45 44.7	+1.5
	baz=313						
DECC	**Green Verdugo**	45.13	90	P	P	17 45 44.9	+1.3
	baz=313						
JLU	**Jordanelle**	45.20	78	P	P	17 45 45.1	+0.8
NLU	**North Lily Min**	45.23	79	P	P	17 45 45.5	+0.9
PASC	**Pasadena Art C**	45.28	90	P	P	17 45 46.1	+1.4
PASC				IAmb	IAmb	17 45 47.3	
	comp=Z,42nm,0.7s						
SHOC	**Shoshone, Teco**	45.29	86	P	P	17 45 46.8	+2.0
	baz=312,SNR=25						
MWC	**Mount Wilson**	45.32	90	P	P	17 45 46.3	+1.0
MWC				pmax	pmax		
	comp=Z,80nm,0.7s						
MWC	**Mount Wilson**	45.32	90	P	P	17 45 46.3	+1.0
MWC				IAmb	IAmb	17 45 48.7	
	comp=Z,80nm,0.7s						
GSC	**Goldstone, Bar**	45.36	87	P	P	17 45 47.0	+1.6
GSC				PcP	PcP	17 47 22.4	+1.3
GSC					S	17 52 10.6	+0.6
GSC	**Goldstone, Bar**	45.36	87	P	P	17 45 47.3	+1.8
	baz=312,SNR=62						
MPU	**Maple Canyon**	45.46	79	P	P	17 45 47.4	+1.1
MPU				PcP	PcP	17 47 21.2	-0.2
FMP	**Fort Macarthur**	45.52	90	P	P	17 45 47.6	+1.0
	baz=313						
RRX	**Edison Barstow**	45.53	88	P	P	17 45 48.4	+1.7
	baz=312						
BFSC	**Mount Baldy Ra**	45.55	89	P	P	17 45 48.4	+1.4
	baz=313,SNR=26						
SHPR	**Sheep Range**	45.57	85	P	P	17 45 48.5	+1.3
CIS	**Catalina Islan**	45.66	91	P	P	17 45 49.0	+1.3
	baz=313,SNR=7.7						
TUQ	**Turquoise Moun**	45.81	87	P	P	17 45 50.5	+1.5
	baz=312,SNR=29						
TCRU	**Three Creeks R**	45.86	81	P	P	17 45 50.9	+1.4
TCRU					PcP	17 47 24.2	+1.2
SCI2	**San Clemente I**	45.87	91	P	P	17 45 51.0	+1.7
	baz=314						
HEC	**Hector,Ludlow**	45.96	88	P	P	17 45 51.7	+1.6
	baz=312,SNR=25						
CCUT	**Cedar City**	45.98	83	P	P	17 45 51.4	+0.9
BBRC	**Big Bear Solar**	45.99	89	P	P	17 45 52.2	+1.7
	baz=313,SNR=7.0						
MSU	**Marysvale**	46.08	81	P	P	17 45 52.8	+1.6
MSU						17 47 25.5	
MSU	**Marysvale**	46.08	81	P	P	17 45 52.8	+1.6
MSU				PcP	PcP	17 47 25.5	+1.8
SZCU	**Shurtz Canyon**	46.12	82	P	P	17 45 52.5	+1.0
TMUT	**Trail Mountain**	46.17	79	P	P	17 45 53.2	+1.2
MURC	**Murrieta**	46.27	90	P	P	17 45 53.9	+1.4
	baz=313						
P17A	**Butcher Ranch,**	46.34	79	P	P	17 45 53.9	+0.8
P17A				PcP	PcP	17 47 25.5	+0.9
RDMU	**Red Mountain**	46.34	77	P	P	17 45 54.0	+0.8
MTPU	**Mount Pierson**	46.38	81	P	P	17 45 55.3	+1.6
GMRC	**Granite Mounta**	46.41	87	P	P	17 45 55.3	+1.6
	baz=312,SNR=33						
LCMT	**Little Creek M**	46.41	83	P	P	17 45 55.3	+1.6
Q16A	**Castle Valley**	46.43	80	P	P	17 45 54.7	+0.8
Q16A				PcP	PcP	17 47 26.3	+1.4
KNB	**Kanab**	46.66	83	P	P	17 45 57.3	+1.6
KNB						17 47 27.6	
KNB				pmax	pmax		
	comp=Z,45nm,1.0s						
KNB	**Kanab**	46.66	83	P	P	17 45 57.3	+1.6
KNB				PcP	PcP	17 47 27.6	+1.8
ULN	**Ulaanbaatar**	46.66	296	⇑*i*P	P	17 45 55.0	-0.5
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ULN	**Ulaanbaatar**	46.66	296	P	P	17 45 55.7	+0.2
PKCU	**Pink Cliffs**	46.69	82	P	P	17 45 57.9	+1.8
SRU	**San Rafael Swe**	46.70	79	P	P	17 45 56.8	+0.9
SRU				pmax	pmax		
	comp=Z,93nm,0.7s						
SRU	**San Rafael Swe**	46.70	79	P	P	17 45 56.8	+0.9
PFO	**Pinyon Flats O**	46.71	89	P	P	17 45 57.3	+1.3
PFO				pmax	pmax		
	comp=Z,74nm,1.4s						
PFO	**Pinyon Flats O**	46.71	89	P	P	17 45 57.3	+1.3
PFO	**Pinyon Flats O**	46.71	89	P	P	17 45 57.3	+1.3
	baz=313						
XPFO	**Pion Flat**	46.71	89	P	P	17 45 57.4	+1.3
XPFO				PcP	PcP	17 47 26.6	+0.7
BELC	**Belle Mtn. Jos**	46.73	88	P	P	17 45 57.3	+1.1
	baz=313,SNR=18						
109C	**Camp Elliot, M**	46.81	90	P	P	17 45 58.0	+1.4
109C				IAmb	IAmb	17 45 59.6	
	comp=Z,71nm,1.1s						
109C	**Camp Elliot, M**	46.81	90	P	P	17 45 57.9	+1.2
	baz=314						
K22A	**Casper**	46.85	73	P	P	17 45 56.5	-0.5
K22A				IAmb	IAmb	17 45 58.8	
	comp=Z,58nm,0.7s						
K22A	**Casper**	46.85	73	P	P	17 45 56.6	-0.5
	baz=308,SNR=36						
SONM	**Songino Array**	47.04	296	P	P	17 45 58.1	-0.3
	comp=Z,2.2nm,1.0s,baz=52,slow=8.6,SNR=9.9						
SONM				pP	pP	17 46 45.0	+2.0
	comp=Z,1.7nm,0.7s,baz=56,slow=8.6,SNR=4.3						
SONM				PcP	PcP	17 47 26.7	-0.1
	comp=Z,3.7nm,0.7s,baz=47,slow=3.1,SNR=6.6						
SONM				ScP	ScP	17 50 59.2	-0.9
	comp=Z,4.7nm,0.8s,baz=42,slow=4.0,SNR=16						
SONM	**Songino Array**	47.04	296	P	P	17 45 58.3	-0.1
SONM					pwP	17 46 48.5	+1.1
SONM					PcP	17 47 25.7	-1.1
SONM					ScP	17 50 58.8	-1.2
RWWY	**Rawlins**	47.04	74	P	P	17 45 57.5	-1.1
NEE2	**Needles Airpor**	47.05	86	P	P	17 45 59.6	+1.1
	baz=312						
KULLO	**Kullorsuaq**	47.06	18	*i* P	P	17 45 58.7	+0.7
	comp=Z,24nm,0.9s						
KULLO	**Kullorsuaq**	47.06	18	*i* P	P	17 45 58.7	+0.7
KULLO				pmax	pmax		
	comp=Z,24nm,0.9s						
IRM	**Iron Mountain**	47.14	87	P	P	17 46 00.4	+1.1
	baz=313,SNR=13						
BAR	**Barrett**	47.22	90	P	P	17 46 01.4	+1.6
BAR				IAmb	IAmb	17 46 02.5	
	comp=Z,51nm,0.8s						
MONP2	**Monument Peak**	47.22	90	P	P	17 46 01.2	+1.1
	baz=314						
ZAK	**Zakamensk**	47.23	301	*e*P	P	17 46 00.0	+0.2
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
W13A	**Hualapai Mount**	47.28	85	P	P	17 46 01.9	+1.4
W13A				IAmb	IAmb	17 46 02.8	
	comp=Z,54nm,0.8s						
BC3	**Big Chuckawall**	47.29	88	P	P	17 46 01.5	+1.0
	baz=313						
U15A	**North Rim**	47.37	83	P	P	17 46 03.0	+1.8
U15A				IAmb	IAmb	17 46 04.0	
	comp=Z,95nm,0.8s						
U15A				PcP	PcP	17 47 28.9	+0.6
RSSD	**Black Hills**	47.39	69	P	P	17 46 00.9	-0.4
RSSD				pmax	pmax		
	comp=Z,42nm,0.6s						
RSSD	**Black Hills**	47.39	69	P	P	17 46 00.6	-0.7
RSSD				PcP	PcP	17 47 27.3	-1.0
RSSD	**Black Hills**	47.39	69	P	P	17 46 00.7	-0.5
	baz=308						
O20A	**White River Ci**	47.41	76	P	P	17 46 01.5	+0.1
O20A	**White River Ci**	47.41	76	P	P	17 46 01.8	+0.3
	baz=309,SNR=66						
SWSC	**Sam W. Stewart**	47.57	89	P	P	17 46 03.4	+0.9
	baz=314						
IKP	**In-Ko-Pah, Jac**	47.58	90	P	P	17 46 04.1	+1.4
	baz=314						
MDND	**Maddock**	47.64	63	P	P	17 46 03.4	+0.6
MDND				IAmb	IAmb	17 46 04.6	
	comp=Z,108nm,0.7s						
MDND	**Maddock**	47.64	63	P	P	17 46 03.4	+0.6
	baz=306						
PDMCI	**Parker Dam,Lak**	47.66	86	P	P	17 46 04.0	+0.9
	baz=313						

E28A	Huff	47.80	65	P	P	17 46 04.3	+0.2
E28A				IAmb	IAmb	17 46 05.3	
	comp=Z,39nm,0.5s						
Y12C	Blythe	47.80	87	P	P	17 46 05.6	+1.4
Y12C				IAmb	IAmb	17 46 06.7	
	comp=Z,99nm,0.8s						
Y12C	Blythe	47.80	87	P	P	17 46 05.6	+1.4
	baz=313,SNR=5.7						
PV09	Paradox Valley	47.92	79	P	P	17 46 05.9	+0.3
PV21	Cone Mtn., Par	47.98	78	P	P	17 46 06.2	+0.4
PV21				IAmb	IAmb	17 46 09.7	
	comp=Z,92nm,0.7s						
PV23	Carpenter Ridg	48.02	79	P	P	17 46 06.7	+0.4
PV23				IAmb	IAmb	17 46 10.0	
	comp=Z,89nm,0.5s						
PV10	Paradox Valley	48.06	79	P	P	17 46 07.3	+0.8
PV14	Lion Creek, Pa	48.07	79	P	P	17 46 06.8	+0.2
PV14				IAmb	IAmb	17 46 09.7	
	comp=Z,118nm,0.6s						
GLA	Glamis	48.09	88	P	P	17 46 07.7	+1.2
GLA				pmax	pmax		
	comp=Z,127nm,0.7s						
GLA	Glamis	48.09	88	P	P	17 46 07.7	+1.2
GLA	Glamis	48.09	88	P	P	17 46 07.8	+1.3
	baz=314,SNR=5.3						
PV22	Blue Mesa, Par	48.10	78	P	P	17 46 07.2	+0.4
PV22				IAmb	IAmb	17 46 10.2	
	comp=Z,95nm,0.7s						
PV20	West Nyswonger	48.12	79	P	P	17 46 07.3	+0.4
PV04	Paradox Valley	48.12	79	P	P	17 46 07.4	+0.4
PV04				IAmb	IAmb	17 46 09.5	
	comp=Z,92nm,0.7s						
PV19	Morning Glory	48.13	79	P	P	17 46 07.4	+0.4
PV17	East Wray Mesa	48.17	79	P	P	17 46 07.7	+0.5
PV16	Nyswonger Mesa	48.17	79	P	P	17 46 07.6	+0.2
PV11	David Mesa, Pa	48.21	79	P	P	17 46 08.1	+0.5
ULM	Lac du Bonnet	48.21	58	P	P	17 46 06.3	-0.8
	comp=Z,18nm,0.4s,baz=306,slow=8.2,SNR=45						
ULM				ScP	ScP	17 51 03.0	-1.7
	comp=Z,1.9nm,0.7s,baz=341,slow=9.3,SNR=2.9						
ULM	Lac du Bonnet	48.21	58	P	P	17 46 06.3	-0.8
PV05	Paradox Valley	48.21	79	P	P	17 46 08.3	+0.6
PV05				IAmb	IAmb	17 46 17.0	
	comp=Z,71nm,0.6s						
PV18	Skein Mesa, Pa	48.22	79	P	P	17 46 08.0	+0.3
PV12	Saucer Basin,	48.24	79	P	P	17 46 08.0	+0.2
PV12				IAmb	IAmb	17 46 12.2	
	comp=Z,95nm,0.7s						
PV03	Paradox Valley	48.25	79	P	P	17 46 08.2	+0.3
PV07	Paradox Valley	48.25	78	P	P	17 46 08.3	+0.4
PV07				IAmb	IAmb	17 46 10.8	
	comp=Z,78nm,0.7s						
N23A	Red Feather La	48.28	74	P	P	17 46 09.1	+0.9
N23A	Red Feather La	48.28	74	P	P	17 46 08.4	+0.2
	baz=309,SNR=5.6						
PHWY	Pilot Hill	48.31	73	P	P	17 46 08.3	-0.2
PV13	Radium Mtn., P	48.33	79	P	P	17 46 09.1	+0.5
PV02	Paradox Valley	48.35	79	P	P	17 46 09.0	+0.4
HHC	Hu-ho-hao-te	48.35	286	eP	P	17 46 08.5	0.0
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,47nm,8.1s						
PV15	Paradox Valley	48.41	78	P	P	17 46 09.6	+0.4
PV15				IAmb	IAmb	17 46 13.9	
	comp=Z,53nm,0.7s						
PV01	Paradox Valley	48.49	79	P	P	17 46 10.3	+0.5
PV01				IAmb	IAmb	17 46 12.8	
	comp=Z,72nm,0.6s						
WUAZ	Wupatki	48.53	83	P	P	17 46 11.0	+1.0
WUAZ				IAmb	IAmb	17 46 12.7	
	comp=Z,72nm,0.9s						
WUAZ	Wupatki	48.53	83	P	P	17 46 10.9	+0.9
	baz=312,SNR=18						
Y14A	Wickenburg	48.60	86	P	P	17 46 12.0	+1.5
Y14A				IAmb	IAmb	17 46 13.3	
	comp=Z,44nm,0.7s						
KBS	Kingsbay	48.69	358	eP	P	17 46 12.0	+1.5
KBS	Kingsbay	48.69	358	P	P	17 46 11.4	+1.0
KBS				pmax	pmax		
	comp=Z,433nm,1.9s						
KBS	Kingsbay	48.69	358	P	P	17 46 11.4	+1.0
SMCO	Snowmass	48.77	76	P	P	17 46 12.1	0.0
SSE	Sheshan	49.03	269	P	P	17 46 14.5	+0.9
SSE				IAmb	IAmb	17 46 40.8	
	comp=Z,56nm,0.7s						
MVCO	Mesa Verde	49.14	79	P	P	17 46 15.2	+0.4
MVCO				IAmb	IAmb	17 46 17.0	
	comp=Z,40nm,0.5s						
MVCO	Mesa Verde	49.14	79	P	P	17 46 14.9	+0.2
	baz=311,SNR=22						
ISCO	Idaho Springs	49.18	75	P	P	17 46 15.4	+0.3
ISCO				pmax	pmax		
	comp=Z,14nm,0.7s						
ISCO	Idaho Springs	49.18	75	P	P	17 46 15.3	+0.3
ISCO	Idaho Springs	49.18	75	P	P	17 46 15.7	+0.6
	baz=310,SNR=17						
X16A	Lo Mia Camp, P	49.22	84	P	P	17 46 16.2	+0.9
X16A				IAmb	IAmb	17 46 18.2	
	comp=Z,44nm,0.7s						
SPA0	Spitsbergen Ar	49.29	356	eP	P	17 46 15.8	+0.7
SPA0	Spitsbergen Ar	49.29	356	P	P	17 46 15.7	+0.6
SPA0				IAmb	IAmb	17 46 16.5	
	comp=Z,70nm,0.7s						
SPITS	Spitsbergen Ar	49.29	356	P	P	17 46 15.6	+0.6
SPITS				pmax	pmax		
	comp=Z,43nm,0.5s						
AGMN	Agassiz Nation	49.38	60	P	P	17 46 15.3	-0.8
AGMN	Agassiz Nation	49.38	60	P	P	17 46 14.9	-1.1
	baz=307,SNR=15						
D32A	Dogwood Acres,	49.47	62	P	P	17 46 16.8	0.0
D32A				IAmb	IAmb	17 46 17.9	
	comp=Z,50nm,0.8s						
NJ2	Nanjing	49.79	272	eP	P	17 46 19.3	0.0
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
W18A	Petrified Fore	49.79	82	P	P	17 46 21.0	+1.5
W18A				IAmb	IAmb	17 46 22.1	
	comp=Z,63nm,0.8s						
W18A	Petrified Fore	49.79	82	P	P	17 46 20.9	+1.3
	baz=313,SNR=15						
S22A	4UR Ranch, Cre	49.79	78	P	P	17 46 20.8	+1.2
S22A	4UR Ranch, Cre	49.79	78	P	P	17 46 20.9	+1.2
	baz=311,SNR=39						
X18A	Snowflake	50.05	83	P	P	17 46 22.8	+1.2
X18A				IAmb	IAmb	17 46 24.3	
	comp=Z,54nm,0.8s						
SUSD	Miller	50.07	66	P	P	17 46 21.2	-0.2
SUSD				IAmb	IAmb	17 46 22.9	
	comp=Z,74nm,0.8s						
SUSD	Miller	50.07	66	P	P	17 46 20.9	-0.4
	baz=309,SNR=6.2						
214A	Organ Pipe Nat	50.07	88	P	P	17 46 23.1	+1.5
214A				IAmb	IAmb	17 46 23.9	
	comp=Z,53nm,0.7s						
214A	Organ Pipe Nat	50.07	88	P	P	17 46 22.7	+1.1
	baz=314,SNR=5.4						
DAG	Danmarks Havn	50.24	6	⇑iP	P	17 46 22.3	+0.1
	comp=Z,14nm,0.7s						
DAG				i		17 47 12.6	
DAG	Danmarks Havn	50.24	6	⇑iP	P	17 46 22.3	+0.1
DAG				i		17 47 12.6	
DAG				pmax	pmax		
	comp=Z,14nm,0.7s						
OGNE	Ogallala	50.53	72	P	P	17 46 25.8	+0.8
OGNE				IAmb	IAmb	17 46 26.9	
	comp=Z,42nm,0.7s						
OGNE	Ogallala	50.53	72	P	P	17 46 25.7	+0.8
	baz=310,SNR=7.2						
SDCO	Great Sand Dun	50.58	77	P	P	17 46 26.4	+0.8
SDCO	Great Sand Dun	50.58	77	P	P	17 46 26.4	+0.8
	baz=312,SNR=45						
K31A	O'Neill	51.33	68	P	P	17 46 30.9	+0.1
K31A				IAmb	IAmb	17 47 55.4	
	comp=Z,58nm,0.4s						
KSCO	Kaye Shedlock’	51.45	74	P	P	17 46 32.7	+0.9
KSCO	Kaye Shedlock’	51.45	74	P	P	17 46 31.9	+0.1
	baz=311						
FRB	Frobisher Bay	51.51	33	P	P	17 46 32.1	+0.4
FRB				pmax	pmax		
	comp=Z,67nm,0.9s						
T25A	Trinidad	51.63	77	P	P	17 46 34.1	+0.8
T25A				IAmb	IAmb	17 46 36.6	
	comp=Z,53nm,0.8s						
T25A	Trinidad	51.63	77	P	P	17 46 34.2	+0.8
	baz=312,SNR=45						
ECSD	EROS Data Cent	51.82	65	P	P	17 46 32.9	-1.5
ANMO	Albuquerque	51.88	80	P	P	17 46 35.9	+0.7
ANMO						17 47 46.3	
ANMO				pmax	pmax		
	comp=Z,15nm,0.9s						
ANMO	Albuquerque	51.88	80	P	P	17 46 35.9	+0.7
ANMO					PcP	17 47 46.3	+1.5
ANMO	Albuquerque	51.88	80	P	P	17 46 36.0	+0.7
	baz=313						
EYMN	Ely	51.89	58	P	P	17 46 34.4	-0.5
EYMN				IAmb	IAmb	17 46 36.1	
	comp=Z,50nm,1.1s						
EYMN	Ely	51.89	58	P	P	17 46 34.1	-0.8
	baz=309,SNR=24						
SUMG	Summit	51.93	15	iP	P	17 46 36.1	+0.9
	comp=Z,69nm,0.8s						
SUMG	Summit	51.93	15	iP	P	17 46 36.1	+0.9
SUMG				pmax	pmax		
	comp=Z,69nm,0.8s						
SUMG	Summit	51.93	15	P	P	17 46 35.5	+0.3
ILULI	Ilulissat	52.33	21	P	P	17 46 37.6	-0.1
ILULI				pmax	pmax		
	comp=Z,19nm,0.8s						
ILULI	Ilulissat	52.33	21	P	P	17 46 37.6	-0.1
BGNE	Belgrade	52.46	69	P	P	17 46 39.0	-0.2
BGNE				IAmb	IAmb	17 46 40.3	
	comp=Z,69nm,0.6s						
BGNE	Belgrade	52.46	69	P	P	17 46 38.7	-0.5
	baz=311,SNR=6.4						
YOJ	Yonaguni jima	52.71	262	P	P	17 46 42.2	+1.1
YOJ				pmax	pmax		
	comp=Z,121nm,1.3s						
YOJ	Yonaguni jima	52.71	262	P	P	17 46 42.2	+1.1
YOJ				IAmb	IAmb	17 48 40.7	
	comp=Z,121nm,1.3s						
E38A	The Farm, Brul	52.72	60	P	P	17 46 40.2	-0.7
E38A				IAmb	IAmb	17 46 41.4	
	comp=Z,52nm,0.5s						
121A	Cookes Peak, D	52.73	83	P	P	17 46 42.4	+1.0
121A	Cookes Peak, D	52.73	83	P	P	17 46 41.3	-0.1
	baz=314						
SPMN	Marine on St.	52.95	62	P	P	17 46 42.5	-0.2
SPMN				IAmb	IAmb	17 46 44.0	
	comp=Z,30nm,0.5s						
SPMN	Marine on St.	52.95	62	P	P	17 46 42.4	-0.2
	baz=310,SNR=9.2						
CBKS	Cedar Bluff	53.26	72	P	P	17 46 45.5	+0.4
CBKS				pmax	pmax		
	comp=Z,57nm,0.7s						
CBKS	Cedar Bluff	53.26	72	P	P	17 46 45.5	+0.4
CBKS				IAmb	IAmb	17 46 47.2	
	comp=Z,56nm,0.7s						
CBKS	Cedar Bluff	53.26	72	P	P	17 46 45.2	+0.1
	baz=312,SNR=13						
HSIG		53.28	89	P	P	17 46 46.8	+1.5
HSIG				IAmb	IAmb	17 46 47.4	
	comp=Z,130nm,1.5s						
N33A	J Bar K, Exete	53.30	69	P	P	17 46 45.3	0.0
I37A	Lemond, Waseca	53.41	63	P	P	17 46 45.9	-0.1
I37A				IAmb	IAmb	17 46 47.0	
	comp=Z,37nm,0.6s						
SRIG	Santa Rosalia	53.71	91	P	P	17 46 48.9	+0.5
SRIG				IAmb	IAmb	17 47 02.7	
	comp=Z,54nm,1.4s						
ZAA0	Zalesovo Array	53.97	314	P	P	17 46 50.3	+0.4
ZAA0					PcP	17 47 51.9	-0.3
ZAA0					PP	17 48 47.5	-5.6
ZALV	Zalesovo Beam	53.97	314	P	P	17 46 49.5	-0.3
	comp=Z,0.9nm,0.4s,baz=32,slow=7.9,SNR=3.9						
ZALV				PcP	PcP	17 47 52.4	+0.2
	comp=Z,5.4nm,0.7s,baz=31,slow=3.7,SNR=13						
ZALV				ScP	ScP	17 51 28.1	-1.5
	comp=Z,1.8nm,0.6s,baz=20,slow=5.1,SNR=5.3						
ZALV	Zalesovo Beam	53.97	314	P	P	17 46 49.1	-0.8
ZALV					PcP	17 47 52.0	-0.2
ZALV					PP	17 48 47.4	-5.7
ZALV					ScP	17 51 28.2	-1.3
D41A	Chassel	53.98	58	P	P	17 46 49.9	-0.2
D41A				IAmb	IAmb	17 46 51.9	
	comp=Z,30nm,0.5s						
R32A	Long Quarter,	54.12	72	P	P	17 46 51.0	-0.3
R32A				IAmb	IAmb	17 46 52.5	
	comp=Z,29nm,0.7s						
SFJD	Kangerlussuaq	54.20	23	iP	P	17 46 51.3	0.0
SFJD	Kangerlussuaq	54.20	23	iP	P	17 46 51.3	0.0
SFJD	Kangerlussuaq	54.20	23	P	P	17 46 51.0	-0.3
N35A	Tabor	54.25	68	P	P	17 46 51.6	-0.5
G40A	Rib Lake	54.31	60	P	P	17 46 51.6	-0.9
COWI	Conover	54.32	59	P	P	17 46 51.8	-0.8
COWI				IAmb	IAmb	17 46 53.2	
	comp=Z,36nm,0.5s						
SSLB	Suanglung	54.46	263	P	P	17 46 54.1	+0.2
YULB	Yu-li	54.55	263	P	P	17 46 54.7	+0.2
MSTX	Muleshoe	54.76	79	P	P	17 46 56.1	0.0
MSTX				IAmb	IAmb	17 46 57.0	
	comp=Z,24nm,0.5s						
MSTX	Muleshoe	54.76	79	P	P	17 46 56.3	+0.3
	baz=314,SNR=16						
MNTX	Cornudas Mount	54.77	82	P	P	17 46 57.3	+1.3
MNTX				IAmb	IAmb	17 46 58.4	
	comp=Z,56nm,0.9s						
MNTX	Cornudas Mount	54.77	82	P	P	17 46 57.4	+1.3
	baz=315,SNR=33						
AMTX	Amarillo	54.78	77	P	P	17 46 56.1	0.0
AMTX				IAmb	IAmb	17 46 58.3	
	comp=Z,34nm,0.6s						
AMTX	Amarillo	54.78	77	P	P	17 46 56.2	0.0
	baz=314						
KSU1	Kansas State U	54.88	70	P	P	17 46 55.6	-1.1
	baz=313,SNR=5.1						
SCIA	State Center	54.91	65	P	P	17 46 56.6	-0.2
SCIA	State Center	54.91	65	P	P	17 46 55.9	-0.9
	baz=312,SNR=5.3						
I40A	Norwalk	55.00	62	P	P	17 46 56.8	-0.7
I40A				IAmb	IAmb	17 46 58.9	
	comp=Z,33nm,0.5s						
F42A	Maple Grove Fa	55.07	59	P	P	17 46 57.7	-0.2
F42A				IAmb	IAmb	17 46 59.2	
	comp=Z,49nm,0.5s						
E43A	Lone Tree Farm	55.25	57	P	P	17 46 58.8	-0.4
U32A	Winter Ranch,	55.34	74	P	P	17 46 59.8	-0.3
U32A				IAmb	IAmb	17 47 01.5	
	comp=Z,36nm,0.7s						
DGZ	Jazzator, Alta	55.62	308	⇓iP	P	17 47 02.7	+0.7
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.2s						
E44A	Grand Marais A	55.63	57	P	P	17 47 02.3	+0.4
E44A				IAmb	IAmb	17 47 04.0	
	comp=Z,29nm,0.7s						
E44A	Grand Marais A	55.63	57	P	P	17 47 01.2	-0.8
	baz=312						
JFWS	Jewell Farm	55.85	62	P	P	17 47 02.2	-1.4
JFWS				pmax	pmax		
	comp=Z,23nm,0.6s						
JFWS	Jewell Farm	55.85	62	P	P	17 47 02.1	-1.4
JFWS				IAmb	IAmb	17 47 03.8	
	comp=Z,23nm,0.6s						
JFWS	Jewell Farm	55.85	62	P	P	17 47 02.2	-1.4
	baz=313,SNR=6.2						
L40A	Anamosa	55.90	64	P	P	17 47 02.8	-1.1
L40A				IAmb	IAmb	17 47 04.2	
	comp=Z,25nm,0.6s						
I42A	Draeger Farm,	55.91	61	P	P	17 47 03.0	-0.9
I42A				IAmb	IAmb	17 47 04.8	
	comp=Z,30nm,0.5s						
SCO	Scoresbysund	56.00	10	iP	P	17 47 04.0	-0.1
SCO	Scoresbysund	56.00	10	iP	P	17 47 04.0	-0.1
SCO	Scoresbysund	56.00	10	P	P	17 47 04.7	+0.6
SCO				IAmb	IAmb	17 48 12.7	
	comp=Z,100nm,1.9s						
LZH	Lanzhou	56.03	287	eP	P	17 47 02.8	-2.3
LZH				pP	pP	17 47 48.3	-3.1
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				pmax	pmax		
	comp=Z,63nm,5.0s						
LZH				LR	LR		
	comp=Z,250nm,14.6s						
LZH				LR	LR		
	comp=Z,250nm,15.2s						
LZH				LR	LR		
	comp=Z,330nm,16.4s						
GTA	Gaotai	56.08	292	P	P	17 47 04.8	-0.5
GTA				pP	pP	17 47 50.3	-1.2
GTA				pmax	pmax		
	comp=Z,65nm,4.7s						
GTA				LR	LR		
	comp=Z,140nm,19.9s						
GTA				LR	LR		
	comp=Z,100nm,21.0s						
GTA				LR	LR		
	comp=Z,87nm,18.2s						
H43A	Windswept, Lux	56.13	60	P	P	17 47 05.0	-0.5
P38A	Dawn	56.27	67	P	P	17 47 05.6	-1.0
P38A				IAmb	IAmb	17 47 07.0	
	comp=Z,45nm,0.5s						
D46A	Sault St. Mari	56.41	55	P	P	17 47 07.0	-0.4
	baz=313,SNR=14						
T35A	Sooner Cattle	56.42	72	P	P	17 47 06.8	-0.9
F45A	CMU Biological	56.48	57	P	P	17 47 07.5	-0.4
	baz=313						
WMOK	Wichita Mounta	56.60	75	P	P	17 47 09.3	+0.3
WMOK				pmax	pmax		
	comp=Z,14nm,0.9s						
WMOK	Wichita Mounta	56.60	75	P	P	17 47 09.3	+0.3
WMOK	Wichita Mounta	56.60	75	P	P	17 47 09.3	+0.3
	baz=314,SNR=18						
E46A	Sault Ste Mari	56.63	56	P	P	17 47 08.9	-0.1
E46A				IAmb	IAmb	17 47 10.6	
	comp=Z,48nm,0.6s						
ENH	Enshi	56.73	278	P	P	17 47 10.1	+0.2
D47A	Chapleau	56.76	55	P	P	17 47 09.4	-0.5
	baz=313,SNR=33						
KEV	Kevo	56.76	350	P	P	17 47 09.6	+0.1
KEV				pmax	pmax		
	comp=Z,51nm,1.3s						
KEV	Kevo	56.76	350	P	P	17 47 09.6	+0.1
KEV				IAmb	IAmb	17 49 07.2	
	comp=Z,51nm,1.3s						
L42A	Oliver, Polo	56.79	63	P	P	17 47 09.0	-1.2
L42A				IAmb	IAmb	17 47 11.0	
	comp=Z,21nm,0.6s						
G45A	Suttons Bay	56.84	58	P	P	17 47 10.0	-0.4
G45A				IAmb	IAmb	17 47 11.7	
	comp=Z,28nm,0.6s						
G45A	Suttons Bay	56.84	58	P	P	17 47 10.1	-0.4
	baz=313,SNR=5.6						
OKCFA	Oklahoma City	56.91	74	P	P	17 47 11.7	+0.5
OKCFA				IAmb	IAmb	17 47 14.0	
	comp=Z,35nm,0.4s						
H45A	Beulah	56.93	58	P	P	17 47 10.6	-0.5
	baz=313						
N41A	Harden Midland	57.02	65	P	P	17 47 10.5	-1.3
N41A				IAmb	IAmb	17 47 13.1	
	comp=Z,27nm,0.5s						
K43A	Burlington	57.03	61	P	P	17 47 11.2	-0.6
K43A				IAmb	IAmb	17 47 12.9	
	comp=Z,94nm,1.6s						
FNO	Franklin	57.05	74	P	P	17 47 11.4	-0.7
G46A	Petoskey	57.06	57	P	P	17 47 11.7	-0.3
	baz=314,SNR=6.7						
E47A	Iron Bridge	57.08	55	P	P	17 47 11.7	-0.5
	baz=314,SNR=16						
ARCES	ARCESS Array B	57.12	351	P	P	17 47 12.1	0.0
	comp=Z,18nm,0.8s,baz=31,slow=8.0,SNR=49						
ARCES				PcP	pwP	17 48 03.5	+0.2
	comp=Z,5.8nm,0.6s,baz=29,slow=2.1,SNR=6.4						
ARCES				ScP	ScP	17 51 41.8	-1.4
	comp=Z,3.0nm,0.7s,baz=27,slow=5.6,SNR=6.5						
ARCES				PKiKP	PKiKP	17 54 27.8	-1.7
	comp=Z,2.0nm,0.9s,baz=282,slow=2.4,SNR=4.5						
ARCES	ARCESS Array B	57.12	351	P	P	17 47 11.5	-0.5
ARCES					pwP	17 48 03.2	-0.2
ARE0	ARCESS Array S	57.12	351	eP	P	17 47 12.1	0.0
ARE0	ARCESS Array S	57.12	351	P	P	17 47 11.7	-0.4
I45A	Fountain	57.23	59	P	P	17 47 13.5	+0.3
I45A	Fountain	57.23	59	P	P	17 47 13.3	+0.1
	baz=314						
X34A	Smith Ranch, M	57.26	75	P	P	17 47 13.3	-0.3
D48A	Paudash Townsh	57.32	54	P	P	17 47 13.2	-0.6
	baz=314,SNR=17						
W35A	Tecumseh	57.44	73	P	P	17 47 14.7	-0.1
TX31	Lajitas Ar. Si	57.49	83	P	P	17 47 16.2	+0.9
TX31				IAmb	IAmb	17 47 17.2	
	comp=Z,51nm,0.8s						
TX32	Lajitas Array	57.49	83	P	P	17 47 16.1	+0.7
TX32				IAmb	IAmb	17 47 17.2	
	comp=Z,52nm,0.8s						
TX32				PcP	PcP	17 48 06.5	+0.1
TXAR	Lajitas Array	57.49	83	P	P	17 47 16.2	+0.9
	comp=Z,35nm,0.6s,baz=297,slow=4.8,SNR=200						
TXAR				PcP	PcP	17 48 06.6	+0.2
	comp=Z,4.9nm,0.5s,baz=279,slow=1.2,SNR=5.6						
TXAR				ScP	ScP	17 51 44.7	-0.9
	comp=Z,1.3nm,0.6s,baz=298,slow=3.1,SNR=5.3						
TXAR	Lajitas Array	57.49	83	P	P	17 47 15.9	+0.6
TXAR				PcP	pwP	17 48 06.2	-0.1
TXAR					ScP	17 51 44.2	-1.4
MATQ	Matagami	57.52	49	P	P	17 47 14.0	-1.1
	baz=314,SNR=6.1						
GLMI	Grayling	57.53	57	P	P	17 47 15.7	+0.4
	baz=314						
TUL1	Leonard	57.54	72	P	P	17 47 15.3	-0.1
TUL1	Leonard	57.54	72	P	P	17 47 15.5	0.0
	baz=314						
LVZ	Lovozero	57.56	346	⇑iP	P	17 47 15.8	+0.6
LVZ				pmax	pmax		
	comp=Z,31nm,0.9s						
LVZ	Lovozero	57.56	346	P	P	17 47 14.8	-0.4
LVZ				IAmb	IAmb	17 47 16.0	
	comp=Z,31nm,0.8s						
ABTX	Abilene, Hawle	57.57	77	P	P	17 47 15.9	0.0
ABTX				IAmb	IAmb	17 47 17.6	
	comp=Z,47nm,1.1s						
ABTX	Abilene, Hawle	57.57	77	P	P	17 47 16.3	+0.5
	baz=315,SNR=8.1						
TRO	Tromso	57.58	353	eP	P	17 47 15.7	+0.4
L44A	Lake County Fo	57.62	62		P	17 47 15.8	-0.1
L44A				IAmb	IAmb	17 47 17.8	
	comp=Z,56nm,1.0s						
L44A	Lake County Fo	57.62	62	P	P	17 47 16.5	+0.6
	baz=314						
E48A	Lockeyer	57.62	55	P	P	17 47 15.7	-0.2
	baz=314,SNR=18						
G47A	Hillman	57.68	57	P	P	17 47 16.5	+0.2
	baz=314						
I46A	Reed City	57.71	59	P	P	17 47 15.6	-1.0
	baz=314						
S39A	Bolivar	57.72	69	P	P	17 47 14.2	-2.5
KTK1	Kautokeino	57.84	351	eP	P	17 47 17.3	+0.2
F48A	Evansville	57.85	55	P	P	17 47 17.4	-0.1
	baz=314,SNR=7.4						
H47A	Mio	57.89	57	P	P	17 47 17.7	-0.2
	baz=314						
R40A	Maddies Statio	57.90	68	P	P	17 47 16.2	-1.8
R40A				IAmb	IAmb	17 47 17.8	
	comp=Z,42nm,0.5s						
U38A	Gravette	57.98	71	P	P	17 47 17.3	-1.3
U38A				IAmb	IAmb	17 47 19.0	
	comp=Z,20nm,0.6s						
HDIL	Hopedale	57.99	64	P	P	17 47 17.9	-0.7
HDIL				IAmb	IAmb	17 47 19.3	
	comp=Z,42nm,0.6s						
HDIL	Hopedale	57.99	64	P	P	17 47 17.5	-1.0
	baz=314,SNR=7.3						
HPIG		58.01	87	P	P	17 47 19.6	+0.5
J46A	Howard City	58.01	59	P	P	17 47 18.5	-0.1
	baz=314						
M44A	Midewin, Midew	58.09	62		P	17 47 18.7	-0.5
M44A				IAmb	IAmb	17 47 20.5	
	comp=Z,29nm,0.8s						
I47A	Gladwin	58.14	58	P	P	17 47 20.6	+1.0
I47A				IAmb	IAmb	17 47 21.6	
	comp=Z,25nm,0.5s						
I47A	Gladwin	58.14	58	P	P	17 47 19.8	+0.3
	baz=314						
F49A	Sandfield	58.18	55	P	P	17 47 19.6	-0.2
	baz=314,SNR=16						
H48A	Harrisville	58.27	57	P	P	17 47 20.2	-0.3
H48A	Harrisville	58.27	57	P	P	17 47 20.3	-0.2
	baz=314						
D50A	G1974 Best Tow	58.29	53	P	P	17 47 19.8	-0.7
	baz=315,SNR=17						
LSQQ	Lebel-sur-Quev	58.31	50	P	P	17 47 19.8	-0.9
	baz=315						
HHAR	Hobbs	58.35	70	P	P	17 47 19.7	-1.4
HHAR				IAmb	IAmb	17 47 21.3	
	comp=Z,21nm,0.5s						
K46A	Dorr	58.40	60	P	P	17 47 20.6	-0.8
	baz=314,SNR=6.3						

I48A	Sherman Twp	58.44	57	P	P	17 47 21.4	-0.1
	baz=314						
SCHQ	Schefferville	58.47	40	P	P	17 47 21.5	-0.1
	comp=Z,12nm,0.5s,baz=312,slow=6.6,SNR=42						
SCHQ	Schefferville	58.47	40	P	P	17 47 21.4	-0.3
SCHQ				IAmb	IAmb	17 47 22.6	
	comp=Z,44nm,1.2s						
Z35A	Perchaven, San	58.49	75	P	P	17 47 22.1	-0.1
P43A	Skaggs, Pawnee	58.50	65	P	P	17 47 21.5	-0.6
J47A	Sunmer	58.52	59	P	P	17 47 21.9	-0.3
J47A				IAmb	IAmb	17 47 23.4	
	comp=Z,42nm,0.5s						
J47A	Sunmer	58.52	59	P	P	17 47 21.7	-0.5
	baz=314,SNR=7.7						
D51A	Lot 18 Range I	58.57	53	P	P	17 47 21.5	-0.9
	baz=315,SNR=13						
L46A	Eue Claire	58.60	61	P	P	17 47 22.0	-0.7
L46A	Eue Claire	58.60	61	P	P	17 47 22.3	-0.5
	baz=314						
CCM	Cathedral Cave	58.65	67	P	P	17 47 21.5	-1.6
CCM				pmax	pmax		
	comp=Z,14nm,0.5s						
CCM	Cathedral Cave	58.65	67	P	P	17 47 21.5	-1.6
CCM	Cathedral Cave	58.65	67	P	P	17 47 21.8	-1.3
	baz=315						
MGMO	Mountain Grove	58.70	69	P	P	17 47 21.8	-1.7
X37A	Clayton	58.71	73	P	P	17 47 23.1	-0.6
O44A	Mansfield	58.72	64	P	P	17 47 22.8	-0.8
O44A				IAmb	IAmb	17 47 24.5	
	comp=Z,37nm,0.5s						
VLDQ	Val d'Or	58.76	51	P	P	17 47 21.6	-2.2
VLDQ				IAmb	IAmb	17 47 22.8	
	comp=Z,66nm,1.6s						
K47A	Vermontville	58.83	59	P	P	17 47 23.5	-0.8
	baz=315,SNR=15						
E51A	G1948 Merrick	58.90	53	P	P	17 47 23.8	-1.0
	baz=315,SNR=12						
U40A	Yellville	58.92	70	P	P	17 47 23.7	-1.4
U40A				IAmb	IAmb	17 47 25.2	
	comp=Z,17nm,0.6s						
U40A	Yellville	58.92	70	P	P	17 47 23.7	-1.4
	baz=315,SNR=12						
KURK	Kurchatov	58.95	314	*i* P	P	17 47 25.1	0.0
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KURK	Kurchatov	58.95	314	P	P	17 47 25.0	0.0
KURK					PcP	17 48 12.1	+0.3
JCT	Junction City	59.00	79	P	P	17 47 25.5	-0.2
JCT				pmax	pmax		
	comp=Z,64nm,1.3s						
JCT	Junction City	59.00	79	P	P	17 47 25.5	-0.2
JCT				IAmb	IAmb	17 47 26.8	
	comp=Z,64nm,1.2s						
JCT	Junction City	59.00	79	P	P	17 47 25.7	0.0
	baz=316,SNR=20						
J48A	Bridge Port	59.02	58	P	P	17 47 25.2	-0.4
J48A				IAmb	IAmb	17 47 27.0	
	comp=Z,30nm,0.6s						
J48A	Bridge Port	59.02	58	P	P	17 47 25.3	-0.2
	baz=315						
KURBB	Kurchatov Arra	59.06	314	P	P	17 47 25.6	-0.2
	comp=Z,6.3nm,0.4s,baz=44,slow=6.6,SNR=21						
KURBB				PcP	pP	17 48 12.5	+0.2
	comp=Z,4.3nm,0.6s,baz=46,slow=6.4,SNR=8.7						
I49A	Point Hope	59.06	57	P	P	17 47 25.8	-0.1
I49A				IAmb	IAmb	17 47 27.7	
	comp=Z,28nm,0.6s						
I49A	Point Hope	59.06	57	P	P	17 47 25.9	-0.1
	baz=315						
F51A	Arnstein	59.12	54	P	P	17 47 25.6	-0.7
	baz=315,SNR=8.0						
K48A	Perry	59.19	59	P	P	17 47 26.3	-0.5
	baz=315,SNR=7.3						
W39A	Magazine	59.20	71	P	P	17 47 26.4	-0.5
W39A				IAmb	IAmb	17 47 28.9	
	comp=Z,65nm,1.7s						
W39A	Magazine	59.20	71	P	P	17 47 26.7	-0.3
	baz=315						
Q44A	Meyer Farm, Va	59.30	65	P	P	17 47 26.7	-0.8
J49A	Marlette	59.31	58	P	P	17 47 27.2	-0.4
	baz=315						
SFIN	Lafayette	59.31	63	P	P	17 47 27.4	-0.3
SFIN	Lafayette	59.31	63	P	P	17 47 27.3	-0.3
	baz=315,SNR=20						
WHTX	Lake Whitney,	59.32	76	P	P	17 47 27.7	-0.2
WHTX				IAmb	IAmb	17 47 28.8	
	comp=Z,22nm,0.6s						
WHTX	Lake Whitney,	59.32	76	P	P	17 47 28.0	+0.2
	baz=316,SNR=6.6						
D53A	Lac Vacive, Po	59.38	52	P	P	17 47 27.1	-0.9
D53A	Lac Vacive, Po	59.38	52	P	P	17 47 27.2	-0.8
	baz=316,SNR=7.5						
LOF	Lofoten	59.39	355	*e*P	P	17 47 27.9	+0.2
M47A	Cromwell	59.42	61	P	P	17 47 27.4	-0.9
	baz=315,SNR=7.7						
T42A	Van Buren	59.45	68	P	P	17 47 26.6	-2.0
T42A				IAmb	IAmb	17 47 28.2	
	comp=Z,16nm,0.5s						
E52A	Mattawa	59.49	53	P	P	17 47 27.7	-1.1
	baz=316,SNR=13						
STEI	Steigen	59.50	355	*e*P	P	17 47 28.5	0.0
SZP	Santa	59.51	259	P	P	17 47 30.0	+0.8
SZP				IAmb	IAmb	17 47 33.1	
	comp=Z,62nm,0.7s						
F52A	Sundridge	59.51	54	P	P	17 47 28.3	-0.6
	baz=316,SNR=15						
K49A	Clarkson	59.55	58	P	P	17 47 29.1	-0.1
	baz=315,SNR=11						
IVI	Ivigtut	59.56	26	P	P	17 47 28.8	-0.2
IVI				IAmb	IAmb	17 47 58.6	
	comp=Z,113nm,1.6s						
WMQ	Urumqi	59.56	303	*e*P	P	17 47 32.5	+3.1
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,76nm,4.1s						
WMQ				LR	LR		
	comp=Z,450nm,25.7s						
WMQ				LR	LR		
	comp=Z,720nm,25.7s						
WMQ				LR	LR		
	comp=Z,110nm,27.3s						
WMQ	Urumqi	59.56	303	P	P	17 47 29.5	+0.1
WMQ				pmax	pmax		
	comp=Z,28nm,1.7s						
WMQ	Urumqi	59.56	303	P	P	17 47 29.5	+0.1
L48A	N Adams	59.63	60	P	P	17 47 29.3	-0.5
	baz=315,SNR=15						
FCAR	Ozark Folk Cen	59.67	70	P	P	17 47 28.9	-1.3
FCAR				IAmb	IAmb	17 47 30.4	
	comp=Z,28nm,0.5s						
N47A	Urbana	59.72	61	P	P	17 47 29.4	-1.0
N47A				IAmb	IAmb	17 47 31.0	
	comp=Z,44nm,0.5s						
N47A	Urbana	59.72	61	P	P	17 47 29.2	-1.2
	baz=315,SNR=10						
MIAR	Mount Ida	59.78	72	P	P	17 47 30.6	-0.4
MIAR				pmax	pmax		
	comp=Z,56nm,1.7s						
MIAR	Mount Ida	59.78	72	P	P	17 47 30.6	-0.4
MIAR				IAmb	IAmb	17 47 32.0	
	comp=Z,56nm,1.7s						
MIAR	Mount Ida	59.78	72	P	P	17 47 30.8	-0.1
	baz=316,SNR=6.4						
P46A	Rosedale	59.79	63	P	P	17 47 30.3	-0.6
AAM	Ann Arbor	59.79	59	P	P	17 47 30.7	-0.1
AAM				pmax	pmax		
	comp=Z,46nm,0.5s						
AAM	Ann Arbor	59.79	59	P	P	17 47 30.7	-0.1
AAM	Ann Arbor	59.79	59	P	P	17 47 30.4	-0.5
	baz=315						
M48A	Edgerton	59.81	60	P	P	17 47 30.4	-0.6
M48A	Edgerton	59.81	60	P	P	17 47 30.4	-0.6
	baz=315,SNR=6.2						
D54A	Lac Fusel, La	59.83	51	P	P	17 47 29.8	-1.3
	baz=316,SNR=7.3						
L49A	Milan	59.87	59	P	P	17 47 31.0	-0.4
	baz=315,SNR=8.5						
E53A	Dumoine, Ponti	59.90	52	P	P	17 47 30.6	-1.0
	baz=316,SNR=10						
OLIL	Olney	59.92	65	P	P	17 47 31.4	-0.4
OLIL				IAmb	IAmb	17 47 32.2	
	comp=Z,29nm,0.8s						
K50A	Casco	59.99	58	P	P	17 47 31.2	-1.0
K50A				IAmb	IAmb	17 47 34.1	
	comp=Z,24nm,0.5s						
K50A	Casco	59.99	58	P	P	17 47 31.5	-0.7
	baz=315						
WHAR	Wooly Hollow	60.00	70	P	P	17 47 31.6	-0.8
PBMO	Poplar Bluff	60.00	68	P	P	17 47 31.3	-1.1
PBMO				IAmb	IAmb	17 47 32.8	
	comp=Z,24nm,0.5s						
S44A	Carbondale	60.02	66	P	P	17 47 31.6	-0.9
S44A				IAmb	IAmb	17 47 34.6	
	comp=Z,27nm,0.6s						
ALGO	Algonquin Park	60.02	53	P	P	17 47 31.9	-0.5
	baz=316						
SIUC	Southern Illin	60.02	66	P	P	17 47 31.5	-1.0
SIUC				IAmb	IAmb	17 47 33.5	
	comp=Z,27nm,0.5s						
H52A	Wyevale	60.05	55	P	P	17 47 32.2	-0.4
	baz=316,SNR=6.5						
I51A	Listowel	60.08	56	P	P	17 47 33.2	+0.4
	baz=316,SNR=11						
N48A	Decatur	60.09	61	P	P	17 47 31.6	-1.3
	baz=315,SNR=17						
E54A	Lac Daplat, Po	60.09	52	P	P	17 47 31.6	-1.2
	baz=316,SNR=9.7						
LCAR	Lake Charles	60.10	69	P	P	17 47 31.5	-1.6
LCAR				IAmb	IAmb	17 47 32.9	
	comp=Z,17nm,0.4s						
MK31	Makanchi Array	60.11	309	P	P	17 47 32.3	-0.7
MK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MK31	Makanchi Array	60.11	309	P	P	17 47 32.3	-0.7
MKAR	Makanchi Array	60.11	309	P	P	17 47 32.4	-0.6
	comp=Z,1.3nm,0.3s,baz=48,slow=6.3,SNR=51						
MKAR				PcP	PcP	17 48 16.3	-0.2
	comp=Z,0.8nm,0.5s,baz=43,slow=5.4,SNR=1.9						
MKAR	Makanchi Array	60.11	309	P	P	17 47 32.3	-0.7
W41B	Gary Mavity, V	60.11	70	P	P	17 47 32.1	-0.9
W41B				IAmb	IAmb	17 49 45.6	
	comp=Z,38nm,0.8s						
W41B	Gary Mavity, V	60.11	70	P	P	17 47 32.2	-0.9
	baz=316,SNR=8.7						
435B	Jarrell	60.11	77	P	P	17 47 33.3	+0.1
435B	Jarrell	60.11	77	P	P	17 47 32.7	-0.6
	baz=316						
MSF	Maaselka	60.20	348	P	P	17 47 34.7	+1.4
MSF				pmax	pmax		
	comp=Z,22nm,2.3s						
M49A	Liberty Center	60.21	60	P	P	17 47 33.1	-0.6
	baz=316,SNR=6.3						
MAKZ	Makanchi	60.24	309	P	P	17 47 33.1	-0.8
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MAKZ	Makanchi	60.24	309	P	P	17 47 33.1	-0.8
X40A	Basin Creek Fa	60.26	71	P	P	17 47 33.8	-0.4
X40A	Basin Creek Fa	60.26	71	P	P	17 47 34.1	-0.1
	baz=316						
I52A	Shelburne	60.32	55	P	P	17 47 34.5	0.0
	baz=316						
SADO	Sadowa	60.33	54	P	P	17 47 33.6	-0.9
SADO				IAmb	IAmb	17 47 35.6	
	comp=Z,16nm,0.5s						
G53A	Haliburton	60.34	54	P	P	17 47 34.3	-0.3
	baz=316,SNR=23						
UALR	University of	60.34	71	P	P	17 47 34.1	-0.5
G54A	Lake Saint Pet	60.40	53	P	P	17 47 34.5	-0.5
	baz=316,SNR=10.0						
L50A	Kingsville	60.42	59	P	P	17 47 34.7	-0.4
	baz=316						
O48A	Farmland	60.45	62	P	P	17 47 34.2	-1.2
	baz=316,SNR=44						
BLO	Bloomington	60.48	63	P	P	17 47 34.9	-0.7
BLO				pmax	pmax		
	comp=Z,45nm,0.5s						
BLO	Bloomington	60.48	63	P	P	17 47 34.9	-0.7
D55A	Sainte-Anne-du	60.48	50	P	P	17 47 34.0	-1.5
	baz=317,SNR=12						
N49A	Columbus Grove	60.49	60	P	P	17 47 35.0	-0.7
N49A	Columbus Grove	60.49	60	P	P	17 47 34.9	-0.8
	baz=316,SNR=21						
BVAR	Borovoye Array	60.66	320	P	P	17 47 37.2	+0.6
	comp=Z,5.5nm,0.4s,baz=53,slow=6.5,SNR=56						
BVAR				PcP	PcP	17 48 18.6	0.0
	comp=Z,8.8nm,0.6s,baz=53,slow=3.2,SNR=9.6						
WLAR	White Oak Lake	60.67	72	P	P	17 47 36.5	-0.4
WLAR				IAmb	IAmb	17 47 37.5	
	comp=Z,29nm,0.6s						
BRVK	Borovoye	60.67	320	*i* P	P	17 47 37.2	+0.5
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BRVK	Borovoye	60.67	320	P	P	17 47 36.9	+0.2
USIN	University of	60.71	65	P	P	17 47 36.7	-0.5
H53A	Bobcaygeon	60.75	54	P	P	17 47 36.6	-0.7
	baz=316,SNR=6.8						
M50A	Fremont	60.75	59	P	P	17 47 37.2	-0.1
M50A	Fremont	60.75	59	P	P	17 47 37.1	-0.3
	baz=316						
J52A	Paris	60.76	56	P	P	17 47 37.4	0.0
	baz=316						
I53A	Kortright Cn E	60.79	55	P	P	17 47 37.7	+0.1
	baz=316						
D56A	ZEC Mazanza, M	60.80	50	P	P	17 47 36.2	-1.4
	baz=317,SNR=7.5						
833A	Chaparral WMA,	60.80	81	P	P	17 47 38.5	+0.6
833A				IAmb	IAmb	17 47 39.9	
	comp=Z,28nm,0.8s						
833A	Chaparral WMA,	60.80	81	P	P	17 47 38.5	+0.6
	baz=317,SNR=6.5						
P48A	Milroy	60.87	62	P	P	17 47 37.2	-1.0
P48A	Milroy	60.87	62	P	P	17 47 37.3	-1.0
	baz=316,SNR=35						
F55A	Otter Lake	60.93	52	P	P	17 47 37.7	-0.8
	baz=317						
O49A	Covington	60.94	61	P	P	17 47 37.7	-1.0
O49A				IAmb	IAmb	17 47 39.9	
	comp=Z,23nm,0.4s						
O49A	Covington	60.94	61	P	P	17 47 37.8	-0.9
	baz=316,SNR=10						
E56A	St. Veronique	61.03	50	P	P	17 47 37.9	-1.4
	baz=317,SNR=8.5						
KONS	Konsvik	61.04	355	*e*P	P	17 47 39.0	+0.1
Q48A	North Vernon	61.08	63	P	P	17 47 38.8	-0.8
	baz=316,SNR=12						
N50A	Nevada	61.15	60	P	P	17 47 39.5	-0.6
	baz=316,SNR=9.0						
PLVO	Plevna	61.15	53	P	P	17 47 39.0	-1.1
PLVO				IAmb	IAmb	17 47 40.9	
	comp=Z,17nm,0.6s						
G55A	Calabogie	61.17	52	P	P	17 47 39.2	-1.0
	baz=317,SNR=12						
P49A	Miami Univ. Ec	61.20	62	P	P	17 47 39.3	-1.1
	baz=316,SNR=27						
GYA	Guiyang	61.20	277	P	P	17 47 42.3	+1.5
GYA				PP	PP	17 50 01.5	+3.6
GYA				S	S	17 55 43.5	0.0
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,5.2s						
PRGR	Permogore	61.22	338	*e*P	P	17 47 39.5	-0.7
PRGR				pmax	pmax		
	comp=Z,13nm,0.6s						
D57A	Chemin Vers le	61.22	49	P	P	17 47 40.0	-0.5
	baz=317,SNR=7.2						
M51A	Elyria	61.25	59	P	P	17 47 40.0	-0.8
	baz=316						
DELO	Deloro Mine	61.27	54	P	P	17 47 39.9	-0.9
DELO				IAmb	IAmb	17 47 42.0	
	comp=Z,25nm,0.5s						
WCI	Wyandotte Cave	61.28	64	P	P	17 47 40.3	-0.7
WCI				pmax	pmax		
	comp=Z,30nm,0.5s						
WCI	Wyandotte Cave	61.28	64	P	P	17 47 40.3	-0.7
WCI				IAmb	IAmb	17 47 43.1	
	comp=Z,30nm,0.5s						
WCI	Wyandotte Cave	61.28	64	P	P	17 47 40.6	-0.4
	baz=316						
MOR8	Moi Rana	61.30	355	*e*P	P	17 47 39.7	-1.0
O50A	Cable	61.35	61	P	P	17 47 41.0	-0.4
	baz=316,SNR=17						
N51A	Ashland	61.45	59	P	P	17 47 40.8	-1.3
N51A				IAmb	IAmb	17 47 44.1	
	comp=Z,39nm,0.5s						
N51A	Ashland	61.45	59	P	P	17 47 41.2	-0.9
	baz=316,SNR=6.2						
I55A	Frankford	61.45	54	P	P	17 47 41.5	-0.5
	baz=317,SNR=6.8						
H55A	Tweed	61.46	53	P	P	17 47 41.5	-0.6
	baz=317,SNR=8.1						
LATQ	La Tuque	61.46	49	P	P	17 47 41.0	-1.1
LATQ	La Tuque	61.46	49	P	P	17 47 41.1	-1.0
	baz=318						
Q49A	Aurora	61.48	62	P	P	17 47 41.4	-1.0
	baz=316,SNR=9.2						
TRQ	Mont Tremblant	61.50	50	P	P	17 47 41.2	-1.2
M52A	Chesterland	61.53	58	P	P	17 47 41.9	-0.8
M52A	Chesterland	61.53	58	P	P	17 47 42.1	-0.6
	baz=316,SNR=5.6						
E57A	Chemin Saint G	61.55	50	P	P	17 47 41.2	-1.5
	baz=318,SNR=7.9						
ACSO	Alum Creek Sta	61.62	60	P	P	17 47 42.8	-0.5
ACSO	Alum Creek Sta	61.62	60	P	P	17 47 42.5	-0.8
	baz=316						
D58A	Chemin du LacG	61.63	49	P	P	17 47 41.8	-1.4
	baz=318,SNR=6.9						
P50A	Jamestown	61.64	61	P	P	17 47 42.7	-0.7
	baz=316,SNR=10.0						
J54A	Appleton	61.66	55	P	P	17 47 43.0	-0.5
J54A	Appleton	61.66	55	P	P	17 47 42.9	-0.6
	baz=317,SNR=7.9						
T47A	Sharon Grove	61.72	65	P	P	17 47 43.5	-0.5
HKT	Hockley	61.76	77	P	P	17 47 44.9	+0.7
HKT	Hockley	61.76	77	P	P	17 47 44.9	+0.7
L53A	Girard	61.80	57	P	P	17 47 43.9	-0.6
	baz=317						
ERPA	Erie	61.82	57	P	P	17 47 44.5	0.0
ERPA				IAmb	IAmb	17 47 47.2	
	comp=Z,37nm,1.2s						
ERPA	Erie	61.82	57	P	P	17 47 44.1	-0.5
	baz=317						
MEDO	Medina	61.84	55	P	P	17 47 44.6	0.0
R49A	Shelbyville	61.84	63	P	P	17 47 44.1	-0.6
R49A				IAmb	IAmb	17 47 49.2	
	comp=Z,35nm,1.4s						
R49A	Shelbyville	61.84	63	P	P	17 47 44.2	-0.6
	baz=316						
H56A	Elgin	61.88	53	P	P	17 47 44.3	-0.6
	baz=317						
O51A	Pataskala	61.88	60	P	P	17 47 44.5	-0.5
	baz=316,SNR=16						
N52A	McGinn’s Farm,	61.89	59	P	P	17 47 44.8	-0.2
	baz=317						
TGY	Tagaytay City	61.91	256	P	P	17 47 47.1	+1.6
	comp=Z,380nm,0.3s,baz=62,slow=5.7,SNR=3.9						
WVT	Waverly	61.93	67	P	P	17 47 45.0	-0.4
WVT				pmax	pmax		
	comp=Z,26nm,0.4s						
WVT	Waverly	61.93	67	P	P	17 47 45.0	-0.4
WVT				IAmb	IAmb	17 47 47.0	
	comp=Z,26nm,0.3s						
WVT	Waverly	61.93	67	P	P	17 47 44.9	-0.4
	baz=316						
M53A	WI Miller and	61.96	58	P	P	17 47 45.3	-0.2
	baz=317,SNR=17						
E58A	La Victoria	61.98	50	P	P	17 47 44.5	-1.1
	baz=318						
L54A	Sinclairville	62.08	56	P	P	17 47 46.1	-0.2
	baz=317,SNR=5.4						
ALLY	Alegheny Colle	62.08	57	P	P	17 47 46.0	-0.3
ALLY				IAmb	IAmb	17 47 48.0	
	comp=Z,26nm,0.7s						
J55A	Hilton	62.08	55	P	P	17 47 45.8	-0.4
	baz=317						
Q50A	Georgetown	62.09	62	P	P	17 47 46.2	-0.2
	baz=316,SNR=12						
G57A	Newington	62.12	52	P	P	17 47 45.9	-0.6
	baz=318						
K54A	Basiliko Farm,	62.12	56	P	P	17 47 46.5	-0.1
	baz=317,SNR=10						
P51A	Williamsport	62.12	61	P	P	17 47 45.9	-0.7
P51A				IAmb	IAmb	17 47 47.6	
	comp=Z,24nm,0.4s						
P51A	Williamsport	62.12	61	P	P	17 47 46.0	-0.6
	baz=317						
S49A	Springfield	62.15	64	P	P	17 47 46.4	-0.4
	baz=316,SNR=15						
ARU	Arti	62.15	329	P	P	17 47 47.1	+0.5
	comp=Z,4.0nm,0.5s,baz=13,slow=6.6,SNR=20						
ARU	Arti	62.15	329	*c i*P	P	17 47 47.0	+0.5
ARU						17 48 22.5	
ARU				*PP	pP	17 48 34.8	+1.3
ARU						17 50 03.8	
ARU				S	S	17 55 59.7	+5.4
ARU				SS	SS	17 59 58.2	-1.9
ARU				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ARU	Arti	62.15	329	P	P	17 47 46.5	0.0
D59A	Saint-Raymond	62.17	48	P	P	17 47 46.1	-0.7
	baz=318						
OXF	Oxford	62.20	69	P	P	17 47 46.6	-0.6
OXF				pmax	pmax		
	comp=Z,71nm,0.6s						
OXF	Oxford	62.20	69	P	P	17 47 46.6	-0.6
OXF	Oxford	62.20	69	P	P	17 47 46.7	-0.5
	baz=316,SNR=9.0						
Q51A	Peebles	62.30	61	P	P	17 47 47.5	-0.4
Q51A				IAmb	IAmb	17 47 49.4	
	comp=Z,27nm,0.8s						
Q51A	Peebles	62.30	61	P	P	17 47 47.7	-0.1
	baz=317,SNR=8.5						
R50A	Paris	62.31	63	P	P	17 47 46.6	-1.3
R50A				IAmb	IAmb	17 47 48.6	
	comp=Z,147nm,2.0s						
R50A	Paris	62.31	63	P	P	17 47 47.5	-0.3
	baz=317,SNR=7.4						
O52A	Adamsville	62.31	60	P	P	17 47 47.3	-0.6
O52A				IAmb	IAmb	17 47 49.5	
	comp=Z,49nm,1.1s						
O52A	Adamsville	62.31	60	P	P	17 47 47.4	-0.4
	baz=317,SNR=9.4						
WVNY	West Valley, N	62.31	56	P	P	17 47 47.5	-0.4
WVNY				IAmb	IAmb	17 47 49.4	
	comp=Z,29nm,0.9s						
N53A	Lisbon	62.33	58	P	P	17 47 47.4	-0.6
	baz=317						
K55A	Perry	62.35	55	P	P	17 47 47.8	-0.3
	baz=317,SNR=8.4						
H57A	Richville	62.39	52	P	P	17 47 47.3	-1.0
	baz=318						
M54A	Oil Creek Stat	62.43	57	P	P	17 47 48.1	-0.6
M54A				IAmb	IAmb	17 47 51.6	
	comp=Z,15nm,0.5s						
M54A	Oil Creek Stat	62.43	57	P	P	17 47 47.9	-0.7
	baz=317						
T49A	Edmonton	62.50	64	P	P	17 47 48.7	-0.4
T49A	Edmonton	62.50	64	P	P	17 47 48.7	-0.4
	baz=317,SNR=25						
P52A	Corning	62.51	60	P	P	17 47 48.6	-0.5
	baz=317						
G58A	Ormstown	62.52	51	P	P	17 47 48.0	-1.1
	baz=318						
O53A	New Philadelph	62.54	59	P	P	17 47 48.5	-0.9
	baz=317,SNR=5.4						
J56A	Wolcott	62.55	54	P	P	17 47 48.9	-0.4
J56A				IAmb	IAmb	17 47 50.5	
	comp=Z,28nm,0.6s						
J56A	Wolcott	62.55	54	P	P	17 47 48.8	-0.6
	baz=318						
L55A	Hinsdale	62.56	56	P	P	17 47 49.2	-0.3
	baz=317,SNR=7.0						
F59A	Saint Guilaume	62.60	50	P	P	17 47 48.8	-0.8
	baz=318						
PLAL	Pickwick Lake	62.62	68	P	P	17 47 49.3	-0.6
I57A	Carthage	62.65	53	P	P	17 47 49.2	-0.8
	baz=318						
D60A	Saint Jean D’O	62.66	48	P	P	17 47 49.2	-0.8
	baz=319						
N54A	Moraine State	62.66	58	P	P	17 47 49.5	-0.7
N54A	Moraine State	62.66	58	P	P	17 47 49.8	-0.4
	baz=317,SNR=15						
R51A	Hillsboro	62.70	62	P	P	17 47 50.6	+0.1
	baz=317,SNR=19						
S50A	Richmond	62.71	63	P	P	17 47 50.1	-0.4
	baz=317,SNR=8.3						
K56A	Middlesex	62.74	55	P	P	17 47 50.5	-0.2
	baz=318,SNR=27						
D61A	St Aubert, Com	62.77	47	P	P	17 47 49.8	-0.9
	baz=319						
V48A	Smith Brothers	62.78	66	P	P	17 47 50.0	-1.0
V48A				IAmb	IAmb	17 47 50.9	
	comp=Z,98nm,2.0s						
CLTN	Cedars of Leba	62.80	66	P	P	17 47 51.0	-0.1
CLTN				IAmb	IAmb	17 47 52.0	
	comp=Z,31nm,0.8s						
U49A	Red Boiling Sp	62.80	65	P	P	17 47 50.6	-0.5

E60A	Ste Agathe de	62.83	49	P	P	17 47 50.2	-0.9
	baz=319						
J57A	Williamstown	62.88	53	P	P	17 47 50.9	-0.6
	baz=318						
F60A	Warwick	62.90	49	P	P	17 47 51.0	-0.6
	baz=319						
M55A	Ridgway	62.92	57	P	P	17 47 51.5	-0.4
M55A				IAmb	IAmb	17 47 53.5	
	comp=Z,23nm,0.9s						
M55A	Ridgway	62.92	57	P	P	17 47 51.7	-0.1
	baz=317,SNR=9.2						
Q52A	Bidwell	62.92	61	P	P	17 47 51.3	-0.6
	baz=317,SNR=7.3						
T50A	Nancy	62.95	64	P	P	17 47 51.8	-0.3
	baz=317,SNR=21						
ZAIG	Zacatecas	62.97	87	P	P	17 47 53.5	+0.7
ZAIG				IAmb	IAmb	17 47 55.0	
	comp=Z,42nm,0.8s						
KIRV	Kirov	62.97	335	P	P	17 47 52.6	+0.7
	comp=Z,11nm,0.4s,baz=25,slow=9.2,SNR=4.3						
G59A	Clarenceville	62.99	51	P	P	17 47 50.8	-1.4
	baz=318						
P53A	Whipple	63.01	60	P	P	17 47 52.1	-0.4
P53A				IAmb	IAmb	17 47 53.4	
	comp=Z,144nm,1.9s						
P53A	Whipple	63.01	60	P	P	17 47 52.0	-0.4
	baz=317						
H58A	Gabriels	63.01	52	P	P	17 47 51.0	-1.4
	baz=318						
O54A	Avella	63.03	59	P	P	17 47 51.9	-0.7
O54A	Avella	63.03	59	P	P	17 47 52.2	-0.4
	baz=317						
L56A	Greenwood	63.04	55	P	P	17 47 52.5	-0.1
L56A	Greenwood	63.04	55	P	P	17 47 52.6	-0.1
	baz=318,SNR=30						
H59A	Cadyville	63.07	51	P	P	17 47 52.3	-0.5
	baz=318						
I58A	Old Forge	63.17	53	P	P	17 47 53.1	-0.4
	baz=318						
S51A	Beattyville	63.17	63	P	P	17 47 53.2	-0.4
S51A				IAmb	IAmb	17 47 54.9	
	comp=Z,19nm,0.5s						
S51A	Beattyville	63.17	63	P	P	17 47 53.2	-0.4
	baz=317,SNR=6.4						
R52A	Catlettsburg	63.18	61	P	P	17 47 53.2	-0.4
	baz=317,SNR=8.4						
M56A	Emporium	63.20	56	P	P	17 47 53.6	-0.2
M56A	Emporium	63.20	56	P	P	17 47 53.6	-0.2
	baz=318,SNR=8.7						
E61A	Lac Etchemin	63.22	48	P	P	17 47 53.6	-0.2
	baz=319						
KLMR	Klimovskoe	63.23	341	*e*P	P	17 47 50.0	-3.5
KLMR				pmax	pmax		
	comp=Z,19nm,1.4s						
KLMR	Klimovskoe	63.23	341	*e*P	P	17 47 50.0	-3.5
KLMR				AMP		17 47 55.9	
	comp=Z,19nm,1.4s						
VBMS	Vicksburg	63.23	71	P	P	17 47 54.0	0.0
	baz=317						
J58A	Remsen	63.26	53	P	P	17 47 53.5	-0.6
J58A	Remsen	63.26	53	P	P	17 47 53.6	-0.5
	baz=318						
N55A	Marion Center	63.31	57	P	P	17 47 53.7	-0.7
	baz=318,SNR=5.5						
NCB	Newcomb	63.32	52	P	P	17 47 54.0	-0.5
F61A	St Evariste	63.34	49	P	P	17 47 53.8	-0.7
	baz=319,SNR=5.8						
D62A	Allapoint, All	63.37	47	P	P	17 47 54.2	-0.5
D62A	Allapoint, All	63.37	47	P	P	17 47 54.2	-0.5
	baz=320,SNR=7.4						
Q53A	Leroy	63.39	60	P	P	17 47 54.7	-0.4
	baz=317,SNR=19						
P54A	Burton	63.40	59	P	P	17 47 54.5	-0.6
	baz=317						
S52A	Salyersville	63.42	62	P	P	17 47 55.4	+0.2
	baz=317						
T51A	Gray	63.48	63	P	P	17 47 55.2	-0.4
	baz=317						
L57A	Andrews Acres	63.49	55	P	P	17 47 55.4	-0.3
	baz=318,SNR=12						
K58A	Earlville	63.53	54	P	P	17 47 55.7	-0.2
K58A	Earlville	63.53	54	P	P	17 47 55.3	-0.5
	baz=318						
R53A	Hurricane	63.55	61	P	P	17 47 55.9	-0.1
R53A	Hurricane	63.55	61	P	P	17 47 55.5	-0.6
	baz=317,SNR=19						
J59A	Piesco	63.56	53	P	P	17 47 55.1	-1.0
J59A				IAmb	IAmb	17 47 56.5	
	comp=Z,16nm,0.5s						
J59A	Piesco	63.56	53	P	P	17 47 54.9	-1.2
	baz=318,SNR=7.4						
N56A	West Decatur	63.56	57	P	P	17 47 55.6	-0.5
	baz=318						
O55A	Ligonier	63.57	58	P	P	17 47 55.7	-0.5
	baz=318						
X48A	Hartselle	63.59	67	P	P	17 47 55.3	-1.0
H60A	Morristown	63.61	51	P	P	17 47 55.8	-0.5
	baz=319						
G61A	St-Isidore-de-	63.61	49	P	P	17 47 55.7	-0.6
	baz=319						
I59A	Olmsteadville	63.62	52	P	P	17 47 55.3	-1.1
	baz=318,SNR=5.3						
SWET	Sewanee	63.66	66	P	P	17 47 55.9	-0.9
SWET				IAmb	IAmb	17 47 56.4	
	comp=Z,18nm,0.7s						
Q54A	Coxs Mills	63.67	60	P	P	17 47 56.0	-0.7
Q54A				IAmb	IAmb	17 49 34.4	
	comp=Z,87nm,1.9s						
Q54A	Coxs Mills	63.67	60	P	P	17 47 56.5	-0.3
	baz=318						
MCWV	Mont Chateau	63.69	59	P	P	17 47 56.7	-0.2
	baz=318						
146A	Union	63.77	70	P	P	17 47 57.8	+0.3
BINY	Binghamton	63.78	54	P	P	17 47 57.2	-0.3
BINY				IAmb	IAmb	17 47 58.5	
	comp=Z,84nm,1.6s						
BINY	Binghamton	63.78	54	P	P	17 47 57.2	-0.3
	baz=318,SNR=7.8						
P55A	Reedsville	63.81	59	P	P	17 47 57.3	-0.5
	baz=318						
D63A	Stockholm	63.82	46	P	P	17 47 57.0	-0.6
	baz=320						
M57A	Sunshine Farm,	63.85	56	P	P	17 47 57.7	-0.2
M57A				IAmb	IAmb	17 47 59.5	
	comp=Z,24nm,0.6s						
M57A	Sunshine Farm,	63.85	56	P	P	17 47 57.4	-0.5
	baz=318,SNR=9.5						
I60A	Shoreham	63.86	51	P	P	17 47 57.5	-0.4
	baz=319						
T52A	Hallie	63.89	63	P	P	17 47 58.5	+0.2
T52A				IAmb	IAmb	17 48 02.6	
	comp=Z,89nm,1.6s						
T52A	Hallie	63.89	63	P	P	17 47 57.9	-0.4
	baz=317						
O56A	Blue Knob Stat	63.91	57	P	P	17 47 58.5	+0.1
O56A				IAmb	IAmb	17 50 09.8	
	comp=Z,56nm,1.9s						
O56A	Blue Knob Stat	63.91	57	P	P	17 47 57.7	-0.7
	baz=318						
K59A	Cooperstown	63.91	53	P	P	17 47 57.7	-0.6
	baz=318						
Z47A	Carrollton	63.92	69	P	P	17 47 58.2	-0.3
S53A	Williamson	63.94	62	P	P	17 47 58.2	-0.4
	baz=318						
L58A	Harry Jones Me	63.96	54	P	P	17 47 58.2	-0.5
	baz=318,SNR=11						
SSPA	Standing Stone	63.98	57	P	P	17 47 58.2	-0.6
SSPA	Standing Stone	63.98	57	P	P	17 47 58.4	-0.4
	baz=318						
H61A	Lyndonville	63.99	50	P	P	17 47 58.2	-0.6
	baz=319						
TZTN	Tazewell	64.00	63	P	P	17 47 59.0	0.0
	baz=317						
W50A	Signal Mountai	64.01	66	P	P	17 47 58.5	-0.6
W50A				IAmb	IAmb	17 48 03.2	
	comp=Z,50nm,1.2s						
Q55A	Buckhannon	64.06	59	P	P	17 47 59.1	-0.3
	baz=318,SNR=7.2						
N57A	Milroy	64.06	56	P	P	17 47 58.9	-0.4
	baz=318,SNR=6.9						
V51A	Loudon	64.10	64	P	P	17 47 59.2	-0.5
V51A				IAmb	IAmb	17 48 01.1	
	comp=Z,26nm,0.5s						
G62A	West of Eustis	64.12	49	P	P	17 47 58.8	-0.8
G62A				IAmb	IAmb	17 48 00.2	
	comp=Z,64nm,1.6s						
G62A	West of Eustis	64.12	49	P	P	17 47 59.0	-0.6
	baz=320,SNR=5.7						
PQI	Presque Isle	64.14	46	P	P	17 47 58.7	-1.1
PQI				IAmb	IAmb	17 48 00.8	
	comp=Z,83nm,1.9s						
E63A	Oxbow	64.16	47	P	P	17 47 58.8	-1.1
E63A				IAmb	IAmb	17 47 59.8	
	comp=Z,35nm,1.4s						
E63A	Oxbow	64.16	47	P	P	17 47 58.9	-0.9
	baz=320						
M58A	Price's Panora	64.16	55	P	P	17 47 59.8	-0.2
	baz=318,SNR=6.1						
R54A	Victor	64.18	61	P	P	17 48 00.0	-0.1
	baz=318,SNR=9.0						
LBNH	Lisbon	64.21	50	P	P	17 47 59.5	-0.7
	baz=319						
T53A	Wise	64.23	62	P	P	17 48 00.5	-0.1
	baz=318,SNR=8.0						
J60A	Lant Hill Farm	64.25	52	P	P	17 47 59.9	-0.6
	baz=319,SNR=8.6						
L59A	Walton	64.25	54	P	P	17 48 00.2	-0.5
L59A				IAmb	IAmb	17 48 01.8	
	comp=Z,19nm,0.7s						
L59A	Walton	64.25	54	P	P	17 48 00.1	-0.5
	baz=319,SNR=6.3						
CPCT	Cooper Cave	64.27	65	P	P	17 48 00.3	-0.5
CPCT				IAmb	IAmb	17 48 01.9	
	comp=Z,25nm,0.5s						
S54A	Dingess, Beckl	64.29	61	P	P	17 48 00.6	-0.3
S54A				IAmb	IAmb	17 48 01.9	
	comp=Z,139nm,1.9s						
S54A	Dingess, Beckl	64.29	61	P	P	17 48 00.6	-0.3
	baz=318						
H62A	Milan	64.32	50	P	P	17 48 00.2	-0.8
H62A				IAmb	IAmb	17 48 01.8	
	comp=Z,30nm,0.7s						
H62A	Milan	64.32	50	P	P	17 48 00.1	-0.8
	baz=319,SNR=9.5						
FPAL	Fort Paine	64.33	66	P	P	17 48 00.7	-0.6
FPAL				IAmb	IAmb	17 48 01.6	
	comp=Z,53nm,1.0s						
P56A	Dayton Farm, R	64.33	58	P	P	17 48 00.8	-0.3
	baz=318						
KSPA	Keystone Colle	64.36	55	P	P	17 48 01.0	-0.3
Y49A	Blount Mountai	64.38	67	P	P	17 48 00.6	-0.9
F63A	Nahmakanta, Br	64.40	48	P	P	17 48 00.5	-1.0
	baz=320						
TBLU	Trondheim	64.41	356	*e*P	P	17 48 00.4	-0.8
E64A	Bridgewater	64.42	46	P	P	17 48 00.4	-1.1
	baz=320,SNR=8.8						
N58A	Sunbury	64.42	56	P	P	17 48 01.1	-0.5
N58A	Sunbury	64.42	56	P	P	17 48 01.1	-0.5
	baz=318,SNR=5.5						
O57A	Amberson	64.42	57	P	P	17 48 01.1	-0.6
	baz=318,SNR=7.5						
V52A	Sevierville	64.49	64	P	P	17 48 01.8	-0.4
V52A				IAmb	IAmb	17 48 06.2	
	comp=Z,117nm,1.9s						
Q56A	Snyder Ridge,	64.49	59	P	P	17 48 02.0	-0.2
	baz=318						
TKL	Tuckaleechee C	64.53	64	P	P	17 48 01.5	-0.9
TKL				pmax	pmax		
	comp=Z,15nm,0.5s						
TKL	Tuckaleechee C	64.53	64	P	P	17 48 01.5	-0.9
TKL				IAmb	IAmb	17 48 04.5	
	comp=Z,14nm,0.5s						
BATG	Bathurst New B	64.53	45	P	P	17 48 01.8	-0.4
BATG				IAmb	IAmb	17 49 25.9	
	comp=Z,61nm,1.8s						
M59A	Waymart	64.54	54	P	P	17 48 02.0	-0.4
	baz=319,SNR=7.0						
R55A	Marlinton	64.56	60	P	P	17 48 02.1	-0.6
	baz=318						
KMI	Kunming	64.56	279	P	P	17 48 04.5	+1.4
KMI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,83nm,5.5s						
J61A	Chester	64.59	51	P	P	17 48 02.1	-0.6
	baz=319						
F64A	Sherman	64.62	47	P	P	17 48 01.7	-1.1
F64A	Sherman	64.62	47	P	P	17 48 01.9	-0.9
	baz=320,SNR=6.5						
G63A	Kingsbury	64.62	48	P	P	17 48 02.2	-0.6
	baz=320						
LRAL	Lakeview Retre	64.65	68	P	P	17 48 02.3	-1.0
LRAL				IAmb	IAmb	17 48 04.1	
	comp=Z,25nm,0.5s						
LRAL	Lakeview Retre	64.65	68	P	P	17 48 02.3	-1.0
	baz=318,SNR=11						
T54A	Tazewell	64.69	62	P	P	17 48 03.6	0.0
	baz=318,SNR=14						
X51A	Calhoun	64.73	66	P	P	17 48 03.8	0.0
	baz=318						
S55A	Lewisburg	64.74	60	P	P	17 48 03.5	-0.3
	baz=318						
K61A	Williamstown	64.76	52	P	P	17 48 03.1	-0.7
	baz=319						
I62A	Tamworth	64.77	50	P	P	17 48 03.0	-0.8
	baz=320						
H63A	New Sharon	64.77	49	P	P	17 48 03.3	-0.6
	baz=320						
P57A	Homestead Farm	64.77	58	P	P	17 48 03.8	-0.2
	baz=318						
L60A	Shokan	64.81	53	P	P	17 48 03.7	-0.5
	baz=319						
N59A	State Game Lan	64.84	55	P	P	17 48 03.8	-0.6
N59A				IAmb	IAmb	17 48 05.9	
	comp=Z,27nm,0.7s						
N59A	State Game Lan	64.84	55	P	P	17 48 04.1	-0.3
	baz=319,SNR=10						
R56A	Bull Pasture M	64.85	59	P	P	17 48 03.9	-0.6
	baz=318						
O58A	Lewisberry	64.85	56	P	P	17 48 04.2	-0.3
	baz=318						
W52A	Murphy	64.86	65	P	P	17 48 04.2	-0.4
FINES	FINESS Array B	64.88	348	P	P	17 48 04.0	-0.2
	comp=Z,6.5nm,0.7s,baz=21,slow=5.7,SNR=23						
FINES				PcP	PcP	17 48 34.8	-0.8
	comp=Z,3.4nm,0.6s,baz=46,slow=5.7,SNR=4.7						
FINES	FINESS Array B	64.88	348	P	P	17 48 03.8	-0.5
FINES					PcP	17 48 34.6	-1.0
G64A	Maxfield	64.90	48	P	P	17 48 04.1	-0.6
	baz=320						
U54A	Nelsons Funny	64.96	62	P	P	17 48 05.3	+0.1
U54A	Nelsons Funny	64.96	62	P	P	17 48 05.4	+0.1
	baz=318,SNR=7.5						
L61A	Hillsdale 1, H	64.98	53	P	P	17 48 04.8	-0.4
	baz=319						
I63A	Otisfield	64.98	50	P	P	17 48 04.7	-0.6
	baz=320						
J62A	Henniker	65.03	51	P	P	17 48 05.1	-0.5
	baz=320						
V53A	Saluda	65.05	64	P	P	17 48 05.4	-0.4
V53A				IAmb	IAmb	17 48 07.4	
	comp=Z,19nm,0.5s						
T55A	Pulaski	65.07	61	P	P	17 48 05.9	-0.1
	baz=318						
O59A	Robesonia	65.09	56	P	P	17 48 05.4	-0.6
	baz=319,SNR=5.5						
Z50A	Ashland	65.10	67	P	P	17 48 05.2	-1.0
Z50A	Ashland	65.10	67	P	P	17 48 05.3	-0.8
	baz=318,SNR=34						
M60A	Port Jervis	65.11	54	P	P	17 48 05.1	-0.9
	baz=319,SNR=6.5						
H64A	Troy	65.16	48	P	P	17 48 05.9	-0.5
	baz=320						
MOL	Molde	65.18	358	*e*P	P	17 48 06.5	+0.4
BLA	Blacksburg	65.20	61	P	P	17 48 06.5	-0.3
	baz=318						
L61B	Northampton	65.21	52	P	P	17 48 05.8	-0.9
	baz=320						
N60A	Cedar Hill Far	65.21	55	P	P	17 48 06.0	-0.7
	baz=319,SNR=5.6						
K62A	Royalston	65.26	52	P	P	17 48 06.7	-0.3
	baz=320						
LUPA	Lehigh Univers	65.28	55	P	P	17 48 06.8	-0.4
S56A	Natural Bridge	65.31	60	P	P	17 48 07.1	-0.3
	baz=318,SNR=6.7						
J63A	Strafford	65.34	51	P	P	17 48 07.3	-0.2
	baz=320						
Q58A	Fox Den Farm,	65.35	58	P	P	17 48 07.3	-0.4
	baz=319						
U55A	TA2, Sparta	65.39	62	P	P	17 48 07.8	-0.2
	baz=318,SNR=5.2						
R57A	Stanardsville	65.39	59	P	P	17 48 07.7	-0.3
	baz=318,SNR=5.2						
V54A	Nebo	65.44	63	P	P	17 48 08.2	-0.1
	baz=318,SNR=11						
Z51A	Franklin	65.47	67	P	P	17 48 07.4	-1.2
O60A	Telford	65.48	55	P	P	17 48 08.0	-0.4
	baz=319						
G65A	Princeton	65.48	47	P	P	17 48 07.9	-0.5
	baz=321						
BG3	Lake Jocassee	65.48	64	P	P	17 48 08.4	-0.2
BG3				IAmb	IAmb	17 48 10.2	
	comp=Z,27nm,0.4s						
P59A	Jarrettsville	65.49	57	P	P	17 48 08.1	-0.4
	baz=319						
I64A	Boothbay	65.53	49	P	P	17 48 08.2	-0.4
	baz=320						
T56A	Rocky Mt	65.54	61	P	P	17 48 08.1	-0.8
	baz=318						
M61A	Granite Spring	65.54	54	P	P	17 48 08.2	-0.6
	baz=319						
H65A	Eastbrook	65.56	48	P	P	17 48 08.1	-0.8
	baz=321						
S57A	Dark Hollow, R	65.57	59	P	P	17 48 08.4	-0.7
	baz=318						
K63A	Dunstable	65.58	51	P	P	17 48 08.3	-0.8
	baz=320						
X53A	Estanollee	65.64	65	P	P	17 48 09.3	-0.2
	baz=318,SNR=5.8						
R58A	Rapidan	65.66	58	P	P	17 48 08.8	-0.8
	baz=319						
Y52A	Lilburn	65.69	66	P	P	17 48 09.5	-0.5
Y52A	Lilburn	65.69	66	P	P	17 48 09.4	-0.5
	baz=318						
N61A	South Mountain	65.70	54	P	P	17 48 09.2	-0.6
	baz=319						
HRV	Adam Dziewonsk	65.70	51	P	P	17 48 09.1	-0.8
	baz=320						
PAL	Palisades	65.70	54	P	P	17 48 09.3	-0.5
	baz=319						
V55A	Taylorsville	65.78	62	P	P	17 48 10.2	-0.2
V55A				IAmb	IAmb	17 48 11.5	
	comp=Z,69nm,1.8s						
V55A	Taylorsville	65.78	62	P	P	17 48 10.0	-0.5
	baz=318						
W54A	Cherokee Point	65.82	64	P	P	17 48 10.4	-0.3
	baz=318						
250A	Grady	65.85	69	P	P	17 48 10.7	-0.2
U56A	King	65.86	61	P	P	17 48 10.7	-0.3
U56A				IAmb	IAmb	17 48 11.7	
	comp=Z,148nm,2.0s						
U56A	King	65.86	61	P	P	17 48 10.7	-0.3
	baz=318,SNR=5.2						
M62A	Hamden	65.87	53	P	P	17 48 10.5	-0.4
	baz=320						
H66A	Whiting	65.91	47	P	P	17 48 10.1	-1.0
	baz=321						
T57A	Hurt	65.98	60	P	P	17 48 11.4	-0.3
T57A				IAmb	IAmb	17 48 13.1	
	comp=Z,16nm,0.5s						
T57A	Hurt	65.98	60	P	P	17 48 11.1	-0.6
	baz=319						
R58B	Mineral	65.98	59	P	P	17 48 11.2	-0.5
	baz=319						
O61A	Allentown	66.07	55	P	P	17 48 11.7	-0.5
	baz=319						
X54A	Belton	66.12	64	P	P	17 48 12.6	-0.1
	baz=318,SNR=9.9						
MOIG	Morelia	66.14	89	P	P	17 48 11.8	-1.4
V56A	Mocksville	66.20	62	P	P	17 48 12.8	-0.3
	baz=319						
152A	Waverly Hall	66.21	67	P	P	17 48 12.1	-1.2
152A				IAmb	IAmb	17 48 22.1	
	comp=Z,102nm,2.0s						
PAULI	Pauline	66.22	64	P	P	17 48 12.8	-0.5
PAULI				IAmb	IAmb	17 48 14.6	
	comp=Z,17nm,0.5s						
KMSC	Kings Mountain	66.25	63	P	P	17 48 13.3	-0.2
KMSC				IAmb	IAmb	17 48 14.6	
	comp=Z,29nm,0.3s						
KMSC	Kings Mountain	66.25	63	P	P	17 48 13.1	-0.4
	baz=319,SNR=8.8						
M63A	Gales Ferry	66.31	52	P	P	17 48 12.6	-1.1
	baz=320						
U57A	Blanch	66.36	61	P	P	17 48 12.3	-1.8
	baz=319						
GOGA	Godfrey	66.36	66	P	P	17 48 13.4	-0.8
GOGA				pmax	pmax		
	comp=Z,15nm,0.6s						
GOGA	Godfrey	66.36	66	P	P	17 48 13.4	-0.8
GOGA	Godfrey	66.36	66	P	P	17 48 13.3	-0.8
	baz=318,SNR=6.4						
NC204	NORSAR Array S	66.37	356	*e*P	P	17 48 13.9	+0.1
NC204	NORSAR Array S	66.37	356	P	P	17 48 14.1	+0.3
T58A	Grand View Acr	66.40	60	P	P	17 48 13.6	-0.7
	baz=319,SNR=5.9						
USP	Ospenovka	66.41	311	P	P	17 48 15.2	+0.8
	SNR=7.5						
DRLN	Deer Lake	66.42	38	P	P	17 48 13.9	-0.4
DRLN				IAmb	IAmb	17 48 19.3	
	comp=Z,174nm,2.0s						
L64A	Middleborough	66.48	51	P	P	17 48 14.0	-0.7
	baz=320						
NC405	NORSAR Array S	66.48	355	P	P	17 48 14.9	+0.4
NC405				IAmb	IAmb	17 48 15.8	
	comp=Z,119nm,1.5s						
NB201	NORSAR Array S	66.57	356	P	P	17 48 15.3	+0.2
NB201				IAmb	IAmb	17 48 15.9	
	comp=Z,35nm,0.8s						
NB2	NORSAR Subarra	66.58	356	P	P	17 48 14.9	-0.3
	comp=Z,4.1nm,0.7s,baz=5.4,slow=6.5						
NB2	NORSAR Subarra	66.58	356	P	P	17 48 14.9	-0.3
	baz=5.4,slow=6.5						
NOA	NORSAR Array B	66.58	356	P	P	17 48 15.3	+0.1
	comp=Z,5.7nm,0.7s,baz=6.4,slow=6.6,SNR=23						
NOA				PcP	PcP	17 48 42.0	-0.8
	comp=Z,1.6nm,0.8s,baz=3.6,slow=4.5,SNR=3.4						
X55A	Gracelyn & Ava	66.58	64	P	P	17 48 15.4	-0.2
	baz=319,SNR=12						
KBK	Karagaybulak	66.67	310	P	P	17 48 16.8	+0.5
	SNR=6.0						
SLVN	Son La	66.69	275	P	P	17 48 17.0	+0.5
Y55A	Saluda	66.86	64	P	P	17 48 17.2	-0.2
	baz=319,SNR=6.5						
NORES	NORESS Array B	66.87	355	P	P	17 48 18.0	+1.1
NORES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
T59A	Double "B" Far	66.89	59	P	P	17 48 17.0	-0.4
	baz=319						
AAK	Ala-Archa	66.89	310	P	P	17 48 18.4	+0.8
	comp=Z,7.2nm,0.5s,baz=121,slow=4.3,SNR=36						
AAK	Ala-Archa	66.89	310	P	P	17 48 18.5	+0.8
	SNR=11						
AAK	Ala-Archa	66.89	310	⇓*i*P	P	17 48 18.8	+1.2
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AAK	Ala-Archa	66.89	310	P	P	17 48 18.2	+0.5
X56A	White Oak	66.89	63	P	P	17 48 17.3	-0.3
	baz=319						
JSC	Jenkinsville	66.93	64	P	P	17 48 17.5	-0.2
JSC				pmax	pmax		
	comp=Z,113nm,2.0s						
JSC	Jenkinsville	66.93	64	P	P	17 48 17.5	-0.2
JSC				IAmb	IAmb	17 48 19.0	
	comp=Z,113nm,2.0s						
V58A	Windy Hill, Pi	66.95	61	P	P	17 48 17.6	-0.3
	baz=319						
W57A	Gilead	66.96	62	P	P	17 48 17.7	-0.3
W57A				IAmb	IAmb	17 50 46.5	
	comp=Z,61nm,1.6s						
W57A	Gilead	66.96	62	P	P	17 48 17.5	-0.4
	baz=319						
SKAR	Skarslia	67.06	357	*e*P	P	17 48 18.6	+0.4
EKS2	Erkin-Say	67.21	311	P	P	17 48 20.6	+1.0
	SNR=6.0						
AKTO	Aktyubinsk	67.32	325	P	P	17 48 20.6	+0.6
	comp=Z,9.2nm,0.5s,baz=59,slow=7.4,SNR=38						
X57A	Johnson Farm,	67.43	63	P	P	17 48 20.6	-0.3
	baz=319						
V59A	Middlesex	67.44	60	P	P	17 48 20.5	-0.4
	baz=319						
W58A	Raeford	67.47	62	P	P	17 48 21.0	-0.2
	baz=319						
U60A	Pendleton	67.48	59	P	P	17 48 20.6	-0.5
	baz=320						
ABKAR	Akbulak array	67.62	323	P	P	17 48 22.3	+0.5
ABKAR				PcP	PcP	17 48 47.3	0.0
ABKAR	Akbulak array	67.62	323	P	P	17 48 21.9	0.0
ABKAR				IAmb	IAmb	17 48 22.4	
	comp=Z,54nm,0.3s						
AML	Almayashu	67.66	311	P	P	17 48 23.9	+1.1

	SNR=7.9						
X58A	Rowland	67.77	62	P	P	17 48 22.8	-0.2
	baz=319						
ODD1	Odda	67.87	358	eP	P	17 48 23.8	+0.5
Z57A	Bowman	67.97	64	P	P	17 48 24.4	+0.1
	baz=319						
LSA	Lhasa	68.00	290	P	P	17 48 25.2	+0.1
LSA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
LSA	Lhasa	68.00	290	P	P	17 48 25.2	+0.1
KONO	Kongsberg	68.04	356	eP	P	17 48 24.8	+0.5
KK31	Karatay Array	68.34	313	P	P	17 48 26.7	+0.2
KK31				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KK31	Karatay Array	68.34	313	P	P	17 48 26.6	+0.2
KKAR	Karatay Array	68.34	313	P	P	17 48 26.6	+0.1
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KKAR	Karatay Array	68.34	313	P	P	17 48 26.4	-0.1
KKAR	Karatay Array	68.34	313	P	P	17 48 26.6	+0.1
KKAR				IAmb	IAmb	17 49 20.9	
	comp=Z,6.6nm,0.9s						
NHSC	New Hope	68.41	64	P	P	17 48 26.4	-0.6
	baz=320						
Z58A	St. Stephen	68.43	63	P	P	17 48 27.2	+0.1
	baz=320						
X60A	Albert Glenn T	68.48	61	P	P	17 48 27.0	-0.4
	baz=320						
KMY	Karmoy	68.60	359	eP	P	17 48 28.2	+0.5
KSH	Kashi	68.61	307	P	P	17 48 32.3	+3.9
KSH				PcP	PcP	17 48 55.3	+3.5
KSH				S	S	17 57 14.5	+0.9
KSH				ScS	SKSac	17 58 05.5	-1.4
KSH				pmax	pmax		
	comp=Z,32nm,0.6s						
KSH				pmax	pmax		
	comp=Z,240nm,6.5s						
KSH				LR	LR		
	comp=Z,310nm,10.3s						
KSH				LR	LR		
	comp=Z,350nm,9.6s						
KSH				LR	LR		
	comp=Z,160nm,10.6s						
OBN	Obninsk	69.14	340	eP	P	17 48 30.3	-0.8
OBN				e		17 48 51.4	
OBN				i *PP	pP	17 49 20.6	+1.5
OBN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TLIG	Tlapa	69.35	88	P	P	17 48 34.6	+1.5
TLIG				IAmb	IAmb	17 48 35.9	
	comp=Z,100nm,1.5s						
SNART	Snartemo	69.43	358	eP	P	17 48 33.6	+0.7
LPSR	Galich'ya Gora	70.96	338	eP	P	17 48 42.3	+0.1
LPSR				pmax	pmax		
	comp=Z,20nm,1.2s						
KKM	Kota Kinabalu	71.10	255	P	P	17 48 44.2	+0.4
LAWE	Loch Awe, Argy	71.36	5	eP	P	17 48 45.2	+0.7
LAWE				IAmb	IAmb	17 48 45.6	
	comp=Z,26nm,0.7s						
EAB	Aberfoyle	71.48	4	eP	P	17 48 45.8	+0.5
VRH	Novokhopyorsk	71.57	335	eP	P	17 48 45.1	-0.8
VRH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GAR	Garm	71.71	311	P	P	17 48 47.7	+0.5
GAR				IAmb	IAmb	17 48 48.6	
	comp=Z,32nm,0.4s						
TAPN	Taplejung	71.75	291	eP	P	17 48 48.2	+0.4
	comp=Z,29nm,0.6s						
ESY	Stoneypath	71.82	3	eP	P	17 48 47.6	+0.2
CM31	Chiang Mai Arr	71.89	277	P	P	17 48 48.7	+0.4
CMAR	Chiang Mai Arr	71.89	277	P	P	17 48 48.5	+0.1
	comp=Z,1.5nm,0.8s,baz=25,slow=7.4,SNR=13						
CMAR				pP	pP	17 49 37.9	+1.0
	comp=Z,3.3nm,0.7s,baz=28,slow=7.2,SNR=7.1						
CMAR	Chiang Mai Arr	71.89	277	i P	P	17 48 48.5	+0.1
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CMAR	Chiang Mai Arr	71.89	277	P	P	17 48 48.3	0.0
CMAR					pP	17 49 37.0	+0.1
PBKT	Sadao Pong	72.11	274	P	P	17 48 49.8	+0.2
VSR	Storozhevoye	72.19	337	eP	P	17 48 49.6	0.0
VSR				pmax	pmax		
	comp=Z,20nm,1.6s						
SANI	Sanana	72.20	241	P	P	17 48 51.1	+1.0
	comp=Z,14nm,1.1s						
ODAN	Odare	72.31	291	eP	P	17 48 50.1	-0.9
MRSI	Marisa	72.32	246	P	P	17 48 52.1	+1.2
	comp=Z,26nm,1.1s						
GUN	Gumba	72.35	293	eP	P	17 48 51.8	+0.4
	comp=Z,67nm,0.5s						
JIRN	Jiri	72.37	292	eP	P	17 48 52.1	+0.6
	comp=Z,85nm,0.5s						
VORD	Divnogorie	72.39	337	eP	P	17 48 50.4	-0.3
VORD				pmax	pmax		
	comp=Z,30nm,1.7s						
EKA	Eskdalemuir Ar	72.39	4	P	P	17 48 50.8	+0.1
EKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ESK	Eskdalemuir	72.40	4	eP	P	17 48 51.2	+0.4
ESK				IAmb	IAmb	17 48 55.7	
	comp=Z,160nm,2.0s						
AAI	Ambon	72.41	239	P	P	17 48 53.2	+1.8
	comp=Z,10nm,0.5s						
CHGR	Chuyangaron	72.52	311	P	P	17 48 51.8	-0.1
CHGR				IAmb	IAmb	17 48 53.2	
	comp=Z,29nm,0.6s						
RAMN	Ramite	72.69	292	eP	P	17 48 53.4	+0.2
	comp=Z,59nm,0.5s						
KKN	Kakani	72.78	293	eP	P	17 48 54.1	+0.3
	comp=Z,5.2nm,0.5s						
GAL1	Galloway	72.79	5	eP	P	17 48 53.4	+0.3
GAL1				IAmb	IAmb	17 48 53.7	
	comp=Z,59nm,0.8s						
PKI	Pulchoki	72.88	293	eP	P	17 48 54.5	0.0
	comp=Z,13nm,0.5s						
EDMD	Edmundbyers	72.93	3	eP	P	17 48 54.0	+0.1
GKN	Gorkha	72.98	294	eP	P	17 48 55.0	+0.1
	comp=Z,31nm,0.5s						
DMN	Daman	73.02	293	eP	P	17 48 55.0	-0.2
	comp=Z,14nm,0.6s						
LUWI	Luwuk	73.11	245	P	P	17 48 56.2	+0.7
	comp=Z,1µmcomp=Z,45nm,0.7s						
DANN	Dangsing	73.20	295	eP	P	17 48 56.6	+0.3
	comp=Z,36nm,0.6s						
IOMK	Kirk Michael	73.40	5	eP	P	17 48 57.0	+0.3
IOMK				IAmb	IAmb	17 49 00.8	
	comp=Z,182nm,1.6s						
MPSI	Mapaga	73.59	248	P	P	17 48 59.6	+1.3
	comp=Z,21nm,1.2s						
CCIG	Comitan	74.25	84	P	P	17 49 03.3	+0.9
CCIG				IAmb	IAmb	17 49 05.4	
	comp=Z,34nm,0.9s						
SAUI	Saumlaki	74.51	234	P	P	17 49 04.4	+0.8
SAUI				IAmb	IAmb	17 49 07.0	
	comp=Z,57nm,1.0s						
SAUI					pP	17 49 52.5	-0.8
NIL	Nilore	74.58	305	P	P	17 49 04.5	+0.6
NIL				pmax	pmax		
	comp=Z,14nm,0.6s						
NIL	Nilore	74.58	305	P	P	17 49 04.5	+0.6
AKASG	Malin Array Be	74.75	343	P	P	17 49 04.0	-0.5
	comp=Z,5.9nm,0.5s,baz=19,slow=6.2,SNR=17						
AKASG				pP	pP	17 49 54.5	+1.3
	comp=Z,0.7nm,0.4s,baz=19,slow=6.0,SNR=1.6						
AKASG	Malin Array Be	74.75	343	P	P	17 49 03.9	-0.7
AKBB	Malin Array Si	74.75	343	P	P	17 49 04.0	-0.5
AKBB				pmax	pmax		
	comp=Z,36nm,1.6s						
AKBB	Malin Array Si	74.75	343	P	P	17 49 04.0	-0.5
LLW	Llanuwychllyn	74.85	4	eP	P	17 49 05.4	+0.4
IBBN	Ibbenburen	75.45	357	eP	P	17 49 09.1	+0.7
	comp=Z,27nm,0.9s,baz=6.1,slow=5.6						
ASSE	Asse, Remlinge	75.50	355	eP	P	17 49 09.7	+1.0
	comp=Z,19nm,1.2s,baz=6.1,slow=5.6						
CLZ	Clausthal	75.81	355	eP	P	17 49 11.2	+0.6
	comp=Z,18nm,0.8s,baz=6.1,slow=5.6						
KBL	Kabul	75.92	309	P	P	17 49 11.1	-0.6
KBL				pmax	pmax		
	comp=Z,12nm,0.7s						
KBL	Kabul	75.92	309	P	P	17 49 11.1	-0.6
CLL	Collm	76.18	353	eP	P	17 49 13.0	+0.4
	comp=Z,6.0nm,0.7s						
CLL	Collm	76.18	353	eP	P	17 49 13.0	+0.4
	comp=Z,6.3nm,0.7s,baz=6.1,slow=5.6						
CLL				epP	pwP	17 50 10.3	+3.7
CLL	Collm	76.18	353	eP	P	17 49 13.0	+0.4
CLL				pmax	pmax		
	comp=Z,16nm,0.7s						
SBUM	Sibu	76.34	256	P	P	17 49 14.7	+0.7
NEUB	Neuenburg	76.36	354	eP	P	17 49 14.0	+0.4
	comp=Z,31nm,1.2s,baz=6.1,slow=5.6						
FBE	Freiberg	76.54	353	eP	P	17 49 15.3	+0.7
	comp=Z,12nm,0.9s,baz=6.1,slow=5.6						
BRG	Berggiesshubel	76.55	353	eP	P	17 49 14.6	-0.1
	comp=Z,6.3nm,1.1s						
BRG	Berggiesshubel	76.55	353	eP	P	17 49 14.6	-0.1
BRG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KWP	Kalwaria Pacla	76.83	347	P	P	17 49 16.6	+0.3
KWP				pmax	pmax		
	comp=Z,42nm,0.6s						
KWP	Kalwaria Pacla	76.83	347	P	P	17 49 16.6	+0.3
KWP				IAmb	IAmb	17 50 59.2	
	comp=Z,42nm,0.6s						
DPC	Dobruska-Polom	76.86	351	eP	P	17 49 16.8	+0.3
DPC	Dobruska-Polom	76.86	351	eP	P	17 49 16.8	+0.3
PLN	Plauen	77.06	354	eP	P	17 49 17.7	+0.1
	comp=Z,6.2nm,1.1s,baz=6.1,slow=5.6						
KRLC	Kraliky	77.09	351	eP	P	17 49 17.6	-0.2
KRLC				ePCP	PcP	17 49 28.2	+0.4
KRLC	Kraliky	77.09	351	eP	P	17 49 17.6	-0.2
KRLC				e		17 49 28.2	
GUNZ	Gunzen	77.17	354	eP	P	17 49 18.6	+0.4
	comp=Z,6.5nm,0.9s,baz=6.1,slow=5.6						
MEM	Membach	77.20	358	P	P	17 49 17.6	-0.7
WERN	Wernitzgruen	77.24	354	eP	P	17 49 19.2	+0.5
	comp=Z,7.0nm,0.8s,baz=6.1,slow=5.6						
AHRW	Bad Neuenahr-A	77.24	357	eP	P	17 49 19.0	+0.4
	comp=Z,14nm,0.7s,baz=6.1,slow=5.6						
NKC	Novy Kostel	77.29	354	eP	P	17 49 19.1	+0.2
NKC	Novy Kostel	77.29	354	eP	P	17 49 19.1	+0.2
BNSI	Bone	77.37	245	P	P	17 49 21.3	+1.6
	comp=Z,11nm,1.5s						
SORM	Soroca	77.38	343	⇑P	P	17 49 19.3	0.0
SORM	Soroca	77.38	343	P	P	17 49 19.3	0.0
TNS	Taunus Mts	77.51	356	eP	P	17 49 20.8	+0.6
	comp=Z,14nm,0.8s,baz=6.1,slow=5.6						
BMRD	Maredsous	77.53	359	P	P	17 49 20.6	+0.5
DOU	Dourbes	77.74	359	P	P	17 49 21.8	+0.5
VRAC	Vranov	77.87	351	⇑P	P	17 49 22.2	+0.1
VRAC	Vranov	77.87	351	P	P	17 49 22.2	+0.1
GRF	Grafenberg Arr	77.91	354	eP	P	17 49 23.0	+0.7
	comp=Z,13nm,0.8s,baz=6.1,slow=5.6						
GRF				epP	pwP	17 50 21.2	+4.7
GEYT	Alibeck	77.91	318	P	P	17 49 23.5	+1.0
	comp=Z,5.8nm,0.8s,baz=345,slow=4.6,SNR=11						
GEYT				pP	pP	17 50 13.1	+1.3
	comp=Z,3.0nm,0.8s,baz=332,slow=2.1,SNR=2.2						
GEYT	Alibeck	77.91	318	P	P	17 49 23.3	+0.7
GYA0B	ALIBECK ARRAY	77.91	318	P	P	17 49 23.1	+0.5
KAPI	Kappang	78.07	245	P	P	17 49 25.2	+1.6
	comp=Z,4.6nm,0.5s,baz=83,slow=3.8,SNR=6.7						
KBZ	Khabaz	78.09	332	P	P	17 49 23.6	+0.3
	comp=Z,2.6nm,0.7s,baz=91,slow=4.8,SNR=6.6						
BKSI	Bulukumba	78.12	245	P	P	17 49 25.3	+1.4
	comp=Z,28nm,0.8s						
KSM	Kuching	78.25	257	P	P	17 49 25.4	+0.7
KSM				IAmb	IAmb	17 49 26.1	
	comp=Z,19nm,0.6s						
KHC	Kasperske Hory	78.31	353	eP	P	17 49 25.1	+0.6
KHC				ex	x	17 50 21.5	
KHC	Kasperske Hory	78.31	353	⇓iP	P	17 49 25.5	+1.0
KHC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KHC	Kasperske Hory	78.31	353	P	P	17 49 24.5	0.0
TRPA	Tarpa	78.32	347	⇑P	P	17 49 25.2	+0.7
WET	Wettzell	78.34	353	eP	P	17 49 24.7	0.0
	comp=Z,8.1nm,1.2s,baz=6.1,slow=5.6						
WET	Wettzell	78.34	353	P	P	17 49 26.9	+2.2
BUR08	Bucovina Ar. S	78.39	345	P	P	17 49 25.4	+0.3
BURAR	Bucovina Array	78.42	345	⇑P	P	17 49 25.7	+0.4
BURAR	Bucovina Array	78.42	345	P	P	17 49 25.6	+0.4
BURAR	Bucovina Array	78.42	345	P	P	17 49 25.4	+0.2
VYHS	Vyhne	78.43	349	eP	P	17 49 25.0	-0.2
VYHS	Vyhne	78.43	349	eP	P	17 49 25.0	-0.2
GERES	GERESS Array B	78.58	353	P	P	17 49 25.6	-0.5
	comp=Z,1.6nm,0.7s,baz=31,slow=6.2,SNR=12						
GERES	GERESS Array B	78.58	353	P	P	17 49 26.1	0.0
GERES	GERESS Array B	78.58	353	P	P	17 49 26.1	0.0
AKT	Akhty	78.63	327	eP	P	17 49 27.1	+0.6
AKT				e		17 49 34.5	
AKT				e*PP	pP	17 50 17.3	+1.5
AKT				e*SP	sP	17 50 37.0	-0.8
AKT				pmax	pmax		
	comp=Z,12nm,0.7s						
ZEI	Tsey	78.65	330	eP	P	17 49 23.2	-3.6
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LGD	Lagodekhi	78.79	328	P	P	17 49 29.8	+2.5
MTN	Manton Dam	78.79	231	P	P	17 49 28.6	+1.2
PSZ	Piszkesteto	78.88	348	P	P	17 49 27.8	+0.1
PSZ	Piszkesteto	78.88	348	P	P	17 49 27.8	+0.1
BIZ	Bicaz	78.93	344	⇑P	P	17 49 28.7	+0.8
ARCR	ARCALIA	79.07	345	⇑P	P	17 49 29.1	+0.4
HRA	Herat	79.17	314	P	P	17 49 29.4	-0.3
TESR	Tescani	79.25	344	⇑P	P	17 49 29.9	+0.2
CONA	Conrad Observa	79.30	351	eP	P	17 49 30.7	+0.6
	comp=Z,2.5nm,0.6s						
TBLG	Delisi	79.36	329	P	P	17 49 32.1	+1.7
TBLG	Delisi	79.36	329	P	P	17 49 31.2	+0.8
TBLG					pP	17 50 19.6	-0.2
TBLG				IAmb	IAmb	17 50 28.0	
	comp=Z,27nm,0.9s						
GHRR		79.55	343	⇑P	P	17 49 31.9	+0.6
VRI	Vrincioaia	79.86	343	⇑P	P	17 49 33.7	+0.7
VRI	Vrincioaia	79.86	343	P	P	17 49 33.7	+0.7
PLOR	Plostina	79.89	343	⇑P	P	17 49 33.8	+0.6
PLOR	Plostina	79.89	343	P	P	17 49 33.7	+0.6
DOPR	Dopca	79.99	344	⇑P	P	17 49 35.0	+1.3
ARSA	Arzberg	80.01	351	ePcP	P	17 49 35.4	+1.7
	comp=Z,6.1nm,0.9s						
AKH	Akhalkalaki	80.03	330	⇑P	P	17 49 35.1	+0.8
AKH	Akhalkalaki	80.03	330	P	P	17 49 35.0	+0.8
TLCR		80.13	342	⇑P	P	17 49 35.2	+0.8
TLCR		80.13	342	P	P	17 49 35.2	+0.8
WATA	Walderalm	80.23	354	eP	P	17 49 35.2	+0.1
	comp=Z,9.4nm,1.1s						
MOTA	Moosalm	80.25	354	eP	P	17 49 35.5	+0.3
	comp=Z,3.1nm,0.6s						
SIRR	Siria	80.27	347	⇑P	P	17 49 35.6	+0.5
CFR	Carcaliu	80.27	342	⇑P	P	17 49 35.4	+0.3
CFR	Carcaliu	80.27	342	P	P	17 49 35.4	+0.3
WTTA	Wattenberg	80.30	354	eP	P	17 49 35.9	+0.4
	comp=Z,4.2nm,0.8s						
MLR	Muntele Rosu	80.36	344	⇑P	P	17 49 37.0	+1.2
MLR	Muntele Rosu	80.36	344	P	P	17 49 36.6	+0.8
MLR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MLR	Muntele Rosu	80.36	344	P	P	17 49 36.6	+0.8
KBA	Koelnbreinsper	80.36	353	eP	P	17 49 36.8	+0.9
	comp=Z,9.2nm,0.5s						
KBA	Koelnbreinsper	80.36	353	P	P	17 49 37.4	+1.6
KBA				pmax	pmax		
	comp=Z,25nm,1.0s						
TOPG	Topolog	80.52	342	⇑P	P	17 49 37.1	+0.6
VOIR		80.56	344	⇑P	P	17 49 37.7	+0.9
VOIR		80.56	344	P	P	17 49 37.7	+0.9
FETA	Feichten	80.60	355	ePcP	P	17 49 38.1	+1.0
	comp=Z,13nm,1.2s,SNR=5.2						
SOKA	Soboth	80.62	352	eP	P	17 49 37.8	+0.7
	comp=Z,16nm,1.1s						
PERS	Pernice	80.65	351	i P	P	17 49 37.5	+0.3
ABTA	Abfaltersbach	80.75	353	eP	P	17 49 38.2	+0.3
	comp=Z,9.2nm,1.2s						
HARR	Harsova	80.78	342	⇑P	P	17 49 38.5	+0.7
HARR	Harsova	80.78	342	P	P	17 49 38.5	+0.7
OBKA	Obir	80.83	352	eP	P	17 49 38.9	+0.6
	comp=Z,9.4nm,0.9s,SNR=4.1						
BZS	Buzias	80.91	347	⇑P	P	17 49 38.7	+0.1
BZS	Buzias	80.91	347	P	P	17 49 38.6	+0.1
TIRR	Tirgusor	80.91	342	⇑P	P	17 49 38.8	+0.2
TIRR	Tirgusor	80.91	342	P	P	17 49 38.7	+0.2
GZR	Gura Zlata	80.96	346	⇑P	P	17 49 39.4	+0.4
GZR	Gura Zlata	80.96	346	P	P	17 49 39.3	+0.4
MFTR	Murfatlar	81.18	342	⇑P	P	17 49 41.2	+1.2
HERR	Herculane	81.52	346	⇑P	P	17 49 41.8	+0.1
MDVR	Moldovita	81.72	347	⇑P	P	17 49 42.9	+0.1
GBRS	Gornja Briga	81.78	352	i P	P	17 49 42.8	-0.3
MYKOM	Kota Tinggi	81.88	262	P	P	17 49 42.9	-1.1
WBSI	Waikabubak, Su	82.09	243	P	P	17 49 44.3	-0.8
	comp=Z,17nm,1.1s						
RAZG	Razgrad	82.13	343	⇑P	P	17 49 44.8	-0.2
PLAI	Plampang	82.31	245	P	P	17 49 45.7	-0.5
	comp=Z,16nm,1.4s						
ELND	Elena	82.86	343	⇑P	P	17 49 48.9	+0.2
WB0	Warramunga Arr	83.37	225	P	P	17 49 51.8	+0.3
WB0					pP	17 50 38.9	-3.7
WR0	Warramunga Arr	83.47	225	P	P	17 49 52.1	+0.1
WR0					pP	17 50 39.6	-3.5
WRAB	Tennant Creek	83.53	225	i P	P	17 49 53.8	+1.5
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WB2	Warramunga Arr	83.54	225	P	P	17 49 52.7	+0.3
WB2					pP	17 50 40.7	-2.8
WRA	Warramunga Arr	83.55	225	P	P	17 49 53.0	+0.6
	comp=Z,2.3nm,0.5s,baz=31,slow=5.6,SNR=21						
WRA				pP	pP	17 50 40.6	-2.8
	comp=Z,3.6nm,0.8s,baz=36,slow=6.1,SNR=7.7						
WRA				PKiKP	PKiKP	17 55 07.7	-0.2
	comp=Z,0.4nm,0.6s,baz=0.4,slow=1.8,SNR=8.2						
WRA	Warramunga Arr	83.55	225	i P	P	17 49 53.0	+0.6
WRA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WRA	Warramunga Arr	83.55	225	P	P	17 49 52.6	+0.2
WRA					pP	17 50 40.7	-2.8
VTS	Vitosha	83.60	345	⇑P	P	17 49 53.1	+0.4
VTS	Vitosha	83.60	345	P	P	17 49 52.4	-0.3
VTS				pmax	pmax		
	comp=Z,16nm,1.3s						
VTS	Vitosha	83.60	345	P	P	17 49 52.4	-0.3
OSSC	Osservatorio P	84.05	354	P	P	17 49 54.1	-0.7
PSI	Prapat	84.08	267	P	P	17 49 56.0	+0.5
PSI				pmax	pmax		
	comp=Z,41nm,0.9s						
RPSI	Rantau Prapat	84.17	267	P	P	17 49 56.0	+0.3
RPSI				IAmb	IAmb	17 50 50.1	
	comp=Z,41nm,0.9s						
MURB	Monte Urbino	84.22	353	P	P	17 49 55.5	-0.3
BR131	Keskin Array S	84.30	337	P	P	17 49 56.6	+0.3
BR131				*PP	pP	17 50 45.5	-0.8
BR131				pmax	pmax		
	comp=Z,11nm,0.8s						
BR131	Keskin Array S	84.30	337	P	P	17 49 56.6	+0.3
BR131					pP	17 50 45.5	-0.8
BRTR	Keskin Array B	84.30	337	P	P	17 49 56.1	-0.2
	comp=Z,9.8nm,0.7s,baz=41,slow=2.8,SNR=51						
BRTR				pP	pP	17 50 45.0	-1.2
	comp=Z,3.2nm,0.9s,baz=46,slow=3.6,SNR=4.1						
BRTR	Keskin Array B	84.30	337	i P	P	17 49 56.8	+0.5
BRTR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BRTR	Keskin Array B	84.30	337	P	P	17 49 56.4	0.0
BRTR					pP	17 50 45.6	-0.8
PDG	Podgorica	84.36	348	⇑P	P	17 49 56.5	+0.1
PDG	Podgorica	84.36	348	P	P	17 49 55.4	-0.9
NRCA	Norcia	84.60	352	P	P	17 49 57.5	-0.1
INTR	Introdacqua	85.35	352	P	P	17 50 01.1	-0.3
FITZ	Fitzroy Crossi	85.97	233	P	P	17 50 05.6	+1.1
	comp=Z,2.2nm,0.6s,baz=21,slow=3.6,SNR=14						
FITZ	Fitzroy Crossi	85.97	233	P	P	17 50 05.2	+0.7
GSI	Gunungsitoli	86.08	267	P	P	17 50 05.7	+0.4
GSI				pP	pwP	17 50 58.3	-1.9
GSI				IAmb	IAmb	17 50 59.8	
	comp=Z,19nm,0.8s						
AS31	Alice Springs	87.02	224	P	P	17 50 10.7	+1.1
AS31				pP	pP	17 50 59.9	-0.4
ASAR	Alice Springs	87.02	224	P	P	17 50 10.8	+1.3
	comp=Z,6.4nm,0.8s,baz=20,slow=5.0,SNR=80						
ASAR				PKiKP	PKiKP	17 55 13.4	0.0
	comp=Z,0.3nm,0.6s,baz=53,slow=1.2,SNR=4.5						
ASAR	Alice Springs	87.02	224	P	P	17 50 10.1	+0.5
ASAR					pP	17 50 58.3	-2.0
ASAR				PKiKP	PKiKP	17 55 12.7	-0.8
PAYG	Puerto Ayora	88.62	93	P	P	17 50 18.6	+1.2
PAYG				IAmb	IAmb	17 50 20.8	
	comp=Z,33nm,0.8s						
WSAR	Wadi Sarin	90.31	310	P	P	17 50 25.1	-0.1
	comp=Z,2.4nm,0.6s,baz=326,slow=11,SNR=1.4						
ASF	Jabal al Asfar	90.56	332	P	P	17 50 25.9	-0.4
	comp=Z,2.6nm,0.7s,baz=60,slow=3.2,SNR=6.7						
STKA	Stephens Creek	91.45	214	P	P	17 50 30.7	+0.7
	comp=Z,2.4nm,0.8s,baz=327,slow=5.1,SNR=4.8						
STKA	Stephens Creek	91.45	214	P	P	17 50 31.2	+1.2
STKA				*PP	pP	17 51 20.4	-1.1
STKA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
STKA	Stephens Creek	91.45	214		P	17 50 31.2	+1.2
STKA					pP	17 51 20.4	-1.1
TORD	Torodi Ar. Bea	114.59	1	PKP	PKiKP	17 56 02.4	-1.0
	comp=Z,1.1nm,0.4s,baz=358,slow=2.5,SNR=18						
TORD				SKP		17 59 16.4	
	comp=Z,0.8nm,0.4s,baz=342,slow=1.5,SNR=7.5						
TORD				PKKPbc	PKKPbc	18 06 41.9	+2.1
	comp=Z,1.0nm,0.9s,baz=167,slow=1.9,SNR=4.5						
SIV	San Ignacio	118.37	79	PKP	PKPdf	17 56 09.9	-0.6
	comp=Z,2.7nm,0.6s,baz=275,slow=3.6,SNR=11						
DBIC	Dimbokro	120.67	9	PKP	PKPdf	17 56 14.1	-0.9
	comp=Z,2.0nm,0.4s,baz=339,slow=4.1,SNR=8.6						
DBIC				SKP		17 59 28.4	
	comp=Z,1.3nm,0.4s,baz=324,slow=2.3,SNR=4.5						
DBIC	Dimbokro	120.67	9		PKPdf	17 56 13.8	-1.2
KMBO	Kilima Mbogo	121.29	319	PKP	PKPdf	17 56 16.0	-0.5
	comp=Z,1.1nm,0.4s,baz=5.9,slow=4.3,SNR=5.3						
BDFB	Brasilia	125.71	67	PKP	PKPdf	17 56 24.1	-0.6
	comp=Z,3.7nm,0.6s,baz=323,slow=1.6,SNR=3.7						
BDFB	Brasilia	125.71	67		PKPdf	17 56 23.7	-1.0
CPUP	Villa Florida	128.46	84	PKP	PKPdf	17 56 29.6	+0.2
	comp=Z,4.9nm,0.6s,baz=320,slow=1.5,SNR=13						
CPUP				SKPbc	SKiKP	17 59 28.9	-17
	comp=Z,1.7nm,0.5s,baz=308,slow=7.6,SNR=5.9						
CPUP	Villa Florida	128.46	84		PKPdf	17 56 29.0	-0.5
PLCA	Paso Flores	130.34	107	PKP	PKiKP	17 56 33.5	-0.1
	comp=Z,10.0nm,1.0s,baz=87,slow=2.8,SNR=12						
PLCA				SKPbc	SKPbc	17 59 35.8	0.0
	comp=Z,10.0nm,0.8s,baz=106,slow=4.2,SNR=21						
PLCA	Paso Flores	130.34	107		PKPdf	17 56 32.8	+0.1
PLCA					SKPbc	17 59 35.1	-0.7
VNDA	Vanda	130.44	186	PKP	PKPdf	17 56 31.9	+0.2
	comp=Z,0.7nm,0.4s,baz=352,slow=3.3,SNR=3.2						
VNDA				SKPbc	SKPab	17 59 36.0	+0.9
	comp=Z,6.8nm,0.9s,baz=329,slow=3.8,SNR=14						
OPO	Ambohidratompo	131.68	297	SKPbc	SKPbc	17 59 39.3	-2.2
	comp=Z,5.3nm,0.8s,baz=43,slow=8.5,SNR=2.3						
LSZ	Lusaka	137.74	322	SKPbc	SKPbc	17 59 59.1	-1.8
	comp=Z,2.4nm,0.6s,baz=34,slow=2.7,SNR=6.1						
QSPA	South Pole Qui	142.29	180		PKPpre	17 56 50.4	
MATP	Matopo	142.29	318	i P	PKPdf	17 56 48.0	-7.6
MATP	Matopo	142.29	318	i P	PKPdf	17 56 48.0	-7.6
EFI	East Falkland	143.56	114	PKIKP	PKPab	17 56 53.9	+0.2
EFI	East Falkland	143.56	114		PKPab	17 56 53.9	+0.2
TSUM	Tsumeb	144.80	335	i P	PKPbc	17 56 59.1	-0.3
TSUM	Tsumeb	144.80	335	i P	PKPbc	17 56 59.1	-0.3
TSUM	Tsumeb	144.80	335		PKPbc	17 56 58.6	-0.9
MAW	Mawson	148.02	219	PKPbc	PKiKP	17 57 08.4	-0.3
	comp=Z,33nm,0.5s,baz=95,slow=3.3,SNR=84						
BOSA	Boshof	150.89	316	i P	PKPbc	17 57 14.1	-1.5
BOSA	Boshof	150.89	316	PKP	PKPdf	17 57 10.9	+1.2
	comp=Z,25nm,0.7s,baz=94,slow=4.9,SNR=4.8						
BOSA				PKPbc	PKPbc	17 57 15.1	-0.5
	comp=Z,25nm,0.7s,baz=54,slow=3.4,SNR=17						
BOSA	Boshof	150.89	316	i P	PKPbc	17 57 14.1	-1.5
SYO	Syowa Base	156.19	212	⇓eSKPdf	SKPdf	18 00 29.0	+1.1

ECX ***25*** *17:43:29.7±0.6, 30°.41N×114°.09W, h7^{km}±9^{km}, MD3.2, ML3.3*

MEX ***25*** *17:43:40.0±0.4, 29°.81N×114°.41W, h16^{km}±18^{km}, MD3.9*

ISC 25 17:43:29.5±1.0**, 30°.43N**±0°.07×**114°.10W**±0°.04**, h10**^{km}**, n10,** σ1^{s}63/16**, 1C-1D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFX	San Felipe	0.88	313	eP	Pg	17 43 45.0	-1.5
SFX				eS	Sg	17 43 57.9	-0.2
PIX	Pinacate	1.25	26	eP	Pn	17 43 51.2	-1.9
PIX				eS	Sb	17 44 09.0	-0.5
SPX	San Pedro Mart	1.32	298	eP	Pn	17 43 53.4	-0.9
SPX				eS	Sb	17 44 11.3	-0.4
SPX				⇓e		17 44 24.1	
SPX				IAML		17 44 24.1	
	comp=N,260nm,1.1s						
ECBX	El Chinero	1.32	322	eP	Pn	17 43 52.0	-2.0

SPIG	**San Pedro Mart**	**1.32**	**298**	eP	**Pn**	**17 43 53.3**	**-1.1**
SQX	**San Quintin**	**1.54**	**276**	eP	**Pn**	**17 43 56.0**	**-1.1**
SQX				eS	**Sn**	**17 44 17.1**	**0.0**
CBX	**Cerro Bola**	**2.88**	**311**	IAML		17 45 12.3	
	comp=N,175nm,0.9s						
CBX				⇑e		17 45 12.3	
CBX	**Cerro Bola**	**2.88**	**311**	i P	**Pg**	**17 44 26.8**	**+2.0**
CBX				i S	**Sg**	**17 45 02.5**	**+0.3**
HSIG		**3.08**	**116**	eP	**Pg**	**17 44 26.6**	**-2.1**
HSIG				i S	**Sb**	**17 45 02.6**	**+0.5**
NZIG	**Nacozari, Sono**	**3.93**	**90**	i P	**Pb**	**17 44 41.4**	**+2.4**
NZIG				i S	**Sb**	**17 45 29.3**	**+2.6**

UPP ***25*** *18:27:28.5±0.1, 67°.05N×20°.97E, h0^{km}, ML1.9, Explosion*
HEL ***25*** *18:27:29.2±0.0, 67°.05N×20°.95E, h0^{km}, ML2.1, ML1.9(UPP), Explosion*
IDC ***25*** *18:27:30.0±1.3, 67°.05N×21°.09E, h0^{km}, mb1 2.8/3, mb1mx2.7/35, mbtmp2.7/3, ML1.9/2, Error ellipse: s-maj=24.2km s-min=10.0km az=104.0*
KOLA ***25*** *18:27:30.9, 67°.96N×20°.46E, h0^{km}*
ISC 25 18:27:29.0±0.8**, 67°.05N**±0°.03×**20°.95E**±0°.03**, h0^{km}, n33, σ0ˢ.93**/42**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.17**	**295**	P	**Pg**	**18 27 32.1**	**0.0**
DUNU				S	**Sg**	**18 27 34.8**	**+0.6**
DUNU	**Dundret**	**0.17**	**295**	i P	**Pg**	**18 27 32.1**	**0.0**
DUNU				i S	**Sg**	**18 27 34.8**	**+0.6**
MASU	**Masugnsbyn**	**0.57**	**45**	P	**Pg**	**18 27 39.6**	**-0.3**
MASU	**Masugnsbyn**	**0.57**	**45**	i P	**Pg**	**18 27 39.6**	**-0.3**
ERTU	**Ertsjaerv**	**0.70**	**135**	P	**Pg**	**18 27 41.5**	**-0.9**
ERTU				S	**Sg**	**18 27 51.6**	**+0.2**
ERTU	**Ertsjaerv**	**0.70**	**135**	eP	**Pg**	**18 27 41.8**	**-0.5**
PAJU	**Pajala**	**0.85**	**91**	P	**Pg**	**18 27 44.2**	**-1.0**
PAJU	**Pajala**	**0.85**	**91**	i P	**Pg**	**18 27 44.2**	**-1.0**
HARU	**Harads**	**0.89**	**179**	P	**Pg**	**18 27 45.1**	**-0.9**
HARU	**Harads**	**0.89**	**179**	i P	**Pg**	**18 27 45.1**	**-0.9**
KUA	**Kurravaara**	**0.94**	**346**	P	**Pg**	**18 27 45.9**	**-1.0**
KUA	**Kurravaara**	**0.94**	**346**	eP	**Pg**	**18 27 45.9**	**-1.0**
LANU	**Lannavaara**	**1.08**	**21**	P	**Pg**	**18 27 48.3**	**-1.3**
LANU	**Lannavaara**	**1.08**	**21**	eP	**Pg**	**18 27 48.6**	**-1.0**
LANU				eS	**Sb**	**18 28 04.2**	**-0.8**
NIKU	**Nikkaluokta**	**1.10**	**319**	P	**Pg**	**18 27 49.0**	**-1.0**
NIKU	**Nikkaluokta**	**1.10**	**319**	eP	**Pg**	**18 27 49.0**	**-1.0**
SJUU	**Sjulsmark**	**1.57**	**170**	P	**Pn**	**18 27 57.4**	**-0.7**
SJUU	**Sjulsmark**	**1.57**	**170**	eP	**Pn**	**18 27 57.4**	**-0.7**
TOF	**Tornio**	**1.67**	**124**	eP	**Pn**	**18 27 58.9**	**-0.4**
HEF	**Hetta**	**1.71**	**36**	eP	**Pb**	**18 28 00.8**	**-0.4**
HEF	**Hetta**	**1.71**	**36**	eP	**Pn**	**18 27 59.3**	**-0.7**
HEF				eSN	**Sg**	**18 28 24.6**	**+0.8**
HEF				MSG		18 28 30.1	
	comp=Z,11nm,0.1s						
KIF	**Kilpisjarvi**	**1.96**	**358**	eP	**Pb**	**18 28 04.3**	**-1.2**
KIF	**Kilpisjarvi**	**1.96**	**358**	ePG	**Pb**	**18 28 04.9**	**-0.6**
KIF				eS	**Sb**	**18 28 29.9**	**-0.6**
KIF				MSG		18 28 36.9	
	comp=Z,16nm,0.2s						
RNF	**Rovaniemi**	**2.05**	**100**	eP	**Pn**	**18 28 05.2**	**+0.6**
RNF				MSG		18 28 38.6	
	comp=Z,10nm,0.1s						
SGF	**Sodankyl**	**2.20**	**77**	eP	**Pn**	**18 28 07.0**	**+0.3**
SVAU	**Svanoeiden**	**2.63**	**193**	P	**Pn**	**18 28 13.0**	**+0.4**
SVAU	**Svanoeiden**	**2.63**	**193**	eP	**Pn**	**18 28 13.0**	**+0.4**
ARCES	**ARCESS Array B**	**3.01**	**32**	Pn	**Pn**	**18 28 18.1**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=212,slow=13,SNR=19						
ARCES				Sn	**Sn**	**18 28 57.2**	**+2.6**
	comp=Z,0.7nm,0.3s,baz=212,slow=17,SNR=9.0						
ARE0	**ARCESS Array S**	**3.01**	**32**	eP	**Pn**	**18 28 18.5**	**+0.6**
APA0	**Apatity Array**	**4.69**	**78**	P	**Pn**	**18 28 42.8**	**+1.9**
APA0				S	**Sn**	**18 29 36.2**	**+0.3**
APA	**Apatity**	**4.85**	**78**	S	**Sn**	**18 29 41.2**	**+1.4**
FINES	**FINESS Array B**	**6.06**	**156**	Pn	**Pn**	**18 29 00.4**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=346,slow=13,SNR=6.1						
FINES				Sn	**Sn**	**18 30 10.6**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=340,slow=24,SNR=2.1						
NOA	**NORSAR Array B**	**7.39**	**220**	Pn	**Pn**	**18 29 18.4**	**+0.5**
	baz=20,slow=17,SNR=1.4						

IDC 25 18:38:26.3±2.6**, 6°.56S**×**129°.84E, h123^{km}**±36^{km}**, mb3.6**/1**, mb1 3.4**/5**, mb1mx3.2**/30**, mbtmp3.8**/5**, MS3.9**/1**, Ms1 3.9**/1**, ms1mx2.9**/25**, Error ellipse: s-maj=66.8km s-min=16.2km az=92.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.83**	**14**	P	Pn	18 39 52.4	+1.9
	3.4nm,0.3s,baz=234,slow=22,SNR=65						
SIJI				S	Sn	18 40 55.5	-0.7
	1.7nm,0.3s,baz=270,slow=22,SNR=9.0						
FITZ	**Fitzroy Crossi**	**12.18**	**199**	P	Pn	18 41 15.4	-0.4
	0.5nm,0.3s,baz=18,slow=10,SNR=14						
FITZ				S	Sn	18 43 23.5	-6.5
	0.5nm,0.3s,baz=207,slow=18,SNR=4.1						
WRA	**Warramunga Arr**	**14.01**	**162**	P	Pn	18 41 38.2	-1.3
	0.4nm,0.3s,baz=345,slow=13,SNR=15						
WRA				S	Sn	18 44 04.0	-10
	0.6nm,0.3s,baz=336,slow=22,SNR=8.1						
ASAR	**Alice Springs**	**17.45**	**167**	P	Pn	18 42 22.4	+0.1
	0.3nm,0.3s,baz=330,slow=9.1,SNR=26						
ASAR				S	S	18 45 30.4	-6.8
	0.1nm,0.3s,baz=358,slow=24,SNR=2.9						
JHJ	**Hachijo jima 2**	**40.57**	**13**	LR	LR	19 00 47.1	
	comp=Z,173nm,20.7s,baz=32,slow=33						
MKAR	**Makanchi Array**	**67.77**	**327**	P	P	18 49 10.8	0.0
	0.6nm,0.4s,baz=118,slow=7.9,SNR=13						

NNC 25 18:59:08.5±7.0**, 37°.46N**×**71°.50E, h172^{km}**±140^{km}**, mb3.0, mpv3.5, 1C-3D, Error ellipse: s-maj=78.7km s-min=53.1km az=9.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.66**	**23**	⇓P	Pn	19 00 30.6	-0.4
	1.7nm,0.5s						
AAK				⇑S	Sn	19 01 36.2	+0.3
	3.5nm,0.6s						
KK31	**Karatay Array**	**5.69**	**353**	P	Pn	19 00 31.8	+0.5
	4.4nm,0.5s,baz=176,slow=12,SNR=96						
KK31				⇓S	Sn	19 01 36.7	+0.4
	0.5nm,0.3s,baz=181,slow=24,SNR=6.2						
AB31	**Akbulak array**	**14.46**	**328**	⇓P	Pn	19 02 24.9	-0.1
	1.9nm,0.2s,baz=219,slow=7.9,SNR=12						

NIED ***25*** *19:08:00, 39°.60N×142°.10E, h56^{km}, Mw3.7 Best double couple: $M_0$3.61000×10^{14} NP1:ϕ_s126.00000°, δ74.00000°, λ-65.00000°. NP2:ϕ_s245.00000°, δ29.00000°, λ-147.00000°.*
JMA 25 19:08:06.6, 39°.63N×**142°.13E, h48^{km}**±1^{km}**, M3.4, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.25**	**258**	P	Pn	19 08 15.1	0.0
MIYJ				S	Sn	19 08 20.9	-0.2
JTH	**Tanohata**	**0.37**	**326**	P	Pn	19 08 16.2	-0.1
JTH				i S	Sn	19 08 22.9	-0.2
OFUJ	**Ofunato**	**0.66**	**213**	P	Pn	19 08 19.5	-0.2
OFUJ				S	Sn	19 08 28.4	-0.7
JOM	**Ohasama**	**0.67**	**257**	P	Pn	19 08 20.1	+0.3
JOM				S	Sn	19 08 29.6	+0.2
JKZ	**Kuzumaki**	**0.71**	**300**	P	Pn	19 08 20.6	+0.1
JKZ				S	Sn	19 08 30.3	-0.2
JANG	**Nango**	**0.88**	**328**	P	Pn	19 08 22.4	-0.3
JANG				S	Sn	19 08 33.8	-0.6
JKMT	**Kesennumamotoy**	**0.96**	**212**	P	Pn	19 08 23.7	-0.1
JKMT				S	Sn	19 08 35.8	-0.6
JMK	**Ichinoseki**	**0.98**	**226**	P	Pn	19 08 23.9	-0.1
JMK				S	Sn	19 08 36.7	0.0
JRG	**Rokugo**	**1.18**	**259**	P	Pn	19 08 26.9	+0.2
JAH	**Hinai**	**1.28**	**296**	P	Pn	19 08 28.4	+0.4
JAH				S	Sn	19 08 45.1	+1.1
JIO	**Ouri**	**1.32**	**208**	P	Pn	19 08 28.4	-0.2
JIO				eS	Sn	19 08 45.1	0.0
JTM	**Tenmabayashi**	**1.41**	**325**	P	Pn	19 08 30.1	+0.2
JTM				S	Sn	19 08 47.6	+0.3
MAT	**Matsushiro**	**4.37**	**226**	P	Pn	19 09 13.4	+3.0

JMA ***25*** *19:26:08.8±0.2, 32°.16N×138°.09E, h401^{km}, M3.5*
IDC ***25*** *19:26:09.5±0.6, 32°.00N×137°.92E, h371^{km}±6^{km}, mb3.1/18, mb1 3.3/25, mb1mx3.1/53, mbtmp3.9/25, Error ellipse: s-maj=12.3km s-min=9.5km az=81.0*
NEIC ***25*** *19:26:09.4±1.7, 31°.98N±0°.08×137°.9E±0°.1, h371^{km}±7^{km}, mb4.0/31, Error ellipse: s-maj=13.3km s-min=11.2km az=90.0*
ISC 25 19:26:09.5±0.6**, 32°.01N**±0°.05×**138°.05E**±0°.05**, h375^{km}**±6^{km}**, n107, σ1ˢ.32**/119**, mb3.7**/32**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.52**	**72**	P	**Pn**	**19 27 02.2**	**+1.9**
JHJ	**Hachijo jima 2**	**1.84**	**53**	P	**Pn**	**19 27 03.5**	**+1.5**
	45nm,0.3s,baz=121,slow=24,SNR=26						
JHJ				S	**S**	**19 27 45.3**	**+0.8**
	3.1nm,0.3s,baz=79,slow=22,SNR=1.3						
JHJ2	**Mitsune**	**1.85**	**53**	P	**Pn**	**19 27 03.4**	**+1.2**
JHJ2	**Mitsune**	**1.85**	**53**	Pn	**Pn**	**19 27 03.4**	**+1.2**
TTO2	**TONANKAI O.B.S**	**1.92**	**334**	P	**Pn**	**19 27 04.1**	**+1.9**
TTO2				eS	**S**	**19 27 47.2**	**+2.4**
TTO1	**TONANKAI O.B.S**	**1.93**	**327**	P	**Pn**	**19 27 04.0**	**+1.7**
TK02	**Tokai 2**	**1.95**	**353**	P	**Pn**	**19 27 04.0**	**+1.5**
JMKN	**Mikurajimanish**	**2.28**	**34**	P	**Pn**	**19 27 06.0**	**+1.0**
JIE	**Ise**	**2.63**	**335**	P	**Pn**	**19 27 08.7**	**+1.1**
JIE				S	**S**	**19 27 55.0**	**+0.4**
JTNC	**Tanabenakahech**	**2.73**	**312**	P	**Pn**	**19 27 09.0**	**+0.5**
JTNC				S	**S**	**19 27 55.6**	**-0.5**
JWY	**Kouya**	**3.01**	**318**	P	**Pn**	**19 27 11.8**	**+0.8**
JWY				S	**S**	**19 28 00.4**	**-0.2**
JOD2	**Odawara 2**	**3.36**	**15**	P	**Pn**	**19 27 14.3**	**+0.4**
JOD2				eS	**S**	**19 28 06.3**	**+0.3**
INU	**Inuyama**	**3.44**	**346**		**Pn**	**19 27 14.9**	**+0.3**
JYN	**Shimob**	**3.50**	**7**	P	**Pn**	**19 27 16.3**	**+1.0**
JAI	**Aioi**	**3.51**	**301**	P	**Pn**	**19 27 15.7**	**+0.4**
BSO1	**Boso 1**	**3.60**	**42**	P	**Pn**	**19 27 15.0**	**-0.5**
BSO1				eS	**S**	**19 28 06.9**	**-2.1**
JRY	**Ryogami san**	**4.06**	**10**	P	**Pn**	**19 27 20.9**	**+0.3**
JRY				S	**S**	**19 28 17.7**	**-0.4**
JTO	**Tosashimizu**	**4.51**	**282**	P	**Pn**	**19 27 25.6**	**+0.4**
MJAR	**Matsushiro Arr**	**4.52**	**2**	P	**Pn**	**19 27 24.9**	**-0.3**
	0.9nm,0.3s,baz=204,slow=7.8,SNR=61						
MJAR				S	**S**	**19 28 25.0**	**-1.6**
	0.1nm,0.3s,baz=90,slow=33,SNR=1.6						
MJAR	**Matsushiro Arr**	**4.52**	**2**		**Pn**	**19 27 24.2**	**-1.0**
MAJO	**Matsushiro**	**4.52**	**2**		**Pn**	**19 27 25.0**	**-0.2**
MAT	**Matsushiro**	**4.52**	**2**	P	**Pn**	**19 27 25.2**	**0.0**
MAT				S	**S**	**19 28 24.4**	**-2.2**
MJB9	**Matsu-Tunnel**	**4.53**	**2**		**Pn**	**19 27 25.2**	**-0.1**
JHS	**Saijyo**	**5.08**	**307**	P	**Pn**	**19 27 31.8**	**+0.6**
CBIJ	**Chichi jima**	**6.08**	**143**	P	**Pn**	**19 27 41.4**	**-0.8**
CBIJ				eS	**S**	**19 28 52.2**	**-5.4**
JCJ	**Chichijima**	**6.08**	**143**	P	**Pn**	**19 27 41.4**	**-0.8**
	5.1nm,0.3s,baz=105,slow=22,SNR=14						
JCJ				S	**S**	**19 28 52.9**	**-4.7**
	17nm,0.3s,baz=306,slow=22,SNR=17						
JNU	**Nakatsue**	**6.15**	**282**	P	**Pn**	**19 27 43.2**	**+0.3**
	1.0nm,0.3s,baz=106,slow=3.5,SNR=9.9						
JNU	**Nakatsue**	**6.15**	**282**		**Pn**	**19 27 43.4**	**+0.5**
JMK	**Ichinoseki**	**7.39**	**20**	P	**Pn**	**19 27 55.1**	**-1.8**
JMK				S	**S**	**19 29 19.8**	**-4.8**
KSRS	**Korea Array**	**9.94**	**306**	P	**P**	**19 28 27.4**	**+0.3**
	0.2nm,0.3s,baz=117,slow=9.5,SNR=4.3						
ERM	**Erimo**	**10.79**	**21**	P	**P**	**19 28 37.0**	**+0.6**
ASAJ	**Asahikawa**	**12.60**	**15**	P	**P**	**19 28 57.2**	**+0.7**
	0.6nm,0.3s,baz=211,slow=9.4,SNR=6.9						
JKA	**Kamikawa-asahi**	**12.60**	**15**	P	**P**	**19 28 57.2**	**+0.7**
USRK	**Ussuriysk Ar.**	**13.06**	**340**	P	**P**	**19 29 00.8**	**-0.8**
	baz=150,slow=10,SNR=4.4						
YHNB	**Yeheng**	**16.39**	**248**	P	**P**	**19 29 36.8**	**-1.4**
YHNB				IAmb	IAmb	19 29 46.1	
	comp=Z,20nm,1.1s						
KLR	**Kul'dur**	**17.84**	**346**	P	**P**	**19 29 52.5**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=176,slow=9.6,SNR=10						
SONM	**Songino Array**	**28.71**	**313**	P	**P**	**19 31 33.9**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=128,slow=9.1,SNR=9.4						
SONM	**Songino Array**	**28.71**	**313**	P	**P**	**19 31 32.3**	**-1.4**
GTA	**Gaotai**	**31.73**	**294**	eP	**P**	**19 31 59.3**	**-0.9**
CMAR	**Chiang Mai Arr**	**37.65**	**259**	P	**P**	**19 32 49.6**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=45,slow=7.7,SNR=6.2						
NIKH	**Nikolski High**	**43.23**	**45**	P	**P**	**19 33 36.1**	**+1.0**
TAPN	**Taplejung**	**43.67**	**277**	eP	**P**	**19 33 38.7**	**-0.6**
	comp=Z,6.8nm,0.4s						
ODAN	**Odare**	**44.09**	**277**	eP	**P**	**19 33 41.8**	**-0.8**
	comp=Z,10nm,0.4s						
MK31	**Makanchi Array**	**44.62**	**306**	P	**P**	**19 33 46.1**	**0.0**
MKAR	**Makanchi Array**	**44.62**	**306**	P	**P**	**19 33 46.0**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=87,slow=10,SNR=27						
MKAR				ScP	**ScP**	**19 38 37.1**	**0.0**
	comp=Z,0.6nm,0.6s,baz=82,slow=5.4,SNR=8.0						
MKAR	**Makanchi Array**	**44.62**	**306**	P	**P**	**19 33 45.6**	**-0.5**
RAMN	**Ramite**	**44.73**	**277**	eP	**P**	**19 33 47.0**	**-0.5**
	comp=Z,17nm,0.7s						
MAKZ	**Makanchi**	**44.84**	**306**	P	**P**	**19 33 47.7**	**-0.2**
MAKZ				IAmb	IAmb	19 33 48.3	
	comp=Z,6.3nm,1.5s						
JIRN	**Jiri**	**44.85**	**278**	eP	**P**	**19 33 48.5**	**-0.1**
	comp=Z,39nm,0.6s						
GUN	**Gumba**	**45.03**	**279**	eP	**P**	**19 33 49.7**	**-0.3**
	comp=Z,23nm,0.6s						
MTN	**Manton Dam**	**45.09**	**190**	P	**P**	**19 33 49.1**	**-0.9**
MTN				IAmb	IAmb	19 33 52.9	
	comp=Z,12nm,1.5s						
PKI	**Pulchoki**	**45.53**	**279**	eP	**P**	**19 33 52.9**	**-1.0**
	comp=Z,6.8nm,0.7s						
KKN	**Kakani**	**45.57**	**279**	eP	**P**	**19 33 53.7**	**-0.3**
DMN	**Daman**	**45.77**	**279**	eP	**P**	**19 33 55.1**	**-0.5**
GKN	**Gorkha**	**46.04**	**279**	eP	**P**	**19 33 57.2**	**-0.4**
DANN	**Dangsing**	**46.66**	**280**	eP	**P**	**19 34 02.5**	**0.0**
	comp=Z,12nm,0.4s						
KURK	**Kurchatov**	**47.01**	**312**	P	**P**	**19 34 03.8**	**-0.6**
ANM	**Nome**	**47.32**	**29**	P	**P**	**19 34 09.2**	**+2.6**
UGM	**Wanagama**	**47.61**	**218**	P	**P**	**19 34 08.8**	**-0.7**
KNRA	**Kununurra**	**48.24**	**192**	P	**P**	**19 34 14.7**	**+0.5**
KNRA				IAmb	IAmb	19 34 15.2	
	comp=Z,5.4nm,0.5s						
GSI	**Gunungsitoli**	**48.85**	**240**	P	**P**	**19 34 18.7**	**-0.2**
GSI				IAmb	IAmb	19 34 19.8	
	comp=Z,17nm,1.3s						
AAK	**Ala-Archa**	**50.56**	**301**	P	**P**	**19 34 30.7**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=162,slow=11,SNR=3.9						
SVW2	**Sparrevohn**	**51.21**	**35**	P	**P**	**19 34 37.8**	**+2.0**
SVW2				IAmb	IAmb	19 35 03.1	
	comp=Z,7.3nm,1.4s						
WB0	**Warramunga Arr**	**51.60**	**184**	P	**P**	**19 34 39.0**	**-0.1**
WB2	**Warramunga Arr**	**51.78**	**184**	P	**P**	**19 34 40.5**	**+0.1**
WB2				IAmb	IAmb	19 34 41.5	
	comp=Z,8.4nm,1.4s						
WRA	**Warramunga Arr**	**51.78**	**184**	P	**P**	**19 34 40.6**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=0.2,slow=7.6,SNR=22						
IMAR	**Indian Mountai**	**52.38**	**29**	P	**P**	**19 34 45.9**	**+1.7**
RSO	**Redoubt South**	**52.58**	**36**	P	**P**	**19 34 47.2**	**+1.2**
KDAK	**Kodiak Island**	**52.71**	**39**	P	**P**	**19 34 47.5**	**+0.8**
PPLA	**Purkeypile**	**52.88**	**33**	P	**P**	**19 34 50.1**	**+2.1**
PPLA				IAmb	IAmb	19 34 57.8	
	comp=Z,15nm,1.6s						
KKAR	**Karatay Array**	**53.35**	**302**	P	**P**	**19 34 51.0**	**-0.7**
CNPM	**China Poot**	**53.35**	**37**	P	**P**	**19 34 51.0**	**-0.4**
MLY	**Manley**	**53.58**	**30**	P	**P**	**19 34 54.0**	**+1.1**
NIL	**Nilore**	**53.65**	**290**	P	**P**	**19 34 53.4**	**-0.6**
NIL				IAmb	IAmb	19 34 55.0	
	comp=Z,6.3nm,0.8s						
TRF	**Thorofare Moun**	**53.75**	**32**	P	**P**	**19 34 56.2**	**+1.9**
TRF				IAmb	IAmb	19 35 31.6	
	comp=Z,12nm,1.5s						
RND	**Reindeer**	**54.39**	**32**	P	**P**	**19 35 00.2**	**+1.4**
RND				IAmb	IAmb	19 35 28.6	
	comp=Z,12nm,1.5s						
GAR	**Garm**	**54.44**	**298**	P	**P**	**19 34 59.3**	**-0.4**
GAR				IAmb	IAmb	19 35 00.2	
	comp=Z,4.3nm,0.7s						
IL31		**55.22**	**30**	P	**P**	**19 35 05.9**	**+1.5**
IL31				IAmb	IAmb	19 35 09.8	
	comp=Z,5.3nm,0.4s						
ILAR	**Eielson Array**	**55.22**	**30**	P	**P**	**19 35 05.0**	**+0.5**
	comp=Z,0.8nm,0.4s,baz=280,slow=5.1,SNR=23						
ILAR	**Eielson Array**	**55.22**	**30**	P	**P**	**19 35 04.9**	**+0.3**
CHGR	**Chuyangaron**	**55.41**	**297**	P	**P**	**19 35 05.8**	**-0.6**
ASAR	**Alice Springs**	**55.51**	**185**	P	**P**	**19 35 06.4**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=16,slow=12,SNR=12						
VRDI	**Verde Repeater**	**57.07**	**34**	P	**P**	**19 35 18.8**	**+1.0**
VRDI				IAmb	IAmb	19 35 27.7	
	comp=Z,20nm,1.6s						
MCARA	**McCarthy VSAT**	**57.26**	**34**	P	**P**	**19 35 20.4**	**+1.6**
MCARA				IAmb	IAmb	19 35 28.3	
	comp=Z,19nm,1.5s						
BCAR	**Beaver Creek A**	**57.61**	**32**	P	**P**	**19 35 23.3**	**+2.0**
ARU	**Arti**	**58.35**	**320**	P	**P**	**19 35 26.0**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=148,slow=22,SNR=3.8						
ARU	**Arti**	**58.35**	**320**	P	**P**	**19 35 24.9**	**-1.5**
ARU				IAmb	IAmb	19 35 26.4	
	comp=Z,2.0nm,0.5s						
ABKAR	**Akbulak array**	**59.12**	**312**	P	**P**	**19 35 31.4**	**-0.3**
YKU2	**Yakutat**	**59.20**	**36**	P	**P**	**19 35 32.3**	**+0.2**
INK	**Inuvik**	**60.11**	**25**	P	**P**	**19 35 39.3**	**+1.2**
	comp=Z,0.6nm,0.5s,baz=34,slow=3.6,SNR=2.0						
INK	**Inuvik**	**60.11**	**25**	P	**P**	**19 35 39.0**	**+0.9**
STKA	**Stephens Creek**	**63.63**	**177**	P	**P**	**19 36 02.9**	**+1.1**
	comp=Z,1.5nm,0.9s,baz=334,slow=7.2,SNR=4.1						
STKA	**Stephens Creek**	**63.63**	**177**	P	**P**	**19 36 02.0**	**+0.3**
BBOO	**Buckleboo**	**64.50**	**182**	P	**P**	**19 36 08.2**	**+0.9**
YKA	**Yellowknife Ar**	**69.54**	**28**	P	**P**	**19 36 39.1**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=298,slow=5.8,SNR=10						
FINES	**FINESS Array B**	**71.95**	**332**	P	**P**	**19 36 52.8**	**+0.1**
	comp=Z,1.0nm,0.4s,baz=77,slow=5.7,SNR=10						
FINES	**FINESS Array B**	**71.95**	**332**	P	**P**	**19 36 52.1**	**-0.7**
KBZ	**Khabaz**	**72.06**	**311**	P	**P**	**19 36 54.0**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=122,slow=2.8,SNR=3.9						
AKASG	**Malin Array Be**	**76.54**	**322**	P	**P**	**19 37 18.7**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=51,slow=6.1,SNR=4.4						
BEKR	**Beckworth**	**78.15**	**50**		pP	19 38 57.1	+4.3
BRTR	**Keskin Array B**	**80.05**	**311**	P	**P**	**19 37 38.5**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=150,slow=4.7,SNR=3.9						
NVAR	**Mina Array Bea**	**80.27**	**51**	P	**P**	**19 37 42.3**	**+2.4**
	comp=Z,0.5nm,0.4s,baz=268,slow=6.1,SNR=2.0						
NVAR	**Mina Array Bea**	**80.27**	**51**	P	**P**	**19 37 42.2**	**+2.2**
PDAR	**Pinedale Array**	**83.19**	**43**	P	**P**	**19 37 56.3**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=335,slow=2.1,SNR=3.6						
PV16	**Nyswonger Mesa**	**86.32**	**47**		pP	19 39 31.5	-5.3
TXAR	**Lajitas Array**	**95.42**	**51**	P	**P**	**19 38 54.2**	**+1.6**
	comp=Z,0.3nm,0.6s,baz=321,slow=3.2,SNR=6.3						
TXAR	**Lajitas Array**	**95.42**	**51**	P	**P**	**19 38 53.9**	**+1.3**

KEA 25 19:27:42.0±0.0**, 40°.43N**×**122°.27E, h0^{km}, ML3.2**/3**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUJ	**Sinuiju**	**1.73**	**100**	Pg	Pb	19 28 14.2	-0.4
SUJ				Sg	Sn	19 28 36.1	0.0
PYAG	**Pyongyang**	**3.02**	**116**	Pg	Pb	19 28 35.6	-1.0
PYAG				Sg	Sb	19 29 15.0	+1.1
HJU	**Haeju**	**3.58**	**130**	Pg	Pg	19 28 49.3	-1.4
HJU				Sg	Sg	19 29 33.7	-3.4
HHU	**Hamhung**	**4.06**	**95**	Sg	Sg	19 29 49.3	-3.0
KMI	**Kunming**	**22.34**	**233**	P	P	19 32 46.5	+4.8
KMI				pP	P	19 32 48.0	+6.3

KEA ***25*** *19:28:33.5±0.0, 40°.43N×122°.27E, h0^{km}, ML3.6/4*
BJI ***25*** *19:28:34.6±0.0, 40°.45N×122°.31E, h8^{km}, ML3.9/10, Ms3.5/1, Ms7 3.5/1*
ISC 25 19:28:33.5±0.9**, 40°.47N**±0°.04×**122°.36E**±0°.03**, h10^{km}, n12, σ2ˢ.38**/21**, 1D, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNY	**Shenyang**	**1.64**	**34**	⇓Pg	**Pg**	**19 29 05.3**	**+0.4**
SNY				Sg	**Sg**	**19 29 27.0**	**+0.9**
SNY				smax	smax		
	comp=N,790nm,0.4s						
SNY				smax	smax		
	comp=E,370nm,0.6s						
DL2	**Dalian**	**1.66**	**200**	Pg	**Pg**	**19 29 05.0**	**-0.4**
DL2				Sg	**Sg**	**19 29 26.8**	**-0.1**
DL2				smax	smax		
	comp=N,1μm,0.5s						
DL2				smax	smax		
	comp=E,1μm,0.6s						
SUJ	**Sinuiju**	**1.67**	**102**	Pg	**Pg**	**19 29 05.7**	**+0.2**
SUJ				Sg	**Sg**	**19 29 27.6**	**+0.4**
PYS	**Pyongsong**	**2.95**	**113**	Pg	**Pg**	**19 29 29.0**	**-1.0**
PYS				Sg	**Sg**	**19 30 06.8**	**-1.4**
PYAG	**Pyongyang**	**2.98**	**117**	Sg	**Sg**	**19 30 07.9**	**-1.1**
HJU	**Haeju**	**3.56**	**132**	Sg	**Sg**	**19 30 27.9**	**+0.1**
HHU	**Hamhung**	**3.99**	**96**	Sg	**Sg**	**19 30 41.3**	**-0.3**
BJI	**Beijing**	**4.75**	**267**	Pg	**Pg**	**19 30 04.5**	**0.0**
BJI				Sg	**Sg**	**19 31 04.0**	**-2.1**
TIA	**Tai'an**	**5.92**	**226**	Pn	**Pb**	**19 30 14.8**	**-1.9**
TIA				Pg	**Pg**	**19 30 29.0**	**+2.2**
TIA				Sg	**Sg**	**19 31 39.5**	**-4.0**
MDJ	**Mudanjiang**	**6.75**	**50**	Pg	**Pg**	**19 30 38.8**	**-4.0**
MDJ				Sg	**Sg**	**19 32 06.5**	**-3.7**
MDJ				LR	LR		
	comp=N,170nm,5.8s						
MDJ				LR	LR		
	comp=E,110nm,4.3s						
MDJ				LR	LR		
	comp=Z,200nm,5.4s						
XAN	**Xi'an**	**12.48**	**243**	P	Pn	19 31 44.3	+13
WMQ	**Urumqi**	**25.81**	**289**	eP	**P**	**19 34 06.5**	**+1.8**
WMQ				pP	**sP**	**19 34 10.5**	**+1.5**
WMQ				sP	**pP**	**19 34 13.5**	**+5.7**

THE ***25*** *19:30:33.7, 38°.26N×20°.42E, h11^{km}±1^{km}, ML2.6/8, Error ellipse: s-maj=1.3km s-min=0.3km az=227.0*
ATH ***25*** *19:30:33.9, 38°.26N×20°.43E, h8^{km}±1^{km}, ML2.5/2, Error ellipse: s-maj=2.2km s-min=0.9km az=254.0*
ISC 25 19:30:34.2±1.7**, 38°.27N**±0°.02×**20°.44E**±0°.05**, h8^{km}**±8^{km}**, n21, σ0ˢ.42**/39**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	**Livadi, Kephal**	**0.01**	**240**	P	**Pg**	**19 30 35.4**	**-0.2**
KEF4				S	**Sg**	**19 30 36.5**	**0.0**
KEF1	**Kardakata, Kep**	**0.03**	**62**	P	**Pg**	**19 30 35.6**	**-0.1**
KEF1				S	**Sg**	**19 30 36.5**	**-0.2**
LXR1	**Lixouri, Cepha**	**0.06**	**181**	P	**Pg**	**19 30 36.0**	**0.0**
LXR1				S	**Sg**	**19 30 37.7**	**+0.4**
	29μm,0.1s						
LXRA	**Lixouri, Kepha**	**0.07**	**182**	P	**Pg**	**19 30 36.0**	**0.0**
LXRA				S	**Sg**	**19 30 37.3**	**0.0**
ARGA	**Argostoli. Kep**	**0.09**	**161**	P	**Pg**	**19 30 36.3**	**-0.1**
ARGA				S	**Sg**	**19 30 37.7**	**-0.2**
CHV1	**Chavriata, Kef**	**0.09**	**209**	P	**Pg**	**19 30 36.2**	**-0.2**
CHV1				S	**Sg**	**19 30 38.2**	**+0.3**
	7μm,0.1s						
ARG2	**Argostoli**	**0.09**	**156**	P	**Pg**	**19 30 36.4**	**0.0**
ARG2				S	**Sg**	**19 30 38.3**	**+0.3**
	23μm,0.1s						
KEF2	**Argostoli. Kep**	**0.11**	**159**	P	**Pg**	**19 30 36.6**	**-0.1**
KEF2				S	**Sg**	**19 30 38.1**	**-0.1**
VLS	**Valsamata**	**0.15**	**126**	P	**Pg**	**19 30 37.1**	**-0.2**
VLS				S	**Sg**	**19 30 39.8**	**+0.4**
	6μm,0.1s						
VLS	**Valsamata**	**0.15**	**126**	P	**Pg**	**19 30 37.1**	**-0.2**
VLS				S	**Sg**	**19 30 39.5**	**+0.1**
VLS				AML	AML	19 30 40.1	
	comp=N,7850μm,0.2s						
VLS				AML	AML	19 30 40.1	
	comp=E,13944μm,0.1s						
KONA	**Konidatara, Ke**	**0.19**	**33**	P	**Pg**	**19 30 38.1**	**0.0**
KONA				S	**Sg**	**19 30 41.1**	**+0.4**
FSK	**Fiskardo**	**0.22**	**26**	P	**Pg**	**19 30 38.5**	**-0.1**
FSK				S	**Sg**	**19 30 42.2**	**+0.7**
	comp=E,1μm,0.1s						
FSK	**Fiskardo**	**0.22**	**26**	P	**Pg**	**19 30 38.5**	**-0.1**
FSK				S	**Sg**	**19 30 41.8**	**+0.3**
FSK				AML	AML	19 30 42.4	
	comp=N,1710μm,0.2s						
FSK				AML	AML	19 30 42.7	
	comp=E,2802μm,0.1s						
KFL	**Anninata**	**0.32**	**119**	P	**Pg**	**19 30 40.1**	**-0.3**
KFL				S	**Sg**	**19 30 45.7**	**+1.1**
	comp=E,630nm,0.3s						
KFL	**Anninata**	**0.32**	**119**	P	**Pg**	**19 30 40.2**	**-0.3**
KFL				S	**Sg**	**19 30 45.1**	**+0.5**
EVGI	**Lefkada island**	**0.39**	**25**	P	**Pg**	**19 30 41.7**	**-0.2**
EVGI				S	**Sg**	**19 30 47.8**	**+0.7**
	comp=E,205nm,0.1s						
EVGI	**Lefkada island**	**0.39**	**25**	P	**Pg**	**19 30 41.6**	**-0.3**
EVGI				S	**Sg**	**19 30 48.0**	**+0.9**
MGNA	**Meganis**	**0.48**	**35**	P	**Pg**	**19 30 43.0**	**-0.5**
LKD2	**Lefkada island**	**0.55**	**18**	P	**Pg**	**19 30 44.2**	**-0.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LKD2				S	Sg	19 30 52.4	+0.3
	comp=E,75nm,0.2s						
PDO	Prodromos	0.67	60	P	Pg	19 30 46.4	-0.7
PVO	Paravola	0.92	67	P	Pg	19 30 51.2	-0.7

IDC 25 19:38:01.6±999.0**, 32°65N×117°41W, h0km, Error ellipse: s-maj=495.3km s-min=29.2km az=39.0, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I57US	PINON FLAT INF	1.25	40	*i*		19 43 50.0	
	baz=220,slow=314,SNR=2.2						
I56US	NEWPORT INFRAS	15.60	1	*i*		21 13 30.0	
	baz=182,slow=319,SNR=2.0						
I10CA	LAC DU BONNET	23.62	36	*i*		22 06 50.0	
	baz=226,slow=336,SNR=1.5						

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*IDC **25** 19:38:12.5±1.4, 32°16S×178°64W, h0km, mb4.3/4, mb1 4.4/5, mb1mx3.8/50, mbtmp4.3/5, ML4.1/1, Error ellipse: s-maj=39.5km s-min=28.5km az=51.0*

*NEIC **25** 19:38:13.6±2.0, 32°5S±0°1×178°7W±0°2, h7km±8km, mb4.6/12, Error ellipse: s-maj=30.3km s-min=18.4km az=88.0*

*WEL **25** 19:38:17.5±0.4, 33°S±3°×17°8W±°, h33km, M4.7/13, mB5.1/5, ML5.0/13, MLv4.8/13, Mw(mB)4.4/5*

ISC 25 19:38:16.6±0.8**, 32°50S**±0°06×**178°4W**±0°1**, h33km, n56, σ1s66**/57**, mb4.5**/10**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.26	8	P	Pn	19 39 06.8	+1.4
GLKZ				S	Sn	19 39 42.9	-0.1
MXZ	Matakaoa Point	5.71	207	Pn	Pn	19 39 38.4	-0.7
MXZ	Matakaoa Point	5.71	207	P	Pn	19 39 39.9	+0.8
MXZ				S	Sn	19 40 42.9	-0.7
WMGZ	Waiomatatini S	5.90	205	P	Pn	19 39 43.2	+1.5
PKGZ	Pakihiroa	6.09	207	P	Pn	19 39 44.4	+0.1
PKGZ				S	Sn	19 40 52.5	-0.4
HAZ	Te Kaha	6.09	209	P	Pn	19 39 44.8	+0.5
HAZ				S	Sn	19 40 52.9	0.0
PUZ	Puketiti	6.18	205	P	Pn	19 39 46.1	+0.5
PUZ				S	Sn	19 40 54.1	-1.0
RUGZ	Raukumara Rang	6.31	209	P	Pn	19 39 47.8	+0.4
RUGZ				S	Sn	19 41 00.9	+2.4
TWGZ	Tauwhareparae	6.38	206	P	Pn	19 39 49.8	+1.5
TWGZ				S	Sn	19 41 02.0	+2.1
TKGZ	Te Karaka	6.66	206	P	Pn	19 39 57.0	+5.0
MWZ	Matawai	6.69	208	P	Pn	19 39 53.2	+0.7
URZ	Urewera	6.80	211	Pn	Pn	19 39 55.0	+1.0
	3.2nm,0.3s,baz=280,slow=6.4,SNR=24						
URZ				Sn	Sn	19 41 09.1	-1.2
	5.8nm,0.3s,baz=276,slow=22,SNR=9.0						
URZ	Urewera	6.80	211		Pn	19 39 53.9	-0.2
URZ	Urewera	6.80	211	P	Pn	19 39 55.0	+1.0
WCZ	Waipu Caves	6.89	238	P	Pn	19 39 59.9	+4.6
MUGZ	Murupara	7.13	212	P	Pn	19 39 59.4	+0.8
RTZ	Ruatahuna	7.15	210	P	Pn	19 39 59.4	+0.4
OUZ	Omahuta	7.16	246		Pn	19 40 02.0	+3.1
OUZ	Omahuta	7.16	246	P	Pn	19 40 02.2	+3.2
OUZ				S	Sn	19 41 20.3	+1.2
RAHZ	Arahi	7.37	208	P	Pn	19 40 04.1	+2.3
MTHZ	Maungataniwha	7.41	210	P	Pn	19 40 02.1	-0.4
BKZ	Black Stump Fm	7.82	210	Pn	Pn	19 40 06.2	-2.0
BFZ	Birch Farm	9.21	206	Pn	Pn	19 40 25.2	-2.0
SNZO	South Karori	10.36	210	Pn	Pn	19 40 42.6	-0.3
TUWZ	Tuamarina	10.79	212	Pn	Pn	19 40 45.4	-3.4
BSWZ	Blackbirch Sta	11.05	211	Pn	Pn	19 40 50.4	-1.9
THZ	Tophouse	11.54	214	Pn	Pn	19 40 55.2	-3.8
KHZ	Kahutara	11.77	210	Pn	Pn	19 40 57.5	-4.5
CTA	Charters Tower	33.83	283	P	P	19 44 56.4	+0.5
	6.4nm,1.1s,baz=112,slow=12,SNR=1.6						
BBOO	Buckleboo	38.08	257	P	P	19 45 31.8	-0.5
RABL	Rabaul	39.37	309	P	P	19 45 41.2	-2.0
RABL				IAmb	IAmb	19 46 01.5	
	comp=Z,11nm,0.6s						
ASAR	Alice Springs	42.66	269	P	P	19 46 09.3	-1.0
	comp=Z,2.2nm,0.8s,baz=111,slow=7.5,SNR=19						
ASAR	Alice Springs	42.66	269	P	P	19 46 09.6	-0.7
WR0	Warramunga Arr	43.67	275	P	P	19 46 16.6	-1.8
WB2	Warramunga Arr	43.83	275	P	P	19 46 18.2	-1.6
WB2				IAmb	IAmb	19 46 19.2	
	comp=Z,6.1nm,1.1s						
WRA	Warramunga Arr	43.84	275	P	P	19 46 18.5	-1.4
	comp=Z,2.0nm,0.3s,baz=113,slow=7.9,SNR=42						
WRA	Warramunga Arr	43.84	275	P	P	19 46 18.5	-1.4
WB0	Warramunga Arr	43.88	275	P	P	19 46 18.6	-1.5
MTN	Manton Dam	49.97	281	P	P	19 47 06.8	-1.0
MTN				IAmb	IAmb	19 47 25.9	
	comp=Z,5.8nm,1.2s						
KNRA	Kununurra	50.52	276	P	P	19 47 10.4	-1.5
KNRA				IAmb	IAmb	19 47 19.5	
	comp=Z,16nm,1.4s						
FITZ	Fitzroy Crossi	52.01	272	P	P	19 47 22.3	-0.8
FITZ				IAmb	IAmb	19 47 39.6	
	comp=Z,7.2nm,1.4s						
CASY	Casey	53.12	209	P	P	19 47 31.1	+0.5
SOEI	Soe	57.31	280		P	19 48 01.9	+0.1
SOEI				IAmb	IAmb	19 48 10.4	
	comp=Z,15nm,1.2s						
QSPA	South Pole Qui	57.62	180	P	P	19 48 07.3	+4.0
	comp=Z,2.5nm,0.8s,baz=19,slow=0.8,SNR=6.7						
QSPA	South Pole Qui	57.62	180	P	P	19 48 05.2	+2.0
QSPA				IAmb	IAmb	19 48 08.6	
	comp=Z,12nm,1.4s						
KURBB	Kurchatov Arra	122.25	313	PKP	PKPdf	19 57 06.5	-1.1
	comp=Z,0.1nm,0.4s,baz=126,slow=2.1,SNR=2.2						
H10S2	ASCENSION HYDR	135.97	157	T	T	22 30 10.1	
	baz=194						
H10S3	ASCENSION HYDR	135.97	157	T	T	22 30 09.2	
	baz=26						
H10N3	ASCENSION HYDR	137.06	156	T	T	22 31 26.3	
	baz=199						
H10N1	ASCENSION HYDR	137.06	156	T	T	22 31 38.5	
	baz=199						
H10N2	ASCENSION HYDR	137.08	156	T	T	22 31 35.0	
	baz=199						
ARCES	ARCESS Array B	140.55	347	PKP	PKPdf	19 57 43.0	+1.5
	comp=Z,2.7nm,1.0s,baz=29,slow=2.1,SNR=1.4						
ARCES	ARCESS Array B	140.55	347		PKPdf	19 57 41.0	-0.5
FINES	FINESS Array B	146.97	339	PKPbc	PKPbc	19 57 54.8	-0.2
	comp=Z,1.6nm,0.6s,baz=58,slow=4.7,SNR=10						
FINES	FINESS Array B	146.97	339		PKPbc	19 57 54.3	-0.7
TORD	Torodi Ar. Bea	160.74	180	PKPab	PKPab	19 58 57.2	+1.6
	comp=Z,1.1nm,0.9s,baz=187,slow=2.8,SNR=5.8						

IDC 25 19:39:12.8±5.0**, 4°49S×153°50E, h141km**±33km**, mb3.3**/2**, mb1 3.6**/3**, mb1mx2.9**/59**, mbtmp3.8**/3**, Error ellipse: s-maj=74.9km s-min=30.3km az=114.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.48	277	P	Pn	19 39 40.6	-0.8
	7.2nm,0.3s,baz=160,slow=1.7,SNR=7.3						
KRVT				S	Sn	19 40 03.4	+0.2
	8.4nm,0.3s,baz=205,slow=22,SNR=6.2						
PMG	Port Moresby	7.96	232	P	Pn	19 41 06.6	+0.9
	1.7nm,0.3s,baz=50,slow=13,SNR=14						
PMG				S	Sn	19 42 33.9	-0.6
	0.4nm,0.3s,baz=270,slow=20,SNR=1.6						
WRA	Warramunga Arr	24.17	229	P	P	19 44 16.6	+0.4
	1.7nm,0.7s,baz=54,slow=9.9,SNR=13						
ASAR	Alice Springs	26.84	223	P	P	19 44 40.0	-0.3
	0.5nm,0.6s,baz=53,slow=8.5,SNR=11						
TORD	Torodi Ar. Bea	150.87	289	PKPbc	PKPbc	19 58 49.5	-0.3
	0.4nm,0.8s,baz=106,slow=2.1,SNR=2.2						

IDC 25 19:46:33.0±1.8**, 56°63S×27°41W, h0km, mb3.8**/2**, mb1 3.9**/2**, mb1mx3.6**/22**, mbtmp3.8**/2**, MS3.7**/2**, Ms1 3.7**/2**, ms1mx3.1**/23**, Error ellipse: s-maj=89.2km s-min=50.1km az=9.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIV	San Ignacio	47.89	314	LR	LR	20 16 03.4	
	comp=Z,41nm,18.0s,baz=202,slow=37						
LPAZ	La Paz	50.61	306	P	P	19 55 34.8	+0.6
	0.6nm,0.3s,baz=139,slow=6.6,SNR=2.4						
TORD	Torodi Ar. Bea	73.62	30	P	P	19 58 07.9	0.0
	0.4nm,0.6s,baz=207,slow=6.3,SNR=2.2						
URZ	Urewera	83.22	199	LR	LR	20 27 40.0	
	comp=Z,98nm,21.5s,baz=5.0,slow=30						
YKA	Yellowknife Ar	136.51	318	PKP	PKPdf	20 05 54.0	-1.2
	0.1nm,0.5s,baz=122,slow=2.9,SNR=1.7						
INK	Inuvik	146.17	320	PKPbc	PKPdf	20 06 11.8	-0.5
	1.7nm,0.6s,baz=158,slow=5.4,SNR=1.8						
ILAR	Eielson Array	150.40	311	PKPbc	PKPbc	20 06 24.1	-0.6
	1.3nm,0.7s,baz=120,slow=3.1,SNR=13						
SONM	Songino Array	150.88	88	PKPbc	PKiKP	20 06 26.9	-0.3
	0.5nm,0.5s,baz=216,slow=3.5,SNR=4.9						

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*NIED **25** 19:54:00, 37°20N×141°50E, h50km, Mw4.3 Best double couple: M₀3.10000×10¹⁵ NP1:φs137.00000°, δ57.00000°, λ115.00000°. NP2:φs277.00000°, δ41.00000°, λ57.00000°.*

*JMA **25** 19:54:00.0±0.1, 37°20N×141°44E, h47km±1km, M4.4*

JMA Felt II J1.

*IDC **25** 19:54:00.6±0.5, 37°18N×141°49E, h45km±3km, mb3.9/27, mb1 4.0/33, mb1mx3.9/67, mbtmp4.1/33, MS3.3/12, Ms1 3.3/12, ms1mx3.1/47, Error ellipse: s-maj=11.9km s-min=7.8km az=138.0*

*NEIC **25** 19:54:01.0±1.7, 37°09N±0°06×141°41E±0°07, h54km±4km, mb4.5/50, Error ellipse: s-maj=9.8km s-min=6.6km az=129.0*

ISC 25 19:53:60.0±0.5**, 37°16N**±0°04×**141°53E**±0°05**, h45km**±3km**, n159, σ1s38**/176**, mb4.4**/46**, MS3.3**/6**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	0.56	292	P	Pn	19 54 10.7	-1.1
JFK				S	Sn	19 54 18.1	-2.1
ONAJ	Iwakimizuishiy	0.58	264	P	Pn	19 54 11.4	-0.7
ONAJ				S	Sn	19 54 19.2	-1.6
JMST	Minamisoumatoc	0.76	318	P	Pn	19 54 13.1	-1.2
JMST				S	Sn	19 54 22.5	-2.2
JFFD	Fukushimafurud	0.78	265	P	Pn	19 54 13.8	-0.8
JFFD				S	Sn	19 54 23.5	-1.6
JMM	Marumori	0.92	321	P	Pn	19 54 15.3	-1.1
JMM				S	Sn	19 54 26.7	-1.8
JHO	Hitachi	0.94	235	P	Pn	19 54 16.0	-0.8
JHO				S	Sn	19 54 27.6	-1.6
JFT	Otama	1.01	291	P	Pn	19 54 17.6	-0.2
JFT				S	Sn	19 54 30.0	-0.9
JIO	Ouri	1.30	354	P	Pn	19 54 21.3	-0.4
JIO				*e*S	Sn	19 54 35.7	-2.2
JOU	Okura	1.38	331	P	Pn	19 54 22.9	0.0
JOU				*e*S	Sn	19 54 39.8	-0.2
JFY	Yanaizu	1.47	280	P	Pn	19 54 24.0	-0.1
JYS	Shirataka	1.57	313	P	Pn	19 54 25.6	+0.2
JYS				*e*S	Sn	19 54 44.9	+0.4
MJAR	Matsushiro Arr	2.73	258	P	Pn	19 54 42.1	+0.7
	3.5nm,0.3s,baz=79,slow=16,SNR=113						
MJAR				S	Sn	19 55 14.9	+1.8
	5.8nm,0.3s,baz=129,slow=36,SNR=2.4						
MJAR				LR	LR	19 56 07.2	
	comp=Z,678nm,19.9s,baz=80,slow=47						
MJAR	Matsushiro Arr	2.73	258		Pn	19 54 41.5	+0.2
MAJO	Matsushiro	2.73	258		Pn	19 54 42.1	+0.7
MAT	Matsushiro	2.73	258	P	Pn	19 54 42.5	+1.2
MAT				S	Sn	19 55 18.5	+5.3
MJB9	Matsu-Tunnel	2.73	258		Pn	19 54 42.2	+0.8
JHJ	Hachijo jima 2	4.28	200	P	Pn	19 55 03.5	+0.9
	75nm,0.3s,baz=119,slow=3.6,SNR=24						
JHJ				S	Sn	19 55 51.5	+0.3
	212nm,0.3s,baz=227,slow=23,SNR=12						
ERM	Erimo	5.01	14	Pn	Pn	19 55 12.6	+0.1
ERM					Sn	19 56 06.6	-2.5
ASAJ	Asahikawa	7.00	6	P	Pn	19 55 39.3	-0.5
	0.8nm,0.3s,baz=183,slow=16,SNR=9.5						
ASAJ				S	Sn	19 56 55.0	-3.0
	0.5nm,0.3s,baz=181,slow=30,SNR=1.5						
JKA	Kamikawa-asahi	7.00	6		Pn	19 55 39.3	-0.5
JKA					Sn	19 56 55.0	-3.0
JNU	Nakatsue	9.61	248	P	Pn	19 56 15.2	-0.4
	0.2nm,0.3s,baz=354,slow=12,SNR=1.3						
JNU				LR	LR	20 00 18.4	
	comp=Z,149nm,20.8s,baz=160,slow=39						
YSS	Yuzh-Sakhalins	9.83	5		Pn	19 56 24.4	+5.8
JCJ	Chichijima	10.05	177	P	Pn	19 56 20.2	-1.5
	10nm,0.3s,baz=282,slow=22,SNR=17						
JCJ				S	Sn	19 58 02.9	-10
	18nm,0.3s,baz=39,slow=23,SNR=7.4						
USA0B	Ussuriysk Arra	10.09	317		Pn	19 56 25.0	+2.8
USRK	Ussuriysk Ar.	10.09	317	P	Pn	19 56 25.7	+3.6
	baz=102,slow=13,SNR=16						
USRK				LR	LR	19 59 56.0	
	comp=Z,178nm,20.5s,baz=157,slow=35						
USRK	Ussuriysk Ar.	10.09	317		Pn	19 56 24.9	+2.7
KSRS	Korea Array	10.84	276	P	Pn	19 56 37.3	+4.8
	0.2nm,0.3s,baz=95,slow=13,SNR=9.1						
KSRS				LR	LR	20 00 31.2	
	comp=Z,146nm,20.0s,baz=90,slow=36						
KS19	Wonju Array Si	10.88	276	Pn	Pn	19 56 33.9	+0.8
MDJ	Mudanjiang	11.70	313		Pn	19 56 47.4	+3.2
CN2	Changchun	13.91	303	*e*P	Pn	19 57 17.0	+2.7
KLR	Kul'dur	14.00	333	P	Pn	19 57 16.0	+0.5
	0.1nm,0.3s,baz=321,slow=6.5,SNR=1.6						
KLR				LR	LR	20 02 30.4	
	comp=Z,92nm,18.9s,baz=172,slow=36						
KLR	Kul'dur	14.00	333		Pn	19 57 16.0	+0.5
NJ2	Nanjing	19.33	261	*e*P	P	19 58 20.0	-1.4
PEA0B	Petropavlovsk-	19.53	30	P	Pn	19 58 24.7	-0.3
PEA0B				IAmb	IAmb	19 58 36.5	
	comp=Z,30nm,1.3s						
PETK	Petropavlovsk-	19.53	30	P	P	19 58 24.1	+0.7
	comp=Z,0.1nm,0.3s,baz=227,slow=18,SNR=1.5						
PETK				LR	LR	20 05 38.6	
	comp=Z,57nm,21.9s,baz=241,slow=36						
PETK	Petropavlovsk-	19.53	30	P	Pn	19 58 25.9	+0.9
MA2	Magadan	23.21	12	P	P	19 59 03.3	+0.6
	comp=Z,4.3nm,0.7s,baz=116,slow=22,SNR=2.9						
MA2				LR	LR	20 07 32.6	
	comp=Z,60nm,20.9s,baz=208,slow=35						
MA2	Magadan	23.21	12	P	P	19 59 02.8	+0.1
MA2				IAmb	IAmb	19 59 18.9	
	comp=Z,11nm,0.8s						
HHC	Hu-ho-hao-te	23.52	288	*e*P	P	19 59 04.3	-1.7
YAK	Yakutsk	25.97	347	P	P	19 59 26.9	-1.0
YAK				IAmb	IAmb	19 59 45.8	
	comp=Z,8.7nm,0.5s						
SEY	Seymchan	26.65	11	P	P	19 59 35.2	+1.1
	comp=Z,1.4nm,0.6s,baz=217,slow=7.4,SNR=6.7						
ULN	Ulaanbaatar	27.36	304	P	P	19 59 40.5	-0.4
ENH	Enshi	27.43	265	P	P	19 59 39.6	-2.0
SONM	Songino Array	27.79	304	P	P	19 59 45.1	+0.4
	comp=Z,1.9nm,0.6s,baz=103,slow=9.0,SNR=19						
SONM				LR	LR	20 10 45.7	
	comp=Z,68nm,20.3s,baz=244,slow=36						
SONM	Songino Array	27.79	304	P	P	19 59 44.3	-0.4
H11N2	WAKE ISLAND Hy	28.14	121	T	T	20 29 26.6	
	baz=314,slow=75,SNR=274						
H11N1	WAKE ISLAND Hy	28.14	121	T	T	20 29 28.5	
	baz=314,slow=75,SNR=270						
H11N3	WAKE ISLAND Hy	28.15	121	T	T	20 29 39.9	
	baz=314,slow=75,SNR=256						
H11S1	WAKE ISLAND Hy	28.85	123	T	T	20 30 54.3	
	baz=313						
H11S3	WAKE ISLAND Hy	28.85	123	T	T	20 30 54.4	
	baz=313,slow=74						
H11S2	WAKE ISLAND Hy	28.87	123	T	T	20 30 55.6	
	baz=313,slow=74						
LZH	Lanzhou	30.14	280	*e*P	P	20 00 04.8	-0.9
LZH				pP	sP	20 00 20.8	-2.3
LZH				sP	pP	20 00 24.5	+6.8
LZH				PP	PnPn	20 00 59.0	-5.1
GTA	Gaotai	32.61	287	*e*P	P	20 00 31.0	+3.6
GTA				pP	pP	20 00 38.8	-0.6
GTA				sP	sP	20 00 42.5	-2.3
DAV	Davao City (W)	33.29	210	LR	LR	20 12 39.1	
	comp=Z,73nm,20.3s,baz=130,slow=34						
TIXI	Tiksi	35.17	353	P	P	20 00 49.6	+0.6
	baz=147,slow=4.1						
WMQ	Urumqi	40.86	297	*e*P	P	20 01 38.5	+1.1
WMQ				sP	pP	20 01 51.3	+1.6
CMAR	Chiang Mai Arr	41.62	255	P	P	20 01 43.9	+0.1
	comp=Z,0.6nm,0.9s,baz=44,slow=6.9,SNR=1.7						
CMAR				LR	LR	20 20 27.6	
	comp=Z,47nm,19.1s,baz=85,slow=38						
CMAR	Chiang Mai Arr	41.62	255	P	P	20 01 43.2	-0.5
LUWI	Luwuk	41.80	209	P	P	20 01 40.9	-4.3
LUWI				IAmb	IAmb	20 01 50.0	
	comp=Z,16nm,0.8s						
ZAA0	Zalesovo Array	41.90	312	P	P	20 01 43.9	-1.7
ZALV	Zalesovo Beam	41.90	312	P	P	20 01 45.7	+0.1
	comp=Z,1.8nm,0.6s,baz=86,slow=7.6,SNR=8.6						
ZALV				LR	LR	20 20 49.4	
	comp=Z,30nm,18.3s,baz=127,slow=38						
ZALV	Zalesovo Beam	41.90	312	P	P	20 01 44.2	-1.4
LSA	Lhasa	42.29	275	P	P	20 01 49.0	-0.7
MK31	Makanchi Array	44.13	302	P	P	20 02 02.9	-0.9
MKAR	Makanchi Array	44.13	302	P	P	20 02 03.9	+0.1
	comp=Z,1.7nm,0.6s,baz=86,slow=10,SNR=23						
MKAR	Makanchi Array	44.13	302	P	P	20 02 03.5	-0.4
MAKZ	Makanchi	44.34	302	P	P	20 02 05.0	-0.5
SVW2	Sparrevohn	45.37	37	P	P	20 02 15.4	+1.9
SVW2				IAmb	IAmb	20 02 41.9	
	comp=Z,6.9nm,1.2s						
KURK	Kurchatov	45.93	308	P	P	20 02 17.4	-0.6
KURK				IAmb	IAmb	20 02 31.6	
	comp=Z,9.1nm,0.9s						
KURBB	Kurchatov Arra	45.99	308	P	P	20 02 18.2	-0.3
	comp=Z,4.4nm,0.6s,baz=82,slow=7.7,SNR=54						
TAPN	Taplejung	46.02	274	*e*P	P	20 02 19.7	+0.3
	comp=Z,7.5nm,0.7s						
IMAR	Indian Mountai	46.50	31	P	P	20 02 23.7	+1.4
IMAR				PcP	PcP	20 03 57.4	+1.3
IMAR				PP	PP	20 04 12.1	+0.3
OHAK	Old Harbor	46.60	43	P	P	20 02 24.0	+0.8
PMG	Port Moresby	46.62	172	P	P	20 02 21.4	-2.3
PMG				IAmb	IAmb	20 02 24.7	
	comp=Z,9.8nm,1.0s						
RSO	Redoubt South	46.75	38	P	P	20 02 25.5	+0.9
KDAK	Kodiak Island	46.94	42	P	P	20 02 27.1	+1.2
	comp=Z,10.0nm,0.6s,baz=277,slow=7.3,SNR=8.9						
KDAK	Kodiak Island	46.94	42	P	P	20 02 27.1	+1.2
PPLA	Purkeypile	47.01	35	P	P	20 02 28.9	+2.4
PPLA				IAmb	IAmb	20 02 45.6	
	comp=Z,10nm,1.4s						
RAMN	Ramite	47.09	274	*e*P	P	20 02 28.1	+0.4
JIRN	Jiri	47.10	275	*e*P	P	20 02 28.3	+0.4
GUN	Gumba	47.23	276	*e*P	P	20 02 29.7	+0.7
KKN	Kakani	47.76	276	*e*P	P	20 02 32.6	-0.3
GKN	Gorkha	48.18	276	*e*P	P	20 02 36.4	+0.3
	comp=Z,10nm,0.6s						
TOLK	Toolik Lake Re	48.32	27	P	P	20 02 38.2	+1.7
TOLK				IAmb	IAmb	20 03 02.4	
	comp=Z,3.0nm,0.9s						
DANN	Dangsing	48.72	277	*e*P	P	20 02 41.0	+0.6
	comp=Z,20nm,0.6s						
COLA	College	48.92	32	P	P	20 02 42.5	+1.5
IL31		49.34	32	P	P	20 02 44.6	+0.4
IL31				IAmb	IAmb	20 02 46.3	
	comp=Z,3.7nm,0.7s						
ILAR	Eielson Array	49.34	32	P	P	20 02 45.4	+1.1
	comp=Z,3.2nm,0.7s,baz=269,slow=6.3,SNR=49						
ILAR	Eielson Array	49.34	32	P	P	20 02 44.8	+0.5
BMAR	Burnt Mountain	50.18	29	P	P	20 02 51.7	+1.0
KSH	Kashi	50.44	294	P	P	20 02 55.8	+2.7
KSH				pP	sP	20 03 10.5	-0.5
KSH				PcP	PcP	20 04 12.5	+1.6
KSH				S	S	20 10 04.3	+0.7
KSH				sS	sS	20 10 30.8	+6.3
BRVK	Borovoye	50.61	312	P	P	20 02 53.8	-0.3
BCAR	Beaver Creek A	51.74	34	P	P	20 03 03.5	+1.1
EGAK	Eagle	51.78	32	P	P	20 03 03.8	+1.1
EGAK				IAmb	IAmb	20 03 05.0	
	comp=Z,6.4nm,1.2s						
KK31	Karatay Array	53.14	300	P	P	20 03 12.3	-0.8
KKAR	Karatay Array	53.14	300	P	P	20 03 12.4	-0.7
KKAR	Karatay Array	53.14	300	P	P	20 03 12.2	-0.9
KKAR				IAmb	IAmb	20 03 31.9	
	comp=Z,2.1nm,0.9s						
EPYK	Eagle Plains	53.37	30	P	P	20 03 16.1	+1.6
HYT	Haines Junctio	54.14	37	P	P	20 03 21.7	+1.4
HYT				IAmb	IAmb	20 03 23.1	
	comp=Z,16nm,1.4s						
DHAK	Deception Hill	54.20	39	P	P	20 03 22.6	+1.9
INK	Inuvik	54.23	27	P	P	20 03 21.6	+1.0
	comp=Z,1.6nm,0.7s,baz=307,slow=6.9,SNR=4.5						
INK				pP	pP	20 03 34.7	+1.4
	comp=Z,2.0nm,0.6s,baz=274,slow=9.3,SNR=3.8						
INK	Inuvik	54.23	27	P	P	20 03 22.4	+1.8
INK				IAmb	IAmb	20 03 35.7	
	comp=Z,3.0nm,0.8s						
NIL	Nilore	54.66	288	P	P	20 03 23.4	-1.0
NIL				IAmb	IAmb	20 03 29.2	
	comp=Z,3.4nm,0.8s						
MNAI	Manna	54.73	230	P	P	20 03 23.1	-1.9
WHY	Whitehorse	55.43	36	P	P	20 03 30.9	+1.3
WRA	Warramunga Arr	57.20	188	P	P	20 03 42.8	+0.4
	comp=Z,4.3nm,0.7s,baz=0.6,slow=7.1,SNR=2.5						
WRA	Warramunga Arr	57.20	188	P	P	20 03 43.0	+0.6
KBL	Kabul	57.45	291	P	P	20 03 44.1	-0.4
KBL				IAmb	IAmb	20 03 45.0	
	comp=Z,5.4nm,1.3s						
ABKAR	Akbulak array	57.93	310	P	P	20 03 46.6	-0.7
DLBC	Dease Lake	58.47	38	P	P	20 03 51.4	+0.3
	comp=Z,4.4nm,0.8s,baz=225,slow=20,SNR=3.4						
DLBC	Dease Lake	58.47	38	P	P	20 03 51.2	+0.1
RES	Resolute Bay	62.46	14	P	P	20 04 18.2	+0.3
	comp=Z,1.1nm,0.8s,baz=309,slow=5.3,SNR=4.2						
RES				pP	pP	20 04 31.1	+0.2
	comp=Z,1.8nm,0.7s,baz=312,slow=8.6,SNR=6.9						
RES	Resolute Bay	62.46	14	P	P	20 04 18.3	+0.3
RES				IAmb	IAmb	20 04 35.5	
	comp=Z,2.5nm,1.0s						
YKA	Yellowknife Ar	63.65	30	P	P	20 04 26.8	+0.8
	comp=Z,1.3nm,0.8s,baz=301,slow=6.3,SNR=14						
YKA				pP	pP	20 04 39.2	+0.2
	comp=Z,1.3nm,0.7s,baz=302,slow=6.3,SNR=11						
GEYT	Alibeck	63.85	299	P	P	20 04 27.5	-0.4
GYA0B	ALIBECK ARRAY	63.85	299	P	P	20 04 28.2	+0.3
GYA0B				IAmb	IAmb	20 04 46.3	
	comp=Z,2.9nm,0.8s						
ARCES	ARCESS Array B	63.91	339	P	P	20 04 28.2	+0.5
	comp=Z,2.4nm,0.8s,baz=55,slow=6.7,SNR=1.9						
STKA	Stephens Creek	68.68	180	P	P	20 04 58.5	0.0
	comp=Z,5.2nm,0.8s,baz=346,slow=6.1,SNR=3.8						
STKA	Stephens Creek	68.68	180	P	P	20 04 59.3	+0.8
FINES	FINESS Array B	68.75	332	P	P	20 04 58.9	+0.3
	comp=Z,2.1nm,0.8s,baz=67,slow=7.7,SNR=2.3						
FINES	FINESS Array B	68.75	332	P	P	20 05 00.1	+1.4
FORT	Forrest	68.75	192	P	P	20 05 00.0	+1.1
E07A	Sunnyside	69.35	47	P	P	20 05 04.0	+1.2
E07A				IAmb	IAmb	20 05 05.0	
	comp=Z,8.4nm,1.0s						
BBOO	Buckleboo	69.80	185	P	P	20 05 04.8	-0.6
KBZ	Khabaz	70.89	311	P	P	20 05 11.8	-0.4
	comp=Z,1.6nm,0.9s,baz=80,slow=19,SNR=2.6						
FFC	Flin Flon	73.55	33	P	P	20 05 27.9	+0.1
FFC				IAmb	IAmb	20 05 30.1	
	comp=Z,8.0nm,1.2s						
NB2	NORSAR Subarra	74.11	337	P	pP	20 05 44.0	-0.2
	comp=Z,2.9nm,1.1s,baz=40,slow=5.9						
NOA	NORSAR Array B	74.11	337	pP	pP	20 05 44.1	-0.2
	comp=Z,0.9nm,0.6s,baz=39,slow=5.9,SNR=4.7						
AKASG	Malin Array Be	74.25	322	P	P	20 05 31.4	-0.6
	comp=Z,1.1nm,0.5s,baz=46,slow=6.1,SNR=7.5						
AKASG				pP	pP	20 05 44.8	-0.5
	comp=Z,1.7nm,0.5s,baz=47,slow=6.2,SNR=5.6						
AKASG	Malin Array Be	74.25	322	P	P	20 05 32.1	+0.1
NVAR	Mina Array Bea	74.84	53	P	P	20 05 37.6	+1.6
	comp=Z,0.7nm,0.6s,baz=276,slow=5.4,SNR=4.9						
NVAR	Mina Array Bea	74.84	53	P	P	20 05 37.1	+1.1
ELK	Elko	75.40	50	P	P	20 05 40.5	+1.3
	comp=Z,0.9nm,0.7s,baz=315,slow=7.1,SNR=2.6						
ELK	Elko	75.40	50	P	P	20 05 39.9	+0.8
FRB	Frobisher Bay	76.63	13	P	P	20 05 45.9	+0.5
	comp=Z,2.1nm,0.5s,baz=325,slow=5.6,SNR=7.0						
FRB				pP	pP	20 05 59.1	+0.5
	comp=Z,4.2nm,0.8s,baz=325,slow=6.2,SNR=5.5						
PDAR	Pinedale Array	77.51	46	P	P	20 05 52.4	+1.3
	comp=Z,0.8nm,0.6s,baz=269,slow=2.2,SNR=11						
PDAR				pP	pP	20 06 05.7	+1.3
	comp=Z,0.6nm,0.6s,baz=248,slow=1.0,SNR=3.9						
PDAR	Pinedale Array	77.51	46	P	P	20 05 51.8	+0.7
BUR08	Bucovina Ar. S	78.26	322	P	P	20 05 55.1	+0.1
BUR08				IAmb	IAmb	20 06 15.9	
	comp=Z,4.8nm,1.2s						
BURAR	Bucovina Array	78.27	322	P	P	20 05 54.6	-0.5
BRTR	Keskin Array B	78.84	312	P	P	20 05 58.8	+0.4
	comp=Z,0.3nm,0.5s,baz=91,slow=7.9,SNR=2.2						
BRTR	Keskin Array B	78.84	312	P	P	20 05 57.9	-0.5
RDMU	Red Mountain	78.90	47	P	P	20 05 59.9	+1.0
ULM	Lac du Bonnet	79.35	33	P	P	20 06 01.0	+0.2
	comp=Z,1.3nm,0.6s,baz=329,slow=12,SNR=3.4						

ULM				pP	pP	20 06 14.4	+0.4
	comp=Z,1.7nm,0.7s,baz=284,slow=2.9,SNR=3.3						
ULM	Lac du Bonnet	79.35	33	P	P	20 06 00.7	-0.1
ULM				IAmb	IAmb	20 06 15.5	
	comp=Z,4.6nm,1.0s						
RAR	Rarotonga	80.16	126	LR	LR	20 43 00.4	
	comp=Z,20nm,18.8s,baz=320,slow=37						
PSZ	Piszkesteto	80.61	325	P	P	20 06 10.0	+2.3
PSZ				IAmb	IAmb	20 06 22.4	
	comp=Z,6.5nm,1.0s						
VYHS	Vyhne	80.67	325	*e*P	pP	20 06 18.6	-2.7
GERES	GERESS Array B	82.65	328	pP	pP	20 06 31.6	-0.3
	comp=Z,0.9nm,0.7s,baz=53,slow=6.9,SNR=4.0						
GERES	GERESS Array B	82.65	328	P	P	20 06 17.7	-0.8
SCHQ	Schefferville	85.19	16	P	P	20 06 30.2	-1.0
	comp=Z,2.1nm,0.9s,baz=23,slow=7.7,SNR=2.0						
SCHQ	Schefferville	85.19	16	P	P	20 06 30.5	-0.8
SCHQ				IAmb	IAmb	20 06 46.2	
	comp=Z,11nm,1.1s						
TXAR	Lajitas Array	89.97	52	P	P	20 06 56.1	+1.2
	comp=Z,0.8nm,0.6s,baz=309,slow=3.2,SNR=11						
TXAR				pP	pP	20 07 08.1	-0.2
	comp=Z,0.7nm,0.7s,baz=298,slow=1.9,SNR=4.7						
TXAR	Lajitas Array	89.97	52	P	P	20 06 54.9	+0.1
R49A	Shelbyville	93.44	35	P	P	20 07 08.4	-2.2
LPAZ	La Paz	146.55	60	PKPbc	PKPab	20 13 38.3	-0.3
	comp=Z,2.0nm,0.5s,baz=341,slow=1.8,SNR=11						
LPAZ				pPKPbc	pPKPbc	20 13 51.5	+0.2
	comp=Z,2.0nm,0.5s,baz=251,slow=3.6,SNR=4.7						
LPAZ	La Paz	146.55	60		PKPbc	20 13 38.1	+0.5
PB11	IPOC Station P	147.76	66		PKPbc	20 13 39.1	-1.2
SIV	San Ignacio	150.93	50	PKPbc	PKiKP	20 13 48.7	-0.1
	comp=Z,1.9nm,0.7s,baz=300,slow=2.0,SNR=10.0						
SIV				PKPab	pPKPdf	20 13 56.3	-0.1
	comp=Z,1.2nm,0.6s,baz=302,slow=3.7,SNR=4.8						
SIV				pPKPbc	pPKPbc	20 14 03.0	+0.9
	comp=Z,1.9nm,0.7s,baz=280,slow=3.5,SNR=4.9						
PLCA	Paso Flores	154.87	108	PKPbc	PKiKP	20 13 57.2	+0.9
	comp=Z,0.8nm,0.6s,baz=77,slow=9.6,SNR=2.9						

IDC ***25*** *19:54:50.0±0.5, 2°.71S×140°.50E, h0^{km}, mb4.2/21, mb1 4.3/23, mb1mx4.2/49, mbtmp4.2/23, ML2.0/1, MS3.7/10, Ms1 3.7/10, ms1mx3.4/29, Error ellipse: s-maj=19.5km s-min=13.3km az=86.0*

DJA ***25*** *19:54:52.3±0.4, 3°S±4°×14°1E±°, h10^{km}, M4.9/12, mb4.7/12, mB5.3/3, MLv4.9/4, Mw(mB)4.8/3*

NEIC ***25*** *19:54:55.0±2.4, 2°.76S±0°.09×140°.44E±0°.07, h38^{km}±6^{km}, mb4.6/39, Error ellipse: s-maj=13.1km s-min=10.3km az=195.0*

ISC 25 19:54:53.4±0.4**, 2°.77S**±0°.05×**140°.48E**±0°.06**, h24^{km}, n127,** σ**1^{s}26**/120**, mb4.5**/32**, MS3.6**/8**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	0.34	42	P	Pb	19 54 54.2	-6.8
GENI	Genyem	0.35	300	P	Pb	19 55 00.0	-1.1
GENI				S	Sb	19 55 07.0	+0.5
WAMI	Wamena	2.08	238	P	Pb	19 55 29.4	-1.1
WAMI				S	Sb	19 55 57.5	+1.6
BAKI	Biak	4.64	290	P	Pb	19 56 14.7	+0.6
MANU	Manus Island	6.92	84		Pn	19 56 32.4	-1.0
FAKI	Fak Fak	8.22	269	P	Pn	19 56 56.3	+5.1
	37nm,0.8s						
FAKI	Fak Fak	8.22	269		Pn	19 56 51.1	-0.1
PMG	Port Moresby	9.36	135	Pn	Pn	19 57 08.3	+1.4
	0.7nm,0.3s,baz=318,slow=16,SNR=2.2						
PMG	Port Moresby	9.36	135		Pn	19 57 09.1	+2.2
SIJI	Sorong	9.40	281	Pn	Pn	19 57 11.1	+3.7
	3.1nm,0.3s,baz=121,slow=8.3,SNR=13						
SAUI	Saumlaki	10.50	240	P	Pn	19 57 26.4	+3.9
	62nm,0.7s						
SAUI	Saumlaki	10.50	240		Pn	19 57 23.6	+1.1
COEN	Coen	11.43	167	Pn	Pn	19 57 37.3	+2.0
AAI	Ambon	12.30	265	P	Pn	19 57 50.6	+3.5
	30nm,0.7s						
LBMI	Labuha	13.14	279	P	P	19 58 05.8	-2.8
NLAI	Namlea	13.37	268	P	P	19 58 07.7	-3.4
	28nm,0.9s						
MTN	Manton Dam	13.63	222		Pn	19 58 03.9	-1.4
SANI	Sanana	14.49	273	P	Pn	19 58 18.8	+1.7
	30nm,0.9s						
KMSI	Cibinong	16.82	281	P	P	19 58 50.1	+0.6
	740nm36nm,0.9s						
GUMO	Guam	16.83	15	LR	LR	20 05 13.1	
	comp=Z,164nm,18.7s,baz=200,slow=37						
KNRA	Kununurra	17.25	221	P	Pn	19 58 53.1	+0.2
SOEI	Soe	17.54	246	P	P	19 58 58.2	+0.7
WB0	Warramunga Arr	17.91	199	P	Pn	19 59 00.5	-0.6
WB0				IAmb	IAmb	19 59 08.0	
	comp=Z,38nm,1.1s						
WR0	Warramunga Arr	18.04	198	P	Pn	19 59 02.0	-0.6
WR0				IAmb	IAmb	19 59 12.6	
	comp=Z,25nm,0.6s						
WRAB	Tennant Creek	18.08	199	P	Pn	19 59 01.9	-1.2
WRAB				IAmb	IAmb	19 59 09.4	
	comp=Z,39nm,0.8s						
WB2	Warramunga Arr	18.09	199	P	Pn	19 59 02.0	-1.2
WB2				IAmb	IAmb	19 59 09.6	
	comp=Z,47nm,0.9s						
WRA	Warramunga Arr	18.09	199	P	Pn	19 59 03.5	+0.3
	comp=Z,2.3nm,0.3s,baz=20,slow=12,SNR=63						
WRA				LR	LR	20 06 41.8	
	comp=Z,387nm,18.9s,baz=45,slow=39						
WRA	Warramunga Arr	18.09	199	P	Pn	19 59 02.0	-1.2
CTAO	Charters Tower	18.11	162		P	19 59 04.0	+0.2
MMRI	Maumere	19.05	251	P	P	19 59 13.1	-1.1
MMRI				IAmb	IAmb	19 59 27.8	
	comp=Z,20nm,0.8s						
BNSI	Bone	20.39	265	P	Pn	19 59 33.5	+2.6
	comp=Z,43nm,1.1s						
BKSI	Bulukumba	20.46	262	P	Pn	19 59 31.0	-0.7
	comp=Z,26nm,0.8s						
SPSI	Sidrap Palu	20.70	266	P	Pn	19 59 33.9	-0.7
KAPI	Kappang	20.80	263	P	P	19 59 34.1	+1.0
	comp=Z,4.1nm,0.3s,baz=153,slow=4.5,SNR=1.3						
FITZ	Fitzroy Crossi	21.06	223	P	P	19 59 36.1	+0.2
	comp=Z,9.7nm,0.8s,baz=47,slow=9.7,SNR=19						
FITZ				LR	LR	20 09 27.6	
	comp=Z,271nm,18.6s,baz=38,slow=42						
FITZ	Fitzroy Crossi	21.06	223	P	P	19 59 35.6	-0.3
AS31	Alice Springs	21.73	196	P	P	19 59 41.6	-1.4
ASAR	Alice Springs	21.73	196	P	P	19 59 43.1	0.0
	comp=Z,3.9nm,0.4s,baz=29,slow=9.9,SNR=76						
ASAR				S	S	20 03 40.3	-2.3
	comp=Z,1.4nm,0.6s,baz=16,slow=27,SNR=2.0						
ASAR				LR	LR	20 08 45.9	
	comp=Z,413nm,18.4s,baz=22,slow=38						
ASAR	Alice Springs	21.73	196	P	P	19 59 41.5	-1.6
EIDS	Eidsvold	24.68	156	P	P	20 00 14.3	+1.6
PSA00	Pilbara Seismi	27.42	225	P	P	20 00 38.3	+0.8
PSA00				IAmb	IAmb	20 00 46.5	
	comp=Z,10nm,0.9s						
STKA	Stephens Creek	28.97	178	P	P	20 00 50.4	-0.8
	comp=Z,0.8nm,0.6s,baz=320,slow=7.9,SNR=1.3						
STKA	Stephens Creek	28.97	178	P	P	20 00 51.0	-0.2
JCJ	Chichijima	29.74	3	LR	LR	20 10 15.9	
	comp=Z,75nm,20.1s,baz=118,slow=31						
H11S3	WAKE ISLAND Hy	33.35	50	T	T	20 36 13.0	
	baz=232,slow=75,SNR=227						
H11S2	WAKE ISLAND Hy	33.37	50	T	T	20 36 17.1	
	baz=232,slow=75,SNR=102						
H11S1	WAKE ISLAND Hy	33.37	50	T	T	20 36 22.8	
	baz=232,slow=75,SNR=36						
H11N1	WAKE ISLAND Hy	34.24	48	T	T	20 37 25.4	
	baz=229,slow=76,SNR=74						
H11N2	WAKE ISLAND Hy	34.26	48	T	T	20 37 24.3	
	baz=229,slow=76,SNR=35						
H11N3	WAKE ISLAND Hy	34.26	48	T	T	20 37 24.6	
	baz=229,slow=76,SNR=45						
TOO	Toolangi	34.94	173	P	P	20 01 44.2	+0.7
TOO				IAmb	IAmb	20 02 01.5	
	comp=Z,6.0nm,0.9s						
MORW	Morawa	34.99	219	P	P	20 01 42.9	-1.1
MORW				IAmb	IAmb	20 01 55.3	
	comp=Z,13nm,1.1s						
QIZ	Qiongzhong	37.11	307	P	P	20 02 01.5	-0.8
QIZ				S	S	20 07 45.5	-1.9
MJAR	Matsushiro Arr	39.16	357	P	P	20 02 18.4	-1.0
	comp=Z,0.7nm,0.5s,baz=174,slow=7.8,SNR=2.2						
MJAR				LR	LR	20 16 13.7	
	comp=Z,47nm,21.4s,baz=115,slow=33						
NJ2	Nanjing	40.26	331	*e*P	P	20 02 30.5	+2.0
KSRS	Korea Array	41.68	345	P	P	20 02 41.1	+1.0
	comp=Z,0.6nm,0.6s,baz=170,slow=8.8,SNR=3.0						
KSRS				LR	LR	20 17 14.8	
	comp=Z,60nm,20.4s,baz=200,slow=32						
RPSI	Rantau Prapat	41.89	277	P	P	20 02 40.8	-1.5
RPSI				IAmb	IAmb	20 02 48.6	
	comp=Z,15nm,0.8s						
RPSI	Rantau Prapat	41.89	277	P	P	20 02 41.6	-0.7
PSI	Prapat	41.90	277	P	P	20 02 41.6	-1.0
	comp=Z,7.0nm,0.7s,baz=88,slow=3.7,SNR=9.9						
GSI	Gunungsitoli	43.08	275	P	P	20 02 50.8	-1.1
GSI				IAmb	IAmb	20 02 54.4	
	comp=Z,14nm,0.9s						
CM31	Chiang Mai Arr	46.00	299	P	P	20 03 15.5	+0.3
CM31				IAmb	IAmb	20 03 16.8	
	comp=Z,7.0nm,0.9s						
CMAR	Chiang Mai Arr	46.00	299	P	P	20 03 16.0	+0.7
	comp=Z,3.8nm,0.7s,baz=120,slow=6.5,SNR=26						
CMAR	Chiang Mai Arr	46.00	299	P	P	20 03 15.7	+0.4
CHTO	Chiang Mai	46.14	299	P	P	20 03 16.1	-0.3
XAN	Xi'an	47.15	324	P	P	20 03 24.8	+0.7
USRK	Ussuriysk Ar.	47.37	352	P	P	20 03 25.9	+0.4
	comp=Z,2.2nm,0.8s,baz=110,slow=8.4,SNR=2.5						
USRK	Ussuriysk Ar.	47.37	352	P	P	20 03 25.7	+0.2
YSS	Yuzh-Sakhalins	49.55	2	P	P	20 03 41.3	-0.9
HHC	Hu-ho-hao-te	50.80	332	*e*P	P	20 03 54.5	+2.5
LZH	Lanzhou	51.60	322	*e*P	P	20 03 59.8	+1.6
LZH				pP	sP	20 04 10.0	+1.4
LZH				sP	pP	20 04 13.3	+7.6
LZH				PP	PP	20 05 53.5	-2.4
KLR	Kul'dur	52.34	353	P	P	20 04 03.0	-0.3
	comp=Z,2.3nm,0.7s,baz=206,slow=3.5,SNR=13						
GTA	Gaotai	56.17	323	P	P	20 04 33.0	+1.4
GTA				pP	sP	20 04 42.5	+0.4
GTA				sP	pP	20 04 46.5	+7.4
LSA	Lhasa	57.13	308	P	P	20 04 40.1	+1.2
LSA				IAmb	IAmb	20 04 59.2	
	comp=Z,10nm,1.6s						
SONM	Songino Array	58.54	334	P	P	20 04 48.8	+0.8
	comp=Z,0.7nm,0.6s,baz=147,slow=7.8,SNR=5.8						
SONM				LR	LR	20 31 04.0	
	comp=Z,38nm,19.3s,baz=182,slow=37						
SONM	Songino Array	58.54	334	P	P	20 04 48.1	0.0
SEY	Seymchan	66.14	6	P	P	20 05 38.0	-0.5
	comp=Z,1.3nm,0.8s,baz=240,slow=6.9,SNR=5.4						
WMQ	Urumqi	66.16	321	*e*P	P	20 05 40.5	+1.4
WMQ				sP	sP	20 05 54.8	+5.1
MK31	Makanchi Array	70.92	322	P	P	20 06 09.0	+0.3
MKAR	Makanchi Array	70.92	322	P	P	20 06 09.6	+0.8
	comp=Z,3.0nm,0.6s,baz=105,slow=8.0,SNR=22						
MKAR	Makanchi Array	70.92	322	P	P	20 06 08.7	0.0
MAKZ	Makanchi	71.12	322	P	P	20 06 09.8	-0.1
MAKZ				IAmb	IAmb	20 06 13.9	
	comp=Z,5.9nm,0.6s						
KSH	Kashi	72.41	313	P	P	20 06 20.3	+2.3
KSH				pP	sP	20 06 30.3	+1.6
KSH				S	S	20 15 40.8	+0.1
KSH				sS	sS	20 15 57.5	+3.9
ZAA0	Zalesovo Array	72.88	329	P	P	20 06 18.7	-1.6
ZALV	Zalesovo Beam	72.88	329	P	P	20 06 20.6	+0.3
	comp=Z,2.5nm,0.8s,baz=104,slow=6.3,SNR=8.1						
ZALV	Zalesovo Beam	72.88	329	P	P	20 06 19.1	-1.2
AAK	Ala-Archa	74.48	316	P	P	20 06 31.7	+1.5
KURK	Kurchatov	74.78	324	P	P	20 06 31.6	+0.1
KURK				IAmb	IAmb	20 06 32.8	
	comp=Z,6.3nm,1.1s						
KURBB	Kurchatov Arra	74.80	324	P	P	20 06 32.0	+0.4
	comp=Z,2.3nm,0.9s,baz=113,slow=5.3,SNR=13						
VNDA	Vanda	75.57	175	P	P	20 06 36.1	+0.5
	comp=Z,1.3nm,0.8s,baz=130,slow=20,SNR=3.1						
VNDA				LR	LR	20 40 37.4	
	comp=Z,122nm,19.0s,baz=341,slow=36						
KBL	Kabul	76.38	306	P	P	20 06 40.7	-0.7
KBL				IAmb	IAmb	20 06 44.0	
	comp=Z,3.8nm,0.7s						
KKAR	Karatay Array	77.41	315	P	P	20 06 46.4	-0.3
OHAK	Old Harbor	79.71	30	P	P	20 06 59.6	+0.7
SVW2	Sparrevohn	80.14	26	P	P	20 07 02.0	+0.7
KDAK	Kodiak Island	80.27	30	P	P	20 07 01.9	-0.1
	comp=Z,5.6nm,0.6s,baz=216,slow=16,SNR=2.2						
KDAK	Kodiak Island	80.27	30	P	P	20 07 01.1	-0.9
NRIK	Noril'sk	80.28	343	P	P	20 07 02.4	+0.5
	comp=Z,1.5nm,0.5s,baz=91,slow=7.9,SNR=4.1						
NRIK				LR	LR	20 41 56.2	
	comp=Z,36nm,22.0s,baz=136,slow=35						
BRVK	Borovoye	80.44	325	P	P	20 07 03.2	+0.1
BRVK				IAmb	IAmb	20 07 11.9	
	comp=Z,4.8nm,0.8s						
HRA	Herat	81.86	305	P	P	20 07 11.2	-0.1
PPLA	Purkeypile	82.32	25	P	P	20 07 12.8	-0.3
PPLA				IAmb	IAmb	20 07 41.5	
	comp=Z,14nm,1.4s						
IMAR	Indian Mountai	82.88	22	P	P	20 07 15.5	-0.2
IL31		85.16	24	P	P	20 07 25.9	-1.4
ILAR	Eielson Array	85.16	24	P	P	20 07 25.6	-1.7
	comp=Z,0.8nm,0.4s,baz=259,slow=4.4,SNR=12						
GEYT	Alibeck	85.66	308	P	P	20 07 31.7	+1.2
	comp=Z,3.0nm,0.9s,baz=219,slow=1.9,SNR=7.5						
GEYT	Alibeck	85.66	308	P	P	20 07 29.3	-1.2
GYA0B	ALIBECK ARRAY	85.66	308	P	P	20 07 28.0	-2.5
ABKAR	Akbulak array	85.91	320	P	P	20 07 30.2	-1.1
BMAR	Burnt Mountain	86.80	22	P	P	20 07 35.3	-0.1
BCAR	Beaver Creek A	86.91	26	P	P	20 07 35.7	-0.4
EGAK	Eagle	87.54	25	P	P	20 07 39.6	+0.6
EGAK				IAmb	IAmb	20 07 41.1	
	comp=Z,6.7nm,1.2s						
DAWY	Dawson	88.16	26	P	P	20 07 42.8	+0.7
HYT	Haines Junctio	88.50	29	P	P	20 07 44.3	+0.4
YKA	Yellowknife Ar	99.32	27	P	Pdif	20 08 32.6	-0.7
	comp=Z,0.8nm,1.0s,baz=286,slow=3.6,SNR=5.6						
ARCES	ARCESS Array B	101.14	341	P	Pdif	20 08 40.8	-0.5
	comp=Z,2.2nm,0.9s,baz=70,slow=11,SNR=4.2						
ARCES	ARCESS Array B	101.14	341		Pdif	20 08 39.6	-1.7
SCHQ	Schefferville	123.55	19	PKP	PKiKP	20 13 49.0	0.0
	comp=Z,1.7nm,0.8s,baz=347,slow=14,SNR=1.9						
SCHQ	Schefferville	123.55	19		PKiKP	20 13 49.3	+0.2
TORD	Torodi Ar. Bea	137.97	287	PKP	PKPdf	20 14 18.1	+0.9
	comp=Z,0.6nm,1.0s,baz=32,slow=1.7,SNR=1.5						
KIC	Kosan Boka	145.15	277	*e*PKP1	PKPdf	20 14 29.9	-0.2
	comp=Z,22nm,0.8s						
DBIC	Dimbokro	145.24	278	PKPbc	PKPbc	20 14 29.8	-0.1
	comp=Z,6.7nm,0.7s,baz=74,slow=2.9,SNR=10						
DBIC	Dimbokro	145.24	278		PKPbc	20 14 29.4	-0.5
TIC	Toumodi	145.41	278	*e*PKP1	PKPab	20 14 30.7	0.0
LIC	Lamto	145.45	277	*e*PKP1	PKPab	20 14 30.7	-0.1
	comp=Z,56nm,1.6s						
LPAZ	La Paz	145.97	125	PKPbc	PKiKP	20 14 35.0	-1.3
	comp=Z,3.8nm,0.7s,baz=244,slow=2.3,SNR=8.1						
LPAZ	La Paz	145.97	125		PKiKP	20 14 35.7	-0.6
CPUP	Villa Florida	146.34	150	PKPbc	PKPab	20 14 34.3	+0.6
	comp=Z,2.4nm,0.6s,baz=250,slow=6.0,SNR=4.5						
SDV	Santo Domingo	148.48	78	PKPbc	PKPbc	20 14 39.2	-0.2
	comp=Z,4.8nm,0.8s,baz=231,slow=3.5,SNR=7.1						
SIV	San Ignacio	151.69	132	PKPbc	PKiKP	20 14 48.1	+0.7
	comp=Z,2.1nm,0.7s,baz=252,slow=2.7,SNR=7.2						

BJI ***25*** *19:56:10.3±0.0, 5°.99S×155°.50E, h181^{km}, mB4.8/27, mb4.5/38*

MOS ***25*** *19:56:12.8±0.8, 6°.05S×154°.92E, h182^{km}, mb4.5/8, Error ellipse: s-maj=8.6km s-min=7.2km az=93.6*

IDC ***25*** *19:56:13.7±0.6, 6°.10S×154°.88E, h176^{km}±4^{km}, mb4.2/27, mb1 4.3/30, mb1mx4.2/49, mbtmp4.7/30, Error ellipse: s-maj=8.4km s-min=7.6km az=84.0*

DJA ***25*** *19:56:13.0±1.1, 6°S±7°×15°5E±1°1, h190^{km}±5^{km}, M5.1/36, mb5.1/36, mB5.3/13, MLv5.8/1, Mw(mB)4.8/13, Mwp6.1/1*

NEIC ***25*** *19:56:14.2±1.6, 6°.09S±0°.08×154°.91E±0°.08, h182^{km}±4^{km}, mb5.1/99, Error ellipse: s-maj=12.7km s-min=10.3km az=218.0*

ISC 25 19:56:14.0±0.4**, 6°.10S**±0°.05×**154°.95E**±0°.05**, h179^{km}**±3^{km}**, h179^{km}:pP-P, n342,** σ**1^{s}13**/371**, mb4.9**/107**, 8C-5D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.36	304		Pn	19 57 06.5	-0.5
KRVT	Keravat (AS076	3.41	301	P	Pn	19 57 07.3	-0.4
	191nm,0.3s,baz=124,slow=1.3,SNR=77						
KRVT				S	Sn	19 57 47.7	-1.9
	514nm,0.3s,baz=233,slow=11,SNR=8.8						
HNR	Honiara	5.96	124	P	Pn	19 57 39.5	-1.0
	15nm,0.3s,baz=97,slow=0.1,SNR=8.5						
HNR	Honiara	5.96	124	*e*P	Pn	19 57 39.0	-1.5
HNR	Honiara	5.96	124	P	Pn	19 57 38.9	-1.5
HNR	Honiara	5.96	124		Pn	19 57 38.9	-1.5
PMG	Port Moresby	8.39	246	P	Pn	19 58 14.5	+2.0
	9.7nm,0.3s,baz=77,slow=6.2,SNR=25						
PMG				S	Sn	20 00 01.9	+15
	3.5nm,0.3s,baz=25,slow=17,SNR=4.1						
PMG	Port Moresby	8.39	246	P	Pn	19 58 13.9	+1.3
PMG	Port Moresby	8.39	246		Pn	19 58 13.8	+1.3
MANU	Manus Island	8.57	298		Pn	19 58 14.6	-0.3
COEN	Coen	13.98	235	P	Pn	19 59 26.5	+1.9
	baz=14,SNR=29						
COEN	Coen	13.98	235	P	P	19 59 27.0	0.0
JAY	Jayapura	14.64	283	P	Pn	19 59 32.4	-0.5
	47nm,1.1s						
JAY	Jayapura	14.64	283	P	Pn	19 59 32.2	-0.7
JAY				pmax	pmax		
	comp=Z,76nm,0.9s						
GENI	Genyem	15.14	283	P	P	19 59 41.7	+1.7
	comp=Z,19µmcomp=Z,317nm,0.6s						
MTSU	Mount Surprise	15.84	220	P	Pn	19 59 50.3	+2.8
	baz=16,SNR=29						
CTA	Charters Tower	16.28	210	P	Pn	19 59 54.7	+1.9
	comp=Z,4.8nm,0.3s,baz=27,slow=12,SNR=38						
DZM	Mont Dzumac	19.38	146	P	P	20 00 27.5	+1.1
	comp=Z,3.3nm,0.3s,baz=250,slow=9.2,SNR=25						
TARA	Tarawa	19.41	68	P	P	20 00 26.8	+0.2
TARA				IAmb	IAmb	20 01 06.3	
	comp=Z,117nm,1.1s						
EIDS	Eidsvold	19.52	191	P	P	20 00 29.3	+1.5
	baz=20,SNR=9.5						
EIDS	Eidsvold	19.52	191	P	P	20 00 28.7	+0.9
EIDS				IAmb	IAmb	20 00 34.8	
	comp=Z,72nm,0.7s						
QIS	Mount Isa	20.70	225	P	P	20 00 41.2	+0.7
	baz=21,SNR=21						
RMQ	Roma	21.12	196	P	P	20 00 46.1	+1.3
	baz=21,SNR=60						
QLP	Quilpie	22.79	205	P	P	20 01 01.5	+0.2
	baz=23,SNR=68						
KDU	Kakadu	23.11	252	P	P	20 01 04.7	+0.4
	baz=23,SNR=5.5						
SAUI	Saumlaki	23.55	264	P	P	20 01 09.2	+0.8
SAUI				IAmb	IAmb	20 01 23.0	
	comp=Z,70nm,0.7s						
WR0	Warramunga Arr	24.15	233	P	P	20 01 14.3	+0.5
FUNA	Funafuti	24.17	97	P	P	20 01 14.3	+0.3
FUNA				IAmb	IAmb	20 01 40.3	
	comp=Z,142nm,1.4s						
WB0	Warramunga Arr	24.17	234	P	P	20 01 14.3	+0.3
SIJI	Sorong	24.20	281	P	P	20 01 14.6	+0.3
	comp=Z,12nm,0.5s,baz=44,slow=14,SNR=8.0						
WRAB	Tennant Creek	24.29	234	*d i*P	P	20 01 15.5	+0.4
WRAB				pmax	pmax		
	comp=Z,57nm,0.8s						
WRAB	Tennant Creek	24.29	234	P	P	20 01 13.8	-1.3
WB2	Warramunga Arr	24.29	234	P	P	20 01 15.9	+0.8
WRA	Warramunga Arr	24.30	234	P	P	20 01 15.6	+0.4
	comp=Z,86nm,0.5s,baz=65,slow=12,SNR=53						
WRA				S	S	20 05 19.5	-1.7
	comp=Z,8.9nm,0.9s,baz=53,slow=16,SNR=5.4						
WRA	Warramunga Arr	24.30	234	P	P	20 01 14.9	-0.3
WRA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
WRA	Warramunga Arr	24.30	234	P	P	20 01 14.9	-0.3
ARMA	Armidale	24.40	187	P	P	20 01 17.0	+1.0
	baz=25,SNR=70						
ARMA	Armidale	24.40	187	P	P	20 01 16.8	+0.8
ARMA				IAmb	IAmb	20 01 18.0	
	comp=Z,71nm,0.7s						
LHI	Lord Howe Isla	25.59	172	P	P	20 01 26.7	0.0
AS31	Alice Springs	26.74	227	P	P	20 01 37.0	-0.2
AS31				IAmb	IAmb	20 01 37.5	
	comp=Z,14nm,0.4s						
ASAR	Alice Springs	26.74	227	P	P	20 01 37.0	-0.2
	comp=Z,24nm,0.5s,baz=58,slow=9.1,SNR=41						
ASAR				PcP	PcP	20 04 55.8	-0.1
	comp=Z,1.9nm,0.5s,baz=103,slow=1.8,SNR=3.0						
ASAR				S	S	20 05 57.9	-1.8
	comp=Z,1.3nm,0.5s,baz=60,slow=14,SNR=2.8						
ASAR	Alice Springs	26.74	227	P	P	20 01 36.7	-0.5
ASAR						20 04 55.6	
ASAR	Alice Springs	26.74	227	P	P	20 01 36.7	-0.5
ASAR				PcP	PcP	20 04 55.6	-0.2
CMSA	Cobar Meteorol	26.76	198	P	P	20 01 37.2	0.0
	baz=27,SNR=57						
MGCD	Mangrove Creek	27.21	187	P	P	20 01 42.3	+1.1
	baz=27,SNR=6.3						
KNRA	Kununurra	27.39	248	P	P	20 01 42.9	0.0
	baz=28,SNR=8.4						
KNRA	Kununurra	27.39	248	P	P	20 01 42.8	-0.2
KNRA				IAmb	IAmb	20 02 15.5	
	comp=Z,41nm,0.8s						
RIV	Riverview	27.82	187	P	P	20 01 47.3	+0.7
RIV				pmax	pmax		
	comp=Z,83nm,1.3s						
LBMI	Labuha	27.93	280	P	P	20 01 48.3	+0.5
	comp=Z,27µmcomp=Z,53nm,0.9s						
TNTI	Ternate	28.37	283	P	P	20 01 53.0	+1.3
TNTI				IAmb	IAmb	20 02 32.7	
	comp=Z,17nm,1.0s						
STKA	Stephens Creek	28.53	204	P	P	20 01 52.8	-0.1
	baz=29,SNR=19						
STKA	Stephens Creek	28.53	204	P	P	20 01 52.6	-0.3
	comp=Z,11nm,0.5s,baz=22,slow=8.5,SNR=29						
STKA	Stephens Creek	28.53	204	P	P	20 01 52.8	-0.1
STKA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
STKA	Stephens Creek	28.53	204	P	P	20 01 52.8	-0.1
YNG	Young	28.71	191	P	P	20 01 55.6	+1.1
	baz=29,SNR=8.1						
SANI	Sanana	29.16	277	P	P	20 01 56.7	-2.0
	comp=Z,18nm,0.7s						
CNB	Canberra Magne	29.53	189	P	P	20 02 02.7	+0.9
	baz=30,SNR=5.7						
CAN	Canberra	29.60	190	P	P	20 02 03.4	+1.0
CAN				pmax	pmax		
	comp=Z,33nm,1.9s						
SOEI	Soe	30.60	261	P	P	20 02 12.4	+0.8
	comp=Z,46nm,0.8s						
SOEI	Soe	30.60	261	P	P	20 02 11.7	+0.1
SOEI				IAmb	IAmb	20 02 27.7	
	comp=Z,46nm,0.9s						
FITZ	Fitzroy Crossi	30.98	245	P	P	20 02 14.0	-0.7
	baz=31,SNR=33						
FITZ	Fitzroy Crossi	30.98	245	P	P	20 02 14.0	-0.7
	comp=Z,52nm,0.6s,baz=72,slow=5.4,SNR=68						
FITZ	Fitzroy Crossi	30.98	245	P	P	20 02 13.8	-0.9
HTT	Hallett	31.01	207	P	P	20 02 14.9	+0.1
	baz=31,SNR=9.1						
MILA	Mila	31.27	189	P	P	20 02 18.3	+1.2
	baz=32,SNR=8.1						
KMSI	Cibinong	31.62	281	P	P	20 02 20.4	0.0
	comp=Z,924nmcomp=Z,87nm,0.7s						
WRKA	Warakurna	31.73	231	P	P	20 02 20.6	-0.6
	baz=32,SNR=32						
BBOO	Buckleboo	31.88	211	P	P	20 02 22.1	-0.3
	baz=32,SNR=29						
BBOO	Buckleboo	31.88	211	P	P	20 02 21.9	-0.5
BBOO				IAmb	IAmb	20 02 22.8	
	comp=Z,42nm,0.8s						
TOO	Toolangi	32.50	194	P	P	20 02 28.6	+0.8
	baz=33,SNR=8.3						
TOO	Toolangi	32.50	194	P	P	20 02 27.8	+0.1
TOO				pmax	pmax		
	comp=Z,16nm,0.8s						
TOO	Toolangi	32.50	194	P	P	20 02 27.8	+0.1
TOO				IAmb	IAmb	20 02 29.4	
	comp=Z,16nm,0.8s						
LUWI	Luwuk	32.50	278	P	P	20 02 27.8	-0.2
	comp=Z,970nmcomp=Z,59nm,0.8s						
LUWI	Luwuk	32.50	278	P	P	20 02 28.0	-0.1
LUWI				IAmb	IAmb	20 02 29.8	
	comp=Z,56nm,1.0s						
MMRI	Maumere	32.54	264	P	P	20 02 28.0	-0.4
	comp=Z,1µmcomp=Z,153nm,0.7s						
MMRI	Maumere	32.54	264	P	P	20 02 27.7	-0.7
ARPS	Mount Arapiles	32.80	200	P	P	20 02 30.8	+0.4
	baz=33,SNR=23						
OUZ	Omahuta	33.69	152	P	P	20 02 39.6	+1.5
OUZ				IAmb	IAmb	20 03 09.8	
	comp=Z,59nm,1.4s						
BASI	Baing, Sumba	34.26	261	P	P	20 02 43.7	+0.4
	comp=Z,831nmcomp=Z,53nm,0.9s						
BNSI	Bone	34.74	271	P	P	20 02 48.0	+0.6
	comp=Z,24nm,1.0s						
KAPI	Kappang	35.05	270	P	P	20 02 50.3	+0.2

	comp=Z,15nm,0.6s,baz=198,slow=5.8,SNR=3.9						
SPSI	Sidrap Palu	35.11	272	P	P	20 02 50.1	-0.5
	comp=Z,15nm,1.1s						
FORT	Forrest	35.22	222	P	P	20 02 51.0	-0.2
	baz=35,SNR=13						
FORT	Forrest	35.22	222	P	P	20 02 50.7	-0.6
FORT				IAmb	IAmb	20 02 54.9	
	comp=Z,46nm,0.6s						
WBSI	Waikabubak, Su	35.39	262	P	P	20 02 52.6	-0.4
	comp=Z,765nmcomp=Z,66nm,0.8s						
MPSI	Mapaga	35.57	279	P	P	20 02 53.8	-0.7
	comp=Z,501nmcomp=Z,37nm,0.8s						
MOO	Moorlands	36.84	190	P	P	20 03 06.6	+1.6
	baz=37,SNR=13						
PLAI	Plampang	36.95	263	P	P	20 03 04.3	-1.9
	comp=Z,669nmcomp=Z,85nm,0.7s						
HIZ	Hauiti	36.97	154	P	P	20 03 06.7	+0.6
PSA00	Pilbara Seismi	37.27	242	P	P	20 03 07.9	-1.0
PSA00				IAmb	IAmb	20 03 09.0	
	comp=Z,25nm,0.8s						
PSA00	Pilbara Seismi	37.27	242	P	P	20 03 07.5	-1.3
PSA00				IAmb	IAmb	20 03 10.3	
	comp=Z,26nm,1.0s						
TAU	Tasmania Unive	37.28	189	P	P	20 03 09.8	+1.2
TAU				pmax	pmax		
	comp=Z,64nm,0.7s						
TAU	Tasmania Unive	37.28	189	P	P	20 03 09.8	+1.2
URZ	Urewera	37.81	151	P	P	20 03 13.5	+0.4
	comp=Z,14nm,0.7s,baz=279,slow=1.8,SNR=5.3						
URZ	Urewera	37.81	151	P	P	20 03 14.4	+1.3
URZ				IAmb	IAmb	20 04 36.1	
	comp=Z,104nm,1.5s						
QRZ	Quartz Range	37.99	158	P	P	20 03 16.0	+1.4
BKZ	Black Stump Fm	38.24	153	P	P	20 03 17.3	+0.5
BKZ				IAmb	IAmb	20 03 46.8	
	comp=Z,86nm,1.6s						
NNZ	Nelson	38.65	158	P	P	20 03 20.6	+0.5
THZ	Tophouse	38.95	158	P	P	20 03 22.9	+0.3
TUWZ	Tuamarina	39.05	157	P	P	20 03 24.1	+0.7
SNZO	South Karori	39.25	156	P	P	20 03 25.3	+0.3
BSWZ	Blackbirch Sta	39.27	157	P	P	20 03 25.2	0.0
BFZ	Birch Farm	39.37	154	P	P	20 03 26.1	+0.1
BFZ				IAmb	IAmb	20 04 42.9	
	comp=Z,119nm,1.3s						
BHW	Baring Head	39.40	156	P	P	20 03 26.4	+0.1
CMWZ	Cape Campbell	39.43	157	P	P	20 03 26.6	+0.1
FOZ	Fox Glacier	39.52	163	P	P	20 03 28.0	+0.8
FOZ				IAmb	IAmb	20 04 44.0	
	comp=Z,136nm,1.4s						
MSWZ	Moikau Station	39.56	156	P	P	20 03 28.2	+0.5
LTZ	Lake Taylor	39.62	160	P	P	20 03 28.5	+0.3
PLWZ	Palliser	39.69	156	P	P	20 03 28.7	0.0
KHZ	Kahutara	39.75	158	P	P	20 03 29.1	0.0
KHZ				IAmb	IAmb	20 03 29.6	
	comp=Z,62nm,0.8s						
OXZ	Oxford	40.02	161	P	P	20 03 31.1	-0.3
OXZ				IAmb	IAmb	20 03 33.5	
	comp=Z,54nm,0.5s						
RPZ	Rata Peaks	40.06	162	P	P	20 03 32.4	+0.7
	comp=Z,108nm,0.6s,baz=314,slow=1.9,SNR=67						
RPZ	Rata Peaks	40.06	162	P	P	20 03 32.2	+0.5
MEEK	Meekatharra	40.18	235	P	P	20 03 32.7	-0.3
	baz=40,SNR=85						
LBZ	Lake Benmore	40.41	163	P	P	20 03 33.9	-0.7
LBZ				IAmb	IAmb	20 03 35.9	
	comp=Z,67nm,1.0s						
WKZ	Wanaka	40.49	165	P	P	20 03 35.2	0.0
WKZ				IAmb	IAmb	20 04 03.9	
	comp=Z,162nm,1.5s						
JAGI	Jajag, Banyuwa	40.53	264	P	P	20 03 33.8	-2.2
JAGI	Jajag, Banyuwa	40.53	264	P	P	20 03 33.5	-2.5
JAGI				IAmb	IAmb	20 03 34.5	
	comp=Z,28nm,0.8s						
MQZ	McQueen's Vall	40.57	160	P	P	20 03 36.1	+0.3
MQZ				IAmb	IAmb	20 03 37.6	
	comp=Z,67nm,0.6s						
DCZ	Deep Cove	40.63	167	P	P	20 03 36.5	+0.1
DCZ				IAmb	IAmb	20 03 49.5	
	comp=Z,72nm,1.5s						
MLZ	Mavora Lakes	40.76	166	P	P	20 03 37.9	+0.3
MLZ				IAmb	IAmb	20 03 38.8	
	comp=Z,77nm,1.0s						
ODZ	Otahua Downs	41.14	163	P	P	20 03 40.4	-0.2
ODZ				IAmb	IAmb	20 04 32.9	
	comp=Z,41nm,1.2s						
GIRL	Giralia	42.55	243	P	P	20 03 53.3	+1.0
	baz=43,SNR=6.5						
GIRL	Giralia	42.55	243	P	P	20 03 52.6	+0.2
KLBR	Kellerberrin	43.03	229	P	P	20 03 55.2	-0.9
	baz=43,SNR=34						
MORW	Morawa	43.25	233	P	P	20 03 57.2	-0.7
	baz=43,SNR=13						
MORW	Morawa	43.25	233	P	P	20 03 57.1	-0.8
MORW				IAmb	IAmb	20 03 58.0	
	comp=Z,29nm,0.6s						
BLDU	Ballidu	43.38	231	P	P	20 03 58.2	-0.7
	baz=44,SNR=33						
NWAO	Narrogin (SRO)	44.06	228	P	P	20 04 03.9	-0.5
	baz=44,SNR=11						
NWAO	Narrogin (SRO)	44.06	228	P	P	20 04 03.8	-0.5
	comp=Z,20nm,0.7s,baz=64,slow=7.2,SNR=14						
NWAO	Narrogin (SRO)	44.06	228	P	P	20 04 03.2	-1.1
NWAO				pmax	pmax		
	comp=Z,28nm,0.9s						
NWAO	Narrogin (SRO)	44.06	228	P	P	20 04 03.2	-1.1
NWAO				IAmb	IAmb	20 04 06.0	
	comp=Z,28nm,0.8s						
UGM	Wanagama	44.12	265	P	P	20 04 04.5	-0.6
UGM				IAmb	IAmb	20 04 12.8	
	comp=Z,120nm,1.3s						
MUN	Mundaring	44.38	230	P	P	20 04 06.5	-0.4
	baz=44,SNR=11						
RKGY	Rocky Gully	45.07	226	P	P	20 04 12.8	+0.5
	baz=45,SNR=37						
KSM	Kuching	45.20	278	P	P	20 04 13.0	-0.6
MJAR	Matsushiro Arr	45.22	341	P	P	20 04 12.4	-1.0
	comp=Z,1.3nm,0.7s,baz=156,slow=13,SNR=2.3						
MJAR	Matsushiro Arr	45.22	341	P	P	20 04 12.1	-1.3
MJAR				pmax	pmax		
	comp=Z,3.0nm,1.4s						
MJAR	Matsushiro Arr	45.22	341	P	P	20 04 12.1	-1.3
CISI	Cisompet, Garu	46.81	265	P	P	20 04 24.6	-1.6
LEM	Lembang	47.02	266	P	P	20 04 28.0	-0.1
	comp=Z,59nm,0.6s,baz=44,slow=3.9,SNR=20						
LEM	Lembang	47.02	266	P	P	20 04 28.0	-0.1
XMIS	Christmas Isla	48.94	261	P	P	20 04 42.3	-0.2
XMIS				IAmb	IAmb	20 04 43.2	
	comp=Z,64nm,0.9s						
ERM	Erimo	49.08	348	P	P	20 04 43.7	+0.7
ERM				pmax	pmax		
	comp=Z,98nm,1.5s						
ERM	Erimo	49.08	348	P	P	20 04 43.7	+0.7
ERM				IAmb	IAmb	20 05 29.9	
	comp=Z,98nm,1.5s						
KSRS	Korea Array	50.13	332	P	P	20 04 50.6	-0.5
	comp=Z,1.5nm,0.6s,baz=150,slow=7.7,SNR=7.3						
KSAR	Wonju Array Be	50.14	332	P	P	20 04 51.2	0.0
KSAR	Wonju Array Be	50.14	332	P	P	20 04 51.2	0.0
NJ2	Nanjing	51.20	320	*e*P	P	20 05 00.0	+0.8
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
JKA	Kamikawa-asahi	51.21	349	P	P	20 04 59.5	+0.5
ASAJ	Asahikawa	51.21	349	P	P	20 04 59.5	+0.5
	comp=Z,3.7nm,0.6s,baz=172,slow=9.8,SNR=5.3						
MNAI	Manna	51.79	269	P	P	20 05 01.1	-2.9
MSHR	Mys Shultsa	53.06	338	⇑*i*P	P	20 05 13.5	+0.8
WHN	Wuhan	53.27	316	⇓P	P	20 05 15.3	+0.8
USRK	Ussuriysk Ar.	54.18	340	P	P	20 05 21.4	+0.6
	comp=Z,1.5nm,0.7s,baz=161,slow=6.1,SNR=4.7						
USRK	Ussuriysk Ar.	54.18	340	P	P	20 05 21.0	+0.2
USRK	Ussuriysk Ar.	54.18	340	P	P	20 05 21.0	+0.2
IPM	Ipoh	54.86	280	P	P	20 05 25.0	-1.3
KULM	Kulim	55.38	281	P	P	20 05 29.0	-1.0
RPSI	Rantau Prapat	56.62	277	P	P	20 05 37.0	-1.9
PSI	Prapat	56.64	277	P	P	20 05 36.9	-2.2
	comp=Z,3.5nm,0.5s,baz=75,slow=11,SNR=4.2						
PSI	Prapat	56.64	277	P	P	20 05 37.0	-2.2
GYA	Guiyang	56.88	307	P	P	20 05 42.5	+1.9
GYA				pP	pP	20 06 24.0	+2.9
GYA				sP	sP	20 06 44.5	+3.9
GYA				PP	PP	20 07 53.0	+3.8
GYA				S	S	20 13 20.5	0.0
GYA				sS	sS	20 14 33.8	+2.3
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.4s						
GSI	Gunungsitoli	57.75	275	P	P	20 05 44.8	-2.0
GSI				IAmb	IAmb	20 05 45.9	
	comp=Z,14nm,0.7s						
KLR	Kul'dur	58.70	342	P	P	20 05 53.0	+0.4
	comp=Z,1.0nm,0.5s,baz=151,slow=7.4,SNR=3.0						
KLR	Kul'dur	58.70	342	⇑*i*P	P	20 05 52.9	+0.2
KLR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
LHMI	Lhok Sumawe	58.99	280	P	P	20 05 54.8	-0.6
PEA0B	Petropavlovsk-	59.02	2	P	P	20 05 55.7	+0.9
PEA0B				pmax	pmax		
	comp=Z,48nm,1.4s						
PEA0B	Petropavlovsk-	59.02	2	P	P	20 05 55.7	+0.9
PEA0B				IAmb	IAmb	20 07 01.3	
	comp=Z,48nm,1.4s						
PETK	Petropavlovsk-	59.02	2	P	P	20 05 55.6	+0.8
	comp=Z,10nm,0.8s,baz=176,slow=8.1,SNR=9.3						
PETK	Petropavlovsk-	59.02	2	P	P	20 05 55.5	+0.6
PETK				pP	pP	20 06 35.8	+0.5
KMI	Kunming	59.48	304	P	P	20 06 00.3	+1.5
KMI				pP	pP	20 06 43.0	+3.4
KMI				sP	sP	20 06 58.5	-0.5
KMI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,140nm,4.5s						
KMI				LR	LR		
	comp=Z,120nm,5.3s						
KMI				LR	LR		
	comp=Z,93nm,7.3s						
KMI				LR	LR		
	comp=Z,92nm,8.1s						
CM31	Chiang Mai Arr	60.36	295	P	P	20 06 05.3	+0.6
CMAR	Chiang Mai Arr	60.36	295	P	P	20 06 05.1	+0.4
	comp=Z,1.7nm,0.7s,baz=121,slow=5.5,SNR=12						
CMAR	Chiang Mai Arr	60.36	295	P	P	20 06 04.8	+0.1
CHTO	Chiang Mai	60.48	296	P	P	20 06 05.3	-0.1
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.3s						
CHTO	Chiang Mai	60.48	296	P	P	20 06 05.3	-0.1
HHC	Hu-ho-hao-te	61.35	324	*e*P	P	20 06 12.8	+1.8
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,45nm,5.1s						
ADK	Adak	62.64	19	P	P	20 06 20.2	+1.0
ADK				pmax	pmax		
	comp=Z,69nm,1.3s						
ADK	Adak	62.64	19	P	P	20 06 20.2	+1.0
ADK				IAmb	IAmb	20 07 05.1	
	comp=Z,69nm,1.3s						
GSTR	Great Sitkin T	63.02	20	P	P	20 06 20.5	-1.3
LZH	Lanzhou	63.65	315	*e*P	P	20 06 30.0	+3.5
LZH				pP	pwP	20 07 11.3	+1.1
LZH				sP	sP	20 07 28.5	+1.5
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				pmax	pmax		
	comp=Z,120nm,5.0s						
LZH				LR	LR		
	comp=Z,330nm,16.3s						
LZH				LR	LR		
	comp=Z,240nm,18.4s						
LZH				LR	LR		
	comp=Z,220nm,17.9s						
ATKA	Atka Island	63.75	21	P	P	20 06 26.4	-0.1
ATKA				IAmb	IAmb	20 07 31.3	
	comp=Z,55nm,1.1s						
ZEA	Zeya	64.01	342	*e*P	P	20 06 28.3	+0.1
MA2	Magadan	65.55	358	P	P	20 06 37.8	-0.2
	comp=Z,7.9nm,0.6s,baz=165,slow=9.7,SNR=4.6						
MA2	Magadan	65.55	358	⇓*i*P	P	20 06 37.0	-1.0
MA2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MA2	Magadan	65.55	358	P	P	20 06 38.1	+0.1
MA2				IAmb	IAmb	20 06 38.6	
	comp=Z,9.2nm,0.7s						
CASY	Casey	67.43	198	P	P	20 06 49.8	-0.2
CASY				IAmb	IAmb	20 06 50.6	
	comp=Z,56nm,1.4s						
GTA	Gaotai	68.06	317	*e*P	P	20 06 54.8	+0.3
GTA				pP	pP	20 07 35.5	-0.8
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ULN	Ulaanbaatar	68.23	327	P	P	20 06 55.8	+0.4
ULN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ULN	Ulaanbaatar	68.23	327	P	P	20 06 55.8	+0.4
AKUT	Akutan	68.42	24	P	P	20 06 55.8	-0.4
SONM	Songino Array	68.56	327	P	P	20 06 58.1	+0.6
	comp=Z,2.7nm,0.4s,baz=141,slow=5.3,SNR=42						
SONM	Songino Array	68.56	327	P	P	20 06 57.7	+0.2
SONM				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SONM	Songino Array	68.56	327	P	P	20 06 57.6	+0.2
SEY	Seymchan	68.86	359	P	P	20 06 58.9	+0.1
	comp=Z,3.9nm,0.9s,baz=163,slow=5.5,SNR=10						
SEY				pP	pP	20 07 42.2	+1.4
	comp=Z,2.7nm,0.9s,baz=193,slow=4.2,SNR=3.7						
SEY	Seymchan	68.86	359	⇑*i*P	P	20 06 59.1	+0.3
YAK	Yakutsk	70.67	348	*e*P	P	20 07 10.1	+0.2
YAK				*e*		20 07 56.5	
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.3s						
LSA	Lhasa	70.73	304	P	P	20 07 11.5	-0.1
LSA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
LSA	Lhasa	70.73	304	P	P	20 07 11.5	-0.1
SDPT	Sand Point	71.46	25	P	P	20 07 15.0	+0.3
VNDA	Vanda	71.48	178	P	P	20 07 14.8	+0.3
	comp=Z,3.1nm,0.9s,baz=335,slow=5.6,SNR=5.8						
VNDA	Vanda	71.48	178	P	P	20 07 15.0	+0.5
VNDA				pmax	pmax		
	comp=Z,36nm,2.0s						
VNDA	Vanda	71.48	178	P	P	20 07 15.0	+0.5
VNDA				IAmb	IAmb	20 07 15.2	
	comp=Z,36nm,1.9s						
ZAK	Zakamensk	71.71	328	*e*P	P	20 07 15.9	-0.6
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TAPN	Taplejung	72.91	301	*e*P	P	20 07 24.1	-0.2
	comp=Z,3.8nm,0.4s						
ODAN	Odare	73.04	300	*e*P	P	20 07 24.8	-0.3
	comp=Z,18nm,0.5s						
RAMN	Ramite	73.75	300	*e*P	P	20 07 28.6	-0.6
	comp=Z,7.5nm,0.4s						
JIRN	Jiri	74.29	301	*e*P	P	20 07 31.9	-0.6
	comp=Z,14nm,0.5s						
BILL	Bilibino	74.39	4	⇓*e*P	P	20 07 32.1	+0.3
BILL				*i* *PP	pP	20 08 15.5	+1.1
BILL				*e*		20 10 23.7	
BILL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BILL	Bilibino	74.39	4	P	P	20 07 31.8	0.0
BILL				pP	pP	20 08 14.8	+0.4
GUN	Gumba	74.62	301	*e*P	P	20 07 33.7	-0.7
	comp=Z,18nm,0.7s						
PKI	Pulchoki	74.93	301	*e*P	P	20 07 34.9	-1.3
	comp=Z,4.4nm,0.5s						
KKN	Kakani	75.10	301	*e*P	P	20 07 36.1	-0.9
	comp=Z,7.9nm,0.5s						
DMN	Daman	75.20	300	*e*P	P	20 07 36.8	-0.8
	comp=Z,11nm,0.5s						
PALK	Pallekele	75.25	279	P	P	20 07 37.9	0.0
PALK				pmax	pmax		
	comp=Z,21nm,1.3s						
PALK	Pallekele	75.25	279	P	P	20 07 37.9	0.0
PALK				IAmb	IAmb	20 09 27.9	
	comp=Z,21nm,1.3s						
GKN	Gorkha	75.70	301	*e*P	P	20 07 40.1	-0.2
OHAK	Old Harbor	75.74	26	P	P	20 07 39.8	+0.2
DANN	Dangsing	76.54	301	*e*P	P	20 07 43.9	-1.3
	comp=Z,6.5nm,0.5s						
SVW2	Sparrevohn	77.19	22	P	P	20 07 47.0	-0.8
RSO	Redoubt South	77.89	24	P	P	20 07 53.0	+1.1
WMQ	Urumqi	78.14	317	*e*P	P	20 07 54.3	+0.8
WMQ				sP	sP	20 09 00.0	+4.6
WMQ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,47nm,4.1s						
WMQ				LR	LR		
	comp=Z,540nm,29.1s						
WMQ				LR	LR		
	comp=Z,1µm,29.2s						
WMQ				LR	LR		
	comp=Z,61nm,29.0s						
SEW	Seward	79.04	25	P	P	20 07 56.5	-1.4
SEW				IAmb	IAmb	20 09 03.5	
	comp=Z,40nm,1.4s						
TIXI	Tiksi	79.46	352	P	P	20 08 00.1	+0.1
TIXI				pP	pP	20 08 43.1	-0.2
PPLA	Purkeypile	79.56	22	P	P	20 08 01.0	+0.1
PPLA				IAmb	IAmb	20 08 47.0	
	comp=Z,35nm,1.8s						
DGZ	Jazzator, Alta	80.41	323	⇑*i*P	P	20 08 05.3	-0.5
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
IMAR	Indian Mountai	80.89	19	P	P	20 08 08.0	+0.2
IMAR				pP	pP	20 08 51.0	+0.2
IL31		82.56	22	P	P	20 08 15.8	-0.6
IL31				pP	pP	20 08 58.4	-1.3
ILAR	Eielson Array	82.56	22	P	P	20 08 15.3	-1.2
	comp=Z,1.1nm,0.7s,baz=238,slow=5.6,SNR=8.9						
ILAR				pP	pP	20 08 58.5	-1.2
	comp=Z,3.4nm,0.7s,baz=241,slow=5.0,SNR=6.7						
ILAR	Eielson Array	82.56	22	*e*P	P	20 08 16.0	-0.5
ILAR	Eielson Array	82.56	22	P	P	20 08 16.0	-0.5
ILAR					pP	20 08 58.9	-0.8
MK31	Makanchi Array	82.70	319	P	P	20 08 17.3	-0.4
MK31				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MK31	Makanchi Array	82.70	319	P	P	20 08 17.3	-0.4
MKAR	Makanchi Array	82.70	319	P	P	20 08 17.0	-0.7
	comp=Z,7.3nm,0.8s,baz=103,slow=5.5,SNR=34						
MKAR	Makanchi Array	82.70	319	*e*P	P	20 08 16.0	-1.7
MKAR	Makanchi Array	82.70	319	P	P	20 08 16.9	-0.7
MENT	Mentasta	82.85	24	P	P	20 08 19.3	+1.2
MENT				IAmb	IAmb	20 10 00.1	
	comp=Z,41nm,1.7s						
MAKZ	Makanchi	82.92	319	P	P	20 08 18.2	-0.6
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MAKZ	Makanchi	82.92	319	P	P	20 08 18.2	-0.6
ZAA0	Zalesovo Array	83.42	326	P	P	20 08 19.2	-2.0
ZALV	Zalesovo Beam	83.42	326	P	P	20 08 19.8	-1.3
	comp=Z,4.3nm,0.6s,baz=122,slow=5.7,SNR=16						
ZALV	Zalesovo Beam	83.42	326	P	P	20 08 19.7	-1.4
BCAR	Beaver Creek A	83.69	24	P	P	20 08 23.5	+1.1
BCAR					pP	20 09 05.3	-0.8
TOLK	Toolik Lake Re	83.78	18	P	P	20 08 24.0	+1.2
TOLK					pP	20 09 06.5	+0.2
TOLK	Toolik Lake Re	83.78	18	P	P	20 08 23.4	+0.6
	baz=236						
HYT	Haines Junctio	84.60	27	P	P	20 08 28.0	+0.9
HYT					pP	20 09 11.1	+0.2
HYT				IAmb	IAmb	20 09 16.8	
	comp=Z,15nm,0.8s						
EGAK	Eagle	84.71	23	P	P	20 08 28.0	+0.5
EGAK					pP	20 09 11.5	+0.3
BMAR	Burnt Mountain	84.73	20	P	P	20 08 27.4	-0.2
BMAR					pP	20 09 11.0	-0.2
MAW	Mawson	85.21	203	P	P	20 08 30.0	+0.1
	baz=85,SNR=17						
MAW	Mawson	85.21	203	P	P	20 08 29.8	0.0
	comp=Z,12nm,0.5s,baz=103,slow=5.1,SNR=30						
MAW	Mawson	85.21	203	P	P	20 08 29.9	0.0
MAW				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MAW	Mawson	85.21	203	P	P	20 08 29.9	0.0
KSH	Kashi	85.40	310	P	P	20 08 34.5	+2.9
KSH				sP	sP	20 09 36.3	+1.7
KSH				PP	PP	20 11 56.8	+4.3
KSH				S	S	20 18 46.3	-1.5
KSH				pmax	pmax		
	comp=Z,15nm,0.6s						
KSH				pmax	pmax		
	comp=Z,140nm,5.3s						
KSH				LR	LR		
	comp=Z,320nm,10.7s						
KSH				LR	LR		
	comp=Z,120nm,10.3s						
KSH				LR	LR		
	comp=Z,98nm,12.5s						
KURK	Kurchatov	86.10	322	*e*P	P	20 08 33.2	-1.4
KURK	Kurchatov	86.10	322	P	P	20 08 33.2	-1.4
EPYK	Eagle Plains	87.05	22	P	P	20 08 39.4	+0.4
EPYK					pP	20 09 22.7	-0.1
EPYK				IAmb	IAmb	20 09 28.6	
	comp=Z,24nm,1.0s						
EPYK	Eagle Plains	87.05	22	P	P	20 08 39.8	+0.8
	baz=248						
AAK	Ala-Archa	87.11	313	P	P	20 08 39.5	-0.5
AAK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
AAK	Ala-Archa	87.11	313	P	P	20 08 39.5	-0.5
KMRM	Mail Ridge	87.32	49	P	P	20 08 38.1	-2.8
NRIK	Noril'sk	87.88	341	pP	pP	20 09 26.4	-1.1
	comp=Z,2.9nm,0.8s,baz=115,slow=8.4,SNR=3.7						
INK	Inuvik	88.90	21	pP	pP	20 09 31.2	-0.8
	comp=Z,10nm,1.1s,baz=238,slow=7.3,SNR=7.5						
INK	Inuvik	88.90	21	P	P	20 08 47.7	+0.1
INK				*PP	pP	20 09 31.1	-0.9
INK				pmax	pmax		
	comp=Z,15nm,1.1s						
INK	Inuvik	88.90	21	P	P	20 08 47.7	+0.1
INK					pP	20 09 31.1	-0.9
INK				IAmb	IAmb	20 09 36.8	
	comp=Z,15nm,1.1s						
MWC	Mount Wilson	90.90	56	P	P	20 08 58.6	+0.6
MWC				*PP	pP	20 09 42.1	+0.1
MWC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MWC	Mount Wilson	90.90	56	P	P	20 08 58.6	+0.6
MWC				IAmb	IAmb	20 09 00.2	
	comp=Z,10nm,1.0s						
MWC				pP	pP	20 09 42.1	+0.1
EDW2	Edwards Air Fo	91.03	55	P	P	20 09 00.1	+1.7
	baz=263						
RYN	Ryan	91.05	51	P	P	20 08 59.3	+0.8
NVAR	Mina Array Bea	91.20	52	P	P	20 09 00.6	+1.3
	comp=Z,0.9nm,0.5s,baz=258,slow=5.9,SNR=7.5						
NVAR				pP	pP	20 09 43.2	-0.1
	comp=Z,0.4nm,0.3s,baz=200,slow=7.2,SNR=2.2						
NVAR	Mina Array Bea	91.20	52	P	P	20 09 00.0	+0.7
NVAR					pP	20 09 43.0	-0.3
NV11	Mina Array Sit	91.31	52	P	P	20 09 00.7	+0.9
NV11				pP	pP	20 09 43.3	-0.5
KVN	Kaiserville	91.43	51	P	P	20 09 00.9	+0.6
KVN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KVN	Kaiserville	91.43	51	P	P	20 09 00.9	+0.6
G08A	Pilot Rock	91.54	45	P	P	20 09 01.1	+0.5
G08A				IAmb	IAmb	20 10 15.9	
	comp=Z,13nm,1.2s						
MPMC	Manual Prospec	91.58	54	P	P	20 09 02.4	+1.3
	baz=264						
MONP2	Monument Peak	92.12	57	P	P	20 09 05.9	+2.3
	baz=264						
FURC	Furnace Creek,	92.12	54	P	P	20 09 05.3	+2.1
	baz=264						
PFO	Pinyon Flats O	92.16	57	⇑*i*P	P	20 09 04.5	+0.8
PFO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PFO	Pinyon Flats O	92.16	57	P	P	20 09 03.4	-0.4
XPFO	Pion Flat	92.16	57	P	P	20 09 03.6	-0.1
HEC	Hector,Ludlow	92.38	55	P	P	20 09 06.1	+1.5
	baz=264						
BELC	Belle Mtn. Jos	92.58	56	P	P	20 09 07.4	+1.8
	baz=264						
GMRC	Granite Mounta	92.93	56	P	P	20 09 08.6	+1.3
	baz=265						
BC3	Big Chuckawall	93.00	57	P	P	20 09 09.2	+1.6
	baz=265						
SYO	Syowa Base	93.16	199	⇓*e*P	P	20 09 08.8	+1.4
SYO	Syowa Base	93.16	199	⇑*e*P	P	20 09 15.0	+7.6
SYO	Syowa Base	93.16	199	⇑*e*pP	pP	20 09 51.8	+0.2
IRM	Iron Mountain	93.30	56	P	P	20 09 10.9	+2.0
	baz=265						
R11A	Troy Canyon, C	93.31	52	P	P	20 09 10.5	+1.5
	baz=265						
SHPR	Sheep Range	93.49	54	P	P	20 09 11.0	+1.1
YKA	Yellowknife Ar	95.56	28	P	P	20 09 18.6	+0.1
	comp=Z,1.5nm,0.7s,baz=262,slow=4.4,SNR=19						

YKA				pP	pP	20 10 02.4	-0.6
	comp=Z,4.1nm,0.8s,baz=262,slow=3.6,SNR=7.4						
YKA				PKKPbc	PKKPdf	20 26 05.6	-6.0
	comp=Z,0.2nm,0.5s,baz=93,slow=3.6,SNR=4.6						
PDAR	Pinedale Array	98.13	48	P	P	20 09 30.2	-0.6
	comp=Z,0.4nm,0.7s,baz=238,slow=3.9,SNR=4.0						
PDAR	Pinedale Array	98.13	48	P	P	20 09 29.7	-1.2
TXAR	Lajitas Array	102.87	61	PKKPbc	PKKPbc	20 25 48.4	-1.7
	comp=Z,0.3nm,0.5s,baz=112,slow=7.1,SNR=3.6						
APA	Apatity	107.28	340 ⇑	iP	Pdif	20 10 18.2	+7.5
APA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
FINES	FINESS Array B	113.10	336	PKKPbc	PKKPbc	20 25 14.8	-4.1
	comp=Z,3.8nm,1.0s,baz=252,slow=3.8,SNR=3.5						
FRB	Frobisher Bay	114.54	20	PKP	PKPdf	20 14 31.0	-1.4
	comp=Z,1.1nm,0.5s,baz=222,slow=6.3,SNR=4.2						
FRB	Frobisher Bay	114.54	20	i PKIKP	PKPdf	20 14 31.0	-1.3
D47A	Chapleau	115.89	40	P	PKPdf	20 14 35.0	-0.5
	baz=290						
AKASG	Malin Array Be	116.79	325	PKP	PKPdf	20 14 36.0	-1.1
	comp=Z,0.6nm,0.5s,baz=53,slow=2.3,SNR=4.5						
AKASG	Malin Array Be	116.79	325	PKIKP	PKPdf	20 14 36.0	-1.1
AKASG	Malin Array Be	116.79	325		PKPdf	20 14 36.0	-1.1
BRTR	Keskin Array B	117.76	312	PKP	PKPdf	20 14 38.0	-1.5
	comp=Z,0.4nm,0.6s,baz=42,slow=2.3,SNR=2.1						
BRTR	Keskin Array B	117.76	312	PKIKP	PKPdf	20 14 37.9	-1.6
BRTR	Keskin Array B	117.76	312		PKPdf	20 14 37.9	-1.6
ACSO	Alum Creek Sta	118.17	47		PKPdf	20 14 39.9	-0.2
ACSO	Alum Creek Sta	118.17	47	P	PKiKP	20 14 40.9	+0.7
	baz=287						
NB2	NORSAR Subarra	118.84	341	PKPdf	PKPdf	20 14 39.4	-1.4
	comp=Z,0.4nm,0.6s,baz=41,slow=1.9						
NOA	NORSAR Array B	118.84	341	PKP	PKPdf	20 14 39.9	-1.0
	comp=Z,0.7nm,0.7s,baz=42,slow=1.8,SNR=4.0						
V52A	Sevierville	118.89	52		PKPdf	20 14 40.3	-1.3
BOSA	Boshof	120.54	232	PKP	PKPdf	20 14 44.3	-0.9
	comp=Z,2.0nm,0.6s,baz=122,slow=2.2,SNR=5.3						
BOSA	Boshof	120.54	232	PKIKP	PKPdf	20 14 44.2	-1.0
BOSA	Boshof	120.54	232		PKPdf	20 14 44.2	-1.0
L55A	Hinsdale	120.75	44	P	PKPdf	20 14 44.3	-0.8
	baz=292						
SCHQ	Schefferville	121.00	27	PKKPbc	PKKPbc	20 24 48.0	-2.8
	comp=Z,3.8nm,0.9s,baz=113,slow=3.9,SNR=5.1						
D56A	ZEC Mazanza, M	121.11	38	P	PKPdf	20 14 44.7	-0.9
	baz=298						
E56A	St. Veronique	121.17	38	P	PKPdf	20 14 44.8	-0.9
	baz=297						
O56A	Blue Knob Stat	121.35	46	P	PKPdf	20 14 45.8	-0.5
	baz=291						
L56A	Greenwood	121.38	44	P	PKPdf	20 14 45.0	-1.3
	baz=293						
F60A	Warwick	123.33	38	P	PKPdf	20 14 49.5	-0.4
	baz=300						
VYHS	Vyhne	123.75	326	ePKIKP	PKPdf	20 14 50.0	-0.6
VYHS	Vyhne	123.75	326	ePKP	PKPdf	20 14 50.0	-0.6
CLL	Collm	125.00	332	i PKPdf	PKiKP	20 14 53.2	0.0
CLL	Collm	125.00	332	ePKIKP	PKPdf	20 14 50.0	-2.9
GERES	GERESS Array B	126.26	329	PKP	PKPdf	20 14 55.4	-0.1
	comp=Z,1.5nm,0.7s,baz=72,slow=2.1,SNR=12						
GERES	GERESS Array B	126.26	329	PKIKP	PKPdf	20 14 55.0	-0.5
GERES	GERESS Array B	126.26	329		PKPdf	20 14 55.0	-0.5
ROSC	El Rosal	130.95	89	SKPbc	SKPab	20 18 15.0	+1.1
	comp=Z,6.1nm,0.3s,baz=61,slow=6.1,SNR=5.2						
ROSC	El Rosal	130.95	89		SKPab	20 18 14.4	+0.5
LPAZ	La Paz	131.92	118	PKP	PKPdf	20 15 07.9	0.0
	comp=Z,2.3nm,0.6s,baz=258,slow=6.0,SNR=4.8						
LPAZ				SKPbc	SKPab	20 18 17.8	-0.5
	comp=Z,3.0nm,1.0s,baz=184,slow=4.8,SNR=6.4						
LPAZ	La Paz	131.92	118		PKPdf	20 15 07.8	0.0
LPAZ					SKPab	20 18 19.1	+0.9
SDV	Santo Domingo	134.74	84	PKP	PKPdf	20 15 12.4	-0.3
	comp=Z,15nm,0.8s,baz=240,slow=3.6,SNR=11						
SDV				SKPbc	SKPbc	20 18 26.7	+0.4
	comp=Z,4.2nm,1.0s,baz=323,slow=5.0,SNR=3.7						
SDV	Santo Domingo	134.74	84		PKPdf	20 15 12.1	-0.6
CPUP	Villa Florida	135.07	137	PKP	PKPdf	20 15 12.7	0.0
	comp=Z,0.6nm,0.3s,baz=56,slow=0.9,SNR=3.3						
SIV	San Ignacio	138.13	122	PKP	PKPdf	20 15 18.4	-0.3
	comp=Z,1.7nm,0.6s,baz=229,slow=2.3,SNR=4.8						
PTGA	Pitinga	144.49	100	PKP	PKPab	20 15 28.5	-0.5
	comp=Z,21nm,0.6s,baz=273,slow=6.3,SNR=47						
PTGA	Pitinga	144.49	100		PKPab	20 15 28.4	-0.6
BDFB	Brasilia	148.63	134	PKPbc	PKPbc	20 15 40.1	-0.9
	comp=Z,5.3nm,0.7s,baz=298,slow=4.7,SNR=6.4						
MDP	Montagnes des	152.52	91	PKPbc	PKPbc	20 15 50.3	+0.1
	comp=Z,35nm,0.9s,baz=256,slow=3.4,SNR=16						
TOA0	Torodi Ar. Sit	152.74	287		PKPbc	20 15 49.2	-1.4
TORD	Torodi Ar. Bea	152.74	287	PKP	PKPdf	20 15 42.4	-1.0
	comp=Z,0.9nm,0.8s,baz=53,slow=0.8,SNR=4.4						
TORD				PKPbc	PKPbc	20 15 49.2	-1.4
	comp=Z,1.8nm,0.3s,baz=87,slow=2.3,SNR=46						
TORD				pPKPbc	pPKPbc	20 16 36.5	-0.8
	comp=Z,0.9nm,0.3s,baz=85,slow=2.1,SNR=2.6						

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*IDC **25** 19:59:06.4±1.6, 2°.44S×138°.69E, h0km, mb4.0/4, mb1 4.2/6, mb1mx3.7/44, mbtmp4.0/6, ML4.0/1, Error ellipse: s-maj=47.1km s-min=27.3km az=91.0*

ISC 25 19:59:11.4±1.3**, 2°.5S**±0°.1×**138°.6E**±0°.2**, h32km, n6, σ0ˢ.80**/6**, mb4.1**/4**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	7.50	282	Pn	Pn	20 00 58.6	0.0
	2.5nm,0.3s,baz=53,slow=20,SNR=8.6						
WRA	Warramunga Arr	17.84	193	P	Pn	20 03 17.7	+0.4
	baz=16,slow=13,SNR=1.3						
ASAR	Alice Springs	21.54	192	P	P	20 03 57.6	-0.5
	4.5nm,0.8s,baz=24,slow=12,SNR=4.4						
MKAR	Makanchi Array	69.54	322	P	P	20 10 17.7	+0.6
	1.4nm,0.7s,baz=107,slow=7.3,SNR=3.6						
ZALV	Zalesovo Beam	71.69	330	P	P	20 10 29.0	-1.0
	1.3nm,0.5s,baz=114,slow=5.1,SNR=2.6						
ILAR	Eielson Array	85.68	24	P	P	20 11 47.1	+0.3
	0.4nm,0.7s,baz=275,slow=4.1,SNR=3.0						

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*IDC **25** 20:27:58.0±1.1, 7°.03S×155°.28E, h0km, mb3.9/12, mb1 4.1/14, mb1mx3.9/42, mbtmp4.0/14, ML2.9/2, MS3.3/2, Ms1 3.3/2, ms1mx2.8/27, Error ellipse: s-maj=31.2km s-min=20.4km az=118.0*

*NEIC **25** 20:28:05.3±2.8, 7°.08S±0°.08×155°.22E±0°.07, h59km±8km, mb4.1/12, Error ellipse: s-maj=12.3km s-min=8.9km az=157.0*

ISC 25 20:28:03.4±0.6**, 7°.04S**±0°.08×**155°.20E**±0°.07**, h41km, n48, σ1ˢ.74**/49**, mb4.0**/19**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	4.14	313	Pn	Pn	20 29 04.8	+0.6
KRVT	Keravat (AS076	4.16	311	Pn	Pn	20 29 03.8	-0.6
	4.3nm,0.3s,baz=121,slow=8.3,SNR=1.5						
KRVT				Sn	Sn	20 29 47.3	-4.6
	6.9nm,0.3s,baz=105,slow=23,SNR=1.8						
HNR	Honiara	5.27	117	LR	LR	20 31 23.3	
	comp=Z,141nm,19.0s,baz=246,slow=40						
HNR	Honiara	5.27	117	Pn	Pn	20 29 19.4	-0.2
PMG	Port Moresby	8.30	253	Pn	Pn	20 30 02.6	+1.4
	2.1nm,0.3s,baz=58,slow=10,SNR=4.4						
PMG				Sn	Sn	20 31 34.8	+1.0
	2.0nm,0.3s,baz=135,slow=17,SNR=3.9						
PMG	Port Moresby	8.30	253		Pn	20 30 01.9	+0.7
PMG					Sn	20 31 29.5	-4.2
GUMO	Guam	22.92	333	LR	LR	20 39 45.4	
	comp=Z,157nm,21.4s,baz=273,slow=31						
WR0	Warramunga Arr	23.80	235	P	P	20 33 12.7	0.0
WR0				IAmb	IAmb	20 33 14.4	
	comp=Z,3.9nm,0.9s						
WB0	Warramunga Arr	23.83	236	P	P	20 33 13.6	+0.7
WB0				IAmb	IAmb	20 33 16.5	
	comp=Z,2.9nm,0.8s						
WB2	Warramunga Arr	23.95	236	P	P	20 33 14.4	+0.4
WB2				IAmb	IAmb	20 33 14.6	
	comp=Z,8.4nm,1.2s						
WRA	Warramunga Arr	23.96	236	P	P	20 33 15.1	+1.0
	comp=Z,2.3nm,0.6s,baz=59,slow=9.8,SNR=21						
WRA				PcP	PcP	20 36 58.2	+2.3
	comp=Z,0.6nm,0.4s,baz=60,slow=2.5,SNR=8.9						
SIJI	Sorong	24.64	283	P	P	20 33 21.4	+1.0
	comp=Z,4.1nm,0.5s,baz=60,slow=10,SNR=4.6						
MSVF	Nonsavu	24.69	118	P	P	20 33 15.4	-5.5
AS31	Alice Springs	26.29	229	P	P	20 33 29.9	-5.5
ASAR	Alice Springs	26.30	229	P	P	20 33 35.9	+0.5
	comp=Z,1.1nm,0.7s,baz=61,slow=8.6,SNR=14						
ASAR				PcP	PcP	20 37 02.3	+1.3
	comp=Z,0.2nm,0.5s,baz=72,slow=3.0,SNR=2.0						
ASAR	Alice Springs	26.30	229	P	P	20 33 35.6	+0.2
KNRA	Kununurra	27.27	249	P	P	20 33 44.5	+0.2
KNRA				IAmb	IAmb	20 34 14.3	
	comp=Z,4.4nm,0.9s						
STKA	Stephens Creek	27.78	205	P	P	20 33 47.8	-0.8
	comp=Z,1.1nm,0.7s,baz=52,slow=11,SNR=2.9						
STKA	Stephens Creek	27.78	205	P	P	20 33 48.9	+0.3
H11S3	WAKE ISLAND Hy	27.79	24	T	T	21 02 19.0	
	baz=202,slow=76,SNR=9.6						
H11S2	WAKE ISLAND Hy	27.79	24	T	T	21 02 12.1	
	baz=202,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	27.80	24	T	T	21 02 21.6	
	baz=202,slow=76,SNR=7.5						
FITZ	Fitzroy Crossi	30.82	246	P	P	20 34 14.8	-0.9
FITZ				IAmb	IAmb	20 34 17.2	
	comp=Z,5.2nm,1.4s						
CM31	Chiang Mai Arr	60.98	296	P	P	20 38 14.4	+1.3
CM31				IAmb	IAmb	20 38 16.3	
	comp=Z,3.0nm,0.8s						
CMAR	Chiang Mai Arr	60.98	296	P	P	20 38 14.5	+1.3
	comp=Z,2.4nm,0.7s,baz=121,slow=5.3,SNR=23						
CMAR	Chiang Mai Arr	60.98	296	P	P	20 38 14.4	+1.3
CMAR				PcP	PcP	20 38 57.7	+1.5
SONM	Songino Array	69.48	327	P	P	20 39 08.6	+0.8
	comp=Z,0.4nm,0.6s,baz=139,slow=5.5,SNR=5.3						
SONM	Songino Array	69.48	327	P	P	20 39 07.2	-0.5
TAPN	Taplejung	73.60	301	eP	P	20 39 34.5	+1.3
ODAN	Odare	73.73	300	eP	P	20 39 35.0	+1.1
	comp=Z,13nm,0.7s						
RAMN	Ramite	74.43	300	eP	P	20 39 39.1	+1.1
JIRN	Jiri	74.98	301	eP	P	20 39 42.4	+1.0
GUN	Gumba	75.31	301	eP	P	20 39 44.2	+0.9
	comp=Z,12nm,0.8s						
PKI	Pulchoki	75.62	301	eP	P	20 39 45.6	+0.6
KKN	Kakani	75.79	301	eP	P	20 39 46.7	+0.9
	comp=Z,9.3nm,0.8s						
DMN	Daman	75.89	301	eP	P	20 39 47.3	+0.8
ILAR	Eielson Array	83.34	21	P	P	20 40 26.6	+0.8
	comp=Z,0.5nm,0.9s,baz=273,slow=5.7,SNR=4.5						
ILAR	Eielson Array	83.34	21	P	P	20 40 26.0	+0.2
MKAR	Makanchi Array	83.57	319	P	P	20 40 28.2	+0.8
	comp=Z,0.4nm,0.5s,baz=96,slow=7.3,SNR=7.9						
MKAR	Makanchi Array	83.57	319	P	P	20 40 27.6	+0.2
ZALV	Zalesovo Beam	84.33	326	P	P	20 40 30.6	-0.4
	comp=Z,0.6nm,0.5s,baz=120,slow=6.4,SNR=3.0						
ZALV	Zalesovo Beam	84.33	326	P	P	20 40 30.4	-0.7
KURK	Kurchatov	86.99	322	P	P	20 40 44.0	-0.3
KURK				IAmb	IAmb	20 40 45.2	
	comp=Z,2.0nm,1.1s						
KURBB	Kurchatov Arra	87.02	322	P	P	20 40 44.3	-0.2
	comp=Z,0.3nm,0.6s,baz=101,slow=4.4,SNR=3.1						
AAK	Ala-Archa	87.93	313	P	P	20 40 50.4	+1.2
	comp=Z,0.4nm,0.5s,baz=231,slow=6.5,SNR=2.1						
AAK	Ala-Archa	87.93	313	P	P	20 40 48.0	-1.2
YKA	Yellowknife Ar	96.28	28	P	P	20 41 28.8	+1.5
	comp=Z,0.5nm,0.7s,baz=258,slow=4.2,SNR=8.0						
TORD	Torodi Ar. Bea	153.23	285	PKPbc	PKiKP	20 47 58.5	+0.4
	comp=Z,1.3nm,0.9s,baz=58,slow=2.2,SNR=5.4						

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*IDC **25** 20:39:07.7±0.9, 14°.54N×144°.34E, h0km, mb3.7/10, mb1 3.9/10, mb1mx3.6/51, mbtmp3.7/10, MS3.4/4, Ms1 3.4/4, ms1mx3.0/24, Error ellipse: s-maj=36.9km s-min=12.6km az=69.0*

*NEIC **25** 20:39:11.0±0.8, 14°.61N±0°.08×144°.5E±0°.2, h27km±6km, mb4.4/14, Error ellipse: s-maj=23.3km s-min=6.7km az=66.0*

ISC 25 20:39:11.2±0.6**, 14°.61N**±0°.08×**144°.5E**±0°.1**, h27km, n39, σ0ˢ.83**/30**, mb4.1**/16**, MS3.6**/3**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.09	158	Pn	Pn	20 39 30.3	-0.4
	144nm,0.3s,baz=338,slow=1.9,SNR=48						
GUMO				Sn	Sn	20 39 44.8	-0.1
	69nm,0.3s,baz=62,slow=19,SNR=18						
PATS	Pohnpei	15.65	118	Pn	Pn	20 42 50.9	+0.9
DAV	Davao City (W)	19.98	250	LR	LR	20 49 58.1	
	comp=Z,74nm,21.7s,baz=120,slow=33						
H11S3	WAKE ISLAND Hy	21.65	77	T	T	21 06 55.5	
	baz=262,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	21.67	77	T	T	21 06 56.7	
	baz=262,slow=75,SNR=12						
H11S2	WAKE ISLAND Hy	21.67	77	T	T	21 06 56.5	
	baz=262,slow=75,SNR=9.8						
H11N1	WAKE ISLAND Hy	22.02	74	T	T	21 07 32.1	
	baz=254						
H11N2	WAKE ISLAND Hy	22.03	73	T	T	21 07 35.0	
	baz=254						
H11N3	WAKE ISLAND Hy	22.04	74	T	T	21 07 29.5	
	baz=254						
MJAR	Matsushiro Arr	22.54	347	P	P	20 44 10.3	+1.2
	1.0nm,0.6s,baz=149,slow=9.5,SNR=2.8						
KSRS	Korea Array	27.08	330	LR	LR	20 55 07.8	
	comp=Z,28nm,18.6s,baz=210,slow=35						
COEN	Coen	28.41	183	P	P	20 45 04.9	+1.2
COEN				IAmb	IAmb	20 45 10.0	
	comp=Z,12nm,1.6s						
WB0	Warramunga Arr	35.57	196	P	P	20 46 06.2	-0.3
WB0				IAmb	IAmb	20 46 07.0	
	comp=Z,4.7nm,1.0s						
WRAB	Tennant Creek	35.74	196		P	20 46 09.9	+2.0
WB2	Warramunga Arr	35.75	196	P	P	20 46 08.0	+0.1
WB2				IAmb	IAmb	20 46 38.1	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	35.75	196	P	P	20 46 07.9	-0.1
	comp=Z,3.1nm,0.9s,baz=11,slow=9.5,SNR=21						
WRA	Warramunga Arr	35.75	196	P	P	20 46 07.0	-1.0
FITZ	Fitzroy Crossi	37.42	210	P	P	20 46 21.9	-0.4
ASAR	Alice Springs	39.42	195	P	P	20 46 38.9	-0.1
	comp=Z,0.2nm,0.4s,baz=14,slow=12,SNR=4.8						
ASAR	Alice Springs	39.42	195	P	P	20 46 38.7	-0.3
PEA0B	Petropavlovsk-	39.81	12	P	P	20 46 41.0	-1.0
CMAR	Chiang Mai Arr	43.71	282	P	P	20 47 14.2	-0.1
	comp=Z,0.8nm,0.6s,baz=86,slow=6.5,SNR=7.5						
CMAR	Chiang Mai Arr	43.71	282	P	P	20 47 12.8	-1.5
SONM	Songino Array	45.67	325	P	P	20 47 30.0	+0.3
	comp=Z,0.4nm,0.8s,baz=126,slow=7.1,SNR=4.7						
SONM	Songino Array	45.67	325	P	P	20 47 29.3	-0.4
STKA	Stephens Creek	46.30	183	P	P	20 47 34.7	0.0
	comp=Z,1.5nm,0.7s,baz=333,slow=12,SNR=3.9						
STKA	Stephens Creek	46.30	183	P	P	20 47 34.5	-0.2
TIXI	Tiksi	57.78	354	P	P	20 49 01.1	+1.6
	comp=Z,0.7nm,0.3s,baz=144,slow=2.1,SNR=7.6						
MK31	Makanchi Array	60.48	316	P	P	20 49 18.8	0.0
MK31				IAmb	IAmb	20 49 40.7	
	comp=Z,4.4nm,1.6s						
MKAR	Makanchi Array	60.48	316	P	P	20 49 19.2	+0.5
	comp=Z,0.5nm,0.7s,baz=95,slow=9.1,SNR=5.3						
MKAR	Makanchi Array	60.48	316	P	P	20 49 19.0	+0.3
MAKZ	Makanchi	60.69	316	P	P	20 49 20.4	+0.2
MAKZ				IAmb	IAmb	20 49 21.0	
	comp=Z,4.8nm,1.4s						
KURK	Kurchatov	63.55	320	P	P	20 49 39.1	-0.1
KURBB	Kurchatov Arra	63.59	320	P	P	20 49 39.6	+0.1
	comp=Z,1.4nm,0.8s,baz=104,slow=6.7,SNR=11						
BVAR	Borovoye Array	68.88	321	P	P	20 50 13.5	+0.1
	comp=Z,0.5nm,0.6s,baz=91,slow=5.9,SNR=4.6						
PPT	Papeete	72.49	114	LR	LR	21 19 06.8	
	comp=Z,31nm,19.1s,baz=165,slow=33						
ABKAR	Akbulak array	75.52	318	P	P	20 50 53.2	0.0
R11A	Troy Canyon, C	88.67	51	P	P	20 52 00.9	-1.7
R11A				IAmb	IAmb	20 52 38.9	
	comp=Z,3.1nm,1.2s						
AKASG	Malin Array Be	93.95	325	LR	LR	21 36 56.7	
	comp=Z,33nm,18.1s,baz=60,slow=37						

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*IDC **25** 20:46:56.8±0.7, 7°.52N×94°.23E, h0km, mb3.9/13, mb1 4.0/14, mb1mx3.8/38, mbtmp3.8/14, ML3.9/1, MS3.5/5, Ms1 3.5/5, ms1mx3.1/36, Error ellipse: s-maj=28.0km s-min=17.2km az=60.0*

*NEIC **25** 20:46:58.5±2.3, 7°.75N±0°.08×94°.55E±0°.09, h10km±2km, mb4.6/30, Error ellipse: s-maj=14.6km s-min=9.2km az=58.0*

ISC 25 20:47:00.8±0.4**, 7°.78N**±0°.06×**94°.49E**±0°.07**, h24km, n91, σ1ˢ.63**/92**, mb4.3**/27**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	3.52	136	Pn	Pn	20 47 54.1	+0.2
PSI	Prapat	6.62	138	Pn	Pn	20 48 40.5	+3.7
	4.0nm,0.3s,baz=324,slow=13,SNR=6.5						
PSI				Sn	Sn	20 49 55.6	+3.9
	1.0nm,0.3s,baz=320,slow=22,SNR=1.1						
PSI				LR	LR	20 51 31.5	
	comp=Z,354nm,20.3s,baz=156,slow=41						
RPSI	Rantau Prapat	6.70	139		Pn	20 48 35.2	-2.6
RPSI	Rantau Prapat	6.70	139		Pn	20 48 40.5	+2.7
RPSI					Sn	20 49 55.6	+2.1
GSI	Gunungsitoli	7.12	154		Pn	20 48 42.1	-1.5
BKNI	Bangkinang	9.87	138	Pn	Pn	20 49 21.2	0.0
CM31	Chiang Mai Arr	11.47	22	Pn	Pn	20 49 43.0	-0.2
CMAR	Chiang Mai Arr	11.47	22	Pn	Pn	20 49 48.4	+5.2
	0.2nm,0.3s,baz=212,slow=14,SNR=5.1						
CMAR				LR	LR	20 54 29.5	
	comp=Z,85nm,18.8s,baz=218,slow=38						
CMAR	Chiang Mai Arr	11.47	22	Pn	Pn	20 49 43.4	+0.2
PALK	Pallekele	13.68	269	LR	LR	20 54 56.1	
	comp=Z,131nm,19.2s,baz=119,slow=36						
PALK	Pallekele	13.68	269	Pn	P	20 50 17.8	-4.2
QIZ	Qiongzhong	18.64	52	P	P	20 51 13.5	-3.4
QIZ				S	Sn	20 54 42.0	-3.3
ODAN	Odare	20.14	341	eP	Pn	20 51 38.5	+3.0
RAMN	Ramite	20.49	340	eP	Pn	20 51 41.2	+1.6
	44nm,0.8s						
TAPN	Taplejung	20.50	343	eP	P	20 51 39.0	+1.4
	38nm,0.8s						
JIRN	Jiri	21.28	339	eP	P	20 51 47.6	+1.5
	60nm,0.9s						
PKI	Pulchoki	21.49	338	eP	P	20 51 49.5	+1.3
	22nm,0.9s						
GUN	Gumba	21.62	339	eP	P	20 51 50.5	+0.8
	49nm,1.1s						
DMN	Daman	21.64	337	eP	P	20 51 51.7	+2.0
	44nm,0.9s						
GKN	Gorkha	22.17	336	eP	P	20 51 54.9	-0.5
DANN	Dangsing	22.84	335	eP	P	20 52 00.6	-2.0
	29nm,0.8s						
H08S3	Diego Garcia H	26.75	236	T	T	21 19 34.3	
	baz=54,slow=75,SNR=55						
H08S2	Diego Garcia H	26.75	236	T	T	21 19 26.1	
	baz=54,slow=75,SNR=38						
H08S1	Diego Carcia H	26.77	236	T	T	21 19 32.2	
	baz=54,slow=75,SNR=11						
LZH	Lanzhou	29.45	16	eP	P	20 53 04.8	+1.9
LZH				pP	sP	20 53 13.0	+1.0
LZH				sP	pwP	20 53 18.0	+5.4
LZH				PP	PnPn	20 53 53.0	-4.4
LUWI	Luwuk	29.53	106		P	20 53 02.8	-1.0
GTA	Gaotai	31.86	8	P	P	20 53 26.0	+1.8
GTA				pP	pwP	20 53 35.5	+1.7
GTA				sP	sP	20 53 39.5	+6.2
NIL	Nilore	32.38	326	P	P	20 53 26.7	-1.9
NIL				IAmb	IAmb	20 53 34.4	
	comp=Z,6.5nm,0.8s						
TNTI	Ternate	33.49	100	P	P	20 53 35.2	-3.4
TNTI				IAmb	IAmb	20 53 46.7	
	comp=Z,16nm,1.0s						
SOEI	Soe	34.39	120	P	P	20 53 45.5	-1.0
SOEI				IAmb	IAmb	20 53 56.9	
	comp=Z,11nm,1.1s						
KSH	Kashi	35.71	335	P	P	20 53 58.0	+0.4
KSH				pP	pwP	20 54 08.0	+0.6
KSH				PcP	PcP	20 56 26.0	+0.4
KSH				S	S	20 59 31.8	-1.4
KSH				PcS	PcS	21 00 11.3	-1.6
HHC	Hu-ho-hao-te	36.28	22	eP	P	20 54 03.3	+0.8
WMQ	Urumqi	36.40	352	eP	P	20 54 05.5	+2.1
WMQ				pP	pwP	20 54 14.3	+1.0
WSAR	Wadi Sarin	37.68	298	P	P	20 54 15.5	+1.0
	comp=Z,2.2nm,0.8s,baz=11,slow=10,SNR=1.2						
AAK	Ala-Archa	38.94	336	P	P	20 54 25.9	+0.9
MK31	Makanchi Array	40.26	347	P	P	20 54 35.5	-0.3
MKAR	Makanchi Array	40.26	347	P	P	20 54 36.6	+0.8
	comp=Z,1.3nm,0.7s,baz=168,slow=7.8,SNR=16						
MKAR	Makanchi Array	40.26	347	P	P	20 54 35.7	-0.2
MAKZ	Makanchi	40.34	347	P	P	20 54 36.5	0.0
MAKZ					PcP	20 56 39.1	-0.6
KK31	Karatay Array	41.01	333	P	P	20 54 43.4	+1.4
KKAR	Karatay Array	41.01	333	P	P	20 54 42.3	+0.3
SONM	Songino Array	41.19	12	P	P	20 54 45.9	+2.4
	comp=Z,2.3nm,0.9s,baz=194,slow=8.2,SNR=9.9						
SONM				PcP	PcP	20 56 43.4	+0.9
	comp=Z,0.6nm,0.8s,baz=218,slow=3.6,SNR=3.8						
SONM	Songino Array	41.19	12		P	20 54 44.2	+0.6
KSRS	Korea Array	42.31	41	LR	LR	21 15 21.7	
	comp=Z,42nm,18.1s,baz=130,slow=40						
GEYT	Alibeck	44.51	318	P	P	20 55 11.1	+0.6
	comp=Z,1.5nm,0.6s,baz=125,slow=14,SNR=3.7						
GEYT	Alibeck	44.51	318	P	P	20 55 10.5	-0.1
GYA0B	ALIBECK ARRAY	44.51	318	P	P	20 55 10.9	+0.4
GYA0B				IAmb	IAmb	20 55 17.2	
	comp=Z,5.2nm,0.7s						
KURK	Kurchatov	44.79	346	P	P	20 55 13.5	+1.0
KURK				IAmb	IAmb	20 55 20.6	
	comp=Z,6.8nm,0.9s						
ZAA0	Zalesovo Array	46.70	352	P	P	20 55 27.9	+0.4
ZAA0				IAmb	IAmb	20 55 35.3	
	comp=Z,6.2nm,0.9s						
ZALV	Zalesovo Beam	46.70	352	P	P	20 55 29.3	+1.7
	comp=Z,1.3nm,0.4s,baz=177,slow=7.8,SNR=9.7						
ZALV	Zalesovo Beam	46.70	352	P	P	20 55 28.1	+0.5
WB0	Warramunga Arr	47.88	125	P	P	20 55 36.5	-0.7
WB0				IAmb	IAmb	20 55 43.5	
	comp=Z,7.1nm,1.6s						
WRA	Warramunga Arr	47.92	126	P	P	20 55 36.9	-0.7
	comp=Z,0.4nm,0.7s,baz=306,slow=8.4,SNR=5.5						
WRA	Warramunga Arr	47.92	126	P	P	20 55 35.8	-1.8
WB2	Warramunga Arr	47.93	126	P	P	20 55 37.5	-0.2
BRVK	Borovoye	49.26	341	P	P	20 55 50.8	+3.4
BRVK				IAmb	IAmb	20 55 54.0	
	comp=Z,3.3nm,0.9s						
ASAR	Alice Springs	49.59	130	P	P	20 55 50.2	-0.2
	comp=Z,0.5nm,0.6s,baz=308,slow=7.1,SNR=10						
ASAR				PcP	PcP	20 57 12.3	+0.4
	comp=Z,0.7nm,0.8s,baz=309,slow=4.1,SNR=5.9						
ASAR	Alice Springs	49.59	130	P	P	20 55 49.6	-0.8
AS31	Alice Springs	49.59	130	P	P	20 55 49.6	-0.8
FORT	Forrest	50.05	142	P	P	20 55 53.8	+0.1
ABKAR	Akbulak array	50.48	331	P	P	20 55 57.2	+0.5
COEN	Coen	52.92	114	P	P	20 56 13.6	-1.9
COEN				IAmb	IAmb	20 56 44.5	
	comp=Z,6.7nm,1.3s						
BR131	Keskin Array S	62.76	311	P	P	20 57 27.7	+3.3
BR131				IAmb	IAmb	20 58 00.3	
	comp=Z,8.5nm,1.6s						
BRTR	Keskin Array B	62.76	311	P	P	20 57 22.7	-1.8
	comp=Z,0.9nm,0.8s,baz=137,slow=4.9,SNR=2.1						
BRTR	Keskin Array B	62.76	311	P	P	20 57 27.4	+3.0
TIXI	Tiksi	67.26	11	P	P	20 57 53.3	+0.3
TIXI				IAmb	IAmb	20 57 54.3	
	comp=Z,2.7nm,1.0s						
AKASG	Malin Array Be	68.45	322	P	P	20 58 01.2	+0.4
	comp=Z,0.2nm,0.3s,baz=88,slow=5.4,SNR=5.3						
BURAR	Bucovina Array	70.35	318	P	P	20 58 12.1	-0.7
FIA1	FINESS Array S	72.96	332	P	P	20 58 27.6	-0.5
FINES	FINESS Array B	72.96	332	P	P	20 58 27.7	-0.3
	comp=Z,2.1nm,0.7s,baz=94,slow=5.9,SNR=6.3						
KEV	Kevo	75.04	341	P	P	20 58 41.5	+1.4
BOSA	Boshof	75.83	238	P	P	20 58 44.4	-1.1
	comp=Z,1.9nm,0.8s,baz=118,slow=22,SNR=3.1						
BOSA	Boshof	75.83	238	P	P	20 58 44.1	-1.4
BOSA				IAmb	IAmb	20 59 17.4	
	comp=Z,23nm,1.6s						
GERES	GERESS Array B	78.13	318	P	P	20 58 57.8	-0.3
	comp=Z,0.7nm,0.7s,baz=76,slow=5.6,SNR=6.2						
GERES	GERESS Array B	78.13	318	P	P	20 58 57.6	-0.6
MAW	Mawson	78.51	192	P	P	20 59 00.5	+0.9
MAW				IAmb	IAmb	20 59 09.0	
	comp=Z,5.5nm,1.6s						
CTI	Castel Tesino	79.49	315	P	P	20 59 08.0	+2.3
CTI				IAmb	IAmb	20 59 40.6	
	comp=Z,9.9nm,1.6s						
NC405	NORSAR Array S	79.75	331	P	P	20 59 06.7	+0.1
NC602	NORSAR Array S	79.82	330	P	P	20 59 06.6	-0.4
NC602				IAmb	IAmb	20 59 25.7	
	comp=Z,18nm,1.1s						
NC303	NORSAR Array S	79.92	331	P	P	20 59 07.4	-0.1
NB2	NORSAR Subarra	79.99	331	P	P	20 59 07.3	-0.7
	comp=Z,4.2nm,0.8s,baz=92,slow=5.6						
NOA	NORSAR Array B	79.99	331	P	P	20 59 07.1	-0.8
	comp=Z,0.7nm,0.7s,baz=95,slow=5.0,SNR=3.1						
TORD	Torodi Ar. Bea	90.96	283	P	P	21 00 03.3	-0.3
	comp=Z,0.6nm,0.9s,baz=90,slow=2.9,SNR=3.0						
IMAR	Indian Mountai	91.59	22	P	P	21 00 06.3	+0.8
RAO	Raoul Island	91.66	119	LR	LR	21 41 39.8	

	comp=Z,82nm,21.4s,baz=304,slow=36						
TXAR	Lajitas Array	139.17	25	PKP	PKPdf	21 06 26.9	+0.3
	comp=Z,0.2nm,0.7s,baz=228,slow=2.3,SNR=2.1						
TXAR	Lajitas Array	139.17	25		PKPdf	21 06 26.6	+0.1
PLCA	Paso Flores	144.57	200	PKP	PKPab	21 06 33.9	-0.3
	comp=Z,1.5nm,0.8s,baz=39,slow=8.3,SNR=4.0						
PLCA	Paso Flores	144.57	200		PKPab	21 06 33.7	-0.5
CPUP	Villa Florida	147.48	232	PKPbc	PKPdf	21 06 42.4	+1.3
	comp=Z,2.0nm,0.9s,baz=132,slow=11,SNR=4.3						
CPUP	Villa Florida	147.48	232		PKPdf	21 06 41.9	+0.8

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*IDC **25** 20:48:53.8±6.7, 7°.71N×94°.97E, h0^{km}, mb4.0/8, mb1 4.1/8, mb1mx3.7/37, mbtmp4.0/8, Error ellipse: s-maj=154.0km s-min=72.5km az=133.0*

*NEIC **25** 20:48:57.0±1.4, 8°.0N±0°.1×94°.7E±0°.2, h9^{km}±4^{km}, mb4.3/9, Error ellipse: s-maj=26.0km s-min=12.1km az=59.0*

ISC 25 20:49:00.4±0.9**, 8°.0N**±0°.1×**94°.9E**±0°.2**, h35^{km}, n26, σ0ˢ.97**/25**, mb4.2**/12**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	3.44	143	Pn	Pn	20 49 51.5	-0.2
CMAR	Chiang Mai Arr	11.14	21	Pn	Pn	20 51 37.0	-0.3
MK31	Makanchi Array	40.13	347	P	P	20 56 33.2	+0.2
MKAR	Makanchi Array	40.13	347	P	P	20 56 34.3	+1.4
	1.5nm,0.8s,baz=164,slow=6.9,SNR=5.7						
MKAR	Makanchi Array	40.13	347	P	P	20 56 33.3	+0.4
MAKZ	Makanchi	40.22	346	P	P	20 56 34.4	+0.8
KKAR	Karatay Array	40.98	333		P	20 56 37.6	-2.3
GEYT	Alibeck	44.59	318	P	P	20 57 09.3	-0.1
	2.9nm,0.6s,baz=98,slow=11,SNR=3.7						
GEYT	Alibeck	44.59	318	P	P	20 57 08.4	-0.9
GYA0B	ALIBECK ARRAY	44.59	318	P	P	20 57 09.2	-0.1
GYA0B				IAmb	IAmb	20 57 13.9	
	comp=Z,3.1nm,0.6s						
KURK	Kurchatov	44.67	345	P	P	20 57 10.1	+0.4
KURK				IAmb	IAmb	20 57 16.7	
	comp=Z,5.1nm,1.3s						
ZAA0	Zalesovo Array	46.54	352	P	P	20 57 23.2	-1.2
ZAA0				IAmb	IAmb	20 57 33.2	
	comp=Z,2.4nm,0.8s						
ZALV	Zalesovo Beam	46.54	352	P	P	20 57 24.7	+0.2
	comp=Z,1.0nm,0.6s,baz=153,slow=9.7,SNR=3.2						
ZALV	Zalesovo Beam	46.54	352	P	P	20 57 24.2	-0.2
WB0	Warramunga Arr	47.71	126	P	P	20 57 38.9	+4.8
BR131	Keskin Array S	62.89	311	P	P	20 59 24.1	+0.7
BRTR	Keskin Array B	62.89	311	P	P	20 59 24.5	+1.1
	comp=Z,0.8nm,0.5s,baz=133,slow=6.7,SNR=5.2						
BRTR	Keskin Array B	62.89	311	P	P	20 59 23.4	0.0
TIXI	Tiksi	66.98	11	P	P	20 59 50.2	+1.0
TIXI				IAmb	IAmb	20 59 56.5	
	comp=Z,1.8nm,0.7s						
AKASG	Malin Array Be	68.50	321	P	P	21 00 00.7	+1.5
	comp=Z,0.2nm,0.3s,baz=88,slow=5.3,SNR=2.2						
BURAR	Bucovina Array	70.43	318	P	P	21 00 10.9	-0.4
FINES	FINESS Array B	72.94	332	P	P	21 00 26.9	+0.9
	comp=Z,3.1nm,0.9s,baz=104,slow=5.9,SNR=6.2						
FINES	FINESS Array B	72.94	332	P	P	21 00 25.6	-0.4
GERES	GERESS Array B	78.21	318	P	P	21 00 56.1	-0.5
	comp=Z,0.4nm,0.4s,baz=64,slow=4.5,SNR=2.3						
GERES	GERESS Array B	78.21	318	P	P	21 00 54.8	-1.9
NOA	NORSAR Array B	79.97	331	P	P	21 01 06.4	+0.5
	comp=Z,0.6nm,0.7s,baz=95,slow=5.0,SNR=2.6						

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*NEIC **25** 21:21:04.6±1.9, 20°.75S±0°.07×169°.85E±0°.08, h99^{km}±9^{km}, mb4.2/9, Error ellipse: s-maj=13.3km s-min=7.2km az=46.0*

*IDC **25** 21:21:06.4±1.8, 20°.78S×169°.69E, h106^{km}±10^{km}, mb3.9/8, mb1 4.1/9, mb1mx3.7/38, mbtmp4.3/9, MS3.5/3, Ms1 3.5/3, ms1mx3.0/30, Error ellipse: s-maj=39.6km s-min=17.7km az=147.0*

ISC 25 21:21:03.5±0.8**, 20°.8S**±0°.1×**169°.90E**±0°.09**, h90^{km}, n26, σ0ˢ.97**/24**, mb4.3**/11**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	3.45	248	eLR	LR	21 21 48.8	
	comp=Z,252nm,29.7s						
DZM	Mont Dzumac	3.45	248	P	Pn	21 21 57.0	+1.8
	56nm,0.3s,baz=77,slow=15,SNR=339						
DZM				LR	LR	21 22 25.8	
	comp=Z,131nm,19.2s,baz=16,slow=24						
DZM				S	Sn	21 22 34.3	-0.9
	72nm,0.3s,baz=157,slow=23,SNR=19						
MSVF	Nonsavu	8.29	70		Pn	21 23 01.8	+0.8
OUZ	Omahuta	14.70	168	Pn	P	21 24 29.1	-1.5
MQZ	McQueen's Vall	22.93	175	P	P	21 26 00.9	+1.0
PMG	Port Moresby	24.68	294	P	P	21 26 16.3	0.0
	4.9nm,0.3s,baz=75,slow=9.8,SNR=3.6						
COEN	Coen	26.38	281	P	P	21 26 32.2	+0.5
COEN				IAmb	IAmb	21 26 33.5	
	comp=Z,9.4nm,1.1s						
STKA	Stephens Creek	27.57	241	P	P	21 26 43.9	+1.7
	comp=Z,1.5nm,0.7s,baz=132,slow=18,SNR=3.6						
STKA	Stephens Creek	27.57	241	IAmb	IAmb	21 26 44.6	
	comp=Z,0.6nm,0.9s						
WR0	Warramunga Arr	33.12	265	P	P	21 27 30.4	-0.9
WR0				IAmb	IAmb	21 27 30.7	
	comp=Z,3.4nm,0.8s						
WB0	Warramunga Arr	33.28	265	P	P	21 27 31.6	-1.1
WRA	Warramunga Arr	33.31	265	P	P	21 27 31.7	-1.3
	comp=Z,2.8nm,0.6s,baz=92,slow=8.5,SNR=48						
WRA				pP	pwP	21 27 56.5	0.0
	comp=Z,0.8nm,0.8s,baz=97,slow=8.2,SNR=1.6						
WRA	Warramunga Arr	33.31	265	P	P	21 27 32.1	-0.9
AS31	Alice Springs	33.38	258	P	P	21 27 33.6	-0.1
AS31				IAmb	IAmb	21 27 34.1	
	comp=Z,2.7nm,0.5s						
ASAR	Alice Springs	33.38	258	P	P	21 27 33.5	-0.1
	comp=Z,4.9nm,0.6s,baz=91,slow=9.2,SNR=67						
ASAR				pP	pwP	21 27 57.5	+0.1
	comp=Z,1.6nm,0.7s,baz=85,slow=9.0,SNR=2.8						
ASAR	Alice Springs	33.38	258	P	P	21 27 33.1	-0.6
FITZ	Fitzroy Crossi	41.73	266	P	P	21 28 44.5	+0.5
	comp=Z,7.7nm,0.7s,baz=114,slow=7.1,SNR=33						
FITZ				pP	pwP	21 29 07.4	-1.0
	comp=Z,2.6nm,0.8s,baz=108,slow=6.4,SNR=2.8						
FITZ	Fitzroy Crossi	41.73	266	P	P	21 28 44.5	+0.5
KSRS	Korea Array	70.16	326	LR	LR	21 59 58.3	
	comp=Z,46nm,21.1s,baz=230,slow=33						
CMAR	Chiang Mai Arr	79.72	294	P	P	21 33 00.9	-1.1
	comp=Z,0.6nm,0.7s,baz=140,slow=5.0,SNR=4.8						
PMSA	Palmer Station	85.21	160	LR	LR	22 04 09.7	
	comp=Z,79nm,19.5s,baz=134,slow=30						
SNAA	Sanae	87.61	182	P	P	21 33 41.7	+0.3
	comp=Z,0.9nm,0.7s,baz=216,slow=24,SNR=2.1						
SNAA	Sanae	87.61	182	IAmb	IAmb	21 33 50.3	
	comp=Z,1.6nm,1.1s						
SONM	Songino Array	88.86	323	P	P	21 33 47.8	+0.1
	comp=Z,0.2nm,0.5s,baz=123,slow=5.3,SNR=1.9						
SONM	Songino Array	88.86	323	IAmb	IAmb	21 33 51.8	
	comp=Z,0.3nm,0.8s						
GERES	GERESS Array B	146.18	331	PKPbc	PKPab	21 40 33.2	-1.1
	comp=Z,1.0nm,0.7s,baz=31,slow=3.1,SNR=10						
GERES				sPKPbc	sPKPab	21 41 14.0	+6.4
	comp=Z,0.8nm,0.7s,baz=32,slow=3.3,SNR=3.6						

IDC 25 21:24:03.7±1.8**, 4°.38N**×**122°.42E, h0^{km}, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.3**/38**, mbtmp3.6**/3**, MS3.4**/1**, Ms1 3.6**/1**, ms1mx2.6**/38**, Error ellipse: s-maj=213.5km s-min=26.5km az=62.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	26.86	155	P	P	21 29 45.9	-0.5
	0.5nm,0.3s,baz=332,slow=10.0,SNR=8.8						
CMAR	Chiang Mai Arr	26.87	303	LR	LR	21 39 14.8	
	comp=Z,80nm,19.9s,baz=172,slow=34						
ASAR	Alice Springs	30.05	159	P	P	21 30 15.2	+0.5
	0.3nm,0.3s,baz=338,slow=7.3,SNR=9.8						
MKAR	Makanchi Array	54.62	327	P	P	21 33 34.1	-0.1
	0.1nm,0.3s,baz=119,slow=7.6,SNR=5.2						

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*SJA **25** 21:26:55.4±0.8, 26°.89S×71°.97W, h30^{km}, ML4.6, MW4.3*

*VAO **25** 21:27:00.2±0.5, 26°.66S×72°.09W, h50^{km}, mb4.5*

*IDC **25** 21:27:05.1±0.7, 26°.47S×70°.64W, h0^{km}, mb4.4/8, mb1 4.4/12, mb1mx4.2/32, mbtmp4.3/12, ML4.2/4, MS3.3/10, Ms1 3.3/10, ms1mx3.2/30, Error ellipse: s-maj=23.1km s-min=14.2km az=106.0*

*NEIC **25** 21:27:07.6, 26°.42S×71°.20W, h33^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.98; $M_{\theta\theta}$-0.03; $M_{\phi\phi}$-1.95; $M_{r\theta}$-0.06; $M_{\theta\phi}$0.62; $M_{\phi r}$0.64; Fault plane solution: $M_0$2.16000×10^{15} NP1:ϕ_s347.05000°, δ53.64000°, λ94.38000°. NP2:ϕ_s159.70000°, δ36.58000°, λ84.08000°. Principal axes: T 2.0875, Plg81.0000°, Azm277.0000°; N 0.1461, Plg4.0000°, Azm164.0000°; P -2.2336, Plg9.0000°, Azm74.0000°;*

*GUC **25** 21:27:07.4±0.7, 26°.45S×70°.90W, h65^{km}±999^{km}, ML4.3*

*NEIC **25** 21:27:08.1±2.4, 26°.45S±0°.03×71°.01W±0°.10, h27^{km}±4^{km}, mb4.4/12, Mwr4.2/22, ML4.3(GUC), Error ellipse: s-maj=12.6km s-min=4.7km az=91.0*

ISC 25 21:27:08.1±1.3**, 26°.46S**±0°.03×**70°.81W**±0°.06**, h26^{km}±8^{km}, n129, σ1ˢ.59**/137**, mb4.7**/11**, MS3.5**/4**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO03	Copiap	1.24	156	eP	Pb	21 27 31.3	+0.4
GO03				i S	Sb	21 27 47.3	+0.9
GO03				IAML		21 27 50.1	
	comp=N,6μm,0.6s						
GO03	Copiap	1.24	156		Pb	21 27 31.4	+0.5
GO03				Sn	Sb	21 27 47.3	+0.9
GO02	Mina Guanaco	1.70	41	eP	Pb	21 27 37.9	-1.0
GO02				i S	Sb	21 28 00.5	+0.6
GO02				IAML		21 28 08.7	
	comp=E,6μm,0.5s						
GO02	Mina Guanaco	1.70	41		Pb	21 27 38.7	-0.2
GO02				Sn	Sb	21 28 00.8	+0.9
PB14	IPOC Station P	1.86	11	eP	Pn	21 27 39.0	+0.3
PB14				i S	Sb	21 28 03.7	-1.1
PB14				IAML		21 28 10.0	
	comp=E,4μm,0.6s						
PB14	IPOC Station P	1.86	11		Pn	21 27 39.1	+0.3
PB14				Sn	Sn	21 28 01.7	+0.1
PB14	IPOC Station P	1.86	11	i P	Pn	21 27 39.6	+0.9
PB14				eS	Sb	21 28 05.4	+0.6
PB14				IAML		21 28 08.8	
	comp=Z,3μm,0.6s						
LCO	Las Campanas	2.54	178	Pn	Pn	21 27 48.5	+0.5
PB10	IPOC Station P	2.95	5	eP	Pn	21 27 52.5	-0.8
PB10	IPOC Station P	2.95	5		Pn	21 27 52.7	-0.6
PB10	IPOC Station P	2.95	5	i P	Pn	21 27 52.7	-0.6
PB10				eS	Sb	21 28 37.6	+2.1
PB10				IAML		21 28 40.4	
	comp=Z,566nm,0.9s						
PB15	IPOC Station P	3.46	21		Pn	21 28 01.4	+0.8
PB15	IPOC Station P	3.46	21	i P	Pn	21 28 02.5	+1.9
PB15				eS	Sb	21 28 54.4	+3.9
PB15				IAML		21 29 02.0	
	comp=Z,3μm,0.4s						
PB05	IPOC Station P	3.64	9	eP	Pn	21 28 02.4	-0.5
PB05	IPOC Station P	3.64	9	i P	Pn	21 28 02.4	-0.5
PB05				eS	Sb	21 28 57.6	+2.0
PB05				IAML		21 29 08.3	
	comp=Z,515nm,0.8s						
GO04	Tololo Observa	3.70	180	eP	Pn	21 28 04.5	+0.7
GO04	Tololo Observa	3.70	180		Pn	21 28 05.5	+1.7
PB06	IPOC Station P	3.91	17	eP	Pn	21 28 06.9	+0.3
PB06	IPOC Station P	3.91	17	i P	Pn	21 28 07.2	+0.5
PB06				eS	Sb	21 29 05.8	+2.5
PB06				IAML		21 29 09.3	
	comp=Z,878nm,0.7s						
PB04	IPOC Station P	4.15	8		Pn	21 28 08.9	-1.2
PB04	IPOC Station P	4.15	8	i P	Pn	21 28 09.3	-0.8
LVC	Limon Verde	4.21	25	Pn	Pn	21 28 11.7	+0.7
	comp=Z,16nm,0.3s,baz=228,slow=7.1,SNR=56						
LVC				Pg	Pb	21 28 21.9	+0.2
	comp=Z,73nm,0.3s,baz=202,slow=11,SNR=42						
LVC				Sn	Sn	21 29 01.0	+1.5
	comp=Z,58nm,0.3s,baz=184,slow=21,SNR=4.4						
LVC				LR	LR	21 29 12.4	
	comp=Z,82nm,19.9s,baz=222,slow=31						
LVC				Lg	Lg	21 29 16.4	
	comp=Z,174nm,0.3s,baz=313,slow=21,SNR=18						
LVC	Limon Verde	4.21	25		Pn	21 28 12.4	+1.4
LVC					Pb	21 28 23.8	+2.1
LVC	Limon Verde	4.21	25	eP	Pn	21 28 12.4	+1.4
LVC				eS	Sb	21 29 07.6	-4.6
PB07	IPOC Station P	4.79	10		Pn	21 28 17.9	-0.9
PB09	IPOC Station P	4.86	17	eP	Pn	21 28 20.4	+0.6
PB09	IPOC Station P	4.86	17		Pn	21 28 20.0	+0.2
PB09	IPOC Station P	4.86	17	i P	Pn	21 28 20.7	+0.9
PB09				eS	Sb	21 29 34.8	+3.9
PB09				IAML		21 29 50.9	
	comp=Z,886nm,1.0s						
PB01	IPOC Station P	5.53	13		Pn	21 28 28.1	-0.8
PATCX	Punta Patache	5.65	6		Pn	21 28 28.7	-1.8
AZAP	Zapla	5.65	68	i P	Pn	21 28 36.7	+6.0
AZAP				IAML		21 29 59.8	
	comp=Z,44nm,1.8s						
YJA	Yavi	6.44	50	i P	Pn	21 28 47.0	+5.2
YJA				IAML		21 30 10.6	
	comp=Z,12nm,2.7s						
PSGCX	Pisagua	6.86	5		Pn	21 28 44.8	-2.5
GO01	Chusmiza	6.92	13		Pn	21 28 47.2	-1.2
PB16	IPOC Station P	8.18	9		Pn	21 29 04.7	-1.1
GO05	Huala	8.57	186	Pn	Pn	21 29 11.4	+0.7
LPAZ	La Paz	10.43	14	Pn	Pn	21 29 37.0	+0.4
	comp=Z,1.4nm,0.3s,baz=189,slow=5.3,SNR=25						
LPAZ				LR	LR	21 34 07.4	
	comp=Z,164nm,19.6s,baz=197,slow=41						
LPAZ	La Paz	10.43	14		Pn	21 29 36.8	+0.2
LPAZ	La Paz	10.43	14	eP	Pn	21 29 35.8	-0.8
CPUP	Villa Florida	12.09	92	Pn	Pn	21 29 55.4	-3.4
	comp=Z,0.2nm,0.3s,baz=236,slow=7.3,SNR=1.7						
CPUP				Sn	Sn	21 32 12.3	-0.4
	comp=Z,0.2nm,0.3s,baz=128,slow=19,SNR=1.7						
CPUP				LR	LR	21 35 05.5	
	comp=Z,254nm,20.6s,baz=262,slow=40						
CPUP	Villa Florida	12.09	92	eP	P	21 30 05.8	-5.5
ITQB	Itaqui	12.93	108	eP	P	21 30 16.5	-4.1
SIV	San Ignacio	13.81	43	Pn	Pn	21 30 19.7	-2.7
	comp=Z,1.3nm,0.3s,baz=263,slow=7.7,SNR=26						
SIV				Sn	Sn	21 32 56.6	+1.6
	comp=Z,0.1nm,0.3s,baz=216,slow=19,SNR=1.5						
SIV				LR	LR	21 35 11.0	
	comp=Z,37nm,18.6s,baz=249,slow=35						
PLCA	Paso Flores	14.23	179	LR	LR	21 36 09.5	
	comp=Z,259nm,19.3s,baz=145,slow=38						
AQDB	Aquidauana	15.09	70	eP	P	21 30 44.2	-0.5
NNA	Nana	15.48	337	LR	LR	21 35 39.8	
	comp=Z,62nm,20.3s,baz=192,slow=33						
NNA	Nana	15.48	337	Pn	Pn	21 30 44.1	-0.8
CPSB	Cacapava Do Su	15.78	108	eP	P	21 30 51.9	-0.4
PLTB	Pedras Altas	15.93	113	eP	P	21 30 53.7	-0.3
ITAB	Concordia	16.69	97	eP	P	21 31 05.2	+2.8
TRCB	Terra Rica	16.92	81	eP	P	21 31 07.9	+2.8
PTGB	Pitanga	17.00	88	eP	P	21 31 09.5	+3.5
SALV	Santo Antonio	17.56	56	eP	P	21 31 13.7	+1.6
C2SB	Chapadao do Su	18.26	69	eP	P	21 31 24.0	+4.1
PCMB	Pacaembu	18.49	79	eP	Pn	21 31 23.4	+0.7
SAML	Samuel	18.86	24	P	P	21 31 25.7	-0.7
SAML	Samuel	18.86	24	eP	P	21 31 23.9	-2.5
SAML				eS	S	21 35 03.3	+3.9
FRTB	Fartura	19.52	85	eP	Pn	21 31 35.6	+0.5
ITRB	Iturama	19.97	75	eP	Pn	21 31 40.4	0.0
ATAH	Atahualpa	20.53	338	LR	LR	21 38 30.2	
	comp=Z,33nm,22.0s,baz=175,slow=33						
ARAG	Araguaiana, MT	20.68	63	eP	P	21 31 46.5	+0.2
CLDB	Colider	21.01	45	eP	P	21 31 48.9	-0.9
BB19B	Bebedouro	21.08	80	eP	P	21 31 53.4	+2.7
SPB	Sao Paulo	21.37	87	eP	P	21 31 57.1	+3.4
RCLB	Rio Claro- Sao	21.56	84	eP	P	21 31 56.8	+0.9
VAO	Valinhos	21.92	86	eP	P	21 31 59.9	+0.2
PARB	Paraibuna	23.05	88	eP	P	21 32 11.3	-0.4
BDFB	Brasilia	23.80	68	P	P	21 32 18.0	-1.2
	comp=Z,7.2nm,0.6s,baz=236,slow=15,SNR=10						
BDFB				LR	LR	21 42 53.6	
	comp=Z,184nm,19.9s,baz=280,slow=40						
BDFB	Brasilia	23.80	68	P	P	21 32 18.4	-0.8
BDFB				IAmb	IAmb	21 32 20.2	
	comp=Z,9.8nm,0.8s						
ESAR	Angra dos Reis	24.18	88	eP	P	21 32 22.9	+0.4
BSCB	Bom Sucesso	24.43	83	eP	P	21 32 24.0	-0.9
JANB	Januaria	27.19	71	eP	P	21 32 49.5	-0.4
PTGA	Pitinga	27.63	24	P	P	21 32 53.5	-0.3
	comp=Z,1.7nm,0.5s,baz=204,slow=14,SNR=4.4						
PTGA	Pitinga	27.63	24	P	P	21 32 52.4	-1.4
PTGA				IAmb	IAmb	21 32 55.0	
	comp=Z,3.1nm,0.8s						
PTGA	Pitinga	27.63	24	eP	P	21 32 49.5	-4.2
SMTB	Santa Maria do	28.12	56	eP	P	21 32 57.1	-1.1
SJMB	Sao Joao De Ma	28.37	80	eP	P	21 33 00.2	-0.2
PRPB	Parauapebas	28.42	48	eP	P	21 32 59.3	-1.6
BSFB	Barra de Sao F	28.63	81	eP	P	21 33 03.3	+0.6
ROSC	El Rosal	31.30	353	LR	LR	21 47 03.3	
	comp=Z,83nm,18.6s,baz=174,slow=38						
NBIT	Itapeh - BA	31.43	75	eP	P	21 33 27.1	-0.4
RUSC	La Rusia	32.24	356	P	P	21 33 33.3	-1.8
NBPN	Ponto Novo - B	32.78	68	eP	P	21 33 38.0	-1.4
NBTA	Tacaratu-PE	35.48	67	eP	P	21 34 01.8	-1.0
NBMO	Morrinhos-CE	37.40	57	eP	P	21 34 18.1	-1.2
VNA3	Neumayer Olymp	55.99	160	P	P	21 36 45.1	+1.1
VNA1	Neumayer--Stat	56.25	159	P	P	21 36 44.8	-1.0
VNA2	Neumayer--Watz	56.60	159	P	P	21 36 49.6	+1.2
SNAA	Sanae	58.21	160	P	P	21 37 00.9	+1.1
SNAA	Sanae	58.21	160	P	P	21 37 00.8	+1.1
	comp=Z,5.6nm,0.6s,baz=283,slow=8.0,SNR=30						
SNAA	Sanae	58.21	160	P	P	21 37 00.8	+1.1
QSPA	South Pole Qui	63.75	180	P	P	21 37 39.7	+2.2
QSPA				IAmb	IAmb	21 37 40.2	
	comp=Z,5.2nm,0.9s						
TXAR	Lajitas Array	63.80	328	P	P	21 37 40.4	+2.1
	comp=Z,0.7nm,0.8s,baz=150,slow=9.6,SNR=6.2						
TXAR	Lajitas Array	63.80	328	P	P	21 37 38.7	+0.4
R40A	Maddies Statio	67.48	342	P	P	21 38 01.1	-0.6
LIC	Lamto	71.47	73	eP	P	21 38 25.9	-1.0
	comp=Z,19nm,1.1s						
TIC	Toumodi	71.69	73	eP	P	21 38 26.8	-1.4
K38A	Parkersburg	71.69	343	P	P	21 38 26.6	-1.0
KIC	Kosan Boka	71.78	73	eP	P	21 38 29.2	+0.4
	comp=Z,8.0nm,0.6s						
DBIC	Dimbokro	71.84	73	P	P	21 38 29.9	+0.7
	comp=Z,5.0nm,0.6s,baz=211,slow=6.5,SNR=9.8						
DBIC				LR	LR	22 09 36.0	
	comp=Z,36nm,18.4s,baz=150,slow=36						
DBIC	Dimbokro	71.84	73	IAmb	IAmb	21 38 30.5	
	comp=Z,5.8nm,0.8s						
MAW	Mawson	80.09	164	P	P	21 39 16.5	+1.3
	comp=Z,3.1nm,0.6s,baz=220,slow=6.4,SNR=10						
TOA0	Torodi Ar. Sit	80.66	70	P	P	21 39 19.0	-0.2
TORD	Torodi Ar. Bea	80.66	70	P	P	21 39 19.4	+0.2
	comp=Z,9.3nm,0.8s,baz=264,slow=5.1,SNR=38						
TORD	Torodi Ar. Bea	80.66	70	P	P	21 39 19.1	-0.1
YKA	Yellowknife Ar	95.29	341	P	P	21 40 29.6	+0.4
	comp=Z,0.5nm,0.7s,baz=138,slow=5.1,SNR=10.0						
ASAR	Alice Springs	124.73	208	PKP	PKPdf	21 46 06.7	+0.5
	comp=Z,0.4nm,0.7s,baz=126,slow=1.8,SNR=6.5						
ASAR	Alice Springs	124.73	208		PKPdf	21 46 06.2	0.0
H11S2	WAKE ISLAND Hy	126.63	274	T	T	00 05 39.2	
	baz=111,slow=75,SNR=23						
H11S1	WAKE ISLAND Hy	126.64	274	T	T	00 05 32.5	
	baz=111,slow=75,SNR=30						
H11S3	WAKE ISLAND Hy	126.65	274	T	T	00 05 37.7	
	baz=111,slow=75,SNR=28						
H11N3	WAKE ISLAND Hy	126.85	276	T	T	00 05 53.6	
	baz=315,slow=75,SNR=3.4						
H11N1	WAKE ISLAND Hy	126.86	276	T	T	00 05 56.0	
H11N2	WAKE ISLAND Hy	126.86	276	T	T	00 05 51.7	
	baz=319,slow=75,SNR=5.2						
WRA	Warramunga Arr	127.81	210	PKP	PKPdf	21 46 12.8	+0.6
	comp=Z,0.8nm,0.7s,baz=157,slow=1.6,SNR=8.0						
ABKAR	Akbulak array	135.91	46		PKPdf	21 46 27.2	+0.8
KURK	Kurchatov	146.39	36		PKPbc	21 46 47.1	+0.6
ZAA0	Zalesovo Array	147.16	27		PKPbc	21 46 48.0	-0.5
ZALV	Zalesovo Beam	147.16	27	PKPbc	PKPbc	21 46 49.0	+0.5
	comp=Z,9.3nm,0.7s,baz=259,slow=2.4,SNR=36						
ZALV	Zalesovo Beam	147.16	27		PKPdf	21 46 47.5	+1.2
AAK	Ala-Archa	147.46	51		PKPbc	21 46 49.8	-0.2
FRU1	Bishkek	147.50	51		PKPab	21 46 52.4	+0.3
KSH	Kashi	149.43	56	PKPbc	PKPdf	21 46 48.0	-2.7
KSH				pPKP	pPKPdf	21 46 59.3	0.0
KSH				PKS	PKSdf	21 50 22.5	-3.2
KSH				PP	PP	21 50 30.0	+2.1
MAKZ	Makanchi	150.42	40		PKPbc	21 46 57.3	+0.1
MKAR	Makanchi Array	150.61	39	PKPbc	PKPbc	21 46 58.4	+0.7
	comp=Z,8.6nm,0.8s,baz=301,slow=2.4,SNR=76						
MKAR				PKPab	PKPab	21 47 05.4	+0.9
	comp=Z,6.2nm,0.9s,baz=329,slow=2.1,SNR=13						
MKAR	Makanchi Array	150.61	39		PKiKP	21 46 58.5	+0.2
SONM	Songino Array	158.55	5	PKPab	PKPab	21 47 39.1	+0.9
	comp=Z,0.6nm,0.8s,baz=304,slow=3.0,SNR=4.4						
SONM	Songino Array	158.55	5	PKPdf	PKPdf	21 47 04.6	+1.3
LZH	Lanzhou	169.37	24	ePKP	PKPdf	21 47 11.5	-2.1
LZH				pPKP	pPKPdf	21 47 23.3	+1.1
LZH				sPKP		21 47 28.0	

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*IDC **25** 21:39:41.6±2.1, 19°.59S×70°.67W, h0^{km}, mb3.7/3, mb1 3.8/4, mb1mx3.6/26, mbtmp3.7/4, ML3.5/1, Error ellipse: s-maj=66.7km s-min=28.0km az=73.0*

*GUC **25** 21:39:43.9±0.7, 19°.67S×71°.02W, h39^{km}±3^{km}, ML3.5*

ISC 25 21:39:42.2±1.6**, 19°.66S**±0°.03×**70°.94W**±0°.07**, h12^{km}±9^{km}, n18, σ1ˢ.01**/29**, mb3.7**/3**, 4C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.77	86	⇓iP	Pn	21 39 59.0	+0.1
PSGC				i S	Sn	21 40 10.4	-0.1
TA01	Diego Aracena	1.15	142	eP	Pg	21 40 04.5	+0.2
TA01				eS	Sn	21 40 20.0	+0.3
TA01				IAML		21 40 25.6	
	comp=E,3μm,0.5s						
PB12	IPOC Station P	1.19	29	⇑iP	Pg	21 40 05.7	+0.6
PB12				eS	Sn	21 40 21.5	+0.6
PB12				IAML		21 40 24.0	
	comp=N,1μm,0.5s						
PB11	IPOC Station P	1.21	95	eP	Pg	21 40 06.4	+0.8
PB11				eS	Sn	21 40 23.8	+2.3
PB11				IAML		21 40 25.5	
	comp=N,3μm,0.3s						
PATCX	Punta Patache	1.37	148	⇑iP	Pb	21 40 07.9	0.0
PATCX				eS	Sg	21 40 26.6	+0.3
PATCX				IAML		21 40 35.4	
	comp=E,914nm,0.2s						
AP01	Chacalluta	1.40	24	eP	Pg	21 40 08.7	-0.4
AP01				eS	Sg	21 40 26.9	-0.4
AP01				IAML		21 40 38.5	
	comp=N,2μm,0.5s						
GO01	Chusmiza	1.64	91	⇑iP	Pg	21 40 13.4	-0.3
GO01				i S	Sg	21 40 37.0	+1.9
PB08	IPOC Station P	1.74	106	⇑iP	Pg	21 40 14.6	-1.1
PB08				i S	Sg	21 40 38.6	+0.2
PB08				IAML		21 40 42.3	
	comp=N,832nm,0.3s						
PB16	IPOC Station P	1.89	46	eP	Pb	21 40 16.8	-0.1
PB16				eS	Sg	21 40 43.2	+0.3
PB16				IAML		21 40 45.3	
	comp=N,402nm,0.2s						
PB02	IPOC Station P	1.92	150	eP	Pn	21 40 15.5	+0.7
PB02				eS	Sb	21 40 40.1	-1.0
PB01	IPOC Station P	1.94	136	eP	Pn	21 40 13.1	-1.9
PB01				i S	Sb	21 40 40.2	-1.5
PB01				IAML		21 40 47.3	
	comp=N,610nm,0.3s						
LVC	Limon Verde	3.49	148	Pn	Pn	21 40 38.0	+1.3
	comp=N,4.3nm,0.3s,baz=336,slow=11,SNR=7.6						
LVC				Sn	Sn	21 41 17.6	-0.6
	comp=N,6.9nm,0.3s,baz=352,slow=10.0,SNR=3.7						
LPAZ	La Paz	4.29	39	Pn	Pb	21 40 56.8	-1.1
	comp=N,0.6nm,0.3s,baz=179,slow=2.2,SNR=17						
SIV	San Ignacio	10.08	70	Pn	Pn	21 42 11.5	+4.6
	comp=N,0.5nm,0.3s,baz=279,slow=11,SNR=8.1						
PTGA	Pitinga	21.66	31	P	P	21 44 32.2	-0.6
	comp=N,1.0nm,0.3s,baz=334,slow=23,SNR=1.9						
TORD	Torodi Ar. Bea	78.55	72	P	P	21 51 43.4	-0.7
	comp=N,0.6nm,0.7s,baz=247,slow=5.2,SNR=4.6						
YKA	Yellowknife Ar	88.84	341	P	P	21 52 36.9	+1.2
	comp=N,0.2nm,0.6s,baz=130,slow=5.9,SNR=4.1						
MKAR	Makanchi Array	145.19	33	PKPbc	PKPdf	21 59 20.5	+0.7
	comp=N,0.3nm,0.7s,baz=317,slow=4.4,SNR=2.8						

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*INET **25** 21:47:45.2, 12°.44N×87°.85W, h75^{km}, ML3.8*

*SNET **25** 21:47:46.6±1.9, 12°.48N×87°.87W, h35^{km}±999^{km}, ML3.6*

*UCR **25** 21:47:46.8±1.9, 12°.52N×87°.85W, h55^{km}±27^{km}, ML3.6*

ISC 25 21:47:47.4±1.3**, 12°.54N**±0°.08×**87°.82W**±0°.05**, h58^{km}**±20^{km}**, n39, σ0ˢ.84**/54**, 5D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	Cosiguina Volc	0.50	30	eP	Pn	21 47 59.8	+0.4
CNCH	Conchagua	0.73	359	⇓iP	Pn	21 48 01.8	-0.3

CNCH				eS	Sn	21 48 13.3	+0.5
CNCH				IAML		21 48 19.1	
	comp=Z,3µm,0.3s						
CNCH	Conchagua	0.73	359	⇓iP	Pn	21 48 01.8	-0.3
CNCH				eS	Sn	21 48 13.3	+0.5
CNCH				IAML		21 48 19.1	
	comp=Z,3µm,0.3s						
CRIN	San Cristobal	0.76	78	⇓eP	Pn	21 48 02.6	+0.2
LCND	La Caada	0.77	355	eP	Pn	21 48 02.2	-0.2
LCND				eS	Sn	21 48 13.9	+0.5
LCND				IAML		21 48 15.5	
	comp=Z,2µm,0.3s						
LCND	La Caada	0.77	355	eP	Pn	21 48 02.2	-0.2
LCND				eS	Sn	21 48 13.9	+0.5
LCND				IAML		21 48 15.5	
	comp=Z,2µm,0.3s						
JUCU	Jucuar¡n	0.83	329	eS	Sn	21 48 14.2	-0.6
JUCU	Jucuar¡n	0.83	329	eS	Sn	21 48 14.2	-0.6
BLLM	Bellamira	0.99	335	i P	Pn	21 48 05.0	-0.3
BLLM	Bellamira	0.99	335	i P	Pn	21 48 05.0	-0.3
LCY	Lacayo	1.00	332	eP	Pn	21 48 05.4	-0.1
LCY	Lacayo	1.00	332	eP	Pn	21 48 05.4	-0.1
RANC	El Ranchito	1.00	333	eP	Pn	21 48 05.4	-0.2
RANC	El Ranchito	1.00	333	eP	Pn	21 48 05.4	-0.2
PACA	Pacayal	1.05	332	eP	Pn	21 48 06.0	-0.2
PACA				eS	Sn	21 48 19.8	-0.2
PACA	Pacayal	1.05	332	eP	Pn	21 48 06.0	-0.2
PACA				eS	Sn	21 48 19.8	-0.2
TECA	Tecapa	1.16	325	eP	Pn	21 48 07.3	-0.5
TECA				eS	Sn	21 48 22.6	-0.3
TECA	Tecapa	1.16	325	eP	Pn	21 48 07.3	-0.5
TECA				eS	Sn	21 48 22.6	-0.3
FAGO	Alcalda de S	1.18	346	eS	Sn	21 48 23.4	+0.3
FAGO	Alcalda de S	1.18	346	eS	Sn	21 48 23.4	+0.3
COPN	Copaltepe	1.25	106	eP	Pn	21 48 07.8	-0.9
COPN	Copaltepe	1.25	106	eP	Pn	21 48 07.8	-0.9
MOMN	Momotombo	1.25	96	eP	Pn	21 48 07.9	-0.9
MOMN	Momotombo	1.25	96	eP	Pn	21 48 07.9	-0.9
TGUH	Tegucigalpa,Un	1.60	19	⇓iP	Pn	21 48 13.7	+0.2
TGUH	Tegucigalpa,Un	1.60	19	⇓iP	Pn	21 48 13.7	+0.2
LFRS	El Faro	1.62	312	eP	Pn	21 48 13.7	-0.2
LFRS				eS	Sn	21 48 32.8	-1.0
MASN	Masaya	1.72	108	eP	Pn	21 48 15.6	+0.6
LOMA	Loma Larga	1.72	310	eP	Pn	21 48 13.7	-1.4
LOMA				eS	Sn	21 48 35.8	-0.3
LOMA	Loma Larga	1.72	310	eP	Pn	21 48 13.7	-1.4
LOMA				eS	Sn	21 48 35.8	-0.3
MATN	Matagalpa	1.88	78	eP	Pn	21 48 16.8	-0.6
CEVE	Cerro Verde	2.18	306	eP	Pn	21 48 20.7	-0.9
CEVE				eS	Sn	21 48 50.5	+3.0
CEVE				IAML		21 48 53.7	
	comp=Z,424nm,0.3s						
CEVE	Cerro Verde	2.18	306	eP	Pn	21 48 20.7	-0.9
CEVE				eS	Sn	21 48 50.5	+3.0
CEVE				IAML		21 48 53.7	
	comp=Z,424nm,0.3s						
ACON	Acoyapa	2.64	102	eP	Pn	21 48 26.7	-1.0
BUEV	Buena Vista	2.92	126	eP	Pn	21 48 32.5	+0.9
IXG	Ixpaco	3.03	303	eP	Pn	21 48 33.1	0.0
IXG	Ixpaco	3.03	303	eP	Pn	21 48 33.1	0.0
CUI	Cuipilapa	3.20	125	eP	Pn	21 48 35.7	+0.4
CUI				eS	Sn	21 49 11.7	-0.7
PLVR	Palo Verde	3.25	132	eP	Pn	21 48 37.0	+0.8
PLVR				eS	Sn	21 49 13.6	-0.1

IDC 25 21:56:24.5±1.6**, 19°.78N**×**121°.97E, h0^{km}, mb3.4**/5**, mb1 3.7**/5**, mb1mx3.4**/42**, mbtmp3.5**/5**, Error ellipse: s-maj=62.4km s-min=23.2km az=58.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	21.79	270	P	P	22 01 18.9	+0.6
	0.7nm,0.3s,baz=85,slow=11,SNR=4.2						
WRA	Warramunga Arr	41.29	162	P	P	22 04 12.2	+0.3
	0.3nm,0.4s,baz=327,slow=8.9,SNR=3.0						
MKAR	Makanchi Array	42.07	319	P	P	22 04 17.4	-0.7
	0.3nm,0.7s,baz=118,slow=7.5,SNR=4.7						
ZALV	Zalesovo Beam	44.36	329	P	P	22 04 36.6	+0.2
	0.5nm,0.5s,baz=121,slow=14,SNR=3.9						
ASAR	Alice Springs	44.72	164	P	P	22 04 39.0	-0.6
	0.3nm,0.5s,baz=337,slow=6.2,SNR=4.6						

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*IDC **25** 21:58:47.2±1.2, 19°.63S×70°.85W, h0^{km}, mb4.2/6, mb1 4.3/8, mb1mx4.0/38, mbtmp4.2/8, ML3.7/2, MS3.0/4, Ms1 3.0/4, ms1mx2.7/35, Error ellipse: s-maj=34.1km s-min=22.8km az=98.0*

*NEIC **25** 21:58:50.3±2.1, 19°.73S±0°.03×70°.81W±0°.05, h21^{km}±5^{km}, mb4.3/4, Error ellipse: s-maj=7.4km s-min=4.6km az=93.0*

*GUC **25** 21:58:51.9±0.6, 19°.72S×70°.69W, h40^{km}±1^{km}, ML3.9*

ISC 25 21:58:49.0±2.9**, 19°.73S**±0°.03×**70°.85W**±0°.06**, h14**^{km}±19^{km}**, n43,** σ1^{s}**03**/56**, mb4.2**/6**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.70	80	eP	Pb	21 59 03.0	0.0
PSGC				i S	Sb	21 59 11.5	-1.0
PSGCX	Pisagua	0.70	80		Pb	21 59 02.3	-0.7
PSGCX					Sb	21 59 11.4	-1.1
TA01	Diego Aracena	1.05	143	eP	Pb	21 59 09.3	+0.4
TA01				i S	Sb	21 59 23.2	+0.7
PB11	IPOC Station P	1.13	92	eP	Pn	21 59 10.0	-0.4
PB11				i S	Sb	21 59 23.6	-1.4
PB11				IAML		21 59 27.2	
	comp=N,10µm,0.3s						
PB11	IPOC Station P	1.13	92		Pn	21 59 09.8	-0.7
PB11					Sb	21 59 24.1	-0.8
PB12	IPOC Station P	1.21	24	eP	Pn	21 59 12.1	+0.6
PB12				i S	Sn	21 59 28.3	+0.4
PB12				IAML		21 59 32.9	
	comp=N,4µm,0.4s						
PB12	IPOC Station P	1.21	24		Pn	21 59 11.8	+0.3
PB12					Sn	21 59 28.2	+0.4
PATCX	Punta Patache	1.27	149		Pb	21 59 13.1	+0.4
AP01	Chacalluta	1.43	20	eP	Pb	21 59 15.8	+0.3
AP01				i S	Sb	21 59 34.0	+0.5
GO01	Chusmiza	1.56	88	eP	Pn	21 59 17.5	+0.7
GO01				i S	Sn	21 59 36.5	-0.5
GO01	Chusmiza	1.56	88		Pn	21 59 17.4	+0.7
GO01					Sn	21 59 37.0	-0.1
PB08	IPOC Station P	1.65	105	eP	Pn	21 59 18.6	+0.7
PB08				i S	Sn	21 59 38.7	-0.4
PB02	IPOC Station P	1.82	151	eP	Pn	21 59 21.2	+1.3
PB02				i S	Sn	21 59 42.6	-0.2
PB01	IPOC Station P	1.83	136	eP	Pn	21 59 21.2	+1.1
PB01				i S	Sn	21 59 43.4	+0.3
PB01				IAML		21 59 44.9	
	comp=N,2µm,0.2s						
PB01	IPOC Station P	1.83	136		Pn	21 59 21.2	+1.1
PB01					Sn	21 59 43.7	+0.5
PB16	IPOC Station P	1.88	43	eP	Pn	21 59 22.8	+1.6
PB16				i S	Sn	21 59 46.3	+1.3
PB16	IPOC Station P	1.88	43		Pn	21 59 22.9	+1.7
PB16					Sb	21 59 46.6	-0.4
PB07	IPOC Station P	2.19	156		Pn	21 59 26.0	+1.0
PB09	IPOC Station P	2.55	144	i S	Sn	22 00 02.1	+1.1
PB09	IPOC Station P	2.55	144		Pn	21 59 32.4	+2.4
PB04	IPOC Station P	2.68	166		Pn	21 59 32.0	+0.2
LVC	Limon Verde	3.39	148	Pn	Pn	21 59 44.1	+2.3
	comp=N,4.2nm,0.3s,baz=347,slow=9.0,SNR=22						
LVC				Sn	Sn	22 00 23.7	+1.6
	comp=N,35nm,0.3s,baz=98,slow=24,SNR=13						
LVC				LR	LR	22 01 16.8	
	comp=N,150nm,18.3s,baz=356,slow=43						
PB15	IPOC Station P	3.70	160		Pn	21 59 46.4	+0.5
PB10	IPOC Station P	3.78	176		Pn	21 59 46.5	-0.3
LPAZ	La Paz	4.29	38	Pn	Pn	21 59 59.0	+4.7
	comp=N,2.5nm,0.3s,baz=171,slow=3.0,SNR=39						
LPAZ				LR	LR	22 01 43.6	
	comp=N,156nm,19.4s,baz=230,slow=42						
PB14	IPOC Station P	4.89	175		Pn	22 00 01.7	-0.7
GO03	Copiap	7.85	176	Pn	Pn	22 00 42.1	-0.7
SIV	San Ignacio	10.03	70	Pn	Pn	22 01 12.7	0.0
	comp=N,1.1nm,0.3s,baz=276,slow=9.7,SNR=16						
SIV				LR	LR	22 05 18.3	
	comp=N,63nm,19.4s,baz=269,slow=39						
GO04	Tololo Observa	10.40	180	Pn	Pn	22 01 15.2	-2.8
SAML	Samuel	13.03	36	Pn	Pn	22 01 54.1	+0.3
PLCA	Paso Flores	20.94	179	P	Pn	22 03 34.6	+0.6
	comp=N,1.9nm,0.9s,baz=31,slow=16,SNR=3.5						
PTGA	Pitinga	21.68	31	P	P	22 03 38.3	-1.1
	comp=N,9.9nm,0.3s,baz=311,slow=22,SNR=24						
PTGA	Pitinga	21.68	31	P	P	22 03 38.4	-1.1
PTGA				IAmb	IAmb	22 03 39.7	
	comp=Z,5.5nm,0.7s						
BDFB	Brasilia	22.13	83	P	P	22 03 46.2	+1.8
	comp=Z,1.4nm,0.5s,baz=294,slow=11,SNR=3.0						
RUSC	La Rusia	25.55	355	P	P	22 04 18.3	+0.3
MDP	Montagnes des	30.49	38	LR	LR	22 18 15.9	
	comp=Z,47nm,18.1s,baz=163,slow=38						
656A	Willston	50.09	347	P	P	22 07 42.7	-0.8
656A				IAmb	IAmb	22 07 43.5	
	comp=Z,69nm,0.5s						
TORD	Torodi Ar. Bea	78.50	72	P	P	22 10 49.4	-0.8
	comp=Z,1.1nm,0.8s,baz=253,slow=5.0,SNR=8.3						
MAW	Mawson	86.54	164	P	P	22 11 30.4	-0.8
	comp=Z,4.4nm,0.4s,baz=286,slow=7.4,SNR=16						
MAW	Mawson	86.54	164	IAmb	IAmb	22 11 39.3	
	comp=Z,0.4nm,0.8s						
YKA	Yellowknife Ar	88.92	341	P	P	22 11 43.5	+1.0
	comp=Z,0.7nm,0.6s,baz=134,slow=5.4,SNR=11						
MKAR	Makanchi Array	145.21	33	PKPbc	PKPdf	22 18 26.6	+0.4
	comp=Z,1.5nm,0.7s,baz=324,slow=4.1,SNR=20						
MKAR	Makanchi Array	145.21	33		PKPdf	22 18 26.5	+0.3

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*NEIC **25** 22:05:04.3±2.2, 22°.14S±0°.10×176°.1W±0°.1, h76^{km}±6^{km}, mb4.7/33, Error ellipse: s-maj=20.3km s-min=6.2km az=129.0*

*IDC **25** 22:05:05.7±3.1, 21°.97S×176°.10W, h82^{km}±28^{km}, mb4.1/15, mb1 4.3/18, mb1mx4.2/33, mbtmp4.5/18, Error ellipse: s-maj=19.7km s-min=14.3km az=123.0*

ISC 25 22:05:04.1±0.4**, 22°.19S**±0°.07×**175°.98W**±0°.07**, h76**^{km}**, n126,** σ1^{s}**65**/117**, mb4.6**/29**, 28C-2D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	6.46	62	Pn	Pn	22 06 38.1	+1.6
MSVF	Nonsavu	7.16	307		Pn	22 06 54.8	+8.5
AFI	Afiamalu	9.15	27	P	Pn	22 07 12.7	-0.8
	3.7nm,0.3s,baz=177,slow=23,SNR=2.0						
AFI				S	Sn	22 08 43.8	-11
	20nm,0.3s,baz=67,slow=22,SNR=7.3						
AFI	Afiamalu	9.15	27	Pn	Pn	22 07 12.9	-0.6
AFI				Sn	Sn	22 08 44.6	-10
RAR	Rarotonga	15.09	89	P	P	22 08 36.3	-0.3
	2.7nm,0.3s,baz=241,slow=11,SNR=8.0						
RAR				S	Sn	22 11 10.5	-8.9
	2.8nm,0.3s,baz=84,slow=21,SNR=3.6						
RAR	Rarotonga	15.09	89		Pn	22 08 31.9	-1.2
RAR				IAmb	IAmb	22 08 41.3	
	comp=Z,32nm,0.9s						
DZM	Mont Dzumac	16.29	267	P	P	22 08 56.9	+6.8
	comp=Z,0.8nm,0.3s,baz=80,slow=18,SNR=8.2						
DZM	Mont Dzumac	16.29	267	P	P	22 08 51.9	+1.8
URZ	Urewera	17.08	199	P	P	22 09 00.4	+1.8
	comp=Z,3.5nm,0.3s,baz=305,slow=3.8,SNR=8.4						
URZ				S	Sn	22 11 59.1	-8.3
	comp=Z,1.5nm,0.3s,baz=272,slow=22,SNR=6.7						
URZ	Urewera	17.08	199	P	Pn	22 08 58.7	+0.7
BKZ	Black Stump Fm	18.11	199	P	P	22 09 08.5	-1.4
PNHZ	Pukenui	18.88	199	P	Pn	22 09 36.3	+16
TSZ	Takapari Road	19.09	199	P	Pn	22 09 36.2	+14
DVHZ	Dannevirke	19.25	198	P	Pn	22 09 34.2	+10
BFZ	Birch Farm	19.58	198	P	P	22 09 24.9	-1.0
KNTN	Kanton	19.74	13	P	Pn	22 09 28.9	-1.1
KNTN				IAmb	IAmb	22 09 29.6	
	comp=Z,74nm,1.1s						
DUWZ	D’Urville Isla	20.43	202	P	P	22 09 35.0	-0.2
PAWZ	Paruwai Farm	20.46	199	P	P	22 09 35.8	+0.3
PLWZ	Palliser	20.68	199	P	P	22 09 39.1	+1.1
PLWZ	Palliser	20.68	199	P	P	22 09 39.0	+1.1
QRZ	Quartz Range	20.97	205	P	Pn	22 09 44.5	+0.2
QRZ	Quartz Range	20.97	205	P	Pn	22 09 44.7	+0.4
NNZ	Nelson	20.99	203	P	P	22 09 40.6	-0.6
THZ	Tophouse	21.64	203	P	P	22 09 48.2	0.0
THZ				IAmb	IAmb	22 09 48.8	
	comp=Z,69nm,1.4s						
THZ	Tophouse	21.64	203	P	P	22 09 52.6	+4.4
KHZ	Kahutara	22.00	201	P	P	22 09 51.5	-0.4
KHZ				IAmb	IAmb	22 09 59.0	
	comp=Z,25nm,1.0s						
KHZ	Kahutara	22.00	201	P	P	22 09 51.5	-0.4
GVZ	Greta Valley S	22.65	201	P	P	22 09 58.2	-0.8
LTZ	Lake Taylor	22.76	203	P	P	22 10 01.6	+1.5
LTZ				IAmb	IAmb	22 10 09.2	
	comp=Z,36nm,1.2s						
LTZ	Lake Taylor	22.76	203	P	P	22 10 02.3	+2.2
INZ	Inchbonnie	23.01	204	P	P	22 10 04.5	+1.8
RPZ	Rata Peaks	24.01	204	P	P	22 10 13.4	+1.6
	comp=Z,14nm,0.8s,baz=31,slow=9.4,SNR=3.7						
RPZ	Rata Peaks	24.01	204	IAmb	IAmb	22 10 16.1	
	comp=Z,24nm,0.9s						
FOZ	Fox Glacier	24.33	206	P	P	22 10 14.9	+0.2
FOZ				IAmb	IAmb	22 10 19.2	
	comp=Z,26nm,0.7s						
LBZ	Lake Benmore	24.91	204	P	P	22 10 20.3	+0.4
PMG	Port Moresby	37.57	284	P	P	22 12 11.6	+0.2
	comp=Z,7.9nm,0.3s,baz=130,slow=9.2,SNR=3.9						
STKA	Stephens Creek	38.80	246	P	P	22 12 22.8	+1.2
	comp=Z,2.0nm,0.5s,baz=86,slow=9.7,SNR=8.9						
STKA	Stephens Creek	38.80	246	P	P	22 12 22.2	+0.6
COEN	Coen	39.59	275	P	P	22 12 30.2	+1.8
COEN				IAmb	IAmb	22 12 30.5	
	comp=Z,13nm,1.0s						
BBOO	Buckleboo	43.52	245	P	P	22 13 00.3	0.0
BBOO				IAmb	IAmb	22 13 18.4	
	comp=Z,16nm,1.4s						
AS31	Alice Springs	45.99	258	P	P	22 13 20.6	+0.4
ASAR	Alice Springs	45.99	258	P	P	22 13 20.2	+0.1
	comp=Z,6.2nm,0.8s,baz=92,slow=8.2,SNR=52						
ASAR	Alice Springs	45.99	258	P	P	22 13 19.9	-0.2
WB0	Warramunga Arr	46.24	263	P	P	22 13 21.4	-0.7
WB0				IAmb	IAmb	22 13 22.9	
	comp=Z,4.3nm,0.8s						
WB2	Warramunga Arr	46.24	263	P	P	22 13 21.6	-0.5
WRA	Warramunga Arr	46.26	263	P	P	22 13 21.7	-0.6
	comp=Z,2.9nm,0.8s,baz=93,slow=8.1,SNR=21						
WRA	Warramunga Arr	46.26	263	P	P	22 13 21.7	-0.6
KNRA	Kununurra	52.44	267	IAmb	IAmb	22 14 10.8	
	comp=Z,10nm,0.8s						
FITZ	Fitzroy Crossi	54.69	263	IAmb	IAmb	22 14 27.1	
	comp=Z,3.8nm,0.8s						
VNDA	Vanda	56.41	186	P	P	22 14 40.9	+3.6
	comp=Z,2.7nm,0.8s,baz=326,slow=7.1,SNR=7.3						
SOEI	Soe	58.44	272	P	P	22 14 51.8	-0.9
QSPA	South Pole Qui	67.89	180	P	P	22 15 56.0	+1.6
QSPA				IAmb	IAmb	22 15 57.6	
	comp=Z,10nm,1.0s						
JAGI	Jajag, Banyuwa	68.26	270	P	P	22 15 56.3	-1.1
JAGI				IAmb	IAmb	22 15 57.4	
	comp=Z,14nm,0.9s						
MJAR	Matsushiro Arr	72.69	323	P	P	22 16 23.3	-0.6
	comp=Z,3.1nm,0.6s,baz=140,slow=6.2,SNR=10						
MJAR	Matsushiro Arr	72.69	323	IAmb	IAmb	22 16 31.5	
	comp=Z,1.2nm,0.6s						
PETK	Petropavlovsk-	78.39	344	P	P	22 16 56.1	0.0
	comp=Z,11nm,0.9s,baz=137,slow=9.5,SNR=13						
MAW	Mawson	80.61	199	P	P	22 17 09.9	+1.8
	comp=Z,3.7nm,0.6s,baz=149,slow=5.0,SNR=8.6						
USRK	Ussuriysk Ar.	81.42	325	P	P	22 17 13.2	+0.5
	comp=Z,2.9nm,0.9s,baz=214,slow=1.8,SNR=5.5						
USRK	Ussuriysk Ar.	81.42	325	P	P	22 17 13.6	+0.9
NJ2	Nanjing	82.41	309	eP	P	22 17 20.0	+1.9
SYO	Syowa Base	85.49	192	⇑eX	P	22 17 30.0	-3.2
SYO	Syowa Base	85.49	192	⇓ePcP	P	22 17 34.5	+1.3
SYO	Syowa Base	85.49	192	⇑eX	P	22 17 49.0	+16
GAMB	Gambell	85.74	2	IAmb	IAmb	22 17 36.1	
	comp=Z,12nm,0.9s						
SNAA	Sanae	86.27	178	P	P	22 17 37.6	+0.5
VNA3	Neumayer Olymp	86.33	176	P	P	22 17 38.3	+0.8
TXAR	Lajitas Array	86.39	56	P	P	22 17 39.6	+1.1
	comp=Z,0.6nm,0.9s,baz=209,slow=8.9,SNR=4.8						
TXAR	Lajitas Array	86.39	56	P	P	22 17 39.1	+0.6
GSI	Gunungsitoli	87.20	273	P	P	22 17 42.9	+0.2
KTH	Kantishna Hill	87.70	11	IAmb	IAmb	22 17 43.9	
	comp=Z,9.7nm,1.0s						
RND	Reindeer	87.94	12	IAmb	IAmb	22 17 46.1	
	comp=Z,11nm,0.9s						
BJI	Beijing	88.42	315	P	P	22 17 49.0	+1.2
PDAR	Pinedale Array	88.91	42	P	P	22 17 51.4	+1.0
	comp=Z,0.2nm,0.6s,baz=276,slow=2.5,SNR=1.8						
IMAR	Indian Mountai	89.51	9	P	P	22 17 52.5	+0.1
ILAR	Eielson Array	89.55	12	P	P	22 17 52.0	-0.6
	comp=Z,1.6nm,0.9s,baz=225,slow=4.9,SNR=11						
HHC	Hu-ho-hao-te	91.88	314	eP	P	22 18 06.5	+2.4
BMAR	Burnt Mountain	92.35	12	P	P	22 18 06.8	+1.2
CMAR	Chiang Mai Arr	92.45	289	P	P	22 18 08.1	+1.0
	comp=Z,1.2nm,0.3s,baz=121,slow=3.0,SNR=16						
LZH	Lanzhou	95.29	307	eP	P	22 18 20.5	+0.5
LZH				pP	pP	22 18 38.5	-1.7
LZH				sP	pwP	22 18 44.8	+2.5
LZH				PP	PP	22 22 11.0	-0.4
YKA	Yellowknife Ar	97.26	24	P	P	22 18 28.1	0.0
	comp=Z,0.6nm,0.7s,baz=234,slow=4.6,SNR=9.8						
MKAR	Makanchi Array	113.72	313	PKiKP	PKiKP	22 23 32.6	-1.3
	comp=Z,0.6nm,0.6s,baz=105,slow=0.7,SNR=11						
KSH	Kashi	117.40	304	PKP	PKPdf	22 23 36.5	-4.8
KSH				sPKP		22 24 13.5	
KSH				PP	PP	22 24 55.5	+1.5
KSH				PKS		22 27 11.5	
KSH	Kashi	117.40	304	SS	SS	22 40 56.5	-2.8
KKAR	Karatay Array	121.77	308		PKPdf	22 23 48.6	-0.9
KBL	Kabul	122.35	298		PKPdf	22 23 50.0	-1.1
ARCES	ARCESS Array B	130.91	350	PKP	PKPdf	22 24 06.1	0.0
	comp=Z,4.9nm,1.0s,baz=20,slow=2.5,SNR=7.4						
FINES	FINESS Array B	137.91	344	PKP	PKPdf	22 24 20.1	+0.7
	comp=Z,1.0nm,0.5s,baz=129,slow=2.7,SNR=5.3						
NB2	NORSAR Subarra	140.86	354	PKP	PKPdf	22 24 17.2	-7.7
	comp=Z,0.5nm,0.6s,baz=9.1,slow=3.0						
NOA	NORSAR Array B	140.86	354	PKhKP	PKPpre	22 24 16.9	
	comp=Z,0.8nm,0.9s,baz=17,slow=4.8,SNR=4.1						
NOA				PKP	PKiKP	22 24 26.6	-0.9
	comp=Z,0.2nm,0.6s,baz=34,slow=3.2,SNR=1.4						
AKH	Akhalkalaki	141.78	309	⇑P	PKPdf	22 24 22.4	-4.9
AKASG	Malin Array Be	145.40	332	PKPbc	PKPbc	22 24 32.0	-1.1
	comp=Z,6.3nm,0.5s,baz=41,slow=4.3,SNR=46						
SORM	Soroca	147.62	329	⇑P	PKPbc	22 24 39.1	-0.6
BR131	Keskin Array S	149.37	312		PKPbc	22 24 44.4	-0.3
BRTR	Keskin Array B	149.37	312	PKPbc	PKPbc	22 24 44.0	-0.7
	comp=Z,3.4nm,0.7s,baz=137,slow=4.8,SNR=23						
BRTR	Keskin Array B	149.37	312		PKPbc	22 24 43.4	-1.3
BURAR	Bucovina Array	149.45	331	⇑P	PKiKP	22 24 47.0	+1.3
BURAR	Bucovina Array	149.45	331		PKPbc	22 24 45.1	+0.5
GHRR		149.53	327	⇑P	PKiKP	22 24 45.5	-0.2
BIZ	Bicaz	149.54	329	⇑P	PKiKP	22 24 47.2	+1.4
CFR	Carcaliu	149.74	325	⇑P	PKPbc	22 24 45.2	-0.1
TOPG	Topolog	149.81	324	⇑P	PKPbc	22 24 45.4	0.0
VRI	Vrincioaia	150.00	327	⇑P	PKPbc	22 24 45.5	-0.5
PLOR	Plostina	150.05	327	⇑P	PKPbc	22 24 46.2	+0.1
TIRR	Tirgusor	150.06	324	⇑P	PKPbc	22 24 45.7	-0.4
CLL	Collm	150.11	349	i PKPbc	PKiKP	22 24 46.9	+0.1
	comp=Z,22nm,1.1s						
CLL				e		22 24 50.0	
CLL				i PKPab	PKPab	22 24 51.2	-0.8
	comp=Z,7.0nm,0.7s						
OSTC	Ostas	150.12	344	⇑ePKP	PKPbc	22 24 46.3	+0.3
HARR	Harsova	150.18	324	⇓P	PKPbc	22 24 46.4	+0.1
TRPA	Tarpa	150.18	335	⇑P	PKPbc	22 24 45.9	-0.3
ARCR	ARCALIA	150.23	331	⇑P	PKPab	22 24 53.3	+0.6
BISRR	Bisoca	150.23	327	⇑P	PKPbc	22 24 46.9	+0.3
MFTR	Murfatlar	150.24	323	⇑P	PKPbc	22 24 46.7	+0.3
DPC	Dobruska-Polom	150.28	344	⇑ePKP	PKPbc	22 24 46.4	-0.1
DPC				ePKPAB	PKPab	22 24 51.4	-1.4
BRG	Berggiesshubel	150.34	347	ePKP	PKPbc	22 24 46.4	-0.1
	comp=Z,9.9nm,1.0s						
MANR	Mangalia	150.37	323	⇑P	PKPbc	22 24 46.9	+0.1
KRLC	Kraliky	150.41	343	⇑ePKP	PKPbc	22 24 46.9	+0.1
KRLC				ePKPAB	PKPab	22 24 53.3	-0.1
DOPR	Dopca	150.59	329	⇑P	PKPbc	22 24 47.6	+0.3
MLR	Muntele Rosu	150.66	328	⇑P	PKPbc	22 24 46.7	-0.9
MDUB	Mudurnu	150.67	315		PKPbc	22 24 47.9	+0.1
PRU	Pruhonice	151.04	346	⇑ePKP	PKPbc	22 24 47.7	-0.5
VOIR		151.13	328	⇑P	PKPbc	22 24 48.4	-0.3
ARR	Arges	151.39	329	⇑P	PKiKP	22 24 49.7	-0.1
HUMR	Humele	151.82	327	⇑P	PKPbc	22 24 49.3	-0.9
KHC	Kasperske Hory	152.06	347	⇑ePKP	PKPbc	22 24 50.2	-0.4
GERES	GERESS Array B	152.31	346	PKPbc	PKPbc	22 24 50.6	-0.7
	comp=Z,1.0nm,0.7s,baz=18,slow=1.7,SNR=8.2						
GERES				PKPab	PKPab	22 25 00.1	-1.3
	comp=Z,0.5nm,0.5s,baz=25,slow=4.4,SNR=4.7						
PLVB	Pleven	152.81	326	⇑P	PKPbc	22 24 52.4	0.0
TORD	Torodi Ar. Bea	170.74	166	PKPab	PKPab	22 26 23.1	+0.9
	comp=Z,0.8nm,0.7s,baz=187,slow=5.1,SNR=3.7						

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*IDC **25** 22:08:44.5±2.1, 26°.60S×70°.67W, h0^{km}, mb3.9/1, mb1 3.6/4, mb1mx3.5/29, mbtmp3.5/4, ML3.3/3, MS2.5/1, Ms1 2.5/1, ms1mx2.3/27, Error ellipse: s-maj=90.1km s-min=42.3km az=105.0*

*SJA **25** 22:08:48.7±1.0, 26°.35S×70°.89W, h40^{km}, ML3.5, MW3.6*

*NEIC **25** 22:08:48.0±1.9, 26°.42S±0°.04×71°.1W±0°.1, h30^{km}±10^{km}, Error ellipse: s-maj=15.3km s-min=4.8km az=81.0*

*GUC **25** 22:08:49.0±0.8, 26°.44S×71°.05W, h55^{km}±20^{km}, ML3.5*

ISC 25 22:08:46.6±1.4**, 26°.40S**±0°.03×**70°.86W**±0°.09**, h11**^{km}±8^{km}**, n42,** σ1^{s}**97**/51**, 2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO03	Copiap	1.32	155	⇓iP	Pn	22 09 11.5	+0.5
GO03				i S	Sb	22 09 27.5	-0.9
GO03				IAML		22 09 29.9	
	comp=N,2µm,0.5s						
GO03	Copiap	1.32	155		Pb	22 09 11.9	+0.4
GO03				Sn	Sb	22 09 27.4	-0.9
GO02	Mina Guanaco	1.68	43	⇓iP	Pg	22 09 18.5	-0.4
GO02				i S	Sg	22 09 40.5	-0.2
GO02				IAML		22 09 47.6	
	comp=N,1µm,0.2s						
GO02	Mina Guanaco	1.68	43		Pg	22 09 18.6	-0.3
PB14	IPOC Station P	1.81	13	eP	Pn	22 09 19.1	+1.1
PB14				eS	Sn	22 09 41.5	+0.5
PB14				IAML		22 09 48.8	
	comp=E,478nm,0.3s						
PB14	IPOC Station P	1.81	13		Pn	22 09 19.2	+1.1
PB14				Sn	Sn	22 09 41.6	+0.5
PB14	IPOC Station P	1.81	13	i P	Pn	22 09 19.6	+1.6
PB14				eS	Sn	22 09 41.3	+0.2
PB10	IPOC Station P	2.88	6	eP	Pn	22 09 32.5	+0.1
PB10				eS	Sn	22 10 08.9	+1.8
PB10				IAML		22 10 28.1	
	comp=E,107nm,0.7s						
PB10	IPOC Station P	2.88	6		Pn	22 09 32.7	+0.2
PB10	IPOC Station P	2.88	6	i P	Pn	22 09 32.9	+0.4
VCA	Vinchina	3.31	135	i P	Pb	22 09 42.2	-3.4
VCA				eS	Sn	22 10 20.3	+2.3
VCA				IAML		22 10 42.1	
	comp=Z,111nm,0.5s						
PB15	IPOC Station P	3.42	22		Pn	22 09 42.2	+2.2
AGUA	GUANDACOL	3.73	146	i P	Pb	22 09 48.5	-4.0
AGUA				IAML		22 10 48.3	
	comp=Z,32nm,0.8s						
GO04	Tololo Observa	3.76	179	eP	Pn	22 09 45.9	+1.0
GO04				eS	Sn	22 10 28.9	-0.3
GO04	Tololo Observa	3.76	179		Pn	22 09 46.5	+1.7
AROD	Rodeo	3.95	162	i P	Pn	22 09 51.4	+3.9
PB04	IPOC Station P	4.09	9		Pn	22 09 49.4	+0.1
PB04				Sn	Sn	22 10 35.8	-1.5
LVC	Limon Verde	4.17	26	Pn	Pn	22 09 52.6	+2.1
	comp=Z,1.8nm,0.3s,baz=208,slow=9.7,SNR=37						
LVC				Sn	Sb	22 10 50.7	+0.1
	comp=Z,19nm,0.3s,baz=331,slow=23,SNR=11						
LVC				LR	LR	22 11 26.7	
	comp=Z,62nm,21.5s,baz=204,slow=38						
CO03	El Pedregal	4.43	178	eP	Pn	22 09 54.8	+0.9
ACCO	Cerro Coronel	4.46	160	i P	Pn	22 09 58.5	+3.9
PB07	IPOC Station P	4.73	11		Pn	22 09 58.2	+0.1
PB09	IPOC Station P	4.81	18	Pn	Pn	22 10 01.1	+1.9
CYA	Choya	4.94	116	i P	Pn	22 10 03.6	+2.8
CYA				IAML		22 11 09.4	
	comp=Z,30nm,0.9s						
PB01	IPOC Station P	5.47	14		Pn	22 10 08.4	+0.2
RTLS	Leoncito	5.55	166	i P	Pn	22 10 13.5	+4.0
RTLS				IAML		22 11 48.9	
	comp=Z,39nm,1.0s						
PATCX	Punta Patache	5.59	7	Pn	Pn	22 10 08.6	-1.2
AZAP	Zapla	5.67	69	i P	Pb	22 10 18.4	-7.4
AZAP				IAML		22 11 35.8	
	comp=Z,4.3nm,2.1s						
RTCV	Cerro Valdivia	5.81	160	i P	Pn	22 10 15.3	+2.5
ASAL	Salagasta	6.42	165	i P	Pn	22 10 24.4	+3.2
ROC1	El Roble	6.56	181	i P	Pn	22 10 26.2	+2.9
ARCO	CERRO ARCO	6.64	166	i P	Pn	22 10 28.7	+4.5
ARCO				IAML		22 11 59.6	
	comp=Z,36nm,0.9s						
PB11	IPOC Station P	6.70	10		Pn	22 10 15.3	-10

PSGCX	Pisagua	6.80	6		Pn	22 10 18.6	-7.8
GO01	Chusmiza	6.87	13	Pn	Pn	22 10 28.6	+0.9
MRA	San Martin	7.49	144	*i* P	Pn	22 10 38.2	+2.3
MRA				IAML		22 12 18.7	
	comp=Z,10nm,0.6s						
PB12	IPOC Station P	7.76	4	Pn	Pn	22 10 39.1	-0.5
LPAZ	La Paz	10.37	15	Pn	Pn	22 11 16.7	+0.8
	comp=Z,0.1nm,0.3s,baz=192,slow=9.3,SNR=1.3						
LPAZ	La Paz	10.37	15		Pn	22 11 16.2	+0.3
SIV	San Ignacio	13.79	43	Pn	Pn	22 12 00.3	-1.9
	comp=Z,0.2nm,0.3s,baz=256,slow=8.3,SNR=2.3						
TORD	Torodi Ar. Bea	80.68	70	P	P	22 20 59.7	-0.4
	comp=Z,0.5nm,0.5s,baz=258,slow=5.5,SNR=7.2						
ZALV	Zalesovo Beam	147.12	27	PKPbc	PKPdf	22 28 28.1	+1.0
	comp=Z,0.4nm,0.4s,baz=299,slow=4.7,SNR=4.4						
MKAR	Makanchi Array	150.59	39	PKPbc	PKPbc	22 28 38.5	0.0
	comp=Z,0.6nm,0.5s,baz=297,slow=2.6,SNR=12						
MKAR				PKPab	pPKPbc	22 28 44.3	+2.1
	comp=Z,0.6nm,0.7s,baz=322,slow=2.3,SNR=6.2						

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*NEIC **25** 22:26:19.3±1.4, 66°.29N±0°.02×149°.84W±0°.07, $h17^{km}\pm8^{km}$, Error ellipse: s-maj=4.1km s-min=3.3km az=108.0*

AEIC 25 22:26:19±1.6**, 66°.27N**±0°.03×**149°.84W**±0°.08**, $h16^{km}$**$\pm6^{km}$**, ML3.6, Mwr3.8**/13(SLM)**, Error ellipse: s-maj=5.3km s-min=3.0km az=118.0, Moment Tensor Solution. Moment tensor: Scale** 10^{14}**Nm;** M_{rr}0.33; $M_{\theta\theta}$-4.70; $M_{\phi\phi}$4.37; $M_{r\theta}$-0.37; $M_{\theta\phi}$-2.81; $M_{\phi r}$1.25; **Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PS06	TAPS Pump Stn6	0.42	174		Pb	22 26 27.8	-0.2
PS06					Sb	22 26 33.8	-0.2
PS05	TAPS Pump Stn5	0.64	329		Pb	22 26 31.7	-0.1
PS05					Sb	22 26 40.7	+0.2
COLD	Coldfoot	0.97	352		Pb	22 26 37.6	+0.1
COLD					Sg	22 26 50.7	0.0
PS07	TAPS Pump Stn7	1.16	145		Pb	22 26 40.7	+0.1
PS07					Sg	22 26 56.9	+0.5
MLY	Manley	1.30	197		Pn	22 26 42.6	+0.1
MLY					Sg	22 27 00.2	-0.6
MDM	Murphy Dome	1.47	152		Pn	22 26 45.0	0.0
MDM	Murphy Dome	1.47	152		Sg	22 27 05.6	-0.9
POKR	Poker Plat Res	1.52	138		Pn	22 26 45.8	+0.2
POKR					Sg	22 27 07.5	-0.6
IM03		1.62	262		Pn	22 26 46.8	0.0
IMAR	Indian Mountai	1.62	262		Pn	22 26 45.7	-1.1
TCOL	CIGO, UAF Yank	1.62	149		Pb	22 26 47.8	-0.7
COLA	College	1.63	148		Pn	22 26 47.4	+0.5
COLA	College	1.63	148	Pn	Pn	22 26 47.2	+0.3
NEA	Nenana	1.73	169		Pn	22 26 48.5	+0.1
CCB	Clear Creek Bu	1.84	151		Pn	22 26 49.8	0.0
FYU	Fort Yukon	1.88	79		Pn	22 26 50.5	+0.1
FYU	Fort Yukon	1.88	79	Pg	Pg	22 26 54.4	-0.6
PRP	Porcupine Dome	1.93	111		Pn	22 26 51.4	+0.1
PRP					Sb	22 27 18.9	+1.3
IL31		1.94	139		Pn	22 26 51.5	+0.3
ILAR	Eielson Array	1.94	139		Pn	22 26 50.3	-1.0
WRH	Wood River Hil	1.95	157		Pn	22 26 51.5	+0.1
WRH	Wood River Hil	1.95	157		Sb	22 27 19.1	+1.0
BWN	Browne	2.11	176		Pg	22 26 59.7	+0.2
BWN	Browne	2.11	176		Pn	22 26 54.6	+0.9
PS08	TAPS Pump Stn8	2.14	142		Pn	22 26 55.3	+1.2
HDA	Harding Lake	2.23	146		Pn	22 26 55.3	+0.1
BPAW	Bear Paw Mtn.	2.23	193		Pn	22 26 55.5	+0.2
BM03	Burnt Mountain	2.37	58		Pn	22 26 57.2	-0.1
BMAR	Burnt Mountain	2.38	58		Pn	22 26 57.0	-0.4
TOLK	Toolik Lake Re	2.39	2		Pn	22 26 59.2	+1.7
MCK	McKinley	2.57	171		Pn	22 27 00.7	+0.6
CHUM	Lake Minchumin	2.61	205		Pn	22 27 01.3	+0.8
KTH	Kantishna Hill	2.76	190		Pn	22 27 02.9	+0.2
TRF	Thorofare Moun	2.83	184		Pn	22 27 04.2	+0.5
RND	Reindeer	2.90	171		Pn	22 27 05.5	+0.9
HUR	Hurricane	3.30	178		Pn	22 27 11.3	+1.2
RIDG	Independent Ri	3.31	138		Pn	22 27 11.5	+1.4
WAT2	Susitna Watana	3.36	170		Pn	22 27 12.2	+1.2
DHY	Denali Highway	3.38	161		Pn	22 27 12.5	+1.3
SCRK	Sand Creek	3.38	130		Pn	22 27 11.9	+0.8
WAT1	Susitna Watana	3.50	170		Pn	22 27 14.0	+1.3
PPLA	Purkeypile	3.53	198		Pn	22 27 13.6	+0.3
PAX	Paxson	3.81	148	Pn	Pn	22 27 18.9	+1.9
EGAK	Eagle	3.91	108		Pn	22 27 18.6	+0.3
TTA	Tatalina	4.28	221		Pn	22 27 25.1	+1.7
TT01	Tatalina	4.30	221		Pn	22 27 23.5	-0.2
SML	Sawmill	4.53	171		Pn	22 27 28.3	+1.4
GHO	Glory Hole Cre	4.53	174		Pn	22 27 28.2	+1.3
BC03		4.72	129		Pn	22 27 29.4	0.0
BCAR	Beaver Creek A	4.72	129		Pn	22 27 29.1	-0.4
KNK	Knik Glacier	4.91	172		Pn	22 27 34.3	+2.1
DAWY	Dawson	4.93	112		Pn	22 27 32.0	-0.4
EPYK	Eagle Plains	5.29	83		Pn	22 27 37.2	-0.1
RDOG	Red Dog Mine	5.39	295	Pn	Pn	22 27 40.5	+1.8
RDOG					Pg	22 27 57.8	-4.4
BVCY	Beaver Creek	5.49	131		Pn	22 27 40.3	+0.2
GLB	Gilahina Butte	5.53	148		Pn	22 27 42.4	+1.8
SVW2	Sparrevohn	5.78	209		Pn	22 27 44.4	+0.3
YUK1	Sand Pete Hill	5.79	131		Pn	22 27 44.7	+0.4
RDWB	Redoubt West	5.96	194		Pn	22 27 47.3	+0.7
RSO	Redoubt South	5.97	194	Pn	Pn	22 27 50.7	+3.8
YUK2	White River	5.98	135		Pn	22 27 47.0	+0.1
HIN	Hinchinbrook I	6.08	164	Pn	Pn	22 27 49.9	+1.7
SEW	Seward	6.19	178	Pn	Pn	22 27 51.7	+2.1
BALM	Baldy	6.22	144	Pn	Pn	22 27 50.1	-0.1
CRQM	Cirque	6.29	148	Pn	Pn	22 27 51.1	-0.1
RAGM	Ragged Mountai	6.34	156		Pn	22 27 55.5	+3.8
TGL	Tana Glacier	6.36	147	Pn	Pn	22 27 50.8	-1.2
BARN	Barnard Glacie	6.37	141	Pn	Pn	22 27 54.4	+2.2
CTGM	Chitina Glacie	6.53	141	Pn	Pn	22 27 56.7	+2.3
GRNC	Granite Creek	6.62	143		Pn	22 27 57.1	+1.3
INK	Inuvik	6.64	65		Pn	22 27 56.2	+0.5
ANM	Nome	6.70	262	Pn	Pn	22 27 57.0	+0.4
CNPM	China Poot	6.80	186	Pn	Pn	22 28 01.1	+3.1
YUK4	Talbot Arm	6.99	130		Pn	22 28 01.0	+0.2

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*JMA **25** 22:31:17.5±0.1, 23°.47N×121°.68E, $h43^{km}\pm2^{km}$, M2.8*
*TAP **25** 22:31:18.0, 23°.52N×121°.63E, $h42^{km}$, ML2.7, C*

ISC 25 22:31:18.4±1.2**, 23°.50N**±0°.02×**121°.66E**±0°.02**, $h40^{km}$**$\pm7^{km}$**, n75,** σ**$0^{s}.74$**/137**, 1C-3D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HGSD	Ruisui	0.22	267	⇑*e*P	Pn	22 31 26.1	+0.2
	baz=262						
EGFH	Guangfu	0.27	308	P	Pn	22 31 26.5	+0.1
	baz=308						
EGFH				*e*S	Sn	22 31 32.8	+0.8
	baz=308						
EHY	Hungye	0.31	271	*e*P	Pn	22 31 26.7	-0.1
	baz=267						
EHY				*e*S	Sn	22 31 32.3	-0.3
	baz=267						
YULB	Yu-li	0.35	252	⇓*e*P	Pn	22 31 27.1	-0.2
	baz=247						
YULB				*e*S	Sn	22 31 33.5	0.0
	baz=247						
TWF1	Yuli	0.36	246	⇓P	Pn	22 31 27.3	-0.2
	baz=241						
TWF1				S	Sn	22 31 33.9	+0.1
	baz=241						
ESL	Shilin	0.37	326	P	Pn	22 31 27.4	-0.2
	baz=329						
ESL				S	Sn	22 31 33.9	-0.1
	baz=329						
ENLB	Shoufeng	0.40	353	P	Pn	22 31 27.0	-0.9
	baz=355						
ENLB				S	Sn	22 31 35.0	+0.4
	baz=355						
FULB	Fuli	0.45	228	*e*P	Pn	22 31 28.5	-0.1
	baz=224						
FULB				S	Sn	22 31 36.5	+0.8
	baz=224						
HWA	Hwalien	0.47	354	*e*S	Sn	22 31 37.5	+1.4
	baz=357						
CHKT	Chengkung	0.48	214	*e*P	Pn	22 31 28.5	-0.5
	baz=209						
CHKT				*e*S	Sn	22 31 36.6	+0.3
	baz=209						
VWDT	VWDT	0.54	298	*e*P	Pn	22 31 29.9	+0.2
	baz=297						
VWDT				*e*S	Sn	22 31 36.9	-0.7
	baz=297						
TWD	Chiawan	0.58	354	*e*P	Pn	22 31 30.1	-0.2
	baz=357						
TWD				*e*S	Sn	22 31 39.3	+0.7
	baz=357						
OWD	Renai	0.63	316	*e*P	Pn	22 31 30.8	-0.3
	baz=316						
OWD				*e*S	Sn	22 31 39.4	-0.7
	baz=316						
YUS	Yu-Shan	0.65	269	⇓*e*P	Pn	22 31 31.6	0.0
	baz=266						
YUS				*e*S	Sn	22 31 40.6	-0.4
	baz=266						
ELDTW	Lidau	0.67	242	*e*P	Pn	22 31 30.5	-1.0
	baz=239						
ELDTW				*e*S	Sn	22 31 40.0	-0.9
	baz=239						
NACB	Ninganchiao	0.67	355	*e*P	Pn	22 31 31.0	-0.5
	baz=356						
NACB				*e*S	Sn	22 31 40.7	-0.2
	baz=356						
SSLB	Suanglung	0.71	294	*e*P	Pn	22 31 31.7	-0.3
	baz=293						
SSLB				*e*S	Sn	22 31 41.2	-0.5
	baz=293						
CHGB	Renai	0.71	321	*e*P	Pn	22 31 32.3	+0.1
	baz=322						
CHGB				*e*S	Sn	22 31 42.0	-0.1
	baz=322						
ETLH	Xiulin Townshi	0.72	347	*e*P	Pn	22 31 31.7	-0.5
	baz=348						
ETLH				*e*S	Sn	22 31 41.7	-0.5
	baz=348						
WHF	Hehuan Shan	0.73	331	*e*P	Pn	22 31 32.5	-0.3
	baz=332						
WHF				*e*S	Sn	22 31 42.3	-0.7
	baz=332						
WHYT	Xinyi Township	0.76	285	*e*P	Pn	22 31 32.9	+0.2
	baz=283						
WHYT				*e*S	Sn	22 31 43.1	-0.1
	baz=283						
ALS	Alishan	0.78	271	*e*P	Pn	22 31 33.6	+0.3
	baz=269						
ALS				*e*S	Sn	22 31 44.0	0.0
	baz=269						
SMLT	Sun Moon Lake	0.79	299	*e*P	Pn	22 31 33.2	0.0
	baz=298						
SMLT				*e*S	Sn	22 31 44.5	+0.6
	baz=298						
TWH	Lutao	0.81	192	*e*P	Pn	22 31 32.5	-0.8
	baz=189						
TWH				*e*S	Sn	22 31 43.6	-0.5
	baz=189						
TYC	Yuchr	0.84	299	*e*P	Pn	22 31 34.3	+0.6
	baz=298						
TYC				*e*S	Sn	22 31 45.5	+0.7
	baz=298						
DPDB	Guoxing	0.85	308	*e*S	Sn	22 31 45.8	+0.3
	baz=308						
TWGBT	Beinan	0.86	218	*e*P	Pn	22 31 33.4	-0.8
	baz=216						
TWGBT				*e*S	Sn	22 31 44.0	-1.5
	baz=216						
TWG	Pinlang	0.87	219	*e*P	Pn	22 31 33.3	-0.9
	baz=216						
TWG				*e*S	Sn	22 31 44.1	-1.5
	baz=216						
TWT	Tachien	0.87	329	*e*P	Pn	22 31 34.2	-0.2
	baz=329						
TWT				*e*S	Sn	22 31 45.9	-0.1
	baz=329						
TDCB	Techi	0.88	329	*e*P	Pn	22 31 34.7	+0.2
	baz=329						
TDCB				*e*S	Sn	22 31 45.8	-0.3
	baz=329						
STYT	Tauyuan	0.90	248	*e*P	Pn	22 31 34.4	-0.2
	baz=245						
STYT				*e*S	Sn	22 31 46.7	+0.3
	baz=245						
CHN5	Tsauling	0.91	276	*e*P	Pn	22 31 35.3	+0.6
	baz=275						
CHN5				*e*S	Sn	22 31 48.0	+1.4
	baz=275						
WJS	Zhushan	0.91	291	*e*P	Pn	22 31 35.1	+0.3
	baz=290						
WJS				*e*S	Sn	22 31 47.9	+1.1
	baz=290						
ENA	Nanau	0.93	5	*e*P	Pn	22 31 34.8	-0.1
	baz=6.0						
ENA				*e*S	Sn	22 31 47.4	+0.4
	baz=6.0						
NNSB	Datong	0.96	345	*e*P	Pn	22 31 35.4	-0.1
	baz=345						
NNSB				*e*S	Sn	22 31 47.9	-0.1
	baz=345						
NNSH	Datong	0.96	345	*e*P	Pn	22 31 35.4	-0.2
	baz=345						
NNSH				*e*S	Sn	22 31 47.4	-0.6
	baz=345						
TPUB	Ta-pu	0.97	258	*e*P	Pn	22 31 36.1	+0.6
	baz=256						
TPUB				*e*S	Sn	22 31 48.9	+0.8
	baz=256						
WNT	Mingjian	0.97	293	*e*P	Pn	22 31 36.0	+0.4
	baz=292						
WNT				*e*S	Sn	22 31 48.7	+0.6
	baz=292						
CHN4	Tsaushan	0.99	261	*e*P	Pn	22 31 36.5	+0.6
	baz=260						
CHN4				*e*S	Sn	22 31 49.4	+0.7
	baz=260						
WTP	Ta-pu	0.99	255	*e*P	Pn	22 31 36.4	+0.5
	baz=253						
WTP				*e*S	Sn	22 31 49.3	+0.5
	baz=253						
WHP	Taichung City	1.01	320	*e*P	Pn	22 31 37.1	+0.9
	baz=320						
WHP				*e*S	Sn	22 31 49.6	+0.3
	baz=320						
WDLH	Douliu	1.04	280	*e*S	Sn	22 31 50.2	+0.2
	baz=279						
SLGT	Liugui	1.06	242	*e*P	Pn	22 31 37.4	+0.6
	baz=240						
SLGT				*e*S	Sn	22 31 51.5	+1.1
	baz=240						
SGST	Jiashian	1.07	247	*e*P	Pn	22 31 37.0	0.0
	baz=245						
SGST				*e*S	Sn	22 31 51.4	+0.7
	baz=245						
CHN1	Nanshi	1.09	253	*e*P	Pn	22 31 37.6	+0.4
	baz=251						
CHN1				*e*S	Sn	22 31 53.7	+2.7
	baz=251						
TWK	Hsinying	1.10	258	*e*P	Pn	22 31 37.5	+0.1
	baz=256						
TWK				*e*S	Sn	22 31 52.5	+1.1
	baz=256						
NDT	Datong Townshi	1.10	353	*e*P	Pn	22 31 37.3	-0.1
	baz=354						
NDT				*e*S	Sn	22 31 51.8	+0.3
	baz=354						
SNST	Tainan City	1.10	255	*e*P	Pn	22 31 37.5	+0.1
	baz=254						
SNST				*e*S	Sn	22 31 52.1	+0.7
	baz=254						
ECL	Taimali	1.11	216	*e*P	Pn	22 31 37.9	+0.4
	baz=213						
TWC	Suao	1.12	9	*e*S	Sn	22 31 52.3	+0.6
	baz=10.0						
EOS1	EOS1	1.13	22	*e*P	Pn	22 31 38.1	+0.4
	baz=23						
EOS1				*e*S	Sn	22 31 52.9	+0.9
	baz=23						
ENTT	Nioudou	1.14	356	*e*P	Pn	22 31 37.9	0.0
	baz=357						
ENTT				*e*S	Sn	22 31 52.2	0.0
	baz=357						
TWQ1	Liyutan	1.17	316	*e*P	Pn	22 31 39.4	+1.1
	baz=316						
YHNB	Yeheng	1.19	347	*e*P	Pn	22 31 38.8	+0.1
	baz=348						
YHNB				*e*S	Sn	22 31 53.6	-0.1
	baz=348						
NSK	Sanguang	1.20	347	*e*P	Pn	22 31 38.9	+0.1
	baz=348						
NSK				*e*S	Sn	22 31 53.9	0.0
	baz=348						
SSD	Sandimen	1.21	232	*e*P	Pn	22 31 40.0	+1.2
	baz=229						
NWLT	Wulai	1.28	354	*e*P	Pn	22 31 40.0	+0.2
	baz=354						
NWLT				*e*S	Sn	22 31 55.7	-0.1
	baz=354						
LIOB	Emei	1.28	333	*e*P	Pn	22 31 41.4	+1.5
	baz=333						
LIOB				*e*S	Sn	22 31 57.0	+1.2
	baz=333						
MASBT	Mashibuluo	1.30	227	*e*P	Pn	22 31 40.5	+0.4
	baz=225						
MASBT				*e*S	Sn	22 31 56.3	+0.1
	baz=225						
EAST	Anshuo	1.34	214	*e*P	Pn	22 31 41.2	+0.6
	baz=212						
TIPB	Shuangxi	1.47	6	*e*P	Pn	22 31 42.9	+0.4
	baz=6.0						
TIPB				*e*S	Sn	22 32 01.1	+0.5
	baz=6.0						
SCZT	Fangliau	1.48	221	*e*P	Pn	22 31 44.0	+1.5
	baz=219						
SCZT				*e*S	Sn	22 32 01.8	+1.2
	baz=219						
JYNG	Yonagunijimaku	1.51	51	P	Pn	22 31 43.1	+0.2
JYNG				S	Sn	22 32 01.4	0.0
YOJ	Yonaguni jima	1.56	52	P	Pn	22 31 44.3	+0.6
YOJ				S	Sn	22 32 03.2	+0.5
WDGT	Dungji	1.85	263	*e*P	Pn	22 31 47.3	-0.4
	baz=261						
PHUB	P'eng-hu	1.92	271	*e*P	Pn	22 31 47.8	-0.7
	baz=269						
PHUB				*e*S	Sn	22 32 09.9	-1.5
	baz=269						
PNG	Penghu	1.93	272	*e*P	Pn	22 31 48.4	-0.4
	baz=271						
HATJ	Hateruma jima	2.04	74	P	Pn	22 31 50.3	0.0
HATJ				S	Sn	22 32 14.1	-0.4
IRIF	Iriomote-Funau	2.07	66	P	Pn	22 31 51.1	+0.5
IRIF				S	Sn	22 32 15.3	+0.1
JKRS	Kuro-shima	2.27	71	P	Pn	22 31 54.1	+0.7
JKRS				S	Sn	22 32 21.5	+1.3
JIJ	Ishigaki jima	2.43	69	P	Pn	22 31 55.3	-0.3
JIJ				S	Sn	22 32 23.2	-0.9
VWUC	VWUC	2.50	307	*e*P	Pn	22 31 56.1	-0.5
	baz=306						
VWUC				*e*S	Sn	22 32 23.8	-2.1
	baz=306						
PTTC	Pingtan	2.63	320	*e*S	Sn	22 32 27.1	-2.0
	baz=319						
JISG	Ishigakijimahi	2.65	65	P	Pn	22 31 58.2	-0.5
JISG				S	Sn	22 32 28.5	-1.1
PTMZ	Houxiangcun	2.78	304	*e*S	Sn	22 32 30.4	-2.3
	baz=303						

IDC 25 22:35:04.4±44.0**, 18°.20S**×**173°.31W, $h0^{km}$, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.7**/39**, mbtmp4.1**/3**, Error ellipse: s-maj=853.2km s-min=182.2km az=81.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.77	243	P	P	22 43 04.2	+0.3
	1.5nm,0.7s,baz=79,slow=8.3,SNR=4.0						
WRA	Warramunga Arr	49.35	259	P	P	22 43 55.6	-0.3
	0.4nm,0.3s,baz=97,slow=6.9,SNR=7.1						
ASAR	Alice Springs	49.38	254	P	P	22 43 55.9	-0.3
	5.1nm,0.5s,baz=91,slow=8.4,SNR=93						

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*IDC **25** 22:36:43.6±0.7, 53°.78S×3°.05E, $h0^{km}$, mb4.2/9, mb1 4.3/9, mb1mx4.1/28, mbtmp4.1/9, ML4.9/1, MS3.7/15, Ms1 3.7/15, ms1mx3.7/18, Error ellipse: s-maj=25.2km s-min=19.5km az=90.0*

*GCMT **25** 22:36:51.0±0.4, 53°.95S±0°.02×3°.01E±0°.03, $h27^{km}\pm1^{km}$, MW5.0/89, Moment Tensor Solution. s20,c20; s89,c111; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.61±.19; $M_{\theta\theta}$3.11±.14; $M_{\phi\phi}$-2.50±.13; $M_{r\theta}$0.53±.22; $M_{\theta\phi}$-0.32±.11; $M_{\phi r}$1.54±.28; Best double couple: $M_0$3.29700×10^{16} NP1:ϕ_s134.00000°, δ64.00000°, λ-17.00000°. NP2: ϕ_s232.00000°, δ75.00000°, λ-153.00000°. Principal axes: T 3.1870, Plg7.0000°, Azm1.0000°; N 0.2200, Plg59.0000°, Azm258.0000°; P -3.4070, Plg30.0000°, Azm95.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 25 22:36:45.3±0.6**, 53°.81S**±0°.09×**3°.0E**±0°.2**, $h10^{km}$, n27,** σ**$1^{s}.49$**/20**, mb4.2**/9**, MS3.7**/14**, Bouvet Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	17.64	192	P	Pn	22 40 51.6	+0.8
VNA2	Neumayer--Watz	17.79	191	P	Pn	22 40 52.5	-0.2
	baz=19,slow=14						
SNAA	Sanae	18.11	186	P	Pn	22 40 54.9	-1.7
SNAA	Sanae	18.11	186	P	Pn	22 40 55.0	-1.7
	3.9nm,0.3s,baz=36,slow=17,SNR=60						
SNAA				LR	LR	22 46 54.2	
	comp=Z,231nm,18.5s,baz=12,slow=34						
VNA3	Neumayer Olymp	18.37	193	P	P	22 40 59.2	-0.7
SUR	Sutherland	24.91	38	LR	LR	22 49 28.8	
	comp=Z,91nm,20.1s,baz=195,slow=31						
BOSA	Boshof	29.97	42	LR	LR	22 52 40.7	
	comp=Z,62nm,20.3s,baz=190,slow=32						
MAW	Mawson	30.92	140	P	P	22 43 02.3	+0.6
	1.3nm,0.3s,baz=87,slow=21,SNR=2.2						
MAW				LR	LR	22 53 15.5	
	comp=Z,135nm,21.1s,baz=261,slow=32						
TSUM	Tsumeb	36.32	24	P	P	22 43 49.8	+0.5
	3.2nm,0.9s,baz=209,slow=10,SNR=3.0						
MATP	Matopo	38.60	40	P	P	22 44 06.7	-1.9
	3.9nm,1.0s,baz=187,slow=11,SNR=4.0						
VNDA	Vanda	48.27	174	P	P	22 45 25.4	-0.4
	4.7nm,0.8s,baz=222,slow=7.0,SNR=9.8						
VNDA				LR	LR	23 06 05.6	
	comp=Z,147nm,18.1s,baz=360,slow=36						
PLCA	Paso Flores	49.40	254	LR	LR	23 04 37.2	
	comp=Z,62nm,18.8s,baz=316,slow=34						
CPUP	Villa Florida	51.80	277	P	P	22 45 54.4	+1.2
	3.6nm,1.0s,baz=115,slow=5.1,SNR=6.0						
CPUP				LR	LR	23 03 58.2	
	comp=Z,52nm,21.8s,baz=190,slow=32						
BDFB	Brasilia	54.91	294	LR	LR	23 04 35.8	
	comp=Z,109nm,19.3s,baz=148,slow=30						
KMBO	Kilima Mbogo	59.60	41	LR	LR	23 11 00.1	
	comp=Z,96nm,18.3s,baz=98,slow=34						
DBIC	Dimbokro	60.62	351	P	P	22 46 56.8	+0.6
	2.2nm,0.8s,baz=180,slow=4.0,SNR=1.8						
DBIC				LR	LR	23 06 57.2	
	comp=Z,52nm,20.2s,baz=146,slow=30						
LPAZ	La Paz	65.90	275	P	P	22 47 31.2	-0.9
	3.3nm,1.1s,baz=172,slow=5.3,SNR=7.3						
LPAZ				LR	LR	23 16 22.2	
	comp=Z,34nm,19.1s,baz=128,slow=36						
TORD	Torodi Ar. Bea	66.70	359	P	P	22 47 35.3	-0.9
	0.4nm,0.7s,baz=215,slow=4.4,SNR=2.9						
TORD				LR	LR	23 10 51.3	
	comp=Z,69nm,21.5s,baz=200,slow=31						
ROSC	El Rosal	86.45	283	LR	LR	23 25 45.5	
	comp=Z,163nm,18.9s,baz=174,slow=34						
STKA	Stephens Creek	87.43	146	LR	LR	23 24 35.4	
	comp=Z,84nm,18.5s,baz=202,slow=33						
ASAR	Alice Springs	91.97	136	P	P	22 49 55.9	+1.6
	0.1nm,0.3s,baz=215,slow=5.7,SNR=2.0						
BRTR	Keskin Array B	96.83	23	LR	LR	23 34 24.4	
	comp=Z,25nm,19.3s,baz=158,slow=36						
MKAR	Makanchi Array	120.60	52	PKP	PKiKP	22 55 38.3	+1.9
	0.4nm,0.9s,baz=191,slow=2.3,SNR=3.1						
RES	Resolute Bay	142.94	334	PKP	PKPdf	22 56 14.4	-2.9
	1.3nm,0.6s,baz=166,slow=16,SNR=6.0						
MJAR	Matsushiro Arr	144.69	101	PKP	PKPab	22 56 20.7	+0.2
	1.5nm,0.7s,baz=196,slow=3.9,SNR=6.4						
YKA	Yellowknife Ar	147.23	311	PKPbc	PKPdf	22 56 26.2	+1.2
	1.3nm,0.8s,baz=106,slow=3.4,SNR=9.4						
TIXI	Tiksi	150.89	32	PKPbc	PKPbc	22 56 35.9	-0.5
	0.6nm,0.3s,baz=76,slow=4.2,SNR=1.9						
TIXI				PKPab	sPKPbc	22 56 41.8	+2.6
	0.7nm,0.4s,baz=341,slow=3.4,SNR=3.6						

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*IGIL **25** 22:37:45.4, 39°.55N×13°.34W, $h31^{km}$, ML2.1*

*MDD **25** 22:37:46.8±2.3, 39°.50N×12°.83W, $h0^{km}$, mb3.6/4, Error ellipse: s-maj=19.5km s-min=15.3km az=117.0, PRXIMO SOLUCION POBRE*

*INMG **25** 22:37:47.7±1.4, 39°.55N×13°.35W, $h10^{km}$, ML2.3, Error* *ellipse: s-maj=11.1km s-min=7.5km az=100.0*

ISC 25 22:37:43.4±3.4**, 39°.54N**±0°.06×**13°.0W**±0°.2**, h10km, n36, σ1ˢ99**/58**, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMAFR	Mafra	2.95	100	Sn	Sn	22 39 06.3	+0.6
	1.3nm,0.0s,SNR=7.9						
PMAFR	Mafra	2.95	100	ePn	Pn	22 38 33.0	+2.8
PMAFR				eSn	Sn	22 39 06.5	+0.8
PCAS	Casmilo, Conde	3.51	80	Sn	Sn	22 39 18.8	-0.7
	2.8nm,0.3s						
PCAS	Casmilo, Conde	3.51	80	eSn	Sn	22 39 18.8	-0.7
PCAS				A	A	22 39 20.7	
	2.8nm,0.3s						
PTOM	Tomar	3.55	87	Sn	Sn	22 39 20.2	-0.3
	3.7nm,0.5s						
PTOM	Tomar	3.55	87	eSn	Sn	22 39 20.2	-0.3
PTOM				A	A	22 39 20.5	
	7.3nm,0.5s						
PMTG	Montargil	3.74	96	Pn	Pn	22 38 43.7	+2.6
PMTG				Sn	Sn	22 39 23.1	-2.0
	2.2nm,0.7s						
PMTG	Montargil	3.74	96	ePn	Pn	22 38 43.7	+2.6
PMTG				eSn	Sn	22 39 23.1	-2.0
PMTG				A	A	22 39 29.9	
	2.2nm,0.7s						
PNCL	Nicolau / Gran	3.77	111	Pn	Pn	22 38 43.4	+1.8
PNCL				Sn	Sn	22 39 25.0	-1.0
	3.6nm,1.0s						
PNCL	Nicolau / Gran	3.77	111	ePn	Pn	22 38 43.4	+1.8
PNCL				eSn	Sn	22 39 25.0	-1.0
PNCL				A	A	22 39 27.6	
	3.6nm,1.0s						
PTEO	Sao Teotonio	3.90	119	Pn	Pn	22 38 44.3	+1.0
PTEO				Sn	Sn	22 39 26.1	-3.1
	4.8nm,0.5s						
PTEO	Sao Teotonio	3.90	119	ePn	Pn	22 38 44.3	+1.0
PTEO				eSn	Sn	22 39 26.1	-3.1
PTEO				A	A	22 39 29.3	
	9.7nm,0.5s						
MORF	Marmelete	4.08	122	eP	Pn	22 38 46.6	+0.8
MORF	Marmelete	4.08	122	Pn	Pn	22 38 46.6	+0.8
PVIS	Viseu	4.09	72	Sn	Sn	22 39 32.2	-1.7
	1.7nm,0.3s						
PVIS	Viseu	4.09	72	eSn	Sn	22 39 32.2	-1.7
PVIS				A	A	22 39 32.3	
	3.4nm,0.3s						
MESJ	Messejana	4.11	113	eP	Pn	22 38 47.2	+1.1
MESJ				eS	Sn	22 39 32.3	-2.0
MESJ				AML	AML	22 39 35.8	
	comp=E,3.9nm,0.2s						
MESJ	Messejana	4.11	113	Pn	Pn	22 38 47.2	+1.1
MESJ				Sn	Sn	22 39 32.3	-2.0
	comp=E,3.9nm,0.2s						
MESJ	Messejana	4.11	113	ePn	Pn	22 38 47.9	+1.7
MESJ				eSn	Sn	22 39 33.6	-0.7
MESJ				A	A	22 39 37.3	
	comp=E,2.5nm,0.4s						
PESTR	Estremoz	4.26	97	eSn	Sn	22 39 37.3	-0.7
PCVE	Castro Verde	4.33	115	Pn	Pn	22 38 50.8	+1.5
PCVE				Sn	Sn	22 39 37.9	-1.9
	comp=E,2.5nm,0.8s						
PCVE	Castro Verde	4.33	115	ePn	Pn	22 38 50.8	+1.5
PCVE				eSn	Sn	22 39 37.9	-1.9
PCVE				A	A	22 39 41.1	
	comp=E,2.5nm,0.8s						
PGAV	Gavieira, Arco	4.33	55	Sn	Sn	22 39 37.9	-2.1
	comp=E,4.7nm,0.6s						
PGAV	Gavieira, Arco	4.33	55	eSn	Sn	22 39 37.9	-2.1
PGAV				A	A	22 39 42.7	
	comp=E,4.7nm,0.6s						
PMRV	Marv??o	4.34	90	Pn	Pn	22 38 51.3	+1.9
PMRV				Sn	Sn	22 39 38.2	-1.9
	comp=E,2.6nm,0.6s						
PMRV	Marv??o	4.34	90	ePn	Pn	22 38 51.3	+1.9
PMRV				eSn	Sn	22 39 38.2	-1.9
PMRV				A	A	22 39 41.1	
	comp=E,2.6nm,0.6s						
ELOB	Lobios	4.42	57	Sn	Sn	22 39 40.0	-2.0
	comp=E,0.4nm,0.1s,SNR=7.9						
PBDV	Barranco-do-Ve	4.60	118	Pn	Pn	22 38 54.4	+1.5
PBDV				Sn	Sn	22 39 44.2	-2.2
	comp=E,4.3nm,0.8s						
PBDV	Barranco-do-Ve	4.60	118	ePn	Pn	22 38 54.4	+1.5
PBDV				eSn	Sn	22 39 44.2	-2.2
PBDV				A	A	22 39 49.8	
	comp=E,4.3nm,0.8s						
PVAQ	Vaqueiros	4.66	116	Pn	Pn	22 38 55.8	+2.0
PVAQ				Sn	Sn	22 39 46.3	-1.7
	comp=E,3.2nm,0.2s						
PVAQ	Vaqueiros	4.66	116	ePn	Pn	22 38 55.8	+2.0
PVAQ				eSn	Sn	22 39 46.3	-1.7
PVAQ				A	A	22 39 49.8	
	comp=E,3.2nm,0.2s						
EBAD	Badajoz	4.72	98	Pn	Pn	22 38 55.7	+1.1
	comp=E,0.2nm,0.0s,SNR=7.9						
EBAD				Sn	Sn	22 39 47.4	-2.1
	comp=E,0.3nm,0.0s,SNR=7.9						
EGRO	El Granado	4.77	113	Pn	Pn	22 38 56.7	+1.4
	comp=E,0.6nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	22 39 48.6	-1.9
	comp=E,0.5nm,0.1s,SNR=4.0						
EAGO	Agolada(Pontev	4.94	47	Sn	Sn	22 39 49.6	-5.2
	comp=E,1.1nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	5.26	108	Pn	Pn	22 39 03.5	+1.5
	comp=E,0.4nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	22 39 59.7	-3.1
	comp=E,0.1nm,0.1s,SNR=7.9						
EPLA	Plasencia	5.36	82	Pn	Pn	22 39 06.7	+3.3
	comp=E,0.1nm,0.1s,SNR=7.9						
EPLA				Sn	Sn	22 40 02.3	-2.8
	comp=E,0.3nm,0.2s,SNR=7.9						

MAN 25 23:11:00.9, 9°.76N×123°.62E, h11km, mb4.1, ML2.9, MS2.6, 3D, Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBP	Tagbilaran	0.25	107	eP	Pg	23 11 06.0	0.0
TBP				iS	Sg	23 11 10.3	+0.9
SNPH	Sibulan	0.57	222⇓	eP	Pb	23 11 12.7	-0.1
SNPH				iS	Sb	23 11 20.9	-0.1
LLP	Lapu-Lapu	0.65	32⇓	eP	Pb	23 11 13.9	-0.3
LLP				iS	Sb	23 11 23.5	+0.3
DCPH	Dipolog City	1.20	193⇓	eP	Sn	23 11 38.1	-1.9

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*NEIC **25** 23:36:47.6±1.6, 51°.6N±0°.1×179°.3W±0°.1, h100km±6km, mb4.3/50, Error ellipse: s-maj=18.5km s-min=9.9km az=171.0*

*IDC **25** 23:36:47.3±0.9, 51°.79N×179°.35W, h93km±7km, mb3.7/13, mb1 3.9/16, mb1mx3.6/44, mbtmp4.0/16, MS2.9/2, Ms1 2.9/2, ms1mx2.6/31, Error ellipse: s-maj=25.6km s-min=10.5km az=172.0*

*AEIC **25** 23:36:48±2.6, 51°.8N±0°.1×179°.2W±0°.1, h98km±5km, Error ellipse: s-maj=18.3km s-min=9.8km az=175.0*

ISC 25 23:36:47.8±0.6**, 51°.7N**±0°.1×**179°.30W**±0°.05**, h100km, n91, σ0ˢ80**/81**, mb4.2**/27**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAEA	Gareloi East	0.35	75		Pn	23 37 02.9	+0.2
TANO	Tanaga North	0.77	73		Pn	23 37 05.8	0.0
TANO					Sn	23 37 18.9	-0.4
TASE	Tanaga Southea	0.80	79		Pn	23 37 06.1	-0.1
TAFP	Tanaga Falls P	0.84	75		Pn	23 37 06.3	-0.3
TAFP					Sn	23 37 20.6	-0.2
TAPA	Tanaga Point A	0.93	82		Pn	23 37 07.3	-0.2
TAPA					Sn	23 37 22.9	+0.5
KIMD	Kanaga Island	1.29	86		Pn	23 37 11.3	-0.2
KICM	Kanaga Island	1.33	79		Pn	23 37 11.9	0.0
KIKV	Kanaga Island	1.34	81		Pn	23 37 11.8	-0.3
KINC	Kanaga Island	1.37	79		Pn	23 37 12.3	-0.1
KIRH	Kanaga Island	1.39	81		Pn	23 37 12.6	-0.1
ADK	Adak	1.64	82		Pn	23 37 15.1	-0.6
ADAG	Mount Adagdak	1.70	79		Pn	23 37 16.1	-0.4
GSTD	Great Sitkin T	1.99	78		Pn	23 37 19.9	-0.4
GSTD					Sn	23 37 44.4	-0.6
GSMY	Great Sitkin M	2.04	79		Pn	23 37 20.5	-0.4
GSTR	Great Sitkin T	2.05	77		Pn	23 37 20.5	-0.5
ATKA	Atka Island	3.20	79		Pn	23 37 36.2	+0.1
NIKH	Nikolski High	6.53	75	Pn	Pn	23 38 22.5	+1.3
MGOD	Makushin Gods	7.83	70		Pn	23 38 39.8	+0.9
MREP	Makushin Rep't	7.91	70		Pn	23 38 41.0	+1.0
PETK	Petropavlovsk-	14.10	285	P	Pn	23 40 02.5	-0.4
	0.3nm,0.3s,baz=145,slow=49,SNR=1.7						
SVW2	Sparrevohn	16.06	45		P	23 40 30.9	+1.9
SVW2				IAmb	IAmb	23 40 53.9	
	comp=Z,32nm,1.5s						
KDAK	Kodiak Island	16.52	58	P	Pn	23 40 31.0	-2.1
	comp=Z,0.8nm,0.3s,baz=253,slow=9.2,SNR=19						
KDAK	Kodiak Island	16.52	58	IAmb	IAmb	23 40 34.8	
	comp=Z,54nm,1.4s						
RSO	Redoubt South	17.11	49		P	23 40 41.8	+1.0
BILL	Bilibino	17.84	342		Pn	23 40 50.4	+1.3
RDOG	Red Dog Mine	18.24	20	P	Pn	23 40 55.7	+1.6
SEY	Seymchan	18.80	318	P	P	23 40 58.9	-0.2
	comp=Z,0.3nm,0.3s,baz=107,slow=12,SNR=6.3						
KTH	Kantishna Hill	19.08	41	P	Pn	23 41 03.4	-0.8
KTH				IAmb	IAmb	23 41 04.4	
	comp=Z,21nm,1.0s						
IMAR	Indian Mountai	19.27	32	P	P	23 41 04.6	+0.4
BPAW	Bear Paw Mtn.	19.30	39	P	Pn	23 41 05.6	-1.0
BPAW				IAmb	IAmb	23 41 09.6	
	comp=Z,15nm,1.3s						
TRF	Thorofare Moun	19.30	41	P	Pn	23 41 06.6	-0.1
MLY	Manley	19.83	37	P	Pn	23 41 11.9	-0.8
SCM	Sheep Creek Mo	20.03	47	P	P	23 41 11.8	-0.7
DHY	Denali Highway	20.39	44	P	Pn	23 41 17.8	-1.6
CCB	Clear Creek Bu	20.78	39	P	Pn	23 41 22.4	-1.4
HDA	Harding Lake	21.03	40	P	P	23 41 22.4	-0.8
HDA				IAmb	IAmb	23 41 46.3	
	comp=Z,9.1nm,1.0s						
ILAR	Eielson Array	21.19	39	P	P	23 41 24.9	0.0
	comp=Z,0.3nm,0.6s,baz=238,slow=8.6,SNR=6.1						
GLB	Gilahina Butte	21.58	49	P	P	23 41 29.4	+0.3
VRDI	Verde Repeater	21.71	50	P	P	23 41 31.6	+1.0
VRDI				IAmb	IAmb	23 41 57.9	
	comp=Z,33nm,1.5s						
TOLK	Toolik Lake Re	22.14	29	P	P	23 41 35.1	+0.2
BARN	Barnard Glacie	22.54	51	P	P	23 41 38.9	-0.5
BARN				IAmb	IAmb	23 41 39.6	
	comp=Z,21nm,1.4s						
BCAR	Beaver Creek A	22.83	46	P	P	23 41 41.1	-1.0
BMAR	Burnt Mountain	23.14	34	P	P	23 41 44.9	-0.2
EGAK	Eagle	23.52	42	P	P	23 41 48.2	-0.3
EGAK				IAmb	IAmb	23 41 48.6	
	comp=Z,13nm,1.4s						
DAWY	Dawson	24.09	44	P	P	23 41 53.4	-0.3
YSS	Yuzh-Sakhalins	24.98	274	P	P	23 42 01.8	-0.1
KLR	Kul'dur	30.79	285	P	P	23 42 53.0	-0.7
	comp=Z,3.7nm,0.7s,baz=70,slow=8.2,SNR=12						
USRK	Ussuriysk Ar.	32.95	276	P	P	23 43 11.4	-1.2
	comp=Z,3.6nm,0.8s,baz=50,slow=4.8,SNR=4.3						
MAJO	Matsushiro	33.53	260	P	P	23 43 18.2	+0.4
MJAR	Matsushiro Arr	33.53	260	P	P	23 43 18.4	+0.7
	comp=Z,2.7nm,0.6s,baz=49,slow=7.8,SNR=4.3						
MJAR	Matsushiro Arr	33.53	260	IAmb	IAmb	23 43 19.6	
	comp=Z,8.0nm,1.7s						
MJB9	Matsu-Tunnel	33.53	260	P	P	23 43 17.9	+0.1
H11N2	WAKE ISLAND Hy	33.69	204	T	T	00 18 57.2	
	baz=17,slow=76,SNR=0.3						
H11N3	WAKE ISLAND Hy	33.70	204	T	T	00 19 02.2	
	baz=17,slow=76,SNR=0.6						
H11N1	WAKE ISLAND Hy	33.71	204	T	T	00 19 12.4	
	baz=17,slow=76,SNR=8.3						
H11S1	WAKE ISLAND Hy	34.91	204	T	T	00 21 29.1	
	baz=17,slow=76,SNR=18						
H11S2	WAKE ISLAND Hy	34.93	204	T	T	00 21 27.3	
	baz=17,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	34.93	204	T	T	00 21 28.1	
	baz=17,slow=76,SNR=11						
YKA	Yellowknife Ar	35.24	47	P	P	23 43 31.3	-0.9
	comp=Z,0.3nm,0.5s,baz=279,slow=8.2,SNR=8.7						
YKA				pP	pP	23 43 54.3	+0.4
	comp=Z,0.2nm,0.7s,baz=280,slow=8.4,SNR=2.7						
KSRS	Korea Array	39.32	270	P	P	23 44 07.9	+1.0
	comp=Z,2.9nm,0.9s,baz=54,slow=8.7,SNR=12						
KSRS				LR	LR	00 01 04.1	
	comp=Z,6.0nm,19.3s,baz=220,slow=37						
KSAR	Wonju Array Be	39.35	270	P	P	23 44 07.4	+0.2
I07A	Izee	39.80	77	IAmb	IAmb	23 44 12.7	
	comp=Z,7.8nm,1.0s						
NVAR	Mina Array Bea	43.82	83	P	P	23 44 45.5	+1.5
	comp=Z,1.1nm,0.6s,baz=307,slow=7.4,SNR=4.9						
ELK	Elko	44.30	78	IAmb	IAmb	23 44 49.4	
	comp=Z,3.3nm,0.8s						
R11A	Troy Canyon, C	45.55	81	P	P	23 44 58.6	+1.0
R11A				IAmb	IAmb	23 44 59.4	
	comp=Z,11nm,1.4s						
SONM	Songino Array	46.23	296	P	P	23 45 02.3	-0.4
	comp=Z,0.4nm,0.4s,baz=72,slow=9.3,SNR=5.0						
SONM	Songino Array	46.23	296	P	P	23 45 02.8	+0.1
PSUT	Pine Spring	46.49	80	P	P	23 45 06.4	+1.3
PDAR	Pinedale Array	46.51	72	P	P	23 45 04.8	-0.4
	comp=Z,0.9nm,0.5s,baz=318,slow=3.9,SNR=10						
PDAR				pP	pP	23 45 26.9	-1.1
	comp=Z,1.7nm,0.9s,baz=305,slow=5.2,SNR=5.5						
PDAR	Pinedale Array	46.51	72	P	P	23 45 04.1	-1.0
NLU	North Lily Min	46.70	77	P	P	23 45 07.8	+1.1
GSC	Goldstone, Bar	46.73	85	IAmb	IAmb	23 45 09.1	
	comp=Z,9.0nm,1.2s						
KNB	Kanab	48.09	80	P	P	23 45 19.1	+1.7
SDCO	Great Sand Dun	52.06	75	IAmb	IAmb	23 45 48.8	
	comp=Z,4.9nm,1.1s						
ANMO	Albuquerque	53.34	78	P	P	23 45 58.0	+1.1
ANMO				IAmb	IAmb	23 45 58.2	
	comp=Z,4.9nm,1.2s						
KURK	Kurchatov	58.58	313	P	P	23 46 33.8	+0.1
TX31	Lajitas Ar. Si	58.91	81	IAmb	IAmb	23 46 38.3	
	comp=Z,2.8nm,0.9s						
TX32	Lajitas Array	58.91	81	IAmb	IAmb	23 46 38.3	
	comp=Z,2.7nm,0.8s						
TXAR	Lajitas Array	58.91	81	P	P	23 46 36.8	+0.4
	comp=Z,1.3nm,0.6s,baz=302,slow=4.2,SNR=13						
TXAR	Lajitas Array	58.91	81	P	P	23 46 36.1	-0.3
MK31	Makanchi Array	59.59	308	P	P	23 46 41.1	+0.3
MK31				IAmb	IAmb	23 46 42.1	
	comp=Z,2.2nm,1.1s						
MKAR	Makanchi Array	59.59	308	P	P	23 46 39.7	-1.1
	comp=Z,0.9nm,0.8s,baz=46,slow=7.1,SNR=10						
MKAR				pP	pP	23 47 05.0	+0.2
	comp=Z,0.8nm,0.8s,baz=70,slow=7.0,SNR=3.6						
MKAR	Makanchi Array	59.59	308	P	P	23 46 41.1	+0.3
SCHQ	Schefferville	59.95	38	LR	LR	00 11 55.5	
	comp=Z,29nm,19.4s,baz=353,slow=35						
JCT	Junction City	60.46	77	P	P	23 46 46.6	-0.4
CMAR	Chiang Mai Arr	70.67	275	P	P	23 47 53.1	+0.3
	comp=Z,1.0nm,0.6s,baz=31,slow=6.2,SNR=6.1						
CMAR				pP	PcP	23 48 14.8	+1.6
	comp=Z,0.6nm,0.3s,baz=29,slow=3.8,SNR=1.8						
CMAR	Chiang Mai Arr	70.67	275	P	P	23 47 52.5	-0.3
GAR	Garm	71.24	310	P	P	23 47 55.0	-1.1
WRA	Warramunga Arr	82.03	223	P	P	23 48 57.1	+0.4
	comp=Z,0.8nm,0.5s,baz=35,slow=6.1,SNR=4.8						
WRA	Warramunga Arr	82.03	223	IAmb	IAmb	23 48 57.6	
	comp=Z,0.5nm,1.5s						
ASAR	Alice Springs	85.51	222	P	P	23 49 14.7	+0.2
	comp=Z,1.1nm,0.8s,baz=26,slow=5.0,SNR=7.3						

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*NIED **25** 23:38:00, 39°.90N×143°.50E, h14km, Mw3.9 Best double couple: M₀8.72000×10¹⁴ NP1:φs12.00000°, δ66.00000°, λ69.00000°. NP2:φs236.00000°, δ31.00000°, λ129.00000°.*

*IDC **25** 23:38:30.8±1.2, 39°.76N×143°.69E, h0km, mb3.8/6, mb1 3.8/10, mb1mx3.6/36, mbtmp3.7/10, ML3.2/3, MS3.1/4, Ms1 3.1/4, ms1mx2.7/38, Error ellipse: s-maj=27.7km s-min=18.8km az=95.0*

*JMA **25** 23:38:33.9±0.2, 39°.91N×143°.55E, h30km, M3.6*

*NEIC **25** 23:38:34.5±2.8, 39°.77N±0°.08×143°.5E±0°.1, h24km±8km, mb4.1/4, Error ellipse: s-maj=14.3km s-min=9.6km az=126.0*

ISC 25 23:38:32.3±3.4**, 39°.85N**±0°.05×**143°.57E**±0°.06**, h9km**±22km**, n35, σ1ˢ43**/39**, mb3.9**/8**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	1.32	274	P	Pb	23 38 56.6	-0.6
JTH				eS	Sb	23 39 12.8	-1.4
MIYJ	Miyakonagasawa	1.38	259	P	Pb	23 38 57.7	-0.6
JANG	Nango	1.66	289	P	Pn	23 39 01.0	-0.6
JANG				eS	Sn	23 39 21.3	-1.8
JOM	Ohasama	1.80	259	P	Pb	23 39 04.3	-1.1
JMK	Ichinoseki	2.04	244	P	Pn	23 39 07.0	+0.3
JTM	Tenmabayashi	2.13	297	P	Pn	23 39 08.5	+0.5
JTM				eS	Sn	23 39 34.0	-0.6
ERM	Erimo	2.18	352	Pn	Pn	23 39 09.3	+0.6
JOT	Ohata	2.46	309	P	Pn	23 39 13.0	+0.5
JOT				eS	Sn	23 39 42.9	+0.3
JNBK	Urakawa-nobuka	2.50	346	P	Pn	23 39 14.1	+1.0
JNBK				eS	Sn	23 39 42.4	-1.4
JYK	Kaneyama	2.66	250	P	Pn	23 39 16.7	+1.3
JCH	Churui	2.76	357	P	Pn	23 39 16.6	-0.1
JCH				eS	Sn	23 39 48.3	-1.9
JAK	Akkeshi	3.25	15	P	Pn	23 39 22.5	-0.9
JAK				S	Sn	23 39 58.4	-3.8
JKA	Kamikawa-asahi	4.32	351		Pn	23 39 38.8	+0.6
JKA					Sn	23 40 30.8	+2.2
ASAJ	Asahikawa	4.32	351	Pn	Pn	23 39 38.8	+0.6
	1.7nm,0.3s,baz=118,slow=12,SNR=2.4						
ASAJ				Sn	Sn	23 40 30.8	+2.1
	1.9nm,0.3s,baz=117,slow=30,SNR=1.8						
MAJO	Matsushiro	5.37	234		Pn	23 39 51.0	-1.5
MAT	Matsushiro	5.37	234	P	Pn	23 39 54.3	+1.7
MAT				eS	Sn	23 40 53.5	-1.0
MJAR	Matsushiro Arr	5.37	234	Pn	Pn	23 39 54.0	+1.4
	0.1nm,0.3s,baz=41,slow=12,SNR=13						
MJAR				LR	LR	23 41 58.6	
	comp=Z,86nm,19.5s,baz=75,slow=39						
MJB9	Matsu-Tunnel	5.37	234		Pn	23 39 53.4	+0.8
USRK	Ussuriysk Ar.	9.65	300	Pn	Pn	23 40 53.0	+1.7
	baz=101,slow=12,SNR=6.7						
USRK				LR	LR	23 44 36.6	
	comp=Z,113nm,19.8s,baz=132,slow=37						
USRK	Ussuriysk Ar.	9.65	300		Pn	23 40 50.8	-0.5
KSRS	Korea Array	12.47	264	Pn	Pn	23 41 32.7	+2.8
	0.2nm,0.3s,baz=79,slow=15,SNR=1.9						
KSRS				LR	LR	23 45 52.0	
	comp=Z,98nm,18.9s,baz=94,slow=35						
KLR	Kul'dur	12.60	322	LR	LR	23 46 44.5	
	comp=Z,102nm,18.1s,baz=354,slow=39						
SEY	Seymchan	23.71	10	P	P	23 43 44.6	+0.4
	1.4nm,0.2s,baz=192,slow=10,SNR=4.5						
ULN	Ulaanbaatar	27.32	299	P	P	23 44 17.6	+0.2
ULN				IAmb	IAmb	23 45 13.8	
	comp=Z,4.8nm,0.6s						
SONM	Songino Array	27.76	299	P	P	23 44 22.0	+0.7
	comp=Z,1.5nm,0.8s,baz=85,slow=8.4,SNR=9.2						
SONM	Songino Array	27.76	299	IAmb	IAmb	23 44 24.0	
	comp=Z,1.4nm,0.9s						
H11N2	WAKE ISLAND Hy	28.34	128	T	T	00 14 03.3	
	baz=320						
H11N1	WAKE ISLAND Hy	28.36	128	T	T	00 14 04.1	
H11N3	WAKE ISLAND Hy	28.36	128	T	T	00 14 06.6	
	baz=314						
ZAA0	Zalesovo Array	41.33	310	P	P	23 46 18.2	+0.1
ZAA0				IAmb	IAmb	23 46 53.4	
	comp=Z,2.8nm,1.1s						
ZALV	Zalesovo Beam	41.33	310	P	P	23 46 18.6	+0.4
	comp=Z,1.3nm,0.7s,baz=81,slow=9.3,SNR=5.3						
ILAR	Eielson Array	46.21	34	P	P	23 46 58.6	+1.4
	comp=Z,0.3nm,0.8s,baz=270,slow=7.2,SNR=3.2						
WRA	Warramunga Arr	60.11	190	P	P	23 48 37.6	-2.3
	comp=Z,0.8nm,0.5s,baz=13,slow=7.7,SNR=4.5						
WRA	Warramunga Arr	60.11	190	IAmb	IAmb	23 48 48.9	
	comp=Z,0.3nm,1.0s						
ASAR	Alice Springs	63.83	190	P	P	23 49 05.2	+0.2
	comp=Z,0.3nm,0.7s,baz=15,slow=5.8,SNR=4.7						

IDC 26 00:17:17.6±3.9**, 3°.56S**×**135°.69E, h0km, mb3.2**/2**, mb1 3.6**/3**, mb1mx3.4**/25**, mbtmp3.4**/3**, ML3.6**/1**, Error ellipse: s-maj=173.5km s-min=32.8km az=80.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.34	185	Pn	Pn	00 21 06.5	-2.1
	0.3nm,0.3s,baz=3.9,slow=13,SNR=11						
WRA				Sn	Sn	00 23 58.9	-12
	0.1nm,0.3s,baz=10.0,slow=23,SNR=4.9						
ASAR	Alice Springs	20.07	185	P	Pn	00 21 53.6	-0.8
	0.7nm,0.5s,baz=6.3,slow=11,SNR=10						
MKAR	Makanchi Array	68.65	324	P	P	00 28 22.8	0.0
	0.1nm,0.5s,baz=115,slow=8.2,SNR=2.3						

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*DDA **26** 00:37:07.7, 34°.99N×32°.04E, h24km±1km, ML1.9*

*NIC **26** 00:37:08.1±0.0, 35°.00N×32°.05E, h20km±1km, Ml2.7/4*

*ISK **26** 00:37:10.1, 35°.11N×32°.24E, h6km, ML2.2/12*

ISC 26 00:37:09.8±1.4**, 35°.02N**±0°.04×**32°.19E**±0°.06**, h18km**±4km**, n24, σ1ˢ29**/41**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKMS	Akamas	0.12	90	P	Pg	00 37 14.0	+0.2
AKMS				S	Sg	00 37 17.9	+1.5
AKMS				AML	AML	00 37 18.2	
	3.7nm,0.2s						
AKMS				AML	AML	00 37 18.2	
	3.7nm,0.2s						
AKMS				AML	AML	00 37 18.7	
	4.1nm,0.2s						
AKMS				AML	AML	00 37 18.7	
	4.1nm,0.2s						
ALFC	Alefka	0.37	68	P	Pb	00 37 18.3	+0.4
NATA	Nata	0.40	127	P	Pb	00 37 17.7	-0.6
NATA				S	Sb	00 37 25.7	+1.6
NATA				AML	AML	00 37 26.1	
	4.2nm,0.2s						
NATA				AML	AML	00 37 26.1	
	4.2nm,0.2s						
NATA				AML	AML	00 37 27.1	
	4.6nm,0.4s						
NATA				AML	AML	00 37 27.1	
	4.6nm,0.4s						
LEF	Lefka	0.59	80	PG	Pb	00 37 20.9	-0.6
LEF				SG	Sg	00 37 27.5	-1.8
LEF	Lefka	0.59	80	iP	Pb	00 37 20.7	-0.8
LEF				iS	Sb	00 37 30.8	+1.3
LEF				IAML		00 37 34.0	
	comp=E,93nm,0.5s						
LEF				IAML		00 37 35.0	
	comp=N,71nm,0.3s						
SZAC	Souni	0.63	114	P	Pb	00 37 21.7	-0.6
SZAC				AML	AML	00 37 32.9	
	comp=N,1.0nm,0.5s						
SZAC				AML	AML	00 37 32.9	
	comp=N,1.0nm,0.5s						
SZAC				S	Sn	00 37 33.1	-0.4
SZAC				AML	AML	00 37 33.8	
	comp=N,1.1nm,0.4s						
SZAC				AML	AML	00 37 33.8	
	comp=N,1.1nm,0.4s						
ASGA	Asgata	0.90	105	P	Pn	00 37 26.9	-0.8
ASGA				S	Sn	00 37 40.6	+0.4
ASGA				AML	AML	00 37 41.5	
	comp=N,0.9nm,0.8s						
ASGA				AML	AML	00 37 41.5	
	comp=N,0.9nm,0.8s						
ASGA				AML	AML	00 37 42.9	
	comp=N,1.0nm,0.4s						
ASGA				AML	AML	00 37 42.9	
	comp=N,1.0nm,0.4s						
CSS	Mathiatis	0.94	93	PG	Pn	00 37 27.8	-0.4
CSS				SG	Sn	00 37 41.1	-0.1
CSS	Mathiatis	0.94	93	P	Pn	00 37 27.5	-0.6
CSS				S	Sn	00 37 42.4	+1.2
GAZI	Gazipasa	1.22	5	PN	Pb	00 37 31.6	-0.8
GAZI				SN	Sb	00 37 47.6	-0.2
GAZI	Gazipasa	1.22	5	iP	Pb	00 37 31.6	-0.8
GAZI				iS	Sn	00 37 49.4	+1.4
GAZI				IAML		00 37 55.0	
	comp=E,31nm,1.0s						
GAZI				IAML		00 38 06.0	
	comp=N,42nm,1.6s						
TEKE	Tekeli-Mersin	1.35	34	PN	Pb	00 37 34.2	-0.4
TEKE				SN	Sg	00 37 52.6	-1.0
BERE	Bereket-Mersin	1.57	32	PN	Pb	00 37 37.4	-1.1
BERE				SN	Sb	00 37 58.6	+0.5
AKKU	Akkuyu-Mersin	1.59	44	PN	Pb	00 37 37.9	-0.8
GULN	MERSIN_Gulnar	1.61	43	iP	Pb	00 37 38.0	-1.0
GULN				IAML		00 38 01.0	
	comp=N,6.1nm,1.0s						
GULN				iS	Sg	00 38 01.7	+0.1
GULN				IAML		00 38 15.0	
	comp=E,9.5nm,1.2s						
ERMK	Ermenek	1.73	20	iP	Pb	00 37 40.8	-0.3
ERMK				iS	Sg	00 38 09.3	+3.8
ERMK				IAML		00 38 11.0	
	comp=N,13nm,0.4s						

ERMK				IAML		00 38 16.0	
	comp=E,8.9nm,0.7s						
IKL	Isikli	1.73	45	PN	Pb	00 37 39.6	-1.4
IKL				SN	Sn	00 38 01.7	+1.2
TEVE	Tevekalti-Mers	1.75	35	PN	Pb	00 37 40.1	-1.3
KEBE	Keben-Mersin	1.89	41	PN	Pb	00 37 42.2	-1.7
KEPZ	Antalya-Kepez	1.94	346	*i* P	Pn	00 37 42.4	+0.5
KEPZ				IAML		00 38 04.0	
	comp=E,12nm,1.4s						
KEPZ				*i* S	Sb	00 38 08.0	-0.5
KEPZ				IAML		00 38 31.0	
	comp=N,9.4nm,1.2s						
HDMB	Hadim	1.96	7	PN	Pb	00 37 43.8	-1.3
KIZK	Mersin	2.16	47	PN	Pn	00 37 45.8	+0.9
KIZK	Mersin	2.16	47	*i* P	Pb	00 37 46.7	-1.7
KIZK				*i* S	Sg	00 38 16.7	-2.6
KIZK				IAML		00 38 24.0	
	comp=E,5.4nm,0.5s						
KIZK				IAML		00 38 29.0	
	comp=N,8.8nm,1.5s						
SEYD	Seydisehir-KON	2.40	353	PN	Pb	00 37 50.4	-2.1

IDC 26 00:44:48.2±2.7**, 4°.98S**×**135°.29E, h0^{km}, mb3.5**/1**, mb1 3.8**/4**, mb1mx3.5**/24**, mbtmp3.7**/4**, ML3.4**/3**, MS3.4**/2**, Ms1 3.4**/2**, ms1mx2.8**/25**, Error ellipse: s-maj=94.3km s-min=28.8km az=74.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.73	315	Pn	Pn	00 46 12.8	-1.9
	1.2nm,0.3s,baz=220,slow=23,SNR=1.8						
SIJI				Sn	Sn	00 47 05.2	-16
	2.8nm,0.3s,baz=118,slow=15,SNR=7.6						
WRA	Warramunga Arr	14.90	183	Pn	Pn	00 48 19.2	-1.1
	0.1nm,0.3s,baz=6.1,slow=13,SNR=2.5						
WRA				Sn	Sn	00 50 48.2	-18
	0.1nm,0.3s,baz=182,slow=14,SNR=1.8						
KAPI	Kappang	15.48	269	LR	LR	00 55 43.7	
	comp=Z,78nm,19.3s,baz=304,slow=42						
ASAR	Alice Springs	18.63	184	P	P	00 49 07.5	0.0
	0.3nm,0.3s,baz=6.4,slow=11,SNR=36						
TGY	Tagaytay City	23.71	323	LR	LR	01 00 20.4	
	comp=Z,142nm,21.5s,baz=102,slow=39						
MKAR	Makanchi Array	69.56	324	P	P	00 55 59.6	+0.5
	0.4nm,0.6s,baz=127,slow=7.6,SNR=5.7						

JMA 26 00:47:02.9±0.2**, 37°.45N**×**144°.50E, h42^{km}, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.55	291	P	Pn	00 47 43.2	+1.5
JIKH				*e*S	Sn	00 48 13.0	+1.5
JIO	Ouri	2.69	293	P	Pn	00 47 45.3	+1.7
JKMT	Kesennumamotoy	2.75	301	P	Pn	00 47 45.8	+1.4
JKMT				*e*S	Sn	00 48 18.7	+2.4
OFUJ	Ofunato	2.76	307	P	Pn	00 47 46.1	+1.5
OFUJ				*e*S	Sn	00 48 18.1	+1.4
JMK	Ichinoseki	2.99	301	P	Pn	00 47 49.6	+1.9
JOM	Ohasama	3.23	310	P	Pn	00 47 53.3	+2.3
JOM				*e*S	Sn	00 48 30.3	+2.1
JFT	Otama	3.31	272	P	Pn	00 47 54.5	+2.3
JFT				*e*S	Sn	00 48 32.2	+1.8
BSO1	Boso 1	3.99	227	*e*S	Sn	00 48 45.8	-0.5
JRY	Ryogami san	4.72	254	P	Pn	00 48 09.5	-2.1
JRY				*e*S	Sn	00 49 03.2	-1.8
JOT	Ohata	4.75	327	*e*S	Sn	00 49 05.5	-0.2
JOD2	Odawara 2	4.88	245	*e*S	Sn	00 49 06.6	-2.5
JKB	Kayabe	5.18	330	*e*S	Sn	00 49 16.1	-0.1
JCH	Churui	5.23	351	*e*S	Sn	00 49 15.5	-2.1
NEM2	Nemuro 2	5.98	9	P	Pn	00 48 26.2	-2.6
NEM2				*e*S	Sn	00 49 30.5	-5.5
JTKR	Abashiri--Toko	6.53	356	P	Pn	00 48 35.5	-0.8
JTKR				*e*S	Sn	00 49 46.3	-3.2

*MEX **26** 00:57:36.9±0.7, 14°.35N×92°.27W, h61^{km}±17^{km}, MD3.7*
*GCG **26** 00:57:38.8±0.3, 14°.52N×92°.20W, h62^{km}±51^{km}, MD3.4*
ISC 26 00:57:37.6±2.2**, 14°.5N**±0°.1×**92°.3W**±0°.1**, h67^{km}, n6, σ1^{s}.05**/10**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.40	6	*i* P	Pn	00 57 48.0	-1.2
THIG				*i* S	Sn	00 57 56.6	-1.1
STG3	Santiaguito 3,	0.74	75	*e*P	Pn	00 57 53.1	+0.1
FUG	Fuego 3	1.42	92	*e*P	Pn	00 58 01.7	+0.1
FUG				*e*S	Sn	00 58 19.6	-0.1
PCIG		1.47	324	*i* P	Pn	00 58 02.7	+0.6
PCIG				*i* S	Sn	00 58 20.9	+0.3
CCIG	Comitan	1.77	5	*i* P	Pn	00 58 05.4	-0.8
CCIG				*i* S	Sn	00 58 29.9	+1.9
IXG	Ixpaco	1.84	100	*e*P	Pn	00 58 07.5	+0.2

IDC 26 01:22:20.1±6.0**, 18°.02S**×**176°.39W, h0^{km}, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.7**/27**, mbtmp4.1**/3**, Error ellipse: s-maj=293.3km s-min=44.4km az=146.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.50	259	P	P	01 30 50.0	+0.4
	1.1nm,0.3s,baz=98,slow=7.7,SNR=20						
ASAR	Alice Springs	46.61	254	P	P	01 30 50.5	0.0
	1.4nm,0.4s,baz=85,slow=8.5,SNR=22						
FITZ	Fitzroy Crossi	54.91	260	P	P	01 31 52.5	-0.6
	0.9nm,0.4s,baz=348,slow=3.6,SNR=11						
BRTR	Keskin Array B	146.22	316	PKPbc	PKPdf	01 42 01.1	-0.9
	0.6nm,0.5s,baz=90,slow=2.9,SNR=3.7						
GERES	GERESS Array B	148.19	347	PKPbc	PKPbc	01 42 08.2	+0.1
	0.5nm,0.6s,baz=29,slow=2.2,SNR=3.6						

IDC 26 01:30:17.9±2.4**, 4°.55S**×**129°.68E, h0^{km}, mb3.6**/1**, mb1 3.5**/4**, mb1mx3.4**/38**, mbtmp3.4**/4**, ML3.0**/3**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.6**/25**, Error ellipse: s-maj=127.8km s-min=27.7km az=74.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	14.04	196	Pn	Pn	01 33 36.6	-1.6
	0.1nm,0.3s,baz=359,slow=3.3,SNR=1.8						
WRA	Warramunga Arr	15.96	164	Pn	Pn	01 34 05.7	+1.6
	0.1nm,0.3s,baz=350,slow=12,SNR=3.7						
ASAR	Alice Springs	19.44	168	P	P	01 34 46.0	-0.1
	0.0nm,0.3s,baz=346,slow=9.7,SNR=11						
NWAO	Narrogin (SRO)	30.54	201	LR	LR	01 48 30.5	
	comp=Z,66nm,20.7s,baz=338,slow=36						
MKAR	Makanchi Array	66.01	326	P	P	01 41 06.4	0.0
	0.4nm,0.5s,baz=126,slow=7.2,SNR=6.3						

*INET **26** 01:41:45.9, 10°.39N×84°.09W, h10^{km}, ML3.2*
*IDC **26** 01:41:46.1±1.8, 10°.33N×84°.42W, h91^{km}±61^{km}, mb2.9/4, mb1 3.3/5, mb1mx3.1/39, mbtmp3.3/5, ML3.3/1, Error ellipse: s-maj=222.0km s-min=33.3km az=33.0*
*UCR **26** 01:41:48.2±1.5, 10°.25N×84°.46W, h93^{km}±4^{km}, MD4.0, MW4.2, Fault plane solution: NP1:ϕ_s21.32000°, δ69.30000°, λ40.89000°.*
*UPA **26** 01:41:50.1±1.2, 9°.69N×84°.62W, h14^{km}±13^{km}, MW4.0*
ISC 26 01:41:46.9±0.8**, 10°.29N**±0°.07×**84°.43W**±0°.06**, h99^{km}**±6^{km}**, n49, σ0^{s}.93**/63**, mb3.2**/4**, 5C-9D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRA1	San Ramn	0.21	194	⇑*i*P	Pn	01 42 01.3	+0.1
SRA1				*e*S	Sn	01 42 12.0	+0.1
FORC	Fortuna	0.30	306	*i* P	Pn	01 42 02.1	+0.7
FORC				*i* S	Sn	01 42 12.5	+0.3
ARE1	Arenal 1	0.33	300	⇓*i*P	Pn	01 42 02.3	+0.8
ARE1				*e*S	Sn	01 42 13.4	+0.8
CASO	Castillo	0.33	295	*i* P	Pn	01 42 02.1	+0.5
CEDE	Laguna Cedeo	0.33	305	*i* P	Pn	01 42 02.3	+0.7
CEDE				*e*S	Sn	01 42 13.4	+0.7
HDC	Heredia	0.42	133	⇑*i*P	Pn	01 42 02.6	+0.4
HDC				*i* S	Sn	01 42 11.6	-2.1
HDC	Heredia	0.42	133	⇑*e*P	Pn	01 42 02.7	+0.5
SJS	Escuela Geolog	0.51	134	⇑*e*P	Pn	01 42 03.4	+0.6
JTS	Las Juntas de	0.52	270	LR	LR	01 41 49.1	
	comp=Z,31nm,21.6s,baz=332,slow=5.6						
JTS				P	Pn	01 42 03.0	+0.2
	168nm,0.3s,baz=59,slow=20,SNR=793						
JTS				S	Sn	01 42 14.3	-0.2
	485nm,0.3s,baz=12,slow=22,SNR=32						
JTS	Las Juntas de	0.52	270	*i* P	Pn	01 42 02.9	+0.2
JTS				*i* S	Sn	01 42 14.0	-0.6
JTS	Las Juntas de	0.52	270	⇓*e*P	Pn	01 42 03.1	+0.3
JTS				*e*S	Sn	01 42 14.4	-0.2
LCR2	La Lucha 2	0.69	143	⇑*i*P	Pn	01 42 04.8	+0.5
ACAL	Aguas Claras	0.69	300	*i* P	Pn	01 42 04.8	+0.6
PTEN	Parque Tenorio	0.69	307	*i* P	Pn	01 42 05.0	+0.8
PTEN				*i* S	Sn	01 42 17.6	+0.4
CUI	Cuipilapa	0.81	297	⇓*i*P	Pn	01 42 06.2	+0.8
HORNC	Hornillas	0.85	300	*i* P	Pn	01 42 06.4	+0.7
COLC	Colonia	0.85	296	*i* P	Pn	01 42 06.5	+0.8
LIM1	Limonal	0.91	297	*i* P	Pn	01 42 07.0	+0.7
PLVR	Palo Verde	0.91	274	⇓*i*P	Pn	01 42 07.1	+0.6
GPS2	Hotel Rincn d	1.02	297	*i* P	Pn	01 42 08.3	+0.8
GPS1	Guardaparques	1.03	298	*i* P	Pn	01 42 08.4	+0.8
GPS3	Bodega del ICE	1.03	297	⇓*i*P	Pn	01 42 08.5	+0.8
BUAI	Buenos Aires	1.06	303	*i* P	Pn	01 42 08.7	+0.7
BUAI				*i* S	Sn	01 42 25.1	+1.3
GUAI	GUAI	1.07	269	*i* P	Pn	01 42 09.1	+1.1
GUAI				*i* S	Sn	01 42 24.7	+0.9
LAPC	Finca la Perla	1.10	296	*i* P	Pn	01 42 09.0	+0.6
GBS3	Finca Las Img	1.12	296	*i* P	Pn	01 42 09.2	+0.6
NY14	Universidad de	1.15	288	*i* P	Pn	01 42 09.5	+0.7
EDDO	Dominical	1.17	152	⇓*e*P	Pn	01 42 10.3	+1.2
EDDO				*e*S	Sn	01 42 26.8	+0.8
EDLM	Las Mercedes	1.30	141	*e*P	Pn	01 42 10.9	+0.1
EDBA	Buenos Aires	1.60	135	*e*P	Pn	01 42 15.9	+1.6
ACON	Acoyapa	1.82	336	⇓*i*P	Pn	01 42 18.0	+0.8
PTJ1	Puerto Jimnez	2.07	147	*e*P	Pn	01 42 20.3	0.0
CNI2	El Empalme, Bo	2.11	114	*e*P	Pn	01 42 21.4	+0.5
MLIR3	Monte Lirio, C	2.17	133	*e*P	Pn	01 42 23.9	+2.1
BRU2	Volcan	2.27	131	*i* P	Pn	01 42 24.2	+1.1
BRU2				*i* S	Sn	01 42 51.7	+0.9
BRU2	Volcan	2.27	131	⇓*i*P	Pn	01 42 24.2	+1.1
BCO2	Palmira	2.44	130	⇓*i*P	Pn	01 42 26.5	+1.2
BCO2				*i* S	Sn	01 42 53.8	-1.1
SBAR3	San Bartolo, C	2.48	142	*e*P	Pn	01 42 25.8	+0.1
CHGR2	Aguacate	2.62	121	*e*P	Pn	01 42 29.1	+1.5
CHIR3	Chiriqui UPA,	2.80	132	*e*P	Pn	01 42 31.7	+1.7
GMAL	Guarumal, Vera	4.03	128	*e*P	Pn	01 42 48.2	+1.7
CACAO	El Cacao, Vera	4.58	129	*e*P	Pn	01 42 55.4	+1.5
BCIP	Isla Barro Col	4.66	103	*e*P	Pn	01 42 55.9	+0.9
FRIJ	El Hiral	4.75	103	*e*P	Pn	01 42 57.2	+1.0
CMIG	Matias Romero	12.20	305	P	Pn	01 44 37.8	+0.5
	0.2nm,0.3s,baz=127,slow=11,SNR=4.2						
TXAR	Lajitas Array	26.13	319	P	P	01 47 12.4	+0.5
	0.1nm,0.4s,baz=149,slow=11,SNR=2.0						
YKA	Yellowknife Ar	56.48	344	P	P	01 51 16.7	-1.6
	0.2nm,0.5s,baz=136,slow=7.9,SNR=5.8						
ILAR	Eielson Array	69.18	336	P	P	01 52 41.9	-0.6
	0.1nm,0.4s,baz=120,slow=3.6,SNR=1.9						
TORD	Torodi Ar. Bea	83.97	78	P	P	01 54 06.4	-0.5
	0.5nm,1.0s,baz=287,slow=6.8,SNR=1.9						

*IDC **26** 01:47:00.6±1.0, 19°.41S×70°.76W, h0^{km}, mb4.2/6, mb1 4.3/9, mb1mx3.9/39, mbtmp4.3/9, ML4.2/3, MS3.4/6, Ms1 3.4/6, ms1mx3.1/29, Error ellipse: s-maj=28.2km s-min=22.4km az=100.0*
*NEIC **26** 01:47:03.1±1.3, 19°.61S±0°.02×70°.83W±0°.06, h23^{km}±5^{km}, mb4.1/7, Mwr4.0/38, ML4.2(GUC), Error ellipse: s-maj=7.9km s-min=2.1km az=105.0*
*GUC **26** 01:47:04.9±0.7, 19°.60S×70°.74W, h40^{km}±3^{km}, ML4.2*
*NEIC **26** 01:47:04.3, 19°.60S×70°.77W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.70; $M_{\theta\theta}$-0.10; $M_{\phi\phi}$-0.59; $M_{r\theta}$0.32; $M_{\theta\phi}$-0.04; $M_{\phi r}$-1.16; Fault plane solution: $M_0$1.37000×10^{15} NP1:ϕ_s11.98000°, δ15.10000°, λ113.83000°. NP2:ϕ_s167.40000°, δ76.21000°, λ83.78000°. Principal axes: T 1.4350, Plg58.0000°, Azm69.0000°; N -0.1436, Plg6.0000°, Azm169.0000°; P -1.2915, Plg31.0000°, Azm263.0000°;*
*VAO **26** 01:47:09.0±0.6, 19°.61S×70°.47W, h65^{km}, mb4.0*
ISC 26 01:47:03.7±1.3**, 19°.61S**±0°.02×**70°.80W**±0°.06**, h29^{km}**±9^{km}**, n94, σ1^{s}.26**/111**, mb4.4**/7**, MS3.8**/3**, 3C-7D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.64	89	⇓*i*P	Pb	01 47 16.0	-0.5
PSGC				*i* S	Sb	01 47 24.6	-0.6
PSGCX	Pisagua	0.64	89		Pb	01 47 15.8	-0.7
PSGCX				Sn	Sb	01 47 24.3	-0.9
PB12	IPOC Station P	1.09	24	⇓*i*P	Pb	01 47 23.4	-0.6
PB12				*i* S	Sn	01 47 38.1	+0.9
PB12	IPOC Station P	1.09	24		Pn	01 47 22.8	-0.3
PB12					Sn	01 47 37.7	+0.5
PB11	IPOC Station P	1.09	98	⇓*i*P	Pn	01 47 23.3	+0.1
PB11				*i* S	Sb	01 47 38.0	0.0
PB11				IAML		01 47 40.9	
	comp=N,9µm,0.3s						
PB11	IPOC Station P	1.09	98		Pn	01 47 23.5	+0.3
PB11					Sb	01 47 37.6	-0.4
TA01	Diego Aracena	1.12	149	⇓*i*P	Pb	01 47 24.1	-0.3
TA01				*i* S	Sn	01 47 38.6	+0.8
TA01				IAML		01 47 42.5	
	comp=E,11µm,0.3s						
AP01	Chacalluta	1.31	20	⇓*i*P	Pb	01 47 27.0	-0.6
AP01				*i* S	Sb	01 47 44.1	+0.1
AP01				IAML		01 47 46.1	
	comp=E,10µm,0.4s						
PATCX	Punta Patache	1.35	153	⇑*i*P	Pb	01 47 27.5	-0.9
PATCX				*i* S	Sb	01 47 45.9	+0.5
PATCX	Punta Patache	1.35	153		Pn	01 47 27.0	+0.3
PATCX				Sn	Sn	01 47 44.3	+0.5
GO01	Chusmiza	1.52	92	⇓*i*P	Pb	01 47 30.7	-0.8
GO01				*i* S	Sb	01 47 50.4	-0.1
GO01				IAML		01 47 52.6	
	comp=N,9µm,0.1s						
GO01	Chusmiza	1.52	92		Pn	01 47 29.9	+0.5
GO01				Sn	Sn	01 47 49.6	+1.2
PB08	IPOC Station P	1.64	109	*i* P	Pb	01 47 32.3	-1.2
PB08				*i* S	Sb	01 47 54.2	+0.3
PB08				IAML		01 47 57.7	
	comp=N,3µm,0.3s						
PB16	IPOC Station P	1.76	44	⇓*i*P	Pb	01 47 34.8	-0.9
PB16				*i* S	Sb	01 47 58.3	+0.6
PB16				IAML		01 48 02.7	
	comp=N,2µm,0.5s						
PB16	IPOC Station P	1.76	44		Pn	01 47 33.1	+0.3
PB16					Sb	01 47 57.9	+0.2
PB01	IPOC Station P	1.89	139		Pn	01 47 34.6	+0.6
PB01				Sn	Sn	01 47 57.0	0.0
PB02	IPOC Station P	1.90	154	⇑*i*P	Pn	01 47 35.5	+1.1
PB02				*i* S	Sn	01 47 58.1	+0.7
PB02				IAML		01 48 03.0	
	comp=E,5µm,0.3s						
PB07	IPOC Station P	2.27	158		Pn	01 47 40.1	+0.6
PB03	IPOC Station P	2.62	158	⇑*i*P	Pn	01 47 45.0	+0.8
PB03				*i* S	Sn	01 48 13.9	-1.2
PB03				IAML		01 48 28.6	
	comp=E,1µm,0.6s						
PB09	IPOC Station P	2.62	146		Pn	01 47 44.6	+0.4
PB04	IPOC Station P	2.78	167		Pn	01 47 46.8	+0.3
LVC	Limon Verde	3.47	150	Pn	Pn	01 47 58.2	+2.1
	comp=E,21nm,0.3s,baz=335,slow=11,SNR=98						
LVC				Sn	Sn	01 48 38.3	+1.9
	comp=E,50nm,0.3s,baz=230,slow=23,SNR=10						
LVC				Lg	Lg	01 48 48.4	
	comp=E,58nm,0.3s,baz=327,slow=20,SNR=8.6						
LVC	Limon Verde	3.47	150		Pn	01 47 57.6	+1.5
LVC					Sn	01 48 36.2	-0.2
LVC	Limon Verde	3.47	150	*e*P	Pn	01 47 58.2	+2.1
LVC				*e*S	Sn	01 48 37.5	+1.1
PB15	IPOC Station P	3.79	161		Pn	01 48 00.5	+0.1
PB15				Sn	Sn	01 48 44.2	+0.1
PB10	IPOC Station P	3.89	177		Pn	01 48 00.4	-1.2
LPAZ	La Paz	4.17	38	Pn	Pn	01 48 10.9	+5.0
	comp=E,4.5nm,0.3s,baz=230,slow=4.9,SNR=43						
LPAZ	La Paz	4.17	38		Pn	01 48 07.1	+1.2
LPAZ	La Paz	4.17	38	*e*P	Pn	01 48 07.8	+1.8
PB14	IPOC Station P	5.01	176		Pn	01 48 16.0	-1.2
GO02	Mina Guanaco	5.64	169		Pn	01 48 25.8	-0.1
GO03	Copiap	7.96	176	Pn	Pn	01 48 56.8	-0.8
GO03					Sn	01 50 26.1	-0.6
NNA	Nana	9.55	322	LR	LR	01 52 57.7	
	comp=E,82nm,19.2s,baz=158,slow=38						
SIV	San Ignacio	9.94	70	Pn	Pn	01 49 25.1	+0.4
	comp=E,2.3nm,0.3s,baz=270,slow=10,SNR=32						
SIV				LR	LR	01 53 51.4	
	comp=E,254nm,18.8s,baz=272,slow=42						
SAML	Samuel	12.91	36		Pn	01 50 05.1	-0.2
SAML	Samuel	12.91	36	*e*P	Pn	01 50 07.7	+2.4
CPUP	Villa Florida	14.09	121	Pn	Pn	01 50 22.5	+1.1
	comp=E,0.2nm,0.3s,baz=302,slow=13,SNR=5.6						
CPUP				LR	LR	01 56 26.3	
	comp=E,88nm,20.1s,baz=274,slow=40						
CPUP	Villa Florida	14.09	121		Pn	01 50 21.6	+0.2
CPUP	Villa Florida	14.09	121	*e*P	Pn	01 50 21.9	+0.4
SALV	Santo Antonio	14.86	78	*e*P	Pn	01 50 31.8	0.0
CLDB	Colider	16.87	61	*e*P	Pn	01 50 57.7	-0.2
PTGB	Pitanga	18.08	110	*e*P	Pn	01 51 12.5	-0.4
PCMB	Pacaembu	18.40	100	*e*P	P	01 51 15.4	-1.2
ARAG	Araguaiana, MT	18.51	81	*e*P	P	01 51 17.2	-0.6
PLTB	Pedras Altas	19.63	131	*e*P	P	01 51 30.4	+0.4
TRQA	Tornquist	19.92	159	*e*P	P	01 51 33.6	+0.4
FRTB	Fartura	20.11	104	*e*P	P	01 51 34.6	-0.7
CNLB	Canela	20.54	122	*e*P	P	01 51 39.3	-0.8
BB19B	Bebedouro	20.94	98	*e*P	P	01 51 43.5	-0.8
PLCA	Paso Flores	21.05	179	P	P	01 51 50.1	+4.7
	comp=E,1.2nm,0.8s,baz=149,slow=12,SNR=3.9						
PLCA	Paso Flores	21.05	179	P	P	01 51 47.1	+1.6
PLCA	Paso Flores	21.05	179	*e*P	P	01 51 48.2	+2.7
IPMB	Ipameri, GO	21.45	89	*e*P	P	01 51 48.7	-1.1
PTGA	Pitinga	21.56	31	P	P	01 51 50.6	-0.4
	comp=E,23nm,0.3s,baz=209,slow=17,SNR=76						
PTGA				LR	LR	02 00 47.8	
	comp=E,85nm,18.1s,baz=222,slow=39						
PTGA	Pitinga	21.56	31	P	P	01 51 50.2	-0.8
PTGA	Pitinga	21.56	31	*e*P	P	01 51 50.6	-0.4
FLOC	Florencia	21.59	347	P	P	01 51 51.7	+0.3
BDFB	Brasilia	22.07	83	P	P	01 51 57.4	+0.8
	comp=E,1.9nm,0.4s,baz=271,slow=9.1,SNR=4.8						
BDFB	Brasilia	22.07	83	P	P	01 51 56.1	-0.5
BDFB				IAmb	IAmb	01 52 12.7	
	comp=Z,4.5nm,0.9s						
GARC	Garzon, Huila	22.14	347	*e*P	P	01 51 58.4	+0.8
SOTA	Rioblanco	22.35	345	*e*P	P	01 52 05.1	+5.1
PARB	Paraibuna	23.71	103	*e*P	P	01 52 11.8	-1.7
ORTC	Ortega, Tolima	23.78	349	*e*P	P	01 52 15.3	+1.3
RREF	El Recreo	24.76	349	*e*P	P	01 52 23.1	-0.7
RREF				*e*P	P	01 52 25.6	+1.9
GUY2C	Guyana, Caldas	25.08	349	*e*P	P	01 52 28.3	+1.9
RUSC	La Rusia	25.44	355	*e*P	P	01 52 30.8	+1.0
RUSC	La Rusia	25.44	355	P	P	01 52 29.6	-0.1
JANB	Januaria	25.68	84	*e*P	P	01 52 29.8	-1.7
CBOC	Ciudad Bolivar	25.83	348	*e*P	P	01 52 34.4	+1.5
HELC	Santa Helena	26.06	349	*e*P	P	01 52 35.7	+0.5
BARC	Barichara	26.14	355	*e*P	P	01 52 33.3	-2.6
PTBC	PUERTO BERRIO,	26.23	352	*e*P	P	01 52 35.6	-0.8
SMLC	San Martn de	28.41	353	*e*P	P	01 52 55.0	-1.0
MDP	Montagnes des	30.37	38	P	P	01 53 13.3	0.0
	comp=Z,5.0nm,0.6s,baz=248,slow=6.0,SNR=4.9						
TOA0	Torodi Ar. Sit	78.42	72	P	P	01 59 00.7	-1.5
TOA0				IAmb	IAmb	01 59 02.8	
	comp=Z,2.8nm,0.8s						
TORD	Torodi Ar. Bea	78.42	72	P	P	01 59 02.0	-0.3
	comp=Z,2.1nm,0.6s,baz=250,slow=5.6,SNR=19						
TORD				LR	LR	02 33 37.2	
	comp=Z,58nm,18.1s,baz=70,slow=36						
YKA	Yellowknife Ar	88.83	341	P	P	01 59 55.9	+1.4
	comp=Z,1.1nm,0.6s,baz=135,slow=5.0,SNR=27						
JMIC	Jan Mayen	99.88	17	LR	LR	02 43 01.8	
	comp=Z,32nm,19.3s,baz=254,slow=34						
H11S2	WAKE ISLAND Hy	125.86	279	T	T	04 25 21.0	
	baz=101,slow=74,SNR=54						
H11S1	WAKE ISLAND Hy	125.86	279	T	T	04 25 13.1	
	baz=101,slow=74,SNR=58						
H11S3	WAKE ISLAND Hy	125.87	279	T	T	04 25 13.8	
	baz=101,slow=74,SNR=61						
H11N3	WAKE ISLAND Hy	125.89	281	T	T	04 25 03.0	
	baz=100,slow=74,SNR=6.0						
H11N2	WAKE ISLAND Hy	125.91	281	T	T	04 25 20.2	
	baz=100,slow=74,SNR=31						
H11N1	WAKE ISLAND Hy	125.91	281	T	T	04 25 13.5	
	baz=100,slow=74,SNR=18						
ASAR	Alice Springs	130.70	210	PKP	PKiKP	02 06 14.2	+0.5
	comp=Z,0.4nm,0.5s,baz=124,slow=2.0,SNR=4.5						
WRA	Warramunga Arr	133.61	214	PKP	PKiKP	02 06 20.0	+0.4
	comp=Z,0.5nm,0.7s,baz=159,slow=1.7,SNR=5.6						
MAKZ	Makanchi	144.91	33		PKPdf	02 06 38.3	+0.2
MK31	Makanchi Array	145.08	33		PKPab	02 06 38.3	+0.4
MKAR	Makanchi Array	145.08	33	PKP	PKPdf	02 06 39.2	+0.8
	comp=Z,1.9nm,0.5s,baz=319,slow=4.0,SNR=29						
MKAR	Makanchi Array	145.08	33		PKPbc	02 06 38.1	+0.3
KSH	Kashi	145.23	48	PKPbc	PKPbc	02 06 37.0	-1.7
KSH				pPKP	sPKPab	02 06 48.5	-2.3
KSH				PP	PP	02 09 58.8	+0.6
KSH				PKS	PKSdf	02 10 10.8	-3.8
SONM	Songino Array	151.75	4	PKPbc	PKPbc	02 06 56.0	+0.3
	comp=Z,0.2nm,0.4s,baz=144,slow=26,SNR=3.1						
LZH	Lanzhou	162.92	15	*e*PKP	PKPdf	02 07 01.5	-2.2
LZH				pPKP	pPKPdf	02 07 11.3	-1.5
LZH				sPKP		02 07 16.5	
CD2	Chengdu	167.72	23	PKP	PKPdf	02 07 06.5	-1.3

IDC 26 02:14:35.9±51.0**, 17°.29S**×**178°.14W, h0^{km}, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.6**/36**, mbtmp4.0**/3**, Error ellipse: s-maj=943.2km s-min=168.7km az=78.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.15	241	P	P	02 22 06.5	+0.9
	1.5nm,0.6s,baz=85,slow=11,SNR=2.2						
WRA	Warramunga Arr	45.00	259	P	P	02 22 52.8	-0.7
	0.4nm,0.5s,baz=97,slow=7.9,SNR=10						
ASAR	Alice Springs	45.21	254	P	P	02 22 54.9	-0.3
	4.4nm,0.5s,baz=89,slow=8.2,SNR=68						

*ATH **26** 02:22:04.8, 36°.73N×22°.85E, h11^{km}±4^{km}, ML2.2/4, Error ellipse: s-maj=4.9km s-min=1.0km az=152.0*
*THE **26** 02:22:05.2, 36°.73N×22°.83E, h8^{km}±1^{km}, ML2.5/8, Error ellipse: s-maj=1.2km s-min=0.6km az=244.0*
ISC 26 02:22:05.0±0.9**, 36°.73N**±0°.02×**22°.84E**±0°.02**, h10^{km}**±6^{km}**, n21, σ0^{s}.34**/38**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLI	Veliai	0.08	102	P	Pg	02 22 06.9	-0.3
VLI				S	Sg	02 22 09.4	+0.5
	7µm,0.6s						
VLI	Veliai	0.08	102	P	Pg	02 22 07.0	-0.3
VLI				S	Sg	02 22 09.2	+0.3
MNVA	Monemvasia	0.16	107	P	Pg	02 22 08.4	-0.1
MNVA				S	Sg	02 22 11.1	+0.2
DYR	Agios Nikonas	0.41	274	P	Pg	02 22 13.1	+0.1
DYR				S	Sg	02 22 19.0	+0.6
DYR	Agios Nikonas	0.41	274	P	Pg	02 22 12.9	-0.1
DYR				S	Sg	02 22 18.6	+0.2
DYR				AML	AML	02 22 20.1	
	comp=N,196µm,0.4s						
DYR				AML	AML	02 22 22.9	
	comp=E,172µm,0.6s						
KTHR	Kythira	0.49	164	P	Pg	02 22 15.0	+0.5
KTHR				S	Sb	02 22 22.5	-0.5
	comp=E,1µm,0.4s						
KRND	KRANIDI	0.69	21	P	Pg	02 22 18.5	+0.1
KRND				S	Sb	02 22 28.8	0.0
	comp=E,220nm,0.5s						
KRND	KRANIDI	0.69	21	P	Pg	02 22 18.2	-0.2
KRND				S	Sg	02 22 27.2	-0.2
KRND				AML	AML	02 22 34.5	
	comp=N,378µm,0.3s						
KRND				AML	AML	02 22 35.4	
	comp=E,438µm,0.3s						
VLX	Vlachokerasia	0.73	330	P	Pg	02 22 19.0	-0.2
VLX				S	Sg	02 22 29.4	+0.5
	comp=E,272nm,0.5s						
VLX	Vlachokerasia	0.73	330	P	Pg	02 22 18.9	-0.3
VLX				S	Sg	02 22 29.3	+0.5
DID	Didima	0.83	22	P	Pg	02 22 20.7	-0.3
DID				S	Sb	02 22 33.6	+0.7
	comp=E,315nm,0.4s						
DID	Didima	0.83	22	P	Pg	02 22 20.7	-0.3
DID				S	Sg	02 22 32.3	+0.4
DID				AML	AML	02 22 37.3	
	comp=E,683µm,0.4s						
DID				AML	AML	02 22 39.0	

	comp=N,509µm,0.4s						
PYL	PYLOS	0.90	281	P	Pg	02 22 21.8	-0.5
PYL				S	Sb	02 22 34.6	-0.1
ANKY	Antikythira Is	0.94	157	P	Pg	02 22 23.1	0.0
ANKY				S	Sb	02 22 35.6	-0.3
	comp=N,370nm,0.9s						
AMT	Artemida-Makis	1.21	312	P	Pb	02 22 27.8	-0.1
MHLO	Agia Marina, M	1.25	92	P	Pb	02 22 28.9	+0.2
MHLO				S	Sn	02 22 45.8	+0.2
	comp=N,810nm,0.7s						
LTK	Loutraki	1.29	4	P	Pg	02 22 29.8	0.0
LTK				S	Sn	02 22 46.5	0.0
LTK				AML	AML	02 22 51.6	
	comp=E,364µm,0.6s						
LTK				AML	AML	02 22 52.9	
	comp=N,228µm,0.4s						
VLY	Voula,Athens	1.35	34	P	Pn	02 22 29.9	0.0
VLY				S	Sb	02 22 47.4	-0.4
	comp=N,150nm,0.4s						
VLY	Voula,Athens	1.35	34	P	Pn	02 22 29.7	-0.2
KLV	Kalavryta, Ach	1.42	337	P	Pn	02 22 31.0	0.0
IMMV	Iera Moni Meta	1.57	144	P	Pn	02 22 32.5	-0.5

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*IDC **26** 02:24:34.0±0.9, 19°.49N×109°.20W, h0^{km}, mb3.6/8, mb1 3.9/11, mb1mx3.8/43, mbtmp3.7/11, ML3.6/3, MS3.4/18, Ms1 3.5/18, ms1mx3.4/33, Error ellipse: s-maj=21.9km s-min=15.9km az=118.0*

*NEIC **26** 02:24:36.1±1.5, 19°.60N±0°.08×109°.36W±0°.07, h10^{km}±1^{km}, mb4.0/38, Error ellipse: s-maj=14.3km s-min=9.2km az=147.0*

ISC 26 02:24:39.0±0.6**, 19°.56N**±0°.07×**109°.34W**±0°.07**, h35^{km}, n73, σ1^{s}.37**/58**, mb3.9**/12**, MS3.3**/11**, Revilla Gigedo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H06E1	SOCORRO T-PHAS	1.69	243	Pn	Pn	02 25 06.1	0.0
H06E1				Sn	Sn	02 25 27.7	+1.2
	SNR=1182						
H06E1				T	T	02 27 12.7	
	SNR=18						
H06N1	SOCORRO T-PHAS	1.71	246	Pn	Pn	02 25 06.1	-0.1
H06N1				Sn	Sn	02 25 27.7	+0.8
H06N1				T	T	02 27 01.4	
	SNR=32						
H06S1	SOCORRO T	1.74	242	Pn	Pn	02 25 06.5	-0.1
H06S1				Sn	Sn	02 25 28.3	+0.7
	SNR=74						
H06S1				T	T	02 27 12.6	
	SNR=13						
LPIG	La Paz	4.61	349	Pn	Pn	02 25 44.7	-1.4
	20nm,0.3s,baz=131,slow=1.0,SNR=4.2						
LPIG				LR	LR	02 27 20.8	
	comp=Z,751nm,19.8s,baz=180,slow=35						
ZAIG	Zacatecas	7.08	62	Pn	Pn	02 26 20.0	-0.4
TLIG	Tlapa	10.41	99		Pn	02 27 06.7	+0.7
TX31	Lajitas Ar. Si	11.01	27		Pn	02 27 12.8	-1.4
TX32	Lajitas Array	11.01	27		Pn	02 27 13.8	-0.4
TXAR	Lajitas Array	11.01	27	Pn	Pn	02 27 13.6	-0.6
	0.1nm,0.3s,baz=196,slow=13,SNR=9.7						
TXAR				LR	LR	02 30 56.9	
	comp=Z,147nm,19.6s,baz=0.0,slow=35						
TXAR	Lajitas Array	11.01	27		Pn	02 27 13.1	-1.1
319A	Douglas	11.76	0	Pn	Pn	02 27 23.5	-1.0
MNTX	Cornudas Mount	12.60	16		Pn	02 27 36.2	+0.4
121A	Cookes Peak, D	12.99	6		Pn	02 27 37.9	-3.4
CMIG	Matias Romero	13.94	98	LR	LR	02 32 44.5	
	comp=Z,382nm,20.3s,baz=262,slow=36						
GLA	Glamis	14.30	341	Pn	Pn	02 27 59.3	+0.2
Y14A	Wickenburg	14.69	348	Pn	Pn	02 28 04.5	+0.2
Y12C	Blythe	14.87	343	Pn	Pn	02 28 04.6	-2.0
X16A	Lo Mia Camp, P	14.91	353		Pn	02 28 03.1	-4.4
X18A	Snowflake	14.92	358		Pn	02 28 04.3	-3.2
PFO	Pinyon Flats O	15.37	337	LR	LR	02 33 37.9	
	comp=Z,274nm,18.7s,baz=158,slow=35						
W18A	Petrified Fore	15.50	359	Pn	Pn	02 28 13.4	-1.7
W18A				IAmb	IAmb	02 28 32.1	
	comp=Z,12nm,1.4s						
ANMO	Albuquerque	15.54	9	Pn	Pn	02 28 16.4	+0.7
	comp=Z,0.1nm,0.3s,baz=175,slow=15,SNR=2.9						
ANMO				LR	LR	02 34 18.6	
	comp=Z,140nm,18.1s,baz=196,slow=38						
ANMO	Albuquerque	15.54	9		Pn	02 28 15.3	-0.4
ANMO				IAmb	IAmb	02 28 32.1	
	comp=Z,7.2nm,1.1s						
W13A	Hualapai Mount	15.99	346		Pn	02 28 22.9	+1.3
WUAZ	Wupatki	16.00	354	P	Pn	02 28 23.2	+1.7
WUAZ				IAmb	IAmb	02 28 39.7	
	comp=Z,14nm,1.2s						
U15A	North Rim	17.00	352	P	Pn	02 28 35.4	+1.0
GSC	Goldstone, Bar	17.01	339		P	02 28 35.7	-0.2
MVCO	Mesa Verde	17.60	2	P	Pn	02 28 41.9	+0.1
MVCO				IAmb	IAmb	02 28 57.6	
	comp=Z,17nm,1.2s						
KNB	Kanab	17.66	351	P	Pn	02 28 43.0	+0.6
LCMT	Little Creek M	17.72	350	P	P	02 28 43.9	+0.1
CCUT	Cedar City	18.27	350	P	P	02 28 50.0	+0.1
SDCO	Great Sand Dun	18.43	10	P	P	02 28 51.7	+0.1
APG	El Apazote	18.58	101	LR	LR	02 35 34.9	
	comp=Z,55nm,20.1s,baz=280,slow=36						
PV04	Paradox Valley	18.77	1	IAmb	IAmb	02 29 02.8	
	comp=Z,14nm,1.2s						
SMCO	Snowmass	19.66	5	IAmb	IAmb	02 29 20.9	
	comp=Z,6.0nm,1.1s						
TEIG	Tepich	19.82	85	LR	LR	02 36 38.6	
	comp=Z,172nm,21.4s,baz=74,slow=37						
NVAR	Mina Array Bea	20.35	339	LR	LR	02 36 21.0	
	comp=Z,110nm,18.0s,baz=172,slow=35						
ISCO	Idaho Springs	20.42	8		pP	02 29 22.8	+0.9
O20A	White River Ci	20.53	2	P	P	02 29 15.2	+0.6
O20A				IAmb	IAmb	02 29 29.6	
	comp=Z,11nm,1.1s						
DUG	Dugway, Tooele	20.78	352	P	P	02 29 17.5	+0.3
DUG				IAmb	IAmb	02 29 23.0	
	comp=Z,6.0nm,1.1s						
WAKR	Walker	20.81	337	IAmb	IAmb	02 29 26.0	
	comp=Z,8.8nm,1.2s						
BGU	Big Grassy Mou	21.53	352		pP	02 29 33.9	+0.2
ELK	Elko	21.71	348	P	P	02 29 29.2	+1.9
	comp=Z,0.9nm,0.4s,baz=174,slow=10.0,SNR=4.6						
ELK				LR	LR	02 37 02.6	
	comp=Z,95nm,19.4s,baz=162,slow=34						
ELK	Elko	21.71	348	IAmb	IAmb	02 29 36.4	
	comp=Z,7.0nm,1.4s						
HWUT	Hardware Ranch	22.06	356	P	P	02 29 29.9	-1.1
HWUT				IAmb	IAmb	02 29 43.0	
	comp=Z,6.1nm,1.1s						
ORV	Oroville	22.52	335	P	P	02 29 35.5	-0.2
PDAR	Pinedale Array	23.14	360	P	P	02 29 43.9	+1.5
	comp=Z,1.4nm,1.1s,baz=160,slow=13,SNR=2.5						
PDAR				LR	LR	02 38 27.7	
	comp=Z,106nm,18.3s,baz=173,slow=36						
PDAR	Pinedale Array	23.14	360	P	P	02 29 42.7	+0.3
K22A	Casper	23.14	5	P	P	02 29 42.5	+0.2
REDW	Red Top Meadow	23.76	357		pP	02 29 57.2	-0.3
TPAW	Teton Pass	23.90	357	IAmb	IAmb	02 30 01.8	
	comp=Z,5.1nm,1.2s						
MOD	Modoc Plateau	24.14	340	IAmb	IAmb	02 29 56.2	
	comp=Z,5.9nm,1.1s						
YBH	Yreka Blue Hor	24.85	336	LR	LR	02 39 48.7	
	comp=Z,71nm,19.0s,baz=166,slow=37						
JTS	Las Juntas de	25.27	108	LR	LR	02 37 46.8	
	comp=Z,43nm,19.3s,baz=12,slow=32						
DGMT	Dagmar	29.14	7	P	P	02 30 35.4	-1.3
NEW	Newport	29.32	349	LR	LR	02 42 30.2	
	comp=Z,68nm,21.0s,baz=186,slow=37						
ULM	Lac du Bonnet	32.44	16	P	P	02 31 05.8	+0.1
	comp=Z,2.4nm,0.9s,baz=172,slow=4.9,SNR=3.0						
ULM				LR	LR	02 43 36.4	
	comp=Z,77nm,19.4s,baz=168,slow=35						
ULM	Lac du Bonnet	32.44	16	IAmb	IAmb	02 31 22.0	
	comp=Z,4.5nm,1.1s						
YKA	Yellowknife Ar	43.05	356	P	P	02 32 34.5	-0.6
	comp=Z,0.4nm,0.8s,baz=170,slow=8.5,SNR=9.5						
YKA				PcP	PcP	02 34 28.1	+3.4
	comp=Z,0.2nm,0.9s,baz=165,slow=4.3,SNR=1.8						
YKA				LR	LR	02 50 58.5	
	comp=Z,85nm,18.3s,baz=0.0,slow=37						
EGAK	Eagle	49.91	343	P	P	02 33 28.6	-0.3
RIDG	Independent Ri	50.24	340	P	P	02 33 31.8	+0.3
INK	Inuvik	51.04	349	P	P	02 33 38.2	+0.9
	comp=Z,1.3nm,1.0s,baz=150,slow=4.4,SNR=2.1						
RSO	Redoubt South	51.06	334	P	P	02 33 39.6	+1.7
IL31		51.60	341	P	P	02 33 42.6	+1.0
IL31				IAmb	IAmb	02 33 52.2	
	comp=Z,2.8nm,0.8s						
ILAR	Eielson Array	51.60	341	P	P	02 33 42.4	+0.8
	comp=Z,0.8nm,0.7s,baz=144,slow=7.3,SNR=10.0						
ILAR				LR	LR	02 57 39.8	
	comp=Z,32nm,19.0s,baz=138,slow=38						
TRF	Thorofare Moun	51.87	338	P	P	02 33 44.8	+0.9
LPAZ	La Paz	53.95	129	P	P	02 33 57.8	-2.5
	comp=Z,0.7nm,0.6s,baz=338,slow=5.4,SNR=2.4						
LPAZ				LR	LR	02 54 09.6	
	comp=Z,56nm,18.4s,baz=324,slow=33						
RDOG	Red Dog Mine	58.74	339	P	P	02 34 33.1	0.0
CPUP	Villa Florida	68.03	130	P	P	02 35 35.8	+0.6
	comp=Z,1.5nm,0.8s,baz=265,slow=7.5,SNR=3.4						
CPUP	Villa Florida	68.03	130	P	P	02 35 35.0	-0.1
NOA	NORSAR Array B	86.71	25	LR	LR	03 14 28.8	
	comp=Z,10.0nm,20.9s,baz=280,slow=34						
WRA	Warramunga Arr	120.41	258	PKP	PKiKP	02 43 29.0	+1.4
	comp=Z,0.2nm,0.3s,baz=73,slow=2.0,SNR=2.2						
ASAR	Alice Springs	121.47	254	PKP	PKPdf	02 43 29.0	-0.5
	comp=Z,0.3nm,0.6s,baz=111,slow=2.1,SNR=2.4						

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*IDC **26** 02:38:45.7±0.5, 48°.97S×124°.55E, h0^{km}, mb4.5/15, mb1 4.6/16, mb1mx4.5/22, mbtmp4.5/16, ML2.6/1, MS4.2/12, Ms1 4.1/12, ms1mx3.9/26, Error ellipse: s-maj=24.4km s-min=14.3km az=103.0*

*NEIC **26** 02:38:47.0±1.2, 48°.95S±0°.10×124°.3E±0°.2, h12^{km}±1^{km}, mb4.7/23, Error ellipse: s-maj=19.8km s-min=14.3km az=99.0*

*GCMT **26** 02:38:47.0±0.3, 48°.93S±0°.02×124°.53E±0°.04, h18^{km}±1^{km}, MW5.0/73, Moment Tensor Solution. s30,c31; s73,c114; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.33±.23; $M_{\theta\theta}$2.49±.14; $M_{\phi\phi}$0.84±.16; $M_{r\theta}$0.32±.30; $M_{\theta\phi}$-2.10±.08; $M_{\phi r}$1.74±.42; Best double couple: $M_0$4.06600×10^{16} NP1:ϕ_s282.00000°,δ44.00000°,λ-126.00000°. NP2: ϕ_s147.00000°,δ55.00000°,λ-60.00000°. Principal axes: T 4.0000, Plg6.0000°, Azm216.0000°; N 0.1390, Plg24.0000°, Azm309.0000°; P -4.1310, Plg65.0000°, Azm113.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 02:38:47.2±0.4**, 48°.96S**±0°.07×**124°.5E**±0°.1**, h13^{km}, n84, σ1^{s}.03**/70**, mb4.5**/19**, MS4.2**/11**, 2C-1D, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W1	Cape Leeuwin H	16.01	328	T	T	02 59 04.6	
	baz=153,slow=76,SNR=121						
H01W2	Cape Leeuwin H	16.01	328	T	T	02 58 57.6	
	baz=153,slow=76,SNR=101						
H01W3	Cape Leeuwin H	16.03	328	T	T	02 59 04.9	
	baz=153,slow=76,SNR=90						
NWAO	Narrogin (SRO)	16.92	338	Pn	Pn	02 42 42.6	-1.0
	1.0nm,0.3s,baz=161,slow=8.7,SNR=7.8						
NWAO				LR	LR	02 47 55.8	
	comp=Z,642nm,18.2s,baz=156,slow=32						
NWAO	Narrogin (SRO)	16.92	338		P	02 42 45.3	-0.3
BBOO	Buckleboo	18.30	32	P	Pn	02 43 00.4	-0.4
BBOO				IAmb	IAmb	02 43 03.9	
	comp=Z,68nm,1.1s						
FORT	Forrest	18.36	10	P	Pn	02 43 00.9	-0.5
FORT				IAmb	IAmb	02 43 10.7	
	comp=Z,76nm,1.1s						
CASY	Casey	18.82	198	P	P	02 43 05.1	-1.2
CASY				IAmb	IAmb	02 43 09.4	
	comp=Z,46nm,1.4s						
MORW	Morawa	20.90	339	P	P	02 43 28.7	-0.5
MORW				IAmb	IAmb	02 43 33.8	
	comp=Z,37nm,1.1s						
STKA	Stephens Creek	21.37	43	P	P	02 43 34.3	+0.1
	comp=Z,11nm,0.7s,baz=201,slow=11,SNR=20						
STKA				LR	LR	02 50 22.2	
	comp=Z,881nm,20.7s,baz=201,slow=33						
STKA	Stephens Creek	21.37	43	P	P	02 43 33.2	-1.0
ASAR	Alice Springs	26.31	20	P	P	02 44 22.2	-0.3
	comp=Z,8.4nm,0.8s,baz=192,slow=9.2,SNR=46						
ASAR				LR	LR	02 53 33.7	
	comp=Z,1µm,21.8s,baz=195,slow=34						
ASAR	Alice Springs	26.31	20	P	P	02 44 22.4	-0.1
AS31	Alice Springs	26.31	20	P	P	02 44 22.0	-0.6
WRA	Warramunga Arr	30.01	19	P	P	02 44 54.8	-0.7
	comp=Z,2.4nm,1.0s,baz=198,slow=8.6,SNR=5.2						
WRA				PcP	PcP	02 47 57.1	-0.5
	comp=Z,0.8nm,0.7s,baz=205,slow=2.3,SNR=4.4						
WRA				LR	LR	02 55 59.3	
	comp=Z,1µm,20.3s,baz=190,slow=34						
WRA	Warramunga Arr	30.01	19	P	P	02 44 55.3	-0.3
WRA					PcP	02 47 57.1	-0.5
WB0	Warramunga Arr	30.19	19	P	P	02 44 56.5	-0.7
FITZ	Fitzroy Crossi	30.80	2	P	P	02 45 02.4	-0.1
FITZ				IAmb	IAmb	02 45 04.9	
	comp=Z,9.5nm,1.1s						
VNDA	Vanda	32.00	166	P	P	02 45 12.9	+0.4
	comp=Z,8.7nm,0.9s,baz=308,slow=8.0,SNR=28						
VNDA	Vanda	32.00	166	P	P	02 45 12.8	+0.3
VNDA				IAmb	IAmb	02 45 13.9	
	comp=Z,11nm,0.9s						
KNRA	Kununurra	33.37	7	P	P	02 45 24.9	-0.2
MAW	Mawson	35.45	216	P	P	02 45 43.1	+0.4
	comp=Z,4.7nm,0.7s,baz=38,slow=8.8,SNR=4.3						
MAW				LR	LR	02 57 56.1	
	comp=Z,141nm,21.4s,baz=68,slow=32						
MAW	Mawson	35.45	216	P	P	02 45 42.2	-0.5
MTN	Manton Dam	36.42	11	P	P	02 45 50.4	-1.0
MTN				IAmb	IAmb	02 45 53.3	
	comp=Z,14nm,1.1s						
URZ	Urewera	38.83	94	P	P	02 46 12.6	+0.8
	comp=Z,7.9nm,0.6s,baz=258,slow=2.0,SNR=5.4						
URZ				LR	LR	02 59 08.1	
	comp=Z,71nm,19.1s,baz=189,slow=32						
URZ	Urewera	38.83	94	P	P	02 46 12.5	+0.8
URZ				IAmb	IAmb	02 46 24.3	
	comp=Z,23nm,1.1s						
SOEI	Soe	39.08	360	P	P	02 46 12.2	-1.9
	comp=Z,15nm,1.4s						
QSPA	South Pole Qui	41.16	180	P	P	02 46 30.3	-0.7
QSPA				IAmb	IAmb	02 46 31.8	
	comp=Z,28nm,1.5s						
DZM	Mont Dzumac	42.62	66	LR	LR	03 01 22.5	
	comp=Z,226nm,18.2s,baz=214,slow=32						
CISI	Cisompet, Garu	43.61	336	P	P	02 46 50.0	-1.2
SYO	Syowa Base	43.74	211	⇑*i*X	P	02 46 45.0	-6.6
SYO	Syowa Base	43.74	211	⇓*i*pP	pP	02 46 54.0	-0.4
PMG	Port Moresby	43.75	33	LR	LR	03 05 00.1	
	comp=Z,290nm,18.6s,baz=198,slow=36						
KAPI	Kappang	43.98	353	P	P	02 46 55.5	+1.4
	comp=Z,2.4nm,0.3s,baz=176,slow=4.3,SNR=6.8						
HNR	Honiara	49.28	49	LR	LR	03 06 22.1	
	comp=Z,313nm,21.5s,baz=180,slow=34						
KRVT	Keravat (AS076	50.28	37	LR	LR	03 09 08.6	
	comp=Z,264nm,18.4s,baz=182,slow=36						
SNAA	Sanae	54.06	198	P	P	02 48 11.8	+1.0
SNAA	Sanae	54.06	198	P	P	02 48 11.7	+0.8
	comp=Z,22nm,0.9s,baz=140,slow=8.2,SNR=42						
SNAA	Sanae	54.06	198	P	P	02 48 10.7	-0.2
VNA2	Neumayer--Watz	55.56	197	P	P	02 48 22.9	+1.2
VNA3	Neumayer Olymp	55.74	196	P	P	02 48 23.4	+0.5
DAV	Davao City (W)	55.80	1	LR	LR	03 15 42.1	
	comp=Z,77nm,18.0s,baz=154,slow=40						
VNA1	Neumayer--Stat	55.95	197	P	P	02 48 25.6	+1.2
CMAR	Chiang Mai Arr	70.88	334	P	P	02 50 05.3	+1.6
	comp=Z,1.0nm,0.3s,baz=184,slow=5.6,SNR=13						
CMAR	Chiang Mai Arr	70.88	334	P	P	02 50 04.0	+0.3
SLVN	Son La	72.36	340	P	P	02 50 11.9	-0.8
SLVN				IAmb	IAmb	02 50 17.6	
	comp=Z,12nm,1.3s						
BOSA	Boshof	74.63	244	P	P	02 50 26.6	+0.3
	comp=Z,8.3nm,1.1s,baz=128,slow=6.3,SNR=5.0						
BOSA				LR	LR	03 16 14.7	
	comp=Z,130nm,20.4s,baz=155,slow=30						
BOSA	Boshof	74.63	244	P	P	02 50 25.9	-0.4
WHN	Wuhan	79.67	351	⇑P	P	02 50 56.0	+2.0
LSZ	Lusaka	82.72	255	P	P	02 51 10.2	-0.8
MJAR	Matsushiro Arr	85.99	11	P	P	02 51 27.0	+0.3
	comp=Z,5.9nm,1.0s,baz=190,slow=7.3,SNR=9.7						
MJAR	Matsushiro Arr	85.99	11	P	P	02 51 27.0	+0.3
KSRS	Korea Array	86.09	3	P	P	02 51 29.1	+1.9
	comp=Z,0.5nm,0.4s,baz=180,slow=6.3,SNR=4.1						
PLCA	Paso Flores	89.70	169	P	P	02 51 45.0	0.0
	comp=Z,1.5nm,1.0s,baz=256,slow=4.7,SNR=2.9						
USRK	Ussuriysk Ar.	93.01	5	P	P	02 52 01.4	+1.8
	comp=Z,0.8nm,0.7s,baz=178,slow=15,SNR=4.4						
USRK	Ussuriysk Ar.	93.01	5	P	P	02 51 59.9	+0.3
SONM	Songino Array	97.69	348	P	Pdif	02 52 21.1	0.0
	comp=Z,0.5nm,1.0s,baz=144,slow=5.3,SNR=3.6						
SONM	Songino Array	97.69	348	P	Pdif	02 52 21.4	+0.3
KSH	Kashi	98.00	324	P	Pdif	02 52 24.8	+2.0
KSH				sP	pwP	02 52 32.0	+0.8
KSH				PP	PP	02 56 26.8	+4.6
KSH	Kashi	98.00	324	S	S	03 03 47.8	-1.0
KSH	Kashi	98.00	324	sS	sS	03 03 56.0	+2.2
H10S2	ASCENSION HYDR	112.11	224	T	T	04 59 56.5	
	baz=150,slow=74,SNR=25						
H10S3	ASCENSION HYDR	112.12	224	T	T	05 00 03.0	
	baz=70,slow=74,SNR=26						
BRTR	Keskin Array B	119.12	298	PKP	PKPdf	02 57 35.2	-0.1
	comp=Z,0.4nm,0.6s,baz=132,slow=4.0,SNR=2.6						
TORD	Torodi Ar. Bea	121.20	253	PKP	PKPdf	02 57 39.7	-0.2
	comp=Z,0.7nm,0.8s,baz=92,slow=0.4,SNR=3.5						
TORD	Torodi Ar. Bea	121.20	253		PKPdf	02 57 37.1	-2.8
ANM	Nome	125.55	30		PKiKP	02 57 47.1	0.0
MLR	Muntele Rosu	127.14	299	PKP	PKPdf	02 57 50.7	+0.1
	comp=Z,1.1nm,0.9s,baz=31,slow=18,SNR=3.8						
MLR	Muntele Rosu	127.14	299		PKPdf	02 57 50.3	-0.2
AKASG	Malin Array Be	128.25	306	PKP	PKiKP	02 57 52.6	-0.3
	comp=Z,0.2nm,0.2s,baz=102,slow=1.2,SNR=4.6						
ILAR	Eielson Array	132.26	35	PKP	PKPdf	02 57 59.8	+0.2
	comp=Z,0.4nm,0.6s,baz=266,slow=3.7,SNR=5.4						
GERES	GERESS Array B	136.00	297	PKP	PKiKP	02 58 09.4	+0.6
	comp=Z,0.6nm,0.9s,baz=153,slow=1.5,SNR=4.5						
TXAR	Lajitas Array	138.61	100	PKhKP	PKPpre	02 58 09.8	
	comp=Z,0.4nm,0.8s,baz=297,slow=4.0,SNR=3.0						
TXAR	Lajitas Array	138.61	100	PKPdf	PKPdf	02 58 12.4	-0.2
PDAR	Pinedale Array	142.52	79	PKP	PKPdf	02 58 18.5	-1.0
	comp=Z,0.7nm,0.9s,baz=176,slow=3.6,SNR=3.4						
YKA	Yellowknife Ar	145.40	45	PKPbc	PKPab	02 58 24.1	+0.4
	comp=Z,4.6nm,0.7s,baz=259,slow=3.1,SNR=58						
LAO	LASA Array	146.37	74		PKiKP	02 58 28.9	-1.1
EKA	Eskdalemuir Ar	147.93	302	PKPbc	PKPbc	02 58 30.8	-0.3
	comp=Z,4.5nm,0.8s,baz=72,slow=2.7,SNR=10.0						
WLAR	White Oak Lake	148.25	105		PKPbc	02 58 32.6	0.0
RES	Resolute Bay	149.35	19		PKiKP	02 58 34.9	-0.4
U40A	Yellville	150.07	101		PKiKP	02 58 37.7	-0.2
FFC	Flin Flon	151.14	61		PKiKP	02 58 40.0	+0.5
TULEG	Thule	151.81	7		PKPdf	02 58 34.5	+0.9
PLAL	Pickwick Lake	152.27	108		PKPbc	02 58 42.1	-0.1

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*IDC **26** 02:59:00.4±1.0, 18°.39S×173°.94W, h0^{km}, mb4.0/6, mb1 4.2/7, mb1mx3.9/36, mbtmp4.1/7, ML4.0/1, MS2.7/1, Ms1 2.7/1, ms1mx2.5/45, Error ellipse: s-maj=46.1km s-min=20.6km az=125.0*

*NEIC **26** 02:59:03.2±1.4, 18°.49S±0°.07×172°.9W±0°.1, h37^{km}±7^{km}, mb4.6/10, Error ellipse: s-maj=15.0km s-min=9.7km az=85.0*

ISC 26 02:59:03.0±0.7**, 18°.52S**±0°.07×**172°.92W**±0°.09**, h35^{km}, n25, σ1^{s}.55**/25**, mb4.3**/10**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	2.89	101	Pn	Pn	02 59 45.6	-0.9
NIUE				Sn	Sn	03 00 20.1	0.0
AFI	Afiamalu	4.72	14	Pn	Pn	03 00 14.7	+3.0
	5.7nm,0.3s,baz=102,slow=23,SNR=5.1						
AFI				Sn	Sn	03 01 02.1	-3.1
	15nm,0.3s,baz=54,slow=22,SNR=3.9						
AFI				LR	LR	03 02 11.8	
	comp=Z,78nm,19.8s,baz=126,slow=39						
AFI	Afiamalu	4.72	14		Pn	03 00 11.7	0.0
AFI					Sn	03 01 02.5	-2.8
URZ	Urewera	21.50	202	P	P	03 03 48.2	-0.5
	14nm,0.5s,baz=327,slow=9.5,SNR=15						
URZ	Urewera	21.50	202	P	P	03 03 49.1	+0.4
URZ				IAmb	IAmb	03 03 51.3	
	comp=Z,22nm,1.0s						
BKZ	Black Stump Fm	22.53	202	P	P	03 03 58.6	-1.2
BKZ				IAmb	IAmb	03 04 00.8	
	comp=Z,8.6nm,0.7s						
HIZ	Hauiti	22.59	206	P	P	03 04 01.2	+0.8
BFZ	Birch Farm	23.97	201	P	P	03 04 14.6	+0.5
TUWZ	Tuamarina	25.45	203	P	P	03 04 27.8	+0.3
NNZ	Nelson	25.48	205	P	P	03 04 28.2	+0.3
NNZ				IAmb	IAmb	03 04 36.7	
	comp=Z,46nm,1.2s						
QRZ	Quartz Range	25.50	206	P	P	03 04 28.1	+0.1
QRZ				IAmb	IAmb	03 04 33.4	
	comp=Z,6.7nm,0.7s						
RPZ	Rata Peaks	28.51	205	P	P	03 04 55.4	+0.3
	comp=Z,4.4nm,0.3s,baz=338,slow=5.4,SNR=2.1						
RPZ	Rata Peaks	28.51	205	P	P	03 04 55.9	+0.9
RPZ				IAmb	IAmb	03 05 10.0	
	comp=Z,26nm,1.2s						
FOZ	Fox Glacier	28.87	207	P	P	03 04 59.2	+1.0
FOZ				IAmb	IAmb	03 05 03.3	
	comp=Z,21nm,0.8s						
WRA	Warramunga Arr	49.65	259	P	P	03 07 46.5	-5.1
	comp=Z,0.6nm,0.6s,baz=97,slow=8.4,SNR=4.7						
AS31	Alice Springs	49.65	254	P	P	03 07 49.9	-1.6
ASAR	Alice Springs	49.65	254	P	P	03 07 46.9	-4.7
	comp=Z,0.4nm,0.4s,baz=92,slow=7.9,SNR=8.6						
FITZ	Fitzroy Crossi	58.06	260	P	P	03 08 51.8	-1.3
TXAR	Lajitas Array	81.98	56	P	P	03 11 25.9	+6.2
	comp=Z,0.3nm,0.7s,baz=258,slow=1.2,SNR=3.7						
ILAR	Eielson Array	85.41	11	P	P	03 11 39.5	+3.1
	comp=Z,0.5nm,0.6s,baz=230,slow=6.1,SNR=18						
ILAR	Eielson Array	85.41	11	P	P	03 11 37.9	+1.5
CLL	Collm	146.95	353	*e*PKiKP	PKiKP	03 18 46.0	+1.8
BRTR	Keskin Array B	148.82	318	PKPbc	PKiKP	03 18 48.8	+0.1
	comp=Z,0.1nm,0.3s,baz=92,slow=18,SNR=2.9						
BRTR	Keskin Array B	148.82	318	PKPdf	PKPdf	03 18 43.7	+0.3
GERES	GERESS Array B	149.28	351	PKPbc	PKPab	03 18 51.4	-1.2
	comp=Z,0.5nm,0.7s,baz=0.0,slow=8.0,SNR=5.0						

IDC 26 03:07:09.1±3.1**, 26°.95N**×**144°.08E, h0^{km}, mb3.5**/2**, mb1 3.7**/3**, mb1mx3.3**/30**, mbtmp3.5**/3**, ML2.7**/1**, Error ellipse: s-maj=69.5km s-min=31.2km az=58.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	1.70	275	Pn	Pn	03 07 40.1	0.0
	3.0nm,0.3s,baz=283,slow=21,SNR=1.5						
JCJ				Sn	Sn	03 07 57.5	-5.1
	8.6nm,0.3s,baz=179,slow=23,SNR=9.7						
MJAR	Matsushiro Arr	10.79	334	Pn	Pn	03 09 44.5	-0.4
	0.1nm,0.3s,baz=158,slow=12,SNR=4.1						
WRA	Warramunga Arr	47.56	192	P	P	03 15 47.4	+0.8
	0.4nm,0.7s,baz=13,slow=8.3,SNR=5.4						
ASAR	Alice Springs	51.27	192	P	P	03 16 13.6	-1.3
	0.2nm,0.5s,baz=16,slow=7.0,SNR=1.7						

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*IDC **26** 03:14:34.0±2.2, 9°.13S×120°.95E, h0^{km}, mb3.8/2, mb1 4.1/4, mb1mx3.7/25, mbtmp3.9/4, ML4.2/2, Error ellipse: s-maj=163.4km s-min=25.8km az=55.0*

*DJA **26** 03:14:43.3±0.4, 10°S±3°×12°1E±°, h68^{km}±8^{km}, M4.3/12, mb4.5/4, mB5.0/1, MLv4.2/12, Mw(mB)4.4/1*

ISC 26 03:14:41.3±0.9**, 9°.52S**±0°.04×**120°.71E**±0°.04**, h35^{km}, n14, σ3^{s}.69**/21**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BASI	Baing, Sumba	0.70	190	P	Pn	03 14 58.7	+3.8
BASI				S	Sn	03 15 10.0	+5.5
WBSI	Waikabubak, Su	1.30	265	P	Pn	03 15 05.9	+2.8
WBSI				S	Sn	03 15 23.2	+3.9
MMRI	Maumere	1.75	60	P	Pn	03 15 12.5	+3.3
MMRI				S	Sn	03 15 33.3	+3.0
PLAI	Plampang	2.97	283	P	Pn	03 15 29.3	+3.2
PLAI				S	Sn	03 16 02.3	+1.8
SOEI	Soe	3.52	94	P	Pn	03 15 36.7	+3.0
SOEI				S	Sn	03 16 15.9	+1.7
BKSI	Bulukumba	4.21	352	P	Pn	03 15 46.2	+3.1
BKSI				S	Sn	03 16 34.6	+3.5
BBSI	Bau Bau	4.41	25	P	Pn	03 15 48.3	+2.4
BBSI				S	Sn	03 16 40.0	+3.9
BNSI	Bone	5.12	353	P	Pn	03 16 00.4	+4.8
	0.1nm14nm,0.9s						
BNSI				S	Sn	03 17 00.4	+6.8
	0.1nm14nm,0.9s						
SRBI	Singaraja	5.61	284	P	Pn	03 16 03.4	+1.0
	0.2nm18nm,0.5s						
JAGI	Jajag, Banyuwa	6.56	279	P	Pn	03 16 15.0	-0.4

WRA	Warramunga Arr	16.75	130	Pn	Pn	03 18 30.7	-2.8
	1.2nm,0.3s,baz=305,slow=14,SNR=24						
WRA				Sn	Sn	03 21 22.1	-17
	0.4nm,0.3s,baz=307,slow=22,SNR=2.0						
ASAR	Alice Springs	18.89	140	P	P	03 18 58.1	-0.9
	0.3nm,0.3s,baz=317,slow=12,SNR=23						
ASAR				S	Sn	03 22 16.8	-14
	0.2nm,0.3s,baz=312,slow=22,SNR=7.0						
SONM	Songino Array	58.50	349	P	P	03 24 29.5	-4.6
	0.5nm,0.4s,baz=167,slow=8.4,SNR=6.5						
MKAR	Makanchi Array	65.69	332	P	P	03 25 18.9	-3.4
	0.5nm,0.4s,baz=150,slow=6.7,SNR=13						

NNC 26 03:21:30.9±4.5, 38°.15N×68°.82E, h0^{km}, mb3.9, mpv3.6, 2C-1D, Error ellipse: s-maj=33.2km s-min=29.9km az=0.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JBG	Jabagly	4.47	17	Pg	Pb	03 22 52.7	+2.5
	5.3nm,0.1s						
JBG				Lg	Lg	03 23 54.0	
	25nm,0.4s						
BRLS	Borolday	4.93	9	Pg	Pb	03 22 57.7	-0.4
	0.3nm,0.1s						
BRLS				Lg	Lg	03 24 02.6	
	11nm,0.5s						
KK31	Karatay Array	5.11	14	⇑Pn	Pn	03 22 48.7	0.0
	0.4nm,0.3s,baz=196,slow=13,SNR=8.4						
KK31				⇓Pg	Pb	03 23 04.0	+2.8
	4.8nm,0.7s,baz=196,slow=17,SNR=11						
KK31				⇑Lg	Lg	03 24 09.7	
	9.7nm,0.6s,baz=197,slow=24,SNR=7.0						
MRKS	Merke	5.69	35	Pg	Pb	03 23 12.2	+1.2
	7.7nm,0.2s						
MRKS				Lg	Lg	03 24 27.5	
	4.8nm,0.4s						

BGR ***26*** *03:29:20.9±0.0, 29°.14S×179°.10W, h400^{km}*

NEIC ***26*** *03:29:35.7±1.3, 26°.17S±0°.05×179°.29E±0°.08, h495^{km}±1^{km}, mb5.9/348, Mwc6.3/67, Mww6.3, Mwc6.4(GCMT), Error ellipse: s-maj=12.3km s-min=7.7km az=85.0*

BJI ***26*** *03:29:35.4±0.0, 26°.11S×179°.28E, h490^{km}, mB5.5/56, mb5.5/79*

MOS ***26*** *03:29:35.5±0.9, 26°.07S×179°.30E, h491^{km}, mb6.0/36, Error ellipse: s-maj=8.4km s-min=6.9km az=117.9*

IDC ***26*** *03:29:37.0±0.3, 26°.12S×179°.26E, h498^{km}±2^{km}, mb5.3/43, mb1 5.3/45, mb1mx5.3/45, mbtmp6.1/45, Error ellipse: s-maj=6.6km s-min=4.9km az=13.0*

NEIC ***26*** *03:29:40, 26°.21S×179°.32E, h513^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.89; $M_{\theta\theta}$-1.32; $M_{\phi\phi}$-0.57; $M_{r\theta}$1.15; $M_{\theta\phi}$-3.32; $M_{\phi r}$-2.08; Fault plane solution: $M_0$4.42000×10^{18} NP1:ϕ_s191.00000°, δ66.00000°, λ36.00000°. NP2:ϕ_s85.00000°, δ57.00000°, λ151.00000°. Principal axes: T 4.4884, Plg42.0000°, Azm51.0000°; N -0.1504, Plg47.0000°, Azm220.0000°; P -4.3379, Plg6.0000°, Azm316.0000°;*

NEIC ***26*** *03:29:40, 26°.10S×179°.40E, h500^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.83; $M_{\theta\theta}$-1.12; $M_{\phi\phi}$-0.71; $M_{r\theta}$1.05; $M_{\theta\phi}$-3.15; $M_{\phi r}$-1.88; Fault plane solution: $M_0$4.14000×10^{18} NP1:ϕ_s190.00000°, δ66.00000°, λ37.00000°. NP2:ϕ_s83.00000°, δ57.00000°, λ151.00000°. Principal axes: T 4.1543, Plg42.0000°, Azm50.0000°; N -0.0321, Plg47.0000°, Azm219.0000°; P -4.1222, Plg6.0000°, Azm315.0000°;*

GCMT ***26*** *03:29:40.7±0.1, 26°.14S±0°.01×179°.32E±0°.01, h510^{km}, MW6.4/168, Moment Tensor Solution. s168,c429; s154,c230; Duration: 3^{s}7 Moment tensor: Scale 10^{18} Nm; M_{rr}1.82±.01; $M_{\theta\theta}$-1.26±.03; $M_{\phi\phi}$-0.55±.03; $M_{r\theta}$1.22±.02; $M_{\theta\phi}$-3.30±.02; $M_{\phi r}$-1.98±.02; Best double couple: $M_0$4.34500×10^{18} NP1:ϕ_s85.00000°, δ58.00000°, λ151.00000°. NP2:ϕ_s191.00000°, δ66.00000°, λ35.00000°. Principal axes: T 4.4330, Plg41.0000°, Azm50.0000°; N -0.1670, Plg48.0000°, Azm221.0000°; P -4.2580, Plg4.0000°, Azm317.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

NEIC ***26*** *03:29:52.2, 26°.17S×179°.10E, h502^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.81; $M_{\theta\theta}$-1.20; $M_{\phi\phi}$-0.60; $M_{r\theta}$0.85; $M_{\theta\phi}$-3.24; $M_{\phi r}$-1.87; Fault plane solution: $M_0$4.15000×10^{18} NP1:ϕ_s84.85000°, δ56.74000°, λ152.59000°. NP2:ϕ_s190.73000°, δ67.36000°, λ36.45000°. Principal axes: T 4.0755, Plg41.0000°, Azm52.0000°; N 0.1565, Plg48.0000°, Azm218.0000°; P -4.2320, Plg7.0000°, Azm316.0000°;*

ISC 26 03:29:36.1±0.2**, 26°.16S**±0°.03×**179°.26E**±0°.03**, h496^{km}**±1^{km}**, h496^{km}:pP-P, n1961,** σ**1^{s}84**/2233**, mb5.9**/289**, 85C-91D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	3.95	142	P	P	03 30 55.9	+2.2
RAO	Raoul Island	3.96	142	P	P	03 30 54.9	+1.1
	16µm,0.3s,baz=105,slow=7.6,SNR=284						
RAO				S	S	03 32 00.4	+3.2
	4µm,0.3s,baz=230,slow=22,SNR=1.4						
RAO	Raoul Island	3.96	142	P	P	03 30 54.7	+0.9
RAO				S	S	03 31 57.0	-0.3
GLKZ	Green Lake	3.97	142	P	P	03 30 55.9	+2.0
GLKZ				S	S	03 32 01.6	+4.2
MSVF	Nonsavu	8.46	352	d iP	P	03 31 37.6	+0.2
MSVF				pmax	pmax		
	comp=Z,7µm,1.0s						
MSVF	Nonsavu	8.46	352	P	P	03 31 36.6	-0.8
MSVF				S	S	03 33 14.8	-2.2
OUZ	Omahuta	10.26	207	P	P	03 31 57.1	+1.1
OUZ	Omahuta	10.26	207	P	P	03 32 00.4	+4.5
NFK	Norfolk Island	10.44	252	P	P	03 31 54.7	-3.4
	baz=11						
GRZ	Great Barrier	10.57	197	P	P	03 32 02.7	+3.5
MXZ	Matakaoa Point	11.39	184	P	P	03 32 08.7	+0.7
PUZ	Puketiti	11.90	184	P	P	03 32 12.5	-0.9
PUZ				S	S	03 34 16.6	-6.6
MARZ	Manawahe	11.99	190	P	P	03 32 18.1	+3.8
TWGZ	Tauwhareparae	12.03	185	P	P	03 32 13.1	-1.7
LIRZ	Lichensteins R	12.05	191	P	P	03 32 20.4	+5.3
KARZ	Kaharoa	12.09	191	P	P	03 32 19.2	+3.8
URZ	Urewera	12.20	188	P	P	03 32 15.3	-1.1
	comp=Z,231nm,0.3s,baz=65,slow=2.8,SNR=270						
URZ				S	S	03 34 24.8	-4.0
	comp=Z,92nm,0.3s,baz=216,slow=21,SNR=11						
URZ				ScP	ScP	03 40 02.6	+1.0
	comp=Z,5.6nm,0.3s,baz=28,slow=5.8,SNR=3.4						
URZ	Urewera	12.20	188	P	P	03 32 15.4	-1.1
URZ					S	03 34 27.0	-1.8
URZ					ScP	03 40 01.7	+0.1
NIUE	Niue	12.22	57	P	P	03 32 16.1	-1.0
	baz=12						
NIUE	Niue	12.22	57	P	P	03 32 15.7	-1.4
NIUE				S	S	03 34 29.4	-0.4
DZM	Mont Dzumac	12.39	286	eP	P	03 32 22.0	+3.0
	comp=Z,13µm,1.4s						
DZM	Mont Dzumac	12.39	286	P	P	03 32 22.3	+3.4
	comp=Z,69nm,0.3s,baz=108,slow=12,SNR=235						
DZM				ScP	ScP	03 40 05.3	+3.0
	comp=Z,4.7nm,0.3s,baz=98,slow=7.3,SNR=17						
DZM	Mont Dzumac	12.39	286	P	P	03 32 18.5	-0.4
DZM					ScP	03 40 02.5	+0.2
HIZ	Hauiti	12.86	196	P	P	03 32 24.6	+1.0
BKZ	Black Stump Fm	13.17	189	P	P	03 32 26.2	-0.7
BFZ	Birch Farm	14.69	189	P	P	03 32 41.5	-1.4
AFI	Afiamalu	14.81	36	S	S	03 35 11.5	-8.5
	comp=Z,139nm,0.3s,baz=136,slow=24,SNR=7.0						
AFI	Afiamalu	14.81	36	P	P	03 32 41.1	-3.4
AFI	Afiamalu	14.81	36	P	P	03 32 41.1	-3.4
DUWZ	D'Urville Isla	15.26	196	P	P	03 32 48.2	-0.7
DUWZ				S	S	03 35 22.4	-5.5
WEL	Wellington	15.53	193	S	S	03 35 27.3	-5.8
TCW	Tory Channel	15.56	194	P	P	03 32 50.4	-1.6
TCW				S	S	03 35 28.5	-5.3
MSWZ	Moikau Station	15.57	191	P	P	03 32 50.1	-1.9
SNZO	South Karori	15.57	193	P	P	03 32 50.5	-1.5
BHW	Baring Head	15.63	192	P	P	03 32 50.2	-2.5
QRZ	Quartz Range	15.65	199	P	P	03 32 52.8	-0.1
QRZ	Quartz Range	15.65	199	P	P	03 32 54.3	+1.4
QRZ				S	S	03 35 38.3	+2.8
PLWZ	Palliser	15.72	191	P	P	03 32 51.2	-2.5
NNZ	Nelson	15.78	197	P	P	03 32 52.9	-1.4
NNZ	Nelson	15.78	197	P	P	03 32 53.7	-0.6
NNZ				S	S	03 35 32.0	-5.9
TUWZ	Tuamarina	15.85	195	P	P	03 32 52.6	-2.4
TUWZ	Tuamarina	15.85	195	P	P	03 32 54.2	-0.7
CMWZ	Cape Campbell	16.09	194	P	P	03 32 56.6	-1.0
CMWZ	Cape Campbell	16.09	194	P	P	03 32 57.3	-0.3
CMWZ				S	S	03 35 38.5	-5.3
BSWZ	Blackbirch Sta	16.14	195	P	P	03 32 57.1	-0.9
BSWZ	Blackbirch Sta	16.14	195	P	P	03 32 57.7	-0.3
BSWZ				S	S	03 35 37.7	-6.8
THZ	Tophouse	16.42	197	P	P	03 33 00.5	-0.6
THZ				S	S	03 35 48.6	-1.2
THZ	Tophouse	16.42	197	P	P	03 33 00.1	-1.0
THZ				S	S	03 35 47.4	-2.3
DSZ	Denniston Nort	16.71	200	P	P	03 33 04.4	+0.3
DSZ				S	S	03 35 55.7	+0.7
KHZ	Kahutara	16.88	195	P	P	03 33 04.5	-1.2
KHZ	Kahutara	16.88	195	P	P	03 33 03.8	-1.9
GVZ	Greta Valley S	17.52	195	P	P	03 33 11.2	-0.8
LTZ	Lake Taylor	17.54	197	P	P	03 33 11.1	-1.1
LTZ				S	S	03 36 05.8	-3.0
FUNA	Funafuti	17.54	360	P	P	03 33 11.0	-1.6
AMCZ	Amberley	17.81	196	P	P	03 33 14.4	-0.3
OXZ	Oxford	18.11	197	P	P	03 33 16.6	-0.8
MQZ	McQueen's Vall	18.31	195	P	P	03 33 18.1	-1.1
MQZ				IAmb	IAmb	03 33 25.6	
	comp=Z,310nm,0.7s						
MQZ				S	S	03 36 20.1	-1.1
LHI	Lord Howe Isla	18.47	249	P	P	03 33 25.4	+4.5
	baz=19,SNR=24						
LHI	Lord Howe Isla	18.47	249	P	P	03 33 21.4	+0.4
RPZ	Rata Peaks	18.74	199	P	P	03 33 22.8	-0.4
	comp=Z,41nm,0.3s,baz=288,slow=0.6,SNR=126						
RPZ				S	S	03 36 30.2	+1.9
	comp=Z,17nm,0.3s,baz=150,slow=22,SNR=3.4						
RPZ	Rata Peaks	18.74	199	P	P	03 33 23.2	-0.1
RPZ					S	03 36 29.4	+1.0
FOZ	Fox Glacier	18.96	202	P	P	03 33 25.1	0.0
FOZ				IAmb	IAmb	03 33 31.3	
	comp=Z,466nm,0.7s						
LBZ	Lake Benmore	19.61	200	P	P	03 33 29.9	-1.2
LBZ				IAmb	IAmb	03 33 36.8	
	comp=Z,124nm,0.7s						
RAR	Rarotonga	19.82	80	P	P	03 33 32.9	-0.4
	comp=Z,20nm,0.3s,baz=235,slow=7.0,SNR=71						
RAR	Rarotonga	19.82	80	P	P	03 33 32.8	-0.6
ODZ	Otahua Downs	20.08	198	P	P	03 33 35.4	+0.1
ODZ				IAmb	IAmb	03 33 39.4	
	comp=Z,165nm,0.7s						
WKZ	Wanaka	20.37	201	P	P	03 33 37.0	-1.1
WKZ				IAmb	IAmb	03 33 51.0	
	comp=Z,323nm,0.6s						
DCZ	Deep Cove	21.57	204	P	P	03 33 49.6	+0.7
DCZ				IAmb	IAmb	03 33 54.0	
	comp=Z,240nm,1.1s						
WHZ	Wether Hill Ro	21.67	202	P	P	03 33 49.9	+0.1
WHZ				IAmb	IAmb	03 33 55.2	
	comp=Z,244nm,0.7s						
ARMA	Armidale	24.67	254	P	P	03 34 20.3	+3.3
	baz=25,SNR=28						
ARMA	Armidale	24.67	254	P	P	03 34 17.1	+0.1
HNR	Honiara	24.74	309	P	P	03 34 17.9	+0.3
	comp=Z,1µm,0.7s,baz=225,slow=4.2,SNR=29						
HNR	Honiara	24.74	309	i P	P	03 34 18.0	+0.3
HNR	Honiara	24.74	309	P	P	03 34 17.0	-0.6
KNTN	Kanton	24.82	22	P	P	03 34 17.8	-0.6
EIDS	Eidsvold	25.37	266	P	P	03 34 25.2	+2.1
	baz=26,SNR=169						
EIDS	Eidsvold	25.37	266	P	P	03 34 23.7	+0.5
MGCD	Mangrove Creek	25.39	247	P	P	03 34 26.9	+3.6
	baz=26,SNR=41						
RIV	Riverview	25.45	246	P	P	03 34 27.5	+3.7
	baz=26,SNR=4.9						
CNB	Canberra Magne	27.18	243	P	P	03 34 42.6	+3.5
	baz=27,SNR=34						
RMQ	Roma	27.31	262	P	P	03 34 43.5	+3.2
	baz=27,SNR=168						
CAN	Canberra	27.48	243	P	P	03 34 45.4	+3.7
CAN				pmax	pmax		
	comp=Z,133nm,0.8s						
MILA	Mila	27.73	240	P	P	03 34 47.4	+3.5
	baz=28,SNR=28						
YNG	Young	27.79	246	P	P	03 34 47.9	+3.5
	baz=28,SNR=30						
TARA	Tarawa	28.04	346	P	P	03 34 46.3	-0.4
TBI	Tubuai	28.51	91	eP	P	03 34 51.0	+0.2
	comp=Z,823nm,0.9s						
CMSA	Cobar Meteorol	29.81	252	P	P	03 35 04.3	+2.2
	baz=30,SNR=51						
PAE	Paea	30.06	80	eP	P	03 35 04.0	-0.3
	comp=Z,225nm,1.3s						
PAE				eScP	ScP	03 40 43.9	-2.2
	comp=Z,61nm,1.4s						
PPT2	Papeete2	30.09	80	eP	P	03 35 04.7	0.0
	comp=Z,1µm,1.3s						
PPT2				eScP	ScP	03 40 44.3	-2.0
	comp=Z,331nm,1.3s						
PPT	Papeete	30.10	80	P	P	03 35 05.6	+0.9
	comp=Z,645nm,1.1s,baz=239,slow=4.7,SNR=26						
PPT				ScP	ScP	03 40 48.8	+2.6
	comp=Z,179nm,0.9s,baz=341,slow=2.8,SNR=8.1						
PPT	Papeete	30.10	80	P	P	03 35 04.5	-0.2
PPTF	Pamatai, Papee	30.10	80	P	P	03 35 04.3	-0.5
TIAR	Tiarei	30.31	80	eP	P	03 35 06.4	-0.1
	comp=Z,623nm,1.2s						
TIAR				eScP	ScP	03 40 45.0	-1.9
	comp=Z,49nm,0.9s						
TVO	Taravao	30.31	80	eP	P	03 35 06.3	-0.3
	comp=Z,126nm,0.7s						
TVO				eScP	ScP	03 40 44.8	-2.2
	comp=Z,34nm,1.0s						
TOO	Toolangi	30.70	240	P	P	03 35 12.2	+2.6
	baz=31,SNR=11						
TOO	Toolangi	30.70	240	P	P	03 35 12.7	+3.0
TOO				pmax	pmax		
	comp=Z,166nm,0.9s						
MOO	Moorlands	30.84	230	P	P	03 35 11.8	+1.0
	baz=31,SNR=4.8						
CTA	Charters Tower	30.89	274	P	P	03 35 13.8	+2.2
	comp=Z,215nm,0.4s,baz=98,slow=10,SNR=243						
CTA				pP	pwP	03 36 38.4	-2.7
	comp=Z,25nm,0.6s,baz=98,slow=13,SNR=0.7						
CTA				S	S	03 39 42.7	+2.4
	comp=Z,84nm,1.2s,baz=23,slow=21,SNR=14						
CTA				ScP	ScP	03 40 52.2	+3.4
	comp=Z,243nm,1.1s,baz=111,slow=3.2,SNR=13						
CTAO	Charters Tower	30.89	274	P	P	03 35 13.7	+2.2
CTAO				pmax	pmax		
	comp=Z,940nm,1.4s						
TAU	Tasmania Unive	30.93	229	P	P	03 35 11.1	-0.4
TAU	Tasmania Unive	30.93	229	P	P	03 35 11.1	-0.4
QLP	Quilpie	31.32	261	P	P	03 35 17.0	+1.8
	baz=32,SNR=48						
MEH	Mehetia	31.33	81	eP	P	03 35 15.0	-0.3
	comp=Z,445nm,1.2s						
MEH				eScP	ScP	03 40 47.7	-2.6
	comp=Z,124nm,1.4s						
PMOR	Pomariorio Ree	32.60	77	eP	P	03 35 26.0	-0.2
	comp=Z,1µm,1.1s						
PMOR				eScP	ScP	03 40 52.8	-1.9
	comp=Z,364nm,1.3s						
VAH	Vaihoa	32.74	77	eP	P	03 35 27.0	-0.3
	comp=Z,2µm,1.2s						
VAH				eScP	ScP	03 40 53.0	-2.2
	comp=Z,295nm,1.3s						
MTSU	Mount Surprise	33.26	277	P	P	03 35 33.6	+1.9
	baz=33,SNR=560						
STKA	Stephens Creek	33.31	251	P	P	03 35 34.1	+2.1
	baz=34,SNR=79						
STKA	Stephens Creek	33.31	251	P	P	03 35 34.1	+2.1
	comp=Z,70nm,0.7s,baz=90,slow=9.0,SNR=88						
STKA				pP	pwP	03 37 01.3	-0.4
	comp=Z,186nm,1.3s,baz=92,slow=9.8,SNR=3.1						
STKA				ScP	ScP	03 41 00.5	+3.5
	comp=Z,55nm,0.8s,baz=99,slow=7.7,SNR=5.3						
STKA				P3KPbc		04 06 34.5	
	comp=Z,15nm,1.1s,baz=277,slow=6.0,SNR=10						
STKA	Stephens Creek	33.31	251	P	P	03 35 32.2	+0.2
STKA				S	S	03 40 17.2	+0.2
STKA					ScP	03 40 57.3	+0.3
ARPS	Mount Arapiles	33.44	242	P	P	03 35 35.4	+2.4
	baz=34,SNR=22						
RABL	Rabaul	33.92	306	P	P	03 35 37.2	-0.3
KRVT	Keravat (AS076	33.95	305	P	P	03 35 37.2	-0.4
	comp=Z,1µm,0.5s,baz=347,slow=0.8,SNR=58						
PMG	Port Moresby	34.67	293	P	P	03 35 44.9	+1.2
	comp=Z,1µm,1.1s,baz=109,slow=5.1,SNR=133						
PMG				S	S	03 40 39.0	+1.0
	comp=Z,31nm,1.1s,baz=314,slow=22,SNR=14						
PMG	Port Moresby	34.67	293	d iP	P	03 35 44.8	+1.1
PMG				pmax	pmax		
	comp=Z,5µm,1.1s						
PMG	Port Moresby	34.67	293	P	P	03 35 44.0	+0.2
HTT	Hallett	35.58	248	P	P	03 35 52.8	+1.7
	baz=36,SNR=154						
COEN	Coen	35.88	283	P	P	03 35 55.8	+2.0
	baz=36,SNR=137						
COEN	Coen	35.88	283	P	P	03 35 54.0	+0.2
COEN				IAmb	IAmb	03 35 59.0	
	comp=Z,508nm,1.0s						
XMAS	Kiritimati	35.97	42	P	P	03 35 53.5	-1.0
KWAJ	Kwajalein Atol	36.55	340	P	P	03 35 59.3	0.0
KWAJ				pmax	pmax		
	comp=Z,2µm,1.1s						
KWAJ	Kwajalein Atol	36.55	340	P	P	03 35 59.3	0.0
QIS	Mount Isa	36.73	270	P	P	03 36 02.1	+1.3
	baz=37,SNR=140						
BBOO	Buckleboo	37.98	250	P	P	03 36 11.7	+0.8
	baz=38,SNR=166						
BBOO	Buckleboo	37.98	250	P	P	03 36 11.6	+0.6
BBOO				IAmb	IAmb	03 36 14.7	
	comp=Z,156nm,0.8s						
PATS	Pohnpei	38.60	325	P	P	03 36 16.9	+0.8
	baz=39,SNR=38						
PATS	Pohnpei	38.60	325	P	P	03 36 15.6	-0.4
ASAR	Alice Springs	41.05	263	P	P	03 36 36.7	+0.8
	comp=Z,186nm,0.7s,baz=96,slow=7.5,SNR=730						
ASAR				pP	pwP	03 38 08.7	-1.6
	comp=Z,80nm,1.0s,baz=96,slow=8.3,SNR=3.0						
ASAR				ScP	ScP	03 41 28.2	+1.7
	comp=Z,22nm,0.8s,baz=109,slow=4.4,SNR=5.1						
ASAR				S	S	03 42 10.7	-1.7
	comp=Z,55nm,0.8s,baz=102,slow=17,SNR=14						
ASAR				P3KPbc		04 06 01.2	
	comp=Z,2.8nm,0.9s,baz=286,slow=3.7,SNR=13						
ASAR	Alice Springs	41.05	263	P	P	03 36 35.9	0.0
ASAR					pP	03 38 05.6	+0.8
ASAR					ScP	03 41 26.4	-0.1
ASAR					S	03 42 11.6	-0.8
WR0	Warramunga Arr	41.45	269	IAmb	IAmb	03 36 42.4	
	comp=Z,144nm,0.8s						
WB2	Warramunga Arr	41.63	269	IAmb	IAmb	03 36 43.0	
	comp=Z,588nm,1.1s						
WRAB	Tennant Creek	41.63	269	d iP	P	03 36 41.3	+0.8
WRAB				pmax	pmax		
	comp=Z,516nm,1.5s						
WRAB	Tennant Creek	41.63	269	P	P	03 36 40.1	-0.3
WRAB				IAmb	IAmb	03 36 43.0	
	comp=Z,557nm,1.1s						
WRA	Warramunga Arr	41.64	269	P	P	03 36 40.8	+0.3
	comp=Z,113nm,0.4s,baz=104,slow=7.6,SNR=185						
WRA				pP	pwP	03 38 13.1	-2.7
	comp=Z,41nm,0.9s,baz=103,slow=6.8,SNR=1.8						
WRA				ScP	ScP	03 41 29.7	+0.9
	comp=Z,38nm,0.8s,baz=109,slow=3.6,SNR=7.7						
WRA				S	S	03 42 17.1	-3.7
	comp=Z,81nm,0.9s,baz=102,slow=14,SNR=7.7						
WRA	Warramunga Arr	41.64	269	P	P	03 36 38.9	-1.6
WRA					pP	03 38 10.0	+0.4
WRA					ScP	03 41 27.9	-0.9
WRA					S	03 42 20.0	-0.9
WB0	Warramunga Arr	41.64	269	IAmb	IAmb	03 36 44.7	
	comp=Z,316nm,0.9s						
TAOE	Nuku Hiva Isla	42.14	73	eP	P	03 36 44.2	-0.5
	comp=Z,5µm,1.1s						
TAOE	Nuku Hiva Isla	42.14	73	P	P	03 36 44.5	-0.2
JAY	Jayapura	43.84	296	P	P	03 36 58.6	+0.7
	comp=Z,6µmcomp=Z,7µmcomp=Z,502nm,1.3s						
JOHN	Johnston Islan	44.01	16	P	P	03 36 58.9	-0.1
GENI	Genyem	44.23	295	P	P	03 37 01.6	+0.7
	comp=Z,11µmcomp=Z,35µmcomp=Z,2µm,1.6s						
FORT	Forrest	44.93	252	P	P	03 37 06.4	+0.3
	baz=45,SNR=168						
FORT	Forrest	44.93	252	P	P	03 37 06.4	+0.3
FORT				IAmb	IAmb	03 37 09.8	
	comp=Z,435nm,0.8s						
PTCN	Pitcairn Islan	45.44	100	P	P	03 37 10.0	-0.2
WRKA	Warakurna	45.73	260	P	P	03 37 12.6	+0.2
	baz=46,SNR=594						
KDU	Kakadu	45.87	278	P	P	03 37 14.0	+0.4
	baz=46,SNR=196						
H11S2	WAKE ISLAND Hy	46.03	343	P	P	03 37 15.7	+1.4
	baz=197,slow=4.6,SNR=21						
H11S3	WAKE ISLAND Hy	46.04	343	P	P	03 37 15.6	+1.2
	baz=197,slow=4.6,SNR=20						
H11S1	WAKE ISLAND Hy	46.05	343	P	P	03 37 15.7	+1.2
	baz=197,slow=4.6,SNR=24						
WAKE	Wake Island	46.81	344	P	P	03 37 20.5	+0.1
MTN	Manton Dam	47.01	277	P	P	03 37 22.4	+0.3
	baz=47,SNR=98						
MTN	Manton Dam	47.01	277	IAmb	IAmb	03 37 27.2	
	comp=Z,132nm,0.5s						
H11N1	WAKE ISLAND Hy	47.16	344	P	P	03 37 23.7	+0.8
	baz=188,slow=10,SNR=20						
H11N3	WAKE ISLAND Hy	47.16	344	P	P	03 37 24.4	+1.5
	baz=188,slow=10,SNR=31						
H11N2	WAKE ISLAND Hy	47.17	344	P	P	03 37 24.6	+1.7
	baz=188,slow=10,SNR=32						
KNRA	Kununurra	48.05	272	P	P	03 37 31.1	+1.1
	baz=48,SNR=201						
KNRA	Kununurra	48.05	272	IAmb	IAmb	03 37 32.5	
	comp=Z,713nm,1.1s						
BAKI	Biak	48.35	294	P	P	03 37 33.7	+1.4
	comp=Z,22µmcomp=Z,2µm,1.0s						
SAUI	Saumlaki	48.96	283	P	P	03 37 38.8	+2.0
	comp=Z,9µmcomp=Z,22µmcomp=Z,2µm,1.2s						
RKPI	Ransiki, Papua	49.77	292	P	P	03 37 45.0	+2.2
	comp=Z,7µmcomp=Z,412nm,1.2s						
FITZ	Fitzroy Crossi	50.03	268	P	P	03 37 45.9	+1.2
	baz=50,SNR=348						
FITZ	Fitzroy Crossi	50.03	268	P	P	03 37 45.9	+1.2
	comp=Z,214nm,0.9s,baz=106,slow=2.6,SNR=299						
FITZ				pP	pwP	03 39 21.8	-2.6
	comp=Z,131nm,0.9s,baz=87,slow=13,SNR=5.8						
FITZ				S	S	03 44 19.1	+0.6
	comp=Z,16nm,0.8s,baz=226,slow=22,SNR=27						
FITZ				PKPPKP	P'P'df	04 08 27.6	-0.7
	comp=Z,1.8nm,1.0s,baz=248,slow=4.9,SNR=3.0						
FITZ	Fitzroy Crossi	50.03	268	P	P	03 37 43.9	-0.8
FITZ					pP	03 39 17.8	-0.6
FAKI	Fak Fak	50.64	289	P	P	03 37 50.0	+0.8
	comp=Z,8µmcomp=Z,12µmcomp=Z,895nm,1.5s						
KHU	Kahuku	51.31	31	IAmb	IAmb	03 38 02.7	
	comp=Z,817nm,1.1s						
PUH	Pauahi	51.61	31	P	P	03 37 55.5	-0.7
NPH	North Pit	51.61	31	IAmb	IAmb	03 37 58.4	
	comp=Z,1µm,1.1s						
HATHI	Halema'uma'u T	51.63	31	IAmb	IAmb	03 38 00.6	
	comp=Z,2µm,1.1s						
SBLHI	Steaming Bluff	51.63	31	IAmb	IAmb	03 38 03.0	
	comp=Z,834nm,1.2s						
GUMO	Guam	51.78	316	P	P	03 37 58.0	+0.6
	comp=Z,2µm,1.0s,baz=165,slow=4.9,SNR=32						
GUMO				ScP	ScP	03 42 13.3	+2.0
	comp=Z,140nm,0.9s,baz=247,slow=4.5,SNR=2.5						
GUMO				S	S	03 44 42.9	+0.9
	comp=Z,41nm,0.5s,baz=325,slow=22,SNR=1.9						
GUMO	Guam	51.78	316	P	P	03 37 57.2	-0.1
GUMO					ScP	03 42 11.3	0.0
GUMO					S	03 44 42.0	-0.1
POHA	Pohakuloa	51.80	31	P	P	03 37 57.4	-0.3
BNDI	Bandanaira	51.83	286	P	P	03 37 58.3	+0.4
	comp=Z,7µmcomp=Z,41µmcomp=Z,880nm,1.3s						
VNDA	Vanda	52.08	185	P	P	03 38 00.3	+1.7
	comp=Z,36nm,0.8s,baz=2.9,slow=7.9,SNR=80						
VNDA				pP	pwP	03 39 41.7	+3.2
	comp=Z,12nm,0.9s,baz=285,slow=15,SNR=1.6						
VNDA				ScP	ScP	03 42 11.9	+0.3
	comp=Z,23nm,0.9s,baz=342,slow=3.7,SNR=4.3						
VNDA	Vanda	52.08	185	P	P	03 37 59.4	+0.8
KIP	Kipapa	52.19	27	P	P	03 38 00.2	0.0
KIP				pmax	pmax		
	comp=Z,629nm,1.1s						
KIP	Kipapa	52.19	27	P	P	03 38 00.2	0.0
KIP				IAmb	IAmb	03 38 13.7	
	comp=Z,629nm,1.1s						
SIJI	Sorong	52.56	291	S	S	03 44 52.9	+0.2
	comp=Z,11nm,0.5s,baz=99,slow=13,SNR=10						
MSAI	Masohi	53.26	286	P	P	03 38 08.5	+0.4
	comp=Z,2µmcomp=Z,211nm,1.2s						

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KLBR  Kellerberrin      53.52 249   P       P        03 38 10.5 +0.7
      baz=54,SNR=87
RKGY  Rocky Gully       53.65 245   P       P        03 38 11.6 +1.0
      baz=54,SNR=11
NWAO  Narrogin (SRO)    53.71 247   P       P        03 38 11.9 +0.8
      baz=54,SNR=6.2
NWAO  Narrogin (SRO)    53.71 247   P       P        03 38 11.5 +0.4
      comp=Z,13nm,0.5s,baz=95,slow=7.0,SNR=12
NWAO                                pP      pP       03 39 46.8 +0.3
      comp=Z,31nm,0.9s,baz=92,slow=9.7,SNR=3.7
NWAO                                ScP     ScP      03 42 22.0 +2.3
      comp=Z,62nm,1.0s,baz=102,slow=6.5,SNR=6.4
NWAO                                PKPPKP  P'P'df   04 08 23.7 +0.4
      comp=Z,12nm,1.1s,baz=332,slow=7.2,SNR=3.6
NWAO  Narrogin (SRO)    53.71 247   P       P        03 38 12.5 +1.3
NWAO  Narrogin (SRO)    53.71 247   P       P        03 38 11.2  0.0
NWAO                                        pP       03 39 46.7 +0.1
NWAO  Narrogin (SRO)    53.71 247   IAmb    IAmb     03 38 15.8
      comp=Z,34nm,1.1s
NWAO                                        ScP      03 42 19.4 -0.3
AAI   Ambon             53.73 286   P       P        03 38 12.8 +1.4
      comp=Z,5µmcomp=Z,14µmcomp=Z,1µm,1.4s
MEEK  Meekatharra       53.85 255   P       P        03 38 12.4 +0.1
      baz=54,SNR=34
PSA00 Pilbara Seismi    54.13 261   P       P        03 38 13.1 -1.1
PSA00 Pilbara Seismi    54.13 261   IAmb    IAmb     03 38 15.1
      comp=Z,23nm,0.7s
MIDW  Midway            54.16   4   P       P        03 38 14.2  0.0
MIDW                                IAmb    IAmb     03 38 16.4
      comp=Z,1µm,1.1s
MBWA  Marble Bar        54.35 262   P       P        03 38 17.4 +1.6
MBWA  Marble Bar        54.35 262   P       P        03 38 15.8  0.0
MBWA                                        pP       03 39 53.0 +1.3
SOEI  Soe               54.41 277   P       P        03 38 18.7 +2.3
      comp=Z,7µmcomp=Z,14µmcomp=Z,1µm,1.4s
SOEI  Soe               54.41 277   IAmb    IAmb     03 38 21.4
      comp=Z,1µm,1.1s
BLDU  Ballidu           54.59 250   P       P        03 38 17.9 +0.5
      baz=55,SNR=53
MUN   Mundaring         54.74 248   P       P        03 38 19.2 +0.8
      baz=55,SNR=11
NLAI  Namlea            54.90 285   P       P        03 38 20.3 +0.6
      comp=Z,13µmcomp=Z,952nm,1.7s
MORW  Morawa            55.49 252   P       P        03 38 24.2 +0.4
      baz=56,SNR=19
LBMI  Labuha            55.87 288   P       P        03 38 29.2 +2.7
      comp=Z,8µmcomp=Z,733nm,1.3s
SANI  Sanana            56.45 286   P       P        03 38 30.6 +0.1
      comp=Z,7µmcomp=Z,12µmcomp=Z,808nm,0.9s
MMRI  Maumere           56.69 277   P       P        03 38 33.2 +1.0
      comp=Z,5µmcomp=Z,12µmcomp=Z,798nm,1.2s
MMRI  Maumere           56.69 277   IAmb    IAmb     03 38 36.1
      comp=Z,736nm,1.1s
MMRI                                        S        03 45 47.3 +0.4
TNTI  Ternate           56.72 290   P       P        03 38 32.9 +0.5
      comp=Z,4µmcomp=Z,8µmcomp=Z,689nm,1.5s
TNTI  Ternate           56.72 290   P       P        03 38 32.3 -0.1
TNTI                                IAmb    IAmb     03 38 35.5
      comp=Z,815nm,1.1s
BASI  Baing, Sumba      57.51 274   P       P        03 38 39.5 +1.7
      comp=Z,3µmcomp=Z,9µmcomp=Z,705nm,1.4s
CASY  Casey             57.79 206   P       P        03 38 38.7 -0.2
BBSI  Bau Bau           57.79 281   P       P        03 38 41.5 +1.8
      comp=Z,117µmcomp=Z,2µmcomp=Z,91nm,1.2s
GIRL  Giralia           58.77 258   P       P        03 38 48.5 +2.3
      baz=59,SNR=22
WBSI  Waikabubak, Su    58.81 275   P       P        03 38 47.6 +0.9
      comp=Z,6µmcomp=Z,430nm,1.4s
KMSI  Cibinong          59.50 287   P       P        03 38 52.1 +0.8
      comp=Z,654nm,0.8s
LUWI  Luwuk             59.73 285   P       P        03 38 54.0 +1.2
      comp=Z,14µmcomp=Z,1µm,1.3s
LUWI  Luwuk             59.73 285   P       P        03 38 53.1 +0.2
LUWI                                IAmb    IAmb     03 38 56.3
      comp=Z,1µm,1.0s
BKSI  Bulukumba         60.03 279   P       P        03 38 55.1 +0.3
      comp=Z,3µmcomp=Z,5µmcomp=Z,502nm,0.9s
PLAI  Plampang          60.60 275   P       P        03 38 59.1 +0.5
      comp=Z,3µmcomp=Z,9µmcomp=Z,947nm,1.0s
APSI  Ampana            60.77 285   P       P        03 39 01.1 +1.4
      comp=Z,6µmcomp=Z,605nm,1.2s
SPSI  Sidrap Palu       60.97 281   P       P        03 39 00.7 -0.3
      comp=Z,3µmcomp=Z,275nm,1.0s
MRSI  Marisa            61.21 286   P       P        03 39 02.3 -0.3
      comp=Z,4µmcomp=Z,4µmcomp=Z,264nm,1.4s
DAV   Davao City (W)    61.66 295   P       P        03 39 05.8 +0.3
      comp=Z,483nm,0.6s,baz=67,slow=1.8,SNR=18
DAV   Davao City (W)    61.66 295⇓iP     P        03 39 05.9 +0.3
DAV   Davao City (W)    61.66 295   P       P        03 39 07.0 +1.4
KCP   Kidapawan         62.03 294⇓eP     P        03 39 08.7 +0.6
CTBH  Cotabato--PC H    62.84 294⇑iP     P        03 39 14.2 +1.0
MPSI  Mapaga            62.91 285   P       P        03 39 13.7  0.0
      comp=Z,4µmcomp=Z,3µmcomp=Z,263nm,1.4s
DNP   Denpasar          62.96 274   P       P        03 39 16.3 +2.3
      comp=Z,28µmcomp=Z,792nm,1.5s
RPN   Rapa Nui          62.98 109   P       P        03 39 16.0 +2.0
      comp=Z,186nm,1.1s,baz=317,slow=3.4,SNR=8.5
RPN   Rapa Nui          62.98 109   P       P        03 39 16.0 +2.0
RPN   Rapa Nui          62.98 109   P       P        03 39 13.8 -0.2
SRBI  Singaraja         63.21 274   P       P        03 39 16.2 +0.6
      comp=Z,6µmcomp=Z,426nm,1.4s
JCJ   Chichijima        63.86 323   P       P        03 39 20.1 +0.6
      comp=Z,1µm,1.2s,baz=165,slow=5.0,SNR=28
JCJ                                 S       S        03 47 14.2 -1.7
      comp=Z,45nm,0.8s,baz=337,slow=21,SNR=4.5
QSPA  South Pole Qui    63.93 180   P       P        03 39 20.2 +0.6
QSPA                                IAmb    IAmb     03 39 22.6
      comp=Z,210nm,1.1s
JAGI  Jajag, Banyuwa    64.00 273   P       P        03 39 20.5 -0.2
      comp=Z,6µmcomp=Z,531nm,1.1s
JAGI  Jajag, Banyuwa    64.00 273   P       P        03 39 20.2 -0.5
JAGI                                IAmb    IAmb     03 39 23.1
      comp=Z,479nm,1.0s
KBKI  Kotabaru          64.46 279   P       P        03 39 25.3 +1.7
      comp=Z,1µmcomp=Z,84nm,0.9s
BKB   Balikpapan        64.76 282   P       P        03 39 30.4 +4.8
SMKI  Samarinda         64.88 283   P       P        03 39 30.3 +4.0
GRJI  Gresik            66.16 274   P       P        03 39 35.9 +1.6
      comp=Z,6µmcomp=Z,808nm,0.9s
PWJI  Pagerwojo         66.29 273   P       P        03 39 35.7 +0.5
      comp=Z,4µmcomp=Z,262nm,0.9s
RCP   Roxas             66.51 297⇓eP     P        03 39 36.8 +0.3
PCJI  Pacitan           66.78 272   P       P        03 39 39.4 +1.2
      comp=Z,9µmcomp=Z,863nm,1.4s
WOJI  Wonogiri, Jawa    67.16 272   P       P        03 39 41.5 +1.0
      comp=Z,5µmcomp=Z,398nm,1.2s
UGM   Wanagama          67.49 272   P       P        03 39 44.1 +1.5
      comp=Z,3µmcomp=Z,3µmcomp=Z,368nm,1.1s
UGM   Wanagama          67.49 272   P       P        03 39 42.5 -0.1
UGM                                 IAmb    IAmb     03 39 45.8
      comp=Z,391nm,1.1s
SMRI  Semarang          67.93 273   P       P        03 39 48.1 +2.8
      comp=Z,6µmcomp=Z,260nm,1.6s
SMRI  Semarang          67.93 273   P       P        03 39 45.6 +0.3
SMRI                                IAmb    IAmb     03 39 50.1
      comp=Z,185nm,1.0s
SPMM  Sapulut           68.05 287   P       P        03 39 48.0 +2.0
TGY   Tagaytay City     69.41 298   P       P        03 39 54.9 +0.7
      comp=Z,168nm,0.3s,baz=14,slow=1.1,SNR=17
TGY                                 S       S        03 48 22.8 +0.9
      comp=Z,114nm,0.3s,baz=102,slow=23,SNR=4.5
JHJ2  Mitsune           69.88 325   IAmb    IAmb     03 39 59.8
      comp=Z,739nm,1.1s
JHJ   Hachijo jima 2    69.90 325   P       P        03 39 57.2 +0.5
      comp=Z,264nm,0.7s,baz=50,slow=21,SNR=7.6
CISI  Cisompet, Garu    70.07 271   P       P        03 39 58.5 +0.2
      comp=Z,4µmcomp=Z,430nm,1.3s
CISI  Cisompet, Garu    70.07 271   IAmb    IAmb     03 40 00.7
      comp=Z,412nm,1.0s
SBUM  Sibu              70.63 283   P       P        03 40 01.1 -0.4
SBUM                                pP      pP       03 41 44.7 +0.4
SBUM  Sibu              70.63 283   P       P        03 40 03.0 +1.5
CNJI  Cibinong          70.79 271   P       P        03 40 02.8 +0.3
      comp=Z,5µmcomp=Z,564nm,1.1s
XMIS  Christmas Isla    70.81 268   IAmb    IAmb     03 40 06.0
      comp=Z,230nm,0.9s
SKJI  Sukabumi          71.44 271   P       P        03 40 07.9 +1.6
      comp=Z,5µmcomp=Z,486nm,1.1s
DBJI  Dramaga           71.45 272   P       P        03 40 07.4 +1.0
      comp=Z,697nm,1.4s
KSM   Kuching           71.85 281   IAmb    IAmb     03 40 12.2
      comp=Z,571nm,1.1s
KSM   Kuching           71.85 281   P       P        03 40 10.0 +1.3
JOW   Kunigami          72.02 313   P       P        03 40 09.8 +0.4
      comp=Z,32nm,1.1s,baz=155,slow=12,SNR=20
JOW   Kunigami          72.02 313   IAmb    IAmb     03 40 13.5
      comp=Z,237nm,1.1s
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MJAR  Matsushiro Arr    73.39 327   P       P        03 40 17.3 +0.2
      comp=Z,260nm,1.1s,baz=158,slow=5.5,SNR=139
MJAR                                pP      pwP      03 42 04.7 -2.2
      comp=Z,3.6nm,0.7s,baz=290,slow=12,SNR=1.6
MJAR                                S       S        03 49 05.9  0.0
      comp=Z,0.8nm,0.6s,baz=116,slow=8.5,SNR=4.0
MJAR                                PKKP    PKKPdf   03 59 40.7 +5.2
      comp=Z,2.0nm,0.9s,baz=341,slow=4.6,SNR=4.1
MJAR                                PKP2bc           04 07 45.9
      comp=Z,0.8nm,0.6s,baz=350,slow=2.8,SNR=4.5
MJAR  Matsushiro Arr    73.39 327   P       P        03 40 16.1 -1.0
MJAR                                        pP       03 42 00.9 -0.2
MAJO  Matsushiro        73.39 327   P       P        03 40 16.7 -0.4
MAJO                                pmax    pmax
      comp=Z,145nm,1.1s
MAJO  Matsushiro        73.39 327   P       P        03 40 16.7 -0.4
MAT   Matsushiro        73.39 327   P       P        03 40 17.1  0.0
MAT                                 S       S        03 49 06.2 +0.3
KASI  Kota Agung        73.92 272   P       P        03 40 20.6  0.0
      comp=Z,4µmcomp=Z,420nm,1.0s
YOJ   Yonaguni jima     74.07 308   IAmb    IAmb     03 40 23.4
      comp=Z,595nm,1.1s
LWLI  Liwa              74.53 272   P       P        03 40 25.0 +0.8
      comp=Z,250nm,1.1s
MDSI  Maura Dua         74.65 273   P       P        03 40 24.0 -0.7
JNU   Nakatsue          74.79 319   P       P        03 40 25.7 +0.6
      comp=Z,120nm,1.0s,baz=85,slow=3.2,SNR=24
MAW   Mawson            75.40 201   P       P        03 40 29.0 +1.1
      baz=75,SNR=29
MAW   Mawson            75.40 201   P       P        03 40 29.4 +1.5
      comp=Z,41nm,0.8s,baz=119,slow=6.4,SNR=32
MAW                                 pP      pP       03 42 14.3 +1.5
      comp=Z,26nm,0.9s,baz=86,slow=7.3,SNR=2.9
MAW   Mawson            75.40 201   P       P        03 40 28.4 +0.4
MAW                                 *PP     pP       03 42 14.0 +1.1
MAW   Mawson            75.40 201   P       P        03 40 28.4 +0.4
MAW                                         pP       03 42 14.0 +1.1
TATO  Taipei            75.47 308   P       P        03 40 29.4 +0.3
TATO  Taipei            75.47 308   P       P        03 40 28.6 -0.5
ERM   Erimo             75.60 333c iP     P        03 40 32.5 +3.1
ERM                                 pmax    pmax
      comp=Z,321nm,1.3s
ERM   Erimo             75.60 333   P       P        03 40 29.5 +0.1
MNAI  Manna             75.80 272   P       P        03 40 33.5 +2.3
      comp=Z,4µmcomp=Z,386nm,1.2s
MNAI  Manna             75.80 272   P       P        03 40 30.2 -1.0
MNAI                                IAmb    IAmb     03 40 33.9
      comp=Z,382nm,1.1s
YUK   Yuzh-Kuril'sk     76.27 336d iP     P        03 40 34.0 +1.0
YUK                               e*PP    pwP      03 42 21.0 -2.7
YUK                               i S     S        03 49 35.0 -1.7
YUK                               eSS     SS       03 54 40.6 -4.3
YUK                                 pmax    pmax
      comp=Z,892nm,1.5s
YUK                                 pmax    pmax
      comp=N,986nm,1.2s
YUK                                 pmax    pmax
      comp=E,684nm,1.4s
KSI   Kapahiang         76.43 273   P       P        03 40 34.9 +0.1
      comp=E,478nm,1.3s
KUR   Kuril'sk          76.60 338c iP     P        03 40 37.5 +2.7
KUR                               i                  03 40 46.4
KUR                               i                  03 43 14.9
KUR                               i S     S        03 49 44.0 +3.8
KUR                               e                  03 50 07.6
KUR                                 pmax    pmax
      comp=Z,1µm,1.5s
KUR                                 pmax    pmax
      comp=N,216nm,1.7s
KUR                                 pmax    pmax
      comp=E,243nm,1.8s
KUR                                 pmax    pmax
      comp=Z,3µm,2.4s
KUR                                 MLR     MLR
      comp=Z,619nm,12.0s
TPRI  Tanjung Pinang    76.72 278   P       P        03 40 38.8 +2.5
      comp=Z,39µmcomp=Z,93nm,0.4s
PMSA  Palmer Station    77.10 157   P       P        03 40 38.9 +1.6
      comp=Z,38nm,0.8s,baz=344,slow=2.5,SNR=5.6
PMSA  Palmer Station    77.10 157   P       P        03 40 37.5 +0.1
QZH   Quanzhou          77.54 306⇑iP     P        03 40 41.0 +0.6
QZH                                 pP      pwP      03 42 28.8 -3.0
QZH                                 sP      sP       03 43 16.8 +0.3
QZH                                 S       S        03 49 49.8 -1.3
QZH                                 ScS     ScS      03 50 10.5 -2.4
QZH                                 sS      sS       03 53 03.8 +3.6
QZH                                 pmax    pmax
      comp=Z,140nm,1.4s
QZH                                 pmax    pmax
      comp=Z,460nm,3.9s
ASAJ  Asahikawa         77.58 334   P       P        03 40 42.4 +2.2
      comp=Z,345nm,0.9s,baz=212,slow=8.7,SNR=95
ASAJ                                S       S        03 49 58.0 +7.3
      comp=Z,11nm,1.1s,baz=18,slow=29,SNR=18
MYKOM Kota Tinggi       77.72 278   P       P        03 40 43.0 +1.3
ADK   Adak              77.79   3   P       P        03 40 40.9 -0.2
ADK                                 pmax    pmax
      comp=Z,1µm,1.1s
ADK   Adak              77.79   3   P       P        03 40 40.9 -0.2
COCO  West Island       78.00 262   P       P        03 40 50.8 +7.6
RGRI  Rengat            78.11 275   P       P        03 40 47.0 +3.1
      comp=Z,30µmcomp=Z,384nm,1.2s
KRJI  Kerinci           78.13 274   P       P        03 40 45.6 +1.5
      comp=Z,273nm,1.3s
SMY   Shemya            78.69 357   IAmb    IAmb     03 40 49.6
      comp=Z,512nm,1.1s
TJN   Taejon            79.13 320c iP     P        03 40 50.3 +1.6
PPSI  Pulau Pagai       79.14 272   P       P        03 40 51.6 +2.3
      comp=Z,5µmcomp=Z,410nm,1.7s
SKR   Severo-Kuril’s    79.20 345c iP     P        03 40 48.7  0.0
SKR                               e*PP    pwP      03 42 37.6 -2.4
SKR                               e                  03 43 27.2
SKR                               i S     S        03 50 10.1 +2.8
SKR                                 pmax    pmax
      comp=Z,2µm,2.6s
SKR                                 pmax    pmax
      comp=Z,291nm,1.4s
HKC   Hong Kong Obse    79.33 301 ⇑P     P        03 40 52.0 +1.9
SSE   Sheshan           79.50 312   P       P        03 40 51.5 +0.7
SSE                                 pP      pwP      03 42 41.5 -1.1
SSE                                 sP      sP       03 43 29.8 +2.3
SSE                                 S       S        03 50 08.0 -3.2
SSE                                 sS      sS       03 53 20.5 -0.4
SSE                                 pmax    pmax
      comp=Z,60nm,1.2s
SSE                                 pmax    pmax
      comp=Z,210nm,4.1s
PDSI  Padang            79.54 274   P       P        03 40 51.0 -0.5
      comp=Z,85nm,1.5s
KSRS  Korea Array       79.56 321   P       P        03 40 52.0 +1.1
      comp=Z,78nm,1.0s,baz=142,slow=5.1,SNR=104
KSRS                                pP      pwP      03 42 42.0 -0.8
      comp=Z,17nm,1.0s,baz=136,slow=5.9,SNR=3.7
KSRS                                PP      PP       03 43 54.8 -5.9
      comp=Z,11nm,0.9s,baz=139,slow=7.5,SNR=4.5
KSAR  Wonju Array Be    79.57 321   P       P        03 40 51.1 +0.1
KSAR  Wonju Array Be    79.57 321   P       P        03 40 51.1 +0.1
BKNI  Bangkinang        79.57 276   P       P        03 40 53.5 +1.9
      comp=Z,216nm,0.5s
KS19  Wonju Array Si    79.62 321   P       P        03 40 51.0 -0.3
YSS   Yuzh-Sakhalins    79.90 336α iP     P        03 40 54.3 +1.8
YSS                               e                  03 40 58.2
YSS                               e*PP    pwP      03 42 41.7 -2.6
YSS                               e*SP    sP       03 43 33.2 +3.9
YSS                               e                  03 43 58.7
YSS                               eS      S        03 50 15.9 +1.2
YSS                               e                  03 50 29.2
YSS                               eSSS    SSS      03 59 05.0
YSS                                 pmax    pmax
      comp=Z,3µm,2.7s
YSS                                 pmax    pmax
      comp=Z,850nm,1.1s
YSS                                 pmax    pmax
      comp=N,210nm,1.4s
YSS                                 pmax    pmax
      comp=E,260nm,1.4s
YSS                                 smax    smax
      comp=N,12µm,5.9s
YSS                                 smax    smax
      comp=E,5µm,9.2s
YSS                                 MLR     MLR
      comp=Z,900nm,15.0s
YSS                                 MLR     MLR
      comp=E,400nm,12.0s
YSS   Yuzh-Sakhalins    79.90 336   P       P        03 40 52.8 +0.3
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YSS                                 IAmb    IAmb     03 40 56.9
      comp=Z,1µm,1.1s
INCN  Inchon            80.32 320   P       P        03 40 56.9 +2.0
INCN  Inchon            80.32 320   P       P        03 40 54.6 -0.4
INCN                                pmax    pmax
      comp=Z,62nm,1.2s
INCN  Inchon            80.32 320   P       P        03 40 54.6 -0.4
GZH   Guangzhou         80.40 302   P       P        03 40 57.5 +1.8
GZH                                 pP      pP       03 42 43.0 +0.9
GZH                                 S       S        03 50 22.0 +1.1
GZH                                 sS      sS       03 53 29.5 -2.0
GZH                                 pmax    pmax
      comp=Z,530nm,4.0s
SISI  Saibi             80.59 273   P       P        03 40 59.3 +2.3
      comp=Z,2µmcomp=Z,90nm,1.5s
UNV   Unalaska Valle    80.62   8   P       P        03 40 55.3 -0.8
UNV                                 IAmb    IAmb     03 40 58.1
      comp=Z,732nm,1.1s
SYO   Syowa Base        80.66 194⇑iP     P        03 40 55.0 -1.3
SYO   Syowa Base        80.66 194⇓ipP    pP       03 42 41.0 -1.9
USHA  Ushuaia           80.77 147   P       P        03 40 58.9 +1.8
      comp=Z,25nm,1.0s,baz=208,slow=7.0,SNR=5.6
USHA                                pP      pP       03 42 49.0 +4.4
      comp=Z,32nm,1.1s,baz=265,slow=7.1,SNR=4.0
TEY   Ternei            80.83 331⇓eP     P        03 40 58.8 +1.4
TEY                               e                  03 50 28.3
TEY                                 pmax    pmax
      comp=Z,50nm,1.5s
PET   Petropavlovsk     80.87 348α iP     P        03 40 57.4  0.0
PET                               e*PP    pwP      03 42 47.6 -1.7
PET                               e*SP    sP       03 43 33.2 -1.4
PET                               e                  03 44 11.0
PET                               i S     S        03 50 24.2 -0.2
PET                               eSS     SS       03 55 50.5 -2.5
PET                                 pmax    pmax
      comp=Z,2µm,3.0s
PET                                 pmax    pmax
      comp=Z,283nm,1.8s
PET                                 pmax    pmax
      comp=Z,1µm,14.8s
PET                                 MLR     MLR
      comp=Z,700nm,17.0s
PET   Petropavlovsk     80.87 348   P       P        03 40 57.2 -0.2
QIZ   Qiongzhong        80.98 296   P       P        03 41 00.0 +1.2
QIZ                                 pP      pP       03 42 48.0 +2.6
QIZ                                 sP      sP       03 43 35.3 -0.6
QIZ                                 S       S        03 50 25.0 -2.0
QIZ                                 sS      sS       03 53 41.8 +4.3
QIZ                                 pmax    pmax
      comp=Z,61nm,1.4s
QIZ   Qiongzhong        80.98 296   P       P        03 40 58.2 -0.6
AKUT  Akutan            81.01   9   P       P        03 40 57.5 -0.6
AKUT                                IAmb    IAmb     03 41 01.0
      comp=Z,443nm,1.1s
H06S1 SOCORRO T         81.12  64   P       P        03 41 00.5 +1.0
      SNR=11
PEA0B Petropavlovsk-    81.14 347c iP     P        03 40 59.3 +0.4
PEA0B Petropavlovsk-    81.14 347   IAmb    IAmb     03 41 07.9
      comp=Z,290nm,1.1s
PETK  Petropavlovsk-    81.14 347   P       P        03 40 59.4 +0.5
      comp=Z,479nm,1.1s,baz=122,slow=5.9,SNR=146
PETK                                pP      pwP      03 42 49.7 -1.1
      comp=Z,14nm,1.0s,baz=168,slow=7.6,SNR=1.5
PETK  Petropavlovsk-    81.14 347   P       P        03 40 59.2 +0.3
PETK                                pP      pP       03 42 45.5 -0.2
H06N1 SOCORRO T-PHAS81.17  64   P       P        03 41 00.9 +1.1
H06E1 SOCORRO T-PHAS81.17  64   P       P        03 41 00.5 +0.6
      SNR=45
IPM   Ipoh              81.45 279   P       P        03 41 02.0 +0.6
MSHR  Mys Shultsa       81.51 326c iP     P        03 41 02.4 +1.4
VLA   Vladivostok       81.55 327c iP     P        03 41 02.3 +1.1
VLA                                 pmax    pmax
      comp=Z,178nm,1.0s
NJ2   Nanjing           81.65 312 eP      P        03 41 03.3 +1.3
NJ2                                 pP      pwP      03 42 51.8 -2.2
NJ2                                 sP      sP       03 43 41.3 +2.2
NJ2                                 PP      PP       03 44 16.3 -1.5
NJ2                                 SKS     SKSac    03 50 32.5 -1.7
NJ2                                 S       SKKSac   03 50 36.0 -2.4
NJ2                                 sS      sS       03 53 48.3 +4.0
NJ2                                 SS      SS       03 56 09.8 +4.7
NJ2                                 pmax    pmax
      comp=Z,140nm,1.0s
NJ2                                 pmax    pmax
      comp=Z,660nm,4.6s
KULM  Kulim             82.15 280   P       P        03 41 07.0 +2.0
USRK  Ussuriysk Ar.     82.30 328   P       P        03 41 06.3 +1.3
      comp=Z,342nm,1.1s,baz=126,slow=3.3,SNR=168
USRK                                S       S        03 50 41.2 +2.0
      comp=Z,3.3nm,1.1s,baz=157,slow=12,SNR=4.2
USRK                                PKPPKP  P'P'df   04 07 32.7 +0.9
      comp=Z,1.3nm,0.8s,baz=318,slow=2.6,SNR=5.7
USRK  Ussuriysk Ar.     82.30 328   P       P        03 41 05.0  0.0
USRK  Ussuriysk Ar.     82.30 328   P       P        03 41 05.0  0.0
USA0B Ussuriysk Arra    82.31 328c iP     P        03 41 06.3 +1.3
SNAA  Sanae             82.42 179   P       P        03 41 06.0 +0.6
SNAA  Sanae             82.42 179   S       S        03 50 36.1 -3.8
      comp=Z,8.4nm,1.0s,baz=359,slow=23,SNR=17
SNAA                                PKKPbc  PKKPbc   03 59 26.8 -3.1
      comp=Z,6.2nm,1.0s,baz=250,slow=0.3,SNR=9.0
SNAA  Sanae             82.42 179c iP     P        03 41 06.1 +0.6
SNAA  Sanae             82.42 179   P       P        03 41 05.4  0.0
RPSI  Rantau Prapat     82.52 277   P       P        03 41 06.0 -0.9
RPSI                                        pP       03 42 53.3 -0.5
PSI   Prapat            82.56 277   PKKPbc  PKKPbc   03 59 28.1 +0.3
      comp=Z,2.2nm,0.4s,baz=213,slow=3.9,SNR=6.2
PSI   Prapat            82.56 277   P       P        03 41 06.0 -1.3
PSI                                 *PP     pP       03 42 53.3 -0.9
PSI                                 pmax    pmax
      comp=Z,103nm,1.1s
VNA3  Neumayer Olymp    82.66 177   P       P        03 41 07.1 +0.6
CNBA  Chernabura Isl    82.68  12   IAmb    IAmb     03 41 10.1
      comp=Z,636nm,1.2s
SNCC  San Nicolas Is    82.92  48   IAmb    IAmb     03 41 15.2
      comp=Z,350nm,1.1s
SNCC  San Nicolas Is    82.92  48   P       P        03 41 09.6 +1.2
      baz=232,SNR=9.9
NVL   N'lazarevskaya    82.93 184⇑iP     P        03 41 07.1 -0.8
NVL                               e*PP    pP       03 42 57.3 +2.1
NVL                               e                  03 44 37.6
NVL                               eSS     SS       03 56 29.6 +8.9
NVL                                 pmax    pmax
      comp=Z,80nm,0.8s
VNA2  Neumayer--Watz    83.07 178   P       P        03 41 09.6 +1.0
      baz=154,slow=4.4
GSI   Gunungsitoli      83.11 275   P       P        03 41 12.3 +2.5
      comp=Z,18µmcomp=Z,1µm,1.5s
TYV   Tymovskoe         83.23 338 eP      P        03 41 11.5 +2.0
TYV                               eS      S        03 50 50.3 +2.3
TYV                                 pmax    pmax
      comp=Z,6µm,4.8s
TYV                                 pmax    pmax
      comp=Z,478nm,1.3s
TYV                                 smax    smax
      comp=E,192nm,2.2s
TYV                                 smax    smax
      comp=E,11µm,5.8s
SCZ2  Santa Cruz Isl    83.30  47   P       P        03 41 11.5 +1.2
      baz=232,SNR=46
VNA1  Neumayer--Stat    83.31 177   P       P        03 41 10.9 +1.2
SCI2  San Clemente I    83.41  48   P       P        03 41 11.8 +1.0
      baz=233,SNR=44
SBC   Santa Barbara     83.52  47   P       P        03 41 13.0 +1.6
      baz=232,SNR=21
PKM   Mcpherson Peak    83.73  46   P       P        03 41 13.9 +1.2
      baz=232,SNR=181
BLG   Laguna Peak, P    83.74  47   P       P        03 41 13.1 +0.5
      baz=233,SNR=17
CIS   Catalina Islan    83.75  48   P       P        03 41 13.3 +0.7
      baz=233,SNR=49
MDJ   Mudanjiang        83.78 327   P       P        03 41 13.8 +1.4
MDJ                                 PcP     PcP      03 41 16.0 +0.7
MDJ                                 pP      pwP      03 43 03.0 -2.5
MDJ                                 sP      sP       03 43 53.5 +3.3
MDJ                                 PP      PP       03 44 32.5 -2.3
MDJ                                 ScS     ScS      03 51 04.5 +1.3
MDJ                                 pmax    pmax
      comp=E,550nm,1.4s
MDJ                                 pmax    pmax
      comp=E,2µm,3.6s
SAO   San Andreas Ge    83.85  44   P       P        03 41 13.0  0.0
SAO                                 pmax    pmax
      comp=Z,912nm,1.2s
SAO   San Andreas Ge    83.85  44   P       P        03 41 13.0  0.0
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WHN	**Wuhan**	**83.86**	**308**	⇓P	**P**	**03 41 14.0**	**+0.9**
WHN				pP	**pwP**	**03 43 04.5**	**-2.1**
WHN				sP	**sP**	**03 43 52.3**	**+1.5**
WHN				PP	**PP**	**03 44 35.8**	**+0.1**
WHN				SKS	**SKSac**	**03 50 46.0**	**-2.6**
WHN				S	**SKKSac**	**03 50 49.3**	**-5.8**
WHN				pmax	pmax		
	comp=Z,590nm,1.3s						
SMMC	**Simmler**	**83.87**	**46**	P	**P**	**03 41 14.7**	**+1.6**
	baz=232,SNR=130						
PMPB	**Monarch Peak**	**83.91**	**45**	P	**P**	**03 41 13.0**	**-0.4**
PAGB	**Antelope Grade**	**83.96**	**45**	IAmb	IAmb	03 41 23.2	
	comp=Z,330nm,1.1s						
FMP	**Fort Macarthur**	**84.02**	**48**	P	**P**	**03 41 14.9**	**+1.0**
	baz=233,SNR=23						
DL2	**Dalian**	**84.20**	**319**	P	**P**	**03 41 15.3**	**+0.7**
DL2				pP	**pP**	**03 43 04.5**	**+2.3**
DL2				sP	**sP**	**03 43 55.8**	**+3.4**
DL2				PP	**PP**	**03 44 37.0**	**-1.3**
DL2				SKS	**SKSac**	**03 50 46.3**	**-4.0**
DL2				S	**S**	**03 51 01.3**	**+3.2**
DL2				sS	**sS**	**03 54 14.0**	**+3.2**
DL2				pmax	pmax		
	comp=Z,190nm,1.3s						
DL2				pmax	pmax		
	comp=Z,380nm,8.9s						
OSI	**Osito Audit: C**	**84.27**	**47**	P	**P**	**03 41 16.3**	**+1.1**
	baz=233						
HOPS	**Hopland Field**	**84.28**	**41**	P	**P**	**03 41 14.6**	**-0.5**
HOPS				IAmb	IAmb	03 41 22.2	
	comp=Z,245nm,0.9s						
DECC	**Green Verdugo**	**84.31**	**48**	P	**P**	**03 41 16.0**	**+0.6**
	baz=233,SNR=38						
GDXM	**Geysers**	**84.32**	**42**	IAmb	IAmb	03 41 22.2	
	comp=Z,498nm,1.2s						
109C	**Camp Elliot, M**	**84.33**	**49**	IAmb	IAmb	03 41 19.8	
	comp=Z,796nm,1.1s						
109C	**Camp Elliot, M**	**84.33**	**49**	P	**P**	**03 41 16.3**	**+0.8**
	baz=234,SNR=125						
PASC	**Pasadena Art C**	**84.36**	**48**	IAmb	IAmb	03 41 19.0	
	comp=Z,768nm,1.1s						
LPIG	**La Paz**	**84.44**	**60**	P	**P**	**03 41 17.3**	**+1.1**
	comp=Z,729nm,1.2s,baz=227,slow=0.5,SNR=49						
MWC	**Mount Wilson**	**84.48**	**48**	IAmb	IAmb	03 41 22.3	
	comp=Z,189nm,1.1s						
ARVC	**Arvin**	**84.51**	**47**	P	**P**	**03 41 17.2**	**+0.9**
	baz=233,SNR=200						
SRIG	**Santa Rosalia**	**84.67**	**56**	IAmb	IAmb	03 41 25.2	
	comp=Z,256nm,1.1s						
MURC	**Murrieta**	**84.69**	**49**	P	**P**	**03 41 18.4**	**+1.1**
	baz=234,SNR=345						
BFSC	**Mount Baldy Ra**	**84.75**	**48**	P	**P**	**03 41 18.4**	**+0.7**
	baz=234,SNR=321						
VES	**Vestal, Richgr**	**84.78**	**46**	P	**P**	**03 41 18.3**	**+0.7**
	baz=232,SNR=240						
MONP2	**Monument Peak**	**84.80**	**50**	P	**P**	**03 41 19.1**	**+1.1**
	baz=234,SNR=164						
IKP	**In-Ko-Pah, Jac**	**84.87**	**50**	P	**P**	**03 41 19.7**	**+1.5**
	baz=234,SNR=240						
VOG	**Valley Oaks Go**	**84.88**	**45**	P	**P**	**03 41 18.7**	**+0.6**
	baz=232,SNR=20						
JCC	**Jacoby Creek,**	**84.91**	**40**	IAmb	IAmb	03 41 31.6	
	comp=Z,169nm,1.1s						
EDW2	**Edwards Air Fo**	**84.91**	**47**	P	**P**	**03 41 19.5**	**+1.1**
	baz=233,SNR=474						
SNY	**Shenyang**	**84.99**	**322**	⇑P	**P**	**03 41 19.0**	**+0.6**
SNY				pP	**pwP**	**03 43 09.5**	**-2.5**
SNY				sP	**sP**	**03 43 59.3**	**+2.9**
SNY				PP	**PP**	**03 44 43.0**	**-1.6**
SNY				pmax	pmax		
	comp=Z,100nm,1.3s						
SNY				pmax	pmax		
	comp=Z,1µm,2.9s						
ISA	**Isabella, Lake**	**85.07**	**46**	P	**P**	**03 41 20.1**	**+1.0**
	baz=233,SNR=564						
KHMM	**Horse Mountain**	**85.11**	**40**	IAmb	IAmb	03 41 23.6	
	comp=Z,776nm,1.1s						
PFO	**Pinyon Flats O**	**85.19**	**49**	*c i*P	**P**	**03 41 20.9**	**+1.1**
PFO				pmax	pmax		
	comp=Z,833nm,1.1s						
PFO	**Pinyon Flats O**	**85.19**	**49**	P	**P**	**03 41 19.9**	**+0.1**
PFO				IAmb	IAmb	03 41 24.5	
	comp=Z,322nm,1.1s						
PFO	**Pinyon Flats O**	**85.19**	**49**	P	**P**	**03 41 20.9**	**+1.1**
	baz=234,SNR=176						
XPFO	**Pion Flat**	**85.19**	**49**	P	**P**	**03 41 19.7**	**-0.2**
XPFO				IAmb	IAmb	03 41 24.5	
	comp=Z,293nm,1.1s						
O02D	**Mt. Diablo Mer**	**85.21**	**41**	P	**P**	**03 41 21.5**	**+1.8**
	baz=230,SNR=496						
SWSC	**Sam W. Stewart**	**85.26**	**50**	P	**P**	**03 41 21.4**	**+1.5**
	baz=235,SNR=175						
BBRC	**Big Bear Solar**	**85.26**	**48**	P	**P**	**03 41 21.4**	**+1.1**
	baz=234,SNR=44						
CMB	**Columbia Colle**	**85.30**	**44**	IAmb	IAmb	03 41 24.2	
	comp=Z,338nm,1.0s						
TIA	**Tai'an**	**85.31**	**314**	P	**P**	**03 41 21.5**	**+1.3**
TIA				pP	**pP**	**03 43 10.8**	**+2.7**
TIA				sP	**sP**	**03 44 00.8**	**+2.6**
TIA				pmax	pmax		
	comp=Z,230nm,1.3s						
TIA				pmax	pmax		
	comp=Z,750nm,3.7s						
CN2	**Changchun**	**85.31**	**324**	*e*P	**P**	**03 41 20.8**	**+0.8**
CN2				pP	pwP	03 43 11.0	-2.6
CN2				pmax	pmax		
	comp=Z,700nm,1.3s						
LHMI	**Lhok Sumawe**	**85.41**	**278**	IAmb	IAmb	03 41 24.8	
	comp=Z,239nm,1.0s						
GRNR	**Gornyy**	**85.43**	**334**	⇑*i*P	**P**	**03 41 22.4**	**+2.0**
GRNR				*e*		03 44 02.6	
GRNR				*e*S	**S**	**03 51 08.0**	**-1.6**
GRNR				pmax	pmax		
	comp=Z,440nm,1.1s						
GRNR				smax	smax		
	comp=N,10.0nm,0.7s						
MLSI	**Meulaboh, Aceh**	**85.47**	**277**	P	**P**	**03 41 22.8**	**+1.3**
	comp=N,3µmcomp=N,298nm,1.3s						
LRMC	**Laurel Mtn Rad**	**85.47**	**47**	P	**P**	**03 41 22.2**	**+1.0**
	baz=233,SNR=121						
AFDM	**Forest Hills D**	**85.51**	**43**	IAmb	IAmb	03 41 25.2	
	comp=Z,376nm,1.1s						
RRX	**Edison Barstow**	**85.57**	**48**	P	**P**	**03 41 22.7**	**+1.2**
	baz=234,SNR=7.5						
ORV	**Oroville**	**85.57**	**42**	IAmb	IAmb	03 41 26.8	
	comp=Z,213nm,1.1s						
WDC	**Whiskeytown Da**	**85.61**	**40**	IAmb	IAmb	03 41 32.9	
	comp=Z,154nm,1.1s						
BELC	**Belle Mtn. Jos**	**85.73**	**49**	P	**P**	**03 41 23.9**	**+1.4**
	baz=234,SNR=230						
N02D	**Trinity Center**	**85.77**	**40**	P	**P**	**03 41 24.0**	**+1.6**
	baz=230,SNR=210						
CWC	**Cottonwood Cre**	**85.79**	**46**	P	**P**	**03 41 23.4**	**+0.7**
	baz=233						
NKL	**Nikolayevsk**	**85.81**	**338**	*e*P	**P**	**03 41 23.3**	**+1.2**
NKL				*e*		03 44 04.3	
NKL				*e*S	**S**	**03 51 11.5**	**-1.5**
NKL				pmax	pmax		
	comp=N,5.0nm,1.1s						
NKL				pmax	pmax		
	comp=E,13nm,1.1s						
NKL				pmax	pmax		
	comp=Z,928nm,1.1s						
NKL				smax	smax		
	comp=N,8.0nm,2.6s						
NKL				smax	smax		
	comp=E,51nm,4.8s						
O03E	**Paynes Creek**	**85.86**	**41**	P	**P**	**03 41 23.7**	**+0.9**
	baz=230,SNR=243						
O03E				S	**S**	**03 51 20.9**	**+6.5**
	baz=230						
MDPB	**Devils Postpil**	**85.87**	**44**	IAmb	IAmb	03 41 28.6	
	comp=Z,226nm,1.2s						
BC3	**Big Chuckawall**	**85.90**	**49**	P	**P**	**03 41 24.9**	**+1.6**
	baz=235,SNR=268						
BC3				S	S	03 51 25.9	+11
	baz=235						
MPMC	**Manual Prospec**	**85.94**	**47**	P	**P**	**03 41 24.5**	**+1.0**
	baz=234,SNR=228						
MPMC				S	S	03 51 25.2	+10
	baz=234						
GSC	**Goldstone, Bar**	**85.95**	**47**	IAmb	IAmb	03 41 29.0	
	comp=Z,294nm,1.1s						
GSC	**Goldstone, Bar**	**85.95**	**47**	P	**P**	**03 41 24.3**	**+1.0**
	baz=234,SNR=443						
GSC				S	S	03 51 24.8	+9.4
	baz=234						
M02C	**Callahan**	**85.95**	**40**	P	**P**	**03 41 25.2**	**+1.9**
	baz=230,SNR=187						
HEC	**Hector,Ludlow**	**85.98**	**48**	P	**P**	**03 41 24.4**	**+0.8**
	baz=234,SNR=354						
HEC				S	**S**	**03 51 24.1**	**+8.3**
	baz=234						
GLA	**Glamis**	**85.99**	**50**	P	**P**	**03 41 25.3**	**+1.7**
	baz=235,SNR=261						
GLA				S	S	03 51 26.0	+10
	baz=235						
MLAC	**Mammoth, Mammo**	**86.02**	**45**	P	**P**	**03 41 25.1**	**+1.2**
	baz=233,SNR=21						
MLAC				S	S	03 51 26.5	+10
	baz=233						
L02E	**Cave Junction**	**86.03**	**39**	P	**P**	**03 41 25.3**	**+1.8**
	baz=229						
TIN	**Tinemaha, Big**	**86.06**	**45**	P	**P**	**03 41 24.9**	**+1.0**
	baz=233,SNR=17						
TIN				S	**S**	**03 51 25.4**	**+8.9**
	baz=233						
RUBR	**Rubicon Trail**	**86.07**	**43**	IAmb	IAmb	03 41 26.9	
	comp=Z,630nm,1.2s						
WAKR	**Walker**	**86.18**	**44**	IAmb	IAmb	03 41 33.6	
	comp=Z,147nm,1.1s						
OHAK	**Old Harbor**	**86.23**	**15**	IAmb	IAmb	03 41 29.0	
	comp=Z,340nm,1.1s						
YBH	**Yreka Blue Hor**	**86.25**	**40**	IAmb	IAmb	03 41 36.0	
	comp=Z,171nm,1.1s						
K02D	**Willamette Mer**	**86.34**	**38**	P	**P**	**03 41 26.7**	**+1.6**
	baz=229,SNR=87						
IRM	**Iron Mountain**	**86.40**	**49**	P	**P**	**03 41 27.0**	**+1.5**
	baz=235,SNR=427						
IRM				S	S	03 51 29.6	+10
	baz=235						
GMRC	**Granite Mounta**	**86.41**	**48**	P	**P**	**03 41 26.9**	**+1.2**
	baz=235,SNR=277						
GMRC				S	S	03 51 29.3	+9.4
	baz=235						
J01E	**Myrtle Point**	**86.50**	**38**	P	**P**	**03 41 27.2**	**+1.6**
	baz=229,SNR=40						
J01E				S	**S**	**03 51 29.0**	**+8.9**
	baz=229						
GRAC	**Grapevine Rang**	**86.58**	**46**	P	**P**	**03 41 27.7**	**+1.4**
	baz=234,SNR=113						
GRAC				S	**S**	**03 51 30.1**	**+8.9**
	baz=234						
Y12C	**Blythe**	**86.59**	**50**	P	**P**	**03 41 27.8**	**+1.4**
	baz=235,SNR=62						
Y12C				S	S	03 51 31.7	+10
	baz=235						
FURC	**Furnace Creek,**	**86.59**	**46**	P	**P**	**03 41 27.3**	**+1.0**
	baz=234,SNR=24						
FURC				S	**S**	**03 51 30.1**	**+8.9**
	baz=234						
TUQ	**Turquoise Moun**	**86.61**	**48**	P	**P**	**03 41 27.6**	**+1.0**
	baz=234,SNR=44						
TUQ				S	S	03 51 31.5	+10
	baz=234						
SHOC	**Shoshone, Teco**	**86.65**	**47**	P	**P**	**03 41 27.6**	**+1.0**
	baz=234,SNR=55						
SHOC				S	S	03 51 31.9	+10
	baz=234						
HUMO	**Hull Mountain**	**86.68**	**39**	IAmb	IAmb	03 41 38.1	
	comp=Z,266nm,1.1s						
214A	**Organ Pipe Nat**	**86.79**	**52**	P	**P**	**03 41 29.1**	**+1.7**
	baz=236						
214A				S	S	03 51 32.8	+9.4
	baz=236						
M04C	**Macdoel**	**86.79**	**40**	P	**P**	**03 41 28.7**	**+1.4**
	baz=230,SNR=274						
L04D	**Klamath Falls**	**86.80**	**39**	P	**P**	**03 41 28.5**	**+1.2**
	baz=230,SNR=198						
RYN	**Ryan**	**86.82**	**44**	IAmb	IAmb	03 41 35.1	
	comp=Z,177nm,1.2s						
NVAR	**Mina Array Bea**	**86.84**	**44**	P	**P**	**03 41 28.4**	**+0.7**
	comp=Z,372nm,1.0s,baz=223,slow=6.7,SNR=234						
NVAR				PKKPbc	**PKKPbc**	**03 59 19.9**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=104,slow=3.7,SNR=3.6						
NVAR				PKPPKP		04 07 23.3	
	comp=Z,1.3nm,0.9s,baz=82,slow=2.1,SNR=7.3						
NVAR	**Mina Array Bea**	**86.84**	**44**	P	**P**	**03 41 27.1**	**-0.6**
KDAK	**Kodiak Island**	**86.90**	**15**	P	**P**	**03 41 27.0**	**-0.2**
KDAK				pmax	pmax		
	comp=Z,180nm,1.2s						
KDAK	**Kodiak Island**	**86.90**	**15**	P	**P**	**03 41 27.0**	**-0.2**
KDAK				IAmb	IAmb	03 41 36.8	
	comp=Z,180nm,1.1s						
PAHR	**Pah Rah Range**	**86.95**	**43**	IAmb	IAmb	03 41 31.6	
	comp=Z,676nm,1.2s						
NEE2	**Needles Airpor**	**87.10**	**49**	P	**P**	**03 41 30.3**	**+1.6**
	baz=235,SNR=54						
NEE2				S	S	03 51 36.9	+11
	baz=235						
PDMCI	**Parker Dam,Lak**	**87.17**	**50**	P	**P**	**03 41 30.7**	**+1.7**
	baz=236,SNR=297						
PDMCI				S	S	03 51 36.6	+10
	baz=236						
I02D	**Swisshome**	**87.17**	**37**	P	**P**	**03 41 30.6**	**+1.8**
	baz=229,SNR=13						
I03D	**Drain, OR**	**87.17**	**38**	P	**P**	**03 41 30.3**	**+1.5**
	baz=229,SNR=52						
PLCA	**Paso Flores**	**87.17**	**134**	P	**P**	**03 41 30.6**	**+1.4**
	comp=Z,50nm,1.0s,baz=29,slow=4.8,SNR=54						
PLCA				pP	**pP**	**03 43 20.4**	**+1.7**
	comp=Z,19nm,1.1s,baz=24,slow=7.6,SNR=3.7						
PLCA				S	S	03 51 09.0	-18
	comp=Z,2.3nm,1.0s,baz=263,slow=22,SNR=3.0						
PLCA				PKKPbc	**PKKPbc**	**03 59 17.8**	**0.0**
	comp=Z,8.7nm,1.0s,baz=188,slow=1.1,SNR=8.1						
PLCA				PKPPKP		04 07 22.0	
	comp=Z,20nm,1.2s,baz=161,slow=5.7,SNR=6.0						
PLCA	**Paso Flores**	**87.17**	**134**	*e*P	**P**	**03 41 30.8**	**+1.6**
TPNV	**Topopah Spring**	**87.27**	**46**	IAmb	IAmb	03 41 33.4	
	comp=Z,571nm,1.1s						
TPNV	**Topopah Spring**	**87.27**	**46**	P	**P**	**03 41 30.7**	**+1.0**
	baz=234,SNR=244						
TPNV				S	S	03 51 37.1	+9.1
	baz=234						
GYA	**Guiyang**	**87.33**	**301**	⇓*i*P	**P**	**03 41 31.3**	**+1.2**
GYA				pP	pP	03 43 20.5	+1.8
GYA				sP	sP	03 44 10.0	+1.3
GYA				PP	**PP**	**03 45 05.8**	**+2.1**
GYA				SKS	**SKSac**	**03 51 10.3**	**-0.1**
GYA				S	**S**	**03 51 26.8**	**-2.1**
GYA				sS	sS	03 54 43.5	+1.6
GYA				pmax	pmax		
	comp=Z,50nm,1.2s						
GYA				pmax	pmax		
	comp=Z,180nm,5.5s						
K04D	**Chiloquin, OR**	**87.37**	**39**	P	**P**	**03 41 31.3**	**+1.3**
	baz=230,SNR=70						
K04D				S	**S**	**03 51 35.9**	**+7.3**
	baz=230						
J04D	**Umpqua Nationa**	**87.56**	**39**	P	**P**	**03 41 32.3**	**+1.3**
	baz=230,SNR=198						
J04D				S	**S**	**03 51 38.1**	**+7.6**
	baz=230						
EFI	**East Falkland**	**87.65**	**148**	*c i*P	**P**	**03 41 33.1**	**+2.0**
EFI				pmax	pmax		
	comp=Z,205nm,0.9s						
EFI	**East Falkland**	**87.65**	**148**	P	**P**	**03 41 31.4**	**+0.3**
EFI				IAmb	IAmb	03 41 35.4	
	comp=Z,221nm,0.8s						
Y14A	**Wickenburg**	**87.74**	**50**	IAmb	IAmb	03 41 35.7	
	comp=Z,508nm,1.1s						
I04A	**Tendick Farm,**	**87.75**	**38**	P	**P**	**03 41 32.4**	**+0.8**
	baz=230,SNR=86						
MOD	**Modoc Plateau**	**87.75**	**41**	IAmb	IAmb	03 41 37.3	
	comp=Z,229nm,1.1s						
COR	**Corvallis**	**87.78**	**37**	P	**P**	**03 41 30.8**	**-0.8**
COR				pmax	pmax		
	comp=Z,368nm,1.2s						
COR	**Corvallis**	**87.78**	**37**	P	**P**	**03 41 30.8**	**-0.8**
COR				IAmb	IAmb	03 41 41.1	
	comp=Z,368nm,1.1s						
H04D	**Lebanon**	**88.04**	**37**	P	**P**	**03 41 34.6**	**+1.7**
	baz=230,SNR=101						
J05D	**Fort Rock, OR**	**88.09**	**39**	P	**P**	**03 41 34.9**	**+1.5**
	baz=231,SNR=520						
J05D				S	**S**	**03 51 43.7**	**+8.4**
	baz=231						
G03D	**McMinnville, O**	**88.20**	**37**	P	**P**	**03 41 35.2**	**+1.6**
	baz=229,SNR=31						
G03D				S	**S**	**03 51 43.1**	**+7.2**
	baz=229						
BJI	**Beijing**	**88.21**	**317**	P	**P**	**03 41 34.8**	**+1.1**
BJI				PcP	**PcP**	**03 41 36.8**	**+1.8**
BJI				pP	**pP**	**03 43 25.3**	**+2.6**
BJI				sP	**sP**	**03 44 15.3**	**+2.8**
BJI				pmax	pmax		
	comp=Z,45nm,0.9s						
TUC	**Tucson**	**88.42**	**53**	P	**P**	**03 41 36.6**	**+1.5**
R11A	**Troy Canyon, C**	**88.52**	**46**	P	**P**	**03 41 36.4**	**+0.8**
	baz=235						
MA2	**Magadan**	**88.60**	**346**	P	**P**	**03 41 35.1**	**0.0**
	comp=Z,133nm,1.1s,baz=155,slow=4.7,SNR=100						
MA2				PP	**PP**	**03 45 10.8**	**-2.1**
	comp=Z,36nm,1.1s,baz=154,slow=9.5,SNR=6.0						
MA2				S	**SKSac**	**03 51 15.4**	**-0.7**
	comp=Z,2.8nm,0.5s,baz=9.2,slow=22,SNR=9.7						
MA2	**Magadan**	**88.60**	**346**	*c i*P	**P**	**03 41 35.1**	**0.0**
MA2				pmax	pmax		
	comp=Z,212nm,1.3s						
MA2	**Magadan**	**88.60**	**346**	P	**P**	**03 41 35.0**	**-0.1**
MA2				IAmb	IAmb	03 41 39.7	
	comp=Z,129nm,1.1s						
I05D	**Terrebonne, OR**	**88.69**	**38**	P	**P**	**03 41 37.2**	**+1.2**
	baz=231,SNR=223						
F04D	**Rainier, OR**	**88.91**	**36**	P	**P**	**03 41 38.6**	**+1.7**
	baz=229,SNR=48						
F04D				S	**S**	**03 51 51.0**	**+8.6**
	baz=229						
BRLK	**Bradley Lake**	**89.07**	**15**	IAmb	IAmb	03 41 47.1	
	comp=Z,295nm,1.1s						
TIY	**Taiyuan**	**89.23**	**313**	*e*P	**P**	**03 41 40.5**	**+1.8**
TIY				pP	**pwP**	**03 43 31.8**	**-1.8**
TIY				sP	**sP**	**03 44 20.5**	**+2.9**
TIY				SKS	**SKSac**	**03 51 21.5**	**+0.4**
TIY				S	**S**	**03 51 47.3**	**+1.4**
TIY				pmax	pmax		
	comp=Z,380nm,1.3s						
G05D	**Wamic, OR**	**89.28**	**37**	P	**P**	**03 41 39.6**	**+0.9**
	baz=231,SNR=48						
G05D				S	**S**	**03 51 54.3**	**+8.4**
	baz=231						
NLWA	**Neilton Lookou**	**89.32**	**35**	IAmb	IAmb	03 41 43.5	
	comp=Z,502nm,1.1s						
E04D	**Cinebar**	**89.45**	**36**	P	**P**	**03 41 40.6**	**+1.3**
	baz=230,SNR=77						
H02S1	**DAWSON INLET T**	**89.45**	**27**	P	**P**	**03 41 40.4**	**+1.2**
	SNR=75						
H02N1	**VAN INLET T-PH**	**89.46**	**27**	P	**P**	**03 41 40.6**	**+1.2**
	SNR=24						
HPIG		**89.48**	**60**	IAmb	IAmb	03 41 43.8	
	comp=Z,421nm,1.1s						
U15A	**North Rim**	**89.60**	**49**	IAmb	IAmb	03 41 52.8	
	comp=Z,298nm,1.1s						
F05D	**White Salmon**	**89.61**	**37**	P	**P**	**03 41 40.9**	**+0.7**
	baz=230,SNR=41						
F05D				S	**S**	**03 51 56.4**	**+7.6**
	baz=230						
XAN	**Xi'an**	**89.61**	**309**	P	**P**	**03 41 42.0**	**+1.5**
XAN				pP	pwP	03 43 33.3	-2.3
XAN				PP	**PP**	**03 45 21.0**	**-0.5**
XAN				SKS	**SKSac**	**03 51 24.8**	**+1.4**
XAN				S	**ScS**	**03 51 51.5**	**-0.8**
XAN				sS	sS	03 55 09.0	+4.2
XAN				pmax	pmax		
	comp=Z,28nm,0.8s						
XAN				pmax	pmax		
	comp=Z,600nm,3.5s						
XAN	**Xi'an**	**89.61**	**309**	IAmb	IAmb	03 41 47.1	
	comp=Z,146nm,1.1s						
G06A	**Carlson Farm,**	**89.65**	**38**	IAmb	IAmb	03 41 46.7	
	comp=Z,231nm,1.2s						
CM31	**Chiang Mai Arr**	**89.69**	**291**	P	**P**	**03 41 43.6**	**+2.4**
CMAR	**Chiang Mai Arr**	**89.69**	**291**	P	**P**	**03 41 42.9**	**+1.7**
	comp=Z,72nm,1.2s,baz=137,slow=2.7,SNR=84						
CMAR				pP	**pP**	**03 43 33.1**	**+2.8**
	comp=Z,2.9nm,0.8s,baz=266,slow=25,SNR=1.6						
CMAR				S	**SKSac**	**03 51 26.9**	**+2.6**
	comp=Z,2.0nm,0.3s,baz=152,slow=32,SNR=4.1						
CMAR				PKKPbc	**PKKPbc**	**03 59 09.8**	**-1.4**
	comp=Z,3.1nm,0.5s,baz=300,slow=3.1,SNR=6.1						
CMAR				PKPPKP	**P'P'df**	**04 07 15.9**	**-4.8**
	comp=Z,1.5nm,0.3s,baz=304,slow=3.6,SNR=8.1						
CMAR	**Chiang Mai Arr**	**89.69**	**291**	*i* P	**P**	**03 41 43.2**	**+2.0**
CMAR				pmax	pmax		
	comp=Z,72nm,1.2s						
CMAR	**Chiang Mai Arr**	**89.69**	**291**	P	**P**	**03 41 40.2**	**-0.9**
CMAR					**pP**	**03 43 28.5**	**-1.8**
KMI	**Kunming**	**89.73**	**298**	P	**P**	**03 41 43.3**	**+1.8**
KMI				pP	pwP	03 43 34.0	-2.5
KMI				sP	sP	03 44 26.5	+6.1
KMI				PP	**PP**	**03 45 25.8**	**+3.0**
KMI				SKS	**SKSac**	**03 51 25.8**	**+1.0**
KMI				S	**S**	**03 51 48.5**	**-2.7**
KMI				pmax	pmax		
	comp=Z,140nm,1.3s						
KMI				pmax	pmax		
	comp=Z,330nm,5.5s						
WUAZ	**Wupatki**	**89.73**	**50**	P	**P**	**03 41 42.3**	**+1.1**
	baz=237,SNR=390						
WUAZ				S	S	03 52 02.6	+12
	baz=237						
D04E	**Lakebay**	**89.74**	**35**	P	**P**	**03 41 42.6**	**+1.9**
	baz=230,SNR=13						
D03D	**Eldon**	**89.81**	**35**	P	**P**	**03 41 42.3**	**+1.3**
	baz=229,SNR=68						
D03D				S	**S**	**03 51 59.1**	**+8.7**
	baz=229						
CHTO	**Chiang Mai**	**89.85**	**291**	P	**P**	**03 41 44.4**	**+2.5**
CHTO	**Chiang Mai**	**89.85**	**291**	P	**P**	**03 41 41.0**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,136nm,1.2s						
CHTO	**Chiang Mai**	**89.85**	**291**	P	**P**	**03 41 41.0**	**-0.9**
CHTO				IAmb	IAmb	03 41 49.1	
	comp=Z,136nm,1.1s						
ZAIG	**Zacatecas**	**89.93**	**65**	IAmb	IAmb	03 41 47.2	
	comp=Z,114nm,0.9s						
ELK	**Elko**	**90.11**	**44**	IAmb	IAmb	03 41 46.3	
	comp=Z,426nm,1.1s						
PAYG	**Puerto Ayora**	**90.11**	**91**	P	**P**	**03 41 41.6**	**-1.7**
X18A	**Snowflake**	**90.19**	**51**	IAmb	IAmb	03 41 47.3	
	comp=Z,397nm,1.1s						
BBB	**Bella Bella**	**90.56**	**29**	P	**P**	**03 41 45.2**	**+0.9**
	comp=Z,362nm,1.2s,baz=246,slow=4.3,SNR=18						
BBB	**Bella Bella**	**90.56**	**29**	IAmb	IAmb	03 41 56.6	
	comp=Z,154nm,1.1s						
W18A	**Petrified Fore**	**90.65**	**51**	P	**P**	**03 41 46.6**	**+1.0**
	baz=238						
W18A				S	S	03 52 09.8	+11
	baz=238						
HIN	**Hinchinbrook I**	**90.68**	**16**	IAmb	IAmb	03 41 50.8	
	comp=Z,144nm,1.1s						
121A	**Cookes Peak, D**	**90.70**	**54**	P	**P**	**03 41 47.3**	**+1.5**
	baz=239						
121A				S	S	03 52 11.2	+12
	baz=239						
A04D	**Lummi Island**	**90.78**	**34**	P	**P**	**03 41 46.8**	**+1.3**
	baz=230,SNR=30						
A04D				S	**S**	**03 52 06.8**	**+7.9**
	baz=230						
B05A	**Bryant**	**90.79**	**35**	P	**P**	**03 41 46.3**	**+0.7**
	baz=230,SNR=112						
B05A				S	**S**	**03 52 06.2**	**+7.0**
	baz=230						
TLIG	**Tlapa**	**90.85**	**71**	IAmb	IAmb	03 41 54.9	
	comp=Z,93nm,1.1s						
LTY	**Liberty**	**90.90**	**36**	IAmb	IAmb	03 42 05.0	
	comp=Z,98nm,1.1s						
SKT	**Skwentna**	**90.92**	**13**	IAmb	IAmb	03 41 47.1	
	comp=Z,239nm,1.2s						
FID	**Port Fidalgo**	**90.99**	**16**	IAmb	IAmb	03 41 57.9	
	comp=Z,104nm,1.1s						
EYAK	**Cordova Ski Ar**	**91.00**	**16**	IAmb	IAmb	03 41 48.9	
	comp=Z,368nm,1.2s						
KNK	**Knik Glacier**	**91.09**	**15**	IAmb	IAmb	03 41 49.2	
	comp=Z,348nm,1.1s						
PMR	**Palmer**	**91.10**	**15**	IAmb	IAmb	03 41 49.0	
	comp=Z,433nm,1.2s						
UNM	**Universidad Na**	**91.13**	**69**	IAmb	IAmb	03 41 56.9	
	comp=Z,328nm,1.1s						
PEL	**Peldehue**	**91.14**	**128**	P	**P**	**03 41 49.1**	**+1.3**
PEL	**Peldehue**	**91.14**	**128**	IAmb	IAmb	03 41 50.4	
	comp=Z,132nm,1.1s						
C06D	**Leavenworth**	**91.20**	**36**	P	**P**	**03 41 47.7**	**+0.2**
	baz=231,SNR=17						
C06D				S	**S**	**03 52 09.4**	**+6.5**
	baz=231						
ANM	**Nome**	**91.22**	**7**	IAmb	IAmb	03 41 50.2	
	comp=Z,81nm,1.0s						
B06A	**Marblemount**	**91.27**	**35**	IAmb	IAmb	03 41 52.6	
	comp=Z,82nm,0.9s						

DUG	**Dugway, Tooele**	**91.33**	**45**	IAmb	IAmb	03 41 57.9	
	comp=Z,163nm,1.1s						
DUG	**Dugway, Tooele**	**91.33**	**45**	P	**P**	**03 41 49.3**	**+0.8**
	baz=236						
SEY	**Seymchan**	**91.33**	**348**	P	**P**	**03 41 48.1**	**+0.5**
	comp=Z,123nm,1.1s,baz=153,slow=4.8,SNR=124						
SEY				pP	**pwP**	**03 43 40.5**	**-1.6**
	comp=Z,40nm,1.2s,baz=90,slow=3.3,SNR=3.6						
SEY				PKKPbc	**PKKPbc**	**03 59 07.7**	**-1.3**
	comp=Z,2.1nm,0.7s,baz=221,slow=0.7,SNR=6.5						
SEY	**Seymchan**	**91.33**	**348**⇓	*i*P	**P**	**03 41 48.4**	**+0.7**
ZEA	**Zeya**	**91.39**	**332**	*e*P	**P**	**03 41 48.9**	**+0.7**
ZEA				*e**PP	**pwP**	**03 43 40.7**	**-2.4**
ZEA				*e*		03 44 31.0	
ZEA				*e*		03 45 34.0	
ZEA				*e*S	**SKSac**	**03 51 34.0**	**+1.7**
ZEA				*e*PS	SP	03 52 10.5	-67
ZEA				*e*		03 53 18.0	
ZEA				pmax	pmax		
	comp=N,200nm,1.2s						
ZEA				pmax	pmax		
	comp=E,72nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,320nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,600nm,3.0s						
ZEA				pmax	pmax		
	comp=N,500nm,4.0s						
ZEA				pmax	pmax		
	comp=Z,700nm,6.0s						
ZEA				pmax	pmax		
	comp=E,300nm,9.0s						
ZEA				smax	smax		
	comp=N,2µm,6.0s						
ZEA				smax	smax		
	comp=E,2µm,6.0s						
SML	**Sawmill**	**91.47**	**15**	IAmb	IAmb	03 42 00.2	
	comp=Z,127nm,1.1s						
HHC	**Hu-ho-hao-te**	**91.55**	**315**	*e*P	**P**	**03 41 50.8**	**+1.4**
HHC				pP	pwP	03 43 42.0	-2.4
HHC				sP	sP	03 44 32.0	+3.6
HHC				SKS	**SKSac**	**03 51 34.0**	**-0.1**
HHC				S	**ScS**	**03 52 09.5**	**+1.3**
HHC				SS	**SS**	**03 58 34.0**	**+5.6**
CD2	**Chengdu**	**91.76**	**304**	P	**P**	**03 41 52.5**	**+1.9**
CD2				pP	pP	03 43 40.5	+0.5
CD2				sP	sP	03 44 33.0	+3.3
CD2				PP	**PP**	**03 45 37.5**	**-0.9**
CD2				SKS	**SKSac**	**03 51 34.0**	**-1.6**
CD2				S	**ScS**	**03 52 12.3**	**+2.0**
CD2				sS	sS	03 55 24.0	-1.1
CD2				pmax	pmax		
	comp=Z,250nm,1.3s						
CD2				pmax	pmax		
	comp=Z,350nm,10.4s						
E09A	**Wood Farm, Sta**	**91.81**	**38**	IAmb	IAmb	03 41 53.3	
	comp=Z,273nm,1.2s						
CRQM	**Cirque**	**91.86**	**17**	IAmb	IAmb	03 41 53.3	
	comp=Z,286nm,1.1s						
WRAK	**Wrangell Islan**	**91.89**	**25**	IAmb	IAmb	03 41 56.6	
	comp=Z,65nm,1.1s						
F10A	**Beach Ranch, E**	**91.99**	**39**	IAmb	IAmb	03 41 54.8	
	comp=Z,192nm,0.9s						
MNTX	**Cornudas Mount**	**92.05**	**56**	P	**P**	**03 41 52.7**	**+0.9**
	baz=240						
MNTX				S	**S**	**03 52 20.0**	**+8.8**
	baz=240						
Y22D	**IRIS PASSCAL I**	**92.10**	**53**	P	**P**	**03 41 53.5**	**+1.3**
	baz=240						
TX31	**Lajitas Ar. Si**	**92.19**	**58**	IAmb	IAmb	03 42 04.0	
	comp=Z,107nm,1.1s						
TX32	**Lajitas Array**	**92.19**	**58**	IAmb	IAmb	03 42 04.6	
	comp=Z,79nm,1.1s						
TXAR	**Lajitas Array**	**92.19**	**58**	P	**P**	**03 41 53.6**	**+1.0**
	comp=Z,145nm,1.0s,baz=216,slow=5.7,SNR=179						
TXAR				PP	**PP**	**03 45 40.1**	**-1.6**
	comp=Z,38nm,1.2s,baz=209,slow=7.2,SNR=6.1						
TXAR				S	**SKSac**	**03 51 38.4**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=13,slow=24,SNR=1.7						
TXAR				PKKPbc	**PKKPbc**	**03 59 05.9**	**+0.4**
	comp=Z,1.2nm,0.6s,baz=98,slow=3.2,SNR=6.8						
TXAR	**Lajitas Array**	**92.19**	**58**	P	**P**	**03 41 52.0**	**-0.6**
TXAR						03 45 40.6	
TXAR	**Lajitas Array**	**92.19**	**58**	P	**P**	**03 41 52.0**	**-0.6**
TXAR					**PP**	**03 45 40.6**	**-1.2**
GLB	**Gilahina Butte**	**92.26**	**17**	IAmb	IAmb	03 41 54.8	
	comp=Z,238nm,1.2s						
BALM	**Baldy**	**92.31**	**18**	IAmb	IAmb	03 41 55.2	
	comp=Z,208nm,1.0s						
BTO	**Baotou**	**92.39**	**315**	*e*P	**P**	**03 41 55.5**	**+2.2**
LLLB	**Lillooet**	**92.40**	**33**	IAmb	IAmb	03 41 58.4	
	comp=Z,77nm,1.1s						
MCARA	**McCarthy VSAT**	**92.42**	**17**	IAmb	IAmb	03 41 56.3	
	comp=Z,274nm,1.1s						
KTH	**Kantishna Hill**	**92.47**	**13**	IAmb	IAmb	03 41 54.3	
	comp=Z,220nm,1.0s						
DGPR	**DIGLIPUR**	**92.48**	**283**	*e*x	**P**	**03 41 53.1**	**-1.0**
DGPR				*i* x	x	03 43 44.5	
DGPR				*e*x	x	03 51 40.6	
TRF	**Thorofare Moun**	**92.50**	**13**	IAmb	IAmb	03 41 55.0	
	comp=Z,271nm,1.0s						
C09A	**Chrisman Ranch**	**92.51**	**37**	IAmb	IAmb	03 41 56.4	
	comp=Z,102nm,0.9s						
BARN	**Barnard Glacie**	**92.52**	**18**	IAmb	IAmb	03 41 56.4	
	comp=Z,324nm,1.1s						
CTGM	**Chitina Glacie**	**92.53**	**18**	IAmb	IAmb	03 41 56.3	
	comp=Z,202nm,1.0s						
MVCO	**Mesa Verde**	**92.59**	**50**	P	**P**	**03 41 54.9**	**+0.4**
	baz=239,SNR=52						
ANMO	**Albuquerque**	**92.87**	**52**	P	**P**	**03 41 55.0**	**-0.8**
ANMO				pmax	pmax		
	comp=Z,87nm,1.1s						
ANMO	**Albuquerque**	**92.87**	**52**	P	**P**	**03 41 55.0**	**-0.8**
ANMO				IAmb	IAmb	03 42 03.3	
	comp=Z,86nm,1.1s						
ANMO	**Albuquerque**	**92.87**	**52**	P	**P**	**03 41 56.5**	**+0.8**
	baz=240						
PV16	**Nyswonger Mesa**	**92.88**	**48**	IAmb	IAmb	03 42 05.7	
	comp=Z,89nm,1.1s						
PV23	**Carpenter Ridg**	**92.89**	**48**	IAmb	IAmb	03 41 59.0	
	comp=Z,222nm,1.2s						
HWUT	**Hardware Ranch**	**92.90**	**45**	IAmb	IAmb	03 41 58.6	
	comp=Z,198nm,1.1s						
PV02	**Paradox Valley**	**92.95**	**49**	IAmb	IAmb	03 41 59.0	
	comp=Z,221nm,1.1s						
PV12	**Saucer Basin,**	**92.96**	**48**	IAmb	IAmb	03 41 59.9	
	comp=Z,317nm,1.2s						
PV01	**Paradox Valley**	**93.02**	**49**	IAmb	IAmb	03 41 59.3	
	comp=Z,203nm,1.1s						
MCK	**McKinley**	**93.03**	**14**	IAmb	IAmb	03 41 58.9	
	comp=Z,271nm,1.1s						
PV22	**Blue Mesa, Par**	**93.08**	**48**	IAmb	IAmb	03 42 01.8	
	comp=Z,140nm,1.2s						
PAX	**Paxson**	**93.15**	**15**	IAmb	IAmb	03 41 58.2	
	comp=Z,138nm,1.2s						
SKAG	**Skagway**	**93.15**	**21**	IAmb	IAmb	03 42 02.9	
	comp=Z,77nm,1.2s						
PV15	**Paradox Valley**	**93.19**	**49**	IAmb	IAmb	03 42 00.1	
	comp=Z,195nm,1.1s						
NEW	**Newport**	**93.41**	**37**	P	**P**	**03 41 57.9**	**+0.3**
	comp=Z,33nm,1.0s,baz=246,slow=3.9,SNR=29						
NEW	**Newport**	**93.41**	**37**	P	**P**	**03 41 57.4**	**-0.3**
	baz=234,SNR=25						
NEW				S	**S**	**03 52 28.7**	**+6.4**
	baz=234						
MENT	**Mentasta**	**93.54**	**16**	IAmb	IAmb	03 42 00.6	
	comp=Z,174nm,1.1s						
CMIG	**Matias Romero**	**93.78**	**73**	P	**P**	**03 42 00.8**	**+0.7**
	comp=Z,103nm,1.1s,baz=254,slow=3.7,SNR=31						
CMIG				PP	**PP**	**03 45 51.2**	**-2.8**
	comp=Z,50nm,1.3s,baz=225,slow=8.8,SNR=6.6						
MLY	**Manley**	**93.83**	**12**	IAmb	IAmb	03 42 00.6	
	comp=Z,73nm,1.0s						
WRH	**Wood River Hil**	**93.86**	**14**	IAmb	IAmb	03 42 01.1	
	comp=Z,277nm,1.1s						
RIDG	**Independent Ri**	**93.95**	**15**	IAmb	IAmb	03 42 02.8	
	comp=Z,207nm,1.1s						
S22A	**4UR Ranch, Cre**	**94.01**	**50**	P	**P**	**03 42 01.7**	**+0.6**
	baz=240,SNR=264						
HDA	**Harding Lake**	**94.05**	**14**	IAmb	IAmb	03 42 03.0	
	comp=Z,94nm,0.9s						
HDA	**Harding Lake**	**94.05**	**14**	P	**P**	**03 41 59.5**	**-0.7**
	baz=210,SNR=79						
HDA				S	**S**	**03 52 27.5**	**+0.4**
	baz=210						
HDA				S	**S**	**03 52 27.5**	**+0.4**
	baz=210						
CCB	**Clear Creek Bu**	**94.08**	**14**	IAmb	IAmb	03 42 01.9	
	comp=Z,204nm,1.1s						
BCAR	**Beaver Creek A**	**94.14**	**17**	P	**P**	**03 42 00.7**	**0.0**
IMAR	**Indian Mountai**	**94.15**	**11**	P	**P**	**03 42 00.3**	**-0.2**
DLBC	**Dease Lake**	**94.23**	**24**	P	**P**	**03 42 01.2**	**+0.1**
	comp=Z,21nm,1.1s,baz=231,slow=3.8,SNR=13						
DLBC				PP	**PP**	**03 45 54.0**	**-2.8**
	comp=Z,40nm,1.1s,baz=221,slow=8.3,SNR=6.7						
DLBC				S	**SKSac**	**03 51 50.4**	**+2.6**
	comp=Z,1.3nm,0.3s,baz=56,slow=25,SNR=6.8						
LZH	**Lanzhou**	**94.24**	**308** ⇑	P	**P**	**03 42 03.5**	**+1.6**
LZH				pP	pwP	03 43 56.0	-1.2
LZH				sP	sP	03 44 44.0	+2.9
LZH				PP	**PP**	**03 45 58.3**	**+0.8**
LZH				SKS	**SKSac**	**03 51 46.8**	**-2.3**
LZH				S	**ScS**	**03 52 34.0**	**+3.1**
LZH				pmax	pmax		
	comp=Z,69nm,1.5s						
LZH				pmax	pmax		
	comp=Z,500nm,7.0s						
MDM	**Murphy Dome**	**94.26**	**13**	IAmb	IAmb	03 42 02.7	
	comp=Z,227nm,1.2s						
TCOL	**CIGO, UAF Yank**	**94.26**	**13**	P	**P**	**03 42 00.3**	**-0.8**
	baz=209,SNR=26						
TCOL				S	**S**	**03 52 27.7**	**-1.1**
	baz=209						
COLA	**College**	**94.27**	**13**	P	**P**	**03 42 00.4**	**-0.7**
COLA				pmax	pmax		
	comp=Z,285nm,1.2s						
COLA	**College**	**94.27**	**13**	P	**P**	**03 42 00.4**	**-0.7**
COLA				IAmb	IAmb	03 42 02.7	
	comp=Z,285nm,1.1s						
O20A	**White River Ci**	**94.27**	**47**	IAmb	IAmb	03 42 05.0	
	comp=Z,148nm,1.1s						
O20A	**White River Ci**	**94.27**	**47**	P	**P**	**03 42 02.3**	**+0.3**
	baz=239						
REDW	**Red Top Meadow**	**94.28**	**43**	IAmb	IAmb	03 42 06.2	
	comp=Z,124nm,1.1s						
TPAW	**Teton Pass**	**94.29**	**43**	IAmb	IAmb	03 42 15.6	
	comp=Z,57nm,1.1s						
MSO	**Missoula**	**94.34**	**39**	P	**P**	**03 42 01.4**	**-0.7**
	baz=236,SNR=17						
IL31		**94.38**	**14**	IAmb	IAmb	03 42 04.6	
	comp=Z,63nm,1.0s						
ILAR	**Eielson Array**	**94.38**	**14**	P	**P**	**03 42 00.7**	**-1.0**
	comp=Z,72nm,1.1s,baz=226,slow=4.6,SNR=145						
ILAR				pP	**pwP**	**03 43 55.5**	**+0.6**
	comp=Z,7.0nm,0.9s,baz=230,slow=4.2,SNR=2.7						
ILAR				PP	**PP**	**03 45 54.0**	**-3.7**
	comp=Z,79nm,1.1s,baz=224,slow=6.8,SNR=10						
ILAR				S	**SKSac**	**03 51 47.6**	**-0.6**
	comp=Z,2.6nm,1.1s,baz=216,slow=7.1,SNR=5.9						
ILAR				PKKPbc	**PKKPdf**	**03 58 59.1**	**-1.5**
	comp=Z,0.7nm,0.6s,baz=24,slow=3.3,SNR=7.3						
ILAR				PKPPKP		04 07 10.2	
	comp=Z,0.4nm,0.9s,baz=268,slow=1.6,SNR=1.4						
ILAR	**Eielson Array**	**94.38**	**14**	P	**P**	**03 42 00.5**	**-1.2**
ILAR				pP	**pP**	**03 43 51.3**	**-0.6**
SNOW	**Snow King Moun**	**94.40**	**43**	IAmb	IAmb	03 42 07.6	
	comp=Z,140nm,1.0s						
BILL	**Bilibino**	**94.41**	**355***c*	*i*P	**P**	**03 42 01.7**	**0.0**
BILL				*i* *PP	**pwP**	**03 43 57.2**	**+0.9**
BILL				*i*		03 45 53.4	
BILL				*i* *SS	sS	03 54 59.8	-48
BILL				pmax	pmax		
	comp=Z,122nm,1.2s						
BILL	**Bilibino**	**94.41**	**355**	P	**P**	**03 42 01.4**	**-0.4**
BILL				IAmb	IAmb	03 42 05.5	
	comp=Z,83nm,1.1s						
IMW	**Indian Meadow**	**94.51**	**43**	IAmb	IAmb	03 42 12.1	
	comp=Z,53nm,1.1s						
POKR	**Poker Plat Res**	**94.57**	**13**	P	**P**	**03 42 01.4**	**-1.1**
	baz=210,SNR=26						
POKR				S	**S**	**03 52 29.6**	**-1.9**
	baz=210						
SMCO	**Snowmass**	**94.63**	**48**	IAmb	IAmb	03 42 07.0	
	comp=Z,231nm,1.1s						
FLWY	**Flagg Ranch**	**94.76**	**43**	IAmb	IAmb	03 42 09.0	
	comp=Z,160nm,1.1s						
BW06	**Boulder Array**	**94.78**	**44**	P	**P**	**03 42 04.3**	**0.0**
	baz=239,SNR=64						
BW06				S	**S**	**03 52 41.5**	**+6.7**
	baz=239						
PD31	**Pinedale Array**	**94.78**	**44**	IAmb	IAmb	03 42 07.5	
	comp=Z,50nm,1.1s						
PDAR	**Pinedale Array**	**94.78**	**44**	P	**P**	**03 42 04.0**	**-0.3**
	comp=Z,79nm,1.1s,baz=222,slow=2.0,SNR=130						
PDAR				pP	**pwP**	**03 44 00.9**	**+4.0**
	comp=Z,7.0nm,0.9s,baz=238,slow=1.7,SNR=3.4						
PDAR				PP	**PP**	**03 45 57.4**	**-4.2**
	comp=Z,54nm,1.1s,baz=235,slow=5.2,SNR=12						
PDAR				S	**SKSac**	**03 51 53.0**	**+1.1**
	comp=Z,3.6nm,1.2s,baz=144,slow=8.4,SNR=6.2						
PDAR				PKKP	**PKKPdf**	**03 58 59.1**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=103,slow=4.7,SNR=6.0						
PDAR	**Pinedale Array**	**94.78**	**44**	P	**P**	**03 42 02.9**	**-1.4**
PDAR					**pP**	**03 43 53.9**	**-0.9**
PDAR					**PP**	**03 45 59.4**	**-2.2**
RDOG	**Red Dog Mine**	**94.86**	**7**	IAmb	IAmb	03 42 06.7	
	comp=Z,193nm,1.2s						
SDCO	**Great Sand Dun**	**94.92**	**50**	P	**P**	**03 42 05.6**	**+0.4**
	baz=241						
H17A	**Grant Village**	**95.00**	**43**	IAmb	IAmb	03 42 10.9	
	comp=Z,86nm,1.1s						
H17A	**Grant Village**	**95.00**	**43**	P	**P**	**03 42 06.8**	**+1.5**
	baz=238,SNR=62						
H17A				S	S	03 52 47.0	+10
	baz=238						
833A	**Chaparral WMA,**	**95.04**	**61**	P	**P**	**03 42 06.1**	**+0.6**
	baz=243,SNR=17						
MSTX	**Muleshoe**	**95.06**	**55**	IAmb	IAmb	03 42 11.2	
	comp=Z,72nm,1.1s						
MSTX	**Muleshoe**	**95.06**	**55**	P	**P**	**03 42 06.0**	**+0.3**
	baz=242						
MSTX				S	**S**	**03 52 44.7**	**+7.3**
	baz=242						
LKWY	**Lake**	**95.20**	**43**	IAmb	IAmb	03 42 12.1	
	comp=Z,115nm,1.1s						
T25A	**Trinidad**	**95.39**	**51**	P	**P**	**03 42 07.3**	**+0.1**
	baz=241						
DAWY	**Dawson**	**95.58**	**17**	IAmb	IAmb	03 42 09.9	
	comp=Z,168nm,1.1s						
WALA	**Waterton Lakes**	**95.61**	**37**	IAmb	IAmb	03 42 10.4	
	comp=Z,106nm,1.1s						
JCT	**Junction City**	**95.69**	**59**	IAmb	IAmb	03 42 13.7	
	comp=Z,59nm,1.0s						
JCT	**Junction City**	**95.69**	**59**	P	**P**	**03 42 08.3**	**-0.2**
	baz=243,SNR=44						
EGAK	**Eagle**	**95.71**	**16**	IAmb	IAmb	03 42 10.8	
	comp=Z,151nm,1.1s						
ISCO	**Idaho Springs**	**95.85**	**48**	P	**P**	**03 42 09.7**	**+0.4**
	baz=241,SNR=59						
N23A	**Red Feather La**	**96.16**	**47**	P	**P**	**03 42 11.4**	**+0.8**
	baz=241,SNR=48						
RLMT	**Red Lodge**	**96.17**	**42**	IAmb	IAmb	03 42 14.8	
	comp=Z,97nm,1.1s						
RLMT	**Red Lodge**	**96.17**	**42**	P	**P**	**03 42 11.3**	**+0.8**
	baz=239,SNR=82						
RLMT				S	S	03 52 57.0	+10
	baz=239						
AMTX	**Amarillo**	**96.28**	**54**	IAmb	IAmb	03 42 18.5	
	comp=Z,59nm,1.1s						
AMTX	**Amarillo**	**96.28**	**54**	P	**P**	**03 42 11.2**	**+0.1**
	baz=242						
YAK	**Yakutsk**	**96.43**	**339***c*	*i*P	**P**	**03 42 11.6**	**+0.7**
YAK				*e**PP	**pwP**	**03 44 06.7**	**+0.6**
YAK				*e*		03 46 15.0	
YAK				*e*S	**SKSac**	**03 51 55.9**	**-3.0**
YAK				*e*SP	**SP**	**03 54 12.7**	**+0.3**
YAK				*e*SS	**SS**	**03 59 34.4**	**-1.7**
YAK				pmax	pmax		
	comp=Z,79nm,1.1s						
YAK				pmax	pmax		
	comp=E,11nm,0.9s						
YAK				pmax	pmax		
	comp=N,18nm,1.3s						
YAK				pmax	pmax		
	comp=N,7.0nm,0.4s						
YAK				pmax	pmax		
	comp=Z,20nm,0.4s						
YAK				pmax	pmax		
	comp=E,40nm,0.9s						
YAK				smax	smax		
	comp=E,545nm,2.0s						
YAK				smax	smax		
	comp=N,1µm,2.0s						
YAK	**Yakutsk**	**96.43**	**339**	P	**P**	**03 42 10.5**	**-0.4**
K22A	**Casper**	**96.64**	**46**	IAmb	IAmb	03 42 20.6	
	comp=Z,41nm,1.1s						
K22A	**Casper**	**96.64**	**46**	Pdiff	**P**	**03 42 14.2**	**+1.5**
	baz=240						
APG	**El Apazote**	**96.72**	**77**	P	**P**	**03 42 14.5**	**+0.9**
	comp=Z,72nm,1.1s,baz=263,slow=6.8,SNR=34						
APG				PP	**PP**	**03 46 11.5**	**-5.3**
	comp=Z,31nm,1.2s,baz=251,slow=7.1,SNR=4.0						
ABTX	**Abilene, Hawle**	**96.77**	**57**	IAmb	IAmb	03 42 18.3	
	comp=Z,94nm,1.1s						
ABTX	**Abilene, Hawle**	**96.77**	**57**	Pdiff	**P**	**03 42 14.5**	**+1.2**
	baz=243						
ABTX				S	**S**	**03 52 56.6**	**+4.7**
	baz=243						
NNA	**Nana**	**96.93**	**107**	P	**P**	**03 42 15.6**	**+1.2**
	comp=Z,8.5nm,0.7s,baz=213,slow=3.4,SNR=5.2						
NNA	**Nana**	**96.93**	**107**⇑	*i*P	**P**	**03 42 16.1**	**+1.6**
NNA				pmax	pmax		
	comp=Z,45nm,1.2s						
NNA	**Nana**	**96.93**	**107**	P	**P**	**03 42 12.3**	**-2.1**
BMAR	**Burnt Mountain**	**97.15**	**13**	P	Pdif	03 42 14.4	+0.2
TOLK	**Toolik Lake Re**	**97.26**	**11**	Pdiff	**P**	**03 42 16.0**	**+1.4**
	baz=208						
EGMT	**Eagleton**	**97.38**	**40**	IAmb	IAmb	03 42 20.9	
	comp=Z,46nm,1.1s						
EGMT	**Eagleton**	**97.38**	**40**	Pdiff	**P**	**03 42 17.1**	**+1.4**
	baz=239						
KSCO	**Kaye Shedlock’**	**97.51**	**50**	IAmb	IAmb	03 42 23.3	
	comp=Z,54nm,1.1s						
KSCO	**Kaye Shedlock’**	**97.51**	**50**	Pdiff	**P**	**03 42 18.2**	**+1.6**
	baz=242						
435B	**Jarrell**	**97.54**	**60**	Pdiff	**P**	**03 42 17.9**	**+1.2**
	baz=244						
ATAH	**Atahualpa**	**97.85**	**102**	P	**P**	**03 42 21.1**	**+2.0**
	comp=Z,11nm,1.0s,baz=260,slow=4.3,SNR=16						
ATAH				pP	**pwP**	**03 44 11.1**	**-1.3**
	comp=Z,3.0nm,0.6s,baz=235,slow=17,SNR=1.8						
ATAH				PKPPKP		04 07 07.3	
	comp=Z,3.1nm,0.9s,baz=43,slow=17,SNR=4.9						
ULN	**Ulaanbaatar**	**98.01**	**320**	P	**P**	**03 42 20.1**	**+1.5**
ULN	**Ulaanbaatar**	**98.01**	**320***c*	*i*P	**P**	**03 42 20.1**	**+1.5**
ULN				pmax	pmax		
	comp=Z,24nm,1.0s						
ULN	**Ulaanbaatar**	**98.01**	**320**		Pdif	03 42 17.7	-0.9
ULN				IAmb	IAmb	03 42 29.7	
	comp=Z,38nm,1.1s						
EPYK	**Eagle Plains**	**98.10**	**16**	Pdiff	**P**	**03 42 19.3**	**+0.9**
	baz=219						
LVC	**Limon Verde**	**98.12**	**120**	P	**P**	**03 42 20.9**	**+0.8**
	comp=Z,3.7nm,0.7s,baz=212,slow=3.4,SNR=6.5						
LVC				pP	**pP**	**03 44 11.6**	**+0.9**
	comp=Z,4.4nm,1.0s,baz=225,slow=5.9,SNR=2.2						
LVC				PP	**PP**	**03 46 25.6**	**-1.2**
	comp=Z,3.4nm,0.8s,baz=248,slow=7.1,SNR=3.4						
LVC				PKPPKP	**P'P'df**	**04 07 00.9**	**-5.5**
	comp=Z,2.3nm,0.7s,baz=201,slow=4.6,SNR=3.4						
LVC	**Limon Verde**	**98.12**	**120**		Pdif	03 42 17.6	-2.5
LVC				pP	pP	03 44 08.4	-2.3
LVC					**PP**	**03 46 25.2**	**-1.6**
LVC	**Limon Verde**	**98.12**	**120**	*e*P	Pdif	03 42 20.0	0.0
WHTX	**Lake Whitney,**	**98.16**	**58**	Pdiff	**P**	**03 42 20.5**	**+1.0**
	baz=244						
WMOK	**Wichita Mounta**	**98.35**	**56**	Pdiff	**P**	**03 42 20.9**	**+0.6**
	baz=244						
SONM	**Songino Array**	**98.38**	**319**	P	**P**	**03 42 20.6**	**+0.4**
	comp=Z,13nm,1.2s,baz=140,slow=2.2,SNR=44						
SONM				pP	**pP**	**03 44 10.8**	**+0.6**
	comp=Z,8.3nm,1.1s,baz=130,slow=4.2,SNR=4.6						
SONM				PP	**PP**	**03 46 24.8**	**-3.9**
	comp=Z,24nm,1.1s,baz=124,slow=5.5,SNR=7.0						
SONM				S	**SKSac**	**03 52 09.1**	**-0.6**
	comp=Z,3.3nm,1.0s,baz=232,slow=1.7,SNR=5.9						
SONM				PKKPbc	**PKKPbc**	**03 58 49.7**	**-0.1**
	comp=Z,5.2nm,1.2s,baz=270,slow=3.3,SNR=8.0						
SONM				PKPPKP	**P'P'df**	**04 06 59.5**	**-3.1**
	comp=Z,4.0nm,1.3s,baz=67,slow=0.6,SNR=4.9						
SONM	**Songino Array**	**98.38**	**319**		Pdif	03 42 19.2	-1.0
SONM					pP	03 44 09.5	-0.7
SONM					**PP**	**03 46 26.4**	**-2.3**
HKT	**Hockley**	**98.55**	**61**	P	**P**	**03 42 22.7**	**+1.5**
GTA	**Gaotai**	**98.61**	**310**	*e*P	**P**	**03 42 22.8**	**+1.3**
GTA				pP	pP	03 44 12.8	+1.4
GTA				sP	sP	03 44 59.5	-1.4
GTA				SKS	**SKSac**	**03 52 10.5**	**-0.8**
GTA				pmax	pmax		
	comp=Z,18nm,1.2s						
GTA				pmax	pmax		
	comp=Z,140nm,8.6s						
SHL	**Shillong**	**98.69**	**294**	*e*x	**pP**	**03 44 06.1**	**-6.0**
SHL				*i* x	**PP**	**03 46 28.5**	**-3.0**
LAO	**LASA Array**	**98.80**	**42**	Pdiff	**P**	**03 42 24.2**	**+2.1**
	baz=241						
OGNE	**Ogallala**	**98.80**	**49**	Pdiff	**P**	**03 42 23.6**	**+1.3**
	baz=243						
RSSD	**Black Hills**	**98.94**	**45**	P	**P**	**03 42 23.3**	**+0.3**
RSSD	**Black Hills**	**98.94**	**45**	Pdiff	**P**	**03 42 24.1**	**+1.1**
	baz=242						
CBKS	**Cedar Bluff**	**99.44**	**51**	Pdiff	**Pdif**	**03 42 26.2**	**+1.2**
	baz=244						
JTS	**Las Juntas de**	**99.62**	**83***c*	*i*P	**Pdif**	**03 42 28.5**	**+2.1**
JTS				pmax	pmax		
	comp=Z,35nm,1.3s						
BOD	**Bodaibo**	**99.74**	**330**	*e*P	**Pdif**	**03 42 25.6**	**-0.2**
BOD				pmax	pmax		
	comp=Z,21nm,1.9s						
NATX	**Nacogdoches**	**100.22**	**60**	Pdiff	**Pdif**	**03 42 30.1**	**+1.5**
	baz=246						
TEIG	**Tepich**	**100.78**	**73**	PP	**PP**	**03 46 44.6**	**-2.4**
DGMT	**Dagmar**	**100.85**	**41**	Pdiff	**Pdif**	**03 42 32.9**	**+1.8**
	baz=243						
TUL1	**Leonard**	**101.06**	**55**	Pdiff	**Pdif**	**03 42 33.6**	**+1.3**
	baz=246						
ZAK	**Zakamensk**	**101.39**	**321**	*e*P	**Pdif**	**03 42 32.9**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BGNE	**Belgrade**	**101.64**	**50**	Pdiff	**Pdif**	**03 42 36.3**	**+1.6**
	baz=246						
KSU1	**Kansas State U**	**101.77**	**52**	Pdiff	**Pdif**	**03 42 36.5**	**+1.2**
	baz=246						
TLY	**Talaya**	**101.78**	**322**	P	**Pdif**	**03 42 36.1**	**+1.0**
TLY	**Talaya**	**101.78**	**322***c*	*i*P	**Pdif**	**03 42 35.7**	**+0.6**
TLY				*e*		03 52 25.8	
TLY				*e*		03 53 34.6	
TLY				pmax	pmax		
	comp=Z,55nm,2.0s						
LPAZ	**La Paz**	**102.10**	**115**	P	**Pdif**	**03 42 39.9**	**+1.7**
	comp=Z,2.8nm,0.8s,baz=226,slow=1.6,SNR=6.1						
LPAZ				PKKPbc	**PKKPbc**	**03 58 38.5**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=38,slow=6.9,SNR=4.8						
LPAZ	**La Paz**	**102.10**	**115**	*e*P	**Pdif**	**03 42 38.3**	**+0.1**
MIAR	**Mount Ida**	**102.17**	**58**	Pdiff	**Pdif**	**03 42 38.3**	**+1.0**
	baz=247						
Z41A	**Richland Creek**	**102.26**	**59**	Pdiff	**Pdif**	**03 42 39.0**	**+1.4**
	baz=247						
W39A	**Magazine**	**102.27**	**57**	Pdiff	**Pdif**	**03 42 39.0**	**+1.3**
	baz=247						
SUSD	**Miller**	**102.36**	**47**	Pdiff	**Pdif**	**03 42 38.7**	**+0.8**
	baz=246						
CHLP	**Challavanipeta**	**102.45**	**285**	*e*pPdif	**pPdif**	**03 44 25.8**	**-2.9**
CHLP				*e*PP	**PKiKP**	**03 46 58.3**	**+1.0**
CHLP				*e*SKSac	**SKSac**	**03 52 29.4**	**-1.0**
GCUF	**Volcan Galeras**	**102.56**	**95**	*e*P	**PKiKP**	**03 46 59.5**	**+1.2**
YKA	**Yellowknife Ar**	**102.69**	**26**	P	**Pdif**	**03 42 38.9**	**+0.1**
	comp=Z,7.7nm,1.0s,baz=233,slow=4.3,SNR=55						
YKA				PP	PP	03 46 50.5	-10
	comp=Z,25nm,1.2s,baz=230,slow=8.1,SNR=7.5						
YKA				PKKPbc	**PKKPbc**	**03 58 30.1**	**-7.7**
	comp=Z,0.5nm,0.6s,baz=51,slow=4.0,SNR=6.4						
YKA				PKPPKP	**P'P'df**	**04 06 55.9**	**+2.7**
	comp=Z,0.8nm,1.1s,baz=51,slow=2.3,SNR=5.4						
X40A	**Basin Creek Fa**	**102.71**	**58**	Pdiff	**Pdif**	**03 42 40.1**	**+0.4**
	baz=247						
BOK	**Bokaro**	**102.97**	**290**	*e*x	**Pdif**	**03 42 49.8**	**+8.8**
BOK				*i* x	x	03 47 01.8	
MOY	**Mondy**	**103.26**	**321**	*e*P	**Pdif**	**03 42 43.4**	**+1.6**
MDND	**Maddock**	**103.35**	**43**	Pdiff	**Pdif**	**03 42 42.9**	**+0.8**
	baz=246						
U40A	**Yellville**	**103.42**	**56**	Pdiff	**Pdif**	**03 42 43.5**	**+0.7**
	baz=247						
W41B	**Gary Mavity, V**	**103.42**	**57**	Pdiff	**Pdif**	**03 42 43.1**	**+0.3**
	baz=247						
TIXI	**Tiksi**	**103.56**	**345**	PP	**PKiKP**	**03 46 56.1**	**-1.7**
	comp=Z,14nm,0.9s,baz=116,slow=3.9,SNR=7.0						
C36M	**Paulatuk**	**103.58**	**18**	Pdiff	**Pdif**	**03 42 43.7**	**+1.1**
	baz=231						
ECSD	**EROS Data Cent**	**103.62**	**48**	Pdiff	**Pdif**	**03 42 44.7**	**+1.2**

	baz=247						
SOTA	**Rioblanco**	**103.62**	**94**	*e*P	PKiKP	03 46 52.0	-8.3
VBMS	**Vicksburg**	**103.63**	**61**	Pdiff	**Pdif**	**03 42 44.7**	**+0.9**
	baz=248						
BCIP	**Isla Barro Col**	**103.72**	**86**	*e*P	**PKiKP**	**03 47 04.5**	**+4.8**
PCON	**Cinco Dias**	**103.90**	**94**	*e*P	PKiKP	03 47 10.4	+10
PRVC	**Isla de Provid**	**104.08**	**82**	*e*P	PKiKP	03 47 09.4	+9.0
PVM	**Polavaram**	**104.08**	**282**	*e*Pdif	**Pdif**	**03 42 47.4**	**+1.3**
PVM				*e*pPdif	**pPdif**	**03 44 36.2**	**+0.1**
PVM				*e*PP	**PP**	**03 47 08.8**	**-2.7**
PVM				*e*SKSac	**SKSac**	**03 52 38.8**	**+1.0**
PVM				*e*SKSdf	**SKKSac**	**03 53 23.3**	**-0.5**
PVM				*e*SP	**SP**	**03 55 33.5**	**-1.8**
PIZC	**Pizarro, Choco**	**104.18**	**91**	*e*P	PKiKP	03 47 09.2	+8.6
X43A	**Marvell**	**104.22**	**58**	Pdiff	**Pdif**	**03 42 47.6**	**+1.3**
	baz=248						
FLOC	**Florencia**	**104.23**	**95**	*e*P	**PKiKP**	**03 47 07.9**	**+7.0**
SKHT	**Srikalahasti**	**104.38**	**278**	*e*Pdif	**Pdif**	**03 42 39.6**	**-7.8**
SKHT				*e*pPdif	**pPdif**	**03 44 30.4**	**-6.9**
SKHT				*e*sPdif	**sPdif**	**03 45 24.0**	**-2.9**
SKHT				*e*PP	**PKiKP**	**03 47 07.3**	**+6.4**
SKHT				*e*SKSac	**SKSac**	**03 52 38.3**	**-0.9**
SKHT				*e*SKSdf	**SKKSac**	**03 53 26.8**	**+0.7**
SKHT				*e*SP	SP	03 55 37.5	-1.0
CPUP	**Villa Florida**	**104.52**	**129**	PKKPbc	PKKPbc	03 58 30.1	-1.4
	comp=Z,4.0nm,1.0s,baz=353,slow=3.1,SNR=4.9						
GARC	**Garzon, Huila**	**104.64**	**95**	*e*P	**PP**	**03 47 14.2**	**-1.6**
YOTC	**Yotoco, Valle**	**104.67**	**93**	*e*P	**PKiKP**	**03 47 03.9**	**+2.2**
MYLAV	**Mylavaram**	**104.76**	**282**	*e*Pdif	**Pdif**	**03 42 51.0**	**+1.9**
MYLAV				*e*pPdif	**pPdif**	**03 44 39.3**	**+0.3**
MYLAV				*e*sPdif	**sPdif**	**03 45 24.1**	**-4.5**
MYLAV				*e*PP	**PP**	**03 47 11.5**	**-4.9**
MYLAV				*e*SKSac	**SKSac**	**03 52 42.9**	**+2.0**
MYLAV				*e*SKKSac	**SKKSac**	**03 53 26.2**	**-2.4**
MYLAV				*e*SP	SP	03 55 40.3	-1.9
FFC	**Flin Flon**	**104.81**	**36**	P	**Pdif**	**03 42 52.8**	**+4.3**
ADKI	**Addanki**	**104.99**	**280**	*e*Pdif	**Pdif**	**03 42 48.5**	**-1.6**
ADKI				*e*pPdif	**pPdif**	**03 44 35.3**	**-4.8**
ADKI				*e*PP	**PP**	**03 47 15.1**	**-3.0**
ADKI				*e*SKSac	**SKSac**	**03 52 42.5**	**+0.5**
SCIA	**State Center**	**105.24**	**51**	PKiKP	**PKiKP**	**03 47 02.9**	**+1.1**
	baz=248						
ORTC	**Ortega, Tolima**	**105.62**	**93**	*e*P	**PP**	**03 47 19.7**	**-3.0**
CBOC	**Ciudad Bolivar**	**105.77**	**91**	*e*P	**PP**	**03 47 17.5**	**-6.5**
NJS	**Nagarjunasagar**	**105.85**	**281**	*e*Pdif	**Pdif**	**03 42 54.0**	**+0.1**
NJS				*e*pPdif	**pPdif**	**03 44 47.0**	**+3.1**
NJS				*e*PP	**PP**	**03 47 20.1**	**-4.3**
NJS				*e*SKSac	**SKSac**	**03 52 46.4**	**+0.6**
NJS				*e*SKKSac	**SKKSac**	**03 53 35.9**	**-0.5**
NJS				*e*SP	SP	03 55 47.5	-6.0
RREF	**El Recreo**	**105.96**	**92**	*e*P	PKiKP	03 47 19.3	+15
SRLM	**Srisailam**	**106.04**	**280**	*e*Pdif	**Pdif**	**03 42 59.3**	**+4.5**
SRLM				*e*pPdif	**pPdif**	**03 44 39.2**	**-5.6**
SRLM				*e*PP	**PP**	**03 47 27.3**	**+1.5**
SRLM				*e*SKSac	**SKSac**	**03 52 46.2**	**-0.5**
SRLM				*e*SKKSac	**SKKSac**	**03 53 36.7**	**-1.1**
SRLM				*e*SP	SP	03 55 51.0	-4.4
GUY2C	**Guyana, Caldas**	**106.08**	**92**	*e*P	**PKiKP**	**03 47 04.2**	**-0.6**
HELC	**Santa Helena**	**106.35**	**91**	*e*P	**PKiKP**	**03 47 02.5**	**-2.7**
ULM	**Lac du Bonnet**	**106.54**	**42**	Pdiff	**Pdif**	**03 42 56.5**	**+0.2**
	comp=Z,6.8nm,0.9s,baz=254,slow=3.7,SNR=12						
ULM				PKiKP	**PKiKP**	**03 47 02.4**	**-1.5**
	comp=Z,5.1nm,0.7s,baz=271,slow=2.9,SNR=6.5						
ULM				PP	**PP**	**03 47 24.9**	**-3.9**
	comp=Z,37nm,1.2s,baz=248,slow=8.2,SNR=4.4						
ULM				PKKPbc	**PKKPbc**	**03 58 23.9**	**-2.0**
	comp=Z,3.7nm,0.8s,baz=51,slow=4.8,SNR=6.3						
NORC	**Norcasia**	**106.67**	**92**	*e*P	**PP**	**03 47 26.6**	**-3.8**
LRAL	**Lakeview Retre**	**106.69**	**61**	PKiKP	**PKiKP**	**03 47 05.2**	**+0.5**
	baz=249						
SPMN	**Marine on St.**	**106.70**	**48**	PKiKP	**PKiKP**	**03 47 05.3**	**+0.9**
	baz=250						
RPR	**Rampur**	**106.75**	**283**	*e*Pdif	**Pdif**	**03 42 49.6**	**-8.3**
RPR				*e*pPdif	**pPdif**	**03 44 46.4**	**-1.6**
RPR				*e*PP	**PP**	**03 47 28.0**	**-2.9**
RPR				*e*SKSac	SKSac	03 52 35.8	-14
HYB	**Hyderabad**	**106.85**	**281**	*i* PKP	PKiKP	03 46 56.0	-10
HYB				*e*PP	**PP**	**03 47 25.0**	**-6.7**
HYB				*e*SKS	SKSdf	03 52 50.0	-40
HYB				*e*SKKS	**SKKSac**	**03 53 40.0**	**-3.4**
HYB				*e*		03 56 00.0	
HYB				*e*		03 57 08.0	
HYB				*e*PKKP	**PKKPbc**	**03 58 26.0**	**+2.0**
HYB				*e*		03 58 43.0	
HYBB	**Hyderabad (bro**	**106.85**	**281**	*e*Pdif	**Pdif**	**03 43 08.2**	**+10**
HYBB				*e*pPdif	**pPdif**	**03 44 43.8**	**-4.7**
HYBB				*e*PKiKP	**PKiKP**	**03 47 04.3**	**-1.2**
HYBB				*e*PP	**PP**	**03 47 32.2**	**+0.5**
HYBB				*e*SKSac	**SKSac**	**03 52 49.6**	**-0.6**
HYBB				*e*SKKSac	**SKKSac**	**03 53 41.3**	**-2.1**
ROSC	**El Rosal**	**106.85**	**93**	PP	**PP**	**03 47 31.2**	**-0.8**
	comp=Z,5.0nm,0.4s,baz=220,slow=1.3,SNR=8.1						
UREC	**San Jos de Ur**	**107.00**	**90**	*e*P	PP	03 47 20.1	-13
URV	**Uravakonda**	**107.04**	**279**	*e*Pdif	**Pdif**	**03 42 56.5**	**-2.8**
URV				*e*pPdif	**pPdif**	**03 44 50.7**	**+1.5**
URV				*e*PP	**PP**	**03 47 34.6**	**+1.6**
URV				*e*SKSac	**SKSac**	**03 52 51.2**	**+0.2**
URV				*e*SKKSac	**SKKSac**	**03 53 42.8**	**-1.9**
URV				*e*SP	**SP**	**03 56 02.3**	**-3.4**
CHIC	**Chingaza**	**107.29**	**93**	*e*P	**PP**	**03 47 34.2**	**-1.1**
SPBC	**San Pablo de B**	**107.42**	**92**	*e*P	PP	03 47 25.8	-10
PTBC	**PUERTO BERRIO,**	**107.46**	**91**	*e*P	**PP**	**03 47 30.7**	**-5.3**
HDIL	**Hopedale**	**107.54**	**53**	PKiKP	**PKiKP**	**03 47 06.9**	**+0.8**
	baz=250						
SRSP	**Sriramsagar**	**107.61**	**283**	*e*Pdif	**Pdif**	**03 43 03.9**	**+2.1**
SRSP				*e*pPdif	**pPdif**	**03 44 54.1**	**+2.3**
SRSP				*e*PP	**PP**	**03 47 33.2**	**-3.9**
SRSP				*e*SKSac	**SKSac**	**03 52 51.7**	**-1.6**
SRSP				*e*SKKSac	**SKKSac**	**03 53 46.6**	**-1.9**
SRSP				*e*SP	**SP**	**03 56 10.7**	**-0.6**
SIV	**San Ignacio**	**107.92**	**119**	PKiKP	**PKiKP**	**03 47 07.1**	**-0.6**
	comp=Z,1.8nm,0.9s,baz=277,slow=7.4,SNR=4.3						
SJCC	**San Jacinto, C**	**108.21**	**88**	*e*P	PKiKP	03 47 16.6	+8.4
RUSC	**La Rusia**	**108.42**	**92**	*e*P	PP	03 47 35.6	-7.8
PTGC	**Puerto Gaitan,**	**108.54**	**94**	*e*P	**PP**	**03 47 41.0**	**-2.8**
BARC	**Barichara**	**108.62**	**92**	*e*P	**PP**	**03 47 42.7**	**-2.0**
WMQ	**Urumqi**	**108.68**	**310**	Pdif	**Pdif**	**03 43 08.0**	**+1.9**
WMQ				PP	**PP**	**03 47 42.5**	**-2.0**
WMQ				S	**Sdif**	**03 54 28.8**	**-2.1**
WMQ				SS	**SS**	**04 02 19.0**	**-5.2**
WMQ				AMB	AMB		
	comp=Z,430nm,5.3s						
KLRI	**Killari**	**108.82**	**281**	*e*Pdif	**Pdif**	**03 43 10.9**	**+3.7**
KLRI				*e*pPdif	**pPdif**	**03 44 53.5**	**-3.7**
KLRI				*e*sPdif	**sPdif**	**03 45 40.4**	**-6.4**
KLRI				*e*PP	**PP**	**03 47 42.8**	**-3.1**
KLRI				*e*SKSac	**SKSac**	**03 52 58.5**	**-0.1**
KLRI				*e*SKKSac	**SKKSac**	**03 53 53.1**	**-3.9**
X51A	**Calhoun**	**108.89**	**60**	PKiKP	**PKiKP**	**03 47 09.5**	**+0.7**
	baz=251						
WCI	**Wyandotte Cave**	**108.97**	**56**	PKiKP	**PKiKP**	**03 47 09.5**	**+0.6**
	baz=251						
T49A	**Edmonton**	**109.19**	**57**	PKiKP	**PKiKP**	**03 47 10.0**	**+0.7**
	baz=251						
DWPF	**Disney Wildern**	**109.51**	**68**	PKiKP	**PKiKP**	**03 47 10.5**	**+0.4**
	baz=250						
S49A	**Springfield**	**109.59**	**57**	PKiKP	**PKiKP**	**03 47 10.6**	**+0.6**
	baz=252						
GOGA	**Godfrey**	**109.61**	**62**	PKiKP	**PKiKP**	**03 47 10.5**	**+0.3**
	baz=251						
Q48A	**North Vernon**	**109.61**	**56**	PKiKP	**PKiKP**	**03 47 10.2**	**+0.2**
	baz=252						
T50A	**Nancy**	**109.69**	**58**	PKiKP	**PKiKP**	**03 47 10.3**	**0.0**
	baz=252						
CODC	**Agustn Codazz**	**109.78**	**88**	*e*P	**PP**	**03 47 48.0**	**-4.7**
R49A	**Shelbyville**	**109.83**	**56**	PKiKP	**PKiKP**	**03 47 10.8**	**+0.3**
	baz=252						
P48A	**Milroy**	**110.00**	**55**	PKiKP	**PKiKP**	**03 47 11.1**	**+0.3**
	baz=252						
TKL	**Tuckaleechee C**	**110.08**	**59**	PKiKP	**PKiKP**	**03 47 09.6**	**-1.4**
	comp=Z,12nm,1.0s,baz=169,slow=3.9,SNR=5.1						
TKL				PP	**PP**	**03 47 52.0**	**-2.5**
	comp=Z,118nm,1.4s,baz=294,slow=7.7,SNR=9.3						
X53A	**Estanollee**	**110.08**	**61**	PKiKP	**PKiKP**	**03 47 11.3**	**+0.2**
	baz=252						
L46A	**Eue Claire**	**110.14**	**52**	PKiKP	**PKiKP**	**03 47 11.2**	**+0.2**
	baz=253						
S50A	**Richmond**	**110.22**	**57**	PKiKP	**PKiKP**	**03 47 11.4**	**+0.1**
	baz=252						
N47A	**Urbana**	**110.23**	**54**	PKiKP	**PKiKP**	**03 47 11.2**	**0.0**
	baz=253						
Q49A	**Aurora**	**110.26**	**56**	PKiKP	**PKiKP**	**03 47 11.3**	**0.0**
	baz=252						
T51A	**Gray**	**110.35**	**58**	PKiKP	**PKiKP**	**03 47 11.5**	**0.0**
	baz=252						
M47A	**Cromwell**	**110.43**	**53**	PKiKP	**PKiKP**	**03 47 11.9**	**+0.4**
	baz=253						
O48A	**Farmland**	**110.44**	**54**	PKiKP	**PKiKP**	**03 47 11.9**	**+0.3**
	baz=253						
R50A	**Paris**	**110.46**	**57**	PKiKP	**PKiKP**	**03 47 11.8**	**+0.2**
	baz=252						
P49A	**Miami Univ. Ec**	**110.55**	**55**	PKiKP	**PKiKP**	**03 47 12.2**	**+0.4**
	baz=253						
K46A	**Dorr**	**110.70**	**52**	PKiKP	**PKiKP**	**03 47 12.1**	**+0.2**
	baz=253						
N48A	**Decatur**	**110.71**	**54**	PKiKP	**PKiKP**	**03 47 12.2**	**+0.2**
	baz=253						
I45A	**Fountain**	**110.78**	**50**	PKiKP	**PKiKP**	**03 47 12.5**	**+0.4**
	baz=253						
S51A	**Beattyville**	**110.82**	**57**	PKiKP	**PKiKP**	**03 47 12.6**	**+0.2**
	baz=252						
X54A	**Belton**	**110.83**	**61**	PKiKP	**PKiKP**	**03 47 12.9**	**+0.5**
	baz=252						
Q50A	**Georgetown**	**110.89**	**56**	PKiKP	**PKiKP**	**03 47 12.7**	**+0.3**
	baz=253						
J46A	**Howard City**	**110.99**	**51**	PKiKP	**PKiKP**	**03 47 13.0**	**+0.5**
	baz=254						
O49A	**Covington**	**111.02**	**55**	PKiKP	**PKiKP**	**03 47 12.9**	**+0.2**
	baz=253						
R51A	**Hillsboro**	**111.03**	**57**	PKiKP	**PKiKP**	**03 47 13.0**	**+0.3**
	baz=253						
Y55A	**Saluda**	**111.04**	**62**	PKiKP	**PKiKP**	**03 47 13.3**	**+0.4**
	baz=252						
H45A	**Beulah**	**111.07**	**50**	PKiKP	**PKiKP**	**03 47 12.9**	**+0.3**
	baz=254						
T52A	**Hallie**	**111.13**	**58**	PKiKP	**PKiKP**	**03 47 13.5**	**+0.5**
	baz=253						
W54A	**Cherokee Point**	**111.14**	**60**	PKiKP	**PKiKP**	**03 47 13.7**	**+0.6**
	baz=252						
S52A	**Salyersville**	**111.22**	**58**	PKiKP	**PKiKP**	**03 47 13.2**	**0.0**
	baz=253						
Z56A	**Williston**	**111.24**	**62**	PKiKP	**PKiKP**	**03 47 13.6**	**+0.3**
	baz=252						
P50A	**Jamestown**	**111.25**	**55**	PKiKP	**PKiKP**	**03 47 13.2**	**0.0**
	baz=253						
K47A	**Vermontville**	**111.25**	**52**	PKiKP	**PKiKP**	**03 47 13.4**	**+0.3**
	baz=254						
I46A	**Reed City**	**111.30**	**51**	PKiKP	**PKiKP**	**03 47 13.4**	**+0.4**
	baz=254						
N49A	**Columbus Grove**	**111.34**	**54**	PKiKP	**PKiKP**	**03 47 14.0**	**+0.8**
	baz=253						
X55A	**Gracelyn & Ava**	**111.38**	**61**	PKiKP	**PKiKP**	**03 47 14.2**	**+0.6**
	baz=252						
Q51A	**Peebles**	**111.42**	**56**	PKiKP	**PKiKP**	**03 47 13.7**	**+0.2**
	baz=253						
T53A	**Wise**	**111.43**	**58**	PKiKP	**PKiKP**	**03 47 14.0**	**+0.4**
	baz=253						
L48A	**N Adams**	**111.45**	**53**	PKiKP	**PKiKP**	**03 47 14.1**	**+0.6**
	baz=254						
G45A	**Suttons Bay**	**111.45**	**49**	PKiKP	**PKiKP**	**03 47 14.0**	**+0.7**
	baz=254						
V54A	**Nebo**	**111.53**	**60**	PKiKP	**PKiKP**	**03 47 13.9**	**+0.1**
	baz=253						
O50A	**Cable**	**111.53**	**55**	PKiKP	**PKiKP**	**03 47 14.2**	**+0.5**
	baz=254						
J47A	**Sunmer**	**111.54**	**51**	PKiKP	**PKiKP**	**03 47 14.0**	**+0.4**
	baz=254						
ZSN	**Zaisan**	**111.64**	**313**	*e*PP	**PP**	**03 48 01.9**	**-3.5**
M49A	**Liberty Center**	**111.65**	**53**	PKiKP	**PKiKP**	**03 47 14.2**	**+0.4**
	baz=254						
E44A	**Grand Marais A**	**111.70**	**48**	PKiKP	**PKiKP**	**03 47 14.2**	**+0.5**
	baz=254						
F45A	**CMU Biological**	**111.72**	**49**	PKiKP	**PKiKP**	**03 47 14.1**	**+0.3**
	baz=254						
R52A	**Catlettsburg**	**111.74**	**57**	PKiKP	**PKiKP**	**03 47 14.1**	**0.0**
	baz=253						
P51A	**Williamsport**	**111.76**	**56**	PKiKP	**PKiKP**	**03 47 14.1**	**0.0**
	baz=254						
Z57A	**Bowman**	**111.77**	**63**	PKiKP	**PKiKP**	**03 47 14.1**	**-0.1**
	baz=252						
KMSC	**Kings Mountain**	**111.82**	**61**	PKiKP	**PKiKP**	**03 47 14.5**	**+0.1**
	baz=253						
U54A	**Nelsons Funny**	**111.85**	**59**	PKiKP	**PKiKP**	**03 47 14.7**	**+0.3**
	baz=253						
X56A	**White Oak**	**111.86**	**61**	PKiKP	**PKiKP**	**03 47 14.6**	**+0.1**
	baz=253						
K48A	**Perry**	**111.91**	**52**	PKiKP	**PKiKP**	**03 47 14.2**	**-0.1**
	baz=254						
I47A	**Gladwin**	**111.97**	**51**	PKiKP	**PKiKP**	**03 47 14.9**	**+0.5**
	baz=254						
L49A	**Milan**	**111.97**	**53**	PKiKP	**PKiKP**	**03 47 15.1**	**+0.6**
	baz=254						
ACSO	**Alum Creek Sta**	**112.03**	**55**	PKiKP	**PKiKP**	**03 47 14.9**	**+0.3**
	baz=254						
N50A	**Nevada**	**112.05**	**54**	PKiKP	**PKiKP**	**03 47 15.1**	**+0.5**
	baz=254						
G46A	**Petoskey**	**112.07**	**49**	PKiKP	**PKiKP**	**03 47 15.0**	**+0.5**
	baz=255						
AAM	**Ann Arbor**	**112.11**	**53**	PKiKP	**PKiKP**	**03 47 15.1**	**+0.5**
	baz=254						
GLMI	**Grayling**	**112.11**	**50**	PKiKP	**PKiKP**	**03 47 15.3**	**+0.7**
	baz=255						
V55A	**Taylorsville**	**112.12**	**60**	PKiKP	**PKiKP**	**03 47 15.3**	**+0.4**
	baz=253						
T54A	**Tazewell**	**112.19**	**59**	PKiKP	**PKiKP**	**03 47 15.4**	**+0.3**
	baz=253						
Q52A	**Bidwell**	**112.20**	**56**	PKiKP	**PKiKP**	**03 47 15.3**	**+0.4**
	baz=254						
O51A	**Pataskala**	**112.28**	**55**	PKiKP	**PKiKP**	**03 47 15.3**	**+0.2**
	baz=254						
J48A	**Bridge Port**	**112.28**	**52**	PKiKP	**PKiKP**	**03 47 15.5**	**+0.5**
	baz=255						
M50A	**Fremont**	**112.30**	**54**	PKiKP	**PKiKP**	**03 47 15.3**	**+0.2**
	baz=254						
H47A	**Mio**	**112.33**	**50**	PKiKP	**PKiKP**	**03 47 15.4**	**+0.4**
	baz=255						
K49A	**Clarkson**	**112.38**	**52**	PKiKP	**PKiKP**	**03 47 15.7**	**+0.5**
	baz=255						
W56A	**Indian Trail**	**112.41**	**61**	PKiKP	**PKiKP**	**03 47 16.0**	**+0.6**
	baz=253						
U55A	**TA2, Sparta**	**112.44**	**59**	PKiKP	**PKiKP**	**03 47 15.9**	**+0.3**
	baz=253						
Z58A	**St. Stephen**	**112.49**	**63**	PKiKP	**PKiKP**	**03 47 16.0**	**+0.4**
	baz=253						
P52A	**Corning**	**112.49**	**56**	PKiKP	**PKiKP**	**03 47 15.7**	**+0.2**
	baz=254						
I48A	**Sherman Twp**	**112.57**	**51**	PKiKP	**PKiKP**	**03 47 15.9**	**+0.4**
	baz=255						
X57A	**Johnson Farm,**	**112.60**	**62**	PKiKP	**PKiKP**	**03 47 16.0**	**+0.1**
	baz=253						
S54A	**Dingess, Beckl**	**112.60**	**58**	PKiKP	**PKiKP**	**03 47 16.0**	**+0.2**
	baz=254						
L50A	**Kingsville**	**112.64**	**53**	PKiKP	**PKiKP**	**03 47 15.8**	**+0.1**
	baz=255						
N51A	**Ashland**	**112.66**	**54**	PKiKP	**PKiKP**	**03 47 15.9**	**+0.1**
	baz=254						
V56A	**Mocksville**	**112.67**	**60**	PKiKP	**PKiKP**	**03 47 15.9**	**0.0**
	baz=253						
G47A	**Hillman**	**112.72**	**50**	PKiKP	**PKiKP**	**03 47 16.0**	**+0.2**
	baz=255						
Q53A	**Leroy**	**112.73**	**57**	PKiKP	**PKiKP**	**03 47 16.1**	**+0.1**
	baz=254						
J49A	**Marlette**	**112.75**	**52**	PKiKP	**PKiKP**	**03 47 16.0**	**+0.1**
	baz=255						
T55A	**Pulaski**	**112.81**	**59**	PKiKP	**PKiKP**	**03 47 16.4**	**+0.1**
	baz=254						
O52A	**Adamsville**	**112.84**	**55**	PKiKP	**PKiKP**	**03 47 16.2**	**+0.1**
	baz=254						
W57A	**Gilead**	**112.87**	**61**	PKiKP	**PKiKP**	**03 47 16.3**	**0.0**
	baz=253						
Z59A	**Georgetown, SC**	**112.89**	**63**	PKiKP	**PKiKP**	**03 47 16.5**	**+0.1**
	baz=253						
M51A	**Elyria**	**112.91**	**54**	PKiKP	**PKiKP**	**03 47 16.7**	**+0.4**
	baz=255						
U56A	**King**	**112.91**	**60**	PKiKP	**PKiKP**	**03 47 16.6**	**+0.2**
	baz=254						
R54A	**Victor**	**112.95**	**58**	PKiKP	**PKiKP**	**03 47 16.2**	**-0.2**
	baz=254						
H48A	**Harrisville**	**112.97**	**50**	PKiKP	**PKiKP**	**03 47 16.4**	**+0.2**
	baz=255						
K50A	**Casco**	**112.97**	**52**	PKiKP	**PKiKP**	**03 47 16.6**	**+0.3**
	baz=255						
P53A	**Whipple**	**113.00**	**56**	PKiKP	**PKiKP**	**03 47 16.6**	**+0.1**
	baz=254						
D46A	**Sault St. Mari**	**113.03**	**48**	PKiKP	**PKiKP**	**03 47 16.2**	**0.0**
	baz=256						
BLA	**Blacksburg**	**113.12**	**59**	PKiKP	**PKiKP**	**03 47 16.6**	**-0.3**
	baz=254						
I49A	**Point Hope**	**113.12**	**51**	PKiKP	**PKiKP**	**03 47 16.6**	**0.0**
	baz=255						
N52A	**McGinn's Farm,**	**113.13**	**55**	PKiKP	**PKiKP**	**03 47 16.8**	**+0.2**
	baz=255						
MK31	**Makanchi Array**	**113.18**	**312**	*i* PKIKP	**PKiKP**	**03 47 15.9**	**-0.7**
MKAR	**Makanchi Array**	**113.18**	**312**	Pdiff	**Pdif**	**03 43 27.5**	**+1.6**
	comp=Z,1.4nm,0.7s,baz=95,slow=6.2,SNR=11						
MKAR				PKiKP	**PKiKP**	**03 47 15.9**	**-0.6**
	comp=Z,24nm,1.0s,baz=217,slow=1.6,SNR=21						
MKAR				PP	**PP**	**03 48 13.4**	**-2.8**
	comp=Z,9.7nm,0.9s,baz=90,slow=4.9,SNR=6.4						
MKAR				SKP		03 50 05.4	
	comp=Z,12nm,0.9s,baz=91,slow=1.6,SNR=5.2						
MKAR				PKKPbc	**PKKPbc**	**03 58 04.4**	**-0.2**
	comp=Z,2.0nm,0.5s,baz=275,slow=2.6,SNR=14						
MKAR				SKKPbc	SKKPbc	04 00 59.8	-3.3
	comp=Z,3.8nm,0.9s,baz=286,slow=2.7,SNR=4.5						
MKAR	**Makanchi Array**	**113.18**	**312**	*i* PKIKP	**PKiKP**	**03 47 16.0**	**-0.6**
MKAR	**Makanchi Array**	**113.18**	**312**	Pdif	**Pdif**	**03 43 26.1**	**+0.2**
S55A	**Lewisburg**	**113.21**	**58**	PKiKP	**PKiKP**	**03 47 16.8**	**-0.2**
	baz=254						
X58A	**Rowland**	**113.22**	**62**	PKiKP	**PKiKP**	**03 47 17.0**	**0.0**
	baz=253						
V57A	**Coltrane Farms**	**113.25**	**60**	PKiKP	**PKiKP**	**03 47 16.9**	**-0.2**
	baz=254						
ZALV	**Zalesovo Beam**	**113.26**	**320**	Pdiff	**Pdif**	**03 43 26.6**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=57,slow=5.5,SNR=3.8						
ZALV				PKiKP	**PKiKP**	**03 47 15.4**	**-1.0**
	comp=Z,5.6nm,0.6s,baz=168,slow=1.3,SNR=17						
ZALV				PP	**PP**	**03 48 15.8**	**-0.6**
	comp=Z,17nm,1.0s,baz=90,slow=5.9,SNR=6.1						
ZALV				PKKPbc	**PKKPbc**	**03 58 04.6**	**+0.2**
	comp=Z,1.9nm,0.6s,baz=263,slow=3.2,SNR=3.6						
ZALV				SKKPbc	SKKPbc	04 00 60.0	-3.4
	comp=Z,1.1nm,0.6s,baz=323,slow=3.9,SNR=3.5						
ZALV	**Zalesovo Beam**	**113.26**	**320**	Pdif	**Pdif**	**03 43 23.6**	**-2.4**
Q54A	**Coxs Mills**	**113.28**	**57**	PKiKP	**PKiKP**	**03 47 16.9**	**-0.1**
	baz=254						
O53A	**New Philadelph**	**113.33**	**55**	PKiKP	**PKiKP**	**03 47 17.2**	**+0.1**
	baz=255						
T56A	**Rocky Mt**	**113.37**	**59**	PKiKP	**PKiKP**	**03 47 17.4**	**+0.1**
	baz=254						
MAKZ	**Makanchi**	**113.39**	**312**	PKIKP	**PKiKP**	**03 47 15.9**	**-1.1**
E47A	**Iron Bridge**	**113.43**	**48**	PKiKP	**PKiKP**	**03 47 17.2**	**+0.1**
	baz=256						
Y59A	**Loris**	**113.43**	**62**	PKiKP	**PKiKP**	**03 47 17.6**	**+0.1**
	baz=253						
W58A	**Raeford**	**113.43**	**61**	PKiKP	**PKiKP**	**03 47 17.4**	**0.0**
	baz=254						
BHK	**Bhakra**	**113.47**	**295**	*e*x	**PP**	**03 48 13.0**	**-5.6**
M52A	**Chesterland**	**113.56**	**54**	PKiKP	**PKiKP**	**03 47 17.6**	**+0.1**
	baz=255						
R55A	**Marlinton**	**113.64**	**58**	PKiKP	**PKiKP**	**03 47 17.7**	**-0.1**
	baz=255						
D47A	**Chapleau**	**113.68**	**48**	PKiKP	**PKiKP**	**03 47 17.7**	**+0.2**
	baz=257						
P54A	**Burton**	**113.71**	**56**	PKiKP	**PKiKP**	**03 47 17.7**	**-0.2**
	baz=255						
F48A	**Evansville**	**113.72**	**49**	PKiKP	**PKiKP**	**03 47 17.5**	**-0.1**
	baz=256						
V58A	**Windy Hill, Pi**	**113.74**	**60**	PKiKP	**PKiKP**	**03 47 17.7**	**-0.2**
	baz=254						
U57A	**Blanch**	**113.74**	**60**	PKiKP	**PKiKP**	**03 47 17.7**	**-0.2**
	baz=254						
K51A	**Iona Station**	**113.75**	**53**	PKiKP	**PKiKP**	**03 47 17.4**	**-0.3**
	baz=256						
Q55A	**Buckhannon**	**113.85**	**57**	PKiKP	**PKiKP**	**03 47 18.2**	**0.0**
	baz=255						
S56A	**Natural Bridge**	**113.90**	**58**	PKiKP	**PKiKP**	**03 47 18.6**	**+0.4**
	baz=255						
RES	**Resolute Bay**	**113.92**	**17**	PKiKP	**PKiKP**	**03 47 16.4**	**-0.7**
	comp=Z,27nm,0.9s,baz=276,slow=2.3,SNR=30						
RES				PP	**PP**	**03 48 17.0**	**-3.5**
	comp=Z,11nm,1.0s,baz=225,slow=17,SNR=6.5						
RES				SKP		03 50 05.1	
	comp=Z,6.5nm,0.8s,baz=94,slow=2.0,SNR=4.2						
O54A	**Avella**	**113.94**	**56**	PKiKP	**PKiKP**	**03 47 18.6**	**+0.4**
	baz=255						
T57A	**Hurt**	**113.96**	**59**	PKiKP	**PKiKP**	**03 47 18.2**	**-0.1**
	baz=254						
M53A	**Wl Miller and**	**114.03**	**54**	PKiKP	PKPdf	03 47 18.2	-0.2
	baz=256						
W59A	**Clinton**	**114.10**	**61**	PKiKP	**PKiKP**	**03 47 18.8**	**+0.1**
	baz=254						
F49A	**Sandfield**	**114.10**	**49**	PKiKP	PKPdf	03 47 18.1	-0.2
	baz=257						
E48A	**Lockeyer**	**114.18**	**49**	PKiKP	PKPdf	03 47 18.5	0.0
	baz=257						
MCWV	**Mont Chateau**	**114.20**	**56**	PKiKP	PKPdf	03 47 18.2	-0.5
	baz=255						
R56A	**Bull Pasture M**	**114.21**	**58**	PKiKP	PKPdf	03 47 18.4	-0.5
	baz=255						
X60A	**Albert Glenn T**	**114.31**	**62**	PKiKP	PKPdf	03 47 18.9	-0.2
	baz=254						
K52A	**Tillsonburg**	**114.33**	**53**	PKiKP	PKPdf	03 47 18.8	-0.1
	baz=256						
U58A	**Oxford**	**114.34**	**60**	PKiKP	PKPdf	03 47 18.7	-0.4
	baz=255						
I51A	**Listowel**	**114.35**	**52**	PKiKP	PKPdf	03 47 18.9	0.0
	baz=256						
N54A	**Moraine State**	**114.42**	**55**	PKiKP	PKPdf	03 47 19.1	0.0
	baz=256						
V59A	**Middlesex**	**114.42**	**61**	PKiKP	PKPdf	03 47 18.5	-0.8
	baz=254						
L53A	**Girard**	**114.46**	**54**	PKiKP	PKPdf	03 47 19.0	-0.1
	baz=256						
T58A	**Grand View Acr**	**114.50**	**59**	PKiKP	PKPdf	03 47 19.4	0.0
	baz=255						
Q56A	**Snyder Ridge,**	**114.54**	**57**	PKiKP	**PKiKP**	**03 47 19.6**	**+0.1**
	baz=255						
CNNC	**Cliffs of the**	**114.55**	**61**	PKiKP	PKPdf	03 47 18.7	-0.8
	baz=254						
UZB	**Uzynbulak**	**114.57**	**308**	⇑*e*PKP	PKPdf	03 47 19.0	-0.6
UZB				*e*PP	**PP**	**03 48 24.1**	**-2.1**
UZB	**Uzynbulak**	**114.57**	**308**	c*e*PKIKP	PKPdf	03 47 18.9	-0.7
UZB				*e*		03 48 24.0	
D48A	**Paudash Townsh**	**114.57**	**48**	PKiKP	PKPdf	03 47 18.9	-0.4
	baz=258						
J52A	**Paris**	**114.61**	**52**	PKiKP	PKPdf	03 47 19.2	-0.2
	baz=257						
ERPA	**Erie**	**114.69**	**54**	PKiKP	PKPdf	03 47 19.5	-0.1
	baz=256						
O55A	**Ligonier**	**114.74**	**56**	PKiKP	PKPdf	03 47 19.6	-0.2
	baz=256						
M54A	**Oil Creek Stat**	**114.79**	**54**	PKiKP	PKPdf	03 47 19.6	-0.3
	baz=256						
NRIK	**Noril'sk**	**114.80**	**337**	Pdiff	**Pdif**	**03 43 33.6**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=123,slow=6.1,SNR=6.1						
NRIK				PKP	PKPdf	03 47 18.3	-0.7
	comp=Z,24nm,1.1s,baz=122,slow=2.4,SNR=18						
NRIK				PP	**PP**	**03 48 23.1**	**-3.8**
	comp=Z,25nm,1.1s,baz=89,slow=7.5,SNR=4.7						
NRIK	**Noril'sk**	**114.80**	**337**	*i* PKIKP	PKPdf	03 47 18.8	-0.2
KPKS	**Kokpek**	**114.88**	**308**	*e*PKP	**PKiKP**	**03 47 20.6**	**+0.5**
KPKS				*e*PP	**PP**	**03 48 25.3**	**-3.0**
KPKS	**Kokpek**	**114.88**	**308**	*e*PKIKP	**PKiKP**	**03 47 20.5**	**+0.5**
KPKS				*e*		03 48 25.2	
D49A	**Beulah Townshi**	**114.89**	**48**	PKiKP	PKPdf	03 47 19.6	-0.3
	baz=258						
P56A	**Dayton Farm, R**	**114.92**	**57**	PKiKP	PKPdf	03 47 19.7	-0.4
	baz=256						
U59A	**Littleton**	**114.92**	**60**	PKiKP	PKPdf	03 47 19.3	-0.9
	baz=255						
SATY	**Saty**	**114.98**	**307**	*e*PKP	PKPdf	03 47 20.1	-0.2
SATY				*i* PP	**PP**	**03 48 26.1**	**-2.9**
SATY	**Saty**	**114.98**	**307**	*e*PKIKP	PKPdf	03 47 20.1	-0.2
SATY				*i*		03 48 26.1	
I52A	**Shelburne**	**115.01**	**51**	PKiKP	**PKPdf**	**03 47 19.8**	**-0.4**
	baz=257						
S58A	**Poland Farm, P**	**115.04**	**59**	PKiKP	**PKPdf**	**03 47 19.7**	**-0.8**
	baz=255						
N55A	**Marion Center**	**115.11**	**55**	PKiKP	**PKPdf**	**03 47 20.3**	**-0.2**
	baz=256						
Q57A	**Strasburg**	**115.12**	**57**	PKiKP	**PKPdf**	**03 47 20.2**	**-0.3**
	baz=256						
V60A	**Jim Taylor Roa**	**115.19**	**61**	PKiKP	**PKPdf**	**03 47 19.8**	**-0.9**
	baz=255						
L54A	**Sinclairville**	**115.21**	**54**	PKiKP	**PKPdf**	**03 47 20.5**	**-0.2**
	baz=257						
W61A	**Ground Anchor**	**115.25**	**62**	PKiKP	**PKPdf**	**03 47 20.7**	**-0.2**
	baz=255						
R58A	**Rapidan**	**115.25**	**58**	PKiKP	**PKPdf**	**03 47 20.6**	**-0.3**
	baz=256						
R58B	**Mineral**	**115.26**	**58**	PKiKP	**PKPdf**	**03 47 20.8**	**0.0**
	baz=256						
T59A	**Double "B" Far**	**115.27**	**60**	PKiKP	**PKPdf**	**03 47 20.8**	**0.0**
	baz=255						
SEM	**Semipalatinsk**	**115.28**	**316**	*e*PKP	**PKPdf**	**03 47 19.7**	**-1.2**
SEM	**Semipalatinsk**	**115.28**	**316**	*e*PKIKP	**PKPdf**	**03 47 19.6**	**-1.2**
O56A	**Blue Knob Stat**	**115.30**	**56**	PKiKP	**PKPdf**	**03 47 20.8**	**-0.1**

	baz=256						
H52A	Wyevale	115.33	51	PKiKP	PKPdf	03 47 20.5	-0.3
	baz=258						
I53A	Kortright Cn E	115.37	52	PKiKP	PKPdf	03 47 20.6	-0.2
	baz=257						
M55A	Ridgway	115.43	54	PKiKP	PKPdf	03 47 21.0	-0.1
	baz=257						
U60A	Pendleton	115.45	60	PKiKP	PKPdf	03 47 20.9	-0.3
	baz=255						
P57A	Homestead Farm	115.53	57	PKiKP	PKPdf	03 47 20.8	-0.6
	baz=256						
F51A	Arnstein	115.59	49	PKiKP	PKPdf	03 47 20.5	-0.8
	baz=258						
OPO	Ambohidratompo	115.62	231	PKP	PKPdf	03 47 22.1	-0.3
	comp=Z,10.0nm,0.8s,baz=149,slow=2.8,SNR=8.7						
Q58A	Fox Den Farm,	115.65	57	PKiKP	PKiKP	03 47 21.8	+0.2
	baz=256						
N56A	West Decatur	115.65	55	PKiKP	PKiKP	03 47 21.7	+0.1
	baz=257						
S59A	Mechanicsville	115.66	59	PKiKP	PKPdf	03 47 21.5	-0.1
	baz=256						
CBN	Corbin Frederi	115.71	58	PKiKP	PKPdf	03 47 21.6	-0.1
	baz=256						
K54A	Basiliko Farm,	115.74	53	PKiKP	PKPdf	03 47 21.2	-0.4
	baz=257						
L55A	Hinsdale	115.83	54	PKiKP	PKPdf	03 47 21.8	0.0
	baz=257						
M56A	Emporium	115.86	55	PKiKP	PKPdf	03 47 21.9	0.0
	baz=257						
D50A	G1974 Best Tow	115.89	48	PKiKP	PKPdf	03 47 21.4	-0.4
	baz=259						
SSPA	Standing Stone	115.89	56		PKPdf	03 47 21.7	-0.3
SSPA	Standing Stone	115.89	56	PKiKP	PKPdf	03 47 21.9	-0.1
	baz=257						
R59A	King George, V	115.91	58	PKiKP	PKPdf	03 47 21.9	-0.2
	baz=256						
J54A	Appleton	115.92	53	PKiKP	PKPdf	03 47 21.7	-0.3
	baz=258						
KSH	Kashi	115.96	303	PKP	PKiKP	03 47 23.3	+1.0
KSH				PP	PP	03 48 42.0	+6.1
KSH				sPKP		03 50 03.3	
KSH				PKS		03 50 58.5	
KSH				SKKS		03 54 44.5	
KSH				AMB	AMB		
	comp=Z,280nm,5.1s						
F52A	Sundridge	115.97	50	PKiKP	PKPdf	03 47 21.6	-0.4
	baz=258						
U61A	Possum Corner	115.97	61	PKiKP	PKiKP	03 47 22.5	+0.3
	baz=256						
MDOK	Medeo	115.98	307	*e*PKP	PKPdf	03 47 22.0	-0.3
MDOK				*e*PP	PP	03 48 32.2	-3.7
MDOK	Medeo	115.98	307	*e*PKIKP	PKPdf	03 47 22.0	-0.3
MDOK				*e*		03 48 32.2	
O57A	Amberson	115.98	56	PKiKP	PKPdf	03 47 21.9	-0.2
	baz=257						
E51A	G1948 Merrick	116.00	49	PKiKP	PKiKP	03 47 22.9	+0.9
	baz=259						
TNSS	Tian-Shan	116.02	307	*e*PKP	PKPdf	03 47 22.7	-0.1
TNSS	Tian-Shan	116.02	307	*e*PKIKP	PKPdf	03 47 22.6	-0.1
P58A	Pank, Wackersv	116.07	57	PKiKP	PKPdf	03 47 22.4	0.0
	baz=257						
N57A	Milroy	116.17	55	PKiKP	PKPdf	03 47 22.3	-0.2
	baz=257						
D51A	Lot 18 Range I	116.18	48	PKiKP	PKPdf	03 47 22.0	-0.3
	baz=259						
K55A	Perry	116.22	53	PKiKP	PKPdf	03 47 22.2	-0.4
	baz=258						
H53A	Bobcaygeon	116.23	51	PKiKP	PKPdf	03 47 22.2	-0.3
	baz=258						
G53A	Haliburton	116.31	51	PKiKP	PKPdf	03 47 22.3	-0.4
	baz=259						
KURK	Kurchatov	116.36	316	P	PKPdf	03 47 22.0	-0.5
KURK	Kurchatov	116.36	316	*d i*PKIKP	PKPdf	03 47 22.1	-0.5
KURK				pmax	pmax		
	comp=Z,167nm,1.3s						
KURK	Kurchatov	116.36	316		PKPdf	03 47 21.9	-0.7
ULHL	Ulahol	116.36	306	P	PKiKP	03 47 23.7	+0.5
	SNR=7.3						
KURBB	Kurchatov Arra	116.40	316	PKP	PKPdf	03 47 21.9	-0.8
	comp=Z,52nm,1.0s,baz=109,slow=1.8,SNR=63						
KURBB				PP	PP	03 48 32.2	-6.2
	comp=Z,26nm,1.1s,baz=100,slow=6.8,SNR=4.4						
KURBB				SKP	SKPdf	03 50 11.0	+0.3
	comp=Z,10nm,0.8s,baz=105,slow=2.1,SNR=4.3						
KURBB				PKKPbc	PKKPbc	03 57 52.5	-1.2
	comp=Z,5.1nm,0.8s,baz=276,slow=4.0,SNR=14						
KURBB				SKKPbc	SKKPbc	04 00 50.4	-3.1
	comp=Z,6.4nm,0.8s,baz=281,slow=3.6,SNR=13						
KURBB	Kurchatov Arra	116.40	316	PKIKP	PKPdf	03 47 21.4	-1.2
Q59A	Harwood	116.41	58	PKiKP	PKPdf	03 47 22.8	-0.2
	baz=257						
L56A	Greenwood	116.46	54	PKiKP	PKPdf	03 47 22.7	-0.4
	baz=258						
O58A	Lewisberry	116.49	56	PKiKP	PKPdf	03 47 22.8	-0.4
	baz=257						
J55A	Hilton	116.51	53	PKiKP	PKPdf	03 47 22.6	-0.4
	baz=258						
E52A	Mattawa	116.52	49	PKiKP	PKPdf	03 47 22.8	-0.2
	baz=259						
M57A	Sunshine Farm,	116.61	55	PKiKP	PKPdf	03 47 23.2	-0.1
	baz=258						
KUU	Kurty	116.63	308	⇑*i*PKP	PKiKP	03 47 23.5	+0.1
KUU				*e*PP	PP	03 48 35.7	-4.5
KUU	Kurty	116.63	308	*c i*PKIKP	PKiKP	03 47 23.5	+0.1
NIL	Nilore	116.65	296	PKIKP	PKPdf	03 47 22.6	-1.1
NIL	Nilore	116.65	296		PKPdf	03 47 22.6	-1.1
BHUJ	Bhuj	116.71	284	*e*x	PKPdf	03 47 25.7	+1.6
G54A	Lake Saint Pet	116.74	50	PKiKP	PKPdf	03 47 23.0	-0.5
	baz=259						
K56A	Middlesex	116.75	53	PKiKP	PKPdf	03 47 23.4	-0.2
	baz=258						
P59A	Jarrettsville	116.75	57	PKiKP	PKPdf	03 47 23.0	-0.7
	baz=257						
I55A	Frankford	116.80	52	PKiKP	PKPdf	03 47 23.3	-0.2
	baz=259						
N58A	Sunbury	116.80	56	PKiKP	PKPdf	03 47 23.6	-0.1
	baz=258						
S61A	Accomac	116.89	59	PKiKP	PKPdf	03 47 23.7	-0.3
	baz=257						
L57A	Andrews Acres	116.95	54	PKiKP	PKPdf	03 47 23.9	-0.1
	baz=258						
PTGA	Pitinga	117.02	105		PKPdf	03 47 24.1	-0.9
KZA	Kyzart	117.05	306	P	PKiKP	03 47 27.4	+2.6
	SNR=14						
O59A	Robesonia	117.09	56	PKiKP	PKPdf	03 47 24.1	-0.2
	baz=258						
M58A	Price’s Panora	117.11	55	PKiKP	PKPdf	03 47 24.0	-0.3
	baz=258						
J56A	Wolcott	117.20	53	PKiKP	PKPdf	03 47 24.1	-0.3
	baz=259						
E53A	Dumoine, Ponti	117.21	49	PKiKP	PKPdf	03 47 24.2	-0.1
	baz=260						
H55A	Tweed	117.21	51	PKiKP	PKPdf	03 47 24.1	-0.2
	baz=259						
D53A	Lac Vacive, Po	117.31	49	PKiKP	PKPdf	03 47 23.9	-0.6
	baz=260						
K57A	Scipio Center	117.34	54	PKiKP	PKPdf	03 47 24.4	-0.3
	baz=259						
KBK	Karagaybulak	117.39	306	P	PKPdf	03 47 25.0	-0.1
	SNR=12						
P60A	Greenville	117.39	57	PKiKP	PKPdf	03 47 24.6	-0.2
	baz=258						
N59A	State Game Lan	117.52	56	PKiKP	PKiKP	03 47 25.2	0.0
	baz=258						
E54A	Lac Daplat, Po	117.54	49	PKiKP	PKPdf	03 47 24.5	-0.4
	baz=260						
CHMS	Chumysh	117.59	307	P	PKPdf	03 47 25.1	-0.1
	SNR=11						
UCH	Uchtor	117.62	306	P	PKPdf	03 47 25.7	-0.1
	SNR=24						
BINY	Binghamton	117.62	54	PKiKP	PKPdf	03 47 25.1	-0.2
	baz=259						
G55A	Calabogie	117.66	51	PKiKP	PKPdf	03 47 25.0	-0.2
	baz=260						
O60A	Telford	117.67	56	PKiKP	PKPdf	03 47 25.3	0.0
	baz=258						
L58A	Harry Jones Me	117.69	54	PKiKP	PKiKP	03 47 25.5	+0.1
	baz=259						
AAK	Ala-Archa	117.71	306	PKP	PKPdf	03 47 25.0	-0.7
	comp=Z,4.4nm,0.3s,baz=126,slow=3.6,SNR=20						
AAK				PKKPbc	PKKPbc	03 57 49.4	+0.3
	comp=Z,14nm,0.8s,baz=225,slow=2.5,SNR=16						
AAK	Ala-Archa	117.71	306	*i* PKPdf	PKPdf	03 47 25.5	-0.1
	SNR=8.7						
AAK	Ala-Archa	117.71	306	*c i*PKIKP	PKiKP	03 47 26.0	+0.3
AAK				pmax	pmax		
	comp=Z,43nm,1.7s						
SGDS	Sogindy	117.77	307	⇑*e*PKP	PKPdf	03 47 25.0	-0.6
SGDS				*e*PP	PP	03 48 43.4	-4.7
MATQ	Matagami	117.77	46	PKiKP	PKPdf	03 47 24.4	-0.9
	baz=262						
USP	Ospenovka	117.82	307	P	PKPdf	03 47 25.4	-0.3
	SNR=20						
J57A	Williamstown	117.84	53	PKiKP	PKPdf	03 47 25.4	-0.2
	baz=259						
H56A	Elgin	117.87	51	PKiKP	PKPdf	03 47 25.4	-0.2
	baz=260						
M59A	Waymart	117.90	55	PKiKP	PKPdf	03 47 25.8	-0.1
	baz=259						
K58A	Earlville	117.97	54	PKiKP	PKPdf	03 47 25.8	-0.1
	baz=259						
N60A	Cedar Hill Far	118.01	56	PKiKP	PKPdf	03 47 26.1	0.0
	baz=259						
F55A	Otter Lake	118.02	50	PKiKP	PKPdf	03 47 25.3	-0.6
	baz=260						
D54A	Lac Fusel, La	118.02	49	PKiKP	PKPdf	03 47 25.3	-0.6
	baz=261						
BDFB	Brasilia	118.03	127	PKP	PKPdf	03 47 26.7	-0.3
	comp=Z,9.3nm,0.8s,baz=280,slow=3.0,SNR=12						
BDFB				SKP	SKPdf	03 50 14.7	-0.6
	comp=Z,9.4nm,0.8s,baz=196,slow=3.4,SNR=6.9						
BDFB				PKKPbc	PKKPbc	03 57 49.4	+1.6
	comp=Z,1.9nm,0.4s,baz=45,slow=3.8,SNR=3.6						
LSQQ	Lebel-sur-Quev	118.10	46	PKiKP	PKPdf	03 47 25.5	-0.5
	baz=262						
I57A	Carthage	118.17	52	PKiKP	PKPdf	03 47 25.8	-0.5
	baz=260						
AML	Almayashu	118.20	306	P	PKiKP	03 47 27.1	+0.1
	SNR=28						
EKS2	Erkin-Say	118.23	306	P	PKiKP	03 47 26.8	+0.1
	SNR=18						
SUR	Sutherland	118.26	201	PKP	PKPdf	03 47 26.9	-0.3
	comp=Z,23nm,0.8s,baz=200,slow=0.7,SNR=16						
SUR	Sutherland	118.26	201		PKPdf	03 47 25.9	-1.3
O61A	Allentown	118.26	57	PKiKP	PKPdf	03 47 26.1	-0.5
	baz=258						
L59A	Walton	118.31	54	PKiKP	PKiKP	03 47 26.8	+0.1
	baz=259						
E55A	Montcerf-Lytto	118.32	49	PKiKP	PKPdf	03 47 25.5	-0.9
	baz=261						
J58A	Remsen	118.34	53	PKiKP	PKPdf	03 47 26.6	0.0
	baz=260						
M60A	Port Jervis	118.45	55	PKiKP	PKPdf	03 47 26.7	-0.2
	baz=259						
BTLS	Baital	118.46	309	⇑*i*PKP	PKPdf	03 47 26.2	-0.6
BTLS				*e*PP	PP	03 48 51.9	-0.8
BTLS	Baital	118.46	309	*c i*PKIKP	PKPdf	03 47 26.2	-0.6
BTLS				*e*		03 48 51.8	
H57A	Richville	118.46	52	PKiKP	PKPdf	03 47 26.6	-0.2
	baz=260						
CRPR	Cabo Rojo, PR	118.53	83		PKPdf	03 47 26.2	-1.4
K59A	Cooperstown	118.55	54	PKiKP	PKPdf	03 47 26.8	-0.3
	baz=260						
N61A	South Mountain	118.58	56	PKiKP	PKiKP	03 47 27.5	+0.3
	baz=259						
I58A	Old Forge	118.62	53	PKiKP	PKPdf	03 47 27.0	-0.2
	baz=260						
D55A	Sainte-Anne-du	118.80	49	PKiKP	PKPdf	03 47 27.1	-0.3
	baz=262						
G57A	Newington	118.85	51	PKiKP	PKPdf	03 47 27.3	-0.2
	baz=261						
L60A	Shokan	118.87	55	PKiKP	PKPdf	03 47 27.7	0.0
	baz=260						
J59A	Piesco	118.92	53	PKiKP	PKPdf	03 47 27.8	0.0
	baz=260						
PAL	Palisades	118.92	56	PKiKP	PKiKP	03 47 28.0	+0.1
	baz=259						
E56A	St. Veronique	119.03	49	PKiKP	PKPdf	03 47 27.5	-0.3
	baz=262						
LONY	Lake Ozonia	119.05	52	PKiKP	PKPdf	03 47 27.6	-0.3
	baz=261						
M61A	Granite Spring	119.08	56	PKiKP	PKiKP	03 47 28.2	0.0
	baz=260						
F57A	Harrington	119.16	50	PKiKP	PKPdf	03 47 27.8	-0.2
	baz=262						
N62A	Caumsett State	119.24	56	PKiKP	PKPdf	03 47 28.3	0.0
	baz=260						
D56A	ZEC Mazanza, M	119.29	49	PKiKP	PKPdf	03 47 28.1	-0.2
	baz=262						
H58A	Gabriels	119.31	52	PKiKP	PKPdf	03 47 28.4	-0.1
	baz=261						
L61A	Hillsdale 1, H	119.39	55	PKiKP	PKPdf	03 47 28.7	0.0
	baz=260						
SJG	San Juan	119.42	83	PKIKP	PKPdf	03 47 28.3	-1.1
SJG	San Juan	119.42	83		PKPdf	03 47 28.3	-1.1
I59A	Olmsteadville	119.42	53	PKiKP	PKPdf	03 47 28.7	0.0
	baz=261						
G58A	Ormstown	119.50	51	PKiKP	PKPdf	03 47 28.5	-0.2
	baz=262						
E57A	Chemin Saint G	119.62	50	PKiKP	PKPdf	03 47 28.7	-0.3
	baz=262						
J60A	Lant Hill Farm	119.66	53	PKiKP	PKPdf	03 47 29.1	0.0
	baz=261						
K61A	Williamstown	119.68	54	PKiKP	PKPdf	03 47 29.3	0.0
	baz=261						
H59A	Cadyville	119.69	52	PKiKP	PKPdf	03 47 28.9	-0.2
	baz=262						
M62A	Hamden	119.75	56	PKiKP	PKPdf	03 47 29.4	0.0
	baz=260						
F58A	St-Lin Laurent	119.77	50	PKiKP	PKPdf	03 47 29.0	-0.2
	baz=262						
FRNY	Flat Rock	119.78	52		PKPdf	03 47 28.5	-0.8
I60A	Shoreham	119.85	53	PKiKP	PKPdf	03 47 29.5	0.0
	baz=261						
D57A	Chemin Vers le	119.88	49	PKiKP	PKiKP	03 47 29.5	0.0
	baz=263						
BRZS	Berezniki	120.03	314	⇑*i*PKP	PKPdf	03 47 28.6	-1.1
BRZS				*e*PP	PP	03 49 02.9	-0.4
BRZS	Berezniki	120.03	314	*c i*PKIKP	PKPdf	03 47 28.5	-1.1
BRZS				*e*		03 49 02.8	
L61B	Northampton	120.08	54	PKiKP	PKiKP	03 47 30.2	+0.1
	baz=261						
BOSA	Boshof	120.08	206	*i* P	PKPdf	03 47 30.6	-0.1
BOSA	Boshof	120.08	206	PKP	PKPdf	03 47 29.6	-1.1
	comp=Z,20nm,1.0s,baz=185,slow=2.8,SNR=18						
BOSA				PKKPbc	PKKPbc	03 57 40.8	-0.3
	comp=Z,46nm,1.0s,baz=24,slow=2.1,SNR=15						
BOSA	Boshof	120.08	206	*i* P	PKPdf	03 47 30.6	-0.1
G59A	Clarenceville	120.11	51	PKiKP	PKPdf	03 47 29.8	-0.1
	baz=262						
E58A	La Victoria	120.21	50	PKiKP	PKiKP	03 47 30.2	0.0
	baz=263						
KBL	Kabul	120.26	296	P	PKiKP	03 47 31.3	+0.3
KBL	Kabul	120.26	296	PKIKP	PKPdf	03 47 30.8	-0.1
KBL	Kabul	120.26	296		PKPdf	03 47 30.8	-0.1
J61A	Chester	120.31	53	PKiKP	PKiKP	03 47 30.8	+0.3
	baz=262						
M63A	Gales Ferry	120.37	56	PKiKP	PKiKP	03 47 30.7	+0.1
	baz=261						
H60A	Morristown	120.38	52	PKiKP	PKiKP	03 47 30.8	+0.2
	baz=262						
K62A	Royalston	120.43	54	PKiKP	PKiKP	03 47 31.3	+0.5
	baz=261						
F59A	Saint Guilaume	120.48	50	PKiKP	PKPdf	03 47 30.6	0.0
	baz=263						
JBG	Jabagly	120.55	305	*c i*PKIKP	PKiKP	03 47 31.2	0.0
JBG				*e*		03 49 06.0	
SJMB	Sao Joao De Ma	120.56	134	*e*P	PKiKP	03 47 32.9	+1.1
D58A	Chemin du LacG	120.57	49	PKiKP	PKPdf	03 47 30.5	-0.3
	baz=264						
I61A	Oroboro, Fairl	120.64	53	PKiKP	PKiKP	03 47 31.4	+0.3
	baz=262						
LATQ	La Tuque	120.67	49	PKiKP	PKPdf	03 47 30.8	-0.1
	baz=264						
KK31	Karatay Array	120.67	306	*i* PKIKP	PKPdf	03 47 30.6	-0.5
KKAR	Karatay Array	120.67	306	PKIKP	PKPdf	03 47 30.8	-0.3
KKAR	Karatay Array	120.67	306		PKPdf	03 47 30.8	-0.3
BSFB	Barra de Sao F	120.69	135	*e*P	PKiKP	03 47 32.4	+0.4
G60A	Masonville	120.70	51	PKiKP	PKPdf	03 47 31.0	-0.1
	baz=263						
E59A	St. Maurice	120.75	50	PKiKP	PKPdf	03 47 31.1	0.0
	baz=263						
L63A	North Scituate	120.77	55	PKiKP	PKiKP	03 47 31.5	+0.1
	baz=261						
J62A	Henniker	120.82	54	PKiKP	PKiKP	03 47 31.8	+0.3
	baz=262						
LBNH	Lisbon	120.88	52	PKiKP	PKiKP	03 47 32.0	+0.4
	baz=262						
HRV	Adam Dziewonsk	120.90	54	PKIKP	PKPdf	03 47 29.6	-2.0
HRV	Adam Dziewonsk	120.90	54		PKPdf	03 47 29.6	-2.0
HRV	Adam Dziewonsk	120.90	54	PKiKP	PKiKP	03 47 31.8	+0.1
	baz=262						
H61A	Lyndonville	120.92	52	PKiKP	PKiKP	03 47 31.8	+0.1
	baz=263						
K63A	Dunstable	120.95	54	PKiKP	PKiKP	03 47 31.9	+0.2
	baz=262						
M64A	Tiverton	121.02	56	PKiKP	PKiKP	03 47 32.0	0.0
	baz=261						
JANB	Januaria	121.05	129	*e*P	PKPdf	03 47 32.7	-0.1
F60A	Warwick	121.08	50	PKiKP	PKiKP	03 47 32.0	+0.1
	baz=263						
I62A	Tamworth	121.25	53	PKiKP	PKiKP	03 47 32.6	+0.2
	baz=263						
D59A	Saint-Raymond	121.27	49	PKiKP	PKiKP	03 47 32.3	0.0
	baz=264						
G61A	St-Isidore-de-	121.29	51	PKiKP	PKiKP	03 47 32.5	+0.1
	baz=263						
L64A	Middleborough	121.35	55	PKiKP	PKiKP	03 47 32.7	+0.1
	baz=262						
J63A	Strafford	121.36	54	PKiKP	PKiKP	03 47 32.8	+0.2
	baz=262						
M65A	Busby, Falmout	121.44	56	PKiKP	PKiKP	03 47 32.9	+0.1
	baz=262						
E60A	Ste Agathe de	121.47	50	PKiKP	PKPdf	03 47 32.3	-0.2
	baz=264						
H62A	Milan	121.47	52	PKiKP	PKiKP	03 47 33.1	+0.3
	baz=263						
BVAR	Borovoye Array	121.67	318	PKP	PKPdf	03 47 32.4	-0.3
	comp=Z,26nm,0.5s,baz=84,slow=1.1,SNR=63						
BVAR				PP	PP	03 49 07.5	-6.7
	comp=Z,34nm,1.0s,baz=104,slow=4.7,SNR=6.5						
BVAR				SKP	SKPdf	03 50 21.3	+0.5
	comp=Z,23nm,1.0s,baz=90,slow=3.0,SNR=3.8						
BVAR				PKKPbc	PKKPab	03 57 33.2	-1.0
	comp=Z,1.6nm,0.7s,baz=289,slow=4.5,SNR=4.2						
BRVK	Borovoye	121.74	318	P	PKPdf	03 47 32.6	-0.2
BRVK	Borovoye	121.74	318	*c i*PKIKP	PKPdf	03 47 32.5	-0.3
BRVK	Borovoye	121.74	318		PKPdf	03 47 32.7	-0.2
F61A	St Evariste	121.74	51	PKiKP	PKiKP	03 47 33.6	+0.3
	baz=264						
I63A	Otisfield	121.82	53	PKiKP	PKiKP	03 47 33.8	+0.4
	baz=263						
D60A	Saint Jean D’O	121.88	49	PKiKP	PKPdf	03 47 33.2	-0.1
	baz=265						
G62A	West of Eustis	121.98	51	PKiKP	PKiKP	03 47 33.7	-0.1
	baz=264						
SVB	Belmont	122.06	90	*e*P	PKPdf	03 47 32.7	-1.9
SVB	Belmont	122.06	90		PKPdf	03 47 32.7	-1.9
SVV	Soufriere Volc	122.11	90	*e*P	PKPdf	03 47 34.0	-0.6
SSV	Crater Summit	122.13	90	*e*P	PKiKP	03 47 36.3	+1.3
E61A	Lac Etchemin	122.13	50	PKiKP	PKiKP	03 47 34.3	+0.2
	baz=265						
H63A	New Sharon	122.28	52	PKiKP	PKiKP	03 47 34.5	+0.2
	baz=264						
D61A	St Aubert, Com	122.41	49	PKiKP	PKiKP	03 47 34.5	0.0
	baz=265						
MLYT	Lee's Yard	122.48	86	*e*P	PKPdf	03 47 34.8	-0.5
I64A	Boothbay	122.48	53	PKiKP	PKiKP	03 47 35.0	+0.3
	baz=264						
PRPB	Parauapebas	122.58	117	*e*P	PKiKP	03 47 36.2	+0.2
G63A	Kingsbury	122.62	52	PKiKP	PKiKP	03 47 35.0	0.0
	baz=264						
FDF	Fort de France	122.70	89	*e*P	PKiKP	03 47 36.2	+0.2
FDF	Fort de France	122.70	89	PKIKP	PKiKP	03 47 36.2	+0.2
FDF	Fort de France	122.70	89		PKiKP	03 47 36.2	+0.2
SMTB	Santa Maria do	122.70	121	*e*P	PKiKP	03 47 36.8	+0.6
H64A	Troy	122.85	52	PKiKP	PKPdf	03 47 35.2	0.0
	baz=264						
PKME	Peaks-Kenny Pk	122.86	51	PKiKP	PKiKP	03 47 35.7	+0.3
	baz=265						
H05S1	Guadeloupe/Mar	122.87	89	PKP	PKPdf	03 47 35.2	-0.9
	SNR=2.8						
F63A	Nahmakanta, Br	123.03	51	PKiKP	PKiKP	03 47 36.0	+0.1
	baz=265						
LBTB	Lobatse	123.11	209	*i* P	PKPdf	03 47 35.1	-1.5
LBTB	Lobatse	123.11	209	PKP	PKPdf	03 47 36.5	-0.1
	comp=Z,11nm,0.6s,baz=164,slow=3.2,SNR=22						
LBTB				PKKPbc	PKKPbc	03 57 29.1	-0.6
	comp=Z,32nm,1.2s,baz=315,slow=5.4,SNR=11						
LBTB	Lobatse	123.11	209	*i* P	PKPdf	03 47 35.1	-1.5
ANWB	Willy Bob	123.17	85	*e*P	PKPdf	03 47 34.6	-2.0
ANWB	Willy Bob	123.17	85		PKPdf	03 47 34.6	-2.0
D62A	Allapoint, All	123.17	49	PKiKP	PKPdf	03 47 35.9	+0.1
	baz=266						
G64A	Maxfield	123.24	52	PKiKP	PKiKP	03 47 36.3	+0.1
	baz=265						
H05N1	Guadeloupe/Mar	123.35	87	PKP	PKPdf	03 47 36.3	-0.7
	SNR=11						
H65A	Eastbrook	123.55	52	PKiKP	PKiKP	03 47 36.9	+0.1
	baz=265						
E63A	Oxbow	123.56	50	PKiKP	PKPdf	03 47 36.6	+0.1
	baz=266						
F64A	Sherman	123.57	51	PKiKP	PKiKP	03 47 36.8	0.0
	baz=266						
KULLO	Kullorsuaq	123.73	16	*i* P	PKPdf	03 47 35.5	-0.6
KULLO	Kullorsuaq	123.73	16	*i* PKIKP	PKPdf	03 47 35.5	-0.6
D63A	Stockholm	123.81	49	PKiKP	PKPdf	03 47 37.0	0.0
	baz=267						
E64A	Bridgewater	123.97	50	PKiKP	PKPdf	03 47 37.3	0.0
	baz=266						
G65A	Princeton	124.07	52	PKiKP	PKiKP	03 47 37.8	-0.1
	baz=266						
H66A	Whiting	124.22	52	PKiKP	PKiKP	03 47 38.5	+0.3
	baz=266						
NBIT	Itapeh - BA	124.46	133	*e*P	PKiKP	03 47 39.5	0.0
SCHQ	Schefferville	124.64	40	PKP	PKPdf	03 47 37.1	-1.3
	comp=Z,171nm,1.1s,baz=318,slow=2.5,SNR=47						
SCHQ				PP	PP	03 49 27.1	-6.8
	comp=Z,109nm,1.2s,baz=282,slow=6.6,SNR=13						
MATP	Matopo	125.69	214	*i* P	PKPdf	03 47 39.2	-2.5
MATP	Matopo	125.69	214	PKhKP	PKPpre	03 47 38.1	
	comp=Z,28nm,0.9s,baz=166,slow=1.1,SNR=27						
MATP				PP	PP	03 49 34.6	-5.6
	comp=Z,18nm,1.0s,baz=207,slow=2.6,SNR=5.1						
MATP	Matopo	125.69	214	*i* P	PKPdf	03 47 39.2	-2.5
WBK	Wadi Bani Khal	125.91	280	P	PKiKP	03 47 43.4	+1.2
	SNR=5.3						
MHTO	MHTO	126.32	278	P	PKPdf	03 47 42.2	-0.4
	SNR=16						
DQM	DQM	126.38	276	P	PKPdf	03 47 41.6	-1.2
	SNR=6.4						
WSAR	Wadi Sarin	126.39	281	PP	PP	03 49 45.8	-0.4
	comp=Z,20nm,1.1s,baz=164,slow=10,SNR=4.4						
WSAR	Wadi Sarin	126.39	281	P	PKiKP	03 47 44.0	+0.9
	SNR=9.1						
JMDO	Jabal Madar	126.61	279	P	PKiKP	03 47 43.8	+0.1
	SNR=9.5						
SOCY	Socotra	126.83	266	P	PKiKP	03 47 44.5	+0.2
	SNR=8.6						
SOCY	Socotra	126.83	266		PKPdf	03 47 43.0	-0.8
NBPN	Ponto Novo - B	126.84	129	*e*P	PKPdf	03 47 44.0	+0.2
SMDO	Samad	126.85	280	P	PKiKP	03 47 44.2	0.0
	SNR=20						
KBS	Kingsbay	126.86	357	*e*PKPdf	PKiKP	03 47 43.4	+0.9
KBS				*e*PP	PP	03 49 48.4	+1.0
KBS				*e*SKSac	SKSac	03 54 03.1	+2.5
KBS				*e*SS	SS	04 06 19.7	+4.9
KBS	Kingsbay	126.86	357	PKIKP	PKiKP	03 47 42.6	+0.1
KBS	Kingsbay	126.86	357		PKiKP	03 47 42.6	+0.1
BIDO	Bidbid	126.91	281	P	PKiKP	03 47 44.2	0.0
	SNR=12						
SVE	Sverdlovsk	127.09	323	*e*PKIKP	PKiKP	03 47 43.8	+0.3
SVE				pmax	pmax		
	comp=Z,262nm,1.5s						
SPA0	Spitsbergen Ar	127.32	356	*e*PKPdf	PKiKP	03 47 43.5	0.0
SPA0				*e*		03 51 00.5	
SPA0				*e*SS	SS	04 06 21.2	+0.8
SPITS	Spitsbergen Ar	127.32	356	PKP	PKPdf	03 47 42.5	-0.5
	comp=Z,176nm,1.0s,baz=61,slow=3.9,SNR=36						
SPITS				PP	PP	03 49 46.7	-3.9
	comp=Z,62nm,1.1s,baz=103,slow=14,SNR=4.0						
BSY	Bisya	127.52	279	P	PKPdf	03 47 44.8	-0.1
	SNR=12						
HOQ	Hoqain	127.64	281	P	PKiKP	03 47 45.5	-0.2
	SNR=14						
ILULI	Ilulissat	127.90	20	*i* P	PKPdf	03 47 43.4	-0.7
ILULI	Ilulissat	127.90	20	*e*PKIKP	PKPdf	03 47 43.4	-0.7
HOPEN	Hopen	128.05	353	*e*PKPdf	PKiKP	03 47 45.8	+0.9
HOPEN				*e*SS	SS	04 06 30.6	+1.3
ARQ	Araqi	128.28	280	P	PKiKP	03 47 46.8	-0.2
	SNR=13						
ARU	Arti	128.28	323	PKP	PKPdf	03 47 45.3	+0.1
	comp=Z,26nm,0.8s,baz=98,slow=1.5,SNR=66						
ARU				PP	pPKPdf	03 49 41.6	0.0
	comp=Z,6.0nm,0.7s,baz=61,slow=2.8,SNR=3.2						
ARU	Arti	128.28	323	*i* PKIKP	PKiKP	03 47 45.8	-0.1
ARU						03 54 10.4	
ARU				SP	SP	03 59 11.6	-3.2
AB31	Akbulak array	128.29	313	*i* PKIKP	PKPdf	03 47 45.5	0.0
ABKAR	Akbulak array	128.29	313		PKPpre	03 47 35.4	

ABKAR				PKPdf	**PKiKP**	**03 47 45.9**	**-0.3**
NBLA	**Lagarto - SE**	**128.40**	**131**	*e*P	**PKPdf**	**03 47 46.2**	**-0.6**
SOHO	**SOHO**	**128.48**	**281**	P	**PKPdf**	**03 47 46.8**	**+0.2**
	SNR=23						
HSPB	**Hornsund (broa**	**128.50**	**355**	*e*PKPdf	**PKiKP**	**03 47 46.5**	**+0.7**
HSPB				*e*PP	**PP**	**03 49 58.8**	**+0.7**
HSPB				*e*SS	SS	04 06 36.4	+1.6
RBK	**Rabkut**	**128.59**	**272**	P	**PKiKP**	**03 47 48.3**	**+0.5**
	SNR=18						
DAG	**Danmarks Havn**	**128.59**	**5**	*i* P	**PKPdf**	**03 47 44.0**	**-1.3**
	comp=Z,168nm,1.4s						
DAG				*e*		03 49 49.8	
DAG	**Danmarks Havn**	**128.59**	**5**	*i* PKIKP	**PKPdf**	**03 47 44.0**	**-1.3**
DAG				pmax	pmax		
	comp=Z,170nm,1.4s						
UOSS	**Minazif**	**128.97**	**282**	*i* PKPdf	**PKPdf**	**03 47 46.9**	**-0.7**
	SNR=5.0						
UOSS	**Minazif**	**128.97**	**282**		**PKPdf**	**03 47 46.3**	**-1.3**
MDH	**Madha**	**128.97**	**282**	PKPdf	**PKPdf**	**03 47 47.2**	**-0.3**
HATD	**Hatta, Dubai**	**129.00**	**282**	*i* PKPdf	**PKPdf**	**03 47 47.6**	**-0.1**
	SNR=9.4						
HATD	**Hatta, Dubai**	**129.00**	**282**	P	**PKPdf**	**03 47 47.9**	**+0.3**
	SNR=6.2						
ASHO	**Ashiyiah**	**129.03**	**281**	*i* PKPdf	**PKPdf**	**03 47 47.8**	**+0.1**
	SNR=9.5						
ASHO	**Ashiyiah**	**129.03**	**281**	P	**PKiKP**	**03 47 48.5**	**0.0**
	SNR=7.7						
MSFE	**Esma-Masafi**	**129.11**	**282**	*i* PKPdf	**PKPdf**	**03 47 48.1**	**+0.3**
	SNR=6.5						
WHFO	**Wadi Hawf**	**129.11**	**272**	P	**PKiKP**	**03 47 49.1**	**+0.3**
	SNR=12						
SFJD	**Kangerlussuaq**	**129.12**	**23**	*i* P	**PKPdf**	**03 47 46.0**	**-0.5**
SFJD	**Kangerlussuaq**	**129.12**	**23**	*i* PKIKP	**PKPdf**	**03 47 46.0**	**-0.5**
SFJD	**Kangerlussuaq**	**129.12**	**23**		**PKPdf**	**03 47 46.9**	**+0.4**
BANOM	**Banah**	**129.12**	**283**	PKPdf	**PKiKP**	**03 47 48.5**	**-0.1**
ALNE	**Al Ain**	**129.15**	**281**	*i* PKiKP	**PKiKP**	**03 47 49.1**	**+0.4**
	SNR=9.5						
SUMG	**Summit**	**129.23**	**14**	*i* P	**PKiKP**	**03 47 47.7**	**-0.2**
	comp=Z,1µm,1.6s						
SUMG	**Summit**	**129.23**	**14**	*i* PKIKP	**PKiKP**	**03 47 47.7**	**-0.2**
SUMG				pmax	pmax		
	comp=Z,1µm,1.6s						
SHME	**Shamm**	**129.29**	**283**	PKPdf	**PKiKP**	**03 47 48.7**	**-0.2**
ABTO	**Aybut**	**129.35**	**272**	P	**PKiKP**	**03 47 50.1**	**+0.8**
	SNR=12						
AKTO	**Aktyubinsk**	**129.44**	**315**	PKP	**PKPdf**	**03 47 47.5**	**-0.2**
	comp=Z,30nm,0.9s,baz=100,slow=4.2,SNR=49						
AKTO				SKPbc	SKPbc	03 50 25.6	+2.8
	comp=Z,46nm,1.0s,baz=92,slow=4.7,SNR=12						
NAZ	**Nazwa, Dubai**	**129.46**	**282**	*i* PKPdf	**PKiKP**	**03 47 49.1**	**-0.2**
	SNR=9.7						
GEYT	**Alibeck**	**129.49**	**299**	PKhKP	PKPpre	03 47 35.3	
	comp=Z,0.8nm,0.4s,baz=251,slow=4.5,SNR=4.4						
GEYT				PKP	**PKPdf**	**03 47 48.5**	**+0.3**
	comp=Z,51nm,1.1s,baz=232,slow=1.7,SNR=35						
GEYT				pPKP	pPKPdf	03 49 46.3	+1.7
	comp=Z,12nm,1.0s,baz=264,slow=2.7,SNR=4.3						
GEYT				SKPbc	SKPbc	03 50 25.9	+2.4
	comp=Z,253nm,1.0s,baz=141,slow=0.9,SNR=45						
GEYT	**Alibeck**	**129.49**	**299**		**PKPdf**	**03 47 48.1**	**-0.1**
NBTA	**Tacaratu-PE**	**129.54**	**129**	*e*P	**PKPdf**	**03 47 49.4**	**+0.4**
LSZ	**Lusaka**	**130.11**	**218**	*i* P	**PKPdf**	**03 47 45.6**	**-4.6**
LSZ	**Lusaka**	**130.11**	**218**	PKP	**PKiKP**	**03 47 51.0**	**0.0**
	comp=Z,20nm,0.7s,baz=130,slow=1.6,SNR=28						
LSZ				SKPbc	**SKPab**	**03 50 27.4**	**+0.6**
	comp=Z,110nm,0.8s,baz=172,slow=3.8,SNR=32						
LSZ	**Lusaka**	**130.11**	**218**	*i* P	**PKPdf**	**03 47 45.6**	**-4.6**
LSZ	**Lusaka**	**130.11**	**218**	PKIKP	**PKPdf**	**03 47 49.2**	**-1.0**
LSZ	**Lusaka**	**130.11**	**218**		**PKPdf**	**03 47 49.2**	**-1.0**
NBPS	**Pedro II - PI**	**130.24**	**122**	*e*P	**PKPdf**	**03 47 50.5**	**0.0**
NBMA	**Muriti-CE**	**130.27**	**127**	*e*P	**PKPdf**	**03 47 50.5**	**+0.1**
NBAN	**Anadia - AL**	**130.38**	**131**	*e*P	**PKPdf**	**03 47 51.0**	**+0.5**
BJO1	**Bjornoya**	**130.53**	**353**	*e*PKPdf	**PKPdf**	**03 47 47.0**	**-2.0**
BJO1				*e*PP	**PP**	**03 50 10.8**	**-0.3**
BJO1				*e*SKSac	**SKSac**	**03 54 10.6**	**-0.6**
BJO1				*e*SS	**SS**	**04 07 04.4**	**+4.9**
NBPB	**Pedra_Branca-C**	**130.89**	**124**	*e*P	**PKiKP**	**03 47 52.8**	**+0.2**
TSUM	**Tsumeb**	**131.52**	**203**	*i* P	**PKPdf**	**03 47 52.5**	**-0.3**
TSUM	**Tsumeb**	**131.52**	**203**	PKP	**PKiKP**	**03 47 54.3**	**+0.5**
	comp=Z,15nm,0.9s,baz=119,slow=1.3,SNR=10						
TSUM				SKPbc	**SKPab**	**03 50 33.3**	**+0.7**
	comp=Z,46nm,0.8s,baz=149,slow=4.5,SNR=21						
TSUM	**Tsumeb**	**131.52**	**203**	*i* P	**PKPdf**	**03 47 52.5**	**-0.3**
TSUM	**Tsumeb**	**131.52**	**203**		**PKPdf**	**03 47 52.0**	**-0.7**
TSUM					**SKPab**	**03 50 34.3**	**+1.6**
NBLI	**Livramento-PB**	**131.56**	**128**	*e*P	**PKiKP**	**03 47 54.2**	**+0.3**
NBRF	**Rio Formoso -**	**131.88**	**131**	*e*P	**PKiKP**	**03 47 54.5**	**+0.1**
NBMO	**Morrinhos-CE**	**132.00**	**122**	*e*P	**PKiKP**	**03 47 55.0**	**+0.2**
KIRV	**Kirov**	**132.47**	**327**	PKP	**PKPdf**	**03 47 53.2**	**+0.1**
	comp=Z,40nm,0.5s,baz=137,slow=1.5,SNR=18						
KIRV				SKPbc	**SKPbc**	**03 50 34.0**	**+0.7**
	comp=Z,237nm,0.8s,baz=90,slow=1.0,SNR=29						
KIRV	**Kirov**	**132.47**	**327**	*i* PKIKP	**PKiKP**	**03 47 53.9**	**-0.4**
NBPA	**Parau_RN**	**132.56**	**127**	*e*P	**PKiKP**	**03 47 56.0**	**+0.1**
NBCL	**Cascavel-CE**	**132.73**	**124**	*e*P	**PKiKP**	**03 47 56.4**	**+0.2**
PRGR	**Permogore**	**132.96**	**332**	*e*PKIKP	**PKPdf**	**03 47 52.3**	**-1.6**
PRGR				*e*		03 50 34.1	
PRGR				*e*		03 50 37.7	
PRGR				pmax	pmax		
	comp=Z,106nm,1.0s						
KIBK	**Kibwezi**	**133.01**	**239**	P	**PKiKP**	**03 47 57.6**	**+0.7**
	SNR=6.3						
LVZ	**Lovozero**	**133.09**	**343**	⇑*i*PKIKP	**PKiKP**	**03 47 56.5**	**+1.1**
LVZ	**Lovozero**	**133.09**	**343**		**PKPdf**	**03 47 53.9**	**-0.2**
HAMF	**Hammerfest**	**133.34**	**349**	*e*PKPdf	**PKPdf**	**03 47 55.1**	**+0.7**
HAMF				*e*PKSdf	**PKSdf**	**03 51 28.4**	**-1.9**
RCBR	**Riachuelo**	**133.37**	**128**	PKP	**PKiKP**	**03 47 57.0**	**-0.6**
	comp=Z,36nm,1.1s,baz=179,slow=2.2,SNR=15						
RCBR				SKPbc	**SKPbc**	**03 50 37.6**	**-0.4**
	comp=Z,44nm,0.8s,baz=192,slow=4.2,SNR=14						
RCBR	**Riachuelo**	**133.37**	**128**	PKIKP	**PKPdf**	**03 47 55.4**	**-0.9**
RCBR	**Riachuelo**	**133.37**	**128**		**PKPdf**	**03 47 55.4**	**-0.9**
RCBR	**Riachuelo**	**133.37**	**128**	*e*P	**PKiKP**	**03 47 57.9**	**+0.3**
NBPV	**Pedro Velho**	**133.39**	**129**	*e*P	**PKiKP**	**03 47 58.5**	**+0.9**
APA	**Apatity**	**133.66**	**343**	⇓*i*PKIKP	**PKPdf**	**03 47 53.9**	**-1.2**
APA				*i*		03 50 37.1	
APA				pmax	pmax		
	comp=Z,55nm,0.9s						
NRS	**Narsarsuaq**	**133.90**	**28**	*i* P	**PKPdf**	**03 47 54.5**	**-1.2**
NRS	**Narsarsuaq**	**133.90**	**28**	*e*PKIKP	**PKPdf**	**03 47 54.5**	**-1.2**
ARCES	**ARCESS Array B**	**133.95**	**348**	PKhKP	PKPpre	03 47 45.7	
	comp=Z,3.9nm,0.7s,baz=48,slow=2.8,SNR=12						
ARCES				PKP	**PKiKP**	**03 47 56.5**	**-0.5**
	comp=Z,67nm,0.8s,baz=2.1,slow=0.9,SNR=18						
ARCES				SKPbc	**SKPbc**	**03 50 38.9**	**+0.8**
	comp=Z,204nm,1.0s,baz=48,slow=3.6,SNR=26						
ARCES	**ARCESS Array B**	**133.95**	**348**	PKIKP	**PKiKP**	**03 47 56.4**	**-0.7**
ARCES	**ARCESS Array B**	**133.95**	**348**		**PKiKP**	**03 47 56.4**	**-0.7**
ARE0	**ARCESS Array S**	**133.95**	**348**	*e*PKPdf	**PKiKP**	**03 47 57.0**	**-0.1**
ARE0				*e*PP	**PP**	**03 50 35.8**	**+2.9**
ARE0				*e*SKSdf	**SKSdf**	**03 54 21.0**	**+2.0**
ARE0				*e*SS	**SS**	**04 07 41.0**	**+0.2**
SCO	**Scoresbysund**	**134.00**	**10**	*i* P	**PKPdf**	**03 47 56.1**	**+0.5**
	comp=Z,188nm,1.3s						
SCO	**Scoresbysund**	**134.00**	**10**	*i* PKIKP	**PKPdf**	**03 47 56.1**	**+0.5**
SCO				pmax	pmax		
	comp=Z,190nm,1.3s						
KMBO	**Kilima Mbogo**	**134.39**	**239**	PKP	**PKPdf**	**03 47 59.1**	**+0.7**
	comp=Z,20nm,1.1s,baz=110,slow=2.4,SNR=12						
KMBO				SKPbc	**SKPbc**	**03 50 42.4**	**+0.9**
	comp=Z,78nm,1.0s,baz=107,slow=3.2,SNR=31						
KMBO	**Kilima Mbogo**	**134.39**	**239**	*i* PKiKP	**PKiKP**	**03 47 59.5**	**-0.5**
	SNR=8.2						
KMBO	**Kilima Mbogo**	**134.39**	**239**		**PKPdf**	**03 47 56.5**	**-1.9**
TMCR	**Tamitsa**	**134.52**	**337**	*e*PKIKP	**PKiKP**	**03 47 58.3**	**0.0**
TMCR				*e*		03 50 34.7	
TMCR				pmax	pmax		
	comp=Z,96nm,1.4s						
KTK1	**Kautokeino**	**134.83**	**348**	*e*PKPdf	**PKiKP**	**03 47 58.4**	**-0.5**
KTK1				*e*SKSdf	**SKSdf**	**03 54 22.4**	**+1.8**
KTK1				*e*SS	**SS**	**04 07 54.4**	**+3.3**
JMIC	**Jan Mayen**	**134.93**	**4**	SKPbc	**SKPbc**	**03 50 38.3**	**-2.7**
	comp=Z,59nm,0.4s,baz=112,slow=4.0,SNR=3.4						
JMIC	**Jan Mayen**	**134.93**	**4**	*e*Pdif	**Pdif**	**03 45 00.4**	**-1.6**
JMIC				*e*SS	SS	04 07 54.3	+2.2
TRO	**Tromso**	**135.00**	**350**	*e*PKPdf	**PKiKP**	**03 47 58.4**	**-0.7**
TRO				*e*PP	**PP**	**03 50 40.0**	**+0.6**
TRO				*e*SKSdf	**SKSdf**	**03 54 24.1**	**+3.3**
TRO				*e*SS	**SS**	**04 07 59.0**	**+5.9**
KLMR	**Klimovskoe**	**135.90**	**333**	*e*PKIKP	**PKPdf**	**03 47 54.4**	**-5.0**
KLMR				*e*		03 50 41.7	
KLMR				pmax	pmax		
	comp=Z,392nm,1.3s						
KLMR	**Klimovskoe**	**135.90**	**333**	*e*PKPdf	**PKPdf**	**03 47 54.4**	**-5.0**
KLMR				AMP		03 48 03.4	
	comp=Z,392nm,1.3s						
KLMR				*e*PP	**sPKPdf**	**03 50 41.8**	**-2.2**
DAMY	**Dhamar**	**136.35**	**264**	P	**PKiKP**	**03 48 04.8**	**+0.9**
	SNR=8.1						
ATD	**Arta Tunnel**	**136.47**	**259**	SKPbc	**SKPbc**	**03 50 50.1**	**+2.5**
	comp=Z,82nm,1.2s,baz=48,slow=0.7,SNR=20						
STEI	**Steigen**	**137.10**	**351**	*e*PKPdf	**PKPdf**	**03 48 02.4**	**+0.9**
STEI				*e*SKPdf	**SKiKP**	**03 50 51.4**	**-0.7**
STEI				*e*SS	**SS**	**04 08 19.4**	**+1.7**
LOF	**Lofoten**	**137.13**	**352**	*e*PKPdf	**PKPdf**	**03 48 00.3**	**-1.2**
LOF				*e*SKPdf	**SKiKP**	**03 50 50.0**	**-2.1**
LOF				*e*SS	**SS**	**04 08 21.7**	**+3.5**
AKT	**Akhty**	**137.49**	**304**	*e*PKIKP	**PKiKP**	**03 48 04.9**	**-0.3**
AKT				*e*		03 50 53.0	
AKT				pmax	pmax		
	comp=Z,125nm,1.2s						
MAK	**Makhachkala**	**137.49**	**306**	*e*P	**Pdif**	**03 45 14.1**	**+0.1**
MAK				*i*		03 48 04.6	
MAK				*e*		03 49 58.0	
MAK				*e*		03 50 54.0	
MAK				*e*PPP	PPP	03 54 00.0	
MAK				*e*		03 54 31.1	
MAK				*e*SS	SS	04 08 24.7	+0.1
MAK				*e*SSS	SSS	04 13 41.4	
MAK				pmax	pmax		
	comp=Z,318nm,0.8s						
LODK	**Lodwar**	**138.66**	**243**	P	**PKiKP**	**03 48 08.0**	**-0.5**
	SNR=12						
GROC	**Groznyy**	**138.69**	**306**	*e*PKIKP	**PKPdf**	**03 48 02.1**	**-3.1**
GROC				pmax	pmax		
	comp=Z,281nm,1.8s						
KONS	**Konsvik**	**138.73**	**352**	*e*PKPdf	**PKPdf**	**03 48 01.2**	**-3.3**
KONS				*e*PP	**PP**	**03 51 03.7**	**+1.4**
MOR8	**Moi Rana**	**138.86**	**351**	*e*PKPdf	**PKPdf**	**03 48 04.7**	**-0.1**
MOR8				*e*SS	SS	04 08 43.4	+4.9
BORG	**Borgarnes**	**139.21**	**13**	SKPbc	**SKPbc**	**03 50 54.8**	**+1.1**
	comp=Z,46nm,1.0s,baz=163,slow=2.2,SNR=3.1						
VRH	**Novokhopyorsk**	**139.29**	**319**	*e*PKIKP	**PKPdf**	**03 48 05.0**	**-1.0**
VRH				pmax	pmax		
	comp=Z,250nm,1.4s						
MOS	**Moscow**	**139.48**	**327**	*i* PKIKP	**PKPdf**	**03 48 06.3**	**+0.1**
MOS				pmax	pmax		
	comp=Z,258nm,1.4s						
MBAR	**Mbarara**	**139.62**	**234**	PKhKP	PKPpre	03 48 02.1	
	comp=Z,2.3nm,0.3s,baz=26,slow=1.1,SNR=4.7						
MBAR				SKPbc	**SKPbc**	**03 50 57.3**	**+0.6**
	comp=Z,49nm,1.0s,baz=108,slow=4.7,SNR=17						
GNI	**Garni**	**139.88**	**302**	PKhKP	PKPpre	03 48 02.0	
	comp=Z,6.1nm,0.3s,baz=196,slow=8.6,SNR=7.1						
GNI				SKPbc	**SKiKP**	**03 50 58.6**	**-0.4**
	comp=Z,42nm,1.0s,baz=212,slow=8.5,SNR=6.0						
GNI	**Garni**	**139.88**	**302**	*i* PKPdf	**PKPdf**	**03 48 05.2**	**-2.4**
	SNR=11						
GNI	**Garni**	**139.88**	**302**	PKHKP	PKPpre	03 47 57.9	
GNI	**Garni**	**139.88**	**302**	PKPpre	PKPpre	03 47 57.9	
GNI					sPdif	03 48 00.0	-4.4
GNI					**SKPbc**	**03 50 53.6**	**-2.9**
ZEI	**Tsey**	**140.13**	**306**	*i* PKHKP	PKPpre	03 48 01.0	
ZEI				pmax	pmax		
	comp=Z,69nm,1.2s						
TASB	**TASBURUN-IGDIR**	**140.28**	**302**	*e*P	**PKPdf**	**03 48 05.5**	**-2.7**
GOF	**Gofitskoye**	**140.29**	**310**	⇑*e*PKIKP	**PKPdf**	**03 48 02.6**	**-5.4**
GOF				pmax	pmax		
	comp=Z,173nm,1.3s						
LPSR	**Galich'ya Gora**	**140.31**	**322**	*e*PKIKP	**PKPdf**	**03 48 05.1**	**-2.7**
LPSR				*e*		03 50 55.5	
LPSR				pmax	pmax		
	comp=Z,280nm,1.6s						
OBN	**Obninsk**	**140.32**	**327**	PKhKP	PKPpre	03 48 01.6	
	comp=Z,7.1nm,0.3s,baz=43,slow=2.6,SNR=11						
OBN				SKPbc	**SKiKP**	**03 50 58.5**	**-0.6**
	comp=Z,3.7nm,0.3s,baz=56,slow=16,SNR=4.0						
OBN	**Obninsk**	**140.32**	**327**	*i* PKIKP	**PKPdf**	**03 48 02.5**	**-5.2**
OBN				pmax	pmax		
	comp=Z,47nm,1.0s						
OBN	**Obninsk**	**140.32**	**327**	PKPpre	PKPpre	03 48 01.1	
FINES	**FINESS Array B**	**140.35**	**340**	PKhKP	PKPpre	03 48 00.5	
	comp=Z,31nm,0.7s,baz=52,slow=4.3,SNR=112						
FINES				PKP	**PKPdf**	**03 48 08.1**	**+0.5**
	comp=Z,25nm,0.4s,baz=70,slow=3.7,SNR=8.4						
FINES				SKPbc	**SKiKP**	**03 50 58.5**	**-0.5**
	comp=Z,37nm,0.8s,baz=92,slow=4.6,SNR=5.5						
FINES				SKKPbc	**SKKPab**	**03 59 28.0**	**-1.9**
	comp=Z,2.5nm,0.6s,baz=156,slow=2.0,SNR=7.1						
FINES	**FINESS Array B**	**140.35**	**340**	PKPpre	PKPpre	03 48 00.9	
FINES					**PKPdf**	**03 48 08.0**	**+0.5**
VORR	**Voronezh**	**140.55**	**321**	*e*PKIKP	**PKPdf**	**03 48 09.0**	**+0.8**
VORR				pmax	pmax		
	comp=Z,500nm,2.0s						
CLDR	**Caldiran**	**140.61**	**301**	*e*P	**PKPdf**	**03 48 05.6**	**-3.5**
AKH	**Akhalkalaki**	**140.66**	**304**	⇓P	**PKPdf**	**03 48 06.3**	**-2.7**
KBZ	**Khabaz**	**140.68**	**308**	PKhKP	PKPpre	03 48 02.9	
	comp=Z,12nm,1.0s,baz=181,slow=9.6,SNR=7.6						
KBZ				SKPbc	**SKiKP**	**03 51 01.4**	**+1.1**
	comp=Z,18nm,0.8s,baz=324,slow=2.4,SNR=3.0						
NSS	**Namsos**	**140.76**	**351**	*e*PKPdf	**PKPdf**	**03 48 07.3**	**-0.9**
NSS				*e*SS	SS	04 09 08.5	+8.2
VSR	**Storozhevoye**	**140.76**	**320**	*e*PKIKP	**PKPdf**	**03 48 02.7**	**-5.9**
VSR				*e*		03 50 54.5	
VSR				pmax	pmax		
	comp=Z,220nm,1.9s						
KVAR	**Kislovodsk Arr**	**140.77**	**308**	PKP	**PKPdf**	**03 48 10.2**	**+1.1**
	comp=Z,39nm,1.2s,baz=87,slow=23,SNR=6.3						
KIV	**Kislovodsk**	**140.78**	**308**	⇓P	**PKPdf**	**03 48 09.4**	**+0.3**
KIV	**Kislovodsk**	**140.78**	**308**	*i* PKPdf	**PKPdf**	**03 48 10.1**	**+1.0**
	SNR=16						
KIV	**Kislovodsk**	**140.78**	**308**	*i* PKIKP	**PKiKP**	**03 48 13.0**	**+1.1**
KIV				pmax	pmax		
	comp=Z,315nm,1.0s						
KIV	**Kislovodsk**	**140.78**	**308**		**PKPdf**	**03 48 09.0**	**-0.1**
VORD	**Divnogorie**	**140.79**	**320**	*e*PKIKP	**PKPdf**	**03 48 02.3**	**-6.4**
VORD				*e*		03 50 57.4	
VORD				pmax	pmax		
	comp=Z,80nm,1.2s						
CUKT	**Cukurca**	**141.00**	**298**	*e*P	**PKPdf**	**03 48 05.0**	**-4.7**
VANB	**Van**	**141.07**	**300**	*e*P	**PKPdf**	**03 48 05.2**	**-4.6**
AGRB	**Hanur-Agry**	**141.28**	**301**	*e*P	**PKPdf**	**03 48 07.1**	**-3.1**
AKDM	**Akdamar-Van**	**141.41**	**299**	*e*P	**PKPdf**	**03 48 08.1**	**-2.4**
SENK	**Senkaya-Erzuru**	**141.63**	**303**	*e*P	**PKPdf**	**03 48 08.8**	**-2.0**
BCA	**Borcka**	**142.04**	**305**	⇓P	**PKPdf**	**03 48 08.1**	**-3.2**
BCA	**Borcka**	**142.04**	**305**	*e*P	**PKPdf**	**03 48 09.1**	**-2.2**
GURO	**Guroymak-BITLI**	**142.13**	**300**	*e*P	**PKPdf**	**03 48 09.9**	**-1.8**
TBLU	**Trondheim**	**142.21**	**352**	*e*PKPdf	**PKPdf**	**03 48 07.3**	**-3.5**
TBLU				*e*SS	SS	04 09 17.4	+0.4
VSU	**Vasula**	**142.39**	**337**	*e*P	**PKPdf**	**03 48 07.0**	**-4.3**
VRTB	**Varto-Mus**	**142.51**	**301**	*e*P	**PKPdf**	**03 48 11.7**	**-0.7**
CHOM	**Cayeli-Rize**	**142.74**	**304**	*e*P	**PKPdf**	**03 48 11.6**	**-0.9**
KARO	**Karliova-Bingo**	**142.80**	**301**	*e*P	**PKPdf**	**03 48 11.9**	**-1.0**
SVAN	**Silvan-Diyarba**	**142.83**	**299**	*e*P	**PKPdf**	**03 48 11.2**	**-1.6**
SOC	**Sochi**	**142.96**	**308**	*e*PKIKP	**PKPdf**	**03 48 11.0**	**-1.8**
SOC				*e*SS	SS	04 09 08.5	-19
SOC				pmax	pmax		
	comp=Z,153nm,1.3s						
BNGB	**Bingl**	**143.13**	**301**	*e*P	**PKPdf**	**03 48 12.6**	**-0.8**
YEDI	**Yedisu-Bingol**	**143.17**	**302**	*e*P	**PKPdf**	**03 48 12.7**	**-0.8**
MOL	**Molde**	**143.18**	**354**	*e*PKPbc	PKPbc	03 48 11.1	+0.5
MOL				*e*SS	SS	04 09 31.0	+3.0
MAZI	**Mazidag**	**143.49**	**298**	*e*P	PKPbc	03 48 13.3	+0.7
KTUT	**Trabzon**	**143.50**	**304**	⇑P	PKPab	03 48 06.8	-5.4
KTUT	**Trabzon**	**143.50**	**304**	*e*P	**PKPdf**	**03 48 14.2**	**+0.4**
DOMB	**Dombas**	**143.53**	**352**	*e*Pdif	**Pdif**	**03 45 38.4**	**-2.2**
DOMB				*e*PKPbc	PKPbc	03 48 12.3	+0.5
DOMB				IVmB_BB		03 48 13.0	
	comp=Z,12µm,1.5s						
DOMB				*e*SS	SS	04 09 31.1	-1.0
ASCN	**Ascension**	**143.62**	**157**		PKPab	03 48 13.2	-0.1
H10N3	**ASCENSION HYDR**	**143.65**	**157**	PKP	**PKPdf**	**03 48 15.0**	**+0.5**
	baz=281,slow=74,SNR=3.8						
H10N1	**ASCENSION HYDR**	**143.65**	**157**	PKP	**PKPdf**	**03 48 15.5**	**+0.9**
	baz=284,slow=74,SNR=4.6						
H10N2	**ASCENSION HYDR**	**143.67**	**157**	PKP	**PKPdf**	**03 48 15.0**	**+0.4**
ERZN	**Erzincan**	**143.78**	**302**	*e*P	**PKPdf**	**03 48 16.3**	**+1.8**
PTK	**Pertek**	**144.14**	**301**	*e*P	**PKPdf**	**03 48 16.2**	**+0.9**
NB2	**NORSAR Subarra**	**144.20**	**350**	PKP	PKPbc	03 48 13.5	-0.5
	comp=Z,3µm,1.4s,baz=16,slow=3.2						
NB2	**NORSAR Subarra**	**144.20**	**350**	PKP	PKPbc	03 48 13.5	-0.5
	baz=16,slow=3.2						
NOA	**NORSAR Array B**	**144.20**	**350**	PKP	PKPbc	03 48 13.3	-0.6
	comp=Z,833nm,1.0s,baz=21,slow=2.5,SNR=448						
NOA				pPKP	pPKPdf	03 50 13.6	+2.3
	comp=Z,20nm,0.9s,baz=8.6,slow=2.7,SNR=3.2						
NOA				SKKPbc	SKKPbc	03 59 12.4	-2.6
	comp=Z,6.0nm,1.1s,baz=195,slow=4.2,SNR=6.1						
SVRC	**Sivrice-ELAZID**	**144.28**	**300**	*e*P	**PKPdf**	**03 48 16.5**	**+1.0**
ESPY	**Espiye-Giresun**	**144.28**	**304**	*e*P	**PKPdf**	**03 48 15.6**	**+0.4**
FOO	**Floro**	**144.36**	**355**	*e*PKPbc	**PKPab**	**03 48 15.0**	**+0.3**
FOO				*e*SKPdf	**SKPbc**	**03 51 04.3**	**-2.3**
FOO				*e*SS	**SS**	**04 09 43.8**	**+2.5**
NC602	**NORSAR Array S**	**144.43**	**350**	*e*PKPbc	PKPbc	03 48 14.4	-0.2
NC602				*e*pPKPdf	pPKPdf	03 50 10.7	-0.9
NC602				*e*SS	SS	04 09 46.1	+3.8
NORES	**NORESS Array B**	**144.43**	**350**	PKIKP	**PKPdf**	**03 48 14.9**	**+0.1**
NORES				pmax	pmax		
	comp=Z,43nm,0.4s						
IZAR	**Zarasai**	**144.54**	**334**	*e*P	**PKPab**	**03 48 15.7**	**+0.1**
SLIT	**Slitere, Latvi**	**144.55**	**339**	*e*P	PKPbc	03 48 14.8	-0.2
HFS	**Hagfors**	**144.62**	**348**	PKP	**PKPdf**	**03 48 14.6**	**-0.6**
	comp=Z,126nm,0.4s,baz=97,slow=3.4,SNR=233						
HFS				SKKPbc	SKKPbc	03 59 09.2	-4.0
	comp=Z,12nm,0.8s,baz=177,slow=3.0,SNR=12						
IDID	**Didziasalis**	**144.65**	**333**	*e*P	**PKPab**	**03 48 17.5**	**+1.5**
HYA	**Hoyanger**	**144.69**	**354**	*e*PKPdf	**PKPab**	**03 48 16.0**	**0.0**
HYA				*e*SS	SS	04 09 49.9	+4.7
ISAL	**Salakas**	**144.72**	**334**	*e*P	**PKPab**	**03 48 16.2**	**0.0**
MICGM	**Minsk**	**144.72**	**331**	⇑*i*PKP	PKPbc	03 48 16.0	+0.3
MICGM				PKPM		03 48 17.0	
	comp=Z,7.0nm,1.0s						
MICGM				PKPM		03 48 18.0	
	comp=N,3.1nm,1.0s						
MICGM				PKPM		03 48 18.0	
	comp=E,2.4nm,1.0s						
MICGM				PKPM		03 48 18.0	
	comp=Z,18nm,6.0s						
MICGM				PKPM		03 48 18.0	
	comp=E,4.9nm,2.0s						
MICGM				*e*pPKP	pPKPdf	03 50 13.0	+0.9
MICGM				*e*PP	**PP**	**03 51 37.0**	**-1.6**
MICGM				*e*PPP	PPP	03 54 58.0	
MICGM				*e*SKKS		03 57 32.0	
MICGM				*e*PS		04 01 50.0	
MICGM				*e*SS	**SS**	**04 09 50.0**	**+3.7**
MNK	**Minsk**	**144.72**	**331**	⇑*i*PKIKP	PKPbc	03 48 16.0	+0.3
MNK				*e*		03 50 13.0	
MNK				*e*		04 01 50.0	
MNK				pmax	pmax		
	comp=Z,7µm,1.0s						
MNK				pmax	pmax		
	comp=N,3µm,1.0s						
MNK				pmax	pmax		
	comp=E,2µm,1.0s						
MNK				pmax	pmax		
	comp=Z,18µm,6.0s						
MNK				pmax	pmax		
	comp=E,5µm,2.0s						
URFA	**Urfa**	**144.78**	**298**	*e*P	**PKPab**	**03 48 17.9**	**+0.7**
NACGM	**Naroch**	**144.92**	**332**	*e*PKP	**PKPdf**	**03 48 16.0**	**+0.2**
NACGM				PKPM		03 48 18.0	
	comp=Z,2.8nm,1.0s						
NACGM				*e*pPKP	**pPKPdf**	**03 50 14.0**	**+1.5**
NACGM				*e*sPKP		03 51 04.0	
NACGM				*e*SKKS		03 57 22.0	
NACGM				*e*SP		04 01 02.0	
NACGM				*e*PS		04 02 32.0	
NACGM				*e*PPS	PPS	04 03 50.0	
NACGM				*e*SS	SS	04 09 28.0	-20
NACGM				*e*SSS	SSS	04 12 57.0	
SUE	**Sulen**	**144.92**	**355**	*e*PKPdf	PKPbc	03 48 16.2	+0.1
SUE				IVmB_BB		03 48 17.7	
	comp=Z,15µm,1.7s						
SUE				*e*SS	SS	04 09 49.9	+2.2
SKAR	**Skarslia**	**144.94**	**352**	*e*PKPdf	PKPbc	03 48 16.5	+0.2
SKAR				IVmB_BB		03 48 18.1	
	comp=Z,12µm,2.8s						
SKAR				*e*SS	SS	04 09 53.9	+5.7
MALT	**Malatya**	**144.97**	**300**	*e*P	**PKPab**	**03 48 18.1**	**+0.1**
OSL	**Oslo**	**145.32**	**350**	*e*PKPdf	**PKPbc**	**03 48 17.4**	**0.0**
OSL				*e*SS	SS	04 10 01.1	+8.8
RSDY	**Resadiye-TOKAT**	**145.43**	**304**	*e*P	**PKPbc**	**03 48 18.9**	**+0.5**
ASK	**Askoy**	**145.45**	**355**	*e*PKPdf	**PKPbc**	**03 48 17.3**	**-0.4**
ASK				IVmBBB		03 48 19.4	
	comp=Z,6µm,1.3s						
BER	**Bergen**	**145.54**	**355**	*e*PKPdf	**PKPbc**	**03 48 17.6**	**-0.4**
BER				*e*PKPdf	**PKPbc**	**03 48 17.6**	**-0.4**
BER				*e*SS	SS	04 09 57.2	+2.6
PABE	**Paberze**	**145.60**	**335**	*e*P	**PKPdf**	**03 48 17.5**	**+0.5**
YEL1	**Yell**	**145.63**	**0**	*e*P	**PKPdf**	**03 48 17.2**	**+0.4**
DARE	**Darende-Malaty**	**145.66**	**301**	*e*P	**PKPbc**	**03 48 19.6**	**+0.4**
KONO	**Kongsberg**	**145.77**	**351**	*e*PKPdf	**PKPbc**	**03 48 18.1**	**-0.6**
KONO				*e*pPKPdf	pPKPab	03 50 12.5	0.0
KONO				*e*SS	SS	04 10 01.9	+4.5
KONO	**Kongsberg**	**145.77**	**351**	PKIKP	**PKPdf**	**03 48 17.2**	**+0.1**
KONO	**Kongsberg**	**145.77**	**351**		**PKPdf**	**03 48 17.2**	**+0.1**
SVSK	**Karacayir**	**145.78**	**303**	*e*P	**PKPbc**	**03 48 19.7**	**+0.4**
ODD1	**Odda**	**145.88**	**353**	*e*PKPdf	**PKPdf**	**03 48 18.2**	**+0.8**
ODD1				*e*SS	SS	04 10 02.5	+3.8
PBUR	**Paburge**	**145.94**	**337**	*e*P	**PKPbc**	**03 48 18.9**	**-0.4**
TOKT	**Tokat**	**146.03**	**304**	*e*P	**PKPab**	**03 48 22.2**	**+0.2**
LRW	**Lerwick**	**146.04**	**0**	*e*P	**PKPdf**	**03 48 17.5**	**-0.1**
GAZ	**Gaziantep**	**146.09**	**298**	*e*P	**PKPbc**	**03 48 20.3**	**-0.1**
KVT	**Kavak**	**146.22**	**305**	*e*P	**PKPbc**	**03 48 20.2**	**-0.4**
KMRS	**Kahramanmaras**	**146.29**	**299**	*e*P	**PKPbc**	**03 48 20.2**	**-0.7**
SIM	**Simferopol'**	**146.35**	**313**	*c* *i*PKIKP	**PKPbc**	**03 48 20.0**	**-0.8**
SIM				*e*SS	SS	04 09 52.0	-14
SIM				pmax	pmax		
	comp=Z,898nm,1.5s						
BLS5	**Blasjo**	**146.38**	**353**	*e*PKPdf	**PKPdf**	**03 48 19.3**	**+1.1**
BLS5				IVmB_BB		03 48 22.4	
	comp=Z,7µm,1.7s						
AKASG	**Malin Array Be**	**146.47**	**325**	PKP	**PKPdf**	**03 48 18.2**	**-0.4**
	comp=Z,214nm,0.8s,baz=44,slow=3.4,SNR=96						
AKASG				PKPbc	**PKPbc**	**03 48 20.6**	**-0.3**
	comp=Z,88nm,0.4s,baz=45,slow=3.9,SNR=79						
AKASG				pPKPbc	pPKPbc	03 50 16.8	+1.4
	comp=Z,57nm,0.9s,baz=40,slow=4.0,SNR=5.1						
AKASG				SKKPbc	SKKPbc	03 59 00.9	-4.0
	comp=Z,2.9nm,0.6s,baz=245,slow=3.6,SNR=9.3						
AKASG	**Malin Array Be**	**146.47**	**325**		**PKPdf**	**03 48 16.4**	**-2.2**
SARI	**SarD1z-Kayseri**	**146.51**	**301**	*e*P	**PKPbc**	**03 48 20.9**	**-0.8**
DIKM	**Dikmen**	**146.64**	**307**	⇓P	**PKPdf**	**03 48 19.1**	**-0.1**
DIKM	**Dikmen**	**146.64**	**307**	*e*P	**PKPdf**	**03 48 20.4**	**+1.2**
KMY	**Karmoy**	**146.71**	**354**	*e*PKPdf	**PKPdf**	**03 48 19.8**	**+1.1**
KMY				*e*pPKPbc	**pPKPdf**	**03 50 14.4**	**-1.3**
KMY				*e*SS	SS	04 10 10.6	+2.9
ASF	**Jabal al Asfar**	**146.71**	**289**	PKPbc	**PKPdf**	**03 48 20.9**	**+1.2**
	comp=Z,107nm,1.1s,baz=70,slow=2.5,SNR=43						
ASF				pPKPbc	pPKPab	03 50 19.5	+2.6
	comp=Z,87nm,1.1s,baz=116,slow=0.8,SNR=10						
ASF				SKKPbc	SKKPbc	03 59 04.0	+1.2
	comp=Z,35nm,1.4s,baz=181,slow=2.5,SNR=5.9						
BNN	**Bunyan**	**146.87**	**302**	*e*P	**PKPdf**	**03 48 21.1**	**+1.2**
STAV	**Stavanger**	**146.94**	**354**	*e*PKPbc	**PKPbc**	**03 48 22.6**	**+0.7**
STAV				IVmB_BB		03 48 23.6	
	comp=Z,8µm,1.7s						
STAV				*e*pPKPbc	**pPKPdf**	**03 50 15.2**	**-1.0**
STAV				*e*SS	SS	04 10 12.1	+1.8
TAHT	**Tahtakopru-Hat**	**147.01**	**297**	*e*P	**PKPbc**	**03 48 21.5**	**-1.4**
SUW	**Suwalki**	**147.02**	**334**	*e*PKPdf	**PKPdf**	**03 48 20.0**	**+0.6**
SUW				*e*PKPbc	**PKiKP**	**03 48 23.4**	**-0.8**
SUW				*e*pPKP	**pPKPab**	**03 50 19.2**	**+1.9**
SUW	**Suwalki**	**147.02**	**334**	*e*PKIKP	**PKPdf**	**03 48 20.0**	**+0.6**
YOZ	**Yozgat**	**147.10**	**303**	*e*P	**PKPdf**	**03 48 20.7**	**+0.5**
HOMB	**Homborsund**	**147.25**	**351**	*e*PKPdf	**PKPdf**	**03 48 20.5**	**+0.9**
HOMB				IVmB_BB		03 48 24.6	
	comp=Z,11µm,1.4s						
HOMB				*e*pPKPbc	**pPKPdf**	**03 50 16.2**	**-0.3**
HOMB				*e*SKSdf	**SKSdf**	**03 54 42.7**	**+2.1**
HOMB				*e*SS	**SS**	**04 10 18.5**	**+4.6**
CEYT	**Ceyhan**	**147.27**	**298**	*e*P	**PKPdf**	**03 48 21.9**	**+1.5**
SNART	**Snartemo**	**147.36**	**352**	*e*PKPbc	**PKPbc**	**03 48 23.2**	**+0.2**
HWQ	**Hawqa**	**147.42**	**293**	*e*P	**PKPdf**	**03 48 21.5**	**+0.6**
BZK	**Bozkurt**	**147.45**	**308**	⇓P	**PKPdf**	**03 48 20.7**	**+0.3**
BZK	**Bozkurt**	**147.45**	**308**	*e*P	**PKPdf**	**03 48 21.7**	**+1.2**
CORM	**Corum**	**147.49**	**304**	*e*P	**PKPdf**	**03 48 22.4**	**+1.6**
RCY	**Rachaya**	**147.56**	**292**	*e*P	**PKPdf**	**03 48 21.6**	**+0.5**
BIGH	**Upper Bighouse**	**147.61**	**3**	*e*P	**PKPdf**	**03 48 21.5**	**+1.3**
KRTS	**Karatas**	**147.63**	**298**	*e*P	**PKiKP**	**03 48 27.0**	**+1.0**
QRWL	**Qaraoun**	**147.69**	**292**	*e*P	**PKPdf**	**03 48 21.6**	**+0.4**
BHL	**Bhannes**	**147.69**	**293**	*e*P	**PKPdf**	**03 48 22.4**	**+1.1**
LEWI	**Lewis, Hebride**	**147.75**	**6**	*e*P	**PKPdf**	**03 48 21.9**	**+1.4**
KARA	**Karaisali**	**147.78**	**299**	*e*P	**PKPdf**	**03 48 22.5**	**+1.3**
MMAI	**Mount Meron Ar**	**147.95**	**291**	PKP	**PKPdf**	**03 48 22.1**	**+0.3**
	comp=Z,63nm,0.6s,baz=108,slow=2.7,SNR=37						
MMAI				PKPbc	**PKiKP**	**03 48 26.8**	**-0.1**
	comp=Z,102nm,0.7s,baz=81,slow=6.2,SNR=78						
MMAI				pPKPbc	**pPKPab**	**03 50 21.6**	**+0.1**
	comp=Z,204nm,0.9s,baz=74,slow=4.4,SNR=15						

MMAI				SKKPbc		03 58 56.9	
	comp=Z,4.2nm,0.6s,baz=300,slow=1.6,SNR=6.7						
CANT	Cankiri	148.12	306	eP	PKPdf	03 48 23.1	+1.3
GULA	Gulagac	148.21	301	eP	PKPbc	03 48 26.7	+0.6
MERS	Mersin	148.26	298	eP	PKPdf	03 48 23.1	+1.0
GOET	G??ttrup	148.33	350	i P	PKPdf	03 48 22.6	+1.2
GOET				i		03 48 26.5	
BR131	Keskin Array S	148.34	304	P	PKPdf	03 48 22.2	0.0
	SNR=126						
BRTR	Keskin Array B	148.34	304	PKP	PKPdf	03 48 21.7	-0.6
	comp=Z,21nm,0.9s,baz=132,slow=1.8,SNR=53						
BRTR				PKPbc	PKPbc	03 48 26.4	+0.1
	comp=Z,76nm,1.0s,baz=132,slow=1.9,SNR=57						
BRTR				pPKPbc	pPKPab	03 50 22.6	-0.3
	comp=Z,27nm,0.9s,baz=117,slow=3.5,SNR=5.6						
BRTR	Keskin Array B	148.34	304		PKPdf	03 48 21.8	-0.5
BRTR					PKPbc	03 48 27.0	+0.6
EIL	Elat	148.34	285	PKP	PKPdf	03 48 22.8	+0.4
	comp=Z,110nm,1.1s,baz=116,slow=0.5,SNR=26						
EIL				PKPbc	PKiKP	03 48 27.5	-0.2
	comp=Z,158nm,1.1s,baz=98,slow=1.1,SNR=42						
EIL				pPKPbc	pPKPab	03 50 22.7	-0.3
	comp=Z,122nm,1.0s,baz=357,slow=3.0,SNR=9.8						
EIL				SKKPbc		03 58 55.1	
	comp=Z,8.5nm,0.9s,baz=10,slow=7.9,SNR=4.5						
KURC	Kurucasile-Bar	148.38	308	eP	PKPdf	03 48 22.2	+0.2
SORM	Soroca	148.40	322	⇑P	PKPdf	03 48 21.0	-0.8
SORM	Soroca	148.40	322	⇑PKIKP	PKPdf	03 48 21.0	-0.8
YAYX	Yaylak	148.40	302	eP	PKPdf	03 48 22.9	+0.6
KAC	Achnashellach	148.52	5	eP	PKPdf	03 48 21.9	+0.2
SERE	Sereflikochisa	148.59	303	eP	PKPdf	03 48 22.8	+0.2
KIZK	Mersin	148.62	298	eP	PKPdf	03 48 23.6	+1.0
KPL	Plockton	148.65	5	eP	PKPdf	03 48 21.9	-0.1
YESY	Yesilyurt	148.71	300	eP	PKPdf	03 48 21.2	-1.7
KIS	Kishinev	148.74	319	ePKP	PKPdf	03 48 23.0	+0.6
	comp=Z,2µm,1.6s						
KIS				i pPKP	pPKPab	03 50 24.0	-0.1
KIS	Kishinev	148.74	319	ePP	PP	03 52 14.0	+12
KIS				eSKS	SKSdf	03 54 36.0	-7.3
KIS	Kishinev	148.74	319	ePPS	PPS	04 06 48.0	
KIS				eSS	SS	04 10 24.0	-7.9
KIS				eSSS	SSS	04 13 40.0	
KIS				LRM	MLR	04 58 44.0	
	comp=Z,700nm,20.0s						
KIS	Kishinev	148.74	319	ePKIKP	PKPdf	03 48 23.0	+0.6
KIS				e		03 51 40.0	
KIS				e		03 54 36.0	
KIS				eSS	SS	04 10 24.0	-7.9
KIS				pmax	pmax		
	comp=Z,2µm,1.6s						
KIS				pmax	pmax		
	comp=Z,2µm,6.0s						
EREN	Erenkoy	148.74	296	eP	PKPdf	03 48 24.8	+2.0
SULT	Sultanhani-AKS	148.79	301	eP	PKPdf	03 48 23.4	+0.5
SILI	Silifke-Mersin	148.82	298	eP	PKPdf	03 48 23.9	+1.0
AFSR	Afar-Bala (An	148.84	304	eP	PKPdf	03 48 23.9	+0.9
ANTO	Ankara	148.93	305	⇓P	PKPdf	03 48 23.5	+0.4
ANTO	Ankara	148.93	305	⇓PKIKP	PKPdf	03 48 23.5	+0.4
ANTO	Ankara	148.93	305		PKPdf	03 48 22.4	-0.7
LOD	Lodumlu	148.95	305	eP	PKPdf	03 48 24.2	+1.1
KEBE	Keben-Mersin	148.97	298	eP	PKPdf	03 48 24.4	+1.1
COP	Copenhagen	148.98	345	i P	PKPbc	03 48 27.6	+0.4
	comp=Z,658nm,1.1s						
COP	Copenhagen	148.98	345	ePKIKP	PKPbc	03 48 27.6	+0.4
COP				pmax	pmax		
	comp=Z,660nm,1.1s						
KULU	Kulu	148.99	303	eP	PKPdf	03 48 23.1	-0.2
IKL	Isikli	149.03	297	eP	PKPdf	03 48 24.2	+1.0
AKKU	Akkuyu-Mersin	149.15	297	eP	PKPdf	03 48 24.5	+1.1
CHBY	Cihanbeyli	149.19	302	eP	PKPdf	03 48 23.9	+0.3
TEVE	Tevekalti-Mers	149.19	298	eP	PKPdf	03 48 24.4	+0.8
DRUM	Mains of Drumt	149.25	2	eP	PKPdf	03 48 24.0	+1.1
LEOM	Leova	149.35	319	⇓P	PKPbc	03 48 26.8	-1.6
LEOM	Leova	149.35	319	⇓PKIKP	PKPbc	03 48 26.8	-1.6
IAS	Iasi	149.36	321	⇓P	PKPdf	03 48 25.2	+1.8
IAS	Iasi	149.36	321	⇓PKIKP	PKPdf	03 48 25.2	+1.8
BERE	Bereket-Mersin	149.38	298	eP	PKPdf	03 48 23.6	-0.4
TEKE	Tekeli-Mersin	149.50	297	eP	PKPdf	03 48 24.4	+0.4
EDU	Dundee	149.60	2	eP	PKPdf	03 48 23.3	-0.2
BEL	Belsk	149.62	333	ePKPdf	PKPdf	03 48 24.8	+1.1
BEL				ePKPbc	PKiKP	03 48 29.7	+0.1
BEL				ePKiKP	PKPbc	03 48 30.9	+2.1
BEL				epPKP	pPKPab	03 50 27.1	-0.3
BEL	Belsk	149.62	333	ePKIKP	PKPdf	03 48 24.8	+1.1
LVV	L'vov	149.62	328	ePKIKP	PKPdf	03 48 24.6	+0.8
LVV				e		03 50 22.3	
LVV				e		03 51 50.8	
LVV				e		03 54 46.0	
TLCR		149.65	316	⇓P	PKPdf	03 48 25.3	+1.4
TLCR		149.65	316	⇓PKIKP	PKPdf	03 48 25.3	+1.4
INVG	Invergeldie, C	149.67	4	eP	PKPdf	03 48 24.7	+1.1
LADK	Ladik-KONYA	149.68	302	eP	PKPdf	03 48 24.4	0.0
KONT	Konya--Tatoy	149.74	301	eP	PKPdf	03 48 24.8	+0.4
LAWE	Loch Awe, Argy	149.74	5	eP	PKPdf	03 48 23.7	0.0
GKP	Gorka Klasztor	149.78	338	ePKPdf	PKPdf	03 48 25.1	+1.2
GKP				ePKPbc	PKiKP	03 48 29.7	-0.2
GKP				ePKiKP	PKPbc	03 48 30.9	+1.7
GKP	Gorka Klasztor	149.78	338	ePKIKP	PKPdf	03 48 25.1	+1.2
JURR	Jurilovca	149.81	316	⇓P	PKPdf	03 48 25.1	+1.0
RGN	Rugen	149.81	344	eP	PKiKP	03 48 30.4	+0.5
BIR	Birlad	149.82	319	⇓P	PKiKP	03 48 30.5	+0.3
BIR	Birlad	149.82	319	⇓PKIKP	PKiKP	03 48 30.5	+0.3
LEF	Lefka	149.83	295	⇑P	PKPdf	03 48 26.0	+1.4
LEF	Lefka	149.83	295	eP	PKPdf	03 48 25.4	+0.9
HDMB	Hadim	149.85	299	eP	PKPdf	03 48 25.3	+0.5
GIUM	Giurgiulesti	149.87	317	⇓P	PKPbc	03 48 28.2	-1.5
KIZT	Kizilcal	149.88	303	eP	PKPdf	03 48 25.3	+0.6
EAB	Aberfoyle	149.89	4	eP	PKPdf	03 48 24.0	0.0
MDUB	Mudurnu	149.92	306	eP	PKPdf	03 48 25.3	+0.6
SVRH	Sivrihisar-ESK	149.99	304	eP	PKPdf	03 48 25.5	+0.7
GHRR		150.06	319	⇑P	PKPdf	03 48 26.9	+2.4
TOPG	Topolog	150.07	316	⇑P	PKPdf	03 48 26.2	+1.6
CFR	Carcaliu	150.07	317	⇓P	PKPdf	03 48 25.5	+0.9
CFR	Carcaliu	150.07	317	⇓PKIKP	PKPdf	03 48 25.5	+0.9
GAZI	Gazipasa	150.12	298	eP	PKPdf	03 48 25.1	+0.1
TUDR		150.15	318	⇑P	PKPdf	03 48 27.2	+2.5
ESY	Stoneypath	150.24	2	eP	PKPdf	03 48 24.5	0.0
TIRR	Tirgusor	150.24	315	⇓P	PKPdf	03 48 25.7	+0.8
TIRR	Tirgusor	150.24	315	⇓P	PKPdf	03 48 25.7	+0.8
TIRR	Tirgusor	150.24	315	⇓PKIKP	PKPdf	03 48 25.7	+0.8
TESR	Tescani	150.26	320	⇓P	PKPdf	03 48 26.1	+1.2
EFOR	EFORIE	150.28	315	⇓P	PKPdf	03 48 27.5	+2.5
BIZ	Bicaz	150.33	321	⇓P	PKiKP	03 48 32.3	+1.0
PETR	Petresti	150.34	318	⇑P	PKPdf	03 48 26.6	+1.6
CIFT	Cifteler, Eski	150.36	304	eP	PKPdf	03 48 26.1	+0.7
MFTR	Murfatlar	150.37	315	⇓P	PKPdf	03 48 27.5	+2.4
EBL	Broad Law	150.37	3	eP	PKPdf	03 48 25.0	+0.3
KWP	Kalwaria Pacla	150.38	328	ePKPdf	PKPdf	03 48 25.3	+0.3
KWP				ePKPbc	PKiKP	03 48 31.5	+0.2
KWP				epPKP	pPKPab	03 50 28.9	-1.7
KWP	Kalwaria Pacla	150.38	328	ePKIKP	PKPdf	03 48 25.3	+0.3
BURAR	Bucovina Array	150.42	323	⇓P	PKPdf	03 48 27.1	+1.9
BURAR	Bucovina Array	150.42	323	⇓PKIKP	PKPdf	03 48 27.1	+1.9
BURAR	Bucovina Array	150.42	323		PKPdf	03 48 24.4	-0.8
ODBI	Odobesti	150.42	319	⇓P	PKPdf	03 48 26.3	+1.2
GULT	Gulveren	150.43	307	eP	PKPdf	03 48 26.1	+0.7
MANR	Mangalia	150.43	314	⇓P	PKPdf	03 48 26.4	+1.2
HARR	Harsova	150.44	316	⇓P	PKPdf	03 48 25.8	+0.7
HARR	Harsova	150.44	316	⇓PKIKP	PKPdf	03 48 25.8	+0.7
SAUV	Serdivan-Sakar	150.46	307	eP	PKPdf	03 48 25.1	-0.2
SRCK	Saricakaya, Es	150.47	306	eP	PKPdf	03 48 25.3	-0.1
SPNC	Sapanca-Adapaz	150.49	307	eP	PKPdf	03 48 26.2	+0.8
CVDA	Cernavoda	150.54	315	⇑P	PKPdf	03 48 26.6	+1.3
VRI	Vrincioaia	150.56	319	⇓P	PKiKP	03 48 31.9	+0.1
VRI	Vrincioaia	150.56	319	⇓PKP2	PKiKP	03 48 31.9	+0.1
ORH	Orhaniye	150.60	308	P	PKPbc	03 48 30.7	-0.9
PLOR	Plostina	150.62	319	⇓P	PKPdf	03 48 27.1	+1.6
PLOR	Plostina	150.62	319	⇓PKP2	PKPdf	03 48 27.1	+1.6
GRER		150.67	318	⇑P	PKiKP	03 48 32.5	+0.4
BISRR	Bisoca	150.74	318	⇓P	PKiKP	03 48 32.8	+0.5
PSN	Preselentsi	150.75	314	P	PKiKP	03 48 32.9	+0.7
ICOR	Ion Corvin	150.79	315	⇓P	PKPdf	03 48 27.2	+1.4
SILT	Sile	150.80	308	eP	PKPdf	03 48 26.6	+0.8
EKA	Eskdalemuir Ar	150.81	3	PKP	PKPdf	03 48 25.6	+0.3
	comp=Z,16nm,1.0s,baz=9.5,slow=2.0,SNR=20						
EKA				PKPbc	PKPbc	03 48 31.1	-0.5
	comp=Z,36nm,0.4s,baz=345,slow=2.7,SNR=59						
EKA				pPKPbc	pPKPab	03 50 30.9	-1.6
	comp=Z,8.0nm,0.8s,baz=338,slow=2.0,SNR=2.4						
ESK	Eskdalemuir	150.82	3	eP	PKPdf	03 48 25.6	+0.2
ESK	Eskdalemuir	150.82	3	PKIKP	PKPdf	03 48 25.9	+0.5
ESK						03 48 31.6	
ESK	Eskdalemuir	150.82	3		PKPdf	03 48 25.9	+0.5
ESK					PKPbc	03 48 31.6	0.0
AMRR	Amara	150.84	316	⇓P	PKiKP	03 48 33.6	+1.2
AMRR	Amara	150.84	316	⇓PKP2	PKiKP	03 48 33.6	+1.2
HRT	Hereke	150.90	308	eP	PKPdf	03 48 26.5	+0.4
PGOR	Pogoanele	150.91	317	⇑P	PKPdf	03 48 27.3	+1.4
SHUT	Suhut-Afyon	150.97	303	eP	PKPdf	03 48 27.5	+1.1
OZUR		150.99	320	⇓P	PKPdf	03 48 27.3	+1.2
ADVT	Abdulvahap	150.99	307	eP	PKPdf	03 48 26.4	+0.2
BSEG	Bad Segeberg	151.07	346	ePKPdf	PKPdf	03 48 26.5	+0.7
	baz=25,slow=1.3						
ISR	Istrita	151.07	318	⇓P	PKPdf	03 48 27.1	+0.9
ISR	Istrita	151.07	318	⇓PKIKP	PKPdf	03 48 27.1	+0.9
GAL1	Galloway	151.18	5	eP	PKPdf	03 48 26.3	+0.3
KLYT	Kilyos	151.19	309	eP	PKPdf	03 48 25.9	-0.5
YLV	Yalova	151.20	307	eP	PKPdf	03 48 27.2	+0.6
ARCR	ARCALIA	151.21	323	⇑P	PKiKP	03 48 33.3	+0.2
MLR	Muntele Rosu	151.23	319	PKP	PKPdf	03 48 26.2	-0.3
	comp=Z,27nm,1.3s,baz=334,slow=2.7,SNR=26						
MLR				PKPbc	PKiKP	03 48 33.3	-0.1
	comp=Z,247nm,1.1s,baz=8.4,slow=3.6,SNR=56						
MLR				PKPab	PKPab	03 48 44.7	+1.5
	comp=Z,49nm,0.7s,baz=334,slow=23,SNR=9.8						
MLR				pPKPbc	pPKPbc	03 50 30.0	+1.3
	comp=Z,55nm,1.1s,baz=59,slow=2.0,SNR=3.0						
MLR	Muntele Rosu	151.23	319	⇑P	PKPdf	03 48 26.6	+0.1
LEHL	Lehliu	151.23	317	⇑P	PKPdf	03 48 28.4	+2.1
ISK	Istanbul-Kandi	151.25	309	eP	PKPdf	03 48 25.8	-0.7
KAVV	Kandilli-Istan	151.25	309	eP	PKPdf	03 48 26.1	-0.4
OJC	Ojcow	151.25	332	ePKPdf	PKPdf	03 48 27.0	+0.8
OJC				ePKPbc	PKiKP	03 48 33.2	+0.1
OJC				epPKP	pPKPbc	03 50 30.7	+2.1
OJC	Ojcow	151.25	332	ePKIKP	PKPdf	03 48 27.0	+0.8
UZH	Uzhgorod	151.26	327	ePKHKP	PKPpre	03 48 24.9	
UZH				e		03 52 03.8	
UZH				e		04 10 52.4	
DOPR	Dopca	151.29	320	⇓P	PKPdf	03 48 27.9	+1.4
HLG	Helgoland	151.29	349	ePKPdf	PKPdf	03 48 27.4	+1.2
	baz=25,slow=1.3						
BMR	Baia Mare	151.29	325	⇓P	PKPdf	03 48 27.3	+0.9
BMR	Baia Mare	151.29	325	⇓PKIKP	PKPdf	03 48 27.3	+0.9
ANTB	Antalya	151.30	300	eP	PKPdf	03 48 27.5	+0.8
H07N1	FLORES T-PHASE	151.31	54	ePKPdf	PKPdf	03 48 28.8	+2.1
H07N1	FLORES T-PHASE	151.31	54	PKP	PKPdf	03 48 27.8	+1.1
	SNR=0.1						
H07N1				PKPbc	PKPbc	03 48 32.6	-0.7
H07S1	FLORES T-PHASE	151.34	55	ePKPdf	PKPdf	03 48 28.5	+1.7
H07S1	FLORES T-PHASE	151.34	55	PKP	PKPdf	03 48 27.0	+0.2
	SNR=17						
H07S1				PKPbc	PKPbc	03 48 33.4	+0.1
EDMD	Edmundbyers	151.35	1	eP	PKPdf	03 48 25.9	-0.3
SECR		151.40	318	⇓P	PKPbc	03 48 30.0	-3.3
BGKT	Bogazkoy	151.40	309	eP	PKPdf	03 48 26.6	-0.1
SULR		151.47	317	⇑P	PKPdf	03 48 29.5	+2.8
PRD	Provadia	151.48	314	P	PKPdf	03 48 27.9	+1.1
TRPA	Tarpa	151.48	326	⇓P	PKPdf	03 48 26.4	-0.2
KORT	Korkueli	151.51	300	eP	PKPdf	03 48 28.9	+1.6
TVSB	Tavsanli	151.51	305	eP	PKPdf	03 48 27.9	+0.8
NEF	NEVSHA	151.53	314	P	PKPdf	03 48 28.4	+1.5
RUE	Ruedersdorf	151.53	341	eP	PKPdf	03 48 28.5	+1.9
RUE	Ruedersdorf	151.53	341	ePKPdf	PKPdf	03 48 27.3	+0.8
	baz=25,slow=1.3						
KESW	Keswick, Cumbr	151.55	3	eP	PKPdf	03 48 25.9	-0.6
CTKS	Kestanelik-??a	151.57	309	eP	PKPdf	03 48 27.3	+0.3
ARMT	Armutlu	151.57	308	eP	PKPdf	03 48 27.4	+0.3
MDNY	Mudanya-Bursa	151.62	307	eP	PKPdf	03 48 27.0	-0.1
CTYL	Yalikoy Yolu	151.62	310	eP	PKPdf	03 48 26.7	-0.4
NIE	Niedzica	151.63	330	ePKPdf	PKPdf	03 48 27.2	+0.3
NIE				ePKPbc	PKiKP	03 48 34.5	+0.6
NIE	Niedzica	151.63	330	ePKIKP	PKPdf	03 48 27.2	+0.3
GEDZ	Gediz	151.68	304	eP	PKPdf	03 48 27.9	+0.5
MDB	Medias	151.76	321	⇑P	PKiKP	03 48 35.0	+0.7
MDB	Medias	151.76	321	⇑PKP2	PKiKP	03 48 35.0	+0.7
GDLE	Glaisdale, N Y	151.77	0	eP	PKPdf	03 48 28.2	+1.3
SLVT	Silivri	151.78	309	eP	PKPdf	03 48 27.3	0.0
VOIR		151.78	320	⇓P	PKPdf	03 48 28.3	+1.0
VOIR		151.78	320	⇓PKIKP	PKPdf	03 48 28.3	+1.0
IOMK	Kirk Michael	151.79	5	eP	PKPdf	03 48 27.6	+0.7
CJR	Cluj-Napoca	151.84	323	⇓P	PKiKP	03 48 34.5	0.0
CJR	Cluj-Napoca	151.84	323	⇓PKP2	PKiKP	03 48 34.5	0.0
RAZG	Razgrad	151.88	315	⇑P	PKPdf	03 48 28.8	+1.4
MTUR	Matau	151.89	319	⇓P	PKiKP	03 48 35.5	+0.8
MTUR	Matau	151.89	319	⇓PKP2	PKiKP	03 48 35.5	+0.8
WIM	Isle of Man	151.90	5	eP	PKPdf	03 48 27.1	+0.1
ELL	Elmali	151.91	300	eP	PKPdf	03 48 28.7	+0.8
SIMA	Simav-Kutahya	151.98	305	eP	PKPdf	03 48 28.3	+0.5
KCTX	Karacabey (Bur	152.03	307	eP	PKPdf	03 48 27.7	-0.1
ARR	Arges	152.06	320	⇑P	PKPdf	03 48 29.0	+1.3
PHSR	Pinarhisar	152.09	311	eP	PKPdf	03 48 27.3	-0.5
KSP	Ksiaz	152.12	337	ePKPdf	PKPdf	03 48 28.7	+1.2
KSP				ePKPbc	PKiKP	03 48 35.4	+0.6
KSP				epPKP	pPKPbc	03 50 33.3	+2.7
KSP	Ksiaz	152.12	337	ePKIKP	PKPdf	03 48 28.7	+1.2
CRLT	Corlu	152.14	310	eP	PKPdf	03 48 28.3	+0.4
KECS	Kecovo	152.22	329	ePKP2	PKiKP	03 48 36.8	+1.6
KECS	Kecovo	152.22	329	ePKP	PKiKP	03 48 36.8	+1.6
KECS				e		03 48 49.1	
OKC	Ostrava-Krasne	152.22	333	ePKPDF	PKPdf	03 48 28.7	+1.0
OKC				⇑ePKP	PKiKP	03 48 35.6	+0.5
OKC				ePKPAB	PKPab	03 48 48.5	+1.4
OKC	Ostrava-Krasne	152.22	333	ePKIKP	PKPdf	03 48 28.7	+1.0
HPK	Haverah Park	152.23	1	eP	PKPdf	03 48 28.8	+1.2
DRGR		152.27	324	⇓P	PKPbc	03 48 35.2	0.0
DRGR		152.27	324	⇓PKP2	PKPbc	03 48 35.2	0.0
AKAS	Kas	152.27	299	eP	PKPdf	03 48 29.1	+0.7
HUMR	Humele	152.33	318	⇓P	PKPdf	03 48 30.8	+2.7
JMB	Yambol	152.35	313	P	PKPdf	03 48 27.8	-0.3
EDC	Edincik	152.36	308	eP	PKPdf	03 48 28.2	0.0
OSTC	Ostas	152.38	336	ePKPDF	PKPdf	03 48 28.4	+0.4
OSTC				⇑ePKP	PKiKP	03 48 36.1	+0.7
OSTC				epPKP	pPKPdf	03 50 26.6	+1.6
OSTC				eSKP		03 55 01.5	
COPA	Copaceanca	152.39	317	⇓P	PKPdf	03 48 28.8	+0.7
KULA	Kula-Manisa	152.40	304	eP	PKPdf	03 48 29.5	+1.1
MRMT	Marmara Adasi	152.45	309	eP	PKPdf	03 48 27.8	-0.6
NRDL	Niedersach Rie	152.46	346	ePKPdf	PKPdf	03 48 28.4	+0.6
	baz=25,slow=1.3						
UPC	Upice	152.50	337	ePKPDF	PKPdf	03 48 29.4	+1.3
UPC				⇑ePKP	PKiKP	03 48 36.1	+0.4
UPC				epPKP	pPKPdf	03 50 25.0	-0.2
UPC	Upice	152.50	337	ePKIKP	PKPdf	03 48 29.4	+1.3
UPC				e		03 48 36.1	
UPC				e		03 50 24.5	
LOT	Lotru	152.51	321	⇓P	PKPdf	03 48 28.4	-0.1
MORC	Moravsky Berou	152.51	334	⇓P	PKPdf	03 48 28.5	+0.3
MORC	Moravsky Berou	152.51	334	⇓PKIKP	PKPdf	03 48 28.5	+0.3
MORC	Moravsky Berou	152.51	334	ePKP	PKPdf	03 48 28.1	-0.1
MORC				e		03 48 37.0	
MORC				e		03 48 50.4	
DPC	Dobruska-Polom	152.52	336	ePKPDF	PKPdf	03 48 28.4	+0.2
DPC				⇑ePKP	PKiKP	03 48 36.7	+0.9
DPC				ePKPAB	PKPab	03 48 50.7	+2.3
DPC				eSKP		03 55 02.9	
DPC	Dobruska-Polom	152.52	336	ePKIKP	PKPdf	03 48 28.4	+0.2
EDRB	Edirne	152.52	312	eP	PKPdf	03 48 28.5	+0.1
ZIMR		152.55	316	⇓P	PKiKP	03 48 36.4	+0.4
ZIMR		152.55	316	⇓PKP2	PKiKP	03 48 36.4	+0.4
KRLC	Kraliky	152.57	335	ePKPDF	PKPdf	03 48 28.3	0.0
KRLC	Kraliky	152.57	335	ePKIKP	PKPdf	03 48 28.3	0.0
FETY	Fethiye	152.59	300	eP	PKPdf	03 48 29.5	+0.8
ELND	Elena	152.59	314	⇓P	PKPdf	03 48 28.4	-0.1
BALB	Balikesir	152.60	307	eP	PKPdf	03 48 28.9	+0.3
WPS	Cemaes, Angles	152.65	5	eP	PKPdf	03 48 29.4	+1.3
ASSE	Asse, Remlinge	152.67	345	ePKPdf	PKPdf	03 48 28.7	+0.6
	baz=25,slow=1.3						
ASSE				ePKPab	PKPab	03 48 49.8	+1.0
	baz=25,slow=1.3						
WME	Myndd Eilian	152.67	5	eP	PKPdf	03 48 28.6	+0.4
RKY	Sarkoy-Tekirda	152.71	309	eP	PKPdf	03 48 27.8	-1.0
DEV	Deva	152.74	322	⇓P	PKPdf	03 48 30.9	+2.3
DEV	Deva	152.74	322	⇓PKIKP	PKPdf	03 48 30.9	+2.3
KRBG	Karabiga-Canak	152.74	308	eP	PKPdf	03 48 27.9	-0.8
WLF1	Llynfaes	152.77	5	eP	PKPdf	03 48 28.6	+0.3
LBWR	Ladybower, Pea	152.78	1	eP	PKPdf	03 48 28.3	-0.1
CLL	Collm	152.79	341	ePKPdf	PKPdf	03 48 30.0	+1.5
	comp=Z,224nm,1.6s						
CLL				⇑iPKPbc	PKiKP	03 48 37.3	+1.1
	comp=Z,521nm,1.2s						
CLL				⇓iPKPab	PKPab	03 48 51.9	+2.5
	comp=Z,630nm,1.3s						
CLL				epPKPdf	pPKPdf	03 50 26.0	+0.5
CLL				epPKPab	pPKPab	03 50 41.0	+0.5
CLL				eSKPdf	SKPdf	03 51 12.0	-2.4
CLL				esPKPab	sPKPab	03 51 36.0	+6.1
CLL				ePP	PP	03 52 24.0	-0.6
CLL				esPP		03 55 05.0	
CLL				ePPP	PPP	03 55 57.0	
CLL				i SKKSac	SKKSac	03 58 26.3	+1.2
CLL				e		03 59 18.0	
CLL				eSdif		04 00 36.0	
CLL				eSKSP		04 01 50.0	
CLL				ePSKS		04 02 30.0	
CLL				eSPP	SPP	04 04 36.0	
CLL				ePPS	PPS	04 05 23.0	
CLL				epPPS		04 07 00.0	
CLL				eSS	SS	04 11 11.0	-4.1
CLL				esSSP		04 15 12.0	
CLL				eSSS	SSS	04 17 00.0	
CLL				eSSSS		04 21 18.0	
CLL				esSSSS		04 23 54.0	
CLL	Collm	152.79	341	ePKPdf	PKPdf	03 48 29.7	+1.2
	baz=25,slow=1.3						
CLL	Collm	152.79	341	⇑ePKIKP	PKPdf	03 48 30.0	+1.5
CLL				i		03 48 37.3	
CLL				pmax	pmax		
	comp=Z,7.0nm,1.6s						
CLL				pmax	pmax		
	comp=Z,224nm,1.2s						
PVL	Pavlikeni	152.79	315	P	PKPdf	03 48 29.4	+0.7
DALY	Dalyan (Mula)	152.88	300	eP	PKPdf	03 48 30.1	+1.1
BRG	Berggiesshubel	152.89	339	i PKP	PKPdf	03 48 29.4	+0.7
	comp=Z,314nm,1.7s						
BRG	Berggiesshubel	152.89	339	i PKP	PKiKP	03 48 37.6	+1.2
	comp=Z,480nm,1.3s						
BRG	Berggiesshubel	152.89	339	i PKP	PKPab	03 48 50.9	+1.0
	comp=Z,515nm,1.3s						
BRG				pPKP	pPKPdf	03 50 23.0	-2.7
BRG				i SKP	SKPdf	03 51 10.9	-3.6
	comp=Z,171nm,1.6s						
BRG				SKS	SKSdf	03 54 49.0	+0.7
BRG				SS	SS	04 11 10.0	-6.2
BRG	Berggiesshubel	152.89	339	ePKPdf	PKPdf	03 48 29.1	+0.4
	baz=25,slow=1.3						
BRG	Berggiesshubel	152.89	339	i PKIKP	PKPdf	03 48 29.4	+0.7
BRG				i		03 48 37.6	
BRG						03 50 23.0	
BRG				i		03 51 10.9	
BRG						03 54 49.0	
BRG				SS	SS	04 11 10.0	-6.2
BRG				pmax	pmax		
	comp=Z,10.0nm,1.7s						
BRG				pmax	pmax		
	comp=Z,314nm,1.3s						
TURN	Turunc	152.90	300	eP	PKPdf	03 48 29.9	+0.8
PSZ	Piszkesteto	152.91	329	⇑P	PKiKP	03 48 36.8	+0.1
PSZ	Piszkesteto	152.91	329	⇑PKP2	PKiKP	03 48 36.8	+0.1
VLAD	Vladila	152.96	318	⇓P	PKiKP	03 48 37.8	+1.0
VYHS	Vyhne	152.96	331	ePKP	PKPdf	03 48 28.6	-0.3
VYHS				e		03 48 38.1	
VYHS				e		03 48 52.0	
CLZ	Clausthal	153.01	345	ePKPdf	PKPdf	03 48 29.3	+0.5
	baz=25,slow=1.3						
FBE	Freiberg	153.03	340	ePKPdf	PKPdf	03 48 29.3	+0.4
	baz=25,slow=1.3						
FBE				ePKPab	PKPab	03 48 52.0	+1.6
	baz=25,slow=1.3						
YER	Yerkesik	153.08	301	eP	PKPdf	03 48 30.1	+0.7
STNC	Stoke	153.08	2	eP	PKPdf	03 48 30.1	+1.3
GZR	Gura Zlata	153.11	322	⇓P	PKPdf	03 48 29.9	+0.7
GZR	Gura Zlata	153.11	322	⇓PKIKP	PKPdf	03 48 29.9	+0.7
IBBN	Ibbenburen	153.11	348	ePKPdf	PKPdf	03 48 29.1	+0.2
	baz=25,slow=1.3						
AYDB	Zeytinkoy-Aydi	153.15	303	eP	PKPdf	03 48 30.5	+0.9
PLVB	Pleven	153.15	316	⇑P	PKPdf	03 48 29.5	+0.3
SIRR	Siria	153.16	324	⇑P	PKPdf	03 48 30.5	+1.3
JAVC	Velka Javorina	153.18	332	ePKP	PKPdf	03 48 30.1	+0.9
JAVC				e		03 48 39.5	
JAVC				e		03 48 54.2	
NEUB	Neuenburg	153.23	342	ePKPdf	PKPdf	03 48 29.5	+0.4
	baz=25,slow=1.3						
NEUB				ePKPab	PKPab	03 48 52.4	+1.1
	baz=25,slow=1.3						
FOEL	Foel Wylfa	153.24	3	eP	PKPdf	03 48 30.5	+1.4
VRAC	Vranov	153.26	334	PKP	PKPdf	03 48 29.7	+0.5
	comp=Z,21nm,1.0s,baz=89,slow=1.2,SNR=34						
VRAC				PKPbc	PKiKP	03 48 37.8	+0.5
	comp=Z,51nm,1.1s,baz=76,slow=0.9,SNR=20						
VRAC				PKPab	PKPab	03 48 52.4	+0.9
	comp=Z,142nm,1.2s,baz=38,slow=4.6,SNR=26						
VRAC	Vranov	153.26	334	ePKP	PKPdf	03 48 28.7	-0.6
VRAC				e		03 48 38.2	
VRAC				e		03 48 53.5	
GELI	Tayfur-Gelibol	153.31	309	eP	PKPdf	03 48 29.2	-0.4
GTTG	Gottingen	153.38	345	ePKPdf	PKPdf	03 48 29.6	+0.3
	baz=25,slow=1.3						
GTTG				ePKPab	PKPab	03 48 53.9	+1.9
	baz=25,slow=1.3						
ALN	Alexandroupoli	153.40	310	P	PKPdf	03 48 29.3	-0.4
PRA	Prague	153.42	338	ePKPDF	PKPdf	03 48 30.6	+1.2
PRA				⇑ePKP	PKiKP	03 48 39.2	+1.7
PRA				ePKPAB	PKPab	03 48 53.2	+1.1
PRA				eSKP		03 55 09.1	
PRA	Prague	153.42	338	ePKIKP	PKPdf	03 48 30.6	+1.2
PRA				e		03 48 39.2	
PCED	Cedros	153.43	55	ePKPdf	PKPdf	03 48 31.3	+1.5
PRU	Pruhonice	153.45	338	ePKPDF	PKPdf	03 48 29.9	+0.4
PRU				⇑ePKP	PKiKP	03 48 38.0	+0.4
PRU				ePKPAB	PKPab	03 48 53.9	+1.6
PRU				epPKP	pPKPab	03 50 43.2	0.0
PRU				eSKP		03 55 08.9	
PRU	Pruhonice	153.45	338	ePKIKP	PKPdf	03 48 29.9	+0.4
PRU				e		03 48 38.0	
KDZ	Kurdzhali	153.50	312	P	PKPdf	03 48 28.8	-1.0
DKL	Dikili	153.51	306	eP	PKPdf	03 48 30.0	+0.1
KRUC	Moravsky	153.54	334	ePKP	PKPdf	03 48 29.0	-0.6
KRUC				e		03 48 38.8	
KRUC				e		03 48 54.6	
SMOL	Smolenice	153.55	332	ePKP	PKPdf	03 48 30.5	+0.8
SMOL				e		03 48 39.9	
SMOL				e		03 48 54.0	
BAIL	Bailesti	153.59	319	⇓P	PKiKP	03 48 39.2	+1.1
BZS	Buzias	153.60	323	⇓P	PKPdf	03 48 29.5	-0.3
BZS	Buzias	153.60	323	⇓PKIKP	PKPdf	03 48 29.5	-0.3
HERR	Herculane	153.62	321	⇓P	PKPdf	03 48 30.3	+0.5
HLM1	Long Mynd	153.63	3	eP	PKPdf	03 48 28.9	-0.7
RDO	Rodhopi	153.64	311	P	PKPdf	03 48 29.7	-0.3
BLCB	Balcova	153.64	304	eP	PKPdf	03 48 30.5	+0.4
EZN	Ezine	153.65	308	eP	PKPdf	03 48 29.9	-0.1
PCAN	Candelaria	153.65	55	ePKPdf	PKPdf	03 48 32.5	+2.4
TREC	Trest	153.69	336	ePKPDF	PKPdf	03 48 30.6	+0.7
TREC				⇑ePKP	PKiKP	03 48 38.4	+0.2
TREC				ePKPAB	PKPab	03 48 55.1	+1.7
TREC				eSKP		03 55 07.5	
SRO	Srobarova	153.71	330	ePKP	PKPdf	03 48 31.4	+1.5
SRO				e		03 48 39.4	
SRO				e		03 48 54.6	
GCAM	G?zelcaml?	153.72	303	eP	PKPdf	03 48 30.6	+0.4
MODS	Modra-Piesok	153.72	332	ePKIKP	PKPdf	03 48 29.6	-0.3
MODS				e		03 48 40.1	
MODS	Modra-Piesok	153.72	332	ePKP	PKPdf	03 48 29.6	-0.3
MODS				e		03 48 40.1	
MODS				e		03 48 55.4	
MODS				eL	L	04 24 34.6	
DAT	Datca	153.73	301	eP	PKPdf	03 48 30.5	+0.1
TANN	Tannenbergstha	153.74	341	ePKPdf	PKPdf	03 48 30.4	+0.4
	baz=25,slow=1.3						
PLD	Plovdiv	153.75	314	P	PKPdf	03 48 29.4	-0.7
PLN	Plauen	153.77	341	ePKPdf	PKPdf	03 48 30.3	+0.3
	baz=25,slow=1.3						
PLN				ePKPab	PKPab	03 48 54.8	+1.1
	baz=25,slow=1.3						
SRBC	Serra Branca	153.77	54	ePKPdf	PKPdf	03 48 32.2	+1.9
MOX	Moxa	153.78	342	ePKPdf	PKPdf	03 48 30.1	+0.1
	baz=25,slow=1.3						
MOX	Moxa	153.78	342	PKIKP	PKPdf	03 48 30.1	+0.1
PGRA	Graciosa	153.82	54	ePKPdf	PKPdf	03 48 32.0	+1.7
GUNZ	Gunzen	153.83	341	ePKPdf	PKPdf	03 48 30.3	+0.3
	baz=25,slow=1.3						
GUNZ				ePKPab	PKPab	03 48 55.4	+1.5
	baz=25,slow=1.3						
BOZC	Bozcaada	153.83	308	eP	PKPdf	03 48 30.0	-0.3
BODT	Bodrum	153.85	301	eP	PKPdf	03 48 30.5	0.0

PMAN	Manadas	153.88	55	ePKPdf	PKPdf	03 48 31.8	+1.4
WERN	Wernitzgruen	153.88	341	ePKPdf	PKPdf	03 48 30.6	+0.5
	baz=25,slow=1.3						
WERN				ePKPab	PKPab	03 48 55.3	+1.1
	baz=25,slow=1.3						
PBCC	Pribram	153.89	338	ePKPDF	PKPdf	03 48 29.9	-0.2
PBCC				ePKPAB	PKPab	03 48 55.6	+1.4
NKC	Novy Kostel	153.91	341	ePKPDF	PKPdf	03 48 30.2	+0.1
NKC				⇑ePKP	PKiKP	03 48 39.5	+0.9
NKC				ePKPAB	PKPab	03 48 55.3	+1.0
NKC	Novy Kostel	153.91	341	ePKIKP	PKPdf	03 48 30.2	+0.1
NKC				e		03 48 39.5	
ZST	Bratislava	153.94	332	ePKIKP	PKPdf	03 48 30.2	0.0
ZST				e		03 48 39.6	
ZST	Bratislava	153.94	332	ePKP	PKPdf	03 48 30.2	0.0
ZST				e		03 48 39.6	
ZST				e		03 48 55.7	
RZN	Rozhen	153.94	313	P	PKPdf	03 48 30.4	-0.3
URLA	Izmir	153.98	305	eP	PKPdf	03 48 29.5	-1.1
BANR	Banloc	154.01	323	⇓P	PKiKP	03 48 39.4	+0.5
BUG	Bochum--Univer	154.03	349	ePKPdf	PKPdf	03 48 30.4	+0.2
	baz=25,slow=1.3						
BUG				ePKPab	PKPab	03 48 55.4	+0.7
	baz=25,slow=1.3						
UBBA	Unterbreizbach	154.04	344	ePKPdf	PKPdf	03 48 30.5	+0.4
	baz=25,slow=1.3						
UBBA				ePKPab	PKPab	03 48 55.6	+1.0
	baz=25,slow=1.3						
MDVR	Moldovita	154.08	322	⇑P	PKiKP	03 48 40.0	+0.8
MANZ	Manzenberg	154.23	341	ePKPdf	PKPdf	03 48 30.9	+0.3
	baz=25,slow=1.3						
MANZ				ePKPab	PKPab	03 48 57.0	+1.3
	baz=25,slow=1.3						
ROTZ	Rotzenmuhle	154.40	340	ePKPdf	PKPdf	03 48 31.0	+0.2
	baz=25,slow=1.3						
ROTZ				ePKPab	PKPab	03 48 58.0	+1.7
	baz=25,slow=1.3						
STRD	Stroud	154.40	2	eP	PKPdf	03 48 31.5	+0.8
ADH	Angra Heroismo	154.50	54	ePKPdf	PKPdf	03 48 34.0	+2.7
KHC	Kasperske Hory	154.51	338	ePKPDF	PKPdf	03 48 31.0	0.0
KHC				⇑ePKP	PKPbc	03 48 41.3	+1.4
KHC				ePKPAB	PKPab	03 48 58.8	+1.9
KHC				epPKP	pPKPdf	03 50 28.5	+0.3
KHC				ex	x	03 50 56.0	
KHC				eSKP		03 55 15.4	
KHC	Kasperske Hory	154.51	338	ePKIKP	PKPdf	03 48 31.0	0.0
KHC				e		03 48 41.3	
KHC				e		03 50 28.5	
CONA	Conrad Observa	154.66	333	ePKPdf	PKPdf	03 48 31.3	-0.1
	comp=Z,60nm,1.5s,SNR=20						
CONA				ePKPab	PKPab	03 48 59.5	+1.8
	comp=Z,189nm,1.2s						
NVR	Nevrokopi	154.67	313	P	PKPdf	03 48 30.8	-0.7
GEC2	GERESS Array S	154.71	337	ePKPdf	PKPdf	03 48 31.4	0.0
	baz=25,slow=1.3						
GEC2				ePKPab	PKPab	03 48 59.3	+1.4
	baz=25,slow=1.3						
GERES	GERESS Array B	154.71	337	PKP	PKPdf	03 48 30.7	-0.7
	comp=Z,34nm,1.2s,baz=48,slow=2.0,SNR=72						
GERES				PKPbc	PKiKP	03 48 39.9	-0.6
	comp=Z,39nm,1.1s,baz=22,slow=1.4,SNR=20						
GERES				PKPab	PKPab	03 48 58.6	+0.8
	comp=Z,48nm,1.0s,baz=45,slow=4.0,SNR=16						
GERES	GERESS Array B	154.71	337		PKPdf	03 48 31.1	-0.3
GERES					PKiKP	03 48 40.4	0.0
GERES					PKPab	03 48 57.7	-0.2
WET	Wettzell	154.73	339	ePKPdf	PKPdf	03 48 31.6	+0.3
	baz=25,slow=1.3						
WET				ePKPab	PKPab	03 48 59.5	+1.6
	baz=25,slow=1.3						
WET	Wettzell	154.73	339	PKIKP	PKPdf	03 48 31.4	+0.1
GRF	Grafenberg Arr	154.75	342	ePKPdf	PKPdf	03 48 31.7	+0.3
	baz=25,slow=1.3						
GRF				ePKPab	PKPab	03 48 59.7	+1.8
	baz=25,slow=1.3						
KKB	Krupnik	154.91	315	P	PKPdf	03 48 31.4	-0.4
AHRW	Bad Neuenahr-A	154.93	348	ePKPdf	PKPdf	03 48 31.8	+0.3
	baz=25,slow=1.3						
AHRW				ePKPab	PKPab	03 48 59.6	+1.0
	baz=25,slow=1.3						
SRS	Serrai	154.96	313	P	PKPdf	03 48 30.7	-1.2
TNS	Taunus Mts	154.96	346	ePKPdf	PKPdf	03 48 31.7	+0.1
	baz=25,slow=1.3						
TNS				ePKPab	PKPab	03 48 59.5	+0.7
	baz=25,slow=1.3						
SOH	Sokhos	155.26	312	P	PKPdf	03 48 30.9	-1.4
ARSA	Arzberg	155.34	333	i PKPdf	PKPdf	03 48 31.6	-0.6
	comp=Z,46nm,1.6s,SNR=18						
ARSA				ePKPab	PKPab	03 49 02.2	+1.7
	comp=Z,110nm,1.5s						
MOA	Molln	155.34	335	i PKPdf	PKPdf	03 48 32.0	-0.2
	comp=Z,66nm,1.6s,SNR=19						
MOA				ePKPab	PKPab	03 49 02.4	+1.8
	comp=Z,149nm,1.2s,SNR=6.7						
KNT	Kendrikon	155.39	313	P	PKPdf	03 48 31.6	-0.8
PAIG	Paliouri	155.45	310	P	PKPdf	03 48 31.4	-1.1
DIVS	Divibare	155.46	322	eP	PKPdf	03 48 31.6	-0.9
VAY	Valandovo	155.52	314	ePKP	PKPdf	03 48 31.7	-0.8
VAY				ePKP	PKPdf	03 48 43.3	+11
VAY				i PKP	PKPab	03 49 01.7	+0.1
VAY				i S	SKKSac	03 58 38.3	-2.0
HORT	Hortiatis	155.53	312	P	PKPdf	03 48 31.9	-0.8
AOS	Alonnisos	155.64	308	P	PKPdf	03 48 31.9	-0.9
GRG	Griva	155.82	313	P	PKPdf	03 48 32.5	-0.5
SKO	Skopje	155.89	316	ePKP	PKPdf	03 48 33.5	+0.5
SKO				i PKP	PKPdf	03 48 44.2	+11
SKO				i PKP	PKPab	03 49 04.5	+1.3
SKO				i S	SKKSac	03 58 43.0	+0.8
SACV	Santiago Islan	155.91	113	PKPdf	PKPdf	03 48 31.8	-2.0
SACV					PKPab	03 49 03.1	-0.8
PSET	Sete Cidades	155.91	55	ePKPdf	PKPdf	03 48 33.1	-0.2
BBLS	Lazići	155.94	322	eP	PKPdf	03 48 33.1	-0.1
WLF	Walferdange	155.94	349	ePKPdf	PKPdf	03 48 33.9	+1.0
	baz=25,slow=1.3						
RJOB	Jochberg	155.97	337	ePKPdf	PKPdf	03 48 32.6	-0.4
	baz=25,slow=1.3						
PDA	Ponta Delgada	155.98	55	ePKPdf	PKPdf	03 48 35.5	+2.2
PERS	Pernice	156.00	332	ePKPdf	PKPdf	03 48 33.2	+0.1
PERS				ePKPab	PKPab	03 49 04.3	+0.9
SOKA	Soboth	156.00	333	i PKPdf	PKPdf	03 48 33.1	-0.1
	comp=Z,60nm,1.5s,SNR=28						
SOKA				ePKPab	PKPab	03 49 04.6	+1.1
	comp=Z,165nm,1.1s						
XOR	Xorichti	156.04	309	P	PKPdf	03 48 32.4	-1.0
HAPS	Han Pijesak,Bl	156.04	323	eP	PKPdf	03 48 34.2	+0.9
NEO	Neokhori	156.04	309	P	PKPdf	03 48 33.0	-0.4
MOSL	Moslavina	156.06	329	i P	PKPdf	03 48 33.6	+0.4
CMLA	Cha da Macela	156.08	55	ePKPdf	PKPdf	03 48 34.6	+1.1
CMLA	Cha da Macela	156.08	55	PKIKP	PKPdf	03 48 32.7	-0.8
CMLA						03 49 04.4	
CMLA	Cha da Macela	156.08	55		PKPdf	03 48 32.7	-0.8
CMLA					PKPab	03 49 04.4	+0.3
PCALD	Caldeiras da R	156.09	55	ePKPdf	PKPdf	03 48 34.8	+1.3
FUR	Furstenfeldbru	156.10	340	ePKPdf	PKPdf	03 48 33.1	-0.1
	baz=25,slow=1.3						
PTL	Penteli	156.10	306	P	PKPdf	03 48 33.0	-0.5
RUDO	Rudo	156.12	322	eP	PKPdf	03 48 34.7	+1.4
STU	Stuttgart	156.13	344	ePKPdf	PKPdf	03 48 33.4	+0.2
	baz=25,slow=1.3						
LIT	Litokhoron	156.18	311	P	PKPdf	03 48 33.0	-0.5
PTJ	Puntijarka	156.20	330	P	PKPdf	03 48 33.6	+0.1
IDI	Anoyia	156.22	299	PKP	PKPdf	03 48 34.0	+0.2
	comp=Z,68nm,1.2s,baz=176,slow=5.9,SNR=6.5						
IDI				PKPab	PKPab	03 49 05.4	+0.6
	comp=Z,29nm,0.8s,baz=102,slow=7.8,SNR=11						
ZAG	Zagreb	156.25	330	P	PKPdf	03 48 35.1	+1.7
OBKA	Obir	156.33	333	ePKPdf	PKPdf	03 48 33.3	-0.3
	comp=Z,46nm,1.7s,SNR=6.6						
OBKA				ePKPab	PKPab	03 49 05.8	+0.8
	comp=Z,47nm,1.4s						
KBA	Koelnbreinsper	156.33	336	i PKPdf	PKPdf	03 48 33.1	-0.6
	comp=Z,54nm,1.4s,SNR=21						
KBA				ePKPab	PKPab	03 49 06.2	+1.2
	comp=Z,63nm,1.1s						
KBA	Koelnbreinsper	156.33	336	PKIKP	PKPdf	03 48 33.4	-0.3
BART	Pico Bartolome	156.33	55	ePKPdf	PKPdf	03 48 35.9	+2.0
CRES	Cresnjev	156.49	331	eP	PKPdf	03 48 33.1	-0.6
BLY	Banja Luka	156.49	327	⇓P	PKPab	03 48 57.5	-8.0
BLY	Banja Luka	156.49	327	eP	PKPdf	03 48 34.0	+0.3
KZN	Kozani	156.56	313	P	PKPdf	03 48 33.7	-0.4
FNA	Florina	156.57	314	P	PKPdf	03 48 33.6	-0.5
MYKA	Terra Mystica	156.59	334	ePKPdf	PKPdf	03 48 33.7	-0.2
	comp=Z,71nm,1.8s,SNR=14						
MYKA				ePKPab	PKPab	03 49 06.8	+0.7
	comp=Z,145nm,1.2s,SNR=8.1						
OZLJ	Ozalj	156.65	330	i P	PKPdf	03 48 33.8	-0.1
PSMA	Santa Maria	156.65	57	ePKPdf	PKPdf	03 48 34.1	-0.1
PSMN	Pico do Norte,	156.69	56	ePKPdf	PKPdf	03 48 34.0	-0.3
LJU	Ljubljana	156.72	332	ePKPdf	PKPdf	03 48 34.0	-0.1
LJU				e		03 48 45.0	
LJU				ePKPab	PKPab	03 49 07.1	+0.6
LJU	Ljubljana	156.72	332	eP	PKPdf	03 48 33.4	-0.6
VAM	Vamos	156.73	299	P	PKPdf	03 48 35.2	+0.9
WATA	Walderalm	156.73	338	ePKPdf	PKPdf	03 48 33.8	-0.4
	comp=Z,105nm,1.5s,SNR=23						
WATA				ePKPab	PKPab	03 49 08.2	+1.5
	comp=Z,219nm,1.3s,SNR=8.8						
BFO	Black Forest	156.76	345	ePKPdf	PKPdf	03 48 33.5	-0.5
	baz=25,slow=1.3						
BFO	Black Forest	156.76	345	PKIKP	PKPdf	03 48 33.4	-0.6
BFO	Black Forest	156.76	345		PKPdf	03 48 33.4	-0.6
OHR	Ohrid	156.77	315	ePKP	PKPdf	03 48 35.0	+0.7
OHR				i PKP	PKPdf	03 48 46.0	+12
OHR				i PKP	PKPab	03 49 07.4	+0.4
OHR				i S	SKKSac	03 58 45.5	-1.6
WTTA	Wattenberg	156.78	338	ePKPdf	PKPdf	03 48 33.6	-0.7
	comp=Z,151nm,1.5s,SNR=41						
WTTA				ePKPab	PKPab	03 49 08.6	+1.7
	comp=Z,174nm,1.4s						
WTTA	Wattenberg	156.78	338	PKIKP	PKPdf	03 48 34.0	-0.3
MGRS	Mrkonjic Grad	156.78	326	eP	PKPdf	03 48 35.9	+1.7
BOJS	Bojanci	156.83	330	ePKPdf	PKPdf	03 48 34.2	+0.1
BOJS				e		03 48 46.1	
BOJS				eSS	SS	04 12 04.3	+5.5
RETA	Reutte	156.86	340	ePKPdf	PKPdf	03 48 34.2	-0.1
	comp=Z,46nm,1.7s,SNR=9.3						
RETA				ePKPab	PKPab	03 49 08.8	+1.6
	comp=Z,358nm,1.2s,SNR=18						
MOTA	Moosalm	156.88	339	ePKPdf	PKPdf	03 48 34.0	-0.4
	comp=Z,74nm,1.4s,SNR=21						
MOTA				ePKPab	PKPab	03 49 08.9	+1.6
	comp=Z,342nm,1.2s,SNR=16						
UBR	Ueberruh	156.88	341	ePKPdf	PKPdf	03 48 33.8	-0.5
	baz=25,slow=1.3						
ABTA	Abfaltersbach	156.92	336	ePKPdf	PKPdf	03 48 33.7	-0.7
	comp=Z,82nm,1.4s,SNR=31						
ABTA				ePKPab	PKPab	03 49 07.9	+0.4
	comp=Z,123nm,1.0s						
PDG	Podgorica	156.93	320	⇑P	PKPab	03 49 03.1	-4.5
PDG	Podgorica	156.93	320	eP	PKPdf	03 48 33.8	-0.5
SQTA	Sankt Quirin	156.96	339	ePKPdf	PKPdf	03 48 34.2	-0.2
	comp=Z,66nm,1.4s,SNR=24						
SQTA				ePKPab	PKPab	03 49 09.2	+1.6
	comp=Z,294nm,1.3s,SNR=8.5						
VOJS	Vojsko	156.99	333	ePKPdf	PKPdf	03 48 34.1	-0.3
VOJS				ePKPab	PKPab	03 49 07.9	+0.1
CEY	Cerknica	157.00	332	eP	PKPdf	03 48 33.9	-0.5
BRY	Bratogost	157.04	322	eP	PKPdf	03 48 35.6	+0.9
DRME	Dracevica, Mon	157.13	319	eP	PKPdf	03 48 34.7	+0.1
TIR	Tirane	157.22	317	i P	PKPdf	03 48 29.1	-5.6
TIR	Tirane	157.22	317	⇑P	PKPab	03 49 06.5	-2.4
TIR	Tirane	157.22	317	⇑PKP2	PKPab	03 49 06.5	-2.4
FETA	Feichten	157.29	339	ePKPdf	PKPdf	03 48 34.7	-0.1
	comp=Z,72nm,1.4s,SNR=16						
FETA				ePKPab	PKPab	03 49 10.8	+1.7
	comp=Z,196nm,1.2s,SNR=6.6						
DAVA	Damuels	157.31	341	ePKPdf	PKPdf	03 48 33.7	-1.2
	comp=Z,52nm,1.7s,SNR=7.9						
DAVA				ePKPab	PKPab	03 49 10.6	+1.4
	comp=Z,366nm,1.1s,SNR=12						
RIY	Rijeka	157.31	331	P	PKPdf	03 48 34.7	0.0
UDBI	Udbina	157.34	328	i P	PKPdf	03 48 34.5	-0.4
KLV	Kalavryta, Ach	157.34	307	P	PKPdf	03 48 34.8	-0.3
RICI	Ricice	157.41	324	P	PKPdf	03 48 35.0	0.0
MAKA	Makarska	157.61	324	i P	PKPdf	03 48 35.0	-0.2
TPE	Tepelena	157.72	314	i P	PKPdf	03 48 33.9	-1.6
NVLJ	Novalja	157.73	329	i P	PKPdf	03 48 35.2	0.0
DAVOX	Davos/Dischmat	157.76	340	PKP	PKPdf	03 48 35.4	-0.1
	comp=Z,14nm,1.0s,baz=204,slow=4.0,SNR=18						
DAVOX				PKPab	PKPab	03 49 11.7	+0.5
	comp=Z,202nm,1.1s,baz=322,slow=1.9,SNR=28						
MORI	Morici	157.86	327	i P	PKPdf	03 48 34.5	-1.0
IGT	Igoumenitsa	157.91	312	P	PKPdf	03 48 35.7	0.0
ZIRJ	Zirje	158.05	327	i P	PKPdf	03 48 35.7	0.0
DUGI	Dugi Otok	158.08	328	i P	PKPdf	03 48 35.8	0.0
BAI	Bari	159.15	320	eP	PKPdf	03 48 37.7	+0.7
TAR1	Taranto	159.28	318	eP	PKPdf	03 48 37.3	+0.1
SG1	Sgolgore (BA)	159.44	320	eP	PKPdf	03 48 37.5	0.0
LIC	Lamto	159.75	168	ePKIKP	PKPdf	03 48 38.3	-0.3
	comp=Z,370nm,1.4s						
LIC	Lamto	159.75	168	ePKIKP	PKPab	03 49 22.0	+1.6
	comp=Z,75nm,0.8s						
KIC	Kosan Boka	159.94	168	ePKIKP	PKPdf	03 48 38.4	-0.4
	comp=Z,399nm,1.5s						
KIC	Kosan Boka	159.94	168	ePKIKP	PKPab	03 49 22.5	+1.3
	comp=Z,119nm,1.1s						
AQU	L'Aquila	160.11	328	eP	PKPdf	03 48 37.2	-1.0
TIC	Toumodi	160.16	167	ePKIKP	PKPdf	03 48 38.7	-0.4
	comp=Z,655nm,1.6s						
TIC	Toumodi	160.16	167	ePKIKP	PKPab	03 49 22.5	+0.3
	comp=Z,12nm,0.6s						
DBIC	Dimbokro	160.22	168	PKP	PKPdf	03 48 38.9	-0.2
	comp=Z,73nm,1.2s,baz=144,slow=2.4,SNR=28						
DBIC				PKPab	PKPab	03 49 22.9	+0.5
	comp=Z,24nm,0.8s,baz=161,slow=4.3,SNR=11						
DBIC				pPKPab	pPKPab	03 51 16.6	+3.5
	comp=Z,26nm,1.0s,baz=179,slow=4.9,SNR=3.8						
TIP	Timpagrande	160.41	316	⇓P	PKPdf	03 48 33.9	-4.8
VAE	Valguarnera	162.91	315	PKP	PKPdf	03 48 42.0	+0.7
	comp=Z,9.9nm,0.9s,baz=203,slow=16,SNR=1.8						
PGAV	Gavieira, Arco	163.06	20	ePKPdf	PKPdf	03 48 43.8	+2.5
PGAV	Gavieira, Arco	163.06	20	ePKPab	PKPab	03 49 35.3	+0.9
PBRG	Braganca	163.63	16	ePKPdf	PKPdf	03 48 43.0	+1.2
PBRG	Braganca	163.63	16	ePKPab	PKPab	03 49 38.1	+1.2
PBRG	Braganca	163.63	16	eSS	SS	04 13 13.9	+5.0
PVRL	Vila Real	163.86	19	ePKPdf	PKPdf	03 48 43.4	+1.4
PVRL	Vila Real	163.86	19	ePKPab	PKPab	03 49 39.2	+1.3
MVO	Moncorvo	164.16	18	ePKPdf	PKPdf	03 48 43.6	+1.3
MVO	Moncorvo	164.16	18	ePKPab	PKPab	03 49 40.0	+0.8
MVO	Moncorvo	164.16	18	eSS	SS	04 13 17.3	+3.0
PMOZ	Porto Moniz, M	164.22	61	ePKPdf	PKPdf	03 48 44.5	+1.9
PMOZ	Porto Moniz, M	164.22	61	ePKPab	PKPab	03 49 41.2	+1.2
PMOZ	Porto Moniz, M	164.22	61	ePP	PP	03 53 29.7	+2.1
PVIS	Viseu	164.32	20	ePKPdf	PKPdf	03 48 43.3	+0.9
PVIS	Viseu	164.32	20	ePKPab	PKPab	03 49 40.6	+0.7
PVIS	Viseu	164.32	20	ePP	PP	03 53 26.8	+0.1
PMAR	Madeira	164.48	61	ePKPab	PKPab	03 49 41.8	+0.6
PMAR	Madeira	164.48	61	ePP	PP	03 53 31.6	+2.5
FUL	Funchal	164.52	62	ePKPdf	PKPdf	03 48 42.3	-0.4
FUL	Funchal	164.52	62	ePKPab	PKPab	03 49 42.1	+0.9
FUL	Funchal	164.52	62	ePP	PP	03 53 30.7	+1.7
COI	Coimbra	164.60	23	ePKPab	PKPab	03 49 41.5	+0.4
COI	Coimbra	164.60	23	eSS	SS	04 13 23.1	+4.2
PCAS	Casmilo, Conde	164.71	23	ePKPdf	PKPdf	03 48 44.8	+2.1
PCAS	Casmilo, Conde	164.71	23	ePKPab	PKPab	03 49 42.6	+1.0
PCAS	Casmilo, Conde	164.71	23	ePP	PP	03 53 32.5	+3.7
PCAS	Casmilo, Conde	164.71	23	eSS	SS	04 13 25.6	+5.5
MTE	Manteigas	164.71	20	ePKPdf	PKPdf	03 48 44.1	+1.3
MTE	Manteigas	164.71	20	ePKPab	PKPab	03 49 42.7	+1.0
MTE	Manteigas	164.71	20	ePP	PP	03 53 28.8	0.0
MTE	Manteigas	164.71	20	eSS	SS	04 13 23.7	+3.6
PMPST	Porto Santo, M	164.80	59	ePKPdf	PKPdf	03 48 44.4	+1.4
PMPST	Porto Santo, M	164.80	59	ePP	PP	03 53 31.6	+1.2
PMPS	Porto Santo	164.81	59	ePKPdf	PKPdf	03 48 44.8	+1.8
PMPS	Porto Santo	164.81	59	ePKPab	PKPab	03 49 43.1	+0.7
PSBE	So Bento	165.08	25	ePKPdf	PKPdf	03 48 44.2	+1.1
PSBE	So Bento	165.08	25	ePKPab	PKPab	03 49 44.4	+1.1
PSBE	So Bento	165.08	25	ePP	PP	03 53 31.1	+0.4
PSBE	So Bento	165.08	25	eSS	SS	04 13 28.4	+4.5
PTOM	Tomar	165.13	24	ePKPdf	PKPdf	03 48 44.4	+1.3
PTOM	Tomar	165.13	24	ePKPab	PKPab	03 49 44.2	+0.7
PCBR	Castelo Branco	165.25	21	ePKPdf	PKPdf	03 48 44.6	+1.5
PCBR	Castelo Branco	165.25	21	ePKPab	PKPab	03 49 44.6	+0.6
PCBR	Castelo Branco	165.25	21	ePP	PP	03 53 31.2	-0.2
PMAFR	Mafra	165.36	27	ePKPdf	PKPdf	03 48 44.8	+1.5
PMAFR	Mafra	165.36	27	ePKPab	PKPab	03 49 45.3	+0.7
PMAFR	Mafra	165.36	27	ePP	PP	03 53 32.5	+0.3
PMAFR	Mafra	165.36	27	eSS	SS	04 13 29.8	+3.0
LIS	Lisbon	165.62	27	ePKPdf	PKPdf	03 48 43.5	+0.1
LIS				ePP	PP	03 53 34.3	+0.8
LIS	Lisbon	165.62	27	ePKPdf	PKPdf	03 48 45.6	+2.1
LIS	Lisbon	165.62	27	ePKPab	PKPab	03 49 47.0	+1.3
PMRV	Marv??o	165.65	21	ePKPdf	PKPdf	03 48 45.0	+1.5
PMRV	Marv??o	165.65	21	ePKPab	PKPab	03 49 46.1	+0.3
PMRV	Marv??o	165.65	21	ePP	PP	03 53 34.0	+0.5
PMRV	Marv??o	165.65	21	eSS	SS	04 13 34.0	+4.6
PMTG	Montargil	165.68	24	ePKPdf	PKPdf	03 48 44.4	+0.9
PMTG	Montargil	165.68	24	ePKPab	PKPab	03 49 46.2	+0.3
PMTG	Montargil	165.68	24	ePP	PP	03 53 33.5	-0.2
PMTG	Montargil	165.68	24	eSS	SS	04 13 35.3	+5.5
UCM	Universidad Co	165.74	8	PKP1	PKPdf	03 48 47.9	+4.3
UCM	Universidad Co	165.74	8	PKP2	PKPab	03 49 50.2	+4.0
PESTR	Estremoz	166.09	23	P	PKPdf	03 48 44.8	+1.0
	SNR=12						
PAB	San Pablo	166.32	12	PKP2	PKPab	03 49 49.2	+0.4
PAB	San Pablo	166.32	12		PKPdf	03 48 42.9	-1.2
PAB					PKPab	03 49 48.4	-0.4
PNCL	Nicolau / Gran	166.39	27	ePKPdf	PKPdf	03 48 45.5	+1.4
PNCL	Nicolau / Gran	166.39	27	ePKPab	PKPab	03 49 50.2	+1.1
PNCL	Nicolau / Gran	166.39	27	ePP	PP	03 53 37.8	+0.4
PNCL	Nicolau / Gran	166.39	27	eSS	SS	04 13 38.7	+1.6
PBEJ	Beja	166.73	25	ePKPdf	PKPdf	03 48 45.8	+1.4
PBEJ	Beja	166.73	25	ePKPab	PKPab	03 49 51.5	+0.9
PBEJ	Beja	166.73	25	ePP	PP	03 53 39.9	+0.8
MESJ	Messejana	166.75	27	ePKPdf	PKPdf	03 48 44.5	+0.1
MESJ				ePP	PP	03 53 40.0	+0.8
MESJ				eSS	SS	04 13 42.4	+1.8
MESJ	Messejana	166.75	27	ePKPdf	PKPdf	03 48 46.2	+1.8
MESJ	Messejana	166.75	27	ePKPab	PKPab	03 49 51.6	+0.9
MESJ	Messejana	166.75	27	ePP	PP	03 53 39.7	+0.5
PTEO	Sao Teotonio	166.79	29	ePKPdf	PKPdf	03 48 46.2	+1.8
PTEO	Sao Teotonio	166.79	29	ePKPab	PKPab	03 49 51.7	+0.8
PTEO	Sao Teotonio	166.79	29	ePP	PP	03 53 40.7	+1.2
TOA0	Torodi Ar. Sit	166.85	190	P	PKPdf	03 48 45.4	+0.3
	SNR=32						
TOA0	Torodi Ar. Sit	166.85	190		PKPdf	03 48 44.2	-0.9
TORD	Torodi Ar. Bea	166.85	190	PKP	PKPdf	03 48 44.5	-0.6
	comp=Z,93nm,1.3s,baz=313,slow=0.1,SNR=82						
TORD				PKPab	PKPab	03 49 52.1	+0.6
	comp=Z,23nm,0.8s,baz=175,slow=3.6,SNR=18						
TORD				pPKPab	pPKPab	03 51 44.0	+2.1
	comp=Z,21nm,0.9s,baz=163,slow=4.3,SNR=3.3						
TORD				PKP2ab		04 00 13.5	
	comp=Z,18nm,1.3s,baz=353,slow=4.4,SNR=4.9						
TORD	Torodi Ar. Bea	166.85	190		PKPdf	03 48 44.1	-1.0
TORD					PKPab	03 49 51.2	-0.3
PCVE	Castro Verde	167.00	27	ePKPdf	PKPdf	03 48 45.9	+1.3
PCVE	Castro Verde	167.00	27	ePKPab	PKPab	03 49 52.5	+0.7
PCVE	Castro Verde	167.00	27	ePP	PP	03 53 40.8	+0.3
PCVE	Castro Verde	167.00	27	eSS	SS	04 13 47.6	+4.4
MORF	Marmelete	167.02	29	ePKPdf	PKPdf	03 48 44.7	0.0
MORF				ePP	PP	03 53 41.4	+0.6
MORF				eSS	SS	04 13 45.3	+1.6
MORF	Marmelete	167.02	29	ePKPdf	PKPdf	03 48 46.5	+1.8
MORF	Marmelete	167.02	29	ePKPab	PKPab	03 49 52.8	+0.8
PFVI	Vila Bisbo	167.09	30	P	PKPdf	03 48 47.4	+2.8
	SNR=5.9						
PFVI	Vila Bisbo	167.09	30	ePKPdf	PKPdf	03 48 46.6	+1.9
PFVI	Vila Bisbo	167.09	30	ePKPab	PKPab	03 49 53.3	+1.1
PFVI	Vila Bisbo	167.09	30	ePP	PP	03 53 41.8	+0.7
PFVI	Vila Bisbo	167.09	30	eSS	SS	04 13 49.1	+4.9
KEST	Kesra	167.13	320	PKP	PKPdf	03 48 44.9	0.0
	comp=Z,27nm,1.2s,baz=139,slow=1.8,SNR=7.0						
KEST				PKPab	PKPab	03 49 53.0	+0.3
	comp=Z,64nm,1.1s,baz=311,slow=1.6,SNR=14						
PVAQ	Vaqueiros	167.33	26	P	PKPdf	03 48 47.4	+2.6
	SNR=7.2						
PVAQ	Vaqueiros	167.33	26	ePKPdf	PKPdf	03 48 46.5	+1.7
PVAQ	Vaqueiros	167.33	26	ePKPab	PKPab	03 49 54.5	+1.2
PVAQ	Vaqueiros	167.33	26	ePP	PP	03 53 42.6	+0.4
PVAQ	Vaqueiros	167.33	26	eSS	SS	04 13 48.4	+2.0
PBDV	Barranco-do-Ve	167.38	27	ePKPdf	PKPdf	03 48 46.5	+1.6
PBDV	Barranco-do-Ve	167.38	27	ePKPab	PKPab	03 49 54.9	+1.4
PBDV	Barranco-do-Ve	167.38	27	ePP	PP	03 53 43.1	+0.6
PBDV	Barranco-do-Ve	167.38	27	eSS	SS	04 13 48.4	+1.4
CMAH	Djebel Manchou	167.46	328	P	PKPab	03 49 45.2	-8.8
CMAH	Djebel Manchou	167.46	328	P	PKPab	03 49 45.2	-8.8
CAEH	'Ain El Ouahch	167.60	330	P	PKPab	03 49 46.8	-7.7
CAEH	'Ain El Ouahch	167.60	330	P	PKPab	03 49 46.8	-7.7
HORN	Hornachuelos	167.74	17	P	PKPdf	03 48 46.2	+1.0
	SNR=9.5						
CKFL	Kef-Lekhel	167.97	330	P	PKPab	03 49 47.8	-8.5
CKFL	Kef-Lekhel	167.97	330	P	PKPab	03 49 47.8	-8.5
SESP	Santiago Espad	167.98	7	P	PKPdf	03 48 47.5	+2.0
	SNR=5.7						
CASM	Ain Smara	168.19	330	P	PKPab	03 49 46.6	-11
CASM	Ain Smara	168.19	330	P	PKPab	03 49 46.6	-11
DFRA	Djebel Bou Aff	168.21	333	P	PKPab	03 49 47.0	-10
DFRA	Djebel Bou Aff	168.21	333	P	PKPab	03 49 47.0	-10
LIJA	Lijar	168.58	19	PKP1	PKPdf	03 48 46.0	+0.2
LIJA	Lijar	168.58	19	PKP2	PKPab	03 50 00.8	+1.8
CART	Cartagena	168.61	1	PKP1	PKPdf	03 48 47.0	+1.3
CART	Cartagena	168.61	1	PKP2	PKPab	03 50 04.0	+5.2
SET	Setif	168.70	334	P	PKPab	03 49 47.0	-13
SET	Setif	168.70	334	P	PKPab	03 49 47.0	-13
CKHR	Kef el Ahmar	168.82	333	P	PKPab	03 49 48.2	-12
CKHR	Kef el Ahmar	168.82	333	P	PKPab	03 49 48.2	-12
EMAL	Malaga-Limoner	168.98	16	PKP1	PKPdf	03 48 45.6	-0.4
EMAL	Malaga-Limoner	168.98	16	PKP2	PKPab	03 50 03.7	+3.2
CEU	Ceuta	169.52	21	PKP1	PKPdf	03 48 48.1	+1.9
CEU	Ceuta	169.52	21	PKP2	PKPab	03 50 06.6	+3.7
RSA	Sarsar	170.27	26	P	PKPdf	03 48 50.0	+3.2
	SNR=24						
PVLZ	Peæn de	170.51	18	PKP1	PKPdf	03 48 47.0	+0.1
PVLZ	Peæn de	170.51	18	PKP2	PKPab	03 50 08.4	+1.1
AVE	Averroes	170.83	38	PKP1	PKPdf	03 48 48.9	+1.7
AVE	Averroes	170.83	38	PKP2	PKPab	03 50 10.2	+1.2
IFR	Ifrane	171.74	26	PKP1	PKPdf	03 48 50.8	+3.0
IFR	Ifrane	171.74	26	PKP2	PKPab	03 50 13.9	+0.7
OUK	Oukaimeden	171.98	50	P	PKPdf	03 48 52.0	+3.8
	SNR=7.0						
CZD	Col de Zad	172.20	28	P	PKPdf	03 48 51.0	+2.8
	SNR=13						
MDT	Midelt	172.57	26	PP	PP	03 54 04.1	-4.1
	comp=Z,10nm,1.1s,baz=31,slow=6.4,SNR=4.5						
MDT	Midelt	172.57	26	P	PKPdf	03 48 50.5	+2.4
	SNR=5.7						
OUZM	OUZ	172.90	47	P	PKPdf	03 48 52.0	+3.7
	SNR=5.0						
TDRA	Tendrara	173.06	9	P	PKPdf	03 48 51.1	+2.7
	SNR=7.3						
GOLM	Goulmima	173.36	33	P	PKPdf	03 48 52.0	+3.5
	SNR=6.0						
TAM	Tamanrasset	173.38	241	PKIKP	PKPdf	03 48 49.8	+1.0
TAM	Tamanrasset	173.38	241		PKPdf	03 48 47.9	-0.8
TAM					PKPab	03 50 19.7	-1.1
TZRR	Tazzarine	173.74	42	P	PKPdf	03 48 52.0	+3.4
	SNR=5.9						
ARF	Arif	173.93	29	P	PKPdf	03 48 52.0	+3.3
	SNR=7.8						
ZGR	Zagora	174.16	46	P	PKPdf	03 48 52.1	+3.3
	SNR=11						

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*IDC **26** 03:36:19.6±7.5, 24°.54S×179°.25E, $h424^{km}$±95^{km}, mb3.9/3, mb1 4.0/3, mb1mx3.4/44, mbtmp4.7/3, Error ellipse: s-maj=167.6km s-min=27.1km az=180.0*

ISC 26 03:36:20.3±1.1**, 24°.7S**±0°.2×**179°.4E**±0°.2**, $h450^{km}$, n9, $\sigma 1^{s}42$/**9**, mb4.3/**3**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.12	153	P	P	03 37 45.9	+0.2
	336nm,0.3s,baz=94,slow=11,SNR=11						
CTA	Charters Tower	30.97	272	P	P	03 42 00.7	+1.4
	20nm,1.1s,baz=159,slow=8.6,SNR=0.8						
ASAR	Alice Springs	41.39	262	P	P	03 43 24.7	-1.4
	4.0nm,0.6s,baz=96,slow=9.3,SNR=0.7						
WRA	Warramunga Arr	41.84	267	P	P	03 43 29.1	-0.6
	12nm,0.9s,baz=98,slow=7.4,SNR=1.2						
ARCES	ARCESS Array B	132.56	348	PKP	PKiKP	03 54 44.2	+0.9
	4.9nm,0.9s,baz=92,slow=4.5,SNR=1.8						
NB2	NORSAR Subarra	142.78	351	PKP	PKPdf	03 55 01.5	+0.5
	comp=Z,1.9nm,0.6s,baz=23,slow=4.0						
NOA	NORSAR Array B	142.78	351	PKP	PKPdf	03 55 01.6	+0.5
	comp=Z,1.7nm,0.8s,baz=21,slow=2.7,SNR=3.9						
HFS	Hagfors	143.22	348	PKP	PKiKP	03 55 02.7	-2.5
	comp=Z,2.3nm,0.4s,baz=62,slow=2.2,SNR=15						
EKA	Eskdalemuir Ar	149.34	3	PKPbc	PKiKP	03 55 18.5	+0.5
	comp=Z,0.9nm,0.5s,baz=328,slow=2.2,SNR=5.0						

IDC 26 03:45:54.8±4.1**, 24°.62S**×**175°.61W, $h0^{km}$, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.8**/41**, mbtmp3.9**/4**, Error ellipse: s-maj=235.1km s-min=32.3km az=158.0, South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	35.48	270	P	P	03 52 54.9	+1.6

	2.9nm,0.8s,baz=98,slow=7.1,SNR=1.6						
ASAR	Alice Springs	45.87	260	P	P	03 54 17.4	-1.7
	0.3nm,0.4s,baz=104,slow=7.1,SNR=5.0						
WRA	Warramunga Arr	46.35	265	P	P	03 54 23.0	0.0
	0.4nm,0.3s,baz=103,slow=7.6,SNR=9.3						
NVAR	Mina Array Bea	82.55	42	P	P	03 58 20.0	+0.1
	1.1nm,0.7s,baz=237,slow=4.1,SNR=5.0						

MAN 26 03:46:12.3, 7°.38N×124°.94E, h8^{km}, mb4.9, ML3.8, MS3.8, 5C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	0.40	158	⇑*e*P	Pg	03 46 20.3	+0.1
KCP				*i* S	Sb	03 46 28.4	+0.3
BUKP	Musuan	0.51	14	*e*P	Pb	03 46 23.2	-0.2
BUKP				*e*S	Sb	03 46 32.6	+1.5
DMPH	Davao City--Mi	0.64	118	⇓*e*P	Pb	03 46 26.3	+0.6
DMPH				*e*S	Sb	03 46 35.1	+0.3
CTBH	Cotabato--PC H	0.71	257	⇓*i*P	Pg	03 46 26.0	+0.1
SKMP	Bagumbayan, Su	0.94	205	*e*P	Pg	03 46 27.6	-2.9
CGP	Cagayan de Oro	1.09	347	⇑*e*P	Pb	03 46 33.4	0.0
CGP				*i* S	Sn	03 46 48.8	-0.4
GSPH	General Santos	1.29	180	⇑*i*P	Pg	03 46 44.6	+7.6
DDMP	Don Marcelino,	1.48	149	*e*P	Pn	03 46 38.3	-1.0
DDMP				*e*S	Sg	03 47 00.9	+0.9
PAGZ	Pagadian	1.61	287	*e*P	Pn	03 46 39.8	-1.3
PAGZ				*e*S	Sb	03 47 02.9	+0.1
DCPH	Dipolog City	1.97	307	⇑*e*P	Pg	03 46 52.9	+2.8
TBP	Tagbilaran	2.53	335	*e*P	Pg	03 47 26.0	+25
RCP	Roxas	4.68	333	⇑*e*P	Pg	03 47 48.6	+6.6
BATP	Bataraza	7.21	282	*e*P	Pb	03 48 19.8	+2.0

IDC 26 03:49:31.1±4.0, 27°.93S×170°.56W, h0^{km}, mb4.3/4, mb1 4.6/4, mb1mx4.0/41, mbtmp4.3/4, Error ellipse: s-maj=312.2km s-min=30.8km az=164.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	40.05	272	P	P	03 57 10.0	+1.7
	6.4nm,0.5s,baz=91,slow=6.7,SNR=3.5						
ASAR	Alice Springs	49.83	262	P	P	03 58 25.8	-0.4
	2.2nm,0.9s,baz=100,slow=8.6,SNR=4.1						
WRA	Warramunga Arr	50.64	266	P	P	03 58 30.6	-1.7
	2.1nm,1.0s,baz=106,slow=8.1,SNR=1.4						
TXAR	Lajitas Array	85.63	54	P	P	04 02 11.9	0.0
	3.3nm,0.8s,baz=212,slow=6.4,SNR=12						

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*NEIC **26** 03:49:54.6±1.4, 26°.17S±0°.09×179°.4E±0°.1, h501^{km}±4^{km}, mb4.7/58, Error ellipse: s-maj=16.9km s-min=12.6km az=85.0*

*IDC **26** 03:49:57.0±0.9, 26°.15S×179°.35E, h515^{km}±9^{km}, mb3.9/15, mb1 4.1/17, mb1mx3.9/35, mbtmp4.8/17, Error ellipse: s-maj=12.9km s-min=9.4km az=4.0*

ISC 26 03:49:55.3±0.3, 26°.17S±0°.05×179°.42E±0°.07, h503^{km}, n211, σ1^{s}.54/229, mb4.6/39, 30C-5D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	3.87	143	P	P	03 51 17.0	+4.2
RAO	Raoul Island	3.88	143	P	P	03 51 17.1	+4.2
	1µm,0.3s,baz=89,slow=8.5,SNR=58						
RAO				S	S	03 52 20.5	+4.3
	baz=103,slow=23,SNR=0.8						
RAO	Raoul Island	3.88	143	P	P	03 51 14.3	+1.4
RAO					S	03 52 15.3	-0.9
GLKZ	Green Lake	3.88	143	P	P	03 51 14.0	+1.1
MSVF	Nonsavu	8.49	351	P	P	03 51 56.0	-1.1
MSVF				S	S	03 53 35.2	-1.7
HAZ	Te Kaha	11.64	186	P	P	03 52 29.9	0.0
HAZ				S	S	03 54 30.0	-7.2
WMGZ	Waiomatatini S	11.65	184	P	P	03 52 30.9	+1.0
WMGZ				S	S	03 54 30.2	-7.2
PKGZ	Pakihiroa	11.74	185	P	P	03 52 30.9	-0.1
TGRZ	Tauranga	11.83	192	P	P	03 52 34.9	+2.9
WHRZ	Whale Island	11.84	189	P	P	03 52 35.7	+3.7
RUGZ	Raukumara Rang	11.86	187	P	P	03 52 32.7	+0.4
RUGZ				S	S	03 54 39.8	-1.8
OPRZ	Ohinepanea	11.89	191	P	P	03 52 34.8	+2.2
PUZ	Puketiti	11.91	184	P	P	03 52 33.9	+1.1
PUZ				S	S	03 54 33.2	-9.4
KMRZ	Kaimai	12.01	193	P	P	03 52 37.3	+3.5
TWGZ	Tauwhareparae	12.04	185	P	P	03 52 34.4	+0.2
TWGZ				S	S	03 54 41.9	-3.1
EDRZ	Edgecumbe	12.12	190	P	P	03 52 36.7	+1.6
KARZ	Kaharoa	12.12	192	P	P	03 52 38.2	+3.2
OMRZ	Omania	12.18	191	P	P	03 52 38.3	+2.6
URZ	Urewera	12.21	189	P	P	03 52 34.6	-1.4
	23nm,0.3s,baz=19,slow=2.7,SNR=72						
URZ				S	S	03 54 44.0	-4.3
	3.5nm,0.3s,baz=214,slow=21,SNR=1.8						
URZ	Urewera	12.21	189	P	P	03 52 34.0	-2.0
URZ					S	03 54 46.5	-1.9
URZ	Urewera	12.21	189	P	P	03 52 35.0	-1.0
MWZ	Matawai	12.24	187	P	P	03 52 35.0	-1.2
TARZ	Mount Tarawera	12.28	191	P	P	03 52 40.3	+3.5
TKGZ	Te Karaka	12.31	186	P	P	03 52 40.4	+3.4
HLRZ	Highlands Stat	12.32	191	P	P	03 52 40.2	+3.0
RAGZ	Rawiri	12.41	187	P	P	03 52 37.3	-0.8
MUGZ	Murupara	12.48	190	P	P	03 52 38.9	+0.1
DZM	Mont Dzumac	12.53	286	P	P	03 52 41.3	+1.7
	7.5nm,0.3s,baz=129,slow=20,SNR=55						
DZM	Mont Dzumac	12.53	286	P	P	03 52 39.3	-0.4
TLZ	Tolley Road	12.56	194	P	P	03 52 42.6	+2.9
RIGZ	Rimuhau	12.58	186	P	P	03 52 40.1	+0.2
RTZ	Ruatahuna	12.58	189	P	P	03 52 38.4	-1.5
PRGZ	Paritu Road	12.79	185	P	P	03 52 43.6	+1.5
MTHZ	Maungataniwha	12.83	189	P	P	03 52 42.4	-0.2
RAHZ	Arahi	12.86	188	P	P	03 52 41.7	-1.2
WATZ	Wairara	12.88	193	P	P	03 52 45.0	+1.9
HIZ	Hauiti	12.90	196	P	P	03 52 43.5	+0.3
HIZ	Hauiti	12.90	196	P	P	03 52 46.5	+3.3
KNZ	Kokohu	12.90	186	P	P	03 52 44.3	+1.0
WHHZ	Waihua	13.00	188	P	P	03 52 45.2	+0.9
MHGZ	Mahia Peninsul	13.01	185	P	P	03 52 44.4	0.0
RATZ	Rangitukua	13.03	193	P	P	03 52 46.3	+1.6
NMHZ	Naumai	13.08	189	P	P	03 52 45.1	-0.1
BKZ	Black Stump Fm	13.19	190	P	P	03 52 43.9	-2.5
BKZ	Black Stump Fm	13.19	190	P	P	03 52 40.6	-5.8
BKZ				P	P	03 52 45.7	-0.7
KRVZ	Karewarewa	13.28	193	P	P	03 52 48.6	+1.3
TWVZ	Taurewa	13.29	194	P	P	03 52 49.0	+1.4
NGZ	Ngauruhoe	13.36	193	P	P	03 52 50.0	+1.7
MCHZ	McNeill Hill	13.44	189	P	P	03 52 48.0	-0.8
FWVZ	Far West T-bar	13.45	193	P	P	03 52 50.4	+1.1
KWHZ	Kaweka Forest	13.46	190	P	P	03 52 48.5	-0.7
VRZ	Vera Road	13.50	196	P	P	03 52 52.5	+3.0
MOVZ	Moawhango	13.56	192	P	P	03 52 49.5	-0.7
BHHZ	Black Hill Sta	13.58	191	P	P	03 52 48.4	-2.0
KRHZ	Kereru	13.68	190	P	P	03 52 50.1	-1.4
KAHZ	Kahuranaki	13.76	188	P	P	03 52 53.1	+0.8
KHEZ	Kahui Hut	13.85	198	P	P	03 52 57.8	+4.5
PNHZ	Pukenui	13.97	190	P	P	03 52 52.9	-1.6
PXZ	Pawanui	13.99	188	P	P	03 52 53.2	-1.5
TSZ	Takapari Road	14.15	191	P	P	03 52 55.6	-0.8
DVHZ	Dannevirke	14.35	190	P	P	03 52 57.8	-0.8
SNZO	South Karori	15.60	193	P	P	03 53 09.6	-1.9
SNZO					S	03 55 51.8	-1.6
BHW	Baring Head	15.66	193	P	P	03 53 10.6	-1.6
QRZ	Quartz Range	15.70	200	P	P	03 53 12.6	0.0
QRZ				S	S	03 55 56.8	+1.5
NNZ	Nelson	15.82	197	P	P	03 53 12.9	-0.9
NNZ					S	03 55 55.4	-2.2
TUWZ	Tuamarina	15.88	195	P	P	03 53 13.2	-1.2
TUWZ					S	03 55 56.4	-2.3
CMWZ	Cape Campbell	16.12	194	P	P	03 53 16.1	-0.9
CMWZ					S	03 56 01.7	-1.4
BSWZ	Blackbirch Sta	16.17	195	P	P	03 53 16.8	-0.7
BSWZ					S	03 56 04.1	+0.1
THZ	Tophouse	16.46	197	P	P	03 53 19.9	-0.7
LTZ	Lake Taylor	17.58	198	IAmb	IAmb	03 53 34.5	
	comp=Z,26nm,0.7s						
RPZ	Rata Peaks	18.78	199	P	P	03 53 42.8	+0.3
	comp=Z,3.7nm,0.3s,baz=165,slow=1.4,SNR=15						
TARA	Tarawa	28.07	346	P	P	03 55 04.8	-1.0
CTA	Charters Tower	31.03	274	P	P	03 55 32.2	+0.6
	comp=Z,19nm,0.3s,baz=96,slow=11,SNR=51						
CTA				ScP	ScP	04 01 10.1	+2.9
	comp=Z,7.0nm,0.8s,baz=97,slow=22,SNR=4.3						
STKA	Stephens Creek	33.44	251	P	P	03 55 53.2	+1.2
	comp=Z,6.8nm,0.5s,baz=96,slow=10,SNR=19						
STKA				PcP	PcP	03 58 21.2	+2.4
	comp=Z,2.0nm,0.6s,baz=186,slow=0.7,SNR=3.7						
STKA	Stephens Creek	33.44	251	P	P	03 55 52.2	+0.2
STKA					PcP	03 58 18.8	-0.1
KRVT	Keravat (AS076	34.06	305	P	P	03 55 57.0	-0.3
	comp=Z,194nm,0.4s,baz=339,slow=0.3,SNR=5.3						
PMG	Port Moresby	34.80	293	P	P	03 56 03.5	-0.1
	comp=Z,17nm,0.8s,baz=85,slow=5.5,SNR=5.6						
BBOO	Buckleboo	38.11	250	P	P	03 56 30.6	-0.2
BBOO				IAmb	IAmb	03 56 31.7	
	comp=Z,18nm,0.6s						
AS31	Alice Springs	41.19	263	IAmb	IAmb	03 56 57.6	
	comp=Z,9.4nm,0.3s						
ASAR	Alice Springs	41.19	263	P	P	03 56 56.0	+0.2
	comp=Z,13nm,0.5s,baz=91,slow=7.3,SNR=183						
ASAR				ScP	ScP	04 01 46.3	+1.4
	comp=Z,0.8nm,0.7s,baz=115,slow=5.2,SNR=2.2						
ASAR				S	S	04 02 32.1	-0.7
	comp=Z,5.1nm,0.8s,baz=101,slow=16,SNR=24						
ASAR	Alice Springs	41.19	263	P	P	03 56 55.6	-0.2
ASAR					pP	03 58 24.8	-0.9
ASAR					ScP	04 01 45.1	+0.1
ASAR					S	04 02 32.7	-0.1
WR0	Warramunga Arr	41.59	269	IAmb	IAmb	03 57 00.4	
	comp=Z,9.9nm,0.7s						
WRA	Warramunga Arr	41.78	269	P	P	03 57 00.4	0.0
	comp=Z,12nm,0.3s,baz=99,slow=7.6,SNR=109						
WRA				ScP	ScP	04 01 49.4	+2.1
	comp=Z,0.9nm,0.5s,baz=99,slow=3.8,SNR=2.2						
WRA				S	S	04 02 38.5	-2.8
	comp=Z,2.8nm,0.9s,baz=107,slow=13,SNR=7.7						
WRA	Warramunga Arr	41.78	269	P	P	03 56 59.7	-0.8
WRA					ScP	04 01 45.6	-1.7
WB0	Warramunga Arr	41.78	269	IAmb	IAmb	03 57 01.1	
	comp=Z,19nm,0.6s						
FORT	Forrest	45.06	252	P	P	03 57 25.4	-0.5
KNRA	Kununurra	48.19	272	P	P	03 57 49.4	-0.4
KNRA				IAmb	IAmb	03 57 51.3	
	comp=Z,64nm,1.1s						
SIJI	Sorong	52.69	291	P	P	03 58 23.0	+0.2
	comp=Z,82nm,0.6s,baz=143,slow=4.4,SNR=13						
QSPA	South Pole Qui	63.93	180	P	P	03 59 38.4	+0.2
QSPA				IAmb	IAmb	03 59 41.0	
	comp=Z,17nm,0.9s						
MJAR	Matsushiro Arr	73.47	326	P	P	04 00 36.2	+0.1
	comp=Z,1.4nm,0.5s,baz=154,slow=6.0,SNR=5.6						
MAW	Mawson	75.45	201	P	P	04 00 47.5	+0.7
	comp=Z,7.1nm,0.5s,baz=131,slow=5.7,SNR=7.2						
MAW	Mawson	75.45	201	P	P	04 00 46.9	0.0
ASAJ	Asahikawa	77.65	334	P	P	04 01 00.4	+1.2
	comp=Z,4.0nm,0.5s,baz=243,slow=11,SNR=4.8						
KSRS	Korea Array	79.65	321	P	P	04 01 11.3	+1.3
	comp=Z,1.4nm,0.6s,baz=140,slow=5.8,SNR=8.0						
SYO	Syowa Base	80.69	194	⇑*e*P	P	04 01 14.0	-1.1
SYO	Syowa Base	80.69	194	⇓*e*PcP	PcP	04 01 19.0	-1.1
PETK	Petropavlovsk-	81.17	347	P	P	04 01 18.2	+0.6
	comp=Z,4.1nm,0.5s,baz=131,slow=7.4,SNR=12						
PETK	Petropavlovsk-	81.17	347	P	P	04 01 17.2	-0.4
USRK	Ussuriysk Ar.	82.38	328	P	P	04 01 25.4	+1.4
	comp=Z,2.7nm,0.5s,baz=136,slow=4.0,SNR=8.6						
USRK	Ussuriysk Ar.	82.38	328	P	P	04 01 23.9	-0.1
SNAA	Sanae	82.42	179	P	P	04 01 24.6	+0.6
SNAA	Sanae	82.42	179	P	P	04 01 24.6	+0.6
VNA3	Neumayer Olymp	82.65	177	P	P	04 01 25.8	+0.6
VNA2	Neumayer--Watz	83.06	178	P	P	04 01 28.3	+1.1
VNA1	Neumayer--Stat	83.30	177	P	P	04 01 29.8	+1.5
ISA	Isabella, Lake	84.97	46	IAmb	IAmb	04 01 39.9	
	comp=Z,18nm,0.8s						
ORV	Oroville	85.48	42	P	P	04 01 38.9	-0.6
GSC	Goldstone, Bar	85.84	47	P	P	04 01 40.4	-1.1
GSC				IAmb	IAmb	04 01 44.1	
	comp=Z,12nm,1.1s						
PNTR	Pine Nut	86.34	43	P	P	04 01 43.3	-0.7
PNTR				IAmb	IAmb	04 01 46.7	
	comp=Z,14nm,0.7s						
BEKR	Beckworth	86.36	42	P	P	04 01 43.8	-0.2
HSIG		86.43	55	IAmb	IAmb	04 01 47.1	
	comp=Z,15nm,0.9s						
214A	Organ Pipe Nat	86.68	52	IAmb	IAmb	04 01 48.3	
	comp=Z,8.1nm,0.7s						
NVAR	Mina Array Bea	86.74	44	P	P	04 01 45.2	-0.6
	comp=Z,4.4nm,0.7s,baz=142,slow=5.1,SNR=20						
NVAR	Mina Array Bea	86.74	44	P	P	04 01 44.7	-1.1
PLCA	Paso Flores	87.07	134	P	P	04 01 48.4	+1.0
	comp=Z,7.5nm,0.9s,baz=40,slow=5.3,SNR=10						
PLCA	Paso Flores	87.07	134	P	P	04 01 46.6	-0.7
PLCA				IAmb	IAmb	04 01 51.3	
	comp=Z,11nm,1.1s						
TPNV	Topopah Spring	87.17	46	IAmb	IAmb	04 01 50.3	
	comp=Z,8.3nm,0.7s						
Y14A	Wickenburg	87.64	50	IAmb	IAmb	04 01 52.7	
	comp=Z,9.0nm,1.1s						
MOD	Modoc Plateau	87.67	40	IAmb	IAmb	04 01 52.5	
	comp=Z,15nm,1.1s						
PINE	Pine Mountain	88.48	39	P	P	04 01 53.4	-0.5
319A	Douglas	88.90	54	IAmb	IAmb	04 01 59.6	
	comp=Z,19nm,0.9s						
WVOR	Wild Horse Val	88.97	41	IAmb	IAmb	04 01 59.1	
	comp=Z,15nm,1.1s						
X16A	Lo Mia Camp, P	88.98	51	IAmb	IAmb	04 01 59.5	
	comp=Z,7.6nm,0.8s						
HPIG		89.36	60	IAmb	IAmb	04 02 00.8	
	comp=Z,7.3nm,0.8s						
J08A	Circle Bar Ran	89.62	40	IAmb	IAmb	04 02 01.0	
	comp=Z,5.6nm,0.8s						
CMAR	Chiang Mai Arr	89.82	291	P	P	04 02 01.9	+1.6
	comp=Z,2.2nm,0.3s,baz=292,slow=4.3,SNR=6.3						
CMAR	Chiang Mai Arr	89.82	291	P	P	04 01 58.5	-1.9
X18A	Snowflake	90.08	51	IAmb	IAmb	04 02 04.3	
	comp=Z,8.4nm,0.9s						
GHO	Glory Hole Cre	91.27	14	P	P	04 02 06.2	+0.1
GHO				IAmb	IAmb	04 02 07.1	
	comp=Z,8.0nm,0.6s						
GHO					pP	04 03 56.4	-1.2
F10A	Beach Ranch, E	91.91	39	P	P	04 02 08.4	-1.1
F10A				IAmb	IAmb	04 02 11.7	
	comp=Z,7.6nm,0.8s						
ILAR	Eielson Array	94.35	14	P	P	04 02 19.4	-0.8
	comp=Z,0.6nm,0.6s,baz=221,slow=5.5,SNR=12						
ILAR	Eielson Array	94.35	14	P	P	04 02 19.6	-0.5
MKAR	Makanchi Array	113.28	312	PKiKP	PKiKP	04 07 34.9	-0.4
	comp=Z,0.5nm,0.6s,baz=224,slow=2.6,SNR=3.7						
KSH	Kashi	116.08	303	PKP	PKiKP	04 07 44.0	+2.9
KSH				PP	PP	04 09 03.8	+8.4
KSH				sPKP		04 10 24.0	
KSH				PKS	PKSdf	04 11 19.8	+1.9
KSH				SKKS		04 15 06.3	
KURBB	Kurchatov Arra	116.50	316	PKP	PKPdf	04 07 40.9	-0.5
	comp=Z,2.3nm,0.8s,baz=108,slow=1.8,SNR=12						
AAK	Ala-Archa	117.82	306	PKP	PKiKP	04 07 44.5	+0.1
	comp=Z,1.2nm,0.7s,baz=326,slow=23,SNR=2.2						
AAK				SKPbc	SKPbc	04 09 49.3	
	comp=Z,1.6nm,0.3s,baz=19,slow=3.7,SNR=5.2						
AAK	Ala-Archa	117.82	306		PKPdf	04 07 43.8	-0.6
BOSA	Boshof	120.14	206	PKP	PKiKP	04 07 50.1	+0.6
	comp=Z,2.0nm,0.6s,baz=110,slow=4.6,SNR=5.3						
BOSA	Boshof	120.14	206		PKPdf	04 07 47.8	-1.6
KK31	Karatay Array	120.79	306		PKPdf	04 07 49.0	-0.9
KKAR	Karatay Array	120.79	306		PKPdf	04 07 48.6	-1.3
KKAR	Karatay Array	120.79	306		PKPdf	04 07 49.1	-0.8
FRB	Frobisher Bay	122.87	29	PKP	PKPdf	04 07 52.6	-0.6
	comp=Z,4.2nm,0.7s,baz=307,slow=2.9,SNR=20						
LBTB	Lobatse	123.18	209	PKP	PKiKP	04 07 55.5	0.0
	comp=Z,1.7nm,0.5s,baz=151,slow=2.1,SNR=6.0						
SCHQ	Schefferville	124.55	40	PKP	PKPdf	04 07 55.8	-0.9
	comp=Z,2.5nm,0.6s,baz=262,slow=1.6,SNR=8.6						
SCHQ	Schefferville	124.55	40	PKPdf	PKPdf	04 07 56.2	-0.5
MATP	Matopo	125.76	214	PKhKP	PKPpre	04 07 57.5	
	comp=Z,2.8nm,0.6s,baz=204,slow=4.5,SNR=7.5						
GEYT	Alibeck	129.62	299	PKP	PKiKP	04 08 08.2	+0.4
	comp=Z,2.0nm,0.7s,baz=267,slow=5.5,SNR=3.9						
GEYT				SKPbc	SKPbc	04 10 44.0	+2.1
	comp=Z,5.5nm,0.8s,baz=90,slow=0.4,SNR=9.8						
GEYT	Alibeck	129.62	299		PKPdf	04 08 07.0	0.0
ARCES	ARCESS Array B	133.98	348	PKhKP	PKPpre	04 08 06.2	
	comp=Z,2.0nm,0.7s,baz=76,slow=1.5,SNR=7.5						
ARCES				PKP	PKPdf	04 08 14.4	+0.2
	comp=Z,2.5nm,0.5s,baz=82,slow=3.0,SNR=16						
FINES	FINESS Array B	140.40	340	PKhKP	PKPpre	04 08 18.9	
	comp=Z,1.3nm,0.3s,baz=40,slow=4.8,SNR=14						
FINES				PKP	sPdif	04 08 27.1	+0.1
	comp=Z,1.8nm,0.4s,baz=46,slow=2.7,SNR=11						
FINES				SKPbc	SKPbc	04 11 15.8	+1.0
	comp=Z,5.5nm,1.0s,baz=168,slow=9.8,SNR=4.4						
NB2	NORSAR Subarra	144.22	350	PKP	PKPbc	04 08 32.1	-0.5
	comp=Z,5.7nm,0.5s,baz=16,slow=3.0						
NOA	NORSAR Array B	144.22	350	PKP	PKPbc	04 08 31.8	-0.8
	comp=Z,13nm,0.8s,baz=20,slow=2.5,SNR=59						
AKASG	Malin Array Be	146.55	325	PKP	PKPdf	04 08 37.2	0.0
	comp=Z,6.1nm,0.3s,baz=45,slow=3.8,SNR=14						
AKASG				PKPbc	PKPbc	04 08 39.3	-0.4
	comp=Z,6.1nm,0.3s,baz=46,slow=4.0,SNR=36						
ASF	Jabal al Asfar	146.85	289	PKPbc	PKPbc	04 08 41.6	+0.4
	comp=Z,6.3nm,0.8s,baz=34,slow=2.0,SNR=9.0						
BZK	Bozkurt	147.56	308	⇑P	PKiKP	04 08 43.9	-0.4
MMAI	Mount Meron Ar	148.08	291	PKPbc	PKiKP	04 08 45.8	+0.1
	comp=Z,8.4nm,0.4s,baz=80,slow=6.9,SNR=31						
BRTR	Keskin Array B	148.46	304	PKPbc	PKPbc	04 08 45.5	+0.2
	comp=Z,4.0nm,0.5s,baz=119,slow=0.9,SNR=30						
BRTR	Keskin Array B	148.46	304		PKPbc	04 08 44.5	-0.7
EIL	Elat	148.48	285	PKPbc	PKiKP	04 08 46.2	-0.3
	comp=Z,6.3nm,0.7s,baz=233,slow=2.7,SNR=6.9						
SORM	Soroca	148.48	322	⇑P	PKPbc	04 08 45.1	+0.3
ANTO	Ankara	149.05	305	⇑P	PKiKP	04 08 47.5	0.0
ANTO	Ankara	149.05	305		PKPbc	04 08 45.6	-0.9
BR231	Keskin MP Arra	149.07	305		PKPbc	04 08 46.0	-0.7
CSS	Mathiatis	149.62	295		PKPbc	04 08 47.6	-0.5
TLCR		149.75	316	⇑P	PKiKP	04 08 48.6	0.0
JURR	Jurilovca	149.91	316	⇑P	PKiKP	04 08 49.1	+0.1
LEF	Lefka	149.96	295	⇓P	PKiKP	04 08 49.6	+0.1
MDUB	Mudurnu	150.04	306		PKiKP	04 08 49.4	-0.2
GHRR		150.15	319	⇑P	PKiKP	04 08 50.3	+0.8
TOPG	Topolog	150.16	316	⇑P	PKiKP	04 08 49.6	+0.1
CFR	Carcaliu	150.17	317	⇑P	PKiKP	04 08 49.6	+0.1
TIRR	Tirgusor	150.34	315	⇑P	PKiKP	04 08 50.0	+0.1
BIZ	Bicaz	150.42	321	⇑P	PKiKP	04 08 50.5	+0.5
MFTR	Murfatlar	150.47	315	⇑P	PKiKP	04 08 50.1	-0.1
BUR08	Bucovina Ar. S	150.49	323		PKPbc	04 08 49.7	-0.1
BURAR	Bucovina Array	150.50	323	⇑P	PKiKP	04 08 51.4	+1.1
BURAR	Bucovina Array	150.50	323		PKPbc	04 08 49.4	-0.4
HARR	Harsova	150.53	316	⇑P	PKPbc	04 08 49.8	0.0
VRI	Vrincioaia	150.66	319	⇑P	PKiKP	04 08 50.4	-0.2
PLOR	Plostina	150.71	319	⇓P	PKiKP	04 08 50.6	-0.1
EKA	Eskdalemuir Ar	150.80	3	PKP	PKPdf	04 08 43.5	-0.4
	comp=Z,1.1nm,0.9s,baz=300,slow=1.8,SNR=3.5						
EKA				PKPbc	PKPbc	04 08 49.8	-0.3
	comp=Z,4.2nm,0.5s,baz=336,slow=2.5,SNR=51						
BISRR	Bisoca	150.84	319	⇓P	PKPbc	04 08 50.5	-0.1
ICOR	Ion Corvin	150.89	315	⇑P	PKiKP	04 08 51.9	+0.8
OZUR		151.08	320	⇑P	PKiKP	04 08 51.6	+0.1
MLR	Muntele Rosu	151.32	319	PKPbc	PKPbc	04 08 51.8	0.0
	comp=Z,2.1nm,0.3s,baz=320,slow=8.7,SNR=16						
MLR	Muntele Rosu	151.32	319	⇑P	PKiKP	04 08 52.5	+0.4
DOPR	Dopca	151.38	320	⇑P	PKiKP	04 08 52.7	+0.6
VOIR		151.88	320	⇑P	PKiKP	04 08 53.6	+0.4
HUMR	Humele	152.42	318	⇓P	PKiKP	04 08 54.3	+0.1
UPC	Upice	152.56	337	⇑*e*PKP	PKiKP	04 08 55.1	+0.8
DPC	Dobruska-Polom	152.57	336	⇑*e*PKP	PKiKP	04 08 55.0	+0.6
KRLC	Kraliky	152.63	335	⇑*e*PKP	PKiKP	04 08 55.1	+0.6
KRLC				*e*PKPAB	PKPab	04 09 08.0	+0.5
ELND	Elena	152.69	314	⇑P	PKiKP	04 08 55.4	+0.5
CLL	Collm	152.84	341	⇑*i*PKPbc	PKiKP	04 08 56.2	+1.4
	comp=Z,10.0nm,0.8s						
CLL				*i* PKPab	PKPab	04 09 09.5	+1.3
	comp=Z,6.0nm,0.6s						
BRG	Berggiesshubel	152.94	340	*i* PKP	PKiKP	04 08 55.5	+0.4
	comp=Z,7.1nm,0.6s						
VYHS	Vyhne	153.03	331	*e*PKP	PKiKP	04 08 56.0	+0.6
GZR	Gura Zlata	153.19	322	⇑P	PKiKP	04 08 56.1	+0.2
BZS	Buzias	153.69	323	⇑P	PKiKP	04 08 57.2	+0.4
HERR	Herculane	153.71	321	⇑P	PKiKP	04 08 57.1	+0.2
MDVR	Moldovita	154.16	322	⇑P	PKiKP	04 08 58.2	+0.4
KHC	Kasperske Hory	154.56	338	⇑*e*PKP	PKPbc	04 08 59.0	+0.4
KHC				*e*x	x	04 09 07.9	
KHC				*e*PKPAB	PKPab	04 09 16.6	+0.8
GERES	GERESS Array B	154.77	338	PKP	PKPdf	04 08 49.5	-0.5
	comp=Z,0.2nm,0.6s,baz=285,slow=35,SNR=2.0						
GERES				PKPbc	PKiKP	04 08 58.3	-0.7
	comp=Z,0.7nm,0.6s,baz=35,slow=4.9,SNR=5.4						
GERES	GERESS Array B	154.77	338		PKPdf	04 08 48.6	-1.4
GERES					PKiKP	04 08 58.6	-0.5
DAVOX	Davos/Dischmat	157.81	341	PKPab	PKPab	04 09 29.7	-0.3
	comp=Z,1.1nm,0.4s,baz=286,slow=0.9,SNR=7.3						
LIC	Lamto	159.72	167	*e*PKP2	PKPab	04 09 39.9	+1.1
	comp=Z,20nm,0.8s						
KIC	Kosan Boka	159.91	168	*e*PKP2	PKPab	04 09 40.8	+1.1
	comp=Z,4.2nm,0.6s						
TIC	Toumodi	160.13	167	*e*PKP2	PKPab	04 09 41.7	+1.1
	comp=Z,3.5nm,0.3s						
DBIC	Dimbokro	160.19	167	PKP	PKPdf	04 08 57.2	-0.4
	comp=Z,3.3nm,0.8s,baz=101,slow=1.8,SNR=6.2						
DBIC				PKPab	PKPab	04 09 40.5	-0.3
	comp=Z,3.1nm,0.8s,baz=201,slow=5.2,SNR=3.4						
DBIC	Dimbokro	160.19	167		PKPdf	04 08 56.5	-1.1
DBIC					PKPab	04 09 40.0	-0.9
TORD	Torodi Ar. Bea	166.87	190	PKP	PKPdf	04 09 03.6	0.0
	comp=Z,1.7nm,0.7s,baz=338,slow=1.2,SNR=9.0						
TORD				PKPab	PKPab	04 10 09.2	-1.0
	comp=Z,4.0nm,0.8s,baz=179,slow=3.3,SNR=14						

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*NCEDC **26** 03:54:42.6±1.2, 40°.85N±0°.01×122°.49W±0°.02, h17^{km}±2^{km}, Md2.5/50, Error ellipse: s-maj=2.3km s-min=1.8km az=93.0*

*ANF **26** 03:54:42.3±0.4, 40°.84N×122°.51W, h22^{km}±8^{km}, ML2.4/4, Error ellipse: s-maj=5.2km s-min=2.5km az=87.0*

ISC 26 03:54:42.6±0.9, 40°.85N±0°.02×122°.49W±0°.02, h20^{km}±3^{km}, n53, σ0^{s}.41/65, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
N02D	Trinity Center	0.20	306		Pg	03 54 47.8	0.0
N02D					Sg	03 54 51.4	0.0
N02D	Trinity Center	0.20	306	P	Pg	03 54 48.0	+0.1
	baz=128,SNR=1000						
N02D				S	Sg	03 54 51.4	0.0
	baz=128						
LGPM	Granite Peak	0.27	283		Pb	03 54 48.6	-0.1
LBKM	Bonanza King	0.27	330		Pg	03 54 48.8	0.0
WDC	Whiskeytown Da	0.28	189		Pb	03 54 48.6	-0.3
WDC					Sb	03 54 52.8	-0.2
LSHM	Sage Hen Hill	0.34	100		Pg	03 54 50.0	0.0
M03C	McCloud	0.50	33		Pb	03 54 52.5	-0.3
LGBM	Gray Butte	0.54	24		Pb	03 54 53.4	-0.2
LCSM	College of the	0.57	7		Pb	03 54 53.2	-0.7
KHBM	Hayfork Bally	0.59	251		Pb	03 54 53.9	-0.5
M02C	Callahan	0.60	333		Pb	03 54 54.5	-0.1
M02C	Callahan	0.60	333	P	Pb	03 54 54.5	-0.1
	baz=153,SNR=230						
M02C				S	Sg	03 55 03.1	+0.2
	baz=153						
LBPM	Beegum Peak	0.61	209		Pb	03 54 54.2	-0.5
LBFM	Black Fox Moun	0.67	42		Pb	03 54 55.8	+0.1
LMPM	Military Pass	0.68	21		Pg	03 54 56.3	+0.1
LDBM	Digger Butte	0.68	128		Pb	03 54 55.5	-0.4
LTCM	Tuscan Springs	0.70	157		Pg	03 54 56.8	+0.3
O02D	Mt. Diablo Mer	0.71	199		Pb	03 54 56.0	-0.5
O02D					Sg	03 55 06.1	-0.2
O02D	Mt. Diablo Mer	0.71	199	P	Pb	03 54 55.8	-0.6
	baz=19,SNR=213						
O02D				S	Sg	03 55 06.0	-0.3
	baz=19						
LAMM	Antelope Mount	0.76	352		Pb	03 54 56.8	-0.6
O03E	Paynes Creek	0.77	137		Pb	03 54 56.9	-0.5
O03E					Sg	03 55 08.4	+0.5
O03E	Paynes Creek	0.77	137	P	Pb	03 54 56.8	-0.5
	baz=317,SNR=16						
O03E				S	Sg	03 55 08.1	+0.2
	baz=317						
LMEM	Manzanita Entr	0.77	114		Pb	03 54 57.3	-0.1
HATC	Hat Creek Radi	0.78	92		Pg	03 54 57.8	-0.2
LHEM	Herd Peak	0.80	15		Pb	03 54 58.0	-0.1
LTIM	Timbered Crate	0.82	67		Pg	03 54 58.5	-0.2
LTIM					Sb	03 55 09.1	+0.1
KPPM	Pickett Peak	0.84	233		Pb	03 54 58.4	-0.2
KCSM	Cold Springs	0.84	248		Pn	03 54 59.3	-0.2
KOMM	Orleans Mounta	0.84	301		Pb	03 54 58.2	-0.5
LBCM	Butte Creek Ri	0.86	91		Pb	03 54 58.9	-0.1
LRDM	Redding Peak	0.87	116		Pb	03 54 58.9	-0.2
LGMM	Garner Mountai	0.89	33		Pg	03 54 60.0	-0.1
KHMM	Horse Mountain	0.94	272		Pb	03 54 59.8	-0.6
LMHM	Little Mount H	0.96	41		Pb	03 55 00.9	+0.2
B040	Montague	0.98	3		Pb	03 55 00.8	-0.1
B040					Sn	03 55 15.0	+0.3
LASM	Arnica Sink	1.01	42		Pb	03 55 01.8	+0.1
M04C	Macdoel	1.05	28		Pg	03 55 02.8	-0.3

M04C	Macdoel	1.05	28	Pb	Pn	03 55 02.5	+0.1
	baz=208,SNR=13						
GVV	Valley View	1.09	188		Pn	03 55 02.9	-0.1
KCRM	Chalk Rock	1.10	248		Pg	03 55 05.0	+1.0
KBNM	Bluenose Ridge	1.10	210		Pg	03 55 03.9	-0.1
KMRM	Mail Ridge	1.12	236		Pg	03 55 05.4	+0.9
JCC	Jacoby Creek,	1.17	269		Pg	03 55 05.6	+0.3
KBSM	Bell Springs	1.26	223		Pg	03 55 07.3	+0.3
KIPM	Iron Peak	1.29	216		Pg	03 55 07.7	+0.1
L04D	Klamath Falls	1.37	6		Pb	03 55 07.9	+0.2
L04D	Klamath Falls	1.37	6	Pb	Pb	03 55 07.7	0.0
	baz=186,SNR=18						
KRKM	Rackout Spring	1.40	203		Pg	03 55 09.8	+0.2
ORV	Oroville	1.50	149	Pn	Pn	03 55 08.6	+0.1
ORV					Sn	03 55 26.6	-0.9
HUMO	Hull Mountain	1.79	349		Pn	03 55 12.0	-0.4
BEKR	Beckworth	1.90	121	Pn	Pn	03 55 14.1	0.0
MOD	Modoc Plateau	1.95	57	Pn	Pn	03 55 14.0	-0.8
MOD				Sn	Sn	03 55 39.6	+0.8
RCCR	Rock Creek Can	4.46	138		Pn	03 55 50.7	+1.3

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*NEIC **26** 04:01:40.3±1.6, 27.°89S±0.°06×66.°72W±0.°05, h165^{km}±6^{km}, mb4.0/6, Md4.1(SJA), Error ellipse: s-maj=9.2km s-min=6.3km az=188.0*

*SJA **26** 04:01:41.3±0.8, 27.°97S×66.°64W, h184^{km}±5^{km}, ML3.8, MW3.7*

*IDC **26** 04:01:41.4±3.4, 27.°85S×66.°66W, h160^{km}±25^{km}, mb3.6/7, mb1 3.7/10, mb1mx3.5/35, mbtmp4.0/10, Error ellipse: s-maj=33.3km s-min=17.1km az=23.0*

*VAO **26** 04:01:57.7±5.1, 27.°20S×65.°90W, h259^{km}±21^{km}, mb4.4*

ISC 26 04:01:40.7±0.5**, 27.°84S**±0.°04×**66.°79W**±0.°05**, h164^{km}, n73,** σ**1.^{s}59**/95**, mb4.1**/7**, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CYA	Choya	1.06	124	*i* P	Pn	04 02 09.7	+2.4
CYA				*i* P	Pn	04 02 09.7	+2.4
CYA				IAML		04 02 10.1	
	comp=Z,749nm,0.4s						
CYA				*e*S	Sn	04 02 28.9	+1.2
CYA				*e*S	Sn	04 02 29.0	+1.2
CYA				IAML		04 02 32.0	
	comp=Z,331nm,0.6s						
VCA	Vinchina	1.53	234	*i* P	Pn	04 02 14.7	+2.9
VCA				*e*S	Sn	04 02 39.9	+4.2
AGUA	GUANDACOL	2.21	222	*i* P	Pn	04 02 21.5	+2.3
AGUA				*i* S	Sn	04 02 52.2	+3.2
AGUA				IAML		04 02 53.7	
	comp=Z,279nm,0.5s						
GO03	Copiap	3.06	274		Pn	04 02 30.4	+0.9
GO03				Sn	Sn	04 03 07.6	+0.4
ACDV	Cuesta del Vie	3.09	221	*i* P	Pn	04 02 32.4	+2.5
ACDV				IAML		04 03 11.8	
	comp=Z,221nm,0.6s						
AROD	Rodeo	3.30	225	*i* P	Pn	04 02 35.0	+2.4
AROD				*e*S	Sn	04 03 15.3	+2.3
AROD				IAML		04 03 17.9	
	comp=Z,30nm,0.4s						
LCO	Las Campanas	3.63	250	Pn	Pn	04 02 37.9	+1.1
LCO				Sn	Sn	04 03 20.8	+0.3
GO02	Mina Guanaco	3.66	316		Pn	04 02 37.8	+0.5
RTLL	Cerro Villicun	3.77	202	*e*P	Pn	04 02 39.5	+1.2
RTLL				*e*S	Sn	04 03 23.2	-0.2
RTLL				*i* S	Sn	04 03 24.6	+1.3
RTLL				IAML		04 03 29.5	
	comp=Z,3µm,1.1s						
ZON	Zonda	4.04	204	*i* P	Pn	04 02 42.9	+1.1
ZON				*e*S	Sn	04 03 29.4	-0.1
ZON				IAML		04 03 30.8	
	comp=Z,87nm,0.8s						
GO04	Tololo Observa	4.21	236		Pn	04 02 45.1	+0.9
GO04				Sn	Sn	04 03 34.8	+1.1
RTCV	Cerro Valdivia	4.28	200	*i* P	Pn	04 02 45.9	+0.9
RTCV				*e*S	Sn	04 03 33.8	-1.4
RTCV				IAML		04 03 36.5	
	comp=Z,49nm,0.7s						
PB14	IPOC Station P	4.56	314		Pn	04 02 49.5	+0.6
PB14				Sn	Sn	04 03 42.8	+0.7
MRA	San Martin	4.65	169	*i* P	Pn	04 02 50.6	+0.7
MRA				IAML		04 04 05.1	
	comp=Z,33nm,0.5s						
ASAL	Salagasta	5.05	200	*i* P	Pn	04 02 56.0	+1.0
ASAL				*e*S	Sn	04 03 45.6	-7.6
ASAL				IAML		04 03 53.1	
	comp=Z,49nm,0.6s						
PB15	IPOC Station P	5.21	332		Pn	04 02 57.8	+0.5
PB15				Sn	Sn	04 03 58.6	+1.3
ARCO	CERRO ARCO	5.31	200	*i* P	Pn	04 02 59.7	+1.1
ARCO				*e*S	Sn	04 03 58.9	-0.6
ARCO				IAML		04 04 00.3	
	comp=Z,64nm,0.5s						
ARCO				IAML		04 04 00.7	
	comp=Z,67nm,0.8s						
PB10	IPOC Station P	5.49	321		Pn	04 03 01.3	+0.5
AAGR	Agrelo	5.51	198	*i* P	Pn	04 03 02.3	+1.2
AAGR				*e*S	Sn	04 03 50.5	-14
AAGR				IAML		04 04 04.5	
	comp=Z,62nm,0.5s						
LVC	Limon Verde	5.55	339	P	Pn	04 03 04.3	+2.3
	comp=Z,2.2nm,0.3s,baz=126,slow=4.9,SNR=21						
LVC				S	Sn	04 04 06.1	+0.5
	comp=Z,9.9nm,0.3s,baz=340,slow=11,SNR=29						
LVC	Limon Verde	5.55	339		Pn	04 03 03.3	+1.3
LVC				Sn	Sn	04 04 06.8	+1.1
PEL	Peldehue	6.26	211	Pn	Pn	04 03 11.0	+0.1
PEL					Sn	04 04 20.8	-1.1
ROC1	El Roble	6.28	214		Pn	04 03 10.5	-0.9
ROC1				Sn	Sn	04 04 19.4	-3.3
PB09	IPOC Station P	6.42	339	Pn	Pn	04 03 14.4	+1.1
PB09					Sn	04 04 25.1	-0.8
PB07	IPOC Station P	6.71	335		Pn	04 03 17.0	-0.1
PB07				Sn	Sn	04 04 29.5	-3.4
PB01	IPOC Station P	7.20	339		Pn	04 03 24.1	+0.5
PATCX	Punta Patache	7.63	336	Pn	Pn	04 03 29.1	-0.2
GO05	Huala	8.38	210	Pn	Pn	04 03 38.2	-0.9
GO01	Chusmiza	8.43	344	Pn	Pn	04 03 40.8	+0.6
GO01					Sn	04 05 10.7	-3.9
PB11	IPOC Station P	8.46	341	Pn	Pn	04 03 40.1	-0.2
CPUP	Villa Florida	8.57	82	P	Pn	04 03 41.3	-0.3
	comp=Z,0.4nm,0.3s,baz=264,slow=12,SNR=15						
CPUP	Villa Florida	8.57	82		Pn	04 03 40.5	-1.0
GO06	Curarrehue	12.34	197	Pn	Pn	04 04 28.8	-2.1
AQDB	Aquidauana	12.50	56	*e*P	Pn	04 04 33.3	+0.3
SIV	San Ignacio	12.93	25	P	Pn	04 04 39.2	+0.6
	comp=Z,0.2nm,0.3s,baz=221,slow=15,SNR=5.9						
ITAB	Concordia	13.03	91	*e*P	P	04 04 44.9	+0.9
PLCA	Paso Flores	13.22	193	P	P	04 04 47.2	+1.0
	comp=Z,0.2nm,0.3s,baz=0.0,slow=5.1,SNR=13						
PLCA	Paso Flores	13.22	193		Pn	04 04 40.5	-1.7
PLCA	Paso Flores	13.22	193		Pn	04 04 41.7	-0.5
TRCB	Terra Rica	13.75	72	*e*P	P	04 04 51.7	-0.5
PCMB	Pacaembu	15.41	70	*e*P	P	04 05 11.4	+0.9
SALV	Santo Antonio	15.71	43	*e*P	P	04 05 13.7	-0.2
FRTB	Fartura	16.17	78	*e*P	P	04 05 19.6	+0.6
BB19B	Bebedouro	17.94	72	*e*P	P	04 05 38.7	+0.3
RCLB	Rio Claro- Sao	18.25	77	*e*P	P	04 05 42.5	+0.7
ARAG	Araguaiana, MT	18.40	52	*e*P	P	04 05 44.1	+0.7
VAO	Valinhos	18.54	79	*e*P	Pn	04 05 46.0	-1.2
SAML	Samuel	19.10	11	P	P	04 05 50.0	-1.0
PARB	Paraibuna	19.61	82	*e*P	P	04 05 56.5	-0.1
IPMB	Ipameri, GO	19.71	64	*e*P	P	04 05 57.9	+0.3
BDFB	Brasilia	21.22	59	P	P	04 06 13.8	-0.1
	comp=Z,2.5nm,0.4s,baz=229,slow=13,SNR=9.0						
BDFB	Brasilia	21.22	59	P	P	04 06 12.8	-1.1
BDFB				IAmb	IAmb	04 06 15.1	
	comp=Z,4.8nm,0.6s						
JANB	Januaria	24.43	63	*e*P	P	04 06 43.9	-0.5
PTGA	Pitinga	27.74	15	P	P	04 07 14.7	+0.7
	comp=Z,2.5nm,0.4s,baz=194,slow=17,SNR=7.6						
PTGA	Pitinga	27.74	15	P	P	04 07 14.2	+0.1
PTGA				IAmb	IAmb	04 07 19.5	
	comp=Z,2.6nm,0.8s						
RUSC	La Rusia	34.09	349	P	P	04 08 10.6	+0.4
SDV	Santo Domingo	36.70	354	P	P	04 08 31.5	-0.8
SDV				IAmb	IAmb	04 08 40.8	
	comp=Z,4.5nm,1.1s						
TXAR	Lajitas Array	66.92	325	P	P	04 12 18.0	+2.6
	comp=Z,0.3nm,0.6s,baz=140,slow=5.7,SNR=2.3						
TXAR	Lajitas Array	66.92	325	P	P	04 12 15.6	+0.1
DBIC	Dimbokro	68.89	70	P	P	04 12 28.1	+0.1
	comp=Z,1.2nm,0.3s,baz=201,slow=6.9,SNR=5.7						
DBIC	Dimbokro	68.89	70	P	P	04 12 27.5	-0.5
TORD	Torodi Ar. Bea	77.80	68	P	P	04 13 20.4	+0.2
	comp=Z,2.4nm,0.9s,baz=282,slow=6.4,SNR=13						
PDAR	Pinedale Array	80.54	330	P	P	04 13 36.2	+1.5
	comp=Z,0.5nm,0.7s,baz=126,slow=7.5,SNR=4.6						
PDAR	Pinedale Array	80.54	330	P	P	04 13 35.2	+0.5
YKA	Yellowknife Ar	97.78	340	P	Pdif	04 14 57.6	+1.0
	comp=Z,0.2nm,0.6s,baz=144,slow=5.3,SNR=3.5						
NB2	NORSAR Subarra	108.44	30	PKP	PKiKP	04 20 04.0	+15
	comp=Z,4.7nm,1.4s,baz=17,slow=2.6						
ASAR	Alice Springs	125.03	203	PKP	PKiKP	04 20 22.8	+0.4
	comp=Z,0.6nm,0.4s,baz=126,slow=1.5,SNR=8.1						
ASAR	Alice Springs	125.03	203		PKPdf	04 20 20.8	-1.2
WRA	Warramunga Arr	128.28	206	PKP	PKPdf	04 20 28.3	0.0
	comp=Z,0.5nm,0.3s,baz=155,slow=2.0,SNR=6.9						
ZALV	Zalesovo Beam	146.64	31	PKPbc	PKPab	04 21 03.1	-0.8
	comp=Z,2.0nm,0.4s,baz=302,slow=3.8,SNR=6.9						
ZALV	Zalesovo Beam	146.64	31		PKPdf	04 21 01.3	+0.6
MKAR	Makanchi Array	149.27	44	PKPbc	PKiKP	04 21 11.3	+0.5
	comp=Z,1.6nm,0.7s,baz=315,slow=2.6,SNR=16						
MKAR	Makanchi Array	149.27	44		PKPbc	04 21 09.5	-0.3

NNC 26 04:21:51.1±1.9**, 48.°53N×67.°10E, h0^{km}, mb3.7, mpv3.3, 5C-3D, Error ellipse: s-maj=25.2km s-min=15.5km az=41.0, Suspected Mining explosion., Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AB31	Akbulak array	4.77	281	⇑Pn	Pn	04 23 01.8	-2.4
	2.2nm,0.3s,baz=121,slow=8.7,SNR=12						
AB31				Pg	Pg	04 23 20.8	-1.7
	1.9nm,0.3s,baz=107,slow=15,SNR=12						
AB31				⇓Lg	Lg	04 24 22.6	
	3.2nm,0.3s,baz=101,slow=29,SNR=4.9						
BRVK	Borovoye	4.96	23	⇓Pn	Pn	04 23 07.2	+0.4
	2.1nm,0.5s						
BRVK				⇑Lg	Lg	04 24 30.0	
	6.4nm,0.6s						
KK31	Karatay Array	5.93	155	⇓Pn	Pn	04 23 16.9	-3.2
	1.0nm,0.5s,baz=336,slow=17,SNR=5.1						
KK31				Sn	Sn	04 24 32.3	+3.5
	3.2nm,0.5s,baz=343,slow=27,SNR=4.2						
AKTO	Aktyubinsk	6.22	291	⇑Pn	Pn	04 23 23.3	-0.7
	3.1nm,1.2s						
AKTO				⇑Sn	Sn	04 24 39.2	+3.4
	1.5nm,0.6s						
AKTO				⇑Lg	Lg	04 25 04.6	
	2.6nm,0.7s						

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*MOS **26** 04:23:11.5±1.1, 26.°10S×179.°41E, h486^{km}, mb5.0/19, Error ellipse: s-maj=9.5km s-min=9.0km az=33.8*

*BJI **26** 04:23:11.2±0.0, 26.°13S×179.°65E, h490^{km}, mB5.2/29, mb4.8/43*

*NEIC **26** 04:23:12.4±1.5, 26.°08S±0.°08×179.°47E±0.°10, h496^{km}±5^{km}, mb4.9/245, Error ellipse: s-maj=13.3km s-min=11.3km az=119.0*

*IDC **26** 04:23:13.3±0.4, 26.°04S×179.°35E, h492^{km}±3^{km}, mb4.3/28, mb1 4.5/32, mb1mx4.4/41, mbtmp5.2/32, Error ellipse: s-maj=8.5km s-min=6.3km az=4.0*

*GCMT **26** 04:23:14.4±0.4, 26.°13S±0.°04×179.°59E±0.°05, h493^{km}±3^{km}, MW5.8/85, Moment Tensor Solution. s85,c113; Duration: 1.^{s}9 Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.83±.22; M$_{\theta\theta}$-2.44±.35; M$_{\phi\phi}$-0.39±.35; M$_{r\theta}$-2.23±.35; M$_{\theta\phi}$-4.46±.32; M$_{\phi r}$-3.39±.34; Best double couple: M$_0$6.24500×10^{17} NP1:φ$_s$89.00000°, δ36.00000°, λ148.00000°. NP2:φ$_s$206.00000°, δ72.00000°, λ59.00000°. Principal axes: T 5.0320, Plg53.0000°, Azm79.0000°; N 2.4260, Plg29.0000°, Azm217.0000°; P -7.4580, Plg21.0000°, Azm319.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 26 04:23:12.5±0.3**, 26.°12S**±0.°04×**179.°46E**±0.°04**, h491^{km}**±3^{km}**, h491^{km}:pP-P, n745,** σ**1.^{s}37**/732**, mb4.9**/193**, 54C-9D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	Raoul Island	3.88	144	P	P	04 24 31.0	+1.7
RAO	Raoul Island	3.89	144	P	P	04 24 31.4	+2.1
	5µm,0.3s,baz=86,slow=1.2,SNR=121						
RAO				S	S	04 25 36.2	+4.2
	baz=103,slow=23,SNR=1.0						
RAO	Raoul Island	3.89	144	P	P	04 24 30.4	+1.0
RAO				S	S	04 25 33.2	+1.2
RAO	Raoul Island	3.89	144	P	P	04 24 30.4	+1.0
RAO					S	04 25 33.2	+1.2
GLKZ	Green Lake	3.90	144	P	P	04 24 31.0	+1.6
MSVF	Nonsavu	8.44	351	⇓*i*P	P	04 25 13.6	0.0
MSVF				pmax	pmax		
	comp=Z,386nm,0.9s						
MSVF	Nonsavu	8.44	351	P	P	04 25 13.4	-0.2
OUZ	Omahuta	10.38	208	P	P	04 25 34.4	+0.7
NFK	Norfolk Island	10.63	251	P	P	04 25 39.3	+2.8
	baz=11						
MXZ	Matakaoa Point	11.46	185	P	P	04 25 44.2	-0.9
MXZ					S	04 27 48.8	-2.1
MXZ	Matakaoa Point	11.46	185	P	P	04 25 44.6	-0.5
MXZ				S	S	04 27 44.4	-6.5
HAZ	Te Kaha	11.69	187	P	P	04 25 44.6	-3.1
TGRZ	Tauranga	11.89	192	P	P	04 25 52.7	+2.9
WHRZ	Whale Island	11.89	190	P	P	04 25 53.4	+3.6
WHRZ				S	S	04 28 01.3	+1.8
RUGZ	Raukumara Rang	11.91	187	P	P	04 25 48.4	-1.7
RUGZ				S	S	04 27 58.5	-1.5
OPRZ	Ohinepanea	11.95	191	P	P	04 25 49.7	-0.7
PUZ	Puketiti	11.96	185	S	P	04 25 48.2	-2.4
PUZ				P	P	04 25 50.3	-0.3
NIUE	Niue	12.04	57	P	P	04 25 51.5	-0.1
	baz=12						
NIUE	Niue	12.04	57	P	P	04 25 50.5	-1.1
NIUE					S	04 28 03.2	+0.4
MARZ	Manawahe	12.07	191	P	P	04 25 53.5	+1.8
KMRZ	Kaimai	12.07	193	P	P	04 25 54.8	+3.0
EDRZ	Edgecumbe	12.18	190	P	P	04 25 54.0	+1.1
KARZ	Kaharoa	12.18	192	P	P	04 25 55.3	+2.4
OMRZ	Omania	12.24	192	P	P	04 25 56.0	+2.5
URZ	Urewera	12.27	189	P	P	04 25 53.5	-0.3
	comp=Z,50nm,0.3s,baz=12,slow=3.9,SNR=143						
URZ				S	S	04 28 04.5	-2.2
	comp=Z,16nm,0.3s,baz=266,slow=23,SNR=21						
URZ				ScP	ScP	04 33 40.2	+1.1
	comp=Z,0.5nm,0.3s,baz=65,slow=8.4,SNR=3.0						
URZ	Urewera	12.27	189	P	P	04 25 52.7	-1.1
URZ					S	04 28 05.3	-1.4
URZ					ScP	04 33 37.6	-1.5
URZ	Urewera	12.27	189	P	P	04 25 52.6	-1.2
MWZ	Matawai	12.29	187	S	S	04 28 04.4	-2.9
UTU	Utuhina	12.34	192	P	P	04 25 58.5	+3.9
TARZ	Mount Tarawera	12.34	191	P	P	04 25 55.9	+1.3
TKGZ	Te Karaka	12.36	186	P	P	04 25 57.4	+2.6
CNGZ	Carnagh Statio	12.38	185	S	S	04 28 07.2	-1.7
HLRZ	Highlands Stat	12.38	191	P	P	04 25 58.4	+3.3
RRRZ	Republican Roa	12.44	191	P	P	04 25 57.3	+1.7
HSRZ	Hossack Road	12.46	192	P	P	04 25 59.3	+3.4
RAGZ	Rawiri	12.46	187	P	P	04 25 54.7	-1.3
GRRZ	Galatos Road	12.52	192	P	P	04 25 59.1	+2.6
HRRZ	Handcock Road	12.53	192	P	P	04 25 57.0	+0.4
MUGZ	Murupara	12.53	190	P	P	04 25 55.5	-1.1
DZM	Mont Dzumac	12.55	286	P	P	04 25 58.7	+1.5
	comp=Z,29nm,0.3s,baz=119,slow=8.1,SNR=128						
DZM				S	S	04 28 10.0	-2.9
	baz=122,slow=18,SNR=0.8						
DZM				ScP	ScP	04 33 41.7	+1.7
	comp=Z,0.5nm,0.3s,baz=106,slow=9.8,SNR=6.6						
DZM	Mont Dzumac	12.55	286	P	P	04 25 56.6	-0.6
DZM					S	04 28 11.9	-1.0
RIGZ	Rimuhau	12.64	186	P	P	04 25 57.4	-0.4
RTZ	Ruatahuna	12.64	189	P	P	04 25 56.0	-1.8
WPRZ	Whakapapatarin	12.68	192	P	P	04 26 00.1	+2.0
ALRZ	Allen Road	12.69	191	P	P	04 26 00.1	+1.9
KUTZ	Kaahu Road	12.71	193	P	P	04 26 01.7	+3.1
SNGZ	Shannon Statio	12.76	188	P	P	04 26 01.6	+2.6
PRGZ	Paritu Road	12.84	186	P	P	04 26 00.6	+0.7
MTHZ	Maungataniwha	12.89	189	P	P	04 25 59.4	-1.1
RAHZ	Arahi	12.92	188	P	P	04 25 59.3	-1.5
MRHZ	Matea Rd	12.94	191	P	P	04 26 01.2	+0.3
HIZ	Hauiti	12.96	196	P	P	04 26 02.5	+1.4
KNZ	Kokohu	12.96	186	P	P	04 26 00.9	-0.2
HATZ	Hinemaiaia	13.05	192	P	P	04 26 01.5	-0.7
RATZ	Rangitukua	13.09	193	P	P	04 26 03.8	+1.3
NMHZ	Naumai	13.14	189	P	P	04 26 02.2	-0.9
NMHZ				S	S	04 28 18.3	-5.5
RITZ	Rihia Road	13.18	192	P	P	04 26 04.5	+1.0
KATZ	Kakaramea	13.21	193	P	P	04 26 05.8	+1.9
BKZ	Black Stump Fm	13.25	190	P	P	04 26 04.0	-0.3
BKZ	Black Stump Fm	13.25	190	P	P	04 26 02.8	-1.4
ARHZ	Aropaoanui	13.27	188	P	P	04 26 05.1	+0.7
WTVZ	West Tongariro	13.37	193	P	P	04 26 06.1	+0.5
NGZ	Ngauruhoe	13.42	193	P	P	04 26 06.8	+0.6
MCHZ	McNeill Hill	13.49	189	P	P	04 26 05.6	-1.2
KWHZ	Kaweka Forest	13.51	190	P	P	04 26 05.8	-1.3
BHHZ	Black Hill Sta	13.64	191	P	P	04 26 05.6	-2.7
MTVZ	Mangateitei	13.65	193	P	P	04 26 08.6	+0.1
KAHZ	Kahuranaki	13.81	188	P	P	04 26 08.9	-1.3
AFI	Afiamalu	14.66	36	P	P	04 26 15.5	-4.1
	comp=Z,43nm,0.3s,baz=215,slow=4.0,SNR=42						
AFI				S	S	04 28 44.1	-10
	comp=Z,17nm,0.3s,baz=349,slow=18,SNR=4.2						
AFI	Afiamalu	14.66	36	P	P	04 26 16.5	-3.0
AFI				pmax	pmax		
	comp=Z,610nm,1.0s						
AFI	Afiamalu	14.66	36	P	P	04 26 17.4	-2.2
AFI					S	04 28 45.7	-8.1
BFZ	Birch Farm	14.77	190	P	P	04 26 19.0	-1.3
MSWZ	Moikau Station	15.65	192	P	P	04 26 26.6	-2.9
SNZO	South Karori	15.66	193	P	P	04 26 27.4	-2.1
BHW	Baring Head	15.72	193	P	P	04 26 27.7	-2.5
QRZ	Quartz Range	15.76	200	P	P	04 26 30.6	-0.1
PLWZ	Palliser	15.80	192	P	P	04 26 28.6	-2.5
NNZ	Nelson	15.88	197	P	P	04 26 30.4	-1.5
TUWZ	Tuamarina	15.94	195	P	P	04 26 30.7	-1.9
CMWZ	Cape Campbell	16.18	194	P	P	04 26 34.0	-1.1
CMWZ					S	04 29 21.4	-0.8
FUNA	Funafuti	17.50	359	P	P	04 26 47.6	-1.2
LHI	Lord Howe Isla	18.66	248	P	P	04 27 02.3	+2.9
	baz=19,SNR=4.8						
LHI	Lord Howe Isla	18.66	248	P	P	04 26 58.9	-0.5
RPZ	Rata Peaks	18.84	199	P	P	04 27 00.8	-0.2
	comp=Z,20nm,0.3s,baz=0.1,slow=2.0,SNR=35						
RPZ				S	S	04 30 01.1	-6.0
	comp=Z,1.0nm,0.3s,baz=18,slow=7.5,SNR=2.2						
RPZ	Rata Peaks	18.84	199	P	P	04 27 00.5	-0.4
FOZ	Fox Glacier	19.07	202	P	P	04 27 02.6	-0.4
RAR	Rarotonga	19.63	80	P	P	04 27 08.7	+0.3
	comp=Z,8.8nm,0.3s,baz=240,slow=6.0,SNR=19						
RAR	Rarotonga	19.63	80	P	P	04 27 08.1	-0.3
RAR				pmax	pmax		
	comp=Z,99nm,1.1s						
LBZ	Lake Benmore	19.72	200	P	P	04 27 06.9	-2.0
WKZ	Wanaka	20.48	202	P	P	04 27 14.8	-1.1
DCZ	Deep Cove	21.69	204	P	P	04 27 26.8	+0.1
WHZ	Wether Hill Ro	21.78	202	P	P	04 27 27.6	+0.1
KNTN	Kanton	24.71	21	P	P	04 27 53.1	-1.0
HNR	Honiara	24.85	308	P	P	04 27 54.6	-0.8
	comp=Z,337nm,0.5s,baz=133,slow=0.2,SNR=10						
HNR	Honiara	24.85	308	P	P	04 27 54.9	-0.5
HNR				pmax	pmax		
	comp=Z,402nm,0.6s						
HNR	Honiara	24.85	308	P	P	04 27 54.9	-0.5
ARMA	Armidale	24.86	254	P	P	04 27 57.4	+1.9
	baz=25,SNR=11						
ARMA	Armidale	24.86	254	P	P	04 27 54.9	-0.6
EIDS	Eidsvold	25.56	265	P	P	04 28 02.5	+0.9
	baz=26,SNR=21						
EIDS	Eidsvold	25.56	265	P	P	04 28 02.1	+0.6
EIDS				IAmb	IAmb	04 28 04.2	
	comp=Z,53nm,0.9s						
MGCD	Mangrove Creek	25.58	247	P	P	04 28 04.0	+2.3
	baz=26,SNR=17						
CNB	Canberra Magne	27.37	243	P	P	04 28 20.6	+3.1
	baz=28,SNR=8.8						
RMQ	Roma	27.50	262	P	P	04 28 20.8	+2.1
	baz=28,SNR=42						
CAN	Canberra	27.66	243	P	P	04 28 19.8	-0.2
CAN				pmax	pmax		
	comp=Z,29nm,0.8s						
CAN	Canberra	27.66	243	P	P	04 28 19.8	-0.2
CAN				IAmb	IAmb	04 28 22.7	
	comp=Z,29nm,0.8s						
MILA	Mila	27.92	240	P	P	04 28 24.6	+2.3
	baz=28,SNR=7.9						
YNG	Young	27.98	246	P	P	04 28 24.6	+1.7
	baz=28,SNR=11						
TARA	Tarawa	28.03	346	P	P	04 28 23.4	-0.1
TBI	Tubuai	28.33	91	*e*P	P	04 28 27.3	+1.3
	comp=Z,84nm,0.7s						
PAE	Paea	29.87	80	*e*P	P	04 28 40.4	+0.9
	comp=Z,6.2nm,0.5s						
PPT2	Papeete2	29.90	80	*e*P	P	04 28 40.9	+1.1
	comp=Z,12nm,0.6s						
PPT	Papeete	29.91	80	P	P	04 28 40.4	+0.6
	comp=Z,23nm,0.6s,baz=165,slow=20,SNR=2.0						
CMSA	Cobar Meteorol	30.00	252	P	P	04 28 41.3	+0.9
	baz=30,SNR=30						
TIAR	Tiarei	30.12	80	*e*P	P	04 28 42.6	+0.9
	comp=Z,12nm,0.4s						
TVO	Taravao	30.12	80	*e*P	P	04 28 42.5	+0.8
	comp=Z,23nm,0.6s						
TOO	Toolangi	30.88	240	P	P	04 28 49.3	+1.3
	baz=31,SNR=15						
TOO	Toolangi	30.88	240	P	P	04 28 49.7	+1.7
TOO				pmax	pmax		
	comp=Z,47nm,0.8s						
TOO	Toolangi	30.88	240	IAmb	IAmb	04 28 50.7	
	comp=Z,34nm,0.8s						
MOO	Moorlands	31.01	230	P	P	04 28 50.4	+1.4
	baz=31,SNR=5.6						
CTA	Charters Tower	31.07	274	P	P	04 28 50.8	+0.9
	comp=Z,84nm,0.6s,baz=98,slow=11,SNR=69						
CTA				S	S	04 33 18.8	-1.3
	comp=Z,7.5nm,0.8s,baz=193,slow=23,SNR=5.9						
CTA				ScP	ScP	04 34 28.4	+1.5
	comp=Z,22nm,0.8s,baz=132,slow=2.2,SNR=7.9						
CTA	Charters Tower	31.07	274	P	P	04 28 50.9	+1.0
CTA				pmax	pmax		
	comp=Z,89nm,0.6s						
CTAO	Charters Tower	31.07	274	P	P	04 28 50.9	+1.0
CTAO				pmax	pmax		
	comp=Z,123nm,0.9s						
TAU	Tasmania Unive	31.10	229	P	P	04 28 50.6	+0.9
TAU				pmax	pmax		
	comp=Z,29nm,1.1s						
TAU	Tasmania Unive	31.10	229	P	P	04 28 50.6	+0.9
TAU				IAmb	IAmb	04 28 52.6	
	comp=Z,29nm,1.1s						
QLP	Quilpie	31.51	261	P	P	04 28 54.3	+0.7
	baz=32,SNR=11						
PMOR	Pomariorio Ree	32.41	77	*e*P	P	04 29 02.0	+0.7
	comp=Z,19nm,0.6s						
MTSU	Mount Surprise	33.43	276	P	P	04 29 11.0	+0.9
	baz=34,SNR=93						
STKA	Stephens Creek	33.50	251	P	P	04 29 11.2	+0.8
	baz=34,SNR=37						
STKA	Stephens Creek	33.50	251	P	P	04 29 11.2	+0.8
	comp=Z,20nm,0.5s,baz=96,slow=11,SNR=44						
STKA				pP	pwP	04 30 37.7	-2.3
	comp=Z,5.5nm,0.7s,baz=81,slow=11,SNR=1.7						
STKA				S	S	04 33 55.8	-1.2
	comp=Z,11nm,0.9s,baz=224,slow=19,SNR=5.5						
STKA				ScP	ScP	04 34 36.2	+1.2
	comp=Z,7.6nm,0.8s,baz=42,slow=4.6,SNR=3.5						
STKA	Stephens Creek	33.50	251	P	P	04 29 10.0	-0.4
STKA				*PP	pP	04 30 34.7	-0.1
STKA				S	S	04 33 55.7	-1.2
STKA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
STKA	Stephens Creek	33.50	251	P	P	04 29 10.0	-0.4
STKA					pP	04 30 34.7	-0.1
STKA					S	04 33 55.7	-1.2
ARPS	Mount Arapiles	33.62	242	P	P	04 29 12.2	+0.9
	baz=34,SNR=13						
KRVT	Keravat (AS076	34.07	305	P	P	04 29 14.4	-1.0
	comp=Z,1µm,0.5s,baz=208,slow=0.7,SNR=42						
KRVT				S	S	04 34 01.1	-4.8
	comp=Z,87nm,0.8s,baz=195,slow=19,SNR=1.7						
PMG	Port Moresby	34.82	293	P	P	04 29 21.5	-0.2
	comp=Z,182nm,0.8s,baz=116,slow=5.7,SNR=63						
PMG				S	S	04 34 15.1	-2.2
	comp=Z,3.0nm,0.3s,baz=119,slow=22,SNR=1.1						
PMG				ScP	ScP	04 34 40.6	+0.6
	comp=Z,20nm,0.8s,baz=86,slow=2.8,SNR=4.7						
PMG	Port Moresby	34.82	293	*d i*P	P	04 29 20.8	-1.0
PMG				pmax	pmax		
	comp=Z,793nm,0.9s						

PMG	Port Moresby	34.82	293	P	P	04 29 21.6	-0.2
PMG	Port Moresby	34.82	293		ScP	04 34 39.4	-0.7
HTT	Hallett	35.76	248	P	P	04 29 29.5	+0.1
	baz=36,SNR=66						
XMAS	Kiritimati	35.81	42	P	P	04 29 30.5	+0.5
COEN	Coen	36.05	282	P	P	04 29 32.7	+0.7
	baz=36,SNR=63						
COEN	Coen	36.05	282	P	P	04 29 31.4	-0.6
QIS	Mount Isa	36.91	270	P	P	04 29 39.0	-0.1
	baz=37,SNR=30						
BBOO	Buckleboo	38.17	249	P	P	04 29 49.0	-0.3
	baz=38,SNR=77						
PATS	Pohnpei	38.66	325	P	P	04 29 52.8	-0.6
AS31	Alice Springs	41.24	263	IAmb	IAmb	04 30 16.3	
	comp=Z,30nm,0.6s						
ASAR	Alice Springs	41.24	263	P	P	04 30 14.2	0.0
	comp=Z,84nm,0.8s,baz=91,slow=7.1,SNR=531						
ASAR				S	S	04 35 51.2	-1.0
	comp=Z,34nm,0.9s,baz=102,slow=14,SNR=16						
ASAR				P3KPbc		04 59 38.2	
	comp=Z,0.5nm,0.7s,baz=276,slow=4.3,SNR=4.9						
ASAR	Alice Springs	41.24	263	P	P	04 30 13.8	-0.4
ASAR				S	S	04 35 51.2	-1.0
ASAR	Alice Springs	41.24	263	P	P	04 30 13.8	-0.4
WRAB	Tennant Creek	41.81	269	⇓iP	P	04 30 18.0	-0.8
WRAB				pmax	pmax		
	comp=Z,96nm,0.8s						
WRAB	Tennant Creek	41.81	269	P	P	04 30 18.0	-0.8
WRA	Warramunga Arr	41.82	269	P	P	04 30 17.7	-1.2
	comp=Z,94nm,0.6s,baz=104,slow=7.7,SNR=192						
WRA				S	S	04 35 58.5	-2.1
	comp=Z,26nm,0.8s,baz=98,slow=15,SNR=25						
WRA	Warramunga Arr	41.82	269	P	P	04 30 17.6	-1.2
WRA				pmax	pmax		
	comp=Z,11nm,0.9s						
WRA	Warramunga Arr	41.82	269	P	P	04 30 17.6	-1.2
TAOE	Nuku Hiva Isla	41.95	73	eP	P	04 30 20.6	+0.6
	comp=Z,114nm,0.4s						
JAY	Jayapura	43.99	296	P	P	04 30 35.8	-0.1
	comp=Z,1µmcomp=Z,104nm,0.7s						
JAY	Jayapura	43.99	296	P	P	04 30 35.8	-0.1
JAY				pmax	pmax		
	comp=Z,168nm,0.7s						
GENI	Genyem	44.38	295	P	P	04 30 38.8	-0.1
	comp=Z,6µmcomp=Z,594nm,0.7s						
FORT	Forrest	45.12	252	P	P	04 30 44.0	-0.4
	baz=45,SNR=58						
WRKA	Warakurna	45.92	260	P	P	04 30 50.2	-0.5
	baz=46,SNR=103						
KDU	Kakadu	46.05	278	P	P	04 30 51.1	-0.6
	baz=46,SNR=112						
MTN	Manton Dam	47.18	277	P	P	04 30 59.4	-0.9
	baz=47,SNR=38						
KNRA	Kununurra	48.23	272	P	P	04 31 08.4	+0.2
	baz=48,SNR=232						
BAKI	Biak	48.50	294	P	P	04 31 11.0	+0.8
	comp=Z,5µmcomp=Z,517nm,0.7s						
SAUI	Saumlaki	49.13	283	P	P	04 31 14.7	-0.3
FITZ	Fitzroy Crossi	50.21	268	P	P	04 31 22.9	0.0
	baz=50,SNR=194						
FITZ	Fitzroy Crossi	50.21	268	P	P	04 31 23.0	+0.2
	comp=Z,111nm,0.8s						
FITZ				pP	pP	04 32 58.1	+2.2
	comp=Z,16nm,0.9s,baz=118,slow=10,SNR=2.5						
FITZ	Fitzroy Crossi	50.21	268	P	P	04 31 22.4	-0.5
KMBL	Kambalda	50.28	250	P	P	04 31 23.9	+0.7
	baz=50,SNR=5.4						
FAKI	Fak Fak	50.80	289	P	P	04 31 27.8	+0.6
	comp=Z,2µmcomp=Z,134nm,1.0s						
FAKI	Fak Fak	50.80	289	P	P	04 31 26.6	-0.7
HMH	Humu‘ula Sheep	51.55	31	P	P	04 31 32.3	-0.5
HPAH	Hawaii Prepara	51.82	30	P	P	04 31 34.1	-0.4
GUMO	Guam	51.87	315	P	P	04 31 34.2	-0.6
	comp=Z,172nm,0.7s,baz=173,slow=8.1,SNR=3.8						
GUMO	Guam	51.87	315	P	P	04 31 34.1	-0.8
GUMO				pmax	pmax		
	comp=Z,226nm,0.9s						
GUMO	Guam	51.87	315	P	P	04 31 34.1	-0.8
BNDI	Bandanaira	52.00	286	P	P	04 31 35.7	-0.2
	comp=Z,5µmcomp=Z,339nm,0.7s						
VNDA	Vanda	52.14	185	P	P	04 31 37.4	+1.4
	comp=Z,5.2nm,0.7s,baz=360,slow=7.5,SNR=18						
VNDA	Vanda	52.14	185	P	P	04 31 36.4	+0.4
VNDA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VNDA	Vanda	52.14	185	P	P	04 31 36.4	+0.4
SIJI	Sorong	52.71	290	P	P	04 31 41.0	-0.1
	comp=Z,441nm,0.7s,baz=105,slow=4.8,SNR=67						
SWI	Sorong	52.72	290	P	P	04 31 42.1	+1.0
	comp=Z,6µmcomp=Z,691nm,0.7s						
SWI	Sorong	52.72	290	P	P	04 31 41.1	0.0
SWI				pmax	pmax		
	comp=Z,689nm,0.8s						
MSAI	Masohi	53.42	286	P	P	04 31 45.9	-0.3
	comp=Z,935nmcomp=Z,44nm,0.7s						
KLBR	Kellerberrin	53.71	249	P	P	04 31 47.9	-0.1
	baz=54,SNR=8.1						
NWAO	Narrogin (SRO)	53.90	247	P	P	04 31 50.0	+0.7
	baz=54,SNR=3.7						
MEEK	Meekatharra	54.04	255	P	P	04 31 49.3	-1.1
	baz=54,SNR=14						
SOEI	Soe	54.58	277	P	P	04 31 55.6	+1.1
	comp=Z,2µmcomp=Z,280nm,0.8s						
BLDU	Ballidu	54.78	250	P	P	04 31 55.5	-0.1
	baz=55,SNR=16						
MUN	Mundaring	54.93	248	P	P	04 31 56.7	+0.1
	baz=55,SNR=3.3						
NLAI	Namlea	55.06	285	P	P	04 31 57.7	0.0
	comp=Z,1µmcomp=Z,136nm,0.8s						
MORW	Morawa	55.68	251	P	P	04 32 01.4	-0.5
	baz=56,SNR=16						
SANI	Sanana	56.61	286	P	P	04 32 07.5	-1.0
	comp=Z,2µmcomp=Z,187nm,0.7s						
TNTI	Ternate	56.88	290	P	P	04 32 10.3	0.0
	comp=Z,2µmcomp=Z,120nm,0.8s						
TNTI	Ternate	56.88	290	P	P	04 32 09.5	-0.8
BASI	Baing, Sumba	57.69	274	P	P	04 32 17.0	+1.1
	comp=Z,2µmcomp=Z,163nm,0.8s						
CASY	Casey	57.92	206	P	P	04 32 16.8	+0.2
CASY				IAmb	IAmb	04 32 19.2	
	comp=Z,45nm,0.9s						
BBSI	Bau Bau	57.96	280	P	P	04 32 19.3	+1.5
	comp=Z,292nmcomp=Z,20nm,0.9s						
GIRL	Giralia	58.96	258	P	P	04 32 25.3	+0.8
	baz=59,SNR=7.8						
WBSI	Waikabubak, Su	58.99	274	P	P	04 32 25.1	+0.3
	comp=Z,61nm,0.7s						
KMSI	Cibinong	59.66	287	P	P	04 32 29.5	+0.3
	comp=Z,201nm,0.7s						
LUWI	Luwuk	59.90	285	P	P	04 32 31.9	+1.1
	comp=Z,2µmcomp=Z,128nm,0.8s						
BKSI	Bulukumba	60.21	279	P	P	04 32 32.0	-0.9
	comp=Z,1µmcomp=Z,143nm,0.7s						
BNSI	Bone	60.64	280	P	P	04 32 36.4	+0.7
	comp=Z,1µmcomp=Z,91nm,1.1s						
PLAI	Plampang	60.78	274	P	P	04 32 36.1	-0.6
	comp=Z,2µmcomp=Z,224nm,0.8s						
APSI	Ampana	60.94	285	P	P	04 32 38.8	+1.1
	comp=Z,722nmcomp=Z,70nm,1.0s						
SPSI	Sidrap Palu	61.14	280	P	P	04 32 38.1	-0.9
	comp=Z,53nm,0.8s						
MRSI	Marisa	61.37	286	P	P	04 32 40.1	-0.5
	comp=Z,45nm,0.8s						
KCP	Kidapawan	62.17	294	⇑eP	P	04 32 45.2	-0.7
MPSI	Mapaga	63.07	285	P	P	04 32 51.1	-0.5
	comp=Z,1µmcomp=Z,40nm,0.8s						
QSPA	South Pole Qui	63.98	180	P	P	04 32 57.0	+0.3
JAGI	Jajag, Banyuwa	64.18	273	P	P	04 32 57.8	-1.0
	comp=Z,1µmcomp=Z,102nm,0.9s						
JAGI	Jajag, Banyuwa	64.18	273	P	P	04 32 57.7	-1.0
WOJI	Wonogiri, Jawa	67.34	272	P	P	04 33 19.5	+0.9
	comp=Z,64nm,1.0s						
KKM	Kota Kinabalu	69.10	288	IAmb	IAmb	04 33 32.5	
	comp=Z,24nm,0.7s						
CISI	Cisompet, Garu	70.25	271	P	P	04 33 37.3	+1.0
	comp=Z,3µmcomp=Z,44nm,0.9s						
SBUM	Sibu	70.80	283	P	P	04 33 38.5	-0.9
SBUM	Sibu	70.80	283	P	P	04 33 40.0	+0.6
CNJI	Cibinong	70.97	271	P	P	04 33 41.8	+1.3
	comp=Z,53nm,1.0s						
TNG	Tangerang	71.89	272	P	P	04 33 55.2	+9.4
SZP	Santa	71.91	301	P	P	04 33 45.0	-0.8
KSM	Kuching	72.02	281	IAmb	IAmb	04 33 48.7	
	comp=Z,24nm,0.8s						
KSM	Kuching	72.02	281	P	P	04 33 47.0	+0.4
JOW	Kunigami	72.12	313	P	P	04 33 46.9	+0.1
	comp=Z,2.4nm,0.7s,baz=143,slow=13,SNR=4.7						
INU	Inuyama	73.13	325	IAmb	IAmb	04 33 53.8	
	comp=Z,19nm,0.8s						
MJA0	Matsu Arr-Jizo	73.44	326	eP	P	04 33 55.0	+0.7
MJAR	Matsushiro Arr	73.45	326	P	P	04 33 54.5	+0.1
	comp=Z,14nm,0.9s,baz=156,slow=5.6,SNR=19						
MJAR	Matsushiro Arr	73.45	326	P	P	04 33 54.1	-0.2
MJAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MJAR	Matsushiro Arr	73.45	326	P	P	04 33 54.1	-0.2
MAJO	Matsushiro	73.45	326	eP	P	04 33 54.9	+0.5
MAJO	Matsushiro	73.45	326	P	P	04 33 54.2	-0.2
MAJO				IAmb	IAmb	04 33 55.5	
	comp=Z,25nm,0.9s						
MAT	Matsushiro	73.45	326	P	P	04 33 54.4	0.0
MAT				S	S	04 42 42.6	-1.3
MJB9	Matsu-Tunnel	73.46	326	IAmb	IAmb	04 33 55.5	
	comp=Z,28nm,1.0s						
LWLI	Liwa	74.71	272	P	P	04 34 05.3	+3.2
	comp=Z,46nm,0.7s						
MDSI	Maura Dua	74.83	272	P	P	04 34 01.1	-1.6
	comp=Z,44nm,0.8s						
JNU	Nakatsue	74.87	319	P	P	04 34 02.1	-0.4
	comp=Z,11nm,0.6s,baz=226,slow=1.9,SNR=7.9						
TPUB	Ta-pu	75.19	306	IAmb	IAmb	04 34 03.9	
	comp=Z,22nm,0.8s						
MAW	Mawson	75.51	201	P	P	04 34 06.7	+1.2
	baz=75,SNR=16						
MAW	Mawson	75.51	201	P	P	04 34 06.6	+1.1
	comp=Z,16nm,0.7s,baz=134,slow=7.4,SNR=19						
MAW	Mawson	75.51	201	P	P	04 34 05.6	+0.1
MAW				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MAW	Mawson	75.51	201	P	P	04 34 05.6	+0.1
ASAJ	Asahikawa	77.62	334	P	P	04 34 19.0	+1.6
	comp=Z,20nm,0.8s,baz=216,slow=8.1,SNR=18						
QZH	Quanzhou	77.66	306	eP	P	04 34 17.5	-0.5
QZH				S	S	04 43 26.0	-3.6
ADK	Adak	77.73	2	P	P	04 34 17.9	+0.1
ADK				pmax	pmax		
	comp=Z,29nm,0.7s						
ADK	Adak	77.73	2	P	P	04 34 17.9	+0.1
ADK				IAmb	IAmb	04 34 18.5	
	comp=Z,29nm,0.7s						
MYKOM	Kota Tinggi	77.89	278	IAmb	IAmb	04 34 21.1	
	comp=Z,26nm,0.7s						
TJN	Taejon	79.21	320	⇑iP	P	04 34 26.4	+0.3
KSRS	Korea Array	79.64	321	P	P	04 34 28.9	+0.6
	comp=Z,8.5nm,0.7s,baz=136,slow=5.8,SNR=32						
KSRS				PP	PP	04 37 38.5	+0.4
	comp=Z,1.4nm,0.5s,baz=143,slow=9.1,SNR=5.7						
KSAR	Wonju Array Be	79.65	321	P	P	04 34 28.3	-0.1
KSAR	Wonju Array Be	79.65	321	P	P	04 34 28.3	-0.1
PDSI	Padang	79.72	274	P	P	04 34 29.0	-0.4
YSS	Yuzh-Sakhalins	79.93	335	⇓iP	P	04 34 31.3	+1.7
YSS				e*PP	pP	04 36 15.9	+0.9
YSS				eS	S	04 43 55.5	+3.2
YSS				eSSS	SSS	04 52 38.4	
YSS				pmax	pmax		
	comp=Z,30nm,1.2s						
YSS				smax	smax		
	comp=N,1µm,6.9s						
YSS				smax	smax		
	comp=E,400nm,8.8s						
YSS				MLR	MLR		
	comp=N,200nm,14.0s						
YSS				MLR	MLR		
	comp=Z,300nm,14.0s						
YSS	Yuzh-Sakhalins	79.93	335	P	P	04 34 29.8	+0.2
YSS				IAmb	IAmb	04 34 33.3	
	comp=Z,25nm,0.6s						
USHA	Ushuaia	80.72	147	P	P	04 34 35.8	+2.0
	comp=Z,23nm,1.1s,baz=333,slow=2.3,SNR=3.1						
SYO	Syowa Base	80.75	194	⇓iP	P	04 34 32.6	-1.1
SYO	Syowa Base	80.75	194	⇓iPcP	PcP	04 34 36.4	-2.3
PETK	Petropavlovsk-	81.14	347	P	P	04 34 35.8	0.0
	comp=Z,5.4nm,0.6s,baz=131,slow=8.0,SNR=8.2						
PETK				PKiKP	PKiKP	04 39 58.1	+1.2
	comp=Z,0.8nm,0.4s,baz=91,slow=0.3,SNR=4.1						
PETK	Petropavlovsk-	81.14	347	P	P	04 34 36.0	+0.2
PETK	Petropavlovsk-	81.14	347	P	P	04 34 36.0	+0.2
IPM	Ipoh	81.62	279	P	P	04 34 38.2	-1.1
IPM	Ipoh	81.62	279	P	P	04 34 39.0	-0.3
NJ2	Nanjing	81.75	312	eP	P	04 34 41.0	+1.6
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
KULM	Kulim	82.32	280	P	P	04 34 41.4	-1.4
KULM	Kulim	82.32	280	P	P	04 34 43.0	+0.2
USA0B	Ussuriysk Arra	82.36	328	⇑iP	P	04 34 43.0	+0.8
USRK	Ussuriysk Ar.	82.36	328	P	P	04 34 43.3	+1.1
	comp=Z,11nm,0.7s,baz=127,slow=3.5,SNR=19						
USRK				PP	PP	04 38 03.2	+3.0
	comp=Z,0.6nm,0.3s,baz=307,slow=47,SNR=1.8						
SNAA	Sanae	82.47	179	⇑iP	P	04 34 43.2	+0.6
SNAA	Sanae	82.47	179	P	P	04 34 42.7	+0.1
SNAA				IAmb	IAmb	04 34 44.8	
	comp=Z,23nm,0.8s						
PSI	Prapat	82.74	277	P	P	04 34 44.3	-0.8
	comp=Z,12nm,0.8s,baz=28,slow=2.5,SNR=12						
PSI				PP	PP	04 38 03.2	-0.6
	comp=Z,2.7nm,0.6s,baz=157,slow=5.7,SNR=4.1						
SNCC	San Nicolas Is	82.75	48	P	P	04 34 45.4	+0.9
	baz=232						
NVL	N'lazarevskaya	82.99	184	⇓iP	P	04 34 45.0	-0.1
NVL				pmax	pmax		
	comp=Z,34nm,0.8s						
SCI2	San Clemente I	83.24	48	P	P	04 34 48.5	+1.6
	baz=233						
GSI	Gunungsitoli	83.28	275	P	P	04 34 48.9	+1.2
	comp=Z,164nm,0.7s						
GSI	Gunungsitoli	83.28	275	IAmb	IAmb	04 34 51.9	
	comp=Z,30nm,0.7s						
SBC	Santa Barbara	83.35	47	P	P	04 34 49.1	+1.6
	baz=232						
PKM	Mcpherson Peak	83.56	46	P	P	04 34 50.3	+1.5
	baz=232						
BLG	Laguna Peak, P	83.58	47	P	P	04 34 49.6	+1.0
	baz=233						
CIS	Catalina Islan	83.58	48	P	P	04 34 49.3	+0.6
	baz=233						
SAO	San Andreas Ge	83.69	44	IAmb	IAmb	04 34 52.2	
	comp=Z,17nm,0.8s						
SMMC	Simmler	83.70	46	P	P	04 34 50.8	+1.5
	baz=232						
PMPB	Monarch Peak	83.75	45	IAmb	IAmb	04 34 52.8	
	comp=Z,29nm,0.8s						
PAGB	Antelope Grade	83.80	45	IAmb	IAmb	04 34 52.9	
	comp=Z,33nm,0.9s						
MDJ	Mudanjiang	83.83	327	P	P	04 34 51.3	+1.7
MDJ				PcP	PcP	04 34 54.0	+1.5
MDJ				pP	pP	04 36 38.5	+2.3
MDJ				sP	sP	04 37 23.5	-2.5
MDJ				PP	PP	04 38 13.5	+1.4
MDJ				S	S	04 44 35.5	+3.8
MDJ				ScS	ScS	04 44 45.3	+4.2
MDJ				sS	sS	04 47 41.0	-1.5
MDJ				SS	SS	04 50 18.3	+4.3
MDJ				pmax	pmax		
	comp=Z,19nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,270nm,10.9s						
FMP	Fort Macarthur	83.85	48	P	P	04 34 50.6	+0.7
	baz=233						
OSI	Osito Audit: C	84.11	47	P	P	04 34 52.5	+1.2
	baz=233						
HOPS	Hopland Field	84.12	41	P	P	04 34 51.1	-0.1
HOPS				IAmb	IAmb	04 34 54.2	
	comp=Z,23nm,0.8s						
DECC	Green Verdugo	84.15	47	P	P	04 34 52.6	+1.1
	baz=233						
109C	Camp Elliot, M	84.16	49	IAmb	IAmb	04 34 54.4	
	comp=Z,16nm,0.9s						
109C	Camp Elliot, M	84.16	49	P	P	04 34 53.1	+1.5
	baz=234						
GDXM	Geysers	84.17	42	P	P	04 34 51.4	-0.1
PASC	Pasadena Art C	84.19	48	IAmb	IAmb	04 34 54.3	
	comp=Z,20nm,0.7s						
CHGN	Chignik	84.22	12	IAmb	IAmb	04 34 55.8	
	comp=Z,26nm,0.6s						
KCPM	Cahto Peak	84.27	41	IAmb	IAmb	04 34 55.8	
	comp=Z,32nm,0.7s						
ARVC	Arvin	84.34	46	P	P	04 34 53.6	+1.1
	baz=233,SNR=10						
MURC	Murrieta	84.52	49	P	P	04 34 54.5	+1.1
	baz=234,SNR=10						
KMRM	Mail Ridge	84.55	40	P	P	04 34 53.4	0.0
KMRM				IAmb	IAmb	04 34 59.5	
	comp=Z,35nm,1.0s						
BFSC	Mount Baldy Ra	84.59	48	P	P	04 34 54.7	+0.9
	baz=234,SNR=16						
VES	Vestal, Richgr	84.61	46	P	P	04 34 54.6	+0.9
	baz=232,SNR=11						
MONP2	Monument Peak	84.63	49	P	P	04 34 55.7	+1.5
	baz=234,SNR=24						
IKP	In-Ko-Pah, Jac	84.70	50	P	P	04 34 56.0	+1.7
	baz=234,SNR=11						
VOG	Valley Oaks Go	84.72	45	P	P	04 34 54.6	+0.4
	baz=232						
EDW2	Edwards Air Fo	84.75	47	P	P	04 34 55.6	+1.1
	baz=233,SNR=17						
ISA	Isabella, Lake	84.90	46	IAmb	IAmb	04 34 58.2	
	comp=Z,28nm,0.8s						
ISA	Isabella, Lake	84.90	46	P	P	04 34 56.5	+1.3
	baz=233,SNR=35						
KHMM	Horse Mountain	84.96	40	IAmb	IAmb	04 34 58.9	
	comp=Z,28nm,0.8s						
PFO	Pinyon Flats O	85.02	49	P	P	04 34 57.1	+1.2
	comp=Z,8.2nm,0.7s,baz=276,slow=2.9,SNR=15						
PFO	Pinyon Flats O	85.02	49	⇓iP	P	04 34 57.5	+1.6
PFO				pmax	pmax		
	comp=Z,11nm,0.9s						
PFO	Pinyon Flats O	85.02	49	P	P	04 34 55.9	-0.1
PFO	Pinyon Flats O	85.02	49	P	P	04 34 57.2	+1.2
	baz=234,SNR=5.4						
XPFO	Pion Flat	85.02	49	P	P	04 34 55.9	0.0
O02D	Mt. Diablo Mer	85.05	41	P	P	04 34 57.2	+1.3
	baz=230,SNR=16						
SWSC	Sam W. Stewart	85.09	50	P	P	04 34 57.5	+1.4
	baz=235						
BBRC	Big Bear Solar	85.09	48	P	P	04 34 57.6	+1.2
	baz=234						
CMB	Columbia Colle	85.14	43	P	P	04 34 56.3	0.0
CMB				pmax	pmax		
	comp=Z,12nm,0.8s						
CMB	Columbia Colle	85.14	43	P	P	04 34 56.3	0.0
LRMC	Laurel Mtn Rad	85.31	47	P	P	04 34 58.3	+1.0
	baz=233,SNR=6.0						
CN2	Changchun	85.38	324	eP	P	04 34 58.5	+1.2
CN2				pmax	pmax		
	comp=Z,50nm,1.0s						
RRX	Edison Barstow	85.40	48	P	P	04 34 58.6	+0.9
	baz=234						
WDC	Whiskeytown Da	85.46	40	IAmb	IAmb	04 35 00.8	
	comp=Z,15nm,0.8s						
BELC	Belle Mtn. Jos	85.56	49	P	P	04 35 00.1	+1.5
	baz=234,SNR=9.0						
N02D	Trinity Center	85.61	40	P	P	04 35 00.1	+1.5
	baz=230,SNR=9.0						
CWC	Cottonwood Cre	85.62	46	P	P	04 34 60.0	+1.1
	baz=233						
O03E	Paynes Creek	85.71	41	P	P	04 35 00.1	+1.0
	baz=230,SNR=12						
BC3	Big Chuckawall	85.73	49	P	P	04 35 01.0	+1.7
	baz=235,SNR=5.1						
MPMC	Manual Prospec	85.78	46	P	P	04 35 00.7	+1.1
	baz=234,SNR=18						
GSC	Goldstone, Bar	85.78	47	IAmb	IAmb	04 35 01.3	
	comp=Z,13nm,0.7s						
GSC	Goldstone, Bar	85.78	47	P	P	04 35 00.7	+1.2
	baz=234,SNR=14						
M02C	Callahan	85.80	40	P	P	04 35 01.4	+1.9
	baz=230,SNR=8.0						
GLA	Glamis	85.82	50	P	P	04 35 01.5	+1.8
	baz=235,SNR=13						
HEC	Hector,Ludlow	85.82	48	P	P	04 35 00.8	+1.1
	baz=234,SNR=7.7						
MLAC	Mammoth, Mammo	85.86	44	P	P	04 35 01.1	+1.1
	baz=232						
TIN	Tinemaha, Big	85.89	45	P	P	04 35 01.2	+1.1
	baz=233						
YBH	Yreka Blue Hor	86.10	39	P	P	04 35 01.7	+0.8
	comp=Z,8.0nm,0.6s,baz=196,slow=2.1,SNR=30						
YBH	Yreka Blue Hor	86.10	39	IAmb	IAmb	04 35 04.2	
	comp=Z,11nm,0.8s						
K02D	Willamette Mer	86.19	38	P	P	04 35 02.9	+1.6
	baz=229						
KLR	Kul'dur	86.22	331	P	P	04 35 03.0	+1.9
	comp=Z,5.2nm,0.8s,baz=115,slow=3.4,SNR=15						
KLR				PP	PP	04 38 32.2	+1.1
	comp=Z,2.0nm,0.8s,baz=112,slow=8.6,SNR=3.0						
KLR	Kul'dur	86.22	331	⇑iP	P	04 35 00.1	-1.0
KLR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
IRM	Iron Mountain	86.23	49	P	P	04 35 03.2	+1.6
	baz=235,SNR=7.4						
GMRC	Granite Mounta	86.24	48	P	P	04 35 03.1	+1.3
	baz=235,SNR=11						
BEKR	Beckworth	86.30	42	IAmb	IAmb	04 35 04.4	
	comp=Z,21nm,0.7s						
J01E	Myrtle Point	86.35	38	P	P	04 35 03.8	+1.9
	baz=229						
HSIG		86.37	55	IAmb	IAmb	04 35 05.4	
	comp=Z,29nm,0.7s						
VCNR	Virginia City	86.37	43	IAmb	IAmb	04 35 05.8	
	comp=Z,12nm,0.7s						
GRAC	Grapevine Rang	86.41	46	P	P	04 35 03.8	+1.3
	baz=234,SNR=11						
Y12C	Blythe	86.42	50	IAmb	IAmb	04 35 05.8	
	comp=Z,13nm,0.8s						
Y12C	Blythe	86.42	50	P	P	04 35 04.2	+1.7
	baz=235,SNR=6.6						
FURC	Furnace Creek,	86.43	46	P	P	04 35 03.5	+1.1
	baz=234						
YERR	Yerington	86.43	43	IAmb	IAmb	04 35 05.2	
	comp=Z,15nm,1.0s						
TUQ	Turquoise Moun	86.44	48	P	P	04 35 03.6	+0.9
	baz=234						
SHOC	Shoshone, Teco	86.48	47	P	P	04 35 03.7	+0.9
	baz=234						
214A	Organ Pipe Nat	86.61	52	IAmb	IAmb	04 35 07.0	
	comp=Z,25nm,0.8s						
214A	Organ Pipe Nat	86.61	52	P	P	04 35 05.3	+1.8
	baz=236,SNR=25						
M04C	Macdoel	86.63	40	P	P	04 35 04.9	+1.4
	baz=230,SNR=6.7						
L04D	Klamath Falls	86.64	39	P	P	04 35 04.6	+1.1
	baz=230						
NVAR	Mina Array Bea	86.68	44	P	P	04 35 04.8	+0.9
	comp=Z,14nm,0.6s,baz=222,slow=8.2,SNR=106						
NVAR	Mina Array Bea	86.68	44	P	P	04 35 03.7	-0.2
NV11	Mina Array Sit	86.77	44	IAmb	IAmb	04 35 06.8	
	comp=Z,11nm,0.7s						
PAHR	Pah Rah Range	86.79	43	IAmb	IAmb	04 35 06.8	
	comp=Z,20nm,0.8s						
KDAK	Kodiak Island	86.80	15	P	P	04 35 03.7	0.0
	comp=Z,7.6nm,0.8s,baz=336,slow=20,SNR=43						
KDAK	Kodiak Island	86.80	15	P	P	04 35 04.3	+0.6
KDAK	Kodiak Island	86.80	15	P	P	04 35 04.2	+0.6
NEE2	Needles Airpor	86.93	49	P	P	04 35 06.2	+1.3
	baz=235,SNR=5.5						
PDMCI	Parker Dam,Lak	87.00	49	P	P	04 35 06.6	+1.4
	baz=236,SNR=10						
I02D	Swisshome	87.02	37	P	P	04 35 06.4	+1.4
	baz=229						
I03D	Drain, OR	87.02	38	P	P	04 35 06.5	+1.5
	baz=229						
PLCA	Paso Flores	87.07	134	P	P	04 35 07.5	+1.8
	comp=Z,13nm,0.9s,baz=270,slow=24,SNR=8.4						
PLCA				PKKPbc	PKKPbc	04 52 53.5	-1.6
	comp=Z,2.0nm,0.9s,baz=131,slow=8.0,SNR=3.0						
PLCA	Paso Flores	87.07	134	P	P	04 35 03.7	-2.0
PLCA	Paso Flores	87.07	134	P	P	04 35 03.7	-2.0
TPNV	Topopah Spring	87.11	46	IAmb	IAmb	04 35 08.7	
	comp=Z,21nm,0.8s						
TPNV	Topopah Spring	87.11	46	P	P	04 35 07.0	+1.1
	baz=234,SNR=12						
KVN	Kaiserville	87.18	44	IAmb	IAmb	04 35 08.6	
	comp=Z,14nm,0.8s						
K04D	Chiloquin, OR	87.22	39	P	P	04 35 07.7	+1.4
	baz=230						
PBKT	Sadao Pong	87.25	290	IAmb	IAmb	04 35 09.6	
	comp=Z,16nm,0.9s						
ENH	Enshi	87.32	306	IAmb	IAmb	04 35 08.7	
	comp=Z,25nm,1.0s						
J04D	Umpqua Nationa	87.41	39	P	P	04 35 08.7	+1.5
	baz=230						
GYA	Guiyang	87.46	301	eP	P	04 35 08.8	+1.1
GYA				pP	pP	04 36 55.8	+0.5
GYA				PP	PP	04 38 44.5	+2.9
GYA				SKS	SKSac	04 44 49.3	+0.7
GYA				S	S	04 45 08.0	+0.6
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,110nm,5.7s						

Y14A	Wickenburg	87.57	50	IAmb	IAmb	04 35 10.0	
	comp=Z,9.0nm,0.7s						
EFI	East Falkland	87.59	148	P	P	04 35 07.8	0.0
EFI				pmax	pmax		
	comp=Z,82nm,0.7s						
EFI	East Falkland	87.59	148	P	P	04 35 07.8	0.0
MOD	Modoc Plateau	87.60	40	IAmb	IAmb	04 35 11.2	
	comp=Z,20nm,0.7s						
I04A	Tendick Farm,	87.60	38	P	P	04 35 08.9	+1.0
	baz=230						
H04D	Lebanon	87.89	37	P	P	04 35 10.5	+1.3
	baz=230						
J05D	Fort Rock, OR	87.93	39	P	P	04 35 11.1	+1.5
	baz=231						
TUC	Tucson	88.25	53	P	P	04 35 13.5	+2.3
TUC				pmax	pmax		
	comp=Z,23nm,0.9s						
BJT	Baijiatuau	88.29	317	P	P	04 35 12.0	+0.9
BJT				pmax	pmax		
	comp=Z,20nm,0.9s						
BJT	Baijiatuau	88.29	317	IAmb	IAmb	04 35 13.3	
	comp=Z,11nm,0.8s						
BJI	Beijing	88.30	317	P	P	04 35 12.3	+1.2
BJI				S	S	04 45 19.3	+5.0
BJI				pmax	pmax		
	comp=Z,14nm,0.9s						
H04A	Detroit Lake	88.30	37	IAmb	IAmb	04 35 13.5	
	comp=Z,23nm,0.8s						
R11A	Troy Canyon, C	88.35	45	P	P	04 35 12.8	+1.1
	baz=235						
I05D	Terrebonne, OR	88.54	38	P	P	04 35 13.9	+1.7
	baz=231						
CNPM	China Poot	88.69	14	IAmb	IAmb	04 35 14.8	
	comp=Z,28nm,1.0s						
F04D	Rainier, OR	88.76	36	P	P	04 35 15.0	+1.8
	baz=229						
319A	Douglas	88.84	54	IAmb	IAmb	04 35 16.9	
	comp=Z,23nm,0.8s						
WVOR	Wild Horse Val	88.90	41	P	P	04 35 15.3	+1.2
WVOR				pmax	pmax		
	comp=Z,31nm,1.3s						
WVOR	Wild Horse Val	88.90	41	IAmb	IAmb	04 35 15.9	
	comp=Z,13nm,0.8s						
X16A	Lo Mia Camp, P	88.92	51	IAmb	IAmb	04 35 18.3	
	comp=Z,17nm,0.8s						
G05D	Wamic, OR	89.13	37	P	P	04 35 16.5	+1.6
	baz=231						
HPIG		89.30	60	IAmb	IAmb	04 35 19.0	
	comp=Z,16nm,0.7s						
E04D	Cinebar	89.30	36	P	P	04 35 17.6	+1.9
	baz=230						
I07A	Izee	89.41	39	IAmb	IAmb	04 35 19.4	
	comp=Z,20nm,0.8s						
F05D	White Salmon	89.46	37	P	P	04 35 18.1	+1.6
	baz=230						
G06A	Carlson Farm,	89.50	38	IAmb	IAmb	04 35 19.3	
	comp=Z,18nm,1.1s						
J08A	Circle Bar Ran	89.56	40	IAmb	IAmb	04 35 18.9	
	comp=Z,13nm,0.7s						
WUAZ	Wupatki	89.56	50	IAmb	IAmb	04 35 20.4	
	comp=Z,9.8nm,0.7s						
WUAZ	Wupatki	89.56	50	P	P	04 35 18.6	+1.2
	baz=237						
D03D	Eldon	89.67	35	P	P	04 35 18.7	+1.4
	baz=229						
XAN	Xi'an	89.73	308	P	P	04 35 19.5	+1.5
XAN				pmax	pmax		
	comp=Z,19nm,1.0s						
XAN	Xi'an	89.73	308	IAmb	IAmb	04 35 20.2	
	comp=Z,16nm,0.8s						
LON	Longmire	89.83	36	IAmb	IAmb	04 35 21.0	
	comp=Z,7.6nm,0.8s						
CMAR	Chiang Mai Arr	89.84	291	P	P	04 35 20.2	+1.4
	comp=Z,3.3nm,0.7s,baz=132,slow=3.3,SNR=23						
CMAR				PP	PP	04 38 59.7	-0.6
	comp=Z,2.4nm,0.4s,baz=124,slow=6.1,SNR=7.9						
CMAR				PKKPbc	PKKPbc	04 52 49.0	+1.2
	comp=Z,1.8nm,0.7s,baz=288,slow=4.5,SNR=7.0						
CMAR	Chiang Mai Arr	89.84	291	P	P	04 35 18.2	-0.6
CMAR	Chiang Mai Arr	89.84	291	P	P	04 35 18.2	-0.6
KMI	Kunming	89.87	298	P	P	04 35 21.0	+1.9
KMI				sP	sP	04 37 54.8	-1.8
KMI				pmax	pmax		
	comp=Z,14nm,0.9s						
KMI				pmax	pmax		
	comp=Z,140nm,4.8s						
ELK	Elko	89.95	44	IAmb	IAmb	04 35 21.6	
	comp=Z,10nm,1.0s						
CHTO	Chiang Mai	90.00	291	P	P	04 35 19.0	-0.6
CHTO				pmax	pmax		
	comp=Z,13nm,1.0s						
CHTO	Chiang Mai	90.00	291	P	P	04 35 19.0	-0.6
CHTO				IAmb	IAmb	04 35 22.3	
	comp=Z,12nm,0.9s						
X18A	Snowflake	90.02	51	IAmb	IAmb	04 35 23.3	
	comp=Z,16nm,0.6s						
RC01	Rabbit Creek A	90.42	14	IAmb	IAmb	04 35 21.9	
	comp=Z,12nm,0.8s						
G08A	Pilot Rock	90.46	38	IAmb	IAmb	04 35 23.7	
	comp=Z,11nm,0.6s						
W18A	Petrified Fore	90.48	51	P	P	04 35 22.8	+1.1
	baz=238						
121A	Cookes Peak, D	90.52	54	P	P	04 35 23.3	+1.4
	baz=239						
B05A	Bryant	90.65	35	P	P	04 35 23.3	+1.5
	baz=230						
TLIG	Tlapa	90.66	71	IAmb	IAmb	04 35 25.9	
	comp=Z,16nm,0.7s						
E07A	Sunnyside	90.75	37	IAmb	IAmb	04 35 25.3	
	comp=Z,11nm,0.7s						
LTY	Liberty	90.75	36	IAmb	IAmb	04 35 23.9	
	comp=Z,9.4nm,0.7s						
HAWA	Hanford	90.82	37	IAmb	IAmb	04 35 25.4	
	comp=Z,7.6nm,0.7s						
GLI	Glacier Island	90.85	16	IAmb	IAmb	04 35 24.1	
	comp=Z,14nm,0.8s						
KNK	Knik Glacier	91.00	15	IAmb	IAmb	04 35 24.7	
	comp=Z,12nm,0.8s						
PMR	Palmer	91.00	14	IAmb	IAmb	04 35 24.5	
	comp=Z,7.3nm,0.7s						
BMO	Blue Mountains	91.13	39	IAmb	IAmb	04 35 26.9	
	comp=Z,7.5nm,0.7s						
MFID	Camas Ranch	91.14	41	IAmb	IAmb	04 35 27.0	
	comp=Z,9.8nm,0.8s						
DUG	Dugway, Tooele	91.17	45	P	P	04 35 26.0	+1.3
DUG				pmax	pmax		
	comp=Z,18nm,1.6s						
DUG	Dugway, Tooele	91.17	45	IAmb	IAmb	04 35 27.0	
	comp=Z,8.1nm,0.7s						
DUG	Dugway, Tooele	91.17	45	P	P	04 35 25.3	+0.6
	baz=236						
SEY	Seymchan	91.32	348	⇑*i*P	P	04 35 24.0	-0.6
D08A	Wollman Farm,	91.56	37	IAmb	IAmb	04 35 30.1	
	comp=Z,9.1nm,0.6s						
HHC	Hu-ho-hao-te	91.64	315	*e*P	P	04 35 28.0	+1.2
HHC				S	S	04 45 48.5	+3.8
HHC				pmax	pmax		
	comp=Z,70nm,1.2s						
HHC				pmax	pmax		
	comp=Z,300nm,6.9s						
F10A	Beach Ranch, E	91.84	39	IAmb	IAmb	04 35 30.1	
	comp=Z,13nm,0.8s						
MNTX	Cornudas Mount	91.87	56	IAmb	IAmb	04 35 32.3	
	comp=Z,8.0nm,0.8s						
MNTX	Cornudas Mount	91.87	56	P	P	04 35 28.8	+0.8
	baz=240						
CD2	Chengdu	91.89	304	P	P	04 35 30.0	+1.9
TX31	Lajitas Ar. Si	92.01	58	IAmb	IAmb	04 35 31.7	
	comp=Z,6.5nm,0.8s						
TX32	Lajitas Array	92.01	58	IAmb	IAmb	04 35 31.7	
	comp=Z,6.7nm,0.8s						
TXAR	Lajitas Array	92.01	58	P	P	04 35 30.0	+1.3
	comp=Z,6.5nm,0.7s,baz=213,slow=6.3,SNR=52						
TXAR				PKKPbc	PKKPbc	04 52 44.1	+1.2
	comp=Z,0.3nm,0.7s,baz=104,slow=5.3,SNR=3.7						
TXAR	Lajitas Array	92.01	58	P	P	04 35 27.9	-0.9
TXAR	Lajitas Array	92.01	58	P	P	04 35 27.9	-0.9
B08A	Colville Reser	92.14	36	IAmb	IAmb	04 35 30.2	
	comp=Z,6.0nm,0.8s						
BALM	Baldy	92.21	18	IAmb	IAmb	04 35 29.9	
	comp=Z,4.2nm,0.6s						
C09A	Chrisman Ranch	92.36	37	IAmb	IAmb	04 35 33.5	
	comp=Z,6.4nm,0.7s						
KTH	Kantishna Hill	92.38	13	IAmb	IAmb	04 35 30.2	
	comp=Z,7.3nm,0.9s						
BARN	Barnard Glacie	92.41	18	IAmb	IAmb	04 35 31.8	
	comp=Z,7.2nm,0.8s						
TRF	Thorofare Moun	92.41	13	IAmb	IAmb	04 35 30.5	
	comp=Z,16nm,0.7s						
MVCO	Mesa Verde	92.42	49	P	P	04 35 31.5	+0.8
	baz=239						
PV05	Paradox Valley	92.47	48	IAmb	IAmb	04 35 35.0	
	comp=Z,6.5nm,0.6s						
PV17	East Wray Mesa	92.67	48	IAmb	IAmb	04 35 39.8	
	comp=Z,6.6nm,0.8s						
RND	Reindeer	92.67	14	IAmb	IAmb	04 35 32.1	
	comp=Z,9.5nm,0.7s						
PV20	West Nyswonger	92.69	48	IAmb	IAmb	04 35 34.2	
	comp=Z,6.4nm,0.6s						
ANMO	Albuquerque	92.70	52	P	P	04 35 30.6	-1.3
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ANMO	Albuquerque	92.70	52	P	P	04 35 30.6	-1.3
ANMO	Albuquerque	92.70	52	P	P	04 35 32.4	+0.4
	baz=240						
PV16	Nyswonger Mesa	92.71	48	IAmb	IAmb	04 35 40.0	
	comp=Z,5.4nm,0.6s						
PV23	Carpenter Ridg	92.72	48	IAmb	IAmb	04 35 34.9	
	comp=Z,11nm,0.6s						
HWUT	Hardware Ranch	92.73	44	IAmb	IAmb	04 35 33.9	
	comp=Z,11nm,0.7s						
PV11	David Mesa, Pa	92.73	48	IAmb	IAmb	04 35 37.2	
	comp=Z,4.6nm,0.6s						
PV04	Paradox Valley	92.76	48	IAmb	IAmb	04 35 35.0	
	comp=Z,8.9nm,0.9s						
PV02	Paradox Valley	92.78	49	IAmb	IAmb	04 35 34.3	
	comp=Z,6.1nm,0.7s						
PV12	Saucer Basin,	92.79	48	IAmb	IAmb	04 35 36.9	
	comp=Z,8.3nm,0.7s						
PV21	Cone Mtn., Par	92.80	48	IAmb	IAmb	04 35 38.3	
	comp=Z,8.8nm,0.6s						
PV01	Paradox Valley	92.85	49	IAmb	IAmb	04 35 34.5	
	comp=Z,6.6nm,0.9s						
MCK	McKinley	92.94	14	IAmb	IAmb	04 35 34.4	
	comp=Z,6.6nm,0.7s						
PV15	Paradox Valley	93.02	49	IAmb	IAmb	04 35 35.5	
	comp=Z,7.1nm,0.9s						
AHID	Auburn Hatcher	93.65	44	IAmb	IAmb	04 35 38.8	
	comp=Z,6.2nm,0.6s						
S22A	4UR Ranch, Cre	93.84	50	P	P	04 35 37.7	+0.5
	baz=240						
HDA	Harding Lake	93.96	14	IAmb	IAmb	04 35 37.5	
	comp=Z,7.1nm,0.6s						
BCAR	Beaver Creek A	94.04	17	P	P	04 35 35.5	-1.7
IMAR	Indian Mountai	94.07	11	P	P	04 35 35.9	-1.3
O20A	White River Ci	94.10	47	IAmb	IAmb	04 35 40.2	
	comp=Z,8.7nm,0.7s						
O20A	White River Ci	94.10	47	P	P	04 35 38.5	+0.3
	baz=239						
REDW	Red Top Meadow	94.12	43	IAmb	IAmb	04 35 42.1	
	comp=Z,5.9nm,0.8s						
SNOW	Snow King Moun	94.23	43	IAmb	IAmb	04 35 41.5	
	comp=Z,9.3nm,0.7s						
ILAR	Eielson Array	94.29	14	P	P	04 35 37.2	-0.9
	comp=Z,1.6nm,0.6s,baz=221,slow=5.3,SNR=45						
ILAR				PP	PP	04 39 32.4	-1.6
	comp=Z,2.2nm,1.1s,baz=226,slow=7.1,SNR=5.2						
ILAR				PKKPbc	PKKPdf	04 52 37.4	-0.4
	comp=Z,1.0nm,0.8s,baz=135,slow=4.9,SNR=8.1						
ILAR	Eielson Array	94.29	14	P	P	04 35 37.4	-0.8
ILAR	Eielson Array	94.29	14	P	P	04 35 37.4	-0.8
LZH	Lanzhou	94.35	308	*e*P	P	04 35 39.3	-0.1
LZH				pP	pP	04 37 27.5	-0.5
LZH				PP	PP	04 39 40.3	+5.1
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				pmax	pmax		
	comp=Z,290nm,5.1s						
BILL	Bilibino	94.38	355	⇑*i*P	P	04 35 40.5	+2.0
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SMCO	Snowmass	94.46	48	IAmb	IAmb	04 35 43.8	
	comp=Z,7.3nm,0.7s						
FLWY	Flagg Ranch	94.60	43	IAmb	IAmb	04 35 43.1	
	comp=Z,5.6nm,0.8s						
PDAR	Pinedale Array	94.61	44	P	P	04 35 40.1	-0.4
	comp=Z,1.2nm,0.6s,baz=201,slow=2.9,SNR=15						
PDAR				PP	PP	04 39 34.7	-2.5
	comp=Z,2.3nm,1.2s,baz=249,slow=4.1,SNR=5.3						
PDAR	Pinedale Array	94.61	44	P	P	04 35 40.4	-0.1
SDCO	Great Sand Dun	94.75	50	P	P	04 35 42.2	+0.9
	baz=241						
MSTX	Muleshoe	94.88	55	P	P	04 35 42.2	+0.4
	baz=242						
JCT	Junction City	95.51	59	IAmb	IAmb	04 35 47.8	
	comp=Z,5.8nm,0.7s						
JCT	Junction City	95.51	59	P	P	04 35 45.4	+0.8
	baz=243						
Q24A	Divide	95.59	49	P	P	04 35 45.9	+0.7
	baz=241						
EGAK	Eagle	95.61	16	IAmb	IAmb	04 35 47.3	
	comp=Z,6.6nm,1.1s						
ISCO	Idaho Springs	95.68	48	P	P	04 35 46.2	+0.7
ISCO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ISCO	Idaho Springs	95.68	48	IAmb	IAmb	04 35 48.0	
	comp=Z,3.7nm,0.7s						
ISCO	Idaho Springs	95.68	48	P	P	04 35 46.2	+0.7
	baz=241						
N23A	Red Feather La	96.00	47	P	P	04 35 47.4	+0.5
	baz=241						
RLMT	Red Lodge	96.02	42	P	P	04 35 47.7	+0.9
	baz=239						
PHWY	Pilot Hill	96.51	47	IAmb	IAmb	04 35 51.5	
	comp=Z,3.5nm,0.7s						
BMAR	Burnt Mountain	97.06	13	P	P	04 35 49.2	-1.5
ULN	Ulaanbaatar	98.09	320	⇑*i*P	P	04 35 56.5	+0.6
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM	Songino Array	98.46	319	PP	PP	04 40 02.5	-3.7
	comp=Z,2.7nm,1.1s,baz=131,slow=6.2,SNR=8.3						
SONM				PKKPbc	PKKPbc	04 52 26.4	-0.2
	comp=Z,0.2nm,0.4s,baz=347,slow=0.7,SNR=3.6						
RSSD	Black Hills	98.78	45	P	P	04 36 00.5	+1.3
RSSD				pmax	pmax		
	comp=Z,8.0nm,1.5s						
INK	Inuvik	100.28	16	P	Pdif	04 36 05.4	+0.5
	comp=Z,1.0nm,0.8s,baz=300,slow=6.1,SNR=3.1						
INK				PKKPbc	PKKPbc	04 52 22.7	+0.8
	comp=Z,1.2nm,0.8s,baz=192,slow=10,SNR=3.5						
ZAK	Zakamensk	101.47	321	*e*P	Pdif	04 36 13.6	+2.8
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
LPAZ	La Paz	101.95	115	P	Pdif	04 36 13.5	-0.9
	comp=Z,1.0nm,0.8s,baz=233,slow=5.1,SNR=2.9						
YKA	Yellowknife Ar	102.56	26	P	Pdif	04 36 14.8	-0.5
	comp=Z,0.2nm,0.6s,baz=243,slow=3.8,SNR=3.4						
YKA				PP	PKiKP	04 40 33.4	+0.2
	comp=Z,1.5nm,1.0s,baz=232,slow=6.9,SNR=9.5						
YKA				PKKPbc	PKKPbc	04 52 14.6	-0.6
	comp=Z,0.6nm,0.6s,baz=48,slow=2.6,SNR=12						
MKAR	Makanchi Array	113.28	312	PKiKP	PKiKP	04 40 52.8	-1.1
	comp=Z,0.6nm,0.5s,baz=135,slow=1.2,SNR=7.7						
MKAR				PP	PP	04 41 51.1	-2.7
	comp=Z,1.1nm,0.7s,baz=112,slow=7.3,SNR=4.2						
MKAR				PKKPbc	PKKPbc	04 51 40.4	-0.8
	comp=Z,1.6nm,0.6s,baz=275,slow=2.9,SNR=15						
ZALV	Zalesovo Beam	113.34	320	PKiKP	PKiKP	04 40 52.8	-0.8
	comp=Z,1.2nm,0.5s,baz=140,slow=1.2,SNR=4.3						
ZALV				PKKPbc	PKKPbc	04 51 41.5	+0.4
	comp=Z,0.4nm,0.3s,baz=247,slow=4.8,SNR=3.6						
D50A	G1974 Best Tow	115.72	48	P	PKPdf	04 40 57.1	-1.3
	baz=259						
O57A	Amberson	115.80	56	P	PKPdf	04 40 58.4	-0.4
	baz=257						
KSH	Kashi	116.08	303	PKP	PKPdf	04 40 58.3	-1.3
KSH				PP	PP	04 42 16.5	+2.9
KSH				sPKP		04 43 38.0	
KSH				PKS	PKSdf	04 44 34.0	-2.3
KSH				SKKS		04 48 20.8	
KSH				AMB	AMB		
	comp=Z,270nm,5.3s						
KSH				LR	LR		
	comp=Z,93nm,8.3s						
KSH				LR	LR		
	comp=Z,110nm,9.7s						
KSH				LR	LR		
	comp=Z,210nm,11.4s						
G53A	Haliburton	116.14	51	P	PKPdf	04 40 58.4	-1.0
	baz=259						
O58A	Lewisberry	116.31	56	P	PKPdf	04 40 59.0	-0.8
	baz=257						
E52A	Mattawa	116.34	49	P	PKPdf	04 40 58.6	-1.0
	baz=259						
KURK	Kurchatov	116.45	316	⇓*i*PKIKP	PKPdf	04 40 58.7	-1.0
KURK	Kurchatov	116.45	316		PKPdf	04 40 58.8	-0.9
KURBB	Kurchatov Arra	116.49	316	PKP	PKPdf	04 40 58.9	-0.9
	comp=Z,1.8nm,0.6s,baz=104,slow=2.2,SNR=7.4						
KURBB				PP	PP	04 42 08.1	-7.9
	comp=Z,0.5nm,0.3s,baz=98,slow=6.4,SNR=5.6						
KURBB				SKP		04 43 48.8	
	comp=Z,2.1nm,0.7s,baz=120,slow=1.6,SNR=4.9						
KURBB				PKKPbc	PKKPbc	04 51 31.4	+1.1
	comp=Z,2.1nm,0.6s,baz=279,slow=4.2,SNR=8.8						
ALGO	Algonquin Park	116.70	50	P	PKPdf	04 40 59.0	-1.4
	baz=259						
E53A	Dumoine, Ponti	117.04	49	P	PKPdf	04 40 59.8	-1.2
	baz=260						
D53A	Lac Vacive, Po	117.14	48		PKPdf	04 40 59.7	-1.5
D53A	Lac Vacive, Po	117.14	48	P	PKPdf	04 41 00.0	-1.1
	baz=260						
K57A	Scipio Center	117.16	53	P	PKPdf	04 40 60.0	-1.4
	baz=259						
E54A	Lac Daplat, Po	117.37	49	P	PKPdf	04 41 00.5	-1.2
	baz=260						
MATQ	Matagami	117.61	46	P	PKPdf	04 41 00.4	-1.6
	baz=262						
M59A	Waymart	117.72	55	P	PKPdf	04 41 01.3	-1.2
	baz=259						
AAK	Ala-Archa	117.83	306	PKKPbc	PKKPbc	04 51 26.2	+0.6
	comp=Z,4.0nm,0.6s,baz=197,slow=4.6,SNR=11						
D54A	Lac Fusel, La	117.85	49	P	PKPdf	04 41 00.9	-1.6
	baz=261						
BDFB	Brasilia	117.91	127	PKP	PKPdf	04 41 02.4	-1.4
	comp=Z,2.6nm,0.7s,baz=202,slow=5.1,SNR=5.9						
BDFB				SKP	SKPdf	04 43 53.0	+0.6
	comp=Z,0.8nm,0.5s,baz=236,slow=9.0,SNR=3.8						
LSQQ	Lebel-sur-Quev	117.93	46	P	PKPdf	04 41 01.1	-1.5
	baz=262						
I57A	Carthage	118.00	52	P	PKPdf	04 41 01.2	-1.7
	baz=260						
E55A	Montcerf-Lytto	118.15	49	P	PKPdf	04 41 01.8	-1.3
	baz=261						
J58A	Remsen	118.17	53	P	PKPdf	04 41 02.2	-1.1
	baz=260						
D55A	Sainte-Anne-du	118.63	49	P	PKPdf	04 41 02.7	-1.4
	baz=262						
G57A	Newington	118.67	51	P	PKPdf	04 41 03.1	-1.1
	baz=261						
J59A	Piesco	118.74	53	P	PKPdf	04 41 03.2	-1.2
	baz=260						
E56A	St. Veronique	118.86	49	P	PKPdf	04 41 03.0	-1.5
	baz=262						
LONY	Lake Ozonia	118.88	52	P	PKPdf	04 41 02.8	-1.8
	baz=261						
D56A	ZEC Mazanza, M	119.12	49	P	PKPdf	04 41 03.9	-1.1
	baz=262						
H58A	Gabriels	119.13	52	P	PKPdf	04 41 04.1	-1.1
	baz=261						
SJG	San Juan	119.23	83	PKIKP	PKPdf	04 41 04.5	-1.5
SJG	San Juan	119.23	83		PKPdf	04 41 04.5	-1.5
I59A	Olmsteadville	119.25	53	P	PKPdf	04 41 04.3	-1.1
	baz=261						
PDPR	Patillas Dam,	119.31	83		PKPdf	04 41 04.1	-2.1
G58A	Ormstown	119.33	51	P	PKPdf	04 41 04.2	-1.2
	baz=262						
GCPR	Guaynabo City	119.36	83		PKPdf	04 41 04.4	-1.9
E57A	Chemin Saint G	119.45	50	P	PKPdf	04 41 04.4	-1.2
	baz=262						
J60A	Lant Hill Farm	119.49	53	P	PKPdf	04 41 04.9	-0.9
	baz=261						
I60A	Shoreham	119.67	53	P	PKPdf	04 41 05.0	-1.1
	baz=261						
D57A	Chemin Vers le	119.70	49	P	PKPdf	04 41 04.8	-1.3
	baz=263						
L61B	Northampton	119.90	54	P	PKPdf	04 41 05.5	-1.1
	baz=261						
E58A	La Victoria	120.04	50	P	PKPdf	04 41 05.7	-1.1
	baz=263						
J61A	Chester	120.13	53	P	PKPdf	04 41 06.2	-0.8
	baz=262						
BOSA	Boshof	120.21	206	PKP	PKiKP	04 41 08.4	+0.3
	comp=Z,4.1nm,0.7s,baz=193,slow=2.3,SNR=5.7						
BOSA				PKKPbc	PKKPbc	04 51 16.5	-1.1
	comp=Z,3.7nm,0.8s,baz=346,slow=4.4,SNR=5.6						
D58A	Chemin du LacG	120.40	49	P	PKPdf	04 41 06.4	-1.1
	baz=263						
LATQ	La Tuque	120.50	49	P	PKPdf	04 41 06.7	-0.9
	baz=264						
G60A	Masonville	120.53	51	P	PKPdf	04 41 06.7	-1.0
	baz=263						
LBNH	Lisbon	120.70	52	P	PKPdf	04 41 07.9	-0.3
	baz=262						
H61A	Lyndonville	120.74	52	P	PKPdf	04 41 07.7	-0.5
	baz=263						
K63A	Dunstable	120.78	54	P	PKPdf	04 41 08.0	-0.3
	baz=262						
KKAR	Karatay Array	120.79	306	PKIKP	PKPdf	04 41 06.7	-1.7
KKAR	Karatay Array	120.79	306		PKPdf	04 41 06.7	-1.7
F60A	Warwick	120.90	50	P	PKPdf	04 41 07.8	-0.7
	baz=263						
D59A	Saint-Raymond	121.10	49	P	PKPdf	04 41 08.1	-0.6
	baz=264						
H62A	Milan	121.30	52	P	PKPdf	04 41 08.5	-0.7
	baz=263						
E60A	Ste Agathe de	121.30	50	P	PKPdf	04 41 08.4	-0.8
	baz=264						
F61A	St Evariste	121.57	50	P	PKPdf	04 41 09.3	-0.5
	baz=264						
I63A	Otisfield	121.64	53	P	PKPdf	04 41 09.4	-0.5
	baz=263						
D60A	Saint Jean D’O	121.71	49	P	PKPdf	04 41 09.2	-0.7
	baz=265						
BVAR	Borovoye Array	121.76	318	PP	PP	04 42 49.0	-2.6
	comp=Z,2.4nm,0.8s,baz=101,slow=7.7,SNR=4.1						
G62A	West of Eustis	121.81	51	P	PKPdf	04 41 09.4	-0.8
	baz=264						
BRVK	Borovoye	121.83	318	⇑*i*PKIKP	PKiKP	04 41 11.3	+1.1
E61A	Lac Etchemin	121.96	50	P	PKPdf	04 41 10.0	-0.5
	baz=265						
D61A	St Aubert, Com	122.24	49	P	PKPdf	04 41 10.0	-1.0
	baz=265						
I64A	Boothbay	122.31	53	P	PKPdf	04 41 10.6	-0.6
	baz=264						
G63A	Kingsbury	122.44	52	P	PKPdf	04 41 10.8	-0.6
	baz=264						
H64A	Troy	122.68	52	P	PKPdf	04 41 11.2	-0.7
	baz=264						
PKME	Peaks-Kenny Pk	122.69	51	P	PKPdf	04 41 11.3	-0.6
	baz=265						
F63A	Nahmakanta, Br	122.86	51	P	PKPdf	04 41 11.2	-1.1
	baz=265						
D62A	Allapoint, All	123.00	49	P	PKPdf	04 41 11.4	-1.0
	baz=266						
G64A	Maxfield	123.06	52	P	PKPdf	04 41 12.0	-0.6
	baz=265						
E63A	Oxbow	123.39	50	P	PKPdf	04 41 12.2	-1.0
	baz=266						
F64A	Sherman	123.40	51	P	PKPdf	04 41 12.3	-0.9
	baz=266						
D63A	Stockholm	123.64	49	P	PKPdf	04 41 12.2	-1.5
	baz=267						
E64A	Bridgewater	123.80	50	P	PKPdf	04 41 12.7	-1.3
	baz=266						
G65A	Princeton	123.90	52	P	PKPdf	04 41 13.1	-1.1
	baz=266						
SCHQ	Schefferville	124.49	40	PKP	PKPdf	04 41 14.0	-1.0
	comp=Z,6.3nm,0.7s,baz=251,slow=3.2,SNR=7.4						
BATG	Bathurst New B	125.05	49		PKPdf	04 41 15.7	-0.6
KBS	Kingsbay	126.82	357	*e*PKPdf	PKiKP	04 41 19.7	+0.3
SPA0	Spitsbergen Ar	127.28	356	*e*PKPdf	PKiKP	04 41 20.1	-0.3
SPITS	Spitsbergen Ar	127.28	356	PKP	PKPdf	04 41 19.5	-0.3
	comp=Z,4.0nm,0.5s,baz=69,slow=4.7,SNR=14						
ILULI	Ilulissat	127.79	20	PKIKP	PKPdf	04 41 20.4	-0.5
ILULI	Ilulissat	127.79	20		PKPdf	04 41 20.4	-0.5
ABKAR	Akbulak array	128.39	313		PKPdf	04 41 22.4	-0.3
AKTO	Aktyubinsk	129.53	315	PKP	PKPdf	04 41 24.8	0.0
	comp=Z,3.6nm,0.6s,baz=64,slow=4.8,SNR=5.9						
AKTO				SKPbc	SKPbc	04 44 01.6	+0.9
	comp=Z,4.5nm,0.8s,baz=112,slow=4.6,SNR=6.9						
GEYT	Alibeck	129.63	299	PKP	PKiKP	04 41 26.7	+0.4
	comp=Z,3.2nm,0.7s,baz=220,slow=3.9,SNR=5.5						
GEYT				SKPbc	SKPbc	04 44 02.9	+1.4
	comp=Z,26nm,0.9s,baz=248,slow=0.8,SNR=26						
LSZ	Lusaka	130.26	217	PKIKP	PKPdf	04 41 26.0	-1.5
LSZ	Lusaka	130.26	217		PKPdf	04 41 26.0	-1.5
KIRV	Kirov	132.53	327	SKPbc	SKPab	04 44 12.3	-0.7
	comp=Z,53nm,0.8s,baz=113,slow=0.8,SNR=12						
PRGR	Permogore	133.00	332	*e*PKIKP	PKiKP	04 41 32.1	-0.2
PRGR				*e*		04 44 12.2	
PRGR				pmax	pmax		

	comp=Z,11nm,1.0s						
ARCES	ARCESS Array B	133.94	348	PKhKP	PKPpre	04 41 25.1	
	comp=Z,11nm,1.1s,baz=0.6,slow=11,SNR=12						
ARCES				PKP	PKiKP	04 41 34.3	+0.3
	comp=Z,3.0nm,0.5s,baz=64,slow=1.0,SNR=11						
ARCES				SKPbc	SKPbc	04 44 15.6	+0.2
	comp=Z,26nm,0.9s,baz=45,slow=3.6,SNR=15						
ARCES	ARCESS Array B	133.94	348	PKIKP	PKiKP	04 41 33.4	-0.6
ARCES	ARCESS Array B	133.94	348		PKiKP	04 41 33.4	-0.6
ARE0	ARCESS Array S	133.94	348	*e*PKPdf	PKiKP	04 41 33.9	-0.1
KMBO	Kilima Mbogo	134.57	239	PKP	PKiKP	04 41 38.2	+0.9
	comp=Z,1.0nm,0.4s,baz=41,slow=4.6,SNR=3.5						
KMBO				SKPab	SKPab	04 44 21.7	-2.1
	comp=Z,7.2nm,0.7s,baz=52,slow=4.7,SNR=17						
KTK1	Kautokeino	134.82	348	*e*PKPdf	PKPdf	04 41 34.5	+0.2
TRO	Tromso	134.98	351	*e*PKPdf	PKPdf	04 41 34.5	0.0
KLMR	Klimovskoe	135.94	333	*e*PKIKP	PKPdf	04 41 33.3	-3.2
KLMR				*e*		04 44 19.8	
KLMR				pmax	pmax		
	comp=Z,30nm,1.7s						
KLMR	Klimovskoe	135.94	333	*e*PKPdf	PKPdf	04 41 33.4	-3.1
KLMR				AMP		04 41 39.9	
	comp=Z,30nm,1.7s						
KLMR				*e*PP	sPKPdf	04 44 19.9	0.0
STEI	Steigen	137.08	351	*e*PKPdf	PKPdf	04 41 38.5	+0.1
VRH	Novokhopyorsk	139.37	319	*e*PKIKP	PKPdf	04 41 44.3	+1.2
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
FINES	FINESS Array B	140.37	340	PKhKP	PKPpre	04 41 37.4	
	comp=Z,2.9nm,0.5s,baz=37,slow=1.0,SNR=15						
FINES				PKP	PKPdf	04 41 45.2	+0.6
	comp=Z,2.5nm,0.5s,baz=56,slow=3.4,SNR=8.4						
FINES				SKPbc	SKPbc	04 44 34.5	+0.2
	comp=Z,13nm,0.8s,baz=66,slow=4.6,SNR=9.7						
FINES	FINESS Array B	140.37	340	PKIKP	PKPdf	04 41 44.6	0.0
FINES	FINESS Array B	140.37	340		PKPdf	04 41 44.6	0.0
LPSR	Galich'ya Gora	140.38	323	*e*PKIKP	PKPdf	04 41 44.0	-0.9
LPSR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
VSR	Storozhevoye	140.84	320	*e*PKIKP	PKiKP	04 41 49.3	+0.7
VSR				*e*		04 44 35.7	
VSR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MOL	Molde	143.15	354	*e*PKPdf	PKPbc	04 41 47.5	0.0
DOMB	Dombas	143.50	352	*e*PKPbc	PKPab	04 41 48.2	-0.3
NB2	NORSAR Subarra	144.18	350	PKP	PKPbc	04 41 50.4	-0.5
	comp=Z,9.3nm,0.6s,baz=21,slow=4.1						
NB2	NORSAR Subarra	144.18	350	PKP	PKPbc	04 41 50.4	-0.5
	baz=21,slow=4.1						
NOA	NORSAR Array B	144.18	350	PKP	PKPbc	04 41 50.0	-0.9
	comp=Z,14nm,0.7s,baz=20,slow=2.5,SNR=81						
FOO	Floro	144.33	355	*e*PKPbc	PKPbc	04 41 51.0	-0.2
NC602	NORSAR Array S	144.42	350	*e*PKPbc	PKPbc	04 41 51.0	-0.5
HFS	Hagfors	144.61	348	PKP	PKPdf	04 41 51.4	-0.8
	comp=Z,23nm,0.6s,baz=64,slow=3.4,SNR=80						
HYA	Hoyanger	144.66	354	*e*PKPbc	PKPdf	04 41 51.7	-0.4
SUE	Sulen	144.88	356	*e*PKPbc	PKPbc	04 41 52.8	-0.1
SKAR	Skarslia	144.92	352	*e*PKPbc	PKPdf	04 41 52.9	+0.2
ASK	Askoy	145.42	355	*e*PKPdf	PKPdf	04 41 53.6	+0.1
BER	Bergen	145.51	355	*e*PKPdf	PKPdf	04 41 53.6	0.0
KONO	Kongsberg	145.75	351	*e*PKPbc	PKPbc	04 41 55.3	-0.3
KONO	Kongsberg	145.75	351	PKIKP	PKPdf	04 41 54.2	+0.1
KONO	Kongsberg	145.75	351	PKPdf	PKPdf	04 41 54.2	+0.1
ODD1	Odda	145.86	354	*e*PKPbc	PKPbc	04 41 55.6	-0.3
BLS5	Blasjo	146.35	354	*e*PKPab	PKPab	04 41 59.5	0.0
AKASG	Malin Array Be	146.53	325	PKPbc	PKPbc	04 41 57.0	-1.1
	comp=Z,5.2nm,0.4s,baz=46,slow=3.9,SNR=30						
AKASG				pPKPbc	pPKPbc	04 43 52.0	+0.4
	comp=Z,3.8nm,0.8s,baz=50,slow=4.8,SNR=2.2						
AKASG				SKPbc	SKPbc	04 44 49.3	-0.1
	comp=Z,4.4nm,0.8s,baz=49,slow=2.6,SNR=4.9						
AKASG	Malin Array Be	146.53	325	PKIKP	PKPdf	04 41 55.3	-0.4
AKASG	Malin Array Be	146.53	325	PKPdf	PKPdf	04 41 55.3	-0.4
KMY	Karmoy	146.68	355	*e*PKPbc	PKPbc	04 41 57.8	-0.4
ASF	Jabal al Asfar	146.87	289	PKPbc	PKiKP	04 42 00.9	-0.8
	comp=Z,12nm,0.8s,baz=62,slow=3.2,SNR=8.8						
ASF				pPKPbc	pPKPab	04 43 54.6	+1.2
	comp=Z,3.4nm,0.8s,baz=190,slow=0.8,SNR=2.9						
STAV	Stavanger	146.91	354	*e*PKPbc	PKPbc	04 41 58.6	-0.2
SUW	Suwalki	147.06	334	*e*PKP	PKPbc	04 41 58.9	-0.5
SUW	Suwalki	147.06	334	*e*PKP2	PKPbc	04 41 58.9	-0.5
HOMB	Homborsund	147.24	351	*e*PKPbc	PKPbc	04 41 59.7	0.0
SNART	Snartemo	147.34	352	*e*PKPbc	PKPbc	04 41 60.0	0.0
BZK	Bozkurt	147.56	308	⇑P	PKiKP	04 42 03.1	+0.4
MMAI	Mount Meron Ar	148.10	291	PKPbc	PKiKP	04 42 03.8	-0.5
	comp=Z,9.0nm,0.4s,baz=72,slow=5.4,SNR=23						
MMAI				pPKPbc	pPKPbc	04 43 57.4	+0.5
	comp=Z,7.8nm,0.7s,baz=78,slow=4.5,SNR=4.9						
BR131	Keskin Array S	148.47	304		PKPbc	04 42 02.5	-1.2
BRTR	Keskin Array B	148.47	304	PKPbc	PKPbc	04 42 03.6	-0.1
	comp=Z,3.8nm,0.6s,baz=142,slow=5.1,SNR=25						
BRTR				pPKPbc	pPKPab	04 44 00.4	+1.0
	comp=Z,1.4nm,0.7s,baz=153,slow=3.2,SNR=2.3						
BRTR	Keskin Array B	148.47	304		PKPbc	04 42 02.4	-1.3
SORM	Soroca	148.47	322	⇑P	PKPbc	04 42 03.0	-0.2
SORM	Soroca	148.47	322	⇑PKP2	PKPbc	04 42 03.0	-0.2
EIL	Elat	148.51	285	PKPbc	PKiKP	04 42 05.0	-0.1
	comp=Z,12nm,0.8s,baz=345,slow=2.7,SNR=10						
EIL				pPKPbc	pPKPab	04 43 60.0	+0.3
	comp=Z,4.7nm,0.8s,baz=64,slow=3.5,SNR=2.1						
BSD	Bornholm Skovb	148.89	343	*i* P	PKPbc	04 42 03.7	-0.3
	comp=Z,4.0nm,0.4s						
ANTO	Ankara	149.06	305		PKPbc	04 42 03.9	-1.2
LEOM	Leova	149.43	319	⇑P	PKPbc	04 42 05.2	-0.4
BEL	Belsk	149.65	333	*e*PKP	PKiKP	04 42 06.4	-0.3
LVV	L'vov	149.68	328	*e*PKHKP	PKPpre	04 42 06.0	
TLCR		149.74	317	⇑P	PKPbc	04 42 06.3	-0.1
GKP	Gorka Klasztor	149.80	339	*e*PKP	PKPbc	04 42 06.3	+0.1
JURR	Jurilovca	149.90	316	⇑P	PKPbc	04 42 06.5	-0.2
LEF	Lefka	149.98	295	⇑P	PKiKP	04 42 07.8	-0.1
TOPG	Topolog	150.16	316	⇑P	PKPbc	04 42 07.7	+0.3
CFR	Carcaliu	150.16	317	⇑P	PKPbc	04 42 07.5	+0.1
CFR	Carcaliu	150.16	317	⇑PKIKP	PKPbc	04 42 07.5	+0.1
TESR	Tescani	150.34	320	⇑P	PKPbc	04 42 07.7	-0.1
TIRR	Tirgusor	150.34	316	⇑P	PKPbc	04 42 07.7	-0.1
TIRR	Tirgusor	150.34	316	⇑PKIKP	PKPbc	04 42 07.7	-0.1
BIZ	Bicaz	150.40	322	⇑P	PKiKP	04 42 08.6	+0.2
KWP	Kalwaria Pacla	150.43	329	*e*PKP	PKiKP	04 42 08.2	-0.2
KWP	Kalwaria Pacla	150.43	329	*e*PKIKP	PKiKP	04 42 08.2	-0.2
MFTR	Murfatlar	150.46	315	⇑P	PKiKP	04 42 09.0	+0.4
BURAR	Bucovina Array	150.49	323	⇑P	PKiKP	04 42 09.3	+0.6
BURAR	Bucovina Array	150.49	323	⇑PKIKP	PKiKP	04 42 09.3	+0.6
BURAR	Bucovina Array	150.49	323		PKPbc	04 42 07.0	-1.2
MANR	Mangalia	150.53	314	⇑P	PKiKP	04 42 09.2	+0.5
HARR	Harsova	150.53	316	⇑P	PKiKP	04 42 09.2	+0.4
HARR	Harsova	150.53	316	⇑PKIKP	PKiKP	04 42 09.2	+0.4
VRI	Vrincioaia	150.65	319	⇑P	PKPbc	04 42 08.2	-0.3
VRI	Vrincioaia	150.65	319	⇑PKIKP	PKPbc	04 42 08.2	-0.3
EKA	Eskdalemuir Ar	150.75	3	PKP	PKPdf	04 42 01.6	-0.8
	comp=Z,1.7nm,0.8s,baz=341,slow=1.8,SNR=5.9						
EKA				PKPbc	PKPbc	04 42 07.6	-0.8
	comp=Z,6.8nm,0.5s,baz=332,slow=2.2,SNR=56						
BISRR	Bisoca	150.83	319	⇑P	PKiKP	04 42 09.8	+0.3
OZUR		151.07	320	⇑P	PKiKP	04 42 09.8	-0.1
ISR	Istrita	151.16	318	⇑P	PKiKP	04 42 11.9	+1.8
ISR	Istrita	151.16	318	⇑PKIKP	PKiKP	04 42 11.9	+1.8
OJC	Ojcow	151.29	332	*e*PKP	PKPbc	04 42 09.9	0.0
OJC	Ojcow	151.29	332	PKIKP	PKPbc	04 42 09.3	-0.6
OJC	Ojcow	151.29	332	PKPbc	PKPbc	04 42 09.3	-0.6
MLR	Muntele Rosu	151.31	319	PKPbc	PKPbc	04 42 10.0	-0.2
	comp=Z,3.8nm,0.5s,baz=164,slow=3.0,SNR=8.9						
MLR				PKPab	PKPab	04 42 19.7	-0.8
	comp=Z,4.0nm,0.6s,baz=165,slow=19,SNR=5.6						
MLR				pPKPbc	pPKPbc	04 44 05.0	+0.1
	comp=Z,4.0nm,0.9s,baz=279,slow=3.8,SNR=1.9						
MLR	Muntele Rosu	151.31	319	⇑P	PKPbc	04 42 09.8	-0.4
MLR	Muntele Rosu	151.31	319	⇑PKIKP	PKPbc	04 42 09.8	-0.4
UZH	Uzhgorod	151.32	328	*i* PKIKP	PKiKP	04 42 10.6	+0.4
UZH				*e*		04 42 19.0	
UZH				*i*		04 44 02.5	
DOPR	Dopca	151.37	320	⇑P	PKiKP	04 42 10.7	+0.2
TRPA	Tarpa	151.54	327	⇑P	PKPbc	04 42 10.4	0.0
NIE	Niedzica	151.68	331	*e*PKP	PKiKP	04 42 12.2	+1.2
NIE	Niedzica	151.68	331	*e*PKIKP	PKiKP	04 42 12.2	+1.2
KSP	Ksiaz	152.15	337	*e*PKP	PKiKP	04 42 12.0	+0.1
KSP	Ksiaz	152.15	337	*e*PKIKP	PKiKP	04 42 12.0	+0.1
OKC	Ostrava-Krasne	152.26	334	⇑*e*PKP	PKiKP	04 42 12.1	-0.1
OKC	Ostrava-Krasne	152.26	334	*e*PKIKP	PKiKP	04 42 12.1	-0.1
OSTC	Ostas	152.41	337	⇑*e*PKP	PKiKP	04 42 12.8	+0.3
UPC	Upice	152.53	337	⇑*e*PKP	PKiKP	04 42 12.7	0.0
UPC	Upice	152.53	337	*e*PKIKP	PKiKP	04 42 12.7	0.0
DPC	Dobruska-Polom	152.55	336	⇑*e*PKP	PKiKP	04 42 13.2	+0.4
DPC	Dobruska-Polom	152.55	336	*e*PKIKP	PKiKP	04 42 13.2	+0.4
MORC	Moravsky Berou	152.55	334	PKIKP	PKPbc	04 42 12.2	-0.5
MORC	Moravsky Berou	152.55	334		PKPbc	04 42 12.2	-0.5
KRLC	Kraliky	152.60	335	⇑*e*PKP	PKiKP	04 42 13.1	+0.2
KRLC	Kraliky	152.60	335	*e*PKIKP	PKiKP	04 42 13.1	+0.2
ELND	Elena	152.69	315	⇑P	PKiKP	04 42 13.9	+0.6
CLL	Collm	152.81	341	⇑*i*PKPbc	PKiKP	04 42 13.9	+0.7
	comp=Z,14nm,0.7s						
CLL				*i* PKPab	PKPab	04 42 27.1	+0.6
	comp=Z,8.0nm,0.8s						
CLL				*e*pPKPab	pPKPab	04 44 15.0	-1.6
CLL				*e*		04 44 23.0	
CLL	Collm	152.81	341	PKIKP	PKPdf	04 42 05.1	-0.4
CLL	Collm	152.81	341	PKPdf	PKPdf	04 42 05.1	-0.4
BRG	Berggiesshubel	152.91	340	PKP	PKPbc	04 42 13.2	-0.2
	comp=Z,6.6nm,0.6s						
BRG				*e*pPKP	pPKPab	04 44 16.5	-0.5
	comp=Z,12nm,1.3s						
BRG	Berggiesshubel	152.91	340	PKIKP	PKPbc	04 42 13.2	-0.2
BRG				pmax	pmax		
	comp=Z,11nm,0.6s						
PVCC	Panska Ves	153.00	339	⇑*e*PKP	PKiKP	04 42 13.9	+0.2
PVCC	Panska Ves	153.00	339	*e*PKIKP	PKiKP	04 42 13.9	+0.2
VYHS	Vyhne	153.01	331	*e*PKIKP	PKPbc	04 42 13.1	-0.6
VYHS				*e*		04 42 28.3	
VYHS	Vyhne	153.01	331	*e*PKP	PKPbc	04 42 13.1	-0.6
VYHS				*e*		04 42 28.3	
GZR	Gura Zlata	153.18	322	⇑P	PKPbc	04 42 13.7	-0.5
GZR	Gura Zlata	153.18	322	⇑PKIKP	PKPbc	04 42 13.7	-0.5
SIRR	Siria	153.23	324	⇑P	PKPbc	04 42 11.4	-2.9
VRAC	Vranov	153.30	335	PKPbc	PKPbc	04 42 14.0	-0.3
	comp=Z,1.5nm,0.3s,baz=205,slow=6.4,SNR=1.8						
VRAC				PKPab	PKPab	04 42 29.8	+1.2
	comp=Z,2.9nm,0.3s,baz=81,slow=3.2,SNR=3.1						
VRAC	Vranov	153.30	335	PKIKP	PKPbc	04 42 14.0	-0.3
PRU	Pruhonice	153.47	338	⇑*e*PKP	PKPbc	04 42 14.5	-0.1
PRU	Pruhonice	153.47	338	*e*PKIKP	PKPbc	04 42 14.5	-0.1
VTS	Vitosha	154.51	316	⇑P	PKPab	04 42 36.2	+1.9
VTS	Vitosha	154.51	316	⇑PKP2	PKPab	04 42 36.2	+1.9
KHC	Kasperske Hory	154.53	338	*e*PKPDF	PKPdf	04 42 08.0	-0.1
KHC				⇑*e*PKP	PKPbc	04 42 17.0	0.0
KHC	Kasperske Hory	154.53	338	*e*PKIKP	PKPdf	04 42 08.0	-0.1
GERES	GERESS Array B	154.74	338	PKP	PKPdf	04 42 08.2	-0.3
	comp=Z,0.7nm,0.8s,baz=72,slow=4.3,SNR=4.6						
GERES				PKPbc	PKiKP	04 42 17.3	-0.1
	comp=Z,1.0nm,0.7s,baz=80,slow=1.5,SNR=6.2						
GERES	GERESS Array B	154.74	338	PKIKP	PKiKP	04 42 16.4	-1.0
GERES	GERESS Array B	154.74	338		PKPdf	04 42 07.3	-1.1
GERES					PKiKP	04 42 16.4	-1.0
IDI	Anoyia	156.35	299	PKPab	PKPab	04 42 43.2	+0.8
	comp=Z,11nm,0.7s,baz=9.6,slow=7.5,SNR=5.2						
DAVOX	Davos/Dischmat	157.78	341	PKP	PKPdf	04 42 12.5	-0.1
	comp=Z,0.8nm,0.5s,baz=342,slow=20,SNR=2.0						
DAVOX				PKPab	PKPab	04 42 49.1	+0.8
	comp=Z,2.5nm,0.5s,baz=158,slow=2.2,SNR=3.4						
LIC	Lamto	159.76	167	*e*PKIKP	PKPdf	04 42 16.3	+0.7
	comp=Z,22nm,0.8s						
LIC	Lamto	159.76	167	*e*PKP2	PKPab	04 42 58.4	+1.0
	comp=Z,72nm,1.0s						
KIC	Kosan Boka	159.95	168	*e*PKIKP	PKPdf	04 42 16.5	+0.7
	comp=Z,17nm,0.8s						
KIC	Kosan Boka	159.95	168	*e*PKP2	PKPab	04 42 59.3	+1.1
	comp=Z,33nm,0.9s						
TIC	Toumodi	160.17	167	*e*PKIKP	PKPdf	04 42 16.7	+0.6
	comp=Z,22nm,1.0s						
TIC	Toumodi	160.17	167	*e*PKP2	PKPab	04 43 00.1	+0.9
	comp=Z,18nm,0.7s						
DBIC	Dimbokro	160.23	167	PKP	PKPdf	04 42 15.9	-0.2
	comp=Z,3.1nm,0.6s,baz=152,slow=1.4,SNR=8.7						
DBIC				PKPab	PKPab	04 43 00.5	+1.1
	comp=Z,11nm,0.9s,baz=170,slow=6.0,SNR=11						
TOA0	Torodi Ar. Sit	166.93	190		PKPdf	04 42 20.7	-1.5
TOA0					PKPab	04 43 28.2	-0.6
TORD	Torodi Ar. Bea	166.93	190	PKP	PKPdf	04 42 21.6	-0.6
	comp=Z,3.5nm,0.7s,baz=312,slow=0.6,SNR=18						
TORD				PKPab	PKPab	04 43 29.0	+0.2
	comp=Z,9.8nm,0.7s,baz=174,slow=3.4,SNR=27						
MDT	Midelt	172.44	27	PKP	PKPdf	04 42 26.9	+1.8
	comp=Z,4.3nm,0.8s,baz=342,slow=6.4,SNR=4.2						
MDT				PKPab	PKPab	04 43 53.6	+0.5
	comp=Z,1.7nm,0.7s,baz=5.2,slow=6.6,SNR=4.4						

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*NEIC **26** 04:27:12.4±0.9, 13°.0N±0°.1×145°.9E±0°.1, h10^{km}±1^{km}, mb4.3/6, Error ellipse: s-maj=27.1km s-min=9.3km az=221.0*

*IDC **26** 04:27:17.3±5.2, 13°.68N×145°.78E, h0^{km}, mb4.1/5, mb1 4.1/5, mb1mx3.7/69, mbtmp4.1/5, MS3.8/1, Ms1 3.8/1, ms1mx3.2/51, Error ellipse: s-maj=101.1km s-min=22.8km az=148.0*

ISC 26 04:27:16.3±1.2**, 12°.8N**±0°.1×**145°.8E**±0°.1**, h43**^{km}**, n17, σ1**^{s}**.57**/18**, mb4.2**/8**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.18	310	Pn	Pn	04 27 36.8	+0.5
	47nm,0.3s,baz=294,slow=5.3,SNR=13						
GUMO				Sn	Sn	04 27 52.5	+1.2
	62nm,0.3s,baz=321,slow=16,SNR=9.8						
GUMO	Guam	1.18	310		Pn	04 27 35.3	-1.0
GUMO					Sn	04 27 50.2	-1.0
KRVT	Keravat (AS076	18.11	160	LR	LR	04 37 49.4	
	comp=Z,311nm,19.1s,baz=316,slow=33						
LBMI	Labuha	22.55	235	P	P	04 32 10.9	-2.0
MJAR	Matsushiro Arr	24.58	345	P	P	04 32 32.5	+0.1
	0.8nm,0.3s,baz=165,slow=10,SNR=1.8						
MJAR	Matsushiro Arr	24.58	345	P	P	04 32 30.8	-1.5
KSRS	Korea Array	29.27	330	P	P	04 33 13.4	-1.0
	0.5nm,0.4s,baz=149,slow=12,SNR=1.9						
SOEI	Soe	30.99	225	P	P	04 33 31.0	+1.0
SONM	Songino Array	47.87	325	P	P	04 35 51.2	+1.0
	1.2nm,0.9s,baz=126,slow=9.3,SNR=4.7						
SONM	Songino Array	47.87	325	P	P	04 35 50.9	+0.7
MK31	Makanchi Array	62.66	316	P	P	04 37 36.5	-0.1
MK31				IAmb	IAmb	04 37 41.4	
	comp=Z,2.0nm,1.1s						
MKAR	Makanchi Array	62.66	316	P	P	04 37 39.8	+3.2
	comp=Z,2.0nm,1.0s,baz=91,slow=8.6,SNR=8.9						
MKAR	Makanchi Array	62.66	316	P	P	04 37 36.5	-0.1
ZAA0	Zalesovo Array	62.77	324	P	P	04 37 36.6	-0.5
ZAA0				IAmb	IAmb	04 37 40.5	
	comp=Z,1.9nm,0.9s						
KURK	Kurchatov	65.75	320	P	P	04 37 56.5	-0.2
KURK				IAmb	IAmb	04 38 01.5	
	comp=Z,4.6nm,0.9s						
KURBB	Kurchatov Arra	65.79	320	P	P	04 38 00.5	+3.5
	comp=Z,2.8nm,0.8s,baz=102,slow=6.7,SNR=10						
IMAR	Indian Mountai	66.54	23	P	P	04 38 00.9	-0.6

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*NEIC **26** 04:38:45.5±1.1, 11°.4S±0°.1×114°.76E±0°.10, h49^{km}±10^{km}, mb4.3/5, Error ellipse: s-maj=17.2km s-min=10.6km az=223.0*

*IDC **26** 04:38:45.7±5.2, 11°.76S×114°.55E, h0^{km}, mb3.5/3, mb1 3.9/3, mb1mx3.5/56, mbtmp3.6/3, Error ellipse: s-maj=291.2km s-min=27.3km az=44.0*

*DJA **26** 04:38:46.2±0.6, 11°S±5°×11°5E±°, h10^{km}, M4.1/7, mb4.2/1, MLv4.0/7*

ISC 26 04:38:45.0±0.8**, 11°.33S**±0°.07×**114°.72E**±0°.06**, h35**^{km}**, n21, σ1**^{s}**.78**/25**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	Jajag, Banyuwa	2.90	349	P	Pn	04 39 29.7	+1.0
JAGI				S	Sn	04 40 02.1	-0.2
JAGI	Jajag, Banyuwa	2.90	349	Pn	Pn	04 39 29.8	+1.1
JAGI				Sn	Sn	04 40 02.1	-0.2
GMJI	Gumukmas	3.29	337	P	Pn	04 39 35.1	+1.0
GMJI				S	Sn	04 40 11.1	-0.9
PLAI	Plampang	3.90	51	P	Pn	04 39 44.3	+1.8
PLAI				S	Sn	04 40 15.0	-12
PWJI	Pagerwojo	4.37	319	P	Pn	04 39 50.3	+1.4
PWJI				S	Sn	04 40 35.8	-2.8
PCJI	Pacitan	4.68	311	P	Pn	04 39 54.8	+1.6
WBSI	Waikabubak, Su	4.89	70	P	Pn	04 39 58.6	+2.5
WBSI				S	Sn	04 40 50.4	-1.1
UGM	Wanagama	5.36	309	P	Pn	04 40 05.6	+3.1
UGM	Wanagama	5.36	309	Pn	Pn	04 40 03.7	+1.1
UGM					Sn	04 41 03.1	+0.1
CISI	Cisompet, Garu	7.78	298	Pn	Pn	04 40 37.0	+1.2
GIRL	Giralia	11.26	182	Pn	Pn	04 41 23.5	-0.1
PSA00	Pilbara Seismi	11.31	155	Pn	Pn	04 41 23.8	-0.4
MORW	Morawa	17.69	176	Pn	Pn	04 42 46.4	-2.3
MORW				IAmb	IAmb	04 42 58.1	
	comp=Z,8.4nm,1.1s						
WRA	Warramunga Arr	20.72	117	P	Pn	04 43 27.6	+2.4
	comp=Z,2.1nm,0.3s,baz=289,slow=12,SNR=8.6						
WRA	Warramunga Arr	20.72	117	P	P	04 43 20.5	-2.2
WB2	Warramunga Arr	20.73	117	P	P	04 43 22.8	0.0
ASAR	Alice Springs	21.99	126	P	P	04 43 40.5	+4.2
	comp=Z,0.5nm,0.5s,baz=300,slow=10,SNR=6.8						
DZM	Mont Dzumac	50.47	109	P	P	04 47 38.7	-1.2
MKAR	Makanchi Array	64.73	336	P	P	04 49 27.8	+8.1
	comp=Z,0.2nm,0.3s,baz=149,slow=6.9,SNR=5.8						
MKAR	Makanchi Array	64.73	336	P	P	04 49 19.7	0.0
ARSB	Arslanbob	64.99	326	P	P	04 49 20.9	-0.8
ARSB				IAmb	IAmb	04 49 23.8	
	comp=Z,10nm,1.1s						

ROM 26 04:39:45.5±0.1**, 43°.494N**±0°.004×**12°.387E**±0°.005**, h10**^{km}**, ML0.9**/3**, 4C, Error ellipse: s-maj=0.4km s-min=0.3km az=148.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATPI	Pietralunga -	0.04	165	P	Pg	04 39 47.6	+0.1
ATPI				S	Sg	04 39 48.9	0.0
BADI	Badiali	0.10	279	⇑P	Pg	04 39 48.5	+0.4
BADI				S	Sg	04 39 50.5	+0.5
BADI				AML	AML		
	comp=E,112μm,0.6s						
BADI				AML	AML		
	comp=N,125μm,0.3s						
ATVO	AVT- Monte Val	0.11	173	⇑P	Pg	04 39 48.9	+0.6
ATVO				S	Sg	04 39 51.2	+0.9
ATVO				AML	AML		
	comp=N,84μm,0.2s						
ATVO				AML	AML		
	comp=E,185μm,0.1s						
PIEI	Pieia	0.12	69	P	Pg	04 39 48.8	+0.5
PIEI				S	Sg	04 39 51.5	+1.2
PIEI				AML	AML		
	comp=E,70μm,0.9s						
PIEI				AML	AML		
	comp=N,74μm,0.3s						
ATMI	Monte Miggiano	0.18	208	P	Pg	04 39 50.2	+0.9
ATMI				S	Sg	04 39 53.4	+1.4
NARO	Abbazia di Nar	0.18	50	⇑P	Pg	04 39 49.8	+0.5
NARO				S	Sg	04 39 53.1	+1.0
PARC	Parchiule	0.19	325	P	Pg	04 39 50.1	+0.7
PARC				S	Sg	04 39 53.5	+1.3
PE3	Peglio	0.22	22	⇑P	Pg	04 39 51.1	+1.1
FRON	Frontone	0.25	84	P	Pg	04 39 51.1	+0.6
FRON				S	Sg	04 39 55.4	+1.5
FRON				AML	AML		
	comp=N,29μm,1.2s						
FRON				AML	AML		
	comp=E,26μm,1.4s						

DDA 26 04:40:10.5, 37°.01N×27°.42E, h9^{km}**, ML1.1, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BDRM	Kayabasi	0.06	19	*i* P	Pg	04 40 12.8	+0.2
BDRM				*i* S	Sg	04 40 13.9	-0.1
DAT	Datca	0.30	155	*i* P	Pg	04 40 17.1	+0.5
DAT				*i* S	Sg	04 40 21.8	+1.2
GCAM	G?zelcaml?	0.71	348	*i* P	Pg	04 40 24.4	+0.2
GCAM				*i* S	Sb	04 40 34.6	-0.3
GCAM				IAML		04 40 45.0	
	comp=N,27nm,1.3s						
GCAM				IAML		04 40 45.0	
	comp=E,18nm,0.7s						
AYDN	Tasoluk	0.75	29	*i* P	Pg	04 40 25.0	0.0
AYDN				*i* S	Sg	04 40 34.7	-0.1
AYDN				IAML		04 40 35.0	
	comp=E,12nm,1.0s						
AYDN				IAML		04 40 35.0	
	comp=N,7.6nm,0.2s						
TURN	Turunc	0.96	98	*i* P	Pg	04 40 24.0	-4.9
TURN				*i* S	Sg	04 40 35.8	-5.5
TURN				IAML		04 40 38.0	
	comp=N,6.9nm,0.6s						
TURN				IAML		04 40 40.0	
	comp=E,6.0nm,0.3s						

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*NEIC **26** 04:42:27.2±1.9, 16°.21N±0°.04×95°.75W±0°.05, h60^{km}±13^{km}, Error ellipse: s-maj=8.1km s-min=5.1km az=49.0*

*IDC **26** 04:42:27.8±2.0, 16°.90N×95°.97W, h0^{km}, mb3.8/8, mb1 4.1/10, mb1mx3.9/46, mbtmp3.9/10, ML3.6/1, MS3.3/1, Ms1 3.3/1, ms1mx2.9/34, Error ellipse: s-maj=39.3km s-min=11.2km az=8.0*

*MEX **26** 04:42:28.6±0.5, 16°.17N×95°.74W, h63^{km}±6^{km}, MD4.6*

ISC 26 04:42:27.6±1.0**, 16°.24N**±0°.03×**95°.75W**±0°.03**, h37**^{km}±1^{km}**, n90, σ1**^{s}**.49**/99**, mb4.2**/15**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	Huatulco	0.58	216	*e*P	Pn	04 42 39.5	0.0
HUIG				*e*S	Sn	04 42 48.7	+1.0
HUIG	Huatulco	0.58	216		Sn	04 42 48.7	+1.0
PANG	Puerto Angel	0.90	231	*e*P	Pn	04 42 43.8	+0.1
PANG				*i* S	Sn	04 42 55.6	+0.1
PANG	Puerto Angel	0.90	231		Sn	04 42 55.6	+0.1
CMIG	Matias Romero	1.19	44	Pg	Pn	04 42 48.3	+0.6
	110nm,0.3s,baz=234,slow=11,SNR=2992						
CMIG				Lg	Lg	04 43 03.1	
	511nm,0.3s,baz=253,slow=15,SNR=22						
CMIG	Matias Romero	1.19	44	*e*P	Pn	04 42 48.1	+0.5
CMIG				*i* S	Sn	04 43 03.8	+1.3
CMIG	Matias Romero	1.19	44		Pn	04 42 48.1	+0.5
OXBJ	Oaxaca	1.24	312	*e*P	Pn	04 42 49.4	+0.8
OXBJ				*e*S	Sn	04 43 05.3	+1.1
VHO	Vista Hermosa	1.25	311	*e*P	Pn	04 42 49.6	+0.9
VHO				*e*S	Sn	04 43 05.5	+1.0
PEIG	Puerto Escondi	1.36	260	*e*P	Pn	04 42 49.5	-0.6
YOIG	Yosondua	1.83	290	*e*P	Pn	04 42 57.7	+1.0
YOIG				*e*S	Sn	04 43 18.8	+0.1
TOIG	Toxpalan	2.23	326	*e*P	Pn	04 43 03.5	+1.4
TOIG				*i* S	Sn	04 43 29.6	+1.0
PNIG	Pinotepa	2.29	274	*e*P	Pn	04 43 02.7	-0.1
PNIG				*i* S	Sn	04 43 29.4	-0.4
PCIG		2.49	102	*e*P	Pn	04 43 05.4	-0.2
PCIG				*i* S	Sn	04 43 33.6	-1.2
PCIG		2.49	102		Pn	04 43 05.4	-0.2
HLIG	Huajuapan de L	2.52	309	*i* P	Pn	04 43 07.1	+0.9
HLIG				*i* S	Sn	04 43 36.2	+0.5
TGIG		2.58	78	*e*P	Pn	04 43 07.7	+0.9
TGIG				*i* S	Sn	04 43 37.0	0.0
TGIG		2.58	78		Pn	04 43 07.7	+0.9
TPIG	Tehuac#an	2.66	325	*i* P	Pn	04 43 08.6	+0.6
TPIG				*i* S	Sn	04 43 39.9	+0.8
TPIG	Tehuac#an	2.66	325		Pn	04 43 08.6	+0.6
FTIG	Fresnillo de T	2.82	306	*i* P	Pn	04 43 11.0	+0.8
FTIG				*i* S	Sn	04 43 44.0	+1.0
TLIG	Tlapa	3.00	296	*e*P	Pn	04 43 13.9	+1.2
TLIG				*i* S	Sn	04 43 48.2	+0.8
TLIG	Tlapa	3.00	296	Pn	Pn	04 43 13.1	+0.4
TLIG				Sn	Sn	04 43 46.8	-0.6
CRIG	Cruz Grande	3.28	279	*e*P	Pn	04 43 16.4	0.0
CRIG				*e*S	Sn	04 43 54.2	-0.1
CCIG	Comitan	3.47	89		Pn	04 43 18.7	-0.6
CCIG				Sn	Sn	04 43 58.6	-0.6
YAIG	Yautepec	4.10	310	*e*P	Pn	04 43 29.2	+1.4
YAIG				*i* S	Sn	04 44 15.1	+0.4
YAIG	Yautepec	4.10	310		Pn	04 43 29.2	+1.4
CAIG	El Cayaco	4.40	281	*e*P	Pn	04 43 32.5	+0.6
CAIG				*i* S	Sn	04 44 21.5	-0.5
UNM	Universidad Na	4.48	314	Pn	Pn	04 43 32.1	-1.1
APG	El Apazote	5.24	103	Pn	Pn	04 43 46.3	+2.7
	4.2nm,0.3s,baz=344,slow=22,SNR=18						
APG				Sn	Sn	04 44 45.0	+2.1
	22nm,0.3s,baz=2.6,slow=21,SNR=8.8						
APG				Lg	Lg	04 45 16.8	
	12nm,0.3s,baz=325,slow=14,SNR=4.0						
MOIG	Morelia	6.20	304	Pn	Pn	04 43 56.4	-0.4
MOIG				Sn	Sn	04 45 06.8	+0.2
TEIG	Tepich	8.13	60	Pn	Pn	04 44 24.0	+0.9
TEIG				Sn	Sn	04 45 44.4	-9.4
	2.6nm,0.3s,SNR=1.5						
TEIG				LR	LR	04 48 17.0	
	comp=Z,179nm,18.5s,baz=11,slow=44						
TEIG	Tepich	8.13	60		Pn	04 44 23.3	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TEIG					Sn	04 45 52.8	-1.1
CSGN	Cosiguina Volc	8.57	111	Pn	Pn	04 44 29.6	+0.4
JTS	Las Juntas de	12.06	118	Pn	Pn	04 45 22.3	+5.3
	0.6nm,0.3s,baz=91,slow=10,SNR=3.6						
JTS	Las Juntas de	12.06	118		Pn	04 45 16.1	-0.8
TX31	Lajitas Ar. Si	14.93	332		Pn	04 45 54.6	-1.5
TX32	Lajitas Array	14.93	332		Pn	04 45 54.5	-1.6
TXAR	Lajitas Array	14.93	332	Pn	Pn	04 45 55.8	-0.2
	0.1nm,0.3s,baz=134,slow=8.9,SNR=2.6						
TXAR	Lajitas Array	14.93	332		Pn	04 45 54.7	-1.4
342A	Flagon Creek P	15.39	11	Pn	Pn	04 46 00.4	-1.6
342A				IAmb	IAmb	04 46 11.3	
	comp=Z,13nm,0.7s						
WHTX	Lake Whitney,	15.76	355		Pn	04 46 05.0	-1.8
ABTX	Abilene, Hawle	16.69	348	Pn	Pn	04 46 17.1	-1.6
ABTX				IAmb	IAmb	04 46 33.8	
	comp=Z,13nm,0.8s						
Z38A	Mt. Pleasant	16.96	2	Pn	Pn	04 46 21.2	-0.9
Z38A				IAmb	IAmb	04 46 35.2	
	comp=Z,28nm,0.8s						
Z35A	Perchaven, San	17.07	356	Pn	Pn	04 46 21.8	-1.6
Z41A	Richland Creek	17.15	8	P	Pn	04 46 22.9	-1.5
WLAR	White Oak Lake	17.54	7	P	Pn	04 46 26.9	-2.2
WLAR				IAmb	IAmb	04 46 44.1	
	comp=Z,27nm,0.9s						
MIAR	Mount Ida	18.33	6	P	P	04 46 38.2	-0.6
Y45A	Yeager Farm, C	18.42	17		P	04 46 38.0	-1.7
Y45A				IAmb	IAmb	04 46 47.6	
	comp=Z,32nm,1.1s						
W41B	Gary Mavity, V	19.11	9	P	P	04 46 46.9	-0.5
TUL1	Leonard	19.59	360	IAmb	IAmb	04 47 03.3	
	comp=Z,16nm,1.1s						
FCAR	Ozark Folk Cen	19.84	9	IAmb	IAmb	04 47 11.4	
	comp=Z,14nm,0.9s						
HHAR	Hobbs	20.03	4	IAmb	IAmb	04 47 01.8	
	comp=Z,12nm,1.0s						
U38A	Gravette	20.16	3	P	P	04 46 57.7	-1.0
U38A				IAmb	IAmb	04 47 14.7	
	comp=Z,14nm,0.9s						
U40A	Yellville	20.20	7	P	P	04 46 58.8	-0.5
U40A				IAmb	IAmb	04 47 15.8	
	comp=Z,24nm,1.1s						
U32A	Winter Ranch,	20.27	352	IAmb	IAmb	04 47 19.0	
	comp=Z,23nm,1.1s						
Y52A	Lilburn	20.46	29	P	P	04 47 00.8	-1.3
T35A	Sooner Cattle	20.61	358	P	P	04 47 02.5	-1.1
ANMO	Albuquerque	20.95	335	P	Pn	04 47 09.9	-0.3
	comp=Z,3.2nm,1.0s,baz=147,slow=14,SNR=9.5						
ANMO	Albuquerque	20.95	335	P	P	04 47 05.8	-1.8
PBMO	Poplar Bluff	21.00	12	IAmb	IAmb	04 47 21.8	
	comp=Z,20nm,0.9s						
T42A	Van Buren	21.11	10	IAmb	IAmb	04 47 26.8	
	comp=Z,12nm,1.0s						
S39A	Bolivar	21.48	5	IAmb	IAmb	04 47 23.6	
	comp=Z,13nm,0.9s						
BG3	Lake Jocassee	21.92	29	P	P	04 47 15.5	-2.3
BG3				IAmb	IAmb	04 47 34.5	
	comp=Z,17nm,1.0s						
CBOC	Ciudad Bolivar	21.92	116	eP	P	04 47 21.5	+3.4
U49A	Red Boiling Sp	22.05	22	IAmb	IAmb	04 47 22.3	
	comp=Z,13nm,0.8s						
CCM	Cathedral Cave	22.09	9	P	P	04 47 17.2	-2.3
CCM				IAmb	IAmb	04 47 31.7	
	comp=Z,10.0nm,0.8s						
TKL	Tuckaleechee C	22.10	27	P	P	04 47 18.7	-0.9
	comp=Z,5.2nm,0.7s,baz=192,slow=7.9,SNR=5.9						
TKL	Tuckaleechee C	22.10	27	IAmb	IAmb	04 47 22.5	
	comp=Z,8.4nm,0.9s						
R40A	Maddies Statio	22.18	7	IAmb	IAmb	04 47 33.4	
	comp=Z,14nm,0.8s						
GUY2C	Guyana, Caldas	22.80	116	eP	P	04 47 31.0	+3.2
PTBC	PUERTO BERRIO,	22.97	112	eP	P	04 47 32.0	+2.9
OLIL	Olney	23.39	15	P	P	04 47 30.9	-2.2
ORTC	Ortega, Tolima	23.58	119	eP	P	04 47 40.0	+4.8
ROSC	El Rosal	23.89	116	P	P	04 47 48.4	+10
	comp=Z,3.1nm,0.3s,baz=5.9,slow=23,SNR=2.1						
P46A	Rosedale	24.46	16	P	P	04 47 41.7	-1.3
CHIC	Chingaza	24.50	116	eP	P	04 47 46.9	+2.7
ISCO	Idaho Springs	25.00	342	P	P	04 47 53.4	+5.1
MACC	Macarena, Meta	25.71	121	eP	P	04 47 56.7	+2.0
L40A	Anamosa	26.03	8	P	P	04 47 55.8	-1.4
K31A	O'Neill	26.42	355	P	P	04 47 58.2	-2.6
JFWS	Jewell Farm	27.00	9	P	P	04 48 04.5	-1.5
JFWS				IAmb	IAmb	04 48 18.5	
	comp=Z,15nm,0.9s						
PDAR	Pinedale Array	28.96	339	P	P	04 48 24.2	+0.4
	comp=Z,0.3nm,0.8s,baz=137,slow=7.0,SNR=2.1						
NVAR	Mina Array Bea	29.68	323	P	P	04 48 31.3	+1.1
	comp=Z,1.0nm,0.8s,baz=140,slow=8.8,SNR=6.0						
SCHQ	Schefferville	44.51	24	P	P	04 50 35.9	+0.6
	comp=Z,2.3nm,1.0s,baz=211,slow=12,SNR=2.4						
YKA	Yellowknife Ar	48.07	348	P	P	04 51 03.1	-0.1
	comp=Z,0.5nm,0.8s,baz=155,slow=7.7,SNR=6.0						
INK	Inuvik	57.30	344	P	P	04 52 11.8	+0.5
	comp=Z,1.5nm,0.9s,baz=62,slow=4.0,SNR=3.4						
INK	Inuvik	57.30	344	P	P	04 52 09.4	-1.9
ILAR	Eielson Array	59.37	337	P	P	04 52 25.6	-0.3
	comp=Z,0.5nm,0.9s,baz=139,slow=3.2,SNR=4.2						
ILAR	Eielson Array	59.37	337	P	P	04 52 23.5	-2.4

PRU 26 04:43:56.5±0.0, 49°.91N×18°.42E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.19	248	ePG	Pg	04 43 59.4	-0.7
OKC				eSG	Sg	04 44 02.9	+0.3
	comp=Z,15nm,0.4s						
OKC	Ostrava-Krasne	0.19	248	e	Sg	04 44 02.9	+0.3
MORC	Moravsky Berou	0.58	257	ePG	Pg	04 44 07.0	-0.7
MORC				eSG	Sg	04 44 14.6	-0.6
DPC	Dobruska-Polom	1.42	289	ePG	Pn	04 44 22.3	-1.3

PRU 26 04:43:56.9±0.0, 50°.13N×19°.04E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.50	79	ePg	Pg	04 44 05.6	-0.8
OJC				eSg	Sg	04 44 12.1	-0.7
OJC	Ojcow	0.50	79	epPKP	Pg	04 44 05.7	-0.7
MORC	Moravsky Berou	1.03	250	ePN	Pb	04 44 17.6	0.0
MORC				eSG	Sb	04 44 31.5	-0.2
NIE	Niedzica	1.08	131	ePg	Pg	04 44 16.8	-0.9
NIE				eSg	Sg	04 44 32.3	+0.6
KRLC	Kraliky	1.46	269	ePG	Pn	04 44 24.2	-0.3
KRLC				eSG	Sg	04 44 43.7	+0.1
	comp=Z,4.6nm,0.6s						
VYHS	Vyhne	1.64	185	ePN	Pn	04 44 26.1	-0.9
VYHS				eSN	Sn	04 44 48.1	-0.8
DPC	Dobruska-Polom	1.76	278	ePG	Pb	04 44 29.7	-0.4
DPC				eSG	Sg	04 44 53.1	-0.3
	comp=Z,5.3nm,0.5s						
VRAC	Vranov	1.79	244	eSG	Sn	04 44 52.8	+0.3
OSTC	Ostas	1.86	284	eSG	Sb	04 44 56.0	+0.4
KRUC	Moravsky	2.03	239	eSG	Sb	04 44 59.4	-0.9
KHC	Kasperske Hory	3.69	256	eSG	Sg	04 45 55.0	-0.3

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*NEIC **26** 04:44:59.7±0.7, 26°.2S±0°.1×179°.5E±0°.2, h506km±12km, mb4.1/13, Error ellipse: s-maj=22.6km s-min=19.7km az=99.0*

*IDC **26** 04:45:01.5±1.5, 26°.16S×179°.39E, h512km±20km, mb3.2/5, mb1 3.6/7, mb1mx3.2/35, mbtmp4.2/7, Error ellipse: s-maj=34.1km s-min=15.2km az=166.0*

ISC 26 04:44:59.9±0.7, 26°.17S±0°.08×179°.49E±0°.09, h503km, n32, σ1s.42/35, mb4.1/13, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.83	144	P	P	04 46 20.9	+3.8
	484nm,0.3s,baz=79,slow=8.0,SNR=19						
RAO				S	S	04 47 14.7	-5.4
	264nm,0.3s,baz=228,slow=23,SNR=6.9						
RAO	Raoul Island	3.83	144	P	P	04 46 17.8	+0.7
MSVF	Nonsavu	8.50	351	P	P	04 47 00.0	-1.8
URZ	Urewera	12.22	189	P	P	04 47 40.6	+0.1
	1.2nm,0.3s,baz=78,slow=1.9,SNR=7.1						
URZ				S	S	04 49 54.2	+1.2
	0.3nm,0.3s,baz=8.4,slow=16,SNR=1.0						
URZ	Urewera	12.22	189	P	P	04 47 40.2	-0.3
URZ					S	04 49 53.2	+0.2
DZM	Mont Dzumac	12.59	286	P	P	04 47 46.0	+1.1
	1.4nm,0.3s,baz=138,slow=23,SNR=9.2						
DZM	Mont Dzumac	12.59	286	P	P	04 47 45.5	+0.7
BKZ	Black Stump Fm	13.20	190	P	P	04 47 50.7	-0.2
LTZ	Lake Taylor	17.59	198	P	P	04 48 34.1	-2.1
EIDS	Eidsvold	25.58	266	P	P	04 49 47.2	-1.2
EIDS				IAmb	IAmb	04 49 49.5	
	comp=Z,14nm,1.1s						
STKA	Stephens Creek	33.50	251	P	P	04 50 57.8	+0.8
	comp=Z,0.7nm,0.3s,baz=91,slow=10,SNR=4.1						
STKA	Stephens Creek	33.50	251	P	P	04 50 56.9	-0.1
COEN	Coen	36.08	283	P	P	04 51 18.9	0.0
COEN				IAmb	IAmb	04 51 20.4	
	comp=Z,5.9nm,0.9s						
BBOO	Buckleboo	38.17	250	P	P	04 51 35.5	-0.3
BBOO				IAmb	IAmb	04 51 42.6	
	comp=Z,5.7nm,1.1s						
AS31	Alice Springs	41.26	263	P	P	04 52 00.6	-0.2
ASAR	Alice Springs	41.26	263	P	P	04 52 01.1	+0.2
	comp=Z,2.9nm,0.4s,baz=90,slow=7.3,SNR=50						
ASAR				S	S	04 57 38.4	+0.2
	comp=Z,0.8nm,0.8s,baz=94,slow=14,SNR=6.7						
ASAR	Alice Springs	41.26	263	P	P	04 52 00.7	-0.1
WR0	Warramunga Arr	41.66	269	P	P	04 52 03.3	-0.7
WR0				IAmb	IAmb	04 52 05.0	
	comp=Z,3.7nm,0.7s						
WB2	Warramunga Arr	41.83	269	P	P	04 52 05.2	-0.2
WB2				IAmb	IAmb	04 52 06.4	
	comp=Z,4.8nm,0.9s						
WRA	Warramunga Arr	41.84	269	P	P	04 52 05.1	-0.4
	comp=Z,3.1nm,0.6s,baz=98,slow=7.5,SNR=15						
WRA				S	S	04 57 47.0	+0.3
	comp=Z,0.3nm,0.3s,baz=105,slow=13,SNR=1.9						
WB0	Warramunga Arr	41.85	269	P	P	04 52 05.1	-0.4
WB0				IAmb	IAmb	04 52 06.0	
	comp=Z,6.3nm,0.8s						
FORT	Forrest	45.12	252	P	P	04 52 30.6	-0.3
MTN	Manton Dam	47.21	277	P	P	04 52 45.7	-1.3
KNRA	Kununurra	48.26	272	P	P	04 52 54.7	-0.1
FITZ	Fitzroy Crossi	50.23	268	P	P	04 53 09.6	+0.2
FITZ				IAmb	IAmb	04 53 10.7	
	comp=Z,5.2nm,0.7s						
SIJI	Sorong	52.75	290	P	P	04 53 27.6	-0.2
	comp=Z,33nm,0.7s,baz=116,slow=16,SNR=5.3						
NVAR	Mina Array Bea	86.70	44	P	P	04 56 50.9	+0.7
	comp=Z,0.7nm,0.6s,baz=226,slow=7.1,SNR=6.3						
NVAR	Mina Array Bea	86.70	44	P	P	04 56 50.3	+0.1
TXAR	Lajitas Array	92.02	58	P	P	04 57 16.8	+1.9
	comp=Z,0.3nm,0.8s,baz=213,slow=3.1,SNR=3.1						
NB2	NORSAR Subarra	144.24	350	PKP	PKPbc	05 03 37.2	0.0
	comp=Z,2.8nm,1.1s,baz=17,slow=2.6						
NOA	NORSAR Array B	144.24	350	PKP	PKPbc	05 03 37.3	+0.1
	comp=Z,0.8nm,0.6s,baz=19,slow=2.7,SNR=3.7						
HFS	Hagfors	144.67	348	PKP	PKPdf	05 03 38.3	0.0
	comp=Z,1.2nm,0.6s,baz=22,slow=1.6,SNR=7.8						

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*IDC **26** 04:47:33.8±1.8, 38°.54N×133°.74E, h456km±21km, mb3.0/5, mb1 3.0/7, mb1mx2.7/66, mbtmp3.8/7, Error ellipse: s-maj=53.0km s-min=31.6km az=31.0*

*JMA **26** 04:47:33.1±0.4, 38°.58N×133°.91E, h473km±4km, M3.3*

ISC 26 04:47:33.6±0.9, 38°.6N±0°.1×133°.82E±0°.08, h447km, n27, σ1s.28/32, mb3.5/5, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJH	Hakui	2.89	125	P	P	04 48 41.2	+1.6
JSZ	Suzu	3.03	112	P	P	04 48 42.4	+1.8
JKG	Kaga	3.07	139	P	P	04 48 42.4	+1.4
JKSM	Kasumi	3.10	167	P	P	04 48 42.3	+1.1
JSD	Sado	3.54	98	P	P	04 48 45.9	+1.3
JWT	Wachi	3.56	159	P	P	04 48 46.7	+1.8
MAT	Matsushiro	4.05	119	P	P	04 48 50.3	+1.2
MJAR	Matsushiro Arr	4.05	119	P	P	04 48 50.4	+1.3
	0.4nm,0.3s,baz=310,slow=8.3,SNR=12						
JNG	Nsakai	4.05	122	P	P	04 48 50.6	+1.4
JHK	Hiroka	4.33	107	P	P	04 48 52.3	+0.8
JRY	Ryogami san	4.81	121	P	P	04 48 57.7	+1.6
JIE	Ise	4.81	150	P	P	04 48 57.6	+1.5
JFT	Otama	5.26	100	P	P	04 49 01.3	+1.0
JFT				eS	S	04 50 10.8	-0.3
JRG	Rokugo	5.36	80	P	P	04 49 02.8	+1.5
JRG				eS	S	04 50 13.1	+0.2
JOD2	Odawara 2	5.38	127	P	P	04 49 03.5	+1.8
JMM	Marumori	5.54	96	P	P	04 49 03.6	+0.5
JFK	Kawauchi	5.71	100	P	P	04 49 04.9	0.0
JFK				eS	S	04 50 17.4	-2.0
USRK	Ussuriysk Ar.	5.75	347	P	P	04 49 06.0	+1.0
	baz=166,slow=9.5,SNR=66						
JMK	Ichinoseki	5.79	84	P	P	04 49 07.0	+1.4
JMK				eS	S	04 50 20.5	-0.2
BSO1	Boso 1	6.98	122	P	P	04 49 17.4	-0.1
BSO1				eS	S	04 50 40.8	-1.8
JHR	Hokuryu	7.85	47	P	P	04 49 28.4	+1.2
JCH	Churui	8.28	58	P	P	04 49 33.3	+1.5
SONM	Songino Array	21.91	304	P	P	04 51 52.5	0.0
	0.9nm,0.6s,baz=112,slow=10,SNR=4.8						
MKAR	Makanchi Array	38.15	299	P	P	04 54 11.8	-1.1
	0.4nm,0.5s,baz=83,slow=9.9,SNR=8.1						
FINES	FINESS Array B	64.51	330	P	P	04 57 24.3	-0.3
	0.5nm,0.3s,baz=60,slow=5.8,SNR=8.0						
HFS	Hagfors	70.04	333	P	P	04 57 58.3	-0.6
	1.1nm,0.4s,baz=76,slow=6.1,SNR=10						
NOA	NORSAR Array B	70.27	334	P	P	04 58 00.3	0.0
	0.4nm,0.6s,baz=46,slow=6.1,SNR=3.7						

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*INET **26** 05:02:00.6, 12°.53N×87°.73W, h77km, ML3.9*

*SNET **26** 05:02:01.4±1.1, 12°.47N×87°.83W, h40km±63km, ML3.9*

*UCR **26** 05:02:01.4±1.2, 12°.47N×87°.83W, h43km±46km, ML3.8*

ISC 26 05:02:01.0±1.8, 12°.4N±0°.1×87°.80W±0°.06, h46km±49km, n32, σ0s.35/45, 2D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.83	357	eP	Pn	05 02 16.4	-0.2
CNCH				eS	Sn	05 02 28.6	+0.7
CNCH				IAML		05 02 30.1	
	comp=Z,6μm,0.1s						
CNCH	Conchagua	0.83	357	eP	Pn	05 02 16.4	-0.2
CNCH				eS	Sn	05 02 28.6	+0.7
CNCH				IAML		05 02 30.1	
	comp=Z,6μm,0.1s						
LCND	La Caada	0.87	354	eP	Pn	05 02 16.8	-0.2
LCND				eS	Sn	05 02 29.0	+0.4
LCND				IAML		05 02 34.8	
	comp=Z,3μm,0.2s						
LCND	La Caada	0.87	354	eP	Pn	05 02 16.8	-0.2
LCND				eS	Sn	05 02 29.0	+0.4
LCND				IAML		05 02 34.8	
	comp=Z,3μm,0.2s						
JUCU	Jucuar¡n	0.92	332	eP	Pn	05 02 17.4	-0.3
JUCU				eS	Sn	05 02 29.4	-0.6
JUCU	Jucuar¡n	0.92	332	eP	Pn	05 02 17.4	-0.3
JUCU				eS	Sn	05 02 29.4	-0.6
BLLM	Bellamira	1.09	337	eP	Pn	05 02 19.9	0.0
BLLM	Bellamira	1.09	337	eP	Pn	05 02 19.9	0.0
LCY	Lacayo	1.09	334	eP	Pn	05 02 20.2	+0.1
LCY	Lacayo	1.09	334	eP	Pn	05 02 20.2	+0.1
PACA	Pacayal	1.15	333	eP	Pn	05 02 20.8	0.0
PACA				eS	Sn	05 02 35.8	+0.4
PACA	Pacayal	1.15	333	eP	Pn	05 02 20.8	0.0
PACA				eS	Sn	05 02 35.8	+0.4
ALJI	Alcalda de J	1.16	320	eP	Pn	05 02 20.8	-0.1
ALJI				eS	Sn	05 02 35.3	-0.3
ALJI				IAML		05 02 36.4	
	comp=Z,2μm,0.1s						
ALJI	Alcalda de J	1.16	320	eP	Pn	05 02 20.8	-0.1
ALJI				eS	Sn	05 02 35.3	-0.3
ALJI				IAML		05 02 36.4	
	comp=Z,2μm,0.1s						
MOMN	Momotombo	1.23	91	eP	Pn	05 02 21.7	-0.1
MOMN	Momotombo	1.23	91	eP	Pn	05 02 21.7	-0.1
TECA	Tecapa	1.26	327	eP	Pn	05 02 22.5	+0.2
TECA	Tecapa	1.26	327	eP	Pn	05 02 22.5	+0.2
COEB	Comit de Eme	1.27	326	eP	Pn	05 02 22.6	+0.1
COEB				eS	Sn	05 02 38.9	+0.4
COEB	Comit de Eme	1.27	326	eP	Pn	05 02 22.6	+0.1
COEB				eS	Sn	05 02 38.9	+0.4
FAGO	Alcalda de S	1.29	346	eP	Pn	05 02 22.3	-0.3
FAGO				eS	Sn	05 02 38.1	-0.6
FAGO	Alcalda de S	1.29	346	eP	Pn	05 02 22.3	-0.3
FAGO				eS	Sn	05 02 38.1	-0.6
TGUH	Tegucigalpa,Un	1.69	17	⇓iP	Pn	05 02 28.2	0.0
TGUH	Tegucigalpa,Un	1.69	17	⇓iP	Pn	05 02 28.2	0.0
LFRS	El Faro	1.71	314	eP	Pn	05 02 28.6	+0.1
LFRS				eS	Sn	05 02 48.5	-0.6
LBRS	Las Brisas	1.77	317	eP	Pn	05 02 30.1	+0.7
LOMA	Loma Larga	1.80	312	eP	Pn	05 02 29.8	+0.1
LOMA				eS	Sn	05 02 51.5	0.0
LOMA				IAML		05 02 52.5	
	comp=Z,1μm,0.2s						
LOMA	Loma Larga	1.80	312	eP	Pn	05 02 29.8	+0.1
LOMA				eS	Sn	05 02 51.5	0.0
LOMA				IAML		05 02 52.5	
	comp=Z,1μm,0.2s						
OPAM	Oficina de Pla	1.86	313	IAML		05 02 54.5	
	comp=Z,700nm,0.3s						
OPAM	Oficina de Pla	1.86	313	IAML		05 02 54.5	
	comp=Z,700nm,0.3s						
CEVE	Cerro Verde	2.25	308	IAML		05 03 09.0	
	comp=Z,631nm,0.2s						
CEVE	Cerro Verde	2.25	308	IAML		05 03 09.0	
	comp=Z,631nm,0.2s						

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*NEIC **26** 05:21:55.9±1.1, 29°.7N±0°.1×114°.03W±0°.08, h33km±8km, Error ellipse: s-maj=18.0km s-min=5.0km az=212.0*

*ECX **26** 05:21:55.4±0.8, 29°.96N×113°.94W, h10km±14km, MD3.3, ML3.3*

*MEX **26** 05:21:58.0±0.4, 29°.93N×113°.88W, h10km±4km, MD4.0*

ISC 26 05:21:50.5±0.9, 30°.49N±0°.05×113°.48W±0°.03, h10km, n25, σ1s.25/31, 1C, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIX	Pinacate	1.07	1	eP	Pn	05 22 23.5	+12
SFX	San Felipe	1.30	295	eP	Pg	05 22 17.9	+2.5
214A	Organ Pipe Nat	1.57	21		Pg	05 22 32.0	+11
SPX	San Pedro Mart	1.79	288	eP	Pg	05 22 25.3	+0.4
SPX	San Pedro Mart	1.79	288	eP	Pg	05 22 25.4	+0.4
SPX				eS	Sb	05 22 46.8	+0.6
SPX	San Pedro Mart	1.79	288		Pg	05 22 25.4	+0.4
SPX					Sb	05 22 46.8	+0.6
SPIG	San Pedro Mart	1.79	288	eP	Pg	05 22 25.3	+0.4
SPIG	San Pedro Mart	1.79	288	eP	Pg	05 22 25.4	+0.4
SPIG				iS	Sb	05 22 46.6	+0.3
SPIG	San Pedro Mart	1.79	288		Pg	05 22 25.4	+0.4
SPIG					Sb	05 22 46.6	+0.3
SQX	San Quintin	2.06	273	eP	Pn	05 22 25.4	+0.1
SQX				IAML		05 22 56.2	
	comp=N,311nm,0.4s						
VTX	Valle De La Tr	2.17	295	eP	Pb	05 22 30.4	+0.5
HSIG		2.65	123	iP	Pb	05 22 38.6	+0.5
HSIG				iS	Sb	05 23 10.2	-0.4
HSIG		2.65	123		Pb	05 22 38.6	+0.5
HSIG					Sb	05 23 10.2	-0.4
HSIG		2.65	123	Pn	Pb	05 22 37.5	-0.6
CBX	Cerro Bola	3.27	305	eP	Pb	05 22 47.0	-1.8
CBX				IAML		05 24 03.8	
	comp=E,106nm,1.2s						
CBX				⇑e		05 24 03.8	
CBX	Cerro Bola	3.27	305	iP	Pb	05 22 47.8	-1.0
CBX				iS	Sb	05 23 26.8	-1.8
CBX	Cerro Bola	3.27	305		Pb	05 22 47.8	-1.0
CBX					Sb	05 23 26.8	-1.8
BAR	Barrett	3.49	310	Pn	Pb	05 22 50.9	-1.5
319A	Douglas	3.72	75	Pn	Pg	05 23 00.7	-1.1
X16A	Lo Mia Camp, P	4.28	23		Pg	05 23 11.4	-1.2
X18A	Snowflake	5.01	36		Pb	05 23 21.7	+3.2
121A	Cookes Peak, D	5.28	66		Pb	05 23 23.3	+0.3
W18A	Petrified Fore	5.59	33		Pb	05 23 30.8	+2.5
U15A	North Rim	6.00	9		Pb	05 23 35.9	+0.5
KNB	Kanab	6.53	5	Pn	Pb	05 23 43.6	-0.8

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*SJA **26** 05:33:04.3±1.1, 22°.05S×67°.20W, h202km±14km, ML2.6, MW3.0*

*GUC **26** 05:33:06.0±0.6, 21°.97S×67°.39W, h217km±13km, ML3.5*

ISC 26 05:33:04.1±2.1, 22°.03S±0°.06×67°.18W±0°.05, h200km±20km, n21, σ1s.06/34, 6C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	Yavi	1.56	96	iP	Pn	05 33 38.5	-0.3
YJA				IAML		05 34 05.9	
	comp=Z,28nm,1.0s						
LVC	Limon Verde	1.70	250	iP	Pn	05 33 41.2	+1.2
LVC				IAML		05 34 12.8	
	comp=Z,14nm,0.2s						
PB09	IPOC Station P	1.93	276	iP	Pn	05 33 43.2	+1.2
PB06	IPOC Station P	2.31	253	⇑iP	Pn	05 33 46.9	+0.8
PB06				iS	Sn	05 34 18.2	-0.5
PB06				IAML		05 34 20.7	
	comp=E,100nm,0.1s						
PB06	IPOC Station P	2.31	253	iP	Pn	05 33 48.3	+2.2
PB01	IPOC Station P	2.36	294	⇑iP	Pn	05 33 46.6	+0.1
PB01				iS	Sn	05 34 18.5	-1.0
PB01				IAML		05 34 19.8	
	comp=N,281nm,0.3s						
PB03	IPOC Station P	2.38	269	⇑iP	Pn	05 33 47.4	+0.5
PB03				iS	Sn	05 34 19.5	-0.6
PB03				IAML		05 34 20.2	
	comp=N,112nm,0.2s						
PB03	IPOC Station P	2.38	269	eP	Pn	05 33 47.6	+0.8
PB03				eS	Sn	05 34 19.8	-0.3
PB03				IAML		05 34 22.0	
	comp=Z,32nm,0.2s						
PB15	IPOC Station P	2.42	240	⇑iP	Pn	05 33 48.6	+1.3
PB15				iS	Sn	05 34 21.6	+0.6
PB07	IPOC Station P	2.53	276	eP	Pn	05 33 49.3	+0.8
PB07				eS	Sn	05 34 22.1	-0.9
PB07				IAML		05 34 22.8	
	comp=Z,29nm,0.5s						
PB02	IPOC Station P	2.62	285	⇑iP	Pn	05 33 49.8	+0.3
PB02				iS	Sn	05 34 22.8	-1.9
PB02				IAML		05 34 25.5	
	comp=E,226nm,0.2s						
PB02	IPOC Station P	2.62	285	eP	Pn	05 33 49.8	+0.3
PB02				eS	Sn	05 34 23.6	-1.2
PB02				IAML		05 34 24.5	
	comp=Z,49nm,0.3s						
PB08	IPOC Station P	2.63	315	⇑iP	Pn	05 33 50.7	+0.9
PB08				iS	Sn	05 34 25.3	-0.2
PB08				IAML		05 34 27.9	
	comp=N,53nm,0.5s						
PB08	IPOC Station P	2.63	315	eP	Pn	05 33 50.8	+0.9
PB08				eS	Sn	05 34 25.8	+0.3
PB08				IAML		05 34 26.3	
	comp=Z,11nm,0.8s						
PB04	IPOC Station P	2.77	263	iP	Pn	05 33 51.9	+0.7
PB04				iS	Sn	05 34 26.7	-1.2
PB04				IAML		05 34 35.3	
	comp=N,86nm,0.4s						
PB05	IPOC Station P	2.91	253	iP	Pn	05 33 54.3	+1.4
PB05				IAML		05 34 40.1	
	comp=Z,7.0nm,0.5s						
AZAP	Zapla	2.93	139	eP	Pn	05 33 53.6	+0.4
AZAP				eS	Sn	05 34 31.5	-0.1
AZAP				IAML		05 34 33.6	
	comp=Z,12nm,0.4s						
PATCX	Punta Patache	3.02	293	eP	Pn	05 33 54.1	+0.1
PATCX				eS	Sn	05 34 31.1	-1.9
PB10	IPOC Station P	3.44	244	iP	Pn	05 34 00.2	+1.1
PB14	IPOC Station P	3.93	228	iP	Pn	05 34 04.0	-1.4
LPAZ	La Paz	5.78	351	iP	Pn	05 34 30.2	+1.1

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*IDC **26** 05:38:52.4±5.1, 32°.74S×179°.68E, h256km±39km, mb3.9/4, mb1 4.0/5, mb1mx3.5/32, mbtmp4.5/5, Error ellipse: s-maj=51.7km s-min=18.6km az=48.0*

*WEL **26** 05:38:56.7±0.5, 33°S±6°×17°9W±1°4, h225km±8km, M4.2/31, mB4.8/20, MLv4.8/31, Mw(mB)4.0/20*

ISC 26 05:38:55.3±1.1, 33°.4S±0°.1×179°.0W±0°.2, h250km, n50, σ2s.09/54, mb4.1/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.23	13	P	Pn	05 40 03.4	+1.5
GLKZ				S	S	05 40 54.6	-0.2
MXZ	Matakaoa Point	4.69	207	P	Pn	05 40 09.5	+2.3
MXZ				S	S	05 41 03.1	-1.4
WMGZ	Waiomatatini S	4.88	205	P	Pn	05 40 12.7	+3.3
WMGZ				S	S	05 41 04.4	-4.2
HAZ	Te Kaha	5.06	210	P	Pn	05 40 12.5	+0.7
PUZ	Puketiti	5.16	205	P	Pn	05 40 14.9	+1.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PUZ				S	S	05 41 16.9	+2.0
RUGZ	Raukumara Rang	5.29	210	P	Pn	05 40 15.7	+1.1
RUGZ				S	S	05 41 16.4	-1.5
WHRZ	Whale Island	5.51	215	P	Pn	05 40 21.5	+4.2
WHRZ				S	S	05 41 24.3	+1.6
TKGZ	Te Karaka	5.63	206	P	Pn	05 40 21.5	+2.7
MWZ	Matawai	5.66	209	P	Pn	05 40 19.7	+0.5
OPRZ	Ohinepanea	5.71	218	P	Pn	05 40 21.2	+1.5
MARZ	Manawahe	5.76	216	P	Pn	05 40 23.1	+2.8
URZ	Urewera	5.77	212	P	Pn	05 40 20.4	-0.1
	10.0nm,0.3s,baz=269,slow=4.8,SNR=44						
URZ				S	S	05 41 27.5	-1.2
	16nm,0.3s,baz=93,slow=21,SNR=23						
URZ	Urewera	5.77	212	P	Pn	05 40 19.5	-1.0
EDRZ	Edgecumbe	5.82	215	P	Pn	05 40 24.2	+3.0
RAGZ	Rawiri	5.85	209	P	Pn	05 40 21.8	+0.3
RIGZ	Rimuhau	5.90	205	P	Pn	05 40 22.6	+0.5
TARZ	Mount Tarawera	6.04	216	P	Pn	05 40 27.7	+3.9
PRGZ	Paritu Road	6.05	204	P	Pn	05 40 27.6	+3.6
MUGZ	Murupara	6.11	213	P	Pn	05 40 25.8	+1.1
SNGZ	Shannon Statio	6.12	208	P	Pn	05 40 28.5	+3.6
RTZ	Ruatahuna	6.13	211	P	Pn	05 40 23.6	-1.4
KNZ	Kokohu	6.21	204	P	Pn	05 40 26.0	+0.1
MHGZ	Mahia Peninsul	6.25	202	P	Pn	05 40 29.8	+3.4
PRRZ	Plateau Road	6.30	215	P	Pn	05 40 29.3	+2.2
RAHZ	Arahi	6.34	209	P	Pn	05 40 28.2	+0.7
ALRZ	Allen Road	6.37	215	P	Pn	05 40 29.4	+1.4
MTHZ	Maungataniwha	6.38	210	P	Pn	05 40 29.2	+1.0
WHHZ	Waihua	6.42	207	P	Pn	05 40 30.7	+2.1
MRHZ	Matea Rd	6.56	213	P	Pn	05 40 31.1	+0.8
KUTZ	Kaahu Road	6.57	218	P	Pn	05 40 32.5	+1.9
NMHZ	Naumai	6.61	209	P	Pn	05 40 31.8	+0.8
TLZ	Tolley Road	6.61	220	P	Pn	05 40 33.5	+2.6
ARHZ	Aropaoanui	6.67	208	P	Pn	05 40 33.3	+1.6
BKZ	Black Stump Fm	6.80	211	P	Pn	05 40 33.7	+0.4
MCHZ	McNeill Hill	6.95	209	P	Pn	05 40 37.2	+2.0
KWHZ	Kaweka Forest	7.04	210	P	Pn	05 40 36.4	-0.1
HIZ	Hauiti	7.11	222	P	Pn	05 40 37.7	+0.4
WTVZ	West Tongariro	7.17	216	P	Pn	05 40 39.1	+1.0
KAHZ	Kahuranaki	7.18	206	P	Pn	05 40 37.4	-0.8
NGZ	Ngauruhoe	7.21	215	P	Pn	05 40 38.5	-0.2
KRHZ	Kereru	7.25	209	P	Pn	05 40 37.6	-1.4
BHHZ	Black Hill Sta	7.25	212	P	Pn	05 40 37.9	-1.1
MOVZ	Moawhango	7.32	214	P	Pn	05 40 38.2	-1.8
PXZ	Pawanui	7.39	205	P	Pn	05 40 40.6	-0.2
PNHZ	Pukenui	7.55	209	P	Pn	05 40 40.9	-1.9
CTA	Charters Tower	33.55	284	P	P	05 44 58.9	-13
	4.8nm,0.5s,baz=117,slow=9.8,SNR=13						
ASAR	Alice Springs	42.17	271	P	P	05 46 11.2	-13
	3.1nm,0.6s,baz=107,slow=7.6,SNR=34						
WRA	Warramunga Arr	43.43	276	P	P	05 46 20.8	-13
	3.0nm,0.6s,baz=116,slow=7.6,SNR=9.4						
QSPA	South Pole Qui	56.72	180	P	P	05 48 14.2	+1.4
	7.3nm,0.7s,baz=212,slow=1.5,SNR=53						
FINES	FINESS Array B	147.62	338	PKPbc	PKPdf	05 58 01.4	-4.9
	2.4nm,0.8s,baz=66,slow=4.6,SNR=7.6						

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*INET **26** 05:42:02.3, 12°.88N×88°.74W, h25^{km}, ML3.4*
*SNET **26** 05:42:02.5±0.9, 12°.92N×88°.73W, h55^{km}±9^{km}, ML3.8*
*UCR **26** 05:42:02.6±0.9, 12°.92N×88°.73W, h55^{km}±9^{km}, ML3.8*
ISC 26 05:42:02.3±1.9, **12°.9N**±0°.1×**88°.74W**±0°.06, **h55**^{km}±16^{km}, **n31**, σ**0^{s}.21**/47, **2D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALJI	Alcalda de J	0.49	20	eP	Pn	05 42 13.8	0.0
ALJI				eS	Sn	05 42 22.4	+0.4
ALJI				IAML		05 42 22.9	
	comp=Z,4µm,0.3s						
ALJI	Alcalda de J	0.49	20	eP	Pn	05 42 13.8	0.0
ALJI				eS	Sn	05 42 22.4	+0.4
ALJI				IAML		05 42 22.9	
	comp=Z,4µm,0.3s						
JUCU	Jucuar¡n	0.61	51	eP	Pn	05 42 15.0	-0.4
JUCU				eS	Sn	05 42 24.8	0.0
JUCU	Jucuar¡n	0.61	51	eP	Pn	05 42 15.0	-0.4
JUCU				eS	Sn	05 42 24.8	0.0
COEB	Comit de Eme	0.66	18	eP	Pn	05 42 15.8	-0.2
COEB				eS	Sn	05 42 25.8	0.0
COEB	Comit de Eme	0.66	18	eP	Pn	05 42 15.8	-0.2
COEB				eS	Sn	05 42 25.8	0.0
TECA	Tecapa	0.67	20	eP	Pn	05 42 16.1	0.0
TECA	Tecapa	0.67	20	eP	Pn	05 42 16.1	0.0
LCY	Lacayo	0.70	38	eP	Pn	05 42 16.4	-0.1
LCY	Lacayo	0.70	38	eP	Pn	05 42 16.4	-0.1
PACA	Pacayal	0.72	34	eP	Pn	05 42 16.7	-0.1
PACA				eS	Sn	05 42 27.3	0.0
PACA	Pacayal	0.72	34	eP	Pn	05 42 16.7	-0.1
PACA				eS	Sn	05 42 27.3	0.0
BLLM	Bellamira	0.75	41	eP	Pn	05 42 16.9	-0.2
BLLM	Bellamira	0.75	41	eP	Pn	05 42 16.9	-0.2
LFRS	El Faro	0.81	337	eP	Pn	05 42 17.7	-0.2
LOMA	Loma Larga	0.88	332	eP	Pn	05 42 18.7	0.0
LOMA				eS	Sn	05 42 30.6	-0.2
LOMA				IAML		05 42 31.9	
	comp=Z,2µm,0.3s						
LOMA	Loma Larga	0.88	332	eP	Pn	05 42 18.7	0.0
LOMA				eS	Sn	05 42 30.6	-0.2
LOMA				IAML		05 42 31.9	
	comp=Z,2µm,0.3s						
LBRS	Las Brisas	0.91	341	eP	Pn	05 42 19.6	+0.4
LCND	La Caada	0.94	62	eP	Pn	05 42 19.3	-0.1
LCND				eS	Sn	05 42 31.9	-0.1
LCND				IAML		05 42 33.3	
	comp=Z,3µm,0.3s						
LCND	La Caada	0.94	62	eP	Pn	05 42 19.3	-0.1
LCND				eS	Sn	05 42 31.9	-0.1
LCND				IAML		05 42 33.3	
	comp=Z,3µm,0.3s						
OPAM	Oficina de Pla	0.95	332	eS	Sn	05 42 32.4	0.0
OPAM	Oficina de Pla	0.95	332	eS	Sn	05 42 32.4	0.0
CNCH	Conchagua	0.97	65	eP	Pn	05 42 19.7	-0.3
CNCH				eS	Sn	05 42 33.5	+0.5
CNCH				IAML		05 42 39.7	
	comp=Z,3µm,0.4s						
CNCH	Conchagua	0.97	65	eP	Pn	05 42 19.7	-0.3
CNCH				eS	Sn	05 42 33.5	+0.5
CNCH				IAML		05 42 39.7	
	comp=Z,3µm,0.4s						
BOQS	Boqueron	1.01	329	eP	Pn	05 42 20.4	-0.1
FAGO	Alcalda de S	1.03	37	eP	Pn	05 42 20.3	-0.4
FAGO				eS	Sn	05 42 34.3	+0.1
FAGO	Alcalda de S	1.03	37	eP	Pn	05 42 20.3	-0.4
FAGO				eS	Sn	05 42 34.3	+0.1
TGUH	Tegucigalpa,Un	1.85	50⇓	iP	Pn	05 42 32.0	+0.1
TGUH	Tegucigalpa,Un	1.85	50⇓	iP	Pn	05 42 32.0	+0.1
MOMN	Momotombo	2.20	102	eP	Pn	05 42 36.4	0.0
MOMN	Momotombo	2.20	102	eP	Pn	05 42 36.4	0.0

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*DJA **26** 05:57:09.5±0.4, 3°S±3°×13°0E±°, h10^{km}, M4.0/7, mb4.5/2, mB5.1/2, MLv3.8/7, Mw(mB)4.4/2*
*IDC **26** 05:57:15.3±2.2, 2°.62S×129°.21E, h75^{km}±58^{km}, mb3.8/2, mb1 4.0/6, mb1mx3.5/37, mbtmp4.1/6, ML4.0/4, MS3.5/1, Ms1 3.5/1, ms1mx2.6/34, Error ellipse: s-maj=50.7km s-min=20.9km az=153.0*
ISC 26 05:57:13.5±0.9, **2°.81S**±0°.06×**129°.34E**±0°.06, **h35**^{km}, **n15**, σ**2^{s}.77**/19, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.67	218	P	Pn	05 57 26.1	-0.4
AAI	Ambon	1.44	233	P	Pn	05 57 39.9	+2.9
BNDI	Bandanaira	1.79	162	P	Pn	05 57 45.4	+3.5
NLAI	Namlea	2.28	259	P	Pn	05 57 51.4	+2.8
NLAI				S	Sn	05 58 23.9	+8.5
SIJI	Sorong	2.73	45	P	Pn	05 57 57.0	+2.1
	24nm,0.3s,baz=220,slow=23,SNR=101						
SIJI				S	Sn	05 58 28.4	+1.7
	18nm,0.3s,baz=232,slow=23,SNR=2.6						
LBMI	Labuha	2.84	320	P	Pn	05 57 52.6	-3.7
LBMI				S	Sn	05 58 31.6	+2.3
SANI	Sanana	3.43	283	P	Pn	05 58 06.9	+2.4
SANI				S	Sn	05 58 44.0	0.0
APSI	Ampana	7.92	284	P	Pn	05 59 06.9	+0.7
	870nm30nm,0.4s						
KAPI	Kappang	9.81	257	P	Pn	05 59 32.8	+0.6
	1.5nm,0.3s,baz=66,slow=19,SNR=4.0						
MPSI	Mapaga	9.94	288	P	Pn	05 59 34.4	+0.4
FITZ	Fitzroy Crossi	15.62	193	P	P	06 00 53.1	-1.8
	0.3nm,0.3s,baz=0.5,slow=11,SNR=9.1						
WRA	Warramunga Arr	17.71	164	P	P	06 01 17.5	-0.7
	0.8nm,0.3s,baz=342,slow=12,SNR=11						
WRA				S	Sn	06 04 26.9	-7.1
	0.6nm,0.3s,baz=304,slow=9.7,SNR=18						
ASAR	Alice Springs	21.20	168	P	P	06 01 56.5	+0.3
	6.3nm,0.6s,baz=351,slow=12,SNR=51						
ASAR				S	S	06 05 48.0	-2.1
	0.5nm,0.7s,baz=356,slow=22,SNR=4.9						
LEM	Lembang	22.00	259	LR	LR	06 12 10.1	
	comp=Z,116nm,20.7s,baz=32,slow=41						
STKA	Stephens Creek	31.13	160	P	P	06 03 30.3	+1.4
	0.5nm,0.4s,baz=324,slow=17,SNR=1.7						

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*IDC **26** 06:16:20.3±4.3, 5°.24S×130°.49E, h249^{km}±41^{km}, mb3.5/3, mb1 3.6/5, mb1mx3.3/20, mbtmp4.2/5, Error ellipse: s-maj=60.2km s-min=12.0km az=68.0*
*DJA **26** 06:16:22.3±0.8, 5°S±5°×13°0E±°, h200^{km}±5^{km}, M4.4/6, MLv4.3/6, MLv4.5/4*
ISC 26 06:16:16.4±0.8, **5°.16S**±0°.07×**129°.92E**±0°.07, **h250**^{km}, **n12**, σ**3^{s}.16**/18, **mb3.9**/3, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.63	359	P	Pn	06 16 53.4	+3.6
BNDI				S	S	06 17 11.7	-4.4
MSAI	Masohi	2.05	331	P	Pn	06 16 59.0	-0.4
MSAI				S	S	06 17 28.2	-5.1
FAKI	Fak Fak	3.22	46	P	Pn	06 17 12.8	+1.5
FAKI				S	S	06 17 52.8	-2.0
NLAI	Namlea	3.40	304	P	Pn	06 17 16.3	+3.0
NLAI				S	S	06 17 57.4	-1.0
SWI	Sorong	4.47	17	P	Pn	06 17 27.9	+2.0
SWI				S	S	06 18 19.1	-2.1
SANI	Sanana	4.99	308	P	Pn	06 17 32.9	+0.8
SANI				S	S	06 18 25.8	-6.7
WRA	Warramunga Arr	15.31	164	P	Pn	06 19 41.0	+0.5
	0.6nm,0.3s,baz=340,slow=13,SNR=8.2						
WRA				S	S	06 22 21.5	-7.3
	1.2nm,0.3s,baz=338,slow=21,SNR=11						
ASAR	Alice Springs	18.80	169	P	Pn	06 20 21.1	-0.3
	1.1nm,0.3s,baz=348,slow=11,SNR=88						
ASAR				S	S	06 23 39.6	+1.4
	0.1nm,0.3s,baz=351,slow=21,SNR=7.1						
STKA	Stephens Creek	28.75	159	P	P	06 21 50.9	-0.1
	3.3nm,1.0s,baz=320,slow=13,SNR=3.7						
CMAR	Chiang Mai Arr	38.51	308	P	P	06 23 22.0	+6.8
	1.2nm,0.3s,baz=141,slow=9.2,SNR=4.1						
MKAR	Makanchi Array	66.65	326	P	P	06 26 47.3	+6.9
	0.9nm,0.5s,baz=122,slow=7.9,SNR=17						
LPAZ	La Paz	152.20	140	PKPbc	PKiKP	06 35 47.2	+2.8
	0.5nm,0.3s,baz=198,slow=1.3,SNR=2.2						
LPAZ				PKPab	PKPab	06 35 56.3	+1.5
	1.7nm,0.8s,baz=246,slow=3.0,SNR=4.1						

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*JMA **26** 06:40:20.9±0.1, 23°.76N×121°.54E, h34^{km}±3^{km}, M3.2*
*TAP **26** 06:40:21.2, 23°.77N×121°.58E, h42^{km}, ML3.5, B*
ISC 26 06:40:22.0±1.0, **23°.79N**±0°.02×**121°.56E**±0°.02, **h34**^{km}±2^{km}, **n111**, σ**0^{s}.81**/181, **2C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESL	Shilin	0.12	284	P	Pb	06 40 28.1	0.0
	baz=286						
ESL				eS	Sb	06 40 32.5	+0.3
	baz=286						
ENLB	Shoufeng	0.12	17	P	Pb	06 40 28.0	-0.1
	baz=12						
ENLB				eS	Sb	06 40 34.2	+2.0
	baz=12						
EGFH	Guangfu	0.17	227	P	Pb	06 40 28.4	-0.1
	baz=245						
EGFH				eS	Sb	06 40 33.4	+0.6
	baz=245						
HWA	Hwalien	0.20	11	eP	Pb	06 40 29.3	+0.6
	baz=14						
TWD	Chiawan	0.30	6⇑	iP	Pb	06 40 29.7	-0.1
	baz=355						
TWD				eS	Sb	06 40 35.6	+0.5
	baz=355						
HGSD	Ruisui	0.32	204	eP	Pn	06 40 30.6	+0.4
	baz=219						
HGSD				eS	Sb	06 40 37.4	+1.8
	baz=219						
EHY	Hungye	0.35	219	P	Pb	06 40 29.7	-0.8
	baz=222						
EHY				eS	Sn	06 40 35.6	-0.6
	baz=222						
VWDT	VWDT	0.39	266	eP	Pb	06 40 31.2	+0.2
	baz=267						
VWDT				eS	Sn	06 40 37.8	+0.6
	baz=267						
NACB	Ninganchiao	0.39	4	eP	Pb	06 40 30.4	-0.7
	baz=351						
NACB				eS	Sb	06 40 37.0	-0.2
	baz=351						
OWD	Renai	0.39	296	P	Pb	06 40 31.2	0.0
	baz=301						
OWD				eS	Sb	06 40 37.6	+0.1
	baz=301						
ETLH	Xiulin Townshi	0.43	350	eP	Pb	06 40 31.0	-0.7
	baz=348						
ETLH				eS	Sb	06 40 37.5	-0.8
	baz=348						
CHGB	Renai	0.45	308	eP	Pb	06 40 32.1	0.0
	baz=310						
CHGB				eS	Sb	06 40 39.4	+0.4
	baz=310						
WHF	Hehuan Shan	0.45	323	P	Pb	06 40 31.8	-0.4
	baz=316						
WHF				eS	Sb	06 40 39.1	-0.2
	baz=316						
YULB	Yu-li	0.46	212	eP	Pb	06 40 30.9	-1.2
	baz=221						
TWF1	Yuli	0.49	210	P	Pb	06 40 31.4	-1.2
	baz=219						
SSLB	Suanglung	0.56	270	P	Pn	06 40 33.2	-0.2
	baz=274						
TWT	Tachien	0.58	323	P	Pn	06 40 34.2	+0.2
	baz=321						
TWT				S	Sb	06 40 42.4	-0.1
	baz=321						
SMLT	Sun Moon Lake	0.61	279	P	Pn	06 40 34.2	-0.1
	baz=280						
SMLT				eS	Sb	06 40 43.9	+0.8
	baz=280						
YUS	Yu-Shan	0.63	242	eS	Sb	06 40 43.9	-0.2
	baz=240						
DPDB	Guoxing	0.63	293	P	Pn	06 40 34.5	0.0
	baz=295						
DPDB				eS	Sb	06 40 44.4	+0.8
	baz=295						
FULB	Fuli	0.63	203	P	Pn	06 40 33.8	-0.7
	baz=214						
FULB				eS	Sn	06 40 43.8	+0.4
	baz=214						
WHYT	Xinyi Township	0.66	262	eP	Pn	06 40 35.0	+0.1
	baz=264						
WHYT				eS	Sb	06 40 45.0	+0.8
	baz=264						
TYC	Yuchr	0.66	281	P	Pn	06 40 34.7	-0.1
	baz=283						
TYC				eS	Sn	06 40 44.5	+0.6
	baz=283						
ENA	Nanau	0.66	14	P	Pn	06 40 34.1	-0.8
	baz=3.0						
NNSB	Datong	0.66	346	eP	Pn	06 40 34.5	-0.5
	baz=348						
NNSB				eS	Sn	06 40 43.9	-0.4
	baz=348						
NNSH	Datong	0.66	346	P	Pn	06 40 34.6	-0.4
	baz=347						
NNSH				eS	Sn	06 40 43.9	-0.5
	baz=347						
NNS	Nan Shan	0.68	345	P	Pn	06 40 34.9	-0.3
	baz=348						
NNS				eS	Sn	06 40 44.4	-0.2
	baz=348						
CHKT	Chengkung	0.71	195	P	Pn	06 40 34.8	-0.7
	baz=187						
CHKT				eS	Sn	06 40 45.3	+0.2
	baz=187						
ALS	Alishan	0.75	249	eP	Pn	06 40 36.5	+0.1
	baz=250						
WHP	Taichung City	0.75	311	P	Pn	06 40 36.9	+0.7
	baz=312						
WHP				eS	Sn	06 40 46.9	+0.5
	baz=312						
WJS	Zhushan	0.77	273	eP	Pn	06 40 37.0	+0.7
	baz=274						
WJS				eS	Sb	06 40 48.2	+1.1
	baz=274						
ELDTW	Lidau	0.78	220	P	Pn	06 40 35.5	-1.1
	baz=219						
ELDTW				eS	Sn	06 40 45.9	-1.2
	baz=219						
WNT	Mingjian	0.81	277	P	Pn	06 40 37.6	+0.7
	baz=277						
WNT				eS	Sb	06 40 49.6	+1.2
	baz=277						
NDT	Datong Townshi	0.82	357	P	Pn	06 40 36.5	-0.6
CHN5	Tsauling	0.83	257	P	Pn	06 40 37.7	+0.4
	baz=259						
CHN5				eS	Sb	06 40 49.8	+0.7
	baz=259						
ENTT	Nioudou	0.85	0	P	Pn	06 40 37.0	-0.6
	baz=358						
TWC	Suao	0.86	18	P	Pn	06 40 37.3	-0.4
	baz=5.0						
TWC				eS	Sb	06 40 50.6	+0.8
	baz=5.0						
TCU	Taichung	0.89	294	eP	Pb	06 40 39.1	+0.1
	baz=294						
TCU				eS	Sb	06 40 51.7	+1.1
	baz=294						
YHNB	Yeheng	0.90	349	P	Pn	06 40 38.1	-0.2
	baz=355						
YHNB				eS	Sn	06 40 49.7	-0.4
	baz=355						
NSK	Sanguang	0.91	348⇑	iP	Pn	06 40 38.2	-0.2
	baz=355						
NSK				eS	Sn	06 40 49.9	-0.3
	baz=355						
TWQ1	Liyutan	0.91	308	eP	Pn	06 40 39.1	+0.7
	baz=307						
TWQ1				eS	Sb	06 40 51.9	+0.5
	baz=307						
EOS1	EOS1	0.92	34	eP	Pn	06 40 39.2	+0.8
	baz=44						
TWE	Neicheng	0.94	6	P	Pn	06 40 38.2	-0.5
	baz=4.0						
WDLH	Douliu	0.94	264	eP	Pn	06 40 39.2	+0.4
	baz=265						
WDLH				eS	Sb	06 40 52.4	+0.3
	baz=265						
STYT	Tauyuan	0.96	230	P	Pn	06 40 39.4	+0.2
	baz=226						
STYT				eS	Sn	06 40 52.4	+0.7
	baz=226						
NSY	Sanyi	0.96	311	eP	Pn	06 40 40.0	+0.9
	baz=310						
NSY				eS	Sb	06 40 53.5	+0.7
	baz=310						
WCHH	Zhanghua	0.96	288	eP	Pn	06 40 39.9	+0.9
	baz=287						
WCHH				eS	Sb	06 40 53.4	+0.6
	baz=287						
SLBB	Yuanshan	0.97	4	eP	Pn	06 40 37.7	-1.5
	baz=2.0						
TPUB	Ta-pu	0.98	241	eP	Pn	06 40 39.8	+0.4
	baz=243						
TPUB				eS	Sb	06 40 53.5	+0.2
	baz=243						
NSTT	Nanjuang	0.99	329	eP	Pb	06 40 40.5	-0.2
	baz=315						
NSTT				eS	Sn	06 40 53.2	+1.0
	baz=315						
CHN4	Tsaushan	0.99	244	eP	Pn	06 40 40.2	+0.8
	baz=246						
CHN4				eS	Sb	06 40 54.1	+0.6
	baz=246						
NWLT	Wulai	0.99	357	P	Pn	06 40 39.1	-0.4
	baz=354						
NWLT				eS	Sn	06 40 52.0	-0.3
	baz=354						
LIOB	Emei	0.99	330	eP	Pb	06 40 40.6	-0.2
	baz=316						
LIOB				eS	Sb	06 40 54.1	+0.5
	baz=316						
WDJ	Dajia District	1.01	304	eP	Pn	06 40 40.0	+0.2
	baz=303						
WDJ				eS	Sn	06 40 53.7	+0.9
	baz=303						
WTP	Ta-pu	1.02	239	eP	Pn	06 40 40.6	+0.6
	baz=240						
WTP				eS	Sb	06 40 54.6	+0.2
	baz=240						
PTSB	Yuanli	1.02	310	eS	Sn	06 40 54.3	+1.2
	baz=309						
NMLH	Miaoli	1.03	317	eP	Pn	06 40 39.9	-0.1
	baz=315						
NMLH				eS	Sn	06 40 54.4	+1.1
	baz=315						
TWG	Pinlang	1.06	205	eP	Pn	06 40 38.5	-1.9
	baz=197						
TWG				eS	Sn	06 40 51.4	-2.6
	baz=197						
TWGBT	Beinan	1.06	205	eP	Pn	06 40 38.4	-2.0
	baz=198						
TWH	Lutao	1.07	184	P	Pn	06 40 39.5	-1.1
	baz=179						
CHY	Chiayi	1.08	255	eP	Pn	06 40 40.9	+0.2
	baz=256						
NTC	Toucheng	1.09	13	eP	Pn	06 40 40.5	-0.4
	baz=2.0						
WLTB	Daxi	1.10	345	eP	Pb	06 40 42.3	-0.3
	baz=349						
WLTB				eS	Sb	06 40 57.7	+1.1
	baz=349						
RLNB	Erlin	1.11	276	eP	Pn	06 40 41.5	+0.5
	baz=276						
RLNB				eS	Sb	06 40 56.5	-0.3
	baz=276						
CHN1	Nanshi	1.12	238	eP	Pn	06 40 42.0	+0.7
	baz=240						
CHN1				eS	Sb	06 40 57.0	-0.2
	baz=240						
SNST	Tainan City	1.13	240	eP	Pn	06 40 42.0	+0.6
	baz=242						
SNST				eS	Sn	06 40 56.8	+1.1
	baz=242						
SGST	Jiashian	1.14	232	P	Pn	06 40 41.6	+0.1
	baz=234						
SGST				eS	Sn	06 40 57.2	+1.2
	baz=234						
SLGT	Liugui	1.15	227	eP	Pn	06 40 42.4	+0.7
	baz=238						
SLGT				eS	Sn	06 40 57.6	+1.3
	baz=238						
NHDH	Xindian Distri	1.17	358	eP	Pn	06 40 42.1	+0.1
	baz=356						
NHDH				eS	Sn	06 40 57.2	+0.4
	baz=356						
TATO	Taipei	1.19	357	eP	Pn	06 40 42.3	+0.1
	baz=1.0						
TATO				eS	Sn	06 40 57.5	+0.4
	baz=1.0						
TWA	Mucha	1.19	1	eP	Pn	06 40 42.5	+0.2
	baz=5.0						
TWA				eS	Sn	06 40 57.5	+0.2
	baz=5.0						
TIPB	Shuangxi	1.21	11	eP	Pn	06 40 42.3	-0.1
	baz=358						
TWB1	Santiao Chiao	1.28	18	eP	Pn	06 40 44.0	+0.6
	baz=28						
NWF	Wu-fen Shan	1.30	9	eP	Pn	06 40 43.6	-0.1
	baz=5.0						
NWF				eS	Sn	06 41 00.5	+0.5
	baz=5.0						
WFSB	Wu-fen Shan	1.30	9	eP	Pn	06 40 43.5	-0.1
	baz=6.0						
ECL	Taimali	1.31	205	eP	Pn	06 40 42.9	-0.9
	baz=201						
CHN8	Yiju	1.31	251	eS	Sn	06 41 01.2	+0.9
	baz=252						
SSD	Sandimen	1.34	220	eP	Pn	06 40 44.6	+0.3
	baz=222						
YM01	YM01	1.36	0	eP	Pn	06 40 44.5	-0.1
	baz=357						
YM01				eS	Sn	06 41 01.5	+0.2
	baz=357						
YM04	YM04	1.36	359	eP	Pn	06 40 44.4	-0.2
	baz=358						

YM10	YM10	1.36	360	*e*P	Pn	06 40 44.6	-0.1
	baz=357						
YM11	YM11	1.38	0	*e*P	Pn	06 40 44.5	-0.3
	baz=358						
YM08	YM08	1.40	1	*e*P	Pn	06 40 44.5	-0.5
	baz=358						
JYNG	Yonagunijimaku	1.43	62	P	Pn	06 40 45.6	+0.2
JYNG				S	Sn	06 41 04.0	+1.0
MASBT	Mashibuluo	1.45	216	*e*P	Pn	06 40 45.8	+0.1
	baz=219						
MASBT				*e*S	Sn	06 41 05.0	+1.4
	baz=219						
YOJ	Yonaguni jima	1.48	63	P	Pn	06 40 46.6	+0.4
	baz=61						
YOJ				S	Sn	06 41 04.2	-0.3
	baz=61						
YOJ	Yonaguni jima	1.48	63	P	Pn	06 40 46.5	+0.3
YOJ				S	Sn	06 41 04.7	+0.2
EAST	Anshuo	1.54	205	*e*P	Pn	06 40 45.5	-1.6
	baz=199						
SCZT	Fangliau	1.65	212	*e*P	Pn	06 40 49.1	+0.6
	baz=229						
SCZT				*e*S	Sn	06 41 10.4	+1.8
	baz=229						
WDGT	Dungji	1.82	254	*e*P	Pn	06 40 50.9	0.0
	baz=254						
PHUB	P'eng-hu	1.84	262	*e*P	Pn	06 40 51.2	0.0
	baz=251						
PHUB				*e*S	Sn	06 41 13.1	-0.2
	baz=251						
PNG	Penghu	1.85	264	P	Pn	06 40 51.2	-0.1
	baz=264						
PNG				S	Sn	06 41 14.0	+0.4
	baz=264						
VCHM	Qimei	2.04	254	*e*P	Pn	06 40 53.5	-0.4
	baz=255						
IRIF	Iriomote-Funau	2.06	74	P	Pn	06 40 55.1	+1.0
IRIF				S	Sn	06 41 19.5	+1.0
HATJ	Hateruma jima	2.07	82	P	Pn	06 40 55.1	+0.8
HATJ				S	Sn	06 41 18.1	-0.8
VWUC	VWUC	2.27	302	*e*P	Pn	06 40 56.1	-0.9
	baz=302						
JKRS	Kuro-shima	2.28	78	P	Pn	06 40 58.3	+1.1
JKRS				S	Sn	06 41 25.5	+1.4
PTTC	Pingtan	2.36	317	*e*S	Sn	06 41 23.9	-2.2
	baz=315						
JIJ	Ishigaki jima	2.43	76	P	Pn	06 40 59.3	+0.1
JIJ				S	Sn	06 41 27.2	-0.5
PTMZ	Houxiangcun	2.55	300	*e*P	Pn	06 41 00.2	-0.7
	baz=299						
PTMZ				*e*S	Sn	06 41 28.4	-2.4
	baz=299						
JISG	Ishigakijimahi	2.63	72	P	Pn	06 41 01.4	-0.6
JISG				S	Sn	06 41 31.7	-1.1
MATB	Ma-tsu	2.78	328	*e*P	Pn	06 41 03.2	-0.8
	baz=326						
MATB				*e*S	Sn	06 41 33.7	-2.6
	baz=326						
KNMB	Chin-men Tao	2.98	284	*e*P	Pn	06 41 05.8	-1.0
	baz=284						
JTJ	Tarama	2.99	73	*e*S	Sn	06 41 41.3	-0.3
LYJJ	Jianjiangzhen	3.20	330	*e*S	Sn	06 41 44.6	-2.2
	baz=328						
MHZQ	Yeshan	3.26	316	*e*P	Pn	06 41 10.6	0.0
	baz=316						
JIRB	Irabujima	3.45	72	S	Sn	06 41 53.3	+0.2
AXDP	Jialang	3.46	289	*e*P	Pn	06 41 12.7	-0.7
	baz=290						
ZPLA	Ao Xicun	3.49	273	*e*P	Pn	06 41 13.4	-0.5
	baz=273						
JIKM	Ikemajima	3.55	71	*e*S	Sn	06 41 55.5	+0.1
JMJ2	Miyako jima3	3.57	74	*e*S	Sn	06 41 56.4	+0.6

MEX 26 07:00:16.2±0.5**,30°.25N×114°.04W,h10^{km},MD4.3,Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPX	San Pedro Mart	1.45	303	*e*P	Pn	07 00 39.4	-3.5
SPX				*i*S	Sn	07 00 57.1	-5.1
SPIG	San Pedro Mart	1.46	303	*e*P	Pn	07 00 39.3	-3.6
SPIG				*i*S	Sn	07 00 57.1	-5.2
214A	Organ Pipe Nat	2.00	32	*e*P	Pn	07 00 46.1	-4.0
214A				*i*S	Sn	07 01 10.9	-4.3
CBX	Cerro Bola	3.04	313	*e*P	Pn	07 01 00.7	-3.8
CBX				*i*S	Sn	07 01 36.7	-4.4
CGIG		5.25	87	*i*P	Pn	07 01 31.8	-3.0
CGIG				*i*S	Sn	07 02 32.8	-2.7

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*IDC **26** 07:01:58.3±3.4,21°.99S×177°.64W,h362^{km}±32^{km},mb3.5/9, mb1 3.8/10,mb1mx3.6/23,mbtmp4.3/10,Error ellipse: s-maj=43.6km s-min=14.4km az=152.0*

ISC 26 07:01:56.7±0.8**,22°.1S**±0°.2×**177°.6W**±0°.2**,h350^{km},n14, σ1^{s}.19**/14**,mb3.7**/9**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	9.81	35	P	Pn	07 04 12.8	+0.2
	2.0nm,0.3s,baz=30,slow=23,SNR=2.7						
AFI				S	S	07 05 53.8	-10
	3.5nm,0.3s,baz=123,slow=23,SNR=8.8						
STKA	Stephens Creek	37.49	246	P	P	07 08 39.6	+1.4
	5.9nm,0.7s,baz=82,slow=8.8,SNR=14						
ASAR	Alice Springs	44.56	258	P	P	07 09 35.7	+0.2
	5.6nm,0.7s,baz=97,slow=7.9,SNR=65						
WRA	Warramunga Arr	44.79	264	P	P	07 09 36.2	-1.1
	3.0nm,0.7s,baz=98,slow=7.5,SNR=12						
NVAR	Mina Array Bea	81.89	43	P	P	07 13 40.3	+2.2
	0.6nm,0.5s,baz=221,slow=8.4,SNR=5.7						
TXAR	Lajitas Array	87.57	57	P	P	07 14 06.5	+0.2
	0.6nm,0.7s,baz=218,slow=5.9,SNR=7.0						
PLCA	Paso Flores	87.92	133	P	P	07 14 06.7	-1.1
	2.2nm,1.0s,baz=172,slow=7.1,SNR=3.2						
ILAR	Eielson Array	89.75	13	P	P	07 14 14.3	-1.1
	0.6nm,0.6s,baz=215,slow=5.3,SNR=8.6						
PDAR	Pinedale Array	89.83	43	P	P	07 14 17.6	+1.0
	0.4nm,0.6s,baz=225,slow=1.3,SNR=4.9						
CMAR	Chiang Mai Arr	91.00	289	P	P	07 14 22.8	+0.4
	0.9nm,0.3s,baz=134,slow=8.2,SNR=5.7						
ARCES	ARCESS Array B	130.53	350	PKP	PKPdf	07 20 24.6	-0.9
	2.5nm,0.7s,baz=343,slow=0.5,SNR=10						
AKASG	Malin Array Be	144.57	330	PKP	PKPab	07 20 49.6	-1.7
	0.9nm,0.4s,baz=44,slow=4.1,SNR=7.8						
GERES	GERESS Array B	151.81	344	PKPbc	PKPbc	07 21 10.0	-0.4
	1.0nm,0.6s,baz=57,slow=4.9,SNR=6.0						
TORD	Torodi Ar. Bea	171.10	175	PKP	PKPdf	07 21 24.5	+0.3
	0.8nm,0.9s,baz=154,slow=1.4,SNR=3.4						

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*IDC **26** 07:18:58.6±3.5,26°.12S×179°.23E,h531^{km}±33^{km},mb3.2/5, mb1 3.5/6,mb1mx3.1/38,mbtmp4.1/6,Error ellipse: s-maj=86.2km s-min=17.9km az=163.0*

ISC 26 07:19:00.4±1.7**,26°.0S**±0°.5×**179°.2E**±0°.2**,h550^{km},n9, σ0^{s}.93**/10**,mb3.7**/5**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	12.27	286	P	P	07 21 41.2	-0.6
	0.8nm,0.3s,baz=296,slow=22,SNR=7.2						
ASAR	Alice Springs	41.00	263	P	P	07 25 56.0	-0.3
	1.6nm,0.7s,baz=88,slow=7.6,SNR=22						
ASAR				S	S	07 31 30.9	+1.6
	0.4nm,0.9s,baz=93,slow=14,SNR=4.1						
WRA	Warramunga Arr	41.56	269	P	P	07 26 00.0	-0.7
	1.8nm,0.5s,baz=104,slow=8.0,SNR=4.8						
KLR	Kul'dur	85.97	331	P	P	07 30 43.3	+0.9
	1.1nm,0.8s,baz=165,slow=5.2,SNR=4.7						
NVAR	Mina Array Bea	86.76	44	P	P	07 30 46.8	+0.1
	0.6nm,0.6s,baz=226,slow=7.7,SNR=4.7						
TXAR	Lajitas Array	92.16	58	P	P	07 31 12.3	+0.4
	0.5nm,0.8s,baz=226,slow=5.0,SNR=4.9						
NB2	NORSAR Subarra	144.00	350	PKP	PKPdf	07 37 31.9	-1.1
	comp=Z,0.8nm,0.5s,baz=14,slow=3.1						
NOA	NORSAR Array B	144.00	350	PKP	PKPdf	07 37 32.4	-0.6
	comp=Z,1.7nm,0.7s,baz=20,slow=2.5,SNR=7.6						
AKASG	Malin Array Be	146.27	325	PKPbc	PKPbc	07 37 39.0	-0.4
	comp=Z,0.7nm,0.5s,baz=46,slow=4.2,SNR=5.1						

IDC 26 07:34:43.1±4.1**,19°.69S×179°.63E,h0^{km},mb4.0**/4**, mb1 4.2**/4**,mb1mx3.7**/41**,mbtmp4.0**/4**,Error ellipse: s-maj=173.0km s-min=36.4km az=142.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	36.15	243	P	P	07 41 47.6	+0.3
	1.9nm,0.7s,baz=76,slow=8.9,SNR=3.7						
WRA	Warramunga Arr	42.51	262	P	P	07 42 40.5	-0.1
	0.7nm,0.3s,baz=97,slow=7.5,SNR=39						
ASAR	Alice Springs	42.54	256	P	P	07 42 40.4	-0.5
	2.3nm,0.8s,baz=97,slow=7.6,SNR=27						
ILAR	Eielson Array	88.04	14	P	P	07 47 34.9	0.0
	0.7nm,1.1s,baz=224,slow=6.0,SNR=4.4						

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*NIED **26** 07:39:00,23°.90N×122°.40E,h14^{km},Mw3.7 Best double couple: M$_0$4.33000×10^{14} NP1:φ$_s$59.00000°,δ87.00000°, λ64.00000°. NP2:φ$_s$324.00000°,δ26.00000°,λ174.00000°.*

*IDC **26** 07:39:39.0±0.9,23°.99N×122°.32E,h0^{km},mb3.8/8, mb1 3.9/9,mb1mx3.7/45,mbtmp3.8/9,ML2.4/1,MS3.1/2, Ms1 3.1/2,ms1mx2.7/38,Error ellipse: s-maj=30.7km s-min=19.7km az=63.0*

*TAP **26** 07:39:42.2,23°.96N×122°.46E,h23^{km},ML4.1,D*

*JMA **26** 07:39:42.2±0.1,23°.92N×122°.43E,h21^{km},M3.6*

ISC 26 07:39:42.2±1.1**,23°.92N**±0°.02×**122°.43E**±0°.02**,h23^{km}**±9^{km}**, n141,σ0^{s}.88**/213**,mb3.8**/8**,1D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	EOS1	0.68	336	*e*P	Pb	07 39 55.4	-0.1
	baz=324						
EOS1				*e*S	Sn	07 40 06.2	-0.1
	baz=324						
JYNG	Yonagunijimaku	0.71	42	P	Pb	07 39 55.6	-0.3
JYNG				S	Sb	07 40 04.0	-1.2
YOJ	Yonaguni jima	0.76	44	P	Pb	07 39 56.5	-0.2
YOJ				S	Sb	07 40 05.2	-1.4
HWA	Hwalien	0.76	274	*e*P	Pb	07 39 57.0	+0.3
	baz=256						
HWA				*e*S	Sn	07 40 07.6	-0.6
	baz=256						
ENLB	Shoufeng	0.76	269	P	Pb	07 39 56.1	-0.7
	baz=253						
ENLB				*e*S	Sb	07 40 07.5	+0.8
	baz=253						
TWD	Chiawan	0.78	282	P	Pb	07 39 57.0	-0.2
	baz=263						
TWD				*e*S	Sb	07 40 07.7	+0.5
	baz=263						
NACB	Ninganchiao	0.80	288	*e*P	Pb	07 39 57.4	-0.2
	baz=270						
NACB				S	Sn	07 40 08.5	-0.9
	baz=270						
ENA	Nanau	0.81	309	P	Pb	07 39 57.3	-0.3
	baz=305						
ENA				S	Sn	07 40 09.0	-0.4
	baz=305						
TWC	Suao	0.87	322	P	Pb	07 39 57.9	-0.7
	baz=319						
ETLH	Xiulin Townshi	0.91	288	*e*P	Pb	07 39 59.1	-0.4
	baz=273						
ETLH				*e*S	Sn	07 40 12.2	0.0
	baz=273						
ESL	Shilin	0.92	264	P	Pb	07 39 58.8	-0.7
	baz=260						
EGFH	Guangfu	0.95	255	*e*P	Pb	07 39 59.7	-0.3
	baz=252						
EGFH				*e*S	Sn	07 40 13.2	+0.2
	baz=252						
HGSD	Ruisui	1.02	245	P	Pb	07 40 00.6	-0.5
	baz=243						
ILA	Ilan	1.05	324	*e*P	Pn	07 40 02.0	+0.6
	baz=321						
TWE	Neicheng	1.06	319	P	Pn	07 40 01.7	+0.1
	baz=317						
TWE				*e*S	Sn	07 40 15.8	+0.2
	baz=317						
ENTT	Nioudou	1.06	312	P	Pn	07 40 01.9	+0.2
	baz=294						
ENTT				*e*S	Sn	07 40 16.7	+0.9
	baz=294						
NDT	Datong Townshi	1.08	309	P	Pn	07 40 02.1	+0.2
	baz=306						
NDT				*e*S	Sn	07 40 16.8	+0.7
	baz=306						
NTC	Toucheng	1.08	330	P	Pn	07 40 02.1	+0.2
	baz=327						
NTC				*e*S	Sn	07 40 16.9	+0.8
	baz=327						
NNSB	Datong	1.08	298	P	Pn	07 40 02.0	0.0
	baz=282						
NNSB				*e*S	Sn	07 40 17.0	+0.6
	baz=282						
NNSH	Datong	1.08	298	P	Pb	07 40 02.0	-0.4
	baz=283						
WHF	Hehuan Shan	1.09	282	P	Pb	07 40 01.9	-0.7
	baz=265						
WHF				*e*S	Sn	07 40 16.7	-0.3
	baz=265						
NNS	Nan Shan	1.09	298	P	Pb	07 40 02.3	-0.3
	baz=282						
NNS				*e*S	Sn	07 40 17.6	+0.9
	baz=282						
EHY	Hungye	1.10	248	P	Pn	07 40 01.9	-0.3
	baz=245						
EHY				*e*S	Sb	07 40 16.7	+0.3
	baz=245						
SLBB	Yuanshan	1.10	319	*e*P	Pn	07 40 02.0	-0.3
	baz=316						
OWD	Renai	1.15	272	*e*P	Pn	07 40 02.9	-0.1
	baz=269						
OWD				*e*S	Sb	07 40 17.4	-0.6
	baz=269						
TWB1	Santiao Chiao	1.16	340	P	Pb	07 40 02.9	-0.6
	baz=356						
TWB1				*e*S	Sn	07 40 19.2	+1.2
	baz=356						
CHGB	Renai	1.16	277	*e*P	Pn	07 40 03.1	0.0
	baz=262						
CHGB				*e*S	Sn	07 40 19.1	+0.7
	baz=262						
YULB	Yu-li	1.16	243	*e*P	Pn	07 40 03.1	0.0
	baz=241						
YULB				S	Sb	07 40 18.4	+0.1
	baz=241						
TIPB	Shuangxi	1.18	332	P	Pb	07 40 03.5	-0.5
	baz=330						
TIPB				*e*S	Sn	07 40 18.9	+0.2
	baz=330						
TWF1	Yuli	1.18	242	P	Pn	07 40 03.5	+0.2
	baz=239						
TWF1				S	Sb	07 40 19.0	+0.1
	baz=239						
VWDT	VWDT	1.19	262	*e*P	Pn	07 40 03.7	+0.2
	baz=259						
VWDT				*e*S	Sb	07 40 19.2	0.0
	baz=259						
NWLT	Wulai	1.20	315	P	Pb	07 40 04.0	-0.3
	baz=313						
NWLT				*e*S	Sn	07 40 20.7	+1.5
	baz=313						
TDCB	Techi	1.21	286	*e*P	Pn	07 40 04.1	+0.2
	baz=271						
TDCB				*e*S	Sn	07 40 20.0	+0.5
	baz=271						
YHNB	Yeheng	1.22	308	*e*P	Pb	07 40 04.2	-0.4
	baz=305						
YHNB				*e*S	Sn	07 40 20.8	+1.1
	baz=305						
NSK	Sanguang	1.23	308	P	Pb	07 40 04.5	-0.5
	baz=305						
NSK				S	Sn	07 40 21.1	+1.0
	baz=305						
IRIF	Iriomote-Funau	1.26	71	P	Pb	07 40 04.9	-0.4
IRIF				S	Sb	07 40 22.2	+1.2
HATJ	Hateruma jima	1.27	84	P	Pb	07 40 05.1	-0.3
HATJ				S	Sb	07 40 22.1	+0.9
FULB	Fuli	1.27	236	P	Pn	07 40 04.2	-0.4
	baz=221						
FULB				*e*S	Sn	07 40 20.4	-0.4
	baz=221						
CHKT	Chengkung	1.27	230	*e*S	Sn	07 40 19.4	-1.6
	baz=228						
NWF	Wu-fen Shan	1.29	333	P	Pb	07 40 05.0	-0.9
	baz=331						
NWF				*e*S	Sb	07 40 22.5	+0.5
	baz=331						
WFSB	Wu-fen Shan	1.29	333	P	Pb	07 40 05.0	-0.8
	baz=331						
WFSB				*e*S	Sb	07 40 22.8	+0.9
	baz=331						
TWA	Mucha	1.31	324	P	Pb	07 40 06.6	+0.5
	baz=322						
TWA				*e*S	Sb	07 40 23.8	+1.3
	baz=322						
NHDH	Xindian Distri	1.32	322	*e*P	Pb	07 40 06.7	+0.3
	baz=319						
NHDH				*e*S	Sb	07 40 24.3	+1.3
	baz=319						
TATO	Taipei	1.36	321	*e*P	Pb	07 40 07.0	0.0
	baz=301						
TATO				*e*S	Sb	07 40 24.7	+0.8
	baz=301						
SSLB	Suanglung	1.36	265	*e*P	Pn	07 40 05.9	+0.2
	baz=262						
DPDB	Guoxing	1.38	275	P	Pb	07 40 06.9	-0.5
	baz=262						
DPDB				*e*S	Sb	07 40 26.0	+1.4
	baz=262						
TAP1	Taipei	1.39	324	*e*P	Pb	07 40 07.9	+0.4
	baz=321						
TAP1				*e*S	Sb	07 40 26.3	+1.5
	baz=321						
SMLT	Sun Moon Lake	1.40	269	P	Pn	07 40 07.0	+0.6
	baz=266						
SMLT				*e*S	Sb	07 40 24.9	-0.4
	baz=266						
WHP	Taichung City	1.40	285	*e*P	Pb	07 40 07.5	-0.3
	baz=270						
WHP				*e*S	Sb	07 40 25.5	+0.2
	baz=270						
WLTB	Daxi	1.42	311	*e*P	Pb	07 40 08.1	+0.1
	baz=308						
YUS	Yu-Shan	1.42	253	P	Pn	07 40 07.5	+0.4
	baz=250						
YUS				*e*S	Sn	07 40 25.2	-0.1
	baz=250						
YM01	YM01	1.45	327	P	Pb	07 40 08.0	-0.6
	baz=325						
WHYT	Xinyi Township	1.46	262	*e*P	Pb	07 40 08.3	-0.5
	baz=259						
YM10	YM10	1.46	327	*e*P	Pb	07 40 07.7	-1.1
	baz=326						
YM10				*e*S	Sb	07 40 28.6	+1.6
	baz=326						
YM11	YM11	1.46	328	*e*P	Pb	07 40 08.5	-0.3
	baz=326						
YM11				*e*S	Sb	07 40 28.4	+1.3
	baz=326						
YM04	YM04	1.47	327	*e*P	Pn	07 40 07.4	+0.1
	baz=324						
YM08	YM08	1.48	329	*e*P	Pb	07 40 08.3	-0.7
	baz=326						
JKRS	Kuro-shima	1.48	77	P	Pb	07 40 08.3	-0.7
JKRS				S	Sb	07 40 28.3	+1.0
LIOB	Emei	1.48	299	P	Pb	07 40 09.0	-0.1
	baz=284						
LIOB				*e*S	Sb	07 40 28.3	+0.9
	baz=284						
ELDTW	Lidau	1.49	241	P	Pn	07 40 07.5	-0.1
	baz=239						
TWH	Lutao	1.49	216	⇓P	Pn	07 40 07.4	-0.2
	baz=214						
TWH				*e*S	Sn	07 40 24.9	-1.4
	baz=214						
TWS1	Kuangyinshan	1.49	322	P	Pb	07 40 08.6	-0.7
	baz=338						
ANP	Anpu	1.51	327	*e*P	Pb	07 40 10.7	+1.1
	baz=324						
NTST	Danshui	1.53	324	*e*P	Pb	07 40 09.3	-0.6
	baz=339						
NCUH	Zhongli	1.54	313	*e*P	Pb	07 40 09.6	-0.5
	baz=310						
ALS	Alishan	1.54	255	*e*P	Pn	07 40 09.7	+1.1
	baz=252						
ALS				*e*S	Sb	07 40 29.3	-0.3
	baz=252						
WJS	Zhushan	1.56	267	*e*P	Pb	07 40 10.7	+0.2
	baz=264						
TWQ1	Liyutan	1.57	286	P	Pb	07 40 10.5	-0.1
	baz=283						
SBCB	Hsinchu	1.58	304	*e*P	Pb	07 40 10.0	-0.7
	baz=301						
WNT	Mingjian	1.60	269	*e*P	Pb	07 40 11.1	0.0
	baz=266						
WNT				*e*S	Sb	07 40 31.9	+1.1
	baz=266						
NSY	Sanyi	1.60	288	P	Pb	07 40 11.2	+0.1
	baz=285						
NMLH	Miaoli	1.62	293	P	Pb	07 40 11.2	-0.2
	baz=290						
TCU	Taichung	1.62	278	*e*P	Pb	07 40 11.5	0.0
	baz=275						
TCU				*e*S	Sb	07 40 32.9	+1.4
	baz=275						
JIJ	Ishigaki jima	1.62	74	P	Pn	07 40 09.8	+0.4
JIJ				S	Sn	07 40 29.8	+0.2
CHN5	Tsauling	1.64	259	P	Pb	07 40 11.4	-0.4
	baz=245						
CHN5				*e*S	Sb	07 40 32.7	+0.6
	baz=245						
TTN	Taitung	1.66	226	*e*S	Sn	07 40 29.8	-0.6
	baz=224						
TWGBT	Beinan	1.66	229	*e*P	Pn	07 40 10.2	+0.3
	baz=239						
TWG	Pinlang	1.66	229	P	Pn	07 40 10.2	+0.2
	baz=239						
TWG				*e*S	Sn	07 40 30.1	-0.4
	baz=239						
STYT	Tauyuan	1.71	244	P	Pn	07 40 11.9	+1.3
	baz=231						
STYT				*e*S	Sn	07 40 33.5	+1.7
	baz=231						
WCHH	Zhanghua	1.72	276	*e*P	Pb	07 40 12.9	-0.2
	baz=273						
WGK	Gukeng	1.73	263	*e*P	Pb	07 40 12.8	-0.4
	baz=260						
PCYT	Pengchaiyu	1.73	349	*e*P	Pn	07 40 11.1	+0.2
	baz=348						
WDLH	Douliu	1.75	263	P	Pb	07 40 13.1	-0.6
	baz=260						
TPUB	Ta-pu	1.76	250	*e*P	Pb	07 40 13.1	-0.9
	baz=236						
TPUB				*e*S	Sb	07 40 36.3	+0.6
	baz=236						
CHN4	Tsaushan	1.78	252	P	Pb	07 40 13.8	-0.4
	baz=249						
CHN4				*e*S	Sb	07 40 37.3	+1.2
	baz=249						
WTP	Ta-pu	1.80	248	P	Pb	07 40 13.6	-0.9
	baz=235						
WTP				*e*S	Sb	07 40 37.6	+1.0
	baz=235						
JISG	Ishigakijimahi	1.84	68	P	Pn	07 40 12.6	+0.2
JISG				S	Sn	07 40 35.5	+0.6
SLGT	Liugui	1.88	241	*e*P	Pb	07 40 14.9	-1.0
	baz=239						
CHY	Chiayi	1.89	257	*e*P	Pb	07 40 15.4	-0.6
	baz=255						
CHY				*e*S	Sb	07 40 39.6	+0.5
	baz=255						
SGST	Jiashian	1.89	244	*e*P	Pn	07 40 14.6	+1.5
	baz=242						
SGST				*e*S	Sb	07 40 39.8	+0.5
	baz=242						
ECL	Taimali	1.89	226	*e*P	Pn	07 40 13.7	+0.6
	baz=224						
ECL				*e*S	Sn	07 40 35.4	-0.8
	baz=224						
CHN1	Nanshi	1.89	248	P	Pb	07 40 15.6	-0.5
	baz=245						
CHN1				*e*S	Sb	07 40 40.2	+0.8
	baz=245						
RLNB	Erlin	1.90	270	*e*P	Pb	07 40 15.4	-0.7
	baz=267						
RLNB				*e*S	Sb	07 40 40.2	+0.9
	baz=267						
TWK	Hsinying	1.90	250	P	Pb	07 40 15.4	-0.8
	baz=248						
TWK				*e*S	Sb	07 40 39.9	+0.4
	baz=248						
SNST	Tainan City	1.91	249	P	Pb	07 40 15.5	-0.8
	baz=246						
SNST				*e*S	Sb	07 40 40.1	+0.4
	baz=246						
WLGB	Puzi	2.00	258	*e*S	Sb	07 40 43.1	+0.6
	baz=255						

SSD	Sandimen	2.02	235	eP	Pb	07 40 18.0	-0.3
	baz=225						
WSF	Szhu	2.04	263	eS	Sb	07 40 43.8	+0.2
	baz=260						
CHN3	Shinhua	2.07	246	eS	Sb	07 40 46.4	+1.8
	baz=244						
TAW	Tawu	2.10	223	eP	Pn	07 40 15.8	-0.2
	baz=232						
MASBT	Mashibuluo	2.10	232	eP	Pn	07 40 17.1	+1.1
	baz=222						
EAST	Anshuo	2.11	224	P	Pn	07 40 16.3	+0.2
	baz=222						
CHN8	Yiju	2.11	255	S	Sb	07 40 44.8	-0.9
	baz=252						
TWM1	Shoushan	2.14	240	eS	Sb	07 40 49.6	+3.1
	baz=238						
SCLT	Jiali	2.18	251	eS	Sb	07 40 47.3	-0.3
	baz=248						
JTJ	Tarama	2.19	70	P	Pn	07 40 18.4	+1.2
JTJ				eS	Sb	07 40 46.3	-1.7
SCZT	Fangliau	2.27	228	eP	Pb	07 40 21.7	-0.9
	baz=218						
WLCH	Liuqiu	2.45	231	eP	Pb	07 40 25.8	+0.2
	baz=244						
TSEB	Hengchuen, Pin	2.46	215	S	Sn	07 40 52.7	+2.6
	baz=224						
TWKBT	Hengchun	2.47	217	eP	Pn	07 40 22.4	+1.3
	baz=216						
TWKBT				eS	Sn	07 40 52.5	+2.0
	baz=216						
TWK1	Hengchun	2.47	218	eP	Pn	07 40 22.5	+1.4
	baz=216						
TWK1				eS	Sn	07 40 51.1	+0.5
	baz=216						
WDGT	Dungji	2.62	256	P	Pn	07 40 24.7	+1.5
	baz=253						
WDGT				eS	Sn	07 40 55.1	+0.8
	baz=253						
PHUB	P'eng-hu	2.65	262	eP	Pn	07 40 24.8	+1.3
	baz=259						
PHUB				eS	Sn	07 40 55.8	+0.9
	baz=259						
PNG	Penghu	2.66	263	eP	Pn	07 40 25.0	+1.4
	baz=260						
PNG				eS	Sn	07 40 56.5	+1.4
	baz=260						
JIRB	Irabujima	2.66	70	eS	Sn	07 40 56.7	+1.6
JIKM	Ikemajima	2.75	68	P	Pn	07 40 26.6	+1.6
JMJ2	Miyako jima3	2.77	72	eS	Sn	07 41 00.8	+3.0
VCHM	Qimei	2.84	256	eP	Pn	07 40 27.5	+1.3
	baz=253						
VCHM				eS	Sn	07 41 00.2	+0.5
	baz=253						
PTTC	Pingtan	2.88	304	eP	Pn	07 40 27.9	+1.1
	baz=301						
VWUC	VWUC	2.92	292	eP	Pn	07 40 27.3	+0.1
	baz=289						
MATB	Ma-tsu	3.16	315	eP	Pn	07 40 30.8	+0.3
	baz=312						
PTMZ	Houxiangcun	3.21	291	eP	Pn	07 40 31.3	0.0
	baz=288						
LYJJ	Jianjiangzhen	3.56	318	eP	Pn	07 40 35.5	-0.6
	baz=314						
XPSS	Dashiqiu	3.62	326	eP	Pn	07 40 36.8	0.0
	baz=323						
KNM	Kinmen	3.68	279	eP	Pn	07 40 39.8	+2.1
	baz=274						
KNM				eS	Sn	07 41 22.5	+2.0
	baz=274						
KNMB	Chin-men Tao	3.73	279	eP	Pn	07 40 38.7	+0.4
	baz=276						
MHZQ	Yeshan	3.77	306	eP	Pn	07 40 38.6	-0.3
	baz=303						
AXDP	Jialang	4.18	284	eP	Pn	07 40 44.9	+0.3
	baz=281						
ZPLA	Ao Xicun	4.28	271	eP	Pn	07 40 46.5	+0.6
	baz=268						
JOW	Kunigami	6.03	60	Pn	Pn	07 41 11.0	+1.0
	0.2nm,0.3s,baz=124,slow=13,SNR=6.3						
KSRS	Korea Array	14.29	18	Pn	P	07 43 07.7	-2.4
	0.3nm,0.3s,baz=198,slow=11,SNR=10						
KSRS				LR	LR	07 49 15.1	
	comp=Z,72nm,18.5s,baz=262,slow=40						
MJAR	Matsushiro Arr	18.52	44	P	Pn	07 43 57.6	+0.4
	baz=243,slow=4.6,SNR=4.3						
SONM	Songino Array	27.06	336	P	P	07 45 22.0	-1.0
	0.9nm,0.6s,baz=156,slow=9.8,SNR=6.4						
MKAR	Makanchi Array	39.32	316	P	P	07 47 09.2	-0.3
	1.1nm,0.5s,baz=102,slow=9.9,SNR=20						
ZALV	Zalesovo Beam	41.09	327	P	P	07 47 22.3	-1.6
	2.2nm,0.6s,baz=122,slow=6.6,SNR=6.4						
WRA	Warramunga Arr	45.12	164	P	P	07 47 57.3	+0.3
	0.8nm,0.8s,baz=345,slow=8.8,SNR=5.2						
ASAR	Alice Springs	48.60	166	P	P	07 48 25.6	+1.5
	0.3nm,0.6s,baz=345,slow=7.4,SNR=4.8						
OBN	Obninsk	68.41	322	LR	LR	08 22 14.3	
	comp=Z,15nm,18.8s,baz=76,slow=37						
FINES	FINESS Array B	72.25	330	P	P	07 51 05.4	+0.1
	2.9nm,0.9s,baz=22,slow=4.5,SNR=1.5						
BRTR	Keskin Array B	74.24	307	P	P	07 51 18.2	+0.5
	0.5nm,0.5s,baz=96,slow=4.3,SNR=3.7						
YKA	Yellowknife Ar	82.77	23	P	P	07 52 03.8	-0.2
	0.1nm,0.6s,baz=311,slow=4.8,SNR=2.5						

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*SNET **26** 07:40:57.7±1.1, 12.°41N×87.°82W, h37^{km}±5^{km}, ML3.7*
*UCR **26** 07:40:57.7±1.5, 12.°41N×87.°81W, h36^{km}±768^{km}, ML3.6*
*INET **26** 07:40:57.1, 12.°46N×87.°73W, h70^{km}, ML3.9*
ISC 26 07:40:56.0±1.6**, 12.°42N**±0.°06×**87.°79W**±0.°05**, h17**^{km}±12^{km}**,**
n48, σ0^{s}80/60**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	0.85	357	eP	Pn	07 41 13.6	+0.3
CNCH				eS	Sn	07 41 25.3	-0.2
CNCH	Conchagua	0.85	357	eP	Pn	07 41 13.6	+0.3
CNCH				eS	Sn	07 41 25.3	-0.2
LCND	La Caada	0.89	353	eP	Pn	07 41 14.1	+0.3
LCND				eS	Sn	07 41 26.8	+0.5
LCND	La Caada	0.89	353	eP	Pn	07 41 14.1	+0.3
LCND				eS	Sn	07 41 26.8	+0.5
JUCU	Jucuar¡n	0.94	331	eP	Pg	07 41 14.3	-0.1
JUCU				eS	Sn	07 41 27.6	-0.1
JUCU	Jucuar¡n	0.94	331	eP	Pg	07 41 14.3	-0.1
JUCU				eS	Sn	07 41 27.6	-0.1
BLLM	Bellamira	1.11	337	eP	Pn	07 41 17.2	+0.3
BLLM	Bellamira	1.11	337	eP	Pn	07 41 17.2	+0.3
LCY	Lacayo	1.11	334	eP	Pg	07 41 17.5	-0.1
LCY	Lacayo	1.11	334	eP	Pg	07 41 17.5	-0.1
PACA	Pacayal	1.17	333	eP	Pn	07 41 18.1	+0.4
PACA				eS	Sb	07 41 33.3	+0.5
PACA	Pacayal	1.17	333	eP	Pn	07 41 18.1	+0.4
PACA				eS	Sb	07 41 33.3	+0.5
ALJI	Alcalda de J	1.18	320	eP	Pn	07 41 17.7	-0.1
ALJI				eS	Sb	07 41 33.1	0.0
ALJI				IAML		07 41 36.4	
	comp=Z,2μm,0.3s						
ALJI	Alcalda de J	1.18	320	eP	Pn	07 41 17.7	-0.1
ALJI				eS	Sb	07 41 33.1	0.0
ALJI				IAML		07 41 36.4	
	comp=Z,2μm,0.3s						
MOMN	Momotombo	1.22	90	eP	Pn	07 41 18.1	-0.2
MOMN	Momotombo	1.22	90	eP	Pn	07 41 18.1	-0.2
TECA	Tecapa	1.28	327	eP	Pn	07 41 19.5	+0.2
TECA	Tecapa	1.28	327	eP	Pn	07 41 19.5	+0.2
COEB	Comit de Eme	1.29	326	eP	Pb	07 41 20.1	+0.1
COEB				eS	Sb	07 41 35.7	-0.7
COEB				IAML		07 41 39.2	
	comp=Z,1μm,0.6s						
COEB	Comit de Eme	1.29	326	eP	Pb	07 41 20.1	+0.1
COEB				eS	Sb	07 41 35.7	-0.7
COEB				IAML		07 41 39.2	
	comp=Z,1μm,0.6s						
FAGO	Alcalda de S	1.30	346	eP	Pn	07 41 19.6	+0.1
FAGO				eS	Sb	07 41 36.4	-0.3
FAGO	Alcalda de S	1.30	346	eP	Pn	07 41 19.6	+0.1
FAGO				eS	Sb	07 41 36.4	-0.3
TGUH	Tegucigalpa,Un	1.70	17	eP	Pn	07 41 25.4	+0.4
TGUH	Tegucigalpa,Un	1.70	17	eP	Pn	07 41 25.4	+0.4
LFRS	El Faro	1.73	314	eP	Pn	07 41 25.8	+0.4
LFRS				eS	Sn	07 41 46.6	-0.5
LBRS	Las Brisas	1.79	317	eP	Pn	07 41 26.5	+0.2
LOMA	Loma Larga	1.82	312	eS	Sn	07 41 48.9	-0.5
LOMA	Loma Larga	1.82	312	eS	Sn	07 41 48.9	-0.5
OPAM	Oficina de Pla	1.88	313	eS	Sn	07 41 50.5	-0.3
OPAM				IAML		07 41 52.9	
	comp=Z,708nm,0.3s						
OPAM	Oficina de Pla	1.88	313	eS	Sn	07 41 50.5	-0.3
OPAM				IAML		07 41 52.9	
	comp=Z,708nm,0.3s						
SNET	Serv Nac Est T	1.89	312	IAML		07 41 51.4	
	comp=Z,478nm,0.3s						
SNET	Serv Nac Est T	1.89	312	IAML		07 41 51.4	
	comp=Z,478nm,0.3s						
UEES	Universidad Ev	1.92	312	IAML		07 41 54.9	
	comp=Z,465nm,0.3s						
UEES	Universidad Ev	1.92	312	IAML		07 41 54.9	
	comp=Z,465nm,0.3s						
BOQS	Boqueron	1.96	312	eP	Pn	07 41 29.3	+0.6
BOQS				eS	Sn	07 41 52.7	-0.2
GBS3	Finca Las Img	2.80	125	eP	Pn	07 41 40.7	+0.6
NY14	Universidad de	2.82	128	eP	Pn	07 41 41.5	+1.1
GB1A	Borinquen Arri	2.83	124	eP	Pn	07 41 42.4	+1.8
LAPC	Finca la Perla	2.83	125	eP	Pn	07 41 40.6	0.0
BUEV	Buena Vista	2.83	124	eP	Pn	07 41 41.4	+0.8
BUAI	Buenos Aires	2.85	122	eP	Pn	07 41 41.2	+0.4
LIM1	Limonal	3.02	124	eP	Pn	07 41 45.4	+2.3
GUAB	Guayabo de Bag	3.03	124	eP	Pn	07 41 39.2	-4.1
COLC	Colonia	3.07	124	eP	Pn	07 41 44.5	+0.6
GUAI	GUAI	3.09	134	eP	Pn	07 41 44.8	+0.8
CUI	Cuipilapa	3.11	124	eP	Pn	07 41 44.7	+0.3
PTEN	Parque Tenorio	3.22	121	eP	Pn	07 41 45.5	-0.4
ACAL	Aguas Claras	3.23	123	eP	Pn	07 41 44.9	-1.1

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*IDC **26** 07:49:52.3±1.2, 9.°20N×75.°15W, h0^{km}, mb3.5/3, mb1 3.8/6, mb1mx3.5/32, mbtmp3.7/6, ML2.8/3, Error ellipse: s-maj=26.9km s-min=17.3km az=31.0*
*RSNC **26** 07:49:57.2±1.0, 9.°05N×75.°09W, h10^{km}±3^{km}, ML3.3, Mw3.5*
ISC 26 07:49:54.7±1.4**, 9.°10N**±0.°03×**75.°13W**±0.°03**, h12**^{km}±10^{km}**,**
n29, σ1^{s}28/48**, mb3.6**/3**, 5C-1D, Near north coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJCC	San Jacinto, C	0.80	356	⇓iP	Pn	07 50 12.3	+0.4
SJCC				eS	Sn	07 50 24.2	+0.5
SJCC				i		07 50 27.6	
	comp=Z,618nm,0.3s						
SMLC	San Martn de	1.08	106	⇑iP	Pg	07 50 15.6	0.0
SMLC				eS	Sg	07 50 29.5	-0.2
SMLC				i		07 50 32.9	
	comp=Z,1μm,0.1s						
ARGC	Ariguani, Magd	1.15	49	⇑iP	Pn	07 50 17.8	+1.1
ARGC				eS	Sn	07 50 33.2	+0.8
ARGC				i		07 50 42.0	
	comp=Z,174nm,0.7s						
LCBC	Los crdobas,	1.25	259	eP	Pg	07 50 18.9	+0.1
LCBC				eS	Sn	07 50 37.7	+2.9
LCBC				i		07 50 39.0	
	comp=Z,290nm,0.3s						
UREC	San Jos de Ur	1.40	197	eP	Pn	07 50 20.2	+0.1
UREC				eS	Sb	07 50 38.1	-0.4
ZARC	Zaragoza, Cauc	1.62	171	eP	Pn	07 50 23.1	0.0
ZARC				eS	Sn	07 50 43.9	-0.1
ZARC				i		07 50 45.5	
	comp=Z,1μm,0.3s						
CODC	Agustn Codazz	1.86	63	⇑iP	Pn	07 50 27.4	+1.0
CODC				eS	Sn	07 50 51.2	+1.4
CODC				i		07 50 56.4	
	comp=Z,120nm,0.3s						
OCAC	Ocana	1.98	115	⇑iP	Pn	07 50 28.6	+0.4
OCAC				eS	Sn	07 50 53.7	+0.7
OCAC				i		07 51 00.7	
	comp=Z,467nm,0.5s						
SMRC	Santa Marta, M	2.24	23	eP	Pn	07 50 33.3	+1.7
SMRC				eS	Sn	07 51 01.3	+2.1
SMRC				i		07 51 13.4	
	comp=Z,45nm,0.4s						
DBBC	Dabeiba	2.33	208	eP	Pn	07 50 34.8	+1.8
DBBC				i		07 51 12.0	
	comp=Z,223nm,0.4s						
PTBC	PUERTO BERRIO,	2.63	165	eP	Pn	07 50 38.0	+1.0
PTBC				eS	Sn	07 51 09.6	+0.7
PTBC				i		07 51 18.4	
	comp=Z,226nm,0.5s						
HELC	Santa Helena	2.92	188	eP	Pn	07 50 42.3	+1.0
HELC				eS	Sn	07 51 17.6	+1.1
HELC				i		07 51 27.3	
	comp=Z,71nm,0.5s						
PAMC	Pamplona, Colo	2.97	126	eP	Pn	07 50 43.8	+1.6
PAMC				eS	Sn	07 51 19.2	+1.3
PAMC				i		07 51 33.6	
	comp=Z,147nm,0.4s						
BARC	Barichara	3.15	142	eP	Pn	07 50 45.7	+1.3
BARC				i		07 51 37.5	
	comp=Z,180nm,0.5s						
CBOC	Ciudad Bolivar	3.33	195	eP	Pn	07 50 47.4	+0.5
CBOC				i		07 51 48.4	
	comp=Z,23nm,0.6s						
NORC	Norcasia	3.52	176	eP	Pn	07 50 49.3	0.0
NORC				i		07 51 44.8	
	comp=Z,59nm,0.3s						
SPBC	San Pablo de B	3.58	163	eP	Pn	07 50 50.3	+0.1
SPBC				eS	Sn	07 51 33.3	+0.8
SPBC				i		07 51 51.7	
	comp=Z,55nm,0.3s						
RUSC	La Rusia	3.77	147	eP	Pn	07 50 54.9	+1.7
RUSC				eS	Sn	07 51 39.0	+1.1
RUSC				i		07 51 57.5	
	comp=Z,129nm,0.8s						
GUY2C	Guyana, Caldas	3.86	184	eP	Pn	07 50 55.5	+1.1
GUY2C				eS	Sn	07 51 40.8	+0.9
GUY2C				i		07 51 58.2	
	comp=Z,44nm,0.5s						
RREF	El Recreo	4.17	183	eP	Pn	07 50 59.9	+1.1
TAMC	Tame, Arauca	4.23	128	eP	Pn	07 51 00.2	+1.1
TAMC				eS	Sn	07 51 48.6	0.0
TAMC				i		07 52 20.5	
	comp=Z,33nm,0.6s						
ROSC	El Rosal	4.30	169	Pn	Pn	07 51 03.0	+2.6
	comp=Z,2.3nm,0.3s,baz=248,slow=19,SNR=3.4						
ROSC				Sn	Sn	07 51 53.7	+2.9
	comp=Z,3.4nm,0.3s,baz=173,slow=22,SNR=3.6						
ROSC				Lg	Lg	07 52 03.2	
	comp=Z,6.9nm,0.3s,baz=204,slow=23,SNR=8.8						
SDV	Santo Domingo	4.44	92	Pn	Pn	07 51 03.4	+1.2
	comp=Z,8.8nm,0.3s,baz=219,slow=8.0,SNR=222						
SDV				Sn	Sn	07 51 54.3	+0.3
	comp=Z,9.9nm,0.3s,baz=25,slow=20,SNR=5.9						
SDV				Lg	Lg	07 52 14.9	
	comp=Z,8.1nm,0.3s,baz=92,slow=21,SNR=3.1						
SDV	Santo Domingo	4.44	92	⇑iP	Pn	07 51 03.6	+1.4
SDV				eS	Sn	07 51 55.0	+1.0
SDV				i		07 52 24.6	
	comp=Z,41nm,0.5s						
ORTC	Ortega, Tolima	5.16	181	eP	Pn	07 51 13.7	+1.8
JTS	Las Juntas de	9.76	278	Pn	Pn	07 52 14.8	-0.3
	comp=Z,0.6nm,0.3s,baz=320,slow=16,SNR=4.1						
LPAZ	La Paz	26.16	165	P	P	07 55 28.6	-1.2
	comp=Z,0.6nm,0.5s,baz=342,slow=9.6,SNR=2.0						
TXAR	Lajitas Array	33.48	311	P	P	07 56 33.3	-0.9
	comp=Z,0.2nm,0.6s,baz=134,slow=9.2,SNR=4.3						
YKA	Yellowknife Ar	60.46	340	P	P	08 00 02.4	-1.8
	comp=Z,0.4nm,0.7s,baz=132,slow=7.6,SNR=9.2						

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*IDC **26** 08:34:35.3±0.6, 13.°85N×92.°86E, h0^{km}, mb4.0/19, mb1 4.2/21, mb1mx3.9/61, mbtmp4.0/21, ML3.6/2, MS3.7/6, Ms1 3.7/6, ms1mx3.4/49, Error ellipse: s-maj=25.2km s-min=12.9km az=55.0*
*NEIC **26** 08:34:40.1±1.6, 13.°81N±0.°07×92.°9E±0.°1, h32^{km}±4^{km}, mb4.6/14, Error ellipse: s-maj=14.5km s-min=9.9km az=72.0*
ISC 26 08:34:40.1±0.5**, 13.°91N**±0.°05×**93.°00E**±0.°06**, h32**^{km}**, n65,**
σ1^{s}58/61**, mb4.2**/24**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGPR	DIGLIPUR	0.73	185	eP	Pb	08 34 55.7	+1.2
PBA	Port Blair	2.25	186	eP	Pb	08 35 20.1	0.0
CMAR	Chiang Mai Arr	7.29	51	Pn	Pn	08 36 25.6	+1.2
	0.3nm,0.3s,baz=242,slow=15,SNR=1.4						
CMAR				Sn	Sn	08 37 45.2	-0.9
	0.5nm,0.3s,baz=231,slow=18,SNR=4.1						
CMAR				LR	LR	08 40 03.0	
	comp=Z,254nm,18.6s,baz=229,slow=44						
CHTO	Chiang Mai	7.51	49	Pn	Pn	08 36 29.3	+1.8
PBKT	Sadao Pong	8.14	70		Pn	08 36 38.2	+2.1
BRDH	Bariadhala	8.82	352	LR	LR	08 41 54.5	
	comp=Z,721nm,19.4s,baz=150,slow=50						
PSI	Prapat	12.49	152	Pn	Pn	08 37 35.0	-0.9
	0.3nm,0.3s,baz=99,slow=17,SNR=1.6						
PSI				LR	LR	08 42 51.1	
	comp=Z,338nm,18.9s,baz=352,slow=39						
RPSI	Rantau Prapat	12.58	152		Pn	08 37 35.0	-2.0
RPSI	Rantau Prapat	12.58	152	Pn	Pn	08 37 36.3	-0.8
SLVN	Son La	12.75	53		Sn	08 39 54.9	-5.4
GSI	Gunungsitoli	13.31	160		Sn	08 40 10.5	-3.6
PALK	Pallekele	13.76	243	Sn	Sn	08 40 12.2	-13
	0.9nm,0.3s,baz=322,slow=19,SNR=3.2						
PALK				LR	LR	08 43 24.4	
	comp=Z,200nm,18.4s,baz=53,slow=39						
ODAN	Odare	13.91	339	eP	Pn	08 37 53.7	-1.7
	24nm,0.2s						
TAPN	Taplejung	14.26	341	eP	Pn	08 37 58.4	-1.8
	17nm,0.3s						
RAMN	Ramite	14.29	336	eP	Pn	08 37 58.7	-1.9
	18nm,0.4s						
HYB	Hyderabad	14.34	286	i P	Pn	08 38 03.0	+1.9
HYB				e		08 40 26.0	
HYB				eS	Sn	08 40 35.0	-4.2
JIRN	Jiri	15.09	336	eP	Pn	08 38 09.5	-1.9
	18nm,0.3s						
PKI	Pulchoki	15.33	334	eP	Pn	08 38 12.9	-1.7
	11nm,0.4s						
PKIN	Phulchoki	15.34	334	eP	Pn	08 38 12.9	-1.8
	16nm,0.4s						
GUN	Gumba	15.43	336	eP	Pn	08 38 13.6	-2.3
	5.2nm,0.3s						
DMN	Daman	15.49	333	eP	Pn	08 38 15.5	-1.2
GKN	Gorkha	16.04	332	eP	Pn	08 38 22.0	-1.6
	21nm,0.2s						
DANN	Dangsing	16.74	331	eP	Pn	08 38 30.8	-1.9
	16nm,0.4s						
NIL	Nilore	26.61	321	P	P	08 40 14.2	-1.6
NIL				IAmb	IAmb	08 40 25.8	
	comp=Z,14nm,1.0s						
H08S3	Diego Garcia H	29.54	225	T	T	09 11 29.4	
	baz=43,slow=76,SNR=24						
H08S2	Diego Garcia H	29.54	225	T	T	09 11 36.4	
	baz=43,slow=76,SNR=10						
H08S1	Diego Carcia H	29.55	225	T	T	09 11 30.8	
	baz=43,slow=76,SNR=14						
GAR	Garm	32.02	325	P	P	08 41 05.7	+1.7
ARSB	Arslanbob	32.40	331	P	P	08 41 08.2	+0.9
ARSB				IAmb	IAmb	08 41 19.1	
	comp=Z,15nm,1.4s						
CHGR	Chuyangaron	32.44	324	P	P	08 41 07.7	+0.1
AAK	Ala-Archa	32.79	334	P	P	08 41 09.8	-0.8
	comp=Z,0.8nm,0.6s,baz=165,slow=13,SNR=1.7						
AAK				LR	LR	08 55 58.3	
	comp=Z,200nm,21.6s,baz=133,slow=39						
MK31	Makanchi Array	33.99	347	P	P	08 41 21.9	+1.0
MKAR	Makanchi Array	33.99	347	P	P	08 41 21.4	+0.4
	comp=Z,2.3nm,0.7s,baz=161,slow=8.2,SNR=26						
MKAR				PcP	PcP	08 43 58.8	+0.3
	comp=Z,0.2nm,0.7s,baz=140,slow=3.2,SNR=2.0						
MKAR	Makanchi Array	33.99	347	P	P	08 41 20.9	0.0
MAKZ	Makanchi	34.08	346	P	P	08 41 22.2	+0.5
SONM	Songino Array	35.62	16	P	P	08 41 36.0	+1.0
	comp=Z,1.1nm,0.9s,baz=208,slow=8.0,SNR=6.5						
SONM	Songino Array	35.62	16	P	P	08 41 37.1	+2.1
KURBB	Kurchatov Arra	38.46	345	P	P	08 41 59.2	+0.3
	comp=Z,2.9nm,0.8s,baz=166,slow=8.1,SNR=18						
KURK	Kurchatov	38.52	345	P	P	08 42 00.1	+0.6
KURK					pP	08 42 08.9	+0.1
TLY	Talaya	38.64	11	LR	LR	09 00 15.2	
	comp=Z,89nm,18.0s,baz=202,slow=40						
GEYT	Alibeck	39.09	314	P	P	08 42 05.0	+0.4
	comp=Z,1.9nm,0.5s,baz=93,slow=8.7,SNR=2.9						
ZALV	Zalesovo Beam	40.47	353	P	P	08 42 15.8	+0.1
	comp=Z,2.1nm,0.6s,baz=179,slow=8.4,SNR=9.3						
ABKAR	Akbulak array	44.47	329	P	P	08 42 48.7	+0.5
FITZ	Fitzroy Crossi	45.25	134	P	P	08 42 54.9	0.0
	comp=Z,2.1nm,0.7s,baz=330,slow=9.5,SNR=5.7						
FITZ	Fitzroy Crossi	45.25	134	IAmb	IAmb	08 43 04.4	
	comp=Z,5.7nm,0.9s						
WB0	Warramunga Arr	52.72	128	IAmb	IAmb	08 44 01.9	
	comp=Z,4.9nm,0.8s						
WRA	Warramunga Arr	52.78	129	P	P	08 43 53.1	+0.5
	comp=Z,2.4nm,0.6s,baz=307,slow=8.1,SNR=20						
WRA				PcP	PcP	08 45 03.0	+1.1
	comp=Z,0.4nm,0.6s,baz=324,slow=3.0,SNR=0.9						
WRAB	Tennant Creek	52.78	129	P	P	08 43 53.0	+0.4
WRAB				IAmb	IAmb	08 44 02.4	
	comp=Z,8.4nm,0.9s						
WB2	Warramunga Arr	52.79	129	IAmb	IAmb	08 44 02.5	
	comp=Z,7.8nm,0.9s						
ASAR	Alice Springs	54.72	133	P	P	08 44 07.0	+0.2
	comp=Z,1.6nm,0.4s,baz=310,slow=6.9,SNR=40						
ASAR				PcP	PcP	08 45 10.0	+0.7
	comp=Z,0.5nm,0.7s,baz=330,slow=3.5,SNR=1.6						
ASAR	Alice Springs	54.72	133	P	P	08 44 07.4	+0.6
BRTR	Keskin Array B	57.74	308	P	P	08 44 27.6	-0.8
	comp=Z,1.3nm,0.6s,baz=122,slow=8.2,SNR=8.2						
AKASG	Malin Array Be	62.79	320	P	P	08 45 01.4	-1.1
	comp=Z,0.2nm,0.3s,baz=84,slow=6.2,SNR=1.7						
PETK	Petropavlovsk-	63.85	37	PP	PP	08 47 32.6	+2.6
	comp=Z,4.0nm,1.0s,baz=251,slow=9.2,SNR=3.9						
MLR	Muntele Rosu	64.15	314	P	P	08 45 12.0	+0.3
	comp=Z,1.1nm,0.4s,baz=186,slow=20,SNR=3.3						
MLR	Muntele Rosu	64.15	314	P	P	08 45 10.3	-1.5
MLR					pP	08 45 21.8	+0.3
FINES	FINESS Array B	66.90	331	P	P	08 45 28.7	-0.4
	comp=Z,1.4nm,0.6s,baz=107,slow=6.6,SNR=3.9						
ARCES	ARCESS Array B	69.25	340	P	P	08 45 43.4	-0.3
	comp=Z,1.4nm,0.7s,baz=92,slow=7.3,SNR=0.9						
GERES	GERESS Array B	72.64	317	P	P	08 46 04.8	+0.1
	comp=Z,0.6nm,0.5s,baz=79,slow=6.9,SNR=4.7						
CLL	Collm	73.03	320	e(P)	P	08 46 10.0	+3.1
NOA	NORSAR Array B	73.97	330	P	P	08 46 11.4	-0.9
	comp=Z,0.8nm,0.7s,baz=90,slow=5.7,SNR=3.8						
BOSA	Boshof	77.90	236	P	P	08 46 35.5	+0.1
	comp=Z,2.1nm,0.6s,baz=42,slow=4.1,SNR=3.8						
TORD	Torodi Ar. Bea	88.14	283	P	P	08 47 28.1	-0.5
	comp=Z,0.6nm,0.8s,baz=81,slow=5.1,SNR=4.8						
ILAR	Eielson Array	89.60	22	P	P	08 47 34.4	-0.1
	comp=Z,0.3nm,0.7s,baz=289,slow=5.2,SNR=5.1						
NVAR	Mina Array Bea	120.25	28	PKP	PKiKP	08 53 29.9	+1.0
	comp=Z,0.3nm,0.7s,baz=297,slow=4.0,SNR=2.6						

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*NIED **26** 08:49:00, 28.°10N×131.°60E, h8^{km}, Mw5.3 Best double couple: $M_0$1.12000×10^{17} NP1:ϕ_s351.00000°, δ53.00000°, λ-72.00000°. NP2:ϕ_s143.00000°, δ41.00000°, λ-112.00000°.*
*BGR **26** 08:49:37.3±0.0, 26.°88N×133.°22E, h33^{km}, mb5.9, mB_BB6.2, Ms5.4*
*BJI **26** 08:49:39.7±0.0, 28.°19N×131.°58E, h9^{km}, mB5.3/61, mb5.4/89, Ms5.3/95, Ms7 5.3/88*
*IDC **26** 08:49:40.4±0.3, 28.°20N×131.°58E, h0^{km}, mb5.4/43, mb1 5.5/52, mb1mx5.5/53, mbtmp5.4/52, ML4.6/8, MS4.7/29, Ms1 4.7/29, ms1mx4.6/41, Error ellipse: s-maj=9.7km s-min=7.5km az=70.0*
*MOS **26** 08:49:41.1±0.9, 28.°23N×131.°59E, h14^{km}, mb6.0/96, MS5.3/28, Error ellipse: s-maj=5.9km s-min=3.1km az=112.5*
*NEIC **26** 08:49:41.9, 28.°19N×131.°51E, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.03; $M_{\theta\theta}$0.24; $M_{\phi\phi}$0.79; $M_{r\theta}$0.09; $M_{\theta\phi}$-0.60; $M_{\phi r}$-0.05; Fault plane solution: $M_0$1.12000×10^{17} NP1:ϕ_s150.46000°, δ42.75000°, λ-85.32000°. NP2:ϕ_s324.09000°, δ47.42000°, λ-94.31000°. Principal axes: T 1.1829, Plg2.0000°, Azm57.0000°; N -0.1467, Plg3.0000°, Azm327.0000°; P -1.0362, Plg86.0000°, Azm183.0000°;*
*NEIC **26** 08:49:41.9±1.4, 28.°19N±0.°06×131.°51E±0.°06, h10^{km}±1^{km}, mb5.7/327, Mwb5.3/56, Mww5.5, Mwc5.4(GCMT) Error ellipse: s-maj=10.0km s-min=8.1km az=145.0*
*JMA **26** 08:49:42.4±0.1, 28.°13N×131.°61E, h77^{km}, M5.3*
JMA Felt III J1.
*GCMT **26** 08:49:42.9±0.1, 28.°13N±0.°01×131.°43E±0.°01, h17^{km}, MW5.4/152, Moment Tensor Solution. s133,c235; s152,c293; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.67±.02; $M_{\theta\theta}$0.46±.01; $M_{\phi\phi}$1.21±.01; $M_{r\theta}$0.25±.04; $M_{\theta\phi}$-0.68±.01; $M_{\phi r}$0.21±.03; Best double couple: $M_0$1.66900×10^{17} NP1:ϕ_s320.00000°, δ45.00000°,*

λ-104.00000°. NP2:ϕ_s159.00000°,δ47.00000°, λ-76.00000°. Principal axes: T 1.6110, Plg1.0000°, Azm240.0000°; N 0.1170, Plg10.0000°, Azm330.0000°; P -1.7280, Plg80.0000°, Azm144.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

*NEIC **26** 08:49:44,28°.12N×131°.45E,h15^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.67; $M_{\theta\theta}$0.45; $M_{\phi\phi}$1.22; $M_{r\theta}$0.05; $M_{\theta\phi}$-0.72; $M_{\phi r}$-0.07; Fault plane solution: $M_0$1.66000×10^{17} NP1:ϕ_s329.00000°, δ46.00000°,λ-90.00000°. NP2:ϕ_s149.00000°,δ44.00000°, λ-89.00000°. Principal axes: T 1.6517, Plg1.0000°, Azm59.0000°; N 0.0208, Plg0.0000°, Azm329.0000°; P -1.6725, Plg89.0000°, Azm224.0000°;*

*NEIC **26** 08:49:47,28°.07N×131°.59E,h16^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-2.15; $M_{\theta\theta}$0.78; $M_{\phi\phi}$1.37; $M_{r\theta}$0.31; $M_{\theta\phi}$-0.42; $M_{\phi r}$-0.53; Fault plane solution: $M_0$2.02000×10^{17} NP1:ϕ_s332.00000°, δ54.00000°,λ-90.00000°. NP2:ϕ_s153.00000°,δ36.00000°, λ-89.00000°. Principal axes: T 1.6828, Plg9.0000°, Azm62.0000°; N 0.5628, Plg1.0000°, Azm332.0000°; P -2.2456, Plg81.0000°, Azm239.0000°;*

ISC 26 08:49:43.1±0.6**,28°.16N**±0°.02×**131°.56E**±0°.03**,h18**^{km}±2^{km}**, n1381,**σ**1^s.41**/1394**,mb5.7**/401**,MS5.1**/79**,92C-99D, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JZK	Kikaishima	1.41	277	⇑P	Pn	08 50 07.5	-0.4
JZK				*e*S	Sb	08 50 26.7	+0.2
JAM	Amami Oshima	1.74	279	⇑P	Pn	08 50 12.2	-0.2
JAM				S	Sn	08 50 33.4	-0.8
JAMN	Amaminishikomi	2.10	273	⇑P	Pn	08 50 16.8	-0.6
JAMN				S	Sn	08 50 41.6	-1.6
JKDJ	Kitadaitoujima	2.21	186	⇑P	Pn	08 50 17.3	-1.6
JKDJ				S	Sn	08 50 41.9	-3.8
JNN	Nakanoshima	2.23	319	⇓P	Pn	08 50 18.9	-0.3
JNN				S	Sn	08 50 44.4	-2.0
JYAK	Yakushimahirau	2.27	336	⇑P	Pn	08 50 19.2	-0.5
JYAK				S	Sn	08 50 44.7	-2.5
JTAJ	Takarajima	2.30	296	P	Pn	08 50 19.5	-0.6
JTAJ				S	Sn	08 50 45.7	-2.2
JMTN	Minamitane	2.31	346	⇑P	Pn	08 50 19.5	-0.7
JMTN				S	Sn	08 50 46.1	-2.1
JTK	Tokunoshima	2.33	262	⇑P	Pn	08 50 20.2	-0.4
JTK				S	Sn	08 50 47.2	-1.7
JMZ	Minamidaito 2	2.35	187	P	Pn	08 50 19.1	-1.7
JMZ				S	Sn	08 50 45.8	-3.3
JTN	Tanegashima 3	2.54	349	⇑P	Pn	08 50 22.4	-1.1
JTN				S	Sn	08 50 52.7	-1.3
JKC	Kuchinoerabu	2.59	333	P	Pn	08 50 23.9	-0.2
JOKE	Okinoerabujima	2.76	254	⇑P	Pn	08 50 25.7	-0.8
JOKE				*e*S	Sn	08 50 56.8	-2.6
JYRO	Yoronjima	2.98	249	P	Pn	08 50 28.2	-1.2
JYRO				S	Sn	08 51 01.2	-3.5
JTSR	Tashiro 2	3.05	350	⇑P	Pn	08 50 29.8	-0.7
JTSR				S	Sn	08 51 03.7	-2.9
JOW	Kunigami	3.20	246	⇑P	Pn	08 50 31.3	-1.2
JOW				*e*S	Sn	08 51 07.1	-3.1
JOW	Kunigami	3.20	246	Pn	Pn	08 50 32.0	-0.5
	327nm,0.3s,baz=111,slow=15,SNR=1937						
JOW				Sn	Sn	08 51 07.3	-2.9
	302nm,0.3s,baz=67,slow=28,SNR=16						
JOW	Kunigami	3.20	246		Pn	08 50 31.5	-1.0
JNAR	Kushima--Naru	3.37	356	⇑P	Pn	08 50 34.5	-0.3
JNAR				S	Sn	08 51 10.9	-3.5
JIH	Iheya	3.38	252	⇑P	Pn	08 50 34.0	-0.9
JIH				S	Sn	08 51 12.1	-2.5
JSU	Suzuyama	3.47	344	⇑P	Pn	08 50 35.4	-0.9
JNKG	Nichinankitago	3.50	357	⇑P	Pn	08 50 36.2	-0.4
JNKG				S	Sn	08 51 14.9	-2.7
JNTH	Nagotoyohara	3.54	243	⇑P	Pn	08 50 35.8	-1.4
JTZ	Takazaki	3.76	354	⇑P	Pn	08 50 39.7	-0.4
JTZ				S	Sn	08 51 20.7	-3.2
JSJ	Shimokoshiki	3.86	336	P	Pn	08 50 40.2	-1.4
JSJ				*e*S	Sn	08 51 22.5	-4.0
JJT3	Tamagusuku3	3.91	240	⇑P	Pn	08 50 40.9	-1.4
JAGN	Aguni-jima	4.14	249	⇑P	Pn	08 50 44.0	-1.5
JAGN				S	Sn	08 51 30.4	-3.1
JIU3	Izumi3	4.43	352	P	Pn	08 50 48.7	-0.7
JKIT	Kitakata	4.46	359	⇑P	Pn	08 50 49.0	-0.8
JKE	Kume jima 2	4.62	248	⇑P	Pn	08 50 49.9	-2.2
JKE				*e*S	Sn	08 51 42.0	-3.3
JSKE	Saikikamae	4.64	4	P	Pn	08 50 51.0	-1.2
JTO	Tosashimizu	4.81	13	⇑P	Pn	08 50 52.9	-1.7
JTO				S	Sn	08 51 42.6	-7.3
JTA	Tamana	4.87	350	P	Pn	08 50 55.1	-0.4
JNU	Nakatsue	4.99	353	P	Pn	08 50 56.6	-0.5
JNU	Nakatsue	4.99	353	Pn	Pn	08 50 57.1	0.0
	41nm,0.3s,baz=300,slow=0.6,SNR=201						
JNU				Sn	Sn	08 51 49.1	-5.2
	123nm,0.3s,baz=51,slow=16,SNR=6.3						
JNU	Nakatsue	4.99	353		Pn	08 50 56.5	-0.5
JUR	Ureshino	5.11	345	⇑P	Pn	08 50 59.3	+0.5
UWA2	Uwa jima 2	5.12	10	⇑P	Pn	08 50 57.6	-1.4
JFI	Itaya	5.35	349	P	Pn	08 51 01.7	-0.4
JKI	Kunimi	5.46	0	P	Pn	08 51 03.2	-0.4
JFA	Akaike	5.58	353	⇑P	Pn	08 51 04.6	-0.6
JMN	Monobe	5.90	19	⇑P	Pn	08 51 09.4	-0.3
JMJ2	Miyako jima3	6.54	240	P	Pn	08 51 16.1	-2.3
JMMH	Miemihama	6.82	33	P	Pn	08 51 21.5	-0.8
JAD	Aida	7.12	18	⇑P	Pn	08 51 26.0	-0.4
JKN2	Miekihoku	7.29	32	P	Pn	08 51 28.6	0.0
JISG	Ishigakijimahi	7.41	243	⇑P	Pn	08 51 26.5	-3.8
JIE	Ise	7.62	34	P	Pn	08 51 33.4	+0.2
JIJ	Ishigaki jima	7.65	242	⇑P	Pn	08 51 29.4	-4.3
TSUJ	Tsu 2	7.74	31	⇑P	Pn	08 51 35.2	+0.3
JKSM	Kasumi	7.87	19	P	Pn	08 51 37.1	+0.5
JAA	Atsumi	8.03	35	P	Pn	08 51 39.3	+0.5
JFM	Mihama	8.26	26	⇑P	Pn	08 51 42.4	+0.4
JICN	Ichinomiyachia	8.43	31	P	Pn	08 51 45.2	+0.9
JSSY	Shinshiroyabe	8.44	36	P	Pn	08 51 45.0	+0.6
HMMJ	Hamamatsu 2	8.50	37	P	Pn	08 51 45.2	-0.1
YOJ	Yonaguni jima	8.51	246	P	Pn	08 51 42.3	-3.1
YOJ				pmax	pmax		
	comp=Z,729nm,0.9s						
YOJ	Yonaguni jima	8.51	246		Pn	08 51 41.9	-3.5
INU	Inuyama	8.54	32		Pn	08 51 45.9	0.0
JKKS	Kakegawashinom	8.56	38	P	Pn	08 51 47.5	+1.3
JAO	Obara	8.59	33	P	Pn	08 51 46.8	+0.2
JYZW	Yoshizawa	8.62	36	P	Pn	08 51 47.0	+0.1
JSG	Sagara	8.62	39	P	Pn	08 51 48.2	+1.3
JHJ	Hachijo jima 2	8.64	53	Pn	Pn	08 51 47.2	-0.1
	comp=Z,221nm,0.3s,baz=77,slow=21,SNR=38						
JHJ				LR	LR	08 54 47.1	
	comp=Z,10µm,18.7s,baz=253,slow=36						
JHJ2	Mitsune	8.66	53		Pn	08 51 48.9	+1.4
JKO	Kozu shima	8.85	45	P	Pn	08 51 51.5	+1.4
JGF	Kuroka	8.91	32	P	Pn	08 51 51.0	0.0
TJN	Taejon	8.93	338	*i* P	Pn	08 51 51.4	+0.2
JMKN	Mikurajimanish	8.95	48	P	Pn	08 51 52.1	+0.6
JNY	Yasuok	8.96	35	P	Pn	08 51 52.4	+0.7
JSKK	Shikinejimakit	8.99	45	P	Pn	08 51 53.1	+1.1
JIZS	Izushimoda	9.05	42	P	Pn	08 51 53.7	+0.9
JKG	Kaga	9.05	25	P	Pn	08 51 53.9	+1.1
JTHY	Toshimahigashi	9.16	44	P	Pn	08 51 55.5	+1.1
JIM2	Oshima 3	9.38	44	P	Pn	08 51 58.5	+1.1
AJI	Ajiro2	9.40	41	P	Pn	08 51 59.2	+1.5
JGN	Niukaw	9.40	30	P	Pn	08 51 57.9	+0.1
JYN	Shimob	9.43	37	P	Pn	08 51 59.2	+1.1
JCJ	Chichijima	9.48	94	Pn	Pn	08 51 59.6	+0.7
	comp=Z,23nm,0.3s,baz=279,slow=6.0,SNR=24						
JCJ				Sn	Sn	08 53 43.5	-1.6
	baz=299,slow=19,SNR=1.6						
JCJ				LR	LR	08 55 12.2	
	comp=Z,7µm,19.5s,baz=267,slow=35						
SSE	Sheshan	9.49	290	P	Pn	08 51 56.0	-2.9
SSE				S	Sn	08 53 43.0	-2.1
SSE				pmax	pmax		
	comp=Z,17nm,0.7s						
SSE				LR	LR		
	comp=Z,6µm,13.8s						
SSE				LR	LR		
	comp=Z,4µm,14.2s						
SSE	Sheshan	9.49	290	Pn	Pn	08 51 58.7	-0.1
JNT	Takato	9.51	34	P	Pn	08 52 00.2	+1.0
JOD2	Odawara 2	9.55	40	P	Pn	08 52 00.9	+1.1
TATO	Taipei	9.55	253		Pn	08 51 58.5	-1.3
KSAR	Wonju Array Be	9.76	342	P	Pn	08 52 03.1	+0.5
KSAR	Wonju Array Be	9.76	342		Pn	08 52 03.1	+0.5
KSRS	Korea Array	9.76	343	Pn	Pn	08 52 03.5	+0.9
	comp=Z,2.3nm,0.3s,baz=162,slow=15,SNR=80						
KSRS				LR	LR	08 56 14.8	
	comp=Z,4µm,18.6s,baz=152,slow=41						
YHNB	Yeheng	9.77	251		Pn	08 52 00.7	-2.1
NACB	Ninganchiao	9.79	248		Pn	08 51 57.8	-5.2
KS19	Wonju Array Si	9.82	343		Pn	08 52 03.2	-0.2
JSGW	Sagamiharawaka	9.87	39	P	Pn	08 52 05.3	+1.3
JNG	Nsakai	9.91	32	P	Pn	08 52 05.5	+0.7
JRY	Ryogami san	10.01	37	P	Pn	08 52 07.0	+1.0
MAJO	Matsushiro	10.07	32	P	Pn	08 52 07.6	+0.7
MAJO	Matsushiro	10.07	32		Pn	08 52 07.6	+0.7
MAT	Matsushiro	10.07	32	P	Pn	08 52 07.3	+0.4
MAT	Matsushiro	10.07	32	P	Pn	08 52 07.3	+0.4
MAT				S	Sn	08 54 05.2	+5.7
MJAR	Matsushiro Arr	10.07	32	Pn	Pn	08 52 07.7	+0.8
	comp=Z,2.5nm,0.3s,baz=205,slow=12,SNR=247						
MJAR	Matsushiro Arr	10.07	32		Pn	08 52 07.5	+0.6
MJB9	Matsu-Tunnel	10.07	32		Pn	08 52 07.2	+0.3
INCN	Inchon	10.18	337	P	Pn	08 52 10.3	+1.9
INCN	Inchon	10.18	337		Pn	08 52 10.3	+1.9
JSZ	Suzu	10.47	26	P	Pn	08 52 13.5	+1.2
SSLB	Suanglung	10.48	248		Pn	08 52 07.4	-5.2
JAG	Ashikaga	10.61	37	P	Pn	08 52 16.1	+1.9
TWG	Pinlang	10.86	243	Pn	Pn	08 52 11.3	-6.4
TPUB	Ta-pu	10.97	246		Pn	08 52 14.6	-4.6
JHYU	Hitachinakayam	11.18	41	P	Pn	08 52 23.4	+1.5
JSD	Sado	11.34	28	P	Pn	08 52 24.5	+0.3
JHO	Hitachi	11.36	40	P	Pn	08 52 25.2	+0.8
NJ2	Nanjing	11.66	293	*e*P	Pn	08 52 30.5	+1.8
NJ2				S	Sn	08 54 41.5	+3.0
NJ2				pmax	pmax		
	comp=Z,39nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,610nm,4.7s						
NJ2				LR	LR		
	comp=Z,8µm,14.2s						
NJ2				LR	LR		
	comp=Z,16µm,10.4s						
NJ2				LR	LR		
	comp=Z,17µm,12.3s						
QZH	Quanzhou	12.04	258	⇑*i*P	Pn	08 52 27.8	-6.0
QZH				S	Sn	08 54 40.5	-7.2
KNMB	Chin-men Tao	12.37	256	Pn	Pn	08 52 34.5	-3.9
JIKH	Ishinomakikobu	13.08	37	P	Pn	08 52 48.3	+0.3
JIO	Ouri	13.12	36	P	Pn	08 52 49.2	+0.6
DL2	Dalian	13.54	325	P	Pn	08 52 52.0	-2.2
DL2				*e*S	Sn	08 55 19.3	-4.9
DL2				pmax	pmax		
	comp=Z,110nm,1.1s						
DL2				pmax	pmax		
	comp=Z,970nm,10.1s						
DL2				LR	LR		
	comp=Z,7µm,14.2s						
DL2				LR	LR		
	comp=Z,6µm,13.1s						
DL2				LR	LR		
	comp=Z,7µm,14.7s						
JOM	Ohasama	13.88	33	P	Pn	08 52 58.5	-0.4
MSHR	Mys Shultsa	14.40	359	*i* P	Pn	08 53 05.6	-0.3
TIA	Tai'an	14.61	307	P	Pn	08 53 10.3	+1.3
TIA				pmax	pmax		
	comp=Z,63nm,0.8s						
TIA				pmax	pmax		
	comp=Z,670nm,6.1s						
TIA				LR	LR		
	comp=Z,6µm,16.1s						
TIA				LR	LR		
	comp=Z,4µm,15.2s						
TIA				LR	LR		
	comp=Z,4µm,13.7s						
SZP	Santa	14.69	226	Pn	Pn	08 53 09.8	-0.3
JANG	Nango	14.69	31	P	Pn	08 53 08.8	-1.2
VLA	Vladivostok	14.94	1	*i* P	Pn	08 53 12.6	-0.6
VLA				pmax	pmax		
	comp=Z,98nm,1.5s						
SNY	Shenyang	15.12	337	⇑P	Pn	08 53 16.8	+1.1
SNY				pP	pP	08 53 24.0	-0.7
SNY				sP	pwP	08 53 28.8	-0.9
SNY				S	Sn	08 56 06.8	+4.2
SNY				pmax	pmax		
	comp=Z,28nm,1.3s						
SNY				pmax	pmax		
	comp=Z,220nm,2.6s						
SNY				LR	LR		
	comp=Z,7µm,16.7s						
SNY				LR	LR		
	comp=Z,7µm,13.7s						
SNY				LR	LR		
	comp=Z,7µm,17.7s						
JARK	Aomorirokkasho	15.14	30	P	Pn	08 53 14.9	-1.1
WHN	Wuhan	15.20	283	⇑P	Pn	08 53 16.3	-0.5
WHN				S	Sn	08 55 59.3	-5.4
WHN				LR	LR		
	comp=Z,6µm,9.9s						
WHN				LR	LR		
	comp=Z,23µm,14.1s						
WHN				LR	LR		
	comp=Z,22µm,13.9s						
USA0B	Ussuriysk Arra	16.02	1	*i* P	Pn	08 53 26.3	-1.1
USRK	Ussuriysk Ar.	16.02	1	Pn	Pn	08 53 28.6	+1.2
	baz=184,slow=10.0,SNR=56						
USRK				LR	LR	09 00 13.0	
	comp=Z,3µm,18.6s,baz=172,slow=40						
USRK	Ussuriysk Ar.	16.02	1	P	P	08 53 29.0	-1.7
CN2	Changchun	16.37	344	*e*P	Pn	08 53 33.0	+1.1
CN2				*e*S	Sn	08 56 36.3	+3.2
CN2				pmax	pmax		
	comp=Z,130nm,1.0s						
CN2				pmax	pmax		
	comp=Z,780nm,8.4s						
CN2				LR	LR		
	comp=Z,5µm,17.0s						
CN2				LR	LR		
	comp=Z,9µm,17.0s						
CN2				LR	LR		
	comp=Z,7µm,16.0s						
MDJ	Mudanjiang	16.50	355	P	Pn	08 53 34.8	+1.2
MDJ				pP	P	08 53 37.5	+1.3
MDJ				sP	pP	08 53 38.8	-1.3
MDJ				S	Sn	08 56 37.5	+1.2
MDJ				sS	S	08 56 42.8	-5.3
MDJ				SS		08 56 52.5	
MDJ				PcP	PcP	08 58 25.0	+0.5
MDJ				ScP	ScP	09 02 00.5	+2.2
MDJ				PcS	PcS	09 02 02.0	+1.8
MDJ				ScS	ScS	09 05 40.5	+3.1
MDJ				pmax	pmax		
	comp=Z,250nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,2µm,3.7s						
MDJ				LR	LR		
	comp=Z,3µm,12.5s						
MDJ				LR	LR		
	comp=Z,3µm,14.2s						
MDJ				LR	LR		
	comp=Z,5µm,13.5s						
MDJ	Mudanjiang	16.50	355	P	P	08 53 35.0	-1.2
ERM	Erimo	16.75	31	c*e*P	Pn	08 53 33.0	-3.7
ERM				pmax	pmax		
	comp=Z,142nm,0.9s						
ERM	Erimo	16.75	31		Pn	08 53 33.5	-3.2
HKC	Hong Kong Obse	16.77	254	⇑P	P	08 53 42.0	+2.8
HKPS	Hong Kong Po S	16.80	254	P	P	08 53 41.2	+1.5
TGY	Tagaytay City	17.12	217	P	P	08 53 43.5	+0.3
	comp=Z,45nm,0.3s,baz=342,slow=10,SNR=6.7						
GZH	Guangzhou	17.18	257	P	Pn	08 53 35.8	-6.5
GZH				sP	P	08 53 40.0	-3.8
GZH				S	Sn	08 56 40.0	-13
GZH				LR	LR		
	comp=Z,3µm,13.9s						
GZH				LR	LR		
	comp=Z,6µm,16.5s						
TEY	Ternei	17.32	12	⇑*e*P	P	08 53 46.1	+0.9
TEY				*e*S	Sn	08 56 59.7	+3.6
TEY				pmax	pmax		
	comp=N,500nm,1.2s						
TEY				pmax	pmax		
	comp=Z,400nm,1.0s						
TEY				pmax	pmax		
	comp=Z,310nm,1.0s						
TEY				pmax	pmax		
	comp=E,30nm,1.1s						
TEY				pmax	pmax		
	comp=N,270nm,1.0s						
TEY				smax	smax		
	comp=E,3µm,12.5s						
TEY				smax	smax		
	comp=N,2µm,8.1s						
TEY				MLR	MLR		
	comp=E,2µm,12.0s						
TEY				MLR	MLR		
	comp=N,2µm,14.0s						
TEY				MLR	MLR		
	comp=Z,3µm,15.0s						
BJT	Baijiatuau	17.36	317	P	Pn	08 53 44.9	+0.5
BJT				pmax	pmax		
	comp=Z,173nm,1.0s						
BJT	Baijiatuau	17.36	317	P	Pn	08 53 44.9	+0.5
BJI	Beijing	17.37	317	P	Pn	08 53 44.5	-0.1
BJI				S	Sn	08 56 59.0	+1.6
BJI				pmax	pmax		
	comp=Z,66nm,1.2s						
BJI				LR	LR		
	comp=Z,5µm,12.9s						
BJI				LR	LR		
	comp=Z,5µm,12.9s						
BJI				LR	LR		
	comp=Z,3µm,14.2s						
ASAJ	Asahikawa	18.23	26	P	Pn	08 53 52.3	-2.8
	comp=Z,1.7nm,0.3s,baz=228,slow=16,SNR=33						
ASAJ				PcP	PcP	08 58 27.9	+0.6
	comp=Z,0.3nm,0.3s,baz=297,slow=3.7,SNR=3.9						
JKA	Kamikawa-asahi	18.23	26		PcP	08 58 27.9	+0.6
RCP	Roxas	18.46	208	⇑*e*P	Pn	08 54 01.2	+3.1
TIY	Taiyuan	18.64	306	*e*P	P	08 54 00.0	+0.1
TIY				S	Sn	08 57 25.0	-3.3
TIY				SS	SnSn	08 57 49.5	+7.3
TIY				pmax	pmax		
	comp=Z,290nm,0.6s						
TIY				LR	LR		
	comp=Z,4µm,12.8s						
TIY				LR	LR		
	comp=Z,3µm,10.9s						
TIY				LR	LR		
	comp=Z,3µm,13.6s						
GUMO	Guam	19.07	137	P	Pn	08 54 07.1	+1.6
	comp=Z,6.7nm,0.3s,baz=204,slow=7.0,SNR=9.8						
ENH	Enshi	19.38	282	P	P	08 54 07.5	-0.5
YUK	Yuzh-Kuril'sk	19.57	32	c *i*P	P	08 54 08.9	-1.0
YUK				*e*S	S	08 57 48.3	-1.8
YUK				pmax	pmax		
	comp=Z,739nm,1.2s						
YUK				pmax	pmax		
	comp=N,145nm,0.7s						
YUK				pmax	pmax		
	comp=E,331nm,1.0s						
YUK				MLR	MLR		
	comp=E,514nm,15.0s						
YUK				MLR	MLR		
	comp=Z,2µm,15.0s						
TBP	Tagbilaran	19.74	203	*i* P	Pn	08 54 15.0	+1.4
XAN	Xi'an	20.23	292	P	P	08 54 16.5	-0.9
XAN				pP	Pn	08 54 20.0	+0.6
XAN				PP	PnPn	08 54 34.8	+0.7
XAN				S	S	08 58 00.3	-3.5
XAN				SS	SnSn	08 58 31.8	+10
XAN				pmax	pmax		
	comp=Z,110nm,1.1s						
XAN				pmax	pmax		
	comp=Z,700nm,3.5s						
XAN				LR	LR		
	comp=Z,4µm,13.0s						
XAN				LR	LR		
	comp=Z,2µm,14.1s						
XAN				LR	LR		
	comp=Z,4µm,14.0s						
XAN	Xi'an	20.23	292	P	P	08 54 16.8	-0.6
XAN				pmax	pmax		
	comp=Z,217nm,0.7s						
XAN	Xi'an	20.23	292	P	P	08 54 16.8	-0.6
XAN				IAmb	IAmb	08 54 37.6	
	comp=Z,217nm,0.7s						
YSS	Yuzh-Sakhalins	20.72	22	⇓*e*P	P	08 54 22.4	0.0
YSS				*e**SP	sP	08 54 27.2	-1.7
YSS				*e*		08 54 40.5	
YSS				*e*PPP	PPP	08 55 00.3	
YSS				*e*S	S	08 58 05.1	-7.9
YSS				*e*SSS	SSS	08 58 39.7	
YSS				pmax	pmax		
	comp=Z,220nm,1.3s						
YSS				MLR	MLR		
	comp=Z,2µm,15.0s						
YSS				MLR	MLR		
	comp=E,600nm,14.0s						
YSS	Yuzh-Sakhalins	20.72	22	P	P	08 54 22.4	0.0
YSS				IAmb	IAmb	08 54 35.6	
	comp=Z,460nm,1.2s						
HHC	Hu-ho-hao-te	20.72	313	*e*P	P	08 54 21.5	-1.2
HHC				pP	pP	08 54 26.0	-0.8
HHC				sP	pwP	08 54 35.5	+4.3
HHC				PP	PnPn	08 54 41.5	+0.7
HHC				S	S	08 58 12.8	-0.7
HHC				pmax	pmax		
	comp=Z,410nm,0.7s						
HHC				pmax	pmax		
	comp=Z,1µm,3.9s						
HHC				LR	LR		
	comp=Z,2µm,11.1s						
HHC				LR	LR		
	comp=Z,5µm,11.8s						
HHC				LR	LR		
	comp=Z,4µm,10.9s						
KLR	Kul'dur	21.05	0	P	P	08 54 25.4	-0.5
	comp=Z,37nm,0.6s,baz=173,slow=7.9,SNR=159						
KLR				PcP	PcP	08 58 33.1	+0.8
	comp=Z,14nm,1.0s,baz=349,slow=3.5,SNR=3.7						
KLR	Kul'dur	21.05	0	d *i*P	P	08 54 25.1	-0.8
KLR				pmax	pmax		
	comp=Z,287nm,0.9s						
KLR				MLR	MLR		
	comp=Z,2µm,20.0s						
KUR	Kuril'sk	21.41	33	c *i*P	P	08 54 30.4	+0.5
KUR				*e*		08 54 47.6	
KUR				*i* S	Sn	08 58 32.2	-2.6
KUR				*e*SSS	SSS	08 59 12.8	
KUR				pmax	pmax		
	comp=Z,3µm,1.9s						
KUR				pmax	pmax		
	comp=Z,1µm,1.2s						
KUR				pmax	pmax		
	comp=N,307nm,1.1s						
KUR				pmax	pmax		
	comp=E,265nm,0.8s						
KUR				MLR	MLR		
	comp=Z,1µm,14.0s						
KUR				MLR	MLR		
	comp=E,966nm,11.0s						
KUR				MLR	MLR		
	comp=N,926nm,12.0s						
BTO	Baotou	21.62	311	*e*P	P	08 54 35.8	+3.5
DAV	Davao City (W)	21.72	196	P	P	08 54 34.0	+0.5
	comp=N,195nm,0.4s,baz=256,slow=12,SNR=1.5						
DAV	Davao City (W)	21.72	196	P	P	08 54 33.5	0.0
QIZ	Qiongzhong	21.85	250	P	P	08 54 36.5	+1.7
QIZ				sP	pwP	08 54 43.5	+0.7
QIZ				S	S	08 58 35.3	-0.4
QIZ				pmax	pmax		
	comp=N,160nm,1.0s						
QIZ				pmax	pmax		
	comp=N,2µm,11.5s						
QIZ				LR	LR		
	comp=N,2µm,12.7s						
QIZ				LR	LR		
	comp=N,2µm,12.3s						
QIZ				LR	LR		
	comp=N,2µm,18.6s						
QIZ	Qiongzhong	21.85	250	IAmb	IAmb	08 54 37.9	
	comp=Z,257nm,0.9s						
KCP	Kidapawan	21.91	197	⇓*i*P	P	08 54 35.4	-0.1
CTBH	Cotabato--PC H	21.94	200	⇑*i*P	P	08 54 36.6	+0.8
GYA	Guiyang	22.18	271	⇓*i*P	P	08 54 38.0	-0.5
GYA				PP	pwP	08 55 03.5	+18
GYA				S	S	08 58 36.0	-6.2
GYA				SS	Sn	08 59 16.5	+23
GYA				ScP	ScP	09 02 13.0	+1.3
GYA				pmax	pmax		
	comp=Z,50nm,1.1s						
GYA				pmax	pmax		

	comp=Z,160nm,4.5s						
GYA				LR	LR		
	comp=Z,5µm,12.5s						
GYA				LR	LR		
	comp=Z,6µm,15.1s						
GYA				LR	LR		
	comp=Z,7µm,15.7s						
GRNR	**Gornyy**	**22.88**	**8**	⇓*i*P	**P**	**08 54 47.4**	**+1.8**
GRNR				*e*		08 55 18.9	
GRNR				pmax	pmax		
	comp=Z,110nm,0.9s						
HIA	**Hailar**	**22.95**	**340**	IAmb	IAmb	08 55 40.5	
	comp=Z,269nm,1.1s						
TYV	**Tymovskoe**	**24.19**	**17**	*e*P	**P**	**08 55 00.9**	**+2.6**
TYV				pmax	pmax		
	comp=Z,500nm,2.7s						
TYV				pmax	pmax		
	comp=Z,94nm,0.8s						
CD2	**Chengdu**	**24.32**	**283**	P	**P**	**08 54 58.3**	**-1.6**
CD2				sP	pP	08 55 02.8	-1.4
CD2				PP	**PnPn**	**08 55 36.5**	**+6.5**
CD2				S	**S**	**08 59 11.3**	**-7.0**
CD2				sS	pS	08 59 23.5	+0.5
CD2				SS	**SnSn**	**09 00 02.3**	**+0.8**
CD2				pmax	pmax		
	comp=Z,250nm,1.1s						
CD2				pmax	pmax		
	comp=Z,1µm,14.4s						
CD2				LR	LR		
	comp=Z,10µm,15.1s						
CD2				LR	LR		
	comp=Z,11µm,14.4s						
CD2				LR	LR		
	comp=Z,14µm,12.9s						
LZH	**Lanzhou**	**24.71**	**296**	⇑P	**P**	**08 55 02.5**	**-1.0**
LZH				pP	pP	08 55 06.3	-1.5
LZH				sP	sP	08 55 10.0	-0.3
LZH				PP	**PnPn**	**08 55 38.8**	**+3.4**
LZH				S	**S**	**08 59 23.5**	**-1.2**
LZH				sS	pS	08 59 28.8	-0.4
LZH				pmax	pmax		
	comp=Z,64nm,1.3s						
LZH				pmax	pmax		
	comp=Z,660nm,5.4s						
LZH				LR	LR		
	comp=Z,5µm,13.0s						
LZH				LR	LR		
	comp=Z,5µm,12.5s						
LZH				LR	LR		
	comp=Z,5µm,13.0s						
ZEA	**Zeya**	**25.75**	**354**	*e*P	**P**	**08 55 11.9**	**-0.6**
ZEA				*e*S	**S**	**08 59 42.0**	**+1.3**
ZEA				*e*SS	**SnSn**	**09 00 38.0**	**+1.8**
ZEA				pmax	pmax		
	comp=N,200nm,1.0s						
ZEA				pmax	pmax		
	comp=E,47nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,340nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,1µm,4.0s						
ZEA				pmax	pmax		
	comp=N,600nm,3.0s						
ZEA				smax	smax		
	comp=Z,900nm,8.0s						
ZEA				smax	smax		
	comp=E,1µm,9.0s						
ZEA				smax	smax		
	comp=N,3µm,12.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,14.0s						
ZEA				MLR	MLR		
	comp=N,2µm,13.0s						
NKL	**Nikolayevsk**	**25.87**	**13**	*e*P	**P**	**08 55 16.5**	**+3.0**
NKL				pmax	pmax		
	comp=Z,84nm,1.0s						
KMI	**Kunming**	**25.91**	**270**	P	**P**	**08 55 15.5**	**+1.0**
KMI				PP	**PnPn**	**08 55 58.5**	**+6.5**
KMI				S	**S**	**08 59 35.8**	**-8.3**
KMI				pmax	pmax		
	comp=Z,140nm,1.1s						
KMI				pmax	pmax		
	comp=Z,510nm,3.7s						
KMI				LR	LR		
	comp=Z,5µm,13.4s						
KMI				LR	LR		
	comp=Z,2µm,12.6s						
KMI				LR	LR		
	comp=Z,3µm,12.8s						
KMI	**Kunming**	**25.91**	**270**	IAmb	IAmb	08 55 16.6	
	comp=Z,122nm,0.9s						
DLV	**T Lat**	**26.93**	**238**	IAmb	IAmb	08 55 28.1	
	comp=Z,176nm,1.1s						
ULN	**Ulaanbaatar**	**27.37**	**323**	*ce*P	**P**	**08 55 26.8**	**-0.6**
ULN				pmax	pmax		
	comp=Z,51nm,0.9s						
ULN				MLR	MLR		
	comp=Z,3µm,16.0s						
ULN	**Ulaanbaatar**	**27.37**	**323**	P	**P**	**08 55 26.8**	**-0.6**
CIT	**Chita**	**27.38**	**335**	*e*P	**P**	**08 55 28.0**	**+0.7**
CIT				*e*		08 55 38.6	
CIT				pmax	pmax		
	comp=Z,390nm,1.5s						
TNTI	**Ternate**	**27.52**	**189**	P	**P**	**08 55 28.4**	**-0.4**
	comp=Z,3µmcomp=Z,201nm,1.3s						
TNTI	**Ternate**	**27.52**	**189**	P	**P**	**08 55 28.6**	**-0.2**
TNTI				IAmb	IAmb	08 55 31.9	
	comp=Z,352nm,1.3s						
SONM	**Songino Array**	**27.71**	**322**	P	**P**	**08 55 29.6**	**-0.8**
	comp=Z,14nm,0.7s,baz=138,slow=9.6,SNR=64						
SONM				PcP	**PcP**	**08 58 47.6**	**+0.6**
	comp=Z,6.9nm,1.0s,baz=111,slow=3.3,SNR=3.9						
SONM				ScP	**ScP**	**09 02 27.1**	**+0.2**
	comp=Z,2.8nm,1.1s,baz=150,slow=3.3,SNR=4.4						
SONM				LR	LR	09 08 04.6	
	comp=Z,3µm,18.6s,baz=129,slow=40						
SONM				P3KPbc		09 27 59.8	
	comp=Z,1.4nm,1.0s,baz=299,slow=5.3,SNR=5.2						
SONM	**Songino Array**	**27.71**	**322**	P	**P**	**08 55 29.3**	**-1.1**
SONM						08 58 47.6	
SONM				pmax	pmax		
	comp=Z,21nm,0.8s						
SONM	**Songino Array**	**27.71**	**322**	P	**P**	**08 55 29.3**	**-1.1**
KMSI	**Cibinong**	**28.37**	**196**	P	**P**	**08 55 37.2**	**+0.8**
	comp=Z,7µmcomp=Z,423nm,0.9s						
GTA	**Gaotai**	**28.53**	**301**	*e*P	**P**	**08 55 36.3**	**-1.6**
GTA				pP	pP	08 55 40.5	-1.7
GTA				sP	sP	08 55 43.5	-1.2
GTA				PcP	**PcP**	**08 58 50.0**	**+0.8**
GTA				S	**S**	**09 00 23.0**	**-2.1**
GTA				PcS	**PcS**	**09 02 31.5**	**-0.2**
GTA				pmax	pmax		
	comp=Z,180nm,5.5s						
GTA				LR	LR		
	comp=Z,5µm,18.6s						
GTA				LR	LR		
	comp=Z,6µm,16.5s						
GTA				LR	LR		
	comp=Z,7µm,16.5s						
SWI	**Sorong**	**28.85**	**181**	P	**P**	**08 55 40.5**	**-0.2**
	comp=Z,1µmcomp=Z,51nm,1.2s						
SWI	**Sorong**	**28.85**	**181**	P	**P**	**08 55 41.0**	**+0.3**
SWI				pmax	pmax		
	comp=Z,51nm,1.2s						
SIJI	**Sorong**	**28.86**	**181**	P	**P**	**08 55 40.6**	**-0.1**
	comp=Z,14nm,0.8s,baz=331,slow=9.1,SNR=7.6						
SIJI				PcP	**PcP**	**08 58 50.4**	**+0.2**
	comp=Z,29nm,0.9s,baz=4.4,slow=7.4,SNR=5.8						
LBMI	**Labuha**	**28.89**	**188**	P	**P**	**08 55 39.4**	**-1.6**
	comp=Z,2µmcomp=Z,124nm,1.1s						
MRSI	**Marisa**	**29.02**	**200**	P	**P**	**08 55 42.7**	**+0.5**
	comp=Z,2µmcomp=Z,90nm,1.5s						
SKR	**Severo-Kuril's**	**29.18**	**33**	*e*P	**P**	**08 55 43.1**	**-0.2**
SKR				*e*		08 56 30.3	
SKR				*e*		08 58 56.4	
SKR				*e*S	**S**	**09 00 38.5**	**+3.8**
SKR				pmax	pmax		
	comp=Z,215nm,1.0s						
SKR				pmax	pmax		
	comp=Z,300nm,3.3s						
SKR				MLR	MLR		
	comp=Z,700nm,16.0s						
MPSI	**Mapaga**	**29.83**	**204**	P	**P**	**08 55 49.8**	**+0.4**
	comp=Z,2µmcomp=Z,97nm,1.5s						
LUWI	**Luwuk**	**30.23**	**198**	P	**P**	**08 55 55.3**	**+2.4**
	comp=Z,109nm,1.1s						
APSI	**Ampana**	**30.43**	**200**	P	**P**	**08 55 54.1**	**-0.5**
	comp=Z,776nmcomp=Z,45nm,1.0s						
PBKT	**Sadao Pong**	**30.46**	**254**	IAmb	IAmb	08 55 57.5	
	comp=Z,149nm,1.1s						
SANI	**Sanana**	**30.50**	**191**	P	**P**	**08 55 54.4**	**-0.9**
	comp=Z,1µmcomp=Z,108nm,1.4s						
FAKI	**Fak Fak**	**30.90**	**179**	P	**P**	**08 55 58.9**	**+0.1**
	comp=Z,2µmcomp=Z,213nm,1.0s						
FAKI	**Fak Fak**	**30.90**	**179**	P	**P**	**08 55 58.7**	**-0.1**
FAKI				IAmb	IAmb	08 56 00.1	
	comp=Z,141nm,0.8s						
CHTO	**Chiang Mai**	**31.24**	**260**	P	**P**	**08 56 02.3**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,110nm,0.8s						
CHTO	**Chiang Mai**	**31.24**	**260**	P	**P**	**08 56 02.3**	**+0.4**
CHTO				IAmb	IAmb	08 56 05.0	
	comp=Z,110nm,0.8s						
CM31	**Chiang Mai Arr**	**31.39**	**259**	P	**P**	**08 56 04.4**	**+1.3**
	SNR=26						
CM31	**Chiang Mai Arr**	**31.39**	**259**	P	**P**	**08 56 04.4**	**+1.3**
	SNR=26						
CMAR	**Chiang Mai Arr**	**31.39**	**259**	P	**P**	**08 56 04.4**	**+1.2**
	comp=Z,34nm,0.8s,baz=58,slow=6.7,SNR=114						
CMAR				PcP	**PcP**	**08 58 57.7**	**+1.0**
	comp=Z,9.4nm,0.8s,baz=41,slow=1.0,SNR=10						
CMAR				LR	LR	09 10 19.9	
	comp=Z,3µm,18.3s,baz=81,slow=40						
CMAR				PKPPKP	**P'P'df**	**09 29 47.8**	**-3.4**
	comp=Z,0.5nm,0.3s,baz=245,slow=3.0,SNR=4.4						
CMAR	**Chiang Mai Arr**	**31.39**	**259**	P	**P**	**08 56 03.7**	**+0.5**
CMAR					**PcP**	**08 58 57.2**	**+0.5**
MSAI	**Masohi**	**31.42**	**185**	P	**P**	**08 56 04.9**	**+1.5**
	comp=Z,2µmcomp=Z,46nm,1.2s						
TLY	**Talaya**	**31.45**	**326**	P	**P**	**08 56 04.0**	**+0.7**
	comp=Z,8.4nm,0.5s,baz=149,slow=9.2,SNR=25						
TLY				PcP	**PcP**	**08 58 57.2**	**+0.8**
	comp=Z,10nm,0.8s,baz=226,slow=4.0,SNR=4.9						
TLY	**Talaya**	**31.45**	**326**	*e*P	**P**	**08 56 03.5**	**+0.1**
TLY				*e*S	**S**	**09 01 07.6**	**-2.8**
TLY				pmax	pmax		
	comp=Z,222nm,1.5s						
TLY				MLR	MLR		
	comp=Z,4µm,11.0s						
TLY	**Talaya**	**31.45**	**326**	P	**P**	**08 56 03.9**	**+0.5**
TLY				IAmb	IAmb	08 56 06.9	
	comp=Z,198nm,1.8s						
IRK	**Irkutsk**	**31.49**	**327**	*e*P	**P**	**08 56 03.4**	**-0.4**
IRK				pmax	pmax		
	comp=Z,186nm,1.4s						
NLAI	**Namlea**	**31.51**	**189**	P	**P**	**08 56 04.2**	**+0.1**
	comp=Z,2µmcomp=Z,105nm,1.1s						
PEA0B	**Petropavlovsk-**	**31.53**	**31**	*d i*P	**P**	**08 56 04.3**	**+0.3**
PEA0B	**Petropavlovsk-**	**31.53**	**31**	IAmb	IAmb	08 56 14.7	
	comp=Z,182nm,1.0s						
PETK	**Petropavlovsk-**	**31.53**	**31**	P	**P**	**08 56 03.9**	**-0.2**
	comp=Z,34nm,0.9s,baz=207,slow=6.6,SNR=30						
PETK				PcP	**PcP**	**08 58 56.4**	**-0.1**
	comp=Z,12nm,1.0s,baz=183,slow=5.8,SNR=4.8						
PETK				LR	LR	09 08 41.0	
	comp=Z,2µm,19.5s,baz=184,slow=36						
SBUM	**Sibu**	**31.53**	**219**	P	**P**	**08 56 04.5**	**+0.1**
SBUM	**Sibu**	**31.53**	**219**	P	**P**	**08 56 05.0**	**+0.6**
SMKI	**Samarinda**	**31.59**	**208**	P	**P**	**08 56 07.6**	**+2.7**
	comp=Z,399nm,1.1s						
GENI	**Genyem**	**31.67**	**163**	P	**P**	**08 56 06.6**	**+1.0**
AAI	**Ambon**	**31.82**	**186**	P	**P**	**08 56 07.2**	**+0.3**
	comp=Z,2µmcomp=Z,94nm,0.9s						
PET	**Petropavlovsk**	**31.91**	**31**	*e*P	**P**	**08 56 07.2**	**-0.1**
PET				*e*		08 57 07.0	
PET				*e*S	**S**	**09 01 14.3**	**-3.0**
PET				pmax	pmax		
	comp=Z,400nm,6.0s						
PET				pmax	pmax		
	comp=Z,54nm,1.0s						
PET				MLR	MLR		
	comp=Z,1µm,17.0s						
PET	**Petropavlovsk**	**31.91**	**31**	P	**P**	**08 56 07.3**	**0.0**
BOD	**Bodaibo**	**32.11**	**342**	*e*P	**P**	**08 56 08.7**	**-0.3**
BOD				pmax	pmax		
	comp=Z,45nm,1.4s						
BKB	**Balikpapan**	**32.46**	**208**	P	**P**	**08 56 13.9**	**+1.4**
	comp=Z,3µmcomp=Z,3µmcomp=Z,6µmcomp=Z,6µm						
	comp=Z,525nm,1.4s						
BNDI	**Bandanaira**	**32.53**	**183**	P	**P**	**08 56 13.1**	**0.0**
	comp=Z,22µmcomp=Z,127nm,0.5s						
MOY	**Mondy**	**32.78**	**324**	*e*P	**P**	**08 56 15.5**	**+0.3**
MOY				pmax	pmax		
	comp=Z,103nm,1.9s						
H11N2	**WAKE ISLAND Hy**	**33.27**	**97**	P	**P**	**08 56 21.3**	**+1.9**
H11N2				T	T	09 31 26.0	
	baz=290,slow=74						
H11N1	**WAKE ISLAND Hy**	**33.28**	**97**	P	**P**	**08 56 21.3**	**+1.9**
H11N1				T	T	09 31 22.6	
	baz=290,slow=74						
H11N3	**WAKE ISLAND Hy**	**33.29**	**97**	P	**P**	**08 56 20.7**	**+1.1**
H11N3				T	T	09 31 25.4	
	baz=290						
KSM	**Kuching**	**33.42**	**221**	P	**P**	**08 56 22.2**	**+1.3**
KSM	**Kuching**	**33.42**	**221**	P	**P**	**08 56 22.0**	**+1.0**
H11S3	**WAKE ISLAND Hy**	**33.56**	**99**	T	T	09 31 53.4	
	baz=291,slow=74,SNR=6.1						
H11S1	**WAKE ISLAND Hy**	**33.56**	**99**	T	T	09 31 52.1	
	baz=291,slow=74,SNR=3.5						
H11S2	**WAKE ISLAND Hy**	**33.58**	**99**	T	T	09 31 56.5	
	baz=291,slow=74,SNR=4.4						
SPSI	**Sidrap Palu**	**33.89**	**201**	P	**P**	**08 56 23.1**	**-1.9**
	comp=Z,24nm,1.0s						
YAK	**Yakutsk**	**33.90**	**358**	*i* P	**P**	**08 56 23.6**	**-1.0**
YAK				pmax	pmax		
	comp=Z,72nm,1.1s						
YAK	**Yakutsk**	**33.90**	**358**	P	**P**	**08 56 24.0**	**-0.6**
YAK				IAmb	IAmb	08 56 35.6	
	comp=Z,123nm,0.9s						
MA2	**Magadan**	**34.06**	**17**	*de*P	**P**	**08 56 25.4**	**-0.7**
MA2				pmax	pmax		
	comp=Z,45nm,1.1s						
MA2				MLR	MLR		
	comp=Z,729nm,16.0s						
MA2	**Magadan**	**34.06**	**17**	P	**P**	**08 56 26.0**	**-0.1**
MA2					**PcP**	**08 59 03.5**	**+0.1**
BNSI	**Bone**	**34.20**	**201**	P	**P**	**08 56 26.0**	**-1.7**
	comp=Z,822nmcomp=Z,34nm,0.9s						
TEZP	**TEZPUR**	**34.35**	**277**	⇓*i*P	**P**	**08 56 29.4**	**+0.3**
BBSI	**Bau Bau**	**34.55**	**196**	P	**P**	**08 56 32.0**	**+1.2**
	comp=Z,29µmcomp=Z,448nmcomp=Z,22nm,1.1s						
KBKI	**Kotabaru**	**34.60**	**208**	P	**P**	**08 56 31.0**	**-0.2**
	comp=Z,65nm,1.0s						
KAPI	**Kappang**	**34.89**	**201**	LR	LR	09 10 53.8	
	comp=Z,434nm,19.8s,baz=30,slow=36						
KAPI	**Kappang**	**34.89**	**201**	P	**P**	**08 56 33.1**	**-0.6**
KAPI				pmax	pmax		
	comp=Z,95nm,1.2s						
KAPI	**Kappang**	**34.89**	**201**	P	**P**	**08 56 33.1**	**-0.6**
KAPI				IAmb	IAmb	08 56 35.3	
	comp=Z,94nm,1.1s						
BKSI	**Bulukumba**	**35.06**	**200**	P	**P**	**08 56 34.4**	**-0.8**
	comp=Z,918nmcomp=Z,79nm,1.1s						
LSA	**Lhasa**	**35.28**	**282**	P	**P**	**08 56 39.0**	**+1.5**
LSA				pmax	pmax		
	comp=Z,250nm,0.8s						
LSA	**Lhasa**	**35.28**	**282**	P	**P**	**08 56 39.0**	**+1.5**
LSA	**Lhasa**	**35.28**	**282**	P	**P**	**08 56 39.0**	**+1.5**
SHL	**Shillong**	**35.38**	**275**	⇓*i*P	**P**	**08 56 38.4**	**+0.2**
SHL				IAmb	IAmb	08 56 41.7	
	comp=Z,328nm,1.3s						
AGT	**Agartala**	**36.36**	**273**	⇓*i*P	**P**	**08 56 47.3**	**+1.0**
BELO	**BELONIA**	**36.36**	**272**	*i* P	**P**	**08 56 48.0**	**+1.8**
KULM	**Kulim**	**37.12**	**238**	P	**P**	**08 56 53.6**	**+0.8**
KULM	**Kulim**	**37.12**	**238**	P	**P**	**08 56 54.0**	**+1.2**
MYKOM	**Kota Tinggi**	**37.26**	**230**	P	**P**	**08 56 56.0**	**+2.0**
SEY	**Seymchan**	**37.35**	**16**	*i* P	**P**	**08 56 53.6**	**-0.7**
IPM	**Ipoh**	**37.38**	**237**	IAmb	IAmb	08 56 57.1	
	comp=Z,154nm,1.3s						
TPRI	**Tanjung Pinang**	**37.45**	**228**	P	**P**	**08 56 57.2**	**+1.6**
MMRI	**Maumere**	**37.67**	**195**	P	**P**	**08 56 56.4**	**-1.0**
	comp=Z,235nm,1.3s						
MMRI	**Maumere**	**37.67**	**195**	P	**P**	**08 56 56.6**	**-0.9**
RABL	**Rabaul**	**37.79**	**145**	P	**P**	**08 56 59.3**	**+0.7**
RABL				IAmb	IAmb	08 57 05.6	
	comp=Z,212nm,1.2s						
KRVT	**Keravat (AS076**	**37.82**	**145**	P	**P**	**08 56 59.4**	**+0.6**
	comp=Z,107nm,0.8s,baz=150,slow=10,SNR=8.0						
WMQ	**Urumqi**	**38.31**	**306**	P	**P**	**08 57 03.5**	**+0.7**
WMQ				pP	sP	08 57 08.0	-1.6
WMQ				PcP	**PcP**	**08 59 17.0**	**+0.5**
WMQ				S	**S**	**09 02 58.0**	**+1.8**
WMQ				SS	**SnSn**	**09 05 34.3**	**-7.1**
WMQ				pmax	pmax		
	comp=Z,84nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,280nm,4.7s						
WMQ				LR	LR		
	comp=Z,1µm,15.5s						
WMQ				LR	LR		
	comp=Z,2µm,17.9s						
WMQ				LR	LR		
	comp=Z,2µm,19.3s						
WMQ	**Urumqi**	**38.31**	**306**	P	**P**	**08 57 03.4**	**+0.7**
WMQ				pmax	pmax		
	comp=Z,100nm,0.9s						
WMQ	**Urumqi**	**38.31**	**306**	P	**P**	**08 57 03.4**	**+0.7**
WMQ				IAmb	IAmb	08 57 06.9	
	comp=Z,100nm,0.9s						
SOEI	**Soe**	**38.34**	**192**	P	**P**	**08 57 01.8**	**-1.4**
	comp=Z,2µmcomp=Z,284nm,1.0s						
SOEI	**Soe**	**38.34**	**192**	IAmb	IAmb	08 57 28.7	
	comp=Z,245nm,0.9s						
TAPN	**Taplejung**	**38.66**	**279**	*e*P	**P**	**08 57 07.0**	**+0.9**
	comp=Z,552nm,1.1s						
DGPR	**DIGLIPUR**	**38.90**	**256**	⇓*i*P	**P**	**08 57 08.7**	**+0.7**
DGPR				IAmb	IAmb	08 57 15.3	
	comp=Z,255nm,1.2s						
ODAN	**Odare**	**39.04**	**279**	*e*P	**P**	**08 57 10.1**	**+0.9**
	comp=Z,1µm,0.9s						
PLAI	**Plampang**	**39.11**	**202**	P	**P**	**08 57 08.5**	**-1.0**
	comp=Z,3µmcomp=Z,362nm,1.1s						
SRBI	**Singaraja**	**39.34**	**206**	P	**P**	**08 57 10.7**	**-0.8**
	comp=Z,1µmcomp=Z,111nm,0.7s						
WBSI	**Waikabubak, Su**	**39.37**	**199**	P	**P**	**08 57 10.8**	**-1.0**
	comp=Z,766nmcomp=Z,70nm,0.8s						
GRJI	**Gresik**	**39.43**	**211**	P	**P**	**08 57 13.6**	**+1.3**
	comp=Z,2µmcomp=Z,297nm,0.9s						
BASI	**Baing, Sumba**	**39.60**	**197**	P	**P**	**08 57 13.4**	**-0.2**
	comp=Z,860nmcomp=Z,81nm,1.1s						
RAMN	**Ramite**	**39.71**	**279**	*e*P	**P**	**08 57 15.4**	**+0.6**
	comp=Z,498nm,0.9s						
UWJI	**Ujung Watu**	**39.72**	**213**	P	**P**	**08 57 15.1**	**+0.5**
	comp=Z,3µmcomp=Z,279nm,1.1s						
DGZ	**Jazzator, Alta**	**39.78**	**315**	*d i*P	**P**	**08 57 15.7**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,14nm,0.8s						
DNP	**Denpasar**	**39.88**	**206**	P	**P**	**08 57 16.7**	**+0.7**
	comp=Z,28µmcomp=Z,656nm,1.4s						
JIRN	**Jiri**	**39.91**	**280**	*e*P	**P**	**08 57 17.7**	**+1.0**
	comp=Z,1µm,1.0s						
PSI	**Prapat**	**40.05**	**237**	P	**P**	**08 57 18.5**	**+0.9**
	comp=Z,39nm,1.1s,baz=17,slow=5.8,SNR=32						
JAGI	**Jajag, Banyuwa**	**40.11**	**207**	P	**P**	**08 57 16.8**	**-1.1**
	comp=Z,2µmcomp=Z,243nm,1.0s						
JAGI	**Jajag, Banyuwa**	**40.11**	**207**	P	**P**	**08 57 16.5**	**-1.4**
JAGI				IAmb	IAmb	08 57 18.8	
	comp=Z,222nm,1.0s						
GUN	**Gumba**	**40.13**	**281**	*e*P	**P**	**08 57 19.7**	**+1.2**
	comp=Z,2µm,0.8s						
GMJI	**Gumukmas**	**40.23**	**208**	P	**P**	**08 57 17.2**	**-1.6**
	comp=Z,1µmcomp=Z,70nm,1.3s						
PMBI	**Palembang**	**40.23**	**224**	P	**P**	**08 57 21.6**	**+2.6**
	comp=Z,434nm,0.5s						
BKNI	**Bangkinang**	**40.24**	**232**	P	**P**	**08 57 22.0**	**+2.9**
	comp=Z,552nm,1.2s,comp=Z,552nm,1.2s						
PMG	**Port Moresby**	**40.27**	**156**	LR	LR	09 11 15.7	
	comp=Z,1µm,21.5s,baz=323,slow=32						
PMG	**Port Moresby**	**40.27**	**156**	*de*P	**P**	**08 57 18.8**	**-0.5**
PMG				pmax	pmax		
	comp=Z,160nm,1.1s						
PMG	**Port Moresby**	**40.27**	**156**	P	**P**	**08 57 19.6**	**+0.4**
KCSI	**Kotacane, Aceh**	**40.44**	**239**	P	**P**	**08 57 19.9**	**-0.8**
	comp=Z,709nmcomp=Z,26nm,1.0s						
SMRI	**Semarang**	**40.51**	**213**	P	**P**	**08 57 22.4**	**+1.2**
	comp=Z,4µmcomp=Z,341nm,1.1s						
SMRI	**Semarang**	**40.51**	**213**	IAmb	IAmb	08 57 23.5	
	comp=Z,247nm,0.9s						
PKI	**Pulchoki**	**40.61**	**280**	*e*P	**P**	**08 57 23.0**	**+0.5**
	comp=Z,1µm,1.0s						
PKIN	**Phulchoki**	**40.62**	**280**	*e*P	**P**	**08 57 22.9**	**+0.4**
	comp=Z,1µm,1.0s						
KKN	**Kakani**	**40.68**	**281**	*e*P	**P**	**08 57 24.3**	**+1.4**
	comp=Z,1µm,1.0s						
PWJI	**Pagerwojo**	**40.72**	**211**	P	**P**	**08 57 21.9**	**-1.0**
	comp=Z,2µmcomp=Z,249nm,0.9s						
MTN	**Manton Dam**	**40.76**	**181**	IAmb	IAmb	08 57 23.6	
	comp=Z,162nm,0.9s						
DMN	**Daman**	**40.87**	**281**	*e*P	**P**	**08 57 25.0**	**+0.5**
	comp=Z,483nm,0.8s						
SDSI	**Sungai Dareh**	**40.89**	**230**	P	**P**	**08 57 25.6**	**+1.2**
	comp=Z,3µmcomp=Z,220nm,1.1s						
ZSN	**Zaisan**	**40.91**	**311**	*e*P	**P**	**08 57 25.6**	**+1.3**
	comp=Z,109nm,2.1s						
ZSN				*e*LR	LR	09 16 13.2	
ZSN	**Zaisan**	**40.91**	**311**	*e*P	**P**	**08 57 25.5**	**+1.3**
ZSN				pmax	pmax		
	comp=Z,109nm,2.1s						
WOJI	**Wonogiri, Jawa**	**40.96**	**212**	P	**P**	**08 57 25.3**	**+0.4**
	comp=Z,4µmcomp=Z,346nm,1.0s						
MLSI	**Meulaboh, Aceh**	**41.01**	**241**	P	**P**	**08 57 25.3**	**-0.1**
	comp=Z,152nm,0.7s						
TPTI		**41.05**	**239**	P	**P**	**08 57 24.6**	**-1.2**
	comp=Z,10.0nm,1.2s						
BOK	**Bokaro**	**41.11**	**275**	⇓*i*P	**P**	**08 57 27.1**	**+0.9**
BOK				⇓*i*P	**P**	**08 57 27.1**	**+0.9**
BOK				IAmb	IAmb	08 57 28.4	
	comp=Z,188nm,0.7s						
PCJI	**Pacitan**	**41.16**	**212**	P	**P**	**08 57 25.7**	**-0.9**
	comp=Z,2µmcomp=Z,102nm,1.1s						
GKN	**Gorkha**	**41.19**	**281**	*e*P	**P**	**08 57 27.7**	**+0.7**
	comp=Z,796nm,0.8s						
UGM	**Wanagama**	**41.22**	**213**	P	**P**	**08 57 27.3**	**+0.2**
	comp=Z,7µmcomp=Z,651nm,1.1s						
PDSI	**Padang**	**41.53**	**231**	P	**P**	**08 57 29.9**	**+0.2**
	comp=Z,4µmcomp=Z,34nm,1.2s						
KRJI	**Kerinci**	**41.72**	**229**	P	**P**	**08 57 32.7**	**+1.4**
	comp=Z,10µmcomp=Z,378nm,1.2s						
LEM	**Lembang**	**41.76**	**217**	P	**P**	**08 57 32.7**	**+1.0**
	comp=Z,635nm,0.7s,baz=41,slow=6.4,SNR=59						
MDSI	**Maura Dua**	**41.82**	**223**	P	**P**	**08 57 32.7**	**+0.7**
	comp=Z,2µmcomp=Z,155nm,1.8s						
DANN	**Dangsing**	**41.88**	**282**	*e*P	**P**	**08 57 33.9**	**+1.1**
	comp=Z,1µm,0.6s						
SBJI	**Serang**	**41.99**	**220**	P	**P**	**08 57 34.7**	**+1.3**
	comp=Z,11µmcomp=Z,675nm,1.2s						
DBJI	**Dramaga**	**42.00**	**219**	P	**P**	**08 57 33.8**	**+0.3**
	comp=Z,13µmcomp=Z,812nm,1.1s						
GSI	**Gunungsitoli**	**42.05**	**237**	P	**P**	**08 57 34.2**	**+0.3**
	comp=Z,19µmcomp=Z,1µm,1.4s						
KSI	**Kapahiang**	**42.16**	**226**	P	**P**	**08 57 35.7**	**+0.8**
	comp=Z,276nm,1.0s						
SNSI	**Sinabang, Aceh**	**42.25**	**239**	P	**P**	**08 57 36.1**	**+0.5**
	comp=Z,156nm,0.9s						
CISI	**Cisompet, Garu**	**42.27**	**216**	P	**P**	**08 57 34.5**	**-1.2**
	comp=Z,202nm,1.0s						
CISI	**Cisompet, Garu**	**42.27**	**216**	IAmb	IAmb	08 57 41.1	
	comp=Z,168nm,0.9s						
LWLI	**Liwa**	**42.31**	**223**	P	**P**	**08 57 36.8**	**+0.6**
	comp=Z,83nm,0.9s						
CNJI	**Cibinong**	**42.42**	**217**	P	**P**	**08 57 35.6**	**-1.3**
	comp=Z,2µmcomp=Z,232nm,0.9s						
KASI	**Kota Agung**	**42.45**	**222**	P	**P**	**08 57 36.8**	**-0.4**
	comp=Z,1µmcomp=Z,88nm,1.1s						
MNAI	**Manna**	**42.48**	**225**	P	**P**	**08 57 38.8**	**+1.4**
	comp=Z,5µmcomp=Z,434nm,1.4s						
MK31	**Makanchi Array**	**42.53**	**310**	*i* P	**P**	**08 57 36.8**	**-0.8**
MK31	**Makanchi Array**	**42.53**	**310**	IAmb	IAmb	08 57 39.8	
	comp=Z,109nm,1.0s						
MKAR	**Makanchi Array**	**42.53**	**310**	P	**P**	**08 57 37.5**	**0.0**
	comp=Z,74nm,0.8s,baz=94,slow=9.8,SNR=310						
MKAR				PcP	**PcP**	**08 59 29.8**	**-0.1**
	comp=Z,22nm,0.7s,baz=80,slow=5.4,SNR=7.0						
MKAR				ScP	**ScP**	**09 03 19.9**	**0.0**
	comp=Z,1.9nm,0.8s,baz=25,slow=3.2,SNR=3.5						
MKAR				S	**S**	**09 04 01.4**	**+2.2**
	comp=Z,1.4nm,1.1s,baz=197,slow=4.9,SNR=1.5						
MKAR				LR	LR	09 16 20.2	
	comp=Z,568nm,19.6s,baz=90,slow=38						
MKAR	**Makanchi Array**	**42.53**	**310**	*i* P	**P**	**08 57 36.7**	**-0.9**
MKAR				pmax	pmax		
	comp=Z,76nm,0.8s						
MKAR	**Makanchi Array**	**42.53**	**310**	P	**P**	**08 57 36.5**	**-1.1**
ZAA0	**Zalesovo Array**	**42.58**	**320**	IAmb	IAmb	08 57 39.7	
	comp=Z,163nm,0.9s						
ZALV	**Zalesovo Beam**	**42.58**	**320**	P	**P**	**08 57 38.2**	**+0.3**
	comp=Z,110nm,0.8s,baz=106,slow=7.4,SNR=229						
ZALV				PcP	**PcP**	**08 59 29.6**	**-0.4**
	comp=Z,35nm,0.9s,baz=125,slow=2.9,SNR=5.2						
ZALV				ScP	**ScP**	**09 03 21.1**	**+1.1**

	comp=Z,0.5nm,0.3s,baz=100,slow=1.6,SNR=1.7						
ZALV				S	S	09 04 01.0	+1.4
	comp=Z,0.5nm,0.3s,baz=312,slow=52,SNR=1.9						
ZALV				LR	LR	09 16 57.9	
	comp=Z,2µm,18.9s,baz=116,slow=38						
ZALV	Zalesovo Beam	42.58	320	P	P	08 57 37.6	-0.3
MAKZ	Makanchi	42.74	310	i P	P	08 57 39.1	-0.2
MAKZ				pmax	pmax		
	comp=Z,139nm,1.0s						
MAKZ	Makanchi	42.74	310	P	P	08 57 38.7	-0.6
MAKZ				IAmb	IAmb	08 57 41.7	
	comp=Z,432nm,1.6s						
PPSI	Pulau Pagai	43.19	230	P	P	08 57 42.0	-1.2
	comp=Z,3µmcomp=Z,251nm,1.2s						
TIXI	Tiksi	43.56	359	ceP	P	08 57 44.7	-0.8
TIXI				pmax	pmax		
	comp=Z,25nm,1.0s						
TIXI				MLR	MLR		
	comp=Z,2µm,20.0s						
TIXI	Tiksi	43.56	359	P	P	08 57 44.4	-1.1
CHLP	Challavanipeta	44.43	268	eP	P	08 57 53.9	+0.7
CHLP				IAmb	IAmb	08 57 54.7	
	comp=Z,37nm,0.9s						
CHLP				eS	S	09 04 27.1	-0.3
CHLP				IVMs_BB	IVMs_BB	09 22 56.0	
	comp=Z,185nm,18.3s						
SEM	Semipalatinsk	44.45	315	eP	P	08 57 50.4	-2.9
SEM	Semipalatinsk	44.45	315	eP	P	08 57 50.3	-2.9
UZB	Uzynbulak	44.52	304	eP	P	08 57 52.7	-1.2
	comp=Z,107nm,1.6s						
UZB				eS	S	09 04 30.2	+1.5
UZB	Uzynbulak	44.52	304	eP	P	08 57 52.6	-1.3
UZB				eS	S	09 04 30.1	+1.5
UZB				pmax	pmax		
	comp=Z,107nm,1.6s						
KPKS	Kokpek	44.78	305	⇓iP	P	08 57 56.2	+0.4
	comp=Z,133nm,1.6s						
KPKS				eLR	LR	09 17 46.0	
KPKS	Kokpek	44.78	305	d iP	P	08 57 56.2	+0.4
KPKS				pmax	pmax		
	comp=Z,133nm,1.6s						
BILL	Bilibino	44.93	18	ceP	P	08 57 56.4	-0.1
BILL				pmax	pmax		
	comp=Z,94nm,1.0s						
BILL				MLR	MLR		
	comp=Z,996nm,17.0s						
BILL	Bilibino	44.93	18	P	P	08 57 56.2	-0.3
BILL				IAmb	IAmb	08 57 57.9	
	comp=Z,84nm,1.0s						
SATY	Saty	44.97	304	eP	P	08 57 57.6	+0.1
	comp=Z,91nm,1.4s						
SATY				eLR	LR	09 17 56.8	
SATY	Saty	44.97	304	eP	P	08 57 57.5	+0.1
SATY				pmax	pmax		
	comp=Z,91nm,1.4s						
ADK	Adak	45.00	44	P	P	08 57 56.7	-0.6
ADK				pmax	pmax		
	comp=Z,67nm,1.0s						
ADK	Adak	45.00	44	P	P	08 57 56.7	-0.6
ADK				IAmb	IAmb	08 57 57.3	
	comp=Z,67nm,1.0s						
KURK	Kurchatov	45.52	315	ceP	P	08 58 00.5	-1.0
KURK				pmax	pmax		
	comp=Z,295nm,1.2s						
KURK	Kurchatov	45.52	315	P	P	08 58 00.7	-0.8
KURK	Kurchatov	45.52	315		PcP	08 59 39.8	-0.2
KURBB	Kurchatov Arra	45.56	315	P	P	08 58 01.6	-0.1
	comp=Z,77nm,0.8s,baz=101,slow=8.8,SNR=313						
KURBB				PcP	PcP	08 59 39.8	-0.3
	comp=Z,22nm,0.9s,baz=103,slow=3.8,SNR=4.8						
KURBB	Kurchatov Arra	45.56	315	P	P	08 58 00.8	-1.0
MDOK	Medeo	45.97	304	eP	P	08 58 05.2	-0.1
MDOK				eS	S	09 04 49.7	+0.2
MDOK				eLR	LR	09 19 50.7	
MDOK	Medeo	45.97	304	eP	P	08 58 05.1	-0.2
MDOK				eS	S	09 04 49.7	+0.2
CHKK	Chushkaly	46.02	305	eP	P	08 58 05.2	-0.4
CHKK	Chushkaly	46.02	305	eP	P	08 58 05.2	-0.4
TNSS	Tian-Shan	46.04	304	eP	P	08 58 06.4	+0.1
TNSS	Tian-Shan	46.04	304	eP	P	08 58 06.3	+0.1
AAA	Alma-Ata	46.07	304	eP	P	08 58 05.8	-0.2
AAA				eLR	LR	09 18 27.5	
AAA	Alma-Ata	46.07	304	eP	P	08 58 08.2	+2.2
AAA				eS	S	09 04 54.5	+3.7
AAA				pmax	pmax		
	comp=Z,500nm,2.8s						
AAA				smax	smax		
	comp=N,200nm,7.2s						
AAA				MLR	MLR		
	comp=Z,1µm,14.0s						
FITZ	Fitzroy Crossi	46.34	188	P	P	08 58 08.7	+0.6
	comp=Z,179nm,0.8s,baz=14,slow=9.2,SNR=429						
HNR	Honiara	46.37	140	P	P	08 58 08.0	-0.5
	comp=Z,83nm,0.5s,baz=188,slow=9.6,SNR=4.5						
DDI	Dehra Dun	46.38	286	⇓iP	P	08 58 09.2	+0.6
DDI				IAmb	IAmb	08 58 10.6	
	comp=Z,153nm,0.5s						
KUU	Kurty	46.49	305	⇓iP	P	08 58 10.2	+0.9
	comp=Z,300nm,1.4s						
KUU				eLR	LR	09 20 19.6	
KUU	Kurty	46.49	305	d iP	P	08 58 10.1	+0.9
KUU				pmax	pmax		
	comp=Z,300nm,1.4s						
ULHL	Ulahol	46.57	303	P	P	08 58 10.3	+0.2
	SNR=44						
BOOM	Boomskoye usch	46.79	303	IAmb	IAmb	08 58 14.5	
	comp=Z,112nm,1.2s						
BOOM					PcP	08 59 45.5	+0.6
KSH	Kashi	46.88	299	P	P	08 58 16.0	+3.5
KSH				pP	pwP	08 58 20.0	-1.7
KSH				PcP	PcP	08 59 48.3	+3.1
KSH				PcS	PcS	09 03 43.8	+3.5
KSH				S	S	09 05 08.0	+5.4
KSH				pmax	pmax		
	comp=Z,20nm,0.7s						
KSH				pmax	pmax		
	comp=Z,1µm,8.9s						
KSH				LR	LR		
	comp=Z,2µm,10.8s						
KSH				LR	LR		
	comp=Z,1µm,10.0s						
KSH				LR	LR		
	comp=Z,1µm,12.4s						
PVM	Polavaram	47.04	268	eP	P	08 58 13.7	-0.1
PVM				IAmb	IAmb	08 58 15.0	
	comp=Z,27nm,0.8s						
PVM				eS	S	09 05 05.1	0.0
PVM				IVMs_BB	IVMs_BB	09 22 57.5	
	comp=Z,196nm,16.8s						
KZA	Kyzart	47.31	303	P	P	08 58 17.4	+1.2
	SNR=135						
NDI	New Delhi	47.44	284	eP	P	08 58 15.0	-1.8
DHRM	DHARAMSHALA	47.49	289	⇓iP	P	08 58 16.9	-0.7
DHRM				IAmb	IAmb	08 58 19.6	
	comp=Z,54nm,0.6s						
KBK	Karagaybulak	47.52	303	P	P	08 58 19.2	+1.7
	SNR=116						
CHMS	Chumysh	47.65	304	P	P	08 58 18.9	+0.5
	SNR=115						
CHMS	Chumysh	47.65	304	i P	P	08 58 18.6	+0.2
CHMS				pmax	pmax		
	comp=Z,398nm,1.3s						
SGDS	Sogindy	47.73	304	eP	P	08 58 19.3	+0.3
	comp=Z,65nm,0.8s						
SGDS				eLR	LR	09 21 30.1	
USP	Ospenovka	47.83	304	P	P	08 58 21.1	+1.3
	SNR=112						
AAK	Ala-Archa	47.85	303	P	P	08 58 20.4	+0.3
	comp=Z,75nm,0.9s,baz=105,slow=6.0,SNR=158						
AAK	Ala-Archa	47.85	303	P	P	08 58 21.5	+1.5
	SNR=79						
AAK	Ala-Archa	47.85	303	i P	P	08 58 21.2	+1.1
	SNR=95						
AAK	Ala-Archa	47.85	303	i P	P	08 58 21.2	+1.1
	SNR=95						
AAK	Ala-Archa	47.85	303	i P	P	08 58 20.2	+0.1
AAK				pmax	pmax		
	comp=Z,145nm,1.2s						
AAK	Ala-Archa	47.85	303	P	P	08 58 20.3	+0.3
AAK				IAmb	IAmb	08 58 22.6	
	comp=Z,121nm,1.1s						
UCH	Uchtor	47.85	303	P	P	08 58 21.6	+1.2
	SNR=468						
WRAB	Tennant Creek	47.88	176	deP	P	08 58 20.2	0.0
WRAB				pmax	pmax		
	comp=Z,234nm,0.9s						
WRAB	Tennant Creek	47.88	176	P	P	08 58 20.2	0.0
WRA	Warramunga Arr	47.89	176	P	P	08 58 20.3	0.0
	comp=Z,202nm,0.8s,baz=352,slow=8.3,SNR=209						
WRA	Warramunga Arr	47.89	176	P	P	08 58 18.8	-1.5
WRA				pmax	pmax		
	comp=Z,15nm,0.8s						
WRA	Warramunga Arr	47.89	176	P	P	08 58 18.8	-1.5
WB2	Warramunga Arr	47.89	176	P	P	08 58 20.1	-0.2
NGP	Nagpur	47.93	274	i P	P	08 58 21.0	+0.2
THN	Thein Dam	47.95	290	eP	P	08 58 20.5	-0.2
MYLAV	Mylavaram	48.11	268	eP	P	08 58 22.4	+0.3
MYLAV				IAmb	IAmb	08 58 23.7	
	comp=Z,31nm,0.8s						
MYLAV				eS	S	09 05 21.3	+1.0
MYLAV				IVMsBB		09 24 59.8	
	comp=Z,159nm,13.9s						
BTLS	Baital	48.14	307	eP	P	08 58 21.9	-0.3
BTLS				eS	S	09 05 21.6	+1.5
BTLS	Baital	48.14	307	eP	P	08 58 21.8	-0.3
BTLS				eS	S	09 05 21.6	+1.5
NRIK	Noril'sk	48.38	341	P	P	08 58 22.9	-0.5
	comp=Z,44nm,0.9s,baz=117,slow=8.3,SNR=55						
NRIK				LR	LR	09 20 31.2	
	comp=Z,1µm,19.7s,baz=140,slow=38						
NRIK	Noril'sk	48.38	341	i P	P	08 58 22.7	-0.8
NRIK				pmax	pmax		
	comp=Z,77nm,1.1s						
EKS2	Erkin-Say	48.38	303	P	P	08 58 25.5	+1.4
	SNR=86						
AML	Almayashu	48.46	303	P	P	08 58 27.1	+2.0
	SNR=138						
RPR	Rampur	48.50	271	eP	P	08 58 25.4	+0.2
RPR				IAmb	IAmb	08 58 26.2	
	comp=Z,32nm,1.0s						
RPR				eS	S	09 05 24.6	-1.3
BHPL	Bhopal	48.70	277	⇓iP	P	08 58 26.3	-0.4
BHPL				IAmb	IAmb	08 58 27.9	
	comp=Z,44nm,0.8s						
ADKI	Addanki	49.05	267	eP	P	08 58 30.4	+0.9
ADKI				IAmb	IAmb	08 58 31.6	
	comp=Z,32nm,1.0s						
ADKI				eS	S	09 05 34.4	+0.8
ADKI				IVMs_BB	IVMs_BB	09 26 37.9	
	comp=Z,162nm,10.2s						
BRZS	Berezniki	49.23	313	⇓iP	P	08 58 30.4	0.0
	comp=Z,194nm,1.8s						
BRZS				eLR	LR	09 20 46.6	
BRZS	Berezniki	49.23	313	d iP	P	08 58 30.3	0.0
BRZS				pmax	pmax		
	comp=Z,194nm,1.8s						
SRSP	Sriramsagar	49.32	271	eP	P	08 58 31.6	+0.1
SRSP				IAmb	IAmb	08 58 32.3	
	comp=Z,28nm,0.7s						
SRSP				eS	S	09 05 35.6	-1.8
SRSP				IVMs_BB	IVMs_BB	09 22 37.5	
	comp=Z,246nm,13.3s						
NJS	Nagarjunasagar	49.36	268	eP	P	08 58 32.1	+0.3
NJS				IAmb	IAmb	08 58 32.9	
	comp=Z,25nm,0.9s						
NJS				eS	S	09 05 37.5	-0.4
NJS				IVMs_BB	IVMs_BB	09 26 20.2	
	comp=Z,241nm,12.9s						
HYB	Hyderabad	49.69	269	i P	P	08 58 34.0	-0.3
HYB				e		08 58 51.5	
HYB	Hyderabad	49.69	269	⇓iP	P	08 58 34.6	+0.2
HYB				IAmb	IAmb	08 58 36.1	
	comp=Z,19nm,0.6s						
HYBB	Hyderabad (bro	49.69	269	eP	P	08 58 34.5	+0.1
HYBB				IAmb	IAmb	08 58 35.2	
	comp=Z,18nm,0.9s						
HYBB				eS	S	09 05 42.4	-0.3
HYBB				IVMs_BB	IVMs_BB	09 23 34.6	
	comp=Z,235nm,13.5s						
NIL	Nilore	49.77	292	P	P	08 58 35.7	+0.9
NIL				pmax	pmax		
	comp=Z,216nm,0.8s						
NIL	Nilore	49.77	292	P	P	08 58 35.7	+0.9
NIKH	Nikolski High	49.90	43	IAmb	IAmb	08 58 45.9	
	comp=Z,71nm,1.0s						
SRLM	Srisailam	49.90	268	eP	P	08 58 36.3	+0.4
SRLM				IAmb	IAmb	08 58 37.0	
	comp=Z,37nm,1.0s						
SRLM				eS	S	09 05 45.5	-0.1
SRLM				IVMs_BB	IVMs_BB	09 26 46.0	
	comp=Z,213nm,12.1s						
MDRS	Chennai	49.96	263	⇓iP	P	08 58 38.2	+1.9
MDRS				IAmb	IAmb	08 58 40.4	
	comp=Z,35nm,0.8s						
MDRS				IAmb	IAmb	08 58 44.7	
	comp=Z,35nm,1.0s						
CTA	Charters Tower	50.02	162	LR	LR	09 18 40.6	
	comp=Z,552nm,18.2s,baz=353,slow=35						
CTA	Charters Tower	50.02	162	P	P	08 58 37.4	+0.8
CTA				pmax	pmax		
	comp=Z,253nm,1.3s						
CTAO	Charters Tower	50.02	162	P	P	08 58 37.3	+0.7
SKHT	Srikalahasti	50.15	265	eP	P	08 58 38.7	+0.9
SKHT				IAmb	IAmb	08 58 40.0	
	comp=Z,43nm,0.9s						
SKHT				eS	S	09 05 48.8	-0.1
SKHT				IVMs_BB	IVMs_BB	09 23 59.7	
	comp=Z,165nm,8.7s						
DZA	Taraz	50.17	304	eP	P	08 58 36.0	-1.7
DZA	Taraz	50.17	304	eP	P	08 58 35.9	-1.7
PSA00	Pilbara Seismi	50.72	194	P	P	08 58 41.7	-0.2
PSA00	Pilbara Seismi	50.72	194	IAmb	IAmb	08 58 43.4	
	comp=Z,611nm,1.6s						
KK31	Karatay Array	50.75	304	i P	P	08 58 42.8	+0.7
KKAR	Karatay Array	50.75	304	P	P	08 58 42.0	-0.1
KKAR	Karatay Array	50.75	304	P	P	08 58 42.0	-0.1
KKAR	Karatay Array	50.75	304	IAmb	IAmb	08 58 44.5	
	comp=Z,215nm,0.8s						
BVAR	Borovoye Array	50.85	317	P	P	08 58 43.2	+0.5
	comp=Z,46nm,0.6s,baz=93,slow=8.9,SNR=208						
BRVK	Borovoye	50.92	317	ceP	P	08 58 43.6	+0.5
BRVK				pmax	pmax		
	comp=Z,156nm,1.3s						
BRVK	Borovoye	50.92	317	P	P	08 58 43.7	+0.6
KLRI	Killari	51.17	271	eP	P	08 58 45.5	-0.1
KLRI				IAmb	IAmb	08 58 46.7	
	comp=Z,57nm,0.8s						
KLRI				eS	S	09 06 02.1	-1.2
KLRI				IVMs_BB	IVMs_BB	09 25 11.4	
	comp=Z,230nm,13.6s						
ASAR	Alice Springs	51.57	177	P	P	08 58 48.5	+0.3
	comp=Z,112nm,0.8s,baz=11,slow=11,SNR=837						
ASAR				PcP	PcP	09 00 02.6	+0.5
	comp=Z,34nm,1.0s,baz=5.6,slow=3.5,SNR=5.6						
ASAR				LR	LR	09 19 57.9	
	comp=Z,560nm,20.3s,baz=0.5,slow=35						
ASAR				PKPPKP	P'P'df	09 29 21.3	+1.7
	comp=Z,0.5nm,1.0s,baz=208,slow=2.4,SNR=4.2						
URV	Uravakonda	51.80	267	eP	P	08 58 50.8	+0.5
URV				IAmb	IAmb	08 58 51.9	
	comp=Z,62nm,0.9s						
URV				eS	S	09 06 12.8	+0.8
PALK	Pallekele	52.27	257	i P	P	08 58 54.7	+0.9
	SNR=9.2						
PALK	Pallekele	52.27	257	i P	P	08 58 54.7	+0.9
	SNR=9.2						
PALK	Pallekele	52.27	257	P	P	08 58 53.7	0.0
PALK				pmax	pmax		
	comp=Z,65nm,1.0s						
PALK	Pallekele	52.27	257	P	P	08 58 53.7	0.0
PALK				IAmb	IAmb	08 58 55.9	
	comp=Z,64nm,0.9s						
KBL	Kabul	53.03	294	P	P	08 59 00.5	+1.0
KBL				pmax	pmax		
	comp=Z,156nm,1.0s						
KBL	Kabul	53.03	294	P	P	08 59 00.5	+1.0
KBL				IAmb	IAmb	08 59 01.9	
	comp=Z,156nm,0.9s						
POO	Poona	53.43	273	⇓iP	P	08 59 02.3	0.0
POO				IAmb	IAmb	08 59 14.7	
	comp=Z,39nm,0.6s						
KAD	Karad	53.59	271	i P	P	08 59 03.6	+0.1
GOA	Goa	54.61	269	⇓iP	P	08 59 11.9	+0.9
GOA				⇓iP	P	08 59 11.9	+0.9
GOA				IAmb	IAmb	08 59 14.5	
	comp=Z,62nm,0.9s						
GOA				IAmb	IAmb	08 59 14.6	
	comp=Z,98nm,1.1s						
TRD	Trivandrum	54.91	260	⇓iP	P	08 59 13.1	0.0
RDOG	Red Dog Mine	55.08	25	IAmb	IAmb	08 59 26.9	
	comp=Z,66nm,1.0s						
CNBA	Chernabura Isl	55.45	41	IAmb	IAmb	08 59 27.4	
	comp=Z,84nm,1.1s						
BHUJ	Bhuj	55.48	280	⇓iP	P	08 59 18.5	+1.4
BHUJ				IAmb	IAmb	08 59 19.7	
	comp=Z,67nm,0.9s						
CHGN	Chignik	56.09	39	IAmb	IAmb	08 59 31.1	
	comp=Z,48nm,1.0s						
EIDS	Eidsvold	56.44	159	IAmb	IAmb	08 59 25.0	
	comp=Z,93nm,1.0s						
SVE	Sverdlovsk	56.58	322	c iP	P	08 59 25.1	+0.6
SVE				eS	S	09 07 21.1	+5.8
SVE				pmax	pmax		
	comp=Z,164nm,1.3s						
SVE				MLR	MLR		
	comp=Z,3µm,16.0s						
AB31	Akbulak array	57.52	313	i P	P	08 59 31.3	+0.1
ABKAR	Akbulak array	57.52	313	P	P	08 59 30.8	-0.4
ABKAR	Akbulak array	57.52	313	IAmb	IAmb	08 59 32.5	
	comp=Z,78nm,0.7s						
IMAR	Indian Mountai	58.42	28	P	P	08 59 37.4	+0.1
HRA	Herat	58.54	295	IAmb	IAmb	08 59 41.0	
	comp=Z,64nm,0.9s						
AKTO	Aktyubinsk	58.61	314	i P	P	08 59 38.4	-0.5
AKTO				pmax	pmax		
	comp=Z,34nm,0.8s						
OHAK	Old Harbor	58.87	38	IAmb	IAmb	08 59 41.4	
	comp=Z,56nm,0.9s						
KDAK	Kodiak Island	59.21	37	P	P	08 59 42.8	-0.2
	comp=Z,109nm,0.9s,baz=322,slow=2.9,SNR=36						
KDAK	Kodiak Island	59.21	37	P	P	08 59 42.7	-0.2
KDAK				pmax	pmax		
	comp=Z,125nm,0.9s						
KDAK	Kodiak Island	59.21	37	P	P	08 59 42.7	-0.2
SKT	Skwentna	59.46	32	IAmb	IAmb	08 59 46.2	
	comp=Z,48nm,1.1s						
KTH	Kantishna Hill	59.66	30	IAmb	IAmb	09 00 17.4	
	comp=Z,59nm,1.2s						
MLY	Manley	59.68	29	IAmb	IAmb	08 59 57.4	
	comp=Z,44nm,1.0s						
BRLK	Bradley Lake	59.92	35	IAmb	IAmb	08 59 49.8	
	comp=Z,66nm,1.1s						
TOLK	Toolik Lake Re	60.05	25	IAmb	IAmb	09 00 00.6	
	comp=Z,54nm,1.1s						
TOLK	Toolik Lake Re	60.05	25	P	P	08 59 49.3	+0.6
	baz=271						
DZM	Mont Dzumac	60.23	142	eP	P	08 59 51.3	+0.8
	comp=Z,317nm,1.2s						
DZM				eS	S	09 08 02.6	-1.2
	comp=Z,841nm,27.4s						
DZM				eLR	LR	09 17 38.9	
	comp=Z,741nm,21.3s						
DZM	Mont Dzumac	60.23	142	P	P	08 59 51.3	+0.8
	baz=58,slow=11						
DZM	Mont Dzumac	60.23	142	IAmb	IAmb	08 59 52.6	
	comp=Z,106nm,0.9s						
RC01	Rabbit Creek A	60.38	33	IAmb	IAmb	08 59 52.4	
	comp=Z,69nm,1.2s						
STKA	Stephens Creek	60.46	170	P	P	08 59 52.0	+0.3
	comp=Z,75nm,0.7s,baz=344,slow=7.1,SNR=127						
STKA				LR	LR	09 24 56.5	
	comp=Z,504nm,22.0s,baz=358,slow=35						
MCK	McKinley	60.53	30	IAmb	IAmb	09 00 03.0	
	comp=Z,130nm,1.2s						
RND	Reindeer	60.59	31	IAmb	IAmb	09 00 03.1	
	comp=Z,92nm,1.0s						
SEW	Seward	60.61	34	IAmb	IAmb	09 00 03.2	
	comp=Z,104nm,1.0s						
PMR	Palmer	60.62	33	IAmb	IAmb	08 59 53.3	
	comp=Z,65nm,1.2s						
GHO	Glory Hole Cre	60.70	32	IAmb	IAmb	09 00 07.6	
	comp=Z,54nm,1.0s						
MDM	Murphy Dome	60.75	29	IAmb	IAmb	09 00 05.1	
	comp=Z,73nm,1.0s						
GEYT	Alibeck	60.90	300	P	P	08 59 56.1	+1.2
	comp=Z,25nm,0.7s,baz=41,slow=2.7,SNR=46						
GEYT				LR	LR	09 31 48.5	
	comp=Z,899nm,18.1s,baz=90,slow=42						
TCOL	CIGO, UAF Yank	60.91	29	P	P	08 59 54.4	-0.1
	baz=275						
COLA	College	60.92	29	P	P	08 59 55.2	+0.7
COLA				pmax	pmax		
	comp=Z,20nm,0.9s						
COLA	College	60.92	29	P	P	08 59 55.2	+0.7
KNK	Knik Glacier	60.96	33	IAmb	IAmb	08 59 56.5	
	comp=Z,60nm,1.0s						
SML	Sawmill	60.98	32	IAmb	IAmb	09 00 08.5	
	comp=Z,47nm,0.9s						
POKR	Poker Plat Res	61.07	29	P	P	08 59 56.0	+0.4
	baz=275						
DHY	Denali Highway	61.29	31	IAmb	IAmb	09 00 29.9	
	comp=Z,80nm,1.9s						
ILAR	Eielson Array	61.34	29	P	P	08 59 56.3	-1.1
	comp=Z,5.5nm,1.0s,baz=288,slow=5.3,SNR=41						
ILAR				PKPPKP	P'P'df	09 29 13.2	-4.4
	comp=Z,3.5nm,0.9s,baz=100,slow=1.3,SNR=8.5						
ILAR	Eielson Array	61.34	29	P	P	08 59 56.1	-1.3
HDA	Harding Lake	61.34	29	IAmb	IAmb	09 00 07.7	
	comp=Z,55nm,0.9s						
HDA	Harding Lake	61.34	29	P	P	08 59 56.6	-0.8
	baz=276						
SCM	Sheep Creek Mo	61.45	32	IAmb	IAmb	09 00 00.2	
	comp=Z,106nm,1.2s						
GLI	Glacier Island	61.68	33	IAmb	IAmb	09 00 00.8	
	comp=Z,58nm,1.2s						
FYU	Fort Yukon	61.84	27	IAmb	IAmb	09 00 15.6	
	comp=Z,122nm,1.2s						
BMAR	Burnt Mountain	62.00	26	P	P	09 00 02.3	+0.4
NWAO	Narrogin (SRO)	62.25	194	P	P	09 00 03.9	+0.1
NWAO				pmax	pmax		
	comp=Z,195nm,1.0s						
NWAO	Narrogin (SRO)	62.25	194	P	P	09 00 03.9	+0.1
NWAO	Narrogin (SRO)	62.25	194	IAmb	IAmb	09 00 05.0	
	comp=Z,156nm,0.9s						
RIDG	Independent Ri	62.34	30	IAmb	IAmb	09 00 18.1	
	comp=Z,67nm,1.2s						
SCRK	Sand Creek	62.68	30	IAmb	IAmb	09 00 18.7	
	comp=Z,48nm,1.0s						
RAGM	Ragged Mountai	62.93	34	P	P	09 00 07.4	-0.9
RAGM				IAmb	IAmb	09 00 10.0	
	comp=Z,85nm,1.3s						
MENT	Mentasta	62.96	31	IAmb	IAmb	09 00 25.7	
	comp=Z,63nm,1.1s						
GLB	Gilahina Butte	63.17	32	IAmb	IAmb	09 00 11.9	
	comp=Z,50nm,1.1s						
VRDI	Verde Repeater	63.38	33	IAmb	IAmb	09 00 12.7	
	comp=Z,33nm,0.9s						
MCARA	McCarthy VSAT	63.55	32	IAmb	IAmb	09 00 42.0	
	comp=Z,111nm,1.4s						
CRQM	Cirque	63.61	33	IAmb	IAmb	09 00 14.8	
	comp=Z,44nm,1.0s						
PRGR	Permogore	63.75	328	eP	P	09 00 12.0	-1.5
PRGR				pmax	pmax		
	comp=Z,61nm,0.6s						
TGL	Tana Glacier	63.76	33	IAmb	IAmb	09 00 15.5	
	comp=Z,50nm,1.0s						
BCAR	Beaver Creek A	63.81	30	P	P	09 00 13.7	-0.3
MSVF	Nonsavu	64.07	130	P	P	09 00 17.5	+1.2
MSVF				pmax	pmax		
	comp=Z,111nm,1.3s						
MSVF	Nonsavu	64.07	130	P	P	09 00 17.5	+1.2
MSVF				IAmb	IAmb	09 00 19.3	
	comp=Z,111nm,1.2s						
H01W3	Cape Leeuwin H	64.83	196	P	P	09 00 20.7	+0.2
	baz=36,slow=3.7,SNR=5.6						
H01W1	Cape Leeuwin H	64.83	196	P	P	09 00 21.6	+1.1
	baz=36,slow=3.7,SNR=6.2						
H01W2	Cape Leeuwin H	64.84	196	P	P	09 00 20.9	+0.3
	baz=36,slow=3.7,SNR=6.3						
WBK	Wadi Bani Khal	64.94	283	P	P	09 00 24.0	+1.9
	SNR=17						
WBK	Wadi Bani Khal	64.94	283	P	P	09 00 24.0	+1.9
	SNR=17						
WSAR	Wadi Sarin	65.00	284	P	P	09 00 23.8	+1.4
	SNR=9.6						
WSAR	Wadi Sarin	65.00	284	P	P	09 00 23.8	+1.4
	SNR=9.6						
PCA	Pinnacle	65.15	33	P	P	09 00 23.3	+0.5
PCA				IAmb	IAmb	09 00 27.4	
	comp=Z,54nm,1.0s						
EPYK	Eagle Plains	65.24	26	IAmb	IAmb	09 00 24.9	
	comp=Z,50nm,0.7s						
EPYK	Eagle Plains	65.24	26	P	P	09 00 23.5	+0.2
	baz=284						
CAN	Canberra	65.25	164	P	P	09 00 25.3	+1.7
CAN	Canberra	65.25	164	IAmb	IAmb	09 00 26.1	
	comp=Z,85nm,1.0s						

BIDO	Bidbid	65.33	285	P	P	09 00 27.0	+2.4
	SNR=11						
BIDO	Bidbid	65.33	285	P	P	09 00 27.0	+2.4
	SNR=11						
SMDO	Samad	65.56	284	P	P	09 00 27.1	+0.9
	SNR=14						
SMDO	Samad	65.56	284	P	P	09 00 27.1	+0.9
	SNR=14						
JMDO	Jabal Madar	65.77	283	P	P	09 00 28.0	+0.6
	SNR=15						
JMDO	Jabal Madar	65.77	283	P	P	09 00 28.0	+0.6
	SNR=15						
INK	Inuvik	65.94	24	P	P	09 00 27.6	-0.1
	comp=Z,12nm,0.5s,baz=295,slow=6.4,SNR=77						
HOQ	Hoqain	66.00	285	P	P	09 00 30.0	+1.1
	SNR=12						
HOQ	Hoqain	66.00	285	P	P	09 00 30.0	+1.1
	SNR=12						
HOQ				P	P	09 00 30.0	+1.1
	SNR=12						
BANOM	Banah	66.02	288	P	P	09 00 30.5	+1.5
BANOM	Banah	66.02	288	P	P	09 00 30.5	+1.5
SHME	Shamm	66.11	288	P	P	09 00 30.7	+1.2
SHME	Shamm	66.11	288	P	P	09 00 30.7	+1.2
MDH	Madha	66.24	287	P	P	09 00 29.9	-0.5
MDH	Madha	66.24	287	P	P	09 00 29.9	-0.5
MSFE	Esma-Masafi	66.34	287	*i* P	P	09 00 32.4	+1.3
	SNR=6.5						
MSFE	Esma-Masafi	66.34	287	*i* P	P	09 00 32.4	+1.3
	SNR=6.5						
MHTO	MHTO	66.41	282	P	P	09 00 31.9	+0.4
	SNR=24						
MHTO	MHTO	66.41	282	P	P	09 00 31.9	+0.4
	SNR=24						
BSY	Bisya	66.41	284	P	P	09 00 33.0	+1.4
	SNR=11						
BSY	Bisya	66.41	284	P	P	09 00 33.0	+1.4
	SNR=11						
BSY				P	P	09 00 33.0	+1.4
	SNR=11						
UOSS	Minazif	66.45	287	P	P	09 00 32.1	+0.4
UOSS	Minazif	66.45	287	P	P	09 00 32.1	+0.4
SOHO	SOHO	66.47	286	P	P	09 00 32.6	+0.8
	SNR=16						
SOHO	SOHO	66.47	286	P	P	09 00 32.6	+0.8
	SNR=16						
TMCR	Tamitsa	66.54	332	*e*P	P	09 00 29.6	-2.0
TMCR				pmax	pmax		
	comp=Z,170nm,0.9s						
HATD	Hatta, Dubai	66.55	287	*i* P	P	09 00 33.7	+1.3
	SNR=15						
HATD	Hatta, Dubai	66.55	287	*i* P	P	09 00 33.7	+1.3
	SNR=15						
HATD	Hatta, Dubai	66.55	287	P	P	09 00 33.4	+1.0
	SNR=5.6						
HATD	Hatta, Dubai	66.55	287	P	P	09 00 33.4	+1.0
	SNR=5.6						
ASHO	Ashiyiah	66.67	286	*i* P	P	09 00 34.1	+0.9
	SNR=10						
ASHO	Ashiyiah	66.67	286	*i* P	P	09 00 34.1	+0.9
	SNR=10						
ASHO	Ashiyiah	66.67	286	P	P	09 00 35.0	+1.8
	SNR=9.5						
ASHO	Ashiyiah	66.67	286	P	P	09 00 35.0	+1.8
	SNR=9.5						
ARQ	Araqi	66.77	285	P	P	09 00 35.0	+1.2
	SNR=14						
ARQ	Araqi	66.77	285	P	P	09 00 35.0	+1.2
	SNR=14						
ARQ				P	P	09 00 35.0	+1.2
	SNR=14						
KLMR	Klimovskoe	66.80	328	*e*P	P	09 00 30.3	-3.0
KLMR				pmax	pmax		
	comp=Z,205nm,1.6s						
KLMR				MLR	MLR		
	comp=Z,3µm,15.0s						
KLMR	Klimovskoe	66.80	328	*e*P	P	09 00 30.4	-2.9
KLMR				AMP		09 00 34.0	
	comp=Z,205nm,1.6s						
KLMR				LQ	LQ	09 24 01.6	
KLMR				LQ	LQ	09 24 01.6	
KLMR				LR	LR	09 25 38.6	
KLMR				AMP		09 33 44.8	
	comp=Z,3µm,14.6s						
NAZ	Nazwa, Dubai	66.89	287	*i* P	P	09 00 35.5	+1.0
	SNR=12						
NAZ	Nazwa, Dubai	66.89	287	*i* P	P	09 00 35.5	+1.0
	SNR=12						
FAQ	Al Faqa, Dubai	67.04	287	*i* P	P	09 00 36.5	+1.0
	SNR=7.5						
FAQ	Al Faqa, Dubai	67.04	287	*i* P	P	09 00 36.5	+1.0
	SNR=7.5						
ALNE	Al Ain	67.16	286	*i* P	P	09 00 37.3	+1.0
	SNR=23						
ALNE	Al Ain	67.16	286	*i* P	P	09 00 37.3	+1.0
	SNR=23						
DQM	DQM	67.18	281	P	P	09 00 36.7	+0.3
	SNR=10						
DQM	DQM	67.18	281	P	P	09 00 36.7	+0.3
	SNR=10						
DQM				P	P	09 00 36.7	+0.3
	SNR=10						
MAK	Makhachkala	67.30	308	*d* *i*P	P	09 00 29.3	-7.5
MAK				*e*SSS	SSS	09 16 54.3	
MAK				pmax	pmax		
	comp=Z,229nm,1.2s						
APA	Apatity	67.33	336	⇓*i*P	P	09 00 35.2	-1.4
APA				*i*		09 01 04.2	
APA				*i*		09 03 04.0	
APA				pmax	pmax		
	comp=Z,111nm,0.8s						
APA				MLR	MLR		
	comp=Z,1µm,13.0s						
SPA0	Spitsbergen Ar	67.55	348	IAmb	IAmb	09 00 56.1	
	comp=Z,99nm,1.1s						
SPITS	Spitsbergen Ar	67.55	348	P	P	09 00 37.4	-0.5
SPITS				pmax	pmax		
	comp=Z,17nm,0.6s						
AKT	Akhty	67.60	306	*e*P	P	09 00 39.5	+0.6
AKT				*e*		09 01 06.5	
AKT				pmax	pmax		
	comp=Z,128nm,0.7s						
AJN	Ajban	67.62	287	P	P	09 00 40.0	+0.8
	SNR=5.8						
AJN	Ajban	67.62	287	P	P	09 00 40.0	+0.8
	SNR=5.8						
LKRN	Lenkeran, Azer	67.72	303	P	P	09 00 40.2	+0.7
SKAG	Skagway	67.72	33	IAmb	IAmb	09 00 41.8	
	comp=Z,45nm,1.1s						
KBS	Kingsbay	67.90	350	P	P	09 00 39.8	-0.2
KBS				pmax	pmax		
	comp=Z,237nm,1.0s						
SEKA	Sheki	68.07	306	P	P	09 00 41.8	0.0
MNGR	Mingechevir, A	68.29	306	P	P	09 00 44.1	+1.0
HSPB	Hornsund (broa	68.31	347	*e*P	P	09 00 42.8	+0.2
HSPB				*e*L	L	09 34 41.4	
	comp=Z,655nm,20.1s						
HSPB	Hornsund (broa	68.31	347	*e*P	P	09 00 42.8	+0.2
HSPB				MLR	MLR		
	comp=Z,700nm,20.1s						
VRH	Novokhopyorsk	68.50	317	*e*P	P	09 00 43.1	-1.1
VRH				pmax	pmax		
	comp=Z,70nm,0.7s						
VRH				MLR	MLR		
	comp=Z,2µm,17.0s						
LGD	Lagodekhi	68.54	307	P	P	09 00 45.1	+0.4
KEV	Kevo	68.73	339	P	P	09 00 45.0	-0.3
KEV				pmax	pmax		
	comp=Z,79nm,0.8s						
KEV	Kevo	68.73	339	P	P	09 00 45.0	-0.3
C36M	Paulatuk	68.83	22	P	P	09 00 46.1	+0.2
C36M				IAmb	IAmb	09 00 56.6	
	comp=Z,58nm,1.1s						
C36M	Paulatuk	68.83	22	P	P	09 00 46.0	0.0
	baz=294						
GANJ	Ganja	68.88	306	P	P	09 00 47.6	+0.8
AFI	Afiamalu	68.96	120	P	P	09 00 48.1	+0.5
AFI				pmax	pmax		
	comp=Z,408nm,1.4s						
ARCES	ARCESS Array B	69.30	339	P	P	09 00 48.5	-0.4
	comp=Z,33nm,0.7s,baz=62,slow=9.1,SNR=84						
ARCES				LR	LR	09 37 15.2	
	comp=Z,2µm,18.0s,baz=51,slow=41						
ARCES	ARCESS Array B	69.30	339	P	P	09 00 48.3	-0.6
ARCES	ARCESS Array B	69.30	339	P	P	09 00 48.3	-0.6
MOS	Moscow	69.34	323	*e*P	P	09 00 47.7	-1.6
MOS				*e*		09 01 09.2	
MOS				*e*		09 03 22.2	
MOS				pmax	pmax		
	comp=Z,600nm,1.8s						
MOS				pmax	pmax		
	comp=Z,208nm,1.4s						
MOS				MLR	MLR		
	comp=Z,2µm,18.0s						
GUDG	Gudauri	69.57	308	P	P	09 00 52.2	+0.8
SHAO	Shalim	69.60	280	*i* P	P	09 00 52.4	+0.8
	SNR=6.9						
SHAO	Shalim	69.60	280	*i* P	P	09 00 52.4	+0.8
	SNR=6.9						
TBLG	Delisi	69.64	307	*e*P	P	09 00 52.5	+1.0
TBLG	Delisi	69.64	307	P	P	09 00 52.3	+0.8
GOF	Gofitskoye	69.67	311	⇑*e*P	P	09 00 52.2	+0.5
GOF				pmax	pmax		
	comp=Z,100nm,0.9s						
LPSR	Galich'ya Gora	69.68	319	*e*P	P	09 00 50.7	-0.8
LPSR				pmax	pmax		
	comp=Z,110nm,0.9s						
LPSR				MLR	MLR		
	comp=Z,2µm,15.0s						
VORR	Voronezh	69.83	318	*e*P	P	09 00 51.0	-1.5
VORR				pmax	pmax		
	comp=Z,450nm,2.0s						
ZEI	Tsey	69.86	308	*e*P	P	09 00 50.8	-2.3
ZEI				pmax	pmax		
	comp=Z,99nm,0.6s						
NAX	Nakhchivan	69.97	304	P	P	09 00 54.6	+0.9
VSR	Storozhevoye	70.02	318	*e*P	P	09 00 52.6	-1.0
VSR				pmax	pmax		
	comp=Z,160nm,1.6s						
VSR				MLR	MLR		
	comp=Z,2µm,15.0s						
VORD	Divnogorie	70.03	318	*e*P	P	09 00 52.6	-1.1
VORD				pmax	pmax		
	comp=Z,70nm,1.5s						
OBN	Obninsk	70.12	323	*d* *i*P	P	09 00 53.7	-0.4
OBN				*i*		09 01 12.6	
OBN				*i*		09 03 26.3	
OBN				pmax	pmax		
	comp=Z,248nm,1.7s						
OBN				MLR	MLR		
	comp=Z,2µm,16.0s						
OBN	Obninsk	70.12	323	P	P	09 00 52.7	-1.4
GNI	Garni	70.18	306	*i* P	P	09 00 56.8	+1.7
	SNR=6.9						
GNI	Garni	70.18	306	*i* P	P	09 00 56.8	+1.7
	SNR=6.9						
KBZ	Khabaz	70.23	310	P	P	09 00 55.7	+0.6
	comp=Z,106nm,0.9s,baz=77,slow=5.0,SNR=127						
KBZ				LR	LR	09 34 06.8	
	comp=Z,777nm,19.4s,baz=69,slow=38						
ONI	Oni	70.24	308	*e*P	P	09 00 56.9	+1.6
ONI	Oni	70.24	308	P	P	09 00 56.6	+1.3
KIV	Kislovodsk	70.29	310	⇑P	P	09 00 56.9	+1.3
KIV	Kislovodsk	70.29	310	*i* P	P	09 01 00.4	+4.8
	SNR=10						
KIV	Kislovodsk	70.29	310	*i* P	P	09 01 00.4	+4.8
	SNR=10						
KIV	Kislovodsk	70.29	310	*i* P	P	09 01 01.0	+5.4
KIV	Kislovodsk	70.29	310	*e*P	P	09 00 58.1	+2.5
KIV				*e*S	S	09 10 11.3	+4.3
KIV				pmax	pmax		
	comp=Z,359nm,1.1s						
KIV				pmax	pmax		
	comp=Z,533nm,4.9s						
BGD	Bogdanovka	70.60	307	P	P	09 00 59.2	+1.5
AKH	Akhalkalaki	70.63	307	⇑P	P	09 00 59.2	+1.4
AKH	Akhalkalaki	70.63	307	P	P	09 00 59.5	+1.7
AKH	Akhalkalaki	70.63	307	P	P	09 00 59.1	+1.3
RBK	Rabkut	71.05	280	P	P	09 01 00.6	+0.1
	SNR=8.8						
RBK	Rabkut	71.05	280	P	P	09 01 00.6	+0.1
	SNR=8.8						
CLDR	Caldiran	71.13	305	*e*P	P	09 01 02.3	+1.3
WHFO	Wadi Hawf	71.25	281	P	P	09 01 01.5	-0.2
	SNR=10						
WHFO	Wadi Hawf	71.25	281	P	P	09 01 01.5	-0.2
	SNR=10						
H02N1	VAN INLET T-PH	71.30	39	P	P	09 01 01.2	-0.3
H02S1	DAWSON INLET T	71.35	39	P	P	09 01 01.5	-0.2
AGRB	Hanur-Agry	71.64	306	*e*P	P	09 01 05.6	+1.6
VANB	Van	71.72	304	*e*P	P	09 01 05.9	+1.5
SENK	Senkaya-Erzuru	71.74	307	*i* P	P	09 01 05.6	+1.0
BATM	Batumi	71.82	308	⇑P	P	09 01 04.8	0.0
BATM	Batumi	71.82	308	P	P	09 01 04.8	0.0
ABTO	Aybut	71.90	280	P	P	09 01 05.8	+0.1
	SNR=12						
ABTO	Aybut	71.90	280	P	P	09 01 05.8	+0.1
	SNR=12						
BCA	Borcka	71.92	308	⇓P	P	09 01 06.5	+1.0
BCA	Borcka	71.92	308	*e*P	P	09 01 06.3	+0.8
AKDM	Akdamar-Van	72.11	304	*e*P	P	09 01 07.9	+1.1
TAU	Tasmania Unive	72.19	168	P	P	09 01 08.2	+1.6
TAU				pmax	pmax		
	comp=Z,119nm,1.4s						
TAU	Tasmania Unive	72.19	168	P	P	09 01 08.2	+1.6
TAU				IAmb	IAmb	09 01 10.2	
	comp=Z,119nm,1.4s						
SOC	Sochi	72.43	310	*e*P	P	09 01 07.3	-1.1
SOC				*e*PPP	PPP	09 05 31.0	
SOC				*e*S	S	09 10 29.0	-2.5
SOC				pmax	pmax		
	comp=Z,164nm,0.6s						
FINES	FINESS Array B	72.64	331	P	P	09 01 08.8	-0.5
	comp=Z,79nm,0.6s,baz=72,slow=6.1,SNR=312						
FINES				LR	LR	09 36 50.2	
	comp=Z,870nm,18.6s,baz=57,slow=39						
GURO	Guroymak-BITLI	72.72	305	P	P	09 01 11.8	+1.4
SIRT	Sirnak	72.82	304	P	P	09 01 11.9	+0.9
VRTB	Varto-Mus	72.90	306	P	P	09 01 13.3	+1.8
RES	Resolute Bay	73.09	12	IAmb	IAmb	09 01 13.3	
	comp=Z,89nm,1.4s						
YEDI	Yedisu-Bingol	73.45	306	*e*P	P	09 01 15.8	+1.1
SVAN	Silvan-Diyarba	73.48	305	*e*P	P	09 01 15.3	+0.5
SOCY	Socotra	73.48	275	P	P	09 01 14.2	-1.0
	SNR=9.7						
SOCY	Socotra	73.48	275	P	P	09 01 14.2	-1.0
	SNR=9.7						
BNGB	Bingl	73.53	306	*e*P	P	09 01 16.5	+1.4
VSU	Vasula	73.70	328	*e*P	P	09 01 15.5	-0.1
VSU	Vasula	73.70	328	P	P	09 01 15.7	+0.1
VSU				pmax	pmax		
	comp=Z,609nm,1.1s						
DAG	Danmarks Havn	73.72	353	⇓*i*P	P	09 01 15.0	-0.4
	comp=Z,42nm,0.9s						
DAG	Danmarks Havn	73.72	353	⇓*i*P	P	09 01 15.0	-0.4
DAG				pmax	pmax		
	comp=Z,42nm,0.9s						
MAZI	Mazidag	74.30	304	*i* P	P	09 01 20.4	+0.7
DYBB	Diyarbakir	74.32	305	*e*P	P	09 01 21.1	+1.3
PTK	Pertek	74.49	306	*e*P	P	09 01 21.8	+0.9
SVRC	Sivrice-ELAZID	74.75	306	P	P	09 01 23.8	+1.4
TULEG	Thule	74.79	5	IAmb	IAmb	09 01 22.5	
	comp=Z,185nm,1.4s						
ARPR	Arapgir-MALATY	75.16	307	P	P	09 01 26.2	+1.5
IZAR	Zarasai	75.21	326	*e*P	P	09 01 24.4	0.0
RSDY	Resadiye-TOKAT	75.33	308	*e*P	P	09 01 26.5	+1.0
NACGM	Naroch	75.34	325	*e*P	P	09 01 24.0	-1.2
NACGM				PM		09 01 26.0	
	comp=Z,0.3nm,1.0s						
NACGM				*e*LR	LR	09 35 56.0	
ISAL	Salakas	75.35	326	*e*P	P	09 01 25.6	+0.4
MALT	Malatya	75.41	306	*e*P	P	09 01 27.9	+1.8
MALT	Malatya	75.41	306	P	P	09 01 27.2	+1.1
URFA	Urfa	75.49	305	*i* P	P	09 01 27.7	+1.2
YKA	Yellowknife Ar	75.52	26	P	P	09 01 25.8	-0.3
	comp=Z,12nm,0.9s,baz=299,slow=5.0,SNR=94						
YKA				PKiKP	PKiKP	09 07 13.3	-0.8
	comp=Z,0.5nm,0.7s,baz=315,slow=1.1,SNR=6.4						
YKA				PKKPbc	PKKPbc	09 20 43.8	-2.5
	comp=Z,0.4nm,0.7s,baz=132,slow=2.6,SNR=6.3						
YKA				PKPPKP	P'P'df	09 28 48.4	-4.8
	comp=Z,0.8nm,1.1s,baz=130,slow=3.0,SNR=3.6						
YKA				LR	LR	09 38 33.3	
	comp=Z,106nm,18.1s,baz=0.0,slow=39						
SIM	Simferopol'	75.56	313	*d* *i*P	P	09 01 26.9	+0.2
SIM				*e*		09 01 40.0	
SIM				pmax	pmax		
	comp=Z,221nm,1.8s						
SVSK	Karacayir	75.76	308	*e*P	P	09 01 29.2	+1.3
TOKT	Tokat	75.90	308	*i* P	P	09 01 29.6	+0.8
KVT	Kavak	75.93	309	P	P	09 01 30.1	+1.2
KVT	Kavak	75.93	309	P	P	09 01 29.7	+0.8
AKASG	Malin Array Be	75.98	320	P	P	09 01 28.7	-0.2
	comp=Z,113nm,0.8s,baz=52,slow=6.2,SNR=40						
AKASG				LR	LR	09 37 03.2	
	comp=Z,574nm,18.6s,baz=65,slow=37						
AKASG	Malin Array Be	75.98	320	P	P	09 01 28.5	-0.4
AKASG				pmax	pmax		
	comp=Z,83nm,1.2s						
AKASG	Malin Array Be	75.98	320	P	P	09 01 28.4	-0.4
DARE	Darende-Malaty	75.98	306	*i* P	P	09 01 31.0	+1.7
SLIT	Slitere, Latvi	76.18	328	*e*P	P	09 01 28.9	-1.0
DIKM	Dikmen	76.22	310	⇑P	P	09 01 30.9	+0.4
DIKM	Dikmen	76.22	310	*e*P	P	09 01 31.2	+0.7
PABE	Paberze	76.45	326	*e*P	P	09 01 31.5	0.0
GAZ	Gaziantep	76.77	305	*e*P	P	09 01 35.0	+1.2
SARI	SarD1z-Kayseri	76.81	307	*e*P	P	09 01 35.3	+1.2
KMRS	Kahramanmaras	76.85	306	*e*P	P	09 01 35.2	+1.0
BZK	Bozkurt	76.93	311	⇑P	P	09 01 34.3	-0.2
BZK	Bozkurt	76.93	311	*e*P	P	09 01 35.2	+0.7
BNN	Bunyan	77.02	307	*i* P	P	09 01 36.0	+0.7
PBUR	Paburge	77.18	327	*e*P	P	09 01 35.6	0.0
CORM	Corum	77.29	309	*e*P	P	09 01 37.7	+1.0
KULLO	Kullorsuaq	77.36	2	⇓*i*P	P	09 01 36.0	-0.3
	comp=Z,39nm,0.8s						
KULLO	Kullorsuaq	77.36	2	⇓*i*P	P	09 01 36.0	-0.3
KULLO				pmax	pmax		
	comp=Z,39nm,0.8s						
SUW	Suwalki	77.61	325	*e*P	P	09 01 38.0	0.0
SUW				*e*L	L	09 39 07.8	
	comp=Z,2µm,18.2s						
SUW	Suwalki	77.61	325	*e*P	P	09 01 38.0	0.0
SUW				MLR	MLR		
	comp=Z,2µm,18.2s						
SORM	Soroca	77.68	318	⇑P	P	09 01 38.5	-0.1
SORM	Soroca	77.68	318	P	P	09 01 38.4	-0.1
HIZ	Hauiti	77.70	147	IAmb	IAmb	09 01 45.6	
	comp=Z,98nm,1.0s						
TAHT	Tahtakopru-Hat	77.85	305	*i* P	P	09 01 39.5	-0.3
CEYT	Ceyhan	77.89	305	*i* P	P	09 01 41.1	+1.1
KIS	Kishinev	77.94	317	⇑*i*P	P	09 01 40.0	-0.1
	comp=Z,290nm,2.0s						
KIS	Kishinev	77.94	317	*e*PcP	PcP	09 01 50.0	+0.2
KIS				*e*L	L	09 33 08.0	
KIS				LRM	MLR	09 39 00.0	
	comp=Z,2µm,16.0s						
KIS	Kishinev	77.94	317	⇑*i*P	P	09 01 40.0	-0.1
KIS				*e*		09 01 50.0	
KIS				*e*		09 04 42.0	
KIS				*e*		09 06 28.0	
KIS				MLR	MLR		
	comp=Z,2µm,16.0s						
KIS				MLR	MLR		
	comp=N,1µm,15.0s						
BR131	Keskin Array S	78.17	309	P	P	09 01 42.0	+0.3
	SNR=49						
BR131	Keskin Array S	78.17	309	P	P	09 01 42.0	+0.3
	SNR=49						
BR131	Keskin Array S	78.17	309	IAmb	IAmb	09 01 43.2	
	comp=Z,126nm,1.1s						
BRTR	Keskin Array B	78.17	309	P	P	09 01 42.1	+0.4
	comp=Z,58nm,0.9s,baz=94,slow=5.0,SNR=197						
BRTR				LR	LR	09 40 58.4	
	comp=Z,243nm,18.5s,baz=26,slow=39						
BRTR	Keskin Array B	78.17	309	*i* P	P	09 01 42.0	+0.3
BRTR	Keskin Array B	78.17	309	*i* P	P	09 01 41.9	+0.3
BRTR				pmax	pmax		
	comp=Z,61nm,0.9s						
BRTR	Keskin Array B	78.17	309	P	P	09 01 41.3	-0.4
KARA	Karaisali	78.28	306	*e*P	P	09 01 43.0	+0.8
QRZ	Quartz Range	78.45	149	P	P	09 01 42.0	-0.7
QRZ				IAmb	IAmb	09 02 19.7	
	comp=Z,134nm,1.5s						
LEOM	Leova	78.54	317	⇑P	P	09 01 43.2	-0.1
LEOM	Leova	78.54	317	P	P	09 01 44.1	+0.7
SERE	Sereflikochisa	78.57	308	P	P	09 01 44.2	+0.3
IAS	Iasi	78.60	318	P	P	09 01 45.6	+1.9
URZ	Urewera	78.62	145	P	P	09 01 42.6	-1.1
	comp=Z,25nm,1.0s,baz=296,slow=4.5,SNR=8.8						
URZ	Urewera	78.62	145	IAmb	IAmb	09 01 44.0	
	comp=Z,211nm,1.8s						
ANTO	Ankara	78.69	309	⇑P	P	09 01 44.6	+0.1
ANTO	Ankara	78.69	309	P	P	09 01 45.1	+0.6
ANTO	Ankara	78.69	309	P	P	09 01 44.0	-0.5
ANTO				pmax	pmax		
	comp=Z,106nm,1.1s						
AFSR	Afar-Bala (An	78.69	309	P	P	09 01 45.0	+0.5
LOD	Lodumlu	78.70	309	P	P	09 01 45.2	+0.7
MERS	Mersin	78.83	306	P	P	09 01 45.6	+0.3
NB2	NORSAR Subarra	78.88	335	P	P	09 01 43.9	-1.1
	comp=Z,164nm,1.4s,baz=48,slow=5.6						
NB2	NORSAR Subarra	78.88	335	P	P	09 01 43.9	-1.1
	baz=48,slow=5.6						
NOA	NORSAR Array B	78.88	335	P	P	09 01 44.0	-1.0
	comp=Z,27nm,0.6s,baz=51,slow=5.6,SNR=105						
NOA				LR	LR	09 41 42.8	
	comp=Z,855nm,18.4s,baz=65,slow=40						
KULU	Kulu	78.92	308	*e*P	P	09 01 47.1	+1.3
NORES	NORESS Array B	78.94	334	P	P	09 01 44.1	-1.2
NORES				pmax	pmax		
	comp=Z,17nm,0.6s						
NC602	NORSAR Array S	78.94	334	IAmb	IAmb	09 01 44.8	
	comp=Z,94nm,1.2s						
SULT	Sultanhani-AKS	78.95	307	*e*P	P	09 01 46.5	+0.6
JURR	Jurilovca	78.97	315	⇓P	P	09 01 46.1	+0.4
BKZ	Black Stump Fm	79.01	146	IAmb	IAmb	09 01 47.7	
	comp=Z,140nm,1.5s						
NBO00	NORSAR Array S	79.05	335	IAmb	IAmb	09 01 45.7	
	comp=Z,74nm,0.8s						
NAO01	NORSAR Array S	79.12	335	IAmb	IAmb	09 01 46.0	
	comp=Z,82nm,1.0s						
NNZ	Nelson	79.15	149	IAmb	IAmb	09 01 52.1	
	comp=Z,165nm,1.3s						
YUVA	Yuva-Kibriscik	79.20	310	*e*P	P	09 01 47.7	+0.4
TOPG	Topolog	79.23	315	⇑P	P	09 01 47.5	+0.3
CFR	Carcaliu	79.23	316	⇑P	P	09 01 46.7	-0.5
CFR	Carcaliu	79.23	316	P	P	09 01 46.6	-0.5
D03D	Eldon	79.23	42	P	P	09 01 48.4	+1.2
	baz=300						
GHRR		79.25	317	⇓P	P	09 01 48.5	+1.2
KIZK	Mersin	79.28	306	*e*P	P	09 01 47.4	-0.3
SUMG	Summit	79.30	357	*i* P	P	09 01 47.9	+0.3
	comp=Z,233nm,1.0s						
SUMG	Summit	79.30	357	*i* P	P	09 01 47.9	+0.3
SUMG				pmax	pmax		
	comp=Z,230nm,1.0s						
SUMG	Summit	79.30	357	IAmb	IAmb	09 01 49.3	
	comp=Z,115nm,1.1s						
LVV	L'vov	79.32	321	*e*P	P	09 01 47.7	+0.1
LVV				*e*		09 04 53.3	
LVV				*e*PPP	PPP	09 06 45.9	
LVV				*e*S	S	09 11 47.4	+0.2
LVV				*e*PS	PnS	09 12 52.5	+22
LVV				*e*SSS	SSS	09 20 21.5	
LVV				MLR	MLR		
	comp=N,700nm,17.0s						
LVV				MLR	MLR		
	comp=E,900nm,17.0s						
LVV				MLR	MLR		
	comp=Z,1µm,16.0s						
TIRR	Tirgusor	79.41	315	⇓P	P	09 01 48.1	-0.1
TIRR	Tirgusor	79.41	315	⇓P	P	09 01 48.1	-0.1
TIRR	Tirgusor	79.41	315	P	P	09 01 48.1	-0.1
TIRR				pmax	pmax		
	comp=Z,213nm,1.4s						
EFOR	EFORIE	79.45	314	⇑P	P	09 01 49.4	+1.0
TESR	Tescani	79.48	317	⇓P	P	09 01 48.5	-0.1
SILI	Silifke-Mersin	79.49	306	*e*P	P	09 01 48.5	-0.3
MDUB	Mudurnu	79.49	310	*e*P	P	09 01 48.8	-0.1
KSV	Kosov	79.50	319	P	P	09 01 48.6	-0.1
MFTR	Murfatlar	79.54	315	⇓P	P	09 01 49.7	+0.8
BIZ	Bicaz	79.59	318	⇓P	P	09 01 49.2	0.0
HARR	Harsova	79.59	315	⇑P	P	09 01 49.3	0.0
HARR	Harsova	79.59	315	P	P	09 01 49.2	0.0
KEBE	Keben-Mersin	79.60	306	P	P	09 01 49.7	+0.2
ODBI	Odobesti	79.61	316	⇓P	P	09 01 50.4	+1.2
IKL	Isikli	79.72	306	P	P	09 01 49.9	-0.1
AUSIV	SIVRIHISAR	79.74	309	P	P	09 01 50.6	+0.3
MORS	Morshin	79.75	321	P	P	09 01 50.7	+0.7
LADK	Ladik-KONYA	79.75	308	P	P	09 01 49.2	-1.2
SVRH	Sivrihisar-ESK	79.75	309	P	P	09 01 50.3	0.0
VRI	Vrincioaia	79.75	317	⇓P	P	09 01 50.7	+0.6
VRI	Vrincioaia	79.75	317	P	P	09 01 50.3	+0.2
VRI	Vrincioaia	79.75	317	P	P	09 01 50.5	+0.4

BUR08	Bucovina Ar. S	79.77	319	IAmb	IAmb	09 01 51.8	
	comp=Z,90nm,1.2s						
KIZT	Kizilcal	79.77	309	P	P	09 01 50.4	-0.1
BURAR	Bucovina Array	79.77	319	⇓P	P	09 01 50.8	+0.5
BURAR	Bucovina Array	79.77	319	P	P	09 01 50.8	+0.5
BURAR	Bucovina Array	79.77	319	P	P	09 01 49.9	-0.3
TEVE	Tevekalti-Mers	79.80	306	P	P	09 01 50.9	+0.3
PLOR	Plostina	79.81	317	⇑P	P	09 01 51.2	+0.7
PLOR	Plostina	79.81	317	P	P	09 01 51.1	+0.7
SCO	Scoresbysund	79.83	351	*i* P	P	09 01 50.6	+0.6
	comp=Z,144nm,1.3s						
SCO	Scoresbysund	79.83	351	*i* P	P	09 01 50.6	+0.6
SCO				pmax	pmax		
	comp=Z,140nm,1.3s						
SCO	Scoresbysund	79.83	351	IAmb	IAmb	09 01 51.8	
	comp=Z,160nm,1.3s						
GRER		79.84	316	⇑P	P	09 01 50.6	+0.1
BISRR	Bisoca	79.92	316	⇓P	P	09 01 52.5	+1.4
PSN	Preselentsi	79.93	314	P	P	09 01 51.7	+0.7
ICOR	Ion Corvin	79.96	315	⇓P	P	09 01 52.0	+0.8
GULT	Gulveren	79.97	310	*e*P	P	09 01 51.4	-0.1
BEL	Belsk	79.99	324	*e*P	P	09 01 52.0	+0.8
BEL				*e*L	L	09 41 03.1	
	comp=Z,2µm,16.3s						
BEL	Belsk	79.99	324	*e*P	P	09 01 52.0	+0.8
BEL				MLR	MLR		
	comp=Z,2µm,16.3s						
SPNC	Sapanca-Adapaz	79.99	311	*e*P	P	09 01 52.1	+0.7
MSEY	Mahe Island	79.99	259	*i* P	P	09 01 52.6	+0.7
	SNR=21						
MSEY	Mahe Island	79.99	259	*i* P	P	09 01 52.6	+0.7
	SNR=21						
MSEY	Mahe Island	79.99	259	P	P	09 01 52.4	+0.5
MSEY				pmax	pmax		
	comp=Z,115nm,1.1s						
MSEY	Mahe Island	79.99	259	P	P	09 01 52.4	+0.5
MSEY				IAmb	IAmb	09 01 53.6	
	comp=Z,115nm,1.1s						
BERE	Bereket-Mersin	80.00	306	*e*P	P	09 01 51.4	-0.4
E04D	Cinebar	80.03	42	P	P	09 01 52.0	+0.5
	baz=301						
SRCK	Saricakaya, Es	80.08	310	*e*P	P	09 01 51.9	-0.1
CIFT	Cifteler, Eski	80.11	309	*e*P	P	09 01 52.1	-0.1
KWP	Kalwaria Pacla	80.15	321	*e*P	P	09 01 52.9	+0.7
KWP				*e*L	L	09 40 34.2	
	comp=Z,2µm,17.1s						
KWP	Kalwaria Pacla	80.15	321	*e*P	P	09 01 52.9	+0.7
KWP				MLR	MLR		
	comp=Z,2µm,17.1s						
RPZ	Rata Peaks	80.16	152	P	P	09 01 50.8	-1.3
	comp=Z,19nm,0.8s,baz=212,slow=10,SNR=3.6						
MMLI	Mount Malkishu	80.17	301	P	P	09 01 53.7	+1.1
TEKE	Tekeli-Mersin	80.17	306	*e*P	P	09 01 52.2	-0.3
KHZ	Kahutara	80.18	150	IAmb	IAmb	09 01 51.9	
	comp=Z,126nm,1.5s						
SILT	Sile	80.21	311	*e*P	P	09 01 52.9	+0.3
HDMB	Hadim	80.24	307	*e*P	P	09 01 52.5	-0.7
ISR	Istrita	80.24	316	⇑P	P	09 01 53.4	+0.6
ISR	Istrita	80.24	316	P	P	09 01 53.4	+0.6
BORA	Eskisehir	80.28	310	P	P	09 01 53.2	+0.1
HRT	Hereke	80.35	311	P	P	09 01 53.6	+0.1
LEHL	Lehliu	80.39	315	⇑P	P	09 01 54.9	+1.4
MLR	Muntele Rosu	80.42	317	⇓P	P	09 01 54.0	+0.1
MLR	Muntele Rosu	80.42	317	P	P	09 01 53.9	+0.1
MLR				pmax	pmax		
	comp=Z,71nm,1.2s						
MLR	Muntele Rosu	80.42	317	IAmb	IAmb	09 01 55.3	
	comp=Z,112nm,1.3s						
F04A	Amboy	80.44	43	P	P	09 01 54.4	+0.7
I02D	Swisshome	80.49	45	P	P	09 01 54.3	+0.3
	baz=300						
SEYD	Seydisehir-KON	80.49	307	*e*P	P	09 01 54.8	+0.4
DOPR	Dopca	80.51	317	⇓P	P	09 01 55.0	+0.8
ARCR	ARCALIA	80.55	319	⇓P	P	09 01 55.1	+0.7
CSS	Mathiatis	80.56	305	*e*P	P	09 01 54.9	+0.2
COR	Corvallis	80.58	44	P	P	09 01 55.8	+1.3
COR				pmax	pmax		
	comp=Z,566nm,1.4s						
ISK	Istanbul-Kandi	80.64	312	*e*P	P	09 01 55.1	+0.2
ISK	Istanbul-Kandi	80.64	312	P	P	09 01 55.3	+0.4
PRD	Provadia	80.66	314	P	P	09 01 55.5	+0.5
GAZI	Gazipasa	80.70	306	*e*P	P	09 01 54.8	-0.6
NEF	NEVSHA	80.71	314	P	P	09 01 55.3	0.0
BMR	Baia Mare	80.74	319	⇑P	P	09 01 56.7	+1.4
LEF	Lefka	80.81	305	*e*P	P	09 01 55.4	-0.5
DAMY	Dhamar	80.81	282	P	P	09 01 58.5	+1.8
	SNR=14						
DAMY	Dhamar	80.81	282	P	P	09 01 58.5	+1.8
	SNR=14						
TRSU	Trosnyk	80.82	320	P	P	09 01 56.8	+1.1
SHUT	Suhut-Afyon	80.84	309	P	P	09 01 56.7	+0.5
J01E	Myrtle Point	80.91	46	P	P	09 01 56.6	+0.3
	baz=300						
UZH	Uzhgorod	80.91	321	⇑*i*P	P	09 01 56.6	+0.4
UZH				*i*		09 02 00.6	
UZH				*e*		09 02 02.5	
UZH				*i* S	S	09 12 03.8	-0.2
UZH				*e*		09 12 55.4	
UZH				*e*		09 17 20.9	
UZH				MLR	MLR		
	comp=N,300nm,15.0s						
UZH				MLR	MLR		
	comp=E,300nm,15.0s						
UZH				MLR	MLR		
	comp=Z,160nm,15.0s						
CTKS	Kestanelik-??a	80.92	312	P	P	09 01 56.1	-0.3
CTYL	Yalikoy Yolu	80.94	312	P	P	09 01 56.7	+0.2
H04D	Lebanon	80.96	44	P	P	09 01 57.1	+0.5
	baz=301						
GKP	Gorka Klasztor	80.97	326	P	P	09 01 58.3	+1.8
BSD	Bornholm Skovb	80.98	329	*i* P	P	09 01 55.6	-0.9
	comp=Z,352nm,1.4s						
BSD	Bornholm Skovb	80.98	329	*i* P	P	09 01 55.6	-0.9
BSD				pmax	pmax		
	comp=Z,350nm,1.4s						
VOIR		80.99	317	⇑P	P	09 01 57.0	+0.1
VOIR		80.99	317	P	P	09 01 56.9	+0.1
I03D	Drain, OR	81.00	45	P	P	09 01 57.8	+0.9
	baz=300						
ARMT	Armutlu	81.01	311	P	P	09 01 56.9	-0.1
F05D	White Salmon	81.04	43	P	P	09 01 57.7	+0.7
	baz=301						
TRPA	Tarpa	81.04	320	⇓P	P	09 01 57.5	+0.6
STHS	Stebnicka Huta	81.07	322	*e*P	P	09 01 57.5	+0.4
STHS				pmax	pmax		
	comp=Z,99nm,1.0s						
STHS	Stebnicka Huta	81.07	322	*e*P	P	09 01 57.5	+0.4
SLVT	Silivri	81.12	312	*e*P	P	09 01 58.1	+0.6
TVSB	Tavsanli	81.15	310	*e*P	P	09 01 58.3	+0.4
CJR	Cluj-Napoca	81.18	319	⇑P	P	09 01 58.7	+0.8
CJR	Cluj-Napoca	81.18	319	P	P	09 01 58.6	+0.8
ISP	Isparta	81.21	308	*e*P	P	09 01 58.0	-0.2
ISP	Isparta	81.21	308	IAmb	IAmb	09 01 58.8	
	comp=Z,139nm,1.3s						
ARR	Arges	81.27	317	⇓P	P	09 01 59.2	+0.9
K02D	Willamette Mer	81.31	46	P	P	09 01 59.1	+0.5
	baz=300						
PHSR	Pinarhisar	81.36	313	*e*P	P	09 01 59.3	+0.5
OJC	Ojcow	81.40	323	*e*P	P	09 01 59.5	+0.6
OJC				*e*L	L	09 41 51.0	
	comp=Z,2µm,16.9s						
OJC	Ojcow	81.40	323	P	P	09 01 59.3	+0.5
OJC				pmax	pmax		
	comp=Z,213nm,1.0s						
OJC	Ojcow	81.40	323	P	P	09 01 59.3	+0.5
I04A	Tendick Farm,	81.54	45	P	P	09 01 59.8	0.0
	baz=301,SNR=9.1						
JMB	Yambol	81.55	314	P	P	09 01 59.7	-0.1
SZH	Strazhica	81.56	315	P	P	09 01 59.7	-0.1
COPA	Copaceanca	81.56	316	⇑P	P	09 01 59.4	-0.3
HRFI	Mount Harif	81.56	299	*i* P	P	09 02 00.8	+0.7
NIE	Niedzica	81.58	322	*e*P	P	09 02 00.9	+1.1
NIE				*e*L	L	09 41 51.5	
	comp=Z,835nm,17.4s						
NIE	Niedzica	81.58	322	*e*P	P	09 02 00.9	+1.1
NIE				MLR	MLR		
	comp=Z,800nm,17.4s						
L02E	Cave Junction	81.62	47	P	P	09 02 00.7	+0.6
	baz=300						
SIMA	Simav-Kutahya	81.66	310	*e*P	P	09 02 01.1	+0.6
DRGR		81.66	319	⇑P	P	09 02 00.2	-0.1
DRGR		81.66	319	P	P	09 02 00.3	-0.1
DRGR				pmax	pmax		
	comp=Z,63nm,1.2s						
KORT	Korkueli	81.73	307	*e*P	P	09 02 01.4	+0.4
LOT	Lotru	81.75	317	⇑P	P	09 02 01.5	+0.6
EDRB	Edirne	81.76	313	*e*P	P	09 02 01.5	+0.6
ELND	Elena	81.77	314	⇑P	P	09 02 01.1	+0.2
EDC	Edincik	81.78	311	*i* P	P	09 02 00.8	-0.2
EIL	Elat	81.79	299	*i* P	P	09 01 57.9	-3.4
MRMT	Marmara Adasi	81.83	312	*e*P	P	09 02 01.5	+0.1
D08A	Wollman Farm,	81.91	41	IAmb	IAmb	09 02 03.1	
	comp=Z,72nm,1.4s						
I05D	Terrebonne, OR	81.92	44	P	P	09 02 02.0	+0.2
	baz=302,SNR=5.2						
PVL	Pavlikeni	81.96	315	P	P	09 02 02.3	+0.4
KECS	Kecovo	82.00	321	*e*P	P	09 02 02.8	+0.8
KECS				pmax	pmax		
	comp=Z,16nm,0.7s						
KECS	Kecovo	82.00	321	*e*P	P	09 02 02.8	+0.8
J04D	Umpqua Nationa	82.01	45	P	P	09 02 02.8	+0.3
	baz=301,SNR=7.3						
DEV	Deva	82.03	318	⇓P	P	09 02 03.3	+1.0
DEV	Deva	82.03	318	P	P	09 02 03.2	+1.0
RKY	Sarkoy-Tekirda	82.06	312	P	P	09 02 03.0	+0.4
BALB	Balikesir	82.12	311	P	P	09 02 03.3	+0.5
VLAD	Vladila	82.13	316	⇑P	P	09 02 03.3	+0.6
KRBG	Karabiga-Canak	82.13	312	P	P	09 02 03.2	+0.4
ELL	Elmali	82.16	307	P	P	09 02 02.9	-0.3
NEW	Newport	82.26	39	P	P	09 02 03.2	-0.2
	baz=304						
PLVB	Pleven	82.31	315	⇑P	P	09 02 03.9	+0.1
GZR	Gura Zlata	82.37	318	⇑P	P	09 02 04.6	+0.5
YBH	Yreka Blue Hor	82.41	47	P	P	09 02 05.3	+0.9
	comp=Z,17nm,1.1s,baz=122,slow=0.5,SNR=14						
L04D	Klamath Falls	82.42	46	P	P	09 02 04.9	+0.4
	baz=301,SNR=11						
PINE	Pine Mountain	82.45	44	IAmb	IAmb	09 02 06.9	
	comp=Z,92nm,1.2s						
RAR	Rarotonga	82.48	119	P	P	09 02 05.7	+0.8
	comp=Z,18nm,0.9s,baz=247,slow=5.4,SNR=4.7						
M02C	Callahan	82.49	47	P	P	09 02 05.2	+0.3
	baz=301						
LPK	Lapseki	82.50	312	*e*P	P	09 02 05.5	+0.7
OKC	Ostrava-Krasne	82.50	323	⇓*e*P	P	09 02 05.1	+0.5
OKC				AMS	AMS	09 42 30.0	
	comp=Z,2µm,16.0s						
OKC	Ostrava-Krasne	82.50	323	*e*P	P	09 02 05.1	+0.5
OKC				MLR	MLR		
	comp=Z,2µm,16.0s						
ERIK	Erikli-Kesan	82.51	312	*e*P	P	09 02 04.9	+0.1
J05D	Fort Rock, OR	82.53	45	P	P	09 02 05.4	+0.2
	baz=302						
SIRR	Siria	82.55	319	⇑P	P	09 02 05.4	+0.4
K04D	Chiloquin, OR	82.56	45	P	P	09 02 05.8	+0.6
	baz=302,SNR=7.1						
AKAS	Kas	82.62	307	*e*P	P	09 02 05.1	-0.6
PSZ	Piszkesteto	82.64	321	⇑P	P	09 02 06.6	+1.1
PSZ	Piszkesteto	82.64	321	P	P	09 02 05.8	+0.3
PSZ				pmax	pmax		
	comp=Z,82nm,1.1s						
GELI	Tayfur-Gelibol	82.67	312	*e*P	P	09 02 05.8	+0.1
ALN	Alexandroupoli	82.70	313	P	P	09 02 05.6	-0.2
ALN	Alexandroupoli	82.70	313	*e*P	P	09 02 05.8	0.0
ALN	Alexandroupoli	82.70	313	P	P	09 02 06.3	+0.5
ALN	Alexandroupoli	82.70	313	IAmb	IAmb	09 02 07.0	
	comp=Z,59nm,1.2s						
ENEZ	Enez	82.71	312	P	P	09 02 06.2	+0.3
FETY	Fethiye	82.79	308	P	P	09 02 06.1	-0.3
N02D	Trinity Center	82.80	47	P	P	09 02 07.4	+0.9
	baz=301,SNR=6.6						
MORC	Moravsky Berou	82.85	323	⇑P	P	09 02 06.8	+0.3
MORC	Moravsky Berou	82.85	323	P	P	09 02 07.1	+0.6
MORC				pmax	pmax		
	comp=Z,440nm,1.3s						
MORC	Moravsky Berou	82.85	323	⇓*i*P	P	09 02 06.9	+0.4
HERR	Herculane	82.86	317	⇓P	P	09 02 06.8	+0.2
KSP	Ksiaz	82.87	325	*e*P	P	09 02 07.1	+0.6
KSP				*e*L	L	09 43 41.0	
	comp=Z,2µm,16.9s						
KSP	Ksiaz	82.87	325	*e*P	P	09 02 07.1	+0.6
PUNG	Punghina	82.88	317	⇑P	P	09 02 07.7	+1.0
RDO	Rodhopi	82.90	313	P	P	09 02 06.8	0.0
RDO	Rodhopi	82.90	313	P	P	09 02 06.9	+0.1
VYHS	Vyhne	82.90	322	*e*P	P	09 02 07.7	+1.0
VYHS				pmax	pmax		
	comp=Z,312nm,1.7s						
VYHS	Vyhne	82.90	322	*e*P	P	09 02 07.7	+1.0
ILULI	Ilulissat	82.90	1	*i* P	P	09 02 05.7	-0.6
	comp=Z,58nm,1.1s						
ILULI	Ilulissat	82.90	1	*e*P	P	09 02 05.7	-0.6
ILULI				pmax	pmax		
	comp=Z,58nm,1.1s						
ILULI	Ilulissat	82.90	1	IAmb	IAmb	09 02 06.6	
	comp=Z,51nm,1.1s						
PLD	Plovdiv	82.93	314	P	P	09 02 07.2	+0.2
PLD	Plovdiv	82.93	314	*e*P	P	09 02 07.6	+0.6
PLD	Plovdiv	82.93	314	P	P	09 02 07.4	+0.4
PLD				pmax	pmax		
	comp=Z,373nm,1.3s						
BZS	Buzias	82.94	318	⇑P	P	09 02 06.4	-0.5
BZS	Buzias	82.94	318	P	P	09 02 07.2	+0.3
BZS				pmax	pmax		
	comp=Z,24nm,1.0s						
M04C	Macdoel	82.94	46	P	P	09 02 07.6	+0.4
	baz=302,SNR=18						
AYDB	Zeytinkoy-Aydi	82.96	309	*e*P	P	09 02 08.0	+0.6
DALY	Dalyan (Mula)	83.00	308	*e*P	P	09 02 07.3	-0.1
TURN	Turunc	83.01	308	*e*P	P	09 02 10.2	+2.7
PGB	Panagyurishte	83.04	315	P	P	09 02 07.9	+0.3
DKL	Dikili	83.06	311	*e*P	P	09 02 07.3	-0.4
EZN	Ezine	83.06	312	*e*P	P	09 02 07.6	-0.1
EZN	Ezine	83.06	312	P	P	09 02 08.1	+0.4
KRLC	Kraliky	83.08	324	⇓*i*P	P	09 02 08.3	+0.6
KRLC				AMS	AMS	09 43 00.0	
	comp=Z,1µm,15.4s						
KRLC	Kraliky	83.08	324	⇓*i*P	P	09 02 08.3	+0.6
KRLC				MLR	MLR		
	comp=Z,1µm,15.4s						
OSTC	Ostas	83.08	324	⇓*i*P	P	09 02 08.4	+0.7
OSTC				AMS	AMS	09 42 50.0	
	comp=Z,2µm,15.5s						
RUE	Ruedersdorf	83.13	327	*e*P	P	09 02 08.3	+0.6
RUE	Ruedersdorf	83.13	327	*e*P	P	09 02 08.6	+0.8
	comp=Z,511nm,1.3s,baz=49,slow=4.8						
RZN	Rozhen	83.14	314	P	P	09 02 08.2	-0.1
DPC	Dobruska-Polom	83.15	324	⇓*i*P	P	09 02 08.9	+0.9
DPC				AMS	AMS	09 42 50.0	
	comp=Z,2µm,16.8s						
DPC	Dobruska-Polom	83.15	324	⇓*i*P	P	09 02 08.9	+0.9
DPC				MLR	MLR		
	comp=Z,2µm,16.8s						
O02D	Mt. Diablo Mer	83.16	48	P	P	09 02 09.1	+0.8
	baz=301,SNR=5.4						
UPC	Upice	83.22	325	⇓*e*P	P	09 02 08.9	+0.6
UPC	Upice	83.22	325	*e*P	P	09 02 08.9	+0.6
BOZC	Bozcaada	83.23	312	*e*P	P	09 02 08.8	+0.2
BLCB	Balcova	83.32	310	P	P	09 02 09.3	+0.2
JAVC	Velka Javorina	83.32	323	⇓*i*P	P	09 02 10.7	+1.7
MDVR	Moldovita	83.34	318	⇓P	P	09 02 08.7	-0.4
BUD	Budapest	83.37	321	P	P	09 02 10.2	+1.0
BUD				pmax	pmax		
	comp=Z,66nm,1.6s						
ATD	Arta Tunnel	83.53	280	P	P	09 02 12.3	+1.7
	SNR=9.9						
ATD	Arta Tunnel	83.53	280	P	P	09 02 12.3	+1.7
	SNR=9.9						
GCAM	G?zelcaml?	83.54	309	*e*P	P	09 02 10.9	+0.7
VTS	Vitosha	83.58	315	⇑P	P	09 02 11.2	+0.6
VTS	Vitosha	83.58	315	P	P	09 02 10.8	+0.2
VTS	Vitosha	83.58	315	P	P	09 02 11.0	+0.4
VTS				pmax	pmax		
	comp=Z,126nm,1.3s						
VTS	Vitosha	83.58	315	IAmb	IAmb	09 02 12.5	
	comp=Z,83nm,0.9s						
VRAC	Vranov	83.63	323	⇓*i*P	P	09 02 11.3	+0.8
URLA	Izmir	83.63	310	*e*P	P	09 02 10.7	0.0
KAVA	Kavala	83.64	313	P	P	09 02 10.4	-0.2
SMOL	Smolenice	83.65	322	*e*P	P	09 02 12.1	+1.4
SMOL				pmax	pmax		
	comp=Z,144nm,1.2s						
SMOL	Smolenice	83.65	322	*e*P	P	09 02 12.0	+1.4
ARG	Arkhangelos	83.67	308	P	P	09 02 10.9	0.0
ARG	Arkhangelos	83.67	308	*e*P	P	09 02 10.9	0.0
ARG	Arkhangelos	83.67	308	P	P	09 02 11.6	+0.7
SIGR	SIGRI	83.69	311	*e*P	P	09 02 12.3	+1.3
O03E	Paynes Creek	83.74	47	P	P	09 02 10.8	-0.6
	baz=302,SNR=8.2						
DAT	Datca	83.79	308	P	P	09 02 11.2	-0.5
BODT	Bodrum	83.81	309	P	P	09 02 11.5	-0.1
BSEG	Bad Segeberg	83.81	329	*e*P	P	09 02 11.5	+0.3
	comp=Z,140nm,1.1s,baz=49,slow=4.8						
BSEG				*e*L	L	09 42 34.8	
	comp=Z,872nm,19.7s						
MODS	Modra-Piesok	83.81	322	*e*P	P	09 02 11.7	+0.2
MODS				pmax	pmax		
	comp=Z,330nm,1.3s						
MODS	Modra-Piesok	83.81	322	*e*P	P	09 02 11.6	+0.1
MOD	Modoc Plateau	83.85	46	IAmb	IAmb	09 02 13.7	
	comp=Z,55nm,1.4s						
KRUC	Moravsky	83.88	323	⇓*i*P	P	09 02 12.5	+0.8
LRW	Lerwick	83.89	338	*e*P	P	09 02 11.1	-0.4
LRW				IAmb	IAmb	09 02 11.8	
	comp=Z,70nm,0.9s						
PVCC	Panska Ves	83.94	325	⇓AMS	AMS	09 44 20.0	
	comp=Z,2µm,17.1s						
CHOS	Chios island	83.98	310	P	P	09 02 12.4	-0.2
CHOS	Chios island	83.98	310	*e*P	P	09 02 12.7	+0.1
ZST	Bratislava	84.01	322	*e*P	P	09 02 12.5	+0.1
ZST				pmax	pmax		
	comp=Z,222nm,1.5s						
ZST	Bratislava	84.01	322	*e*P	P	09 02 12.5	+0.1
BRG	Berggiesshubel	84.04	326	⇓*i*P	P	09 02 12.9	+0.4
	comp=Z,90nm,0.9s						
BRG	Berggiesshubel	84.04	326	S	S	09 12 36.0	0.0
BRG				*e*PKPPKP		09 28 29.8	
	comp=Z,2.2nm,0.5s						
BRG	Berggiesshubel	84.04	326	*e*P	P	09 02 13.0	+0.4
	comp=Z,90nm,0.9s,baz=49,slow=4.8						
BRG	Berggiesshubel	84.04	326	⇓*i*P	P	09 02 12.9	+0.4
BRG				S	S	09 12 36.0	0.0
BRG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,90nm,0.5s						
BRG				MLR	MLR		
	comp=N,2µm,17.1s						
BRG				MLR	MLR		
	comp=E,650nm,14.8s						
BRG				MLR	MLR		
	comp=Z,731nm,15.0s						
BMO	Blue Mountains	84.06	42	IAmb	IAmb	09 02 14.6	
	comp=Z,59nm,1.4s						
KKB	Krupnik	84.08	315	P	P	09 02 12.6	-0.3
JTMT	Jette	84.12	38	IAmb	IAmb	09 02 15.0	
	comp=Z,52nm,1.4s						
SRS	Serrai	84.16	314	P	P	09 02 12.9	-0.5
SRS	Serrai	84.16	314	P	P	09 02 12.7	-0.7
SRS				pmax	pmax		
	comp=Z,114nm,1.1s						
J08A	Circle Bar Ran	84.19	44	IAmb	IAmb	09 02 15.7	
	comp=Z,65nm,1.2s						
TREC	Trest	84.22	324	⇓*e*P	P	09 02 14.1	+0.6
TREC	Trest	84.22	324	*e*P	P	09 02 14.1	+0.6
CLL	Collm	84.23	326	⇓*i*P	P	09 02 14.7	+1.2
	comp=Z,284nm,1.3s						
CLL				*e*PP	PP	09 05 27.0	-0.4
CLL				*e*S	S	09 12 41.0	+3.1
CLL				*e*SS	SS	09 18 06.0	-0.2
CLL				*e*		09 23 18.0	
CLL				LV		09 43 00.0	
	comp=Z,2µm,18.5s						
CLL	Collm	84.23	326	*e*P	P	09 02 14.6	+1.1
	comp=Z,284nm,1.3s,baz=49,slow=4.8						
CLL				*e*L	L	09 43 53.8	
	comp=Z,2µm,18.4s						
CLL	Collm	84.23	326	⇓*i*P	P	09 02 14.7	+1.2
CLL				*e*S	S	09 12 41.0	+3.1
CLL				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CLL				MLR	MLR		
	comp=Z,2µm,18.5s						
FRGS	Fruska Gora	84.25	319	⇓*i*P	P	09 02 07.5	-6.2
PRU	Pruhonice	84.28	325	⇓*e*P	P	09 02 14.2	+0.4
PRU				*e*x	x	09 02 23.1	
PRU				AMS	AMS	09 43 40.0	
	comp=Z,1µm,13.5s						
PRU	Pruhonice	84.28	325	*e*P	P	09 02 14.2	+0.4
PRU				*e*		09 02 23.1	
PRU				MLR	MLR		
	comp=Z,1µm,13.5s						
PRA	Prague	84.29	325	⇓*e*P	P	09 02 14.7	+0.9
PRA				AMS	AMS	09 43 40.0	
	comp=Z,2µm,15.5s						
PRA	Prague	84.29	325	*e*P	P	09 02 14.7	+0.9
PRA				MLR	MLR		
	comp=Z,2µm,15.5s						
FBE	Freiberg	84.30	326	*e*P	P	09 02 14.6	+0.8
	comp=Z,294nm,1.3s,baz=49,slow=4.8						
MORH	Mrgy, Hungar	84.31	320	⇓*i*P	P	09 02 14.1	+0.1
OUR	Ouranopolis	84.33	313	*e*P	P	09 02 14.1	-0.1
OUR	Ouranopolis	84.33	313	P	P	09 02 15.5	+1.3
KNT	Kendrikon	84.58	314	P	P	09 02 15.2	-0.3
KNT	Kendrikon	84.58	314	*e*P	P	09 02 15.6	+0.1
WVOR	Wild Horse Val	84.60	44	IAmb	IAmb	09 02 17.7	
	comp=Z,65nm,1.4s						
SOP	Sopron	84.61	322	P	P	09 02 16.6	+1.1
SOP				pmax	pmax		
	comp=Z,89nm,1.4s						
KARP	Karpathos	84.68	308	P	P	09 02 15.9	-0.3
KARP	Karpathos	84.68	308	*e*P	P	09 02 15.9	-0.3
VAY	Valandovo	84.70	314	⇓*i*P	P	09 02 16.0	-0.1
VAY	Valandovo	84.70	314	P	P	09 02 15.8	-0.3
VAY				pmax	pmax		
	comp=Z,168nm,1.4s						
DIVS	Divibare	84.74	318	⇓*i*P	P	09 02 16.2	-0.1
PAIG	Paliouri	84.74	313	P	P	09 02 15.5	-0.8
PAIG	Paliouri	84.74	313	P	P	09 02 16.1	-0.2
HORT	Hortiatis	84.76	314	P	P	09 02 15.7	-0.8
HORT	Hortiatis	84.76	314	*e*P	P	09 02 16.3	-0.2
TEKS	Tekeris	84.76	318	⇓*i*P	P	09 02 16.4	+0.1
ASSE	Asse, Remlinge	84.83	328	*e*P	P	09 02 16.7	+0.3
	comp=Z,172nm,1.5s,baz=49,slow=4.8						
CONA	Conrad Observa	84.84	323	*i* pP	P	09 02 17.6	+0.8
	comp=Z,124nm,0.8s,SNR=59						
CONA				*e*PP	PP	09 05 35.5	+2.9
	comp=Z,24nm,1.4s						
MSO	Missoula	84.85	39	P	P	09 02 16.6	-0.2
	baz=306,SNR=8.7						
NRDL	Niedersach Rie	84.85	328	*e*P	P	09 02 16.8	+0.3
	comp=Z,120nm,1.4s,baz=49,slow=4.8						
NEUB	Neuenburg	84.89	327	*e*P	P	09 02 17.2	+0.4
	comp=Z,352nm,1.4s,baz=49,slow=4.8						
BEKR	Beckworth	84.91	47	IAmb	IAmb	09 02 18.7	
	comp=Z,58nm,1.3s						
GRG	Griva	85.01	314	P	P	09 02 16.9	-0.8
GRG	Griva	85.01	314	*e*P	P	09 02 17.3	-0.4
AOS	Alonnisos	85.02	312	P	P	09 02 16.7	-1.0
AOS	Alonnisos	85.02	312	*e*P	P	09 02 17.2	-0.5
APE	Apeiranthos	85.02	309	P	P	09 02 15.3	-2.5
APE	Apeiranthos	85.02	309	⇑P	P	09 02 16.7	-1.1
APE	Apeiranthos	85.02	309	P	P	09 02 17.2	-0.6
APE				pmax	pmax		
	comp=Z,79nm,1.0s						
SKO	Skopje	85.05	315	⇓*i*P	P	09 02 18.1	+0.3
TANN	Tannenbergstha	85.06	326	*e*P	P	09 02 17.8	0.0
	comp=Z,188nm,1.6s,baz=49,slow=4.8						
SFJD	Kangerlussuaq	85.13	1	*i* P	P	09 02 16.6	-1.1
SFJD	Kangerlussuaq	85.13	1	*i* P	P	09 02 16.6	-1.1
SFJD	Kangerlussuaq	85.13	1	P	P	09 02 17.2	-0.5
CLZ	Clausthal	85.15	328	*e*P	P	09 02 18.7	+0.5
	comp=Z,270nm,1.3s,baz=49,slow=4.8						
GUNZ	Gunzen	85.16	326	*e*P	P	09 02 18.6	+0.3
	comp=Z,88nm,1.3s,baz=49,slow=4.8						
PLN	Plauen	85.17	326	*e*P	P	09 02 18.4	+0.2
	comp=Z,59nm,1.4s,baz=49,slow=4.8						
NKC	Novy Kostel	85.19	326	⇓*e*P	P	09 02 18.5	+0.1
NKC				AMS	AMS	09 45 10.0	
	comp=Z,2µm,14.9s						
NKC	Novy Kostel	85.19	326	*e*P	P	09 02 18.5	+0.1
NKC				MLR	MLR		
	comp=Z,2µm,14.9s						
WERN	Wernitzgruen	85.19	326	*e*P	P	09 02 18.7	+0.3
	comp=Z,107nm,1.4s,baz=49,slow=4.8						
BEHE	Becsehely	85.22	321	⇓*i*P	P	09 02 18.8	+0.2
BBLS	Lazići	85.22	318	⇓*i*P	P	09 02 19.0	+0.3
KHC	Kasperske Hory	85.31	324	⇓*i*P	P	09 02 18.9	-0.1
KHC				*e*x	x	09 02 36.5	
KHC				AMS	AMS	09 44 20.0	
	comp=Z,2µm,14.6s						
KHC	Kasperske Hory	85.31	324	⇓*i*P	P	09 02 18.9	-0.1
KHC				MLR	MLR		
	comp=Z,2µm,14.6s						

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MOX   Moxa             85.33 326 eP     P      09 02 19.1  0.0
      comp=Z,113nm,1.7s,baz=49,slow=4.8
MOX                              eL     L      09 44 34.7
      comp=Z,2µm,19.1s
MOX   Moxa             85.33 326  P     P      09 02 19.0 -0.1
HAPS  Han Pijesak,Bl   85.36 318 eP     P      09 02 21.0 +1.5
RUDO  Rudo             85.38 318 eP     P      09 02 19.2 -0.3
LIT   Litokhoron       85.42 313  P     P      09 02 18.8 -0.9
LIT   Litokhoron       85.42 313  P     P      09 02 19.4 -0.3
GEC2  GERESS Array S   85.42 324 eP     P      09 02 19.5 -0.1
      comp=Z,42nm,1.3s,baz=49,slow=4.8
GEC2                             eL     L      09 46 29.9
      comp=Z,1µm,18.9s
GERES GERESS Array B   85.42 324  P     P      09 02 19.2 -0.4
      comp=Z,8.9nm,0.7s,baz=46,slow=4.2,SNR=44
GERES                             PKKPbc PKKPbc 09 20 23.7 -0.3
      comp=Z,1.4nm,0.8s,baz=227,slow=5.3,SNR=7.1
GERES                             LR     LR     09 46 40.3
      comp=Z,956nm,18.4s,baz=59,slow=40
GERES GERESS Array B   85.42 324  P     P      09 02 19.8 +0.1
ARSA  Arzberg          85.43 322 ePcP   P      09 02 19.8 +0.1
      comp=Z,51nm,0.8s,SNR=26
MANZ  Manzenberg       85.51 326 eP     P      09 02 20.2 +0.2
      comp=Z,314nm,2.7s,baz=49,slow=4.8
KOGS  Kog              85.52 321 eP     P      09 02 20.2 +0.1
FFC   Flin Flon        85.53  28  P     P      09 02 19.7 -0.3
FFC                               pmax   pmax
      comp=Z,75nm,1.4s
FFC   Flin Flon        85.53  28  P     P      09 02 19.7 -0.3
FFC                               IAmb   IAmb   09 02 21.0
      comp=Z,75nm,1.4s
GTTG  Gottingen        85.54 328 eP     P      09 02 20.4 +0.3
      comp=Z,186nm,1.5s,baz=49,slow=4.8
KALN  Kalnik           85.59 321 i P    P      09 02 20.4 -0.1
ROTZ  Rotzenmuhle      85.60 325 eP     P      09 02 20.8 +0.3
      comp=Z,146nm,1.9s,baz=49,slow=4.8
PAHR  Pah Rah Range    85.63  47  IAmb   IAmb   09 02 22.4
      comp=Z,72nm,1.3s
WET   Wettzell         85.66 325 eL     L      09 45 03.7
      comp=Z,1µm,18.4s
WET   Wettzell         85.66 325  P     P      09 02 21.3 +0.6
MOSL  Moslavina        85.74 320 i P    P      09 02 21.2  0.0
MOA   Molln            85.74 323 ePcP   P      09 02 21.3 +0.1
      comp=Z,62nm,1.1s,SNR=14
MOA                              ePP    PP     09 05 42.4 +2.5
      comp=Z,16nm,1.5s
FNA   Florina          85.75 314  P     P      09 02 20.7 -0.7
FNA                               pmax   pmax
      comp=Z,56nm,1.2s
FNA   Florina          85.75 314  IAmb   IAmb   09 02 21.6
      comp=Z,150nm,1.7s
MFID  Camas Ranch      85.75  42  IAmb   IAmb   09 02 23.5
      comp=Z,65nm,1.2s
KZN   Kozani           85.76 314  P     P      09 02 20.4 -1.1
PNTR  Pine Nut         85.82  48  IAmb   IAmb   09 02 23.9
      comp=Z,133nm,1.7s
CMB   Columbia Colle   85.88  49  IAmb   IAmb   09 02 23.4
      comp=Z,70nm,1.4s
UPM   Unac-Piva        85.90 317 eP     P      09 02 21.8 -0.5
OHR   Ohrid            85.93 315⇓iP     P      09 02 21.5 -0.8
OHR   Ohrid            85.93 315  P     P      09 02 23.1 +0.8
OHR                               pmax   pmax
      comp=Z,129nm,1.1s
UBBA  Unterbreizbach   86.00 327 eP     P      09 02 22.3 +0.1
      comp=Z,112nm,1.5s,baz=49,slow=4.8
PTJ   Puntijarka       86.00 321  P     P      09 02 22.5 -0.1
BLY   Banja Luka       86.00 319 ⇑P     P      09 02 23.2 +0.7
BLY   Banja Luka       86.00 319⇓iP     P      09 02 22.9 +0.4
BIGH  Upper Bighouse   86.05 338 eP     P      09 02 21.8 -0.6
BIGH                              IAmb   IAmb   09 02 22.6
      comp=Z,93nm,0.9s
SOKA  Soboth           86.05 322 ePcP   P      09 02 22.6 -0.2
      comp=Z,134nm,1.1s,SNR=52
IBBN  Ibbenburen       86.05 329 eP     P      09 02 22.5 -0.1
      comp=Z,234nm,1.5s,baz=49,slow=4.8
LAST  Lasithi          86.06 308  P     P      09 02 22.8 -0.3
AGG   Agios Georgios   86.11 313  P     P      09 02 22.1 -1.1
AGG   Agios Georgios   86.11 313  IAmb   IAmb   09 02 22.7
      comp=Z,67nm,1.1s
PDG   Podgorica        86.13 317 ⇑P     P      09 02 23.4 +0.3
PDG   Podgorica        86.13 317 eP     P      09 02 23.1 -0.1
GRF   Grafenberg Arr   86.14 326 eP     P      09 02 23.3 +0.2
      comp=Z,441nm,2.8s,baz=49,slow=4.8
GRF                              eL     L      09 45 09.3
      comp=Z,2µm,18.0s
WAKR  Walker           86.25  48  IAmb   IAmb   09 02 26.0
      comp=Z,61nm,1.5s
MGRS  Mrkonjic Grad    86.26 319 eP     P      09 02 24.6 +0.8
BRY   Bratogost        86.29 317⇓iP     P      09 02 23.6 -0.6
DRME  Dracevica, Mon   86.31 316⇓iP     P      09 02 23.7 -0.4
CRES  Cresnjev         86.33 321⇓iP     P      09 02 24.4 +0.3
EGMT  Eagleton         86.37  36  IAmb   IAmb   09 02 25.8
      comp=Z,63nm,1.1s
EGMT  Eagleton         86.37  36  P     P      09 02 24.3  0.0
      baz=309
TIR   Tirane           86.38 315 ⇑P     P      09 02 24.4  0.0
TIR   Tirane           86.38 315  P     P      09 02 24.9 +0.5
TIR                               pmax   pmax
      comp=Z,154nm,1.4s
OBKA  Obir             86.42 322 ePcP   P      09 02 24.5 -0.1
      comp=Z,54nm,0.9s,SNR=9.9
OZLJ  Ozalj            86.46 321 i P    P      09 02 24.6 -0.1
DLMT  Dillon           86.47  39  IAmb   IAmb   09 02 26.8
      comp=Z,107nm,1.4s
TREB  Trebinje         86.51 317 eP     P      09 02 24.3 -0.8
HCY   Herceg Novi      86.58 317 eP     P      09 02 24.7 -0.7
RJOB  Jochberg         86.59 324 eP     P      09 02 25.4  0.0
      comp=Z,34nm,1.0s,baz=49,slow=4.8
ANX   Ano Chora        86.61 312  P     P      09 02 24.4 -1.4
DBRK  Dubrovnik        86.66 317 i P    P      09 02 25.0 -0.8
KBA   Koelnbreinsper   86.71 323 ePcP   P      09 02 25.3 -0.9
      comp=Z,20nm,0.7s,SNR=10
KBA                              ePP    PP     09 05 50.9 +3.1
      comp=Z,52nm,2.1s
KBA   Koelnbreinsper   86.71 323  P     P      09 02 25.8 -0.4
LJU   Ljubljana        86.72 322 eP     P      09 02 25.4 -0.6
LJU   Ljubljana        86.72 322⇓iP     P      09 02 25.3 -0.7
RICI  Ricice           86.78 318  P     P      09 02 25.5 -0.9
RYN   Ryan             86.78  48  IAmb   IAmb   09 02 28.4
      comp=Z,60nm,1.4s
DRUM  Mains of Drumt   86.80 337 eP     P      09 02 25.6 -0.6
DRUM                              IAmb   IAmb   09 02 26.1
      comp=Z,116nm,1.3s
KVN   Kaiserville      86.82  47  IAmb   IAmb   09 02 28.6
      comp=Z,92nm,1.4s
MYKA  Terra Mystica    86.83 322 ePcP   P      09 02 25.5 -1.1
      comp=Z,31nm,0.8s,SNR=7.7
MYKA                             ePP    PP     09 05 50.8 +2.1
      comp=Z,38nm,1.7s
CRNS  Crni Vrh         86.84 322 eP     P      09 02 25.6 -1.0
BUG   Bochum--Univer   86.86 329 eP     P      09 02 26.2 -0.3
      comp=Z,137nm,1.6s,baz=49,slow=4.8
IMMV  Iera Moni Meta   86.94 309 eP     P      09 02 23.3 -4.0
UDBI  Udbina           86.95 320 i P    P      09 02 27.0 -0.3
CEY   Cerknica         86.96 321⇓iP     P      09 02 25.4 -1.8
MAKA  Makarska         86.97 318 i P    P      09 02 26.7 -0.5
NVAR  Mina Array Bea   87.03  48  P     P      09 02 28.5 +0.5
      comp=Z,8.6nm,0.7s,baz=293,slow=4.8,SNR=69
NVAR                              PKKPbc PKKPbc 09 20 20.8 +0.7
      comp=Z,0.2nm,0.3s,baz=100,slow=4.7,SNR=4.9
NVAR                              LR     LR     09 38 14.2
      comp=Z,131nm,18.4s,baz=334,slow=34
NVAR  Mina Array Bea   87.03  48  P     P      09 02 28.8 +0.8
FUR   Furstenfeldbru   87.10 325 eP     P      09 02 27.9  0.0
      comp=Z,48nm,0.8s,baz=49,slow=4.8
FUR                              eL     L      09 46 17.0
      comp=Z,1µm,18.1s
IGT   Igoumenitsa      87.11 314  P     P      09 02 27.7 -0.4
IGT                               pmax   pmax
      comp=Z,65nm,1.2s
MLAC  Mammoth, Mammo87.12  48  P     P      09 02 28.8 +0.3
      baz=304
NV11  Mina Array Sit   87.13  48  IAmb   IAmb   09 02 30.2
      comp=Z,46nm,1.5s
TNS   Taunus Mts       87.14 327 eP     P      09 02 27.9 -0.1
      comp=Z,72nm,1.5s,baz=49,slow=4.8
TNS                              eL     L      09 49 19.5
      comp=Z,502nm,18.0s
PAGB  Antelope Grade   87.21  51  IAmb   IAmb   09 02 30.4
      comp=Z,70nm,1.3s
EDU   Dundee           87.27 337 eP     P      09 02 26.9 -1.5
KAC   Achnashellach    87.29 338 eP     P      09 02 27.4 -1.1
ABTA  Abfaltersbach    87.36 323 eP     P      09 02 27.7 -1.5
      comp=Z,25nm,0.8s,SNR=9.9
WATA  Walderalm        87.48 324 ePcP   P      09 02 28.8 -1.0
      comp=Z,19nm,1.2s
WATA                             ePP    PP     09 05 57.0 +3.0
      comp=Z,24nm,1.4s
WTTA  Wattenberg       87.49 324 ePcP   P      09 02 29.1 -0.8
      comp=Z,31nm,1.3s,SNR=7.3
WTTA                             ePP    PP     09 05 57.3 +3.1
      comp=Z,24nm,1.4s
WTTA  Wattenberg       87.49 324  P     P      09 02 29.2 -0.8
AHRW  Bad Neuenahr-A   87.57 328 eP     P      09 02 29.8 -0.2
      comp=Z,94nm,1.4s,baz=49,slow=4.8
SMMC  Simmler          87.61  51  P     P      09 02 31.1 +0.5
      baz=303
ESY   Stoneypath       87.62 336 eP     P      09 02 28.8 -1.3
MOTA  Moosalm          87.72 324 i PcP  P      09 02 29.9 -1.1
      comp=Z,16nm,0.9s
MOTA                             ePP    PP     09 05 57.6 +1.7
      comp=Z,26nm,1.5s
SQTA  Sankt Quirin     87.75 324 ePcP   P      09 02 30.1 -1.0
      comp=Z,13nm,0.9s
SQTA                             ePP    PP     09 05 58.8 +2.8
      comp=Z,23nm,1.1s
STU   Stuttgart        87.75 326  P     P      09 02 30.5 -0.4
STU                               pmax   pmax
      comp=Z,50nm,1.0s
RETA  Reutte           87.80 324 ePcP   P      09 02 30.9 -0.5
      comp=Z,18nm,1.5s
RETA                             ePP    PP     09 05 59.5 +3.0
      comp=Z,20nm,1.6s
EBL   Broad Law        87.88 336 eP     P      09 02 30.3 -1.2
VES   Vestal, Richgr   87.95  50  P     P      09 02 31.8 -0.3
      baz=304
PKM   Mcpherson Peak   87.97  51  P     P      09 02 32.9 +0.4
      baz=303
EAB   Aberfoyle        88.01 337 eP     P      09 02 30.1 -1.9
FETA  Feichten         88.12 324 ePcP   P      09 02 32.1 -0.9
      comp=Z,17nm,1.0s
LKWY  Lake             88.19  39  IAmb   IAmb   09 02 37.2
      comp=Z,57nm,1.2s
H17A  Grant Village    88.20  39  IAmb   IAmb   09 02 37.4
      comp=Z,75nm,1.2s
H17A  Grant Village    88.20  39  P     P      09 02 35.8 +2.2
      baz=309
EKA   Eskdalemuir Ar   88.27 336  P     P      09 02 33.3  0.0
CTI   Castel Tesino    88.27 323  IAmb   IAmb   09 02 39.0
      comp=Z,27nm,1.0s
SBC   Santa Barbara    88.28  52  P     P      09 02 34.5 +0.8
      baz=303
CWC   Cottonwood Cre   88.29  49  P     P      09 02 34.2 +0.3
      baz=304
FLWY  Flagg Ranch      88.33  40  IAmb   IAmb   09 02 37.0
      comp=Z,54nm,1.2s
DAVA  Damuels          88.39 325 ePcP   P      09 02 33.5 -0.7
      comp=Z,36nm,1.3s,SNR=7.2
DAVA                             ePP    PP     09 06 04.7 +3.5
      comp=Z,13nm,1.0s
GRAC  Grapevine Rang   88.45  48  P     P      09 02 35.1 +0.5
      baz=305
ISA   Isabella, Lake   88.46  50  P     P      09 02 34.7  0.0
      baz=304
RLMT  Red Lodge        88.47  38  IAmb   IAmb   09 02 36.8
      comp=Z,112nm,1.8s
RLMT  Red Lodge        88.47  38  P     P      09 02 35.4 +0.7
      baz=310,SNR=23
BFO   Black Forest     88.47 326 eP     P      09 02 33.7 -0.7
      comp=Z,45nm,1.1s,baz=49,slow=4.8
BFO                              eL     L      09 46 27.4
      comp=Z,2µm,18.4s
BFO   Black Forest     88.47 326  P     P      09 02 34.0 -0.4
BFO                               pmax   pmax
      comp=Z,53nm,1.2s
BFO   Black Forest     88.47 326  P     P      09 02 34.0 -0.4
BFO                               IAmb   IAmb   09 02 34.9
      comp=Z,52nm,1.2s
ARVC  Arvin            88.51  51  P     P      09 02 35.1 +0.3
      baz=304
WLF   Walferdange      88.60 328 eP     P      09 02 35.1 +0.2
      comp=Z,122nm,1.1s,baz=49,slow=4.8
WLF   Walferdange      88.60 328  P     P      09 02 35.0  0.0
WLF                               pmax   pmax
      comp=Z,477nm,1.0s
SGRT  San Giovanni R   88.64 318  IAmb   IAmb   09 02 36.1
      comp=Z,56nm,1.0s
REDW  Red Top Meadow   88.69  40  IAmb   IAmb   09 02 38.2
      comp=Z,54nm,1.6s
PPT   Papeete          88.75 111  LR     LR     09 35 09.1
      comp=Z,160nm,20.7s,baz=286,slow=31
PPT2  Papeete2         88.76 111 eS     S      09 13 20.0 -3.0
      comp=Z,242nm,25.2s
PPT2  Papeete2         88.76 111 eLQ    LQ     09 26 44.4
      comp=Z,700nm,30.0s
PPT2                             eLR    LR     09 30 44.3
      comp=Z,260nm,22.0s
R11A  Troy Canyon, C   88.83  46  P     P      09 02 36.7 +0.2
      baz=306
OSI   Osito Audit: C   88.87  51  P     P      09 02 36.9 +0.3
      baz=304
DGMT  Dagmar           88.87  33  P     P      09 02 36.5 +0.2
      baz=313
PMOR  Pomariorio Ree   88.89 108 eP     P      09 02 37.4 +0.6
      comp=Z,213nm,1.3s
MPMC  Manual Prospec   88.90  49  P     P      09 02 36.7 -0.2
      baz=305,SNR=5.5
LAO   LASA Array       89.06  36  P     P      09 02 37.8 +0.5
      baz=312
FURC  Furnace Creek,   89.08  49  P     P      09 02 37.7 +0.3
      baz=305
ECH   Echery           89.12 327  IAmb   IAmb   09 02 37.8
      comp=Z,64nm,1.4s
TPNV  Topopah Spring   89.21  48  P     P      09 02 38.3  0.0
      baz=305
EDW2  Edwards Air Fo   89.22  50  P     P      09 02 38.3 +0.1
      baz=304
LBWR  Ladybower, Pea   89.23 334 eP     P      09 02 36.8 -1.1
LBWR                              IAmb   IAmb   09 02 37.7
      comp=Z,38nm,1.0s
HWUT  Hardware Ranch   89.36  42  IAmb   IAmb   09 02 41.4
      comp=Z,106nm,1.4s
DUG   Dugway, Tooele   89.47  44  IAmb   IAmb   09 02 41.8
      comp=Z,56nm,1.4s
DUG   Dugway, Tooele   89.47  44  P     P      09 02 40.0 +0.6
      baz=307
NRCA  Norcia           89.51 320  IAmb   IAmb   09 02 40.7
      comp=Z,37nm,1.2s
TIP   Timpagrande      89.57 315 ⇑P     P      09 02 39.8  0.0
AQU   L'Aquila         89.64 319  P     P      09 02 40.8 +0.7
AQU                               pmax   pmax
      comp=Z,59nm,1.0s
GSC   Goldstone, Bar   89.78  49  P     P      09 02 40.8 -0.1
      baz=305
BW06  Boulder Array    89.80  40  P     P      09 02 40.8 -0.3
      baz=310
PD31  Pinedale Array   89.80  40  IAmb   IAmb   09 02 42.5
      comp=Z,49nm,1.6s
PDAR  Pinedale Array   89.80  40  P     P      09 02 41.0  0.0
      comp=Z,6.4nm,0.9s,baz=304,slow=1.6,SNR=45
PDAR                              PP     PP     09 06 12.0 -0.8
      comp=Z,1.8nm,1.0s,baz=289,slow=2.8,SNR=3.8
PDAR                              PKKPbc PKKPbc 09 20 12.6 -1.0
      comp=Z,1.1nm,0.8s,baz=126,slow=4.0,SNR=8.9
PDAR  Pinedale Array   89.80  40  P     P      09 02 40.6 -0.4
BFSC  Mount Baldy Ra   89.81  51  P     P      09 02 41.3 +0.2
      baz=304
HEC   Hector,Ludlow    90.37  50  P     P      09 02 43.7  0.0
      baz=305
MURC  Murrieta         90.49  51  P     P      09 02 44.0 -0.2
      baz=305
GMRC  Granite Mounta   90.85  49  P     P      09 02 46.0  0.0
      baz=306
109C  Camp Elliot, M   90.95  52  P     P      09 02 46.4 +0.1
      baz=305
PFO   Pinyon Flats O   90.98  51  P     P      09 02 46.8 +0.2
      comp=Z,5.8nm,0.7s,baz=291,slow=7.4,SNR=11
PFO   Pinyon Flats O   90.98  51  P     P      09 02 46.9 +0.3
      baz=305
BELC  Belle Mtn. Jos   91.08  50  P     P      09 02 46.7 -0.3
      baz=306
ULM   Lac du Bonnet    91.35  28  P     P      09 02 47.4 -0.4
      comp=Z,26nm,1.0s,baz=316,slow=5.3,SNR=32
ULM                               PKKPbc PKKPbc 09 20 08.0 -1.7
      comp=Z,4.2nm,0.8s,baz=64,slow=1.6,SNR=9.3
ULM                               LR     LR     09 48 59.1
      comp=Z,118nm,18.9s,baz=338,slow=39
ULM   Lac du Bonnet    91.35  28  IAmb   IAmb   09 02 48.8
      comp=Z,50nm,1.1s
MDND  Maddock          91.49  32  P     P      09 02 48.9 +0.4
      baz=317
SRU   San Rafael Swe   91.53  43  P     P      09 02 49.5 +0.4
SRU                               pmax   pmax
      comp=Z,52nm,1.2s
SRU   San Rafael Swe   91.53  43  P     P      09 02 49.5 +0.4
BNI   Bardonecchia     91.54 324  IAmb   IAmb   09 02 54.1
      comp=Z,41nm,1.4s
NEE2  Needles Airpor   91.56  49  P     P      09 02 49.3 +0.2
      baz=306
IRM   Iron Mountain    91.56  50  P     P      09 02 49.8 +0.6
      baz=306
K22A  Casper           91.58  39  P     P      09 02 48.7 -0.5
K22A  Casper           91.58  39  P     P      09 02 49.2  0.0
      baz=312,SNR=7.4
BC3   Big Chuckawall   91.64  50  P     P      09 02 49.8 +0.2
      baz=306
TBI   Tubuai           91.71 116 eS     S      09 13 47.0 -2.9
      comp=Z,369nm,26.0s
TBI   Tubuai           91.71 116 eLR    LR     09 32 07.9
      comp=Z,429nm,21.5s
IKP   In-Ko-Pah, Jac   91.78  51  P     P      09 02 50.3 +0.1
      baz=305
SWSC  Sam W. Stewart   91.82  51  P     P      09 02 50.4 +0.1
      baz=306
W13A  Hualapai Mount   91.85  48  P     P      09 02 51.4 +0.7
RSSD  Black Hills      91.93  36  P     P      09 02 51.1 +0.2
RSSD                              pmax   pmax
      comp=Z,104nm,1.8s
RSSD  Black Hills      91.93  36  P     P      09 02 51.1 +0.2
RSSD                              IAmb   IAmb   09 02 52.6
      comp=Z,104nm,1.8s
RSSD  Black Hills      91.93  36  P     P      09 02 51.0 +0.2
      baz=313
U15A  North Rim        92.08  46  IAmb   IAmb   09 02 55.4
      comp=Z,45nm,1.7s
PDMCI Parker Dam,Lak   92.15  49  P     P      09 02 52.2 +0.4
      baz=306
Y12C  Blythe           92.22  50  P     P      09 02 53.1 +1.0
Y12C                              IAmb   IAmb   09 02 54.1
      comp=Z,31nm,1.4s
Y12C  Blythe           92.22  50  P     P      09 02 52.3 +0.2
      baz=306
O20A  White River Ci   92.24  42  IAmb   IAmb   09 02 54.2
      comp=Z,61nm,1.2s
O20A  White River Ci   92.24  42  P     P      09 02 52.9 +0.5
      baz=310,SNR=21
GLA   Glamis           92.42  50  P     P      09 02 53.5 +0.4
      baz=306
AGMN  Agassiz Nation   92.84  29  P     P      09 02 53.6 -1.2
AGMN  Agassiz Nation   92.84  29  P     P      09 02 54.3 -0.4
      baz=320
PV22  Blue Mesa, Par   92.95  43  IAmb   IAmb   09 02 57.9
      comp=Z,51nm,1.2s
PV17  East Wray Mesa   93.00  43  P     P      09 02 56.8 +0.9
PV05  Paradox Valley   93.05  44  P     P      09 02 57.1 +0.9
N23A  Red Feather La   93.07  40  P     P      09 02 56.9 +0.6
      baz=312,SNR=15
PHWY  Pilot Hill       93.07  39  P     P      09 02 56.7 +0.4
PHWY                              IAmb   IAmb   09 02 58.0
      comp=Z,35nm,1.4s
PV07  Paradox Valley   93.09  43  IAmb   IAmb   09 02 58.5
      comp=Z,94nm,1.9s
Y14A  Wickenburg       93.12  49  IAmb   IAmb   09 02 58.2
      comp=Z,32nm,1.2s
PV13  Radium Mtn., P   93.17  43  P     P      09 02 57.2 +0.4
PV02  Paradox Valley   93.19  43  IAmb   IAmb   09 02 58.9
      comp=Z,55nm,1.2s
WUAZ  Wupatki          93.23  47  P     P      09 02 57.7 +0.7
WUAZ                              IAmb   IAmb   09 02 59.2
      comp=Z,64nm,1.3s
WUAZ  Wupatki          93.23  47  P     P      09 02 57.6 +0.6
      baz=308,SNR=18
PV15  Paradox Valley   93.25  43  P     P      09 02 57.3 +0.1
PV15                              IAmb   IAmb   09 02 59.3
      comp=Z,80nm,1.4s
SMCO  Snowmass         93.61  42  IAmb   IAmb   09 03 01.2
      comp=Z,53nm,1.5s
X16A  Lo Mia Camp, P   93.86  48  IAmb   IAmb   09 03 02.3
      comp=Z,33nm,1.2s
MVCO  Mesa Verde       93.97  44  IAmb   IAmb   09 03 02.5
      comp=Z,47nm,1.4s
MVCO  Mesa Verde       93.97  44  P     P      09 03 00.8 +0.3
      baz=310,SNR=16
ISCO  Idaho Springs    93.99  40  P     P      09 03 01.3 +0.7
      baz=312,SNR=8.7
SUSD  Miller           94.28  34  P     P      09 03 01.1 -0.4
      baz=317
KMBO  Kilima Mbogo     94.33 271  P     P      09 03 02.7 +0.2
      comp=Z,7.1nm,0.7s,baz=52,slow=7.3,SNR=13
KMBO  Kilima Mbogo     94.33 271  P     P      09 03 02.6 +0.2
KMBO  Kilima Mbogo     94.33 271  P     P      09 03 02.6 +0.2
KMBO  Kilima Mbogo     94.33 271  P     P      09 03 02.8 +0.3
214A  Organ Pipe Nat   94.44  50  IAmb   IAmb   09 03 04.6
      comp=Z,42nm,1.2s
214A  Organ Pipe Nat   94.44  50  P     P      09 03 03.1 +0.7
      baz=307
W18A  Petrified Fore   94.52  46  P     P      09 03 03.3 +0.3
      baz=309
S22A  4UR Ranch, Cre   94.63  43  P     P      09 03 04.0 +0.5
      baz=311,SNR=11
X18A  Snowflake        94.75  47  IAmb   IAmb   09 03 06.0
      comp=Z,25nm,1.3s
EYMN  Ely              94.95  27  IAmb   IAmb   09 03 05.4
      comp=Z,31nm,1.1s
EYMN  Ely              94.95  27  P     P      09 03 04.2 -0.2
      baz=323
SDCO  Great Sand Dun   95.42  42  P     P      09 03 07.2  0.0
      baz=312
CASY  Casey            95.50 188  P     P      09 03 06.4 +0.2
CASY                              IAmb   IAmb   09 03 07.1
      comp=Z,41nm,1.1s
SCHQ  Schefferville    95.85  11  P     P      09 03 07.6 -0.8
      comp=Z,9.5nm,0.7s,baz=2.8,slow=4.6,SNR=28
SCHQ                              LR     LR     09 50 12.3
      comp=Z,255nm,18.1s,baz=338,slow=38
SCHQ  Schefferville    95.85  11  IAmb   IAmb   09 03 08.2
      comp=Z,16nm,0.9s
ECSD  EROS Data Cent   95.94  33  P     P      09 03 08.7 -0.3
      baz=319
E38A  The Farm, Brul   95.99  28  IAmb   IAmb   09 03 09.7
      comp=Z,28nm,1.2s
KSCO  Kaye Shedlock’   96.22  39  P     P      09 03 10.6  0.0
      baz=314
KEST  Kesra            96.32 316  P     P      09 03 11.2 +0.1
      comp=Z,10nm,0.8s,baz=293,slow=2.0,SNR=6.4
KEST                              LR     LR     09 51 52.5
      comp=Z,342nm,18.4s,baz=346,slow=39
KEST  Kesra            96.32 316  IAmb   IAmb   09 03 11.9
      comp=Z,17nm,1.0s
SPMN  Marine on St.    96.55  30  P     P      09 03 12.0 +0.2
      baz=322
ANMO  Albuquerque      96.69  45  P     P      09 03 13.7 +0.8
ANMO                              pmax   pmax
      comp=Z,21nm,1.6s
ANMO  Albuquerque      96.69  45  P     P      09 03 13.7 +0.8
ANMO  Albuquerque      96.69  45  P     P      09 03 13.2 +0.3
      baz=311
319A  Douglas          97.17  49  IAmb   IAmb   09 03 17.3
      comp=Z,51nm,1.9s
121A  Cookes Peak, D   97.42  47  IAmb   IAmb   09 03 53.0
      comp=Z,22nm,1.6s
121A  Cookes Peak, D   97.42  47  P     Pdif   09 03 16.5 +0.2
      baz=310
CBKS  Cedar Bluff      97.95  38  P     P      09 03 17.5 -0.8
      baz=316
MATQ  Matagami         98.20  19  P     P      09 03 18.5 -0.6
      baz=334
E44A  Grand Marais A   98.22  25  P     P      09 03 18.1 -1.1
      baz=327
D46A  Sault St. Mari   98.67  24  P     P      09 03 20.2 -1.1
      baz=329
D47A  Chapleau         98.86  23  P     P      09 03 20.9 -1.2
      baz=330
LSQQ  Lebel-sur-Quev   99.02  19  P     Pdif   09 03 21.9 -0.9
      baz=335
E46A  Sault Ste Mari   99.03  24  IAmb   IAmb   09 03 23.6
      comp=Z,28nm,1.3s
F45A  CMU Biological   99.16  25  P     Pdif   09 03 22.6 -0.8
      baz=328
D48A  Paudash Townsh   99.20  22  P     Pdif   09 03 22.8 -0.9
      baz=331
D49A  Beulah Townshi   99.27  22  P     Pdif   09 03 22.9 -1.0
      baz=331
E47A  Iron Bridge      99.32  24  P     Pdif   09 03 23.1 -1.1
      baz=329
MNTX  Cornudas Mount   99.50  46  P     Pdif   09 03 25.1 -0.3
      baz=312
G45A  Suttons Bay      99.64  26  P     Pdif   09 03 25.0 -0.6
      baz=327
E48A  Lockeyer         99.68  23  P     Pdif   09 03 25.0 -0.8
      baz=330
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F48A	Evansville	100.09	24	P	Pdif	09 03 27.2	-0.4
	baz=330						
G47A	Hillman	100.21	25	P	Pdif	09 03 26.9	-1.2
	baz=329						
F49A	Sandfield	100.35	23	P	Pdif	09 03 28.3	-0.4
	baz=330						
F51A	Arnstein	100.92	22	P	Pdif	09 03 30.3	-1.0
	baz=332						
ALGO	Algonquin Park	101.49	21	P	Pdif	09 03 32.9	-1.0
	baz=334						
TXAR	Lajitas Array	102.18	47	P	Pdif	09 03 37.9	+0.5
	comp=Z,0.7nm,0.6s,baz=296,slow=2.3,SNR=10.0						
TXAR				PP	PP	09 07 45.0	-3.7
	comp=Z,1.5nm,1.1s,baz=282,slow=6.0,SNR=4.0						
TXAR				PKKPbc	PKKPbc	09 19 39.1	-0.7
	comp=Z,1.3nm,0.7s,baz=154,slow=4.9,SNR=14						
TXAR				PKKP	PKKPdf	09 19 47.3	+1.3
	comp=Z,0.5nm,0.8s,baz=159,slow=3.8,SNR=4.2						
E57A	Chemin Saint G	102.22	18	P	Pdif	09 03 35.9	-1.2
	baz=337						
BOSA	Boshof	116.20	250	PKP	PKiKP	09 08 25.9	+0.1
	comp=Z,3.8nm,1.0s,baz=118,slow=1.8,SNR=4.6						
TORD	Torodi Ar. Bea	116.44	303	PKP	PKPdf	09 08 25.6	-1.0
	comp=Z,7.1nm,1.0s,baz=19,slow=2.5,SNR=20						
TORD				PP	PP	09 09 32.6	+0.1
	comp=Z,7.5nm,0.9s,baz=40,slow=5.9,SNR=9.1						
TORD				PKKPbc	PKKPbc	09 18 54.8	+0.8
	comp=Z,2.5nm,0.8s,baz=224,slow=3.0,SNR=11						
SYO	Syowa Base	116.67	204	⇑ePdiff	Pdif	09 04 43.0	+2.5
SYO	Syowa Base	116.67	204	⇑epPdiff	pPdif	09 04 45.5	-0.1
QSPA	South Pole Qui	117.92	180		PKPdf	09 08 27.6	-0.3
DBIC	Dimbokro	125.53	303	PKP	PKPdf	09 08 43.5	-0.5
	comp=Z,18nm,0.9s,baz=38,slow=2.9,SNR=15						
DBIC	Dimbokro	125.53	303		PKPdf	09 08 43.9	-0.1
KIC	Kosan Boka	125.65	302	ePKIKP	PKPdf	09 08 43.5	-0.8
	comp=Z,162nm,1.3s						
TIC	Toumodi	125.67	303	ePKIKP	PKPdf	09 08 43.5	-0.9
	comp=Z,20nm,0.6s						
LIC	Lamto	125.95	302	ePKIKP	PKPdf	09 08 43.8	-1.1
	comp=Z,113nm,1.1s						
NVL	N'lazarevskaya	126.01	201	⇑iPKIKP	PKPdf	09 08 42.2	-1.0
NVL				pmax	pmax		
	comp=Z,41nm,1.0s						
JTS	Las Juntas de	127.96	48	PKIKP	PKPdf	09 08 48.6	-0.1
JTS	Las Juntas de	127.96	48		PKPdf	09 08 48.6	-0.1
SNAA	Sanae	129.85	197	PKPdf	PKPdf	09 08 50.4	-0.2
STVI	Saint Thomas	131.08	21		PKPdf	09 08 54.5	0.0
VNA2	Neumayer--Watz	131.47	197	PKPdf	PKiKP	09 08 54.5	-0.2
VNA3	Neumayer Olymp	131.82	196	PKPdf	PKPdf	09 08 54.4	+0.1
VNA1	Neumayer--Stat	131.87	197	PKPdf	PKPdf	09 08 54.6	+0.3
SMLC	San Martn de	135.69	38	eP	PKPdf	09 09 02.1	-1.2
ZARC	Zaragoza, Cauc	136.33	40	eP	PKPdf	09 09 02.9	-1.6
OCAC	Ocana	136.56	37	eP	PKPdf	09 09 05.1	0.0
CBOC	Ciudad Bolivar	136.97	42	eP	PKPdf	09 09 04.7	-1.2
HELC	Santa Helena	137.00	42	eP	PKPdf	09 09 04.1	-2.1
SDV	Santo Domingo	137.38	33	eP	PKPdf	09 08 57.6	-9.0
SDV	Santo Domingo	137.38	33	eP	PKPdf	09 09 07.4	+0.8
PLMC	San Jos del P	137.57	44	eP	PKPdf	09 09 06.5	-0.4
PAMC	Pamplona, Colo	137.64	37	eP	PKPdf	09 09 07.0	-0.6
GUY2C	Guyana, Caldas	137.87	42	eP	PKPdf	09 09 03.6	-4.4
NORC	Norcasia	137.89	41	eP	PKPdf	09 09 02.0	-5.5
BARC	Barichara	138.00	38	eP	PKPdf	09 08 58.5	-9.4
RREF	El Recreo	138.14	43	eP	PKPdf	09 09 07.0	-1.7
YOTC	Yotoco, Valle	138.25	45	eP	PKPdf	09 08 55.4	-13
SPBC	San Pablo de B	138.28	40	eP	PKPdf	09 09 08.4	+0.2
ROSC	El Rosal	138.79	41	PKP	PKiKP	09 09 10.9	-0.8
	comp=Z,36nm,0.9s,baz=122,slow=1.7,SNR=14						
PCRV	Puerto La Cruz	138.80	25	PKP	PKPdf	09 09 07.6	-1.5
	comp=Z,11nm,0.9s,baz=45,slow=4.3,SNR=2.8						
PLCV	Puerto La Cruz	138.83	25		PKPdf	09 09 07.6	-1.5
ORTC	Ortega, Tolima	138.98	43	eP	PKPdf	09 09 05.1	-4.4
CHIC	Chingaza	139.30	41	eP	PKPdf	09 09 08.6	-2.0
PCON	Cinco Dias	139.50	46	eP	PKPdf	09 09 08.5	-2.5
SOTA	Rioblanco	139.51	47	eP	PKPdf	09 09 01.8	-9.2
VILC	Villavicencio,	139.74	41	eP	PKPdf	09 09 06.8	-4.2
GARC	Garzon, Huila	140.18	45	eP	PKPdf	09 09 11.4	-0.5
FLOC	Florencia	140.54	46	eP	PKPdf	09 09 05.1	-7.2
MACC	Macarena, Meta	141.22	43	eP	PKPdf	09 09 09.9	-3.6
PMSA	Palmer Station	142.05	169	eP	PKPdf	09 09 13.4	+0.1
MDP	Montagnes des	146.69	8	PKPbc	PKPbc	09 09 24.0	-0.5
	comp=Z,38nm,0.6s,baz=287,slow=1.3,SNR=20						
NNA	Nana	148.97	65	PKIKP	PKPdf	09 09 27.3	+0.6
NNA	Nana	148.97	65		PKPdf	09 09 27.3	+0.6
PTGA	Pitinga	150.58	24	PKPbc	PKPbc	09 09 34.5	-0.2
	comp=Z,104nm,0.9s,baz=346,slow=2.3,SNR=82						
PTGA	Pitinga	150.58	24		PKPdf	09 09 29.8	+0.4
PTGA	Pitinga	150.58	24	eP	PKPdf	09 09 30.8	+1.4
NBMO	Morrinhos-CE	154.03	341	eP	PKPdf	09 09 33.3	-1.1
NBCL	Cascavel-CE	154.31	336	eP	PKPdf	09 09 34.5	-0.3
RCBR	Riachuelo	154.81	330	PKPbc	PKPbc	09 09 43.5	-0.7
	comp=Z,11nm,0.8s,baz=342,slow=1.9,SNR=4.5						
RCBR	Riachuelo	154.81	330		PKiKP	09 09 44.2	0.0
RCBR	Riachuelo	154.81	330	eP	PKPdf	09 09 36.4	+0.9
EFI	East Falkland	155.42	166	PKP2	PKPab	09 10 01.3	+0.7
EFI	East Falkland	155.42	166		PKPab	09 10 01.3	+0.7
NBPS	Pedro II - PI	155.45	343	eP	PKPdf	09 09 35.8	-0.7
NBPB	Pedra_Branca-C	155.99	338	eP	PKPdf	09 09 37.1	-0.1
SAML	Samuel	156.38	39	PKIKP	PKPdf	09 09 37.6	0.0
SAML	Samuel	156.38	39		PKPdf	09 09 37.6	0.0
SAML	Samuel	156.38	39	eP	PKPdf	09 09 37.1	-0.5
NBRF	Rio Formoso -	156.91	325	eP	PKPdf	09 09 39.0	+0.7
PLCA	Paso Flores	157.94	130	PKP	PKPdf	09 09 39.2	+0.4
	comp=Z,7.1nm,1.1s,baz=5.1,slow=5.3,SNR=6.5						
PLCA				PKPab	PKPab	09 10 11.3	-0.7
	comp=Z,13nm,1.0s,baz=26,slow=3.9,SNR=9.7						
PLCA	Paso Flores	157.94	130		PKPdf	09 09 38.5	-0.4
PLCA					PKPab	09 10 13.9	+1.9
PLCA	Paso Flores	157.94	130	eP	PKPdf	09 09 39.9	+1.0
LPAZ	La Paz	158.32	61	PKP	PKPdf	09 09 41.4	+0.7
	comp=Z,5.9nm,1.0s,baz=0.9,slow=2.2,SNR=15						
LPAZ				PKPab	PKPab	09 10 14.3	-0.6
	comp=Z,4.7nm,0.9s,baz=360,slow=3.5,SNR=4.4						
PB10	IPOC Station P	159.57	82		PKPab	09 10 20.3	+0.7
PB01	IPOC Station P	159.61	74		PKPdf	09 09 41.7	+0.2
PB01					PKPab	09 10 21.0	+1.1
GO04	Tololo Observa	160.37	101		PKPab	09 10 24.4	+1.2
PB15	IPOC Station P	160.43	80	PKPdf	PKPdf	09 09 42.3	-0.2
LVC	Limon Verde	160.71	78	PKP	PKPdf	09 09 44.3	+1.3
	comp=Z,14nm,1.1s,baz=238,slow=2.8,SNR=5.6						
LVC				PKPab	PKPab	09 10 26.7	+1.8
	comp=Z,22nm,1.1s,baz=292,slow=5.0,SNR=8.4						
SIV	San Ignacio	163.18	47	PKP	PKPdf	09 09 46.0	+0.7
	comp=Z,9.3nm,0.9s,baz=176,slow=0.9,SNR=44						
SIV				PKPab	PKPab	09 10 34.4	-1.0
	comp=Z,5.4nm,0.8s,baz=277,slow=4.2,SNR=6.6						
BDFB	Brasilia	167.54	358	PKP	PKPdf	09 09 49.3	+0.3
	comp=Z,16nm,1.0s,baz=76,slow=1.2,SNR=14						
BDFB				PKPab	PKPab	09 10 54.0	-0.5
	comp=Z,16nm,1.0s,baz=14,slow=6.3,SNR=7.6						
CPUP	Villa Florida	171.88	79	PKP	PKPdf	09 09 51.6	+0.5
	comp=Z,15nm,1.1s,baz=38,slow=1.4,SNR=22						
CPUP				PKPab	PKPab	09 11 13.9	+0.2
	comp=Z,8.5nm,1.1s,baz=280,slow=4.1,SNR=5.7						

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*NEIC **26** 09:16:07.5±1.6, 5°.88S±0°.07×75°.66W±0°.09, h80^{km}±6^{km}, mb4.3/27, Error ellipse: s-maj=13.5km s-min=10.3km az=79.0*

*IDC **26** 09:16:09.3±0.8, 5°.79S×75°.72W, h102^{km}±7^{km}, mb3.6/11, mb1 3.8/16, mb1mx3.7/30, mbtmp3.9/16, MS3.4/2, Ms1 3.4/2, ms1mx2.8/21, Error ellipse: s-maj=20.3km s-min=13.0km az=59.0*

ISC 26 09:16:09.3±0.4, **5°.92S**±0°.05×**75°.74W**±0°.07, **h100^{km}, n68,** σ1^{s}.**49**/74, **mb4.2**/21, **Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	Atahualpa	2.91	245	P	Pn	09 16 55.6	+1.5
	baz=72,slow=9.2						
ATAH				S	Sn	09 17 25.7	-2.9
	32nm,0.3s,baz=314,slow=18,SNR=3.3						
NNA	Nana	6.13	190	P	Pn	09 17 39.9	+2.5
	1.7nm,0.3s,baz=339,slow=3.4,SNR=9.1						
NNA				S	Sn	09 18 42.8	-3.4
	18nm,0.3s,baz=193,slow=16,SNR=11						
NNA	Nana	6.13	190		Pn	09 17 36.7	-0.7
NNA					Sn	09 18 43.3	-2.9
GCUF	Volcan Galeras	7.28	347	eP	Pn	09 17 55.8	+2.4
FLOC	Florencia	7.45	1	eP	Pn	09 17 56.7	+1.3
FLOC	Florencia	7.45	1		Pn	09 17 57.1	+1.7
CRUC	La Cruz	7.53	351	eP	Pn	09 17 58.7	+1.9
SOTA	Rioblanco	8.05	354	eP	Pn	09 18 05.9	+2.0
GARC	Garzon, Huila	8.05	2	eP	Pn	09 18 05.2	+1.4
MACC	Macarena, Meta	8.23	13	eP	Pn	09 18 07.2	+1.2
ORTC	Ortega, Tolima	9.77	3	eP	Pn	09 18 28.7	+1.7
ROSC	El Rosal	10.78	8	LR	LR	09 22 33.2	
	comp=Z,74nm,20.1s,baz=28,slow=36						
RUSC	La Rusia	12.03	13	Pn	Pn	09 18 57.0	-0.8
LPAZ	La Paz	12.72	145	P	Pn	09 19 08.7	+1.6
	0.4nm,0.3s,baz=339,slow=8.8,SNR=12						
LPAZ	La Paz	12.72	145		Pn	09 19 05.6	-1.5
SAML	Samuel	12.81	104		Pn	09 19 06.0	-1.7
PB11	IPOC Station P	14.98	157		P	09 19 41.2	+2.2
GO01	Chusmiza	15.08	156		P	09 19 44.1	+3.6
GO01				IAmb	IAmb	09 19 45.9	
	comp=Z,7.1nm,0.5s						
PTGA	Pitinga	16.56	72	P	Pn	09 19 54.8	-0.8
	comp=Z,0.6nm,0.3s,baz=315,slow=20,SNR=2.6						
PTGA	Pitinga	16.56	72	P	P	09 19 55.5	-1.0
PB07	IPOC Station P	16.70	161		Pn	09 19 58.9	+1.4
PB09	IPOC Station P	16.99	159	Pn	P	09 20 03.7	+2.4
SIV	San Ignacio	17.52	126	P	P	09 20 06.3	-0.7
	comp=Z,0.2nm,0.3s,baz=306,slow=16,SNR=4.5						
LVC	Limon Verde	17.86	159	P	Pn	09 20 15.7	+4.1
	comp=Z,0.3nm,0.3s,baz=340,slow=13,SNR=3.8						
LVC	Limon Verde	17.86	159	P	P	09 20 10.3	-0.7
URIC	Uribia, Colomb	17.90	12	P	P	09 20 09.7	-1.4
MTDJ	Mount Denham	24.06	356	P	P	09 21 17.8	+2.4
MTDJ				IAmb	IAmb	09 21 18.4	
	comp=Z,15nm,0.8s						
BANI	BANI	24.73	12	P	P	09 21 20.3	-1.3
CPUP	Villa Florida	26.85	141	P	P	09 21 41.5	+0.9
	comp=Z,2.2nm,0.7s,baz=332,slow=12,SNR=9.6						
CPUP	Villa Florida	26.85	141	P	P	09 21 42.1	+1.6
PLCA	Paso Flores	34.97	173	P	P	09 22 51.7	-0.3
	comp=Z,0.7nm,0.7s,baz=146,slow=9.2,SNR=4.6						
PLCA	Paso Flores	34.97	173	P	P	09 22 52.7	+0.7
HODGE	Hodges	40.41	352	P	P	09 23 38.2	+0.5
TXAR	Lajitas Array	44.15	324	P	P	09 24 08.2	-0.1
	comp=Z,0.5nm,0.7s,baz=138,slow=7.7,SNR=6.4						
TXAR				PP	PcP	09 25 51.6	-0.1
	comp=Z,0.1nm,0.6s,baz=142,slow=11,SNR=2.3						
TXAR				LR	LR	09 44 10.2	
	comp=Z,106nm,19.3s,baz=0.0,slow=38						
TXAR	Lajitas Array	44.15	324	P	P	09 24 08.5	+0.2
L56A	Greenwood	47.85	358	P	P	09 24 37.5	+0.4
X16A	Lo Mia Camp, P	52.40	322	P	P	09 25 12.7	+0.9
X16A				IAmb	IAmb	09 25 13.1	
	comp=Z,1.4nm,0.7s						
LATQ	La Tuque	53.13	3	P	P	09 25 17.5	+0.9
AGMN	Agassiz Nation	56.81	344	P	P	09 25 42.1	-1.0
PDAR	Pinedale Array	57.37	331	P	P	09 25 46.9	-0.6
	comp=Z,0.3nm,0.5s,baz=130,slow=11,SNR=4.9						
PDAR				PcP	PcP	09 26 39.3	-1.1
	comp=Z,0.6nm,0.9s,baz=148,slow=8.6,SNR=3.6						
PDAR	Pinedale Array	57.37	331	P	P	09 25 47.4	-0.1
HWUT	Hardware Ranch	57.52	329	P	P	09 25 48.1	-0.3
HWUT				IAmb	IAmb	09 25 48.5	
	comp=Z,1.8nm,0.6s						
ULM	Lac du Bonnet	58.60	345	P	P	09 25 53.5	-2.1
	comp=Z,2.7nm,0.6s,baz=172,slow=6.9,SNR=7.7						
ULM	Lac du Bonnet	58.60	345	P	P	09 25 54.2	-1.4
ULM				IAmb	IAmb	09 25 54.8	
	comp=Z,3.4nm,0.7s						
NVAR	Mina Array Bea	59.20	322	P	P	09 25 60.0	-0.3
	comp=Z,0.5nm,0.7s,baz=135,slow=6.9,SNR=3.4						
NVAR				PcP	PcP	09 26 47.4	-0.3
	comp=Z,0.3nm,0.6s,baz=128,slow=5.8,SNR=2.5						
YHL	Hebgen Lake	59.71	331	P	P	09 26 05.0	+1.2
SCHQ	Schefferville	60.98	6	P	P	09 26 10.6	-1.3
	comp=Z,1.5nm,0.7s,baz=192,slow=7.2,SNR=4.0						
SCHQ	Schefferville	60.98	6	P	P	09 26 11.6	-0.3
MFID	Camas Ranch	61.03	328	P	P	09 26 13.4	+0.9
I07A	Izee	63.47	326	P	P	09 26 29.7	+0.9
WALA	Waterton Lakes	64.07	333	P	P	09 26 32.6	-0.1
WALA				IAmb	IAmb	09 26 33.6	
	comp=Z,2.8nm,1.0s						
DBIC	Dimbokro	71.83	81	P	P	09 27 23.3	+1.4
	comp=Z,2.4nm,0.6s,baz=194,slow=5.0,SNR=2.9						
YKA	Yellowknife Ar	74.40	342	P	P	09 27 35.0	-1.0
	comp=Z,0.9nm,0.6s,baz=141,slow=6.4,SNR=24						
YKA				pP	pP	09 28 00.4	-1.2
	comp=Z,0.1nm,0.3s,baz=139,slow=6.2,SNR=2.3						
SNAA	Sanae	79.06	162	P	P	09 28 02.9	+0.6
SNAA				IAmb	IAmb	09 28 03.6	
	comp=Z,6.2nm,1.4s						
TOA0	Torodi Ar. Sit	79.18	75	P	P	09 28 03.8	-0.1
TOA0				IAmb	IAmb	09 28 08.1	
	comp=Z,4.4nm,1.4s						
TORD	Torodi Ar. Bea	79.18	75	P	P	09 28 03.5	-0.4
	comp=Z,0.6nm,0.4s,baz=272,slow=4.9,SNR=7.8						
TORD				pP	pP	09 28 29.8	0.0
	comp=Z,0.7nm,0.6s,baz=272,slow=6.2,SNR=2.2						
TORD	Torodi Ar. Bea	79.18	75	P	P	09 28 03.8	-0.1
INK	Inuvik	84.14	342	P	P	09 28 28.7	-0.1
QSPA	South Pole Qui	84.18	180	P	P	09 28 30.1	+0.8
QSPA				IAmb	IAmb	09 28 30.7	
	comp=Z,3.5nm,0.9s						
SCO	Scoresbysund	84.20	16	P	P	09 28 30.0	+0.9
SCO				IAmb	IAmb	09 28 48.5	
	comp=Z,7.1nm,1.4s						
ILAR	Eielson Array	87.41	336	P	P	09 28 44.1	-0.9
	comp=Z,0.5nm,0.7s,baz=105,slow=3.6,SNR=5.3						
TRF	Thorofare Moun	88.42	334	P	P	09 28 49.9	-0.3
TRF				IAmb	IAmb	09 28 52.3	
	comp=Z,5.0nm,1.4s						
BPAW	Bear Paw Mtn.	88.90	335	P	P	09 28 51.7	-0.5
PPLA	Purkeypile	89.10	334	P	P	09 28 52.9	-0.4
PPLA				IAmb	IAmb	09 28 55.2	
	comp=Z,3.6nm,1.0s						
ZALV	Zalesovo Beam	129.57	15	PKP	PKPdf	09 35 05.6	-0.8
	comp=Z,0.5nm,0.3s,baz=289,slow=5.3,SNR=2.1						
MKAR	Makanchi Array	135.09	21	PKhKP	PKPpre	09 35 13.2	
	comp=Z,0.3nm,0.6s,baz=333,slow=3.3,SNR=3.7						
ASAR	Alice Springs	138.75	223	PKhKP	PKPpre	09 35 16.3	
	comp=Z,0.2nm,0.4s,baz=136,slow=3.8,SNR=5.8						
ASAR				PKP	PKPdf	09 35 22.8	-1.9
	comp=Z,0.4nm,0.7s,baz=119,slow=2.1,SNR=5.9						
ASAR				pPKP	pPKPdf	09 35 53.2	+1.0
	comp=Z,0.3nm,0.8s,baz=48,slow=1.4,SNR=2.8						
WRA	Warramunga Arr	140.81	228	PKP	PKPdf	09 35 27.3	-1.2
	comp=Z,0.7nm,0.5s,baz=123,slow=2.0,SNR=3.6						

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*NIED **26** 09:33:00, 28°.10N×131°.60E, h14^{km}, Mw4.4 Best double couple: $M_0$4.52000×10^{15} NP1:ϕ_s153.00000°, δ46.00000°, λ-99.00000°. NP2:ϕ_s346.00000°, δ45.00000°, λ-81.00000°.*

*BJI **26** 09:33:15.3±0.0, 27°.98N×131°.68E, h10^{km}, mB4.8/23, mb4.5/34, Ms4.3/13, Ms7 4.1/13*

*MOS **26** 09:33:17.4±1.1, 28°.15N×131°.53E, h12^{km}, mb4.6/23, Error ellipse: s-maj=9.7km s-min=5.5km az=96.3*

*IDC **26** 09:33:17.3±0.5, 28°.21N×131°.60E, h0^{km}, mb4.2/25, mb1 4.3/29, mb1mx4.3/42, mbtmp4.2/29, ML3.8/4, MS3.5/8, Ms1 3.6/8, ms1mx3.3/41, Error ellipse: s-maj=16.1km s-min=12.5km az=86.0*

*JMA **26** 09:33:19.5±0.1, 28°.14N×131°.56E, h78^{km}±5^{km}, M4.3*

*NEIC **26** 09:33:22.7±1.3, 28°.17N±0°.06×131°.50E±0°.06, h35^{km}±5^{km}, mb4.8/48, Error ellipse: s-maj=8.8km s-min=7.5km az=191.0*

ISC 26 09:33:18.8±2.0, **28°.15N**±0°.03×**131°.55E**±0°.04, **h9^{km}**±12^{km}, **n206,** σ1^{s}.**52**/232, **mb4.6**/71, **MS4.0**/8, **8C-1D, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JZK	Kikaishima	1.40	277	P	Pn	09 33 44.3	-0.2
JZK				eS	Sn	09 34 01.8	-1.3
JAM	Amami Oshima	1.73	279	P	Pn	09 33 48.8	-0.3
JAM				eS	Sn	09 34 09.4	-1.9
JAMN	Amaminishikomi	2.10	273	P	Pn	09 33 53.4	-0.7
JAMN				S	Sn	09 34 18.6	-1.7
JKDJ	Kitadaitoujima	2.20	186	P	Pn	09 33 54.2	-1.3
JKDJ				eS	Sn	09 34 19.2	-3.7
JNN	Nakanoshima	2.23	319	P	Pn	09 33 55.4	-0.6
JNN				eS	Sn	09 34 21.8	-2.0
JYAK	Yakushimahirau	2.27	337	P	Pn	09 33 56.0	-0.5
JYAK				S	Sn	09 34 22.1	-2.6
JTAJ	Takarajima	2.29	296	P	Pn	09 33 56.0	-0.8
JTAJ				S	Sn	09 34 22.4	-2.7
JMTN	Minamitane	2.31	346	P	Pn	09 33 56.4	-0.7
JMTN				S	Sn	09 34 23.5	-2.2
JTK	Tokunoshima	2.33	262	P	Pn	09 33 56.9	-0.4
JTK				S	Sn	09 34 24.5	-1.5
JMZ	Minamidaito 2	2.34	187	P	Pn	09 33 56.5	-0.9
JMZ				S	Sn	09 34 22.6	-3.6
JTN	Tanegashima 3	2.55	349	P	Pn	09 33 59.5	-0.8
JTN				S	Sn	09 34 29.7	-1.8
JKC	Kuchinoerabu	2.59	333	P	Pn	09 34 00.6	-0.3
JKC				eS	Sn	09 34 28.9	-3.6
JOKE	Okinoerabujima	2.75	254	P	Pn	09 34 02.4	-0.7
JOKE				S	Sn	09 34 34.0	-2.5
JYRO	Yoronjima	2.97	249	P	Pn	09 34 05.2	-0.9
JYRO				S	Sn	09 34 39.5	-2.3
JOW	Kunigami	3.19	247	P	Pn	09 34 08.2	-0.9
JOW				eS	Sn	09 34 44.5	-2.8
JOW	Kunigami	3.19	247	Pn	Pn	09 34 08.3	-0.9
	197nm,0.3s,baz=101,slow=17,SNR=2243						
JOW				Sn	Sn	09 34 42.7	-4.6
	63nm,0.3s,baz=238,slow=29,SNR=7.1						
JOW	Kunigami	3.19	247		Pn	09 34 09.3	+0.2
JOW				Sn	Sn	09 34 44.5	-2.8
JIH	Iheya	3.37	252	P	Pn	09 34 10.7	-0.8
JIH				S	Sn	09 34 48.9	-2.7
JTZ	Takazaki	3.76	354	P	Pn	09 34 16.7	-0.3
JTZ				S	Sn	09 34 58.6	-2.8
JSJ	Shimokoshiki	3.86	336	P	Pn	09 34 17.2	-1.2
JSJ				eS	Sn	09 35 00.3	-3.6
JAGN	Aguni-jima	4.13	249	P	Pn	09 34 21.1	-1.0
JAGN				S	Sn	09 35 07.8	-2.7
JKE	Kume jima 2	4.61	248	P	Pn	09 34 27.3	-1.4
JKE				eS	Sn	09 35 19.2	-3.2
JTO	Tosashimizu	4.82	13	P	Pn	09 34 30.5	-1.1
JTO				eS	Sn	09 35 20.2	-7.3
JNU	Nakatsue	4.99	354	Pn	Pn	09 34 33.9	-0.1
	3.4nm,0.3s,baz=188,slow=7.7,SNR=26						
JNU				Sn	Sn	09 35 24.6	-7.3
	1.8nm,0.3s,baz=208,slow=15,SNR=2.2						
JNU	Nakatsue	4.99	354		Pn	09 34 35.0	+1.1
JMN	Monobe	5.91	19	P	Pn	09 34 46.6	0.0
YOJ	Yonaguni jima	8.49	246	P	Pn	09 35 19.5	-2.5
YOJ	Yonaguni jima	8.49	246	Pn	Pn	09 35 19.5	-2.5
INU	Inuyama	8.55	32		Pn	09 35 23.9	+1.0
JHJ	Hachijo jima 2	8.65	53	Pn	Pn	09 35 26.6	+2.4
	28nm,0.3s,baz=73,slow=14,SNR=11						
JHJ				Sn	Sn	09 36 46.5	-15
	baz=27,slow=18,SNR=1.2						
JHJ				LR	LR	09 37 33.2	
	comp=Z,160nm,21.8s,baz=110,slow=30						
JHJ2	Mitsune	8.67	53	Pn	Pn	09 35 26.6	+2.1
TJN	Taejon	8.94	338	iP	Pn	09 35 27.4	-0.7
JCJ	Chichijima	9.49	94	Pn	Pn	09 35 37.7	+2.0
	2.5nm,0.3s,baz=336,slow=19,SNR=8.0						
JCJ				LR	LR	09 38 13.3	
	comp=Z,273nm,20.1s,baz=333,slow=31						
YHNB	Yeheng	9.75	252		Pn	09 35 38.9	-0.5
KSRS	Korea Array	9.77	343	Pn	Pn	09 35 40.4	+1.0
	0.2nm,0.3s,baz=164,slow=15,SNR=7.4						
NACB	Ninganchiao	9.78	248	Pn	Pn	09 35 36.2	-3.5
MAJO	Matsushiro	10.09	32	P	Pn	09 35 45.3	+1.5
MAJO	Matsushiro	10.09	32		Pn	09 35 45.3	+1.5
MAT	Matsushiro	10.09	32	P	Pn	09 35 44.9	+1.1
MAT				eS	Sn	09 37 38.2	+1.1
MJAR	Matsushiro Arr	10.09	32	Pn	Pn	09 35 45.1	+1.3
	0.5nm,0.3s,baz=206,slow=12,SNR=28						
MJAR				LR	LR	09 39 02.0	
	comp=Z,292nm,18.4s,baz=190,slow=34						
MJAR	Matsushiro Arr	10.09	32	P	Pn	09 35 45.3	+1.5
MJAR	Matsushiro Arr	10.09	32		Pn	09 35 45.3	+1.5
MJB9	Matsu-Tunnel	10.09	32		Pn	09 35 45.3	+1.5
YULB	Yu-li	10.38	245		Pn	09 35 42.6	-5.4
SSLB	Suanglung	10.47	248		Pn	09 35 45.4	-3.8
TPUB	Ta-pu	10.96	246	Pn	Pn	09 35 53.0	-2.9
NJ2	Nanjing	11.66	293	eP	Pn	09 36 05.3	-0.1
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,180nm,4.9s						
NJ2				LR	LR		
	comp=N,490nm,17.2s						
NJ2				LR	LR		
	comp=E,1µm,13.2s						
NJ2				LR	LR		
	comp=Z,1µm,13.2s						
USA0B	Ussuriysk Arra	16.02	1	iP	Pn	09 37 05.4	+1.1
USRK	Ussuriysk Ar.	16.02	1	Pn	P	09 37 09.3	+1.5
	baz=195,slow=15,SNR=8.8						
USRK				LR	LR	09 43 07.4	
	comp=Z,79nm,18.8s,baz=185,slow=37						
ASAJ	Asahikawa	18.24	26	P	Pn	09 37 30.6	-1.5
	0.2nm,0.3s,baz=263,slow=17,SNR=1.4						
ASAJ				LR	LR	09 44 41.6	
	comp=Z,160nm,18.9s,baz=322,slow=38						
JKA	Kamikawa-asahi	18.24	26	P	Pn	09 37 30.6	-1.5
XAN	Xi'an	20.23	292	P	Pn	09 37 57.8	+1.6
XAN				pP	pwP	09 38 05.3	+4.7
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
HHC	Hu-ho-hao-te	20.72	313	eP	Pn	09 38 01.0	-1.0
HHC				pmax	pmax		
	comp=Z,85nm,0.7s						
HHC				pmax	pmax		
	comp=Z,260nm,3.8s						
HHC				LR	LR		
	comp=N,820nm,11.1s						
HHC				LR	LR		
	comp=E,520nm,10.6s						
HHC				LR	LR		
	comp=Z,800nm,10.1s						
YSS	Yuzh-Sakhalins	20.73	22	eP	P	09 37 59.5	0.0
YSS				e		09 38 05.5	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YSS				MLR	MLR		
	comp=Z,300nm,14.0s						
KLR	Kul'dur	21.05	0	P	P	09 38 03.4	+0.4
	comp=Z,6.0nm,0.9s,baz=187,slow=6.7,SNR=4.0						
KLR				LR	LR	09 46 25.1	
	comp=Z,128nm,18.1s,baz=201,slow=38						
KLR	Kul'dur	21.05	0	iP	P	09 38 04.2	+1.2
KLR				pmax	pmax		
	comp=Z,19nm,0.9s						
GYA	Guiyang	22.17	271	eP	P	09 38 15.3	0.0
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GRNR	Gornyy	22.89	8	⇓iP	P	09 38 24.1	+1.4
GRNR				pmax	pmax		
	comp=Z,8.0nm,1.3s						
LZH	Lanzhou	24.70	296	eP	P	09 38 40.8	+0.3
LZH				pP	sP	09 38 45.0	+1.4
LZH				sP	pwP	09 38 47.5	+2.5
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				pmax	pmax		
	comp=Z,220nm,4.3s						
LZH				LR	LR		
	comp=Z,320nm,13.0s						
LZH				LR	LR		
	comp=Z,380nm,12.5s						
LZH				LR	LR		
	comp=Z,420nm,13.2s						
ZEA	Zeya	25.76	354	eP	P	09 38 52.1	+2.4
ZEA				pmax	pmax		
	comp=Z,32nm,1.2s						
ULN	Ulaanbaatar	27.37	323	ceP	P	09 39 03.9	-0.6
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SONM	Songino Array	27.71	322	P	P	09 39 07.0	-0.5
	comp=Z,0.6nm,0.6s,baz=126,slow=7.5,SNR=5.0						
SONM	Songino Array	27.71	322	P	P	09 39 07.0	-0.5
FAKI	Fak Fak	30.89	179	P	P	09 39 36.8	+1.0
FAKI				IAmb	IAmb	09 39 37.8	
	comp=Z,11nm,0.7s						
CMAR	Chiang Mai Arr	31.38	259	P	P	09 39 40.5	+0.4
	comp=Z,0.9nm,0.3s,baz=59,slow=7.9,SNR=4.5						
CMAR				LR	LR	09 54 03.9	
	comp=Z,222nm,18.2s,baz=226,slow=40						
CMAR	Chiang Mai Arr	31.38	259	iP	P	09 39 42.7	+2.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TLY	Talaya	31.45	326	eP	P	09 39 41.8	+1.3
TLY				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TLY				MLR	MLR		
	comp=Z,525nm,13.0s						
PETK	Petropavlovsk-	31.54	31	P	P	09 39 40.2	-1.0
	comp=Z,5.8nm,1.1s,baz=228,slow=3.8,SNR=3.8						
PETK				LR	LR	09 51 59.3	
	comp=Z,118nm,18.3s,baz=242,slow=36						
H11N2	WAKE ISLAND Hy	33.28	97	T	T	10 15 08.6	

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       baz=290,slow=74,SNR=4.0
H11N1  WAKE ISLAND Hy 33.28  97   T        T          10 15 07.0
       baz=290,slow=74,SNR=3.3
H11N3  WAKE ISLAND Hy 33.30  97   T        T          10 15 07.6
       baz=290,slow=74,SNR=2.9
H11S3  WAKE ISLAND Hy 33.57  99   T        T          10 15 31.7
       baz=295
H11S1  WAKE ISLAND Hy 33.57  99   T        T          10 15 32.0
       baz=295
H11S2  WAKE ISLAND Hy 33.58  99   T        T          10 15 35.6
       baz=295
MA2    Magadan        34.07  17ceP         P          09 40 03.1  -0.2
MA2                               pmax     pmax
       comp=Z,4.0nm,0.9s
SEY    Seymchan       37.36  16 i P        P          09 40 36.1 +4.7
WMQ    Urumqi         38.31 306 eP         P          09 40 40.3 +0.5
WMQ                               pmax     pmax
       comp=Z,9.0nm,1.5s
WMQ                               pmax     pmax
       comp=Z,68nm,4.7s
RAMN   Ramite         39.70 279 eP         P          09 40 52.6 +0.7
JIRN   Jiri           39.91 280 eP         P          09 40 55.2 +1.4
       comp=Z,20nm,0.7s
JAGI   Jajag, Banyuwa 40.10 207   P        P          09 40 54.8  -0.1
GUN    Gumba          40.13 281 eP         P          09 40 56.8 +1.2
       comp=Z,53nm,0.7s
PKI    Pulchoki       40.60 280 eP         P          09 41 00.2 +0.7
       comp=Z,26nm,0.9s
PKIN   Phulchoki      40.61 280 eP         P          09 41 00.0 +0.5
       comp=Z,16nm,0.7s
MTN    Manton Dam     40.75 181   P        P          09 40 59.6  -0.6
MTN                               IAmb     IAmb       09 41 00.6
       comp=Z,16nm,0.9s
DMN    Daman          40.86 281 eP         P          09 41 02.4 +0.9
GKN    Gorkha         41.19 281 eP         P          09 41 04.9 +0.8
       comp=Z,11nm,0.4s
DANN   Dangsing       41.87 282 eP         P          09 41 10.8 +0.9
       comp=Z,24nm,0.6s
MK31   Makanchi Array 42.53 310   P        P          09 41 14.8 +0.1
MK31                              pmax     pmax
       comp=Z,5.0nm,1.2s
MK31   Makanchi Array 42.53 310   P        P          09 41 14.8 +0.1
MKAR   Makanchi Array 42.53 310   P        P          09 41 15.3 +0.7
       comp=Z,2.3nm,0.9s,baz=93,slow=9.0,SNR=18
MKAR                              PcP      PcP        09 43 07.0  -0.1
       comp=Z,1.0nm,0.6s,baz=86,slow=2.9,SNR=5.6
MKAR                              ScP      ScP        09 46 56.4  -1.8
       comp=Z,0.2nm,0.7s,baz=72,slow=4.7,SNR=2.2
MKAR   Makanchi Array 42.53 310   P        P          09 41 13.1  -1.6
ZAA0   Zalesovo Array 42.58 321   P        P          09 41 14.3  -0.6
ZALV   Zalesovo Beam  42.58 321   P        P          09 41 15.4 +0.4
       comp=Z,2.4nm,0.5s,baz=106,slow=7.7,SNR=10.0
ZALV                              PcP      PcP        09 43 06.3  -0.8
       comp=Z,1.0nm,0.6s,baz=219,slow=1.9,SNR=3.9
ZALV   Zalesovo Beam  42.58 321   P        P          09 41 15.0 +0.1
MAKZ   Makanchi       42.74 310   P        P          09 41 17.6 +1.2
MAKZ                              pmax     pmax
       comp=Z,7.0nm,1.2s
MAKZ   Makanchi       42.74 310   P        P          09 41 17.6 +1.2
COEN   Coen           43.34 163   P        P          09 41 22.2 +0.7
TIXI   Tiksi          43.57 359 i P        P          09 41 20.5  -2.2
TIXI                              pmax     pmax
       comp=Z,2.0nm,0.9s
KNRA   Kununurra      43.65 184   P        P          09 41 24.4 +0.6
KNRA                              IAmb     IAmb       09 41 25.1
       comp=Z,21nm,0.8s
BILL   Bilibino       44.94  18ceP         P          09 41 32.2  -1.5
BILL                              pmax     pmax
       comp=Z,4.0nm,1.0s
BILL   Bilibino       44.94  18   P        P          09 41 33.8 +0.1
KURK   Kurchatov      45.52 315ceP         P          09 41 38.4  -0.2
KURK                              pmax     pmax
       comp=Z,5.0nm,1.0s
KURK   Kurchatov      45.52 315   P        P          09 41 38.7 +0.1
KURK                              IAmb     IAmb       09 41 40.1
       comp=Z,13nm,1.4s
KURBB  Kurchatov Arra 45.56 315   P        P          09 41 39.4 +0.5
       baz=100,slow=8.6
KURBB                             PcP      PcP        09 43 16.3  -1.1
       comp=Z,1.0nm,0.7s,baz=100,slow=3.8,SNR=3.2
FITZ   Fitzroy Crossi 46.33 188   P        P          09 41 45.2   0.0
KSH    Kashi          46.88 299   P        P          09 41 52.8 +3.2
KSH                               pP       pwP        09 41 58.5 +4.3
KSH                               PcP      PcP        09 43 25.3 +2.9
KSH                               S        S          09 48 43.0 +2.4
KSH                               sS       sS         09 48 51.8 +8.4
KSH                               pmax     pmax
       comp=Z,10.0nm,0.5s
KSH                               pmax     pmax
       comp=Z,370nm,6.1s
KSH                               LR       LR
       comp=Z,320nm,13.3s
KSH                               LR       LR
       comp=Z,410nm,11.6s
KSH                               LR       LR
       comp=Z,410nm,10.2s
WB0    Warramunga Arr 47.71 176   P        P          09 41 56.1 +0.1
AAK    Ala-Archa      47.85 303   PcP      PcP        09 43 25.8   0.0
       comp=Z,1.2nm,0.6s,baz=176,slow=20,SNR=2.7
AAK    Ala-Archa      47.85 303ceP         P          09 41 57.9 +0.7
AAK                               pmax     pmax
       comp=Z,5.0nm,1.3s
AAK    Ala-Archa      47.85 303   P        P          09 41 58.2 +1.1
WRAB   Tennant Creek  47.88 176ceP         P          09 41 57.4 +0.1
WRAB                              pmax     pmax
       comp=Z,23nm,0.9s
WRAB   Tennant Creek  47.88 176   P        P          09 41 56.8  -0.5
WRA    Warramunga Arr 47.88 176   P        P          09 41 57.6 +0.3
       comp=Z,23nm,0.8s,baz=352,slow=8.3,SNR=32
WRA    Warramunga Arr 47.88 176   P        P          09 41 57.0  -0.3
WB2    Warramunga Arr 47.88 176   P        P          09 41 57.4 +0.1
WR0    Warramunga Arr 47.91 176   P        P          09 41 57.6 +0.1
NRIK   Noril'sk       48.38 341   P        P          09 41 60.0  -0.7
       comp=Z,1.3nm,0.5s,baz=130,slow=7.5,SNR=4.4
NRIK   Noril'sk       48.38 341 i P        P          09 42 00.1  -0.5
NRIK                              pmax     pmax
       comp=Z,5.0nm,1.1s
ARSB   Arslanbob      49.04 302   P        P          09 42 04.3  -2.0
ARSB                              pmax     pmax
       comp=Z,12nm,1.1s
ARSB   Arslanbob      49.04 302   P        P          09 42 04.3  -2.0
ARSB                              IAmb     IAmb       09 42 08.9
       comp=Z,12nm,1.1s
CTA    Charters Tower 50.02 162   P        P          09 42 14.1 +0.4
CTA                               pmax     pmax
       comp=Z,31nm,0.9s
CTAO   Charters Tower 50.02 162   P        P          09 42 14.1 +0.4
CTAO                              pmax     pmax
       comp=Z,28nm,0.9s
PSAB2  Pilbara Seismi 50.69 194   P        P          09 42 18.6  -0.2
PSAB2                             IAmb     IAmb       09 42 21.1
       comp=Z,16nm,1.1s
PSAB1  Pilbara Seismi 50.71 194   P        P          09 42 18.3  -0.6
PSAB1                             IAmb     IAmb       09 42 20.2
       comp=Z,9.3nm,0.8s
KK31   Karatay Array  50.75 304   P        P          09 42 20.0 +0.8
KK31                              pmax     pmax
       comp=Z,7.0nm,0.9s
KK31   Karatay Array  50.75 304   P        P          09 42 20.0 +0.8
KK31                              IAmb     IAmb       09 42 21.3
       comp=Z,7.3nm,0.9s
KKAR   Karatay Array  50.75 304   P        P          09 42 19.3 +0.1
KKAR   Karatay Array  50.75 304   P        P          09 42 19.3 +0.1
BVAR   Borovoye Array 50.85 317   PcP      PcP        09 43 36.3  -0.1
       comp=Z,2.1nm,0.5s,baz=125,slow=3.9,SNR=6.8
BRVK   Borovoye       50.92 317ceP         P          09 42 21.1 +0.8
BRVK                              pmax     pmax
       comp=Z,5.0nm,1.3s
BRVK   Borovoye       50.92 317   P        P          09 42 20.0  -0.3
BRVK                              IAmb     IAmb       09 42 32.1
       comp=Z,5.1nm,0.8s
GAR    Garm           51.30 299   P        P          09 42 23.7 +0.2
GAR                               IAmb     IAmb       09 42 25.0
       comp=Z,9.8nm,0.8s
AS31   Alice Springs  51.56 177   P        P          09 42 25.9 +0.6
AS31                              IAmb     IAmb       09 42 27.6
       comp=Z,4.4nm,0.7s
ASAR   Alice Springs  51.56 177   P        P          09 42 26.2 +0.8
       comp=Z,11nm,0.6s,baz=11,slow=11,SNR=152
ASAR                              PcP      PcP        09 43 40.0 +0.7
       comp=Z,2.0nm,0.8s,baz=360,slow=2.9,SNR=5.0
ASAR   Alice Springs  51.56 177   P        P          09 42 25.3  -0.1
CHGR   Chuyangaron    52.24 299   P        P          09 42 28.8  -1.7
KBL    Kabul          53.03 294   P        P          09 42 36.4  -0.1
KBL                               pmax     pmax
```

```
       comp=Z,11nm,1.3s
KBL    Kabul          53.03 294   P        P          09 42 36.4  -0.1
KBL                               IAmb     IAmb       09 42 39.4
       comp=Z,11nm,1.3s
ABKAR  Akbulak array  57.51 313   P        P          09 43 08.1  -0.2
ARU    Arti           57.74 321c iP        P          09 43 10.0 +0.1
ARU                                                   09 45 13.3
ARU                               S        S          09 51 10.7 +2.0
ARU                               SS       SS         09 54 59.9 +1.2
ARU                               pmax     pmax
       comp=Z,9.0nm,1.1s
ARU    Arti           57.74 321   P        P          09 43 09.6  -0.3
ARU                               IAmb     IAmb       09 43 10.6
       comp=Z,8.5nm,1.1s
MLY    Manley         59.69  29   P        P          09 43 23.1  -0.3
STKA   Stephens Creek 60.45 170   P        P          09 43 29.2 +0.4
       comp=Z,7.8nm,0.7s,baz=350,slow=6.4,SNR=14
STKA   Stephens Creek 60.45 170   P        P          09 43 28.9 +0.1
MCK    McKinley       60.54  30   P        P          09 43 29.2   0.0
MCK                               pmax     pmax
       comp=Z,17nm,1.4s
MCK    McKinley       60.54  30   P        P          09 43 29.2   0.0
RND    Reindeer       60.61  31   P        P          09 43 29.1  -0.6
RND                               pmax     pmax
       comp=Z,6.0nm,0.8s
RND    Reindeer       60.61  31   P        P          09 43 29.1  -0.6
RND                               IAmb     IAmb       09 43 29.8
       comp=Z,5.7nm,0.8s
GEYT   Alibeck        60.90 300   P        P          09 43 32.2 +0.2
       comp=Z,0.9nm,0.4s,baz=33,slow=30,SNR=1.9
GEYT   Alibeck        60.90 300   P        P          09 43 31.1  -1.0
ILAR   Eielson Array  61.35  29   P        P          09 43 33.1  -1.5
       comp=Z,0.6nm,0.8s,baz=262,slow=5.8,SNR=7.9
ILAR   Eielson Array  61.35  29   P        P          09 43 33.7  -0.9
ILAR   Eielson Array  61.35  29   P        P          09 43 33.7  -0.9
BMAR   Burnt Mountain 62.01  26   P        P          09 43 40.2 +1.1
NWAO   Narrogin (SRO) 62.24 194   P        P          09 43 41.5 +0.6
NWAO                              pmax     pmax
       comp=Z,13nm,0.9s
NWAO   Narrogin (SRO) 62.24 194   P        P          09 43 41.5 +0.6
NWAO   Narrogin (SRO) 62.24 194   P        P          09 43 41.4 +0.5
NWAO                              IAmb     IAmb       09 43 41.9
       comp=Z,11nm,0.9s
KIRV   Kirov          62.41 324 i P        P          09 43 41.7  -0.1
RAGM   Ragged Mountai 62.95  34   P        P          09 43 44.8  -0.6
VRDI   Verde Repeater 63.39  33   P        P          09 43 48.7 +0.2
VRDI                              IAmb     IAmb       09 44 06.1
       comp=Z,12nm,1.5s
BCAR   Beaver Creek A 63.82  30   P        P          09 43 51.6 +0.3
BALM   Baldy          63.95  33   P        P          09 43 52.5 +0.2
BALM                              IAmb     IAmb       09 44 03.7
       comp=Z,10nm,1.3s
DAWY   Dawson         64.67  29   P        P          09 43 57.0 +0.2
DAWY                              IAmb     IAmb       09 44 08.8
       comp=Z,9.2nm,1.4s
EPYK   Eagle Plains   65.25  26   P        P          09 44 00.9 +0.4
INK    Inuvik         65.96  24   P        P          09 44 03.9  -1.1
       comp=Z,1.0nm,0.5s,baz=307,slow=6.5,SNR=7.6
INK    Inuvik         65.96  24   P        P          09 44 04.5  -0.4
INK                               pmax     pmax
       comp=Z,6.0nm,1.5s
INK    Inuvik         65.96  24   P        P          09 44 04.5  -0.4
C36M   Paulatuk       68.84  22   P        P          09 44 23.1  -0.1
C36M                              IAmb     IAmb       09 44 24.2
       comp=Z,12nm,1.5s
ARCES  ARCESS Array B 69.30 339   P        P          09 44 25.5  -0.6
       comp=Z,6.4nm,1.0s,baz=38,slow=6.1,SNR=5.1
OBN    Obninsk        70.12 323 i P        P          09 44 30.4  -0.9
OBN                               pmax     pmax
       comp=Z,7.0nm,0.5s
KBZ    Khabaz         70.22 310   P        P          09 44 32.2   0.0
       comp=Z,5.0nm,0.8s,baz=12,slow=13,SNR=6.8
KBZ    Khabaz         70.22 310 i P        P          09 44 32.6 +0.4
KBZ                               pmax     pmax
       comp=Z,5.0nm,0.9s
FIA1   FINESS Array S 72.64 331   P        P          09 44 46.3  -0.1
FIA1                              IAmb     IAmb       09 44 56.6
       comp=Z,12nm,1.1s
FINES  FINESS Array B 72.64 331   P        P          09 44 46.0  -0.5
       comp=Z,3.1nm,0.5s,baz=64,slow=5.3,SNR=18
FINES  FINESS Array B 72.64 331   P        P          09 44 46.2  -0.3
FINES  FINESS Array B 72.64 331   P        P          09 44 46.2  -0.3
RES    Resolute Bay   73.10  12   P        P          09 44 48.5  -0.5
       comp=Z,1.6nm,0.7s,baz=334,slow=4.9,SNR=9.6
RES    Resolute Bay   73.10  12   P        P          09 44 49.4 +0.4
RES                               pmax     pmax
       comp=Z,7.0nm,1.4s
RES    Resolute Bay   73.10  12   P        P          09 44 49.4 +0.4
YKA    Yellowknife Ar 75.53  26   P        P          09 45 02.7  -0.6
       comp=Z,0.3nm,0.6s,baz=305,slow=5.5,SNR=11
AKASG  Malin Array Be 75.98 320   P        P          09 45 05.3  -0.8
       comp=Z,2.6nm,0.6s,baz=57,slow=6.2,SNR=14
BRTR   Keskin Array B 78.17 309   P        P          09 45 19.1 +0.3
       comp=Z,2.2nm,0.9s,baz=104,slow=5.2,SNR=9.9
NC405  NORSAR Array S 78.64 335   P        P          09 45 20.5  -0.4
NB2    NORSAR Subarra 78.88 335   P        P          09 45 21.3  -0.9
       comp=Z,1.1nm,0.6s,baz=49,slow=5.6
NOA    NORSAR Array B 78.88 335   P        P          09 45 21.4  -0.9
       comp=Z,1.7nm,0.7s,baz=50,slow=5.5,SNR=5.9
BURAR  Bucovina Array 79.77 319   P        P          09 45 27.5   0.0
BURAR  Bucovina Array 79.77 319   P        P          09 45 27.9 +0.5
KWP    Kalwaria Pacla 80.15 321   P        P          09 45 30.2 +0.9
KWP                               pmax     pmax
       comp=Z,46nm,1.5s
BMO    Blue Mountains 84.07  42   P        P          09 45 50.5 +0.3
BMO                               pmax     pmax
       comp=Z,3.0nm,1.0s
CLL    Collm          84.23 326 i P        P          09 45 51.8 +1.1
       comp=Z,19nm,1.4s
CLL                             ePP        PP         09 49 05.0 +0.5
CLL    Collm          84.23 326 i P        P          09 45 51.8 +1.1
CLL                               pmax     pmax
       comp=Z,284nm,1.4s
GERES  GERESS Array B 85.42 324   P        P          09 45 56.7  -0.1
       comp=Z,0.4nm,0.5s,baz=54,slow=5.0,SNR=1.4
PAHR   Pah Rah Range  85.64  47   P        P          09 45 58.2   0.0
PAHR                              IAmb     IAmb       09 45 59.2
       comp=Z,8.3nm,1.3s
MFID   Camas Ranch    85.77  42   P        P          09 45 58.4  -0.3
MFID                              IAmb     IAmb       09 46 00.3
       comp=Z,9.4nm,1.4s
DLMT   Dillon         86.48  39   P        P          09 46 01.2  -1.0
DLMT                              IAmb     IAmb       09 46 03.5
       comp=Z,4.4nm,0.9s
KVN    Kaiserville    86.83  47   P        P          09 46 05.0 +0.9
KVN                               pmax     pmax
       comp=Z,4.0nm,0.9s
KVN    Kaiserville    86.83  47   P        P          09 46 05.0 +0.9
KVN                               IAmb     IAmb       09 46 05.4
       comp=Z,4.2nm,0.9s
NVAR   Mina Array Bea 87.04  48   P        P          09 46 05.2   0.0
       comp=Z,1.3nm,0.7s,baz=294,slow=5.4,SNR=10
NVAR   Mina Array Bea 87.04  48   P        P          09 46 06.1 +0.8
ELK    Elko           87.67  44   P        P          09 46 09.4 +1.1
       comp=Z,0.8nm,0.7s,baz=244,slow=1.0,SNR=2.4
PDAR   Pinedale Array 89.81  40   P        P          09 46 18.4 +0.1
       comp=Z,0.6nm,0.7s,baz=298,slow=3.2,SNR=5.7
PDAR   Pinedale Array 89.81  40   P        P          09 46 17.4  -0.9
ULM    Lac du Bonnet  91.36  28   P        P          09 46 24.2  -0.8
       comp=Z,1.9nm,0.8s,baz=317,slow=5.1,SNR=4.5
SDV    Santo Domingo 137.39  33   PKP      PKPdf      09 52 42.9  -1.1
       comp=Z,5.4nm,0.8s,baz=281,slow=2.9,SNR=6.4
ATAH   Atahualpa     144.81  59   PKP      PKPdf      09 52 57.7 +0.2
       comp=Z,8.3nm,0.8s,baz=329,slow=5.9,SNR=6.2
PTGA   Pitinga       150.59  24   PKPbc    PKPbc      09 53 11.8  -0.2
       comp=Z,9.7nm,0.9s,baz=40,slow=2.2,SNR=13
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JMA ***26*** *09:43:17.5±0.1, 23.°27N×121.°55E, h0^{km}, M3.4*
TAP ***26*** *09:43:19.7, 23.°30N×121.°41E, h17^{km}, ML3.7, C*
ISC 26 09:43:19.4±0.8**, 23.°29N**±0.°01×**121.°48E**±0.°02**, h18**^{km}±5^{km}**,**
n115, $\sigma 0^{s}88$/209**, 17C-4D, Taiwan**

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Code   Station Name       Δ°  AZ°    Phase ID       Time     Res
                                     Op    ISC     h  m  s   ISC
TWF1   Yuli             0.18 292⇓iP        Pb     09 43 23.9  -0.2
       baz=299
TWF1                            eS         Sg     09 43 27.1  -0.1
       baz=299
FULB   Fuli             0.19 243⇑iP        Pb     09 43 24.2  -0.1
       baz=217
FULB                             S         Sg     09 43 27.6 +0.2
       baz=217
YULB   Yu-li            0.20 303⇓iP        Pb     09 43 24.1  -0.3
       baz=312
YULB                            i S        Sb     09 43 27.4  -0.4
       baz=312
HGSD   Ruisui           0.21 347⇑iP        Pb     09 43 24.8   0.0
       baz=13
HGSD                            eS         Sg     09 43 30.1 +2.1
       baz=13
CHKT   Chengkung        0.21 209⇑iP        Pg     09 43 25.2 +0.7
       baz=180
CHKT                            i S        Sg     09 43 29.3 +1.3
       baz=180
EHY    Hungye           0.26 327⇓iP        Pb     09 43 25.4  -0.2
       baz=334
EHY                              S         Sb     09 43 29.5  -0.4
       baz=334
EGFH   Guangfu          0.38 353 eP        Pg     09 43 27.6 +0.2
       baz=352
EGFH                            eS         Sb     09 43 34.2 +0.8
       baz=352
ELDTW  Lidau            0.43 257⇑iP        Pg     09 43 27.3  -1.0
       baz=252
ELDTW                            S         Sg     09 43 32.6  -1.7
       baz=252
ESL    Shilin           0.53 356 eP        Pb     09 43 30.3 +0.1
       baz=356
ESL                             eS         Sb     09 43 36.1  -1.4
       baz=356
VWDT   VWDT             0.56 327⇑iP        Pb     09 43 30.3  -0.4
       baz=341
VWDT                            eS         Sb     09 43 37.8  -0.6
       baz=341
TWH    Lutao            0.57 180 eP        Pb     09 43 31.2 +0.3
       baz=162
TWH                             eS         Sg     09 43 39.8 +1.3
       baz=162
TWGBT  Beinan           0.59 218⇑iP        Pb     09 43 30.3  -1.0
       baz=211
TWGBT                           eS         Sb     09 43 38.3  -1.1
       baz=211
TWG    Pinlang          0.59 219⇑iP        Pb     09 43 30.3  -1.0
       baz=211
TWG                             eS         Sb     09 43 38.5  -0.9
       baz=211
TTN    Taitung          0.61 210 i P       Pg     09 43 32.0 +0.4
       baz=216
TTN                             eS         Sg     09 43 41.5 +1.8
       baz=216
ENLB   Shoufeng         0.62  10   P       Pg     09 43 32.2 +0.4
       baz=27
ENLB                            eS         Sn     09 43 43.7 +0.6
       baz=27
ALS    Alishan          0.66 290⇑iP        Pb     09 43 32.0  -0.6
       baz=292
ALS                             eS         Sb     09 43 40.4  -1.1
       baz=292
STYT   Tauyuan          0.67 260 ⇑P        Pb     09 43 31.7  -1.0
       baz=257
STYT                            eS         Sb     09 43 39.8  -1.9
       baz=257
SSLB   Suanglung        0.69 316⇑iP        Pb     09 43 32.2  -0.9
       baz=321
SSLB                            eS         Sb     09 43 40.8  -1.5
       baz=321
HWA    Hwalien          0.70  10 eP        Pb     09 43 31.9  -1.1
       baz=3.0
HWA                             eS         Sn     09 43 44.7  -0.1
       baz=3.0
WHYT   Xinyi Township   0.70 306   P       Pb     09 43 33.0  -0.2
       baz=314
WHYT                            eS         Sb     09 43 42.2  -0.4
       baz=314
OWD    Renai            0.72 337⇑iP        Pb     09 43 32.8  -0.8
       baz=344
OWD                             eS         Sb     09 43 41.4  -1.9
       baz=344
TPUB   Ta-pu            0.78 271⇑iP        Pb     09 43 34.1  -0.4
       baz=277
TPUB                            eS         Sb     09 43 44.0  -0.8
       baz=277
WTP    Ta-pu            0.80 267⇑iP        Pb     09 43 34.5  -0.3
       baz=266
WTP                             eS         Sb     09 43 45.1  -0.1
       baz=266
SMLT   Sun Moon Lake    0.80 318⇑iP        Pb     09 43 34.2  -0.6
       baz=330
SMLT                            eS         Sb     09 43 43.8  -1.6
       baz=330
CHN5   Tsauling         0.80 293⇑iP        Pb     09 43 34.8   0.0
       baz=295
CHN5                            eS         Sb     09 43 44.9  -0.4
       baz=295
TWD    Chiawan          0.80   8 eP        Pb     09 43 34.3  -0.5
TWD                             eS         Sb     09 43 45.6 +0.3
CHN4   Tsaushan         0.82 275⇑iP        Pb     09 43 35.0  -0.1
       baz=275
CHN4                            eS         Sb     09 43 45.9 +0.1
       baz=275
CHGB   Renai            0.82 340⇑iP        Pb     09 43 34.7  -0.6
       baz=346
CHGB                            eS         Sb     09 43 46.5 +0.3
       baz=346
SLGT   Liugui           0.82 249   P       Pb     09 43 34.6  -0.5
       baz=246
SLGT                            eS         Sb     09 43 45.1  -0.8
       baz=246
TYC    Yuchr            0.84 317   P       Pb     09 43 35.0  -0.5
       baz=332
TYC                             eS         Sb     09 43 46.0  -0.5
       baz=332
ECL    Taimali          0.84 215   P       Pb     09 43 33.8  -1.7
       baz=209
ECL                             eS         Sb     09 43 45.5  -0.9
       baz=209
SGST   Jiashian         0.85 256   P       Pb     09 43 34.6  -1.0
       baz=254
SGST                            eS         Sb     09 43 46.3  -0.5
       baz=254
WJS    Zhushan          0.87 308 eP        Pb     09 43 36.4 +0.4
       baz=322
WJS                             eS         Sn     09 43 49.3 +0.2
       baz=322
WHF    Hehuan Shan      0.88 347 i P       Pb     09 43 35.7  -0.7
       baz=4.0
WHF                             eS         Sg     09 43 48.9 +0.6
       baz=4.0
CHN1   Nanshi           0.88 264   P       Pb     09 43 36.3 +0.1
       baz=262
CHN1                            eS         Sg     09 43 48.7 +0.5
       baz=262
NACB   Ninganchiao      0.89   7   P       Pb     09 43 35.2  -1.2
       baz=360
NACB                            eS         Sb     09 43 47.3  -0.6
       baz=360
DPDB   Guoxing          0.90 326 eP        Pb     09 43 35.6  -1.0
       baz=338
DPDB                            eS         Sb     09 43 47.9  -0.4
       baz=338
SNST   Tainan City      0.90 266   P       Pb     09 43 36.6   0.0
       baz=265
SNST                            eS         Sb     09 43 48.7 +0.4
       baz=265
TWK    Hsinying         0.91 269   P       Pb     09 43 36.6  -0.1
       baz=268
TWK                             eS         Sb     09 43 49.1 +0.6
       baz=268
ETLH   Xiulin Townshi   0.92   0 eP        Pb     09 43 35.8  -1.1
       baz=6.0
ETLH                            eS         Sb     09 43 48.8  -0.1
       baz=6.0
WGK    Gukeng           0.93 296   P       Pb     09 43 37.6 +0.6
       baz=298
WGK                             eS         Sn     09 43 51.0 +0.5
       baz=298
WNT    Mingjian         0.94 309 i P       Pb     09 43 37.7 +0.5
       baz=313
WNT                             eS         Sn     09 43 50.9 +0.1
       baz=313
SSD    Sandimen         0.95 236 eP        Pb     09 43 36.0  -1.3
       baz=227
SSD                             eS         Sb     09 43 47.1  -2.4
       baz=227
WDLH   Douliu           0.95 295 eP        Pb     09 43 37.7 +0.3
       baz=297
WDLH                            eS         Sn     09 43 52.5 +1.5
       baz=297
CHN2   Minshiung        0.95 285 eP        Pb     09 43 37.0  -0.4
       baz=286
CHN2                            eS         Sn     09 43 51.9 +0.8
       baz=286
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CHY	Chiayi	0.99	282	⇓iP	Pb	09 43 38.5	+0.4
	baz=283						
CHY				eS	Sn	09 43 51.9	-0.1
	baz=283						
TWT	Tachien	1.00	344	eP	Pb	09 43 38.0	-0.4
	baz=341						
TWT				eS	Sb	09 43 51.5	+0.1
	baz=341						
TDCB	Techi	1.01	343	eP	Pb	09 43 38.1	-0.4
	baz=347						
MASBT	Mashibuluo	1.03	229	P	Pb	09 43 37.5	-1.2
	baz=222						
MASBT				eS	Sb	09 43 51.5	-0.4
	baz=222						
CHN3	Shinhua	1.04	259	eP	Pg	09 43 40.6	+0.9
	baz=268						
CHN3				eS	Sg	09 43 56.7	+3.3
	baz=268						
SGLT	Jiouru	1.07	239	eP	Pb	09 43 39.3	-0.1
	baz=235						
TAW	Tawu	1.07	210	eP	Pb	09 43 38.4	-1.0
	baz=208						
EAST	Anshuo	1.07	213	eP	Pb	09 43 37.5	-2.0
	baz=208						
EAST				eS	Sb	09 43 52.8	-0.4
	baz=208						
TWM1	Shoushan	1.07	245	eP	Pg	09 43 40.8	+0.5
	baz=242						
TWM1				eS	Sg	09 43 56.1	+1.8
	baz=242						
WLGB	Puzi	1.10	280	eP	Pb	09 43 40.4	+0.5
	baz=281						
WLGB				eS	Sg	09 43 56.0	+0.9
	baz=281						
WHP	Taichung City	1.10	334	eP	Pn	09 43 40.0	-0.1
	baz=345						
WHP				eS	Sn	09 43 54.9	0.0
	baz=345						
TCU	Taichung	1.13	320	eP	Pn	09 43 40.4	0.0
	baz=323						
TCU				eS	Sn	09 43 55.7	+0.3
	baz=323						
NNSB	Datong	1.14	356	P	Pn	09 43 39.7	-0.9
	baz=12						
NNSB				eS	Sb	09 43 54.6	-0.6
	baz=12						
NNSH	Datong	1.14	356	eP	Pn	09 43 39.8	-0.9
	baz=11						
NNSH				eS	Sb	09 43 54.7	-0.6
	baz=11						
NNS	Nan Shan	1.15	355	eP	Pn	09 43 40.2	-0.6
	baz=12						
NNS				eS	Sb	09 43 55.4	-0.2
	baz=12						
WCHH	Zhanghua	1.16	313	eP	Pn	09 43 40.5	-0.2
	baz=316						
WCHH				eS	Sg	09 43 57.5	+0.5
	baz=316						
ENA	Nanau	1.16	12	P	Pn	09 43 39.8	-1.1
	baz=4.0						
ENA				eS	Sb	09 43 55.0	-0.8
	baz=4.0						
CHN8	Yiju	1.17	273	eP	Pb	09 43 41.5	+0.4
	baz=273						
CHN8				eS	Sg	09 43 58.0	+0.7
	baz=273						
SNJT	Kaohsiung City	1.18	243	i P	Pg	09 43 42.9	+0.7
	baz=241						
SNJT				eS	Sg	09 44 01.1	+3.4
	baz=241						
SCLT	Jiali	1.19	265	eP	Pg	09 43 42.4	0.0
	baz=264						
SCLT				eS	Sg	09 43 59.1	+1.2
	baz=264						
RLNB	Erlin	1.19	301	eP	Pn	09 43 41.3	+0.1
	baz=303						
RLNB				eS	Sg	09 43 58.5	+0.5
	baz=303						
WSF	Szhu	1.21	287	eP	Pn	09 43 41.8	+0.4
	baz=288						
WSF				eS	Sg	09 43 58.4	-0.1
	baz=288						
SCZT	Fangliau	1.21	221	eP	Pn	09 43 41.0	-0.4
	baz=212						
SCZT				eS	Sb	09 43 56.4	-0.6
	baz=212						
WSSB	Gushan	1.29	240	P	Pg	09 43 45.8	+1.5
	baz=239						
WSSB				eS	Sg	09 44 04.4	+3.2
	baz=239						
NSY	Sanyi	1.30	330	eP	Pb	09 43 44.3	+0.9
	baz=334						
NSY				eS	Sg	09 44 02.6	+1.0
	baz=334						
WDJ	Dajia District	1.31	324	eP	Pg	09 43 44.5	-0.2
	baz=328						
WDJ				eS	Sg	09 44 03.0	+1.3
	baz=328						
NDT	Datong Townshi	1.31	1	eP	Pn	09 43 42.4	-0.5
	baz=6.0						
NDT				eS	Sn	09 43 59.0	-1.0
	baz=6.0						
ENTT	Nioudou	1.35	3	eP	Pn	09 43 43.0	-0.5
	baz=7.0						
ENTT				eS	Sn	09 44 00.2	-0.7
	baz=7.0						
PTSB	Yuanli	1.35	329	eP	Pb	09 43 44.3	0.0
	baz=332						
PTSB				eS	Sg	09 44 04.0	+0.7
	baz=332						
TWC	Suao	1.36	14	eP	Pb	09 43 44.6	+0.2
	baz=5.0						
TWC				eS	Sn	09 43 60.0	-1.2
	baz=5.0						
WLCH	Liuqiu	1.38	228	eP	Pg	09 43 46.7	+0.8
	baz=229						
YHNB	Yeheng	1.38	356	eP	Pn	09 43 43.9	0.0
YHNB				eS	Sb	09 44 02.3	+0.1
NSK	Sanguang	1.39	356	eP	Pn	09 43 44.0	-0.1
NSK				eS	Sb	09 44 03.0	+0.6
EOS1	EOS1	1.39	25	eP	Pb	09 43 44.7	-0.2
	baz=42						
EOS1				eS	Sg	09 44 04.0	-0.4
	baz=42						
NMLH	Miaoli	1.40	333	eP	Pb	09 43 44.8	-0.2
	baz=352						
NMLH				eS	Sg	09 44 04.7	+0.1
	baz=352						
NSTT	Nanjuang	1.41	342	P	Pb	09 43 45.3	+0.1
	baz=345						
NSTT				eS	Sb	09 44 03.1	+0.2
	baz=345						
LIOB	Emei	1.42	343	P	Pb	09 43 45.8	+0.4
	baz=345						
LIOB				eS	Sb	09 44 04.2	+1.1
	baz=345						
TWE	Neicheng	1.44	7	eP	Pn	09 43 44.4	-0.3
	baz=10.0						
TWKBT	Hengchun	1.47	205	eP	Pn	09 43 44.1	-1.0
	baz=193						
TWK1	Hengchun	1.47	205	eP	Pn	09 43 44.9	-0.3
	baz=193						
TSEB	Hengchuen, Pin	1.48	201	eP	Pn	09 43 44.9	-0.3
	baz=190						
NWLT	Wulai	1.48	1	eP	Pn	09 43 45.1	-0.2
	baz=5.0						
NWLT				eS	Sb	09 44 04.9	-0.2
	baz=5.0						
WLTB	Daxi	1.57	353	eS	Sb	09 44 07.3	-0.3
	baz=7.0						
NTC	Toucheng	1.59	12	eP	Pb	09 43 49.2	+0.9
	baz=14						
NTC				eS	Sg	09 44 10.2	-0.8
	baz=14						
NHDH	Xindian Distri	1.67	1	eP	Pn	09 43 48.9	+1.1
	baz=17						
WDGT	Dungji	1.67	269	P	Pn	09 43 47.4	-0.4
	baz=269						
WDGT				eS	Sn	09 44 09.9	+1.0
	baz=269						
TIPB	Shuangxi	1.71	11	eP	Pn	09 43 48.6	+0.3
	baz=13						
TIPB				eS	Sn	09 44 09.4	-0.4
	baz=13						
PHUB	P'eng-hu	1.77	278	P	Pn	09 43 48.1	-1.0
	baz=278						
PHUB				eS	Sn	09 44 11.9	+0.7
	baz=278						
JYNG	Yonagunijimaku	1.77	49	P	Pn	09 43 49.9	+0.6
JYNG				eS	Sn	09 44 12.2	+0.8
TWB1	Santiao Chiao	1.78	15	eP	Pn	09 43 49.3	0.0
	baz=6.0						
PNG	Penghu	1.79	279	P	Pn	09 43 49.2	-0.3
	baz=263						
PNG				eS	Sn	09 44 11.4	-0.3
	baz=263						
NWF	Wu-fen Shan	1.80	9	eP	Pn	09 43 50.8	+1.1
	baz=12						
NWF				eS	Sn	09 44 12.5	+0.3
	baz=12						
WFSB	Wu-fen Shan	1.80	9	eP	Pn	09 43 50.0	+0.4
	baz=10.0						
YOJ	Yonaguni jima	1.83	50	P	Pn	09 43 50.8	+0.8
YOJ				eS	Sb	09 44 14.2	-0.7
YM01	YM01	1.85	3	eP	Pn	09 43 51.5	+1.1
	baz=2.0						
YM01				eS	Sn	09 44 14.5	+1.1
	baz=2.0						
YM04	YM04	1.86	2	eP	Pn	09 43 51.9	+1.4
	baz=19						
YM10	YM10	1.86	2	eP	Pn	09 43 49.6	-0.9
	baz=2.0						
YM05	YM05	1.87	2	eP	Pn	09 43 50.6	-0.1
	baz=2.0						
VCHM	Qimei	1.89	268	P	Pn	09 43 50.2	-0.5
	baz=267						
VCHM				eS	Sn	09 44 14.7	+0.5
	baz=267						
HATJ	Hateruma jima	2.27	70	S	Sn	09 44 23.5	-0.1
IRIF	Iriomote-Funau	2.31	63	P	Pn	09 43 57.4	+0.8
IRIF				S	Sn	09 44 25.5	+0.8
JKRS	Kuro-shima	2.50	67	P	Pn	09 44 00.2	+0.9
JKRS				S	Sn	09 44 30.2	+0.8
VWUC	VWUC	2.51	313	eP	Pn	09 43 59.5	0.0
	baz=312						
JIJ	Ishigaki jima	2.67	66	P	Pn	09 44 02.0	+0.5
JIJ				eS	Sn	09 44 32.6	-0.8
PTMZ	Houxiangcun	2.77	310	eP	Pn	09 44 02.9	-0.1
	baz=295						
JISG	Ishigakijimahi	2.90	63	P	Pn	09 44 04.9	+0.2
JISG				eS	Sn	09 44 38.4	-0.7
JTJ	Tarama	3.24	65	P	Pn	09 44 10.3	+0.8
JTJ				S	Sn	09 44 48.1	+0.5
JMJ2	Miyako jima3	3.81	67	eS	Sn	09 45 02.2	+0.6
JIKM	Ikemajima	3.81	64	eS	Sn	09 45 01.7	0.0
JOGS	Gusukube	3.88	67	eS	Sn	09 45 04.6	+1.2

*SJA **26** 09:48:58.0±0.8, 19°.79S×71°.01W, h12^{km}±4^{km}, ML3.9, MW3.8*
*IDC **26** 09:48:58.4±1.6, 19°.68S×70°.78W, h0^{km}, mb4.0/4, mb1 4.2/6, mb1mx3.8/30, mbtmp4.1/6, ML4.0/2, MS3.8/2, Ms1 3.8/2, ms1mx3.0/27, Error ellipse: s-maj=34.6km s-min=26.7km az=63.0*
*NEIC **26** 09:49:00.9±2.5, 19°.83S±0°.04×70°.90W±0°.07, h22^{km}±5^{km}, mb4.2/7, ML4.0(GUC), Error ellipse: s-maj=10.0km s-min=6.4km az=100.0*
*GUC **26** 09:49:02.6±0.6, 19°.82S×70°.80W, h39^{km}±3^{km}, ML4.0*
ISC 26 09:48:58.6±1.4**, 19°.80S**±0°.02×**70°.94W**±0°.05**, h5**^{km}±9^{km}**, n62,** σ**1**^{s}.**31**/85**, mb4.2**/7**, 5C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.80	75	⇓iP	Pb	09 49 15.0	-0.1
PSGC				i S	Sb	09 49 24.5	-1.6
PSGCX	Pisagua	0.80	75		Pb	09 49 14.7	-0.3
PSGCX	Pisagua	0.80	75	i P	Pb	09 49 15.0	0.0
PSGCX				i S	Sb	09 49 24.8	-1.4
PSGCX				IAML		09 49 28.1	
	comp=Z,1μm,0.3s						
TA01	Diego Aracena	1.04	137	⇓iP	Pb	09 49 19.1	0.0
TA01				i S	Sg	09 49 32.3	0.0
TA01				IAML		09 49 34.4	
	comp=E,7μm,0.3s						
PB11	IPOC Station P	1.21	88	⇓iP	Pb	09 49 21.6	-0.4
PB11				i S	Sg	09 49 36.8	-0.9
PB11				IAML		09 49 39.1	
	comp=N,5μm,0.3s						
PB11	IPOC Station P	1.21	88		Pb	09 49 21.7	-0.4
PB11	IPOC Station P	1.21	88	i P	Pn	09 49 21.9	-0.5
PB11				IAML		09 49 40.5	
	comp=Z,2μm,0.2s						
PATCX	Punta Patache	1.26	144	⇑iP	Pb	09 49 22.7	0.0
PATCX				i S	Sg	09 49 38.6	-0.4
PATCX				IAML		09 49 41.8	
	comp=E,3μm,0.4s						
PATCX	Punta Patache	1.26	144		Pb	09 49 22.8	0.0
PATCX	Punta Patache	1.26	144	i P	Pb	09 49 22.8	0.0
PATCX				i S	Sg	09 49 37.4	-1.6
PATCX				IAML		09 49 44.6	
	comp=Z,3μm,0.4s						
PB12	IPOC Station P	1.32	26	⇑iP	Pn	09 49 24.8	+1.1
PB12				i S	Sn	09 49 41.5	-0.2
PB12				IAML		09 49 48.2	
	comp=N,4μm,0.6s						
PB12	IPOC Station P	1.32	26		Pn	09 49 24.8	+1.1
PB12	IPOC Station P	1.32	26	i P	Pn	09 49 24.8	+1.1
PB12				i S	Sn	09 49 43.2	+1.5
PB12				IAML		09 49 47.4	
	comp=Z,3μm,0.5s						
AP01	Chacalluta	1.53	22	⇑iP	Pg	09 49 28.3	+0.3
AP01				i S	Sg	09 49 48.1	+0.2
AP01				IAML		09 49 51.8	
	comp=N,7μm,0.5s						
GO01	Chusmiza	1.65	86	eP	Pb	09 49 29.1	-0.7
GO01				i S	Sn	09 49 50.1	-0.4
GO01	Chusmiza	1.65	86		Pb	09 49 29.1	-0.7
PB08	IPOC Station P	1.72	102	⇓iP	Pb	09 49 30.0	-0.9
PB08				i S	Sn	09 49 51.4	-0.6
PB08				IAML		09 49 52.3	
	comp=N,3μm,0.5s						
PB08	IPOC Station P	1.72	102	i P	Pb	09 49 30.0	-0.9
PB08				i S	Sn	09 49 51.0	-1.0
PB08				IAML		09 49 53.4	
	comp=Z,2μm,0.5s						
PB02	IPOC Station P	1.80	147	i P	Pn	09 49 30.6	+0.2
PB02				i S	Sn	09 49 54.7	+1.0
PB02				IAML		09 49 58.3	
	comp=Z,4μm,0.5s						
PB01	IPOC Station P	1.84	132	⇑iP	Pn	09 49 31.3	+0.4
PB01				i S	Sn	09 49 54.2	-0.4
PB01				IAML		09 49 59.1	
	comp=E,4μm,0.4s						
PB01	IPOC Station P	1.84	132		Pn	09 49 31.5	+0.6
PB16	IPOC Station P	1.99	43		Pb	09 49 35.1	-0.6
PB16	IPOC Station P	1.99	43	i P	Pb	09 49 35.3	-0.4
PB16				i S	Sg	09 50 02.0	-0.7
PB16				IAML		09 50 03.1	
	comp=Z,2μm,0.4s						
PB07	IPOC Station P	2.16	153	⇑iP	Pn	09 49 35.3	0.0
PB07				i S	Sn	09 50 03.0	+0.5
PB07				IAML		09 50 14.2	
	comp=E,1μm,0.4s						
PB07	IPOC Station P	2.16	153		Pn	09 49 35.9	+0.6
PB07	IPOC Station P	2.16	153	i P	Pn	09 49 35.6	+0.2
PB07				i S	Sb	09 50 05.7	+0.4
PB07				IAML		09 50 17.3	
	comp=Z,1μm,0.6s						
PB03	IPOC Station P	2.50	154	i P	Pn	09 49 40.2	+0.2
PB03				i S	Sg	09 50 19.3	+0.4
PB03				IAML		09 50 21.2	
	comp=Z,584nm,0.6s						
PB09	IPOC Station P	2.54	142		Pn	09 49 42.5	+1.8
PB09	IPOC Station P	2.54	142	i P	Pn	09 49 41.9	+1.3
PB09				i S	Sb	09 50 18.2	+1.7
PB09				IAML		09 50 24.9	
	comp=Z,1μm,0.6s						
PB04	IPOC Station P	2.63	164		Pn	09 49 41.6	-0.2
PB04	IPOC Station P	2.63	164	i P	Pn	09 49 41.7	-0.2
PB04				i S	Sg	09 50 23.5	+0.4
PB05	IPOC Station P	3.11	167	i P	Pn	09 49 47.6	-0.8
PB05				i S	Sg	09 50 37.9	-0.8
PB05				IAML		09 50 47.2	
	comp=Z,290nm,1.0s						
PB06	IPOC Station P	3.16	156	i P	Pn	09 49 48.8	-0.3
PB06				IAML		09 50 43.5	
	comp=Z,554nm,0.7s						
LVC	Limon Verde	3.38	146	Pn	Pn	09 49 53.7	+1.4
	comp=Z,16nm,0.3s,baz=332,slow=9.9,SNR=89						
LVC				Sn	Sn	09 50 33.9	+1.0
	comp=Z,31nm,0.3s,baz=106,slow=12,SNR=6.5						
LVC				LR	LR	09 51 20.6	
	comp=Z,325nm,18.2s,baz=132,slow=42						
LVC	Limon Verde	3.38	146	i P	Pn	09 49 53.7	+1.4
LVC				i S	Sb	09 50 43.3	+2.6
LVC				IAML		09 50 50.4	
	comp=Z,222nm,0.5s						
PB15	IPOC Station P	3.66	158		Pn	09 49 55.4	-0.6
PB15	IPOC Station P	3.66	158	i P	Pn	09 49 56.4	+0.4
PB15				IAML		09 51 05.2	
	comp=Z,686nm,0.4s						
PB10	IPOC Station P	3.71	174		Pn	09 49 55.6	-1.0
PB10	IPOC Station P	3.71	174	i P	Pn	09 49 55.5	-1.0
PB10				IAML		09 51 11.5	
	comp=Z,120nm,0.7s						
LPAZ	La Paz	4.40	38	Pn	Pb	09 50 11.2	-5.5
	comp=Z,1.0nm,0.3s,baz=256,slow=5.9,SNR=17						
LPAZ	La Paz	4.40	38		Pn	09 50 10.9	+4.3
PB14	IPOC Station P	4.83	174		Pn	09 50 10.8	-1.4
PB14	IPOC Station P	4.83	174	i P	Pn	09 50 11.2	-1.0
PB14				IAML		09 51 41.6	
	comp=Z,66nm,0.5s						
GO02	Mina Guanaco	5.48	167		Pn	09 50 21.1	0.0
YJA	Yavi	5.60	116	i P	Pn	09 50 28.7	+5.8
YJA				IAML		09 50 40.2	
	comp=Z,12nm,0.6s						
YJA				IAML		09 52 00.7	
	comp=Z,6.2nm,2.5s						
SIV	San Ignacio	10.13	70	Pn	Pn	09 51 24.1	-0.8
	comp=Z,1.2nm,0.3s,baz=266,slow=10,SNR=28						
SIV				Sn	Sn	09 53 17.9	-1.0
	comp=Z,0.2nm,0.3s,baz=287,slow=17,SNR=1.1						
CPUP	Villa Florida	14.11	120	Pn	Pn	09 52 21.6	+2.5
	comp=Z,0.1nm,0.3s,baz=335,slow=11,SNR=2.9						
PTGA	Pitinga	21.79	31	P	P	09 53 49.9	-1.6
	comp=Z,3.8nm,0.3s,baz=209,slow=20,SNR=7.4						
PTGA	Pitinga	21.79	31	P	P	09 53 50.6	-0.9
PTGA				IAmb	IAmb	09 54 03.0	
	comp=Z,5.3nm,1.1s						
BDFB	Brasilia	22.22	83	P	P	09 53 54.7	-1.6
	comp=Z,2.4nm,0.4s,baz=242,slow=7.1,SNR=3.6						
BDFB	Brasilia	22.22	83	P	P	09 53 55.8	-0.6
BDFB				IAmb	IAmb	09 54 11.3	
	comp=Z,5.9nm,1.3s						
WMOK	Wichita Mounta	60.35	334	P	P	09 59 05.5	-3.1
WMOK				IAmb	IAmb	09 59 18.0	
	comp=Z,1.8nm,0.9s						
QSPA	South Pole Qui	70.38	180	P	P	10 00 15.4	+2.0
MDPB	Devils Postpil	72.89	322	P	P	10 00 27.9	-1.1
WVOR	Wild Horse Val	75.95	326	P	P	10 00 45.2	-1.4
WVOR				IAmb	IAmb	10 00 48.5	
	comp=Z,3.6nm,0.6s						
TOA0	Torodi Ar. Sit	78.60	72	P	P	10 01 00.9	-1.0
TOA0				IAmb	IAmb	10 01 11.6	
	comp=Z,3.9nm,1.1s						
TORD	Torodi Ar. Bea	78.60	72	P	P	10 01 00.7	-1.2
	comp=Z,1.2nm,0.6s,baz=258,slow=4.5,SNR=7.6						
YKA	Yellowknife Ar	88.97	341	P	P	10 01 54.1	+0.3
	comp=Z,0.4nm,0.9s,baz=139,slow=5.8,SNR=5.7						
RPZ	Rata Peaks	95.09	220	LR	LR	10 36 17.4	
	comp=Z,162nm,19.4s,baz=311,slow=30						
MKAR	Makanchi Array	145.32	33	PKPbc	PKPdf	10 08 37.7	+0.2
	comp=Z,0.8nm,0.7s,baz=337,slow=3.7,SNR=9.7						
MKAR	Makanchi Array	145.32	33		PKPdf	10 08 37.9	+0.4
KSH	Kashi	145.46	48	PKPbc	PKiKP	10 08 40.5	-1.6
KSH				PP	PP	10 12 04.0	+5.9
KSH				PKS	PKSdf	10 12 14.0	+0.3

*JMA **26** 10:15:03.6±0.2, 32°.82N×137°.96E, h372^{km}, M3.2*
*IDC **26** 10:15:05.3±0.7, 32°.73N×137°.88E, h355^{km}±11^{km}, mb3.3/5, mb1 3.3/10, mb1mx3.0/54, mbtmp4.0/10, Error ellipse: s-maj=26.5km s-min=13.5km az=60.0*
ISC 26 10:15:05.1±0.9**, 32°.76N**±0°.08×**137°.81E**±0°.07**, h341**^{km}**, n27,** σ**1**^{s}.**70**/31**, mb3.5**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTO3	TONANKAI O.B.S	1.15	342	P	Pn	10 15 52.8	+2.5
TTO2	TONANKAI O.B.S	1.17	326	P	Pn	10 15 52.8	+2.6
TTO1	TONANKAI O.B.S	1.22	315	P	Pn	10 15 52.8	+2.4
TTO4	TONANKAI O.B.S	1.26	350	P	Pn	10 15 53.0	+2.3
TTO5	TONANKAI O.B.S	1.49	357	P	Pn	10 15 54.2	+2.2
JAOM	Aogashimamukai	1.67	100	P	Pn	10 15 54.9	+1.5
JHJ	Hachijo jima 2	1.69	77	P	Pn	10 15 55.1	+1.6
	7.4nm,0.3s,baz=289,slow=18,SNR=1.3						
JHJ				S	S	10 16 35.3	+3.0
	11nm,0.3s,baz=45,slow=20,SNR=2.0						
JIE	Ise	1.87	331	P	Pn	10 15 56.3	+1.7
JTNC	Tanabenakahech	2.12	300	P	Pn	10 15 57.8	+1.4
JWY	Kouya	2.36	309	P	Pn	10 16 00.1	+1.8
JOD2	Odawara 2	2.71	23	P	Pn	10 16 02.7	+1.6
JOD2				eS	S	10 16 47.9	+1.7
JYN	Shimob	2.79	12	P	Pn	10 16 03.3	+1.4
JWT	Wachi	3.21	322	P	Pn	10 16 07.1	+1.4
JWT				S	S	10 16 55.3	+0.9
BSO1	Boso 1	3.24	54	eS	S	10 16 51.6	-2.3
JRY	Ryogami san	3.37	15	P	Pn	10 16 08.2	+1.0
JRY				eS	S	10 16 58.7	+1.5
MAT	Matsushiro	3.79	5	P	Pn	10 16 11.7	+0.4
MAT				S	S	10 17 03.8	-0.8
MJAR	Matsushiro Arr	3.79	5	P	Pn	10 16 11.7	+0.4
	0.9nm,0.3s,baz=185,slow=10.0,SNR=90						
JNU	Nakatsue	5.84	275	P	Pn	10 16 35.0	+1.2
	1.6nm,0.3s,baz=83,slow=2.9,SNR=14						
JCJ	Chichijima	6.80	145	P	Pn	10 16 40.6	-4.4
	4.4nm,0.3s,baz=19,slow=20,SNR=7.8						
JCJ				S	S	10 17 56.8	-9.3
	24nm,0.3s,baz=289,slow=22,SNR=14						
KSRS	Korea Array	9.36	303	P	Pn	10 17 16.4	+1.2
	0.4nm,0.3s,baz=116,slow=12,SNR=14						
ASAJ	Asahikawa	11.94	17	P	Pn	10 17 44.9	-1.2
	0.7nm,0.3s,baz=206,slow=13,SNR=7.7						
USRK	Ussuriysk Ar.	12.29	340	P	P	10 17 50.2	+0.1
	baz=162,slow=10.0,SNR=4.8						
SONM	Songino Array	28.06	312	P	P	10 20 26.4	+0.2
	2.0nm,0.6s,baz=121,slow=10,SNR=8.8						
MKAR	Makanchi Array	44.03	305	P	P	10 22 39.0	-1.0
	0.9nm,0.5s,baz=88,slow=9.9,SNR=16						
WRA	Warramunga Arr	52.51	184	P	P	10 23 42.9	-1.5
	0.9nm,0.3s,baz=0.2,slow=7.7,SNR=20						
ASAR	Alice Springs	56.24	184	P	P	10 24 09.6	-1.3
	0.7nm,0.5s,baz=15,slow=12,SNR=2.2						
BRTR	Keskin Array B	79.41	310	P	P	10 26 34.0	-0.4
	0.7nm,0.5s,baz=90,slow=3.8,SNR=4.1						

*IDC **26** 10:17:12.0±1.8, 0°.84S×133°.30E, h0^{km}, mb4.0/3, mb1 4.2/6, mb1mx3.7/45, mbtmp4.1/6, ML4.3/2, Error ellipse: s-maj=35.3km s-min=17.6km az=64.0*
*DJA **26** 10:17:18.3±1.1, 1°S±6°×13°3E±°, h24^{km}±12^{km}, M4.4/8, mb4.7/4, mB5.5/1, MLv4.4/8, MLv4.4/2, Mw(mB)5.0/1*
ISC 26 10:17:16.3±1.0**, 0°.69S**±0°.08×**133°.28E**±0°.06**, h28**^{km}**, n17,** σ**1**^{s}.**40**/23**, mb4.2**/3**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKPI	Ransiki, Papua	1.22	132	P	Pn	10 17 38.6	+1.1
RKPI				S	Sb	10 17 56.3	+2.3
SIJI	Sorong	2.02	265	Pn	Pn	10 17 48.9	+0.3
	2.2nm,0.3s,baz=75,slow=9.6,SNR=5.2						
SIJI				Sn	Sn	10 18 13.9	+1.0
	44nm,0.3s,baz=61,slow=13,SNR=12						
SWI	Sorong	2.03	265	P	Pn	10 17 49.1	+0.5
SWI				S	Sn	10 18 13.9	+0.8
FAKI	Fak Fak	2.45	205	P	Pn	10 17 55.1	+0.7
BNDI	Bandanaira	5.09	221	P	Pn	10 18 31.5	+0.7
BNDI				S	Sn	10 19 29.1	+0.5
MSAI	Masohi	5.09	239	P	Pn	10 18 32.3	+1.5
LBMI	Labuha	5.78	270	P	Pn	10 18 42.1	+1.8
	0.2nm0.2nm46nm,0.9s						
AAI	Ambon	5.89	240	P	Pn	10 18 42.7	+0.9
	0.3nm42nm,0.4s						
NLAI	Namlea	6.68	248	P	Pn	10 18 55.5	+2.9
SANI	Sanana	7.42	259	P	Pn	10 19 02.6	-0.1
FITZ	Fitzroy Crossi	18.86	203	P	P	10 21 31.6	-2.9
	1.0nm,0.3s,baz=32,slow=12,SNR=17						
FITZ				S	Sn	10 24 46.3	-19
	0.0nm,0.3s,baz=58,slow=15,SNR=1.2						
WRA	Warramunga Arr	19.17	177	P	P	10 21 36.0	-1.8
	0.9nm,0.3s,baz=357,slow=12,SNR=16						
WRA				S	Sn	10 24 59.0	-14
	baz=351,slow=21,SNR=1.5						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ASAR	Alice Springs	22.85	179	P	P	10 22 16.9	-0.7
	4.6nm,0.5s,baz=359,slow=10,SNR=77						
ASAR				S	S	10 26 25.6	+0.1
	1.1nm,1.0s,baz=4.6,slow=20,SNR=4.9						
STKA	Stephens Creek	32.00	167	P	P	10 23 39.3	-1.1
	1.8nm,0.5s,baz=336,slow=13,SNR=5.1						
MKAR	Makanchi Array	64.92	324	P	P	10 27 53.6	+0.2
	0.3nm,0.5s,baz=127,slow=7.7,SNR=4.6						
KSH	Kashi	65.78	314	P	P	10 27 59.0	-0.2
KSH				pP	pP	10 28 04.3	-3.8
KSH				PcP	PcP	10 28 29.5	-0.8
KSH				PcS		10 32 32.0	
KSH				S	S	10 36 45.0	+0.7
KSH	Kashi	65.78	314	SS	SS	10 41 04.3	+5.1

MOS ***26*** *10:26:02.4±1.0, 51°.29N×178°.91W, h47km, mb4.9/49,*
Error ellipse: s-maj=7.4km s-min=5.4km az=90.3

IDC ***26*** *10:26:02.1±2.4, 51°.37N×178°.90W, h30km±16km, mb4.3/35,*
mb1 4.4/37, mb1mx4.3/54, mbtmp4.5/37, ML2.8/1, MS3.6/19,
Ms1 3.6/19, ms1mx3.4/41, Error ellipse: s-maj=14.8km
s-min=9.0km az=157.0

AEIC ***26*** *10:26:04±2.5, 51°.25N±0°.09×178°.76W±0°.09, h20km±4km,*
ML4.5/38, mb4.8/265(NEIC), Error ellipse: s-maj=13.2km
s-min=7.2km az=157.0

ISC 26 10:26:05.5±0.7, **51°.35N**±0°.07×**178°.91W**±0°.03, **h59**km±5km,
n763, σ1s.09/764, **mb4.8**/164, **MS3.6**/23, **38C-9D,**
Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAEA	Gareloi East	0.44	13		Pn	10 26 15.2	-1.6
TASE	Tanaga Southea	0.72	48		Pn	10 26 18.6	-1.4
TANO	Tanaga North	0.75	41		Pn	10 26 19.2	-1.0
TAFP	Tanaga Falls P	0.79	46		Pn	10 26 19.5	-1.4
TAPA	Tanaga Point A	0.82	55		Pn	10 26 19.8	-1.4
KIMD	Kanaga Island	1.12	68		Pn	10 26 23.1	-2.0
KIKV	Kanaga Island	1.20	63		Pn	10 26 24.8	-1.4
KIWB	Kanaga Island	1.20	65		Pn	10 26 34.3	+8.1
KIWB					Sn	10 27 01.3	+20
KICM	Kanaga Island	1.21	61		Pn	10 26 25.3	-0.9
KIRH	Kanaga Island	1.25	63		Pn	10 26 25.6	-1.2
ADK	Adak	1.48	68	P	Pn	10 26 28.3	-1.6
ADK	Adak	1.48	68		Pn	10 26 28.2	-1.6
ADK					Sn	10 26 47.7	-0.6
ADK	Adak	1.48	68		Pn	10 26 28.4	-1.6
ADK				Sn	Sn	10 26 47.5	-0.7
ADAG	Mount Adagdak	1.57	66		Pn	10 26 30.2	-0.9
GSSP	Great Sitkin S	1.85	65		Pn	10 26 34.3	-0.6
GSTD	Great Sitkin T	1.86	67		Pn	10 26 34.2	-0.8
GSTD					Sn	10 26 57.4	0.0
GSMY	Great Sitkin M	1.90	68		Pn	10 26 34.6	-1.0
GSTR	Great Sitkin T	1.92	66		Pn	10 26 35.4	-0.5
ATKA	Atka Island	3.05	72		Pn	10 26 50.4	-0.7
ATKA	Atka Island	3.05	72		Sn	10 27 27.5	+1.1
KOKL	Mount Kliuchef	3.08	70		Pn	10 26 52.0	+0.4
KOFP	Korovin Flat P	3.12	71		Pn	10 26 53.0	+0.7
SMY	Shemya	4.53	290	P	Pn	10 27 11.2	-0.3
SMY	Shemya	4.53	290	Pn	Pn	10 27 11.1	-0.3
SMY						10 27 11.8	
NIKH	Nikolski High	6.39	71		Pn	10 27 37.8	+0.8
NIKH	Nikolski High	6.39	71		Sn	10 28 51.8	+3.3
OKSP	Okmok Steeple	6.78	70		Pn	10 27 43.7	+1.4
SPIA	Saint Paul Isl	7.72	38	Pn	Pn	10 27 55.5	+0.4
MGOD	Makushin Gods	7.73	67		Pn	10 27 56.3	+1.0
MREP	Makushin Rep't	7.81	67		Pn	10 27 57.1	+0.8
MSW	Makushin Switc	7.81	66		Pn	10 27 57.1	+0.7
MSW					Sn	10 29 27.9	+4.6
MNAT	Makushin Natee	7.86	66		Pn	10 27 59.0	+2.0
UNV	Unalaska Valle	7.95	67		Pn	10 27 59.5	+1.2
UNV	Unalaska Valle	7.95	67		Sn	10 29 30.3	+3.6
AKBBA	Akutan Broad B	8.34	66		Pn	10 28 06.0	+2.4
AKUT	Akutan	8.44	66	Pn	Pn	10 28 06.6	+1.7
SSBA	Shishaldin	9.53	63		Pn	10 28 21.2	+1.3
FALS	False Pass	9.95	63	Pn	Pn	10 28 26.4	+0.9
SDPT	Sand Point	11.71	63	Pn	Pn	10 28 49.0	-0.6
CNBA	Chernabura Isl	12.11	66	Pn	Pn	10 28 52.8	-2.3
GAMB	Gambell	13.03	14		Pn	10 29 09.4	+1.9
CHGN	Chignik	13.06	60	Pn	Pn	10 29 06.6	-1.4
PET	Petropavlovsk	13.86	286	eP	P	10 29 24.4	-0.9
PET				pmax	pmax		
	comp=Z,12nm,1.0s						
PET				MLR	MLR		
	comp=Z,300nm,18.0s						
PEA0B	Petropavlovsk-	14.43	286	Pn	Pn	10 29 27.3	+1.0
PETK	Petropavlovsk-	14.43	286	Pn	Pn	10 29 25.3	-1.1
	comp=Z,0.2nm,0.3s,baz=98,slow=14,SNR=4.6						
PETK				Sn	Sn	10 32 04.7	-0.1
	baz=96,slow=23,SNR=1.4						
PETK				LR	LR	10 34 47.1	
	comp=Z,297nm,21.8s,baz=64,slow=36						
PETK	Petropavlovsk-	14.43	286	Pn	P	10 29 28.7	-3.0
CHIR	Chirikof Islan	14.51	63	Pn	Pn	10 29 27.9	+0.6
ANM	Nome	15.01	23	P	P	10 29 35.9	-2.1
ANM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ANM	Nome	15.01	23	Pn	P	10 29 36.0	-2.1
SII	Sitkinak Islan	15.41	61	Pn	Pn	10 29 37.0	-2.1
SII				IAmb	IAmb	10 29 54.8	
	comp=Z,46nm,0.7s						
OHAK	Old Harbor	16.01	59		Pn	10 29 42.3	-4.3
OHAK				IAmb	IAmb	10 29 56.8	
	comp=Z,23nm,0.6s						
SVW2	Sparrevohn	16.14	44	Pn	P	10 29 50.2	-0.3
KDAK	Kodiak Island	16.49	57	Pn	Pn	10 29 49.0	-3.7
	comp=Z,4.2nm,0.3s,baz=248,slow=9.1,SNR=61						
KDAK				Sn	Sn	10 32 49.2	-5.4
	comp=Z,0.4nm,0.3s,baz=336,slow=20,SNR=1.6						
KDAK	Kodiak Island	16.49	57	P	Pn	10 29 49.0	-3.7
KDAK	Kodiak Island	16.49	57	Pn	Pn	10 29 49.3	-3.4
RSO	Redoubt South	17.15	48	Pn	P	10 30 02.0	0.0
HOM	Homer	17.43	51	Pn	P	10 30 05.2	+0.5
HOM				IAmb	IAmb	10 30 05.7	
	comp=Z,105nm,1.3s						
CNPM	China Poot	17.59	52	Pn	P	10 30 06.4	-0.2
BRLK	Bradley Lake	17.82	51	Pn	P	10 30 09.1	-0.1
BILL	Bilibino	18.23	342	deP	Pn	10 30 15.7	+1.7
BILL				pmax	pmax		
	comp=Z,29nm,1.1s						
BILL	Bilibino	18.23	342	P	Pn	10 30 14.3	+0.3
PPLA	Purkeypile	18.38	41	P	Pn	10 30 16.7	+0.8
PPLA				IAmb	IAmb	10 30 35.6	
	comp=Z,34nm,0.9s						
SEW	Seward	18.61	51	P	P	10 30 16.7	-1.0
RC01	Rabbit Creek A	18.76	47	P	Pn	10 30 20.7	+0.3
MA2	Magadan	18.91	308	P	Pn	10 30 22.5	+0.3
	comp=Z,0.4nm,0.3s,baz=87,slow=14,SNR=4.4						
MA2	Magadan	18.91	308	ceP	Pn	10 30 23.4	+1.1
MA2				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KTH	Kantishna Hill	19.18	40	P	Pn	10 30 25.1	-0.5
KTH				IAmb	IAmb	10 30 29.4	
	comp=Z,53nm,0.8s						
PMR	Palmer	19.20	46	P	Pn	10 30 25.4	-0.2
PMR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PMR	Palmer	19.20	46	P	Pn	10 30 25.4	-0.2
SEY	Seymchan	19.22	318	P	Pn	10 30 25.6	-0.3
	comp=Z,0.3nm,0.3s,baz=120,slow=15,SNR=11						
GHO	Glory Hole Cre	19.35	46	P	P	10 30 25.3	-0.6
TRF	Thorofare Moun	19.39	40	P	P	10 30 27.0	+0.5
TRF				IAmb	IAmb	10 30 35.4	
	comp=Z,41nm,1.0s						
BPAW	Bear Paw Mtn.	19.41	38	P	Pn	10 30 28.0	-0.1
IMAR	Indian Mountai	19.43	32	P	Pn	10 30 28.1	-0.3
KNK	Knik Glacier	19.45	47	P	Pn	10 30 27.8	-0.8
SML	Sawmill	19.62	46	P	P	10 30 28.6	-0.3
SML				pmax	pmax		
	comp=Z,19nm,1.0s						
SML	Sawmill	19.62	46	P	P	10 30 28.6	-0.3
GLI	Glacier Island	19.94	49	P	P	10 30 29.3	-3.0
GLI				IAmb	IAmb	10 30 37.6	
	comp=Z,17nm,0.6s						
MLY	Manley	19.96	36	P	Pn	10 30 33.9	-0.7
RND	Reindeer	19.97	41	P	P	10 30 32.8	+0.2
RND				pmax	pmax		
	comp=Z,17nm,0.6s						
RND	Reindeer	19.97	41	P	P	10 30 32.9	+0.2
RND				IAmb	IAmb	10 30 40.4	
	comp=Z,17nm,0.6s						
BWN	Browne	20.04	39	P	Pn	10 30 35.0	-0.5
BWN				IAmb	IAmb	10 30 42.5	
	comp=Z,80nm,1.1s						
MCK	McKinley	20.06	40	P	P	10 30 33.9	+0.2
MCK				pmax	pmax		
	comp=Z,19nm,1.0s						
MCK	McKinley	20.06	40	P	P	10 30 33.9	+0.2
SCM	Sheep Creek Mo	20.09	46	P	P	10 30 32.8	-1.2
SCM				pmax	pmax		
	comp=Z,24nm,0.6s						
SCM	Sheep Creek Mo	20.09	46	P	P	10 30 32.8	-1.2
SCM				IAmb	IAmb	10 30 37.4	
	comp=Z,24nm,0.6s						
HIN	Hinchinbrook I	20.11	51	P	P	10 30 34.8	+0.6
HIN				IAmb	IAmb	10 30 51.6	
	comp=Z,32nm,1.2s						
FID	Port Fidalgo	20.20	50	P	P	10 30 34.2	-0.9
DHY	Denali Highway	20.46	43	P	P	10 30 38.3	+0.1
DHY				IAmb	IAmb	10 30 42.5	
	comp=Z,41nm,0.7s						
EYAK	Cordova Ski Ar	20.51	50	P	P	10 30 39.2	+0.8
WRH	Wood River Hil	20.71	39	P	P	10 30 39.6	-0.9
MDM	Murphy Dome	20.86	38	P	P	10 30 42.7	+0.4
MDM				IAmb	IAmb	10 30 46.6	
	comp=Z,23nm,0.8s						
CCB	Clear Creek Bu	20.89	39	P	P	10 30 42.1	-0.5
TCOL	CIGO, UAF Yank	20.97	38	P	P	10 30 44.4	+1.1
	baz=245						
COLA	College	20.97	38	P	P	10 30 44.5	+1.1
COLA				pmax	pmax		
	comp=Z,25nm,1.0s						
COLA	College	20.97	38	P	P	10 30 45.1	+1.7
COLA				IAmb	IAmb	10 30 48.5	
	comp=Z,25nm,0.9s						
RAGM	Ragged Mountai	21.00	51	P	P	10 30 44.2	+0.4
RAGM				IAmb	IAmb	10 30 51.2	
	comp=Z,35nm,1.2s						
HDA	Harding Lake	21.14	40	P	P	10 30 45.3	+0.2
HDA				IAmb	IAmb	10 30 48.0	
	comp=Z,13nm,0.4s						
HDA	Harding Lake	21.14	40	P	P	10 30 45.9	+0.8
	baz=247,SNR=16						
POKR	Poker Plat Res	21.24	38	P	P	10 30 46.7	+0.5
	baz=245,SNR=10						
PAX	Paxson	21.25	44	P	P	10 30 47.7	+1.2
PAX				pmax	pmax		
	comp=Z,21nm,0.9s						
PAX	Paxson	21.25	44	P	P	10 30 48.2	+1.7
PAX				IAmb	IAmb	10 30 52.5	
	comp=Z,22nm,0.9s						
IL31		21.30	39	P	P	10 30 46.8	-0.1
IL31				IAmb	IAmb	10 31 03.5	
	comp=Z,18nm,0.8s						
IL31					Sn	10 34 49.1	-1.2
ILAR	Eielson Array	21.30	39	P	P	10 30 45.0	-1.9
	comp=Z,2.7nm,0.5s,baz=242,slow=9.1,SNR=19						
ILAR				PcP	PcP	10 34 48.5	-0.4
	comp=Z,1.2nm,0.4s,baz=276,slow=3.2,SNR=14						
ILAR				ScP	ScP	10 38 23.1	+2.5
	comp=Z,0.8nm,0.8s,baz=278,slow=3.4,SNR=8.4						
ILAR	Eielson Array	21.30	39	P	P	10 30 47.2	+0.2
ILAR					Sn	10 34 48.3	-2.0
COLD	Coldfoot	21.31	31	P	P	10 30 48.5	+1.6
GLB	Gilahina Butte	21.62	49	P	P	10 30 49.6	-0.8
GLB				IAmb	IAmb	10 30 56.5	
	comp=Z,17nm,0.6s						
VRDI	Verde Repeater	21.74	49	P	P	10 30 51.7	-0.1
RIDG	Independent Ri	21.76	42	P	P	10 30 51.2	-0.7
RIDG				IAmb	IAmb	10 30 54.8	
	comp=Z,18nm,0.5s						
CRQM	Cirque	21.81	51	P	P	10 30 52.6	+0.1
TGL	Tana Glacier	21.96	51	P	P	10 30 55.1	+1.0
MCARA	McCarthy VSAT	21.98	49	P	P	10 30 55.0	+0.9
MENT	Mentasta	22.01	45	P	P	10 30 56.4	+1.9
SCRK	Sand Creek	22.20	42	P	P	10 30 55.4	-1.3
SCRK				IAmb	IAmb	10 30 58.5	
	comp=Z,13nm,0.6s						
BALM	Baldy	22.24	50	P	P	10 30 57.8	+0.7
TOLK	Toolik Lake Re	22.32	28	P	P	10 30 58.4	+0.6
TOLK				IAmb	IAmb	10 31 00.6	
	comp=Z,15nm,0.5s						
TOLK	Toolik Lake Re	22.32	28	P	P	10 30 57.9	0.0
	baz=234,SNR=28						
BARN	Barnard Glacie	22.57	50	P	P	10 31 01.1	+0.3
FYU	Fort Yukon	22.68	35	P	P	10 31 02.1	+0.5
FYU				IAmb	IAmb	10 31 05.6	
	comp=Z,17nm,0.7s						
CTGM	Chitina Glacie	22.71	50	P	P	10 31 02.3	+0.1
BCAR	Beaver Creek A	22.90	45	P	P	10 31 03.2	-0.8
PCA	Pinnacle	23.15	53	P	P	10 31 06.6	+0.1
PCA				IAmb	IAmb	10 31 08.7	
	comp=Z,23nm,1.2s						
BMAR	Burnt Mountain	23.29	33	P	P	10 31 08.3	+0.5
EGAK	Eagle	23.61	41	P	P	10 31 11.0	+0.3
EGAK				IAmb	IAmb	10 31 11.5	
	comp=Z,19nm,0.7s						
DAWY	Dawson	24.17	43	P	P	10 31 15.8	-0.1
HYT	Haines Junctio	24.56	51	P	P	10 31 19.2	-0.4
YUK	Yuzh-Kuril'sk	24.63	267	i P	P	10 31 20.0	-0.2
YSS	Yuzh-Sakhalins	25.25	275	⇑ eP	P	10 31 26.5	+0.7
YSS				e*PP	pP	10 31 39.8	-0.2
YSS				e*SP	sP	10 31 49.0	+2.3
YSS				eS	S	10 35 43.0	-4.1
YSS				eSS	SnSn	10 36 52.5	+10
YSS				pmax	pmax		
	comp=Z,40nm,0.7s						
YSS				pmax	pmax		
	comp=Z,200nm,6.0s						
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
YSS	Yuzh-Sakhalins	25.25	275	P	P	10 31 27.3	+1.5
YSS				IAmb	IAmb	10 31 27.5	
	comp=Z,35nm,0.8s						
EPYK	Eagle Plains	25.82	38	P	P	10 31 30.4	-0.5
EPYK				IAmb	IAmb	10 31 30.6	
	comp=Z,8.1nm,0.5s						
EPYK	Eagle Plains	25.82	38	P	P	10 31 29.7	-1.1
	baz=255,SNR=10						
JKA	Kamikawa-asahi	26.64	269	P	P	10 31 38.8	+0.4
ASAJ	Asahikawa	26.64	269	P	P	10 31 38.8	+0.4
	comp=Z,23nm,1.0s,baz=71,slow=16,SNR=14						
ERM	Erimo	27.38	265	i P	P	10 31 44.8	-0.2
ERM				pmax	pmax		
	comp=Z,23nm,1.3s						
ERM	Erimo	27.38	265	P	P	10 31 46.8	+1.8
ERM				IAmb	IAmb	10 31 50.7	
	comp=Z,27nm,1.2s						
INK	Inuvik	27.52	35	P	P	10 31 45.5	-0.5
	comp=Z,1.8nm,0.4s,baz=269,slow=4.7,SNR=9.7						
INK				PcP	PcP	10 35 02.9	+0.5
	comp=Z,1.9nm,0.4s,baz=307,slow=2.8,SNR=5.4						
INK	Inuvik	27.52	35	P	P	10 31 46.7	+0.7
GRNR	Gornyy	27.76	287	eP	P	10 31 46.9	-1.5
DLBC	Dease Lake	28.43	56	P	P	10 31 53.5	-0.8
	comp=Z,2.3nm,1.1s,baz=238,slow=15,SNR=2.1						
TEY	Ternei	29.95	276	⇓ eP	P	10 32 07.6	-0.2
TEY				pmax	pmax		
	comp=E,20nm,0.7s						
TEY				pmax	pmax		
	comp=Z,20nm,1.1s						
TEY				pmax	pmax		
	comp=N,10.0nm,1.4s						
TIXI	Tiksi	30.62	331	P	P	10 32 14.1	+0.5
	comp=N,1.0nm,0.3s,baz=130,slow=7.7,SNR=8.8						
TIXI				PcP	PcP	10 35 10.1	-0.1
	comp=N,5.7nm,0.7s,baz=98,slow=2.2,SNR=14						
TIXI	Tiksi	30.62	331	i P	P	10 32 13.9	+0.4
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
C36M	Paulatuk	31.08	34	P	P	10 32 17.7	+0.1
C36M	Paulatuk	31.08	34	P	P	10 32 16.9	-0.6
	baz=263,SNR=5.6						
KLR	Kul'dur	31.12	286	c iP	P	10 32 17.6	-0.6
KLR				pmax	pmax		
	comp=Z,22nm,0.8s						
ZEA	Zeya	32.18	296	eP	P	10 32 26.1	-1.3
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
USA0B	Ussuriysk Arra	33.23	277	i P	P	10 32 36.4	-0.3
USA0B	Ussuriysk Arra	33.23	277	P	P	10 32 36.6	0.0
USA0B				IAmb	IAmb	10 32 38.5	
	comp=Z,7.7nm,0.9s						
USRK	Ussuriysk Ar.	33.23	277	P	P	10 32 36.1	-0.6
	comp=Z,3.9nm,0.7s,baz=52,slow=7.9,SNR=10.0						
USRK	Ussuriysk Ar.	33.23	277	P	P	10 32 36.4	-0.3
H11N2	WAKE ISLAND Hy	33.48	205	T	T	11 09 42.3	
	baz=18,slow=76,SNR=442						
H11N3	WAKE ISLAND Hy	33.49	205	T	T	11 09 43.4	
	baz=18,slow=76,SNR=432						
H11N1	WAKE ISLAND Hy	33.50	205	T	T	11 09 44.6	
	baz=18,slow=76,SNR=368						
MJAR	Matsushiro Arr	33.71	261	P	P	10 32 40.3	-0.7
	comp=Z,4.3nm,0.9s,baz=56,slow=9.1,SNR=8.0						
MJAR				LR	LR	10 44 29.3	
	comp=Z,77nm,21.7s,baz=85,slow=33						
MJAR	Matsushiro Arr	33.71	261	P	P	10 32 41.1	+0.1
MAJO	Matsushiro	33.72	261	P	P	10 32 41.2	+0.3
MAJO				IAmb	IAmb	10 32 58.0	
	comp=Z,12nm,1.1s						
MAT	Matsushiro	33.72	261	P	P	10 32 40.8	-0.2
MJB9	Matsu-Tunnel	33.72	261	P	P	10 32 41.0	0.0
MJB9				IAmb	IAmb	10 32 58.0	
	comp=Z,12nm,1.1s						
MDJ	Mudanjiang	34.51	279	P	P	10 32 46.9	-0.9
MDJ				IAmb	IAmb	10 32 48.8	
	comp=Z,7.7nm,0.8s						
MSHR	Mys Shultsa	34.59	275	c iP	P	10 32 48.2	-0.3
H11S1	WAKE ISLAND Hy	34.70	204	T	T	11 11 03.4	
	baz=18						
H11S2	WAKE ISLAND Hy	34.72	204	T	T	11 10 13.2	
	baz=18,slow=74						
H11S3	WAKE ISLAND Hy	34.72	204	T	T	11 10 07.8	
	baz=18,slow=74						
LLLB	Lillooet	35.13	68	P	P	10 32 55.0	+1.9
LLLB				IAmb	IAmb	10 32 55.4	
	comp=Z,9.8nm,1.1s						
YKA	Yellowknife Ar	35.30	46	P	P	10 32 53.5	-0.8
	comp=Z,1.4nm,0.4s,baz=274,slow=9.4,SNR=53						
YKA				PcP	PcP	10 35 24.2	+0.7
	comp=Z,1.0nm,0.6s,baz=276,slow=2.5,SNR=10						
YKA				ScP	ScP	10 39 06.5	+2.6
	comp=Z,0.6nm,0.6s,baz=284,slow=2.8,SNR=11						
YKA				LR	LR	10 48 49.0	
	comp=Z,114nm,19.4s,baz=0.0,slow=39						
YKA	Yellowknife Ar	35.30	46	i P	P	10 32 54.1	-0.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NLWA	Neilton Lookou	35.34	74	P	P	10 32 57.3	+2.3
NLWA				IAmb	IAmb	10 33 12.7	
	comp=Z,29nm,1.1s						
D03D	Eldon	35.75	74	P	P	10 32 59.1	+0.7
	baz=297						
E03A	Lebam	35.92	75	P	P	10 33 02.1	+2.2
B05A	Bryant	36.01	72	P	P	10 33 01.3	+0.7
	baz=297						
D05A	Enumclaw	36.57	74	P	P	10 33 07.7	+2.3
D05A				IAmb	IAmb	10 33 22.3	
	comp=Z,34nm,1.2s						
LON	Longmire	36.89	74	P	P	10 33 09.7	+1.5
LON				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LON	Longmire	36.89	74	P	P	10 33 10.1	+1.9
LON				IAmb	IAmb	10 33 11.1	
	comp=Z,6.4nm,0.7s						
F04A	Amboy	36.92	76	P	P	10 33 10.2	+1.8
F04A				IAmb	IAmb	10 33 26.5	
	comp=Z,28nm,1.2s						
LTY	Liberty	37.33	73	P	P	10 33 13.1	+1.1
LTY				IAmb	IAmb	10 33 23.9	
	comp=Z,8.9nm,1.1s						
B08A	Colville Reser	37.61	70	P	P	10 33 15.4	+1.2
B08A				IAmb	IAmb	10 33 16.1	
	comp=Z,9.1nm,0.8s						
H04A	Detroit Lake	37.69	77	P	P	10 33 16.7	+1.7
H04A				IAmb	IAmb	10 33 31.7	
	comp=Z,24nm,1.1s						
BOD	Bodaibo	37.94	307	eP	P	10 33 14.9	-1.9
BOD				pmax	pmax		
	comp=Z,5.0nm,1.1s						
E07A	Sunnyside	38.16	73	P	P	10 33 20.9	+2.0
E07A				IAmb	IAmb	10 33 21.2	
	comp=Z,6.5nm,0.6s						
G06A	Carlson Farm,	38.35	76	P	P	10 33 22.0	+1.5
HAWA	Hanford	38.43	73	P	P	10 33 22.8	+1.6
HAWA				IAmb	IAmb	10 33 23.6	
	comp=Z,11nm,0.6s						
F07A	Phinny Hill Vi	38.44	74	P	P	10 33 22.6	+1.3
F07A				IAmb	IAmb	10 33 24.4	
	comp=Z,14nm,0.8s						
D08A	Wollman Farm,	38.47	72	P	P	10 33 22.2	+0.7
C09A	Chrisman Ranch	38.50	71	P	P	10 33 22.2	+0.5
C09A				IAmb	IAmb	10 33 23.2	
	comp=Z,11nm,1.0s						
NEW	Newport	38.95	69	P	P	10 33 26.2	+0.7
NEW				pmax	pmax		
	comp=Z,26nm,0.8s						
NEW	Newport	38.95	69	P	P	10 33 26.2	+0.7
NEW				IAmb	IAmb	10 33 26.9	
	comp=Z,12nm,0.8s						
NEW	Newport	38.95	69	P	P	10 33 25.9	+0.3
	baz=299,SNR=16						
E09A	Wood Farm, Sta	39.20	72	P	P	10 33 27.6	0.0
KSRS	Korea Array	39.57	271	P	P	10 33 31.2	+0.5
	comp=Z,5.7nm,0.8s,baz=59,slow=7.9,SNR=24						
KSRS				PcP	PcP	10 35 37.2	+0.3
	comp=Z,0.9nm,0.6s,baz=75,slow=2.9,SNR=7.1						
KSRS				LR	LR	10 49 41.7	
	comp=Z,42nm,19.9s,baz=48,slow=36						
KS19	Wonju Array Si	39.58	271	P	P	10 33 31.4	+0.5
KS19				IAmb	IAmb	10 33 42.3	
	comp=Z,21nm,1.5s						
KSAR	Wonju Array Be	39.60	271	P	P	10 33 31.3	+0.3
I07A	Izee	39.64	76	P	P	10 33 32.2	+0.8
RES	Resolute Bay	39.79	24	P	P	10 33 33.3	+1.2
F10A	Beach Ranch, E	40.03	73	P	P	10 33 35.4	+0.8
MOD	Modoc Plateau	40.34	80	P	P	10 33 38.9	+1.6
WALA	Waterton Lakes	40.44	67	P	P	10 33 38.6	+0.6
JNU	Nakatsue	40.50	263	P	P	10 33 39.0	+0.5
	comp=Z,17nm,0.8s,baz=20,slow=0.9,SNR=9.5						
JNU	Nakatsue	40.50	263	P	P	10 33 39.0	+0.5
JNU				IAmb	IAmb	10 33 43.1	
	comp=Z,19nm,0.9s						
BMO	Blue Mountains	40.56	74	P	P	10 33 39.7	+0.7
TJN	Taejon	40.59	270	ceP	P	10 33 39.8	+0.6
J08A	Circle Bar Ran	40.66	77	P	P	10 33 40.7	+0.9
JTMT	Jette	40.87	69	P	P	10 33 41.8	+0.2
JTMT				IAmb	IAmb	10 33 43.1	
	comp=Z,22nm,1.4s						
WVOR	Wild Horse Val	41.07	78	P	P	10 33 44.7	+1.4
WVOR	Wild Horse Val	41.07	78	P	P	10 33 44.2	+1.0
MSO	Missoula	41.54	70	P	P	10 33 47.8	+0.8
MSO				IAmb	IAmb	10 33 48.8	
	comp=Z,24nm,1.5s						
PAHR	Pah Rah Range	42.18	82	P	P	10 33 53.1	+0.7
MFID	Camas Ranch	42.24	75	P	P	10 33 53.6	+0.8
LRM	Limekiln Ridge	42.95	70	P	P	10 33 58.5	-0.2
MCMT	McKenzie Canyo	43.25	72	P	P	10 34 01.4	+0.3
EGMT	Eagleton	43.35	66	P	P	10 34 01.9	+0.3
EGMT				IAmb	IAmb	10 34 03.7	
	comp=Z,10nm,0.8s						
EGMT	Eagleton	43.35	66	P	P	10 34 01.1	-0.5
	baz=302,SNR=7.4						
KVN	Kaiserville	43.37	82	P	P	10 34 04.0	+1.9
NVAR	Mina Array Bea	43.62	83	P	P	10 34 05.2	+1.1
	comp=Z,1.3nm,0.6s,baz=299,slow=7.0,SNR=9.5						
NVAR				LR	LR	10 49 01.1	
	comp=Z,60nm,18.2s,baz=326,slow=32						
NVAR	Mina Array Bea	43.62	83	P	P	10 34 05.5	+1.3
QLMT	Earthquake Lak	44.09	71	P	P	10 34 08.5	+0.7
ELK	Elko	44.13	78	P	P	10 34 08.8	+0.6
FFC	Flin Flon	44.21	54	P	P	10 34 06.9	-1.5
FFC				pmax	pmax		
	comp=Z,3.0nm,1.3s						
YHL	Hebgen Lake	44.23	71	P	P	10 34 09.7	+0.7
YHB	Horse Butte	44.27	71	P	P	10 34 10.1	+0.8
NRIK	Noril'sk	44.40	330	P	P	10 34 07.2	-2.4
	comp=Z,1.1nm,0.7s,baz=0.0,slow=20,SNR=1.6						
NRIK				LR	LR	10 54 17.5	
	comp=Z,65nm,18.2s,baz=56,slow=38						
NRIK	Noril'sk	44.40	330	i P	P	10 34 10.0	+0.3
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
YMR	Madison River	44.46	71	P	P	10 34 11.6	+0.8
YHH	Holmes Hill	44.46	71	P	P	10 34 11.2	+0.3
GCMT	Greycliff	44.60	69	P	P	10 34 12.5	+0.7
YNR	Norris Junctio	44.60	71	P	P	10 34 13.4	+1.5
YPP	Pitchstone Pla	44.77	71	P	P	10 34 15.5	+2.1
YNE	Yellowstone No	44.83	70	P	P	10 34 13.9	+0.1
H17A	Grant Village	44.84	71	P	P	10 34 15.6	+1.7
H17A				IAmb	IAmb	10 34 17.4	
	comp=Z,38nm,1.4s						
H17A	Grant Village	44.84	71	P	P	10 34 15.2	+1.3

	baz=304,SNR=16							
LKWY	Lake	44.85	71		P	P	10 34 15.7	+1.7
LKWY					IAmb	IAmb	10 34 16.6	
	comp=Z,16nm,1.1s							
YMP	Mirror Lake Pl	44.89	70		P	P	10 34 16.2	+1.8
IMW	Indian Meadow	44.91	72		P	P	10 34 15.1	+0.7
FLWY	Flagg Ranch	44.94	71		P	P	10 34 16.5	+1.9
FLWY					IAmb	IAmb	10 34 17.4	
	comp=Z,9.7nm,0.7s							
FXWY	Fox Creek	45.00	72		P	P	10 34 15.8	+0.6
HVU	Hansel Valley	45.02	75		P	P	10 34 16.4	+1.2
RLMT	Red Lodge	45.20	69		P	P	10 34 17.4	+0.7
RLMT					IAmb	IAmb	10 34 19.0	
	comp=Z,28nm,1.0s							
RLMT	Red Lodge	45.20	69		P	P	10 34 17.2	+0.5
	baz=304,SNR=27							
SNOW	Snow King Moun	45.26	72		P	P	10 34 19.2	+2.0
R11A	Troy Canyon, C	45.36	81		P	P	10 34 18.7	+0.8
R11A	Troy Canyon, C	45.36	81		P	P	10 34 18.7	+0.8
	baz=308,SNR=6.2							
BGU	Big Grassy Mou	45.37	76		P	P	10 34 19.9	+1.9
HWUT	Hardware Ranch	45.86	75		P	P	10 34 23.4	+1.6
HWUT					IAmb	IAmb	10 34 39.6	
	comp=Z,8.2nm,1.2s							
DUG	Dugway, Tooele	45.94	77		P	P	10 34 23.8	+1.3
DUG					pmax	pmax		
	comp=Z,21nm,1.1s							
DUG	Dugway, Tooele	45.94	77		P	P	10 34 23.5	+1.1
DUG					IAmb	IAmb	10 34 26.2	
	comp=Z,32nm,1.4s							
DUG	Dugway, Tooele	45.94	77		P	P	10 34 23.3	+0.8
	baz=307,SNR=8.8							
TLY	Talaya	46.02	302		LR	LR	10 56 44.8	
	comp=Z,55nm,18.1s,baz=48,slow=40							
TLY	Talaya	46.02	302	*i*	P	P	10 34 23.7	+0.9
TLY					pmax	pmax		
	comp=Z,2.0nm,0.8s							
LAO	LASA Array	46.09	66		P	P	10 34 24.4	+0.9
LAO	LASA Array	46.09	66		P	P	10 34 24.1	+0.6
	baz=304,SNR=13							
ULN	Ulaanbaatar	46.21	296	*ce*	P	P	10 34 24.6	+0.1
ULN					pmax	pmax		
	comp=Z,13nm,1.2s							
ULN	Ulaanbaatar	46.21	296		P	P	10 34 25.0	+0.5
ULN					IAmb	IAmb	10 34 25.7	
	comp=Z,14nm,1.2s							
PSUT	Pine Spring	46.31	80		P	P	10 34 27.9	+2.4
BW06	Boulder Array	46.38	72		P	P	10 34 26.2	+0.2
BW06					IAmb	IAmb	10 34 28.2	
	comp=Z,14nm,1.0s							
BW06	Boulder Array	46.38	72		P	P	10 34 25.9	-0.1
	baz=306,SNR=10							
PD31	Pinedale Array	46.38	72		P	P	10 34 26.1	+0.1
PD31					IAmb	IAmb	10 34 28.2	
	comp=Z,13nm,1.1s							
PDAR	Pinedale Array	46.38	72		P	P	10 34 26.4	+0.3
	comp=Z,10nm,0.5s,baz=309,slow=3.6,SNR=142							
PDAR					LR	LR	10 51 21.9	
	comp=Z,67nm,21.1s,baz=320,slow=33							
JLU	Jordanelle	46.53	76		P	P	10 34 28.3	+1.1
NLU	North Lily Min	46.54	77		P	P	10 34 27.8	+0.6
SONM	Songino Array	46.60	297		P	P	10 34 27.9	+0.4
	comp=Z,5.5nm,0.9s,baz=54,slow=9.2,SNR=21							
SONM					ScP	ScP	10 39 51.7	+2.9
	comp=Z,0.6nm,0.6s,baz=51,slow=4.6,SNR=1.8							
SONM					LR	LR	10 54 48.6	
	comp=Z,153nm,21.0s,baz=60,slow=37							
SONM	Songino Array	46.60	297		P	P	10 34 27.4	-0.1
MPU	Maple Canyon	46.77	76		P	P	10 34 29.8	+0.7
CCUT	Cedar City	47.23	80		P	P	10 34 33.6	+0.9
TMUT	Trail Mountain	47.47	77		P	P	10 34 35.2	+0.6
HHC	Hu-ho-hao-te	47.63	286	*e*	P	P	10 34 35.5	-0.1
LCMT	Little Creek M	47.64	81		P	P	10 34 36.9	+1.1
P17A	Butcher Ranch,	47.65	76		P	P	10 34 36.7	+0.9
RDMU	Red Mountain	47.68	75		P	P	10 34 36.9	+0.8
Q16A	Castle Valley	47.72	77		P	P	10 34 37.2	+0.7
PFO	Pinyon Flats O	47.84	87	*i*	P	P	10 34 38.1	+0.8
KNB	Kanab	47.90	80		P	P	10 34 39.5	+1.7
SRU	San Rafael Swe	48.00	77		P	P	10 34 39.8	+1.2
K22A	Casper	48.25	70		P	P	10 34 40.6	+0.2
K22A					IAmb	IAmb	10 34 41.9	
	comp=Z,11nm,0.6s							
K22A	Casper	48.25	70		P	P	10 34 40.0	-0.4
	baz=307,SNR=6.5							
U15A	North Rim	48.60	81		P	P	10 34 44.6	+1.2
U15A					IAmb	IAmb	10 34 52.7	
	comp=Z,7.4nm,0.8s							
NJ2	Nanjing	48.74	272	*e*	P	P	10 34 44.0	-0.1
O20A	White River Ci	48.75	74		P	P	10 34 44.6	+0.3
O20A	White River Ci	48.75	74		P	P	10 34 44.5	+0.1
	baz=308,SNR=20							
RSSD	Black Hills	48.83	67		P	P	10 34 44.6	-0.3
RSSD					pmax	pmax		
	comp=Z,9.0nm,0.6s							
RSSD	Black Hills	48.83	67		P	P	10 34 44.6	-0.3
RSSD					IAmb	IAmb	10 34 45.5	
	comp=Z,8.8nm,0.6s							
RSSD	Black Hills	48.83	67		P	P	10 34 44.6	-0.3
	baz=307							
PV09	Paradox Valley	49.23	76		P	P	10 34 48.4	+0.2
PV21	Cone Mtn., Par	49.29	76		P	P	10 34 48.9	+0.4
PV21					IAmb	IAmb	10 34 51.5	
	comp=Z,9.7nm,0.5s							
PV23	Carpenter Ridg	49.33	76		P	P	10 34 50.1	+1.1
PV23					IAmb	IAmb	10 35 01.9	
	comp=Z,11nm,0.6s							
PV10	Paradox Valley	49.37	77		P	P	10 34 50.7	+1.5
PV10					IAmb	IAmb	10 34 52.5	
	comp=Z,14nm,0.7s							
PV14	Lion Creek, Pa	49.38	77		P	P	10 34 49.6	+0.4
PV14					IAmb	IAmb	10 34 51.9	
	comp=Z,11nm,0.6s							
PV22	Blue Mesa, Par	49.42	76		P	P	10 34 49.9	+0.4
PV22					IAmb	IAmb	10 34 52.8	
	comp=Z,13nm,0.8s							
PV20	West Nyswonger	49.43	77		P	P	10 34 50.0	+0.4
PV20					IAmb	IAmb	10 34 51.9	
	comp=Z,9.8nm,0.7s							
PV04	Paradox Valley	49.44	76		P	P	10 34 49.7	+0.1
PV17	East Wray Mesa	49.47	77		P	P	10 34 50.4	+0.4
PV16	Nyswonger Mesa	49.48	77		P	P	10 34 50.4	+0.4
PV16					IAmb	IAmb	10 34 52.4	
	comp=Z,13nm,0.7s							
PV11	David Mesa, Pa	49.52	76		P	P	10 34 50.8	+0.5
PV18	Skein Mesa, Pa	49.53	77		P	P	10 34 50.8	+0.5
PV12	Saucer Basin,	49.55	76		P	P	10 34 52.5	+1.9
PV12					IAmb	IAmb	10 35 06.2	
	comp=Z,16nm,0.7s							
PV03	Paradox Valley	49.56	77		P	P	10 34 51.0	+0.4
PV07	Paradox Valley	49.56	76		P	P	10 34 51.3	+0.6
PV07					IAmb	IAmb	10 34 53.4	
	comp=Z,10nm,1.0s							
PV13	Radium Mtn., P	49.64	77		P	P	10 34 52.1	+0.9
PV02	Paradox Valley	49.66	76		P	P	10 34 52.2	+0.8
N23A	Red Feather La	49.66	72		P	P	10 34 51.7	+0.2
	baz=308,SNR=7.4							
PV15	Paradox Valley	49.73	76		P	P	10 34 52.6	+0.7
PV15					IAmb	IAmb	10 35 08.0	
	comp=Z,8.9nm,0.8s							
ULM	Lac du Bonnet	49.75	57		P	P	10 34 50.2	-1.4
	comp=Z,1.2nm,0.4s,baz=288,slow=5.3,SNR=3.7							
ULM	Lac du Bonnet	49.75	57		IAmb	IAmb	10 35 00.3	
	comp=Z,8.2nm,1.4s							
WUAZ	Wupatki	49.76	81		P	P	10 34 52.7	+0.6
	baz=311							
PV01	Paradox Valley	49.80	76		P	P	10 34 52.9	+0.5
PV01					IAmb	IAmb	10 35 04.3	
	comp=Z,10nm,0.6s							
KBS	Kingsbay	49.82	357		P	P	10 34 54.8	+3.1
KBS					pmax	pmax		
	comp=Z,37nm,2.1s							
SMCO	Snowmass	50.11	74		P	P	10 34 55.6	+0.6
SMCO					IAmb	IAmb	10 35 00.5	
	comp=Z,4.0nm,0.7s							
SPITS	Spitsbergen Ar	50.39	356		P	P	10 34 55.9	-0.2
SPITS					pmax	pmax		
	comp=Z,3.0nm,0.3s							
MVCO	Mesa Verde	50.44	77		P	P	10 34 57.1	-0.2
MVCO					IAmb	IAmb	10 35 13.6	
	comp=Z,5.4nm,0.6s							
MVCO	Mesa Verde	50.44	77		P	P	10 34 57.8	+0.5
	baz=310							
ISCO	Idaho Springs	50.54	73		P	P	10 34 58.2	+0.1
ISCO					pmax	pmax		
	comp=Z,8.0nm,0.9s							
ISCO	Idaho Springs	50.54	73		P	P	10 34 59.5	+1.4
ISCO					IAmb	IAmb	10 35 00.7	
	comp=Z,3.4nm,0.6s							
ISCO	Idaho Springs	50.54	73		P	P	10 34 58.4	+0.3
	baz=309							
AGMN	Agassiz Nation	50.91	59		P	P	10 34 59.6	-0.8
	baz=307							
S22A	4UR Ranch, Cre	51.11	76		P	P	10 35 03.1	+0.7
	baz=310,SNR=6.5							
X18A	Snowflake	51.29	81		P	P	10 35 04.8	+1.2
Q24A	Divide	51.35	73		P	P	10 35 04.7	+0.6
	baz=310							
SDCO	Great Sand Dun	51.92	75		P	P	10 35 10.6	+2.2
SDCO					IAmb	IAmb	10 35 11.2	
	comp=Z,4.5nm,0.7s							
SDCO	Great Sand Dun	51.92	75		P	P	10 35 08.8	+0.4
	baz=310,SNR=7.7							
OGNE	Ogallala	51.95	70		P	P	10 35 09.5	+1.1
OGNE					IAmb	IAmb	10 35 10.0	
	comp=Z,20nm,1.1s							
OGNE	Ogallala	51.95	70		P	P	10 35 08.8	+0.4
	baz=309							
TUC	Tucson	52.25	84		P	P	10 35 07.7	-3.0
TUC					pmax	pmax		
	comp=Z,6.0nm,2.7s							
WHN	Wuhan	52.59	274	⇓	P	P	10 35 12.8	-0.3
T25A	Trinidad	52.97	75		P	P	10 35 16.7	+0.6
	baz=311,SNR=8.1							
FRB	Frobisher Bay	53.08	31		P	P	10 35 16.3	+0.1
FRB					pmax	pmax		
	comp=Z,14nm,1.1s							
ANMO	Albuquerque	53.16	78		P	P	10 35 17.0	-0.6
ANMO					pmax	pmax		
	comp=Z,5.0nm,1.4s							
ANMO	Albuquerque	53.16	78		P	P	10 35 18.0	+0.4
SSLB	Suanglung	53.24	263		P	P	10 35 15.3	-2.8
SSLB					IAmb	IAmb	10 35 18.5	
	comp=Z,11nm,0.8s							
ECSD	EROS Data Cent	53.30	64		P	P	10 35 17.4	-0.8
	baz=309							
SUMG	Summit	53.34	14		P	P	10 35 18.4	-0.1
SUMG					pmax	pmax		
	comp=Z,15nm,2.8s							
SUMG	Summit	53.34	14		P	P	10 35 19.0	+0.5
SUMG					IAmb	IAmb	10 35 20.5	
	comp=Z,13nm,1.2s							
EYMN	Ely	53.44	57		P	P	10 35 19.3	+0.2
EYMN	Ely	53.44	57		P	P	10 35 19.0	-0.2
	baz=309							
XAN	Xi'an	53.60	281		P	P	10 35 20.3	-0.3
XAN					pP	pP	10 35 29.3	-6.5
BGNE	Belgrade	53.91	67		P	P	10 35 22.5	-0.2
	baz=310							
ZALV	Zalesovo Beam	54.00	313		P	P	10 35 22.5	-0.6
	comp=Z,0.5nm,0.3s,baz=62,slow=5.6,SNR=2.4							
ZALV					PcP	PcP	10 36 28.2	+0.7
	comp=Z,5.8nm,0.7s,baz=26,slow=3.2,SNR=16							
CBKS	Cedar Bluff	54.67	70		P	P	10 35 29.1	+0.8
CBKS	Cedar Bluff	54.67	70		P	P	10 35 28.0	-0.3
	baz=311,SNR=6.0							
LZH	Lanzhou	55.33	286	*e*	P	P	10 35 34.0	+0.8
LZH					pP	sP	10 35 49.3	-5.5
LZH					sP	pP	10 35 56.5	+8.2
LZH					PP	PP	10 37 44.3	+7.2
DGZ	Jazzator, Alta	55.50	308	*i*	P	P	10 35 34.0	-0.3
DGZ					pmax	pmax		
	comp=Z,1.0nm,0.8s							
GTA	Gaotai	55.51	292		P	P	10 35 34.5	0.0
GTA					pP	pP	10 35 38.5	-11
GTA					sP	sP	10 35 41.5	-15
N35A	Tabor	55.70	66		P	P	10 35 36.2	+0.6
MNTX	Cornudas Mount	56.02	80		P	P	10 35 38.8	+0.7
MNTX					IAmb	IAmb	10 35 42.4	
	comp=Z,5.4nm,1.1s							
MNTX	Cornudas Mount	56.02	80		P	P	10 35 37.9	-0.2
	baz=314							
MSTX	Muleshoe	56.07	77		P	P	10 35 40.0	+1.5
MSTX					IAmb	IAmb	10 35 52.7	
	comp=Z,7.6nm,0.8s							
MSTX	Muleshoe	56.07	77		P	P	10 35 39.2	+0.7
	baz=313							
AMTX	Amarillo	56.12	75		P	P	10 35 40.6	+1.8
AMTX					IAmb	IAmb	10 35 41.2	
	comp=Z,12nm,0.6s							
AMTX	Amarillo	56.12	75		P	P	10 35 39.9	+1.1
	baz=313							
KSU1	Kansas State U	56.31	68		P	P	10 35 39.6	-0.4
	baz=312,SNR=5.4							
E43A	Lone Tree Farm	56.80	56		P	P	10 35 43.1	-0.2
E43A					IAmb	IAmb	10 35 44.1	
	comp=Z,6.0nm,0.6s							
JFWS	Jewell Farm	57.37	61		P	P	10 35 46.6	-0.8
	baz=312							
P38A	Dawn	57.73	66		P	P	10 35 49.4	-0.7
WMOK	Wichita Mounta	57.97	73		P	P	10 35 51.8	0.0
WMOK					pmax	pmax		
	comp=Z,16nm,1.2s							
WMOK	Wichita Mounta	57.97	73		P	P	10 35 52.6	+0.8
WMOK					IAmb	IAmb	10 36 07.4	
	comp=Z,14nm,1.3s							
WMOK	Wichita Mounta	57.97	73		P	P	10 35 51.6	-0.2
	baz=313							
D46A	Sault St. Mari	57.97	54		P	P	10 35 51.1	-0.5
	baz=313							
ARCES	ARCESS Array B	58.10	350		P	P	10 35 51.6	-0.6
	comp=Z,5.1nm,0.7s,baz=22,slow=7.8,SNR=22							
ARCES					PcP	PcP	10 36 43.2	-0.1
	comp=Z,5.3nm,0.8s,baz=25,slow=4.0,SNR=4.2							
D47A	Chapleau	58.33	53		P	P	10 35 53.9	-0.2
	baz=313							
N41A	Harden Midland	58.51	63		P	P	10 35 55.8	+0.3
N41A					IAmb	IAmb	10 35 56.4	
	comp=Z,21nm,1.1s							
E47A	Iron Bridge	58.65	54		P	P	10 35 56.0	-0.3
	baz=313							
TX31	Lajitas Ar. Si	58.72	81		P	P	10 35 57.3	+0.1
TX32	Lajitas Array	58.72	81		P	P	10 35 57.5	+0.3
TXAR	Lajitas Array	58.72	81		P	P	10 35 57.1	-0.1
	comp=Z,0.9nm,0.5s,baz=304,slow=5.4,SNR=13							
TXAR					LR	LR	11 01 27.2	
	comp=Z,21nm,18.2s,baz=0.0,slow=36							
W35A	Tecumseh	58.82	72		P	P	10 35 57.6	-0.1
D48A	Paudash Townsh	58.89	52		P	P	10 35 57.5	-0.6
	baz=314							
ABTX	Abilene, Hawle	58.90	76		P	P	10 35 59.4	+1.1
ABTX					IAmb	IAmb	10 36 01.7	
	comp=Z,22nm,1.2s							
TUL1	Leonard	58.94	70		P	P	10 35 58.2	-0.3
TUL1					IAmb	IAmb	10 36 00.3	
	comp=Z,8.6nm,0.8s							
TUL1	Leonard	58.94	70		P	P	10 35 58.5	-0.1
	baz=314							
KURK	Kurchatov	58.99	314	*ce*	P	P	10 35 57.5	-1.1
KURK					pmax	pmax		
	comp=Z,3.0nm,1.0s							
KURK	Kurchatov	58.99	314		P	P	10 35 56.5	-2.1
KURK					IAmb	IAmb	10 36 00.7	
	comp=Z,10nm,1.4s							
D49A	Beulah Townshi	59.05	52		P	P	10 35 58.1	-1.0
	baz=314							
S39A	Bolivar	59.16	67		P	P	10 35 58.2	-1.8
S39A					IAmb	IAmb	10 36 17.6	
	comp=Z,9.8nm,1.4s							
E48A	Lockeyer	59.19	53		P	P	10 35 59.6	-0.5
	baz=314							
WMQ	Urumqi	59.30	303	*e*	P	P	10 36 03.0	+2.0
R40A	Maddies Statio	59.36	66		P	P	10 36 00.1	-1.2
R40A					IAmb	IAmb	10 36 00.9	
	comp=Z,11nm,0.6s							
HDIL	Hopedale	59.49	62		P	P	10 36 02.2	0.0
HDIL	Hopedale	59.49	62		P	P	10 36 01.6	-0.6
	baz=313,SNR=6.2							
F49A	Sandfield	59.75	54		P	P	10 36 03.8	-0.2
	baz=314							
HHAR	Hobbs	59.77	69		P	P	10 36 03.7	-0.6
HHAR					IAmb	IAmb	10 36 12.8	
	comp=Z,11nm,1.3s							
H48A	Harrisville	59.83	55		P	P	10 36 03.9	-0.6
	baz=314							
D50A	G1974 Best Tow	59.86	51		P	P	10 36 03.5	-1.2
	baz=314							
LSQQ	Lebel-sur-Quev	59.90	48		P	P	10 36 03.6	-1.4
	baz=315							
E50A	Wahnapitae	59.94	52		P	P	10 36 03.8	-1.4
	baz=314							
P43A	Skaggs, Pawnee	59.99	63		P	P	10 36 05.4	-0.3
I48A	Sherman Twp	59.99	56		P	P	10 36 04.6	-1.1
	baz=314							
MK31	Makanchi Array	60.00	308	*i*	P	P	10 36 05.2	-0.5
MK31	Makanchi Array	60.00	308		P	P	10 36 04.5	-1.2
MKAR	Makanchi Array	60.00	308		P	P	10 36 04.1	-1.6
	comp=Z,1.5nm,0.3s,baz=48,slow=6.6,SNR=35							
MKAR					PcP	PcP	10 36 51.2	0.0
	comp=Z,1.5nm,0.5s,baz=44,slow=4.0,SNR=5.2							
MKAR					LR	LR	11 03 03.0	
	comp=Z,65nm,20.7s,baz=18,slow=37							
MKAR	Makanchi Array	60.00	308	*i*	P	P	10 36 05.0	-0.7
MKAR					pmax	pmax		
	comp=Z,2.0nm,0.3s							
MKAR	Makanchi Array	60.00	308		P	P	10 36 04.2	-1.5
SCHQ	Schefferville	60.06	38		P	P	10 36 04.5	-1.5
	comp=Z,5.0nm,0.8s,baz=324,slow=6.2,SNR=15							
SCHQ					LR	LR	11 03 34.7	
	comp=Z,70nm,19.2s,baz=346,slow=38							
SCHQ	Schefferville	60.06	38		P	P	10 36 05.2	-0.8
SCHQ					IAmb	IAmb	10 36 07.5	
	comp=Z,14nm,1.3s							
CCM	Cathedral Cave	60.11	65		P	P	10 36 06.0	-0.6
CCM					pmax	pmax		
	comp=Z,22nm,2.8s							
CCM	Cathedral Cave	60.11	65		P	P	10 36 05.5	-1.0
CCM					IAmb	IAmb	10 36 14.9	
	comp=Z,5.8nm,0.9s							
CCM	Cathedral Cave	60.11	65		P	P	10 36 05.9	-0.6
	baz=314							
L46A	Eue Claire	60.12	59		P	P	10 36 06.2	-0.3
	baz=314							
MAKZ	Makanchi	60.14	309		P	P	10 36 05.1	-1.5
MAKZ					pmax	pmax		
	comp=Z,3.0nm,0.5s							
MAKZ	Makanchi	60.14	309		P	P	10 36 05.1	-1.5
MAKZ					IAmb	IAmb	10 36 07.3	
	comp=Z,2.8nm,0.5s							
MGMO	Mountain Grove	60.14	67		P	P	10 36 05.5	-1.3
D51A	Lot 18 Range I	60.15	51		P	P	10 36 05.8	-0.9
	baz=315							
JCT	Junction City	60.30	77		P	P	10 36 09.2	+1.3
JCT					IAmb	IAmb	10 36 11.4	
	comp=Z,6.8nm,0.7s							
JCT	Junction City	60.30	77		P	P	10 36 08.4	+0.4
	baz=315,SNR=5.3							
U40A	Yellville	60.36	68		P	P	10 36 07.4	-0.9
U40A					IAmb	IAmb	10 36 08.8	
	comp=Z,25nm,1.4s							
U40A	Yellville	60.36	68		P	P	10 36 07.6	-0.7
	baz=314							
K47A	Vermontville	60.36	58		P	P	10 36 07.1	-1.0
	baz=314							
E51A	G1948 Merrick	60.48	52		P	P	10 36 07.9	-1.0
	baz=315							
J48A	Bridge Port	60.56	57		P	P	10 36 09.1	-0.5
	baz=314							
I49A	Point Hope	60.62	56		P	P	10 36 09.2	-0.7
	baz=314							
W39A	Magazine	60.62	69		P	P	10 36 09.4	-0.6
	baz=314							
WHTX	Lake Whitney,	60.66	75		P	P	10 36 11.0	+0.6
WHTX	Lake Whitney,	60.66	75		P	P	10 36 10.7	+0.3
	baz=315							
Q44A	Meyer Farm, Va	60.78	63		P	P	10 36 11.0	-0.1
SFIN	Lafayette	60.82	61		P	P	10 36 11.8	+0.4
SFIN	Lafayette	60.82	61		P	P	10 36 11.1	-0.2
	baz=314,SNR=11							
BRVK	Borovoye	60.88	320	*i*	P	P	10 36 11.7	+0.1
BRVK					pmax	pmax		
	comp=Z,3.0nm,0.5s							
K49A	Clarkson	61.10	57		P	P	10 36 12.4	-0.8
	baz=315							
FCAR	Ozark Folk Cen	61.10	68		P	P	10 36 12.4	-0.9
L48A	N Adams	61.17	58		P	P	10 36 13.0	-0.7
	baz=315							
MIAR	Mount Ida	61.19	70		P	P	10 36 14.5	+0.5
MIAR					pmax	pmax		
	comp=Z,16nm,1.2s							
MIAR	Mount Ida	61.19	70		P	P	10 36 14.4	+0.5
MIAR					IAmb	IAmb	10 36 29.2	
	comp=Z,23nm,1.4s							
MIAR	Mount Ida	61.19	70		P	P	10 36 13.9	-0.1
	baz=315							
N47A	Urbana	61.23	60		P	P	10 36 13.5	-0.7
	baz=314							
P46A	Rosedale	61.29	62		P	P	10 36 14.8	+0.3
OLIL	Olney	61.41	63		P	P	10 36 15.4	0.0
PBMO	Poplar Bluff	61.46	66		P	P	10 36 15.3	-0.4
E53A	Dumoine, Ponti	61.48	51		P	P	10 36 15.6	-0.1
	baz=316							
S44A	Carbondale	61.49	65		P	P	10 36 15.8	-0.2
S44A					IAmb	IAmb	10 36 16.3	
	comp=Z,12nm,0.8s							
SIUC	Southern Illin	61.50	64		P	P	10 36 15.7	-0.3
W41B	Gary Mavity, V	61.53	68		P	P	10 36 15.6	-0.6
	baz=315							
N48A	Decatur	61.61	59		P	P	10 36 16.1	-0.6
	baz=315							
H52A	Wyevale	61.62	53		P	P	10 36 15.9	-0.7
	baz=315							
M49A	Liberty Center	61.74	58		P	P	10 36 17.1	-0.5
	baz=315							
PRGR	Permogore	61.90	338	*e*	P	P	10 36 16.2	-2.1
PRGR					pmax	pmax		
	comp=Z,8.0nm,0.6s							
G53A	Haliburton	61.91	52		P	P	10 36 18.0	-0.6
	baz=316							
PARMO	Parma	61.93	66		P	P	10 36 19.3	+0.4
L50A	Kingsville	61.96	57		P	P	10 36 18.4	-0.6
	baz=315							
O48A	Farmland	61.97	60		P	P	10 36 18.2	-0.9
	baz=315							
BLO	Bloomington	61.98	62		P	P	10 36 19.4	+0.2
N49A	Columbus Grove	62.02	59		P	P	10 36 19.0	-0.4
	baz=315							
D55A	Sainte-Anne-du	62.07	49		P	P	10 36 18.5	-1.1
	baz=316							
USIN	University of	62.19	63		P	P	10 36 20.9	+0.2
M50A	Fremont	62.29	58		P	P	10 36 20.6	-0.6
	baz=315							
J52A	Paris	62.32	55		P	P	10 36 20.6	-0.8
	baz=316							
H53A	Bobcaygeon	62.32	53		P	P	10 36 20.6	-0.7
	baz=316							
P48A	Milroy	62.38	61		P	P	10 36 21.2	-0.6
P48A	Milroy	62.38	61		P	P	10 36 21.0	-0.9
	baz=315,SNR=8.8							
O49A	Covington	62.46	59		P	P	10 36 21.9	-0.4
	baz=315							
F55A	Otter Lake	62.51	50		P	P	10 36 21.3	-1.3
	baz=316							
Q48A	North Vernon	62.59	61		P	P	10 36 22.6	-0.6
	baz=315							
ARU	Arti	62.59	328	*d i*	P	P	10 36 22.2	-0.8
ARU					S	S	10 44 45.0	-1.1
ARU					pmax	pmax		
	comp=Z,2.0nm,0.6s							
N50A	Nevada	62.68	58		P	P	10 36 23.5	-0.3
	baz=316							
P49A	Miami Univ. Ec	62.71	60		P	P	10 36 23.4	-0.7
	baz=315							
G55A	Calabogie	62.75	51		P	P	10 36 23.4	-0.9
	baz=316							
WCI	Wyandotte Cave	62.77	62		P	P	10 36 24.6	+0.1
WCI					pmax	pmax		
	comp=Z,23nm,0.7s							
WCI	Wyandotte Cave	62.77	62		P	P	10 36 24.6	+0.1
WCI	Wyandotte Cave	62.77	62		P	P	10 36 24.3	-0.2
	baz=315							
O50A	Cable	62.87	59		P	P	10 36 24.9	-0.2
	baz=316,SNR=5.4							
N51A	Ashland	62.99	58		P	P	10 36 25.4	-0.5
	baz=316							
Q49A	Aurora	62.99	61		P	P	10 36 25.4	-0.5
	baz=316							
LATQ	La Tuque	63.05	47		P	P	10 36 24.8	-1.4
	baz=318							
M52A	Chesterland	63.08	57		P	P	10 36 25.7	-0.8
	baz=316							
HKT	Hockley	63.09	75		P	P	10 36 26.3	-0.3
HKT					pmax	pmax		
	comp=Z,7.0nm,1.6s							
E57A	Chemin Saint G	63.14	49		P	P	10 36 25.8	-1.0
	baz=317							
ACSO	Alum Creek Sta	63.15	59		P	P	10 36 27.0	0.0
	baz=316							

P50A	Jamestown	63.16	60	P	P	10 36 27.0	-0.1
	baz=316						
T47A	Sharon Grove	63.20	64	P	P	10 36 27.8	+0.4
J54A	Appleton	63.23	54	P	P	10 36 26.9	-0.5
	baz=316						
R49A	Shelbyville	63.35	61	P	P	10 36 28.0	-0.3
	baz=316						
L53A	Girard	63.35	56	P	P	10 36 27.9	-0.4
	baz=316						
ERPA	Erie	63.37	55	P	P	10 36 28.1	-0.4
	baz=316						
WVT	Waverly	63.40	65	P	P	10 36 28.8	+0.1
WVT				pmax	pmax		
	comp=Z,14nm,0.8s						
WVT	Waverly	63.40	65	P	P	10 36 28.8	+0.1
WVT				IAmb	IAmb	10 36 29.7	
	comp=Z,14nm,0.8s						
WVT	Waverly	63.40	65	P	P	10 36 28.6	-0.1
	baz=316						
O51A	Pataskala	63.42	58	P	P	10 36 28.2	-0.6
	baz=316						
N52A	McGinn’s Farm,	63.43	57	P	P	10 36 28.2	-0.6
	baz=316						
H56A	Elgin	63.45	51	P	P	10 36 28.4	-0.5
	baz=317						
M53A	WI Miller and	63.51	56	P	P	10 36 29.1	-0.3
	baz=316						
KIRV	Kirov	63.57	334	LR	LR	11 07 58.3	
	comp=Z,94nm,18.0s,baz=47,slow=40						
KIRV	Kirov	63.57	334	*i* P	P	10 36 28.7	-0.7
Q50A	Georgetown	63.61	60	P	P	10 36 29.8	-0.2
	baz=316						
ALLY	Alegheny Colle	63.63	56	P	P	10 36 29.4	-0.7
L54A	Sinclairville	63.63	55	P	P	10 36 29.5	-0.6
	baz=316						
S49A	Springfield	63.65	62	P	P	10 36 30.0	-0.3
	baz=316,SNR=9.8						
OXF	Oxford	63.65	67	P	P	10 36 30.7	+0.3
OXF	Oxford	63.65	67	P	P	10 36 30.2	-0.2
	baz=316						
P51A	Williamsport	63.65	59	P	P	10 36 29.6	-0.7
	baz=316						
KMI	Kunming	63.66	278	P	P	10 36 32.0	+1.2
KMI				pP	pP	10 36 34.8	-11
KMI				sP	sP	10 36 37.3	-15
K54A	Basiliko Farm,	63.68	54	P	P	10 36 30.0	-0.5
	baz=317						
R50A	Paris	63.82	61	P	P	10 36 31.9	+0.5
R50A	Paris	63.82	61	P	P	10 36 31.2	-0.2
	baz=316						
Q51A	Peebles	63.82	60	P	P	10 36 31.6	+0.2
Q51A	Peebles	63.82	60	P	P	10 36 31.2	-0.2
	baz=316,SNR=5.5						
O52A	Adamsville	63.85	58	P	P	10 36 31.7	+0.1
O52A	Adamsville	63.85	58	P	P	10 36 31.4	-0.2
	baz=316						
K55A	Perry	63.91	54	P	P	10 36 31.6	-0.4
	baz=317						
KLMR	Klimovskoe	63.98	340	*e*P	P	10 36 27.4	-4.6
KLMR				pmax	pmax		
	comp=Z,20nm,1.6s						
KLMR	Klimovskoe	63.98	340	*e*P	P	10 36 27.4	-4.6
KLMR				AMP		10 36 35.0	
	comp=Z,20nm,1.6s						
M54A	Oil Creek Stat	63.98	56	P	P	10 36 31.8	-0.6
	baz=317						
T49A	Edmonton	64.00	63	P	P	10 36 32.2	-0.4
	baz=316,SNR=8.0						
P52A	Corning	64.04	59	P	P	10 36 32.0	-0.8
	baz=316						
PLAL	Pickwick Lake	64.08	66	P	P	10 36 32.9	-0.3
O53A	New Philadelph	64.08	57	P	P	10 36 32.4	-0.7
	baz=316						
L55A	Hinsdale	64.12	54	P	P	10 36 33.0	-0.4
	baz=317						
N54A	Moraine State	64.21	56	P	P	10 36 33.6	-0.4
	baz=317						
S50A	Richmond	64.21	61	P	P	10 36 33.6	-0.4
	baz=316						
R51A	Hillsboro	64.21	60	P	P	10 36 34.0	+0.1
	baz=316,SNR=9.5						
V48A	Smith Brothers	64.25	65	P	P	10 36 34.6	+0.3
CLTN	Cedars of Leba	64.28	64	P	P	10 36 35.2	+0.8
U49A	Red Boiling Sp	64.28	63	P	P	10 36 34.6	+0.2
K56A	Middlesex	64.31	53	P	P	10 36 34.7	+0.1
	baz=317						
D61A	St Aubert, Com	64.37	46	P	P	10 36 34.1	-0.8
	baz=319						
T50A	Nancy	64.44	62	P	P	10 36 35.3	-0.3
	baz=316,SNR=9.8						
Q52A	Bidwell	64.45	59	P	P	10 36 35.1	-0.4
	baz=316						
M55A	Ridgway	64.47	55	P	P	10 36 35.4	-0.3
	baz=317						
P53A	Whipple	64.54	58	P	P	10 36 35.8	-0.3
	baz=317						
O54A	Avella	64.57	57	P	P	10 36 36.0	-0.4
	baz=317						
L56A	Greenwood	64.60	54	P	P	10 36 36.9	+0.3
L56A	Greenwood	64.60	54	P	P	10 36 36.6	0.0
	baz=317						
S51A	Beattyville	64.68	61	P	P	10 36 36.7	-0.4
	baz=316						
K57A	Scipio Center	64.69	53	P	P	10 36 36.9	-0.2
	baz=317						
R52A	Catlettsburg	64.70	60	P	P	10 36 36.9	-0.3
	baz=316						
M56A	Emporium	64.76	55	P	P	10 36 36.9	-0.6
	baz=317						
N55A	Marion Center	64.86	56	P	P	10 36 37.6	-0.6
	baz=317						
Q53A	Leroy	64.92	59	P	P	10 36 38.3	-0.3
	baz=317,SNR=6.2						
D62A	Allapoint, All	64.97	45	P	P	10 36 38.1	-0.7
	baz=320						
T51A	Gray	64.98	62	P	P	10 36 39.0	-0.1
	baz=316						
X48A	Hartselle	65.05	66	P	P	10 36 39.2	-0.3
L57A	Andrews Acres	65.06	54	P	P	10 36 38.9	-0.6
	baz=318						
R53A	Hurricane	65.08	59	P	P	10 36 40.0	+0.4
	baz=317						
K58A	Earlville	65.10	52	P	P	10 36 39.2	-0.5
	baz=318						
SWET	Sewanee	65.13	64	P	P	10 36 40.0	-0.1
Q54A	Coxs Mills	65.20	58	P	P	10 36 40.0	-0.4
	baz=317						
BINY	Binghamton	65.35	53	P	P	10 36 40.8	-0.5
	baz=318						
Z47A	Carrollton	65.36	67	P	P	10 36 41.7	+0.1
T52A	Hallie	65.40	61	P	P	10 36 42.2	+0.4
	baz=317						
M57A	Sunshine Farm,	65.41	54	P	P	10 36 41.5	-0.3
	baz=318						
S53A	Williamson	65.45	60	P	P	10 36 41.9	-0.2
	baz=317						
W50A	Signal Mountai	65.49	64	P	P	10 36 42.7	+0.3
TZTN	Tazewell	65.50	62	P	P	10 36 42.4	-0.1
	baz=317						
L58A	Harry Jones Me	65.53	53	P	P	10 36 42.3	-0.2
	baz=318						
SSPA	Standing Stone	65.54	55	P	P	10 36 42.3	-0.2
	baz=318						
Q55A	Buckhannon	65.59	58	P	P	10 36 42.6	-0.4
	baz=317						
V51A	Loudon	65.59	63	P	P	10 36 43.1	+0.1
R54A	Victor	65.70	59	P	P	10 36 43.7	-0.1
	baz=317						
G62A	West of Eustis	65.71	47	P	P	10 36 43.2	-0.5
	baz=319						
M58A	Price’s Panora	65.72	54	P	P	10 36 43.5	-0.3
	baz=318						
T53A	Wise	65.74	61	P	P	10 36 43.9	-0.1
	baz=317						
E63A	Oxbow	65.75	45	P	P	10 36 42.8	-1.0
	baz=320						
CPCT	Cooper Cave	65.75	63	P	P	10 36 44.3	+0.2
FINES	FINESS Array B	65.79	347	P	P	10 36 43.3	-0.5
	comp=Z,4.7nm,0.4s,baz=11,slow=7.7,SNR=49						
FINES				LR	LR	11 10 09.7	
	comp=Z,37nm,18.4s,baz=356,slow=40						
FINES	FINESS Array B	65.79	347	*ce*P	P	10 36 43.7	-0.2
FINES				pmax	pmax		
	comp=Z,5.0nm,0.4s						
FINES	FINESS Array B	65.79	347	P	P	10 36 43.6	-0.2
FPAL	Fort Paine	65.80	65	P	P	10 36 44.4	0.0
S54A	Dingess, Beckl	65.81	59	P	P	10 36 44.3	-0.1
	baz=317						
L59A	Walton	65.82	52	P	P	10 36 44.0	-0.5
	baz=318						
P56A	Dayton Farm, R	65.88	57	P	P	10 36 45.0	+0.2
	baz=318						
H62A	Milan	65.91	48	P	P	10 36 44.1	-0.8
	baz=319						
O57A	Amberson	65.98	55	P	P	10 36 45.1	-0.4
	baz=318						
N58A	Sunbury	65.98	54	P	P	10 36 45.3	-0.1
	baz=318						
V52A	Sevierville	65.99	62	P	P	10 36 45.9	+0.4
V52A				IAmb	IAmb	10 36 48.6	
	comp=Z,12nm,0.8s						
E64A	Bridgewater	66.02	45	P	P	10 36 44.5	-1.0
	baz=320						
TKL	Tuckaleechee C	66.02	63	P	P	10 36 46.1	+0.4
R55A	Marlinton	66.09	58	P	P	10 36 45.5	-0.7
	baz=317						
LRAL	Lakeview Retre	66.10	67	P	P	10 36 46.0	-0.3
LRAL				IAmb	IAmb	10 36 47.1	
	comp=Z,9.6nm,0.9s						
LRAL	Lakeview Retre	66.10	67	P	P	10 36 46.0	-0.3
	baz=317						
M59A	Waymart	66.11	53	P	P	10 36 45.1	-1.2
	baz=318						
T54A	Tazewell	66.21	60	P	P	10 36 47.1	+0.1
	baz=317						
X51A	Calhoun	66.21	64	P	P	10 36 47.2	+0.2
	baz=317						
F64A	Sherman	66.21	46	P	P	10 36 45.8	-1.0
	baz=320						
USP	Ospenovka	66.35	310	P	P	10 36 49.5	+1.7
	SNR=8.1						
R56A	Bull Pasture M	66.39	58	P	P	10 36 48.0	-0.2
	baz=318						
N59A	State Game Lan	66.41	54	P	P	10 36 47.9	-0.3
	baz=318						
O58A	Lewisberry	66.41	55	P	P	10 36 47.7	-0.5
	baz=318						
U54A	Nelsons Funny	66.47	61	P	P	10 36 48.6	-0.1
	baz=317						
V53A	Saluda	66.55	62	P	P	10 36 49.7	+0.5
V53A				IAmb	IAmb	10 36 58.3	
	comp=Z,13nm,0.9s						
Z50A	Ashland	66.56	66	P	P	10 36 48.9	-0.4
Z50A	Ashland	66.56	66	P	P	10 36 48.7	-0.5
	baz=317,SNR=6.9						
T55A	Pulaski	66.59	60	P	P	10 36 49.5	0.0
	baz=318						
O59A	Robesonia	66.65	54	P	P	10 36 49.1	-0.6
	baz=318						
M60A	Port Jervis	66.68	53	P	P	10 36 49.2	-0.6
	baz=319						
BLA	Blacksburg	66.72	59	P	P	10 36 50.4	+0.1
	baz=318						
N60A	Cedar Hill Far	66.78	53	P	P	10 36 50.7	+0.2
	baz=319						
AAK	Ala-Archa	66.83	310	P	P	10 36 52.7	+1.7
	SNR=8.8						
AAK	Ala-Archa	66.83	310	*ce*P	P	10 36 52.5	+1.5
AAK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
AAK	Ala-Archa	66.83	310	P	P	10 36 51.9	+0.9
AAK				IAmb	IAmb	10 36 53.1	
	comp=Z,7.5nm,0.6s						
S56A	Natural Bridge	66.84	58	P	P	10 36 50.6	-0.3
	baz=318						
SWI	Sorong	66.87	236	P	P	10 36 51.2	-0.2
SWI				pmax	pmax		
	comp=Z,48nm,0.9s						
SIJI	Sorong	66.88	236	P	P	10 36 50.1	-1.3
	comp=Z,29nm,0.9s,baz=30,slow=7.2,SNR=11						
KZA	Kyzart	66.88	309	P	P	10 36 52.6	+0.9
	SNR=6.0						
Q58A	Fox Den Farm,	66.89	56	P	P	10 36 50.8	-0.4
	baz=318						
U55A	TA2, Sparta	66.90	60	P	P	10 36 51.6	+0.1
	baz=318						
J63A	Strafford	66.93	49	P	P	10 36 51.5	+0.1
	baz=320						
R57A	Stanardsville	66.93	57	P	P	10 36 51.4	-0.1
	baz=318						
V54A	Nebo	66.94	61	P	P	10 36 51.8	+0.2
	baz=318						
P59A	Jarrettsville	67.04	55	P	P	10 36 52.0	-0.2
	baz=318						
S57A	Dark Hollow, R	67.10	58	P	P	10 36 52.5	-0.1
	baz=318						
X53A	Estanollee	67.13	63	P	P	10 36 52.7	-0.1
	baz=318						
EKS2	Erkin-Say	67.15	310	P	P	10 36 54.7	+1.7
	SNR=13						
Y52A	Lilburn	67.17	64	P	P	10 36 53.0	-0.1
	baz=317						
R58A	Rapidan	67.20	57	P	P	10 36 53.2	-0.1
	baz=318						
V55A	Taylorsville	67.29	61	P	P	10 36 53.7	-0.2
	baz=318						
W54A	Cherokee Point	67.32	62	P	P	10 36 53.9	-0.1
	baz=318						
U56A	King	67.38	60	P	P	10 36 54.2	-0.2
	baz=318						
LSA	Lhasa	67.39	290	P	P	10 36 56.7	+1.6
LSA				pmax	pmax		
	comp=Z,19nm,0.7s						
T57A	Hurt	67.51	59	P	P	10 36 55.2	+0.1
	baz=318						
R58B	Mineral	67.52	57	P	P	10 36 55.2	-0.1
	baz=318						
AML	Almayashu	67.59	310	P	P	10 36 57.7	+1.5
	SNR=11						
X54A	Belton	67.61	62	P	P	10 36 56.2	+0.3
	baz=318						
NB2	NORSAR Subarra	67.66	355	P	P	10 36 55.5	-0.3
	comp=Z,2.3nm,0.6s,baz=7.4,slow=6.9						
NOA	NORSAR Array B	67.66	355	P	P	10 36 54.9	-1.0
	comp=Z,2.0nm,0.7s,baz=6.9,slow=6.4,SNR=8.7						
NOA				LR	LR	11 07 50.6	
	comp=Z,15nm,19.4s,baz=240,slow=37						
V56A	Mocksville	67.72	60	P	P	10 36 56.5	0.0
	baz=318						
KMSC	Kings Mountain	67.75	61	P	P	10 36 57.0	+0.3
KMSC	Kings Mountain	67.75	61	P	P	10 36 56.9	+0.1
	baz=318						
GOGA	Godfrey	67.84	64	P	P	10 36 57.1	-0.2
	baz=318						
U57A	Blanch	67.88	59	P	P	10 36 57.4	-0.2
	baz=318						
HODGE	Hodges	67.91	63	P	P	10 36 58.4	+0.6
ABKAR	Akbulak array	67.92	323	P	P	10 36 56.7	-0.9
ABKAR	Akbulak array	67.92	323	P	P	10 36 56.6	-0.9
ABKAR				IAmb	IAmb	10 37 00.2	
	comp=Z,3.7nm,1.1s						
T58A	Grand View Acr	67.93	58	P	P	10 36 57.3	-0.5
	baz=318						
NORES	NORESS Array B	67.95	354	P	P	10 36 59.5	+1.9
NORES				pmax	pmax		
	comp=Z,1.0nm,0.2s						
X55A	Gracelyn & Ava	68.08	62	P	P	10 36 58.5	-0.3
	baz=318,SNR=5.8						
KK31	Karatay Array	68.35	312	P	P	10 37 02.1	+1.7
KK31				IAmb	IAmb	10 37 02.2	
	comp=Z,4.7nm,0.6s						
KKAR	Karatay Array	68.35	312	P	P	10 37 00.8	+0.4
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KKAR	Karatay Array	68.35	312	P	P	10 37 00.0	-0.4
KKAR	Karatay Array	68.35	312	P	P	10 37 00.8	+0.4
KKAR				IAmb	IAmb	10 37 02.2	
	comp=Z,4.7nm,0.6s						
Y55A	Saluda	68.35	63	P	P	10 37 00.5	0.0
	baz=318						
X56A	White Oak	68.40	62	P	P	10 37 01.0	+0.2
	baz=318						
JSC	Jenkinsville	68.43	62	P	P	10 37 01.1	+0.1
JSC				pmax	pmax		
	comp=Z,12nm,0.6s						
JSC	Jenkinsville	68.43	62	P	P	10 37 01.1	+0.1
T59A	Double "B" Far	68.43	58	P	P	10 37 01.0	+0.1
	baz=319						
KSH	Kashi	68.46	307	P	P	10 37 04.0	+2.7
KSH				pP	PcP	10 37 24.5	-1.8
KSH				PcP	sP	10 37 28.5	+5.3
KSH				S	S	10 45 59.0	+0.5
KSH	Kashi	68.46	307	SS	SS	10 50 26.5	+4.2
V58A	Windy Hill, Pi	68.48	59	P	P	10 37 01.1	-0.1
	baz=318						
W57A	Gilead	68.48	60	P	P	10 37 01.4	+0.1
	baz=318						
ARSB	Arslanbob	68.56	310	P	P	10 37 03.5	+1.6
ARSB				IAmb	IAmb	10 37 04.0	
	comp=Z,8.9nm,0.7s						
TAOE	Nuku Hiva Isla	68.65	138	*e*T	T	11 51 34.6	
	comp=Z,28nm,0.3s						
V59A	Middlesex	68.97	59	P	P	10 37 04.1	-0.2
	baz=319						
W58A	Raeford	68.99	60	P	P	10 37 04.2	-0.2
	baz=319						
U60A	Pendleton	69.02	58	P	P	10 37 04.5	-0.1
	baz=319						
Z56A	Williston	69.08	63	P	P	10 37 05.3	+0.3
	baz=318						
Y57A	Sumter	69.11	62	P	P	10 37 05.5	+0.3
	baz=318						
Z57A	Bowman	69.47	62	P	P	10 37 07.6	+0.2
	baz=319						
Y58A	Scranton	69.59	61	P	P	10 37 07.4	-0.8
	baz=319						
OBN	Obninsk	69.87	339	LR	LR	11 10 41.1	
	comp=Z,12nm,21.0s,baz=27,slow=38						
OBN	Obninsk	69.87	339	*i* P	P	10 37 09.3	-0.2
OBN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
NHSC	New Hope	69.90	62	P	P	10 37 09.7	-0.4
	baz=319						
Z58A	St. Stephen	69.94	62	P	P	10 37 09.7	-0.6
	baz=319						
X60A	Albert Glenn T	70.00	60	P	P	10 37 10.4	-0.3
	baz=319						
CMAR	Chiang Mai Arr	70.95	276	P	P	10 37 16.6	-0.1
	comp=Z,3.2nm,0.7s,baz=26,slow=6.6,SNR=21						
CMAR	Chiang Mai Arr	70.95	276	P	P	10 37 15.8	-0.9
TAPN	Taplejung	71.15	290	*e*P	P	10 37 18.8	+0.6
	comp=Z,46nm,0.8s						
GAR	Garm	71.64	310	P	P	10 37 21.6	+0.8
ODAN	Odare	71.71	290	*e*P	P	10 37 22.0	+0.5
	comp=Z,9.4nm,0.3s						
GUN	Gumba	71.80	292	*e*P	P	10 37 23.0	+0.8
	comp=Z,81nm,0.4s						
JIRN	Jiri	71.81	292	*e*P	P	10 37 23.2	+0.9
	comp=Z,68nm,0.5s						
RAMN	Ramite	72.10	291	*e*P	P	10 37 24.4	+0.5
	comp=Z,73nm,0.5s						
PKI	Pulchoki	72.33	292	*e*P	P	10 37 25.7	+0.4
	comp=Z,36nm,0.6s						
PKIN	Phulchoki	72.33	292	*e*P	P	10 37 25.7	+0.4
	comp=Z,40nm,0.5s						
GKN	Gorkha	72.45	293	*e*P	P	10 37 26.3	+0.5
	comp=Z,26nm,0.3s						
CHGR	Chuyangaron	72.47	310	P	P	10 37 26.1	+0.4
DMN	Daman	72.48	292	*e*P	P	10 37 26.8	+0.7
DANN	Dangsing	72.70	294	*e*P	P	10 37 28.1	+0.6
	comp=Z,83nm,0.9s						
DWPF	Disney Wildern	72.96	66	P	P	10 37 28.6	-0.1
	baz=320						
PPT2	Papeete2	73.29	151	*e*LR	LR	10 59 44.3	
	comp=Z,125nm,31.2s						
PPT2	Papeete2	73.29	151	*e*T	T	11 57 23.3	
	comp=Z,4.1nm,0.3s						
EKA	Eskdalemuir Ar	73.62	3	P	P	10 37 32.7	+0.6
EKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
DZM	Mont Dzumac	74.23	194	*e*LR	LR	11 00 24.8	
	comp=Z,114nm,23.9s						
NIL	Nilore	74.37	304	P	P	10 37 37.4	+0.5
AKASG	Malin Array Be	75.55	342	P	P	10 37 42.9	-0.4
	comp=Z,2.2nm,0.4s,baz=22,slow=6.1,SNR=21						
AKASG				LR	LR	11 14 59.1	
	comp=Z,38nm,19.0s,baz=20,slow=39						
AKASG	Malin Array Be	75.55	342	P	P	10 37 42.5	-0.9
AKBB	Malin Array Si	75.55	342	*i* P	P	10 37 43.2	-0.1
AKBB	Malin Array Si	75.55	342	P	P	10 37 42.6	-0.7
AKBB				IAmb	IAmb	10 37 44.3	
	comp=Z,16nm,1.1s						
KIEV	Kiev	75.56	342	P	P	10 37 42.0	-1.4
KBL	Kabul	75.80	308	P	P	10 37 43.8	-1.6
KBL				IAmb	IAmb	10 37 46.4	
	comp=Z,9.2nm,0.7s						
MTN	Manton Dam	77.21	230	P	P	10 37 52.6	-0.5
MTN				IAmb	IAmb	10 37 53.1	
	comp=Z,9.6nm,0.8s						
CLL	Collm	77.22	352	*e*P	P	10 37 50.0	-2.7
CTA	Charters Tower	77.42	213	P	P	10 37 53.6	-0.5
	comp=Z,2.5nm,0.7s,baz=7.3,slow=12,SNR=2.0						
KWP	Kalwaria Pacla	77.72	346	P	P	10 37 56.6	+1.0
KWP				pmax	pmax		
	comp=Z,32nm,1.3s						
KWP	Kalwaria Pacla	77.72	346	P	P	10 37 55.8	+0.2
DPC	Dobruska-Polom	77.85	350	P	P	10 37 55.1	-1.3
DPC				pmax	pmax		
	comp=Z,36nm,2.3s						
GEYT	Alibeck	78.06	317	P	P	10 37 58.6	+0.9
	comp=Z,0.7nm,0.3s,baz=342,slow=3.2,SNR=2.0						
GEYT				LR	LR	11 15 06.6	
	comp=Z,72nm,21.2s,baz=70,slow=38						
KMPD	K-Podol'skiy	78.12	343	P	P	10 37 58.0	+0.2
SORM	Soroca	78.17	342	⇑P	P	10 37 57.8	-0.3
SORM	Soroca	78.17	342	⇑P	P	10 37 57.8	-0.3
KIV	Kislovodsk	78.46	331	*e*P	P	10 37 59.3	-0.6
KIV				pmax	pmax		
	comp=Z,28nm,1.1s						
KIV				MLR	MLR		
	comp=Z,154nm,19.0s						
KBZ	Khabaz	78.60	330	P	P	10 38 00.9	+0.3
	comp=Z,4.4nm,0.8s,baz=87,slow=5.4,SNR=5.5						
KBZ	Khabaz	78.60	330	*i* P	P	10 38 00.8	+0.3
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SHA1	Shidzhatmaz	78.66	331	*i* P	P	10 38 01.1	-0.1
TBI	Tubuai	78.76	153	*e*LR	LR	11 02 27.7	
	comp=Z,98nm,24.8s						
TBI	Tubuai	78.76	153	*e*T	T	12 04 12.5	
	comp=Z,5.2nm,0.4s						
VRAC	Vranov	78.84	350	⇓P	P	10 38 02.6	+0.7
VRAC	Vranov	78.84	350	⇓P	P	10 38 02.6	+0.7
TRPA	Tarpa	79.20	346	⇑P	P	10 38 04.5	+0.7
BUR08	Bucovina Ar. S	79.23	344	P	P	10 38 04.1	0.0
BUR08				IAmb	IAmb	10 38 06.5	
	comp=Z,9.4nm,0.8s						
BURAR	Bucovina Array	79.26	344	⇑P	P	10 38 04.0	-0.2
BURAR	Bucovina Array	79.26	344	⇑P	P	10 38 04.0	-0.2
BURAR	Bucovina Array	79.26	344	P	P	10 38 04.3	+0.1
KHC	Kasperske Hory	79.33	352	*i* P	P	10 38 03.6	-0.9
KHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GERES	GERESS Array B	79.60	352	P	P	10 38 06.2	+0.1
	comp=Z,1.4nm,0.5s,baz=32,slow=5.3,SNR=6.8						
GERES				LR	LR	11 18 01.0	
	comp=Z,20nm,18.0s,baz=40,slow=39						
BIZ	Bicaz	79.75	343	⇓P	P	10 38 07.9	+1.1
ARCR	ARCALIA	79.92	344	⇑P	P	10 38 09.1	+1.4
TESR	Tescani	80.06	342	⇑P	P	10 38 08.3	-0.1
CONA	Conrad Observa	80.29	350	*e*P	P	10 38 10.4	+0.6
	comp=Z,4.2nm,0.6s						
DRGR		80.48	345	P	P	10 38 10.7	-0.1
DRGR				pmax	pmax		
	comp=Z,20nm,1.1s						
OZUR		80.62	343	⇑P	P	10 38 13.0	+1.5
VRI	Vrincioaia	80.66	342	⇓P	P	10 38 12.4	+0.7
VRI	Vrincioaia	80.66	342	⇓P	P	10 38 12.4	+0.7
PLOR	Plostina	80.69	342	⇑P	P	10 38 12.5	+0.5
PLOR	Plostina	80.69	342	⇑P	P	10 38 12.5	+0.5
DOPR	Dopca	80.82	343	⇑P	P	10 38 13.6	+1.0
BISRR	Bisoca	80.97	342	⇑P	P	10 38 14.6	+1.1
CFR	Carcaliu	81.05	341	⇑P	P	10 38 15.6	+1.9
CFR	Carcaliu	81.05	341	⇑P	P	10 38 15.6	+1.9
MLR	Muntele Rosu	81.17	343	⇑P	P	10 38 16.5	+1.9
MLR	Muntele Rosu	81.17	343	⇑P	P	10 38 16.5	+1.9
MLR	Muntele Rosu	81.17	343	P	P	10 38 15.9	+1.3
MLR				IAmb	IAmb	10 38 16.9	
	comp=Z,11nm,0.7s						
WATA	Walderalm	81.28	353	*i* P	P	10 38 15.3	+0.2
MOTA	Moosalm	81.31	353	*e*P	P	10 38 16.0	+0.7
	comp=Z,12nm,1.2s						
WTTA	Wattenberg	81.34	353	*i* P	P	10 38 16.0	+0.4
KBA	Koelnbreinsper	81.38	352	*e*P	P	10 38 16.7	+0.9
	comp=Z,22nm,0.9s						
KBA	Koelnbreinsper	81.38	352	P	P	10 38 16.8	+1.0
KBA				pmax	pmax		
	comp=Z,20nm,1.0s						
VOIR		81.39	343	⇑P	P	10 38 16.7	+1.0

VOIR		81.39	343	⇑P	P	10 38 16.7	+1.0
SOKA	Soboth	81.61	350	*e*P	P	10 38 18.0	+1.2
	comp=Z,3.8nm,0.6s						
FETA	Feichten	81.65	353	*e*P	P	10 38 18.1	+1.0
	comp=Z,8.9nm,1.3s						
TIRR	Tirgusor	81.68	341	⇑P	P	10 38 17.3	+0.2
TIRR	Tirgusor	81.68	341	⇑P	P	10 38 17.3	+0.2
TIRR	Tirgusor	81.68	341	P	P	10 38 17.6	+0.5
TIRR				IAmb	IAmb	10 38 18.1	
	comp=Z,15nm,0.7s						
ABTA	Abfaltersbach	81.78	352	*e*P	P	10 38 18.4	+0.6
	comp=Z,10.0nm,1.1s						
BZS	Buzias	81.80	346	⇑P	P	10 38 17.8	+0.1
BZS	Buzias	81.80	346	⇑P	P	10 38 17.8	+0.1
WRAB	Tennant Creek	81.94	224	*ce*P	P	10 38 17.4	-1.2
WRAB				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WRA	Warramunga Arr	81.95	224	P	P	10 38 17.4	-1.4
	comp=Z,2.0nm,0.7s,baz=35,slow=6.0,SNR=6.6						
WRA	Warramunga Arr	81.95	224	IAmb	IAmb	10 38 18.3	
	comp=Z,0.3nm,1.1s						
HERR	Herculane	82.38	345	⇑P	P	10 38 20.9	+0.1
MDVR	Moldovita	82.59	345	⇑P	P	10 38 22.3	+0.3
PSI	Prapat	82.93	266	P	P	10 38 23.8	-0.4
	comp=Z,12nm,0.8s,baz=30,slow=4.6,SNR=4.8						
RPSI	Rantau Prapat	83.01	266	P	P	10 38 24.0	-0.5
RPSI				IAmb	IAmb	10 38 24.5	
	comp=Z,11nm,0.7s						
RPSI	Rantau Prapat	83.01	266	P	P	10 38 23.8	-0.6
PLVB	Pleven	83.45	343	⇑P	P	10 38 26.6	+0.2
FITZ	Fitzroy Crossi	84.39	232	P	P	10 38 31.2	-0.1
	comp=Z,7.0nm,0.8s,baz=22,slow=5.9,SNR=21						
FITZ	Fitzroy Crossi	84.39	232	P	P	10 38 31.2	-0.1
FITZ				IAmb	IAmb	10 38 32.2	
	comp=Z,9.9nm,1.1s						
VTS	Vitosha	84.44	344	⇑P	P	10 38 31.8	+0.1
VTS	Vitosha	84.44	344	⇑P	P	10 38 31.8	+0.1
VTS	Vitosha	84.44	344	P	P	10 38 31.3	-0.4
VTS				IAmb	IAmb	10 38 32.5	
	comp=Z,5.0nm,0.7s						
BR131	Keskin Array S	84.94	335	P	P	10 38 34.0	-0.2
BR131				IAmb	IAmb	10 38 34.9	
	comp=Z,6.8nm,0.7s						
BRTR	Keskin Array B	84.94	335	P	P	10 38 34.3	+0.1
	comp=Z,6.4nm,0.7s,baz=40,slow=2.7,SNR=35						
BRTR	Keskin Array B	84.94	335	*ce*P	P	10 38 34.2	+0.1
BRTR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BRTR	Keskin Array B	84.94	335	P	P	10 38 33.5	-0.7
OSSC	Osservatorio P	85.09	353	P	P	10 38 34.7	0.0
MURB	Monte Urbino	85.24	352	P	P	10 38 36.0	+0.5
AS31	Alice Springs	85.42	222	P	P	10 38 35.7	-0.7
ASAR	Alice Springs	85.42	222	P	P	10 38 35.9	-0.6
	comp=Z,2.6nm,0.7s,baz=25,slow=5.8,SNR=41						
NRCA	Norcia	85.61	351	P	P	10 38 38.0	+0.6
STKA	Stephens Creek	89.87	213	P	P	10 38 57.8	+0.3
	comp=Z,6.7nm,0.8s,baz=349,slow=4.4,SNR=14						
STKA	Stephens Creek	89.87	213	IAmb	IAmb	10 38 58.3	
	comp=Z,1.3nm,0.8s						
TORD	Torodi Ar. Bea	115.77	359	PKP	PKiKP	10 44 40.9	-0.5
	comp=Z,0.5nm,0.4s,baz=353,slow=2.6,SNR=8.9						
DBIC	Dimbokro	121.98	7	PKP	PKPdf	10 44 53.0	-0.3
	comp=Z,2.1nm,0.3s,baz=305,slow=1.8,SNR=11						
TIC	Toumodi	121.99	7	*e*PKIKP	PKPdf	10 44 52.9	-0.6
	comp=Z,8.1nm,0.4s						
KIC	Kosan Boka	122.30	7	*e*PKIKP	PKPdf	10 44 53.5	-0.5
	comp=Z,12nm,1.0s						
LIC	Lamto	122.41	7	*e*PKIKP	PKPdf	10 44 53.1	-1.1
	comp=Z,4.0nm,0.4s						
PLCA	Paso Flores	131.03	107	PKP	PKPdf	10 45 10.3	+0.4
	comp=Z,2.3nm,0.9s,baz=129,slow=4.6,SNR=5.5						
TSUM	Tsumeb	145.38	332		PKPab	10 45 37.2	+0.2
MAW	Mawson	146.42	218	PKPbc	PKPbc	10 45 38.0	-0.3
	comp=Z,6.2nm,0.8s,baz=338,slow=3.9,SNR=7.5						
BOSA	Boshof	150.94	312	PKPbc	PKPbc	10 45 51.5	+0.1
	comp=Z,5.0nm,0.5s,baz=28,slow=2.0,SNR=18						

IDC 26 10:42:06.6±1.7**, 7°.49N×94°.25E, h0km, mb4.0**/7**, mb1 4.0**/8**, mb1mx3.7**/43**, mbtmp3.9**/8**, ML3.8**/1**, Error ellipse: s-maj=62.3km s-min=27.8km az=62.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.82	22	Pn	Pn	10 44 55.8	-0.9
	0.2nm,0.3s,baz=216,slow=13,SNR=1.3						
H08S3	Diego Garcia H	26.39	236	T	T	11 14 19.5	
	baz=57						
H08S2	Diego Garcia H	26.39	236	T	T	11 14 20.4	
	baz=57						
H08S1	Diego Carcia H	26.41	236	T	T	11 14 19.8	
	baz=57						
MKAR	Makanchi Array	40.49	347	P	P	10 49 46.9	-0.3
	1.0nm,0.7s,baz=165,slow=7.2,SNR=12						
SONM	Songino Array	41.52	12	P	P	10 49 55.8	0.0
	0.5nm,0.6s,baz=188,slow=3.2,SNR=5.0						
KURBB	Kurchatov Arra	44.95	346	P	P	10 50 23.4	+0.1
	1.6nm,0.8s,baz=167,slow=7.0,SNR=15						
ZALV	Zalesovo Beam	46.95	352	P	P	10 50 39.5	+0.5
	2.0nm,0.4s,baz=180,slow=8.2,SNR=8.2						
ASAR	Alice Springs	49.59	130	P	P	10 50 59.9	-0.1
	0.2nm,0.6s,baz=302,slow=7.3,SNR=4.3						
FINES	FINESS Array B	73.10	332	P	P	10 53 38.1	-0.5
	2.0nm,0.8s,baz=110,slow=8.3,SNR=3.9						
ARCES	ARCESS Array B	75.66	340	P	P	10 53 53.4	0.0
	7.8nm,1.0s,baz=112,slow=6.9,SNR=2.7						

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*IDC **26** 10:42:58.5±1.5, 7°.27N×93°.68E, h0km, mb4.0/7, mb1 3.9/9, mb1mx3.7/50, mbtmp3.9/9, ML3.6/2, MS3.0/2, Ms1 3.0/2, ms1mx2.6/51, Error ellipse: s-maj=60.8km s-min=20.6km az=60.0*

ISC 26 10:43:03.7±1.2**, 7°.3N**±0°.1×**93°.7E**±0°.2**, h35km, n14, σ0ˢ.85**/10**, mb3.9**/7**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	6.84	130	Pn	Pn	10 44 41.8	0.0
	0.4nm,0.3s,baz=264,slow=18,SNR=1.1						
CMAR	Chiang Mai Arr	12.24	24	Pn	Pn	10 45 56.1	+0.5
	0.2nm,0.3s,baz=228,slow=15,SNR=1.8						
PALK	Pallekele	12.89	271	LR	LR	10 50 23.4	
	comp=Z,30nm,19.6s,baz=60,slow=35						
H08S3	Diego Garcia H	25.81	235	T	T	11 15 26.1	
	baz=55,slow=75,SNR=3.7						
H08S2	Diego Garcia H	25.82	235	T	T	11 15 24.3	
	baz=55,slow=75,SNR=5.3						
H08S1	Diego Carcia H	25.83	235	T	T	11 15 40.3	
	baz=55,slow=75,SNR=7.9						
KAPI	Kappang	28.72	114	LR	LR	11 01 33.4	
	comp=Z,78nm,21.0s,baz=28,slow=39						
MKAR	Makanchi Array	40.58	348	P	P	10 50 39.3	-0.6
	1.5nm,0.7s,baz=167,slow=8.1,SNR=12						
SONM	Songino Array	41.85	13	P	P	10 50 49.5	-0.9
	0.9nm,0.7s,baz=201,slow=7.4,SNR=4.5						
KURBB	Kurchatov Arra	45.02	346	P	P	10 51 15.9	+0.2
	2.1nm,0.7s,baz=164,slow=7.1,SNR=12						
ZALV	Zalesovo Beam	47.09	353	P	P	10 51 32.2	+0.2
	2.1nm,0.4s,baz=188,slow=8.0,SNR=7.6						
BVAR	Borovoye Array	49.42	342	P	P	10 51 50.4	+0.4
	0.4nm,0.3s,baz=123,slow=10,SNR=2.8						
ASAR	Alice Springs	49.87	129	P	P	10 51 53.2	-0.8
	0.6nm,0.9s,baz=298,slow=6.1,SNR=4.5						
ASAR				PcP	PcP	10 53 15.9	+1.7
	0.3nm,0.8s,baz=303,slow=2.4,SNR=2.6						
FINES	FINESS Array B	73.04	332	P	P	10 54 29.9	+0.1
	3.0nm,0.7s,baz=123,slow=14,SNR=4.7						

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*IDC **26** 10:53:42.2±1.9, 21°.61N×143°.16E, h291km±17km, mb3.2/12, mb1 3.3/14, mb1mx3.1/52, mbtmp3.9/14, Error ellipse: s-maj=21.9km s-min=12.7km az=94.0*

ISC 26 10:53:44.3±0.8**, 21°.70N**±0°.10×**143°.1E**±0°.2**, h311km, n16, σ1ˢ.00**/18**, mb3.5**/11**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.44	351	P	Pn	10 55 07.0	-0.2
	13nm,0.3s,baz=284,slow=22,SNR=15						
JCJ				S	S	10 56 12.1	-2.0
	11nm,0.3s,baz=52,slow=23,SNR=7.3						
MJAR	Matsushiro Arr	15.39	345	P	P	10 57 04.2	-0.8
	0.1nm,0.3s,baz=166,slow=10,SNR=5.3						
KSRS	Korea Array	20.48	323	P	P	10 58 00.4	+1.3
	0.5nm,0.5s,baz=150,slow=8.2,SNR=3.1						
PETK	Petropavlovsk-	33.29	16	P	P	10 59 53.2	0.0
	2.6nm,1.0s,baz=212,slow=10,SNR=1.9						
WRA	Warramunga Arr	42.27	192	P	P	11 01 06.2	-1.8
	0.5nm,0.6s,baz=15,slow=9.1,SNR=12						
ASAR	Alice Springs	45.97	192	P	P	11 01 36.8	-0.5
	0.2nm,0.7s,baz=15,slow=9.6,SNR=6.0						
MKAR	Makanchi Array	54.65	313	P	P	11 02 42.5	+0.9
	0.3nm,0.5s,baz=95,slow=9.0,SNR=4.9						
MKAR				PcP	PcP	11 03 40.1	-0.2
	0.3nm,0.4s,baz=78,slow=5.4,SNR=5.0						
ILAR	Eielson Array	62.07	27	P	P	11 03 31.8	-0.4
	0.5nm,0.7s,baz=252,slow=5.4,SNR=7.1						
BVAR	Borovoye Array	62.63	319	P	P	11 03 36.8	+0.7
	1.5nm,0.4s,baz=85,slow=7.6,SNR=11						
INK	Inuvik	67.59	24	P	P	11 04 07.3	-0.2
	0.6nm,0.6s,baz=11,slow=2.4,SNR=1.7						
YKA	Yellowknife Ar	76.48	28	P	P	11 05 00.4	+0.4
	0.6nm,0.6s,baz=289,slow=5.4,SNR=12						
ARCES	ARCESS Array B	78.90	341	P	P	11 05 13.9	+0.7
	4.7nm,1.0s,baz=60,slow=7.2,SNR=7.5						
FINES	FINESS Array B	83.15	334	P	P	11 05 35.1	-0.4
	1.0nm,0.4s,baz=76,slow=4.6,SNR=12						
NVAR	Mina Array Bea	83.19	51	P	P	11 05 38.1	+1.5
	0.4nm,0.5s,baz=286,slow=6.0,SNR=5.3						
PLCA	Paso Flores	145.81	131	PKPbc	PKPbc	11 12 46.9	-0.5
	1.0nm,0.6s,baz=30,slow=6.0,SNR=4.5						
LPAZ	La Paz	150.00	85	PKPbc	PKiKP	11 13 00.1	-0.3
	0.7nm,0.5s,baz=307,slow=5.1,SNR=1.7						

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*KRNET **26** 10:58:26.8±0.1, 39°.22N×74°.56E, mb3.0*
*SOME **26** 10:58:29.3, 39°.53N×74°.42E, h20km*
*NNC **26** 10:58:33.5±2.1, 39°.77N×74°.61E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=17.4km s-min=10.7km az=148.0*

ISC 26 10:58:31.7±1.8**, 39°.61N**±0°.09×**74°.59E**±0°.04**, h10km, n34, σ1ˢ.86**/57**, 16C-15D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob	2.10	325	⇓*i*P	Pb	10 59 08.8	-1.2
	baz=31						
ARSB				⇓*i*S	Sg	10 59 39.6	+0.3
	baz=31						
NRN	Naryn	2.11	30	⇑*i*P	Pb	10 59 09.4	-0.9
	baz=26						
NRN				⇑*i*S	Sg	10 59 40.5	+0.9
	baz=26						
ARLS	Aral	2.25	355	⇓*i*P	Pb	10 59 12.5	-0.1
	baz=56						
ARLS				⇓*i*S	Sg	10 59 45.2	+1.0
	baz=56						
KZA	Kyzart	2.51	11	⇑*i*P	Pb	10 59 15.5	-1.7
	baz=10.0						
KZA				⇑*i*S	Sg	10 59 51.5	-1.0
	baz=10.0						
AML	Almayashu	2.60	345	⇓*i*P	Pb	10 59 16.7	-2.0
	baz=48						
AML				⇓*i*S	Sb	10 59 53.1	+2.2
	baz=48						
UCH	Uchtor	2.61	359	⇓*i*P	Pb	10 59 17.1	-1.8
	baz=59						
UCH				⇓*i*S	Sb	10 59 53.7	+2.5
	baz=59						
ULHL	Ulahol	2.91	25	⇑*i*P	Pb	10 59 20.7	-3.2
	baz=22						
ULHL				⇑*i*S	Sb	11 00 00.3	+0.7
	baz=22						
BTK	Batken	2.94	280	⇑*i*P	Pn	10 59 17.4	-1.2
	baz=87						
BTK				⇑*i*S	Sn	10 59 53.8	-0.1
	baz=87						
ARK	Arkit	2.96	318	⇑*i*P	Pn	10 59 20.3	+1.4
	baz=23						
ARK				⇑*i*S	Sb	10 59 58.9	-1.9
	baz=23						
AAK	Ala-Archa	3.02	359	⇑*e*P	Pb	10 59 22.9	-2.8
	baz=59						
AAK				⇑*i*S	Sb	11 00 04.4	+1.7
	baz=59						
AAK	Ala-Archa	3.02	359	⇓Pn	Pb	10 59 22.7	-3.0
	5.7nm,1.1s						
AAK				⇑Lg	Lg	11 00 05.4	
	14nm,1.0s						
BOOM	Boomskoye usch	3.05	19	⇑*i*P	Pb	10 59 23.2	-3.0
	baz=17						
BOOM				⇑*i*S	Sb	11 00 03.8	+0.3
	baz=17						
KBK	Karagaybulak	3.05	5	⇓*i*P	Pb	10 59 22.9	-3.3
	baz=5.0						
KBK				⇓*i*S	Sb	11 00 04.7	+1.1
	baz=5.0						
KDJ	Kajisay	3.19	37	⇓*i*P	Pn	10 59 24.4	+2.3
	baz=34						
KDJ				⇓*i*S	Sb	11 00 06.3	-1.3
	baz=34						
MRKS	Merke	3.29	342	*e*P	Pb	10 59 29.4	-0.9
	6.7nm,0.4s						
MRKS				*e*S	Sb	11 00 13.2	+2.8
	4.2nm,0.5s						
MRKS	Merke	3.29	342	Pg	Pb	10 59 29.4	-0.9
	6.7nm,0.4s						
MRKS				Lg	Lg	11 00 13.6	
	4.2nm,0.5s						
KST	Kastek	3.58	16	*e*P	Pb	10 59 36.5	+1.4
	4.6nm,0.5s						
KST				*e*S	Sg	11 00 24.7	-2.0
	9.4nm,0.7s						
KST	Kastek	3.58	16	Pg	Pb	10 59 34.7	-0.5
	4.6nm,0.5s						
KST				Lg	Lg	11 00 23.0	
	9.4nm,0.7s						
DGS	Degeres	3.73	13	*e*P	Pb	10 59 39.1	+1.3
	6.5nm,0.5s						
DGS				*e*S	Sg	11 00 29.4	-2.2
	21nm,0.6s						
DGS	Degeres	3.73	13	Pg	Pb	10 59 38.4	+0.6
	6.5nm,0.5s						
DGS				Lg	Lg	11 00 29.1	
	21nm,0.6s						
IZV	Izvestkoviy	3.74	23	*e*P	Pb	10 59 39.4	+1.4
	2.5nm,0.5s						
IZV				*e*S	Sg	11 00 30.1	-1.9
	12nm,0.5s						
IZV	Izvestkoviy	3.74	23	Pg	Pb	10 59 38.6	+0.6
	2.5nm,0.5s						
IZV				Lg	Lg	11 00 29.7	
	12nm,0.5s						
SGDS	Sogindy	3.83	0	Pg	Pb	10 59 39.3	-0.2
	6.2nm,0.6s						
SGDS				Lg	Lg	11 00 30.3	
	19nm,0.1s						
TNSS	Tian-Shan	3.85	27	*e*P	Pb	10 59 41.2	+1.2
	3.5nm,0.3s						
TNSS				*e*S	Sg	11 00 33.0	-2.5
	7.0nm,0.8s						
TNSS	Tian-Shan	3.85	27	Pg	Pb	10 59 40.8	+0.8
	3.5nm,0.3s						
TNSS				Lg	Lg	11 00 33.5	
	7.0nm,0.8s						
MDOK	Medeo	4.00	27	*e*P	Pb	10 59 43.7	+1.3
	3.5nm,0.4s						
MDOK				*e*S	Sg	11 00 37.3	-2.9
	5.2nm,0.5s						
MDOK	Medeo	4.00	27	Pg	Pb	10 59 43.0	+0.6
	3.5nm,0.4s						
MDOK				Lg	Lg	11 00 36.6	
	5.2nm,0.5s						
KOTS	Kotyrbulak	4.08	27	*e*P	Pb	10 59 45.5	+1.7
	6.1nm,0.3s						
KOTS				*e*S	Sg	11 00 40.3	-2.5
	11nm,0.4s						
KOTS	Kotyrbulak	4.08	27	Pg	Pb	10 59 44.5	+0.7
	6.1nm,0.3s						
KOTS				Lg	Lg	11 00 39.5	
	11nm,0.4s						
KTBS	Karatobe	4.38	20	*e*P	Pb	10 59 50.5	+1.7
	2.2nm,0.4s						
KTBS				*e*S	Sg	11 00 48.7	-3.8
	6.4nm,0.5s						
KTBS	Karatobe	4.38	20	Pg	Pb	10 59 50.3	+1.5
	2.2nm,0.4s						
KTBS				Lg	Lg	11 00 49.2	
	6.4nm,0.5s						
KUU	Kurty	4.47	16	*e*P	Pb	10 59 52.5	+2.2
	1.2nm,0.3s						
KUU				*e*S	Sg	11 00 52.4	-2.9
	8.4nm,0.8s						
KUU	Kurty	4.47	16	Pg	Pb	10 59 51.4	+1.1
	1.2nm,0.3s						
KUU				Lg	Lg	11 00 51.4	
	8.4nm,0.8s						
KK31	Karatay Array	4.64	320	⇓Pn	Pn	10 59 43.0	+1.0
	0.2nm,0.3s,baz=127,slow=13,SNR=3.1						
KK31				⇓Pg	Pb	10 59 55.1	+1.8
	0.2nm,0.2s,baz=131,slow=15,SNR=4.1						
KK31				⇑Lg	Lg	11 00 56.6	
	0.7nm,0.4s,baz=135,slow=28,SNR=4.3						

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*MOS **26** 11:11:11.5±1.2, 1°.55N×126°.22E, h24km, mb5.2/51, Error ellipse: s-maj=8.8km s-min=4.9km az=107.5*
*NEIC **26** 11:11:14.8±1.6, 1°.52N±0°.06×126°.30E±0°.06, h35km±1km, mb5.0/112, Error ellipse: s-maj=11.7km s-min=9.8km az=214.0*
*BJI **26** 11:11:15.3±0.0, 1°.59N×126°.34E, h53km, mB5.0/40, mb4.8/62, Ms4.3/26, Ms7 4.0/26*
*DJA **26** 11:11:15.4±0.5, 2°N±2°×12°6E±°, h30km±5km, M4.7/44, mB5.2/13, mb5.0/44, MLv4.7/6, MLv4.8/19, Mw(mB)4.6/13, Mwp5.0/7*
*IDC **26** 11:11:15.5±1.5, 1°.47N×126°.37E, h42km±13km, mb4.5/34, mb1 4.5/37, mb1mx4.5/48, mbtmp4.7/37, ML4.4/4, MS3.8/15, Ms1 3.8/15, ms1mx3.6/38, Error ellipse: s-maj=13.2km s-min=7.1km az=79.0*
*GCMT **26** 11:11:15.8±0.3, 1°.70N±0°.02×126°.26E±0°.03, h26km±1km, MW4.9/72, Moment Tensor Solution. s40,c47; s72,c105; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.90±.14; $M_{\theta\theta}$-0.24±.08; $M_{\phi\phi}$-1.66±.10; $M_{r\theta}$-0.81±.20; $M_{\theta\phi}$-1.43±.06; $M_{\phi r}$-0.80±.24; Best double couple: $M_0$2.50400×10^{16} NP1:ϕ_s21.00000°, δ33.00000°, λ73.00000°. NP2: ϕ_s221.00000°, δ59.00000°, λ101.00000°. Principal axes: T 2.2030, Plg74.0000°, Azm158.0000°; N 0.6050, Plg9.0000°, Azm35.0000°; P -2.8060, Plg13.0000°, Azm303.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*KLM **26** 11:11:17.0, 1°.45N×126°.55E, h43km, mb4.8*
*MAN **26** 11:11:19.4, 2°.05N×126°.69E, h95km, mb5.4, ML4.4, MS4.6*

ISC 26 11:11:15.7±0.6**, 1°.57N**±0°.03×**126°.36E**±0°.04**, h43km**±4km**, n435, σ1ˢ.37**/460**, mb5.0**/130**, MS3.9**/23**, 11C-4D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.28	128	P	Pn	11 11 35.8	-1.3
TNTI	Ternate	1.28	128		Pn	11 11 36.0	-1.1
LBMI	Labuha	2.47	153	P	Pn	11 11 54.5	+1.0
LBMI				S	Sn	11 12 24.5	+2.0
KMSI	Cibinong	2.58	247	P	Pn	11 11 54.9	0.0
SANI	Sanana	3.62	186	P	Pn	11 12 08.7	-0.5
LUWI	Luwuk	4.43	234	P	Pn	11 12 20.4	0.0
LUWI	Luwuk	4.43	234		Pn	11 12 21.0	+0.6
DDMP	Don Marcelino,	4.55	352	*e*P	Pn	11 12 22.7	+0.7
DDMP				*e*S	Sn	11 13 09.8	-3.9
MRSI	Marisa	4.55	256	P	Pn	11 12 21.1	-1.0
GSPH	General Santos	4.70	343	⇑*i*P	Pn	11 12 25.9	+1.7
NLAI	Namlea	4.84	171	P	Pn	11 12 26.1	+0.1
SKMP	Bagumbayan, Su	5.24	340	*e*P	Pn	11 12 30.6	-0.9
SKMP				*e*S	Sn	11 13 29.1	-1.6
APSI	Ampana	5.32	242	P	Pn	11 12 32.6	0.0
	2.4nm2.4nm5µm497nm,0.7s						
MATI	Mati	5.34	359	*e*P	Pn	11 12 31.9	-0.9
SWI	Sorong	5.46	116	P	Pn	11 12 32.3	-2.3
	0.3nm0.3nm3µm72nm,0.7s						
SWI	Sorong	5.46	116	P	Pn	11 12 35.6	+1.0
SWI				pmax	pmax		
	comp=Z,72nm,0.7s						
SIJI	Sorong	5.47	116	P	Pn	11 12 35.0	+0.3
	comp=Z,2.5nm,0.3s,baz=311,slow=9.0,SNR=14						
SIJI				LR	LR	11 15 07.2	
	comp=Z,2µm,18.5s,baz=322,slow=43						
DAV	Davao City (W)	5.52	352	P	Pn	11 12 36.3	+1.0
	comp=Z,49nm,0.3s,baz=237,slow=4.1,SNR=1.4						
DAV				S	Sn	11 13 40.1	+2.5
	comp=Z,52nm,0.3s,baz=234,slow=18,SNR=1.8						
DAV	Davao City (W)	5.52	352	⇑*e*P	Pn	11 12 39.3	+3.9
MSAI	Masohi	5.52	152	P	Pn	11 12 39.3	+3.9
	comp=Z,0.2nmcomp=Z,51nm,1.0s						
AAI	Ambon	5.54	161	P	Pn	11 12 35.3	-0.3
	comp=Z,0.6nmcomp=Z,0.6nmcomp=Z,4µmcomp=Z,2µm comp=Z,153nm,0.6s						
AAI	Ambon	5.54	161	P	Pn	11 12 37.0	+1.4
AAI				pmax	pmax		
	comp=Z,148nm,0.6s						
CTBH	Cotabato--PC H	6.00	339	⇑*e*P	Pn	11 12 43.2	+1.3
BUKP	Musuan	6.40	348	*e*P	Pn	11 12 50.5	+3.0
BUKP				*e*S	Sn	11 14 00.6	+1.3
MPSI	Mapaga	6.58	259	P	Pn	11 12 52.5	+2.6
	comp=Z,0.4nmcomp=Z,0.4nmcomp=Z,4µmcomp=Z,1µm comp=Z,104nm,0.8s						
PAGZ	Pagadian	6.91	335	*e*P	Pn	11 12 52.9	-1.5
BNDI	Bandanaira	7.01	150	P	Pn	11 13 10.9	+15
FAKI	Fak Fak	7.38	127	P	Pn	11 13 00.8	-0.2
	comp=Z,0.3nmcomp=Z,2µmcomp=Z,997nmcomp=Z,86nm,0.7s						
FAKI	Fak Fak	7.38	127		Pn	11 12 59.8	-1.2
BBSI	Bau Bau	7.97	208	P	Pn	11 13 10.1	+1.1
	comp=Z,0.1nmcomp=Z,40µmcomp=Z,488nmcomp=Z,39nm,0.8s						
SPSI	Sidrap Palu	8.58	230	P	Pn	11 13 18.8	+1.4
	comp=Z,0.4nmcomp=Z,997nmcomp=Z,111nm,0.8s						
BNSI	Bone	8.62	226	P	Pn	11 13 18.9	+1.0
	comp=Z,0.4nmcomp=Z,1µmcomp=Z,116nm,0.7s						
BKSI	Bulukumba	9.26	222	P	Pn	11 13 26.2	-0.5
	comp=Z,691nmcomp=Z,86nm,0.8s						
KAPI	Kappang	9.29	225	P	Pn	11 13 27.2	+0.1
	comp=Z,3.4nm,0.3s,baz=24,slow=7.3,SNR=11						
KAPI				S	Sn	11 15 09.0	-1.5
	comp=Z,2.5nm,0.3s,baz=211,slow=21,SNR=1.4						
KAPI				LR	LR	11 16 46.2	
	comp=Z,203nm,21.4s,baz=64,slow=36						
KAPI	Kappang	9.29	225	P	Pn	11 13 23.2	-4.0
KAPI	Kappang	9.29	225	Pn	Pn	11 13 23.2	-4.0
KKM	Kota Kinabalu	11.05	294		Pn	11 13 52.7	+1.3
KBKI	Kotabaru	11.28	245	P	Pn	11 14 03.9	+10
SOEI	Soe	11.44	190	P	Pn	11 14 04.1	+7.4
WBSI	Waikabubak, Su	13.12	212	P	P	11 14 33.6	+4.7
PLAI	Plampang	13.41	219	P	P	11 14 34.0	+2.0
SBUM	Sibu	14.16	274	Pn	Pn	11 14 33.9	+0.2
SBUM	Sibu	14.16	274	P	P	11 14 41.0	+0.7
GENI	Genyem	14.41	107	P	P	11 14 45.8	+2.7
SRBI	Singaraja	14.68	229	P	P	11 14 47.5	+1.4
JAY	Jayapura	14.90	106	P	P	11 14 56.0	+7.4
KMMI	Kalianget	15.04	235	P	P	11 14 55.3	+5.1
MTN	Manton Dam	15.09	162	P	Pn	11 14 46.8	+0.8
	baz=15,SNR=4.0						
MTN	Manton Dam	15.09	162		Pn	11 14 44.0	-2.0
JAGI	Jajag, Banyuwa	15.74	230	P	P	11 15 00.2	+2.3
JAGI	Jajag, Banyuwa	15.74	230		Pn	11 14 52.3	-2.2
JAGI				IAmb	IAmb	11 15 01.0	
	comp=Z,92nm,0.9s						
KSM	Kuching	16.05	270		Pn	11 14 56.1	-2.4
KSM	Kuching	16.05	270	P	P	11 15 04.0	+2.7
GMJI	Gumukmas	16.17	233	P	P	11 15 05.8	+3.1
KNRA	Kununurra	17.30	172	P	Pn	11 15 13.6	-0.6
	baz=17,SNR=38						
KNRA	Kununurra	17.30	172		Pn	11 15 13.1	-1.1
KNRA				IAmb	IAmb	11 15 14.9	
	comp=Z,190nm,1.4s						
PWJI	Pagerwojo	17.37	237	P	P	11 15 18.1	+2.2
	comp=Z,43nm,0.8s						
PCJI	Pacitan	17.98	237	P	P	11 15 28.0	+5.3
WOJI	Wonogiri, Jawa	18.01	239	P	P	11 15 30.6	+7.5
FITZ	Fitzroy Crossi	19.56	182	P	P	11 15 38.8	-1.1
	baz=20,SNR=33						
FITZ	Fitzroy Crossi	19.56	182	P	P	11 15 38.3	-1.7
	comp=Z,1.3nm,0.3s,baz=19,slow=8.9,SNR=45						
FITZ	Fitzroy Crossi	19.56	182	P	P	11 15 38.3	-1.7
LEM	Lembang	20.48	246	P	P	11 15 49.0	-1.2
	comp=Z,12nm,0.5s,baz=343,slow=22,SNR=1.7						
TWG	Pinlang	21.74	347	P	P	11 16 01.1	-2.4
YULB	Yu-li	22.24	348	P	P	11 16 06.6	-2.4
TPUB	Ta-pu	22.30	346	P	P	11 16 06.8	-2.8
TPUB				IAmb	IAmb	11 16 13.7	
	comp=Z,44nm,0.7s						
MYKOM	Kota Tinggi	22.50	271	P	P	11 16 11.6	-0.2
MYKOM				IAmb	IAmb	11 16 16.4	
	comp=Z,59nm,1.1s						
WB0	Warramunga Arr	22.62	160	P	P	11 16 11.9	-1.1
WB0				IAmb	IAmb	11 16 17.5	
	comp=Z,96nm,1.1s						
SSLB	Suanglung	22.70	347	P	P	11 16 11.8	-2.0

COEN	**Coen**	**22.71**	**133**	P	**P**	**11 16 13.2**	**-0.8**
	baz=23,SNR=20						
COEN	**Coen**	**22.71**	**133**	P	**P**	**11 16 13.5**	**-0.5**
WRAB	**Tennant Creek**	**22.76**	**160**	*i* P	**P**	**11 16 13.0**	**-1.5**
WRAB				pmax	pmax		
	comp=Z,26nm,0.8s						
WRAB	**Tennant Creek**	**22.76**	**160**	P	**P**	**11 16 13.6**	**-0.9**
WRA	**Warramunga Arr**	**22.77**	**160**	P	**P**	**11 16 12.9**	**-1.7**
	comp=Z,33nm,0.6s,baz=338,slow=11,SNR=74						
WRA				PcP	**PcP**	**11 20 05.6**	**+0.2**
	comp=Z,2.1nm,0.5s,baz=331,slow=2.0,SNR=7.7						
WRA				S	**S**	**11 20 17.8**	**-2.9**
	comp=Z,6.5nm,1.0s,baz=346,slow=17,SNR=5.9						
WRA	**Warramunga Arr**	**22.77**	**160**	*i* P	**P**	**11 16 12.5**	**-2.1**
WRA				pmax	pmax		
	comp=Z,33nm,0.6s						
WRA	**Warramunga Arr**	**22.77**	**160**	P	**P**	**11 16 13.8**	**-0.8**
WB2	**Warramunga Arr**	**22.77**	**160**	P	**P**	**11 16 14.1**	**-0.6**
WB2				IAmb	IAmb	11 16 21.2	
	comp=Z,62nm,0.7s						
WR0	**Warramunga Arr**	**22.85**	**160**	P	**P**	**11 16 14.2**	**-1.2**
WR0				IAmb	IAmb	11 16 25.1	
	comp=Z,39nm,0.8s						
KASI	**Kota Agung**	**22.95**	**252**	P	**P**	**11 16 19.6**	**+3.1**
	comp=Z,41nm,0.6s						
MDSI	**Maura Dua**	**22.97**	**255**	P	**P**	**11 16 15.5**	**-1.2**
	comp=Z,14nm,0.9s						
PMG	**Port Moresby**	**23.41**	**118**	P	**P**	**11 16 20.6**	**-0.5**
	comp=Z,9.2nm,0.7s,baz=310,slow=7.1,SNR=5.8						
PMG	**Port Moresby**	**23.41**	**118**	P	**P**	**11 16 20.6**	**-0.5**
PMG				pmax	pmax		
	comp=Z,23nm,1.2s						
PMG	**Port Moresby**	**23.41**	**118**	P	**P**	**11 16 20.6**	**-0.5**
YHNB	**Yeheng**	**23.46**	**349**	P	**P**	**11 16 21.2**	**-0.3**
YHNB				IAmb	IAmb	11 16 28.1	
	comp=Z,35nm,1.0s						
MBWA	**Marble Bar**	**23.50**	**196**	P	**P**	**11 16 20.1**	**-1.7**
MBWA				IAmb	IAmb	11 16 22.0	
	comp=Z,53nm,0.8s						
QIZ	**Qiongzhong**	**23.73**	**318**	P	**P**	**11 16 23.8**	**-0.2**
QIZ				S	**S**	**11 20 36.0**	**-0.4**
QIZ				LR	LR		
	comp=Z,270nm,21.1s						
QIZ				LR	LR		
	comp=Z,220nm,17.6s						
QIZ				LR	LR		
	comp=Z,310nm,15.7s						
PSA00	**Pilbara Seismi**	**23.87**	**195**	P	**P**	**11 16 24.4**	**-0.9**
PSA00				IAmb	IAmb	11 16 25.8	
	comp=Z,47nm,0.7s						
PSAB3	**Pilbara Seismi**	**23.89**	**195**	P	**P**	**11 16 24.7**	**-0.8**
PSAB3				IAmb	IAmb	11 16 26.0	
	comp=Z,48nm,0.7s						
PSAC3	**Pilbara Seismi**	**23.92**	**195**	P	**P**	**11 16 24.7**	**-1.1**
PSAC3				IAmb	IAmb	11 16 26.4	
	comp=Z,43nm,0.7s						
PSAD3	**Pilbara Seismi**	**23.95**	**195**	P	**P**	**11 16 25.4**	**-0.7**
JOW	**Kunigami**	**25.18**	**4**	P	**P**	**11 16 38.4**	**+1.1**
	comp=Z,4.5nm,0.7s,baz=140,slow=12,SNR=10						
JOW	**Kunigami**	**25.18**	**4**	P	**P**	**11 16 36.8**	**-0.5**
JOW				IAmb	IAmb	11 16 44.9	
	comp=Z,31nm,0.7s						
IPM	**Ipoh**	**25.46**	**277**	P	**P**	**11 16 38.9**	**-1.1**
QIS	**Mount Isa**	**25.54**	**150**	P	**P**	**11 16 41.0**	**+0.4**
	baz=26,SNR=12						
KULM	**Kulim**	**25.93**	**279**	P	**P**	**11 16 45.4**	**+1.3**
AS31	**Alice Springs**	**26.14**	**164**	P	**P**	**11 16 45.2**	**-0.8**
ASAR	**Alice Springs**	**26.14**	**164**	P	**P**	**11 16 44.7**	**-1.3**
	comp=Z,7.9nm,0.7s,baz=345,slow=7.9,SNR=157						
ASAR				PcP	**PcP**	**11 20 13.2**	**+0.4**
	comp=Z,4.2nm,0.5s,baz=347,slow=2.3,SNR=19						
ASAR				S	**S**	**11 21 11.8**	**-3.1**
	comp=Z,0.4nm,0.5s,baz=22,slow=1.3,SNR=3.9						
ASAR				ScP	**ScP**	**11 23 50.4**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=347,slow=2.9,SNR=2.8						
ASAR	**Alice Springs**	**26.14**	**164**	P	**P**	**11 16 45.2**	**-0.8**
ASAR	**Alice Springs**	**26.14**	**164**	P	**P**	**11 16 45.2**	**-0.8**
KRVT	**Keravat (AS076**	**26.30**	**103**	LR	LR	11 25 57.7	
	comp=Z,353nm,18.4s,baz=268,slow=34						
MTSU	**Mount Surprise**	**26.38**	**139**	P	**P**	**11 16 47.8**	**-0.5**
	baz=26,SNR=12						
WRKA	**Warakurna**	**26.52**	**176**	P	**P**	**11 16 49.2**	**-0.2**
	baz=27,SNR=60						
RPSI	**Rantau Prapat**	**27.44**	**273**	P	**P**	**11 16 56.5**	**-1.4**
RPSI				IAmb	IAmb	11 17 01.0	
	comp=Z,24nm,1.1s						
RPSI	**Rantau Prapat**	**27.44**	**273**	P	**P**	**11 16 57.9**	**+0.1**
PSI	**Prapat**	**27.44**	**273**	P	**P**	**11 16 57.9**	**-0.1**
	comp=Z,12nm,0.9s,baz=110,slow=4.0,SNR=7.1						
PSI	**Prapat**	**27.44**	**273**	P	**P**	**11 16 57.9**	**-0.1**
PSI				pmax	pmax		
	comp=Z,24nm,1.1s						
GSI	**Gunungsitoli**	**28.78**	**270**	P	**P**	**11 17 07.8**	**-1.9**
GSI				IAmb	IAmb	11 17 14.6	
	comp=Z,14nm,0.7s						
MEEK	**Meekatharra**	**29.02**	**194**	P	**P**	**11 17 10.8**	**-1.0**
	baz=29,SNR=11						
CTA	**Charters Tower**	**29.05**	**139**	P	**P**	**11 17 10.4**	**-1.7**
	comp=Z,6.1nm,1.0s,baz=287,slow=5.8,SNR=5.0						
PBKT	**Sadao Pong**	**29.10**	**302**	P	**P**	**11 17 12.9**	**+0.3**
SLVN	**Son La**	**29.41**	**314**	P	**P**	**11 17 15.4**	**+0.1**
JCJ	**Chichijima**	**29.57**	**30**	P	**P**	**11 17 15.8**	**-0.8**
	comp=Z,70nm,0.7s,baz=260,slow=17,SNR=6.4						
WHN	**Wuhan**	**30.98**	**340**	⇑P	P	11 17 39.5	+10
NJ2	**Nanjing**	**31.13**	**348**	*e*P	**P**	**11 17 32.0**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GYA	**Guiyang**	**31.16**	**324**	*e*P	**P**	**11 17 34.0**	**+3.2**
GYA				pP	sP	11 17 45.5	-1.4
GYA				S	**S**	**11 22 36.3**	**+2.3**
GYA				sS	sS	11 22 56.3	+3.6
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,4.6s						
CMAR	**Chiang Mai Arr**	**31.70**	**304**	P	**P**	**11 17 36.1**	**+0.6**
	comp=Z,0.9nm,0.3s,baz=164,slow=37,SNR=1.8						
CMAR				PcP	**PcP**	**11 20 28.3**	**+1.6**
	comp=Z,4.4nm,1.0s,baz=167,slow=1.2,SNR=13						
CMAR				LR	LR	11 31 29.6	
	comp=Z,154nm,18.8s,baz=177,slow=38						
CHTO	**Chiang Mai**	**31.87**	**304**	P	**P**	**11 17 36.3**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CHTO	**Chiang Mai**	**31.87**	**304**	P	**P**	**11 17 36.3**	**-0.7**
MORW	**Morawa**	**32.03**	**197**	P	**P**	**11 17 37.4**	**-0.8**
	baz=32,SNR=11						
MORW	**Morawa**	**32.03**	**197**	P	**P**	**11 17 37.8**	**-0.5**
MORW				IAmb	IAmb	11 17 38.6	
	comp=Z,28nm,0.9s						
FORT	**Forrest**	**32.21**	**177**	P	**P**	**11 17 39.9**	**+0.1**
	baz=32,SNR=9.1						
FORT	**Forrest**	**32.21**	**177**	P	**P**	**11 17 39.4**	**-0.5**
KMI	**Kunming**	**32.68**	**318**	P	**P**	**11 17 46.3**	**+2.0**
KMI				pP	pwP	11 17 57.3	-0.3
KMI				sP	sP	11 18 02.0	+1.7
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
KMI				pmax	pmax		
	comp=Z,64nm,3.9s						
KMI				LR	LR		
	comp=Z,220nm,17.3s						
KMI				LR	LR		
	comp=Z,180nm,20.8s						
KMI				LR	LR		
	comp=Z,320nm,19.3s						
ENH	**Enshi**	**32.73**	**332**	P	**P**	**11 17 44.0**	**-0.5**
ENH				IAmb	IAmb	11 17 50.3	
	comp=Z,27nm,1.0s						
KMBL	**Kambalda**	**33.03**	**187**	P	**P**	**11 17 47.6**	**+0.6**
	baz=33,SNR=14						
BLDU	**Ballidu**	**33.30**	**195**	P	**P**	**11 17 48.8**	**-0.6**
	baz=33,SNR=19						
KLBR	**Kellerberrin**	**33.98**	**193**	P	**P**	**11 17 55.0**	**-0.3**
	baz=34,SNR=34						
MUN	**Mundaring**	**34.73**	**195**	P	**P**	**11 18 01.5**	**-0.3**
	baz=35,SNR=9.0						
INU	**Inuyama**	**35.04**	**15**	P	**P**	**11 18 04.5**	**+0.1**
INU				IAmb	IAmb	11 18 09.9	
	comp=Z,24nm,0.8s						
NWAO	**Narrogin (SRO)**	**35.38**	**193**	P	**P**	**11 18 07.3**	**-0.1**
	baz=36,SNR=11						
NWAO	**Narrogin (SRO)**	**35.38**	**193**	P	**P**	**11 18 06.8**	**-0.6**
NWAO				pmax	pmax		
	comp=Z,33nm,0.8s						
NWAO	**Narrogin (SRO)**	**35.38**	**193**	P	**P**	**11 18 06.8**	**-0.6**
NWAO	**Narrogin (SRO)**	**35.38**	**193**	P	**P**	**11 18 06.6**	**-0.7**
NWAO				IAmb	IAmb	11 18 07.9	
	comp=Z,26nm,0.8s						
BBOO	**Buckleboo**	**35.40**	**166**	P	**P**	**11 18 07.2**	**-0.4**
	baz=36,SNR=15						
BBOO	**Buckleboo**	**35.40**	**166**	P	**P**	**11 18 07.1**	**-0.5**
KSAR	**Wonju Array Be**	**35.72**	**2**	P	**P**	**11 18 09.9**	**-0.3**
KSAR	**Wonju Array Be**	**35.72**	**2**	P	**P**	**11 18 09.9**	**-0.3**
KSRS	**Korea Array**	**35.74**	**2**	P	**P**	**11 18 11.0**	**+0.7**
	comp=Z,4.1nm,0.7s,baz=179,slow=10,SNR=19						
KSRS				PcP	**PcP**	**11 20 39.1**	**+1.4**
	comp=Z,1.2nm,0.7s,baz=195,slow=2.5,SNR=5.2						
CD2	**Chengdu**	**36.19**	**326**	P	**P**	**11 18 14.0**	**-0.4**
CD2				S	**S**	**11 23 52.8**	**+1.1**
CD2				pmax	pmax		
	comp=Z,50nm,0.9s						
CD2				pmax	pmax		
	comp=Z,110nm,4.7s						
CD2				LR	LR		
	comp=Z,320nm,20.8s						
CD2				LR	LR		
	comp=Z,310nm,19.4s						
CD2				LR	LR		
	comp=Z,260nm,23.0s						
XAN	**Xi'an**	**36.19**	**335**	P	**P**	**11 18 13.3**	**-1.1**
XAN				pmax	pmax		
	comp=Z,12nm,1.0s						
XAN	**Xi'an**	**36.19**	**335**	P	**P**	**11 18 13.2**	**-1.1**
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
XAN	**Xi'an**	**36.19**	**335**	P	**P**	**11 18 13.2**	**-1.1**
XAN				IAmb	IAmb	11 18 19.2	
	comp=Z,11nm,0.8s						
STKA	**Stephens Creek**	**36.27**	**158**	P	**P**	**11 18 14.6**	**-0.5**
	baz=36,SNR=5.6						
STKA	**Stephens Creek**	**36.27**	**158**	P	**P**	**11 18 14.4**	**-0.5**
	comp=Z,24nm,0.8s,baz=329,slow=8.3,SNR=37						
STKA				PcP	**PcP**	**11 20 39.9**	**+0.4**
	comp=Z,2.8nm,0.5s,baz=77,slow=4.1,SNR=3.4						
STKA	**Stephens Creek**	**36.27**	**158**	P	**P**	**11 18 14.6**	**-0.5**
STKA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
STKA	**Stephens Creek**	**36.27**	**158**	P	**P**	**11 18 14.6**	**-0.5**
MAJO	**Matsushiro**	**36.48**	**16**	P	**P**	**11 18 16.8**	**0.0**
MAJO				pmax	pmax		
	comp=Z,12nm,0.8s						
MAJO	**Matsushiro**	**36.48**	**16**	P	**P**	**11 18 16.8**	**0.0**
MAJO				IAmb	IAmb	11 18 19.4	
	comp=Z,12nm,0.8s						
MAT	**Matsushiro**	**36.48**	**16**	P	**P**	**11 18 15.6**	**-1.2**
MJAR	**Matsushiro Arr**	**36.48**	**16**	P	**P**	**11 18 16.1**	**-0.6**
	comp=Z,13nm,0.9s,baz=186,slow=9.7,SNR=23						
MJAR				PcP	**PcP**	**11 20 40.9**	**+0.8**
	comp=Z,3.5nm,0.8s,baz=186,slow=2.8,SNR=5.9						
MJAR				LR	LR	11 32 53.7	
	comp=Z,43nm,20.8s,baz=200,slow=36						
MJAR	**Matsushiro Arr**	**36.48**	**16**	P	**P**	**11 18 16.2**	**-0.6**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MJAR	**Matsushiro Arr**	**36.48**	**16**	P	**P**	**11 18 16.2**	**-0.6**
MJB9	**Matsu-Tunnel**	**36.48**	**16**	P	**P**	**11 18 16.9**	**+0.1**
MJB9				IAmb	IAmb	11 18 19.4	
	comp=Z,12nm,0.8s						
HTT	**Hallett**	**36.77**	**162**	P	**P**	**11 18 19.9**	**+0.5**
	baz=37,SNR=5.8						
RKGY	**Rocky Gully**	**37.05**	**193**	P	**P**	**11 18 22.6**	**+1.0**
	baz=37,SNR=10.0						
CMSA	**Cobar Meteorol**	**37.70**	**152**	P	**P**	**11 18 27.8**	**+0.6**
	baz=38,SNR=6.1						
BJT	**Baijiatuau**	**39.38**	**348**	P	**P**	**11 18 41.4**	**+0.3**
BJT				pmax	pmax		
	comp=Z,16nm,0.9s						
BJT	**Baijiatuau**	**39.38**	**348**	P	**P**	**11 18 41.4**	**+0.3**
BJT				IAmb	IAmb	11 18 43.1	
	comp=Z,16nm,0.9s						
BJI	**Beijing**	**39.39**	**348**	P	**P**	**11 18 41.5**	**+0.3**
BJI				pmax	pmax		
	comp=Z,13nm,0.9s						
ARMA	**Armidale**	**39.90**	**145**	P	**P**	**11 18 46.4**	**+0.6**
	baz=40,SNR=9.4						
ARMA	**Armidale**	**39.90**	**145**	P	**P**	**11 18 46.0**	**+0.3**
ARMA				IAmb	IAmb	11 18 52.0	
	comp=Z,20nm,0.8s						
LZH	**Lanzhou**	**40.19**	**331**	*e*P	**P**	**11 18 48.8**	**+0.7**
LZH				pP	pwP	11 19 00.8	-0.8
LZH				sP	sP	11 19 07.0	+2.7
LZH				pmax	pmax		
	comp=Z,35nm,1.3s						
LZH				pmax	pmax		
	comp=Z,90nm,4.8s						
LZH				LR	LR		
	comp=Z,260nm,15.0s						
LZH				LR	LR		
	comp=Z,270nm,16.1s						
LZH				LR	LR		
	comp=Z,340nm,17.0s						
ARPS	**Mount Arapiles**	**40.77**	**161**	P	**P**	**11 18 53.1**	**+0.3**
	baz=41,SNR=7.2						
MSHR	**Mys Shultsa**	**41.05**	**5**	*i* P	**P**	**11 18 55.4**	**+0.5**
HHC	**Hu-ho-hao-te**	**41.33**	**343**	*e*P	**P**	**11 18 58.3**	**+0.9**
HHC				pmax	pmax		
	comp=Z,96nm,0.9s						
HHC				pmax	pmax		
	comp=Z,360nm,4.8s						
HHC				LR	LR		
	comp=Z,930nm,14.8s						
HHC				LR	LR		
	comp=Z,620nm,13.6s						
HHC				LR	LR		
	comp=Z,990nm,14.7s						
USA0B	**Ussuriysk Arra**	**42.74**	**6**	*c i*P	**P**	**11 19 09.6**	**+0.8**
USA0B	**Ussuriysk Arra**	**42.74**	**6**	P	**P**	**11 19 09.5**	**+0.8**
USRK	**Ussuriysk Ar.**	**42.74**	**6**	P	**P**	**11 19 09.8**	**+1.1**
	comp=Z,8.7nm,0.7s,baz=201,slow=8.4,SNR=28						
USRK	**Ussuriysk Ar.**	**42.74**	**6**	P	**P**	**11 19 09.6**	**+0.9**
USRK	**Ussuriysk Ar.**	**42.74**	**6**	P	**P**	**11 19 09.6**	**+0.9**
MDJ	**Mudanjiang**	**42.96**	**3**	P	**P**	**11 19 12.0**	**+1.5**
MDJ				pmax	pmax		
	comp=Z,19nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,140nm,3.7s						
MDJ	**Mudanjiang**	**42.96**	**3**	P	**P**	**11 19 11.4**	**+0.9**
TEY	**Ternei**	**44.22**	**10**	⇑*e*P	**P**	**11 19 21.9**	**+1.3**
TEY				pmax	pmax		
	comp=N,30nm,1.0s						
TEY				pmax	pmax		
	comp=Z,20nm,1.2s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.7s						
GTA	**Gaotai**	**44.77**	**331**	*e*P	**P**	**11 19 25.3**	**0.0**
GTA				pmax	pmax		
	comp=E,4.0nm,0.7s						
ODAN	**Odare**	**45.05**	**307**	*e*P	**P**	**11 19 27.2**	**-0.7**
	comp=E,26nm,0.8s						
DZM	**Mont Dzumac**	**45.63**	**123**	LR	LR	11 40 03.7	
	comp=E,136nm,18.1s,baz=264,slow=38						
RAMN	**Ramite**	**45.72**	**307**	*e*P	**P**	**11 19 32.8**	**-0.4**
	comp=E,12nm,0.5s						
JIRN	**Jiri**	**46.36**	**308**	*e*P	**P**	**11 19 37.6**	**-0.8**
	comp=E,20nm,0.5s						
GUN	**Gumba**	**46.72**	**308**	*e*P	**P**	**11 19 40.0**	**-1.2**
	comp=E,25nm,0.6s						
PKI	**Pulchoki**	**46.94**	**307**	*e*P	**P**	**11 19 42.3**	**-0.6**
	comp=E,9.0nm,0.6s						
DMN	**Daman**	**47.20**	**307**	*e*P	**P**	**11 19 44.2**	**-0.6**
	comp=E,26nm,0.9s						
YSS	**Yuzh-Sakhalins**	**47.41**	**15**	⇑*e*P	**P**	**11 19 46.6**	**+0.9**
YSS				*e**PP	**sP**	**11 20 01.5**	**-0.6**
YSS				*e*		11 21 38.5	
YSS				*e*S	**S**	**11 26 32.1**	**-4.8**
YSS				*e*SS	**SS**	**11 29 54.8**	**-10**
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
YSS				MLR	MLR		
	comp=Z,100nm,13.0s						
YSS	**Yuzh-Sakhalins**	**47.41**	**15**	P	**P**	**11 19 45.8**	**+0.1**
YSS				IAmb	IAmb	11 19 47.7	
	comp=Z,28nm,1.1s						
KLR	**Kul'dur**	**47.70**	**5**	*c i*P	**P**	**11 19 48.5**	**+0.5**
KLR				pmax	pmax		
	comp=Z,17nm,1.0s						
GKN	**Gorkha**	**47.74**	**307**	*e*P	**P**	**11 19 48.2**	**-0.7**
	comp=Z,5.8nm,0.2s						
HIA	**Hailar**	**47.85**	**354**	P	**P**	**11 19 49.8**	**+0.6**
HIA				pmax	pmax		
	comp=Z,17nm,0.9s						
HIA	**Hailar**	**47.85**	**354**	P	**P**	**11 19 49.8**	**+0.6**
HIA				IAmb	IAmb	11 19 51.2	
	comp=Z,17nm,0.9s						
DANN	**Dangsing**	**48.59**	**307**	*e*P	**P**	**11 19 54.4**	**-1.2**
	comp=Z,52nm,0.8s						
ULN	**Ulaanbaatar**	**49.05**	**343**	*i* P	**P**	**11 19 58.6**	**0.0**
ULN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ULN	**Ulaanbaatar**	**49.05**	**343**	P	**P**	**11 19 58.9**	**+0.3**
ULN				IAmb	IAmb	11 20 01.7	
	comp=Z,16nm,1.2s						
SONM	**Songino Array**	**49.22**	**342**	P	**P**	**11 19 59.7**	**-0.2**
	comp=Z,5.4nm,0.8s,baz=163,slow=8.5,SNR=26						
SONM				PcP	**PcP**	**11 21 23.1**	**+0.5**
	comp=Z,5.5nm,0.8s,baz=167,slow=3.0,SNR=9.0						
SONM				LR	LR	11 41 37.3	
	comp=Z,134nm,20.6s,baz=158,slow=37						
SONM	**Songino Array**	**49.22**	**342**	P	**P**	**11 19 59.9**	**0.0**
SONM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONM	**Songino Array**	**49.22**	**342**	P	**P**	**11 19 59.9**	**0.0**
HYB	**Hyderabad**	**49.53**	**292**	*i* P	**P**	**11 20 05.0**	**+2.4**
GRNR	**Gornyy**	**49.76**	**8**	⇑*i*P	**P**	**11 20 05.2**	**+1.4**
GRNR				*e*S	**S**	**11 27 14.3**	**+4.3**
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GRNR				smax	smax		
	comp=N,2.0nm,1.0s						
ZEA	**Zeya**	**52.00**	**1**	*e*P	**P**	**11 20 20.9**	**+0.3**
ZEA				pmax	pmax		
	comp=Z,15nm,1.0s						
ZAK	**Zakamensk**	**52.43**	**342**	*e*P	**P**	**11 20 23.8**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
TLY	**Talaya**	**53.46**	**343**	*e*P	**P**	**11 20 32.1**	**+0.7**
TLY				pmax	pmax		
	comp=Z,21nm,1.1s						
TLY				MLR	MLR		
	comp=Z,226nm,17.0s						
MOY	**Mondy**	**54.28**	**341**	*e*P	**P**	**11 20 39.3**	**+1.8**
WMQ	**Urumqi**	**54.28**	**326**	*e*P	**P**	**11 20 39.3**	**+1.6**
WMQ				pP	pP	11 20 49.8	+0.4
WMQ				pmax	pmax		
	comp=Z,15nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,81nm,6.3s						
WMQ				LR	LR		
	comp=Z,140nm,17.3s						
WMQ				LR	LR		
	comp=Z,100nm,16.5s						
WMQ				LR	LR		
	comp=Z,220nm,24.5s						
MSVF	**Nonsavu**	**54.38**	**113**	*i* P	**P**	**11 20 38.1**	**-0.7**
MSVF				pmax	pmax		
	comp=Z,15nm,1.0s						
BOD	**Bodaibo**	**56.94**	**352**	*e*P	**P**	**11 20 56.4**	**+0.1**
BOD				pmax	pmax		
	comp=Z,22nm,1.5s						
PEA0B	**Petropavlovsk-**	**57.55**	**22**	P	**P**	**11 21 02.7**	**+1.9**
PEA0B				pmax	pmax		
	comp=Z,30nm,1.1s						
PEA0B	**Petropavlovsk-**	**57.55**	**22**	P	**P**	**11 21 02.7**	**+1.9**
PETK	**Petropavlovsk-**	**57.55**	**22**	P	**P**	**11 21 02.5**	**+1.7**
	comp=Z,19nm,0.8s,baz=183,slow=5.7,SNR=77						
PETK				PcP	**PcP**	**11 21 54.5**	**+0.6**
	comp=Z,1.6nm,0.6s,baz=206,slow=4.5,SNR=1.2						
PET	**Petropavlovsk**	**57.85**	**22**	*i* P	**P**	**11 21 04.1**	**+1.3**
PET				pmax	pmax		
	comp=Z,30nm,1.3s						
PET	**Petropavlovsk**	**57.85**	**22**	P	**P**	**11 21 03.5**	**+0.7**
MK31	**Makanchi Array**	**59.12**	**326**	P	**P**	**11 21 11.0**	**-0.9**
MK31	**Makanchi Array**	**59.12**	**326**	P	**P**	**11 21 11.3**	**-0.6**
MK31				IAmb	IAmb	11 21 16.5	
	comp=Z,12nm,0.8s						
MKAR	**Makanchi Array**	**59.12**	**326**	P	**P**	**11 21 11.4**	**-0.5**
	comp=Z,9.1nm,0.5s,baz=121,slow=8.4,SNR=77						
MKAR				PcP	**PcP**	**11 22 00.4**	**+0.2**
	comp=Z,2.6nm,0.6s,baz=112,slow=5.9,SNR=1.5						
MKAR				LR	LR	11 47 13.9	
	comp=Z,162nm,21.6s,baz=104,slow=36						
MAKZ	**Makanchi**	**59.30**	**326**	P	**P**	**11 21 13.1**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,20nm,0.9s						
MAKZ	**Makanchi**	**59.30**	**326**	P	**P**	**11 21 13.1**	**-0.1**
KSH	**Kashi**	**59.32**	**316**	P	**P**	**11 21 17.0**	**+3.4**
KSH				pP	sP	11 21 28.8	-1.4
KSH				PP	**PP**	**11 23 29.5**	**+4.5**
KSH				S	**S**	**11 29 21.0**	**+1.8**
KSH				sS	sS	11 29 42.5	+3.5
KSH				ScS	**ScS**	**11 30 58.8**	**-1.7**
KSH				pmax	pmax		
	comp=Z,33nm,1.1s						
KSH				pmax	pmax		
	comp=Z,250nm,5.2s						
KSH				LR	LR		
	comp=Z,250nm,8.9s						
KSH				LR	LR		
	comp=Z,380nm,11.8s						
KSH				LR	LR		
	comp=Z,140nm,11.3s						
YAK	**Yakutsk**	**60.36**	**2**	*e*P	**P**	**11 21 20.7**	**+0.6**
YAK				pmax	pmax		
	comp=Z,79nm,1.0s						
YAK				pmax	pmax		
	comp=N,20nm,0.9s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.1s						
YAK	**Yakutsk**	**60.36**	**2**	P	**P**	**11 21 20.5**	**+0.4**
MA2	**Magadan**	**60.87**	**14**	*i* P	**P**	**11 21 25.1**	**+1.5**
MA2				pmax	pmax		
	comp=Z,30nm,1.0s						
MA2	**Magadan**	**60.87**	**14**	P	**P**	**11 21 25.9**	**+2.3**
URZ	**Urewera**	**61.24**	**136**	P	**P**	**11 21 25.4**	**-1.2**
	comp=Z,7.9nm,0.9s,baz=292,slow=20,SNR=1.5						
AAK	**Ala-Archa**	**61.71**	**319**	*i* P	**P**	**11 21 30.0**	**+0.1**
AAK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
AAK	**Ala-Archa**	**61.71**	**319**	P	**P**	**11 21 29.9**	**+0.1**
ARSB	**Arslanbob**	**62.16**	**317**	P	**P**	**11 21 32.6**	**-0.3**
ARSB				pmax	pmax		
	comp=Z,18nm,1.4s						
ARSB	**Arslanbob**	**62.16**	**317**	P	**P**	**11 21 32.6**	**-0.3**
ARSB				IAmb	IAmb	11 21 41.0	
	comp=Z,18nm,1.4s						
ZAA0	**Zalesovo Array**	**62.34**	**334**	P	**P**	**11 21 33.0**	**-0.7**
ZAA0				IAmb	IAmb	11 21 39.9	
	comp=Z,6.1nm,0.8s						
ZALV	**Zalesovo Beam**	**62.34**	**334**	P	**P**	**11 21 32.7**	**-0.9**
	comp=Z,2.3nm,0.3s,baz=126,slow=6.3,SNR=9.1						
ZALV				LR	LR	11 50 26.4	
	comp=Z,76nm,19.2s,baz=67,slow=38						
KBL	**Kabul**	**62.55**	**308**	P	**P**	**11 21 35.6**	**-0.1**
KBL				pmax	pmax		
	comp=Z,12nm,0.7s						
KBL	**Kabul**	**62.55**	**308**	P	**P**	**11 21 35.6**	**-0.1**
KBL				IAmb	IAmb	11 21 41.9	
	comp=Z,12nm,0.7s						
GAR	**Garm**	**63.12**	**314**	P	**P**	**11 21 38.7**	**-0.6**
AFI	**Afiamalu**	**63.17**	**106**	LR	LR	11 46 24.3	
	comp=Z,94nm,21.1s,baz=53,slow=33						
KURBB	**Kurchatov Arra**	**63.35**	**328**	P	**P**	**11 21 39.0**	**-1.5**
KURK	**Kurchatov**	**63.36**	**328**	*e*P	**P**	**11 21 39.9**	**-0.6**
KURK				pmax	pmax		
	comp=Z,18nm,0.5s						
KURK	**Kurchatov**	**63.36**	**328**	P	**P**	**11 21 39.6**	**-0.9**
CHGR	**Chuyangaron**	**63.84**	**313**	P	**P**	**11 21 43.4**	**-0.7**
SEY	**Seymchan**	**64.20**	**13**	P	**P**	**11 21 47.1**	**+1.3**
	comp=Z,16nm,1.0s,baz=218,slow=5.2,SNR=42						
SEY	**Seymchan**	**64.20**	**13**	⇓*i*P	**P**	**11 21 48.2**	**+2.4**
KK31	**Karatay Array**	**64.56**	**318**	*i* P	**P**	**11 21 47.7**	**-0.9**
KK31	**Karatay Array**	**64.56**	**318**	P	**P**	**11 21 47.4**	**-1.2**
KKAR	**Karatay Array**	**64.56**	**318**	P	**P**	**11 21 47.7**	**-0.9**
KKAR	**Karatay Array**	**64.56**	**318**	P	**P**	**11 21 47.7**	**-0.9**
KKAR	**Karatay Array**	**64.56**	**318**	P	**P**	**11 21 47.3**	**-1.3**
KKAR				IAmb	IAmb	11 21 54.5	
	comp=Z,6.9nm,0.9s						
HRA	**Herat**	**67.90**	**307**	P	**P**	**11 22 09.3**	**-1.1**
BRVK	**Borovoye**	**69.00**	**328**	*i* P	**P**	**11 22 16.2**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,11nm,1.1s						
BRVK	**Borovoye**	**69.00**	**328**	P	**P**	**11 22 16.6**	**0.0**
BRVK				IAmb	IAmb	11 22 23.5	
	comp=Z,9.3nm,0.8s						
TIXI	**Tiksi**	**69.99**	**1**	P	**P**	**11 22 22.3**	**-0.1**
	comp=Z,21nm,0.9s,baz=173,slow=3.6,SNR=41						

TIXI	Tiksi	69.99	1	d iP	P	11 22 22.1	-0.3
TIXI				pmax	pmax		
	comp=Z,32nm,1.1s						
TIXI	Tiksi	69.99	1	P	P	11 22 22.5	+0.1
ATKA	Atka Island	70.47	34	P	P	11 22 25.7	0.0
BILL	Bilibino	71.72	15	iP	P	11 22 31.2	-1.8
BILL				i		11 22 40.7	
BILL				i		11 22 52.2	
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BILL	Bilibino	71.72	15	P	P	11 22 34.1	+1.2
GEYT	Alibeck	71.96	309	P	P	11 22 36.4	+1.3
	comp=Z,5.6nm,0.8s,baz=129,slow=4.0,SNR=7.6						
GEYT	Alibeck	71.96	309	P	P	11 22 34.2	-0.8
NRIK	Noril'sk	72.43	347	P	P	11 22 37.5	+0.4
	comp=Z,18nm,0.7s,baz=128,slow=6.0,SNR=32						
NRIK				LR	LR	11 57 26.7	
	comp=Z,64nm,18.5s,baz=110,slow=38						
NRIK	Noril'sk	72.43	347	iP	P	11 22 37.9	+0.8
NRIK				pmax	pmax		
	comp=Z,18nm,0.8s						
AB31	Akbulak array	73.58	321	iP	P	11 22 43.0	-1.4
ABKAR	Akbulak array	73.58	321	P	P	11 22 44.1	-0.3
AKTO	Aktyubinsk	75.12	322	P	P	11 22 51.6	-1.7
SVE	Sverdlovsk	75.60	329	⇓eP	P	11 22 56.5	+0.6
SVE				pmax	pmax		
	comp=Z,27nm,1.1s						
GAMB	Gambell	76.50	24	P	P	11 23 03.0	+2.1
GAMB				IAmb	IAmb	11 23 03.6	
	comp=Z,17nm,0.8s						
ARU	Arti	76.56	328	c iP	P	11 23 00.7	-0.7
ARU				*PP	pwP	11 23 15.5	-0.2
ARU				S	S	11 32 45.0	+0.8
ARU				SS	SS	11 37 37.1	-2.8
ARU				pmax	pmax		
	comp=Z,15nm,1.0s						
ARU	Arti	76.56	328	P	P	11 23 00.1	-1.3
ARU				IAmb	IAmb	11 23 06.7	
	comp=Z,12nm,0.8s						
ANM	Nome	79.37	24	P	P	11 23 19.0	+2.1
ANM				pmax	pmax		
	comp=Z,12nm,1.2s						
ANM	Nome	79.37	24	P	P	11 23 19.0	+2.1
VNDA	Vanda	81.35	173	P	P	11 23 27.1	-0.2
	comp=Z,4.2nm,0.8s,baz=311,slow=7.1,SNR=12						
VNDA	Vanda	81.35	173	P	P	11 23 27.7	+0.5
VNDA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
VNDA	Vanda	81.35	173	P	P	11 23 27.7	+0.5
RDOG	Red Dog Mine	81.42	21	P	P	11 23 30.1	+2.3
RDOG				IAmb	IAmb	11 23 31.5	
	comp=Z,11nm,0.8s						
MAW	Mawson	81.62	200	P	P	11 23 28.9	+0.2
	comp=Z,6.2nm,0.9s,baz=14,slow=7.1,SNR=4.6						
KIRV	Kirov	81.87	329	iP	P	11 23 29.4	-0.9
SVW2	Sparrevohn	82.86	29	P	P	11 23 38.0	+2.5
SVW2				IAmb	IAmb	11 23 38.8	
	comp=Z,16nm,0.9s						
ZEI	Tsey	83.40	313	eP	P	11 23 40.7	+1.8
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KDAK	Kodiak Island	83.90	32	P	P	11 23 40.7	-0.1
	comp=Z,13nm,0.8s,baz=196,slow=4.5,SNR=6.1						
RSO	Redoubt South	84.14	29	P	P	11 23 43.7	+1.4
KBZ	Khabaz	84.19	314	P	P	11 23 43.0	+0.3
	comp=Z,2.9nm,0.8s,baz=134,slow=7.8,SNR=5.0						
KBZ	Khabaz	84.19	314	iP	P	11 23 42.6	0.0
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PRGR	Permogore	84.21	332	eP	P	11 23 41.6	-0.8
PRGR				pmax	pmax		
	comp=Z,25nm,0.9s						
NEY	Neytrino	84.29	313	iP	P	11 23 44.1	+0.7
NEY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KIV	Kislovodsk	84.35	314	eP	P	11 23 40.9	-2.8
KIV				pmax	pmax		
	comp=Z,16nm,0.9s						
IMAR	Indian Mountai	84.45	24	P	P	11 23 45.3	+1.7
CNPM	China Poot	84.79	30	P	P	11 23 46.7	+1.3
PPT	Papeete	84.81	108	LR	LR	11 59 57.5	
	comp=Z,31nm,19.0s,baz=286,slow=34						
BRLK	Bradley Lake	84.99	30	P	P	11 23 47.4	+1.0
VRH	Novokhopyorsk	85.42	321	eP	P	11 23 47.4	-1.3
VRH				pmax	pmax		
	comp=Z,120nm,1.8s						
MLY	Manley	85.58	25	P	P	11 23 51.0	+1.8
RC01	Rabbit Creek A	85.67	29	P	P	11 23 50.8	+1.1
SEW	Seward	85.74	30	P	P	11 23 51.4	+1.4
PMR	Palmer	86.00	29	P	P	11 23 52.1	+0.7
PMR				pmax	pmax		
	comp=Z,17nm,1.0s						
PMR	Palmer	86.00	29	P	P	11 23 52.1	+0.7
COLD	Coldfoot	86.01	23	P	P	11 23 53.2	+1.9
COLD				IAmb	IAmb	11 23 54.7	
	comp=Z,5.6nm,0.8s						
GHO	Glory Hole Cre	86.11	28	P	P	11 23 53.6	+1.5
GHO				IAmb	IAmb	11 24 06.7	
	comp=Z,11nm,1.1s						
MCK	McKinley	86.25	26	IAmb	IAmb	11 23 53.6	
	comp=Z,5.0nm,0.8s						
MCK				P	P	11 23 53.7	+1.1
RND	Reindeer	86.26	27	P	P	11 23 52.8	+0.1
RND				pmax	pmax		
	comp=Z,6.0nm,0.8s						
RND	Reindeer	86.26	27	P	P	11 23 52.8	+0.1
RND				IAmb	IAmb	11 23 53.8	
	comp=Z,5.5nm,0.8s						
KNK	Knik Glacier	86.31	29	P	P	11 23 54.0	+1.1
TOLK	Toolik Lake Re	86.38	21	P	P	11 23 55.1	+1.9
TOLK				IAmb	IAmb	11 23 56.0	
	comp=Z,9.7nm,0.7s						
TOLK	Toolik Lake Re	86.38	21	P	P	11 23 55.1	+1.9
	baz=265						
SML	Sawmill	86.40	28	P	P	11 23 54.6	+1.2
WRH	Wood River Hil	86.67	26	P	P	11 23 54.9	+0.3
WRH				IAmb	IAmb	11 23 55.4	
	comp=Z,4.6nm,0.8s						
CCB	Clear Creek Bu	86.80	25	P	P	11 23 55.4	+0.2
CCB				IAmb	IAmb	11 23 56.3	
	comp=Z,5.5nm,0.8s						
DHY	Denali Highway	86.91	27	P	P	11 23 57.1	+1.1
VORD	Divnogorie	86.94	321	eP	P	11 23 55.2	-1.0
VORD				pmax	pmax		
	comp=Z,20nm,0.8s						
VSR	Storozhevoye	87.02	321	eP	P	11 23 55.4	-1.2
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KLMR	Klimovskoe	87.09	331	eP	P	11 23 54.4	-2.3
KLMR				pmax	pmax		
	comp=Z,41nm,1.5s						
KLMR	Klimovskoe	87.09	331	eP	P	11 23 54.4	-2.3
KLMR				AMP		11 23 58.5	
	comp=Z,41nm,1.5s						
HDA	Harding Lake	87.16	26	P	P	11 23 56.9	-0.1
HDA				IAmb	IAmb	11 23 57.6	
	comp=Z,6.7nm,0.8s						
HDA	Harding Lake	87.16	26	P	P	11 23 56.7	-0.3
	baz=268						
LPSR	Galich'ya Gora	87.20	322	eP	P	11 23 57.0	-0.4
LPSR				pmax	pmax		
	comp=Z,40nm,1.1s						
IL31		87.20	25	P	P	11 23 56.8	-0.3
IL31				IAmb	IAmb	11 23 57.4	
	comp=Z,9.1nm,1.5s						
ILAR	Eielson Array	87.20	25	P	P	11 23 56.2	-0.9
	comp=Z,2.2nm,0.7s,baz=245,slow=4.8,SNR=33						
ILAR	Eielson Array	87.20	25	P	P	11 23 56.4	-0.8
ILAR	Eielson Array	87.20	25	P	P	11 23 56.4	-0.8
RIDG	Independent Ri	88.06	26	P	P	11 24 02.1	+0.7
RIDG				IAmb	IAmb	11 24 02.6	
	comp=Z,10nm,0.8s						
BMAR	Burnt Mountain	88.20	23	P	P	11 24 03.7	+1.7
GLB	Gilahina Butte	88.55	29	P	P	11 24 04.2	+0.5
GLB				IAmb	IAmb	11 24 20.6	
	comp=Z,7.6nm,1.2s						
MENT	Mentasta	88.58	27	P	P	11 24 05.0	+1.2
MENT				IAmb	IAmb	11 24 05.2	
	comp=Z,16nm,1.4s						
OBN	Obninsk	88.60	325	iP	P	11 24 04.7	+0.7
OBN				i		11 24 08.6	
OBN				pmax	pmax		
	comp=Z,11nm,0.9s						
OBN				MLR	MLR		
	comp=Z,72nm,17.0s						
VRDI	Verde Repeater	88.72	29	P	P	11 24 06.1	+1.4
VRDI				IAmb	IAmb	11 24 13.7	
	comp=Z,7.1nm,1.3s						
KMBO	Kilima Mbogo	89.14	269	P	P	11 24 07.5	-0.3
	comp=Z,0.9nm,0.3s,baz=19,slow=22,SNR=2.0						
KMBO	Kilima Mbogo	89.14	269	P	P	11 24 09.1	+1.3
KMBO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BCAR	Beaver Creek A	89.45	27	P	P	11 24 08.4	+0.4
BARN	Barnard Glacie	89.60	29	P	P	11 24 10.0	+1.1
BARN				IAmb	IAmb	11 24 11.2	
	comp=Z,7.7nm,0.8s						
EGAK	Eagle	89.65	25	P	P	11 24 09.2	+0.4
EGAK				IAmb	IAmb	11 24 10.3	
	comp=Z,3.6nm,0.7s						
CTGM	Chitina Glacie	89.76	29	P	P	11 24 11.4	+1.9
CTGM				IAmb	IAmb	11 24 12.1	
	comp=Z,7.5nm,0.8s						
SYO	Syowa Base	90.29	201	⇑eP	P	11 24 12.6	+1.0
SYO	Syowa Base	90.29	201	⇓epP	pP	11 24 24.0	-0.2
DAWY	Dawson	90.46	26	P	P	11 24 13.8	+1.1
DAWY				IAmb	IAmb	11 24 14.2	
	comp=Z,4.0nm,0.8s						
BR131	Keskin Array S	91.10	310	P	P	11 24 15.7	-0.6
BR131				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BR131	Keskin Array S	91.10	310	P	P	11 24 15.7	-0.6
BR131				IAmb	IAmb	11 24 21.6	
	comp=Z,3.2nm,0.8s						
BRTR	Keskin Array B	91.10	310	P	P	11 24 15.3	-1.0
	comp=Z,2.0nm,0.8s,baz=100,slow=5.1,SNR=8.2						
BRTR				LR	LR	12 11 48.9	
	comp=Z,19nm,18.2s,baz=60,slow=40						
BRTR	Keskin Array B	91.10	310	P	P	11 24 15.6	-0.7
EPYK	Eagle Plains	91.35	24	P	P	11 24 17.8	+1.1
EPYK				IAmb	IAmb	11 24 18.9	
	comp=Z,6.8nm,0.8s						
EPYK	Eagle Plains	91.35	24	P	P	11 24 17.8	+1.1
	baz=277						
INK	Inuvik	92.29	21	P	P	11 24 20.1	-0.9
	comp=Z,5.2nm,1.0s,baz=264,slow=4.7,SNR=10						
INK	Inuvik	92.29	21	P	P	11 24 21.1	+0.2
INK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
INK	Inuvik	92.29	21	P	P	11 24 21.1	+0.2
INK				IAmb	IAmb	11 24 22.1	
	comp=Z,8.6nm,1.1s						
ARCES	ARCESS Array B	92.33	340	P	P	11 24 20.6	-0.6
	comp=Z,8.9nm,0.9s,baz=70,slow=2.9,SNR=9.8						
SPITS	Spitsbergen Ar	92.51	349	P	P	11 24 21.6	-0.2
	comp=Z,13nm,0.9s,baz=259,slow=6.7,SNR=4.3						
AKASG	Malin Array Be	93.32	321	P	P	11 24 24.9	-1.2
	comp=Z,0.2nm,0.3s,baz=43,slow=18,SNR=1.5						
AKASG				LR	LR	12 10 22.5	
	comp=Z,34nm,20.3s,baz=215,slow=38						
AKASG	Malin Array Be	93.32	321	P	P	11 24 25.4	-0.7
AKASG				pmax	pmax		
	comp=Z,3.0nm,1.3s						
AKASG	Malin Array Be	93.32	321	P	P	11 24 25.4	-0.7
FINES	FINESS Array B	93.55	332	P	P	11 24 25.8	-1.1
	comp=Z,1.3nm,0.5s,baz=62,slow=3.8,SNR=12						
FINES	FINESS Array B	93.55	332	iP	P	11 24 28.8	+1.9
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	FINESS Array B	93.55	332	P	P	11 24 27.2	+0.3
TIRR	Tirgusor	94.59	315	P	P	11 24 33.2	+1.2
TIRR				pmax	pmax		
	comp=Z,20nm,1.5s						
C36M	Paulatuk	95.35	20	P	P	11 24 35.4	+0.4
C36M	Paulatuk	95.35	20	P	P	11 24 35.5	+0.5
	baz=289						
MLR	Muntele Rosu	96.19	316	P	P	11 24 40.7	+1.2
MLR				pmax	pmax		
	comp=Z,11nm,1.0s						
BURAR	Bucovina Array	96.35	318	P	P	11 24 40.2	0.0
BURAR	Bucovina Array	96.35	318	P	P	11 24 40.1	0.0
BUR08	Bucovina Ar. S	96.36	318	P	P	11 24 40.4	+0.2
DRGR		98.18	318	P	P	11 24 47.8	-0.6
BBB	Bella Bella	98.24	37	LR	LR	12 00 14.3	
	comp=Z,38nm,20.0s,baz=299,slow=30						
DAG	Danmarks Havn	99.33	352	iP	Pdif	11 24 51.7	-1.1
	comp=Z,5.8nm,0.8s						
DAG	Danmarks Havn	99.33	352	iP	Pdif	11 24 51.7	-1.1
DAG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
RES	Resolute Bay	99.99	10	P	Pdif	11 24 56.1	+0.3
	comp=Z,1.8nm,0.7s,baz=308,slow=6.2,SNR=14						
RES	Resolute Bay	99.99	10	P	Pdif	11 24 54.1	-1.7
RES				pmax	pmax		
	comp=Z,6.0nm,2.7s						
YKA	Yellowknife Ar	101.60	24	Pdiff	Pdif	11 25 02.3	-0.9
	comp=Z,0.6nm,0.6s,baz=296,slow=4.0,SNR=18						
YKA				PKiKP	PKiKP	11 29 26.7	0.0
	comp=Z,0.5nm,0.6s,baz=302,slow=1.6,SNR=8.5						
YKA				PKKPbc	PKKPbc	11 41 09.5	-3.4
	comp=Z,0.2nm,0.7s,baz=111,slow=3.0,SNR=3.8						
YKA	Yellowknife Ar	101.60	24	iP	Pdif	11 25 03.3	+0.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NVAR	Mina Array Bea	108.61	49	PP	PKiKP	11 30 10.1	+29
	comp=Z,1.3nm,1.0s,baz=280,slow=5.4,SNR=3.6						
NVAR				PKKPbc	PKKPbc	11 40 50.2	-0.9
	comp=Z,0.2nm,0.6s,baz=135,slow=1.4,SNR=3.8						
NVAR				PKKPab	PKKPab	11 41 02.9	-0.8
	comp=Z,0.8nm,0.8s,baz=151,slow=2.7,SNR=4.6						
PDAR	Pinedale Array	113.21	42	PKiKP	PKiKP	11 29 47.5	-1.7
	comp=Z,0.2nm,0.5s,baz=190,slow=3.3,SNR=2.5						
PDAR				PKKPbc	PKKPbc	11 40 35.0	-1.2
	comp=Z,0.6nm,0.8s,baz=104,slow=6.3,SNR=3.9						
PDAR				PKKPab	PKKPab	11 40 42.2	-1.0
	comp=Z,1.8nm,0.9s,baz=116,slow=5.4,SNR=12						
LAO	LASA Array	113.47	37	P	PKiKP	11 29 50.6	+1.2
	baz=300						
RSSD	Black Hills	116.11	38	P	PKPdf	11 29 54.8	0.0
	baz=301						
ULM	Lac du Bonnet	117.02	29	PKP	PKPdf	11 29 55.4	-0.6
	comp=Z,2.4nm,0.7s,baz=318,slow=2.6,SNR=5.2						
ULM	Lac du Bonnet	117.02	29	PKIKP	PKiKP	11 29 56.2	+0.2
ULM	Lac du Bonnet	117.02	29		PKiKP	11 29 56.2	+0.2
ANMO	Albuquerque	118.73	48	PKP	PKPdf	11 29 59.2	-0.8
	comp=Z,1.7nm,0.9s,baz=203,slow=3.7,SNR=5.5						
ANMO	Albuquerque	118.73	48	P	PKiKP	11 30 01.3	+1.2
	baz=295						
EYMN	Ely	120.69	29	P	PKiKP	11 30 03.3	0.0
	baz=314						
ECSD	EROS Data Cent	120.76	35		PKPdf	11 30 03.4	0.0
ECSD	EROS Data Cent	120.76	35	P	PKiKP	11 30 04.0	+0.5
	baz=308						
MNTX	Cornudas Mount	120.89	51		PKiKP	11 30 05.1	+1.0
MNTX	Cornudas Mount	120.89	51	P	PKiKP	11 30 05.2	+1.0
	baz=294						
HPIG		122.47	57		PKiKP	11 30 08.0	+0.4
SCHQ	Schefferville	122.74	9	PKP	PKiKP	11 30 07.2	0.0
	comp=Z,3.0nm,0.6s,baz=334,slow=1.6,SNR=12						
SCHQ	Schefferville	122.74	9		PKiKP	11 30 07.6	+0.5
TX31	Lajitas Ar. Si	123.19	53		PKiKP	11 30 09.7	+0.8
TX32	Lajitas Array	123.19	53		PKiKP	11 30 09.1	+0.3
TXAR	Lajitas Array	123.19	53	PKP	PKPdf	11 30 08.5	-0.1
	comp=Z,1.3nm,0.7s,baz=185,slow=1.0,SNR=17						
TXAR				PKKPbc	PKKPbc	11 39 59.5	-0.1
	comp=Z,0.4nm,1.0s,baz=125,slow=6.3,SNR=3.7						
TXAR	Lajitas Array	123.19	53	PKIKP	PKiKP	11 30 09.5	+0.7
TXAR	Lajitas Array	123.19	53		PKiKP	11 30 09.5	+0.7
G40A	Rib Lake	123.21	30		PKiKP	11 30 08.9	+0.6
TOA0	Torodi Ar. Sit	123.21	287		PKiKP	11 30 09.2	+0.1
TORD	Torodi Ar. Bea	123.21	287	PKP	PKiKP	11 30 09.1	0.0
	comp=Z,9.7nm,0.9s,baz=51,slow=2.5,SNR=44						
TORD	Torodi Ar. Bea	123.21	287		PKiKP	11 30 09.5	+0.4
KSU1	Kansas State U	123.50	39	P	PKiKP	11 30 09.6	+0.5
	baz=305						
JFWS	Jewell Farm	124.82	32	PKIKP	PKPdf	11 30 10.8	-0.4
JFWS	Jewell Farm	124.82	32		PKPdf	11 30 10.8	-0.4
JFWS	Jewell Farm	124.82	32	P	PKPdf	11 30 10.9	-0.4
	baz=314						
D46A	Sault St. Mari	124.86	25	P	PKiKP	11 30 11.7	+0.2
	baz=322						
L40A	Anamosa	124.87	34		PKiKP	11 30 11.7	0.0
D47A	Chapleau	125.11	24	P	PKiKP	11 30 12.6	+0.6
	baz=323						
E47A	Iron Bridge	125.52	25	P	PKiKP	11 30 12.7	-0.1
	baz=323						
JCT	Junction City	125.73	50	PKIKP	PKiKP	11 30 15.0	+1.2
JCT	Junction City	125.73	50		PKiKP	11 30 14.9	+1.2
JCT	Junction City	125.73	50	P	PKiKP	11 30 14.4	+0.6
	baz=297						
E48A	Lockeyer	125.96	24	P	PKiKP	11 30 14.2	+0.5
	baz=324						
G47A	Hillman	126.28	26	P	PKiKP	11 30 15.0	+0.6
	baz=321						
D50A	G1974 Best Tow	126.30	22	P	PKiKP	11 30 14.3	-0.1
	baz=327						
S39A	Bolivar	126.42	39		PKiKP	11 30 15.3	+0.4
R40A	Maddies Statio	126.70	38		PKiKP	11 30 16.1	+0.7
J47A	Sunmer	127.33	28	P	PKiKP	11 30 17.2	+0.6
	baz=319						
CCM	Cathedral Cave	127.48	37	P	PKPdf	11 30 16.4	0.0
	baz=310						
U40A	Yellville	127.53	40		PKiKP	11 30 17.7	+0.5
U40A	Yellville	127.53	40	P	PKiKP	11 30 17.3	+0.2
	baz=307						
K47A	Vermontville	127.67	29	P	PKiKP	11 30 17.4	+0.2
	baz=319						
K48A	Perry	127.99	28	P	PKiKP	11 30 17.8	-0.1
	baz=320						
MIAR	Mount Ida	128.12	42	P	PKiKP	11 30 19.8	+1.4
	baz=305						
L48A	N Adams	128.50	29	P	PKiKP	11 30 19.0	0.0
	baz=319						
N48A	Decatur	129.01	31	P	PKiKP	11 30 20.6	+0.6
	baz=318						
KIC	Kosan Boka	130.56	280	ePKIKP	PKiKP	11 30 24.3	+0.5
	comp=Z,24nm,1.1s						
DBIC	Dimbokro	130.63	280	PKP	PKPdf	11 30 23.1	0.0
	comp=Z,6.6nm,0.9s,baz=321,slow=0.9,SNR=6.6						
DBIC	Dimbokro	130.63	280	PKIKP	PKiKP	11 30 24.4	+0.5
DBIC	Dimbokro	130.63	280		PKiKP	11 30 24.4	+0.5
TIC	Toumodi	130.79	280	ePKIKP	PKiKP	11 30 24.6	+0.3
WVT	Waverly	130.80	37	P	PKiKP	11 30 24.2	+0.5
	baz=312						
LIC	Lamto	130.85	280	ePKIKP	PKiKP	11 30 24.8	+0.4
	comp=Z,26nm,0.8s						
T50A	Nancy	131.91	34	P	PKiKP	11 30 25.6	-0.4
	baz=316						
TKL	Tuckaleechee C	133.49	34	PKP	PKiKP	11 30 28.6	-0.6
	comp=Z,12nm,0.8s,baz=150,slow=5.4,SNR=7.5						
TKL	Tuckaleechee C	133.49	34	PKIKP	PKiKP	11 30 28.8	-0.4
TKL	Tuckaleechee C	133.49	34		PKiKP	11 30 28.8	-0.4
PLCA	Paso Flores	138.12	161	PKP	PKiKP	11 30 38.0	-0.6
	comp=Z,2.4nm,0.7s,baz=356,slow=7.4,SNR=5.8						
PEL	Peldehue	144.75	155	PKIKP	PKPab	11 30 47.3	-0.1
PEL	Peldehue	144.75	155		PKPab	11 30 47.3	-0.1
ROC1	El Roble	144.75	154		PKPbc	11 30 47.8	0.0
JTS	Las Juntas de	146.68	69	PKPbc	PKPbc	11 30 53.6	-0.4
	comp=Z,6.4nm,0.9s,baz=319,slow=9.3,SNR=4.0						
JTS	Las Juntas de	146.68	69	PKIKP	PKPdf	11 30 51.9	-0.4
JTS	Las Juntas de	146.68	69		PKPdf	11 30 51.9	-0.4
GO04	Tololo Observa	147.22	152		PKPab	11 30 56.8	-0.3
PB14	IPOC Station P	151.93	146		PKiKP	11 31 08.5	+0.8
GO02	Mina Guanaco	151.95	148	PKPdf	PKPdf	11 30 59.7	-1.1
GO02					PKiKP	11 31 08.8	+1.1
CPUP	Villa Florida	155.13	172	PKP	PKPdf	11 31 04.8	-0.1
	comp=Z,0.8nm,0.3s,baz=204,slow=4.1,SNR=2.4						
CPUP	Villa Florida	155.13	172	PKIKP	PKPdf	11 31 05.3	+0.3
CPUP	Villa Florida	155.13	172		PKPdf	11 31 05.3	+0.3
LPAZ	La Paz	159.56	137	PKIKP	PKPdf	11 31 11.0	-0.6
LPAZ	La Paz	159.56	137		PKPdf	11 31 11.0	-0.6
SDV	Santo Domingo	160.13	58	PKP	PKPdf	11 31 12.4	+0.6
	comp=Z,1.9nm,0.5s,baz=24,slow=7.2,SNR=4.0						
SIV	San Ignacio	163.91	153	PKP	PKPdf	11 31 16.2	+0.9
	comp=Z,1.3nm,0.9s,baz=145,slow=6.8,SNR=4.3						
SIV				PKPab	PKPab	11 32 08.7	+0.8
	comp=Z,2.0nm,0.8s,baz=188,slow=2.9,SNR=7.1						

TAP 26 11:18:11.9, 23°.14N × 120°.88E, h6$^{km}\pm2^{km}$, ML0.9, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STYT	Tauyuan	0.11	284	iP	Pg	11 18 15.0	+0.6
	baz=284						
STYT				iS	Sg	11 18 16.6	+0.6
	baz=284						
ELDTW	Lidau	0.14	68	P	Pg	11 18 16.1	+1.3
	baz=69						
ELDTW				S	Sg	11 18 18.6	+1.7
	baz=69						
SLGT	Liugui	0.25	236	P	Pb	11 18 18.0	-0.9
	baz=236						
SLGT				S	Sg	11 18 21.7	+1.4
	baz=236						
CHN1	Nanshi	0.32	279	eS	Sg	11 18 24.0	+1.5
	baz=278						
FULB	Fuli	0.39	81	P	Pb	11 18 21.2	-0.1
	baz=80						
FULB				S	Sb	11 18 26.7	-0.9
	baz=80						
TWF1	Yuli	0.44	61	eP	Pb	11 18 21.8	-0.4
	baz=61						
SSD	Sandimen	0.45	210	P	Pb	11 18 22.7	+0.4
	baz=209						
YULB	Yu-li	0.47	57	P	Pg	11 18 21.7	+0.8
	baz=56						
YULB				eS	Sg	11 18 28.1	+1.0
	baz=56						

TAP 26 11:18:13.4, 23°.45N × 120°.57E, h11$^{km}\pm1^{km}$, ML0.9, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHN4	Tsaushan	0.10	170	iP	Pg	11 18 16.4	+0.2
	baz=169						
CHN4				S	Sg	11 18 19.0	+0.9
	baz=169						
TPUB	Ta-pu	0.16	161	P	Pg	11 18 17.4	+0.4
	baz=161						
TPUB				S	Sg	11 18 21.0	+1.5
	baz=161						
CHN5	Tsauling	0.17	34	P	Pb	11 18 18.1	-0.6
	baz=33						
CHN5				S	Sg	11 18 21.8	+1.9
	baz=33						
WTP	Ta-pu	0.21	170	P	Pg	11 18 18.4	+0.5
	baz=295						
WTP				iS	Sg	11 18 22.7	+1.9
	baz=295						
WTP	Ta-pu	0.21	170	P	Pg	11 18 18.2	+0.4
	baz=167						
WTP				S	Sg	11 18 22.8	+1.9
	baz=167						
ALS	Alishan	0.22	75	eP	Pg	11 18 18.5	+0.3
	baz=75						
ALS				eS	Sg	11 18 23.1	+1.6
	baz=75						
SNST	Tainan City	0.24	197	eP	Pb	11 18 19.6	-0.2
	baz=196						
SNST				S	Sg	11 18 23.8	+2.0
	baz=196						
CHN1	Nanshi	0.27	189	P	Pb	11 18 19.9	-0.4
	baz=188						
CHN1				S	Sb	11 18 25.1	+0.3
	baz=188						
CHN1	Nanshi	0.27	189	P	Pb	11 18 19.7	-0.5
	baz=278						
CHN8	Yiju	0.35	252	eP	Pg	11 18 19.9	-0.5
	baz=252						
WHYT	Xinyi Township	0.35	47	eP	Pb	11 18 21.3	-0.4
	baz=46						
WSF	Szhu	0.37	300	eP	Pb	11 18 21.4	-0.6
	baz=300						
SCLT	Jiali	0.44	232	eP	Pg	11 18 22.3	+0.2
	baz=230						
SSLB	Suanglung	0.48	46	eP	Pb	11 18 23.8	-0.1
	baz=46						

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*SJA **26** 11:26:53.7±0.8, 31°.56S × 69°.57W, h102$^{km}\pm3^{km}$, ML3.0, MW3.0*

*GUC **26** 11:26:54.0±0.8, 31°.57S × 69°.89W, h139$^{km}\pm12^{km}$, ML3.3*

ISC 26 11:26:54.5±1.4, 31°.54S±0°.03 × 69°.51W±0°.03, h110$^{km}\pm10^{km}$, n24, σ0^{s}.80/45, 2D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLS	Leoncito	0.31	144	iP	Pn	11 27 10.2	-0.5
RTLS				iS	Sn	11 27 22.4	-0.4
RTLS				IAML		11 27 22.9	
	comp=Z,454nm,0.2s						
ZON	Zonda	0.71	90	iP	Pn	11 27 12.8	-0.2
ZON				IAML		11 27 13.2	
	comp=Z,201nm,0.4s						

ZON				*i* S	Sn	11 27 26.9	0.0
RTCV	Cerro Valdivia	0.89	111	*i* P	Pn	11 27 14.5	-0.1
RTCV				*i* S	Sn	11 27 29.5	-0.3
RTLL	Cerro Villicun	0.91	77	*i* P	Pn	11 27 14.3	-0.6
RTLL				*i* S	Sn	11 27 29.8	-0.4
ACCO	Cerro Coronel	1.03	22	*i* P	Pn	11 27 16.3	-0.1
ACCO				*i* S	Sn	11 27 33.0	+0.2
ASAL	Salagasta	1.19	151	*i* P	Pn	11 27 18.1	+0.2
ASAL				*i* S	Sn	11 27 37.0	+1.5
CO03	El Pedregal	1.23	305	*i* P	Pn	11 27 18.4	+0.1
CO03				*i* S	Sn	11 27 36.5	+0.3
CO03	 comp=N,344nm,0.3s			IAML		11 27 38.6	
CO02	Combarbal	1.32	285	*i* P	Pn	11 27 18.8	-0.5
CO02				*i* S	Sn	11 27 37.9	-0.1
CO02	 comp=E,898nm,0.3s			IAML		11 27 40.6	
CO04	Los Peladeros	1.34	248	⇓*i*P	Pn	11 27 19.0	-0.7
CO04				*i* S	Sn	11 27 38.2	-0.6
CO04	 comp=E,524nm,0.2s			IAML		11 27 39.6	
AROD	Rodeo	1.37	1	*i* P	Pn	11 27 20.7	+0.6
AROD				*i* S	Sn	11 27 40.5	+1.0
ARCO	CERRO ARCO	1.39	159	*i* P	Pn	11 27 20.4	+0.3
ARCO				*i* S	Sn	11 27 40.1	+0.6
ARCO	 comp=Z,216nm,0.3s			IAML		11 27 43.4	
ACDV	Cuesta del Vie	1.41	14	*i* P	Pn	11 27 20.8	+0.4
ACDV				*i* S	Sn	11 27 40.8	+0.8
ACDV	 comp=Z,88nm,0.5s			IAML		11 27 43.9	
VA03	San Esteban	1.50	216	⇓*i*P	Pn	11 27 21.5	+0.1
VA03				*i* S	Sn	11 27 42.3	+0.4
VA03	 comp=E,642nm,0.1s			IAML		11 27 44.0	
AAGR	Agrelo	1.64	159	*i* P	Pn	11 27 23.4	+0.3
AAGR				*i* S	Sn	11 27 46.3	+1.4
GO04	Tololo Observa	1.76	321	*i* P	Pn	11 27 24.3	-0.4
GO04				*i* S	Sn	11 27 47.3	-0.4
GO04	 comp=N,641nm,0.3s			IAML		11 27 50.5	
GO04	Tololo Observa	1.76	321	*i* P	Pn	11 27 24.2	-0.5
GO04				*i* S	Sn	11 27 47.3	-0.4
FCH	Farellones	1.90	200	*i* P	Pn	11 27 27.1	+0.6
FCH				*i* S	Sn	11 27 52.9	+2.1
FCH	 comp=E,208nm,0.2s			IAML		11 27 56.7	
ROCH	El Roble	1.91	221	*i* P	Pn	11 27 26.0	-0.5
ROCH				*i* S	Sn	11 27 50.2	-0.7
ROC1	El Roble	1.91	221	*i* P	Pn	11 27 26.0	-0.6
AGUA	GUANDACOL	2.23	24	*i* P	Pn	11 27 31.4	+0.8
AGUA				*i* S	Sn	11 27 59.5	+1.4
VCA	Vinchina	3.02	22	*i* P	Pn	11 27 41.8	+0.8
VCA				*i* S	Sn	11 28 17.3	+0.7
VCA	 comp=Z,68nm,0.2s			IAML		11 28 21.4	
MRA	San Martin	3.34	106	*i* P	Pn	11 27 44.6	-0.5
MRA				*i* S	Sn	11 28 22.2	-2.0
MRA	 comp=Z,39nm,0.4s			IAML		11 28 24.7	
LAMA	Las Malvinas	3.39	176	*i* P	Pn	11 27 45.5	-0.2
CYA	Choya	4.46	47	*i* P	Pn	11 27 58.5	-1.6
CYA	 comp=Z,7.8nm,0.4s			IAML		11 28 49.9	

IDC 26 11:27:19.2±1.6, 5°.75S×150°.36E, h127^{km}±21^{km}, mb3.1/4, mb1 3.2/6, mb1mx3.1/31, mbtmp3.5/6, Error ellipse: s-maj=64.6km s-min=14.6km az=128.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076 9.4nm,0.3s,baz=235,slow=4.8,SNR=6.6	2.19	49	P	Pn	11 27 55.4	-0.1
PMG	Port Moresby 1.4nm,0.3s,baz=39,slow=6.2,SNR=5.9	4.82	221	P	Pn	11 28 30.5	+0.6
PMG	 7.7nm,0.3s,baz=39,slow=18,SNR=11			S	Sn	11 29 25.2	+0.3
WRA	Warramunga Arr 1.0nm,0.3s,baz=54,slow=10,SNR=7.8	21.02	226	P	P	11 31 52.8	-0.1
ASAR	Alice Springs 0.2nm,0.3s,baz=52,slow=8.8,SNR=16	23.84	220	P	P	11 32 21.3	+0.4
FITZ	Fitzroy Crossi 0.3nm,0.3s,baz=63,slow=11,SNR=1.4	27.07	241	P	P	11 32 49.8	-0.3
SONM	Songino Array 0.2nm,0.3s,baz=140,slow=5.5,SNR=2.5	65.86	329	P	P	11 37 51.1	-0.2

JMA 26 11:33:39.6±0.2, 24°.94N×123°.36E, h136^{km}±3^{km}, M2.6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.57	214	P	Pn	11 33 59.9	+0.1
YOJ				*e*S	Sn	11 34 15.2	+0.2
JYNG	Yonagunijimaku	0.62	218	P	Pn	11 34 00.2	+0.2
JYNG				*e*S	Sn	11 34 15.8	+0.3
IRIF	Iriomote-Funau	0.69	151	P	Pn	11 34 00.4	-0.1
JIJ	Ishigaki jima	0.92	129	P	Pn	11 34 02.3	0.0
JIJ				S	Sn	11 34 18.7	-0.8
JKRS	Kuro-shima	0.92	140	P	Pn	11 34 02.8	+0.5
JKRS				S	Sn	11 34 19.8	+0.3
JISG	Ishigakijimahi	0.93	112	P	Pn	11 34 02.3	-0.1
JISG				*e*S	Sn	11 34 19.8	+0.1
HATJ	Hateruma jima	0.97	155	*e*S	Sn	11 34 21.3	+1.0
JTJ	Tarama	1.26	103	P	Pn	11 34 05.6	+0.1
JTJ				*e*S	Sn	11 34 24.7	-0.5
JIRB	Irabujima	1.65	93	P	Pn	11 34 10.0	+0.2
JIRB				S	Sn	11 34 32.1	-0.7
JIKM	Ikemajima	1.71	90	P	Pn	11 34 10.9	+0.4
JMJ2	Miyako jima3	1.80	96	P	Pn	11 34 12.1	+0.6
JMJ2				*e*S	Sn	11 34 36.3	+0.4
JOGS	Gusukube	1.87	95	P	Pn	11 34 13.0	+0.7
JOGS				*e*S	Sn	11 34 37.8	+0.5

TAP 26 11:34:21.1, 24°.27N×121°.69E, h5^{km}, ML1.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	Ninganchiao baz=212	0.13	223	P	Pg	11 34 23.8	+0.1
NACB	 baz=212			*e*S	Sg	11 34 26.3	+0.8
ENA	Nanau baz=34	0.17	16	*e*P	Pg	11 34 24.9	+0.5
ENA	 baz=34			*e*S	Sg	11 34 27.7	+1.0
ETLH	Xiulin Townshi baz=252	0.20	252	*e*P	Pg	11 34 25.4	+0.3
ETLH	 baz=252			*e*S	Sg	11 34 30.0	+2.3
TWD	Chiawan baz=201	0.21	205	*e*P	Pg	11 34 25.6	+0.4
TWD	 baz=201			S	Sg	11 34 29.1	+1.2
NNSH	Datong baz=300	0.32	300	*e*P	Pg	11 34 28.1	+0.6
NNSH	 baz=300			S	Sg	11 34 32.8	+1.1
NNSB	Datong baz=301	0.32	300	P	Pg	11 34 27.9	+0.4
NNSB	 baz=301			*e*S	Sg	11 34 33.1	+1.4
NNS	Nan Shan baz=302	0.34	301	*e*P	Pg	11 34 27.6	-0.1
NNS	 baz=302			S	Sg	11 34 33.5	+1.3
NDT	Datong Townshi baz=337	0.37	334	*e*P	Pb	11 34 29.6	-0.6
NDT	 baz=337			S	Sb	11 34 35.0	-1.3
ENTT	Nioudou baz=347	0.39	343	*e*P	Pb	11 34 29.6	-0.8
ENTT	 baz=347			S	Sb	11 34 35.4	-1.4
WHF	Hehuan Shan baz=250	0.41	253	P	Pg	11 34 29.6	+0.5
WHF	 baz=250			*e*S	Sb	11 34 36.3	-1.5
YHNB	Yeheng baz=327	0.49	324	*e*P	Pg	11 34 31.5	+0.8
YHNB	 baz=327			*e*S	Sg	11 34 37.9	+0.8
NSK	Sanguang baz=327	0.51	323	*e*P	Pb	11 34 31.9	-0.6
NSK	 baz=327			*e*S	Sg	11 34 38.0	+0.4
ESL	Shilin baz=202	0.51	208	*e*S	Sg	11 34 38.6	+1.0
CHGB	Renai baz=232	0.52	246	*e*P	Pb	11 34 32.2	-0.5
CHGB	 baz=232			S	Sb	11 34 40.1	-0.5
NWLT	Wulai baz=345	0.54	341	*e*P	Pg	11 34 32.2	+0.8
NWLT	 baz=345			*e*S	Sg	11 34 39.7	+1.3
OWD	Renai baz=222	0.56	237	*e*P	Pg	11 34 32.6	+0.6
OWD	 baz=222			*e*S	Sb	11 34 41.3	-0.7
VWDT	VWDT baz=221	0.72	225	*e*S	Sb	11 34 45.6	-0.6
HGSD	Ruisui baz=207	0.81	198	*e*P	Pb	11 34 37.4	-0.3
HGSD	 baz=207			*e*S	Sb	11 34 49.1	+0.2
SSLB	Suanglung baz=232	0.83	235	*e*S	Sb	11 34 48.9	-0.5
EHY	Hungye baz=207	0.83	204	*e*P	Pg	11 34 37.3	+0.2
EHY	 baz=207			*e*S	Sg	11 34 48.4	+0.6

IDC ***26*** *11:34:30.9±0.7, 34°.90N×26°.03E, h0^{km}, mb4.2/15, mb1 4.2/24, mb1mx4.0/54, mbtmp4.0/24, ML3.8/8, MS3.1/8, Ms1 3.1/8, ms1mx2.9/50, Error ellipse: s-maj=16.8km s-min=8.6km az=14.0*

MOS ***26*** *11:34:31.9±1.2, 34°.77N×25°.98E, h15^{km}, mb4.4/16, Error ellipse: s-maj=6.6km s-min=3.8km az=87.3*

DDA ***26*** *11:34:32.0, 34°.75N×25°.61E, h54^{km}±114^{km}, MW4.2*

ATH ***26*** *11:34:32.9, 35°.02N×25°.99E, h18^{km}±1^{km}, ML3.9/18, Error ellipse: s-maj=1.8km s-min=0.8km az=351.0*

NIC ***26*** *11:34:33.1±0.0, 34°.94N×26°.05E, h14^{km}±1^{km}, Ml4.3/3*

ISK ***26*** *11:34:33.1, 34°.98N×26°.06E, h20^{km}, ML4.0/35*

THE ***26*** *11:34:33.4, 34°.99N×25°.97E, h0^{km}±1^{km}, ML3.8/10, Error ellipse: s-maj=2.1km s-min=0.7km az=166.0*

NEIC ***26*** *11:34:34.6±1.9, 34°.75N±0°.08×25°.93E±0°.07, h29^{km}±6^{km}, mb4.3/16, Error ellipse: s-maj=11.9km s-min=7.8km az=200.0*

GII ***26*** *11:34:36.1±0.0, 34°.70N×26°.24E, h10^{km}±1^{km}, mb4.2/4, MD4.0/4, Mm4.0/6*

ISC 26 11:34:33.1±0.8, 34°.90N±0°.03×26°.00E±0°.02, h11^{km}±4^{km}, n316, σ1^{s}81/365, mb4.3/36, 18C-4D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRMA	Ierapetra Chan	0.25	298	P	Pg	11 34 35.9	-2.3
FRMA	 67µm,0.3s			S	Sg	11 34 38.2	-3.4
ZKR	Zakros	0.28	39	P	Pg	11 34 38.1	-0.6
ZKR	 79µm,0.4s			S	Sg	11 34 42.2	-0.3
ZKR	Zakros	0.28	39	P	Pg	11 34 38.2	-0.6
ZKR				S	Sg	11 34 41.7	-0.8
ZKR	 comp=N,99421µm,0.4s			AML	AML	11 34 43.1	
ZKR				AML	AML	11 34 43.3	
ZKR	Zakros	0.28	39	PG	Pg	11 34 38.5	-0.2
ZKR				SG	Sg	11 34 42.5	0.0
ZKR	Zakros	0.28	39	P	Pg	11 34 38.1	-0.6
ZKR				S	Sg	11 34 42.3	-0.2
ZKR	 comp=N,217nm,0.4s			AML	AML	11 34 42.5	
ZKR	 comp=N,217nm,0.4s			AML	AML	11 34 42.5	
ZKR	 comp=N,100nm,0.4s			AML	AML	11 34 42.6	
ZKR	 comp=N,100nm,0.4s			AML	AML	11 34 42.6	
STIA	Sitia Lasithi	0.31	14	P	Pg	11 34 38.3	-1.0
STIA				S	Sg	11 34 42.6	-0.9
NPS	Neapolis	0.48	319	P	Pg	11 34 41.4	-1.1
NPS	 comp=N,11µm,0.7s			S	Sg	11 34 49.1	+0.2
NPS	Neapolis	0.48	319	P	Pg	11 34 41.6	-1.0
NPS				S	Sg	11 34 47.7	-1.2
NPS	 comp=E,22188µm,0.8s			AML	AML	11 34 54.3	
NPS	 comp=N,22781µm,0.6s			AML	AML	11 34 58.5	
NPS	Neapolis	0.48	319	P	Pg	11 34 41.2	-1.3
LAST	Lasithi	0.50	301	P	Pg	11 34 41.7	-1.2
LAST	 comp=N,15µm,0.6s			S	Sg	11 34 49.4	-0.2
LAST	Lasithi	0.50	301	P	Pg	11 34 41.8	-1.2
LAST				S	Sg	11 34 49.1	-0.5
LAST	 comp=E,28096µm,0.6s			AML	AML	11 34 49.5	
LAST	 comp=N,34199µm,0.6s			AML	AML	11 34 56.9	
HRKL	Herakleio	0.84	299	P	Pg	11 34 48.3	-1.1
HRKL	 comp=N,19µm,1.0s			S	Sg	11 35 00.4	0.0
HRKL	Herakleio	0.84	299	PG	Pb	11 34 50.1	+0.3
HRKL				SG	Sn	11 35 02.5	-0.8
KSTL	Kastelli Herak	0.86	298	P	Pg	11 34 44.2	-5.5
KSTL				S	Sg	11 34 53.5	-7.5
SIVA	Sivas	0.99	277	P	Pg	11 34 51.2	-0.8
SIVA	 comp=N,21µm,0.6s			S	Sb	11 35 05.8	+0.6
SIVA	Sivas	0.99	277	P	Pg	11 34 51.0	-1.0
SIVA				S	Sg	11 35 04.3	-0.6
SIVA	 comp=N,34175µm,0.5s			AML	AML	11 35 10.6	
SIVA	 comp=E,48474µm,0.7s			AML	AML	11 35 20.6	
IDI	Anoyia	0.99	293	P	Pg	11 34 50.6	-1.6
IDI	 comp=E,5µm,0.5s			S	Sn	11 35 06.3	-0.8
IDI	Anoyia comp=E,52nm,0.3s,baz=126,slow=17,SNR=118	0.99	293	Pg	Pg	11 34 50.1	-2.1
IDI	 comp=E,333nm,0.3s,baz=24,slow=22,SNR=13			Lg	Lg	11 35 04.8	
IDI	Anoyia	0.99	293	P	Pg	11 34 50.2	-2.0
IDI	 comp=N,9250µm,0.6s			AML	AML	11 35 10.8	
IDI	 comp=E,8770µm,0.5s			AML	AML	11 35 11.1	
IDI	Anoyia	0.99	293	PG	Pb	11 34 52.2	-0.1
IDI				SG	Sn	11 35 06.8	-0.3
TMBK	Timbaki Herakl	1.03	280	P	Pg	11 34 51.9	-1.0
TMBK	 comp=E,6µm,0.4s			S	Sn	11 35 08.3	+0.4
KARP	Karpathos	1.15	55	P	Pb	11 34 53.8	-1.2
KARP	 comp=E,4µm,0.6s			S	Sn	11 35 11.6	+0.7
KARP	Karpathos	1.15	55	P	Pb	11 34 54.0	-0.9
KARP				S	Sb	11 35 08.0	-1.9
KARP	 comp=N,8819µm,0.6s			AML	AML	11 35 21.1	
KARP	 comp=E,8575µm,0.6s			AML	AML	11 35 24.4	
KARP	Karpathos	1.15	55	PG	Pb	11 34 53.4	-1.6
KARP	Karpathos	1.15	55		Pb	11 34 54.5	-0.5
KARP	Karpathos	1.15	55	P	Pb	11 34 53.7	-1.3
KARP				S	Sb	11 35 09.6	-0.3
ANAF	Anafi Island	1.47	353	P	Pn	11 34 58.7	-0.8
ANAF	Anafi Island	1.47	353	P	Pn	11 34 58.6	-0.8
ANAF	 comp=N,18449µm,0.5s			AML	AML	11 35 28.1	
ANAF	 comp=E,16036µm,0.4s			AML	AML	11 35 29.1	
SANT	Santorini	1.53	343	P	Pn	11 34 59.7	-0.8
SANT	 comp=E,2µm,0.9s			S	Sn	11 35 18.8	-1.6
SANT	Santorini	1.53	343	P	Pn	11 34 59.4	-1.0
SANT	 comp=E,7199µm,0.6s			AML	AML	11 35 23.4	
SANT	 comp=N,2361µm,0.7s			AML	AML	11 35 25.3	
SANT	Santorini	1.53	343	PN	Pn	11 34 59.2	-1.3
SANT	Santorini	1.53	343	*i* P	Pn	11 34 59.7	-0.8
SANT				*i* S	Sn	11 35 18.6	-1.8
SANT	Santorini	1.53	343		Pn	11 34 60.0	-0.5
THR6	Thira Island,	1.54	341	P	Pn	11 35 00.2	-0.2
THR6	Thira Island,	1.54	341	P	Pn	11 35 00.1	-0.3
SAP1	Santorini-Akro	1.54	341	P	Pn	11 35 00.3	-0.2
SAP1	Santorini-Akro	1.54	341	P	Pn	11 35 00.3	-0.2
THT1	Athinios (Pele	1.56	343	P	Pn	11 35 00.1	-0.6
THT1	Athinios (Pele	1.56	343	P	Pn	11 35 00.1	-0.6
VAM	Vamos	1.56	289	P	Pn	11 35 00.8	0.0
VAM	Vamos	1.56	289	P	Pn	11 35 00.7	0.0
VAM	 comp=E,8991µm,0.6s			AML	AML	11 35 28.4	
VAM	 comp=N,8269µm,0.9s			AML	AML	11 35 40.7	
VAM	Vamos	1.56	289	P	Pn	11 35 01.3	+0.5
THR8	Santorini-Mono	1.56	344	P	Pn	11 35 00.0	-0.8
THR8	Santorini-Mono	1.56	344	P	Pn	11 34 59.6	-1.2
GVDS	Gavdos	1.57	269	P	Pb	11 35 02.1	-0.1
GVDS	Gavdos	1.57	269	PN	Pb	11 35 01.8	-0.4
STAX	Taxiarchis Har	1.57	342	P	Pn	11 35 00.5	-0.5
STAX	Taxiarchis Har	1.57	342	P	Pn	11 35 00.5	-0.5
STAX				S	Sn	11 35 19.9	-1.4
STAX	 comp=N,5968µm,0.7s			AML	AML	11 35 27.3	
STAX	 comp=E,6340µm,1.0s			AML	AML	11 35 27.3	
GVD	Gavdhos	1.58	268	P	Pb	11 35 02.1	-0.1
GVD	Gavdhos	1.58	268	P	Pb	11 35 02.3	+0.1
GVD	 comp=E,7843µm,0.5s			AML	AML	11 35 37.8	
GVD	 comp=N,6834µm,0.7s			AML	AML	11 35 43.4	
GVD	Gavdhos	1.58	268	PN	Pb	11 35 01.7	-0.5
THR3	Thira Island,	1.58	342	P	Pn	11 35 00.6	-0.5
THR3	Thira Island,	1.58	342	P	Pn	11 35 00.6	-0.5
THT2	Imerovigli	1.60	343	PN	Pn	11 35 00.3	-1.1
THR5	Thira Island,	1.61	341	P	Pn	11 35 01.2	-0.2
THR5	Thira Island,	1.61	341	P	Pn	11 35 01.1	-0.3
THR2	Thira island,	1.61	344	P	Pn	11 35 01.1	-0.4
CMBO	Columbo, Santo	1.64	343	P	Pn	11 35 01.1	-0.8
CMBO	Columbo, Santo	1.64	343	P	Pn	11 35 01.9	+0.1
IMMV	Iera Moni Meta	1.75	289	P	Pn	11 35 03.9	+0.6
IMMV	Iera Moni Meta	1.75	289	P	Pb	11 35 04.4	-0.8
IMMV	 comp=N,6295µm,0.7s			AML	AML	11 35 36.0	
IMMV	 comp=E,7509µm,0.9s			AML	AML	11 35 46.9	
IMMV	Iera Moni Meta	1.75	289	PN	Pn	11 35 03.4	+0.1
IOSP	Ios island	1.91	343	P	Pn	11 35 04.7	-0.9
IOSP	Ios island	1.91	343	P	Pn	11 35 04.9	-0.7
IOSP	 comp=N,4597µm,0.7s			AML	AML	11 35 37.0	
IOSP	 comp=E,5276µm,0.6s			AML	AML	11 35 37.5	
AMGA	Amorgos Island	1.93	357	P	Pn	11 35 05.0	-0.9
AMGA	Amorgos Island	1.93	357	P	Pn	11 35 04.8	-1.1
AMGA	 comp=N,3308µm,0.7s			AML	AML	11 35 34.9	
AMGA	 comp=E,3136µm,0.9s			AML	AML	11 35 37.7	
RODP	Rodopos	1.95	290	PN	Pn	11 35 06.6	+0.4
ARG	Arkhangelos	2.17	52	P	Pb	11 35 11.2	-1.2
ARG	Arkhangelos	2.17	52	P	Pb	11 35 10.9	-1.6
ARG	 comp=E,1940µm,0.9s			AML	AML	11 35 47.4	
ARG	 comp=N,2152µm,1.2s			AML	AML	11 35 49.7	
ARG	Arkhangelos	2.17	52	PN	Pn	11 35 08.1	-1.1
ARG	Arkhangelos	2.17	52	P	Pn	11 35 10.6	+1.4
ARG				S	Sn	11 35 37.0	+0.9
APE	Apeiranthos	2.20	350	P	Pn	11 35 08.3	-1.3
APE	Apeiranthos	2.20	350	P	Pn	11 35 08.3	-1.3
APE	 comp=E,1356µm,0.7s			AML	AML	11 35 41.1	
APE	 comp=N,1476µm,0.6s			AML	AML	11 35 44.8	
APE	Apeiranthos	2.20	350	⇓P	Pb	11 35 12.0	-0.9
APE				⇑S	Sb	11 35 40.7	+0.5
APE	Apeiranthos	2.20	350	PN	Pn	11 35 08.3	-1.3
APE	Apeiranthos	2.20	350	*i* P	Pn	11 35 08.8	-0.8
APE				*i* S	Sn	11 35 36.5	-0.3
APE	Apeiranthos	2.20	350	P	Pn	11 35 10.2	+0.6
APE				S	Sn	11 35 36.8	0.0
APE	Apeiranthos	2.20	350	P	Pn	11 35 08.8	-0.8
MHLO	Agia Marina, M	2.21	324	P	Pn	11 35 08.7	-1.0
MHLO	Agia Marina, M	2.21	324	P	Pn	11 35 09.8	+0.1
DAT	Datca	2.23	35	PN	Pn	11 35 08.7	-1.4
MHLA	Plaka, Milos I	2.25	326	P	Pn	11 35 10.9	+0.7
MHLA	 comp=N,6162µm,1.1s			AML	AML	11 35 57.6	
MHLA	 comp=E,4428µm,1.2s			AML	AML	11 36 05.0	
BODT	Bodrum	2.41	26	PN	Pn	11 35 11.1	-1.3
ANKY	Antikythira Is	2.41	294	P	Pn	11 35 12.7	+0.3
ANKY	Antikythira Is	2.41	294	P	Pn	11 35 12.7	+0.3
DALY	Dalyan (Mula)	2.88	48	PN	Pn	11 35 18.2	-0.7
TURN	Turunc	2.89	46	PN	Pn	11 35 14.1	-4.9
TURN	Turunc	2.89	46	*i* P	Pn	11 35 15.9	-3.1
TURN				*i* S	Sn	11 35 46.7	-7.0
TURN	 comp=Z,132nm,0.6s			IAML		11 36 11.0	
YER	Yerkesik	2.90	39	PN	Pn	11 35 18.3	-0.9
FETY	Fethiye	3.05	54	PN	Pn	11 35 20.5	-0.7
VLI	Veliai	3.08	307	P	Pn	11 35 21.9	+0.2
VLI	Veliai	3.08	307	P	Pn	11 35 22.1	+0.4
VLI	 comp=N,1043µm,0.7s			AML	AML	11 36 02.3	
VLI	 comp=E,913µm,0.7s			AML	AML	11 36 07.0	
AYDN	Tasoluk	3.15	28	*i* P	Pn	11 35 24.5	+1.9
AYDN				*i* S	Sb	11 36 04.0	-3.5
AYDN	 comp=Z,74nm,1.2s			IAML		11 36 31.0	
AKAS	Kas	3.22	65	PN	Pn	11 35 23.4	-0.4
AKAS	Kas	3.22	65	*i* P	Pn	11 35 24.8	+1.0
AKAS				*i* S	Sn	11 35 58.4	-3.9
AKAS	 comp=Z,49nm,0.8s			IAML		11 36 05.0	
AKAS	 comp=N,102nm,1.1s			IAML		11 36 47.0	
AKAS	 comp=E,100nm,0.9s			IAML		11 36 47.0	
KARY	Karystos	3.37	338	P	Pn	11 35 25.1	-0.6
AYDB	Zeytinkoy-Aydi	3.40	26	PN	Pn	11 35 25.4	-0.8
DID	Didima	3.43	320	P	Pn	11 35 27.3	+0.8
DID	Didima	3.43	320	P	Pn	11 35 27.4	+0.9
TAVA	DENIZLI_Tavas	3.48	42	*i* P	Pn	11 35 29.1	+1.9
TAVA				*i* S	Sn	11 36 10.0	+1.5
TAVA	 comp=Z,68nm,1.0s			IAML		11 36 45.0	
CHOS	Chios island	3.48	1	P	Pn	11 35 26.3	-0.9
CHOS	Chios island	3.48	1	PN	Pn	11 35 26.2	-1.1
URLA	Izmir	3.49	8	PN	Pn	11 35 26.3	-1.0
URLA	Izmir	3.49	8	*i* P	Pn	11 35 26.9	-0.4
URLA	 comp=Z,37nm,0.8s			IAML		11 36 45.0	
BLCB	Balcova	3.58	13	PN	Pn	11 35 28.3	-0.2
ELL	Elmali	3.67	59	PN	Pn	11 35 29.7	-0.2
ELL	Elmali	3.67	59	P	Pn	11 35 32.4	+2.5
ELL	Elmali	3.67	59		Pn	11 35 32.4	+2.5
ELL	Elmali	3.67	59	P	Pn	11 35 30.8	+0.8
AKUM	Antalya-Kumluc	3.81	67	*i* P	Pn	11 35 32.4	+0.7
AKUM	 comp=N,55nm,1.3s			IAML		11 36 30.0	
AKUM	 comp=Z,35nm,0.9s			IAML		11 36 38.0	
AKUM	 comp=E,53nm,0.7s			IAML		11 37 07.0	
LTK	Loutraki	3.96	323	P	Pn	11 35 35.3	+1.5
VIL2	Platees	3.97	327	P	Pn	11 35 33.4	-0.6
KORT	Korkueli	4.10	58	PN	Pn	11 35 35.6	-0.3
KORT	Korkueli	4.10	58	*i* P	Pn	11 35 39.0	+3.1
KORT	 comp=Z,50nm,1.0s			IAML		11 36 59.0	
MANT	Manisa	4.13	29	*i* P	Pn	11 35 38.1	+1.8
MANT				*i* S	Sn	11 36 27.1	+2.4
MANT	 comp=Z,34nm,1.1s			IAML		11 36 38.0	
MANT	Manisa	4.13	29		Pn	11 35 39.0	+2.7
ZEDA	zmir-Bergama	4.15	12	*i* P	Pn	11 35 35.9	-0.5
ZEDA				*i* S	Sn	11 36 24.7	-0.2
ZEDA	 comp=Z,36nm,0.7s			IAML		11 36 31.0	
KULA	Kula-Manisa	4.19	30	PN	Pn	11 35 37.4	+0.4
BRDR	BURDUR-Merkez	4.30	48	*i* P	Pn	11 35 42.0	+3.4

BRDR				*i* S	Sn	11 36 34.5	+5.6
BRDR				IAML		11 37 04.0	
	comp=Z,40nm,1.3s						
KLV	Kalavryta, Ach	4.41	316	P	Pn	11 35 40.7	+0.6
KHAL	Karahalli	4.46	38	*i* P	Pn	11 35 42.0	+1.3
KHAL				IAML		11 36 55.0	
	comp=Z,20nm,1.4s						
DSF	Desfina	4.48	322	P	Pn	11 35 42.3	+1.3
USAK	Uak-Merkez	4.51	32	*i* P	Pn	11 35 42.2	+0.8
USAK				IAML		11 37 13.0	
	comp=Z,21nm,2.1s						
AOS	Alonnisos	4.59	339	P	Pn	11 35 42.6	+0.2
AOS	Alonnisos	4.59	339	PN	Pn	11 35 43.0	+0.6
DRO	Drossia	4.61	313	P	Pn	11 35 44.1	+1.3
LAKA	Lakka	4.65	317	P	Pn	11 35 44.9	+1.6
ISP	Isparta	4.67	50	P	Pn	11 35 46.8	+3.1
ISP	Isparta	4.67	50	Pn	Pn	11 35 46.8	+3.1
DEMI	Demirci	4.67	27	*i* P	Pn	11 35 45.8	+2.2
KZIL	AFYON_Kizioren	4.72	44	*i* P	Pn	11 35 45.5	+1.1
KZIL				IAML		11 37 47.0	
	comp=Z,20nm,2.9s						
SIMA	Simav-Kutahya	4.81	29	PN	Pn	11 35 45.2	-0.3
EZN	Ezine	4.92	3	PN	Pn	11 35 46.6	-0.4
EZN	Ezine	4.92	3	P	Pn	11 35 51.2	+4.2
GDZ	Gediz	5.02	33	*i* P	Pn	11 35 50.5	+2.0
AGG	Agios Georgios	5.06	326	PN	Pn	11 35 49.9	+1.0
AGG	Agios Georgios	5.06	326	*i* P	Pn	11 35 50.8	+2.0
AGG				*i* S	Sb	11 36 54.8	-7.6
AGG	Agios Georgios	5.06	326	P	Pn	11 35 51.3	+2.4
AGG	Agios Georgios	5.06	326		Pn	11 35 51.3	+2.4
AKMS	Akamas	5.20	87	P	Pn	11 35 50.8	-0.1
AKMS				AML	AML	11 36 56.7	
	comp=Z,0.7nm,0.9s						
AKMS				AML	AML	11 37 12.8	
	comp=Z,0.8nm,0.8s						
TVSB	Tavsanli	5.32	30	PN	Pn	11 35 53.3	+0.8
GAZI	Gazipasa	5.32	74	PN	Pn	11 35 52.2	-0.2
SEYD	Seydisehir-KON	5.34	60	PN	Pn	11 35 53.8	+0.9
PAIG	Paliouri	5.35	340	P	Pn	11 35 55.0	+2.2
PAIG				pmax	pmax		
	comp=Z,36nm,0.8s						
NATA	Nata	5.40	89	P	Pn	11 35 53.4	-0.3
ALFC	Alefka	5.42	85	P	Pn	11 35 53.5	-0.4
ALFC				AML	AML	11 36 58.9	
	comp=Z,0.5nm,0.8s						
ALFC				AML	AML	11 37 05.5	
	comp=Z,0.6nm,0.9s						
LPK	Lapseki	5.50	6	PN	Pn	11 35 54.8	-0.1
GELI	Tayfur-Gelibol	5.50	4	PN	Pn	11 35 55.5	+0.6
OSC2	CSNet OBS 4	5.51	108	P	Pn	11 35 55.5	+0.4
OSC2				S	Sn	11 36 59.4	+0.9
MRMT	Marmara Adasi	5.83	12	PN	Pn	11 35 59.4	-0.2
LIT	Litokhoron	5.89	333	P	Pn	11 36 02.3	+1.9
LIT	Litokhoron	5.89	333		Pn	11 36 02.3	+1.9
TEKE	Tekeli-Mersin	5.93	76	PN	Pn	11 36 01.4	+0.6
KONT	Konya--Tatoy	5.96	57	PN	Pn	11 36 02.1	+0.8
ALN	Alexandroupoli	5.99	0	PN	Pn	11 36 02.6	+1.0
ALN	Alexandroupoli	5.99	0	P	Pn	11 36 03.0	+1.4
ALN	Alexandroupoli	5.99	0	Pn	Pn	11 36 03.0	+1.4
CSS	Mathiatis	6.02	87	PN	Pn	11 36 03.3	+1.2
CSS	Mathiatis	6.02	87	Pn	Pn	11 36 03.3	+1.2
BERE	Bereket-Mersin	6.06	74	PN	Pn	11 36 02.6	-0.1
LADK	Ladik-KONYA	6.09	55	PN	Pn	11 36 03.7	+0.6
KDHN	Kadinhani	6.10	52	*i* P	Pn	11 36 03.8	+0.5
KDHN				IAML		11 38 40.0	
	comp=Z,7.3nm,2.2s						
BORA	Eskisehir	6.11	34	PN	Pn	11 36 03.9	+0.6
UKOP	Uzunkopru-Edir	6.24	4	PN	Pn	11 36 05.9	+0.8
RDO	Rodhopi	6.25	357	PN	Pn	11 36 05.9	+0.7
SOH	Sokhos	6.27	341	P	Pn	11 36 06.2	+0.6
SOH				pmax	pmax		
	comp=Z,16nm,0.7s						
GULN	MERSIN_Gulnar	6.28	76	*i* P	Pn	11 36 06.1	+0.5
GULN				*i* S	Sn	11 37 16.0	-1.4
GULN				IAML		11 37 26.0	
	comp=Z,16nm,0.7s						
SRCK	Saricakaya, Es	6.31	34	PN	Pn	11 36 07.3	+1.2
IKL	Isikli	6.40	76	PN	Pn	11 36 07.8	+0.5
SRS	Serrai	6.49	344	P	Pn	11 36 11.4	+2.8
SRS				pmax	pmax		
	comp=Z,27nm,1.1s						
GRG	Griva	6.68	336	P	Pn	11 36 14.4	+3.2
GRG				pmax	pmax		
	comp=Z,35nm,0.9s						
KNT	Kendrikon	6.71	340	P	Pn	11 36 15.5	+3.9
KNT				pmax	pmax		
	comp=Z,28nm,0.8s						
MMB	Musomiste	6.92	346	P	Pn	11 36 21.0	+6.6
FNA	Florina	6.92	329	P	Pn	11 36 16.5	+2.0
FNA	Florina	6.92	329		Pn	11 36 16.5	+2.0
MDUB	Mudurnu	6.92	35		Pn	11 36 16.6	+2.0
VAY	Valandovo	6.96	338	*i* P	Pn	11 36 18.2	+3.3
BR231	Keskin MP Arra	7.31	46		Pn	11 36 20.8	+1.0
KKB	Krupnik	7.32	343	P	Pn	11 36 24.3	+4.3
ANTO	Ankara	7.34	45	⇑P	Pn	11 36 23.9	+3.7
ANTO	Ankara	7.34	45	⇑P	Pn	11 36 23.9	+3.7
ANTO	Ankara	7.34	45	Pn	Pn	11 36 21.8	+1.5
OHR	Ohrid	7.44	328	*i* P	Pn	11 36 24.9	+3.3
BR131	Keskin Array S	7.76	49	*i* P	Pn	11 36 27.8	+1.7
BR131	Keskin Array S	7.76	49		Pn	11 36 27.4	+1.3
BRTR	Keskin Array B	7.76	49	Pn	Pn	11 36 26.4	+0.3
	comp=Z,0.3nm,0.3s,baz=221,slow=14,SNR=12						
BRTR				LR	LR	11 40 14.8	
	comp=Z,186nm,20.3s,baz=234,slow=44						
BRTR	Keskin Array B	7.76	49	P	Pn	11 36 26.6	+0.5
BRTR	Keskin Array B	7.76	49		Pn	11 36 26.6	+0.5
SKO	Skopje	7.92	334	*i* P	Pn	11 36 33.9	+5.8
VTS	Vitosha	8.00	345	⇑P	Pn	11 36 32.5	+3.1
VTS	Vitosha	8.00	345	P	Pn	11 36 32.8	+3.4
VTS	Vitosha	8.00	345	⇑P	Pn	11 36 32.5	+3.1
VTS	Vitosha	8.00	345		Pn	11 36 31.0	+1.6
MMAI	Mount Meron Ar	8.03	101	Pn	Pn	11 36 29.0	-0.8
	comp=Z,3.0nm,0.3s,baz=291,slow=12,SNR=2.4						
MMAI				Sn	Sn	11 38 00.1	-0.6
	comp=Z,2.9nm,0.3s,baz=314,slow=30,SNR=2.3						
KZIT	Kziot	8.10	117	Pn	Pn	11 36 30.1	-0.6
KZIT				Sn	Sn	11 37 59.6	-2.7
GEM	Giv'at Ha'Em	8.19	99	Pn	Pn	11 36 32.4	+0.5
HMDT	Nahal Hemdat	8.37	106	Pn	Pn	11 36 34.8	+0.4
HMDT				Sn	Sn	11 38 07.4	-1.6
YTIR	Yattir	8.42	112	Pn	Pn	11 36 35.5	+0.4
YTIR				Sn	Sn	11 38 07.2	-3.0
DSI	Dead Sea	8.53	110	Pn	Pn	11 36 35.7	-0.8
DSI				Sn	Sn	11 38 10.2	-2.6
TIP	Timpagrande	8.54	303	⇑P	Pn	11 36 37.7	+1.0
TIP	Timpagrande	8.54	303	Pn	Pn	11 36 35.3	-1.4
RAZG	Razgrad	8.66	2	⇓P	Pn	11 36 43.1	+4.8
KRMI	Paran Flat	8.77	121	Pn	Pn	11 36 40.2	+0.3
KRMI				Sn	Sn	11 38 15.7	-3.1
GHAJ	Ghor Haditha	8.79	111	Pn	Pn	11 36 39.9	-0.1
ZFRI	Zfri	8.86	117	Pn	Pn	11 36 41.1	+0.1
ZFRI				Sn	Sn	11 38 17.4	-3.5
HRFI	Mount Harif	9.04	120	Pn	Pn	11 36 43.6	0.0
HRFI				Sn	Sn	11 38 22.7	-2.7
MBRI	Mt Berech	9.09	122	Pn	Pn	11 36 44.4	0.0
MBRI				Sn	Sn	11 38 24.5	-2.3
EIL	Elat	9.19	122	Pn	Pn	11 36 43.8	-1.8
	comp=Z,1.3nm,0.3s,baz=327,slow=9.7,SNR=18						
EIL				Sn	Sn	11 38 26.8	-2.4
	comp=Z,1.5nm,0.3s,baz=313,slow=19,SNR=4.5						
EIL				LR	LR	11 40 39.0	
	comp=Z,62nm,20.5s,baz=290,slow=40						
EIL	Elat	9.19	122	Pn	Pn	11 36 45.3	-0.4
EIL				Sn	Sn	11 38 25.7	-3.4
ICOR	Ion Corvin	9.31	8	⇑P	Pn	11 36 51.0	+3.8
ASF	Jabal al Asfar	9.49	104	Pn	Pn	11 36 49.7	-0.1
	comp=Z,0.4nm,0.3s,baz=239,slow=10,SNR=3.8						
ASF	Jabal al Asfar	9.49	104	P	Pn	11 36 50.6	+0.8
ASF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VAE	Valguarnera	9.72	289	Pn	Pn	11 36 53.8	+0.9
	comp=Z,4.0nm,0.3s,baz=357,slow=19,SNR=4.4						
VAE				Sn	Sn	11 38 42.6	+0.7
	comp=Z,3.4nm,0.3s,baz=93,slow=22,SNR=1.5						
TIRR	Tirgusor	9.72	10	⇑P	Pn	11 36 56.5	+3.6
TIRR	Tirgusor	9.72	10	⇑P	Pn	11 36 56.5	+3.6
ACER	Acerenza	9.89	309	Pn	Pn	11 36 54.0	-1.2
HERR	Herculane	10.34	346	⇑P	Pn	11 37 04.2	+2.9
VOIR		10.55	356	⇑P	Pn	11 37 07.4	+3.1
VOIR		10.55	356	⇑P	Pn	11 37 07.4	+3.1
MLR	Muntele Rosu	10.58	360	Pn	Pn	11 37 06.5	+1.8
	comp=Z,0.3nm,0.3s,baz=128,slow=9.0,SNR=3.2						
MLR				LR	LR	11 41 11.2	
	comp=Z,60nm,20.1s,baz=264,slow=38						
MLR	Muntele Rosu	10.58	360		Pn	11 37 05.0	+0.3
GZR	Gura Zlata	10.77	348	⇓P	Pn	11 37 09.7	+2.5
GZR	Gura Zlata	10.77	348	⇓P	Pn	11 37 09.7	+2.5
PLOR	Plostina	10.95	2	⇑P	Pn	11 37 13.4	+3.7
PLOR	Plostina	10.95	2	⇑P	Pn	11 37 13.4	+3.7
VRI	Vrincioaia	10.97	3	⇑P	Pn	11 37 13.5	+3.6
VRI	Vrincioaia	10.97	3	⇑P	Pn	11 37 13.5	+3.6
SOC	Sochi	13.70	47	*e*P	Pn	11 37 47.4	+0.1
SOC				*e*		11 40 21.4	
SOC				pmax	pmax		
	comp=Z,32nm,0.7s						
SOC				MLR	MLR		
	comp=Z,232nm,19.0s						
ARXR	Arkhyz	14.64	49	*i* P	Pn	11 38 02.3	+2.0
KWP	Kalwaria Pacla	14.92	352	P	P	11 38 09.3	-0.2
KWP				pmax	pmax		
	comp=Z,12nm,2.1s						
PGF	Pioggiola	15.29	305	P	P	11 38 13.8	0.0
PGF				pmax	pmax		
	comp=Z,40nm,2.2s						
KIV	Kislovodsk	15.72	50	*e*P	Pn	11 38 15.3	+0.7
KIV				pmax	pmax		
	comp=Z,13nm,0.9s						
KIV				MLR	MLR		
	comp=Z,66nm,12.0s						
KBZ	Khabaz	15.75	51	Pn	Pn	11 38 16.4	+1.6
	comp=Z,0.1nm,0.3s,baz=241,slow=10,SNR=1.8						
KBZ				LR	LR	11 46 10.5	
	comp=Z,40nm,21.5s,baz=276,slow=44						
KBZ	Khabaz	15.75	51	*i* P	P	11 38 18.0	-0.7
KBZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SALO	Salr	15.91	317		Pn	11 38 17.0	0.0
SALO				IAmb	IAmb	11 38 27.6	
	comp=Z,15nm,0.8s						
AKASG	Malin Array Be	15.97	7	Pn	Pn	11 38 16.5	-1.0
	comp=Z,2.0nm,0.3s,baz=197,slow=10,SNR=14						
AKASG				Sn	Sn	11 41 19.1	+4.6
	comp=Z,1.7nm,0.3s,baz=328,slow=8.9,SNR=15						
AKASG	Malin Array Be	15.97	7	P	Pn	11 38 18.7	+1.2
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AKASG	Malin Array Be	15.97	7		Pn	11 38 18.7	+1.2
AKBB	Malin Array Si	15.97	7	*i* P	P	11 38 19.6	-1.5
AKBB	Malin Array Si	15.97	7		P	11 38 19.8	-1.3
VRAC	Vranov	15.98	337	P	P	11 38 20.8	-0.5
VRAC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ZEI	Tsey	16.00	55	*e*P	Pn	11 38 12.8	-5.4
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WTTA	Wattenberg	16.39	323	P	P	11 38 25.1	-1.0
WTTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GERES	GERESS Array B	16.64	331	Pn	Pn	11 38 26.9	+0.6
	baz=152,slow=12,SNR=4.3						
GERES	GERESS Array B	16.64	331	P	Pn	11 38 27.0	+0.6
GERES	GERESS Array B	16.64	331		Pn	11 38 26.7	+0.4
KHC	Kasperske Hory	16.92	331	*e*P	P	11 38 31.5	-0.3
KHC	Kasperske Hory	16.92	331	*i* P	P	11 38 31.9	+0.1
KHC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
DAVOX	Davos/Dischmat	16.98	319	LR	LR	11 46 44.2	
	comp=Z,92nm,18.7s,baz=77,slow=43						
VSR	Storozhevoye	18.88	26	*i* P	Pn	11 38 55.0	+1.1
VSR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
CLL	Collm	18.90	334	*e*P	Pn	11 38 55.0	+0.9
CLL				*e*pP	sP	11 39 00.0	+2.3
CLL	Collm	18.90	334	*e*P	Pn	11 38 55.0	+0.9
LOR	Lormes	20.68	313	P	P	11 39 12.2	-0.8
LOR				pmax	pmax		
	comp=Z,15nm,2.0s						
OBN	Obninsk	21.50	17	*i* P	P	11 39 23.8	+2.1
OBN				pmax	pmax		
	comp=Z,6.0nm,0.5s						
TAM	Tamanrasset	21.57	241	P	P	11 39 24.4	+1.5
TAM				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GEYT	Alibeck	25.95	74	P	P	11 40 05.6	0.0
	comp=Z,7.3nm,0.8s,baz=270,slow=7.4,SNR=12						
HFS	Hagfors	26.49	346	P	P	11 40 12.8	+2.7
	comp=Z,2.5nm,0.8s,baz=155,slow=9.0,SNR=2.5						
FINES	FINESS Array B	26.56	0	P	P	11 40 11.1	+0.3
	comp=Z,2.7nm,0.9s,baz=157,slow=30,SNR=1.6						
NOA	NORSAR Array B	27.83	345	LR	LR	11 52 22.3	
	comp=Z,20nm,18.9s,baz=230,slow=38						
KIRV	Kirov	28.33	26	*i* P	P	11 40 28.8	+2.2
EKA	Eskdalemuir Ar	28.65	325	P	P	11 40 28.9	-0.6
	comp=Z,1.3nm,0.5s,baz=125,slow=9.8,SNR=6.1						
ABKAR	Akbulak array	28.71	50	P	P	11 40 29.5	-0.7
TOA0	Torodi Ar. Sit	30.86	231	P	P	11 40 50.2	+0.7
TOA0				IAmb	IAmb	11 40 50.3	
	comp=Z,3.6nm,0.8s						
TORD	Torodi Ar. Bea	30.86	231	P	P	11 40 49.7	+0.3
	comp=Z,2.8nm,0.6s,baz=35,slow=9.1,SNR=27						
ARCES	ARCESS Array B	34.69	360	P	P	11 41 20.5	-2.0
	comp=Z,3.8nm,0.9s,baz=184,slow=8.3,SNR=11						
KK31	Karatay Array	35.20	63	P	P	11 41 27.0	-0.3
KK31				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KK31	Karatay Array	35.20	63	P	P	11 41 27.0	-0.3
KK31				IAmb	IAmb	11 41 28.6	
	comp=Z,3.2nm,0.9s						
KKAR	Karatay Array	35.20	63	P	P	11 41 27.4	+0.1
KKAR	Karatay Array	35.20	63	P	P	11 41 26.7	-0.6
KKAR				IAmb	IAmb	11 41 28.6	
	comp=Z,3.2nm,0.9s						
KKAR	Karatay Array	35.20	63	P	P	11 41 27.4	+0.1
BRVK	Borovoye	35.97	46	*i* P	P	11 41 33.4	-0.3
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BRVK	Borovoye	35.97	46	P	P	11 41 33.8	+0.1
BRVK				IAmb	IAmb	11 41 35.3	
	comp=Z,3.7nm,1.1s						
AAK	Ala-Archa	38.15	63	*ce*P	P	11 41 54.1	+1.5
AAK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AAK	Ala-Archa	38.15	63	P	P	11 41 53.2	+0.6
KSH	Kashi	39.66	68	P	P	11 42 05.3	+0.2
KSH				PP	PnPn	11 43 39.8	+0.7
KSH				PcS	PcS	11 48 03.5	+1.4
KSH				S	S	11 48 07.5	-0.9
KSH				SS	SS	11 50 53.0	-10
DBIC	Dimbokro	39.95	233	LR	LR	11 58 54.9	
	comp=Z,32nm,18.2s,baz=322,slow=37						
TIC	Toumodi	40.08	233	*e*P	P	11 42 08.3	-0.4
KIC	Kosan Boka	40.11	232	*e*P	P	11 42 08.8	-0.2
	comp=Z,7.7nm,0.6s						
LIC	Lamto	40.40	232	*e*P	P	11 42 11.2	-0.1
	comp=Z,8.8nm,0.7s						
KURK	Kurchatov	40.81	51	*ce*P	P	11 42 15.1	+0.7
KURK				pmax	pmax		
	comp=Z,31nm,0.7s						
KURK	Kurchatov	40.81	51	P	P	11 42 14.4	0.0
KURK				IAmb	IAmb	11 42 15.3	
	comp=Z,6.7nm,0.8s						
MAKZ	Makanchi	43.13	56	P	P	11 42 34.0	+0.6
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MAKZ	Makanchi	43.13	56	P	P	11 42 34.0	+0.6
MK31	Makanchi Array	43.34	56	P	P	11 42 35.3	+0.1
MK31				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MK31	Makanchi Array	43.34	56	P	P	11 42 35.3	+0.1
MKAR	Makanchi Array	43.34	56	P	P	11 42 35.5	+0.3
	comp=Z,6.1nm,0.6s,baz=281,slow=6.3,SNR=81						
MKAR	Makanchi Array	43.34	56	P	P	11 42 35.0	-0.2
ZAA0	Zalesovo Array	44.69	46	P	P	11 42 45.1	-0.7
ZAA0				IAmb	IAmb	11 42 45.9	
	comp=Z,2.6nm,0.7s						
ZALV	Zalesovo Beam	44.69	46	P	P	11 42 45.1	-0.7
	comp=Z,2.8nm,0.6s,baz=270,slow=9.5,SNR=9.6						
ZALV	Zalesovo Beam	44.69	46	*i* P	P	11 42 45.2	-0.6
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZALV	Zalesovo Beam	44.69	46	P	P	11 42 45.0	-0.8
DGZ	Jazzator, Alta	46.50	52	*i* P	P	11 43 00.9	+0.5
WMQ	Urumqi	47.54	60	*e*P	P	11 43 09.0	+0.5
WMQ				sP	sP	11 43 25.3	+13
NRIK	Noril'sk	47.82	25	*i* P	P	11 43 14.4	+4.2
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MATP	Matopo	55.07	177	P	P	11 44 04.4	-0.8
	comp=Z,1.4nm,0.7s,baz=17,slow=9.5,SNR=3.6						
SONM	Songino Array	59.12	51	P	P	11 44 33.4	-0.3
	comp=Z,0.9nm,0.7s,baz=281,slow=8.4,SNR=5.5						
ULN	Ulaanbaatar	59.52	51	*i* P	P	11 44 39.6	+3.1
ULN				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TIXI	Tiksi	61.17	21	*i* P	P	11 44 49.4	+2.3
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
LZH	Lanzhou	61.69	64	*e*P	P	11 44 52.3	+0.8
LZH				pP	sP	11 45 04.5	+8.8
LZH				sP	pP	11 45 06.8	+12
LZH				PP	PP	11 47 04.3	-2.8
SCHQ	Schefferville	63.83	320	P	P	11 45 04.8	-0.4
	comp=Z,5.0nm,0.6s,baz=61,slow=5.9,SNR=24						
SCHQ	Schefferville	63.83	320	P	P	11 45 05.2	-0.1
HHC	Hu-ho-hao-te	65.21	56	*e*P	P	11 45 13.3	-1.3
CMAR	Chiang Mai Arr	65.91	84	P	P	11 45 18.6	-0.8
	comp=Z,0.6nm,0.4s,baz=306,slow=7.7,SNR=2.4						
CMAR				LR	LR	12 21 22.5	
	comp=Z,37nm,19.1s,baz=145,slow=43						
HIA	Hailar	66.72	45	*i* P	P	11 45 26.1	+2.0
HIA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BILL	Bilibino	73.14	15	*i* P	P	11 46 06.5	+3.3
BILL				pmax	pmax		
	comp=Z,5.0nm,1.6s						
KLR	Kul'dur	73.51	41	*i* P	P	11 46 08.8	+3.1
KLR				pmax	pmax		
	comp=Z,7.0nm,2.5s						
C36M	Paulatuk	73.75	349	P	P	11 46 06.2	-0.6
C36M				IAmb	IAmb	11 46 08.9	
	comp=Z,5.3nm,1.5s						
USRK	Ussuriysk Ar.	76.53	45	P	P	11 46 22.4	-0.8
	comp=Z,1.9nm,0.7s,baz=266,slow=5.1,SNR=5.0						
USRK	Ussuriysk Ar.	76.53	45	P	P	11 46 23.0	-0.3
USRK	Ussuriysk Ar.	76.53	45	P	P	11 46 23.0	-0.3
KSRS	Korea Array	77.89	53	P	P	11 46 29.1	-1.9
	comp=Z,0.5nm,0.4s,baz=268,slow=5.3,SNR=2.5						
YKA	Yellowknife Ar	77.91	342	P	P	11 46 29.4	-1.2
	comp=Z,0.3nm,0.5s,baz=40,slow=5.5,SNR=6.2						
YKA	Yellowknife Ar	77.91	342	*i* P	P	11 46 31.9	+1.3
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ILAR	Eielson Array	80.50	357	P	P	11 46 44.2	-0.6
	comp=Z,0.6nm,0.9s,baz=351,slow=5.1,SNR=5.9						
WRH	Wood River Hil	80.85	357	P	P	11 46 46.2	-0.5
WRH				IAmb	IAmb	11 47 00.0	
	comp=Z,2.6nm,0.8s						
PPLA	Purkeypile	82.53	359	P	P	11 46 55.7	0.0

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*LDG **26** 11:41:53.6±0.1, 44°.49N×7°.25E, h10^{km}, Md1.5/1, Ml1.5/7, Error ellipse: s-maj=1.8km s-min=1.1km az=63.0*

GEN 26 11:41:54.0, 44°.48N×7°.24E, h10^{km}±1^{km}, Ml0.5, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PZZ	Stroppo	0.09	289	P	Pg	11 41 56.6	+0.1
PZZ				S	Sg	11 41 58.4	0.0
STV	Sant Anna di V	0.24	164	P	Pg	11 41 58.9	0.0
STV				S	Sg	11 42 02.4	+0.2
ENR	Entracque	0.28	152	P	Pg	11 41 59.6	0.0
ENR				S	Sg	11 42 03.4	-0.1
BHB	Bricherasio	0.37	3	P	Pg	11 42 00.2	-1.1
BHB				S	Sg	11 42 04.7	-1.4
MBDF	Montbardon	0.41	307	*e*Pg	Pg	11 42 01.8	-0.4
MBDF				*e*Sg	Sg	11 42 07.4	-0.3
	2.0nm,0.2s						
SBF	Sospel	0.63	167	*e*Pg	Pg	11 42 05.9	-0.3
SBF				*e*Sg	Sg	11 42 14.5	+0.1
	1.7nm,0.2s						
FRF	La Foret Royal	1.01	205	*e*Pg	Pg	11 42 13.0	-0.3
FRF				*e*Sg	Sg	11 42 26.3	-0.2
	1.7nm,0.2s						
ORIF	Oris-en-Rattie	1.06	295	*e*Pg	Pg	11 42 13.7	-0.7
ORIF				*e*Sg	Sg	11 42 27.6	-0.6
	1.0nm,0.2s						
LPL	La Plagne	1.10	341	*e*Sg	Sg	11 42 28.2	-1.2
	1.4nm,0.2s						
LMR	La Mourre	1.26	205	*e*Pg	Pn	11 42 17.5	-0.1
LMR				*e*Sg	Sb	11 42 34.0	0.0
	0.5nm,0.2s						
SMRF	Simiane la Rot	1.29	248	*e*Pn	Pn	11 42 16.6	-1.5
SMRF				*e*Sn	Sb	11 42 33.1	-2.0
	0.1nm,0.1s						

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*IDC **26** 11:45:05.5±2.9, 18°.30N×145°.57E, h149^{km}±27^{km}, mb3.2/7, mb1 3.6/8, mb1mx3.2/48, mbtmp3.7/8, Error ellipse: s-maj=29.9km s-min=19.9km az=106.0*

ISC 26 11:45:05.6±0.7**, 18°.30N**±0°.09×**145°.6E**±0°.2**, h150^{km}, n9, σ1^{s}.01**/12**, mb3.4**/7**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.73	188	P	Pn	11 46 15.1	-0.3
	13nm,0.3s,baz=173,slow=20,SNR=2.1						
GUMO				S	Sn	11 47 10.8	+0.9
	8.7nm,0.3s,baz=172,slow=20,SNR=1.8						
WRA	Warramunga Arr	39.56	197	P	P	11 52 22.3	+0.1
	1.7nm,0.5s,baz=17,slow=8.7,SNR=4.0						
WRA				PcP	PcP	11 54 25.6	-1.1
	0.3nm,0.8s,baz=17,slow=3.4,SNR=0.5						
ASAR	Alice Springs	43.23	196	P	P	11 52 51.8	-0.4
	0.6nm,0.6s,baz=15,slow=8.1,SNR=17						
CMAR	Chiang Mai Arr	44.13	278	P	P	11 52 58.6	-0.9
	0.7nm,0.6s,baz=78,slow=5.9,SNR=3.5						
MKAR	Makanchi Array	58.64	314	P	P	11 54 48.6	+1.6
	0.4nm,0.9s,baz=92,slow=3.5,SNR=2.9						
ILAR	Eielson Array	64.06	26	P	P	11 55 21.6	-1.5
	0.5nm,0.9s,baz=240,slow=32,SNR=4.2						
YKA	Yellowknife Ar	78.41	28	P	P	11 56 49.4	+0.1
	0.1nm,0.5s,baz=284,slow=5.0,SNR=4.1						
YKA				pP	pwP	11 57 30.3	+0.8
	0.3nm,0.6s,baz=281,slow=5.5,SNR=4.2						
NVAR	Mina Array Bea	83.50	52	P	P	11 57 17.9	+0.9
	0.5nm,0.7s,baz=260,slow=5.4,SNR=3.7						
LPAZ	La Paz	147.80	92	PKPbc	PKPbc	12 04 34.7	+0.2
	0.8nm,0.6s,baz=333,slow=2.3,SNR=2.3						

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*NEIC **26** 12:21:37.8±1.6, 0°.01S±0°.08×125°.07E±0°.06, h33^{km}±4^{km}, mb4.3/22, Error ellipse: s-maj=12.6km s-min=7.3km az=160.0*

*IDC **26** 12:21:40.0±0.8, 0°.12S×125°.02E, h58^{km}±7^{km}, mb3.9/20, mb1 4.0/23, mb1mx3.9/56, mbtmp4.2/23, MS3.3/7, Ms1 3.3/7, ms1mx2.9/46, Error ellipse: s-maj=13.9km s-min=10.0km az=83.0*

*DJA **26** 12:21:40.7±0.2, 0°S±1°×12°5E±°, h45^{km}±4^{km}, M4.5/20, mb4.6/14, mB5.0/6, MLv4.5/20, Mw(mB)4.3/6*

ISC 26 12:21:40.6±0.6**, 0°.08S**±0°.04×**125°.10E**±0°.04**, h62^{km}**±6^{km}**, n81, σ1^{s}.39**/99**, mb4.2**/28**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	1.29	300	P	Pn	12 22 01.0	-1.6
KMSI				S	Sn	12 22 17.7	-1.3
SANI	Sanana	2.15	156	P	Pn	12 22 11.6	-2.6
SANI				S	Sn	12 22 40.3	+0.5
TNTI	Ternate	2.42	70	P	Pn	12 22 18.2	+0.4
TNTI				S	Sn	12 22 48.0	+1.7
TNTI	Ternate	2.42	70		Pn	12 22 18.8	+0.9
LBMI	Labuha	2.46	103	P	Pn	12 22 18.2	-0.3
LBMI				S	Sn	12 22 47.3	-0.2
LUWI	Luwuk	2.52	248	P	Pn	12 22 20.3	+1.1
LUWI				S	Sn	12 22 55.1	+6.3
LUWI	Luwuk	2.52	248		Pn	12 22 20.2	+1.1
MRSI	Marisa	3.21	280	P	Pn	12 22 26.2	-2.4
APSI	Ampana	3.55	256	P	Pn	12 22 34.0	+0.7
NLAI	Namlea	3.72	148	P	Pn	12 22 34.0	-1.7
AAI	Ambon	4.74	139	P	Pn	12 22 49.9	+0.3
MSAI	Masohi	5.02	130	P	Pn	12 22 53.9	+0.5
	0.3nm1µm76nm,0.9s						
MSAI				S	Sn	12 23 50.0	-0.2
	0.3nm1µm76nm,0.9s						
MPSI	Mapaga	5.22	275	P	Pn	12 22 58.5	+2.3
	0.3nm2µm52nm,0.9s						
SIJI	Sorong	6.22	97	P	Pn	12 23 10.3	+0.4
	5.1nm,0.3s,baz=270,slow=12,SNR=15						
SIJI				S	Sn	12 24 21.7	+2.1
	baz=286,slow=23,SNR=1.1						

BNDI	Bandanaira	6.52	133	P	Pn	12 23 16.5	+2.5
SPSI	Sidrap Palu	6.58	234	P	Pn	12 23 15.3	+0.5
	0.4nm1µm93nm,0.5s						
SPSI				S	Sn	12 24 27.1	-1.4
	0.4nm1µm93nm,0.5s						
BNSI	Bone	6.58	229	P	Pn	12 23 14.9	0.0
	0.3nm64nm,0.6s						
BNSI				S	Sn	12 24 26.7	-1.9
	0.3nm64nm,0.6s						
DAV	Davao City (W)	7.11	4	LR	LR	12 26 30.4	
	comp=Z,199nm,20.6s,baz=182,slow=40						
BKSI	Bulukumba	7.20	224	P	Pn	12 23 25.0	+1.7
	0.2nm693nm39nm,0.6s						
BKSI				S	Sn	12 24 41.2	-2.6
	0.2nm693nm39nm,0.6s						
KAPI	Kappang	7.25	227	P	Pn	12 23 23.8	-0.2
	5.2nm,0.3s,baz=72,slow=3.2,SNR=19						
KAPI				S	Sn	12 24 43.3	-1.7
	9.1nm,0.3s,baz=163,slow=19,SNR=10						
KAPI				LR	LR	12 26 56.1	
	comp=Z,112nm,18.7s,baz=65,slow=44						
KAPI	Kappang	7.25	227		Pn	12 23 24.7	+0.7
KAPI					Sn	12 24 45.0	0.0
FAKI	Fak Fak	7.68	112		Pn	12 23 28.0	-2.0
KBKI	Kotabaru	9.48	250	P	Pn	12 24 10.3	+16
SOEI	Soe	9.65	185	P	Pn	12 24 03.3	+6.3
MTN	Manton Dam	14.03	155		Pn	12 24 55.5	-1.0
PWJI	Pagerwojo	15.43	239	P	P	12 25 20.6	+2.6
KNRA	Kununurra	15.92	167		Pn	12 25 19.6	-1.3
KNRA				IAmb	IAmb	12 25 20.7	
	comp=Z,16nm,0.8s						
FITZ	Fitzroy Crossi	17.92	178	P	P	12 25 44.5	-1.0
	comp=Z,0.3nm,0.3s,baz=5.9,slow=8.6,SNR=18						
FITZ				LR	LR	12 34 35.0	
	comp=Z,57nm,18.8s,baz=339,slow=43						
FITZ	Fitzroy Crossi	17.92	178	P	Pn	12 25 45.6	0.0
WRAB	Tennant Creek	21.72	156	P	P	12 26 25.6	-1.2
WRAB				IAmb	IAmb	12 26 31.3	
	comp=Z,7.6nm,1.0s						
WRA	Warramunga Arr	21.72	156	P	P	12 26 25.2	-1.6
	comp=Z,2.8nm,0.4s,baz=335,slow=12,SNR=54						
WRA				PcP	PcP	12 30 23.5	-2.4
	comp=Z,0.3nm,0.6s,baz=331,slow=2.7,SNR=2.0						
WRA	Warramunga Arr	21.72	156	P	P	12 26 27.1	+0.2
WB2	Warramunga Arr	21.73	156	P	P	12 26 25.6	-1.3
WR0	Warramunga Arr	21.82	155	P	P	12 26 26.5	-1.4
PSA00	Pilbara Seismi	21.97	193	P	P	12 26 31.5	+2.0
COEN	Coen	22.59	128	P	P	12 26 38.9	+2.6
COEN				IAmb	IAmb	12 26 39.9	
	comp=Z,6.2nm,0.6s						
IPM	Ipoh	24.47	281	P	P	12 26 53.6	-0.5
IPM				IAmb	IAmb	12 26 53.9	
	comp=Z,7.2nm,0.6s						
AS31	Alice Springs	24.96	161	P	P	12 26 59.0	+0.5
ASAR	Alice Springs	24.96	161	P	P	12 26 58.5	+0.1
	comp=Z,5.7nm,1.0s,baz=341,slow=7.3,SNR=52						
ASAR				pP	pP	12 27 11.1	-1.5
	comp=Z,3.8nm,0.6s,baz=331,slow=10,SNR=11						
ASAR				PcP	PcP	12 30 33.6	+1.0
	comp=Z,0.7nm,0.6s,baz=346,slow=2.0,SNR=7.0						
ASAR	Alice Springs	24.96	161	P	P	12 26 58.7	+0.2
KULM	Kulim	24.99	283	P	P	12 26 58.1	-0.8
KULM				IAmb	IAmb	12 27 15.1	
	comp=Z,16nm,1.4s						
PSI	Prapat	26.32	276	LR	LR	12 37 47.2	
	comp=Z,255nm,21.5s,baz=111,slow=37						
FORT	Forrest	30.66	175	P	P	12 27 51.0	+1.7
CMAR	Chiang Mai Arr	31.62	307	P	P	12 27 57.7	-0.3
	comp=Z,0.3nm,0.3s,baz=147,slow=7.9,SNR=5.6						
CMAR				PcP	PcP	12 30 48.8	-0.3
	comp=Z,0.9nm,0.7s,baz=124,slow=1.3,SNR=6.2						
CMAR				LR	LR	12 42 07.5	
	comp=Z,66nm,18.9s,baz=236,slow=39						
JNU	Nakatsue	33.47	9	P	P	12 28 14.4	+0.4
	comp=Z,4.9nm,0.8s,baz=227,slow=4.2,SNR=2.0						
STKA	Stephens Creek	35.27	155	P	P	12 28 29.8	+0.2
	comp=Z,6.7nm,0.5s,baz=334,slow=8.2,SNR=31						
STKA	Stephens Creek	35.27	155	P	P	12 28 30.5	+0.9
STKA				IAmb	IAmb	12 28 30.8	
	comp=Z,1.6nm,0.5s						
KSRS	Korea Array	37.43	4	P	P	12 28 48.9	+1.0
	comp=Z,1.9nm,0.7s,baz=179,slow=10.0,SNR=11						
KSRS				LR	LR	12 43 40.2	
	comp=Z,31nm,20.4s,baz=240,slow=35						
MJAR	Matsushiro Arr	38.41	17	P	P	12 28 55.8	-0.4
	comp=Z,1.3nm,0.7s,baz=201,slow=9.1,SNR=4.1						
LZH	Lanzhou	41.05	333	eP	P	12 29 18.5	+0.2
LZH				pP	pP	12 29 28.8	-4.2
LZH				sP	pwP	12 29 33.8	-3.4
LZH				PP	PnPn	12 31 01.3	+2.4
HHC	Hu-ho-hao-te	42.55	345	eP	P	12 29 31.8	+1.4
USRK	Ussuriysk Ar.	44.51	7	P	P	12 29 46.9	+0.9
	comp=Z,1.8nm,0.4s,baz=190,slow=8.6,SNR=13						
USRK	Ussuriysk Ar.	44.51	7	P	P	12 29 46.5	+0.6
ASAJ	Asahikawa	46.68	17	P	P	12 30 03.8	+0.6
	comp=Z,3.8nm,0.9s,baz=98,slow=24,SNR=2.6						
JKA	Kamikawa-asahi	46.68	17	P	P	12 30 03.8	+0.6
KLR	Kul'dur	49.45	6	P	P	12 30 24.6	+0.2
	comp=Z,2.4nm,0.5s,baz=190,slow=5.8,SNR=12						
SONM	Songino Array	50.42	344	P	P	12 30 31.4	-0.5
	comp=Z,1.5nm,0.7s,baz=160,slow=6.8,SNR=11						
SONM				pP	pP	12 30 48.2	+1.0
	comp=Z,0.8nm,0.7s,baz=166,slow=9.0,SNR=3.1						
SONM				PcP	PcP	12 31 48.8	-0.8
	comp=Z,0.4nm,0.7s,baz=204,slow=3.2,SNR=2.0						
SONM	Songino Array	50.42	344	P	P	12 30 31.6	-0.4
WMQ	Urumqi	54.97	328	eP	P	12 31 07.3	+1.7
PETK	Petropavlovsk-	59.55	22	P	P	12 31 38.4	+0.8
	comp=Z,1.4nm,0.8s,baz=219,slow=8.9,SNR=1.5						
PETK				LR	LR	12 57 49.5	
	comp=Z,20nm,20.4s,baz=239,slow=36						
MK31	Makanchi Array	59.80	327	P	P	12 31 38.9	-0.5
MK31				IAmb	IAmb	12 31 40.9	
	comp=Z,2.7nm,0.6s						
MKAR	Makanchi Array	59.80	327	P	P	12 31 38.0	-1.4
	comp=Z,3.2nm,0.6s,baz=125,slow=8.3,SNR=41						
MKAR				PcP	PcP	12 32 25.3	-0.3
	comp=Z,1.3nm,0.7s,baz=121,slow=5.6,SNR=6.1						
MKAR	Makanchi Array	59.80	327	P	P	12 31 38.9	-0.5
MAKZ	Makanchi	59.97	327	P	P	12 31 41.1	+0.4
MAKZ				IAmb	IAmb	12 31 42.1	
	comp=Z,3.0nm,0.6s						
YAK	Yakutsk	62.04	2	P	P	12 31 53.9	-0.4
	comp=Z,4.8nm,0.3s,baz=172,slow=1.7,SNR=4.1						
YAK	Yakutsk	62.04	2	P	P	12 31 54.3	0.0
KBL	Kabul	62.60	310	P	P	12 31 57.8	-1.1
MA2	Magadan	62.77	14	P	P	12 31 59.0	-0.3
	comp=Z,2.7nm,0.7s,baz=214,slow=8.2,SNR=3.3						
MA2				pP	pP	12 32 14.8	-0.1
	comp=Z,2.2nm,0.4s,baz=210,slow=20,SNR=3.1						
ZALV	Zalesovo Beam	63.26	335	P	P	12 32 01.5	-1.2
	comp=Z,0.8nm,0.4s,baz=132,slow=6.6,SNR=5.0						
ZALV	Zalesovo Beam	63.26	335	P	P	12 32 02.4	-0.2
KURK	Kurchatov	64.10	329	P	P	12 32 07.8	-0.4
KKAR	Karatay Array	64.94	319	P	P	12 32 13.8	-0.1
SEY	Seymchan	66.08	13	P	P	12 32 22.0	+1.1
	comp=Z,0.3nm,0.4s,baz=235,slow=8.9,SNR=5.6						
TIXI	Tiksi	71.65	1	P	P	12 32 55.2	-0.1
TIXI				IAmb	IAmb	12 32 55.5	
	comp=Z,2.5nm,0.9s						
GEYT	Alibeck	72.04	310	P	P	12 32 58.0	-0.3
	comp=Z,2.1nm,0.7s,baz=165,slow=6.2,SNR=4.1						
ATKA	Atka Island	72.53	34	P	P	12 33 02.3	+1.4
NRIK	Noril'sk	73.73	347	P	P	12 33 07.8	+0.2
	comp=Z,7.0nm,0.5s,baz=124,slow=6.1,SNR=12						
NRIK				PP	PP	12 35 50.4	-2.4
	comp=Z,2.0nm,0.3s,baz=222,slow=2.6,SNR=4.3						
ABKAR	Akbulak array	74.08	322	P	P	12 33 08.8	-1.3
ABKAR				IAmb	IAmb	12 33 11.5	
	comp=Z,2.3nm,0.8s						
ABKAR	Akbulak array	74.08	322	P	P	12 33 10.7	+0.6
ILAR	Eielson Array	89.22	25	P	P	12 34 28.6	-0.8
	comp=Z,0.1nm,0.4s,baz=263,slow=4.2,SNR=1.4						
TORD	Torodi Ar. Bea	122.45	285	PKP	PKPdf	12 40 30.1	+0.1
	comp=Z,0.6nm,0.6s,baz=78,slow=1.8,SNR=3.0						

JMA **26** *12:23:54.8±0.1,23°.28N×121°.56E,h0^{km},M3.5*
NEIC **26** *12:23:57.0±1.4,23°.28N±0°.02×121°.45E±0°.01,h16^{km}±4^{km},*
mb4.3/3,ML4.3(TAP),Error ellipse: s-maj=3.6km
s-min=1.3km az=207.0
TAP **26** *12:23:57.2,23°.30N×121°.42E,h17^{km},ML3.9,C*
ASIES **26** *12:23:57.2,23°.29N×121°.42E,h20^{km},MW3.5*
ISC 26 12:23:55.3±1.0**,23°.29N**±0°.01×**121°.54E**±0°.02**,h14**^{km}±8^{km}**,**

n149,σ1ˢ17/239,mb4.3/3,18C-11D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HGSD	Ruisui	0.23	332	⇑iP	Pb	12 24 02.3	+1.1
	baz=11						
HGSD				eS	Sb	12 24 06.1	+0.8
	baz=11						
TWF1	Yuli	0.23	286	⇓iP	Pb	12 24 01.4	+0.1
	baz=298						
TWF1				eS	Sb	12 24 04.7	-0.6
	baz=298						
FULB	Fuli	0.24	248	⇑iP	Pb	12 24 01.8	+0.2
	baz=219						
FULB				S	Sb	12 24 05.1	-0.6
	baz=219						
YULB	Yu-li	0.24	295	⇓iP	Pb	12 24 01.7	+0.1
	baz=312						
YULB				eS	Sb	12 24 04.9	-0.9
	baz=312						
YULB	Yu-li	0.24	295		Pb	12 24 01.6	+0.1
CHKT	Chengkung	0.25	220	⇑iP	Pb	12 24 02.8	+1.2
	baz=188						
CHKT				S	Sb	12 24 06.9	+1.0
	baz=188						
EHY	Hungye	0.29	317	⇓iP	Pb	12 24 03.0	+0.6
	baz=333						
EHY				eS	Sb	12 24 06.9	-0.2
	baz=333						
EGFH	Guangfu	0.39	345	eP	Pn	12 24 05.1	-1.5
	baz=351						
EGFH				eS	Sn	12 24 12.1	-1.8
	baz=351						
ELDTW	Lidau	0.49	258	i P	Pg	12 24 04.9	-0.1
	baz=253						
ELDTW				eS	Sg	12 24 10.0	-1.6
	baz=253						
ESL	Shilin	0.53	349	eP	Pn	12 24 07.3	-1.2
	baz=355						
YUS	Yu-Shan	0.57	290	⇓iP	Pb	12 24 07.1	-0.4
	baz=296						
YUS				eS	Sg	12 24 13.7	-0.8
	baz=296						
TWH	Lutao	0.58	186	⇓iP	Pn	12 24 08.8	-0.4
	baz=172						
TWH				eS	Sn	12 24 17.3	-1.2
	baz=172						
VWDT	VWDT	0.59	322	⇑iP	Pb	12 24 08.0	+0.5
	baz=341						
VWDT				eS	Sb	12 24 15.0	-0.6
	baz=341						
ENLB	Shoufeng	0.61	5	eP	Pn	12 24 09.6	-0.1
	baz=26						
ENLB				eS	Sn	12 24 21.1	+1.7
	baz=26						
TWGBT	Beinan	0.63	222	⇑iP	Pb	12 24 07.9	-0.3
	baz=212						
TWGBT				S	Sg	12 24 16.1	+0.1
	baz=212						
TWG	Pinlang	0.64	223	⇑iP	Pb	12 24 07.9	-0.2
	baz=212						
TWG				eS	Sg	12 24 15.9	-0.3
	baz=212						
TWG	Pinlang	0.64	223		Pb	12 24 08.0	-0.2
TTN	Taitung	0.65	214	eP	Pn	12 24 09.5	-0.6
	baz=216						
TTN				eS	Sn	12 24 19.2	-0.8
	baz=216						
HWA	Hwalien	0.69	5	eP	Pn	12 24 11.1	+0.5
	baz=25						
HWA				eS	Sn	12 24 21.2	+0.1
	baz=25						
ALS	Alishan	0.71	288	⇓iP	Pb	12 24 09.6	-0.1
	baz=292						
ALS				eS	Sg	12 24 18.2	-0.4
	baz=292						
SSLB	Suanglung	0.73	313	⇑iP	Pb	12 24 09.7	-0.2
	baz=321						
SSLB				S	Sg	12 24 17.9	-1.3
	baz=321						
SSLB	Suanglung	0.73	313		Pb	12 24 09.9	0.0
SSLB				Sg	Sg	12 24 18.6	-0.6
STYT	Tauyuan	0.73	260	⇓iP	Pg	12 24 09.5	0.0
	baz=257						
STYT				eS	Sg	12 24 17.4	-1.8
	baz=257						
OWD	Renai	0.74	333	eP	Pb	12 24 10.3	+0.2
	baz=344						
OWD				eS	Sb	12 24 20.3	+0.1
	baz=344						
WHYT	Xinyi Township	0.75	303	i P	Pb	12 24 10.6	+0.4
	baz=314						
WHYT				eS	Sg	12 24 19.5	-0.3
	baz=314						
TWD	Chiawan	0.79	4	P	Pn	12 24 11.8	-0.2
TWD				eS	Sn	12 24 23.5	-0.1
SMLT	Sun Moon Lake	0.83	315	P	Pn	12 24 11.9	-0.8
	baz=330						
SMLT				eS	Sb	12 24 22.5	-0.3
	baz=330						
CHGB	Renai	0.84	336	P	Pn	12 24 12.5	-0.4
	baz=355						
TPUB	Ta-pu	0.84	271	⇓iP	Pg	12 24 11.8	+0.3
	baz=277						
TPUB				eS	Sg	12 24 22.0	-0.5
	baz=277						
TPUB	Ta-pu	0.84	271		Pg	12 24 11.9	+0.3
TPUB				Sg	Sg	12 24 22.1	-0.5
CHN5	Tsauling	0.85	291	⇓iP	Pn	12 24 12.4	-0.5
	baz=295						
CHN5				eS	Sb	12 24 23.2	0.0
	baz=295						
WTP	Ta-pu	0.85	267	i P	Pg	12 24 12.2	+0.4
	baz=266						
WTP				eS	Sg	12 24 22.6	-0.4
	baz=266						
CHN4	Tsaushan	0.87	274	eP	Pn	12 24 12.6	-0.6
	baz=275						
CHN4				eS	Sb	12 24 23.6	-0.2
	baz=275						
SLGT	Liugui	0.87	250	eP	Pg	12 24 12.2	0.0
	baz=242						
TYC	Yuchr	0.88	314	⇑iP	Pn	12 24 12.6	-0.7
	baz=329						
TYC				eS	Sb	12 24 23.4	-0.5
	baz=329						
ECL	Taimali	0.88	218	eP	Pb	12 24 11.1	-1.2
	baz=209						
ECL				eS	Sb	12 24 22.3	-1.6
	baz=209						
NACB	Ninganchiao	0.88	3	eP	Pn	12 24 12.9	-0.4
	baz=360						
NACB				eS	Sn	12 24 27.0	+1.0
	baz=360						
NACB	Ninganchiao	0.88	3		Pn	12 24 13.1	-0.3
WHF	Hehuan Shan	0.89	344	eP	Pn	12 24 13.2	-0.6
	baz=5.0						
WHF				eS	Sn	12 24 25.6	-1.1
	baz=5.0						
SGST	Jiashian	0.90	257	⇓iP	Pb	12 24 12.3	-0.5
	baz=254						
SGST				eS	Sb	12 24 23.9	-0.8
	baz=254						
ETLH	Xiulin Townshi	0.91	357	eP	Pn	12 24 13.3	-0.5
	baz=5.0						
WJS	Zhushan	0.91	306	⇑iP	Pn	12 24 14.1	+0.4
	baz=322						
WJS				eS	Sn	12 24 26.4	-0.4
	baz=322						
DPDB	Guoxing	0.93	323	eP	Pn	12 24 13.8	-0.3
	baz=338						
DPDB				eS	Sn	12 24 26.1	-1.2
	baz=338						
CHN1	Nanshi	0.94	264	⇑iP	Pn	12 24 13.8	-0.3
	baz=263						
CHN1				eS	Sn	12 24 26.4	-1.0
	baz=263						
SNST	Tainan City	0.96	266	P	Pn	12 24 14.3	-0.1
	baz=265						
SNST				eS	Sg	12 24 26.7	+0.2
	baz=265						
TWK	Hsinying	0.97	269	⇑iP	Pg	12 24 14.1	+0.1
	baz=268						
TWK				eS	Sg	12 24 26.6	0.0
	baz=268						
WNT	Mingjian	0.98	307	⇑iP	Pn	12 24 15.4	+0.7
	baz=313						
WNT				eS	Sn	12 24 28.7	+0.3
	baz=313						
WGK	Gukeng	0.98	294	⇑iP	Pn	12 24 15.0	+0.4
	baz=298						
WGK				eS	Sn	12 24 28.6	+0.2
	baz=298						
SSD	Sandimen	1.00	237	⇑iP	Pb	12 24 13.7	-0.7
	baz=228						
SSD				eS	Sb	12 24 24.9	-2.4
	baz=228						
WDLH	Douliu	1.00	294	⇑iP	Pn	12 24 15.4	+0.4
	baz=297						
WDLH				eS	Sn	12 24 28.8	-0.2
	baz=297						
CHN2	Minshiung	1.01	284	eP	Pn	12 24 15.9	+0.8
	baz=286						
CHN2				eS	Sn	12 24 29.8	+0.7
	baz=286						
TDCB	Techi	1.02	340	i P	Pn	12 24 15.4	0.0
	baz=341						
TDCB				eS	Sb	12 24 28.0	-0.3
	baz=341						
CHY	Chiayi	1.05	282	i P	Pg	12 24 16.1	+0.6
	baz=284						
CHY				eS	Sn	12 24 29.7	-0.3
	baz=284						
MASBT	Mashibuluo	1.07	231	⇑iP	Pb	12 24 15.0	-0.7
	baz=222						
MASBT				eS	Sb	12 24 29.0	-0.6
	baz=222						
CHN3	Shinhua	1.10	259	P	Pg	12 24 18.2	+1.7
	baz=268						
CHN3				eS	Sn	12 24 34.1	+2.7
	baz=268						
TAW	Tawu	1.10	213	eP	Pb	12 24 15.2	-0.9
	baz=205						
TAW				eS	Sb	12 24 29.1	-1.3
	baz=205						
EAST	Anshuo	1.11	215	⇓iP	Pb	12 24 15.2	-1.0
	baz=211						
SGLT	Jiouru	1.12	240	eP	Pg	12 24 17.7	+0.9
	baz=235						
WHP	Taichung City	1.12	331	eP	Pg	12 24 17.7	+0.7
	baz=344						
TWM1	Shoushan	1.13	246	eP	Pg	12 24 17.8	+0.7
	baz=242						
TWM1				eS	Sg	12 24 34.7	+2.9
	baz=242						
NNSB	Datong	1.14	353	eP	Pg	12 24 17.3	-0.1
	baz=12						
NNSB				eS	Sn	12 24 33.0	+0.4
	baz=12						
NNSH	Datong	1.14	353	P	Pg	12 24 17.4	0.0
	baz=11						
NNSH				eS	Sn	12 24 32.4	-0.2
	baz=11						
ENA	Nanau	1.15	9	eP	Pg	12 24 17.5	+0.1
	baz=5.0						
WLGB	Puzi	1.15	280	eP	Pg	12 24 18.0	+0.5
	baz=281						
WLGB				eS	Sg	12 24 34.0	+1.4
	baz=281						
NNS	Nan Shan	1.16	352	eP	Pg	12 24 17.3	-0.3
	baz=12						
NNS				eS	Sg	12 24 33.3	+0.6
	baz=12						
TCU	Taichung	1.16	317	eP	Pg	12 24 18.4	+0.7
	baz=323						
TCU				eS	Sg	12 24 34.8	+1.8
	baz=323						
WCHH	Zhanghua	1.20	311	eP	Pg	12 24 18.6	+0.2
	baz=316						
WCHH				eS	Sg	12 24 34.9	+1.0
	baz=316						
SSPT	Xinbi	1.20	228	eP	Pn	12 24 17.4	-0.4
	baz=215						
SSPT				eS	Sn	12 24 33.9	0.0
	baz=215						
CHN8	Yiju	1.22	273	P	Pg	12 24 19.1	+0.2
	baz=273						
CHN8				eS	Sn	12 24 34.0	-0.3
	baz=273						
SNJT	Kaohsiung City	1.23	245	P	Pg	12 24 20.7	+1.7
	baz=241						
SNJT				eS	Sg	12 24 39.0	+4.0
	baz=241						
TAI1	Yung-k'ang	1.23	259	eS	Sg	12 24 37.1	+2.0
	baz=267						
RLNB	Erlin	1.24	299	eP	Pg	12 24 18.9	-0.2
	baz=303						
RLNB				eS	Sg	12 24 35.7	+0.4
	baz=303						
SCLT	Jiali	1.24	265	eP	Pg	12 24 19.5	+0.2
	baz=264						
SCLT				eS	Sg	12 24 37.2	+1.8
	baz=264						
SCZT	Fangliau	1.25	223	P	Pn	12 24 18.2	-0.1
	baz=212						
SCZT				eS	Sb	12 24 33.9	-0.7
	baz=212						
WSF	Szhu	1.26	286	eP	Pb	12 24 19.0	+0.2
	baz=288						
WSF				eS	Sg	12 24 35.5	-0.5
	baz=288						
TWQ1	Liyutan	1.27	326	eP	Pg	12 24 20.8	+1.1
	baz=333						
TWQ1				eS	Sg	12 24 36.4	+0.2
	baz=333						
WTCT	Ta-ch'eng	1.29	297	eP	Pg	12 24 19.6	-0.5
	baz=300						
WTCT				eS	Sg	12 24 37.2	+0.3
	baz=300						
NDT	Datong Townshi	1.31	359	eP	Pg	12 24 19.9	-0.5
	baz=6.0						
NSY	Sanyi	1.33	328	eP	Pg	12 24 21.6	+0.7
	baz=334						
NSY				eS	Sg	12 24 39.3	+1.2
	baz=334						
WDJ	Dajia District	1.34	322	eP	Pg	12 24 21.9	+0.9
	baz=328						
WDJ				eS	Sg	12 24 40.1	+1.6
	baz=328						
TWC	Suao	1.34	12	eP	Pg	12 24 20.9	-0.3
	baz=4.0						
WSSB	Gushan	1.34	242	P	Pg	12 24 22.7	+1.6
	baz=241						
ENTT	Nioudou	1.34	1	P	Pb	12 24 20.5	+0.2
	baz=8.0						
EOS1	EOS1	1.36	23	eP	Pg	12 24 21.9	+0.4
	baz=42						
EOS1				eS	Sg	12 24 40.1	+0.8
	baz=42						
PTSB	Yuanli	1.38	327	eP	Pg	12 24 22.9	+1.0
	baz=330						
YHNB	Yeheng	1.38	354	P	Pg	12 24 21.8	-0.1
	baz=1.0						
YHNB				eS	Sg	12 24 39.9	-0.1
	baz=1.0						
YHNB	Yeheng	1.38	354		Pg	12 24 21.7	-0.2
NSK	Sanguang	1.39	353	P	Pg	12 24 21.9	-0.2
	baz=13						
NMLH	Miaoli	1.42	331	P	Pg	12 24 22.7	+0.1
	baz=352						
NMLH				eS	Sg	12 24 43.1	+2.0
	baz=352						
WLCH	Liuqiu	1.42	229	eP	Pg	12 24 24.3	+1.7
	baz=229						
NSTT	Nanjuang	1.42	340	i P	Pg	12 24 23.1	+0.4
	baz=345						
NSTT				eS	Sb	12 24 39.9	+0.2
	baz=345						
TWE	Neicheng	1.43	5	eP	Pg	12 24 22.4	-0.4
	baz=11						
LIOB	Emei	1.43	341	P	Pg	12 24 23.3	+0.4
	baz=346						
LIOB				eS	Sg	12 24 43.0	+1.5
	baz=346						
TWP	Hsiaoliuchiu	1.44	229	eP	Pg	12 24 24.4	+1.5
	baz=229						
SLBB	Yuanshan	1.46	3	eP	Pn	12 24 21.4	+0.1
	baz=9.0						
HEN	Hengchun	1.48	210	eP	Pb	12 24 22.9	+0.3
	baz=198						
NWLT	Wulai	1.48	359	P	Pb	12 24 22.8	+0.1
	baz=5.0						
TWK1	Hengchun	1.50	207	P	Pn	12 24 22.3	+0.4
	baz=189						
TWK1				eS	Sn	12 24 40.5	-0.8
	baz=189						
TWKBT	Hengchun	1.50	207	eP	Pn	12 24 21.9	+0.1

	baz=193						
WLTB	Daxi	1.58	350	eP	Pg	12 24 26.9	+1.3
	baz=10.0						
NHDH	Xindian Distri	1.67	360	eP	Pg	12 24 26.4	-0.9
	baz=17						
TATO	Taipei	1.68	358	eP	Pb	12 24 26.1	+0.1
	baz=17						
TATO	Taipei	1.68	358		Pb	12 24 26.4	+0.4
TIPB	Shuangxi	1.69	9	eP	Pb	12 24 26.1	-0.2
	baz=13						
TIPB				eS	Sb	12 24 47.3	-0.2
	baz=13						
WDGT	Dungji	1.73	269	⇑iP	Pn	12 24 25.2	+0.2
	baz=269						
WDGT				eS	Sn	12 24 46.5	-0.3
	baz=269						
JYNG	Yonagunijimaku	1.73	48	P	Pb	12 24 27.4	+0.5
JYNG				eS	Sg	12 24 49.8	-1.2
TWB1	Santiao Chiao	1.76	13	eP	Pg	12 24 28.1	-1.0
	baz=7.0						
YOJ	Yonaguni jima	1.78	49	eP	Pb	12 24 27.7	0.0
	baz=55						
YOJ				eS	Sg	12 24 51.5	-1.2
	baz=55						
YOJ	Yonaguni jima	1.78	49	P	Pb	12 24 28.3	+0.5
YOJ				eS	Sg	12 24 52.0	-0.7
YOJ	Yonaguni jima	1.78	49		Pb	12 24 28.2	+0.5
NWF	Wu-fen Shan	1.79	7	eP	Pb	12 24 28.0	+0.1
	baz=10.0						
WFSB	Wu-fen Shan	1.79	7	eP	Pb	12 24 28.3	+0.5
	baz=10.0						
TWS1	Kuangyinshan	1.81	356	eP	Pb	12 24 27.4	-0.7
	baz=17						
PHUB	P'eng-hu	1.82	277	eP	Pn	12 24 25.9	-0.3
	baz=278						
PHUB				eS	Sn	12 24 47.6	-1.6
	baz=278						
PNG	Penghu	1.84	279	⇑iP	Pn	12 24 26.9	+0.4
	baz=263						
PNG				eS	Sn	12 24 49.1	-0.6
	baz=263						
YM01	YM01	1.85	1	eP	Pb	12 24 28.6	-0.4
	baz=3.0						
YM04	YM04	1.85	360	eP	Pb	12 24 28.2	-0.8
	baz=20						
YM10	YM10	1.86	1	eP	Pb	12 24 28.8	-0.3
	baz=3.0						
YM05	YM05	1.87	1	eP	Pb	12 24 28.1	-1.1
	baz=3.0						
YM11	YM11	1.87	1	eP	Pb	12 24 28.6	-0.7
	baz=3.0						
ANP	Anpu	1.89	359	eP	Pb	12 24 29.6	-0.1
	baz=19						
YM08	YM08	1.89	1	eP	Pb	12 24 29.6	-0.1
	baz=3.0						
VCHM	Qimei	1.94	268	P	Pn	12 24 27.4	-0.5
	baz=268						
VCHM				eS	Sn	12 24 53.0	+0.8
	baz=268						
TWY	Chenhua	1.98	2	eP	Pb	12 24 30.5	-0.6
	baz=4.0						
HATJ	Hateruma jima	2.21	69	S	Sb	12 25 01.3	-1.1
IRIF	Iriomote-Funau	2.26	62	P	Pb	12 24 35.0	-0.9
IRIF				S	Sb	12 25 03.8	+0.1
PCYT	Pengchaiyu	2.38	12	eP	Pb	12 24 35.7	-2.3
	baz=13						
JKRS	Kuro-shima	2.45	67	P	Pb	12 24 37.6	-1.6
JKRS				S	Sb	12 25 08.1	-1.2
VWUC	VWUC	2.55	312	eP	Pn	12 24 37.3	+1.0
	baz=312						
JIJ	Ishigaki jima	2.61	65	P	Pn	12 24 39.1	+2.0
JIJ				S	Sn	12 25 10.2	+1.5
PTTC	Pingtan	2.73	324	eP	Pn	12 24 39.9	+1.2
	baz=324						
PTMZ	Houxiangcun	2.81	309	P	Pn	12 24 40.7	+0.8
	baz=295						
JISG	Ishigakijimahi	2.84	62	P	Pn	12 24 42.4	+2.1
JISG				S	Sn	12 25 17.0	+2.6
KNM	Kinmen	3.06	292	eP	Pn	12 24 44.6	+1.3
	baz=290						
KNMB	Chin-men Tao	3.11	293	P	Pn	12 24 43.9	-0.1
	baz=292						
KNMB	Chin-men Tao	3.11	293	Pn	Pn	12 24 44.5	+0.4
QZH	Quanzhou	3.16	302	Pn	Pn	12 24 43.8	-0.8
QZH				Sn	Sn	12 25 20.5	-1.6
JTJ	Tarama	3.19	64	P	Pn	12 24 47.3	+2.2
JTJ				S	Sb	12 25 26.4	-4.1
MATB	Ma-tsu	3.20	333	eP	Pn	12 24 45.9	+0.7
	baz=333						
ZPLA	Ao Xicun	3.53	281	eP	Pn	12 24 50.2	+0.4
	baz=280						
AXDP	Jialang	3.63	297	P	Pn	12 24 51.2	0.0
	baz=296						
JIRB	Irabujima	3.66	65	P	Pn	12 24 53.8	+2.3
JIRB				S	Sb	12 25 38.9	-5.1
JMJ	Miyako jima 2	3.75	65	eP	Pn	12 24 54.9	+2.1
	baz=72						
JMJ2	Miyako jima3	3.75	67	P	Pn	12 24 55.6	+2.8
JMJ2				eS	Sb	12 25 41.8	-4.9
JIKM	Ikemajima	3.76	64	eS	Sn	12 25 40.8	+3.8
JOGS	Gusukube	3.83	67	P	Pn	12 24 56.6	+2.8
JOGS				eS	Sn	12 25 42.5	+3.8
LSA	Lhasa	27.89	290	P	P	12 29 43.5	-1.9
LSA				IAmb	IAmb	12 29 44.2	
	comp=Z,5.2nm,0.6s						
BOOM	Boomskoye usch	42.23	308	P	P	12 31 50.0	+1.7
BOOM				IAmb	IAmb	12 31 50.8	
	comp=Z,7.4nm,1.1s						
AAK	Ala-Archa	43.31	308	P	P	12 31 56.3	-0.7
AAK				IAmb	IAmb	12 31 57.8	
	comp=Z,3.3nm,1.1s						

TIR 26 12:38:48.6, 42°.38N×19°.87E, h7km, Md2.1/2, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCI	Bajram Curri	0.15	95	i PG	Pg	12 38 52.0	+0.3
BCI				i SG	Sg	12 38 54.5	+0.7
PUK	Puka	0.34	177	i PG	Pg	12 38 55.7	+0.4
PUK				i SG	Sg	12 39 00.9	+1.2

ROM 26 12:39:53.5±0.1, 43°.492N±0°.004×12°.390E±0°.005, h6km±1km, ML0.9/2, Error ellipse: s-maj=0.4km s-min=0.3km az=314.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATPI	Pietralunga -	0.04	168	P	Pg	12 39 55.1	+0.2
ATPI				S	Sg	12 39 56.2	+0.2
BADI	Badiali	0.11	280	P	Pg	12 39 56.2	+0.3
BADI				S	Sg	12 39 58.2	+0.7
BADI				AML	AML		
	comp=N,128μm,0.3s						
BADI				AML	AML		
	comp=E,84μm,1.0s						
ATVO	AVT- Monte Val	0.11	174	P	Pg	12 39 56.4	+0.4
ATVO				S	Sg	12 39 58.4	+0.8
PIEI	Pieia	0.11	67	P	Pg	12 39 56.4	+0.4
PIEI				S	Sg	12 39 58.6	+0.8
PIEI				AML	AML		
	comp=E,98μm,0.2s						
PIEI				AML	AML		
	comp=E,97μm,0.2s						
PIEI				AML	AML		
	comp=N,83μm,0.4s						
NARO	Abbazia di Nar	0.18	49	P	Pg	12 39 57.4	+0.2
PARC	Parchiule	0.19	325	P	Pg	12 39 58.0	+0.6
PE3	Peglio	0.22	21	P	Pg	12 39 58.8	+0.9
FRON	Frontone	0.25	84	P	Pg	12 39 58.8	+0.5
MTL1	Matelica	0.51	117	S	Sb	12 40 13.0	+0.5

IDC 26 12:40:32.2±14.0, 4°.64S×103°.66E, h196km±126km, mb2.9/7, mb1 3.1/7, mb1mx2.9/49, mbtmp3.4/7, MS3.5/1, Ms1 3.5/1, ms1mx3.0/6, Error ellipse: s-maj=154.1km s-min=17.0km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	23.42	349	P	P	12 45 23.4	-0.5
	0.5nm,0.7s,baz=174,slow=9.1,SNR=4.5						
WRA	Warramunga Arr	33.52	120	P	P	12 46 52.8	-0.7
	0.1nm,0.4s,baz=300,slow=8.8,SNR=1.5						
WRA				PcP	PcP	12 49 29.0	-0.8
	0.2nm,0.8s,baz=287,slow=3.1,SNR=1.5						
ASAR	Alice Springs	34.76	126	P	P	12 47 04.8	+0.5
	0.2nm,0.3s,baz=301,slow=7.9,SNR=5.1						
KSRS	Korea Array	47.59	26	LR	LR	13 09 46.8	
	comp=Z,50nm,19.4s,baz=85,slow=37						
SONM	Songino Array	52.31	2	P	P	12 49 24.2	+0.4
	0.4nm,0.5s,baz=176,slow=5.8,SNR=3.0						
MKAR	Makanchi Array	54.60	342	P	P	12 49 40.9	+0.5
	0.5nm,0.7s,baz=146,slow=7.3,SNR=6.3						
KURBB	Kurchatov Arra	59.15	342	P	P	12 50 12.2	-0.1
	0.3nm,0.8s,baz=169,slow=6.1,SNR=4.1						
ZALV	Zalesovo Beam	60.48	347	P	P	12 50 20.5	-0.7
	0.4nm,0.4s,baz=140,slow=3.2,SNR=1.9						

MAN 26 12:45:09.4, 9°.76N×123°.83E, h5km, mb4.4, ML3.3, MS3.1, 1C-2D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBP	Tagbilaran	0.08	154	eP	Pg	12 45 11.6	+0.4
LLP	Lapu-Lapu	0.57	14	eP	Pg	12 45 20.3	-0.1
LLP				eS	Sg	12 45 28.4	+0.6
SNPH	Sibulan	0.72	235	⇑iP	Pb	12 45 24.3	-0.1
SNPH				i S	Sb	12 45 35.3	+0.7
MSLP	Maasin	1.08	70	eP	Pg	12 45 30.0	-0.2
MSLP				eS	Sn	12 45 46.9	+0.2
DCPH	Dipolog City	1.26	202	⇓eP	Pg	12 45 32.9	-0.7
GUIM	Jordan	1.49	305	eP	Pn	12 45 36.1	-0.8
GUIM				eS	Sn	12 45 56.6	-0.2
OCLP	Ormoc	1.50	31	eP	Pn	12 45 35.2	-1.8
OCLP				eS	Sg	12 45 58.1	+0.6
PAGZ	Pagadian	1.95	193	eP	Pn	12 45 42.3	-0.9
PAGZ				eS	Sb	12 46 09.2	-0.9
RCP	Roxas	2.08	329	⇓eP	Pn	12 45 45.4	+0.4
RCP				eS	Sb	12 46 13.0	-0.9

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*IDC **26** 12:48:26.1±1.0, 24°.88N×141°.35E, h192km±8km, mb3.0/6, mb1 3.3/9, mb1mx3.0/53, mbtmp3.6/9, Error ellipse: s-maj=24.5km s-min=13.8km az=112.0*

ISC 26 12:48:26.8±1.0, 24°.9N±0°.1×141°.3E±0°.2, h200km, n9, σ1ˢ18/13, mb3.3/6, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	2.33	20	P	Pn	12 49 08.5	-0.4
	24nm,0.3s,baz=262,slow=22,SNR=26						
JCJ				S	Sn	12 49 39.5	-2.3
	148nm,0.3s,baz=270,slow=22,SNR=44						
MJAR	Matsushiro Arr	11.90	348	P	Pn	12 51 11.2	+0.8
	0.1nm,0.3s,baz=166,slow=12,SNR=1.8						
KSRS	Korea Array	16.93	321	P	Pn	12 52 13.1	+1.0
	0.2nm,0.3s,baz=130,slow=13,SNR=7.2						
WRA	Warramunga Arr	45.08	189	P	P	12 56 22.1	-1.1
	1.2nm,0.5s,baz=9.8,slow=8.8,SNR=22						
KURBB	Kurchatov Arra	54.01	316	P	P	12 57 29.5	-0.7
	0.2nm,0.4s,baz=88,slow=6.9,SNR=1.9						
KURBB				pP	pP	12 58 14.7	+0.6
	0.5nm,0.6s,baz=92,slow=7.9,SNR=4.7						
BVAR	Borovoye Array	59.12	318	P	P	12 58 05.3	-0.9
	0.4nm,0.7s,baz=80,slow=8.9,SNR=2.2						
BVAR				pP	PcP	12 58 52.0	-0.6
	0.4nm,0.5s,baz=77,slow=6.4,SNR=3.4						
ILAR	Eielson Array	60.02	28	P	P	12 58 12.6	+0.4
	0.4nm,0.9s,baz=266,slow=5.3,SNR=2.7						
YKA	Yellowknife Ar	74.45	28	P	P	12 59 43.7	+0.9
	0.1nm,0.6s,baz=303,slow=6.1,SNR=3.9						
YKA				pP	pP	13 00 29.1	-0.3
	0.3nm,0.8s,baz=294,slow=4.7,SNR=2.4						
NVAR	Mina Array Bea	82.52	51	P	P	13 00 29.2	+1.6
	0.3nm,0.5s,baz=293,slow=5.8,SNR=3.6						

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*IDC **26** 12:51:51.3±3.9, 6°.42S×103°.59E, h0km, mb3.3/5, mb1 3.5/5, mb1mx3.3/45, mbtmp3.3/5, Error ellipse: s-maj=172.6km s-min=24.0km az=52.0*

ISC 26 12:51:56.0±3.8, 6°.5S±0°.7×103°.5E±0°.9, h35km, n6, σ0ˢ40/6, mb3.4/5, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.77	117	P	P	12 58 25.8	-0.3
	0.5nm,0.6s,baz=290,slow=10,SNR=5.6						
ASAR	Alice Springs	33.82	124	P	P	12 58 35.5	+0.2
	0.3nm,0.8s,baz=301,slow=7.9,SNR=4.9						
SONM	Songino Array	54.17	2	P	P	13 01 18.3	+0.3
	0.4nm,0.6s,baz=188,slow=8.7,SNR=2.3						
MKAR	Makanchi Array	56.32	343	P	P	13 01 32.9	-0.5
	0.3nm,0.7s,baz=163,slow=8.9,SNR=3.8						
KURBB	Kurchatov Arra	60.87	342	P	P	13 02 05.1	+0.2
	0.2nm,0.7s,baz=152,slow=8.3,SNR=2.3						
TXAR	Lajitas Array	145.77	45	PKPbc	PKPbc	13 11 32.2	-0.1
	0.2nm,0.6s,baz=243,slow=2.2,SNR=3.5						

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*IDC **26** 12:52:08.4±2.0, 37°.11N×144°.57E, h0km, mb3.4/3, mb1 3.5/6, mb1mx3.2/48, mbtmp3.5/6, ML2.9/3, Error ellipse: s-maj=50.0km s-min=26.1km az=77.0*

*JMA **26** 12:52:13.8±0.3, 37°.36N×144°.32E, h44km, M3.0*

ISC 26 12:52:09.7±1.2, 37°.25N±0°.06×144°.67E±0°.08, h26km, n24, σ2ˢ56/27, mb3.5/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.76	294	P	Pn	12 52 52.7	+0.5
JIO	Ouri	2.90	296	P	Pn	12 52 54.6	+0.5
JKMT	Kesennumamotoy	2.97	303	P	Pn	12 52 55.5	+0.4
JKMT				eS	Sn	12 53 26.9	-3.0
OFUJ	Ofunato	3.00	309	P	Pn	12 52 55.8	+0.3
OFUJ				eS	Sn	12 53 27.5	-3.0
JFK	Kawauchi	3.03	273	P	Pn	12 52 56.9	+0.9
JFK				eS	Sn	12 53 28.2	-3.3
JMK	Ichinoseki	3.21	303	eS	Sn	12 53 34.1	-1.8
JFT	Otama	3.47	276	P	Pn	12 53 03.3	+1.3
JFT				eS	Sn	12 53 40.6	-1.6
JOM	Ohasama	3.47	311	P	Pn	12 53 03.4	+1.5
JOM				eS	Sn	12 53 40.2	-1.9
JRY	Ryogami san	4.80	257	P	Pn	12 53 20.6	+0.3
MJAR	Matsushiro Arr	5.23	264	Pn	Pn	12 53 26.7	+0.5
	0.1nm,0.3s,baz=84,slow=15,SNR=3.0						
JCH	Churui	5.46	350	P	Pn	12 53 30.3	+1.0
JCH				eS	Sn	12 54 28.2	-3.0
JHJ	Hachijo jima 2	5.74	226	Pn	Pn	12 53 31.2	-2.0
	4.1nm,0.3s,baz=66,slow=20,SNR=1.0						
JHJ				Sn	Sn	12 54 32.2	-6.0
	8.3nm,0.3s,baz=74,slow=17,SNR=2.1						
NEM2	Nemuro 2	6.17	7	P	Pn	12 53 38.5	-0.5
NEM2				eS	Sn	12 54 43.9	-4.8
JTKR	Abashiri--Toko	6.74	355	P	Pn	12 53 48.4	+1.5
JTKR				eS	Sn	12 54 58.7	-4.2
ASAJ	Asahikawa	7.04	348	Pn	Pn	12 53 53.0	+1.9
	0.2nm,0.3s,baz=193,slow=14,SNR=1.5						
H11N2	WAKE ISLAND Hy	26.09	126	T	T	13 24 44.6	
	baz=316,slow=74						
H11N1	WAKE ISLAND Hy	26.09	126	T	T	13 24 45.2	
	baz=316						
H11N3	WAKE ISLAND Hy	26.10	126	T	T	13 24 43.2	
	baz=316,slow=74						
H11S1	WAKE ISLAND Hy	26.86	128	T	T	13 25 37.3	
	baz=318						
H11S3	WAKE ISLAND Hy	26.86	128	T	T	13 25 42.0	
	baz=318						
H11S2	WAKE ISLAND Hy	26.88	128	T	T	13 25 41.7	
	baz=318						
KURBB	Kurchatov Arra	47.92	308	P	P	13 00 48.8	+3.2
	0.3nm,0.4s,baz=81,slow=7.8,SNR=5.0						
WRA	Warramunga Arr	57.71	192	P	P	13 01 59.8	+1.7
	0.2nm,0.4s,baz=9.7,slow=7.3,SNR=6.6						
ASAR	Alice Springs	61.43	191	P	P	13 02 25.6	+1.8
	0.2nm,0.8s,baz=7.2,slow=7.2,SNR=5.4						

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*IDC **26** 13:30:54.2±2.7, 6°.31S×130°.01E, h108km±30km, mb3.5/4, mb1 3.8/8, mb1mx3.4/45, mbtmp4.0/8, Error ellipse: s-maj=49.1km s-min=17.4km az=78.0*

*DJA **26** 13:30:55.8±0.4, 6°S±2°×13°0E±°, h157km±8km, M4.2/12, mB5.0/6, mb4.0/6, MLv4.3/12, Mw(mB)4.4/6*

*NEIC **26** 13:30:56.4±0.6, 6°.19S±0°.05×130°.1E±0°.1, h128km±10km, mb4.2/18, Error ellipse: s-maj=17.4km s-min=7.8km az=95.0*

ISC 26 13:30:57.1±0.6, 6°.22S±0°.04×130°.29E±0°.07, h146km, n51, σ2ˢ17/55, mb3.9/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.73	347	P	Pn	13 31 29.2	+0.3
SAUI	Saumlaki	2.02	150	P	Pn	13 31 28.0	-4.2
SAUI				S	Sn	13 32 00.4	+1.2
SAUI	Saumlaki	2.02	150	Pn	Pn	13 31 33.5	+1.3
MSAI	Masohi	3.16	335	P	Pn	13 31 46.3	-0.1
MSAI				S	Sn	13 32 26.3	+1.7
FAKI	Fak Fak	3.82	31	P	Pn	13 31 54.0	-0.9
FAKI				S	Sn	13 32 37.5	-2.3
FAKI	Fak Fak	3.82	31		Pn	13 31 53.7	-1.2
SIJI	Sorong	5.41	10	P	Pn	13 32 14.5	-1.4
	6.8nm,0.3s,baz=204,slow=20,SNR=49						
SIJI				S	Sn	13 33 11.6	-5.9
	8.0nm,0.3s,baz=218,slow=19,SNR=7.0						
SWI	Sorong	5.41	10	P	Pn	13 32 14.8	-1.2
SANI	Sanana	5.96	314	P	Pn	13 32 20.9	-2.4
	0.0nm3.6nm,0.9s						
RKPI	Ransiki, Papua	6.08	40	P	Pn	13 32 25.7	+0.8
	0.9nm8μm91nm,0.7s						
LBMI	Labuha	6.21	333	P	Pn	13 32 27.1	+0.5
	0.1nm1μm7.2nm,1.2s						
MTN	Manton Dam	6.63	173	Pn	Pn	13 32 30.7	-1.5
SOEI	Soe	6.92	239	P	Pn	13 32 35.2	-1.0
SOEI	Soe	6.92	239		Pn	13 32 34.7	-1.5
KNRA	Kununurra	9.51	189	Pn	Pn	13 33 07.4	-3.3
FITZ	Fitzroy Crossi	12.64	201	P	Pn	13 33 48.1	-3.8
	1.1nm,0.3s,baz=29,slow=10,SNR=71						
FITZ				S	Sn	13 35 56.7	-15
	1.4nm,0.3s,baz=79,slow=5.2,SNR=7.2						
FITZ	Fitzroy Crossi	12.64	201	Pn	Pn	13 33 47.9	-4.1
WB0	Warramunga Arr	14.04	164	Pn	Pn	13 34 07.1	-2.7
WRAB	Tennant Creek	14.19	164	Pn	Pn	13 34 07.3	-4.3
WRA	Warramunga Arr	14.20	164	P	Pn	13 34 09.1	-2.6
	0.4nm,0.3s,baz=337,slow=14,SNR=35						
WRA				S	Sn	13 36 38.1	-11
	2.0nm,0.3s,baz=351,slow=23,SNR=15						
WRA	Warramunga Arr	14.20	164		Pn	13 34 09.4	-2.4
WB2	Warramunga Arr	14.20	164	Pn	Pn	13 34 08.4	-3.3
WR0	Warramunga Arr	14.27	164	Pn	Pn	13 34 10.2	-2.4
COEN	Coen	14.83	122	Pn	Pn	13 34 22.1	+2.4
AS31	Alice Springs	17.69	169		Pn	13 34 54.8	+0.2
ASAR	Alice Springs	17.69	169	P	P	13 34 54.6	+1.2
	0.7nm,0.3s,baz=348,slow=10.0,SNR=36						
ASAR				S	S	13 38 02.9	-6.9
	0.5nm,0.3s,baz=356,slow=25,SNR=8.9						
PSAB2	Pilbara Seismi	18.28	212		P	13 34 59.7	-0.1
PSAC1	Pilbara Seismi	18.29	213		P	13 34 59.8	-0.1
PSAA2	Pilbara Seismi	18.29	213		P	13 34 59.8	-0.2
PSAA2				IAmb	IAmb	13 35 13.6	
	comp=Z,14nm,1.2s						
PSA00	Pilbara Seismi	18.30	212		P	13 35 00.2	+0.1
PSA00				IAmb	IAmb	13 35 00.5	
	comp=Z,6.5nm,0.6s						
PSA00	Pilbara Seismi	18.30	212		P	13 34 59.7	-0.3
PSA00				IAmb	IAmb	13 35 00.4	
	comp=Z,5.2nm,1.2s						
PSAA3	Pilbara Seismi	18.30	212		P	13 35 00.2	+0.1
PSAA3				IAmb	IAmb	13 35 00.5	
	comp=Z,15nm,1.3s						
PSAA1	Pilbara Seismi	18.31	213		P	13 35 00.1	0.0
PSAA1				IAmb	IAmb	13 35 00.5	
	comp=Z,6.2nm,0.5s						
PSAB1	Pilbara Seismi	18.31	213		P	13 35 00.1	0.0
PSAB1				IAmb	IAmb	13 35 00.6	
	comp=Z,6.9nm,0.6s						
PSAB3	Pilbara Seismi	18.31	212		P	13 35 00.2	0.0
PSAB3				IAmb	IAmb	13 35 00.6	
	comp=Z,8.7nm,0.6s						
PSAC3	Pilbara Seismi	18.35	212		P	13 35 00.5	-0.1
PSAD3	Pilbara Seismi	18.39	213		P	13 35 01.0	-0.1
PSAD3				IAmb	IAmb	13 35 52.4	
	comp=Z,16nm,1.4s						
BBOO	Buckleboo	27.00	169	P	P	13 36 26.1	+0.7
STKA	Stephens Creek	27.63	159	P	P	13 36 31.6	+0.5
	comp=Z,1.0nm,0.9s,baz=4.2,slow=12,SNR=1.3						
STKA	Stephens Creek	27.63	159	P	P	13 36 32.0	+1.0
NWAO	Narrogin (SRO)	29.22	203	P	P	13 36 44.9	-0.2
CMAR	Chiang Mai Arr	39.46	309	P	P	13 38 12.8	-0.6
	comp=Z,0.7nm,0.4s,baz=139,slow=5.9,SNR=4.8						
LZH	Lanzhou	48.86	331	eP	P	13 39 28.3	+0.1
LZH				pP	pP	13 40 02.5	+2.4
LZH				sP	sP	13 40 17.5	+1.6
LZH				PP	PP	13 41 28.5	+5.5
HHC	Hu-ho-hao-te	49.90	341	eP	P	13 39 38.5	+2.6
WMQ	Urumqi	62.91	327	eP	P	13 41 09.8	+1.9
MK31	Makanchi Array	67.74	327	P	P	13 41 39.4	+0.5
MK31				IAmb	IAmb	13 41 39.6	
	comp=Z,7.0nm,2.0s						
MKAR	Makanchi Array	67.74	327	P	P	13 41 40.2	+1.3
	comp=Z,1.2nm,0.6s,baz=117,slow=8.2,SNR=16						
MKAR	Makanchi Array	67.74	327	P	P	13 41 39.4	+0.5
MAKZ	Makanchi	67.92	326	P	P	13 41 40.8	+0.7
MAKZ				IAmb	IAmb	13 41 50.2	
	comp=Z,5.4nm,1.6s						
KURBB	Kurchatov Arra	72.00	328	P	P	13 42 05.3	+0.5
	comp=Z,0.5nm,0.5s,baz=130,slow=4.9,SNR=7.3						
KURK	Kurchatov	72.01	328	P	P	13 42 05.3	+0.4

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*NNC **26** 13:37:40.1±1.4, 40°.32N×63°.82E, h0km, mb4.1, mpv3.6, Error ellipse: s-maj=42.8km s-min=10.2km az=151.0*

*IDC **26** 13:37:44.6±3.1, 40°.38N×63°.80E, h32km±25km, mb3.3/4, mb1 3.5/11, mb1mx3.3/47, mbtmp3.5/11, ML3.4/7, Error ellipse: s-maj=17.6km s-min=12.0km az=10.0*

ISC 26 13:37:40.9±0.8, 40°.51N±0°.09×63°.88E±0°.06, h11km, n15, σ1ˢ71/21, mb3.6/4, 4C-2D, Northwestern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GEYT	Alibeck	5.16	242	Pn	Pn	13 38 57.8	-0.4
	4.2nm,0.3s,baz=60,slow=6.9,SNR=25						
GEYT				Sn	Sn	13 39 54.6	-3.1
	8.5nm,0.3s,baz=55,slow=11,SNR=3.0						
GYA0B	ALIBECK ARRAY	5.16	242	⇑Pn	Pn	13 38 59.3	+1.2
GYA0B				⇑Sn	Sn	13 39 55.5	-2.2
KK31	Karatay Array	5.59	60	⇑Pn	Pn	13 39 05.5	+1.4
	1.3nm,0.5s,baz=251,slow=7.5,SNR=12						
KK31				⇓Pg	Pg	13 39 27.0	-1.0
	3.9nm,0.5s,baz=247,slow=16,SNR=3.6						
KK31				⇑Lg	Lg	13 40 40.7	
	13nm,0.6s,baz=240,slow=29,SNR=8.3						
AAK	Ala-Archa	8.24	72	Pn	Pn	13 39 41.9	+1.3
	1.6nm,0.3s,baz=230,slow=2.4,SNR=18						
AAK				Sn	Sn	13 41 11.5	-2.2
	0.3nm,0.3s,baz=260,slow=4.8,SNR=1.6						
AAK				Lg	Lg	13 42 07.8	
	0.6nm,0.3s,baz=25,slow=11,SNR=4.2						
AAK	Ala-Archa	8.24	72	⇓Pn	Pn	13 39 41.5	+1.0
	2.2nm,0.4s						
AAK				Lg	Lg	13 42 04.2	
	7.0nm,0.7s						
AB31	Akbulak array	9.18	344	P	Pn	13 39 55.9	+2.7
	9.1nm,0.7s,baz=158,slow=13,SNR=19						
AKTO	Aktyubinsk	10.74	339	Pn	Pn	13 40 16.1	+1.5
	0.3nm,0.3s,baz=158,slow=15,SNR=4.6						
AKTO				Sn	Sn	13 42 12.7	-2.0
	0.1nm,0.3s,baz=32,slow=23,SNR=1.6						
AKTO				Lg	Lg	13 43 28.9	
	0.3nm,0.3s,baz=33,slow=20,SNR=1.7						
BVAR	Borovoye Array	13.28	17	Pn	Pn	13 40 49.1	-0.2
	0.2nm,0.3s,baz=192,slow=11,SNR=3.3						
BVAR				Sn	Sn	13 43 14.1	-2.8
	0.3nm,0.3s,baz=202,slow=20,SNR=2.3						
KURBB	Kurchatov Arra	14.38	40	Pn	Pn	13 41 03.1	-1.2
	0.0nm,0.3s,baz=241,slow=14,SNR=3.4						
MKAR	Makanchi Array	14.72	59	Pn	Pn	13 41 08.8	-0.2
	0.2nm,0.3s,baz=249,slow=14,SNR=9.2						
ZALV	Zalesovo Beam	19.47	39	P	Pn	13 42 09.3	+0.6
	0.3nm,0.3s,baz=239,slow=12,SNR=6.0						
TORD	Torodi Ar. Bea	60.47	262	P	P	13 47 51.3	+0.3
	0.4nm,0.8s,baz=52,slow=5.7,SNR=2.3						
YKA	Yellowknife Ar	77.34	359	P	P	13 49 36.8	+1.6
	0.2nm,0.6s,baz=356,slow=6.0,SNR=5.7						
WRA	Warramunga Arr	88.83	118	P	P	13 50 34.9	-0.2
	0.5nm,0.9s,baz=318,slow=5.5,SNR=3.3						
ASAR	Alice Springs	91.12	120	P	P	13 50 45.8	0.0
	0.2nm,0.8s,baz=318,slow=5.4,SNR=4.6						

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*IDC **26** 13:46:40.6±0.7, 1°.95N×93°.57E, h0km, mb4.4/22, mb1 4.5/25, mb1mx4.3/52, mbtmp4.4/25, ML4.6/3, MS3.6/9, Ms1 3.6/9, ms1mx3.2/49, Error ellipse: s-maj=25.7km*

s-min=12.9km az=40.0

*KLM **26** 13:46:41.0, 2°.04N×93°.38E, h10^{km}, mb4.9*

*MOS **26** 13:46:43.7±0.8, 2°.03N×93°.61E, h32^{km}, mb4.7/22, Error ellipse: s-maj=10.5km s-min=6.3km az=111.1*

*NEIC **26** 13:46:45.6±1.6, 2°.01N±0°.08×93°.64E±0°.08, h32^{km}±4^{km}, mb4.6/38, Error ellipse: s-maj=13.4km s-min=10.5km az=49.0*

*DJA **26** 13:46:47.9±0.4, 2°N±2°×9°4E±°, h54^{km}±11^{km}, M4.9/21, mb4.9/21, mB5.3/14, MLv5.2/13, Mw(mB)4.7/14*

ISC 26 13:46:46.0±0.5**, 2°.04N**±0°.06×**93°.69E**±0°.05**, h35**^{km}**, n185,** σ**1**^{s}**.34**/187**, mb4.6**/53**, MS3.8**/8**, 1C-1D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	Sinabang, Aceh	2.66	82	P	Pn	13 47 27.3	+0.8
SNSI				S	Sn	13 47 56.1	-1.5
MLSI	Meulaboh, Aceh	3.50	51	P	Pn	13 47 38.6	+0.6
MLSI				S	Sn	13 48 15.2	-3.1
TPTI		3.69	71	P	Pn	13 47 40.6	-0.1
GSI	Gunungsitoli	3.96	101	P	Pn	13 47 45.5	+1.2
GSI	Gunungsitoli	3.96	101		Pn	13 47 45.4	+1.2
KCSI	Kotacane, Aceh	4.34	70	P	Pn	13 47 51.1	+1.6
KCSI				S	Sn	13 48 41.1	+2.2
LHMI	Lhok Sumawe	4.54	46	P	Pn	13 47 53.7	+1.4
LHMI				S	Sn	13 48 44.2	+0.3
LHMI	Lhok Sumawe	4.54	46		Pn	13 47 53.4	+1.1
RPSI	Rantau Prapat	5.27	83		Pn	13 48 03.5	+1.1
RPSI	Rantau Prapat	5.27	83		Pn	13 48 03.7	+1.3
RPSI					Sn	13 48 59.0	-3.0
PSI	Prapat	5.29	82	Pn	Pn	13 48 03.7	+1.0
	22nm,0.3s,baz=270,slow=6.1,SNR=150						
PSI				Sn	Sn	13 48 59.0	-3.6
	baz=271,slow=20,SNR=1.5						
PSI				LR	LR	13 50 23.4	
	comp=Z,397nm,18.1s,baz=224,slow=41						
SISI	Saibi	6.35	122	P	Pn	13 48 18.2	+0.9
	0.8nm1μm73nm,0.7s						
SISI				S	Sn	13 49 24.2	-4.4
	0.8nm1μm73nm,0.7s						
PDSI	Padang	7.38	113	P	Pn	13 48 33.4	+2.0
	0.5nm1μm37nm,0.9s						
BKNI	Bangkinang	7.55	103	P	Pn	13 48 36.2	+2.6
	1.0nm194nm,0.8s						
BKNI	Bangkinang	7.55	103	Pn	Pn	13 48 34.8	+1.2
KULM	Kulim	7.66	65		Pn	13 48 35.8	+0.6
KULM	Kulim	7.66	65	P	Pn	13 48 36.0	+0.8
IPM	Ipoh	7.72	72		Pn	13 48 36.2	+0.2
IPM	Ipoh	7.72	72	P	Pn	13 48 37.0	+1.0
PPSI	Pulau Pagai	7.92	127	P	Pn	13 48 39.6	+0.8
	0.6nm158nm,0.8s						
SDSI	Sungai Dareh	8.29	111	P	Pn	13 48 45.0	+1.2
	3μm24nm,0.8s						
KRJI	Kerinci	8.79	118	P	Pn	13 48 53.8	+3.0
	2.2nm8μm701nm,0.9s						
MYKOM	Kota Tinggi	10.16	91		Pn	13 49 10.1	+0.5
MYKOM	Kota Tinggi	10.16	91	P	Pn	13 49 12.0	+2.5
KSI	Kapahiang	10.55	122	P	Pn	13 49 18.7	+3.8
	135nm,0.9s						
KSI	Kapahiang	10.55	122	P	Pn	13 49 16.3	+1.4
KSI				pmax	pmax		
	comp=Z,135nm,0.9s						
MNAI	Manna	11.23	124	P	Pn	13 49 24.3	0.0
	comp=Z,7μmcomp=Z,191nm,0.5s						
MNAI	Manna	11.23	124		Pn	13 49 24.6	+0.4
MDSI	Maura Dua	12.33	122	P	Pn	13 49 40.5	+1.3
	comp=Z,22nm,0.8s						
LWLI	Liwa	12.51	124	P	Pn	13 49 44.1	+2.3
	comp=Z,14μmcomp=Z,38nm,0.7s						
KASI	Kota Agung	13.15	125	P	Pn	13 49 50.7	+0.2
	comp=Z,513nmcomp=Z,28nm,0.7s						
PALK	Pallekele	13.94	292	Pn	Pn	13 50 00.6	-0.7
	comp=Z,2.5nm,0.3s,baz=106,slow=13,SNR=9.0						
PALK				Sn	Sn	13 52 22.2	-13
	comp=Z,21nm,0.3s,baz=26,slow=23,SNR=21						
PALK	Pallekele	13.94	292	Pn	Pn	13 50 00.4	-0.9
PBKT	Sadao Pong	16.12	26	Pn	Pn	13 50 30.1	0.0
KSM	Kuching	16.62	92	Pn	Pn	13 50 35.8	-0.7
KSM				IAmb	IAmb	13 50 42.7	
	comp=Z,38nm,1.2s						
KSM	Kuching	16.62	92	P	P	13 50 39.0	+0.3
CISI	Cisompet, Garu	17.02	124	Pn	Pn	13 50 40.6	-0.9
CISI				IAmb	IAmb	13 51 03.9	
	comp=Z,68nm,1.5s						
CM31	Chiang Mai Arr	17.11	17		Pn	13 50 41.8	-0.8
CMAR	Chiang Mai Arr	17.11	17	P	P	13 50 42.7	-1.3
	comp=Z,0.8nm,0.3s,baz=213,slow=12,SNR=47						
CMAR	Chiang Mai Arr	17.11	17	*i* P	P	13 50 42.7	-1.3
CMAR				pmax	pmax		
	comp=Z,13nm,0.8s						
CMAR	Chiang Mai Arr	17.11	17		Pn	13 50 41.8	-0.8
CHTO	Chiang Mai	17.45	17	P	Pn	13 50 45.6	-1.2
CHTO				pmax	pmax		
	comp=Z,12nm,0.9s						
CHTO	Chiang Mai	17.45	17		Pn	13 50 45.6	-1.2
DLV	T Lat	17.67	55	P	P	13 50 50.4	0.0
DLV				IAmb	IAmb	13 51 04.5	
	comp=Z,31nm,0.9s						
SBUM	Sibu	18.52	88	P	Pn	13 51 00.1	0.0
BRDH	Bariadhala	20.61	355	P	Pn	13 51 23.6	-1.2
	comp=Z,96nm,0.4s,baz=102,slow=18,SNR=6.0						
HYB	Hyderabad	21.32	317	*i* P	P	13 51 31.0	+0.9
SLVN	Son La	21.61	27	P	P	13 51 33.8	+0.6
KKM	Kota Kinabalu	22.82	79	P	P	13 51 46.7	+0.4
KKM				IAmb	IAmb	13 51 54.1	
	comp=Z,31nm,0.9s						
QIZ	Qiongzhong	23.14	42	P	P	13 51 49.5	+0.1
QIZ				S	S	13 55 59.8	+1.2
H08S2	Diego Garcia H	23.23	245	T	T	14 17 27.3	
	baz=64,slow=76,SNR=31						
H08S3	Diego Garcia H	23.23	245	T	T	14 17 27.0	
	baz=64,slow=76,SNR=86						
H08S1	Diego Carcia H	23.25	245	T	T	14 17 28.1	
	baz=64,slow=76,SNR=31						
KMI	Kunming	24.55	20	P	P	13 52 05.0	+2.0
KMI				pP	sP	13 52 14.5	-0.8
KMI				sP	pwP	13 52 17.0	-0.5
ODAN	Odare	25.41	347	*e*P	P	13 52 11.9	+1.2
	comp=Z,53nm,0.9s						
RAMN	Ramite	25.68	345	*e*P	P	13 52 14.8	+1.6
	comp=Z,59nm,0.6s						
JIRN	Jiri	26.47	345	*e*P	P	13 52 21.5	+1.1
	comp=Z,55nm,0.7s						
PKI	Pulchoki	26.59	343	*e*P	P	13 52 22.2	+0.7
PKIN	Phulchoki	26.60	343	*e*P	P	13 52 22.4	+0.8
DMN	Daman	26.72	343	*e*P	P	13 52 23.4	+0.8
	comp=Z,18nm,0.8s						
GUN	Gumba	26.79	345	*e*P	P	13 52 24.2	+0.9
	comp=Z,46nm,0.8s						
KKN	Kakani	26.84	343	*e*P	P	13 52 24.3	+0.7
	comp=Z,3.7nm,1.0s						
GKN	Gorkha	27.23	342	*e*P	P	13 52 28.0	+1.0
	comp=Z,53nm,0.6s						
GYA	Guiyang	27.29	26	*e*P	P	13 52 29.0	+1.4
LSA	Lhasa	27.61	355	P	P	13 52 33.0	+2.2
LSA	Lhasa	27.61	355	P	P	13 52 32.5	+1.7
LSA				pmax	pmax		
	comp=Z,24nm,0.6s						
LSA	Lhasa	27.61	355	P	P	13 52 32.5	+1.7
DANN	Dangsing	27.83	341	*e*P	P	13 52 33.3	+0.7
	comp=Z,32nm,0.7s						
ENH	Enshi	31.83	27	P	P	13 53 07.3	-0.4
ENH				IAmb	IAmb	13 53 08.3	
	comp=Z,6.8nm,0.6s						
DAV	Davao City (W)	32.17	80	LR	LR	14 08 11.1	
	comp=Z,36nm,18.4s,baz=62,slow=40						
TWG	Pinlang	33.66	50	P	P	13 53 24.6	+0.8
XAN	Xi'an	34.87	22	P	P	13 53 34.5	+0.3
XAN				pP	pwP	13 53 50.5	+1.5
XAN	Xi'an	34.87	22	P	P	13 53 34.0	-0.2
XAN				pmax	pmax		
	comp=Z,15nm,0.9s						
XAN	Xi'an	34.87	22	P	P	13 53 34.0	-0.2
LZH	Lanzhou	35.16	14	*e*P	P	13 53 28.8	-8.0
LZH				pP	pP	13 53 38.5	-7.1
LZH				sP	sP	13 53 44.3	-4.9
LZH				PP	PnPn	13 54 46.3	-8.8
NIL	Nilore	36.80	331	P	P	13 53 50.3	-0.5
NIL				pmax	pmax		
	comp=Z,19nm,0.6s						
NIL	Nilore	36.80	331	P	P	13 53 50.3	-0.5
FITZ	Fitzroy Crossi	37.29	124	P	P	13 53 55.3	+0.3
GTA	Gaotai	37.61	8	P	P	13 53 58.3	+0.7
GTA				pP	pP	13 54 05.3	-1.2
GTA				sP	sP	13 54 09.0	-1.1
SIJI	Sorong	37.69	94	P	P	13 53 58.2	-0.3
	comp=Z,4.6nm,0.8s,baz=252,slow=20,SNR=2.4						
NJ2	Nanjing	38.12	36	*e*P	P	13 54 03.8	+2.0
KSH	Kashi	40.64	339	P	P	13 54 23.0	0.0
KSH				sP	pwP	13 54 37.0	-0.7
KSH				PcP	PcP	13 56 25.3	+0.8
KSH				PcS	PcS	14 00 14.5	-0.8
KSH				S	S	14 00 28.8	-1.8
HHC	Hu-ho-hao-te	41.88	20	*e*P	P	13 54 34.3	+1.2
WMQ	Urumqi	41.94	354	*e*P	P	13 54 35.3	+1.8
WMQ				sP	pwP	13 54 46.8	-1.6
GAR	Garm	42.52	333	P	P	13 54 37.7	-0.7
GAR				IAmb	IAmb	13 54 38.7	
	comp=Z,23nm,1.2s						
ULHL	Ulahol	42.98	341	P	P	13 54 43.1	+0.9
	SNR=5.5						
BJI	Beijing	42.98	26	P	P	13 54 44.0	+2.1
ARSB	Arslanbob	43.33	337	P	P	13 54 45.5	+0.5
ARSB				pmax	pmax		
	comp=Z,13nm,0.8s						
ARSB	Arslanbob	43.33	337	P	P	13 54 45.5	+0.5
ARSB				IAmb	IAmb	13 54 46.5	
	comp=Z,13nm,0.8s						
UCH	Uchtor	43.55	339	P	P	13 54 47.8	+0.8
	SNR=7.8						
AML	Almayashu	43.76	338	P	P	13 54 49.5	+0.8
	SNR=12						
TKM2	Tokmak 2	43.80	341	P	P	13 54 49.4	+0.7
	SNR=7.7						
AAK	Ala-Archa	43.92	340	*i* P	P	13 54 49.2	-0.5
AAK				pmax	pmax		
	comp=Z,6.0nm,1.6s						
AAK	Ala-Archa	43.92	340	P	P	13 54 50.4	+0.7
AAK				IAmb	IAmb	13 54 52.3	
	comp=Z,13nm,1.8s						
USP	Ospenovka	44.47	340	P	P	13 54 54.5	+0.5
	SNR=7.7						
WB0	Warramunga Arr	45.45	120	P	P	13 55 02.1	+0.1
WB0				IAmb	IAmb	13 55 22.4	
	comp=Z,8.0nm,1.2s						
WRA	Warramunga Arr	45.47	121	P	P	13 55 02.5	+0.2
	comp=Z,3.3nm,0.8s,baz=299,slow=8.7,SNR=18						
WRA	Warramunga Arr	45.47	121	P	P	13 55 02.0	-0.2
WRAB	Tennant Creek	45.48	121	*i* P	P	13 55 03.0	+0.8
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WRAB	Tennant Creek	45.48	121	P	P	13 55 02.7	+0.4
WRAB				IAmb	IAmb	13 55 03.4	
	comp=Z,5.6nm,0.8s						
WB2	Warramunga Arr	45.48	121	P	P	13 55 02.1	-0.2
WB2				IAmb	IAmb	13 55 16.5	
	comp=Z,7.1nm,1.1s						
WR0	Warramunga Arr	45.65	121	P	P	13 55 03.7	+0.1
WR0				IAmb	IAmb	13 55 18.6	
	comp=Z,6.5nm,0.9s						
MK31	Makanchi Array	45.67	349	P	P	13 55 03.8	+0.4
MK31				pmax	pmax		
	comp=Z,13nm,0.9s						
MK31	Makanchi Array	45.67	349	P	P	13 55 03.8	+0.4
MKAR	Makanchi Array	45.67	349	P	P	13 55 04.1	+0.7
	comp=Z,10.0nm,0.5s,baz=168,slow=8.8,SNR=192						
MKAR	Makanchi Array	45.67	349	P	P	13 55 03.9	+0.5
MAKZ	Makanchi	45.74	349	P	P	13 55 04.4	+0.4
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MAKZ	Makanchi	45.74	349	P	P	13 55 04.4	+0.4
MAKZ				IAmb	IAmb	13 55 05.5	
	comp=Z,8.2nm,0.8s						
KK31	Karatay Array	45.82	336	P	P	13 55 04.6	0.0
KK31				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KK31	Karatay Array	45.82	336	P	P	13 55 04.6	0.0
KK31				IAmb	IAmb	13 55 05.6	
	comp=Z,7.2nm,0.8s						
KKAR	Karatay Array	45.82	336	P	P	13 55 04.5	-0.1
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KKAR	Karatay Array	45.82	336	P	P	13 55 04.2	-0.4
KKAR	Karatay Array	45.82	336	P	P	13 55 04.5	-0.1
KKAR				IAmb	IAmb	13 55 05.6	
	comp=Z,7.2nm,0.8s						
ASAR	Alice Springs	46.72	126	P	P	13 55 12.3	+0.3
	comp=Z,1.1nm,0.7s,baz=300,slow=7.4,SNR=25						
ASAR				PcP	PcP	13 56 45.7	+0.4
	comp=Z,0.5nm,0.6s,baz=300,slow=3.1,SNR=4.5						
ASAR	Alice Springs	46.72	126	P	P	13 55 11.7	-0.3
AS31	Alice Springs	46.72	126	P	P	13 55 12.2	+0.1
SONM	Songino Array	46.92	12	P	P	13 55 14.2	+0.8
	comp=Z,6.9nm,0.6s,baz=192,slow=9.0,SNR=42						
SONM	Songino Array	46.92	12	P	P	13 55 13.5	+0.1
ULN	Ulaanbaatar	47.09	12	*i* P	P	13 55 14.8	+0.1
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KSRS	Korea Array	47.24	38	P	P	13 55 17.1	+1.3
	comp=Z,0.5nm,0.7s,baz=220,slow=8.4,SNR=2.4						
KSRS				LR	LR	14 17 45.1	
	comp=Z,66nm,18.1s,baz=238,slow=39						
DGZ	Jazzator, Alta	47.78	355	*i* P	P	13 55 21.0	+1.0
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GEYT	Alibeck	48.36	322	P	P	13 55 25.7	+1.1
	comp=Z,9.9nm,0.6s,baz=148,slow=8.7,SNR=17						
GEYT	Alibeck	48.36	322	P	P	13 55 25.4	+0.8
GYA0B	ALIBECK ARRAY	48.36	322	P	P	13 55 25.6	+1.0
KURK	Kurchatov	50.15	348	*i* P	P	13 55 38.0	+0.1
KURK				pmax	pmax		
	comp=Z,16nm,1.2s						
KURK	Kurchatov	50.15	348	P	P	13 55 38.5	+0.6
TLY	Talaya	50.17	8	*i* P	P	13 55 39.0	+0.9
TLY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZAA0	Zalesovo Array	52.25	353	P	P	13 55 53.4	-0.2
ZAA0				IAmb	IAmb	13 55 55.1	
	comp=Z,6.5nm,0.8s						
ZALV	Zalesovo Beam	52.25	353	P	P	13 55 54.1	+0.5
	comp=Z,6.4nm,0.6s,baz=186,slow=8.2,SNR=36						
ZALV	Zalesovo Beam	52.25	353	P	P	13 55 53.4	-0.2
MJAR	Matsushiro Arr	53.50	45	LR	LR	14 21 19.3	
	comp=Z,23nm,18.3s,baz=70,slow=39						
USRK	Ussuriysk Ar.	53.94	33	LR	LR	14 22 11.7	
	comp=Z,84nm,18.3s,baz=203,slow=39						
BRVK	Borovoye	54.42	343	*i* P	P	13 56 08.0	-1.6
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRVK	Borovoye	54.42	343	P	P	13 56 08.1	-1.6
BRVK				IAmb	IAmb	13 56 09.9	
	comp=Z,6.9nm,1.1s						
ABKAR	Akbulak array	55.17	334	P	P	13 56 13.7	-1.4
STKA	Stephens Creek	56.54	131	P	P	13 56 25.4	+0.1
	comp=Z,2.6nm,0.7s,baz=302,slow=7.0,SNR=5.5						
STKA				LR	LR	14 21 09.8	
	comp=Z,73nm,19.4s,baz=221,slow=37						
STKA	Stephens Creek	56.54	131	P	P	13 56 24.5	-0.8
KLR	Kul'dur	57.15	29	*i* P	P	13 56 29.9	+0.7
KLR				pmax	pmax		
	comp=Z,6.0nm,2.0s						
ERM	Erimo	59.50	41	*ce*P	P	13 56 56.7	+11
ERM				pmax	pmax		
	comp=Z,78nm,1.7s						
ARU	Arti	61.09	339	*d i*P	P	13 56 55.2	-1.2
ARU				S	S	14 05 15.1	+2.2
ARU				SS	SS	14 09 12.0	-1.1
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KBZ	Khabaz	61.16	320	P	P	13 56 57.8	+0.6
	comp=Z,3.8nm,0.9s,baz=151,slow=5.3,SNR=5.7						
KBZ	Khabaz	61.16	320	*i* P	P	13 56 57.5	+0.4
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SHA1	Shidzhatmaz	61.32	320	*i* P	P	13 56 58.4	-0.1
KIV	Kislovodsk	61.40	320	*e*P	P	13 56 56.2	-2.7
KIV				pmax	pmax		
	comp=Z,30nm,1.1s						
YAK	Yakutsk	65.64	18	*e*P	P	13 57 26.5	+0.1
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
BRTR	Keskin Array B	65.96	313	P	P	13 57 28.8	-0.4
	comp=E,0.6nm,0.5s,baz=132,slow=7.3,SNR=4.4						
VSR	Storozhevoye	66.90	326	*i* P	P	13 57 33.4	-1.3
VSR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NRIK	Noril'sk	67.31	358	P	P	13 57 36.1	-0.9
	comp=Z,1.3nm,0.3s,baz=150,slow=5.0,SNR=3.9						
OBN	Obninsk	70.08	329	*i* P	P	13 57 53.4	-1.1
OBN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LBTB	Lobatse	71.13	243	LR	LR	14 25 53.2	
	comp=Z,52nm,18.8s,baz=80,slow=33						
IDI	Anoyia	71.58	306	P	P	13 58 05.1	+1.0
	comp=Z,3.5nm,0.5s,baz=63,slow=9.0,SNR=6.5						
AKASG	Malin Array Be	72.47	323	P	P	13 58 07.4	-1.6
	comp=Z,0.1nm,0.2s,baz=90,slow=5.6,SNR=1.3						
AKASG	Malin Array Be	72.47	323	P	P	13 58 07.4	-1.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,1.1s						
VRI	Vrincioaia	72.63	318	P	P	13 58 10.7	+0.6
VRI				pmax	pmax		
	comp=Z,10.0nm,2.9s						
TIXI	Tiksi	73.01	11	*i* P	P	13 58 11.2	-0.6
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TIXI	Tiksi	73.01	11	P	P	13 58 11.3	-0.5
TIXI				IAmb	IAmb	13 58 12.3	
	comp=Z,7.4nm,0.8s						
MLR	Muntele Rosu	73.06	317	P	P	13 58 12.1	-0.7
	comp=Z,1.2nm,0.6s,baz=123,slow=11,SNR=3.3						
MLR	Muntele Rosu	73.06	317	P	P	13 58 12.1	-0.7
MLR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MLR	Muntele Rosu	73.06	317	IAmb	IAmb	13 58 14.2	
	comp=Z,4.6nm,0.9s						
BURAR	Bucovina Array	74.09	319	P	P	13 58 19.4	+0.6
BUR08	Bucovina Ar. S	74.10	319	P	P	13 58 19.5	+0.6
SUR	Sutherland	76.69	236	LR	LR	14 26 10.2	
	comp=Z,51nm,18.0s,baz=120,slow=31						
FIA1	FINESS Array S	77.65	333	P	P	13 58 38.4	-0.3
FINES	FINESS Array B	77.65	333	P	P	13 58 37.9	-0.7
	comp=Z,2.7nm,0.9s,baz=110,slow=7.6,SNR=7.6						
FINES	FINESS Array B	77.65	333	P	P	13 58 38.3	-0.4
FINES	FINESS Array B	77.65	333	P	P	13 58 38.3	-0.4
VYHS	Vyhne	78.45	319	*e*P	P	13 58 44.0	+0.5
VYHS	Vyhne	78.45	319	*e*P	P	13 58 44.0	+0.5
MODS	Modra-Piesok	79.46	319	*e*P	P	13 58 48.8	-0.2
MODS	Modra-Piesok	79.46	319	*e*P	P	13 58 48.8	-0.2
ARCES	ARCESS Array B	80.58	341	P	P	13 58 54.0	-0.6
	comp=Z,4.6nm,0.9s,baz=72,slow=4.0,SNR=6.1						
ARCES	ARCESS Array B	80.58	341	P	P	13 58 54.0	-0.6
BILL	Bilibino	81.65	21	*i* P	P	13 59 01.8	+1.5
BILL				pmax	pmax		
	comp=Z,8.0nm,3.5s						
GERES	GERESS Array B	81.87	319	P	P	13 59 02.1	+0.1
	comp=Z,2.2nm,0.7s,baz=54,slow=2.3,SNR=7.9						
GERES	GERESS Array B	81.87	319	P	P	13 59 02.6	+0.6
GERES	GERESS Array B	81.87	319	P	P	13 59 02.6	+0.6
HFS	Hagfors	83.25	330	P	P	13 59 08.6	-0.2
	comp=Z,1.1nm,0.4s,baz=123,slow=5.5,SNR=8.5						
DAVOX	Davos/Dischmat	84.27	317	P	P	13 59 14.9	+0.3
	comp=Z,4.0nm,0.5s,baz=3.4,slow=20,SNR=8.0						
NOA	NORSAR Array B	84.57	331	P	P	13 59 15.1	-0.5
	comp=Z,0.7nm,0.9s,baz=97,slow=5.0,SNR=4.1						
SPITS	Spitsbergen Ar	85.42	348	P	P	13 59 19.2	-0.3
	comp=Z,5.8nm,0.8s,baz=152,slow=7.5,SNR=4.2						
DBIC	Dimbokro	98.24	277	LR	LR	14 43 46.6	
	comp=Z,25nm,18.5s,baz=60,slow=35						
TX31	Lajitas Ar. Si	144.65	27		PKPdf	14 06 18.2	-1.7
TX32	Lajitas Array	144.65	27		PKPdf	14 06 18.2	-1.7
TXAR	Lajitas Array	144.66	27	PKP	PKPdf	14 06 19.2	-0.7
	comp=Z,0.9nm,0.4s,baz=68,slow=1.0,SNR=13						
TXAR	Lajitas Array	144.66	27		PKPdf	14 06 18.8	-1.1

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*SNET **26** 13:47:23.1±1.5, 14°.04N×87°.81W, h14^{km}±11^{km}, ML3.5*

*UCR **26** 13:47:23.1±1.9, 14°.04N×87°.80W, h15^{km}±13^{km}, ML3.6*

*INET **26** 13:47:23.4, 14°.07N×87°.75W, h2^{km}, ML3.7*

ISC 26 13:47:22.8±1.2**, 14°.00N**±0°.04×**87°.78W**±0°.03**, h22**^{km}±5^{km}**, n33,** σ**0**^{s}**.44**/46**, 2C, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAGO	Alcalda de S	0.44	226	*e*P	Pb	13 47 31.4	-0.4
FAGO				*e*S	Sb	13 47 37.6	-0.3
FAGO				IAML		13 47 38.6	
	comp=Z,2μm,0.3s						
FAGO	Alcalda de S	0.44	226	*e*P	Pb	13 47 31.4	-0.4
FAGO				*e*S	Sb	13 47 37.6	-0.3
FAGO				IAML		13 47 38.6	
	comp=Z,2μm,0.3s						
TGUH	Tegucigalpa,Un	0.50	83	⇑*i*P	Pb	13 47 32.7	-0.2
TGUH				*e*S	Sb	13 47 40.4	+0.6
TGUH	Tegucigalpa,Un	0.50	83	⇑*i*P	Pb	13 47 32.7	-0.2
TGUH				*e*S	Sb	13 47 40.4	+0.6
LCND	La Caada	0.69	189	*e*P	Pb	13 47 36.5	+0.2
LCND	La Caada	0.69	189	*e*P	Pb	13 47 36.5	+0.2
BLLM	Bellamira	0.71	219	*e*P	Pb	13 47 36.8	+0.3
BLLM	Bellamira	0.71	219	*e*P	Pb	13 47 36.8	+0.3
CNCH	Conchagua	0.72	184	*e*P	Pn	13 47 37.5	-0.3
CNCH				*e*S	Sn	13 47 49.3	+1.0
CNCH				IAML		13 47 54.7	
	comp=Z,5μm,0.4s						
CNCH	Conchagua	0.72	184	*e*P	Pn	13 47 37.5	-0.3
CNCH				*e*S	Sn	13 47 49.3	+1.0
CNCH				IAML		13 47 54.7	
	comp=Z,5μm,0.4s						
PACA	Pacayal	0.74	225	*e*P	Pb	13 47 37.3	+0.1
PACA				IAML		13 47 55.3	
	comp=Z,4μm,0.5s						
PACA	Pacayal	0.74	225	*e*P	Pb	13 47 37.3	+0.1
PACA				IAML		13 47 55.3	
	comp=Z,4μm,0.5s						
RANC	El Ranchito	0.75	221	*e*P	Pn	13 47 37.8	-0.4
RANC	El Ranchito	0.75	221	*e*P	Pn	13 47 37.8	-0.4
LCY	Lacayo	0.76	221	*e*P	Pn	13 47 37.9	-0.4
LCY	Lacayo	0.76	221	*e*P	Pn	13 47 37.9	-0.4
TECA	Tecapa	0.86	234	*e*P	Pb	13 47 39.2	0.0
TECA	Tecapa	0.86	234	*e*P	Pb	13 47 39.2	0.0
JUCU	Jucuar¡n	0.87	212	*e*P	Pn	13 47 39.8	0.0
JUCU				IAML		13 47 57.7	
	comp=Z,1μm,0.4s						
JUCU	Jucuar¡n	0.87	212	*e*P	Pn	13 47 39.8	0.0
JUCU				IAML		13 47 57.7	
	comp=Z,1μm,0.4s						
COEB	Comit de Eme	0.88	236	*e*P	Pb	13 47 39.5	+0.1
COEB				*e*S	Sn	13 47 51.8	-0.4
COEB	Comit de Eme	0.88	236	*e*P	Pb	13 47 39.5	+0.1
COEB				*e*S	Sn	13 47 51.8	-0.4
LLGN	La Laguna	1.14	278	*e*P	Pb	13 47 44.1	+0.2
LLGN				*e*S	Sn	13 47 58.1	-0.5
LLGN				IAML		13 48 03.6	
	comp=Z,2μm,0.4s						
LLGN	La Laguna	1.14	278	*e*P	Pb	13 47 44.1	+0.2
LLGN				*e*S	Sn	13 47 58.1	-0.5
LLGN				IAML		13 48 03.6	
	comp=Z,2μm,0.4s						
LBRS	Las Brisas	1.25	258	*e*P	Pb	13 47 45.7	-0.1
LFRS	El Faro	1.30	253	*e*P	Pb	13 47 46.3	-0.3
LFRS				*e*S	Sb	13 48 03.9	+1.1
BOQS	Boqueron	1.48	260	*e*P	Pb	13 47 49.9	+0.1
MTO3	Montecristo	1.58	285	*e*P	Pn	13 47 50.1	+0.4
MTO3				*e*S	Sb	13 48 11.4	+0.3
MTO3				IAML		13 48 14.9	
	comp=Z,421nm,0.4s						
MTO3	Montecristo	1.58	285	*e*P	Pn	13 47 50.1	+0.4
MTO3				*e*S	Sb	13 48 11.4	+0.3
MTO3				IAML		13 48 14.9	
	comp=Z,421nm,0.4s						
MOMN	Momotombo	1.99	142	*e*P	Pn	13 47 54.6	-0.6
MOMN	Momotombo	1.99	142	*e*P	Pn	13 47 54.6	-0.6
MRL	Marmol	2.13	300	*e*P	Pb	13 48 00.7	-0.2
MRL	Marmol	2.13	300	*e*P	Pb	13 48 00.7	-0.2

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*ISK **26** 14:00:14.2, 38°.14N×38°.60E, h3^{km}, ML4.1/21*

*DDA **26** 14:00:14.5, 38°.13N×38°.58E, h12^{km}±2^{km}, MW4.0*

*IDC **26** 14:00:15.8±0.7, 38°.10N×38°.45E, h0^{km}, mb3.8/12, mb1 3.9/17, mb1mx3.7/56, mbtmp3.8/17, ML3.4/5, MS3.2/18, Ms1 3.2/18, ms1mx3.1/53, Error ellipse: s-maj=12.0km s-min=10.2km az=160.0*

*NEIC **26** 14:00:18.4±1.6, 38°.08N±0°.07×38°.5E±0°.1, h17^{km}±5^{km}, Error ellipse: s-maj=12.8km s-min=10.6km az=103.0*

*GII **26** 14:00:34.4±0.0, 38°.61N×38°.41E, h1^{km}, mb4.2/2, MD4.1/2, Mm4.5/6*

ISC 26 14:00:16.2±1.0**, 38°.13N**±0°.01×**38°.58E**±0°.02**, h6**^{km}±7^{km}**, n115, σ1^{s}.57**/147**, mb3.9**/13**, MS3.1**/8**, 9C-11D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MALT	Malatya	0.22	326	PG	Pg	14 00 19.4	-1.2
MALT				SG	Sg	14 00 22.7	-0.8
ELZG	Elazig	0.48	41	⇓ *i*P	Pg	14 00 24.2	-1.3
ELZG				*i* S	Sg	14 00 31.2	-0.7
ELZG				IAML		14 00 32.0	
	comp=E,9μm,0.6s						
ELZG				IAML		14 00 36.0	
	comp=N,7μm,0.6s						
AKCD	Akcadag	0.55	288	⇑ *i*P	Pg	14 00 25.4	-1.4
AKCD				*i* S	Sg	14 00 33.3	-0.6
AKCD				IAML		14 00 35.0	
	comp=N,40μm,0.2s						
AKCD				IAML		14 00 36.0	
	comp=E,15μm,0.5s						
SVRC	Sivrice-ELAZID	0.62	66	PG	Pg	14 00 26.8	-1.4
SVRC				SG	Sg	14 00 35.8	-0.5
ATAB	Bozova	0.70	199	⇓ *i*P	Pg	14 00 28.6	-1.1
ATAB				*i* S	Sg	14 00 38.0	-0.8
ATAB				IAML		14 00 42.0	
	comp=E,2μm,0.5s						
URFA	Urfa	0.72	165	PG	Pg	14 00 28.9	-1.1
URFA				SG	Sg	14 00 38.7	-0.6
HEKM	Malatya_Hekimh	0.89	327	⇑ *i*P	Pg	14 00 31.6	-1.8
HEKM				*i* S	Sg	14 00 44.7	-0.2
HEKM				IAML		14 00 45.0	
	comp=N,11μm,0.6s						
HEKM				IAML		14 00 45.0	
	comp=E,15μm,0.3s						
DARE	Darende-Malaty	0.97	297	PG	Pg	14 00 32.5	-2.3
ARPR	Arapgir-MALATY	0.98	349	PG	Pg	14 00 33.3	-1.7
ARPR				SG	Sg	14 00 47.9	+0.2
PTK	Pertek	0.99	40	PG	Pg	14 00 33.2	-2.0
SANL	SANLIURFA_Merk	1.01	161	*i* P	Pg	14 00 33.9	-1.8
SANL				*i* S	Sb	14 00 49.8	+0.1
SANL				IAML		14 00 50.0	
	comp=N,9μm,0.7s						
SANL				IAML		14 00 50.0	
	comp=E,3μm,0.7s						
GZT	Gaziantep	1.12	226	⇓ *i*P	Pg	14 00 36.3	-1.4
GZT				*i* S	Sb	14 00 53.4	+0.4
GZT				IAML		14 00 54.0	
	comp=E,7μm,0.3s						
GZT				IAML		14 00 54.0	
	comp=N,9μm,0.5s						
KEMA	Kemaliye	1.14	356	⇓ *i*P	Pg	14 00 35.5	-2.5
KEMA				*i* S	Sg	14 00 52.2	-0.6
KEMA				IAML		14 00 57.0	
	comp=E,3μm,0.6s						
KEMA				IAML		14 00 59.0	
	comp=N,3μm,0.6s						
ELBS	KAHRAMANMARAS	1.16	280	⇑ *i*P	Pg	14 00 35.7	-2.7
ELBS				IAML		14 01 00.0	
	comp=E,13μm,0.6s						
ELBS				IAML		14 01 00.0	
	comp=N,8μm,0.6s						
CUGUR	Gurin_SVAS	1.19	300	⇑ *i*P	Pg	14 00 36.5	-2.5
CUGUR				*i* S	Sg	14 00 54.1	-0.3
CUGUR				IAML		14 01 04.0	
	comp=N,4μm,0.7s						
CUGUR				IAML		14 01 06.0	
	comp=E,4μm,0.8s						
DIYA	Diyarbakir	1.23	99	⇑ *i*P	Pg	14 00 38.5	-1.3
DIYA				*i* S	Sn	14 00 57.2	+0.2
DIYA				IAML		14 00 59.0	
	comp=E,3μm,0.8s						
DIYA				IAML		14 01 02.0	
	comp=N,2μm,0.7s						
TNCL	Tunceli-Merkez	1.23	37	⇓ *i*P	Pg	14 00 37.2	-2.7
TNCL				*i* S	Sn	14 00 57.5	+0.4
TNCL				IAML		14 01 07.0	
	comp=E,1μm,1.0s						
TNCL				IAML		14 01 11.0	
	comp=N,1μm,0.8s						
DYBB	Diyarbakir	1.24	98	PN	Pg	14 00 38.5	-1.5
DYBB				SN	Sb	14 00 56.3	-0.1
SURC	SANLIURFA_SURC	1.25	179	⇓ *i*P	Pg	14 00 38.7	-1.5
SURC				*i* S	Sb	14 00 56.9	+0.3
SURC				IAML		14 00 57.0	
	comp=E,5μm,0.8s						
SURC				IAML		14 00 58.0	
	comp=N,7μm,0.8s						
REFA	Refahiye_ERZN	1.27	6	⇓ *i*P	Pn	14 00 47.1	+6.5
REFA				*i* S	Sn	14 01 11.8	+14
REFA				IAML		14 01 19.0	
	comp=N,533nm,1.3s						
REFA				IAML		14 01 23.0	
	comp=E,535nm,1.2s						
GAZ	Gaziantep	1.45	229	PN	Pn	14 00 42.3	-0.8
GAZ				SN	Sg	14 01 02.8	-0.1
GAZ	Gaziantep	1.45	229	Pn	Pn	14 00 41.4	-1.7
HANI	Diyarbakir_Han	1.46	78	⇑ *i*P	Pn	14 00 42.2	-0.9
HANI				*i* S	Sn	14 01 02.5	-0.1
HANI				IAML		14 01 08.0	
	comp=E,2μm,1.0s						
HANI				IAML		14 01 08.0	
	comp=N,1μm,1.2s						
CUKAN	kangal_SIVAS	1.47	324	⇑ *i*P	Pn	14 00 41.4	-2.0
CUKAN				*i* S	Sb	14 01 01.9	-1.2
CUKAN				IAML		14 01 07.0	
	comp=E,944nm,0.6s						
CUKAN				IAML		14 01 13.0	
	comp=N,1μm,0.7s						
KMRS	Kahramanmaras	1.47	245	PN	Pn	14 00 42.6	-0.7
KMRS				SN	Sg	14 01 03.4	-0.2
AYKD	Aykdinkavak	1.58	244	⇓ *i*P	Pn	14 00 43.5	-1.3
AYKD				*i* S	Sn	14 01 04.4	-1.1
AYKD				IAML		14 01 07.0	
	comp=N,5μm,0.4s						
AYKD				IAML		14 01 08.0	
	comp=E,2μm,0.5s						
MAZI	Mazidag	1.62	114	PN	Pn	14 00 44.6	-0.8
SARI	SarD1z-Kayseri	1.73	280	PN	Pn	14 00 46.4	-0.5
KAMA	Osmaniye	1.79	239	*i* P	Pn	14 00 45.8	-1.9
KAMA				IAML		14 01 13.0	
	comp=N,440nm,0.5s						
KAMA				*i* S	Sg	14 01 13.0	-0.7
KAMA				IAML		14 01 18.0	
	comp=E,777nm,0.5s						
EUZM	Uzumlu	1.80	29	⇓ *i*P	Pn	14 00 47.7	-0.2
EUZM				*i* S	Sg	14 01 14.5	+0.6
EUZM				IAML		14 01 17.0	
	comp=E,462nm,0.8s						
KUZU	Kuzuini	1.81	222	*i* P	Pn	14 00 46.1	-1.9
KUZU				*i* S	Sb	14 01 13.5	+0.7
KUZU				IAML		14 01 17.0	
	comp=N,5μm,0.6s						
KUZU				IAML		14 01 22.0	
	comp=E,3μm,0.3s						
CUALT	Altinyayla-SIV	1.83	309	*i* P	Pn	14 00 48.6	+0.3
CUALT				*i* S	Sn	14 01 12.3	+0.4
CUALT				IAML		14 01 23.0	
	comp=E,561nm,0.6s						
CUALT				IAML		14 01 29.0	
	comp=N,788nm,0.7s						
BNGB	Bingl	1.85	62	PN	Pn	14 00 47.9	-0.7
ANDN	Andirin	1.86	253	⇓ *i*P	Pn	14 00 47.1	-1.5
ANDN				*i* S	Sb	14 01 13.9	-0.2
ANDN				IAML		14 01 21.0	
	comp=N,2μm,0.9s						
ANDN				IAML		14 01 26.0	
	comp=E,1μm,0.7s						
CUZAR	Zara_SIVAS	1.86	340	⇓ *i*P	Pb	14 00 49.9	-0.9
CUZAR				*i* S	Sg	14 01 15.3	-0.8
CUZAR				IAML		14 01 19.0	
	comp=E,1μm,0.8s						
CUZAR				IAML		14 01 22.0	
	comp=N,768nm,1.2s						
MARD	Mardin	1.92	114	⇑ *i*P	Pn	14 00 48.3	-1.3
MARD				IAML		14 01 20.0	
	comp=N,3μm,0.7s						
MARD				IAML		14 01 23.0	
	comp=E,1μm,1.1s						
SAIM	ADANA	1.98	266	⇑ *i*P	Pn	14 00 49.9	-0.5
SAIM				*i* S	Sg	14 01 20.0	+0.1
SAIM				IAML		14 01 22.0	
	comp=N,1μm,0.4s						
SAIM				IAML		14 01 27.0	
	comp=E,1μm,0.9s						
YEDI	Yedisu-Bingol	2.01	49	PN	Pn	14 00 49.9	-0.9
SVAN	Silvan-Diyarba	2.06	89	PN	Pn	14 00 50.8	-0.6
KELT	Kelkit	2.08	14	*i* P	Pn	14 00 52.0	+0.2
KELT				*i* S	Sb	14 01 20.8	+0.1
KELT				IAML		14 01 26.0	
	comp=E,340nm,0.9s						
KELT				IAML		14 01 29.0	
	comp=N,336nm,0.6s						
SUSE	Susehri	2.09	352	*i* P	Pb	14 00 53.4	-1.3
SUSE				*i* S	Sb	14 01 21.1	+0.1
SUSE				IAML		14 01 28.0	
	comp=E,460nm,1.1s						
SUSE				IAML		14 01 45.0	
	comp=N,362nm,1.7s						
BTMN	Batman	2.14	96	*i* P	Pn	14 00 51.6	-0.8
BTMN				IAML		14 01 34.0	
	comp=E,1μm,1.0s						
BTMN				IAML		14 01 35.0	
	comp=N,1μm,0.8s						
SVSK	Karacayir	2.17	326	PN	Pn	14 00 52.8	0.0
BNGL	BINGOL	2.17	67	*i* P	Pn	14 00 54.3	+1.2
BNGL				*i* S	Sg	14 01 27.1	+1.1
CUSAR	Sarkisla-SIVAS	2.23	306	*i* P	Pn	14 00 54.3	+0.4
CUSAR				*i* S	Sg	14 01 28.0	0.0
CUSAR				IAML		14 01 30.0	
	comp=N,565nm,0.6s						
CUSAR				IAML		14 01 43.0	
	comp=E,456nm,0.9s						
KARO	Karliova-Bingo	2.26	58	PN	Pn	14 00 53.2	-1.1
BNN	Bunyan	2.27	289	PN	Pn	14 00 54.1	-0.2
MUSM	Mu-Merkez	2.37	75	*i* P	Pn	14 00 55.4	-0.4
MUSM				*i* S	Sg	14 01 30.9	-1.7
MUSM				IAML		14 01 36.0	
	comp=N,256nm,1.0s						
MUSM				IAML		14 01 43.0	
	comp=E,225nm,0.8s						
KOPT	Kop Dagi	2.40	38	*i* P	Pn	14 00 57.2	+0.9
KOPT				*i* S	Sg	14 01 38.6	+5.2
KOPT				IAML		14 01 44.0	
	comp=N,320nm,1.2s						
KOPT				IAML		14 01 50.0	
	comp=E,268nm,1.4s						
RSDY	Resadiye-TOKAT	2.46	337	PN	Pn	14 00 56.6	-0.3
VRTB	Varto-Mus	2.47	65	PN	Pn	14 00 56.3	-0.9
BAYT	Aydıntepe-Bayb	2.56	28	PN	Pn	14 00 57.9	-0.5
AKO	Adana	2.57	256	*i* P	Pn	14 00 58.1	-0.3
AKO				*i* S	Sg	14 01 39.8	+0.8
AKO				IAML		14 01 50.0	
	comp=E,205nm,0.6s						
AKO				IAML		14 01 54.0	
	comp=N,225nm,1.2s						
TAHT	Tahtakopru-Hat	2.60	228	PN	Pn	14 00 58.7	0.0
SRTM	Siirt_Merkez	2.64	92	*i* P	Pn	14 00 58.2	-1.2
SRTM				*i* S	Sg	14 01 39.4	-1.6
SRTM				IAML		14 01 48.0	
	comp=N,2μm,0.8s						
SRTM				IAML		14 01 51.0	
	comp=E,3μm,0.9s						
YURE	YUREGIR	2.69	242	PN	Pn	14 00 59.8	-0.2
YURE	YUREGIR	2.69	242	*i* P	Pn	14 00 59.5	-0.4
YURE				*i* S	Sb	14 01 37.7	-0.2
TOKT	Tokat	2.70	325	PN	Pn	14 00 59.9	-0.3
ESPY	Espiye-Giresun	2.78	2	PN	Pn	14 01 00.7	-0.6
BR131	Keskin Array S	4.17	294		Pn	14 01 20.6	0.0
BRTR	Keskin Array B	4.17	294	Pn	Pn	14 01 20.9	+0.3
	comp=E,2.1nm,0.3s,baz=129,slow=13,SNR=44						
BRTR				Pg	Pb	14 01 30.2	+0.2
	comp=E,3.7nm,0.3s,baz=114,slow=14,SNR=25						
BRTR				Lg	Lg	14 02 25.3	
	comp=E,0.5nm,0.3s,baz=119,slow=26,SNR=1.7						
BRTR				LR	LR	14 03 16.0	
	comp=E,482nm,20.0s,baz=88,slow=44						
BRTR	Keskin Array B	4.17	294		Pn	14 01 20.5	0.0
HWQ	Hawqa	4.40	210	*e*P	Pn	14 01 23.1	-0.6
ILGA	Ilgaz	4.76	309		Pn	14 01 29.1	+0.4
ANTO	Ankara	4.83	293		Pn	14 01 30.4	+0.8
BR231	Keskin MP Arra	4.84	292	Pn	Pn	14 01 30.6	+1.0
BHL	Bhannes	4.84	210	*e*P	Pn	14 01 28.4	-1.3
DQRL	Deir Qamar	5.05	210	*e*P	Pn	14 01 32.9	+0.3
RCY	Rachaya	5.14	207	*e*P	Pn	14 01 33.6	-0.2
QRWL	Qaraoun	5.15	208	*e*P	Pn	14 01 33.9	+0.1
CSS	Mathiatis	5.28	235	Pn	Pn	14 01 36.1	+0.5
NATI	Neve Ativ	5.38	206	Pn	Pg	14 02 00.6	+1.2
GEM	Giv'at Ha'Em	5.46	207	Pn	Pg	14 02 02.8	+2.1
GEM				Sn	Sg	14 03 10.4	-1.0
KSDI	Kefar Szold	5.47	207	Pn	Pg	14 02 00.3	-0.8
KSDI				Sn	Sg	14 03 10.7	-1.3
MMAI	Mount Meron Ar	5.73	208	Pn	Pn	14 01 41.3	-0.6
	comp=E,2.7nm,0.3s,baz=54,slow=15,SNR=7.4						
MMAI				Pg	Pb	14 02 00.3	+3.8
	comp=E,7.2nm,0.3s,baz=36,slow=18,SNR=9.0						
MMAI				Lg	Lg	14 03 14.9	
	comp=E,3.4nm,0.3s,baz=33,slow=29,SNR=1.9						
MMAI				LR	LR	14 04 12.2	
	comp=E,415nm,18.3s,baz=20,slow=42						
BLGI	Bet Lehem HaGe	6.06	208	Pn	Pg	14 02 11.5	-0.7
ASF	Jabal al Asfar	6.11	194	Pn	Pn	14 01 47.2	+0.2
	comp=E,0.6nm,0.3s,baz=327,slow=10,SNR=4.2						
ASF				Pg	Pb	14 02 05.4	+2.4
	comp=E,0.6nm,0.3s,baz=114,slow=24,SNR=6.7						
ASF				Lg	Lg	14 03 26.8	
	comp=E,2.7nm,0.3s,baz=335,slow=22,SNR=4.3						
MDUB	Mudurnu	6.19	294		Pn	14 01 49.0	+0.8
MMLI	Mount Malkishu	6.24	205	Pn	Pg	14 02 13.1	-2.7
HMDT	Nahal Hemdat	6.38	204	Pn	Pg	14 02 15.8	-2.6
HMDT				Sn	Sg	14 03 33.7	-7.3
KBZ	Khabaz	6.47	29	LR	LR	14 04 53.7	
	comp=E,234nm,18.1s,baz=231,slow=42						
KVAR	Kislovodsk Arr	6.59	27	LR	LR	14 05 02.4	
	comp=E,120nm,18.4s,baz=168,slow=43						
YTIR	Yattir	7.33	204	Pn	Pb	14 02 29.1	+5.2
EIL	Elat	8.96	201	Pg	Pg	14 02 57.2	-11
	comp=E,0.4nm,0.3s,baz=12,slow=14,SNR=2.2						
EIL				Lg	Lg	14 04 59.0	
	comp=E,0.3nm,0.3s,baz=171,slow=19,SNR=2.2						
EIL				LR	LR	14 06 15.7	
	comp=E,308nm,19.6s,baz=88,slow=40						
IDI	Anoyia	11.35	260	Pn	Pn	14 02 57.8	-1.2
	comp=E,0.5nm,0.3s,baz=93,slow=17,SNR=2.5						
IDI				LR	LR	14 07 16.9	
	comp=E,57nm,21.7s,baz=94,slow=38						
MLR	Muntele Rosu	11.95	312	LR	LR	14 08 57.5	
	comp=E,203nm,19.3s,baz=122,slow=44						
GEYT	Alibeck	15.40	85	LR	LR	14 10 54.0	
	comp=E,49nm,19.8s,baz=145,slow=41						
TIP	Timpagrande	17.08	280	P	P	14 04 17.0	-0.4
VYHS	Vyhne	17.66	312	*e*P	P	14 04 24.5	+0.8
AKTO	Aktyubinsk	18.50	42	P	Pn	14 04 33.6	+0.5
	comp=E,0.0nm,0.3s,baz=233,slow=13,SNR=8.2						
AKTO				LR	LR	14 13 17.8	
	comp=E,51nm,18.9s,baz=257,slow=42						
ABKAR	Akbulak array	18.96	47	P	Pn	14 04 38.4	-0.2
VRAC	Vranov	19.35	312	LR	LR	14 13 34.3	
	comp=E,81nm,19.8s,baz=105,slow=41						
GERES	GERESS Array B	20.90	309	P	P	14 04 59.8	+0.6
	comp=E,0.7nm,0.4s,baz=116,slow=9.1,SNR=6.8						
GERES				LR	LR	14 13 54.6	
	comp=E,55nm,18.1s,baz=94,slow=39						
KIRV	Kirov	21.64	15	P	P	14 05 08.6	+1.7
	comp=E,7.3nm,0.5s,baz=182,slow=2.3,SNR=5.0						
KIRV				LR	LR	14 14 04.6	
	comp=E,53nm,18.2s,baz=61,slow=38						
ARU	Arti	22.63	30	P	P	14 05 18.9	+1.3
	comp=E,2.0nm,0.7s,baz=209,slow=8.5,SNR=9.5						
DAVOX	Davos/Dischmat	22.77	301	LR	LR	14 15 26.2	
	comp=E,67nm,20.7s,baz=74,slow=40						
KEST	Kesra	23.45	273	P	P	14 05 27.5	+1.1
	comp=E,20nm,1.2s,baz=324,slow=3.7,SNR=3.5						
KEST	Kesra	23.45	273	IAmb	IAmb	14 05 30.3	
	comp=Z,21nm,1.1s						
FINES	FINESS Array B	24.60	346	P	P	14 05 38.4	+1.5
	comp=Z,2.2nm,0.8s,baz=146,slow=7.7,SNR=2.2						
FINES				LR	LR	14 17 29.7	
	comp=Z,32nm,19.8s,baz=20,slow=42						
KK31	Karatay Array	24.65	68	P	P	14 05 38.7	+1.2
KK31				IAmb	IAmb	14 05 59.6	
	comp=Z,7.4nm,0.8s						
KKAR	Karatay Array	24.65	68	P	P	14 05 38.0	+0.4
KKAR	Karatay Array	24.65	68	P	P	14 05 38.7	+1.1
KKAR				IAmb	IAmb	14 05 59.6	
	comp=Z,7.4nm,0.8s						
ECH	Echery	24.88	304	P	P	14 05 39.3	-0.2
BVAR	Borovoye Array	26.51	46	P	P	14 05 55.4	+1.2
	comp=Z,0.4nm,0.5s,baz=238,slow=8.3,SNR=4.5						
HFS	Hagfors	27.08	332	LR	LR	14 19 07.9	
	comp=Z,82nm,18.1s,baz=142,slow=42						
AAK	Ala-Archa	27.59	69	LR	LR	14 18 39.7	
	comp=Z,66nm,18.5s,baz=155,slow=40						
NOA	NORSAR Array B	28.60	332	LR	LR	14 18 54.8	
	comp=Z,50nm,19.4s,baz=145,slow=39						
KSH	Kashi	29.03	75	P	P	14 06 14.0	-3.1
KSH				pP	pP	14 06 18.0	-1.5
KSH				PcP	PcP	14 09 25.3	-0.1
KSH				S	S	14 11 00.5	-8.3
KSH				sS	pS	14 11 08.5	-2.8
MKAR	Makanchi Array	33.02	61	P	P	14 06 53.4	+1.3
	comp=Z,0.5nm,0.6s,baz=260,slow=8.2,SNR=5.4						
ZALV	Zalesovo Beam	35.07	48	P	P	14 07 12.7	+3.0
	comp=Z,0.3nm,0.3s,baz=258,slow=7.2,SNR=1.8						
ZALV	Zalesovo Beam	35.07	48	P	P	14 07 11.2	+1.5
TORD	Torodi Ar. Bea	41.12	243	P	P	14 08 01.4	+0.3
	comp=Z,2.3nm,1.0s,baz=54,slow=7.3,SNR=3.6						
CMAR	Chiang Mai Arr	55.69	93	P	P	14 09 53.6	+0.1
	comp=Z,0.3nm,0.3s,baz=290,slow=8.4,SNR=1.8						
CMAR				LR	LR	14 39 31.2	
	comp=Z,26nm,18.6s,baz=10.0,slow=42						
KSRS	Korea Array	67.69	59	P	P	14 11 13.8	-0.4
	comp=Z,0.8nm,0.8s,baz=294,slow=4.8,SNR=4.9						
YKA	Yellowknife Ar	77.42	348	P	P	14 12 13.6	+1.8
	comp=Z,0.7nm,0.9s,baz=26,slow=5.8,SNR=6.1						

IDC 26 14:03:10.2±4.0**, 7°.30S**×**107°.56E, h0**^{km}**, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.3**/62**, mbtmp3.6**/4**, MS3.3**/3**, Ms1 3.3**/3**, ms1mx2.8**/34**, Error ellipse: s-maj=90.5km s-min=8.7km az=84.0, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEM	Lembang	0.47	8	Pg	Pg	14 03 19.1	-0.2
	114nm,0.3s,baz=86,slow=19,SNR=31						
LEM				Lg	Lg	14 03 26.1	
	406nm,0.3s,baz=336,slow=18,SNR=22						
PSI	Prapat	13.22	319	LR	LR	14 12 06.3	
	comp=Z,132nm,21.3s,baz=212,slow=41						
FITZ	Fitzroy Crossi	20.63	123	P	P	14 07 51.4	-0.1
	1.4nm,1.0s,baz=304,slow=7.3,SNR=2.4						
DAV	Davao City (W)	22.95	52	LR	LR	14 19 36.4	
	comp=Z,62nm,18.3s,baz=112,slow=43						
TGY	Tagaytay City	25.07	32	LR	LR	14 20 14.6	
	comp=Z,76nm,19.3s,baz=38,slow=41						
WRA	Warramunga Arr	28.85	119	P	P	14 09 10.2	-0.5
	0.4nm,0.9s,baz=294,slow=9.1,SNR=2.7						
ASAR	Alice Springs	30.07	126	P	P	14 09 21.2	-0.3
	0.5nm,1.0s,baz=300,slow=8.9,SNR=5.3						
STKA	Stephens Creek	40.03	132	P	P	14 10 48.0	+0.8
	0.6nm,0.5s,baz=295,slow=10.0,SNR=4.4						

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*IDC **26** 14:03:12.0±4.9, 36°.40N×71°.28E, h230^{km}±49^{km}, mb3.4/3, mb1 3.2/8, mb1mx2.8/65, mbtmp3.8/8, MS3.1/1, Ms1 3.1/1, ms1mx2.4/32, Error ellipse: s-maj=67.3km s-min=35.1km az=130.0*

*NEIC **26** 14:03:13.9±1.0, 36°.69N±0°.07×71°.1E±0°.1, h246^{km}±10^{km}, mb4.5/3, Error ellipse: s-maj=15.8km s-min=7.5km az=123.0*

ISC 26 14:03:14.5±1.0**, 36°.7N**±0°.1×**71°.2E**±0°.1**, h250**^{km}**, n31, σ0^{s}.87**/31**, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.42	344		Pn	14 04 00.1	-0.9
CHGR	Chuyangaron	2.55	321		Pn	14 04 00.8	-1.5
KBL	Kabul	2.75	220		Pn	14 04 02.9	-1.7
NIL	Nilore	3.46	150	Pn	Pn	14 04 12.7	+0.5
ARSB	Arslanbob	4.85	16		Pn	14 04 27.8	-0.6
AML	Almayashu	5.78	19	P	Pn	14 04 40.1	-0.1
	SNR=62						
UCH	Uchtor	6.11	24	P	Pn	14 04 44.5	+0.1
	SNR=38						
KZA	Kyzart	6.24	29	P	Pn	14 04 45.9	-0.1
	SNR=5.5						
EKS2	Erkin-Say	6.30	18	P	Pn	14 04 47.0	+0.6
	SNR=7.8						
KK31	Karatay Array	6.44	356	Pn	Pn	14 04 47.3	-0.7
KKAR	Karatay Array	6.44	356		Pn	14 04 47.2	-0.8
AAK	Ala-Archa	6.48	22	P	Pn	14 04 49.0	+0.4
	1.7nm,0.3s,baz=184,slow=6.3,SNR=37						
AAK				S	S	14 06 02.5	-1.6
	1.0nm,0.3s,baz=317,slow=22,SNR=26						
AAK	Ala-Archa	6.48	22	P	Pn	14 04 49.2	+0.6
	SNR=14						
AAK	Ala-Archa	6.48	22		Pn	14 04 48.8	+0.2
ULHL	Ulahol	6.80	34	P	Pn	14 04 52.6	-0.2
	SNR=6.7						
BOOM	Boomskoye usch	6.87	31		Pn	14 04 53.5	0.0
TKM2	Tokmak 2	7.10	27	P	Pn	14 04 56.9	+0.3
	SNR=6.9						
MAKZ	Makanchi	12.92	35	P	Pn	14 06 09.7	+0.4
MK31	Makanchi Array	13.06	36	P	Pn	14 06 11.2	+0.2
MKAR	Makanchi Array	13.06	36	P	Pn	14 06 11.3	+0.3
	0.2nm,0.3s,baz=227,slow=14,SNR=13						
MKAR	Makanchi Array	13.06	36	P	P	14 06 11.8	-0.9
KURBB	Kurchatov Arra	14.91	18	P	Pn	14 06 32.9	-0.4
	0.1nm,0.3s,baz=206,slow=11,SNR=8.7						
BVAR	Borovoye Array	16.36	358	P	Pn	14 06 50.2	-0.3
	0.4nm,0.3s,baz=167,slow=11,SNR=7.9						
WSAR	Wadi Sarin	17.23	222	LR	LR	14 14 44.6	
	comp=Z,71nm,20.2s,baz=238,slow=40						
ZALV	Zalesovo Beam	19.69	24	P	P	14 07 26.4	+1.5
	0.3nm,0.3s,baz=214,slow=10,SNR=4.2						
FINES	FINESS Array B	37.42	326	P	P	14 10 05.0	+1.6
	0.6nm,0.4s,baz=108,slow=6.2,SNR=4.1						
ARCES	ARCESS Array B	41.04	337	P	P	14 10 34.9	+1.7
	5.1nm,1.0s,baz=108,slow=8.6,SNR=1.7						
KS19	Wonju Array Si	44.62	71	P	P	14 11 02.2	0.0
KS19				IAmb	IAmb	14 12 22.2	
	comp=Z,61nm,1.9s						
TOA0	Torodi Ar. Sit	65.87	269	P	P	14 13 33.1	-0.7
TOA0				IAmb	IAmb	14 13 47.6	
	comp=Z,16nm,1.8s						
TORD	Torodi Ar. Bea	65.87	269	P	P	14 13 33.8	0.0
	comp=Z,0.6nm,0.6s,baz=53,slow=5.7,SNR=7.2						
TORD	Torodi Ar. Bea	65.87	269	P	P	14 13 33.4	-0.4

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*IDC **26** 14:31:20.0±0.9, 26°.04N×96°.78E, h0^{km}, mb3.7/9, mb1 3.8/10, mb1mx3.6/41, mbtmp3.7/10, ML4.0/1, MS3.9/3, Ms1 3.9/3, ms1mx2.9/43, Error ellipse: s-maj=44.1km s-min=14.8km az=62.0*

*NEIC **26** 14:31:25.9±2.0, 25°.93N±0°.08×96°.8E±0°.1, h50^{km}±5^{km}, mb4.1/9, Error ellipse: s-maj=19.8km s-min=9.2km az=63.0*

ISC 26 14:31:22.1±0.8**, 26°.02N**±0°.09×**96°.9E**±0°.1**, h16**^{km}**, n38, σ1^{s}.02**/34**, mb3.9**/13**, MS4.2**/3**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	Lhasa	6.24	307		Pn	14 32 56.5	+2.5
SIMRM	Sittwe	6.91	213	Pn	Pn	14 33 03.9	+1.2
CHTO	Chiang Mai	7.43	165	Pn	Pn	14 33 09.9	0.0
CMAR	Chiang Mai Arr	7.77	165	Pn	Pn	14 33 15.2	+0.6
	0.6nm,0.3s,baz=340,slow=12,SNR=9.6						
CMAR				Lg	Lg	14 35 27.3	
	0.2nm,0.3s,baz=334,slow=29,SNR=6.4						
CMAR	Chiang Mai Arr	7.77	165		Pn	14 33 15.7	+1.0
TAPN	Taplejung	8.29	281	*e*P	Pn	14 33 22.8	+0.8
	31nm,0.4s						
ODAN	Odare	8.53	278	*e*P	Pn	14 33 25.8	+0.6
	12nm,0.4s						
RAMN	Ramite	9.24	278	*e*P	Pn	14 33 35.4	+0.4
	13nm,0.4s						
JIRN	Jiri	9.67	282	*e*P	Pn	14 33 41.4	+0.4
	20nm,0.3s						
GUN	Gumba	9.97	283	*e*P	Pn	14 33 45.5	+0.4
	24nm,0.4s						
PKI	Pulchoki	10.35	281	*e*P	Pn	14 33 50.2	0.0
	16nm,0.5s						
PKIN	Phulchoki	10.36	281	*e*P	Pn	14 33 50.2	-0.1
	13nm,0.4s						
KKN	Kakani	10.48	282	*e*P	Pn	14 33 52.1	+0.1
	6.9nm,0.5s						
GKN	Gorkha	11.08	283	*e*P	Pn	14 33 59.6	-0.5
	18nm,0.3s						
DANN	Dangsing	11.89	284	*e*P	Pn	14 34 09.9	-1.4
	15nm,0.5s						
NIL	Nilore	21.81	296	P	P	14 36 13.6	-0.2
NIL				IAmb	IAmb	14 36 18.9	
	comp=Z,12nm,0.8s						
SONM	Songino Array	23.03	17	P	P	14 36 26.0	-0.6
	comp=Z,0.4nm,0.6s,baz=211,slow=8.1,SNR=2.5						
SONM	Songino Array	23.03	17	P	P	14 36 25.7	-0.9

MK31	Makanchi Array	23.74	335	P	P	14 36 34.1	+0.5
MK31				IAmb	IAmb	14 36 35.3	
	comp=Z,3.5nm,0.8s						
MKAR	Makanchi Array	23.74	335	P	P	14 36 33.4	-0.2
	comp=Z,2.9nm,0.5s,baz=142,slow=10,SNR=60						
MKAR	Makanchi Array	23.74	335	P	P	14 36 34.0	+0.4
MAKZ	Makanchi	23.88	334	P	P	14 36 34.9	0.0
MAKZ				IAmb	IAmb	14 36 36.5	
	comp=Z,6.8nm,1.2s						
PALK	Pallekele	24.18	222	LR	LR	14 48 09.8	
	comp=Z,81nm,19.4s,baz=75,slow=42						
AAK	Ala-Archa	24.70	318	P	P	14 36 44.1	+1.5
	comp=Z,1.2nm,0.7s,baz=156,slow=7.3,SNR=4.8						
AAK	Ala-Archa	24.70	318	P	P	14 36 44.2	+1.5
AAK				IAmb	IAmb	14 36 46.7	
	comp=Z,3.4nm,1.2s						
GAR	Garm	25.75	307	P	P	14 36 53.3	+1.2
GAR				IAmb	IAmb	14 36 54.8	
	comp=Z,11nm,0.7s						
KURBB	Kurchatov Arra	28.31	335	P	P	14 37 14.9	+0.1
	comp=Z,0.8nm,0.6s,baz=144,slow=9.7,SNR=7.3						
KURK	Kurchatov	28.35	335	P	P	14 37 14.9	-0.3
KURK	Kurchatov	28.35	335	IAmb	IAmb	14 37 20.4	
	comp=Z,2.1nm,0.9s						
ABKAR	Akbulak array	36.78	319	P	P	14 38 28.9	0.0
BRTR	Keskin Array B	53.81	301	P	P	14 40 43.7	-0.6
	comp=Z,0.3nm,0.4s,baz=113,slow=7.0,SNR=2.1						
AKASG	Malin Array Be	56.33	315	P	P	14 41 00.5	-1.6
	comp=Z,0.8nm,0.4s,baz=75,slow=6.1,SNR=4.3						
WRA	Warramunga Arr	58.41	138	P	P	14 41 19.2	+2.0
	comp=Z,1.1nm,0.9s,baz=328,slow=7.6,SNR=7.2						
WRAB	Tennant Creek	58.41	138	P	P	14 41 15.2	-2.0
ARCES	ARCESS Array B	59.36	337	P	P	14 41 23.9	+0.7
	comp=Z,2.4nm,0.9s,baz=97,slow=7.4,SNR=1.1						
ASAR	Alice Springs	61.03	141	P	P	14 41 35.2	0.0
	comp=Z,0.5nm,0.8s,baz=324,slow=6.5,SNR=6.5						
CTA	Charters Tower	66.33	129	LR	LR	15 11 48.4	
	comp=Z,229nm,21.8s,baz=306,slow=37						
DZM	Mont Dzumac	82.64	119	LR	LR	15 23 51.4	
	comp=Z,84nm,18.2s,baz=8.5,slow=38						

*SJA **26** 15:00:56.2±0.8, 19°.56S×71°.50W, h15^{km}±4^{km}, MD3.3*
*IDC **26** 15:01:01.5±2.0, 19°.53S×71°.02W, h0^{km}, mb3.7/2, mb1 3.7/4, mb1mx3.5/33, mbtmp3.6/4, ML3.1/2, Error ellipse: s-maj=58.9km s-min=37.6km az=52.0*
*GUC **26** 15:01:03.5±0.7, 19°.68S×71°.09W, h40^{km}±2^{km}, ML3.2*
ISC 26 15:01:02.5±1.6**, 19°.63S**±0°.03×**71°.12W**±0°.06**, h17**^{km}±9^{km}**, n36, σ1^{s}.48**/62**, 2C-1D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.94	88	*e*P	Pg	15 01 20.6	-0.2
PSGC				*i* S	Sn	15 01 32.8	-1.3
PSGCX	Pisagua	0.94	88	*i* P	Pg	15 01 20.5	-0.3
PSGCX				*i* S	Sn	15 01 33.7	-0.4
PB12	IPOC Station P	1.25	37	*e*P	Pb	15 01 26.1	+0.4
PB12				*i* S	Sg	15 01 43.3	+0.2
PB12	IPOC Station P	1.25	37	*i* P	Pb	15 01 26.2	+0.4
PB12				*i* S	Sg	15 01 44.3	+1.2
TA01	Diego Aracena	1.29	137	*e*P	Pn	15 01 25.5	-0.2
TA01				*i* S	Sb	15 01 41.2	-1.3
TA01				IAML		15 01 48.2	
	comp=E,676nm,0.5s						
PB11	IPOC Station P	1.39	96	*e*P	Pb	15 01 27.8	-0.2
PB11				*i* S	Sg	15 01 45.6	-1.7
PB11				IAML		15 01 47.3	
	comp=N,1µm,0.5s						
PB11	IPOC Station P	1.39	96	*i* P	Pb	15 01 27.8	-0.2
PB11				*i* S	Sg	15 01 46.0	-1.3
PATCX	Punta Patache	1.50	143	*e*P	Pn	15 01 28.7	0.0
PATCX				*e*S	Sb	15 01 49.4	+0.7
PATCX				IAML		15 01 58.4	
	comp=N,330nm,0.6s						
PATCX	Punta Patache	1.50	143	*i* P	Pn	15 01 28.5	-0.1
PATCX				*i* S	Sg	15 01 52.9	+2.0
GO01	Chusmiza	1.81	92	*e*P	Pb	15 01 34.5	-1.1
GO01				*i* S	Sb	15 01 57.6	-0.5
PB08	IPOC Station P	1.92	106	*e*P	Pn	15 01 35.5	+0.8
PB08				*i* S	Sb	15 02 00.0	-1.1
PB08				IAML		15 02 05.5	
	comp=N,378nm,0.3s						
PB08	IPOC Station P	1.92	106	*i* P	Pn	15 01 35.6	+0.9
PB08				*i* S	Sb	15 02 01.0	0.0
PB16	IPOC Station P	1.99	50	*e*P	Pb	15 01 37.6	-1.0
PB16				*i* S	Sb	15 02 04.0	+0.6
PB16	IPOC Station P	1.99	50	*i* P	Pb	15 01 37.8	-0.9
PB16				*i* S	Sg	15 02 05.0	-1.8
PB02	IPOC Station P	2.04	146	*e*P	Pn	15 01 36.4	+0.3
PB02				*e*S	Sn	15 01 59.7	-1.6
PB02				IAML		15 02 15.3	
	comp=E,495nm,0.4s						
PB02	IPOC Station P	2.04	146	*i* P	Pn	15 01 36.4	+0.3
PB02				*i* S	Sn	15 01 59.9	-1.4
PB01	IPOC Station P	2.08	133	*e*P	Pn	15 01 37.1	+0.4
PB01				*i* S	Sn	15 02 01.5	-0.8
PB07	IPOC Station P	2.39	151	⇑*i*P	Pn	15 01 41.2	+0.2
PB07				*e*S	Sb	15 02 16.5	+2.1
PB07				IAML		15 02 26.9	
	comp=E,201nm,0.6s						
PB07	IPOC Station P	2.39	151	*i* P	Pn	15 01 41.2	+0.2
PB07				*i* S	Sg	15 02 21.8	+2.4
PB03	IPOC Station P	2.73	152	⇑*i*P	Pn	15 01 45.7	0.0
PB03				IAML		15 02 38.9	
	comp=E,68nm,0.3s						
PB03	IPOC Station P	2.73	152	*i* P	Pn	15 01 45.8	+0.1
PB09	IPOC Station P	2.79	141	*i* P	Pn	15 01 48.0	+1.6
PB09				*i* S	Sg	15 02 33.7	+1.6
PB04	IPOC Station P	2.84	162	*e*P	Pn	15 01 46.9	-0.4
PB04				*e*S	Sb	15 02 27.0	-0.5
PB04				IAML		15 02 53.9	
	comp=N,100nm,0.3s						
PB04	IPOC Station P	2.84	162	*i* P	Pn	15 01 47.0	-0.3
PB05	IPOC Station P	3.32	165	⇓*i*P	Pn	15 01 53.2	-0.6
PB05				*e*S	Sn	15 02 28.4	-4.6
PB05				IAML		15 03 03.3	
	comp=E,42nm,0.4s						
PB05	IPOC Station P	3.32	165	*i* P	Pn	15 01 53.3	-0.6
PB05				*i* S	Sn	15 02 30.6	-2.4
PB06	IPOC Station P	3.39	155	*i* P	Pn	15 01 54.4	-0.3
LVC	Limon Verde	3.62	146	Pn	Pn	15 01 59.8	+1.7
	comp=E,1.5nm,0.3s,baz=338,slow=12,SNR=7.7						
LVC				Sn	Sn	15 02 40.3	-0.2
	comp=E,3.8nm,0.3s,baz=161,slow=16,SNR=4.3						
LVC	Limon Verde	3.62	146	*i* P	Pn	15 02 00.3	+2.2
LVC				*i* S	Sn	15 02 41.6	+1.1
PB15	IPOC Station P	3.88	157	*i* P	Pn	15 02 02.6	+1.0
PB10	IPOC Station P	3.91	172	*i* P	Pn	15 02 00.6	-1.1
PB10				*i* S	Sn	15 02 41.5	-5.7
LPAZ	La Paz	4.37	41	Pn	Pb	15 02 16.9	-2.3
	comp=E,0.5nm,0.3s,baz=246,slow=9.9,SNR=4.2						
SIV	San Ignacio	10.23	71	Pn	Pn	15 03 29.4	+0.8
	comp=E,0.1nm,0.3s,baz=250,slow=18,SNR=1.9						
TORD	Torodi Ar. Bea	78.70	72	P	P	15 13 04.4	0.0
	comp=E,0.7nm,0.7s,baz=252,slow=5.8,SNR=2.6						
YKA	Yellowknife Ar	88.75	341	P	P	15 13 56.4	+1.7
	comp=E,0.2nm,0.6s,baz=132,slow=4.9,SNR=5.2						
MKAR	Makanchi Array	145.26	33	PKPbc	PKPab	15 20 40.5	+1.4
	comp=E,0.3nm,0.7s,baz=316,slow=4.0,SNR=3.9						

IDC 26 15:09:12.1±1.2**, 2°.57N×128°.10E, h0**^{km}**, mb3.4**/4**, mb1 3.6**/5**, mb1mx3.3**/40**, mbtmp3.5**/5**, ML3.7**/1**, Error ellipse: s-maj=72.3km s-min=20.7km az=71.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.66	137	Pn	Pn	15 10 23.4	-0.4
	3.8nm,0.3s,baz=331,slow=16,SNR=5.4						
SIJI				Sn	Sn	15 11 14.1	-4.6
	1.0nm,0.3s,baz=228,slow=23,SNR=1.4						
WRA	Warramunga Arr	23.20	165	P	P	15 14 20.8	+0.1
	0.6nm,0.4s,baz=337,slow=10,SNR=4.2						
ASAR	Alice Springs	26.68	168	P	P	15 14 53.1	0.0
	0.3nm,0.5s,baz=352,slow=7.6,SNR=5.0						
ASAR				PcP	PcP	15 18 16.5	-0.6
	0.2nm,0.8s,baz=357,slow=1.9,SNR=1.8						
KSRS	Korea Array	34.72	360	P	P	15 16 02.7	-1.1
	0.2nm,0.3s,baz=176,slow=9.9,SNR=5.3						
H11S3	WAKE ISLAND Hy	40.97	65	T	T	16 00 09.9	
	baz=252,slow=74						
H11S2	WAKE ISLAND Hy	40.98	65	T	T	16 00 25.6	
	baz=252,slow=74						
H11S1	WAKE ISLAND Hy	40.98	65	T	T	16 00 26.0	
	baz=252						
H11N1	WAKE ISLAND Hy	41.54	63	T	T	16 00 45.8	
	baz=250,slow=75,SNR=27						
H11N2	WAKE ISLAND Hy	41.55	63	T	T	16 00 46.6	
	baz=250,slow=75,SNR=7.8						
H11N3	WAKE ISLAND Hy	41.56	63	T	T	16 00 47.2	
	baz=250,slow=75,SNR=16						
MKAR	Makanchi Array	59.28	325	P	P	15 19 16.7	+1.0
	0.3nm,0.6s,baz=112,slow=7.9,SNR=4.7						

IDC 26 15:20:26.4±11.0**, 0°.22N×122°.17E, h168**^{km}±110^{km}**, mb2.6**/3**, mb1 2.9**/4**, mb1mx2.7**/39**, mbtmp3.2**/4**, Error ellipse: s-maj=155.2km s-min=29.2km az=60.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	18.52	170	P	P	15 24 30.9	+0.8
	0.2nm,0.3s,baz=356,slow=7.2,SNR=2.6						
WRA	Warramunga Arr	23.32	150	P	P	15 25 19.3	-0.4
	0.1nm,0.4s,baz=324,slow=11,SNR=5.2						
ASAR	Alice Springs	26.34	155	P	P	15 25 46.9	-0.1
	0.2nm,0.6s,baz=329,slow=10.0,SNR=6.5						
ASAR				PcP	PcP	15 29 08.5	-0.1
	0.2nm,1.0s,baz=350,slow=1.5,SNR=1.1						
MKAR	Makanchi Array	57.99	329	P	P	15 30 01.5	-0.1
	0.1nm,0.4s,baz=133,slow=8.2,SNR=2.1						

KEA 26 15:23:39.9±0.0**, 40°.81N×122°.57E, h0**^{km}**, ML2.8**/1**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUJ	Sinuiju	1.63	115	Pg	Pb	15 24 10.9	+0.1
SUJ				Sg	Sg	15 24 32.0	-0.2
PYS	Pyongsong	2.96	121	Pg	Pb	15 24 34.3	+0.8
PYS				Sg	Sb	15 25 12.5	+2.2
PYAG	Pyongyang	3.01	125	Sg	Sb	15 25 13.8	+2.1
HJU	Haeju	3.69	138	Sg	Sg	15 25 35.5	-2.8
HHU	Hamhung	3.89	102	Sg	Sg	15 25 48.6	+3.8

*PGC **26** 15:32:07.0±12.0, 50°.77N×139°.00W, h10^{km}, MLSn3.8/4, Mw4.4/4, 564km Wsw of Sandspit, Bc West Of Vancouver Island*
*NEIC **26** 15:32:07.4±3.1, 50°.7N±0°.1×139°.1W±0°.2, h15^{km}±8^{km}, mb4.2/4, Mwr4.4(OTT), Error ellipse: s-maj=22.8km s-min=16.4km az=212.0*
ISC 26 15:32:07.7±1.4**, 50°.8N**±0°.1×**138°.88W**±0°.10**, h10**^{km}**, n48, σ1^{s}.71**/51**, West of Vancouver Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIB	Van Inlet	4.63	55	Pn	Pn	15 33 17.4	-0.2
VIB				Sn	Sn	15 34 09.6	-1.9
VIB	Van Inlet	4.63	55	Pn	Pn	15 33 17.4	-0.2
DIB	Dawson Inlet,	4.64	56	Pn	Pn	15 33 17.1	-0.6
DIB				Sn	Sn	15 34 09.3	-2.3
DIB	Dawson Inlet,	4.64	56	Pn	Pn	15 33 16.8	-0.9
BNB	Barry Inlet	4.78	65	Pn	Pn	15 33 19.6	-0.2
BNB				Sn	Sn	15 34 13.6	-1.7
MOBC	Moresby Island	4.88	58	Pn	Pn	15 33 21.8	+0.6
MOBC				Sn	Sn	15 34 16.3	-1.4
MOBC	Moresby Island	4.88	58	Pn	Pn	15 33 22.2	+1.0
CRAG	Craig	5.83	34	Pn	Pn	15 33 36.6	+2.5
SIT	Sitka	6.62	17	Pn	Pn	15 33 44.1	-0.8
DHAK	Deception Hill	8.33	2	Pn	Pn	15 34 09.9	+1.4
YKU2	Yakutat	8.76	357	Pn	Pn	15 34 15.4	+1.2
PNL	Peninsula	8.91	358	Pn	Pn	15 34 17.6	+1.3
PCA	Pinnacle	9.37	356	Pn	Pn	15 34 23.1	+0.5
PCA	Pinnacle	9.37	356	Pn	Pn	15 34 22.9	+0.3
YUK7	Dusty Glacier	9.78	2	Pn	Pn	15 34 30.8	+2.4
HYT	Haines Junctio	10.09	4	Pn	Pn	15 34 35.0	+2.4
HYT	Haines Junctio	10.09	4	Pn	Pn	15 34 35.0	+2.4
WHY	Whitehorse	10.15	11	Pn	Pn	15 34 36.4	+3.0
WHY	Whitehorse	10.15	11		Pn	15 34 36.4	+3.0
YUK6	Outpost Mounta	10.19	1	Pn	Pn	15 34 37.0	+3.0
TGL	Tana Glacier	10.24	349	Pn	Pn	15 34 33.4	-1.2
CTGM	Chitina Glacie	10.30	353	Pn	Pn	15 34 35.7	+0.3
CTGM	Chitina Glacie	10.30	353	Pn	Pn	15 34 35.3	-0.1
KIAG	Kiagna River	10.35	351	Pn	Pn	15 34 35.9	-0.3
YUK5	Granite Creek	10.39	3	Pn	Pn	15 34 39.7	+3.0
BARN	Barnard Glacie	10.42	353	Pn	Pn	15 34 36.7	-0.4
BALM	Baldy	10.46	351	Pn	Pn	15 34 37.3	-0.3
YUK4	Talbot Arm	10.59	1	Pn	Pn	15 34 43.2	+3.8
VRDI	Verde Repeater	10.77	348	Pn	Pn	15 34 41.1	-0.9
FID	Port Fidalgo	10.86	340	Pn	Pn	15 34 40.0	-3.0
MCARA	McCarthy VSAT	10.87	349	Pn	Pn	15 34 42.3	-0.9
GLB	Gilahina Butte	11.03	348	Pn	Pn	15 34 44.0	-1.3
YUK3	Moose Creek	11.05	356	Pn	Pn	15 34 48.0	+2.2
YUK2	White River	11.08	355	Pn	Pn	15 34 48.1	+1.9
SEW	Seward	11.09	331	Pn	Pn	15 34 47.6	+1.6
YUK1	Sand Pete Hill	11.43	356	Pn	Pn	15 34 53.0	+2.0
BVCY	Beaver Creek	11.71	355	Pn	Pn	15 34 56.5	+1.8
RC01	Rabbit Creek A	11.97	334	Pn	Pn	15 34 57.4	-0.7
SCM	Sheep Creek Mo	12.01	340	Pn	Pn	15 34 57.5	-1.3
HARP	HAARP	12.14	346	Pn	Pn	15 35 01.9	+1.4
SML	Sawmill	12.21	338	Pn	Pn	15 34 59.7	-1.8
DAWY	Dawson	13.32	359	Pn	Pn	15 35 19.1	+2.5
DAWY	Dawson	13.32	359	Pn	Pn	15 35 18.8	+2.2
VCNR	Virginia City	17.73	123	P	Pn	15 36 14.0	-0.7
VCNR				IAmb	IAmb	15 36 16.5	
	comp=Z,8.9nm,0.6s						
MDPB	Devils Postpil	19.27	125	P	P	15 36 33.2	+0.6
MDPB				IAmb	IAmb	15 36 34.0	
	comp=Z,4.0nm,0.7s						
GCMT	Greycliff	20.00	93	P	P	15 36 40.5	+0.1
NLU	North Lily Min	21.60	110	P	P	15 36 57.7	-0.1
MGMO	Mountain Grove	35.60	94	P	P	15 39 06.1	+0.8
MGMO				IAmb	IAmb	15 39 07.1	
	comp=Z,12nm,0.7s						

*NEIC **26** 15:51:40.5±1.8, 22°.3S±0°.1×178°.8E±0°.2, h577^{km}±18^{km}, mb4.3/14, Error ellipse: s-maj=30.1km s-min=13.6km az=127.0*
*IDC **26** 15:51:42.0±34.0, 22°.43S×179°.34E, h650^{km}±287^{km}, mb2.9/5, mb1 3.1/5, mb1mx2.7/40, mbtmp4.0/5, Error ellipse: s-maj=325.9km s-min=96.7km az=83.0*
ISC 26 15:51:39.8±1.1**, 22°.1S**±0°.2×**178°.7E**±0°.1**, h550**^{km}**, n22, σ1^{s}.33**/21**, mb4.1**/12**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.37	352	P	P	15 53 02.9	-1.8
NIUE	Niue	11.05	76	P	P	15 54 09.1	+0.4
KNTN	Kanton	21.33	27	P	P	15 55 49.0	+1.0
CTA	Charters Tower	30.32	268	P	P	15 57 09.4	+2.3
	2.7nm,0.8s,baz=98,slow=13,SNR=8.6						
PMG	Port Moresby	32.79	288	P	P	15 57 29.4	+1.1
STKA	Stephens Creek	34.34	246	P	P	15 57 40.8	-0.3
	1.0nm,0.5s,baz=75,slow=12,SNR=4.2						
STKA	Stephens Creek	34.34	246	P	P	15 57 41.2	+0.1
COEN	Coen	34.68	277	P	P	15 57 46.7	+2.5
COEN				IAmb	IAmb	15 58 03.6	
	comp=Z,21nm,1.6s						
BBOO	Buckleboo	39.10	245	P	P	15 58 17.6	-2.6
WR0	Warramunga Arr	41.18	265	P	P	15 58 36.2	-0.8
WR0				IAmb	IAmb	15 59 49.9	
	comp=Z,23nm,1.9s						
AS31	Alice Springs	41.19	259	P	P	15 58 37.0	-0.1
ASAR	Alice Springs	41.19	259	P	P	15 58 37.1	0.0
	comp=Z,2.8nm,0.8s,baz=100,slow=7.8,SNR=42						
ASAR	Alice Springs	41.19	259	P	P	15 58 36.6	-0.5
WB0	Warramunga Arr	41.35	265	P	P	15 58 37.9	-0.5
WB0				IAmb	IAmb	16 00 10.5	
	comp=Z,15nm,1.8s						
WB2	Warramunga Arr	41.36	265	P	P	15 58 38.1	-0.3
WB2				IAmb	IAmb	16 00 13.8	
	comp=Z,12nm,1.5s						
WRAB	Tennant Creek	41.36	265	P	P	15 58 37.2	-1.3
WRA	Warramunga Arr	41.37	265	P	P	15 58 38.4	-0.2
	comp=Z,1.7nm,0.7s,baz=99,slow=7.7,SNR=28						
WRA	Warramunga Arr	41.37	265	P	P	15 58 36.7	-1.8
MTN	Manton Dam	46.15	273	P	P	15 59 14.6	-1.0
MTN				IAmb	IAmb	16 00 25.4	
	comp=Z,11nm,1.6s						
KNRA	Kununurra	47.52	269	P	P	15 59 25.3	-0.6
KNRA				IAmb	IAmb	16 01 11.2	
	comp=Z,12nm,1.4s						
FITZ	Fitzroy Crossi	49.80	265	P	P	15 59 42.2	-0.6
FITZ				IAmb	IAmb	16 00 37.7	
	comp=Z,11nm,1.8s						
CMAR	Chiang Mai Arr	87.78	291	P	P	16 03 27.5	-3.6
	comp=Z,0.2nm,0.6s,baz=121,slow=3.3,SNR=4.6						

*AEIC **26** 15:59:38±2.5, 51°.2N±0°.1×179°.24E±0°.07, h27^{km}±5^{km}, ML3.6/16, mb4.1/45(NEIC), Error ellipse: s-maj=16.6km s-min=6.5km az=178.0*
*NEIC **26** 15:59:42.2±1.6, 51°.2N±0°.1×179°.53E±0°.08, h60^{km}±7^{km}, Error ellipse: s-maj=16.0km s-min=6.8km az=173.0*
*IDC **26** 15:59:43.9±5.1, 51°.24N×179°.62E, h74^{km}±46^{km}, mb3.6/17, mb1 3.7/19, mb1mx3.5/57, mbtmp3.9/19, ML2.8/2, MS3.2/3, Ms1 3.2/3, ms1mx2.7/49, Error ellipse: s-maj=25.5km s-min=13.1km az=165.0*
ISC 26 15:59:41.4±0.7**, 51°.2N**±0°.1×**179°.42E**±0°.04**, h48**^{km}**, n104, σ1^{s}.45**/109**, mb4.0**/28**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TASE	Tanaga Southea	1.70	68		Pn	16 00 07.9	-0.8
TAFP	Tanaga Falls P	1.76	66		Pn	16 00 09.4	0.0
TAFP					Sn	16 00 32.5	+1.8
TAPA	Tanaga Point A	1.83	70		Pn	16 00 08.9	-1.5
KIMD	Kanaga Island	2.16	74		Pn	16 00 15.0	+0.1
KIMD					Sn	16 00 42.6	+2.1
KIKV	Kanaga Island	2.23	71		Pn	16 00 16.1	+0.2
ADK	Adak	2.52	73		Pn	16 00 18.3	-1.6
GSTD	Great Sitkin T	2.89	71		Pn	16 00 24.9	-0.1
GSTD					Sn	16 00 59.6	+1.2
GSMY	Great Sitkin M	2.94	72		Pn	16 00 25.1	-0.5
GSTR	Great Sitkin T	2.95	71		Pn	16 00 25.3	-0.5
SMY	Shemya	3.62	297	Pn	Pn	16 00 36.3	+1.4
SMY	Shemya	3.62	297		Sn	16 01 14.4	-1.9
ATKA	Atka Island	4.09	74		Pn	16 00 40.3	-1.0
KOFP	Korovin Flat P	4.17	73		Pn	16 00 42.2	-0.3
NIKH	Nikolski High	7.43	72	Pn	Pn	16 01 27.9	+0.7
SPIA	Saint Paul Isl	8.50	41	Pn	Pn	16 01 42.8	+1.1
UNV	Unalaska Valle	8.97	67	Pn	Pn	16 01 48.1	-0.2
PETK	Petropavlovsk-	13.46	287	P	Pn	16 02 51.4	+1.8
	0.1nm,0.3s,baz=90,slow=13,SNR=3.8						
PETK				S	Sn	16 05 10.5	-7.0
	baz=300,slow=39,SNR=1.8						
PETK				LR	LR	16 07 47.0	
	comp=Z,46nm,21.4s,baz=62,slow=36						
CHGN	Chignik	14.04	60	Pn	Pn	16 02 56.6	-0.7
ANM	Nome	15.56	25	P	P	16 03 20.4	-0.5
SVW2	Sparrevohn	16.97	45	P	P	16 03 36.6	+0.2
OHAK	Old Harbor	16.98	59	Pn	Pn	16 03 31.6	-3.6
OHAK				IAmb	IAmb	16 03 37.1	
	comp=Z,9.5nm,0.8s						
KDAK	Kodiak Island	17.45	57	P	Pn	16 03 36.9	-4.1
	comp=Z,0.6nm,0.3s,baz=175,slow=6.9,SNR=16						
KDAK	Kodiak Island	17.45	57	Pn	Pn	16 03 38.1	-2.9
RSO	Redoubt South	18.03	48	P	Pn	16 03 49.0	+0.7
MA2	Magadan	18.17	309	LR	LR	16 10 18.2	
	comp=Z,30nm,18.3s,baz=118,slow=35						
CNPM	China Poot	18.50	52	P	P	16 03 53.4	+0.1
CNPM				IAmb	IAmb	16 04 07.9	
	comp=Z,14nm,1.2s						
SEY	Seymchan	18.63	319	P	Pn	16 03 57.0	+1.6
	comp=Z,0.1nm,0.3s,baz=247,slow=23,SNR=7.4						
BRLK	Bradley Lake	18.73	51	P	P	16 03 56.0	+0.1
PPLA	Purkeypile	19.17	42	Pn	Pn	16 04 01.9	-0.2
PPLA				IAmb	IAmb	16 04 08.8	
	comp=Z,5.9nm,0.6s						
SEW	Seward	19.51	51	P	P	16 04 04.7	+0.4
KTH	Kantishna Hill	19.96	40	P	P	16 04 09.6	+0.2
KTH				IAmb	IAmb	16 04 25.1	
	comp=Z,8.9nm,0.8s						
IMAR	Indian Mountai	20.10	33	P	P	16 04 11.0	+0.2
BPAW	Bear Paw Mtn.	20.17	39	P	P	16 04 11.8	+0.2
TRF	Thorofare Moun	20.18	41	P	P	16 04 11.6	-0.3
GHO	Glory Hole Cre	20.20	46	P	P	16 04 09.9	-2.0
GHO				IAmb	IAmb	16 04 44.5	
	comp=Z,13nm,1.4s						
KNK	Knik Glacier	20.31	47	P	P	16 04 12.1	-1.0
KNK				IAmb	IAmb	16 04 45.6	
	comp=Z,11nm,1.4s						
SML	Sawmill	20.48	46	P	P	16 04 14.1	-0.9
SML				IAmb	IAmb	16 04 14.9	
	comp=Z,4.6nm,0.8s						
MLY	Manley	20.69	37	P	P	16 04 17.4	+0.3
RND	Reindeer	20.77	42	P	P	16 04 19.0	+1.0
RND				IAmb	IAmb	16 04 50.6	
	comp=Z,7.5nm,1.3s						
SCM	Sheep Creek Mo	20.94	47	P	P	16 04 18.0	-2.0
SCM				IAmb	IAmb	16 04 54.4	
	comp=Z,6.6nm,0.8s						
HIN	Hinchinbrook I	21.01	51	P	P	16 04 19.7	-0.9
FID	Port Fidalgo	21.09	50	P	P	16 04 19.7	-1.8
DHY	Denali Highway	21.28	43	P	P	16 04 22.5	-1.2
DHY				IAmb	IAmb	16 04 30.9	
	comp=Z,5.2nm,0.7s						
WRH	Wood River Hil	21.48	39	P	P	16 04 24.3	-1.2
MDM	Murphy Dome	21.62	38	P	P	16 04 26.6	-0.5
MDM				IAmb	IAmb	16 04 52.2	
	comp=Z,5.9nm,0.8s						
CCB	Clear Creek Bu	21.66	39	P	P	16 04 27.2	-0.2
RAGM	Ragged Mountai	21.90	51	P	P	16 04 30.1	-0.1
HDA	Harding Lake	21.91	40	P	P	16 04 30.0	-0.2
HDA				IAmb	IAmb	16 04 52.8	
	comp=Z,11nm,1.4s						
IL31		22.07	39	P	P	16 04 31.6	-0.2
ILAR	Eielson Array	22.07	39	P	P	16 04 30.9	-1.0
	comp=Z,0.7nm,0.7s,baz=242,slow=9.3,SNR=11						
ILAR	Eielson Array	22.07	39	P	P	16 04 32.0	+0.1
GLB	Gilahina Butte	22.49	49	P	P	16 04 35.0	-1.6
VRDI	Verde Repeater	22.63	49	P	P	16 04 35.7	-2.4
VRDI				IAmb	IAmb	16 05 13.2	
	comp=Z,10nm,1.4s						
MCARA	McCarthy VSAT	22.86	49	P	P	16 04 40.1	-0.2
MCARA				IAmb	IAmb	16 05 20.9	
	comp=Z,9.3nm,1.3s						
TOLK	Toolik Lake Re	22.94	29	P	P	16 04 40.9	-0.3
TOLK				IAmb	IAmb	16 04 41.7	
	comp=Z,4.1nm,0.6s						
BALM	Baldy	23.13	50	P	P	16 04 42.2	-1.0
BALM				IAmb	IAmb	16 05 38.1	
	comp=Z,7.3nm,1.4s						
BARN	Barnard Glacie	23.46	50	P	P	16 04 45.1	-1.4
BARN				IAmb	IAmb	16 05 18.9	
	comp=Z,6.2nm,1.1s						
CTGM	Chitina Glacie	23.61	50	P	P	16 04 46.7	-1.1
CTGM				IAmb	IAmb	16 04 58.8	
	comp=Z,14nm,1.3s						
BCAR	Beaver Creek A	23.74	45	P	P	16 04 47.5	-1.4
BMAR	Burnt Mountain	23.99	34	P	P	16 04 50.7	-0.4
EGAK	Eagle	24.40	41	P	P	16 04 54.7	-0.2
HYT	Haines Junctio	25.46	51	P	P	16 05 04.6	-0.1
JKA	Kamikawa-asahi	25.58	268	P	P	16 05 07.6	+1.8
ASAJ	Asahikawa	25.59	268	P	P	16 05 07.6	+1.8
	comp=Z,3.4nm,0.7s,baz=101,slow=8.9,SNR=6.9						
KLR	Kul'dur	30.15	285	P	P	16 05 47.5	+1.0
	comp=Z,5.0nm,0.6s,baz=65,slow=8.7,SNR=20						
YKA	Yellowknife Ar	36.15	46	P	P	16 06 37.4	-1.2
	comp=Z,0.6nm,0.4s,baz=279,slow=7.8,SNR=12						
KS19	Wonju Array Si	38.53	270	P	P	16 06 58.5	-0.6
KSAR	Wonju Array Be	38.55	270	P	P	16 06 58.1	-1.1
MCMT	McKenzie Canyo	44.29	71	P	P	16 07 45.3	-1.1
YHL	Hebgen Lake	45.26	70	P	P	16 07 53.7	-0.5
YHH	Holmes Hill	45.49	70	P	P	16 07 55.5	-0.6
SONM	Songino Array	45.71	296	P	P	16 07 59.3	+1.7
	comp=Z,1.2nm,0.8s,baz=57,slow=9.1,SNR=9.3						
SONM	Songino Array	45.71	296	P	P	16 07 58.4	+0.8
HHC	Hu-ho-hao-te	46.65	285	*e*P	P	16 08 02.5	-2.5
BW06	Boulder Array	47.42	71	P	P	16 08 10.3	-0.8
BW06				IAmb	IAmb	16 09 44.5	
	comp=Z,1.5nm,0.9s						
PD31	Pinedale Array	47.42	71	P	P	16 08 10.4	-0.8
PDAR	Pinedale Array	47.42	71	P	P	16 08 10.7	-0.5
	comp=Z,1.7nm,0.6s,baz=311,slow=3.1,SNR=15						
PDAR	Pinedale Array	47.42	71	P	P	16 08 10.2	-0.9
SPA0	Spitsbergen Ar	50.45	356	P	P	16 08 33.2	-0.4
SPITS	Spitsbergen Ar	50.45	356	P	P	16 08 33.5	-0.1
	comp=Z,5.1nm,0.4s,baz=30,slow=6.8,SNR=62						
PV13	Radium Mtn., P	50.69	75	P	P	16 08 35.4	-0.8
LZH	Lanzhou	54.35	285	*e*P	P	16 09 03.3	+0.1
LZH				pP	pP	16 09 09.0	-7.4
LZH				sP	sP	16 09 12.5	-9.4
LZH				PP	PP	16 11 07.5	+2.2

ARCES	ARCESS Array B	58.05	349	P	P	16 09 28.1	-0.8
	comp=Z,3.7nm,0.9s,baz=19,slow=5.7,SNR=3.5						
WMQ	Urumqi	58.48	302	*e*P	P	16 09 33.5	+1.1
MK31	Makanchi Array	59.25	308	P	P	16 09 37.2	-0.5
MKAR	Makanchi Array	59.25	308	P	P	16 09 37.8	+0.1
	comp=Z,1.1nm,0.3s,baz=52,slow=6.2,SNR=38						
MKAR	Makanchi Array	59.25	308	P	P	16 09 37.5	-0.2
MAKZ	Makanchi	59.40	308	P	P	16 09 38.6	-0.1
MAKZ				IAmb	IAmb	16 09 39.5	
	comp=Z,1.4nm,0.7s						
TXAR	Lajitas Array	59.78	80	P	P	16 09 41.0	-0.6
	comp=Z,0.3nm,0.5s,baz=318,slow=8.1,SNR=4.5						
BRVK	Borovoye	60.30	319	P	P	16 09 45.7	+1.0
SCHQ	Schefferville	60.81	37	P	P	16 09 46.8	-1.5
	comp=Z,2.4nm,1.0s,baz=340,slow=12,SNR=2.3						
FINES	FINESS Array B	65.68	346	P	P	16 10 19.4	-0.8
	comp=Z,1.2nm,0.9s,baz=60,slow=7.5,SNR=1.3						
ABKAR	Akbulak array	67.38	322	P	P	16 10 31.8	+0.5
KSH	Kashi	67.69	306	P	P	16 10 36.0	+2.4
KSH				pP	pP	16 10 44.5	-2.6
KSH				PP	PP	16 13 07.0	+4.2
KSH				PcS		16 15 05.5	
KSH				S	S	16 19 30.3	+2.9
NB2	NORSAR Subarra	67.69	354	P	P	16 10 32.9	-0.2
	comp=Z,1.4nm,0.8s,baz=8.0,slow=6.5						
NOA	NORSAR Array B	67.69	354	P	P	16 10 33.0	-0.2
	comp=Z,1.4nm,0.6s,baz=7.9,slow=6.3,SNR=5.9						
CMAR	Chiang Mai Arr	69.91	275	P	P	16 10 48.0	+0.4
	comp=Z,0.4nm,0.5s,baz=27,slow=7.0,SNR=4.8						
GAR	Garm	70.92	309	P	P	16 10 54.5	+0.9
CHGR	Chuyangaron	71.75	309	P	P	16 10 59.4	+0.9
NIL	Nilore	73.58	303	P	P	16 11 09.3	-0.1
AKASG	Malin Array Be	75.34	341	P	P	16 11 18.9	-0.4
	comp=Z,0.2nm,0.3s,baz=25,slow=5.9,SNR=2.1						
GEYT	Alibeck	77.44	316	LR	LR	16 47 40.1	
	comp=Z,72nm,19.5s,baz=10.0,slow=37						
WRA	Warramunga Arr	81.13	222	P	P	16 11 50.7	-0.9
	comp=Z,0.2nm,0.8s,baz=32,slow=6.1,SNR=2.1						
FITZ	Fitzroy Crossi	83.49	231	P	P	16 12 03.9	0.0
	comp=Z,0.4nm,0.5s,baz=31,slow=6.0,SNR=1.5						

MAN 26 16:05:22.5, 19°.28N×121°.20E, h21km, mb4.9, ML3.8, MS3.8, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGCP	Mt. Cagua	1.31	142	*e*P	Pb	16 05 46.2	-0.1
SGCP				*e*S	Sb	16 06 02.9	+0.2
BBP	Basco	1.36	32	*e*P	Pn	16 05 46.0	-0.2
APYP	Conner	1.41	178	*e*P	Pn	16 05 47.2	+0.2
APYP				*e*S	Sn	16 06 04.8	-0.1
SIPP	Brgy, Tapao	1.52	208	⇑*e*P	Pn	16 05 47.8	-0.7
SIPP				*e*S	Sb	16 06 09.2	+0.3
ABRA	Dolores	1.69	196	*e*P	Pn	16 05 50.0	-0.7
ABRA				*e*S	Sb	16 06 13.6	0.0
CAUP	Cauayan	2.40	166	*e*P	Pb	16 06 04.4	-0.6
CAUP				*e*S	Sb	16 06 45.9	+12
BOLP	Bolinao	3.13	203	*e*P	Pn	16 06 11.2	+0.5
SMPP	San Manuel, Pa	3.15	189	*e*P	Pn	16 06 10.9	-0.1
SMPP				*e*S	Sn	16 06 49.7	+1.8

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*JMA **26** 16:12:04.0, 23°.25N×121°.55E, h0km, M3.4*
*ASIES **26** 16:12:06.5, 23°.29N×121°.38E, h18km, MW3.2*
*TAP **26** 16:12:06.5, 23°.30N×121°.41E, h17km, ML3.7, C*

ISC 26 16:12:06.7±0.9, 23°.29N±0°.01×121°.47E±0°.02, h16km±7km, n138, σ1s.07/241, 22C-7D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWF1	Yuli	0.17	293	⇓*i*P	Pb	16 12 10.6	-0.8
	baz=302						
TWF1				*e*S	Sb	16 12 13.8	-0.8
	baz=302						
FULB	Fuli	0.18	241	⇑*i*P	Pb	16 12 11.0	-0.7
	baz=217						
FULB				S	Sb	16 12 14.4	-0.5
	baz=217						
YULB	Yu-li	0.19	304	⇓*i*P	Pb	16 12 10.9	-0.8
	baz=314						
YULB				S	Sb	16 12 14.3	-0.8
	baz=314						
CHKT	Chengkung	0.21	206	⇑*i*P	Pb	16 12 12.0	-0.1
	baz=179						
CHKT				S	Sg	16 12 15.8	+1.0
	baz=179						
HGSD	Ruisui	0.21	349	⇑*i*P	Pb	16 12 11.7	-0.4
	baz=14						
HGSD				S	Sb	16 12 15.1	-0.7
	baz=14						
EHY	Hungye	0.26	329	⇓*i*P	Pb	16 12 12.3	-0.6
	baz=335						
EHY				S	Sb	16 12 16.2	-0.8
	baz=335						
EGFH	Guangfu	0.38	355	*e*P	Pg	16 12 14.6	0.0
	baz=353						
EGFH				*e*S	Sb	16 12 21.1	+0.4
	baz=353						
ELDTW	Lidau	0.42	257	⇑*i*P	Pg	16 12 14.2	-1.1
	baz=253						
ELDTW				*e*S	Sg	16 12 19.0	-2.2
	baz=253						
YUS	Yu-Shan	0.51	293	⇓*i*P	Pg	16 12 16.3	-0.8
	baz=297						
YUS				S	Sg	16 12 22.6	-1.5
	baz=297						
ESL	Shilin	0.53	357	P	Pb	16 12 16.6	-0.9
	baz=357						
ESL				*e*S	Sg	16 12 25.3	+1.1
	baz=357						
VWDT	VWDT	0.55	327	⇑*i*P	Pb	16 12 17.2	-0.7
	baz=343						
VWDT				*e*S	Sb	16 12 24.3	-1.3
	baz=343						
TWH	Lutao	0.57	179	*e*P	Pb	16 12 18.0	-0.3
	baz=171						
TWH				*e*S	Sb	16 12 26.5	+0.3
	baz=171						
TWGBT	Beinan	0.59	217	⇑*i*P	Pb	16 12 17.1	-1.4
	baz=211						
TWGBT				*e*S	Sb	16 12 24.5	-2.1
	baz=211						
TWG	Pinlang	0.59	218	⇑*i*P	Pb	16 12 17.1	-1.5
	baz=211						
TWG				*e*S	Sb	16 12 25.2	-1.5
	baz=211						
TTN	Taitung	0.61	209	*e*P	Pb	16 12 18.6	-0.3
	baz=216						
TTN				*e*S	Sg	16 12 28.1	+1.4
	baz=216						
ENLB	Shoufeng	0.63	11	*e*P	Pb	16 12 18.4	-0.8
	baz=27						
ENLB				*e*S	Sn	16 12 29.7	-0.9
	baz=27						
ALS	Alishan	0.65	290	⇓*i*P	Pb	16 12 18.8	-1.0
	baz=293						
ALS				*e*S	Sb	16 12 27.4	-1.3
	baz=293						
STYT	Tauyuan	0.66	259	P	Pb	16 12 18.6	-1.3
	baz=257						
STYT				*e*S	Sb	16 12 26.8	-2.1
	baz=257						
SSLB	Suanglung	0.68	317	⇑*i*P	Pb	16 12 19.0	-1.2
	baz=322						
SSLB				S	Sb	16 12 27.3	-2.2
	baz=322						
WHYT	Xinyi Township	0.69	306	P	Pb	16 12 19.9	-0.6
	baz=315						
WHYT				*e*S	Sb	16 12 28.5	-1.3
	baz=315						
HWA	Hwalien	0.70	11	*e*P	Pg	16 12 21.4	+1.0
	baz=26						
HWA				*e*S	Sn	16 12 31.4	-1.0
	baz=26						
OWD	Renai	0.71	338	P	Pb	16 12 19.7	-1.1
	baz=345						
OWD				*e*S	Sb	16 12 28.6	-2.0
	baz=345						
TPUB	Ta-pu	0.77	271	⇑*i*P	Pb	16 12 20.9	-0.7
	baz=278						
TPUB				*e*S	Sb	16 12 31.1	-0.8
	baz=278						
WTP	Ta-pu	0.78	267	P	Pb	16 12 21.2	-0.7
	baz=266						
WTP				*e*S	Sb	16 12 31.6	-0.7
	baz=266						
CHN5	Tsauling	0.79	293	⇓*i*P	Pb	16 12 21.8	-0.3
	baz=296						
CHN5				*e*S	Sb	16 12 32.3	-0.2
	baz=296						
SMLT	Sun Moon Lake	0.79	319	⇑*i*P	Pb	16 12 21.2	-0.9
	baz=331						
SMLT				*e*S	Sb	16 12 31.4	-1.1
	baz=331						
TWD	Chiawan	0.80	9	*e*P	Pb	16 12 21.2	-1.0
	baz=3.0						
TWD				*e*S	Sg	16 12 33.7	+0.9
	baz=3.0						
CHN4	Tsaushan	0.80	275	⇑*i*P	Pb	16 12 21.9	-0.4
	baz=275						
CHN4				*e*S	Sb	16 12 32.4	-0.5
	baz=275						
SLGT	Liugui	0.81	249	⇑*i*P	Pb	16 12 21.4	-0.9
	baz=246						
SLGT				*e*S	Sb	16 12 31.5	-1.5
	baz=246						
CHGB	Renai	0.81	341	*e*P	Pb	16 12 21.8	-0.8
	baz=347						
CHGB				*e*S	Sg	16 12 34.6	+1.2
	baz=347						
TYC	Yuchr	0.83	318	⇑*i*P	Pb	16 12 21.9	-0.8
	baz=333						
TYC				*e*S	Sb	16 12 32.7	-0.9
	baz=333						
ECL	Taimali	0.83	215	⇑*i*P	Pb	16 12 20.4	-2.3
	baz=209						
ECL				*e*S	Sb	16 12 31.6	-2.1
	baz=209						
SGST	Jiashian	0.84	256	⇑*i*P	Pb	16 12 21.2	-1.6
	baz=254						
SGST				*e*S	Sb	16 12 33.0	-0.8
	baz=254						
WJS	Zhushan	0.86	308	⇑*i*P	Pb	16 12 23.4	+0.2
	baz=323						
WJS				*e*S	Sg	16 12 35.8	+1.0
	baz=323						
CHN1	Nanshi	0.87	263	*i* P	Pb	16 12 23.1	-0.3
	baz=263						
CHN1				*e*S	Sb	16 12 34.0	-0.8
	baz=263						
WHF	Hehuan Shan	0.87	348	P	Pb	16 12 22.4	-1.3
	baz=6.0						
WHF				*e*S	Sg	16 12 36.0	+0.7
	baz=6.0						
NACB	Ninganchiao	0.89	8	*e*P	Pb	16 12 22.0	-1.7
	baz=13						
NACB				*e*S	Sb	16 12 34.5	-0.9
	baz=13						
DPDB	Guoxing	0.89	326	⇑*i*P	Pb	16 12 23.1	-0.7
	baz=341						
DPDB				*e*S	Sb	16 12 34.4	-1.1
	baz=341						
SNST	Tainan City	0.89	266	*e*P	Pb	16 12 23.4	-0.4
	baz=266						
SNST				*e*S	Sb	16 12 34.6	-0.9
	baz=266						
TWK	Hsinying	0.90	269	P	Pb	16 12 23.4	-0.5
	baz=269						
TWK				*e*S	Sb	16 12 34.7	-1.0
	baz=269						
ETLH	Xiulin Townshi	0.92	1	*e*P	Pb	16 12 22.7	-1.5
	baz=5.0						
WGK	Gukeng	0.92	296	⇑*i*P	Pb	16 12 24.4	+0.2
	baz=299						
WGK				*e*S	Sn	16 12 38.0	+0.2
	baz=299						
WNT	Mingjian	0.93	310	⇑*i*P	Pb	16 12 24.6	+0.2
	baz=314						
WNT				*e*S	Sg	16 12 37.4	+0.5
	baz=314						
SSD	Sandimen	0.94	235	*i* P	Pb	16 12 22.9	-1.6
	baz=226						
WDLH	Douliu	0.94	295	⇑*i*P	Pb	16 12 24.7	+0.1
	baz=298						
WDLH				*e*S	Sg	16 12 38.4	+1.1
	baz=298						
CHN2	Minshiung	0.94	285	*e*P	Pb	16 12 24.6	0.0
	baz=287						
CHN2				*e*S	Sn	16 12 39.0	+0.7
	baz=287						
CHY	Chiayi	0.98	283	⇑*i*P	Pb	16 12 25.1	-0.1
	baz=284						
CHY				*e*S	Sb	16 12 38.9	+1.0
	baz=284						
TWT	Tachien	1.00	345	*e*P	Pb	16 12 24.7	-1.0
	baz=342						
TWT				*e*S	Sb	16 12 37.1	-1.6
	baz=342						
TDCB	Techi	1.00	344	*e*P	Pb	16 12 25.0	-0.7
	baz=348						
MASBT	Mashibuluo	1.02	229	*i* P	Pb	16 12 24.2	-1.7
	baz=221						
MASBT				*e*S	Sb	16 12 38.3	-0.8
	baz=221						
CHN3	Shinhua	1.03	258	P	Pg	16 12 27.3	+0.6
	baz=269						
CHN3				*e*S	Sg	16 12 42.6	+2.4
	baz=269						
SGLT	Jiouru	1.06	238	*e*P	Pb	16 12 26.8	+0.2
	baz=235						
EAST	Anshuo	1.06	212	*e*P	Pb	16 12 24.4	-2.3
	baz=210						
TWM1	Shoushan	1.07	245	*e*P	Pn	16 12 27.5	+0.5
	baz=242						
TWM1				*e*S	Sg	16 12 43.2	+1.9
	baz=242						
WLGB	Puzi	1.09	280	*e*P	Pn	16 12 26.9	-0.3
	baz=281						
WLGB				*e*S	Sn	16 12 42.0	+0.1
	baz=281						
WHP	Taichung City	1.09	334	*e*P	Pn	16 12 26.7	-0.7
	baz=346						
WHP				*e*S	Sb	16 12 41.8	+0.4
	baz=346						
TCU	Taichung	1.12	320	*e*P	Pb	16 12 28.1	+0.4
	baz=324						
TCU				*e*S	Sg	16 12 43.9	+0.9
	baz=324						
NNSB	Datong	1.14	356	*i* P	Pn	16 12 26.7	-1.3
	baz=13						
NNSB				*e*S	Sb	16 12 41.7	-1.0
	baz=13						
NNSH	Datong	1.14	356	P	Pn	16 12 26.7	-1.3
	baz=13						
NNSH				*e*S	Sb	16 12 41.7	-1.0
	baz=13						
WCHH	Zhanghua	1.15	314	*e*P	Pn	16 12 27.8	-0.3
	baz=317						
WCHH				*e*S	Sb	16 12 43.2	+0.5
	baz=317						
NNS	Nan Shan	1.15	356	*e*P	Pn	16 12 27.0	-1.2
	baz=13						
NNS				*e*S	Sb	16 12 42.0	-1.0
	baz=13						
SSPT	Xinbi	1.15	226	*e*P	Pn	16 12 27.1	-0.9
	baz=218						
CHN8	Yiju	1.16	273	*e*P	Pn	16 12 28.2	0.0
	baz=274						
CHN8				*e*S	Sg	16 12 45.1	+1.0
	baz=274						
ENA	Nanau	1.16	12	*e*P	Pn	16 12 26.6	-1.7
	baz=5.0						
ENA				*e*S	Sb	16 12 42.5	-0.8
	baz=5.0						
SNJT	Kaohsiung City	1.17	243	*e*P	Pg	16 12 29.8	+0.5
	baz=241						
SNJT				*e*S	Sg	16 12 48.9	+4.4
	baz=241						
SCLT	Jiali	1.18	265	*e*P	Pn	16 12 28.9	+0.5
	baz=265						
SCLT				*e*S	Sg	16 12 45.8	+1.0
	baz=265						
RLNB	Erlin	1.18	301	*e*P	Pn	16 12 28.8	+0.3
	baz=304						
RLNB				*e*S	Sg	16 12 45.7	+0.8
	baz=304						
WSF	Szhu	1.19	287	*i* P	Pn	16 12 28.5	-0.2
	baz=289						
WSF				S	Sn	16 12 45.3	+0.7
	baz=289						
SCZT	Fangliau	1.20	221	*e*P	Pn	16 12 27.6	-1.2
	baz=211						
SCZT				*e*S	Sn	16 12 45.0	+0.4
	baz=211						
WTCT	Ta-ch'eng	1.23	298	*e*P	Pn	16 12 29.0	-0.2
	baz=301						
WTCT				*e*S	Sn	16 12 46.1	+0.6
	baz=301						
TWQ1	Liyutan	1.23	329	*i* P	Pb	16 12 29.9	+0.3
	baz=334						
TWQ1				*e*S	Sg	16 12 47.8	+1.2
	baz=334						
WSSB	Gushan	1.28	240	*e*P	Pg	16 12 32.0	+0.6
	baz=239						
WSSB				*e*S	Sg	16 12 49.1	+0.9
	baz=239						
NSY	Sanyi	1.30	330	*e*P	Pn	16 12 29.9	-0.2
	baz=335						
NSY				*e*S	Sg	16 12 49.1	+0.6
	baz=335						
WDJ	Dajia District	1.30	325	*e*P	Pn	16 12 30.6	+0.5
	baz=329						
WDJ				*e*S	Sg	16 12 49.8	+1.1
	baz=329						
NDT	Datong Townshi	1.31	2	*e*P	Pn	16 12 29.4	-0.9
	baz=7.0						
NDT				*e*S	Sn	16 12 46.7	-0.8
	baz=7.0						
PTSB	Yuanli	1.35	329	*e*P	Pb	16 12 32.3	+0.7
	baz=333						
PTSB				*e*S	Sg	16 12 50.8	+0.6
	baz=333						
ENTT	Nioudou	1.35	4	*e*P	Pn	16 12 29.6	-1.3
	baz=8.0						
TWC	Suao	1.36	15	*e*P	Pn	16 12 30.6	-0.4
	baz=6.0						
TWC				*e*S	Sb	16 12 49.7	+0.8
	baz=6.0						
WLCH	Liuqiu	1.37	227	*e*P	Pb	16 12 33.1	+1.2
	baz=226						
WLCH				*e*S	Sg	16 12 53.5	+2.6
	baz=226						
YHNB	Yeheng	1.38	357	*e*P	Pn	16 12 30.8	-0.6
	baz=16						
YHNB				*e*S	Sn	16 12 48.3	-1.0
	baz=16						
TWP	Hsiaoliuchiu	1.38	228	*e*P	Pg	16 12 33.7	+0.4
	baz=226						
TWP				*e*S	Sg	16 12 53.0	+1.7
	baz=226						
NSK	Sanguang	1.39	356	*e*P	Pn	16 12 31.2	-0.3
	baz=1.0						
NSK				*e*S	Sn	16 12 49.5	+0.1
	baz=1.0						
NMLH	Miaoli	1.39	334	*e*P	Pb	16 12 32.3	0.0
	baz=353						
NMLH				*e*S	Sg	16 12 51.4	-0.1
	baz=353						
EOS1	EOS1	1.40	26	*e*P	Pb	16 12 32.3	0.0
	baz=41						
NSTT	Nanjuang	1.40	342	*e*P	Pn	16 12 31.9	+0.3
	baz=346						
NSTT				*e*S	Sb	16 12 50.4	+0.2
	baz=346						
LIOB	Emei	1.41	343	*i* P	Pb	16 12 32.6	-0.1
	baz=346						
TWE	Neicheng	1.44	7	P	Pn	16 12 31.4	-0.7
	baz=11						
HEN	Hengchun	1.44	208	*e*P	Pn	16 12 32.5	+0.4
	baz=197						
SLBB	Yuanshan	1.47	6	*e*P	Pn	16 12 30.5	-2.0
	baz=10.0						
TWK1	Hengchun	1.47	205	*e*P	Pn	16 12 31.7	-0.8
	baz=193						
TWKBT	Hengchun	1.47	204	P	Pn	16 12 31.2	-1.3
	baz=189						
TWKBT				*e*S	Sn	16 12 50.0	-1.3
	baz=189						
TSEB	Hengchuen, Pin	1.48	201	*e*P	Pn	16 12 30.9	-1.6
	baz=186						
TSEB				*e*S	Sn	16 12 51.1	-0.4
	baz=186						
NWLT	Wulai	1.48	1	*e*P	Pn	16 12 31.9	-0.9
	baz=6.0						
NWLT				*e*S	Sn	16 12 49.5	-2.3
	baz=6.0						
WLTB	Daxi	1.57	353	*e*P	Pn	16 12 34.9	+1.1
	baz=10.0						
NTC	Toucheng	1.59	12	*e*P	Pn	16 12 34.5	+0.3
	baz=15						
NTC				*e*S	Sn	16 12 53.5	-1.0
	baz=15						
WDGT	Dungji	1.66	269	⇓*i*P	Pn	16 12 34.6	-0.5
	baz=269						
WDGT				*e*S	Sn	16 12 56.3	+0.3
	baz=269						
NHDH	Xindian Distri	1.67	2	*e*P	Pn	16 12 35.7	+0.5
	baz=18						
TATO	Taipei	1.68	1	*e*P	Pn	16 12 34.8	-0.6
	baz=18						
TATO				*e*S	Sb	16 12 58.1	0.0
	baz=18						
TWA	Mucha	1.69	4	*e*P	Pn	16 12 36.4	+0.8
	baz=20						
TIPB	Shuangxi	1.71	11	*e*P	Pn	16 12 35.6	-0.2
	baz=14						
PHUB	P'eng-hu	1.75	278	*i* P	Pn	16 12 35.8	-0.6
	baz=279						
PHUB				*e*S	Sn	16 12 57.5	-0.9
	baz=279						
PNG	Penghu	1.78	279	⇑*i*P	Pn	16 12 36.2	-0.5
	baz=263						
PNG				*e*S	Sn	16 12 59.7	+0.8
	baz=263						
TWB1	Santiao Chiao	1.78	15	*e*P	Pn	16 12 37.2	+0.5
	baz=7.0						
TWB1				*e*S	Sb	16 13 00.4	-0.6
	baz=7.0						
JYNG	Yonagunijimaku	1.78	49	P	Pn	16 12 36.8	0.0
JYNG				S	Sb	16 13 00.3	-0.8
NWF	Wu-fen Shan	1.80	9	*e*P	Pn	16 12 37.7	+0.6
	baz=13						
NWF				*e*S	Sb	16 13 00.9	-0.7
	baz=13						
WFSB	Wu-fen Shan	1.80	9	*e*P	Pn	16 12 38.0	+0.9
	baz=13						
WFSB				*e*S	Sn	16 12 59.3	-0.2
	baz=13						
YOJ	Yonaguni jima	1.83	50	*e*P	Pn	16 12 37.4	0.0
	baz=55						
YOJ				*e*S	Sb	16 13 02.2	-0.4
	baz=55						
YOJ	Yonaguni jima	1.83	50	P	Pn	16 12 37.5	0.0
YOJ				*e*S	Sn	16 13 01.0	+0.6
YM04	YM04	1.86	2	*e*P	Pn	16 12 37.9	0.0
	baz=20						
YM10	YM10	1.86	3	*e*P	Pn	16 12 36.9	-1.0
	baz=3.0						
YM05	YM05	1.87	3	*e*P	Pn	16 12 36.5	-1.5
	baz=3.0						
YM11	YM11	1.87	3	*e*P	Pn	16 12 37.9	-0.2
	baz=3.0						
VCHM	Qimei	1.87	268	*e*P	Pn	16 12 37.0	-1.0
	baz=268						
VCHM				*e*S	Sb	16 13 03.1	-0.6
	baz=268						
ANP	Anpu	1.89	1	*e*P	Pn	16 12 39.4	+1.0
	baz=20						
TWY	Chenhua	1.98	4	*e*P	Pn	16 12 39.8	+0.2
	baz=4.0						
HATJ	Hateruma jima	2.28	70	P	Pn	16 12 43.2	-0.4
HATJ				S	Sn	16 13 10.2	-1.1
IRIF	Iriomote-Funau	2.32	63	P	Pn	16 12 44.1	-0.1
IRIF				*e*S	Sn	16 13 11.8	-0.6
VWUC	VWUC	2.50	313	*e*P	Pn	16 12 45.4	-1.3
	baz=313						
JKRS	Kuro-shima	2.52	67	P	Pn	16 12 47.0	+0.1
JKRS				*e*S	Sn	16 13 17.1	-0.1
JIJ	Ishigaki jima	2.68	66	P	Pn	16 12 48.5	-0.6
JIJ				*e*S	Sn	16 13 19.6	-1.6
PTTC	Pingtan	2.69	325	*e*P	Pn	16 12 48.7	-0.6
	baz=324						
PTMZ	Houxiangcun	2.76	310	*e*P	Pn	16 12 49.8	-0.5
	baz=295						
JISG	Ishigakijimahi	2.91	63	P	Pn	16 12 51.4	-0.9
JISG				S	Sn	16 13 25.9	-1.0
KNM	Kinmen	3.00	293	*e*P	Pn	16 12 54.0	+0.5
	baz=291						
KNMB	Chin-men Tao	3.05	293	*e*P	Pn	16 12 52.8	-1.4
	baz=292						
QZH	Quanzhou	3.10	303	Pn	Pn	16 12 53.5	-1.4
QZH				Sn	Sn	16 13 26.8	-4.8

MATB	**Ma-tsu**	**3.17**	**334**	*e*P	**Pn**	**16 12 55.5**	**-0.4**
	baz=333						
JTJ	**Tarama**	**3.25**	**65**	P	**Pn**	**16 12 56.7**	**-0.3**
JTJ				S	**Sn**	**16 13 35.3**	**-0.1**
ZPLA	**Ao Xicun**	**3.47**	**281**	*e*P	**Pn**	**16 12 59.4**	**-0.6**
	baz=280						
MHZQ	**Yeshan**	**3.57**	**322**	*e*P	**Pn**	**16 13 00.2**	**-1.1**
	baz=321						
AXDP	**Jialang**	**3.58**	**297**	P	**Pn**	**16 13 00.7**	**-0.7**
	baz=296						
LYJJ	**Jianjiangzhen**	**3.60**	**335**	*e*P	**Pn**	**16 13 01.5**	**-0.3**
	baz=347						
LYJJ				*e*S	**Sn**	**16 13 44.2**	**+0.2**
	baz=347						
JIRB	**Irabujima**	**3.72**	**65**	P	**Pn**	**16 13 02.9**	**-0.5**
JIRB				*e*S	**Sn**	**16 13 46.5**	**-0.4**
XPSS	**Dashiqiu**	**3.81**	**343**	*e*P	**Pn**	**16 13 03.5**	**-1.2**
	baz=341						
JMJ	**Miyako jima 2**	**3.82**	**66**	*e*P	**Pn**	**16 13 04.9**	**+0.1**
	baz=74						
JMJ				*e*S	**Sn**	**16 13 47.8**	**-1.5**
	baz=74						
JMJ2	**Miyako jima3**	**3.82**	**67**	P	**Pn**	**16 13 05.1**	**+0.3**
JIKM	**Ikemajima**	**3.82**	**64**	P	**Pn**	**16 13 04.4**	**-0.4**
JIKM				S	**Sn**	**16 13 50.0**	**+0.6**
WMQ	**Urumqi**	**34.46**	**315**	*e*P	**P**	**16 18 56.0**	**+2.2**

IDC ***26*** *16:20:04.7±0.6, 30°.93N×110°.80E, h0^{km}, mb4.3/20, mb1 4.4/22, mb1mx4.3/43, mbtmp4.3/22, ML3.6/2, MS3.5/18, Ms1 3.5/18, ms1mx3.3/50, Error ellipse: s-maj=18.1km s-min=13.2km az=52.0*

MOS ***26*** *16:20:05.4±0.8, 30°.93N×110°.75E, h17^{km}, mb4.7/30, Error ellipse: s-maj=8.3km s-min=5.2km az=107.8*

BJI ***26*** *16:20:05.8±0.0, 30°.92N×110°.79E, h10^{km}, mB4.8/38, mb4.4/45, ML4.8/32, Ms4.4/60, Ms7 4.0/53*

NEIC ***26*** *16:20:06.7±1.3, 30°.89N±0°.06×110°.73E±0°.08, h16^{km}±4^{km}, mb4.8/73, Error ellipse: s-maj=9.9km s-min=8.3km az=106.0*

ISC 26 16:20:06.4±0.3, **30°.97N**±0°.03×**110°.83E**±0°.03, **h10^{km}**, **n247**, σ**1^{s}.57**/264, **mb4.6**/80, **MS3.8**/19, **20C-6D**, **Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENH	**Enshi**	**1.35**	**239**	Pn	**Pn**	**16 20 29.7**	**-1.6**
WHN	**Wuhan**	**3.06**	**97**	⇑Pn	**Pn**	**16 20 55.3**	**+0.5**
WHN				Pg	**Pb**	**16 21 01.5**	**+0.5**
WHN				Sn	**Sn**	**16 21 32.0**	**+0.5**
WHN				Sg	**Sg**	**16 21 45.0**	**+0.2**
WHN				smax	smax		
	comp=N,4μm,0.6s						
WHN				smax	smax		
	comp=E,4μm,0.9s						
XAN	**Xi'an**	**3.46**	**333**	Pn	**Pn**	**16 21 01.3**	**+1.0**
XAN				Pg	**Pb**	**16 21 08.3**	**+0.5**
XAN				Sn	**Sb**	**16 21 53.5**	**+3.6**
XAN				Sg	**Sg**	**16 21 58.3**	**+0.8**
XAN				smax	smax		
	comp=N,3μm,1.0s						
XAN				smax	smax		
	comp=E,2μm,1.2s						
XAN				LR	LR		
	comp=N,10μm,6.2s						
XAN				LR	LR		
	comp=E,10μm,5.7s						
XAN				LR	LR		
	comp=Z,5μm,6.0s						
XAN	**Xi'an**	**3.46**	**333**	P	**Pn**	**16 21 00.9**	**+0.6**
XAN	**Xi'an**	**3.46**	**333**	Pn	**Pn**	**16 21 00.9**	**+0.6**
GYA	**Guiyang**	**5.79**	**220**	Pn	**Pn**	**16 21 33.5**	**+1.0**
GYA				Sn	**Sn**	**16 22 40.0**	**+1.0**
GYA				Sg	**Sg**	**16 23 14.5**	**+2.2**
GYA				smax	smax		
	comp=N,370nm,0.8s						
GYA				smax	smax		
	comp=E,380nm,1.0s						
GYA				LR	LR		
	comp=N,3μm,9.8s						
GYA				LR	LR		
	comp=Z,2μm,12.8s						
CD2	**Chengdu**	**6.07**	**271**	Pn	**Pn**	**16 21 35.5**	**-0.8**
CD2				Sn	**Sn**	**16 22 43.5**	**-2.3**
CD2				Sg	**Sg**	**16 23 20.5**	**-0.8**
CD2				smax	smax		
	comp=N,670nm,1.1s						
CD2				smax	smax		
	comp=E,740nm,1.0s						
CD2				LR	LR		
	comp=N,5μm,5.5s						
CD2				LR	LR		
	comp=E,6μm,7.2s						
CD2				LR	LR		
	comp=Z,2μm,9.3s						
TIY	**Taiyuan**	**6.86**	**11**	*e*Pn	**Pn**	**16 21 48.8**	**+1.7**
TIY				Pg	Pg	16 22 13.0	-4.7
TIY				Sg	**Sg**	**16 23 40.3**	**-6.2**
TIY				smax	smax		
	comp=N,460nm,0.9s						
TIY				smax	smax		
	comp=E,620nm,0.9s						
NJ2	**Nanjing**	**6.94**	**79**	*e*Pn	**Pn**	**16 21 49.5**	**+1.4**
NJ2				Pg	**Pb**	**16 22 11.5**	**+4.5**
NJ2				Sg	**Sg**	**16 23 41.8**	**-7.3**
NJ2				smax	smax		
	comp=N,530nm,0.7s						
NJ2				smax	smax		
	comp=E,490nm,1.1s						
TIA	**Tai'an**	**7.41**	**43**	Pn	**Pn**	**16 21 58.8**	**+4.2**
TIA				Pg	Pb	16 22 20.5	+5.4
TIA				Sg	Sb	16 23 54.5	+11
TIA				smax	smax		
	comp=N,270nm,1.2s						
TIA				smax	smax		
	comp=E,260nm,1.5s						
LZH	**Lanzhou**	**7.75**	**313**	*e*Pn	**Pn**	**16 22 00.0**	**+0.6**
LZH				Pg	**Pb**	**16 22 24.5**	**+3.6**
LZH				Sn	**Sn**	**16 23 28.3**	**+1.1**
LZH				Sg	**Sg**	**16 24 07.8**	**-7.2**
LZH				smax	smax		
	comp=N,920nm,0.9s						
LZH				smax	smax		
	comp=E,1μm,0.9s						
LZH				LR	LR		
	comp=N,4μm,6.0s						
LZH				LR	LR		
	comp=E,3μm,6.5s						
LZH				LR	LR		
	comp=Z,3μm,9.2s						
GZH	**Guangzhou**	**8.16**	**163**	Pn	Pn	16 21 57.8	-7.1
GZH				Sn	Sn	16 23 22.5	-15
GZH				smax	smax		
	comp=N,350nm,1.0s						
GZH				smax	smax		
	comp=E,390nm,0.9s						
SSE	**Sheshan**	**8.89**	**87**	P	**Pn**	**16 22 14.0**	**-0.9**
SSE				S	**Sn**	**16 23 55.5**	**+0.4**
SSE				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SSE				pmax	pmax		
	comp=Z,70nm,4.2s						
SSE				LR	LR		
	comp=N,610nm,6.6s						
SSE				LR	LR		
	comp=E,430nm,6.4s						
QZH	**Quanzhou**	**9.12**	**129**	P	**Pn**	**16 22 17.5**	**-0.5**
QZH				smax	smax		
	comp=N,150nm,1.2s						
QZH				smax	smax		
	comp=E,120nm,0.8s						
QZH				LR	LR		
	comp=N,2μm,6.4s						
QZH				LR	LR		
	comp=E,2μm,6.9s						
QZH				LR	LR		
	comp=Z,770nm,6.2s						
HKPS	**Hong Kong Po S**	**9.15**	**160**	Pn	**Pn**	**16 22 18.1**	**-0.3**
KMI	**Kunming**	**9.21**	**233**	P	**Pn**	**16 22 21.0**	**+1.5**
KMI				pP		16 22 23.5	
KMI				sP		16 22 26.5	
KMI				S	**Sn**	**16 24 01.5**	**-1.9**
KMI				SS	**SnSn**	**16 24 16.0**	**+0.9**
KMI				pmax	pmax		
	comp=Z,28nm,0.6s						
KMI				pmax	pmax		
	comp=Z,140nm,3.1s						
KMI				LR	LR		
	comp=N,2μm,5.7s						
KMI				LR	LR		
	comp=E,880nm,5.3s						
KMI				LR	LR		
	comp=Z,780nm,6.0s						
BTO	**Baotou**	**9.64**	**356**	*e*P	**Pn**	**16 22 27.0**	**+1.8**
HHC	**Hu-ho-hao-te**	**9.88**	**3**	*e*P	Pn	16 22 36.3	+7.8
HHC				pmax	pmax		
	comp=Z,420nm,3.7s						
HHC				LR	LR		
	comp=N,1μm,4.2s						
HHC				LR	LR		
	comp=E,690nm,5.9s						
HHC				LR	LR		
	comp=Z,2μm,4.8s						
BJI	**Beijing**	**10.04**	**24**	P	**Pn**	**16 22 32.0**	**+1.3**
BJI				S	**Sn**	**16 24 22.5**	**-0.9**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BJI				LR	LR		
	comp=N,580nm,10.5s						
BJI				LR	LR		
	comp=E,440nm,14.1s						
YHNB	**Yeheng**	**11.25**	**121**	Pn	**Pn**	**16 22 46.7**	**-0.6**
SLVN	**Son La**	**11.43**	**215**		**Pn**	**16 22 45.8**	**-4.0**
SSLB	**Suanglung**	**11.49**	**126**	Pn	**Pn**	**16 22 50.0**	**-0.5**
TPUB	**Ta-pu**	**11.59**	**129**		**Pn**	**16 22 51.7**	**-0.3**
QIZ	**Qiongzhong**	**11.92**	**185**	P	**Pn**	**16 22 56.0**	**-0.4**
QIZ				S	**Sn**	**16 25 10.0**	**+0.4**
QIZ				LR	LR		
	comp=N,1μm,6.4s						
QIZ				LR	LR		
	comp=E,760nm,7.8s						
QIZ				LR	LR		
	comp=Z,1μm,7.7s						
YULB	**Yu-li**	**11.99**	**126**		**Pn**	**16 22 57.2**	**-0.2**
GTA	**Gaotai**	**12.32**	**316**	*e*P	**Pn**	**16 22 59.3**	**-2.7**
GTA				pP		16 23 03.3	
GTA				sP		16 23 06.5	
GTA				S	**Sn**	**16 25 19.8**	**+0.3**
GTA				SS	**SnSn**	**16 25 29.8**	**-1.8**
SNY	**Shenyang**	**14.91**	**40**	⇑P	P	16 23 49.8	+6.9
KSAR	**Wonju Array Be**	**15.51**	**61**	P	**Pn**	**16 23 45.9**	**+0.8**
KSAR	**Wonju Array Be**	**15.51**	**61**	Pn	**Pn**	**16 23 45.9**	**+0.8**
KS19	**Wonju Array Si**	**15.52**	**61**	P	**P**	**16 23 51.1**	**+1.4**
KSRS	**Korea Array**	**15.54**	**61**	Pn	**P**	**16 23 47.9**	**-2.0**
	0.5nm,0.3s,baz=242,slow=11,SNR=50						
KSRS				Lg	Lg	16 28 15.0	
	0.1nm,0.3s,baz=247,slow=25,SNR=2.9						
KSRS				LR	LR	16 29 15.5	
	comp=Z,76nm,21.7s,baz=280,slow=35						
CHTO	**Chiang Mai**	**16.19**	**224**	P	**P**	**16 23 54.8**	**-2.4**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CHTO	**Chiang Mai**	**16.19**	**224**	P	**P**	**16 23 54.8**	**-2.4**
CM31	**Chiang Mai Arr**	**16.46**	**224**	P	**P**	**16 24 00.3**	**0.0**
CMAR	**Chiang Mai Arr**	**16.46**	**224**	Pn	**Pn**	**16 23 56.6**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=16,slow=10,SNR=7.3						
CMAR				LR	LR	16 30 48.6	
	comp=Z,124nm,18.1s,baz=26,slow=39						
CMAR	**Chiang Mai Arr**	**16.46**	**224**	*ce*P	**P**	**16 24 01.3**	**+1.0**
CMAR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**16.46**	**224**		**Pn**	**16 23 57.4**	**-0.2**
PBKT	**Sadao Pong**	**16.92**	**214**	P	**P**	**16 24 04.8**	**-0.5**
LSA	**Lhasa**	**17.04**	**271**	P	**P**	**16 24 05.3**	**-1.8**
ULN	**Ulaanbaatar**	**17.12**	**351**	*ce*P	**Pn**	**16 24 05.9**	**+0.1**
ULN				pmax	pmax		
	comp=Z,27nm,1.7s						
ULN	**Ulaanbaatar**	**17.12**	**351**	Pn	**Pn**	**16 24 05.7**	**-0.1**
JNU	**Nakatsue**	**17.14**	**78**	LR	LR	16 30 48.4	
	comp=Z,132nm,20.1s,baz=261,slow=38						
SONM	**Songino Array**	**17.18**	**350**	P	**Pn**	**16 24 06.5**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=169,slow=12,SNR=28						
SONM				Lg	Lg	16 29 08.8	
	baz=175,slow=25,SNR=4.5						
SONM				LR	LR	16 31 21.9	
	comp=Z,366nm,18.0s,baz=173,slow=39						
SONM	**Songino Array**	**17.18**	**350**	Pn	**Pn**	**16 24 05.8**	**-0.8**
CN2	**Changchun**	**17.26**	**38**	*e*P	**P**	**16 24 10.8**	**+1.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.4s						
CN2				pmax	pmax		
	comp=Z,290nm,6.1s						
CN2				LR	LR		
	comp=Z,450nm,21.0s						
CN2				LR	LR		
	comp=Z,430nm,21.0s						
CN2				LR	LR		
	comp=Z,290nm,16.0s						
BRDH	**Bariadhala**	**18.99**	**249**	LR	LR	16 31 27.2	
	comp=Z,153nm,20.3s,baz=127,slow=36						
MSHR	**Mys Shultsa**	**19.93**	**49**	*i* P	**P**	**16 24 38.8**	**+0.5**
ZAK	**Zakamensk**	**20.20**	**346**	*e*P	Pn	16 24 42.4	-0.8
ZAK				pmax	pmax		
	comp=Z,20nm,1.2s						
TAPN	**Taplejung**	**20.50**	**266**	*e*P	Pn	16 24 45.6	-1.5
	comp=Z,97nm,1.0s						
ODAN	**Odare**	**20.91**	**265**	*e*P	Pn	16 24 51.0	-0.8
	comp=Z,65nm,0.8s						
USRK	**Ussuriysk Ar.**	**21.27**	**46**	P	**P**	**16 24 57.1**	**+4.3**
	comp=Z,6.6nm,0.8s,baz=234,slow=4.8,SNR=9.7						
TLY	**Talaya**	**21.36**	**348**	P	**P**	**16 24 54.7**	**+0.9**
	comp=Z,7.9nm,0.7s,baz=177,slow=8.0,SNR=10.0						
TLY				LR	LR	16 33 52.3	
	comp=Z,108nm,19.8s,baz=147,slow=39						
TLY	**Talaya**	**21.36**	**348**	*e*P	**P**	**16 24 53.7**	**-0.1**
TLY				*e*S	**S**	**16 28 45.7**	**-5.2**
TLY				pmax	pmax		
	comp=Z,51nm,1.5s						
TLY				MLR	MLR		
	comp=Z,796nm,12.0s						
TLY	**Talaya**	**21.36**	**348**	P	**P**	**16 24 53.2**	**-0.6**
RAMN	**Ramite**	**21.56**	**265**	*e*P	**P**	**16 24 57.1**	**+0.8**
	comp=Z,37nm,0.8s						
JIRN	**Jiri**	**21.72**	**267**	*e*P	**P**	**16 24 58.1**	**-0.1**
	comp=Z,40nm,0.6s						
IRK	**Irkutsk**	**21.80**	**349**	*e*P	**P**	**16 24 59.2**	**+0.8**
IRK				pmax	pmax		
	comp=Z,59nm,1.4s						
MOY	**Mondy**	**21.92**	**343**	*e*P	**P**	**16 25 01.2**	**+1.4**
MOY				pmax	pmax		
	comp=Z,28nm,1.4s						
GUN	**Gumba**	**21.93**	**268**	*e*P	**P**	**16 25 00.2**	**-0.2**
	comp=Z,176nm,1.1s						
WMQ	**Urumqi**	**22.32**	**312**	*e*P	**P**	**16 25 04.8**	**+0.5**
WMQ				PP	**PnPn**	**16 25 33.8**	**+7.0**
WMQ				pmax	pmax		
	comp=Z,11nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,34nm,3.9s						
WMQ				LR	LR		
	comp=Z,520nm,12.9s						
WMQ				LR	LR		
	comp=Z,510nm,12.9s						
WMQ				LR	LR		
	comp=Z,270nm,20.3s						
WMQ	**Urumqi**	**22.32**	**312**	P	**P**	**16 25 04.7**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,21nm,0.8s						
WMQ	**Urumqi**	**22.32**	**312**	P	**P**	**16 25 04.7**	**+0.5**
WMQ				IAmb	IAmb	16 25 13.9	
	comp=Z,21nm,0.8s						
PKI	**Pulchoki**	**22.41**	**268**	*e*P	**P**	**16 25 05.2**	**-0.4**
	comp=Z,44nm,1.1s						
PKIN	**Phulchoki**	**22.42**	**268**	*e*P	**P**	**16 25 05.1**	**-0.5**
	comp=Z,15nm,0.5s						
KKN	**Kakani**	**22.47**	**268**	*e*P	**P**	**16 25 05.8**	**-0.3**
	comp=Z,19nm,0.8s						
DMN	**Daman**	**22.66**	**268**	*e*P	**P**	**16 25 08.4**	**+0.2**
	comp=Z,57nm,1.1s						
GKN	**Gorkha**	**22.97**	**269**	*e*P	**P**	**16 25 10.1**	**-1.2**
	comp=Z,84nm,0.8s						
MJAR	**Matsushiro Arr**	**23.40**	**69**	P	**P**	**16 25 16.4**	**+1.0**
	comp=Z,1.5nm,0.7s,baz=261,slow=31,SNR=4.1						
MJAR				LR	LR	16 34 28.7	
	comp=Z,86nm,18.2s,baz=270,slow=37						
DANN	**Dangsing**	**23.64**	**271**	*e*P	**P**	**16 25 17.1**	**-1.1**
	comp=Z,46nm,0.8s						
KLR	**Kul'dur**	**24.13**	**35**	P	**P**	**16 25 22.8**	**+0.4**
	comp=Z,9.8nm,1.1s,baz=241,slow=9.8,SNR=11						
KLR				LR	LR	16 35 18.2	
	comp=Z,136nm,19.3s,baz=230,slow=38						
KLR	**Kul'dur**	**24.13**	**35**	*d i*P	**P**	**16 25 23.0**	**+0.7**
KLR				pmax	pmax		
	comp=Z,12nm,1.1s						
TEY	**Ternei**	**24.56**	**48**	*e*P	**P**	**16 25 30.4**	**+4.1**
ZEA	**Zeya**	**25.67**	**23**	*e*P	**P**	**16 25 37.1**	**+0.9**
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
ZEA				MLR	MLR		
	comp=N,200nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,14.0s						
DGZ	**Jazzator, Alta**	**25.67**	**323**	*d i*P	**P**	**16 25 37.7**	**+1.2**
DGZ				pmax	pmax		
	comp=Z,11nm,1.0s						
MK31	**Makanchi Array**	**27.06**	**314**	P	**P**	**16 25 48.9**	**-0.1**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MK31	**Makanchi Array**	**27.06**	**314**	P	**P**	**16 25 48.9**	**-0.1**
MKAR	**Makanchi Array**	**27.06**	**314**	P	**P**	**16 25 49.2**	**+0.2**
	comp=Z,4.0nm,0.6s,baz=111,slow=10,SNR=59						
MKAR	**Makanchi Array**	**27.06**	**314**	P	**P**	**16 25 48.7**	**-0.3**
MAKZ	**Makanchi**	**27.26**	**314**	P	**P**	**16 25 50.2**	**-0.6**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MAKZ	**Makanchi**	**27.26**	**314**	P	**P**	**16 25 50.2**	**-0.6**
DAV	**Davao City (W)**	**27.50**	**147**	LR	LR	16 38 33.0	
	comp=Z,94nm,18.6s,baz=356,slow=40						
ASAJ	**Asahikawa**	**28.22**	**53**	P	**P**	**16 26 00.7**	**+1.4**
	comp=Z,6.2nm,0.9s,baz=259,slow=4.5,SNR=8.3						
ASAJ				LR	LR	16 35 55.3	
	comp=Z,34nm,19.9s,baz=323,slow=34						
JKA	**Kamikawa-asahi**	**28.22**	**53**	P	**P**	**16 26 00.7**	**+1.4**
KSH	**Kashi**	**29.57**	**296**	P	**P**	**16 26 15.0**	**+3.5**
KSH				sP	sP	16 26 22.5	+6.4
KSH				PcP	**PcP**	**16 29 18.5**	**+2.1**
KSH				S	**S**	**16 31 10.5**	**+3.9**
KSH				sS	sS	16 31 18.3	+6.3
KSH				SS	**SnSn**	**16 32 43.3**	**+8.9**
KSH				pmax	pmax		
	comp=Z,13nm,0.7s						
KSH				pmax	pmax		
	comp=Z,120nm,4.4s						
KSH				LR	LR		
	comp=Z,360nm,10.3s						
KSH				LR	LR		
	comp=Z,320nm,8.1s						
KSH				LR	LR		
	comp=Z,330nm,12.5s						
ZAA0	**Zalesovo Array**	**29.62**	**328**	P	**P**	**16 26 11.1**	**-0.5**
ZAA0				IAmb	IAmb	16 26 12.5	
	comp=Z,11nm,0.9s						
ZALV	**Zalesovo Beam**	**29.62**	**328**	P	**P**	**16 26 11.8**	**+0.1**
	comp=Z,8.2nm,0.7s,baz=124,slow=8.5,SNR=35						
ZALV				LR	LR	16 37 33.7	
	comp=Z,80nm,18.6s,baz=111,slow=35						
ZALV	**Zalesovo Beam**	**29.62**	**328**	P	**P**	**16 26 11.1**	**-0.5**
ZALV	**Zalesovo Beam**	**29.62**	**328**	P	**P**	**16 26 11.1**	**-0.5**
KURK	**Kurchatov**	**30.99**	**319**	*ce*P	**P**	**16 26 23.8**	**+0.1**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KURK	**Kurchatov**	**30.99**	**319**	P	**P**	**16 26 21.9**	**-1.8**
AAK	**Ala-Archa**	**31.11**	**302**	*ce*P	**P**	**16 26 25.8**	**+0.7**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
AAK	**Ala-Archa**	**31.11**	**302**	P	**P**	**16 26 23.6**	**-1.6**
NIL	**Nilore**	**31.76**	**285**	P	**P**	**16 26 28.7**	**-2.1**
NIL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NIL	**Nilore**	**31.76**	**285**	P	**P**	**16 26 28.7**	**-2.1**
NIL				IAmb	IAmb	16 26 40.8	
	comp=Z,6.4nm,0.9s						
SDSI	**Sungai Dareh**	**32.96**	**197**	P	P	16 26 52.4	+11
APSI	**Ampana**	**33.33**	**160**	P	P	16 26 57.7	+13
YAK	**Yakutsk**	**33.41**	**16**	*e*P	**P**	**16 26 44.6**	**-0.2**
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
YAK	**Yakutsk**	**33.41**	**16**	P	**P**	**16 26 44.1**	**-0.7**
YAK				IAmb	IAmb	16 26 45.0	
	comp=Z,14nm,0.8s						
LUWI	**Luwuk**	**33.80**	**158**	P	P	16 26 55.5	+6.8
KK31	**Karatay Array**	**34.07**	**302**	P	**P**	**16 26 50.1**	**-0.8**
KK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KK31	**Karatay Array**	**34.07**	**302**	P	**P**	**16 26 50.1**	**-0.8**
KKAR	**Karatay Array**	**34.07**	**302**	P	**P**	**16 26 50.0**	**-0.9**
KKAR	**Karatay Array**	**34.07**	**302**	P	**P**	**16 26 50.0**	**-0.9**
KKAR	**Karatay Array**	**34.07**	**302**	P	**P**	**16 26 50.0**	**-0.9**
KKAR				IAmb	IAmb	16 26 52.8	
	comp=Z,3.5nm,0.8s						
KBL	**Kabul**	**35.14**	**287**	P	**P**	**16 26 59.8**	**-0.7**
KBL				pmax	pmax		
	comp=Z,13nm,1.3s						
KBL	**Kabul**	**35.14**	**287**	P	**P**	**16 26 59.8**	**-0.7**
KBL				IAmb	IAmb	16 27 05.2	
	comp=Z,12nm,1.3s						
BRVK	**Borovoye**	**36.66**	**319**	*ce*P	**P**	**16 27 12.4**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BRVK	**Borovoye**	**36.66**	**319**	P	**P**	**16 27 12.7**	**-0.3**
MA2	**Magadan**	**39.11**	**31**	*i* P	**P**	**16 27 33.8**	**+0.2**
MA2				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MA2	**Magadan**	**39.11**	**31**	P	**P**	**16 27 33.1**	**-0.5**
NRIK	**Noril'sk**	**40.65**	**348**	P	**P**	**16 27 46.6**	**+0.3**
	comp=Z,8.7nm,0.8s,baz=141,slow=7.0,SNR=16						
NRIK	**Noril'sk**	**40.65**	**348**	*i* P	**P**	**16 27 46.6**	**+0.3**
NRIK				pmax	pmax		
	comp=Z,18nm,1.2s						
SEY	**Seymchan**	**41.47**	**27**	*i* P	**P**	**16 27 53.3**	**+0.2**
TIXI	**Tiksi**	**41.90**	**8**	*e*P	**P**	**16 27 55.4**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.4s						
TIXI	**Tiksi**	**41.90**	**8**	P	**P**	**16 27 55.8**	**-0.7**
ABKAR	**Akbulak array**	**42.11**	**311**	P	**P**	**16 27 59.0**	**+0.4**
ABKAR	**Akbulak array**	**42.11**	**311**	P	**P**	**16 27 58.8**	**+0.3**
ABKAR				IAmb	IAmb	16 29 25.7	
	comp=Z,22nm,0.3s						
SVE	**Sverdlovsk**	**43.11**	**322**	⇑*e*P	**P**	**16 28 07.5**	**+0.9**
SVE				pmax	pmax		
	comp=Z,24nm,1.0s						
GEYT	**Alibeck**	**43.53**	**294**	P	**P**	**16 28 11.3**	**+1.0**
	comp=Z,4.0nm,0.9s,baz=46,slow=4.3,SNR=8.6						
ARU	**Arti**	**44.13**	**321**	*c i*P	**P**	**16 28 14.7**	**-0.1**
ARU						16 29 55.4	
ARU				S	**S**	**16 34 49.0**	**+1.6**
ARU				SS	**SS**	**16 38 05.1**	**+0.5**
ARU				pmax	pmax		
	comp=Z,19nm,1.0s						
ARU	**Arti**	**44.13**	**321**	P	**P**	**16 28 14.4**	**-0.3**
ARU				IAmb	IAmb	16 28 15.7	
	comp=Z,18nm,1.0s						
MTN	**Manton Dam**	**47.73**	**153**	P	**P**	**16 28 42.0**	**-1.6**
MTN				IAmb	IAmb	16 28 48.4	
	comp=Z,5.0nm,0.9s						
BILL	**Bilibino**	**48.88**	**24**	*i* P	**P**	**16 28 51.1**	**-0.8**
BILL				*i*		16 30 22.2	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.7s						
BILL				MLR	MLR		
	comp=Z,82nm,17.0s						
BILL	**Bilibino**	**48.88**	**24**	P	**P**	**16 28 51.5**	**-0.4**
BILL				IAmb	IAmb	16 30 24.1	
	comp=Z,14nm,1.9s						
KIRV	**Kirov**	**49.35**	**323**	*i* P	**P**	**16 28 55.4**	**-0.2**
KNRA	**Kununurra**	**49.48**	**157**	P	**P**	**16 28 55.3**	**-1.7**
KNRA				IAmb	IAmb	16 28 57.0	
	comp=Z,5.6nm,0.8s						
FITZ	**Fitzroy Crossi**	**50.82**	**162**	P	**P**	**16 29 06.5**	**-0.7**
VRH	**Novokhopyorsk**	**53.79**	**313**	*e*P	**P**	**16 29 28.1**	**-0.8**
VRH				pmax	pmax		
	comp=Z,20nm,0.7s						
KBZ	**Khabaz**	**54.08**	**304**	P	**P**	**16 29 31.2**	**+0.1**
	comp=Z,3.7nm,0.9s,baz=89,slow=9.2,SNR=5.3						
KBZ				LR	LR	16 57 57.2	
	comp=Z,30nm,18.2s,baz=66,slow=42						
KBZ	**Khabaz**	**54.08**	**304**	*i* P	**P**	**16 29 31.3**	**+0.1**
KBZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV	**Kislovodsk**	**54.19**	**304**	*e*P	**P**	**16 29 32.9**	**+0.8**
KIV				pmax	pmax		
	comp=Z,43nm,1.0s						
KIV				MLR	MLR		
	comp=Z,79nm,16.0s						
KIV	**Kislovodsk**	**54.19**	**304**	P	**P**	**16 29 30.5**	**-1.6**
KIV				IAmb	IAmb	16 29 38.9	

	comp=Z,21nm,1.2s						
SHA1	Shidzhatmaz	54.25	304	i P	P	16 29 33.1	+0.4
KLMR	Klimovskoe	54.46	325	eP	P	16 29 31.1	-2.6
KLMR				pmax	pmax		
	comp=Z,13nm,0.6s						
KLMR	Klimovskoe	54.46	325	eP	P	16 29 31.1	-2.6
KLMR				AMP		16 29 34.0	
	comp=Z,13nm,0.6s						
WB0	Warramunga Arr	55.29	153	P	P	16 29 39.2	-1.0
WB0				IAmb	IAmb	16 30 52.1	
	comp=Z,22nm,1.9s						
LPSR	Galich'ya Gora	55.35	315	eP	P	16 29 39.6	-0.7
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR	Storozhevoye	55.38	313	eP	P	16 29 39.7	-0.8
VSR				pmax	pmax		
	comp=Z,20nm,1.1s						
WRAB	Tennant Creek	55.43	153	ceP	P	16 29 40.8	-0.3
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WRAB	Tennant Creek	55.43	153	P	P	16 29 40.1	-1.0
WRAB				IAmb	IAmb	16 29 43.6	
	comp=Z,5.5nm,0.8s						
WRA	Warramunga Arr	55.43	153	P	P	16 29 40.6	-0.6
	comp=Z,3.4nm,0.8s,baz=341,slow=7.7,SNR=17						
WRA	Warramunga Arr	55.43	153	ceP	P	16 29 42.9	+1.7
WRA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WRA	Warramunga Arr	55.43	153	P	P	16 29 40.3	-0.8
WB2	Warramunga Arr	55.44	153	P	P	16 29 40.6	-0.6
WB2				IAmb	IAmb	16 29 43.7	
	comp=Z,5.4nm,0.8s						
OBN	Obninsk	56.43	318	i P	P	16 29 47.4	-0.5
OBN				i		16 30 47.1	
OBN				pmax	pmax		
	comp=Z,11nm,1.0s						
OBN				MLR	MLR		
	comp=Z,95nm,16.0s						
AS31	Alice Springs	58.66	155	P	P	16 30 03.0	-0.9
ASAR	Alice Springs	58.66	155	P	P	16 30 03.8	-0.2
	comp=Z,2.0nm,0.6s,baz=335,slow=5.9,SNR=27						
ASAR	Alice Springs	58.66	155	P	P	16 30 03.2	-0.8
ASAR	Alice Springs	58.66	155	P	P	16 30 03.2	-0.8
KEV	Kevo	59.19	336	P	P	16 30 07.1	0.0
KEV				pmax	pmax		
	comp=Z,160nm,1.6s						
KEV	Kevo	59.19	336	P	P	16 30 07.1	0.0
ARCES	ARCESS Array B	59.74	336	P	P	16 30 11.1	+0.2
	comp=Z,2.5nm,0.5s,baz=80,slow=8.5,SNR=15						
ARCES				LR	LR	17 00 31.6	
	comp=Z,25nm,18.2s,baz=14,slow=41						
ARCES	ARCESS Array B	59.74	336	P	P	16 30 10.9	0.0
ARCES	ARCESS Array B	59.74	336	P	P	16 30 10.9	0.0
ARE0	ARCESS Array S	59.74	336	P	P	16 30 11.2	+0.3
ARE0				IAmb	IAmb	16 30 35.8	
	comp=Z,8.4nm,1.9s						
ANM	Nome	59.88	30	P	P	16 30 12.5	+0.6
ANM				pmax	pmax		
	comp=Z,13nm,1.7s						
ANM	Nome	59.88	30	P	P	16 30 12.5	+0.6
ANM				IAmb	IAmb	16 30 17.3	
	comp=Z,13nm,1.7s						
FINES	FINESS Array B	60.87	327	P	P	16 30 18.5	-0.3
	comp=Z,3.0nm,0.8s,baz=90,slow=9.0,SNR=8.7						
FINES				LR	LR	17 00 04.5	
	comp=Z,69nm,19.0s,baz=89,slow=39						
FINES	FINESS Array B	60.87	327	ceP	P	16 30 18.8	+0.1
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	FINESS Array B	60.87	327	P	P	16 30 18.2	-0.5
AKASG	Malin Array Be	61.65	314	P	P	16 30 23.9	-0.3
	comp=Z,2.8nm,0.6s,baz=62,slow=6.6,SNR=8.6						
AKASG	Malin Array Be	61.65	314	i P	P	16 30 23.7	-0.5
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKASG	Malin Array Be	61.65	314	P	P	16 30 23.4	-0.7
BR131	Keskin Array S	61.78	301	i P	P	16 30 25.3	-0.2
BR131	Keskin Array S	61.78	301	P	P	16 30 25.0	-0.5
BR131				IAmb	IAmb	16 30 26.2	
	comp=Z,4.6nm,1.0s						
BRTR	Keskin Array B	61.78	301	P	P	16 30 25.3	-0.2
	comp=Z,2.5nm,0.9s,baz=115,slow=7.2,SNR=16						
BRTR				LR	LR	16 59 07.8	
	comp=Z,22nm,18.4s,baz=355,slow=38						
BRTR	Keskin Array B	61.78	301	ceP	P	16 30 25.5	0.0
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRTR	Keskin Array B	61.78	301	P	P	16 30 24.9	-0.6
TOPG	Topolog	63.88	308	⇑P	P	16 30 39.4	+0.2
CFR	Carcaliu	63.94	309	P	P	16 30 39.7	+0.1
CFR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TIRR	Tirgusor	63.99	308	⇓P	P	16 30 40.0	+0.1
IMAR	Indian Mountai	64.28	27	P	P	16 30 41.2	-0.3
TTA	Tatalina	64.30	30	P	P	16 30 41.6	-0.2
TTA	Tatalina	64.30	30	P	P	16 30 41.6	-0.2
VRI	Vrincioaia	64.66	310	⇓P	P	16 30 45.1	+0.8
VRI	Vrincioaia	64.66	310	P	P	16 30 45.3	+1.0
VRI				pmax	pmax		
	comp=Z,15nm,1.1s						
PLOR	Plostina	64.72	310	⇑P	P	16 30 44.2	-0.5
BIZ	Bicaz	64.72	311	⇑P	P	16 30 44.5	-0.2
TOLK	Toolik Lake Re	64.92	24	P	P	16 30 45.4	-0.2
TOLK				IAmb	IAmb	16 30 46.8	
	comp=Z,4.4nm,0.8s						
BURAR	Bucovina Array	65.07	312	⇓P	P	16 30 47.1	0.0
BURAR	Bucovina Array	65.07	312	P	P	16 30 46.6	-0.5
BURAR	Bucovina Array	65.07	312	P	P	16 30 46.6	-0.5
BUR08	Bucovina Ar. S	65.07	312	P	P	16 30 46.3	-0.8
COLD	Coldfoot	65.20	25	P	P	16 30 47.8	+0.3
COLD				IAmb	IAmb	16 30 59.9	
	comp=Z,3.6nm,0.9s						
MLR	Muntele Rosu	65.30	310	⇑P	P	16 30 47.8	-0.9
MLY	Manley	65.79	27	P	P	16 30 51.5	+0.1
VOIR		65.91	310	⇑P	P	16 30 52.6	+0.1
KWP	Kalwaria Pacla	65.96	315	P	P	16 30 52.6	-0.1
KWP				pmax	pmax		
	comp=Z,19nm,1.0s						
KWP	Kalwaria Pacla	65.96	315	P	P	16 30 52.6	-0.1
PPLA	Purkeypile	65.97	30	P	P	16 30 53.0	+0.3
BPAW	Bear Paw Mtn.	66.03	28	P	P	16 30 53.3	+0.4
BPAW				IAmb	IAmb	16 30 55.0	
	comp=Z,15nm,1.5s						
KTH	Kantishna Hill	66.26	29	P	P	16 30 54.7	+0.3
KTH				IAmb	IAmb	16 30 57.4	
	comp=Z,15nm,1.4s						
TRPA	Tarpa	66.59	313	⇑P	P	16 30 58.5	+1.8
WRH	Wood River Hil	67.05	28	P	P	16 30 59.3	-0.1
WRH				IAmb	IAmb	16 31 07.5	
	comp=Z,4.2nm,0.8s						
CCB	Clear Creek Bu	67.09	27	P	P	16 30 59.5	-0.1
CCB				IAmb	IAmb	16 31 01.0	
	comp=Z,2.7nm,0.8s						
BMAR	Burnt Mountain	67.12	24	P	P	16 31 00.1	+0.2
RND	Reindeer	67.17	29	P	P	16 31 00.3	0.0
RND				pmax	pmax		
	comp=Z,19nm,1.7s						
RND	Reindeer	67.17	29	P	P	16 31 00.3	0.0
RND				IAmb	IAmb	16 31 01.9	
	comp=Z,19nm,1.7s						
IL31		67.40	27	P	P	16 31 00.6	-1.0
IL31				IAmb	IAmb	16 31 34.3	
	comp=Z,14nm,1.8s						
ILAR	Eielson Array	67.40	27	P	P	16 31 01.1	-0.5
	comp=Z,1.3nm,0.7s,baz=282,slow=5.1,SNR=14						
ILAR	Eielson Array	67.40	27	P	P	16 31 00.5	-1.1
NC405	NORSAR Array S	67.57	329	P	P	16 31 02.0	-0.7
BRLK	Bradley Lake	67.73	33	P	P	16 31 03.0	-0.8
NB201	NORSAR Array S	67.78	329	P	P	16 31 03.1	-1.1
NC602	NORSAR Array S	67.80	328	P	P	16 31 03.9	-0.3
NB2	NORSAR Subarra	67.82	329	P	P	16 31 03.6	-0.8
	comp=Z,1.3nm,0.6s,baz=70,slow=6.9						
NOA	NORSAR Array B	67.82	329	P	P	16 31 04.0	-0.4
	comp=Z,0.9nm,0.6s,baz=66,slow=6.2,SNR=6.3						
NOA				LR	LR	17 02 26.3	
	comp=Z,91nm,20.1s,baz=75,slow=38						
HERR	Herculane	67.85	310	⇓P	P	16 31 05.3	+0.5
NC204	NORSAR Array S	67.93	329	P	P	16 31 04.5	-0.6
SML	Sawmill	68.05	30	P	P	16 31 05.9	+0.1
SML				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SML	Sawmill	68.05	30	P	P	16 31 05.9	+0.1
SML				IAmb	IAmb	16 31 14.9	
	comp=Z,7.9nm,0.8s						
MDVR	Moldovita	68.35	310	⇑P	P	16 31 08.5	+0.5
SCM	Sheep Creek Mo	68.47	30	P	P	16 31 09.0	+0.5
SCM				pmax	pmax		
	comp=Z,24nm,1.5s						
SCM	Sheep Creek Mo	68.47	30	P	P	16 31 08.9	+0.5
RIDG	Independent Ri	68.65	28	P	P	16 31 09.0	-0.6
VYHS	Vyhne	68.75	314	eP	P	16 31 11.0	+0.6
VYHS	Vyhne	68.75	314	eP	P	16 31 11.0	+0.6
SCRK	Sand Creek	68.89	27	P	P	16 31 10.7	-0.5
STKA	Stephens Creek	68.97	152	P	P	16 31 11.8	0.0
	comp=Z,2.7nm,0.8s,baz=344,slow=5.1,SNR=4.8						
STKA	Stephens Creek	68.97	152	P	P	16 31 11.4	-0.4
STKA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
STKA	Stephens Creek	68.97	152	P	P	16 31 11.3	-0.4
MORC	Moravsky Berou	69.03	316	P	P	16 31 11.0	-1.1
MORC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MORC	Moravsky Berou	69.03	316	P	P	16 31 11.0	-1.1
MORC				IAmb	IAmb	16 31 13.5	
	comp=Z,3.9nm,0.9s						
FID	Port Fidalgo	69.31	31	P	P	16 31 14.9	+1.2
EGAK	Eagle	69.59	26	P	P	16 31 15.0	-0.2
EGAK				IAmb	IAmb	16 31 28.9	
	comp=Z,24nm,2.0s						
LIT	Litokhoron	69.66	305	P	P	16 31 14.5	-1.7
LIT				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LIT	Litokhoron	69.66	305	P	P	16 31 14.5	-1.7
LIT				IAmb	IAmb	16 33 08.4	
	comp=Z,10nm,1.1s						
GLB	Gilahina Butte	70.14	30	P	P	16 31 19.0	+0.2
GLB				IAmb	IAmb	16 32 08.8	
	comp=Z,9.2nm,1.3s						
BCAR	Beaver Creek A	70.19	28	P	P	16 31 19.6	+0.5
INK	Inuvik	70.30	21	P	P	16 31 18.7	-0.9
INK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
INK	Inuvik	70.30	21	P	P	16 31 18.7	-0.9
INK				IAmb	IAmb	16 31 19.8	
	comp=Z,9.5nm,0.7s						
EPYK	Eagle Plains	70.35	23	P	P	16 31 18.9	-1.1
VRDI	Verde Repeater	70.40	30	P	P	16 31 20.1	-0.4
MCARA	McCarthy VSAT	70.50	29	P	P	16 31 20.4	-0.6
MCARA				IAmb	IAmb	16 31 26.8	
	comp=Z,11nm,1.0s						
DAWY	Dawson	70.61	26	P	P	16 31 20.8	-0.8
DAWY				IAmb	IAmb	16 31 27.0	
	comp=Z,4.2nm,1.0s						
GERES	GERESS Array B	71.70	316	P	P	16 31 28.6	0.0
	comp=Z,0.9nm,0.9s,baz=94,slow=4.3,SNR=6.3						
GERES				LR	LR	17 03 53.2	
	comp=Z,63nm,19.8s,baz=36,slow=37						
GERES	GERESS Array B	71.70	316	P	P	16 31 27.4	-1.2
GERES	GERESS Array B	71.70	316	P	P	16 31 27.4	-1.2
C36M	Paulatuk	72.33	18	P	P	16 31 30.6	-1.3
C36M				IAmb	IAmb	16 31 31.2	
	comp=Z,9.9nm,0.6s						
HYT	Haines Junctio	73.09	28	P	P	16 31 35.9	-0.8
HYT				IAmb	IAmb	16 32 15.7	
	comp=Z,31nm,1.9s						
RES	Resolute Bay	73.27	7	P	P	16 31 37.2	-0.1
RES				pmax	pmax		
	comp=Z,12nm,1.8s						
RES	Resolute Bay	73.27	7	P	P	16 31 37.2	-0.1
RES				IAmb	IAmb	16 31 37.7	
	comp=Z,12nm,1.8s						
YKA	Yellowknife Ar	80.00	20	P	P	16 32 14.9	-0.7
	comp=Z,2.4nm,0.6s,baz=325,slow=4.5,SNR=47						
YKA	Yellowknife Ar	80.00	20	i P	P	16 32 14.8	-0.8
YKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FFC	Flin Flon	90.10	18	P	P	16 33 05.8	-0.6
FFC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
FFC	Flin Flon	90.10	18	P	P	16 33 05.8	-0.6
FFC				IAmb	IAmb	16 33 06.5	
	comp=Z,6.8nm,0.8s						
ULM	Lac du Bonnet	95.74	17	LR	LR	17 20 06.9	
	comp=Z,51nm,21.4s,baz=332,slow=38						

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*IDC **26** 16:21:44.6±1.5, 6°.58S×103°.33E, h0^{km}, mb3.8/11, mb1 3.9/11, mb1mx3.7/41, mbtmp3.8/11, MS3.3/1, Ms1 3.3/1, ms1mx2.6/42, Error ellipse: s-maj=57.2km s-min=15.9km az=51.0*

*DJA **26** 16:21:46.2±1.3, 7°S±4°×10°4E±°, h11^{km}±10^{km}, M3.9/8, MLv3.9/8*

*NEIC **26** 16:21:48.9±2.8, 6°.75S±0°.09×103°.4E±0°.1, h35^{km}±7^{km}, mb4.5/7, Error ellipse: s-maj=20.4km s-min=9.3km az=56.0*

ISC 26 16:21:50.0±0.8**, 6°.61S**±0°.07×**103°.55E**±0°.08**, h35^{km}, n40, σ1ˢ49**/36**, mb3.8**/14**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	Kota Agung	1.43	41	P	Pn	16 22 11.9	-1.6
LWLI	Liwa	1.66	18	P	Pn	16 22 15.8	-0.9
LWLI				S	Sn	16 22 36.4	-0.4
MDSI	Maura Dua	2.19	16	P	Pn	16 22 23.4	-0.6
MNAI	Manna	2.31	345	P	Pn	16 22 25.7	+0.1
MNAI				S	Sn	16 22 54.3	+1.5
MNAI	Manna	2.31	345	Pn	Pn	16 22 25.9	+0.3
SKJI	Sukabumi	3.01	98	P	Pn	16 22 33.8	-1.4
KSI	Kapahiang	3.09	342	P	Pn	16 22 35.0	-1.4
KSI				S	Sn	16 23 16.2	+4.1
DBJI	Dramaga	3.17	89	P	Pn	16 22 35.4	-2.2
CNJI	Cibinong	3.62	101	P	Pn	16 22 42.0	-1.6
CISI	Cisompet, Garu	4.33	103	Pn	Pn	16 22 53.6	+0.1
XMIS	Christmas Isla	4.37	152	Pn	Pn	16 22 52.3	-1.8
UGM	Wanagama	7.04	101	Pn	Pn	16 23 32.5	+1.9
PSI	Prapat	10.42	334	LR	LR	16 28 05.6	
	comp=Z,175nm,19.0s,baz=159,slow=37						
JAGI	Jajag, Banyuwa	10.67	101	Pn	Pn	16 24 21.9	+1.4
SOEI	Soe	20.74	100	P	P	16 26 27.8	-0.2
FITZ	Fitzroy Crossi	24.38	120	P	P	16 27 05.6	+0.5
	0.8nm,0.8s,baz=297,slow=12,SNR=1.8						
FITZ	Fitzroy Crossi	24.38	120	P	P	16 27 05.4	+0.2
CMAR	Chiang Mai Arr	25.32	350	P	P	16 27 12.4	-1.2
	0.9nm,0.6s,baz=181,slow=9.0,SNR=6.4						
H01W3	Cape Leeuwin H	29.79	162	T	T	16 59 28.4	
	baz=340						
H01W2	Cape Leeuwin H	29.80	162	T	T	16 59 24.5	
	baz=340						
H01W1	Cape Leeuwin H	29.80	162	T	T	16 59 17.6	
	baz=340						
H08S2	Diego Garcia H	30.84	266	T	T	17 00 24.0	
	baz=90						
H08S3	Diego Garcia H	30.84	266	T	T	17 00 34.1	
	baz=90						
H08S1	Diego Carcia H	30.85	266	T	T	17 00 39.4	
	baz=90						
WB0	Warramunga Arr	32.67	117	P	P	16 28 20.8	+1.5
WB0				IAmb	IAmb	16 28 35.5	
	comp=Z,16nm,1.8s						
WRA	Warramunga Arr	32.69	117	P	P	16 28 20.8	+1.4
	comp=Z,1.0nm,0.7s,baz=287,slow=12,SNR=13						
WB2	Warramunga Arr	32.70	117	P	P	16 28 20.9	+1.5
WB2				IAmb	IAmb	16 29 05.6	
	comp=Z,13nm,1.6s						
WR0	Warramunga Arr	32.87	117	P	P	16 28 22.6	+1.6
WR0				IAmb	IAmb	16 29 29.9	
	comp=Z,12nm,1.9s						
ASAR	Alice Springs	33.73	123	P	P	16 28 30.1	+1.6
	comp=Z,0.6nm,0.8s,baz=300,slow=7.5,SNR=14						
ASAR	Alice Springs	33.73	123	P	P	16 28 27.1	-1.3
PMG	Port Moresby	43.25	97	P	P	16 29 48.9	+0.4
	comp=Z,6.3nm,0.8s,baz=245,slow=12,SNR=4.2						
STKA	Stephens Creek	43.47	130	P	P	16 29 52.2	+2.1
	comp=Z,1.0nm,0.5s,baz=310,slow=8.4,SNR=4.8						
KSRS	Korea Array	49.38	26	P	P	16 30 35.4	-0.9
	comp=Z,0.7nm,0.7s,baz=207,slow=8.1,SNR=2.3						
SONM	Songino Array	54.26	2	P	P	16 31 12.6	-0.1
	comp=Z,0.8nm,0.9s,baz=190,slow=7.3,SNR=1.3						
MKAR	Makanchi Array	56.42	343	P	P	16 31 27.9	-0.2
	comp=Z,0.7nm,0.6s,baz=152,slow=8.9,SNR=8.7						
USRK	Ussuriysk Ar.	56.70	24	P	P	16 31 29.1	-1.0
ZALV	Zalesovo Beam	62.36	348	P	P	16 32 09.0	+0.1
	comp=Z,0.9nm,0.4s,baz=141,slow=5.7,SNR=4.6						
ZALV	Zalesovo Beam	62.36	348	P	P	16 32 08.6	-0.3
BRTR	Keskin Array B	79.03	312	P	P	16 33 48.1	-2.8
	comp=Z,0.4nm,0.6s,baz=114,slow=3.6,SNR=2.3						
TXAR	Lajitas Array	145.80	45	PKPbc	PKPab	16 41 27.5	+0.7
	comp=Z,0.6nm,0.8s,baz=246,slow=1.6,SNR=5.5						

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*IDC **26** 16:39:34.6±1.8, 7°.68S×130°.55E, h0^{km}, mb4.0/1, mb1 3.7/5, mb1mx3.4/32, mbtmp3.6/5, ML3.4/4, Error ellipse: s-maj=66.9km s-min=24.4km az=86.0*

*NEIC **26** 16:39:39.5±0.5, 7°.63S±0°.03×130°.3E±0°.2, h32^{km}±10^{km}, mb4.3/1, Error ellipse: s-maj=26.2km s-min=3.0km az=95.0*

ISC 26 16:39:37.8±0.9**, 7°.78S**±0°.06×**130°.5E**±0°.1**, h35^{km}, n14, σ2ˢ44**/16**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	0.79	105	Pn	Pn	16 39 58.6	+6.1
MTN	Manton Dam	5.07	173	Pn	Pn	16 40 56.7	+5.4
FAKI	Fak Fak	5.12	20		Pn	16 40 52.8	+0.6
SIJI	Sorong	6.91	6	Pn	Pn	16 41 17.3	+0.7
	0.8nm,0.3s,baz=248,slow=9.7,SNR=9.7						
SIJI				Sn	Sn	16 42 30.4	-3.7
	0.8nm,0.3s,baz=253,slow=19,SNR=2.2						
KNRA	Kununurra	8.04	192	Pn	Pn	16 41 35.4	+3.2
FITZ	Fitzroy Crossi	11.31	204	Pn	Pn	16 42 18.9	+1.9
	0.3nm,0.3s,baz=28,slow=11,SNR=25						
FITZ				Sn	Sn	16 44 18.9	-3.2
	0.4nm,0.3s,baz=62,slow=19,SNR=7.2						
FITZ	Fitzroy Crossi	11.31	204		Pn	16 42 18.6	+1.6
WB0	Warramunga Arr	12.49	163	Pn	Pn	16 42 35.2	+2.0
WRA	Warramunga Arr	12.64	163	Pn	Pn	16 42 37.2	+2.0
	0.1nm,0.3s,baz=349,slow=13,SNR=4.9						
WRA				Sn	Sn	16 44 53.8	-1.0
	0.4nm,0.3s,baz=330,slow=22,SNR=7.2						
WB2	Warramunga Arr	12.64	163	Pn	Pn	16 42 36.8	+1.5
ASAR	Alice Springs	16.12	169	Pn	P	16 43 24.9	0.0
	0.1nm,0.3s,baz=342,slow=8.5,SNR=9.9						
ASAR				Sn	Sn	16 46 15.1	-4.7
	0.1nm,0.3s,baz=358,slow=28,SNR=3.1						
MK31	Makanchi Array	69.16	327	P	P	16 50 41.2	+0.4
MK31				IAmb	IAmb	16 52 17.1	
	comp=Z,4.9nm,1.9s						
MKAR	Makanchi Array	69.16	327	P	P	16 50 42.2	+1.4
	comp=Z,1.2nm,0.6s,baz=127,slow=7.5,SNR=18						
MKAR	Makanchi Array	69.16	327	P	P	16 50 41.1	+0.3

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*IDC **26** 16:52:15.8±3.4, 21°.09S×70°.12W, h0^{km}, mb3.9/1, mb1 3.7/2, mb1mx3.4/16, mbtmp3.6/2, ML3.1/1, Error ellipse: s-maj=130.6km s-min=45.5km az=102.0*

*GUC **26** 16:52:19.4±0.6, 19°.99S×70°.76W, h37^{km}±3^{km}, ML3.5*

ISC 26 16:52:16.1±2.0**, 20°.07S**±0°.03×**70°.82W**±0°.08**, h6^{km}**±11^{km}**, n20, σ1ˢ55**/26**, 7C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA01	Diego Aracena	0.78	130	⇑ iP	Pn	16 52 33.5	-0.2
TA01				i S	Sn	16 52 44.7	-1.0
TA01				IAML		16 52 49.6	
	comp=E,3µm,0.3s						
PSGC	Pisagua	0.81	55	⇓ iP	Pg	16 52 32.1	+0.5
PSGC				i S	Sg	16 52 42.3	+0.2
PATCX	Punta Patache	0.98	140	⇑ iP	Pn	16 52 36.9	+0.4
PATCX				i S	Sn	16 52 50.6	-0.2
PATCX				IAML		16 52 56.5	
	comp=E,1µm,0.8s						
PB11	IPOC Station P	1.14	75	⇑ iP	Pb	16 52 38.2	-0.1
PB11				i S	Sb	16 52 52.5	-1.0
PB11				IAML		16 52 54.1	
	comp=N,4µm,0.2s						
PB02	IPOC Station P	1.52	145	⇑ iP	Pg	16 52 45.7	+0.4
PB02				eS	Sg	16 53 06.3	+1.3
PB02				IAML		16 53 10.3	
	comp=E,2µm,0.4s						
PB12	IPOC Station P	1.52	18	⇓ iP	Pn	16 52 43.2	-0.8
PB12				i S	Sn	16 53 02.7	-1.4
PB12				IAML		16 53 06.5	
	comp=E,767nm,0.5s						
PB08	IPOC Station P	1.57	93	⇑ iP	Pg	16 52 45.7	-0.5
PB08				i S	Sg	16 53 05.9	-0.7
GO01	Chusmiza	1.58	76	⇑ iP	Pb	16 52 45.8	-0.3
GO01				i S	Sg	16 53 06.5	-0.6
PB01	IPOC Station P	1.58	128	⇑ iP	Pg	16 52 46.3	-0.2
PB01				i S	Sg	16 53 07.5	+0.5
PB01				IAML		16 53 14.7	
	comp=E,464nm,0.4s						
AP01	Chacalluta	1.75	15	eP	Pn	16 52 47.4	+0.4
AP01				eS	Sn	16 53 09.1	-0.5
AP01				IAML		16 53 11.5	
	comp=E,2µm,0.3s						
PB16	IPOC Station P	2.12	36	eP	Pn	16 52 54.0	+1.3
PB16				eS	Sn	16 53 20.5	+0.8
PB16				IAML		16 53 26.9	
	comp=N,384nm,0.4s						
LPAZ	La Paz	4.55	35	Pn	Pb	16 53 33.8	-3.0
	comp=N,0.4nm,0.3s,baz=213,slow=8.3,SNR=6.0						
LPAZ				Sn	Sb	16 54 37.6	+5.5
	comp=N,0.5nm,0.3s,baz=220,slow=15,SNR=1.4						
TORD	Torodi Ar. Bea	78.58	71	P	P	17 04 18.2	-1.0
	comp=N,0.7nm,0.6s,baz=238,slow=5.1,SNR=4.8						
H11S2	WAKE ISLAND Hy	125.91	279	T	T	19 29 44.8	
	baz=102						
H11S1	WAKE ISLAND Hy	125.92	279	T	T	19 29 43.1	
	baz=102,slow=74						
H11S3	WAKE ISLAND Hy	125.93	279	T	T	19 29 44.4	
	baz=102,slow=74						
H11N3	WAKE ISLAND Hy	125.96	280	T	T	19 29 48.1	
	baz=102,slow=75,SNR=7.2						
H11N2	WAKE ISLAND Hy	125.97	280	T	T	19 29 49.5	
	baz=102,slow=75,SNR=5.2						
H11N1	WAKE ISLAND Hy	125.98	280	T	T	19 29 48.2	
	baz=102,slow=75,SNR=4.4						
MKAR	Makanchi Array	145.47	33	PKPbc	PKPab	17 11 56.7	+1.2
	comp=N,0.7nm,0.6s,baz=315,slow=3.9,SNR=11						

VIE 26 16:58:11.9±0.2**, 47°.72N**×**12°.89E, h2^{km}**±2^{km}**, ml1.5**/9**, Error ellipse: s-maj=1.8km s-min=1.1km az=143.0 12 km NW of Berchtesgaden, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOA	Molln	0.94	81	i Pg	Pb	16 58 30.8	-0.2
	0.7nm,0.4s						
MOA				i Sg	Sb	16 58 43.1	-0.7
	0.9nm,0.3s						
WTTA	Wattenberg	0.96	243	i Pg	Pg	16 58 30.7	+0.3
	0.6nm,0.2s						
WTTA				i Sg	Sb	16 58 44.6	-0.1
	2.6nm,0.3s						
WATA	Walderalm	0.97	247	i Sg	Sg	16 58 43.7	+0.7
	4µm,0.0s						
ABTA	Abfaltersbach	1.00	195	ePg	Pb	16 58 32.0	-0.1
	0.7nm,0.3s						
ABTA				i Sg	Sb	16 58 45.0	-0.7
	1.8nm,0.3s						
SQTA	Sankt Quirin	1.24	247	Pg	Pn	16 58 37.4	+0.9
	1.1nm,0.2s						
SQTA				i Sg	Sb	16 58 53.1	+0.3
	1.8nm,0.2s						
MOTA	Moosalm	1.27	254	i Pg	Pn	16 58 37.8	+0.9
MOTA				i Sg	Sb	16 58 53.6	+0.2
RETA	Reutte	1.46	262	i Pg	Pg	16 58 40.7	+0.8
	0.9nm,0.3s						
RETA				i Sg	Sn	16 59 00.1	+1.0
	1.3nm,0.2s						
FETA	Feichten	1.63	246	i Pg	Pg	16 58 44.0	+1.0
	0.3nm,0.2s						

LJU 26 16:59:03.0, 46°.39N×**15°.07E, h0^{km} Rockburst, Northwestern Balkan Peninsula**

WEL 26 17:07:04.7, 36°S±7°×**17°8E**±1°6**, h263^{km}**±9^{km}**, M3.3**/26**, mB4.2**/3**, MLv3.3**/26**, Mw(mB)3.3**/3**, Error ellipse: s-maj=0.0km s-min=0.0km az=85.1, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.18	172	P	Pn	17 07 41.7	-0.4
MXZ				S	S	17 08 06.3	-5.4
HAZ	Te Kaha	1.39	190	P	Pn	17 07 42.8	-0.5
HAZ				S	S	17 08 09.5	-4.5
WMGZ	Waiomatatini S	1.45	170	P	Pn	17 07 44.3	+0.5
WMGZ				S	S	17 08 11.7	-3.2
PKGZ	Pakihiroa	1.50	180	P	Pn	17 07 44.2	0.0

RUGZ	Raukumara Rang	1.61	192	P	Pn	17 07 44.5	-0.6
PUZ	Puketiti	1.68	176	S	S	17 08 15.1	-3.0
TWGZ	Tauwhareparae	1.79	183	P	Pn	17 07 47.8	+1.3
TWGZ				S	S	17 08 17.4	-2.2
MWZ	Matawai	1.99	193	P	Pn	17 07 48.8	+0.6
MWZ				S	S	17 08 20.4	-2.3
URZ	Urewera	2.02	202	P	Pn	17 07 48.8	+0.4
URZ				S	S	17 08 21.2	-1.8
TKGZ	Te Karaka	2.06	185	P	Pn	17 07 54.8	+6.2
TKGZ				S	S	17 08 26.3	+2.7
RAGZ	Rawiri	2.17	194	P	Pn	17 07 51.2	+1.4
RIGZ	Rimuhau	2.33	186	P	Pn	17 07 52.5	+1.3
MUGZ	Murupara	2.33	206	P	Pn	17 07 51.9	+0.6
RTZ	Ruatahuna	2.39	201	P	Pn	17 07 52.3	+0.4
TOZ	Tahuroa Road	2.47	236	P	Pn	17 07 53.4	+0.9
RAHZ	Arahi	2.65	197	P	Pn	17 07 55.7	+1.5
MTHZ	Maungataniwha	2.65	202	P	Pn	17 07 55.4	+1.1
MRHZ	Matea Rd	2.78	208	P	Pn	17 07 56.6	+0.9
ARHZ	Aropaoanui	3.00	196	P	Pn	17 07 59.6	+1.7
ARHZ				S	S	17 08 40.4	+0.3
BKZ	Black Stump Fm	3.05	204	P	Pn	17 07 59.4	+0.9
BKZ				S	S	17 08 39.8	-1.4
MCHZ	McNeill Hill	3.24	199	P	Pn	17 08 02.5	+2.0
MCHZ				S	S	17 08 45.2	+0.2
KWHZ	Kaweka Forest	3.30	203	P	Pn	17 08 02.6	+1.3
BHHZ	Black Hill Sta	3.48	207	P	Pn	17 08 04.4	+1.2
BHHZ				S	S	17 08 48.8	-1.1
KRHZ	Kereru	3.52	202	P	Pn	17 08 04.7	+1.1
KRHZ				S	S	17 08 49.2	-1.3
KAHZ	Kahuranaki	3.53	195	P	Pn	17 08 05.7	+2.0
PXZ	Pawanui	3.76	195	P	Pn	17 08 07.9	+1.7
PXZ				S	S	17 08 53.8	-1.5
PNHZ	Pukenui	3.82	202	P	Pn	17 08 08.0	+1.1
PNHZ				S	S	17 08 54.4	-2.3
TSZ	Takapari Road	4.03	204	P	Pn	17 08 10.1	+0.8
DVHZ	Dannevirke	4.18	201	P	Pn	17 08 12.4	+1.3
BFZ	Birch Farm	4.52	198	P	Pn	17 08 16.5	+1.4
MRZ	Mangatainoka R	4.70	204	P	Pn	17 08 17.9	+0.7
TIWZ	Tintock	4.71	201	P	Pn	17 08 18.6	+1.3
HOWZ	Holdsworth Sta	4.93	203	P	Pn	17 08 20.6	+0.6
OGWZ	Otaki Gorge	4.98	206	P	Pn	17 08 21.2	+0.7
KIW	Kapiti Island	5.11	208	P	Pn	17 08 22.5	+0.4
CAW	Cannon Point	5.27	206	P	Pn	17 08 24.4	+0.4

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*NEIC **26** 17:34:24.2±1.4, 26°.4S±0°.1×179°.3E±0°.2, h493^{km}±10^{km}, mb4.4/19, Error ellipse: s-maj=27.8km s-min=18.9km az=82.0*

*IDC **26** 17:34:25.9±2.1, 26°.52S×179°.29E, h510^{km}±26^{km}, mb3.1/7, mb1 3.3/10, mb1mx3.2/28, mbtmp4.1/10, Error ellipse: s-maj=27.2km s-min=15.6km az=158.0*

ISC 26 17:34:24.5±0.8**, 26°.46S**±0°.09×**179°.3E**±0°.1**, h495**^{km}**, n44,** σ**0^{s}.82**/42**, mb3.7**/14**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	11.91	188	P	P	17 37 01.7	-0.2
	1.3nm,0.3s,baz=90,slow=5.1,SNR=10						
URZ				S	S	17 39 11.9	+0.2
	0.3nm,0.3s,baz=54,slow=19,SNR=1.9						
URZ	Urewera	11.91	188	P	P	17 37 01.5	-0.3
DZM	Mont Dzumac	12.54	288	P	P	17 37 10.3	+1.4
	0.4nm,0.3s,baz=142,slow=19,SNR=3.0						
BKZ	Black Stump Fm	12.89	190	P	P	17 37 09.8	-2.5
BHW	Baring Head	15.36	193	P	P	17 37 38.5	+0.3
QRZ	Quartz Range	15.40	200	P	P	17 37 39.5	+0.9
NNZ	Nelson	15.52	197	P	P	17 37 39.2	-0.7
NNZ				IAmb	IAmb	17 37 46.2	
	comp=Z,29nm,1.1s						
TUWZ	Tuamarina	15.58	195	P	P	17 37 38.8	-1.8
BSWZ	Blackbirch Sta	15.87	195	P	P	17 37 43.0	-0.5
THZ	Tophouse	16.15	198	P	P	17 37 46.5	-0.2
THZ				IAmb	IAmb	17 38 05.2	
	comp=Z,23nm,1.1s						
KHZ	Kahutara	16.61	195	P	P	17 37 50.6	-0.7
LTZ	Lake Taylor	17.27	198	P	P	17 37 58.1	0.0
RPZ	Rata Peaks	18.48	199	P	P	17 38 09.4	+0.1
	comp=Z,0.8nm,0.3s,baz=101,slow=10,SNR=1.7						
RPZ	Rata Peaks	18.48	199	P	P	17 38 09.4	+0.1
RPZ				IAmb	IAmb	17 38 38.6	
	comp=Z,39nm,1.2s						
FOZ	Fox Glacier	18.71	202	P	P	17 38 12.2	+0.9
FOZ				IAmb	IAmb	17 38 20.2	
	comp=Z,29nm,1.0s						
STKA	Stephens Creek	33.27	252	P	P	17 40 20.6	+0.4
	comp=Z,0.6nm,0.4s,baz=95,slow=12,SNR=4.4						
STKA	Stephens Creek	33.27	252	P	P	17 40 20.8	+0.7
BBOO	Buckleboo	37.94	250	P	P	17 40 58.8	-0.2
BBOO				IAmb	IAmb	17 41 13.1	
	comp=Z,21nm,1.4s						
AS31	Alice Springs	41.08	264	P	P	17 41 24.9	+0.3
ASAR	Alice Springs	41.08	264	P	P	17 41 24.7	+0.1
	comp=Z,1.4nm,0.6s,baz=93,slow=7.4,SNR=56						
ASAR				S	S	17 47 01.0	-0.3
	comp=Z,0.4nm,0.8s,baz=85,slow=14,SNR=4.8						
ASAR	Alice Springs	41.08	264	P	P	17 41 24.6	0.0
WR0	Warramunga Arr	41.51	269	P	P	17 41 27.0	-1.0
WR0				IAmb	IAmb	17 41 52.1	
	comp=Z,5.3nm,1.5s						
WRA	Warramunga Arr	41.70	269	P	P	17 41 29.1	-0.3
	comp=Z,1.2nm,0.5s,baz=107,slow=6.4,SNR=10						
WRA				S	S	17 47 08.6	-1.6
	comp=Z,0.5nm,0.9s,baz=98,slow=12,SNR=3.4						
FORT	Forrest	44.90	252	P	P	17 41 54.1	-0.2
FORT				IAmb	IAmb	17 41 54.4	
	comp=Z,10nm,0.7s						
MTN	Manton Dam	47.10	277	P	P	17 42 10.7	-0.7
MTN				IAmb	IAmb	17 42 25.6	
	comp=Z,7.6nm,1.4s						
WAKE	Wake Island	47.11	344	P	P	17 42 09.6	-1.5
KNRA	Kununurra	48.13	272	P	P	17 42 18.9	-0.1
KNRA				IAmb	IAmb	17 42 20.4	
	comp=Z,4.8nm,0.6s						
FITZ	Fitzroy Crossi	50.08	268	P	P	17 42 34.1	+0.7
QSPA	South Pole Qui	63.63	180	P	P	17 44 06.4	+0.3
KSRS	Korea Array	79.83	321	P	P	17 45 40.9	+0.1
	comp=Z,0.6nm,0.6s,baz=125,slow=5.6,SNR=2.7						
GO09	Cerro Castillo	80.34	143		pP	17 47 30.4	-0.1
PETK	Petropavlovsk-	81.44	347	P	P	17 45 48.6	-0.3
	comp=Z,1.2nm,0.6s,baz=112,slow=8.5,SNR=5.5						
SNAA	Sanae	82.12	179	P	P	17 45 52.4	+0.1
SNAA				IAmb	IAmb	17 46 14.2	
	comp=Z,3.9nm,1.3s						
USA0B	Ussuriysk Arra	82.59	328	P	P	17 45 55.6	+0.7
USA0B				IAmb	IAmb	17 45 59.8	
	comp=Z,11nm,1.4s						
USRK	Ussuriysk Ar.	82.59	328	P	P	17 45 55.2	+0.3
	comp=Z,1.2nm,0.6s,baz=129,slow=2.4,SNR=2.6						
USRK	Ussuriysk Ar.	82.59	328	P	P	17 45 55.5	+0.6
TXAR	Lajitas Array	92.29	58	P	P	17 46 42.9	+1.4
	comp=Z,0.4nm,0.8s,baz=120,slow=5.3,SNR=3.8						
FINES	FINESS Array B	140.65	340	PKhKP	PKPpre	17 52 48.8	
	comp=Z,2.5nm,0.9s,baz=42,slow=4.1,SNR=9.4						
FINES	FINESS Array B	140.65	340		PKPpre	17 52 49.8	
NB2	NORSAR Subarra	144.50	350	PKP	PKPbc	17 53 02.0	-1.4
	comp=Z,3.1nm,0.7s,baz=25,slow=3.0						
NOA	NORSAR Array B	144.50	350	PKP	PKPbc	17 53 02.1	-1.2
	comp=Z,1.5nm,0.6s,baz=19,slow=3.1,SNR=11						
AKASG	Malin Array Be	146.75	325	PKPbc	PKPbc	17 53 09.2	-1.0
	comp=Z,1.9nm,0.5s,baz=44,slow=4.3,SNR=9.5						
BRTR	Keskin Array B	148.56	304	PKPbc	PKPbc	17 53 14.8	-0.6
	comp=Z,0.9nm,0.5s,baz=82,slow=1.0,SNR=7.9						
BURAR	Bucovina Array	150.69	323		PKiKP	17 53 20.6	0.0

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*IDC **26** 17:58:09.9±1.5, 4°.14N×126°.72E, h0^{km}, mb3.7/6, mb1 3.9/7, mb1mx3.5/35, mbtmp3.7/7, ML3.7/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/41, Error ellipse: s-maj=63.7km s-min=17.4km az=58.0*

*DJA **26** 17:58:13.7±1.1, 4°N±12°×12°7E±°, h86^{km}±48^{km}, M4.1/10, mB4.5/2, mb4.0/7, MLv4.2/10, Mw(mB)3.7/2*

*NEIC **26** 17:58:16.9±1.1, 4°.16N±0°.04×126°.9E±0°.1, h57^{km}±10^{km}, mb4.0/10, Error ellipse: s-maj=18.2km s-min=4.0km az=74.0*

ISC 26 17:58:15.4±0.7**, 4°.11N**±0°.07×**126°.83E**±0°.10**, h36**^{km}**, n33,** σ**1^{s}.76**/31**, mb3.7**/8**, 1C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	3.36	171	P	Pn	17 59 07.1	+1.7
TNTI	Ternate	3.36	171	Pn	Pn	17 59 05.8	+0.4
CTBH	Cotabato--PC H	4.02	320	⇑iP	Pn	17 59 17.4	+3.0
KMSI	Cibinong	4.52	219	P	Pn	17 59 22.2	+0.9
LBMI	Labuha	4.76	172	P	Pn	17 59 26.2	+1.5
	0.1nm12nm,0.9s						
MRSI	Marisa	6.07	234	P	Pn	17 59 44.6	+1.9
	0.2nm600nm39nm,0.5s						
SANI	Sanana	6.18	188	P	Pn	17 59 42.7	-1.4
SANI	Sanana	6.18	188	P	Pn	17 59 43.0	-1.1
LUWI	Luwuk	6.53	218	P	Pn	17 59 51.5	+2.6
	0.2nm31nm,1.1s						
LUWI	Luwuk	6.53	218	Pn	Pn	17 59 53.2	+4.2
SIJI	Sorong	6.64	138	Pn	Pn	17 59 52.0	+1.5
	1.6nm,0.3s,baz=331,slow=19,SNR=6.4						
SIJI				Sn	Sn	18 01 07.5	+2.4
	0.2nm,0.3s,baz=249,slow=23,SNR=1.4						
APSI	Ampana	7.19	226	P	Pn	18 00 00.1	+2.1
FAKI	Fak Fak	8.84	142	Pn	Pn	18 00 22.1	+1.4
BNDI	Bandanaira	9.11	160	P	Pn	18 00 19.1	-5.3
KAPI	Kappang	11.49	218	LR	LR	18 05 53.1	
	comp=Z,99nm,18.7s,baz=55,slow=40						
SZP	Santa	14.75	335	Pn	Pn	18 01 41.8	+0.3
MTN	Manton Dam	17.38	166	Pn	Pn	18 02 13.0	-2.2
MTN				IAmb	IAmb	18 02 18.0	
	comp=Z,6.5nm,1.1s						
KNRA	Kununurra	19.75	174	P	P	18 02 42.9	+0.5
KNRA				IAmb	IAmb	18 02 45.9	
	comp=Z,5.4nm,0.7s						
TPUB	Ta-pu	20.00	343	P	P	18 02 45.1	+0.1
TPUB				IAmb	IAmb	18 02 45.5	
	comp=Z,18nm,1.3s						
FITZ	Fitzroy Crossi	22.10	183	P	P	18 03 05.9	-1.7
	comp=Z,0.7nm,0.4s,baz=9.5,slow=9.7,SNR=13						
FITZ	Fitzroy Crossi	22.10	183	P	P	18 03 05.8	-1.8
WRAB	Tennant Creek	25.01	163	P	P	18 03 33.6	-2.5
WRA	Warramunga Arr	25.02	163	P	P	18 03 36.0	-0.1
	comp=Z,1.0nm,0.4s,baz=341,slow=11,SNR=6.4						
AS31	Alice Springs	28.46	166	P	P	18 04 06.8	-0.3
ASAR	Alice Springs	28.46	166	P	P	18 04 07.4	+0.2
	comp=Z,0.3nm,0.5s,baz=345,slow=7.0,SNR=9.9						
CMAR	Chiang Mai Arr	30.77	300	P	P	18 04 27.9	+0.2
	comp=Z,0.5nm,0.7s,baz=105,slow=7.1,SNR=5.7						
BBOO	Buckleboo	37.75	167	P	P	18 05 28.1	+0.1
STKA	Stephens Creek	38.45	160	P	P	18 05 35.0	+1.2
	comp=Z,0.9nm,0.4s,baz=338,slow=10,SNR=1.9						
STKA	Stephens Creek	38.45	160	IAmb	IAmb	18 05 35.6	
	comp=Z,2.2nm,1.5s						
MKAR	Makanchi Array	57.30	325	P	P	18 07 58.0	-1.7
	comp=Z,0.3nm,0.4s,baz=118,slow=7.8,SNR=10						
KURK	Kurchatov	61.48	327	P	P	18 08 27.4	-0.9
KURK				IAmb	IAmb	18 08 44.3	
	comp=Z,1.4nm,0.8s						
TIXI	Tiksi	67.46	1	P	P	18 09 06.2	-0.9
TIXI				IAmb	IAmb	18 09 23.1	
	comp=Z,3.1nm,1.5s						
CBN	Corbin Frederi	132.29	26		PKPdf	18 17 24.9	-1.2

DJA 26 17:58:58.0±1.1**, 3°S**±6°×**12°9E**±°**, h15**^{km}±13^{km}**, M2.7**/7**, MLv2.7**/7**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.81	172	P	Pg	17 59 12.7	-1.0
AAI	Ambon	1.30	209	P	Pn	17 59 21.3	-0.3
AAI				S	Sb	17 59 29.7	-9.0
NLAI	Namlea	1.85	248	P	Pn	17 59 29.7	+0.5
LBMI	Labuha	2.30	325	P	Pn	17 59 34.5	-1.0

IDC 26 18:01:10.6±2.5**, 3°.96N**×**127°.92E, h0**^{km}**, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.1**/32**, mbtmp3.3**/3**, Error ellipse: s-maj=147.1km s-min=28.1km az=70.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	22.03	186	P	P	18 06 06.9	0.0
	0.7nm,0.7s,baz=7.0,slow=11,SNR=2.0						
WRA	Warramunga Arr	24.57	165	P	P	18 06 32.8	+0.3
ASAR	Alice Springs	28.07	168	P	P	18 07 03.7	-0.4
	0.2nm,0.6s,baz=349,slow=7.3,SNR=6.2						
MKAR	Makanchi Array	58.05	325	P	P	18 11 05.5	-0.1
	0.1nm,0.5s,baz=126,slow=7.8,SNR=2.2						

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*IDC **26** 18:16:00.7±0.6, 6°.59S×105°.24E, h0^{km}, mb4.3/24, mb1 4.4/26, mb1mx4.3/43, mbtmp4.3/26, ML5.0/1, MS3.4/8, Ms1 3.4/8, ms1mx3.0/51, Error ellipse: s-maj=18.5km s-min=11.7km az=45.0*

*NEIC **26** 18:16:01.3±1.5, 6°.75S±0°.08×105°.15E±0°.04, h11^{km}±4^{km}, mb4.6/28, Error ellipse: s-maj=12.3km s-min=3.1km az=202.0*

*DJA **26** 18:16:03.0±0.7, 7°S±2°×10°5E±°, h11^{km}±5^{km}, M4.7/28, mb4.8/28, mB5.2/14, MLv5.0/18, Mw(mB)4.5/14, Mwp5.3/1*

*KLM **26** 18:16:04.0, 7°.14S×105°.03E, h22^{km}, mb4.6*

ISC 26 18:16:04.7±1.1**, 6°.91S**±0°.05×**105°.17E**±0°.04**, h32**^{km}±3^{km}**, n158,** σ**1^{s}.74**/167**, mb4.4**/39**, MS3.4**/6**, 1C, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKJI	Sukabumi	1.38	94	P	Pn	18 16 27.2	-0.6
SKJI				S	Sb	18 16 47.9	+0.6
KASI	Kota Agung	1.53	334	P	Pn	18 16 31.2	+1.4
KASI				S	Sn	18 16 51.4	+2.8
DBJI	Dramaga	1.61	77	P	Pn	18 16 31.3	+0.4
DBJI				S	Sn	18 16 52.8	+2.2
TNG	Tangerang	1.64	64	P	Pn	18 16 31.7	+0.4
CNJI	Cibinong	1.99	102	P	Pn	18 16 35.6	-0.5
CNJI				S	Sb	18 17 06.1	+1.5
LWLI	Liwa	2.18	330	P	Pb	18 16 43.1	-0.5
LWLI				S	Sb	18 17 13.1	+2.8
LEM	Lembang	2.44	88	Pn	Pn	18 16 42.9	+0.5
	360nm,0.3s,baz=311,slow=4.7,SNR=88						
LEM				LR	LR	18 17 10.7	
	comp=Z,523nm,18.4s,baz=229,slow=30						
LEM				Sn	Sn	18 17 12.6	+1.4
	139nm,0.3s,baz=310,slow=15,SNR=5.7						
LEM	Lembang	2.44	88	P	Pn	18 16 44.1	+1.7
LEM				S	Sb	18 17 17.0	-0.6
MDSI	Maura Dua	2.60	338	P	Pn	18 16 46.5	+1.9
MDSI				S	Sb	18 17 22.2	-0.1
CISI	Cisompet, Garu	2.71	104	P	Pn	18 16 46.0	0.0
CISI				S	Sn	18 17 16.2	-1.5
CISI	Cisompet, Garu	2.71	104		Pn	18 16 46.2	+0.2
MNAI	Manna	3.36	319	P	Pn	18 16 57.5	+2.6
MNAI	Manna	3.36	319		Pn	18 16 57.4	+2.5
XMIS	Christmas Isla	3.58	172		Pn	18 16 56.2	-1.8
PMBI	Palembang	3.98	354	P	Pn	18 17 07.9	+4.4
PMBI				S	Sb	18 17 59.9	-2.0
KSI	Kapahiang	4.13	322	P	Pn	18 17 10.1	+4.5
SMRI	Semarang	5.24	92	P	Pn	18 17 22.4	+1.6
	0.9nm215nm,0.7s						
SMRI	Semarang	5.24	92		Pn	18 17 20.3	-0.5
UGM	Wanagama	5.41	101	P	Pn	18 17 23.8	+0.7
	0.8nm2µm165nm,0.6s						
UGM				S	Sn	18 18 19.2	-5.1
	0.8nm2µm165nm,0.6s						
UGM	Wanagama	5.41	101		Pn	18 17 23.8	+0.7
WOJI	Wonogiri, Jawa	5.78	100	P	Pn	18 17 29.2	+0.9
	0.3nm48nm,0.7s						
PCJI	Pacitan	6.09	102	P	Pn	18 17 33.3	+0.7
	0.9nm2µm122nm,0.8s						
PPSI	Pulau Pagai	6.59	308	P	Pn	18 17 40.1	+0.8
	0.8nm3µm151nm,0.5s						
GRJI	Gresik	7.26	90	P	Pn	18 17 51.1	+2.5
	0.3nm799nm57nm,0.8s						
GMJI	Gumukmas	8.32	100	P	Pn	18 18 06.4	+3.3
	694nm26nm,0.8s						
MYKOM	Kota Tinggi	8.74	351	P	Pn	18 18 12.0	+3.0
JAGI	Jajag, Banyuwa	9.04	100	P	Pn	18 18 15.0	+2.0
	2µm113nm,1.0s						
JAGI	Jajag, Banyuwa	9.04	100		Pn	18 18 14.7	+1.7
COCO	West Island	9.75	237		Pn	18 18 23.0	+0.3
SRBI	Singaraja	10.03	97	P	Pn	18 18 29.6	+3.0
	993nm58nm,0.9s						
GSI	Gunungsitoli	11.14	317		Pn	18 18 39.9	-1.9
SBUM	Sibu	11.66	37	P	Pn	18 18 54.0	+5.0
PLAI	Plampang	12.64	99	P	Pn	18 19 05.1	+2.8
	416nm37nm,0.9s						
KAPI	Kappang	14.63	83	Pn	Pn	18 19 28.7	-0.8
	baz=181,slow=16,SNR=1.2						
KAPI				LR	LR	18 25 36.5	
	comp=Z,110nm,21.2s,baz=258,slow=40						
BKSI	Bulukumba	14.96	85	P	Pn	18 19 37.1	+3.2
	23nm,0.8s						
BNSI	Bone	15.07	81	P	P	18 19 39.4	-1.0
	486nm16nm,0.7s						
SPMM	Sapulut	16.14	45	P	Pn	18 19 52.0	+2.7
MPSI	Mapaga	16.37	64	P	P	18 19 58.2	+3.4
	13nm,0.6s						
MMRI	Maumere	17.00	97	P	P	18 20 03.5	+1.7
	957nm74nm,0.5s						
MMRI	Maumere	17.00	97		Pn	18 19 59.2	-1.0
APSI	Ampana	17.48	71	P	P	18 20 21.7	+15
MRSI	Marisa	18.27	67	P	Pn	18 20 18.7	+2.7
	22nm,0.7s						
LUWI	Luwuk	18.50	72	P	Pn	18 20 28.4	+10
SOEI	Soe	19.11	100	P	Pn	18 20 26.6	+0.4
	92nm,0.7s						
SOEI	Soe	19.11	100	P	P	18 20 23.8	-1.4
PSA00	Pilbara Seismi	20.34	137	P	P	18 20 38.3	-0.2
PSA00	Pilbara Seismi	20.34	137	P	P	18 20 38.0	-0.5
PSA00				IAmb	IAmb	18 20 53.7	
	comp=Z,40nm,1.9s						
SANI	Sanana	21.31	78	P	P	18 20 51.2	+2.2
	comp=Z,9.4nm,1.1s						
NLAI	Namlea	22.15	82	P	P	18 21 03.0	+5.0
	comp=Z,22nm,0.6s						
FITZ	Fitzroy Crossi	22.84	121	P	P	18 21 06.7	+1.3
	comp=Z,3.7nm,0.6s,baz=304,slow=7.0,SNR=17						
FITZ	Fitzroy Crossi	22.84	121	P	P	18 21 05.8	+0.5
LBMI	Labuha	23.13	75	P	P	18 21 11.2	+2.8
	comp=Z,2µmcomp=Z,29nm,0.8s						
AAI	Ambon	23.15	83	P	P	18 21 14.4	+5.8
	comp=Z,13nm,1.1s						
KNRA	Kununurra	24.70	113	P	P	18 21 22.9	-0.3
KNRA				IAmb	IAmb	18 21 25.5	
	comp=Z,29nm,0.9s						
CMAR	Chiang Mai Arr	25.95	346	P	P	18 21 31.8	-2.6
	comp=Z,1.2nm,0.5s,baz=180,slow=8.9,SNR=16						
CMAR				ScP	ScP	18 28 45.0	+4.9
	comp=Z,0.5nm,0.6s,baz=196,slow=4.4,SNR=6.3						
CMAR				LR	LR	18 32 48.3	
	comp=Z,64nm,21.9s,baz=206,slow=39						
QIZ	Qiongzhong	26.19	10	P	P	18 21 34.5	-2.0
QIZ				S	S	18 26 09.5	+2.9
MTN	Manton Dam	26.24	105	P	P	18 21 35.9	-1.2
MTN				IAmb	IAmb	18 21 45.5	
	comp=Z,14nm,0.6s						
SIJI	Sorong	26.71	78	P	P	18 21 41.4	-0.1
	comp=Z,4.4nm,0.6s,baz=332,slow=19,SNR=3.0						
PALK	Pallekele	28.18	300	LR	LR	18 31 49.6	
	comp=Z,109nm,20.7s,baz=101,slow=34						
NWAO	Narrogin (SRO)	28.21	158	LR	LR	18 34 46.2	
	comp=Z,94nm,18.2s,baz=312,slow=40						
H01W3	Cape Leeuwin H	29.04	165	T	T	18 52 21.3	
	baz=344,slow=76,SNR=203						
H01W1	Cape Leeuwin H	29.05	165	T	T	18 52 21.4	
	baz=344,slow=76,SNR=250						
H01W2	Cape Leeuwin H	29.05	165	T	T	18 52 22.4	
	baz=344,slow=76,SNR=223						
WRA	Warramunga Arr	31.12	117	P	P	18 22 21.3	+0.7
WRAB	Tennant Creek	31.13	117	P	P	18 22 20.5	-0.1
WRAB				IAmb	IAmb	18 22 34.5	
	comp=Z,12nm,1.1s						
AS31	Alice Springs	32.23	124	P	P	18 22 31.0	+0.6
ASAR	Alice Springs	32.23	124	P	P	18 22 31.4	+1.0
	comp=Z,0.8nm,0.4s,baz=303,slow=8.6,SNR=54						
ASAR				PcP	PcP	18 25 19.7	+1.1
	comp=Z,1.0nm,0.4s,baz=316,slow=2.1,SNR=9.1						
ASAR				S	S	18 27 40.9	-0.8
	comp=Z,0.7nm,1.0s,baz=296,slow=14,SNR=5.3						
ASAR	Alice Springs	32.23	124	P	P	18 22 31.1	+0.7
ASAR					PcP	18 25 19.6	+1.0
H08S2	Diego Garcia H	32.41	267	T	T	18 56 38.4	
	baz=90,slow=76,SNR=921						
H08S3	Diego Garcia H	32.42	267	T	T	18 56 43.5	
	baz=90,slow=76,SNR=1624						
H08S1	Diego Carcia H	32.43	267	T	T	18 56 44.1	
	baz=90,slow=76,SNR=551						
ODAN	Odare	37.73	334	*e*P	P	18 23 17.5	-0.4
	comp=Z,12nm,0.4s						
TAPN	Taplejung	38.02	334	*e*P	P	18 23 19.8	-0.6
	comp=Z,11nm,0.6s						
RAMN	Ramite	38.17	333	*e*P	P	18 23 21.1	-0.5
	comp=Z,7.5nm,0.4s						
JIRN	Jiri	38.96	333	*e*P	P	18 23 27.4	-1.0
	comp=Z,12nm,0.3s						
PKI	Pulchoki	39.25	332	*e*P	P	18 23 30.0	-0.8
	comp=Z,2.5nm,0.3s						
PKIN	Phulchoki	39.26	332	*e*P	P	18 23 29.7	-1.1
	comp=Z,3.7nm,0.3s						
GUN	Gumba	39.32	333	*e*P	P	18 23 30.8	-0.6
	comp=Z,14nm,0.3s						
GKN	Gorkha	39.98	331	*e*P	P	18 23 36.2	-0.5
	comp=Z,16nm,0.3s						
DANN	Dangsing	40.69	330	*e*P	P	18 23 42.3	-0.4
	comp=Z,23nm,0.4s						
NJ2	Nanjing	40.89	18	*e*P	P	18 23 43.3	-0.6
PMG	Port Moresby	41.62	96	P	P	18 23 50.7	+0.4
	comp=Z,22nm,0.6s,baz=190,slow=1.2,SNR=27						
PMG	Port Moresby	41.62	96	P	P	18 23 50.2	-0.1
STKA	Stephens Creek	42.06	131	P	P	18 23 55.9	+2.3
	comp=Z,3.6nm,0.4s,baz=319,slow=6.7,SNR=14						
STKA				LR	LR	18 42 33.8	
	comp=Z,65nm,18.0s,baz=349,slow=38						
STKA	Stephens Creek	42.06	131	P	P	18 23 55.6	+2.0
LZH	Lanzhou	42.79	358	*e*P	P	18 24 00.3	+0.7
LZH				pP	pP	18 24 04.3	-4.5
LZH				sP	sP	18 24 07.3	-5.3
LZH				PP	PP	18 25 39.5	+0.2
HHC	Hu-ho-hao-te	47.89	7	*e*P	P	18 24 42.5	+2.6
KSRS	Korea Array	48.99	24	P	P	18 24 47.0	-1.3
	comp=Z,1.1nm,0.5s,baz=223,slow=7.6,SNR=5.9						
NIL	Nilore	50.43	325	P	P	18 24 57.6	-1.8
NIL				IAmb	IAmb	18 24 59.7	
	comp=Z,8.2nm,0.8s						
WMQ	Urumqi	52.92	344	*e*P	P	18 25 18.5	+0.7
MJAR	Matsushiro Arr	53.18	33	P	P	18 25 17.4	-2.4
	comp=Z,0.5nm,0.4s,baz=209,slow=5.7,SNR=2.1						
MJAR				PcP	PcP	18 26 28.3	+0.6
	comp=Z,0.7nm,0.5s,baz=193,slow=4.9,SNR=5.0						
KSH	Kashi	53.51	332	P	P	18 25 22.0	-0.4
KSH				sP	pP	18 25 29.0	-2.9
KSH				PP	PP	18 27 24.8	+1.5
KSH				S	S	18 32 50.8	-2.5
KSH				sS	pS	18 32 57.5	-7.2
KBL	Kabul	53.52	323	P	P	18 25 21.1	-1.6
KBL				IAmb	IAmb	18 25 37.5	
	comp=Z,12nm,1.6s						
SONM	Songino Array	54.52	1	P	P	18 25 28.5	-1.1
	comp=Z,1.1nm,0.6s,baz=174,slow=9.6,SNR=8.9						
SONM				PcP	PcP	18 26 32.6	0.0
	comp=Z,1.6nm,0.4s,baz=181,slow=3.7,SNR=12						
SONM	Songino Array	54.52	1	P	P	18 25 28.3	-1.3
ULN	Ulaanbaatar	54.57	2	P	P	18 25 28.7	-1.3
ULN				IAmb	IAmb	18 26 42.6	
	comp=Z,6.8nm,1.6s						
USA0B	Ussuriysk Arra	56.34	23	P	P	18 25 41.2	-1.4
USRK	Ussuriysk Ar.	56.34	23	P	P	18 25 41.4	-1.2
	comp=Z,8.9nm,0.7s,baz=211,slow=6.8,SNR=28						
USRK	Ussuriysk Ar.	56.34	23	P	P	18 25 41.2	-1.4
MK31	Makanchi Array	57.21	341	P	P	18 25 46.9	-1.9
MKAR	Makanchi Array	57.21	341	P	P	18 25 47.3	-1.4
	comp=Z,1.4nm,0.4s,baz=152,slow=8.7,SNR=62						
MKAR	Makanchi Array	57.21	341	P	P	18 25 46.5	-2.2
TLY	Talaya	58.37	359	P	P	18 25 55.2	-1.6
KK31	Karatay Array	58.89	331	P	P	18 25 58.8	-1.8
KK31				IAmb	IAmb	18 26 03.5	
	comp=Z,9.6nm,1.9s						
KKAR	Karatay Array	58.89	331	P	P	18 25 59.2	-1.3
ASAJ	Asahikawa	60.99	30	P	P	18 26 13.5	-1.4
	comp=Z,1.3nm,0.5s,baz=233,slow=8.0,SNR=6.4						
KURK	Kurchatov	61.81	341	P	P	18 26 19.0	-1.4
KURK				IAmb	IAmb	18 26 22.8	
	comp=Z,3.4nm,1.1s						
GEYT	Alibeck	62.50	319	P	P	18 26 25.8	+0.5
	comp=Z,1.8nm,0.5s,baz=266,slow=4.5,SNR=4.1						
GEYT				LR	LR	18 58 01.9	
	comp=Z,24nm,18.0s,baz=60,slow=40						
GEYT	Alibeck	62.50	319	P	P	18 26 25.7	+0.4
ZAA0	Zalesovo Array	63.01	347	P	P	18 26 25.8	-2.5
ZAA0				IAmb	IAmb	18 26 27.9	
	comp=Z,3.2nm,1.1s						
ZALV	Zalesovo Beam	63.01	347	P	P	18 26 26.4	-1.9
	comp=Z,1.7nm,0.3s,baz=162,slow=6.0,SNR=10						
ZALV				LR	LR	18 56 22.6	
	comp=Z,40nm,19.2s,baz=102,slow=39						
ZALV	Zalesovo Beam	63.01	347	P	P	18 26 25.7	-2.6
MAW	Mawson	66.93	196	P	P	18 26 56.8	+3.2
	comp=Z,4.0nm,1.0s,baz=34,slow=3.6,SNR=2.5						
ABKAR	Akbulak array	68.42	330	P	P	18 27 03.1	-0.2

ARU	Arti	73.77	335	P	P	18 27 35.5	0.0
ARU				IAmb	IAmb	18 29 29.5	
	comp=Z,22nm,1.8s						
PETK	Petropavlovsk-	74.41	30	P	P	18 27 38.2	-1.2
	comp=Z,2.5nm,0.6s,baz=186,slow=6.2,SNR=12						
PET	Petropavlovsk	74.84	30	P	P	18 27 40.6	-1.2
SYO	Syowa Base	74.96	200	⇑*e*pP	pP	18 27 51.0	-0.9
KBZ	Khabaz	75.37	318	P	P	18 27 45.9	+0.7
	comp=Z,3.8nm,0.9s,baz=127,slow=4.6,SNR=6.0						
MA2	Magadan	75.49	22	P	P	18 27 44.6	-0.9
	comp=Z,3.3nm,0.6s,baz=208,slow=5.7,SNR=13						
MA2	Magadan	75.49	22	P	P	18 27 44.6	-0.9
MA2				IAmb	IAmb	18 27 45.3	
	comp=Z,4.3nm,0.8s						
NRIK	Noril'sk	77.05	354	P	P	18 27 53.5	-0.6
	comp=Z,1.6nm,0.3s,baz=147,slow=3.3,SNR=5.5						
BOSA	Boshof	77.89	242	P	P	18 28 01.9	+1.9
	comp=Z,1.9nm,0.7s,baz=112,slow=5.4,SNR=5.1						
TIXI	Tiksi	79.95	7	P	P	18 28 08.2	-1.8
TIXI				IAmb	IAmb	18 28 09.7	
	comp=Z,3.3nm,0.5s						
BR131	Keskin Array S	80.42	312	P	P	18 28 13.9	+0.3
BRTR	Keskin Array B	80.42	312	P	P	18 28 13.8	+0.3
	comp=Z,2.0nm,0.8s,baz=133,slow=6.7,SNR=9.7						
BRTR	Keskin Array B	80.42	312	P	P	18 28 12.7	-0.8
KLMR	Klimovskoe	84.48	333	*e*P	P	18 28 32.9	-1.1
KLMR				AMP		18 28 36.6	
	comp=Z,45nm,1.8s						
AKASG	Malin Array Be	86.50	322	P	P	18 28 44.4	+0.1
	comp=Z,0.6nm,0.4s,baz=84,slow=4.4,SNR=3.7						
BURAR	Bucovina Array	88.33	318	P	P	18 28 54.9	+1.5
BUR08	Bucovina Ar. S	88.34	318	P	P	18 28 55.3	+1.8
FINES	FINESS Array B	90.83	332	P	P	18 29 05.4	+0.8
	comp=Z,2.3nm,0.5s,baz=101,slow=4.5,SNR=22						
FINES	FINESS Array B	90.83	332	P	P	18 29 06.2	+1.6
ARCES	ARCESS Array B	92.82	340	P	P	18 29 13.8	+0.1
	comp=Z,5.3nm,1.0s,baz=92,slow=6.0,SNR=7.6						
YKA	Yellowknife Ar	117.40	20	PKP	PKPdf	18 34 46.8	+0.1
	comp=Z,0.4nm,0.6s,baz=8.8,slow=2.0,SNR=6.8						
ULM	Lac du Bonnet	133.36	18	PKP	PKPdf	18 35 18.0	+0.4
	comp=Z,1.7nm,0.6s,baz=321,slow=1.8,SNR=4.5						
WMOK	Wichita Mounta	144.59	35		PKPab	18 35 37.4	+0.2
TX31	Lajitas Ar. Si	144.86	47		PKPbc	18 35 39.2	+0.8
TX32	Lajitas Array	144.86	47		PKPbc	18 35 39.2	+0.8
TXAR	Lajitas Array	144.86	47	PKP	PKPdf	18 35 39.5	+0.2
	comp=Z,4.9nm,0.5s,baz=281,slow=1.1,SNR=62						
TXAR	Lajitas Array	144.86	47		PKPdf	18 35 39.4	+0.1
R40A	Maddies Statio	145.00	24		PKPbc	18 35 38.4	0.0
S39A	Bolivar	145.06	26		PKPbc	18 35 38.2	-0.4
U38A	Gravette	145.60	29		PKPdf	18 35 40.0	-0.3
CCM	Cathedral Cave	145.61	23		PKPdf	18 35 39.6	-0.6
Q44A	Meyer Farm, Va	145.67	20		PKPdf	18 35 40.5	+0.2
HHAR	Hobbs	145.94	28		PKPdf	18 35 40.9	+0.1
MGMO	Mountain Grove	145.96	25		PKPdf	18 35 40.8	-0.1
ACSO	Alum Creek Sta	146.03	11		PKPdf	18 35 40.7	-0.2
U40A	Yellville	146.38	27		PKPdf	18 35 42.3	+0.7
T42A	Van Buren	146.56	24		PKPdf	18 35 43.1	+1.2
JCT	Junction City	146.86	42		PKPbc	18 35 45.4	+1.0
LCAR	Lake Charles	147.36	25		PKPdf	18 35 44.8	+1.6
MIAR	Mount Ida	147.52	30		PKPbc	18 35 46.5	+0.4
WVT	Waverly	148.58	20		PKPbc	18 35 49.2	+0.4
CLTN	Cedars of Leba	149.11	18		PKPbc	18 35 50.0	-0.2
V52A	Sevierville	150.11	14		PKPbc	18 35 53.2	+0.5
LPAZ	La Paz	156.01	196	PKP	PKPdf	18 36 00.3	+2.8
	comp=Z,0.8nm,0.7s,baz=34,slow=4.6,SNR=4.0						

IDC ***26*** *19:04:48.9±4.0, 36˚.22N×71˚.08E, h182km±27km, mb3.2/9, mb1 3.3/15, mb1mx3.0/66, mbtmp3.7/15, Error ellipse: s-maj=44.0km s-min=20.1km az=155.0*

ISC 26 19:04:51.5±0.7**, 36˚.44N**±0˚.07×**71˚.14E**±0˚.08**, h200**km**, n36,** σ1ˢ**83**/35**, mb3.5**/8**, 3C, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	5.50	135	*e*PN	Pn	19 06 40.5	+28
THN				*e*SN	Sn	19 07 18.0	+1.9
AML	Almayashu	6.01	18	P	Pn	19 06 19.3	+0.1
	SNR=48						
UCH	Uchtor	6.34	23	P	Pn	19 06 23.9	+0.4
	SNR=25						
KZA	Kyzart	6.47	28	P	Pn	19 06 25.0	-0.1
	SNR=6.7						
EKS2	Erkin-Say	6.54	17	P	Pn	19 06 26.2	+0.5
	SNR=17						
KK31	Karatay Array	6.67	356	Pn	Pn	19 06 26.3	-1.0
	2.9nm,0.4s,baz=185,slow=12,SNR=98						
KK31				⇑Lg	Lg	19 07 35.1	
	18nm,0.7s,baz=185,slow=21,SNR=21						
AAK	Ala-Archa	6.71	22	P	Pn	19 06 28.5	+0.6
	3.0nm,0.3s,baz=172,slow=7.0,SNR=57						
AAK				S	Sn	19 07 41.0	-3.4
	1.9nm,0.3s,baz=354,slow=24,SNR=19						
AAK	Ala-Archa	6.71	22	P	Pn	19 06 28.1	+0.2
	SNR=16						
AAK	Ala-Archa	6.71	22	⇑Pn	Pn	19 06 27.7	-0.2
	7.0nm,0.6s						
AAK				⇑Lg	Lg	19 07 41.2	
	10nm,0.5s						
KBK	Karagaybulak	6.87	24	P	Pn	19 06 31.6	+1.6
	SNR=12						
ULHL	Ulahol	7.01	33	P	Pn	19 06 32.7	+0.7
	SNR=11						
CHMS	Chumysh	7.11	22	P	Pn	19 06 33.7	+0.6
	SNR=6.7						
USP	Ospenovka	7.29	20	P	Pn	19 06 35.8	+0.4
	SNR=6.0						
GEYT	Alibeck	10.50	282	P	Pn	19 07 15.4	-1.7
	0.3nm,0.3s,baz=129,slow=11,SNR=1.8						
MKAR	Makanchi Array	13.27	35	P	Pn	19 07 52.9	+0.7
	0.1nm,0.3s,baz=224,slow=14,SNR=10						
DANN	Dangsing	13.36	124	*e*P	P	19 07 56.9	+0.4
	5.9nm,0.3s						
DANN				*e*S	S	19 10 17.8	-5.1
GKN	Gorkha	14.18	123	*e*P	P	19 08 07.1	+1.7
	5.7nm,0.2s						
GKN				*e*S	S	19 10 36.5	-5.1
DMN	Daman	14.75	123	*e*P	P	19 08 14.3	+2.5
	4.5nm,0.4s						
PKIN	Phulchoki	14.96	122	*e*P	P	19 08 16.8	+2.5
	6.7nm,0.4s						
PKI	Pulchoki	14.98	122	*e*P	P	19 08 17.0	+2.5
	5.8nm,0.5s						
GUN	Gumba	15.09	120	*e*P	P	19 08 18.6	+2.9
	6.9nm,0.4s						
KURBB	Kurchatov Arra	15.14	18	P	Pn	19 08 14.9	-0.3
	0.0nm,0.3s,baz=206,slow=12,SNR=5.8						
JIRN	Jiri	15.46	120	*e*P	P	19 08 22.6	+2.8
	16nm,0.4s						
RAMN	Ramite	16.19	121	*e*P	Pn	19 08 30.8	+2.5
	4.9nm,0.3s						
BVAR	Borovoye Array	16.59	358	P	Pn	19 08 32.4	-0.2
	0.6nm,0.3s,baz=167,slow=11,SNR=15						
AKTO	Aktyubinsk	16.89	330	P	Pn	19 08 35.4	-0.8
	0.7nm,0.3s,baz=138,slow=10,SNR=17						
ZALV	Zalesovo Beam	19.92	24	P	P	19 09 08.6	+0.9
	1.1nm,0.4s,baz=216,slow=12,SNR=6.8						
ARU	Arti	21.72	341	P	P	19 09 27.8	+1.2
	0.5nm,0.3s,baz=163,slow=21,SNR=3.1						
FINES	FINESS Array B	37.59	326	P	P	19 11 46.8	+0.4
	1.2nm,0.4s,baz=122,slow=9.4,SNR=9.8						
ARCES	ARCESS Array B	41.24	338	P	P	19 12 17.0	+0.6
	1.4nm,0.6s,baz=106,slow=7.9,SNR=9.5						
NB2	NORSAR Subarra	44.49	323	P	P	19 12 42.2	-0.5
	comp=Z,0.5nm,0.6s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.49	323	P	P	19 12 42.7	0.0
	comp=Z,0.6nm,0.8s,baz=104,slow=7.3,SNR=4.9						
TORD	Torodi Ar. Bea	65.83	269	P	P	19 15 14.4	-1.3
	comp=Z,0.4nm,0.5s,baz=38,slow=7.1,SNR=5.4						
INK	Inuvik	73.94	9	P	P	19 16 05.4	+1.2
	comp=Z,0.5nm,0.5s,baz=138,slow=1.5,SNR=3.7						
ILAR	Eielson Array	74.80	16	P	P	19 16 10.6	+1.3
	comp=Z,0.2nm,0.3s,baz=318,slow=3.6,SNR=2.6						
YKA	Yellowknife Ar	81.30	3	P	P	19 16 45.5	+0.6
	comp=Z,0.3nm,0.4s,baz=354,slow=5.0,SNR=5.7						

PGC 26 19:28:45.9±3.6**, 50˚.80N×139˚.11W, h10**km**, MLSn3.7**/6**, Mw4.3**/6**, 568km Wsw of Sandspit, Bc West Of Vancouver Island, West of Vancouver Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIB	Van Inlet	4.74	56	Pn	Pn	19 29 56.2	-1.2
VIB				Sn	Sn	19 30 48.7	-3.7
DIB	Dawson Inlet,	4.75	57	Pn	Pn	19 29 56.1	-1.3
DIB				Sn	Sn	19 30 48.8	-3.7
BNB	Barry Inlet	4.91	66	Pn	Pn	19 29 58.2	-1.5
BNB				Sn	Sn	19 30 53.7	-2.8
NDB	Naden	4.92	48	Pn	Pn	19 29 59.5	-0.3
MOBC	Moresby Island	5.00	59	Pn	Pn	19 29 59.7	-1.2
MOBC				Sn	Sn	19 30 55.5	-3.2
HG3B	Hotspring	5.09	67	Pn	Pn	19 30 01.3	-0.8
HG3B				Sn	Sn	19 30 57.4	-3.4
BESE	Bessie Mountai	8.17	16	Pn	Pn	19 30 48.3	+3.9
PNL	Peninsula	8.89	359	Pn	Pn	19 30 56.1	+1.9
DLBC	Dease Lake	9.28	31	Pn	Pn	19 31 03.9	+4.2
PCA	Pinnacle	9.34	356	Pn	Pn	19 31 01.6	+1.1
GRNC	Granite Creek	10.06	353	Pn	Pn	19 31 11.0	+0.4
WHY	Whitehorse	10.16	12	Pn	Pn	19 31 15.3	+3.6
WHY				Sn	Sn	19 33 04.9	-0.8
CTGM	Chitina Glacie	10.27	354	Pn	Pn	19 31 13.8	+0.7
KIAG	Kiagna River	10.31	351	Pn	Pn	19 31 13.9	+0.1
YUK5	Granite Creek	10.38	3	Pn	Pn	19 31 18.6	+3.9
BALM	Baldy	10.42	351	Pn	Pn	19 31 15.4	+0.1
YUK4	Talbot Arm	10.57	1	Pn	Pn	19 31 22.2	+4.8
PTPK	Patty Peak	10.58	351	Pn	Pn	19 31 18.4	+0.9
YUK3	Moose Creek	11.03	357	Pn	Pn	19 31 26.6	+2.9
YUK1	Sand Pete Hill	11.41	357	Pn	Pn	19 31 31.6	+2.8
DAWY	Dawson	13.30	359	Pn	Pn	19 31 57.9	+3.3

IDC ***26*** *19:34:12.6±9.7, 22˚.31S×65˚.60W, h247km±81km, mb3.2/1, mb1 3.1/2, mb1mx3.0/23, mbtmp3.7/2, Error ellipse: s-maj=114.7km s-min=78.1km az=29.0*

SCB ***26*** *19:34:18.4±11.0, 22˚.24S×67˚.12W, h0km±85km, ML4.7/2, Error ellipse: s-maj=34.2km s-min=27.8km az=0.0*

ISC 26 19:34:08.8±1.1**, 22˚.76S**±0˚.07×**66˚.40W**±0˚.06**, h246**km±8km**, n27,** σ1ˢ**58**/47**, 9C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	Yavi	1.00	55	P	Pn	19 34 44.5	+0.5
YJA				S	S	19 35 09.5	-2.0
LVC	Limon Verde	2.33	273	*e*P	Pn	19 34 55.8	+1.4
LVC				*i* S	S	19 35 31.0	+0.7
PB09	IPOC Station P	2.80	289	⇑*i*P	Pn	19 35 01.1	+1.9
PB09				*i* S	S	19 35 40.0	+1.3
PB09				IAML		19 35 44.3	
	comp=E,123nm,0.3s						
PB15	IPOC Station P	2.87	260	*e*P	Pn	19 35 01.0	+1.2
PB15				*e*S	S	19 35 40.5	+0.5
PB06	IPOC Station P	2.93	270	*e*P	Pn	19 35 01.9	+1.4
PB06				*i* S	S	19 35 41.5	+0.3
PB06				IAML		19 35 43.5	
	comp=N,209nm,0.1s						
PB06	IPOC Station P	2.93	270	P	Pn	19 35 01.5	+1.1
PB06				S	S	19 35 36.8	-4.4
PB03	IPOC Station P	3.18	282	⇑*i*P	Pn	19 35 04.3	+1.1
PB03				*i* S	S	19 35 45.8	-0.4
PB01	IPOC Station P	3.34	300	⇑*i*P	Pn	19 35 06.0	+1.1
PB01				*i* S	S	19 35 49.4	+0.1
PB01	IPOC Station P	3.34	300	P	Pn	19 35 06.0	+1.1
PB07	IPOC Station P	3.39	287	⇑*i*P	Pn	19 35 06.8	+1.2
PB07				*i* S	S	19 35 49.7	-0.7
PB04	IPOC Station P	3.49	276	⇑*i*P	Pn	19 35 07.8	+1.1
PB04				*i* S	S	19 35 51.9	-0.6
PB05	IPOC Station P	3.51	268	⇑*i*P	Pn	19 35 07.9	+1.1
PB05				*i* S	S	19 35 51.5	-1.3
PB02	IPOC Station P	3.55	293	⇑*i*P	Pn	19 35 08.2	+0.9
PB02				*i* S	S	19 35 52.5	-1.1
PB02	IPOC Station P	3.55	293	P	Pn	19 35 08.0	+0.7
PB02				S	S	19 35 49.3	-4.3
PB02				AML	AML	19 35 52.7	
	comp=N,1µm,0.4s						
PB08	IPOC Station P	3.66	315	⇑*i*P	Pn	19 35 10.8	+2.0
PB08				*i* S	S	19 35 57.9	+1.6
PB08	IPOC Station P	3.66	315	P	Pn	19 35 10.7	+1.9
PB10	IPOC Station P	3.90	258	*e*P	Pn	19 35 12.1	+0.9
PB10				*e*S	S	19 35 58.7	-2.0
PB10	IPOC Station P	3.90	258	P	Pn	19 35 11.9	+0.7
PATCX	Punta Patache	3.99	298	*e*P	Pn	19 35 13.1	+0.7
PATCX				*e*S	S	19 36 01.3	-1.5
TA01	Diego Aracena	4.14	301	*e*P	Pn	19 35 14.3	+0.3
TA01				*i* S	S	19 36 03.9	-2.0
PB11	IPOC Station P	4.26	314	⇑*i*P	Pn	19 35 16.1	+0.4
PB11	IPOC Station P	4.26	314	Pg	Pn	19 35 16.2	+0.5
PB11				Sg	S	19 36 07.1	-1.7
PB11				AML	AML	19 36 11.7	
	comp=N,3µm,0.4s						
PSGC	Pisagua	4.69	311	*e*P	Pn	19 35 20.4	-0.4
PSGC				*e*S	S	19 36 15.6	-2.4
PSGC	Pisagua	4.69	311	P	Pn	19 35 37.0	+16
PSGC				S	S	19 36 16.1	-1.9
LPAZ	La Paz	6.64	345	P	Pn	19 35 47.0	+1.4
	comp=N,0.6nm,0.3s,baz=163,slow=10,SNR=11						
LPAZ				S	S	19 37 03.0	0.0
	comp=N,0.2nm,0.3s,baz=311,slow=18,SNR=7.4						
TORD	Torodi Ar. Bea	75.61	69	P	P	19 45 26.0	-1.1
	comp=N,0.3nm,0.3s,baz=246,slow=6.4,SNR=7.0						
MKAR	Makanchi Array	145.22	39	PKP	PKPdf	19 53 18.7	+1.7
	comp=N,0.3nm,0.4s,baz=295,slow=3.3,SNR=6.5						

IDC ***26*** *19:39:45.5±2.0, 34˚.26N×79˚.89E, h0km, mb3.7/2, mb1 3.5/6, mb1mx3.2/67, mbtmp3.4/6, ML3.1/4, Error ellipse: s-maj=60.2km s-min=21.1km az=59.0*

ISC 26 19:39:50.4±0.9**, 34˚.36N**±0˚.09×**80˚.0E**±0˚.1**, h28**km**, n13,** σ1ˢ**98**/15**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DANN	Dangsing	6.78	151	*e*P	Pn	19 41 28.8	+0.5
	6.0nm,0.3s						
GKN	Gorkha	7.46	147	*e*P	Pn	19 41 38.7	+1.2
	5.6nm,0.3s						
GUN	Gumba	8.15	140	*e*P	Pn	19 41 50.8	+3.7
	4.8nm,0.3s						
PKIN	Phulchoki	8.18	144	*e*P	Pn	19 41 47.4	0.0
	6.6nm,0.6s						
PKI	Pulchoki	8.19	144	*e*P	Pn	19 41 47.6	0.0
	9.4nm,0.7s						
JIRN	Jiri	8.51	140	*e*P	Pn	19 41 54.6	+2.5
	17nm,0.3s						
AAK	Ala-Archa	9.34	334	Pn	Pn	19 42 04.5	+1.3
	0.2nm,0.3s,baz=156,slow=12,SNR=9.1						
AAK				Sn	Sn	19 43 51.4	+4.1
	0.1nm,0.3s,baz=339,slow=17,SNR=3.7						
MKAR	Makanchi Array	12.54	7	Pn	Pn	19 42 46.0	-0.9
	0.1nm,0.3s,baz=182,slow=13,SNR=5.9						
MKAR				Sn	Sn	19 45 05.5	-0.1
	0.0nm,0.3s,baz=186,slow=23,SNR=2.7						
KURBB	Kurchatov Arra	16.30	357	Pn	Pn	19 43 36.8	-0.3
	0.0nm,0.3s,baz=173,slow=15,SNR=5.3						
BVAR	Borovoye Array	19.89	343	P	P	19 44 18.5	-0.9
	0.1nm,0.3s,baz=154,slow=12,SNR=6.7						
CMAR	Chiang Mai Arr	23.12	128	P	P	19 44 53.8	-0.5
	0.6nm,0.4s,baz=313,slow=10,SNR=8.4						
SMTH	Samothraki Isl	43.14	295	P	P	19 47 46.3	-2.1
FINES	FINESS Array B	43.40	326	P	P	19 47 49.3	-0.9
	1.6nm,0.9s,baz=119,slow=8.7,SNR=3.8						

PRU ***26*** *19:46:24.7±0.0, 45˚.83N×27˚.22E, h143km, M4.6*

SIGU ***26*** *19:46:26.9±0.2, 46˚N±1˚×2˚7E±˚, h153km±1km, mb3.8/6*

MOS ***26*** *19:46:27.4±0.8, 45˚.68N×26˚.52E, h139km, mb4.2/13, Error ellipse: s-maj=5.5km s-min=4.3km az=114.9*

BUC ***26*** *19:46:28.9±0.2, 45˚.66N×26˚.54E, h133km±1km, ml4.6/63, Error ellipse: s-maj=1.3km s-min=1.0km az=25.0*

NEIC ***26*** *19:46:28.6±1.6, 45˚.68N±0˚.04×26˚.56E±0˚.06, h142km±4km, Error ellipse: s-maj=6.3km s-min=5.6km az=133.0*

IDC ***26*** *19:46:28.5±0.3, 45˚.67N×26˚.41E, h137km±3km, mb3.9/24, mb1 3.8/34, mb1mx3.7/58, mbtmp4.2/34, MS2.7/2, Ms1 2.7/2, ms1mx2.2/50, Error ellipse: s-maj=10.9km s-min=9.0km az=166.0*

SOF ***26*** *19:46:28.6, 45˚.71N×26˚.48E, h112km, MD4.0*

BEO ***26*** *19:46:36.7±0.8, 45˚.36N×25˚.39E, h0km, ML3.6/8*

ISC 26 19:46:28.7±0.5**, 45˚.66N**±0˚.02×**26˚.56E**±0˚.02**, h141**km±3km**, n469,** σ1ˢ**43**/633**, mb4.3**/44**, 163C-109D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOR	Plostina	0.20	18	⇑P	Pn	19 46 47.5	-0.4
PLOR				⇑S	Sn	19 47 01.3	-1.2
PLOR	Plostina	0.20	18	⇑P	Pn	19 46 47.5	-0.4
PLOR				⇑S	Sn	19 47 01.3	-1.2
PLOR	Plostina	0.20	18	P	Pn	19 46 47.5	-0.4
PLOR						19 47 01.3	
PLOR	Plostina	0.20	18		Pn	19 46 47.5	-0.4
PLOR					Sn	19 47 01.3	-1.2
VRI	Vrincioaia	0.23	30	⇓P	Pn	19 46 47.7	-0.2
VRI				⇑S	Sn	19 47 01.5	-1.2
VRI	Vrincioaia	0.23	30	⇓P	Pn	19 46 47.7	-0.2
VRI				⇑S	Sn	19 47 01.5	-1.2
VRI	Vrincioaia	0.23	30	P	Pn	19 46 47.8	-0.2
VRI						19 47 01.7	
VRI	Vrincioaia	0.23	30		Pn	19 46 47.8	-0.2
VRI					Sn	19 47 01.6	-1.0
ODBI	Odobesti	0.36	74	⇓S	Sn	19 47 04.4	+1.2
ODBI	Odobesti	0.36	74	⇓S	Sn	19 47 04.4	+1.2
GRER		0.41	134	⇑S	Sn	19 47 05.7	+2.2
GRER		0.41	134	⇑S	Sn	19 47 05.7	+2.2
MLR	Muntele Rosu	0.47	249	⇑P	Pn	19 46 48.9	-0.1
MLR				⇑S	Sn	19 47 03.3	-1.0
MLR	Muntele Rosu	0.47	249	LR	LR	19 46 37.0	
	comp=Z,22nm,21.5s,baz=122,slow=23						
MLR				P	Pn	19 46 48.7	-0.3
	baz=352,slow=15						
MLR				S	Sn	19 47 04.0	-0.3
	985nm,0.3s,baz=238,slow=19,SNR=17						
MLR	Muntele Rosu	0.47	249	⇑P	Pn	19 46 48.9	-0.1
MLR				⇑S	Sn	19 47 03.3	-1.0
MLR	Muntele Rosu	0.47	249		Pn	19 46 48.8	-0.1
MLR				Sn	Sn	19 47 04.2	-0.2
PETR	Petresti	0.47	82	⇓P	Pn	19 46 49.2	+0.4
PETR				⇑S	Sn	19 47 03.8	-0.2
PETR	Petresti	0.47	82	⇓P	Pn	19 46 49.2	+0.4
PETR				⇑S	Sn	19 47 03.8	-0.2
PETR	Petresti	0.47	82		Pn	19 46 49.2	+0.4
PETR					Sn	19 47 03.8	-0.2
ISR	Istrita	0.54	181	⇑P	Pn	19 46 49.5	+0.2
ISR	Istrita	0.54	181	⇑P	Pn	19 46 49.5	+0.2
ISR	Istrita	0.54	181	P	Pn	19 46 49.6	+0.2
OZUR		0.69	309	⇓P	Pn	19 46 49.5	-0.7
OZUR				⇑S	Sn	19 47 04.7	-1.9
OZUR		0.69	309	⇓P	Pn	19 46 49.5	-0.7
OZUR				⇑S	Sn	19 47 04.7	-1.9
GHRR		0.71	56	⇓S	Sn	19 47 05.7	-1.0
GHRR		0.71	56	⇓S	Sn	19 47 05.7	-1.0
SECR		0.72	209	⇑P	Pn	19 46 50.8	+0.4
SECR				⇑S	Sn	19 47 07.5	+0.7
SECR		0.72	209	⇑P	Pn	19 46 50.8	+0.4
SECR				⇑S	Sn	19 47 07.5	+0.7
SECR		0.72	209		Pn	19 46 50.8	+0.4
SECR					Sn	19 47 06.8	0.0
TUDR		0.78	95	⇑P	Pn	19 46 50.4	-0.3
TUDR				⇑S	Sn	19 47 06.7	-0.7
TUDR		0.78	95	⇑P	Pn	19 46 50.4	-0.3
TUDR				⇑S	Sn	19 47 06.7	-0.7
TUDR		0.78	95		Pn	19 46 50.5	-0.2
TUDR					Sn	19 47 06.7	-0.7
PGOR	Pogoanele	0.81	158	⇑P	Pn	19 46 51.4	+0.4
PGOR				⇓S	Sn	19 47 07.1	-0.8
PGOR	Pogoanele	0.81	158	⇑P	Pn	19 46 51.4	+0.4
PGOR				⇓S	Sn	19 47 07.1	-0.8
PLAR	PLOIESTI	0.84	207	⇑P	Pn	19 46 51.6	+0.4
PLAR	PLOIESTI	0.84	207	⇑P	Pn	19 46 51.6	+0.4
TESR	Tescani	0.85	4	⇓P	Pn	19 46 50.6	-0.7
TESR				⇑S	Sn	19 47 06.9	-1.7
TESR	Tescani	0.85	4	⇓P	Pn	19 46 50.6	-0.7
TESR				⇑S	Sn	19 47 06.9	-1.7
TESR	Tescani	0.85	4		Pn	19 46 50.7	-0.6
TESR					Sn	19 47 06.9	-1.7
DOPR	Dopca	0.88	291	⇑P	Pn	19 46 51.2	-0.3
DOPR				⇑S	Sn	19 47 07.8	-1.1
DOPR	Dopca	0.88	291	⇑P	Pn	19 46 51.2	-0.3
DOPR				⇑S	Sn	19 47 07.8	-1.1
DOPR	Dopca	0.88	291		Pn	19 46 51.2	-0.3
DOPR					Sn	19 47 07.8	-1.1
NEGR	Negresti	0.93	98	⇑P	Pn	19 46 51.8	0.0
NEGR				⇑S	Sn	19 47 09.0	-0.5
NEGR	Negresti	0.93	98	⇑P	Pn	19 46 51.8	0.0
NEGR				⇑S	Sn	19 47 09.0	-0.5
VARL	Varlezi	0.93	75	⇓P	Pn	19 46 51.8	-0.1
VARL				⇑S	Sn	19 47 09.0	-0.7
VARL	Varlezi	0.93	75	⇓P	Pn	19 46 51.8	-0.1
VARL				⇑S	Sn	19 47 09.0	-0.7
BIR	Birlad	0.96	50	⇓P	Pn	19 46 52.1	0.0
BIR				⇓S	Sn	19 47 09.5	-0.6
BIR	Birlad	0.96	50	⇓P	Pn	19 46 52.1	0.0
BIR				⇓S	Sn	19 47 09.5	-0.6
BIR	Birlad	0.96	50	P	Pn	19 46 52.0	-0.2
BIR	Birlad	0.96	50		Pn	19 46 52.2	0.0
BIR					Sn	19 47 09.5	-0.6
SULR		1.01	193	⇓P	Pn	19 46 53.0	+0.3
SULR				⇑S	Sn	19 47 10.7	-0.1
SULR		1.01	193	⇓P	Pn	19 46 53.0	+0.3
SULR				⇑S	Sn	19 47 10.7	-0.1
SULR		1.01	193		Pn	19 46 53.0	+0.3
SULR					Sn	19 47 10.5	-0.3
GISR	Galati	1.07	101	⇑P	Pn	19 46 53.3	+0.1
GISR				⇑S	Sn	19 47 11.2	-0.6
GISR	Galati	1.07	101	⇑P	Pn	19 46 53.3	+0.1
GISR				⇑S	Sn	19 47 11.2	-0.6
GISR	Galati	1.07	101		Pn	19 46 53.2	+0.1
GISR					Sn	19 47 11.2	-0.6
VOIR		1.09	259	⇑P	Pn	19 46 52.9	-0.5
VOIR				⇓S	Sn	19 47 11.1	-1.2
VOIR		1.09	259	⇑P	Pn	19 46 52.9	-0.5
VOIR				⇓S	Sn	19 47 11.1	-1.2
VOIR		1.09	259	P	Pn	19 46 53.0	-0.5
VOIR						19 47 11.1	
VOIR		1.09	259		Pn	19 46 53.0	-0.5
VOIR					Sn	19 47 11.1	-1.2
MTUR	Matau	1.14	248	⇓P	Pn	19 46 54.0	0.0
MTUR	Matau	1.14	248	⇓P	Pn	19 46 54.0	0.0
GIUM	Giurgiulesti	1.17	98	⇓P	Pn	19 46 54.4	+0.3
GIUM				⇑S	Sn	19 47 13.0	-0.4
GIUM	Giurgiulesti	1.17	98	P	Pn	19 46 54.3	+0.3
GIUM	Giurgiulesti	1.17	98	⇓P	Pn	19 46 54.4	+0.3
GIUM				⇑S	Sn	19 47 13.0	-0.4
GIUM	Giurgiulesti	1.17	98		Pn	19 46 54.4	+0.3
GIUM					Sn	19 47 13.1	-0.4
AMRR	Amara	1.19	152	⇑P	Pn	19 46 54.6	+0.3
AMRR				⇑S	Sn	19 47 14.0	+0.3
AMRR	Amara	1.19	152	⇑P	Pn	19 46 54.6	+0.3
AMRR				⇑S	Sn	19 47 14.0	+0.3
AMRR	Amara	1.19	152		Pn	19 46 54.6	+0.3
AMRR					Sn	19 47 14.1	+0.4
LEHL	Lehliu	1.20	171	⇑P	Pn	19 46 54.7	+0.2
LEHL				⇓S	Sn	19 47 14.6	+0.5
LEHL	Lehliu	1.20	171	⇑P	Pn	19 46 54.7	+0.2
LEHL				⇓S	Sn	19 47 14.6	+0.5
CFR	Carcaliu	1.21	113	⇑P	Pn	19 46 54.4	-0.1
CFR				⇑S	Sn	19 47 13.7	-0.4
CFR	Carcaliu	1.21	113	⇑P	Pn	19 46 54.4	-0.1
CFR				⇑S	Sn	19 47 13.7	-0.4
CFR	Carcaliu	1.21	113	P	Pn	19 46 54.0	-0.5
CFR	Carcaliu	1.21	113		Pn	19 46 54.4	-0.1
CFR					Sn	19 47 13.7	-0.4
INCR	INCERC-Sediu C	1.25	193	⇑P	Pn	19 46 55.0	0.0
INCR				⇓S	Sn	19 47 14.3	-0.7
INCR	INCERC-Sediu C	1.25	193	⇑P	Pn	19 46 55.0	0.0
INCR				⇓S	Sn	19 47 14.3	-0.7
INCR	INCERC-Sediu C	1.25	193		Pn	19 46 54.9	0.0
INCR					Sn	19 47 14.2	-0.7
GIRR	Girov	1.29	358	⇓P	Pn	19 46 55.3	0.0
GIRR	Girov	1.29	358	⇓P	Pn	19 46 55.3	0.0
BIZ	Bicaz	1.32	346	⇑P	Pn	19 46 56.0	+0.4
BIZ				⇑S	Sn	19 47 15.2	-1.0
BIZ	Bicaz	1.32	346	⇑P	Pn	19 46 56.0	+0.4
BIZ				⇑S	Sn	19 47 15.2	-1.0
BUC1	Bucharest	1.37	196	⇓P	Pn	19 46 56.2	0.0
BUC1				⇑S	Sn	19 47 16.5	-0.5
BUC1	Bucharest	1.37	196	⇓P	Pn	19 46 56.2	0.0
BUC1				⇑S	Sn	19 47 16.5	-0.5
HARR	Harsova	1.37	135	⇓P	Pn	19 46 56.2	0.0
HARR	Harsova	1.37	135	⇓P	Pn	19 46 56.2	0.0
HARR	Harsova	1.37	135	P	Pn	19 46 56.2	0.0
HARR	Harsova	1.37	135		Pn	19 46 56.2	0.0
ARR	Arges	1.39	258	⇑P	Pn	19 46 56.2	-0.3
ARR				⇑S	Sn	19 47 16.4	-1.2
ARR	Arges	1.39	258	⇑P	Pn	19 46 56.2	-0.3
ARR				⇑S	Sn	19 47 16.4	-1.2
ARR	Arges	1.39	258		Pn	19 46 56.2	-0.3

ARR					Sn	19 47 16.4	-1.2
LEOM	Leova	1.43	55	⇑P	Pn	19 46 56.7	0.0
LEOM				⇓S	Sn	19 47 17.4	-0.7
LEOM	Leova	1.43	55	P	Pn	19 46 56.2	-0.5
LEOM	Leova	1.43	55	⇑P	Pn	19 46 56.7	0.0
LEOM				⇓S	Sn	19 47 17.4	-0.7
LEOM	Leova	1.43	55	P	Pn	19 46 56.2	-0.5
SGRR	Singureni	1.50	196	⇓P	Pn	19 46 57.4	-0.2
SGRR				⇑S	Sn	19 47 18.7	-0.8
SGRR	Singureni	1.50	196	⇓P	Pn	19 46 57.4	-0.2
SGRR				⇑S	Sn	19 47 18.7	-0.8
SGRR	Singureni	1.50	196		Pn	19 46 57.4	-0.2
SGRR					Sn	19 47 18.6	-1.0
TOPG	Topolog	1.50	121	⇓P	Pn	19 46 57.2	-0.4
TOPG				⇓S	Sn	19 47 18.5	-1.1
TOPG	Topolog	1.50	121	⇓P	Pn	19 46 57.2	-0.4
TOPG				⇓S	Sn	19 47 18.5	-1.1
RASA	Rasa	1.51	164	⇑P	Pn	19 46 57.6	0.0
RASA				⇑S	Sn	19 47 19.1	-0.6
RASA	Rasa	1.51	164	⇑P	Pn	19 46 57.6	0.0
RASA				⇑S	Sn	19 47 19.1	-0.6
HUMR	Humele	1.59	225	⇑P	Pn	19 46 58.2	-0.4
HUMR				⇑S	Sn	19 47 20.5	-0.9
HUMR	Humele	1.59	225	⇑P	Pn	19 46 58.2	-0.4
HUMR				⇑S	Sn	19 47 20.5	-0.9
HUMR	Humele	1.59	225		Pn	19 46 58.2	-0.4
HUMR					Sn	19 47 20.5	-0.9
MDB	Medias	1.60	288	⇑P	Pn	19 46 58.2	-0.4
MDB	Medias	1.60	288	⇑P	Pn	19 46 58.2	-0.4
TLCR		1.66	106	⇓P	Pn	19 46 59.1	-0.2
TLCR				⇓S	Sn	19 47 22.2	-0.4
TLCR		1.66	106	⇓P	Pn	19 46 59.1	-0.2
TLCR				⇓S	Sn	19 47 22.2	-0.4
IAS	Iasi	1.68	24	⇓P	Pn	19 46 59.0	-0.4
IAS	Iasi	1.68	24	⇓P	Pn	19 46 59.0	-0.4
IAS				⇑S	Sn	19 47 21.1	-2.0
IAS	Iasi	1.68	24	P	Pn	19 46 59.1	-0.4
CVDA	Cernavoda	1.69	141	⇓P	Pn	19 46 59.8	+0.1
CVDA				⇑S	Sn	19 47 22.3	-1.0
CVDA	Cernavoda	1.69	141	⇓P	Pn	19 46 59.8	+0.1
CVDA				⇑S	Sn	19 47 22.3	-1.0
CVDA	Cernavoda	1.69	141		Pn	19 46 59.8	+0.1
CVDA					Sn	19 47 22.3	-1.0
CVD1	Cernavoda-Powe	1.71	141	⇑P	Pn	19 47 00.0	+0.1
CVD1	Cernavoda-Powe	1.71	141	⇑P	Pn	19 47 00.0	+0.1
ICOR	Ion Corvin	1.78	150	⇑P	Pn	19 47 01.1	+0.5
ICOR				⇑S	Sn	19 47 24.9	-0.2
ICOR	Ion Corvin	1.78	150	⇑P	Pn	19 47 01.1	+0.5
ICOR				⇑S	Sn	19 47 24.9	-0.2
ICOR	Ion Corvin	1.78	150		Pn	19 47 01.1	+0.5
ICOR					Sn	19 47 24.9	-0.2
TIRR	Tirgusor	1.78	132	⇓P	Pn	19 47 00.6	0.0
TIRR	Tirgusor	1.78	132	⇓P	Pn	19 47 00.6	0.0
TIRR	Tirgusor	1.78	132	P	Pn	19 47 00.6	0.0
TIRR						19 47 23.5	
TIRR	Tirgusor	1.78	132		Pn	19 47 00.3	-0.4
TIRR				Sn	Sn	19 47 22.6	-2.5
TIRR	Tirgusor	1.78	132		Pn	19 47 00.6	0.0
TIRR					Sn	19 47 23.5	-1.6
COPA	Copaceanca	1.80	213	⇑P	Pn	19 47 00.6	-0.4
COPA				⇑S	Sn	19 47 24.3	-1.3
COPA	Copaceanca	1.80	213	⇑P	Pn	19 47 00.6	-0.4
COPA				⇑S	Sn	19 47 24.3	-1.3
JURR	Jurilovca	1.87	118	⇑P	Pn	19 47 01.8	+0.2
JURR	Jurilovca	1.87	118	⇑P	Pn	19 47 01.8	+0.2
LOT	Lotru	1.97	265	⇓P	Pn	19 47 02.8	-0.2
LOT				⇓S	Sn	19 47 28.9	-0.4
LOT	Lotru	1.97	265	⇓P	Pn	19 47 02.8	-0.2
LOT				⇓S	Sn	19 47 28.9	-0.4
MFTR	Murfatlar	1.99	138	⇑P	Pn	19 47 03.1	0.0
MFTR	Murfatlar	1.99	138	⇑P	Pn	19 47 03.1	0.0
MFTR	Murfatlar	1.99	138		Pn	19 47 03.2	+0.1
MFTR					Sn	19 47 28.1	-1.3
MILM	Milestii Mici	2.00	50	⇑P	Pn	19 47 03.0	-0.2
MILM	Milestii Mici	2.00	50	⇑P	Pn	19 47 03.0	-0.2
KIS	Kishinev	2.06	49	⇑*i*P	Pn	19 47 04.5	+0.6
	450nm,0.5s						
KIS				*i* S	Sn	19 47 30.5	-0.4
	9µm,0.5s						
KIS	Kishinev	2.06	49	⇑P	Pn	19 47 03.7	-0.2
KIS	Kishinev	2.06	49	*i* P	Pn	19 47 04.5	+0.6
KIS				Pm		19 47 05.0	
KIS				*i* S	Sn	19 47 30.5	-0.4
KIS				Sm		19 47 30.8	
KIS				m		19 47 31.0	
KIS	Kishinev	2.06	49	⇑P	Pn	19 47 03.7	-0.2
KIS	Kishinev	2.06	49	⇑*i*P	Pn	19 47 04.5	+0.6
KIS				*i* S	Sn	19 47 30.5	-0.4
KIS	Kishinev	2.06	49		Pn	19 47 03.7	-0.2
ARCR	ARCALIA	2.09	314	⇓P	Pn	19 47 04.1	-0.2
ARCR				⇑S	Sn	19 47 30.4	-1.2
ARCR	ARCALIA	2.09	314	⇓P	Pn	19 47 04.1	-0.2
ARCR				⇑S	Sn	19 47 30.4	-1.2
RAZG	Razgrad	2.10	181	⇓P	Pn	19 47 04.2	-0.2
RAZG				⇑S	Sn	19 47 30.5	-1.4
RAZG	Razgrad	2.10	181	⇓P	Pn	19 47 04.2	-0.2
RAZG				⇑S	Sn	19 47 30.5	-1.4
RAZG	Razgrad	2.10	181		Pn	19 47 04.3	-0.2
RAZG					Sn	19 47 30.5	-1.4
TSCT	Constanta Port	2.11	135	⇓P	Pn	19 47 04.7	+0.1
TSCT				⇑S	Sn	19 47 31.2	-0.9
TSCT	Constanta Port	2.11	135	⇓P	Pn	19 47 04.7	+0.1
TSCT				⇑S	Sn	19 47 31.2	-0.9
TSCT	Constanta Port	2.11	135		Pn	19 47 04.7	+0.1
TSCT					Sn	19 47 31.2	-0.9
BURAR	Bucovina Array	2.16	335	⇓P	Pn	19 47 06.2	+0.9
BURAR				⇑S	Sn	19 47 34.4	+1.0
BURAR	Bucovina Array	2.16	335	⇓P	Pn	19 47 06.2	+0.9
BURAR				⇑S	Sn	19 47 34.4	+1.0
BURAR	Bucovina Array	2.16	335		Pn	19 47 05.3	0.0
EFOR	EFORIE	2.16	136	⇑P	Pn	19 47 05.3	+0.1
EFOR				⇓S	Sn	19 47 32.5	-0.7
EFOR	EFORIE	2.16	136	⇑P	Pn	19 47 05.3	+0.1
EFOR				⇓S	Sn	19 47 32.5	-0.7
ZIMR		2.18	203	⇑P	Pn	19 47 05.1	-0.3
ZIMR				⇓S	Sn	19 47 32.1	-1.5
ZIMR		2.18	203	⇑P	Pn	19 47 05.1	-0.3
ZIMR				⇓S	Sn	19 47 32.1	-1.5
BUR08	Bucovina Ar. S	2.19	335		Pn	19 47 06.1	+0.4
VLAD	Vladila	2.27	223	⇓P	Pn	19 47 05.7	-0.7
VLAD	Vladila	2.27	223	⇓P	Pn	19 47 05.7	-0.7
VLAD	Vladila	2.27	223		Pn	19 47 05.8	-0.7
TSSL	Sulina	2.28	102	⇓P	Pn	19 47 06.7	+0.1
TSSL				⇑S	Sn	19 47 35.3	-0.5
TSSL	Sulina	2.28	102	⇓P	Pn	19 47 06.7	+0.1
TSSL				⇑S	Sn	19 47 35.3	-0.5
PSN	Preselentsi	2.29	149	*i* P	Pn	19 47 07.2	+0.4
CJR	Cluj-Napoca	2.31	298	⇑P	Pn	19 47 06.7	-0.3
CJR				⇑S	Sn	19 47 35.8	-0.8
CJR	Cluj-Napoca	2.31	298	⇑P	Pn	19 47 06.7	-0.3
CJR				⇑S	Sn	19 47 35.8	-0.8
MANR	Mangalia	2.34	141	⇓P	Pn	19 47 07.5	+0.1
MANR				⇓S	Sn	19 47 36.1	-1.0
MANR	Mangalia	2.34	141	⇓P	Pn	19 47 07.5	+0.1
MANR				⇓S	Sn	19 47 36.1	-1.0
TSMN	Mangalia Port-	2.36	141	⇓P	Pn	19 47 07.7	+0.1
TSMN				⇓S	Sn	19 47 37.3	-0.1
TSMN	Mangalia Port-	2.36	141	⇓P	Pn	19 47 07.7	+0.1
TSMN				⇓S	Sn	19 47 37.3	-0.1
SZH	Strazhica	2.44	191	*i* P	Pn	19 47 08.2	-0.4
PRD	Provadia	2.54	166	*i* P	Pn	19 47 10.4	+0.6
DEV	Deva	2.57	276	⇓P	Pn	19 47 09.9	-0.3
DEV				⇑S	Sn	19 47 42.4	+0.2
DEV	Deva	2.57	276	⇓P	Pn	19 47 09.9	-0.3
DEV				⇑S	Sn	19 47 42.4	+0.2
PVL	Pavlikeni	2.60	200	P	Pn	19 47 11.8	+1.2
ROIA	ROIAK	2.63	167	P	Pn	19 47 11.4	+0.3
PLVB	Pleven	2.67	212	⇑P	Pn	19 47 11.1	-0.4
PLVB	Pleven	2.67	212	⇑P	Pn	19 47 11.1	-0.4
CHRU	Chernivtsi	2.67	351	⇑*i*P	Pn	19 47 11.1	-0.3
CHRU				Pm		19 47 11.5	
CHRU				⇓*i*S	Sn	19 47 42.7	-1.8
CHRU				Sm		19 47 45.4	
GZR	Gura Zlata	2.67	266	⇑P	Pn	19 47 11.6	0.0
GZR				⇑S	Sn	19 47 44.1	-0.5
GZR	Gura Zlata	2.67	266	⇑P	Pn	19 47 11.6	0.0
GZR				⇑S	Sn	19 47 44.1	-0.5
GZR	Gura Zlata	2.67	266		Pn	19 47 11.6	0.0
GZR					Sn	19 47 43.9	-0.7
SORM	Soroca	2.76	26	⇓P	Pn	19 47 11.7	-0.8
SORM	Soroca	2.76	26	⇓P	Pn	19 47 11.7	-0.8
KSV	Kosov	2.84	339	*i* P	Pn	19 47 12.7	-0.9
KSV				Pm		19 47 14.2	
KSV				Sm		19 47 51.1	
RAKU	Rahkiv	2.88	326	⇓*i*P	Pn	19 47 13.9	-0.2
RAKU				*i* S	Sn	19 47 48.7	-0.5
DRGR		2.90	294	⇑P	Pn	19 47 13.4	-1.1
DRGR		2.90	294	⇑P	Pn	19 47 13.4	-1.1
KMPD	K-Podol'skiy	2.90	359	*i* P	Pn	19 47 13.4	-0.9
KMPD				*i* S	Sn	19 47 47.3	-2.4
BMR	Baia Mare	2.92	315	⇑P	Pn	19 47 14.2	-0.4
BMR	Baia Mare	2.92	315	⇑P	Pn	19 47 14.2	-0.4
NSLU	Nyzhne Selyshc	2.92	331	⇑*i*P	Pn	19 47 19.5	+4.9
NSLU				*e*S	Sn	19 47 58.3	+8.3
PUNG	Punghina	2.92	243	⇑P	Pn	19 47 13.4	-1.3
PUNG	Punghina	2.92	243	⇑P	Pn	19 47 13.4	-1.3
NDNU	Novodnistrovsk	2.98	10	⇑*i*P	Pn	19 47 14.6	-0.8
NDNU				*i* S	Sn	19 47 48.7	-2.9
DJES	Djerdap	3.03	252	*e*Pn	Pn	19 47 14.4	-1.6
DJES				*e*Sg	Sn	19 47 44.8	-7.8
HERR	Herculane	3.03	257	⇓P	Pn	19 47 15.1	-0.9
HERR	Herculane	3.03	257	⇓P	Pn	19 47 15.1	-0.9
JMB	Yambol	3.20	180	P	Pn	19 47 17.9	-0.3
STNU	Starunia	3.36	336	⇑*i*P	Pn	19 47 20.1	-0.1
KORU	Korolevo	3.43	318	⇑*i*P	Pn	19 47 20.2	-0.9
KORU				*e*S	Sn	19 48 01.1	-0.7
TRSU	Trosnyk	3.47	316	⇑*i*P	Pn	19 47 21.0	-0.6
TRSU				*e*S	Sn	19 48 02.2	-0.5
BZS	Buzias	3.47	271	*e*Pn	Pn	19 47 20.8	-0.9
BZS	Buzias	3.47	271	⇓P	Pn	19 47 21.0	-0.7
BZS	Buzias	3.47	271	⇓P	Pn	19 47 21.0	-0.7
SIRR	Siria	3.47	282	⇓P	Pn	19 47 21.4	-0.4
SIRR	Siria	3.47	282	⇓P	Pn	19 47 21.4	-0.4
MEZ	Mezhgor'ye	3.53	325	*i* P	Pn	19 47 21.7	-0.8
MEZ				*i* S	Sn	19 48 03.3	-0.9
MDVR	Moldovita	3.54	257	⇑P	Pn	19 47 22.1	-0.5
MDVR	Moldovita	3.54	257	⇑P	Pn	19 47 22.1	-0.5
MDVR	Moldovita	3.54	257		Pn	19 47 22.2	-0.5
HORU	Horodok	3.55	359	*i* P	Pn	19 47 22.2	-0.6
PGB	Panagyurishte	3.56	210	P	Pn	19 47 23.3	+0.3
ZAGS	Zajecar	3.60	241	*e*Pn	Pn	19 47 21.3	-2.1
KUBS	Kucevo	3.68	252	*e*Pn	Pn	19 47 22.2	-2.3
ZAPS	Zavoj	3.69	231	*e*Pn	Pn	19 47 24.0	-0.7
BERU	Beregovo	3.72	315	⇓*i*P	Pn	19 47 24.2	-0.7
BERU				*e*S	Sn	19 48 07.6	-0.9
PLD	Plovdiv	3.80	201	P	Pn	19 47 25.8	-0.3
BANR	Banloc	3.83	268	⇓P	Pn	19 47 26.4	+0.1
BANR				⇓S	Sn	19 48 09.9	-1.1
BANR	Banloc	3.83	268	⇓P	Pn	19 47 26.4	+0.1
BANR				⇓S	Sn	19 48 09.9	-1.1
MUKU	Mukachevo	3.85	318	⇓*i*P	Pn	19 47 26.3	-0.3
MUKU				*e*S	Sn	19 48 10.8	-0.8
VTS	Vitosha	3.87	219	*e*Pn	Pn	19 47 27.0	-0.2
VTS	Vitosha	3.87	219	⇑P	Pn	19 47 27.0	-0.2
VTS	Vitosha	3.87	219	⇑P	Pn	19 47 27.0	-0.2
VTS	Vitosha	3.87	219	*i* P	Pn	19 47 26.6	-0.6
VTS	Vitosha	3.87	219	P	Pn	19 47 26.8	-0.4
VTS	Vitosha	3.87	219		Pn	19 47 26.8	-0.4
MORS	Morshin	3.92	333	*i* P	Pn	19 47 26.9	-0.6
MORS				*e*S	Sn	19 48 12.3	-0.9
BOVS	Bovan	4.01	241	*e*Pn	Pn	19 47 27.9	-1.0
UZH	Uzhgorod	4.16	317	*i* P	Pn	19 47 29.9	-0.8
UZH				*e*S	Sn	19 48 18.3	-0.6
UZH	Uzhgorod	4.16	317	⇑*i*P	Pn	19 47 30.3	-0.4
UZH				*e*S	Sn	19 48 16.8	-2.1
UZH				smax	smax		
	comp=N,15nm,1.0s						
UZH				smax	smax		
	comp=E,10.0nm,1.0s						
SHIU	Shidnytsya	4.17	330	⇓*i*P	Pn	19 47 30.7	-0.2
SHIU				*i* S	Sn	19 48 18.2	-1.1
STZU	Stuzhytsa	4.29	323	*i* P	Pn	19 47 31.8	-0.7
STZU				*e*S	Sn	19 48 21.2	-0.9
BOSS	Bosilegrad	4.32	224	*e*Pn	Pn	19 47 32.8	-0.1
BARS	Barje	4.44	232	*e*Pn	Pn	19 47 20.6	-14
BARS	Barje	4.44	232	*e*Pn	Pn	19 47 34.2	-0.3
LVV	L'vov	4.50	339	*e*P	Pn	19 47 34.3	-0.8
LVV				*e*S	Sn	19 48 25.6	-1.3
LVV	L'vov	4.50	339	*e*P	Pn	19 47 34.9	-0.2
LVV				*i* S	Sn	19 48 27.8	+0.9
LVV				pmax	pmax		
	comp=Z,100nm,1.8s						
LVV				MLR	MLR		
	comp=E,100nm,1.9s						
LVV				MLR	MLR		
	comp=N,100nm,1.4s						
LVV				MLR	MLR		
	comp=Z,200nm,1.7s						
GRUS	Gruza	4.53	249	*e*Pn	Pn	19 47 34.5	-1.1
RDO	Rodhopi	4.58	190	P	Pn	19 47 35.9	-0.4
SELS	Selova	4.60	240	*e*Pn	Pn	19 47 34.5	-2.1
TRUS	Trudelj	4.60	254	*e*Pn	Pn	19 47 35.5	-1.1
NVR	Nevrokopi	4.74	205	P	Pn	19 47 38.4	-0.1
KWP	Kalwaria Pacla	4.75	328	P	Pn	19 47 39.0	+0.5
KWP	Kalwaria Pacla	4.75	328		Pn	19 47 39.0	+0.5
ALN	Alexandroupoli	4.78	185	P	Pn	19 47 38.8	-0.2
ALN	Alexandroupoli	4.78	185	P	Pn	19 47 38.5	-0.5
ALN	Alexandroupoli	4.78	185		Pn	19 47 38.5	-0.5
FRGS	Fruska Gora	4.78	266	*e*Pn	Pn	19 47 31.9	-7.1
KAVA	Kavala	4.90	198	P	Pn	19 47 40.6	0.0
DIVS	Divibare	4.92	254	*e*Pn	Pn	19 47 39.6	-1.4
DIVS	Divibare	4.92	254	*e*Pn	Pn	19 47 39.6	-1.4
ISK	Istanbul-Kandi	4.94	158	P	Pn	19 47 41.0	-0.2
KECS	Kecovo	5.02	306	*e*P	Pn	19 47 41.8	-0.3
KECS	Kecovo	5.02	306	*e*PN	Pn	19 47 41.8	-0.3
IVAS	Ivanjica	5.03	248	*e*Pn	Pn	19 47 40.8	-1.6
TEKS	Tekeris	5.10	260	*e*Pn	Pn	19 47 43.1	-0.2
PSZ	Piszkesteto	5.11	299	P	Pn	19 47 41.9	-1.4
PSZ	Piszkesteto	5.11	299		Pn	19 47 41.9	-1.4
SEV	Sevastopol'	5.15	100	*i* P	Pn	19 47 40.9	-3.0
SEV				Pm		19 47 41.1	
SEV				*i* S	Sn	19 48 34.7	-7.8
SEV				Sm		19 48 41.3	
SEV	Sevastopol'	5.15	100	⇓*i*P	Pn	19 47 40.9	-3.0
SEV				*i* S	Sn	19 48 34.7	-7.8
VAY	Valandovo	5.22	215	*e*Pn	Pn	19 47 46.2	+1.3
VAY	Valandovo	5.22	215	*i* Pn	Pn	19 47 47.0	+2.1
KNT	Kendrikon	5.23	212	P	Pn	19 47 45.0	0.0
THAS	Thassos island	5.23	196	P	Pn	19 47 45.6	+0.6
SJES	Sjenica	5.29	245	*e*Pn	Pn	19 47 45.6	-0.3
AKASG	Malin Array Be	5.35	18	P	Pn	19 47 45.6	-0.8
	comp=Z,3.8nm,0.3s,baz=206,slow=12,SNR=14						
AKASG				S	Sn	19 48 42.0	-5.2
	comp=Z,8.0nm,0.3s,baz=203,slow=22,SNR=5.2						
AKASG	Malin Array Be	5.35	18		Pn	19 47 44.3	-2.1
AKBB	Malin Array Si	5.35	18	*i* P	Pn	19 47 45.0	-1.4
AKBB	Malin Array Si	5.35	18		Pn	19 47 44.8	-1.6
SIM	Simferopol'	5.38	95	*i* P	Pn	19 47 46.1	-0.8
SIM				Pm		19 47 50.3	
SIM				*i* S	Sn	19 48 45.2	-2.6
SIM				Sm		19 48 50.1	
SIM	Simferopol'	5.38	95	*d* *i*P	Pn	19 47 46.1	-0.8
SIM				*e*S	Sn	19 48 45.3	-2.6
SIM				pmax	pmax		
	comp=Z,184nm,0.3s						
SIM				smax	smax		
	comp=N,88nm,1.1s						
SIM				smax	smax		
	comp=E,97nm,1.0s						
SOH	Sokhos	5.38	207	P	Pn	19 47 46.6	-0.4
BBLS	Lazići	5.40	253	*e*Pn	Pn	19 47 47.2	-0.2
BBLS	Lazići	5.40	253	*e*Pn	Pn	19 47 47.5	+0.1
YAL	Yalta	5.50	100	*i* P	Pn	19 47 46.8	-1.8
YAL				*i* S	Sn	19 48 47.5	-3.4
YAL	Yalta	5.50	100	⇓*i*P	Pn	19 47 46.8	-1.8
YAL				*i* S	Sn	19 48 47.5	-3.4
MORH	Mrgy, Hungar	5.55	279	*e*Pn	Pn	19 47 48.7	-0.5
ALU	Alushta	5.63	97	*i* P	Pn	19 47 49.0	-1.3
ALU				Pm		19 47 49.5	
ALU				Sm		19 47 59.8	
ALU				*e*S	Sn	19 48 49.8	-4.1
ALU	Alushta	5.63	97	⇓*i*P	Pn	19 47 49.0	-1.3
ALU				*e*S	Sn	19 48 49.8	-4.1
HAPS	Han Pijesak,BI	5.63	256	*e*Pn	Pn	19 47 51.3	+0.8
VYHS	Vyhne	5.99	301	*e*P	Pn	19 47 54.6	-0.5
VYHS	Vyhne	5.99	301	*e*PN	Pn	19 47 54.6	-0.5
SUDU	Sudak	6.00	94	*i* P	Pn	19 47 53.9	-1.4
SUDU				Pm		19 47 55.2	
SUDU				*i* S	Sn	19 49 00.7	-2.2
SUDU				Sm		19 49 03.0	
SUDU	Sudak	6.00	94	⇓*i*P	Pn	19 47 53.9	-1.4
SUDU				*i* S	Sn	19 49 00.7	-2.2
PAIG	Paliouri	6.11	201	P	Pn	19 47 57.6	+0.8
MDUB	Mudurnu	6.20	145		Pn	19 47 56.7	-1.4
FEO	Feodosiya	6.26	93	*e*P	Pn	19 47 57.6	-1.0
FEO	Feodosiya	6.26	93	*e*P	Pn	19 47 57.6	-1.0
DRME	Dracevica, Mon	6.36	239	*e*Pn	Pn	19 48 01.5	+1.4
OJC	Ojcow	6.43	318	P	Pn	19 47 59.7	-1.3
OJC	Ojcow	6.43	318		Pn	19 47 59.7	-1.3
TREB	Trebinje	6.60	246	*e*Pn	Pn	19 48 03.8	+0.6
BLY	Banja Luka	6.69	265	*e*Pn	Pn	19 48 04.3	-0.1
BLY	Banja Luka	6.69	265		Pn	19 48 04.0	-0.4
DBRK	Dubrovnik	6.75	247	*e*Pn	Pn	19 48 07.3	+2.0
DBRK				Sn	Sn	19 49 20.1	-0.8
XOR	Xorichti	6.77	203	P	Pn	19 48 04.4	-1.2
JAVC	Velka Javorina	6.84	301	*e*PN	Pn	19 48 06.7	+0.2
SMOL	Smolenice	6.86	298	*e*P	Pn	19 48 06.2	-0.5
SMOL	Smolenice	6.86	298	*e*PN	Pn	19 48 06.2	-0.5
BEHE	Becsehely	6.86	280	*e*Pn	Pn	19 48 06.8	+0.1
MODS	Modra-Piesok	6.90	296	*e*P	Pn	19 48 05.8	-1.5
MODS	Modra-Piesok	6.90	296	*e*PN	Pn	19 48 05.8	-1.5
STON	Ston	6.95	249	*e*Pn	Pn	19 48 09.8	+1.9
STON				Sn	Sn	19 49 24.9	-0.7
ILGA	Ilgaz	6.96	129		Pn	19 48 07.6	-0.7
OKC	Ostrava-Krasne	7.04	309	*e*P	Pn	19 48 07.5	-1.6
OKC	Ostrava-Krasne	7.04	309	*e*P	Pn	19 48 07.5	-1.6
RICI	Ricice	7.07	256	*i* Pn	Pn	19 48 09.9	+0.3
RICI				Sn	Sn	19 49 28.4	-0.3
MAKA	Makarska	7.23	254	*i* Pn	Pn	19 48 12.4	+0.8
MAKA				Sn	Sn	19 49 31.0	-1.3
MANT	Manisa	7.32	168	Pn	Pn	19 48 12.2	-1.0
MORC	Moravsky Berou	7.34	307	*e*PN	Pn	19 48 11.4	-1.8
ANTO	Ankara	7.38	139	P	Pn	19 48 13.9	0.0
ANTO	Ankara	7.38	139	Pn	Pn	19 48 13.9	0.0
VRAC	Vranov	7.67	302	P	Pn	19 48 16.8	-0.8
	baz=118,slow=12,SNR=14						
VRAC				LR	LR	19 51 08.4	
	comp=E,39nm,18.0s,baz=41,slow=37						
VRAC	Vranov	7.67	302	*e*PN	Pn	19 48 16.9	-0.7
CONA	Conrad Observa	7.69	291	Pn	Pn	19 48 17.2	-0.6
	comp=E,8.3nm,1.0s,SNR=6.9						
KRUC	Moravsky	7.70	300	*e*PN	Pn	19 48 16.9	-1.0
CRES	Cresnjev	7.77	275	*e*Pn	Pn	19 48 19.9	+0.9
ARSA	Arzberg	7.79	286	Pn	Pn	19 48 19.5	+0.3
	comp=E,6.7nm,0.8s,SNR=5.2						
BR131	Keskin Array S	7.89	136	*d* *i*P	Pn	19 48 20.2	-0.6
BR131	Keskin Array S	7.89	136		Pn	19 48 20.1	-0.6
BRTR	Keskin Array B	7.89	136	P	Pn	19 48 20.6	-0.3
	comp=E,1.0nm,0.3s,baz=322,slow=11,SNR=76						
BRTR	Keskin Array B	7.89	136		Pn	19 48 20.0	-0.8
KRLC	Kraliky	7.92	307	*e*P	Pn	19 48 19.2	-1.7
KRLC	Kraliky	7.92	307	*e*P	Pn	19 48 19.2	-1.7
MORI	Morici	7.93	261	*e*Pn	Pn	19 48 22.9	+1.8
SOKA	Soboth	8.07	281	*i* Pn	Pn	19 48 23.4	+0.4
	comp=E,5.6nm,0.6s						
DPC	Dobruska-Polom	8.31	308	*e*P	Pn	19 48 32.5	+6.3
DPC	Dobruska-Polom	8.31	308	*e*P	Pn	19 48 32.5	+6.3
TREC	Trest	8.34	300	*e*P	Pn	19 48 26.6	+0.1
TREC	Trest	8.34	300	*e*P	Pn	19 48 26.6	+0.1
MOA	Molln	8.72	289	*i* Pn	Pn	19 48 31.7	+0.1
	comp=E,10nm,1.2s						
PRU	Pruhonice	9.17	302	*e*P	Pn	19 48 36.5	-1.1
PRU	Pruhonice	9.17	302	*e*P	Pn	19 48 36.5	-1.1
KBA	Koelnbreinsper	9.25	284	*i* Pn	Pn	19 48 39.9	+1.0
	comp=E,14nm,1.2s						
GEC2	GERESS Array S	9.31	295		Pn	19 48 39.9	+0.3
GERES	GERESS Array B	9.31	295	P	Pn	19 48 39.4	-0.2
	comp=E,0.4nm,0.3s,baz=106,slow=14,SNR=33						
GERES				LR	LR	19 52 35.6	
	comp=E,49nm,18.9s,baz=56,slow=40						
GERES	GERESS Array B	9.31	295		Pn	19 48 39.7	+0.1
KHC	Kasperske Hory	9.46	296	*e*P	Pn	19 48 41.3	-0.3
KHC	Kasperske Hory	9.46	296	*i* P	Pn	19 48 41.0	-0.6
KHC	Kasperske Hory	9.46	296		Pn	19 48 41.9	+0.3
SOC	Sochi	9.61	98	*e*P	Pn	19 48 43.7	+0.2
SOC				*e*		19 50 33.4	
SOC				pmax	pmax		
	comp=Z,31nm,1.1s						
TIP	Timpagrande	9.72	232	Pn	Pn	19 48 44.3	-0.8
ABTA	Abfaltersbach	9.80	281	*i* Pn	Pn	19 48 46.0	-0.2
	comp=Z,3.5nm,0.9s						
VORD	Divnogorie	10.00	53	*e*P	Pn	19 48 50.0	+1.4
VORD				*e*S	Sn	19 50 35.0	-4.0
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VORD				smax	smax		
	comp=E,160nm,0.8s						
VSR	Storozhevoye	10.04	52	*e*P	Pn	19 48 49.3	0.0
VSR				*e*S	Sn	19 50 36.0	-4.2
VSR				pmax	pmax		
	comp=Z,8.0nm,0.4s						
VSR				smax	smax		
	comp=N,190nm,3.3s						
WTTA	Wattenberg	10.43	284	*i* Pn	Pn	19 48 58.0	+3.4
	comp=N,1.7nm,0.7s						
WATA	Walderalm	10.47	285	*i* Pn	Pn	19 48 59.6	+4.5
	comp=N,7.2nm,1.0s						
CLL	Collm	10.62	307	*e*P	Pn	19 48 56.0	-0.9
CLL	Collm	10.62	307	*e*P	Pn	19 48 56.0	-0.9
SQTA	Sankt Quirin	10.71	284	*i* Pn	Pn	19 49 01.5	+3.2
	comp=N,4.6nm,0.8s						
MOTA	Moosalm	10.79	285	*i* Pn	Pn	19 49 00.3	+1.0
	comp=N,11nm,1.4s						
FETA	Feichten	11.03	283	*i* Pn	Pn	19 49 05.7	+3.1
	comp=N,0.1nm,0.4s						
OBN	Obninsk	11.40	30	*i* P	P	19 49 21.5	+6.2
OBN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
VRH	Novokhopyorsk	11.49	56	*e*P	Pn	19 49 05.5	-2.8
VRH				*e*S	Sn	19 51 06.0	-8.9
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VRH				smax	smax		
	comp=E,130nm,2.1s						
KIV	Kislovodsk	11.58	93	*e*P	Pn	19 49 12.8	+3.0
KIV				pmax	pmax		
	comp=Z,14nm,0.9s						
KVAR	Kislovodsk Arr	11.59	93	P	Pn	19 49 12.5	+2.6
	baz=284,slow=19,SNR=2.9						
DAVOX	Davos/Dischmat	11.62	281	P	Pn	19 49 10.2	0.0
	comp=Z,0.1nm,0.3s,baz=69,slow=14,SNR=2.5						
GOF	Gofitskoye	11.62	87	⇑*e*P	Pn	19 49 09.3	-0.8
GOF				pmax	pmax		
	comp=Z,42nm,1.1s						
DAVA	Damuels	11.62	284	*i* Pn	Pn	19 49 09.2	-1.1
	comp=Z,15nm,1.4s						
KBZ	Khabaz	11.79	94	P	Pn	19 49 12.8	+0.5
	comp=Z,0.3nm,0.3s,baz=297,slow=1.3,SNR=7.2						
MOS	Moscow	12.27	31	*e*P	P	19 49 23.3	-1.6
ZEI	Tsey	12.77	97	*e*P	Pn	19 49 26.5	+1.2
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VSU	Vasula	12.82	0	*i* P	Pn	19 49 22.7	-2.9
AKH	Akhalkalaki	13.00	103	P	Pn	19 49 28.5	+0.3
AKH	Akhalkalaki	13.00	103		Pn	19 49 28.5	+0.3
SENIN	Lac Senin/Sane	13.41	280	P	P	19 49 38.1	+0.1
FINES	FINESS Array B	15.81	359	P	Pn	19 50 03.2	0.0
	comp=Z,0.6nm,0.3s,baz=172,slow=11,SNR=18						
FINES	FINESS Array B	15.81	359	*c* *e*P	Pn	19 50 03.7	+0.5
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
FINES	FINESS Array B	15.81	359	Pn	Pn	19 50 03.6	+0.3
HFS	Hagfors	16.39	337	P	Pn	19 50 09.6	-0.7
	comp=Z,0.3nm,0.3s,baz=139,slow=12,SNR=10						
KLMR	Klimovskoe	17.02	22	*e*P	P	19 50 15.1	-2.4
KLMR				pmax	pmax		
	comp=Z,22nm,1.4s						
KLMR	Klimovskoe	17.02	22	*e*Pn	P	19 50 15.1	-2.4
KLMR				AMP		19 50 19.6	
	comp=Z,22nm,1.4s						
NC602	NORSAR Array S	17.50	335	P	P	19 50 21.9	-1.0
NC602				IAmb	IAmb	19 50 49.6	
	comp=Z,90nm,1.8s						
NC405	NORSAR Array S	17.76	336	P	P	19 50 24.8	-0.8
NAO01	NORSAR Array S	17.79	334	P	P	19 50 25.6	-0.3
NB201	NORSAR Array S	17.83	335	P	P	19 50 26.6	+0.2
NB201				IAmb	IAmb	19 50 57.7	
	comp=Z,76nm,1.6s						
NOA	NORSAR Array B	17.84	335	P	P	19 50 26.3	-0.3
	comp=Z,0.0nm,0.3s,baz=139,slow=11,SNR=5.0						
NC303	NORSAR Array S	17.95	336	P	P	19 50 27.9	+0.2
NBO00	NORSAR Array S	17.97	335	P	P	19 50 28.0	+0.1

NC204	**NORSAR Array S**	18.16	335	P	P	19 50 29.9	-0.2
NC204				IAmb	IAmb	19 50 38.3	
	comp=Z,79nm,1.8s						
KIRV	**Kirov**	18.96	39	P	P	19 50 38.9	+0.3
	comp=Z,2.0nm,0.3s,baz=227,slow=6.8,SNR=5.1						
PRGR	**Permogore**	19.46	28	*e*P	P	19 50 41.2	-2.9
PRGR				pmax	pmax		
	comp=Z,17nm,0.6s						
EKA	**Eskdalemuir Ar**	21.09	308	P	P	19 51 01.2	-0.4
	comp=Z,1.1nm,0.5s,baz=104,slow=10,SNR=5.1						
AKTO	**Aktyubinsk**	21.47	66	P	P	19 51 06.6	+0.8
	comp=Z,3.0nm,0.6s,baz=262,slow=10,SNR=12						
ARU	**Arti**	22.61	50	P	P	19 51 17.2	-0.1
	comp=Z,2.4nm,0.4s,baz=238,slow=9.1,SNR=16						
ARU	**Arti**	22.61	50*c*	*i*P	P	19 51 17.0	-0.2
ARU				*PP	pP	19 51 40.8	-2.6
ARU						19 51 58.0	
ARU				S	S	19 55 13.1	-1.0
ARU				SS	SnSn	19 56 11.0	+10
ARU				pmax	pmax		
	comp=Z,20nm,1.8s						
ARU	**Arti**	22.61	50	P	P	19 51 16.8	-0.5
ARU				IAmb	IAmb	19 51 18.1	
	comp=Z,9.0nm,0.5s						
ABKAR	**Akbulak array**	22.75	69	P	P	19 51 19.0	+0.4
ARCES	**ARCESS Array B**	23.94	359	P	P	19 51 29.3	-0.1
	comp=Z,3.4nm,0.6s,baz=174,slow=9.4,SNR=17						
GEYT	**Alibeck**	24.64	97	P	P	19 51 37.5	+1.4
	comp=Z,3.5nm,0.7s,baz=305,slow=11,SNR=9.0						
GEYT	**Alibeck**	24.64	97	P	P	19 51 36.8	+0.7
BRVK	**Borovoye**	29.04	59*c*	*e*P	P	19 52 16.6	+1.4
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BRVK	**Borovoye**	29.04	59	P	P	19 52 16.6	+1.4
BRVK				IAmb	IAmb	19 52 17.2	
	comp=Z,5.2nm,0.5s						
BVAR	**Borovoye Array**	29.10	59	P	P	19 52 17.2	+1.4
	comp=Z,1.5nm,0.5s,baz=278,slow=9.0,SNR=13						
KK31	**Karatay Array**	31.22	79	P	P	19 52 36.0	+1.4
KK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KK31	**Karatay Array**	31.22	79	P	P	19 52 36.0	+1.4
KKAR	**Karatay Array**	31.22	79	P	P	19 52 36.1	+1.5
KKAR	**Karatay Array**	31.22	79	P	P	19 52 36.1	+1.5
KKAR	**Karatay Array**	31.22	79	P	P	19 52 35.9	+1.3
KKAR				IAmb	IAmb	19 52 37.2	
	comp=Z,2.4nm,0.7s						
AAK	**Ala-Archa**	34.12	78	P	P	19 53 02.1	+2.1
	comp=Z,2.9nm,0.6s,baz=248,slow=4.5,SNR=24						
AAK	**Ala-Archa**	34.12	78*c*	*e*P	P	19 53 02.4	+2.3
AAK				pmax	pmax		
	comp=Z,10.0nm,1.6s						
AAK	**Ala-Archa**	34.12	78	P	P	19 53 02.3	+2.3
KURBB	**Kurchatov Arra**	34.44	63	P	P	19 53 03.4	+1.0
	comp=Z,2.5nm,0.5s,baz=286,slow=9.2,SNR=31						
KURK	**Kurchatov**	34.47	62*c*	*e*P	P	19 53 03.5	+0.8
KURK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KURK	**Kurchatov**	34.47	62	P	P	19 53 03.6	+0.9
KURK				IAmb	IAmb	19 53 04.0	
	comp=Z,4.3nm,0.4s						
KSH	**Kashi**	36.41	82	P	P	19 53 20.0	+0.4
KSH				PcP	PcP	19 55 42.5	+1.8
KSH				S	S	19 58 47.5	-3.2
KSH				PcS	PcS	19 59 27.5	-1.3
KSH				SS	SnSn	20 01 21.0	-14
ZAA0	**Zalesovo Array**	37.52	56	P	P	19 53 29.6	+0.9
ZAA0				IAmb	IAmb	19 53 30.4	
	comp=Z,5.8nm,0.7s						
ZALV	**Zalesovo Beam**	37.52	56	P	P	19 53 29.7	+1.0
	comp=Z,7.1nm,0.6s,baz=280,slow=9.4,SNR=29						
MAKZ	**Makanchi**	37.67	68	P	P	19 53 31.2	+1.2
MAKZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MAKZ	**Makanchi**	37.67	68	P	P	19 53 31.2	+1.2
MK31	**Makanchi Array**	37.88	68	P	P	19 53 32.8	+1.0
MK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MK31	**Makanchi Array**	37.88	68	P	P	19 53 32.8	+1.0
MKAR	**Makanchi Array**	37.88	68	P	P	19 53 33.0	+1.2
	comp=Z,2.3nm,0.5s,baz=272,slow=8.3,SNR=51						
MKAR	**Makanchi Array**	37.88	68	P	P	19 53 32.9	+1.1
TOA0	**Torodi Ar. Sit**	38.66	221	P	P	19 53 38.5	0.0
TOA0				IAmb	IAmb	19 53 40.0	
	comp=Z,5.3nm,0.6s						
TORD	**Torodi Ar. Bea**	38.66	221	P	P	19 53 38.6	0.0
	comp=Z,4.5nm,0.5s,baz=29,slow=8.7,SNR=38						
TORD				PcP	PcP	19 55 47.2	-0.6
	comp=Z,1.0nm,0.6s,baz=16,slow=2.6,SNR=4.0						
TORD	**Torodi Ar. Bea**	38.66	221	P	P	19 53 38.5	0.0
DGZ	**Jazzator, Alta**	40.20	61	*i* P	P	19 53 52.9	+1.7
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WMQ	**Urumqi**	42.53	70	*e*P	P	19 54 12.5	+2.4
MBAR	**Mbarara**	46.22	174	P	P	19 54 40.0	+0.2
	comp=Z,2.6nm,0.2s,baz=196,slow=7.4,SNR=3.8						
MBAR	**Mbarara**	46.22	174	P	P	19 54 40.0	+0.2
DBIC	**Dimbokro**	47.41	225	P	P	19 54 48.2	-0.7
	comp=Z,6.1nm,0.3s,baz=14,slow=8.6,SNR=30						
DBIC	**Dimbokro**	47.41	225	P	P	19 54 48.0	-0.9
DBIC				IAmb	IAmb	19 54 49.0	
	comp=Z,7.4nm,0.5s						
TIC	**Toumodi**	47.52	225	*e*P	P	19 54 49.2	-0.5
KIC	**Kosan Boka**	47.62	224	*e*P	P	19 54 50.0	-0.5
	comp=Z,8.8nm,0.4s						
LIC	**Lamto**	47.88	225	*e*P	P	19 54 51.5	-1.0
	comp=Z,20nm,0.4s						
TLY	**Talaya**	49.04	53	P	P	19 55 01.9	+0.8
	comp=Z,2.5nm,0.4s,baz=283,slow=8.7,SNR=5.4						
TLY	**Talaya**	49.04	53	*i* P	P	19 55 02.9	+1.8
TLY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TLY	**Talaya**	49.04	53	P	P	19 55 02.2	+1.2
TLY				IAmb	IAmb	19 55 03.6	
	comp=Z,4.1nm,0.6s						
TIXI	**Tiksi**	51.03	23	P	P	19 55 16.0	+0.3
	comp=Z,1.1nm,0.4s,baz=238,slow=1.4,SNR=7.5						
TIXI	**Tiksi**	51.03	23	*i* P	P	19 55 17.0	+1.3
TIXI				pmax	pmax		
	comp=Z,5.0nm,2.9s						
SONM	**Songino Array**	52.40	57	P	P	19 55 27.8	+1.4
	comp=Z,4.6nm,0.8s,baz=296,slow=7.9,SNR=34						
SONM	**Songino Array**	52.40	57	P	P	19 55 27.7	+1.4
SONM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONM	**Songino Array**	52.40	57	P	P	19 55 27.7	+1.4
GTA	**Gaotai**	52.60	69	*e*P	P	19 55 29.3	+1.3
YAK	**Yakutsk**	56.38	33	*i* P	P	19 55 56.1	+1.4
YAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LZH	**Lanzhou**	57.10	70	*e*P	P	19 56 02.5	+2.1
LZH				pP	pP	19 56 32.0	-1.5
LZH				sP	sP	19 56 48.0	-1.0
LZH				PP	PP	19 58 06.5	-2.0
HHC	**Hu-ho-hao-te**	59.28	62	*e*P	P	19 56 15.8	+0.4
PALK	**Pallekele**	60.19	112	P	P	19 56 22.3	+0.5
	comp=Z,5.4nm,0.7s,baz=316,slow=7.0,SNR=5.3						
BILL	**Bilibino**	62.66	16	*i* P	P	19 56 36.7	-0.9
BILL				pmax	pmax		
	comp=Z,5.0nm,1.6s						
SEY	**Seymchan**	63.50	24	P	P	19 56 44.0	+0.7
	comp=Z,1.3nm,0.3s,baz=310,slow=3.5,SNR=11						
SEY	**Seymchan**	63.50	24	*i* P	P	19 56 45.3	+2.0
ENH	**Enshi**	64.39	72	P	P	19 56 50.4	+0.8
ENH				IAmb	IAmb	19 56 51.1	
	comp=Z,4.9nm,0.7s						
CHTO	**Chiang Mai**	64.56	89	P	P	19 56 51.4	+0.6
CHTO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CHTO	**Chiang Mai**	64.56	89	P	P	19 56 51.4	+0.6
CMAR	**Chiang Mai Arr**	64.80	89	P	P	19 56 53.1	+0.7
	comp=Z,1.7nm,0.5s,baz=306,slow=7.7,SNR=22						
CMAR	**Chiang Mai Arr**	64.80	89*c*	*e*P	P	19 56 53.2	+0.8
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CMAR	**Chiang Mai Arr**	64.80	89	P	P	19 56 52.9	+0.5
KLR	**Kul'dur**	65.30	44	*i* P	P	19 56 55.7	+0.5
KLR				pmax	pmax		
	comp=Z,4.0nm,1.5s						
YKA	**Yellowknife Ar**	67.81	342	P	P	19 57 10.6	-0.3
	comp=Z,1.1nm,0.5s,baz=37,slow=5.8,SNR=21						
IMAR	**Indian Mountai**	68.69	0		P	19 57 17.7	+1.4
USRK	**Ussuriysk Ar.**	68.83	48	P	P	19 57 17.8	+0.2
	comp=Z,0.8nm,0.5s,baz=296,slow=6.0,SNR=5.3						
NJ2	**Nanjing**	69.35	65	*e*P	P	19 57 21.0	+0.1
RND	**Reindeer**	71.22	358	P	P	19 57 31.7	-0.2
RND				pmax	pmax		
	comp=Z,12nm,1.4s						
RND	**Reindeer**	71.22	358	P	P	19 57 31.7	-0.2
RND				IAmb	IAmb	20 00 12.4	
	comp=Z,12nm,1.4s						
KSAR	**Wonju Array Be**	71.22	56	P	P	19 57 32.5	+0.3
KSAR	**Wonju Array Be**	71.22	56	P	P	19 57 32.5	+0.3
KSRS	**Korea Array**	71.23	55	P	P	19 57 32.7	+0.4
	comp=Z,1.4nm,0.7s,baz=316,slow=4.9,SNR=6.4						
YSS	**Yuzh-Sakhalins**	72.10	40⇑	*e*P	P	19 57 39.2	+1.9
YSS				pmax	pmax		
	comp=Z,10.0nm,1.7s						
ULM	**Lac du Bonnet**	72.23	325	P	P	19 57 36.9	-1.2
	comp=Z,0.9nm,0.4s,baz=54,slow=8.2,SNR=3.5						
SCM	**Sheep Creek Mo**	72.74	357	P	P	19 57 41.9	+0.9
SCM				pmax	pmax		
	comp=Z,52nm,1.9s						
SCM	**Sheep Creek Mo**	72.74	357	P	P	19 57 41.9	+0.9
IPM	**Ipoh**	75.96	98	P	P	19 58 00.3	0.0
IPM				IAmb	IAmb	19 58 00.9	
	comp=Z,5.3nm,0.7s						
ECSD	**EROS Data Cent**	77.71	322	P	P	19 58 09.2	-0.4
ECSD				IAmb	IAmb	19 58 09.8	
	comp=Z,12nm,1.4s						
PDAR	**Pinedale Array**	83.68	329	P	P	19 58 41.1	-0.6
	comp=Z,0.3nm,0.6s,baz=50,slow=6.1,SNR=2.2						
PV23	**Carpenter Ridg**	87.23	327	P	P	19 58 58.6	-0.9
PMG	**Port Moresby**	117.90	74*c*	*i*PKIKP	PKiKP	20 05 00.8	+2.0
PMG				pmax	pmax		
	comp=Z,76nm,2.5s						
ASAR	**Alice Springs**	118.44	96	PKP	PKPdf	20 04 58.7	-0.9
	comp=Z,0.2nm,0.5s,baz=318,slow=1.7,SNR=4.8						

LJU 26 19:47:29.8, 45.°75N×14.°87E, h2^{km}, ML0.4, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VISS	**Visnje**	0.05	338⇓	*i*Pg	Pg	19 47 30.9	0.0
VISS				*i* Sg	Sg	19 47 31.8	+0.1
	comp=Z,11nm,0.1s						

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*IDC **26** 19:52:07.7±1.3, 33.°24N×73.°54E, h0^{km}, mb3.8/11, mb1 3.9/15, mb1mx3.6/58, mbtmp3.9/15, ML3.7/4, MS3.4/1, Ms1 3.4/1, ms1mx2.3/47, Error ellipse: s-maj=24.9km s-min=23.5km az=104.0*

*NEIC **26** 19:52:09.2±1.4, 33.°29N±0.°05×73.°5E±0.°1, h5^{km}±2^{km}, mb4.0/8, Error ellipse: s-maj=14.9km s-min=4.9km az=71.0*

*NDI **26** 19:52:09.4±2.9, 33.°78N×73.°18E, h15^{km}±515^{km}, ML3.9*

ISC 26 19:52:09.0±0.6, **33.°20N**±0.°05×**73.°34E**±0.°05, **h15^{km}, n56, σ2^{s}06**/60, **mb4.0**/11, **Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIL	**Nilore**	0.46	351		Pg	19 52 17.0	-1.2
NIL				Sg	Sg	19 52 21.3	-3.1
JMU	**Jammu**	1.40	110	*e*P	Pn	19 52 30.5	-3.5
JMU				*e*S	Sn	19 52 50.0	-2.2
THN	**Thein Dam**	2.14	110	*e*P	Pg	19 52 50.0	-0.1
THN				*e*S	Sg	19 53 20.0	+2.0
DHRM	**DHARAMSHALA**	2.67	110	*e*P	Pb	19 52 57.6	+0.9
DHRM				*e*S	Sg	19 53 32.6	-2.3
DHRM				IAML		19 53 37.0	
	comp=N,701nm,0.3s						
DHRM				IAML		19 53 37.9	
	comp=E,704nm,0.7s						
BHK	**Bhakra**	3.15	123	*e*P	Pg	19 53 09.0	-0.5
BHK				*e*S	Sg	19 53 50.8	+0.4
KBL	**Kabul**	3.82	292		Pb	19 53 12.7	-3.5
SMLA	**Simla**	3.85	121	*e*P	Pb	19 53 13.7	-2.9
SMLA				*e*S	Sb	19 54 01.3	-1.7
SMLA				IAML		19 54 23.7	
	comp=E,242nm,0.4s						
KUDL	**Kundal**	5.72	151	*e*P	Pn	19 53 24.6	-8.8
KUDL				*e*S	Sn	19 54 31.6	-7.3
ARSB	**Arslanbob**	8.12	358		Pn	19 54 07.7	+1.2
AML	**Almayashu**	8.92	2	P	Pn	19 54 20.3	+2.6
	SNR=41						
KZA	**Kyzart**	8.99	9	P	Pn	19 54 20.4	+1.7
	SNR=23						
UCH	**Uchtor**	9.06	6	P	Pn	19 54 21.4	+1.8
	SNR=20						
EKS2	**Erkin-Say**	9.45	2	P	Pn	19 54 27.2	+2.5
	SNR=21						
AAK	**Ala-Archa**	9.47	5	Pn	Pn	19 54 26.6	+1.7
	comp=E,1.8nm,0.3s,baz=162,slow=4.8,SNR=23						
AAK				Sn	Sn	19 56 11.2	0.0
	comp=E,0.1nm,0.3s,baz=336,slow=17,SNR=2.1						
AAK	**Ala-Archa**	9.47	5	Pn	Pn	19 54 26.5	+1.5
BOOM	**Boomskoye usch**	9.50	12		Pn	19 54 27.2	+1.8
CHMS	**Chumysh**	9.85	6	P	Pn	19 54 31.8	+1.7
	SNR=11						
KK31	**Karatay Array**	10.14	348		Pn	19 54 35.0	+1.0
KKAR	**Karatay Array**	10.14	348		Pn	19 54 34.8	+0.8
KKAR	**Karatay Array**	10.14	348		Pn	19 54 35.1	+1.1
DANN	**Dangsing**	10.18	116	*e*P	Pn	19 54 37.8	+2.9
	comp=E,9.5nm,0.2s						
GKN	**Gorkha**	11.02	115	*e*P	Pn	19 54 48.7	+2.3
	comp=E,18nm,0.2s						
DMN	**Daman**	11.58	116	*e*P	Pn	19 54 56.4	+2.3
PKIN	**Phulchoki**	11.82	115	*e*P	Pn	19 54 58.8	+1.5
	comp=E,11nm,0.3s						
PKI	**Pulchoki**	11.83	115	*e*P	Pn	19 54 59.0	+1.4
	comp=E,8.5nm,0.2s						
GUN	**Gumba**	12.02	113	*e*P	Pn	19 55 01.0	+0.8
	comp=E,10nm,0.3s						
JIRN	**Jiri**	12.38	113	*e*P	Pn	19 55 06.1	+0.9
	comp=E,18nm,0.3s						
RAMN	**Ramite**	13.06	115	*e*P	Pn	19 55 14.7	+0.4
	comp=E,26nm,0.6s						
MAKZ	**Makanchi**	15.11	23		Pn	19 55 40.0	-1.9
MK31	**Makanchi Array**	15.20	24		Pn	19 55 40.4	-2.6
MKAR	**Makanchi Array**	15.20	24	Pn	Pn	19 55 41.8	-1.3
	comp=E,0.2nm,0.3s,baz=215,slow=14,SNR=7.0						
MKAR				Sn	Sn	19 58 27.3	-3.8
	comp=E,0.0nm,0.3s,baz=190,slow=16,SNR=3.8						
MKAR	**Makanchi Array**	15.20	24	Pn	Pn	19 55 40.4	-2.7
KURBB	**Kurchatov Arra**	17.83	11	P	Pn	19 56 14.4	-2.0
	comp=E,0.1nm,0.3s,baz=197,slow=11,SNR=26						
KURK	**Kurchatov**	17.93	11		Pn	19 56 15.2	-2.5
KURK				IAmb	IAmb	19 56 20.6	
	comp=Z,4.6nm,0.8s						
ABKAR	**Akbulak array**	18.90	332	P	P	19 56 28.4	-0.4
BVAR	**Borovoye Array**	19.93	355	P	P	19 56 41.0	+0.8
	comp=Z,0.5nm,0.3s,baz=165,slow=11,SNR=13						
BRVK	**Borovoye**	19.97	355		P	19 56 40.8	+0.2
BRVK				IAmb	IAmb	19 56 46.0	
	comp=Z,3.0nm,0.8s						
AKTO	**Aktyubinsk**	20.59	331	P	Pn	19 56 49.0	-0.6
	comp=Z,2.8nm,0.3s,baz=122,slow=8.4,SNR=13						
ZAA0	**Zalesovo Array**	22.29	18	P	P	19 57 06.8	+1.1
ZAA0				IAmb	IAmb	19 57 09.4	
	comp=Z,3.7nm,0.5s						
ZALV	**Zalesovo Beam**	22.29	18	P	P	19 57 05.7	+0.1
	comp=Z,3.7nm,0.4s,baz=210,slow=9.8,SNR=21						
ARU	**Arti**	25.38	341	P	P	19 57 36.6	+1.2
	comp=Z,1.0nm,0.5s,baz=138,slow=10,SNR=4.0						
ARU	**Arti**	25.38	341	P	P	19 57 36.3	+0.8
ARU				IAmb	IAmb	19 58 24.2	
	comp=Z,3.6nm,0.8s						
CMAR	**Chiang Mai Arr**	27.23	116	P	P	19 57 52.2	-0.3
	comp=Z,0.2nm,0.2s,baz=297,slow=9.1,SNR=0.8						
BR131	**Keskin Array S**	32.39	293	P	P	19 58 40.1	+1.8
BRTR	**Keskin Array B**	32.39	293	P	P	19 58 40.6	+2.3
	comp=Z,0.5nm,0.8s,baz=79,slow=8.9,SNR=3.5						
FINES	**FINESS Array B**	41.29	328	P	P	19 59 55.1	+1.6
ARCES	**ARCESS Array B**	44.92	338	P	P	20 00 23.9	+1.1
	comp=Z,6.8nm,1.0s,baz=99,slow=6.3,SNR=4.0						
CLL	**Collm**	46.79	312	*e*P	P	20 00 38.0	+0.2
HFS	**Hagfors**	46.85	324	P	P	20 00 39.3	+1.2
	comp=Z,3.4nm,1.0s,baz=113,slow=11,SNR=5.0						
TIXI	**Tiksi**	48.15	21	P	P	20 00 48.5	+0.4
	comp=Z,0.4nm,0.3s,baz=250,slow=5.9,SNR=3.7						
TIXI	**Tiksi**	48.15	21	IAmb	IAmb	20 01 04.4	
	comp=Z,4.1nm,1.5s						
NOA	**NORSAR Array B**	48.17	325	P	P	20 00 49.6	+1.2
	comp=Z,0.2nm,0.6s,baz=68,slow=9.4,SNR=2.7						
SPITS	**Spitsbergen Ar**	51.13	347	LR	LR	20 26 24.6	
	comp=Z,37nm,20.3s,baz=275,slow=40						
TORD	**Torodi Ar. Bea**	67.64	271	P	P	20 03 07.6	+1.8
	comp=Z,0.6nm,0.5s,baz=57,slow=5.2,SNR=2.4						
TORD	**Torodi Ar. Bea**	67.64	271	IAmb	IAmb	20 03 12.9	
	comp=Z,0.8nm,0.9s						
YKA	**Yellowknife Ar**	84.43	4	P	P	20 04 41.7	+1.1
	comp=Z,0.5nm,0.6s,baz=350,slow=5.0,SNR=12						

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*IDC **26** 19:58:47.8±1.1, 11.°37N×125.°82E, h0^{km}, mb3.5/5, mb1 3.7/5, mb1mx3.4/33, mbtmp3.5/5, MS2.9/1, Ms1 2.9/1, ms1mx2.5/24, Error ellipse: s-maj=74.2km s-min=21.6km az=71.0*

*MAN **26** 19:58:53.2, 11.°40N×125.°69E, h15^{km}, mb4.0, ML2.8, MS2.4*

ISC 26 19:58:52.9±0.9, **11.°45N**±0.°05×**125.°82E**±0.°08, **h33^{km}, n20, σ1^{s}14**/16, **mb3.4**/5, **1C, Samar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OCLP	**Ormoc**	1.25	252	*e*P	Pn	19 59 13.3	-0.8
OCLP				*e*S	Sn	19 59 29.7	-0.1
CNP	**Catarman**	1.55	313	*e*P	Pn	19 59 18.8	+0.6
CNP				*e*S	Sb	19 59 39.3	-1.0
MSLP	**Maasin**	1.61	216	*e*P	Pn	19 59 19.2	+0.2
MSLP				*e*S	Sb	19 59 41.5	-0.6
TBP	**Tagbilaran**	2.60	228	*e*P	Pn	19 59 34.0	+1.3
PVCP	**Virac**	2.69	323	*e*P	Pn	19 59 33.7	-0.1
PVCP				*e*S	Sn	19 59 43.3	-22
RCP	**Roxas**	3.02	272⇑	*e*P	Pn	19 59 41.0	+2.7
GUIM	**Jordan**	3.28	256	*e*P	Pn	19 59 42.2	+0.2
BUKP	**Musuan**	3.62	192	*e*P	Pn	19 59 48.2	+1.4
KSRS	**Korea Array**	25.96	4	LR	LR	20 14 38.4	
	comp=Z,25nm,18.8s,baz=190,slow=36						
ASAR	**Alice Springs**	35.78	167	P	P	20 05 48.3	-0.9
	0.2nm,0.6s,baz=348,slow=7.1,SNR=9.2						
SONM	**Songino Array**	39.77	339	P	P	20 06 24.1	+1.3
	0.4nm,0.6s,baz=160,slow=7.7,SNR=2.8						
H11S3	**WAKE ISLAND Hy**	40.03	75	T	T	20 49 24.4	
	baz=265,slow=75,SNR=9.3						
H11S1	**WAKE ISLAND Hy**	40.04	75	T	T	20 49 24.6	
	baz=265,slow=75,SNR=7.1						
H11S2	**WAKE ISLAND Hy**	40.04	75	T	T	20 49 23.1	
	baz=265,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	40.32	73	T	T	20 49 41.4	
	baz=265,slow=74,SNR=84						
H11N2	**WAKE ISLAND Hy**	40.33	73	T	T	20 49 41.5	
	baz=265,slow=74,SNR=66						
H11N3	**WAKE ISLAND Hy**	40.34	73	T	T	20 49 44.7	
	baz=265,slow=74,SNR=63						
STKA	**Stephens Creek**	45.65	161	P	P	20 07 09.5	-0.9
	0.9nm,0.5s,baz=355,slow=12,SNR=4.7						
MKAR	**Makanchi Array**	50.83	322	P	P	20 07 50.0	-0.3
	0.3nm,0.3s,baz=116,slow=8.0,SNR=11						
ILAR	**Eielson Array**	78.58	26	P	P	20 10 51.3	+0.3
	0.3nm,0.7s,baz=251,slow=5.4,SNR=2.3						

IDC 26 20:16:40.3±1.9, **30.°95N**×**41.°42W, h0^{km}, mb3.6**/8, **mb1 3.9**/8, **mb1mx3.5**/60, **mbtmp3.6**/8, **MS3.3**/8, **Ms1 3.3**/8, **ms1mx3.0**/36, **Error ellipse: s-maj=65.2km s-min=23.2km az=14.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJG	**San Juan**	25.80	246	LR	LR	20 32 57.3	
	comp=Z,21nm,18.5s,baz=256,slow=38						
ROSC	**El Rosal**	40.38	237	LR	LR	20 38 34.4	
	comp=Z,36nm,21.1s,baz=14,slow=32						
DBIC	**Dimbokro**	41.88	118	LR	LR	20 42 02.1	
	comp=Z,31nm,18.1s,baz=354,slow=36						
TORD	**Torodi Ar. Bea**	43.40	104	P	P	20 24 45.1	+0.2
	1.1nm,0.8s,baz=303,slow=5.8,SNR=4.3						
TORD				LR	LR	20 41 39.1	
	comp=Z,44nm,18.9s,baz=50,slow=34						
GERES	**GERESS Array B**	44.87	50	P	P	20 24 56.7	+0.2
	0.2nm,0.5s,baz=258,slow=5.3,SNR=4.0						
H10N2	**ASCENSION HYDR**	46.39	142	T	T	21 14 42.8	
	baz=328,slow=75,SNR=33						
H10N3	**ASCENSION HYDR**	46.40	142	T	T	21 14 47.3	
	baz=328,slow=75,SNR=31						
H10N1	**ASCENSION HYDR**	46.41	142	T	T	21 14 44.3	
	baz=328,slow=75,SNR=34						
H10S3	**ASCENSION HYDR**	47.25	143	T	T	21 15 35.4	
	baz=327,slow=74,SNR=61						
H10S2	**ASCENSION HYDR**	47.26	143	T	T	21 15 37.0	
	baz=253,slow=74,SNR=18						
TXAR	**Lajitas Array**	53.22	285	LR	LR	20 47 43.6	
	comp=Z,18nm,18.1s,baz=0.0,slow=35						
PDAR	**Pinedale Array**	54.42	303	P	P	20 26 09.8	+0.2
	0.9nm,0.9s,baz=86,slow=7.9,SNR=5.3						
PDAR				LR	LR	20 47 58.8	
	comp=Z,53nm,18.8s,baz=64,slow=34						
AKASG	**Malin Array Be**	54.83	47	LR	LR	20 48 15.7	
	comp=Z,28nm,18.6s,baz=305,slow=35						
YKA	**Yellowknife Ar**	55.35	327	P	P	20 26 14.8	-0.8
	0.6nm,1.0s,baz=88,slow=7.6,SNR=4.4						
YKA				LR	LR	20 49 21.7	
	comp=Z,35nm,18.5s,baz=0.0,slow=35						
BRTR	**Keskin Array B**	60.23	59	P	P	20 26 49.6	-0.9
	0.6nm,1.0s,baz=298,slow=6.1,SNR=2.4						
NVAR	**Mina Array Bea**	61.98	300	P	P	20 27 01.9	-0.7
	0.2nm,0.4s,baz=72,slow=5.8,SNR=2.1						
ILAR	**Eielson Array**	68.65	334	P	P	20 27 46.0	+1.0
	0.6nm,0.8s,baz=54,slow=4.4,SNR=5.9						
KURBB	**Kurchatov Arra**	83.04	34	P	P	20 29 07.5	0.0
	0.6nm,0.9s,baz=317,slow=5.3,SNR=4.5						

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*SKO **26** 20:28:47.6, 41.°35N×19.°30E, h0^{km}*

*TIR **26** 20:28:47.9, 41.°51N×19.°58E, h22^{km}, Md2.7/5*

*BEO **26** 20:28:49.3±0.3, 41.°62N×19.°75E, h0^{km}, ML2.1/9*

*RHSSO **26** 20:28:50.6±0.9, 41.°53N×19.°42E, h14^{km}±2^{km}, ML2.3/7*

ISC 26 20:28:48.2±1.1, **41.°49N**±0.°03×**19.°52E**±0.°03, **h9^{km}**±9^{km}, **n37, σ1^{s}00**/65, **1D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	0.30	119	*e*Pg	Pg	20 28 54.6	+0.4
TIR				*e*Sg	Sg	20 28 57.6	-0.6
TIR	**Tirane**	0.30	119	*i* PG	Pg	20 28 54.1	-0.1
TIR				*i* SG	Sg	20 28 59.0	+0.8
PUK	**Puka**	0.62	27	*i* PG	Pg	20 28 59.9	-0.3
PUK				*i* SG	Sg	20 29 08.8	+0.5
PHP	**Peshkopia**	0.72	74	*i* PG	Pg	20 29 01.5	-0.6
PHP				*i* SG	Sg	20 29 11.5	0.0
DRME	**Dracevica, Mon**	0.74	340	*e*Pg	Pb	20 29 02.8	-0.4
DRME				*e*Sg	Sb	20 29 13.2	-0.1
PDG	**Podgorica**	0.96	348	*e*Pg	Pg	20 29 04.6	-2.0
PDG				*e*Sg	Sg	20 29 18.2	-0.8
PDG	**Podgorica**	0.96	348	*e*Pg	Pb	20 29 07.4	+0.5
PDG				*e*Sg	Sb	20 29 20.3	+0.6
BCI	**Bajram Curri**	0.96	25	*i* PG	Pg	20 29 06.1	-0.6
BCI				*i* SG	Sg	20 29 19.6	+0.2
OHR	**Ohrid**	1.04	111⇓	*i*Pg	Pb	20 29 08.2	-0.1
OHR				*i* Sg	Sn	20 29 24.3	+0.7
OHR				*e*Lg	Lg	20 29 24.9	
	comp=N,37nm,0.7s						
HCY	**Herceg Novi**	1.22	322	*e*Pg	Pg	20 29 11.0	-0.6
HCY				*e*Sg	Sb	20 29 27.5	+0.2
TREB	**Trebinje**	1.50	325	*e*Pg	Pn	20 29 15.5	+0.3
TREB				*e*Sg	Sg	20 29 36.6	+0.2
TREB	**Trebinje**	1.50	325	*e*Pg	Pn	20 29 15.9	+0.7
TREB				*e*Sg	Sn	20 29 35.1	+0.2
SKO	**Skopje**	1.52	71	*e*Sg	Sn	20 29 31.9	-3.5
DBRK	**Dubrovnik**	1.56	320	*e*Pn	Pb	20 29 16.9	-0.3
DBRK				Sn	Sn	20 29 37.1	+0.8
FNA	**Florina**	1.57	116	*i* PN	Pb	20 29 17.2	-0.3
FNA				*i* SN	Sg	20 29 38.8	0.0
BRY	**Bratogost**	1.58	333	*e*Pn	Pn	20 29 16.9	+0.4
BRY				*e*Sn	Sn	20 29 37.1	-0.1
SJES	**Sjenica**	1.80	11	*e*Pg	Pn	20 29 18.3	-1.2
SJES				*e*Sg	Sn	20 29 41.1	-1.4
STON	**Ston**	1.93	316	*e*Pn	Pg	20 29 24.9	-0.3
STON				*e*Sg	Sg	20 29 53.4	+3.2
STON	**Ston**	1.93	316	*e*Pn	Pn	20 29 20.8	-0.3
STON				Sn	Sn	20 29 45.0	-0.5
STON	**Ston**	1.93	316	*e*Pn	Pn	20 29 21.4	+0.3
STON				*e*Sn	Sn	20 29 45.5	+0.1
SELS	**Selova**	2.10	34	*e*Pg	Pn	20 29 23.5	0.0
SELS				*e*Sg	Sn	20 29 50.2	+0.6
RUDO	**Rudo**	2.13	357	*e*Pn	Pn	20 29 25.8	+1.9
IVAS	**Ivanjica**	2.13	13	*e*Pg	Pn	20 29 24.1	+0.1
IVAS				*e*Sg	Sn	20 29 51.6	+0.9
BARS	**Barje**	2.16	52	*e*Pg	Pn	20 29 25.1	+0.7
BBLS	**Lazići**	2.37	358	*e*Pn	Pn	20 29 27.5	+0.2

BBLS	Lazići	2.37	358	*e*Pn	Pn	20 29 28.4	+1.1
BBLS				*e*Sn	Sn	20 29 56.6	0.0
BOSS	Bosilegrad	2.43	65	*e*Pg	Pn	20 29 29.1	+1.1
GRUS	Gruza	2.55	20	*e*Pn	Pn	20 29 30.5	+0.8
MAKA	Makarska	2.58	315	*e*Pn	Pn	20 29 29.7	-0.3
MAKA				Sn	Sn	20 30 00.1	-1.3
HAPS	Han Pijesak,Bl	2.62	351	*e*Pn	Pn	20 29 32.7	+1.9
HAPS				*e*Sn	Sn	20 30 03.4	+0.6
DIVS	Divibare	2.63	8	*e*Sn	Sn	20 30 03.1	+0.2
RICI	Ricice	2.67	319	*i* Pn	Pn	20 29 30.9	-0.3
RICI				Sn	Sn	20 30 04.0	+0.3
BOVS	Bovan	2.68	36	*e*Pn	Pn	20 29 31.1	-0.4
BOVS				*e*Sg	Sn	20 30 06.8	+2.7
ZAPS	Zavoj	2.92	51	*e*Pn	Pn	20 29 33.7	-1.0
ZIRJ	Zirje	3.58	308	*e*Pn	Pn	20 29 43.2	-0.7
ZIRJ				Sn	Sn	20 30 25.8	-0.5
MORI	Morici	3.67	311	*e*Pn	Pn	20 29 45.2	+0.1
MORI				Sn	Sn	20 30 27.5	-1.1
DUGI	Dugi Otok	4.12	309	*e*Pn	Pn	20 29 51.4	0.0

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*NEIC **26** 20:34:12.8±0.9, 43.°70N±0.°06×105.°08W±0.°09, h0^{km}±2^{km}, ML3.1/46, Error ellipse: s-maj=10.8km s-min=9.3km az=283.0*

*IDC **26** 20:34:13.7±1.9, 43.°82N×105.°53W, h0^{km}, mb1 3.7/2, mb1mx3.2/42, mbtmp3.5/2, ML3.3/2, Error ellipse: s-maj=55.4km s-min=9.9km az=151.0*

ISC 26 20:34:13.4±1.2**, 43.°69N**±0.°06×**105.°15W**±0.°06**, h0**^{km}**, n34, σ0.^{s}77**/33**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.91	61		Pb	20 34 33.1	+0.9
K22A	Casper	1.45	225		Pn	20 34 38.8	-2.1
K22A				IAML		20 35 04.6	
	comp=E,233nm,0.3s						
K22A				IAML		20 35 05.5	
	comp=N,278nm,0.3s						
PHWY	Pilot Hill	2.40	186		Pn	20 34 53.7	-0.5
RWWY	Rawlins	2.51	218		Pn	20 34 55.8	+0.1
RWWY				IAML		20 35 36.4	
	comp=N,75nm,0.9s						
N23A	Red Feather La	2.86	192		Pn	20 35 01.8	+1.3
N23A				IAML		20 35 44.0	
	comp=E,45nm,0.8s						
LAO	LASA Array	3.09	346	Pn	Pn	20 35 03.3	-0.2
RLMT	Red Lodge	3.28	297		Pn	20 35 05.8	-0.4
RLMT				IAML		20 35 44.9	
	comp=E,35nm,5.0s						
RLMT				IAML		20 36 08.1	
	comp=E,45nm,5.0s						
PD31	Pinedale Array	3.35	256	Pn	Pn	20 35 07.0	-0.2
PDAR	Pinedale Array	3.35	256	Pn	Pn	20 35 07.0	-0.2
	comp=E,2.1nm,0.3s,baz=72,slow=18,SNR=33						
PDAR				Lg	Lg	20 35 52.0	
	comp=E,8.8nm,0.3s,baz=69,slow=32,SNR=13						
PDAR	Pinedale Array	3.35	256		Pn	20 35 07.5	+0.3
BW06	Boulder Array	3.35	256	Pn	Pn	20 35 07.2	0.0
OGNE	Ogallala	3.59	139		Pn	20 35 09.1	-1.2
YNE	Yellowstone No	3.73	292	Pn	Pn	20 35 11.6	-0.8
YMP	Mirror Lake Pl	3.75	288		Pn	20 35 12.6	-0.1
GCMT	Greycliff	3.84	305	Pn	Pn	20 35 13.9	0.0
ISCO	Idaho Springs	3.90	185		Pn	20 35 15.8	+0.9
ISCO				IAML		20 36 02.8	
	comp=E,20nm,4.7s						
ISCO				IAML		20 37 10.1	
	comp=E,18nm,4.8s						
H17A	Grant Village	3.98	282		Pn	20 35 15.8	-0.1
H17A				IAML		20 36 17.6	
	comp=E,25nm,2.6s						
H17A				IAML		20 36 20.1	
	comp=N,22nm,1.4s						
FLWY	Flagg Ranch	4.03	277		Pn	20 35 16.8	+0.2
FLWY				IAML		20 36 12.3	
	comp=N,30nm,5.0s						
FLWY				IAML		20 36 20.8	
	comp=N,28nm,4.2s						
YPP	Pitchstone Pla	4.12	280		Pn	20 35 17.5	-0.4
REDW	Red Top Meadow	4.16	267	Pn	Pn	20 35 18.3	0.0
REDW				IAML		20 36 32.3	
	comp=N,28nm,2.2s						
IMW	Indian Meadow	4.20	275		Pn	20 35 19.3	+0.4
IMW				IAML		20 36 35.3	
	comp=N,16nm,3.4s						
IMW				IAML		20 37 36.2	
	comp=N,14nm,4.8s						
TPAW	Teton Pass	4.22	269		Pn	20 35 19.5	+0.3
TPAW				IAML		20 36 50.1	
	comp=N,25nm,4.1s						
TPAW				IAML		20 37 19.9	
	comp=N,20nm,5.0s						
O20A	White River Ci	4.24	214	Pn	Pn	20 35 18.8	-0.5
YHH	Holmes Hill	4.24	287		Pn	20 35 19.9	+0.4
FXWY	Fox Creek	4.27	271	Pn	Pn	20 35 19.6	-0.1
YHL	Hebgen Lake	4.49	287	Pn	Pn	20 35 23.0	+0.1
HWUT	Hardware Ranch	5.17	248	Pn	Pn	20 35 31.4	-0.8
HWUT				IAML		20 36 13.8	
	comp=N,15nm,5.0s						
EGMT	Eagleton	5.40	325		Pn	20 35 33.2	-2.0
SPUT	South Promonto	5.90	249	Pn	Pn	20 35 42.1	0.0
SDCO	Great Sand Dun	5.95	183	Pn	Pn	20 35 42.1	-0.8
SRU	San Rafael Swe	6.10	223		Pn	20 35 44.2	-0.8
I10CA	LAC DU BONNET	9.01	41	*i*		21 25 10.0	
	baz=223,slow=338,SNR=2.5						
ULM	Lac du Bonnet	9.12	41	Pn	Pn	20 36 25.8	-0.3
	comp=N,0.9nm,0.3s,baz=232,slow=12,SNR=7.1						
ULM	Lac du Bonnet	9.12	41		Pn	20 36 25.3	-0.8

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*IDC **26** 20:35:30.7±0.6, 55.°90N×162.°88E, h0^{km}, mb3.9/22, mb1 4.1/26, mb1mx4.0/48, mbtmp3.9/26, ML3.7/4, MS3.6/6, Ms1 3.6/6, ms1mx3.1/54, Error ellipse: s-maj=16.2km s-min=10.6km az=149.0*

*MOS **26** 20:35:31.6±0.8, 55.°91N×163.°19E, h15^{km}, mb4.3/9, Error ellipse: s-maj=6.7km s-min=4.6km az=73.1*

*KRSC **26** 20:35:31.4±1.1, 55.°80N×163.°20E, h20^{km}±18^{km}, ML4.6, FELT [II] at Ust-Kamchatsk.*

*NEIC **26** 20:35:36.6±1.5, 55.°95N±0.°08×162.°66E±0.°09, h44^{km}±6^{km}, mb4.3/32, Error ellipse: s-maj=12.4km s-min=7.1km az=163.0*

ISC 26 20:35:34.4±1.0**, 55.°89N**±0.°04×**163.°00E**±0.°03**, h27**^{km}±6^{km}**, n193, σ1.^{s}37**/216**, mb4.3**/47**, 2C-1D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.33	342	*i* P	Pb	20 35 40.9	-1.1
KBTR				*e*S	Sb	20 35 47.6	+0.4
KBTR	Krutoberegovo	0.33	342	PN	Pb	20 35 40.9	-1.1
KBTR				S	Sb	20 35 47.6	+0.4
KBG	Krutoberegovo	0.40	335	*e*P	Pb	20 35 41.8	-1.2
KBG				*e*S	Sb	20 35 49.5	+0.6
KBG	Krutoberegovo	0.40	335	PN	Pb	20 35 41.8	-1.2
KBG				S	Sb	20 35 49.5	+0.6
SMKR	Semkarok	1.10	309	*e*P	Pn	20 35 53.9	-0.3
SMKR				*e*S	Sb	20 36 09.5	+0.7
SMKR	Semkarok	1.10	309	PN	Pn	20 35 53.9	-0.3
SMKR				S	Sb	20 36 09.5	+0.7
BDR	Baidarnaya	1.21	305	*e*P	Pn	20 35 56.0	+0.3
BDR				*e*S	Sb	20 36 14.5	+2.6
BDR	Baidarnaya	1.21	305	PN	Pn	20 35 56.0	+0.3
BDR				S	Sb	20 36 14.5	+2.6
ZLN	Zelenaya	1.24	277	*e*P	Pn	20 35 56.6	+0.5
ZLN	Zelenaya	1.24	277	PN	Pn	20 35 56.6	+0.5
SRKR	Sorokina	1.28	307	*e*P	Pn	20 35 56.9	+0.3
SRKR	Sorokina	1.28	307	PN	Pn	20 35 56.9	+0.3
CIRR	Tsirk	1.29	281	*e*P	Pn	20 35 57.3	+0.5
CIRR				*e*S	Sb	20 36 15.8	+1.6
CIRR	Tsirk	1.29	281	PN	Pn	20 35 57.3	+0.5
CIRR				S	Sb	20 36 15.8	+1.6
BZGR	Bezymyannyi-Gr	1.30	273	*e*P	Pn	20 35 57.0	+0.1
BZGR				*e*S	Sb	20 36 14.3	-0.2
BZGR	Bezymyannyi-Gr	1.30	273	PN	Pn	20 35 57.0	+0.1
BZGR				S	Sb	20 36 14.3	-0.2
LGNR	Loginova	1.31	279	*e*P	Pn	20 35 57.9	+0.6
LGNR	Loginova	1.31	279	PN	Pn	20 35 57.9	+0.6
KLY	Klyuchi	1.38	289	*e*P	Pn	20 35 56.8	-1.1
KLY				*e*S	Sn	20 36 14.9	-0.4
KLY	Klyuchi	1.38	289	PN	Pn	20 35 56.8	-1.1
KLY				S	Sn	20 36 14.9	-0.4
KRSR	Krestovskiy	1.41	284	*e*P	Pn	20 35 58.6	+0.2
KRSR				*e*S	Sb	20 36 18.0	+0.4
KRSR	Krestovskiy	1.41	284	PN	Pn	20 35 58.6	+0.2
KRSR				S	Sb	20 36 18.0	+0.4
KIRR	Kirishev	1.50	273	*e*P	Pn	20 36 00.2	+0.5
KIRR				*e*S	Sb	20 36 21.0	+0.7
KIRR	Kirishev	1.50	273	PN	Pn	20 36 00.2	+0.5
KIRR				S	Sb	20 36 21.0	+0.7
KPT	Kopyto	1.57	274	*e*P	Pb	20 36 01.8	-1.0
KPT				*e*S	Sb	20 36 23.6	+1.4
KPT	Kopyto	1.57	274	PN	Pb	20 36 01.8	-1.0
KPT				S	Sb	20 36 23.6	+1.4
KMNR	Kamenistaya	1.57	266	*e*P	Pb	20 36 01.8	-1.0
KMNR				*e*S	Sb	20 36 23.8	+1.6
KMNR	Kamenistaya	1.57	266	PN	Pb	20 36 01.8	-1.0
KMNR				S	Sb	20 36 23.8	+1.6
TUMD	Tumrok D	1.63	246	*e*P	Pn	20 36 01.7	+0.3
TUMD				*e*S	Sn	20 36 21.7	+0.1
KZV	Kizimen	1.73	244	*i* P	Pn	20 36 03.3	+0.4
KZV	Kizimen	1.73	244	PN	Pn	20 36 03.3	+0.4
TUMR	Tumrok	1.73	251	*i* P	Pn	20 36 04.0	+1.1
TUMR				*e*S	Sb	20 36 26.5	-0.5
TUMR	Tumrok	1.73	251	PN	Pn	20 36 01.7	-1.2
KOZ	Kozyrevsk	1.77	277	*e*P	Pb	20 36 05.0	-1.1
KOZ				*e*S	Sb	20 36 29.1	+1.2
KOZ	Kozyrevsk	1.77	277	PN	Pb	20 36 05.0	-1.1
KOZ				S	Sb	20 36 29.1	+1.2
BKI	Bering	1.82	111	*e*P	Pn	20 36 03.1	-0.9
BKI				*e*S	Sn	20 36 24.7	-1.5
BKI	Bering	1.82	111	PN	Pn	20 36 03.1	-0.9
BKI				S	Sn	20 36 24.7	-1.5
ESO	Esso	2.42	273	*e*P	Pn	20 36 13.4	+1.1
ESO	Esso	2.42	273	PN	Pn	20 36 13.4	+1.1
KII	Karymskiy	2.77	229	*e*P	Pn	20 36 18.4	+1.3
KII	Karymskiy	2.77	229	PN	Pn	20 36 18.4	+1.3
SPN	Mys Shipunski	3.30	213	*e*P	Pn	20 36 23.3	-1.0
SPN				*e*S	Sn	20 37 00.4	-2.1
SPN	Mys Shipunski	3.30	213	PN	Pn	20 36 23.3	-1.0
OSSR	Ossora	3.37	0	*e*P	Pn	20 36 25.7	+0.5
OSSR	Ossora	3.37	0	PN	Pn	20 36 25.7	+0.5
NLC	Nalytchevo	3.46	220	*e*P	Pn	20 36 26.9	+0.4
NLC				*e*S	Sn	20 37 06.7	+0.1
NLC	Nalytchevo	3.46	220	PN	Pn	20 36 26.9	+0.4
SDLR	Sedlovina	3.55	224	*i* P	Pn	20 36 28.8	+0.9
SDLR	Sedlovina	3.55	224	PN	Pn	20 36 28.8	+0.9
KRER	Koryakskii	3.59	225	*e*P	Pn	20 36 29.7	+1.3
KRER	Koryakskii	3.59	225	PN	Pn	20 36 29.7	+1.3
SMAR	Somma	3.60	225	*e*P	Pn	20 36 29.7	+1.1
SMAR	Somma	3.60	225	PN	Pn	20 36 29.7	+1.1
AVH	Avacha	3.62	225	*i* P	Pn	20 36 30.5	+1.7
AVH	Avacha	3.62	225	PN	Pn	20 36 30.5	+1.7
UGLR	Uglovaya	3.63	224	*i* P	Pn	20 36 30.1	+1.2
UGLR	Uglovaya	3.63	224	PN	Pn	20 36 30.1	+1.2
KOK	Koryaka	3.64	226	*i* P	Pn	20 36 30.7	+1.6
KOK	Koryaka	3.64	226	PN	Pn	20 36 30.7	+1.6
DALK	Dalny	3.79	223	*e*P	Pn	20 36 32.1	+1.1
DALK	Dalny	3.79	223	PN	Pn	20 36 32.1	+1.1
PET	Petropavlovsk	3.84	223	*i* P	Pn	20 36 33.5	+1.9
PET				*e*S	Sn	20 37 17.9	+2.1
PET	Petropavlovsk	3.84	223	*e*PN	Pn	20 36 32.7	+1.1
PET				*e*S	Sn	20 37 19.5	+3.7
PET				pmax	pmax		
	comp=Z,500nm,4.4s						
PET				pmax	pmax		
	comp=Z,200nm,4.4s						
PET				pmax	pmax		
	comp=Z,130nm,0.4s						
PET				smax	smax		
	comp=E,551nm,0.9s						
PET				smax	smax		
	comp=N,360nm,0.8s						
PET				MLR	MLR		
	comp=Z,200nm,11.0s						
PET				MLR	MLR		
	comp=Z,400nm,10.0s						
PET	Petropavlovsk	3.84	223	Pn	Pn	20 36 31.1	-0.5
PEA0B	Petropavlovsk-	4.17	230	*d i*PN	Pn	20 36 37.4	+1.2
PEA0B	Petropavlovsk-	4.17	230		Pn	20 36 35.3	-0.9
PETK	Petropavlovsk-	4.17	230	Pn	Pn	20 36 36.5	+0.3
	comp=Z,4.0nm,0.3s,baz=71,slow=14,SNR=31						
PETK				Lg	Lg	20 37 44.9	
	comp=Z,2.2nm,0.3s,baz=64,slow=43,SNR=3.9						
PETK				LR	LR	20 38 25.9	
	comp=Z,544nm,19.2s,baz=58,slow=43						
PETK	Petropavlovsk-	4.17	230		Pn	20 36 37.8	+1.6
KRMR	Karymshinskiy	4.19	225	*e*P	Pn	20 36 37.6	+1.1
KRMR				*e*S	Sn	20 37 24.8	+0.3
KRMR	Karymshinskiy	4.19	225	PN	Pn	20 36 37.6	+1.1
RUS	Russkaya	4.36	219	*e*P	Pn	20 36 39.2	+0.4
RUS	Russkaya	4.36	219	PN	Pn	20 36 39.2	+0.4
GRL	Gorelyy	4.42	223	*i* P	Pn	20 36 42.3	+2.4
GRL	Gorelyy	4.42	223	PN	Pn	20 36 42.3	+2.4
MTVR	Mutnovka	4.44	222	*e*P	Pn	20 36 42.0	+1.9
MTVR	Mutnovka	4.44	222	PN	Pn	20 36 42.0	+1.9
APC	Apacha	4.53	231	*e*P	Pn	20 36 43.7	+2.5
APC	Apacha	4.53	231	PN	Pn	20 36 43.7	+2.5
ASAK	Asacha	4.62	223	*i* P	Pn	20 36 45.1	+2.5
ASAK	Asacha	4.62	223	PN	Pn	20 36 45.1	+2.5
MIPR	Malaya Ipel'ka	5.16	228	*i* P	Pn	20 36 53.6	+3.7
MIPR	Malaya Ipel'ka	5.16	228	PN	Pn	20 36 53.6	+3.7
KMSK	Kamenskaya	6.79	13	*e*P	Pn	20 37 13.9	+1.7
KMSK	Kamenskaya	6.79	13	PN	Pn	20 37 13.9	+1.7
MA2	Magadan	7.51	304	Pn	Pn	20 37 23.2	+1.1
	comp=Z,0.3nm,0.3s,baz=53,slow=20,SNR=1.3						
MA2				LR	LR	20 40 32.7	
	comp=Z,266nm,18.9s,baz=113,slow=40						
MA2	Magadan	7.51	304	*i* PN	Pn	20 37 23.7	+1.6
MA2				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SEY	Seymchan	8.89	327	*i* PN	Pn	20 37 42.4	+1.5
BILL	Bilibino	12.28	6	*i* PN	Pn	20 38 26.1	-1.2
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,205nm,16.0s						
YUK	Yuzh-Kuril'sk	16.15	230	*e*P	P	20 39 24.1	+1.8
YUK				*i* S	S	20 42 24.9	-5.2
YUK				pmax	pmax		
	comp=Z,89nm,1.4s						
YUK				pmax	pmax		
	comp=Z,61nm,0.7s						
YUK				pmax	pmax		
	comp=N,36nm,0.4s						
YUK				MLR	MLR		
	comp=Z,182nm,17.0s						
JKA	Kamikawa-asahi	17.55	236	P	P	20 39 37.5	-0.4
ASAJ	Asahikawa	17.55	236	P	P	20 39 37.5	-0.4
	comp=Z,0.8nm,0.3s,baz=78,slow=11,SNR=6.9						
ASAJ				LR	LR	20 46 39.5	
	comp=Z,232nm,18.2s,baz=8.0,slow=38						
ANM	Nome	17.75	48	P	P	20 39 41.6	+1.6
ANM				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ANM	Nome	17.75	48	P	P	20 39 41.6	+1.6
YAK	Yakutsk	18.09	303	*e*P	P	20 39 45.0	+1.3
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK	Yakutsk	18.09	303		Pn	20 39 40.5	-2.9
YAK				IAmb	IAmb	20 39 55.4	
	comp=Z,13nm,0.6s						
RDOG	Red Dog Mine	19.78	39	P	Pn	20 40 04.2	+0.4
KLR	Kul'dur	20.01	264	P	P	20 40 02.6	-2.2
	comp=Z,0.1nm,0.3s,baz=64,slow=9.7,SNR=3.5						
KLR				LR	LR	20 48 02.2	
	comp=Z,38nm,19.7s,baz=75,slow=38						
KLR	Kul'dur	20.01	264	*i* P	P	20 40 03.4	-1.4
KLR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TIXI	Tiksi	21.35	331	P	P	20 40 19.1	0.0
	comp=Z,9.0nm,0.8s,baz=112,slow=11,SNR=36						
TIXI				LR	LR	20 49 24.9	
	comp=Z,160nm,19.8s,baz=130,slow=39						
TIXI	Tiksi	21.35	331	*i* P	P	20 40 21.5	+2.4
TIXI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TIXI	Tiksi	21.35	331	P	P	20 40 19.3	+0.2
TIXI				IAmb	IAmb	20 40 23.4	
	comp=Z,10nm,0.9s						
IMAR	Indian Mountai	22.81	46	P	P	20 40 35.2	+0.4
BPAW	Bear Paw Mtn.	23.92	51	P	P	20 40 46.8	+1.0
MLY	Manley	24.01	49	P	P	20 40 49.0	+2.3
KDAK	Kodiak Island	24.04	67	P	P	20 40 46.4	-0.5
	comp=Z,3.1nm,0.9s,baz=346,slow=12,SNR=11						
KDAK	Kodiak Island	24.04	67	IAmb	IAmb	20 40 54.4	
	comp=Z,69nm,1.4s						
TRF	Thorofare Moun	24.26	53	P	P	20 40 49.8	+0.7
TRF				IAmb	IAmb	20 41 08.6	
	comp=Z,7.8nm,1.1s						
TOLK	Toolik Lake Re	24.71	40	P	P	20 40 54.0	+1.0
TOLK				IAmb	IAmb	20 41 00.3	
	comp=Z,7.6nm,0.8s						
NEA	Nenana	24.73	50	P	P	20 40 54.6	+1.4
WRH	Wood River Hil	25.16	50	P	P	20 40 58.3	+1.2
WRH				IAmb	IAmb	20 41 16.6	
	comp=Z,5.3nm,0.8s						
CCB	Clear Creek Bu	25.28	50	P	P	20 40 59.9	+1.9
CCB				IAmb	IAmb	20 41 16.9	
	comp=Z,10nm,1.5s						
MJB9	Matsu-Tunnel	25.62	231	P	P	20 40 59.7	-1.8
MJB9				IAmb	IAmb	20 41 13.2	
	comp=Z,13nm,0.9s						
MAJO	Matsushiro	25.62	231	P	P	20 40 59.7	-1.8
MAJO				IAmb	IAmb	20 41 13.2	
	comp=Z,13nm,0.9s						
MJAR	Matsushiro Arr	25.62	231	P	P	20 41 00.3	-1.2
	comp=Z,4.4nm,1.0s,baz=33,slow=7.8,SNR=8.4						
MJAR	Matsushiro Arr	25.62	231	P	P	20 41 02.0	+0.6
ILAR	Eielson Array	25.66	49	P	P	20 41 01.8	+0.1
	comp=Z,0.7nm,0.9s,baz=262,slow=7.4,SNR=6.9						
BMAR	Burnt Mountain	26.51	43	P	P	20 41 10.0	+0.7
BCAR	Beaver Creek A	28.12	53	P	P	20 41 24.9	+1.1
INK	Inuvik	30.62	41	P	P	20 41 46.7	+0.9
	comp=Z,1.5nm,0.7s,baz=266,slow=5.7,SNR=5.5						
INK	Inuvik	30.62	41	IAmb	IAmb	20 41 47.4	
	comp=Z,3.4nm,1.1s						
C36M	Paulatuk	33.78	38	P	P	20 42 14.3	+0.9
C36M				IAmb	IAmb	20 42 14.9	
	comp=Z,5.3nm,0.7s						
SONM	Songino Array	34.97	281	P	P	20 42 24.9	+0.7
	comp=Z,0.4nm,0.4s,baz=69,slow=7.4,SNR=3.0						
SONM	Songino Array	34.97	281	IAmb	IAmb	20 42 31.0	
	comp=Z,0.8nm,0.6s						
H11N2	WAKE ISLAND Hy	36.23	174	T	T	21 21 03.6	
	baz=356,slow=76,SNR=732						
H11N3	WAKE ISLAND Hy	36.24	174	T	T	21 21 09.5	
	baz=356,slow=76,SNR=2635						
H11N1	WAKE ISLAND Hy	36.24	174	T	T	21 21 09.7	
	baz=356,slow=76,SNR=3520						
H11S1	WAKE ISLAND Hy	37.43	174	T	T	21 22 38.4	
	baz=341,slow=75,SNR=107						
H11S3	WAKE ISLAND Hy	37.44	174	T	T	21 22 37.3	
	baz=341,slow=75,SNR=127						
H11S2	WAKE ISLAND Hy	37.45	174	T	T	21 22 41.6	
	baz=341,slow=75,SNR=77						
YKA	Yellowknife Ar	39.97	46	P	P	20 43 07.0	+1.0
	comp=Z,1.0nm,0.8s,baz=300,slow=7.6,SNR=12						
YKA	Yellowknife Ar	39.97	46	*i* P	P	20 43 07.4	+1.3
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
DGZ	Jazzator, Alta	43.99	295	*i* P	P	20 43 38.8	-0.4
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA	Gaotai	44.00	276	*e*P	P	20 43 37.8	-1.7
GTA				pP	pP	20 43 42.0	-5.0
GTA				sP	pwP	20 43 45.3	-3.8
KURK	Kurchatov	47.71	301	*ce*P	P	20 44 07.6	-0.8
KURK				pmax	pmax		
	comp=Z,53nm,2.5s						
KURK	Kurchatov	47.71	301	P	P	20 44 06.8	-1.5
MK31	Makanchi Array	48.49	295	P	P	20 44 12.8	-1.7
MK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK31	Makanchi Array	48.49	295	P	P	20 44 12.8	-1.7
MKAR	Makanchi Array	48.49	295	P	P	20 44 13.0	-1.5
	comp=Z,1.0nm,0.7s,baz=57,slow=6.9,SNR=18						
MKAR	Makanchi Array	48.49	295	P	P	20 44 12.5	-2.0
MAKZ	Makanchi	48.64	295	P	P	20 44 13.9	-1.7
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.3s						
MAKZ	Makanchi	48.64	295	P	P	20 44 13.9	-1.7
MAKZ				IAmb	IAmb	20 44 22.2	
	comp=Z,3.8nm,1.2s						
NVAR	Mina Array Bea	53.26	74	P	P	20 44 53.0	+2.3
	comp=Z,0.6nm,0.7s,baz=298,slow=6.0,SNR=2.8						
PDAR	Pinedale Array	54.72	64	P	P	20 45 02.0	+0.7
	comp=Z,0.3nm,0.6s,baz=46,slow=2.6,SNR=2.8						
TARA	Tarawa	54.96	168	P	P	20 45 04.0	+1.0
AAK	Ala-Archa	55.36	296	*i* P	P	20 45 05.4	-0.5
AAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AAK	Ala-Archa	55.36	296	P	P	20 45 05.1	-0.8
ULM	Lac du Bonnet	55.69	50	P	P	20 45 09.0	+1.1
	comp=Z,1.1nm,0.4s,baz=323,slow=8.6,SNR=2.4						
ULM	Lac du Bonnet	55.69	50	P	P	20 45 09.3	+1.4
ULM				IAmb	IAmb	20 45 26.9	
	comp=Z,4.5nm,1.1s						
KSH	Kashi	56.89	293	P	P	20 45 19.5	+2.6
KSH				pP	sP	20 45 32.3	+4.1
KSH				PcP	PcP	20 46 14.3	+2.2
KSH				PcS	PcS	20 50 12.8	-0.2
KSH				S	S	20 53 08.3	-0.5
KK31	Karatay Array	57.00	299	P	P	20 45 15.9	-1.6
KK31				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KK31	Karatay Array	57.00	299	P	P	20 45 15.9	-1.6
KKAR	Karatay Array	57.00	299	P	P	20 45 16.0	-1.4
KKAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KKAR	Karatay Array	57.00	299	P	P	20 45 16.0	-1.4
KKAR	Karatay Array	57.00	299	P	P	20 45 15.9	-1.6
ABKAR	Akbulak array	57.26	311	P	P	20 45 18.2	-0.9
FINES	FINESS Array B	58.20	337	P	P	20 45 25.9	+0.4
	comp=Z,3.7nm,0.8s,baz=21,slow=12,SNR=9.9						
FINES	FINESS Array B	58.20	337	P	P	20 45 26.0	+0.4
FINES	FINESS Array B	58.20	337	P	P	20 45 23.1	-2.5
CMAR	Chiang Mai Arr	60.40	259	P	P	20 45 41.5	+0.1
	comp=Z,0.8nm,0.7s,baz=21,slow=6.5,SNR=7.2						
CMAR	Chiang Mai Arr	60.40	259	P	P	20 45 41.0	-0.3
OBN	Obninsk	61.05	328	*i* P	P	20 45 44.9	-0.3
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NB2	NORSAR Subarra	61.30	345	P	P	20 45 46.7	-0.2
	comp=Z,2.1nm,0.8s,baz=19,slow=6.9						
NOA	NORSAR Array B	61.30	345	P	P	20 45 47.0	0.0
	comp=Z,1.4nm,0.8s,baz=18,slow=6.9,SNR=8.0						
NOA	NORSAR Array B	61.30	345	P	P	20 45 47.0	0.0
SIJI	Sorong	62.19	216	P	P	20 45 52.7	-0.7
	comp=Z,2.1nm,0.4s,baz=23,slow=4.4,SNR=3.8						
HNR	Honiara	65.13	183	LR	LR	21 10 03.2	
	comp=Z,263nm,21.4s,baz=296,slow=32						
SBUM	Sibu	66.99	237	P	P	20 46 24.3	-0.4
SBUM				IAmb	IAmb	20 46 26.9	
	comp=Z,4.1nm,1.0s						
AKASG	Malin Array Be	67.06	330	P	P	20 46 25.3	+0.6
	comp=Z,0.3nm,0.3s,baz=142,slow=10,SNR=1.5						
AKASG	Malin Array Be	67.06	330	P	P	20 46 25.0	+0.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,1.2s						
AKASG	Malin Array Be	67.06	330	P	P	20 46 25.0	+0.2
TX31	Lajitas Ar. Si	68.03	70	P	P	20 46 32.9	+1.5
TX31				IAmb	IAmb	20 46 43.5	
	comp=Z,2.2nm,0.8s						
TX32	Lajitas Array	68.03	70	P	P	20 46 32.9	+1.5
TX32				IAmb	IAmb	20 46 43.5	
	comp=Z,2.2nm,0.8s						
TXAR	Lajitas Array	68.03	70	P	P	20 46 33.0	+1.7
	comp=Z,1.2nm,0.8s,baz=299,slow=4.9,SNR=12						
TXAR	Lajitas Array	68.03	70	P	P	20 46 32.5	+1.1
TXAR	Lajitas Array	68.03	70	P	P	20 46 32.5	+1.1
BUR08	Bucovina Ar. S	70.94	331	P	P	20 46 48.1	-1.0
GERES	GERESS Array B	72.52	339	P	P	20 46 59.1	+0.5
	comp=Z,0.6nm,0.7s,baz=10,slow=6.1,SNR=3.8						
GERES	GERESS Array B	72.52	339	P	P	20 46 59.3	+0.7
CONA	Conrad Observa	72.95	338	*i* pP	pP	20 47 06.9	-2.6
	comp=Z,3.2nm,1.3s						
KBA	Koelnbreinsper	74.28	339	*i* P	P	20 47 02.9	-6.1
	comp=Z,5.9nm,1.1s						
SOKA	Soboth	74.31	338	*i* P	P	20 47 03.9	-5.2
	comp=Z,3.0nm,1.0s						
WTTA	Wattenberg	74.44	340	*i* P	P	20 47 07.3	-2.6
	comp=Z,10nm,1.8s						
ABTA	Abfaltersbach	74.77	339	*i* P	P	20 47 10.2	-1.5
	comp=Z,4.9nm,1.1s						
FETA	Feichten	74.84	341	*i* P	P	20 47 10.9	-1.4
	comp=Z,9.1nm,1.6s						
BRTR	Keskin Array B	75.50	322	P	P	20 47 15.4	-0.8
	comp=Z,0.5nm,0.8s,baz=44,slow=3.4,SNR=2.7						
BRTR	Keskin Array B	75.50	322	*i* P	P	20 47 21.3	+5.1
BRTR				pmax	pmax		

	comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	**75.50**	**322**	P	**P**	**20 47 15.0**	**-1.2**
WRAB	**Tennant Creek**	**79.34**	**207**	*ce*P	**P**	**20 47 38.5**	**+1.0**
WRAB				pmax	pmax		
	comp=Z,8.0nm,2.5s						
FITZ	**Fitzroy Crossi**	**80.17**	**216**	P	**P**	**20 47 41.5**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=360,slow=4.8,SNR=7.2						
FITZ	**Fitzroy Crossi**	**80.17**	**216**	P	**P**	**20 47 41.7**	**-0.3**
FITZ				IAmb	IAmb	20 48 09.6	
	comp=Z,5.7nm,1.4s						
ASAR	**Alice Springs**	**83.02**	**207**	P	**P**	**20 47 57.5**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=14,slow=5.0,SNR=28						
ASAR	**Alice Springs**	**83.02**	**207**	P	**P**	**20 47 57.4**	**+0.4**
STKA	**Stephens Creek**	**89.31**	**198**	P	**P**	**20 48 28.3**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=344,slow=8.9,SNR=3.1						

MAN 26 20:41:56.9,16°.67N×119°.52E,h27^{km},mb5.0,ML3.9, MS3.9,2C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.48**	**127**	*e*P	Pb	20 42 07.3	+0.5
BOLP				*e*S	Sb	20 42 14.1	+0.6
SCZP	**Santa Cruz**	**0.97**	**157**	*e*P	Pb	20 42 14.9	-0.2
SCZP				*e*S	Sb	20 42 26.8	-0.6
SMPP	**San Manuel, Pa**	**1.23**	**115**	*e*P	Pn	20 42 16.6	-1.8
SMPP				*e*S	Sn	20 42 29.6	-4.6
ABRA	**Dolores**	**1.50**	**49**	*e*P	Pn	20 42 22.2	+0.2
ABRA				*e*S	Sb	20 42 42.0	-0.8
SIPP	**Brgy, Tapao**	**1.54**	**36**	⇑*e*P	Pn	20 42 22.8	+0.2
SIPP				*e*S	Sb	20 42 44.3	+0.5
APYP	**Conner**	**2.03**	**54**	*e*P	Pn	20 42 29.6	+0.2
APYP				*e*S	Sn	20 42 53.8	0.0
BALP	**Baler**	**2.19**	**115**	*e*P	Pn	20 42 32.4	+0.9
BALP				*e*S	Sn	20 42 59.3	+1.7
CAUP	**Cauayan**	**2.23**	**83**	*e*P	Pn	20 42 33.4	+1.4
CAUP				*e*S	Sb	20 43 02.3	-1.3
PALP	**Palanan**	**2.81**	**82**	*e*P	Pn	20 42 41.3	+1.2
PALP				*e*S	Sn	20 43 14.8	+1.7
SGCP	**Mt. Cagua**	**2.88**	**57**	*e*P	Pn	20 42 41.4	+0.4
SGCP				*e*S	Sn	20 43 10.7	-4.0
TGY	**Tagaytay City**	**2.90**	**152**	⇑*e*P	Pb	20 42 47.2	-0.7
LUBP	**Lubang**	**3.00**	**166**	*e*P	Pn	20 42 44.2	+1.5
LUBP				*e*S	Sb	20 43 38.5	+13
POLP	**Polilio Island**	**3.03**	**129**	*e*P	Pn	20 42 43.0	-0.1
POLP				*e*S	Sn	20 43 19.3	+0.8
LQP	**Lukban**	**3.21**	**142**	*e*P	Pn	20 42 44.8	-0.9
LQP				*i* S	Sb	20 43 28.2	-3.8
ENPP	**El Nido**	**5.43**	**181**	*e*P	Pn	20 43 16.0	-0.1

*IDC **26** 20:44:24.9±8.8,22°.81N×121°.52E,h0^{km},mb3.3/3, mb1 3.3/5,mb1mx3.1/46,mbtmp3.4/5,ML2.8/2,MS4.2/1, Ms1 4.2/1,ms1mx2.8/24,Error ellipse: s-maj=161.7km s-min=40.7km az=171.0*
*JMA **26** 20:44:28.5,23°.26N×121°.56E,h0^{km},M3.8*
*ASIES **26** 20:44:30.6,23°.29N×121°.41E,h20^{km},MW3.4*
*TAP **26** 20:44:30.9,23°.30N×121°.41E,h17^{km},ML3.9,C*
*BJI **26** 20:44:37.5±0.0,23°.66N×120°.80E,h7^{km},ML3.3/4*

ISC 26 20:44:30.8±0.8,23°.28N±0°.02×121°.48E±0°.02,h17^{km}±5^{km}, n151,σ0^{s}84/235,mb3.0/3,22C-4D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWF1	**Yuli**	**0.18**	**293**	⇓*i*P	**Pb**	**20 44 35.1**	**-0.5**
	baz=298						
TWF1				S	**Sb**	**20 44 38.3**	**-0.5**
	baz=298						
FULB	**Fuli**	**0.19**	**244**	⇑*i*P	**Pb**	**20 44 35.5**	**-0.3**
	baz=215						
FULB				S	**Sg**	**20 44 39.3**	**+0.6**
	baz=215						
YULB	**Yu-li**	**0.20**	**304**	⇓*i*P	**Pb**	**20 44 35.3**	**-0.6**
	baz=312						
YULB				S	**Sb**	**20 44 38.5**	**-0.9**
	baz=312						
CHKT	**Chengkung**	**0.21**	**209**	⇑*i*P	**Pg**	**20 44 36.5**	**+0.7**
	baz=180						
CHKT				*i* S	**Sg**	**20 44 40.5**	**+1.3**
	baz=180						
HGSD	**Ruisui**	**0.21**	**347**	⇑*i*P	**Pb**	**20 44 36.0**	**-0.2**
	baz=13						
HGSD				*e*S	**Sg**	**20 44 40.5**	**+1.1**
	baz=13						
EHY	**Hungye**	**0.27**	**328**	⇓*i*P	**Pb**	**20 44 36.6**	**-0.5**
	baz=333						
EHY				*e*S	**Sb**	**20 44 40.6**	**-0.7**
	baz=333						
EGFH	**Guangfu**	**0.39**	**353**	*e*P	**Pg**	**20 44 38.9**	**+0.1**
	baz=352						
EGFH				*e*S	**Sg**	**20 44 44.6**	**+0.3**
	baz=352						
ELDTW	**Lidau**	**0.43**	**258**	⇑*i*P	**Pg**	**20 44 38.6**	**-1.0**
	baz=259						
ELDTW				*e*S	**Sg**	**20 44 44.2**	**-1.4**
	baz=259						
YUS	**Yu-Shan**	**0.52**	**293**	*i* P	**Pg**	**20 44 40.7**	**-0.7**
	baz=296						
YUS				S	**Sg**	**20 44 47.4**	**-1.2**
	baz=296						
ESL	**Shilin**	**0.53**	**356**	*i* P	**Pb**	**20 44 40.9**	**-0.8**
	baz=356						
ESL				*e*S	**Sg**	**20 44 49.2**	**+0.6**
	baz=356						
VWDT	**VWDT**	**0.56**	**327**	⇑*i*P	**Pb**	**20 44 41.5**	**-0.6**
	baz=342						
VWDT				*e*S	**Sb**	**20 44 48.9**	**-1.0**
	baz=342						
TWH	**Lutao**	**0.57**	**180**	*e*P	**Pg**	**20 44 42.5**	**+0.4**
	baz=172						
TWH				*e*S	**Sn**	**20 44 52.5**	**-0.5**
	baz=172						
TWGBT	**Beinan**	**0.59**	**218**	⇑*i*P	**Pb**	**20 44 41.6**	**-1.0**
	baz=211						
TWGBT				*e*S	**Sb**	**20 44 48.7**	**-1.9**
	baz=211						
TWG	**Pinlang**	**0.59**	**219**	⇑*i*P	**Pb**	**20 44 41.6**	**-1.0**
	baz=211						
TWG				*e*S	**Sb**	**20 44 49.3**	**-1.4**
	baz=211						
TTN	**Taitung**	**0.61**	**210**	*e*P	**Pb**	**20 44 42.7**	**-0.1**
	baz=202						
TTN				*e*S	**Sn**	**20 44 53.0**	**-0.9**
	baz=202						
ENLB	**Shoufeng**	**0.63**	**11**	*e*P	**Pb**	**20 44 42.9**	**-0.4**
	baz=27						
ENLB				*e*S	**Sn**	**20 44 53.5**	**-1.0**
	baz=27						
ALS	**Alishan**	**0.66**	**290**	*i* P	**Pb**	**20 44 43.2**	**-0.7**
	baz=292						
ALS				*e*S	**Sb**	**20 44 52.0**	**-0.9**
	baz=292						
STYT	**Tauyuan**	**0.67**	**260**	⇑*i*P	**Pb**	**20 44 43.0**	**-1.0**
	baz=257						
STYT				S	**Sb**	**20 44 51.6**	**-1.5**
	baz=257						
SSLB	**Suanglung**	**0.69**	**317**	⇑*i*P	**Pb**	**20 44 43.4**	**-1.1**
	baz=321						
SSLB				*e*S	**Sb**	**20 44 51.7**	**-2.1**
	baz=321						
HWA	**Hwalien**	**0.70**	**10**	*e*P	**Pg**	**20 44 45.2**	**+0.6**
	baz=4.0						
HWA				*e*S	**Sn**	**20 44 56.2**	**-0.1**
	baz=4.0						
WHYT	**Xinyi Township**	**0.70**	**306**	⇑*i*P	**Pb**	**20 44 44.1**	**-0.5**
	baz=314						
WHYT				S	**Sb**	**20 44 53.1**	**-0.9**
	baz=314						
OWD	**Renai**	**0.72**	**338**	⇑*i*P	**Pb**	**20 44 44.0**	**-1.0**
	baz=344						
OWD				*e*S	**Sb**	**20 44 52.9**	**-1.9**
	baz=344						
TPUB	**Ta-pu**	**0.78**	**272**	⇑*i*P	**Pb**	**20 44 45.4**	**-0.5**
	baz=277						
TPUB				*e*S	**Sb**	**20 44 55.9**	**-0.2**
	baz=277						
WTP	**Ta-pu**	**0.79**	**268**	⇑*i*P	**Pb**	**20 44 45.8**	**-0.4**
	baz=266						
WTP				*e*S	**Sb**	**20 44 56.5**	**-0.1**
	baz=266						
CHN5	**Tsauling**	**0.80**	**293**	⇑*i*P	**Pb**	**20 44 46.1**	**-0.1**
	baz=295						
CHN5				*e*S	**Sb**	**20 44 57.0**	**+0.3**
	baz=295						
SMLT	**Sun Moon Lake**	**0.80**	**319**	⇑*i*P	**Pb**	**20 44 45.5**	**-0.8**
	baz=330						
SMLT				*e*S	**Sb**	**20 44 55.3**	**-1.5**
	baz=330						
TWD	**Chiawan**	**0.80**	**8**	*e*P	**Pb**	**20 44 45.6**	**-0.7**
	baz=3.0						
TWD				*e*S	**Sb**	**20 44 56.8**	**0.0**
	baz=3.0						
CHN4	**Tsaushan**	**0.81**	**275**	⇑*i*P	**Pb**	**20 44 46.3**	**-0.1**
	baz=275						
CHN4				*e*S	**Sb**	**20 44 57.4**	**+0.3**
	baz=275						
SLGT	**Liugui**	**0.82**	**250**	⇑*i*P	**Pb**	**20 44 45.9**	**-0.6**
	baz=242						
SLGT				*e*S	**Sb**	**20 44 57.0**	**-0.2**
	baz=242						
CHGB	**Renai**	**0.82**	**340**	*e*P	**Pb**	**20 44 45.9**	**-0.9**
	baz=355						
ECL	**Taimali**	**0.83**	**215**	*e*P	**Pb**	**20 44 44.9**	**-1.9**
	baz=211						
TYC	**Yuchr**	**0.84**	**318**	⇑*i*P	**Pb**	**20 44 46.2**	**-0.7**
	baz=323						
TYC				*e*S	**Sb**	**20 44 58.0**	**+0.1**
	baz=323						
SGST	**Jiashian**	**0.84**	**257**	⇑*i*P	**Pb**	**20 44 45.7**	**-1.3**
	baz=253						
SGST				S	**Sb**	**20 44 57.5**	**-0.5**
	baz=253						
WJS	**Zhushan**	**0.87**	**308**	*i* P	**Pb**	**20 44 47.8**	**+0.3**
	baz=322						
WJS				*e*S	**Sn**	**20 45 00.4**	**-0.2**
	baz=322						
CHN1	**Nanshi**	**0.88**	**264**	⇑*i*P	**Pb**	**20 44 47.4**	**-0.1**
	baz=262						
CHN1				*e*S	**Sg**	**20 44 59.9**	**+0.4**
	baz=262						
WHF	**Hehuan Shan**	**0.88**	**347**	P	**Pb**	**20 44 46.8**	**-1.0**
	baz=6.0						
WHF				*e*S	**Sb**	**20 44 58.3**	**-1.2**
	baz=6.0						
NACB	**Ninganchiao**	**0.90**	**7**	P	**Pb**	**20 44 46.5**	**-1.3**
	baz=13						
NACB				*e*S	**Sb**	**20 44 58.9**	**-0.6**
	baz=13						
DPDB	**Guoxing**	**0.90**	**326**	*e*P	**Pb**	**20 44 47.3**	**-0.7**
	baz=338						
DPDB				*e*S	**Sb**	**20 44 59.3**	**-0.5**
	baz=338						
SNST	**Tainan City**	**0.90**	**266**	⇓*i*P	**Pb**	**20 44 48.0**	**0.0**
	baz=265						
SNST				*e*S	**Sg**	**20 45 00.9**	**+0.7**
	baz=265						
TWK	**Hsinying**	**0.91**	**269**	*i* P	**Pb**	**20 44 47.9**	**-0.2**
	baz=268						
TWK				*e*S	**Sg**	**20 45 00.7**	**+0.2**
	baz=268						
ETLH	**Xiulin Townshi**	**0.92**	**0**	*e*P	**Pb**	**20 44 47.0**	**-1.3**
	baz=6.0						
ETLH				*e*S	**Sb**	**20 44 59.7**	**-0.6**
	baz=6.0						
WGK	**Gukeng**	**0.93**	**296**	*i* P	**Pb**	**20 44 48.7**	**+0.2**
	baz=298						
WGK				*e*S	**Sn**	**20 45 02.1**	**+0.1**
	baz=298						
WNT	**Mingjian**	**0.94**	**309**	⇑*i*P	**Pb**	**20 44 49.0**	**+0.5**
	baz=313						
WNT				*e*S	**Sn**	**20 45 02.2**	**0.0**
	baz=313						
SSD	**Sandimen**	**0.94**	**236**	*i* P	**Pb**	**20 44 47.4**	**-1.2**
	baz=227						
SSD				*e*S	**Sb**	**20 45 01.1**	**+0.3**
	baz=227						
WDLH	**Douliu**	**0.95**	**295**	⇑*i*P	**Pb**	**20 44 49.0**	**+0.2**
	baz=297						
WDLH				*e*S	**Sn**	**20 45 03.5**	**+1.1**
	baz=297						
CHN2	**Minshiung**	**0.95**	**285**	*e*P	**Pb**	**20 44 49.2**	**+0.4**
	baz=286						
CHN2				*e*S	**Sn**	**20 45 03.3**	**+0.8**
	baz=286						
CHY	**Chiayi**	**0.99**	**283**	*i* P	**Pb**	**20 44 49.5**	**0.0**
	baz=283						
CHY				*e*S	**Sn**	**20 45 03.2**	**-0.2**
	baz=283						
TWT	**Tachien**	**1.01**	**344**	*i* P	**Pb**	**20 44 49.5**	**-0.3**
	baz=341						
TWT				S	**Sb**	**20 45 02.2**	**-0.6**
	baz=341						
TDCB	**Techi**	**1.01**	**343**	P	**Pb**	**20 44 48.8**	**-1.1**
	baz=348						
MASBT	**Mashibuluo**	**1.02**	**230**	*i* P	**Pb**	**20 44 48.5**	**-1.5**
	baz=232						
CHN3	**Shinhua**	**1.04**	**259**	*e*P	**Pg**	**20 44 51.5**	**+0.5**
	baz=268						
CHN3				*e*S	**Sg**	**20 45 08.3**	**+3.6**
	baz=268						
SGLT	**Jiouru**	**1.06**	**239**	*e*P	**Pn**	**20 44 51.1**	**+0.3**
	baz=235						
TAW	**Tawu**	**1.06**	**210**	*e*P	**Pb**	**20 44 48.6**	**-2.0**
	baz=207						
EAST	**Anshuo**	**1.07**	**213**	P	**Pb**	**20 44 48.7**	**-2.1**
	baz=210						
TWM1	**Shoushan**	**1.07**	**245**	P	**Pb**	**20 44 51.2**	**+0.3**
	baz=242						
TWM1				*e*S	**Sg**	**20 45 07.6**	**+1.9**
	baz=242						
WLGB	**Puzi**	**1.10**	**280**	P	**Pb**	**20 44 51.6**	**+0.3**
	baz=281						
WLGB				*e*S	**Sg**	**20 45 07.4**	**+0.9**
	baz=281						
WHP	**Taichung City**	**1.10**	**334**	*e*P	**Pn**	**20 44 51.1**	**-0.4**
	baz=344						
TCU	**Taichung**	**1.13**	**320**	*i* P	**Pb**	**20 44 52.4**	**+0.5**
	baz=324						
TCU				*e*S	**Sn**	**20 45 07.1**	**+0.2**
	baz=324						
NNSB	**Datong**	**1.15**	**356**	*i* P	**Pn**	**20 44 51.1**	**-1.0**
	baz=13						
NNSB				*e*S	**Sb**	**20 45 06.1**	**-0.7**
	baz=13						
NNSH	**Datong**	**1.15**	**356**	*i* P	**Pn**	**20 44 51.0**	**-1.1**
	baz=11						
NNSH				*e*S	**Sb**	**20 45 05.8**	**-1.0**
	baz=11						
SSPT	**Xinbi**	**1.15**	**227**	P	**Pn**	**20 44 51.8**	**-0.3**
	baz=215						
SSPT				*e*S	**Sb**	**20 45 06.9**	**0.0**
	baz=215						
NNS	**Nan Shan**	**1.16**	**355**	P	**Pn**	**20 44 51.5**	**-0.8**
	baz=13						
NNS				*e*S	**Sb**	**20 45 06.6**	**-0.6**
	baz=13						
WCHH	**Zhanghua**	**1.16**	**314**	P	**Pn**	**20 44 52.2**	**+0.1**
	baz=316						
WCHH				*e*S	**Sn**	**20 45 08.1**	**+0.5**
	baz=316						
CHN8	**Yiju**	**1.17**	**273**	*e*P	**Pn**	**20 44 52.4**	**+0.2**
	baz=273						
CHN8				*e*S	**Sb**	**20 45 07.4**	**+0.2**
	baz=273						
ENA	**Nanau**	**1.17**	**12**	P	**Pn**	**20 44 51.2**	**-1.1**
	baz=5.0						
ENA				*e*S	**Sb**	**20 45 06.4**	**-0.9**
	baz=5.0						
SNJT	**Kaohsiung City**	**1.18**	**244**	P	**Pg**	**20 44 54.4**	**+0.9**
	baz=241						
SNJT				*e*S	**Sg**	**20 45 11.9**	**+3.0**
	baz=241						
SCLT	**Jiali**	**1.18**	**265**	*e*P	**Pn**	**20 44 52.2**	**-0.3**
	baz=264						
SCLT				*e*S	**Sg**	**20 45 10.3**	**+1.2**
	baz=264						
RLNB	**Erlin**	**1.19**	**301**	*e*P	**Pn**	**20 44 52.7**	**+0.1**
	baz=303						
RLNB				*e*S	**Sn**	**20 45 08.7**	**+0.3**
	baz=303						
SCZT	**Fangliau**	**1.20**	**221**	P	**Pn**	**20 44 52.0**	**-0.7**
	baz=212						
WSF	**Szhu**	**1.21**	**287**	*e*P	**Pn**	**20 44 52.8**	**0.0**
	baz=288						
WSF				*e*S	**Sg**	**20 45 09.8**	**-0.1**
	baz=288						
WTCT	**Ta-ch'eng**	**1.24**	**298**	*e*S	**Sn**	**20 45 09.8**	**+0.2**
	baz=300						
TWQ1	**Liyutan**	**1.24**	**329**	P	**Pb**	**20 44 54.1**	**+0.3**
	baz=332						
WSSB	**Gushan**	**1.29**	**241**	*e*P	**Pg**	**20 44 56.2**	**+0.5**
	baz=240						
NSY	**Sanyi**	**1.30**	**330**	*e*P	**Pb**	**20 44 55.4**	**+0.6**
	baz=334						
NSY				*e*S	**Sg**	**20 45 13.6**	**+0.5**
	baz=334						
WDJ	**Dajia District**	**1.31**	**324**	*e*P	**Pb**	**20 44 55.4**	**+0.5**
	baz=326						
NDT	**Datong Townshi**	**1.32**	**1**	*e*P	**Pn**	**20 44 54.2**	**-0.1**
	baz=6.0						
ENTT	**Nioudou**	**1.35**	**3**	*e*P	**Pn**	**20 44 54.1**	**-0.8**
	baz=8.0						
PTSB	**Yuanli**	**1.36**	**329**	*e*P	**Pb**	**20 44 56.7**	**+1.0**
	baz=333						
PTSB				*e*S	**Sg**	**20 45 14.7**	**-0.1**
	baz=333						
TWC	**Suao**	**1.36**	**14**	*e*P	**Pn**	**20 44 55.3**	**+0.3**
	baz=6.0						
WLCH	**Liuqiu**	**1.37**	**228**	*e*P	**Pg**	**20 44 57.8**	**+0.6**
	baz=228						
YHNB	**Yeheng**	**1.39**	**356**	P	**Pn**	**20 44 55.4**	**+0.1**
	baz=1.0						
YHNB				*e*S	**Sn**	**20 45 13.3**	**0.0**
	baz=1.0						
TWP	**Hsiaoliuchiu**	**1.39**	**228**	*e*P	**Pg**	**20 44 57.7**	**+0.1**
	baz=228						
NSK	**Sanguang**	**1.39**	**356**	*e*P	**Pn**	**20 44 55.7**	**+0.2**
	baz=13						
EOS1	**EOS1**	**1.40**	**25**	*e*P	**Pn**	**20 44 55.9**	**+0.5**
	baz=42						
EOS1				*e*S	**Sb**	**20 45 14.9**	**+1.0**
	baz=42						
NMLH	**Miaoli**	**1.40**	**334**	P	**Pb**	**20 44 56.4**	**0.0**
	baz=353						
NMLH				*e*S	**Sg**	**20 45 15.5**	**-0.5**
	baz=353						
NSTT	**Nanjuang**	**1.41**	**342**	P	**Pb**	**20 44 56.5**	**-0.2**
	baz=346						
LIOB	**Emei**	**1.42**	**343**	*e*P	**Pb**	**20 44 56.8**	**-0.1**
	baz=346						
LIOB				*e*S	**Sb**	**20 45 15.3**	**+0.7**
	baz=346						
HEN	**Hengchun**	**1.44**	**208**	*e*P	**Pb**	**20 44 57.0**	**-0.2**
	baz=197						
TWE	**Neicheng**	**1.44**	**7**	*e*P	**Pn**	**20 44 55.7**	**-0.4**
	baz=11						
TWK1	**Hengchun**	**1.47**	**205**	*e*P	**Pn**	**20 44 56.0**	**-0.5**
	baz=193						
TWKBT	**Hengchun**	**1.47**	**205**	*e*P	**Pn**	**20 44 56.0**	**-0.4**
	baz=193						
SLBB	**Yuanshan**	**1.47**	**6**	*e*P	**Pn**	**20 44 55.0**	**-1.5**
	baz=10.0						
TSEB	**Hengchuen, Pin**	**1.47**	**201**	*e*P	**Pn**	**20 44 56.6**	**+0.1**
	baz=190						
NWLT	**Wulai**	**1.49**	**1**	*e*P	**Pn**	**20 44 56.6**	**-0.1**
	baz=6.0						
SBCB	**Hsinchu**	**1.57**	**343**	*e*P	**Pb**	**20 45 00.1**	**+0.7**
	baz=345						
WLTB	**Daxi**	**1.58**	**353**	*e*P	**Pb**	**20 45 00.0**	**+0.6**
	baz=10.0						
NTC	**Toucheng**	**1.60**	**12**	*e*P	**Pn**	**20 44 59.2**	**+1.0**
	baz=15						
NTC				*e*S	**Sn**	**20 45 19.0**	**+0.6**
	baz=15						
WDGT	**Dungji**	**1.67**	**270**	P	**Pn**	**20 44 58.9**	**-0.3**
	baz=269						
WDGT				*e*S	**Sb**	**20 45 21.6**	**-0.2**
	baz=269						
NHDH	**Xindian Distri**	**1.68**	**2**	*e*P	**Pn**	**20 45 00.1**	**+0.8**
	baz=18						
TATO	**Taipei**	**1.69**	**0**	P	**Pn**	**20 45 00.1**	**+0.7**
	baz=17						
TATO				*e*S	**Sb**	**20 45 22.6**	**+0.3**
	baz=17						
TWA	**Mucha**	**1.69**	**3**	*e*P	**Pn**	**20 45 00.6**	**+1.1**
	baz=20						
TIPB	**Shuangxi**	**1.71**	**11**	P	**Pn**	**20 44 59.6**	**-0.2**
	baz=13						
TIPB				*e*S	**Sn**	**20 45 22.1**	**+0.7**
	baz=13						
PHUB	**P'eng-hu**	**1.76**	**278**	P	**Pn**	**20 44 59.9**	**-0.6**
	baz=277						
JYNG	**Yonagunijimaku**	**1.78**	**49**	P	**Pn**	**20 45 00.9**	**+0.2**
JYNG				S	**Sn**	**20 45 23.9**	**+1.0**
TWB1	**Santiao Chiao**	**1.78**	**15**	*e*P	**Pb**	**20 45 02.3**	**-0.7**
	baz=7.0						
PNG	**Penghu**	**1.79**	**280**	P	**Pn**	**20 45 00.6**	**-0.2**
	baz=280						
PNG				*e*S	**Sn**	**20 45 22.1**	**-0.9**
	baz=280						
NWF	**Wu-fen Shan**	**1.80**	**9**	*e*P	**Pn**	**20 45 01.8**	**+0.7**
	baz=10.0						
WFSB	**Wu-fen Shan**	**1.80**	**9**	*e*P	**Pn**	**20 45 01.4**	**+0.4**
	baz=11						
TWS1	**Kuangyinshan**	**1.81**	**358**	*e*P	**Pn**	**20 45 02.5**	**+1.3**
	baz=18						
YOJ	**Yonaguni jima**	**1.83**	**50**	*i* P	**Pn**	**20 45 01.7**	**+0.3**
	baz=55						
YOJ				*e*S	**Sn**	**20 45 23.8**	**-0.4**
	baz=55						
YOJ	**Yonaguni jima**	**1.83**	**50**	P	**Pn**	**20 45 01.9**	**+0.5**
YOJ				*e*S	**Sn**	**20 45 25.1**	**+0.9**
YM01	**YM01**	**1.86**	**3**	*e*P	**Pn**	**20 45 01.5**	**-0.3**
	baz=3.0						
YM04	**YM04**	**1.86**	**2**	*e*P	**Pn**	**20 45 01.8**	**-0.2**
	baz=20						
YM10	**YM10**	**1.87**	**2**	*e*P	**Pn**	**20 45 01.9**	**-0.1**
	baz=3.0						
YM05	**YM05**	**1.88**	**2**	*e*P	**Pn**	**20 45 01.8**	**-0.4**
	baz=3.0						
YM11	**YM11**	**1.88**	**3**	*e*P	**Pn**	**20 45 01.3**	**-0.8**
	baz=3.0						
VCHM	**Qimei**	**1.88**	**268**	P	**Pn**	**20 45 01.6**	**-0.5**
	baz=267						
ANP	**Anpu**	**1.90**	**1**	*e*P	**Pn**	**20 45 02.3**	**-0.1**
	baz=20						
HATJ	**Hateruma jima**	**2.27**	**70**	P	**Pn**	**20 45 07.7**	**+0.2**
HATJ				S	**Sn**	**20 45 34.6**	**-0.4**
IRIF	**Iriomote-Funau**	**2.31**	**63**	P	**Pn**	**20 45 08.4**	**+0.3**
IRIF				*e*S	**Sn**	**20 45 36.6**	**+0.5**
JKRS	**Kuro-shima**	**2.51**	**67**	P	**Pn**	**20 45 11.3**	**+0.6**
JKRS				S	**Sn**	**20 45 41.8**	**+0.9**
VWUC	**VWUC**	**2.52**	**313**	*e*P	**Pn**	**20 45 10.4**	**-0.4**
	baz=312						
JIJ	**Ishigaki jima**	**2.67**	**66**	P	**Pn**	**20 45 12.8**	**-0.1**
JIJ				S	**Sn**	**20 45 43.9**	**-1.0**
PTTC	**Pingtan**	**2.70**	**325**	*e*P	**Pn**	**20 45 12.9**	**-0.5**
	baz=324						
PTMZ	**Houxiangcun**	**2.77**	**310**	P	**Pn**	**20 45 14.3**	**-0.1**
	baz=295						
JISG	**Ishigakijimahi**	**2.90**	**63**	P	**Pn**	**20 45 15.9**	**-0.2**
JISG				*e*S	**Sn**	**20 45 49.7**	**-0.9**
KNM	**Kinmen**	**3.01**	**293**	*e*P	**Pn**	**20 45 18.2**	**+0.7**
	baz=290						
KNMB	**Chin-men Tao**	**3.06**	**293**	*e*P	**Pn**	**20 45 17.1**	**-1.3**
	baz=292						
QZH	**Quanzhou**	**3.11**	**303**	Pn	**Pn**	**20 45 18.3**	**-0.7**
QZH				Sn	**Sn**	**20 45 53.8**	**-2.0**
QZH				smax	smax		
	comp=N,69nm,0.5s						
QZH				smax	smax		
	comp=E,56nm,0.6s						
MATB	**Ma-tsu**	**3.18**	**334**	*e*P	**Pn**	**20 45 19.7**	**-0.2**
	baz=333						
JTJ	**Tarama**	**3.25**	**65**	P	**Pn**	**20 45 21.0**	**+0.1**
JTJ				*e*S	**Sn**	**20 45 58.4**	**-0.7**
ZPLA	**Ao Xicun**	**3.48**	**281**	P	**Pn**	**20 45 23.3**	**-0.7**
	baz=279						
MHZQ	**Yeshan**	**3.58**	**322**	*e*P	**Pn**	**20 45 25.5**	**0.0**
	baz=321						
AXDP	**Jialang**	**3.59**	**297**	*e*P	**Pn**	**20 45 24.9**	**-0.6**
	baz=296						
LYJJ	**Jianjiangzhen**	**3.61**	**335**	*e*P	**Pn**	**20 45 25.6**	**-0.3**
	baz=333						
JIRB	**Irabujima**	**3.71**	**65**	P	**Pn**	**20 45 27.3**	**0.0**
JIRB				S	**Sn**	**20 46 10.4**	**-0.2**
ZZJH	**Jiuhuzhen**	**3.71**	**289**	*e*P	**Pn**	**20 45 27.0**	**-0.3**
	baz=288						
JMJ	**Miyako jima 2**	**3.81**	**66**	*e*P	**Pn**	**20 45 29.2**	**+0.6**
	baz=71						
JMJ2	**Miyako jima3**	**3.81**	**67**	P	**Pn**	**20 45 29.2**	**+0.6**
JMJ2				S	**Sn**	**20 46 13.4**	**+0.4**
JIKM	**Ikemajima**	**3.81**	**64**	P	**Pn**	**20 45 28.8**	**+0.1**
JIKM				*e*S	**Sn**	**20 46 12.1**	**-1.0**
XPSS	**Dashiqiu**	**3.81**	**342**	*e*P	**Pn**	**20 45 28.1**	**-0.6**
	baz=341						
JOGS	**Gusukube**	**3.88**	**67**	P	**Pn**	**20 45 30.3**	**+0.7**
JOGS				S	**Sn**	**20 46 15.5**	**+0.7**
VDOS	**Pratas Island**	**5.10**	**241**	*e*P	**Pn**	**20 45 47.1**	**+0.8**
	baz=240						
JOW	**Kunigami**	**7.11**	**59**	Pn	**Pn**	**20 46 13.0**	**-0.9**

	0.2nm,0.3s,baz=151,slow=13,SNR=6.1						
KSRS	**Korea Array**	**15.18**	**20**	Pn	**P**	**20 48 07.7**	**-1.6**
	0.1nm,0.3s,baz=203,slow=12,SNR=4.6						
XAN	**Xi'an**	**15.36**	**317**	P	P	20 48 20.5	+9.1
XAN				pP	sP	20 48 26.8	+8.5
SONM	**Songino Array**	**27.30**	**338**	P	**P**	**20 50 13.9**	**-0.6**
	0.1nm,0.3s,baz=159,slow=12,SNR=2.0						
WMQ	**Urumqi**	**34.47**	**315**	*e*P	**P**	**20 51 20.3**	**+2.5**
MKAR	**Makanchi Array**	**39.17**	**317**	P	**P**	**20 51 57.5**	**-0.2**
	0.1nm,0.6s,baz=108,slow=10,SNR=2.3						
KRVT	**Keravat (AS076**	**40.50**	**129**	LR	LR	21 05 57.0	
	comp=Z,334nm,21.4s,baz=260,slow=32						
ZALV	**Zalesovo Beam**	**41.15**	**328**	P	**P**	**20 52 15.3**	**+1.4**
	0.5nm,0.5s,baz=119,slow=9.1,SNR=2.2						

JMA ***26*** *20:45:52.1±0.1, 23°.26N×121°.56E, h1^{km}±1^{km}, M3.5*

TAP ***26*** *20:45:54.2, 23°.30N×121°.39E, h18^{km}, ML3.7, C*

ISC 26 20:45:53.9±0.8**, 23°.29N**±0°.02×**121°.46E**±0°.02**, h16**^{km}±5^{km}**, n108, σ0^{s}.87**/168**, 11C-3D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWF1	**Yuli**	**0.16**	**294**	⇓*i*P	**Pg**	**20 45 58.3**	**+0.2**
	baz=305						
TWF1				S	**Sg**	**20 46 01.5**	**+0.6**
	baz=305						
FULB	**Fuli**	**0.17**	**240**	*e*P	**Pg**	**20 45 58.6**	**+0.3**
	baz=213						
FULB				*e*S	**Sb**	**20 46 02.1**	**+0.1**
	baz=213						
YULB	**Yu-li**	**0.18**	**305**	⇓*i*P	**Pg**	**20 45 58.5**	**+0.1**
	baz=311						
YULB				*e*S	**Sg**	**20 46 01.4**	**+0.1**
	baz=311						
CHKT	**Chengkung**	**0.20**	**205**	⇑*i*P	**Pb**	**20 45 59.6**	**+0.3**
	baz=176						
CHKT				S	**Sb**	**20 46 03.7**	**+0.8**
	baz=176						
HGSD	**Ruisui**	**0.21**	**351**	*e*P	**Pg**	**20 45 59.2**	**+0.5**
	baz=17						
HGSD				*e*S	**Sb**	**20 46 03.6**	**+0.7**
	baz=17						
EHY	**Hungye**	**0.25**	**330**	⇓*i*P	**Pg**	**20 45 59.8**	**+0.3**
	baz=337						
EHY				*e*S	**Sg**	**20 46 03.7**	**+0.4**
	baz=337						
EGFH	**Guangfu**	**0.38**	**356**	*e*P	**Pg**	**20 46 02.2**	**+0.5**
	baz=354						
EGFH				*e*S	**Sb**	**20 46 08.2**	**+0.2**
	baz=354						
ELDTW	**Lidau**	**0.42**	**257**	⇑*i*P	**Pg**	**20 46 01.8**	**-0.7**
	baz=252						
ELDTW				S	**Sg**	**20 46 07.3**	**-0.9**
	baz=252						
YUS	**Yu-Shan**	**0.51**	**294**	*i* P	**Pg**	**20 46 03.9**	**-0.3**
	baz=297						
YUS				*e*S	**Sg**	**20 46 10.7**	**-0.4**
	baz=297						
ESL	**Shilin**	**0.53**	**358**	*e*P	**Pg**	**20 46 04.0**	**-0.4**
	baz=356						
VWDT	**VWDT**	**0.55**	**328**	P	**Pg**	**20 46 04.6**	**-0.2**
	baz=343						
VWDT				S	**Sg**	**20 46 12.3**	**+0.1**
	baz=343						
TWH	**Lutao**	**0.57**	**178**	P	**Pg**	**20 46 05.7**	**+0.4**
	baz=161						
TWH				S	**Sn**	**20 46 15.4**	**-1.2**
	baz=161						
TWGBT	**Beinan**	**0.58**	**217**	⇑*i*P	**Pg**	**20 46 04.7**	**-0.7**
	baz=210						
TWGBT				*e*S	**Sg**	**20 46 12.7**	**-0.5**
	baz=210						
TWG	**Pinlang**	**0.58**	**218**	⇑*i*P	**Pg**	**20 46 04.7**	**-0.8**
	baz=210						
TWG				*e*S	**Sg**	**20 46 12.8**	**-0.5**
	baz=210						
TTN	**Taitung**	**0.60**	**208**	*e*P	**Pb**	**20 46 06.3**	**+0.2**
	baz=201						
TTN				*e*S	**Sn**	**20 46 16.1**	**-1.2**
	baz=201						
ENLB	**Shoufeng**	**0.63**	**12**	*e*P	**Pg**	**20 46 06.1**	**-0.2**
	baz=4.0						
ENLB				*e*S	**Sn**	**20 46 16.6**	**-1.3**
	baz=4.0						
ALS	**Alishan**	**0.64**	**290**	⇑*i*P	**Pg**	**20 46 06.3**	**-0.3**
	baz=293						
ALS				*e*S	**Sg**	**20 46 14.7**	**-0.4**
	baz=293						
STYT	**Tauyuan**	**0.66**	**259**	⇑*i*P	**Pg**	**20 46 06.2**	**-0.7**
	baz=257						
STYT				*e*S	**Sg**	**20 46 14.6**	**-1.0**
	baz=257						
SSLB	**Suanglung**	**0.68**	**317**	*e*P	**Pb**	**20 46 06.5**	**-0.9**
	baz=322						
SSLB				*e*S	**Sg**	**20 46 14.7**	**-1.6**
	baz=322						
WHYT	**Xinyi Township**	**0.69**	**306**	*i* P	**Pb**	**20 46 07.3**	**-0.3**
	baz=315						
WHYT				*e*S	**Sg**	**20 46 16.2**	**-0.3**
	baz=315						
HWA	**Hwalien**	**0.70**	**11**	*e*P	**Pb**	**20 46 07.3**	**-0.4**
	baz=4.0						
HWA				*e*S	**Sn**	**20 46 19.2**	**-0.4**
	baz=4.0						
OWD	**Renai**	**0.71**	**339**	*e*P	**Pg**	**20 46 08.6**	**+0.6**
	baz=345						
OWD				*e*S	**Sg**	**20 46 17.1**	**-0.3**
	baz=345						
TPUB	**Ta-pu**	**0.76**	**271**	*e*P	**Pb**	**20 46 08.6**	**-0.3**
	baz=278						
TPUB				*e*S	**Sb**	**20 46 18.8**	**-0.2**
	baz=278						
WTP	**Ta-pu**	**0.78**	**267**	*e*P	**Pb**	**20 46 09.0**	**-0.1**
	baz=266						
WTP				*e*S	**Sb**	**20 46 19.3**	**-0.1**
	baz=266						
CHN5	**Tsauling**	**0.78**	**293**	⇑*i*P	**Pb**	**20 46 09.2**	**0.0**
	baz=296						
CHN5				*e*S	**Sg**	**20 46 19.9**	**+0.4**
	baz=296						
SMLT	**Sun Moon Lake**	**0.78**	**319**	*e*P	**Pb**	**20 46 08.6**	**-0.7**
	baz=331						
SMLT				*e*S	**Sb**	**20 46 19.3**	**-0.4**
	baz=331						
CHN4	**Tsaushan**	**0.80**	**275**	⇑*i*P	**Pb**	**20 46 09.4**	**0.0**
	baz=275						
CHN4				*e*S	**Sg**	**20 46 20.4**	**+0.4**
	baz=275						
TWD	**Chiawan**	**0.80**	**9**	*e*P	**Pb**	**20 46 09.0**	**-0.5**
	baz=360						
SLGT	**Liugui**	**0.80**	**249**	⇑*i*P	**Pb**	**20 46 08.9**	**-0.6**
	baz=242						
SLGT				*e*S	**Sb**	**20 46 20.1**	**-0.1**
	baz=242						
CHGB	**Renai**	**0.81**	**341**	*e*P	**Pb**	**20 46 08.9**	**-0.9**
	baz=347						
CHGB				*e*S	**Sb**	**20 46 20.6**	**0.0**
	baz=347						
TYC	**Yuchr**	**0.82**	**318**	*e*P	**Pb**	**20 46 09.3**	**-0.6**
	baz=328						
ECL	**Taimali**	**0.83**	**214**	*e*P	**Pb**	**20 46 08.1**	**-1.9**
	baz=211						
SGST	**Jiashian**	**0.83**	**256**	⇑*i*P	**Pb**	**20 46 08.6**	**-1.4**
	baz=254						
SGST				*e*S	**Sb**	**20 46 20.5**	**-0.5**
	baz=254						
WJS	**Zhushan**	**0.86**	**309**	⇑*i*P	**Pg**	**20 46 10.8**	**+0.2**
	baz=323						
WJS				*e*S	**Sn**	**20 46 23.3**	**-0.2**
	baz=323						
CHN1	**Nanshi**	**0.86**	**263**	*e*P	**Pb**	**20 46 10.6**	**0.0**
	baz=262						
CHN1				*e*S	**Sg**	**20 46 22.3**	**+0.2**
	baz=262						
WHF	**Hehuan Shan**	**0.87**	**348**	*e*P	**Pb**	**20 46 09.7**	**-1.2**
	baz=4.0						
WHF				*e*S	**Sg**	**20 46 23.3**	**+0.7**
	baz=4.0						
SNST	**Tainan City**	**0.89**	**266**	*e*P	**Pb**	**20 46 11.1**	**+0.1**
	baz=265						
SNST				*e*S	**Sn**	**20 46 24.0**	**-0.3**
	baz=265						
DPDB	**Guoxing**	**0.89**	**327**	*e*P	**Pb**	**20 46 10.2**	**-0.8**
	baz=337						
NACB	**Ninganchiao**	**0.89**	**8**	*e*P	**Pb**	**20 46 09.7**	**-1.3**
	baz=12						
TWK	**Hsinying**	**0.89**	**269**	*e*P	**Pb**	**20 46 11.1**	**0.0**
	baz=268						
TWK				*e*S	**Sg**	**20 46 23.6**	**+0.6**
	baz=268						
WGK	**Gukeng**	**0.91**	**296**	P	**Pg**	**20 46 11.9**	**+0.3**
	baz=298						
WGK				*e*S	**Sn**	**20 46 25.4**	**+0.5**
	baz=298						
ETLH	**Xiulin Townshi**	**0.92**	**1**	*e*P	**Pb**	**20 46 10.8**	**-0.7**
	baz=5.0						
WNT	**Mingjian**	**0.92**	**310**	*i* P	**Pb**	**20 46 11.9**	**+0.4**
	baz=313						
WNT				*e*S	**Sn**	**20 46 25.1**	**-0.1**
	baz=313						
SSD	**Sandimen**	**0.93**	**235**	*e*P	**Pb**	**20 46 10.4**	**-1.3**
	baz=227						
CHN2	**Minshiung**	**0.94**	**285**	*e*P	**Pg**	**20 46 12.4**	**+0.4**
	baz=286						
CHN2				*e*S	**Sn**	**20 46 26.5**	**+1.0**
	baz=286						
WDLH	**Douliu**	**0.94**	**296**	*e*P	**Pg**	**20 46 12.3**	**+0.2**
	baz=297						
WDLH				*e*S	**Sn**	**20 46 25.9**	**+0.5**
	baz=297						
CHY	**Chiayi**	**0.97**	**283**	*e*P	**Pb**	**20 46 12.6**	**+0.2**
	baz=284						
CHY				*e*S	**Sn**	**20 46 27.0**	**+0.6**
	baz=284						
TWT	**Tachien**	**1.00**	**345**	*e*P	**Pb**	**20 46 12.1**	**-0.8**
	baz=342						
TWT				*e*S	**Sb**	**20 46 25.8**	**-0.1**
	baz=342						
TDCB	**Techi**	**1.00**	**344**	*e*P	**Pb**	**20 46 12.5**	**-0.5**
	baz=347						
MASBT	**Mashibuluo**	**1.01**	**229**	*e*P	**Pb**	**20 46 11.6**	**-1.6**
	baz=221						
MASBT				*e*S	**Sb**	**20 46 25.1**	**-1.2**
	baz=221						
CHN3	**Shinhua**	**1.03**	**258**	*e*P	**Pg**	**20 46 14.6**	**+0.8**
	baz=267						
CHN3				*e*S	**Sn**	**20 46 28.6**	**+0.8**
	baz=267						
SGLT	**Jiouru**	**1.05**	**238**	*e*P	**Pg**	**20 46 15.0**	**+0.8**
	baz=235						
TWM1	**Shoushan**	**1.06**	**244**	*e*P	**Pg**	**20 46 15.2**	**+0.8**
	baz=243						
TAW	**Tawu**	**1.06**	**209**	*e*P	**Pb**	**20 46 12.0**	**-1.9**
	baz=207						
EAST	**Anshuo**	**1.06**	**212**	*e*P	**Pb**	**20 46 12.3**	**-1.7**
	baz=210						
WLGB	**Puzi**	**1.08**	**280**	*e*P	**Pb**	**20 46 14.2**	**0.0**
	baz=281						
WLGB				*e*S	**Sg**	**20 46 30.2**	**+1.2**
	baz=281						
WHP	**Taichung City**	**1.09**	**335**	*e*P	**Pn**	**20 46 14.9**	**+0.2**
	baz=344						
TCU	**Taichung**	**1.12**	**320**	*e*P	**Pg**	**20 46 15.7**	**+0.2**
	baz=322						
NNSB	**Datong**	**1.14**	**357**	*e*P	**Pn**	**20 46 14.3**	**-1.1**
	baz=13						
NNSB				*e*S	**Sb**	**20 46 28.5**	**-1.5**
	baz=13						
NNSH	**Datong**	**1.14**	**357**	*e*P	**Pn**	**20 46 14.4**	**-0.9**
	baz=11						
WCHH	**Zhanghua**	**1.14**	**314**	*e*P	**Pb**	**20 46 15.6**	**+0.3**
	baz=315						
SSPT	**Xinbi**	**1.15**	**226**	*e*P	**Pn**	**20 46 15.1**	**-0.2**
	baz=218						
CHN8	**Yiju**	**1.15**	**273**	*e*P	**Pb**	**20 46 15.6**	**+0.2**
	baz=273						
CHN8				*e*S	**Sg**	**20 46 32.2**	**+1.1**
	baz=273						
NNS	**Nan Shan**	**1.15**	**356**	*e*P	**Pn**	**20 46 14.4**	**-1.1**
	baz=12						
NNS				*e*S	**Sb**	**20 46 29.5**	**-0.8**
	baz=12						
SNJT	**Kaohsiung City**	**1.16**	**243**	*e*P	**Pg**	**20 46 17.6**	**+1.2**
	baz=241						
SNJT				*e*S	**Sg**	**20 46 35.3**	**+3.7**
	baz=241						
ENA	**Nanau**	**1.17**	**13**	*e*P	**Pn**	**20 46 14.2**	**-1.4**
	baz=6.0						
ENA				*e*S	**Sb**	**20 46 29.9**	**-0.7**
	baz=6.0						
SCLT	**Jiali**	**1.17**	**265**	*e*P	**Pg**	**20 46 16.6**	**+0.1**
	baz=264						
SCLT				*e*S	**Sg**	**20 46 33.5**	**+1.8**
	baz=264						
RLNB	**Erlin**	**1.17**	**301**	*e*P	**Pn**	**20 46 15.4**	**-0.3**
	baz=303						
RLNB				*e*S	**Sn**	**20 46 31.6**	**+0.2**
	baz=303						
WSF	**Szhu**	**1.19**	**287**	*e*P	**Pn**	**20 46 15.2**	**-0.6**
	baz=287						
SCZT	**Fangliau**	**1.20**	**220**	*e*P	**Pn**	**20 46 15.6**	**-0.4**
	baz=212						
TWQ1	**Liyutan**	**1.23**	**329**	P	**Pb**	**20 46 17.1**	**+0.3**
	baz=333						
TWQ1				*e*S	**Sg**	**20 46 35.1**	**+1.4**
	baz=333						
WSSB	**Gushan**	**1.28**	**240**	*e*P	**Pg**	**20 46 20.2**	**+1.7**
	baz=240						
NSY	**Sanyi**	**1.29**	**331**	*e*P	**Pb**	**20 46 18.4**	**+0.6**
	baz=333						
NDT	**Datong Townshi**	**1.31**	**2**	*e*P	**Pb**	**20 46 18.2**	**0.0**
	baz=16						
ENTT	**Nioudou**	**1.35**	**4**	*e*P	**Pn**	**20 46 17.1**	**-1.1**
	baz=7.0						
TWC	**Suao**	**1.36**	**15**	*e*P	**Pb**	**20 46 19.1**	**0.0**
	baz=5.0						
WLCH	**Liuqiu**	**1.36**	**227**	*e*P	**Pg**	**20 46 21.2**	**+1.0**
	baz=228						
TWP	**Hsiaoliuchiu**	**1.38**	**227**	*e*P	**Pg**	**20 46 21.4**	**+0.9**
	baz=228						
YHNB	**Yeheng**	**1.38**	**357**	*e*P	**Pn**	**20 46 18.6**	**0.0**
	baz=13						
NMLH	**Miaoli**	**1.39**	**334**	*e*P	**Pb**	**20 46 19.4**	**-0.1**
	baz=334						
NSK	**Sanguang**	**1.39**	**356**	*e*P	**Pn**	**20 46 17.6**	**-1.1**
	baz=13						
NSK				*e*S	**Sn**	**20 46 34.9**	**-1.9**
	baz=13						
NSTT	**Nanjuang**	**1.40**	**343**	*e*P	**Pn**	**20 46 19.4**	**+0.5**
	baz=345						
LIOB	**Emei**	**1.41**	**343**	*e*P	**Pb**	**20 46 19.8**	**-0.1**
	baz=343						
HEN	**Hengchun**	**1.44**	**208**	*e*P	**Pn**	**20 46 19.8**	**+0.5**
	baz=198						
TWE	**Neicheng**	**1.44**	**8**	*e*P	**Pn**	**20 46 19.7**	**+0.4**
	baz=10.0						
TWK1	**Hengchun**	**1.47**	**204**	*e*P	**Pn**	**20 46 19.4**	**-0.3**
	baz=194						
TWKBT	**Hengchun**	**1.47**	**204**	*e*P	**Pn**	**20 46 19.1**	**-0.6**
	baz=194						
SLBB	**Yuanshan**	**1.47**	**6**	*e*P	**Pn**	**20 46 17.9**	**-1.9**
	baz=8.0						
NWLT	**Wulai**	**1.48**	**2**	*e*P	**Pb**	**20 46 21.2**	**0.0**
	baz=18						
WDGT	**Dungji**	**1.65**	**269**	*e*P	**Pn**	**20 46 22.3**	**0.0**
	baz=268						
TIPB	**Shuangxi**	**1.71**	**11**	*e*P	**Pn**	**20 46 24.1**	**+0.9**
	baz=12						
PHUB	**P'eng-hu**	**1.75**	**278**	*e*P	**Pn**	**20 46 22.9**	**-0.7**
	baz=276						
PNG	**Penghu**	**1.77**	**279**	*e*P	**Pn**	**20 46 23.9**	**0.0**
	baz=278						
JYNG	**Yonagunijimaku**	**1.79**	**49**	P	**Pn**	**20 46 24.9**	**+0.8**
JYNG				*e*S	**Sn**	**20 46 46.5**	**0.0**
NWF	**Wu-fen Shan**	**1.80**	**9**	*e*P	**Pn**	**20 46 25.5**	**+1.1**
	baz=9.0						
WFSB	**Wu-fen Shan**	**1.80**	**9**	*e*P	**Pn**	**20 46 24.5**	**+0.2**
	baz=9.0						
YOJ	**Yonaguni jima**	**1.84**	**50**	*e*P	**Pn**	**20 46 24.2**	**-0.6**
	baz=52						
YOJ	**Yonaguni jima**	**1.84**	**50**	P	**Pn**	**20 46 24.5**	**-0.4**
YOJ				S	**Sn**	**20 46 48.5**	**+0.7**
VCHM	**Qimei**	**1.87**	**268**	*e*P	**Pn**	**20 46 24.3**	**-0.9**
	baz=266						
HATJ	**Hateruma jima**	**2.28**	**70**	P	**Pn**	**20 46 30.9**	**-0.1**
HATJ				*e*S	**Sn**	**20 46 59.8**	**+1.0**
IRIF	**Iriomote-Funau**	**2.33**	**63**	P	**Pn**	**20 46 31.7**	**+0.1**
IRIF				*e*S	**Sn**	**20 47 00.2**	**+0.3**
JKRS	**Kuro-shima**	**2.52**	**67**	P	**Pn**	**20 46 34.7**	**+0.5**
JKRS				*e*S	**Sn**	**20 47 04.8**	**+0.1**
JIJ	**Ishigaki jima**	**2.68**	**66**	P	**Pn**	**20 46 36.6**	**+0.2**
JIJ				S	**Sn**	**20 47 07.0**	**-1.6**
JISG	**Ishigakijimahi**	**2.91**	**63**	*e*S	**Sn**	**20 47 12.8**	**-1.5**
JTJ	**Tarama**	**3.26**	**65**	*e*S	**Sn**	**20 47 21.6**	**-1.3**
JIRB	**Irabujima**	**3.73**	**65**	P	**Pn**	**20 46 53.0**	**+2.2**
JIRB				S	**Sn**	**20 47 35.5**	**+1.1**
JMJ2	**Miyako jima3**	**3.82**	**67**	P	**Pn**	**20 46 54.0**	**+1.9**
JMJ2				*e*S	**Sn**	**20 47 37.7**	**+0.9**
JIKM	**Ikemajima**	**3.83**	**64**	S	**Sn**	**20 47 39.0**	**+2.1**

BJI ***26*** *20:47:46.2±0.0, 1°.33N×127°.99E, h150^{km}, mB5.0/61, mb5.2/88*

MOS ***26*** *20:47:51.0±0.9, 1°.81N×127°.51E, h154^{km}, mb5.3/36, Error ellipse: s-maj=6.3km s-min=4.2km az=109.1*

IDC ***26*** *20:47:51.4±0.9, 1°.78N×127°.54E, h144^{km}±7^{km}, mb5.1/33, mb1 5.1/38, mb1mx5.1/41, mbtmp5.5/38, MS4.2/18, Ms1 4.2/18, ms1mx4.0/34, Error ellipse: s-maj=9.8km s-min=6.5km az=68.0*

KLM ***26*** *20:47:51.0, 1°.80N×127°.65E, h145^{km}, mb6.0*

NEIC ***26*** *20:47:51.2±1.4, 1°.75N±0°.04×127°.52E±0°.04, h147^{km}±3^{km}, mb5.5/255, Mww5.4, Mwc5.5(GCMT), Error ellipse: s-maj=7.5km s-min=3.1km az=130.0*

NEIC ***26*** *20:47:52, 1°.86N×127°.60E, h140^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.99; $M_{\theta\theta}$-1.52; $M_{\phi\phi}$0.53; $M_{r\theta}$-0.40; $M_{\theta\phi}$0.86; $M_{\phi r}$-1.20; Fault plane solution: $M_0$2.03000×10^{17} NP1:ϕ_s145.00000°, δ60.00000°, λ143.00000°. NP2:ϕ_s256.00000°, δ58.00000°, λ36.00000°. Principal axes: T 2.1848, Plg47.0000°, Azm110.0000°; N -0.3503, Plg43.0000°, Azm291.0000°; P -1.8346, Plg1.0000°, Azm200.0000°;*

DJA ***26*** *20:47:52.0±0.1, 2°N±1°×12°8E±°, h140^{km}±1^{km}, M5.4/106, mB5.9/90, mb5.7/106, MLv6.0/19, Mw(mB)5.5/90, Mwp5.4/34*

GCMT ***26*** *20:47:52.2±0.1, 1°.86N±0°.01×127°.61E±0°.01, h141^{km}, MW5.5/149, Moment Tensor Solution. s135,c233; s149,c285; Duration: 1^{s}.3 Moment tensor: Scale 10^{17} Nm; M_{rr}0.93±.02; $M_{\theta\theta}$-1.49±.02; $M_{\phi\phi}$0.55±.03; $M_{r\theta}$-0.40±.02; $M_{\theta\phi}$0.86±.02; $M_{\phi r}$-1.21±.02; Best double couple: $M_0$1.99100×10^{17} NP1:ϕ_s255.00000°, δ59.00000°, λ35.00000°. NP2:ϕ_s145.00000°, δ61.00000°, λ143.00000°. Principal axes: T 2.1750, Plg46.0000°, Azm109.0000°; N -0.3730, Plg44.0000°, Azm292.0000°; P -1.8070, Plg1.0000°, Azm201.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***26*** *20:47:52, 1°.69N×127°.40E, h150^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.01; $M_{\theta\theta}$-1.00; $M_{\phi\phi}$-0.01; $M_{r\theta}$-0.23; $M_{\theta\phi}$0.68; $M_{\phi r}$-0.89; Fault plane solution: $M_0$1.52000×10^{17} NP1:ϕ_s147.00000°, δ59.00000°, λ130.00000°. NP2:ϕ_s268.00000°, δ49.00000°, λ42.00000°. Principal axes: T 1.6382, Plg55.0000°, Azm111.0000°; N -0.2666, Plg34.0000°, Azm304.0000°; P -1.3716, Plg6.0000°, Azm210.0000°;*

ISC 26 20:47:51.6±0.3**, 1°.77N**±0°.02×**127°.52E**±0°.03**, h150**^{km}±2^{km}**, h151**^{km}**:pP-P, n1137, σ1^{s}.24**/1302**, mb5.4**/244**, 60C-16D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.00**	**189**	P	**Pn**	**20 48 16.3**	**-0.2**
TNTI				S	**Sn**	**20 48 35.3**	**-0.2**
TNTI	**Ternate**	**1.00**	**189**		**Pn**	**20 48 16.5**	**0.0**
LBMI	**Labuha**	**2.39**	**181**	P	**Pn**	**20 48 31.8**	**+0.4**
LBMI				S	**Sn**	**20 49 02.6**	**+0.4**
MNI	**Manado**	**2.70**	**263**	P	**Pn**	**20 48 35.1**	**-0.2**
KMSI	**Cibinong**	**3.74**	**252**	P	**Pn**	**20 48 48.2**	**-0.2**
KMSI				S	**Sn**	**20 49 32.0**	**-0.6**
SANI	**Sanana**	**4.09**	**202**	P	**Pn**	**20 48 51.5**	**-1.6**
SANI				S	**Sn**	**20 49 34.8**	**-6.1**
SWI	**Sorong**	**4.56**	**125**	P	**Pn**	**20 48 59.7**	**+0.5**
SWI				S	**Sn**	**20 49 51.8**	**-0.1**
SIJI	**Sorong**	**4.57**	**125**	P	**Pn**	**20 49 00.2**	**+0.9**
	15nm,0.3s,baz=315,slow=8.6,SNR=64						
SIJI				S	**Sn**	**20 49 46.6**	**-5.5**
	16nm,0.3s,baz=281,slow=6.0,SNR=4.3						
NLAI	**Namlea**	**4.99**	**185**	P	**Pn**	**20 49 04.5**	**-0.5**
NLAI				S	**Sn**	**20 49 59.3**	**-2.9**
GSPH	**General Santos**	**5.00**	**329**	⇑*i*P	**Pn**	**20 49 03.0**	**-2.2**
GSPH				*i* S	**Sn**	**20 49 57.3**	**-5.2**
MSAI	**Masohi**	**5.27**	**165**	P	**Pn**	**20 49 10.9**	**+2.2**
	2.9nm9μm728nm,1.2s						
MSAI				S	**Sn**	**20 50 09.9**	**+1.0**
	2.9nm9μm728nm,1.2s						
AAI	**Ambon**	**5.46**	**173**	P	**Pn**	**20 49 12.0**	**+0.8**
	7.7nm20μm19μm2μm,0.9s						
AAI				S	**Sn**	**20 50 11.1**	**-2.3**
	7.7nm20μm19μm2μm,0.9s						
AAI	**Ambon**	**5.46**	**173**	P	**Pn**	**20 49 11.9**	**+0.8**
AAI				pmax	pmax		
	comp=Z,2μm,0.9s						
LUWI	**Luwuk**	**5.51**	**240**	P	**Pn**	**20 49 10.6**	**-1.3**
	comp=Z,148nmcomp=Z,12μmcomp=Z,54μmcomp=Z,6μm,0.8s						
LUWI				S	**Sn**	**20 50 14.9**	**+0.4**
	comp=Z,148nmcomp=Z,12μmcomp=Z,54μmcomp=Z,6μm,0.8s						
LUWI	**Luwuk**	**5.51**	**240**		**Pn**	**20 49 10.5**	**-1.3**
DAV	**Davao City (W)**	**5.61**	**340**	P	**Pn**	**20 49 13.3**	**+0.1**
	comp=Z,109nm,0.3s,baz=56,slow=1.1,SNR=16						
DAV				S	**Sn**	**20 50 13.3**	**-3.7**
	comp=Z,250nm,0.3s,baz=264,slow=23,SNR=10						
DAV				LR	LR	20 51 49.2	
	comp=Z,4μm,18.6s,baz=175,slow=42						
DAV	**Davao City (W)**	**5.61**	**340**	P	**Pn**	**20 49 15.6**	**+2.4**
DAV	**Davao City (W)**	**5.61**	**340**		**Pn**	**20 49 12.6**	**-0.6**
MRSI	**Marisa**	**5.73**	**257**	P	**Pn**	**20 49 14.7**	**0.0**
	comp=Z,39nmcomp=Z,12μmcomp=Z,35μmcomp=Z,4μm,0.7s						
MRSI				S	**Sn**	**20 50 19.7**	**0.0**
	comp=Z,39nmcomp=Z,12μmcomp=Z,35μmcomp=Z,4μm,0.7s						
CTBH	**Cotabato--PC H**	**6.33**	**329**	⇓*e*P	**Pn**	**20 49 21.6**	**-1.1**
APSI	**Ampana**	**6.45**	**246**	P	**Pn**	**20 49 23.6**	**-0.7**
	comp=Z,29nmcomp=Z,4μmcomp=Z,32μmcomp=Z,3μm,1.3s						
APSI				S	**Sn**	**20 50 36.5**	**-0.5**
	comp=Z,29nmcomp=Z,4μmcomp=Z,32μmcomp=Z,3μm,1.3s						
FAKI	**Fak Fak**	**6.63**	**135**	P	**Pn**	**20 49 28.1**	**+1.3**
	comp=Z,2.4nmcomp=Z,5μmcomp=Z,9μmcomp=Z,715nm,1.4s						
FAKI				S	**Sn**	**20 50 41.3**	**-0.1**
	comp=Z,2.4nmcomp=Z,5μmcomp=Z,9μmcomp=Z,715nm,1.4s						
FAKI	**Fak Fak**	**6.63**	**135**		**Pn**	**20 49 28.2**	**+1.3**
BNDI	**Bandanaira**	**6.69**	**159**	P	**Pn**	**20 49 28.6**	**+1.1**
	comp=Z,5.2nmcomp=Z,11μmcomp=Z,18μmcomp=Z,1μm,1.0s						
CGP	**Cagayan de Oro**	**7.21**	**337**	⇓*i*P	**Pn**	**20 49 35.8**	**+1.2**
CGP				*i* S	**Sn**	**20 50 52.1**	**-3.3**
RKPI	**Ransiki, Papua**	**7.41**	**116**	P	**Pn**	**20 49 39.1**	**+2.0**
	comp=Z,2.9nmcomp=Z,14μmcomp=Z,667nm,1.0s						
MPSI	**Mapaga**	**7.76**	**260**	P	**Pn**	**20 49 42.3**	**+0.5**
	comp=Z,5.5nmcomp=Z,15μmcomp=Z,9μmcomp=Z,757nm,1.0s						
MPSI				S	**Sn**	**20 51 08.0**	**-0.4**
	comp=Z,5.5nmcomp=Z,15μmcomp=Z,9μmcomp=Z,757nm,1.0s						
DCPH	**Dipolog City**	**7.94**	**329**	⇑*e*P	**Pn**	**20 49 46.0**	**+1.7**
SNPH	**Sibulan**	**8.65**	**331**	*e*P	**Pn**	**20 49 54.7**	**+0.9**
BBSI	**Bau Bau**	**8.74**	**214**	P	**Pn**	**20 49 55.7**	**+0.7**
	comp=Z,6μmcomp=Z,617nm,1.1s						
BBSI				S	**Sn**	**20 51 31.8**	**-0.4**
	comp=Z,6μmcomp=Z,617nm,1.1s						
LLP	**Lapu-Lapu**	**9.20**	**338**	⇓*e*P	**Pn**	**20 50 00.6**	**-0.4**
LLP				*e*S	**Sn**	**20 51 40.0**	**-3.2**
BNSI	**Bone**	**9.62**	**230**	P	**Pn**	**20 50 06.4**	**-0.2**
	comp=Z,12μmcomp=Z,20μmcomp=Z,2μm,0.9s						
BNSI				S	**Sn**	**20 51 49.0**	**-4.3**
	comp=Z,12μmcomp=Z,20μmcomp=Z,2μm,0.9s						
SPSI	**Sidrap Palu**	**9.62**	**234**	P	**Pn**	**20 50 06.3**	**-0.3**
	comp=Z,4μmcomp=Z,24μmcomp=Z,2μm,0.7s						
SPSI				S	**Sn**	**20 51 49.0**	**-4.3**
	comp=Z,4μmcomp=Z,24μmcomp=Z,2μm,0.7s						
BKSI	**Bulukumba**	**10.21**	**226**	P	**Pn**	**20 50 13.7**	**-0.8**
	comp=Z,4μmcomp=Z,28μmcomp=Z,2μm,0.6s						
BKSI				S	**Sn**	**20 52 06.3**	**-1.3**
	comp=Z,4μmcomp=Z,28μmcomp=Z,2μm,0.6s						
KAPI	**Kappang**	**10.28**	**229**	P	**Pn**	**20 50 15.0**	**-0.3**
	comp=Z,58nm,0.3s,baz=75,slow=3.7,SNR=222						
KAPI				S	**Sn**	**20 52 06.4**	**-2.8**
	comp=Z,124nm,0.3s,baz=225,slow=23,SNR=16						
KAPI				LR	LR	20 54 13.7	
	comp=Z,2μm,21.5s,baz=36,slow=37						
SAUI	**Saumlaki**	**10.39**	**159**	P	**Pn**	**20 50 16.2**	**-0.7**
	comp=Z,7μmcomp=Z,6μmcomp=Z,435nm,1.0s						
SAUI	**Saumlaki**	**10.39**	**159**		**Pn**	**20 50 16.3**	**-0.6**
SMKI	**Samarinda**	**10.55**	**258**	P	**Pn**	**20 50 19.2**	**+0.3**
	comp=Z,12μmcomp=Z,862nm,0.8s						
RCP	**Roxas**	**10.82**	**334**	⇑*e*P	**Pn**	**20 50 23.4**	**+0.9**
BKB	**Balikpapan**	**11.04**	**254**	P	**Pn**	**20 50 24.7**	**-0.8**
	comp=Z,3μmcomp=Z,7μmcomp=Z,783nm,1.0s						
BKB	**Balikpapan**	**11.04**	**254**		**Pn**	**20 50 25.1**	**-0.4**
SPMM	**Sapulut**	**11.42**	**285**	P	**Pn**	**20 50 34.0**	**+3.6**

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MMRI  Maumere          11.60 207   P      Pn      20 50 33.1 +0.3
        comp=Z,5µmcomp=Z,11µmcomp=Z,961nm,1.5s
MMRI  Maumere          11.60 207          Pn      20 50 32.5 -0.2
SOEI  Soe              11.90 196   P      Pn      20 50 38.5 +1.8
        comp=Z,7µmcomp=Z,12µmcomp=Z,1µm,0.9s
SOEI  Soe              11.90 196          Pn      20 50 38.6 +1.9
EDFI  Ende, Flores     11.96 209   P      Pn      20 50 38.3 +0.8
KKM   Kota Kinabalu    12.05 291          Pn      20 50 38.6 -0.1
GENI  Genyem           13.36 109   P      Pn      20 50 56.7 +1.2
        comp=Z,6µmcomp=Z,37µmcomp=Z,3µm,1.1s
BASI  Baing, Sumba     13.77 210   P      Pn      20 51 00.2 -0.5
        comp=Z,2µmcomp=Z,10µmcomp=Z,1µm,1.0s
JAY   Jayapura         13.85 108   P      Pn      20 51 02.2 +0.5
        comp=Z,3µmcomp=Z,3µmcomp=Z,421nm,0.9s
JAY   Jayapura         13.85 108   P      Pn      20 51 02.3 +0.5
JAY                                pmax   pmax
        comp=Z,665nm,0.9s
TGY   Tagaytay City    13.88 332   P      Pn      20 51 02.2 +0.1
        comp=Z,22nm,0.3s,baz=288,slow=4.5,SNR=9.5
WBSI  Waikabubak, Su   13.93 215   P      Pn      20 51 02.5 -0.3
        comp=Z,10µmcomp=Z,1µm,0.8s
PLAI  Plampang         14.32 223   P      P       20 51 09.3 -1.1
        comp=Z,8µmcomp=Z,27µmcomp=Z,3µm,1.3s
MTN   Manton Dam       14.95 166   P      Pn      20 51 13.9 -1.6
        baz=15,SNR=123
MTN   Manton Dam       14.95 166   P      Pn      20 51 13.4 -2.1
KDU   Kakadu           15.18 161   P      Pn      20 51 16.6 -1.7
        baz=15,SNR=54
SBUM  Sibu             15.31 273   P      Pn      20 51 19.1 -0.8
SBUM                               IAmb   IAmb    20 51 25.6
        comp=Z,212nm,1.0s
SBUM  Sibu             15.31 273   P      P       20 51 21.0 -0.3
SRBI  Singaraja        15.70 231   P      P       20 51 26.9 +1.2
        comp=Z,7µmcomp=Z,16µmcomp=Z,1µm,1.1s
DNP   Denpasar         16.07 230   P      P       20 51 32.8 +3.0
        comp=Z,47µmcomp=Z,4µm,1.0s
DNP   Denpasar         16.07 230   P      P       20 51 32.9 +3.1
DNP                                pmax   pmax
        comp=Z,4µm,1.0s
KMMI  Kalianget        16.12 237   P      P       20 51 32.8 +2.5
        comp=Z,18µmcomp=Z,2µm,1.0s
JAGI  Jajag, Banyuwa   16.77 232   P      Pn      20 51 39.7 +1.9
        comp=Z,10µmcomp=Z,18µmcomp=Z,822nm,0.8s
JAGI  Jajag, Banyuwa   16.77 232          Pn      20 51 39.2 +1.4
SZP   Santa            17.15 337   P      P       20 51 40.0 -1.6
SZP                                IAmb   IAmb    20 51 49.2
        comp=Z,179nm,0.9s
KSM   Kuching          17.21 269   P      Pn      20 51 43.3 +0.2
KSM                                IAmb   IAmb    20 51 46.7
        comp=Z,444nm,0.9s
KSM   Kuching          17.21 269   P      Pn      20 51 44.0 +0.9
GRJI  Gresik           17.32 240   P      Pn      20 51 46.2 +1.8
        comp=Z,797nmcomp=Z,7µmcomp=Z,583nm,1.1s
KNRA  Kununurra        17.38 176   P      P       20 51 44.1  0.0
        baz=17,SNR=210
KNRA  Kununurra        17.38 176   P      P       20 51 43.9 -0.2
KNRA                               IAmb   IAmb    20 51 45.4
        comp=Z,327nm,0.9s
PCJI  Pacitan          19.07 239   P      Pn      20 52 04.5 -0.6
        comp=Z,30µmcomp=Z,3µm,1.3s
WOJI  Wonogiri, Jawa   19.11 240   P      Pn      20 52 04.7 -0.9
        comp=Z,7µmcomp=Z,891nm,1.4s
SMRI  Semarang         19.17 243   P      Pn      20 52 05.6 -0.6
        comp=Z,6µmcomp=Z,20µmcomp=Z,2µm,1.2s
SMRI  Semarang         19.17 243   P      P       20 52 04.9 +1.2
UGM   Wanagama         19.49 240   P      Pn      20 52 09.3 -0.8
        comp=Z,4µmcomp=Z,14µmcomp=Z,1µm,1.3s
UGM   Wanagama         19.49 240   P      P       20 52 08.6 +1.3
FITZ  Fitzroy Crossi   19.83 185   P      P       20 52 10.0 -0.8
        baz=20,SNR=147
FITZ  Fitzroy Crossi   19.83 185   P      P       20 52 09.9 -0.9
        comp=Z,2.8nm,0.3s,baz=19,slow=10,SNR=143
FITZ                               S      S       20 55 42.2 -3.8
        comp=Z,0.5nm,0.3s,baz=173,slow=16,SNR=6.4
FITZ  Fitzroy Crossi   19.83 185   P      P       20 52 09.9 -0.9
GUMO  Guam             20.79  55   P      P       20 52 18.6 -2.5
        comp=Z,90nm,0.5s,baz=12,slow=3.1,SNR=3.6
GUMO                               LR     LR      20 59 13.1
        comp=Z,862nm,21.2s,baz=254,slow=33
GUMO  Guam             20.79  55   P      P       20 52 20.5 -0.7
GUMO                               pmax   pmax
        comp=Z,490nm,1.4s
GUMO  Guam             20.79  55   P      P       20 52 20.5 -0.7
GUMO                               IAmb   IAmb    20 52 20.9
        comp=Z,490nm,1.4s
DLV   T  Lat           21.41 299   P      P       20 52 28.1 +0.1
DLV                                IAmb   IAmb    20 53 11.0
        comp=Z,138nm,1.0s
LEM   Lembang          21.63 247   P      P       20 52 29.9 -0.4
        comp=Z,724nm,0.9s,baz=65,slow=7.5,SNR=39
CISI  Cisompet, Garu   21.73 245   P      P       20 52 30.7 -0.6
        comp=Z,5µmcomp=Z,722nm,0.9s
CISI  Cisompet, Garu   21.73 245   P      P       20 52 30.0 -1.3
TWG   Pinlang          21.84 344   P      P       20 52 29.9 -2.4
TWG                                IAmb   IAmb    20 52 38.4
        comp=Z,323nm,0.8s
COEN  Coen             22.02 136   P      P       20 52 31.6 -2.6
COEN                               IAmb   IAmb    20 52 35.1
        comp=Z,187nm,0.9s
CNJI  Cibinong         22.26 246   P      P       20 52 37.1 +0.6
        comp=Z,8µmcomp=Z,950nm,0.9s
DBJI  Dramaga          22.32 248   P      P       20 52 37.1 -0.1
        comp=Z,7µmcomp=Z,467nm,1.4s
YULB  Yu-li            22.33 345   P      P       20 52 35.7 -1.4
TPUB  Ta-pu            22.42 343   P      P       20 52 36.7 -1.3
TPUB                               IAmb   IAmb    20 52 42.4
        comp=Z,148nm,0.8s
PMG   Port Moresby     22.49 120   P      P       20 52 37.8 -1.0
        comp=Z,151nm,0.9s,baz=317,slow=4.9,SNR=27
PMG   Port Moresby     22.49 120ceP    P       20 52 37.5 -1.3
PMG                                pmax   pmax
        comp=Z,737nm,1.0s
PMG   Port Moresby     22.49 120   P      P       20 52 37.6 -1.1
PMG                                IAmb   IAmb    20 52 41.8
        comp=Z,200nm,1.0s
WRAB  Tennant Creek    22.58 163ceP    P       20 52 39.0 -0.6
WRAB                               pmax   pmax
        comp=Z,670nm,1.0s
WRAB  Tennant Creek    22.58 163   P      P       20 52 38.8 -0.8
SKJI  Sukabumi         22.67 247   P      P       20 52 40.7 +0.3
        comp=Z,7µmcomp=Z,764nm,1.0s
SSLB  Suanglung        22.80 344   P      P       20 52 40.7 -0.8
YOJ   Yonaguni jima    22.98 349   P      P       20 52 43.7 +0.6
YOJ                                pmax   pmax
        comp=Z,353nm,1.2s
YOJ   Yonaguni jima    22.98 349   P      P       20 52 43.7 +0.6
YOJ                                IAmb   IAmb    20 53 25.4
        comp=Z,353nm,1.2s
NACB  Ninganchiao      23.00 346   P      P       20 52 43.8 +0.4
TPRI  Tanjung Pinang   23.01 268   P      P       20 52 44.4 +0.8
        comp=Z,4µmcomp=Z,433nm,1.3s
PMBI  Palembang        23.22 258   P      P       20 52 48.0 +2.5
        comp=Z,2µmcomp=Z,12µmcomp=Z,1µm,1.0s
PMBI  Palembang        23.22 258   P      P       20 52 46.3 +0.8
YHNB  Yeheng           23.53 346   P      P       20 52 48.7 +0.4
YHNB                               IAmb   IAmb    20 52 54.2
        comp=Z,161nm,0.9s
MYKOM Kota Tinggi      23.66 270   P      P       20 52 50.6 +1.0
MYKOM                              IAmb   IAmb    20 52 52.5
        comp=Z,279nm,0.8s
MYKOM Kota Tinggi      23.66 270   P      P       20 52 51.0 +1.4
TATO  Taipei           23.80 346   P      P       20 52 50.4 -0.2
MBWA  Marble Bar       24.03 198   P      P       20 52 52.6 -0.2
KASI  Kota Agung       24.11 252   P      P       20 52 54.2 +0.5
        comp=Z,4µmcomp=Z,556nm,0.8s
MDSI  Maura Dua        24.14 255   P      P       20 52 54.7 +0.8
        comp=Z,3µmcomp=Z,162nm,1.5s
HKPS  Hong Kong Po S   24.18 328   P      P       20 52 55.0 +0.8
KNMB  Chin-men Tao     24.23 339   P      P       20 52 54.9 +0.3
KNMB                               IAmb   IAmb    20 52 58.2
        comp=Z,112nm,0.9s
PSAD1 Pilbara Seismi   24.28 198   P      P       20 52 54.7 -0.3
PSAD1                              IAmb   IAmb    20 53 38.9
        comp=Z,114nm,1.0s
PSAC1 Pilbara Seismi   24.36 198   P      P       20 52 55.7 -0.1
PSAC2 Pilbara Seismi   24.36 197   P      P       20 52 55.3 -0.5
PSAC2                              IAmb   IAmb    20 53 00.2
        comp=Z,116nm,0.8s
PSAB2 Pilbara Seismi   24.36 198   P      P       20 52 55.8 -0.1
PSAB2                              IAmb   IAmb    20 53 13.2
        comp=Z,91nm,0.8s
PSAA2 Pilbara Seismi   24.37 198   P      P       20 52 55.7 -0.2
PSAA2                              IAmb   IAmb    20 53 12.9
        comp=Z,103nm,0.9s
QIZ   Qiongzhong       24.38 316   P      P       20 52 57.3 +1.3
QIZ                                pP     pP      20 53 26.0 -0.1
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QIZ                                S      S       20 57 05.3 +0.5
QIZ                                sS     sS      20 58 01.5 +1.7
QIZ                                pmax   pmax
        comp=Z,58nm,1.2s
QIZ                                pmax   pmax
        comp=Z,360nm,2.6s
QIZ                                LR     LR
        comp=Z,1µm,15.7s
QIZ                                LR     LR
        comp=Z,850nm,18.6s
QIZ                                LR     LR
        comp=Z,630nm,19.1s
PSA00 Pilbara Seismi   24.38 198   P      P       20 52 55.6 -0.4
PSA00                              IAmb   IAmb    20 53 13.0
        comp=Z,97nm,0.9s
PSA00 Pilbara Seismi   24.38 198   P      P       20 52 55.6 -0.4
PSA00                              IAmb   IAmb    20 53 00.1
        comp=Z,48nm,0.8s
PSAA3 Pilbara Seismi   24.39 198   P      P       20 52 55.3 -0.8
PSAA3                              IAmb   IAmb    20 53 00.5
        comp=Z,100nm,0.9s
PSAB1 Pilbara Seismi   24.39 198   P      P       20 52 55.6 -0.5
PSAB1                              IAmb   IAmb    20 53 13.5
        comp=Z,83nm,0.8s
PSAA1 Pilbara Seismi   24.39 198   P      P       20 52 55.3 -0.8
PSAA1                              IAmb   IAmb    20 53 44.3
        comp=Z,200nm,1.3s
PSAD2 Pilbara Seismi   24.39 197   P      P       20 52 56.0 -0.1
PSAD2                              IAmb   IAmb    20 53 00.5
        comp=Z,91nm,0.8s
LWLI  Liwa             24.39 254   P      P       20 52 57.3 +1.0
        comp=Z,403nm,1.0s
PSAB3 Pilbara Seismi   24.40 197   P      P       20 52 55.7 -0.5
PSAB3                              IAmb   IAmb    20 53 00.6
        comp=Z,110nm,0.9s
PSAC3 Pilbara Seismi   24.43 198   P      P       20 52 56.1 -0.3
PSAD3 Pilbara Seismi   24.47 198   P      P       20 52 56.5 -0.4
PSAD3                              IAmb   IAmb    20 53 21.2
        comp=Z,92nm,0.9s
QZH   Quanzhou         24.60 340⇓iP    P       20 52 59.8 +1.9
QZH                                S      S       20 57 05.5 -2.6
QZH                                pmax   pmax
        comp=Z,130nm,0.7s
QZH                                pmax   pmax
        comp=Z,720nm,3.3s
QZH                                LR     LR
        comp=Z,460nm,20.6s
QZH                                LR     LR
        comp=Z,430nm,23.5s
QZH                                LR     LR
        comp=Z,890nm,15.2s
JOW   Kunigami         24.93   2   P      P       20 53 01.2 +0.3
        comp=Z,8.8nm,0.8s,baz=178,slow=14,SNR=23
JOW   Kunigami         24.93   2   P      P       20 53 01.4 +0.5
JOW                                IAmb   IAmb    20 53 42.4
        comp=Z,128nm,1.0s
XMIS  Christmas Isla   24.94 240   P      P       20 53 01.1 -0.1
QIS   Mount Isa        25.15 153   P      P       20 53 02.9 -0.1
        baz=25,SNR=120
KRVT  Keravat (AS076   25.22 104   P      P       20 53 02.6 -1.1
        comp=Z,238nm,0.9s,baz=139,slow=6.7,SNR=16
MNAI  Manna            25.29 256   P      P       20 53 06.9 +2.5
        comp=Z,7µmcomp=Z,840nm,1.1s
MNAI  Manna            25.29 256   P      P       20 53 05.0 +0.6
RABL  Rabaul           25.32 104   P      P       20 53 04.3 -0.4
RABL                               IAmb   IAmb    20 53 07.3
        comp=Z,193nm,0.8s
KSI   Kapahiang        25.49 258   P      P       20 53 08.5 +2.2
        comp=Z,5µmcomp=Z,532nm,0.8s
KSI   Kapahiang        25.49 258   P      P       20 53 07.7 +1.4
KSI                                pmax   pmax
        comp=Z,532nm,0.8s
MTSU  Mount Surprise   25.78 141   P      P       20 53 09.0 +0.3
        baz=26,SNR=88
AS31  Alice Springs    26.03 167   P      P       20 53 10.3 -0.7
ASAR  Alice Springs    26.03 167   P      P       20 53 10.4 -0.5
        comp=Z,92nm,0.6s,baz=345,slow=6.9,SNR=910
ASAR                               PcP    PcP     20 56 35.6 +0.4
        comp=Z,19nm,0.7s,baz=353,slow=2.5,SNR=9.3
ASAR                               S      S       20 57 32.0 +1.1
        comp=Z,29nm,1.1s,baz=345,slow=19,SNR=4.4
ASAR                               ScP    ScP     21 00 00.1 -0.9
        comp=Z,18nm,0.7s,baz=345,slow=2.7,SNR=9.3
ASAR                               LR     LR      21 03 48.8
        comp=Z,834nm,20.6s,baz=336,slow=37
ASAR  Alice Springs    26.03 167   P      P       20 53 10.3 -0.7
SDSI  Sungai Dareh     26.23 264   P      P       20 53 15.5 +2.7
        comp=Z,2µmcomp=Z,87nm,0.8s
KRJI  Kerinci          26.34 262   P      P       20 53 16.1 +2.2
        comp=Z,8µmcomp=Z,483nm,1.3s
BKNI  Bangkinang       26.52 267   P      P       20 53 18.3 +2.9
        comp=Z,2µmcomp=Z,130nm,1.1s
BKNI  Bangkinang       26.52 267   P      P       20 53 15.8 +0.4
BKNI                               IAmb   IAmb    20 53 50.7
        comp=Z,173nm,1.1s
IPM   Ipoh             26.59 276   P      P       20 53 16.3 +0.1
IPM                                IAmb   IAmb    20 53 53.8
        comp=Z,205nm,1.3s
IPM   Ipoh             26.59 276   P      P       20 53 17.0 +0.9
WRKA  Warakurna        26.66 178   P      P       20 53 16.1 -0.5
        baz=27,SNR=297
KULM  Kulim            27.05 278   P      P       20 53 20.4 +0.2
KULM                               IAmb   IAmb    20 53 57.0
        comp=Z,310nm,1.9s
KULM  Kulim            27.05 278   P      P       20 53 21.0 +0.8
PDSI  Padang           27.19 265   P      P       20 53 22.7 +1.2
        comp=Z,719nmcomp=Z,27nm,1.1s
GIRL  Giralia          27.51 207   P      P       20 53 24.2 +0.1
        baz=28,SNR=7.9
GIRL  Giralia          27.51 207   P      P       20 53 24.2 +0.1
GIRL                               IAmb   IAmb    20 53 27.0
        comp=Z,204nm,1.0s
PPSI  Pulau Pagai      27.87 261   P      P       20 53 28.4 +0.9
        comp=Z,4µmcomp=Z,258nm,1.3s
CTA   Charters Tower   28.45 141   P      P       20 53 33.5 +0.9
        comp=Z,84nm,1.0s,baz=324,slow=12,SNR=32
CTA                                PcP    PcP     20 56 41.8 +0.7
        comp=Z,16nm,0.8s,baz=323,slow=5.1,SNR=3.2
CTAO  Charters Tower   28.45 141   P      P       20 53 33.5 +0.9
RPSI  Rantau Prapat    28.59 272   P      P       20 53 33.7 -0.2
RPSI                               IAmb   IAmb    20 53 37.3
        comp=Z,85nm,1.0s
PSI   Prapat           28.59 273   P      P       20 53 34.4 +0.3
        comp=Z,53nm,1.0s,baz=83,slow=5.7,SNR=43
SISI  Saibi            28.60 264   P      P       20 53 36.4 +2.4
        comp=Z,64nm,1.1s
JCJ   Chichijima       28.84  28   P      P       20 53 34.6 -1.4
        comp=Z,145nm,0.8s,baz=230,slow=13,SNR=11
MEEK  Meekatharra      29.52 196   P      P       20 53 41.6 -0.4
        baz=30,SNR=43
GSI   Gunungsitoli     29.94 270   P      P       20 53 45.9  0.0
        comp=Z,9µmcomp=Z,774nm,1.2s
GSI   Gunungsitoli     29.94 270   P      P       20 53 45.4 -0.4
GSI                                IAmb   IAmb    20 53 47.2
        comp=Z,151nm,0.9s
PBKT  Sadao Pong       29.99 301   P      P       20 53 46.8 +0.6
SLVN  Son La           30.13 312   P      P       20 53 48.4 +0.9
NJ2   Nanjing          31.21 346  eP      P       20 53 57.0 +0.2
NJ2                                pP     pwP     20 54 33.3 +2.2
NJ2                                sP     sP      20 54 45.3 +0.3
NJ2                                S      S       20 58 54.8 +2.9
NJ2                                sS     sS      20 59 50.5 +2.5
NJ2                                pmax   pmax
        comp=Z,15nm,0.5s
NJ2                                LR     LR
        comp=Z,500nm,16.8s
NJ2                                LR     LR
        comp=Z,520nm,18.2s
NJ2                                LR     LR
        comp=Z,580nm,19.9s
WHN   Wuhan            31.23 338  ⇓P      P       20 53 59.5 +2.6
WHN                                S      S       20 58 54.0 +1.8
WHN                                sS     sS      20 59 55.5 +7.3
WHN                                pmax   pmax
        comp=Z,110nm,0.7s
WHN                                LR     LR
        comp=Z,3µm,25.5s
WHN                                LR     LR
        comp=Z,1µm,15.5s
WHN                                LR     LR
        comp=Z,2µm,19.2s
JNU   Nakatsue         31.35   5   P      P       20 53 58.0  0.0
        comp=Z,27nm,0.9s,baz=147,slow=2.9,SNR=14
JNU   Nakatsue         31.35   5   P      P       20 53 57.9  0.0
JNU                                IAmb   IAmb    20 55 01.8
        comp=Z,67nm,1.0s
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GYA   Guiyang          31.69 323⇑iP    P       20 54 03.5 +2.3
GYA                                pP     pwP     20 54 36.8 +1.3
GYA                                sP     sP      20 54 54.0 +4.4
GYA                                PP     PnPn    20 55 13.8 +2.1
GYA                                PcP    PcP     20 56 50.5 +0.9
GYA                                S      S       20 59 02.5 +2.6
GYA                                sS     sS      20 59 58.5 +2.5
GYA                                ScP    ScP     21 00 19.3 +0.3
GYA                                SS     SS      21 01 15.5 -6.8
GYA                                ScS    ScS     21 04 16.5 -1.1
GYA                                pmax   pmax
        comp=Z,20nm,1.0s
GYA                                pmax   pmax
        comp=Z,130nm,4.9s
FORT  Forrest          32.37 179   P      P       20 54 06.6 -0.3
        baz=32,SNR=49
FORT  Forrest          32.37 179   P      P       20 54 06.1 -0.8
QLP   Quilpie          32.48 151   P      P       20 54 07.6 -0.3
        baz=32,SNR=17
CM31  Chiang Mai Arr   32.56 302   P      P       20 54 09.8 +0.9
CMAR  Chiang Mai Arr   32.56 302   P      P       20 54 09.8 +0.9
        comp=Z,9.7nm,1.0s,baz=121,slow=7.0,SNR=65
CMAR                               PcP    PcP     20 56 53.8 +1.8
        comp=Z,11nm,0.9s,baz=127,slow=1.9,SNR=8.6
CMAR                               ScP    ScP     21 00 23.0 +1.0
        comp=Z,13nm,0.9s,baz=150,slow=2.3,SNR=18
CMAR                               PKiKP  PKiKP   21 04 18.9 -0.2
        comp=Z,1.1nm,0.8s,baz=274,slow=0.7,SNR=5.1
CMAR                               LR     LR      21 10 06.2
        comp=Z,323nm,18.2s,baz=136,slow=41
CMAR  Chiang Mai Arr   32.56 302ceP    P       20 54 10.6 +1.8
CMAR                               pmax   pmax
        comp=Z,10.0nm,1.0s
CMAR  Chiang Mai Arr   32.56 302   P      P       20 54 09.6 +0.8
MORW  Morawa           32.58 199   P      P       20 54 08.6 -0.2
        baz=33,SNR=35
MORW  Morawa           32.58 199   P      P       20 54 08.3 -0.4
CHTO  Chiang Mai       32.73 303   P      P       20 54 11.2 +0.9
CHTO                               pmax   pmax
        comp=Z,49nm,1.1s
CHTO  Chiang Mai       32.73 303   P      P       20 54 11.2 +0.9
ENH   Enshi            33.11 331   IAmb   IAmb    20 54 16.6
        comp=Z,54nm,0.8s
KMI   Kunming          33.33 316   P      P       20 54 17.8 +2.2
KMI                                pP     pwP     20 54 51.8 +1.9
KMI                                sP     sP      20 55 06.5 +2.4
KMI                                PP     PP      20 55 34.0 -0.1
KMI                                S      S       20 59 29.0 +3.5
KMI                                sS     ScP     21 00 31.3 +6.5
KMI                                pmax   pmax
        comp=Z,20nm,0.6s
KMI                                pmax   pmax
        comp=Z,180nm,4.4s
KMI                                LR     LR
        comp=Z,390nm,14.5s
KMI                                LR     LR
        comp=Z,500nm,17.2s
KMI                                LR     LR
        comp=Z,730nm,20.1s
COCO  West Island      33.49 245   P      P       20 54 17.0 +0.1
COCO                               pmax   pmax
        comp=Z,247nm,1.2s
COCO  West Island      33.49 245   P      P       20 54 17.0 +0.1
BLDU  Ballidu          33.81 197   P      P       20 54 19.0 -0.4
        baz=34,SNR=44
HNR   Honiara          34.16 110   P      P       20 54 21.2 -1.5
HNR                                pmax   pmax
        comp=Z,153nm,1.2s
HNR   Honiara          34.16 110   P      P       20 54 21.2 -1.5
HNR                                IAmb   IAmb    20 54 22.2
        comp=Z,153nm,1.2s
TJN   Taejon           34.44 360ceP    P       20 54 26.0 +1.2
KLBR  Kellerberrin     34.45 195   P      P       20 54 24.6 -0.3
        baz=34,SNR=83
INU   Inuyama          34.56  14   P      P       20 54 25.8  0.0
INU                                IAmb   IAmb    20 54 27.1
        comp=Z,77nm,1.1s
RMQ   Roma             34.77 145   P      P       20 54 27.9  0.0
        baz=35,SNR=23
MUN   Mundaring        35.24 197   P      P       20 54 31.6 -0.1
        baz=35,SNR=21
BBOO  Buckleboo        35.33 168   P      P       20 54 32.1 -0.4
        baz=35,SNR=414
BBOO  Buckleboo        35.33 168   P      P       20 54 32.0 -0.4
EIDS  Eidsvold         35.33 141   P      P       20 54 32.5 -0.1
        baz=35,SNR=49
EIDS  Eidsvold         35.33 141   P      P       20 54 32.0 -0.6
KSAR  Wonju Array Be   35.50   0   P      P       20 54 34.4 +0.5
KSAR  Wonju Array Be   35.50   0   P      P       20 54 34.4 +0.5
KSRS  Korea Array      35.51   1   P      P       20 54 34.8 +0.8
        comp=Z,21nm,1.0s,baz=178,slow=9.7,SNR=67
KSRS                               PcP    PcP     20 57 00.6 +0.6
        comp=Z,21nm,0.9s,baz=186,slow=3.1,SNR=15
KSRS                               S      S       21 00 01.1 +2.8
        comp=Z,0.7nm,0.4s,baz=188,slow=18,SNR=4.1
KSRS                               ScP    ScP     21 00 31.6 -0.4
        comp=Z,11nm,0.9s,baz=186,slow=3.8,SNR=15
INCN  Inchon           35.55 359   P      P       20 54 34.2 -0.1
INCN                               pmax   pmax
        comp=Z,25nm,0.9s
INCN  Inchon           35.55 359   P      P       20 54 34.2 -0.1
KS19  Wonju Array Si   35.56   0   P      P       20 54 34.6 +0.2
TIA   Tai'an           35.60 345   P      P       20 54 35.5 +0.7
TIA                                S      S       20 59 58.8 -0.9
TIA                                pmax   pmax
        comp=Z,18nm,0.7s
TIA                                LR     LR
        comp=Z,140nm,9.5s
TIA                                LR     LR
        comp=Z,420nm,14.2s
TIA                                LR     LR
        comp=Z,430nm,16.2s
NWAO  Narrogin (SRO)   35.85 195   P      P       20 54 36.8 -0.1
        baz=36,SNR=43
NWAO  Narrogin (SRO)   35.85 195   P      P       20 54 37.0  0.0
NWAO                               pmax   pmax
        comp=Z,32nm,0.6s
NWAO  Narrogin (SRO)   35.85 195   P      P       20 54 37.0  0.0
NWAO  Narrogin (SRO)   35.85 195   P      P       20 54 36.9  0.0
NWAO                               IAmb   IAmb    20 54 37.6
        comp=Z,25nm,0.6s
MAJO  Matsushiro       35.98  15   P      P       20 54 37.0 -1.1
MAJO                               pmax   pmax
        comp=Z,92nm,1.1s
MAJO  Matsushiro       35.98  15   P      P       20 54 37.0 -1.1
MAJO                               IAmb   IAmb    20 54 39.3
        comp=Z,92nm,1.1s
MAT   Matsushiro       35.98  15   P      P       20 54 36.8 -1.3
MAT                                S      S       21 00 00.0 -5.6
MJAR  Matsushiro Arr   35.98  15   P      P       20 54 37.0 -1.0
        comp=Z,35nm,0.7s,baz=184,slow=9.5,SNR=92
MJAR                               PcP    PcP     20 57 02.3 +0.9
        comp=Z,23nm,0.8s,baz=188,slow=3.4,SNR=9.2
MJAR                               S      S       21 00 03.3 -2.3
        comp=Z,4.9nm,1.0s,baz=184,slow=14,SNR=4.3
MJAR                               ScP    ScP     21 00 33.5 -0.3
        comp=Z,10nm,1.0s,baz=213,slow=4.0,SNR=7.2
MJAR  Matsushiro Arr   35.98  15          ScP     21 00 33.9 +0.1
MJAR  Matsushiro Arr   35.98  15   P      P       20 54 36.5 -1.6
MJB9  Matsu-Tunnel     35.99  15   P      P       20 54 37.6 -0.5
MJB9                               IAmb   IAmb    20 54 39.3
        comp=Z,94nm,1.1s
STKA  Stephens Creek   36.03 159   P      P       20 54 38.5  0.0
        baz=36,SNR=329
STKA  Stephens Creek   36.03 159   P      P       20 54 38.5  0.0
        comp=Z,272nm,0.9s,baz=334,slow=8.4,SNR=358
STKA                               PcP    PcP     20 57 01.7  0.0
        comp=Z,41nm,0.8s,baz=334,slow=6.7,SNR=3.8
STKA                               S      S       21 00 04.6 -1.7
        comp=Z,48nm,1.0s,baz=134,slow=18,SNR=11
STKA                               LR     LR      21 10 31.4
        comp=Z,741nm,20.8s,baz=315,slow=38
STKA  Stephens Creek   36.03 159   P      P       20 54 38.2 -0.2
STKA                               IAmb   IAmb    20 54 39.7
        comp=Z,56nm,0.8s
XAN   Xi'an            36.51 334   P      P       20 54 44.0 +1.4
XAN                                pP     pwP     20 55 21.5 +4.0
XAN                                S      S       21 00 15.0 +1.2
XAN                                SS     SS      21 02 59.3 -0.6
XAN                                pmax   pmax
        comp=Z,34nm,0.7s
XAN                                pmax   pmax
        comp=Z,170nm,3.5s
XAN                                LR     LR
        comp=Z,710nm,19.2s
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XAN				LR	LR		
	comp=Z,730nm,21.8s						
XAN				LR	LR		
	comp=Z,510nm,25.0s						
XAN	**Xi'an**	**36.51**	**334**	IAmb	IAmb	20 54 45.0	
	comp=Z,63nm,0.8s						
HTT	**Hallett**	**36.62**	**164**	P	**P**	**20 54 43.6**	**+0.1**
	baz=37,SNR=31						
CD2	**Chengdu**	**36.69**	**325**	P	**P**	**20 54 45.5**	**+1.3**
CD2				pP	pwP	20 55 17.8	-1.3
CD2				sP	sP	20 55 32.8	-0.1
CD2				S	**S**	**21 00 18.0**	**+1.5**
CD2				sS	sS	21 01 20.8	+7.5
CD2				SS	**SS**	**21 03 00.8**	**-2.7**
CD2				pmax	pmax		
	comp=Z,50nm,1.0s						
CD2				pmax	pmax		
	comp=Z,110nm,3.6s						
CD2				LR	LR		
	comp=Z,1µm,18.1s						
CD2				LR	LR		
	comp=Z,1µm,18.1s						
CD2				LR	LR		
	comp=Z,570nm,13.7s						
CMSA	**Cobar Meteorol**	**37.35**	**154**	P	**P**	**20 54 49.8**	**+0.2**
	baz=37,SNR=35						
DL2	**Dalian**	**37.35**	**352**	P	**P**	**20 54 50.5**	**+1.0**
DL2				PcP	**PcP**	**20 57 06.0**	**+0.5**
DL2				S	**S**	**21 00 29.0**	**+2.8**
DL2				ScP	**ScP**	**21 00 39.0**	**+0.2**
DL2				pmax	pmax		
	comp=Z,20nm,0.8s						
DL2				pmax	pmax		
	comp=Z,96nm,5.0s						
RKGY	**Rocky Gully**	**37.52**	**194**	P	**P**	**20 54 52.1**	**+1.1**
	baz=38,SNR=51						
TIY	**Taiyuan**	**38.37**	**341**	*e*P	**P**	**20 54 59.8**	**+1.6**
TIY				pP	**pwP**	**20 55 33.3**	**-0.1**
TIY				PP	**PP**	**20 56 33.5**	**+4.3**
TIY				S	**S**	**21 00 42.5**	**+0.7**
TIY				pmax	pmax		
	comp=Z,40nm,0.5s						
TIY				LR	LR		
	comp=Z,390nm,15.9s						
TIY				LR	LR		
	comp=Z,130nm,7.6s						
TIY				LR	LR		
	comp=Z,330nm,21.2s						
ARMA	**Armidale**	**39.40**	**146**	P	**P**	**20 55 07.8**	**+0.8**
	baz=40,SNR=84						
ARMA	**Armidale**	**39.40**	**146**	P	**P**	**20 55 07.4**	**+0.4**
BJT	**Baijiatuau**	**39.45**	**346**	IAmb	IAmb	20 55 45.7	
	comp=Z,73nm,1.0s						
BJI	**Beijing**	**39.47**	**346**	P	**P**	**20 55 08.0**	**+0.8**
BJI				pP	**pP**	**20 55 41.0**	**+1.6**
BJI				sP	**sP**	**20 55 56.3**	**+0.1**
BJI				PcP	**PcP**	**20 57 13.5**	**+1.4**
BJI				S	**S**	**21 00 58.0**	**0.0**
BJI				sS	**sS**	**21 01 56.5**	**+1.2**
BJI				ScS	**ScS**	**21 05 01.0**	**+1.7**
BJI				pmax	pmax		
	comp=Z,58nm,0.7s						
BJI				LR	LR		
	comp=Z,220nm,15.6s						
BJI				LR	LR		
	comp=Z,440nm,17.6s						
SNY	**Shenyang**	**40.04**	**355**	⇓P	**P**	**20 55 12.5**	**+0.6**
SNY				pP	**pP**	**20 55 40.5**	**-3.4**
SNY				PP	**PP**	**20 56 46.5**	**-0.7**
SNY				S	**S**	**21 01 07.0**	**+0.6**
SNY				pmax	pmax		
	comp=Z,23nm,0.7s						
SNY				LR	LR		
	comp=Z,310nm,16.1s						
SNY				LR	LR		
	comp=Z,320nm,17.9s						
BRDH	**Bariadhala**	**40.56**	**304**	P	**P**	**20 55 18.1**	**+1.7**
	comp=Z,103nm,0.4s,baz=99,slow=12,SNR=3.5						
LZH	**Lanzhou**	**40.59**	**330**	⇑P	**P**	**20 55 18.3**	**+1.6**
LZH				pP	pwP	20 55 55.0	+2.7
LZH				sP	sP	20 56 12.3	+6.5
LZH				S	**S**	**21 01 12.0**	**-3.1**
LZH				sS	sS	21 02 14.0	+1.3
LZH				SS	**SS**	**21 04 20.0**	**-1.4**
LZH				pmax	pmax		
	comp=Z,83nm,1.2s						
LZH				pmax	pmax		
	comp=Z,370nm,5.4s						
LZH				LR	LR		
	comp=Z,1µm,17.5s						
LZH				LR	LR		
	comp=Z,1µm,17.4s						
LZH				LR	LR		
	comp=Z,2µm,18.7s						
ARPS	**Mount Arapiles**	**40.59**	**162**	P	**P**	**20 55 17.1**	**+0.6**
	baz=41,SNR=104						
MSHR	**Mys Shultsa**	**40.76**	**4**	*i* P	**P**	**20 55 18.8**	**+1.0**
YNG	**Young**	**40.89**	**153**	P	**P**	**20 55 19.9**	**+0.9**
	baz=41,SNR=13						
VLA	**Vladivostok**	**41.35**	**5**	*i* P	**P**	**20 55 23.0**	**+0.3**
VLA				pmax	pmax		
	comp=Z,95nm,1.5s						
HHC	**Hu-ho-hao-te**	**41.50**	**342**	*e*P	**P**	**20 55 25.5**	**+1.5**
HHC				pP	pP	20 55 57.8	+1.3
HHC				sP	sP	20 56 11.3	-1.9
HHC				PP	**PP**	**20 57 04.5**	**+1.4**
HHC				S	**S**	**21 01 31.0**	**+2.6**
HHC				SS	**SS**	**21 04 38.5**	**-0.6**
HHC				pmax	pmax		
	comp=Z,260nm,0.9s						
HHC				pmax	pmax		
	comp=Z,1µm,4.9s						
CN2	**Changchun**	**41.89**	**358**	*e*P	**P**	**20 55 27.0**	**-0.1**
CN2				PcP	**PcP**	**20 57 20.8**	**+0.9**
CN2				*e*S	**S**	**21 01 33.3**	**-0.6**
CN2				SS	**SS**	**21 04 43.5**	**-3.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.4s						
CN2				pmax	pmax		
	comp=Z,100nm,6.8s						
CN2				LR	LR		
	comp=Z,380nm,22.0s						
CN2				LR	LR		
	comp=Z,610nm,22.0s						
CN2				LR	LR		
	comp=Z,300nm,19.0s						
CAN	**Canberra**	**42.01**	**153**	P	**P**	**20 55 29.1**	**+0.8**
CAN				pmax	pmax		
	comp=Z,173nm,1.1s						
CAN	**Canberra**	**42.01**	**153**	P	**P**	**20 55 29.1**	**+0.8**
CAN				IAmb	IAmb	20 55 30.7	
	comp=Z,172nm,1.1s						
CNB	**Canberra Magne**	**42.17**	**153**	P	**P**	**20 55 30.6**	**+1.0**
	baz=42,SNR=9.5						
H11N1	**WAKE ISLAND Hy**	**42.41**	**62**	T	T	21 39 43.7	
	baz=262,slow=75,SNR=7.3						
H11N3	**WAKE ISLAND Hy**	**42.43**	**62**	T	T	21 39 48.3	
	baz=251,slow=75,SNR=7.4						
USA0B	**Ussuriysk Arra**	**42.44**	**5**	*c* *i*P	**P**	**20 55 32.0**	**+0.6**
USA0B	**Ussuriysk Arra**	**42.44**	**5**	P	**P**	**20 55 32.1**	**+0.7**
USRK	**Ussuriysk Ar.**	**42.44**	**5**	P	**P**	**20 55 32.1**	**+0.7**
	comp=Z,45nm,0.8s,baz=191,slow=7.4,SNR=91						
USRK				S	**S**	**21 01 42.3**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=187,slow=13,SNR=4.8						
ERM	**Erimo**	**42.46**	**17**	P	**P**	**20 55 32.1**	**+0.4**
ERM				pmax	pmax		
	comp=Z,234nm,1.8s						
ERM	**Erimo**	**42.46**	**17**	P	**P**	**20 55 32.1**	**+0.4**
ERM				IAmb	IAmb	20 56 39.2	
	comp=Z,234nm,1.8s						
TOO	**Toolangi**	**42.54**	**159**	P	**P**	**20 55 33.8**	**+1.4**
	baz=43,SNR=14						
TOO	**Toolangi**	**42.54**	**159**	P	**P**	**20 55 32.9**	**+0.5**
TOO				pmax	pmax		
	comp=Z,237nm,1.6s						
TOO	**Toolangi**	**42.54**	**159**	P	**P**	**20 55 32.9**	**+0.5**
TOO				IAmb	IAmb	20 55 35.1	
	comp=Z,237nm,1.6s						
MDJ	**Mudanjiang**	**42.71**	**2**	P	**P**	**20 55 34.5**	**+0.9**
MDJ				S	**S**	**21 01 46.8**	**+1.0**
MDJ				SS	**SS**	**21 04 53.8**	**-8.6**
MDJ				pmax	pmax		
	comp=Z,96nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,240nm,4.2s						
MDJ	**Mudanjiang**	**42.71**	**2**	IAmb	IAmb	20 55 35.7	
	comp=Z,81nm,1.0s						
MILA	**Mila**	**43.54**	**155**	P	**P**	**20 55 41.9**	**+1.4**
	baz=44,SNR=4.6						
ASAJ	**Asahikawa**	**44.24**	**16**	S	**S**	**21 02 09.9**	**+1.8**
	comp=Z,11nm,1.0s,baz=91,slow=27,SNR=5.5						
ASAJ				LR	LR	21 13 26.6	
	comp=Z,365nm,19.8s,baz=260,slow=35						
LSA	**Lhasa**	**44.33**	**312**	P	**P**	**20 55 50.0**	**+2.6**
LSA				S	**S**	**21 02 15.0**	**+4.2**
LSA				pmax	pmax		
	comp=Z,45nm,0.4s						
LSA				LR	LR		
	comp=Z,1µm,23.5s						
LSA				LR	LR		
	comp=Z,1µm,19.9s						
LSA				LR	LR		
	comp=Z,2µm,17.8s						
LSA	**Lhasa**	**44.33**	**312**	P	**P**	**20 55 50.1**	**+2.6**
LSA				pmax	pmax		
	comp=Z,202nm,1.9s						
LSA	**Lhasa**	**44.33**	**312**	P	**P**	**20 55 50.1**	**+2.6**
LSA				IAmb	IAmb	20 56 10.2	
	comp=Z,202nm,1.9s						
DZM	**Mont Dzumac**	**44.77**	**124**	*e*P	**P**	**20 55 51.1**	**+0.5**
	comp=Z,464nm,1.3s						
DZM	**Mont Dzumac**	**44.77**	**124**	*e*LR	LR	21 08 42.5	
	comp=Z,545nm,26.8s						
DZM	**Mont Dzumac**	**44.77**	**124**	P	**P**	**20 55 50.7**	**+0.1**
DZM				IAmb	IAmb	20 55 52.6	
	comp=Z,231nm,1.2s						
YUK	**Yuzh-Kuril'sk**	**45.13**	**19**	*d* *i*P	**P**	**20 55 53.3**	**+0.4**
YUK				*e*		20 57 42.1	
YUK				*i* S	**S**	**21 02 21.4**	**+0.5**
YUK				*i* *SS	**sS**	**21 03 17.6**	**-1.6**
YUK				*i* SS	**ScS**	**21 05 36.2**	**+2.1**
YUK				pmax	pmax		
	comp=E,104nm,0.8s						
YUK				pmax	pmax		
	comp=Z,184nm,0.8s						
YUK				pmax	pmax		
	comp=N,49nm,0.5s						
YUK				pmax	pmax		
	comp=Z,188nm,1.8s						
GTA	**Gaotai**	**45.18**	**329**	P	**P**	**20 55 55.0**	**+1.4**
GTA				pP	pwP	20 56 28.3	-1.5
GTA				sP	sP	20 56 45.3	+2.2
GTA				PcP	**PcP**	**20 57 33.0**	**+1.6**
GTA				ScP	**ScP**	**21 01 11.0**	**+1.0**
GTA				S	**S**	**21 02 22.5**	**+0.4**
GTA				ScS	**ScS**	**21 05 34.0**	**-1.0**
GTA				pmax	pmax		
	comp=Z,31nm,0.8s						
GTA				pmax	pmax		
	comp=Z,120nm,7.9s						
GTA				LR	LR		
	comp=Z,740nm,21.3s						
GTA				LR	LR		
	comp=Z,500nm,22.0s						
GTA				LR	LR		
	comp=Z,600nm,20.6s						
CHLP	**Challavanipeta**	**45.73**	**294**	*e*P	**P**	**20 55 59.5**	**+1.4**
CHLP				IAmb	IAmb	20 56 00.8	
	comp=Z,16nm,0.9s						
CHLP				*e*S	**S**	**21 02 32.1**	**+1.9**
TAPN	**Taplejung**	**45.82**	**307**	*e*P	**P**	**20 56 00.3**	**+1.2**
RAMN	**Ramite**	**46.53**	**306**	*e*P	**P**	**20 56 06.1**	**+1.5**
	comp=Z,44nm,0.6s						
KUR	**Kuril'sk**	**46.85**	**20**	*c* *i*P	**P**	**20 56 06.9**	**+0.5**
KUR				*e*		20 57 55.5	
KUR				*i* S	**S**	**21 02 47.6**	**+2.1**
KUR				*e*SS	**SS**	**21 06 13.6**	**-0.6**
KUR				pmax	pmax		
	comp=Z,211nm,1.2s						
KUR				MLR	MLR		
	comp=Z,376nm,17.0s						
YSS	**Yuzh-Sakhalins**	**46.92**	**14**	α *i*P	**P**	**20 56 07.3**	**+0.4**
YSS				*e*		20 56 46.3	
YSS				*e**SP	**sP**	**20 56 54.4**	**-1.7**
YSS				*e*		20 57 37.8	
YSS				*e*S	**S**	**21 02 45.3**	**-1.1**
YSS				*e*		21 05 41.9	
YSS				pmax	pmax		
	comp=Z,80nm,0.9s						
YSS				smax	smax		
	comp=E,200nm,7.0s						
YSS				MLR	MLR		
	comp=Z,300nm,14.0s						
YSS	**Yuzh-Sakhalins**	**46.92**	**14**	P	**P**	**20 56 07.2**	**+0.3**
YSS				IAmb	IAmb	20 56 08.3	
	comp=Z,72nm,0.9s						
PALK	**Pallekele**	**46.97**	**278**	P	**P**	**20 56 06.8**	**-1.2**
PALK				pmax	pmax		
	comp=Z,81nm,1.6s						
PALK	**Pallekele**	**46.97**	**278**	P	**P**	**20 56 06.8**	**-1.2**
JIRN	**Jiri**	**47.17**	**307**	*e*P	**P**	**20 56 11.0**	**+1.4**
KLR	**Kul'dur**	**47.42**	**4**	*c* *i*P	**P**	**20 56 10.9**	**+0.1**
KLR				pmax	pmax		
	comp=Z,52nm,1.1s						
MOO	**Moorlands**	**47.46**	**160**	P	**P**	**20 56 12.3**	**+1.1**
	baz=48,SNR=4.2						
GUN	**Gumba**	**47.52**	**307**	*e*P	**P**	**20 56 13.7**	**+1.3**
	comp=Z,80nm,0.6s						
PVM	**Polavaram**	**47.65**	**292**	*e*P	**P**	**20 56 14.3**	**+1.2**
PVM				IAmb	IAmb	20 56 15.5	
	comp=Z,14nm,0.6s						
PVM				*e*S	**S**	**21 02 56.8**	**-0.8**
PKI	**Pulchoki**	**47.76**	**306**	*e*P	**P**	**20 56 14.9**	**+0.8**
PKIN	**Phulchoki**	**47.77**	**306**	*e*P	**P**	**20 56 14.9**	**+0.7**
TAU	**Tasmania Unive**	**47.92**	**160**	P	**P**	**20 56 14.8**	**+0.1**
TAU				pmax	pmax		
	comp=Z,69nm,1.1s						
TAU	**Tasmania Unive**	**47.92**	**160**	P	**P**	**20 56 14.8**	**+0.1**
TAU				IAmb	IAmb	20 56 16.7	
	comp=Z,69nm,1.1s						
DMN	**Daman**	**48.01**	**306**	*e*P	**P**	**20 56 17.1**	**+1.0**
	comp=Z,73nm,1.0s						
MYLAV	**Mylavaram**	**48.45**	**291**	*e*P	**P**	**20 56 20.5**	**+1.3**
MYLAV				IAmb	IAmb	20 56 21.8	
	comp=Z,24nm,1.0s						
MYLAV				*e*S	**S**	**21 03 08.9**	**0.0**
GKN	**Gorkha**	**48.56**	**307**	*e*P	**P**	**20 56 21.1**	**+1.0**
SKHT	**Srikalahasti**	**48.74**	**287**	*e*P	**P**	**20 56 21.8**	**+0.3**
SKHT				IAmb	IAmb	20 56 23.5	
	comp=Z,15nm,0.7s						
SKHT				*e*S	**S**	**21 03 12.6**	**-0.5**
ADKI	**Addanki**	**48.88**	**289**	*e*P	**P**	**20 56 23.7**	**+1.2**
ADKI				IAmb	IAmb	20 56 25.0	
	comp=Z,16nm,1.0s						
ADKI				*e*S	**S**	**21 03 17.1**	**+2.1**
ULN	**Ulaanbaatar**	**49.22**	**342**	*c* *e*P	**P**	**20 56 25.8**	**+1.0**
ULN				pmax	pmax		
	comp=Z,80nm,1.0s						
NFK	**Norfolk Island**	**49.34**	**132**	P	**P**	**20 56 27.4**	**+1.6**
	baz=49,SNR=9.5						
SONM	**Songino Array**	**49.40**	**341**	P	**P**	**20 56 27.1**	**+1.0**
	comp=Z,23nm,0.7s,baz=156,slow=8.6,SNR=183						
SONM				PcP	**PcP**	**20 57 47.2**	**+0.9**
	comp=Z,19nm,0.8s,baz=156,slow=5.2,SNR=4.8						
SONM				PP	**PP**	**20 58 15.0**	**-6.6**
	comp=Z,16nm,0.8s,baz=169,slow=5.8,SNR=4.3						
SONM				ScP	**ScP**	**21 01 27.8**	**+0.2**
	comp=Z,8.1nm,0.9s,baz=140,slow=3.9,SNR=8.1						
SONM				LR	LR	21 18 12.0	
	comp=Z,359nm,19.1s,baz=171,slow=37						
SONM	**Songino Array**	**49.40**	**341**	P	**P**	**20 56 26.9**	**+0.8**
DANN	**Dangsing**	**49.40**	**307**	*e*P	**P**	**20 56 27.9**	**+1.2**
	comp=Z,132nm,0.6s						
NJS	**Nagarjunasagar**	**49.65**	**290**	*e*P	**P**	**20 56 29.0**	**+0.6**
NJS				IAmb	IAmb	20 56 30.1	
	comp=Z,15nm,0.8s						
NJS				*e*S	**S**	**21 03 24.7**	**-1.1**
SRLM	**Srisailam**	**49.95**	**290**	*e*P	**P**	**20 56 30.5**	**-0.2**
SRLM				IAmb	IAmb	20 56 32.5	
	comp=Z,23nm,0.8s						
SRLM				*e*S	**S**	**21 03 29.7**	**-0.4**
RPR	**Rampur**	**50.18**	**293**	*e*P	**P**	**20 56 33.1**	**+0.8**
RPR				IAmb	IAmb	20 56 34.2	
	comp=Z,14nm,0.5s						
RPR				*e*S	**S**	**21 03 32.6**	**-0.4**
HYB	**Hyderabad**	**50.54**	**291**	*i* P	**P**	**20 56 36.5**	**+1.4**
HYB				*e*		20 56 43.0	
HYB				*e*pP	**pP**	**20 57 09.0**	**+0.3**
HYB				*e*PcP	**PcP**	**20 57 49.5**	**-1.4**
HYB				*e*ScP	**ScP**	**21 01 32.0**	**-1.0**
HYB				*e*S	**S**	**21 03 40.0**	**+1.9**
HYBB	**Hyderabad (bro**	**50.54**	**291**	*e*P	**P**	**20 56 35.6**	**+0.5**
HYBB				IAmb	IAmb	20 56 38.0	
	comp=Z,45nm,1.0s						
HYBB				*e*S	**S**	**21 03 38.0**	**-0.2**
SRSP	**Sriramsagar**	**51.07**	**293**	*e*P	**P**	**20 56 39.5**	**+0.5**
SRSP				IAmb	IAmb	20 56 41.3	
	comp=Z,18nm,1.0s						
SRSP				*e*S	**S**	**21 03 44.2**	**-1.2**
URV	**Uravakonda**	**51.28**	**288**	*e*P	**P**	**20 56 40.7**	**0.0**
URV				IAmb	IAmb	20 56 41.9	
	comp=Z,46nm,1.1s						
URV				*e*S	**S**	**21 03 46.7**	**-1.8**
CIT	**Chita**	**51.43**	**349**	*e*P	**P**	**20 56 41.0**	**-0.2**
CIT				pmax	pmax		
	comp=Z,91nm,1.4s						
ZEA	**Zeya**	**51.80**	**360**	*e*P	**P**	**20 56 43.7**	**-0.1**
ZEA				*e*S	**S**	**21 03 56.0**	**+1.8**
ZEA				*e*		21 06 22.0	
ZEA				pmax	pmax		
	comp=Z,41nm,1.0s						
ZEA				smax	smax		
	comp=N,200nm,13.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,16.0s						
KLRI	**Killari**	**52.50**	**291**	*e*P	**P**	**20 56 49.7**	**0.0**
KLRI				IAmb	IAmb	20 56 51.1	
	comp=Z,30nm,1.0s						
KLRI				*e*S	**S**	**21 04 03.6**	**-1.4**
FUNA	**Funafuti**	**52.51**	**102**	P	**P**	**20 56 49.9**	**+0.1**
ZAK	**Zakamensk**	**52.62**	**341**	*e*P	**P**	**20 56 50.6**	**+0.5**
MSVF	**Nonsavu**	**53.39**	**114**	*c* *i*P	**P**	**20 56 57.7**	**+1.4**
MSVF				pmax	pmax		
	comp=Z,245nm,1.0s						
MSVF	**Nonsavu**	**53.39**	**114**	P	**P**	**20 56 57.9**	**+1.7**
TLY	**Talaya**	**53.63**	**342**	LR	LR	21 22 01.6	
	comp=Z,253nm,20.2s,baz=139,slow=38						
TLY	**Talaya**	**53.63**	**342**	*e*P	**P**	**20 56 58.5**	**+1.2**
TLY				*e*S	**S**	**21 04 18.2**	**-1.0**
TLY				*e*SS	**SKiKP**	**21 07 57.4**	**+1.1**
TLY				pmax	pmax		
	comp=Z,25nm,0.8s						
TLY				MLR	MLR		
	comp=Z,777nm,19.0s						
TLY	**Talaya**	**53.63**	**342**	P	**P**	**20 56 57.9**	**+0.6**
MOY	**Mondy**	**54.48**	**340**	*e*P	**P**	**20 57 04.9**	**+1.2**
MOY				pmax	pmax		
	comp=Z,65nm,1.9s						
WMQ	**Urumqi**	**54.78**	**325**	P	**P**	**20 57 07.5**	**+1.6**
WMQ				pP	pP	20 57 40.3	+0.4
WMQ				S	**S**	**21 04 34.8**	**-0.2**
WMQ				sS	sS	21 05 37.0	+2.4
WMQ				ScS	**ScS**	**21 06 38.0**	**-2.2**
WMQ				pmax	pmax		
	comp=Z,74nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,83nm,4.9s						
WMQ				LR	LR		
	comp=Z,500nm,17.1s						
WMQ				LR	LR		
	comp=Z,280nm,17.1s						
WMQ				LR	LR		
	comp=Z,430nm,25.1s						
WMQ	**Urumqi**	**54.78**	**325**	IAmb	IAmb	20 57 08.5	
	comp=Z,79nm,0.8s						
POO	**Poona**	**55.15**	**291**	*e*P	**P**	**20 57 06.0**	**-2.9**
BHK	**Bhakra**	**56.47**	**307**	*e*x	**P**	**20 57 22.2**	**+4.1**
BOD	**Bodaibo**	**56.91**	**351**	*e*P	**P**	**20 57 20.7**	**0.0**
BOD				pmax	pmax		
	comp=Z,60nm,1.1s						
PEA0B	**Petropavlovsk-**	**56.95**	**21**	P	**P**	**20 57 21.8**	**+0.8**
PEA0B				pmax	pmax		
	comp=Z,110nm,1.1s						
PEA0B	**Petropavlovsk-**	**56.95**	**21**	P	**P**	**20 57 21.8**	**+0.8**
PEA0B				IAmb	IAmb	20 57 23.1	
	comp=Z,110nm,1.1s						
PETK	**Petropavlovsk-**	**56.95**	**21**	P	**P**	**20 57 21.9**	**+0.8**
	comp=Z,66nm,0.9s,baz=196,slow=5.4,SNR=67						
PETK				LR	LR	21 21 48.0	
	comp=Z,114nm,20.0s,baz=245,slow=36						
PET	**Petropavlovsk**	**57.23**	**22**	*e*P	**P**	**20 57 23.4**	**+0.4**
PET				*e*S	**S**	**21 05 08.3**	**+1.4**
PET				*e*SS	**SS**	**21 09 03.3**	**+4.8**
PET				pmax	pmax		
	comp=Z,127nm,1.2s						
PET				MLR	MLR		
	comp=Z,200nm,15.0s						
PET				MLR	MLR		
	comp=Z,200nm,17.0s						
PET	**Petropavlovsk**	**57.23**	**22**	P	**P**	**20 57 23.4**	**+0.4**
DCZ	**Deep Cove**	**58.67**	**148**	P	**P**	**20 57 33.4**	**+0.3**
DGZ	**Jazzator, Alta**	**58.68**	**331**	*c* *i*P	**P**	**20 57 33.9**	**+0.5**
DGZ				pmax	pmax		
	comp=Z,24nm,0.8s						
QRZ	**Quartz Range**	**58.91**	**141**	P	**P**	**20 57 35.3**	**+0.3**
QRZ				IAmb	IAmb	20 57 37.6	
	comp=Z,64nm,1.0s						
MK31	**Makanchi Array**	**59.61**	**326**	P	**P**	**20 57 40.8**	**+1.1**
MK31				pmax	pmax		
	comp=Z,45nm,0.8s						
MK31	**Makanchi Array**	**59.61**	**326**	P	**P**	**20 57 40.8**	**+1.1**
MK31				IAmb	IAmb	20 57 41.6	
	comp=Z,45nm,0.8s						
MKAR	**Makanchi Array**	**59.61**	**326**	P	**P**	**20 57 40.8**	**+1.1**
	comp=Z,59nm,0.7s,baz=120,slow=8.5,SNR=804						
MKAR				S	**S**	**21 05 40.2**	**+2.1**
	comp=Z,5.8nm,1.1s,baz=126,slow=12,SNR=7.5						
MKAR				PKPPKP	**P'P'df**	**21 27 08.4**	**+1.3**
	comp=Z,0.8nm,0.8s,baz=306,slow=4.1,SNR=4.6						
MKAR	**Makanchi Array**	**59.61**	**326**	P	**P**	**20 57 40.6**	**+0.9**
LBZ	**Lake Benmore**	**59.63**	**146**	P	**P**	**20 57 39.6**	**-0.2**
THZ	**Tophouse**	**59.68**	**142**	P	**P**	**20 57 40.2**	**0.0**
THZ				IAmb	IAmb	20 57 40.6	
	comp=Z,52nm,0.8s						
RPZ	**Rata Peaks**	**59.71**	**145**	P	**P**	**20 57 40.2**	**-0.2**
RPZ				IAmb	IAmb	20 57 41.4	
	comp=Z,69nm,0.9s						
MAKZ	**Makanchi**	**59.80**	**325**	P	**P**	**20 57 41.7**	**+0.7**
MAKZ				pmax	pmax		
	comp=Z,70nm,0.9s						
MAKZ	**Makanchi**	**59.80**	**325**	P	**P**	**20 57 41.7**	**+0.7**
MAKZ				IAmb	IAmb	20 57 42.9	
	comp=Z,70nm,0.9s						
LTZ	**Lake Taylor**	**59.88**	**143**	P	**P**	**20 57 40.7**	**-0.9**
LTZ				IAmb	IAmb	20 57 42.5	
	comp=Z,73nm,1.2s						
KSH	**Kashi**	**59.99**	**316**	P	**P**	**20 57 45.0**	**+2.5**
KSH				sP	sP	20 58 34.3	+0.9
KSH				PP	PP	21 00 04.8	+8.1
KSH				PcS	**PcS**	**21 02 27.0**	**-2.7**
KSH				S	**S**	**21 05 42.3**	**-1.1**
KSH				ScS	**ScS**	**21 07 14.5**	**-4.1**
KSH				pmax	pmax		
	comp=Z,44nm,0.8s						
KSH				pmax	pmax		
	comp=Z,230nm,6.2s						
KSH				LR	LR		
	comp=Z,530nm,13.4s						
KSH				LR	LR		
	comp=Z,490nm,13.2s						
KSH				LR	LR		
	comp=Z,280nm,15.1s						
OXZ	**Oxford**	**60.05**	**144**	P	**P**	**20 57 42.1**	**-0.7**
OXZ				IAmb	IAmb	20 58 28.0	
	comp=Z,37nm,1.0s						
TUWZ	**Tuamarina**	**60.14**	**141**	P	**P**	**20 57 42.3**	**-1.0**
YAK	**Yakutsk**	**60.14**	**1**	*i* P	**P**	**20 57 43.2**	**+0.3**
YAK				pmax	pmax		
	comp=Z,248nm,0.7s						
YAK	**Yakutsk**	**60.14**	**1**	P	**P**	**20 57 43.3**	**+0.3**
BSWZ	**Blackbirch Sta**	**60.25**	**141**	P	**P**	**20 57 43.4**	**-0.7**
MA2	**Magadan**	**60.41**	**13**	*c* *e*P	**P**	**20 57 45.8**	**+1.0**
MA2				pmax	pmax		
	comp=Z,85nm,0.8s						
MA2	**Magadan**	**60.41**	**13**	P	**P**	**20 57 46.0**	**+1.1**
MA2				IAmb	IAmb	20 57 47.1	
	comp=Z,92nm,0.8s						
KHZ	**Kahutara**	**60.43**	**142**	P	**P**	**20 57 44.6**	**-0.7**
KHZ				IAmb	IAmb	20 57 45.4	
	comp=Z,54nm,0.8s						
URZ	**Urewera**	**60.58**	**137**	P	**P**	**20 57 45.3**	**-1.1**
	comp=Z,22nm,0.7s,baz=318,slow=2.7,SNR=9.3						
URZ	**Urewera**	**60.58**	**137**	P	**P**	**20 57 46.0**	**-0.4**
URZ				IAmb	IAmb	20 57 47.8	
	comp=Z,32nm,0.8s						

BKZ	Black Stump Fm	60.61	138	P	P	20 57 46.3	-0.4
BKZ				IAmb	IAmb	20 57 48.3	
	comp=Z,42nm,0.9s						
BHW	Baring Head	60.71	141	P	P	20 57 45.8	-1.4
KNTN	Kanton	60.91	94	P	P	20 57 50.1	+1.0
MSWZ	Moikau Station	60.95	140	P	P	20 57 47.8	-1.1
ULHL	Ulahol	61.00	319	P	P	20 57 51.0	+1.4
	SNR=22						
PLWZ	Palliser	61.04	141	P	P	20 57 48.6	-0.9
KZA	Kyzart	61.59	318	P	P	20 57 55.6	+1.9
	SNR=42						
KBK	Karagaybulak	62.04	318	P	P	20 57 57.9	+1.5
	SNR=14						
AFI	Afiamalu	62.12	107	P	P	20 57 58.3	+1.1
AFI				pmax	pmax		
	comp=Z,340nm,1.6s						
AFI	Afiamalu	62.12	107	P	P	20 57 58.3	+1.1
UCH	Uchtor	62.15	318	P	P	20 57 59.2	+1.7
	SNR=49						
FRU1	Bishkek	62.32	318	P	P	20 57 58.5	+0.3
FRU1				pmax	pmax		
	comp=Z,31nm,1.2s						
FRU1	Bishkek	62.32	318	P	P	20 57 58.5	+0.3
CHMS	Chumysh	62.32	319	P	P	20 57 59.0	+0.9
	SNR=12						
AAK	Ala-Archa	62.34	318	P	P	20 57 59.8	+1.4
	SNR=15						
AAK	Ala-Archa	62.34	318	ceP	P	20 57 59.6	+1.2
AAK				pmax	pmax		
	comp=Z,22nm,1.6s						
AAK	Ala-Archa	62.34	318	P	P	20 57 59.5	+1.2
USP	Ospenovka	62.61	319	P	P	20 58 01.1	+1.1
	SNR=58						
AML	Almayashu	62.66	317	P	P	20 58 02.3	+1.5
	SNR=61						
ZAA0	Zalesovo Array	62.68	333	P	P	20 57 59.7	-0.5
ZAA0				IAmb	IAmb	20 58 39.4	
	comp=Z,53nm,1.4s						
ZALV	Zalesovo Beam	62.68	333	P	P	20 57 59.8	-0.4
	comp=Z,12nm,0.8s,baz=116,slow=6.8,SNR=52						
ZALV				PcP	PcP	20 58 37.0	-0.5
	comp=Z,15nm,0.8s,baz=129,slow=4.9,SNR=5.0						
ZALV				PKPPKP	P'P'df	21 27 00.2	-1.5
	comp=Z,4.7nm,1.1s,baz=300,slow=3.3,SNR=4.5						
ZALV				LR	LR	21 28 43.1	
	comp=Z,168nm,18.3s,baz=128,slow=39						
ZALV	Zalesovo Beam	62.68	333	P	P	20 57 59.6	-0.6
ARSB	Arslanbob	62.81	316	P	P	20 58 02.2	+0.7
ARSB				pmax	pmax		
	comp=Z,113nm,1.5s						
ARSB	Arslanbob	62.81	316	P	P	20 58 02.2	+0.7
ARSB				IAmb	IAmb	20 58 49.2	
	comp=Z,113nm,1.5s						
EKS2	Erkin-Say	62.83	318	P	P	20 58 02.8	+1.3
	SNR=60						
KBL	Kabul	63.34	308	P	P	20 58 05.8	+0.6
KBL				pmax	pmax		
	comp=Z,38nm,0.8s						
KBL	Kabul	63.34	308	P	P	20 58 05.8	+0.6
KBL				IAmb	IAmb	20 58 06.9	
	comp=Z,38nm,0.8s						
JOHN	Johnston Islan	63.62	72	P	P	20 58 07.1	+0.1
SEY	Seymchan	63.76	12	c iP	P	20 58 08.7	+1.6
KURK	Kurchatov	63.81	328	ceP	P	20 58 08.1	+0.4
KURK				pmax	pmax		
	comp=Z,119nm,0.7s						
KURK	Kurchatov	63.81	328	P	P	20 58 08.3	+0.7
NIUE	Niue	64.80	112	P	P	20 58 14.0	-0.7
	baz=65,SNR=5.0						
NIUE	Niue	64.80	112	P	P	20 58 15.6	+0.8
KK31	Karatay Array	65.20	317	P	P	20 58 17.7	+0.7
KK31				pmax	pmax		
	comp=Z,42nm,1.0s						
KK31	Karatay Array	65.20	317	P	P	20 58 17.6	+0.7
KK31				IAmb	IAmb	20 58 18.7	
	comp=Z,42nm,0.9s						
KKAR	Karatay Array	65.20	317	P	P	20 58 17.6	+0.7
KKAR				pmax	pmax		
	comp=Z,42nm,1.0s						
KKAR	Karatay Array	65.20	317	P	P	20 58 17.6	+0.7
KKAR				IAmb	IAmb	20 58 18.7	
	comp=Z,42nm,0.9s						
KKAR	Karatay Array	65.20	317	P	P	20 58 17.4	+0.4
TAS	Tashkent	65.38	315	P	P	20 58 19.3	+1.2
TAS				pmax	pmax		
	comp=Z,60nm,0.8s						
TAS	Tashkent	65.38	315	P	P	20 58 19.3	+1.2
TAS				IAmb	IAmb	20 58 20.3	
	comp=Z,60nm,0.8s						
ADK	Adak	68.14	34	P	P	20 58 35.7	+0.4
ADK				pmax	pmax		
	comp=Z,80nm,1.0s						
ADK	Adak	68.14	34	P	P	20 58 35.7	+0.4
ADK				IAmb	IAmb	20 58 36.8	
	comp=Z,80nm,1.0s						
GSTR	Great Sitkin T	68.58	34	P	P	20 58 38.8	+0.7
HRA	Herat	68.72	306	P	P	20 58 39.6	0.0
CASY	Casey	68.98	187	P	P	20 58 40.5	+0.3
BRVK	Borovoye	69.46	327	ceP	P	20 58 43.7	+0.2
BRVK				pmax	pmax		
	comp=Z,78nm,1.0s						
BRVK	Borovoye	69.46	327	P	P	20 58 43.5	0.0
BRVK				IAmb	IAmb	20 58 44.8	
	comp=Z,68nm,0.9s						
ATKA	Atka Island	69.66	34	P	P	20 58 44.8	+0.1
TIXI	Tiksi	69.78	0	S	S	21 07 39.4	-2.4
	comp=Z,2.1nm,1.0s,baz=350,slow=21,SNR=12						
TIXI	Tiksi	69.78	0	ceP	P	20 58 44.3	-0.8
TIXI				pmax	pmax		
	comp=Z,56nm,0.9s						
TIXI	Tiksi	69.78	0	P	P	20 58 44.2	-0.8
TIXI				IAmb	IAmb	20 58 45.9	
	comp=Z,43nm,0.8s						
BILL	Bilibino	71.24	14	c iP	P	20 58 53.4	-0.6
BILL				i		20 59 10.3	
BILL				i *PP	pP	20 59 29.8	-0.6
BILL				pmax	pmax		
	comp=Z,19nm,1.1s						
BILL	Bilibino	71.24	14	P	P	20 58 54.1	+0.1
UOSS	Minazif	72.33	296	P	P	20 59 00.7	-0.8
NRIK	Noril'sk	72.51	346	P	P	20 59 01.9	+0.3
	comp=Z,43nm,0.7s,baz=123,slow=6.2,SNR=78						
NRIK				S	S	21 08 12.2	-1.1
	comp=Z,2.1nm,0.7s,baz=345,slow=22,SNR=13						
NRIK	Noril'sk	72.51	346	i P	P	20 59 01.8	+0.3
NRIK				pmax	pmax		
	comp=Z,52nm,0.7s						
GEYT	Alibeck	72.74	309	P	P	20 59 04.8	+1.2
	comp=Z,18nm,0.7s,baz=147,slow=3.5,SNR=50						
GEYT				LR	LR	21 35 30.4	
	comp=Z,79nm,21.9s,baz=25,slow=39						
GEYT	Alibeck	72.74	309	P	P	20 59 04.8	+1.2
GYA0B	ALIBECK ARRAY	72.74	309	P	P	20 59 04.7	+1.1
NIKH	Nikolski High	72.96	35	P	P	20 59 04.5	-0.1
NIKH				IAmb	IAmb	20 59 59.9	
	comp=Z,97nm,1.1s						
KEKH	Kekaha	73.36	68	P	P	20 59 08.3	+0.8
SOCY	Socotra	73.54	282	P	P	20 59 08.3	-0.5
SOCY				IAmb	IAmb	20 59 09.3	
	comp=Z,55nm,0.8s						
SPIA	Saint Paul Isl	73.78	30	P	P	20 59 10.4	+1.3
ABKAR	Akbulak array	74.16	321	P	P	20 59 11.5	-0.1
RAR	Rarotonga	74.56	112	P	P	20 59 14.9	+0.5
	comp=Z,26nm,0.9s,baz=220,slow=4.9,SNR=5.1						
RAR	Rarotonga	74.56	112	P	P	20 59 15.9	+1.5
RAR				pmax	pmax		
	comp=Z,320nm,2.0s						
RAR	Rarotonga	74.56	112	P	P	20 59 15.9	+1.5
RAR				IAmb	IAmb	20 59 17.4	
	comp=Z,320nm,1.9s						
UNV	Unalaska Valle	74.58	34	P	P	20 59 14.1	+0.1
UNV				IAmb	IAmb	20 59 15.6	
	comp=Z,60nm,1.0s						
KIP	Kipapa	74.89	68	P	P	20 59 17.4	+1.0
KIP				pmax	pmax		
	comp=Z,162nm,1.0s						
KIP	Kipapa	74.89	68	P	P	20 59 17.4	+1.0
KIP				IAmb	IAmb	20 59 19.3	
	comp=Z,162nm,1.0s						
HON	Honolulu	74.90	69	P	P	20 59 17.4	+1.0
HON				pmax	pmax		
	comp=Z,503nm,1.0s						
HON	Honolulu	74.90	69	P	P	20 59 17.4	+1.0
AKUT	Akutan	75.08	34	P	P	20 59 16.7	-0.1
GAMB	Gambell	75.86	24	P	P	20 59 21.9	+0.9
GAMB				IAmb	IAmb	20 59 23.4	
	comp=Z,83nm,0.9s						
SVE	Sverdlovsk	76.04	329	deP	P	20 59 22.4	+0.2
SVE				pmax	pmax		
	comp=Z,79nm,0.9s						
KHLH	Kahului Airpor	76.34	69	P	P	20 59 26.5	+1.8
KHLH				IAmb	IAmb	20 59 27.9	
	comp=Z,176nm,1.0s						
HLK	Haleakala	76.50	69	P	P	20 59 27.1	+1.2
HLK				IAmb	IAmb	20 59 28.7	
	comp=Z,206nm,1.0s						
FALS	False Pass	76.61	34	P	P	20 59 25.7	+0.3
KKH	Kailua Kona	76.65	70	P	P	20 59 27.7	+1.3
KKH	Kailua Kona	76.65	70	P	P	20 59 27.7	+1.3
KHLU	Kahalu`u	76.77	70	P	P	20 59 27.7	+0.5
HPAH	Hawaii Prepara	76.97	70	P	P	20 59 29.3	+0.9
HPAH				IAmb	IAmb	20 59 30.8	
	comp=Z,131nm,0.9s						
ARU	Arti	77.01	328	c iP	P	20 59 27.0	-0.7
ARU				*PP	pP	21 00 03.7	-0.3
ARU						21 02 24.0	
ARU				S	S	21 09 06.6	+3.0
ARU				SS	SS	21 14 00.1	-3.7
ARU				pmax	pmax		
	comp=Z,53nm,0.8s						
ARU	Arti	77.01	328	P	P	20 59 26.9	-0.8
ARU				IAmb	IAmb	20 59 28.2	
	comp=Z,48nm,0.8s						
MWH	Moku‘aweowe	77.04	71	P	P	20 59 30.5	+1.2
MLOA	Mauna Loa Obse	77.06	70	P	P	20 59 30.1	+0.8
POHA	Pohakuloa	77.12	70	P	P	20 59 30.4	+1.1
HMH	Humu‘ula Sheep	77.16	70	P	P	20 59 31.5	+1.8
AIN	Ainahou	77.17	71	P	P	20 59 30.8	+1.2
MLH	Mauna Loa	77.24	71	P	P	20 59 30.1	+0.1
WRMHI	West Rim	77.32	71	P	P	20 59 31.7	+1.4
SDHHI	Sand Hill	77.32	71	P	P	20 59 31.6	+1.3
UWE	Uwekahuna	77.33	71	P	P	20 59 32.3	+1.9
OBL	Observatory Le	77.33	71	P	P	20 59 30.7	+0.3
NPH	North Pit	77.34	71	P	P	20 59 30.6	+0.2
NPH				pmax	pmax		
	comp=Z,121nm,1.0s						
NPH	North Pit	77.34	71	P	P	20 59 30.6	+0.2
NPH				IAmb	IAmb	20 59 41.5	
	comp=Z,121nm,1.0s						
UWB	Uwekahuna B	77.34	71	P	P	20 59 31.0	+0.5
RIM	Rim	77.34	71	P	P	20 59 31.9	+1.5
KKO	Keanakako`i	77.35	71	P	P	20 59 31.7	+1.2
SBLHI	Steaming Bluff	77.35	71	P	P	20 59 31.4	+0.9
BYL	Byron's Ledge	77.36	71	P	P	20 59 32.0	+1.5
HATHI	Halema‘uma‘u T	77.36	71	P	P	20 59 31.0	+0.5
PUH	Pauahi	77.40	71	P	P	20 59 32.1	+1.4
SDPT	Sand Point	78.37	34	P	P	20 59 35.6	+0.4
ANM	Nome	78.72	24	P	P	20 59 38.1	+1.1
ANM				pmax	pmax		
	comp=Z,102nm,1.6s						
ANM	Nome	78.72	24	P	P	20 59 38.1	+1.1
ANM				IAmb	IAmb	20 59 39.5	
	comp=Z,102nm,1.6s						
CNBA	Chernabura Isl	78.74	34	P	P	20 59 37.8	+0.5
CNBA				IAmb	IAmb	20 59 38.9	
	comp=Z,72nm,0.8s						
CHGN	Chignik	79.72	33	P	P	20 59 42.7	+0.2
CHGN				IAmb	IAmb	21 01 05.1	
	comp=Z,67nm,0.7s						
LKRN	Lenkeran, Azer	80.11	309	P	P	20 59 45.8	+0.7
RDOG	Red Dog Mine	80.82	21	P	P	20 59 49.6	+1.3
RDOG				IAmb	IAmb	20 59 51.0	
	comp=Z,105nm,1.3s						
CHIR	Chirikof Islan	81.16	34	P	P	20 59 51.5	+1.2
AKT	Akhty	81.18	312	eP	P	20 59 51.5	+0.6
AKT				e*PP	pP	21 00 25.2	-2.5
AKT				e		21 02 58.4	
AKT				pmax	pmax		
	comp=Z,16nm,0.7s						
VNDA	Vanda	81.39	173	P	P	20 59 51.2	+0.1
	comp=Z,83nm,0.8s,baz=315,slow=6.0,SNR=264						
VNDA				PKKPbc	PKKPbc	21 18 25.9	-2.4
	comp=Z,3.1nm,0.9s,baz=266,slow=1.2,SNR=8.0						
VNDA				LR	LR	21 36 45.0	
	comp=Z,131nm,19.0s,baz=340,slow=36						
VNDA	Vanda	81.39	173	P	P	20 59 51.1	0.0
VNDA				IAmb	IAmb	20 59 52.3	
	comp=Z,88nm,0.8s						
MAK	Makhachkala	81.49	313	d iP	P	20 59 49.7	-2.6
MAK				e*PP	pP	21 00 27.0	-2.1
MAK				e*SP	sP	21 00 40.5	-4.3
MAK				eS	S	21 09 47.6	-3.9
MAK				eSS	SS	21 15 09.7	-1.8
MAK				eSSS	SSS	21 18 38.4	
MAK				pmax	pmax		
	comp=Z,211nm,1.2s						
SEKA	Sheki	81.56	311	P	P	20 59 53.3	+0.5
MNGR	Mingechevir, A	81.60	311	P	P	20 59 54.0	+1.1
SII	Sitkinak Islan	82.08	33	P	P	20 59 56.3	+1.2
SVW2	Sparrevohn	82.13	29	P	P	20 59 56.7	+1.4
MAW	Mawson	82.20	200	P	P	20 59 54.8	-0.6
	baz=82,SNR=12						
MAW	Mawson	82.20	200	P	P	20 59 56.5	+1.0
	comp=Z,22nm,0.9s,baz=68,slow=6.0,SNR=20						
MAW				PKKPbc	PKKPbc	21 18 22.5	-3.7
	comp=Z,2.8nm,0.7s,baz=178,slow=1.4,SNR=3.8						
MAW				LR	LR	21 31 25.5	
	comp=Z,91nm,21.8s,baz=54,slow=32						
MAW	Mawson	82.20	200	P	P	20 59 56.2	+0.7
MAW				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MAW	Mawson	82.20	200	P	P	20 59 56.2	+0.7
KIRV	Kirov	82.30	329	i P	P	20 59 56.4	+0.3
OHAK	Old Harbor	82.66	33	P	P	20 59 58.8	+0.8
OHAK				IAmb	IAmb	21 00 00.1	
	comp=Z,136nm,0.8s						
NAX	Nakhchivan	82.70	309	P	P	20 59 59.1	+0.3
GROC	Groznyy	82.76	313	eP	P	20 59 58.4	-0.5
GROC				e*PP	pP	21 00 36.7	+0.9
GROC				e*SP	sP	21 00 51.3	-0.2
GROC				e		21 03 08.4	
GROC				eS	S	21 10 02.1	-2.4
GROC				pmax	pmax		
	comp=Z,42nm,1.0s						
DAMY	Dhamar	82.91	284	P	P	21 00 02.4	+1.7
KDAK	Kodiak Island	83.12	32	P	P	21 00 01.4	+1.0
	comp=Z,111nm,0.7s,baz=255,slow=3.1,SNR=81						
KDAK	Kodiak Island	83.12	32	P	P	21 00 01.1	+0.7
KDAK				IAmb	IAmb	21 00 02.4	
	comp=Z,130nm,0.8s						
RSO	Redoubt South	83.40	29	P	P	21 00 02.0	-0.1
TBLG	Delisi	83.44	312	P	P	21 00 02.9	+0.4
TBLG				pmax	pmax		
	comp=Z,45nm,1.0s						
TBLG	Delisi	83.44	312	P	P	21 00 02.9	+0.4
KZRT	Kazreti	83.67	311	P	P	21 00 04.7	+1.0
GUDG	Gudauri	83.68	312	P	P	21 00 04.9	+1.0
PPT	Papeete	83.76	108	LR	LR	21 37 02.9	
	comp=Z,56nm,18.1s,baz=209,slow=35						
PPT2	Papeete2	83.76	108	eP	P	21 00 04.7	0.0
	comp=Z,87nm,1.3s						
PPT2	Papeete2	83.76	108	eS	S	21 10 13.8	-1.9
	comp=Z,199nm,29.2s						
PPT2	Papeete2	83.76	108	eLR	LR	21 26 43.9	
	comp=Z,332nm,27.2s						
PAE	Paea	83.77	108	eP	P	21 00 04.2	-0.3
	comp=Z,9.4nm,1.1s						
IMAR	Indian Mountai	83.80	24	P	P	21 00 04.6	+0.8
HOM	Homer	83.84	30	P	P	21 00 04.5	+0.4
PPLA	Purkeypile	84.00	27	P	P	21 00 05.1	0.0
CNPM	China Poot	84.03	30	P	P	21 00 05.3	+0.2
TVO	Taravao	84.08	108	eP	P	21 00 06.2	-0.1
	comp=Z,23nm,1.1s						
ZEI	Tsey	84.12	313	eP	P	21 00 05.8	-0.4
ZEI				pmax	pmax		
	comp=Z,15nm,0.7s						
SKT	Skwentna	84.19	28	P	P	21 00 05.3	-0.5
SKT				IAmb	IAmb	21 00 06.8	
	comp=Z,100nm,0.8s						
BRLK	Bradley Lake	84.24	30	P	P	21 00 06.3	+0.2
BGD	Bogdanovka	84.27	311	P	P	21 00 08.8	+1.8
TBI	Tubuai	84.28	114	eP	P	21 00 06.8	-0.3
	comp=Z,164nm,1.0s						
TBI	Tubuai	84.28	114	eS	S	21 10 19.2	-1.3
	comp=Z,186nm,26.2s						
TBI	Tubuai	84.28	114	eLR	LR	21 26 49.0	
	comp=Z,304nm,35.5s						
AKH	Akhalkalaki	84.35	311	⇓P	P	21 00 08.9	+1.6
AKH	Akhalkalaki	84.35	311	P	P	21 00 08.4	+1.0
AKH				pmax	pmax		
	comp=Z,47nm,1.0s						
AKH	Akhalkalaki	84.35	311	P	P	21 00 08.4	+1.0
AKH				IAmb	IAmb	21 00 33.9	
	comp=Z,47nm,1.0s						
ATD	Arta Tunnel	84.44	281	P	P	21 00 09.7	+1.5
ONI	Oni	84.44	312	P	P	21 00 09.0	+1.4
PRGR	Permogore	84.59	332	eP	P	21 00 06.1	-1.7
PRGR				eS	S	21 10 12.7	-9.4
PRGR				pmax	pmax		
	comp=Z,26nm,0.8s						
KARS	Kars	84.63	310	P	P	21 00 10.6	+1.9
KTH	Kantishna Hill	84.66	26	P	P	21 00 08.5	+0.3
BPAW	Bear Paw Mtn.	84.69	26	P	P	21 00 08.6	+0.3
GOF	Gofitskoye	84.85	315	⇑eP	P	21 00 09.4	-0.1
GOF				pmax	pmax		
	comp=Z,35nm,1.1s						
KBZ	Khabaz	84.89	314	P	P	21 00 10.0	+0.3
	comp=Z,15nm,1.1s,baz=58,slow=0.9,SNR=14						
KBZ				LR	LR	21 42 11.2	
	comp=Z,120nm,21.8s,baz=66,slow=38						
KBZ	Khabaz	84.89	314	c iP	P	21 00 09.8	+0.1
KBZ				pmax	pmax		
	comp=Z,18nm,1.3s						
MLY	Manley	84.91	25	P	P	21 00 09.7	+0.2
TRF	Thorofare Moun	84.92	27	P	P	21 00 09.2	-0.5
RC01	Rabbit Creek A	84.94	29	P	P	21 00 09.4	-0.2
SEW	Seward	84.99	30	P	P	21 00 10.1	+0.3
KIV	Kislovodsk	85.06	314	⇑P	P	21 00 10.2	-0.5
KIV	Kislovodsk	85.06	314	eP	P	21 00 14.3	+3.6
KIV				e*PP	pwP	21 00 49.3	-1.2
KIV				e		21 10 24.7	
KIV				pmax	pmax		
	comp=Z,39nm,1.1s						
KIV				MLR	MLR		
	comp=Z,271nm,20.0s						
KIV	Kislovodsk	85.06	314	P	P	21 00 11.0	+0.3
SHA1	Shidzhatmaz	85.07	314	i P	P	21 00 10.9	0.0
PMOR	Pomariorio Ree	85.22	105	eP	P	21 00 11.8	-0.1
	comp=Z,304nm,1.3s						
PMR	Palmer	85.28	28	P	P	21 00 10.9	-0.3
PMR				pmax	pmax		
	comp=Z,123nm,0.9s						
PMR	Palmer	85.28	28	P	P	21 00 10.9	-0.3
PMR				IAmb	IAmb	21 00 12.6	
	comp=Z,123nm,0.9s						
BWN	Browne	85.36	26	P	P	21 00 12.3	+0.7
BWN				IAmb	IAmb	21 00 14.6	
	comp=Z,48nm,0.9s						
COLD	Coldfoot	85.38	23	P	P	21 00 12.8	+1.1
GHO	Glory Hole Cre	85.39	28	P	P	21 00 11.7	-0.2
GHO				IAmb	IAmb	21 00 13.4	
	comp=Z,43nm,0.8s						
MCK	McKinley	85.56	26	P	P	21 00 12.1	-0.5
MCK				pmax	pmax		
	comp=Z,51nm,0.8s						
MCK	McKinley	85.56	26	P	P	21 00 12.1	-0.5
MCK				IAmb	IAmb	21 00 13.9	
	comp=Z,51nm,0.8s						
RND	Reindeer	85.56	27	P	P	21 00 12.2	-0.5
RND				pmax	pmax		
	comp=Z,50nm,0.6s						
RND	Reindeer	85.56	27	P	P	21 00 12.2	-0.5
RND				IAmb	IAmb	21 00 13.7	
	comp=Z,50nm,0.6s						
KNK	Knik Glacier	85.58	29	P	P	21 00 12.9	+0.1
SML	Sawmill	85.67	28	P	P	21 00 13.3	0.0
SML				pmax	pmax		
	comp=Z,122nm,0.8s						
SML	Sawmill	85.67	28	P	P	21 00 13.3	0.0
SML				IAmb	IAmb	21 00 15.0	
	comp=Z,122nm,0.8s						
BATM	Batumi	85.71	311	⇑P	P	21 00 15.0	+1.1
BATM	Batumi	85.71	311	⇑P	P	21 00 15.0	+1.1
BCA	Borcka	85.76	311	⇓P	P	21 00 14.8	+0.6
TOLK	Toolik Lake Re	85.77	21	P	P	21 00 14.4	+0.7
TOLK				IAmb	IAmb	21 00 16.5	
	comp=Z,51nm,0.8s						
TOLK	Toolik Lake Re	85.77	21	P	P	21 00 14.6	+0.9
	baz=264						
MDM	Murphy Dome	85.96	25	P	P	21 00 14.2	-0.5
WRH	Wood River Hil	85.99	26	P	P	21 00 13.9	-0.8
VRH	Novokhopyorsk	85.99	321	eP	P	21 00 14.5	-0.5
VRH				pmax	pmax		
	comp=Z,60nm,0.7s						
COLA	College	86.12	25	P	P	21 00 15.0	-0.3
COLA				pmax	pmax		
	comp=Z,17nm,0.8s						
COLA	College	86.12	25	P	P	21 00 15.0	-0.3
CCB	Clear Creek Bu	86.12	25	P	P	21 00 14.4	-0.9
SCM	Sheep Creek Mo	86.15	28	P	P	21 00 15.9	+0.2
SCM				pmax	pmax		
	comp=Z,182nm,1.3s						
SCM	Sheep Creek Mo	86.15	28	P	P	21 00 15.9	+0.2
SCM				IAmb	IAmb	21 00 18.3	
	comp=Z,182nm,1.3s						
DHY	Denali Highway	86.21	27	P	P	21 00 15.7	-0.3
GLI	Glacier Island	86.21	29	P	P	21 00 16.1	+0.2
GLI				IAmb	IAmb	21 00 17.6	
	comp=Z,84nm,0.7s						
POKR	Poker Plat Res	86.31	25	P	P	21 00 17.3	+1.0
	baz=266						
HDA	Harding Lake	86.48	26	P	P	21 00 15.8	-1.3
HDA	Harding Lake	86.48	26	P	P	21 00 16.0	-1.1
	baz=267						
HIN	Hinchinbrook I	86.48	30	P	P	21 00 17.6	+0.4
HIN				IAmb	IAmb	21 00 19.3	
	comp=Z,57nm,0.8s						
FID	Port Fidalgo	86.50	29	P	P	21 00 17.4	+0.1
FID				IAmb	IAmb	21 00 19.2	
	comp=Z,53nm,0.8s						
IL31		86.52	25	P	P	21 00 15.8	-1.5
ILAR	Eielson Array	86.52	25	P	P	21 00 16.2	-1.1
	comp=Z,12nm,1.0s,baz=254,slow=4.0,SNR=64						
ILAR				PP	PP	21 03 37.8	-3.2
	comp=Z,5.9nm,1.1s,baz=255,slow=6.3,SNR=7.5						
ILAR				PKKPbc	PKKPbc	21 18 13.0	-2.8
	comp=Z,0.6nm,0.9s,baz=50,slow=2.3,SNR=4.7						
ILAR				LR	LR	21 35 08.0	
	comp=Z,111nm,19.8s,baz=284,slow=33						
ILAR	Eielson Array	86.52	25	P	P	21 00 15.8	-1.6
EYAK	Cordova Ski Ar	86.86	30	P	P	21 00 19.5	+0.5
FYU	Fort Yukon	87.29	24	P	P	21 00 21.9	+1.0
FYU				IAmb	IAmb	21 00 23.6	
	comp=Z,39nm,0.9s						
RIDG	Independent Ri	87.37	26	P	P	21 00 20.9	-0.7
RIDG				IAmb	IAmb	21 00 22.4	
	comp=Z,48nm,0.9s						
RAGM	Ragged Mountai	87.38	30	P	P	21 00 22.0	+0.4
KLMR	Klimovskoe	87.49	331	eP	P	21 00 18.2	-3.8
KLMR				pmax	pmax		
	comp=Z,58nm,1.5s						
KLMR	Klimovskoe	87.49	331	eP	P	21 00 18.2	-3.8
KLMR				AMP		21 00 22.6	
	comp=Z,58nm,1.5s						
BMAR	Burnt Mountain	87.57	23	P	P	21 00 23.0	+0.6
VSR	Storozhevoye	87.60	321	eP	P	21 00 21.7	-1.1
VSR				pmax	pmax		
	comp=Z,30nm,1.3s						
LPSR	Galich'ya Gora	87.75	322	eP	P	21 00 23.1	-0.4
LPSR				pmax	pmax		
	comp=Z,30nm,1.0s						
GLB	Gilahina Butte	87.82	29	P	P	21 00 23.6	-0.1
MENT	Mentasta	87.87	27	P	P	21 00 24.0	+0.1
MENT				IAmb	IAmb	21 00 28.1	
	comp=Z,26nm,0.8s						
VRDI	Verde Repeater	87.99	29	P	P	21 00 24.5	-0.2
CRQM	Cirque	88.14	29	P	P	21 00 25.9	+0.5
CRQM				IAmb	IAmb	21 00 27.9	
	comp=Z,31nm,1.0s						
MCARA	McCarthy VSAT	88.20	29	P	P	21 00 25.9	+0.5
TMCR	Tamitsa	88.20	334	eP	P	21 00 24.0	-1.3
TMCR				pmax	pmax		
	comp=Z,25nm,0.6s						
MALT	Malatya	88.20	308	P	P	21 00 27.2	+1.1
TGL	Tana Glacier	88.30	29	P	P	21 00 26.3	+0.3
MOS	Moscow	88.49	326	eP	P	21 00 24.1	-2.8
MOS				eS	SKSac	21 10 39.2	-2.6
MOS				e		21 10 56.0	
MOS				pmax	pmax		
	comp=Z,41nm,1.4s						
BALM	Baldy	88.53	29	P	P	21 00 27.6	+0.5
BALM				pmax	pmax		
	comp=Z,16nm,0.8s						

BALM	Baldy	88.53	29	P	P	21 00 27.6	+0.5
BCAR	Beaver Creek A	88.75	27	P	P	21 00 28.3	+0.2
BARN	Barnard Glacie	88.86	29	P	P	21 00 29.4	+0.6
BARN				IAmb	IAmb	21 00 31.9	
	comp=Z,34nm,0.8s						
EGAK	Eagle	88.98	25	P	P	21 00 29.0	0.0
CTGM	Chitina Glacie	89.02	29	P	P	21 00 30.4	+0.9
CTGM				IAmb	IAmb	21 00 31.6	
	comp=Z,43nm,1.0s						
OBN	Obninsk	89.11	325	i P	P	21 00 27.0	-2.8
OBN				pmax	pmax		
	comp=Z,24nm,0.8s						
OBN	Obninsk	89.11	325	P	P	21 00 28.4	-1.3
GAZ	Gaziantep	89.19	307	P	P	21 00 30.3	-0.5
GAZ				IAmb	IAmb	21 00 57.0	
	comp=Z,193nm,1.9s						
PCA	Pinnacle	89.59	30	P	P	21 00 32.4	+0.3
PCA				IAmb	IAmb	21 00 37.5	
	comp=Z,49nm,1.2s						
DAWY	Dawson	89.78	26	P	P	21 00 33.2	+0.4
DAWY				IAmb	IAmb	21 00 34.4	
	comp=Z,44nm,0.9s						
APA	Apatity	89.96	337	⇑iP	P	21 00 31.3	-2.2
APA				pmax	pmax		
	comp=Z,15µm,1.1s						
KVT	Kavak	89.97	311	P	P	21 00 35.1	+0.9
EPYK	Eagle Plains	90.71	24	P	P	21 00 37.1	-0.1
EPYK				IAmb	IAmb	21 00 38.2	
	comp=Z,36nm,1.0s						
EPYK	Eagle Plains	90.71	24	P	P	21 00 37.0	-0.1
	baz=276						
SYO	Syowa Base	90.89	201	⇑eP	P	21 00 40.0	+2.2
SYO	Syowa Base	90.89	201	⇓eX	P	21 00 43.0	+5.2
HYT	Haines Junctio	90.90	29	P	P	21 00 38.8	+0.6
SIM	Simferopol'	91.18	315	eP	P	21 00 39.4	-0.3
SIM				pmax	pmax		
	comp=Z,11nm,0.8s						
INK	Inuvik	91.68	22	P	P	21 00 40.4	-1.1
	comp=Z,20nm,1.0s,baz=278,slow=4.4,SNR=42						
INK				PKiKP	PKiKP	21 05 32.4	+0.7
	comp=Z,2.7nm,0.8s,baz=75,slow=1.2,SNR=3.4						
INK	Inuvik	91.68	22	P	P	21 00 41.1	-0.4
INK				pmax	pmax		
	comp=Z,47nm,1.4s						
INK	Inuvik	91.68	22	P	P	21 00 41.1	-0.4
INK				IAmb	IAmb	21 00 42.3	
	comp=Z,47nm,1.4s						
QSPA	South Pole Qui	91.69	180	P	P	21 00 41.8	+0.1
QSPA				IAmb	IAmb	21 00 43.4	
	comp=Z,107nm,1.5s						
BR131	Keskin Array S	91.88	310	i P	P	21 00 43.1	-0.1
BR131	Keskin Array S	91.88	310	P	P	21 00 42.1	-1.2
BRTR	Keskin Array B	91.88	310	P	P	21 00 42.5	-0.8
	comp=Z,4.3nm,0.9s,baz=114,slow=5.5,SNR=18						
BRTR				PP	PP	21 04 26.2	+1.8
	comp=Z,2.1nm,1.1s,baz=115,slow=5.6,SNR=3.6						
BRTR				PKKPbc	PKKPbc	21 18 02.0	+0.3
	comp=Z,0.7nm,0.9s,baz=186,slow=6.1,SNR=4.8						
BRTR				LR	LR	21 48 42.6	
	comp=Z,45nm,20.1s,baz=44,slow=40						
BRTR	Keskin Array B	91.88	310	ceP	P	21 00 42.5	-0.8
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BRTR	Keskin Array B	91.88	310	P	P	21 00 41.8	-1.4
SKAG	Skagway	92.13	30	P	P	21 00 44.3	+0.6
SKAG				IAmb	IAmb	21 00 45.9	
	comp=Z,58nm,0.8s						
WHY	Whitehorse	92.20	29	P	P	21 00 44.9	+0.7
WHY				IAmb	IAmb	21 00 46.3	
	comp=Z,50nm,0.9s						
CSS	Mathiatis	92.44	305	P	P	21 00 45.2	-0.6
BESE	Bessie Mountai	92.48	31	P	P	21 00 46.3	+0.8
BESE				IAmb	IAmb	21 00 47.7	
	comp=Z,61nm,1.0s						
SPA0	Spitsbergen Ar	92.54	349	eP	P	21 00 45.0	-0.3
SPA0	Spitsbergen Ar	92.54	349	P	P	21 00 44.7	-0.7
SPA0				IAmb	IAmb	21 00 45.8	
	comp=Z,60nm,0.9s						
SPITS	Spitsbergen Ar	92.54	349	P	P	21 00 44.7	-0.7
SPITS				pmax	pmax		
	comp=Z,11nm,0.5s						
ARCES	ARCESS Array B	92.55	340	P	P	21 00 44.5	-1.0
	comp=Z,32nm,0.7s,baz=80,slow=6.4,SNR=57						
ARCES				PKiKP	PKiKP	21 05 33.2	-0.1
	comp=Z,1.3nm,0.6s,baz=96,slow=1.2,SNR=6.6						
ARCES	ARCESS Array B	92.55	340	P	P	21 00 44.7	-0.8
ARCES	ARCESS Array B	92.55	340	P	P	21 00 44.7	-0.8
ARE0	ARCESS Array S	92.55	340	eP	P	21 00 45.1	-0.4
ARE0	ARCESS Array S	92.55	340	P	P	21 00 45.0	-0.6
JIS	Juneau Island	92.77	32	P	P	21 00 47.5	+0.8
JIS				IAmb	IAmb	21 00 48.8	
	comp=Z,53nm,0.8s						
HAMF	Hammerfest	92.91	341	eP	P	21 00 46.5	-0.6
KBS	Kingsbay	93.06	350	eP	P	21 00 45.8	-1.9
HSPB	Hornsund (broa	93.14	348	eP	P	21 00 47.4	-0.7
KTK1	Kautokeino	93.45	340	eP	P	21 00 48.7	-1.0
MDUB	Mudurnu	93.68	311	P	P	21 00 50.8	-0.7
AKASG	Malin Array Be	93.90	321	P	P	21 00 50.9	-1.2
	comp=Z,1.9nm,0.7s,baz=70,slow=4.5,SNR=13						
AKASG				PKKPbc	PKKPdf	21 17 52.5	-2.5
	comp=Z,0.3nm,0.3s,baz=262,slow=3.3,SNR=4.6						
AKASG	Malin Array Be	93.90	321	P	P	21 00 50.9	-1.2
AKBB	Malin Array Si	93.90	321	P	P	21 00 49.8	-2.3
AKBB				pmax	pmax		
	comp=Z,15nm,1.1s						
AKBB	Malin Array Si	93.90	321	P	P	21 00 49.8	-2.3
FINES	FINESS Array B	93.92	332	P	P	21 00 51.3	-0.7
	comp=Z,4.5nm,0.8s,baz=60,slow=4.8,SNR=13						
FINES				PKiKP	PKiKP	21 05 37.8	+2.0
	comp=Z,2.3nm,0.7s,baz=151,slow=4.4,SNR=3.6						
FINES	FINESS Array B	93.92	332	P	P	21 00 50.8	-1.2
WRAK	Wrangell Islan	94.14	33	P	P	21 00 52.0	-1.1
WRAK				IAmb	IAmb	21 00 54.8	
	comp=Z,49nm,0.9s						
TRO	Tromso	94.75	341	eP	P	21 00 55.1	-0.5
C36M	Paulatuk	94.78	20	P	P	21 00 55.3	-0.4
C36M	Paulatuk	94.78	20	P	P	21 00 55.8	+0.1
	baz=288						
TLCR		94.90	315	⇑P	P	21 00 56.7	-0.1
TLCR		94.90	315	⇑P	P	21 00 56.7	-0.1
DLBC	Dease Lake	95.01	31	P	P	21 00 57.3	+0.2
	comp=Z,23nm,0.9s,baz=300,slow=5.4,SNR=28						
DLBC	Dease Lake	95.01	31	P	P	21 00 57.9	+0.8
DLBC				IAmb	IAmb	21 00 59.1	
	comp=Z,25nm,0.8s						
ELL	Elmali	95.06	307	P	P	21 00 57.2	-0.7
ELL				pmax	pmax		
	comp=Z,28nm,0.8s						
ELL	Elmali	95.06	307	P	P	21 00 57.2	-0.7
ELL				IAmb	IAmb	21 01 23.8	
	comp=Z,28nm,0.8s						
TOPG	Topolog	95.24	315	⇑P	P	21 00 58.0	-0.4
TIRR	Tirgusor	95.28	315	⇑P	P	21 00 57.8	-0.7
TIRR	Tirgusor	95.28	315	P	P	21 00 57.8	-0.7
TIRR				pmax	pmax		
	comp=Z,45nm,1.3s						
TIRR	Tirgusor	95.28	315	P	P	21 00 57.8	-0.7
TIRR				IAmb	IAmb	21 01 24.2	
	comp=Z,45nm,1.3s						
CFR	Carcaliu	95.37	316	⇑P	P	21 00 58.2	-0.7
CFR	Carcaliu	95.37	316	⇑P	P	21 00 58.2	-0.7
MANT	Manisa	95.93	309	P	P	21 01 00.4	-1.5
TESR	Tescani	96.20	317	⇓P	P	21 01 02.4	-0.4
VRI	Vrincioaia	96.25	316	⇑P	P	21 01 02.9	-0.1
VRI	Vrincioaia	96.25	316	⇑P	P	21 01 02.9	-0.1
PLOR	Plostina	96.31	316	⇑P	P	21 01 02.9	-0.4
PLOR	Plostina	96.31	316	⇑P	P	21 01 02.9	-0.4
BIZ	Bicaz	96.50	317	⇑P	P	21 01 03.7	-0.4
STEI	Steigen	96.59	339	eP	P	21 01 02.1	-1.9
MLR	Muntele Rosu	96.85	316	⇑P	P	21 01 05.4	-0.5
MLR	Muntele Rosu	96.85	316	P	P	21 01 05.5	-0.4
MLR				pmax	pmax		
	comp=Z,24nm,1.1s						
MLR	Muntele Rosu	96.85	316	P	P	21 01 05.5	-0.4
MLR				IAmb	IAmb	21 01 32.0	
	comp=Z,24nm,1.1s						
OZUR		96.86	317	⇑P	P	21 01 05.5	-0.3
BURAR	Bucovina Array	96.98	318	⇑P	P	21 01 06.2	-0.2
BURAR	Bucovina Array	96.98	318	⇑P	P	21 01 06.2	-0.2
BURAR	Bucovina Array	96.98	318	P	P	21 01 06.0	-0.3
BUR08	Bucovina Ar. S	96.99	318	P	P	21 01 06.0	-0.4
BUR08				IAmb	IAmb	21 01 34.9	
	comp=Z,20nm,1.1s						
MOR8	Moi Rana	97.54	338	eP	P	21 01 06.5	-1.9
ARR	Arges	97.78	316	⇑P	Pdif	21 01 10.1	0.0
LOT	Lotru	98.37	316	⇑P	P	21 01 12.3	-0.4
UZH	Uzhgorod	98.70	320	⇓eP	Pdif	21 01 14.1	+0.2
DRGR		98.82	318	⇓P	Pdif	21 01 14.6	0.0
DRGR		98.82	318	⇓P	Pdif	21 01 14.6	0.0
GZR	Gura Zlata	99.06	316	⇑P	Pdif	21 01 15.4	-0.3
GZR	Gura Zlata	99.06	316	⇑P	Pdif	21 01 15.4	-0.3
NSS	Namsos	99.14	337	eP	Pdif	21 01 13.7	-1.7
DAG	Danmarks Havn	99.29	353	i P	Pdif	21 01 15.1	-0.8
	comp=Z,30nm,0.8s						
DAG	Danmarks Havn	99.29	353	i P	Pdif	21 01 15.1	-0.8
DAG				pmax	pmax		
	comp=Z,30nm,0.8s						
VTS	Vitosha	99.29	314	⇑P	Pdif	21 01 14.2	-2.7
VTS	Vitosha	99.29	314	⇑P	Pdif	21 01 14.2	-2.7
HERR	Herculane	99.42	316	⇑P	Pdif	21 01 17.7	+0.5
RES	Resolute Bay	99.58	10	P	Pdif	21 01 17.7	+0.4
	comp=Z,18nm,0.8s,baz=306,slow=5.7,SNR=79						
RES				PKiKP	PKiKP	21 05 47.2	+1.7
	comp=Z,2.2nm,0.8s,baz=291,slow=4.3,SNR=4.3						
RES	Resolute Bay	99.58	10		Pdif	21 01 17.2	-0.1
RES				IAmb	IAmb	21 01 18.6	
	comp=Z,24nm,0.9s						
NVL	N'lazarevskaya	99.94	198	eP	Pdif	21 01 30.4	+12
NVL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NC602	NORSAR Array S	100.86	333	eP	Pdif	21 01 21.9	-1.4
NB2	NORSAR Subarra	100.88	334	P	Pdif	21 01 22.2	-1.2
	comp=Z,2.2nm,0.7s,baz=66,slow=4.6						
NB2	NORSAR Subarra	100.88	334	P	Pdif	21 01 22.2	-1.2
	baz=66,slow=4.6						
NOA	NORSAR Array B	100.88	334	P	Pdif	21 01 21.9	-1.5
	comp=Z,4.2nm,0.8s,baz=66,slow=4.5,SNR=17						
NOA				PKiKP	PKiKP	21 05 48.1	-0.1
	comp=Z,0.8nm,0.8s,baz=262,slow=3.2,SNR=3.3						
NOA				PKKPbc	PKKPbc	21 17 35.5	-2.5
	comp=Z,1.8nm,0.9s,baz=248,slow=2.3,SNR=6.0						
YKA	Yellowknife Ar	100.94	25	P	Pdif	21 01 23.7	+0.1
	comp=Z,4.8nm,0.8s,baz=293,slow=4.4,SNR=51						
YKA				PP	PP	21 05 35.8	+2.7
	comp=Z,1.4nm,1.0s,baz=286,slow=7.6,SNR=5.0						
YKA				PKiKP	PKiKP	21 05 48.0	-0.1
	comp=Z,1.8nm,0.7s,baz=296,slow=1.4,SNR=11						
YKA				PKKPbc	PKKPbc	21 17 34.6	-3.2
	comp=Z,1.4nm,0.7s,baz=116,slow=2.8,SNR=16						
VYHS	Vyhne	100.96	320	eP	Pdif	21 01 24.9	+0.9
VYHS	Vyhne	100.96	320	ePDIFF	Pdif	21 01 24.9	+0.9
NC204	NORSAR Array S	100.99	334		Pdif	21 01 22.7	-1.2
BOSA	Boshof	101.61	241	P	Pdif	21 01 27.0	-0.5
	comp=Z,3.0nm,0.8s,baz=191,slow=2.0,SNR=3.7						
D03D	Eldon	101.67	41	P	Pdif	21 01 28.7	+1.5
	baz=286						
CONA	Conrad Observa	103.03	320	i PKKPbc	PKKPbc	21 17 30.0	-1.3
BRG	Berggiesshubel	103.28	323	ePDIFF	Pdif	21 02 17.9	+44
	comp=Z,4.2nm,0.7s						
BRG				epPDIFF		21 02 54.4	
	comp=Z,12nm,1.4s						
BRG	Berggiesshubel	103.28	323	ePP	PP	21 06 24.8	+34
	comp=Z,6.6nm,1.1s						
ARSA	Arzberg	103.45	319	i PKKPbc	PKKPbc	21 17 29.2	-0.8
	comp=Z,5.9nm,1.3s						
SNAA	Sanae	103.53	194	PKKPbc	PKKPbc	21 17 27.6	-3.1
	comp=Z,4.3nm,0.8s,baz=236,slow=6.6,SNR=10						
SNAA				PKKPab	PKKPdf	21 17 46.8	+8.6
	comp=Z,2.0nm,1.0s,baz=355,slow=2.5,SNR=5.7						
CLL	Collm	103.68	324	ePP	PP	21 05 54.0	0.0
SOKA	Soboth	103.95	319	i PKKPbc	PKKPbc	21 17 18.7	-10
	comp=Z,6.4nm,1.5s						
MOA	Molln	104.07	320	i PKKPbc	PKKPbc	21 17 27.1	-1.1
	comp=Z,5.7nm,0.8s						
GERES	GERESS Array B	104.10	321	PKiKP	PKiKP	21 05 54.7	+0.2
	comp=Z,1.2nm,0.6s,baz=113,slow=1.7,SNR=6.8						
GERES				PKKPbc	PKKPbc	21 17 27.0	-1.2
	comp=Z,2.1nm,0.9s,baz=209,slow=2.4,SNR=7.0						
GERES				PKKPab	PKKPab	21 17 46.4	-0.6
	comp=Z,0.9nm,0.8s,baz=224,slow=3.7,SNR=5.0						
OBKA	Obir	104.32	319	i PKKPbc	PKKPbc	21 17 25.9	-1.5
	comp=Z,9.7nm,1.2s						
MYKA	Terra Mystica	104.87	319	i PKKPbc	PKKPbc	21 17 24.4	-1.4
	comp=Z,6.6nm,0.8s						
NEW	Newport	105.26	39	Pdiff	Pdif	21 01 42.8	-0.3
	comp=Z,1.6nm,0.8s,baz=201,slow=4.9,SNR=3.6						
ABTA	Abfaltersbach	105.57	320	i PKKPbc	PKKPbc	21 17 22.7	-0.9
	comp=Z,7.4nm,1.0s						
WTTA	Wattenberg	105.95	320	i PKKPab	PKKPab	21 17 39.0	+0.2
	comp=Z,14nm,1.0s						
SQTA	Sankt Quirin	106.24	320	i PKKPbc	PKKPbc	21 17 20.3	-1.4
	comp=Z,1.1nm,0.4s						
MOTA	Moosalm	106.26	321	i PKKPbc	PKKPbc	21 17 20.0	-1.7
	comp=Z,8.8nm,1.1s						
RETA	Reutte	106.42	321	i PKKPab	PKKPab	21 17 35.9	-0.6
	comp=Z,6.9nm,1.1s						
FETA	Feichten	106.61	320	i PKKPbc	PKKPbc	21 17 19.9	-0.7
	comp=Z,8.3nm,1.1s						
NVAR	Mina Array Bea	107.61	49	Pdiff	Pdif	21 01 54.4	+0.3
	comp=Z,1.7nm,0.8s,baz=235,slow=5.2,SNR=6.5						
NVAR				PKiKP	PKiKP	21 06 02.8	+1.3
	comp=Z,1.7nm,0.8s,baz=244,slow=1.7,SNR=6.8						
NVAR				PKKPbc	PKKPbc	21 17 17.7	+0.5
	comp=Z,1.1nm,0.7s,baz=133,slow=4.4,SNR=6.9						
NVAR				PKKPab	PKKPab	21 17 32.1	+0.6
	comp=Z,0.8nm,0.6s,baz=114,slow=4.9,SNR=4.4						
NVAR	Mina Array Bea	107.61	49		Pdif	21 01 52.7	-1.4
ELK	Elko	109.12	46	PKiKP	PKiKP	21 06 05.1	+0.8
	comp=Z,4.1nm,0.8s,baz=254,slow=3.4,SNR=12						
R11A	Troy Canyon, C	109.66	48	P	PKiKP	21 06 06.4	+1.1
	baz=289						
GMRC	Granite Mounta	110.72	52	P	PKiKP	21 06 08.8	+1.5
	baz=288						
DUG	Dugway, Tooele	111.05	45	P	PKiKP	21 06 08.9	+1.2
	baz=292						
PDAR	Pinedale Array	112.29	42	PKKPbc	PKKPbc	21 17 00.9	-1.5
	comp=Z,1.5nm,0.6s,baz=120,slow=4.7,SNR=8.2						
PDAR				PKKPab	PKKPab	21 17 09.4	-1.3
	comp=Z,2.6nm,0.7s,baz=116,slow=6.8,SNR=11						
LAO	LASA Array	112.62	37	P	PKiKP	21 06 11.8	+1.3
	baz=299						
O20A	White River Ci	114.29	44	P	PKiKP	21 06 15.0	+1.0
	baz=295						
K22A	Casper	114.35	41	P	PKiKP	21 06 14.3	+0.2
	baz=298						
W18A	Petrified Fore	115.19	50	P	PKPdf	21 06 17.2	+1.3
	baz=292						
TUC	Tucson	115.36	53	P	PKPdf	21 06 17.2	+1.0
	baz=290						
ISCO	Idaho Springs	116.26	43	PKIKP	PKiKP	21 06 18.6	+0.6
ISCO	Idaho Springs	116.26	43		PKiKP	21 06 18.6	+0.6
ISCO	Idaho Springs	116.26	43	P	PKiKP	21 06 18.4	+0.4
	baz=297						
ULM	Lac du Bonnet	116.28	29	PKP	PKPdf	21 06 16.8	-0.4
	comp=Z,13nm,0.6s,baz=314,slow=1.9,SNR=19						
ULM				PKKPbc	PKKPab	21 16 51.5	-1.2
	comp=Z,2.5nm,0.7s,baz=129,slow=5.1,SNR=5.9						
ULM	Lac du Bonnet	116.28	29		PKPdf	21 06 16.6	-0.7
S22A	4UR Ranch, Cre	116.30	46	P	PKiKP	21 06 19.6	+1.4
	baz=295						
Q24A	Divide	116.95	44	P	PKiKP	21 06 20.3	+0.9
	baz=297						
SDCO	Great Sand Dun	117.25	45	P	PKiKP	21 06 20.6	+0.7
	baz=296						
121A	Cookes Peak, D	117.65	52	P	PKiKP	21 06 21.9	+1.2
	baz=292						
ANMO	Albuquerque	117.73	49	PKP	PKiKP	21 06 21.1	+0.3
	comp=Z,9.1nm,0.8s,baz=203,slow=2.5,SNR=20						
ANMO	Albuquerque	117.73	49		PKiKP	21 06 21.3	+0.5
ANMO	Albuquerque	117.73	49	P	PKiKP	21 06 21.8	+0.9
	baz=294						
T25A	Trinidad	118.30	46	P	PKiKP	21 06 22.8	+0.9
	baz=297						
MNTX	Cornudas Mount	119.86	52		PKiKP	21 06 25.3	+0.4
MNTX	Cornudas Mount	119.86	52	P	PKiKP	21 06 25.6	+0.8
	baz=293						
ECSD	EROS Data Cent	119.92	36		PKiKP	21 06 24.8	+0.2
ECSD	EROS Data Cent	119.92	36	P	PKPdf	21 06 24.3	-0.2
	baz=307						
EYMN	Ely	119.96	29		PKPdf	21 06 24.0	-0.5
EYMN	Ely	119.96	29	P	PKPdf	21 06 24.4	0.0
	baz=314						
BGNE	Belgrade	120.34	39	P	PKPdf	21 06 25.3	-0.1
	baz=304						
MVO	Moncorvo	120.62	321	ePKPdf	PKiKP	21 06 27.0	+0.9
CBKS	Cedar Bluff	120.72	42	P	PKiKP	21 06 26.8	+0.5
	baz=302						
E38A	The Farm, Brul	120.85	30		PKPdf	21 06 25.9	-0.2
MSTX	Muleshoe	120.90	48		PKPdf	21 06 26.7	-0.2
MSTX	Muleshoe	120.90	48	P	PKiKP	21 06 27.3	+0.4
	baz=296						
PGAV	Gavieira, Arco	120.92	323	ePKPdf	PKiKP	21 06 27.2	+0.5
PCAB	Cabril	120.93	322	ePKPdf	PKiKP	21 06 27.3	+0.6
PVRL	Vila Real	120.98	322	ePKPdf	PKiKP	21 06 27.7	+0.9
SPMN	Marine on St.	121.12	32		PKPdf	21 06 26.4	-0.3
SPMN	Marine on St.	121.12	32	P	PKiKP	21 06 27.0	+0.1
	baz=311						
MTE	Manteigas	121.37	321	ePKPdf	PKiKP	21 06 28.6	+1.0
PVIS	Viseu	121.41	321	ePKPdf	PKiKP	21 06 28.4	+0.7
PCBR	Castelo Branco	121.64	320	ePKPdf	PKiKP	21 06 28.9	+0.8
PMRV	Marv??o	121.82	320	ePKPdf	PKiKP	21 06 29.3	+0.8
D41A	Chassel	121.99	28		PKPdf	21 06 28.2	-0.1
TX31	Lajitas Ar. Si	122.14	53		PKiKP	21 06 29.5	0.0
TX32	Lajitas Array	122.14	53		PKiKP	21 06 29.6	+0.1
TXAR	Lajitas Array	122.14	53	PKP	PKiKP	21 06 29.9	+0.4
	comp=Z,6.9nm,0.7s,baz=227,slow=1.0,SNR=51						
TXAR				PP	PP	21 08 05.0	-0.9
	comp=Z,1.5nm,0.8s,baz=240,slow=4.0,SNR=4.1						
TXAR				PKKPbc	PKKPab	21 16 27.5	+0.2
	comp=Z,1.6nm,0.7s,baz=121,slow=6.7,SNR=11						
TXAR	Lajitas Array	122.14	53	PKIKP	PKPdf	21 06 29.2	-0.1
TXAR	Lajitas Array	122.14	53		PKPdf	21 06 29.2	-0.1
SCHQ	Schefferville	122.36	10	PKP	PKiKP	21 06 29.3	+0.2
	comp=Z,10nm,0.5s,baz=347,slow=2.0,SNR=27						
SCHQ	Schefferville	122.36	10		PKPdf	21 06 28.8	-0.1
PTOM	Tomar	122.36	321	ePKPdf	PKiKP	21 06 30.4	+0.9
COWI	Conover	122.40	29		PKPdf	21 06 29.2	-0.1
G40A	Rib Lake	122.45	31		PKPdf	21 06 29.0	-0.3
U32A	Winter Ranch,	122.47	44		PKPdf	21 06 29.2	-0.5
KSU1	Kansas State U	122.61	40	P	PKiKP	21 06 30.0	0.0
	baz=304						
PBEJ	Beja	122.90	319	ePKPdf	PKiKP	21 06 31.5	+0.9
I40A	Norwalk	123.17	32		PKPdf	21 06 29.7	-1.1
PCVE	Castro Verde	123.23	318	ePKPdf	PKiKP	21 06 32.3	+1.0
E43A	Lone Tree Farm	123.23	28		PKPdf	21 06 30.4	-0.4
MESJ	Messejana	123.23	319	ePKPdf	PKiKP	21 06 32.3	+1.0
PNCL	Nicolau / Gran	123.29	319	ePKPdf	PKiKP	21 06 32.4	+1.1
PMAFR	Mafra	123.30	320	ePKPdf	PKPdf	21 06 30.6	-0.5
PBDV	Barranco-do-Ve	123.37	318	ePKPdf	PKiKP	21 06 32.8	+1.2
WMOK	Wichita Mounta	123.45	46	PKIKP	PKPdf	21 06 31.5	-0.1
WMOK	Wichita Mounta	123.45	46		PKPdf	21 06 31.5	-0.1
WMOK	Wichita Mounta	123.45	46	P	PKiKP	21 06 31.9	0.0
	baz=300						
E44A	Grand Marais A	123.55	27		PKPdf	21 06 31.5	+0.1
E44A	Grand Marais A	123.55	27	P	PKiKP	21 06 31.9	+0.3
	baz=319						
MORF	Marmelete	123.81	318	ePKPdf	PKiKP	21 06 33.4	+0.9
ABTX	Abilene, Hawle	123.85	48	P	PKPdf	21 06 32.5	0.0
	baz=298						
T35A	Sooner Cattle	123.89	42		PKPdf	21 06 32.4	+0.1
JFWS	Jewell Farm	124.03	33	PKIKP	PKPdf	21 06 31.8	-0.6
JFWS	Jewell Farm	124.03	33		PKPdf	21 06 31.8	-0.6
JFWS	Jewell Farm	124.03	33	P	PKPdf	21 06 31.9	-0.6
	baz=312						
L40A	Anamosa	124.06	34		PKPdf	21 06 31.9	-0.6
I42A	Draeger Farm,	124.07	31		PKPdf	21 06 31.6	-0.8
FNO	Franklin	124.16	44		PKiKP	21 06 33.2	0.0
D46A	Sault St. Mari	124.18	26	P	PKiKP	21 06 32.9	+0.1
	baz=321						
X34A	Smith Ranch, M	124.20	45		PKPdf	21 06 33.1	+0.1
P38A	Dawn	124.24	38		PKPdf	21 06 32.4	-0.5
TOA0	Torodi Ar. Sit	124.27	287		PKPdf	21 06 33.0	-0.6
TORD	Torodi Ar. Bea	124.27	287	PKP	PKPdf	21 06 33.3	-0.3
	comp=Z,21nm,0.8s,baz=57,slow=2.2,SNR=92						
TORD				PKKPbc	PKKPab	21 16 19.4	+1.2
	comp=Z,8.9nm,0.8s,baz=266,slow=3.7,SNR=30						
TORD	Torodi Ar. Bea	124.27	287		PKPdf	21 06 32.7	-0.9
MATQ	Matagami	124.29	19	P	PKPdf	21 06 32.4	-0.3
	baz=329						
F45A	CMU Biological	124.44	28	P	PKiKP	21 06 33.4	0.0
	baz=319						
D47A	Chapleau	124.45	25	P	PKiKP	21 06 33.4	0.0
	baz=322						
E46A	Sault Ste Mari	124.47	26		PKPdf	21 06 33.0	-0.2
JCT	Junction City	124.71	51	PKIKP	PKPdf	21 06 34.3	+0.2
JCT	Junction City	124.71	51		PKPdf	21 06 34.3	+0.2
JCT	Junction City	124.71	51	P	PKiKP	21 06 34.5	+0.1
	baz=297						
E47A	Iron Bridge	124.85	26	P	PKiKP	21 06 34.1	-0.1
	baz=322						
G45A	Suttons Bay	124.85	28		PKPdf	21 06 34.0	+0.1
G45A	Suttons Bay	124.85	28	P	PKPdf	21 06 34.0	+0.1
	baz=318						
D48A	Paudash Townsh	124.89	24	P	PKPdf	21 06 33.9	-0.1
	baz=324						
TUL1	Leonard	124.92	43		PKiKP	21 06 34.6	0.0
L42A	Oliver, Polo	124.96	33		PKPdf	21 06 33.5	-0.7
H45A	Beulah	124.98	29	P	PKPdf	21 06 34.2	0.0
	baz=318						
D49A	Beulah Townshi	125.00	24	P	PKPdf	21 06 34.2	0.0
	baz=324						
G46A	Petoskey	125.02	27	P	PKPdf	21 06 34.4	+0.1
	baz=319						
LSQQ	Lebel-sur-Quev	125.11	19	P	PKPdf	21 06 34.1	-0.2
	baz=330						
N41A	Harden Midland	125.15	35		PKPdf	21 06 34.0	-0.6
K43A	Burlington	125.20	32		PKPdf	21 06 34.0	-0.7
Z35A	Perchaven, San	125.26	46		PKPdf	21 06 34.8	-0.3
E48A	Lockeyer	125.30	25	P	PKiKP	21 06 35.2	+0.1
	baz=323						
GLMI	Grayling	125.50	28		PKPdf	21 06 35.0	-0.2
GLMI	Grayling	125.50	28	P	PKiKP	21 06 35.5	-0.1
	baz=319						
S39A	Bolivar	125.53	40		PKPdf	21 06 35.0	-0.4
U38A	Gravette	125.57	41		PKPdf	21 06 35.1	-0.5
G47A	Hillman	125.59	27	P	PKiKP	21 06 35.9	+0.1
	baz=320						
F48A	Evansville	125.62	26	P	PKPdf	21 06 35.4	+0.1
	baz=322						
D50A	G1974 Best Tow	125.68	23	P	PKPdf	21 06 35.4	0.0
	baz=326						
VLDQ	Val d'Or	125.76	20		PKPdf	21 06 34.7	-0.8
WHTX	Lake Whitney,	125.78	48		PKiKP	21 06 36.4	-0.1
WHTX	Lake Whitney,	125.78	48	P	PKiKP	21 06 37.2	+0.8
	baz=300						
R40A	Maddies Statio	125.83	38		PKPdf	21 06 36.0	0.0
H47A	Mio	125.86	28	P	PKiKP	21 06 36.3	0.0
	baz=320						
D51A	Lot 18 Range I	125.92	22	P	PKPdf	21 06 35.8	-0.1
	baz=326						
F49A	Sandfield	125.92	25	P	PKiKP	21 06 36.2	-0.2
	baz=323						
X37A	Clayton	125.93	44		PKPdf	21 06 35.4	-0.9
HHAR	Hobbs	125.95	41		PKPdf	21 06 36.1	-0.3
833A	Chaparral WMA,	125.97	53		PKiKP	21 06 37.4	+0.5
833A	Chaparral WMA,	125.97	53	P	PKiKP	21 06 37.3	+0.3
	baz=296						
HDIL	Hopedale	126.14	34		PKPdf	21 06 36.4	-0.2
HDIL	Hopedale	126.14	34	P	PKPdf	21 06 36.3	-0.2
	baz=312						
H48A	Harrisville	126.19	27		PKPdf	21 06 36.4	-0.1
H48A	Harrisville	126.19	27	P	PKiKP	21 06 37.1	+0.2
	baz=321						
435B	Jarrell	126.26	49		PKPdf	21 06 35.6	-1.4
M44A	Midewin, Midew	126.27	33		PKPdf	21 06 35.2	-1.5
E51A	G1948 Merrick	126.34	23	P	PKPdf	21 06 36.8	+0.1
	baz=326						
I48A	Sherman Twp	126.41	28	P	PKiKP	21 06 37.6	+0.2
	baz=320						
MGMO	Mountain Grove	126.52	40		PKPdf	21 06 36.9	-0.6
K46A	Dorr	126.53	30	P	PKPdf	21 06 37.2	0.0
	baz=317						
D53A	Lac Vacive, Po	126.56	21	P	PKPdf	21 06 37.2	0.0
	baz=328						
J47A	Sunmer	126.60	29		PKPdf	21 06 37.3	-0.1
J47A	Sunmer	126.60	29	P	PKiKP	21 06 37.8	0.0
	baz=318						
CCM	Cathedral Cave	126.61	38	PKIKP	PKPdf	21 06 37.2	-0.3
CCM	Cathedral Cave	126.61	38		PKPdf	21 06 37.2	-0.3
CCM	Cathedral Cave	126.61	38	P	PKiKP	21 06 37.9	-0.1
	baz=309						
P43A	Skaggs, Pawnee	126.62	35		PKPdf	21 06 37.6	+0.2
U40A	Yellville	126.62	41		PKPdf	21 06 37.2	-0.4
U40A	Yellville	126.62	41	P	PKPdf	21 06 37.6	0.0
	baz=306						
F51A	Arnstein	126.67	24	P	PKPdf	21 06 37.4	+0.1
	baz=325						
W39A	Magazine	126.68	42		PKPdf	21 06 37.4	-0.3
W39A	Magazine	126.68	42	P	PKiKP	21 06 38.0	-0.2
	baz=305						
L46A	Eue Claire	126.75	31		PKPdf	21 06 37.4	-0.2
D54A	Lac Fusel, La	126.86	20	P	PKPdf	21 06 37.3	-0.4
	baz=329						
E52A	Mattawa	126.87	22	P	PKPdf	21 06 37.7	-0.1
	baz=327						

K47A	Vermontville	126.93	30	P	PKiKP	21 06 38.3	-0.2
	baz=318						
I49A	Point Hope	127.01	27		PKPdf	21 06 37.9	-0.2
I49A	Point Hope	127.01	27	P	PKiKP	21 06 38.5	-0.1
	baz=321						
F52A	Sundridge	127.02	23	P	PKiKP	21 06 38.6	0.0
	baz=326						
J48A	Bridge Port	127.05	28		PKPdf	21 06 38.1	0.0
J48A	Bridge Port	127.05	28	P	PKPdf	21 06 38.2	0.0
	baz=320						
E53A	Dumoine, Ponti	127.16	22	P	PKiKP	21 06 38.6	-0.3
	baz=328						
MIAR	Mount Ida	127.19	43	PKIKP	PKPdf	21 06 38.5	-0.2
MIAR	Mount Ida	127.19	43		PKPdf	21 06 38.5	-0.2
MIAR	Mount Ida	127.19	43	P	PKiKP	21 06 39.4	+0.2
	baz=305						
K48A	Perry	127.26	29	P	PKiKP	21 06 39.2	+0.1
	baz=319						
E54A	Lac Daplat, Po	127.29	21	P	PKPdf	21 06 38.5	0.0
	baz=328						
J49A	Marlette	127.31	28	P	PKPdf	21 06 38.7	+0.1
	baz=320						
T42A	Van Buren	127.34	39		PKPdf	21 06 38.5	-0.4
ALGO	Algonquin Park	127.37	22	P	PKPdf	21 06 38.8	+0.1
	baz=327						
FCAR	Ozark Folk Cen	127.38	41		PKPdf	21 06 38.8	-0.3
D55A	Sainte-Anne-du	127.39	20	P	PKPdf	21 06 38.9	+0.2
	baz=331						
Q44A	Meyer Farm, Va	127.40	36		PKiKP	21 06 39.2	-0.3
SFIN	Lafayette	127.49	33		PKPdf	21 06 38.7	-0.4
SFIN	Lafayette	127.49	33	P	PKPdf	21 06 39.2	+0.1
	baz=314						
M47A	Cromwell	127.58	31	P	PKiKP	21 06 39.7	-0.1
	baz=317						
D56A	ZEC Mazanza, M	127.60	19	P	PKPdf	21 06 39.3	+0.2
	baz=332						
E55A	Montcerf-Lytto	127.67	20	P	PKPdf	21 06 39.5	+0.2
	baz=330						
L48A	N Adams	127.75	30	P	PKPdf	21 06 39.8	+0.2
	baz=318						
G54A	Lake Saint Pet	127.83	23	P	PKiKP	21 06 40.2	0.0
	baz=327						
G53A	Haliburton	127.85	23	P	PKiKP	21 06 40.3	0.0
	baz=326						
N47A	Urbana	127.88	32		PKPdf	21 06 38.6	-1.3
N47A	Urbana	127.88	32	P	PKPdf	21 06 39.9	+0.1
	baz=316						
LCAR	Lake Charles	127.89	40		PKPdf	21 06 39.5	-0.5
PBMO	Poplar Bluff	127.92	39		PKPdf	21 06 39.8	-0.2
LATQ	La Tuque	127.92	17		PKPdf	21 06 39.6	-0.1
LATQ	La Tuque	127.92	17	P	PKiKP	21 06 40.1	-0.1
	baz=334						
I51A	Listowel	127.92	26	P	PKiKP	21 06 40.3	-0.2
	baz=323						
SADO	Sadowa	127.93	24	PKP	PKPdf	21 06 39.9	+0.1
	comp=Z,25nm,0.8s,baz=283,slow=4.1,SNR=16						
SADO	Sadowa	127.93	24		PKPdf	21 06 39.4	-0.4
P46A	Rosedale	127.95	34		PKPdf	21 06 40.1	+0.1
L49A	Milan	127.96	29	P	PKiKP	21 06 40.7	+0.2
	baz=319						
HKT	Hockley	127.99	49	PKIKP	PKiKP	21 06 40.7	-0.2
HKT	Hockley	127.99	49		PKiKP	21 06 40.7	-0.2
WLAR	White Oak Lake	127.99	44		PKiKP	21 06 41.1	+0.3
SIUC	Southern Illin	128.06	37		PKiKP	21 06 40.9	0.0
D58A	Chemin du LacG	128.15	18	P	PKPdf	21 06 40.3	+0.1
	baz=334						
N48A	Decatur	128.25	31	P	PKiKP	21 06 40.9	-0.3
	baz=317						
H53A	Bobcaygeon	128.32	24	P	PKiKP	21 06 41.3	+0.1
	baz=326						
M49A	Liberty Center	128.33	30	P	PKiKP	21 06 41.3	0.0
	baz=318						
G55A	Calabogie	128.47	22	P	PKiKP	21 06 41.2	-0.2
	baz=328						
L50A	Kingsville	128.47	29	P	PKiKP	21 06 41.3	-0.2
	baz=320						
J52A	Paris	128.61	26	P	PKiKP	21 06 41.8	0.0
	baz=323						
O48A	Farmland	128.62	32	P	PKiKP	21 06 42.0	+0.1
	baz=316						
N49A	Columbus Grove	128.64	31		PKPdf	21 06 41.3	+0.1
N49A	Columbus Grove	128.64	31	P	PKiKP	21 06 41.6	-0.3
	baz=318						
BLO	Bloomington	128.65	34	PKIKP	PKPdf	21 06 41.5	+0.1
BLO	Bloomington	128.65	34		PKPdf	21 06 41.5	+0.1
DELO	Deloro Mine	128.75	23		PKiKP	21 06 41.8	-0.2
M50A	Fremont	128.85	29		PKiKP	21 06 42.0	-0.3
M50A	Fremont	128.85	29	P	PKiKP	21 06 42.4	0.0
	baz=319						
K52A	Tillsonburg	128.87	27	P	PKiKP	21 06 42.3	-0.1
	baz=323						
H55A	Tweed	128.89	23	P	PKiKP	21 06 42.4	+0.1
	baz=328						
O49A	Covington	129.10	31	P	PKiKP	21 06 42.8	-0.1
	baz=317						
G57A	Newington	129.22	20	P	PKiKP	21 06 42.7	-0.2
	baz=330						
Q48A	North Vernon	129.25	34	P	PKiKP	21 06 43.8	+0.5
	baz=315						
N50A	Nevada	129.27	30	P	PKiKP	21 06 43.5	+0.3
	baz=319						
P49A	Miami Univ. Ec	129.37	32	P	PKiKP	21 06 43.6	+0.2
	baz=316						
E61A	Lac Etchemin	129.44	16	P	PKiKP	21 06 43.7	+0.3
	baz=336						
N51A	Ashland	129.54	29	P	PKiKP	21 06 43.5	-0.3
	baz=320						
M52A	Chesterland	129.55	28		PKPdf	21 06 43.1	+0.1
M52A	Chesterland	129.55	28	P	PKiKP	21 06 43.8	+0.1
	baz=321						
H57A	Richville	129.63	21	P	PKiKP	21 06 43.7	-0.1
	baz=330						
F61A	St Evariste	129.72	17	P	PKiKP	21 06 44.7	+0.7
	baz=336						
ERPA	Erie	129.72	27	P	PKiKP	21 06 43.9	-0.2
	baz=323						
ACSO	Alum Creek Sta	129.76	30		PKiKP	21 06 44.3	+0.1
ACSO	Alum Creek Sta	129.76	30	P	PKiKP	21 06 43.8	-0.4
	baz=319						
K54A	Basiliko Farm,	129.89	25	P	PKPdf	21 06 43.9	+0.2
	baz=325						
L54A	Sinclairville	129.93	26	P	PKiKP	21 06 44.2	-0.4
	baz=324						
WVT	Waverly	129.94	38	PKIKP	PKPdf	21 06 43.7	-0.2
WVT	Waverly	129.94	38		PKPdf	21 06 43.7	-0.2
WVT	Waverly	129.94	38	P	PKiKP	21 06 44.5	-0.2
	baz=311						
M53A	WI Miller and	129.95	28	P	PKiKP	21 06 44.6	0.0
	baz=322						
N52A	McGinn’s Farm,	129.96	29	P	PKiKP	21 06 45.0	+0.4
	baz=321						
OXF	Oxford	129.98	40	PKIKP	PKPdf	21 06 43.8	-0.2
OXF	Oxford	129.98	40		PKPdf	21 06 43.8	-0.2
OXF	Oxford	129.98	40	P	PKPdf	21 06 44.3	+0.3
	baz=309						
I57A	Carthage	129.98	22	P	PKiKP	21 06 44.9	+0.3
	baz=329						
O51A	Pataskala	130.01	30	P	PKiKP	21 06 44.5	-0.2
	baz=319						
K55A	Perry	130.05	25	P	PKPdf	21 06 44.1	+0.1
	baz=326						
WVNY	West Valley, N	130.09	25		PKiKP	21 06 44.9	0.0
P51A	Williamsport	130.28	31	P	PKiKP	21 06 45.0	-0.3
	baz=318						
S49A	Springfield	130.31	34	P	PKiKP	21 06 45.0	-0.3
	baz=315						
J57A	Williamstown	130.31	22	P	PKiKP	21 06 44.9	-0.3
	baz=329						
L55A	Hinsdale	130.35	25	P	PKPdf	21 06 45.0	+0.4
	baz=325						
M54A	Oil Creek Stat	130.35	27		PKPdf	21 06 44.5	-0.1
M54A	Oil Creek Stat	130.35	27	P	PKPdf	21 06 44.8	+0.3
	baz=323						
O52A	Adamsville	130.42	30	P	PKiKP	21 06 45.9	+0.3
	baz=320						
R50A	Paris	130.49	33	P	PKiKP	21 06 45.7	-0.1
	baz=316						
PLAL	Pickwick Lake	130.53	39		PKPdf	21 06 44.2	-0.8
J58A	Remsen	130.62	22	P	PKiKP	21 06 45.8	-0.1
	baz=329						
P52A	Corning	130.64	30	P	PKPdf	21 06 45.5	+0.4
	baz=320						
T49A	Edmonton	130.64	35	P	PKiKP	21 06 45.9	-0.2
	baz=314						
L56A	Greenwood	130.75	25		PKPdf	21 06 45.3	0.0
L56A	Greenwood	130.75	25	P	PKPdf	21 06 45.8	+0.4
	baz=326						
M55A	Ridgway	130.79	26	P	PKPdf	21 06 45.7	+0.3
	baz=324						
V48A	Smith Brothers	130.81	37		PKPdf	21 06 45.6	+0.1
J59A	Piesco	130.81	21		PKPdf	21 06 45.6	+0.2
J59A	Piesco	130.81	21	P	PKiKP	21 06 46.0	-0.3
	baz=330						
S50A	Richmond	130.88	34	P	PKiKP	21 06 46.2	-0.4
	baz=316						
I60A	Shoreham	130.91	20	P	PKiKP	21 06 46.1	-0.3
	baz=332						
344A	Westbrook Farm	130.91	44		PKPdf	21 06 45.6	-0.3
M56A	Emporium	131.03	26		PKPdf	21 06 45.8	0.0
M56A	Emporium	131.03	26	P	PKiKP	21 06 46.6	-0.2
	baz=325						
O54A	Avella	131.07	28		PKPdf	21 06 45.7	-0.3
Q52A	Bidwell	131.08	31	P	PKPdf	21 06 46.3	+0.3
	baz=319						
T50A	Nancy	131.10	35	P	PKiKP	21 06 46.7	-0.3
	baz=315						
P53A	Whipple	131.12	30		PKPdf	21 06 46.3	+0.3
P53A	Whipple	131.12	30	P	PKiKP	21 06 46.8	-0.2
	baz=320						
L57A	Andrews Acres	131.16	24	P	PKiKP	21 06 46.6	-0.4
	baz=327						
N55A	Marion Center	131.24	27	P	PKPdf	21 06 45.9	-0.4
	baz=324						
BINY	Binghamton	131.34	23		PKiKP	21 06 46.9	-0.5
BINY	Binghamton	131.34	23	P	PKiKP	21 06 47.2	-0.2
	baz=328						
S51A	Beattyville	131.35	33	P	PKiKP	21 06 47.1	-0.5
	baz=317						
N56A	West Decatur	131.44	26	P	PKiKP	21 06 47.2	-0.5
	baz=325						
X48A	Hartselle	131.52	39		PKPdf	21 06 46.4	-0.5
M57A	Sunshine Farm,	131.60	25		PKiKP	21 06 47.4	-0.5
M57A	Sunshine Farm,	131.60	25	P	PKiKP	21 06 47.7	-0.2
	baz=326						
KIC	Kosan Boka	131.67	280	*e*PKIKP	PKiKP	21 06 48.5	-0.3
	comp=Z,23nm,0.7s						
R53A	Hurricane	131.71	31	P	PKPdf	21 06 47.7	+0.5
	baz=319						
DBIC	Dimbokro	131.74	280	PKP	PKiKP	21 06 49.1	+0.2
	comp=Z,9.5nm,0.7s,baz=85,slow=3.3,SNR=14						
DBIC				SKPbc	SKPbc	21 09 59.6	-0.3
	comp=Z,43nm,0.8s,baz=68,slow=4.6,SNR=30						
DBIC	Dimbokro	131.74	280	PKIKP	PKPdf	21 06 48.1	+0.2
DBIC	Dimbokro	131.74	280		PKPdf	21 06 48.0	+0.2
Q54A	Coxs Mills	131.78	30	P	PKiKP	21 06 47.9	-0.4
	baz=321						
M58A	Price’s Panora	131.85	24	P	PKiKP	21 06 48.6	+0.2
	baz=327						
O56A	Blue Knob Stat	131.85	27	P	PKiKP	21 06 49.1	+0.6
	baz=324						
SSPA	Standing Stone	131.85	26		PKPdf	21 06 47.8	+0.4
SSPA	Standing Stone	131.85	26	P	PKiKP	21 06 48.0	-0.4
	baz=325						
P55A	Reedsville	131.87	29	P	PKPdf	21 06 48.0	+0.5
	baz=322						
N57A	Milroy	131.90	26	P	PKiKP	21 06 48.1	-0.4
	baz=325						
TIC	Toumodi	131.90	280	*e*PKIKP	PKPdf	21 06 48.7	+0.5
LIC	Lamto	131.97	280	*e*PKIKP	PKiKP	21 06 48.9	-0.5
	comp=Z,43nm,0.6s						
W50A	Signal Mountai	132.08	37		PKPdf	21 06 48.4	+0.4
M59A	Waymart	132.12	23	P	PKPdf	21 06 48.3	+0.4
	baz=328						
Q55A	Buckhannon	132.15	29	P	PKPdf	21 06 48.3	+0.2
	baz=322						
N58A	Sunbury	132.18	25	P	PKPdf	21 06 48.2	+0.2
	baz=326						
R54A	Victor	132.32	31	P	PKiKP	21 06 49.0	-0.5
	baz=320						
P56A	Dayton Farm, R	132.33	28	P	PKiKP	21 06 49.0	-0.5
	baz=323						
S54A	Dingess, Beckl	132.44	31	P	PKPdf	21 06 49.1	+0.5
	baz=319						
LRAL	Lakeview Retre	132.46	40		PKPdf	21 06 48.9	+0.2
LRAL	Lakeview Retre	132.46	40	P	PKPdf	21 06 49.3	+0.5
	baz=310						
TKL	Tuckaleechee C	132.67	35	PKP	PKPdf	21 06 49.5	+0.4
	comp=Z,35nm,0.7s,baz=128,slow=2.7,SNR=7.8						
TKL				SKPbc	SKPbc	21 10 02.0	-0.6
	comp=Z,16nm,1.0s,baz=331,slow=2.0,SNR=4.0						
TKL	Tuckaleechee C	132.67	35		PKPdf	21 06 48.4	-0.7
O58A	Lewisberry	132.69	26	P	PKiKP	21 06 50.1	-0.1
	baz=326						
N60A	Cedar Hill Far	132.82	23	P	PKiKP	21 06 49.8	-0.6
	baz=328						
ODNJ	Ogdensburg	132.83	23		PKPdf	21 06 49.4	+0.2
O59A	Robesonia	132.85	25	P	PKPdf	21 06 49.4	+0.1
	baz=327						
R56A	Bull Pasture M	132.94	29	P	PKiKP	21 06 50.5	-0.3
	baz=322						
Z50A	Ashland	133.01	39		PKPdf	21 06 49.4	-0.4
Z50A	Ashland	133.01	39	P	PKPdf	21 06 49.9	+0.1
	baz=311						
P58A	Pank, Wackersv	133.05	26	P	PKPdf	21 06 49.8	+0.2
	baz=325						
O60A	Telford	133.16	24	P	PKiKP	21 06 50.6	-0.5
	baz=328						
PAL	Palisades	133.17	22	P	PKiKP	21 06 51.1	+0.1
	baz=330						
V53A	Saluda	133.21	34		PKPdf	21 06 50.6	+0.4
Q58A	Fox Den Farm,	133.32	27	P	PKPdf	21 06 50.5	+0.3
	baz=324						
BLA	Blacksburg	133.35	31	P	PKPdf	21 06 50.8	+0.4
	baz=320						
Z51A	Franklin	133.44	39		PKPdf	21 06 50.8	+0.2
P60A	Greenville	133.50	25	P	PKPdf	21 06 50.7	+0.2
	baz=327						
U55A	TA2, Sparta	133.56	32	P	PKiKP	21 06 51.6	-0.5
	baz=319						
250A	Grady	133.61	41		PKiKP	21 06 51.8	-0.5
T56A	Rocky Mt	133.69	31	P	PKPdf	21 06 51.6	+0.6
	baz=320						
Y52A	Lilburn	133.75	37		PKPdf	21 06 51.2	+0.1
Y52A	Lilburn	133.75	37	P	PKiKP	21 06 52.3	-0.2
	baz=314						
X53A	Estanollee	133.75	36	P	PKiKP	21 06 52.6	+0.1
	baz=315						
R58B	Mineral	134.02	28		PKPdf	21 06 51.4	-0.1
152A	Waverly Hall	134.15	39		PKPdf	21 06 51.9	0.0
CMIG	Matias Romero	134.18	64	PKP	PKPdf	21 06 52.7	+0.3
	comp=Z,5.8nm,0.7s,baz=262,slow=3.4,SNR=8.1						
CMIG				SKPbc	SKPbc	21 10 07.4	-0.6
	comp=Z,4.9nm,0.8s,baz=330,slow=2.7,SNR=5.2						
PAULI	Pauline	134.38	34		PKPdf	21 06 51.5	-0.8
KMSC	Kings Mountain	134.42	34		PKPdf	21 06 51.4	-1.0
KMSC	Kings Mountain	134.42	34	P	PKiKP	21 06 53.1	-0.7
	baz=318						
GOGA	Godfrey	134.42	37	PKIKP	PKPdf	21 06 51.0	-1.4
GOGA	Godfrey	134.42	37		PKPdf	21 06 51.0	-1.4
T59A	Double "B" Far	134.96	29		PKPdf	21 06 52.7	-0.6
Y57A	Sumter	135.77	34		PKPdf	21 06 53.4	-1.5
PLCA	Paso Flores	137.90	159	PKhKP	PKPpre	21 06 47.8	
	comp=Z,4.9nm,0.9s,baz=15,slow=5.1,SNR=6.3						
PLCA				PKP	PKiKP	21 07 00.0	-0.8
	comp=Z,13nm,0.9s,baz=194,slow=1.3,SNR=11						
PLCA				SKPbc	SKPbc	21 10 19.3	+0.4
	comp=Z,5.0nm,0.8s,baz=25,slow=3.5,SNR=7.1						
GO05	Huala	142.29	153	PKPpre	PKPpre	21 07 01.4	
LMEL	Las Melosas	144.03	154	⇑*i*P	PKPbc	21 07 08.9	+0.5
MT05	Renca	144.18	153	*i* P	PKPbc	21 07 08.7	0.0
ROC1	El Roble	144.41	153		PKPbc	21 07 09.9	+0.2
ROCH	El Roble	144.41	153	⇑*i*P	PKPbc	21 07 09.9	+0.2
PEL	Peldehue	144.42	153	⇑*i*P	PKPbc	21 07 09.8	+0.3
PEL	Peldehue	144.42	153	PKIKP	PKPbc	21 07 09.7	+0.2
PEL	Peldehue	144.42	153		PKPbc	21 07 09.7	+0.2
FCH	Farellones	144.44	154	*i* P	PKPdf	21 07 10.8	-0.3
ACON	Acoyapa	144.76	66		PKPbc	21 07 11.3	+0.3
FSCY	Frank Sound, G	144.87	52		PKPdf	21 07 12.0	+0.3
CBCY	The Bluff, Cay	145.74	50		PKPbc	21 07 14.1	+0.2
GO04	Tololo Observa	146.83	150		PKPdf	21 07 15.1	0.0
PRVC	Isla de Provid	147.64	61	*e*P	PKPbc	21 07 19.5	+0.1
MTDJ	Mount Denham	148.33	50		PKPbc	21 07 19.8	-1.5
GTBY	Guantanamo Bay	149.05	45		PKPbc	21 07 23.4	+0.5
GO03	Copiap	149.20	148		PKPbc	21 07 23.5	+0.3
VCA	Vinchina	149.27	152	⇑*i*P	PKiKP	21 07 24.3	-0.3
PLTB	Pedras Altas	150.15	178	*e*P	PKiKP	21 07 26.1	-0.1
BCIP	Isla Barro Col	150.65	68	PKIKP	PKPbc	21 07 26.8	-0.2
BCIP	Isla Barro Col	150.65	68		PKPbc	21 07 26.8	-0.2
PB14	IPOC Station P	151.43	144	⇑*i*P	PKiKP	21 07 29.7	+0.4
PB14	IPOC Station P	151.43	144		PKiKP	21 07 29.4	0.0
GO02	Mina Guanaco	151.48	146		PKPdf	21 07 23.1	+0.3
GO02				PKPbc	PKiKP	21 07 29.5	+0.1
PB10	IPOC Station P	152.18	142		PKiKP	21 07 31.0	+0.4
SDDR	Presa de Saban	152.30	41		PKPbc	21 07 30.6	-0.1
PB15	IPOC Station P	153.06	144		PKPdf	21 07 25.5	+0.4
PB04	IPOC Station P	153.30	141		PKiKP	21 07 33.6	+0.5
ATAH	Atahualpa	153.62	102	PKP	PKPdf	21 07 27.4	+1.1
	comp=Z,14nm,1.0s,baz=249,slow=1.7,SNR=12						
ATAH				PKPbc	PKiKP	21 07 35.7	+1.4
	comp=Z,39nm,0.8s,baz=191,slow=4.0,SNR=4.2						
ATAH				PKPab	PKPab	21 07 49.4	+2.0
	comp=Z,86nm,0.9s,baz=209,slow=3.3,SNR=21						
DR12	Loma Pena Alta	153.66	38		PKPab	21 07 47.2	+0.4
NNA	Nana	153.80	114	PKP	PKPdf	21 07 26.6	+0.5
	comp=Z,4.6nm,0.3s,baz=2.3,slow=1.9,SNR=3.9						
NNA				PKPbc	PKiKP	21 07 35.0	+0.9
	comp=Z,32nm,0.8s,baz=282,slow=4.3,SNR=9.6						
NNA				PKPab	PKPab	21 07 48.6	+1.0
	comp=Z,8.5nm,0.4s,baz=253,slow=5.8,SNR=6.3						
NNA	Nana	153.80	114	PKPbc	PKiKP	21 07 34.7	+0.5
LVC	Limon Verde	153.84	144	PKP	PKPdf	21 07 26.6	+0.2
	comp=Z,6.3nm,0.9s,baz=125,slow=1.8,SNR=5.3						
LVC				PKPbc	PKiKP	21 07 35.1	+0.6
	comp=Z,22nm,0.9s,baz=214,slow=3.3,SNR=9.4						
LVC				PKPab	PKPab	21 07 49.7	+1.8
	comp=Z,54nm,0.8s,baz=254,slow=3.4,SNR=19						
LVC	Limon Verde	153.84	144	PKPbc	PKiKP	21 07 34.9	+0.4
LVC				PKPab	PKPab	21 07 50.0	+2.1
GR1C	Gorgona, Isla	153.88	80	*e*P	PKPbc	21 07 33.2	-1.0
PB07	IPOC Station P	153.91	141		PKiKP	21 07 34.7	+0.3
PB07				PKPab	PKPab	21 07 49.1	+1.2
PB09	IPOC Station P	154.26	142		PKPdf	21 07 27.9	+1.2
PB09				PKPab	PKPab	21 07 50.9	+1.5
SJCC	San Jacinto, C	154.60	62	*e*P	PKPdf	21 07 28.7	+1.4
PB01	IPOC Station P	154.66	140		PKPdf	21 07 27.2	0.0
PB01					PKiKP	21 07 36.5	+0.7
PB01				PKPab	PKPab	21 07 52.2	+1.1
DBBC	Dabeiba	154.76	70	*e*P	PKPdf	21 07 28.3	+0.8
UREC	San Jos de Ur	155.13	67	*e*P	PKPdf	21 07 27.0	-1.0
CPUP	Villa Florida	155.14	170	PKP	PKPdf	21 07 27.6	0.0
	comp=Z,6.3nm,1.0s,baz=344,slow=1.7,SNR=5.0						
CPUP				PKPbc	PKPbc	21 07 37.1	
	comp=Z,18nm,0.8s,baz=171,slow=0.9,SNR=18						
CPUP				PKPab	PKPab	21 07 53.0	+0.3
	comp=Z,42nm,0.9s,baz=185,slow=4.0,SNR=17						
CPUP	Villa Florida	155.14	170		PKPdf	21 07 27.9	+0.3
PSGCX	Pisagua	155.26	137		PKPdf	21 07 27.7	-0.3
CBOC	Ciudad Bolivar	155.30	72	*e*P	PKPdf	21 07 28.4	0.0
POPC	Popayan, Colom	155.43	80	*e*P	PKPdf	21 07 37.3	+8.7
PB11	IPOC Station P	155.46	138		PKPdf	21 07 28.6	+0.2
YOTC	Yotoco, Valle	155.47	76	*e*P	PKPdf	21 07 28.4	-0.2
SOTA	Rioblanco	155.56	81	*e*P	PKPdf	21 07 30.3	+1.1
PCON	Cinco Dias	155.74	80	*e*P	PKPdf	21 07 38.5	+9.0
PB12	IPOC Station P	155.78	135	PKPdf	PKPdf	21 07 28.9	+0.2
GO01	Chusmiza	155.84	139		PKPdf	21 07 28.7	-0.7
ZARC	Zaragoza, Cauc	155.85	67	*e*P	PKPdf	21 07 28.8	-0.1
OBIP	Obispado Ponce	155.89	35	PKPdf	PKPdf	21 07 27.7	-1.1
OBIP					PKPab	21 07 55.0	-1.2
GCPR	Guaynabo City	155.97	33	PKPdf	PKPdf	21 07 27.8	-1.1
GCPR					PKPab	21 07 55.9	-0.6
SMLC	San Martn de	156.05	64	*e*P	PKPdf	21 07 29.3	+0.1
ICMP	Isla Caja de M	156.06	35	PKPdf	PKPdf	21 07 28.3	-0.7
ICMP					PKPab	21 07 56.6	-0.4
SJG	San Juan	156.09	34	PKP	PKPdf	21 07 29.0	0.0
	comp=Z,5.3nm,0.2s,baz=345,slow=21,SNR=1.0						
SJG				PKPab	PKPab	21 07 57.4	+0.4
	comp=Z,15nm,0.4s,baz=22,slow=3.7,SNR=10						
SJG	San Juan	156.09	34	PKIKP	PKPdf	21 07 28.1	-0.9
SJG						21 07 57.1	
SJG	San Juan	156.09	34	PKPdf	PKPdf	21 07 28.1	-0.9
SJG					PKPab	21 07 57.1	+0.1
GUY2C	Guyana, Caldas	156.10	73	*e*P	PKPdf	21 07 29.7	-0.2
RREF	El Recreo	156.21	74	*e*P	PKPdf	21 07 31.8	+1.6
PDPR	Patillas Dam,	156.24	34		PKPdf	21 07 28.6	-0.6
PDPR					PKPab	21 07 57.4	-0.3
TOLC	Tolima	156.32	74	*e*P	PKPdf	21 07 30.3	+0.3
URIC	Uribia, Colomb	156.43	55	*e*P	PKPdf	21 07 29.6	0.0
URIC	Uribia, Colomb	156.43	55	PKPdf	PKPdf	21 07 29.0	-0.6
URIC					PKPab	21 07 58.4	-0.4
NORC	Norcasia	156.48	72	*e*P	PKPab	21 07 59.2	0.0
STVI	Saint Thomas	156.53	31		PKPdf	21 07 29.4	-0.3
STVI					PKPab	21 07 59.1	+0.1
PB16	IPOC Station P	156.54	136		PKPdf	21 07 29.7	-0.7
ORTC	Ortega, Tolima	156.56	76	*e*P	PKPab	21 07 58.0	-1.5
PTBC	PUERTO BERRIO,	156.56	69	*e*P	PKPdf	21 07 29.1	-0.7
FLOC	Florencia	156.59	82	PKPdf	PKPdf	21 07 29.2	-0.7
FLOC					PKPab	21 08 00.7	+1.0
GARC	Garzon, Huila	156.66	80	*e*P	PKPab	21 08 01.5	+1.3
CDVI	St. Croix	157.13	31		PKPab	21 08 01.2	-0.3
SPBC	San Pablo de B	157.21	71	*e*P	PKPdf	21 07 30.9	+0.1
ROSC	El Rosal	157.21	73	PKP	PKPdf	21 07 32.1	+0.9
	comp=Z,10nm,0.3s,baz=215,slow=1.5,SNR=6.7						
ROSC				PKPab	PKPab	21 08 04.7	+2.0
	comp=Z,45nm,0.8s,baz=170,slow=1.8,SNR=12						
ROSC	El Rosal	157.21	73	PKPdf	PKPdf	21 07 30.0	-1.1
ROSC					PKPab	21 08 04.5	+1.8
BARC	Barichara	157.72	68	*e*P	PKPdf	21 07 32.0	+0.5
CHIC	Chingaza	157.83	73	*e*P	PKPdf	21 07 31.5	-0.5
PAMC	Pamplona, Colo	157.89	66	*e*P	PKPdf	21 07 32.6	+0.5
RUSC	La Rusia	158.06	70	*e*P	PKPdf	21 07 31.9	-0.4
RUSC	La Rusia	158.06	70		PKPdf	21 07 31.8	-0.6
RUSC					PKPab	21 08 05.7	-0.8
LPAZ	La Paz	158.88	134	PKP	PKPdf	21 07 34.2	+0.8
	comp=Z,12nm,1.1s,baz=12,slow=0.6,SNR=20						
LPAZ				PKPab	PKPab	21 08 11.1	+1.0
	comp=Z,31nm,0.9s,baz=213,slow=1.8,SNR=18						
LPAZ	La Paz	158.88	134	PKIKP	PKPdf	21 07 33.2	-0.2
LPAZ						21 08 11.1	
LPAZ	La Paz	158.88	134		PKPdf	21 07 33.2	-0.2
LPAZ	La Paz	158.88	134	*e*P	PKPdf	21 07 34.8	+1.4
SDV	Santo Domingo	159.03	59	PKP	PKPdf	21 07 32.8	-0.3
	comp=Z,21nm,0.8s,baz=200,slow=1.4,SNR=24						
SDV				PKPab	PKPab	21 08 10.8	+0.5
	comp=Z,36nm,0.8s,baz=298,slow=2.6,SNR=13						
SDV	Santo Domingo	159.03	59	*e*P	PKPdf	21 07 32.8	-0.3
SDV	Santo Domingo	159.03	59		PKPdf	21 07 31.8	-1.3
RCBR	Riachuelo	162.98	256	PKP	PKPdf	21 07 37.4	+0.3
	comp=Z,16nm,1.1s,baz=227,slow=0.8,SNR=3.9						
RCBR	Riachuelo	162.98	256	PKIKP	PKPdf	21 07 37.3	+0.2
IPMB	Ipameri, GO	163.35	194	*e*P	PKPab	21 08 26.8	-1.8
SIV	San Ignacio	163.52	150	PKP	PKPdf	21 07 37.3	-0.2
	comp=Z,5.2nm,0.8s,baz=211,slow=2.4,SNR=25						
SIV				PKPab	PKPab	21 08 29.7	+0.2
	comp=Z,37nm,0.9s,baz=218,slow=4.2,SNR=50						
BDFB	Brasilia	165.53	197	PKP	PKPdf	21 07 38.9	-0.5
	comp=Z,7.6nm,0.8s,baz=86,slow=2.4,SNR=8.9						
BDFB	Brasilia	165.53	197		PKPdf	21 07 39.5	+0.1
SALV	Santo Antonio	165.60	167	*e*P	PKPdf	21 07 39.8	+0.4
SAML	Samuel	167.18	124	PKIKP	PKPdf	21 07 40.8	+0.2
SAML						21 08 46.0	
SAML	Samuel	167.18	124		PKPdf	21 07 40.8	+0.2
SAML					PKPab	21 08 46.0	+0.2
SAML	Samuel	167.18	124	*e*P	PKPab	21 08 46.8	+1.0
PTGA	Pitinga	172.44	82	PKP	PKPdf	21 07 42.8	-0.9
	comp=Z,2.6nm,0.6s,baz=120,slow=2.9,SNR=4.4						
PTGA				PKPab	PKPab	21 09 09.1	-0.2
	comp=Z,12nm,1.0s,baz=282,slow=4.2,SNR=8.4						
PTGA	Pitinga	172.44	82		PKPab	21 09 08.5	-0.8
MDP	Montagnes des	173.17	1	PKP	PKPdf	21 07 43.2	-0.8
	comp=Z,35nm,1.1s,baz=52,slow=3.2,SNR=3.7						

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*JMA **26** 20:55:40.8, 23°.27N×121°.55E, h0km, M2.8*
*TAP **26** 20:55:43.0, 23°.30N×121°.41E, h17km, ML3.0, B*
ISC 26 20:55:42.6±0.8**, 23°.27N**±0°.02×**121°.48E**±0°.02**, h18**km±2km**,**
n85, σ0s.67/153**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FULB	Fuli	0.19	248	*i* P	Pb	20 55 47.6	+0.5
	baz=217						
FULB				*e*S	Sg	20 55 51.8	+1.1
	baz=217						
TWF1	Yuli	0.19	296	*i* P	Pb	20 55 47.2	+0.1
	baz=301						
TWF1				*i* S	Sb	20 55 50.7	+0.6
	baz=301						
CHKT	Chengkung	0.20	212	*e*P	Pg	20 55 48.6	+1.0
	baz=180						
CHKT				S	Sg	20 55 52.5	+1.6
	baz=180						
YULB	Yu-li	0.21	306	*e*P	Pb	20 55 47.4	-0.2
	baz=314						
YULB				*e*S	Sb	20 55 51.2	+0.3
	baz=314						

HGSD	Ruisui	0.23	347	*i* P	Pb	20 55 48.1	0.0
	baz=13						
HGSD				*e*S	Sg	20 55 53.2	+1.5
	baz=13						
EHY	Hungye	0.28	328	P	Pb	20 55 48.7	-0.4
	baz=335						
EHY				*i* S	Sb	20 55 52.8	-0.5
	baz=335						
EGFH	Guangfu	0.40	353	P	Pg	20 55 51.1	+0.1
	baz=352						
EGFH				S	Sb	20 55 57.9	+0.8
	baz=352						
ELDTW	Lidau	0.43	260	P	Pg	20 55 50.7	-0.9
	baz=253						
ELDTW				S	Sg	20 55 56.2	-1.4
	baz=253						
YUS	Yu-Shan	0.53	294	*i* P	Pb	20 55 52.8	-0.9
	baz=297						
YUS				*i* S	Sb	20 55 59.3	-1.9
	baz=297						
ESL	Shilin	0.54	355	*e*P	Pb	20 55 53.5	-0.1
	baz=356						
ESL				*e*S	Sb	20 56 00.5	-0.6
	baz=356						
TWH	Lutao	0.56	180	*i* P	Pn	20 55 55.0	-0.6
	baz=162						
TWH				S	Sn	20 56 04.3	-0.1
	baz=162						
VWDT	VWDT	0.57	327	*i* P	Pb	20 55 53.6	-0.5
	baz=342						
VWDT				S	Sb	20 56 01.2	-0.7
	baz=342						
TWGBT	Beinan	0.58	219	*e*P	Pb	20 55 53.6	-0.6
	baz=211						
TWGBT				*e*S	Sg	20 56 02.4	+0.4
	baz=211						
TWG	Pinlang	0.58	220	P	Pb	20 55 53.6	-0.7
	baz=211						
TWG				S	Sg	20 56 02.9	+0.8
	baz=211						
TTN	Taitung	0.60	211	*e*S	Sn	20 56 05.0	-0.4
	baz=216						
ENLB	Shoufeng	0.64	10	*e*P	Pg	20 55 55.9	+0.6
	baz=3.0						
ENLB				S	Sn	20 56 06.8	+0.2
	baz=3.0						
ALS	Alishan	0.67	291	*i* P	Pb	20 55 55.3	-0.6
	baz=292						
ALS				S	Sb	20 56 04.7	-0.2
	baz=292						
STYT	Tauyuan	0.67	261	P	Pb	20 55 55.3	-0.6
	baz=257						
STYT				S	Sb	20 56 03.7	-1.2
	baz=257						
SSLB	Suanglung	0.71	317	*i* P	Pb	20 55 55.6	-0.8
	baz=321						
SSLB				S	Sb	20 56 04.4	-1.4
	baz=321						
HWA	Hwalien	0.71	9	*e*S	Sg	20 56 07.4	+1.2
	baz=3.0						
WHYT	Xinyi Township	0.72	307	P	Pb	20 55 56.1	-0.5
	baz=314						
WHYT				S	Sb	20 56 05.7	-0.4
	baz=314						
OWD	Renai	0.74	338	P	Pb	20 55 56.8	-0.3
	baz=344						
OWD				*e*S	Sb	20 56 06.0	-0.9
	baz=344						
TPUB	Ta-pu	0.78	272	P	Pb	20 55 57.5	-0.2
	baz=278						
TPUB				S	Sb	20 56 08.3	+0.3
	baz=278						
WTP	Ta-pu	0.80	269	*e*P	Pb	20 55 57.8	-0.1
	baz=266						
WTP				S	Sb	20 56 08.3	-0.1
	baz=266						
CHN5	Tsauling	0.81	294	*e*P	Pb	20 55 58.1	0.0
	baz=296						
CHN5				S	Sb	20 56 08.8	0.0
	baz=296						
SMLT	Sun Moon Lake	0.81	319	P	Pb	20 55 57.6	-0.7
	baz=330						
SMLT				*e*S	Sb	20 56 08.7	-0.3
	baz=330						
TWD	Chiawan	0.81	7	P	Pb	20 55 58.3	0.0
	baz=1.0						
TWD				*e*S	Sb	20 56 09.3	+0.4
	baz=1.0						
SLGT	Liugui	0.82	251	P	Pb	20 55 58.0	-0.3
	baz=246						
SLGT				S	Sb	20 56 09.1	+0.2
	baz=246						
CHN4	Tsaushan	0.82	276	P	Pb	20 55 58.2	-0.2
	baz=275						
CHN4				S	Sb	20 56 09.1	+0.1
	baz=275						
ECL	Taimali	0.83	216	*e*P	Pb	20 55 57.7	-0.8
	baz=209						
ECL				*e*S	Sb	20 56 08.6	-0.7
	baz=209						
CHGB	Renai	0.84	340	P	Pb	20 55 58.4	-0.3
	baz=346						
CHGB				*e*S	Sb	20 56 09.7	0.0
	baz=346						
SGST	Jiashian	0.85	257	*e*P	Pb	20 55 58.3	-0.5
	baz=254						
SGST				S	Sb	20 56 10.0	+0.1
	baz=254						
TYC	Yuchr	0.85	318	P	Pb	20 55 58.5	-0.4
	baz=332						
TYC				*e*S	Sb	20 56 09.9	-0.1
	baz=332						
CHN1	Nanshi	0.88	265	*e*P	Pb	20 55 59.4	0.0
	baz=263						
CHN1				*e*S	Sb	20 56 10.8	0.0
	baz=263						
WJS	Zhushan	0.88	309	*e*P	Pb	20 55 59.8	+0.4
	baz=323						
WJS				*e*S	Sg	20 56 12.0	+0.4
	baz=323						
WHF	Hehuan Shan	0.89	347	P	Pb	20 55 59.1	-0.7
	baz=4.0						
WHF				S	Sb	20 56 11.6	0.0
	baz=4.0						
SNST	Tainan City	0.91	267	*e*P	Pn	20 56 00.4	-0.1
	baz=265						
SNST				*e*S	Sg	20 56 12.5	+0.2
	baz=265						
NACB	Ninganchiao	0.91	7	*e*P	Pb	20 55 58.7	-1.1
	baz=360						
NACB				*e*S	Sb	20 56 10.7	-0.9
	baz=360						
TWK	Hsinying	0.91	270	*e*P	Pb	20 55 59.9	0.0
	baz=268						
TWK				*e*S	Sb	20 56 11.8	0.0
	baz=268						
DPDB	Guoxing	0.92	326	*e*P	Pb	20 55 59.1	-0.9
	baz=338						
DPDB				*e*S	Sb	20 56 11.3	-0.6
	baz=338						
ETLH	Xiulin Townshi	0.93	0	*e*P	Pb	20 55 59.3	-1.0
	baz=6.0						
ETLH				*e*S	Sb	20 56 12.3	-0.1
	baz=6.0						
SSD	Sandimen	0.94	237	*e*P	Pb	20 55 59.7	-0.7
	baz=227						
SSD				*e*S	Sb	20 56 12.0	-0.5
	baz=227						
WGK	Gukeng	0.94	296	*e*P	Pn	20 56 01.0	+0.1
	baz=298						
WGK				*e*S	Sn	20 56 14.0	+0.1
	baz=298						
WNT	Mingjian	0.95	310	P	Pn	20 56 01.2	+0.2
	baz=313						
WNT				S	Sn	20 56 14.7	+0.5
	baz=313						
CHN2	Minshiung	0.96	286	*e*S	Sn	20 56 14.8	+0.4
	baz=286						
WDLH	Douliu	0.96	296	*e*P	Pn	20 56 01.5	+0.2
	baz=297						
WDLH				S	Sn	20 56 14.9	+0.5
	baz=297						
CHY	Chiayi	1.00	283	*e*P	Pb	20 56 00.6	-0.8
	baz=284						
CHY				*e*S	Sn	20 56 15.2	-0.1
	baz=284						
MASBT	Mashibuluo	1.02	230	P	Pb	20 56 00.9	-0.9
	baz=221						
MASBT				*e*S	Sb	20 56 14.9	+0.1
	baz=221						
CHN3	Shinhua	1.04	260	*e*S	Sg	20 56 18.1	+1.5
	baz=268						
EAST	Anshuo	1.06	214	P	Pb	20 56 00.8	-1.7
	baz=208						
EAST				*e*S	Sb	20 56 15.1	-0.9
	baz=208						
TWM1	Shoushan	1.07	246	P	Pg	20 56 03.5	+0.1
	baz=242						
TWM1				*e*S	Sg	20 56 19.6	+2.1
	baz=242						
WLGB	Puzi	1.10	281	*e*P	Pb	20 56 03.8	+0.6
	baz=281						
WLGB				*e*S	Sg	20 56 19.3	+0.8
	baz=281						
WHP	Taichung City	1.12	334	P	Pb	20 56 04.2	+0.7
	baz=345						
WHP				*e*S	Sb	20 56 17.2	-0.5
	baz=345						
TCU	Taichung	1.14	320	*e*P	Pb	20 56 04.2	+0.3
	baz=323						
TCU				*e*S	Sn	20 56 19.2	+0.2
	baz=323						
NNSB	Datong	1.16	356	*e*P	Pn	20 56 03.4	-0.7
	baz=12						
NNSB				*e*S	Sb	20 56 17.4	-1.5
	baz=12						
NNSH	Datong	1.16	356	P	Pn	20 56 02.8	-1.3
	baz=11						
NNSH				S	Sb	20 56 17.5	-1.4
	baz=11						
CHN8	Yiju	1.17	274	*e*S	Sg	20 56 21.1	+0.5
	baz=273						
NNS	Nan Shan	1.17	355	P	Pn	20 56 03.9	-0.3
	baz=12						
NNS				S	Sb	20 56 18.5	-0.8
	baz=12						
ENA	Nanau	1.18	12	P	Pn	20 56 03.6	-0.6
	baz=4.0						
ENA				*e*S	Sb	20 56 18.6	-0.8
	baz=4.0						
SCZT	Fangliau	1.20	222	*e*P	Pn	20 56 04.5	+0.1
	baz=212						
SCZT				*e*S	Sn	20 56 20.1	0.0
	baz=212						
RLNB	Erlin	1.20	301	*e*S	Sn	20 56 20.7	+0.4
	baz=303						
WSF	Szhu	1.21	288	*e*S	Sn	20 56 21.4	+0.8
	baz=288						
TWQ1	Liyutan	1.25	329	*e*P	Pg	20 56 06.7	-0.2
	baz=333						
TWQ1				S	Sg	20 56 23.5	+0.1
	baz=333						
NSY	Sanyi	1.32	330	*e*S	Sg	20 56 25.5	+0.1
	baz=334						
ENTT	Nioudou	1.37	3	*e*P	Pn	20 56 06.7	-0.2
	baz=7.0						
ENTT				*e*S	Sn	20 56 24.1	-0.5
	baz=7.0						
YHNB	Yeheng	1.40	356	*e*P	Pn	20 56 07.4	+0.1
	baz=12						
NSK	Sanguang	1.41	355	*e*P	Pb	20 56 08.3	-0.1
NSK				*e*S	Sn	20 56 25.2	-0.3
EOS1	EOS1	1.41	25	*e*P	Pn	20 56 07.6	+0.3
	baz=47						
EOS1				*e*S	Sb	20 56 26.9	+1.0
	baz=47						
NSTT	Nanjuang	1.43	342	*e*P	Pb	20 56 08.3	-0.4
	baz=345						
NSTT				*e*S	Sb	20 56 27.0	+0.5
	baz=345						
HEN	Hengchun	1.43	209	*e*S	Sb	20 56 26.9	+0.2
	baz=193						
LIOB	Emei	1.44	343	*e*P	Pb	20 56 09.3	+0.4
	baz=345						
LIOB				*e*S	Sb	20 56 27.2	+0.4
	baz=345						
TWE	Neicheng	1.46	7	*e*P	Pn	20 56 08.3	+0.3
	baz=11						
TWE				*e*S	Sn	20 56 26.4	-0.2
	baz=11						
TWKBT	Hengchun	1.46	205	*e*S	Sn	20 56 26.4	-0.3
	baz=190						
TWK1	Hengchun	1.46	205	*e*S	Sn	20 56 26.9	+0.2
	baz=190						
TSEB	Hengchuen, Pin	1.46	202	*e*S	Sb	20 56 28.4	+0.8
	baz=188						
NWLT	Wulai	1.50	1	*e*P	Pb	20 56 09.6	-0.4
	baz=5.0						
NWLT				*e*S	Sn	20 56 27.5	-0.4
	baz=5.0						
WDGT	Dungji	1.67	270	*e*P	Pn	20 56 11.3	+0.2
	baz=269						
TIPB	Shuangxi	1.72	10	*e*P	Pn	20 56 12.2	+0.5
	baz=13						
TIPB				*e*S	Sn	20 56 32.9	-0.4
	baz=13						
JYNG	Yonagunijimaku	1.78	48	P	Pb	20 56 13.8	-1.0
JYNG				*e*S	Sb	20 56 36.4	-0.4
HATJ	Hateruma jima	2.27	69	S	Sn	20 56 46.8	0.0
IRIF	Iriomote-Funau	2.32	62	P	Pn	20 56 20.6	+0.7
IRIF				*e*S	Sn	20 56 48.7	+0.8
JKRS	Kuro-shima	2.51	67	P	Pn	20 56 23.6	+1.1
JKRS				S	Sn	20 56 53.5	+0.9
JIJ	Ishigaki jima	2.67	65	S	Sn	20 56 56.2	-0.4
JISG	Ishigakijimahi	2.90	63	P	Pn	20 56 28.1	+0.2
JISG				*e*S	Sn	20 57 02.5	+0.1
JTJ	Tarama	3.25	64	S	Sn	20 57 11.2	+0.3

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*IDC **26** 21:01:56.7±1.9, 43°.66N×105°.48W, h0^{km}, mb1 3.6/3, mb1mx3.3/59, mbtmp3.5/3, ML3.3/3, Error ellipse: s-maj=57.5km s-min=9.6km az=152.0*

*NEIC **26** 21:01:58.1±1.1, 43°.75N±0°.04×105°.35W±0°.04, h0^{km}±1^{km}, ML3.2/66, Error ellipse: s-maj=7.9km s-min=4.5km az=161.0*

ISC 26 21:01:57.8±0.9**, 43°.75N**±0°.04×**105°.34W**±0°.05**, h0^{km}, n40, σ0^{s}.85**/39**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	1.01	68	Pg	Pg	21 02 16.6	-0.7
K22A	Casper	1.40	219		Pg	21 02 23.2	-1.5
K22A					Sg	21 02 42.0	-0.8
K22A				IAML		21 02 46.0	
	comp=N,439nm,0.3s						
K22A				IAML		21 02 46.1	
	comp=E,330nm,0.3s						
PHWY	Pilot Hill	2.45	182		Pn	21 02 39.4	+0.1
PHWY				IAML		21 03 18.6	
	comp=E,77nm,0.5s						
RWWY	Rawlins	2.48	214		Pn	21 02 39.8	+0.1
RWWY				IAML		21 03 15.9	
	comp=E,109nm,0.7s						
RWWY				IAML		21 03 15.9	
	comp=E,117nm,0.7s						
N23A	Red Feather La	2.89	189		Pn	21 02 45.7	+0.3
N23A				IAML		21 03 29.1	
	comp=N,68nm,0.7s						
LAO	LASA Array	3.00	348		Pn	21 02 46.6	-0.1
LAO				IAML		21 03 30.5	
	comp=N,90nm,0.6s						
RLMT	Red Lodge	3.13	297		Pn	21 02 48.8	+0.2
PD31	Pinedale Array	3.24	254		Pn	21 02 50.4	+0.3
PDAR	Pinedale Array	3.24	254	Pn	Pn	21 02 49.8	-0.3
	comp=N,3.1nm,0.3s,baz=76,slow=17,SNR=47						
PDAR				Lg	Lg	21 03 33.9	
	comp=N,7.1nm,0.3s,baz=72,slow=35,SNR=6.5						
PDAR	Pinedale Array	3.24	254		Pn	21 02 50.5	+0.4
BW06	Boulder Array	3.24	254		Pn	21 02 50.3	+0.2
BW06				IAML		21 03 39.7	
	comp=N,43nm,0.3s						
YNE	Yellowstone No	3.58	292		Pn	21 02 54.7	-0.1
YMP	Mirror Lake Pl	3.60	288		Pn	21 02 55.2	0.0
GCMT	Greycliff	3.70	305		Pn	21 02 56.5	+0.1
OGNE	Ogallala	3.72	138		Pn	21 02 57.2	+0.5
H17A	Grant Village	3.83	281		Pn	21 02 58.1	-0.2
H17A				IAML		21 04 01.4	
	comp=N,24nm,0.6s						
FLWY	Flagg Ranch	3.89	277		Pn	21 02 59.4	+0.4
FLWY				Pg	Pb	21 03 09.0	+1.6
FLWY				IAML		21 04 17.1	
	comp=N,27nm,4.9s						
FLWY				IAML		21 04 22.8	
	comp=N,33nm,4.4s						
SNOW	Snow King Moun	3.94	268		Pn	21 03 00.3	+0.5
SNOW				IAML		21 04 08.2	
	comp=N,32nm,3.9s						
SNOW				IAML		21 05 02.1	
	comp=N,29nm,5.0s						
ISCO	Idaho Springs	3.96	183		Pn	21 03 00.6	+0.6
ISCO				IAML		21 03 50.3	
	comp=N,24nm,4.8s						
ISCO				IAML		21 04 05.5	
	comp=N,29nm,4.8s						
YPP	Pitchstone Pla	3.98	279		Pn	21 02 59.4	-1.0
REDW	Red Top Meadow	4.03	266		Pn	21 03 00.8	-0.2
REDW				IAML		21 03 29.4	
	comp=N,30nm,4.7s						
REDW				IAML		21 04 12.3	
	comp=N,35nm,2.2s						
IMW	Indian Meadow	4.06	274	IAML		21 04 11.1	
	comp=N,26nm,0.6s						
TPAW	Teton Pass	4.08	268	IAML		21 04 30.1	
	comp=N,34nm,2.8s						
YHH	Holmes Hill	4.09	287	Pn	Pn	21 03 01.8	-0.1
O20A	White River Ci	4.21	212		Pn	21 03 03.5	0.0
O20A				IAML		21 03 43.0	
	comp=E,33nm,4.7s						
O20A				IAML		21 05 00.1	
	comp=N,43nm,4.3s						
AHID	Auburn Hatcher	4.32	259		Pn	21 03 06.0	+0.9
AHID				IAML		21 04 19.8	
	comp=N,24nm,0.7s						
AHID				IAML		21 04 24.9	
	comp=E,24nm,3.8s						
YHB	Horse Butte	4.33	285	Pn	Pn	21 03 04.0	-1.0
E28A	Huff	4.33	48		Pn	21 03 05.6	+0.7
YHL	Hebgen Lake	4.34	287		Pn	21 03 05.2	-0.1
SMCO	Snowmass	4.73	196	Pn	Pn	21 03 08.8	-2.0
SMCO				Pg	Pb	21 03 24.3	+2.4
SMCO				IAML		21 04 29.7	
	comp=E,24nm,3.3s						
DGMT	Dagmar	4.79	9		Pn	21 03 12.2	+0.9
HWUT	Hardware Ranch	5.07	247	IAML		21 05 01.0	
	comp=E,19nm,3.0s						
HWUT				IAML		21 05 02.6	
	comp=E,23nm,4.9s						
KSCO	Kaye Shedlock’	5.16	156		Pn	21 03 16.9	+0.5
EGMT	Eagleton	5.27	326		Pn	21 03 18.2	+0.3
JLU	Jordanelle	5.53	237		Pn	21 03 21.4	-0.1
ECSD	EROS Data Cent	6.32	87	Pn	Pn	21 03 32.1	-0.1
ELK	Elko	7.94	251	Pn	Pn	21 03 55.4	+0.8
	comp=E,0.2nm,0.3s,baz=66,slow=14,SNR=2.4						
I10CA	LAC DU BONNET	9.06	41	*i*		21 53 17.4	
	baz=221,slow=337,SNR=6.6						
ULM	Lac du Bonnet	9.16	42	Pn	Pn	21 04 09.8	-1.4
	comp=E,1.1nm,0.3s,baz=230,slow=11,SNR=11						
ULM				Pg		21 04 44.5	
	comp=E,0.8nm,0.3s,baz=225,slow=14,SNR=6.5						
ULM	Lac du Bonnet	9.16	42		Pn	21 04 10.1	-1.1

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*IDC **26** 21:08:06.0±5.9, 5°.22S×152°.93E, h38^{km}±46^{km}, mb3.6/4, mb1 3.8/5, mb1mx3.3/36, mbtmp3.9/5, ML2.0/1, Error ellipse: s-maj=56.4km s-min=22.5km az=100.0*

ISC 26 21:08:05.0±1.4**, 5°.17S**±0°.10×**153°.0E**±0°.2**, h43^{km}, n7, σ2^{s}.31**/8**, mb3.6**/4**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.31	311	Pn	Pn	21 08 27.2	+0.3
	998nm,0.3s,baz=144,slow=1.8,SNR=271						
KRVT				Sn	Sn	21 08 44.4	+1.1
	853nm,0.3s,baz=130,slow=13,SNR=38						
PMG	Port Moresby	7.18	234	Pn	Pn	21 09 47.8	+0.3
	1.4nm,0.3s,baz=42,slow=14,SNR=5.6						
ASAR	Alice Springs	26.03	223	P	P	21 13 34.1	-0.3
	2.1nm,0.9s,baz=59,slow=8.7,SNR=22						
STKA	Stephens Creek	28.64	201	P	P	21 13 59.6	+1.9
	1.0nm,0.7s,baz=15,slow=12,SNR=3.0						
FITZ	Fitzroy Crossi	29.68	242	P	P	21 14 06.2	-0.8
	0.8nm,0.6s,baz=85,slow=8.0,SNR=3.0						
ILAR	Eielson Array	82.42	22	P	P	21 20 23.4	+1.0
	0.2nm,0.5s,baz=241,slow=4.0,SNR=1.6						
TORD	Torodi Ar. Bea	150.63	288	PKPbc	PKPab	21 27 55.9	-4.5
	0.5nm,0.6s,baz=76,slow=2.4,SNR=3.3						

IDC 26 21:43:13.4±3.8**, 6°.28S**×**127°.45E, h545^{km}**±61^{km}**, mb2.7**/2**, mb1 2.8**/3**, mb1mx2.4**/31**, mbtmp3.7**/3**, Error ellipse: s-maj=267.5km s-min=16.0km az=66.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	15.14	154	P	P	21 46 23.6	-0.9
ASAR	Alice Springs	18.36	161	P	P	21 46 54.9	0.0
	0.4nm,0.3s,baz=333,slow=9.2,SNR=24						
ASAR				S	S	21 49 55.7	+0.6
	0.0nm,0.3s,baz=343,slow=22,SNR=7.2						
STKA	Stephens Creek	28.69	154	P	P	21 48 27.3	+0.5
	1.6nm,0.7s,baz=333,slow=15,SNR=1.9						
MKAR	Makanchi Array	66.26	328	P	P	21 53 07.7	-0.1
	0.2nm,0.4s,baz=117,slow=7.3,SNR=6.1						

IDC 26 21:58:35.1±2.6**, 9°.64S**×**119°.01E, h0^{km}, mb3.7**/3**, mb1 3.7**/4**, mb1mx3.5**/21**, mbtmp3.6**/4**, ML3.5**/1**, MS3.8**/1**, Ms1 3.8**/1**, ms1mx2.8**/27**, Error ellipse: s-maj=195.4km s-min=30.3km az=55.0, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	19.93	136	P	P	22 03 08.7	-0.1
	0.1nm,0.3s,baz=318,slow=12,SNR=13						
ASAR				S	S	22 06 37.8	-16
	0.1nm,0.3s,baz=309,slow=22,SNR=5.2						
BRDH	Bariadhala	41.84	320	LR	LR	22 28 32.9	
	comp=Z,113nm,18.4s,baz=168,slow=43						
SONM	Songino Array	58.31	350	P	P	22 08 33.0	+1.1
	0.4nm,0.5s,baz=170,slow=8.4,SNR=3.8						
MKAR	Makanchi Array	65.03	333	P	P	22 09 16.4	-0.8
	0.9nm,0.8s,baz=144,slow=7.8,SNR=12						
ZALV	Zalesovo Beam	69.64	339	P	P	22 09 46.6	+0.4
	0.4nm,0.5s,baz=140,slow=7.5,SNR=1.7						

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*TAP **26** 22:12:29.7, 24°.59N×122°.60E, h95^{km}, ML3.2, C*

*JMA **26** 22:12:30.2, 24°.76N×122°.59E, h85^{km}±1^{km}, M2.3*

ISC 26 22:12:30.7±1.4**, 24°.57N**±0°.04×**122°.56E**±0°.02**, h85^{km}**±8^{km}**, n72, σ0^{s}.79**/123**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.37	108	P	Pn	22 12 44.1	+0.1
JYNG				S	Sn	22 12 54.4	+0.6
EOS1	EOS1	0.39	267⇑	*i*P	Pn	22 12 44.4	+0.4
	baz=261						
EOS1				*e*S	Sn	22 12 55.4	+1.5
	baz=261						
YOJ	Yonaguni jima	0.43	104	*i* P	Pn	22 12 44.5	+0.1
	baz=112						
YOJ				S	Sn	22 12 55.0	+0.5
	baz=112						
YOJ	Yonaguni jima	0.43	104	P	Pn	22 12 44.4	+0.1
YOJ				S	Sn	22 12 54.8	+0.3
TWC	Suao	0.64	274	*e*P	Pn	22 12 45.9	-0.3
	baz=274						
TWC				*e*S	Sn	22 12 57.1	-0.7
	baz=274						
TWB1	Santiao Chiao	0.68	310	*e*P	Pn	22 12 46.4	-0.1
	baz=303						
NTC	Toucheng	0.72	293	*e*S	Sn	22 12 58.8	-0.2
	baz=285						
ENA	Nanau	0.76	259	P	Pn	22 12 47.5	+0.2
	baz=254						
ENA				*e*S	Sn	22 13 00.3	+0.6
	baz=254						
TIPB	Shuangxi	0.78	301	P	Pn	22 12 47.4	-0.2
	baz=296						
TIPB				*e*S	Sn	22 12 59.7	-0.5
	baz=296						
TWE	Neicheng	0.82	281	P	Pn	22 12 48.2	+0.1
	baz=277						
TWE				*e*S	Sn	22 13 00.5	-0.5
	baz=277						
SLBB	Yuanshan	0.86	283	*e*P	Pn	22 12 47.7	-0.8
	baz=287						
SLBB				*e*S	Sn	22 13 01.5	-0.3
	baz=287						
NWF	Wu-fen Shan	0.86	305	*e*P	Pn	22 12 48.7	+0.1

	baz=296						
NWF				eS	Sn	22 13 02.2	+0.3
	baz=296						
WFSB	Wu-fen Shan	0.86	305	eP	Pn	22 12 48.6	+0.1
	baz=296						
WFSB				eS	Sn	22 13 01.8	0.0
	baz=296						
ENTT	Nioudou	0.90	275	P	Pn	22 12 49.6	+0.6
	baz=270						
ENTT				eS	Sn	22 13 03.3	+0.7
	baz=270						
NDT	Datong Townshi	0.95	272	eP	Pn	22 12 50.1	+0.6
	baz=272						
NDT				eS	Sn	22 13 04.2	+0.7
	baz=272						
NACB	Ninganchiao	0.96	246	eP	Pn	22 12 49.5	-0.2
	baz=240						
NACB				eS	Sn	22 13 03.1	-0.7
	baz=240						
TWA	Mucha	0.97	295	eP	Pn	22 12 49.0	-0.8
	baz=286						
TWA				eS	Sn	22 13 03.6	-0.5
	baz=286						
NWLT	Wulai	0.98	282	eP	Pn	22 12 50.1	+0.2
	baz=287						
NWLT				eS	Sn	22 13 03.7	-0.5
	baz=287						
TWD	Chiawan	1.00	241	eP	Pn	22 12 49.6	-0.5
	baz=236						
TWD				eS	Sn	22 13 04.1	-0.5
	baz=236						
NHDH	Xindian Distri	1.01	293	eS	Sn	22 13 04.0	-0.9
	baz=283						
ETLH	Xiulin Townshi	1.04	250	eP	Pn	22 12 50.6	-0.1
	baz=250						
ETLH				eS	Sn	22 13 05.0	-0.6
	baz=250						
HWA	Hwalien	1.05	236	eS	Sn	22 13 06.3	+0.8
	baz=236						
TATO	Taipei	1.05	293	eS	Sn	22 13 04.4	-1.2
	baz=283						
YM01	YM01	1.06	303	eP	Pn	22 12 50.6	-0.2
	baz=293						
YM11	YM11	1.07	304	eP	Pn	22 12 50.6	-0.4
	baz=295						
YM10	YM10	1.07	303	eP	Pn	22 12 50.6	-0.4
	baz=291						
YM10				eS	Sn	22 13 05.5	-0.7
	baz=291						
YM05	YM05	1.08	304	eP	Pn	22 12 50.6	-0.5
	baz=293						
NNSB	Datong	1.08	263	P	Pn	22 12 51.2	+0.1
	baz=254						
NNSB				eS	Sn	22 13 06.1	-0.3
	baz=254						
NNSH	Datong	1.08	263	P	Pn	22 12 51.3	+0.2
	baz=256						
NNSH				eS	Sn	22 13 06.1	-0.3
	baz=256						
YHNB	Yeheng	1.08	276	P	Pn	22 12 51.2	+0.1
	baz=274						
YHNB				eS	Sn	22 13 06.6	+0.3
	baz=274						
NNS	Nan Shan	1.08	263	P	Pn	22 12 51.3	+0.1
	baz=255						
NNS				eS	Sn	22 13 05.7	-0.9
	baz=255						
YM04	YM04	1.09	302	P	Pn	22 12 50.8	-0.4
	baz=291						
YM04				eS	Sn	22 13 05.4	-1.2
	baz=291						
ENLB	Shoufeng	1.09	233	eP	Pn	22 12 50.3	-0.9
	baz=230						
IRIF	Iriomote-Funau	1.10	102	P	Pn	22 12 51.1	-0.1
IRIF				S	Sn	22 13 06.7	+0.2
HATJ	Hateruma jima	1.25	114	P	Pn	22 12 53.5	+0.4
WHF	Hehuan Shan	1.25	250	P	Pn	22 12 53.5	-0.1
	baz=250						
WHF				S	Sn	22 13 09.8	-0.8
	baz=250						
ESL	Shilin	1.27	234	eP	Pn	22 12 53.1	-0.3
	baz=234						
ESL				eS	Sn	22 13 09.3	-1.1
	baz=234						
TWT	Tachien	1.30	256	eP	Pn	22 12 55.6	+1.7
	baz=255						
TWT				eS	Sn	22 13 11.2	0.0
	baz=255						
TDCB	Techi	1.31	256	eP	Pn	22 12 54.4	+0.4
	baz=256						
TDCB				eS	Sn	22 13 11.1	-0.4
	baz=256						
CHGB	Renai	1.36	248	P	Pn	22 12 54.7	0.0
	baz=241						
CHGB				eS	Sn	22 13 12.5	-0.2
	baz=241						
JKRS	Kuro-shima	1.37	104	P	Pn	22 12 54.7	+0.2
JKRS				S	Sn	22 13 13.0	+0.5
EGFH	Guangfu	1.37	229	eP	Pn	22 12 54.7	+0.2
	baz=230						
EGFH				eS	Sn	22 13 11.5	-1.0
	baz=230						
OWD	Renai	1.40	244	eP	Pn	22 12 55.0	-0.2
	baz=239						
OWD				eS	Sn	22 13 11.9	-1.6
	baz=239						
LIOB	Emei	1.40	273	eP	Pn	22 12 55.2	+0.2
	baz=272						
LIOB				eS	Sn	22 13 13.1	-0.3
	baz=272						
NSTT	Nanjuang	1.42	273	eS	Sn	22 13 13.7	0.0
	baz=271						
JIJ	Ishigaki jima	1.46	98	P	Pn	22 12 55.4	-0.3
JIJ				S	Sn	22 13 14.0	-0.6
HGSD	Ruisui	1.49	224	eP	Pn	22 12 56.7	+0.6
	baz=223						
WHP	Taichung City	1.50	259	P	Pn	22 12 57.2	+0.9
	baz=256						
WHP				eS	Sn	22 13 15.8	+0.3
	baz=256						
VWDT	VWDT	1.53	238	P	Pn	22 12 56.8	+0.2
	baz=233						
VWDT				eS	Sn	22 13 15.6	-0.5
	baz=233						
EHY	Hungye	1.55	227	eP	Pn	22 12 56.4	-0.5
	baz=234						
DPDB	Guoxing	1.58	251	eP	Pn	22 12 58.0	+0.6
	baz=247						
JISG	Ishigakijimahi	1.60	89	P	Pn	22 12 57.2	-0.3
JISG				eS	Sn	22 13 17.5	-0.3
YULB	Yu-li	1.64	225	P	Pn	22 12 57.1	-1.0
	baz=233						
YULB				eS	Sn	22 13 17.0	-1.9
	baz=233						
SSLB	Suanglung	1.66	242	P	Pn	22 12 59.1	+0.8
	baz=239						
SSLB				eS	Sn	22 13 18.6	-0.7
	baz=239						
SMLT	Sun Moon Lake	1.66	246	P	Pn	22 12 59.4	+0.9
	baz=240						
SMLT				eS	Sn	22 13 20.8	+1.4
	baz=240						
TWF1	Yuli	1.67	224	P	Pn	22 12 57.7	-0.8
	baz=232						
TYC	Yuchr	1.69	247	P	Pn	22 12 59.7	+1.0
	baz=241						
TYC				eS	Sn	22 13 20.2	+0.4
	baz=241						
WHYT	Xinyi Township	1.78	241	P	Pn	22 13 00.7	+0.8
	baz=239						
WHYT				eS	Sn	22 13 23.1	+1.0
	baz=239						
FULB	Fuli	1.79	220	P	Pn	22 12 59.5	-0.6
	baz=216						
YUS	Yu-Shan	1.82	234	eP	Pn	22 13 00.3	-0.6
	baz=229						
YUS				eS	Sn	22 13 23.1	-0.6
	baz=229						
WJS	Zhushan	1.83	246	eS	Sn	22 13 25.1	+1.9
	baz=257						
ALS	Alishan	1.92	237	eP	Pn	22 13 00.9	-1.0
	baz=232						
ALS				eS	Sn	22 13 26.3	+0.6
	baz=232						
JTJ	Tarama	1.96	87	P	Pn	22 13 02.1	-0.1
JTJ				eS	Sn	22 13 26.4	+0.3
ELDTW	Lidau	1.97	226	eP	Pn	22 13 02.1	-0.4
	baz=226						
ELDTW				eS	Sn	22 13 24.8	-1.8
	baz=226						
CHN5	Tsauling	1.97	241	eP	Pn	22 13 03.4	+1.0
	baz=234						
CHN5				eS	Sn	22 13 28.6	+2.0
	baz=234						
TWH	Lutao	2.10	208	eP	Pn	22 13 01.7	-2.4
	baz=213						
STYT	Tauyuan	2.16	230	eP	Pn	22 13 06.5	+1.5
	baz=230						
STYT				eS	Sn	22 13 31.1	-0.1
	baz=230						
CHN4	Tsaushan	2.17	236	P	Pn	22 13 06.3	+1.3
	baz=236						
CHN4				eS	Sn	22 13 32.2	+1.0
	baz=236						
TPUB	Ta-pu	2.17	235	eP	Pn	22 13 05.8	+0.8
	baz=235						
TPUB				eS	Sn	22 13 32.8	+1.5
	baz=235						
WTP	Ta-pu	2.21	234	eP	Pn	22 13 07.0	+1.3
	baz=234						
CHN1	Nanshi	2.31	234	eP	Pn	22 13 07.3	+0.4
	baz=234						
SNST	Tainan City	2.31	235	eP	Pn	22 13 08.6	+1.6
	baz=235						

*IDC **26** 22:31:19.2±0.8, 35°.46N×141°.20E, h0^{km}, mb3.6/9, mb1 3.7/14, mb1mx3.6/45, mbtmp3.7/14, ML3.2/4, MS3.2/2, Ms1 3.2/2, ms1mx2.6/38, Error ellipse: s-maj=21.2km s-min=18.6km az=94.0*

*JMA **26** 22:31:22.7±0.2, 35°.46N×141°.16E, h31^{km}±2^{km}, M3.2*

ISC 26 22:31:23.7±0.7, **35°.44N**±0°.06×**141°.15E**±0°.08, **h33^{km}, n31,** σ**1.^{s}15**/26, **mb3.6**/9, **2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	0.35	318	⇓P	Pb	22 31 30.8	-1.4
JSMT	Sammumatsuo	0.61	290	P	Pn	22 31 35.3	-0.7
JCN	Nagara	0.78	269	P	Pn	22 31 38.2	-0.1
BSO1	Boso 1	0.80	190	P	Pn	22 31 36.8	-1.3
BSO4	Boso 4	0.80	236	P	Pn	22 31 37.8	-0.8
BSO3	Boso 3	0.82	220	⇓P	Pn	22 31 37.8	-0.9
JYT	Yasato	1.10	316	P	Pn	22 31 42.0	-0.8
JHJ	Hachijo jima 2	2.58	206	Pn	Pn	22 32 02.1	-1.0
	16nm,0.3s,baz=138,slow=22,SNR=20						
JHJ				Sn	Sn	22 32 32.6	-0.7
	61nm,0.3s,baz=96,slow=23,SNR=7.7						
MJAR	Matsushiro Arr	2.63	296	Pn	Pn	22 32 04.4	+0.6
	0.5nm,0.3s,baz=99,slow=9.3,SNR=18						
MAT	Matsushiro	2.63	296	P	Pn	22 32 05.0	+1.2
MAT				eS	Sn	22 32 33.8	-0.8
JCJ	Chichijima	8.37	174	Pn	Pn	22 33 20.6	-2.1
	8.8nm,0.3s,baz=4.3,slow=21,SNR=18						
JCJ				Sn	Sn	22 34 47.2	-8.7
	5.2nm,0.3s,baz=84,slow=22,SNR=2.1						
ASAJ	Asahikawa	8.74	7	Pn	Pn	22 33 25.1	-2.5
	0.5nm,0.3s,baz=166,slow=19,SNR=2.9						
KSRS	Korea Array	10.84	285	Pn	Pn	22 33 56.9	+0.4
	0.4nm,0.3s,baz=91,slow=15,SNR=1.9						
KLR	Kul'dur	15.41	336	LR	LR	22 41 03.8	
	comp=Z,80nm,20.5s,baz=164,slow=38						
H11N2	WAKE ISLAND Hy	27.55	118	T	T	23 06 10.6	
	baz=310,slow=75,SNR=41						
H11N1	WAKE ISLAND Hy	27.56	118	T	T	23 06 04.8	
	baz=310,slow=75,SNR=39						
H11N3	WAKE ISLAND Hy	27.57	118	T	T	23 06 14.9	
	baz=310,slow=75,SNR=45						
H11S3	WAKE ISLAND Hy	28.21	120	T	T	23 06 54.7	
	baz=312,slow=75,SNR=118						
H11S1	WAKE ISLAND Hy	28.21	120	T	T	23 06 55.8	
	baz=312,slow=75,SNR=144						
H11S2	WAKE ISLAND Hy	28.23	120	T	T	23 06 54.3	
	baz=312,slow=75,SNR=86						
SONM	Songino Array	28.53	306	P	P	22 37 17.8	+1.5
	0.3nm,0.4s,baz=120,slow=8.5,SNR=1.6						
ZALV	Zalesovo Beam	42.84	314	P	P	22 39 18.3	-0.1
	0.5nm,0.5s,baz=103,slow=6.2,SNR=2.5						
ZALV				LR	LR	22 59 00.6	
	comp=Z,30nm,18.5s,baz=66,slow=39						
MKAR	Makanchi Array	44.80	303	P	P	22 39 34.6	+0.3
	0.4nm,0.6s,baz=90,slow=10,SNR=7.1						
ILAR	Eielson Array	50.96	32	P	P	22 40 21.4	-0.2
	0.7nm,0.7s,baz=254,slow=5.3,SNR=7.3						
ASAR	Alice Springs	59.18	188	P	P	22 41 22.6	+1.1
	0.2nm,0.4s,baz=20,slow=13,SNR=4.9						
YKA	Yellowknife Ar	65.29	30	P	P	22 42 02.2	+0.3
	0.3nm,0.8s,baz=298,slow=5.9,SNR=4.7						
AKASG	Malin Array Be	75.43	322	P	P	22 43 03.6	-0.4
	0.4nm,0.4s,baz=46,slow=6.2,SNR=2.6						
NB2	NORSAR Subarra	75.57	337	P	P	22 43 04.9	+0.1
	comp=Z,0.3nm,0.5s,baz=41,slow=5.9						
NOA	NORSAR Array B	75.57	337	P	P	22 43 05.2	+0.4
	comp=Z,1.0nm,0.8s,baz=39,slow=5.7,SNR=4.1						
NVAR	Mina Array Bea	76.12	53	P	P	22 43 10.3	+1.8
	comp=Z,0.4nm,0.6s,baz=298,slow=4.5,SNR=3.6						
LPAZ	La Paz	147.66	61	PKPbc	PKiKP	22 51 06.7	-1.4
	comp=Z,0.9nm,0.6s,baz=337,slow=4.3,SNR=4.0						

*JMA **26** 22:54:57.9±0.3, 36°.32N×142°.53E, h71^{km}, M3.3*

*IDC **26** 22:55:02.0±2.0, 36°.96N×142°.03E, h0^{km}, mb3.7/4, mb1 3.7/6, mb1mx3.5/45, mbtmp3.7/6, ML3.3/2, MS2.7/4, Ms1 2.7/4, ms1mx2.6/40, Error ellipse: s-maj=46.0km s-min=28.6km az=78.0*

ISC 26 22:54:56.8±1.8, **36°.26N**±0°.08×**142°.6E**±0°.1, **h15^{km}, n20,** σ**1.^{s}24**/19, **mb3.7**/4, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	1.49	249	P	Pn	22 55 23.1	+0.1
JHYU	Hitachinakayam	1.60	273	P	Pn	22 55 24.4	0.0
JHO	Hitachi	1.64	283	P	Pn	22 55 24.6	-0.5
JHO				eS	Sn	22 55 44.6	-1.4
ONAJ	Iwakimizuishiy	1.65	301	P	Pn	22 55 24.6	-0.6
JFT	Otama	2.18	306	P	Pn	22 55 32.7	+0.2
JAG	Ashikaga	2.52	275	P	Pn	22 55 37.1	0.0
JAG				eS	Sn	22 56 05.5	-2.0
JRY	Ryogami san	2.97	266	P	Pn	22 55 43.5	+0.1
JOD2	Odawara 2	3.00	252	P	Pn	22 55 43.9	+0.2
JYK	Kaneyama	3.18	327	P	Pn	22 55 45.8	-0.4
MJAR	Matsushiro Arr	3.52	276	Pn	Pn	22 55 52.3	+1.3
	0.6nm,0.3s,baz=91,slow=9.1,SNR=30						
MJAR				LR	LR	22 57 23.2	
	comp=Z,59nm,19.4s,baz=85,slow=46						
MAT	Matsushiro	3.52	276	P	Pn	22 55 52.1	+1.1
MAT				S	Sn	22 56 32.3	-0.1
JHJ2	Mitsune	3.87	217	eS	Sn	22 56 38.2	-2.7
ASAJ	Asahikawa	7.85	0	Pn	Pn	22 56 48.7	-1.6
	1.1nm,0.3s,baz=201,slow=11,SNR=6.7						
JNU	Nakatsue	10.12	255	LR	LR	23 01 37.9	
	comp=Z,41nm,20.5s,baz=338,slow=40						
KSRS	Korea Array	11.79	280	LR	LR	23 01 54.6	
	comp=Z,60nm,19.6s,baz=224,slow=36						
PETK	Petropavlovsk-	19.92	28	LR	LR	23 08 45.4	
	comp=Z,22nm,18.0s,baz=242,slow=42						
SONM	Songino Array	28.98	305	P	P	23 00 56.0	+0.2
	0.9nm,0.5s,baz=105,slow=8.5,SNR=6.6						
ZALV	Zalesovo Beam	43.12	313	P	P	23 02 56.6	+0.4
	0.7nm,0.5s,baz=110,slow=7.8,SNR=2.8						
MKAR	Makanchi Array	45.31	303	P	P	23 03 16.1	+2.2
	1.5nm,0.7s,baz=88,slow=8.1,SNR=20						
ASAR	Alice Springs	60.16	189	P	P	23 05 15.7	+12
	0.4nm,0.7s,baz=13,slow=15,SNR=4.3						

*NEIC **26** 22:56:45.6±3.0, 52°.45N±0°.05×131°.8W±0°.1, h10^{km}±1^{km}, Error ellipse: s-maj=13.1km s-min=5.8km az=240.0*

*PGC **26** 22:56:45.6±0.4, 52°.42N×131°.78W, h10^{km}, ML4.6/18, ML4.5, 92km south of Sandspit, Bc Haida Gwaii Region*

*MOS **26** 22:56:46.7±1.4, 52°.63N×132°.02W, h10^{km}, mb5.0/16, MS4.2/5, Error ellipse: s-maj=12.7km s-min=5.1km az=97.6*

*IDC **26** 22:56:46.3±0.6, 52°.51N×131°.76W, h0^{km}, mb4.3/21, mb1 4.3/31, mb1mx4.3/42, mbtmp4.2/31, ML3.4/9, MS3.8/33, Ms1 3.8/33, ms1mx3.7/58, Error ellipse: s-maj=14.6km s-min=8.6km az=46.0*

*GCMT **26** 22:56:50.2±0.4, 52°.40N±0°.04×131°.51W±0°.07, h12^{km}, MW4.8/79, Moment Tensor Solution. s10,c10; s79,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.60±.07; M$_{\theta\theta}$1.04±.07; M$_{\phi\phi}$0.56±.07; M$_{r\theta}$-1.14±.36; M$_{\theta\phi}$-0.51±.06; M$_{\phi r}$-1.10±.34; Best double couple: M$_0$1.99200×10^{16} NP1:φ$_s$313.00000°, δ36.00000°, λ-46.00000°. NP2: φ$_s$82.00000°, δ65.00000°, λ-117.00000°. Principal axes: T 1.4830, Plg16.0000°, Azm191.0000°; N 1.0250, Plg24.0000°, Azm94.0000°; P -2.5020, Plg60.0000°, Azm312.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **26** 22:56:55.7±0.0, 52°.85N×131°.92W, h33^{km}, mb5.1, Ms4.2*

ISC 26 22:56:46.6±0.7, **52°.45N**±0°.04×**131°.79W**±0°.03, **h9^{km}**±3^{km}, **n523,** σ**1.^{s}83**/502, **mb4.6**/65, **MS4.0**/35, **35C-4D, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNB	Barry Inlet	0.13	10	P	Pg	22 56 48.7	-0.9
BNB				S	Sg	22 56 50.6	-0.9
BNB	Barry Inlet	0.13	10		Pg	22 56 50.4	+0.9
HG3B	Hotspring	0.24	59	P	Pg	22 56 50.6	-0.9
HG3B				S	Sg	22 56 53.9	-0.9
HG3B	Hotspring	0.24	59		Pg	22 56 50.6	-0.9
HG3B					Sg	22 56 54.0	-0.9
HG1B	Mitchell Dam	0.53	337	P	Pg	22 56 55.9	-0.9
HG1B				S	Sg	22 57 03.0	-0.7
HG1B	Mitchell Dam	0.53	337		Sg	22 57 03.0	-0.7
MOBC	Moresby Island	0.70	351	P	Pg	22 56 59.0	-1.2
MOBC				S	Sg	22 57 08.6	-0.8
MOBC	Moresby Island	0.70	351		Pg	22 56 59.0	-1.2
MOBC					Sg	22 57 08.3	-1.1
MOBC	Moresby Island	0.70	351		Pg	22 56 59.0	-1.2
MOBC					Sg	22 57 08.6	-0.8
DIB	Dawson Inlet,	0.86	331	P	Pg	22 57 01.6	-1.6
DIB				S	Sg	22 57 12.7	-1.6
DIB	Dawson Inlet,	0.86	331		Pg	22 57 01.5	-1.6
DIB				Sg	Sg	22 57 12.5	-1.8
DIB	Dawson Inlet,	0.86	331		Pg	22 57 01.5	-1.6
DIB					Sg	22 57 12.7	-1.6
H02S1	DAWSON INLET T	0.86	331	Pn	Pg	22 57 01.6	-1.5
H02S1				Sn	Sg	22 57 12.5	-1.9
H02N1	VAN INLET T-PH	0.92	331	Pn	Pg	22 57 03.6	-0.8
H02N1				Sn	Sg	22 57 14.6	-1.8
VIB	Van Inlet	0.92	331	P	Pg	22 57 02.7	-1.7
VIB				S	Sg	22 57 14.7	-1.6
VIB	Van Inlet	0.92	331		Pg	22 57 02.6	-1.7
BNAB	Bonilla	1.25	33	P	Pb	22 57 07.9	-2.5
BNAB				S	Sb	22 57 24.5	-2.2
MASB	Masset	1.57	355	Pn	Pn	22 57 14.6	-0.1
MASB				Sg	Sb	22 57 36.2	+0.3
NDB	Naden	1.66	336	Pn	Pn	22 57 14.1	-1.8
NDB				Sn	Sn	22 57 36.6	-0.8
NDB				Sg	Sb	22 57 37.9	-0.5
RUBB	Prince Rupert	2.09	25	Pn	Pn	22 57 20.6	-1.2
RUBB				Sn	Sn	22 57 46.8	-1.1
BBB	Bella Bella	2.27	95	Pn	Pn	22 57 22.4	-1.8
	36nm,0.3s,baz=280,slow=11,SNR=69						
BBB				Lg	Lg	22 57 52.9	
	360nm,0.3s,baz=18,slow=20,SNR=13						
BBB				LR	LR	22 57 56.2	
	comp=Z,566nm,20.0s,baz=288,slow=31						
BBB	Bella Bella	2.27	95	Pn	Pn	22 57 22.0	-2.3
BBB				Sn	Sn	22 57 50.3	-2.0
BBB	Bella Bella	2.27	95		Pn	22 57 22.5	-1.8
BBB				Sn	Sn	22 57 49.8	-2.6
HOLB	Holberg	2.92	127	Pn	Pn	22 57 30.9	-2.3
HOLB				Sn	Sn	22 58 05.0	-3.4
PHC	Port Hardy	3.23	121	Pn	Pn	22 57 34.9	-2.6
PHC				Sn	Sn	22 58 12.7	-3.4
BPBC	Brooks Peninsu	3.41	131	Pn	Pn	22 57 39.0	-1.1
BPBC				Sn	Sn	22 58 17.5	-3.1
MAYB	Maynard	3.54	124	Pn	Pn	22 57 39.2	-2.7
MAYB				Sn	Sn	22 58 20.0	-4.0
TLCB	Telegraph Cove	3.64	120	Pn	Pn	22 57 41.5	-1.5
TLCB				Sn	Sn	22 58 22.9	-3.1
EDB	Eliza Dome	3.91	129	Pn	Pn	22 57 46.6	-0.2
EDB				Sn	Sn	22 58 30.2	-2.6
WRAK	Wrangell Islan	3.99	356		Pn	22 57 46.3	-1.6
GDR	Gold River	4.50	124	Pn	Pn	22 57 54.7	-0.2
SPLB	Strathcona Par	4.63	121	Sn	Sn	22 58 44.2	-6.4
CBB	Campbell River	4.71	118	Pn	Pn	22 57 58.1	+0.4
CBB				Sn	Sn	22 58 49.2	-3.2
UBRB	Upper Baezaeko	4.71	82	Pn	Pn	22 57 58.5	+0.6
UBRB				Sn	Sn	22 58 48.8	-3.9
BTB	Buttle Lake	4.96	125	Pn	Pn	22 58 01.5	+0.1
BTB				Sn	Sn	22 58 54.6	-4.3
SIT	Sitka	5.05	337	P	Pn	22 58 01.4	-1.0
SIT	Sitka	5.05	337		Pn	22 58 01.4	-1.0
SIT				Sn	Sn	22 58 58.8	-2.0
OZB	Mount Ozzard	5.31	129	Pn	Pn	22 58 07.7	+1.6
MGB	Mount Grey	5.68	125	Pn	Pn	22 58 10.1	-1.1
SHB	Sechelt	5.75	117	Pn	Pn	22 58 11.0	-1.3
NLLB	Nanaimo Lost L	5.90	120	Pn	Pn	22 58 14.5	+0.4
YOUB	Youbou, Lake C	5.96	124	Pn	Pn	22 58 15.5	+0.5
JIS	Juneau Island	6.02	347	Pn	Pn	22 58 15.6	-0.2
WSLR	Whistler	6.03	109	Pn	Pn	22 58 17.9	+1.8
DLBC	Dease Lake	6.08	9	Pn	Pn	22 58 17.1	+0.4
	2.4nm,0.3s,baz=193,slow=1.4,SNR=37						
DLBC				Lg	Lg	22 59 53.9	
	5.7nm,0.3s,baz=290,slow=2.5,SNR=9.6						
DLBC	Dease Lake	6.08	9	Pn	Pn	22 58 17.7	+1.0
DLBC	Dease Lake	6.08	9		Pn	22 58 18.5	+1.8
PFB	Port Renfrew	6.09	127	Pn	Pn	22 58 18.0	+1.2
WPB	Watts Point	6.09	114	Pn	Pn	22 58 19.4	+2.6
BIB	Bowen Island	6.17	116	Pn	Pn	22 58 19.9	+2.1
LZB	Mount Lazard	6.37	124	Pn	Pn	22 58 21.8	+1.2
BESE	Bessie Mountai	6.38	345	Pn	Pn	22 58 21.6	+0.7
LLLB	Lillooet	6.45	103	Pn	Pn	22 58 23.8	+2.0
LLLB	Lillooet	6.45	103		Pn	22 58 22.2	+0.4
PGC	Sidney	6.53	122	Pn	Pn	22 58 19.3	-3.5
SNB	Saturna Island	6.60	120	Pn	Pn	22 58 25.1	+1.2
BMBC	Bull Mountain	6.71	54	Pn	Pn	22 58 23.8	-1.5
A04D	Lummi Island	6.88	119	P	Pn	22 58 29.2	+1.6
	baz=307						
VDB	Vedder Mountai	7.04	115	Pn	Pn	22 58 29.8	+0.1
NLWA	Neilton Lookou	7.19	132		Pn	22 58 32.0	+0.1
MBW	Mount Baker	7.28	116	Pn	Pn	22 58 33.4	+0.1
NBC5	NorthernBC 5	7.30	42	Pn	Pn	22 58 33.4	0.0
D03D	Eldon	7.46	128	P	Pn	22 58 38.2	+2.7
	baz=315						
B05A	Bryant	7.48	120	P	Pn	22 58 37.9	+2.0
	baz=309						
BLBC	Blue River	7.72	88	Pn	Pn	22 58 40.4	+1.1
FNBB	Fort Nelson	8.13	34	Pn	Pn	22 58 46.4	+1.6
MNB	Mounoet Dainar	8.22	86	Pn	Pn	22 58 46.5	+0.3
WHY	Whitehorse	8.40	350	Pn	Pn	22 58 48.8	+0.2
WHY	Whitehorse	8.40	350		Pn	22 58 49.8	+1.3
E04D	Cinebar	8.41	131	P	Pn	22 58 51.7	+3.1
	baz=319						
SLEB	Sale Mountain	8.56	93	Pn	Pn	22 58 50.6	-0.3
LON	Longmire	8.63	127	Pn	Pn	22 58 53.7	+2.0
LON	Longmire	8.63	127	P	Pn	22 58 55.9	+4.2
LON	Longmire	8.63	127		Pn	22 58 55.1	+3.4
LTY	Liberty	8.86	122	Pn	Pn	22 58 56.6	+1.7
B08A	Colville Reser	8.95	112		Pn	22 58 59.3	+3.3
F04A	Amboy	8.95	133		Pn	22 58 58.9	+2.9
NBC2	NorthernBC 2	8.99	32	Pn	Pn	22 58 58.3	+1.8
G03D	McMinnville, O	9.16	139	P	Pn	22 59 01.8	+2.9
	baz=326						
YUK6	Outpost Mounta	9.24	340	Pn	Pn	22 59 01.4	+1.2
YUK5	Granite Creek	9.31	342	Pn	Pn	22 59 02.9	+1.8
YUK4	Talbot Arm	9.67	340	Pn	Pn	22 59 08.7	+2.8
GRNC	Granite Creek	9.94	330	Pn	Pn	22 59 09.4	-0.3
H04D	Lebanon	9.94	139	P	Pn	22 59 13.7	+4.0
	baz=327						
CTGM	Chitina Glacie	10.01	332	Pn	Pn	22 59 09.5	-1.0
CTGM	Chitina Glacie	10.01	332		Pn	22 59 12.5	+2.0
CTGM				Sn	Sn	23 01 02.6	-0.3
HAWA	Hanford	10.02	122		Pn	22 59 14.9	+4.2
H04A	Detroit Lake	10.04	137		Pn	22 59 14.9	+4.0
BARN	Barnard Glacie	10.18	332		Pn	22 59 13.7	+0.7
NEW	Newport	10.26	108	Pn	Pn	22 59 14.6	+0.5
	0.2nm,0.3s,baz=291,slow=14,SNR=1.9						
NEW				Lg	Lg	23 02 04.0	
	0.2nm,0.3s,baz=41,slow=13,SNR=4.1						
G06A	Carlson Farm,	10.30	130		Pn	22 59 16.1	+1.7
TGL	Tana Glacier	10.30	328	Pn	Pn	22 59 15.0	+0.5
BALM	Baldy	10.36	330	Pn	Pn	22 59 16.6	+1.2
CRQM	Cirque	10.40	328		Pn	22 59 14.9	-1.1
YUK3	Moose Creek	10.46	337	P	Pn	22 59 17.7	+0.9
PTPK	Patty Peak	10.52	331	P	Pn	22 59 16.7	-0.8
YUK2	White River	10.56	336	P	Pn	22 59 19.7	+1.6

RAGM	Ragged Mountai	10.67	323	Pn	Pn	22 59 19.2	-0.3
E09A	Wood Farm, Sta	10.67	118		Pn	22 59 21.6	+2.0
MCARA	McCarthy VSAT	10.84	330	Pn	Pn	22 59 23.2	+1.5
VRDI	Verde Repeater	10.85	329	Pn	Pn	22 59 22.5	+0.4
G08A	Pilot Rock	11.07	125		Pn	22 59 27.0	+1.9
GLB	Gilahina Butte	11.13	329	Pn	Pn	22 59 25.4	-0.4
PINE	Pine Mountain	11.29	136		Pn	22 59 32.0	+3.8
HIN	Hinchinbrook I	11.37	320	Pn	Pn	22 59 27.3	-1.8
WALA	Waterton Lakes	11.82	100	P	Pn	22 59 36.9	+1.5
BCAR	Beaver Creek A	11.89	337		Pn	22 59 33.3	-2.9
JTMT	Jette	12.18	106		Pn	22 59 41.1	+0.8
BMO	Blue Mountains	12.21	123	P	Pn	22 59 41.7	+0.9
BMO	Blue Mountains	12.21	123		Pn	22 59 41.7	+0.9
DAWY	Dawson	12.30	344		Pn	22 59 41.3	-0.5
YBH	Yreka Blue Hor	12.37	147	Pn	Pn	22 59 45.8	+2.9
	0.1nm,0.3s,baz=316,slow=13,SNR=4.2						
YBH				LR	LR	23 03 46.7	
	comp=Z,407nm,21.1s,baz=336,slow=34						
YBH	Yreka Blue Hor	12.37	147	P	Pn	22 59 41.6	-1.3
YBH	Yreka Blue Hor	12.37	147		Pn	22 59 41.5	-1.3
SCM	Sheep Creek Mo	12.60	324	P	Pn	22 59 45.4	-0.4
SCM	Sheep Creek Mo	12.60	324		Pn	22 59 45.4	-0.4
M04C	Macdoel	12.63	144	P	Pn	22 59 50.1	+3.6
	baz=332						
MSO	Missoula	12.85	109		Pn	22 59 46.9	-2.6
MSO	Missoula	12.85	109	P	Pn	22 59 52.4	+2.9
	baz=303						
SML	Sawmill	12.94	323	P	Pn	22 59 50.5	-0.1
SML	Sawmill	12.94	323	Pn	Pn	22 59 50.5	-0.1
CNPM	China Poot	12.95	311		Pn	22 59 49.3	-1.4
KDAK	Kodiak Island	13.02	302	LR	LR	23 03 46.1	
	comp=Z,428nm,19.9s,baz=120,slow=32						
KDAK	Kodiak Island	13.02	302	P	Pn	22 59 49.5	-2.1
KDAK	Kodiak Island	13.02	302	Pn	Pn	22 59 49.5	-2.1
GHO	Glory Hole Cre	13.14	322		Pn	22 59 49.9	-3.4
EGAK	Eagle	13.27	342		Pn	22 59 52.6	-2.3
WVOR	Wild Horse Val	13.38	133	P	P	23 00 03.5	-2.9
WVOR				pmax	pmax		
	comp=Z,13nm,1.5s						
YKA	Yellowknife Ar	13.61	36	Pn	Pn	22 59 58.4	-1.2
	comp=Z,0.2nm,0.3s,baz=228,slow=12,SNR=53						
YKA				Lg	Lg	23 03 52.1	
	comp=Z,0.1nm,0.3s,baz=224,slow=27,SNR=3.9						
YKA				LR	LR	23 05 47.5	
	comp=Z,615nm,18.4s,baz=0.0,slow=40						
YKW1	Yellowknife Ar	13.65	36	P	Pn	22 59 58.5	-1.6
YKW3	Yellowknife Ar	13.65	35	P	Pn	22 59 59.0	-1.1
EPYK	Eagle Plains	14.18	352	P	Pn	23 00 11.1	+3.7
	baz=168,SNR=8.1						
MCK	McKinley	14.43	328	P	Pn	23 00 09.7	-1.1
MCK	McKinley	14.43	328		Pn	23 00 09.7	-1.1
DLMT	Dillon	14.45	112		Pn	23 00 07.2	-4.2
IL31		14.58	334		Pn	23 00 11.4	-1.4
ILAR	Eielson Array	14.58	334	Pn	Pn	23 00 14.6	+1.6
	comp=Z,0.0nm,0.3s,baz=164,slow=10,SNR=4.8						
ILAR				Lg	Lg	23 04 34.4	
	comp=Z,0.0nm,0.3s,baz=112,slow=23,SNR=4.5						
ILAR				LR	LR	23 05 50.6	
	comp=Z,359nm,20.4s,baz=140,slow=37						
ILAR	Eielson Array	14.58	334	P	Pn	23 00 12.0	-0.9
ILAR	Eielson Array	14.58	334		Pn	23 00 12.0	-0.9
EGMT	Eagleton	14.76	99	P	Pn	23 00 18.3	+2.8
	baz=296						
BWN	Browne	14.90	329	Pn	Pn	23 00 13.5	-3.7
KTH	Kantishna Hill	14.97	325	IAmb	IAmb	23 00 27.1	
	comp=Z,23nm,1.0s						
PPLA	Purkeypile	15.04	322	IAmb	IAmb	23 00 29.1	
	comp=Z,14nm,0.9s						
BPAW	Bear Paw Mtn.	15.35	327	IAmb	IAmb	23 00 30.2	
	comp=Z,17nm,1.2s						
PAHR	Pah Rah Range	15.35	141	IAmb	IAmb	23 00 36.5	
	comp=Z,20nm,1.0s						
AFDM	Forest Hills D	15.45	147	IAmb	IAmb	23 00 37.0	
	comp=Z,20nm,1.3s						
SVW2	Sparrevohn	15.57	313		Pn	23 00 24.4	-1.6
SVW2				IAmb	IAmb	23 00 33.4	
	comp=Z,32nm,1.2s						
FYU	Fort Yukon	15.65	340	IAmb	IAmb	23 00 30.3	
	comp=Z,45nm,1.3s						
FYU					PcP	23 05 27.6	+0.1
DHRN	Dharma Camp	15.83	18	P	Pn	23 00 29.1	-0.2
MLY	Manley	15.89	330	IAmb	IAmb	23 00 48.1	
	comp=Z,26nm,1.4s						
INK	Inuvik	15.93	358	Pn	Pn	23 00 31.9	+1.2
	comp=Z,0.1nm,0.3s,baz=167,slow=9.0,SNR=7.0						
INK				Lg	Lg	23 05 12.8	
	comp=Z,0.1nm,0.3s,baz=81,slow=29,SNR=5.7						
INK				LR	LR	23 07 02.5	
	comp=Z,610nm,18.1s,baz=178,slow=39						
INK	Inuvik	15.93	358	P	Pn	23 00 28.4	-2.3
INK				pmax	pmax		
	comp=Z,24nm,1.5s						
INK	Inuvik	15.93	358		Pn	23 00 28.4	-2.3
H17A	Grant Village	16.18	111	IAmb	IAmb	23 00 42.7	
	comp=Z,38nm,1.3s						
H17A					PcP	23 05 28.4	-0.7
H17A	Grant Village	16.18	111	P	P	23 00 38.9	+1.3
	baz=308,SNR=12						
BMAR	Burnt Mountain	16.27	342		Pn	23 00 31.9	-3.2
ELK	Elko	16.28	129	Pn	P	23 00 38.8	+0.2
	comp=Z,0.1nm,0.3s,baz=325,slow=14,SNR=4.7						
ELK				LR	LR	23 07 13.1	
	comp=Z,222nm,20.4s,baz=348,slow=38						
FLWY	Flagg Ranch	16.30	113	IAmb	IAmb	23 00 41.2	
	comp=Z,42nm,1.5s						
FLWY					PcP	23 05 29.8	+0.5
FXWY	Fox Creek	16.40	114		PcP	23 05 30.3	+0.9
RLMT	Red Lodge	16.51	107	P	P	23 00 43.8	+2.6
	baz=305,SNR=9.0						
NVAR	Mina Array Bea	16.87	141	Pn	P	23 00 46.3	+1.0
	comp=Z,0.1nm,0.3s,baz=311,slow=9.9,SNR=12						
NVAR				LR	LR	23 07 47.9	
	comp=Z,136nm,19.5s,baz=354,slow=39						
NVAR	Mina Array Bea	16.87	141		Pn	23 00 40.1	-3.0
C36M	Paulatuk	17.34	9	P	P	23 00 51.7	+1.8
	baz=196						
IMAR	Indian Mountai	17.47	329	P	Pn	23 00 49.4	-0.7
BW06	Boulder Array	17.78	114	P	P	23 00 56.8	+1.6
	baz=311						
FFC	Flin Flon	17.78	71	P	Pn	23 00 53.7	-0.4
FFC				pmax	pmax		
	comp=Z,32nm,1.2s						
FFC	Flin Flon	17.78	71	P	Pn	23 00 53.7	-0.4
FFC				IAmb	IAmb	23 01 07.5	
	comp=Z,32nm,1.2s						
PDAR	Pinedale Array	17.78	114	P	P	23 00 56.9	+1.6
	baz=322,slow=9.4,SNR=13						
PDAR				LR	LR	23 07 39.1	
	comp=Z,219nm,19.5s,baz=344,slow=37						
PDAR	Pinedale Array	17.78	114	P	Pn	23 00 53.6	-0.8
DUG	Dugway, Tooele	17.88	126	P	P	23 00 58.7	+2.5
DUG				pmax	pmax		
	comp=Z,11nm,1.1s						
DUG	Dugway, Tooele	17.88	126	P	P	23 00 58.1	+1.9
	baz=320						
TOLK	Toolik Lake Re	18.31	339	IAmb	IAmb	23 01 05.7	
	comp=Z,41nm,1.4s						
TOLK	Toolik Lake Re	18.31	339	P	P	23 01 02.7	+2.0
	baz=143,SNR=10.0						
CWC	Cottonwood Cre	18.71	143	P	Pn	23 01 08.9	+3.1
	baz=333						
TPNV	Topopah Spring	18.97	139	P	Pn	23 01 11.7	+2.8
	baz=330						
ISA	Isabella, Lake	19.27	145	P	Pn	23 01 15.5	+3.1
	baz=335,SNR=7.3						
MPMC	Manual Prospec	19.27	143	P	Pn	23 01 15.5	+3.0
	baz=333						
K22A	Casper	19.58	110	IAmb	IAmb	23 01 20.2	
	comp=Z,42nm,1.3s						
K22A	Casper	19.58	110	P	P	23 01 16.5	+1.6
	baz=309						
SRU	San Rafael Swe	19.85	124	P	P	23 01 15.0	-2.9
SRU				pmax	pmax		
	comp=Z,28nm,1.3s						
SRU	San Rafael Swe	19.85	124	P	P	23 01 15.0	-2.9
MTPU	Mount Pierson	19.86	129	P	P	23 01 14.8	-3.4
RSSD	Black Hills	20.16	103	P	P	23 01 18.5	-2.8
RSSD				pmax	pmax		
	comp=Z,6.0nm,0.8s						
RSSD	Black Hills	20.16	103	P	P	23 01 18.5	-2.8
RSSD	Black Hills	20.16	103	P	Pn	23 01 24.5	+1.3
	baz=305						
LCMT	Little Creek M	20.20	133	P	P	23 01 19.4	-2.4
O20A	White River Ci	20.30	118	P	Pn	23 01 26.0	+1.2
	baz=316,SNR=6.5						
HEC	Hector,Ludlow	20.79	142	P	P	23 01 30.7	+2.6
	baz=333						
BFSC	Mount Baldy Ra	20.84	145	P	Pn	23 01 32.0	+0.9
	baz=335,SNR=5.4						
ANM	Nome	21.02	318	P	P	23 01 28.5	-1.7
ANM				pmax	pmax		
	comp=Z,27nm,1.1s						
ANM	Nome	21.02	318	P	P	23 01 28.4	-1.7
ANM				IAmb	IAmb	23 01 37.1	
	comp=Z,27nm,1.1s						
N23A	Red Feather La	21.04	113	P	P	23 01 33.2	+2.2
	baz=312						
GMRC	Granite Mounta	21.09	141	P	P	23 01 34.3	+3.1
	baz=332						
PV07	Paradox Valley	21.32	122	IAmb	IAmb	23 01 43.2	
	comp=Z,15nm,0.8s						
BELC	Belle Mtn. Jos	21.65	142	P	P	23 01 40.4	+3.1
	baz=334						
PFO	Pinyon Flats O	21.83	144	LR	LR	23 10 08.6	
	comp=Z,198nm,18.3s,baz=176,slow=37						
IRM	Iron Mountain	21.84	140	P	P	23 01 42.2	+2.9
	baz=332						
ISCO	Idaho Springs	21.97	115	P	P	23 01 42.5	+1.5
	baz=314						
PDMCI	Parker Dam,Lak	22.11	138	P	P	23 01 44.6	+2.5
	baz=331						
BC3	Big Chuckawall	22.16	142	P	P	23 01 45.7	+2.8
	baz=333						
WUAZ	Wupatki	22.29	131	P	P	23 01 47.4	+3.2
	baz=326						
MVCO	Mesa Verde	22.33	124	P	P	23 01 46.8	+2.0
	baz=321,SNR=5.2						
ULM	Lac du Bonnet	22.40	81	P	P	23 01 47.5	+2.3
	comp=Z,7.6nm,0.9s,baz=296,slow=11,SNR=12						
ULM				LR	LR	23 11 05.7	
	comp=Z,598nm,20.2s,baz=296,slow=38						
ULM	Lac du Bonnet	22.40	81	*i* P	P	23 01 46.5	+1.4
ULM	Lac du Bonnet	22.40	81	IAmb	IAmb	23 02 00.1	
	comp=Z,25nm,1.4s						
S22A	4UR Ranch, Cre	22.79	120	P	P	23 01 51.8	+2.1
	baz=319,SNR=9.8						
Q24A	Divide	22.81	116	P	P	23 01 51.7	+1.7
	baz=315						
GLA	Glamis	22.94	141	P	P	23 01 53.7	+2.7
	baz=333						
SUSD	Miller	23.04	97	P	P	23 01 53.9	+1.9
	baz=302						
AGMN	Agassiz Nation	23.13	86	P	P	23 01 54.7	+1.8
	baz=294,SNR=5.8						
GAMB	Gambell	23.50	314	P	P	23 01 52.3	-4.0
GAMB				IAmb	IAmb	23 02 01.5	
	comp=Z,13nm,1.1s						
KSCO	Kaye Shedlock'	24.19	112	P	P	23 02 05.0	+1.5
	baz=314						
T25A	Trinidad	24.53	118	P	P	23 02 08.6	+1.9
	baz=318						
214A	Organ Pipe Nat	24.70	139	P	P	23 02 09.8	+1.9
	baz=332						
ECSD	EROS Data Cent	24.85	96	P	P	23 02 06.8	-2.3
ECSD				IAmb	IAmb	23 02 25.8	
	comp=Z,8.3nm,1.2s						
ECSD	EROS Data Cent	24.85	96	P	P	23 02 11.2	+2.0
	baz=303						
ANMO	Albuquerque	25.13	124	P	P	23 02 14.4	+2.4
	comp=Z,3.3nm,1.1s,baz=320,slow=10.0,SNR=5.3						
ANMO	Albuquerque	25.13	124	P	P	23 02 14.3	+2.4
	baz=322						
TUC	Tucson	25.25	135	P	P	23 02 16.0	+3.0
	baz=329						
EYMN	Ely	25.94	84	P	P	23 02 15.7	-3.3
EYMN	Ely	25.94	84	P	P	23 02 20.4	+1.4
	baz=296,SNR=8.8						
121A	Cookes Peak, D	26.42	129	P	P	23 02 21.1	-2.6
121A				IAmb	IAmb	23 02 33.6	
	comp=Z,14nm,1.1s						
121A	Cookes Peak, D	26.42	129	P	P	23 02 25.9	+2.2
	baz=326						
RES	Resolute Bay	26.81	21	P	P	23 02 27.2	+0.6
	comp=Z,2.3nm,0.8s,baz=235,slow=10,SNR=8.9						
RES				LR	LR	23 13 34.3	
	comp=Z,509nm,18.2s,baz=222,slow=38						
RES	Resolute Bay	26.81	21	P	P	23 02 27.1	+0.5
RES	Resolute Bay	26.81	21	P	P	23 02 25.4	-1.2
RES				pmax	pmax		
	comp=Z,8.0nm,1.3s						
RES	Resolute Bay	26.81	21	P	P	23 02 25.4	-1.2
RES				IAmb	IAmb	23 02 38.9	
	comp=Z,7.8nm,1.2s						
MNTX	Cornudas Mount	28.26	127	P	P	23 02 41.4	+1.4
	baz=325						
WMOK	Wichita Mounta	29.39	114	P	P	23 02 52.6	+2.5
WMOK	Wichita Mounta	29.39	114	P	P	23 02 51.8	+1.7
	baz=318						
G45A	Suttons Bay	30.86	85	P	P	23 03 04.8	+1.8
	baz=301						
TXAR	Lajitas Array	31.05	127	P	P	23 03 07.5	+2.7
	comp=Z,1.8nm,0.6s,baz=328,slow=7.5,SNR=18						
TXAR	Lajitas Array	31.05	127	P	P	23 03 03.5	-1.3
TXAR	Lajitas Array	31.05	127	P	P	23 03 03.5	-1.3
E47A	Iron Bridge	31.60	81	P	P	23 03 11.0	+1.6
	baz=299						
U40A	Yellville	31.67	105	P	P	23 03 12.0	+1.8
	baz=313						
G47A	Hillman	31.89	84	P	P	23 03 13.8	+1.8
	baz=301						
JCT	Junction City	32.08	121	P	P	23 03 15.6	+1.7
	baz=323						
D48A	Paudash Townsh	32.14	79	P	P	23 03 14.3	+0.1
	baz=299						
F48A	Evansville	32.31	82	P	P	23 03 17.4	+1.8
	baz=300						
MIAR	Mount Ida	32.50	108	P	P	23 03 18.6	+1.1
	baz=316						
K47A	Vermontville	32.53	89	P	P	23 03 19.0	+1.3
	baz=304						
SFIN	Lafayette	32.57	94	P	P	23 03 19.9	+1.9
	baz=307						
BILL	Bilibino	32.75	322	*i* P	P	23 03 20.5	+1.2
BILL				MLR	MLR		
	comp=Z,119nm,19.0s						
N47A	Urbana	33.13	92	P	P	23 03 23.8	+0.9
	baz=307						
FRB	Frobisher Bay	33.81	46	P	P	23 03 29.0	+0.5
O48A	Farmland	33.83	92	P	P	23 03 28.9	-0.1
	baz=307						
833A	Chaparral WMA,	34.02	122	P	P	23 03 33.3	+2.5
	baz=324						
L50A	Kingsville	34.22	88	P	P	23 03 33.4	+1.0
	baz=305						
Q48A	North Vernon	34.29	95	P	P	23 03 33.9	+0.9
	baz=309						
O49A	Covington	34.38	92	P	P	23 03 34.8	+1.1
	baz=307						
D53A	Lac Vacive, Po	34.65	77	P	P	23 03 37.2	+1.1
	baz=300						
WVT	Waverly	34.82	100	P	P	23 03 39.3	+1.7
	baz=312						
ALGO	Algonquin Park	35.00	79	P	P	23 03 40.7	+1.6
	baz=301						
G53A	Haliburton	35.09	80	P	P	23 03 41.0	+1.2
	baz=302						
E54A	Lac Daplat, Po	35.27	77	P	P	23 03 42.6	+1.1
	baz=301						
R50A	Paris	35.55	94	P	P	23 03 44.8	+0.8
	baz=310						
S50A	Richmond	35.89	95	P	P	23 03 47.9	+1.1
	baz=310						
E55A	Montcerf-Lytto	35.94	77	P	P	23 03 49.0	+1.8
	baz=301						
R51A	Hillsboro	36.00	94	P	P	23 03 48.8	+1.1
	baz=309						
T50A	Nancy	36.05	96	P	P	23 03 49.5	+1.3
	baz=311						
G55A	Calabogie	36.16	79	P	P	23 03 50.4	+1.4
	baz=302						
L54A	Sinclairville	36.25	85	P	P	23 03 51.5	+1.6
	baz=305						
O53A	New Philadelph	36.25	89	P	P	23 03 50.4	+0.5
	baz=307						
D56A	ZEC Mazanza, M	36.41	75	P	P	23 03 52.2	+1.0
	baz=300						
M54A	Oil Creek Stat	36.45	86	P	P	23 03 53.0	+1.4
	baz=306						
E56A	St. Veronique	36.50	76	P	P	23 03 53.3	+1.3
	baz=301						
K55A	Perry	36.73	83	P	P	23 03 55.3	+1.4
	baz=305						
L55A	Hinsdale	36.81	84	P	P	23 03 55.6	+0.9
	baz=305						
D57A	Chemin Vers le	36.94	75	P	P	23 03 57.7	+2.0
	baz=301						
E57A	Chemin Saint G	37.10	76	P	P	23 03 58.5	+1.5
	baz=301						
T52A	Hallie	37.12	95	P	P	23 03 58.4	+1.0
	baz=311						
TZTN	Tazewell	37.15	96	P	P	23 03 58.8	+1.3
	baz=311						
K56A	Middlesex	37.20	83	P	P	23 03 58.5	+0.6
	baz=305						
SCHQ	Schefferville	37.35	60	LR	LR	23 19 36.3	
	comp=Z,802nm,20.4s,baz=316,slow=37						
M56A	Emporium	37.37	85	P	P	23 04 00.1	+0.6
	baz=306						
LRAL	Lakeview Retre	37.45	103	P	P	23 04 00.8	+0.7
	baz=315						
J57A	Williamstown	37.60	81	P	P	23 04 02.2	+0.9
	baz=304						
R54A	Victor	37.66	92	P	P	23 04 02.8	+0.9
	baz=309						
X51A	Calhoun	37.67	99	P	P	23 04 03.1	+1.1
	baz=313						
LONY	Lake Ozonia	37.78	78	P	P	23 04 03.5	+0.6
	baz=303						
G58A	Ormstown	37.81	77	P	P	23 04 03.7	+0.6
	baz=303						
L57A	Andrews Acres	37.88	84	P	P	23 04 05.3	+1.6
	baz=306						
H58A	Gabriels	38.14	78	P	P	23 04 05.5	-0.4
	baz=304						
U54A	Nelsons Funny	38.21	94	P	P	23 04 08.3	+1.7
	baz=311						
S55A	Lewisburg	38.22	92	P	P	23 04 07.6	+0.9
	baz=310						
Q56A	Snyder Ridge,	38.23	89	P	P	23 04 07.6	+0.9
	baz=308						
J59A	Piesco	38.47	80	P	P	23 04 09.2	+0.5
	baz=304						
M58A	Price's Panora	38.49	84	P	P	23 04 10.2	+1.3
	baz=306						
R56A	Bull Pasture M	38.49	90	P	P	23 04 10.8	+1.8
	baz=309						
BLA	Blacksburg	38.62	92	P	P	23 04 11.7	+1.7
	baz=310						
V54A	Nebo	38.62	95	P	P	23 04 12.0	+2.0
	baz=312						
F60A	Warwick	38.63	75	P	P	23 04 11.4	+1.5
	baz=302						
Y52A	Lilburn	38.63	100	P	P	23 04 11.7	+1.6
	baz=314						
X53A	Estanollee	38.65	98	P	P	23 04 12.1	+1.8
	baz=313						
P57A	Homestead Farm	38.67	88	P	P	23 04 11.8	+1.4
	baz=308						
U55A	TA2, Sparta	38.70	94	P	P	23 04 11.4	+0.7
	baz=311						
D60A	Saint Jean D'O	38.74	73	P	P	23 04 12.8	+2.0
	baz=302						
S56A	Natural Bridge	38.85	91	P	P	23 04 12.6	+0.7
	baz=310						
G60A	Masonville	38.87	76	P	P	23 04 13.0	+1.0
	baz=303						
T56A	Rocky Mt	38.98	92	P	P	23 04 14.5	+1.4
	baz=310						
I60A	Shoreham	38.99	79	P	P	23 04 14.3	+1.3
	baz=304						
X54A	Belton	39.19	97	P	P	23 04 15.8	+1.1
	baz=313						
Q58A	Fox Den Farm,	39.21	88	P	P	23 04 15.8	+0.9
	baz=309						
G61A	St-Isidore-de-	39.25	76	P	P	23 04 15.2	0.0
	baz=303						
GOGA	Godfrey	39.30	99	P	P	23 04 17.3	+1.6
	baz=314						
SEY	Seymchan	39.48	316	P	P	23 04 18.5	+1.6
	comp=Z,1.5nm,0.3s,baz=84,slow=6.2,SNR=8.8						
SEY	Seymchan	39.48	316	*i* P	P	23 04 17.7	+0.8
X55A	Gracelyn & Ava	39.69	97	P	P	23 04 19.5	+0.6
	baz=313						
R58B	Mineral	39.70	89	P	P	23 04 19.2	+0.2
	baz=310						
Y55A	Saluda	39.91	97	P	P	23 04 22.1	+1.3
	baz=314						
R60A	Leonardtown, M	40.30	88	P	P	23 04 26.1	+2.1
	baz=309						
PETK	Petropavlovsk-	41.06	300	LR	LR	23 19 01.7	
	comp=Z,88nm,22.0s,baz=61,slow=32						
S61A	Accomac	41.23	88	P	P	23 04 33.0	+1.4
	baz=310						
NHSC	New Hope	41.50	97	P	P	23 04 35.2	+1.3
	baz=314						
MA2	Magadan	41.54	311	P	P	23 04 35.5	+1.6
	comp=Z,2.9nm,0.4s,baz=59,slow=7.2,SNR=6.4						
MA2	Magadan	41.54	311	*ce*P	P	23 04 34.5	+0.5
MA2				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MA2	Magadan	41.54	311	P	P	23 04 31.4	-2.6
MA2				IAmb	IAmb	23 04 37.2	
	comp=Z,8.7nm,1.1s						
SUMG	Summit	41.98	27	P	P	23 04 36.9	-1.0
SUMG				pmax	pmax		
	comp=Z,31nm,1.5s						
SUMG	Summit	41.98	27	P	P	23 04 36.9	-1.0
TIXI	Tiksi	44.06	333	*ce*P	P	23 04 54.2	0.0
TIXI				pmax	pmax		
	comp=Z,5.0nm,2.5s						
DAG	Danmarks Havn	44.42	18	P	P	23 04 58.5	+1.5
DAG				pmax	pmax		
	comp=Z,14nm,1.5s						
YSS	Yuzh-Sakhalins	52.46	301	*e*P	P	23 06 00.9	+1.6
YSS				MLR	MLR		
	comp=Z,100nm,15.0s						
ASAJ	Asahikawa	54.39	298	LR	LR	23 28 14.2	
	comp=Z,22nm,19.4s,baz=38,slow=35						
NRIK	Noril'sk	55.15	344	P	P	23 06 18.2	-0.5
	comp=Z,4.4nm,0.9s,baz=47,slow=7.1,SNR=8.2						
NRIK	Noril'sk	55.15	344	*i* P	P	23 06 19.6	+0.9
NRIK				pmax	pmax		
	comp=Z,28nm,3.1s						
KLR	Kul'dur	56.49	309	LR	LR	23 31 11.0	
	comp=Z,39nm,18.0s,baz=38,slow=37						
KLR	Kul'dur	56.49	309	*i* P	P	23 06 29.4	+0.8
KLR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
H11N2	WAKE ISLAND Hy	57.17	260	T	T	00 08 30.5	
	baz=39,slow=76						
H11N3	WAKE ISLAND Hy	57.17	260	T	T	00 08 30.7	
	baz=39,slow=76						
H11N1	WAKE ISLAND Hy	57.19	260	T	T	00 08 34.0	
	baz=39,slow=76						
ARCES	ARCESS Array B	57.20	9	LR	LR	23 32 50.9	
	comp=Z,70nm,18.3s,baz=342,slow=38						
H11S1	WAKE ISLAND Hy	58.23	259	T	T	00 09 51.8	
	baz=39,slow=76,SNR=292						
H11S2	WAKE ISLAND Hy	58.24	259	T	T	00 09 52.1	
	baz=39,slow=76,SNR=243						
H11S3	WAKE ISLAND Hy	58.25	259	T	T	00 09 55.1	
	baz=39,slow=76,SNR=259						
TAOE	Nuku Hiva Isla	61.48	189	*e*LR	LR	23 25 15.7	
	comp=Z,246nm,24.0s						
TAOE	Nuku Hiva Isla	61.48	189	*e*T	T	00 13 33.0	
	comp=Z,58nm,0.3s						
OUL	Oulu	61.54	11	P	P	23 07 04.8	+1.4
OUL				pmax	pmax		
	comp=Z,32nm,1.7s						
MJAR	Matsushiro Arr	62.04	294	P	P	23 07 07.7	+0.4
	comp=Z,0.9nm,0.4s,baz=353,slow=3.4,SNR=4.8						
MJAR	Matsushiro Arr	62.04	294	P	P	23 07 05.5	-1.7
MJAR				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MJAR	Matsushiro Arr	62.04	294	P	P	23 07 05.5	-1.7
NB2	NORSAR Subarra	63.06	19	P	P	23 07 14.8	+1.1
	comp=Z,35nm,1.2s,baz=338,slow=6.9						
NB2	NORSAR Subarra	63.06	19	P	P	23 07 14.8	+1.1
	baz=338,slow=6.9						
NOA	NORSAR Array B	63.06	19	P	P	23 07 14.4	+0.7
	comp=Z,8.6nm,1.0s,baz=336,slow=6.6,SNR=16						
NOA				LR	LR	23 35 45.6	
	comp=Z,156nm,19.4s,baz=335,slow=37						
JOF	Joensuu	64.21	8	P	P	23 07 22.7	+1.6
JOF				pmax	pmax		
	comp=Z,12nm,1.3s						
FINES	FINESS Array B	65.09	12	P	P	23 07 27.5	+0.6
	comp=Z,5.4nm,0.9s,baz=26,slow=18,SNR=6.9						
FINES	FINESS Array B	65.09	12	P	P	23 07 27.0	+0.1
FINES	FINESS Array B	65.09	12	P	P	23 07 27.0	+0.1
SDV	Santo Domingo	65.60	108	P	P	23 07 26.3	-4.9

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PRGR  Permogore         66.24   1 eP     P       23 07 33.3 -1.0
PRGR                              pmax   pmax
      comp=Z,35nm,1.0s
TLY   Talaya            66.25 326 i P    P       23 07 34.8 +0.1
TLY                               pmax   pmax
      comp=Z,4.0nm,1.4s
RUSC  La Rusia          66.62 112  P     P       23 07 36.4 -1.6
ROSC  El Rosal          66.78 114  P     P       23 07 40.8 +1.8
      comp=Z,4.4nm,0.4s,baz=10.0,slow=9.4,SNR=4.7
ROSC  El Rosal          66.78 114  P     P       23 07 36.0 -2.9
KLMR  Klimovskoe        66.83   5 eP     P       23 07 36.5 -1.6
KLMR                              pmax   pmax
      comp=Z,48nm,1.3s
KLMR  Klimovskoe        66.83   5 eP     P       23 07 36.6 -1.6
KLMR                              AMP            23 07 41.0
      comp=Z,48nm,1.3s
KSRS  Korea Array       66.93 302  P     P       23 07 40.4 +1.2
      comp=Z,1.6nm,0.9s,baz=46,slow=5.7,SNR=6.5
KSRS                              LR     LR      23 36 51.4
      comp=Z,23nm,18.3s,baz=80,slow=36
KSAR  Wonju Array Be    66.95 302  P     P       23 07 36.9 -2.4
KSAR  Wonju Array Be    66.95 302  P     P       23 07 36.9 -2.4
VSU   Vasula            68.07  12ceP     P       23 07 48.6 +2.6
VSU                               pmax   pmax
      comp=Z,42nm,1.3s
SONM  Songino Array     68.47 322  P     P       23 07 49.6 +0.7
      comp=Z,0.2nm,0.3s,baz=33,slow=3.5,SNR=5.2
SONM  Songino Array     68.47 322  P     P       23 07 46.6 -2.3
SONM                              pmax   pmax
      comp=Z,2.0nm,1.2s
SONM  Songino Array     68.47 322  P     P       23 07 46.6 -2.3
PMOR  Pomariorio Ree    68.61 197 eT     T       00 22 27.8
      comp=Z,112nm,0.4s
VAH   Vaihoa            68.79 196 eT     T       00 22 41.6
      comp=Z,29nm,0.4s
KIRV  Kirov             69.32 359  LR    LR      23 41 18.0
      comp=Z,37nm,18.6s,baz=30,slow=39
BSEG  Bad Segeberg      69.38  23 eL     L       23 34 57.9
      comp=Z,143nm,19.4s
ZAA0  Zalesovo Array    69.67 338  IAmb  IAmb    23 07 57.7
      comp=Z,3.4nm,0.9s
ZALV  Zalesovo Beam     69.67 338  P     P       23 07 56.8 +0.7
      comp=Z,2.4nm,0.8s,baz=30,slow=5.6,SNR=12
ZALV                              LR     LR      23 41 05.1
      comp=Z,51nm,19.1s,baz=358,slow=38
ZALV  Zalesovo Beam     69.67 338  P     P       23 07 54.5 -1.5
ZALV  Zalesovo Beam     69.67 338  P     P       23 07 54.5 -1.5
SVE   Sverdlovsk        70.61 353⇑eP     P       23 08 02.4 +0.6
SVE                               pmax   pmax
      comp=Z,19nm,1.3s
ARU   Arti              71.15 354  LR    LR      23 42 20.3
      comp=Z,52nm,18.1s,baz=3.0,slow=38
ARU   Arti              71.15 354  P     P       23 08 05.7 +0.6
ARU                                              23 10 40.4
ARU                                S     S       23 17 24.4 +2.9
ARU                                SS    SS      23 21 57.7 +4.0
ARU   Arti              71.15 354  P     P       23 08 04.4 -0.7
BSTI  Sart Tilman       71.20  27  PcP   PcP     23 08 25.0 -0.4
BMRD  Maredsous         71.22  28  pP    P       23 08 06.7 +1.1
BMRD                               x     x       23 08 42.7
BGES  Gesves            71.24  28  pP    P       23 08 07.4 +1.7
BCLA  Clavier           71.27  27  pP    P       23 08 07.6 +1.8
BCLA                               sP    pP      23 08 09.5 +1.1
MEM   Membach           71.30  27  pP    P       23 08 08.1 +2.0
MEM                                sP    pP      23 08 09.6 +1.1
MEM   Membach           71.30  27  P     P       23 08 08.2 +2.2
MEM                               pmax   pmax
      comp=Z,29nm,2.5s
CLZ   Clausthal         71.31  24 eP     P       23 08 08.7 +2.5
      comp=Z,33nm,1.2s,baz=343,slow=5.4
CLZ                               eL     L       23 39 35.1
      comp=Z,145nm,19.6s
TIAR  Tiarei            71.36 198 eT     T       00 25 54.3
      comp=Z,19nm,0.2s
PPT2  Papeete2          71.44 198 eLR    LR      23 29 59.2
      comp=Z,160nm,23.8s
PPT2  Papeete2          71.44 198 eT     T       00 26 01.0
      comp=Z,12nm,0.2s
MEH   Mehetia           71.45 196 eT     T       00 26 00.7
      comp=Z,21nm,0.3s
GKP   Gorka Klasztor    71.51  19 eP     P       23 08 09.4 +2.1
GKP   Gorka Klasztor    71.51  19 eP     P       23 08 09.4 +2.1
PAE   Paea              71.51 198 eT     T       00 26 05.5
      comp=Z,4.4nm,0.3s
TVO   Taravao           71.57 198 eT     T       00 26 09.7
      comp=Z,3.4nm,0.3s
HHC   Hu-ho-hao-te      72.12 315 eP     P       23 08 11.5 +0.2
TNS   Taunus Mts        72.31  26 eL     L       23 41 38.4
      comp=Z,175nm,18.4s
OBN   Obninsk           72.37   7 i P    P       23 08 13.4 +1.0
OBN                               i              23 08 31.3
OBN                               pmax   pmax
      comp=Z,17nm,1.2s
OBN                               MLR    MLR
      comp=Z,98nm,16.0s
CLL   Collm             72.44  22⇑iP     P       23 08 15.3 +2.4
      comp=Z,28nm,1.5s
CLL                               ePcP   PcP     23 08 32.0 +1.3
CLL                               ePP    PP      23 10 51.0 -2.1
CLL                               Lm     MLR     23 39 00.0
      comp=N,100nm,19.3s
CLL                               Lm     MLR     23 39 00.0
      comp=E,100nm,20.5s
CLL                               Lm     MLR     23 39 00.0
      comp=Z,100nm,18.1s
CLL   Collm             72.44  22 eL     L       23 39 39.1
      comp=Z,135nm,18.1s
CLL   Collm             72.44  22⇑iP     P       23 08 15.3 +2.4
CLL                               pmax   pmax
      comp=Z,19nm,1.5s
MOX   Moxa              72.72  23 eL     L       23 38 07.1
      comp=Z,99nm,20.0s
DGZ   Jazzator, Alta    72.93 335 i P    P       23 08 16.6 +0.6
DGZ                               pmax   pmax
      comp=Z,14nm,1.8s
BRG   Berggiesshubel    73.06  22 eP     P       23 08 18.5 +1.9
      comp=Z,29nm,1.4s
BRG   Berggiesshubel    73.06  22 eP     P       23 08 18.2 +1.7
      comp=Z,29nm,1.4s,baz=343,slow=5.4
BRG   Berggiesshubel    73.06  22 eP     P       23 08 18.5 +1.9
BRG                               MLR    MLR
      comp=N,29µm,14.4s
BRG                               MLR    MLR
      comp=E,193nm,12.4s
BRG                               MLR    MLR
      comp=Z,150nm,20.7s
BRVK  Borovoye          73.25 346ceP     P       23 08 18.5 +0.8
BRVK                              pmax   pmax
      comp=Z,21nm,2.5s
BRVK  Borovoye          73.25 346  P     P       23 08 16.7 -1.0
NKC   Novy Kostel       73.30  23 eP     P       23 08 20.1 +2.0
NKC   Novy Kostel       73.30  23 eP     P       23 08 20.1 +2.0
GRF   Grafenberg Arr    73.50  24 eP     P       23 08 21.6 +2.3
      comp=Z,6.9nm,0.8s,baz=343,slow=5.4
GRF                               eL     L       23 41 03.3
      comp=Z,135nm,18.8s
KSP   Ksiaz             73.61  20 eP     P       23 08 22.0 +2.2
KSP   Ksiaz             73.61  20 eP     P       23 08 22.0 +2.2
UPC   Upice             73.86  21 eP     P       23 08 23.6 +2.3
UPC   Upice             73.86  21 eP     P       23 08 23.6 +2.3
BFO   Black Forest      74.00  26 eL     L       23 39 40.0
      comp=Z,146nm,21.2s
PRU   Pruhonice         74.02  22 eP     P       23 08 24.5 +2.2
PRU   Pruhonice         74.02  22 eP     P       23 08 24.5 +2.2
KURK  Kurchatov         74.04 340ceP     P       23 08 23.2 +0.8
KURK                              pmax   pmax
      comp=Z,11nm,1.7s
KURK  Kurchatov         74.04 340  P     P       23 08 20.6 -1.7
KURK                              IAmb   IAmb    23 08 24.6
      comp=Z,4.6nm,0.9s
DPC   Dobruska-Polom    74.08  21 eP     P       23 08 24.8 +2.1
DPC                               AMS    AMS     23 40 40.0
      comp=Z,200nm,21.8s
DPC   Dobruska-Polom    74.08  21 eP     P       23 08 24.8 +2.1
DPC                               MLR    MLR
      comp=Z,200nm,21.8s
WET   Wettzell          74.42  23 eL     L       23 38 33.7
      comp=Z,112nm,18.9s
KRLC  Kraliky           74.43  20 eP     P       23 08 26.9 +2.1
KRLC  Kraliky           74.43  20 eP     P       23 08 26.9 +2.1
KHC   Kasperske Hory    74.60  23 eP     P       23 08 27.8 +2.1
KHC   Kasperske Hory    74.60  23 i P    P       23 08 26.6 +0.9
KHC                               pmax   pmax
      comp=Z,9.0nm,0.8s
MORC  Moravsky Berou    74.88  20 eP     P       23 08 29.0 +1.7
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TREC  Trest             74.89  22 eP     P       23 08 29.2 +1.8
TREC  Trest             74.89  22 eP     P       23 08 29.2 +1.8
GEC2  GERESS Array S    74.90  23 eP     P       23 08 29.1 +1.6
      comp=Z,15nm,1.4s,baz=343,slow=5.4
GEC2                              eL     L       23 39 45.1
      comp=Z,102nm,19.0s
GERES GERESS Array B    74.90  23  P     P       23 08 28.2 +0.7
      comp=Z,2.9nm,0.9s,baz=356,slow=5.4,SNR=15
GERES                             LR     LR      23 42 29.6
      comp=Z,79nm,18.1s,baz=18,slow=37
GERES GERESS Array B    74.90  23  P     P       23 08 25.3 -2.2
GERES GERESS Array B    74.90  23  P     P       23 08 25.3 -2.2
OJC   Ojcow             74.91  18 eP     P       23 08 28.7 +1.2
OJC   Ojcow             74.91  18 eP     P       23 08 28.7 +1.2
FUR   Furstenfeldbru    74.93  25 eL     L       23 41 38.3
      comp=Z,106nm,19.0s
OKC   Ostrava-Krasne    74.95  20 eP     P       23 08 29.8 +2.2
OKC   Ostrava-Krasne    74.95  20 eP     P       23 08 29.8 +2.2
VRAC  Vranov            75.12  21 eP     P       23 08 30.9 +2.2
KRUC  Moravsky          75.31  21 eP     P       23 08 31.5 +1.7
GUMO  Guam              75.31 273  LR    LR      23 34 44.3
      comp=Z,59nm,19.9s,baz=94,slow=30
DAVA  Damuels           75.38  26 i sP   P       23 08 32.3 +1.9
      comp=Z,11nm,1.2s
MOTA  Moosalm           75.65  25 i sP   P       23 08 33.6 +1.6
      comp=Z,7.4nm,1.2s
JAVC  Velka Javorina    75.77  20 eP     P       23 08 35.1 +2.6
WATA  Walderalm         75.78  25 i pP   P       23 08 31.7 -0.9
      comp=Z,14nm,1.1s
SQTA  Sankt Quirin      75.79  25 i sP   P       23 08 34.5 +1.8
      comp=Z,17nm,1.3s
NJ2   Nanjing           75.79 304 eP     P       23 08 32.0 -0.8
FETA  Feichten          75.85  25 i sP   P       23 08 35.1 +2.0
      comp=Z,11nm,1.1s
WTTA  Wattenberg        75.86  25 i pP   P       23 08 33.8 +0.6
      comp=Z,18nm,1.2s,SNR=5.1
WTTA  Wattenberg        75.86  25  P     P       23 08 35.4 +2.2
MOA   Molln             75.96  23 i sP   P       23 08 34.7 +1.2
      comp=Z,6.3nm,1.2s
AKASG Malin Array Be    75.97  12  P     P       23 08 33.9 +0.4
      comp=Z,0.8nm,0.5s,baz=350,slow=5.4,SNR=20
AKASG Malin Array Be    75.97  12 i P    P       23 08 34.5 +1.0
AKASG                             pmax   pmax
      comp=Z,2.0nm,0.8s
AKASG Malin Array Be    75.97  12  P     P       23 08 32.3 -1.2
CONA  Conrad Observa    76.26  22 i pP   P       23 08 35.4 +0.1
      comp=Z,12nm,1.4s,SNR=7.1
KBA   Koelnbreinsper    76.46  24 i sP   P       23 08 37.6 +1.0
      comp=Z,15nm,1.3s,SNR=6.0
KBA   Koelnbreinsper    76.46  24  P     P       23 08 38.8 +2.2
ABTA  Abfaltersbach     76.56  24 i P    P       23 08 35.1 -2.0
      comp=Z,8.5nm,1.4s
ARSA  Arzberg           76.82  22 i sP   P       23 08 40.8 +2.3
      comp=Z,16nm,1.2s
UZH   Uzhgorod          76.90  17⇑iP     P       23 08 40.7 +1.9
UZH                               e              23 08 45.3
UZH                               e              23 08 52.7
MK31  Makanchi Array    76.92 337  IAmb  IAmb    23 08 41.1
      comp=Z,1.9nm,0.9s
MKAR  Makanchi Array    76.92 337  P     P       23 08 39.6 +0.6
      comp=Z,2.2nm,0.8s,baz=34,slow=4.5,SNR=26
MKAR                              LR     LR      23 45 09.2
      comp=Z,46nm,18.8s,baz=355,slow=38
MKAR  Makanchi Array    76.92 337  P     P       23 08 37.8 -1.2
MKAR  Makanchi Array    76.92 337  P     P       23 08 37.8 -1.2
MAKZ  Makanchi          76.98 337  P     P       23 08 38.4 -1.0
MAKZ                              pmax   pmax
      comp=Z,6.0nm,0.9s
MAKZ  Makanchi          76.98 337  P     P       23 08 38.4 -1.0
TBI   Tubuai            77.04 197 eLR    LR      23 32 24.2
      comp=Z,153nm,33.0s
TBI   Tubuai            77.04 197 eT     T       00 32 59.9
      comp=Z,12nm,0.2s
AKTO  Aktyubinsk        77.15 354  LR    LR      23 41 52.0
      comp=Z,28nm,20.8s,baz=337,slow=35
SOKA  Soboth            77.24  23 i sP   P       23 08 42.1 +1.2
      comp=Z,17nm,1.3s,SNR=5.6
OBKA  Obir              77.28  23 i sP   P       23 08 42.2 +1.0
      comp=Z,14nm,1.1s
TRPA  Tarpa             77.43  17 ⇑P     P       23 08 43.0 +1.2
ABKAR Akbulak array     78.18 352  P     P       23 08 45.2 -0.8
SORM  Soroca            78.37  13 ⇑P     P       23 08 47.9 +0.9
SORM  Soroca            78.37  13 ⇑P     P       23 08 47.9 +0.9
BURAR Bucovina Array    78.39  16  P     P       23 08 46.2 -1.1
DRGR                    78.75  18 ⇓P     P       23 08 51.4 +2.1
DRGR                    78.75  18 ⇓P     P       23 08 51.4 +2.1
ARCR  ARCALIA           78.76  16 ⇑P     P       23 08 51.7 +2.4
BIZ   Bicaz             79.19  15 ⇑P     P       23 08 54.0 +2.4
LZH   Lanzhou           79.40 317 eP     P       23 08 52.0 -1.1
LZH                                pP    pP      23 08 56.5 +0.7
LZH                                sP    sP      23 08 59.5 +2.8
LZH                                PP    PP      23 11 48.5 -4.0
MILM  Milestii Mici     79.62  13 ⇑P     P       23 08 54.3 +0.4
BZS   Buzias            79.67  19 ⇑P     P       23 08 55.8 +1.6
BZS   Buzias            79.67  19 ⇑P     P       23 08 55.8 +1.6
TESR  Tescani           79.70  15 ⇑P     P       23 08 56.2 +1.9
GZR   Gura Zlata        80.11  18 ⇑P     P       23 08 58.7 +2.0
GZR   Gura Zlata        80.11  18 ⇑P     P       23 08 58.7 +2.0
GHRR                    80.25  15 ⇑P     P       23 08 59.4 +2.1
VRI   Vrincioaia        80.34  15 ⇑P     P       23 08 59.6 +1.8
VRI   Vrincioaia        80.34  15 ⇑P     P       23 08 59.6 +1.8
PLOR  Plostina          80.34  15 ⇑P     P       23 08 59.6 +1.7
PLOR  Plostina          80.34  15 ⇑P     P       23 08 59.6 +1.7
ARR   Arges             80.47  17 ⇑P     P       23 09 00.4 +1.8
VOIR                    80.48  16 ⇓P     P       23 09 00.5 +1.8
VOIR                    80.48  16 ⇓P     P       23 09 00.5 +1.8
HERR  Herculane         80.54  18 ⇑P     P       23 09 00.3 +1.4
CFR   Carcaliu          81.23  14 ⇑P     P       23 09 03.8 +1.3
CFR   Carcaliu          81.23  14 ⇑P     P       23 09 03.8 +1.3
TOPG  Topolog           81.56  14 ⇑P     P       23 09 05.1 +0.8
VLAD  Vladila           81.76  17 ⇑P     P       23 09 05.7 +0.3
AAK   Ala-Archa         82.60 341ceP     P       23 09 11.5 +1.4
AAK                               pmax   pmax
      comp=Z,7.0nm,1.7s
AAK   Ala-Archa         82.60 341  P     P       23 09 08.3 -1.7
AAK                               IAmb   IAmb    23 09 12.5
      comp=Z,3.4nm,1.1s
GOF   Gofitskoye        82.77   4⇑eP     P       23 09 12.4 +1.7
GOF                               pmax   pmax
      comp=Z,35nm,1.0s
VTS   Vitosha           82.88  18 ⇑P     P       23 09 12.0 +0.5
VTS   Vitosha           82.88  18 ⇑P     P       23 09 12.0 +0.5
KKAR  Karatay Array     82.89 344  P     P       23 09 10.0 -1.4
KKAR  Karatay Array     82.89 344  P     P       23 09 10.0 -1.4
KIV   Kislovodsk        83.85   4 eP     P       23 09 17.3 +0.9
KIV                               pmax   pmax
      comp=Z,19nm,1.0s
KIV                               MLR    MLR
      comp=Z,132nm,19.0s
KBZ   Khabaz            84.09   4  P     P       23 09 19.7 +2.3
      comp=Z,2.7nm,0.9s,baz=314,slow=2.4,SNR=5.2
KBZ                               LR     LR      23 49 50.8
      comp=Z,49nm,20.1s,baz=6.0,slow=38
HNR   Honiara           84.56 247  LR    LR      23 42 17.7
      comp=Z,100nm,18.0s,baz=4.0,slow=32
KRVT  Keravat (AS076    85.02 256  LR    LR      23 39 11.0
      comp=Z,78nm,21.9s,baz=13,slow=30
KSH   Kashi             85.28 339  P     P       23 09 26.0 +2.2
KSH                                pP    sP      23 09 31.3 +4.0
KSH                                PP    PP      23 12 44.5 +4.0
KSH   Kashi             85.28 339  S     S       23 19 55.5 +1.3
KSH   Kashi             85.28 339  sS    sS      23 20 03.3 +4.8
KEST  Kesra             85.86  31  LR    LR      23 48 43.8
      comp=Z,140nm,18.1s,baz=327,slow=36
BRTR  Keskin Array B    87.33  11  P     P       23 09 34.9 +1.0
      comp=Z,1.5nm,1.1s,baz=5.7,slow=2.5,SNR=7.4
BRTR                              LR     LR      23 51 31.4
      comp=Z,17nm,20.4s,baz=318,slow=38
BRTR  Keskin Array B    87.33  11 i P    P       23 09 35.7 +1.8
BRTR                              pmax   pmax
      comp=Z,1.0nm,1.0s
BRTR  Keskin Array B    87.33  11  P     P       23 09 32.7 -1.2
LPAZ  La Paz            87.69 121  P     P       23 09 37.1 +0.8
      comp=Z,1.6nm,0.9s,baz=9.8,slow=9.5,SNR=4.6
LPAZ  La Paz            87.69 121  P     P       23 09 32.8 -3.5
LPAZ                              pmax   pmax
      comp=Z,4.0nm,1.1s
LPAZ  La Paz            87.69 121  P     P       23 09 32.8 -3.5
GEYT  Alibeck           89.58 352  LR    LR      23 53 10.6
      comp=Z,37nm,20.7s,baz=65,slow=38
DZM   Mont Dzumac       91.54 235 eLR    LR      23 39 12.0
      comp=Z,190nm,22.4s
PMG   Port Moresby      91.98 257  LR    LR      23 42 07.2
      comp=Z,70nm,21.4s,baz=254,slow=30
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CMAR  Chiang Mai Arr    96.82 312  P      P       23 10 18.2 +0.2
      comp=Z,0.7nm,0.5s,baz=351,slow=8.0,SNR=5.6
SNAA  Sanae            150.69 150  PKP    PKPdf   23 16 31.9 -0.2
      comp=Z,3.0nm,1.1s,baz=72,slow=4.0,SNR=3.9
SNAA                               PKPbc  sPKPdf  23 16 38.0 +2.2
      comp=Z,5.7nm,0.9s,baz=270,slow=2.7,SNR=11
BOSA  Boshof           150.72  45  PKPbc  PKPbc   23 16 38.0 -1.1
      comp=Z,7.8nm,1.1s,baz=328,slow=9.2,SNR=3.9
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SJA ***26*** *23:33:34.8±1.0, 20°.03S×70°.82W, $h8^{km}\pm7^{km}$, ML3.8, MW3.7*
NEIC ***26*** *23:33:34.3±3.0, 20°.05S±0°.03×70°.93W±0°.04, $h10^{km}\pm3^{km}$, mb4.7/6, Mwr4.2/39, ML4.3(GUC), Error ellipse: s-maj=6.1km s-min=3.9km az=96.0*
IDC ***26*** *23:33:35.3±0.6, 19°.96S×70°.65W, $h0^{km}$, mb4.2/14, mb1 4.3/17, mb1mx4.3/33, mbtmp4.3/17, ML4.2/3, MS3.0/3, Ms1 3.0/3, ms1mx2.8/26, Error ellipse: s-maj=20.1km s-min=12.6km az=58.0*
NEIC ***26*** *23:33:36.5, 20°.09S×70°.80W, $h11^{km}$, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.27; $M_{\theta\theta}$-1.47; $M_{\phi\phi}$-0.80; $M_{r\theta}$0.57; $M_{\theta\phi}$0.96; $M_{\phi r}$-1.26; Fault plane solution: $M_0$2.61000×10^{15} NP1:ϕ_s293.36000°, δ32.00000°, λ67.11000°. NP2:ϕ_s139.83000°, δ60.77000°, λ103.67000°. Principal axes: T 2.7286, Plg71.0000°, Azm81.0000°; N -0.2639, Plg12.0000°, Azm313.0000°; P -2.4648, Plg15.0000°, Azm220.0000°;*
GUC ***26*** *23:33:37.7±0.5, 20°.05S×70°.78W, $h23^{km}\pm2^{km}$, ML4.3*
VAO ***26*** *23:33:42.1±0.8, 20°.03S×70°.64W, $h58^{km}\pm6^{km}$, mb4.4*
ISC 26 23:33:34.7±0.9, **20°.05S**±0°.02×**70°.84W**±0°.04, **$h7^{km}$**$\pm5^{km}$, **n162, σ1.60**/190, **mb4.5**/16, **6C-4D, Near coast of northern Chile**

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Code  Station Name       Δ°   AZ°   Phase ID         Time       Res
                                    Op     ISC       h  m  s    ISC
TA01  Diego Aracena     0.81 130⇑iP      Pb        23 33 51.4 +0.4
TA01                             eS      Sb        23 34 01.8 -0.3
TA01                              IAML             23 34 06.2
      comp=N,26µm,0.4s
PSGC  Pisagua           0.81  56⇓iP      Pb        23 33 51.5 +0.2
PSGC                             i S     Sb        23 34 01.8 -0.8
PSGCX Pisagua           0.81  56         Pb        23 33 51.5 +0.2
PSGCX                             Sg     Sb        23 34 02.2 -0.3
PSGCX Pisagua           0.81  56 eP      Pb        23 33 51.6 +0.3
PSGCX                            eS      Sb        23 34 01.9 -0.6
PATCX Punta Patache     1.00 140⇑iP      Pb        23 33 54.7 +0.2
PATCX                            i S     Sb        23 34 08.0  0.0
PATCX Punta Patache     1.00 140         Pb        23 33 54.7 +0.2
PATCX                             Sg     Sb        23 34 07.9  0.0
PATCX Punta Patache     1.00 140 eP      Pb        23 33 54.7 +0.2
PATCX                            eS      Sn        23 34 10.0 +0.2
PB11  IPOC Station P    1.15  76⇓iP      Pn        23 33 57.2 -0.3
PB11                             i S     Sb        23 34 11.9 -0.5
PB11                              IAML             23 34 18.5
      comp=N,13µm,0.2s
PB11  IPOC Station P    1.15  76         Pn        23 33 57.4 -0.1
PB11                              Sg     Sb        23 34 12.4  0.0
PB11  IPOC Station P    1.15  76 eP      Pn        23 33 57.3 -0.3
PB11                             eS      Sb        23 34 12.8 +0.4
PB11                              IAML             23 34 16.8
      comp=Z,7µm,0.2s
PB12  IPOC Station P    1.51  19⇓iP      Pb        23 34 03.0 -0.1
PB12                             i S     Sg        23 34 23.6 +0.3
PB12                              IAML             23 34 27.2
      comp=N,16µm,0.7s
PB12  IPOC Station P    1.51  19         Pg        23 34 03.6 -0.1
PB12  IPOC Station P    1.51  19 eP      Pb        23 34 03.2  0.0
PB12                             eS      Sg        23 34 23.3  0.0
PB02  IPOC Station P    1.54 145⇑iP      Pb        23 34 03.4 -0.3
PB02                             i S     Sn        23 34 23.4 +0.2
PB02                              IAML             23 34 29.0
      comp=E,12µm,0.5s
PB02  IPOC Station P    1.54 145 eP      Pb        23 34 03.5 -0.2
PB02                             eS      Sg        23 34 25.9 +1.5
PB02                              IAML             23 34 32.5
      comp=Z,3µm,0.4s
PB08  IPOC Station P    1.59  93⇑iP      Pb        23 34 04.4 -0.3
PB08                             i S     Sg        23 34 25.1 -0.8
PB08  IPOC Station P    1.59  93 eP      Pb        23 34 04.5 -0.2
PB08                             eS      Sn        23 34 24.8 +0.1
PB08                              IAML             23 34 29.3
      comp=Z,569nm,0.4s
GO01  Chusmiza          1.60  76 eP      Pg        23 34 04.9 -0.5
GO01                             eS      Sg        23 34 25.5 -0.7
GO01  Chusmiza          1.60  76         Pg        23 34 04.8 -0.5
PB01  IPOC Station P    1.61 128⇑iP      Pb        23 34 04.3 -0.6
PB01                             i S     Sn        23 34 24.9 +0.1
PB01                              IAML             23 34 28.3
      comp=N,5µm,0.5s
PB01  IPOC Station P    1.61 128         Pn        23 34 04.1 +0.4
PB01  IPOC Station P    1.61 128 eP      Pb        23 34 04.5 -0.3
PB01                             eS      Sn        23 34 25.1 +0.3
PB01                              IAML             23 34 28.8
      comp=Z,912nm,0.5s
AP01  Chacalluta        1.74  16 eP      Pb        23 34 06.8 -0.2
AP01                             eS      Sb        23 34 29.5 +0.5
PB07  IPOC Station P    1.89 152 eP      Pn        23 34 08.5 +0.9
PB07                             i S     Sb        23 34 33.0 -0.6
PB07                              IAML             23 34 47.1
      comp=E,3µm,0.4s
PB07  IPOC Station P    1.89 152         Pn        23 34 08.6 +0.9
PB07  IPOC Station P    1.89 152 eP      Pn        23 34 08.7 +1.1
PB07                             eS      Sb        23 34 33.7  0.0
PB07                              IAML             23 34 43.5
      comp=Z,875nm,0.4s
PB16  IPOC Station P    2.12  37⇓iP      Pb        23 34 13.3 -0.6
PB16                             i S     Sg        23 34 42.1 -1.0
PB16                              IAML             23 34 47.9
      comp=N,3µm,0.3s
PB16  IPOC Station P    2.12  37         Pb        23 34 13.2 -0.7
PB16  IPOC Station P    2.12  37 eP      Pb        23 34 13.5 -0.4
PB16                             eS      Sg        23 34 42.0 -1.1
PB03  IPOC Station P    2.23 153 eP      Pn        23 34 13.5 +1.2
PB03                             eS      Sb        23 34 44.0 +0.5
PB03                              IAML             23 34 58.4
      comp=Z,372nm,0.7s
PB09  IPOC Station P    2.29 140⇑iP      Pb        23 34 15.6 -0.9
PB09                             eS      Sb        23 34 44.8 -0.4
PB09  IPOC Station P    2.29 140         Pb        23 34 15.5 -1.1
PB09  IPOC Station P    2.29 140 i P     Pb        23 34 15.6 -0.9
PB09                             eS      Sg        23 34 47.6 -0.8
PB04  IPOC Station P    2.36 164         Pn        23 34 14.1  0.0
PB04  IPOC Station P    2.36 164 i P     Pn        23 34 14.4 +0.3
PB04                             eS      Sg        23 34 49.7 -0.9
PB05  IPOC Station P    2.85 168 eP      Pn        23 34 20.6 -0.2
PB05                             eS      Sb        23 35 03.7 +2.5
PB05                              IAML             23 35 19.7
      comp=Z,215nm,0.8s
PB06  IPOC Station P    2.89 156 eP      Pn        23 34 22.0 +0.6
PB06                             eS      Sb        23 35 03.4 +0.9
LVC   Limon Verde       3.12 145  Pn     Pn        23 34 27.2 +2.5
      comp=Z,37nm,0.3s,baz=328,slow=8.4,SNR=192
LVC                               Sn     Sn        23 35 05.0 +2.6
      comp=Z,56nm,0.3s,baz=122,slow=17,SNR=5.2
LVC                               Lg     Lg        23 35 12.4
      comp=Z,128nm,0.3s,baz=78,slow=10,SNR=8.3
LVC                               LR     LR        23 35 34.4
      comp=Z,263nm,20.7s,baz=324,slow=38
LVC   Limon Verde       3.12 145 eP      Pn        23 34 27.3 +2.5
LVC                              eS      Sn        23 35 03.9 +1.5
LVC   Limon Verde       3.12 145 i P     Pn        23 34 27.2 +2.5
LVC                              eS      Sb        23 35 09.9 +0.7
LVC                               IAML             23 35 13.7
      comp=Z,429nm,1.4s
PB15  IPOC Station P    3.39 158         Pn        23 34 28.6 +0.3
PB15  IPOC Station P    3.39 158 i P     Pn        23 34 28.9 +0.6
PB15                             eS      Sg        23 35 21.4 -2.3
PB10  IPOC Station P    3.46 176         Pn        23 34 28.4 -0.6
PB10  IPOC Station P    3.46 176 i P     Pn        23 34 28.4 -0.6
PB10                             eS      Sg        23 35 26.1 +0.4
LPAZ  La Paz            4.55  35  Pn     Pn        23 34 49.5 +5.0
      comp=Z,2.5nm,0.3s,baz=246,slow=7.1,SNR=38
LPAZ  La Paz            4.55  35         Pn        23 34 48.1 +3.6
LPAZ  La Paz            4.55  35 eP      Pn        23 34 47.2 +2.6
LPAZ  La Paz            4.55  35 i P     Pb        23 34 52.8 -2.5
PB14  IPOC Station P    4.57 175 i P     Pn        23 34 43.6 -1.0
PB14                             eS      Sn        23 35 33.9 -4.3
GO02  Mina Guanaco      5.22 167         Pn        23 34 53.7 +0.2
GO02                                     Sn        23 35 53.4 -0.7
YJA   Yavi              5.41 114 i P     Pn        23 35 00.8 +4.6
```

YJA				IAML		23 36 34.3	
	comp=Z,13nm,1.3s						
AZAP	Zapla	6.78	129	*i* P	Pn	23 35 17.3	+2.5
AZAP				IAML		23 37 17.2	
	comp=Z,10nm,1.3s						
GO03	Copiap	7.53	176	Pn	Pn	23 35 24.1	-1.0
GO03					Sn	23 36 46.6	-4.2
GO04	Tololo Observa	10.08	180	Pn	Pn	23 35 57.9	-2.3
SIV	San Ignacio	10.13	68	Pn	Pn	23 36 01.1	+0.3
	comp=Z,3.1nm,0.3s,baz=266,slow=10,SNR=55						
SIV				LR	LR	23 39 55.4	
	comp=Z,70nm,20.4s,baz=270,slow=38						
SAML	Samuel	13.29	35		Pn	23 36 44.1	+0.1
CPUP	Villa Florida	13.90	119	Pn	Pn	23 36 53.1	+0.8
	comp=Z,0.2nm,0.3s,baz=293,slow=13,SNR=1.3						
CPUP				LR	LR	23 43 36.0	
	comp=Z,85nm,19.8s,baz=308,slow=44						
CPUP	Villa Florida	13.90	119		Pn	23 36 51.0	-1.3
AQDB	Aquidauana	14.22	94	*e*P	Pn	23 36 58.7	+2.1
SALV	Santo Antonio	14.99	76	*e*P	Pn	23 37 08.8	+1.6
C2SB	Chapadao do Su	17.03	89	*e*P	Pn	23 37 34.1	+0.5
CLDB	Colider	17.12	60	*e*P	Pn	23 37 34.5	-0.2
TRCB	Terra Rica	17.17	102	*e*P	Pn	23 37 35.2	-0.2
PTGB	Pitanga	17.97	108	*e*P	P	23 37 45.8	-0.1
ITAB	Concordia	18.56	116	*e*P	Pn	23 37 52.5	+0.1
ARAG	Araguaiana, MT	18.62	80	*e*P	P	23 37 52.4	-0.6
CPSB	Cacapava Do Su	18.80	127	*e*P	Pn	23 37 56.0	+0.7
PLTB	Pedras Altas	19.37	130	*e*P	P	23 38 01.6	+0.4
GO06	Curarrehue	19.47	181	P	Pn	23 38 03.7	+0.2
FRTB	Fartura	20.04	103	*e*P	P	23 38 08.9	+0.3
CNLB	Canela	20.35	121	*e*P	P	23 38 12.2	+0.4
PLCA	Paso Flores	20.62	179	P	Pn	23 38 18.1	+1.1
	comp=Z,2.2nm,0.7s,baz=214,slow=13,SNR=6.1						
PLCA	Paso Flores	20.62	179	P	P	23 38 14.8	+0.1
PLCA	Paso Flores	20.62	179	*e*P	P	23 38 15.9	+1.2
BB19B	Bebedouro	20.92	97	*e*P	P	23 38 17.8	-0.4
IPMB	Ipameri, GO	21.49	88	*e*P	P	23 38 24.3	-0.1
RCLB	Rio Claro- Sao	21.85	100	*e*P	P	23 38 28.1	-0.1
PTGA	Pitinga	21.96	30	P	P	23 38 29.0	-0.2
	comp=Z,6.9nm,0.3s,baz=209,slow=13,SNR=14						
PTGA	Pitinga	21.96	30	P	P	23 38 28.8	-0.4
PTGA	Pitinga	21.96	30	*e*P	P	23 38 29.0	-0.2
SPB	Sao Paulo	22.01	103	*e*P	P	23 38 29.6	-0.2
FLOC	Florencia	22.01	347	*e*P	P	23 38 33.8	+3.9
GCUF	Volcan Galeras	22.09	342	*e*P	P	23 38 41.1	+10
BDFB	Brasilia	22.16	82	P	P	23 38 31.8	+0.2
	comp=Z,8.3nm,0.7s,baz=248,slow=14,SNR=11						
BDFB	Brasilia	22.16	82	P	P	23 38 29.1	-2.5
GARC	Garzon, Huila	22.57	348	*e*P	P	23 38 38.8	+2.8
SOTA	Rioblanco	22.76	345	*e*P	P	23 38 43.0	+4.6
PCON	Cinco Dias	22.90	346	*e*P	P	23 38 46.3	+6.4
POPC	Popayan, Colom	23.17	345	*e*P	P	23 38 45.9	+3.6
PARB	Paraibuna	23.65	103	*e*P	P	23 38 47.0	0.0
ORTC	Ortega, Tolima	24.20	349	*e*P	P	23 38 54.5	+2.3
YOTC	Yotoco, Valle	24.49	347	*e*P	P	23 38 59.8	+4.8
CHIC	Chingaza	24.69	353	*e*P	P	23 38 54.7	-2.4
SMTB	Santa Maria do	25.08	67	*e*P	P	23 39 00.2	+0.1
RREF	El Recreo	25.19	349	*e*P	P	23 39 06.2	+4.4
GUY2C	Guyana, Caldas	25.51	349	*e*P	P	23 39 07.7	+3.2
SPBC	San Pablo de B	25.74	353	*e*P	P	23 39 07.6	+1.4
NORC	Norcasia	25.76	351	*e*P	P	23 39 08.6	+2.2
JANB	Januaria	25.76	83	*e*P	P	23 39 05.9	-0.5
RUSC	La Rusia	25.88	355	*e*P	P	23 39 09.5	+1.7
RUSC	La Rusia	25.88	355	P	P	23 39 08.3	+0.4
PTBC	PUERTO BERRIO,	26.66	352	*e*P	P	23 39 14.2	-0.2
DBBC	Dabeiba	27.41	348	*e*P	P	23 39 25.6	+4.3
ZARC	Zaragoza, Cauc	27.66	351	*e*P	P	23 39 19.2	-4.2
SDV	Santo Domingo	28.76	0	P	P	23 39 35.7	+2.3
	comp=Z,1.7nm,0.3s,baz=338,slow=5.4,SNR=2.7						
SDV	Santo Domingo	28.76	0	*e*P	P	23 39 35.0	+1.5
SMLC	San Martn de	28.85	353	*e*P	P	23 39 33.3	-0.7
SJCC	San Jacinto, C	30.07	351	*e*P	P	23 39 43.1	-1.7
NBLA	Lagarto - SE	33.04	79	*e*P	P	23 40 10.2	-0.9
NBAN	Anadia - AL	34.90	78	*e*P	P	23 40 26.3	-1.0
RCBR	Riachuelo	36.77	72	P	P	23 40 43.0	-0.4
	comp=Z,7.4nm,0.6s,baz=234,slow=9.6,SNR=8.4						
RCBR	Riachuelo	36.77	72	P	P	23 40 41.9	-1.4
RCBR	Riachuelo	36.77	72	*e*P	P	23 40 42.6	-0.8
CDVI	St. Croix	38.04	9	P	P	23 40 51.7	-2.2
OBIP	Obispado Ponce	38.09	7	P	P	23 40 53.0	-1.3
OBIP				IAmb	IAmb	23 40 55.3	
	comp=Z,11nm,0.8s						
PDPR	Patillas Dam,	38.13	7	P	P	23 40 53.6	-1.0
SABA	Saba	38.17	12	P	P	23 40 53.1	-2.0
SJG	San Juan	38.20	7	P	P	23 40 53.8	-1.5
GCPR	Guaynabo City	38.41	7	P	P	23 40 55.1	-1.9
TXAR	Lajitas Array	58.42	326	P	P	23 43 33.5	+2.1
	comp=Z,0.6nm,0.7s,baz=144,slow=7.7,SNR=5.5						
TXAR	Lajitas Array	58.42	326	P	P	23 43 29.5	-1.9
SNAA	Sanae	64.23	161	P	P	23 44 12.0	+1.8
	comp=Z,1.6nm,0.8s,baz=296,slow=6.5,SNR=3.6						
SNAA	Sanae	64.23	161	P	P	23 44 08.7	-1.4
LIC	Lamto	69.75	75	*e*P	P	23 44 45.0	-1.1
	comp=Z,57nm,1.9s						
TIC	Toumodi	69.92	75	*e*P	P	23 44 46.5	-0.7
KIC	Kosan Boka	70.06	75	*e*P	P	23 44 47.5	-0.5
	comp=Z,13nm,0.9s						
DBIC	Dimbokro	70.08	75	P	P	23 44 47.5	-0.7
	comp=Z,4.5nm,0.8s,baz=229,slow=9.6,SNR=5.4						
DBIC	Dimbokro	70.08	75	IAmb	IAmb	23 44 49.1	
	comp=Z,5.6nm,0.9s						
PDAR	Pinedale Array	71.97	331	P	P	23 44 59.6	+0.3
	comp=Z,0.5nm,0.6s,baz=147,slow=6.9,SNR=3.7						
PDAR	Pinedale Array	71.97	331	P	P	23 44 59.2	-0.1
NVAR	Mina Array Bea	73.25	323	P	P	23 45 08.0	+1.0
	comp=Z,0.5nm,0.6s,baz=157,slow=8.0,SNR=4.2						
NVAR	Mina Array Bea	73.25	323	P	P	23 45 06.2	-0.8
ULM	Lac du Bonnet	73.41	344	P	P	23 45 08.1	+0.7
	comp=Z,1.0nm,0.5s,baz=173,slow=6.8,SNR=3.4						
YNE	Yellowstone No	73.93	332	P	P	23 45 09.2	-1.7
SCHQ	Schefferville	74.66	2	P	P	23 45 15.7	+1.1
	comp=Z,3.8nm,0.9s,baz=215,slow=6.7,SNR=3.7						
TOA0	Torodi Ar. Sit	78.59	71	P	P	23 45 36.1	-1.6
TORD	Torodi Ar. Bea	78.59	71	P	P	23 45 37.6	-0.1
	comp=Z,10nm,0.7s,baz=249,slow=5.3,SNR=67						
TORD	Torodi Ar. Bea	78.59	71	P	P	23 45 37.0	-0.7
TAM	Tamanrasset	85.80	64	P	P	23 46 13.7	-1.9
YKA	Yellowknife Ar	89.23	341	P	P	23 46 32.6	+1.6
	comp=Z,2.1nm,0.7s,baz=136,slow=5.2,SNR=46						
H11S2	WAKE ISLAND Hy	125.89	279	T	T	02 12 06.6	
	baz=101,slow=74,SNR=129						
H11S1	WAKE ISLAND Hy	125.89	279	T	T	02 12 07.1	
	baz=101,slow=74,SNR=121						
H11S3	WAKE ISLAND Hy	125.90	279	T	T	02 12 06.0	
	baz=101,slow=74,SNR=117						
H11N3	WAKE ISLAND Hy	125.94	280	T	T	02 12 09.0	
	baz=101,slow=74,SNR=61						
H11N2	WAKE ISLAND Hy	125.95	280	T	T	02 12 10.0	
	baz=101,slow=74,SNR=54						
H11N1	WAKE ISLAND Hy	125.95	280	T	T	02 12 10.3	
	baz=101,slow=74,SNR=42						
ASAR	Alice Springs	130.30	210	PKP	PKiKP	23 52 47.9	+0.4
	comp=Z,0.4nm,0.6s,baz=142,slow=2.2,SNR=5.9						
WRA	Warramunga Arr	133.22	213	PKP	PKiKP	23 52 54.6	+1.1
ZALV	Zalesovo Beam	141.38	23	PKP	PKPdf	23 53 05.3	-0.9
	comp=Z,2.6nm,0.7s,baz=291,slow=2.5,SNR=9.0						
ZALV	Zalesovo Beam	141.38	23		PKPdf	23 53 04.5	-1.7
MAKZ	Makanchi	145.30	33		PKPdf	23 53 14.7	+1.3
NIL	Nilore	145.41	59		PKPbc	23 53 13.4	-0.5
MKAR	Makanchi Array	145.47	33	PKPbc	PKPab	23 53 15.2	+1.3
	comp=Z,8.1nm,0.7s,baz=324,slow=3.7,SNR=104						
MKAR	Makanchi Array	145.47	33		PKPab	23 53 15.3	+1.4
KSH	Kashi	145.55	48	PKPbc	PKPab	23 53 15.0	+0.4
KSH	Kashi	145.55	48	PP	PP	23 56 38.0	+3.4
KLR	Kul'dur	145.73	333	PKPbc	PKPab	23 53 16.5	+1.8
	comp=Z,3.5nm,0.7s,baz=20,slow=4.1,SNR=7.8						
USRK	Ussuriysk Ar.	149.32	327	PKPbc	PKiKP	23 53 25.7	+0.1
	comp=Z,3.4nm,0.8s,baz=51,slow=3.7,SNR=4.8						
MJAR	Matsushiro Arr	149.76	309	PKPbc	PKiKP	23 53 27.9	+1.1
	comp=Z,2.5nm,0.6s,baz=108,slow=2.0,SNR=6.3						
MJAR	Matsushiro Arr	149.76	309		PKPbc	23 53 24.6	-1.2
MJAR				PKPab	sPKPbc	23 53 28.2	+0.4
SONM	Songino Array	152.19	4	PKPbc	PKiKP	23 53 33.4	+1.8
	comp=Z,2.1nm,0.7s,baz=322,slow=1.9,SNR=16						
LZH	Lanzhou	163.36	15	*e*PKP	PKPdf	23 53 37.3	-1.5
LZH				pPKP	sPKPdf	23 53 46.0	+5.3
LZH				sPKP		23 53 49.0	

KEA 26 23:47:42.9±0.0**, 40.°46N**×**122.°39E, h0**^{km}**, ML2.5**/1**,**
Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUJ	Sinuiju	1.65	102	Pg	Pb	23 48 13.8	-0.3
SUJ				Sg	Sn	23 48 34.8	-0.1
PYS	Pyongsong	2.92	113	Sg	Sg	23 49 14.9	-2.0
PYAG	Pyongyang	2.95	117	Sg	Sb	23 49 12.9	0.0
KGE	Kanggye	3.24	80	Sg	Sg	23 49 24.9	-2.2
SRW	Sariwon	3.25	126	Sg	Sg	23 49 25.0	-2.4
HJU	Haeju	3.54	132	Sg	Sb	23 49 32.3	+2.5
HHU	Hamhung	3.97	96	Sg	Sg	23 49 49.2	-1.2

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*IASPEI **26** 23:50:52.8±1.1, 36.°02N±0.°02×117.°54W±0.°02, h6^{km}±8^{km}, Error ellipse: s-maj=2.8km s-min=2.7km az=112.3, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ANF **26** 23:50:52.3±0.1, 36.°01N×117.°55W, h7^{km}±1^{km}, ML3.1/29, Error ellipse: s-maj=1.2km s-min=1.2km az=97.0*

*NEIC **26** 23:50:52.8±1.3, 36.°026N±0.°006×117.°53W±0.°02, h2^{km}±6^{km}, Error ellipse: s-maj=2.6km s-min=0.8km az=105.0*

*PAS **26** 23:50:53.1±1.5, 36.°02N±0.°01×117.°54W±0.°02, h3^{km}±6^{km}, ML3.2/161, Error ellipse: s-maj=2.2km s-min=1.2km az=49.0*

*SCEDC **26** 23:50:53.1, 36.°02N×117.°54W, h2^{km}*

ISC 26 23:50:53.1±0.9**, 36.°02N**±0.°01×**117.°54W**±0.°01**, h5**^{km}±7^{km}**,**
n92, σ0^{s}.86/125**, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPMC	Manual Prospec	0.06	48	P	Pg	23 50 54.3	-0.4
	baz=221,SNR=1000						
MPMC				S	Sg	23 50 55.3	-0.6
	baz=221						
WCSM	Coso Springs S	0.18	273		Pg	23 50 56.7	0.0
CLC	China Lake	0.21	192		Pg	23 51 00.1	+2.9
JRC2	Joshua Ridge	0.22	261		Pg	23 50 57.4	0.0
VPEM	Volcano Peak E	0.23	253		Pg	23 50 57.7	+0.1
MFS	McCloud Flat S	0.27	291		Pg	23 50 58.4	0.0
TOW	Tower One	0.28	221		Pg	23 50 58.9	+0.4
WCHM	Chimney Peak	0.45	253		Pg	23 51 01.7	-0.2
CCCA	Chr Cany lake	0.51	163		Pg	23 51 03.1	+0.1
CCCA					Sg	23 51 10.7	+1.0
LRMC	Laurel Mtn Rad	0.55	192	P	Pg	23 51 03.4	-0.3
	baz=12,SNR=42						
LRMC				S	Sg	23 51 09.9	-0.9
	baz=12						
QSM	Queen of Sheba	0.55	95		Pg	23 51 03.5	-0.2
CGO	Cerro Gordo	0.57	339		Pg	23 51 03.7	-0.5
CGO					Sg	23 51 11.9	+0.3
CWC	Cottonwood Cre	0.60	314		Pg	23 51 04.7	-0.1
CWC					Sg	23 51 12.6	-0.1
CWC	Cottonwood Cre	0.60	314	P	Pg	23 51 04.6	-0.1
	baz=134						
CWC				S	Sg	23 51 12.4	-0.3
	baz=134						
JFS	Joseph F. Stat	0.67	189		Pg	23 51 05.6	-0.5
WBSM	Bird Springs	0.68	225		Pg	23 51 06.0	-0.3
WBSM					Sg	23 51 15.2	+0.1
FURC	Furnace Creek,	0.71	51		Sg	23 51 16.3	+0.4
FURC	Furnace Creek,	0.71	51	P	Pg	23 51 06.7	0.0
	baz=230,SNR=64						
FURC				S	Sg	23 51 16.0	+0.1
	baz=230						
DTP	Desert Tortois	0.79	198		Pg	23 51 07.6	-0.7
TMO	Tin Mountain	0.79	8		Pg	23 51 07.6	-0.8
ISA	Isabella, Lake	0.83	245	Pg	Pg	23 51 08.8	-0.3
ISA				Sg	Sg	23 51 19.9	-0.1
ISA	Isabella, Lake	0.83	245	P	Pg	23 51 08.8	-0.3
	baz=65,SNR=171						
ISA				S	Sg	23 51 19.8	-0.1
	baz=65						
WASM	Alta Sierra Ca	0.87	252		Pg	23 51 09.5	-0.3
FMT	Funeral Mounta	0.87	45		Pg	23 51 09.4	-0.4
GSC	Goldstone, Bar	0.93	140	Pg	Pg	23 51 10.4	-0.6
GSC				Sg	Sg	23 51 23.1	0.0
GSC	Goldstone, Bar	0.93	140	P	Pg	23 51 10.4	-0.6
	baz=320,SNR=116						
GSC				S	Sg	23 51 23.3	+0.1
	baz=320						
GRAC	Grapevine Rang	0.99	8		Pg	23 51 11.5	-0.5
GRAC	Grapevine Rang	0.99	8	P	Pg	23 51 11.5	-0.5
	baz=188,SNR=72						
GVN	Grapevine	0.99	9		Pg	23 51 11.6	-0.6
SPG2	Springville 2	1.01	281		Pg	23 51 11.6	-0.8
SHOC	Shoshone, Teco	1.04	96	P	Pg	23 51 12.7	-0.2
	baz=277,SNR=119						
SHOC				S	Sb	23 51 27.1	-0.3
	baz=277						
WOFM	Oak Flat	1.07	243		Pg	23 51 12.9	-0.6
AMDNV	Amargosa	1.11	67		Pg	23 51 13.7	-0.7
HYS	Haystack Butte	1.15	181		Pg	23 51 14.2	-1.0
TIN	Tinemaha, Big	1.17	332		Pg	23 51 14.9	-0.7
TIN	Tinemaha, Big	1.17	332	P	Pg	23 51 14.7	-0.9
	baz=152,SNR=50						
TIN				S	Sg	23 51 30.6	-0.2
	baz=152						
EDW2	Edwards Air Fo	1.19	198		Pg	23 51 15.0	-1.0
EDW2					Sg	23 51 30.6	-0.8
EDW2	Edwards Air Fo	1.19	198	P	Pg	23 51 14.9	-1.0
	baz=18,SNR=61						
EDW2				S	Sg	23 51 30.8	-0.6
	baz=18						
ALV	Alvord Mountai	1.21	142		Pg	23 51 14.5	-1.8
TEJ	El Tejon	1.22	230		Pg	23 51 15.2	-1.4
RRX	Edison Barstow	1.23	158	P	Pg	23 51 16.5	-0.1
	baz=339,SNR=18						
RRX				S	Sb	23 51 33.0	+0.2
	baz=339						
VES	Vestal, Richgr	1.26	262	P	Pg	23 51 16.7	-0.6
	baz=82,SNR=41						
VES				S	Sg	23 51 33.2	-0.5
	baz=82						
ARVC	Arvin	1.38	230	S	Sg	23 51 36.9	-0.4
	baz=50						
TPNV	Topopah Spring	1.40	48	Sg	Sg	23 51 37.6	-0.4
TPNV	Topopah Spring	1.40	48	P	Pn	23 51 18.9	-0.5
	baz=228,SNR=120						
TPNV				S	Sg	23 51 37.4	-0.6
	baz=228						
TUQ	Turquoise Moun	1.44	113	P	Pn	23 51 18.8	-1.2
	baz=294,SNR=5.3						
TUQ				S	Sg	23 51 39.1	-0.3
	baz=294						
DSCC	Desert Studies	1.46	126		Pb	23 51 20.8	0.0
HEC	Hector,Ludlow	1.54	140	Sb	Sg	23 51 42.8	+0.1
	baz=321						
HOLC	Holcomb Ridge	1.58	189		Pn	23 51 22.4	+0.6
OSI	Osito Audit: C	1.70	215	Pn	Pn	23 51 23.5	0.0
OSI	Osito Audit: C	1.70	215	Sg	Sg	23 51 48.5	+0.7
	baz=34						
BFSC	Mount Baldy Ra	1.78	183	P	Pn	23 51 23.5	-1.1
	baz=3.2,SNR=21						
BFSC				Sb	Sg	23 51 49.8	-0.5
	baz=3.2						
BBRC	Big Bear Solar	1.82	164	Pg	Pb	23 51 27.3	+0.2
	baz=344						
BBRC				Sb	Sg	23 51 51.6	-0.2
	baz=344						
MWC	Mount Wilson	1.84	193		Pn	23 51 25.1	-0.4
DECC	Green Verdugo	1.88	200	Pg	Pb	23 51 28.1	+0.3
	baz=20						
DECC				Sb	Sb	23 51 52.3	+0.7
	baz=20						
MLAC	Mammoth, Mammo	1.91	328	Pg	Pb	23 51 28.9	+0.2
	baz=147						
MLAC				Sg	Sg	23 51 55.9	+1.3
	baz=147						
GMRC	Granite Mounta	1.97	128		Pn	23 51 25.6	-1.6
GMRC	Granite Mounta	1.97	128	P	Pn	23 51 25.6	-1.6
	baz=309,SNR=18						
GMRC				Sb	Sb	23 51 55.0	+0.6
	baz=309						
OMMB	Old Mammoth Mi	1.98	324		Pn	23 51 26.5	-1.0
OMMB				Pg	Pb	23 51 29.5	-0.2
GTM	Goat Mountain	1.98	150		Pb	23 51 29.5	0.0
SHPR	Sheep Range	1.99	75		Pn	23 51 27.3	-0.2
SMMC	Simmler	2.12	251	Pb	Pb	23 51 31.0	-0.9
	baz=70						
SMMC				Sb	Sb	23 51 58.8	+0.2
	baz=70						
PKM	Mcpherson Peak	2.17	239	Sb	Sb	23 52 00.4	+0.2
	baz=58						
PAGB	Antelope Grade	2.22	263		Pn	23 51 30.3	-0.2
MMIM	Miami Mountain	2.25	309		Pb	23 51 34.2	-0.2
BELC	Belle Mtn. Jos	2.38	147	Sb	Sb	23 52 07.7	+1.5
	baz=328						
MURC	Murrieta	2.43	173	Sb	Sg	23 52 09.5	-1.7
	baz=354						
NV11	Mina Array Sit	2.46	349		Pn	23 51 34.4	+0.4
NVAR	Mina Array Bea	2.48	346		Pn	23 51 33.0	-1.4
PFO	Pinyon Flats O	2.56	159		Pn	23 51 34.5	-0.9
XPFO	Pion Flat	2.56	159		Pn	23 51 34.6	-0.8
XPFO				Pg	Pb	23 51 40.6	+1.0
PMPB	Monarch Peak	2.65	275		Pn	23 51 35.9	-0.6
NEE2	Needles Airpor	2.70	117	Sb	Sg	23 52 17.6	-2.1
	baz=298						
IRM	Iron Mountain	2.71	133	Sb	Sb	23 52 17.4	+2.0
	baz=314						
RYN	Ryan	2.72	344		Pn	23 51 37.4	-0.2
R11A	Troy Canyon, C	2.80	33		Pn	23 51 38.6	-0.1
R11A	Troy Canyon, C	2.80	33	Pb	Pb	23 51 43.2	-0.6
	baz=214						
R11A				Sb	Sb	23 52 20.7	+2.2
	baz=214						
WAKR	Walker	2.91	329	Pn	Pn	23 51 39.7	-0.5
WAKR					Pb	23 51 46.9	+1.4
CMB	Columbia Colle	3.04	312		Pn	23 51 41.2	-0.6
W13A	Hualapai Mount	3.12	106	Pn	Pn	23 51 42.5	-0.6
W13A					Pb	23 51 51.0	+1.8
SAO	San Andreas Ge	3.24	284	Pn	Pn	23 51 43.8	-0.7
Y12C	Blythe	3.36	131	Pn	Pn	23 51 46.9	+0.7
BAR	Barrett	3.41	168	Pn	Pn	23 51 47.0	+0.1
PNTR	Pine Nut	3.47	333	Pn	Pn	23 51 47.9	-0.1
KNB	Kanab	3.93	74		Pn	23 51 53.9	-0.3
AFDM	Forest Hills D	4.00	318	Pn	Pn	23 51 55.5	+0.5
AFDM					Pb	23 52 05.2	+1.2
U15A	North Rim	4.27	83	Pn	Pn	23 51 58.5	-0.4
U15A					Pb	23 52 10.6	+1.9
BEKR	Beckworth	4.44	331	Pn	Pn	23 52 03.1	+1.8
ORV	Oroville	4.72	320	Pn	Pn	23 52 03.2	-1.7
MTPU	Mount Pierson	4.74	63	Pn	Pn	23 52 05.7	+0.2
MSU	Marysvale	4.95	58	Pn	Pn	23 52 07.0	-1.3
ELK	Elko	5.05	20	Pn	Pn	23 52 08.7	-1.0

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*NEIC **26** 23:55:17.4±1.2, 55.°9S±0.°1×27.°8W±0.°2, h111^{km}±8^{km}, mb4.2/7, Error ellipse: s-maj=22.1km s-min=8.2km az=50.0*

*IDC **26** 23:55:20.8±10.0, 55.°92S×28.°00W, h136^{km}±89^{km}, mb3.5/3, mb1 3.7/3, mb1mx3.4/22, mbtmp3.9/3, Error ellipse: s-maj=36.3km s-min=27.8km az=93.0*

ISC 26 23:55:18.8±0.8**, 55.°9S**±0.°1×**27.°9W**±0.°1**, h121**^{km}**, n22,**
σ0^{s}.63/22**, mb4.1**/6**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	5.17	285	Pn	Pn	23 56 34.4	+0.5
HOPE				Sn	Sn	23 57 31.5	-1.0
VNA3	Neumayer Olymp	17.27	160	P	P	23 59 11.0	-0.7
VNA2	Neumayer--Watz	17.48	157	P	P	23 59 13.6	-0.4
	baz=316,slow=13						
SNAA	Sanae	19.04	156	P	P	23 59 30.5	-0.6
SNAA	Sanae	19.04	156	P	P	23 59 30.5	-0.6
SNAA				IAmb	IAmb	23 59 31.1	
	comp=Z,7.3nm,0.4s						
QSPA	South Pole Qui	34.34	180	P	P	00 01 54.0	+0.5
QSPA				IAmb	IAmb	00 01 54.7	
	comp=Z,2.7nm,0.7s						
GO02	Mina Guanaco	43.05	298	P	P	00 03 06.7	0.0
GO02				IAmb	IAmb	00 03 12.0	
	comp=Z,3.7nm,0.9s						
LVC	Limon Verde	44.87	301	P	P	00 03 21.9	+0.6
LVC				IAmb	IAmb	00 03 24.4	
	comp=Z,3.6nm,0.8s						
VNDA	Vanda	46.69	183	P	P	00 03 35.1	+0.5
	comp=Z,1.0nm,1.0s,baz=188,slow=8.6,SNR=5.7						
PATCX	Punta Patache	46.99	301	P	P	00 03 38.3	+0.7
LPAZ	La Paz	49.95	306	P	P	00 04 00.8	-0.2
	comp=Z,0.9nm,0.5s,baz=162,slow=3.2,SNR=3.2						
LPAZ	La Paz	49.95	306	IAmb	IAmb	00 04 05.8	
	comp=Z,2.5nm,1.1s						
TOA0	Torodi Ar. Sit	73.14	30	P	P	00 06 36.9	+1.0
TORD	Torodi Ar. Bea	73.14	30	P	P	00 06 36.7	+0.8
	comp=Z,1.1nm,0.5s,baz=203,slow=6.0,SNR=18						
TORD	Torodi Ar. Bea	73.14	30	P	P	00 06 35.0	-0.9
FINES	FINESS Array B	124.45	28	PKP	PKPdf	00 14 01.2	-0.8
	comp=Z,1.1nm,0.9s,baz=232,slow=2.2,SNR=3.8						
YKA	Yellowknife Ar	135.78	318	PKP	PKPdf	00 14 23.2	-0.3
	comp=Z,0.3nm,0.7s,baz=126,slow=2.6,SNR=4.0						
INK	Inuvik	145.43	321	PKPbc	PKPbc	00 14 41.0	+0.1
	comp=Z,1.1nm,0.5s,baz=100,slow=2.8,SNR=9.1						
ILAR	Eielson Array	149.71	312	PKPbc	PKPbc	00 14 52.6	-0.1
	comp=Z,1.1nm,0.6s,baz=145,slow=1.9,SNR=14						
ILAR	Eielson Array	149.71	312		PKPbc	00 14 52.3	-0.4
KDAK	Kodiak Island	150.38	297	PKPbc	PKPbc	00 14 54.3	-0.2
	comp=Z,6.3nm,1.0s,baz=122,slow=3.4,SNR=7.2						
SONM	Songino Array	151.14	87	PKPbc	PKPbc	00 14 56.5	-0.3
	comp=Z,0.7nm,0.5s,baz=210,slow=3.3,SNR=7.7						

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*IDC **26** 23:59:00.8±0.9, 44.°88N×110.°67W, h0^{km}, mb3.5/1, mb1 3.4/7, mb1mx3.3/47, mbtmp3.0/7, ML3.2/6, MS3.4/3, Ms1 3.4/3, ms1mx2.8/30, Error ellipse: s-maj=12.7km s-min=7.2km az=63.0*

*UUSS **26** 23:59:00.8±3.0, 44.°80N±0.°04×110.°78W±0.°07, h4^{km}±5^{km}, ML3.5/6, Error ellipse: s-maj=6.8km s-min=5.0km az=93.0*

*NEIC **26** 23:59:02.5±2.0, 44.°76N±0.°03×110.°81W±0.°08, h6^{km}±5^{km}, Error ellipse: s-maj=7.8km s-min=4.9km az=86.0*

ISC 26 23:59:01.4±0.8**, 44.°82N**±0.°04×**110.°77W**±0.°03**, h8**^{km}±6^{km}**,**
n58, σ1^{s}.55/60**, Yellowstone region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YHH	Holmes Hill	0.07	243	Pg	Pg	23 59 03.5	-0.2
YHH				Sg	Sg	23 59 04.7	-0.6
YNM	Yellowstone No	0.10	153	Pg	Pg	23 59 04.2	+0.1
YNM				Sg	Sg	23 59 05.8	-0.2
YNR	Norris Junctio	0.12	148		Pg	23 59 04.7	+0.3
YMR	Madison River	0.20	223	Pg	Pg	23 59 06.2	+0.5
YUF	Upper Falls	0.21	120		Pg	23 59 06.8	+1.0
YUF				Sg	Sg	23 59 09.8	+1.0
YHL	Hebgen Lake	0.30	276	Pg	Pb	23 59 08.1	-1.0
YHB	Horse Butte	0.31	258	Pg	Pb	23 59 08.3	-1.0
LKWY	Lake	0.36	134		Pb	23 59 09.6	-0.7
YMP	Mirror Lake Pl	0.44	100	Pg	Pb	23 59 11.7	+0.1
YMP					Pb	23 59 11.8	+0.1
H17A	Grant Village	0.45	162		Pb	23 59 10.9	-0.7
YNE	Yellowstone No	0.57	70		Pb	23 59 13.5	-0.4
FLWY	Flagg Ranch	0.74	176		Pb	23 59 16.2	-0.4
IMW	Indian Meadow	0.93	188	Pg	Pb	23 59 19.4	-0.5
FXWY	Fox Creek	1.19	189	Pg	Pb	23 59 23.7	-0.7
TPAW	Teton Pass	1.33	186	Pn	Pb	23 59 26.2	-0.6
SNOW	Snow King Moun	1.35	180		Pb	23 59 27.1	-0.1
DLMT	Dillon	1.40	293		Pg	23 59 28.1	-0.2
REDW	Red Top Meadow	1.46	182		Pn	23 59 27.9	-0.2
AHID	Auburn Hatcher	2.07	187		Pb	23 59 38.6	-0.6
BW06	Boulder Array	2.23	156		Pb	23 59 40.4	-1.7
PD31	Pinedale Array	2.23	156		Pb	23 59 41.1	-1.0
PDAR	Pinedale Array	2.23	156	Pn	Pb	23 59 41.4	-0.7
	2.4nm,0.3s,baz=334,slow=14,SNR=43						
PDAR				Lg	Lg	00 00 12.4	
	1.1nm,0.3s,baz=352,slow=31,SNR=8.3						
PDAR	Pinedale Array	2.23	156		Pb	23 59 40.2	-1.9
MSO	Missoula	2.99	313		Pn	23 59 51.5	+2.3
HWUT	Hardware Ranch	3.26	191		Pn	23 59 53.8	+0.8
EGMT	Eagleton	3.28	12		Pn	23 59 55.4	+2.2
LAO	LASA Array	3.69	58		Pn	23 59 58.9	+0.2
LAO				Pg	Pg	00 00 09.5	-2.6
SPUT	South Promonto	3.72	200		Pn	23 59 58.7	-0.5
TCUT	Toone Canyon	3.73	187		Pn	23 59 58.4	-1.0
K22A	Casper	3.76	124	Pn	Pn	00 00 00.6	+0.8
JTMT	Jette	3.81	321		Pn	00 00 02.8	+2.4
BGU	Big Grassy Mou	4.23	204		Pn	00 00 06.2	0.0
JLU	Jordanelle	4.24	187	Pn	Pn	00 00 07.2	+0.6
RDMU	Red Mountain	4.34	168		Pn	00 00 06.8	-1.0
BMO	Blue Mountains	4.65	273		Pn	00 00 11.4	-0.5
F10A	Beach Ranch, E	4.69	287		Pn	00 00 15.1	+2.5
WALA	Waterton Lakes	4.76	334		Pn	00 00 15.9	+2.4
RSSD	Black Hills	4.87	96		Pn	00 00 15.4	+0.3
NLU	North Lily Min	4.96	192		Pn	00 00 13.4	-2.9
ELK	Elko	5.23	220	Pn	Pn	00 00 22.7	+2.6
	0.1nm,0.3s,baz=29,slow=13,SNR=3.2						

ELK				Lg	Lg	00 01 47.3	
	0.4nm,0.3s,baz=228,slow=9.1,SNR=4.9						
ELK				LR	LR	00 02 23.6	
	comp=Z,176nm,20.3s,baz=28,slow=38						
PHWY	Pilot Hill	5.24	130		Pn	00 00 19.3	-1.0
N23A	Red Feather La	5.29	136		Pn	00 00 21.4	+0.5
NEW	Newport	5.58	310	Pn	Pn	00 00 26.9	+2.3
	0.9nm,0.3s,baz=124,slow=12,SNR=9.2						
NEW				Lg	Lg	00 01 55.4	
	3.0nm,0.3s,baz=237,slow=20,SNR=7.5						
DGMT	Dagmar	5.81	49		Pn	00 00 31.3	+3.4
G08A	Pilot Rock	5.82	278		Pn	00 00 31.3	+3.2
D08A	Wollman Farm,	6.11	294		Pn	00 00 34.8	+2.8
WVOR	Wild Horse Val	6.19	250	Pn	Pn	00 00 34.4	+1.2
I07A	Izee	6.30	266		Pn	00 00 38.0	+3.4
PV09	Paradox Valley	6.43	168		Pn	00 00 36.0	-0.6
E07A	Sunnyside	6.60	288		Pn	00 00 40.7	+2.1
B08A	Colville Reser	6.88	304		Pn	00 00 44.6	+2.0
NVAR	Mina Array Bea	8.52	224	Pn	Pn	00 01 10.0	+4.8
	0.2nm,0.3s,baz=42,slow=12,SNR=1.4						
NVAR				Pg		00 01 30.5	
	0.1nm,0.3s,baz=33,slow=15,SNR=3.0						
NVAR				Lg	Lg	00 03 32.0	
	0.3nm,0.3s,baz=30,slow=27,SNR=2.3						
NVAR				LR	LR	00 05 07.5	
	comp=Z,143nm,19.6s,baz=9.5,slow=43						
NVAR	Mina Array Bea	8.52	224		Pn	00 01 03.8	-1.4
ULM	Lac du Bonnet	11.43	56	Pg	Pn	00 02 27.7	+43
	0.3nm,0.3s,baz=259,slow=13,SNR=2.6						
ULM				Lg	Lg	00 04 54.0	
	0.3nm,0.3s,baz=326,slow=20,SNR=3.1						
TXAR	Lajitas Array	16.45	158	Pn	P	00 02 56.6	+1.3
	0.0nm,0.3s,baz=356,slow=12,SNR=2.3						
YKA	Yellowknife Ar	17.85	354	P	Pn	00 03 08.3	-1.5
	0.0nm,0.3s,baz=173,slow=13,SNR=4.7						
YKA				Lg	Lg	00 08 11.6	
	0.0nm,0.3s,baz=165,slow=27,SNR=3.7						
ILAR	Eielson Array	28.23	328	P	P	00 04 54.0	-0.4
	0.4nm,0.6s,baz=132,slow=9.2,SNR=1.5						
FRB	Frobisher Bay	30.28	36	LR	LR	00 17 21.8	
	comp=Z,224nm,18.2s,baz=22,slow=36						

MAN 27 00:06:41.4, 8°.84N×122°.88E, h15km, mb4.1, ML2.9, MS2.6, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCPH	Dipolog City	0.54	119	⇑eP	Pg	00 06 51.7	-0.3
DCPH				eS	Sg	00 06 59.6	+0.4
SNPH	Sibulan	0.61	35	⇑iP	Pb	00 06 53.9	+0.1
SNPH				iS	Sb	00 07 02.1	-0.1
TBP	Tagbilaran	1.29	49	iP	Pn	00 07 03.8	-1.0

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*IDC **27** 00:24:28.0±1.8, 2°.88S×139°.94E, h0km, mb3.8/4, mb1 4.2/5, mb1mx3.8/19, mbtmp4.0/5, ML4.5/1, MS3.4/2, Ms1 3.3/2, ms1mx2.8/19, Error ellipse: s-maj=78.1km s-min=25.7km az=94.0*

*NEIC **27** 00:24:32.7±2.5, 3°.0S±0°.1×139°.7E±0°.1, h35km±2km, mb4.4/13, Error ellipse: s-maj=25.8km s-min=16.5km az=112.0*

*DJA **27** 00:24:41.2±0.3, 3°S±4°×14°0E±°, h92km±5km, M4.5/8, mb4.4/8, mB5.1/2, MLv4.6/7, Mw(mB)4.4/2*

ISC 27 00:24:40.0±0.7, 3°.18S±0°.07×139°.83E±0°.06, h100km, n36, σ2ˢ04/40, mb3.8/6, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	0.67	30	P	Pn	00 24 57.9	+0.7
GENI				S	Sn	00 25 10.5	+0.4
JAY	Jayapura	1.09	53	P	Pn	00 25 02.1	+0.5
JAY				S	Sn	00 25 17.7	-0.1
WAMI	Wamena	1.32	238	P	Pn	00 25 06.2	+2.1
WAMI				S	Sn	00 25 23.9	+1.6
BAKI	Biak	4.21	298	P	Pn	00 25 43.2	+1.1
RKPI	Ransiki, Papua	5.88	286	P	Pn	00 26 08.5	+3.7
	0.7nm6μm80nm,0.8s						
RKPI				S	Sn	00 27 07.8	-3.1
	0.7nm6μm80nm,0.8s						
FAKI	Fak Fak	7.57	272	P	Pn	00 26 30.0	+2.2
	0.1nm22nm,0.7s						
FAKI	Fak Fak	7.57	272		Pn	00 26 27.2	-0.6
PMG	Port Moresby	9.56	131		Pn	00 26 56.2	+1.4
COEN	Coen	11.21	163		Pn	00 27 13.4	-3.9
LBMI	Labuha	12.57	281	P	Pn	00 27 36.9	+1.4
	19nm,0.7s						
MTN	Manton Dam	12.89	221		Pn	00 27 37.8	-1.9
MTN					Sn	00 29 53.9	-7.7
KNRA	Kununurra	16.52	221		Pn	00 28 23.2	-2.7
KNRA				IAmb	IAmb	00 28 28.4	
	comp=Z,19nm,0.5s						
KNRA				S	Sn	00 31 17.8	-12
SOEI	Soe	16.78	246	P	P	00 28 32.9	+3.1
	comp=Z,36nm,1.0s						
SOEI	Soe	16.78	246	P	Pn	00 28 24.4	-4.8
WB0	Warramunga Arr	17.32	197	P	P	00 28 34.9	-0.7
WR0	Warramunga Arr	17.46	197	P	P	00 28 35.5	-1.7
WRAB	Tennant Creek	17.49	197	P	P	00 28 37.0	-0.5
WRAB				IAmb	IAmb	00 28 40.7	
	comp=Z,21nm,0.8s						
WB2	Warramunga Arr	17.50	197	P	P	00 28 36.4	-1.2
WB2				IAmb	IAmb	00 28 46.7	
	comp=Z,23nm,0.8s						
WRA	Warramunga Arr	17.51	197	P	P	00 28 37.6	0.0
	comp=Z,1.6nm,0.3s,baz=21,slow=12,SNR=54						
WRA				S	Sn	00 31 39.3	-14
	comp=Z,0.7nm,0.3s,baz=13,slow=22,SNR=6.6						
WRA	Warramunga Arr	17.51	197	P	P	00 28 36.6	-1.0
WRA					Sn	00 31 42.2	-11
BNSI	Bone	19.72	266	P	Pn	00 29 09.8	+5.6
FITZ	Fitzroy Crossi	20.33	222	P	P	00 29 07.8	-0.7
FITZ				IAmb	IAmb	00 29 10.1	
	comp=Z,13nm,0.9s						
AS31	Alice Springs	21.16	195	P	P	00 29 16.8	-0.6
ASAR	Alice Springs	21.16	195	P	P	00 29 18.4	+1.0
	comp=Z,3.3nm,0.6s,baz=22,slow=10,SNR=49						
ASAR				S	S	00 33 06.0	-1.3
	comp=Z,6.0nm,0.8s,baz=11,slow=28,SNR=12						
ASAR				LR	LR	00 39 04.2	
	comp=Z,60nm,20.4s,baz=328,slow=41						
ASAR	Alice Springs	21.16	195	P	P	00 29 17.8	+0.5
STKA	Stephens Creek	28.60	177	LR	LR	00 42 57.7	
	comp=Z,97nm,18.1s,baz=20,slow=38						
FORT	Forrest	29.62	201	P	P	00 30 37.4	+1.4
BBOO	Buckleboo	29.69	186	P	P	00 30 37.9	+1.3
BBOO				IAmb	IAmb	00 30 45.0	
	comp=Z,11nm,1.2s						
MKAR	Makanchi Array	70.84	322	P	P	00 35 46.1	0.0
	comp=Z,1.1nm,0.7s,baz=106,slow=7.7,SNR=12						
MKAR	Makanchi Array	70.84	322	P	P	00 35 45.1	-0.9
MAKZ	Makanchi	71.04	322	P	P	00 35 46.5	-0.8
MAKZ				IAmb	IAmb	00 35 48.0	
	comp=Z,2.0nm,0.8s						
ZALV	Zalesovo Beam	72.90	330	P	P	00 35 57.0	-1.2
	comp=Z,0.5nm,0.5s,baz=128,slow=6.3,SNR=2.5						
ZALV	Zalesovo Beam	72.90	330	P	P	00 35 56.6	-1.6
RC01	Rabbit Creek A	83.43	27	P	P	00 36 54.5	-1.7
ILAR	Eielson Array	85.79	24	P	P	00 37 07.7	-0.3
	comp=Z,0.4nm,0.9s,baz=248,slow=4.8,SNR=2.4						
ILAR	Eielson Array	85.79	24	P	P	00 37 07.0	-1.0

KEA 27 00:38:04.2±0.0, 40°.46N×122°.39E, h0km, ML2.7/1, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUJ	Sinuiju	1.65	102	Pg	Pb	00 38 35.1	-0.3
SUJ				Sg	Sn	00 38 56.1	-0.1
PYS	Pyongsong	2.92	113	Pg	Pb	00 38 57.4	+0.2
PYS				Sg	Sb	00 39 34.4	+0.9
PYAG	Pyongyang	2.95	117	Sg	Sb	00 39 36.5	+2.3
KGE	Kanggye	3.24	80	Sg	Sb	00 39 44.9	+2.2
HHU	Hamhung	3.97	96	Sg	Sg	00 40 10.0	-1.7

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*UCR **27** 01:04:51.6±1.7, 8°.28N×82°.84W, h2km±4km, MW3.9, mb4.0(NEIC)*

*UPA **27** 01:04:52.4±1.4, 8°.28N×82°.80W, h16km±2km, MW4.4*

*NEIC **27** 01:04:54.3±1.1, 8°.37N±0°.10×82°.77W±0°.06, h22km±15km, ML4.0(UCR), Error ellipse: s-maj=14.6km s-min=7.5km az=199.0*

ISC 27 01:04:52.5±0.9, 8°.26N±0°.03×82°.79W±0°.02, h17km±6km, n55, σ1ˢ05/91, 3C-8D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBAR3	San Bartolo, C	0.11	300	⇑iP	Pg	01 04 56.1	0.0
SBAR3				eS	Sg	01 04 59.4	+1.0
BAGA3	Bagala, Chiriq	0.33	52	⇓iP	Pb	01 05 00.3	+0.3
DVD	David	0.38	63	⇑iP	Pb	01 05 00.6	-0.2
DVD				eS	Sb	01 05 07.1	+0.7
PEDE3	Pedregal, Chir	0.38	72	iP	Pb	01 05 00.8	-0.1
PEDE3				eS	Sb	01 05 06.2	-0.4
LOCO3	Loma Colorada,	0.40	69	⇓iP	Pb	01 05 01.1	-0.1
LOCO3				eS	Sb	01 05 06.7	-0.3
LOMA3	Las Lomas, Chi	0.43	67	⇓iP	Pb	01 05 01.6	-0.2
LOMA3				eS	Sg	01 05 05.2	-1.9
CHIR3	Chiriqui UPA,	0.47	74	⇓iP	Pb	01 05 02.2	-0.3
BCO2	Palmira	0.52	30	⇓iP	Pb	01 05 03.0	-0.4
BCO2				eS	Sb	01 05 11.2	+0.4
MLIR3	Monte Lirio, C	0.53	356	iP	Pb	01 05 03.0	-0.5
MLIR3				eS	Sb	01 05 11.8	+1.0
BRU2	Volcan	0.54	11	⇓iP	Pg	01 05 03.0	-0.3
BRU2				eS	Sb	01 05 11.9	+0.7
BRU2	Volcan	0.54	11	eP	Pg	01 05 03.0	-0.3
BRU2				eS	Sb	01 05 12.0	+0.9
PIRO	Carate, Puerto	0.56	284	eP	Pg	01 05 02.0	-1.7
PIRO				eS	Sb	01 05 12.0	+0.4
PTJ1	Puerto Jimnez	0.57	298	eP	Pg	01 05 02.9	-1.0
PTJ1				eS	Sb	01 05 12.2	+0.1
EDSV	San Vito	0.58	342	eP	Pg	01 05 03.1	-1.0
EDSV				eS	Sb	01 05 12.7	+0.2
PSOM3	Paja de Sombre	0.62	48	⇓iP	Pg	01 05 04.3	-0.6
PSOM3				eS	Sb	01 05 13.4	-0.2
CHGR2	Aguacate	0.93	44	⇑eP	Pb	01 05 08.9	-1.3
CHGR2				eS	Sb	01 05 21.5	-0.8
EDPN	Palmar Norte	0.96	317	eP	Pb	01 05 08.6	-2.1
EDPN				eS	Sb	01 05 21.8	-1.4
EDBA	Buenos Aires	1.01	332	eP	Pb	01 05 10.8	-0.9
EDBA				eS	Sg	01 05 24.9	-0.7
NANC3	Nancito, Chiri	1.05	91	eP	Pb	01 05 10.9	-1.4
NANC3				eS	Sb	01 05 22.6	-3.2
PVID3	Puerto Vidal,	1.19	100	eS	Sb	01 05 28.6	-1.3
CNI2	El Empalme, Bo	1.20	15	⇓iP	Pn	01 05 13.3	-1.3
CNI2				eS	Sb	01 05 28.2	-1.8
EDLM	Las Mercedes	1.28	322	eP	Pn	01 05 14.4	-1.4
RGM0	Gandoca	1.33	8	eP	Pg	01 05 17.8	-0.5
RGM0				eS	Sg	01 05 36.5	+0.9
RGM0	Gandoca	1.33	8	eP	Pb	01 05 16.5	-0.6
EDDO	Dominical	1.45	313	eP	Pn	01 05 17.7	-0.3
EDDO				eS	Sb	01 05 36.6	-0.7
CNAZ3	Canazas, Verag	1.57	87	eP	Pn	01 05 18.9	-0.8
CNAZ3				eS	Sn	01 05 38.4	-1.2
GMAL	Guarumal, Vera	1.62	108	eP	Pn	01 05 18.6	-1.8
GMAL				eS	Sb	01 05 42.1	-0.1
GMAL	Guarumal, Vera	1.62	108	eP	Pn	01 05 18.9	-1.5
SFRA3	San Francisco,	1.80	90	eP	Pn	01 05 21.9	-1.0
SFRA3				eS	Sb	01 05 47.8	+0.4
STIA3	Santiago, Vera	1.81	95	eP	Pn	01 05 22.8	-0.2
STIA3				eS	Sn	01 05 44.9	-0.7
PONU3	Ponuga, Veragu	1.83	102	eP	Pn	01 05 24.1	+0.7
PONU3				eS	Sb	01 05 47.8	-0.6
LCR2	La Lucha 2	1.90	321	eP	Pn	01 05 24.8	+0.4
LCR2				eS	Sn	01 05 48.5	+0.5
CALO3	Calobre, Verag	1.93	88	eP	Pn	01 05 25.3	+0.6
CALO3				eS	Sn	01 05 49.5	+0.9
OCU3	Ocu, Herrera	2.02	99	eS	Sg	01 05 58.6	+1.0
SJS	Escuela Geolog	2.08	323	eP	Pn	01 05 27.6	+0.7
SJS				eS	Sb	01 05 55.2	-0.4
CACAO	El Cacao, Vera	2.12	115	eP	Pn	01 05 28.4	+1.1
CACAO				eS	Sn	01 05 52.7	-0.5
HDC	Heredia	2.17	323	eP	Pn	01 05 29.3	+1.2
HDC				eS	Sn	01 05 55.5	+0.9
HDC	Heredia	2.17	323	eP	Pn	01 05 29.1	+1.0
HDC				eS	Sb	01 05 57.4	-0.7
HDC	Heredia	2.17	323	Pn	Pn	01 05 28.1	0.0
HDC				Sn	Sn	01 05 54.0	-0.7
PNME	Penonome	2.45	85	eP	Pg	01 05 38.1	-1.4
AZU	Azuero	2.54	100	eP	Pn	01 05 34.7	+1.6
AZU				eS	Sb	01 06 09.0	+0.3
AZU	Azuero	2.54	100	eP	Pn	01 05 34.3	+1.3
ARE1	Arenal 1	2.90	319	eP	Pn	01 05 39.6	+1.6
ARE1				eS	Sb	01 06 16.9	-2.1
CEDE	Laguna Cedeo	2.91	320	eP	Pn	01 05 39.6	+1.4
JTS	Las Juntas de	2.93	314	eP	Pn	01 05 38.1	-0.5
JTS	Las Juntas de	2.93	314	Pn	Pn	01 05 37.9	-0.6
JTS				Sn	Sn	01 06 13.3	-0.2
ZANG	Zanguenga, Cho	2.97	76	eP	Pn	01 05 40.8	+1.8
BCIP	Isla Barro Col	3.05	73	eP	Pn	01 05 40.8	+0.6
BCIP	Isla Barro Col	3.05	73		Pn	01 05 40.3	+0.2
BCIP				Sn	Sn	01 06 17.0	+0.6
CHOR3	La Chorrera	3.06	78	eS	Sb	01 06 24.0	+0.3
PLVR	Palo Verde	3.27	310	eP	Pn	01 05 43.3	0.0
CUI	Cuipilapa	3.34	316	eP	Pn	01 05 45.7	+1.6
ACON	Acoyapa	4.37	328	Pn	Pn	01 05 58.9	+0.7
URIC	Uribia, Colomb	11.17	71	Pn	Pn	01 07 31.8	+0.1
PAYG	Puerto Ayora	11.60	220	Pn	Pn	01 07 40.0	+2.4

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*IDC **27** 01:11:02.7±0.9, 36°.91N×142°.19E, h0km, mb3.5/8, mb1 3.7/11, mb1mx3.6/37, mbtmp3.5/11, ML3.0/3, MS2.8/2, Ms1 2.8/2, ms1mx2.4/33, Error ellipse: s-maj=24.7km s-min=17.4km az=118.0*

*JMA **27** 01:11:07.0±0.1, 36°.95N×141°.95E, h39km±3km, M3.6*

ISC 27 01:11:05.4±0.8, 36°.88N±0°.04×141°.91E±0°.05, h19km, n32, σ0ˢ96/36, mb3.5/8, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.92	285	P	Pn	01 11 23.8	+0.5
ONAJ				eS	Sn	01 11 35.8	-0.2
JFK	Kawauchi	0.96	301	P	Pg	01 11 24.1	0.0
JFK				eS	Sg	01 11 36.5	-0.3
JFFD	Fukushimafurud	1.10	282	P	Pg	01 11 26.6	-0.1
JFFD				eS	Sg	01 11 40.8	-0.3
JHO	Hitachi	1.11	257	P	Pg	01 11 27.0	+0.1
JHO				eS	Sg	01 11 41.9	+0.5
JMST	Minamisoumatoc	1.17	317	P	Pn	01 11 26.8	0.0
JMST				S	Sb	01 11 41.5	-0.4
JMM	Marumori	1.33	318	P	Pn	01 11 29.1	+0.2
JFT	Otama	1.41	298	P	Pb	01 11 31.6	+0.5
JFT				eS	Sb	01 11 49.4	+0.8
JIO	Ouri	1.64	344	P	Pn	01 11 33.2	0.0
JIO				eS	Sn	01 11 52.7	-1.0
JOU	Okura	1.78	327	P	Pn	01 11 36.3	+1.1
JFY	Yanaizu	1.84	287	P	Pb	01 11 39.0	+0.6
JYS	Shirataka	1.98	313	eS	Sn	01 12 02.6	+0.3
JAG	Ashikaga	2.02	258	P	Pb	01 11 40.9	-0.7
JMK	Ichinoseki	2.14	346	P	Pn	01 11 40.8	+0.7
MJAR	Matsushiro Arr	2.99	265	Pn	Pb	01 11 55.3	-2.7
	1.8nm,0.3s,baz=87,slow=15,SNR=40						
MJAR				Sn	Sb	01 12 33.5	-0.7
	1.4nm,0.3s,baz=90,slow=10,SNR=5.9						
MJAR				LR	LR	01 13 24.8	
	comp=Z,122nm,18.2s,baz=210,slow=45						
MAT	Matsushiro	2.99	265	P	Pb	01 11 55.6	-2.5
MAT				eS	Sb	01 12 33.3	-0.9
JHJ	Hachijo jima 2	4.13	206	Pn	Pn	01 12 07.6	+0.1
	5.6nm,0.3s,baz=68,slow=20,SNR=1.5						
JHJ				Sn	Sn	01 12 55.4	+0.1
	27nm,0.3s,baz=327,slow=17,SNR=2.3						
ASAJ	Asahikawa	7.25	4	Pn	Pn	01 12 48.9	-1.4
	0.2nm,0.3s,baz=117,slow=11,SNR=1.6						
ASAJ				Sn	Sn	01 14 11.6	-0.5
	0.3nm,0.3s,baz=351,slow=19,SNR=2.2						
KSRS	Korea Array	11.18	277	LR	LR	01 18 02.0	
	comp=Z,57nm,19.2s,baz=128,slow=37						
SEY	Seymchan	26.87	11	P	P	01 16 44.2	-0.4
	0.4nm,0.3s,baz=159,slow=6.9,SNR=5.4						
H11N2	WAKE ISLAND Hy	27.73	121	T	T	01 45 56.4	
	baz=314,slow=75,SNR=16						
H11N1	WAKE ISLAND Hy	27.74	121	T	T	01 46 00.8	
	baz=314,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	27.75	121	T	T	01 45 57.8	
	baz=314,slow=75,SNR=18						
SONM	Songino Array	28.20	304	P	P	01 16 59.2	+2.3
	0.6nm,0.8s,baz=101,slow=7.7,SNR=3.5						
H11S1	WAKE ISLAND Hy	28.44	123	T	T	01 46 51.7	
	baz=316,slow=74						
H11S3	WAKE ISLAND Hy	28.44	123	T	T	01 46 47.8	
	baz=316,slow=74						
H11S2	WAKE ISLAND Hy	28.46	123	T	T	01 46 48.9	
	baz=316						
MKAR	Makanchi Array	44.54	302	P	P	01 19 16.4	+0.6
	0.4nm,0.7s,baz=84,slow=8.3,SNR=4.4						
ILAR	Eielson Array	49.42	32	P	P	01 19 52.5	-1.1
	0.3nm,0.7s,baz=254,slow=6.7,SNR=5.2						
WRA	Warramunga Arr	56.96	188	P	P	01 20 50.1	+0.5
	0.3nm,0.4s,baz=6.1,slow=7.1,SNR=0.8						
ASAR	Alice Springs	60.69	188	P	P	01 21 16.3	+0.8
	0.3nm,0.7s,baz=16,slow=9.2,SNR=4.3						
YKA	Yellowknife Ar	63.74	30	P	P	01 21 35.0	-0.5
	0.2nm,0.7s,baz=305,slow=6.5,SNR=3.2						
TXAR	Lajitas Array	89.90	53	P	P	01 24 03.4	-0.2
	0.2nm,0.5s,baz=306,slow=3.0,SNR=5.1						

KEA 27 01:42:32.6±0.0, 40°.46N×122°.39E, h0km, ML2.7/1, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUJ	Sinuiju	1.65	102	Pg	Pb	01 43 03.6	-0.2
SUJ				Sg	Sn	01 43 24.7	+0.1
PYS	Pyongsong	2.92	113	Sg	Sg	01 44 04.9	-1.7
PYAG	Pyongyang	2.95	117	Sg	Sg	01 44 06.7	-0.7
KGE	Kanggye	3.24	80	Sg	Sg	01 44 15.6	-1.2
HHU	Hamhung	3.97	96	Sg	Sg	01 44 37.5	-2.6

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*IDC **27** 02:37:10.4±1.7, 16°.58S×168°.49E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.7/36, mbtmp3.9/5, ML3.4/1, Error ellipse: s-maj=55.8km s-min=26.0km az=126.0*

*NEIC **27** 02:37:23.3±1.0, 17°.0S±0°.1×168°.5E±0°.3, h109km±17km, mb4.0/4, Error ellipse: s-maj=49.0km s-min=6.7km az=112.0*

ISC 27 02:37:16.2±1.2, 16°.6S±0°.1×168°.4E±0°.2, h35km, n12, σ0ˢ81/14, mb3.7/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	5.78	198	Pn	Pn	02 38 39.1	-0.5
	1.1nm,0.3s,baz=16,slow=9.2,SNR=10						
DZM				Sn	Sn	02 39 45.8	+1.1
	0.7nm,0.3s,baz=299,slow=10,SNR=1.5						
DZM	Mont Dzumac	5.78	198		Pn	02 38 40.1	+0.6
DZM					Sn	02 39 43.8	-0.9
EIDS	Eidsvold	18.38	239	P	Pn	02 41 28.5	+0.2
EIDS				IAmb	IAmb	02 41 29.4	
	comp=Z,10nm,1.1s						
WB0	Warramunga Arr	32.44	259	P	P	02 43 43.8	+0.4
WB2	Warramunga Arr	32.48	259	P	P	02 43 44.1	+0.4
WB2				IAmb	IAmb	02 43 49.0	
	comp=Z,3.1nm,1.1s						
WRA	Warramunga Arr	32.49	259	P	P	02 43 44.5	+0.7
	comp=Z,0.2nm,0.4s,baz=96,slow=8.7,SNR=2.2						
AS31	Alice Springs	33.09	252	P	P	02 43 48.3	-0.8
ASAR	Alice Springs	33.09	252	P	P	02 43 48.0	-1.0
	comp=Z,1.7nm,0.4s,baz=83,slow=8.8,SNR=41						
ASAR	Alice Springs	33.09	252	P	P	02 43 48.2	-0.9
IMAR	Indian Mountai	87.06	15	P	P	02 49 57.8	+0.1
ILAR	Eielson Array	87.94	18	P	P	02 50 00.9	-1.0
	comp=Z,0.2nm,0.5s,baz=235,slow=5.2,SNR=6.9						
YKA	Yellowknife Ar	98.67	27	P	P	02 50 52.1	+0.7
	comp=Z,0.1nm,0.6s,baz=256,slow=4.4,SNR=2.2						

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*JMA **27** 03:04:23.8±0.1, 23°.27N×121°.56E, h0km, M3.4*

*TAP **27** 03:04:26.2, 23°.29N×121°.38E, h16km, ML3.6, C*

ISC 27 03:04:25.8±0.8, 23°.28N±0°.01×121°.46E±0°.02, h17km±5km, n113, σ0ˢ85/208, 20C-4D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWF1	Yuli	0.17	297	⇓iP	Pg	03 04 30.2	+0.1
	baz=303						
TWF1				S	Sg	03 04 33.1	+0.1
	baz=303						
FULB	Fuli	0.17	244	⇑iP	Pg	03 04 30.4	+0.3
	baz=209						
FULB				S	Sb	03 04 34.1	+0.4
	baz=209						
YULB	Yu-li	0.19	308	⇑iP	Pg	03 04 30.5	+0.1
	baz=314						
YULB				S	Sg	03 04 33.5	-0.1
	baz=314						
CHKT	Chengkung	0.20	206	⇑iP	Pb	03 04 31.4	+0.5
	baz=172						
CHKT				eS	Sb	03 04 35.4	+1.0
	baz=172						
HGSD	Ruisui	0.22	351	P	Pg	03 04 31.3	+0.4
	baz=21						
HGSD				eS	Sb	03 04 36.2	+1.1
	baz=21						
EHY	Hungye	0.26	331	⇑iP	Pg	03 04 31.9	+0.3
	baz=341						
EHY				eS	Sg	03 04 35.9	+0.4
	baz=341						
EGFH	Guangfu	0.39	356	eP	Pg	03 04 34.2	+0.4
	baz=357						
EGFH				eS	Sb	03 04 41.1	+1.0
	baz=357						
ELDTW	Lidau	0.42	258	⇑iP	Pg	03 04 33.6	-0.7
	baz=252						
ELDTW				eS	Sg	03 04 38.5	-1.6
	baz=252						
YUS	Yu-Shan	0.51	295	⇑iP	Pg	03 04 35.8	-0.4
	baz=299						
YUS				eS	Sg	03 04 42.1	-1.1
	baz=299						
ESL	Shilin	0.54	357	⇑iP	Pg	03 04 35.9	-0.6
ESL				eS	Sb	03 04 44.4	+0.1
VWDT	VWDT	0.56	329	⇑iP	Pg	03 04 36.7	-0.1
	baz=346						
VWDT				eS	Sg	03 04 44.8	+0.4
	baz=346						
TWH	Lutao	0.56	178	P	Pb	03 04 37.5	+0.3
	baz=169						
TWH				eS	Sn	03 04 47.3	-0.6
	baz=169						
TWGBT	Beinan	0.57	218	⇑iP	Pg	03 04 36.5	-0.6
	baz=208						
TWGBT				eS	Sg	03 04 44.9	+0.1
	baz=208						
TWG	Pinlang	0.58	218	⇑iP	Pg	03 04 36.6	-0.6
	baz=208						
TWG				eS	Sg	03 04 44.9	+0.1
	baz=208						
TTN	Taitung	0.59	209	eP	Pb	03 04 37.8	+0.1
	baz=199						
TTN				eS	Sn	03 04 47.7	-1.0
	baz=199						
ENLB	Shoufeng	0.64	12	eP	Pg	03 04 38.1	-0.2
	baz=29						
ENLB				eS	Sn	03 04 50.8	+0.8
	baz=29						
ALS	Alishan	0.65	291	⇑iP	Pg	03 04 38.3	-0.3
	baz=294						
ALS				eS	Sg	03 04 46.4	-0.8
	baz=294						
STYT	Tauyuan	0.66	260	P	Pg	03 04 38.1	-0.6
	baz=257						
STYT				eS	Sg	03 04 46.4	-1.0
	baz=257						
SSLB	Suanglung	0.69	318	⇑iP	Pg	03 04 38.5	-0.8
	baz=324						
SSLB				S	Sg	03 04 47.2	-1.3
	baz=324						
WHYT	Xinyi Township	0.70	307	⇑iP	Pg	03 04 39.3	-0.1
	baz=317						
WHYT				eS	Sg	03 04 47.6	-1.1
	baz=317						
HWA	Hwalien	0.71	11	eP	Pb	03 04 40.2	+0.5
	baz=6.0						
HWA				eS	Sb	03 04 50.8	+1.5
	baz=6.0						
OWD	Renai	0.72	339	⇑iP	Pg	03 04 39.2	-0.8
	baz=347						
OWD				eS	Sg	03 04 48.8	-0.8
	baz=347						
TPUB	Ta-pu	0.76	272	⇑iP	Pg	03 04 40.4	-0.3
	baz=279						
TPUB				eS	Sg	03 04 50.8	-0.1
	baz=279						
WTP	Ta-pu	0.78	268	⇑iP	Pg	03 04 40.7	-0.3
	baz=266						
WTP				eS	Sg	03 04 51.3	+0.1
	baz=266						
CHN5	Tsauling	0.79	294	P	Pb	03 04 41.0	-0.1
	baz=297						

CHN5	baz=297			*e*S	Sg	03 04 51.8	+0.2
SMLT	Sun Moon Lake baz=333	0.79	320	⇑*i*P	Pb	03 04 40.6	-0.6
SMLT	baz=333			*e*S	Sg	03 04 50.5	-1.3
SLGT	Liugui baz=245	0.80	250	⇑*i*P	Pb	03 04 40.8	-0.4
SLGT	baz=245			*e*S	Sb	03 04 51.0	-0.8
CHN4	Tsaushan baz=276	0.80	276	*e*P	Pb	03 04 41.2	0.0
CHN4	baz=276			*e*S	Sb	03 04 51.9	+0.1
TWD	Chiawan baz=5.0	0.81	9	*e*P	Pb	03 04 40.6	-0.8
TWD	baz=5.0			*e*S	Sg	03 04 53.5	+1.2
ECL	Taimali baz=207	0.82	215	*e*P	Pb	03 04 40.6	-0.9
ECL	baz=207			*e*S	Sb	03 04 51.7	-0.7
CHGB	Renai baz=349	0.82	342	⇑*i*P	Pb	03 04 41.1	-0.7
CHGB	baz=349			*e*S	Sg	03 04 52.0	-0.8
SGST	Jiashian baz=253	0.83	257	P	Pb	03 04 40.6	-1.1
SGST	baz=253			*e*S	Sb	03 04 52.1	-0.6
TYC	Yuchr baz=329	0.84	319	⇓*i*P	Pb	03 04 41.4	-0.5
TYC	baz=329			*e*S	Sb	03 04 53.0	+0.2
CHN1	Nanshi baz=262	0.86	264	⇓*i*P	Pb	03 04 42.6	+0.3
CHN1	baz=262			*e*S	Sg	03 04 54.7	+0.8
WJS	Zhushan baz=325	0.86	309	P	Pg	03 04 43.0	+0.4
WJS	baz=325			*e*S	Sn	03 04 55.8	+0.3
WHF	Hehuan Shan baz=357	0.89	348	P	Pb	03 04 42.0	-0.9
WHF	baz=357			*e*S	Sg	03 04 55.2	+0.4
SNST	Tainan City baz=265	0.89	267	*e*P	Pg	03 04 43.4	+0.4
SNST	baz=265			*e*S	Sg	03 04 55.5	+0.8
TWK	Hsinying baz=269	0.89	270	⇓*i*P	Pb	03 04 42.9	0.0
TWK	baz=269			*e*S	Sg	03 04 55.4	+0.5
DPDB	Guoxing baz=343	0.90	327	*e*P	Pb	03 04 42.6	-0.4
DPDB	baz=343			*e*S	Sb	03 04 53.9	-0.9
NACB	Ninganchiao baz=15	0.90	8	*e*P	Pb	03 04 41.6	-1.5
NACB	baz=15			*e*S	Sb	03 04 53.7	-1.1
WGK	Gukeng baz=300	0.92	297	*i* P	Pg	03 04 44.0	+0.3
WGK	baz=300			*e*S	Sn	03 04 57.2	+0.4
SSD	Sandimen baz=225	0.93	236	*e*P	Pb	03 04 43.5	+0.1
SSD	baz=225			*e*S	Sb	03 04 53.7	-1.8
ETLH	Xiulin Townshi baz=9.0	0.93	1	*e*P	Pb	03 04 42.2	-1.3
ETLH	baz=9.0			*e*S	Sb	03 04 55.9	+0.2
WNT	Mingjian baz=316	0.93	310	*i* P	Pg	03 04 44.1	+0.3
WNT	baz=316			*e*S	Sn	03 04 57.6	+0.5
WDLH	Douliu baz=299	0.94	296	P	Pb	03 04 44.0	+0.3
WDLH	baz=299			*e*S	Sg	03 04 56.5	+0.1
CHY	Chiayi baz=285	0.98	283	⇑*i*P	Pb	03 04 44.7	+0.4
CHY	baz=285			S	Sg	03 04 57.9	+0.3
MASBT	Mashibuluo baz=219	1.01	229	*i* P	Pb	03 04 43.6	-1.2
MASBT	baz=219			*e*S	Sb	03 04 57.7	-0.1
TWT	Tachien baz=344	1.01	345	*e*P	Pb	03 04 44.5	-0.5
TWT	baz=344			*e*S	Sb	03 04 57.0	-1.0
TDCB	Techi baz=348	1.01	344	*e*P	Pb	03 04 44.1	-0.9
CHN3	Shinhua baz=268	1.03	259	*e*P	Pg	03 04 46.0	+0.4
CHN3	baz=268			*e*S	Sn	03 05 03.0	+3.5
TAW	Tawu baz=203	1.05	210	*e*P	Pb	03 04 43.4	-2.1
TAW	baz=203			*e*S	Sb	03 04 57.3	-1.8
EAST	Anshuo baz=205	1.05	213	P	Pb	03 04 44.2	-1.4
EAST	baz=205			*e*S	Sb	03 04 56.7	-2.4
TWM1	Shoushan baz=239	1.06	245	*e*P	Pg	03 04 46.8	+0.6
TWM1	baz=239			*e*S	Sn	03 05 01.2	+1.0
WLGB	Puzi baz=283	1.08	281	*e*P	Pn	03 04 46.6	+0.4
WLGB	baz=283			*e*S	Sn	03 05 02.7	+1.8
WHP	Taichung City baz=348	1.10	335	*e*P	Pn	03 04 46.9	+0.3
WHP	baz=348			*e*S	Sg	03 05 02.8	+1.1
TCU	Taichung baz=326	1.13	321	*e*P	Pn	03 04 46.2	-0.6
TCU	baz=326			*e*S	Sn	03 05 02.1	+0.2
SSPT	Xinbi baz=217	1.14	226	*e*P	Pb	03 04 47.6	+0.6
CHN8	Yiju baz=275	1.15	274	*e*P	Pb	03 04 47.6	+0.4
CHN8	baz=275			*e*S	Sg	03 05 04.0	+0.9
NNSB	Datong baz=15	1.15	357	P	Pn	03 04 46.3	-1.0
NNSB	baz=15			*e*S	Sb	03 05 01.1	-1.0
NNSH	Datong baz=15	1.15	357	*e*P	Pn	03 04 46.1	-1.2
NNSH	baz=15			*e*S	Sb	03 05 01.5	-0.6
WCHH	Zhanghua baz=309	1.15	314	*e*P	Pn	03 04 46.9	-0.2
WCHH	baz=309			*e*S	Sb	03 05 01.9	-0.1
SNJT	Kaohsiung City baz=238	1.16	244	*e*P	Pg	03 04 49.4	+1.2
SNJT	baz=238			*e*S	Sg	03 05 06.8	+3.5
NNS	Nan Shan baz=15	1.16	356	*e*P	Pn	03 04 46.6	-0.8
NNS	baz=15			*e*S	Sb	03 05 02.3	-0.1
SCLT	Jiali baz=264	1.17	265	*e*S	Sg	03 05 05.1	+1.5
ENA	Nanau baz=9.0	1.18	13	*e*P	Pn	03 04 46.1	-1.4
ENA	baz=9.0			*e*S	Sb	03 05 02.1	-0.6
RLNB	Erlin baz=305	1.18	302	*e*P	Pn	03 04 47.9	+0.4
RLNB	baz=305			*e*S	Sg	03 05 05.2	+1.2
SCZT	Fangliau baz=208	1.19	221	*e*P	Pn	03 04 47.5	-0.1
SCZT	baz=208			*e*S	Sb	03 05 02.2	-0.8
WSF	Szhu baz=291	1.19	288	*e*P	Pb	03 04 48.2	+0.3
WSF	baz=291			*e*S	Sg	03 05 04.9	+0.5
WTCT	Ta-ch'eng baz=302	1.23	299	*e*S	Sb	03 05 04.6	+0.4
WSSB	Gushan baz=236	1.27	241	*e*P	Pg	03 04 50.9	+0.6
WSSB	baz=236			*e*S	Sg	03 05 08.4	+1.5
NSY	Sanyi baz=337	1.30	331	*e*P	Pb	03 04 50.6	+0.7
NSY	baz=337			*e*S	Sg	03 05 08.5	+0.5
WDJ	Dajia District baz=327	1.30	325	*e*P	Pb	03 04 50.7	+0.8
NDT	Datong Townshi baz=20	1.32	2	*e*P	Pn	03 04 49.1	-0.4
NDT	baz=20			*e*S	Sn	03 05 06.6	-0.2
PTSB	Yuanli baz=335	1.36	330	*e*S	Sg	03 05 10.5	+0.8
ENTT	Nioudou baz=11	1.36	4	*e*P	Pn	03 04 49.4	-0.7
ENTT	baz=11			*e*S	Sn	03 05 06.7	-1.1
TWC	Suao baz=9.0	1.38	15	*e*P	Pn	03 04 51.0	+0.7
TWC	baz=9.0			*e*S	Sn	03 05 07.6	-0.4
YHNB	Yeheng baz=17	1.39	357	P	Pn	03 04 50.3	-0.2
YHNB	baz=17			*e*S	Sn	03 05 08.6	0.0
NMLH	Miaoli baz=356	1.40	334	*e*P	Pn	03 04 50.6	+0.1
NMLH	baz=356			*e*S	Sg	03 05 11.4	+0.5
NSK	Sanguang baz=17	1.40	356	*e*P	Pn	03 04 50.8	+0.2
NSK	baz=17			*e*S	Sn	03 05 08.7	-0.1
EOS1	EOS1 baz=43	1.41	26	P	Pb	03 04 51.9	+0.3
EOS1	baz=43			*e*S	Sg	03 05 11.4	+0.1
LIOB	Emei baz=346	1.42	344	*e*P	Pb	03 04 52.4	+0.5
TWE	Neicheng baz=11	1.45	7	*e*P	Pn	03 04 51.5	+0.2
TWKBT	Hengchun baz=189	1.46	204	*e*P	Pn	03 04 51.3	-0.1
TWKBT	baz=189			*e*S	Sb	03 05 11.2	+0.5
TWK1	Hengchun baz=189	1.46	205	*e*P	Pn	03 04 51.1	-0.2
TWK1	baz=189			*e*S	Sn	03 05 10.6	+0.5
TSEB	Hengchuen, Pin baz=186	1.46	201	*e*P	Pb	03 04 53.0	+0.5
TSEB	baz=186			*e*S	Sb	03 05 11.4	+0.5
NWLT	Wulai baz=20	1.50	1	*e*P	Pn	03 04 51.9	0.0
NWLT	baz=20			*e*S	Sn	03 05 09.7	-1.5
NTC	Toucheng baz=17	1.61	12	*e*P	Pb	03 04 56.0	+0.9
NTC	baz=17			*e*S	Sb	03 05 16.5	+1.4
WDGT	Dungji baz=269	1.66	270	*e*P	Pn	03 04 53.4	-0.7
WDGT	baz=269			*e*S	Sn	03 05 14.4	-0.6
TIPB	Shuangxi baz=16	1.72	11	*e*P	Pn	03 04 54.7	-0.4
TIPB	baz=16			*e*S	Sn	03 05 16.8	+0.1
PHUB	P'eng-hu baz=279	1.75	278	*e*P	Pn	03 04 54.9	-0.5
PHUB	baz=279			*e*S	Sn	03 05 15.5	-1.8
PNG	Penghu baz=281	1.77	280	P	Pn	03 04 55.4	-0.3
PNG	baz=281			*e*S	Sn	03 05 17.7	-0.2
TWB1	Santiao Chiao baz=7.0	1.79	16	*e*P	Pn	03 04 57.4	+1.4
JYNG	Yonagunijimaku	1.79	49	P	Pn	03 04 57.4	+1.4
JYNG				S	Sn	03 05 18.8	+0.4
NWF	Wu-fen Shan baz=14	1.81	9	*e*P	Pn	03 04 56.8	+0.5
NWF	baz=14			*e*S	Sn	03 05 19.3	+0.3
WFSB	Wu-fen Shan baz=14	1.81	9	*e*P	Pn	03 04 57.2	+0.9
WFSB	baz=14			*e*S	Sn	03 05 18.5	-0.4
YOJ	Yonaguni jima baz=53	1.85	50	*e*P	Pn	03 04 56.8	0.0
YOJ	baz=53			*e*S	Sb	03 05 21.7	-0.3
YOJ	Yonaguni jima	1.85	50	P	Pn	03 04 57.3	+0.6
YOJ				S	Sn	03 05 20.5	+0.8
YM01	YM01 baz=3.0	1.87	3	*e*P	Pn	03 04 57.4	+0.4
VCHM	Qimei baz=268	1.87	268	P	Pn	03 04 56.6	-0.4
VCHM	baz=268			*e*S	Sn	03 05 20.8	+0.5
HATJ	Hateruma jima	2.29	70	P	Pn	03 05 02.0	-0.8
HATJ				S	Sn	03 05 30.3	-0.3
IRIF	Iriomote-Funau	2.33	63	P	Pn	03 05 04.2	+0.8
IRIF				*e*S	Sn	03 05 32.5	+0.8
VWUC	VWUC baz=299	2.51	313	*e*P	Pn	03 05 05.9	+0.1
JKRS	Kuro-shima	2.52	67	P	Pn	03 05 08.1	+2.1
JKRS				S	Sn	03 05 36.8	+0.3
JIJ	Ishigaki jima	2.69	66	P	Pn	03 05 08.5	+0.2
JIJ				S	Sn	03 05 39.4	-1.0
PTMZ	Houxiangcun baz=296	2.77	310	*e*P	Pn	03 05 09.4	+0.1
JISG	Ishigakijimahi	2.92	63	P	Pn	03 05 10.7	-0.7
JISG				*e*S	Sn	03 05 44.7	-1.4
KNMB	Chin-men Tao baz=293	3.05	293	*e*P	Pn	03 05 12.4	-0.9
JTJ	Tarama	3.26	65	P	Pn	03 05 16.0	-0.2
JTJ				*e*S	Sn	03 05 54.2	-0.5
AXDP	Jialang baz=297	3.58	298	P	Pn	03 05 20.2	-0.3
JIRB	Irabujima	3.73	65	S	Sn	03 06 05.8	-0.4
JMJ2	Miyako jima3	3.83	67	S	Sn	03 06 08.4	-0.2
JIKM	Ikemajima	3.83	64	S	Sn	03 06 07.6	-1.1
JOGS	Gusukube	3.90	67	S	Sn	03 06 10.9	+0.5

JMA 27 03:07:55.3±0.2**, 37°.92N**×**143°.53E, h50^{km}, M4.0, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	1.67	284	P	Pn	03 08 22.8	+0.6
JIKH				*e*S	Sn	03 08 42.7	+0.2
JIO	Ouri	1.80	288	P	Pn	03 08 25.0	+1.1
JIO				*e*S	Sn	03 08 46.2	+0.7
JKMT	Kesennumamotoy	1.84	299	P	Pn	03 08 25.3	+0.8
JKMT				S	Sn	03 08 47.5	+0.9
OFUJ	Ofunato	1.86	309	P	Pn	03 08 25.6	+0.8
OFUJ				S	Sn	03 08 47.8	+0.7
JMK	Ichinoseki	2.09	300	P	Pn	03 08 28.9	+1.1
JMK				S	Sn	03 08 53.7	+1.1
JOM	Ohasama	2.34	312	P	Pn	03 08 32.3	+1.0
JOM				S	Sn	03 09 00.2	+1.4
JFT	Otama	2.56	262	P	Pn	03 08 35.6	+1.2
JFT				*e*S	Sn	03 09 05.3	+0.9
JYK	Kaneyama	2.68	293	P	Pn	03 08 37.8	+1.8
JYK				*e*S	Sn	03 09 09.4	+2.2
JANG	Nango	2.91	328	P	Pn	03 08 39.8	+0.7
JANG				*e*S	Sn	03 09 13.3	+0.5
JAG	Ashikaga	3.58	247	P	Pn	03 08 48.7	+0.4
JAG				*e*S	Sn	03 09 29.3	-0.1
BSO1	Boso 1	3.86	213	P	Pn	03 08 49.8	-1.8
BSO1				*e*S	Sn	03 09 33.4	-2.0
JOT	Ohata	3.95	332	P	Pn	03 08 55.2	+1.8
JRY	Ryogami san	4.17	244	P	Pn	03 08 56.6	+0.3
JRY				S	Sn	03 09 41.8	-2.0
JNBK	Urakawa-nobuka	4.39	352	P	Pn	03 09 00.1	+0.7
JNBK				*e*S	Sn	03 09 49.2	-0.1
JKB	Kayabe	4.40	335	P	Pn	03 09 01.1	+1.6
JKB				S	Sn	03 09 49.7	+0.2
JOD2	Odawara 2	4.45	235	P	Pn	03 09 00.1	-0.2
JOD2				S	Sn	03 09 47.5	-3.3
MAT	Matsushiro	4.46	254	P	Pn	03 09 02.2	+1.7
MAT				*e*S	Sn	03 09 51.7	+0.6
JCH	Churui	4.69	358	P	Pn	03 09 03.5	0.0
JCH				*e*S	Sn	03 09 54.7	-1.9

KEA 27 03:16:06.5±0.0**, 40°.73N**×**122°.54E, h0^{km}, ML2.5**/2**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUJ	Sinuiju	1.62	112	Pg	Pg	03 16 37.5	0.0
SUJ				Sg	Sg	03 16 58.6	+0.1
PYS	Pyongsong	2.94	119	Pg	Pb	03 17 00.8	+1.0
PYS				Sg	Sb	03 17 38.6	+2.3
PYAG	Pyongyang	2.99	123	Sg	Sb	03 17 39.1	+1.4
HHU	Hamhung	3.90	100	Sg	Sg	03 18 12.4	+0.7

IDC ***27*** *03:19:36.0±2.2, 37°.99N×143°.62E, h0^{km}, mb3.6/3, mb1 3.7/6, mb1mx3.4/45, mbtmp3.7/6, ML3.5/2, Error ellipse: s-maj=52.7km s-min=25.4km az=84.0*

JMA ***27*** *03:19:39.1±0.2, 38°.09N×143°.64E, h46^{km}, M3.4*

ISC 27 03:19:37.1±1.3**, 37°.99N**±0°.06×**143°.74E**±0°.10**, h19^{km}, n21,** σ**1^{s}.84**/25**, mb3.8**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	1.82	281	P	Pn	03 20 07.4	+0.1
JIO	Ouri	1.94	285	P	Pn	03 20 09.1	+0.1
JIO				*e*S	Sn	03 20 31.3	-1.4
OFUJ	Ofunato	1.95	305	P	Pn	03 20 09.0	-0.2
JKMT	Kesennumamotoy	1.96	295	P	Pn	03 20 09.2	-0.1
JKMT				S	Sn	03 20 31.4	-1.9
JMK	Ichinoseki	2.19	297	P	Pn	03 20 12.7	+0.2
JOM	Ohasama	2.42	309	P	Pn	03 20 16.2	+0.6
JFT	Otama	2.73	261	P	Pn	03 20 21.1	+1.1
JFT				*e*S	Sn	03 20 52.0	-0.5
JYK	Kaneyama	2.81	290	P	Pn	03 20 21.9	+0.9
JAG	Ashikaga	3.76	247	P	Pn	03 20 35.2	+1.1
JRY	Ryogami san	4.34	244	P	Pn	03 20 43.7	+1.6
JRY				*e*S	Sn	03 21 30.6	-1.6
JNBK	Urakawa-nobuka	4.35	350	P	Pn	03 20 43.3	+1.1
JNBK				S	Sn	03 21 30.6	-1.7
JOD2	Odawara 2	4.62	235	*e*S	Sn	03 21 36.7	-2.4
MJAR	Matsushiro Arr 0.1nm,0.3s,baz=68,slow=9.9,SNR=2.3	4.64	254	Pn	Pn	03 20 45.0	-1.2
JHJ	Hachijo jima 2 6.2nm,0.3s,baz=53,slow=20,SNR=1.8	5.83	215	Pn	Pn	03 21 02.9	+0.4
JHJ	7.5nm,0.3s,baz=108,slow=20,SNR=1.8			Sn	Sn	03 22 03.0	-5.9
ASAJ	Asahikawa 0.9nm,0.3s,baz=180,slow=20,SNR=6.1	6.18	352	Pn	Pn	03 21 07.0	-0.3
ASAJ	0.3nm,0.3s,baz=86,slow=14,SNR=1.4			Sn	Sn	03 22 15.1	-2.3
H11N2	WAKE ISLAND Hy baz=317,slow=76,SNR=4.5	27.13	126	T	T	03 53 42.9	
H11N1	WAKE ISLAND Hy baz=317,slow=76,SNR=4.5	27.14	126	T	T	03 53 42.4	
H11N3	WAKE ISLAND Hy baz=317,slow=76,SNR=4.5	27.14	126	T	T	03 53 42.4	
MKAR	Makanchi Array 0.3nm,0.7s,baz=77,slow=7.6,SNR=3.9	45.18	302	P	P	03 27 54.1	+1.5
KURBB	Kurchatov Arra 0.5nm,0.6s,baz=83,slow=8.5,SNR=4.7	46.87	308	P	P	03 28 07.5	+1.7
WRA	Warramunga Arr 1.0nm,0.7s,baz=10,slow=7.3,SNR=8.0	58.30	190	P	P	03 29 32.3	+1.6

JMA ***27*** *03:23:58.6±0.1, 38°.17N×141°.68E, h50^{km}±1^{km}, M3.8*

JMA Felt I J1.

IDC ***27*** *03:23:59.1±1.1, 38°.13N×141°.95E, h70^{km}±7^{km}, mb3.4/9, mb1 3.5/13, mb1mx3.3/43, mbtmp3.7/13, MS2.4/1, Ms1 2.4/1, ms1mx2.1/28, Error ellipse: s-maj=20.3km s-min=10.1km az=108.0*

ISC 27 03:23:58.8±1.0**, 38°.17N**±0°.05×**141°.76E**±0°.09**, h56^{km}**±7^{km}**, n36,** σ**1^{s}.73**/47**, mb3.7**/9**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.27	301	P	Pn	03 24 07.1	-1.2
JIKH				*i* S	Sn	03 24 13.0	-2.1
JIO	Ouri	0.43	311	P	Pn	03 24 08.6	-1.1
JIO				S	Sn	03 24 15.5	-2.1
JKMT	Kesennumamotoy	0.68	341	P	Pn	03 24 11.7	-0.8
JKMT				S	Sn	03 24 20.9	-1.6
JOFO	Osakifurukawao	0.79	303	P	Pn	03 24 13.2	-0.8
JOFO				S	Sn	03 24 24.1	-1.0
JMM	Marumori	0.82	248	P	Pn	03 24 12.8	-1.6
JMM				S	Sn	03 24 23.1	-2.7
JOU	Okura	0.89	283	P	Pn	03 24 14.1	-1.1
JOU				S	Sn	03 24 25.5	-1.8
JMK	Ichinoseki	0.89	332	P	Pn	03 24 14.6	-0.6
JMK				S	Sn	03 24 25.9	-1.3
JFK	Kawauchi	1.07	221	P	Pn	03 24 16.5	-1.1
JFT	Otama	1.30	240	P	Pn	03 24 20.0	-0.7
JFT				S	Sn	03 24 35.5	-1.7
JYK	Kaneyama	1.33	305	P	Pn	03 24 20.3	-0.8
JYS	Shirataka	1.34	273	P	Pn	03 24 20.4	-0.8
JYS				S	Sn	03 24 36.6	-1.4
JOM	Ohasama	1.35	344	P	Pn	03 24 21.1	-0.3
JOM				S	Sn	03 24 37.6	-0.7
JRG	Rokugo	1.51	325	P	Pn	03 24 23.4	-0.1
JYA	Atsumi	1.66	285	P	Pn	03 24 24.8	-0.8
MJAR	Matsushiro Arr 0.5nm,0.3s,baz=59,slow=10.0,SNR=11	3.27	241	P	Pn	03 24 47.9	+0.4
MJAR	0.2nm,0.3s,baz=78,slow=18,SNR=1.4			S	Sn	03 25 29.8	+4.6
MAT	Matsushiro	3.27	241	P	Pn	03 24 47.7	+0.2
MAT				*e*S	Sn	03 25 25.6	+0.5
JHJ	Hachijo jima 2 3.4nm,0.3s,baz=0.0,slow=20,SNR=1.2	5.29	198	P	Pn	03 25 14.9	-0.4
JHJ	5.8nm,0.3s,baz=90,slow=20,SNR=1.9			S	Sn	03 26 11.0	-3.9
ASAJ	Asahikawa 1.0nm,0.3s,baz=214,slow=14,SNR=6.9	5.97	6	P	Pn	03 25 23.5	-1.0
ASAJ	0.3nm,0.3s,baz=253,slow=20,SNR=1.7			S	Sn	03 26 31.9	+0.3
USRK	Ussuriysk Ar. baz=119,slow=16,SNR=4.2	9.51	312	P	Pn	03 26 13.6	+0.6
KSRS	Korea Array comp=Z,18nm,18.8s,baz=255,slow=35	10.97	271	LR	LR	03 30 26.2	
H11N2	WAKE ISLAND Hy baz=316,slow=75,SNR=53	28.51	123	T	T	04 00 01.6	
H11N1	WAKE ISLAND Hy baz=316,slow=75,SNR=105	28.52	123	T	T	04 00 02.1	
H11N3	WAKE ISLAND Hy baz=316,slow=75,SNR=76	28.53	123	T	T	04 00 03.8	
H11S1	WAKE ISLAND Hy baz=317,slow=76,SNR=72	29.27	125	T	T	04 00 59.3	
H11S3	WAKE ISLAND Hy baz=317,slow=76,SNR=71	29.27	125	T	T	04 00 59.3	
H11S2	WAKE ISLAND Hy baz=317,slow=76,SNR=64	29.28	125	T	T	04 01 01.0	
ZALV	Zalesovo Beam 1.7nm,0.6s,baz=87,slow=9.1,SNR=4.2	41.36	311	P	P	03 31 38.2	-0.8
ZALV	0.6nm,0.3s,baz=64,slow=6.8,SNR=2.0			pP	pP	03 31 56.6	+3.2
MKAR	Makanchi Array 0.5nm,0.6s,baz=86,slow=10,SNR=9.0	43.76	301	P	P	03 31 58.3	-0.3
MKAR	1.0nm,0.7s,baz=88,slow=9.8,SNR=10			pP	pP	03 32 16.6	+3.4
KURBB	Kurchatov Arra 0.9nm,0.3s,baz=81,slow=7.8,SNR=12	45.53	307	P	P	03 32 12.4	-0.2
KURBB	4.1nm,0.7s,baz=82,slow=8.3,SNR=15			pP	pP	03 32 30.3	+3.1
BVAR	Borovoye Array 0.4nm,0.5s,baz=83,slow=6.0,SNR=3.0	50.02	312	P	P	03 32 46.5	-0.8
BVAR	0.3nm,0.4s,baz=54,slow=11,SNR=3.1			pP	pP	03 33 05.7	+3.6
WRA	Warramunga Arr 0.7nm,0.3s,baz=4.8,slow=7.4,SNR=5.7	58.23	188	P	P	03 33 47.2	-0.1
ASAR	Alice Springs 0.2nm,0.4s,baz=358,slow=4.8,SNR=4.9	61.95	188	P	P	03 34 12.6	-0.2
YKA	Yellowknife Ar 0.4nm,0.9s,baz=286,slow=6.6,SNR=3.4	62.69	31	P	P	03 34 15.5	-1.8
FINES	FINESS Array B 1.1nm,0.7s,baz=1.4,slow=5.6,SNR=2.2	67.94	332	P	P	03 34 51.3	+0.1
NB2	NORSAR Subarra comp=Z,0.3nm,0.5s,baz=38,slow=6.5	73.24	337	P	P	03 35 23.9	+0.3
NOA	NORSAR Array B	73.24	337	P	P	03 35 23.3	-0.3

comp=Z,0.3nm,0.5s,baz=52,slow=7.1,SNR=4.5

NEIC **27** *03:49:42.7±1.5, 12°.10S±0°.06×166°.59E±0°.06, h98^{km}±1^{km}, mb5.7/139, Mwb6.0/73, Mww6.0, Mwc6.0(GCMT), Error ellipse: s-maj=11.3km s-min=8.6km az=122.0*

MOS **27** *03:49:44.4±0.9, 12°.06S×166°.63E, h118^{km}, mb5.8/45, Error ellipse: s-maj=7.5km s-min=6.3km az=125.0*

BJI **27** *03:49:45.5±0.0, 11°.50S×166°.70E, h107^{km}, mB6.2/73, mb5.8/89*

IDC **27** *03:49:46.4±1.5, 12°.14S×166°.64E, h118^{km}±12^{km}, mb5.2/27, mb1 5.3/30, mb1mx5.2/32, mbtmp5.5/30, MS5.0/39, Ms1 5.0/39, ms1mx4.9/44, Error ellipse: s-maj=10.4km s-min=8.2km az=58.0*

GCMT **27** *03:49:46.7±0.1, 12°.13S±0°.01×166°.46E, h116^{km}, MW6.0/160, Moment Tensor Solution. s160,c351; s156,c506; Duration: 2^{s}4 Moment tensor: Scale 10^{18} Nm; M_{rr}1.08±.01; $M_{\theta\theta}$-0.20±.01; $M_{\phi\phi}$-0.87±.01; $M_{r\theta}$0.02±.01; $M_{\theta\phi}$0.29±.01; $M_{\phi r}$-0.55±.01; Best double couple: $M_0$1.16700×10^{18} NP1:ϕ_s333.00000°, δ32.00000°, λ78.00000°. NP2:ϕ_s167.00000°, δ59.00000°, λ97.00000°. Principal axes: T 1.2250, Plg75.0000°, Azm98.0000°; N -0.1170, Plg6.0000°, Azm344.0000°; P -1.1100, Plg14.0000°, Azm252.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC **27** *03:49:46.8, 12°.14S×166°.51E, h99^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.47; $M_{\theta\theta}$-0.26; $M_{\phi\phi}$-1.22; $M_{r\theta}$-0.05; $M_{\theta\phi}$0.30; $M_{\phi r}$-0.32; Fault plane solution: $M_0$1.43000×10^{18} NP1:ϕ_s339.78000°, δ39.25000°, λ83.03000°. NP2:ϕ_s168.75000°, δ51.10000°, λ95.66000°. Principal axes: T 1.5139, Plg83.0000°, Azm112.0000°; N -0.1807, Plg4.0000°, Azm345.0000°; P -1.3332, Plg6.0000°, Azm255.0000°;*

NEIC **27** *03:49:47, 11°.99S×166°.33E, h110^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.01; $M_{\theta\theta}$-0.19; $M_{\phi\phi}$-0.82; $M_{r\theta}$0.00; $M_{\theta\phi}$0.22; $M_{\phi r}$-0.56; Fault plane solution: $M_0$1.11000×10^{18} NP1:ϕ_s170.00000°, δ60.00000°, λ97.00000°. NP2:ϕ_s336.00000°, δ31.00000°, λ78.00000°. Principal axes: T 1.1741, Plg74.0000°, Azm99.0000°; N -0.1421, Plg6.0000°, Azm347.0000°; P -1.0320, Plg15.0000°, Azm255.0000°;*

NEIC **27** *03:49:47, 12°.12S×166°.46E, h115^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.12; $M_{\theta\theta}$-0.21; $M_{\phi\phi}$-0.91; $M_{r\theta}$0.02; $M_{\theta\phi}$0.31; $M_{\phi r}$-0.56; Fault plane solution: $M_0$1.21000×10^{18} NP1:ϕ_s167.00000°, δ59.00000°, λ98.00000°. NP2:ϕ_s333.00000°, δ32.00000°, λ78.00000°. Principal axes: T 1.2654, Plg75.0000°, Azm99.0000°; N -0.1150, Plg7.0000°, Azm343.0000°; P -1.1504, Plg13.0000°, Azm251.0000°;*

ISC 27 03:49:44.5±0.3**, 12°.14S**±0°.03×**166°.62E**±0°.03**, h110**^{km}±2^{km}**, h111**^{km}**:pP-P, n1291, σ1^{s}35**/1412**, mb5.8**/221**, 97C-14D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	7.09	292	P	Pn	03 51 26.4	+0.8
	54nm,0.3s,baz=161,slow=4.3,SNR=22						
HNR				S	Sn	03 52 46.7	+2.0
	267nm,0.3s,baz=204,slow=20,SNR=6.5						
HNR				LR	LR	03 54 26.8	
	comp=Z,13µm,18.4s,baz=124,slow=40						
HNR	Honiara	7.09	292	i P	Pn	03 51 27.5	+1.9
HNR	Honiara	7.09	292		Pn	03 51 22.9	-2.7
HNR				Sn	Sn	03 52 42.5	-2.3
DZM	Mont Dzumac	9.88	181	ePn	Pn	03 52 06.3	+2.7
	1µm,1.2s						
DZM				eSn	Sn	03 53 50.7	-2.0
	897nm,1.0s						
DZM	Mont Dzumac	9.88	181	P	Pn	03 52 06.3	+2.7
	29nm,0.3s,baz=307,slow=16,SNR=268						
DZM				S	Sn	03 53 53.6	+0.9
	18nm,0.3s,baz=59,slow=23,SNR=3.9						
DZM				LR	LR	03 54 38.4	
	comp=Z,4µm,18.9s,baz=16,slow=30						
DZM	Mont Dzumac	9.88	181		Pn	03 52 03.1	-0.4
DZM				Sn	Sn	03 53 52.3	-0.3
MSVF	Nonsavu	12.36	118	i P	P	03 52 42.8	-1.6
MSVF				pmax	pmax		
	comp=Z,1µm,1.0s						
MSVF	Nonsavu	12.36	118		Pn	03 52 36.2	-0.7
FUNA	Funafuti	12.88	75		Pn	03 52 44.7	+1.1
TARA	Tarawa	14.79	25	P	Pn	03 53 09.1	+0.9
KRVT	Keravat (AS076	16.40	297	P	P	03 53 30.6	+1.5
	comp=Z,7.6nm,0.3s,baz=182,slow=3.9,SNR=4.8						
KRVT				S	S	03 56 33.1	-1.9
	comp=Z,5.7nm,0.3s,baz=107,slow=20,SNR=1.4						
PMG	Port Moresby	19.31	276	P	Pn	03 54 03.1	-0.2
	comp=Z,2.2nm,0.3s,baz=98,slow=5.8,SNR=51						
PMG	Port Moresby	19.31	276	ceP	Pn	03 54 02.8	-0.5
PMG				pmax	pmax		
	comp=Z,1µm,1.0s						
PMG	Port Moresby	19.31	276	P	P	03 54 02.1	+0.9
PMG				IAmb	IAmb	03 54 08.6	
	comp=Z,628nm,1.1s						
EIDS	Eidsvold	19.71	226	P	Pn	03 54 08.4	+0.4
	baz=20,SNR=181						
EIDS	Eidsvold	19.71	226	P	P	03 54 04.8	-0.7
EIDS				IAmb	IAmb	03 54 11.3	
	comp=Z,426nm,0.8s						
LHI	Lord Howe Isla	20.51	199	P	Pn	03 54 16.1	-1.0
	baz=20,SNR=16						
LHI	Lord Howe Isla	20.51	199	P	P	03 54 14.5	+0.6
LHI				IAmb	IAmb	03 54 18.5	
	comp=Z,966nm,1.5s						
PATS	Pohnpei	20.58	336	P	Pn	03 54 16.9	-1.2
	baz=21,SNR=11						
PATS	Pohnpei	20.58	336	P	P	03 54 13.1	-1.8
PATS				IAmb	IAmb	03 54 41.0	
	comp=Z,514nm,1.0s						
CTA	Charters Tower	21.09	245	P	P	03 54 22.3	+2.0
	comp=Z,180nm,0.8s,baz=74,slow=12,SNR=113						
CTAO	Charters Tower	21.09	245	P	P	03 54 22.3	+2.0
CTAO				pmax	pmax		
	comp=Z,437nm,1.9s						
AFI	Afiamalu	21.12	97	P	P	03 54 23.4	+2.7
	comp=Z,483nm,1.1s,baz=268,slow=16,SNR=35						
AFI	Afiamalu	21.12	97	P	P	03 54 22.3	+1.6
AFI				pmax	pmax		
	comp=Z,949nm,1.2s						
AFI	Afiamalu	21.12	97	P	P	03 54 22.3	+1.6
RMQ	Roma	22.05	227	P	P	03 54 31.5	+1.1
	baz=22,SNR=170						
MTSU	Mount Surprise	22.33	252	P	P	03 54 33.0	-0.5
	baz=22,SNR=85						
ARMA	Armidale	22.89	215	P	P	03 54 41.3	+2.3
	baz=23,SNR=143						
ARMA	Armidale	22.89	215	P	P	03 54 38.6	-0.5
ARMA				IAmb	IAmb	03 54 43.3	
	comp=Z,385nm,0.8s						
COEN	Coen	22.91	263	P	P	03 54 40.2	+0.9
	baz=23,SNR=19						
COEN	Coen	22.91	263	P	P	03 54 37.8	-1.5
COEN				IAmb	IAmb	03 55 06.8	
	comp=Z,438nm,0.8s						
KNTN	Kanton	23.38	68	P	P	03 54 40.5	-3.2
NIUE	Niue	23.60	110	P	P	03 54 48.6	+3.0
	baz=24,SNR=6.2						
NIUE	Niue	23.60	110	P	P	03 54 44.8	-0.8
OUZ	Omahuta	23.83	166	P	P	03 54 47.0	-0.5
MGCD	Mangrove Creek	25.33	212	P	P	03 55 04.0	+2.9
	baz=25,SNR=13						
QLP	Quilpie	25.48	232	P	P	03 55 03.9	+1.3
	baz=25,SNR=15						
RIV	Riverview	25.80	211	P	P	03 55 07.3	+2.0
	baz=26,SNR=5.7						
RIV	Riverview	25.80	211	P	P	03 55 08.3	+3.0
RIV				pmax	pmax		
	comp=Z,350nm,1.2s						
QIS	Mount Isa	27.21	249	P	P	03 55 19.6	+1.3
	baz=27,SNR=34						
CMSA	Cobar Meteorol	27.30	222	P	P	03 55 20.2	+1.4
	baz=27,SNR=44						
JAY	Jayapura	27.40	288	P	P	03 55 19.7	-0.3
	comp=Z,3µmcomp=Z,1µmcomp=Z,27nm,1.4s						
JAY	Jayapura	27.40	288	P	P	03 55 22.5	+2.5
JAY				pmax	pmax		
	comp=Z,43nm,1.4s						
YNG	Young	27.60	214	P	P	03 55 23.7	+2.1
	baz=28,SNR=20						
URZ	Urewera	27.65	162	P	P	03 55 23.5	+1.7
	comp=Z,57nm,0.7s,baz=258,slow=1.4,SNR=34						
URZ				S	S	03 59 55.1	-0.6
	comp=Z,11nm,1.0s,baz=280,slow=19,SNR=2.0						
URZ	Urewera	27.65	162	P	P	03 55 21.2	-0.6
URZ					S	03 59 56.2	+0.5
GENI	Genyem	27.87	288	P	P	03 55 33.4	+9.3
CNB	Canberra Magne	27.87	211	P	P	03 55 26.2	+2.1
	baz=28,SNR=7.1						
CAN	Canberra	28.06	212	P	P	03 55 27.9	+2.2
CAN				pmax	pmax		
	comp=Z,96nm,2.4s						
MILA	Mila	29.35	209	P	P	03 55 38.9	+1.8
	baz=29,SNR=3.8						
SNZO	South Karori	29.91	168	P	P	03 55 43.0	+1.1
SNZO				IAmb	IAmb	03 55 45.2	
	comp=Z,427nm,1.6s						
STKA	Stephens Creek	30.27	226	P	P	03 55 47.0	+1.7
	baz=30,SNR=125						
STKA	Stephens Creek	30.27	226	P	P	03 55 47.1	+1.8
	comp=Z,64nm,0.7s,baz=42,slow=9.4,SNR=141						
STKA				PcP	PcP	03 58 43.9	+0.5
	comp=Z,32nm,0.8s,baz=30,slow=2.3,SNR=2.9						
STKA				LR	LR	04 07 22.5	
	comp=Z,8µm,19.1s,baz=80,slow=35						
STKA	Stephens Creek	30.27	226	P	P	03 55 46.6	+1.3
STKA						03 58 42.9	
STKA				pmax	pmax		
	comp=Z,32nm,1.1s						
STKA	Stephens Creek	30.27	226	P	P	03 55 46.5	+1.3
STKA					PcP	03 58 42.9	-0.5
TOO	Toolangi	31.61	213	P	P	03 55 58.7	+1.7
	baz=32,SNR=42						
TOO	Toolangi	31.61	213	P	P	03 55 58.7	+1.7
TOO				pmax	pmax		
	comp=Z,80nm,0.8s						
TOO	Toolangi	31.61	213	IAmb	IAmb	03 55 59.7	
	comp=Z,80nm,0.8s						
RPZ	Rata Peaks	31.70	174	P	P	03 55 58.9	+1.3
	comp=Z,132nm,0.7s,baz=310,slow=0.7,SNR=47						
RPZ				LR	LR	04 08 00.8	
	comp=Z,1µm,21.4s,baz=342,slow=34						
WR0	Warramunga Arr	31.75	252	P	P	03 55 57.8	-0.6
WR0				PcP	PcP	03 58 45.5	-2.0
WRAB	Tennant Creek	31.93	252	ceP	P	03 56 00.1	+0.1
WRAB				pmax	pmax		
	comp=Z,71nm,1.0s						
WRAB	Tennant Creek	31.93	252	P	P	03 55 59.0	-0.9
WRAB				PcP	PcP	03 58 48.0	0.0
WB2	Warramunga Arr	31.93	252	P	P	03 55 59.3	-0.7
WB2				PcP	PcP	03 58 47.7	-0.3
WRA	Warramunga Arr	31.94	252	P	P	03 56 00.6	+0.5
	comp=Z,50nm,0.9s,baz=84,slow=9.1,SNR=116						
WRA				PcP	PcP	03 58 49.2	+1.1
	comp=Z,28nm,0.8s,baz=79,slow=2.8,SNR=9.5						
WRA				ScP	ScP	04 02 23.7	+2.0
	comp=Z,19nm,1.2s,baz=75,slow=3.6,SNR=6.3						
WRA				PKiKP	PKiKP	04 06 15.6	-0.9
	comp=Z,1.9nm,0.6s,baz=359,slow=0.6,SNR=13						
WRA				P3KPbc		04 27 31.2	
	comp=Z,0.4nm,0.6s,baz=256,slow=2.6,SNR=5.1						
WRA	Warramunga Arr	31.94	252	i P	P	03 56 00.1	0.0
WRA				pmax	pmax		
	comp=Z,11nm,0.4s						
WRA	Warramunga Arr	31.94	252	P	P	03 55 59.5	-0.6
WRA					PcP	03 58 47.4	-0.6
WRA				ScP	ScP	04 02 21.2	-0.4
HTT	Hallett	33.01	226	P	P	03 56 10.9	+1.6
	baz=33,SNR=43						
ASAR	Alice Springs	33.09	245	P	P	03 56 10.8	+0.6
	comp=Z,44nm,0.6s,baz=66,slow=10,SNR=542						
ASAR				PcP	PcP	03 58 51.7	+0.5
	comp=Z,14nm,0.7s,baz=70,slow=2.6,SNR=6.0						
ASAR				ScP	ScP	04 02 27.1	+1.4
	comp=Z,20nm,1.2s,baz=77,slow=2.9,SNR=9.9						
ASAR				PKiKP	PKiKP	04 06 17.3	0.0
	comp=Z,0.7nm,0.6s,baz=104,slow=2.3,SNR=2.9						
ASAR				LR	LR	04 09 33.2	
	comp=Z,3µm,18.7s,baz=76,slow=36						
ASAR				P3KPbc		04 27 26.3	
	comp=Z,0.5nm,0.7s,baz=266,slow=4.9,SNR=5.7						
ASAR	Alice Springs	33.09	245	P	P	03 56 09.4	-0.8
ASAR					PcP	03 58 51.1	-0.1
ASAR					ScP	04 02 26.0	+0.4
ARPS	Mount Arapiles	33.13	218	P	P	03 56 12.1	+1.8
	baz=33,SNR=50						
KDU	Kakadu	33.34	265	P	P	03 56 12.8	+0.4
	baz=33,SNR=21						
RAR	Rarotonga	33.37	110	P	P	03 56 14.5	+2.0
	comp=Z,18nm,0.8s,baz=250,slow=6.9,SNR=5.2						
RAR	Rarotonga	33.37	110	P	P	03 56 12.4	-0.1
GUMO	Guam	33.45	319	LR	LR	04 09 11.3	
	comp=Z,2µm,19.7s,baz=144,slow=35						
GUMO	Guam	33.45	319	P	P	03 56 13.3	+0.1
GUMO				pmax	pmax		
	comp=Z,307nm,0.9s						
GUMO	Guam	33.45	319	P	P	03 56 13.3	+0.1
MTN	Manton Dam	34.64	265	P	P	03 56 25.6	+2.0
	baz=34,SNR=18						
MTN	Manton Dam	34.64	265	P	P	03 56 23.9	+0.3
MTN				IAmb	IAmb	03 56 31.6	
	comp=Z,74nm,0.8s						
MTN				PcP	PcP	03 58 55.2	-0.5
MTN				S	S	04 01 41.0	-4.4
MTN				ScP	ScP	04 02 30.3	-0.8
BBOO	Buckleboo	34.74	229	P	P	03 56 25.5	+1.3
	baz=35,SNR=77						
BBOO	Buckleboo	34.74	229	IAmb	IAmb	03 56 27.5	
	comp=Z,104nm,0.8s						
TAU	Tasmania Unive	34.93	205	P	P	03 56 26.3	+0.5
TAU	Tasmania Unive	34.93	205	P	P	03 56 26.3	+0.5
FAKI	Fak Fak	35.24	282	P	P	03 56 27.8	-1.0
SIJI	Sorong	36.81	285	LR	LR	04 12 20.4	
	comp=Z,2µm,21.2s,baz=121,slow=37						
KNRA	Kununurra	36.89	260	P	P	03 56 43.6	+0.8
	baz=37,SNR=41						
BNDI	Bandanaira	37.08	279	P	P	03 56 45.6	+1.2
	comp=Z,5µmcomp=Z,12µmcomp=Z,868nm,1.5s						
MSAI	Masohi	38.31	280	P	P	03 56 56.1	+1.2
	comp=Z,20nm,0.8s						
WRKA	Warakurna	38.39	245	P	P	03 56 55.6	+0.2
	baz=38,SNR=257						
AAI	Ambon	38.93	279	P	P	03 57 00.4	+0.4
	comp=Z,6µmcomp=Z,3µmcomp=Z,133nm,0.7s						
FITZ	Fitzroy Crossi	39.94	256	P	P	03 57 09.0	+0.7
	baz=40,SNR=60						
FITZ	Fitzroy Crossi	39.94	256	LR	LR	04 13 06.6	
	comp=Z,3µm,19.2s,baz=78,slow=35						
FITZ	Fitzroy Crossi	39.94	256	IAmb	IAmb	03 57 40.0	
	comp=Z,115nm,0.9s						
NLAI	Namlea	40.10	279	P	P	03 57 11.6	+1.9
	comp=Z,8µmcomp=Z,479nm,1.2s						
FORT	Forrest	40.14	236	P	P	03 57 10.8	+1.0
	baz=40,SNR=168						
FORT	Forrest	40.14	236	P	P	03 57 10.3	+0.5
LBMI	Labuha	40.45	283	P	P	03 57 13.8	+1.2
	comp=Z,66µmcomp=Z,5µmcomp=Z,252nm,1.2s						
TNTI	Ternate	41.03	285	P	P	03 57 18.1	+0.7
	comp=Z,2µmcomp=Z,3µmcomp=Z,128nm,1.0s						
TNTI	Ternate	41.03	285	IAmb	IAmb	03 57 24.3	
	comp=Z,80nm,0.9s						
SANI	Sanana	41.49	281	P	P	03 57 22.3	+1.2
	comp=Z,5µmcomp=Z,4µmcomp=Z,202nm,0.8s						
SOEI	Soe	41.62	269	P	P	03 57 24.2	+1.8
	comp=Z,3µmcomp=Z,207nm,1.0s						
SOEI	Soe	41.62	269	IAmb	IAmb	03 57 29.7	
	comp=Z,141nm,0.8s						
PAE	Paea	42.61	103	epP	pP	03 57 59.0	+4.0
	comp=Z,34nm,1.2s						
PPT	Papeete	42.61	103	P	P	03 57 31.7	+1.5
	comp=Z,21nm,0.7s,baz=32,slow=19,SNR=1.9						
PPT				LR	LR	04 12 14.4	
	comp=Z,1µm,20.1s,baz=264,slow=32						
PPT2	Papeete2	42.61	103	epP	pP	03 57 59.7	+4.6
	comp=Z,297nm,1.3s						
PPT2				eS	S	04 03 42.9	-2.5
	comp=Z,2µm,24.0s						
PPT2				eLQ	LQ	04 07 43.5	
	comp=Z,9µm,30.5s						
PPT2				eLR	LR	04 09 30.7	
	comp=Z,25µm,32.0s						
TIAR	Tiarei	42.83	103	epP	pP	03 58 01.4	+4.6
	comp=Z,125nm,1.4s						
TVO	Taravao	42.92	103	epP	pP	03 58 01.8	+4.2
	comp=Z,56nm,1.2s						
TBI	Tubuai	43.13	111	epP	pP	03 58 01.9	+2.6
TBI				eS	S	04 03 50.6	-2.1
	comp=Z,2µm,28.2s						
TBI				eLQ	LQ	04 07 54.8	
	comp=Z,9µm,29.2s						
TBI				eLR	LR	04 09 47.4	
	comp=Z,12µm,35.0s						
MMRI	Maumere	43.76	270	P	P	03 57 40.3	+0.8
	comp=Z,5µmcomp=Z,5µmcomp=Z,366nm,1.1s						
BBSI	Bau Bau	43.99	275	P	P	03 57 43.1	+1.8
	comp=Z,1µmcomp=Z,50nm,0.9s						
MEH	Mehetia	44.05	103	epP	pP	03 58 10.9	+4.1
	comp=Z,183nm,1.3s						
KMSI	Cibinong	44.17	284	P	P	03 57 44.3	+1.5
	comp=Z,4µmcomp=Z,498nm,0.7s						
PMOR	Pomariorio Ree	44.25	99	eP	P	03 57 44.0	+0.6
	comp=Z,188nm,1.2s						
PMOR				epP	pwP	03 58 13.3	+2.7
	comp=Z,1µm,1.4s						
VAH	Vaihoa	44.50	99	eP	P	03 57 45.8	+0.4
	comp=Z,145nm,1.3s						
VAH				epP	pwP	03 58 15.0	+2.3
LUWI	Luwuk	44.86	281	P	P	03 57 49.7	+1.5
	comp=Z,5µmcomp=Z,298nm,1.0s						
DAV	Davao City (W)	45.05	293	⇑iP	P	03 57 49.5	-0.3
BASI	Baing, Sumba	45.17	268	P	P	03 57 53.0	+2.2
	comp=Z,2µmcomp=Z,4µmcomp=Z,212nm,0.8s						
KMBL	Kambalda	45.38	238	P	P	03 57 53.2	+1.0
	baz=45,SNR=101						
KCP	Kidapawan	45.47	293	⇑eP	P	03 57 53.5	+0.4
PSA00	Pilbara Seismi	45.59	252	P	P	03 57 54.4	+0.4
JCJ	Chichijima	45.65	329	LR	LR	04 12 57.2	
	comp=Z,772nm,20.3s,baz=139,slow=30						
MBWA	Marble Bar	45.67	252	P	P	03 57 54.3	-0.3
MBWA				IAmb	IAmb	03 57 56.8	
	comp=Z,172nm,1.1s						
MBWA				PcP	PcP	03 59 30.2	-0.9
APSI	Ampana	45.97	281	P	P	03 57 58.7	+1.7
	comp=Z,3µmcomp=Z,201nm,1.1s						
MRSI	Marisa	46.09	283	P	P	03 57 58.2	+0.3
	comp=Z,5µmcomp=Z,2µmcomp=Z,93nm,0.6s						
WBSI	Waikabubak, Su	46.41	268	P	P	03 58 01.3	+0.8
	comp=Z,4µmcomp=Z,340nm,0.8s						
BKSI	Bulukumba	46.41	274	P	P	03 58 01.3	+0.8
	comp=Z,4µmcomp=Z,2µmcomp=Z,108nm,0.8s						
BNSI	Bone	46.61	275	P	P	03 58 03.6	+1.5
	comp=Z,5µmcomp=Z,430nm,0.7s						
KAPI	Kappang	46.83	275	PcP	PcP	03 59 37.1	+1.8
	baz=132,slow=3.7						
KAPI	Kappang	46.83	275	P	P	03 58 03.7	-0.1
KAPI						03 59 35.2	
KAPI				pmax	pmax		
	comp=Z,152nm,0.7s						
KAPI	Kappang	46.83	275	P	P	03 58 03.7	-0.1
KAPI				IAmb	IAmb	03 58 07.0	
	comp=Z,152nm,0.7s						
KAPI					PcP	03 59 35.2	0.0
SPSI	Sidrap Palu	47.04	276	P	P	03 58 05.7	+0.3
	comp=Z,2µmcomp=Z,124nm,0.8s						
MEEK	Meekatharra	47.25	245	P	P	03 58 07.9	+1.0
	baz=47,SNR=242						
MPSI	Mapaga	48.00	282	P	P	03 58 13.3	+0.5
	comp=Z,4µmcomp=Z,3µmcomp=Z,301nm,0.7s						
PLAI	Plampang	48.10	269	P	P	03 58 14.0	+0.4
	comp=Z,4µmcomp=Z,6µmcomp=Z,415nm,1.1s						
OPA	Opana	48.32	46	P	P	03 58 14.5	-0.6
OPA				*PP	pP	03 58 39.3	-1.4
OPA				pmax	pmax		
	comp=Z,2µm,1.8s						
OPA	Opana	48.32	46	P	P	03 58 14.5	-0.6
OPA					pP	03 58 39.3	-1.4
KHU	Kahuku	48.55	51	P	P	03 58 15.1	-2.1
KHU	Kahuku	48.55	51	P	P	03 58 15.1	-2.1
KLBR	Kellerberrin	48.86	239	P	P	03 58 19.7	+0.4
	baz=49,SNR=41						
POHA	Pohakuloa	48.92	50	P	P	03 58 20.1	+0.1
HPAH	Hawaii Prepara	48.96	50	P	P	03 58 19.9	-0.3
BLDU	Ballidu	49.55	240	P	P	03 58 25.1	+0.6
	baz=49,SNR=29						
NWAO	Narrogin (SRO)	49.58	237	P	P	03 58 25.4	+0.8
	baz=50,SNR=32						
NWAO	Narrogin (SRO)	49.58	237	P	P	03 58 24.3	-0.4
NWAO				pmax	pmax		
	comp=Z,148nm,0.9s						
NWAO	Narrogin (SRO)	49.58	237	P	P	03 58 24.3	-0.4
MORW	Morawa	49.87	242	P	P	03 58 27.7	+0.8
	baz=50,SNR=50						
MORW	Morawa	49.87	242	P	P	03 58 26.9	0.0
RKGY	Rocky Gully	50.18	235	P	P	03 58 30.6	+1.5
	baz=50,SNR=16						
MUN	Mundaring	50.23	238	P	P	03 58 30.8	+1.2
	baz=50,SNR=44						
SMKI	Samarinda	50.37	280	P	P	03 58 33.6	+2.7
	comp=Z,362nm,1.0s						
BKB	Balikpapan	50.46	278	P	P	03 58 34.2	+2.6
	comp=Z,6µmcomp=Z,4µmcomp=Z,237nm,0.9s						
DNP	Denpasar	50.63	269	P	P	03 58 34.5	+1.7
	comp=Z,28µmcomp=Z,604nm,0.8s						
SRBI	Singaraja	50.72	269	P	P	03 58 34.3	+0.8
	comp=Z,7µmcomp=Z,350nm,1.6s						
GIRL	Giralia	50.85	251	P	P	03 58 37.1	+2.7
	baz=51,SNR=8.4						
JAGI	Jajag, Banyuwa	51.69	269	P	P	03 58 40.4	-0.4
	comp=Z,4µmcomp=Z,5µmcomp=Z,348nm,1.0s						
JHJ	Hachijo jima 2	51.78	331	LR	LR	04 18 50.6	
	comp=Z,723nm,19.3s,baz=112,slow=34						
TGY	Tagaytay City	52.25	299	LR	LR	04 18 13.9	
	comp=Z,1µm,20.8s,baz=78,slow=33						
TAOE	Nuku Hiva Isla	52.38	92	eS	S	04 05 59.2	-4.7
	comp=Z,2µm,23.4s						
TAOE				eLQ	LQ	04 11 45.9	
	comp=Z,4µm,27.2s						
TAOE				eLR	LR	04 14 01.4	
	comp=Z,9µm,32.4s						
GMJI	Gumukmas	52.41	269	P	P	03 58 46.5	+0.4
	comp=Z,3µmcomp=Z,134nm,1.8s						
SPMM	Sapulut	52.60	286	P	P	03 58 50.0	+2.5
KKM	Kota Kinabalu	53.27	287	P	P	03 58 52.0	-0.6
GRJI	Gresik	53.58	270	P	P	03 58 56.8	+2.1
	comp=Z,939nmcomp=Z,82nm,0.7s						
JOW	Kunigami	53.74	317	IAmb	IAmb	03 58 58.9	
	comp=Z,118nm,0.8s						
PWJI	Pagerwojo	54.06	269	P	P	03 58 58.7	+0.5
	comp=Z,4µmcomp=Z,175nm,1.4s						
SIPP	Brgy, Tapao	54.48	302	⇑eP	P	03 59 02.0	+0.9
PCJI	Pacitan	54.64	269	P	P	03 59 03.6	+1.2
	comp=Z,8µmcomp=Z,517nm,1.3s						
INU	Inuyama	54.92	330	P	P	03 59 03.1	-0.9
WOJI	Wonogiri, Jawa	54.95	269	P	P	03 59 05.8	+1.2
	comp=Z,3µmcomp=Z,4µmcomp=Z,150nm,1.0s						
UGM	Wanagama	55.33	269	P	P	03 59 08.7	+1.3
	comp=Z,4µmcomp=Z,4µmcomp=Z,259nm,1.1s						
MJAR	Matsushiro Arr	55.33	332	P	P	03 59 07.1	+0.1
	comp=Z,55nm,1.0s,baz=158,slow=8.0,SNR=67						
MJAR				LR	LR	04 20 53.0	
	comp=Z,643nm,21.6s,baz=135,slow=34						
MJAR	Matsushiro Arr	55.33	332	P	P	03 59 06.0	-1.0
MAJO	Matsushiro	55.33	332	P	P	03 59 05.7	-1.3
MAJO				pmax	pmax		
	comp=Z,140nm,1.3s						
MAJO	Matsushiro	55.33	332	P	P	03 59 05.7	-1.3
MAJO				IAmb	IAmb	03 59 08.7	
	comp=Z,140nm,1.2s						
MAT	Matsushiro	55.33	332	P	P	03 59 07.2	+0.2
MAT				S	S	04 06 39.0	-3.8
SMRI	Semarang	55.55	270	P	P	03 59 10.9	+1.9
	comp=Z,5µmcomp=Z,316nm,0.9s						
SBUM	Sibu	55.95	281	P	P	03 59 11.6	-0.3
SBUM	Sibu	55.95	281	P	P	03 59 14.0	+2.1
JNU	Nakatsue	56.46	324	LR	LR	04 18 30.3	
	comp=Z,545nm,20.8s,baz=131,slow=30						
TATO	Taipei	57.43	310	P	P	03 59 21.6	-0.4
KSM	Kuching	57.53	280	P	P	03 59 22.3	-0.7
KSM	Kuching	57.53	280	P	P	03 59 24.0	+1.0
CISI	Cisompet, Garu	58.03	269	P	P	03 59 26.7	+0.1
	comp=Z,3µmcomp=Z,7µmcomp=Z,490nm,0.7s						
ERM	Erimo	58.05	340	c iP	P	03 59 27.7	+1.7
ERM				pmax	pmax		
	comp=Z,84nm,1.1s						
LEM	Lembang	58.35	269	P	P	03 59 30.6	+1.7
	baz=93,slow=8.0						
CNJI	Cibinong	58.74	269	P	P	03 59 31.6	+0.1
	comp=Z,6µmcomp=Z,491nm,0.8s						
YUK	Yuzh-Kuril'sk	59.02	343	d iP	P	03 59 32.4	-0.3
YUK				i *PP	pP	03 59 58.1	-1.0
YUK				i		04 00 21.8	

YUK				*i*		04 01 41.4	
YUK				*e*S	**S**	**04 07 30.7**	**0.0**
YUK				*e*SS	**SS**	**04 11 28.5**	**+1.7**
YUK				pmax	pmax		
	comp=Z,555nm,3.7s						
CBJI	**Citeko**	**59.17**	**270**	P	**P**	**03 59 34.9**	**+0.5**
	comp=Z,596nm,0.7s						
DBJI	**Dramaga**	**59.24**	**270**	P	**P**	**03 59 36.1**	**+1.1**
	comp=Z,8µmcomp=Z,287nm,1.3s						
SKJI	**Sukabumi**	**59.36**	**269**	P	**P**	**03 59 36.4**	**+0.7**
	comp=Z,7µmcomp=Z,707nm,0.7s						
KUR	**Kuril'sk**	**59.57**	**345***c*	*i*P	**P**	**03 59 37.5**	**+1.0**
KUR				*i*		04 01 49.5	
KUR				*e*S	**S**	**04 07 44.2**	**+6.3**
KUR				*e*SS	**SS**	**04 11 39.2**	**+3.8**
KUR				pmax	pmax		
	comp=Z,196nm,1.3s						
KUR				pmax	pmax		
	comp=N,86nm,1.4s						
KUR				pmax	pmax		
	comp=E,42nm,1.4s						
KUR				pmax	pmax		
	comp=Z,2µm,6.8s						
QZH	**Quanzhou**	**59.60**	**309**⇑	*i*P	**P**	**03 59 38.3**	**+1.2**
QZH				pP	**pP**	**04 00 00.8**	**-2.2**
QZH				S	**S**	**04 07 34.0**	**-5.0**
QZH				sS	**sS**	**04 08 21.3**	**-1.4**
QZH				pmax	pmax		
	comp=Z,160nm,1.6s						
QZH				pmax	pmax		
	comp=Z,1µm,4.4s						
QZH				LR	LR		
	comp=Z,1µm,20.4s						
QZH				LR	LR		
	comp=Z,640nm,10.9s						
QZH				LR	LR		
	comp=Z,2µm,19.9s						
XMIS	**Christmas Isla**	**59.70**	**265**	IAmb	IAmb	03 59 40.2	
	comp=Z,106nm,0.9s						
PPBI	**Pangkal Pinang**	**60.71**	**274**	P	**P**	**03 59 46.4**	**+1.4**
	comp=Z,15µmcomp=Z,174nm,1.1s						
TJN	**Taejon**	**60.81**	**324***c*	*e*P	**P**	**03 59 45.7**	**+0.6**
SSE	**Sheshan**	**61.23**	**316**	P	**P**	**03 59 49.0**	**+0.9**
SSE				S	**S**	**04 08 00.0**	**+0.4**
SSE				pmax	pmax		
	comp=Z,170nm,1.1s						
SSE				pmax	pmax		
	comp=Z,840nm,3.1s						
SSE				LR	LR		
	comp=Z,520nm,18.4s						
SSE				LR	LR		
	comp=Z,570nm,18.4s						
KSRS	**Korea Array**	**61.26**	**325**	P	**P**	**03 59 49.5**	**+1.4**
	comp=Z,47nm,0.9s,baz=140,slow=7.2,SNR=158						
KSRS				LR	LR	04 24 21.3	
	comp=Z,542nm,20.8s,baz=134,slow=34						
KSAR	**Wonju Array Be**	**61.27**	**325**	P	**P**	**03 59 48.2**	**-0.1**
KSAR	**Wonju Array Be**	**61.27**	**325**	P	**P**	**03 59 48.1**	**-0.1**
KASI	**Kota Agung**	**61.63**	**270**	P	**P**	**03 59 51.0**	**-0.2**
	comp=Z,3µmcomp=Z,3µmcomp=Z,188nm,0.8s						
HKC	**Hong Kong Obse**	**61.76**	**304** ⇑	P	**P**	**03 59 54.0**	**+2.2**
INCN	**Inchon**	**62.00**	**325**	P	**P**	**03 59 54.2**	**+1.0**
INCN	**Inchon**	**62.00**	**325**	P	**P**	**03 59 53.1**	**-0.1**
INCN	**Inchon**	**62.00**	**325**	P	**P**	**03 59 53.1**	**-0.1**
MDSI	**Maura Dua**	**62.14**	**271**	P	**P**	**03 59 54.1**	**-0.5**
	comp=Z,2µmcomp=Z,115nm,2.0s						
LWLI	**Liwa**	**62.16**	**271**	P	**P**	**03 59 55.4**	**+0.5**
	comp=Z,21µmcomp=Z,68nm,0.7s						
YSS	**Yuzh-Sakhalins**	**62.59**	**342**α	*i*P	**P**	**03 59 58.3**	**+1.5**
YSS				*e*		04 00 35.1	
YSS				*e*S	**S**	**04 08 15.3**	**-0.8**
YSS				pmax	pmax		
	comp=Z,100nm,1.3s						
YSS				pmax	pmax		
	comp=Z,2µm,5.6s						
YSS	**Yuzh-Sakhalins**	**62.59**	**342**	P	**P**	**03 59 56.6**	**-0.2**
YSS				IAmb	IAmb	04 00 00.0	
	comp=Z,178nm,1.2s						
GZH	**Guangzhou**	**62.81**	**304**	P	**P**	**04 00 00.8**	**+2.0**
GZH				S	**S**	**04 08 20.5**	**+0.8**
GZH				pmax	pmax		
	comp=Z,3µm,3.1s						
TPRI	**Tanjung Pinang**	**62.98**	**277**	P	**P**	**04 00 01.8**	**+1.6**
TEY	**Ternei**	**63.06**	**337**⇑	*i*P	**P**	**04 00 01.1**	**+1.1**
TEY				pmax	pmax		
	comp=Z,80nm,1.3s						
TEY				pmax	pmax		
	comp=E,100nm,3.7s						
TEY				pmax	pmax		
	comp=N,200nm,3.9s						
TEY				pmax	pmax		
	comp=Z,400nm,4.5s						
SKR	**Severo-Kuril's**	**63.22**	**353**	*e*P	P	03 59 53.8	-7.2
SKR				*e*		04 00 21.3	
SKR				*e*S	**S**	**04 08 23.4**	**-0.5**
SKR				pmax	pmax		
	comp=Z,800nm,5.2s						
SKR				pmax	pmax		
	comp=Z,49nm,1.3s						
SKR				pmax	pmax		
	comp=Z,200nm,4.0s						
SKR				MLR	MLR		
	comp=Z,400nm,19.0s						
NJ2	**Nanjing**	**63.40**	**315**⇑	*i*P	**P**	**04 00 04.0**	**+1.5**
NJ2				S	**S**	**04 08 26.0**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,280nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,2µm,5.5s						
NJ2				LR	LR		
	comp=Z,990nm,21.8s						
NJ2				LR	LR		
	comp=Z,700nm,19.9s						
NJ2				LR	LR		
	comp=Z,1µm,21.8s						
MSHR	**Mys Shultsa**	**63.42**	**331***c*	*i*P	**P**	**04 00 03.8**	**+1.3**
VLA	**Vladivostok**	**63.50**	**332***c*	*i*P	**P**	**04 00 04.0**	**+1.0**
VLA				pmax	pmax		
	comp=Z,298nm,1.7s						
MYKOM	**Kota Tinggi**	**63.85**	**278**	IAmb	IAmb	04 00 08.2	
	comp=Z,91nm,1.1s						
MYKOM	**Kota Tinggi**	**63.85**	**278**	P	**P**	**04 00 08.0**	**+2.1**
KSI	**Kapahiang**	**63.86**	**272**	P	**P**	**04 00 05.9**	**-0.2**
	comp=Z,293nm,0.8s						
QIZ	**Qiongzhong**	**63.95**	**298**	P	**P**	**04 00 08.3**	**+1.9**
QIZ				pP	**pP**	**04 00 34.0**	**+1.3**
QIZ				S	**S**	**04 08 33.8**	**-0.3**
QIZ				pmax	pmax		
	comp=Z,110nm,1.2s						
QIZ				pmax	pmax		
	comp=Z,2µm,4.5s						
QIZ	**Qiongzhong**	**63.95**	**298**	IAmb	IAmb	04 00 09.3	
	comp=Z,112nm,1.0s						
USA0B	**Ussuriysk Arra**	**64.30**	**333***c*	*i*P	**P**	**04 00 09.6**	**+1.4**
USRK	**Ussuriysk Ar.**	**64.30**	**333**	P	**P**	**04 00 10.3**	**+2.0**
	comp=Z,82nm,0.9s,baz=139,slow=6.3,SNR=149						
USRK				LR	LR	04 25 11.4	
	comp=Z,633nm,21.7s,baz=127,slow=33						
USRK	**Ussuriysk Ar.**	**64.30**	**333**	P	**P**	**04 00 08.1**	**-0.2**
PET	**Petropavlovsk**	**65.26**	**355**	*e*P	**P**	**04 00 14.5**	**+0.3**
PET				*e*		04 00 45.8	
PET				*e*S	**S**	**04 08 46.8**	**-2.1**
PET				pmax	pmax		
	comp=Z,42nm,1.3s						
PET				pmax	pmax		
	comp=Z,1µm,5.7s						
PET				pmax	pmax		
	comp=Z,1µm,15.4s						
KRJI	**Kerinci**	**65.28**	**273**	P	**P**	**04 00 17.5**	**+2.1**
	comp=Z,328nm,0.7s						
VNDA	**Vanda**	**65.42**	**181**	P	**P**	**04 00 16.5**	**+1.4**
	comp=Z,26nm,0.9s,baz=358,slow=6.8,SNR=72						
VNDA				LR	LR	04 26 22.1	
	comp=Z,1µm,18.1s,baz=22,slow=34						
VNDA	**Vanda**	**65.42**	**181**	P	**P**	**04 00 15.6**	**+0.5**
VNDA				IAmb	IAmb	04 00 17.6	
	comp=Z,230nm,1.6s						
PEA0B	**Petropavlovsk-**	**65.43**	**354***c*	*i*P	**P**	**04 00 16.0**	**+0.6**
PETK	**Petropavlovsk-**	**65.43**	**354**	P	**P**	**04 00 16.7**	**+1.3**
	comp=Z,11nm,0.7s,baz=159,slow=8.5,SNR=18						
PETK				LR	LR	04 24 34.0	
	comp=Z,993nm,21.0s,baz=160,slow=32						
PETK	**Petropavlovsk-**	**65.43**	**354**	P	**P**	**04 00 15.1**	**-0.3**
SDSI	**Sungai Dareh**	**65.57**	**275**	P	**P**	**04 00 17.4**	**+0.3**
	comp=Z,3µmcomp=Z,68nm,0.7s						
CASY	**Casey**	**65.68**	**202**	P	**P**	**04 00 17.4**	**+0.6**
CASY				IAmb	IAmb	04 00 18.5	
	comp=Z,134nm,1.0s						
MDJ	**Mudanjiang**	**65.71**	**332**	P	**P**	**04 00 19.0**	**+1.7**
MDJ				pP	pP	04 00 44.5	+0.3
MDJ				sP	sP	04 00 59.0	+3.0
MDJ				PP	**PP**	**04 02 45.8**	**+2.3**
MDJ				S	**S**	**04 08 58.8**	**+4.0**
MDJ				ScS	**ScS**	**04 10 03.8**	**+0.9**
MDJ				pmax	pmax		
	comp=Z,170nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,3µm,3.5s						
MDJ				LR	LR		
	comp=Z,1µm,15.4s						
MDJ				LR	LR		
	comp=Z,1µm,14.3s						
MDJ				LR	LR		
	comp=Z,2µm,24.8s						
MDJ	**Mudanjiang**	**65.71**	**332**	P	**P**	**04 00 16.9**	**-0.4**
MDJ				IAmb	IAmb	04 00 19.9	
	comp=Z,188nm,1.2s						
MDJ				pP	**pP**	**04 00 41.2**	**-3.0**
WHN	**Wuhan**	**65.76**	**312**⇑	*i*P	**P**	**04 00 19.0**	**+1.1**
WHN				PcP	**pP**	**04 00 44.3**	**-0.4**
WHN				S	**S**	**04 08 54.8**	**-1.1**
WHN				pmax	pmax		
	comp=Z,190nm,0.9s						
WHN				pmax	pmax		
	comp=Z,4µm,3.3s						
WHN				LR	LR		
	comp=Z,3µm,20.6s						
WHN				LR	LR		
	comp=Z,2µm,11.6s						
WHN				LR	LR		
	comp=Z,4µm,19.4s						
DL2	**Dalian**	**65.86**	**323**	P	**P**	**04 00 19.5**	**+1.1**
DL2				pP	**pP**	**04 00 42.3**	**-2.8**
DL2				S	**S**	**04 08 58.5**	**+1.7**
DL2				pmax	pmax		
	comp=Z,300nm,0.8s						
DL2				pmax	pmax		
	comp=Z,2µm,3.7s						
DL2				LR	LR		
	comp=Z,950nm,18.2s						
DL2				LR	LR		
	comp=Z,590nm,13.7s						
DL2				LR	LR		
	comp=Z,2µm,37.3s						
TYV	**Tymovskoe**	**66.13**	**344**	*e*P	**P**	**04 00 20.3**	**+0.4**
TYV				*e*S	**S**	**04 09 00.3**	**+0.7**
TYV				pmax	pmax		
	comp=Z,44nm,1.5s						
TYV				pmax	pmax		
	comp=Z,2µm,5.3s						
TYV				smax	smax		
	comp=N,800nm,8.7s						
BKNI	**Bangkinang**	**66.23**	**276**	P	**P**	**04 00 22.5**	**+1.2**
	comp=N,5µmcomp=N,9µmcomp=N,718nm,0.8s						
PDSI	**Padang**	**66.52**	**274**	P	**P**	**04 00 22.3**	**-0.9**
	comp=N,5µmcomp=N,65nm,0.7s						
PPSI	**Pulau Pagai**	**66.56**	**272**	P	**P**	**04 00 24.1**	**+0.6**
	comp=N,7µmcomp=N,480nm,1.0s						
SNY	**Shenyang**	**66.71**	**326** ⇑	P	**P**	**04 00 25.0**	**+1.2**
SNY				pP	**pP**	**04 00 49.8**	**-0.9**
SNY				sP	**sP**	**04 01 02.8**	**+0.2**
SNY				S	**S**	**04 09 08.0**	**+1.0**
SNY				sS	**sS**	**04 09 51.5**	**-2.2**
SNY				pmax	pmax		
	comp=N,120nm,1.5s						
SNY				pmax	pmax		
	comp=N,2µm,3.2s						
SNY				LR	LR		
	comp=N,810nm,21.1s						
SNY				LR	LR		
	comp=N,1µm,19.1s						
TIA	**Tai'an**	**67.00**	**318**	P	**P**	**04 00 26.5**	**+0.7**
TIA				S	**S**	**04 09 10.8**	**+0.1**
TIA				pmax	pmax		
	comp=N,100nm,0.9s						
TIA				pmax	pmax		
	comp=N,1µm,3.8s						
TIA				LR	LR		
	comp=N,910nm,20.1s						
TIA				LR	LR		
	comp=N,1µm,18.6s						
TIA				LR	LR		
	comp=N,1µm,17.7s						
CN2	**Changchun**	**67.11**	**329**	*e*P	**P**	**04 00 27.3**	**+1.0**
CN2				*e*S	**S**	**04 09 12.8**	**+1.0**
CN2				SS	**SS**	**04 13 32.8**	**-0.5**
CN2				pmax	pmax		
	comp=N,200nm,1.4s						
CN2				pmax	pmax		
	comp=N,2µm,4.0s						
CN2				LR	LR		
	comp=N,700nm,22.0s						
CN2				LR	LR		
	comp=N,500nm,22.0s						
CN2				LR	LR		
	comp=N,900nm,19.0s						
IPM	**Ipoh**	**67.26**	**280**	P	**P**	**04 00 30.0**	**+2.1**
SISI	**Saibi**	**67.76**	**274**	P	**P**	**04 00 31.9**	**+0.9**
	comp=N,2µmcomp=N,67nm,0.8s						
KULM	**Kulim**	**67.83**	**281**	P	**P**	**04 00 33.0**	**+1.6**
GRNR	**Gornyy**	**67.96**	**340**⇑	*i*P	**P**	**04 00 33.5**	**+2.0**
GRNR				*e*S	**S**	**04 09 25.2**	**+3.6**
GRNR				*e*SS	**SS**	**04 13 44.7**	**-1.4**
GRNR				pmax	pmax		
	comp=Z,80nm,1.3s						
GRNR				smax	smax		
	comp=E,3.0nm,1.0s						
KLR	**Kul'dur**	**68.40**	**336***c*	*i*P	**P**	**04 00 35.2**	**+1.0**
KLR				pmax	pmax		
	comp=Z,341nm,1.8s						
NKL	**Nikolayevsk**	**68.72**	**344**	*e*P	**P**	**04 00 35.9**	**-0.2**
NKL				*e*		04 01 02.6	
NKL				*e*S	**S**	**04 09 29.6**	**-0.9**
NKL				pmax	pmax		
	comp=Z,91nm,1.2s						
NKL				pmax	pmax		
	comp=N,5.0nm,0.7s						
NKL				pmax	pmax		
	comp=Z,77nm,8.0s						
RPSI	**Rantau Prapat**	**68.84**	**278**	P	**P**	**04 00 37.0**	**-0.8**
RPSI				IAmb	IAmb	04 00 40.2	
	comp=Z,152nm,0.8s						
PSI	**Prapat**	**68.87**	**278**	P	**P**	**04 00 38.2**	**+0.2**
	comp=Z,123nm,0.8s,baz=119,slow=4.1,SNR=177						
GYA	**Guiyang**	**69.74**	**304**⇑	*i*P	**P**	**04 00 44.8**	**+1.6**
GYA				PcP	**PcP**	**04 01 05.0**	**-0.3**
GYA				pP	pwP	04 01 13.5	-0.2
GYA				PP	**PP**	**04 03 24.0**	**+5.0**
GYA				ScP		04 05 02.5	
GYA				S	**S**	**04 09 44.3**	**+0.4**
GYA				SKS	**SKSac**	**04 10 30.0**	**-4.3**
GYA				ScS	**SKKSac**	**04 10 33.0**	**-1.3**
GYA				pmax	pmax		
	comp=Z,140nm,0.9s						
GYA				pmax	pmax		
	comp=Z,2µm,5.5s						
GSI	**Gunungsitoli**	**69.83**	**276**	P	**P**	**04 00 45.0**	**+1.2**
	comp=Z,22µmcomp=Z,2µm,0.8s						
GSI	**Gunungsitoli**	**69.83**	**276**	P	**P**	**04 00 42.6**	**-1.3**
BJT	**Baijiatuau**	**69.86**	**321**	IAmb	IAmb	04 00 45.7	
	comp=Z,121nm,1.0s						
BJI	**Beijing**	**69.87**	**321**⇑	*i*P	**P**	**04 00 44.5**	**+1.0**
BJI				PcP	**PcP**	**04 01 07.0**	**+1.7**
BJI				S	**S**	**04 09 45.3**	**+0.8**
BJI				sS	**SKSac**	**04 10 34.3**	**0.0**
BJI				pmax	pmax		
	comp=Z,140nm,0.9s						
BJI				LR	LR		
	comp=Z,970nm,27.5s						
BJI				LR	LR		
	comp=Z,1µm,21.8s						
BJI				LR	LR		
	comp=Z,3µm,31.4s						
SLVN	**Son La**	**69.98**	**298**	IAmb	IAmb	04 00 48.4	
	comp=Z,435nm,1.9s						
KCSI	**Kotacane, Aceh**	**70.16**	**278**	P	**P**	**04 00 45.6**	**-0.3**
	comp=Z,3µmcomp=Z,203nm,0.7s						
TPTI		**70.67**	**278**	P	**P**	**04 00 48.9**	**-0.1**
	comp=Z,626nmcomp=Z,23nm,0.8s						
PBKT	**Sadao Pong**	**70.89**	**292**	IAmb	IAmb	04 00 52.9	
	comp=Z,83nm,1.0s						
TIY	**Taiyuan**	**70.94**	**317**	*e*P	**P**	**04 00 52.5**	**+2.3**
TIY				pP	**pwP**	**04 01 19.0**	**-0.8**
TIY				S	**S**	**04 09 59.8**	**+2.5**
TIY				pmax	pmax		
	comp=Z,170nm,1.0s						
TIY				LR	LR		
	comp=Z,560nm,16.2s						
TIY				LR	LR		
	comp=Z,360nm,13.2s						
TIY				LR	LR		
	comp=Z,1µm,22.5s						
SNSI	**Sinabang, Aceh**	**71.29**	**277**	P	**P**	**04 00 54.8**	**+2.0**
	comp=Z,5µmcomp=Z,329nm,1.0s						
LHMI	**Lhok Sumawe**	**71.38**	**280**	P	**P**	**04 00 55.8**	**+2.6**
	comp=Z,4µmcomp=Z,148nm,1.0s						
LHMI	**Lhok Sumawe**	**71.38**	**280**	P	**P**	**04 00 51.9**	**-1.4**
LHMI				IAmb	IAmb	04 00 56.4	
	comp=Z,88nm,0.7s						
XAN	**Xi'an**	**71.49**	**312**	P	**P**	**04 00 54.8**	**+1.2**
XAN				pP	pP	04 01 18.0	-2.5
XAN				sP	sP	04 01 34.8	+2.7
XAN				PP	**PP**	**04 03 32.5**	**-1.3**
XAN				S	**S**	**04 10 02.5**	**-1.2**
XAN				sS	SKSac	04 10 46.8	-0.2
XAN				pmax	pmax		
	comp=Z,210nm,1.5s						
XAN				pmax	pmax		
	comp=Z,2µm,5.9s						
XAN				LR	LR		
	comp=Z,630nm,20.0s						
XAN				LR	LR		
	comp=Z,990nm,18.9s						
XAN				LR	LR		
	comp=Z,1µm,22.2s						
XAN	**Xi'an**	**71.49**	**312**	IAmb	IAmb	04 00 55.8	
	comp=Z,175nm,0.9s						
MLSI	**Meulaboh, Aceh**	**71.66**	**279**	P	**P**	**04 00 55.7**	**+0.7**
	comp=Z,6µmcomp=Z,462nm,0.8s						
KMI	**Kunming**	**72.42**	**301**	P	**P**	**04 01 01.5**	**+2.0**
KMI				pP	pP	04 01 25.5	-0.7
KMI				sP	sP	04 01 39.5	+1.8
KMI				PP	**PP**	**04 03 45.0**	**+2.9**
KMI				S	**S**	**04 10 15.5**	**+0.4**
KMI				sS	sS	04 11 00.8	+1.4
KMI				SS	**SS**	**04 14 58.0**	**+1.9**
KMI				pmax	pmax		
	comp=Z,280nm,1.6s						
KMI				pmax	pmax		
	comp=Z,2µm,6.8s						
KMI				LR	LR		
	comp=Z,590nm,18.8s						
KMI				LR	LR		
	comp=Z,330nm,19.3s						
KMI				LR	LR		
	comp=Z,710nm,21.8s						
MA2	**Magadan**	**72.61**	**352**	LR	LR	04 27 00.6	
	comp=Z,1µm,21.8s,baz=180,slow=31						
MA2	**Magadan**	**72.61**	**352***c*	*e*P	**P**	**04 00 59.4**	**-0.2**
MA2				pmax	pmax		
	comp=Z,68nm,1.9s						
MA2	**Magadan**	**72.61**	**352**	P	**P**	**04 00 59.2**	**-0.4**
HHC	**Hu-ho-hao-te**	**73.22**	**319**	*e*P	**P**	**04 01 05.5**	**+1.7**
HHC				pP	pP	04 01 29.8	-0.9
HHC				sP	sP	04 01 47.3	+4.5
HHC				PP	**PP**	**04 03 46.8**	**-1.7**
HHC				S	**SKiKP**	**04 10 25.0**	**0.0**
HHC				sS	sS	04 11 10.0	+0.7
HHC				pmax	pmax		
	comp=Z,980nm,1.2s						
HHC				pmax	pmax		
	comp=Z,3µm,6.7s						
CMAR	**Chiang Mai Arr**	**73.33**	**294**	P	**P**	**04 01 07.1**	**+2.3**
	comp=Z,57nm,0.7s,baz=129,slow=4.8,SNR=91						
CMAR				LR	LR	04 31 26.7	
	comp=Z,343nm,21.5s,baz=100,slow=34						
CMAR	**Chiang Mai Arr**	**73.33**	**294**	*i* P	**P**	**04 01 06.9**	**+2.1**
CMAR				pmax	pmax		
	comp=Z,63nm,0.7s						
CMAR	**Chiang Mai Arr**	**73.33**	**294**	P	**P**	**04 01 04.1**	**-0.7**
CHTO	**Chiang Mai**	**73.45**	**294**	P	**P**	**04 01 06.9**	**+1.4**
CHTO	**Chiang Mai**	**73.45**	**294**	P	**P**	**04 01 04.6**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,608nm,1.9s						
CHTO	**Chiang Mai**	**73.45**	**294**	P	**P**	**04 01 04.6**	**-0.9**
ZEA	**Zeya**	**73.68**	**337***c*	*e*P	**P**	**04 01 07.4**	**+1.4**
ZEA				*e*		04 01 33.0	
ZEA				*e*S	**S**	**04 10 32.0**	**+4.3**
ZEA				pmax	pmax		
	comp=N,200nm,1.4s						
ZEA				pmax	pmax		
	comp=E,74nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,510nm,1.8s						
ZEA				pmax	pmax		
	comp=Z,2µm,10.0s						
ZEA				pmax	pmax		
	comp=E,800nm,6.0s						
ZEA				pmax	pmax		
	comp=N,1µm,5.0s						
ZEA				smax	smax		
	comp=E,400nm,9.0s						
ZEA				smax	smax		
	comp=N,2µm,12.0s						
HIA	**Hailar**	**73.74**	**330**	IAmb	IAmb	04 01 09.3	
	comp=Z,156nm,1.1s						
CD2	**Chengdu**	**73.94**	**307** ⇑	P	**P**	**04 01 09.5**	**+1.3**
CD2				pP	pP	04 01 34.5	-0.8
CD2				sP	sP	04 01 50.3	+3.4
CD2				S	**S**	**04 10 32.5**	**+0.7**
CD2				SS	**SS**	**04 15 15.5**	**-3.3**
CD2				pmax	pmax		
	comp=Z,280nm,0.9s						
CD2				pmax	pmax		
	comp=Z,2µm,4.9s						
CD2				LR	LR		
	comp=Z,2µm,16.3s						
CD2				LR	LR		
	comp=Z,3µm,19.2s						
CD2				LR	LR		
	comp=Z,2µm,18.0s						
SEY	**Seymchan**	**75.65**	**353**⇑	*i*P	**P**	**04 01 17.5**	**+0.3**
LZH	**Lanzhou**	**76.12**	**312** ⇑	P	**P**	**04 01 23.0**	**+2.3**
LZH				pP	pwP	04 01 49.8	-1.0
LZH				S	**S**	**04 10 55.8**	**-0.2**
LZH				sS	sS	04 11 44.8	+3.8
LZH				SS	**SS**	**04 15 49.3**	**-2.6**
LZH				pmax	pmax		
	comp=Z,290nm,1.3s						
LZH				pmax	pmax		
	comp=Z,2µm,6.0s						
LZH				LR	LR		
	comp=Z,640nm,14.6s						
LZH				LR	LR		
	comp=Z,770nm,14.6s						
LZH				LR	LR		
	comp=Z,1µm,18.4s						
PBA	**Port Blair**	**77.05**	**285**	*e*P	P	04 01 26.9	+0.7
PBA				IAmb	IAmb	04 01 34.0	
	comp=Z,55nm,0.3s						
KDAK	**Kodiak Island**	**77.28**	**21**	LR	LR	04 29 49.8	
	comp=Z,2µm,20.3s,baz=223,slow=31						
DGPR	**DIGLIPUR**	**77.28**	**287**	*e*P	**P**	**04 01 27.2**	**-0.2**
QSPA	**South Pole Qui**	**77.87**	**180**	P	**P**	**04 01 30.5**	**+0.5**
QSPA				IAmb	IAmb	04 01 32.1	
	comp=Z,198nm,1.1s						
CIT	**Chita**	**78.53**	**330**	*e*P	**P**	**04 01 35.2**	**+1.5**
CIT				*e*		04 01 41.7	
CIT				*e*		04 02 17.6	
CIT				pmax	pmax		
	comp=Z,738nm,1.8s						
CNPM	**China Poot**	**79.06**	**20**	IAmb	IAmb	04 01 37.9	
	comp=Z,109nm,1.5s						
YAK	**Yakutsk**	**79.38**	**343**	LR	LR	04 36 31.1	
	comp=Z,463nm,18.5s,baz=171,slow=35						
YAK	**Yakutsk**	**79.38**	**343***c*	*i*P	**P**	**04 01 38.3**	**+0.3**
YAK				*e**PP	**pP**	**04 02 04.3**	**-1.3**
YAK				*e*S	**S**	**04 11 28.9**	**-0.7**
YAK				*e*		04 11 39.3	
YAK				*e**SS	**sS**	**04 12 14.9**	**-2.2**
YAK				*e*SS	**SS**	**04 16 45.4**	**+5.9**
YAK				*e*SSS	SSS	04 19 55.2	
YAK				pmax	pmax		
	comp=Z,106nm,1.0s						
YAK				pmax	pmax		
	comp=N,48nm,1.2s						
YAK				pmax	pmax		

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      comp=E,27nm,1.2s
YAK                                  smax     smax
      comp=N,99nm,1.8s
YAK                                  smax     smax
      comp=E,118nm,2.0s
YAK   Yakutsk          79.38 343     P        P        04 01 38.1 +0.2
YAK                                  IAmb     IAmb     04 01 40.0
      comp=Z,87nm,0.9s
ULN   Ulaanbaatar      79.69 324     P        P        04 01 41.7 +1.5
ULN   Ulaanbaatar      79.69 324ceP           P        04 01 41.4 +1.2
ULN                                  pmax     pmax
      comp=Z,504nm,2.0s
ULN   Ulaanbaatar      79.69 324     P        P        04 01 39.0 -1.2
ULN                                  IAmb     IAmb     04 01 42.6
      comp=Z,182nm,1.0s
KOHI  KOHIMA           79.93 299⇑iP           P        04 01 42.4 +0.4
BILL  Bilibino         79.96 360ceP           P        04 01 41.3 +0.3
BILL                                 pmax     pmax
      comp=Z,182nm,1.6s
BILL  Bilibino         79.96 360     P        P        04 01 40.6 -0.4
BILL                                 IAmb     IAmb     04 01 43.5
      comp=Z,188nm,1.4s
SONM  Songino Array    80.05 324     P        P        04 01 43.7 +1.6
      comp=Z,66nm,0.9s,baz=142,slow=5.8,SNR=187
SONM                                 PKPPKP            04 28 29.3
      comp=Z,0.4nm,0.5s,baz=349,slow=4.4,SNR=3.6
SONM                                 LR       LR       04 36 22.3
      comp=Z,422nm,21.7s,baz=121,slow=35
SONM  Songino Array    80.05 324     P        P        04 01 41.1 -1.1
GTA   Gaotai           80.43 314 ⇑P           P        04 01 46.0 +1.6
GTA                                  pP       pP       04 02 12.0  0.0
GTA                                  sP       sP       04 02 27.0 +3.4
GTA                                  S        S        04 11 40.3 -1.6
GTA                                  sS       sS       04 12 32.0 +3.8
GTA                                  pmax     pmax
      comp=Z,160nm,1.2s
GTA                                  pmax     pmax
      comp=Z,2µm,11.3s
GTA                                  LR       LR
      comp=Z,360nm,15.8s
GTA                                  LR       LR
      comp=Z,550nm,18.6s
GTA                                  LR       LR
      comp=Z,630nm,19.9s
ITAN  ITANAGAR         80.71 300⇑iP           P        04 01 47.2 +1.3
ITAN                                 IAmb     IAmb     04 01 49.6
      comp=Z,174nm,0.8s
BRDH  Bariadhala       81.14 295     P        P        04 01 50.5 +2.2
      comp=Z,173nm,0.6s,baz=88,slow=6.7,SNR=25
TEZP  TEZPUR           81.33 300⇑iP           P        04 01 50.1 +0.9
TEZP                                 IAmb     IAmb     04 01 53.5
      comp=Z,108nm,0.8s
SHL   Shillong         81.79 298⇑iP           P        04 01 52.9 +1.0
SHL                                  IAmb     IAmb     04 01 54.7
      comp=Z,76nm,0.8s
AGT   Agartala         81.84 297    eP        P        04 01 53.9 +1.9
BOD   Bodaibo          81.88 335    eP        P        04 01 50.8 -0.6
BOD                                  pmax     pmax
      comp=Z,122nm,1.6s
GUWA  GUWAHATI         82.14 299    eP        P        04 01 52.3 -1.2
HOPS  Hopland Field    82.77  48     IAmb     IAmb     04 02 35.9
      comp=Z,227nm,1.8s
CRQM  Cirque           82.81  22     IAmb     IAmb     04 01 58.0
      comp=Z,76nm,1.2s
TGL   Tana Glacier     82.93  22     IAmb     IAmb     04 01 58.5
      comp=Z,72nm,1.2s
BWN   Browne           83.06  18     IAmb     IAmb     04 02 04.6
      comp=Z,63nm,0.8s
ZAK   Zakamensk        83.08 325    eP        P        04 01 58.0  0.0
ZAK                                  pmax     pmax
      comp=Z,122nm,1.4s
IMAR  Indian Mountai   83.24  15     P        P        04 01 58.3  0.0
O02D  Mt. Diablo Mer   83.41  47     P        P        04 02 01.5 +1.6
      baz=248,SNR=8.5
IRK   Irkutsk          83.44 327    eP        P        04 01 59.6 -0.1
IRK                                 e                  04 02 28.4
IRK                                  pmax     pmax
      comp=Z,300nm,3.3s
SNCC  San Nicolas Is   83.46  54     P        P        04 02 01.8 +1.6
      baz=251
TLY   Talaya           83.50 326     P        P        04 02 00.7 +0.7
TLY   Talaya           83.50 326c iP          P        04 02 00.6 +0.6
TLY                                 eS        S        04 12 10.8 -1.9
TLY                                 eSS       SS       04 17 46.4 +5.0
TLY                                  pmax     pmax
      comp=Z,679nm,1.7s
TLY                                  MLR      MLR
      comp=Z,1µm,21.0s
TLY   Talaya           83.50 326     P        P        04 02 00.1 +0.1
DHUB  DHUBRI           83.55 298    eP        P        04 02 00.5 -0.3
BARN  Barnard Glacie   83.56  23     IAmb     IAmb     04 02 02.6
      comp=Z,65nm,1.1s
LSA   Lhasa            83.66 302     IAmb     IAmb     04 02 05.8
      comp=Z,57nm,0.7s
WDC   Whiskeytown Da   83.73  46     P        P        04 02 01.3 -0.1
WDC                                  pmax     pmax
      comp=Z,294nm,2.0s
WDC   Whiskeytown Da   83.73  46     P        P        04 02 01.3 -0.1
WDC                                  IAmb     IAmb     04 02 35.6
      comp=Z,294nm,1.9s
J01E  Myrtle Point     83.75  44     P        P        04 02 03.8 +2.4
      baz=247
K02D  Willamette Mer   83.75  44     P        P        04 02 03.2 +1.6
      baz=247
N02D  Trinity Center   83.77  46     P        P        04 02 03.2 +1.5
      baz=248,SNR=6.4
PKM   Mcpherson Peak   83.77  52     P        P        04 02 03.8 +1.8
      baz=251
SMMC  Simmler          83.77  52     P        P        04 02 03.0 +1.2
      baz=250
M02C  Callahan         83.82  46     P        P        04 02 03.2 +1.3
      baz=248
HDA   Harding Lake     84.00  18     P        P        04 02 02.7 +0.5
      baz=226,SNR=105
MDM   Murphy Dome      84.00  18     IAmb     IAmb     04 02 03.8
      comp=Z,86nm,1.2s
MAW   Mawson           84.04 202     P        P        04 02 03.7 +1.2
      comp=Z,35nm,0.9s,baz=110,slow=7.2,SNR=24
MAW                                  LR       LR       04 33 03.2
      comp=Z,1µm,20.9s,baz=98,slow=31
MAW   Mawson           84.04 202     P        P        04 02 02.5  0.0
YBH   Yreka Blue Hor   84.04  45     LR       LR       04 33 09.0
      comp=Z,608nm,20.3s,baz=244,slow=31
YBH   Yreka Blue Hor   84.04  45     IAmb     IAmb     04 02 38.2
      comp=Z,69nm,1.1s
TCOL  CIGO, UAF Yank   84.05  18     P        P        04 02 02.3 -0.1
      baz=225,SNR=9.7
COLA  College          84.05  18     P        P        04 02 02.6 +0.1
COLA                                 pmax     pmax
      comp=Z,104nm,1.3s
COLA  College          84.05  18     P        P        04 02 02.6 +0.1
COLA                                 IAmb     IAmb     04 02 03.3
      comp=Z,104nm,1.2s
BLG   Laguna Peak, P   84.10  53     P        P        04 02 04.6 +1.2
      baz=251
ORV   Oroville         84.11  48     IAmb     IAmb     04 02 37.1
      comp=Z,170nm,1.8s
SCI2  San Clemente I   84.15  55     P        P        04 02 05.0 +1.3
      baz=252
O03E  Paynes Creek     84.16  47     P        P        04 02 04.2 +0.5
      baz=249,SNR=7.0
I02D  Swisshome        84.18  43     P        P        04 02 04.8 +1.3
      baz=247
HUMO  Hull Mountain    84.20  44     IAmb     IAmb     04 02 38.2
      comp=Z,129nm,1.6s
ILAR  Eielson Array    84.27  18     P        P        04 02 04.0 +0.4
      comp=Z,31nm,0.8s,baz=236,slow=5.0,SNR=227
ILAR                                 PKKPbc   PKKPbc   04 20 15.3 -4.0
      comp=Z,1.2nm,0.8s,baz=302,slow=1.2,SNR=6.8
ILAR                                 LR       LR       04 33 37.6
      comp=Z,1µm,21.9s,baz=233,slow=31
ILAR  Eielson Array    84.27  18     P        P        04 02 04.0 +0.4
ILAR  Eielson Array    84.27  18     P        P        04 02 03.2 -0.5
I03D  Drain, OR        84.35  43     P        P        04 02 05.8 +1.4
      baz=248
POKR  Poker Plat Res   84.35  18     P        P        04 02 03.7 -0.3
      baz=225,SNR=20
CIS   Catalina Islan   84.39  54     P        P        04 02 05.6 +0.7
      baz=252
CMB   Columbia Colle   84.39  49     P        P        04 02 04.4 -0.5
CMB                                  pmax     pmax
      comp=Z,32nm,1.1s
CMB   Columbia Colle   84.39  49     P        P        04 02 04.4 -0.5
L04D  Klamath Falls    84.50  45     P        P        04 02 06.3 +0.8
      baz=248
OSI   Osito Audit: C   84.53  53     P        P        04 02 06.7 +1.0
      baz=251
VOG   Valley Oaks Go   84.57  51     P        P        04 02 06.5 +0.7
      baz=251
FMP   Fort Macarthur   84.58  54     P        P        04 02 06.6 +0.7
      baz=252
ARVC  Arvin            84.61  53     P        P        04 02 07.1 +1.1
      baz=251
VES   Vestal, Richgr   84.64  52     P        P        04 02 06.9 +0.8
      baz=251
SCRK  Sand Creek       84.65  20     IAmb     IAmb     04 02 07.4
      comp=Z,85nm,1.2s
M04C  Macdoel          84.67  45     P        P        04 02 07.4 +1.1
      baz=249,SNR=5.3
DECC  Green Verdugo    84.72  53     P        P        04 02 07.2 +0.6
      baz=252
BCAR  Beaver Creek A   84.80  21     P        P        04 02 05.9 -0.5
MOY   Mondy            84.96 325    eP        P        04 02 07.9 +0.4
MOY                                 e                  04 02 34.2
MOY                                  pmax     pmax
      comp=Z,397nm,2.7s
G03D  McMinnville, O   84.99  42     P        P        04 02 08.4 +0.8
      baz=247
BBB   Bella Bella      84.99  34     LR       LR       04 33 49.8
      comp=Z,2µm,20.1s,baz=242,slow=31
J04D  Umpqua Nationa   85.02  44     P        P        04 02 09.3 +1.1
      baz=248
I04A  Tendick Farm,    85.02  43     P        P        04 02 08.9 +1.0
      baz=248
K04D  Chiloquin, OR    85.03  45     P        P        04 02 09.2 +1.1
      baz=249
ISA   Isabella, Lake   85.06  52     P        P        04 02 09.3 +1.0
      baz=251,SNR=8.5
H04D  Lebanon          85.07  43     P        P        04 02 09.4 +1.3
      baz=248
GTK   Tadong           85.11 299    eP        P        04 02 10.2 +1.3
EDW2  Edwards Air Fo   85.18  53     P        P        04 02 09.7 +0.7
      baz=252,SNR=7.2
BFSC  Mount Baldy Ra   85.25  54     P        P        04 02 10.2 +0.9
      baz=252
109C  Camp Elliot, M   85.28  55     P        P        04 02 10.3 +0.9
      baz=252
MLAC  Mammoth, Mammo85.42     50     P        P        04 02 11.8 +1.5
      baz=251
MURC  Murrieta         85.42  54     P        P        04 02 11.0 +0.8
      baz=252
F04D  Rainier, OR      85.49  41     P        P        04 02 11.6 +1.5
      baz=248
CWC   Cottonwood Cre   85.61  51     P        P        04 02 12.5 +1.3
      baz=252
LRMC  Laurel Mtn Rad   85.61  52     P        P        04 02 12.3 +1.1
      baz=252
J05D  Fort Rock, OR    85.63  44     P        P        04 02 12.2 +1.1
      baz=249
TIN   Tinemaha, Big    85.69  51     P        P        04 02 12.7 +1.2
      baz=251
MOD   Modoc Plateau    85.78  46     IAmb     IAmb     04 02 45.8
      comp=Z,129nm,1.6s
MONP2 Monument Peak    85.83  55     P        P        04 02 13.5 +1.2
      baz=253
BBRC  Big Bear Solar   85.84  54     P        P        04 02 13.3 +0.8
      baz=252
TAPN  Taplejung        85.88 299    eP        P        04 02 13.9 +1.0
      comp=Z,458nm,1.4s
I05D  Terrebonne, OR   85.93  43     P        P        04 02 13.6 +1.1
      baz=249
MPMC  Manual Prospec   85.94  52     P        P        04 02 13.3 +0.5
      baz=252,SNR=9.5
E04D  Cinebar          85.95  41     P        P        04 02 13.5 +1.2
      baz=248
RRX   Edison Barstow   85.96  53     P        P        04 02 13.7 +0.9
      baz=252
D03D  Eldon            85.99  40     P        P        04 02 14.4 +1.9
      baz=247
IKP   In-Ko-Pah, Jac   86.01  56     P        P        04 02 14.3 +1.2
      baz=253
PFO   Pinyon Flats O   86.01  55     LR       LR       04 32 47.5
      comp=Z,2µm,21.5s,baz=260,slow=30
PFO   Pinyon Flats O   86.01  55   i P        P        04 02 14.6 +1.4
PFO                                  pmax     pmax
      comp=Z,15nm,1.0s
PFO   Pinyon Flats O   86.01  55     P        P        04 02 12.2 -1.0
PFO   Pinyon Flats O   86.01  55     P        P        04 02 14.2 +1.0
      baz=253
XPFO  Pion Flat        86.01  55     P        P        04 02 12.4 -0.7
ODAN  Odare            86.03 298    eP        P        04 02 14.4 +0.9
      comp=Z,308nm,0.9s
D04E  Lakebay          86.06  40     P        P        04 02 14.7 +1.9
      baz=248
NVAR  Mina Array Bea   86.07  50     P        P        04 02 15.0 +1.5
      comp=Z,4.4nm,0.8s,baz=232,slow=7.8,SNR=35
NVAR                                 PKKPbc   PKKPbc   04 20 13.1 -0.9
      comp=Z,0.8nm,0.7s,baz=113,slow=4.3,SNR=4.1
NVAR                                 LR       LR       04 33 31.9
      comp=Z,3µm,20.5s,baz=258,slow=30
NVAR  Mina Array Bea   86.07  50     P        P        04 02 12.3 -1.2
GSC   Goldstone, Bar   86.24  53     P        P        04 02 15.4 +1.1
      baz=252
G05D  Wamic, OR        86.28  42     P        P        04 02 15.3 +1.3
      baz=249
TOLK  Toolik Lake Re   86.32  15     P        P        04 02 14.9 +1.1
      baz=223,SNR=20
GRAC  Grapevine Rang   86.33  51     P        P        04 02 15.6 +1.0
      baz=252
SWSC  Sam W. Stewart   86.34  55     P        P        04 02 15.6 +1.0
      baz=253
F05D  White Salmon     86.42  42     P        P        04 02 16.0 +1.3
      baz=249
HEC   Hector,Ludlow    86.47  53     P        P        04 02 16.3 +1.0
      baz=253
BELC  Belle Mtn. Jos   86.49  54     P        P        04 02 16.3 +0.8
      baz=253,SNR=10
LON   Longmire         86.51  41     P        P        04 02 14.5 -0.7
LON                                  *PP      pP       04 02 42.3 -0.9
LON   Longmire         86.51  41     P        P        04 02 14.5 -0.7
LON                                           pP       04 02 42.3 -0.9
BOK   Bokaro           86.54 295⇑iP           P        04 02 16.7 +0.9
BOK                                 eP        PcP      04 02 18.1  0.0
BOK                                 i pP      pP       04 02 42.4 -1.2
FURC  Furnace Creek,   86.55  52     P        P        04 02 16.4 +0.9
      baz=252,SNR=7.1
A04D  Lummi Island     86.69  39     P        P        04 02 17.1 +1.2
      baz=248
RAMN  Ramite           86.73 298    eP        P        04 02 17.6 +0.6
      comp=Z,285nm,1.3s
BMAR  Burnt Mountain   86.79  17     P        P        04 02 16.9 +0.8
BC3   Big Chuckawall   86.82  55     P        P        04 02 18.6 +1.5
      baz=253,SNR=5.6
SHOC  Shoshone, Teco   86.83  52     P        P        04 02 17.7 +0.6
      baz=253
B05A  Bryant           86.89  39     P        P        04 02 18.1 +1.2
      baz=248
CHLP  Challavanipeta   86.89 290    eP        P        04 02 18.5 +0.9
CHLP                                 IAmb     IAmb     04 02 19.5
      comp=Z,39nm,1.0s
CHLP                                epP       pP       04 02 43.2 -1.9
CHLP                                e                  04 12 48.8
DLBC  Dease Lake       86.96  28     LR       LR       04 34 23.4
      comp=Z,1µm,21.2s,baz=228,slow=31
TUQ   Turquoise Moun   86.97  53     P        P        04 02 18.9 +1.0
      baz=253
GMRC  Granite Mounta   86.98  54     P        P        04 02 18.7 +0.8
      baz=253,SNR=6.7
GLA   Glamis           87.16  56     P        P        04 02 20.2 +1.5
      baz=254
TPNV  Topopah Spring   87.16  51     P        P        04 02 19.7 +0.9
      baz=253,SNR=9.2
IRM   Iron Mountain    87.21  54     P        P        04 02 20.1 +1.2
      baz=253,SNR=11
JIRN  Jiri             87.27 299    eP        P        04 02 20.5 +0.8
      comp=Z,487nm,1.1s
TIXI  Tiksi            87.32 349ceP           P        04 02 18.3 -0.2
TIXI                                 pmax     pmax
      comp=Z,119nm,1.7s
TIXI  Tiksi            87.32 349     P        P        04 02 18.0 -0.5
TIXI                                 IAmb     IAmb     04 02 20.5
      comp=Z,192nm,1.7s
TIXI                                          pP       04 02 45.7 -0.9
C06D  Leavenworth      87.51  40     P        P        04 02 20.8 +0.8
      baz=249
Y12C  Blythe           87.59  55     IAmb     IAmb     04 02 56.1
      comp=Z,66nm,1.4s
Y12C  Blythe           87.59  55     P        P        04 02 22.1 +1.4
      baz=254
GUN   Gumba            87.60 299    eP        P        04 02 21.9 +0.6
      comp=Z,299nm,1.0s
NEE2  Needles Airpor   87.80  54     P        P        04 02 23.1 +1.4
      baz=254
HAWA  Hanford          87.85  42     IAmb     IAmb     04 02 55.9
      comp=Z,115nm,1.6s
PKI   Pulchoki         87.91 299    eP        P        04 02 23.2 +0.4
      comp=Z,178nm,0.6s
PKIN  Phulchoki        87.92 299    eP        P        04 02 23.2 +0.5
      comp=Z,184nm,0.6s
PDMCI Parker Dam,Lak   88.05  54     P        P        04 02 23.9 +1.1
      baz=254,SNR=8.3
KKN   Kakani           88.08 299    eP        P        04 02 24.5 +1.1
R11A  Troy Canyon, C   88.08  50     P        P        04 02 23.8 +0.7
      baz=253,SNR=17
DMN   Daman            88.18 299    eP        P        04 02 24.7 +0.7
      comp=Z,494nm,0.7s
E08A  Dider Farm, El   88.19  42     P        P        04 02 22.0 -1.2
W13A  Hualapai Mount   88.47  54     IAmb     IAmb     04 03 01.9
      comp=Z,154nm,1.8s
214A  Organ Pipe Nat   88.50  57     P        P        04 02 27.0 +1.9
      baz=255,SNR=7.8
EPYK  Eagle Plains     88.54  20     P        P        04 02 25.1 +0.6
      baz=235
LPIG  La Paz           88.68  65     LR       LR       04 36 16.2
      comp=Z,571nm,18.9s,baz=240,slow=32
GKN   Gorkha           88.68 299    eP        P        04 02 26.3 +0.1
      comp=Z,433nm,0.8s
BMO   Blue Mountains   88.82  44     IAmb     IAmb     04 03 00.3
      comp=Z,163nm,1.8s
PVM   Polavaram        88.86 288    eP        P        04 02 27.1 +0.1
PVM                                  IAmb     IAmb     04 02 29.1
      comp=Z,89nm,1.6s
PVM                                 epP       pP       04 02 50.8 -3.9
PVM                                 eSKSac    SKSac    04 12 45.9 -1.1
Y14A  Wickenburg       88.86  55     IAmb     IAmb     04 03 03.7
      comp=Z,81nm,1.6s
ELK   Elko             89.03  48     PKPPKP   P'P'df   04 28 13.7 -0.2
      comp=Z,0.7nm,0.6s,baz=98,slow=6.8,SNR=4.2
ELK                                  LR       LR       04 35 32.0
      comp=Z,2µm,20.5s,baz=243,slow=31
ELK   Elko             89.03  48     IAmb     IAmb     04 03 01.8
      comp=Z,130nm,1.7s
MDRS  Chennai          89.24 283    eP        P        04 02 29.8 +1.0
MDRS                                 IAmb     IAmb     04 02 31.7
      comp=Z,25nm,0.7s
DANN  Dangsing         89.52 299    eP        P        04 02 30.0 -0.3
      comp=Z,322nm,0.7s
MYLAV Mylavaram        89.67 287    eP        P        04 02 31.5 +0.7
MYLAV                                IAmb     IAmb     04 02 33.3
      comp=Z,42nm,1.1s
MYLAV                               epP       pP       04 02 57.9 -0.6
MYLAV                               eSKSac    SKSac    04 12 50.8 -1.0
SKHT  Srikalahasti     89.89 284    eP        P        04 02 32.6 +0.7
SKHT                                 IAmb     IAmb     04 02 33.6
      comp=Z,27nm,1.0s
NEW   Newport          90.01  40     LR       LR       04 35 12.3
      comp=Z,1µm,21.1s,baz=252,slow=30
NEW   Newport          90.01  40     P        P        04 02 32.5 +0.7
      baz=252
U15A  North Rim        90.08  53     IAmb     IAmb     04 03 10.9
      comp=Z,198nm,2.0s
ADKI  Addanki          90.10 286    eP        P        04 02 32.5 -0.3
ADKI                                 IAmb     IAmb     04 02 35.2
      comp=Z,30nm,1.2s
ADKI                                epP       pP       04 02 57.9 -2.6
ADKI                                eSKSac    SKSac    04 12 54.2 -0.1
TUC   Tucson           90.25  57     P        P        04 02 32.8 -0.5
TUC                                  pmax     pmax
      comp=Z,150nm,2.0s
TUC   Tucson           90.25  57     P        P        04 02 32.8 -0.5
TUC                                  IAmb     IAmb     04 03 08.0
      comp=Z,150nm,2.0s
TUC   Tucson           90.25  57     P        P        04 02 35.3 +2.0
      baz=256
WMQ   Urumqi           90.47 315     P        P        04 02 34.5 +0.4
WMQ                                  pP       pP       04 03 02.3 +0.1
WMQ                                  PP       PP       04 06 08.5 -1.8
WMQ                                  SKS      SKSac    04 12 54.0 -1.5
WMQ                                  S        S        04 13 18.0 -2.1
WMQ                                  SS       SS       04 19 23.3 -0.3
WMQ                                  pmax     pmax
      comp=Z,110nm,1.5s
WMQ                                  pmax     pmax
      comp=Z,1µm,5.3s
WMQ                                  LR       LR
      comp=Z,450nm,21.1s
WMQ                                  LR       LR
      comp=Z,510nm,22.9s
WMQ                                  LR       LR
      comp=Z,1µm,25.3s
WUAZ  Wupatki          90.56  54     P        P        04 02 35.9 +1.1
      baz=256,SNR=5.3
INK   Inuvik           90.65  19     PKKPbc   PKKPbc   04 19 59.6 -4.1
      comp=Z,1.5nm,0.5s,baz=46,slow=2.4,SNR=5.8
INK                                  LR       LR       04 38 28.0
      comp=Z,959nm,20.7s,baz=218,slow=32
DUG   Dugway, Tooele   90.66  49     IAmb     IAmb     04 03 09.3
      comp=Z,92nm,1.6s
DUG   Dugway, Tooele   90.66  49     P        P        04 02 36.5 +1.4
      baz=255
NJS   Nagarjunasagar   90.87 287    eP        P        04 02 36.7 +0.3
NJS                                  IAmb     IAmb     04 02 38.3
      comp=Z,100nm,1.3s
NJS                                 epP       pP       04 03 02.0 -2.1
NJS                                 eSKSac    SKSac    04 12 57.7 -1.0
SYO   Syowa Base       90.99 197⇓iP           P        04 02 34.0 -1.9
SYO   Syowa Base       90.99 197⇓iPcP         PcP      04 02 37.0 +0.1
SYO   Syowa Base       90.99 197⇓isP          sP       04 03 13.4 -2.0
SRLM  Srisailam        91.17 286    eP        P        04 02 38.2 +0.4
SRLM                                 IAmb     IAmb     04 02 39.8
      comp=Z,71nm,1.0s
SRLM                                epP       pP       04 03 04.6 -0.9
SRLM                                eSKSac    SKSac    04 13 00.5  0.0
RPR   Rampur           91.37 289    eP        P        04 02 38.9 +0.2
RPR                                  IAmb     IAmb     04 02 40.2
      comp=Z,63nm,0.7s
RPR                                 epP       pP       04 03 03.9 -2.4
RPR                                 eSKSac    SKSac    04 13 00.5 -1.0
TRD   Trivandrum       91.44 278    ex        P        04 02 46.1 +7.0
X18A  Snowflake        91.46  55     IAmb     IAmb     04 03 13.5
      comp=Z,97nm,1.9s
HYB   Hyderabad        91.76 287    i P       P        04 02 40.5 -0.1
      comp=Z,179nm,1.2s
HYB                                 e                  04 03 07.0
HYB                                 e                  04 03 15.0
HYB   Hyderabad        91.76 287    eP        P        04 02 39.5 -1.0
HYBB  Hyderabad (bro   91.76 287    eP        P        04 02 40.5 -0.1
HYBB                                 IAmb     IAmb     04 02 41.4
      comp=Z,58nm,1.1s
HYBB                                epP       pP       04 03 05.5 -2.7
HYBB                                eSKSac    SKSac    04 13 02.1 -1.8
W18A  Petrified Fore   91.77  55     P        P        04 02 41.3 +0.8
      baz=256,SNR=6.5
DLMT  Dillon           92.16  44     IAmb     IAmb     04 03 16.2
      comp=Z,38nm,1.1s
SRSP  Sriramsagar      92.27 289    eP        P        04 02 42.6 -0.2
SRSP                                 IAmb     IAmb     04 02 43.7
      comp=Z,63nm,1.0s
SRSP                                epP       pP       04 03 09.6 -0.9
SRSP                                eSKSac    SKSac    04 13 04.8 -1.8
WALA  Waterton Lakes   92.28  40     IAmb     IAmb     04 03 16.7
      comp=Z,60nm,1.4s
DGZ   Jazzator, Alta   92.28 320c iP          P        04 02 42.6 +0.2
DGZ                                  pmax     pmax
      comp=Z,97nm,0.8s
URV   Uravakonda       92.47 285    eP        P        04 02 44.1 +0.3
URV                                  IAmb     IAmb     04 02 45.1
      comp=Z,73nm,1.0s
URV                                 epP       pP       04 03 07.8 -3.7
URV                                 eSKSac    SKSac    04 13 07.5 -0.3
121A  Cookes Peak, D   92.77  57     P        P        04 02 46.3 +1.2
      baz=258
FXWY  Fox Creek        92.82  46     IAmb     IAmb     04 03 22.3
      comp=Z,89nm,2.0s
REDW  Red Top Meadow   92.88  46     IAmb     IAmb     04 03 19.5
      comp=Z,86nm,1.8s
MVCO  Mesa Verde       93.22  53     P        P        04 02 48.6 +1.4
      baz=257
H17A  Grant Village    93.31  45     P        P        04 02 49.6 +2.2
      baz=256
BW06  Boulder Array    93.66  47     P        P        04 02 50.3 +1.2
      baz=257
PDAR  Pinedale Array   93.66  47     P        P        04 02 49.3 +0.3
      comp=Z,1.1nm,0.8s,baz=199,slow=2.4,SNR=9.2
PDAR                                 PKKPbc   PKKPdf   04 19 50.4 -3.6
      comp=Z,1.6nm,0.7s,baz=102,slow=5.4,SNR=9.8
PDAR                                 LR       LR       04 39 01.5
      comp=Z,711nm,19.8s,baz=270,slow=32
PDAR  Pinedale Array   93.66  47     P        P        04 02 47.5 -1.6
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KLRI	Killari	93.72	288	eP	P	04 02 49.0	-0.6
KLRI				IAmb	IAmb	04 02 50.6	
	comp=Z,29nm,0.9s						
KLRI				epP	pP	04 03 14.3	-2.9
KLRI				eSKSac	SKSac	04 13 13.0	-1.7
BHPL	Bhopal	93.98	293	eP	P	04 02 50.1	-0.6
O20A	White River Ci	94.05	50	P	P	04 02 51.9	+1.1
	baz=258						
C36M	Paulatuk	94.17	19	P	P	04 02 50.5	+0.1
	baz=247						
ANMO	Albuquerque	94.36	55	P	P	04 02 50.1	-2.3
ANMO	Albuquerque	94.36	55	P	P	04 02 50.0	-2.3
ANMO	Albuquerque	94.36	55	P	P	04 02 53.6	+1.2
	baz=258						
RLMT	Red Lodge	94.39	45	P	P	04 02 53.9	+1.6
	baz=257						
PMSA	Palmer Station	94.41	161	P	P	04 02 53.0	+1.3
	comp=Z,41nm,0.7s,baz=245,slow=2.9,SNR=5.9						
PMSA	Palmer Station	94.41	161	P	P	04 02 50.7	-1.0
MNTX	Cornudas Mount	94.59	59	IAmb	IAmb	04 03 28.5	
	comp=Z,48nm,2.0s						
MNTX	Cornudas Mount	94.59	59	P	P	04 02 54.5	+1.2
	baz=259						
S22A	4UR Ranch, Cre	94.63	53	P	P	04 02 55.4	+1.7
	baz=258						
EGMT	Eagleton	94.70	42	IAmb	IAmb	04 03 27.4	
	comp=Z,120nm,2.0s						
EGMT	Eagleton	94.70	42	P	P	04 02 54.8	+1.3
	baz=257						
DDI	Dehra Dun	94.81	300	eP	P	04 02 54.2	-0.1
MK31	Makanchi Array	94.90	317	i P	P	04 02 55.1	+0.7
MKAR	Makanchi Array	94.90	317	P	P	04 02 55.6	+1.2
	comp=Z,126nm,0.7s,baz=93,slow=6.3,SNR=756						
MKAR				PP	PP	04 06 41.4	-3.5
	comp=Z,10nm,1.2s,baz=106,slow=7.7,SNR=4.4						
MKAR				PKiKP	PKiKP	04 07 36.3	+0.5
	comp=Z,2.8nm,0.9s,baz=104,slow=0.8,SNR=13						
MKAR				PKKPbc	PKKPdf	04 19 49.3	-2.3
	comp=Z,4.4nm,0.7s,baz=286,slow=2.8,SNR=19						
MKAR				LR	LR	04 45 12.9	
	comp=Z,357nm,21.0s,baz=122,slow=35						
MKAR	Makanchi Array	94.90	317	i P	P	04 02 55.0	+0.6
MKAR				pmax	pmax		
	comp=Z,128nm,0.7s						
MKAR	Makanchi Array	94.90	317	P	P	04 02 53.5	-0.9
ZALV	Zalesovo Beam	94.94	324	P	P	04 02 54.5	+0.2
	comp=Z,37nm,0.8s,baz=116,slow=4.3,SNR=107						
ZALV				PKiKP	PKiKP	04 07 36.3	+0.7
	comp=Z,0.8nm,0.3s,baz=104,slow=4.6,SNR=1.9						
ZALV				PKKPbc	PKKPdf	04 19 49.7	-1.9
	comp=Z,1.7nm,0.3s,baz=316,slow=2.2,SNR=4.2						
ZALV				LR	LR	04 43 18.0	
	comp=Z,384nm,21.6s,baz=106,slow=34						
ZALV	Zalesovo Beam	94.94	324	P	P	04 02 53.5	-0.8
MAKZ	Makanchi	95.11	317	i P	P	04 02 55.2	-0.1
MAKZ				pmax	pmax		
	comp=Z,182nm,1.1s						
MAKZ	Makanchi	95.11	317	P	P	04 02 54.9	-0.5
NVL	N'lazarevskaya	95.52	188	⇓iP	P	04 02 56.0	-0.7
NVL				eS	SKSac	04 13 17.0	-5.4
NVL				pmax	pmax		
	comp=Z,58nm,1.0s						
NVL				MLR	MLR		
	comp=Z,863nm,17.0s						
YKA	Yellowknife Ar	95.55	27	P	P	04 02 55.9	-0.9
	comp=Z,2.5nm,0.4s,baz=254,slow=4.7,SNR=62						
YKA				PKiKP	PKiKP	04 07 37.2	+0.8
	comp=Z,0.9nm,0.7s,baz=233,slow=1.2,SNR=6.8						
YKA				PKKPbc	PKKPbc	04 19 47.8	-2.9
	comp=Z,0.5nm,0.6s,baz=79,slow=2.9,SNR=4.3						
YKA				LR	LR	04 42 58.0	
	comp=Z,523nm,18.7s,baz=0.0,slow=33						
TXAR	Lajitas Array	95.60	61	P	P	04 02 59.0	+1.0
	comp=Z,2.0nm,0.8s,baz=224,slow=6.1,SNR=24						
TXAR				PKiKP	PKiKP	04 07 39.2	+1.6
	comp=Z,0.6nm,0.9s,baz=244,slow=3.5,SNR=1.4						
TXAR				LR	LR	04 42 09.9	
	comp=Z,520nm,18.7s,baz=0.0,slow=33						
TXAR	Lajitas Array	95.60	61	P	P	04 02 56.6	-1.4
SDCO	Great Sand Dun	95.66	53	P	P	04 02 59.1	+0.7
	baz=259						
SMLA	Simla	95.71	300	⇑iP	P	04 02 58.4	0.0
SMLA				IAmb	IAmb	04 03 01.1	
	comp=Z,33nm,0.7s						
SNAA	Sanae	96.08	183	P	P	04 02 59.1	-0.4
SNAA	Sanae	96.08	183	P	P	04 02 59.0	-0.4
	comp=Z,23nm,0.9s,baz=203,slow=12,SNR=49						
SNAA	Sanae	96.08	183	c iP	P	04 02 59.4	0.0
PDGK	Podgornoye	96.15	313	i P	P	04 02 59.7	-0.6
PDGK				pmax	pmax		
	comp=Z,42nm,1.1s						
DHRM	DHARAMSHALA	96.64	301	eP	P	04 03 01.9	-0.9
VNA3	Neumayer Olymp	96.78	181	P	P	04 03 02.4	-0.1
VNA2	Neumayer--Watz	97.03	182	P	Pdif	04 03 04.0	+0.3
	baz=165,slow=4.6						
MSTX	Muleshoe	97.17	57	P	Pdif	04 03 05.7	+0.5
	baz=260						
VNA1	Neumayer--Stat	97.34	182	P	Pdif	04 03 05.2	+0.2
NRIK	Noril'sk	97.44	339	P	P	04 03 05.1	-0.2
	comp=Z,6.8nm,0.9s,baz=112,slow=4.6,SNR=22						
NRIK				PKKPbc	PKKPbc	04 19 43.9	-1.8
	comp=Z,1.7nm,0.6s,baz=90,slow=4.0,SNR=2.0						
NRIK	Noril'sk	97.44	339	i P	P	04 03 04.7	-0.6
NRIK				pmax	pmax		
	comp=Z,44nm,1.6s						
KURK	Kurchatov	98.03	320	P	P	04 03 07.9	-0.5
KURK	Kurchatov	98.03	320	ceP	P	04 03 07.9	-0.5
KURK				pmax	pmax		
	comp=Z,54nm,1.7s						
KURK	Kurchatov	98.03	320	P	P	04 03 07.9	-0.5
KSH	Kashi	98.11	309	P	Pdif	04 03 11.8	+2.6
KSH				pP	pwP	04 03 41.0	+1.3
KSH				PP	PP	04 07 15.5	+5.6
KSH				S	S	04 14 23.0	-4.3
KSH				sS	sS	04 15 14.0	-0.5
KSH				SS	SS	04 21 13.8	+1.2
KSH				pmax	pmax		
	comp=Z,23nm,0.6s						
KSH				pmax	pmax		
	comp=Z,810nm,4.6s						
KSH				LR	LR		
	comp=Z,900nm,13.3s						
KSH				LR	LR		
	comp=Z,1µm,16.9s						
KSH				LR	LR		
	comp=Z,730nm,16.4s						
ULHL	Ulahol	98.32	311	P	Pdif	04 03 11.1	+0.9
	SNR=10						
BOOM	Boomskoye usch	98.58	312	IAmb	IAmb	04 03 12.8	
	comp=Z,22nm,1.1s						
KZA	Kyzart	99.03	311	P	Pdif	04 03 14.9	+1.2
	SNR=8.0						
JCT	Junction City	99.10	61	P	Pdif	04 03 14.2	+0.5
	baz=261						
CHMS	Chumysh	99.52	312	P	Pdif	04 03 15.8	+0.5
	SNR=7.1						
CHMS	Chumysh	99.52	312	i P	Pdif	04 03 15.1	-0.2
CHMS				pmax	pmax		
	comp=Z,15nm,0.8s						
UCH	Uchtor	99.59	311	P	Pdif	04 03 17.3	+1.1
	SNR=7.6						
AAK	Ala-Archa	99.66	312	P	Pdif	04 03 17.1	+0.9
	SNR=7.5						
AAK	Ala-Archa	99.66	312	i Pdiff	Pdif	04 03 17.0	+0.9
	SNR=9.0						
AAK	Ala-Archa	99.66	312	i P	Pdif	04 03 17.0	+0.9
	SNR=9.0						
AAK	Ala-Archa	99.66	312	P	Pdif	04 03 16.7	+0.5
AAK	Ala-Archa	99.66	312	i P	Pdif	04 03 16.3	+0.2
AAK				pmax	pmax		
	comp=Z,25nm,2.6s						
AAK	Ala-Archa	99.66	312		Pdif	04 03 15.2	-0.9
USP	Ospenovka	99.74	312	P	Pdif	04 03 17.1	+0.8
	SNR=9.1						
AML	Almayashu	100.18	311	P	Pdif	04 03 19.4	+0.7
	SNR=12						
EKS2	Erkin-Say	100.19	312	P	Pdif	04 03 19.6	+1.2
	SNR=5.1						
BHUJ	Bhuj	101.02	292	eP	Pdif	04 03 21.4	-1.0
BHUJ				IAmb	IAmb	04 03 27.1	
	comp=Z,15nm,0.5s						
KK31	Karatay Array	102.62	312	i P	Pdif	04 03 28.3	-0.8
BRVK	Borovoye	103.40	322	P	Pdif	04 03 31.8	-0.5
BRVK	Borovoye	103.40	322		Pdif	04 03 31.6	-0.7
ULM	Lac du Bonnet	104.01	41	PKiKP	PKiKP	04 07 51.2	-0.7
	comp=Z,1.5nm,0.3s,baz=280,slow=2.9,SNR=5.7						
W39A	Magazine	104.68	57	P	Pdif	04 03 39.8	+1.5
	baz=266						
W41B	Gary Mavity, V	105.93	57	P	PKiKP	04 07 56.5	+0.6
	baz=266						
LRAL	Lakeview Retre	110.18	59	P	PKiKP	04 08 04.0	+0.1
	baz=268						
WCI	Wyandotte Cave	110.79	54	P	PKiKP	04 08 05.5	+0.6
	baz=271						
G45A	Suttons Bay	111.00	46	P	PKiKP	04 08 06.0	+0.9
	baz=274						
F45A	CMU Biological	111.06	46	P	PKiKP	04 08 05.9	+0.8
	baz=274						
Z50A	Ashland	111.09	59	P	PKiKP	04 08 05.8	+0.2
	baz=269						
G46A	Petoskey	111.54	46	P	PKiKP	04 08 06.7	+0.6
	baz=275						
S49A	Springfield	111.60	54	P	PKiKP	04 08 06.8	+0.3
	baz=271						
N48A	Decatur	111.69	51	P	PKiKP	04 08 07.3	+0.7
	baz=273						
J47A	Sunmer	111.72	48	P	PKiKP	04 08 07.3	+0.8
	baz=274						
T50A	Nancy	111.97	55	P	PKiKP	04 08 07.1	-0.1
	baz=271						
D46A	Sault St. Mari	111.97	44	P	PKiKP	04 08 07.0	+0.1
	baz=276						
P49A	Miami Univ. Ec	111.99	52	P	PKiKP	04 08 07.3	+0.1
	baz=272						
KBS	Kingsbay	112.08	355	eSP	SP	04 18 11.6	-0.7
L48A	N Adams	112.08	50	P	PKiKP	04 08 08.0	+0.7
	baz=274						
O49A	Covington	112.25	51	P	PKiKP	04 08 07.8	+0.1
	baz=273						
K48A	Perry	112.26	49	P	PKiKP	04 08 08.1	+0.6
	baz=274						
G47A	Hillman	112.26	46	P	PKiKP	04 08 08.0	+0.5
	baz=275						
S50A	Richmond	112.30	54	P	PKiKP	04 08 07.9	+0.1
	baz=272						
N49A	Columbus Grove	112.33	51	P	PKiKP	04 08 07.9	+0.2
	baz=273						
J48A	Bridge Port	112.47	48	P	PKiKP	04 08 08.6	+0.7
	baz=275						
L49A	Milan	112.57	49	P	PKiKP	04 08 08.6	+0.4
	baz=274						
D47A	Chapleau	112.59	44	P	PKiKP	04 08 08.4	+0.3
	baz=277						
Y52A	Lilburn	112.64	58	P	PKiKP	04 08 09.6	+1.0
	baz=270						
T51A	Gray	112.69	55	P	PKiKP	04 08 09.0	+0.4
	baz=272						
O50A	Cable	112.80	51	P	PKiKP	04 08 08.7	0.0
	baz=273						
R51A	Hillsboro	112.92	53	P	PKiKP	04 08 09.1	+0.1
	baz=273						
OPO	Ambohidratompo	112.94	244	PKiKP	PKiKP	04 08 10.3	+0.5
	comp=Z,3.4nm,0.5s,baz=318,slow=2.7,SNR=4.5						
S51A	Beattyville	112.94	54	P	PKiKP	04 08 09.6	+0.5
	baz=272						
TZTN	Tazewell	113.02	55	P	PKiKP	04 08 09.7	+0.5
	baz=272						
F48A	Evansville	113.06	45	P	PKiKP	04 08 09.2	+0.2
	baz=276						
Q51A	Peebles	113.08	53	P	PKiKP	04 08 09.7	+0.4
	baz=273						
I49A	Point Hope	113.11	47	P	PKiKP	04 08 09.5	+0.4
	baz=276						
N50A	Nevada	113.12	51	P	PKiKP	04 08 10.0	+0.7
	baz=274						
GOGA	Godfrey	113.14	59	P	PKiKP	04 08 09.8	+0.3
	baz=271						
X53A	Estanollee	113.27	58	P	PKiKP	04 08 10.5	+0.8
	baz=271						
ACSO	Alum Creek Sta	113.29	51	P	PKiKP	04 08 09.9	+0.2
	baz=274						
E48A	Lockeyer	113.30	45	P	PKiKP	04 08 09.9	+0.4
	baz=277						
UOSS	Minazif	113.41	292	PKiKP	PKiKP	04 08 10.8	+0.5
UOSS	Minazif	113.41	292	P	PKiKP	04 08 10.8	+0.5
D48A	Paudash Townsh	113.45	44	P	PKiKP	04 08 10.0	+0.3
	baz=278						
F49A	Sandfield	113.47	45	P	PKiKP	04 08 10.5	+0.8
	baz=277						
HATD	Hatta, Dubai	113.47	292	PKiKP	PKiKP	04 08 11.5	+1.0
HATD	Hatta, Dubai	113.47	292	P	PKiKP	04 08 11.5	+1.0
MSFE	Esma-Masafi	113.47	292	PKiKP	PKiKP	04 08 11.3	+0.8
MSFE	Esma-Masafi	113.47	292	P	PKiKP	04 08 11.3	+0.8
SHME	Shamm	113.52	293	PKiKP	PKiKP	04 08 11.7	+1.2
SHME	Shamm	113.52	293	P	PKiKP	04 08 11.7	+1.2
ASHO	Ashiyiah	113.53	292	i PKiKP	PKiKP	04 08 11.5	+0.9
	SNR=12						
ASHO	Ashiyiah	113.53	292	i P	PKiKP	04 08 11.5	+0.9
	SNR=12						
O51A	Pataskala	113.58	51	P	PKiKP	04 08 10.5	+0.3
	baz=274						
N51A	Ashland	113.70	51	P	PKiKP	04 08 11.3	+0.9
	baz=274						
ALNE	Al Ain	113.78	291	PKPdf	PKiKP	04 08 12.3	+1.3
ALNE	Al Ain	113.78	291	P	PKiKP	04 08 12.3	+1.3
T53A	Wise	113.81	55	P	PKiKP	04 08 11.9	+1.1
	baz=273						
NAZ	Nazwa, Dubai	113.91	292	PKPdf	PKiKP	04 08 12.2	+1.0
NAZ	Nazwa, Dubai	113.91	292	P	PKiKP	04 08 12.2	+1.0
P52A	Corning	113.98	52	P	PKiKP	04 08 11.1	+0.1
	baz=274						
X54A	Belton	114.03	58	P	PKiKP	04 08 11.6	+0.4
	baz=272						
W54A	Cherokee Point	114.17	57	P	PKiKP	04 08 12.3	+0.8
	baz=272						
V54A	Nebo	114.34	56	P	PKiKP	04 08 12.5	+0.7
	baz=272						
U54A	Nelsons Funny	114.41	55	P	PKiKP	04 08 12.7	+0.7
	baz=273						
M52A	Chesterland	114.41	50	P	PKiKP	04 08 12.3	+0.6
	baz=276						
I51A	Listowel	114.42	47	P	PKiKP	04 08 12.3	+0.7
	baz=277						
Y55A	Saluda	114.48	58	P	PKiKP	04 08 12.4	+0.3
	baz=272						
Q53A	Leroy	114.50	53	P	PKiKP	04 08 12.3	+0.3
	baz=274						
P53A	Whipple	114.56	52	P	PKiKP	04 08 12.3	+0.2
	baz=274						
T54A	Tazewell	114.58	55	P	PKiKP	04 08 12.7	+0.4
	baz=273						
O53A	New Philadelph	114.64	51	P	PKiKP	04 08 12.5	+0.3
	baz=275						
X55A	Gracelyn & Ava	114.65	58	P	PKiKP	04 08 12.9	+0.6
	baz=272						
S54A	Dingess, Beckl	114.74	54	P	PKiKP	04 08 13.0	+0.5
	baz=274						
D50A	G1974 Best Tow	114.78	44	P	PKPdf	04 08 12.8	+0.5
	baz=279						
KMSC	Kings Mountain	114.87	57	P	PKiKP	04 08 13.5	+0.7
	baz=273						
N53A	Lisbon	114.87	51	P	PKiKP	04 08 13.3	+0.7
	baz=276						
F51A	Arnstein	114.92	45	P	PKPdf	04 08 12.7	+0.2
	baz=279						
M53A	WI Miller and	114.93	50	P	PKPdf	04 08 13.2	+0.5
	baz=276						
V55A	Taylorsville	114.93	56	P	PKiKP	04 08 13.4	+0.5
	baz=273						
R54A	Victor	114.97	53	P	PKiKP	04 08 13.4	+0.5
	baz=274						
Q54A	Coxs Mills	115.03	53	P	PKPdf	04 08 13.4	+0.4
	baz=275						
U55A	TA2, Sparta	115.03	55	P	PKiKP	04 08 13.6	+0.4
	baz=273						
PRGR	Permogore	115.09	333	ePKIKP	PKiKP	04 08 10.9	-1.5
PRGR				pmax	pmax		
	comp=Z,21nm,0.9s						
E51A	G1948 Merrick	115.12	44	P	PKPdf	04 08 13.2	+0.3
	baz=279						
H52A	Wyevale	115.12	46	P	PKPdf	04 08 13.6	+0.6
	baz=278						
X56A	White Oak	115.14	58	P	PKiKP	04 08 13.5	+0.2
	baz=272						
L53A	Girard	115.19	49	P	PKPdf	04 08 13.6	+0.4
	baz=276						
T55A	Pulaski	115.20	55	P	PKPdf	04 08 13.8	+0.3
	baz=274						
157A	Early Branch	115.23	60	P	PKiKP	04 08 13.9	+0.4
	baz=272						
O54A	Avella	115.28	51	P	PKPdf	04 08 14.0	+0.6
	baz=276						
F52A	Sundridge	115.35	45	P	PKPdf	04 08 13.8	+0.4
	baz=279						
ERPA	Erie	115.37	49	P	PKPdf	04 08 13.9	+0.4
	baz=277						
Z57A	Bowman	115.46	59	P	PKiKP	04 08 14.7	+0.8
	baz=272						
W56A	Indian Trail	115.48	57	P	PKiKP	04 08 14.6	+0.7
	baz=273						
BLA	Blacksburg	115.49	55	P	PKiKP	04 08 14.8	+0.8
	baz=274						
N54A	Moraine State	115.49	50	P	PKiKP	04 08 14.5	+0.7
	baz=276						
V56A	Mocksville	115.52	56	P	PKiKP	04 08 14.5	+0.5
	baz=273						
U56A	King	115.58	55	P	PKiKP	04 08 14.7	+0.6
	baz=274						
Q55A	Buckhannon	115.61	53	P	PKiKP	04 08 14.9	+0.7
	baz=275						
R55A	Marlinton	115.64	53	P	PKiKP	04 08 14.9	+0.6
	baz=275						
M54A	Oil Creek Stat	115.68	50	P	PKiKP	04 08 14.5	+0.3
	baz=277						
Y57A	Sumter	115.69	58	P	PKiKP	04 08 15.3	+0.9
	baz=273						
E52A	Mattawa	115.73	44	P	PKiKP	04 08 14.6	+0.5
	baz=280						
MCWV	Mont Chateau	115.73	52	P	PKiKP	04 08 14.5	+0.2
	baz=276						
T56A	Rocky Mt	115.81	55	P	PKiKP	04 08 14.6	0.0
	baz=274						
L54A	Sinclairville	115.85	49	P	PKiKP	04 08 14.7	+0.3
	baz=277						
X57A	Johnson Farm,	115.92	58	P	PKiKP	04 08 15.4	+0.5
	baz=273						
G53A	Haliburton	115.94	46	P	PKiKP	04 08 15.0	+0.5
	baz=279						
W57A	Gilead	115.96	57	P	PKiKP	04 08 15.4	+0.6
	baz=273						
H53A	Bobcaygeon	116.05	46	P	PKiKP	04 08 15.5	+0.7
	baz=279						
O55A	Ligonier	116.09	51	P	PKiKP	04 08 15.4	+0.4
	baz=276						
V57A	Coltrane Farms	116.09	56	P	PKiKP	04 08 15.4	+0.2
	baz=274						
S56A	Natural Bridge	116.13	54	P	PKiKP	04 08 15.4	+0.2
	baz=275						
R56A	Bull Pasture M	116.19	53	P	PKiKP	04 08 15.8	+0.4
	baz=275						
ALGO	Algonquin Park	116.20	45	P	PKiKP	04 08 15.3	+0.3
	baz=280						
Z58A	St. Stephen	116.20	59	P	PKiKP	04 08 15.8	+0.4
	baz=273						
J54A	Appleton	116.21	48	P	PKiKP	04 08 15.6	+0.6
	baz=278						
D53A	Lac Vacive, Po	116.24	43	P	PKiKP	04 08 15.8	+0.7
	baz=281						
K54A	Basiliko Farm,	116.26	48	P	PKiKP	04 08 15.9	+0.6
	baz=278						
G54A	Lake Saint Pet	116.27	45	P	PKiKP	04 08 15.3	+0.1
	baz=280						
Y58A	Scranton	116.30	58	P	PKiKP	04 08 16.0	+0.4
	baz=273						
Q56A	Snyder Ridge,	116.30	52	P	PKiKP	04 08 15.5	0.0
	baz=276						
LSQQ	Lebel-sur-Quev	116.32	41	P	PKiKP	04 08 15.5	+0.3
	baz=282						
M55A	Ridgway	116.35	50	P	PKiKP	04 08 16.1	+0.5
	baz=277						
E53A	Dumoine, Ponti	116.39	44	P	PKiKP	04 08 15.8	+0.4
	baz=280						
PTAC	Punta Ardita,	116.40	88	eP	PKiKP	04 08 23.3	+7.0
U57A	Blanch	116.41	55	P	PKiKP	04 08 16.0	+0.2
	baz=274						
T57A	Hurt	116.43	55	P	PKPdf	04 08 15.7	-0.1
	baz=275						
L55A	Hinsdale	116.50	49	P	PKiKP	04 08 16.2	+0.4
	baz=278						
X58A	Rowland	116.53	57	P	PKiKP	04 08 16.4	+0.4
	baz=274						
W58A	Raeford	116.59	57	P	PKiKP	04 08 16.5	+0.4
	baz=274						
S57A	Dark Hollow, R	116.61	54	P	PKiKP	04 08 16.8	+0.7
	baz=275						
V58A	Windy Hill, Pi	116.64	56	P	PKiKP	04 08 16.7	+0.6
	baz=274						
O56A	Blue Knob Stat	116.65	51	P	PKiKP	04 08 16.8	+0.7
	baz=277						
K55A	Perry	116.70	48	P	PKiKP	04 08 16.6	+0.5
	baz=278						
E54A	Lac Daplat, Po	116.71	44	P	PKiKP	04 08 16.6	+0.6
	baz=281						
APA	Apatity	116.74	342	⇓iPKIKP	PKPdf	04 08 14.1	-1.3
APA				i		04 08 46.0	
APA				pmax	pmax		
	comp=Z,17nm,0.9s						
N56A	West Decatur	116.77	50	P	PKiKP	04 08 16.9	+0.5
	baz=277						
M56A	Emporium	116.79	50	P	PKiKP	04 08 17.1	+0.8
	baz=278						
J55A	Hilton	116.80	48	P	PKiKP	04 08 16.9	+0.7
	baz=279						
D54A	Lac Fusel, La	116.92	43	P	PKiKP	04 08 16.5	+0.1
	baz=282						
T58A	Grand View Acr	117.01	55	P	PKiKP	04 08 17.6	+0.7
	baz=275						
U58A	Oxford	117.05	55	P	PKiKP	04 08 17.3	+0.3
	baz=275						
SSPA	Standing Stone	117.12	51	P	PKiKP	04 08 17.3	+0.3
	baz=278						
X59A	McDuffie Farm,	117.14	57	P	PKiKP	04 08 17.5	+0.3
	baz=274						
L56A	Greenwood	117.16	49	P	PKiKP	04 08 17.5	+0.4
	baz=278						
P57A	Homestead Farm	117.16	52	P	PKiKP	04 08 17.4	+0.3
	baz=277						
HAMF	Hammerfest	117.20	347	ePKPdf	PKiKP	04 08 16.8	+0.6
HAMF				eSP	SP	04 19 01.7	+2.4
W59A	Clinton	117.23	57	P	PKiKP	04 08 18.0	+0.7
	baz=274						
G55A	Calabogie	117.25	45	P	PKiKP	04 08 17.7	+0.7
	baz=281						
S58A	Poland Farm, P	117.33	54	P	PKiKP	04 08 17.9	+0.5
	baz=276						
V59A	Middlesex	117.35	56	P	PKiKP	04 08 18.1	+0.6
	baz=275						
N57A	Milroy	117.36	50	P	PKiKP	04 08 18.0	+0.5
	baz=278						
O57A	Amberson	117.36	51	P	PKiKP	04 08 18.0	+0.5
	baz=277						
R58B	Mineral	117.43	53	P	PKiKP	04 08 17.8	+0.1
	baz=276						
Q58A	Fox Den Farm,	117.48	52	P	PKiKP	04 08 18.2	+0.5
	baz=277						
Y60A	Bolivia	117.50	58	P	PKiKP	04 08 18.3	+0.4
	baz=274						
M57A	Sunshine Farm,	117.59	50	P	PKiKP	04 08 18.5	+0.7
	baz=278						
ARCES	ARCESS Array B	117.60	346	PKP	PKiKP	04 08 17.3	+0.2
	comp=Z,23nm,0.3s,baz=75,slow=2.1,SNR=319						
ARCES				PKKPbc	PKKPbc	04 18 38.9	-3.3
	comp=Z,8.7nm,0.9s,baz=262,slow=2.7,SNR=15						
ARCES	ARCESS Array B	117.60	346	PKIKP	PKPdf	04 08 17.0	-0.1
ARCES	ARCESS Array B	117.60	346		PKPdf	04 08 16.9	-0.1
ARE0	ARCESS Array S	117.60	346	ePKPdf	PKiKP	04 08 17.5	+0.5
ARE0				ePS	PKKPdf	04 19 17.5	+8.0
X60A	Albert Glenn T	117.66	57	P	PKiKP	04 08 18.6	+0.4
	baz=274						
U59A	Littleton	117.66	55	P	PKPdf	04 08 18.1	0.0
	baz=275						
CNNC	Cliffs of the	117.68	57	P	PKiKP	04 08 18.8	+0.6
	baz=275						
L57A	Andrews Acres	117.70	49	P	PKiKP	04 08 18.6	+0.5
	baz=279						
P58A	Pank, Wackersv	117.71	52	P	PKiKP	04 08 18.4	+0.3
	baz=277						
D55A	Sainte-Anne-du	117.74	43	P	PKiKP	04 08 18.2	+0.2
	baz=283						
SUMG	Summit	117.78	8	i P	PKiKP	04 08 18.8	+0.9
	comp=Z,15nm,0.6s						
SUMG	Summit	117.78	8	PKIKP	PKPdf	04 08 17.7	-0.2
SUMG	Summit	117.78	8		PKPdf	04 08 17.6	-0.2
T59A	Double "B" Far	117.79	55	P	PKiKP	04 08 18.7	+0.3
	baz=276						
CBN	Corbin Frederi	117.81	53	P	PKiKP	04 08 18.4	0.0
	baz=277						
K57A	Scipio Center	117.83	48	P	PKiKP	04 08 18.5	+0.2
	baz=280						
O58A	Lewisberry	117.92	51	P	PKiKP	04 08 18.8	+0.3
	baz=278						
S59A	Mechanicsville	117.92	54	P	PKPdf	04 08 18.1	-0.4

	baz=276						
N58A	Sunbury	117.97	50	P	PKiKP	04 08 19.0	+0.4
	baz=278						
R59A	King George, V	118.01	53	P	PKiKP	04 08 19.1	+0.4
	baz=277						
J57A	Williamstown	118.09	47	P	PKiKP	04 08 19.0	+0.3
	baz=280						
KLMR	Klimovskoe	118.10	334	ePKIKP	PKPdf	04 08 17.4	-0.8
KLMR				e		04 09 36.5	
KLMR				pmax	pmax		
	comp=Z,22nm,0.8s						
KLMR	Klimovskoe	118.10	334	ePKPdf	PKPdf	04 08 17.4	-0.8
KLMR				AMP		04 08 19.6	
	comp=Z,22nm,0.8s						
KLMR				ePP	PP	04 09 36.6	+2.2
ILULI	Ilulissat	118.12	14	i P	PKPdf	04 08 17.7	-0.3
ILULI	Ilulissat	118.12	14	i PKIKP	PKPdf	04 08 17.7	-0.3
V60A	Jim Taylor Roa	118.14	56	P	PKPdf	04 08 19.0	0.0
	baz=275						
U60A	Pendleton	118.16	55	P	PKiKP	04 08 19.2	+0.1
	baz=276						
D56A	ZEC Mazanza, M	118.21	43	P	PKiKP	04 08 19.0	+0.1
	baz=283						
I57A	Carthage	118.23	47	P	PKiKP	04 08 19.2	+0.1
	baz=281						
BINY	Binghamton	118.30	49	P	PKiKP	04 08 19.3	0.0
	baz=280						
H57A	Richville	118.32	46	P	PKPdf	04 08 19.1	0.0
	baz=281						
RREF	El Recreo	118.40	91	eP	PKPdf	04 08 19.2	-1.8
L58A	Harry Jones Me	118.43	49	P	PKiKP	04 08 19.7	+0.2
	baz=280						
S60A	Water View	118.43	54	P	PKiKP	04 08 19.9	+0.3
	baz=277						
GUY2C	Guyana, Caldas	118.44	91	eP	PKPdf	04 08 20.7	-0.2
K58A	Earlville	118.45	48	P	PKiKP	04 08 19.8	+0.3
	baz=280						
G57A	Newington	118.48	45	P	PKiKP	04 08 19.5	+0.1
	baz=282						
KTK1	Kautokeino	118.53	346	ePKPdf	PKiKP	04 08 19.3	+0.4
J58A	Remsen	118.61	47	P	PKiKP	04 08 20.1	+0.3
	baz=281						
N59A	State Game Lan	118.67	50	P	PKiKP	04 08 20.9	+0.9
	baz=279						
V61A	Roper	118.69	56	P	PKiKP	04 08 20.4	+0.3
	baz=276						
E57A	Chemin Saint G	118.77	44	P	PKiKP	04 08 20.4	+0.4
	baz=283						
I58A	Old Forge	118.77	47	P	PKiKP	04 08 20.4	+0.3
	baz=281						
D57A	Chemin Vers le	118.80	43	P	PKiKP	04 08 20.2	+0.2
	baz=284						
M59A	Waymart	118.82	49	P	PKiKP	04 08 20.5	+0.2
	baz=280						
Q60A	Greensboro	118.89	52	P	PKiKP	04 08 21.1	+0.7
	baz=278						
LPAZ	La Paz	118.93	116	PKP	PKiKP	04 08 22.0	0.0
	comp=Z,2.5nm,0.7s,baz=225,slow=0.2,SNR=11						
LPAZ				PKKPbc	PKKPbc	04 18 35.7	-0.9
	comp=Z,4.1nm,0.7s,baz=68,slow=2.7,SNR=14						
LPAZ	La Paz	118.93	116	eP	PKPdf	04 08 21.4	-0.5
LPAZ	La Paz	118.93	116	PKIKP	PKiKP	04 08 22.0	0.0
TRO	Tromso	119.02	348	ePKPdf	PKiKP	04 08 20.2	+0.4
K59A	Cooperstown	119.03	48	P	PKiKP	04 08 20.9	+0.2
	baz=281						
O60A	Telford	119.04	51	P	PKiKP	04 08 21.5	+0.8
	baz=279						
J59A	Piesco	119.14	47	P	PKiKP	04 08 21.0	+0.1
	baz=282						
N60A	Cedar Hill Far	119.18	50	P	PKiKP	04 08 21.2	+0.3
	baz=280						
H58A	Gabriels	119.18	46	P	PKiKP	04 08 21.1	+0.2
	baz=282						
E58A	La Victoria	119.36	43	P	PKiKP	04 08 21.5	+0.4
	baz=284						
MAK	Makhachkala	119.42	313	eP	Pdif	04 04 43.3	-0.4
MAK				i		04 08 18.6	
MAK				e		04 08 48.7	
MAK				eSS	SS	04 25 56.1	-2.5
MAK				pmax	pmax		
	comp=Z,253nm,1.1s						
D58A	Chemin du LacG	119.45	43	P	PKiKP	04 08 21.5	+0.1
	baz=285						
M60A	Port Jervis	119.45	49	P	PKPdf	04 08 21.4	0.0
	baz=280						
H59A	Cadyville	119.47	45	P	PKiKP	04 08 22.2	+0.8
	baz=283						
I59A	Olmsteadville	119.53	46	P	PKiKP	04 08 21.7	+0.2
	baz=282						
AKT	Akhty	119.53	311	i PKIKP	PKiKP	04 08 23.3	+1.5
AKT				e		04 08 52.7	
AKT				pmax	pmax		
	comp=Z,41nm,1.1s						
PTBC	PUERTO BERRIO,	119.57	89	eP	PKPdf	04 08 22.2	-0.3
O61A	Allentown	119.72	51	P	PKiKP	04 08 22.6	+0.6
	baz=280						
SPBC	San Pablo de B	119.79	90	eP	PKPdf	04 08 20.5	-2.5
SFJD	Kangerlussuaq	119.87	16	i P	PKiKP	04 08 22.1	+0.6
SFJD	Kangerlussuaq	119.87	16	i PKIKP	PKiKP	04 08 22.1	+0.6
I60A	Shoreham	119.93	46	P	PKiKP	04 08 22.7	+0.4
	baz=283						
PAL	Palisades	120.04	50	P	PKiKP	04 08 23.4	+0.8
	baz=281						
M61A	Granite Spring	120.09	49	P	PKiKP	04 08 23.5	+0.8
	baz=281						
K61A	Williamstown	120.19	48	P	PKiKP	04 08 23.7	+0.8
	baz=282						
F60A	Warwick	120.35	44	P	PKiKP	04 08 23.6	+0.5
	baz=285						
SCHQ	Schefferville	120.48	33	PKP	PKPdf	04 08 22.8	-0.2
	comp=Z,1.8nm,0.3s,baz=307,slow=3.5,SNR=14						
SCHQ				PKKPbc	PKKPab	04 18 30.0	-0.2
	comp=Z,6.0nm,0.8s,baz=70,slow=3.4,SNR=8.8						
E60A	Ste Agathe de	120.59	43	P	PKiKP	04 08 24.0	+0.4
	baz=286						
GROC	Groznyy	120.59	313	i PKIKP	PKPdf	04 08 23.1	-0.5
GROC				e		04 09 51.6	
GROC				pmax	pmax		
	comp=Z,34nm,0.6s						
L61B	Northampton	120.66	48	P	PKiKP	04 08 24.4	+0.5
	baz=282						
D60A	Saint Jean D'O	120.79	42	P	PKiKP	04 08 23.9	0.0
	baz=286						
RUSC	La Rusia	120.80	90	eP	PKPdf	04 08 24.7	-0.7
VRH	Novokhopyorsk	120.96	323	ePKIKP	PKiKP	04 08 24.4	+0.3
VRH				pmax	pmax		
	comp=Z,80nm,0.7s						
OCAC	Ocana	120.97	88	eP	PKPdf	04 08 25.0	-0.3
F61A	St Evariste	121.00	43	P	PKiKP	04 08 25.0	+0.6
	baz=286						
J62A	Henniker	121.11	47	P	PKiKP	04 08 25.6	+0.9
	baz=283						
STEI	Steigen	121.19	348	ePKPdf	PKiKP	04 08 24.6	+0.6
STEI				eSP	SP	04 19 34.8	-0.1
STEI				eSS	SS	04 26 16.3	-3.0
E61A	Lac Etchemin	121.21	43	P	PKiKP	04 08 25.6	+0.8
	baz=286						
H62A	Milan	121.25	45	P	PKiKP	04 08 25.7	+0.8
	baz=285						
MOS	Moscow	121.36	329	i PKIKP	PKPdf	04 08 22.2	-2.4
MOS				e		04 09 56.5	
MOS				pmax	pmax		
	comp=Z,41nm,1.0s						
LOF	Lofoten	121.36	349	ePKPdf	PKPdf	04 08 24.1	-0.2
K63A	Dunstable	121.44	47	P	PKiKP	04 08 26.2	+0.9
	baz=283						
SCO	Scoresbysund	121.45	3	i P	PKiKP	04 08 25.8	+1.3
	comp=Z,12nm,0.5s						
SCO	Scoresbysund	121.45	3	i PKIKP	PKiKP	04 08 25.8	+1.3
SCO				pmax	pmax		
	comp=Z,12nm,0.5s						
G62A	West of Eustis	121.51	44	P	PKiKP	04 08 26.1	+0.6
	baz=286						
M64A	Tiverton	121.93	48	P	PKiKP	04 08 27.0	+0.7
	baz=283						
D62A	Allapoint, All	121.97	42	P	PKiKP	04 08 26.5	+0.3
	baz=288						
GNI	Garni	122.01	310	i PKPdf	PKiKP	04 08 29.2	+2.4
	SNR=5.6						
GNI	Garni	122.01	310	i P	PKiKP	04 08 29.2	+2.4
	SNR=5.6						
LPSR	Galich'ya Gora	122.02	325	ePKIKP	PKiKP	04 08 26.9	+0.7
LPSR				pmax	pmax		
	comp=Z,80nm,1.2s						
ZEI	Tsey	122.04	313	i PKIKP	PKPdf	04 08 26.0	-0.6
ZEI				pmax	pmax		
	comp=Z,13nm,0.7s						
G63A	Kingsbury	122.16	44	P	PKiKP	04 08 27.0	+0.3
	baz=286						
OBN	Obninsk	122.18	329c	iPKIKP	PKiKP	04 08 26.8	+0.4
OBN				i		04 09 05.9	
OBN				pmax	pmax		
	comp=Z,34nm,1.0s						
F63A	Nahmakanta, Br	122.34	43	P	PKiKP	04 08 27.5	+0.5
	baz=287						
VSR	Storozhevoye	122.44	324	ePKIKP	PKiKP	04 08 27.4	+0.4
VSR				pmax	pmax		
	comp=Z,50nm,0.6s						
VORD	Divnogorie	122.47	323	ePKIKP	PKiKP	04 08 27.0	-0.1
VORD				pmax	pmax		
	comp=Z,20nm,0.7s						
KBZ	Khabaz	122.52	314	PKP	PKiKP	04 08 28.1	+0.7
	comp=Z,12nm,0.8s,baz=54,slow=2.8,SNR=22						
H64A	Troy	122.57	45	P	PKiKP	04 08 28.1	+0.6
	baz=286						
E63A	Oxbow	122.58	42	P	PKiKP	04 08 27.8	+0.3
	baz=288						
D63A	Stockholm	122.59	42	P	PKiKP	04 08 27.9	+0.4
	baz=289						
KIV	Kislovodsk	122.60	315	i PKIKP	PKiKP	04 08 32.1	+4.4
KIV				e		04 10 09.5	
KIV				ePS	PS	04 20 05.4	+2.5
KIV				eSS	SS	04 26 43.1	+3.7
KIV				pmax	pmax		
	comp=Z,56nm,1.0s						
CPUP	Villa Florida	122.66	132	PKP	PKPdf	04 08 27.8	-0.3
	comp=Z,4.8nm,0.7s,baz=263,slow=1.6,SNR=14						
CPUP				PKKPbc	PKKPbc	04 18 21.2	-1.0
	comp=Z,4.9nm,0.8s,baz=61,slow=2.9,SNR=11						
CPUP	Villa Florida	122.66	132		PKPdf	04 08 27.4	-0.7
AKH	Akhalkalaki	122.66	312	⇑P	PKiKP	04 08 29.9	+1.8
SHA1	Shidzhatmaz	122.68	314	i PKIKP	PKiKP	04 08 28.9	+0.8
G64A	Maxfield	122.71	44	P	PKiKP	04 08 28.4	+0.6
	baz=287						
F64A	Sherman	122.80	43	P	PKiKP	04 08 28.2	+0.3
	baz=288						
MOR8	Moi Rana	122.84	347	ePKPdf	PKPdf	04 08 27.1	-0.1
MOR8				ePP	PP	04 10 06.3	-0.1
MOR8				eSP	SP	04 19 47.1	-2.5
E64A	Bridgewater	122.97	42	P	PKiKP	04 08 28.3	0.0
	baz=289						
STOK	Stokkvaagen	123.01	348	ePKPdf	PKiKP	04 08 28.6	+0.9
FINES	FINESS Array B	123.10	339	PKP	PKiKP	04 08 28.3	+0.3
	comp=Z,14nm,0.4s,baz=65,slow=1.8,SNR=94						
FINES				PKKPbc	PKKPab	04 18 19.4	+0.7
	comp=Z,5.1nm,0.9s,baz=212,slow=1.2,SNR=11						
FINES	FINESS Array B	123.10	339	PKIKP	PKiKP	04 08 28.0	0.0
FINES	FINESS Array B	123.10	339		PKiKP	04 08 28.0	0.0
G65A	Princeton	123.53	43	P	PKiKP	04 08 30.0	+0.7
	baz=288						
SDV	Santo Domingo	123.69	87	eP	PKPdf	04 08 29.4	-1.2
SDV	Santo Domingo	123.69	87		PKPdf	04 08 29.6	-1.0
DAMY	Dhamar	123.86	279		PKPdf	04 08 27.8	-3.2
BCA	Borcka	124.02	312	⇑P	PKiKP	04 08 31.7	+1.1
SOC	Sochi	124.77	315	ePKIKP	PKPdf	04 08 31.3	-0.3
SOC				e		04 15 24.1	
SOC				pmax	pmax		
	comp=Z,32nm,0.9s						
NSS	Namsos	124.79	347	ePKPdf	PKiKP	04 08 31.2	-0.1
VSU	Vasula	124.81	336	eP	PKiKP	04 08 32.2	+0.7
VSU	Vasula	124.81	336c	iPKIKP	PKiKP	04 08 31.9	+0.4
VSU				pmax	pmax		
	comp=Z,112nm,0.6s						
BOSA	Boshof	124.90	222	PKP	PKiKP	04 08 33.1	+0.2
	comp=Z,15nm,0.8s,baz=88,slow=1.8,SNR=26						
SUR	Sutherland	124.97	215	PKP	PKiKP	04 08 32.8	-0.1
	comp=Z,17nm,0.8s,baz=117,slow=3.8,SNR=8.7						
SUR	Sutherland	124.97	215		PKPdf	04 08 31.6	-1.1
SIV	San Ignacio	125.16	120	PKKPbc	PKKPbc	04 18 12.3	+0.1
	comp=Z,0.8nm,0.7s,baz=113,slow=9.2,SNR=5.7						
SAML	Samuel	126.25	111	PKIKP	PKPdf	04 08 34.5	-0.7
SAML	Samuel	126.25	111		PKPdf	04 08 34.5	-0.7
TBLU	Trondheim	126.28	347	ePKPdf	PKPdf	04 08 34.0	+0.1
IZAR	Zarasai	126.74	333	eP	PKiKP	04 08 37.1	+1.7
IDID	Didziasalis	126.79	333	eP	PKiKP	04 08 36.5	+1.0
ISAL	Salakas	126.91	333	eP	PKiKP	04 08 37.3	+1.5
LBTB	Lobatse	127.01	226	PKIKP	PKPdf	04 08 35.7	-0.9
LBTB	Lobatse	127.01	226		PKPdf	04 08 35.7	-0.9
MOL	Molde	127.46	348	ePKPdf	PKiKP	04 08 37.0	+0.4
DOMB	Dombas	127.61	347	ePKPdf	PKiKP	04 08 37.3	+0.3
DOMB				ePP	PP	04 10 40.1	+1.8
PABE	Paberze	127.89	334	eP	PKiKP	04 08 38.7	+1.0
NB2	NORSAR Subarra	127.97	345	PKPdf	PKPdf	04 08 37.4	+0.2
	comp=Z,4.1nm,0.5s,baz=31,slow=1.9						
NB2	NORSAR Subarra	127.97	345	PKPdf	PKPdf	04 08 37.4	+0.2
	baz=31,slow=1.9						
NOA	NORSAR Array B	127.97	345	PKP	PKiKP	04 08 37.8	0.0
	comp=Z,7.7nm,0.7s,baz=32,slow=2.0,SNR=47						
SIM	Simferopol'	128.05	318c	iPKIKP	PKiKP	04 08 38.8	+0.4
SIM				e		04 10 42.0	
SIM				pmax	pmax		
	comp=Z,30nm,0.8s						
SIM				pmax	pmax		
	comp=Z,270nm,9.9s						
NC602	NORSAR Array S	128.15	345	ePKPdf	PKiKP	04 08 38.4	+0.3
NC602				ePP	PP	04 10 44.0	+2.2
NC602				eSKSac	SKSac	04 15 32.4	-2.3
AKASG	Malin Array Be	128.24	327	PKP	PKiKP	04 08 38.5	-0.1
	comp=Z,3.3nm,0.4s,baz=55,slow=2.3,SNR=52						
AKASG				PP	PP	04 10 41.4	-1.5
	comp=Z,5.8nm,0.9s,baz=48,slow=7.2,SNR=9.3						
AKASG	Malin Array Be	128.24	327	PKIKP	PKPdf	04 08 37.5	-0.5
AKASG	Malin Array Be	128.24	327		PKPdf	04 08 37.5	-0.5
AKBB	Malin Array Si	128.24	327	i PKIKP	PKPdf	04 08 38.2	+0.2
PBUR	Paburge	128.38	336	eP	PKiKP	04 08 39.6	+0.9
DIKM	Dikmen	128.51	314	⇑P	PKiKP	04 08 41.4	+2.0
FOO	Floro	128.84	349	ePKPdf	PKiKP	04 08 39.9	+0.5
FOO				eSP	SP	04 20 42.9	+0.8
SJG	San Juan	128.85	76	eP	PKPdf	04 08 38.4	-1.7
SJG	San Juan	128.85	76	PKIKP	PKPdf	04 08 39.3	-0.8
SJG	San Juan	128.85	76		PKPdf	04 08 39.3	-0.8
GCPR	Guaynabo City	128.91	76		PKPdf	04 08 38.2	-2.0
SKAR	Skarslia	128.99	346	ePKPdf	PKPdf	04 08 39.4	+0.2
SKAR				ePP	PP	04 10 49.9	+2.6
SKAR				eSKPdf	SKPdf	04 12 01.3	-3.3
SKAR				eSP	SP	04 20 43.1	-0.5
HYA	Hoyanger	129.01	348	ePKPdf	PKiKP	04 08 40.4	+0.6
OSL	Oslo	129.05	345	ePKPdf	PKiKP	04 08 40.9	+1.0
BZK	Bozkurt	129.28	315	⇑P	PKiKP	04 08 41.6	+0.7
SUE	Sulen	129.39	349	ePKPdf	PKiKP	04 08 40.9	+0.4
SUE				ePP	PP	04 10 52.3	+2.5
KONO	Kongsberg	129.58	345	ePKPdf	PKiKP	04 08 41.2	+0.2
KONO				ePP	PP	04 10 52.7	+1.6
KONO				eSKPdf	SKiKP	04 12 03.0	-4.0
KONO				eSS	SS	04 28 03.2	-1.3
KONO	Kongsberg	129.58	345	PKIKP	PKPdf	04 08 40.1	-0.1
KONO	Kongsberg	129.58	345		PKPdf	04 08 40.1	-0.1
ASK	Askoy	129.83	348	ePKPdf	PKiKP	04 08 41.1	-0.3
BER	Bergen	129.90	348	ePKPdf	PKiKP	04 08 41.3	-0.3
BER				ePP	PP	04 10 52.3	-0.8
STVI	Saint Thomas	129.99	76		PKPdf	04 08 40.7	-1.5
ODD1	Odda	130.05	347	ePKPdf	PKiKP	04 08 42.3	+0.3
KLNR	Kaliningrad	130.08	335	i PKIKP	PKiKP	04 08 42.4	+0.3
KLNR				pmax	pmax		
	comp=Z,181nm,1.4s						
SORM	Soroca	130.09	324	⇑P	PKiKP	04 08 42.6	+0.2
SORM	Soroca	130.09	324	⇑PKIKP	PKiKP	04 08 42.6	+0.2
CDVI	St. Croix	130.16	77		PKPdf	04 08 41.0	-1.5
BR131	Keskin Array S	130.33	312c	iPKIKP	PKPdf	04 08 42.8	+0.3
BRTR	Keskin Array B	130.33	312	PKP	PKiKP	04 08 43.2	-0.1
	comp=Z,10nm,0.9s,baz=142,slow=4.6,SNR=34						
BRTR	Keskin Array B	130.33	312	PKIKP	PKPdf	04 08 41.4	-1.1
BRTR	Keskin Array B	130.33	312		PKPdf	04 08 41.4	-1.1
KIS	Kishinev	130.41	323	ePKP	PKiKP	04 08 44.0	+0.9
KIS	Kishinev	130.41	323	ePP	PP	04 10 56.0	-1.2
KIS				i SKP		04 12 08.0	
KIS	Kishinev	130.41	323	i PKS	PKSdf	04 12 32.0	+13
KIS				eSKSP		04 21 04.0	
KIS	Kishinev	130.41	323	ePKIKP	PKiKP	04 08 44.0	+0.9
KIS				e		04 21 04.0	
BLS5	Blasjo	130.53	347	ePKPdf	PKiKP	04 08 43.1	+0.2
BLS5				ePP	PP	04 10 57.0	-0.3
BLS5				eSP	SP	04 20 56.7	-0.2
LSZ	Lusaka	130.65	238	PKIKP	PKPdf	04 08 39.7	-4.1
LSZ	Lusaka	130.65	238		PKPdf	04 08 39.7	-4.1
ANTO	Ankara	130.89	313	PKIKP	PKPdf	04 08 42.8	-0.7
ANTO	Ankara	130.89	313		PKPdf	04 08 42.8	-0.7
KMY	Karmoy	130.99	347	ePKPdf	PKiKP	04 08 44.5	+0.7
LEOM	Leova	131.01	323	⇑P	PKiKP	04 08 45.8	+1.5
LEOM	Leova	131.01	323	⇑PKIKP	PKiKP	04 08 45.8	+1.5
HOMB	Homborsund	131.07	345	ePKPdf	PKiKP	04 08 44.8	+0.8
HOMB				eSP	SP	04 20 58.9	-2.6
STAV	Stavanger	131.14	347	ePKPdf	PKiKP	04 08 44.6	+0.5
STAV				ePP	PP	04 11 03.9	+2.7
TLCR		131.31	321	⇓P	PKiKP	04 08 44.6	-0.2
TLCR		131.31	321	⇓PKIKP	PKiKP	04 08 44.7	-0.2
SNART	Snartemo	131.33	346	ePKPdf	PKiKP	04 08 44.9	+0.4
LVV	L'vov	131.48	328	ePKIKP	PKPdf	04 08 44.1	-0.1
TOPG	Topolog	131.73	321	⇑P	PKiKP	04 08 46.7	+0.9
BSD	Bornholm Skovb	131.74	339	i P	PKiKP	04 08 46.7	+1.2
	comp=Z,29nm,0.8s						
BSD	Bornholm Skovb	131.74	339	i PKIKP	PKiKP	04 08 46.7	+1.2
BSD				pmax	pmax		
	comp=Z,29nm,0.8s						
BEL	Belsk	131.75	332	ePKP	PKiKP	04 08 45.9	+0.3
BEL	Belsk	131.75	332	ePKIKP	PKiKP	04 08 45.9	+0.3
TIRR	Tirgusor	131.91	320	⇑P	PKiKP	04 08 46.4	+0.2
TIRR	Tirgusor	131.91	320	⇑PKIKP	PKiKP	04 08 46.4	+0.2
GOET	G??ttrup	131.95	344	i P	PKiKP	04 08 47.4	+1.6
PTGA	Pitinga	132.02	102		PKPdf	04 08 45.0	-1.3
BIZ	Bicaz	132.02	324	⇑P	PKiKP	04 08 47.6	+1.2
MFTR	Murfatlar	132.04	320	⇑P	PKiKP	04 08 47.2	+0.8
HARR	Harsova	132.10	321	⇑P	PKiKP	04 08 47.2	+0.7
HARR	Harsova	132.10	321	⇑PKIKP	PKiKP	04 08 47.2	+0.7
MANR	Mangalia	132.11	319	⇓P	PKiKP	04 08 46.7	+0.1
BURAR	Bucovina Array	132.14	325	⇑P	PKiKP	04 08 47.8	+1.1
BURAR	Bucovina Array	132.14	325	⇑PKIKP	PKiKP	04 08 47.8	+1.1
BURAR	Bucovina Array	132.14	325		PKPdf	04 08 45.2	-0.4
VRI	Vrincioaia	132.23	323	⇑P	PKiKP	04 08 46.3	-0.5
VRI	Vrincioaia	132.23	323	⇑PKIKP	PKiKP	04 08 46.3	-0.5
GKP	Gorka Klasztor	132.26	336	ePKP	PKiKP	04 08 46.7	+0.1
GKP				ePP	PP	04 11 09.8	+1.1
GKP	Gorka Klasztor	132.26	336	ePKIKP	PKiKP	04 08 46.7	+0.1
GKP				e		04 11 09.8	
KWP	Kalwaria Pacla	132.27	329	ePKP	PKiKP	04 08 46.8	0.0
KWP				ePP	PP	04 11 09.3	+0.4
KWP	Kalwaria Pacla	132.27	329	ePKIKP	PKiKP	04 08 46.8	0.0
KWP				e		04 11 09.3	
PSN	Preselentsi	132.43	319	P	PKiKP	04 08 47.8	+0.6
DOPR	Dopca	132.96	323	⇑P	PKiKP	04 08 49.3	+1.0
ISK	Istanbul-Kandi	133.04	316	P	PKiKP	04 08 48.3	-0.3
SECR		133.06	322	⇓P	PKiKP	04 08 49.0	+0.5
UZH	Uzhgorod	133.11	328	ePKHKP	PKPpre	04 08 33.6	
UZH				i		04 08 46.8	
PRD	Provadia	133.16	319	P	PKiKP	04 08 49.2	+0.5
NEF	NEVSHA	133.21	319	P	PKiKP	04 08 50.2	+1.3
TRPA	Tarpa	133.29	327	⇑P	PKiKP	04 08 49.2	+0.4
OJC	Ojcow	133.31	331	ePKP	PKiKP	04 08 48.4	-0.4
OJC				ePP	PP	04 11 15.4	-0.1
OJC	Ojcow	133.31	331	ePKIKP	PKiKP	04 08 48.4	-0.4
OJC				e		04 11 15.4	
CJR	Cluj-Napoca	133.56	325	⇓P	PKiKP	04 08 50.5	+1.0
CJR	Cluj-Napoca	133.56	325	⇓PKIKP	PKiKP	04 08 50.5	+1.0
NIE	Niedzica	133.60	330	ePKP	PKiKP	04 08 50.0	+0.5
NIE				ePP	PP	04 11 18.4	+0.9
NIE	Niedzica	133.60	330	ePKIKP	PKiKP	04 08 50.0	+0.5
NIE				e		04 11 18.4	
ARR	Arges	133.74	323	⇑P	PKiKP	04 08 50.6	+0.7
HUMR	Humele	133.99	322	⇑P	PKiKP	04 08 49.8	-0.5
SZH	Strazhica	134.06	320	P	PKiKP	04 08 51.4	+0.8
EDRB	Edirne	134.23	318	P	PKiKP	04 08 50.8	-0.2
BSEG	Bad Segeberg	134.26	341	ePKPdf	PKiKP	04 08 50.7	+0.1
	baz=36,slow=1.8						
BSEG				eL	L	05 07 52.7	
	comp=Z,649nm,21.2s						
OKC	Ostrava-Krasne	134.34	332	ePKPpre	PKPpre	04 08 43.6	
OKC				ePKPDF	PKiKP	04 08 50.5	-0.4
OKC				ePP	PP	04 11 22.1	+0.1
KULA	Kula-Manisa	134.37	313	P	PKiKP	04 08 51.2	-0.3
KSP	Ksiaz	134.45	334	ePKP	PKiKP	04 08 51.0	-0.1
KSP				ePP	PP	04 11 22.3	-0.4
KSP	Ksiaz	134.45	334	ePKIKP	PKiKP	04 08 51.0	-0.1
KSP				e		04 11 22.3	
PVL	Pavlikeni	134.46	320	P	PKiKP	04 08 52.3	+0.9
KSL	Kastellorizon	134.58	309	P	PKPdf	04 08 50.2	-0.2
MORC	Moravsky Berou	134.66	332	⇑P	PKiKP	04 08 51.7	0.0
MORC	Moravsky Berou	134.66	332	⇑PKIKP	PKiKP	04 08 51.7	0.0
MORC	Moravsky Berou	134.66	332	ePKIKP	PKiKP	04 08 51.4	-0.3
MORC				ePP	PP	04 11 24.3	+0.2
OSTC	Ostas	134.69	334	ePKPDF	PKiKP	04 08 51.8	+0.1
OSTC				ePP	PP	04 11 22.2	-2.0
OSTC				AMS	AMS	05 08 00.0	
	comp=Z,800nm,18.5s						
FETY	Fethiye	134.78	310	P	PKiKP	04 08 51.7	-0.6
KRLC	Kraliky	134.79	333	ePKPpre	PKPpre	04 08 40.7	
KRLC				ePKPDF	PKiKP	04 08 51.5	-0.4
KRLC				ePP	PP	04 11 21.7	-3.2
KRLC				AMS	AMS	05 06 30.0	
	comp=Z,800nm,20.2s						
PSZ	Piszkesteto	134.80	329	⇑P	PKiKP	04 08 52.3	+0.3
PSZ	Piszkesteto	134.80	329	⇑PKIKP	PKiKP	04 08 52.3	+0.3
DPC	Dobruska-Polom	134.80	333	ePKPDF	PKiKP	04 08 52.4	+0.5
DPC				ePP	PP	04 11 20.4	-4.5
DPC				AMS	AMS	05 08 00.0	
	comp=Z,1μm,21.1s						
DPC	Dobruska-Polom	134.80	333	ePKIKP	PKiKP	04 08 52.4	+0.5
DPC				MLR	MLR		
	comp=Z,1μm,21.1s						
GZR	Gura Zlata	134.80	324	⇑P	PKiKP	04 08 51.6	-0.5
GZR	Gura Zlata	134.80	324	⇑PKIKP	PKiKP	04 08 51.6	-0.5
PLVB	Pleven	134.81	321	⇑P	PKPdf	04 08 51.2	+0.6
UPC	Upice	134.82	334	ePKPDF	PKiKP	04 08 52.7	+0.8
UPC				ePP	PP	04 11 21.0	-4.0
UPC				AMS	AMS	05 01 10.0	
	comp=Z,1μm,23.8s						
UPC	Upice	134.82	334	ePKIKP	PKiKP	04 08 52.7	+0.8
UPC				MLR	MLR		
	comp=Z,1μm,23.8s						
SIRR	Siria	134.91	326	⇑P	PKiKP	04 08 52.6	+0.4
VYHS	Vyhne	134.94	330	ePKIKP	PKiKP	04 08 51.9	-0.3
VYHS	Vyhne	134.94	330	ePKP	PKiKP	04 08 51.9	-0.3
ALN	Alexandroupoli	135.15	317	P	PKPdf	04 08 51.3	0.0
ENEZ	Enez	135.15	317	P	PKiKP	04 08 52.1	-0.7
KDZ	Kurdzhali	135.20	318	P	PKiKP	04 08 52.3	-0.7
JAVC	Velka Javorina	135.25	331	ePP	PP	04 11 29.7	+1.8
HERR	Herculane	135.31	324	⇑P	PKiKP	04 08 52.9	-0.2
BZS	Buzias	135.32	325	⇓P	PKiKP	04 08 52.5	-0.5
BZS	Buzias	135.32	325	⇓PKIKP	PKiKP	04 08 52.5	-0.5
RDO	Rodhopi	135.37	318	P	PKPdf	04 08 51.6	-0.1
MPEP	Malo Peshtene	135.37	321	P	PKiKP	04 08 53.0	-0.3
BRG	Berggiesshubel	135.41	336	ePKPdf	PKiKP	04 08 52.8	-0.3
	baz=36,slow=1.8						
BRG	Berggiesshubel	135.41	336	PKIKP	PKiKP	04 08 52.8	-0.3
PVCC	Panska Ves	135.41	335	ePKPDF	PKiKP	04 08 53.4	+0.3
PVCC				ePP	PP	04 11 24.0	-4.7
PVCC				AMS	AMS	05 00 40.0	
	comp=Z,1μm,30.4s						
PVCC	Panska Ves	135.41	335	ePKIKP	PKiKP	04 08 53.4	+0.3
VRAC	Vranov	135.43	332	⇑P	PKiKP	04 08 53.7	+0.5
VRAC	Vranov	135.43	332	⇑PKIKP	PKiKP	04 08 53.7	+0.5
VRAC	Vranov	135.43	332	ePKIKP	PKiKP	04 08 53.0	-0.2
VRAC				ePP	PP	04 11 29.8	+0.9
CLL	Collm	135.44	337	ePKPdf	PKPdf	04 08 51.0	-0.6
CLL				i PKiKP	PKiKP	04 08 53.3	+0.2
	comp=Z,34nm,0.8s						
CLL				e		04 09 37.0	
CLL				e		04 11 18.0	
CLL				ePP	PP	04 11 28.0	-0.8
CLL				i SKPbc	SKPbc	04 12 13.7	+0.9
	comp=Z,13nm,1.0s						
CLL				eSKPdf	SKPab	04 12 17.0	-0.3
	comp=Z,24nm,1.2s						
CLL				i PKSbc	PKSbc	04 12 24.6	+0.7
	comp=Z,22nm,1.2s						
CLL				epPKSdf		04 12 55.0	
CLL				esPKSdf		04 13 03.0	
CLL				ePPP	PPP	04 14 18.0	
CLL				ePPPP		04 16 24.0	
CLL				e		04 21 06.0	
CLL				ePS	PS	04 21 48.0	-5.4
CLL				eSPP	SPP	04 23 24.0	
CLL				eSKKSacre		04 25 06.0	
CLL				eSS	SS	04 29 12.0	-3.9
CLL				esSS		04 30 24.0	
CLL				e		04 31 06.0	
CLL				e		04 32 48.0	
CLL				eSSS	SSS	04 34 18.0	
CLL				e		04 39 00.0	
CLL	Collm	135.44	337	ePKPdf	PKiKP	04 08 53.5	+0.4
	baz=36,slow=1.8						

CLL				eL	L	05 01 18.2	
	comp=Z,577nm,21.7s						
CLL	Collm	135.44	337	ePKIKP	PKPdf	04 08 51.0	-0.6
CLL				e		04 11 28.0	
CLL				pmax	pmax		
	comp=Z,28nm,0.8s						
CLL				pmax	pmax		
	comp=Z,34nm,1.2s						
EZN	Ezine	135.46	315	P	PKPdf	04 08 52.6	+0.7
NRDL	Niedersach Rie	135.54	340	ePKPdf	PKiKP	04 08 53.0	-0.2
	baz=36,slow=1.8						
RETH	Rethem/Aller,	135.58	340	ePKPdf	PKiKP	04 08 52.9	-0.4
	baz=36,slow=1.8						
FBE	Freiberg	135.61	336	ePKPdf	PKiKP	04 08 53.4	0.0
	baz=36,slow=1.8						
SMOL	Smolenice	135.61	331	ePKIKP	PKiKP	04 08 53.7	+0.1
SMOL	Smolenice	135.61	331	ePKP	PKiKP	04 08 53.7	+0.1
RZN	Rozhen	135.63	319	P	PKiKP	04 08 53.8	-0.3
ASSE	Asse, Remlinge	135.64	339	ePKPdf	PKiKP	04 08 52.9	-0.5
	baz=36,slow=1.8						
ARG	Arkhangelos	135.66	310	P	PKPdf	04 08 53.1	+0.7
SRO	Srobarova	135.66	330	ePKIKP	PKiKP	04 08 53.8	+0.1
SRO	Srobarova	135.66	330	ePKP	PKiKP	04 08 53.8	+0.1
SMTH	Samothraki Isl	135.69	317	P	PKPdf	04 08 52.4	0.0
KRUC	Moravsky	135.70	332	PKIKP	PKiKP	04 08 53.6	-0.1
KRUC	Moravsky	135.70	332	ePKIKP	PKiKP	04 08 53.2	-0.5
KRUC				ePP	PP	04 11 31.3	+0.7
PRK	Paraskevi	135.75	315	P	PKiKP	04 08 53.9	-0.2
MDVR	Moldovita	135.77	324	⇑P	PKiKP	04 08 54.0	-0.1
MODS	Modra-Piesok	135.78	331	ePKIKP	PKiKP	04 08 53.2	-0.7
MODS	Modra-Piesok	135.78	331	ePKP	PKiKP	04 08 53.2	-0.7
PRA	Prague	135.82	334	ePKPDF	PKiKP	04 08 55.6	+1.7
PRA				ePP	PP	04 11 25.7	-5.5
PRA				AMS	AMS	05 00 50.0	
	comp=Z,1µm,26.0s						
PRA	Prague	135.82	334	ePKIKP	PKiKP	04 08 55.6	+1.7
PRA				MLR	MLR		
	comp=Z,1µm,26.0s						
PRU	Pruhonice	135.84	334	PKIKP	PKiKP	04 08 53.8	-0.2
DAT	Datca	135.87	311	P	PKPdf	04 08 52.1	-0.9
TREC	Trest	135.94	333	ePKPDF	PKiKP	04 08 53.5	-0.8
TREC				ePP	PP	04 11 25.1	-7.0
TREC				AMS	AMS	05 04 20.0	
	comp=Z,1µm,26.6s						
TREC	Trest	135.94	333	ePKIKP	PKiKP	04 08 53.5	-0.8
TREC				MLR	MLR		
	comp=Z,1µm,26.6s						
CLZ	Clausthal	135.99	339	ePKPdf	PKiKP	04 08 54.0	-0.3
	baz=36,slow=1.8						
BDFB	Brasilia	135.99	128	PKhKP	PKPpre	04 08 45.6	
	comp=Z,1.2nm,0.4s,baz=222,slow=6.6,SNR=4.4						
BDFB				PKP	PKPdf	04 08 53.8	0.0
	comp=Z,7.1nm,0.7s,baz=190,slow=2.4,SNR=15						
NEUB	Neuenburg	135.99	337	ePKPdf	PKiKP	04 08 53.8	-0.5
	baz=36,slow=1.8						
SMG	Samos	136.02	312	P	PKPdf	04 08 52.6	-0.5
SIGR	SIGRI	136.06	315	P	PKiKP	04 08 55.5	+0.8
VTS	Vitosha	136.09	321	P	PKPdf	04 08 54.0	+0.8
VTS	Vitosha	136.09	321	⇑P	PKiKP	04 08 54.1	-0.8
VTS	Vitosha	136.09	321	P	PKiKP	04 08 54.4	-0.5
VTS	Vitosha	136.09	321	⇑PKIKP	PKiKP	04 08 54.1	-0.8
KAVA	Kavala	136.11	318	P	PKiKP	04 08 54.0	-0.8
THAS	Thassos island	136.17	317	P	PKPdf	04 08 53.2	0.0
CHOS	Chios island	136.28	314	P	PKPdf	04 08 54.5	+0.9
PBCC	Pribram	136.29	334	ePKPDF	PKiKP	04 08 56.3	+1.4
MMB	Musomiste	136.32	319	P	PKPdf	04 08 53.7	+0.1
NVR	Nevrokopi	136.36	319	P	PKPdf	04 08 52.9	-0.7
TANN	Tannenbergstha	136.36	336	ePKPdf	PKiKP	04 08 54.3	-0.8
	baz=36,slow=1.8						
GTTG	Gottingen	136.38	339	ePKPdf	PKiKP	04 08 54.4	-0.6
	baz=36,slow=1.8						
PLN	Plauen	136.42	336	ePKPdf	PKiKP	04 08 54.5	-0.7
	baz=36,slow=1.8						
GUNZ	Gunzen	136.45	336	ePKPdf	PKiKP	04 08 54.7	-0.6
	baz=36,slow=1.8						
IBBN	Ibbenburen	136.47	341	ePKPdf	PKiKP	04 08 54.5	-0.7
	baz=36,slow=1.8						
WERN	Wernitzgruen	136.49	336	ePKPdf	PKiKP	04 08 54.9	-0.4
	baz=36,slow=1.8						
MOX	Moxa	136.50	337	ePKPdf	PKiKP	04 08 54.7	-0.6
	baz=36,slow=1.8						
MOX				eL	L	05 11 58.3	
	comp=Z,633nm,21.4s						
MOX	Moxa	136.50	337	PKIKP	PKiKP	04 08 55.1	-0.2
NKC	Novy Kostel	136.51	336	ePKPDF	PKiKP	04 08 55.5	+0.1
NKC				ePP	PP	04 11 26.1	-9.5
NKC				AMS	AMS	05 08 50.0	
	comp=Z,800nm,19.6s						
NKC	Novy Kostel	136.51	336	ePKIKP	PKiKP	04 08 55.5	+0.1
NKC				MLR	MLR		
	comp=Z,800nm,19.6s						
MORH	Mrgy, Hungar	136.56	328	⇑iP	PKPdf	04 08 54.4	+0.6
KKB	Krupnik	136.58	320	P	PKPdf	04 08 54.9	+0.9
FRGS	Fruska Gora	136.61	326	⇑iP	PKPdf	04 08 48.0	-6.0
KARP	Karpathos	136.63	309	P	PKiKP	04 08 55.5	-0.6
SRS	Serrai	136.65	319	P	PKPdf	04 08 53.8	-0.4
CONA	Conrad Observa	136.76	331	iPKiKP	PKiKP	04 08 55.6	-0.5
	comp=Z,29nm,1.1s,SNR=12						
CONA				iPP	PP	04 11 39.2	+1.8
	comp=Z,20nm,1.6s						
OUR	Ouranopolis	136.79	317	P	PKPdf	04 08 54.5	+0.1
MANZ	Manzenberg	136.84	336	ePKPdf	PKiKP	04 08 55.2	-0.8
	baz=36,slow=1.8						
KHC	Kasperske Hory	136.89	334	ePKPpre	PKPpre	04 08 44.6	
KHC				ePKPDF	PKPdf	04 08 55.3	+0.9
KHC				epPKP	pPKPdf	04 09 24.5	+0.8
KHC				ePP	PP	04 11 31.3	-6.8
KHC				AMS	AMS	05 02 10.0	
	comp=Z,1µm,27.6s						
KHC	Kasperske Hory	136.89	334	ePKHKP	PKPpre	04 08 44.6	
KHC				e		04 08 55.3	
KHC				e		04 09 24.5	
SOH	Sokhos	136.96	318	P	PKPdf	04 08 55.5	+0.7
ROTZ	Rotzenmuhle	136.97	336	ePKPdf	PKPdf	04 08 55.2	+0.7
	baz=36,slow=1.8						
GEC2	GERESS Array S	137.06	334	ePKPdf	PKPdf	04 08 55.7	+0.9
	baz=36,slow=1.8						
GEC2				eL	L	05 13 05.8	
	comp=Z,600nm,21.3s						
GERES	GERESS Array B	137.06	334	PKhKP	PKPpre	04 08 43.7	
	comp=Z,1.5nm,0.8s,baz=33,slow=3.2,SNR=8.9						
GERES				PKP	PKiKP	04 08 55.9	-0.7
	comp=Z,14nm,0.8s,baz=67,slow=1.7,SNR=26						
GERES	GERESS Array B	137.06	334	PKIKP	PKPdf	04 08 54.0	-0.8
GERES	GERESS Array B	137.06	334		PKPdf	04 08 54.0	-0.8
AMGA	Amorgos Island	137.06	312	P	PKPdf	04 08 54.1	-1.0
KNT	Kendrikon	137.07	319	P	PKPdf	04 08 54.5	-0.4
DIVS	Divibare	137.16	324	⇑iP	PKPdf	04 08 55.8	+0.7
WET	Wettzell	137.18	335	ePKPdf	PKPdf	04 08 55.7	+0.7
	baz=36,slow=1.8						
WET				eL	L	05 10 12.0	
	comp=Z,484nm,21.0s						
WET	Wettzell	137.18	335	PKIKP	PKiKP	04 08 56.4	-0.4
PAIG	Paliouri	137.20	317	P	PKPdf	04 08 54.5	-0.7
VAY	Valandovo	137.20	319	iP	PKPdf	04 08 55.5	+0.3
HORT	Hortiatis	137.24	318	P	PKPdf	04 08 55.9	+0.5
THE	Thessaloniki	137.31	318	P	PKPdf	04 08 54.9	-0.4
BEHE	Becsehely	137.34	329	⇑iP	PKPdf	04 08 56.2	+0.9
BUG	Bochum--Univer	137.37	341	ePKPdf	PKiKP	04 08 56.2	-0.8
	baz=36,slow=1.8						
ARSA	Arzberg	137.41	331	iPKiKP	PKiKP	04 08 56.9	-0.5
	comp=Z,7.6nm,1.0s						
ARSA				iPP	PP	04 11 43.6	+2.3
	comp=Z,19nm,1.1s						
GRF	Grafenberg Arr	137.42	336	eL	L	05 12 57.2	
	comp=Z,531nm,20.8s						
SKO	Skopje	137.55	321	iP	PKiKP	04 08 57.0	-0.7
MOA	Molln	137.56	332	iPKiKP	PKiKP	04 08 57.6	0.0
	comp=Z,11nm,0.6s						
KOGS	Kog	137.62	330	iPKPdf	PKPdf	04 08 56.0	+0.2
KOGS				ePP	PP	04 11 43.1	+0.5
KOGS				e		04 12 04.7	
BBLS	Lazići	137.64	324	⇑iP	PKPdf	04 08 56.7	+0.7
SKIA	Skiathos	137.72	316	P	PKPdf	04 08 56.4	+0.2
HAPS	Han Pijesak,Bl	137.76	325	eP	PKiKP	04 08 58.7	+0.5
NEO	Neokhori	137.81	316	P	PKiKP	04 08 57.4	-1.0
RUDO	Rudo	137.81	324	eP	PKiKP	04 08 57.7	-0.5
MRKA	Markates	137.86	315	P	PKiKP	04 08 57.9	-0.6
LIT	Litokhoron	137.90	318	P	PKPdf	04 08 54.3	-2.2
NPS	Neapolis	137.91	310	P	PKiKP	04 08 57.9	-0.8
MOSL	Moslavina	137.94	328	iP	PKPdf	04 08 57.0	+0.5
SERI	Serifos	137.94	313	P	PKiKP	04 08 57.9	-0.8
PTL	Penteli	137.98	314	P	PKPdf	04 08 56.6	-0.1
TNS	Taunus Mts	138.01	339	ePKPdf	PKiKP	04 08 57.7	-0.8
	baz=36,slow=1.8						
TNS				eL	L	05 08 00.4	
	comp=Z,423nm,21.2s						
LAST	Lasithi	138.05	310	P	PKPdf	04 08 57.6	+0.6
SOKA	Soboth	138.05	331	iPKiKP	PKiKP	04 08 59.2	+0.5
	comp=Z,28nm,1.1s						
SOKA				iPP	PP	04 11 47.7	+2.3
	comp=Z,20nm,1.1s,SNR=5.8						
ATHU	Athens Univers	138.07	314	P	PKPdf	04 08 56.4	-0.5
ATH	Athens Observa	138.12	314	P	PKPdf	04 08 56.9	0.0
VLY	Voula,Athens	138.12	314	P	PKPdf	04 08 56.9	-0.1
PTJ	Puntijarka	138.14	329	P	PKPdf	04 08 57.5	+0.7
FNA	Florina	138.25	319	P	PKPdf	04 08 57.4	+0.2
LKR	Lokris	138.28	316	P	PKPdf	04 08 56.6	-0.6
BLY	Banja Luka	138.30	327	⇑iP	PKPdf	04 08 57.1	0.0
VILL	Villia	138.31	315	P	PKPdf	04 08 56.9	-0.5
PHP	Peshkopia	138.33	321	P	PKPdf	04 08 58.0	+0.7
OBKA	Obir	138.41	331	iPKiKP	PKiKP	04 09 00.0	+0.6
	comp=Z,16nm,1.0s						
OBKA				iPP	PP	04 11 49.9	+2.3
	comp=Z,22nm,1.5s						
BEBN	Eben Emael	138.42	342	PKPdf	PKPdf	04 08 57.9	+0.8
BEBN				PP	PP	04 11 47.9	+0.6
OHR	Ohrid	138.43	320	iP	PKPdf	04 08 58.5	+1.0
IDI	Anoyia	138.44	310	P	PKPdf	04 08 57.9	+0.2
CRES	Cresnjev	138.45	329	⇑iP	PKPdf	04 08 58.1	+0.8
AXAR	Agios Charalam	138.46	316	P	PKPdf	04 08 57.8	+0.2
MEM	Membach	138.49	341	PKPdf	PKPdf	04 08 58.1	+0.9
MEM				PKiKP	PKiKP	04 09 00.3	+1.0
MEM				PP	PP	04 11 48.3	+0.7
THL	Klokotos Trika	138.49	318	P	PKPdf	04 08 57.5	0.0
PROD	Prodromos	138.54	315	P	PKPdf	04 08 57.0	-0.7
KBA	Koelnbreinsper	138.55	332	iPKiKP	PKiKP	04 09 01.0	+1.1
	comp=Z,24nm,1.1s						
KBA				iPP	PP	04 11 48.9	+0.4
	comp=Z,28nm,1.9s						
OZLJ	Ozalj	138.59	329	iP	PKiKP	04 08 58.7	-1.0
PDG	Podgorica	138.60	323	⇑iP	PKPdf	04 08 57.7	0.0
FUR	Furstenfeldbru	138.61	335	ePKPdf	PKPdf	04 08 58.4	+0.9
	baz=36,slow=1.8						
FUR				eL	L	05 12 10.6	
	comp=Z,647nm,21.6s						
LTK	Loutraki	138.61	315	P	PKPdf	04 08 55.0	-2.9
BSTI	Sart Tilman	138.64	342	PP	PP	04 11 50.8	+2.1
NEST	Nestorio	138.66	319	P	PKiKP	04 09 00.6	+0.4
DID	Didima	138.67	314	P	PKPdf	04 08 55.9	-2.1
MAKR	Makrakomi, Fth	138.69	317	P	PKPdf	04 08 58.7	+0.7
KPRO	Kipourio	138.71	318	P	PKPdf	04 08 58.6	+0.5
BHOU	Houvegnez	138.71	341	PP	PP	04 11 50.8	+1.7
BRY	Bratogost	138.73	324	eP	PKiKP	04 09 00.9	+0.6
MYKA	Terra Mystica	138.74	332	iPKiKP	PKiKP	04 09 00.7	+0.6
	comp=Z,17nm,1.0s						
MYKA				iPP	PP	04 11 52.2	+2.5
	comp=Z,23nm,1.4s						
LJU	Ljubljana	138.75	330	iPKPdf	PKPdf	04 08 58.8	+1.0
LJU				e		04 09 27.4	
LJU				ePKS	PKSdf	04 12 34.2	+0.4
LJU	Ljubljana	138.75	330	⇑iP	PKPdf	04 08 58.7	+0.8
BOJS	Bojanci	138.78	329	ePKPdf	PKPdf	04 08 58.6	+0.7
DRME	Dracevica, Mon	138.79	323	⇑iP	PKPdf	04 08 58.4	+0.3
UCC	Uccle	138.81	343	PKPdf	PKPdf	04 08 58.6	+0.8
UCC				PKiKP	PKiKP	04 09 01.4	+1.4
UCC				PP	PP	04 11 51.9	+2.3
BCLA	Clavier	138.87	342	PKPdf	PKPdf	04 08 58.6	+0.7
BCLA				PKiKP	PKiKP	04 09 01.0	+0.8
BCLA				PP	PP	04 11 52.8	+2.8
TIR	Tirane	138.88	321	P	PKPdf	04 08 58.8	+0.6
VAM	Vamos	138.91	311	P	PKiKP	04 08 59.8	-0.9
EVR	Evrytania	138.96	317	P	PKiKP	04 08 59.8	-1.0
TREB	Trebinje	138.96	324	eP	PKiKP	04 09 00.8	+0.2
BGES	Gesves	138.97	342	PKPdf	PKiKP	04 08 59.3	-1.0
BGES				PKiKP	PKPdf	04 09 01.5	+3.4
BGES				PP	PP	04 11 51.3	+0.7
CHAN	Chania	138.97	311	P	PKiKP	04 09 00.2	-0.6
KALE	Kalithea	139.00	316	P	PKPdf	04 08 59.3	+0.7
CEY	Cerknica	139.02	330	eP	PKPdf	04 08 59.2	+0.8
HCY	Herceg Novi	139.04	323	eP	PKPdf	04 08 57.8	-0.7
SERG	Sergoula	139.04	316	P	PKPdf	04 08 58.8	+0.1
ANX	Ano Chora	139.05	316	P	PKPdf	04 08 58.9	+0.1
TRIZ	Trizonia	139.06	316	P	PKPdf	04 08 59.2	+0.6
SNF	Seneffe	139.09	343	PKPdf	PKPdf	04 08 59.1	+0.8
SNF				PKiKP	PKiKP	04 09 02.1	+1.6
WATA	Walderalm	139.13	334	iPKiKP	PKiKP	04 09 02.1	+1.1
	comp=Z,34nm,1.7s						
WATA				iPP	PP	04 11 52.7	+0.6
	comp=Z,38nm,1.7s						
BMRD	Maredsous	139.13	342	PKPdf	PKiKP	04 08 59.8	-0.9
BMRD				PKiKP	PKPdf	04 09 02.2	+3.8
EFP	Efpalio	139.14	316	P	PKPdf	04 08 59.8	+1.0
RICI	Ricice	139.15	326	P	PKPdf	04 08 58.4	-0.3
WTTA	Wattenberg	139.16	334	iPKiKP	PKiKP	04 09 02.1	+1.0
	comp=Z,41nm,1.2s,SNR=7.7						
WTTA				iPP	PP	04 11 53.7	+1.4
	comp=Z,51nm,2.0s						
ABTA	Abfaltersbach	139.17	333	iPKiKP	PKiKP	04 09 01.8	+0.8
	comp=Z,12nm,0.8s						
ABTA				iPP	PP	04 11 54.0	+1.7
	comp=Z,12nm,1.4s						
UDBI	Udbina	139.19	328	iP	PKPdf	04 08 58.7	-0.1
JAN	Janina	139.20	318	P	PKPdf	04 08 59.3	+0.4
STON	Ston	139.23	324	iP	PKPdf	04 08 55.9	-2.9
STON	Ston	139.23	324	eP	PKPdf	04 08 59.9	+1.1
WLF	Walferdange	139.26	341	PKiKP	PKiKP	04 09 02.7	+1.7
WLF	Walferdange	139.26	341	ePKPdf	PKiKP	04 09 00.3	-0.7
	baz=36,slow=1.8						
RIY	Rijeka	139.29	330	P	PKPdf	04 08 58.8	-0.1
RIY	Rijeka	139.29	330	⇑iP	PKPdf	04 08 59.1	+0.3
PVO	Paravola	139.30	317	P	PKiKP	04 09 00.7	-0.7
MOTA	Moosalm	139.32	334	iPKiKP	PKiKP	04 09 02.0	+0.6
	comp=Z,25nm,0.6s						
MOTA				iPP	PP	04 11 54.4	+1.1
	comp=Z,40nm,1.6s						
VLX	Vlachokerasia	139.33	314	P	PKiKP	04 09 00.7	-0.9
RETA	Reutte	139.36	335	iPKiKP	PKiKP	04 09 01.8	+0.5
	comp=Z,18nm,1.0s						
RETA				iPP	PP	04 11 54.5	+1.2
	comp=Z,16nm,1.5s						
DOU	Dourbes	139.37	342	PKiKP	PKiKP	04 09 02.3	+1.1
SQTA	Sankt Quirin	139.38	334	iPKiKP	PKiKP	04 09 01.0	-0.5
	comp=Z,21nm,0.6s						
SQTA				iPP	PP	04 11 53.5	0.0
	comp=Z,30nm,1.5s						
TPE	Tepelena	139.39	320	P	PKPdf	04 08 59.8	+0.6
UBR	Ueberruh	139.47	336	ePKPdf	PKPdf	04 08 59.9	+0.6
	baz=36,slow=1.8						
DRO	Drossia	139.51	316	P	PKPdf	04 09 00.3	+0.8
PDO	Prodromos	139.54	317	P	PKPdf	04 09 00.7	+1.2
RLS	Riolos of Patr	139.62	316	P	PKiKP	04 09 01.6	-0.5
NVLJ	Novalja	139.63	329	iP	PKPdf	04 08 59.1	-0.3
BFO	Black Forest	139.63	338	ePKPdf	PKPdf	04 09 00.0	+0.6
	baz=36,slow=1.8						
BFO				eL	L	05 10 09.0	
	comp=Z,360nm,21.1s						
MORI	Morici	139.68	327	iP	PKPdf	04 08 59.7	+0.1
FETA	Feichten	139.74	334	iPKiKP	PKiKP	04 09 02.5	+0.3
	comp=Z,37nm,0.9s						
FETA				iPP	PP	04 11 58.2	+2.4
	comp=Z,17nm,1.8s						
KEK	Kerkira	139.85	319	P	PKPdf	04 08 59.3	-0.8
ZIRJ	Zirje	139.85	327	iP	PKPdf	04 09 00.1	+0.2
DAVA	Damuels	139.88	335	iPKiKP	PKiKP	04 09 01.7	-0.8
	comp=Z,22nm,1.0s						
DAVA				iPP	PP	04 11 59.9	+3.3
	comp=Z,7.9nm,0.8s						
DUGI	Dugi Otok	139.93	328	iP	PKPdf	04 08 59.9	-0.2
KFL	Anninata	140.06	316	P	PKiKP	04 09 03.0	0.0
AQU	L'Aquila	141.94	327	⇑iP	PKPdf	04 09 04.2	+0.4
TIP	Timpagrande	142.07	321	P	PKPdf	04 08 59.6	-4.6
BNI	Bardonecchia	142.99	336	PKHKP	PKPdf	04 09 02.8	-2.9
BNI	Bardonecchia	142.99	336		PKPdf	04 09 02.8	-2.9
WDD	Wied Dalam	145.49	318		PKPdf	04 09 09.1	-1.0
KEST	Kesra	148.80	323	PKPbc	PKiKP	04 09 20.9	-0.2
	comp=Z,153nm,0.8s,baz=245,slow=0.8,SNR=89						
CMAH	Djebel Manchou	149.27	326	P	PKiKP	04 09 22.5	+0.5
CMAH	Djebel Manchou	149.27	326	P	PKiKP	04 09 22.5	+0.5
CAEH	'Ain El Ouahch	149.46	327	P	PKiKP	04 09 23.5	+1.1
CAEH	'Ain El Ouahch	149.46	327	P	PKiKP	04 09 23.5	+1.1
ABSA	Djebel Ababsia	149.49	325	P	PKiKP	04 09 23.0	+0.4
ABSA	Djebel Ababsia	149.49	325	P	PKiKP	04 09 23.0	+0.4
CKFL	Kef-Lekhel	149.81	327	P	PKiKP	04 09 24.0	+0.8
CKFL	Kef-Lekhel	149.81	327	P	PKiKP	04 09 24.0	+0.8
PBRG	Braganca	149.88	350	ePKPbc	PKiKP	04 09 23.2	+0.1
PBRG	Braganca	149.88	350	ePKPab	PKPab	04 09 29.0	+1.0
PGAV	Gavieira, Arco	149.95	352	ePKPdf	PKPdf	04 09 17.5	0.0
PGAV	Gavieira, Arco	149.95	352	ePKPbc	PKiKP	04 09 23.6	+0.3
PGAV	Gavieira, Arco	149.95	352	ePKPab	PKPab	04 09 29.0	+0.7
PGAV	Gavieira, Arco	149.95	352	eLR	LR	05 01 57.7	
	comp=Z,568nm,20.0s						
CASM	Ain Smara	150.04	327	P	PKiKP	04 09 24.5	+0.9
CASM	Ain Smara	150.04	327	P	PKiKP	04 09 24.5	+0.9
PCAB	Cabril	150.17	352	ePKPbc	PKiKP	04 09 24.3	+0.6
PVRL	Vila Real	150.55	351	ePKPbc	PKiKP	04 09 25.3	+0.8
UCM	Universidad Co	150.55	344	iPKP	PKPdf	04 09 21.0	+2.6
UCM	Universidad Co	150.55	344	iPP	PP	04 13 02.4	+2.8
MVO	Moncorvo	150.55	350	ePKPdf	PKPdf	04 09 19.9	+1.5
MVO	Moncorvo	150.55	350	ePKPbc	PKiKP	04 09 25.6	+1.0
MVO	Moncorvo	150.55	350	ePKPab	PKPab	04 09 31.7	+0.9
MVO	Moncorvo	150.55	350	eLR	LR	05 01 45.8	
	comp=Z,723nm,20.0s						
SET	Setif	150.66	328	P	PKiKP	04 09 26.0	+1.0
SET	Setif	150.66	328	P	PKiKP	04 09 26.0	+1.0
SHEL	Horse Pasture	151.08	195	PKIKP	PKPbc	04 09 23.3	-2.5
SHEL	Horse Pasture	151.08	195		PKPbc	04 09 23.3	-2.5
PVIS	Viseu	151.13	351	ePKPbc	PKiKP	04 09 26.3	+0.6
RCBR	Riachuelo	151.36	127	PKIKP	PKPbc	04 09 24.1	-2.4
RCBR	Riachuelo	151.36	127		PKPbc	04 09 24.1	-2.4
MTE	Manteigas	151.38	351	ePKPdf	PKPdf	04 09 19.5	-0.2
MTE	Manteigas	151.38	351	ePKPbc	PKiKP	04 09 27.6	+1.3
MTE	Manteigas	151.38	351	eLR	LR	05 02 23.9	
	comp=Z,656nm,20.0s						
COI	Coimbra	151.70	352	ePKPbc	PKiKP	04 09 27.7	+0.9
PCAS	Casmilo, Conde	151.86	352	ePKPbc	PKiKP	04 09 28.0	+0.8
PCBR	Castelo Branco	151.92	350	ePKPdf	PKPdf	04 09 21.5	+1.1
PCBR	Castelo Branco	151.92	350	ePKPbc	PKiKP	04 09 28.7	+1.4
PCBR	Castelo Branco	151.92	350	ePKPab	PKPab	04 09 37.1	+0.7
PTOM	Tomar	152.28	352	ePKPbc	PKiKP	04 09 28.9	+0.8
PMRV	Marv??o	152.31	350	ePKPdf	PKPdf	04 09 22.1	+1.1
PMRV	Marv??o	152.31	350	ePKPbc	PKiKP	04 09 29.3	+1.1
PMRV	Marv??o	152.31	350	eLR	LR	05 02 00.1	
	comp=Z,487nm,20.0s						
CART	Cartagena	152.34	338	iPKP	PKPdf	04 09 22.5	+1.4
CART	Cartagena	152.34	338	iPP	PP	04 13 04.3	-5.5
SESP	Santiago Espad	152.38	341	P	PKiKP	04 09 29.5	+1.0
	SNR=97						
PSBE	So Bento	152.43	352	ePKPbc	PKiKP	04 09 29.6	+1.2
EBNR	Beni Rached	152.45	333	P	PKiKP	04 09 29.8	+1.2
EBNR	Beni Rached	152.45	333	P	PKiKP	04 09 29.8	+1.2
ECHA	Ech Chlef	152.64	333	P	PKiKP	04 09 29.9	+1.0
ECHA	Ech Chlef	152.64	333	P	PKiKP	04 09 29.9	+1.0
PMTG	Montargil	152.79	351	ePKPdf	PKPdf	04 09 22.7	+1.0
PMTG	Montargil	152.79	351	ePKPbc	PKiKP	04 09 30.0	+0.9
EANR	'Ain N'Sour	152.93	334	P	PKiKP	04 09 31.1	+1.5
EANR	'Ain N'Sour	152.93	334	P	PKiKP	04 09 31.1	+1.5
PMAFR	Mafra	153.04	353	ePKPbc	PKiKP	04 09 31.0	+1.3
PMAFR	Mafra	153.04	353	ePKPab	PKPab	04 09 43.2	+2.0
LIS	Lisbon	153.26	353	ePKPdf	PKPdf	04 09 23.0	+0.5
LIS				AMS	AMS	05 20 35.8	
	comp=Z,897nm,25.5s						
LIS	Lisbon	153.26	353	ePKIKP	PKPdf	04 09 22.9	+0.5
LIS	Lisbon	153.26	353	ePKPbc	PKiKP	04 09 31.9	+1.8
HORN	Hornachuelos	153.39	346	P	PKiKP	04 09 32.0	+1.6
	SNR=8.1						
PBEJ	Beja	153.75	350	ePKPdf	PKPdf	04 09 24.5	+1.3
PBEJ	Beja	153.75	350	ePKPbc	PKiKP	04 09 32.7	+1.5
PBEJ	Beja	153.75	350	ePKPab	PKPab	04 09 46.7	+2.5
PNCL	Nicolau / Gran	153.77	351	ePKPdf	PKPdf	04 09 24.6	+1.4
PNCL	Nicolau / Gran	153.77	351	ePKPbc	PKiKP	04 09 32.4	+1.2
PNCL	Nicolau / Gran	153.77	351	ePKPab	PKPab	04 09 46.3	+2.1
MESJ	Messejana	153.99	351	ePKPdf	PKPdf	04 09 23.9	+0.4
MESJ				ePP	PP	04 13 21.4	+2.4
MESJ				AMS	AMS	05 15 52.7	
	comp=Z,803nm,17.8s						
MESJ	Messejana	153.99	351	ePKIKP	PKPdf	04 09 23.9	+0.4
MESJ				e		04 13 21.3	
MESJ	Messejana	153.99	351	ePKPdf	PKPdf	04 09 24.0	+0.4
MESJ	Messejana	153.99	351	ePKPbc	PKiKP	04 09 33.1	+1.5
MESJ	Messejana	153.99	351	ePKPab	PKPab	04 09 47.4	+2.2
PCVE	Castro Verde	154.17	350	ePKPdf	PKPdf	04 09 24.4	+0.6
PCVE	Castro Verde	154.17	350	ePKPbc	PKiKP	04 09 33.7	+1.7
PCVE	Castro Verde	154.17	350	ePKPab	PKPab	04 09 48.5	+2.6
EMAL	Malaga-Limoner	154.19	343	iPKP	PKPdf	04 09 24.3	+0.5
EMAL	Malaga-Limoner	154.19	343	iPP	PP	04 13 11.9	-8.3
LIJA	Lijar	154.32	345	ePKP	PKPdf	04 09 27.0	+2.9
LIJA				i		04 09 34.8	
PVAQ	Vaqueiros	154.33	350	ePKPbc	PKiKP	04 09 33.7	+1.3
PVAQ	Vaqueiros	154.33	350	ePKPab	PKPab	04 09 48.6	+2.0
PVAQ	Vaqueiros	154.33	350	eLR	LR	05 04 06.3	
PTEO	Sao Teotonio	154.36	351	ePKPdf	PKPdf	04 09 25.5	+1.5
PBDV	Barranco-do-Ve	154.53	350	ePKPdf	PKPdf	04 09 26.8	+2.5
PBDV	Barranco-do-Ve	154.53	350	ePKiKP	PKiKP	04 09 35.2	+2.4
MORF	Marmelete	154.58	351	ePKPdf	PKPdf	04 09 24.8	+0.3
MORF				ePP	PP	04 13 24.8	+2.4
MORF				AMS	AMS	05 22 55.8	
	comp=N,455nm,18.7s						
MORF	Marmelete	154.58	351	ePKIKP	PKPdf	04 09 24.7	+0.3
MORF				e		04 13 24.7	
MORF	Marmelete	154.58	351	ePKPdf	PKPdf	04 09 24.6	+0.2
MORF	Marmelete	154.58	351	ePKPbc	PKiKP	04 09 34.3	+1.3
MORF	Marmelete	154.58	351	ePKPab	PKPab	04 09 50.3	+2.5
SFS	San Fernando	154.93	346	iPKP	PKPdf	04 09 27.4	+2.6
SFS	San Fernando	154.93	346	iPP	PP	04 13 26.4	+2.2
CEU	Ceuta	155.26	344	iPKP	PKPdf	04 09 25.1	-0.1
CEU	Ceuta	155.26	344	iPP	PP	04 13 18.5	-7.6
PVLZ	Peæn de	155.63	342	iPKP	PKPdf	04 09 25.7	-0.1
PVLZ	Peæn de	155.63	342	iPP	PP	04 13 24.6	-3.7
IFR	Ifrane	157.42	342	iPKP	PKPdf	04 09 30.4	+1.9
IFR	Ifrane	157.42	342	iPP	PP	04 13 38.6	+0.2
CZD	Col de Zad	157.84	341	P	PKPdf	04 09 33.0	+3.8
	SNR=5.2						
MDT	Midelt	157.90	340	P	PKPdf	04 09 31.1	+2.1
	SNR=8.1						
AVE	Averroes	158.24	346	iPKP	PKPdf	04 09 29.9	+0.7
AVE	Averroes	158.24	346	iPP	PP	04 13 38.0	-4.6
TZRR	Tazzarine	160.09	340	P	PKPdf	04 09 34.1	+2.5
	SNR=6.8						
TORD	Torodi Ar. Bea	165.26	276	PKP	PKPdf	04 09 37.0	0.0
	comp=N,26nm,0.8s,baz=22,slow=1.2,SNR=105						
TORD				PKPab	PKPab	04 10 36.2	+1.2
	comp=N,22nm,0.8s,baz=80,slow=4.8,SNR=12						
TORD	Torodi Ar. Bea	165.26	276		PKPdf	04 09 35.6	-1.3
TORD					PKPab	04 10 32.1	-2.9
KIC	Kosan Boka	169.72	237	ePKP2	PKPab	04 10 55.6	+0.9
	comp=N,206nm,1.1s						
LIC	Lamto	169.88	235	ePKP2	PKPab	04 10 56.1	+0.7
	comp=N,445nm,1.9s						
DBIC	Dimbokro	169.99	238	PKP	PKPdf	04 09 40.0	-0.3
	comp=N,18nm,1.2s,baz=158,slow=2.0,SNR=12						
DBIC				PKPab	PKPab	04 10 56.3	+0.4
	comp=N,42nm,0.8s,baz=106,slow=4.6,SNR=29						
DBIC	Dimbokro	169.99	238		PKPab	04 10 53.5	-2.4
TIC	Toumodi	170.11	237	ePKP2	PKPab	04 10 57.2	+0.8
	comp=N,145nm,0.8s						

PRU 27 04:00:08.6±0.0, 49°.82N×18°.57E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.27	274	ePG	Pg	04 00 14.3	+0.5
OKC				eSG	Sg	04 00 17.9	+0.5
	comp=Z,16nm,0.8s						
KRLC	Kraliky	1.18	283	ePG	Pg	04 00 29.4	-1.9
KRLC				eSG	Sg	04 00 46.5	-0.1
	comp=Z,1.9nm,0.5s						
DPC	Dobruska-Polom	1.54	291	eSG	Sg	04 00 57.1	-1.0

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*IDC **27** 04:00:13.6±0.4, 4°.23N×86°.68E, h0km, mb5.0/34, mb1 5.0/37, mb1mx4.9/50, mbtmp5.0/37, ML5.2/4, MS4.6/7, Ms1 4.6/7, ms1mx4.2/32, Error ellipse: s-maj=13.3km s-min=9.0km az=42.0*

*MOS **27** 04:00:13.3±0.9, 4°.32N×86°.76E, h10km, mb5.6/34, Error ellipse: s-maj=11.8km s-min=5.1km az=123.8*

*BJI **27** 04:00:14.8±0.0, 4°.30N×86°.70E, h10km, mB5.2/42, mb5.2/61, Ms4.8/39, Ms7 4.6/39*

*NEIC **27** 04:00:15.5±2.1, 4°.2N±0°.1×86°.73E±0°.08, h13km±4km, mb5.4/50, Error ellipse: s-maj=14.6km s-min=11.4km az=185.0*

*GCMT **27** 04:00:20.5±0.3, 4°.29N±0°.02×86°.55E±0°.02, h20km±2km, MW5.3/89, Moment Tensor Solution. s33,c38; s89,c116; Duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.22±.05; $M_{\theta\theta}$-1.04±.04; $M_{\phi\phi}$0.82±.04; $M_{r\theta}$-0.33±.09;*

$M_{\theta\phi}$0.17±.04; $M_{\phi r}$-0.27±.09; Best double couple: $M_0$1.04600×10^{17} NP1:ϕ_s139.00000°,δ64.00000°, λ173.00000°. NP2:ϕ_s232.00000°,δ83.00000°,λ26.00000°. Principal axes: T 0.9640, Plg23.0000°, Azm99.0000°; N 0.1670, Plg63.0000°, Azm246.0000°; P -1.1280, Plg13.0000°, Azm3.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 27 04:00:17.9±0.7**,4°.32N**±0°.04×**86°.69E**±0°.04**,h29**^{km}±5^{km}**,**
h29^{km}**:pP-P,n399,σ1s.73**/412**,mb5.4**/132**,MS4.8**/13**,**
38C-9D,North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	Pallekele	6.64	297	Pn	Pn	04 01 53.1	-0.5
	122nm,0.3s,baz=118,slow=12,SNR=279						
PALK				Sn	Sn	04 03 00.9	-7.5
	369nm,0.3s,baz=172,slow=23,SNR=12						
PALK				LR	LR	04 04 22.4	
	comp=Z,4µm,18.9s,baz=118,slow=37						
PBA	Port Blair	9.44	39	eP	Pn	04 02 32.2	+0.2
PBA				ex	x	04 04 09.9	
MLSI	Meulaboh, Aceh	9.69	90	P	Pn	04 02 35.8	+0.3
	7µm820nm,0.9s						
SNSI	Sinabang, Aceh	9.81	101	P	Pn	04 02 35.6	-1.5
	11µm1µm,0.8s						
LHMI	Lhok Sumawe	10.27	85	P	Pn	04 02 43.9	+0.5
	540nm,0.7s						
LHMI	Lhok Sumawe	10.27	85		Pn	04 02 42.1	-1.3
TRD	Trivandrum	10.52	294	ex	Pn	04 03 02.8	+16
TPTI		10.52	95	P	Pn	04 02 45.4	-1.5
	786nm108nm,0.8s						
DGPR	DIGLIPUR	10.75	35	eP	Pn	04 02 49.1	-0.9
DGPR				IAmb	IAmb	04 02 55.2	
	comp=Z,516nm,1.4s						
DGPR				ex	x	04 04 38.0	
KCSI	Kotacane, Aceh	11.09	94	P	Pn	04 02 55.7	+1.0
	comp=Z,7µmcomp=Z,1µm,0.7s						
GSI	Gunungsitoli	11.28	105	P	Pn	04 02 56.2	-1.1
	comp=Z,11µmcomp=Z,1µm,0.8s						
GSI	Gunungsitoli	11.28	105		Pn	04 02 55.4	-1.9
SKHT	Srikalahasti	11.62	324	eP	Pn	04 02 59.1	-2.8
SKHT				IAmb	IAmb	04 03 03.4	
	comp=Z,334nm,0.8s						
SKHT				eS	Sn	04 04 57.5	-13
PSI	Prapat	12.31	97	Pn	Pn	04 03 10.9	-0.6
	comp=Z,6.3nm,0.3s,baz=259,slow=8.2,SNR=15						
PSI				Sn	Sn	04 05 19.1	-8.7
	baz=279,slow=18,SNR=1.6						
PSI				LR	LR	04 08 02.2	
	comp=Z,2µm,18.9s,baz=262,slow=38						
RPSI	Rantau Prapat	12.32	97	Pn	Pn	04 03 10.9	-0.6
ADKI	Addanki	13.22	331	eP	Pn	04 03 20.3	-3.5
ADKI				IAmb	IAmb	04 03 25.3	
	comp=Z,116nm,0.6s						
ADKI				eS	Sn	04 05 34.3	-16
SISI	Saibi	13.60	114	P	P	04 03 35.0	-2.7
MYLAV	Mylavaram	13.71	335	eP	Pn	04 03 27.3	-3.1
MYLAV				IAmb	IAmb	04 03 30.6	
	comp=Z,268nm,0.6s						
MYLAV				eS	Sn	04 05 45.5	-16
PVM	Polavaram	13.78	339	eP	Pn	04 03 27.9	-3.5
PVM				IAmb	IAmb	04 03 30.9	
	comp=Z,105nm,0.5s						
PVM				eS	Sn	04 05 45.7	-18
SRLM	Srisailam	13.99	327	eP	Pn	04 03 32.0	-2.3
SRLM				IAmb	IAmb	04 03 35.2	
	comp=Z,304nm,0.5s						
SRLM				eS	Sn	04 05 52.4	-16
URV	Uravakonda	14.06	319	eP	Pn	04 03 33.1	-2.3
URV				IAmb	IAmb	04 03 38.4	
	comp=Z,169nm,0.5s						
URV				eS	Sn	04 05 54.5	-16
MNCY	Minicoy	14.12	287	ex	Pn	04 03 30.6	-5.5
NJS	Nagarjunasagar	14.15	330	eP	Pn	04 03 32.2	-4.3
NJS				IAmb	IAmb	04 03 40.0	
	comp=Z,48nm,0.7s						
NJS				eS	Sn	04 05 56.9	-16
KAAM	Kaadhehdhoo	14.20	255		Pn	04 03 36.2	-1.0
IPM	Ipoh	14.30	89		Pn	04 03 36.7	-1.9
CHLP	Challavanipeta	14.33	350	eP	Pn	04 03 33.8	-5.2
CHLP				IAmb	IAmb	04 03 37.8	
	comp=Z,169nm,0.9s						
CHLP				eS	Sn	04 06 01.2	-16
PDSI	Padang	14.71	110	P	Pn	04 03 44.4	+0.2
	comp=Z,100nm,0.8s						
BKNI	Bangkinang	14.88	105	P	Pn	04 03 46.6	+0.2
	comp=Z,8µmcomp=Z,834nm,0.9s						
BKNI	Bangkinang	14.88	105	P	Pn	04 03 46.0	-0.5
PPSI	Pulau Pagai	15.06	118	P	Pn	04 03 49.2	+0.4
	comp=Z,4µmcomp=Z,396nm,1.0s						
HYB	Hyderabad	15.26	329	i P	Pn	04 03 49.0	-2.6
	comp=Z,77nm,0.8s						
HYB				e		04 03 58.0	
HYB				eS	Sn	04 06 11.0	-29
HYB	Hyderabad	15.26	329	eP	Pn	04 03 48.0	-3.6
HYB				IAmb	IAmb	04 03 53.5	
	comp=Z,69nm,0.8s						
HYB				ex	x	04 06 17.0	
HYBB	Hyderabad (bro	15.26	329	eP	Pn	04 03 48.1	-3.5
HYBB				IAmb	IAmb	04 03 53.1	
	comp=Z,34nm,0.7s						
HYBB				eS	Sn	04 06 22.4	-17
SDSI	Sungai Dareh	15.63	109	P	Pn	04 03 56.0	-0.3
	comp=Z,4µmcomp=Z,373nm,1.0s						
KRJI	Kerinci	16.08	113	P	P	04 04 04.6	-0.7
	comp=Z,12µmcomp=Z,1µm,1.1s						
RPR	Rampur	16.15	334	eP	Pn	04 04 00.5	-2.5
RPR				IAmb	IAmb	04 04 05.1	
	comp=Z,57nm,0.7s						
RPR				eS	Sn	04 06 44.4	-17
RGRI	Rengat	16.31	106	P	P	04 04 10.9	+3.1
SRSP	Sriramsagar	16.65	331	eP	Pn	04 04 06.6	-2.8
SRSP				IAmb	IAmb	04 04 14.2	
	comp=Z,69nm,1.0s						
SRSP				eS	Sn	04 06 59.9	-14
GOA	Goa	16.83	312	eP	Pn	04 04 10.8	-0.8
SIMRM	Sittwe	16.84	21	P	Pn	04 04 11.8	+0.2
SIMRM				IAmb	IAmb	04 04 23.9	
	comp=Z,212nm,1.1s						
KLRI	Killari	16.86	325	eP	Pn	04 04 09.5	-2.5
KLRI				IAmb	IAmb	04 04 12.8	
	comp=Z,149nm,0.6s						
KLRI				eS	Sn	04 07 01.3	-17
MYKOM	Kota Tinggi	17.32	98	P	P	04 04 18.5	-0.5
MYKOM				IAmb	IAmb	04 04 22.5	
	comp=Z,444nm,1.5s						
MYKOM	Kota Tinggi	17.32	98	P	P	04 04 19.0	0.0
KSI	Kapahiang	17.76	116	P	P	04 04 24.4	+0.5
KSI				pmax	pmax		
	comp=Z,251nm,1.1s						
KAD	Karad	17.80	317	i P	Pn	04 04 23.2	-0.5
TPRI	Tanjung Pinang	18.14	100	P	P	04 04 28.7	+0.7
	comp=Z,71µmcomp=Z,142nm,1.1s						
DGAR	Diego Garcia	18.37	231	i P	P	04 04 29.9	-0.7
DGAR	Diego Garcia	18.37	231		P	04 04 28.7	-1.9
DGAR				IAmb	IAmb	04 04 45.7	
	comp=Z,142nm,0.8s						
MNAI	Manna	18.40	118	P	P	04 04 30.6	-0.3
	comp=Z,5µmcomp=Z,461nm,1.3s						
MNAI	Manna	18.40	118	P	P	04 04 28.3	-2.6
MNAI				IAmb	IAmb	04 04 33.4	
	comp=Z,533nm,1.1s						
CM31	Chiang Mai Arr	18.47	40	P	P	04 04 31.4	-0.3
CMAR	Chiang Mai Arr	18.47	40	P	Pn	04 04 32.1	+0.3
	comp=Z,0.8nm,0.3s,baz=231,slow=12,SNR=56						
CMAR				S	Sn	04 07 50.8	-6.7
	comp=Z,0.6nm,0.3s,baz=347,slow=14,SNR=1.8						
CMAR				LR	LR	04 11 16.3	
	comp=Z,884nm,19.8s,baz=240,slow=36						
CMAR	Chiang Mai Arr	18.47	40	i P	Pn	04 04 34.2	+2.3
CMAR				pmax	pmax		
	comp=Z,40nm,0.9s						
CMAR	Chiang Mai Arr	18.47	40	P	Pn	04 04 31.7	-0.1
H08S3	Diego Garcia H	18.48	230	T	T	04 23 15.9	
	baz=48,slow=74						
H08S2	Diego Garcia H	18.49	230	T	T	04 23 24.3	
	baz=48,slow=74						
H08S1	Diego Carcia H	18.50	230	T	T	04 23 13.3	
	baz=48						
PBKT	Sadao Pong	18.57	48	P	P	04 04 32.3	-0.4
CHTO	Chiang Mai	18.73	39	P	Pn	04 04 35.9	+0.8
CHTO				pmax	pmax		
	comp=Z,39nm,1.1s						
CHTO	Chiang Mai	18.73	39	P	Pn	04 04 35.9	+0.8
BRDH	Bariadhala	18.87	14	P	Pn	04 04 38.0	+1.4
	comp=Z,29nm,0.3s,baz=80,slow=4.9,SNR=30						
BRDH				S	Sn	04 07 58.0	-9.1
	comp=Z,30nm,0.3s,baz=288,slow=15,SNR=1.7						
BRDH				LR	LR	04 13 49.7	
	comp=Z,2µm,18.6s,baz=141,slow=43						
POO	Poona	18.89	319	⇓ix	P	04 04 33.5	-2.8
	comp=Z,260nm,1.2s						
POO				eP	Pn	04 04 37.7	+0.7
POO				ePP	pwP	04 04 47.6	-0.7
POO				ePPP	PPP	04 04 55.6	
POO				ex	x	04 07 46.2	
POO				eSSS	SSS	04 08 16.2	
BELO	BELONIA	19.37	13	ex	Pn	04 04 44.4	+1.7
BOK	Bokaro	19.38	358	eP	Pn	04 04 42.7	-0.1
BOK				IAmb	IAmb	04 04 48.3	
	comp=Z,438nm,0.5s						
PMBI	Palembang	19.45	111	P	Pn	04 04 43.4	-0.4
	comp=Z,32µmcomp=Z,844nm,1.1s						
PMBI	Palembang	19.45	111	P	P	04 04 40.6	-1.9
MDSI	Maura Dua	19.54	116	P	Pn	04 04 44.6	-0.2
	comp=Z,16µmcomp=Z,3µmcomp=Z,224nm,1.3s						
LWLI	Liwa	19.68	118	P	Pn	04 04 47.0	+0.4
	comp=Z,198nm,0.8s						
AGT	Agartala	19.94	12	ex	Pn	04 04 50.7	+1.2
AGT				IAmb	IAmb	04 04 54.1	
	comp=Z,323nm,0.5s						
KASI	Kota Agung	20.30	119	P	Pn	04 04 53.0	-0.8
	comp=Z,5µmcomp=Z,451nm,1.1s						
PPBI	Pangkal Pinang	20.48	108	P	Pn	04 04 55.3	-0.6
	comp=Z,13µmcomp=Z,308nm,1.1s						
BHPL	Bhopal	20.83	335	eP	P	04 04 58.5	+1.1
BHPL				IAmb	IAmb	04 05 04.7	
	comp=Z,234nm,1.1s						
SHL	Shillong	21.71	13	eP	P	04 05 08.7	+1.8
SHL				IAmb	IAmb	04 05 13.3	
	comp=Z,246nm,0.6s						
DHUB	DHUBRI	21.81	8	eP	P	04 05 07.0	-0.9
SBJI	Serang	22.01	118	P	P	04 05 10.6	+0.5
	comp=Z,5µmcomp=Z,227nm,1.3s						
ODAN	Odare	22.42	2	eP	P	04 05 16.6	+1.9
	comp=Z,1µm,1.0s						
RAMN	Ramite	22.50	360	eP	P	04 05 17.9	+2.3
	comp=Z,554nm,0.6s						
DBJI	Dramaga	22.76	118	P	P	04 05 19.4	+1.2
	comp=Z,17µmcomp=Z,410nm,1.5s						
SKJI	Sukabumi	22.80	119	P	P	04 05 20.0	+1.4
	comp=Z,6µmcomp=Z,746nm,1.0s						
DLV	T Lat	22.86	69	P	P	04 05 18.0	-1.4
DLV				IAmb	IAmb	04 05 28.6	
	comp=Z,71nm,1.0s						
TAPN	Taplejung	22.92	2	eP	P	04 05 22.0	+1.9
	comp=Z,578nm,0.9s						
TEZP	TEZPUR	22.93	14	ex	P	04 05 22.2	+2.4
GTK	Tadong	22.94	4	ex	P	04 05 22.5	+2.4
GTK				IAmb	IAmb	04 05 34.7	
	comp=Z,233nm,0.4s						
PKI	Pulchoki	23.15	357	eP	P	04 05 23.7	+1.2
	comp=Z,1µm,1.2s						
PKIN	Phulchoki	23.16	357	eP	P	04 05 23.8	+1.3
	comp=Z,1µm,1.2s						
DMN	Daman	23.21	356	eP	P	04 05 24.4	+1.5
	comp=Z,488nm,0.8s						
JIRN	Jiri	23.22	359	eP	P	04 05 24.7	+1.6
	comp=Z,288nm,0.8s						
CNJI	Cibinong	23.45	119	P	P	04 05 26.1	+1.0
	comp=Z,5µmcomp=Z,339nm,1.2s						
GUN	Gumba	23.47	358	eP	P	04 05 27.0	+1.4
	comp=Z,306nm,0.8s						
GKN	Gorkha	23.63	355	eP	P	04 05 28.2	+1.2
	comp=Z,197nm,0.8s						
LEM	Lembang	23.65	118	P	P	04 05 27.9	+0.7
	comp=Z,215nm,1.1s,baz=0.7,slow=0.7,SNR=24						
KSM	Kuching	23.76	96	P	P	04 05 25.7	-2.5
KSM				IAmb	IAmb	04 05 30.3	
	comp=Z,118nm,0.9s						
KSM	Kuching	23.76	96	P	P	04 05 29.0	+0.8
SLVN	Son La	23.78	43	P	P	04 05 28.4	0.0
XMIS	Christmas Isla	23.93	128	P	P	04 05 28.6	-1.1
XMIS				IAmb	IAmb	04 05 31.7	
	comp=Z,136nm,1.1s						
DANN	Dangsing	24.06	354	eP	P	04 05 33.1	+1.9
	comp=Z,422nm,0.8s						
CISI	Cisompet, Garu	24.16	119	P	P	04 05 30.8	-1.2
	comp=Z,4µmcomp=Z,179nm,0.8s						
BHUJ	Bhuj	25.00	320	eP	P	04 05 41.2	+1.7
SBUM	Sibu	25.55	93	P	P	04 05 44.0	-0.6
SBUM				IAmb	IAmb	04 05 47.6	
	comp=Z,114nm,1.5s						
SBUM	Sibu	25.55	93	P	P	04 05 46.0	+1.4
KMI	Kunming	25.80	35	P	P	04 05 49.8	+2.8
KMI				pP	pP	04 05 52.5	-1.6
KMI				sP	sP	04 05 55.3	-1.7
KMI				PP	PnPn	04 06 32.0	+7.5
KMI				pmax	pmax		
	comp=Z,20nm,0.9s						
KMI				pmax	pmax		
	comp=Z,92nm,3.1s						
KMI				LR	LR		
	comp=Z,340nm,12.4s						
KMI				LR	LR		
	comp=Z,810nm,17.3s						
KMI				LR	LR		
	comp=Z,1µm,21.6s						
NDI	New Delhi	25.85	341	eP	P	04 05 48.0	+0.9
QIZ	Qiongzhong	26.92	55	P	P	04 05 58.3	+1.4
QIZ				S	S	04 10 32.5	+0.1
QIZ				pmax	pmax		
	comp=Z,13nm,1.0s						
QIZ				LR	LR		
	comp=Z,1µm,13.2s						
QIZ				LR	LR		
	comp=Z,680nm,25.5s						
QIZ				LR	LR		
	comp=Z,2µm,24.5s						
WOJI	Wonogiri, Jawa	27.03	116	P	P	04 05 58.4	+0.5
	comp=Z,6µmcomp=Z,22nm,0.7s						
DDI	Dehra Dun	27.12	343	eP	P	04 06 01.3	+2.7
DDI				IAmb	IAmb	04 06 10.3	
	comp=Z,65nm,0.5s						
PCJI	Pacitan	27.41	117	P	P	04 06 01.4	+0.1
	comp=Z,2µmcomp=Z,100nm,1.2s						
SMLA	Simla	28.13	342	eP	P	04 06 10.1	+2.5
BHK	Bhakra	28.63	341	ex	P	04 06 18.0	+5.9
GYA	Guiyang	29.16	39	⇑iP	P	04 06 19.0	+2.1
GYA				pP	pP	04 06 23.5	-0.5
GYA				PP	PnPn	04 07 15.8	+5.7
GYA				PcP	PcP	04 09 26.5	+2.2
GYA				S	S	04 11 12.0	+4.4
GYA				pmax	pmax		
	comp=Z,30nm,0.9s						
GYA				pmax	pmax		
	comp=Z,160nm,5.4s						
GYA				LR	LR		
	comp=Z,940nm,18.5s						
GYA				LR	LR		
	comp=Z,830nm,17.5s						
GYA				LR	LR		
	comp=Z,980nm,16.0s						
DHRM	DHARAMSHALA	29.44	342	eP	P	04 06 20.1	+0.6
DHRM				IAmb	IAmb	04 06 24.9	
	comp=Z,74nm,1.0s						
KKM	Kota Kinabalu	29.45	85	P	P	04 06 17.9	-1.8
KKM				IAmb	IAmb	04 06 21.9	
	comp=Z,36nm,1.0s						
THN	Thein Dam	29.80	341	eP	P	04 06 24.0	+1.7
CD2	Chengdu	30.96	29	eP	P	04 06 33.5	+0.8
SOCY	Socotra	33.26	286	P	P	04 06 53.7	+0.5
SOCY				IAmb	IAmb	04 07 08.5	
	comp=Z,86nm,1.4s						
MPSI	Mapaga	33.41	96	P	P	04 06 55.0	+0.6
	comp=Z,1µmcomp=Z,163nm,0.9s						
PLAI	Plampang	33.64	113	P	P	04 06 54.3	-2.1
	comp=Z,27nm,0.9s						
SPSI	Sidrap Palu	34.06	104	P	P	04 06 59.4	-0.7
	comp=Z,44nm,0.8s						
KBL	Kabul	34.24	334	P	P	04 07 02.0	+0.4
KBL				pmax	pmax		
	comp=Z,57nm,0.9s						
KBL	Kabul	34.24	334	P	P	04 07 02.0	+0.4
KBL				IAmb	IAmb	04 07 04.4	
	comp=Z,57nm,0.8s						
KAPI	Kappang	34.30	105	P	P	04 07 01.6	-0.6
	comp=Z,120nm,0.8s,baz=281,slow=7.5,SNR=62						
BNSI	Bone	34.49	104	P	P	04 07 04.3	+0.5
	comp=Z,131nm,1.8s						
BKSI	Bulukumba	34.74	106	P	P	04 07 05.7	-0.3
	comp=Z,137nm,1.1s						
TGY	Tagaytay City	35.13	72	P	P	04 07 10.8	+1.5
	comp=Z,202nm,0.4s,baz=6.5,slow=3.0,SNR=5.7						
APSI	Ampana	35.32	98	P	P	04 07 12.4	+1.4
	comp=Z,1µmcomp=Z,72nm,1.3s						
LZH	Lanzhou	35.35	24	eP	P	04 07 12.5	+1.4
LZH				pP	sP	04 07 21.8	+0.5
LZH				sP	pwP	04 07 26.0	+2.3
LZH				pmax	pmax		
	comp=Z,50nm,1.0s						
LZH				pmax	pmax		
	comp=Z,220nm,4.9s						
LZH				LR	LR		
	comp=Z,1µm,14.3s						
LZH				LR	LR		
	comp=Z,860nm,13.0s						
LZH				LR	LR		
	comp=Z,1µm,14.1s						
MRSI	Marisa	35.42	95	P	P	04 07 11.5	-0.4
	comp=Z,3µmcomp=Z,413nm,0.8s						
SZP	Santa	35.58	66	P	P	04 07 13.3	+0.1
KSH	Kashi	36.36	346	P	P	04 07 19.3	-0.4
KSH				sP	pP	04 07 26.5	-0.4
KSH				PP	PnPn	04 08 42.5	+0.2
KSH				S	S	04 12 59.0	-0.2
KSH				PcS	PcS	04 13 30.5	-1.2
KSH				SS	SnSn	04 15 24.8	-3.2
KSH				pmax	pmax		
	comp=Z,330nm,1.4s						
KSH				pmax	pmax		
	comp=Z,1µm,5.8s						
KSH				LR	LR		
	comp=Z,1µm,13.0s						
KSH				LR	LR		
	comp=Z,2µm,14.3s						
KSH				LR	LR		
	comp=Z,1µm,17.6s						
LUWI	Luwuk	36.45	98	P	P	04 07 20.7	+0.1
	comp=Z,88nm,0.7s						
LUWI	Luwuk	36.45	98	P	P	04 07 19.0	-1.7
GTA	Gaotai	36.90	17	⇓P	P	04 07 26.0	+1.7
GTA				pP	pP	04 07 30.0	-1.5
GTA				sP	sP	04 07 33.5	-1.0
GTA				pmax	pmax		
	comp=Z,81nm,0.9s						
GTA				pmax	pmax		
	comp=Z,140nm,5.2s						
GTA				LR	LR		
	comp=Z,580nm,21.0s						
GTA				LR	LR		
	comp=Z,460nm,19.9s						
GTA				LR	LR		
	comp=Z,190nm,17.5s						
BBSI	Bau Bau	37.14	105	P	P	04 07 27.1	+0.6
	comp=Z,629nmcomp=Z,76nm,1.1s						
KMSI	Cibinong	37.44	95	P	P	04 07 30.9	+1.8
	comp=Z,187nm,0.5s						
HRA	Herat	37.55	326	P	P	04 07 30.5	+0.6
HRA				IAmb	IAmb	04 07 33.5	
	comp=Z,69nm,0.9s						
GAR	Garm	37.59	339	P	P	04 07 30.0	-0.1
CHGR	Chuyangaron	37.72	337	P	P	04 07 31.2	0.0
TWG	Pinlang	37.99	58	P	P	04 07 34.8	+1.1
KCP	Kidapawan	38.30	84	⇓eP	P	04 07 37.7	+1.2
YULB	Yu-li	38.41	57	IAmb	IAmb	04 07 41.2	
	comp=Z,54nm,1.2s						
ULHL	Ulahol	38.90	348	P	P	04 07 39.0	-2.2
	SNR=9.4						
KZA	Kyzart	38.96	346	P	P	04 07 44.3	+2.3
	SNR=6.8						
UCH	Uchtor	39.28	346	P	P	04 07 47.1	+2.4
	SNR=8.4						
WMQ	Urumqi	39.35	1	eP	P	04 07 46.8	+2.0
WMQ				pP	pP	04 07 49.5	-2.5
WMQ				PP	PnPn	04 09 21.8	+3.5
WMQ				S	S	04 13 50.0	+5.7
WMQ				pmax	pmax		
	comp=Z,52nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,120nm,5.5s						
WMQ				LR	LR		
	comp=Z,340nm,21.7s						
WMQ				LR	LR		
	comp=Z,480nm,21.7s						
WMQ				LR	LR		
	comp=Z,780nm,25.3s						
AML	Almayashu	39.40	345	P	P	04 07 48.0	+2.4
	SNR=15						
KBK	Karagaybulak	39.58	346	P	P	04 07 49.5	+2.6
	SNR=15						
AAK	Ala-Archa	39.67	346	P	P	04 07 49.2	+1.5
	SNR=14						
AAK	Ala-Archa	39.67	346	deP	P	04 07 49.9	+2.3
AAK				pmax	pmax		
	comp=Z,54nm,1.3s						
AAK	Ala-Archa	39.67	346	P	P	04 07 48.8	+1.2
SANI	Sanana	39.78	98	P	P	04 07 45.4	-3.4
	comp=Z,42nm,1.2s						
EKS2	Erkin-Say	39.87	345	P	P	04 07 51.8	+2.5
	SNR=22						
SOEI	Soe	39.97	111	P	P	04 07 46.6	-3.8
	comp=Z,87nm,1.0s						
SOEI	Soe	39.97	111	IAmb	IAmb	04 07 57.8	
	comp=Z,61nm,0.8s						
USP	Ospenovka	40.26	346	P	P	04 07 54.5	+2.1
	SNR=9.7						
YOJ	Yonaguni jima	40.27	57	P	P	04 07 52.4	-0.3
YOJ				pmax	pmax		
	comp=Z,78nm,1.1s						
YOJ	Yonaguni jima	40.27	57	P	P	04 07 52.4	-0.3
YOJ				IAmb	IAmb	04 07 55.4	
	comp=Z,78nm,1.1s						
TNTI	Ternate	40.78	94	P	P	04 07 56.5	-0.6
	comp=Z,24nm,0.8s						
NJ2	Nanjing	40.86	44	eP	P	04 07 58.8	+1.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NLAI	Namlea	41.07	100	P	P	04 08 00.3	+0.8
	comp=Z,105nm,0.8s						
KK31	Karatay Array	41.20	342	i P	P	04 08 01.9	+1.8
KK31	Karatay Array	41.20	342	IAmb	IAmb	04 08 03.0	
	comp=Z,157nm,1.4s						
KKAR	Karatay Array	41.20	342	IAmb	IAmb	04 08 03.0	
	comp=Z,157nm,1.4s						
PSA00	Pilbara Seismi	41.44	130	P	P	04 08 02.3	0.0
GEYT	Alibeck	42.41	326	P	P	04 08 12.0	+1.9
	comp=Z,108nm,0.8s,baz=294,slow=1.5,SNR=102						
GEYT				LR	LR	04 27 55.5	
	comp=Z,649nm,19.5s,baz=65,slow=39						
MK31	Makanchi Array	42.48	356	i P	P	04 08 11.2	+0.7
MK31	Makanchi Array	42.48	356	IAmb	IAmb	04 08 12.7	
	comp=Z,69nm,1.5s						
MKAR	Makanchi Array	42.48	356	P	P	04 08 11.5	+0.9
	comp=Z,13nm,0.6s,baz=189,slow=8.2,SNR=38						
MKAR				PP	PP	04 09 50.3	+0.9
	comp=Z,9.3nm,0.9s,baz=173,slow=11,SNR=3.7						
MAKZ	Makanchi	42.52	355	i P	P	04 08 11.3	+0.5
MAKZ				pmax	pmax		
	comp=Z,47nm,1.1s						
MAKZ	Makanchi	42.52	355	P	P	04 08 11.9	+1.0
MAKZ				IAmb	IAmb	04 08 13.0	
	comp=Z,47nm,1.0s						
HHC	Hu-ho-hao-te	42.69	28	eP	P	04 08 14.0	+1.6
HHC				pP	sP	04 08 22.0	-0.7
HHC				sP	pwP	04 08 27.5	+2.3
HHC				pmax	pmax		
	comp=Z,190nm,0.9s						
HHC				pmax	pmax		
	comp=Z,800nm,4.7s						
HHC				LR	LR		
	comp=Z,3µm,14.1s						
HHC				LR	LR		
	comp=Z,2µm,14.2s						
HHC				LR	LR		
	comp=Z,2µm,13.7s						
MSAI	Masohi	42.89	100	P	P	04 08 12.8	-1.5
	comp=Z,27µmcomp=Z,957nmcomp=Z,14nm,1.2s						
MORW	Morawa	43.55	141	P	P	04 08 20.1	+0.7
	baz=44,SNR=5.1						
MORW	Morawa	43.55	141	P	P	04 08 20.1	+0.7
MEEK	Meekatharra	43.60	137	P	P	04 08 20.0	+0.1
	baz=44,SNR=11						
ATD	Arta Tunnel	43.96	282	P	P	04 08 24.5	+1.5
	comp=Z,12nm,0.8s,baz=133,slow=1.1,SNR=7.5						

ATD	Arta Tunnel	43.96	282	P	P	04 08 24.5	+1.5
FITZ	Fitzroy Crossi	44.40	121	P	P	04 08 26.4	+0.1
	baz=44,SNR=34						
FITZ	Fitzroy Crossi	44.40	121	P	P	04 08 26.5	+0.1
	comp=Z,37nm,0.8s,baz=302,slow=6.1,SNR=52						
FITZ				PcP	PP	04 10 10.5	+0.2
	comp=Z,13nm,0.8s,baz=323,slow=3.8,SNR=6.0						
FITZ	Fitzroy Crossi	44.40	121	P	P	04 08 26.4	+0.1
FITZ				IAmb	IAmb	04 08 27.5	
	comp=Z,47nm,0.9s						
BJI	Beijing	44.41	33	P	P	04 08 28.0	+1.9
BJI				PcP	PcP	04 10 07.8	-1.8
BJI				pmax	pmax		
	comp=Z,32nm,0.9s						
SIJI	Sorong	44.84	96	P	P	04 08 28.8	-1.2
	comp=Z,25nm,0.7s,baz=315,slow=6.6,SNR=14						
BLDU	Ballidu	45.05	142	P	P	04 08 31.6	+0.2
	baz=45,SNR=4.9						
DGZ	Jazzator, Alta	45.22	1	i P	P	04 08 34.2	+1.5
DGZ				pmax	pmax		
	comp=Z,30nm,1.0s						
JOW	Kunigami	45.57	56	P	P	04 08 36.6	+1.0
	comp=Z,1.3nm,0.8s,baz=162,slow=14,SNR=4.4						
FAKI	Fak Fak	46.09	98	P	P	04 08 39.2	-0.7
	comp=Z,59nm,1.0s						
KNRA	Kununurra	46.14	116	P	P	04 08 39.8	-0.4
	baz=46,SNR=17						
KNRA	Kununurra	46.14	116	P	P	04 08 40.1	-0.1
KNRA				IAmb	IAmb	04 08 40.3	
	comp=Z,46nm,0.8s						
KLBR	Kellerberrin	46.38	143	P	P	04 08 41.7	-0.1
	baz=46,SNR=6.1						
SONM	Songino Array	46.54	18	P	P	04 08 44.6	+1.5
	comp=Z,52nm,0.8s,baz=198,slow=9.1,SNR=118						
SONM	Songino Array	46.54	18	P	P	04 08 44.6	+1.5
KURBB	Kurchatov Arra	46.65	353	P	P	04 08 44.5	+0.8
KURK	Kurchatov	46.73	353	ceP	P	04 08 45.2	+0.9
KURK				pmax	pmax		
	comp=Z,98nm,1.0s						
KURK	Kurchatov	46.73	353	P	P	04 08 45.6	+1.3
H01W3	Cape Leeuwin H	46.77	149	T	T	04 58 57.2	
	baz=322						
H01W2	Cape Leeuwin H	46.78	149	T	T	04 58 49.5	
	baz=322						
H01W1	Cape Leeuwin H	46.79	149	T	T	04 58 51.6	
	baz=322						
NWAO	Narrogin (SRO)	47.02	144	P	P	04 08 46.5	-0.4
	baz=47,SNR=4.1						
NWAO	Narrogin (SRO)	47.02	144	P	P	04 08 46.2	-0.6
	comp=Z,7.3nm,0.6s,baz=302,slow=7.6,SNR=6.5						
MTN	Manton Dam	47.33	112	P	P	04 08 49.0	-0.5
	baz=47,SNR=5.5						
MTN	Manton Dam	47.33	112	P	P	04 08 48.8	-0.8
ZAK	Zakamensk	47.99	14	eP	P	04 08 53.7	-0.6
ZAK				pmax	pmax		
	comp=Z,18nm,1.1s						
KDU	Kakadu	48.52	111	P	P	04 08 57.8	-1.0
	baz=48,SNR=12						
MOY	Mondy	48.67	12	eP	P	04 09 01.0	+1.4
MOY				pmax	pmax		
	comp=Z,29nm,1.6s						
TLY	Talaya	49.28	14	P	P	04 09 06.3	+2.2
	comp=Z,6.0nm,0.7s,baz=248,slow=11,SNR=4.0						
TLY	Talaya	49.28	14	i P	P	04 09 06.1	+2.0
TLY				pmax	pmax		
	comp=Z,11nm,1.0s						
TLY	Talaya	49.28	14	P	P	04 09 06.4	+2.4
TLY				IAmb	IAmb	04 09 07.7	
	comp=Z,36nm,1.5s						
ZALV	Zalesovo Beam	49.50	359	P	P	04 09 06.5	+0.8
	comp=Z,58nm,0.7s,baz=183,slow=7.8,SNR=78						
BAKI	Biak	49.69	95	P	P	04 09 07.2	-0.6
	comp=Z,251nm,0.9s						
WRKA	Warakurna	49.85	128	P	P	04 09 09.1	+0.2
	baz=50,SNR=11						
KSRS	Korea Array	50.05	43	P	P	04 09 11.4	+1.3
	comp=Z,1.6nm,0.6s,baz=236,slow=8.2,SNR=9.0						
ABKAR	Akbulak array	50.21	337	P	P	04 09 12.3	+1.2
ABKAR	Akbulak array	50.21	337	IAmb	IAmb	04 09 13.5	
	comp=Z,225nm,1.7s						
BRVK	Borovoye	50.43	347	ceP	P	04 09 12.9	+0.1
BRVK				pmax	pmax		
	comp=Z,22nm,1.0s						
BRVK	Borovoye	50.43	347	P	P	04 09 13.7	+1.0
AKT	Akhty	50.80	322	eP	P	04 09 16.9	+1.0
AKT				e		04 10 32.4	
AKT				pmax	pmax		
	comp=Z,67nm,0.8s						
MAK	Makhachkala	51.81	324	eP	P	04 09 19.3	-4.0
MAK				ePPP	PPP	04 12 18.4	
MAK				eS	S	04 16 39.3	-4.5
MAK				eSS	SS	04 20 14.2	-6.6
MAK				eSSS	SSS	04 21 55.4	
MAK				pmax	pmax		
	comp=Z,103nm,0.7s						
MAK				MLR	MLR		
	comp=Z,577nm,14.0s						
LGD	Lagodekhi	51.91	322	P	P	04 09 26.0	+1.9
CN2	Changchun	52.08	35	eP	P	04 09 26.3	+1.0
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
WRA	Warramunga Arr	52.66	119	P	P	04 09 30.2	+0.2
	comp=Z,166nm,0.7s,baz=297,slow=8.3,SNR=762						
WRAB	Tennant Creek	52.66	119	ceP	P	04 09 30.4	+0.3
WRAB				pmax	pmax		
	comp=Z,202nm,0.7s						
WRAB	Tennant Creek	52.66	119	P	P	04 09 30.3	+0.3
FORT	Forrest	52.70	134	P	P	04 09 30.6	+0.5
	baz=53,SNR=38						
TBLG	Delisi	52.79	321	P	P	04 09 32.4	+1.7
AKH	Akhalkalaki	53.41	320	⇑P	P	04 09 35.1	-0.4
AKH	Akhalkalaki	53.41	320	P	P	04 09 35.0	-0.4
AKH	Akhalkalaki	53.41	320	IAmb	IAmb	04 09 38.0	
	comp=Z,36nm,1.2s						
ASAR	Alice Springs	53.76	123	P	P	04 09 38.0	-0.1
	comp=Z,24nm,0.9s,baz=296,slow=7.1,SNR=131						
ASAR				PcP	PcP	04 10 43.8	-0.2
	comp=Z,8.5nm,0.9s,baz=300,slow=3.7,SNR=6.3						
ASAR	Alice Springs	53.76	123	P	P	04 09 37.3	-0.8
ASAR	Alice Springs	53.76	123	P	P	04 09 37.3	-0.8
ZEI	Tsey	53.89	322	eP	P	04 09 39.3	+0.4
ZEI				pmax	pmax		
	comp=Z,21nm,0.7s						
ONI	Oni	54.06	321	P	P	04 09 42.0	+2.0
BATM	Batumi	54.66	319	P	P	04 09 45.7	+1.3
MDJ	Mudanjiang	54.97	36	P	P	04 09 48.0	+1.5
MDJ				pmax	pmax		
	comp=Z,14nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,340nm,7.1s						
KBZ	Khabaz	55.01	322	P	P	04 09 47.9	+1.1
	comp=Z,30nm,0.9s,baz=128,slow=4.9,SNR=14						
KBZ	Khabaz	55.01	322	i P	P	04 09 47.5	+0.7
KBZ				pmax	pmax		
	comp=Z,45nm,0.9s						
SHA1	Shidzhatmaz	55.16	322	i P	P	04 09 49.3	+1.1
KIV	Kislovodsk	55.26	322	eP	P	04 09 51.9	+3.1
KIV				pmax	pmax		
	comp=Z,227nm,1.0s						
MALT	Malatya	55.36	314	P	P	04 09 52.1	+2.5
DOMR	Dombai	55.57	321	i P	P	04 09 52.3	+1.2
ARXR	Arkhyz	55.93	321	i P	P	04 09 55.3	+1.7
USRK	Ussuriysk Ar.	56.19	38	P	P	04 09 55.4	+0.1
	comp=Z,2.9nm,0.9s,baz=278,slow=5.2,SNR=7.1						
USRK	Ussuriysk Ar.	56.19	38	P	P	04 09 55.9	+0.6
SVE	Sverdlovsk	56.29	343	ceP	P	04 09 56.9	+1.2
SVE				eS	S	04 17 44.6	+0.7
SVE				pmax	pmax		
	comp=Z,113nm,1.0s						
ARU	Arti	56.58	342	d iP	P	04 09 58.1	+0.3
ARU						04 12 01.5	
ARU				S	S	04 17 49.2	+1.5
ARU				SS	SS	04 21 35.7	+0.2
ARU				pmax	pmax		
	comp=Z,43nm,0.8s						
ARU	Arti	56.58	342	P	P	04 09 57.8	-0.1
SOC	Sochi	56.91	321	eP	P	04 09 59.0	-1.5
SOC				eS	S	04 17 52.5	-0.1
SOC				pmax	pmax		
	comp=Z,49nm,0.9s						
MJAR	Matsushiro Arr	57.04	49	P	P	04 10 02.7	+1.2
	comp=Z,2.4nm,0.7s,baz=241,slow=2.9,SNR=5.5						
MJAR				PcP	PcP	04 10 55.8	-0.5
	comp=Z,4.6nm,0.8s,baz=243,slow=4.2,SNR=6.9						
BOD	Bodaibo	57.50	17	eP	P	04 10 01.2	-3.1
BOD				pmax	pmax		
	comp=Z,18nm,1.0s						
QIS	Mount Isa	57.50	118	P	P	04 10 05.3	+0.3
	baz=58,SNR=38						
KVT	Kavak	58.19	317	P	P	04 10 11.7	+2.1
KLR	Kul'dur	58.79	33	P	P	04 10 14.1	+0.6
	comp=Z,2.7nm,0.8s,baz=246,slow=8.0,SNR=6.6						
KLR	Kul'dur	58.79	33	i P	P	04 10 13.5	0.0
KLR				pmax	pmax		
	comp=Z,10.0nm,1.5s						
COEN	Coen	58.90	109	P	P	04 10 14.6	-0.2
	baz=59,SNR=5.4						
ZEA	Zeya	59.32	27	eP	P	04 10 17.2	+0.1
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
BR131	Keskin Array S	59.34	314	d iP	P	04 10 17.7	0.0
BR131	Keskin Array S	59.34	314	P	P	04 10 18.3	+0.6
BRTR	Keskin Array B	59.34	314	P	P	04 10 18.2	+0.6
	comp=Z,27nm,0.6s,baz=135,slow=6.3,SNR=49						
BBOO	Buckleboo	59.57	132	P	P	04 10 18.7	-0.5
	baz=60,SNR=11						
ILGA	Ilgaz	59.79	316	P	P	04 10 21.9	+1.0
ILGA				IAmb	IAmb	04 10 22.6	
	comp=Z,45nm,1.0s						
VRH	Novokhopyorsk	59.87	329	eP	P	04 10 20.4	-0.5
VRH				pmax	pmax		
	comp=Z,70nm,1.0s						
BZK	Bozkurt	59.95	317	⇑P	P	04 10 22.7	+1.0
ANTO	Ankara	60.00	314	P	P	04 10 23.0	+0.9
ANTO				pmax	pmax		
	comp=Z,44nm,0.9s						
ANTO	Ankara	60.00	314	P	P	04 10 23.0	+0.9
ANTO				IAmb	IAmb	04 10 23.6	
	comp=Z,44nm,0.8s						
VORD	Divnogorie	61.00	328	eP	P	04 10 28.1	-0.5
VORD				pmax	pmax		
	comp=Z,50nm,0.7s						
MTSU	Mount Surprise	61.02	113	P	P	04 10 28.8	-0.6
	baz=61,SNR=25						
ELL	Elmali	61.09	310	P	P	04 10 30.8	+1.0
SIM	Simferopol'	61.11	320	c iP	P	04 10 30.1	+0.5
SIM				e		04 11 10.5	
SIM				eSSS	SSS	04 25 27.5	
SIM				pmax	pmax		
	comp=Z,39nm,0.7s						
VSR	Storozhevoye	61.20	328	eP	P	04 10 29.4	-0.6
VSR				pmax	pmax		
	comp=Z,80nm,1.3s						
KIRV	Kirov	61.35	339	i P	P	04 10 31.2	+0.3
PMG	Port Moresby	61.78	103	P	P	04 10 34.8	+0.2
	comp=Z,39nm,0.8s,baz=292,slow=4.3,SNR=16						
PMG	Port Moresby	61.78	103	ceP	P	04 10 35.3	+0.7
PMG				pmax	pmax		
	comp=Z,368nm,1.7s						
HTT	Hallett	61.99	132	P	P	04 10 35.5	-0.2
	baz=62,SNR=6.1						
LPSR	Galich'ya Gora	62.08	329	eP	P	04 10 35.5	-0.4
LPSR				pmax	pmax		
	comp=Z,70nm,0.8s						
ISK	Istanbul-Kandi	63.08	314	P	P	04 10 43.3	+0.4
CTAO	Charters Tower	63.31	115	P	P	04 10 45.4	+0.7
STKA	Stephens Creek	63.36	129	P	P	04 10 44.5	-0.4
	baz=63,SNR=11						
STKA	Stephens Creek	63.36	129	P	P	04 10 44.5	-0.4
	comp=Z,14nm,0.8s,baz=301,slow=8.2,SNR=26						
STKA				LR	LR	04 36 09.7	
	comp=Z,646nm,20.5s,baz=305,slow=34						
QLP	Quilpie	63.52	122	P	P	04 10 46.6	+0.6
	baz=64,SNR=3.2						
MANR	Mangalia	64.34	317	⇑P	P	04 10 51.9	+0.8
MOS	Moscow	64.45	332	eP	P	04 10 50.1	-1.5
MOS				e		04 11 19.8	
MOS				pmax	pmax		
	comp=Z,140nm,1.2s						
JURR	Jurilovca	64.47	318	⇑P	P	04 10 52.6	+0.6
OBN	Obninsk	64.62	331	ceP	P	04 10 52.5	-0.2
OBN				i		04 10 57.3	
OBN				i		04 13 24.2	
OBN				i S	S	04 19 49.8	+19
OBN				pmax	pmax		
	comp=Z,91nm,1.7s						
TIRR	Tirgusor	64.67	318	⇑P	P	04 10 53.8	+0.5
TOPG	Topolog	64.84	318	⇑P	P	04 10 54.9	+0.6
PRGR	Permogore	64.86	340	eP	P	04 10 53.4	-0.7
PRGR				pmax	pmax		
	comp=Z,51nm,0.6s						
NRIK	Noril'sk	64.92	0	P	P	04 10 54.5	+0.1
	comp=Z,30nm,0.9s,baz=158,slow=5.3,SNR=18						
NRIK	Noril'sk	64.92	0	i P	P	04 10 54.2	-0.2
NRIK				pmax	pmax		
	comp=Z,40nm,1.0s						
HARR	Harsova	65.08	318	⇑P	P	04 10 56.6	+0.7
HARR	Harsova	65.08	318	P	P	04 10 57.1	+1.2
CFR	Carcaliu	65.11	318	⇑P	P	04 10 56.8	+0.8
CFR	Carcaliu	65.11	318	P	P	04 10 56.8	+0.8
ALN	Alexandroupoli	65.20	313	P	P	04 10 57.9	+1.1
LEOM	Leova	65.49	320	P	P	04 10 59.7	+1.2
ARPS	Mount Arapiles	65.61	134	P	P	04 10 59.2	-0.2
	baz=66,SNR=6.3						
RAZG	Razgrad	65.68	316	⇑P	P	04 11 00.8	+1.0
YAK	Yakutsk	65.81	21	P	P	04 11 00.6	+0.3
	comp=Z,6.6nm,0.4s,baz=245,slow=12,SNR=4.2						
YAK	Yakutsk	65.81	21	eP	P	04 11 00.1	-0.1
YAK				pmax	pmax		
	comp=Z,23nm,0.9s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.0s						
ELND	Elena	65.92	315	⇑P	P	04 11 02.3	+0.9
SORM	Soroca	66.03	321	⇑P	P	04 11 02.2	+0.2
SORM	Soroca	66.03	321	P	P	04 11 02.2	+0.2
VRI	Vrincioaia	66.28	319	⇑P	P	04 11 05.1	+1.5
VRI	Vrincioaia	66.28	319	P	P	04 11 05.1	+1.5
PLOR	Plostina	66.32	319	⇓P	P	04 11 05.6	+1.6
PLOR	Plostina	66.32	319	P	P	04 11 05.5	+1.6
SECR		66.44	318	⇑P	P	04 11 05.4	+0.7
CMSA	Cobar Meteorol	66.45	127	P	P	04 11 05.1	+0.1
	baz=66,SNR=20						
AKASG	Malin Array Be	66.50	324	P	P	04 11 04.8	-0.1
	comp=E,6.5nm,0.9s,baz=95,slow=5.0,SNR=15						
AKBB	Malin Array Si	66.50	324	i P	P	04 11 05.2	+0.3
ZIMR		66.50	316	⇓P	P	04 11 06.1	+1.1
TESR	Tescani	66.54	319	⇑P	P	04 11 06.1	+0.8
KLMR	Klimovskoe	66.60	337	eP	P	04 11 03.3	-2.1
KLMR				pmax	pmax		
	comp=Z,41nm,1.1s						
KLMR	Klimovskoe	66.60	337	eP	P	04 11 03.4	-2.0
KLMR				AMP		04 11 06.3	
	comp=Z,41nm,1.1s						
MLR	Muntele Rosu	66.67	318	⇑P	P	04 11 07.8	+1.6
MLR	Muntele Rosu	66.67	318	P	P	04 11 07.9	+1.6
MLR	Muntele Rosu	66.67	318	P	P	04 11 07.9	+1.6
PAIG	Paliouri	66.68	312	P	P	04 11 06.7	+0.4
PLVB	Pleven	66.94	316	⇑P	P	04 11 08.6	+0.7
HUMR	Humele	67.02	317	⇑P	P	04 11 08.6	+0.2
VOIR		67.25	318	⇑P	P	04 11 10.3	+0.3
VOIR		67.25	318	P	P	04 11 10.3	+0.3
RMQ	Roma	67.33	121	P	P	04 11 10.5	-0.2
	baz=67,SNR=18						
BOSA	Boshof	67.44	237	P	P	04 11 12.1	+0.6
	comp=Z,2.7nm,0.8s,baz=97,slow=6.9,SNR=1.8						
ARR	Arges	67.51	318	⇑P	P	04 11 12.0	+0.5
VTS	Vitosha	67.70	314	P	P	04 11 12.7	-0.2
VTS	Vitosha	67.70	314	P	P	04 11 12.7	-0.2
BURAR	Bucovina Array	67.83	320	P	P	04 11 15.5	+1.9
BUR08	Bucovina Ar. S	67.85	320	P	P	04 11 15.2	+1.5
DEV	Deva	68.82	318	⇑P	P	04 11 21.2	+1.4
DEV	Deva	68.82	318	P	P	04 11 21.1	+1.4
HERR	Herculane	68.88	317	⇑P	P	04 11 21.0	+0.9
EIDS	Eidsvold	69.02	119	P	P	04 11 21.4	+0.1
	baz=69,SNR=5.1						
TMCR	Tamitsa	69.15	339	eP	P	04 11 21.6	+0.3
TMCR				pmax	pmax		
	comp=Z,46nm,1.1s						
MDVR	Moldovita	69.33	316	⇑P	P	04 11 23.6	+0.6
BZS	Buzias	69.62	317	P	P	04 11 26.8	+2.2
TRPA	Tarpa	69.70	320	⇑P	P	04 11 26.1	+1.0
SIRR	Siria	69.76	318	⇑P	P	04 11 26.7	+1.2
PUL	Pulkovo	69.88	333	ceP	P	04 11 27.5	+1.6
PUL				pmax	pmax		
	comp=Z,74nm,0.5s						
UZH	Uzhgorod	70.01	320	eP	P	04 11 30.0	+3.0
UZH				i		04 11 34.7	
UZH				e		04 11 51.8	
ARMA	Armidale	70.91	124	P	P	04 11 33.9	+1.0
	baz=71,SNR=7.8						
VSU	Vasula	70.97	331	ceP	P	04 11 32.1	-0.5
VSU				pmax	pmax		
	comp=Z,198nm,1.7s						
KECS	Kecovo	71.12	320	eP	P	04 11 34.6	+0.8
KECS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KECS	Kecovo	71.12	320	eP	P	04 11 34.6	+0.8
VYHS	Vyhne	72.18	320	eP	P	04 11 40.8	+0.6
VYHS	Vyhne	72.18	320	eP	P	04 11 40.8	+0.6
VYHS				e		04 12 16.1	
TIXI	Tiksi	72.24	13	P	P	04 11 39.9	-0.1
	comp=Z,22nm,0.4s,baz=210,slow=4.1,SNR=43						
TIXI	Tiksi	72.24	13	ceP	P	04 11 39.2	-0.8
TIXI				pmax	pmax		
	comp=Z,85nm,1.7s						
FINES	FINESS Array B	72.50	334	P	P	04 11 42.3	+0.6
	comp=Z,23nm,0.8s,baz=115,slow=5.9,SNR=24						
APA	Apatity	72.67	341	⇑iP	P	04 11 41.9	-0.8
APA				pmax	pmax		
	comp=Z,22nm,0.9s						
APA				MLR	MLR		
	comp=Z,1µm,16.0s						
SMOL	Smolenice	73.10	319	eP	P	04 11 46.2	+0.6
SMOL	Smolenice	73.10	319	eP	P	04 11 46.2	+0.6
SMOL				e		04 12 18.4	
MODS	Modra-Piesok	73.17	319	eP	P	04 11 45.8	-0.3
MODS	Modra-Piesok	73.17	319	eP	P	04 11 45.8	-0.3
MODS				e		04 12 18.2	
MA2	Magadan	73.37	29	P	P	04 11 47.1	+0.2
	comp=Z,3.4nm,0.3s,baz=209,slow=7.4,SNR=5.1						
MA2	Magadan	73.37	29	ceP	P	04 11 47.0	0.0
MA2				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KRLC	Kraliky	73.86	321	eP	P	04 11 50.6	+0.5
KRLC				ePCP	pwP	04 12 03.4	+0.1
KRLC	Kraliky	73.86	321	eP	P	04 11 50.6	+0.5
KRLC				e		04 12 03.4	
DPC	Dobruska-Polom	74.21	321	eP	P	04 11 52.6	+0.4
DPC				ePCP	pwP	04 12 06.2	+0.9
DPC	Dobruska-Polom	74.21	321	eP	P	04 11 52.6	+0.4
DPC				e		04 12 06.2	
HNR	Honiara	74.26	101	P	P	04 11 52.4	-0.7
	comp=Z,58nm,0.4s,baz=204,slow=13,SNR=1.8						
OSTC	Ostas	74.32	321	eP	P	04 11 53.2	+0.4
UPC	Upice	74.44	321	eP	P	04 11 54.9	+1.5
UPC	Upice	74.44	321	eP	P	04 11 54.9	+1.5
TREC	Trest	74.52	320	eP	P	04 11 54.1	+0.1
TREC				ePCP	pwP	04 12 07.3	+0.2
TREC	Trest	74.52	320	eP	P	04 11 54.1	+0.1
TREC				e		04 12 07.3	
SEY	Seymchan	75.27	26	P	P	04 11 57.7	-0.3
	comp=Z,4.6nm,0.9s,baz=232,slow=6.4,SNR=13						
GERES	GERESS Array B	75.58	319	P	P	04 12 00.5	+0.3
	comp=Z,9.2nm,1.0s,baz=98,slow=4.6,SNR=11						
KHC	Kasperske Hory	75.72	320	eP	P	04 12 00.7	-0.2
KHC				ex	x	04 12 20.0	
KHC	Kasperske Hory	75.72	320	i P	P	04 12 00.9	0.0
KHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ARCES	ARCESS Array B	76.17	341	P	P	04 12 04.2	+1.2
	comp=Z,20nm,0.8s,baz=103,slow=5.7,SNR=15						
CLL	Collm	76.46	322	i P	P	04 12 06.5	+1.5
	comp=Z,20nm,1.3s						
NKC	Novy Kostel	76.63	321	eP	P	04 12 07.7	+1.7
NKC				ePCP	pwP	04 12 21.4	+2.2
NKC	Novy Kostel	76.63	321	eP	P	04 12 07.7	+1.7
NKC				e		04 12 21.4	
NORES	NORESS Array B	79.00	331	P	P	04 12 19.4	+0.4
NORES				pmax	pmax		
	comp=Z,3.0nm,0.4s						
NB2	NORSAR Subarra	79.22	331	P	P	04 12 19.7	-0.5
	comp=Z,6.6nm,0.8s,baz=99,slow=5.3						
NOA	NORSAR Array B	79.22	331	P	P	04 12 20.1	-0.1
	comp=Z,6.1nm,0.9s,baz=100,slow=5.8,SNR=9.9						
NOA				PP	PP	04 15 18.3	-1.6
	comp=Z,2.3nm,0.9s,baz=100,slow=8.4,SNR=4.6						
SYO	Syowa Base	79.93	196	⇓eP	P	04 12 24.6	+0.8
SYO	Syowa Base	79.93	196	⇑ePcP	PcP	04 12 34.4	+3.2
WLF	Walferdange	80.59	319	pP	P	04 12 29.8	+2.0
MEM	Membach	80.76	320	P	P	04 12 26.5	-2.2
BMRD	Maredsous	81.53	320	pP	P	04 12 36.5	+3.7
DOU	Dourbes	81.63	320	P	P	04 12 32.8	-0.6
SNF	Seneffe	81.85	320	P	P	04 12 35.2	+0.8
BILL	Bilibino	82.12	22	i P	P	04 12 34.2	-1.4
BILL				i		04 12 40.0	
BILL				i		04 15 43.2	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TORD	Torodi Ar. Bea	84.16	283	P	P	04 12 47.8	+0.6
	comp=Z,2.7nm,0.9s,baz=87,slow=5.2,SNR=1.9						
EKA	Eskdalemuir Ar	86.39	325	P	P	04 12 58.3	+0.8
RPZ	Rata Peaks	88.89	134	P	P	04 13 08.8	-0.9
	comp=Z,7.3nm,0.6s,baz=44,slow=14,SNR=1.8						
DAG	Danmarks Havn	89.31	347	i P	P	04 13 11.0	-0.1
DAG	Danmarks Havn	89.31	347	i P	P	04 13 11.0	-0.1
KIC	Kosan Boka	90.94	276	ePKP2	P	04 13 28.1	+8.1
	comp=Z,175nm,1.6s						
VNDA	Vanda	91.00	168	P	P	04 13 18.3	-0.6
	comp=Z,1.0nm,0.7s,baz=281,slow=6.0,SNR=5.2						
VNDA				LR	LR	04 48 32.6	
	comp=Z,468nm,19.7s,baz=302,slow=32						
TIC	Toumodi	91.20	277	ePKP2	P	04 13 29.1	+7.9
LIC	Lamto	91.24	276	ePKP2	P	04 13 29.2	+7.8
	comp=Z,119nm,1.8s						
ILAR	Eielson Array	100.73	21	PP	PP	04 18 07.5	-3.0
	comp=Z,1.5nm,1.0s,baz=307,slow=5.3,SNR=4.2						
YKA	Yellowknife Ar	111.42	10	PP	PP	04 19 26.4	-2.7
	comp=Z,0.2nm,0.5s,baz=162,slow=13,SNR=5.3						
YKA				PKKPab	PKKPab	04 29 51.7	-3.5
	comp=Z,0.2nm,0.7s,baz=150,slow=5.0,SNR=5.5						
YKA				PKKP	PKKPdf	04 30 04.6	+0.2
	comp=Z,0.5nm,0.7s,baz=150,slow=5.3,SNR=5.6						
PDAR	Pinedale Array	130.87	16	PKP	PKPdf	04 19 27.9	+0.6
	comp=Z,0.8nm,0.7s,baz=109,slow=0.9,SNR=6.3						
NVAR	Mina Array Bea	131.57	26	PKP	PKiKP	04 19 30.6	+0.9
	comp=Z,0.8nm,0.6s,baz=318,slow=2.0,SNR=7.5						
TXAR	Lajitas Array	145.09	16	PKPbc	PKPab	04 19 53.2	+0.3
	comp=Z,1.5nm,0.6s,baz=54,slow=1.1,SNR=11						
SIV	San Ignacio	146.27	248	PKPbc	PKPdf	04 19 55.5	-0.3
	comp=Z,1.3nm,0.7s,baz=97,slow=8.1,SNR=4.7						
LVC	Limon Verde	150.20	230	PKPbc	PKPbc	04 20 07.7	+0.2
	comp=Z,15nm,0.9s,baz=144,slow=1.7,SNR=9.5						
LPAZ	La Paz	152.56	242	PKPbc	PKPbc	04 20 13.2	-0.3
	comp=Z,4.5nm,0.9s,baz=94,slow=4.8,SNR=5.0						
LPAZ				PKPab	PKPab	04 20 24.4	+0.5
	comp=Z,5.1nm,0.8s,baz=37,slow=5.1,SNR=6.2						

SJA ***27*** *04:07:27.0±0.3, 34.°64S×72.°43W, h55^{km}±8^{km}, ML3.4, MW3.7*

GUC ***27*** *04:07:27.8±0.5, 34.°87S×72.°04W, h30^{km}±2^{km}, ML3.8*

ISC 27 04:07:26.3±1.8**, 34.°75S**±0.°06×**72.°16W**±0.°10**, h10**^{km}±14^{km}**,**
n19, σ0.^{s}91/33**, 5C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	Huala	0.33	144	⇑iP	Pg	04 07 33.4	+0.6
GO05				i S	Sg	04 07 37.4	+0.2
RCDM	Rinconada Maip	1.68	42	eP	Pn	04 07 56.3	+0.4
RCDM				i S	Sn	04 08 17.4	-0.1
ANTU	Antumapu	1.73	48	eP	Pn	04 07 56.7	+0.2
ANTU				eS	Sn	04 08 18.6	0.0
ANTU				IAML		04 08 26.0	
	comp=N,2µm,0.3s						
MT05	Renca	1.79	42	eP	Pn	04 07 58.1	+0.7
MT05				eS	Sn	04 08 21.1	+0.8
MT05				IAML		04 08 30.1	
	comp=E,1µm,0.3s						
LMEL	Las Melosas	1.85	62	⇑iP	Pn	04 07 58.0	-0.3
LMEL				i S	Sn	04 08 21.6	-0.3
LMEL				IAML		04 08 25.4	
	comp=E,2µm,0.2s						
MT03	Universidad Ad	1.85	48	⇑iP	Pn	04 07 58.5	+0.2
MT03				i S	Sn	04 08 21.9	+0.1
MT03				IAML		04 08 29.3	
	comp=N,3µm,0.4s						
CLCH	Cerro Calan	1.91	46	⇑iP	Pn	04 07 59.5	+0.6
CLCH				i S	Sn	04 08 23.6	+0.5
CLCH				IAML		04 08 28.6	
	comp=E,1µm,0.4s						
ROC1	El Roble	2.01	29	i P	Pn	04 08 00.3	-0.2

ROC1				eS	Sn	04 08 27.2	+1.4
ROCH	El Roble	2.01	29	eP	Pn	04 08 01.5	+1.0
ROCH				i S	Sb	04 08 27.6	-0.7
ROCH				IAML		04 08 32.9	
	comp=N,903nm,0.5s						
PEL	Peldehue	2.01	38	⇑iP	Pn	04 08 01.4	+1.0
PEL				i S	Sn	04 08 26.2	+0.5
PEL				IAML		04 08 31.1	
	comp=N,726nm,0.4s						
PEL	Peldehue	2.01	38	i P	Pn	04 08 01.4	+1.0
PEL				eS	Sn	04 08 27.0	+1.3
FCH	Farellones	2.10	48	eP	Pn	04 08 02.6	+0.7
FCH				eS	Sn	04 08 28.9	+0.7
FCH				IAML		04 08 34.8	
	comp=N,747nm,0.2s						
LAMA	Las Malvinas	2.43	95	i P	Pb	04 08 08.8	-1.4
LAMA				eS	Sb	04 08 41.0	+0.7
EDS3	Malargue	2.48	115	i P	Pb	04 08 10.6	-0.5
AAGR	Agrelo	3.23	60	i P	Pb	04 08 22.0	-1.8
CANA	Caviahue	3.26	165	i P	Pb	04 08 22.9	-1.5
ARCO	CERRO ARCO	3.29	56	i P	Pb	04 08 24.3	-0.6
ARCO				IAML		04 09 09.4	
	comp=Z,77nm,0.7s						
GO04	Tololo Observa	4.70	15	i P	Pn	04 08 37.8	+0.2
ACCO	Cerro Coronel	4.90	33	i P	Pn	04 08 42.0	+1.6
ACCO				eS	Sb	04 09 50.2	-1.4
ACCO				IAML		04 10 00.2	
	comp=Z,29nm,0.4s						

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*SKO **27** 04:09:17.4, 40°.81N×22°.10E, h23km*

*ATH **27** 04:09:17.7, 40°.81N×22°.11E, h24km±2km, ML2.1/8, Error ellipse: s-maj=2.1km s-min=0.7km az=335.0*

*THE **27** 04:09:18.5, 40°.82N×22°.10E, h4km±1km, ML2.0/7, Error ellipse: s-maj=1.5km s-min=0.5km az=332.0*

ISC 27 04:09:18.1±0.9**, 40°.82N**±0°.02×**22°.10E**±0°.02**, h17**km±7km**, n33, σ0s.52**/54**, 1D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRG	Griva	0.27	59	P	Pg	04 09 24.2	+0.1
GRG				S	Sg	04 09 27.9	-0.3
	1µm,0.1s						
GRG	Griva	0.27	59	P	Pg	04 09 24.2	+0.1
GRG				S	Sb	04 09 29.0	+0.1
GRG				AML	AML	04 09 31.0	
	comp=E,2138µm,0.1s						
GRG				AML	AML	04 09 31.1	
	comp=N,2197µm,0.2s						
KTI	Kastanea	0.43	178	P	Pg	04 09 26.8	-0.1
FNA	Florina	0.55	266	P	Pg	04 09 28.5	-0.6
FNA				S	Sb	04 09 36.8	-0.1
FNA	Florina	0.55	266	P	Pg	04 09 28.7	-0.4
FNA				S	Sg	04 09 36.7	+0.2
FNA				AML	AML	04 09 37.2	
	comp=N,896µm,0.5s						
FNA				AML	AML	04 09 37.8	
	comp=E,1143µm,0.3s						
KZN	Kozani	0.57	206	P	Pg	04 09 28.9	-0.6
KZN				S	Sb	04 09 37.2	-0.3
	comp=E,178nm,0.4s						
KZN	Kozani	0.57	206	P	Pg	04 09 28.8	-0.6
KZN				S	Sg	04 09 36.9	-0.2
KZN				AML	AML	04 09 38.2	
	comp=N,335µm,0.4s						
KZN				AML	AML	04 09 40.8	
	comp=E,400µm,0.5s						
VAY	Valandovo	0.62	35	⇓iPg	Pg	04 09 30.0	-0.3
VAY				i Sg	Sb	04 09 39.1	+0.3
VAY				eLg	Lg	04 09 39.4	
	comp=N,42nm,0.4s						
THE	Thessaloniki	0.69	106	P	Pb	04 09 30.9	-0.7
THE				S	Sg	04 09 40.6	-0.1
THE	Thessaloniki	0.69	106	P	Pb	04 09 30.9	-0.7
KNT	Kendrikon	0.70	60	P	Pg	04 09 31.8	0.0
KNT				S	Sg	04 09 41.5	+0.4
	comp=N,135nm,0.2s						
KNT	Kendrikon	0.70	60	P	Pb	04 09 31.7	-0.2
KNT				S	Sb	04 09 41.0	-0.2
KNT				AML	AML	04 09 42.7	
	comp=N,465µm,0.1s						
KNT				AML	AML	04 09 43.8	
	comp=E,240µm,0.2s						
LIT	Litokhoron	0.78	157	P	Pg	04 09 33.5	+0.2
LIT				S	Sn	04 09 44.7	-0.9
	comp=E,135nm,0.2s						
LIT	Litokhoron	0.78	157	P	Pb	04 09 32.8	-0.4
LIT				S	Sg	04 09 43.9	+0.2
LIT				AML	AML	04 09 46.9	
	comp=E,339µm,0.3s						
LIT				AML	AML	04 09 49.7	
	comp=N,246µm,0.2s						
HORT	Hortiatis	0.80	106	P	Pb	04 09 32.9	-0.6
HORT				S	Sb	04 09 43.7	-0.3
HORT				AML	AML	04 09 47.5	
	comp=E,81µm,0.2s						
HORT				AML	AML	04 09 50.2	
	comp=N,67µm,0.4s						
NEST	Nestorio	0.89	243	P	Pg	04 09 35.4	-0.1
NEST				S	Sn	04 09 48.3	-0.3
	comp=N,80nm,0.4s						
NEST	Nestorio	0.89	243	P	Pb	04 09 35.2	0.0
NEST				S	Sg	04 09 47.9	+0.6
NEST				AML	AML	04 09 52.0	
	comp=E,189µm,0.4s						
NEST				AML	AML	04 09 52.1	
	comp=N,150µm,0.5s						
SOH	Sokhos	0.95	89	P	Pb	04 09 35.9	-0.3
SOH				S	Sn	04 09 50.1	+0.1
	comp=N,88nm,0.3s						
SOH	Sokhos	0.95	89	P	Pb	04 09 36.0	-0.3
SOH				S	Sn	04 09 49.5	-0.5
SOH				AML	AML	04 09 53.7	
	comp=E,189µm,0.5s						
SOH				AML	AML	04 09 54.5	
	comp=N,184µm,0.4s						
PENT	Pentalofos	0.96	230	P	Pg	04 09 36.7	0.0
OHR	Ohrid	1.02	287	ePg	Pb	04 09 37.1	-0.3
OHR				i Sg	Sn	04 09 52.0	+0.2
OHR				eLg	Lg	04 09 53.4	
	comp=N,32nm,0.6s						
KPRO	Kipourio	1.03	213	P	Pb	04 09 37.4	-0.1
SRS	Serrai	1.17	75	P	Pb	04 09 39.8	-0.1
SRS				S	Sg	04 09 57.1	+1.0
SRS	Serrai	1.17	75	P	Pb	04 09 39.8	-0.1
SKO	Skopje	1.25	337	i Pg	Pg	04 09 42.0	-0.3
THL	Klokotos Trika	1.25	183	P	Pg	04 09 42.3	-0.1
THL				S	Sg	04 10 01.0	+2.3
THL	Klokotos Trika	1.25	183	P	Pb	04 09 41.6	+0.3
NVR	Nevrokopi	1.44	68	P	Pb	04 09 44.3	-0.1
NVR				S	Sg	04 10 05.1	+0.6
	comp=N,22nm,0.4s						
NVR	Nevrokopi	1.44	68	P	Pb	04 09 44.9	+0.4
PAIG	Paliouri	1.50	126	P	Pn	04 09 44.7	+0.4
PAIG	Paliouri	1.50	126	P	Pn	04 09 44.6	+0.4
OUR	Ouranopolis	1.52	108	P	Pn	04 09 44.6	+0.2
OUR	Ouranopolis	1.52	108	P	Pb	04 09 44.9	-0.8

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*ISK **27** 05:10:36.6, 34°.89N×32°.73E, h55km, ML2.4/14*

*NIC **27** 05:10:37.8±0.0, 34°.94N×32°.73E, h50km±1km, Ml2.5/5*

*DDA **27** 05:10:37.0, 34°.88N×32°.49E, h48km±13km, ML1.8*

*GII **27** 05:10:40.6±0.5, 35°.00N×33°.15E, h50km, Mm2.2/4*

ISC 27 05:10:37.5±1.2**, 34°.90N**±0°.03×**32°.68E**±0°.03**, h54**km±5km**, n44, σ1s.18**/69**, 1C-3D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NATA	Nata	0.15	217	P	Pn	05 10 46.3	+0.3
NATA				S	Sn	05 10 53.0	+1.0
NATA				AML	AML	05 10 54.1	
	2.8nm,0.4s						
NATA				AML	AML	05 10 54.1	
	2.8nm,0.4s						
NATA				AML	AML	05 10 56.0	
	3.8nm,0.2s						
NATA				AML	AML	05 10 56.0	
	3.8nm,0.2s						
SZAC	Souni	0.22	130	⇑P	Pn	05 10 46.1	-0.3
SZAC				S	Sn	05 10 53.3	+0.5
SZAC				AML	AML	05 10 53.5	
	1.6nm,0.1s						
SZAC				AML	AML	05 10 53.5	
	1.6nm,0.1s						
SZAC				AML	AML	05 10 54.2	
	1.5nm,0.2s						
SZAC				AML	AML	05 10 54.2	
	1.5nm,0.2s						
ALFC	Alefka	0.27	346	P	Pn	05 10 46.6	-0.2
ALFC				AML	AML	05 10 53.2	
	1.2nm,0.2s						
ALFC				AML	AML	05 10 53.2	
	1.2nm,0.2s						
ALFC				AML	AML	05 10 53.5	
	1.2nm,0.1s						
ALFC				AML	AML	05 10 53.5	
	1.2nm,0.1s						
ALFC				S	Sn	05 10 53.6	+0.1
LEF	Lefka	0.28	38	PG	Pn	05 10 46.2	-0.6
LEF				SG	Sn	05 10 53.0	-0.6
LEF	Lefka	0.28	38	i P	Pn	05 10 46.3	-0.6
LEF				i S	Sn	05 10 54.4	+0.8
LEF				IAML		05 10 55.0	
	comp=E,69nm,0.2s						
LEF				IAML		05 10 55.0	
	comp=N,57nm,0.3s						
AKMS	Akamas	0.31	294	⇓P	Pn	05 10 47.0	0.0
AKMS				AML	AML	05 10 55.0	
	comp=N,1.3nm,0.4s						
AKMS				AML	AML	05 10 55.0	
	comp=N,1.3nm,0.4s						
AKMS				S	Sn	05 10 55.0	+1.1
AKDN	Akdeniz- Kıbrı	0.47	31	PG	Pn	05 10 48.1	-0.6
ASGA	Asgata	0.48	103	⇓P	Pn	05 10 48.2	-0.6
ASGA				AML	AML	05 10 56.3	
	comp=N,1.2nm,0.4s						
ASGA				AML	AML	05 10 56.3	
	comp=N,1.2nm,0.4s						
ASGA				S	Sn	05 10 56.9	-0.1
ASGA				AML	AML	05 10 57.6	
	comp=N,0.8nm,0.3s						
ASGA				AML	AML	05 10 57.6	
	comp=N,0.8nm,0.3s						
CSS	Mathiatis	0.54	83	PG	Pn	05 10 48.7	-0.7
CSS				SG	Sn	05 10 57.5	-0.7
CSS	Mathiatis	0.54	83	Pg	Pn	05 10 48.8	-0.7
CSS	Mathiatis	0.54	83	⇓P	Pn	05 10 48.8	-0.7
CSS				S	Sn	05 10 58.0	-0.1
ATHAL	Athalassa	0.64	67	S	Sn	05 11 00.5	+0.3
MVOU	Mavrovouni	0.79	81	P	Pn	05 10 52.3	-0.3
MVOU				S	Sn	05 11 03.5	-0.1
PARAL	Paralimni	1.12	85	P	Pn	05 10 57.1	+0.1
TEKE	Tekeli-Mersin	1.29	16	PN	Pn	05 10 59.2	-0.1
TEKE				SN	Sn	05 11 15.5	-0.1
GAZI	Gazipasa	1.37	348	PN	Pn	05 11 00.3	0.0
GAZI				SN	Sn	05 11 17.9	+0.5
GAZI	Gazipasa	1.37	348	i P	Pn	05 11 00.0	-0.3
GAZI				i S	Sn	05 11 17.1	-0.4
GAZI				IAML		05 11 19.0	
	comp=E,6.7nm,0.3s						
GAZI				IAML		05 11 19.0	
	comp=N,13nm,0.6s						
EREN	Erenkoy	1.38	62	PN	Pn	05 11 00.1	-0.3
EREN	Erenkoy	1.38	62	i P	Pn	05 11 01.9	+1.5
EREN				i S	Sn	05 11 20.4	+2.9
EREN				IAML		05 11 22.0	
	comp=N,29nm,0.6s						
AKKU	Akkuyu-Mersin	1.45	29	PN	Pn	05 11 01.3	-0.1
GULN	MERSIN_Gulnar	1.47	29	i P	Pn	05 11 01.8	+0.1
GULN				i S	Sn	05 11 18.8	-1.0
GULN				IAML		05 11 20.0	
	comp=E,8.1nm,0.2s						
GULN				IAML		05 11 21.0	
	comp=N,10nm,0.2s						
TISA	Tisan-Mersin	1.50	33	PN	Pn	05 11 01.6	-0.6
BERE	Bereket-Mersin	1.52	17	PN	Pn	05 11 02.3	-0.2
YESI	Yesilovacik-Me	1.52	31	PN	Pn	05 11 02.0	-0.3
KARG	Kargicak-Mersi	1.55	33	PN	Pn	05 11 02.7	-0.1
IKL	Isikli	1.57	31	PN	Pn	05 11 02.7	-0.4
TEVE	Tevekalti-Mers	1.66	22	PN	Pn	05 11 04.4	+0.1
ERMK	Ermenek	1.75	6	i P	Pn	05 11 07.5	+1.8
ERMK				i S	Sn	05 11 29.1	+2.0
ERMK				IAML		05 11 33.0	
	comp=N,12nm,0.6s						
ERMK				IAML		05 11 35.0	
	comp=E,9.1nm,0.3s						
KEBE	Keben-Mersin	1.76	28	PN	Pn	05 11 05.7	-0.1
OSC2	CSNet OBS 4	1.85	191	P	Pn	05 11 08.2	+1.4
OSC2				S	Sn	05 11 31.9	+2.9
KIZK	Mersin	1.98	37	PN	Pn	05 11 08.3	-0.4
KIZK	Mersin	1.98	37	i P	Pn	05 11 10.7	+2.1
KIZK				i S	Sn	05 11 32.1	-0.2
KIZK				IAML		05 11 35.0	
	comp=E,19nm,1.2s						
KIZK				IAML		05 11 35.0	
	comp=N,6.5nm,0.2s						
HDMB	Hadim	2.07	356	PN	Pn	05 11 10.0	-0.1
KEPZ	Antalya-Kepez	2.18	337	i P	Pn	05 11 11.3	-0.2
KEPZ				i S	Sn	05 11 35.9	-1.4
KEPZ				IAML		05 11 39.0	
	comp=N,7.8nm,1.0s						
KERG	Konya-Eregli	2.77	25	i P	Pn	05 11 22.1	+2.4
KERG				i S	Sn	05 11 54.2	+2.2
KERG				IAML		05 11 56.0	
	comp=N,7.1nm,0.4s						
KERG				IAML		05 11 59.0	
	comp=E,5.1nm,0.4s						
MMA0B	Mount Meron ar	2.94	129	Pn	Pn	05 11 21.7	-0.2
GEM	Giv'at Ha'Em	3.00	123	Pn	Pn	05 11 22.6	+0.1
GEM				Sn	Sn	05 11 54.1	-3.1
KSDI	Kefar Szold	3.00	124	Pn	Pn	05 11 22.6	0.0
KSDI				Sn	Sn	05 11 54.9	-2.5
NATI	Neve Ativ	3.02	122	Pn	Pn	05 11 22.8	0.0
NATI				Sn	Sn	05 11 55.6	-2.1
KARA	Karaisali	3.05	39	PN	Pn	05 11 23.6	+0.4
TAHT	Tahtakopru-Hat	3.22	62	PN	Pn	05 11 25.8	+0.2
CMRD	Camardi-Nigde	3.33	33	PN	Pn	05 11 27.7	+0.4
FETY	Fethiye	3.40	302	i P	Pn	05 11 26.6	-1.5
FETY				i S	Sn	05 12 03.8	-3.3
HMDT	Nahal Hemdat	3.55	137	Pn	Pn	05 11 31.4	+1.3
HMDT				Sn	Sn	05 12 10.4	-0.4

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*NIED **27** 05:20:00, 36°.80N×140°.60E, h8km, Mw3.8 Best double couple: M0 4.91000×10^{14} NP1:φs158.00000°, δ66.00000°, λ-115.00000°. NP2:φs27.00000°, δ34.00000°, λ-46.00000°.*

*IDC **27** 05:20:40.9±0.7, 36°.74N×140°.57E, h0km, mb3.7/15, mb1 3.9/17, mb1mx3.7/48, mbtmp3.7/17, ML3.7/2, Error ellipse: s-maj=17.8km s-min=15.6km az=121.0*

*JMA **27** 05:20:42.3, 36°.83N×140°.56E, h8km, M3.8 Broadband fault plane solution: P waves. NP1:φs335.00000°, δ41.00000°, λ-113.00000°. NP2:φs184.00000°, δ53.00000°, λ-71.00000°. Principal axes: T Plg6.0000°, Azm261.0000°; N Plg15.0000°, Azm353.0000°; P Plg74.0000°, Azm150.0000°;*

JMA Felt II J1.

ISC 27 05:20:42.5±1.0**, 36°.82N**±0°.03×**140°.56E**±0°.04**, h8**km±6km**, n36, σ1s.29**/42**, mb3.7**/15**, 8C, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	Hitachi	0.20	178	⇑P	Pg	05 20 46.9	+0.2
JHO				S	Sg	05 20 50.1	+0.6
JFFD	Fukushimafurud	0.27	0	⇑P	Pg	05 20 47.5	-0.5
JFFD				S	Sg	05 20 51.0	-0.7
ONAJ	Iwakimizuishiy	0.34	34	⇑P	Pg	05 20 48.8	-0.5
ONAJ				S	Sg	05 20 53.4	-0.5
JSB	Shiboa	0.54	287	S	Sg	05 21 00.3	+0.4
JFK	Kawauchi	0.60	25	⇑P	Pg	05 20 53.4	-0.8
JFK				S	Sg	05 21 01.4	-0.7
JYT	Yasato	0.66	207	⇑P	Pg	05 20 55.1	-0.1
JYT				S	Sg	05 21 04.0	+0.3
JFT	Otama	0.72	346	⇑P	Pg	05 20 55.9	-0.6
JFT				S	Sg	05 21 05.1	-0.8
JFY	Yanaizu	0.90	311	⇑P	Pg	05 20 59.1	-0.8
JFY				S	Sg	05 21 10.9	-0.7
JAG	Ashikaga	0.97	247	⇑P	Pg	05 21 00.2	-1.0
JAG				S	Sg	05 21 13.1	-0.7
MJAR	Matsushiro Arr	1.91	262	Pn	Pn	05 21 15.6	+0.2
	13nm,0.3s,baz=87,slow=15,SNR=264						
MJAR				Sn	Sn	05 21 39.6	-0.1
	9.7nm,0.3s,baz=79,slow=32,SNR=15						
MJAR				LR	LR	05 22 15.0	
	comp=Z,109nm,20.5s,baz=85,slow=50						
MAT	Matsushiro	1.91	262	P	Pn	05 21 16.1	+0.7
MAT				S	Sb	05 21 41.8	+0.1
JHJ	Hachijo jima 2	3.74	190	Pn	Pn	05 21 39.4	-1.2
	13nm,0.3s,baz=261,slow=22,SNR=1.3						
JHJ				Sn	Sn	05 22 23.1	-1.8
	15nm,0.3s,baz=103,slow=19,SNR=1.7						
ASAJ	Asahikawa	7.46	11	Pn	Pn	05 22 33.0	+1.4
	1.2nm,0.3s,baz=241,slow=18,SNR=6.9						
ASAJ				Sn	Sn	05 24 00.2	+3.9
	0.3nm,0.3s,baz=113,slow=31,SNR=1.5						
USRK	Ussuriysk Ar.	9.84	321	Pn	Pn	05 23 08.1	+3.8
	baz=134,slow=14,SNR=5.0						
KSRS	Korea Array	10.11	277	Pn	Pn	05 23 11.1	+3.1
	0.2nm,0.3s,baz=83,slow=8.9,SNR=1.5						
SONM	Songino Array	27.34	305	P	P	05 26 28.2	+0.1
	0.4nm,0.5s,baz=120,slow=8.7,SNR=2.0						
H11N2	WAKE ISLAND Hy	28.63	119	T	T	05 56 23.9	
	baz=312,slow=75,SNR=382						
H11N1	WAKE ISLAND Hy	28.64	119	T	T	05 56 24.4	
	baz=312,slow=75,SNR=388						
H11N3	WAKE ISLAND Hy	28.65	119	T	T	05 56 25.1	
	baz=312,slow=75,SNR=235						
H11S1	WAKE ISLAND Hy	29.32	121	T	T	05 57 17.2	
	baz=314,slow=75,SNR=1316						
H11S3	WAKE ISLAND Hy	29.32	121	T	T	05 57 17.3	
	baz=314,slow=75,SNR=656						
H11S2	WAKE ISLAND Hy	29.34	121	T	T	05 57 18.1	
	baz=314,slow=75,SNR=639						
ZALV	Zalesovo Beam	41.56	313	P	P	05 28 29.7	-0.7
	0.4nm,0.3s,baz=105,slow=9.1,SNR=2.4						
MKAR	Makanchi Array	43.65	302	P	P	05 28 48.8	+1.2
	0.2nm,0.5s,baz=90,slow=10,SNR=5.0						
KURBB	Kurchatov Arra	45.60	308	P	P	05 29 01.9	-1.0
	0.9nm,0.7s,baz=84,slow=8.1,SNR=7.0						
ILAR	Eielson Array	50.04	32	P	P	05 29 36.9	-0.4
	0.5nm,0.8s,baz=272,slow=6.8,SNR=4.3						
BVAR	Borovoye Array	50.21	312	P	P	05 29 38.7	-0.1
	0.3nm,0.3s,baz=85,slow=9.5,SNR=2.5						
WRA	Warramunga Arr	56.76	187	P	P	05 30 25.5	-1.5
	0.6nm,0.5s,baz=1.9,slow=7.3,SNR=5.2						
ASAR	Alice Springs	60.48	187	P	P	05 30 52.1	-0.8
	0.5nm,0.8s,baz=14,slow=7.3,SNR=4.9						
YKA	Yellowknife Ar	64.34	30	P	P	05 31 17.8	-0.5
	0.2nm,0.5s,baz=297,slow=6.1,SNR=4.1						
FINES	FINESS Array B	68.69	332	P	P	05 31 45.6	-0.5
	2.8nm,1.0s,baz=1.4,slow=7.6,SNR=3.5						
AKASG	Malin Array Be	74.05	322	P	P	05 32 17.3	-1.4
	0.2nm,0.3s,baz=59,slow=6.1,SNR=1.9						
NOA	NORSAR Array B	74.12	337	P	P	05 32 19.7	+0.6
	0.7nm,0.9s,baz=43,slow=5.5,SNR=2.0						
NVAR	Mina Array Bea	75.67	53	P	P	05 32 29.6	+0.9
	0.6nm,0.8s,baz=291,slow=5.5,SNR=7.6						
PDAR	Pinedale Array	78.31	45	P	P	05 32 43.2	-0.2
	0.4nm,0.8s,baz=310,slow=4.5,SNR=2.5						
TXAR	Lajitas Array	90.79	52	P	P	05 33 46.8	+0.1
	0.4nm,0.7s,baz=301,slow=1.6,SNR=4.7						

WEL 27 05:39:12.3, 37°S±7°×**17°7E**±1°5**, h222**km±10km**, M3.0**/22**, MLv3.0**/22**, Error ellipse: s-maj=0.0km s-min=0.0km az=102.1, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HAZ	Te Kaha	1.08	146	P	Pn	05 39 44.2	-0.5
RUGZ	Raukumara Rang	1.22	155	P	Pn	05 39 45.2	-0.8
MXZ	Matakaoa Point	1.25	125	P	Pn	05 39 45.0	-0.9
MXZ				S	S	05 40 09.5	-2.7
PKGZ	Pakihiroa	1.33	141	P	Pn	05 39 46.6	-0.1
PKGZ				S	S	05 40 11.0	-2.5
URZ	Urewera	1.40	177	P	Pn	05 39 47.3	+0.2
URZ				S	S	05 40 13.2	-1.1
WMGZ	Waiomatatini S	1.47	131	P	Pn	05 39 47.6	-0.1
WMGZ				S	S	05 40 13.4	-1.9
MWZ	Matawai	1.53	165	P	Pn	05 39 48.3	+0.2
MWZ				S	S	05 40 14.9	-1.3
PUZ	Puketiti	1.56	141	P	Pn	05 39 48.3	-0.2
PUZ				S	S	05 40 14.0	-2.7
MUGZ	Murupara	1.63	187	P	Pn	05 39 49.6	+0.6
RAGZ	Rawiri	1.66	169	P	Pn	05 39 49.8	+0.4
PRRZ	Plateau Road	1.71	197	P	Pn	05 39 49.0	-0.7
TKGZ	Te Karaka	1.71	158	P	Pn	05 39 55.0	+5.4
RTZ	Ruatahuna	1.75	181	P	Pn	05 39 50.5	+0.3
CNGZ	Carnagh Statio	1.88	150	P	Pn	05 39 51.7	+0.5
RIGZ	Rimuhau	1.94	162	P	Pn	05 39 52.4	+0.6
MTHZ	Maungataniwha	1.99	184	P	Pn	05 39 53.1	+0.7
MRHZ	Matea Rd	2.03	193	P	Pn	05 39 53.6	+0.8
WHHZ	Waihua	2.22	176	P	S	05 40 28.6	+0.9
NMHZ	Naumai	2.24	184	P	Pn	05 39 56.2	+1.3
NMHZ	Naumai	2.24	184	P	S	05 40 31.0	+2.8
BKZ	Black Stump Fm	2.34	190	P	Pn	05 39 56.2	+0.3
MHGZ	Mahia Peninsul	2.40	163	P	Pn	05 39 56.8	+0.4
ARHZ	Aropaoanui	2.40	180	P	Pn	05 39 57.3	+0.9
ARHZ	Aropaoanui	2.40	180	P	S	05 40 23.3	-7.7
MCHZ	McNeill Hill	2.59	185	P	Pn	05 39 59.4	+0.9
MCHZ	McNeill Hill	2.59	185	P	S	05 40 30.4	-4.4
KWHZ	Kaweka Forest	2.60	190	P	Pn	05 39 56.5	-2.2
KWHZ	Kaweka Forest	2.60	190	P	S	05 40 36.6	+1.6
BHHZ	Black Hill Sta	2.73	196	P	Pn	05 40 00.4	+0.3
KRHZ	Kereru	2.83	190	P	Pn	05 40 01.4	+0.3
KRHZ	Kereru	2.83	190	P	S	05 40 39.3	-0.1
KAHZ	Kahuranaki	2.93	182	P	Pn	05 40 02.7	+0.4
PNHZ	Pukenui	3.12	192	P	Pn	05 40 04.4	0.0
PNHZ	Pukenui	3.12	192	P	S	05 40 42.8	-2.4
PXZ	Pawanui	3.17	182	P	Pn	05 40 04.7	-0.3
PXZ	Pawanui	3.17	182	P	S	05 40 41.0	-5.3
TSZ	Takapari Road	3.30	194	P	S	05 40 48.9	-0.2
ANWZ	Angora Road	3.62	187	P	S	05 40 50.5	-5.3
PRWZ	Pori Road	3.78	192	P	S	05 40 53.9	-5.3
BFZ	Birch Farm	3.86	189	P	Pn	05 40 12.6	-0.5
BFZ	Birch Farm	3.86	189	P	S	05 40 55.4	-5.7
MRZ	Mangatainoka R	3.96	196	P	Pn	05 40 13.5	-0.8
MRZ	Mangatainoka R	3.96	196	P	S	05 40 54.6	-8.5
TIWZ	Tintock	4.01	192	P	Pn	05 40 14.3	-0.6
TIWZ	Tintock	4.01	192	P	S	05 40 60.0	-4.3
HOWZ	Holdsworth Sta	4.20	196	P	S	05 41 05.5	-2.9
OGWZ	Otaki Gorge	4.21	199	P	Pn	05 40 16.5	-0.8
CAW	Cannon Point	4.50	199	P	Pn	05 40 19.7	-1.3

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*NNC **27** 06:06:59.7±1.2, 53°.61N×88°.04E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=9.5km s-min=6.6km az=68.0*

ASRS 27 06:06:54.0, 53°.78N×88°.24E, M1.6, 9C-5D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array	2.03	276	⇓Pn	Pg	06 07 33.5	+0.6
	1.9nm,0.6s						
ZAA0				⇑Lg	Lg	06 08 02.3	
	3.2nm,0.4s						
KURK	Kurchatov	6.66	246	⇑Pn	Pn	06 08 35.8	+2.9
	2.8nm,0.6s						
KURK				⇓Sn	Sn	06 09 51.8	+2.4
	1.5nm,0.5s						
KURK				⇑Lg	Lg	06 10 24.2	
	4.1nm,0.6s						
KURBB	Kurchatov Arra	6.75	246	⇑Pn	Pn	06 08 38.4	+4.1
	3.6nm,0.4s						
KURBB				⇑Sn	Sn	06 09 54.0	+2.1
	6.2nm,0.6s						
KURBB				⇓Lg	Lg	06 10 29.2	
	6.3nm,0.6s						
MK31	Makanchi Array	7.96	211	⇑Pn	Pn	06 08 55.4	+4.4
	0.6nm,0.5s,baz=30,slow=12,SNR=21						
MK31				⇑Sn	Sn	06 10 24.0	+2.3
	1.0nm,0.6s,baz=286,slow=8.5,SNR=2.6						
MK31				⇓Lg	Lg	06 11 04.3	
	1.4nm,0.6s,baz=29,slow=30,SNR=3.0						
MAKZ	Makanchi	8.05	212	⇑Pn	Pn	06 08 55.4	+3.3
	1.1nm,0.6s						
MAKZ				⇑Sn	Sn	06 10 25.1	+1.3
	0.6nm,0.5s						
MAKZ				⇓Lg	Lg	06 11 06.7	
	2.0nm,0.8s						

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*IDC **27** 06:35:27.6±2.5, 26°.42S×179°.25E, h542km±32km, mb3.1/6, mb1 3.5/8, mb1mx3.1/41, mbtmp4.2/8, Error ellipse: s-maj=34.7km s-min=15.9km az=166.0*

ISC 27 06:35:26.8±0.7, 26°.43S±0°.08×179°.46E±0°.09, h550^{km}, n25, σ1^{s}.46/34, mb3.8/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	3.63	141	P	P	06 36 45.9	0.0
GLKZ	Green Lake	3.65	141	P	P	06 36 45.1	-0.9
GLKZ				S	S	06 37 51.3	+0.6
KUZ	Kuaotunu	10.77	196	P	P	06 37 54.8	+2.4
WIAZ	Waiheke Island	10.97	199	P	P	06 37 56.7	+2.3
MXZ	Matakaoa Point	11.14	185	P	P	06 37 55.9	-0.4
MXZ				S	S	06 40 00.1	+0.8
AWAZ	Awhitu Peninsu	11.37	200	P	P	06 38 00.3	+1.7
HAZ	Te Kaha	11.38	187	P	P	06 37 59.3	+0.6
HAZ				S	S	06 40 01.8	-1.9
WMGZ	Waiomatatini S	11.39	184	P	P	06 37 59.9	+1.1
WMGZ				S	S	06 40 04.2	+0.2
RUGZ	Raukumara Rang	11.60	187	P	P	06 38 01.1	-0.1
PUZ	Puketiti	11.65	185	P	P	06 38 02.8	+1.2
PUZ				S	S	06 40 08.7	-0.2
URZ	Urewera	11.96	189	P	P	06 38 04.6	-0.1
	2.3nm,0.3s,baz=357,slow=3.8,SNR=12						
URZ				S	S	06 40 13.1	-1.6
	0.4nm,0.3s,baz=261,slow=18,SNR=2.9						
MWZ	Matawai	11.98	187	P	P	06 38 05.2	+0.3
MWZ				S	S	06 40 12.9	-2.3
RAGZ	Rawiri	12.16	188	P	P	06 38 05.0	-1.8
RIGZ	Rimuhau	12.33	186	P	P	06 38 08.8	+0.3
RTZ	Ruatahuna	12.33	189	P	P	06 38 07.6	-1.0
AFI	Afiamalu	14.92	35	P	P	06 38 31.7	-4.0
	1.4nm,0.3s,baz=227,slow=16,SNR=4.4						
RPZ	Rata Peaks	18.55	199	P	P	06 39 11.1	+1.6
	1.2nm,0.3s,baz=39,slow=13,SNR=1.8						
CTA	Charters Tower	31.10	275	P	P	06 41 00.4	-0.4
	1.7nm,0.4s,baz=103,slow=13,SNR=2.2						
STKA	Stephens Creek	33.40	252	P	P	06 41 20.8	+0.6
	1.3nm,0.5s,baz=104,slow=12,SNR=4.4						
ASAR	Alice Springs	41.20	264	P	P	06 42 24.1	-0.1
	1.5nm,0.4s,baz=94,slow=7.9,SNR=47						
ASAR				S	S	06 47 58.6	0.0
	0.6nm,0.9s,baz=100,slow=14,SNR=6.3						
WRA	Warramunga Arr	41.81	269	P	P	06 42 28.1	-0.8
	1.2nm,0.4s,baz=104,slow=7.8,SNR=26						
WRA				S	S	06 48 05.5	-1.9
	0.8nm,0.8s,baz=97,slow=15,SNR=5.4						
NVAR	Mina Array Bea	86.90	44	P	P	06 47 15.7	+2.0
	0.7nm,0.7s,baz=222,slow=7.1,SNR=5.2						
TXAR	Lajitas Array	92.17	58	P	P	06 47 40.2	+2.0
	0.4nm,0.8s,baz=224,slow=7.5,SNR=3.9						
NB2	NORSAR Subarra	144.49	350	PKP	PKPdf	06 54 00.2	0.0
	comp=Z,0.2nm,0.5s,baz=16,slow=3.2						
NOA	NORSAR Array B	144.49	350	PKP	PKPdf	06 54 00.9	+0.7
	comp=Z,0.3nm,0.4s,baz=21,slow=2.6,SNR=5.1						

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*NIED **27** 06:39:00, 44°.10N×148°.10E, h53^{km}, Mw4.2 Best double couple: M$_0$2.24000×10^{15} NP1:φ$_s$41.00000°, δ79.00000°, λ99.00000°. NP2:φ$_s$182.00000°, δ15.00000°, λ51.00000°.*
*SKHL **27** 06:39:52.5±0.3, 44°.41N×148°.48E, h66^{km}±1^{km}, mb4.9/7*
*MOS **27** 06:39:52.6±1.0, 44°.45N×148°.31E, h62^{km}, mb4.3/5, Error ellipse: s-maj=8.2km s-min=6.1km az=63.9*
*JMA **27** 06:39:53.1±0.3, 44°.07N×148°.06E, h0^{km}, M4.7*
*IDC **27** 06:39:54.8±2.2, 44°.54N×148°.23E, h64^{km}±20^{km}, mb3.7/23, mb1 3.8/30, mb1mx3.7/63, mbtmp3.9/30, MS3.4/12, Ms1 3.4/12, ms1mx3.1/47, Error ellipse: s-maj=16.4km s-min=10.7km az=138.0*
*NEIC **27** 06:39:55.5±1.0, 44°.55N±0°.09×148°.2E±0°.1, h67^{km}±4^{km}, mb4.3/15, Error ellipse: s-maj=15.5km s-min=9.9km az=134.0*

ISC 27 06:39:53.8±1.0, 44°.40N±0°.05×148°.32E±0°.06, h57^{km}±9^{km}, n148, σ1^{s}.03/159, mb4.0/37, MS3.5/7, 9C-9D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.89	339	*i* P	Pn	06 40 08.7	-1.6
KUR				AMB	AMB	06 40 09.4	
	2µm,0.4s						
KUR				*e*S	Sn	06 40 20.6	-1.7
KUR				A	A	06 40 21.3	
	8µm,2.0s						
KUR				A	A	06 40 21.3	
	16µm,2.0s						
KUR				A	A	06 40 23.7	
	5µm,0.4s						
KUR				A	A	06 40 23.7	
	4µm,0.4s						
KUR	Kuril'sk	0.89	339	*d i*PN	Pn	06 40 08.6	-1.7
KUR				pmax	pmax		
	comp=Z,2µm,0.3s						
KUR				pmax	pmax		
	comp=N,599nm,0.2s						
KUR				pmax	pmax		
	comp=E,1µm,0.2s						
KUR				pmax	pmax		
	comp=E,16µm,2.0s						
KUR				pmax	pmax		
	comp=N,8µm,1.9s						
YUK	Yuzh-Kuril'sk	1.80	259	*i* P	Pn	06 40 22.3	-0.2
YUK				AMB	AMB	06 40 25.0	
	comp=N,1µm,0.4s						
YUK				*e*S	Sn	06 40 44.7	+0.5
YUK				A	A	06 40 51.0	
	comp=N,2µm,0.4s						
YUK				A	A	06 40 51.0	
	comp=N,1µm,0.4s						
YUK	Yuzh-Kuril'sk	1.80	259	*d i*PN	Pn	06 40 22.2	-0.2
YUK				*e*S	Sn	06 40 44.7	+0.5
YUK				pmax	pmax		
	comp=Z,1392µm,0.2s						
YUK				pmax	pmax		
	comp=E,352µm,0.3s						
YUK				pmax	pmax		
	comp=N,395µm,0.1s						
YUK				smax	smax		
	comp=E,1µm,0.4s						
YUK				smax	smax		
	comp=N,2µm,0.3s						
GRPR	Tuman	1.87	258	*i* P	Pn	06 40 23.2	-0.3
GRPR				AMB	AMB	06 40 25.0	
	comp=N,640nm,0.3s						
GRPR				*i* S	Sn	06 40 45.3	-0.7
GRPR				A	A	06 40 50.0	
	comp=N,2µm,0.4s						
GRPR				A	A	06 40 50.0	
	comp=N,1µm,0.4s						
GRPR	Tuman	1.87	258	⇓*i*PN	Pn	06 40 23.2	-0.3
GRPR				*i* S	Sn	06 40 45.3	-0.7
GRPR				pmax	pmax		
	comp=Z,635nm,0.3s						
GRPR				pmax	pmax		
	comp=N,407nm,0.1s						
GRPR				pmax	pmax		
	comp=E,237nm,0.2s						
GRPR				smax	smax		
	comp=E,1µm,0.3s						
GRPR				smax	smax		
	comp=N,2µm,0.2s						
GLVR	Golovnino	2.12	253	*i* P	Pn	06 40 26.9	0.0
GLVR				AMB	AMB	06 40 28.0	
	comp=N,440nm,0.3s						
GLVR				*e*S	Sn	06 40 52.0	0.0
GLVR				A	A	06 40 59.0	
	comp=N,2µm,0.4s						
GLVR				A	A	06 40 59.0	
	comp=N,1µm,0.4s						
GLVR	Golovnino	2.12	253	⇓*i*PN	Pn	06 40 26.9	0.0
GLVR				*e*S	Sn	06 40 52.4	+0.4
GLVR				pmax	pmax		
	comp=Z,437nm,0.1s						
GLVR				smax	smax		
	comp=N,3µm,0.2s						
GLVR				smax	smax		
	comp=E,1µm,0.2s						
NEM2	Nemuro 2	2.13	242	P	Pn	06 40 26.0	-1.0
NEM2				*e*S	Sn	06 40 50.2	-2.0
NMR	Nemuro--Hokkai	2.14	242	*i* P	Pn	06 40 26.3	-0.8
NMR				*i* S	Sn	06 40 51.8	-0.6
NMR	Nemuro--Hokkai	2.14	242	⇓*i*PN	Pn	06 40 26.0	-1.1
NMR				*i* S	Sn	06 40 50.8	-1.6
JRA	Rausu	2.34	260	P	Pn	06 40 30.6	+0.7
JNSB	Nemuroshibetsu	2.47	256	P	Pn	06 40 32.2	+0.6
JKHN	Kushirohamanak	2.64	241	P	Pn	06 40 33.5	-0.4
JKHN				*e*S	Sn	06 41 03.1	-1.6
JNK	Nakash	2.72	254	P	Pn	06 40 35.5	+0.4
JNK				*e*S	Sn	06 41 06.6	-0.2
JAK	Akkeshi	2.98	243	P	Pn	06 40 38.2	-0.3
JAK				*e*S	Sn	06 41 11.4	-1.6
JTKR	Abashiri--Toko	3.20	264	P	Pn	06 40 42.2	+0.6
JAR	Ashorobuto	3.47	253	P	Pn	06 40 46.4	+1.1
JCH	Churui	4.02	245	P	Pn	06 40 52.9	0.0
JKK2	Kamakawa 2	4.04	264	P	Pn	06 40 55.5	+2.3
JKA	Kamikawa-asahi	4.12	268	*e*P	Pn	06 40 54.5	+0.4
JKA	Kamikawa-asahi	4.12	268		Pn	06 40 54.5	+0.4
ASAJ	Asahikawa	4.12	268	P	Pn	06 40 54.5	+0.3
	comp=E,2.7nm,0.3s,baz=78,slow=17,SNR=10						
ASAJ				LR	LR	06 42 47.2	
	comp=E,292nm,18.5s,baz=146,slow=42						
JSE	Soyaes	4.12	280	P	Pn	06 40 54.9	+0.7
ERM	Erimo	4.46	239	*d i*PN	Pn	06 41 00.8	+1.9
ERM	Erimo	4.46	239		Pn	06 41 01.9	+3.0
ERM				Sn	Sn	06 41 50.6	+1.1
JNBK	Urakawa-nobuka	4.58	244	P	Pn	06 41 00.8	+0.3
JWK2	Keihoku	4.65	284	P	Pn	06 41 03.5	+2.0
YSS	Yuzh-Sakhalins	4.66	305	*i* P	Pn	06 41 01.8	+0.3
YSS				AMB	AMB	06 41 02.0	
	comp=E,20nm,0.8s						
YSS				*e*S	Sn	06 41 55.6	+1.4
YSS				A	A	06 41 56.0	
	comp=E,30nm,0.8s						
YSS	Yuzh-Sakhalins	4.66	305	⇑*i*PN	Pn	06 41 01.9	+0.3
YSS				*e*S	Sn	06 41 55.6	+1.4
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				smax	smax		
	comp=N,30nm,1.0s						
YSS				smax	smax		
	comp=E,30nm,0.8s						
YSS				MLR	MLR		
	comp=Z,300nm,12.0s						
YSS	Yuzh-Sakhalins	4.66	305	Pn	Pn	06 41 01.9	+0.3
JKB	Kayabe	5.89	247	P	Pn	06 41 19.3	+0.9
JKB				*e*S	Sn	06 42 23.8	-0.8
JOT	Ohata	6.13	243	P	Pn	06 41 21.8	0.0
JOT				*e*S	Sn	06 42 27.5	-3.0
TYV	Tymovskoe	7.50	331	*e*P	Pn	06 41 41.1	+0.6
TYV				AMB	AMB	06 41 43.3	
	comp=Z,10.0nm,1.0s						
TYV				*e*S	Sn	06 43 02.4	-1.7
TYV				A	A	06 43 02.9	
	comp=Z,10.0nm,1.0s						
TYV	Tymovskoe	7.50	331	*e*PN	Pn	06 41 41.1	+0.6
TYV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SKR	Severo-Kuril's	8.20	37	*e*P	Pn	06 41 49.8	-0.2
SKR				AMB	AMB	06 41 51.0	
	comp=Z,50nm,0.8s						
SKR				*e*S	Sn	06 43 16.4	-4.7
SKR				A	A	06 43 30.0	
	comp=Z,40nm,1.0s						
SKR				A	A	06 43 30.0	
	comp=Z,80nm,1.0s						
SKR	Severo-Kuril's	8.20	37	*e*PN	Pn	06 41 50.2	+0.2
SKR				*e*S	Sn	06 43 23.4	+2.3
SKR				pmax	pmax		
	comp=Z,49nm,0.8s						
SKR				smax	smax		
	comp=N,40nm,1.2s						
SKR				smax	smax		
	comp=E,81nm,1.4s						
NKL	Nikolayevsk	10.09	333	*e*P	Pn	06 42 16.8	+0.9
PEA0B	Petropavlovsk-	10.68	32	PN	Pn	06 42 24.9	+1.0
PEA0B	Petropavlovsk-	10.68	32	Pn	Pn	06 42 24.9	+1.0
PETK	Petropavlovsk-	10.68	32	P	Pn	06 42 24.4	+0.5
	comp=E,0.6nm,0.3s,baz=201,slow=14,SNR=9.3						
PETK	Petropavlovsk-	10.68	32	PN	Pn	06 42 25.0	+1.1
PETK	Petropavlovsk-	10.68	32		Pn	06 42 25.0	+1.1
MJA0	Matsu Arr-Jizo	10.97	228	*e*PN	Pn	06 42 29.5	+1.5
MJAR	Matsushiro Arr	10.99	228	P	Pn	06 42 27.8	-0.5
	comp=E,0.1nm,0.3s,baz=24,slow=12,SNR=4.4						
MJAR	Matsushiro Arr	10.99	228	PN	Pn	06 42 29.3	+1.0
MJAR	Matsushiro Arr	10.99	228		Pn	06 42 29.3	+1.0
USRK	Ussuriysk Ar.	11.70	275	P	Pn	06 42 38.6	+0.6
	baz=88,slow=11,SNR=5.7						
USRK				LR	LR	06 47 01.0	
	comp=E,110nm,20.5s,baz=44,slow=37						
USRK	Ussuriysk Ar.	11.70	275	PN	Pn	06 42 39.4	+1.4
USRK	Ussuriysk Ar.	11.70	275		Pn	06 42 39.4	+1.4
USA0B	Ussuriysk Arra	11.71	275	*ce*PN	Pn	06 42 39.5	+1.6
USA0B	Ussuriysk Arra	11.71	275	Pn	Pn	06 42 38.5	+0.6
KLR	Kul'dur	12.32	299	P	Pn	06 42 48.4	+2.1
	comp=E,0.1nm,0.3s,baz=102,slow=15,SNR=4.3						
KLR				LR	LR	06 47 22.8	
	comp=E,182nm,21.0s,baz=116,slow=37						
KLR	Kul'dur	12.32	299	⇑*e*PN	Pn	06 42 49.0	+2.6
EKMR	Ekimchan	13.32	316	*e*P	Pn	06 42 58.2	-1.7
EKMR				AMB	AMB	06 43 03.0	
	comp=E,10.0nm,1.0s						
MA2	Magadan	15.27	5	LR	LR	06 48 24.9	
	comp=E,90nm,20.4s,baz=100,slow=34						
MA2	Magadan	15.27	5	⇑*e*P	Pn	06 43 26.9	+1.3
KSRS	Korea Array	16.88	253	P	Pn	06 43 46.2	+0.2
	comp=E,0.3nm,0.3s,baz=57,slow=14,SNR=4.4						
KSRS				LR	LR	06 49 43.7	
	comp=E,64nm,20.4s,baz=80,slow=35						
JNU	Nakatsue	17.62	236	P	P	06 43 57.0	+1.4
	comp=E,0.2nm,0.3s,baz=20,slow=15,SNR=3.5						
TJN	Taejon	17.83	250	⇑*e*P	P	06 43 58.3	+0.4
SEY	Seymchan	18.71	6	P	P	06 44 05.6	-1.7
	baz=173,slow=8.4,SNR=11						
SEY	Seymchan	18.71	6	*e*P	P	06 44 06.0	-1.4
SEY	Seymchan	18.71	6	⇑*i*P	P	06 44 06.0	-1.4
BILL	Bilibino	25.50	16	*e*P	P	06 45 18.0	+1.6
BILL	Bilibino	25.50	16	⇓*e*P	P	06 45 18.0	+1.6
BILL				pmax	pmax		
	comp=Z,2.0nm,1.3s						
SONM	Songino Array	29.00	292	P	P	06 45 47.9	-0.3
	comp=Z,0.6nm,0.3s,baz=64,slow=11,SNR=3.6						
SONM	Songino Array	29.00	292	*e*P	P	06 45 49.9	+1.7
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
H11N2	WAKE ISLAND Hy	29.07	142	T	T	07 16 34.2	
	baz=333,slow=76,SNR=1216						
H11N1	WAKE ISLAND Hy	29.08	142	T	T	07 16 35.2	
	baz=333,slow=76,SNR=886						
H11N3	WAKE ISLAND Hy	29.09	142	T	T	07 16 35.5	
	baz=333,slow=76,SNR=1224						
H11S1	WAKE ISLAND Hy	30.07	143	T	T	07 17 51.6	
	baz=334,slow=76,SNR=1902						
H11S3	WAKE ISLAND Hy	30.07	143	T	T	07 17 50.0	
	baz=334,slow=76,SNR=1065						
H11S2	WAKE ISLAND Hy	30.08	143	T	T	07 17 53.0	
	baz=334,slow=76,SNR=990						
TLY	Talaya	30.34	300	LR	LR	06 58 35.3	
	comp=Z,83nm,18.5s,baz=57,slow=37						
IMAR	Indian Mountai	37.63	35	P	P	06 47 02.3	-0.4
PPLA	Purkeypile	38.14	40	P	P	06 47 07.6	+0.3
PPLA				IAmb	IAmb	06 47 10.9	
	comp=Z,6.7nm,1.2s						
TGY	Tagaytay City	38.15	226	LR	LR	07 01 07.9	
	comp=Z,94nm,21.8s,baz=152,slow=33						
KDAK	Kodiak Island	38.19	48	P	P	06 47 07.1	-0.4
	comp=Z,4.4nm,0.9s,baz=267,slow=5.9,SNR=5.0						
MLY	Manley	38.82	36	P	P	06 47 14.0	+1.1
NRIK	Noril'sk	39.09	331	LR	LR	07 04 23.8	
	comp=Z,50nm,18.7s,baz=22,slow=38						
SML	Sawmill	39.98	41	P	P	06 47 22.7	+0.2
SCM	Sheep Creek Mo	40.45	41	P	P	06 47 26.9	+0.5
SCM				pmax	pmax		
	comp=Z,9.0nm,1.2s						
SCM	Sheep Creek Mo	40.45	41	P	P	06 47 26.9	+0.5
HDA	Harding Lake	40.45	37	P	P	06 47 26.0	-0.3
HDA				IAmb	IAmb	06 47 42.1	
	comp=Z,8.5nm,1.5s						
IL31		40.46	37	P	P	06 47 26.4	+0.1
IL31				IAmb	IAmb	06 47 27.6	
	comp=Z,7.0nm,1.4s						
ILAR	Eielson Array	40.46	37	P	P	06 47 25.9	-0.5
	comp=Z,0.9nm,0.5s,baz=250,slow=7.1,SNR=14						
ZALV	Zalesovo Beam	41.28	307	PcP	PcP	06 49 30.1	-0.7
	comp=Z,1.0nm,0.6s,baz=80,slow=1.6,SNR=5.0						
BMAR	Burnt Mountain	41.33	33	P	P	06 47 33.9	+0.3
BCAR	Beaver Creek A	42.86	39	P	P	06 47 46.9	+0.8
EGAK	Eagle	42.91	36	P	P	06 47 46.5	+0.2
EGAK				IAmb	IAmb	06 47 46.6	
	comp=Z,4.7nm,1.0s						
MK31	Makanchi Array	45.03	297	P	P	06 48 03.0	-0.6
MK31				pmax	pmax		
	comp=Z,3.0nm,1.4s						
MK31	Makanchi Array	45.03	297	P	P	06 48 03.0	-0.6
MKAR	Makanchi Array	45.03	297	P	P	06 48 03.7	+0.1
	comp=Z,0.7nm,0.7s,baz=84,slow=8.4,SNR=6.0						
MKAR				PcP	PcP	06 49 43.1	-0.6
	comp=Z,0.4nm,0.3s,baz=64,slow=4.5,SNR=8.5						
MKAR				LR	LR	07 05 56.5	
	comp=Z,54nm,18.3s,baz=54,slow=35						
MKAR	Makanchi Array	45.03	297	*e*P	P	06 48 03.4	-0.2
MKAR	Makanchi Array	45.03	297	*e*P	P	06 48 03.4	-0.2
MKAR	Makanchi Array	45.03	297	P	P	06 48 04.0	+0.3
HYT	Haines Junctio	45.28	42	P	P	06 48 07.2	+1.6
INK	Inuvik	45.41	31	P	P	06 48 06.2	-0.1
	comp=Z,0.7nm,0.4s,baz=304,slow=11,SNR=17						
INK	Inuvik	45.41	31	P	P	06 48 06.5	+0.2
INK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
INK	Inuvik	45.41	31	P	P	06 48 06.5	+0.2
KURK	Kurchatov	45.86	304	*e*P	P	06 48 10.4	+0.3
KURK	Kurchatov	45.86	304	P	P	06 48 10.4	+0.3
KURK						06 49 45.8	
KURBB	Kurchatov Arra	45.95	304	P	P	06 48 10.4	-0.4
	comp=Z,0.5nm,0.3s,baz=75,slow=8.2,SNR=8.3						
KURBB				PcP	PcP	06 49 45.8	-0.9
	comp=Z,0.7nm,0.5s,baz=72,slow=4.0,SNR=4.8						
CMAR	Chiang Mai Arr	48.51	254	P	P	06 48 31.6	+0.4
	comp=Z,0.7nm,0.3s,baz=27,slow=8.1,SNR=1.7						
BVAR	Borovoye Array	49.74	309	PcP	PcP	06 49 59.5	-0.8
	comp=Z,0.5nm,0.4s,baz=59,slow=3.4,SNR=4.0						
BRVK	Borovoye	49.78	309	⇑*e*P	P	06 48 38.0	-2.4
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
JIRN	Jiri	51.74	273	*e*P	P	06 48 55.7	-0.2
	comp=Z,9.7nm,0.3s						
GUN	Gumba	51.81	274	*e*P	P	06 48 56.3	-0.2
	comp=Z,12nm,0.3s						
AAK	Ala-Archa	51.83	296	*e*P	P	06 48 56.0	-0.2
AAK	Ala-Archa	51.83	296	⇑*e*P	P	06 48 56.0	-0.2
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
RAMN	Ramite	51.86	272	*e*P	P	06 48 56.5	-0.2
	comp=Z,28nm,0.3s						
PKI	Pulchoki	52.35	273	*e*P	P	06 49 00.0	-0.4
DMN	Daman	52.54	274	*e*P	P	06 49 01.8	0.0
DANN	Dangsing	53.07	275	*e*P	P	06 49 05.8	+0.1
	comp=Z,10nm,0.3s						
RES	Resolute Bay	54.10	17	P	P	06 49 11.6	-0.5
	comp=Z,0.8nm,0.6s,baz=297,slow=5.7,SNR=5.6						
RES	Resolute Bay	54.10	17	P	P	06 49 11.6	-0.5
RES				IAmb	IAmb	06 49 23.1	
	comp=Z,2.0nm,1.0s						
ARU	Arti	54.44	317	*e*P	P	06 49 14.9	0.0
ARU	Arti	54.44	317	⇓*e*P	P	06 49 14.8	-0.1
ARU				pmax	pmax		
	comp=Z,3.0nm,1.2s						
YKA	Yellowknife Ar	54.79	34	P	P	06 49 17.1	-0.2
	comp=Z,1.8nm,0.8s,baz=297,slow=6.4,SNR=24						
ABKAR	Akbulak array	57.31	309	P	P	06 49 35.0	-0.6
KIRV	Kirov	57.59	322	⇑*e*P	P	06 49 39.0	+1.6
ARCES	ARCESS Array B	58.92	340	P	P	06 49 45.7	-0.9
	comp=Z,4.0nm,0.9s,baz=46,slow=8.0,SNR=1.6						
NEW	Newport	61.27	49	P	P	06 50 03.2	+0.2
	comp=Z,2.0nm,0.7s,baz=271,slow=2.1,SNR=4.0						
FINES	FINESS Array B	64.67	333	P	P	06 50 23.6	-1.6
	comp=Z,0.6nm,0.5s,baz=45,slow=3.0,SNR=5.6						
GEYT	Alibeck	64.86	299	P	P	06 50 25.7	-1.2
	comp=Z,0.8nm,0.4s,baz=70,slow=8.4,SNR=1.6						
GEYT				LR	LR	07 21 46.7	
	comp=Z,45nm,19.0s,baz=0.0,slow=39						
WB0	Warramunga Arr	65.12	194	P	P	06 50 29.6	+1.0
WB0				IAmb	IAmb	06 50 29.8	
	comp=Z,4.0nm,1.0s						
WRAB	Tennant Creek	65.29	194	⇓*i*P	P	06 50 29.9	+0.2
WRAB				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WB2	Warramunga Arr	65.30	194	P	P	06 50 30.9	+1.2
WB2				IAmb	IAmb	06 50 30.9	
	comp=Z,2.6nm,0.8s						
WRA	Warramunga Arr	65.30	194	P	P	06 50 30.1	+0.3
	comp=Z,1.8nm,0.8s,baz=16,slow=6.8,SNR=13						
WRA	Warramunga Arr	65.30	194	*e*P	P	06 50 30.4	+0.7
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FITZ	Fitzroy Crossi	65.56	204	P	P	06 50 32.5	+1.0
	comp=Z,1.1nm,0.8s,baz=0.0,slow=10,SNR=2.4						
NVAR	Mina Array Bea	66.52	59	P	P	06 50 38.6	+0.8
	comp=Z,0.9nm,0.7s,baz=286,slow=8.4,SNR=7.4						
PDAR	Pinedale Array	68.85	51	P	P	06 50 52.2	-0.2
	comp=Z,0.6nm,0.7s,baz=274,slow=2.6,SNR=6.4						
ASAR	Alice Springs	69.01	194	P	P	06 50 54.6	+1.3
	comp=Z,1.4nm,0.8s,baz=10.0,slow=5.0,SNR=16						
ASAR	Alice Springs	69.01	194	*e*P	P	06 50 54.5	+1.3
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NOA	NORSAR Array B	69.29	339	P	P	06 50 53.1	-1.6
	comp=Z,0.8nm,0.7s,baz=29,slow=6.7,SNR=8.3						
NOA				LR	LR	07 24 29.6	
	comp=Z,16nm,18.4s,baz=255,slow=39						
NOA	NORSAR Array B	69.29	339	*e*P	P	06 50 53.5	-1.1
KBZ	Khabaz	69.99	312	LR	LR	07 24 20.3	
	comp=Z,66nm,18.5s,baz=33,slow=38						
RDMU	Red Mountain	70.30	52	P	P	06 51 02.3	+0.9
ULM	Lac du Bonnet	70.47	38	P	P	06 51 01.1	-0.9
	comp=Z,1.0nm,0.4s,baz=328,slow=7.6,SNR=3.1						
AKASG	Malin Array Be	71.55	324	P	P	06 51 08.0	-0.4
	comp=Z,0.2nm,0.3s,baz=40,slow=6.0,SNR=4.5						
BRTR	Keskin Array B	77.69	314	P	P	06 51 44.2	-0.3
	comp=Z,0.3nm,0.3s,baz=43,slow=7.4,SNR=4.2						
BRTR	Keskin Array B	77.69	314	P	P	06 51 44.0	-0.5
TX31	Lajitas Ar. Si	81.59	57	P	P	06 52 06.0	+0.2
TX31				IAmb	IAmb	06 52 11.5	
	comp=Z,6.0nm,1.4s						
TX32	Lajitas Array	81.59	57	P	P	06 52 06.0	+0.2
TXAR	Lajitas Array	81.59	57	P	P	06 52 05.8	+0.1
	comp=Z,1.2nm,0.6s,baz=295,slow=4.2,SNR=18						
TXAR	Lajitas Array	81.59	57	P	P	06 52 06.0	+0.2
TXAR	Lajitas Array	81.59	57	P	P	06 52 06.0	+0.2

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*JMA **27** 06:44:01.9±0.1, 42°.91N×145°.33E, h87^{km}±1^{km}, M3.1*
*SKHL **27** 06:44:02.1±0.2, 42°.73N×145°.49E, h65^{km}±3^{km}, mb4.2/4*

ISC 27 06:44:02.7±2.0, 42°.93N±0°.09×145°.31E±0°.06, h82^{km}±10^{km}, n15, σ0^{s}.42/30, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKHN	Kushirohamanak	0.19	325	P	Pn	06 44 14.9	+0.3
JKHN				*e*S	Sn	06 44 24.5	+1.1
JAK	Akkeshi	0.46	279	P	Pn	06 44 16.1	-0.1
JAK				*e*S	Sn	06 44 26.9	+0.7
NMR	Nemuro--Hokkai	0.54	35	*i* P	Pn	06 44 16.5	-0.4
NMR				*i* S	Sn	06 44 26.8	-0.6
NEM2	Nemuro 2	0.54	36	P	Pn	06 44 16.6	-0.3
NEM2				*e*S	Sn	06 44 27.3	-0.2
JNK	Nakash	0.79	327	P	Pn	06 44 19.0	-0.4
JNK				*e*S	Sn	06 44 31.2	-0.6
GLVR	Golovnino	0.82	11	*i* P	Pn	06 44 19.7	-0.1
GLVR				AMB	AMB	06 44 20.0	
	50nm,0.2s						
GLVR				*i* S	Sn	06 44 32.3	-0.3
GLVR				A	A	06 44 34.0	
	1µm,0.4s						
GLVR				A	A	06 44 34.0	
	1µm,0.4s						
JRA	Rausu	1.02	352	P	Pn	06 44 22.0	0.0
JRA				*e*S	Sn	06 44 36.7	+0.2
JOB	Onbets	1.08	269	P	Pn	06 44 22.7	-0.1
JOB				*e*S	Sn	06 44 38.0	+0.1
GRPR	Tuman	1.12	17	*i* P	Pn	06 44 22.9	-0.3
GRPR				AMB	AMB	06 44 24.0	
	70nm,0.3s						
GRPR				*i* S	Sn	06 44 38.6	0.0
GRPR				A	A	06 44 39.0	
	900nm,0.4s						
GRPR				A	A	06 44 39.0	
	600nm,0.4s						
YUK	Yuzh-Kuril'sk	1.18	20	*e*P	Pn	06 44 23.9	-0.1
YUK				AMB	AMB	06 44 26.0	
	60nm,0.3s						
YUK				*i* S	Sn	06 44 39.8	-0.1
YUK				A	A	06 44 40.0	
	500nm,0.3s						
YUK				A	A	06 44 40.0	
	700nm,0.3s						
JAR	Ashorobuto	1.19	289	P	Pn	06 44 24.1	0.0
JAR				*e*S	Sn	06 44 40.4	+0.2
JTKR	Abashiri--Toko	1.46	316	P	Pn	06 44 27.6	+0.1

JTKR				*e*S	Sn	06 44 46.6	+0.3
JCH	Churui	1.47	258	P	Pn	06 44 27.3	-0.3
JCH				*e*S	Sn	06 44 45.8	-0.7
JMP	Maruseppu	1.78	308	P	Pn	06 44 31.7	-0.1
JMP				*e*S	Sn	06 44 54.1	+0.2
KUR	Kuril'sk	2.95	38	*e*P	Pn	06 44 47.9	+0.5
KUR				AMB	AMB	06 44 48.2	
	40nm,0.4s						
KUR				*e*S	Sn	06 45 22.1	+0.4
KUR				A	A	06 45 24.4	
	80nm,0.2s						
KUR				A	A	06 45 24.4	
	60nm,0.2s						

IDC ***27*** *06:48:45.9±1.6, 3°.20S×130°.72E, h0^{km}, mb3.4/2, mb1 3.5/5, mb1mx3.4/42, mbtmp3.3/5, ML3.1/3, Error ellipse: s-maj=68.6km s-min=23.0km az=88.0*

DJA ***27*** *06:48:49.4±0.5, 3°S±5°×13°1E±°, h10^{km}, M3.2/4, MLv3.2/4*

ISC 27 06:48:47.4±1.0**, 3°.05S**±0°.07×**130°.95E**±0°.08**, h10^{km}, n8, σ2^{s}.20**/9**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	1.31	84	P	Pn	06 49 14.2	+2.5
BNDI	Bandanaira	1.79	215	P	Pn	06 49 21.1	+2.7
MSAI	Masohi	2.04	262	P	Pg	06 49 26.6	+0.1
SIJI	Sorong	2.19	8	Pn	Pn	06 49 25.4	+1.5
	3.1nm,0.3s,baz=219,slow=23,SNR=11						
SIJI				Sn	Sb	06 49 53.4	-1.1
	4.4nm,0.3s,baz=230,slow=22,SNR=5.3						
FITZ	Fitzroy Crossi	15.83	199	Pn	Pn	06 52 28.2	-2.3
	0.0nm,0.3s,baz=17,slow=11,SNR=1.2						
FITZ				Sn	Sn	06 55 09.1	-17
	0.0nm,0.3s,baz=299,slow=14,SNR=1.5						
WRA	Warramunga Arr	17.11	169	P	Pn	06 52 44.7	-2.2
	0.1nm,0.3s,baz=346,slow=12,SNR=6.5						
WRA				S	Sn	06 55 40.4	-17
	0.1nm,0.3s,baz=358,slow=23,SNR=2.1						
ASAR	Alice Springs	20.69	172	P	P	06 53 26.5	-1.4
	1.3nm,0.4s,baz=351,slow=10,SNR=25						
MKAR	Makanchi Array	65.50	325	P	P	06 59 31.4	+0.5
	0.2nm,0.6s,baz=111,slow=7.9,SNR=2.5						

NNC 27 07:05:28.6±5.0**, 41°.68N×78°.37E, h0^{km}, mb2.8, mpv2.6, 2C, Error ellipse: s-maj=34.0km s-min=28.6km az=137.0, Suspected Mining explosion., Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDOK	Medeo	1.77	327	Pg	Pn	07 05 59.6	-1.1
	1.3nm,0.4s						
MDOK				Lg	Lg	07 06 24.9	
	2.4nm,0.4s						
KST	Kastek	2.24	308	Pg	Pg	07 06 12.0	+0.4
	1.1nm,0.1s						
KST				Lg	Lg	07 06 41.0	
	2.6nm,0.4s						
DGS	Degeres	2.47	310	Pg	Pg	07 06 15.2	-0.8
	0.9nm,0.2s						
DGS				Lg	Lg	07 06 47.1	
	5.1nm,0.4s						
ARXS	Arharly	2.56	351	Pg	Pg	07 06 17.1	-0.6
	1.2nm,0.2s						
ARXS				Lg	Lg	07 06 49.8	
	3.8nm,0.3s						
AAK	Ala-Archa	3.03	290	⇑Pg	Pb	07 06 22.4	-1.2
	1.4nm,0.8s						
AAK				⇑Lg	Lg	07 07 04.9	
	2.3nm,0.7s						

SOME 27 07:06:18.6, 42°.52N×79°.57E, h5^{km}, 2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	0.64	353	⇓*i*P	Pg	07 06 31.6	+0.6
	30nm,0.1s						
SHLS				⇓*i*S	Sb	07 06 41.1	-0.7
	16nm,0.3s						
UZB	Uzynbulak	0.75	328	*e*P	Pg	07 06 32.7	-0.2
	4.3nm,0.2s						
UZB				*e*S	Sg	07 06 43.0	+0.4
	15nm,0.1s						
DJR	Jarkent	1.82	5	*e*P	Pb	07 06 52.6	+0.1
	0.9nm,0.1s						
DJR				*e*S	Sg	07 07 17.2	+0.1
	3.0nm,0.5s						
KOTS	Kotyrbulak	1.94	292	*e*P	Pb	07 06 54.6	0.0
	3.7nm,0.2s						
KOTS				*e*S	Sg	07 07 20.3	-0.7
	6.5nm,0.2s						
ARXS	Arharly	2.12	324	*e*P	Pb	07 06 57.3	-0.2
	3.9nm,0.4s						
ARXS				*e*S	Sb	07 07 25.1	+1.0
	6.8nm,0.4s						

AEIC ***27*** *07:28:31.9±2.4, 68°.02N±0°.05×163°.48W±0°.07, h14^{km}±4^{km}, ML4.1/37, mb4.3/15(NEIC), Error ellipse: s-maj=7.8km s-min=2.7km az=198.0*

IDC ***27*** *07:28:32.7±0.5, 68°.18N×163°.69W, h0^{km}, mb4.2/24, mb1 4.3/29, mb1mx4.2/62, mbtmp4.2/29, ML3.9/5, MS3.4/6, Ms1 3.4/6, ms1mx3.0/48, Error ellipse: s-maj=15.9km s-min=10.1km az=25.0*

NEIC ***27*** *07:28:33.4±2.2, 68°.08N±0°.06×163°.5W±0°.1, h9^{km}±4^{km}, Error ellipse: s-maj=9.2km s-min=5.6km az=180.0*

ISC 27 07:28:33.2±0.4**, 68°.12N**±0°.05×**163°.44W**±0°.04**, h10^{km}, n153, σ1^{s}.52**/160**, mb4.3**/30**, MS3.2**/5**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.21	109		Pg	07 28 37.2	-0.4
RDOG					Sg	07 28 40.2	-0.4
ANM	Nome	3.66	193		Pn	07 29 28.7	-1.1
ANM					Sn	07 30 13.3	+0.4
IM03		4.36	115		Pn	07 29 39.2	-0.1
IMAR	Indian Mountai	4.36	115		Pn	07 29 39.0	-0.4
PS05	TAPS Pump Stn5	5.09	99		Pn	07 29 49.3	-0.1
COLD	Coldfoot	5.13	94		Pn	07 29 51.0	+1.0
COLD					Sn	07 30 51.4	+2.3
TOLK	Toolik Lake Re	5.15	78		Pn	07 29 51.8	+1.4
TOLK					Sn	07 30 51.5	+1.6
GAMB	Gambell	5.52	222		Pn	07 29 53.0	-2.3
PS01	TAPS Pump Stn	5.70	61		Pn	07 29 58.5	+0.7
PS06	TAPS Pump Stn6	5.83	107		Sn	07 31 05.9	-0.6
MLY	Manley	5.94	116		Pn	07 30 01.0	-0.2
TTA	Tatalina	6.06	146	Pn	Pn	07 30 03.2	+0.4
TT01	Tatalina	6.08	146		Pn	07 30 02.6	-0.3
CHUM	Lake Minchumin	6.22	128		Pn	07 30 05.8	+0.9
BPAW	Bear Paw Mtn.	6.47	123		Pn	07 30 09.1	+0.7
NEA	Nenana	6.78	115		Pn	07 30 13.1	+0.5
MDM	Murphy Dome	6.84	110		Pn	07 30 12.8	-0.8
KTH	Kantishna Hill	6.88	126		Pn	07 30 14.9	+0.9
KTH				Sn	Sn	07 31 31.2	-1.1
BWN	Browne	6.91	118		Pn	07 30 14.2	-0.2
PPLA	Purkeypile	7.02	133		Pn	07 30 16.9	+0.8
TCOL	CIGO, UAF Yank	7.02	110		Pn	07 30 16.6	+0.7
COLA	College	7.03	110		Pn	07 30 15.9	-0.1
POKR	Poker Plat Res	7.04	108		Pn	07 30 16.4	+0.2
TRF	Thorofare Moun	7.15	125		Pn	07 30 19.4	+1.5
BM03	Burnt Mountain	7.17	87		Pn	07 30 18.2	+0.1
CCB	Clear Creek Bu	7.17	112		Pn	07 30 18.5	+0.5
BMAR	Burnt Mountain	7.18	87	Pn	Pn	07 30 17.5	-0.6
WRH	Wood River Hil	7.18	113		Pn	07 30 18.5	+0.4
FYU	Fort Yukon	7.20	94		Pn	07 30 18.7	+0.3
MCK	McKinley	7.38	120		Pn	07 30 20.8	-0.1
IL31		7.42	109		Pn	07 30 21.0	-0.4
ILAR	Eielson Array	7.42	109	Pn	Pn	07 30 20.5	-0.9
	1.9nm,0.3s,baz=304,slow=13,SNR=85						
ILAR				Sn	Sn	07 31 43.1	-2.6
	3.8nm,0.3s,baz=197,slow=24,SNR=7.7						
ILAR				Lg	Lg	07 32 26.4	
	baz=310,slow=25,SNR=2.0						
ILAR	Eielson Array	7.42	109		Pn	07 30 21.5	0.0
PRP	Porcupine Dome	7.53	102	Pn	Pn	07 30 19.0	-4.0
PS08	TAPS Pump Stn8	7.58	110		Pn	07 30 22.3	-1.3
HDA	Harding Lake	7.61	111		Pn	07 30 24.8	+0.7
RND	Reindeer	7.63	121		Pn	07 30 24.8	+0.5
SVW2	Sparrevohn	7.81	151		Pn	07 30 27.3	+0.4
DHY	Denali Highway	8.34	120		Pn	07 30 35.2	+1.1
SPBG	Spurr Blockage	8.35	140		Pn	07 30 35.0	+0.7
WAT6	Susitna Watana	8.58	123		Pn	07 30 38.2	+0.8
RIDG	Independent Ri	8.76	111		Pn	07 30 39.8	0.0
GHO	Glory Hole Cre	8.84	129	Pn	Pn	07 30 42.1	+1.1
SCRK	Sand Creek	8.91	109	Pn	Pn	07 30 43.3	+1.3
RSO	Redoubt South	8.97	144		Pn	07 30 44.6	+1.8
SML	Sawmill	8.99	128		Pn	07 30 44.2	+1.3
RC01	Rabbit Creek A	9.17	134		Pn	07 30 48.1	+2.7
KNK	Knik Glacier	9.26	129		Pn	07 30 49.1	+2.5
SCM	Sheep Creek Mo	9.27	125	Pn	Pn	07 30 48.9	+2.1
EGAK	Eagle	9.50	100		Pn	07 30 50.0	+0.1
MENT	Mentasta	9.66	113		Pn	07 30 50.1	-2.0
BRLK	Bradley Lake	10.02	141	Pn	Pn	07 30 51.7	-5.3
SEW	Seward	10.08	136	Pn	Pn	07 30 58.7	+1.0
CNPM	China Poot	10.15	142	Pn	Pn	07 30 58.9	+0.1
BCAR	Beaver Creek A	10.26	109		Pn	07 30 59.6	-0.7
FID	Port Fidalgo	10.37	127	Pn	Pn	07 31 02.0	+0.2
EPYK	Eagle Plains	10.46	87		Pn	07 31 03.8	+0.8
DAWY	Dawson	10.53	101		Pn	07 31 06.1	+2.1
HIN	Hinchinbrook I	10.65	128	Pn	Pn	07 31 08.0	+2.3
GLB	Gilahina Butte	10.68	119	Pn	Pn	07 31 07.8	+1.7
EYAK	Cordova Ski Ar	10.75	126	Pn	Pn	07 31 08.6	+1.6
MCARA	McCarthy VSAT	10.98	118	Pn	Pn	07 31 08.3	-1.8
INK	Inuvik	11.06	75	Pn	Pn	07 31 09.8	-1.3
	1.6nm,0.3s,baz=296,slow=12,SNR=40						
INK				Sn	Sn	07 33 07.7	-7.0
	2.3nm,0.3s,baz=330,slow=7.7,SNR=8.0						
INK				LR	LR	07 35 27.4	
	comp=Z,136nm,19.9s,baz=294,slow=37						
INK	Inuvik	11.06	75		Pn	07 31 08.9	-2.3
BILL	Bilibino	11.26	284		Pn	07 31 12.7	-1.2
CRQM	Cirque	11.41	121	Pn	Pn	07 31 17.0	+0.8
BALM	Baldy	11.46	118	Pn	Pn	07 31 15.3	-1.5
KDAK	Kodiak Island	11.47	149	Pn	Pn	07 31 15.2	-1.6
	0.1nm,0.3s,baz=150,slow=23,SNR=2.1						
KDAK	Kodiak Island	11.47	149		Pn	07 31 17.8	+1.0
TGL	Tana Glacier	11.51	120	Pn	Pn	07 31 15.4	-2.0
BARN	Barnard Glacie	11.67	117	Pn	Pn	07 31 18.2	-1.6
OHAK	Old Harbor	11.87	152	Pn	Pn	07 31 23.7	+1.4
HYT	Haines Junctio	13.26	111	Pn	Pn	07 31 42.2	+0.8
C36M	Paulatuk	14.16	67		Pn	07 31 50.5	-3.0
WHY	Whitehorse	14.30	108	Pn	Pn	07 31 55.7	0.0
SKAG	Skagway	15.00	112	Pn	Pn	07 32 04.8	-0.1
DLBC	Dease Lake	17.63	107	P	P	07 32 39.7	+0.1
	0.5nm,0.3s,baz=285,slow=5.6,SNR=5.9						
DLBC	Dease Lake	17.63	107	Pn	Pn	07 32 36.1	-2.5
SEY	Seymchan	18.67	275	P	Pn	07 32 51.1	-0.2
	0.1nm,0.3s,baz=6.7,slow=23,SNR=3.6						
YKA	Yellowknife Ar	20.66	82	P	P	07 33 13.7	+1.0
	5.0nm,0.6s,baz=306,slow=11,SNR=65						
YKA				S	S	07 36 52.7	-10
	0.2nm,0.5s,baz=317,slow=22,SNR=2.1						
YKA				LR	LR	07 41 59.5	
	comp=Z,230nm,19.9s,baz=0.0,slow=39						
MA2	Magadan	21.40	269	LR	LR	07 41 21.4	
	comp=Z,105nm,19.4s,baz=46,slow=36						
RES	Resolute Bay	21.53	42	P	P	07 33 22.2	+0.3
	1.4nm,0.5s,baz=271,slow=13,SNR=11						
RES				S	S	07 37 12.3	-7.8
	2.7nm,0.8s,baz=215,slow=22,SNR=5.2						
RES				LR	LR	07 44 02.1	
	comp=Z,96nm,18.5s,baz=195,slow=43						
RES	Resolute Bay	21.53	42	P	P	07 33 22.5	+0.6
PEA0B	Petropavlovsk-	23.71	250	P	P	07 33 44.1	-0.8
PEA0B				IAmb	IAmb	07 34 03.4	
	comp=Z,19nm,1.1s						
PETK	Petropavlovsk-	23.71	250	P	P	07 33 44.9	0.0
	comp=Z,4.0nm,0.7s,baz=75,slow=12,SNR=8.4						
PETK				LR	LR	07 43 41.3	
	comp=Z,68nm,20.0s,baz=60,slow=38						
PETK	Petropavlovsk-	23.71	250	P	P	07 33 44.2	-0.7
TULEG	Thule	26.59	31	P	P	07 34 10.7	-0.2
TULEG				IAmb	IAmb	07 34 23.9	
	comp=Z,7.7nm,0.8s						
DAG	Danmarks Havn	33.73	14	*i* P	P	07 35 15.0	+1.0
	comp=Z,4.3nm,0.8s						
NRIK	Noril'sk	34.57	324	P	P	07 35 21.5	+0.1
	comp=Z,2.9nm,0.5s,baz=58,slow=7.5,SNR=7.1						
MCMT	McKenzie Canyo	34.85	106	P	P	07 35 24.2	-0.1
SUMG	Summit	34.98	25	*i* P	P	07 35 29.9	+4.5
SUMG	Summit	34.98	25	P	P	07 35 26.1	+0.7
SUMG				IAmb	IAmb	07 35 27.7	
	comp=Z,2.4nm,0.5s						
WDC	Whiskeytown Da	35.26	120	P	P	07 35 27.8	+0.1
WDC				IAmb	IAmb	07 35 32.1	
	comp=Z,4.8nm,0.8s						
YHH	Holmes Hill	35.60	104	P	P	07 35 31.9	+1.0
PD31	Pinedale Array	37.82	104	P	P	07 35 50.4	+0.7
PDAR	Pinedale Array	37.82	104	P	P	07 35 51.6	+1.9
	comp=Z,0.9nm,0.7s,baz=356,slow=8.3,SNR=8.7						
PDAR				PcP	PcP	07 38 06.3	+0.3
	comp=Z,0.3nm,0.6s,baz=355,slow=4.5,SNR=2.7						
PDAR	Pinedale Array	37.82	104	P	P	07 35 49.3	-0.5
WAKR	Walker	38.16	118	P	P	07 35 54.5	+2.0
NVAR	Mina Array Bea	38.60	117	P	P	07 35 58.3	+2.0
	comp=Z,2.1nm,0.6s,baz=321,slow=7.0,SNR=21						
NVAR	Mina Array Bea	38.60	117	P	P	07 35 52.4	-3.9
NV11	Mina Array Sit	38.65	117	P	P	07 35 57.9	+1.2
DUG	Dugway, Tooele	38.91	109	P	P	07 35 59.9	+1.1
DUG				IAmb	IAmb	07 36 02.8	
	comp=Z,2.9nm,0.7s						
R11A	Troy Canyon, C	39.59	114	P	P	07 36 06.2	+1.7
PSUT	Pine Spring	40.03	112	P	P	07 36 10.0	+1.8
EYMN	Ely	40.15	82	P	P	07 36 09.7	+0.8
EYMN				IAmb	IAmb	07 36 12.3	
	comp=Z,5.8nm,0.7s						
Q16A	Castle Valley	40.63	109	P	P	07 36 15.4	+2.3
TPNV	Topopah Spring	40.63	116	P	P	07 36 15.0	+1.8
CCUT	Cedar City	41.08	112	P	P	07 36 18.0	+1.1
SZCU	Shurtz Canyon	41.13	112	P	P	07 36 17.8	+0.4
LCMT	Little Creek M	41.60	112	P	P	07 36 20.3	-0.9
PV22	Blue Mesa, Par	41.82	106	P	P	07 36 24.2	+1.2
ARCES	ARCESS Array B	42.47	355	P	P	07 36 28.2	+0.6
	comp=Z,3.9nm,0.8s,baz=7.4,slow=7.7,SNR=5.1						
ARCES				PcP	PcP	07 38 20.7	+0.6
	comp=Z,6.9nm,1.0s,baz=356,slow=3.6,SNR=6.5						
ARCES	ARCESS Array B	42.47	355	P	P	07 36 26.6	-1.0
SCHQ	Schefferville	43.01	57	P	P	07 36 33.0	+0.8
	comp=Z,2.9nm,0.7s,baz=302,slow=7.9,SNR=11						
SCHQ	Schefferville	43.01	57	P	P	07 36 32.2	0.0
SCHQ				IAmb	IAmb	07 36 38.4	
	comp=Z,4.5nm,1.0s						
MJAR	Matsushiro Arr	44.93	256	LR	LR	07 56 12.6	
	comp=Z,60nm,19.0s,baz=100,slow=37						
SONM	Songino Array	46.81	292	P	P	07 37 03.7	+1.0
	comp=Z,1.2nm,0.9s,baz=26,slow=8.2,SNR=4.7						
SONM	Songino Array	46.81	292	IAmb	IAmb	07 37 11.0	
	comp=Z,1.1nm,0.9s						
KSRS	Korea Array	47.93	267	P	P	07 37 12.1	+0.7
	comp=Z,1.8nm,0.7s,baz=19,slow=8.1,SNR=8.9						
KSAR	Wonju Array Be	47.95	267	P	P	07 37 09.6	-2.0
ZALV	Zalesovo Beam	48.26	313	P	P	07 37 13.0	-0.7
	comp=Z,1.7nm,0.6s,baz=32,slow=7.3,SNR=5.6						
ZALV	Zalesovo Beam	48.26	313	P	P	07 37 13.1	-0.6
KLMR	Klimovskoe	50.24	346	*e*P	P	07 37 29.2	+0.4
KLMR				AMP		07 37 32.3	
	comp=Z,26nm,1.1s						
FINES	FINESS Array B	50.54	354	P	P	07 37 32.2	+1.2
	comp=Z,5.0nm,0.4s,baz=21,slow=7.4,SNR=61						
FINES	FINESS Array B	50.54	354	P	P	07 37 30.1	-0.9
HHC	Hu-ho-hao-te	51.03	284	*e*P	P	07 37 32.8	-2.3
NOA	NORSAR Array B	51.08	3	P	P	07 37 36.1	+1.0
	comp=Z,0.5nm,0.6s,baz=0.0,slow=7.6,SNR=2.9						
TX31	Lajitas Ar. Si	51.93	107	P	P	07 37 43.0	+1.0
TX32	Lajitas Array	51.93	107	P	P	07 37 43.3	+1.3
TXAR	Lajitas Array	51.93	107	P	P	07 37 43.2	+1.2
	comp=Z,1.6nm,0.8s,baz=328,slow=6.1,SNR=17						
TXAR	Lajitas Array	51.93	107	P	P	07 37 42.0	+0.1
ARU	Arti	51.96	332	P	P	07 37 42.4	+0.7
	comp=Z,3.0nm,0.2s,baz=46,slow=6.8,SNR=5.5						
KURK	Kurchatov	52.84	315	P	P	07 37 47.6	-0.7
KURBB	Kurchatov Arra	52.95	315	P	P	07 37 49.2	+0.1
	comp=Z,0.9nm,0.7s,baz=27,slow=6.1,SNR=2.7						
KURBB				PcP	PcP	07 38 58.2	+0.4
	comp=Z,0.7nm,0.8s,baz=22,slow=3.9,SNR=3.3						
MKAR	Makanchi Array	55.40	310	P	P	07 38 06.3	-0.8
	comp=Z,0.4nm,0.5s,baz=35,slow=6.4,SNR=5.4						
WMQ	Urumqi	56.50	305	*e*P	P	07 38 15.5	+0.5
AKTO	Aktyubinsk	57.78	330	P	P	07 38 24.6	+0.7
	comp=Z,2.1nm,0.7s,baz=5.9,slow=4.7,SNR=7.9						
ABKAR	Akbulak array	58.54	328	P	P	07 38 29.3	+0.1
AKASG	Malin Array Be	61.12	351	P	P	07 38 48.0	+1.1
	comp=Z,8.5nm,0.5s,baz=6.7,slow=6.7,SNR=62						
AKASG	Malin Array Be	61.12	351	P	P	07 38 47.1	+0.1
AKBB	Malin Array Si	61.12	351	P	P	07 38 48.1	+1.2
GERES	GERESS Array B	63.34	2	P	P	07 39 03.6	+1.6
	comp=Z,1.4nm,0.7s,baz=2.8,slow=5.5,SNR=8.3						
VYHS	Vyhne	63.69	358	*e*P	P	07 39 06.3	+2.1
BUR08	Bucovina Ar. S	64.37	354	P	P	07 39 09.1	+0.3
BURAR	Bucovina Array	64.40	354	P	P	07 39 09.8	+0.8
KBZ	Khabaz	66.72	340	P	P	07 39 24.4	+0.5
	comp=Z,4.3nm,0.7s,baz=349,slow=8.4,SNR=10.0						
BRTR	Keskin Array B	71.71	346	P	P	07 39 55.4	+0.3
	comp=Z,1.6nm,0.8s,baz=33,slow=3.6,SNR=9.5						
CMAR	Chiang Mai Arr	75.84	284	P	P	07 40 19.7	+0.4
	comp=Z,0.7nm,0.3s,baz=4.0,slow=6.9,SNR=4.4						
WRA	Warramunga Arr	98.63	237	P	P	07 42 11.5	-0.5
	comp=Z,1.1nm,0.9s,baz=24,slow=5.0,SNR=6.7						
ASAR	Alice Springs	102.25	236	P	Pdif	07 42 28.8	+0.7
	comp=Z,0.2nm,0.8s,baz=21,slow=5.5,SNR=1.5						
SUR	Sutherland	144.13	354	PKP	PKPdf	07 48 07.8	-0.7
	comp=Z,2.6nm,0.7s,baz=134,slow=12,SNR=1.4						
SUR	Sutherland	144.13	354		PKPdf	07 48 08.5	-0.1
VNDA	Vanda	146.92	193	PKPbc	PKPbc	07 48 14.2	+0.5
	comp=Z,1.2nm,0.7s,baz=338,slow=5.3,SNR=7.6						

IGQ ***27*** *07:34:10.3±0.7, 2°S±5°×7°7W±°, h7^{km}, M4.1*

ISC 27 07:34:09.1±1.6**, 2°.06S**±0°.08×**77°.21W**±0°.05**, h10^{km}, n51, σ1^{s}.17**/55**, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APUY	Puyo	0.99	307	P	Pg	07 34 28.1	-0.1
APUY	Puyo	0.99	307	S	Sb	07 34 42.3	+0.7
ATEN	Tena	1.21	330	S	Sb	07 34 44.6	-3.1
ATEN	Tena	1.21	330	P	Pb	07 34 28.5	-3.6
BPAT	Tungurahua Vol	1.34	294	P	Pn	07 34 34.2	-0.2
BPAT	Tungurahua Vol	1.34	294	S	Sb	07 34 52.3	+0.1
BULB	Ulba Tungurahu	1.35	297	S	Sb	07 34 52.4	+0.1
BULB	Ulba Tungurahu	1.35	297	P	Pn	07 34 34.1	-0.3
BRUN	Tungurahua Vol	1.36	298	P	Pn	07 34 34.5	0.0
BRUN	Tungurahua Vol	1.36	298	S	Sn	07 34 53.0	+0.2
RUN5	Runtun	1.38	298	P	Pn	07 34 34.4	-0.2
RETU	Refugio	1.38	296	P	Pn	07 34 34.7	-0.2
BMAS	Trigal station	1.39	293	P	Pn	07 34 34.7	-0.2
BMAS	Trigal station	1.39	293	S	Sb	07 34 53.6	+0.2
BBIL	Ulba Tungurahu	1.42	295	P	Pn	07 34 35.0	-0.2
BIL2	Estacion Bilba	1.43	295	P	Pn	07 34 34.5	-0.9
PISA	Pisayambo	1.54	310	P	Pn	07 34 37.4	+0.2
TAMB	Tambo	1.78	319	P	Pn	07 34 41.5	+1.0
BTAM	Cotopaxi Volca	1.82	319	S	Sb	07 35 05.8	0.0
BTAM	Cotopaxi Volca	1.82	319	P	Pn	07 34 42.1	+1.1
BMOR	Cotopaxi Volca	1.82	316	P	Pn	07 34 41.8	+0.8
ANTM	Antisana-La Mi	1.82	326	P	Pn	07 34 41.4	+0.3
ANTM	Antisana-La Mi	1.82	326	S	Sn	07 35 04.0	-0.4
ANTS	Antisana-Sarah	1.82	328	S	Sn	07 35 05.5	+0.9
ANTS	Antisana-Sarah	1.82	328	P	Pn	07 34 41.2	+0.1
VC1	Cotopaxi 1	1.85	320	P	Pn	07 34 42.7	+1.3
BREF	Cotopaxi Volca	1.85	318	P	Pb	07 34 43.9	+0.5
ANTG	Antisana-Guama	1.87	326	P	Pn	07 34 42.3	+0.7
ANTG	Antisana-Guama	1.87	326	S	Sn	07 35 05.4	-0.1
BNAS	Cotopaxi Volca	1.88	317	P	Pn	07 34 43.3	+1.6
COHC	Cochancay	2.09	259	P	Pb	07 34 47.4	+0.3
PINO	Pino	2.35	323	P	Pb	07 34 51.6	-0.3
YANA	Yana	2.36	325	P	Pb	07 34 51.3	-0.7
PULU	Pululahua	2.44	328	P	Pb	07 34 53.0	-0.4
IMBA	Imbabura, San	2.52	337	P	Pb	07 34 55.4	+0.6
YAHU	Yahuarcocha	2.56	340	P	Pn	07 34 53.7	+2.6
CUSW	Cuicocha Oeste	2.59	334	P	Pb	07 34 57.9	+2.0
CUIC	Cuicocha-Domo	2.61	334	P	Pb	07 34 55.7	-0.6
CUSE	Cuicocha Este	2.63	333	P	Pb	07 34 55.6	-1.0
URCU	Urcuqui	2.69	337	P	Pb	07 34 57.3	-0.4
PAC1	Pacto, Paraso	2.80	325	P	Pb	07 34 58.4	-1.0
CPAS2	Pasto	3.26	359	*e*P	Pb	07 35 05.2	-2.0
CPAS2				*e*S	Sb	07 35 48.1	+1.0
GCUF	Volcan Galeras	3.26	358	*e*P	Pn	07 35 01.5	+0.7
GCUF				*e*S	Sb	07 35 48.4	+0.9
FLOC	Florencia	3.93	23	*e*P	Pn	07 35 09.0	-0.6
FLOC				*e*S	Sb	07 36 09.5	+3.2
FLOC				*i*		07 36 20.4	
	comp=Z,102nm,0.3s						
SOTA	Rioblanco	4.21	8	*e*P	Pn	07 35 14.6	+0.8
PCON	Cinco Dias	4.43	11	*e*P	Pn	07 35 17.7	+0.8
GARC	Garzon, Huila	4.55	22	*e*P	Pn	07 35 17.6	-0.7
MACC	Macarena, Meta	5.36	39	*e*P	Pn	07 35 28.8	-0.4
MACC				*e*S	Sb	07 36 46.6	-0.7
YOTC	Yotoco, Valle	6.06	8	*e*P	Pn	07 35 40.0	+1.0
ORTC	Ortega, Tolima	6.24	18	*e*P	Pn	07 35 40.8	-0.6
VILC	Villavicencio,	7.06	30	*e*P	Pn	07 35 54.1	+1.3

IDC ***27*** *07:39:25.9±0.6, 34°.79N×73°.57E, h0^{km}, mb4.3/22, mb1 4.4/28, mb1mx4.3/49, mbtmp4.3/28, ML4.0/6, MS3.3/9, Ms1 3.3/9, ms1mx3.0/56, Error ellipse: s-maj=14.3km s-min=12.9km az=153.0*

NDI ***27*** *07:39:27.8±2.7, 34°.99N×73°.25E, h20^{km}±421^{km}, ML4.0, mb4.7(NEIC)*

NEIC ***27*** *07:39:29.0±2.4, 34°.73N±0°.05×73°.66E±0°.07, h24^{km}±5^{km}, mb4.7/50, Error ellipse: s-maj=9.3km s-min=6.6km az=121.0*

BJI ***27*** *07:39:28.1±0.0, 34°.72N×73°.44E, h45^{km}, mB4.7/19, mb4.6/32, ML3.8/2, Ms3.8/10, Ms7 3.7/11*

MOS ***27*** *07:39:29.0±0.9, 34°.78N×73°.64E, h34^{km}, mb4.7/20, Error ellipse: s-maj=9.1km s-min=4.9km az=89.1*

NNC ***27*** *07:39:33.4±4.3, 35°.15N×72°.31E, h0^{km}, mb4.7, mpv4.4, Error ellipse: s-maj=33.2km s-min=20.0km az=9.0*

ISC 27 07:39:28.9±0.3**, 34°.78N**±0°.03×**73°.70E**±0°.04**, h21^{km}, n206, σ1^{s}.80**/221**, mb4.5**/61**, MS3.5**/8**, 19C-8D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	1.17	198	P	Pb	07 39 51.5	+1.0
NIL	Nilore	1.19	199	P	Pn	07 39 48.7	-1.6
NIL	Nilore	1.19	199		Pn	07 39 48.7	-1.6
CEP	Cherat	1.76	238	P	Pb	07 40 00.5	-0.2
JMU	Jammu	2.28	154	*e*P	Pn	07 40 06.0	+0.6
JMU				*e*S	Sb	07 40 38.0	+0.8
THW	Thamme Wali	2.56	220	P	Pb	07 40 11.8	-2.4
THN	Thein Dam	2.88	144	*e*x	Pb	07 40 20.5	+1.0
THN				*e*S	Sb	07 40 55.0	+0.7
SARP	Sargodha	2.98	197	P	Pn	07 40 17.2	+2.3
DHRM	DHARAMSHALA	3.32	139	*e*P	Pb	07 40 24.4	-2.9
DHRM				*e*S	Sb	07 41 06.2	-1.2
DHRM				IAML		07 41 37.3	
	comp=E,918nm,0.4s						
DHRM				IAML		07 41 37.5	
	comp=N,542nm,0.6s						
KBL	Kabul	3.85	268	P	Pn	07 40 28.0	+0.9
KBL						07 41 11.8	
KBL	Kabul	3.85	268	Pn	Pn	07 40 28.0	+0.9
KBL				Sn	Sn	07 41 11.8	-0.1
BHK	Bhakra	4.05	145	*e*x	Pb	07 40 44.8	+5.2
BHK				*e*x	Sn	07 41 21.4	+4.9
SMLA	Simla	4.66	140	*e*P	Pn	07 40 42.0	+4.0
SMLA				*e*S	Sn	07 41 37.2	+5.7
SMLA				IAML		07 41 40.9	
	comp=E,197nm,0.4s						
GAR	Garm	5.01	328		Pn	07 40 45.0	+2.0
GAR				Sn	Sn	07 41 42.5	+2.1
KSH	Kashi	5.07	20	P	Pn	07 40 43.0	-0.8
KSH				S	Sn	07 41 38.8	-2.9
KSH				pmax	pmax		
	comp=E,18nm,0.6s						
KSH				pmax	pmax		
	comp=E,330nm,4.6s						
KSH				smax	smax		
	comp=E,120nm,0.7s						
KSH				smax	smax		
	comp=E,77nm,0.7s						
CHGR	Chuyangaron	5.32	318		Pn	07 40 48.0	+0.8
CHGR				Sn	Sn	07 41 48.0	+0.1
JOSI	Joshimath	6.49	129	*e*P	Pn	07 41 07.9	+4.6
JOSI				IAmb	IAmb	07 42 53.2	
	comp=N,2µm,1.2s						
ARSB	Arslanbob	6.56	355	P	Pn	07 41 06.4	+2.1
ARSB						07 42 19.0	
ARSB	Arslanbob	6.56	355		Pn	07 41 06.4	+2.1
ARSB				Sn	Sn	07 42 18.9	+0.4
NDI	New Delhi	6.77	153	*e*P	Pn	07 41 11.0	+3.9
KUDL	Kundal	7.03	159	*e*P	Pn	07 40 58.1	-12
KUDL				*e*S	Sn	07 42 14.7	-15
AML	Almayashu	7.34	360	P	Pn	07 41 18.4	+3.1

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             SNR=18
KZA   Kyzart              7.39   9   P      Pn     07 41 18.4 +2.4
             SNR=14
UCH   Uchtor              7.47   5   P      Pn     07 41 19.6 +2.6
             SNR=24
ULHL  Ulahol              7.72  14   P      Pn     07 41 23.3 +3.0
             SNR=9.9
AAK   Ala-Archa           7.87   4   Pn     Pn     07 41 24.8 +2.5
             comp=N,0.8nm,0.3s,baz=170,slow=10,SNR=24
AAK                                  Sn     Sn     07 42 50.2  -0.6
             comp=N,0.3nm,0.3s,baz=162,slow=20,SNR=1.3
AAK   Ala-Archa           7.87   4   P      Pn     07 41 25.3 +3.0
             SNR=12
AAK   Ala-Archa           7.87   4 ⇑P      Pn     07 41 25.0 +2.7
             comp=N,12nm,0.8s
AAK                                ⇓S      Sn     07 42 56.0 +5.1
             comp=N,22nm,0.9s
AAK   Ala-Archa           7.87   4c iP     Pn     07 41 24.7 +2.4
AAK                                  pmax   pmax
             comp=Z,11nm,0.7s
AAK   Ala-Archa           7.87   4          Pn     07 41 24.1 +1.8
AAK                                  Sn     Sn     07 42 51.4 +0.6
EKS2  Erkin-Say           7.87   0   P      Pn     07 41 25.8 +3.5
             SNR=5.5
BOOM  Boomskoye usch      7.90  12   P      Pn     07 41 24.6 +1.9
BOOM  Boomskoye usch      7.90  12   Pn     Pn     07 41 24.6 +1.9
CHM   Chimkent            8.19 338   P      Pn     07 41 29.4 +2.9
CHM                                  S      Sn     07 43 05.4 +7.1
CHMS  Chumysh             8.25   5 ⇑P      Pn     07 41 29.4 +2.1
             comp=Z,5.9nm,0.5s
CHMS                               ⇑S      Sn     07 43 05.0 +5.1
             comp=Z,6.7nm,0.7s
KK31  Karatay Array       8.68 344 ⇑P      Pn     07 41 34.1 +0.9
             comp=Z,21nm,0.4s,baz=164,slow=12,SNR=186
KK31                               ⇑S      Sn     07 43 07.5  -2.9
             comp=Z,29nm,0.6s,baz=173,slow=23,SNR=6.2
KK31  Karatay Array       8.68 344   P      Pn     07 41 34.5 +1.3
KK31                                               07 43 08.0
KK31  Karatay Array       8.68 344          Pn     07 41 34.5 +1.3
KK31                                 Sn     Sn     07 43 08.0  -2.4
KKAR  Karatay Array       8.68 344   P      Pn     07 41 34.2 +1.0
KKAR                                               07 43 07.9
KKAR  Karatay Array       8.68 344          Pn     07 41 34.2 +1.0
KKAR  Karatay Array       8.68 344          Pn     07 41 34.6 +1.4
KKAR                                 Sn     Sn     07 43 07.8  -2.6
PDGK  Podgornoye          9.65  26 ⇑P      Pn     07 41 55.7 +9.1
             comp=Z,13nm,0.9s
PDGK                               ⇑S      Sn     07 43 48.7  +14
             comp=Z,16nm,1.3s
PDGK  Podgornoye          9.65  26   P      Pn     07 41 55.7 +9.1
DANN  Dangsing           10.70 124  eP      Pn     07 42 02.1 +0.8
             comp=Z,64nm,0.6s
GKN   Gorkha             11.52 123  eP      Pn     07 42 12.7 +0.3
             comp=Z,50nm,0.2s
BHPL  Bhopal             11.95 163  eP      Pn     07 42 20.7 +2.6
BHPL                                eS      Sn     07 44 25.7  -5.0
DMN   Daman              12.09 123  eP      Pn     07 42 19.9  -0.3
             comp=Z,56nm,0.8s
KKN   Kakani             12.10 122  eP      Pn     07 42 19.9  -0.4
             comp=Z,30nm,0.5s
PKIN  Phulchoki          12.31 122  eP      Pn     07 42 23.1  -0.2
             comp=Z,50nm,0.5s
PKI   Pulchoki           12.32 122  eP      Pn     07 42 23.4  -0.1
             comp=Z,37nm,0.5s
GUN   Gumba              12.45 120  eP      Pn     07 42 24.5  -0.7
             comp=Z,82nm,0.8s
JIRN  Jiri               12.82 120  eP      Pn     07 42 29.6  -0.7
             comp=Z,117nm,0.6s
GEYT  Alibeck            12.95 289   Pn     Pn     07 42 30.3  -1.5
             comp=Z,0.5nm,0.3s,baz=107,slow=9.2,SNR=3.0
GEYT                                 Sn     Sn     07 44 50.8  -4.4
             comp=Z,0.3nm,0.3s,baz=124,slow=33,SNR=1.9
GEYT                                 LR     LR     07 47 28.6
             comp=Z,31nm,19.7s,baz=210,slow=38
GEYT  Alibeck            12.95 289          Pn     07 42 30.4  -1.3
GYA0B ALIBECK ARRAY      12.95 289   Pn     Pn     07 42 30.2  -1.6
RAMN  Ramite             13.54 122  eP      Pn     07 42 38.7  -1.3
             comp=Z,43nm,0.6s
MAKZ  Makanchi           13.54  25   P      Pn     07 42 39.8   0.0
MAKZ  Makanchi           13.54  25          Pn     07 42 39.8   0.0
MK31  Makanchi Array     13.64  26   P      Pn     07 42 37.9  -3.2
MK31  Makanchi Array     13.64  26   Pn     Pn     07 42 37.9  -3.2
MKAR  Makanchi Array     13.64  26   Pn     Pn     07 42 41.5 +0.4
             comp=Z,0.2nm,0.3s,baz=192,slow=15,SNR=17
MKAR  Makanchi Array     13.64  26   Pn     Pn     07 42 39.5  -1.6
WMQ   Urumqi             14.09  46  eP      Pn     07 42 48.0 +0.7
TAPN  Taplejung          14.09 118  eP      Pn     07 42 46.4  -1.2
             comp=Z,73nm,0.5s
ODAN  Odare              14.15 120  eP      Pn     07 42 46.4  -2.0
             comp=Z,46nm,0.7s
NGP   Nagpur             14.37 159  ex      Pn     07 42 49.0  -2.1
NGP                                 ex      x      07 45 14.8
POO   Poona              16.18 180  ex      Pn     07 43 19.0 +3.8
KURBB Kurchatov Arra     16.22  11   Pn     Pn     07 43 13.3  -2.1
             comp=Z,0.3nm,0.3s,baz=203,slow=11,SNR=14
KURK  Kurchatov          16.33  11⇓eP      P      07 43 19.2  -0.3
KURK                                 pmax   pmax
             comp=Z,16nm,0.8s
KURK  Kurchatov          16.33  11          Pn     07 43 15.8  -0.9
AB31  Akbulak array      17.67 329 ⇓P      Pn     07 43 30.9  -2.8
             comp=Z,8.9nm,0.2s,baz=134,slow=12,SNR=7.9
AB31                               ⇑S      Sn     07 46 37.5   -12
             comp=Z,12nm,0.5s,baz=152,slow=23,SNR=5.2
AB31  Akbulak array      17.67 329   P      Pn     07 43 30.8  -2.8
AB31                                 S      Sn     07 46 37.5   -12
ABKAR Akbulak array      17.67 329   Pn     Pn     07 43 31.3  -2.3
DGZ   Jazzator, Alta     18.00  30deP      Pn     07 43 37.2  -0.7
BVAR  Borovoye Array     18.39 354   P      P      07 43 40.5  -1.9
             comp=Z,3.4nm,0.3s,baz=156,slow=10.0,SNR=35
BRVK  Borovoye           18.44 353⇑eP      P      07 43 42.1  -0.8
BRVK                                 pmax   pmax
             comp=Z,19nm,0.8s
BRVK  Borovoye           18.44 353   P      P      07 43 40.5  -2.4
AKTO  Aktyubinsk         19.38 329   P      P      07 43 53.4 +0.1
             comp=Z,1.7nm,0.3s,baz=135,slow=9.5,SNR=27
AKTO                                 LR     LR     07 52 02.6
             comp=Z,58nm,20.8s,baz=150,slow=39
AKTO  Aktyubinsk         19.38 329 ⇑P      P      07 43 53.1  -0.1
             comp=Z,18nm,0.9s
AKTO                               ⇓S      Sn     07 47 18.1   -13
             comp=Z,6.7nm,0.9s
BRDH  Bariadhala         19.78 123   LR     LR     07 52 44.1
             comp=Z,119nm,18.8s,baz=91,slow=40
ZAA0  Zalesovo Array     20.70  19   P      P      07 44 06.8  -0.8
ZAA0                                 IAmb   IAmb   07 44 08.0
             comp=Z,21nm,0.6s
ZALV  Zalesovo Beam      20.70  19   P      P      07 44 07.5   0.0
             comp=Z,20nm,0.5s,baz=216,slow=11,SNR=48
ZALV  Zalesovo Beam      20.70  19   P      P      07 44 06.3  -1.3
GTA   Gaotai             21.30  70  eP      P      07 44 16.0 +1.6
GTA                                  pP     sP     07 44 25.0 +0.6
GTA                                  sP     pP     07 44 29.8 +8.4
GTA                                  pmax   pmax
             comp=Z,12nm,0.8s
GNI   Garni              23.55 292   LR     LR     07 55 42.4
             comp=Z,34nm,19.5s,baz=3.5,slow=42
ARU   Arti               24.00 339   P      P      07 44 41.3  -0.6
             comp=Z,3.3nm,0.4s,baz=115,slow=5.8,SNR=15
ARU                                  LR     LR     07 53 36.9
             comp=Z,82nm,19.7s,baz=259,slow=36
ARU   Arti               24.00 339c iP     P      07 44 42.2 +0.3
ARU                                  S      S      07 49 00.4 +2.8
ARU                                  SS     SnSn   07 49 42.4 +4.0
ARU                                  pmax   pmax
             comp=Z,12nm,0.7s
ARU   Arti               24.00 339   P      P      07 44 41.2  -0.7
ARU                                  IAmb   IAmb   07 44 43.0
             comp=Z,13nm,0.7s
KBZ   Khabaz             25.36 300   LR     LR     07 57 07.6
             comp=Z,59nm,18.1s,baz=77,slow=42
CD2   Chengdu            25.50  90  eP      P      07 44 54.0  -1.8
CD2                                  pmax   pmax
             comp=Z,10.0nm,0.4s
MOY   Mondy              25.86  41  eP      P      07 45 00.9 +1.8
MOY                                  pmax   pmax
             comp=Z,14nm,1.7s
ZAK   Zakamensk          26.55  45  eP      P      07 45 05.8 +0.5
ZAK                                  pmax   pmax
             comp=Z,6.0nm,1.0s
TLY   Talaya             27.32  43   P      P      07 45 13.7 +1.6
             comp=Z,1.5nm,0.4s,baz=243,slow=9.1,SNR=5.6
TLY   Talaya             27.32  43⇓eP      P      07 45 13.2 +1.1
TLY                                  pmax   pmax
             comp=Z,2.0nm,0.9s
TLY   Talaya             27.32  43   P      P      07 45 10.2  -1.9
CHTO  Chiang Mai         27.46 119   P      P      07 45 12.9  -0.7
CHTO                                 pmax   pmax
             comp=Z,8.0nm,0.9s
CHTO  Chiang Mai         27.46 119   P      P      07 45 12.9  -0.7
SONM  Songino Array      27.58  52   P      P      07 45 16.0 +1.4
             comp=Z,3.1nm,0.7s,baz=245,slow=12,SNR=14
SONM  Songino Array      27.58  52   P      P      07 45 16.1 +1.5
SONM                                 pmax   pmax
             comp=Z,4.0nm,1.1s
SONM  Songino Array      27.58  52   P      P      07 45 16.1 +1.5
CMAR  Chiang Mai Arr     27.69 119   P      P      07 45 15.3  -0.4
CMAR  Chiang Mai Arr     27.69 119   P      P      07 45 15.3  -0.4
KIRV  Kirov              28.76 333⇑eP      P      07 45 25.7 +1.0
HHC   Hu-ho-hao-te       30.35  67  eP      P      07 45 39.0  -0.2
HHC                                  pmax   pmax
             comp=Z,76nm,0.8s
HHC                                  pmax   pmax
             comp=Z,240nm,4.3s
HHC                                  LR     LR
             comp=Z,730nm,12.8s
HHC                                  LR     LR
             comp=Z,350nm,13.1s
HHC                                  LR     LR
             comp=Z,760nm,12.3s
BR131 Keskin Array S     32.08 291⇑eP      P      07 45 55.5 +0.9
BRTR  Keskin Array B     32.08 291   P      P      07 45 55.6 +1.1
             comp=Z,1.1nm,0.7s,baz=110,slow=7.3,SNR=6.7
BRTR  Keskin Array B     32.08 291   P      P      07 45 52.2  -2.4
OBN   Obninsk            32.67 320 i P      P      07 45 58.1  -1.2
OBN                                  pmax   pmax
             comp=Z,5.0nm,0.8s
ELL   Elmali             35.37 286   P      P      07 46 22.8  -0.3
ELL                                  pmax   pmax
             comp=Z,28nm,1.1s
ELL   Elmali             35.37 286   P      P      07 46 22.8  -0.3
NRIK  Noril'sk           35.46   8   P      P      07 46 23.7 +0.3
             comp=Z,2.9nm,0.7s,baz=179,slow=6.3,SNR=8.5
NRIK  Noril'sk           35.46   8⇓eP      P      07 46 24.1 +0.7
NRIK                                 pmax   pmax
             comp=Z,10.0nm,1.2s
QIZ   Qiongzhong         35.62 107   P      P      07 46 22.5  -2.8
QIZ                                  S      S      07 51 55.0  -5.5
QIZ                                  LR     LR
             comp=Z,130nm,14.7s
AKASG Malin Array Be     35.74 310   P      P      07 46 25.1  -0.9
             comp=Z,0.5nm,0.3s,baz=106,slow=9.3,SNR=4.7
NJ2   Nanjing            37.55  81  eP      P      07 46 40.0  -1.6
NJ2                                  pmax   pmax
             comp=Z,8.0nm,0.5s
MLR   Muntele Rosu       37.55 301   P      P      07 46 40.0  -1.7
MLR                                  pmax   pmax
             comp=Z,5.0nm,0.9s
MLR   Muntele Rosu       37.55 301   P      P      07 46 40.0  -1.7
BURAR Bucovina Array     38.07 305   P      P      07 46 45.5  -0.5
BURAR Bucovina Array     38.07 305   P      P      07 46 45.4  -0.7
VSU   Vasula             38.90 322⇓eP      P      07 46 51.9  -0.7
VSU                                  pmax   pmax
             comp=Z,36nm,1.3s
FIA1  FINESS Array S     40.13 327   P      P      07 47 01.5  -1.4
FINES FINESS Array B     40.13 327   P      P      07 47 02.2  -0.7
             comp=Z,3.1nm,0.7s,baz=111,slow=10,SNR=9.6
FINES FINESS Array B     40.13 327 i P      P      07 47 03.0 +0.1
FINES                                pmax   pmax
             comp=Z,3.0nm,0.7s
FINES FINESS Array B     40.13 327   P      P      07 47 02.5  -0.5
YULB  Yu-li              42.76  92   P      P      07 47 23.5  -1.5
KSRS  Korea Array        43.38  70   P      P      07 47 31.1 +1.3
             comp=Z,1.3nm,0.8s,baz=275,slow=6.7,SNR=4.9
ARCES ARCESS Array B     43.57 338   P      P      07 47 31.5 +0.5
             comp=Z,6.4nm,0.6s,baz=109,slow=8.4,SNR=24
ARCES                                LR     LR     08 07 31.2
             comp=Z,94nm,18.1s,baz=356,slow=39
ARCES ARCESS Array B     43.57 338   P      P      07 47 31.8 +0.9
ARE0  ARCESS Array S     43.57 338   P      P      07 47 31.9 +0.9
YAK   Yakutsk            44.12  34  eP      P      07 47 35.2  -0.2
YAK                                  pmax   pmax
             comp=Z,11nm,0.8s
KLR   Kul'dur            44.41  53   P      P      07 47 38.8 +0.9
             comp=Z,1.5nm,0.6s,baz=293,slow=8.6,SNR=7.5
KLR   Kul'dur            44.41  53⇑eP      P      07 47 38.4 +0.5
KLR                                  pmax   pmax
             comp=Z,2.0nm,1.4s
TIXI  Tiksi              46.57  21   P      P      07 47 54.9 +0.2
             comp=Z,6.5nm,0.7s,baz=267,slow=4.4,SNR=16
TIXI  Tiksi              46.57  21   P      P      07 47 55.0 +0.4
TIXI                                 IAmb   IAmb   07 47 55.8
             comp=Z,7.8nm,0.8s
NC405 NORSAR Array S     46.84 324   P      P      07 47 56.8  -0.2
NC303 NORSAR Array S     47.01 324   P      P      07 47 57.5  -0.8
NB201 NORSAR Array S     47.03 324   P      P      07 47 59.0 +0.4
NB201                                IAmb   IAmb   07 48 03.2
             comp=Z,6.5nm,0.9s
NB2   NORSAR Subarra     47.07 324   P      P      07 47 57.8  -1.1
             comp=Z,1.2nm,0.6s,baz=95,slow=7.9
NOA   NORSAR Array B     47.07 324   P      P      07 47 57.9  -1.1
             comp=Z,1.5nm,0.6s,baz=96,slow=7.7,SNR=8.9
NOA                                  LR     LR     08 07 52.6
             comp=Z,35nm,18.5s,baz=270,slow=36
TGY   Tagaytay City      47.17 104   LR     LR     08 08 00.1
             comp=Z,141nm,19.8s,baz=30,slow=36
NBO00 NORSAR Array S     47.28 324   P      P      07 47 59.4  -1.1
NBO00                                IAmb   IAmb   07 48 15.4
             comp=Z,10nm,0.9s
NC204 NORSAR Array S     47.31 324   P      P      07 48 00.3  -0.4
NC204                                IAmb   IAmb   07 48 06.3
             comp=Z,3.1nm,0.7s
KMBO  Kilima Mbogo       49.39 231   P      P      07 48 17.1  -0.4
             comp=Z,0.7nm,0.3s,baz=40,slow=12,SNR=5.6
SPA0  Spitsbergen Ar     49.67 347   P      P      07 48 20.0 +1.4
MJAR  Matsushiro Arr     51.54  68   P      P      07 48 34.3 +0.9
             comp=Z,4.5nm,0.9s,baz=291,slow=11,SNR=4.9
SEY   Seymchan           54.63  33⇑eP      P      07 48 56.4 +0.7
DAG   Danmarks Havn      56.99 344   P      P      07 49 12.4   0.0
DAG                                  pmax   pmax
             comp=Z,5.0nm,0.9s
BILL  Bilibino           59.19  26c iP     P      07 49 29.2 +1.3
BILL                                i              07 49 37.5
BILL                                i              07 49 46.7
BILL                                i              07 50 13.9
BILL                                 pmax   pmax
             comp=Z,4.0nm,1.0s
TOA0  Torodi Ar. Sit     67.91 271   P      P      07 50 25.8  -0.6
TORD  Torodi Ar. Bea     67.91 271   P      P      07 50 25.6  -0.8
             comp=Z,9.4nm,0.8s,baz=47,slow=5.6,SNR=44
TORD  Torodi Ar. Bea     67.91 271   P      P      07 50 25.3  -1.0
RES   Resolute Bay       70.55 357   P      P      07 50 42.6 +0.9
RES   Resolute Bay       70.55 357   P      P      07 50 42.6 +0.9
TOLK  Toolik Lake Re     72.02  15   P      P      07 50 51.1 +0.4
COLD  Coldfoot           73.02  16   P      P      07 50 56.5  -0.1
IMAR  Indian Mountai     73.13  18   P      P      07 50 57.4 +0.1
BMAR  Burnt Mountain     74.08  14   P      P      07 51 04.1 +1.1
MLY   Manley             74.65  18   P      P      07 51 06.9 +0.5
INK   Inuvik             75.23  10   P      P      07 51 09.3  -0.2
INK   Inuvik             75.23  10   P      P      07 51 09.3  -0.2
BPAW  Bear Paw Mtn.      75.34  19   P      P      07 51 10.3   0.0
BPAW                                 IAmb   IAmb   07 51 11.6
             comp=Z,4.3nm,0.8s
C36M  Paulatuk           75.36   6   P      P      07 51 09.9  -0.3
C36M                                 IAmb   IAmb   07 51 10.8
             comp=Z,6.4nm,0.7s
COLA  College            75.50  17   P      P      07 51 11.2 +0.1
COLA                                 pmax   pmax
             comp=Z,10.0nm,0.9s
COLA  College            75.50  17   P      P      07 51 11.2 +0.1
KTH   Kantishna Hill     75.80  19   P      P      07 51 12.1  -0.9
KTH                                  IAmb   IAmb   07 51 14.4
             comp=Z,6.9nm,0.9s
IL31                     75.81  17   P      P      07 51 12.1  -0.8
IL31                                 IAmb   IAmb   07 51 13.8
             comp=Z,5.5nm,1.1s
ILAR  Eielson Array      75.81  17   P      P      07 51 12.7  -0.3
             comp=Z,2.3nm,0.8s,baz=311,slow=5.2,SNR=36
ILAR  Eielson Array      75.81  17   P      P      07 51 11.0  -2.0
PPLA  Purkeypile         75.98  20   P      P      07 51 14.3 +0.2
PPLA                                 IAmb   IAmb   07 51 15.3
             comp=Z,4.2nm,0.6s
RND   Reindeer           76.46  18   P      P      07 51 16.7  -0.1
RND                                  pmax   pmax
             comp=Z,10.0nm,1.4s
RND   Reindeer           76.46  18   P      P      07 51 16.7  -0.1
RND                                  IAmb   IAmb   07 51 17.4
             comp=Z,10.0nm,1.4s
DBIC  Dimbokro           76.84 269   P      P      07 51 19.2  -0.4
             comp=Z,4.1nm,0.8s,baz=32,slow=8.0,SNR=4.5
KIC   Kosan Boka         76.92 269  eP      P      07 51 19.9  -0.2
             comp=Z,19nm,1.1s
TIC   Toumodi            76.99 269  eP      P      07 51 20.0  -0.5
DHY   Denali Highway     77.11  18   P      P      07 51 20.8 +0.3
DHY                                  IAmb   IAmb   07 51 22.0
             comp=Z,3.9nm,0.7s
RIDG  Independent Ri     77.17  17   P      P      07 51 18.2  -2.5
RIDG                                 IAmb   IAmb   07 51 21.5
             comp=Z,11nm,1.2s
LIC   Lamto              77.23 269  eP      P      07 51 21.3  -0.5
             comp=Z,1.0nm,0.2s
GHO   Glory Hole Cre     77.79  19   P      P      07 51 24.8 +0.5
GHO                                  IAmb   IAmb   07 51 31.1
             comp=Z,4.8nm,0.9s
PMR   Palmer             77.88  19   P      P      07 51 24.3  -0.4
PMR                                  pmax   pmax
             comp=Z,3.0nm,0.8s
PMR   Palmer             77.88  19   P      P      07 51 24.3  -0.4
BOSA  Boshof             77.90 222   P      P      07 51 25.5 +0.2
             comp=Z,3.1nm,0.6s,baz=19,slow=3.5,SNR=5.9
BOSA  Boshof             77.90 222   P      P      07 51 26.1 +0.7
BOSA                                 IAmb   IAmb   07 51 44.9
             comp=Z,15nm,1.5s
SML   Sawmill            77.92  19   P      P      07 51 25.1 +0.1
SML                                  pmax   pmax
             comp=Z,8.0nm,0.8s
SML   Sawmill            77.92  19   P      P      07 51 24.8  -0.2
SML                                  IAmb   IAmb   07 51 26.2
             comp=Z,7.8nm,0.8s
DAWY  Dawson             78.07  14   P      P      07 51 26.4 +0.6
DAWY                                 IAmb   IAmb   07 51 27.2
             comp=Z,5.6nm,0.9s
RC01  Rabbit Creek A     78.12  20   P      P      07 51 26.8 +0.7
RC01                                 IAmb   IAmb   07 51 26.9
             comp=Z,4.2nm,0.7s
SCM   Sheep Creek Mo     78.16  19   P      P      07 51 27.1 +0.7
SCM                                  pmax   pmax
             comp=Z,9.0nm,0.8s
SCM   Sheep Creek Mo     78.16  19   P      P      07 51 27.1 +0.7
KNK   Knik Glacier       78.21  19   P      P      07 51 25.3  -1.3
KNK                                  IAmb   IAmb   07 51 28.4
             comp=Z,10nm,1.2s
BCAR  Beaver Creek A     78.45  16   P      P      07 51 28.6 +0.7
BRLK  Bradley Lake       78.87  21   P      P      07 51 30.0  -0.3
SEW   Seward             79.01  20   P      P      07 51 31.6 +0.6
SEW                                  IAmb   IAmb   07 51 33.8
             comp=Z,11nm,1.4s
WB0   Warramunga Arr     79.13 123   P      P      07 51 33.2 +1.0
WRA   Warramunga Arr     79.21 123   P      P      07 51 33.5 +0.9
             comp=Z,3.0nm,0.7s,baz=323,slow=5.3,SNR=61
WRA   Warramunga Arr     79.21 123   P      P      07 51 33.0 +0.4
WRA   Warramunga Arr     79.21 123   P      P      07 51 33.0 +0.4
WRAB  Tennant Creek      79.21 123⇑eP      P      07 51 33.7 +1.1
WRAB                                 pmax   pmax
             comp=Z,13nm,2.5s
FID   Port Fidalgo       79.30  19   P      P      07 51 31.9  -0.7
WR0   Warramunga Arr     79.36 123   P      P      07 51 33.9 +0.5
WR0                                  IAmb   IAmb   07 51 35.1
             comp=Z,4.0nm,0.8s
EYAK  Cordova Ski Ar     79.66  19   P      P      07 51 35.4 +0.9
EYAK                                 IAmb   IAmb   07 51 44.8
             comp=Z,12nm,1.2s
CTGM  Chitina Glacie     80.39  17   P      P      07 51 40.1 +1.4
CTGM                                 IAmb   IAmb   07 51 57.1
             comp=Z,12nm,1.3s
HYT   Haines Junctio     81.37  15   P      P      07 51 45.5 +1.6
HYT                                  IAmb   IAmb   07 51 46.4
             comp=Z,7.0nm,0.9s
ASAR  Alice Springs      81.46 126   P      P      07 51 45.8 +1.1
             comp=Z,2.2nm,0.7s,baz=310,slow=5.1,SNR=36
YKA   Yellowknife Ar     82.84   4   P      P      07 51 51.5 +0.2
             comp=Z,1.1nm,0.6s,baz=351,slow=4.9,SNR=20
YKA   Yellowknife Ar     82.84   4⇑eP      P      07 51 51.0  -0.3
YKA                                  pmax   pmax
             comp=Z,1.0nm,0.6s
PDAR  Pinedale Array    102.77   2   P      Pdif   07 53 25.4 +0.3
             comp=Z,0.1nm,0.4s,baz=352,slow=3.7,SNR=1.7
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*THE **27** 07:42:27.8, 38°.32N×20°.35E, $h5^{km}\pm1^{km}$, ML2.7/5, Error ellipse: s-maj=1.4km s-min=0.6km az=272.0*

*ATH **27** 07:42:27.1, 38°.31N×20°.38E, $h16^{km}\pm1^{km}$, ML2.6/12, Error ellipse: s-maj=2.3km s-min=0.9km az=267.0*

ISC 27 07:42:26.3±0.9, **38°.32N**±0°.03×**20°.26E**±0°.04, **h15**$^{km}\pm5^{km}$, **n54**, σ**0^{s}.81**/84, **Greece**

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Code  Station Name        Δ°  AZ°   Phase ID        Time       Res
                                    Op     ISC     h  m  s    ISC
AGT1  Agia Thekli        0.12 124   P      Pg     07 42 30.0 +0.3
AGT1                                S      Sg     07 42 31.5  -0.5
KEF4  Livadi, Kephal     0.14 115   P      Pg     07 42 29.9  -0.1
KEF4                                S      Sg     07 42 32.0  -0.6
CHV1  Chavriata, Kef     0.16 144   P      Pg     07 42 31.0 +0.6
CHV1                                S      Sg     07 42 33.0  -0.1
KEF1  Kardakata, Kep     0.17 103   P      Pg     07 42 30.0  -0.4
KEF1                                S      Sg     07 42 31.9  -1.3
LXR1  Lixouri, Cepha     0.18 130   P      Pg     07 42 30.9 +0.3
LXR1                                S      Sg     07 42 33.0  -0.5
LXRA  Lixouri, Kepha     0.18 130   P      Pg     07 42 30.9 +0.3
LXRA                                S      Sg     07 42 33.5   0.0
ARGA  Argostoli. Kep     0.22 129   P      Pg     07 42 31.2  -0.1
ARGA                                S      Sg     07 42 34.1  -0.5
ARG2  Argostoli          0.23 128   P      Pg     07 42 31.4 +0.1
ARG2                                S      Sg     07 42 34.3  -0.4
             9µm,0.1s
KEF2  Argostoli. Kep     0.23 130   P      Pg     07 42 31.5   0.0
KEF2                                S      Sg     07 42 34.3  -0.7
VSK1  VASILIKIADES       0.26  69   P      Pg     07 42 31.4  -0.4
VSK1                                S      Sg     07 42 34.5  -1.1
KONA  Konidatara, Ke     0.27  66   P      Pg     07 42 31.6  -0.4
KONA                                S      Sg     07 42 34.9  -1.1
KONA                                AML    AML    07 42 35.0
             comp=N,9280µm,0.1s
KONA                                AML    AML    07 42 35.1
             comp=E,7160µm,0.1s
FSK   Fiskardo           0.28  59   P      Pg     07 42 31.9  -0.3
FSK                                 S      Sg     07 42 35.1  -1.1
             comp=E,3µm,0.2s
FSK   Fiskardo           0.28  59   P      Pg     07 42 31.9  -0.3
FSK                                 S      Sg     07 42 35.4  -0.8
FSK                                 AML    AML    07 42 35.5
             comp=N,5993µm,0.3s
FSK                                 AML    AML    07 42 35.6
             comp=E,6814µm,0.3s
VLS   Valsamata          0.29 118   P      Pg     07 42 32.0  -0.5
VLS                                 S      Sg     07 42 35.6  -1.1
VLS   Valsamata          0.29 118   P      Pg     07 42 32.0  -0.5
VLS                                 S      Sg     07 42 35.4  -1.3
VLS                                 AML    AML    07 42 35.6
             comp=N,18920µm,0.2s
VLS                                 AML    AML    07 42 35.6
             comp=E,15846µm,0.1s
EVGI  Lefkada island     0.43  45   P      Pg     07 42 35.0   0.0
EVGI                                S      Sg     07 42 40.9   0.0
EVGI  Lefkada island     0.43  45   P      Pg     07 42 34.9   0.0
EVGI                                S      Sg     07 42 40.9   0.0
KFL   Anninata           0.46 116   P      Pg     07 42 35.0  -0.5
KFL                                 S      Sg     07 42 41.2  -0.6
             comp=E,2µm,0.4s
KFL   Anninata           0.46 116   P      Pg     07 42 34.9  -0.6
KFL                                 S      Sg     07 42 41.0  -0.8
KFL                                 AML    AML    07 42 41.2
             comp=N,3959µm,0.4s
KFL                                 AML    AML    07 42 41.4
             comp=E,5445µm,0.4s
MGNA  Meganis            0.54  51   P      Pg     07 42 36.3  -0.6
MGNA                                S      Sg     07 42 43.7  -0.4
MGNA                                AML    AML    07 42 44.3
             comp=E,1528µm,0.2s
MGNA                                AML    AML    07 42 44.4
             comp=N,1935µm,0.1s
LKD2  Lefkada island     0.56  33   P      Pg     07 42 37.3  -0.1
LKD2  Lefkada island     0.56  33   P      Pg     07 42 37.2  -0.2
LKD2                                AML    AML    07 42 51.1
             comp=E,500µm,0.2s
LKD2                                AML    AML    07 42 53.0
             comp=N,728µm,0.3s
TSLK  Tsoukalades, L     0.59  31   P      Pg     07 42 38.2 +0.2
TSLK                                S      Sb     07 42 47.1 +0.5
TSLK  Tsoukalades, L     0.59  31   P      Pg     07 42 38.0 +0.1
TSLK                                AML    AML    07 42 50.4
             comp=E,684µm,0.3s
TSLK                                AML    AML    07 42 52.5
             comp=N,746µm,0.3s
PDO   Prodromos          0.78  68   P      Pg     07 42 40.5  -0.9
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PDO	Prodromos	0.78	68	P	Pg	07 42 40.3	-1.1
PDO				AML	AML	07 42 58.0	
	comp=N,1014µm,0.3s						
PDO				AML	AML	07 42 58.3	
	comp=E,1025µm,0.3s						
VTN	Vitineika	0.83	118	P	Pg	07 42 41.2	-1.2
RLS	Riolos of Patr	0.98	105	P	Pg	07 42 44.1	-1.2
RLS	Riolos of Patr	0.98	105	P	Pg	07 42 44.0	-1.2
PVO	Paravola	1.04	73	P	Pg	07 42 45.8	-0.5
PVO				S	Sn	07 43 00.9	+0.4
	comp=E,430nm,0.5s						
PVO	Paravola	1.04	73	P	Pg	07 42 45.7	-0.6
PVO				AML	AML	07 43 06.3	
	comp=E,969µm,0.6s						
PVO				AML	AML	07 43 06.3	
	comp=N,938µm,0.6s						
DRO	Drossia	1.20	107	P	Pb	07 42 48.8	+0.1
EFP	Efpalio	1.30	85	P	Pb	07 42 50.6	+0.3
EFP				S	Sn	07 43 08.8	+1.9
EFP	Efpalio	1.30	85	P	Pn	07 42 48.8	-1.0
ANX	Ano Chora	1.33	78	P	Pn	07 42 50.9	+0.5
ANX				S	Sn	07 43 10.4	+2.5
ANX	Ano Chora	1.33	78	P	Pn	07 42 50.7	+0.3
EVR	Evrytania	1.35	63	P	Pg	07 42 52.5	+0.2
EVR	Evrytania	1.35	63	P	Pb	07 42 51.9	+0.6
EVR				AML	AML	07 43 14.7	
	comp=E,286µm,0.6s						
EVR				AML	AML	07 43 15.3	
	comp=N,273µm,0.5s						
LAKA	Lakka	1.35	93	P	Pn	07 42 50.5	-0.1
LAKA				S	Sn	07 43 09.9	+1.6
LAKA	Lakka	1.35	93	P	Pn	07 42 50.4	-0.3
SERG	Sergoula	1.42	86	P	Pn	07 42 51.7	+0.2
SERG	Sergoula	1.42	86	P	Pn	07 42 51.7	+0.2
TRIZ	Trizonia	1.43	87	P	Pn	07 42 51.3	-0.3
KALE	Kalithea	1.48	87	P	Pb	07 42 53.6	+0.1
KALE	Kalithea	1.48	87	P	Pb	07 42 53.5	+0.1
KALE				AML	AML	07 43 18.5	
	comp=N,219µm,0.3s						
KALE				AML	AML	07 43 19.6	
	comp=E,147µm,0.6s						
KLV	Kalavryta, Ach	1.51	100	P	Pn	07 42 53.0	+0.1
KLV	Kalavryta, Ach	1.51	100	P	Pn	07 42 53.0	+0.1
MAKR	Makrakomi, Fth	1.62	64	P	Pb	07 42 56.0	+0.1
MAKR				S	Sg	07 43 17.7	-0.8
	comp=E,140nm,0.4s						
MAKR	Makrakomi, Fth	1.62	64	P	Pb	07 42 56.3	+0.4
MAKR				AML	AML	07 43 26.0	
	comp=E,457µm,0.4s						
MAKR				AML	AML	07 43 27.2	
	comp=N,322µm,0.4s						
DSF	Desfina	1.78	86	P	Pn	07 42 57.7	+1.1
STON	Ston	4.95	338	*e*Pn	Pn	07 43 40.7	+0.7
STON				Sn	Sn	07 44 36.1	-0.8
ZIRJ	Zirje	6.37	328	*e*Pn	Pn	07 44 00.5	+0.9
ZIRJ				Sn	Sn	07 45 11.1	-1.0
MORI	Morici	6.52	330	*e*Pn	Pn	07 44 03.9	+2.3
MORI				Sn	Sn	07 45 15.6	-0.1
DUGI	Dugi Otok	6.89	327	*e*Pn	Pn	07 44 04.8	-2.0
DUGI				Sn	Sn	07 45 23.5	-1.4

TAP 27 07:47:13.0, 23°.79N×121°.56E, h25^{km}, ML2.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESL	Shilin	0.12	283	P	Pb	07 47 18.0	+0.2
	baz=282						
ESL				S	Sb	07 47 21.8	+0.8
	baz=282						
ENLB	Shoufeng	0.12	20	*e*P	Pb	07 47 17.5	-0.3
	baz=19						
ENLB				S	Sb	07 47 22.1	+1.1
	baz=19						
EGFH	Guangfu	0.17	225	P	Pb	07 47 18.3	0.0
	baz=224						
EGFH				S	Sb	07 47 22.6	+0.8
	baz=224						
TWD	Chiawan	0.29	7	P	Pb	07 47 20.7	+0.8
	baz=8.0						
TWD				*e*S	Sn	07 47 26.4	-0.9
	baz=8.0						
HGSD	Ruisui	0.32	203	P	Pn	07 47 21.3	-0.7
	baz=202						
HGSD				*e*S	Sn	07 47 28.1	+0.2
	baz=202						
EHY	Hungye	0.35	218	*e*P	Pb	07 47 19.6	-1.2
	baz=216						
EHY				*e*S	Sb	07 47 26.1	-0.1
	baz=216						
VWDT	VWDT	0.38	265	*e*P	Pb	07 47 21.9	+0.6
	baz=264						
VWDT				*e*S	Sn	07 47 28.2	-1.3
	baz=264						
NACB	Ninganchiao	0.39	5	P	Pb	07 47 21.6	+0.3
	baz=5.0						
NACB				*e*S	Sn	07 47 28.8	-0.8
	baz=5.0						
NACB	Ninganchiao	0.39	5	P	Pb	07 47 21.7	+0.4
OWD	Renai	0.39	295	P	Pb	07 47 21.4	0.0
	baz=295						
OWD				*e*S	Sb	07 47 27.7	+0.5
	baz=295						
ETLH	Xiulin Townshi	0.42	351	P	Pb	07 47 22.1	+0.1
	baz=350						
ETLH				*e*S	Sn	07 47 29.5	-1.1
	baz=350						
CHGB	Renai	0.44	308	P	Pb	07 47 23.0	+0.6
	baz=307						
CHGB				S	Sn	07 47 30.1	-1.2
	baz=307						
WHF	Hehuan Shan	0.45	323	P	Pb	07 47 22.7	+0.1
	baz=323						
WHF				*e*S	Sb	07 47 29.8	+0.7
	baz=323						
YULB	Yu-li	0.46	211	P	Pb	07 47 22.5	-0.1
	baz=211						
TWF1	Yuli	0.49	209	*e*P	Pb	07 47 22.4	-0.7
	baz=207						
TWF1				*e*S	Sn	07 47 32.3	0.0
	baz=207						
SSLB	Suanglung	0.55	270	P	Pb	07 47 23.9	-0.2
	baz=269						
SSLB				S	Sb	07 47 31.9	+0.2
	baz=269						
TWT	Tachien	0.58	323	*e*S	Sn	07 47 34.1	-0.5
	baz=321						
SMLT	Sun Moon Lake	0.61	279	*e*P	Pb	07 47 25.6	+0.5
	baz=278						
SMLT				*e*S	Sn	07 47 35.1	-0.1
	baz=278						
DPDB	Guoxing	0.63	293	P	Pn	07 47 26.0	-0.3
	baz=292						
DPDB				S	Sn	07 47 35.0	-0.6
	baz=292						
YUS	Yu-Shan	0.63	242	P	Pb	07 47 25.8	+0.1
	baz=241						
YUS				S	Sb	07 47 34.2	0.0
	baz=241						
FULB	Fuli	0.63	202	*e*P	Pb	07 47 25.2	-0.3
	baz=202						
TYC	Yuchr	0.65	280	*e*P	Pb	07 47 25.8	+0.1
	baz=280						
NNSB	Datong	0.66	346	P	Pn	07 47 26.5	-0.4
	baz=345						
NNSB				S	Sb	07 47 35.2	+0.4
	baz=345						
NNSH	Datong	0.66	346	P	Pb	07 47 26.2	+0.2
	baz=345						
NNSH				S	Sb	07 47 35.1	+0.4
	baz=345						
ENA	Nanau	0.66	15	P	Pb	07 47 26.1	+0.2
	baz=15						
ENA				*e*S	Sn	07 47 35.5	-0.8
	baz=15						
NNS	Nan Shan	0.67	346	*e*P	Pb	07 47 26.5	+0.4
	baz=346						
NNS				*e*S	Sb	07 47 35.7	+0.6
	baz=346						
CHKT	Chengkung	0.71	194	*e*P	Pb	07 47 26.4	-0.3
	baz=193						
CHKT				*e*S	Sn	07 47 37.5	0.0
	baz=193						
WHP	Taichung City	0.74	311	*e*P	Pn	07 47 28.3	+0.3
	baz=311						
WHP				*e*S	Sn	07 47 39.2	+0.7
	baz=311						
ALS	Alishan	0.74	248	*e*S	Sb	07 47 37.9	+0.5
	baz=247						
NDT	Datong Townshi	0.81	357	*e*P	Pn	07 47 28.8	-0.1
	baz=357						
NDT				*e*S	Sn	07 47 39.6	-0.5
	baz=357						
TPUB	Ta-pu	0.98	240	P	Pb	07 47 31.9	+0.6
	baz=240						
TPUB				S	Sn	07 47 45.0	+0.8
	baz=240						
CHN4	Tsaushan	0.99	244	P	Pb	07 47 32.4	+1.0
	baz=243						
CHN4				*e*S	Sn	07 47 47.4	+3.0
	baz=243						
WTP	Ta-pu	1.02	238	P	Pb	07 47 32.8	+0.8
	baz=237						
TWK	Hsinying	1.11	242	*e*S	Sb	07 47 49.7	+2.1
	baz=241						
CHN1	Nanshi	1.12	238	*e*P	Pb	07 47 34.7	+1.1
	baz=237						
CHN1				*e*S	Sb	07 47 50.5	+2.7
	baz=237						
SNST	Tainan City	1.12	240	*e*S	Sb	07 47 49.8	+1.8
	baz=239						

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*PDG **27** 08:05:23.9±0.5, 43°.76N×17°.40E, h10^{km}±1^{km}, MD5.1/1, ML3.0/13, Error ellipse: s-maj=0.8km s-min=1.3km az=0.0*
*BEO **27** 08:05:24.4±0.5, 43°.73N×17°.31E, h12^{km}±3^{km}, ML2.9/15*
*RHSSO **27** 08:05:24.6±0.3, 43°.74N×17°.35E, h6^{km}±2^{km}, ML3.0/14*
*PRU **27** 08:05:25.4±0.0, 43°.85N×17°.37E, h0^{km}*
ISC 27 08:05:24.2±1.1**, 43°.74N**±0°.02×**17°.40E**±0°.02**, h5**^{km}±9^{km}**, n67, σ1^{s}.40**/103**, 1C-2D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RICI	Ricice	0.31	218	*i* Pg	Pg	08 05 30.3	+0.1
RICI				Sg	Sb	08 05 35.8	-1.8
MAKA	Makarska	0.53	211	*i* Pg	Pg	08 05 34.0	-0.3
MAKA				Sg	Sb	08 05 42.8	-1.1
MGRS	Mrkonjic Grad	0.71	342	*e*Pg	Pg	08 05 37.9	0.0
MGRS				*e*Sg	Sg	08 05 47.2	0.0
HVAR	Hvar	0.89	231	*e*Pg	Pg	08 05 39.9	-1.3
HVAR				Sg	Sb	08 05 54.6	+0.3
STON	Ston	0.89	165	*e*Pg	Pg	08 05 40.3	-1.0
STON				*e*Sg	Sg	08 05 54.0	+1.1
STON	Ston	0.89	165	*e*Pg	Pg	08 05 40.3	-1.0
STON				Sg	Sg	08 05 54.1	+1.1
STON	Ston	0.89	165	⇓*i*Pg	Pg	08 05 40.2	-1.0
STON				*e*Sg	Sg	08 05 53.5	+0.6
BLY	Banja Luka	1.02	352	*e*Pg	Pg	08 05 43.6	-0.2
BLY				*e*Sg	Sg	08 05 57.6	+0.6
BLY	Banja Luka	1.02	352	⇓*i*Pg	Pg	08 05 43.5	-0.2
BLY				*e*Sg	Sg	08 05 57.6	+0.6
DOB	Doboj	1.12	27	*e*Pg	Pg	08 05 44.6	-1.0
DOB				*e*Sg	Sb	08 06 01.9	+1.0
DOB	Doboj	1.12	27	*e*Pg	Pg	08 05 44.7	-0.9
DOB				*e*Sg	Sg	08 06 00.3	+0.2
HAPS	Han Pijesak,Bl	1.18	72	*e*Pg	Pg	08 05 47.3	+0.5
HAPS				*e*Sg	Sg	08 06 02.9	+0.9
HAPS	Han Pijesak,Bl	1.18	72	⇑*i*Pg	Pg	08 05 47.1	+0.3
HAPS				*e*Sg	Sg	08 06 02.9	+0.9
BRY	Bratogost	1.18	135	*e*Pg	Pg	08 05 46.1	-0.7
BRY				*e*Sg	Sg	08 06 03.1	+1.0
DBRK	Dubrovnik	1.20	153	*e*Pn	Pg	08 05 45.9	-1.4
DBRK				Sn	Sn	08 06 05.5	+1.1
UPM	Unac-Piva	1.22	115	*e*Pg	Pg	08 05 47.0	-0.6
MORI	Morici	1.23	277	*e*Pg	Pg	08 05 46.6	-1.1
MORI				Sg	Sn	08 06 05.7	+0.6
TREB	Trebinje	1.24	145	*e*Pg	Pb	08 05 46.4	-1.6
TREB				*e*Sg	Sb	08 06 05.3	+1.0
TREB	Trebinje	1.24	145	*e*Pg	Pb	08 05 46.8	-1.2
TREB				*e*Sg	Sg	08 06 04.9	+1.0
ZIRJ	Zirje	1.27	267	*e*Pn	Pb	08 05 47.0	-1.6
UDBI	Udbina	1.42	304	*i* Pn	Pn	08 05 50.1	-0.6
RUDO	Rudo	1.44	94	*e*Sg	Sb	08 06 11.2	+1.1
BBLS	Lazići	1.46	84	*e*Pg	Pn	08 05 51.5	+0.2
BBLS	Lazići	1.46	84	*e*Pg	Pn	08 05 51.2	-0.1
BBLS				*e*Sg	Sb	08 06 12.1	+1.2
HCY	Herceg Novi	1.52	148	*e*Pn	Pn	08 05 51.8	-0.3
DUGI	Dugi Otok	1.71	279	*e*Pn	Pb	08 05 55.2	-0.9
TEKS	Tekeris	1.74	61	*e*Pn	Pn	08 05 55.2	+0.1
TEKS	Tekeris	1.74	61	*e*Pn	Pn	08 05 54.8	-0.3
TEKS				*e*Sn	Sn	08 06 18.4	+0.7
PDG	Podgorica	1.89	133	*e*Pn	Pn	08 05 57.6	+0.5
PDG	Podgorica	1.89	133	*e*Pn	Pn	08 05 57.9	+0.8
PDG				*e*Sn	Sn	08 06 22.6	+1.3
DIVS	Divibare	1.91	78	*e*Pn	Pn	08 05 58.0	+0.5
DIVS	Divibare	1.91	78	*e*Pn	Pn	08 05 58.0	+0.5
DIVS				*e*Sn	Sn	08 06 22.8	+0.7
MOSL	Moslavina	1.93	347	*e*Pn	Pn	08 05 57.3	-0.4
SJES	Sjenica	1.94	103	*e*Pn	Pn	08 05 58.9	+1.0
NVLJ	Novalja	2.00	295	*e*Pn	Pb	08 05 60.0	-1.0
IVAS	Ivanjica	2.01	94	*e*Pn	Pn	08 05 59.1	+0.2
DRME	Dracevica, Mon	2.03	139	*e*Pn	Pn	08 05 59.8	+0.7
DRME				*e*Sn	Sn	08 06 25.6	+0.7
TRUS	Trudelj	2.23	76	*e*Pn	Pn	08 06 01.6	-0.2
FRGS	Fruska Gora	2.24	50	*e*Sn	Sn	08 06 30.4	+0.4
OZLJ	Ozalj	2.33	324	*e*Pn	Pn	08 06 03.6	+0.4
PTJ	Puntijarka	2.40	335	*e*Pn	Pn	08 06 03.9	-0.3
GRUS	Gruza	2.41	85	*e*Pn	Pn	08 06 04.4	+0.1
KALN	Kalnik	2.48	345	*e*Pn	Pn	08 06 04.9	-0.5
CRES	Cresnjev	2.50	327	*e*Pn	Pn	08 06 05.5	-0.1
CRES				*e*Sn	Sn	08 06 36.2	-0.4
RIY	Rijeka	2.62	308	*e*Pn	Pn	08 06 07.3	+0.1
RIY				*e*Sn	Sn	08 06 38.7	-0.7
MORH	Mrgy, Hungar	2.63	19	*e*Pn	Pn	08 06 07.3	0.0
MORH				*e*Sn	Sn	08 06 40.5	+0.8
SELS	Selova	2.76	100	*e*Pn	Pn	08 06 09.4	+0.2
BEHE	Becsehely	2.77	351	*e*Pn	Pn	08 06 09.8	+0.6
BEHE				*e*Sn	Sn	08 06 42.9	-0.2
CEY	Cerknica	2.91	314	*e*Pn	Pn	08 06 11.5	+0.3
BOVS	Bovan	3.13	90	*e*Pn	Pn	08 06 14.0	-0.2
BARS	Barje	3.36	104	*e*Pn	Pn	08 06 17.1	-0.2
SOKA	Soboth	3.38	331	*i* Pn	Pn	08 06 17.7	-0.1
	1.0nm,0.2s,SNR=5.2						
SOKA				*i* Sn	Sn	08 06 56.1	-2.2
	2.5nm,0.2s						
OBKA	Obir	3.43	325	*i* Pn	Pn	08 06 19.2	+0.8
	1.2nm,0.2s						
OBKA				*i* Sg	Sg	08 07 14.2	0.0
	9.9nm,0.4s						
ZAGS	Zajecar	3.50	87	*e*Pn	Pn	08 06 18.8	-0.6
ARSA	Arzberg	3.75	340	*i* Pn	Pn	08 06 23.0	+0.2
	19nm,0.3s,SNR=15						
ARSA				*i* Sn	Sn	08 07 05.6	-1.8
	1.6nm,0.3s						
ZAPS	Zavoj	3.84	95	*e*Pn	Pn	08 06 24.1	+0.1
MYKA	Terra Mystica	3.92	319	*i* Pn	Pn	08 06 26.7	+1.5
	0.6nm,0.2s						
MYKA				*i* Sn	Sb	08 07 25.6	+3.8
	3.2nm,0.4s						
CONA	Conrad Observa	4.33	346	*i* Pn	Pn	08 06 30.9	+0.2
	0.3nm,0.1s						
CONA				*i* Sn	Sn	08 07 19.5	-2.1
	5.1nm,0.4s						
MODS	Modra-Piesok	4.64	359	*e*SN	Sn	08 07 24.8	-4.4
MOA	Molln	4.66	333	*i* Pn	Pn	08 06 36.2	+1.0
	1.7nm,0.2s,SNR=6.6						
MOA				*i* Sn	Sn	08 07 29.2	-0.5
	1.1nm,0.0s						
SMOL	Smolenice	4.78	0	*e*SN	Sn	08 07 25.7	-6.9
VYHS	Vyhne	4.86	11	*e*SN	Sn	08 07 32.6	-2.1
WTTA	Wattenberg	5.37	313	*i* Pn	Pn	08 06 46.7	+1.6
	1.1nm,0.2s						
WTTA				*i* Sn	Sn	08 07 50.1	+2.7
	2.1nm,0.3s						
WATA	Walderalm	5.44	313	*i* Sg	Sg	08 08 22.8	+3.8
	2.9nm,0.4s						
MOTA	Moosalm	5.70	311	*i* Pn	Pn	08 06 51.1	+1.4
	0.9nm,0.2s						
MOTA				*i* Sn	Sn	08 07 59.0	+3.3
	1.1nm,0.2s						
FETA	Feichten	5.73	307	*i* Pn	Pn	08 06 52.0	+2.0
	0.6nm,0.2s						
FETA				*i* Sn	Sn	08 07 57.9	+1.6
	0.1nm,0.2s						
KHC	Kasperske Hory	6.00	335	*e*SN	Sn	08 08 02.5	-0.4

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*IDC **27** 08:09:09.0±0.8, 55°.95S×124°.96W, h0^{km}, mb3.8/7, mb1 4.0/7, mb1mx3.8/27, mbtmp3.7/7, MS4.1/17, Ms1 4.1/17, ms1mx4.0/24, Error ellipse: s-maj=39.0km s-min=26.8km az=155.0*
*GCMT **27** 08:09:15.0±0.2, 55°.66S±0°.01×124°.73W±0°.02, h25^{km}±1^{km}, MW5.1/103, Moment Tensor Solution. s46,c67; s103,c147; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.33±.17; $M_{\theta\theta}$3.40±.17; $M_{\phi\phi}$-3.08±.14; $M_{r\theta}$-0.42±.30; $M_{\theta\phi}$4.15±.11; $M_{\phi r}$-0.23±.27; Best double couple: $M_0$5.28500×10^{16} NP1:ϕ_s289.00000°, δ87.00000°, λ3.00000°. NP2:ϕ_s199.00000°, δ87.00000°, λ177.00000°. Principal axes: T 5.4640, Plg5.0000°, Azm154.0000°; N -0.3660, Plg85.0000°, Azm337.0000°; P -5.1050, Plg0.0000°, Azm244.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*
ISC 27 08:09:10.7±0.8**, 56°.1S**±0°.2×**124°.7W**±0°.2**, h10**^{km}**, n38, σ1^{s}.13**/11**, mb3.8**/7**, MS4.1**/20**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMSA	Palmer Station	30.00	132	LR	LR	08 23 22.1	
	comp=Z,391nm,21.9s,baz=260,slow=28						
VNDA	Vanda	32.52	203	LR	LR	08 24 56.7	
	comp=Z,243nm,21.3s,baz=86,slow=29						
TBI	Tubuai	37.43	321	*e*S	S	08 22 13.8	+1.7
	95nm,31.8s						
TBI				*e*LQ	LQ	08 24 48.6	
	314nm,24.9s						
TBI				*e*LR	LR	08 26 06.6	
	comp=Z,802nm,29.8s,baz=158						
TBI	Tubuai	37.43	321	*e*T	T	08 55 20.0	
	51nm,0.3s						
PLCA	Paso Flores	38.03	90	LR	LR	08 27 58.0	
	comp=Z,272nm,21.2s,baz=58,slow=30						
PPT2	Papeete2	42.81	324	*e*S	S	08 23 33.9	+1.2
	169nm,26.2s						
PPT2				*e*LQ	LQ	08 26 42.6	
	999nm,27.8s						
PPT2				*e*LR	LR	08 28 49.9	
	comp=Z,891nm,26.0s,baz=161						
PPT	Papeete	42.83	324	LR	LR	08 29 43.1	
	comp=Z,253nm,21.9s,baz=152,slow=29						
RAR	Rarotonga	43.46	309	LR	LR	08 33 21.0	
	comp=Z,108nm,18.2s,baz=142,slow=34						
VAH	Vaihoa	44.40	328	*e*T	T	09 03 57.9	
	90nm,0.3s						
PMOR	Pomariorio Ree	44.70	327	*e*T	T	09 04 24.8	
	6.5nm,0.3s						
SNAA	Sanae	46.20	158	P	P	08 17 36.3	+1.2
	1.3nm,0.8s,baz=225,slow=14,SNR=3.8						
TAOE	Nuku Hiva Isla	48.67	339	*e*LR	LR	08 31 38.6	
	comp=Z,427nm,24.5s						
CPUP	Villa Florida	56.03	87	LR	LR	08 38 56.3	
	comp=Z,204nm,20.3s,baz=228,slow=32						
MAW	Mawson	56.48	183	LR	LR	08 41 02.7	
	comp=Z,250nm,21.8s,baz=186,slow=34						
LPAZ	La Paz	58.18	71	P	P	08 19 05.5	0.0
	1.0nm,0.9s,baz=206,slow=4.6,SNR=2.1						
LPAZ				LR	LR	08 38 17.0	
	comp=Z,98nm,20.0s,baz=200,slow=30						
SIV	San Ignacio	62.22	77	P	P	08 19 33.5	+1.0
	0.9nm,0.8s,baz=234,slow=8.7,SNR=3.2						
STKA	Stephens Creek	66.13	248	LR	LR	08 42 21.4	
	comp=Z,116nm,21.7s,baz=43,slow=30						
BDFB	Brasilia	69.75	88	LR	LR	08 48 02.3	
	comp=Z,224nm,20.2s,baz=250,slow=33						
ROSC	El Rosal	73.35	53	LR	LR	08 46 23.8	
	comp=Z,96nm,20.4s,baz=248,slow=30						
H01W1	Cape Leeuwin H	76.49	226	T	T	09 46 25.7	
	baz=148,slow=76,SNR=119						
H01W2	Cape Leeuwin H	76.50	226	T	T	09 46 29.1	
	baz=148,slow=76,SNR=98						
H01W3	Cape Leeuwin H	76.51	226	T	T	09 46 27.0	
	baz=148,slow=76,SNR=99						
ASAR	Alice Springs	76.75	247	P	P	08 21 01.9	-0.3
	0.4nm,0.8s,baz=151,slow=6.3,SNR=2.6						
ASAR				LR	LR	08 49 59.0	
	comp=Z,177nm,19.8s,baz=126,slow=32						
NWAO	Narrogin (SRO)	76.91	230	LR	LR	08 49 21.0	
	comp=Z,56nm,18.0s,baz=110,slow=31						
WRA	Warramunga Arr	79.59	250	P	P	08 21 17.6	-0.4
	0.7nm,0.8s,baz=146,slow=5.0,SNR=9.0						
FITZ	Fitzroy Crossi	85.61	244	LR	LR	08 55 04.3	
	comp=Z,64nm,19.9s,baz=118,slow=32						
TXAR	Lajitas Array	86.97	18	P	P	08 21 55.0	-0.7
	0.9nm,1.0s,baz=203,slow=8.8,SNR=4.1						
BOSA	Boshof	91.82	154	LR	LR	08 56 30.5	
	comp=Z,93nm,20.9s,baz=175,slow=31						
H11S2	WAKE ISLAND Hy	93.84	298	T	T	10 06 17.1	
	baz=148,slow=76,SNR=71						
H11S3	WAKE ISLAND Hy	93.85	298	T	T	10 06 19.6	
	baz=148,slow=76,SNR=20						
H11S1	WAKE ISLAND Hy	93.86	298	T	T	10 06 19.7	
	baz=148,slow=76,SNR=22						
NVAR	Mina Array Bea	94.33	5	P	P	08 22 29.3	-0.7
	0.1nm,0.3s,baz=193,slow=6.2,SNR=2.0						
NVAR				LR	LR	08 54 38.0	
	comp=Z,146nm,20.6s,baz=246,slow=29						
H11N3	WAKE ISLAND Hy	94.78	298	T	T	10 07 22.6	
	baz=147,slow=76,SNR=19						
H11N1	WAKE ISLAND Hy	94.79	298	T	T	10 07 26.1	
	baz=147,slow=76,SNR=19						
H11N2	WAKE ISLAND Hy	94.80	298	T	T	10 07 24.5	
	baz=147,slow=76,SNR=23						
PDAR	Pinedale Array	99.33	11	LR	LR	08 58 26.1	
	comp=Z,106nm,20.1s,baz=64,slow=30						
ILAR	Eielson Array	121.74	349	PKP	PKiKP	08 28 02.5	-0.9
	0.2nm,0.9s,baz=203,slow=3.6,SNR=1.2						
SONM	Songino Array	148.12	277	PKPbc	PKPbc	08 28 54.6	-1.1
	0.2nm,0.3s,baz=101,slow=2.9,SNR=2.1						

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*MEX **27** 08:13:07.3±0.6, 14°.47N×92°.06W, h72^{km}±6^{km}, MD3.9*
*GCG **27** 08:13:08.7±0.3, 14°.25N×91°.96W, h15^{km}±3^{km}, MD3.6*
ISC 27 08:13:07.6±1.8**, 14°.5N**±0°.1×**92°.10W**±0°.08**, h68**^{km}±12^{km}**, n9, σ0^{s}.56**/17**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.39	336	*e*P	Pn	08 13 19.1	-0.1
THIG				*e*S	Sn	08 13 28.4	+0.6
ERG	Entre ros, C	0.53	101	*e*P	Pn	08 13 20.6	+0.1
STG3	Santiaguito 3,	0.54	72	*e*P	Pn	08 13 20.7	-0.1
STG3				*e*S	Sn	08 13 29.8	-0.7
FUG	Fuego 3	1.22	94	*e*P	Pn	08 13 28.8	-0.2
FUG				*e*S	Sn	08 13 44.6	-0.4
PCIG		1.58	317	*e*P	Pn	08 13 33.0	-0.5
PCIG				*e*S	Sn	08 13 52.9	-0.3
IXG	Ixpaco	1.65	103	*e*P	Pn	08 13 34.9	+0.2
IXG				*e*S	Sn	08 13 55.6	+0.4
CCIG	Comitan	1.73	359	*e*P	Pn	08 13 35.5	-0.2
CCIG				*e*S	Sn	08 13 57.5	+0.6
TGIG		2.43	336	*i* P	Pn	08 13 44.2	-0.8
TGIG				*i* S	Sn	08 14 14.8	+1.0
CMIG	Matias Romero	3.69	314	*e*P	Pn	08 14 02.0	-0.1
CMIG				*i* S	Sn	08 14 45.0	+0.6

JMA 27 08:19:34.2±0.1**, 39°.18N×142°.40E, h29**^{km}±1^{km}**, M3.7, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.58	260	P	Pb	08 19 45.6	-0.2
OFUJ				*e*S	Sb	08 19 53.4	-0.4
MIYJ	Miyakonagasawa	0.60	312	P	Pb	08 19 45.9	-0.3
MIYJ				S	Sb	08 19 53.7	-0.7
JKMT	Kesennumamotoy	0.81	243	P	Pn	08 19 49.0	-0.6
JKMT				S	Sb	08 19 59.7	-0.6
JTH	Tanohata	0.86	331	P	Pn	08 19 49.9	-0.5
JTH				*e*S	Sb	08 20 01.8	-0.1
JOM	Ohasama	0.91	289	P	Pn	08 19 50.9	-0.1
JOM				S	Sb	08 20 02.8	-0.3
JMK	Ichinoseki	0.95	256	P	Pn	08 19 51.3	-0.2
JMK				S	Sn	08 20 03.8	-0.3
JIO	Ouri	1.09	229	P	Pn	08 19 52.8	-0.8
JIO				S	Sn	08 20 06.4	-1.3
JKZ	Kuzumaki	1.15	315	P	Pn	08 19 54.9	+0.5
JKZ				S	Sn	08 20 09.4	+0.1
JANG	Nango	1.37	331	P	Pn	08 19 58.0	+0.6
JRG	Rokugo	1.39	280	P	Pb	08 19 58.7	-0.8
MAT	Matsushiro	4.24	233	P	Pn	08 20 41.2	+4.4
MAT				*e*S	Sn	08 21 30.8	+5.5

IDC 27 08:25:23.1±2.0,**4°.32S**×**126°.26E**,**h0**^{km},**mb3.1**/2, **mb1 3.5**/3,**mb1mx3.3**/38,**mbtmp3.3**/3,**ML3.7**/1,**Error ellipse: s-maj=153.5km s-min=29.4km az=64.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.41	154	P	P	08 29 29.4	+0.4
	0.3nm,0.3s,baz=332,slow=11,SNR=20						
ASAR	Alice Springs	20.60	160	P	P	08 30 02.5	-1.5
	0.2nm,0.4s,baz=344,slow=11,SNR=10						
MKAR	Makanchi Array	63.98	328	P	P	08 35 58.8	+0.4
	0.3nm,0.5s,baz=126,slow=7.3,SNR=2.3						

KEA 27 08:26:17.4±0.0,**40°.73N**×**122°.54E**,**h0**^{km},**ML2.4**/2, **Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUJ	Sinuiju	1.62	112	Pg	Pg	08 26 48.4	0.0
SUJ				Sg	Sg	08 27 09.5	+0.1
PYS	Pyongsong	2.94	119	Sg	Sg	08 27 50.2	-1.8
PYAG	Pyongyang	2.99	123	Sg	Sg	08 27 52.3	-1.2
KGE	Kanggye	3.10	85	Sg	Sg	08 28 01.2	+4.3
HHU	Hamhung	3.90	100	Sg	Sg	08 28 23.9	+1.3

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*DJA **27** 08:30:30.8±0.1, 3°S±2°×12°9E±°, h10^{km}, M4.8/25, mb4.8/25, mB5.4/10, MLv4.9/19, Mw(mB)4.8/10, Mwp6.3/1*

*IDC **27** 08:30:33.8±2.4, 3°.55S×128°.86E, h36^{km}±19^{km}, mb4.0/15, mb1 4.2/19, mb1mx4.0/38, mbtmp4.2/19, ML3.8/4, MS3.6/6, Ms1 3.6/6, ms1mx3.1/45, Error ellipse: s-maj=21.0km s-min=10.0km az=77.0*

*NEIC **27** 08:30:34.3±1.6, 3°.47S±0°.06×128°.85E±0°.07, h41^{km}±8^{km}, mb4.3/24, Error ellipse: s-maj=9.7km s-min=8.2km az=81.0*

ISC 27 08:30:30.3±0.4,**3°.47S**±0°.04×**128°.86E**±0°.04,**h10**^{km},**n92**, σ**1^{s}80**/98,**mb4.4**/20,**MS3.7**/5,**Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.14	30	P	Pg	08 30 33.3	-0.2
MSAI				S	Sg	08 30 35.5	-0.3
AAI	Ambon	0.69	252	P	Pg	08 30 44.5	+0.8
BNDI	Bandanaira	1.48	135	P	Pn	08 30 57.4	+0.4
NLAI	Namlea	1.77	277	P	Pn	08 31 01.3	+0.3
LBMI	Labuha	3.12	334	P	Pn	08 31 19.6	0.0
LBMI				S	Sn	08 31 58.6	+1.6
SANI	Sanana	3.19	296	P	Pn	08 31 20.5	-0.1
SANI				S	Sn	08 31 55.8	-2.9
FAKI	Fak Fak	3.43	81	P	Pn	08 31 24.9	+1.0
FAKI	Fak Fak	3.43	81		Pn	08 31 25.5	+1.6
FAKI				Sn	Sn	08 32 06.8	+2.2
SIJI	Sorong	3.53	43	Pn	Pn	08 31 27.2	+1.9
	198nm,0.3s,baz=262,slow=7.4,SNR=404						
SIJI				Sn	Sn	08 32 09.1	+2.0
	57nm,0.3s,baz=70,slow=18,SNR=12						
SWI	Sorong	3.53	43	P	Pn	08 31 27.2	+1.9
SWI				S	Sn	08 32 07.3	+0.2
TNTI	Ternate	4.47	341	P	Pn	08 31 37.6	-0.5
TNTI	Ternate	4.47	341		Pn	08 31 38.4	+0.2
SAUI	Saumlaki	5.10	152	P	Pn	08 31 50.9	+4.1
	1.7nm8μm497nm,0.7s						
SAUI	Saumlaki	5.10	152		Pn	08 31 50.7	+3.9
RKPI	Ransiki, Papua	5.66	70	P	Pn	08 31 55.0	+0.4
	2.8nm18μm327nm,0.6s						
LUWI	Luwuk	6.54	292	P	Pn	08 32 07.3	+0.7
	0.7nm3μm240nm,0.8s						
LUWI	Luwuk	6.54	292		Pn	08 32 08.2	+1.6
BAKI	Biak	7.59	73	P	Pn	08 32 22.9	+1.8
	0.5nm64μm134nm,0.9s						
APSI	Ampana	7.64	289	P	Pn	08 32 23.8	+2.1
	0.7nm2μm180nm,0.5s						
SOEI	Soe	7.73	216	P	Pn	08 32 26.6	+3.5
	0.3nm76nm,0.9s						
SOEI	Soe	7.73	216		Pn	08 32 27.4	+4.4
MRSI	Marisa	7.95	299	P	Pn	08 32 26.3	+0.4
	0.4nm1μm84nm,0.5s						
BNSI	Bone	8.78	264	P	Pn	08 32 38.6	+1.2
	30nm,0.8s						
BKSI	Bulukumba	8.90	258	P	Pn	08 32 41.5	+2.5
	54nm,0.9s						
SPSI	Sidrap Palu	9.08	267	P	Pn	08 32 44.1	+2.6
	52nm,0.8s						
KAPI	Kappang	9.21	260	Pn	Pn	08 32 45.4	+2.1
	2.3nm,0.3s,baz=113,slow=4.1,SNR=15						
KAPI				LR	LR	08 36 37.0	
	comp=Z,289nm,19.9s,baz=80,slow=40						
KAPI	Kappang	9.21	260		Pn	08 32 47.0	+3.8
MTN	Manton Dam	9.58	167		Pn	08 32 51.6	+3.2
MPSI	Mapaga	9.72	293	P	Pn	08 32 52.5	+2.2
	29nm,0.8s						
DAV	Davao City (W)	10.97	343	LR	LR	08 38 23.9	
	comp=Z,383nm,20.4s,baz=323,slow=42						
KNRA	Kununurra	12.13	180		Pn	08 33 24.5	+1.2
FITZ	Fitzroy Crossi	14.88	192	Pn	Pn	08 34 00.6	-0.2
	0.4nm,0.3s,baz=31,slow=11,SNR=14						
FITZ	Fitzroy Crossi	14.88	192		Pn	08 34 00.9	+0.1
WB0	Warramunga Arr	17.07	162		Pn	08 34 27.3	-2.0
WB0				IAmb	IAmb	08 34 39.7	
	comp=Z,23nm,0.9s						
WRAB	Tennant Creek	17.22	162	Pn	Pn	08 34 29.3	-1.8
WRAB				IAmb	IAmb	08 34 42.0	
	comp=Z,15nm,0.7s						
WRA	Warramunga Arr	17.22	162	P	Pn	08 34 29.0	-2.2
	comp=Z,0.9nm,0.3s,baz=347,slow=13,SNR=35						
WRA	Warramunga Arr	17.22	162		Pn	08 34 27.0	-4.2
WB2	Warramunga Arr	17.23	162		Pn	08 34 27.9	-3.4
WR0	Warramunga Arr	17.30	162		Pn	08 34 29.6	-2.5
PWJI	Pagerwojo	17.55	254	P	Pn	08 34 34.9	-0.4
	comp=Z,27nm,0.8s						
COEN	Coen	17.56	127		Pn	08 34 34.0	-1.4
WOJI	Wonogiri, Jawa	18.36	256	P	P	08 34 47.5	+2.2
	comp=Z,22nm,0.9s						
PMG	Port Moresby	19.11	109	P	P	08 34 53.9	+0.4
	comp=Z,1.0nm,0.3s,baz=284,slow=17,SNR=1.9						
PMG	Port Moresby	19.11	109	P	Pn	08 34 56.9	+2.5
PMG				IAmb	IAmb	08 35 12.7	
	comp=Z,18nm,0.8s						
PSA00	Pilbara Seismi	20.01	205	P	P	08 35 03.1	-0.3
PSA00				IAmb	IAmb	08 35 16.8	
	comp=Z,16nm,0.8s						
PSA00	Pilbara Seismi	20.01	205	P	P	08 35 02.4	-1.0
PSA00				IAmb	IAmb	08 35 16.4	
	comp=Z,4.9nm,0.7s						
AS31	Alice Springs	20.66	167	P	P	08 35 10.8	+0.4
AS31				IAmb	IAmb	08 35 20.2	
	comp=Z,14nm,1.1s						
ASAR	Alice Springs	20.66	167	P	P	08 35 10.7	+0.2
	comp=Z,12nm,0.6s,baz=348,slow=11,SNR=189						
ASAR				S	S	08 38 58.0	-3.4
	comp=Z,1.5nm,0.7s,baz=345,slow=17,SNR=4.7						
ASAR				ScP	ScP	08 42 55.6	-2.1
	comp=Z,0.4nm,0.7s,baz=341,slow=2.0,SNR=4.4						
ASAR	Alice Springs	20.66	167	P	P	08 35 10.3	-0.1
CTA	Charters Tower	23.68	136	P	P	08 35 42.6	+0.3
	comp=Z,8.8nm,0.7s,baz=317,slow=11,SNR=8.8						
STKA	Stephens Creek	30.69	158	P	P	08 36 44.7	-0.7
	comp=Z,4.3nm,0.8s,baz=310,slow=7.5,SNR=7.5						
STKA	Stephens Creek	30.69	158	P	P	08 36 45.5	+0.1
CMAR	Chiang Mai Arr	36.65	308	P	P	08 37 38.1	+0.7
	comp=Z,1.0nm,0.3s,baz=138,slow=7.6,SNR=1.9						
CMAR				LR	LR	08 57 10.9	
	comp=Z,53nm,18.1s,baz=184,slow=44						
CMAR	Chiang Mai Arr	36.65	308	P	P	08 37 37.1	-0.3
CHTO	Chiang Mai	36.84	308	P	P	08 37 39.2	+0.1
CHTO				IAmb	IAmb	08 37 45.4	
	comp=Z,5.8nm,0.8s						
KMI	Kunming	38.09	320	P	P	08 37 56.3	+6.5
KMI				pP	sP	08 38 00.5	+6.5
KSRS	Korea Array	40.73	359	P	P	08 38 11.8	+0.5
	comp=Z,1.6nm,0.6s,baz=177,slow=10.0,SNR=9.4						
KSRS				LR	LR	08 53 08.4	
	comp=Z,40nm,20.9s,baz=175,slow=33						
MJAR	Matsushiro Arr	40.75	12	P	P	08 38 11.1	-0.5
	comp=Z,6.7nm,0.8s,baz=187,slow=9.6,SNR=9.2						
MJAR	Matsushiro Arr	40.75	12	P	P	08 38 11.4	-0.2
MAJO	Matsushiro	40.75	12	P	P	08 38 12.1	+0.5
MJB9	Matsu-Tunnel	40.76	12	P	P	08 38 12.3	+0.7
DZM	Mont Dzumac	40.87	120	*e*LR	LR	08 37 09.0	
	comp=Z,216nm,25.0s						
USRK	Ussuriysk Ar.	47.54	3	P	P	08 39 06.6	+0.8
	comp=Z,3.7nm,0.7s,baz=179,slow=8.3,SNR=8.4						
USRK				LR	LR	08 59 18.6	
	comp=Z,81nm,19.8s,baz=89,slow=36						
USRK	Ussuriysk Ar.	47.54	3	P	P	08 39 06.8	+1.0
MDJ	Mudanjiang	47.88	1	P	P	08 39 06.8	-1.6
ASAJ	Asahikawa	48.95	13	P	P	08 39 17.1	+0.3
	comp=Z,2.5nm,0.7s,baz=235,slow=12,SNR=1.9						
JKA	Kamikawa-asahi	48.95	13	P	P	08 39 17.1	+0.3
SONM	Songino Array	54.76	342	P	P	08 40 00.8	+0.5
	comp=Z,1.4nm,0.9s,baz=152,slow=6.6,SNR=5.7						
PETK	Petropavlovsk-	61.37	19	P	P	08 40 46.6	+0.2
	comp=Z,2.2nm,0.7s,baz=203,slow=6.5,SNR=3.3						
PETK	Petropavlovsk-	61.37	19	P	P	08 40 46.1	-0.3
KSH	Kashi	64.67	317	P	P	08 41 13.3	+4.6
KSH				pP	sP	08 41 18.0	+5.7
KSH				PP	PP	08 43 36.3	+5.2
KSH				S	S	08 49 47.5	-1.6
KSH				sS	sS	08 49 56.8	+2.6
MK31	Makanchi Array	64.67	326	P	P	08 41 08.2	-0.3
MKAR	Makanchi Array	64.67	326	P	P	08 41 08.2	-0.3
	comp=Z,1.5nm,0.6s,baz=122,slow=8.4,SNR=19						
MKAR	Makanchi Array	64.67	326	P	P	08 41 07.7	-0.8
MAKZ	Makanchi	64.85	326	P	P	08 41 09.1	-0.6
MAKZ				IAmb	IAmb	08 41 15.4	
	comp=Z,3.3nm,1.1s						
ZAA0	Zalesovo Array	67.93	334	P	P	08 41 29.1	-0.1
ZAA0				IAmb	IAmb	08 41 39.6	
	comp=Z,5.6nm,1.2s						
ZALV	Zalesovo Beam	67.93	334	P	P	08 41 28.5	-0.7
	comp=Z,1.0nm,0.4s,baz=115,slow=6.5,SNR=3.8						
ZALV	Zalesovo Beam	67.93	334	P	P	08 41 28.2	-0.9
GAR	Garm	68.39	314	P	P	08 41 32.0	-0.6
KURK	Kurchatov	68.93	328	P	P	08 41 34.9	-0.6
KK31	Karatay Array	69.96	318	P	P	08 41 42.0	-0.1
KK31				IAmb	IAmb	08 41 48.0	
	comp=Z,3.4nm,1.1s						
KKAR	Karatay Array	69.96	318	P	P	08 41 40.5	-1.6
TIXI	Tiksi	74.98	0	P	P	08 42 11.3	-0.1
TIXI				IAmb	IAmb	08 42 16.6	
	comp=Z,2.9nm,0.7s						
VNDA	Vanda	76.07	173	P	P	08 42 16.0	-1.6
	comp=Z,0.5nm,0.5s,baz=334,slow=6.6,SNR=2.7						
NRIK	Noril'sk	77.88	346	P	P	08 42 27.5	-0.4
	comp=Z,1.0nm,0.4s,baz=78,slow=8.4,SNR=3.5						
ABKAR	Akbulak array	79.05	321	P	P	08 42 33.9	-0.9
ABKAR				IAmb	IAmb	08 42 39.6	
	comp=Z,3.1nm,0.9s						
ILAR	Eielson Array	90.66	25	P	P	08 43 31.8	-1.2
	comp=Z,0.4nm,0.7s,baz=241,slow=5.1,SNR=5.4						
MMAI	Mount Meron Ar	94.77	303	LR	LR	09 36 27.9	
	comp=Z,52nm,18.1s,baz=15,slow=42						
TXAR	Lajitas Array	124.03	57	PKP	PKPdf	08 49 28.8	-1.0
	comp=Z,0.3nm,0.7s,baz=257,slow=3.6,SNR=2.4						
TORD	Torodi Ar. Bea	126.94	284	PKP	PKPdf	08 49 35.0	-0.6
	comp=Z,0.5nm,0.6s,baz=102,slow=1.2,SNR=2.1						
CPUP	Villa Florida	149.78	169	PKPbc	PKPbc	08 50 20.3	-1.1
	comp=Z,1.3nm,0.6s,baz=317,slow=1.2,SNR=3.5						
CPUP	Villa Florida	149.78	169		PKPbc	08 50 21.0	-0.4

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*UPA **27** 08:40:02.9±0.7, 8°.10N×77°.66W, h4^{km}±4^{km}, MW3.6*

*RSNC **27** 08:40:03.2±1.1, 8°.15N×77°.58W, h0^{km}±4^{km}, ML2.6*

ISC 27 08:40:01.3±1.4,**8°.16N**±0°.03×**77°.59W**±0°.02,**h4**^{km}±11^{km}, **n31**,σ**1^{s}34**/56,**2C,Panama-Colombia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UPD2	Meteti	0.57	312	⇑*i*P	Pb	08 40 14.6	+0.6
UPD2				*e*S	Sb	08 40 23.4	+0.9
UPD2				*i*		08 40 27.9	
	comp=Z,2μm,0.2s						
UPD2	Meteti	0.57	312	⇑*e*P	Pb	08 40 14.7	+0.7
UPD2				*e*S	Sb	08 40 23.6	+1.1
PTAC	Punta Ardita,	1.03	192	*e*P	Pg	08 40 21.1	+0.1
PTAC				*e*S	Sn	08 40 36.0	-1.5
PTAC	Punta Ardita,	1.03	192	*e*P	Pg	08 40 21.1	+0.1
PTAC				*e*S	Sn	08 40 35.9	-1.5
LCBC	Los crdobas,	1.39	60	*e*P	Pb	08 40 28.2	+0.3
LCBC				*e*S	Sg	08 40 47.5	+1.5
LCBC				*i*		08 40 56.1	
	comp=Z,97nm,0.7s						
CNTA3	Canitas, Panam	1.67	309	*e*P	Pn	08 40 31.8	+0.5
CNTA3				*e*S	Sb	08 40 54.0	0.0
DBBC	Dabeiba	1.77	130	*e*P	Pb	08 40 33.9	-0.6
DBBC				*e*S	Sb	08 40 57.6	+0.5
DBBC				*i*		08 41 05.2	
	comp=Z,224nm,0.5s						
DBBC	Dabeiba	1.77	130	*e*P	Pb	08 40 34.1	-0.3
DBBC				*e*S	Sg	08 40 57.8	-0.6
CHPO	Chepo, Panama	1.82	304	*e*P	Pn	08 40 34.3	+0.9
CHPO				*e*S	Sn	08 40 56.1	-0.8
SOLC	Bahia Solano	1.93	175	*e*P	Pb	08 40 35.9	-1.1
SOLC				*e*S	Sg	08 41 02.1	-1.2
SOLC				*i*		08 41 08.1	
	comp=Z,51nm,0.5s						
FLAM	Flamenco Islan	2.07	291	*e*S	Sb	08 41 05.8	+0.1
UREC	San Jos de Ur	2.07	101	*e*P	Pn	08 40 37.1	+0.2
UREC				*e*S	Sb	08 41 04.8	-0.9
UPA	Univ. de Panam	2.09	293	*e*P	Pn	08 40 35.9	-1.3
UPA				*e*S	Sn	08 41 03.3	-0.5
UPA	Univ. de Panam	2.09	293	*e*P	Pn	08 40 36.6	-0.6
UPA				*e*S	Sn	08 41 04.7	+1.0
CHOR3	La Chorrera	2.28	289	*e*P	Pn	08 40 40.3	+0.6
CHOR3				*e*S	Sn	08 41 09.1	+0.8
FRIJ	El Hiral	2.37	297	*e*P	Pn	08 40 41.2	+0.3
ZANG	Zanguenga, Cho	2.39	290	*e*P	Pb	08 40 43.6	-1.4
ZANG				*e*S	Sn	08 41 12.7	+1.6
BCIP	Isla Barro Col	2.44	294	*e*P	Pn	08 40 42.2	+0.2
BCIP				*e*S	Sb	08 41 14.4	-1.9
BCIP				*i*		08 41 29.6	
	comp=Z,46nm,0.7s						
BCIP	Isla Barro Col	2.44	294	*e*P	Pn	08 40 42.9	+0.9
BCIP				*e*S	Sn	08 41 12.8	+0.4
MLIR	Monte Lirio	2.49	296	*e*S	Sb	08 41 17.2	-0.4
AZU	Azuero	2.69	262	*e*P	Pn	08 40 47.2	+1.8
AZU				*i*		08 41 35.4	
	comp=Z,61nm,0.6s						
AZU	Azuero	2.69	262	*e*P	Pb	08 40 48.3	-1.7
AZU				*e*S	Sn	08 41 18.8	+0.4
CBOC	Ciudad Bolivar	2.76	145	*e*P	Pn	08 40 47.0	+0.5
CBOC				*e*S	Sn	08 41 21.9	+1.4
CBOC				*i*		08 41 28.5	
	comp=Z,14nm,0.5s						
ZARC	Zaragoza, Cauc	2.78	104	*e*P	Pn	08 40 47.3	+0.6
ZARC				*e*S	Sn	08 41 20.0	-0.8
ZARC				*i*		08 41 24.0	
	comp=Z,19nm,0.3s						
HELC	Santa Helena	2.83	134	*e*P	Pn	08 40 48.9	+1.3
HELC				*e*S	Sn	08 41 23.8	+1.5
HELC				*i*		08 41 35.7	
	comp=Z,7.0nm,0.6s						
HELC	Santa Helena	2.83	134	*e*P	Pn	08 40 49.5	+2.0
HELC				*e*S	Sn	08 41 24.4	+2.1
SJCC	San Jacinto, C	2.94	54	*e*P	Pn	08 40 49.4	+0.5
SJCC				*e*S	Sn	08 41 19.1	-5.6
SJCC				*i*		08 41 27.4	
	comp=Z,6.4nm,0.4s						
PTBC	PUERTO BERRIO,	3.50	117	*e*P	Pn	08 40 57.4	+0.9
PTBC				*e*S	Sn	08 41 38.4	+0.1
PTBC				*i*		08 41 40.4	
	comp=Z,8.0nm,0.3s						
NORC	Norcasia	3.73	134	*e*P	Pn	08 41 01.9	+2.1
NORC				*i*		08 42 02.3	
	comp=Z,5.3nm,0.5s						
RREF	El Recreo	3.93	145	*e*P	Pn	08 41 04.3	+1.3
RREF				*i*		08 41 58.2	
	comp=Z,5.6nm,0.4s						
OCAC	Ocana	4.22	89	*e*P	Pn	08 41 07.5	+0.8
OCAC				*e*S	Sn	08 41 54.9	-1.6
OCAC				*i*		08 42 00.2	
	comp=Z,21nm,0.5s						

NNC 27 08:52:29.8±2.5,**36°.88N**×**69°.48E**,**h0**^{km},**mb4.3**,**mpv4.0**, **2C-3D,Error ellipse: s-maj=23.2km s-min=18.5km az=114.0,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.17	31	P	Pn	08 54 03.0	+0.4
	SNR=26						
KK31	Karatay Array	6.27	7	Pn	Pn	08 54 03.9	+0.4
	1.2nm,0.3s,baz=198,slow=16,SNR=13						
KK31				⇓Sn	Sn	08 55 16.9	+1.1
	16nm,0.6s,baz=196,slow=25,SNR=5.6						
UCH	Uchtor	6.60	34	P	Pn	08 54 08.9	+0.3
	SNR=25						
KZA	Kyzart	6.84	39	P	Pn	08 54 11.1	-0.7
	SNR=16						
AAK	Ala-Archa	6.92	32	P	Pn	08 54 13.2	+0.5
	SNR=22						
AAK	Ala-Archa	6.92	32	⇑Pn	Pn	08 54 12.8	+0.1
	7.0nm,0.3s						
AAK				⇓Sn	Sn	08 55 33.8	+1.6
	23nm,0.7s						
KBK	Karagaybulak	7.14	34	P	Pn	08 54 16.5	+0.8
	SNR=8.8						
CHMS	Chumysh	7.33	32	P	Pn	08 54 17.7	-0.4
	SNR=8.6						
CHMS	Chumysh	7.33	32	⇓Pn	Pn	08 54 17.5	-0.6
	12nm,0.6s						
CHMS				⇑Sn	Sn	08 55 42.9	+0.9
	21nm,0.6s						
USP	Ospenovka	7.45	30	P	Pn	08 54 19.3	-0.5
	SNR=9.2						
ULHL	Ulahol	7.48	42	P	Pn	08 54 20.1	-0.3
	SNR=5.7						

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*NEIC **27** 08:53:10.9±1.3, 17°.24N±0°.07×101°.26W±0°.05, h21^{km}±13^{km}, Error ellipse: s-maj=12.0km s-min=1.5km az=216.0*

*MEX **27** 08:53:12.7±0.6, 17°.28N×101°.28W, h7^{km}±4^{km}, MD4.1*

ISC 27 08:53:11.2±1.2,**17°.27N**±0°.05×**101°.28W**±0°.04, **h25**^{km}±10^{km},**n25**,σ**0^{s}74**/47,**Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.38	333	*e*P	Pb	08 53 19.8	+0.3
ZIIG				*e*S	Sb	08 53 24.8	-0.3
ZIIG	Zihuatanejo	0.38	333		Pb	08 53 19.8	+0.3
ZIIG					Sb	08 53 24.8	-0.3
CAIG	El Cayaco	0.99	103	*e*P	Pn	08 53 28.9	-0.7
CAIG				*e*S	Sn	08 53 41.4	-1.4
CAIG	El Cayaco	0.99	103		Pn	08 53 28.9	-0.7
CAIG					Sn	08 53 41.4	-1.4
MEIG	Mezcala	1.71	67	*e*P	Pn	08 53 39.5	0.0
MEIG				*i* S	Sn	08 54 00.8	+0.1
MEIG	Mezcala	1.71	67		Pn	08 53 39.5	0.0
MEIG					Sn	08 54 00.8	+0.1
CRIG	Cruz Grande	2.12	104	*e*P	Pn	08 53 45.0	-0.1
CRIG				*i* S	Sn	08 54 09.9	-0.8
MMIG	Aquila	2.21	298	*e*P	Pn	08 53 46.4	+0.1
MMIG				*i* S	Sn	08 54 12.9	0.0
MMIG	Aquila	2.21	298		Pn	08 53 46.4	+0.1
MMIG					Sn	08 54 12.9	0.0
MAVM	Malinalco, Edo	2.39	45	*e*P	Pn	08 53 50.0	+1.0
MAVM				*i* S	Sn	08 54 17.5	-0.1
MAVM	Malinalco, Edo	2.39	45		Pn	08 53 50.0	+1.0
MAVM					Sn	08 54 17.5	-0.1
MOIG	Morelia	2.40	2	Pn	Pb	08 53 52.0	-1.8
MOIG				Sn	Sb	08 54 22.7	-0.5
TOVM	TOLUCA	2.52	37	*e*P	Pn	08 53 51.3	+0.4
TOVM				*i* S	Sn	08 54 21.0	+0.1
TOVM	TOLUCA	2.52	37		Pn	08 53 51.3	+0.4
TOVM					Sn	08 54 21.0	+0.1
TLIG	Tlapa	2.61	83	*e*P	Pn	08 53 53.0	+1.1
TLIG				*e*S	Sn	08 54 22.7	-0.2
TLIG	Tlapa	2.61	83	Pn	Pn	08 53 53.0	+1.1
TLIG	Tlapa	2.61	83		Pn	08 53 53.0	+1.1
TLIG					Sn	08 54 22.7	-0.2
YAIG	Yautepec	2.64	53	*e*P	Pn	08 53 52.5	+0.1
YAIG				*i* S	Sn	08 54 23.9	+0.3
YAIG	Yautepec	2.64	53		Pn	08 53 52.5	+0.1
YAIG					Sn	08 54 23.9	+0.3
FTIG	Fresnillo de T	3.07	78	*e*P	Pn	08 53 59.3	+1.0
PNIG	Pinotepa	3.14	106	*e*P	Pn	08 54 00.1	+0.9
PNIG				*i* S	Sn	08 54 36.6	+0.7
PNIG	Pinotepa	3.14	106		Pn	08 54 00.1	+0.9
PNIG					Sn	08 54 36.6	+0.7
HLIG	Huajuapan de L	3.37	80	*e*P	Pn	08 54 03.0	+0.6
HLIG				*i* S	Sn	08 54 42.5	+0.9
YOIG	Yosondua	3.60	96	*e*P	Pn	08 54 07.0	+1.3
YOIG				*i* S	Sn	08 54 48.7	+1.2
SRIG	Santa Rosalia	14.23	317	Pn	Pn	08 56 31.6	+0.3

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*KOLA **27** 09:02:38.3, 64°.61N×31°.26E, h0^{km}*

*MOS **27** 09:02:38.7, 64°.71N×30°.24E, M2.7, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

*HEL **27** 09:02:39.0±0.2, 64°.77N×30°.74E, h0^{km}, ML2.0, Explosion*

*NAO **27** 09:02:41.6±1.5, 64°.84N×29°.97E, ML2.4*

*BER **27** 09:02:43.0±4.1, 64°.82N×29°.87E, h0^{km}, ML2.4(NAO), Suspected explosion*

ISC 27 09:02:38.4±0.9,**64°.77N**±0°.03×**30°.62E**±0°.05,**h0**^{km},**n25**, σ**2^{s}61**/45,**Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KU6	Riekki	1.30	347	*e*P	Pg	09 03 02.3	-1.1
KU6				*e*S	Sg	09 03 20.0	-0.2
MSF	Maaselka	1.33	331	*e*P	Pg	09 03 03.1	-0.8
MSF				*e*S	Sg	09 03 20.6	-0.5
JOF	Joensuu	1.88	170	*e*P	Pn	09 03 12.0	+0.3
JOF				*e*S	Sb	09 03 38.4	+0.8
OUL	Oulu	2.04	281	*e*PB	Pn	09 03 15.6	+1.6
OUL				*e*SG	Sb	09 03 43.2	+1.0
OUL				MSG		09 03 46.5	
	comp=Z,7.2nm,0.1s						
OBF4	Vikkela, Lumij	2.36	274	MSG		09 03 54.5	
	comp=Z,4.0nm,0.1s						
OUF	Merijarvi	2.58	264	*e*PB	Pn	09 03 23.9	+2.5
OUF				*e*SB	Sb	09 03 58.2	+0.7
OBF0	Syolatti, Pyha	2.76	267	MSG		09 04 08.2	
	comp=Z,9.8nm,0.2s						
TOF	Tornio	2.94	299	MSG		09 04 14.6	
	comp=Z,5.3nm,0.2s						
APA0	Apatity Array	3.01	18	P	Pn	09 03 27.8	+0.5
APA0				S	Sn	09 04 04.7	+0.7
VRF	Varrio	3.02	353	*e*P	Pn	09 03 28.5	+1.0
VRF				*e*SG	Sb	09 04 11.1	+0.6
APA	Apatity	3.03	21	P	Pn	09 03 27.8	+0.2
APA				S	Sn	09 04 05.0	+0.4
FIA0	FINESS Array S	3.92	214	Pn	Pn	09 03 41.0	+1.2
	baz=28,slow=14						
FIA0				Pg	Pb	09 03 49.2	+0.9
	baz=30,slow=16						
FIA0				Sn	Sn	09 04 28.1	+1.6
	baz=34,slow=22						
FIA0				Lg	Lg	09 04 40.4	
	baz=21,slow=28						
FIA0	FINESS Array S	3.92	214	Pn	Pn	09 03 41.0	+1.2
	baz=28,slow=14						
FIA0				Pg	Pb	09 03 49.2	+0.9
	baz=30,slow=16						
FIA0				Sg	Sb	09 04 40.4	+4.1
	baz=21,slow=28						
HEF	Hetta	4.59	326	Pn	Pn	09 03 50.9	+1.8
HEF				Pg	Pb	09 04 02.2	+2.5
HEF				Sn	Sn	09 04 43.7	+0.7
HEF				Lg	Lg	09 04 59.6	
HEF	Hetta	4.59	326	Pn	Pn	09 03 50.9	+1.8
HEF				Pg	Pb	09 04 02.2	+2.5
HEF				Sg	Sb	09 04 59.6	+4.0
ARA0	ARCESS Array S	5.19	340	Pn	Pn	09 03 57.0	-0.2
	baz=154,slow=14						
ARA0				Sn	Sn	09 04 53.6	-4.1
	baz=137,slow=16						
ARA0				Lg	Lg	09 05 17.1	
	baz=156,slow=37						
ARA0	ARCESS Array S	5.19	340	Pn	Pn	09 03 57.0	-0.2
	baz=154,slow=14						
ARA0				Sn	Sn	09 04 53.6	-4.1
	baz=137,slow=16						
ARA0				Sg	Sb	09 05 17.1	+4.4
	baz=156,slow=37						
KEV	Kevo	5.20	346	Pn	Pn	09 03 57.2	-0.2
KEV				Sn	Sn	09 04 56.0	-2.0
KEV	Kevo	5.20	346	Pn	Pn	09 03 57.2	-0.2
KEV				Sn	Sn	09 04 56.0	-2.0
KIF	Kilpisjarvi	5.75	322	Pn	Pn	09 04 05.7	+0.8
KIF				Sn	Sn	09 05 11.6	+0.2
KIF				Lg	Lg	09 05 34.0	
KIF	Kilpisjarvi	5.75	322	Pn	Pn	09 04 05.7	+0.8
KIF				Sg	Sb	09 05 34.0	+5.3
HFS	Hagfors	9.10	247	Sn	Sn	09 06 26.4	-7.4
	baz=66,slow=28						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
HFS				Lg	Lg	09 07 16.1	
	baz=45,slow=28						
HFS	Hagfors	9.10	247	Sn	Sn	09 06 26.4	-7.4
	baz=66,slow=28						
HFS				Sg		09 07 16.1	
	baz=45,slow=28						
NB2	NORSAR Subarra	9.59	256	Pn	Pn	09 04 59.8	+2.1
NB2	NORSAR Subarra	9.59	256	Pn	Pn	09 04 59.8	+2.1

IDC 27 09:09:38.5±7.5, 14°.84S×167°.22E, h154^{km}±66^{km}, mb3.6/4, mb1 3.8/5, mb1mx3.3/45, mbtmp4.1/5, MS3.6/1, Ms1 3.6/1, ms1mx2.7/24, Error ellipse: s-maj=60.7km s-min=38.5km az=0.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.23	186	P	Pn	09 11 22.3	+0.6
	4.2nm,0.3s,baz=6.8,slow=10,SNR=43						
DZM				S	Sn	09 12 42.1	-0.7
	0.4nm,0.3s,baz=326,slow=23,SNR=1.8						
RAO	Raoul Island	19.85	139	LR	LR	09 20 40.4	
	comp=Z,190nm,21.5s,baz=158,slow=33						
CTA	Charters Tower	20.67	252	P	P	09 14 06.9	+0.4
	4.3nm,0.8s,baz=90,slow=12,SNR=4.3						
STKA	Stephens Creek	28.89	230	P	P	09 15 22.9	0.0
	1.4nm,0.4s,baz=58,slow=9.7,SNR=9.1						
WRA	Warramunga Arr	31.76	256	P	P	09 15 47.8	-0.6
	0.8nm,0.6s,baz=85,slow=8.6,SNR=2.2						
ASAR	Alice Springs	32.59	249	P	P	09 15 55.8	+0.1
	1.3nm,0.3s,baz=76,slow=9.2,SNR=57						
ARCES	ARCESS Array B	120.35	345	PKP	PKPdf	09 28 10.7	-0.3
	8.6nm,1.2s,baz=54,slow=2.3,SNR=6.8						

IDC 27 09:10:32.5±2.5, 35°.87N×141°.10E, h0^{km}, mb3.5/3, mb1 3.7/7, mb1mx3.4/70, mbtmp3.7/7, ML3.5/4, MS2.6/1, Ms1 2.6/1, ms1mx2.1/39, Error ellipse: s-maj=59.6km s-min=22.2km az=59.0

JMA 27 09:10:43.2±0.2, 35°.62N×140°.13E, h66^{km}±2^{km}, M3.0

ISC 27 09:10:43.9±1.0, 35°.53N±0°.04×140°.11E±0°.05, h67^{km}±8^{km}, n20, σ1^{s}30/32, mb3.7/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCN	Nagara	0.14	145	P	Pn	09 10 53.9	0.0
JCN				eS	Sn	09 11 02.4	+1.3
JSMT	Sammumatsuo	0.30	68	P	Pn	09 10 54.3	-0.4
BSO3	Boso 3	0.80	155	P	Pn	09 10 59.3	-0.2
BSO3				eX		09 11 12.3	
JOD2	Odawara 2	0.87	253	P	Pn	09 11 00.3	-0.4
JOD2				S	Sn	09 11 12.6	-0.5
JIM2	Oshima 3	0.98	214	S	Sn	09 11 15.2	-0.3
JAG	Ashikaga	1.04	330	P	Pn	09 11 01.6	-1.1
JAG				S	Sn	09 11 15.2	-1.5
JRY	Ryogami san	1.09	297	P	Pn	09 11 03.3	-0.2
JRY				S	Sn	09 11 17.9	-0.1
BSO1	Boso 1	1.13	141	P	Pn	09 11 03.4	0.0
BSO1				eS	Sn	09 11 19.3	+1.3
JFNN	Fujinakano	1.21	254	P	Pn	09 11 05.0	+0.1
JFNN				S	Sn	09 11 20.9	+0.2
JYN	Shimob	1.27	269	P	Pn	09 11 05.6	-0.3
JYN				S	Sn	09 11 22.5	+0.2
JIZS	Izushimoda	1.29	231	P	Pn	09 11 05.8	-0.2
JIZS				S	Sn	09 11 22.3	-0.3
JKT	Katashina	1.42	331	P	Pn	09 11 06.8	-1.0
JKT				S	Sn	09 11 24.0	-1.6
MJAR	Matsushiro Arr	1.84	304	Pn	Pn	09 11 12.9	-0.5
	3.1nm,0.3s,baz=101,slow=7.4,SNR=105						
MJAR				Sn	Sn	09 11 37.8	+2.1
	4.0nm,0.3s,baz=263,slow=30,SNR=3.3						
MAT	Matsushiro	1.84	304	P	Pn	09 11 13.2	-0.2
MAT				S	Sn	09 11 36.2	+0.5
JHJ	Hachijo jima 2	2.42	186	Pn	Pn	09 11 21.2	0.0
	21nm,0.3s,baz=29,slow=19,SNR=12						
JHJ				Sn	Sn	09 11 49.4	-0.4
	45nm,0.3s,baz=265,slow=20,SNR=7.8						
JCJ	Chichijima	8.59	168	Pn	Pn	09 12 41.4	-4.2
	4.3nm,0.3s,baz=298,slow=15,SNR=2.0						
KSRS	Korea Array	10.00	285	Pn	Pn	09 13 07.9	+3.2
	0.1nm,0.3s,baz=100,slow=13,SNR=1.6						
KSRS				LR	LR	09 17 05.2	
	comp=Z,35nm,21.8s,baz=150,slow=37						
KURBB	Kurchatov Arra	46.11	309	P	P	09 19 01.5	+0.2
	0.4nm,0.4s,baz=83,slow=7.5,SNR=6.5						
WRA	Warramunga Arr	55.44	187	P	P	09 20 10.6	-1.1
	0.6nm,0.5s,baz=2.5,slow=7.5,SNR=3.3						
ASAR	Alice Springs	59.17	187	P	P	09 20 38.8	+0.9
	0.1nm,0.3s,baz=23,slow=11,SNR=6.9						

JMA 27 09:14:00.2±0.5, 46°.10N×152°.05E, h30^{km}, M4.0

SKHL 27 09:14:01.8±0.5, 45°.64N×152°.25E, h47^{km}±7^{km}, mb4.1/4

ISC 27 09:14:03.9±4.5, 45°.2N±0°.2×152°.2E±0°.2, h48^{km}, n13, σ1^{s}23/20, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.06	271	eP	Pn	09 14 48.4	-1.3
KUR				AMB	AMB	09 14 51.8	
	20nm,0.3s						
KUR				eS	Sn	09 15 23.3	-1.7
KUR				A	A	09 15 28.8	
	150nm,0.3s						
KUR				A	A	09 15 28.8	
	50nm,0.3s						
YUK	Yuzh-Kuril'sk	4.68	257	i P	Pn	09 15 12.7	+0.8
YUK				AMB	AMB	09 15 14.0	
	10.0nm,0.3s						
YUK				eS	Sn	09 16 06.0	+1.1
YUK				A	A	09 16 09.0	
	40nm,0.3s						
YUK				A	A	09 16 09.0	
	40nm,0.3s						
GRPR	Tuman	4.75	257	eP	Pn	09 15 14.5	+1.5
GRPR				AMB	AMB	09 15 19.0	
	10.0nm,0.3s						
GRPR				eS	Sn	09 16 08.5	+1.8
GRPR				A	A	09 16 13.0	
	70nm,0.4s						
GRPR				A	A	09 16 13.0	
	50nm,0.4s						
NEM2	Nemuro 2	5.00	250	P	Pn	09 15 15.8	-0.5
NEM2				eS	Sn	09 16 11.7	-1.0
GLVR	Golovnino	5.01	255	eP	Pn	09 15 17.5	+1.1
GLVR				AMB	AMB	09 15 18.0	
	10.0nm,0.4s						
GLVR				eS	Sn	09 16 14.6	+1.6
GLVR				A	A	09 16 16.0	
	40nm,0.4s						
GLVR				A	A	09 16 16.0	
	60nm,0.4s						
JRA	Rausu	5.22	258	P	Pn	09 15 20.5	+1.2
JNK	Nakash	5.61	255	P	Pn	09 15 25.2	+0.5
JAK	Akkeshi	5.85	250	P	Pn	09 15 27.5	-0.5
JTKR	Abashiri--Toko	6.05	261	P	Pn	09 15 31.4	+0.6
JAR	Ashorobuto	6.35	255	P	Pn	09 15 35.6	+0.7
JAR				eS	Sn	09 16 45.6	-0.5
JKK2	Kamakawa 2	6.89	262	P	Pn	09 15 43.5	+1.2
JCH	Churui	6.90	251	P	Pn	09 15 41.8	-0.6
JCH				eS	Sn	09 16 57.5	-2.0
JNBK	Urakawa-nobuka	7.45	250	P	Pn	09 15 49.4	-0.5

IDC 27 09:19:55.1±1.1, 39°.04N×75°.13E, h0^{km}, mb3.5/5, mb1 3.6/7, mb1mx3.3/47, mbtmp3.4/7, ML2.7/2, Error ellipse: s-maj=25.6km s-min=15.1km az=89.0

SOME 27 09:19:59.5, 39°.22N×75°.18E, h5^{km}

KRNET 27 09:20:02.9±0.1, 39°.34N×75°.02E, mb3.6

BJI 27 09:20:04.9±0.0, 39°.28N×75°.09E, h13^{km}, ML3.4/5

NNC 27 09:20:05.7±3.7, 39°.60N×74°.90E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=29.8km s-min=18.5km az=170.0

ISC 27 09:19:56.4±1.7, 39°.21N±0°.06×75°.17E±0°.04, h1^{km}±10^{km}, n48, σ2^{s}13/77, mb3.5/5, 20C-17D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	0.69	64	Pg	Pg	09 20 10.5	+0.8
KSH				Sg	Sg	09 20 17.0	-1.7
KSH				smax	smax		
	comp=N,7µm,0.5s						
KSH				smax	smax		
	comp=E,4µm,0.4s						
NRN	Naryn	2.31	16	⇓iP	Pb	09 20 40.3	+1.2
	baz=19						
NRN				⇓iS	Sn	09 21 07.3	+2.1
	baz=19						
ARSB	Arslanbob	2.69	322	⇑iP	Pb	09 20 44.2	-1.4
	baz=22						
ARSB				⇑iS	Sn	09 21 13.9	-0.6
	baz=22						
ARLS	Aral	2.73	347	⇑iP	Pn	09 20 44.5	+2.9
	baz=48						
ARLS				⇑iS	Sn	09 21 15.4	+0.1
	baz=48						
KZA	Kyzart	2.86	1	⇑iP	Pn	09 20 47.0	+3.3
	baz=4.0						
KZA				⇑iS	Sn	09 21 19.4	+0.3
	baz=4.0						
KZA	Kyzart	2.86	1	P	Pn	09 20 47.1	+3.3
	SNR=12						
UCH	Uchtor	3.05	351	⇓eP	Pn	09 20 49.8	+3.4
	baz=53						
UCH				⇓iS	Sn	09 21 23.4	-0.4
	baz=53						
UCH	Uchtor	3.05	351	P	Pn	09 20 49.8	+3.4
	SNR=16						
AML	Almayashu	3.12	339	⇑iP	Pn	09 20 50.4	+3.1
	baz=41						
AML				⇑iS	Sn	09 21 24.9	-0.6
	baz=41						
AML	Almayashu	3.12	339	P	Pn	09 20 50.6	+3.3
	SNR=15						
ULHL	Ulahol	3.14	15	⇓eP	Pb	09 20 51.9	-1.3
	baz=17						
ULHL				⇓iS	Sn	09 21 27.4	+1.8
	baz=17						
ULHL	Ulahol	3.14	15	P	Pb	09 20 56.4	+3.2
	SNR=17						
KDJ	Kajisay	3.29	27	⇓iP	Pb	09 20 55.3	-0.5
	baz=30						
KDJ				⇓iS	Sn	09 21 33.0	+3.7
	baz=30						
BOOM	Boomskoye usch	3.33	10	⇑eP	Pb	09 20 54.2	-2.2
	baz=12						
BOOM				⇑iS	Sn	09 21 31.7	+1.6
	baz=12						
KBK	Karagaybulak	3.45	357	P	Pb	09 20 56.0	-2.4
	SNR=7.7						
AAK	Ala-Archa	3.46	352	Pn	Pn	09 20 55.6	+3.9
	1.1nm,0.3s,baz=171,slow=19,SNR=10						
AAK				Pg	Pg	09 21 02.8	0.0
	4.0nm,0.3s,baz=169,slow=9.3,SNR=19						
AAK				Lg	Lg	09 21 47.6	
	6.5nm,0.3s,baz=1.0,slow=23,SNR=3.8						
AAK	Ala-Archa	3.46	352	⇑iP	Pn	09 20 55.3	+3.6
	baz=53						
AAK				⇑iS	Sn	09 21 33.1	-0.3
	baz=53						
AAK	Ala-Archa	3.46	352	⇓Pn	Pn	09 20 55.6	+3.9
	2.2nm,0.5s						
AAK				⇑Pg	Pg	09 21 03.4	+0.6
	17nm,0.6s						
AAK				⇓Lg	Lg	09 21 44.2	
	52nm,1.0s						
BTK	Batken	3.46	286	⇑eP	Pn	09 20 55.8	+4.1
	baz=84						
BTK				⇑iS	Sn	09 21 34.2	+0.8
	baz=84						
ARK	Arkit	3.56	318	⇑iP	Pn	09 20 55.7	+2.7
	baz=17						
ARK				⇑iS	Sn	09 21 34.0	-1.7
	baz=17						
EKS2	Erkin-Say	3.60	343	⇓eP	Pn	09 20 57.3	+3.7
	baz=45						
EKS2				⇓iS	Sn	09 21 36.3	-0.6
	baz=45						
EKS2	Erkin-Say	3.60	343	P	Pg	09 21 05.4	-0.1
	SNR=9.3						
TKM2	Tokmak 2	3.72	5	P	Pb	09 21 05.5	+2.4
	SNR=6.2						
CHMS	Chumysh	3.80	355	⇓Pn	Pn	09 20 59.7	+3.5
	2.2nm,0.3s						
CHMS				⇓Pg	Pg	09 21 08.9	-0.3
	25nm,1.1s						
CHMS				⇓Lg	Lg	09 21 54.5	
	29nm,0.7s						
MRKS	Merke	3.83	338	eP	Pg	09 21 10.8	+1.1
	34nm,0.5s						
MRKS				eS	Sg	09 22 00.4	+1.1
	17nm,0.5s						
KST	Kastek	3.88	9	eP	Pg	09 21 11.1	+0.4
	20nm,0.5s						
KST				eS	Sg	09 22 00.6	-0.3
	82nm,0.7s						
MTBS	Maitube	4.03	13	eP	Pg	09 21 13.6	-0.1
	9.9nm,0.3s						
MTBS				eS	Sg	09 22 05.3	-0.6
	28nm,0.4s						
TNSS	Tian-Shan	4.05	19	eP	Pg	09 21 13.9	-0.1
	11nm,0.5s						
TNSS				eS	Sg	09 22 05.9	-0.7
	40nm,0.5s						
DGS	Degeres	4.05	6	eP	Pg	09 21 14.2	+0.1
	31nm,0.6s						
DGS				eS	Sg	09 22 06.2	-0.4
	66nm,0.6s						
USP	Ospenovka	4.08	353	P	Pg	09 21 13.6	-1.0
	SNR=10						
MDOK	Medeo	4.20	19	eP	Pg	09 21 15.8	-1.0
	6.0nm,0.4s						
MDOK				eS	Sg	09 22 08.9	-2.3
	42nm,0.8s						
MDOK	Medeo	4.20	19	⇑Pg	Pg	09 21 16.6	-0.3
	11nm,1.0s						
MDOK				Lg	Lg	09 22 10.0	
	74nm,0.9s						
KRBS	Karabastau	4.50	5	eP	Pg	09 21 21.5	-1.1
	7.5nm,0.5s						
KRBS				eS	Sg	09 22 18.9	-2.0
	12nm,0.5s						
KTBS	Karatobe	4.64	14	eP	Pg	09 21 24.5	-0.8
	7.6nm,0.4s						
KTBS				eS	Sg	09 22 23.6	-1.8
	43nm,0.5s						
KUU	Kurty	4.76	10	eP	Pg	09 21 26.4	-1.2
	3.2nm,0.7s						
KUU				eS	Sg	09 22 26.6	-2.7
	221nm,0.7s						
KPKS	Kokpek	5.01	31	eP	Pg	09 21 31.8	-0.6
	6.5nm,0.4s						
KPKS				eS	Sg	09 22 35.9	-1.3
	41nm,0.6s						
KK31	Karatay Array	5.24	319	⇓Pn	Pn	09 21 18.1	+2.0
	0.5nm,0.3s,baz=138,slow=14,SNR=5.2						
KK31				⇓Pg	Pb	09 21 33.5	+4.6
	1.0nm,0.3s,baz=130,slow=12,SNR=7.4						
KK31				⇑Sn	Sn	09 22 14.9	-2.2
	12nm,0.6s,baz=174,slow=26,SNR=8.1						
KK31				Lg	Lg	09 22 40.8	
	baz=129,slow=27						
PDGK	Podgornoye	5.25	37	⇑Pg	Pg	09 21 36.9	0.0
	7.7nm,0.6s						
ARXS	Arharly	5.38	21	eP	Pg	09 21 38.5	-1.0
	4.8nm,1.0s						
ARXS				eS	Sg	09 22 47.3	-1.8
	21nm,0.5s						
CHCP	Chirah Chowk	5.75	196	P	Pb	09 21 30.5	-7.1
BTLS	Baital	5.88	352	eP	Pg	09 21 47.5	-1.6
	1.3nm,0.2s						
BTLS				eS	Sg	09 23 03.5	-2.0
	9.9nm,0.8s						
MKAR	Makanchi Array	9.20	32	Pn	Pn	09 22 14.0	+3.7
	0.0nm,0.3s,baz=219,slow=8.9,SNR=2.5						
MKAR				Lg	Lg	09 24 49.1	
	0.2nm,0.3s,baz=222,slow=34,SNR=3.5						
WMQ	Urumqi	10.46	60	eP	Pn	09 22 36.5	+8.9
BRTR	Keskin Array B	31.86	284	P	P	09 26 23.5	+0.3
	0.8nm,0.8s,baz=64,slow=6.6,SNR=4.0						
TORD	Torodi Ar. Bea	69.05	270	P	P	09 31 01.9	-2.3
	0.1nm,0.3s,baz=54,slow=6.3,SNR=4.4						
YKA	Yellowknife Ar	78.34	5	P	P	09 31 57.1	-0.9
	0.3nm,0.5s,baz=347,slow=5.4,SNR=8.5						
WRA	Warramunga Arr	80.73	125	P	P	09 32 09.7	-1.9
	0.2nm,0.5s,baz=332,slow=4.6,SNR=1.8						
ASAR	Alice Springs	83.20	128	P	P	09 32 23.3	-1.3
	0.2nm,0.8s,baz=313,slow=5.7,SNR=2.7						

NEIC 27 09:20:51.4±1.4, 56°.95N±0°.05×157°.4W±0°.1, h104^{km}±4^{km}, Error ellipse: s-maj=10.1km s-min=4.2km az=131.0

AEIC 27 09:20:52.8±1.2, 56°.99N±0°.05×157°.5W±0°.1, h98^{km}±4^{km}, ML3.2/94, Error ellipse: s-maj=9.7km s-min=4.7km az=131.0

IDC 27 09:20:53.6±5.8, 57°.39N×157°.39W, h104^{km}±35^{km}, mb3.3/6, mb1 3.6/9, mb1mx3.3/59, mbtmp3.7/9, MS3.7/1, Ms1 3.8/1, ms1mx2.8/23, Error ellipse: s-maj=49.7km s-min=24.9km az=65.0

ISC 27 09:20:51.8±0.8, 57°.01N±0°.05×157°.44W±0°.05, h97^{km}±8^{km}, n100, σ0^{s}93/111, mb3.6/6, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLBL	Peulik Blue Cr	0.77	26		Pn	09 21 10.0	+0.4
PLBL					Sn	09 21 23.3	+0.4
CHGN	Chignik	0.89	218		Pn	09 21 10.4	-0.4
CHGN					Sn	09 21 24.7	-0.3
PLK1	Peulik 1	0.91	29		Pn	09 21 11.4	+0.4
PLK3	Peulik 3	0.93	42		Pn	09 21 12.0	+0.8
PLK3					Sn	09 21 27.4	+1.6
PLK2	Peulik 2	0.97	38		Pn	09 21 12.4	+0.8
PLK5	Peulik 5	1.03	17		Pn	09 21 12.9	+0.6
VNHG	Veniaminof 1	1.24	231		Pn	09 21 14.7	-0.1
VNHG					Sn	09 21 32.2	+0.1
VNSG	Veniaminof 6	1.27	227		Pn	09 21 14.8	-0.3
VNSS	Veniaminof 8	1.36	236		Pn	09 21 15.9	-0.5
VNSS					Sn	09 21 34.9	0.0
VNFG	Fog Glacier, M	1.38	239		Pn	09 21 16.4	0.0
KJL	Kejulik	1.45	43		Pn	09 21 17.6	+0.3
CAHL	Cahill	1.55	47		Pn	09 21 19.1	+0.5
CHIR	Chirikof Islan	1.56	139		Pn	09 21 18.2	-0.4
CHIR					Sn	09 21 38.7	-0.2
KELA	Mount Kelaz	1.70	32		Pn	09 21 20.8	+0.4
KABU	Katmai Buttres	1.71	42		Pn	09 21 21.3	+0.7
KABU					Sn	09 21 42.6	+0.1
KCE	Katmai Mt Cerb	1.73	43		Pn	09 21 20.4	-0.4
KBM	Katmai Bkd Mtn	1.75	43		Pn	09 21 20.4	-0.5
KCG	Knife Ck. Glac	1.80	43		Pn	09 21 22.4	+0.7
SII	Sitkinak Islan	1.84	103		Pn	09 21 22.4	+0.1
SII					Sn	09 21 46.4	+1.0
KAHC	Katmai Hardscr	2.09	37		Pn	09 21 26.1	+0.5
OHAK	Old Harbor	2.27	83		Pn	09 21 27.9	+0.2
OHAK					Sn	09 21 54.8	-0.5
SDPT	Sand Point	2.38	227		Pn	09 21 28.7	-0.5
SDPT					Sn	09 21 58.5	+0.7
CNBA	Chernabura Isl	2.51	210		Pn	09 21 29.5	-1.4
KDAK	Kodiak Island	2.74	72	P	Pn	09 21 34.2	+0.3
	32nm,0.3s,baz=223,slow=3.3,SNR=1105						
KDAK				S	Sn	09 22 06.2	-0.1
	17nm,0.3s,baz=54,slow=21,SNR=17						
KDAK	Kodiak Island	2.74	72		Pn	09 21 34.4	+0.5
PS1A	Pavlof South-1	2.88	238		Pn	09 21 36.1	+0.2
BLHA	Black Hill	2.89	245		Pn	09 21 36.3	+0.3
PS4A	Pavlof South-4	2.98	238		Pn	09 21 37.2	+0.1
DT1	Dutton Round H	3.32	237		Pn	09 21 41.6	-0.1
FALS	False Pass	4.00	240		Sn	09 22 35.5	-1.0
FALS	False Pass	4.00	240		Pn	09 21 51.2	+0.4
HOM	Homer	4.05	47	Pn	Pn	09 21 53.7	+2.3
CNPM	China Poot	4.13	50		Sn	09 22 41.4	+1.6
CNPM	China Poot	4.13	50		Pn	09 21 53.3	+0.7
RED	Redoubt Volcan	4.19	33		Pn	09 21 54.1	+0.6
SVW2	Sparrevohn	4.21	12		Pn	09 21 53.8	+0.2
RDWB	Redoubt West	4.23	33		Pn	09 21 55.2	+1.2
RSO	Redoubt South	4.23	33		Pn	09 21 55.6	+1.4
DFR	Drift River	4.36	33		Pn	09 21 57.1	+1.3
SSBA	Shishaldin	4.38	242		Pn	09 21 55.5	-0.6
BRLK	Bradley Lake	4.42	49		Sn	09 22 45.0	-1.7
BRLK	Bradley Lake	4.42	49		Pn	09 21 56.3	-0.2
BRSE	Bradley Lake S	4.46	49		Pn	09 21 57.1	0.0
SLKM	Skilak Lake	5.14	44		Pn	09 22 07.0	+0.7
SEW	Seward	5.20	50		Pn	09 22 07.5	+0.4
RC01	Rabbit Creek A	5.70	41		Pn	09 22 14.1	+0.3
RC01	Rabbit Creek A	5.70	41		Sn	09 23 15.3	-2.5
SKT	Skwentna	5.82	29		Pn	09 22 16.5	+1.0
TT01	Tatalina	5.96	6		Pn	09 22 17.4	+0.1
UNV	Unalaska Valle	6.06	242		Pn	09 22 17.6	-1.1
PWL	Port Wells	6.09	47		Pn	09 22 18.8	-0.3
MSW	Makushin Switc	6.16	244		Pn	09 22 19.0	-1.0
PMR	Palmer	6.26	39	Pn	Pn	09 22 20.5	-0.9
KNK	Knik Glacier	6.38	42		Pn	09 22 22.8	-0.3
GHO	Glory Hole Cre	6.45	39		Pn	09 22 23.3	-0.8
PPLA	Purkeypile	6.46	22		Pn	09 22 26.2	+1.8
HIN	Hinchinbrook I	6.63	55		Pn	09 22 26.2	-0.2
SML	Sawmill	6.68	40	Pn	Pn	09 22 26.4	-0.8
FID	Port Fidalgo	6.80	52		Pn	09 22 27.8	-1.0
EYAK	Cordova Ski Ar	7.03	55		Pn	09 22 31.5	-0.4
SCM	Sheep Creek Mo	7.07	43		Pn	09 22 31.9	-0.5
KTH	Kantishna Hill	7.31	24		Pn	09 22 36.5	+0.6
WAT1	Susitna Watana	7.34	34		Pn	09 22 35.0	-1.2
TRF	Thorofare Moun	7.37	26		Pn	09 22 36.3	-0.3
WAT6	Susitna Watana	7.42	37		Pn	09 22 36.0	-1.3
WAT2	Susitna Watana	7.43	33		Pn	09 22 36.5	-1.0
GOAT	Goat Mountain	7.51	56		Pn	09 22 37.9	-0.5
RND	Reindeer	7.70	30		Pn	09 22 40.5	-0.6
BPAW	Bear Paw Mtn.	7.79	21		Pn	09 22 41.7	-0.5
DHY	Denali Highway	7.89	35		Pn	09 22 42.5	-1.2
BERG	Berg Lake	7.91	59		Pn	09 22 43.5	-0.4
MCK	McKinley	7.94	28		Pn	09 22 43.5	-0.8
GLB	Gilahina Butte	8.27	52		Pn	09 22 48.3	-0.6
CRQM	Cirque	8.30	57		Pn	09 22 48.7	-0.6
VRDI	Verde Repeater	8.34	54		Pn	09 22 49.7	-0.2
KIAG	Kiagna River	8.71	57		Pn	09 22 54.9	-0.1
BALM	Baldy	8.76	56		Pn	09 22 55.0	-0.5
PTPK	Patty Peak	8.76	55		Pn	09 22 55.3	-0.3
WRH	Wood River Hil	8.76	28		Pn	09 22 53.7	-1.7
GRNC	Granite Creek	8.93	59		Pn	09 22 57.2	-0.8
CCB	Clear Creek Bu	8.98	27		Pn	09 22 57.5	-0.8
PS08	TAPS Pump Stn8	9.15	30		Pn	09 22 58.9	-1.8
RIDG	Independent Ri	9.17	37		Pn	09 23 00.2	-0.9
IM03		9.17	10		Pn	09 23 01.1	+0.1
IMAR	Indian Mountai	9.17	10		Pn	09 23 01.0	0.0
CTGM	Chitina Glacie	9.20	58	Pn	Pn	09 23 02.0	+0.4
ILAR	Eielson Array	9.31	29	P	Pn	09 23 00.6	-2.3
	0.8nm,0.3s,baz=214,slow=13,SNR=50						
ILAR				S	Sn	09 24 36.8	-8.9
	0.1nm,0.3s,baz=219,slow=22,SNR=2.5						
ILAR	Eielson Array	9.31	29		Pn	09 23 00.9	-2.0
PCA	Pinnacle	9.49	64	Pn	Pn	09 23 05.2	-0.3
SCRK	Sand Creek	9.62	38		Pn	09 23 05.6	-1.6
YUK2	White River	9.71	54		Pn	09 23 08.8	+0.4
BC03		9.89	46		Pn	09 23 10.2	-0.5
DLBC	Dease Lake	14.67	73	P	P	09 24 17.1	-0.8
	0.1nm,0.3s,baz=262,slow=7.1,SNR=4.6						
INK	Inuvik	15.63	34	P	Pn	09 24 23.1	-3.0
	0.1nm,0.3s,baz=332,slow=29,SNR=2.4						
YKA	Yellowknife Ar	21.93	58	P	P	09 25 36.4	-0.4
	0.6nm,0.6s,baz=270,slow=8.8,SNR=11						
NVAR	Mina Array Bea	31.63	109	P	P	09 27 07.6	+2.0
	0.9nm,0.7s,baz=305,slow=8.7,SNR=8.6						
NVAR				LR	LR	09 38 47.8	
	comp=Z,134nm,19.7s,baz=349,slow=34						
PDAR	Pinedale Array	33.22	95	P	P	09 27 20.7	+1.2
	0.4nm,0.5s,baz=321,slow=4.6,SNR=6.0						
ULM	Lac du Bonnet	35.99	74	P	P	09 27 43.1	+0.1
	0.9nm,0.3s,baz=306,slow=5.7,SNR=3.8						
TXAR	Lajitas Array	46.34	103	P	P	09 29 08.6	+0.6
	0.4nm,0.7s,baz=309,slow=5.7,SNR=5.2						
SCHQ	Schefferville	47.20	52	P	P	09 29 14.2	-0.1
	2.6nm,0.9s,baz=291,slow=8.6,SNR=1.6						

KRNET 27 09:22:31.6±0.1, 43°.42N×79°.90E, mb2.6

NNC 27 09:22:34.8±1.3, 42°.90N×79°.78E, h0^{km}, mb3.2, mpv3.4, Error ellipse: s-maj=7.1km s-min=6.2km az=161.0

SOME 27 09:22:36.0, 42°.97N×79°.83E, h20^{km}

ISC 27 09:22:34.8±1.7, 42°.97N±0°.05×79°.82E±0°.04, h3^{km}±12^{km}, n17, σ1^{s}11/33, 12C-8D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	0.32	306	⇑iP	Pg	09 22 41.4	+0.4
	139nm,0.1s						
SHLS				⇑iS	Sg	09 22 45.5	+0.3
	257nm,0.2s						
SHLS	Shalkode	0.32	306	P	Pg	09 22 41.4	+0.4
	139nm,0.1s						
SHLS				S	Sg	09 22 45.5	+0.3
	226nm,0.2s						
PDGK	Podgornoye	0.43	326	P	Pb	09 22 44.8	-0.4
	3.1nm,0.1s						
PDGK				S	Sb	09 22 51.1	-1.1

	16nm,0.1s						
PDGK	Podgornoye	0.43	326	⇓P	Pb	09 22 44.5	-0.7
	24nm,0.9s						
PDGK				⇑S	Sb	09 22 51.1	-1.1
	24nm,0.5s						
UZB	Uzynbulak	0.61	287	⇓*i*P	Pb	09 22 47.6	-0.6
	17nm,0.1s						
UZB				⇑*i*S	Sb	09 22 56.0	-1.3
	62nm,0.3s						
KTMS	Ketmen	0.61	39	⇓*i*P	Pb	09 22 48.0	-0.3
	27nm,0.1s						
KTMS				⇓*i*S	Sb	09 22 56.5	-1.0
	58nm,0.2s						
KTMS	Ketmen	0.61	39	P	Pb	09 22 48.0	-0.3
	27nm,0.1s						
KTMS				S	Sb	09 22 56.5	-1.0
	57nm,0.1s						
KPKS	Kokpek	0.97	301	*e*P	Pb	09 22 53.9	-0.4
	33nm,0.1s						
KPKS				*e*S	Sb	09 23 06.8	-0.7
	62nm,0.2s						
SATY	Saty	1.04	275	*e*P	Pb	09 22 55.3	-0.3
	6.6nm,0.1s						
SATY				*e*S	Sb	09 23 09.1	-0.5
	53nm,0.1s						
SATY	Saty	1.04	275	P	Pb	09 22 55.3	-0.3
	5.7nm,0.1s						
SATY				S	Sb	09 23 09.1	-0.5
	53nm,0.1s						
PRZ	Przheval'sk	1.15	246	⇑*i*P	Pn	09 22 58.0	0.0
	baz=30						
PRZ				⇑*i*S	Sn	09 23 17.2	+2.7
	baz=30						
DJR	Jarkent	1.36	359	*e*P	Pb	09 23 00.7	-0.3
	0.4nm,0.1s						
DJR				*e*S	Sg	09 23 18.6	+0.1
	6.8nm,0.4s						
ANVS	Anan'yevo	1.59	264	⇑*i*P	Pn	09 23 03.6	-0.5
	baz=50						
ANVS				⇑*i*S	Sg	09 23 26.6	+0.7
	baz=50						
MDOK	Medeo	2.04	276	⇓Pg	Pn	09 23 10.4	+0.2
	3.4nm,0.5s						
MDOK				⇓Lg	Lg	09 23 37.5	
KDJ	Kajisay	2.12	248	⇓*i*P	Pb	09 23 12.2	-1.8
	baz=38						
KDJ				⇓*i*S	Sb	09 23 41.7	+0.8
	baz=38						
BOOM	Boomskoye usch	2.90	262	⇑*i*P	Pn	09 23 21.3	-0.7
	baz=54						
BOOM				⇑*i*S	Sn	09 23 58.1	+0.6
	baz=54						
NRN	Naryn	3.23	243	⇑*i*P	Pn	09 23 28.2	+1.5
	baz=37						
NRN				⇑*i*S	Sb	09 24 09.4	-3.3
	baz=37						

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*DDA **27** 09:47:39.9, 37°.02N×27°.46E, h10^{km}, ML2.1*

*ISK **27** 09:47:40.3, 36°.99N×27°.44E, h10^{km}, ML2.5/11*

ISC 27 09:47:40.1±0.9**, 37°.02N**±0°.03×**27°.52E**±0°.03**, h9**^{km}±7^{km}**, n17,** σ1^{s}.**87**/27**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.07	308	*i* P	Pg	09 47 42.3	+0.1
BDRM				*i* S	Sg	09 47 43.2	-0.5
BDRM				IAML		09 47 44.0	
	comp=N,2µm,0.3s						
BODT	Bodrum	0.17	284	PG	Pg	09 47 43.5	-0.2
BODT				SG	Sg	09 47 46.2	+0.1
DATC	Datca-Mugla	0.29	156	PG	Pg	09 47 46.5	+0.7
DATC				SG	Sg	09 47 51.1	+1.5
DAT	Datca	0.30	170	PG	Pg	09 47 46.6	+0.6
DAT				SG	Sg	09 47 50.9	+0.9
DAT	Datca	0.30	170	*i* P	Pg	09 47 46.6	+0.6
DAT				*i* S	Sb	09 47 51.6	-1.0
KOSK	Kos Island	0.51	238	PG	Pg	09 47 49.3	-0.6
KOSK				SG	Sb	09 47 56.0	-2.6
YER	Yerkesik	0.62	79	PG	Pb	09 47 54.2	+1.0
MRSB	Marmaris-Mugla	0.63	119	PG	Pg	09 47 53.5	+1.3
MRSB				SG	Sb	09 48 03.1	+1.0
GCAM	G?zelcaml?	0.71	342	PG	Pb	09 47 55.1	+0.4
GCAM	G?zelcaml?	0.71	342	*i* P	Pg	09 47 53.5	-0.3
GCAM				*i* S	Sg	09 48 03.7	+0.6
GCAM				IAML		09 48 05.0	
	comp=N,261nm,0.4s						
GCAM				IAML		09 48 06.0	
	comp=E,92nm,0.7s						
TURN	Turunc	0.88	99	PG	Pg	09 47 53.8	-3.3
TURN				SG	Sg	09 48 03.7	-4.9
TURN	Turunc	0.88	99	*i* P	Pg	09 47 53.0	-4.1
TURN				*i* S	Sg	09 48 04.0	-4.5
TURN				IAML		09 48 06.0	
	comp=E,68nm,0.3s						
TURN				IAML		09 48 08.0	
	comp=N,68nm,0.3s						
DALY	Dalyan (Mula)	0.94	102	PG	Pn	09 47 59.9	+0.5
ARG	Arkhangelos	0.94	148	PG	Pb	09 47 58.9	+0.3
AYDB	Zeytinkoy-Aydi	0.97	18	PG	Pg	09 47 59.6	+0.8
TAVA	DENIZLI_Tavas	1.20	68	*i* P	Pg	09 48 05.2	+2.1
TAVA				*i* S	Sn	09 48 21.2	+1.6
URLA	Izmir	1.52	332	PN	Pb	09 48 08.2	-0.3

MAN 27 10:02:58.5, 18°.22N×120°.14E, h32^{km}, mb4.1, ML2.9, MS2.6, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	0.42	134	⇑*e*P	Pn	10 03 08.5	+0.2
SIPP				*e*S	Sn	10 03 15.5	+0.5

IDC 27 10:11:49.3±1.1**, 31°.08N×111°.04E, h0^{km}, mb3.4**/5**, mb1 3.6**/7**, mb1mx3.3**/60**, mbtmp3.4**/7**, ML4.0**/2**, Error ellipse: s-maj=38.3km s-min=24.4km az=61.0, Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	15.33	61	Pn	Pn	10 15 27.4	+0.4
	0.2nm,0.3s,baz=237,slow=12,SNR=1.3						
CMAR	Chiang Mai Arr	16.67	224	Pn	Pn	10 15 45.4	+1.0
	0.5nm,0.3s,baz=26,slow=12,SNR=5.4						
MKAR	Makanchi Array	27.12	314	P	P	10 17 33.8	-0.2
	0.3nm,0.5s,baz=107,slow=11,SNR=4.1						
KURBB	Kurchatov Arra	31.03	318	P	P	10 18 08.7	0.0
	0.2nm,0.5s,baz=119,slow=9.5,SNR=3.1						
WRA	Warramunga Arr	55.45	153	P	P	10 21 26.2	+0.3
	0.4nm,0.8s,baz=339,slow=7.7,SNR=0.3						
ASAR	Alice Springs	58.68	155	P	P	10 21 48.0	-0.8
	0.1nm,0.3s,baz=338,slow=6.7,SNR=2.9						
YKA	Yellowknife Ar	79.84	20	P	P	10 23 59.4	+0.1
	0.2nm,0.6s,baz=323,slow=4.7,SNR=3.5						

IDC 27 10:20:32.7±1.9**, 34°.42N×83°.03E, h0^{km}, mb3.6**/4**, mb1 3.8**/7**, mb1mx3.4**/66**, mbtmp3.6**/7**, ML3.3**/3**, Error ellipse: s-maj=52.3km s-min=24.4km az=61.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	10.58	323	Pn	Pn	10 23 06.8	+1.1
	0.3nm,0.3s,baz=144,slow=19,SNR=2.6						
MKAR	Makanchi Array	12.38	358	Pn	Pn	10 23 29.8	-0.3
	0.2nm,0.3s,baz=183,slow=14,SNR=24						
KURBB	Kurchatov Arra	16.53	350	Pn	Pn	10 24 23.5	-2.2
	0.1nm,0.3s,baz=170,slow=11,SNR=4.8						
BVAR	Borovoye Array	20.67	338	P	P	10 25 15.0	+1.1
	0.8nm,0.7s,baz=150,slow=12,SNR=4.8						
SONM	Songino Array	22.02	45	P	P	10 25 28.5	-0.2
	1.6nm,0.8s,baz=256,slow=12,SNR=6.7						
WRA	Warramunga Arr	72.82	130	P	P	10 32 03.4	0.0
	1.6nm,0.2s,baz=322,slow=5.7,SNR=6.8						
ILAR	Eielson Array	73.73	20	P	P	10 32 08.2	+0.1
	0.5nm,0.9s,baz=313,slow=5.3,SNR=5.3						

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*NEIC **27** 10:21:16.6±1.9, 3°.98N±0°.05×71°.42W±0°.04, h26^{km}±4^{km}, mb4.7/43, Error ellipse: s-maj=8.9km s-min=4.3km az=217.0*

*RSNC **27** 10:21:16.6±0.8, 3°.93N×71°.58W, h4^{km}±6^{km}, ML4.3, Mw4.3*

*IDC **27** 10:21:17.6±2.4, 4°.03N×71°.45W, h35^{km}±19^{km}, mb3.9/20, mb1 4.1/25, mb1mx4.0/52, mbtmp4.2/25, ML3.5/4, MS3.6/17, Ms1 3.6/17, ms1mx3.5/38, Error ellipse: s-maj=15.4km s-min=10.2km az=67.0*

ISC 27 10:21:14.1±1.5**, 3°.98N**±0°.03×**71°.44W**±0°.03**, h9**^{km}±9^{km}**, n120,** σ1^{s}.**67**/137**, mb4.5**/37**, MS3.7**/11**, 3C-3D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTGC	Puerto Gaitan,	0.73	287	⇑*i*Pg	Pb	10 21 27.1	-1.8
PTGC				*e*Sg	Sb	10 21 35.7	-3.3
PTGC				*i*		10 21 53.1	
	comp=Z,6µm,0.7s						
GUVC	San Jose del G	1.86	220	*e*P	Pn	10 21 45.2	-0.9
GUVC				*e*S	Sn	10 22 08.7	-1.0
GUVC				*i*		10 22 13.3	
	comp=Z,5µm,0.5s						
VILC	Villavicencio,	2.25	273	⇑*e*P	Pn	10 21 52.2	+0.5
VILC				*e*S	Sn	10 22 19.1	-0.6
CHIC	Chingaza	2.38	286	⇓*e*P	Pn	10 21 54.2	+0.6
CHIC				*e*S	Sn	10 22 23.1	+0.1
CHIC				*i*		10 22 29.2	
	comp=Z,2µm,0.5s						
TAMC	Tame, Arauca	2.46	352	*e*P	Pn	10 21 56.9	+2.5
TAMC				*e*S	Sb	10 22 29.7	+0.6
TAMC				*i*		10 22 55.4	
	comp=Z,2µm,1.1s						
RUSC	La Rusia	2.51	319	*e*P	Pn	10 21 57.3	+1.8
RUSC				*e*S	Sn	10 22 28.3	+1.9
RUSC				*i*		10 22 43.2	
	comp=Z,1µm,0.7s						
RUSC	La Rusia	2.51	319		Pn	10 21 57.1	+1.7
CVER	Cruz Verde, Cu	2.68	282	*e*P	Pn	10 21 59.6	+1.7
ROSC	El Rosal	3.00	287	Pn	Pn	10 22 04.3	+2.2
	comp=Z,23nm,0.3s,baz=45,slow=20,SNR=38						
ROSC				Sn	Sn	10 22 36.1	-2.3
	comp=Z,54nm,0.3s,baz=150,slow=21,SNR=4.9						
ROSC				Lg	Lg	10 22 49.5	
	comp=Z,78nm,0.3s,baz=97,slow=17,SNR=5.6						
ROSC				LR	LR	10 23 36.7	
	comp=Z,634nm,20.2s,baz=158,slow=47						
ROSC	El Rosal	3.00	287	⇓*e*P	Pn	10 22 04.3	+2.2
ROSC				*e*S	Sg	10 22 49.8	-0.8
ROSC	El Rosal	3.00	287		Pn	10 22 04.4	+2.3
MACC	Macarena, Meta	3.02	233	*e*P	Pn	10 22 02.1	0.0
MACC				*e*S	Sn	10 22 40.1	+1.7
MACC				*i*		10 22 47.9	
	comp=Z,2µm,0.4s						
SPBC	San Pablo de B	3.11	302	*e*P	Pn	10 22 04.0	+0.7
SPBC				*e*S	Sb	10 22 49.3	+1.7
SPBC				*i*		10 22 58.0	
	comp=Z,529nm,1.8s						
BARC	Barichara	3.12	326	*e*P	Pn	10 22 05.0	+1.3
PAMC	Pamplona, Colo	3.56	339	*e*P	Pn	10 22 11.3	+1.3
PAMC				*e*S	Sb	10 23 05.5	+4.3
PAMC				*i*		10 23 17.8	
	comp=Z,734nm,1.6s						
NORC	Norcasia	3.76	295	*e*P	Pn	10 22 12.6	+0.2
NORC				*e*S	Sb	10 23 06.0	-0.6
NORC				*i*		10 23 11.7	
	comp=Z,429nm,0.6s						
ORTC	Ortega, Tolima	3.80	269	*e*P	Pn	10 22 13.3	+0.5
ORTC				*e*S	Sb	10 23 09.2	+1.7
ORTC				*i*		10 23 24.4	
	comp=Z,915nm,0.6s						
PTBC	PUERTO BERRIO,	3.94	310	*e*P	Pn	10 22 14.2	-0.5
PTBC				*e*S	Sb	10 23 12.8	+1.3
PTBC				*i*		10 23 21.5	
	comp=Z,248nm,0.9s						
ANIL	Santa Ana	3.99	277	*e*P	Pn	10 22 16.3	+0.7
ANIL				*e*S	Sb	10 23 14.9	+1.8
ANIL				*i*		10 23 18.4	
	comp=Z,1µm,0.5s						
RREF	El Recreo	4.00	283	*e*P	Pn	10 22 16.5	+0.3
RREF				*e*S	Sb	10 23 15.6	+1.6
RREF				*i*		10 23 31.1	
	comp=Z,391nm,1.3s						
GUY2C	Guyana, Caldas	4.11	288	⇓*e*P	Pn	10 22 18.4	+1.0
GUY2C				*e*S	Sn	10 22 54.6	-11
GUY2C				*i*		10 23 35.1	
	comp=Z,253nm,0.6s						
GARC	Garzon, Huila	4.42	246	*e*P	Pn	10 22 21.5	-0.1
GARC				*e*S	Sn	10 23 11.4	-2.0
OCAC	Ocana	4.62	336	*e*P	Pn	10 22 25.9	+1.6
OCAC				*e*S	Sg	10 23 39.3	-3.5
OCAC				*i*		10 23 53.9	
	comp=Z,353nm,0.7s						
HELC	Santa Helena	4.63	298	*e*P	Pn	10 22 25.3	+0.8
HELC				*e*S	Sn	10 23 18.6	0.0
FLOC	Florencia	4.84	241	*e*P	Pn	10 22 28.1	+1.0
FLOC				*e*S	Sb	10 23 36.2	-1.2
FLOC				*i*		10 23 49.4	
	comp=Z,642nm,0.5s						
FLOC	Florencia	4.84	241		Pn	10 22 27.3	+0.2
ZARC	Zaragoza, Cauc	4.87	316	*e*P	Pn	10 22 28.9	+1.4
ZARC				*e*S	Sn	10 23 20.4	-3.7
YOTC	Yotoco, Valle	4.89	270	*e*P	Pn	10 22 27.6	-0.4
YOTC				*e*S	Sn	10 23 21.9	-2.9
PLMC	San Jos del P	4.92	281	*e*P	Pn	10 22 30.8	+2.5
PLMC				*e*S	Sb	10 23 43.0	+3.2
CBOC	Ciudad Bolivar	4.93	293	*e*P	Pn	10 22 29.7	+1.3
CBOC				*i*		10 23 56.4	
	comp=Z,127nm,1.0s						
SDV	Santo Domingo	4.94	9	Pn	Pn	10 22 29.0	+0.4
	comp=Z,24nm,0.3s,baz=160,slow=5.4,SNR=60						
SDV				Pg	Pg	10 22 48.9	+0.2
	comp=Z,56nm,0.3s,baz=207,slow=19,SNR=16						
SDV				Sn	Sn	10 23 25.7	-0.4
	comp=Z,46nm,0.3s,baz=310,slow=18,SNR=6.4						
SDV				Lg	Lg	10 23 50.0	
	comp=Z,60nm,0.3s,baz=257,slow=23,SNR=2.1						
PCON	Cinco Dias	5.22	252	*e*P	Pn	10 22 35.1	+2.3
PCON				*e*S	Sb	10 23 51.7	+2.8
PCON				*i*		10 24 02.4	
	comp=Z,457nm,0.9s						
SMLC	San Martn de	5.46	331	*e*P	Pn	10 22 37.4	+1.8
SMLC				*e*S	Sn	10 23 40.2	+1.7
UREC	San Jos de Ur	5.53	313	*e*P	Pn	10 22 36.8	+0.1
UREC				*e*S	Sn	10 23 36.9	-3.6
DBBC	Dabeiba	5.63	303	⇑*e*P	Pn	10 22 39.9	+1.9
MALC	Bahia Malaga	5.88	271	*e*P	Pn	10 22 42.7	+1.2
SJCC	San Jacinto, C	6.95	328	*e*P	Pn	10 22 56.8	+0.6
SJCC				*e*S	Sn	10 24 14.1	-1.4
SJCC				*i*		10 24 32.0	
	comp=Z,54nm,0.8s						
URIC	Uribia, Colomb	7.69	356		Pn	10 23 06.2	-0.1
PCRV	Puerto La Cruz	9.13	47	Pn	Pn	10 23 26.7	+0.6
	comp=Z,12nm,0.3s,baz=209,slow=8.1,SNR=30						
PCRV				Sn	Sn	10 25 08.3	-0.9
	comp=Z,1.5nm,0.3s,baz=267,slow=19,SNR=1.3						
PCRV				Lg	Lg	10 26 04.5	
	comp=Z,5.6nm,0.3s,baz=210,slow=17,SNR=4.0						
PLCV	Puerto La Cruz	9.16	48		Pn	10 23 26.7	+0.3
PLCV					Sn	10 25 08.3	-1.5
PTGA	Pitinga	12.38	112	Pn	Pn	10 24 11.2	+0.6
	comp=Z,0.9nm,0.3s,baz=285,slow=16,SNR=6.6						
PTGA				Sn	Sn	10 26 22.2	-6.7
	comp=Z,1.8nm,0.3s,baz=347,slow=22,SNR=3.3						
PTGA				Lg	Lg	10 27 43.4	
	comp=Z,8.2nm,0.3s,baz=211,slow=22,SNR=6.9						
PTGA				LR	LR	10 29 10.6	
	comp=Z,230nm,18.2s,baz=306,slow=38						
PTGA	Pitinga	12.38	112		Sn	10 26 30.6	+1.7
PTGA	Pitinga	12.38	112	Pn	Pn	10 24 11.6	+0.9
ATAH	Atahualpa	13.04	212	Pn	Pn	10 24 21.5	+1.5
	comp=Z,0.5nm,0.3s,baz=24,slow=12,SNR=3.6						
ATAH				Sn	Sn	10 26 49.0	+3.4
	comp=Z,0.5nm,0.3s,baz=226,slow=21,SNR=1.9						
ATAH				LR	LR	10 29 43.7	
	comp=Z,135nm,18.6s,baz=40,slow=39						
BANI	BANI	14.36	4		Pn	10 24 41.1	+3.3
JTS	Las Juntas de	14.80	296	LR	LR	10 30 17.2	
	comp=Z,186nm,21.2s,baz=167,slow=36						
DR12	Loma Pena Alta	14.85	8	Pn	Pn	10 24 45.4	+0.9
SDDR	Presa de Saban	14.91	1	Pn	Pn	10 24 46.5	+1.3
SJG	San Juan	14.97	20	LR	LR	10 31 17.4	
	comp=Z,123nm,18.9s,baz=172,slow=40						
CUPR	Culebra, Puert	15.46	22	Pn	Pn	10 24 52.6	+0.1
CUPR				IAmb	IAmb	10 25 01.3	
	comp=Z,23nm,0.8s						
NNA	Nana	16.75	199	LR	LR	10 32 07.4	
	comp=Z,115nm,18.8s,baz=355,slow=39						
MDP	Montagnes des	18.77	86	Lg	Lg	10 31 00.3	
	comp=Z,0.4nm,0.3s,baz=44,slow=22,SNR=1.6						
LPAZ	La Paz	20.40	171	P	Pn	10 25 53.5	-0.6
	comp=Z,8.7nm,0.8s,baz=348,slow=12,SNR=28						
LPAZ				Lg	Lg	10 31 57.9	
	comp=Z,6.1nm,0.8s,baz=106,slow=12,SNR=2.9						
LPAZ				LR	LR	10 34 05.0	
	comp=Z,249nm,21.1s,baz=3.5,slow=38						
LPAZ	La Paz	20.40	171	P	Pn	10 25 54.0	-0.2
APG	El Apazote	21.70	302	P	P	10 26 07.3	+1.5
	comp=Z,5.5nm,0.8s,baz=4.8,slow=3.0,SNR=4.1						
APG				LR	LR	10 35 26.2	
	comp=Z,76nm,21.7s,baz=76,slow=39						
SIV	San Ignacio	22.34	153	P	P	10 26 12.7	+0.3
	comp=Z,3.4nm,0.7s,baz=346,slow=9.6,SNR=17						
SIV				S	S	10 30 19.7	+1.5
	comp=Z,1.5nm,0.8s,baz=310,slow=19,SNR=2.1						
SIV				Lg	Lg	10 32 52.4	
	comp=Z,10nm,0.9s,baz=258,slow=22,SNR=4.5						
SIV				LR	LR	10 35 10.5	
	comp=Z,326nm,18.4s,baz=283,slow=37						
TEIG	Tepich	23.02	316	LR	LR	10 38 05.8	
	comp=Z,58nm,18.4s,baz=126,slow=44						
CMIG	Matias Romero	26.43	301	LR	LR	10 37 09.6	
	comp=Z,98nm,19.1s,baz=82,slow=36						
LVC	Limon Verde	26.54	175	P	P	10 26 53.4	+0.7
	comp=Z,2.8nm,0.5s,baz=358,slow=6.3,SNR=4.0						
LVC				LR	LR	10 38 08.9	
	comp=Z,184nm,18.0s,baz=344,slow=38						
LVC	Limon Verde	26.54	175	IAmb	IAmb	10 26 55.7	
	comp=Z,12nm,1.2s						
BDFB	Brasilia	30.29	131	LR	LR	10 40 18.9	
	comp=Z,152nm,19.3s,baz=298,slow=38						
Z50A	Ashland	32.11	337	P	P	10 27 43.0	+1.2
Z50A				IAmb	IAmb	10 27 43.8	
	comp=Z,9.1nm,0.8s						
Y49A	Blount Mountai	32.84	337	P	P	10 27 48.7	+0.5
Y49A				IAmb	IAmb	10 27 49.8	
	comp=Z,8.1nm,0.8s						
CPUP	Villa Florida	33.09	156	LR	LR	10 42 02.8	
	comp=Z,169nm,18.3s,baz=18,slow=38						
T59A	Double "B" Far	33.31	351	P	P	10 27 52.2	0.0
T59A				IAmb	IAmb	10 27 53.6	
	comp=Z,6.7nm,0.7s						
TKL	Tuckaleechee C	33.52	342	LR	LR	10 41 20.2	
	comp=Z,228nm,18.9s,baz=74,slow=36						
PLAL	Pickwick Lake	34.49	335	P	P	10 28 03.3	+0.9
WVT	Waverly	35.38	337	P	P	10 28 10.6	+0.4
WVT				IAmb	IAmb	10 28 11.6	
	comp=Z,10nm,0.8s						
N59A	State Game Lan	36.98	355	P	P	10 28 25.1	+1.2
M57A	Sunshine Farm,	37.54	353	P	P	10 28 30.2	+1.7
M57A				IAmb	IAmb	10 28 42.0	
	comp=Z,14nm,1.1s						
M56A	Emporium	37.83	352	P	P	10 28 32.4	+1.4
M56A				IAmb	IAmb	10 28 49.3	
	comp=Z,22nm,1.4s						
CCM	Cathedral Cave	38.44	335	P	P	10 28 36.3	+0.1
WVNY	West Valley, N	38.79	352	P	P	10 28 39.9	+0.8
R40A	Maddies Statio	39.08	334	IAmb	IAmb	10 28 41.7	
	comp=Z,6.2nm,0.8s						
J57A	Williamstown	39.47	355	P	P	10 28 45.1	+0.3
J57A				IAmb	IAmb	10 28 46.5	
	comp=Z,14nm,0.7s						
TX31	Lajitas Ar. Si	39.60	313	P	P	10 28 46.4	+0.2
TX32	Lajitas Array	39.60	313	P	P	10 28 46.4	+0.2
TXAR	Lajitas Array	39.60	313	P	P	10 28 46.3	+0.1
	comp=Z,58nm,0.3s,baz=127,slow=8.9,SNR=40						
P38A	Dawn	40.74	334	IAmb	IAmb	10 28 55.6	
	comp=Z,11nm,0.8s						
SADO	Sadowa	41.18	352	P	P	10 28 59.6	+0.7
	comp=Z,7.9nm,0.7s,baz=239,slow=3.8,SNR=6.1						
SADO	Sadowa	41.18	352	IAmb	IAmb	10 29 09.6	
	comp=Z,28nm,1.5s						
MNTX	Cornudas Mount	42.14	315	P	P	10 29 07.0	0.0
D62A	Allapoint, All	42.99	2	P	P	10 29 13.4	-0.2
D62A				IAmb	IAmb	10 29 18.9	
	comp=Z,19nm,1.4s						
D53A	Lac Vacive, Po	43.27	354	P	P	10 29 16.4	+0.5
D53A				IAmb	IAmb	10 29 17.5	
	comp=Z,8.9nm,0.9s						
ANMO	Albuquerque	44.73	318	P	P	10 29 27.8	-0.3
	comp=Z,1.7nm,0.7s,baz=149,slow=11,SNR=7.3						
EYMN	Ely	47.07	342	P	P	10 29 46.0	-0.1
PV01	Paradox Valley	47.96	320	IAmb	IAmb	10 29 54.5	
	comp=Z,4.3nm,0.9s						
N23A	Red Feather La	48.07	325	P	P	10 29 55.1	+0.7
N23A				IAmb	IAmb	10 29 56.7	
	comp=Z,6.7nm,1.1s						
PV13	Radium Mtn., P	48.14	320	IAmb	IAmb	10 29 55.9	
	comp=Z,5.9nm,0.8s						
ULM	Lac du Bonnet	50.51	340	P	P	10 30 11.0	-1.5
	comp=Z,1.0nm,0.4s,baz=162,slow=7.5,SNR=4.6						
ULM	Lac du Bonnet	50.51	340	IAmb	IAmb	10 30 16.4	
	comp=Z,12nm,1.5s						
SCHQ	Schefferville	50.83	3	P	P	10 30 15.5	+0.6
	comp=Z,8.2nm,0.6s,baz=190,slow=6.4,SNR=22						
SCHQ	Schefferville	50.83	3	IAmb	IAmb	10 30 16.3	
	comp=Z,8.0nm,0.7s						
PDAR	Pinedale Array	51.35	324	P	P	10 30 18.2	-1.0
	comp=Z,1.3nm,0.8s,baz=122,slow=9.3,SNR=9.5						
PDAR				LR	LR	10 55 03.8	
	comp=Z,77nm,18.9s,baz=64,slow=40						
ELK	Elko	53.71	319	P	P	10 30 36.0	-0.8
	comp=Z,0.6nm,0.5s,baz=159,slow=8.6,SNR=4.0						
NVAR	Mina Array Bea	54.66	315	P	P	10 30 43.4	-0.4
	comp=Z,0.6nm,0.8s,baz=125,slow=8.0,SNR=4.3						
WVOR	Wild Horse Val	56.76	320	P	P	10 30 59.5	+0.8
WVOR				IAmb	IAmb	10 31 05.4	
	comp=Z,3.9nm,0.6s						
YKA	Yellowknife Ar	66.49	340	P	P	10 32 02.2	-1.6
	comp=Z,1.5nm,0.7s,baz=135,slow=6.7,SNR=32						
SUMG	Summit	71.47	10	*i* P	P	10 32 35.3	+0.2
	comp=Z,46nm,1.0s						
SUMG	Summit	71.47	10	P	P	10 32 34.2	-0.9
TOA0	Torodi Ar. Sit	72.69	78	P	P	10 32 42.2	-0.8
TORD	Torodi Ar. Bea	72.69	78	P	P	10 32 41.9	-1.1
	comp=Z,0.8nm,0.5s,baz=291,slow=5.6,SNR=8.8						
INK	Inuvik	76.25	340	P	P	10 33 01.5	-1.1
	comp=Z,0.6nm,0.6s,baz=106,slow=5.2,SNR=2.1						
ILAR	Eielson Array	80.23	335	P	P	10 33 23.4	-1.3
	comp=Z,0.2nm,0.6s,baz=104,slow=4.1,SNR=4.6						
ILAR				PP	PP	10 36 24.8	-2.4
	comp=Z,1.2nm,1.1s,baz=116,slow=4.1,SNR=6.5						
ILAR				LR	LR	11 13 13.6	
	comp=Z,96nm,18.0s,baz=86,slow=39						
BPAW	Bear Paw Mtn.	81.87	334	P	P	10 33 32.5	-1.1
PPLA	Purkeypile	82.26	333	P	P	10 33 34.6	-1.1
PPLA				IAmb	IAmb	10 33 47.1	
	comp=Z,13nm,1.5s						
NB2	NORSAR Subarra	82.97	29	P	P	10 33 40.0	+0.6
	comp=Z,3.6nm,0.8s,baz=266,slow=5.3						
NOA	NORSAR Array B	82.97	29	P	P	10 33 39.2	-0.3
	comp=Z,1.7nm,0.8s,baz=267,slow=5.2,SNR=4.3						
IMAR	Indian Mountai	83.25	336	P	P	10 33 39.8	-0.9
GERES	GERESS Array B	83.82	41	P	P	10 33 44.6	+0.5
	comp=Z,1.7nm,0.6s,baz=222,slow=1.8,SNR=9.5						
SNAA	Sanae	87.15	163	P	P	10 34 00.3	+0.1
	comp=Z,1.2nm,0.9s,baz=311,slow=10.0,SNR=6.0						
SNAA	Sanae	87.15	163	IAmb	IAmb	10 34 11.7	
	comp=Z,6.4nm,1.4s						
ARCES	ARCESS Array B	88.73	20	P	P	10 34 07.4	-0.4
	comp=Z,1.5nm,0.6s,baz=347,slow=5.0,SNR=7.5						
FINES	FINESS Array B	90.13	28	P	P	10 34 13.9	-0.5
	comp=Z,1.0nm,0.8s,baz=224,slow=12,SNR=2.6						
MKAR	Makanchi Array	124.37	22	PKP	PKPdf	10 40 12.2	-1.6
	comp=Z,0.3nm,0.5s,baz=308,slow=2.3,SNR=4.9						
KSH	Kashi	127.34	32	PKP	PKiKP	10 40 22.0	+1.6
KSH				PP	PP	10 42 24.0	+5.4
KSH				PKS	PKSdf	10 43 57.0	+0.5
KSH	Kashi	127.34	32	SS	SS	10 59 30.8	+2.8
SONM	Songino Array	128.37	2	PKP	PKPdf	10 40 19.6	-2.0
	comp=Z,0.4nm,0.6s,baz=38,slow=2.6,SNR=2.7						
ASAR	Alice Springs	148.67	229	PKPbc	PKPdf	10 41 00.2	+1.3
	comp=Z,1.5nm,0.6s,baz=115,slow=3.5,SNR=28						
WRA	Warramunga Arr	150.29	236	PKP	PKPdf	10 40 59.8	-1.8
	comp=Z,2.2nm,1.0s,baz=116,slow=1.8,SNR=3.4						
WRA				PKPbc	PKPbc	10 41 04.4	-2.3
	comp=Z,2.9nm,1.1s,baz=130,slow=1.6,SNR=3.3						

IDC 27 10:39:55.1±3.7**, 9°.39S×117°.03E, h0^{km}, mb3.3**/2**, mb1 3.5**/3**, mb1mx3.4**/23**, mbtmp3.3**/3**, Error ellipse: s-maj=271.6km s-min=29.5km az=49.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.74	124	P	P	10 44 25.2	-1.5
	baz=292,slow=12,SNR=0.5						
ASAR	Alice Springs	21.49	133	P	P	10 44 46.6	+1.0

	0.9nm,0.6s,baz=308,slow=9.3,SNR=16						
MKAR	Makanchi Array	63.94	334	P	P	10 50 30.0	0.0
	0.2nm,0.5s,baz=129,slow=5.9,SNR=2.8						

*IDC **27** 10:59:00.5±2.8,21°.71N×143°.08E,h298km±29km,mb3.0/4, mb1 3.2/6,mb1mx2.8/55,mbtmp3.8/6,Error ellipse: s-maj=80.1km s-min=20.0km az=97.0*

ISC 27 10:59:00.8±1.2,**21°.7N**±0°.1×**143°.0E**±0°.5,**h300**km,**n6**, σ**0s.48**/7,**mb3.4**/4,**Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.42	352	P	Pn	11 00 23.7	+0.5
	4.2nm,0.3s,baz=192,slow=9.3,SNR=6.7						
JCJ				S	S	11 01 28.7	-0.7
	8.2nm,0.3s,baz=272,slow=22,SNR=6.2						
MJAR	Matsushiro Arr	15.36	345	P	P	11 02 21.9	+0.2
	0.1nm,0.3s,baz=165,slow=10,SNR=2.1						
WRA	Warramunga Arr	42.25	192	P	P	11 06 25.1	-0.3
	0.9nm,0.3s,baz=15,slow=8.5,SNR=3.0						
ASAR	Alice Springs	45.96	192	P	P	11 06 54.8	+0.1
	0.2nm,0.6s,baz=12,slow=9.1,SNR=4.4						
YKA	Yellowknife Ar	76.52	28	P	P	11 10 17.8	-0.1
	0.3nm,0.6s,baz=290,slow=5.3,SNR=4.1						
FINES	FINESS Array B	83.11	334	P	P	11 10 52.9	0.0
	1.5nm,1.0s,baz=59,slow=8.8,SNR=1.4						

*IGQ **27** 11:02:15.0±0.3,2°S±2°×7°9W±°,h4km,M4.2*

*IDC **27** 11:02:24.4±4.6,2°.61S×79°.62W,h101km±53km,mb3.3/6, mb1 3.5/10,mb1mx3.3/51,mbtmp3.7/10,Error ellipse: s-maj=45.9km s-min=25.6km az=36.0*

ISC 27 11:02:15.4±0.6,**2°.22S**±0°.03×**79°.32W**±0°.03,**h10**km,**n56**, σ**1s.64**/58,**mb3.6**/6,**Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COHC	Cochancay	0.25	166	S	Sg	11 02 23.5	-0.5
COHC	Cochancay	0.25	166	P	Pg	11 02 19.8	-0.7
AMIL	Milagro (Trans	0.29	287	P	Pg	11 02 21.7	+0.3
AMIL	Milagro (Trans	0.29	287	S	Sb	11 02 27.5	-0.2
AGUAY	Guayaquil	0.66	285	P	Pg	11 02 28.5	+0.3
BMAS	Trigal station	1.10	49	P	Pg	11 02 35.0	-1.6
MORR	Playas El Morr	1.10	248	S	Sn	11 02 52.7	+0.4
MORR	Playas El Morr	1.10	248	P	Pb	11 02 36.7	+0.1
BIL2	Estacion Bilba	1.11	47	P	Pg	11 02 37.2	+0.3
BBIL	Ulba Tungurahu	1.13	47	P	Pg	11 02 36.1	-1.1
BPAT	Tungurahua Vol	1.14	51	P	Pg	11 02 36.0	-1.4
RETU	Refugio	1.16	49	P	Pg	11 02 36.3	-1.5
BULB	Ulba Tungurahu	1.20	49	P	Pb	11 02 36.9	-1.5
BULB	Ulba Tungurahu	1.20	49	S	Sg	11 02 51.3	-2.8
RUN5	Runtun	1.20	48	P	Pb	11 02 37.0	-1.4
BRUN	Tungurahua Vol	1.20	49	P	Pb	11 02 37.1	-1.4
PISA	Pisayambo	1.48	39	P	Pn	11 02 43.0	+0.3
APUY	Puyo	1.52	60	P	Pn	11 02 43.7	+0.9
PPLP	Puerto Lpez	1.61	295	P	Pn	11 02 42.2	-1.8
SALI	Salinas	1.68	271	P	Pn	11 02 44.4	-0.4
BMOR	Cotopaxi Volca	1.71	30	P	Pn	11 02 47.1	+1.2
BNAS	Cotopaxi Volca	1.75	28	P	Pb	11 02 48.0	0.0
BREF	Cotopaxi Volca	1.77	30	P	Pb	11 02 49.5	+1.0
TAMB	Tambo	1.79	32	P	Pb	11 02 48.9	+0.3
BTAM	Cotopaxi Volca	1.79	31	P	Pb	11 02 48.6	-0.1
VC1	Cotopaxi 1	1.82	30	P	Pb	11 02 49.5	+0.3
ANTM	Antisana-La Mi	2.00	33	P	Pb	11 02 52.1	-0.2
GONZ	Gonzanam	2.00	182	P	Pb	11 02 51.6	-0.6
ANTG	Antisana-Guama	2.01	32	P	Pb	11 02 52.2	-0.3
ANTS	Antisana-Sarah	2.06	34	P	Pb	11 02 53.0	-0.3
GGPC	Guagua Pichinc	2.15	19	P	Pb	11 02 54.5	-0.5
TERV	Terraza Guagua	2.16	19	P	Pb	11 02 55.2	+0.3
PINO	Pino	2.17	19	P	Pb	11 02 55.1	-0.1
MAG1	Magdalena	2.19	348	P	Pb	11 02 55.3	+0.2
YANA	Yana	2.22	20	P	Pb	11 02 55.9	0.0
PULU	Pululahua	2.37	20	P	Pb	11 02 59.2	+0.6
PAC1	Pacto, Paraso	2.53	12	P	Pb	11 02 59.4	-1.6
CUIC	Cuicocha-Domo	2.69	21	P	Pb	11 03 03.1	-0.8
IMBA	Imbabura, San	2.72	24	P	Pb	11 03 05.4	+0.8
URCU	Urcuqui	2.85	22	P	Pb	11 03 05.8	-0.8
YAHU	Yahuarcocha	2.86	26	P	Pb	11 03 08.4	+1.6
GCUF	Volcan Galeras	3.95	30	*e*P	Pb	11 03 22.2	-3.3
GCUF				*e*S	Sg	11 04 20.4	-2.2
ATAH	Atahualpa	4.96	169	P	Pn	11 03 33.5	+3.0
	1.2nm,0.3s,baz=7.6,slow=9.3,SNR=8.6						
ATAH				S	Sn	11 04 27.0	-1.2
	2.5nm,0.3s,baz=116,slow=12,SNR=2.0						
SOTA	Rioblanco	5.11	32	*e*P	Pn	11 03 37.5	+5.0
FLOC	Florencia	5.26	44	*e*P	Pn	11 03 37.1	+2.8
FLOC				*e*S	Sb	11 04 55.0	+4.1
PCON	Cinco Dias	5.38	33	*e*P	Pn	11 03 41.7	+5.3
GARC	Garzon, Huila	5.81	41	*e*P	Pn	11 03 45.9	+3.9
NNA	Nana	10.01	166	P	Pn	11 04 41.1	+1.7
	1.8nm,0.3s,baz=328,slow=13,SNR=2.0						
NNA				S	Sn	11 06 27.4	-4.5
	0.3nm,0.3s,baz=208,slow=22,SNR=1.4						
LPAZ	La Paz	17.79	142	P	P	11 06 26.2	+1.4
	0.1nm,0.3s,baz=48,slow=3.6,SNR=2.7						
PTGA	Pitinga	19.40	86	P	Pn	11 06 46.8	+3.8
	0.1nm,0.3s,baz=270,slow=20,SNR=1.8						
SIV	San Ignacio	22.58	128	P	P	11 07 15.6	-0.7
	0.8nm,0.6s,baz=310,slow=14,SNR=4.3						
ANMO	Albuquerque	44.89	328	P	P	11 10 29.3	-1.2
	1.5nm,0.9s,baz=157,slow=7.7,SNR=2.7						
NVAR	Mina Array Bea	54.12	322	P	P	11 11 39.9	-1.1
	0.2nm,0.5s,baz=150,slow=5.1,SNR=2.0						
YKA	Yellowknife Ar	69.84	343	P	P	11 13 25.2	-0.8
	0.4nm,0.8s,baz=141,slow=6.4,SNR=5.7						
INK	Inuvik	79.54	342	P	P	11 14 22.1	-0.1
	2.1nm,1.0s,baz=124,slow=7.2,SNR=5.2						
ILAR	Eielson Array	82.61	336	P	P	11 14 38.1	-0.6
	0.5nm,0.9s,baz=174,slow=4.3,SNR=4.2						

*HLW **27** 11:12:03.2,34°.69N×24°.87E,h13km±19km,Md4.3,Ml4.4*

*NEIC **27** 11:12:04.9±2.3,34°.54N±0°.05×24°.82E±0°.07,h22km±6km, mb4.2/8,ML3.7(THE),ML4.1(ISK),Error ellipse: s-maj=8.5km s-min=7.0km az=104.0*

*ISK **27** 11:12:06.0,34°.62N×24°.85E,h19km,ML4.1/16*

*NIC **27** 11:12:06.1±0.0,34°.04N×25°.07E,h26km±15km,Ml4.0/4*

*IDC **27** 11:12:06.4±2.1,34°.67N×24°.76E,h32km±12km,mb3.9/17, mb1 4.0/23,mb1mx3.8/53,mbtmp4.1/23,ML4.3/6,MS3.4/5, Ms1 3.4/5,ms1mx2.9/50,Error ellipse: s-maj=18.6km s-min=15.5km az=30.0*

*THE **27** 11:12:06.6,34°.59N×24°.82E,h1km±1km,ML3.7/10,Error ellipse: s-maj=1.4km s-min=0.5km az=179.0*

*ATH **27** 11:12:06.7,34°.67N×24°.77E,h28km,ML3.9/18,Error ellipse: s-maj=1.6km s-min=0.7km az=359.0*

*GII **27** 11:12:12.0±0.0,34°.32N×25°.59E,h8km±1km,mb4.3/3, MD4.2/3,Mm3.9/9*

ISC 27 11:12:06.1±0.8,**34°.56N**±0°.03×**24°.83E**±0°.02,**h35**km±3km, **n186**,σ**2s.05**/243,**mb4.1**/22,**4C,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	Sivas	0.46	358	P	Pb	11 12 15.3	-1.0
SIVA				S	Sb	11 12 22.4	-0.8
SIVA	Sivas	0.46	358	P	Pb	11 12 15.2	-1.0
SIVA				S	Sb	11 12 21.4	-1.8
SIVA				AML	AML	11 12 22.6	
SIVA				AML	AML	11 12 25.1	
TMBK	Timbaki Herakl	0.52	354	P	Pb	11 12 16.5	-0.6
TMBK				S	Sb	11 12 24.0	-0.7
	23µm,0.2s						
GVD	Gavdhos	0.68	295	P	Pn	11 12 19.3	+0.1
GVD	Gavdhos	0.68	295	P	Pn	11 12 18.9	-0.3
GVD				S	Sb	11 12 27.5	-1.4
GVD				AML	AML	11 12 33.3	
	comp=E,34873µm,0.6s						
GVD				AML	AML	11 12 41.1	
	comp=N,29638µm,0.6s						
GVD	Gavdhos	0.68	295	PG	Pb	11 12 19.5	-0.1
GVD				SG	Sn	11 12 29.5	+1.0
GVDS	Gavdos	0.68	295	P	Pb	11 12 19.8	+0.1
GVDS				S	Sn	11 12 30.2	+1.7
	comp=N,7µm,0.3s						
GVDS	Gavdos	0.68	295	PG	Pb	11 12 19.7	+0.1
IDI	Anoyia	0.73	4	P	Pn	11 12 19.5	-0.6
IDI				S	Sn	11 12 30.8	+0.7
	comp=N,16µm,0.3s						
IDI	Anoyia	0.73	4	Pg	Pn	11 12 19.2	-0.8
	comp=N,231nm,0.3s,baz=179,slow=7.5,SNR=741						
IDI				Lg	Lg	11 12 28.3	
	comp=N,3µm,0.3s,baz=129,slow=19,SNR=40						
IDI	Anoyia	0.73	4	P	Pn	11 12 19.3	-0.8
IDI				S	Sb	11 12 28.6	-1.9
IDI				AML	AML	11 12 30.9	
	comp=N,34478µm,0.3s						
IDI				AML	AML	11 12 33.5	
	comp=E,27709µm,0.6s						
IDI	Anoyia	0.73	4	PG	Pn	11 12 19.3	-0.8
IDI				SG	Sb	11 12 29.6	-0.9
KSTL	Kastelli Herak	0.77	15	P	Pb	11 12 21.3	+0.1
KSTL				S	Sn	11 12 32.6	+1.7
IACM	Heraklion	0.78	15	P	Pb	11 12 21.0	-0.3
IACM				S	Sn	11 12 31.6	+0.6
IACM	Heraklion	0.78	15	P	Pb	11 12 20.7	-0.6
IACM				S	Sb	11 12 29.8	-1.7
IACM				AML	AML	11 12 36.7	
IACM				AML	AML	11 12 42.5	
HRKL	Herakleio	0.79	16	P	Pb	11 12 21.2	-0.3
HRKL				S	Sn	11 12 33.1	+1.8
HRKL	Herakleio	0.79	16	PG	Pb	11 12 21.2	-0.3
HRKL				SG	Sb	11 12 31.3	-0.6
LAST	Lasithi	0.81	41	P	Pb	11 12 21.7	-0.2
LAST				S	Sn	11 12 33.4	+1.5
	comp=E,5µm,0.3s						
LAST	Lasithi	0.81	41	P	Pb	11 12 21.5	-0.3
LAST				S	Sn	11 12 32.6	+0.7
LAST				AML	AML	11 12 35.0	
	comp=N,18908µm,0.4s						
LAST				AML	AML	11 12 39.1	
	comp=E,9117µm,0.4s						
PRNS	Prines Rethymn	0.85	342	P	Pb	11 12 22.9	+0.3
PRNS				S	Sb	11 12 34.4	+0.7
FRMA	Ierapetra Chan	0.87	58	P	Pb	11 12 24.7	+1.8
FRMA				S	Sb	11 12 39.3	+5.0
NPS	Neapolis	0.95	42	P	Pb	11 12 24.4	+0.1
NPS				S	Sb	11 12 38.8	+2.1
	comp=E,5µm,0.4s						
NPS	Neapolis	0.95	42	P	Pb	11 12 24.1	-0.2
NPS				S	Sb	11 12 36.9	+0.3
NPS				AML	AML	11 12 40.5	
	comp=E,14817µm,0.3s						
NPS				AML	AML	11 12 40.7	
	comp=N,13151µm,0.3s						
VAM	Vamos	1.00	329	P	Pn	11 12 24.1	+0.5
VAM				S	Sb	11 12 39.1	+1.3
VAM	Vamos	1.00	329	P	Pn	11 12 23.7	+0.1
VAM				S	Sn	11 12 35.7	-0.8
VAM				AML	AML	11 12 40.0	
	comp=E,30738µm,0.4s						
VAM				AML	AML	11 12 41.9	
	comp=N,26362µm,0.3s						
IMMV	Iera Moni Meta	1.14	323	P	Pb	11 12 26.8	-0.6
IMMV				S	Sb	11 12 44.4	+2.4
	comp=N,6µm,0.3s						
IMMV	Iera Moni Meta	1.14	323	P	Pn	11 12 26.2	+0.5
IMMV				S	Sn	11 12 40.9	+0.8
IMMV				AML	AML	11 12 44.4	
	comp=E,11146µm,0.4s						
IMMV				AML	AML	11 12 49.4	
	comp=N,17071µm,0.8s						
IMMV	Iera Moni Meta	1.14	323	PN	Pb	11 12 27.4	0.0
CHAN	Chania	1.16	326	P	Pb	11 12 27.4	-0.3
CHAN				S	Sb	11 12 44.1	+1.6
	comp=N,2µm,0.6s						
STIA	Sitia Lasithi	1.22	58	P	Pb	11 12 29.8	+1.1
ZKR	Zakros	1.27	64	P	Pb	11 12 30.1	+0.6
ZKR				S	Sb	11 12 48.2	+2.6
ZKR	Zakros	1.27	64	P	Pb	11 12 29.9	+0.4
ZKR				S	Sb	11 12 47.9	+2.3
ZKR				AML	AML	11 12 56.5	
	comp=E,8728µm,0.5s						
ZKR				AML	AML	11 12 58.8	
	comp=N,2862µm,0.7s						
ZKR	Zakros	1.27	64	PN	Pb	11 12 28.8	-0.7
ZKR	Zakros	1.27	64	⇑P	Pb	11 12 30.0	+0.4
ZKR				S	Sb	11 12 51.0	+5.4
ZKR				AML	AML	11 12 56.2	
	comp=N,8.8nm,0.5s						
ZKR				AML	AML	11 12 56.2	
	comp=N,8.8nm,0.5s						
RODP	Rodopos	1.33	319	P	Pb	11 12 30.6	-0.1
RODP				S	Sb	11 12 48.6	+1.1
RODP	Rodopos	1.33	319	PN	Pb	11 12 29.7	-1.0
ANKY	Antikythira Is	1.81	317	P	Pb	11 12 37.8	-0.9
ANKY				S	Sb	11 13 00.4	-0.6
	comp=N,2µm,0.6s						
ANKY	Antikythira Is	1.81	317	P	Pn	11 12 36.4	+1.5
ANKY				S	Sn	11 12 58.4	+1.8
ANKY				AML	AML	11 13 13.4	
	comp=E,4013µm,0.7s						
ANKY				AML	AML	11 13 17.5	
	comp=N,2305µm,0.7s						
THR6	Thira Island,	1.86	14	P	Pb	11 12 37.4	-2.0
THR6	Thira Island,	1.86	14	P	Pb	11 12 38.1	-1.3
SANT	Santorini	1.88	16	P	Pb	11 12 38.0	-2.0
SANT				S	Sb	11 13 02.4	-0.7
	comp=N,2µm,0.6s						
SANT	Santorini	1.88	16	P	Pb	11 12 37.9	-2.0
SANT				S	Sb	11 13 00.6	-2.5
SANT				AML	AML	11 13 11.1	
	comp=N,2005µm,0.6s						
SANT				AML	AML	11 13 11.6	
	comp=E,7034µm,0.5s						
SANT	Santorini	1.88	16	PN	Pn	11 12 36.9	+1.0
SANT	Santorini	1.88	16		Pb	11 12 37.8	-2.1
THT1	Athinios (Pele	1.89	15	P	Pb	11 12 37.8	-2.2
THR5	Thira Island,	1.91	13	P	Pn	11 12 38.0	+1.9
THR5	Thira Island,	1.91	13	P	Pb	11 12 38.6	-1.6
THR3	Thira Island,	1.91	14	P	Pb	11 12 39.0	-1.3
SAP2K	Karterados	1.92	15	P	Pb	11 12 38.8	-1.7
SAP3	Santorini-Thir	1.92	12	P	Pb	11 12 39.0	-1.6
THT2	Imerovigli	1.94	14	PN	Pn	11 12 37.7	+1.1
THR2	Thira island,	1.95	14	P	Pb	11 12 39.1	-2.0
CMBO	Columbo, Santo	1.97	14	P	Pn	11 12 38.9	+1.9
CMBO	Columbo, Santo	1.97	14	P	Pb	11 12 39.4	-1.9
KARP	Karpathos	2.15	62	P	Pb	11 12 43.5	-1.0
KARP	Karpathos	2.15	62	P	Pb	11 12 43.4	-1.0
KARP				S	Sb	11 13 08.7	-2.1
KARP				AML	AML	11 13 27.5	
	comp=N,1968µm,0.6s						
KARP				AML	AML	11 13 28.0	
	comp=E,1840µm,0.7s						
KARP	Karpathos	2.15	62	PN	Pb	11 12 41.9	-2.6
KARP	Karpathos	2.15	62	Pn	Pb	11 12 43.4	-1.1
MHLO	Agia Marina, M	2.16	351	P	Pn	11 12 41.6	+2.0
MHLO	Agia Marina, M	2.16	351	P	Pn	11 12 41.4	+1.8
MHLO				S	Sn	11 13 06.3	+1.1
MHLO				AML	AML	11 13 19.3	
	comp=N,15175µm,0.5s						
MHLO				AML	AML	11 13 19.6	
	comp=E,12430µm,0.6s						
IOSP	Ios island	2.20	10	P	Pn	11 12 42.1	+2.0
IOSP				S	Sn	11 13 07.7	+1.6
IOSP				AML	AML	11 13 18.2	
	comp=N,3633µm,0.3s						
IOSP				AML	AML	11 13 21.8	
	comp=E,2630µm,0.5s						
MHLA	Plaka, Milos I	2.21	351	P	Pn	11 12 42.2	+1.9
KTHR	Kythira	2.26	319	P	Pb	11 12 44.4	-2.0
KTHR				S	Sb	11 13 12.5	-1.5
	comp=E,552nm,0.4s						
AMGA	Amorgos Island	2.43	21	P	Pn	11 12 45.0	+1.6
AMGA				S	Sn	11 13 14.1	+2.2
AMGA				AML	AML	11 13 27.5	
	comp=N,1467µm,0.5s						
AMGA				AML	AML	11 13 29.3	
	comp=E,1996µm,0.6s						
APE	Apeiranthos	2.57	13	P	Pn	11 12 46.9	+1.5
APE	Apeiranthos	2.57	13	P	Pn	11 12 46.6	+1.3
APE	Apeiranthos	2.57	13	PN	Pn	11 12 46.7	+1.3
SERI	Serifos	2.62	354	P	Pn	11 12 47.6	+1.6
SERI	Serifos	2.62	354	P	Pn	11 12 47.5	+1.6
SERI				S	Sn	11 13 17.3	+0.9
SERI				AML	AML	11 13 32.4	
	comp=E,521µm,0.4s						
SERI				AML	AML	11 13 32.5	
	comp=N,580µm,0.4s						
VLI	Veliai	2.65	325	P	Pn	11 12 48.6	+2.2
VLI	Veliai	2.65	325	P	Pn	11 12 48.3	+1.9
VLI				S	Sn	11 13 18.5	+1.1
VLI				AML	AML	11 13 36.0	
	comp=E,909µm,0.6s						
VLI				AML	AML	11 13 37.2	
	comp=N,949µm,0.5s						
KOSK	Kos Island	2.80	38	PN	Pn	11 12 50.4	+1.9
DYR	Agios Nikonas	3.00	318	P	Pn	11 12 53.4	+2.2
DYR				S	Sn	11 13 27.0	+1.1
DYR				AML	AML	11 13 51.4	
	comp=N,201µm,1.0s						
DYR				AML	AML	11 13 53.9	
	comp=E,229µm,1.4s						
SLUM	Salum	3.07	174	P	Pn	11 12 53.8	+1.6
	baz=174						
SLUM				S	Sn	11 13 28.2	+0.5
	baz=174						
DAT	Datca	3.12	45	PN	Pn	11 12 54.9	+2.0
KRND	KRANIDI	3.13	335	P	Pn	11 12 54.4	+1.4
ARG	Arkhangelos	3.16	57	P	Pn	11 12 56.6	+3.2
ARG	Arkhangelos	3.16	57	P	Pn	11 12 56.5	+3.0
ARG	Arkhangelos	3.16	57	PN	Pn	11 12 56.1	+2.7
ARG	Arkhangelos	3.16	57	⇑P	Pn	11 12 56.4	+3.0
ARG				S	Sb	11 13 36.5	-3.2
BODT	Bodrum	3.21	38	PN	Pn	11 12 56.3	+2.2
DID	Didima	3.22	337	P	Pn	11 12 55.1	+0.9
DID	Didima	3.22	337	P	Pn	11 12 55.3	+1.1
VLY	Voula,Athens	3.40	346	P	Pn	11 12 58.2	+1.6
PYL	PYLOS	3.43	314	P	Pn	11 12 58.4	+1.2
ITM	Ithomi	3.52	319	Pn	Pn	11 13 01.7	+3.3
SMG	Samos	3.54	27	P	Pn	11 13 00.6	+1.9
GCAM	G?zelcaml?	3.69	31	PN	Pn	11 13 02.9	+2.2
YER	Yerkesik	3.81	46	P	Pn	11 13 05.8	+3.5
YER	Yerkesik	3.81	46	PN	Pn	11 13 04.6	+2.3
TURN	Turunc	3.84	52	PN	Pn	11 13 00.9	-1.9
DALY	Dalyan (Mula)	3.84	53	PN	Pn	11 13 05.9	+3.1
CHOS	Chios island	3.95	14	PN	Pn	11 13 06.1	+1.8
FETY	Fethiye	4.04	58	P	Pn	11 13 07.6	+2.1
FETY	Fethiye	4.04	58	PN	Pn	11 13 07.3	+1.8
URLA	Izmir	4.05	20	PN	Pn	11 13 07.9	+2.2
AYDB	Zeytinkoy-Aydi	4.19	35	PN	Pn	11 13 10.4	+2.7
KSL	Kastellorizon	4.20	66	P	Pn	11 13 09.7	+2.0
KSL	Kastellorizon	4.20	66	⇑P	Pn	11 13 09.6	+2.0
KSL				AML	AML	11 14 02.0	
	comp=E,0.4nm,0.4s						
BLCB	Balcova	4.22	24	PN	Pn	11 13 10.4	+2.5
AKAS	Kas	4.24	65	PN	Pn	11 13 10.7	+2.3
ELL	Elmali	4.68	61	PN	Pn	11 13 17.2	+2.9
ELL	Elmali	4.68	61		Pn	11 13 16.7	+2.4
ELL	Elmali	4.68	61	P	Pn	11 13 17.2	+2.9
SIGR	SIGRI	4.72	10	PN	Pn	11 13 17.5	+2.7
MANT	Manisa	4.94	36		Pn	11 13 21.6	+3.5
XOR	Xorichti	4.98	345	P	Pn	11 13 22.1	+3.7
KULA	Kula-Manisa	5.01	37	PN	Pn	11 13 21.7	+2.8
KORT	Korkueli	5.11	60	PN	Pn	11 13 24.4	+4.1
SWA2		5.32	174	P	Pn	11 13 24.3	+1.1
	baz=174						
SWA2				AMP		11 14 00.0	
	baz=174						
HBRG	Burj al `Arab	5.80	132	P	Pn	11 13 31.0	+1.3
	baz=133						
HBRG				AMP		11 14 00.0	
	baz=133						
HBRG				S	Sn	11 14 33.3	-1.6
	baz=133						
LIT	Litokhoron	5.84	342		Pn	11 13 32.2	+2.0
AKMS	Akamas	6.19	84	P	Pn	11 13 35.1	0.0
AKMS				S	Sn	11 14 44.6	-0.1
AKMS				AML	AML	11 14 44.7	
	comp=E,1.0nm,0.5s						
AKMS				AML	AML	11 14 44.7	
	comp=E,1.0nm,0.5s						
AKMS				AML	AML	11 14 45.1	
	comp=E,0.6nm,0.6s						
AKMS				AML	AML	11 14 45.1	
	comp=E,0.6nm,0.6s						
OSC2	CSNet OBS 4	6.36	101	S	Sn	11 14 45.3	-3.5
NATA	Nata	6.38	86	P	Pn	11 13 38.1	+0.4
ALFC	Alefka	6.42	82	⇑P	Pn	11 13 38.6	+0.5
ALFC				S	Sn	11 14 49.3	-0.9
FNA	Florina	6.79	337	Pn	Pn	11 13 44.6	+1.2
ASGA	Asgata	6.94	86	P	Pn	11 13 46.0	+0.7
HNAT	Natroun	6.94	133	S	Sn	11 15 03.3	+0.2
	baz=134						
HNAT				AMP		11 15 00.0	
	baz=134						
VAY	Valandovo	6.99	346	*i* Pn	Pb	11 13 57.2	-9.4
CSS	Mathiatis	7.01	84	Pn	Pn	11 13 46.3	0.0
CSS	Mathiatis	7.01	84	Pn	Pn	11 13 46.1	-0.2
MVOU	Mavrovouni	7.26	84	P	Pn	11 13 50.9	+1.2
GLL	Jalalah	7.66	129	P	Pn	11 13 55.4	+0.2
	baz=129						
TIP	Timpagrande	7.95	308	Pn	Pn	11 13 57.8	-1.4
SUZ	Suez	8.25	123	P	Pn	11 14 03.2	-0.1
	baz=123						
RSH		8.30	113	P	Pn	11 14 03.7	-0.3
	baz=114						
BRTR	Keskin Array B	8.72	51	Pn	Pn	11 14 08.6	-1.3
	comp=E,0.1nm,0.3s,baz=225,slow=15,SNR=5.7						
BRTR				LR	LR	11 18 30.8	
	comp=E,140nm,18.4s,baz=240,slow=44						
KZIT	Kziot	8.84	112	Pn	Pn	11 14 10.8	-0.6
KZIT				Sn	Sn	11 15 43.6	-6.2
MMAI	Mount Meron Ar	8.93	97	Pn	Pn	11 14 12.6	-0.1
	comp=E,3.5nm,0.3s,baz=292,slow=9.7,SNR=5.2						
MMAI				Sn	Sn	11 15 47.5	-4.7
	comp=E,4.1nm,0.3s,baz=285,slow=26,SNR=3.6						
GEM	Giv'at Ha'Em	9.11	95	Pn	Pn	11 14 15.3	+0.2
GEM				Sn	Sn	11 15 52.1	-4.2
NATI	Neve Ativ	9.16	95	Pn	Pn	11 14 15.8	+0.1
NATI				Sn	Sn	11 15 52.9	-4.6
YTIR	Yattir	9.21	107	Pn	Pn	11 14 15.8	-0.7
YTIR				Sn	Sn	11 15 54.1	-4.9
HMDT	Nahal Hemdat	9.23	101	Pn	Pn	11 14 16.5	-0.3
HMDT				Sn	Sn	11 15 53.4	-6.0
DSI	Dead Sea	9.34	106	Pn	Pn	11 14 17.8	-0.5
DSI				Sn	Sn	11 15 56.1	-6.0
KRMI	Paran Flat	9.47	115	Pn	Pn	11 14 20.2	+0.2
PRNI	Paran	9.56	113	Pn	Pn	11 14 21.5	+0.2
PRNI				Sn	Sn	11 16 01.1	-6.5
HRFI	Mount Harif	9.74	115	Pn	Pn	11 14 24.1	+0.3
HRFI				Sn	Sn	11 16 06.2	-5.8
MBRI	Mt Berech	9.77	116	Pn	Pn	11 14 24.1	-0.2
MBRI				Sn	Sn	11 16 06.7	-6.1
EIL	Elat	9.87	117	Pn	Pn	11 14 25.4	-0.1
	comp=E,4.3nm,0.3s,baz=350,slow=4.5,SNR=34						
EIL				Sn	Sn	11 16 10.0	-5.0
	comp=E,1.8nm,0.3s,baz=291,slow=15,SNR=2.9						
EIL	Elat	9.87	117	Pn	Pn	11 14 25.6	+0.1
EIL				Sn	Sn	11 16 10.2	-4.8
ASF	Jabal al Asfar	10.37	100	Pn	Pn	11 14 34.4	+2.0
	comp=E,0.4nm,0.3s,baz=249,slow=5.1,SNR=2.7						
ASF				Sn	Sn	11 16 22.8	-4.6
	comp=E,0.8nm,0.3s,baz=327,slow=16,SNR=2.9						
MLR	Muntele Rosu	10.96	4	Pn	Pn	11 14 40.3	-0.2
	comp=E,0.2nm,0.3s,baz=189,slow=13,SNR=1.8						
MLR				LR	LR	11 19 18.5	
	comp=E,181nm,20.0s,baz=124,slow=40						
OBKA	Obir	14.26	330	*i* Pn	P	11 15 29.3	-3.0
	comp=E,26nm,1.8s						
ARSA	Arzberg	14.49	334	*i* Pn	P	11 15 32.8	-2.0
	comp=E,0.1nm,0.2s						
MYKA	Terra Mystica	14.74	328	*i* Pn	Pn	11 15 30.4	-1.6
	comp=E,12nm,1.3s						
KBA	Koelnbreinsper	15.21	329	*i* Pn	Pn	11 15 36.8	-1.7
	comp=E,7.4nm,1.3s						
WTTA	Wattenberg	16.11	326	*i* Pn	Pn	11 15 47.8	-2.2
	comp=E,13nm,1.2s						
WATA	Walderalm	16.20	326	*i* Pn	P	11 15 56.1	+2.2
	comp=E,9.9nm,0.9s						
SQTA	Sankt Quirin	16.28	325	*i* Pn	P	11 15 58.5	+3.6
	comp=E,3.9nm,0.8s						
FETA	Feichten	16.37	324	*i* Pn	Pn	11 15 54.4	+1.1
	comp=E,7.0nm,1.4s						
MOTA	Moosalm	16.42	325	*i* Pn	P	11 15 58.4	+2.0
	comp=E,0.2nm,0.3s						
AKASG	Malin Array Be	16.45	10	Pn	Pn	11 15 52.0	-2.1
	comp=E,7.8nm,0.3s,baz=201,slow=10,SNR=33						
AKASG	Malin Array Be	16.45	10		Pn	11 15 54.8	+0.7
AKBB	Malin Array Si	16.45	10		Pn	11 15 53.6	-0.5
GEC2	GERESS Array S	16.49	333	P	P	11 15 58.1	+1.0
GERES	GERESS Array B	16.49	333	Pn	Pn	11 15 54.9	+0.1
	comp=E,0.6nm,0.3s,baz=142,slow=12,SNR=17						
GERES				LR	LR	11 23 32.5	
	comp=E,110nm,18.6s,baz=38,slow=42						
GERES	GERESS Array B	16.49	333	P	P	11 15 57.6	+0.5
GNI	Garni	16.78	65	LR	LR	11 23 47.2	
	comp=E,176nm,18.0s,baz=248,slow=42						
KHC	Kasperske Hory	16.78	334	*e*P	P	11 16 01.5	+1.3

CLL	**Collm**	**18.81**	**336**	*e*pP	**Pn**	**11 16 26.0**	**+2.8**
CLL				*e*PP	**sP**	**11 16 34.0**	**-1.1**
HFS	**Hagfors**	**26.61**	**348**	P	**P**	**11 17 39.5**	**-1.4**
	comp=E,1.4nm,0.5s,baz=152,slow=12,SNR=2.4						
FINES	**FINESS Array B**	**26.92**	**1**	P	**P**	**11 17 41.8**	**-1.9**
	comp=E,1.4nm,0.4s,baz=287,slow=24,SNR=6.8						
NOA	**NORSAR Array B**	**27.92**	**346**	P	**P**	**11 17 51.5**	**-1.2**
	comp=E,0.2nm,0.3s,baz=146,slow=9.3,SNR=3.3						
EKA	**Eskdalemuir Ar**	**28.38**	**326**	P	**P**	**11 17 57.2**	**+0.3**
	comp=E,0.4nm,0.3s,baz=115,slow=11,SNR=4.8						
AKTO	**Aktyubinsk**	**28.86**	**46**	P	**P**	**11 18 01.4**	**+0.1**
	comp=E,0.6nm,0.4s,baz=235,slow=12,SNR=1.8						
TOA0	**Torodi Ar. Sit**	**29.89**	**230**	P	**P**	**11 18 11.8**	**+1.2**
TOA0				IAmb	IAmb	11 18 12.5	
	comp=Z,4.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**29.89**	**230**	P	**P**	**11 18 11.6**	**+0.9**
	comp=Z,4.4nm,0.6s,baz=38,slow=9.2,SNR=27						
ARU	**Arti**	**31.70**	**36**	P	**P**	**11 18 26.4**	**+0.2**
	comp=Z,2.2nm,0.2s,baz=208,slow=8.4,SNR=4.7						
ARCES	**ARCESS Array B**	**35.03**	**0**	P	**P**	**11 18 53.7**	**-1.5**
	comp=Z,1.6nm,0.6s,baz=182,slow=8.5,SNR=7.5						
TIC	**Toumodi**	**39.10**	**232**	*e*P	**P**	**11 19 30.7**	**+0.4**
KIC	**Kosan Boka**	**39.14**	**231**	*e*P	**P**	**11 19 30.9**	**+0.3**
	comp=Z,8.1nm,0.8s						
LIC	**Lamto**	**39.43**	**231**	*e*P	**P**	**11 19 33.4**	**+0.5**
	comp=Z,50nm,1.7s						
KURBB	**Kurchatov Arra**	**41.71**	**50**	P	**P**	**11 19 51.9**	**+0.4**
	comp=Z,1.1nm,0.5s,baz=275,slow=8.7,SNR=13						
SPITS	**Spitsbergen Ar**	**43.88**	**357**	P	**P**	**11 20 08.7**	**0.0**
	comp=Z,12nm,1.0s,baz=162,slow=12,SNR=5.1						
MAKZ	**Makanchi**	**44.12**	**56**	P	**P**	**11 20 12.0**	**+0.9**
MAKZ				IAmb	IAmb	11 20 13.1	
	comp=Z,1.9nm,0.5s						
MK31	**Makanchi Array**	**44.33**	**56**	P	**P**	**11 20 13.9**	**+1.1**
MK31				IAmb	IAmb	11 20 25.6	
	comp=Z,2.8nm,0.8s						
MKAR	**Makanchi Array**	**44.33**	**56**	P	**P**	**11 20 14.0**	**+1.2**
	comp=Z,1.9nm,0.4s,baz=270,slow=8.1,SNR=20						
MKAR	**Makanchi Array**	**44.33**	**56**	P	**P**	**11 20 14.0**	**+1.2**
ZALV	**Zalesovo Beam**	**45.62**	**46**	P	**P**	**11 20 23.4**	**+0.6**
	comp=Z,1.8nm,0.5s,baz=265,slow=9.0,SNR=4.4						
SONM	**Songino Array**	**60.08**	**50**	P	**P**	**11 22 11.8**	**+2.0**
	comp=Z,0.3nm,0.4s,baz=288,slow=10,SNR=2.1						
SONM				LR	LR	11 50 02.0	
	comp=Z,67nm,19.8s,baz=92,slow=38						
SCHQ	**Schefferville**	**63.47**	**320**	P	**P**	**11 22 32.8**	**+0.4**
	comp=Z,2.0nm,0.4s,baz=64,slow=3.5,SNR=3.5						
SCHQ	**Schefferville**	**63.47**	**320**	IAmb	IAmb	11 22 46.7	
	comp=Z,0.7nm,0.5s						
CMAR	**Chiang Mai Arr**	**66.91**	**83**	P	**P**	**11 22 55.9**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=295,slow=6.7,SNR=1.2						
USRK	**Ussuriysk Ar.**	**77.46**	**45**	P	**P**	**11 23 58.3**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=256,slow=5.8,SNR=2.5						
YKA	**Yellowknife Ar**	**77.94**	**342**	P	**P**	**11 24 00.3**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=39,slow=5.3,SNR=5.8						

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*ROM **27** 11:22:03.8±0.3, 47°.10N±0°.01×12°.264E±0°.009, h7^{km}±1^{km}, ML3.0/22, Error ellipse: s-maj=1.1km s-min=0.5km az=195.0*

*VIE **27** 11:22:03.1±0.1, 47°.10N×12°.29E, h11^{km}±2^{km}, mb2.5/15, ml3.3/19, Error ellipse: s-maj=1.5km s-min=0.9km az=9.0 16 km SSE of Krimml*

*PRU **27** 11:22:06.4±0.0, 47°.19N×12°.37E, h0^{km}, Krimml*

*LDG **27** 11:22:06.2±0.1, 47°.17N×12°.23E, h2^{km}, Ml3.3/36, Error ellipse: s-maj=3.3km s-min=2.1km az=151.0*

*BGR **27** 11:22:06.6±0.2, 47°.11N×12°.33E, h10^{km}, ML3.2/11, Error ellipse: s-maj=6.7km s-min=3.3km az=6.0*

*STR **27** 11:22:14.0±1.0, 47˚N±6˚×1˚2E±1˚0, h18^{km}±14^{km}, MLv3.6/15*

ISC 27 11:22:04.0±0.9**, 47°.13N**±0°.02×**12°.29E**±0°.01**, h11**^{km}±7^{km}**, n143,** σ**2**^{s}**15**/234**, 5C-6D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RISI	**Rein**	**0.23**	**219**	⇑P	**Pg**	**11 22 08.3**	**-0.5**
RISI				S	**Sg**	**11 22 11.4**	**-0.7**
RISI				AML	AML		
	comp=E,9185µm,0.4s						
RISI				AML	AML		
	comp=N,18850µm,0.4s						
RISI				AML	AML		
	comp=N,18850µm,0.4s						
ABTA	**Abfaltersbach**	**0.41**	**158**	*e*Pg	**Pg**	**11 22 11.6**	**-0.5**
	comp=N,34nm,0.1s,SNR=59						
ABTA				*i* Sg	**Sg**	**11 22 16.7**	**-0.8**
	comp=N,218nm,0.2s						
WTTA	**Wattenberg**	**0.46**	**288**	*e*Pg	**Pg**	**11 22 13.3**	**+0.1**
	SNR=153						
WTTA				*e*Sg	**Sg**	**11 22 19.9**	**+0.6**
	SNR=6.4						
WTTA	**Wattenberg**	**0.46**	**288**	⇓P	**Pg**	**11 22 13.2**	**+0.1**
WTTA				S	**Sg**	**11 22 20.1**	**+0.8**
WTTA				AML	AML		
	comp=E,2080µm,1.6s						
WTTA				AML	AML		
	comp=N,2015µm,0.4s						
WTTA	**Wattenberg**	**0.46**	**288**	*e*Pg	**Pg**	**11 22 13.1**	**0.0**
	comp=N,90nm,0.2s,SNR=31						
WTTA				*i* Sg	**Sg**	**11 22 19.3**	**0.0**
	comp=N,803nm,0.5s						
WATA	**Walderalm**	**0.53**	**294**	*e*Pg	**Pg**	**11 22 14.3**	**0.0**
	comp=N,80nm,0.2s,SNR=26						
WATA				*i* Sg	**Sg**	**11 22 21.8**	**+0.5**
	comp=N,254nm,0.2s						
BRES	**Bressanone**	**0.57**	**222**	P	**Pg**	**11 22 15.0**	**-0.1**
BRES				S	**Sg**	**11 22 22.8**	**+0.1**
BRES				AML	AML		
	comp=E,1045µm,0.5s						
BRES				AML	AML		
	comp=N,1260µm,0.4s						
BRES				AML	AML		
	comp=E,1046µm,0.5s						
BRES				AML	AML		
	comp=N,1265µm,0.4s						
BRES				AML	AML		
	comp=N,1260µm,0.4s						
BRES				AML	AML		
	comp=E,1044µm,0.5s						
FVI	**Forni Avoltri**	**0.63**	**147**	⇓P	**Pg**	**11 22 15.8**	**-0.4**
FVI				S	**Sg**	**11 22 25.0**	**+0.5**
FVI				AML	AML		
	comp=E,1275µm,0.2s						
FVI				AML	AML		
	comp=N,979µm,0.5s						
ROSI	**Rosskopf**	**0.63**	**252**	⇓P	**Pg**	**11 22 15.7**	**-0.6**
ROSI				S	**Sg**	**11 22 24.9**	**+0.3**
ROSI				AML	AML		
	comp=E,1000µm,0.6s						
ROSI				AML	AML		
	comp=N,1210µm,0.7s						
KBA	**Koelnbreinsper**	**0.72**	**93**	*e*Pg	**Pg**	**11 22 17.5**	**-0.5**
	SNR=92						
KBA				*e*Sg	**Sg**	**11 22 27.0**	**-0.6**
	SNR=7.3						
KBA	**Koelnbreinsper**	**0.72**	**93**	*i* Pg	**Pg**	**11 22 17.4**	**-0.6**
	comp=N,75nm,0.4s						
KBA				*i* Sg	**Sg**	**11 22 26.8**	**-0.8**
	comp=N,156nm,0.2s						
SQTA	**Sankt Quirin**	**0.74**	**278**	*e*Pg	**Pg**	**11 22 18.0**	**-0.3**
	comp=N,13nm,0.1s,SNR=32						
SQTA				*i* Sg	**Sg**	**11 22 29.0**	**+0.9**
	comp=N,152nm,0.4s						
ABSI	**Aberstueckl**	**0.77**	**239**	⇑P	**Pg**	**11 22 18.6**	**-0.3**
ABSI				S	**Sg**	**11 22 28.8**	**-0.3**
ABSI				AML	AML		
	comp=N,1032µm,0.8s						
ABSI				AML	AML		
	comp=E,938µm,0.7s						
MOTA	**Moosalm**	**0.83**	**286**	*e*Pg	**Pg**	**11 22 19.4**	**-0.7**
	comp=E,5.7nm,0.2s,SNR=12						
MOTA				*i* Sg	**Sg**	**11 22 31.5**	**+0.5**
	comp=E,279nm,0.6s						
KOSI	**Kohlern**	**0.91**	**224**	⇑P	**Pg**	**11 22 21.2**	**-0.4**
KOSI				S	**Sg**	**11 22 33.1**	**-0.3**
KOSI				AML	AML		
	comp=E,782µm,0.8s						
KOSI				AML	AML		
	comp=N,889µm,0.6s						
STAL	**STALIGIAL**	**0.91**	**161**	⇑P	**Pg**	**11 22 21.2**	**-0.3**
STAL				AML	AML		
	comp=E,892µm,0.3s						
STAL				AML	AML		
	comp=N,1290µm,0.9s						
STAL				AML	AML		
	comp=E,1140µm,0.3s						
STAL				AML	AML		
	comp=E,892µm,0.3s						
STAL				AML	AML		
	comp=N,1285µm,0.9s						
STAL				AML	AML		
	comp=N,1150µm,0.9s						
APPI	**Appiano**	**0.97**	**229**	P	**Pg**	**11 22 22.8**	**+0.1**
APPI				AML	AML		
	comp=N,677µm,0.3s						
APPI				AML	AML		
	comp=E,612µm,0.3s						
ACOM	**Acomizza, Ital**	**1.02**	**124**	⇓P	**Pg**	**11 22 22.8**	**-0.9**
ACOM				S	**Sg**	**11 22 36.8**	**-0.1**
ACOM				AML	AML		
	comp=E,1890µm,0.4s						
ACOM				AML	AML		
	comp=E,1885µm,0.4s						
ACOM				AML	AML		
	comp=N,1570µm,0.3s						
PTCC	**Patocco-Chiusa**	**1.03**	**134**	P	**Pg**	**11 22 22.9**	**-0.9**
PTCC				AML	AML		
	comp=E,369µm,0.6s						
PTCC				AML	AML		
	comp=N,334µm,1.3s						
PTCC				AML	AML		
	comp=E,370µm,0.6s						
PTCC				AML	AML		
	comp=N,334µm,1.3s						
GEPF	**Gemona**	**1.03**	**145**	P	**Pg**	**11 22 23.2**	**-0.6**
MYKA	**Terra Mystica**	**1.05**	**118**	*i* Pg	**Pg**	**11 22 23.0**	**-1.2**
	comp=N,4.5nm,0.2s						
MYKA				*i* Sg	**Sb**	**11 22 38.0**	**-0.1**
	comp=N,114nm,0.4s						
FETA	**Feichten**	**1.07**	**265**	*e*Pg	**Pg**	**11 22 23.7**	**-0.9**
	comp=N,2.3nm,0.2s,SNR=13						
FETA				*i* Sg	**Sg**	**11 22 37.6**	**-0.9**
	comp=N,48nm,0.4s						
RETA	**Reutte**	**1.10**	**290**	*e*Pg	**Pg**	**11 22 23.9**	**-1.2**
	comp=N,3.6nm,0.2s,SNR=34						
RETA				*i* Sg	**Sb**	**11 22 40.4**	**+1.1**
	comp=N,64nm,0.4s						
POLC	**Polcenigo**	**1.11**	**172**	P	**Pg**	**11 22 25.0**	**-0.3**
CTI	**Castel Tesino**	**1.16**	**202**	P	**Pg**	**11 22 25.9**	**-0.4**
CTI				AML	AML		
	comp=E,880µm,0.2s						
CTI				AML	AML		
	comp=N,968µm,0.3s						
MOSI	**Grossmontoni**	**1.29**	**248**	⇓P	**Pg**	**11 22 28.1**	**-0.8**
MOSI				AML	AML		
	comp=N,1125µm,0.4s						
MOSI				AML	AML		
	comp=E,715µm,0.3s						
SABO	**M.te Sabotino**	**1.46**	**141**	AML	AML		
	comp=N,2100µm,0.5s						
SABO				AML	AML		
	comp=E,1955µm,0.5s						
BRMO	**Bormio**	**1.47**	**244**	⇑P	**Pn**	**11 22 30.9**	**+0.5**
BRMO				AML	AML		
	comp=E,324µm,0.4s						
BRMO				AML	AML		
	comp=E,324µm,0.4s						
BRMO				AML	AML		
	comp=N,328µm,0.5s						
MOA	**Molln**	**1.53**	**61**	*e*Pn	**Pg**	**11 22 33.3**	**+0.1**
	SNR=8.4						
MOA				*e*Sg	**Sg**	**11 22 56.3**	**+3.2**
	SNR=5.6						
MOA	**Molln**	**1.53**	**61**	*e*Pg	**Pg**	**11 22 33.0**	**-0.3**
	comp=N,6.1nm,0.1s,SNR=24						
MOA				*i* Sg	**Sg**	**11 22 54.8**	**+1.7**
	comp=N,144nm,0.4s						
UBR	**Ueberruh**	**1.58**	**291**	*e*Pn	**Pg**	**11 22 34.9**	**+0.6**
	SNR=8.1						
UBR				*e*Sg	**Sg**	**11 22 57.0**	**+2.2**
	SNR=10						
MABI	**Malga Bissina**	**1.62**	**229**	P	**Pn**	**11 22 33.8**	**+1.1**
MABI				AML	AML		
	comp=E,58µm,0.8s						
MABI				AML	AML		
	comp=N,194µm,1.1s						
DAVA	**Damuels**	**1.65**	**277**	*e*Pn	**Pg**	**11 22 36.2**	**+0.6**
	SNR=19						
DAVA				*e*Sg	**Sg**	**11 23 00.0**	**+3.0**
	SNR=7.6						
DAVA	**Damuels**	**1.65**	**277**	*e*Pg	**Pg**	**11 22 35.9**	**+0.3**
	comp=N,27nm,0.2s,SNR=30						
DAVA				*i* Sg	**Sg**	**11 22 58.2**	**+1.2**
	comp=N,524nm,0.5s						
OBKA	**Obir**	**1.67**	**111**	*e*Pn	**Pb**	**11 22 34.5**	**-0.3**
	SNR=5.3						
OBKA				*e*Pg	**Pg**	**11 22 36.3**	**+0.3**
	SNR=20						
OBKA				*e*Sg	**Sg**	**11 23 00.1**	**+2.4**
	SNR=3.2						
OBKA	**Obir**	**1.67**	**111**	*e*Pg	**Pn**	**11 22 34.3**	**+1.0**
	comp=N,148nm,0.4s,SNR=32						
OBKA				*i* Sg	**Sg**	**11 22 57.3**	**-0.4**
	comp=N,202nm,0.4s						
DAVOX	**Davos/Dischmat**	**1.68**	**259**	P	**Pn**	**11 22 34.7**	**+1.2**
DAVOX				AML	AML		
	comp=N,414µm,0.6s						
DAVOX				AML	AML		
	comp=N,413µm,0.6s						
DAVOX				AML	AML		
	comp=E,356µm,1.1s						
TRI	**Trieste**	**1.75**	**144**	AML	AML		
	comp=E,292µm,1.3s						
TRI				AML	AML		
	comp=N,360µm,0.4s						
TRI				AML	AML		
	comp=N,360µm,0.4s						
MAGA	**Magasa**	**1.77**	**221**	AML	AML		
	comp=E,2015µm,0.6s						
MAGA				AML	AML		
	comp=N,1475µm,0.7s						
LJU	**Ljubljana**	**1.89**	**124**	AML	AML		
	comp=N,715µm,0.5s						
LJU				AML	AML		
	comp=E,506µm,0.5s						
SOKA	**Soboth**	**1.94**	**102**	*e*Pg	**Pb**	**11 22 38.7**	**-0.6**
	comp=E,15nm,0.4s,SNR=18						
SOKA				*i* Sn	**Sn**	**11 23 00.1**	**-1.1**
	comp=E,17nm,0.3s						
GEC2	**GERESS Array S**	**1.97**	**28**	*e*Pn	**Pb**	**11 22 38.8**	**-1.0**
	SNR=5.0						
GEC2				*e*Sn	**Sb**	**11 23 04.8**	**+0.4**
	SNR=4.7						
GEC2				*e*Sg	**Sg**	**11 23 07.3**	**+0.1**
	SNR=4.7						
PLONS	**Plons/SG**	**1.99**	**269**	*e*Pn	**Pb**	**11 22 41.3**	**+1.1**
	SNR=11						
PLONS				*e*Sg	**Sg**	**11 23 10.0**	**+2.2**
	SNR=6.1						
PLONS	**Plons/SG**	**1.99**	**269**	AML	AML		
	comp=E,216µm,0.8s						
PLONS				AML	AML		
	comp=N,277µm,0.4s						
WET	**Wettzell**	**2.06**	**11**	*e*Pn	**Pn**	**11 22 39.9**	**+1.4**
	SNR=8.9						
WET				*e*Sn	**Sb**	**11 23 07.3**	**+0.3**
	SNR=5.3						
WET				*e*Sg	**Sg**	**11 23 10.2**	**+0.1**
	SNR=5.3						
KHC	**Kasperske Hory**	**2.19**	**23**	*e*PN	**Pn**	**11 22 42.0**	**+1.7**
KHC				*e*SN	**Sn**	**11 23 09.0**	**+1.7**
KHC				*e*SG	**Sg**	**11 23 14.0**	**-0.2**
ARSA	**Arzberg**	**2.21**	**86**	*e*Pn	**Pb**	**11 22 43.5**	**-0.4**
	SNR=2.7						
ARSA				*e*Sg	**Sg**	**11 23 14.4**	**-0.7**
	SNR=3.5						
ARSA	**Arzberg**	**2.21**	**86**	AML	AML		
	comp=E,102µm,0.5s						
ARSA				AML	AML		
	comp=N,95µm,1.1s						
ARSA	**Arzberg**	**2.21**	**86**	*e*Pn	**Pb**	**11 22 42.9**	**-1.1**
	comp=N,22nm,0.4s,SNR=18						
ARSA				*i* Sg	**Sg**	**11 23 14.3**	**-0.7**
	comp=N,29nm,0.4s						
WILA	**Wila**	**2.32**	**278**	*e*Sg	**Sg**	**11 23 19.8**	**+1.4**
	SNR=8.4						
RIY	**Rijeka**	**2.36**	**139**	*e*Pn	**Pb**	**11 22 47.3**	**+0.9**
RIY				Sn	**Sn**	**11 23 14.0**	**+2.4**
CONA	**Conrad Observa**	**2.55**	**70**	*i* Pn	**Pn**	**11 22 47.2**	**+1.9**
	comp=N,1.1nm,0.2s						
CONA				*i* Sn	**Sn**	**11 23 16.4**	**0.0**
	comp=N,14nm,0.3s						
FUSIO	**Fusio**	**2.58**	**256**	AML	AML		
	comp=E,196µm,0.8s						
FUSIO				AML	AML		
	comp=N,182µm,0.8s						
BOJS	**Bojanci**	**2.62**	**127**	⇓P	**Pn**	**11 22 47.5**	**+1.4**
BOJS				AML	AML		
	comp=E,77µm,0.5s						
BOJS				AML	AML		
	comp=N,89µm,0.5s						
ROTZ	**Rotzenmuhle**	**2.64**	**359**	*e*Pn	**Pn**	**11 22 47.5**	**+0.9**
	SNR=5.8						
SLE	**Schleitheim**	**2.65**	**285**	Pn	**Pn**	**11 22 49.7**	**+3.0**
SLE				Sg	**Sg**	**11 23 29.5**	**+0.3**
SLE	**Schleitheim**	**2.65**	**285**	*e*Pn	**Pn**	**11 22 50.0**	**+3.3**
	SNR=3.4						
OZLJ	**Ozalj**	**2.67**	**123**	*i* Pn	**Pb**	**11 22 49.9**	**-1.8**
PBCC	**Pribram**	**2.80**	**23**	*e*SG	**Sg**	**11 23 33.6**	**-0.4**
KOGS	**Kog**	**2.81**	**103**	AML	AML		
	comp=E,294µm,0.4s						
KOGS				AML	AML		
	comp=N,300µm,0.7s						
SULZ	**Cheisacher**	**2.87**	**280**	Pn	**Pn**	**11 22 52.8**	**+3.2**
BFO	**Black Forest**	**2.93**	**296**	*e*Pn	**Pn**	**11 22 53.2**	**+2.7**
	SNR=13						
BFO				*e*Sn	**Sn**	**11 23 27.6**	**+2.0**
	SNR=2.8						
BFO				*e*Sg	**Sg**	**11 23 41.4**	**+3.3**
	SNR=3.2						
TREC	**Trest**	**3.05**	**43**	*e*SG	**Sg**	**11 23 40.6**	**-1.3**
	comp=N,49nm,0.4s						
KIZ	**Kirchzarten**	**3.07**	**287**	Pn	**Pn**	**11 22 55.3**	**+2.8**
NKC	**Novy Kostel**	**3.11**	**2**	*e*PN	**Pn**	**11 22 55.1**	**+2.1**
NKC				*e*SG	**Sg**	**11 23 43.5**	**-0.4**
	comp=N,33nm,0.4s						
BALST	**Balsthal**	**3.13**	**276**	Pn	**Pn**	**11 22 56.2**	**+2.9**
BALST				Sn	**Sn**	**11 23 32.1**	**+1.3**
BALST	**Balsthal**	**3.13**	**276**	*e*Pn	**Pn**	**11 22 56.2**	**+2.9**
	SNR=18						
BALST				*e*Sn	**Sn**	**11 23 33.0**	**+2.2**
	SNR=2.9						
BALST				*e*Sg	**Sg**	**11 23 45.2**	**+0.6**
	SNR=1.7						
NVLJ	**Novalja**	**3.13**	**144**	*i* Pn	**Pn**	**11 22 56.0**	**+2.8**
NVLJ				Sn	**Sn**	**11 23 34.3**	**+3.7**
EMBD	**Embd, Matterta**	**3.20**	**255**	Pn	**Pn**	**11 22 58.2**	**+3.9**
PRA	**Prague**	**3.27**	**25**	*e*SG	**Sg**	**11 23 48.5**	**-0.6**
	comp=N,38nm,0.6s						
TANN	**Tannenbergstha**	**3.29**	**2**	*e*Pn	**Pn**	**11 22 57.5**	**+2.0**
	SNR=5.8						
KRUC	**Moravsky**	**3.37**	**53**	*e*PN	**Pb**	**11 23 02.7**	**-0.9**
KRUC				*e*SG	**Sg**	**11 23 50.4**	**-1.7**
ZST	**Bratislava**	**3.43**	**70**	*e*PG	**Pg**	**11 23 09.9**	**+0.3**
ZST				*e*SG	**Sg**	**11 23 54.7**	**+0.7**
MOSL	**Moslavina**	**3.44**	**114**	*e*Pn	**Pn**	**11 22 59.0**	**+1.4**
MOSL				Sn	**Sn**	**11 23 35.4**	**-2.9**
BOURR	**Bourrignon**	**3.45**	**276**	Pn	**Pn**	**11 23 00.4**	**+2.7**
BOURR				Sn	**Sn**	**11 23 40.0**	**+1.4**
LANF	**Langenberg**	**3.53**	**303**	Pn	**Pn**	**11 23 02.4**	**+3.7**
MOX	**Moxa**	**3.55**	**353**	*e*Pn	**Pn**	**11 23 00.3**	**+1.3**
	SNR=4.5						
UDBI	**Udbina**	**3.56**	**136**	*i* Pn	**Pn**	**11 23 02.4**	**+3.3**
WLS	**Welschbruch**	**3.57**	**293**	Pn	**Pn**	**11 23 01.9**	**+2.6**
MOF	**Molkenrain**	**3.57**	**284**	Pn	**Pn**	**11 23 01.9**	**+2.6**
MODS	**Modra-Piesok**	**3.59**	**68**	*e*PN	**Pn**	**11 23 01.1**	**+1.5**
MODS				*e*PG	**Pg**	**11 23 12.4**	**-0.4**
VRAC	**Vranov**	**3.62**	**51**	*e*PN	**Pn**	**11 23 02.8**	**+2.9**
VRAC				*e*SG	**Sg**	**11 23 57.6**	**-2.4**
CDF	**Champ du Feu**	**3.62**	**293**	*e*Pn	**Pn**	**11 23 01.0**	**+1.0**
CDF				*e*Sn	**Sn**	**11 23 40.5**	**-2.2**
CDF				*e*Sg	**Sg**	**11 23 57.6**	**-2.4**
	comp=N,64nm,0.6s						
ECH	**Echery**	**3.63**	**289**	Pn	**Pn**	**11 23 02.6**	**+2.5**
TORNY	**Torny/Romont**	**3.67**	**266**	Pn	**Pn**	**11 23 03.6**	**+3.0**
DUGI	**Dugi Otok**	**3.69**	**147**	*e*Pn	**Pn**	**11 23 03.7**	**+2.8**
LOMF	**Lomont**	**3.73**	**275**	Pn	**Pn**	**11 23 04.2**	**+2.8**
LOMF				Sn	**Sn**	**11 23 46.1**	**+0.8**
PVCC	**Panska Ves**	**3.73**	**23**	*e*SG	**Sg**	**11 24 02.4**	**-1.1**
	comp=N,54nm,0.7s						
HINF	**Hinteralfeld**	**3.75**	**283**	*e*Pn	**Pn**	**11 23 02.1**	**+0.3**
HINF	**Hinteralfeld**	**3.75**	**283**	*e*P	**Pn**	**11 23 04.1**	**+2.3**
HINF				*e*Sn	**Sn**	**11 23 43.9**	**-2.0**
	comp=N,14nm,0.3s						
HINF				*e*Sg	**Sg**	**11 24 02.3**	**-2.0**
	comp=N,34nm,0.5s						
CHMF	**Charmoille**	**3.84**	**274**	Pn	**Pn**	**11 23 05.8**	**+2.7**
BRG	**Berggiesshubel**	**3.91**	**16**	PG	**Pg**	**11 23 16.2**	**-2.6**
BRG				SG	**Sg**	**11 24 09.1**	**-0.2**
	comp=N,23nm,0.9s						
TNS	**Taunus Mts**	**4.01**	**322**	*e*Pn	**Pn**	**11 23 08.4**	**+3.0**
	SNR=8.3						
MORI	**Morici**	**4.05**	**142**	*e*Pn	**Pn**	**11 23 08.6**	**+2.7**
MORI				Sn	**Sn**	**11 23 55.4**	**+2.2**
HAU	**Haudompre**	**4.12**	**285**	*e*Pn	**Pn**	**11 23 07.0**	**+0.2**
HAU	**Haudompre**	**4.12**	**285**	*e*P	**Pn**	**11 23 09.4**	**+2.6**
HAU	**Haudompre**	**4.12**	**285**	*e*Pg	**Pg**	**11 23 21.1**	**-1.7**
HAU				*e*Sn	**Sn**	**11 23 53.8**	**-1.1**
	comp=N,49nm,0.5s						
HAU				*e*Sg	**Sg**	**11 24 13.7**	**-2.4**
	comp=N,50nm,0.5s						
LPG	**La Plagne**	**4.17**	**249**	*e*P	**Pn**	**11 23 12.1**	**+4.4**
LPG				*e*Sn	**Sn**	**11 23 54.8**	**-1.7**
	comp=N,17nm,0.6s						
LPG				*e*Sg	**Sg**	**11 24 15.7**	**-2.0**
	comp=N,22nm,0.6s						
LPL	**La Plagne**	**4.17**	**249**	*e*P	**Pn**	**11 23 12.1**	**+4.4**
LPL				*e*Sn	**Sn**	**11 23 55.4**	**-1.1**
	comp=N,8.2nm,0.5s						
RSL	**Roselend**	**4.17**	**252**	Pn	**Pn**	**11 23 11.9**	**+4.2**
RSL				Sn	**Sn**	**11 23 59.9**	**+3.5**
ABH	**Alteburg**	**4.19**	**313**	Pn	**Pn**	**11 23 10.4**	**+2.6**
ABH				Sn	**Sn**	**11 23 56.3**	**-0.3**
DPC	**Dobruska-Polom**	**4.19**	**38**	*e*PN	**Pn**	**11 23 08.8**	**+1.0**
DPC				*e*SN	**Sn**	**11 23 57.7**	**+1.0**
DPC				*e*SG	**Sg**	**11 24 16.6**	**-1.8**
	comp=N,22nm,0.5s						
KRLC	**Kraliky**	**4.20**	**44**	*e*SN	**Sn**	**11 23 57.7**	**+0.8**
KRLC				*e*SG	**Sg**	**11 24 17.3**	**-1.4**
	comp=N,58nm,0.6s						
ZIRJ	**Zirje**	**4.20**	**145**	*e*Pn	**Pn**	**11 23 11.0**	**+3.1**
ZIRJ				Sn	**Sn**	**11 23 59.4**	**+2.5**
CLL	**Collm**	**4.21**	**6**	*e*Pg	**Pg**	**11 23 28.0**	**+3.4**
CLL				*e*		11 24 06.0	
CLL				*e*Sg	**Sg**	**11 24 19.0**	**-0.2**
	comp=Z,29nm,0.9s						
CABF	**La Chapelle**	**4.28**	**265**	*e*Pn	**Pn**	**11 23 10.8**	**+1.7**
CABF				*e*Sn	**Sn**	**11 23 56.7**	**-2.4**
	comp=Z,21nm,0.5s						
CABF				*e*Sg	**Sg**	**11 24 19.5**	**-1.9**
	comp=Z,21nm,0.5s						
OSTC	**Ostas**	**4.30**	**36**	*e*SG	**Sg**	**11 24 21.0**	**-1.1**
	comp=Z,44nm,0.7s						
MORC	**Moravsky Berou**	**4.39**	**51**	*e*SG	**Sg**	**11 24 20.9**	**-4.0**
MBDF	**Montbardon**	**4.53**	**240**	*e*Pn	**Pn**	**11 23 14.8**	**+2.2**
MBDF	**Montbardon**	**4.53**	**240**	*e*P	Pb	11 23 19.5	-4.1
MBDF				*e*Sn	**Sn**	**11 24 05.8**	**+0.4**
	comp=Z,22nm,0.7s						
VYHS	**Vyhne**	**4.62**	**70**	*e*PG	**Pg**	**11 23 33.5**	**+1.1**
VYHS				*e*SN	**Sn**	**11 24 07.6**	**+0.3**
PAGF	**Fort de Pagny**	**4.64**	**290**	*e*P	**Pn**	**11 23 17.4**	**+3.4**
PAGF				*e*Sn	**Sn**	**11 24 05.2**	**-2.7**
	comp=Z,15nm,0.5s						
PAGF				*e*Sg	**Sg**	**11 24 31.2**	**-1.8**
	comp=Z,30nm,0.5s						
SBF	**Sospel**	**4.72**	**228**	*e*Pn	**Pn**	**11 23 17.4**	**+2.3**
SBF				*e*Sn	**Sn**	**11 24 07.8**	**-2.0**
	comp=Z,9.9nm,0.4s						
OKC	**Ostrava-Krasne**	**4.75**	**53**	*e*SG	**Sg**	**11 24 34.4**	**-2.0**
	comp=Z,25nm,0.5s						
ORIF	**Oris-en-Rattie**	**4.98**	**246**	*e*Pn	**Pn**	**11 23 21.5**	**+2.8**
ORIF				*e*Sn	**Sn**	**11 24 14.1**	**-2.1**
	comp=Z,12nm,0.5s						
SFTF	**Sexfontaines**	**5.01**	**285**	*e*Pn	**Pn**	**11 23 18.1**	**-1.0**
SFTF				*e*Sg	**Sg**	**11 24 42.2**	**-2.7**
	comp=Z,23nm,0.5s						
MEZF	**Maizieres J'vi**	**5.06**	**288**	*e*P	**Pn**	**11 23 24.0**	**+4.2**
MEZF				*e*Sg	**Sg**	**11 24 42.6**	**-3.9**
	comp=Z,23nm,0.6s						
PGF	**Pioggiola**	**5.14**	**208**	*e*Pn	**Pn**	**11 23 22.7**	**+1.8**
PGF				*e*Sn	**Sn**	**11 24 18.1**	**-2.1**
	comp=Z,1.5nm,0.3s						
FRF	**La Foret Royal**	**5.34**	**230**	*e*Pn	**Pn**	**11 23 25.8**	**+2.3**
FRF	**La Foret Royal**	**5.34**	**230**	*e*P	**Pn**	**11 23 28.2**	**+4.7**
FRF				*e*Sn	**Sn**	**11 24 22.4**	**-2.6**
	comp=Z,1.1nm,0.3s						
LMR	**La Mourre**	**5.57**	**229**	*e*Pn	**Pn**	**11 23 28.8**	**+2.1**

LMR				eSn	Sn	11 24 28.1	-2.5
	comp=Z,2.6nm,0.5s						
SMRF	Simiane la Rot	5.67	239	ePn	Pn	11 23 28.5	+0.4
SMRF	Simiane la Rot	5.67	239	eP	Pn	11 23 32.8	+4.7
SMRF				eSn	Sn	11 24 30.3	-2.9
	comp=Z,3.4nm,0.5s						
LOR	Lormes	5.75	275	ePn	Pn	11 23 29.4	+0.2
LOR	Lormes	5.75	275	ePg	Pg	11 23 51.0	-2.9
LOR				eSn	Sn	11 24 31.8	-3.2
	comp=Z,5.9nm,0.3s						
LOR				eSg	Sg	11 25 05.0	-3.3
	comp=Z,8.9nm,0.5s						
VIVF	Saint-Julien-l	5.77	250	ePn	Pn	11 23 31.2	+1.7
VIVF				eSn	Sn	11 24 34.0	-1.7
	comp=Z,8.4nm,0.5s						
GIVF	Givet	5.78	304	eP	Pn	11 23 33.1	+3.6
GIVF				eSn	Sn	11 24 32.3	-3.4
	comp=Z,7.2nm,0.3s						
SMF	Signal de Mont	5.81	268	eSn	Sn	11 24 33.0	-3.6
	comp=Z,15nm,0.5s						
SSF	Saint Saulge	6.00	273	ePn	Pn	11 23 32.2	-0.4
SSF	Saint Saulge	6.00	273	eP	Pn	11 23 37.2	+4.6
SSF				eSn	Sn	11 24 37.7	-3.5
	comp=Z,6.7nm,0.5s						
SSF				eSg	Sg	11 25 12.6	-3.7
	comp=Z,6.8nm,0.5s						
BAIF	Baives	6.11	302	ePn	Pn	11 23 34.8	+0.7
BAIF	Baives	6.11	302	eP	Pn	11 23 38.3	+4.2
BAIF				eSn	Sn	11 24 40.4	-3.5
	comp=Z,5.5nm,0.5s						
AVF	Avril sur Loir	6.12	270	ePn	Pn	11 23 35.9	+1.6
AVF				eSn	Sn	11 24 41.2	-3.1
	comp=Z,3.1nm,0.4s						
BGF	Bois d'Agland	6.50	268	ePn	Pn	11 23 41.5	+2.0
BGF				eSn	Sn	11 24 49.7	-3.9
	comp=Z,56nm,0.3s						
HYF	Humbligny	6.58	275	ePn	Pn	11 23 42.2	+1.7
HYF				eSn	Sn	11 24 50.0	-5.5
LASF	Ste Croix	6.65	246	ePn	Pn	11 23 43.4	+1.8
LASF	Ste Croix	6.65	246	ePg	Pg	11 24 08.5	-2.8
LASF				eSn	Sn	11 24 53.7	-3.7
	comp=Z,19nm,0.7s						
TCF	Toulx Ste Croi	6.98	267	ePn	Pn	11 23 47.8	+1.7
TCF				eSn	Sn	11 25 01.7	-3.7
	comp=Z,13nm,0.5s						
CAF	Calviac	7.45	257	ePn	Pn	11 23 54.1	+1.6
CAF				eSn	Sn	11 25 12.7	-4.3
	comp=Z,2.8nm,0.5s						
RJF	Les Rejaudoux	7.69	260	ePn	Pn	11 23 57.4	+1.6
RJF				eSn	Sn	11 25 18.1	-4.8
	comp=Z,2.0nm,0.4s						
MFF	Saint Martin d	8.54	271	ePn	Pn	11 24 08.4	+1.0
GRR	Gorron	8.95	283	ePn	Pn	11 24 12.2	-0.8
GRR	Gorron	8.95	283	eP	Pn	11 24 17.2	+4.2

*ASRS **27** 11:23:29.4±0.2, 51°N±1°×9°0E±°, h10^{km}, MLh4.0/21, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*

*NNC **27** 11:23:32.3±1.9, 51°.46N×89°.63E, h0^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=14.9km s-min=8.4km az=88.0*

ISC 27 11:23:31.8±1.3**, 51°.32N**±0°.04×**89°.72E**±0°.02**, h1**^{km}±12^{km}**, n37,** σ**1^{s}95**/67**, 6C-8D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULGR	Ulagan, Altay	1.31	239	Pg	Pn	11 23 55.8	-1.5
ULGR				Sg	Sb	11 24 11.5	-3.1
CUR	Chagan-Uzun	1.50	216	Pg	Pn	11 23 58.8	-1.1
CUR				Sg	Sn	11 24 17.4	-2.8
ARTR	Artybash	1.59	289	Pg	Pg	11 24 03.1	+0.8
ARTR				Sg	Sg	11 24 25.1	+2.1
AKAR	Aktash	1.66	234	Pg	Pn	11 24 01.9	-0.3
AKAR				Sg	Sn	11 24 23.1	-1.2
CHBI	Chibit, Altay	1.73	235	Pg	Pn	11 24 03.2	+0.1
CHBI				Sg	Sn	11 24 24.7	-1.1
DJO	Djoy, Khakassi	1.73	32	Pg	Pg	11 24 05.8	+0.8
DJO				Sg	Sg	11 24 29.7	+2.2
SLNR	Muhor-Tarhata,	1.74	208	Pg	Pn	11 24 02.9	-0.4
SLNR				Sg	Sn	11 24 25.8	-0.4
DJOS	Djoyskaya Sosn	1.81	34	Pg	Pg	11 24 07.0	+0.6
DJOS				Sg	Sg	11 24 31.9	+2.0
TASR	Tashtagol	1.84	323	Pg	Pg	11 24 08.0	+1.1
TASR				Sg	Sg	11 24 34.3	+3.6
CERR	Cheremushki	1.86	34	Pg	Pg	11 24 08.2	+0.7
CERR				Sg	Sg	11 24 32.7	+1.1
VEH	Verkhnyaya Baz	1.97	11	Pg	Pg	11 24 10.9	+1.3
VEH				Sg	Sg	11 24 37.1	+2.0
DGZ	Jazzator, Alta	2.18	223	Pg	Pn	11 24 11.2	+1.8
DGZ				Sg	Sn	11 24 37.9	+0.9
LUZB	Luzhba, Kemero	2.40	348	Pg	Pg	11 24 18.3	+0.5
LUZB				Sg	Sg	11 24 50.2	+1.4
GALT	Gorno-Altaysk,	2.44	287	Pg	Pg	11 24 17.8	-0.7
GALT				Sg	Sg	11 24 50.0	0.0
TUNR	Tungur	2.44	243	Pg	Pb	11 24 16.6	0.0
TUNR				Sg	Sb	11 24 47.7	+0.5
ARDR	Aradan	2.62	60	Pg	Pg	11 24 21.7	-0.4
ARDR				Sg	Sg	11 24 55.5	-0.5
ABNR	Abakan	2.63	23	Pg	Pg	11 24 20.1	-2.1
ABNR				Sg	Sg	11 24 57.9	+1.7
ELT	Eltsovka	2.89	314	Pg	Pb	11 24 22.5	-1.6
ELT				Sg	Sg	11 25 04.5	-0.1
KZLR	Kyzyl	2.98	81	Pg	Pb	11 24 27.0	+1.2
KZLR				Sg	Sb	11 25 03.9	+1.2
UKR	Ust'-Kan	3.14	265	Pg	Pb	11 24 29.3	+0.9
UKR				Sg	Sg	11 25 10.9	-1.6
SALR	Pechorkino, Sa	3.94	323	Pg	Pb	11 24 37.7	-4.3
SALR				Sg	Sb	11 25 27.5	-2.8
ZAA0	Zalesovo Array	3.98	313	⇑Pg	Pb	11 24 41.2	-1.5
	2.2nm,0.8s						
ZAA0				⇑Lg	Lg	11 25 35.1	
	8.1nm,0.8s						
TDJR	Todzha	4.10	72	Pg	Pb	11 24 47.8	+2.9
TDJR				Sg	Sg	11 25 41.9	-1.6
MINR	Mina	4.49	35	Pn	Pn	11 24 44.1	+3.1
MINR				Pg	Pg	11 24 54.3	-3.5
MINR				Sg	Sg	11 25 54.1	-1.9
ORY	Orie	4.91	39	Pg	Pb	11 25 00.9	+2.3
ORY				Sg	Sg	11 26 06.4	-3.1
KHAR	Kharino, NSO,	4.96	314	Sg	Sg	11 26 12.7	+1.7
NVSII	Novosibirsk	5.26	315	Pg	Pg	11 25 12.3	-0.2
NVSII				Sg	Sg	11 26 18.7	-2.0
NVS	Novosibirsk	5.26	315	Pg	Pg	11 25 12.8	+0.2
NVS				Sg	Sg	11 26 19.6	-1.1
BSTK	Bystrovka, Nov	5.37	310	Pg	Pg	11 25 08.4	-6.2
BSTK				Sg	Sg	11 26 25.9	+1.8
NHES	Novosibirsk, N	5.39	314	Sg	Sg	11 26 26.8	+2.2
GZLN	Zheleznogorsk	5.61	24	Pg	Pg	11 25 19.3	+0.1
ALXA	Alekseevka, NS	5.62	313	Sg	Sg	11 26 34.3	+2.2
ORL	Orlik	6.36	75	Pg	Pb	11 25 28.8	+5.4
ORL				Sg	Sg	11 26 49.8	-6.2
MK31	Makanchi Array	6.66	230	⇑Pn	Pn	11 25 11.7	+1.0
	7.7nm,0.5s,baz=57,slow=12,SNR=82						
MK31				⇓Sn	Sn	11 26 30.6	+3.5
	7.1nm,0.6s						
MK31				⇓Lg	Lg	11 27 02.7	
	13nm,0.6s,baz=51,slow=31,SNR=5.0						
MAKZ	Makanchi	6.80	231	⇓Pn	Pn	11 25 13.5	+0.9
	4.3nm,0.5s						
MAKZ				⇓Sn	Sn	11 26 33.7	+3.1
	4.5nm,0.5s						
MAKZ				⇓Lg	Lg	11 27 08.2	
	22nm,0.8s						
KURK	Kurchatov	7.03	269	⇓Pn	Pn	11 25 16.6	+0.8
	4.4nm,0.9s						
KURK				⇑Sn	Sn	11 26 36.5	+0.3
	9.1nm,0.6s						
KURK				⇓Lg	Lg	11 27 13.4	
	18nm,0.6s						
KURBB	Kurchatov Arra	7.10	269	⇑Pn	Pn	11 25 17.7	+0.9
	2.2nm,0.3s						
KURBB				⇑Sn	Sn	11 26 38.7	+0.7
	22nm,0.6s						
KURBB				⇓Lg	Lg	11 27 14.6	
	67nm,0.8s						

WEL 27 11:26:54.0±0.5**, 33°S**±8°×**17°9W**±2°0**, h264**^{km}±7^{km}**, M4.1**/13**, mB4.6**/10**, MLv4.7**/13**, Mw(mB)3.8**/10**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.80	17	S	S	11 28 42.1	-3.6
PUZ	Puketiti	5.55	201	P	Pn	11 28 19.5	+2.6
PUZ				S	S	11 29 25.6	+2.3
RUGZ	Raukumara Rang	5.65	206	P	Pn	11 28 20.4	+2.2
RUGZ				S	S	11 29 28.7	+3.0
TKGZ	Te Karaka	6.02	203	P	Pn	11 28 31.7	+9.2
TKGZ				S	S	11 29 42.7	+9.1
HIZ	Hauiti	7.39	219	P	Pn	11 28 42.8	+3.2
NGZ	Ngauruhoe	7.54	212	P	Pn	11 28 44.7	+3.1
PKVZ	Pokaka	7.74	213	P	Pn	11 28 46.0	+1.9
MTVZ	Mangateitei	7.76	212	P	Pn	11 28 46.6	+2.2
PXZ	Pawanui	7.78	203	P	Pn	11 28 47.6	+3.1
PXZ				S	S	11 30 13.8	+0.1
VRZ	Vera Road	7.90	217	P	Pn	11 28 48.8	+2.9
PRHZ	Porangahau	8.07	203	P	Pn	11 28 49.5	+1.4
DVHZ	Dannevirke	8.26	205	P	Pn	11 28 52.0	+1.5
DVHZ				S	S	11 30 23.4	-1.3
ANWZ	Angora Road	8.30	203	P	Pn	11 28 53.8	+2.9
ANWZ				S	S	11 30 22.6	-2.9
PRWZ	Pori Road	8.56	205	P	Pn	11 28 56.3	+2.0
PRWZ				S	S	11 30 23.3	-8.2
BFZ	Birch Farm	8.57	204	P	Pn	11 28 55.1	+0.7
BFZ				S	S	11 30 29.5	-2.3
TIWZ	Tintock	8.78	205	P	Pn	11 28 57.5	+0.4
TIWZ				S	S	11 30 33.7	-3.1
MRZ	Mangatainoka R	8.79	207	P	Pn	11 28 55.2	-2.0
MRZ				S	S	11 30 31.4	-5.6
HOWZ	Holdsworth Sta	9.02	206	P	Pn	11 29 00.1	0.0
HOWZ				S	S	11 30 37.6	-4.7
TMWZ	Te Maipa	9.07	204	P	Pn	11 29 00.9	+0.2
TMWZ				S	S	11 30 40.6	-2.9
OGWZ	Otaki Gorge	9.09	208	P	Pn	11 28 59.3	-1.6
OGWZ				S	S	11 30 39.4	-4.3
KIW	Kapiti Island	9.23	209	P	Pn	11 29 02.4	-0.3
KIW				S	S	11 30 41.6	-5.4
MTW	Mount Morrison	9.26	206	P	Pn	11 29 02.3	-0.7
MTW				S	S	11 30 41.5	-6.1
CAW	Cannon Point	9.38	208	P	Pn	11 29 02.8	-1.7
CAW				S	S	11 30 45.5	-4.8
PLWZ	Palliser	9.71	205	P	Pn	11 29 08.2	-0.5
TCW	Tory Channel	9.78	210	P	Pn	11 29 08.4	-1.2
TUWZ	Tuamarina	10.11	211	P	Pn	11 29 12.6	-1.0
NNZ	Nelson	10.19	213	P	Pn	11 29 14.0	-0.7
QRZ	Quartz Range	10.30	218	P	Pn	11 29 14.4	-1.7
BSWZ	Blackbirch Sta	10.37	210	P	Pn	11 29 15.9	-1.1
THZ	Tophouse	10.84	213	P	Pn	11 29 21.9	-0.9
KHZ	Kahutara	11.09	209	P	Pn	11 29 25.2	-0.7

MAN 27 11:32:46.2, 18°.41N×120°.36E, h73^{km}**, mb3.9, ML2.7, MS2.2, 1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIPP	Brgy, Tapao	0.49	169	⇓eP	Pn	11 33 00.2	+1.0

*IDC **27** 11:36:07.6±1.8, 19°.48S×70°.67W, h0^{km}, mb4.0/3, mb1 4.2/4, mb1mx3.7/25, mbtmp4.0/4, ML3.5/1, MS2.5/2, Ms1 2.5/2, ms1mx2.4/22, Error ellipse: s-maj=55.9km s-min=19.0km az=70.0*

*GUC **27** 11:36:10.0±0.6, 19°.59S×71°.06W, h41^{km}±1^{km}, ML3.8*

ISC 27 11:36:09.1±3.1**, 19°.60S**±0°.04×**71°.07W**±0°.09**, h16**^{km}±16^{km}**, n25,** σ**1^{s}03**/27**, mb4.0**/3**, 6C-3D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.90	90	⇓iP	Pb	11 36 26.0	-0.4
PSGC				iS	Sg	11 36 38.6	+0.2
PB12	IPOC Station P	1.21	36	⇑iP	Pn	11 36 31.3	-0.2
PB12				iS	Sn	11 36 47.6	-0.1
TA01	Diego Aracena	1.27	139	⇑iP	Pn	11 36 32.5	+0.3
TA01				iS	Sn	11 36 49.3	+0.3
PB11	IPOC Station P	1.34	97	⇑iP	Pb	11 36 33.9	-0.2
PB11				iS	Sb	11 36 51.6	+0.5
AP01	Chacalluta	1.41	30	⇓iP	Pn	11 36 34.2	+0.1
AP01				iS	Sn	11 36 52.1	-0.3
AP01				IAML		11 36 59.6	
	comp=N,4μm,0.5s						
PATCX	Punta Patache	1.49	145	⇑iP	Pn	11 36 35.6	+0.4
GO01	Chusmiza	1.77	92	eP	Pb	11 36 40.8	-0.8
GO01				iS	Sb	11 37 03.8	+0.1
PB08	IPOC Station P	1.88	107	⇑iP	Pn	11 36 41.9	+0.9
PB08				iS	Sb	11 37 06.2	-0.6
PB08				IAML		11 37 12.5	
	comp=E,767nm,0.5s						
PB16	IPOC Station P	1.95	50	⇓iP	Pn	11 36 43.0	+1.0
PB16				iS	Sn	11 37 07.5	+1.0
PB02	IPOC Station P	2.03	147	⇑iP	Pn	11 36 43.5	+0.7
PB01	IPOC Station P	2.06	134	eP	Pn	11 36 43.9	+0.6
PB01				IAML		11 37 20.1	
	comp=N,1μm,0.4s						
PB07	IPOC Station P	2.39	152	IAML		11 37 33.3	
	comp=E,664nm,0.4s						
LVC	Limon Verde	3.61	146	Pn	Pn	11 37 04.6	-0.1
	comp=E,4.7nm,0.3s,baz=332,slow=15,SNR=5.8						
LVC				Sn	Sn	11 37 47.6	+0.4
	comp=E,20nm,0.3s,baz=329,slow=18,SNR=4.2						
LVC				Lg	Lg	11 37 58.7	
	comp=E,22nm,0.3s,baz=63,slow=17,SNR=5.4						
LVC				LR	LR	11 38 10.2	
	comp=E,26nm,18.9s,baz=328,slow=35						
LPAZ	La Paz	4.33	41	Pn	Pn	11 37 17.9	+3.0
	comp=E,1.2nm,0.3s,baz=242,slow=6.5,SNR=20						
SIV	San Ignacio	10.18	71	Pn	Pn	11 38 35.2	+0.5
	comp=E,1.6nm,0.3s,baz=269,slow=9.5,SNR=29						
SIV				LR	LR	11 43 05.5	
	comp=E,90nm,21.2s,baz=277,slow=43						
PTGA	Pitinga	21.68	31	P	P	11 40 56.7	-2.7
	comp=E,1.6nm,0.3s,baz=253,slow=19,SNR=3.3						
TORD	Torodi Ar. Bea	78.66	72	P	P	11 48 09.9	-1.1
	comp=E,2.1nm,0.6s,baz=250,slow=5.2,SNR=10						
YKA	Yellowknife Ar	88.74	341	P	P	11 49 02.4	+0.9
	comp=E,0.6nm,0.7s,baz=138,slow=5.1,SNR=7.9						
H11S2	WAKE ISLAND Hy	125.60	279	T	T	14 14 27.2	
	baz=101,slow=74,SNR=19						
H11S1	WAKE ISLAND Hy	125.61	279	T	T	14 14 21.6	
	baz=101,slow=74,SNR=3.7						
H11S3	WAKE ISLAND Hy	125.62	279	T	T	14 14 27.4	
	baz=101,slow=74,SNR=4.0						
H11N3	WAKE ISLAND Hy	125.64	281	T	T	14 14 22.8	
	baz=101,slow=74						
H11N2	WAKE ISLAND Hy	125.66	281	T	T	14 14 20.9	
	baz=101,slow=74						
H11N1	WAKE ISLAND Hy	125.66	281	T	T	14 14 25.5	
	baz=101						
MKAR	Makanchi Array	145.22	33	PKP	PKPdf	11 55 46.6	+0.5
	comp=E,0.8nm,0.6s,baz=315,slow=3.1,SNR=9.7						

*NEIC **27** 11:51:58.5±1.6, 17°.09N±0°.06×101°.03W±0°.04, h24^{km}±8^{km}, Md4.0/28(MEX), Error ellipse: s-maj=10.0km s-min=3.2km az=203.0*

*MEX **27** 11:51:59.9±0.8, 17°.16N×101°.03W, h5^{km}±4^{km}, MD4.0*

ISC 27 11:51:56.7±1.4**, 17°.23N**±0°.06×**101°.02W**±0°.03**, h7**^{km}±12^{km}**, n25,** σ**0^{s}70**/46**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	Zihuatanejo	0.56	312	eP	Pn	11 52 11.3	+0.1
ZIIG				eS	Sn	11 52 19.9	-0.9
ZIIG	Zihuatanejo	0.56	312		Pn	11 52 11.3	+0.1
ZIIG					Sn	11 52 19.9	-0.9
CAIG	El Cayaco	0.74	104	eP	Pb	11 52 12.5	+0.4
CAIG				eS	Sb	11 52 22.1	-0.3
CAIG	El Cayaco	0.74	104		Pb	11 52 12.5	+0.4
CAIG					Sb	11 52 22.1	-0.3
UON	La Union	1.05	314	eP	Pn	11 52 18.4	+0.5
UON				eS	Sg	11 52 31.9	+1.2
ACP2	Acapulco	1.14	108	eP	Pg	11 52 18.3	-0.4
ACP2				eS	Sb	11 52 33.5	-0.5
ACP2	Acapulco	1.14	108		Pg	11 52 18.3	-0.4
ACP2					Sb	11 52 33.5	-0.5
MEIG	Mezcala	1.51	62	eP	Pn	11 52 24.7	+0.4
MEIG				eS	Sn	11 52 44.1	-0.2
MEIG	Mezcala	1.51	62		Pn	11 52 24.7	+0.4
MEIG					Sn	11 52 44.1	-0.2
PLIG	Platanillo	1.85	51	eP	Pb	11 52 30.2	-0.8
PLIG				iS	Sn	11 52 52.8	0.0
PLIG	Platanillo	1.85	51		Pb	11 52 30.2	-0.8
PLIG					Sn	11 52 52.8	0.0
CRIG	Cruz Grande	1.88	105	eP	Pn	11 52 29.0	-0.3
TLIG	Tlapa	2.37	82	eP	Pn	11 52 37.5	+1.3
TLIG				iS	Sn	11 53 05.1	-0.5
TLIG	Tlapa	2.37	82		Pn	11 52 37.5	+1.3
TLIG					Sn	11 53 05.1	-0.5
TLIG	Tlapa	2.37	82	Pn	Pb	11 52 39.1	-0.7
MOIG	Morelia	2.44	356	Pn	Pb	11 52 40.4	-0.7
MMIG	Aquila	2.45	296	iP	Pn	11 52 38.1	+0.9
MMIG				iS	Sn	11 53 07.8	+0.4
MMIG	Aquila	2.45	296		Pn	11 52 38.1	+0.9
MMIG					Sn	11 53 07.8	+0.4
YAIG	Yautepec	2.47	49	iP	Pn	11 52 38.3	+0.7
YAIG				eS	Sn	11 53 08.8	+0.7
YAIG	Yautepec	2.47	49		Pn	11 52 38.3	+0.7
YAIG					Sn	11 53 08.8	+0.7
UNM	Universidad Na	2.73	40	Pn	Pb	11 52 45.2	-0.8
FTIG	Fresnillo de T	2.84	76	eP	Pn	11 52 44.1	+1.4
FTIG				iS	Sn	11 53 17.6	+0.4
PNIG	Pinotepa	2.90	106	eP	Pn	11 52 43.5	+0.2
PNIG				iS	Sn	11 53 17.9	-0.5
PNIG	Pinotepa	2.90	106		Pn	11 52 43.5	+0.2
PNIG					Sn	11 53 17.9	-0.5
HLIG	Huajuapan de L	3.13	79	eP	Pn	11 52 47.8	+1.1
HLIG				iS	Sn	11 53 25.4	+0.9

*MOS **27** 11:52:37.6±1.0, 5°.01S×151°.44E, h146^{km}, mb4.8/32, Error ellipse: s-maj=9.8km s-min=6.8km az=97.4*

*IDC **27** 11:52:37.8±0.4, 5°.07S×151°.46E, h134^{km}±3^{km}, mb4.4/28, mb1 4.5/32, mb1mx4.5/37, mbtmp4.8/32, MS3.3/4, Ms1 3.3/4, ms1mx2.9/31, Error ellipse: s-maj=9.7km s-min=7.1km az=109.0*

*NEIC **27** 11:52:38.2±1.6, 5°.04S±0°.07×151°.42E±0°.08, h138^{km}±5^{km}, mb4.7/102, Error ellipse: s-maj=12.4km s-min=8.4km az=129.0*

*DJA **27** 11:52:39.0±0.4, 5°S±3°×15°1E±°, h142^{km}±5^{km}, M4.9/36, mb5.0/36, mB5.3/14, MLv5.4/2, Mw(mB)4.7/14, Mwp6.1/1*

*GCMT **27** 11:52:40.2±0.3, 5°.25S±0°.03×151°.45E±0°.03, h152^{km}±5^{km}, MW4.8/76, Moment Tensor Solution. s11,c11; s76,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.46±.12; $M_{\theta\theta}$-0.17±.19; $M_{\phi\phi}$-0.28±.21; $M_{r\theta}$1.32±.09; $M_{\theta\phi}$-0.46±.13; $M_{\phi r}$1.36±.09; Best double couple: $M_0$1.98100×10^{16} NP1:ϕ_s216.00000°, δ9.00000°, λ82.00000°. NP2: ϕ_s44.00000°, δ82.00000°, λ91.00000°. Principal axes: T 1.8630, Plg53.0000°, Azm316.0000°; N 0.2360, Plg1.0000°, Azm224.0000°; P -2.0990, Plg37.0000°, Azm133.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 11:52:38.2±0.5**, 5°.08S**±0°.04×**151°.48E**±0°.05**, h139**^{km}±4^{km}**, h139**^{km}**:pP-P, n305,** σ**1^{s}14**/317**, mb4.8**/105**, 7C-7D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	0.94	36	P	Pn	11 53 01.4	-0.1
	789nm,0.3s,baz=146,slow=1.3,SNR=372						
KRVT				LR	LR	11 53 10.9	
	comp=Z,119nm,20.6s,baz=120,slow=35						
KRVT				S	Sn	11 53 18.1	-1.0
	1μm,0.3s,baz=155,slow=22,SNR=17						
RABL	Rabaul	1.11	38		Pn	11 53 02.9	-0.1
RABL				Sn	Sn	11 53 21.3	-0.7
PMG	Port Moresby	6.07	225	P	Pn	11 54 06.4	+0.6
	17nm,0.3s,baz=66,slow=6.2,SNR=37						
PMG				S	Sn	11 55 12.6	-1.6
	84nm,0.3s,baz=159,slow=20,SNR=19						
PMG				LR	LR	11 56 25.0	
	comp=Z,145nm,20.4s,baz=322,slow=37						
PMG	Port Moresby	6.07	225	d iP	Pn	11 54 06.0	+0.2
PMG	Port Moresby	6.07	225		Pn	11 54 06.4	+0.6
PMG				Sn	Sn	11 55 13.8	-0.4
HNR	Honiara	9.45	118	P	Pn	11 54 51.8	+0.6
	6.1nm,0.3s,baz=207,slow=13,SNR=6.7						
HNR				LR	LR	11 58 38.7	
	comp=Z,235nm,18.4s,baz=257,slow=38						
HNR	Honiara	9.45	118	P	Pn	11 54 47.0	-4.1
HNR	Honiara	9.45	118	P	Pn	11 54 52.1	+1.0
HNR	Honiara	9.45	118		Pn	11 54 52.1	+1.0
JAY	Jayapura	11.04	283	P	P	11 55 21.1	-0.3
JAY	Jayapura	11.04	283	P	Pn	11 55 14.9	+2.5
JAY				pmax	pmax		
	comp=Z,26nm,1.2s						
COEN	Coen	12.03	222	P	Pn	11 55 27.4	+2.0
	baz=12,SNR=4.3						
COEN	Coen	12.03	222		Pn	11 55 26.0	+0.6
COEN					Sn	11 57 33.1	-5.2
MTSU	Mount Surprise	14.75	208	P	P	11 56 03.4	+0.9
	baz=15,SNR=5.0						
CTA	Charters Tower	15.77	198	P	P	11 56 14.4	+0.6
	comp=Z,1.0nm,0.3s,baz=24,slow=13,SNR=22						
CTAO	Charters Tower	15.77	198	P	P	11 56 16.4	+2.6
CTAO				pmax	pmax		
	comp=Z,26nm,1.1s						
QIS	Mount Isa	19.23	216	P	Pn	11 56 53.1	-1.2
	baz=19,SNR=16						
FAKI	Fak Fak	19.30	276	P	P	11 56 53.0	+0.4
	comp=Z,49nm,0.9s						
FAKI	Fak Fak	19.30	276	P	P	11 56 53.1	+0.4
FAKI				IAmb	IAmb	11 56 56.6	
	comp=Z,37nm,0.8s						
GUMO	Guam	19.67	341	P	Pn	11 56 58.4	-1.0
	comp=Z,10nm,0.3s,baz=182,slow=11,SNR=7.6						
GUMO	Guam	19.67	341	P	Pn	11 56 58.2	-1.2
GUMO				pmax	pmax		
	comp=Z,544nm,1.1s						
GUMO	Guam	19.67	341	P	Pn	11 56 58.2	-1.2
EIDS	Eidsvold	20.18	181	P	P	11 57 02.4	+0.4
	baz=20,SNR=6.8						
EIDS	Eidsvold	20.18	181	P	P	11 57 03.2	+1.2
EIDS				IAmb	IAmb	11 57 04.0	
	comp=Z,19nm,0.9s						
KDU	Kakadu	20.23	247	P	P	11 57 02.2	-0.4
	baz=20,SNR=353						
SIJI	Sorong	20.61	281	P	P	11 57 07.4	+0.7
	comp=Z,40nm,0.6s,baz=105,slow=8.1,SNR=18						
SWI	Sorong	20.61	281	P	P	11 57 07.9	+1.1
SWI				pmax	pmax		
	comp=Z,99nm,0.9s						
RMQ	Roma	21.45	187	P	P	11 57 16.5	+0.9
	baz=22,SNR=20						
MTN	Manton Dam	21.51	248	P	P	11 57 15.6	-0.8
	baz=22,SNR=101						
MTN	Manton Dam	21.51	248	P	P	11 57 15.4	-1.0
WB0	Warramunga Arr	22.14	227	P	P	11 57 22.3	-0.6
WB0				IAmb	IAmb	11 57 24.3	
	comp=Z,39nm,1.1s						
WR0	Warramunga Arr	22.15	227	P	P	11 57 22.2	-0.8
WR0				IAmb	IAmb	11 57 24.0	
	comp=Z,24nm,0.8s						
DZM	Mont Dzumac	22.26	141	P	P	11 57 24.6	+0.5
	comp=Z,37nm,0.7s,baz=321,slow=8.1,SNR=28						
DZM				LR	LR	12 04 17.4	
	comp=Z,101nm,20.7s,baz=252,slow=31						
DZM	Mont Dzumac	22.26	141	P	P	11 57 24.9	+0.8
DZM				IAmb	IAmb	11 57 25.5	
	comp=Z,40nm,0.7s						
WRAB	Tennant Creek	22.27	227	P	P	11 57 23.5	-0.7
WRAB				pmax	pmax		
	comp=Z,38nm,0.6s						
WRAB	Tennant Creek	22.27	227	P	P	11 57 23.5	-0.7
WB2	Warramunga Arr	22.28	227	P	P	11 57 23.7	-0.5
WRA	Warramunga Arr	22.29	227	P	P	11 57 23.4	-1.0
	comp=Z,28nm,0.6s,baz=50,slow=10.0,SNR=70						
WRA				S	S	12 01 17.6	-2.0
	comp=Z,8.7nm,0.9s,baz=52,slow=20,SNR=9.9						
WRA				ScP	ScP	12 04 40.6	+0.7
	comp=Z,13nm,0.9s,baz=48,slow=2.7,SNR=16						
WRA	Warramunga Arr	22.29	227	iP	P	11 57 22.5	-1.8
WRA				pmax	pmax		
	comp=Z,28nm,0.6s						
WRA	Warramunga Arr	22.29	227	P	P	11 57 23.0	-1.3
QLP	Quilpie	22.48	197	P	P	11 57 26.8	+0.7
	baz=23,SNR=18						
LBMI	Labuha	24.34	280	P	P	11 57 43.4	0.0
	comp=Z,932nmcomp=Z,52nm,0.9s						
KNRA	Kununurra	24.67	243	P	P	11 57 46.5	+0.2
	baz=25,SNR=114						
KNRA	Kununurra	24.67	243	P	P	11 57 46.7	+0.3
AS31	Alice Springs	25.07	221	P	P	11 57 49.9	-0.1
ASAR	Alice Springs	25.07	221	P	P	11 57 50.0	0.0

	comp=Z,21nm,0.6s,baz=56,slow=9.0,SNR=187						
ASAR				S	S	12 02 00.1	-4.2
	comp=Z,0.9nm,0.7s,baz=51,slow=15,SNR=2.3						
ASAR				ScP	ScP	12 04 49.0	+1.5
	comp=Z,7.0nm,0.8s,baz=51,slow=3.2,SNR=24						
ASAR	Alice Springs	25.07	221	P	P	11 57 48.5	-1.5
ASAR				S	S	12 02 00.1	-4.2
ASAR	Alice Springs	25.07	221	P	P	11 57 48.5	-1.5
ARMA	Armidale	25.21	180	P	P	11 57 52.2	+1.0
	baz=25,SNR=7.0						
ARMA	Armidale	25.21	180	P	P	11 57 51.7	+0.4
ARMA				IAmb	IAmb	11 57 54.8	
	comp=Z,38nm,1.1s						
CMSA	Cobar Meteorol	26.88	191	P	P	11 58 06.2	+0.1
	baz=27,SNR=12						
SOEI	Soe	27.37	259	P	P	11 58 11.4	+0.5
	comp=Z,930nmcomp=Z,49nm,0.6s						
STKA	Stephens Creek	28.23	198	P	P	11 58 18.2	+0.1
	baz=28,SNR=4.3						
STKA	Stephens Creek	28.23	198	P	P	11 58 18.0	-0.1
	comp=Z,3.8nm,0.7s,baz=23,slow=12,SNR=8.7						
STKA				ScP	ScP	12 04 57.5	+0.9
	comp=Z,3.9nm,0.6s,baz=61,slow=5.5,SNR=6.7						
FITZ	Fitzroy Crossi	28.37	241	P	P	11 58 18.9	-0.7
	comp=Z,14nm,0.3s,baz=55,slow=7.1,SNR=200						
FITZ	Fitzroy Crossi	28.37	241	P	P	11 58 19.9	+0.4
MSVF	Nonsavu	28.87	118	⇑*e*P	P	11 58 25.2	+1.1
MSVF				pmax	pmax		
	comp=Z,15nm,0.8s						
MSVF	Nonsavu	28.87	118	P	P	11 58 25.5	+1.4
MSVF				IAmb	IAmb	11 58 26.8	
	comp=Z,20nm,0.8s						
MMRI	Maumere	29.24	261	P	P	11 58 27.3	-0.1
WRKA	Warakurna	29.81	226	P	P	11 58 31.6	-0.8
	baz=30,SNR=33						
CAN	Canberra	30.18	184	P	P	11 58 36.2	+0.7
CAN				pmax	pmax		
	comp=Z,21nm,1.4s						
CAN	Canberra	30.18	184	P	P	11 58 36.2	+0.7
CAN				IAmb	IAmb	11 58 41.5	
	comp=Z,21nm,1.4s						
HTT	Hallett	30.54	201	P	P	11 58 38.6	0.0
	baz=31,SNR=9.9						
BBOO	Buckleboo	31.12	206	P	P	11 58 43.7	0.0
	baz=31,SNR=16						
BBOO	Buckleboo	31.12	206	P	P	11 58 43.7	0.0
KAPI	Kappang	31.60	269	P	P	11 58 49.0	+0.9
	comp=Z,3.7nm,0.3s,baz=174,slow=1.9,SNR=3.5						
MPSI	Mapaga	32.00	279	P	P	11 58 51.3	-0.3
	comp=Z,370nmcomp=Z,14nm,0.8s						
WBSI	Waikabubak, Su	32.13	260	P	P	11 59 04.0	+11
ARPS	Mount Arapiles	32.76	194	P	P	11 58 58.5	+0.6
	baz=33,SNR=14						
PLAI	Plampang	33.65	262	P	P	11 59 04.9	-1.1
	comp=Z,507nmcomp=Z,52nm,0.7s						
FORT	Forrest	33.75	218	P	P	11 59 06.3	-0.4
	baz=34,SNR=13						
FORT	Forrest	33.75	218	P	P	11 59 06.3	-0.4
FORT				IAmb	IAmb	11 59 07.4	
	comp=Z,12nm,0.8s						
PSA00	Pilbara Seismi	34.76	239	P	P	11 59 14.9	-0.6
PSA00	Pilbara Seismi	34.76	239	P	P	11 59 16.3	+0.8
PSA00				IAmb	IAmb	11 59 17.1	
	comp=Z,13nm,0.8s						
OUZ	Omahuta	36.29	149	P	P	11 59 29.9	+1.5
OUZ				IAmb	IAmb	11 59 31.3	
	comp=Z,16nm,0.8s						
KKM	Kota Kinabalu	36.90	287	P	P	11 59 33.9	-0.1
KKM				IAmb	IAmb	11 59 50.0	
	comp=Z,31nm,1.5s						
TAU	Tasmania Unive	37.86	185	P	P	11 59 42.8	+1.3
TAU				pmax	pmax		
	comp=Z,27nm,1.2s						
TAU	Tasmania Unive	37.86	185	P	P	11 59 42.8	+1.3
TAU				IAmb	IAmb	11 59 42.9	
	comp=Z,27nm,1.2s						
MEEK	Meekatharra	37.99	232	P	P	11 59 42.5	-0.4
	baz=38,SNR=53						
PWJI	Pagerwojo	39.51	264	P	P	11 59 55.4	-0.3
	comp=Z,24nm,0.8s						
SBUM	Sibu	39.92	280	P	P	12 00 01.0	+1.8
GIRL	Giralia	39.98	240	P	P	12 00 00.1	+0.6
	baz=40,SNR=6.2						
GIRL	Giralia	39.98	240	P	P	11 59 59.4	-0.1
PCJI	Pacitan	40.14	263	P	P	12 00 00.4	-0.5
	comp=Z,64nm,0.9s						
URZ	Urewera	40.43	148	P	P	12 00 04.0	+1.0
	comp=Z,18nm,1.0s,baz=290,slow=2.8,SNR=17						
URZ	Urewera	40.43	148	P	P	12 00 03.8	+0.8
URZ				IAmb	IAmb	12 00 04.3	
	comp=Z,17nm,0.8s						
BKZ	Black Stump Fm	40.80	150	P	P	12 00 06.7	+0.7
BKZ				IAmb	IAmb	12 00 13.9	
	comp=Z,18nm,1.2s						
YULB	Yu-li	40.85	315	IAmb	IAmb	12 00 09.4	
	comp=Z,15nm,0.7s						
NACB	Ninganchiao	41.14	316	P	P	12 00 09.8	+0.8
MORW	Morawa	41.15	230	P	P	12 00 08.6	-0.5
	baz=41,SNR=8.3						
MORW	Morawa	41.15	230	P	P	12 00 08.2	-0.8
MORW				IAmb	IAmb	12 00 08.8	
	comp=Z,11nm,0.6s						
KLBR	Kellerberrin	41.16	226	P	P	12 00 08.1	-1.0
	baz=41,SNR=9.1						
SSLB	Suanglung	41.34	315	P	P	12 00 12.2	+1.6
SSLB				IAmb	IAmb	12 00 16.6	
	comp=Z,16nm,0.7s						
TUWZ	Tuamarina	41.40	154	P	P	12 00 11.6	+0.8
BLDU	Ballidu	41.41	228	P	P	12 00 10.4	-0.8
	baz=42,SNR=14						
KSM	Kuching	41.64	278	P	P	12 00 14.0	+0.8
RPZ	Rata Peaks	42.18	159	P	P	12 00 17.8	+0.6
	comp=Z,30nm,0.8s,baz=297,slow=3.6,SNR=8.4						
RPZ	Rata Peaks	42.18	159	P	P	12 00 18.4	+1.2
NWAO	Narrogin (SRO)	42.26	225	P	P	12 00 17.1	-0.9
	baz=42,SNR=5.2						
NWAO	Narrogin (SRO)	42.26	225	P	P	12 00 16.9	-1.1
	comp=Z,5.2nm,0.7s,baz=60,slow=8.8,SNR=6.2						
NWAO	Narrogin (SRO)	42.26	225	P	P	12 00 17.6	-0.4
NWAO				pmax	pmax		
	comp=Z,39nm,1.5s						
NWAO	Narrogin (SRO)	42.26	225	P	P	12 00 17.6	-0.4
NWAO				IAmb	IAmb	12 00 31.1	
	comp=Z,39nm,1.5s						
NWAO	Narrogin (SRO)	42.26	225	P	P	12 00 17.3	-0.7
NWAO				IAmb	IAmb	12 00 31.1	
	comp=Z,32nm,1.5s						
MUN	Mundaring	42.48	227	P	P	12 00 19.3	-0.5
	baz=42,SNR=5.2						
JNU	Nakatsue	42.72	334	P	P	12 00 22.5	+0.9
JNU				IAmb	IAmb	12 00 24.0	
	comp=Z,22nm,0.9s						
MJAR	Matsushiro Arr	43.22	344	P	P	12 00 25.5	-0.2
	comp=Z,1.2nm,0.4s,baz=147,slow=8.3,SNR=3.3						
MJAR				PcP	PcP	12 02 12.5	0.0
	comp=Z,2.8nm,0.6s,baz=160,slow=3.7,SNR=8.1						
MJAR				LR	LR	12 18 38.6	
	comp=Z,30nm,19.2s,baz=275,slow=36						
RKGY	Rocky Gully	43.38	223	P	P	12 00 26.8	-0.2
	baz=44,SNR=6.6						
CISI	Cisompet, Garu	43.45	264	P	P	12 00 26.6	-1.4
	comp=Z,2µmcomp=Z,98nm,0.8s						
CISI	Cisompet, Garu	43.45	264	P	P	12 00 26.4	-1.5
LEM	Lembang	43.65	265	P	P	12 00 28.9	-0.7
	comp=Z,11nm,0.4s,baz=88,slow=11,SNR=4.2						
CNJI	Cibinong	44.13	265	P	P	12 00 32.2	-1.1
	comp=Z,100nm,0.9s						
TJN	Taejon	47.01	333	*d i*P	P	12 00 56.4	+0.9
MDSI	Maura Dua	47.13	269	P	P	12 00 56.2	-0.7
	comp=Z,12nm,0.6s						
QIZ	Qiongzhong	47.48	301	P	P	12 01 00.8	+1.3
QIZ				S	S	12 07 44.8	+0.9
KSRS	Korea Array	47.66	335	P	P	12 01 01.1	+0.5
	comp=Z,5.2nm,0.7s,baz=153,slow=9.0,SNR=26						
KSRS				pP	pP	12 01 31.7	+0.1
	comp=Z,1.9nm,0.9s,baz=157,slow=9.7,SNR=2.6						
KSRS				PcP	PcP	12 02 28.3	+0.4
	comp=Z,2.0nm,0.5s,baz=148,slow=3.9,SNR=11						
NJ2	Nanjing	48.24	322	*e*P	P	12 01 06.3	+1.2
WHN	Wuhan	50.15	317	P	P	12 01 21.8	+2.1
PDSI	Padang	51.10	273	P	P	12 01 26.5	-0.6
	comp=Z,5µmcomp=Z,21nm,0.5s						
IPM	Ipoh	51.28	280	P	P	12 01 28.2	-0.3
USA0B	Ussuriysk Arra	52.09	342	*de*P	P	12 01 34.2	+0.3
USRK	Ussuriysk Ar.	52.09	342	P	P	12 01 33.7	-0.2
	comp=Z,4.4nm,0.7s,baz=162,slow=8.2,SNR=10.0						
USRK	Ussuriysk Ar.	52.09	342	P	P	12 01 34.0	+0.1
USRK	Ussuriysk Ar.	52.09	342	P	P	12 01 34.0	+0.1
YSS	Yuzh-Sakhalins	52.38	352	*e*P	P	12 01 32.4	-3.5
YSS				*e*		12 02 03.0	
PSI	Prapat	53.08	277	P	P	12 01 40.6	-1.3
	comp=Z,7.4nm,0.5s,baz=140,slow=7.7,SNR=4.9						
MDJ	Mudanjiang	53.23	341	P	P	12 01 42.8	+0.5
GYA	Guiyang	53.52	308	⇓*i*P	P	12 01 46.5	+1.6
GYA				pP	pwP	12 02 18.3	-0.8
GYA				PP	PP	12 03 50.5	+3.5
GYA				S	S	12 09 08.5	+1.0
GYA				sS	sS	12 10 03.0	+0.6
CN2	Changchun	54.02	337	*e*P	P	12 01 47.0	-1.1
GSI	Gunungsitoli	54.21	275	P	P	12 01 48.8	-1.3
	comp=Z,176nm,0.9s						
GSI	Gunungsitoli	54.21	275	P	P	12 01 48.5	-1.6
KCSI	Kotacane, Aceh	54.33	278	P	P	12 01 48.8	-2.1
	comp=Z,25nm,0.6s						
PBKT	Sadao Pong	54.36	294	P	P	12 01 52.5	+1.5
PBKT				IAmb	IAmb	12 01 53.2	
	comp=Z,17nm,1.3s						
TPTI		54.87	278	P	P	12 01 53.1	-1.7
	comp=Z,7.2nm,0.9s						
MLSI	Meulaboh, Aceh	55.79	279	P	P	12 02 00.1	-1.2
	comp=Z,159nm,0.7s						
XAN	Xi'an	55.92	317	P	P	12 02 02.5	+0.5
XAN				pP	pP	12 02 08.5	-26
KMI	Kunming	56.05	305	P	P	12 02 05.3	+2.0
TYV	Tymovskoe	56.23	353	*e*P	P	12 02 02.9	-0.9
TYV				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KLR	Kul'dur	56.75	345	*c i*P	P	12 02 07.2	-0.3
KLR				*i* *PP	pP	12 02 40.2	+0.5
KLR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CMAR	Chiang Mai Arr	56.80	296	P	P	12 02 09.7	+1.2
	comp=Z,9.6nm,0.8s,baz=116,slow=5.3,SNR=56						
CMAR				pP	pP	12 02 41.6	+0.8
	comp=Z,1.4nm,0.6s,baz=128,slow=5.1,SNR=2.0						
CMAR				PcP	PcP	12 03 03.1	+0.4
	comp=Z,2.2nm,0.8s,baz=113,slow=3.1,SNR=4.7						
CMAR				ScP	ScP	12 06 49.6	+0.2
	comp=Z,0.7nm,0.5s,baz=107,slow=2.9,SNR=4.4						
CMAR	Chiang Mai Arr	56.80	296	P	P	12 02 09.1	+0.6
CD2	Chengdu	57.92	311	*e*P	P	12 02 16.0	-0.2
PEA0B	Petropavlovsk-	58.20	4	P	P	12 02 17.5	-0.1
PEA0B				pmax	pmax		
	comp=Z,12nm,0.8s						
PEA0B	Petropavlovsk-	58.20	4	P	P	12 02 17.5	-0.1
PEA0B				IAmb	IAmb	12 02 18.7	
	comp=Z,12nm,0.8s						
PETK	Petropavlovsk-	58.20	4	P	P	12 02 17.2	-0.4
	comp=Z,5.4nm,0.6s,baz=159,slow=7.7,SNR=17						
PETK				PcP	PcP	12 03 07.9	+0.4
	comp=Z,1.4nm,0.6s,baz=149,slow=6.3,SNR=1.6						
PETK	Petropavlovsk-	58.20	4	P	P	12 02 17.5	-0.1
PETK	Petropavlovsk-	58.20	4	P	P	12 02 17.4	-0.1
HHC	Hu-ho-hao-te	58.51	325	*e*P	P	12 02 21.0	+0.9
LZH	Lanzhou	60.52	317	*e*P	P	12 02 35.8	+1.7
LZH				pP	pP	12 03 06.0	-0.5
LZH				sP	sP	12 03 22.0	+0.5
MA2	Magadan	64.45	360	*de*P	P	12 02 58.6	-0.9
MA2				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GTA	Gaotai	64.97	318	*e*P	P	12 03 04.3	+0.8
GTA				pP	PcP	12 03 08.5	-27
GTA				sP	pP	12 03 11.8	-25
ULN	Ulaanbaatar	65.54	329	P	P	12 03 08.3	+1.3
ULN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ULN	Ulaanbaatar	65.54	329	P	P	12 03 08.3	+1.3
ULN				IAmb	IAmb	12 03 09.1	
	comp=Z,9.0nm,0.8s						
SONM	Songino Array	65.86	328	P	P	12 03 10.0	+1.0
	comp=Z,11nm,0.5s,baz=148,slow=5.2,SNR=87						
SONM				PcP	PcP	12 03 38.8	-0.1
	comp=Z,2.2nm,0.4s,baz=157,slow=4.2,SNR=6.5						
SONM	Songino Array	65.86	328	P	P	12 03 09.8	+0.8
SONM				pmax	pmax		
	comp=Z,12nm,0.6s						
SONM	Songino Array	65.86	328	P	P	12 03 09.8	+0.8
SEY	Seymchan	67.82	0	⇑*e*P	P	12 03 20.0	-0.9
YAK	Yakutsk	68.99	349	*e*P	P	12 03 27.7	-0.5
YAK				pmax	pmax		
	comp=Z,13nm,0.7s						
ZAK	Zakamensk	69.05	329	*e*P	P	12 03 29.2	+0.2
ZAK				*e*		12 04 03.3	
ZAK				pmax	pmax		
	comp=Z,22nm,0.9s						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ODAN	Odare	69.55	301	*e*P	P	12 03 32.7	0.0
	comp=Z,31nm,0.7s						
BOD	Bodaibo	69.58	340	*e*P	P	12 03 30.8	-1.2
BOD				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TLY	Talaya	69.66	331	*de*P	P	12 03 33.5	+0.9
TLY				pmax	pmax		
	comp=Z,9.0nm,1.0s						
JIRN	Jiri	70.80	301	*e*P	P	12 03 40.5	0.0
	comp=Z,37nm,0.7s						
MOY	Mondy	70.97	329	*e*P	P	12 03 41.6	+0.9
MOY				pmax	pmax		
	comp=Z,21nm,1.5s						
GUN	Gumba	71.14	302	*e*P	P	12 03 42.4	-0.1
	comp=Z,57nm,0.8s						
PKI	Pulchoki	71.44	301	*e*P	P	12 03 43.8	-0.5
	comp=Z,33nm,1.0s						
PKIN	Phulchoki	71.45	301	*e*P	P	12 03 44.0	-0.3
PALK	Pallekele	71.68	279	P	P	12 03 45.4	-0.2
	comp=Z,12nm,0.5s,baz=59,slow=4.5,SNR=13						
PALK	Pallekele	71.68	279	P	P	12 03 45.5	-0.2
PALK				pmax	pmax		
	comp=Z,14nm,0.6s						
PALK	Pallekele	71.68	279	P	P	12 03 45.5	-0.2
PALK				IAmb	IAmb	12 03 46.5	
	comp=Z,14nm,0.6s						
DMN	Daman	71.71	301	*e*P	P	12 03 45.7	-0.2
	comp=Z,58nm,0.8s						
GKN	Gorkha	72.22	301	*e*P	P	12 03 48.6	-0.2
VNDA	Vanda	72.61	178	P	P	12 03 50.9	+0.9
	comp=Z,1.8nm,0.7s,baz=334,slow=6.8,SNR=10						
DANN	Dangsing	73.06	302	*e*P	P	12 03 53.3	-0.6
	comp=Z,44nm,0.8s						
BILL	Bilibino	73.69	6	⇑*e*P	P	12 03 56.2	-0.1
BILL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BILL	Bilibino	73.69	6	P	P	12 03 56.3	-0.1
GAMB	Gambell	74.00	16	P	P	12 03 57.1	-1.1
WMQ	Urumqi	75.05	318	P	P	12 04 05.5	+0.6
WMQ				pP	pP	12 04 40.0	+1.2
WMQ				sP	sP	12 04 54.5	+1.0
WMQ				S	S	12 13 33.5	+1.7
HYB	Hyderabad	75.34	289	*i* P	P	12 04 06.5	-0.5
SII	Sitkinak Islan	75.62	28	P	P	12 04 07.8	0.0
OHAK	Old Harbor	76.39	27	P	P	12 04 12.3	+0.3
OHAK				IAmb	IAmb	12 04 12.7	
	comp=Z,7.9nm,0.5s						
ANM	Nome	76.43	18	P	P	12 04 13.0	+0.9
ANM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ANM	Nome	76.43	18	P	P	12 04 13.0	+0.9
KDAK	Kodiak Island	77.02	27	P	P	12 04 15.7	+0.1
KDAK				pmax	pmax		
	comp=Z,37nm,1.5s						
KDAK	Kodiak Island	77.02	27	P	P	12 04 15.7	+0.1
KDAK				IAmb	IAmb	12 04 25.0	
	comp=Z,37nm,1.5s						
SVW2	Sparrevohn	77.59	23	P	P	12 04 19.6	+0.9
TIXI	Tiksi	78.00	353	⇑*e*P	P	12 04 19.2	-1.5
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.2s						
SEW	Seward	79.61	26	P	P	12 04 29.6	-0.1
SEW				IAmb	IAmb	12 04 30.5	
	comp=Z,22nm,1.4s						
MK31	Makanchi Array	79.67	319	*i* P	P	12 04 29.9	-0.6
MK31	Makanchi Array	79.67	319	P	P	12 04 30.4	0.0
MK31				IAmb	IAmb	12 04 31.6	
	comp=Z,13nm,1.2s						
MKAR	Makanchi Array	79.67	319	P	P	12 04 30.5	0.0
	comp=Z,4.5nm,0.6s,baz=103,slow=6.9,SNR=57						
MKAR	Makanchi Array	79.67	319	P	P	12 04 30.2	-0.3
MAKZ	Makanchi	79.88	319	*i* P	P	12 04 30.6	-1.0
MAKZ				pmax	pmax		
	comp=Z,26nm,1.3s						
MAKZ	Makanchi	79.88	319	P	P	12 04 31.4	-0.1
MAKZ				IAmb	IAmb	12 04 32.6	
	comp=Z,24nm,1.2s						
PPLA	Purkeypile	79.93	23	P	P	12 04 31.1	-0.6
RC01	Rabbit Creek A	79.98	25	P	P	12 04 31.7	0.0
RC01				IAmb	IAmb	12 04 32.6	
	comp=Z,11nm,1.2s						
PMR	Palmer	80.48	25	P	P	12 04 34.2	-0.2
PMR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
PMR	Palmer	80.48	25	P	P	12 04 34.2	-0.2
PDGK	Podgornoye	80.52	315	*i* P	P	12 04 34.9	-0.3
PDGK				pmax	pmax		
	comp=Z,15nm,0.6s						
ZAA0	Zalesovo Array	80.65	327	IAmb	IAmb	12 04 35.4	
	comp=Z,12nm,0.8s						
ZALV	Zalesovo Beam	80.65	327	P	P	12 04 34.6	-0.9
	comp=Z,9.1nm,0.6s,baz=111,slow=5.1,SNR=36						
ZALV	Zalesovo Beam	80.65	327	P	P	12 04 34.5	-1.0
ZALV	Zalesovo Beam	80.65	327	P	P	12 04 34.5	-1.0
KTH	Kantishna Hill	80.77	23	P	P	12 04 35.4	-0.7
SML	Sawmill	80.92	25	P	P	12 04 37.0	+0.2
SML				pmax	pmax		
	comp=Z,8.0nm,0.6s						
SML	Sawmill	80.92	25	P	P	12 04 37.0	+0.2
SML				IAmb	IAmb	12 04 37.3	
	comp=Z,8.4nm,0.6s						
BPAW	Bear Paw Mtn.	81.03	22	P	P	12 04 36.8	-0.5
HIN	Hinchinbrook I	81.04	26	P	P	12 04 38.0	+0.5
HIN				IAmb	IAmb	12 04 57.3	
	comp=Z,24nm,1.2s						
IMAR	Indian Mountai	81.08	20	P	P	12 04 37.9	+0.3
RND	Reindeer	81.49	23	IAmb	IAmb	12 04 39.9	
	comp=Z,8.5nm,0.6s						
MLY	Manley	81.61	21	P	P	12 04 40.6	+0.1
MLY				IAmb	IAmb	12 04 41.1	
	comp=Z,13nm,0.6s						
MCK	McKinley	81.62	23	P	P	12 04 39.8	-0.7
MCK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MCK	McKinley	81.62	23	P	P	12 04 39.8	-0.7
MCK				IAmb	IAmb	12 04 40.5	
	comp=Z,10nm,0.6s						
KSH	Kashi	82.11	311	P	P	12 04 46.0	+2.3
KSH				PP	PP	12 07 58.5	+4.7
KSH				S	S	12 14 45.0	-2.3
KSH	Kashi	82.11	311	sS	sS	12 15 47.0	+0.6
CCB	Clear Creek Bu	82.50	22	P	P	12 04 44.1	-0.9
CCB				IAmb	IAmb	12 04 44.6	
	comp=Z,6.0nm,0.6s						
COLA	College	82.60	22	P	P	12 04 44.7	-0.7
COLA				pmax	pmax		
	comp=Z,13nm,0.6s						
GLB	Gilahina Butte	82.68	26	P	P	12 04 46.0	-0.1
HDA	Harding Lake	82.72	23	IAmb	IAmb	12 04 46.4	
	comp=Z,6.4nm,0.5s						
VRDI	Verde Repeater	82.75	26	P	P	12 04 46.8	+0.2
IL31		82.91	22	IAmb	IAmb	12 04 46.5	
	comp=Z,7.5nm,0.7s						
ILAR	Eielson Array	82.91	22	P	P	12 04 45.6	-1.5
	comp=Z,6.9nm,0.6s,baz=249,slow=5.0,SNR=158						
ILAR	Eielson Array	82.91	22	P	P	12 04 45.5	-1.6
ILAR	Eielson Array	82.91	22	P	P	12 04 45.5	-1.6
NIL	Nilore	83.05	305	P	P	12 04 48.7	+0.1
NIL				pmax	pmax		
	comp=Z,32nm,0.8s						
NIL	Nilore	83.05	305	P	P	12 04 48.7	+0.1
BALM	Baldy	83.16	27	P	P	12 04 48.9	+0.2
TKM2	Tokmak 2	83.17	314	P	P	12 04 49.6	+0.4
	SNR=34						
KURK	Kurchatov	83.17	322	*e*P	P	12 04 46.7	-2.1
KURK				pmax	pmax		
	comp=Z,24nm,1.2s						
KURK	Kurchatov	83.17	322	P	P	12 04 48.4	-0.4
KZA	Kyzart	83.23	313	P	P	12 04 51.0	+1.2
	SNR=37						
BARN	Barnard Glacie	83.48	27	P	P	12 04 49.6	-0.8
KBK	Karagaybulak	83.58	314	P	P	12 04 51.8	+0.6
	SNR=10						
CHMS	Chumysh	83.80	314	P	P	12 04 52.6	+0.4
	SNR=14						
CHMS	Chumysh	83.80	314	*i* P	P	12 04 52.2	0.0
CHMS				pmax	pmax		
	comp=Z,27nm,0.9s						
UCH	Uchtor	83.80	313	P	P	12 04 53.8	+1.0
	SNR=29						
AAK	Ala-Archa	83.90	314	P	P	12 04 53.1	+0.2
	SNR=20						
AAK	Ala-Archa	83.90	314	*c i*P	P	12 04 53.1	+0.2
AAK				pmax	pmax		
	comp=Z,16nm,0.7s						
AAK	Ala-Archa	83.90	314	P	P	12 04 53.5	+0.6
USP	Ospenovka	84.03	314	P	P	12 04 54.0	+0.6
	SNR=25						
BCAR	Beaver Creek A	84.21	25	P	P	12 04 54.1	+0.2
FYU	Fort Yukon	84.35	21	IAmb	IAmb	12 04 55.6	
	comp=Z,6.5nm,0.6s						
AML	Almayashu	84.37	313	P	P	12 04 56.4	+0.8
	SNR=72						
EKS2	Erkin-Say	84.42	314	P	P	12 04 56.1	+0.6
	SNR=32						
MAW	Mawson	84.81	203	P	P	12 04 57.4	+0.7
	comp=Z,2.7nm,0.6s,baz=123,slow=7.0,SNR=7.2						
MAW	Mawson	84.81	203	IAmb	IAmb	12 04 59.7	
	comp=Z,0.2nm,0.8s						
QSPA	South Pole Qui	84.89	180	P	P	12 04 57.5	+0.2
	comp=Z,4.4nm,1.0s,baz=302,slow=0.9,SNR=11						
QSPA				pP	pP	12 05 30.5	-2.2
	comp=Z,7.0nm,0.9s,baz=344,slow=3.7,SNR=5.8						
QSPA	South Pole Qui	84.89	180	P	P	12 04 57.5	+0.2
BMAR	Burnt Mountain	84.96	20	P	P	12 04 58.3	+0.7
EGAK	Eagle	85.13	23	IAmb	IAmb	12 04 59.5	
	comp=Z,9.6nm,1.1s						
DAWY	Dawson	85.58	24	IAmb	IAmb	12 05 03.0	
	comp=Z,3.8nm,0.5s						
NRIK	Noril'sk	85.80	341	P	P	12 05 00.8	-0.8
	comp=Z,4.3nm,0.6s,baz=124,slow=4.5,SNR=8.8						
NRIK	Noril'sk	85.80	341	⇑*i*P	P	12 05 00.7	-0.8
NRIK				pmax	pmax		
	comp=Z,14nm,1.4s						
GAR	Garm	86.32	310	IAmb	IAmb	12 05 05.6	
	comp=Z,14nm,1.1s						
KKAR	Karatay Array	86.86	314	P	P	12 05 07.0	-0.4
KKAR	Karatay Array	86.86	314	P	P	12 05 07.0	-0.4
EPYK	Eagle Plains	87.42	23	IAmb	IAmb	12 05 10.8	
	comp=Z,6.8nm,0.7s						
BRVK	Borovoye	88.74	323	*i* P	P	12 05 14.9	-1.1
BRVK				pmax	pmax		
	comp=Z,15nm,1.5s						
BRVK	Borovoye	88.74	323	P	P	12 05 14.9	-1.1
BRVK				IAmb	IAmb	12 05 16.5	
	comp=Z,6.7nm,0.8s						
AFDM	Forest Hills D	91.25	51	P	P	12 05 29.4	+1.2
AFDM				IAmb	IAmb	12 05 30.8	
	comp=Z,4.1nm,0.9s						
MOD	Modoc Plateau	92.03	48	IAmb	IAmb	12 05 33.7	
	comp=Z,5.8nm,0.8s						
C36M	Paulatuk	92.75	21	IAmb	IAmb	12 05 34.1	
	comp=Z,3.8nm,0.8s						
NVAR	Mina Array Bea	93.29	52	P	P	12 05 39.2	+1.4
	comp=Z,4.1nm,0.7s,baz=254,slow=6.4,SNR=32						
NVAR	Mina Array Bea	93.29	52	P	P	12 05 38.7	+0.9
KVN	Kaiserville	93.49	51	IAmb	IAmb	12 05 40.6	
	comp=Z,4.2nm,0.8s						
BMO	Blue Mountains	94.41	45	P	P	12 05 43.3	+0.7
BMO				pmax	pmax		
	comp=Z,9.0nm,1.5s						
BMO	Blue Mountains	94.41	45	P	P	12 05 43.3	+0.7
BMO				IAmb	IAmb	12 05 43.8	
	comp=Z,8.9nm,1.5s						
F10A	Beach Ranch, E	94.51	44	IAmb	IAmb	12 05 44.6	
	comp=Z,2.9nm,0.7s						
ABKAR	Akbulak array	94.81	319	P	P	12 05 41.9	-2.4
ARU	Arti	95.81	326	*d i*P	P	12 05 46.1	-2.5
ARU						12 09 39.4	
ARU				S	SKSac	12 16 08.7	-3.0
ARU				SS	SS	12 23 22.1	-5.2
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
YKA	Yellowknife Ar	96.28	28	P	P	12 05 50.9	+0.3
	comp=Z,1.0nm,0.6s,baz=267,slow=4.4,SNR=20						
PDAR	Pinedale Array	100.01	48	P	Pdif	12 06 08.2	+0.1
	comp=Z,1.3nm,0.5s,baz=215,slow=1.6,SNR=16						
TXAR	Lajitas Array	105.42	61	PKKPab	PKKPab	12 22 29.2	+0.7

	comp=Z,0.8nm,0.9s,baz=120,slow=5.3,SNR=4.6						
ARCES	ARCESS Array B	106.74	343	PKiKP	PKiKP	12 10 46.5	-0.2
	comp=Z,2.5nm,0.7s,baz=85,slow=1.2,SNR=9.5						
FINES	FINESS Array B	110.75	335	PKiKP	PKiKP	12 10 53.8	-0.5
	comp=Z,1.7nm,0.6s,baz=80,slow=2.7,SNR=7.1						
AKASG	Malin Array Be	113.94	324	PKiKP	PKiKP	12 11 00.1	-0.6
	comp=Z,1.0nm,0.4s,baz=67,slow=2.1,SNR=4.4						
BRTR	Keskin Array B	114.50	311	PKP	PKPdf	12 11 00.7	-1.6
	comp=Z,0.8nm,0.9s,baz=101,slow=2.9,SNR=2.7						
NB2	NORSAR Subarra	116.72	340	PKPdf	PKPdf	12 11 04.7	-1.1
	comp=Z,2.2nm,0.9s,baz=44,slow=1.9						
NOA	NORSAR Array B	116.72	340	PKP	PKPdf	12 11 05.0	-0.8
	comp=Z,1.3nm,0.6s,baz=48,slow=1.9,SNR=11						
BOSA	Boshof	118.40	234	PKP	PKiKP	12 11 10.3	0.0
	comp=Z,1.9nm,0.7s,baz=214,slow=1.5,SNR=3.9						
VTS	Vitosha	120.96	317	PKIKP	PKPdf	12 11 13.7	-1.0
BRG	Berggiesshubel	122.25	330	*e*PKP	PKiKP	12 11 17.2	+0.3
	comp=Z,4.9nm,0.8s						
BRG	Berggiesshubel	122.25	330	*e*PKIKP	PKiKP	12 11 17.2	+0.3
BRG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CLL	Collm	122.45	330	*i* PKPdf	PKiKP	12 11 17.7	+0.4
	comp=Z,7.0nm,0.9s						
CLL	Collm	122.45	330	*i* PKIKP	PKiKP	12 11 17.7	+0.4
CLL				pmax	pmax		
	comp=Z,22nm,0.9s						
CONA	Conrad Observa	122.94	326	*i* PKiKP	PKPdf	12 11 18.3	0.0
	comp=Z,4.6nm,0.6s						
KHC	Kasperske Hory	123.49	328	*e*PKPDF	PKPdf	12 11 19.0	-0.2
KHC	Kasperske Hory	123.49	328	*e*PKIKP	PKPdf	12 11 19.0	-0.2
GEC2	GERESS Array S	123.59	328		PKPdf	12 11 19.6	0.0
GERES	GERESS Array B	123.59	328	PKP	PKPdf	12 11 19.2	-0.3
	comp=Z,5.1nm,0.6s,baz=64,slow=2.0,SNR=27						
GERES				pPKP	pPKPdf	12 11 56.3	-0.4
	comp=Z,0.8nm,0.6s,baz=25,slow=3.5,SNR=1.9						
WTTA	Wattenberg	125.65	327	*e*PKiKP	PKPdf	12 11 23.5	-0.2
	comp=Z,5.8nm,0.5s						
MOTA	Moosalm	125.89	328	*i* PKiKP	PKPdf	12 11 24.0	-0.1
	comp=Z,5.9nm,0.5s						
SQTA	Sankt Quirin	125.91	327	*e*PKiKP	PKPdf	12 11 24.1	0.0
	comp=Z,6.4nm,0.7s						
RETA	Reutte	125.98	328	*i* PKiKP	PKiKP	12 11 24.5	0.0
	comp=Z,2.3nm,0.5s						
FETA	Feichten	126.29	328	*i* PKiKP	PKPdf	12 11 25.0	+0.1
	comp=Z,5.2nm,0.8s						
DAVA	Damuels	126.57	328	*i* PKiKP	PKiKP	12 11 25.7	-0.2
	comp=Z,6.4nm,0.8s						
LPAZ	La Paz	135.44	119	PKP	PKPdf	12 11 43.6	+0.1
	comp=Z,0.6nm,0.4s,baz=13,slow=5.9,SNR=3.8						
SDV	Santo Domingo	138.05	82		PKPdf	12 11 48.9	+0.9
PTGA	Pitinga	148.07	100		PKPbc	12 12 08.7	0.0
TOA0	Torodi Ar. Sit	149.13	287		PKPbc	12 12 10.5	-0.8
TORD	Torodi Ar. Bea	149.13	287	PKP	PKPdf	12 12 07.0	0.0
	comp=Z,29nm,0.7s,baz=72,slow=1.7,SNR=89						
TORD				PKPbc	PKPbc	12 12 10.6	-0.7
	comp=Z,29nm,0.7s,baz=57,slow=1.7,SNR=76						
TORD				SKPbc		12 15 34.7	
	comp=Z,1.1nm,0.7s,baz=80,slow=1.2,SNR=4.1						
BDFB	Brasilia	151.78	137	PKPab	PKPab	12 12 24.4	-2.6
	comp=Z,4.1nm,0.5s,baz=181,slow=6.1,SNR=5.8						
KIC	Kosan Boka	156.30	274	*e*PKP1	PKPab	12 12 46.4	+0.1
	comp=Z,16nm,0.7s						
DBIC	Dimbokro	156.41	275	PKPbc	PKPdf	12 12 27.0	+9.4
	comp=Z,2.1nm,0.5s,baz=311,slow=0.9,SNR=6.9						
DBIC				PKPab	PKPab	12 12 45.3	-1.4
	comp=Z,3.3nm,0.6s,baz=127,slow=4.7,SNR=4.5						
TIC	Toumodi	156.57	275	*e*PKP1	PKPab	12 12 47.4	-0.1
LIC	Lamto	156.59	274	*e*PKP1	PKPab	12 12 47.5	-0.1
	comp=Z,6.3nm,0.5s						

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*SOME **27** 11:52:51.9, 40°.85N×70°.73E, h5^{km}*

*KRNET **27** 11:52:55.6±0.1, 41°.18N×70°.71E, h14^{km}, mb2.4*

*NNC **27** 11:52:55.1±3.5, 40°.90N×70°.75E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=26.9km s-min=16.4km az=25.0*

ISC 27 11:52:56.8±1.7, 41°.04N±0°.05×70°.78E±0°.05, h8^{km}±12^{km}, n14, σ1^{s}78/24, 2C-16D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	0.98	178	⇓*i*P	Pn	11 53 17.2	+0.2
	baz=76						
BTK				⇓*i*S	Sn	11 53 32.9	+1.8
	baz=76						
ARK	Arkit	1.17	49	⇓*i*P	Pb	11 53 17.4	-2.0
	baz=57						
ARK				⇓*i*S	Sb	11 53 33.1	-1.7
	baz=57						
JBG	Jabagly	1.39	353	P	Pg	11 53 23.6	0.0
	7.4nm,0.1s						
JBG				S	Sg	11 53 45.3	+3.6
	16nm,0.2s						
ARSB	Arslanbob	1.69	80	⇑*i*P	Pb	11 53 27.5	-0.7
	baz=84						
ARSB				⇑*i*S	Sg	11 53 51.7	+0.6
	baz=84						
KK31	Karatay Array	2.07	355	⇓Pn	Pb	11 53 34.2	-0.5
	0.8nm,0.2s,baz=183,slow=16,SNR=29						
KK31				⇓Lg	Lg	11 54 02.8	
	3.1nm,0.3s,baz=181,slow=28,SNR=10						
BRLS	Borolday	2.11	341	*e*P	Pn	11 53 31.1	-1.3
	0.4nm,0.1s						
BRLS				*e*S	Sn	11 53 58.3	-0.5
	6.0nm,0.2s						
BRLS	Borolday	2.11	341	Pg	Pn	11 53 31.2	-1.2
	0.4nm,0.1s						
BRLS				Lg	Lg	11 53 58.3	
	6.0nm,0.2s						
AML	Almayashu	2.44	63	⇓*e*P	Pb	11 53 38.9	-2.4
	baz=66						
AML				⇓*i*S	Sb	11 54 11.1	-0.6
	baz=66						
MRKS	Merke	2.50	46	*e*P	Pb	11 53 42.5	+0.4
	3.8nm,0.3s						
MRKS				*e*S	Sg	11 54 16.5	-0.6
	3.5nm,0.3s						
MRKS	Merke	2.50	46	Pg	Pb	11 53 42.7	+0.7
	3.5nm,0.3s						
MRKS				Lg	Lg	11 54 18.0	
	4.4nm,0.3s						
EKS2	Erkin-Say	2.77	53	⇓*i*P	Pn	11 53 42.6	+1.0
	baz=56						
EKS2				⇓*i*S	Sn	11 54 17.4	+2.2
	baz=56						
ARLS	Aral	2.79	72	⇓*e*P	Pb	11 53 44.1	-2.9
	baz=74						
ARLS				⇓*i*S	Sb	11 54 19.2	-2.2
	baz=74						
UCH	Uchtor	3.04	66	⇓*i*P	Pn	11 53 47.1	+1.4
	baz=69						
UCH				⇓*i*S	Sn	11 54 25.2	+2.7
	baz=69						
AAK	Ala-Archa	3.20	59	⇓Pg	Pb	11 53 53.4	-0.7
	1.0nm,0.5s						
AAK				⇓Lg	Lg	11 54 37.6	
	2.7nm,1.0s						

DDA 27 12:47:47.8, 38°.48N×29°.13E, h7^{km}±4^{km}, ML1.3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USAK	Uak-Merkez	0.25	340	*i* P	Pg	12 47 52.8	-0.1
USAK				IAML		12 47 55.0	
	comp=E,23nm,0.8s						
USAK				*i* S	Sg	12 47 56.8	+0.6
USAK				IAML		12 48 09.0	
	comp=N,82nm,0.7s						
KHAL	Karahalli	0.30	110	*i* P	Pg	12 47 53.5	-0.4
KHAL				*i* S	Sg	12 47 59.4	+1.5
KHAL				IAML		12 48 04.0	
	comp=N,19nm,0.6s						
KHAL				IAML		12 48 07.0	
	comp=E,42nm,1.1s						
MANT	Manisa	0.45	272	*i* S	Sb	12 48 04.3	-0.8

BUC 27 12:50:01.5±0.2, 45°.70N×26°.44E, h13^{km}±2^{km}, ml1.9/9, 30C-8D, Error ellipse: s-maj=1.9km s-min=1.4km az=7.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOR	Plostina	0.21	45	⇑P	Pg	12 50 05.5	-0.7
PLOR				⇑S	Sg	12 50 09.6	+0.2
PLOR	Plostina	0.21	45	⇑P	Pg	12 50 05.5	-0.7
PLOR				⇑S	Sg	12 50 09.6	+0.2
BISRR	Bisoca	0.24	129	⇑P	Pg	12 50 06.5	-0.3
BISRR				⇑S	Sg	12 50 11.2	+0.8
BISRR	Bisoca	0.24	129	⇑P	Pg	12 50 06.5	-0.3
BISRR				⇑S	Sg	12 50 11.2	+0.8
VRI	Vrincioaia	0.26	51	⇑P	Pg	12 50 06.7	-0.3
VRI				⇑S	Sg	12 50 11.6	+0.8
VRI	Vrincioaia	0.26	51	⇑P	Pg	12 50 06.7	-0.3
VRI				⇑S	Sg	12 50 11.6	+0.8
MLR	Muntele Rosu	0.41	239	⇓P	Pg	12 50 09.0	-0.7
MLR				⇑S	Sg	12 50 15.4	+0.1
MLR	Muntele Rosu	0.41	239	⇓P	Pg	12 50 09.0	-0.7
MLR				⇑S	Sg	12 50 15.4	+0.1
GRER		0.50	131	⇓S	Sb	12 50 19.2	0.0
GRER		0.50	131	⇓S	Sb	12 50 19.2	0.0
OZUR		0.60	311	⇑S	Sg	12 50 21.5	+0.2
OZUR		0.60	311	⇑S	Sg	12 50 21.5	+0.2
DOPR	Dopca	0.78	290	⇑P	Pb	12 50 17.0	0.0
DOPR				⇑S	Sb	12 50 28.1	+0.6
DOPR	Dopca	0.78	290	⇑P	Pb	12 50 17.0	0.0
DOPR				⇑S	Sb	12 50 28.1	+0.6
TESR	Tescani	0.82	10	⇑P	Pb	12 50 18.1	+0.4
TESR				⇑S	Sb	12 50 29.2	+0.6
TESR	Tescani	0.82	10	⇑P	Pb	12 50 18.1	+0.4
TESR				⇑S	Sb	12 50 29.2	+0.6
VOIR		1.01	255	⇑S	Sn	12 50 35.8	+0.2
VOIR		1.01	255	⇑S	Sn	12 50 35.8	+0.2
CFR	Carcaliu	1.30	113	⇑P	Pn	12 50 24.8	-0.6
CFR				⇓S	Sn	12 50 43.0	+0.4
CFR	Carcaliu	1.30	113	⇑P	Pn	12 50 24.8	-0.6
CFR				⇓S	Sn	12 50 43.0	+0.4
ARR	Arges	1.31	256	⇓P	Pb	12 50 26.0	-0.1
ARR				⇑S	Sg	12 50 43.9	0.0
ARR	Arges	1.31	256	⇓P	Pb	12 50 26.0	-0.1
ARR				⇑S	Sg	12 50 43.9	0.0

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*DDA **27** 13:12:40.7, 35°.15N×27°.87E, h34^{km}±4^{km}, MW4.0*

*NIC **27** 13:12:42.3±0.0, 35°.32N×27°.97E, h9^{km}±1^{km}, Ml4.0/4*

*ATH **27** 13:12:43.7, 35°.36N×27°.87E, h29^{km}±2^{km}, ML3.6/5, Error ellipse: s-maj=4.9km s-min=1.6km az=338.0*

*ISK **27** 13:12:43.6, 35°.32N×27°.86E, h20^{km}, ML3.9/24*

*THE **27** 13:12:44.4, 35°.36N×27°.84E, h0^{km}±1^{km}, ML3.7/3, Error ellipse: s-maj=2.8km s-min=1.0km az=144.0*

*GII **27** 13:12:47.4±0.0, 34°.85N×28°.29E, h6^{km}, MD3.6/4, Mm3.9/4*

*IDC **27** 13:12:48.6±2.0, 35°.52N×27°.68E, h70^{km}±19^{km}, mb3.7/11, mb1 3.7/16, mb1mx3.5/39, mbtmp3.9/16, MS2.9/6, Ms1 2.9/6, ms1mx2.8/34, Error ellipse: s-maj=24.9km s-min=13.0km az=153.0*

ISC 27 13:12:43.3±1.1, 35°.27N±0°.03×27°.93E±0°.02, h27^{km}±8^{km}, n139, σ1^{s}74/181, mb3.9/11, 8C-1D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.68	294	P	Pb	13 12 55.4	-1.2
KARP				S	Sb	13 13 05.8	0.0
	11µm,0.7s						
KARP	Karpathos	0.68	294	P	Pb	13 12 55.5	-1.1
KARP				S	Sb	13 13 05.6	-0.2
KARP				AML	AML	13 13 11.7	
	comp=E,21900µm,0.7s						
KARP				AML	AML	13 13 12.2	
	comp=N,21756µm,0.6s						
KARP	Karpathos	0.68	294	PG	Pb	13 12 55.9	-0.8
KARP				SG	Sb	13 13 05.6	-0.2
KARP	Karpathos	0.68	294	⇑P	Pb	13 12 55.4	-1.2
KARP				S	Sb	13 13 05.9	+0.2
KARP				AML	AML	13 13 10.9	
	comp=N,22nm,0.7s						
KARP				AML	AML	13 13 10.9	
	comp=N,22nm,0.7s						
KARP				AML	AML	13 13 11.5	
	comp=N,22nm,0.6s						
KARP				AML	AML	13 13 11.5	
	comp=N,22nm,0.6s						
ARG	Arkhangelos	0.96	10	P	Pb	13 13 02.3	+1.0
ARG				S	Sn	13 13 16.1	+2.3
	comp=N,6µm,1.1s						
ARG	Arkhangelos	0.96	10	P	Pb	13 13 01.2	-0.1
ARG				S	Sn	13 13 17.0	+3.2
ARG				AML	AML	13 13 22.8	
	comp=N,10795µm,1.1s						
ARG				AML	AML	13 13 26.3	
	comp=E,12358µm,1.0s						
ARG	Arkhangelos	0.96	10	PG	Pb	13 13 02.3	+1.0
ARG				SG	Sn	13 13 15.3	+1.5
ARG	Arkhangelos	0.96	10	⇑P	Pn	13 12 59.2	-1.8
ZKR	Zakros	1.41	264	P	Pb	13 13 08.9	0.0
ZKR				S	Sb	13 13 28.8	+2.4
	comp=E,2µm,0.5s						
ZKR	Zakros	1.41	264	P	Pb	13 13 08.3	-0.6
ZKR				S	Sb	13 13 26.2	-0.2
ZKR				AML	AML	13 13 35.7	
	comp=E,4845µm,1.1s						
ZKR				AML	AML	13 13 39.4	
	comp=N,1643µm,0.5s						
ZKR	Zakros	1.41	264	PN	Pb	13 13 08.2	-0.7
ZKR	Zakros	1.41	264	⇑P	Pb	13 13 08.7	-0.2
ZKR				AML	AML	13 13 34.4	
	comp=N,4.8nm,0.6s						
ZKR				AML	AML	13 13 46.6	
	comp=N,1.8nm,0.6s						
MRSB	Marmaris-Mugla	1.46	9	PN	Pb	13 13 09.1	-0.7
DAT	Datca	1.48	349	P	Pb	13 13 09.5	-0.8
DAT	Datca	1.48	349	PN	Pb	13 13 09.3	-1.0
DATC	Datca-Mugla	1.50	352	PN	Pb	13 13 09.5	-1.0
STIA	Sitia Lasithi	1.50	268	P	Pb	13 13 10.5	0.0
KSL	Kastellorizon	1.61	56	P	Pb	13 13 12.1	-0.2
KSL	Kastellorizon	1.61	56	P	Pb	13 13 11.7	-0.6
KSL	Kastellorizon	1.61	56	⇑P	Pn	13 13 11.1	+1.1
DALY	Dalyan (Mula)	1.65	21	PN	Pb	13 13 11.9	-1.2
FETY	Fethiye	1.66	34	P	Pb	13 13 12.3	-0.8
FETY	Fethiye	1.66	34	PN	Pb	13 13 12.4	-0.7
KOSK	Kos Island	1.67	333	PN	Pn	13 13 11.5	+0.8
AKAS	Kas	1.67	54	PN	Pb	13 13 12.7	-0.7
AKAS	Kas	1.67	54	*i* P	Pb	13 13 12.5	-0.9
AKAS				*i* S	Sb	13 13 34.5	+0.4
AKAS				IAML		13 13 38.0	
	comp=N,434nm,0.5s						
AKAS				IAML		13 13 39.0	
	comp=E,200nm,0.5s						
TURN	Turunc	1.69	19	PN	Pn	13 13 09.9	-1.2
TURN	Turunc	1.69	19	*i* P	Pn	13 13 10.6	-0.5
TURN				*i* S	Sb	13 13 33.2	-1.3
BODT	Bodrum	1.86	345	PN	Pn	13 13 14.5	+1.1
YER	Yerkesik	1.89	9	P	Pb	13 13 15.5	-1.5
YER	Yerkesik	1.89	9	PN	Pn	13 13 15.1	+1.3
NPS	Neapolis	1.89	270	P	Pb	13 13 16.2	-1.0
NPS	Neapolis	1.89	270	P	Pb	13 13 16.1	-1.1
NPS				S	Sn	13 13 35.7	-1.2
NPS				AML	AML	13 13 51.8	
	comp=N,80µm,3.3s						
NPS				AML	AML	13 13 52.4	
	comp=E,4228µm,0.6s						
LAST	Lasithi	2.01	268	P	Pb	13 13 17.7	-1.4
LAST	Lasithi	2.01	268	P	Pb	13 13 18.0	-1.2
LAST				AML	AML	13 13 56.5	
	comp=N,1185µm,0.9s						
LAST				AML	AML	13 13 60.0	
	comp=E,1390µm,1.0s						
ELL	Elmali	2.18	47	PN	Pn	13 13 19.9	+2.0
AKUM	Antalya-Kumluc	2.23	61	*i* P	Pn	13 13 20.0	+1.5
AKUM				*i* S	Sb	13 13 49.1	-0.9
AKUM				IAML		13 13 55.0	
	comp=E,78nm,0.5s						
AKUM				IAML		13 14 31.0	
	comp=N,69nm,1.4s						
AMGA	Amorgos Island	2.27	314	P	Pn	13 13 19.7	+0.7
AMGA	Amorgos Island	2.27	314	P	Pn	13 13 19.7	+0.7
SANT	Santorini	2.29	299	P	Pn	13 13 20.7	+1.5
SANT	Santorini	2.29	299	PN	Pn	13 13 20.3	+1.0
SANT	Santorini	2.29	299	*i* P	Pn	13 13 20.4	+1.0
HRKL	Herakleio	2.31	272	PN	Pn	13 13 21.0	+1.4
TAVA	DENIZLI_Tavas	2.33	20	*i* P	Pn	13 13 21.9	+1.9
THT2	Imerovigli	2.34	301	PN	Pn	13 13 20.8	+0.7
CMBO	Columbo, Santo	2.37	301	P	Pn	13 13 21.4	+1.0
AYDN	Tasoluk	2.39	359	*i* P	Pn	13 13 21.6	+0.9
AYDN				*i* S	Sb	13 13 53.0	-1.6
IDI	Anoyia	2.48	271	P	Pn	13 13 23.6	+1.6
	comp=N,6.3nm,0.3s,baz=88,slow=16,SNR=19						
IDI				S	Sn	13 13 52.9	+1.3
	comp=N,15nm,0.3s,baz=4.7,slow=16,SNR=5.1						
IDI				LR	LR	13 14 43.8	
	comp=N,310nm,18.3s,baz=92,slow=50						
IDI	Anoyia	2.48	271	P	Pn	13 13 24.2	+2.2
IDI	Anoyia	2.48	271	PN	Pn	13 13 23.5	+1.5
GCAM	G?zelcaml?	2.49	347	PN	Pn	13 13 23.2	+1.2
GCAM	G?zelcaml?	2.49	347	*i* P	Pn	13 13 24.1	+2.1
SIVA	Sivas	2.57	265	P	Pn	13 13 24.5	+1.4
SMG	Samos	2.59	341	P	Pn	13 13 24.3	+0.9
SMG	Samos	2.59	341	P	Pn	13 13 24.3	+0.9
KORT	Korkueli	2.62	48	PN	Pn	13 13 25.8	+1.9
KORT	Korkueli	2.62	48	*i* P	Pb	13 13 27.7	-1.8
DENT	Denizli	2.64	19	PN	Pn	13 13 25.8	+1.7
APE	Apeiranthos	2.64	314	P	Pn	13 13 25.2	+1.0
APE	Apeiranthos	2.64	314	PN	Pn	13 13 25.5	+1.3
APE	Apeiranthos	2.64	314	*i* P	Pn	13 13 25.3	+1.1
APE	Apeiranthos	2.64	314	⇑P	Pn	13 13 24.9	+0.7
APE				S	Sb	13 13 58.8	-3.2
AYDB	Zeytinkoy-Aydi	2.67	359	PN	Pn	13 13 25.9	+1.2
DGB	zmir	2.90	344	*i* P	Pn	13 13 27.8	+0.1
BRDR	BURDUR-Merkez	2.97	35	*i* P	Pn	13 13 31.1	+2.3
GVDS	Gavdos	3.17	263	PN	Pn	13 13 33.8	+2.3
GVD	Gavdhos	3.18	263	PN	Pn	13 13 33.8	+2.3
BLCB	Balcova	3.19	347	PN	Pn	13 13 32.9	+1.2
IMMV	Iera Moni Meta	3.23	275	P	Pn	13 13 35.2	+3.0
IMMV	Iera Moni Meta	3.23	275	PN	Pn	13 13 34.2	+2.0
MANT	Manisa	3.26	9	*i* P	Pn	13 13 34.2	+1.4
URLA	Izmir	3.27	341	PN	Pn	13 13 33.9	+1.2
URLA	Izmir	3.27	341	*i* P	Pn	13 13 33.4	+0.6
KULA	Kula-Manisa	3.29	10	PN	Pn	13 13 34.6	+1.4
ISP	Isparta	3.30	39	PN	Pn	13 13 35.4	+2.2
KHAL	Karahalli	3.34	22	*i* P	Pn	13 13 34.5	+0.6
RODP	Rodopos	3.42	276	PN	Pn	13 13 36.7	+1.9
CHOS	Chios island	3.46	335	P	Pn	13 13 36.7	+1.3
KZIL	AFYON_Kizioren	3.47	30	*i* P	Pn	13 13 37.2	+1.5
USAK	Uak-Merkez	3.55	14	*i* P	Pn	13 13 37.7	+1.0
BAGO	Egridir - ISPA	3.56	39	*i* P	Pn	13 13 37.3	+0.4
AKMS	Akamas	3.62	93	P	Pn	13 13 38.3	+0.7
AKMS				S	Sn	13 14 22.3	+2.8
AKMS				AML	AML	13 14 23.0	
	comp=N,0.9nm,0.7s						
AKMS				AML	AML	13 14 23.0	
	comp=N,0.9nm,0.7s						
AKMS				AML	AML	13 14 25.2	
	comp=N,0.9nm,0.5s						
AKMS				AML	AML	13 14 25.2	
	comp=N,0.9nm,0.5s						
GAZI	Gazipasa	3.70	74	*i* P	Pn	13 13 39.6	+0.9
GAZI				*i* S	Sn	13 14 20.9	-0.5
ZEDA	zmir-Bergama	3.75	350	*i* P	Pn	13 13 39.8	+0.4
DEMI	Demirci	3.82	9	*i* P	Pn	13 13 41.3	+0.9
ALFC	Alefka	3.83	90	⇓P	Pn	13 13 41.0	+0.5
ALFC				S	Sn	13 14 26.4	+1.8
ALFC				AML	AML	13 14 26.4	
	comp=N,0.8nm,0.8s						
ALFC				AML	AML	13 14 26.4	
	comp=N,0.8nm,0.8s						
ALFC				AML	AML	13 14 32.1	
	comp=N,0.9nm,0.6s						
ALFC				AML	AML	13 14 32.1	
	comp=N,0.9nm,0.6s						
NATA	Nata	3.84	96	P	Pn	13 13 41.8	+1.1
GDZ	Gediz	4.01	18	*i* P	Pn	13 13 44.1	+1.0
SZAC	Souni	4.10	96	⇑P	Pn	13 13 45.2	+1.0
SZAC				S	Sn	13 14 34.1	+2.8
STEP	BALIKESIR_Sava	4.10	358	*i* P	Pn	13 13 45.3	+1.0
OSC2	CSNet OBS 4	4.21	120	P	Pn	13 13 47.2	+1.5
OSC2				S	Sn	13 14 37.2	+3.2
ERMK	Ermenek	4.27	70	*i* P	Pn	13 13 49.9	+3.2
ERMK				*i* S	Sn	13 14 40.5	+4.7
DURS	Dursunbey	4.35	6	*i* P	Pn	13 13 48.8	+1.1
ASGA	Asgata	4.39	95	P	Pn	13 13 49.1	+0.9
ASGA				S	Sn	13 14 41.1	+2.6
CSS	Mathiatis	4.44	92	Pn	Pn	13 13 50.2	+1.3
CSS	Mathiatis	4.44	92	⇑P	Pn	13 13 50.4	+1.5
BAYC	CANAKKALE_Bayr	4.60	347	*i* P	Pn	13 13 52.4	+1.4
GULN	MERSIN_Gulnar	4.66	77	*i* P	Pn	13 13 53.1	+1.2
GULN				*i* S	Sn	13 14 45.8	+0.7
KDHN	Kadinhani	4.67	45	*i* P	Pn	13 13 52.2	0.0
MVOU	Mavrovouni	4.68	91	⇑P	Pn	13 13 54.0	+1.9
KERG	Konya-Eregli	5.44	65	*i* P	Pn	13 14 05.3	+2.6
KERG				*i* S	Sn	13 15 05.5	+0.9
GULE	Gulek	5.89	68	*i* P	Pn	13 14 12.3	+3.4
BRTR	Keskin Array B	6.36	44	P	Pn	13 14 17.7	+2.4
	comp=N,0.5nm,0.3s,baz=217,slow=15,SNR=16						
BRTR				S	Sn	13 15 23.9	-3.1
	baz=4.8,slow=16,SNR=1.7						
BRTR				LR	LR	13 17 36.6	
	comp=N,132nm,18.5s,baz=199,slow=46						
MMAI	Mount Meron Ar	6.59	108	P	Pn	13 14 19.1	+0.5
	comp=N,3.4nm,0.3s,baz=311,slow=12,SNR=6.2						
MMAI				S	Sn	13 15 31.4	-1.4
	comp=N,2.5nm,0.3s,baz=292,slow=16,SNR=3.2						
MMAI				LR	LR	13 17 19.5	
	comp=N,51nm,21.7s,baz=85,slow=40						
GEM	Giv'at Ha'Em	6.73	106	Pn	Pn	13 14 22.3	+2.0
NATI	Neve Ativ	6.77	105	Pn	Pn	13 14 22.9	+2.1
KZIT	Kziot	6.96	127	Pn	Pn	13 14 23.6	+0.1
KZIT				Sn	Sn	13 15 38.1	-3.6
HMDT	Nahal Hemdat	7.01	113	Pn	Pn	13 14 25.0	+0.9
HMDT				Sn	Sn	13 15 40.2	-2.7
YTIR	Yattir	7.17	121	Pn	Pn	13 14 26.6	+0.2
YTIR				Sn	Sn	13 15 43.4	-3.6
DSI	Dead Sea	7.24	119	Pn	Pn	13 14 27.9	+0.6
DSI				Sn	Sn	13 15 46.2	-2.5
GHAJ	Ghor Haditha	7.52	120	Pn	Pn	13 14 31.3	+0.2
KRMI	Paran Flat	7.69	130	Pn	Pn	13 14 33.4	-0.2
KRMI				Sn	Sn	13 15 56.2	-3.7
ZFRI	Zfri	7.70	126	Pn	Pn	13 14 33.2	-0.4
ZFRI				Sn	Sn	13 15 55.2	-4.7
PRNI	Paran	7.71	127	Pn	Pn	13 14 33.5	-0.4
PRNI				Sn	Sn	13 15 56.1	-4.3
HRFI	Mount Harif	7.95	129	Pn	Pn	13 14 40.7	+3.6
HRFI				Sn	Sn	13 16 01.8	-4.3
MBRI	Mt Berech	8.04	131	Pn	Pn	13 14 39.0	+0.7
MBRI				Sn	Sn	13 16 04.7	-3.7
ASF	Jabal al Asfar	8.09	110	P	Pn	13 14 38.6	-0.4
	comp=N,0.3nm,0.3s,baz=180,slow=4.0,SNR=2.2						
ASF				S	Sn	13 16 09.3	-0.3
	comp=N,0.2nm,0.3s,baz=237,slow=6.6,SNR=1.7						
EIL	Elat	8.15	131	P	Pn	13 14 39.3	-0.5
	comp=N,1.8nm,0.3s,baz=342,slow=5.8,SNR=12						
EIL				S	Sn	13 16 06.1	-4.9
	comp=N,2.0nm,0.3s,baz=58,slow=13,SNR=6.2						
EIL				LR	LR	13 19 48.1	
	comp=N,18nm,20.6s,baz=284,slow=50						
EIL	Elat	8.15	131	Pn	Pn	13 14 39.1	-0.7
EIL				Sn	Sn	13 16 07.2	-3.8
MLR	Muntele Rosu	10.32	352	P	Pn	13 15 09.7	0.0
	comp=N,0.2nm,0.3s,baz=313,slow=10,SNR=1.9						
MLR				LR	LR	13 19 45.4	
	comp=N,110nm,21.4s,baz=119,slow=42						
KBZ	Khabaz	14.30	49	P	P	13 16 13.0	+2.3
	comp=N,0.2nm,0.3s,baz=233,slow=9.4,SNR=23						
AKASG	Malin Array Be	15.45	3	P	Pn	13 16 19.9	+0.6
	comp=N,0.3nm,0.3s,baz=189,slow=11,SNR=5.2						
GERES	GERESS Array B	17.15	327	P	Pn	13 16 41.3	+0.2
	comp=N,0.1nm,0.3s,baz=143,slow=13,SNR=12						
KHC	Kasperske Hory	17.42	327	*e*P	Pn	13 16 44.0	-0.3
CLL	Collm	19.30	331	*e*(P)	P	13 17 05.0	-1.0
CLL				*e*		13 17 09.0	
CLL				*e*PPP	PPP	13 17 29.0	
FINES	FINESS Array B	26.22	358	P	P	13 18 13.7	-1.9
	comp=N,1.4nm,0.5s,baz=161,slow=11,SNR=8.3						
AKTO	Aktyubinsk	26.53	46	P	P	13 18 19.2	+0.6
	comp=N,3.1nm,0.6s,baz=261,slow=9.2,SNR=12						
HFS	Hagfors	26.54	344	P	P	13 18 16.4	-2.1
	comp=N,1.7nm,0.6s,baz=144,slow=13,SNR=4.3						
KLMR	Klimovskoe	26.67	13	*e*	P	13 18 18.4	-1.2
KLMR				AMP		13 18 27.7	
	comp=Z,24nm,2.0s						
NB2	NORSAR Subarra	27.92	343	P	P	13 18 29.3	-1.7
	comp=Z,1.1nm,0.8s,baz=150,slow=11						
NOA	NORSAR Array B	27.92	343	P	P	13 18 28.3	-2.7
	comp=Z,0.6nm,0.8s,baz=156,slow=10,SNR=4.2						
NOA				LR	LR	13 31 06.4	
	comp=Z,39nm,18.3s,baz=265,slow=40						
TORD	Torodi Ar. Bea	32.34	234	P	P	13 19 09.9	-0.4
	comp=Z,1.8nm,0.7s,baz=34,slow=9.2,SNR=10.0						
ARCES	ARCESS Array B	34.35	358	P	P	13 19 25.8	-1.6
	comp=Z,3.4nm,0.9s,baz=162,slow=8.4,SNR=6.4						
KSH	Kashi	38.05	69	P	P	13 20 00.0	+0.4
KSH				pP	pP	13 20 05.3	-1.9
KSH				PP	PnPn	13 21 29.8	+1.6

KSH				S	**S**	**13 25 49.5**	**-1.1**
KSH				PcS	**PcS**	**13 26 03.3**	**-0.2**
MKAR	**Makanchi Array**	**41.82**	**57**	P	**P**	**13 20 32.0**	**+1.3**
	comp=Z,0.9nm,0.6s,baz=282,slow=6.2,SNR=15						
ZALV	**Zalesovo Beam**	**43.29**	**46**	P	**P**	**13 20 42.4**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=268,slow=8.9,SNR=4.9						
SONM	**Songino Array**	**57.66**	**51**	P	**P**	**13 22 32.8**	**+1.5**
	comp=Z,0.9nm,0.7s,baz=282,slow=8.9,SNR=5.1						
SCHQ	**Schefferville**	**64.56**	**320**	P	**P**	**13 23 16.1**	**-1.7**
	comp=Z,2.1nm,0.5s,baz=92,slow=6.7,SNR=5.4						
KSRS	**Korea Array**	**76.41**	**54**	P	**P**	**13 24 31.4**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=306,slow=4.8,SNR=2.5						

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*EAF **27** 13:36:35.2±0.6, 25°.66S×28°.08E, h11^{km}±8^{km}, MD3.3*

PRE 27 13:36:35.2±0.8**, 25°.58S×27°.57E, h2**^{km}**, ML2.0, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLR	**Silverton**	**0.66**	**104**	*e*P	Pg	13 36 48.4	+0.6
SLR				*e*S	Sg	13 36 56.6	+0.3
SLR				AML	AML	13 36 58.0	
	comp=Z,150nm,0.7s						
PRYS	**Parys**	**1.36**	**188**	*e*P	Pg	13 37 01.2	0.0
PRYS				*e*S	Sn	13 37 20.5	+0.5
PRYS				AML	AML	13 37 22.8	
	comp=Z,17nm,0.4s						
LBTB	**Lobatse**	**1.88**	**287**	*i* P	Pg	13 37 13.3	+2.2
LBTB	**Lobatse**	**1.88**	**287**	*i* P	Pg	13 37 13.3	+2.2
BOSA	**Boshof**	**3.66**	**214**	*i* P	Pn	13 37 34.7	+1.7
BOSA				*i* S	Sn	13 38 17.4	+0.6
BOSA	**Boshof**	**3.66**	**214**	*e*P	Pn	13 37 33.4	+0.4
BOSA				*e*S	Sn	13 38 16.8	-0.1
BOSA				AML	AML	13 38 30.4	
	comp=Z,5.3nm,0.6s						
BOSA	**Boshof**	**3.66**	**214**	*i* P	Pn	13 37 34.7	+1.7
BOSA				*i* S	Sn	13 38 17.4	+0.6
MATP	**Matopo**	**5.20**	**10**	*i* P	Pn	13 37 52.4	-1.8
MATP				*i* S	Sn	13 38 49.5	-5.3
MATP	**Matopo**	**5.20**	**10**	*i* P	Pn	13 37 52.4	-1.8
MATP				*i* S	Sn	13 38 49.5	-5.3

IDC 27 13:37:45.3±2.2**, 6°.23S×129°.35E, h0**^{km}**, mb3.7**/1**, mb1 3.4**/3**, mb1mx3.3**/20**, mbtmp3.3**/3**, ML3.2**/2**, Error ellipse: s-maj=157.2km s-min=30.7km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.46**	**161**	Pn	Pn	13 41 09.8	-1.7
	0.1nm,0.3s,baz=343,slow=14,SNR=8.8						
WRA				Sn	Sn	13 43 39.4	-13
	0.1nm,0.3s,baz=346,slow=30,SNR=1.8						
ASAR	**Alice Springs**	**17.88**	**166**	P	P	13 41 56.8	+0.3
	0.1nm,0.3s,baz=346,slow=8.2,SNR=9.6						
ASAR				S	Sn	13 45 03.0	-13
	0.0nm,0.3s,baz=350,slow=25,SNR=2.8						
MKAR	**Makanchi Array**	**67.23**	**327**	P	P	13 48 41.6	0.0
	0.5nm,0.6s,baz=125,slow=7.9,SNR=8.6						

TAP 27 13:44:18.7, 23°.60N×121°.95E, h11^{km}**, ML2.0, D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENLB	**Shoufeng**	**0.44**	**313**	*e*P	Pg	13 44 27.1	-0.2
	baz=313						
EGFH	**Guangfu**	**0.48**	**278**	*e*P	Pg	13 44 28.2	+0.1
	baz=277						
EGFH				*e*S	Sg	13 44 35.2	+0.6
	baz=277						
HWA	**Hwalien**	**0.49**	**320**	*e*P	Pg	13 44 27.9	-0.4
	baz=320						
HGSD	**Ruisui**	**0.49**	**257**	*e*P	Pg	13 44 27.8	-0.6
	baz=256						
HGSD				*e*S	Sg	13 44 34.5	-0.4
	baz=256						
ESL	**Shilin**	**0.52**	**294**	*i* P	Pg	13 44 28.4	-0.4
	baz=293						
ESL				*i* S	Sg	13 44 35.7	0.0
	baz=293						
EHY	**Hungye**	**0.58**	**261**	P	Pg	13 44 29.6	-0.5
	baz=260						
EHY				*e*S	Sg	13 44 38.3	+0.5
	baz=260						
YULB	**Yu-li**	**0.64**	**251**	*i* P	Pg	13 44 30.8	-0.3
	baz=250						
YULB				*e*S	Sg	13 44 39.9	+0.5
	baz=250						
TWF1	**Yuli**	**0.65**	**247**	*i* P	Pg	13 44 30.9	-0.4
	baz=246						
TWF1				*e*S	Sg	13 44 40.1	+0.2
	baz=246						
NACB	**Ninganchiao**	**0.65**	**330**	*i* P	Pg	13 44 31.1	-0.3
	baz=330						
NACB				*e*S	Sg	13 44 40.0	0.0
	baz=330						
FULB	**Fuli**	**0.72**	**236**	*e*P	Pg	13 44 31.6	-1.1
	baz=236						
FULB				*e*S	Sg	13 44 40.6	-1.6
	baz=236						
CHKT	**Chengkung**	**0.74**	**227**	*e*P	Pg	13 44 32.8	-0.1
	baz=226						
ETLH	**Xiulin Townshi**	**0.74**	**325**	*i* P	Pg	13 44 32.6	-0.3
	baz=324						
ETLH				S	Sg	13 44 42.6	0.0
	baz=324						
VWDT	**VWDT**	**0.76**	**282**	*e*P	Pg	13 44 33.1	-0.2
	baz=281						
VWDT				S	Sg	13 44 43.4	+0.2
	baz=281						
OWD	**Renai**	**0.79**	**296**	*e*P	Pg	13 44 33.8	-0.2
	baz=296						
OWD				*e*S	Sg	13 44 43.4	-1.0
	baz=296						
WHF	**Hehuan Shan**	**0.83**	**311**	*e*P	Pg	13 44 34.3	-0.5
	baz=310						
WHF				*e*S	Sg	13 44 45.5	-0.1
	baz=310						
ENA	**Nanau**	**0.84**	**347**	*e*S	Sb	13 44 46.4	-0.2
	baz=347						
CHGB	**Renai**	**0.84**	**303**	*i* P	Pg	13 44 34.4	-0.6
	baz=302						
CHGB				S	Sg	13 44 45.8	-0.3
	baz=302						
YUS	**Yu-Shan**	**0.92**	**263**	P	Pg	13 44 35.8	-0.7
	baz=262						
YUS				*e*S	Sg	13 44 47.8	-0.9
	baz=262						
SSLB	**Suanglung**	**0.93**	**282**	*e*P	Pg	13 44 36.1	-0.6
	baz=281						
ELDTW	**Lidau**	**0.95**	**244**	*e*P	Pg	13 44 36.3	-0.7
	baz=243						
NNSB	**Datong**	**0.97**	**328**	P	Pg	13 44 36.6	-0.8
	baz=327						
NNSB				S	Sg	13 44 49.5	-0.6
	baz=327						
NNSH	**Datong**	**0.97**	**328**	*i* P	Pg	13 44 36.4	-1.0
	baz=327						
NNSH				S	Sg	13 44 49.6	-0.5
	baz=327						
NNS	**Nan Shan**	**0.98**	**328**	*e*P	Pg	13 44 36.9	-0.8
	baz=327						
NNS				*e*S	Sg	13 44 50.0	-0.5
	baz=327						
DPDB	**Guoxing**	**1.03**	**295**	P	Pg	13 44 37.6	-0.9
	baz=294						
ALS	**Alishan**	**1.05**	**265**	*e*P	Pg	13 44 38.0	-1.0
	baz=264						
NDT	**Datong Townshi**	**1.07**	**338**	*e*P	Pb	13 44 38.4	-0.8
	baz=338						
NDT				S	Sb	13 44 52.3	-0.9
	baz=338						
ENTT	**Nioudou**	**1.09**	**341**	*e*P	Pb	13 44 38.8	-0.7
	baz=341						
ENTT				*e*S	Sb	13 44 53.3	-0.5
	baz=341						
WHP	**Taichung City**	**1.14**	**306**	*e*P	Pb	13 44 39.6	-0.8
	baz=306						
WHP				S	Sb	13 44 54.2	-1.0
	baz=306						
CHN5	**Tsauling**	**1.17**	**270**	*e*P	Pb	13 44 40.0	-0.8
	baz=269						
CHN5				*e*S	Sb	13 44 56.0	0.0
	baz=269						
YHNB	**Yeheng**	**1.18**	**334**	P	Pb	13 44 40.1	-1.0
	baz=333						
NSK	**Sanguang**	**1.20**	**333**	*e*P	Pn	13 44 40.3	-1.1
	baz=333						
NSK				S	Sb	13 44 55.8	-1.1
	baz=333						
NWLT	**Wulai**	**1.24**	**341**	*e*S	Sb	13 44 57.3	-0.7
	baz=340						
TPUB	**Ta-pu**	**1.25**	**256**	*e*P	Pn	13 44 41.2	-0.9
	baz=255						
TPUB				S	Sb	13 44 57.5	-0.8
	baz=255						
CHN4	**Tsaushan**	**1.27**	**259**	*e*P	Pn	13 44 41.7	-0.6
	baz=258						
WTP	**Ta-pu**	**1.28**	**254**	*e*P	Pn	13 44 41.7	-0.8
	baz=253						
WTP				*e*S	Sb	13 44 58.1	-1.1
	baz=253						
SLGT	**Liugui**	**1.34**	**243**	P	Pn	13 44 42.5	-0.8
	baz=243						
CHN1	**Nanshi**	**1.37**	**253**	*e*S	Sb	13 45 01.6	-0.2
	baz=252						
TWK	**Hsinying**	**1.38**	**256**	*e*P	Pn	13 44 43.5	-0.4
	baz=255						
TWK				S	Sn	13 45 01.0	-1.2
	baz=255						

JMA 27 13:44:36.2, 24°.46N×123°.56E, h11^{km}±2^{km}**, M1.6, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.20**	**129**	P	Pg	13 44 40.4	-0.1
IRIF				S	Sg	13 44 43.7	+0.3
HATJ	**Hateruma jima**	**0.46**	**151**	P	Pg	13 44 45.0	-0.2
HATJ				*e*S	Sg	13 44 51.6	+0.3
JKRS	**Kuro-shima**	**0.47**	**118**	P	Pg	13 44 45.4	+0.1
JKRS				S	Sb	13 44 52.7	-0.6
YOJ	**Yonaguni jima**	**0.50**	**270**	P	Pg	13 44 46.2	+0.2
YOJ				S	Sg	13 44 53.1	+0.5
JIJ	**Ishigaki jima**	**0.54**	**100**	P	Pg	13 44 46.4	-0.3
JIJ				S	Sg	13 44 53.9	0.0
JISG	**Ishigakijimahi**	**0.69**	**79**	P	Pg	13 44 49.7	0.0
JISG				S	Sg	13 44 59.3	+0.5
JTJ	**Tarama**	**1.05**	**80**	P	Pb	13 44 56.4	-0.1
JTJ				S	Sn	13 45 11.2	-0.4

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*ATH **27** 14:36:04.8, 35°.16N×25°.83E, h22^{km}±1^{km}, ML3.4/7, Error ellipse: s-maj=2.2km s-min=1.2km az=175.0*

*IDC **27** 14:36:05.3±1.9, 33°.09N×27°.52E, h0^{km}, mb3.9/3, mb1 3.9/3, mb1mx3.4/35, mbtmp3.9/3, Error ellipse: s-maj=1508.0km s-min=27.6km az=145.0*

*THE **27** 14:36:05.4, 35°.17N×25°.82E, h4^{km}±1^{km}, ML3.4/8, Error ellipse: s-maj=1.5km s-min=0.3km az=174.0*

ISC 27 14:36:05.7±0.9**, 35°.19N**±0°.03×**25°.82E**±0°.02**, h7**^{km}±7^{km}**, n41, σ1^s.24**/62**, mb3.9**/3**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NPS	**Neapolis**	**0.18**	**293**	P	**Pg**	**14 36 09.8**	**+0.4**
NPS				S	**Sg**	**14 36 12.9**	**+1.0**
	30μm,0.2s						
NPS	**Neapolis**	**0.18**	**293**	P	**Pg**	**14 36 09.9**	**+0.4**
NPS				S	**Sg**	**14 36 13.3**	**+1.4**
NPS				AML	AML	14 36 13.8	
	comp=E,66791μm,0.2s						
NPS				AML	AML	14 36 14.1	
	comp=N,52848μm,0.2s						
FRMA	**Ierapetra Chan**	**0.19**	**201**	P	**Pg**	**14 36 09.1**	**-0.5**
FRMA				S	**Sg**	**14 36 11.7**	**-0.4**
	comp=N,11μm,0.2s						
STIA	**Sitia Lasithi**	**0.23**	**87**	P	**Pg**	**14 36 10.1**	**-0.1**
STIA				S	**Sg**	**14 36 13.3**	**0.0**
LAST	**Lasithi**	**0.28**	**264**	P	**Pg**	**14 36 11.2**	**0.0**
LAST				S	**Sg**	**14 36 15.7**	**+0.7**
	comp=N,4μm,0.2s						
LAST	**Lasithi**	**0.28**	**264**	P	**Pg**	**14 36 11.2**	**0.0**
LAST				S	**Sg**	**14 36 15.4**	**+0.4**
LAST				AML	AML	14 36 16.1	
	comp=N,9623μm,0.3s						
LAST				AML	AML	14 36 16.6	
	comp=E,8306μm,0.2s						
ZKR	**Zakros**	**0.34**	**103**	P	**Pg**	**14 36 11.8**	**-0.6**
ZKR				S	**Sg**	**14 36 16.8**	**0.0**
	comp=E,9μm,0.3s						
ZKR	**Zakros**	**0.34**	**103**	P	**Pg**	**14 36 11.9**	**-0.4**
ZKR				S	**Sg**	**14 36 16.5**	**-0.3**
ZKR				AML	AML	14 36 16.9	
	comp=N,11186μm,0.3s						
ZKR				AML	AML	14 36 17.0	
	comp=E,24048μm,0.3s						
HRKL	**Herakleio**	**0.60**	**282**	P	**Pg**	**14 36 17.4**	**+0.2**
HRKL				S	**Sb**	**14 36 26.7**	**-0.4**
	comp=E,4μm,0.5s						
IACM	**Heraklion**	**0.62**	**281**	P	**Pg**	**14 36 17.7**	**0.0**
IACM				S	**Sb**	**14 36 27.2**	**-0.5**
	comp=E,9μm,0.4s						
IACM	**Heraklion**	**0.62**	**281**	P	**Pg**	**14 36 17.5**	**-0.2**
IACM				S	**Sb**	**14 36 27.3**	**-0.5**
IACM				AML	AML	14 36 32.0	
	comp=N,14233μm,0.8s						
IACM				AML	AML	14 36 33.2	
	comp=E,20196μm,0.5s						
KSTL	**Kastelli Herak**	**0.62**	**281**	P	**Pg**	**14 36 13.5**	**-4.2**
KSTL				S	**Sg**	**14 36 19.3**	**-6.5**
IDI	**Anoyia**	**0.76**	**277**	P	**Pg**	**14 36 20.0**	**-0.4**
IDI	**Anoyia**	**0.76**	**277**	P	**Pg**	**14 36 19.9**	**-0.6**
IDI				S	**Sg**	**14 36 30.0**	**-0.3**
IDI				AML	AML	14 36 34.2	
	comp=E,2037μm,0.2s						
IDI				AML	AML	14 36 35.8	
	comp=N,1840μm,0.2s						
SIVA	**Sivas**	**0.84**	**258**	P	**Pg**	**14 36 21.8**	**-0.1**
SIVA				S	**Sb**	**14 36 34.1**	**-0.1**
	comp=N,3μm,0.4s						
SIVA	**Sivas**	**0.84**	**258**	P	**Pg**	**14 36 21.4**	**-0.5**
SIVA				S	**Sg**	**14 36 32.4**	**-0.5**
SIVA				AML	AML	14 36 35.0	
	comp=E,6504μm,0.4s						
SIVA				AML	AML	14 36 35.6	
	comp=N,3683μm,0.4s						
TMBK	**Timbaki Herakl**	**0.87**	**262**	P	**Pg**	**14 36 22.2**	**-0.2**
TMBK				S	**Sb**	**14 36 35.0**	**+0.1**
PRNS	**Prines Rethymn**	**1.09**	**279**	P	**Pb**	**14 36 27.1**	**+0.2**
PRNS				S	**Sn**	**14 36 42.9**	**+0.2**
KARP	**Karpathos**	**1.16**	**72**	P	**Pg**	**14 36 27.0**	**-0.9**
KARP	**Karpathos**	**1.16**	**72**	P	**Pg**	**14 36 27.1**	**-0.9**
THR6	**Thira Island,**	**1.21**	**344**	P	**Pg**	**14 36 28.1**	**-0.9**
SANT	**Santorini**	**1.21**	**346**	P	**Pg**	**14 36 28.0**	**-1.0**
SANT	**Santorini**	**1.21**	**346**	P	**Pg**	**14 36 28.8**	**-0.2**
SANT				S	**Sg**	**14 36 45.2**	**+0.5**
SANT				AML	AML	14 36 47.0	
	comp=E,4223μm,0.3s						
SANT				AML	AML	14 36 47.8	
	comp=N,1320μm,0.3s						
SAP1	**Santorini-Akro**	**1.21**	**344**	P	**Pg**	**14 36 28.3**	**-0.7**
SAP1				S	**Sg**	**14 36 45.2**	**+0.5**
	comp=N,4μm,0.3s						
SAP1	**Santorini-Akro**	**1.21**	**344**	P	**Pg**	**14 36 28.9**	**-0.1**
SAP1				S	**Sb**	**14 36 45.6**	**+0.7**
SAP2K	**Karterados**	**1.25**	**346**	P	**Pg**	**14 36 29.0**	**-0.8**
SAP2K				S	**Sb**	**14 36 47.0**	**+1.0**
THR5	**Thira Island,**	**1.28**	**343**	P	**Pn**	**14 36 28.6**	**-1.4**
THR2	**Thira island,**	**1.29**	**346**	P	**Pn**	**14 36 29.4**	**-0.8**
VAM	**Vamos**	**1.34**	**280**	P	**Pn**	**14 36 30.4**	**-0.4**
VAM	**Vamos**	**1.34**	**280**	P	**Pn**	**14 36 30.5**	**-0.4**
IMMV	**Iera Moni Meta**	**1.52**	**281**	P	**Pn**	**14 36 33.9**	**+0.5**
IMMV	**Iera Moni Meta**	**1.52**	**281**	P	**Pn**	**14 36 33.9**	**+0.5**
AMGA	**Amorgos Island**	**1.64**	**2**	P	**Pn**	**14 36 33.7**	**-1.3**
RODP	**Rodopos**	**1.72**	**283**	P	**Pn**	**14 36 36.5**	**+0.4**
MHLO	**Agia Marina, M**	**1.88**	**323**	P	**Pn**	**14 36 37.0**	**-1.3**
APE	**Apeiranthos**	**1.89**	**353**	P	**Pn**	**14 36 37.0**	**-1.4**
VLI	**Veliai**	**2.79**	**304**	P	**Pn**	**14 36 49.5**	**-1.2**
DID	**Didima**	**3.11**	**319**	P	**Pn**	**14 36 55.2**	**0.0**
TORD	**Torodi Ar. Bea**	**30.92**	**231**	P	**P**	**14 42 22.8**	**-0.5**
	comp=N,0.8nm,0.5s,baz=34,slow=9.4,SNR=5.8						
MKAR	**Makanchi Array**	**43.31**	**57**	P	**P**	**14 44 08.1**	**-0.1**
	comp=N,0.9nm,0.5s,baz=271,slow=8.1,SNR=16						
KSRS	**Korea Array**	**77.84**	**53**	P	**P**	**14 48 06.5**	**+2.5**
	comp=N,0.8nm,0.6s,baz=311,slow=4.3,SNR=4.2						

IDC 27 14:37:24.4±3.0**, 6°.34S×128°.54E, h223**^{km}±40^{km}**, mb3.3**/1**, mb1 3.6**/5**, mb1mx3.1**/42**, mbtmp4.2**/5**, Error ellipse: s-maj=61.7km s-min=17.7km az=85.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.07**	**27**	P	Pn	14 38 53.5	+0.4
	2.9nm,0.3s,baz=229,slow=20,SNR=14						
SIJI				S	S	14 39 58.4	-5.0
	2.0nm,0.3s,baz=104,slow=17,SNR=3.9						
FITZ	**Fitzroy Crossi**	**12.03**	**193**	P	Pn	14 40 09.7	+0.6
	1.2nm,0.3s,baz=20,slow=12,SNR=31						
FITZ				S	S	14 42 20.9	-1.2
	0.2nm,0.3s,baz=130,slow=23,SNR=2.2						
WRA	**Warramunga Arr**	**14.65**	**158**	P	Pn	14 40 40.5	-1.1
	0.6nm,0.3s,baz=338,slow=12,SNR=41						
WRA				S	S	14 43 14.1	-10
	0.1nm,0.3s,baz=338,slow=20,SNR=2.6						
ASAR	**Alice Springs**	**17.99**	**164**	P	P	14 41 19.1	+0.4
	0.6nm,0.3s,baz=343,slow=11,SNR=158						
ASAR				S	S	14 44 27.1	-6.3
	0.2nm,0.3s,baz=345,slow=20,SNR=16						
MKAR	**Makanchi Array**	**66.89**	**327**	P	P	14 47 52.4	-0.2
	0.5nm,0.4s,baz=115,slow=8.2,SNR=12						

IDC 27 15:11:29.3±3.2**, 29°.24S×177°.75W, h102**^{km}±7^{km}**, mb2.9**/2**, mb1 3.1**/2**, mb1mx3.0**/26**, mbtmp3.2**/2**, Error ellipse: s-maj=63.1km s-min=5.2km az=84.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.15**	**264**	P	Pn	15 11 42.9	-0.7
	51nm,0.3s,baz=87,slow=23,SNR=1.4						
RAO				S	Sn	15 11 56.2	+2.0
	164nm,0.3s,baz=77,slow=19,SNR=3.4						
ASAR	**Alice Springs**	**43.40**	**266**	P	P	15 19 21.8	-0.3
	0.1nm,0.4s,baz=99,slow=7.0,SNR=4.5						
WRA	**Warramunga Arr**	**44.29**	**271**	P	P	15 19 28.9	-0.3
	0.2nm,0.4s,baz=111,slow=7.8,SNR=5.3						
FINES	**FINESS Array B**	**144.13**	**341**	PKP	PKiKP	15 30 54.2	-1.8
	1.2nm,0.9s,baz=56,slow=3.5,SNR=4.4						

TAP 27 15:26:12.6, 24°.85N×122°.25E, h114^{km}±1^{km}**, ML2.2, D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.29**	**304**	*e*P	Pn	15 26 28.3	-0.5
	baz=304						
TIPB	**Shuangxi**	**0.41**	**288**	P	Pn	15 26 29.1	-0.3
	baz=287						
TIPB				S	Sn	15 26 41.3	-0.7
	baz=287						
TWC	**Suao**	**0.44**	**237**	*e*P	Pn	15 26 28.9	-0.6
	baz=236						
NWF	**Wu-fen Shan**	**0.48**	**297**	*e*P	Pn	15 26 29.6	-0.3
	baz=297						
TWE	**Neicheng**	**0.55**	**257**	*e*P	Pn	15 26 29.8	-0.4
	baz=255						
TWE				*e*S	Sn	15 26 42.3	-1.1
	baz=255						
ENA	**Nanau**	**0.63**	**228**	P	Pn	15 26 30.5	-0.3
	baz=227						
ENA				S	Sn	15 26 44.1	-0.4
	baz=227						
ENTT	**Nioudou**	**0.66**	**252**	P	Pn	15 26 31.1	0.0
	baz=251						
ENTT				*e*S	Sn	15 26 45.1	+0.2
	baz=251						
NWLT	**Wulai**	**0.69**	**264**	*e*P	Pn	15 26 30.9	-0.4
	baz=264						
NWLT				*e*S	Sn	15 26 43.8	-1.5
	baz=264						
NDT	**Datong Townshi**	**0.72**	**250**	P	Pn	15 26 31.8	+0.3
	baz=249						
NDT				S	Sn	15 26 45.7	-0.1
	baz=249						
YHNB	**Yeheng**	**0.82**	**258**	P	Pn	15 26 32.5	0.0
	baz=257						
YHNB				S	Sn	15 26 47.0	-0.4
	baz=257						
NSK	**Sanguang**	**0.83**	**258**	P	Pn	15 26 32.5	-0.1
	baz=257						
NSK				S	Sn	15 26 46.8	-0.9
	baz=257						
NNSB	**Datong**	**0.90**	**242**	P	Pn	15 26 33.4	+0.1
	baz=242						
NNSB				S	Sn	15 26 48.1	-0.7
	baz=242						
NNSH	**Datong**	**0.90**	**242**	P	Pn	15 26 33.2	-0.1
	baz=242						
NNSH				S	Sn	15 26 47.8	-1.0
	baz=242						
NNS	**Nan Shan**	**0.90**	**243**	S	Sn	15 26 48.0	-0.8
	baz=242						
NACB	**Ninganchiao**	**0.90**	**222**	*e*P	Pn	15 26 32.2	-1.0
	baz=221						
NACB				*e*S	Sn	15 26 47.3	-1.3
	baz=221						
ETLH	**Xiulin Townshi**	**0.95**	**228**	*e*P	Pn	15 26 33.0	-0.7
	baz=227						
ETLH				*e*S	Sn	15 26 48.9	-0.7
	baz=227						
WHF	**Hehuan Shan**	**1.14**	**232**	P	Pn	15 26 35.9	-0.2
	baz=231						
WHF				S	Sn	15 26 52.4	-1.3
	baz=231						
LIOB	**Emei**	**1.14**	**260**	*e*S	Sn	15 26 52.5	-0.6
	baz=259						
CHGB	**Renai**	**1.26**	**232**	P	Pn	15 26 37.1	-0.1
	baz=231						
CHGB				S	Sn	15 26 54.5	-1.2
	baz=231						
WHP	**Taichung City**	**1.32**	**245**	P	Pn	15 26 37.5	-0.1
	baz=244						
WHP				S	Sn	15 26 56.1	-0.5
	baz=244						
OWD	**Renai**	**1.32**	**228**	*e*P	Pn	15 26 36.1	-1.7
	baz=227						
OWD				*e*S	Sn	15 26 54.8	-2.1
	baz=227						
VWDT	**VWDT**	**1.49**	**223**	*e*S	Sn	15 26 59.3	-0.7
	baz=222						
SSLB	**Suanglung**	**1.59**	**229**	*e*P	Pn	15 26 41.0	+0.2
	baz=228						
SSLB				S	Sn	15 27 01.5	-0.6
	baz=228						
YULB	**Yu-li**	**1.69**	**211**	*e*P	Pn	15 26 39.6	-2.4
	baz=211						
WHYT	**Xinyi Township**	**1.72**	**228**	P	Pn	15 26 42.8	+0.5
	baz=228						
WHYT				*e*S	Sn	15 27 05.1	+0.1
	baz=228						

JMA 27 15:26:54.5, 24°.43N×123°.94E, h0^{km}**, M0.6, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIJ	**Ishigaki jima**	**0.20**	**110**	P	Pg	15 26 58.7	+0.4
JIJ				S	Sg	15 27 01.7	+0.9
JKRS	**Kuro-shima**	**0.20**	**162**	P	Pg	15 26 58.9	+0.5
JKRS				S	Sg	15 27 02.2	+1.2
IRIF	**Iriomote-Funau**	**0.21**	**244**	P	Pg	15 26 59.1	+0.5
IRIF				S	Sg	15 27 02.3	+0.9
JISG	**Ishigakijimahi**	**0.37**	**65**	P	Pg	15 27 02.4	+0.8
JISG				S	Sg	15 27 08.4	+1.9
JTJ	**Tarama**	**0.72**	**73**	S	Sb	15 27 20.1	-0.4

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*IDC **27** 15:32:25.7±0.5, 5°.75S×153°.11E, h0^{km}, mb4.5/24, mb1 4.6/26, mb1mx4.6/37, mbtmp4.5/26, ML3.6/2, MS3.7/10, Ms1 3.7/10, ms1mx3.4/28, Error ellipse: s-maj=15.2km s-min=11.4km az=89.0*

*MOS **27** 15:32:27.4±1.1, 5°.61S×152°.98E, h18^{km}, mb5.0/39, Error ellipse: s-maj=8.9km s-min=6.4km az=99.8*

*NEIC **27** 15:32:28.0±1.5, 5°.74S±0°.06×153°.07E±0°.07, h16^{km}±2^{km}, mb4.9/99, Error ellipse: s-maj=10.3km s-min=8.6km az=57.0*

*BJI **27** 15:32:29.8±0.0, 5°.48S×153°.47E, h43^{km}, mB5.0/32, mb4.8/54, Ms4.6/11, Ms7 4.3/10*

*GCMT **27** 15:32:31.0±0.4, 5°.97S±0°.05×153°.08E±0°.03, h27^{km}, MW4.9/66, Moment Tensor Solution. s24,c24; s66,c76;*

Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.77±.21; $M_{\theta\theta}$0.40±.12; $M_{\phi\phi}$2.37±.13; $M_{r\theta}$0.20±.27; $M_{\theta\phi}$-0.47±.09; $M_{\phi r}$0.49±.20; Best double couple: $M_0$2.67200×10^{16} NP1:ϕ_s342.00000°,δ41.00000°,λ-98.00000°. NP2: ϕ_s173.00000°,δ50.00000°,λ-83.00000°. Principal axes: T 2.5100, Plg5.0000°, Azm258.0000°; N 0.3260, Plg5.0000°, Azm348.0000°; P -2.8340, Plg83.0000°, Azm127.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

*DJA **27** 15:32:32.0±0.9, 6°S±4°×15°3E±°, h58km±5km, M5.1/32, mb5.0/32, mB5.5/13, MLv5.3/2, Mw(mB)5.0/13, Mwp5.5/1*

ISC 27 15:32:30.5±1.0**, 5°.66S**±0°.04×**153°.05E**±0°.05**, h30**km±6km**, n321,** σ**1ˢ21**/330**, mb4.9**/110**, MS3.6**/12**, 7C-12D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.68	323	Pn	Pb	15 32 59.6	-1.2
	65nm,0.3s,baz=215,slow=1.9,SNR=92						
KRVT				Sn	Sb	15 33 22.1	+0.6
	656nm,0.3s,baz=274,slow=24,SNR=10						
KRVT				LR	LR	15 33 40.1	
	comp=Z,882nm,20.4s,baz=341,slow=41						
RABL	Rabaul	1.70	329		Pb	15 32 59.8	-1.3
PMG	Port Moresby	6.92	237	Pn	Pn	15 34 10.7	+0.8
	14nm,0.3s,baz=58,slow=7.9,SNR=55						
PMG				Sn	Sn	15 35 31.1	+3.3
	27nm,0.3s,baz=35,slow=23,SNR=7.3						
PMG				LR	LR	15 36 38.0	
	comp=Z,675nm,21.6s,baz=34,slow=36						
PMG	Port Moresby	6.92	237	c iP	Pn	15 34 10.7	+0.8
PMG				pmax	pmax		
	comp=Z,384nm,0.8s						
PMG	Port Moresby	6.92	237		Pn	15 34 10.8	+0.8
PMG					Sn	15 35 28.8	+1.0
HNR	Honiara	7.80	119	Pn	Pn	15 34 19.9	-2.1
	comp=Z,7.6nm,0.3s,baz=221,slow=4.6,SNR=2.4						
HNR	Honiara	7.80	119	P	Pn	15 34 23.1	+1.1
HNR				pmax	pmax		
	comp=Z,165nm,1.0s						
COEN	Coen	12.75	229	P	Pn	15 35 32.3	+2.5
	baz=13,SNR=9.6						
COEN	Coen	12.75	229	Pn	Pn	15 35 30.0	+0.2
GENI	Genyem	13.20	283	P	Pn	15 35 38.4	+2.4
	comp=Z,40nm,1.1s						
PATS	Pohnpei	13.48	23	Pn	Pn	15 35 38.3	-1.5
MTSU	Mount Surprise	15.05	214	P	Pn	15 36 03.3	+2.1
	baz=15,SNR=8.2						
CTA	Charters Tower	15.79	204	Pn	Pn	15 36 12.4	+1.5
	comp=Z,0.4nm,0.3s,baz=26,slow=14,SNR=15						
CTAO	Charters Tower	15.79	204	P	P	15 36 13.4	-1.0
CTAO				pmax	pmax		
	comp=Z,21nm,1.1s						
EIDS	Eidsvold	19.69	185	P	P	15 36 57.5	+0.1
	baz=20,SNR=6.8						
EIDS	Eidsvold	19.69	185	P	P	15 36 57.1	-0.3
QIS	Mount Isa	19.74	220	P	P	15 36 58.6	+0.6
	baz=20,SNR=13						
GUMO	Guam	20.77	337	P	Pn	15 37 11.4	-0.3
GUMO				pmax	pmax		
	comp=Z,613nm,1.6s						
GUMO	Guam	20.77	337	P	Pn	15 37 11.4	-0.3
DZM	Mont Dzumac	20.84	143	LR	LR	15 44 14.0	
	comp=Z,192nm,19.2s,baz=310,slow=34						
FAKI	Fak Fak	20.91	277	P	P	15 37 11.5	+0.7
	comp=Z,20nm,0.9s						
FAKI	Fak Fak	20.91	277	P	P	15 37 11.3	+0.5
RMQ	Roma	21.12	191	P	P	15 37 13.0	+0.1
	baz=21,SNR=17						
KDU	Kakadu	21.47	250	P	P	15 37 17.0	+0.3
	baz=22,SNR=22						
SIJI	Sorong	22.25	282	P	P	15 37 25.0	-0.2
	comp=Z,12nm,0.7s,baz=67,slow=16,SNR=9.5						
QLP	Quilpie	22.45	201	P	P	15 37 26.3	-0.8
	baz=22,SNR=10.0						
MTN	Manton Dam	22.76	250	P	P	15 37 30.6	0.0
	baz=23,SNR=73						
MTN	Manton Dam	22.76	250	P	P	15 37 29.7	-0.9
MTN				PcP	PcP	15 41 22.1	+0.1
MTN					S	15 41 36.6	-1.1
WR0	Warramunga Arr	22.93	230	P	P	15 37 31.6	-0.8
WR0				PcP	PcP	15 41 22.1	-0.2
WB0	Warramunga Arr	22.93	231	P	P	15 37 31.5	-0.9
WB0				PcP	PcP	15 41 22.9	+0.6
WRAB	Tennant Creek	23.06	230	P	P	15 37 32.3	-1.4
WRAB				pmax	pmax		
	comp=Z,14nm,0.8s						
WRAB	Tennant Creek	23.06	230	P	P	15 37 32.3	-1.4
WB2	Warramunga Arr	23.07	230	P	P	15 37 32.6	-1.1
WB2				PcP	PcP	15 41 22.8	+0.2
WRA	Warramunga Arr	23.08	230	P	P	15 37 32.7	-1.1
	comp=Z,7.6nm,0.6s,baz=55,slow=10.0,SNR=34						
WRA				PcP	PcP	15 41 22.6	+0.1
	comp=Z,4.0nm,0.7s,baz=54,slow=2.2,SNR=8.2						
WRA				LR	LR	15 46 56.3	
	comp=Z,276nm,19.0s,baz=55,slow=38						
WRA	Warramunga Arr	23.08	230	P	P	15 37 32.5	-1.3
WRA					PcP	15 41 22.2	-0.3
ARMA	Armidale	24.67	183	P	P	15 37 48.9	+0.1
	baz=25,SNR=5.2						
ARMA	Armidale	24.67	183	P	P	15 37 49.5	+0.7
ARMA				IAmb	IAmb	15 37 50.1	
	comp=Z,22nm,1.1s						
AS31	Alice Springs	25.70	224	P	P	15 37 57.3	-0.9
ASAR	Alice Springs	25.70	224	P	P	15 37 57.4	-0.8
	comp=Z,8.8nm,0.8s,baz=56,slow=9.0,SNR=84						
ASAR				PcP	PcP	15 41 28.7	+0.5
	comp=Z,2.1nm,0.6s,baz=59,slow=2.6,SNR=7.5						
ASAR				LR	LR	15 47 09.3	
	comp=Z,157nm,20.6s,baz=48,slow=34						
ASAR	Alice Springs	25.70	224	P	P	15 37 56.9	-1.3
ASAR						15 41 28.4	
ASAR	Alice Springs	25.70	224	P	P	15 37 56.9	-1.3
ASAR					PcP	15 41 28.4	+0.2
KNRA	Kununurra	25.83	245	P	P	15 37 59.4	+0.1
	baz=26,SNR=26						
KNRA	Kununurra	25.83	245	P	P	15 37 59.3	-0.1
LBMI	Labuha	25.98	280	P	P	15 38 02.4	+1.6
	comp=Z,25nm,0.8s						
CMSA	Cobar Meteorol	26.66	194	P	P	15 38 05.3	-1.5
	baz=27,SNR=7.0						
MSVF	Nonsavu	27.22	118	⇑eP	P	15 38 15.1	+3.0
H11S3	WAKE ISLAND Hy	27.51	29	T	T	16 06 35.1	
	baz=207,slow=73,SNR=7.0						
H11S2	WAKE ISLAND Hy	27.52	29	T	T	16 06 36.1	
	baz=207,slow=73,SNR=5.2						
H11S1	WAKE ISLAND Hy	27.53	29	T	T	16 06 16.7	
	baz=207,slow=73,SNR=6.9						
STKA	Stephens Creek	28.20	201	P	P	15 38 19.2	-1.4
	baz=28,SNR=5.0						
STKA	Stephens Creek	28.20	201	P	P	15 38 18.9	-1.7
	comp=Z,5.9nm,1.0s,baz=30,slow=10,SNR=9.3						
STKA				LR	LR	15 50 17.6	
	comp=Z,127nm,18.6s,baz=21,slow=38						
STKA	Stephens Creek	28.20	201	P	P	15 38 19.1	-1.5
STKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
STKA	Stephens Creek	28.20	201	P	P	15 38 18.8	-1.8
SOEI	Soe	28.80	260	P	P	15 38 24.6	-1.7
FITZ	Fitzroy Crossi	29.48	243	P	P	15 38 31.6	-0.5
	baz=30,SNR=47						
FITZ	Fitzroy Crossi	29.48	243	P	P	15 38 31.6	-0.5
	comp=Z,16nm,0.5s,baz=51,slow=8.2,SNR=77						
FITZ				LR	LR	15 50 45.1	
	comp=Z,92nm,18.3s,baz=64,slow=37						
FITZ	Fitzroy Crossi	29.48	243	P	P	15 38 31.5	-0.6
FITZ				IAmb	IAmb	15 38 32.6	
	comp=Z,38nm,1.1s						
KMSI	Cibinong	29.68	281	P	P	15 38 33.6	-0.3
	comp=Z,1µmcomp=Z,29nm,0.7s						
CAN	Canberra	29.76	187	P	P	15 38 33.7	-0.7
CAN				pmax	pmax		
	comp=Z,18nm,1.2s						
CAN	Canberra	29.76	187	P	P	15 38 33.7	-0.7
CAN				IAmb	IAmb	15 38 52.7	
	comp=Z,18nm,1.2s						
DAV	Davao City (W)	30.18	294	LR	LR	15 50 16.4	
	comp=Z,89nm,18.0s,baz=100,slow=35						
BBSI	Bau Bau	30.33	269	P	P	15 38 40.6	+0.9
	comp=Z,5.7nm,0.9s						
WRKA	Warakurna	30.57	228	P	P	15 38 40.1	-1.7
	baz=31,SNR=8.0						
HTT	Hallett	30.60	204	P	P	15 38 40.6	-1.3
	baz=31,SNR=4.4						
MMRI	Maumere	30.71	263	P	P	15 38 41.9	-1.1
	comp=Z,48nm,0.7s						
MMRI	Maumere	30.71	263	P	P	15 38 41.4	-1.7
BBOO	Buckleboo	31.32	208	P	P	15 38 46.7	-1.5
	baz=31,SNR=6.6						
BBOO	Buckleboo	31.32	208	P	P	15 38 47.0	-1.2
BBOO				IAmb	IAmb	15 38 47.5	
	comp=Z,22nm,1.1s						
BASI	Baing, Sumba	32.46	260	P	P	15 38 59.0	+0.5
	comp=Z,54nm,1.4s						
TOO	Toolangi	32.51	191	P	P	15 38 58.7	+0.1
TOO				pmax	pmax		
	comp=Z,36nm,1.7s						
TOO	Toolangi	32.51	191	P	P	15 38 58.7	+0.1
TOO				IAmb	IAmb	15 39 19.8	
	comp=Z,36nm,1.7s						
BNSI	Bone	32.84	271	P	P	15 39 02.6	+0.9
	comp=Z,2µmcomp=Z,15nm,0.9s						
KAPI	Kappang	33.16	269	P	P	15 39 05.3	+0.7
	comp=Z,4.1nm,0.3s,baz=123,slow=6.7,SNR=5.1						
KAPI	Kappang	33.16	269	P	P	15 39 05.2	+0.7
KAPI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KAPI	Kappang	33.16	269	P	P	15 39 05.2	+0.6
KAPI				IAmb	IAmb	15 39 06.2	
	comp=Z,9.7nm,0.9s						
WBSI	Waikabubak, Su	33.58	261	P	P	15 39 08.1	-0.2
	comp=Z,826nmcomp=Z,70nm,0.9s						
FORT	Forrest	34.29	220	P	P	15 39 13.2	-1.0
	baz=34,SNR=33						
FORT	Forrest	34.29	220	P	P	15 39 13.2	-1.0
OUZ	Omahuta	35.00	150	P	P	15 39 21.4	+1.2
PLAI	Plampang	35.12	263	P	P	15 39 20.5	-1.1
	comp=Z,593nmcomp=Z,47nm,0.7s						
PSAD2	Pilbara Seismi	35.73	240	P	P	15 39 25.9	-0.9
PSAD2				IAmb	IAmb	15 39 51.5	
	comp=Z,28nm,1.4s						
PSAC2	Pilbara Seismi	35.77	241	P	P	15 39 26.4	-0.7
PSAC2				IAmb	IAmb	15 39 39.8	
	comp=Z,38nm,1.4s						
PSAD1	Pilbara Seismi	35.79	241	P	P	15 39 26.6	-0.6
PSAB3	Pilbara Seismi	35.82	241	P	P	15 39 27.1	-0.4
PSAB3				IAmb	IAmb	15 39 58.5	
	comp=Z,46nm,1.6s						
PSAB1	Pilbara Seismi	35.84	241	P	P	15 39 27.0	-0.7
PSAB1				IAmb	IAmb	15 39 40.3	
	comp=Z,25nm,1.3s						
SPMM	Sapulut	37.95	285	P	P	15 39 41.0	-4.8
JAGI	Jajag, Banyuwa	38.69	264	P	P	15 39 49.9	-2.1
	comp=Z,44nm,0.9s						
JAGI	Jajag, Banyuwa	38.69	264	P	P	15 39 49.9	-2.1
JAGI				IAmb	IAmb	15 39 50.9	
	comp=Z,34nm,0.9s						
MEEK	Meekatharra	38.89	234	P	P	15 39 52.7	-0.8
	baz=39,SNR=6.7						
URZ	Urewera	39.13	149	P	P	15 39 54.7	-0.7
	comp=Z,16nm,1.2s,baz=166,slow=18,SNR=1.5						
URZ	Urewera	39.13	149	P	P	15 39 55.1	-0.2
URZ				IAmb	IAmb	15 40 04.5	
	comp=Z,69nm,1.7s						
BKZ	Black Stump Fm	39.52	151	P	P	15 39 57.9	-0.8
BKZ				IAmb	IAmb	15 40 55.0	
	comp=Z,33nm,1.4s						
TUWZ	Tuamarina	40.21	155	P	P	15 40 03.5	-0.8
SNZO	South Karori	40.43	155	P	P	15 40 07.6	+1.5
PWJI	Pagerwojo	41.01	264	P	P	15 40 11.1	-0.1
	comp=Z,45nm,0.9s						
GIRL	Giralia	41.07	242	P	P	15 40 12.5	+0.8
SBUM	Sibu	41.56	280	P	P	15 40 15.2	-0.7
SBUM	Sibu	41.56	280	P	P	15 40 12.0	-3.8
PCJI	Pacitan	41.63	264	P	P	15 40 16.0	-0.4
	comp=Z,944nmcomp=Z,107nm,0.8s						
WOJI	Wonogiri, Jawa	41.88	265	P	P	15 40 17.7	-0.7
	comp=Z,2µmcomp=Z,26nm,1.2s						
KLBR	Kellerberrin	41.91	228	P	P	15 40 17.0	-1.4
	baz=42,SNR=4.3						
MORW	Morawa	42.01	232	P	P	15 40 17.2	-2.1
	baz=42,SNR=4.0						
MORW	Morawa	42.01	232	P	P	15 40 17.7	-1.6
TPUB	Ta-pu	42.78	313	P	P	15 40 26.1	+0.4
SSLB	Suanglung	42.85	314	P	P	15 40 26.2	0.0
SSLB				IAmb	IAmb	15 41 39.2	
	comp=Z,18nm,1.1s						
NWAO	Narrogin (SRO)	42.97	226	P	P	15 40 28.7	+1.6
NWAO				pmax	pmax		
	comp=Z,58nm,1.6s						
NWAO	Narrogin (SRO)	42.97	226	P	P	15 40 28.7	+1.6
NWAO				IAmb	IAmb	15 41 46.9	
	comp=Z,58nm,1.6s						
NWAO	Narrogin (SRO)	42.97	226	P	P	15 40 27.8	+0.7
NWAO				IAmb	IAmb	15 41 46.9	
	comp=Z,47nm,1.6s						
YHNB	Yeheng	43.12	316	P	P	15 40 27.1	-1.3
KSM	Kuching	43.27	278	P	P	15 40 30.4	+0.7
KSM				IAmb	IAmb	15 40 32.5	
	comp=Z,14nm,0.8s						
KSM	Kuching	43.27	278	P	P	15 40 26.0	-3.7
JNU	Nakatsue	43.93	333	P	P	15 40 34.7	-0.1
	comp=Z,6.6nm,0.9s,baz=209,slow=3.4,SNR=4.9						
JNU	Nakatsue	43.93	333	P	P	15 40 34.6	-0.2
MJAR	Matsushiro Arr	44.22	343	P	P	15 40 38.7	+1.7
	comp=Z,1.4nm,0.6s,baz=160,slow=7.5,SNR=2.9						
MJAR	Matsushiro Arr	44.22	343	P	P	15 40 36.3	-0.7
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MJAR	Matsushiro Arr	44.22	343	P	P	15 40 36.3	-0.7
CISI	Cisompet, Garu	44.96	265	P	P	15 40 42.3	-1.0
	comp=Z,871nmcomp=Z,86nm,1.0s						
CISI	Cisompet, Garu	44.96	265	P	P	15 40 42.7	-0.6
CNJI	Cibinong	45.64	265	P	P	15 40 48.4	-0.3
ERM	Erimo	48.29	350	P	P	15 41 11.3	+2.4
ERM				pmax	pmax		
	comp=Z,51nm,1.7s						
ERM	Erimo	48.29	350	P	P	15 41 11.3	+2.4
KSRS	Korea Array	48.87	333	P	P	15 41 13.4	0.0
	comp=Z,0.9nm,0.6s,baz=156,slow=8.3,SNR=6.3						
KSAR	Wonju Array Be	48.88	333	P	P	15 41 13.5	0.0
KSAR	Wonju Array Be	48.88	333	P	P	15 41 13.5	0.0
NJ2	Nanjing	49.66	321	eP	P	15 41 21.5	+1.9
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MYKOM	Kota Tinggi	49.69	277	P	P	15 41 19.3	-0.8
MYKOM				IAmb	IAmb	15 41 35.3	
	comp=Z,12nm,1.0s						
MYKOM	Kota Tinggi	49.69	277	P	P	15 41 15.0	-5.1
ASAJ	Asahikawa	50.43	350	P	P	15 41 25.5	+0.3
	comp=Z,4.0nm,0.6s,baz=84,slow=13,SNR=6.0						
IPM	Ipoh	52.92	280	P	P	15 41 43.9	-0.5
IPM				IAmb	IAmb	15 41 51.6	
	comp=Z,17nm,1.3s						
IPM	Ipoh	52.92	280	P	P	15 41 40.0	-4.4
USRK	Ussuriysk Ar.	53.13	341	P	P	15 41 45.4	0.0
	comp=Z,1.5nm,0.7s,baz=162,slow=6.8,SNR=3.7						
USRK	Ussuriysk Ar.	53.13	341	P	P	15 41 44.7	-0.6
USRK	Ussuriysk Ar.	53.13	341	P	P	15 41 44.7	-0.6
RPSI	Rantau Prapat	54.69	277	P	P	15 41 56.3	-1.0
RPSI				IAmb	IAmb	15 41 58.4	
	comp=Z,6.4nm,0.8s						
PSI	Prapat	54.70	277	P	P	15 41 56.3	-1.3
PSI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ENH	Enshi	54.91	313	P	P	15 41 58.5	-0.2
ENH				IAmb	IAmb	15 42 00.4	
	comp=Z,8.6nm,1.0s						
GYA	Guiyang	55.11	308	eP	P	15 42 02.8	+2.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2	Changchun	55.17	336	eP	P	15 41 59.5	-0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GSI	Gunungsitoli	55.82	275	P	P	15 42 04.2	-1.3
PBKT	Sadao Pong	56.02	294	P	P	15 42 06.6	-0.3
PBKT				IAmb	IAmb	15 42 09.5	
	comp=Z,12nm,1.6s						
XAN	Xi'an	57.41	317	P	P	15 42 16.8	+0.3
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
XAN	Xi'an	57.41	317	P	P	15 42 16.8	+0.3
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
XAN	Xi'an	57.41	317	P	P	15 42 16.8	+0.3
KMI	Kunming	57.67	304	P	P	15 42 22.5	+3.8
KMI				pmax	pmax		
	comp=Z,16nm,1.1s						
KLR	Kul'dur	57.73	344	⇓eP	P	15 42 17.9	-0.5
KLR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CM31	Chiang Mai Arr	58.46	296	P	P	15 42 25.4	+1.3
CM31				IAmb	IAmb	15 42 26.8	
	comp=Z,13nm,0.8s						
CMAR	Chiang Mai Arr	58.46	296	P	P	15 42 26.0	+1.9
	comp=Z,8.1nm,0.9s,baz=359,slow=22,SNR=5.7						
CMAR				LR	LR	16 09 01.6	
	comp=Z,27nm,18.9s,baz=170,slow=38						
CMAR	Chiang Mai Arr	58.46	296	ceP	P	15 42 22.2	-1.9
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CMAR	Chiang Mai Arr	58.46	296	P	P	15 42 25.4	+1.3
CHTO	Chiang Mai	58.58	296	P	P	15 42 24.7	-0.2
CHTO				pmax	pmax		
	comp=Z,15nm,1.2s						
CHTO	Chiang Mai	58.58	296	P	P	15 42 24.7	-0.2
CHTO				IAmb	IAmb	15 42 27.2	
	comp=Z,15nm,1.1s						
PEA0B	Petropavlovsk-	58.67	3	ceP	P	15 42 25.8	+0.9
PEA0B	Petropavlovsk-	58.67	3	P	P	15 42 25.2	+0.3
PETK	Petropavlovsk-	58.67	3	P	P	15 42 25.8	+0.9
	comp=Z,8.5nm,0.6s,baz=177,slow=9.1,SNR=13						
PETK	Petropavlovsk-	58.67	3	P	P	15 42 25.6	+0.7
PETK	Petropavlovsk-	58.67	3	P	P	15 42 25.6	+0.7
CD2	Chengdu	59.48	311	eP	P	15 42 31.5	+0.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	Hu-ho-hao-te	59.88	324	eP	P	15 42 36.0	+2.3
HHC				pmax	pmax		
	comp=Z,84nm,1.1s						
HHC				pmax	pmax		
	comp=Z,340nm,5.6s						
HHC				LR	LR		
	comp=Z,1µm,16.8s						
HHC				LR	LR		
	comp=Z,510nm,17.6s						
HHC				LR	LR		
	comp=Z,960nm,17.5s						
HIA	Hailar	61.91	336	P	P	15 42 47.3	+0.1
HIA				pmax	pmax		
	comp=Z,11nm,0.9s						
HIA	Hailar	61.91	336	P	P	15 42 47.3	+0.1
HIA				IAmb	IAmb	15 42 49.2	
	comp=Z,11nm,0.9s						
LZH	Lanzhou	62.01	316	eP	P	15 42 51.5	+3.2
LZH				pP	sP	15 42 59.8	+0.3
LZH				sP	pwP	15 43 02.5	+0.8
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				pmax	pmax		
	comp=Z,130nm,4.8s						
ZEA	Zeya	63.03	343	eP	P	15 42 55.2	+0.7
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MA2	Magadan	65.05	359	d iP	P	15 43 07.6	-0.1
MA2				pmax	pmax		
	comp=Z,22nm,1.3s						
MA2	Magadan	65.05	359	P	P	15 43 07.3	-0.3
GTA	Gaotai	66.45	317	eP	P	15 43 19.0	+1.7
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ULN	Ulaanbaatar	66.85	328	d iP	P	15 43 21.4	+1.7
ULN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ULN	Ulaanbaatar	66.85	328	P	P	15 43 21.1	+1.4
ULN				IAmb	IAmb	15 43 22.3	
	comp=Z,12nm,1.1s						
SONM	Songino Array	67.17	328	P	P	15 43 23.2	+1.4
	comp=Z,5.6nm,0.6s,baz=148,slow=6.4,SNR=40						
SONM	Songino Array	67.17	328	P	P	15 43 22.8	+1.0
SONM				pmax	pmax		
	comp=Z,18nm,1.5s						
SONM	Songino Array	67.17	328	P	P	15 43 22.8	+1.0
CASY	Casey	67.28	197	P	P	15 43 21.0	-0.9
CASY				IAmb	IAmb	15 45 24.5	
	comp=Z,13nm,1.2s						
UNV	Unalaska Valle	68.29	24	P	P	15 43 30.4	+2.0
SEY	Seymchan	68.40	360	⇓iP	P	15 43 29.4	+0.5
LSA	Lhasa	68.92	305	P	P	15 43 35.5	+2.0
LSA				pmax	pmax		
	comp=Z,67nm,0.8s						
LSA	Lhasa	68.92	305	P	P	15 43 34.7	+1.2
LSA				pmax	pmax		
	comp=Z,13nm,0.8s						
LSA	Lhasa	68.92	305	P	P	15 43 34.7	+1.2
YAK	Yakutsk	69.86	349	⇑eP	P	15 43 38.7	+0.7
YAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ZAK	Zakamensk	70.35	329	eP	P	15 43 42.2	+0.8
ZAK				pmax	pmax		
	comp=Z,13nm,1.0s						
BOD	Bodaibo	70.67	339	eP	P	15 43 43.0	-0.1
BOD				pmax	pmax		
	comp=Z,6.0nm,1.4s						
TLY	Talaya	70.94	330	⇓eP	P	15 43 46.0	+1.1
TLY				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TAPN	Taplejung	71.06	301	eP	P	15 43 47.3	+0.8
	comp=Z,32nm,0.9s						
ODAN	Odare	71.19	301	eP	P	15 43 48.2	+1.0
	comp=Z,51nm,0.9s						
VNDA	Vanda	71.97	178	P	P	15 43 50.6	-0.1
	comp=Z,3.6nm,0.9s,baz=335,slow=6.9,SNR=16						
VNDA	Vanda	71.97	178	P	P	15 43 50.8	+0.1
VNDA				pmax	pmax		
	comp=Z,12nm,1.3s						
VNDA	Vanda	71.97	178	P	P	15 43 50.8	+0.1
VNDA				IAmb	IAmb	15 43 51.5	
	comp=Z,12nm,1.3s						
MOY	Mondy	72.27	329	eP	P	15 43 54.4	+1.3
MOY				pmax	pmax		
	comp=Z,14nm,1.6s						
JIRN	Jiri	72.44	301	eP	P	15 43 55.6	+0.7
	comp=Z,34nm,0.8s						
GUN	Gumba	72.77	301	eP	P	15 43 57.8	+1.0
	comp=Z,62nm,0.9s						
PKI	Pulchoki	73.08	301	eP	P	15 43 59.1	+0.4
	comp=Z,41nm,1.0s						
PKIN	Phulchoki	73.09	301	eP	P	15 43 59.0	+0.3
	comp=Z,35nm,1.0s						
PALK	Pallekele	73.31	279	P	P	15 44 00.4	+0.5
PALK				pmax	pmax		
	comp=Z,20nm,1.2s						
PALK	Pallekele	73.31	279	P	P	15 44 00.4	+0.5
PALK				IAmb	IAmb	15 46 03.5	
	comp=Z,20nm,1.1s						
DMN	Daman	73.35	301	eP	P	15 44 01.0	+0.8
	comp=Z,67nm,1.0s						
GKN	Gorkha	73.85	301	eP	P	15 44 03.6	+0.6
	comp=Z,102nm,1.1s						
BILL	Bilibino	74.11	5	d iP	P	15 44 04.0	+0.5
BILL				i		15 44 20.0	
BILL				i		15 46 47.6	
BILL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BILL	Bilibino	74.11	5	P	P	15 44 04.3	+0.8
BILL				IAmb	IAmb	15 44 05.2	
	comp=Z,7.0nm,0.7s						
GAMB	Gambell	74.14	15	P	P	15 44 04.5	+0.9
DANN	Dangsing	74.69	301	eP	P	15 44 08.5	+0.5
	comp=Z,40nm,0.8s						
OHAK	Old Harbor	76.20	27	P	P	15 44 15.8	+0.2
ANM	Nome	76.52	17	P	P	15 44 18.7	+1.4
ANM				pmax	pmax		
	comp=Z,8.0nm,1.4s						
ANM	Nome	76.52	17	P	P	15 44 18.6	+1.4
WMQ	Urumqi	76.53	317	eP	P	15 44 19.3	+1.3
WMQ				pP	pP	15 44 26.5	+0.9
WMQ				pmax	pmax		
	comp=Z,14nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,160nm,5.9s						
WMQ				LR	LR		
	comp=Z,130nm,22.1s						
HYB	Hyderabad	77.00	289	i P	P	15 44 21.0	-0.1
HYB				e		15 44 34.0	
SVW2	Sparrevohn	77.51	23	P	P	15 44 26.3	+3.3
SVW2				IAmb	IAmb	15 44 54.5	
	comp=Z,14nm,1.6s						
RSO	Redoubt South	78.26	24	P	P	15 44 28.9	+1.4
CNPM	China Poot	78.38	25	P	P	15 44 27.6	-0.2
TIXI	Tiksi	78.77	352	⇑eP	P	15 44 29.4	-0.3
TIXI				pmax	pmax		

	comp=Z,1.0nm,1.2s						
TIXI	Tiksi	78.77	352	P	P	15 44 29.6	-0.2
DGZ	Jazzator, Alta	78.91	323	*de*P	P	15 44 32.1	+0.9
DGZ				pmax	pmax		
	comp=Z,13nm,0.9s						
RDOG	Red Dog Mine	79.74	15	P	P	15 44 36.4	+1.3
GHO	Glory Hole Cre	80.54	24	P	P	15 44 38.8	-0.8
GHO				IAmb	IAmb	15 45 04.7	
	comp=Z,28nm,1.7s						
KTH	Kantishna Hill	80.71	22	P	P	15 44 39.1	-1.5
KTH				IAmb	IAmb	15 45 09.5	
	comp=Z,22nm,1.6s						
SML	Sawmill	80.80	24	P	P	15 44 40.5	-0.5
SML				pmax	pmax		
	comp=Z,21nm,1.6s						
SML	Sawmill	80.80	24	P	P	15 44 40.5	-0.5
SML				IAmb	IAmb	15 45 06.9	
	comp=Z,21nm,1.6s						
TRF	Thorofare Moun	80.89	22	P	P	15 44 40.6	-1.0
TRF				IAmb	IAmb	15 47 19.3	
	comp=Z,18nm,1.6s						
IMAR	Indian Mountai	81.10	19	P	P	15 44 43.0	+0.5
MK31	Makanchi Array	81.13	319	*i* P	P	15 44 43.6	+0.5
MK31	Makanchi Array	81.13	319	P	P	15 44 43.7	+0.6
MK31				IAmb	IAmb	15 44 45.1	
	comp=Z,8.4nm,1.0s						
MKAR	Makanchi Array	81.13	319	P	P	15 44 44.0	+0.8
	comp=Z,8.6nm,0.9s,baz=104,slow=5.9,SNR=64						
MKAR	Makanchi Array	81.13	319	P	P	15 44 43.4	+0.3
MKAR	Makanchi Array	81.13	319	P	P	15 44 43.4	+0.3
MAKZ	Makanchi	81.34	319	*i* P	P	15 44 43.9	-0.3
MAKZ				pmax	pmax		
	comp=Z,17nm,1.1s						
MAKZ	Makanchi	81.34	319	P	P	15 44 44.8	+0.6
MAKZ				IAmb	IAmb	15 44 46.2	
	comp=Z,15nm,1.1s						
RND	Reindeer	81.42	23	P	P	15 44 43.2	-1.1
RND				pmax	pmax		
	comp=Z,18nm,1.7s						
RND	Reindeer	81.42	23	P	P	15 44 43.1	-1.1
RND				IAmb	IAmb	15 45 25.3	
	comp=Z,18nm,1.7s						
MCK	McKinley	81.55	22	P	P	15 44 45.3	+0.3
MCK				pmax	pmax		
	comp=Z,14nm,1.3s						
MCK	McKinley	81.55	22	P	P	15 44 45.3	+0.3
MCK				IAmb	IAmb	15 45 14.2	
	comp=Z,14nm,1.3s						
MLY	Manley	81.59	21	P	P	15 44 44.6	-0.6
DHY	Denali Highway	81.82	23	P	P	15 44 47.1	+0.6
DHY				IAmb	IAmb	15 44 52.6	
	comp=Z,19nm,1.7s						
ZAA0	Zalesovo Array	82.00	326	P	P	15 44 47.4	-0.1
ZAA0				IAmb	IAmb	15 44 48.4	
	comp=Z,12nm,0.8s						
ZALV	Zalesovo Beam	82.00	326	P	P	15 44 47.8	+0.3
	comp=Z,12nm,0.7s,baz=111,slow=5.2,SNR=52						
ZALV	Zalesovo Beam	82.00	326	P	P	15 44 47.0	-0.5
PDGK	Podgornoye	82.03	315	*i* P	P	15 44 47.4	-0.7
PDGK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CCB	Clear Creek Bu	82.45	22	P	P	15 44 48.8	-0.8
GLB	Gilahina Butte	82.52	26	P	P	15 44 48.5	-1.6
VRDI	Verde Repeater	82.58	26	P	P	15 44 50.5	-0.1
TGL	Tana Glacier	82.65	26	P	P	15 44 50.9	+0.1
TGL				IAmb	IAmb	15 45 36.6	
	comp=Z,7.5nm,1.0s						
IL31		82.86	22	P	P	15 44 50.9	-0.8
IL31				IAmb	IAmb	15 44 52.0	
	comp=Z,16nm,1.8s						
ILAR	Eielson Array	82.86	22	P	P	15 44 51.1	-0.6
	comp=Z,1.1nm,0.7s,baz=242,slow=5.2,SNR=7.1						
ILAR	Eielson Array	82.86	22	P	P	15 44 51.0	-0.7
ILAR	Eielson Array	82.86	22	P	P	15 44 51.0	-0.7
BALM	Baldy	82.98	26	P	P	15 44 52.3	-0.3
BALM				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BALM	Baldy	82.98	26	P	P	15 44 52.3	-0.3
BALM				IAmb	IAmb	15 45 24.0	
	comp=Z,5.2nm,1.0s						
SCRK	Sand Creek	83.59	23	P	P	15 44 54.2	-1.5
SCRK				IAmb	IAmb	15 47 19.0	
	comp=Z,5.8nm,0.7s						
KSH	Kashi	83.67	311	P	P	15 44 59.3	+2.6
KSH				pP	sP	15 45 07.3	+0.1
KSH				SKS	S	15 55 16.5	-1.1
KSH				S	SKKSac	15 55 20.5	-1.9
KSH				pmax	pmax		
	comp=Z,22nm,1.2s						
KSH				pmax	pmax		
	comp=Z,270nm,6.0s						
KSH				LR	LR		
	comp=Z,140nm,10.9s						
KSH				LR	LR		
	comp=Z,95nm,10.3s						
KSH				LR	LR		
	comp=Z,300nm,13.6s						
TOLK	Toolik Lake Re	83.95	18	P	P	15 44 56.3	-1.1
BCAR	Beaver Creek A	84.08	25	P	P	15 44 58.2	0.0
QSPA	South Pole Qui	84.31	180	P	P	15 44 58.2	-1.2
KURK	Kurchatov	84.59	322	*de*P	P	15 45 01.0	+0.1
KURK				pmax	pmax		
	comp=Z,18nm,1.0s						
KURK	Kurchatov	84.59	322	P	P	15 45 00.7	-0.2
NIL	Nilore	84.66	304	P	P	15 45 01.7	0.0
NIL				pmax	pmax		
	comp=Z,12nm,0.8s						
NIL	Nilore	84.66	304	P	P	15 45 01.7	0.0
TKM2	Tokmak 2	84.70	314	P	P	15 45 03.2	+1.3
	SNR=29						
KZA	Kyzart	84.76	313	P	P	15 45 04.3	+1.8
	SNR=22						
MAW	Mawson	84.88	203	P	P	15 45 00.1	-2.0
	baz=85,SNR=15						
MAW	Mawson	84.88	203	P	P	15 45 01.7	-0.4
	comp=Z,5.0nm,0.6s,baz=112,slow=6.3,SNR=18						
MAW	Mawson	84.88	203	P	P	15 45 01.7	-0.4
MAW				pmax	pmax		
	comp=Z,6.0nm,1.6s						
MAW	Mawson	84.88	203	P	P	15 45 01.7	-0.4
BMAR	Burnt Mountain	84.96	20	P	P	15 45 03.5	+1.0
HYT	Haines Junctio	85.08	27	P	P	15 45 03.4	+0.1
HYT				IAmb	IAmb	15 45 29.8	
	comp=Z,7.8nm,1.0s						
KBK	Karagaybulak	85.11	314	P	P	15 45 05.6	+1.6
	SNR=12						
CHMS	Chumysh	85.32	314	P	P	15 45 05.9	+1.1
	SNR=13						
UCH	Uchtor	85.33	313	P	P	15 45 07.2	+1.7
	SNR=18						
AAK	Ala-Archa	85.43	313	P	P	15 45 06.8	+1.3
	SNR=11						
AAK	Ala-Archa	85.43	313	*d i*P	P	15 45 06.4	+0.8
AAK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
AAK	Ala-Archa	85.43	313	P	P	15 45 05.9	+0.4
AAK				IAmb	IAmb	15 45 07.8	
	comp=Z,10.0nm,0.8s						
USP	Ospenovka	85.56	314	P	P	15 45 07.3	+1.2
	SNR=14						
AML	Almayashu	85.91	313	P	P	15 45 09.5	+1.2
	SNR=30						
EKS2	Erkin-Say	85.95	313	P	P	15 45 09.6	+1.5
	SNR=9.6						
NRIK	Noril'sk	86.85	341	P	P	15 45 11.5	-0.2
	comp=Z,2.0nm,0.5s,baz=99,slow=4.7,SNR=7.1						
NRIK	Noril'sk	86.85	341	⇓*e*P	P	15 45 11.5	-0.2
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KK31	Karatay Array	88.39	313	P	P	15 45 19.8	0.0
KK31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KK31	Karatay Array	88.39	313	P	P	15 45 19.8	0.0
KKAR	Karatay Array	88.39	313	P	P	15 45 19.2	-0.6
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KKAR	Karatay Array	88.39	313	P	P	15 45 20.0	+0.3
KKAR	Karatay Array	88.39	313	P	P	15 45 19.2	-0.6
KKAR				IAmb	IAmb	15 45 21.0	
	comp=Z,2.1nm,0.6s						
BRVK	Borovoye	90.14	323	*de*P	P	15 45 27.0	-0.7
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BRVK	Borovoye	90.14	323	P	P	15 45 26.8	-0.9
BRVK				IAmb	IAmb	15 45 28.2	
	comp=Z,7.0nm,0.8s						
NVAR	Mina Array Bea	92.42	52	P	P	15 45 39.8	+0.9
	comp=Z,0.5nm,0.6s,baz=259,slow=5.9,SNR=5.6						
NVAR				LR	LR	16 18 45.4	
	comp=Z,67nm,21.1s,baz=15,slow=30						
NVAR	Mina Array Bea	92.42	52	P	P	15 45 39.1	+0.2
YKA	Yellowknife Ar	96.06	28	P	P	15 45 55.0	+0.2
	comp=Z,0.4nm,0.7s,baz=265,slow=4.7,SNR=6.2						
YKA	Yellowknife Ar	96.06	28	P	P	15 45 55.0	+0.2
YKA	Yellowknife Ar	96.06	28	P	P	15 45 55.0	+0.2
ARU	Arti	97.16	326	*d i*P	P	15 45 58.1	-1.8
ARU						15 49 54.8	
ARU				S	SKSac	15 56 35.3	+0.5
ARU				SS	SS	16 03 52.0	-6.6
ARU				pmax	pmax		
	comp=Z,6.0nm,1.1s						
PDAR	Pinedale Array	99.24	48	P	Pdif	15 46 10.8	+0.9
	comp=Z,0.5nm,0.8s,baz=224,slow=6.2,SNR=3.5						
PDAR				LR	LR	16 26 37.7	
	comp=Z,99nm,19.0s,baz=65,slow=33						
PDAR	Pinedale Array	99.24	48	P	Pdif	15 46 10.4	+0.5
AKASG	Malin Array Be	115.33	324	PKP	PKiKP	15 51 08.7	-0.5
	comp=Z,1.1nm,0.6s,baz=53,slow=2.5,SNR=6.2						
AKASG	Malin Array Be	115.33	324	PKIKP	PKiKP	15 51 08.2	-1.0
AKASG	Malin Array Be	115.33	324		PKiKP	15 51 08.2	-1.0
AKBB	Malin Array Si	115.33	324	⇑*i*PKIKP	PKiKP	15 51 08.5	-0.7
BRTR	Keskin Array B	116.05	312	PKP	PKPdf	15 51 11.0	-0.2
	comp=Z,0.4nm,0.6s,baz=96,slow=1.8,SNR=2.9						
NOA	NORSAR Array B	117.80	340	PKP	PKPdf	15 51 13.2	-0.5
	comp=Z,0.4nm,0.7s,baz=47,slow=1.8,SNR=3.4						
PLCA	Paso Flores	118.95	143	PKP	PKPdf	15 51 16.1	-0.5
	comp=Z,0.6nm,0.4s,baz=60,slow=3.6,SNR=5.8						
PLCA	Paso Flores	118.95	143	PKIKP	PKPdf	15 51 16.5	-0.1
PLCA	Paso Flores	118.95	143		PKPdf	15 51 16.5	-0.1
BOSA	Boshof	119.31	233	PKP	PKPdf	15 51 17.6	-0.1
	comp=Z,2.9nm,0.8s,baz=138,slow=4.3,SNR=3.8						
BRG	Berggiesshubel	123.53	330	*e*PKP	PKiKP	15 51 27.7	+2.5
	comp=Z,1.6nm,0.5s						
BRG	Berggiesshubel	123.53	330	*e*PKIKP	PKiKP	15 51 27.7	+2.5
BRG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CLL	Collm	123.71	331	*e*PKPdf	PKiKP	15 51 27.0	+1.5
	comp=Z,4.0nm,0.7s						
CLL				*e*pPKPdf	pPKPdf	15 51 31.0	-2.8
CLL				*e*		15 51 50.0	
CLL	Collm	123.71	331	*e*PKIKP	PKiKP	15 51 27.0	+1.5
CLL				*e*		15 51 31.0	
CLL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GERES	GERESS Array B	124.91	328	PKP	PKiKP	15 51 28.1	0.0
	comp=Z,1.5nm,0.6s,baz=82,slow=2.6,SNR=11						
PB11	IPOC Station P	130.99	122		PKiKP	15 51 40.9	-0.4
GO01	Chusmiza	131.42	122		PKPdf	15 51 41.8	+0.2
LPAZ	La Paz	133.80	119	PKP	PKiKP	15 51 47.0	-0.5
	comp=Z,4.0nm,1.0s,baz=264,slow=3.6,SNR=9.9						
LPAZ	La Paz	133.80	119		PKiKP	15 51 47.0	-0.5
SDV	Santo Domingo	136.57	83		PKPdf	15 51 51.0	0.0
CPUP	Villa Florida	136.66	139	PKP	PKPdf	15 51 50.4	-0.2
	comp=Z,2.1nm,0.8s,baz=126,slow=1.6,SNR=5.3						
CPUP	Villa Florida	136.66	139	PKIKP	PKPdf	15 51 49.5	-1.1
CPUP	Villa Florida	136.66	139		PKPdf	15 51 49.5	-1.1
SAML	Samuel	141.08	112	PKIKP	PKPdf	15 51 58.0	-1.0
SAML	Samuel	141.08	112		PKPdf	15 51 58.0	-1.0
PTGA	Pitinga	146.43	100		PKPbc	15 52 09.1	-0.7
BDFB	Brasilia	150.29	136	PKPbc	PKPbc	15 52 19.9	0.0
	comp=Z,14nm,0.7s,baz=204,slow=1.2,SNR=9.6						
BDFB	Brasilia	150.29	136	PKIKP	PKPdf	15 52 14.5	-0.2
BDFB	Brasilia	150.29	136	PKPdf	PKPdf	15 52 14.5	-0.2
BDFB					PKPbc	15 52 19.3	-0.6
TOA0	Torodi Ar. Sit	150.80	287		PKPbc	15 52 20.6	-0.4
TORD	Torodi Ar. Bea	150.80	287	PKPbc	PKPbc	15 52 20.6	-0.4
	comp=Z,23nm,0.7s,baz=70,slow=2.6,SNR=105						
KIC	Kosan Boka	157.90	273	*e*PKP1	PKPab	15 52 58.3	-0.1
	comp=Z,14nm,0.7s						
DBIC	Dimbokro	158.01	274	PKPab	PKPab	15 52 58.4	-0.5
	comp=Z,4.3nm,0.7s,baz=93,slow=4.6,SNR=5.8						
TIC	Toumodi	158.17	274	*e*PKP1	PKPab	15 52 59.2	-0.4
LIC	Lamto	158.19	273	*e*PKP1	PKPab	15 52 59.4	-0.3
	comp=Z,25nm,1.3s						

KRNET 27 15:51:15.6±0.1, 41.°52N×69.°35E, mb1.9, 8C, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTK	Batken	1.84	142	⇑*i*P	Pn	15 51 47.0	-1.5
	baz=42						
BTK				⇑*i*S	Sn	15 52 10.0	-2.5
	baz=42						
ARK	Arkit	1.98	81	⇑*i*P	Pn	15 51 49.3	-1.2
	baz=82						
ARK				⇑*i*S	Sn	15 52 13.6	-2.5
	baz=82						
ARSB	Arslanbob	2.74	93	⇑*i*P	Pn	15 51 59.5	-1.5
	baz=93						
ARSB				⇑*i*S	Sn	15 52 31.7	-3.2
	baz=93						
ARLS	Aral	3.74	83	⇑*i*P	Pn	15 52 13.6	-1.2
	baz=83						
ARLS				⇑*i*S	Sn	15 52 55.2	-4.4
	baz=83						

NNC 27 15:51:47.3±0.4, 42.°77N×71.°13E, h0^{km}, mpv1.2, 14C-6D, Error ellipse: s-maj=7.2km s-min=1.9km az=36.0, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK06	Karatay Array	0.55	307	⇑P	Pg	15 51 58.4	+0.6
KK06				⇓S	Sg	15 52 06.3	+1.3
KK07	Karatay Array	0.56	305	⇓P	Pg	15 51 58.4	+0.3
KK07				⇓S	Sg	15 52 06.3	+0.9
KK02	Karatay Array	0.56	307	⇑P	Pg	15 51 58.5	+0.4
KK02				⇑S	Sg	15 52 06.3	+0.8
KK31	Karatay Array	0.56	307	⇑P	Pg	15 51 58.4	+0.3
	0.3nm,0.4s,baz=122,slow=18,SNR=16						
KK31				⇑S	Sg	15 52 06.4	+1.0
	0.7nm,0.3s,baz=130,slow=32,SNR=7.8						
KK05	Karatay Array	0.57	308	⇓P	Pg	15 51 58.5	+0.4
KK05				⇑S	Sg	15 52 06.2	+0.7
KK01	Karatay Array	0.57	307	⇑P	Pg	15 51 58.5	+0.3
KK01				⇑S	Sg	15 52 06.3	+0.7
KK03	Karatay Array	0.57	306	⇓P	Pg	15 51 58.5	+0.3
KK03				⇑S	Sg	15 52 06.4	+0.8
KK04	Karatay Array	0.57	307	⇑P	Pg	15 51 58.5	+0.3
KK04				⇑S	Sg	15 52 06.3	+0.6
KK08	Karatay Array	0.58	306	⇑P	Pg	15 51 58.4	0.0
KK08				⇓S	Sg	15 52 06.4	+0.5
KK09	Karatay Array	0.58	308	⇑P	Pg	15 51 58.4	-0.1
KK09				⇑S	Sg	15 52 06.4	+0.4

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*BJI **27** 15:54:58.7±0.0, 35.°94N×82.°44E, h7^{km}, ML3.7/6*

*IDC **27** 15:55:01.5±1.7, 36.°32N×82.°57E, h0^{km}, mb3.8/4, mb1 4.0/9, mb1mx3.6/34, mbtmp3.9/9, ML3.4/5, Error ellipse: s-maj=39.1km s-min=22.9km az=58.0*

*NNC **27** 15:55:04.5±3.8, 36.°49N×82.°77E, h0^{km}, mb4.6, mpv4.0, Error ellipse: s-maj=54.7km s-min=27.9km az=73.0*

ISC 27 15:55:05.0±0.9, **36.°17N**±0.°07×**82.°6E**±0.°1, **h35^{km}, n21, σ1.^{s}82**/25, **mb3.7**/4, **2C-5D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDGK	Podgornoye	7.53	343	⇓Pn	Pn	15 56 52.0	-0.3
	5.1nm,0.5s						
PDGK				⇓Sn	Sn	15 58 17.7	+1.2
	34nm,0.7s						
PDGK				⇓Lg	Lg	15 58 53.4	
	51nm,1.0s						
DANN	Dangsing	7.87	172	*e*P	Pn	15 56 54.3	-2.9
	7.9nm,0.5s						
GKN	Gorkha	8.34	167	*e*P	Pn	15 57 02.3	-1.2
	8.6nm,0.5s						
WMQ	Urumqi	8.59	26	*e*P	Pn	15 57 09.8	+2.9
WMQ				smax	smax		
	comp=N,13nm,0.9s						
WMQ				smax	smax		
	comp=E,13nm,1.1s						
GUN	Gumba	8.71	160	*e*P	Pn	15 57 08.4	-0.4
DMN	Daman	8.81	165	*e*P	Pn	15 57 08.7	-1.4
	8.7nm,0.7s						
PKIN	Phulchoki	8.90	163	*e*P	Pn	15 57 10.3	-1.1
	12nm,0.6s						
PKI	Pulchoki	8.91	163	*e*P	Pn	15 57 10.3	-1.3
	9.9nm,0.6s						
AAK	Ala-Archa	8.97	318	Pn	Pn	15 57 13.8	+1.6
	0.1nm,0.3s,baz=158,slow=14,SNR=2.8						
AAK				Lg	Lg	15 59 38.5	
	0.2nm,0.3s,baz=152,slow=22,SNR=2.2						
JIRN	Jiri	9.03	159	*e*P	Pn	15 57 12.6	-0.7
	18nm,0.6s						
ODAN	Odare	10.16	155	*e*P	Pn	15 57 26.5	-2.1
	12nm,0.7s						
MK31	Makanchi Array	10.61	359	⇓Pn	Pn	15 57 33.5	-1.0
	3.5nm,0.5s,baz=181,slow=12,SNR=124						
MK31				⇑Sn	Sn	15 59 32.4	+0.4
	6.5nm,1.1s,baz=187,slow=26,SNR=4.2						
MKAR	Makanchi Array	10.61	359	Pn	Pn	15 57 33.9	-0.7
	2.1nm,0.3s,baz=181,slow=13,SNR=108						
MKAR				Sn	Sn	15 59 29.4	-2.7
	baz=189,slow=25,SNR=0.9						
MAKZ	Makanchi	10.63	358	⇓Pn	Pn	15 57 34.0	-0.8
	16nm,0.5s						
MAKZ				⇑Sn	Sn	15 59 29.9	-2.6
	5.9nm,1.1s						
KURBB	Kurchatov Arra	14.73	350	Pn	Pn	15 58 27.8	-2.9
	0.0nm,0.3s,baz=174,slow=12,SNR=21						
ZALV	Zalesovo Beam	17.84	4	P	Pn	15 59 07.5	-2.8
	0.3nm,0.3s,baz=187,slow=12,SNR=11						
BVAR	Borovoye Array	18.90	337	P	Pn	15 59 22.1	-1.1
	0.4nm,0.3s,baz=142,slow=10.0,SNR=20						
SONM	Songino Array	21.11	49	P	P	15 59 47.3	+0.6
	2.8nm,0.9s,baz=241,slow=10,SNR=14						
FINES	FINESS Array B	43.11	324	P	P	16 03 02.0	+0.5
	2.3nm,1.0s,baz=104,slow=3.9,SNR=2.7						
ARCES	ARCESS Array B	45.18	335	P	P	16 03 18.9	+0.9
	3.3nm,1.0s,baz=93,slow=9.4,SNR=4.0						
WRA	Warramunga Arr	74.24	130	P	P	16 06 40.9	+2.3
	0.5nm,0.9s,baz=324,slow=5.7,SNR=3.8						

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*SJA **27** 16:04:41.8±0.9, 24.°10S×66.°93W, h187^{km}±12^{km}, ML3.2, MW3.3*

*GUC **27** 16:04:42.3±0.5, 24.°11S×67.°31W, h221^{km}±12^{km}, ML3.7*

ISC 27 16:04:41.6±2.4, **24.°13S**±0.°08×**66.°95W**±0.°05, **h195^{km}**±21^{km}, **n18, σ1.^{s}16**/31, **6C-1D, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AZAP	Zapla	1.72	94	*i* P	Pn	16 05 17.1	-0.1
AZAP				*e*S	Sn	16 05 44.3	-0.5
YJA	Yavi	2.35	34	*i* P	Pn	16 05 24.6	+0.6
YJA				*e*S	Sn	16 05 55.9	-0.9
LVC	Limon Verde	2.35	310	*e*P	Pn	16 05 25.1	+1.2
LVC				*i* S	Sn	16 05 57.8	+0.9
PB15	IPOC Station P	2.49	291	⇑*i*P	Pn	16 05 26.4	+1.1
PB15				*i* S	Sn	16 05 59.4	+0.1
GO02	Mina Guanaco	2.62	246	⇑*i*P	Pn	16 05 27.6	+0.7
GO02				*e*S	Sn	16 06 02.4	+0.3
GO02				IAML		16 06 03.7	
	comp=N,296nm,0.1s						
PB06	IPOC Station P	2.80	300	⇑*i*P	Pn	16 05 29.8	+1.0
PB06				*i* S	Sn	16 06 05.0	-0.5
PB06				IAML		16 06 07.8	
	comp=E,228nm,0.1s						
PB06	IPOC Station P	2.80	300	*i* P	Pn	16 05 29.8	+1.0
PB06				*e*S	Sn	16 06 04.2	-1.3
PB06				IAML		16 06 07.6	
	comp=Z,145nm,0.3s						
PB09	IPOC Station P	3.14	317	⇓*i*P	Pn	16 05 34.3	+1.5
PB09				*i* S	Sn	16 06 13.8	+0.9
PB09				IAML		16 06 16.8	
	comp=N,65nm,0.5s						
PB14	IPOC Station P	3.19	260	*i* P	Pn	16 05 33.9	+0.3
PB14				IAML		16 06 15.8	
	comp=Z,25nm,0.2s						
PB05	IPOC Station P	3.25	292	⇑*i*P	Pn	16 05 34.6	+0.5
PB05				*i* S	Sn	16 06 12.9	-2.2
PB05				IAML		16 06 19.8	
	comp=N,66nm,0.2s						
PB05	IPOC Station P	3.25	292	*i* P	Pn	16 05 34.5	+0.4
PB05				IAML		16 06 16.8	
	comp=Z,36nm,0.4s						
PB03	IPOC Station P	3.31	308	*e*P	Pn	16 05 35.4	+0.5
PB03				*e*S	Sn	16 06 14.6	-1.9
PB10	IPOC Station P	3.36	280	⇑*i*P	Pn	16 05 36.0	+0.6
PB10				*e*S	Sn	16 06 16.1	-1.3
PB10	IPOC Station P	3.36	280	*i* P	Pn	16 05 36.4	+1.1
PB10				IAML		16 06 19.5	
	comp=Z,36nm,0.2s						
PB04	IPOC Station P	3.45	301	*i* P	Pn	16 05 37.0	+0.5
PB04				*i* S	Sn	16 06 17.6	-1.9
PB04	IPOC Station P	3.45	301	*i* P	Pn	16 05 37.2	+0.6
PB07	IPOC Station P	3.61	311	⇑*i*P	Pn	16 05 38.9	+0.3
PB07				*e*S	Sn	16 06 20.8	-2.4
LPAZ	La Paz	7.88	352	*i* P	Pn	16 06 34.9	+1.0

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*DJA **27** 16:16:59.6±0.5, 9°S±3°×11°0E±°, h10^{km}, M3.9/10, mb4.1/1, MLv3.7/10*

*IDC **27** 16:17:00.5±3.2, 8.°39S×111.°17E, h0^{km}, mb3.2/4, mb1 3.4/4, mb1mx3.2/29, mbtmp3.2/4, Error ellipse: s-maj=155.3km s-min=24.4km az=52.0*

ISC 27 16:17:04.2±1.4, **9.°24S**±0.°10×**110.°42E**±0.°08, **h55^{km}, n14, σ1.^{s}64**/18, **mb3.4**/4, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCJI	Pacitan	1.28	36	P	Pn	16 17 23.3	-2.5
PCJI				S	Sn	16 17 43.3	+1.3
UGM	Wanagama	1.32	4	P	Pn	16 17 25.0	-1.5
UGM				S	Sn	16 17 45.1	+2.0
YOGI	Yogyakarta	1.42	355	P	Pn	16 17 26.8	-0.9
YOGI				S	Sn	16 17 47.8	+2.4
WOJI	Wonogiri, Jawa	1.48	20	P	Pn	16 17 27.7	-0.8
PWJI	Pagerwojo	1.83	49	P	Pn	16 17 31.4	-1.9
PWJI				S	Sn	16 17 56.3	+1.0
SMRI	Semarang	2.18	1	P	Pn	16 17 36.9	-1.2
CISI	Cisompet, Garu	3.07	303	P	Pn	16 17 49.2	-1.1
GMJI	Gumukmas	3.14	72	P	Pn	16 17 50.9	-0.3
JAGI	Jajag, Banyuwa	3.77	79	P	Pn	16 17 58.6	-1.2
PLAI	Plampang	7.28	87	P	Pn	16 18 47.2	-0.8
WRA	Warramunga Arr	25.44	117	P	P	16 22 28.0	+0.8
	0.3nm,0.3s,baz=296,slow=11,SNR=4.1						
ASAR	Alice Springs	26.64	125	P	P	16 22 40.4	+2.4
	0.1nm,0.5s,baz=301,slow=9.3,SNR=5.8						
SONM	Songino Array	56.94	357	P	P	16 26 42.3	-1.6
	0.2nm,0.5s,baz=174,slow=4.4,SNR=2.2						
MKAR	Makanchi Array	61.17	338	P	P	16 27 13.2	+0.1
	0.2nm,0.4s,baz=152,slow=7.9,SNR=7.4						

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*NEIC **27** 16:30:54.1±1.6, 17.°77S±0.°07×178.°2W±0.°1, h553^{km}±8^{km}, mb4.5/50, Error ellipse: s-maj=18.5km s-min=9.8km az=89.0*

*IDC **27** 16:30:54.3±1.8, 17.°91S×178.°17W, h544^{km}±23^{km}, mb3.5/10, mb1 3.6/12, mb1mx3.2/49, mbtmp4.5/12, Error ellipse: s-maj=30.1km s-min=17.2km az=147.0*

ISC 27 16:30:54.5±0.6, **17.°77S**±0.°10×**178.°19W**±0.°09, **h550^{km}, n74, σ1.^{s}00**/74, **mb4.4**/33, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.59	270	P	P	16 32 17.4	+3.9
AFI	Afiamalu	7.26	59	P	P	16 32 45.6	+0.4
	4.3nm,0.3s,baz=164,slow=4.6,SNR=8.4						
AFI	Afiamalu	7.26	59	P	P	16 32 44.7	-0.5
NIUE	Niue	7.95	101	P	P	16 32 51.3	-0.4
DZM	Mont Dzumac	15.07	251	P	P	16 34 04.6	-0.3
	0.7nm,0.3s,baz=158,slow=20,SNR=6.1						
DZM	Mont Dzumac	15.07	251	P	P	16 34 04.7	-0.1
TARA	Tarawa	20.93	334	P	P	16 34 58.1	-1.0
THZ	Tophouse	25.10	196	P	P	16 35 35.9	-0.1
KHZ	Kahutara	25.56	194	P	P	16 35 38.9	-1.1
LTZ	Lake Taylor	26.22	196	P	P	16 35 44.0	-1.8
LTZ				IAmb	IAmb	16 35 49.4	
	comp=Z,27nm,1.5s						
OXZ	Oxford	26.79	196	P	P	16 35 48.9	-1.9
OXZ				IAmb	IAmb	16 35 49.8	
	comp=Z,31nm,1.2s						
RPZ	Rata Peaks	27.42	197	P	P	16 35 54.6	-1.7
	comp=Z,6.2nm,0.7s,baz=100,slow=17,SNR=1.5						
RPZ	Rata Peaks	27.42	197	P	P	16 35 54.8	-1.5
RPZ				IAmb	IAmb	16 36 12.7	
	comp=Z,32nm,1.2s						
FOZ	Fox Glacier	27.62	199	P	P	16 35 57.5	-0.5
LBZ	Lake Benmore	28.28	198	P	P	16 36 02.6	-1.2

WKZ	Wanaka	29.03	199	P	P	16 36 09.8	-0.5
EIDS	Eidsvold	29.51	250	P	P	16 36 14.6	-0.3
EIDS				IAmb	IAmb	16 36 20.2	
	comp=Z,16nm,1.1s						
MLZ	Mavora Lakes	29.80	200	P	P	16 36 17.5	+0.5
ARMA	Armidale	30.19	240	P	P	16 36 21.7	+0.9
ARMA				IAmb	IAmb	16 36 22.5	
	comp=Z,7.5nm,0.8s						
WHZ	Wether Hill Ro	30.32	199	P	P	16 36 22.6	+1.1
CTA	Charters Tower	33.68	260	P	P	16 36 50.0	-0.4
	comp=Z,3.1nm,0.8s,baz=93,slow=9.8,SNR=6.5						
CAN	Canberra	33.96	233	P	P	16 36 53.1	+0.5
CAN				IAmb	IAmb	16 37 10.2	
	comp=Z,24nm,1.3s						
PMG	Port Moresby	34.65	279	P	P	16 36 59.5	+0.9
	comp=Z,11nm,0.8s,baz=74,slow=5.5,SNR=4.4						
PMG	Port Moresby	34.65	279	P	P	16 36 59.3	+0.7
PMG				IAmb	IAmb	16 37 00.9	
	comp=Z,11nm,0.9s						
COEN	Coen	37.32	270	P	P	16 37 21.2	+0.5
COEN				IAmb	IAmb	16 37 21.7	
	comp=Z,4.5nm,0.6s						
TOO	Toolangi	37.42	231	P	P	16 37 21.7	+0.5
TOO				IAmb	IAmb	16 37 22.6	
	comp=Z,11nm,0.9s						
STKA	Stephens Creek	38.88	241	P	P	16 37 33.6	+0.4
	comp=Z,6.6nm,0.5s,baz=95,slow=7.7,SNR=35						
STKA	Stephens Creek	38.88	241	P	P	16 37 34.1	+0.9
BBOO	Buckleboo	43.66	241	P	P	16 38 11.3	+0.4
BBOO				IAmb	IAmb	16 38 12.0	
	comp=Z,9.9nm,0.8s						
WR0	Warramunga Arr	44.68	259	P	P	16 38 17.9	-1.1
WB0	Warramunga Arr	44.83	260	P	P	16 38 19.3	-0.9
WB2	Warramunga Arr	44.85	259	P	P	16 38 19.5	-0.9
WB2				IAmb	IAmb	16 38 20.4	
	comp=Z,5.1nm,0.5s						
WRAB	Tennant Creek	44.86	259	P	P	16 38 19.4	-1.0
WRAB				IAmb	IAmb	16 38 20.3	
	comp=Z,4.5nm,0.5s						
WRA	Warramunga Arr	44.87	259	P	P	16 38 19.6	-0.9
	comp=Z,2.6nm,0.5s,baz=96,slow=7.5,SNR=111						
WRA	Warramunga Arr	44.87	259	P	P	16 38 19.4	-1.0
AS31	Alice Springs	45.03	254	P	P	16 38 21.6	-0.1
AS31				IAmb	IAmb	16 38 22.3	
	comp=Z,7.4nm,0.8s						
ASAR	Alice Springs	45.03	254	P	P	16 38 21.6	-0.1
	comp=Z,20nm,0.5s,baz=89,slow=7.5,SNR=896						
ASAR				PcP	PcP	16 39 51.0	0.0
	comp=Z,1.0nm,0.6s,baz=104,slow=3.7,SNR=5.1						
ASAR	Alice Springs	45.03	254	P	P	16 38 21.3	-0.5
ASAR					PcP	16 39 50.9	0.0
MTN	Manton Dam	49.02	268	P	P	16 38 51.2	-0.6
FORT	Forrest	50.26	245	P	P	16 39 00.2	-0.5
FORT				IAmb	IAmb	16 39 00.8	
	comp=Z,8.1nm,0.6s						
KNRA	Kununurra	50.72	264	P	P	16 39 03.8	-0.3
KNRA				IAmb	IAmb	16 39 04.5	
	comp=Z,8.1nm,0.7s						
FAKI	Fak Fak	50.76	281	P	P	16 39 04.6	0.0
SIJI	Sorong	52.41	283	P	P	16 39 16.9	+0.4
	comp=Z,11nm,0.6s,baz=88,slow=5.5,SNR=10						
FITZ	Fitzroy Crossi	53.26	260	P	P	16 39 22.4	-0.1
	comp=Z,1.3nm,0.3s,baz=114,slow=3.7,SNR=24						
FITZ	Fitzroy Crossi	53.26	260	P	P	16 39 22.3	-0.1
SOEI	Soe	56.28	270	P	P	16 39 45.3	+1.5
PSA00	Pilbara Seismi	58.15	255	P	P	16 39 55.5	-0.8
PSA00	Pilbara Seismi	58.15	255	P	P	16 39 55.5	-0.8
PSA00				IAmb	IAmb	16 40 06.6	
	comp=Z,32nm,1.4s						
MMRI	Maumere	58.51	271	P	P	16 39 58.4	-0.5
NWAO	Narrogin (SRO)	59.46	242	P	P	16 40 04.6	-0.4
NWAO				IAmb	IAmb	16 40 04.7	
	comp=Z,22nm,1.3s						
NWAO	Narrogin (SRO)	59.46	242	P	P	16 40 04.0	-0.9
NWAO				IAmb	IAmb	16 40 04.7	
	comp=Z,18nm,1.3s						
LUWI	Luwuk	60.29	279	P	P	16 40 10.2	-0.6
MORW	Morawa	60.73	246	P	P	16 40 12.9	-0.5
MORW				IAmb	IAmb	16 40 26.0	
	comp=Z,23nm,1.4s						
JAGI	Jajag, Banyuwa	66.26	268	P	P	16 40 47.7	-1.3
JAGI				IAmb	IAmb	16 40 48.2	
	comp=Z,8.2nm,0.8s						
MJAR	Matsushiro Arr	67.92	323	P	P	16 40 57.7	-1.1
KKM	Kota Kinabalu	68.92	284	P	P	16 41 05.1	-0.2
KKM				IAmb	IAmb	16 41 14.4	
	comp=Z,29nm,1.4s						
ADK	Adak	69.37	1	P	P	16 41 08.4	+1.4
UGM	Wanagama	69.86	268	P	P	16 41 10.7	-0.2
QSPA	South Pole Qui	72.28	180	P	P	16 41 25.6	+1.3
SSLB	Suanglung	72.34	303	P	P	16 41 23.2	-1.9
SSLB				IAmb	IAmb	16 41 35.6	
	comp=Z,32nm,1.5s						
TPUB	Ta-pu	72.37	302	P	P	16 41 24.7	-0.6
TPUB				IAmb	IAmb	16 41 38.7	
	comp=Z,42nm,1.6s						
AKUT	Akutan	72.40	8	P	P	16 41 26.3	+1.5
AKUT				IAmb	IAmb	16 41 30.6	
	comp=Z,25nm,1.1s						
CISI	Cisompet, Garu	72.54	268		P	16 41 25.9	-0.7
CISI				IAmb	IAmb	16 41 44.3	
	comp=Z,44nm,1.5s						
KSM	Kuching	72.88	277	P	P	16 41 28.1	-0.4
KSAR	Wonju Array Be	74.76	318	P	P	16 41 37.4	-1.2
KS19	Wonju Array Si	74.81	318	P	P	16 41 37.1	-1.8
KS19				IAmb	IAmb	16 41 38.1	
	comp=Z,10nm,0.9s						
JCC	Jacoby Creek,	76.94	39		pP	16 43 46.6	+0.6
ILAR	Eielson Array	85.71	13	P	P	16 42 34.6	-0.4
	comp=Z,0.2nm,0.7s,baz=218,slow=5.6,SNR=2.4						
CMAR	Chiang Mai Arr	89.04	290	P	P	16 42 53.0	+1.3
	comp=Z,0.6nm,0.7s,baz=128,slow=2.1,SNR=5.7						
CMAR	Chiang Mai Arr	89.04	290	P	P	16 42 51.0	-0.7
BRTR	Keskin Array B	144.84	315	PKP	PKPbc	16 49 30.1	0.0
	comp=Z,0.8nm,0.8s,baz=107,slow=3.9,SNR=6.1						
BRTR	Keskin Array B	144.84	315		PKPdf	16 49 29.8	+0.3
GERES	GERESS Array B	147.53	345	PKPbc	PKPbc	16 49 37.7	+0.6
	comp=Z,0.5nm,0.5s,baz=60,slow=3.2,SNR=5.0						
GERES	GERESS Array B	147.53	345		PKPbc	16 49 37.1	0.0

DJA ***27*** *16:44:42.0±0.2, 3°S±2°×12°8E±°, h10^{km}, M4.2/11, mB5.0/1, mb5.1/1, MLv3.7/11, Mw(mB)4.3/1*

NEIC ***27*** *16:44:44.9±1.6, 2.°85S±0.°06×128.°23E±0.°05, h56^{km}±8^{km}, mb4.2/24, Error ellipse: s-maj=10.4km s-min=4.9km az=209.0*

IDC ***27*** *16:44:46.9±2.2, 2.°86S×128.°36E, h65^{km}±20^{km}, mb3.6/6, mb1 3.9/10, mb1mx3.5/53, mbtmp4.0/10, Error ellipse: s-maj=17.4km s-min=11.9km az=89.0*

ISC 27 16:44:43.7±0.5**, 2.°88S**±0.°04×**128.°17E**±0.°04**, h38^{km}, n56, σ1^{s}27**/62**, mb4.0**/10**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	0.80	178	P	Pn	16 44 58.8	+0.3
MSAI	Masohi	0.89	121	P	Pn	16 45 01.1	+1.4
NLAI	Namlea	1.12	251	P	Pn	16 45 04.2	+1.3
NLAI				S	Sn	16 45 19.7	+2.7
LBMI	Labuha	2.33	343	P	Pn	16 45 19.7	+0.3
LBMI				S	Sn	16 45 47.5	+0.7
SANI	Sanana	2.33	291	P	Pn	16 45 19.0	-0.4
SANI				S	Sn	16 45 44.7	-2.1
BNDI	Bandanaira	2.38	133	P	Pn	16 45 23.5	+3.3
SIJI	Sorong	3.69	57	P	Pn	16 45 38.4	+0.2
	19nm,0.3s,baz=240,slow=12,SNR=68						
SIJI				S	Sn	16 46 20.4	-0.1
	6.9nm,0.3s,baz=56,slow=20,SNR=18						
TNTI	Ternate	3.71	348		Pn	16 45 39.2	+0.6
FAKI	Fak Fak	4.08	91	P	Pn	16 45 44.9	+1.3
FAKI	Fak Fak	4.08	91		Pn	16 45 44.0	+0.4
LUWI	Luwuk	5.69	289	Pn	Pn	16 46 07.0	+1.3
APSI	Ampana	6.80	287	P	Pn	16 46 22.6	+1.6
SOEI	Soe	7.85	209		Pn	16 46 38.7	+3.2
KAPI	Kappang	8.66	256	P	Pn	16 46 53.0	+6.5
	0.5nm,0.3s,baz=106,slow=9.1,SNR=6.3						
KAPI	Kappang	8.66	256		Pn	16 46 52.2	+5.8
MTN	Manton Dam	10.32	164		Pn	16 47 11.5	+2.2
KNRA	Kununurra	12.73	177		Pn	16 47 44.4	+2.2
KNRA					Sn	16 49 59.9	-2.8
FITZ	Fitzroy Crossi	15.32	189	P	P	16 48 21.7	+0.1
	0.4nm,0.3s,baz=16,slow=9.9,SNR=17						
FITZ	Fitzroy Crossi	15.32	189	P	P	16 48 21.9	+0.3
FITZ				IAmb	IAmb	16 48 31.2	
	comp=Z,14nm,1.5s						
WB0	Warramunga Arr	17.85	161	P	Pn	16 48 49.2	0.0
WRAB	Tennant Creek	17.99	161	P	Pn	16 48 50.6	-0.3
WRAB				IAmb	IAmb	16 48 56.0	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	18.00	161	P	Pn	16 48 50.6	-0.4
	comp=Z,0.6nm,0.3s,baz=340,slow=11,SNR=27						
WRA	Warramunga Arr	18.00	161	P	Pn	16 48 50.2	-0.9
WB2	Warramunga Arr	18.00	161	P	Pn	16 48 51.2	+0.1
WR0	Warramunga Arr	18.08	160	P	Pn	16 48 51.8	-0.3
COEN	Coen	18.46	127		P	16 48 54.6	-1.9
PSAC2	Pilbara Seismi	20.23	203	P	P	16 49 16.3	+0.5
PSAC2				IAmb	IAmb	16 50 12.5	
	comp=Z,22nm,1.2s						
PSAB2	Pilbara Seismi	20.24	203	P	P	16 49 15.0	-0.8
PSAB2				IAmb	IAmb	16 49 27.0	
	comp=Z,21nm,1.3s						
PSAC1	Pilbara Seismi	20.24	203	P	P	16 49 16.4	+0.6
PSAC1				IAmb	IAmb	16 50 00.6	
	comp=Z,18nm,1.2s						
PSAA2	Pilbara Seismi	20.26	203	P	P	16 49 16.3	+0.4
PSAD2	Pilbara Seismi	20.26	203	P	P	16 49 16.0	0.0
PSA00	Pilbara Seismi	20.27	203	P	P	16 49 16.1	0.0
PSAA3	Pilbara Seismi	20.27	203	P	P	16 49 16.4	+0.3
PSAA3				IAmb	IAmb	16 49 27.6	
	comp=Z,29nm,1.4s						
PSAB1	Pilbara Seismi	20.27	203	P	P	16 49 16.1	0.0
PSAB1				IAmb	IAmb	16 49 24.5	
	comp=Z,14nm,1.1s						
AS31	Alice Springs	21.40	165	P	P	16 49 28.6	+0.3
AS31				IAmb	IAmb	16 49 30.0	
	comp=Z,2.7nm,0.7s						
ASAR	Alice Springs	21.40	165	P	P	16 49 28.5	+0.2
	comp=Z,6.4nm,0.6s,baz=345,slow=10,SNR=141						
ASAR				S	S	16 53 23.1	-0.8
	comp=Z,1.6nm,0.9s,baz=350,slow=21,SNR=4.2						
ASAR				PcP	PcP	16 53 32.6	+1.4
	comp=Z,0.7nm,0.5s,baz=340,slow=2.2,SNR=6.0						
ASAR	Alice Springs	21.40	165	P	P	16 49 28.3	0.0
ASAR					S	16 53 22.4	-1.5
RABL	Rabaul	23.99	94	P	P	16 49 56.4	+1.4
BBOO	Buckleboo	30.68	167	P	P	16 50 54.0	-0.9
STKA	Stephens Creek	31.49	158	P	P	16 50 59.9	-2.1
HHC	Hu-ho-hao-te	46.09	342	*e*P	P	16 53 05.3	+1.1
SONM	Songino Array	53.98	342	P	P	16 54 03.1	-0.9
	comp=Z,0.3nm,0.6s,baz=157,slow=5.7,SNR=3.0						
SONM	Songino Array	53.98	342	P	P	16 54 02.3	-1.7
WMQ	Urumqi	58.97	327	*e*P	P	16 54 40.5	+1.0
MK31	Makanchi Array	63.80	327	P	P	16 55 11.3	-0.8
MK31				IAmb	IAmb	16 57 27.7	
	comp=Z,2.2nm,1.3s						
MKAR	Makanchi Array	63.80	327	P	P	16 55 13.1	+1.0
	comp=Z,0.9nm,0.7s,baz=124,slow=8.1,SNR=13						
MKAR	Makanchi Array	63.80	327	P	P	16 55 12.2	+0.1
MAKZ	Makanchi	63.98	327	P	P	16 55 13.8	+0.5
MAKZ				IAmb	IAmb	16 57 28.3	
	comp=Z,4.0nm,1.3s						
KURK	Kurchatov	68.07	329	P	P	16 55 39.7	+0.3
KURK				IAmb	IAmb	16 55 41.0	
	comp=Z,3.6nm,0.8s						
KKAR	Karatay Array	69.06	319	P	P	16 55 46.5	+0.7
BVAR	Borovoye Array	73.63	328	P	P	16 56 13.3	+0.2
	comp=Z,1.2nm,0.7s,baz=112,slow=3.9,SNR=7.2						
TIXI	Tiksi	74.40	0	P	P	16 56 17.7	+0.4
	comp=Z,1.7nm,0.6s,baz=239,slow=2.5						
TIXI	Tiksi	74.40	0	P	P	16 56 17.6	+0.4
TIXI				IAmb	IAmb	16 56 18.8	
	comp=Z,2.1nm,0.7s						
ABKAR	Akbulak array	78.17	322	P	P	16 56 36.5	-2.6
ILAR	Eielson Array	90.42	25	P	P	16 57 41.2	+0.2
	comp=Z,0.3nm,0.7s,baz=285,slow=4.6,SNR=2.3						
ILAR	Eielson Array	90.42	25	P	P	16 57 40.6	-0.3

DJA ***27*** *16:46:55.3±0.7, 3°S±3°×12°8E±°, h16^{km}±7^{km}, M4.0/10, mB5.0/1, mb4.3/2, MLv3.9/10, Mw(mB)4.3/1*

IDC ***27*** *16:46:59.8±2.1, 2.°89S×128.°32E, h60^{km}±21^{km}, mb3.7/4, mb1 3.9/8, mb1mx3.4/56, mbtmp4.0/8, ML4.0/4, MS3.1/1, Ms1 3.1/1, ms1mx2.6/38, Error ellipse: s-maj=18.8km s-min=10.1km az=83.0*

ISC 27 16:46:57.6±0.7**, 2.°87S**±0.°05×**128.°18E**±0.°05**, h38^{km}, n16, σ1^{s}35**/22**, mb4.0**/4**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	0.81	179	P	Pn	16 47 11.9	-0.7
AAI				S	Sn	16 47 24.5	+1.1
MSAI	Masohi	0.88	123	P	Pn	16 47 14.0	+0.5
NLAI	Namlea	1.14	251	P	Pn	16 47 16.8	-0.3
NLAI				S	Sn	16 47 32.7	+1.2
LBMI	Labuha	2.32	343	P	Pn	16 47 33.5	+0.2
SANI	Sanana	2.34	290	S	Sn	16 47 57.6	-3.5
SIJI	Sorong	3.67	57	P	Pn	16 47 51.3	-0.5
	40nm,0.3s,baz=246,slow=11,SNR=22						
SIJI				S	Sn	16 48 34.6	+0.8
	7.8nm,0.3s,baz=353,slow=23,SNR=1.9						
FAKI	Fak Fak	4.06	91	P	Pn	16 47 57.8	+0.6
MRSI	Marisa	7.07	298	P	Pn	16 48 38.6	0.0
KAPI	Kappang	8.68	256	P	Pn	16 49 04.4	+3.7
	0.6nm,0.3s,baz=88,slow=6.5,SNR=4.0						
TBP	Tagbilaran	13.20	341	*i* P	P	16 50 11.8	-0.1
FITZ	Fitzroy Crossi	15.34	189	P	P	16 50 34.7	-1.0
	0.2nm,0.3s,baz=16,slow=5.9,SNR=16						
FITZ				LR	LR	16 56 48.7	
	comp=Z,76nm,19.6s,baz=16,slow=38						
WRA	Warramunga Arr	18.00	161	P	Pn	16 51 04.5	-0.6
	0.7nm,0.3s,baz=339,slow=11,SNR=14						
WRA				S	Sn	16 54 24.6	-0.4
	0.1nm,0.3s,baz=335,slow=22,SNR=2.3						
ASAR	Alice Springs	21.40	165	P	P	16 51 42.0	-0.2
	3.7nm,0.5s,baz=346,slow=12,SNR=13						
ASAR				S	S	16 55 36.5	-1.5
	1.1nm,0.8s,baz=347,slow=21,SNR=7.7						
ASAR				PcP	PcP	16 55 46.0	+0.8
	0.4nm,0.5s,baz=354,slow=1.9,SNR=5.1						
MKAR	Makanchi Array	63.80	327	P	P	16 57 26.4	+0.5
	1.0nm,1.0s,baz=127,slow=8.0,SNR=5.4						
KURBB	Kurchatov Arra	68.07	328	P	P	16 57 53.4	+0.1
	1.4nm,0.8s,baz=133,slow=6.6,SNR=5.8						
BVAR	Borovoye Array	73.63	328	P	P	16 58 27.3	+0.2
	1.4nm,1.0s,baz=82,slow=5.1,SNR=5.2						

ATH ***27*** *16:51:32.6, 38.°23N×20.°39E, h7^{km}±2^{km}, ML2.2/6, Error ellipse: s-maj=2.3km s-min=0.8km az=228.0*

THE ***27*** *16:51:32.6, 38.°23N×20.°38E, h8^{km}, ML2.5/7, Error ellipse: s-maj=1.0km s-min=0.3km az=240.0*

ISC 27 16:51:32.7±1.5**, 38.°23N**±0.°03×**20.°40E**±0.°04**, h7^{km}**±6^{km}**, n28, σ0^{s}50**/55**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGT1	Agia Thekli	0.02	329	P	Pg	16 51 33.8	-0.1
AGT1				S	Sg	16 51 34.6	-0.2
KEF4	Livadi, Kephal	0.03	43	P	Pg	16 51 34.0	0.0
KEF4				S	Sg	16 51 34.9	0.0
LXR1	Lixouri, Cepha	0.05	135	P	Pg	16 51 34.2	+0.1
LXR1				S	Sg	16 51 35.7	+0.6
LXRA	Lixouri, Kepha	0.05	137	P	Pg	16 51 34.3	+0.2
LXRA				S	Sg	16 51 35.4	+0.3
KEF3	Kipouria, Keph	0.05	231	P	Pg	16 51 34.2	+0.1
KEF3				S	Sg	16 51 35.4	+0.2
CHV1	Chavriata, Kef	0.05	193	P	Pg	16 51 34.3	+0.1
CHV1				S	Sg	16 51 35.6	+0.4
KEF1	Kardakata, Kep	0.07	53	P	Pg	16 51 34.5	+0.1
KEF1				S	Sg	16 51 35.6	-0.1
ARGA	Argostoli. Kep	0.09	131	P	Pg	16 51 34.8	+0.1
ARGA				S	Sg	16 51 36.1	+0.1
ARG2	Argostoli	0.09	128	P	Pg	16 51 34.9	+0.2
ARG2				S	Sg	16 51 36.7	+0.5
	9μm,0.2s						
KEF2	Argostoli. Kep	0.10	134	P	Pg	16 51 35.1	+0.3
KEF2				S	Sg	16 51 36.6	+0.2
VLS	Valsamata	0.16	110	P	Pg	16 51 36.0	0.0
VLS				S	Sg	16 51 38.6	+0.4
	3μm,0.2s						
VLS	Valsamata	0.16	110	P	Pg	16 51 36.0	0.0
VLS				S	Sg	16 51 38.7	+0.4
VLS				AML	AML	16 51 38.9	
	comp=N,7850μm,0.3s						
VLS				AML	AML	16 51 39.2	
	comp=E,3344μm,0.2s						
VSK1	VASILIKIADES	0.22	37	P	Pg	16 51 37.2	+0.2
VSK1				S	Sg	16 51 40.8	+0.8
	comp=E,3μm,0.4s						
KONA	Konidatara, Ke	0.23	36	P	Pg	16 51 37.4	+0.1
KONA				S	Sg	16 51 40.2	-0.3
KONA				AML	AML	16 51 41.9	
	comp=E,2334μm,0.3s						
KONA				AML	AML	16 51 42.3	
	comp=N,3597μm,0.5s						
FSK	Fiskardo	0.26	30	P	Pg	16 51 37.9	+0.1
FSK				S	Sg	16 51 42.2	+0.9
	comp=N,798nm,0.2s						
FSK	Fiskardo	0.26	30	P	Pg	16 51 38.0	+0.1
FSK				S	Sg	16 51 42.1	+0.9
FSK				AML	AML	16 51 43.7	
	comp=E,1736μm,0.2s						
FSK				AML	AML	16 51 45.1	
	comp=N,1432μm,0.3s						
KFL	Anninata	0.33	112	P	Pg	16 51 38.9	-0.3
KFL				S	Sg	16 51 44.5	+0.9
	comp=N,675nm,0.4s						
KFL	Anninata	0.33	112	P	Pg	16 51 39.2	0.0
KFL				S	Sg	16 51 43.8	+0.2
KFL				AML	AML	16 51 44.8	
	comp=N,1056μm,0.4s						
KFL				AML	AML	16 51 47.7	
	comp=E,1425μm,0.3s						
EVGI	Lefkada island	0.44	28	P	Pg	16 51 41.1	0.0
EVGI				S	Sg	16 51 47.7	+0.8
	comp=E,840nm,0.2s						
EVGI	Lefkada island	0.44	28	P	Pg	16 51 41.2	+0.1
EVGI				S	Sg	16 51 48.1	+1.2
MGNA	Meganis	0.52	36	P	Pg	16 51 42.5	-0.3
MGNA				S	Sg	16 51 49.4	-0.2
LKD2	Lefkada island	0.59	20	P	Pg	16 51 43.8	-0.3
LKD2				S	Sg	16 51 52.8	+1.0
LKD2	Lefkada island	0.59	20	P	Pg	16 51 43.8	-0.3
LKD2				S	Sg	16 51 52.2	+0.4
LKD2				AML	AML	16 51 54.1	
	comp=N,414μm,0.3s						
LKD2				AML	AML	16 51 58.6	
	comp=E,369μm,0.4s						
TSLK	Tsoukalades, L	0.62	19	P	Pg	16 51 44.3	-0.4
TSLK				S	Sg	16 51 53.4	+0.6
	comp=E,248nm,0.4s						
TSLK	Tsoukalades, L	0.62	19	P	Pg	16 51 44.3	-0.4
TSLK				S	Sg	16 51 54.2	+1.4
TSLK				AML	AML	16 51 56.9	
	comp=E,459μm,0.5s						
TSLK				AML	AML	16 51 57.5	
	comp=N,515μm,0.3s						
PDO	Prodromos	0.72	59	P	Pg	16 51 46.1	-0.4
PDO				S	Sb	16 51 56.6	-1.0
PDO	Prodromos	0.72	59	P	Pg	16 51 46.2	-0.2
PDO				S	Sb	16 51 57.2	-0.4
PVO	Paravola	0.97	66	P	Pg	16 51 50.8	-0.4

IDC 27 16:53:52.5±2.8**, 20.°62S**×**176.°32W, h0^{km}, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.6**/35**, mbtmp3.9**/3**, Error ellipse: s-maj=179.1km s-min=42.8km az=157.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	35.04	264	P	P	17 00 48.2	+0.9
	1.5nm,0.4s,baz=90,slow=10,SNR=5.1						
ASAR	Alice Springs	46.02	257	P	P	17 02 18.4	+0.2
	1.0nm,0.7s,baz=93,slow=8.2,SNR=30						
ASAR				PcP	PcP	17 03 53.0	-1.9
	0.3nm,0.6s,baz=101,slow=4.3,SNR=8.2						
WRA	Warramunga Arr	46.14	262	P	P	17 02 18.2	-0.9
	0.5nm,0.6s,baz=93,slow=6.7,SNR=16						
BVAR	Borovoye Array	120.18	320	PKP	PKiKP	17 12 45.9	+0.5
	0.4nm,0.3s,baz=147,slow=2.6,SNR=4.3						
AKASG	Malin Array Be	143.86	332	PKP	PKPdf	17 13 29.0	-0.7
	0.9nm,0.4s,baz=43,slow=4.3,SNR=8.0						
BRTR	Keskin Array B	148.07	313	PKPbc	PKPbc	17 13 40.6	+0.1
	0.4nm,0.5s,baz=130,slow=4.5,SNR=4.1						

KEA 27 16:53:57.2±0.0**, 41.°69N**×**121.°30E, h0^{km}, ML3.0**/3**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUJ	Sinuiju	2.90	122	Pg	Pg	16 54 51.4	-1.3
SUJ				Sg	Sg	16 55 28.3	-2.0
PYS	Pyongsong	4.25	124	Pg	Pg	16 55 17.3	-1.3
PYS				Sg	Sg	16 56 12.3	-1.3
PYAG	Pyongyang	4.31	126	Sg	Sg	16 56 16.6	+1.0
HJU	Haeju	4.99	135	Sg	Sg	16 56 39.0	+1.5
HHU	Hamhung	5.05	108	Sg	Sg	16 56 34.7	-4.6

IDC ***27*** *17:44:54.0±2.5, 10.°18S×119.°12E, h0^{km}, mb3.5/1, mb1 3.3/4, mb1mx3.2/27, mbtmp3.2/4, ML3.0/3, Error ellipse: s-maj=205.4km s-min=26.0km az=51.0*

DJA ***27*** *17:45:01.0±1.2, 10°S±7°×11°9E±°, h16^{km}±7^{km}, M3.4/6, MLv3.4/6*

ISC 27 17:44:59.5±1.0**, 10.°25S**±0.°07×**119.°13E**±0.°06**, h33^{km}, n9, σ2^{s}05**/12**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.65	23	P	Pb	17 45 12.7	+0.1
WBSI				S	Sb	17 45 19.9	-1.7
BASI	Baing, Sumba	1.43	89	P	Pb	17 45 24.9	-0.6
BASI				S	Sb	17 45 44.3	+0.9
PLAI	Plampang	1.94	316	P	Pn	17 45 31.3	+1.1
PLAI				S	Sb	17 45 55.7	-2.4
SRBI	Singaraja	4.42	299	P	Pn	17 46 08.0	+3.7
BKSI	Bulukumba	4.99	11	P	Pn	17 46 14.9	+2.8
FITZ	Fitzroy Crossi	10.04	142	Pn	Pn	17 47 20.7	-0.8
	0.1nm,0.3s,baz=327,slow=11,SNR=1.7						
FITZ				Sn	Sn	17 49 03.1	-10
	0.2nm,0.3s,baz=179,slow=23,SNR=6.1						
WRA	Warramunga Arr	17.55	125	P	Pn	17 48 59.7	-2.1
	0.1nm,0.3s,baz=295,slow=14,SNR=2.3						
WRA				S	Sn	17 52 00.3	-16
	baz=297,slow=22,SNR=1.3						
ASAR	Alice Springs	19.41	135	P	P	17 49 23.0	-0.1
	0.1nm,0.3s,baz=311,slow=9.6,SNR=7.9						
ASAR				S	S	17 52 48.7	-12
	0.0nm,0.3s,baz=300,slow=22,SNR=2.6						
MKAR	Makanchi Array	65.62	333	P	P	17 55 39.4	-0.8
	0.3nm,0.5s,baz=153,slow=7.6,SNR=5.6						

KRNET ***27*** *17:49:02.0±0.1, 42.°91N×78.°23E, h15^{km}, mb2.3*

NNC ***27*** *17:49:01.4±0.6, 42.°90N×78.°23E, h0^{km}, mb2.3, mpv2.6, Error ellipse: s-maj=6.9km s-min=1.7km az=174.0*

SOME ***27*** *17:49:02.5, 42.°93N×78.°20E, h10^{km}*

ISC 27 17:49:03.1±0.7**, 42.°93N**±0.°02×**78.°19E**±0.°02**, h10^{km}, n38, σ1^{s}50**/74**, 19C-11D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	0.20	51	⇓*e*P	Pg	17 49 06.1	-1.3
	9.3nm,0.1s						
SATY				⇑*i*S	Sg	17 49 08.6	-1.8
	250nm,0.1s						
SATY	Saty	0.20	51	P	Pg	17 49 06.1	-1.3
	9.3nm,0.1s						
SATY				S	Sg	17 49 08.6	-1.8
	250nm,0.1s						
ANVS	Anan'yevo	0.41	249	⇑*i*P	Pg	17 49 10.7	-0.6
	baz=53						
ANVS				⇑*i*S	Sg	17 49 15.9	-0.9
	baz=53						
PRZ	Przheval'sk	0.47	161	⇑*i*P	Pg	17 49 11.1	-1.3
	baz=62						
PRZ				⇑*i*S	Sg	17 49 16.7	-1.9
	baz=62						
KPKS	Kokpek	0.64	34	⇓*i*P	Pg	17 49 14.1	-1.5
	baz=31						
KPKS				⇓*i*S	Sg	17 49 22.4	-1.6
	baz=31						
KPKS	Kokpek	0.64	34	⇓*i*P	Pg	17 49 14.1	-1.5
	9.6nm,0.1s						
KPKS				⇓*i*S	Sg	17 49 22.4	-1.6
	16nm,0.2s						
UZB	Uzynbulak	0.64	70	⇑*i*P	Pg	17 49 14.2	-1.4
	baz=68						
UZB				⇓*i*S	Sg	17 49 22.5	-1.6
	baz=68						

UZB	Uzynbulak	0.64	70	⇑iP	Pg	17 49 14.2	-1.4
	2.4nm,0.1s						
UZB				⇓iS	Sg	17 49 22.4	-1.6
	9.5nm,0.1s						
UZB	Uzynbulak	0.64	70	P	Pg	17 49 14.2	-1.4
	2.4nm,0.1s						
UZB				S	Sg	17 49 22.4	-1.6
	9.5nm,0.1s						
KOTS	Kotyrbulak	0.85	291	eP	Pb	17 49 19.2	-0.7
	baz=92						
KOTS				eS	Sb	17 49 31.0	-0.5
	baz=92						
KOTS	Kotyrbulak	0.85	291	eP	Pb	17 49 19.2	-0.7
	1.2nm,0.1s						
KOTS				eS	Sb	17 49 31.0	-0.5
	4.6nm,0.1s						
KOTS	Kotyrbulak	0.85	291	P	Pb	17 49 19.2	-0.7
	1.2nm,0.1s						
KOTS				S	Sb	17 49 31.0	-0.5
	4.6nm,0.1s						
MDOK	Medeo	0.87	286	eP	Pg	17 49 19.0	-0.8
	baz=87						
MDOK				eS	Sg	17 49 30.8	-0.4
	baz=87						
MDOK	Medeo	0.87	286	eP	Pg	17 49 19.0	-0.8
	0.7nm,0.1s						
MDOK				eS	Sg	17 49 30.8	-0.4
	2.8nm,0.5s						
MDOK	Medeo	0.87	286	⇑P	Pg	17 49 19.3	-0.5
	2.0nm,1.0s						
MDOK				⇓S	Sb	17 49 31.6	-0.6
	0.6nm,0.4s						
MDOK	Medeo	0.87	286	Pg	Pg	17 49 19.0	-0.8
	0.7nm,0.1s						
MDOK				Lg	Lg	17 49 30.8	
	2.8nm,0.5s						
TNSS	Tian-Shan	0.92	277	eP	Pb	17 49 20.7	-0.7
	baz=78						
TNSS				eS	Sb	17 49 33.2	-0.6
	baz=78						
TNSS	Tian-Shan	0.92	277	eP	Pb	17 49 20.7	-0.7
	0.2nm,0.1s						
TNSS				eS	Sb	17 49 33.2	-0.6
	1.2nm,0.2s						
TNSS	Tian-Shan	0.92	277	P	Pb	17 49 20.7	-0.7
	0.2nm,0.1s						
TNSS				S	Sb	17 49 33.2	-0.6
	1.2nm,0.2s						
SHLS	Shalkode	0.96	76	eP	Pn	17 49 24.9	+2.2
	baz=78						
SHLS				eS	Sn	17 49 41.2	+4.7
	baz=78						
SHLS	Shalkode	0.96	76	eP	Pn	17 49 24.9	+2.2
	4.6nm,0.2s						
SHLS				eS	Sn	17 49 41.2	+4.7
	3.5nm,0.2s						
SHLS	Shalkode	0.96	76	P	Pn	17 49 24.9	+2.2
	4.6nm,0.2s						
SHLS				S	Sn	17 49 41.2	+4.7
	3.5nm,0.2s						
PDGK	Podgornoye	1.03	67	P	Pg	17 49 21.2	-1.6
	0.3nm,0.1s						
PDGK				S	Sg	17 49 34.6	-1.6
	1.3nm,0.2s						
PDGK	Podgornoye	1.03	67	⇓P	Pg	17 49 20.9	-1.9
	0.6nm,0.4s						
PDGK				⇑S	Sg	17 49 34.7	-1.5
	1.3nm,0.4s						
KDJ	Kajisay	1.10	223	⇑iP	Pg	17 49 23.0	-1.2
	baz=25						
KDJ				⇑iS	Sg	17 49 37.7	-0.7
	baz=25						
ARXS	Arharly	1.31	348	eP	Pn	17 49 26.4	-1.1
	3.9nm,0.2s						
ARXS				eS	Sb	17 49 43.7	-0.9
	6.8nm,0.3s						
ARXS	Arharly	1.31	348	P	Pg	17 49 27.6	-0.6
	3.9nm,0.2s						
ARXS				S	Sg	17 49 45.3	+0.1
	6.8nm,0.3s						
ULHL	Ulahol	1.60	245	⇑iP	Pn	17 49 31.5	-0.1
	baz=46						
ULHL				⇑iS	Sb	17 49 53.1	0.0
	baz=46						
KUU	Kurty	1.66	306	eP	Pg	17 49 33.8	-1.0
	baz=6.0						
KUU				eS	Sg	17 49 55.9	-0.5
	baz=6.0						
KUU	Kurty	1.66	306	eP	Pg	17 49 33.8	-1.0
	1.2nm,0.2s						
KUU				eS	Sg	17 49 55.9	-0.5
	6.8nm,0.3s						
KUU	Kurty	1.66	306	P	Pg	17 49 33.8	-1.0
	1.2nm,0.2s						
KUU				S	Sg	17 49 55.9	-0.5
	6.8nm,0.3s						
KTMS	Ketmen	1.66	71	eP	Pb	17 49 33.0	-0.8
	baz=70						
KTMS				eS	Sb	17 49 54.7	-0.2
	baz=70						
KTMS	Ketmen	1.66	71	eP	Pb	17 49 33.0	-0.8
	1.1nm,0.1s						
KTMS				eS	Sb	17 49 54.7	-0.2
	2.6nm,0.2s						
KTMS	Ketmen	1.66	71	P	Pb	17 49 33.0	-0.8
	1.1nm,0.1s						
KTMS				S	Sb	17 49 54.7	-0.2
	2.6nm,0.2s						
BOOM	Boomskoye usch	1.72	256	⇓iP	Pb	17 49 34.4	-0.4
	baz=57						
BOOM				⇓iS	Sg	17 49 57.0	-1.3
	baz=57						
TKM2	Tokmak 2	1.91	271	⇑iP	Pb	17 49 37.5	-0.6
	baz=71						
TKM2				⇑iS	Sg	17 50 02.7	-1.7
	baz=71						
NRN	Naryn	2.21	228	⇑iP	Pb	17 49 42.2	-1.2
	baz=29						
NRN				⇑iS	Sb	17 50 09.7	-1.3
	baz=29						
AAK	Ala-Archa	2.74	265	⇑Pg	Pn	17 49 48.3	+1.1
	1.9nm,0.9s						
AAK				⇑Lg	Lg	17 50 29.1	
	0.5nm,0.4s						

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*NEIC **27** 17:59:12.1±1.8, 8°.66S±0°.04×74°.33W±0°.07, h142^{km}±4^{km}, mb4.9/180, Error ellipse: s-maj=10.1km s-min=5.2km az=103.0*

*IDC **27** 17:59:12.7±0.4, 8°.66S×74°.40W, h145^{km}±3^{km}, mb4.3/26, mb1 4.5/33, mb1mx4.4/47, mbtmp4.8/33, MS3.0/4, Ms1 3.0/4, ms1mx2.8/38, Error ellipse: s-maj=11.4km s-min=8.5km az=49.0*

*VAO **27** 17:59:16.4±0.3, 8°.60S×74°.01W, h160^{km}±1^{km}, mb5.1*

ISC 27 17:59:12.3±0.3, **8°.68S**±0°.04×**74°.34W**±0°.04, **h144**^{km}±2^{km}, **h145**^{km}**:pP-P, n560,** σ**1^{s}08**/599, **mb4.8**/115, **1C, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	4.10	217	P	Pn	18 00 12.5	-1.3
	55nm,0.3s,baz=34,slow=3.5,SNR=86						
NNA				S	Sn	18 00 56.5	-5.1
	487nm,0.3s,baz=168,slow=14,SNR=28						
NNA	Nana	4.10	217		Pn	18 00 12.2	-1.7
ATAH	Atahualpa	4.30	291	P	Pn	18 00 15.2	-1.6
	271nm,0.3s,baz=95,slow=3.8,SNR=1066						
ATAH				S	Sn	18 01 03.1	-3.7
	126nm,0.3s,baz=316,slow=17,SNR=7.8						
LPAZ	La Paz	9.69	142	P	Pn	18 01 30.7	+1.8
	3.0nm,0.3s,baz=326,slow=12,SNR=36						
LPAZ				LR	LR	18 05 39.3	
	comp=Z,96nm,20.7s,baz=47,slow=40						
LPAZ	La Paz	9.69	142		Pn	18 01 29.2	+0.3
LPAZ	La Paz	9.69	142	eP	Pn	18 01 29.8	+0.9
FLOC	Florencia	10.28	353		Pn	18 01 34.9	-1.4
PB12	IPOC Station P	10.61	159		Pn	18 01 39.6	-1.1
PB16	IPOC Station P	10.68	154		Pn	18 01 44.0	+1.9
MACC	Macarena, Meta	10.77	3	eP	Pn	18 01 40.1	-2.6
GARC	Garzon, Huila	10.86	354	eP	Pn	18 01 42.8	-1.3
SOTA	Rioblanco	10.98	348	eP	Pn	18 01 44.4	-1.6
SAML	Samuel	11.03	92		Pn	18 01 45.1	-1.1
SAML	Samuel	11.03	92	eP	Pn	18 01 45.7	-0.5
SAML				eS	Sn	18 03 44.1	-4.1
PCON	Cinco Dias	11.13	349	eP	Pn	18 01 47.1	-0.9
PSGCX	Pisagua	11.59	160	Pn	Pn	18 01 49.2	-4.4
PB11	IPOC Station P	11.91	158		Pn	18 01 56.1	-1.7
GO01	Chusmiza	12.01	156		Pn	18 01 59.4	0.0
ORTC	Ortega, Tolima	12.54	356	eP	Pn	18 02 07.2	+1.2
PB01	IPOC Station P	13.15	160		Pn	18 02 14.2	+0.4
ROSC	El Rosal	13.43	0	LR	LR	18 08 57.0	
	comp=Z,166nm,18.8s,baz=205,slow=44						
RREF	El Recreo	13.53	356	eP	P	18 02 24.8	+1.4
PB07	IPOC Station P	13.66	162		Pn	18 02 19.8	-0.6
PB09	IPOC Station P	13.93	160	P	Pn	18 02 23.4	-0.4
PB04	IPOC Station P	14.16	164	P	P	18 02 29.4	-0.4
RUSC	La Rusia	14.53	5	eP	P	18 02 36.3	+1.9
RUSC	La Rusia	14.53	5	P	P	18 02 35.2	+0.8
CBOC	Ciudad Bolivar	14.55	353	eP	P	18 02 35.8	+1.6
LVC	Limon Verde	14.80	160	P	P	18 02 36.3	-0.8
	2.3nm,0.3s,baz=351,slow=7.6,SNR=11						
LVC	Limon Verde	14.80	160	P	P	18 02 37.0	-0.1
LVC	Limon Verde	14.80	160	eP	P	18 02 38.9	+1.7
SIV	San Ignacio	14.86	121	P	P	18 02 36.8	-0.7
	6.4nm,0.3s,baz=305,slow=12,SNR=103						
SIV				LR	LR	18 08 28.1	
	comp=Z,21nm,20.8s,baz=279,slow=37						
PTBC	PUERTO BERRIO,	15.12	360	eP	P	18 02 39.8	-0.6
PB15	IPOC Station P	15.18	163	P	Pn	18 02 35.5	-4.1
PB10	IPOC Station P	15.19	167	P	Pn	18 02 40.3	+0.9
BRRC	Barranca, Sant	15.70	2	eP	Pn	18 02 43.0	-2.8
PTGA	Pitinga	16.35	62	P	P	18 02 54.6	+0.5
	28nm,0.3s,baz=237,slow=15,SNR=71						
PTGA				S	S	18 05 49.0	-7.2
	5.3nm,0.3s,baz=162,slow=19,SNR=2.8						
PTGA				LR	LR	18 08 40.5	
	comp=Z,49nm,21.7s,baz=274,slow=35						
PTGA	Pitinga	16.35	62	P	Pn	18 02 53.8	-0.1
OCAC	Ocana	16.84	4	eP	Pn	18 02 59.9	0.0
GO02	Mina Guanaco	17.00	165	P	Pn	18 03 02.3	+0.3
PAYG	Puerto Ayora	17.76	296	P	P	18 03 09.1	-0.5
PAYG				IAmb	IAmb	18 03 13.5	
	comp=Z,44nm,1.1s						
SDV	Santo Domingo	17.84	12	P	P	18 03 11.3	+0.7
	comp=Z,6.8nm,0.3s,baz=162,slow=2.6,SNR=27						
SDV	Santo Domingo	17.84	12	P	P	18 03 11.3	+0.7
SDV	Santo Domingo	17.84	12	eP	Pn	18 03 11.7	-0.3
SDV				eS	S	18 06 28.7	+0.2
CLDB	Colider	18.41	98	eP	P	18 03 17.1	+0.4
CLDB				eS	S	18 06 37.1	-2.4
SJCC	San Jacinto, C	18.48	357	eP	P	18 03 18.4	+1.0
BAUV	El Baul	18.60	20	eP	P	18 03 19.5	+0.7
SALV	Santo Antonio	19.57	113	eP	P	18 03 30.2	+0.9
SALV				epP	pP	18 03 57.0	+2.2
SALV				eS	S	18 06 59.6	-3.0
URIC	Uribia, Colomb	20.39	7	P	P	18 03 36.7	-1.3
ORIV	Oritupano	20.73	32	eP	P	18 03 43.7	+2.0
PCRV	Puerto La Cruz	21.08	27	P	P	18 03 45.7	+0.2
	comp=Z,22nm,0.5s,baz=78,slow=1.9,SNR=10						
AQDB	Aquidauana	21.49	125	eP	P	18 03 49.9	+0.1
AQDB				epP	pP	18 04 18.5	+2.7
AQDB				eS	S	18 07 37.6	-1.8
ARAG	Araguaiana, MT	23.09	110	eP	P	18 04 06.0	+0.3
ARAG				epP	pP	18 04 35.1	+1.9
ARAG				eS	S	18 08 02.8	-3.1
TRN	Trinidad (W)	23.12	34	eP	P	18 04 05.5	-0.4
C2SB	Chapadao do Su	23.15	118	eP	P	18 04 07.1	+1.0
C2SB				epP	pP	18 04 37.8	+4.0
C2SB				eS	S	18 08 05.6	-1.2
CPUP	Villa Florida	23.85	139	P	P	18 04 13.0	+0.6
	comp=Z,16nm,0.6s,baz=321,slow=9.9,SNR=41						
CPUP	Villa Florida	23.85	139	P	P	18 04 12.1	-0.3
CPUP				IAmb	IAmb	18 04 14.3	
	comp=Z,17nm,0.6s						
TOSP	Speyside	24.14	35	eP	P	18 04 16.8	+1.7
GRGR	Grenville	24.22	32	eP	P	18 04 16.7	+0.7
GRGR	Grenville	24.22	32	P	P	18 04 16.5	+0.6
GCMP	Grenada, Carri	24.64	32	eP	P	18 04 19.1	-0.6
SVB	Belmont	25.39	31	eP	P	18 04 26.2	-0.3
SVB	Belmont	25.39	31	P	P	18 04 25.4	-1.1
SVCV	St. Vincent, C	25.45	31	eP	P	18 04 25.9	-1.2
MDP	Montagnes des	25.61	58	P	P	18 04 28.8	+0.2
	comp=Z,18nm,0.8s,baz=250,slow=7.4,SNR=8.0						
PCMB	Pacaembu	25.67	123	eP	P	18 04 29.6	+0.6
PCMB				eS	S	18 08 46.1	-0.9
MCLT	Moule a Chique	25.92	31	eP	P	18 04 30.1	-1.3
SLBI	Saint Lucia, B	26.17	31	eP	P	18 04 30.6	-2.9
PTGB	Pitanga	26.57	130	eP	P	18 04 37.2	+0.1
BDFB	Brasilia	26.63	108	P	P	18 04 38.6	+0.7
	comp=Z,21nm,0.6s,baz=272,slow=11,SNR=20						
BDFB				pP	pP	18 05 09.1	+0.8
	comp=Z,22nm,0.6s,baz=261,slow=12,SNR=4.5						
BDFB	Brasilia	26.63	108	P	P	18 04 38.3	+0.4
BDFB				IAmb	IAmb	18 04 42.1	
	comp=Z,34nm,0.9s						
FDF	Fort de France	26.69	29	eP	P	18 04 35.5	-2.8
IPMB	Ipameri, GO	27.02	113	eP	P	18 04 41.6	+0.3
IPMB				epP	pP	18 05 12.2	+0.4
IPMB				eS	S	18 09 06.1	-2.5
SJG	San Juan	27.83	17	P	P	18 04 48.4	+0.1
	comp=Z,54nm,0.5s,baz=321,slow=19,SNR=2.2						
FRTB	Fartura	27.86	124	eP	P	18 04 48.5	-0.1
FRTB				eS	S	18 09 19.4	-2.1
AOPR	Arecibo Observ	27.88	16	P	P	18 04 49.6	+0.7
ITAB	Concordia	27.96	134	eP	P	18 04 49.9	+0.4
GCPR	Guaynabo City	28.03	17	P	P	18 04 50.5	+0.4
GCPR				IAmb	IAmb	18 04 55.2	
	comp=Z,23nm,0.7s						
STVI	Saint Thomas	28.42	19	P	P	18 04 53.6	+0.1
ANWB	Willy Bob	28.98	25	eP	P	18 04 57.4	-1.1
CPSB	Cacapava Do Su	29.14	141	eP	P	18 05 02.5	+2.6
CPSB				epP	pP	18 05 35.5	+4.9
RCLB	Rio Claro- Sao	29.15	121	eP	P	18 05 00.2	+0.1
SPB	Sao Paulo	29.72	123	P	P	18 05 03.9	-1.2
SPB	Sao Paulo	29.72	123	eP	P	18 05 04.6	-0.4
PLTB	Pedras Altas	29.98	143	eP	P	18 05 08.8	+1.4
PLTB				eS	S	18 09 56.1	+1.4
JANB	Januaria	30.04	105	eP	P	18 05 08.4	+0.3
BSCB	Bom Sucesso	31.03	117	eP	P	18 05 16.6	-0.2
PLCA	Paso Flores	32.09	175	P	P	18 05 25.7	-0.1
	comp=Z,1.9nm,0.8s,baz=185,slow=8.0,SNR=5.4						
SJMB	Sao Joao De Ma	33.66	111	eP	P	18 05 40.2	+0.5
BSFB	Barra de Sao F	34.00	111	eP	P	18 05 42.6	-0.1
BSFB				epP	pP	18 06 14.1	+0.3
BSFB				eS	S	18 10 56.2	-1.2
RPN	Rapa Nui	37.82	236	P	P	18 06 16.2	+1.1
	comp=Z,43nm,0.4s,baz=63,slow=2.3,SNR=2.2						
Z58A	St. Stephen	42.11	353	P	P	18 06 51.4	+1.2
	baz=172						
152A	Waverly Hall	42.30	347	P	P	18 06 51.4	-0.4
152A				IAmb	IAmb	18 07 26.8	
	comp=Z,17nm,0.7s						
Y60A	Bolivia	42.61	355	P	P	18 06 55.6	+1.3
	baz=174						
GOGA	Godfrey	42.75	349	P	P	18 06 56.1	+0.7
	baz=167						
Y55A	Saluda	42.98	351	P	P	18 06 57.6	+0.3
	baz=169						
Z50A	Ashland	43.14	346	P	P	18 06 58.0	-0.6
Z50A				pP	pP	18 07 29.3	-1.5
Z50A				IAmb	IAmb	18 07 33.6	
	comp=Z,19nm,0.9s						
Z50A	Ashland	43.14	346	P	P	18 06 58.1	-0.5
	baz=163						
LRAL	Lakeview Retre	43.20	344	P	P	18 06 58.6	-0.4
LRAL				pP	pP	18 07 31.5	+0.1
LRAL	Lakeview Retre	43.20	344	P	P	18 06 58.9	-0.2
	baz=162						
X55A	Gracelyn & Ava	43.47	351	P	P	18 07 02.0	+0.8
	baz=170						
W58A	Raeford	43.71	354	P	P	18 07 04.3	+1.2
	baz=173						
W57A	Gilead	43.92	353	P	P	18 07 05.4	+0.6
W57A	Gilead	43.92	353	P	P	18 07 05.7	+0.8
	baz=172						
833A	Chaparral WMA,	44.04	328	P	P	18 07 06.9	+1.0
	baz=143						
KMSC	Kings Mountain	44.09	352	P	P	18 07 07.3	+1.2
	baz=170						
FPAL	Fort Paine	44.29	347	P	P	18 07 07.1	-0.8
FPAL				pP	pP	18 07 40.9	+0.6
FPAL				IAmb	IAmb	18 07 42.5	
	comp=Z,14nm,0.7s						
V59A	Middlesex	44.36	355	P	P	18 07 09.3	+1.0
	baz=175						
V58A	Windy Hill, Pi	44.47	354	P	P	18 07 09.8	+0.7
	baz=173						
V57A	Coltrane Farms	44.63	354	P	P	18 07 11.0	+0.6
	baz=172						
V56A	Mocksville	44.63	353	P	P	18 07 11.5	+1.1
	baz=171						
W50A	Signal Mountai	44.86	347	P	P	18 07 11.7	-0.6
W50A					pP	18 07 43.9	-0.9
W50A				IAmb	IAmb	18 07 47.3	
	comp=Z,19nm,0.8s						
CPCT	Cooper Cave	44.94	348	P	P	18 07 12.6	-0.3
CPCT					pP	18 07 43.9	-1.4
U58A	Oxford	45.01	355	P	P	18 07 14.7	+1.3
	baz=174						
SWET	Sewanee	45.01	347	P	P	18 07 12.8	-0.8
SWET					pP	18 07 44.3	-1.8
U57A	Blanch	45.12	354	P	P	18 07 15.0	+0.7
	baz=173						
U56A	King	45.15	353	P	P	18 07 15.7	+1.1
	baz=172						
237A	Washetta, Mont	45.36	334	P	P	18 07 15.7	-0.5
T59A	Double "B" Far	45.51	356	P	P	18 07 18.3	+0.9
	baz=176						
T58A	Grand View Acr	45.56	355	P	P	18 07 18.8	+1.0
	baz=174						
T60A	Surry	45.64	357	P	P	18 07 20.3	+2.0
	baz=177						
T57A	Hurt	45.67	355	P	P	18 07 18.9	+0.2
T57A				IAmb	IAmb	18 07 20.1	
	comp=Z,22nm,0.6s						
T57A	Hurt	45.67	355	P	P	18 07 19.5	+0.8
	baz=173,SNR=7.2						
V48A	Smith Brothers	45.73	346	P	P	18 07 18.1	-1.0
V48A				IAmb	IAmb	18 07 53.7	
	comp=Z,23nm,0.7s						
T56A	Rocky Mt	45.78	354	P	P	18 07 20.8	+1.2
	baz=172						
T55A	Pulaski	45.96	353	P	P	18 07 22.1	+1.1
	baz=171						
JCT	Junction City	45.98	329	P	P	18 07 21.9	+0.7
WHTX	Lake Whitney,	46.08	332	P	P	18 07 22.9	+0.9
	baz=148						
S58A	Poland Farm, P	46.18	356	P	P	18 07 23.7	+1.1
	baz=175						
U49A	Red Boiling Sp	46.22	347	P	P	18 07 21.8	-1.2
T51A	Gray	46.29	349	P	P	18 07 23.7	+0.1
	baz=167						
S57A	Dark Hollow, R	46.40	355	P	P	18 07 25.2	+0.9
S57A				IAmb	IAmb	18 07 26.0	
	comp=Z,14nm,0.6s						
S57A	Dark Hollow, R	46.40	355	P	P	18 07 25.3	+0.9
	baz=174						
UALR	University of	46.46	339	P	P	18 07 24.2	-0.6
UALR				IAmb	IAmb	18 07 25.5	
	comp=Z,16nm,0.8s						
R58B	Mineral	46.52	356	P	P	18 07 26.8	+1.6
	baz=175						
S55A	Lewisburg	46.57	353	P	P	18 07 26.7	+1.0
	baz=172						
MIAR	Mount Ida	46.69	338	P	P	18 07 26.2	-0.5
	baz=154						
T49A	Edmonton	46.74	348	P	P	18 07 26.1	-0.9
T49A				IAmb	IAmb	18 07 40.9	
	comp=Z,14nm,0.5s						
T49A	Edmonton	46.74	348	P	P	18 07 26.5	-0.6
	baz=165						
W41B	Gary Mavity, V	46.79	340	P	P	18 07 26.7	-0.7
W41B	Gary Mavity, V	46.79	340	P	P	18 07 27.1	-0.3
	baz=156						
R58A	Rapidan	46.86	356	P	P	18 07 29.3	+1.4
	baz=175						
R57A	Stanardsville	46.90	355	P	P	18 07 29.3	+1.1
	baz=174						
WHAR	Wooly Hollow	46.91	340	P	P	18 07 27.4	-0.9
R54A	Victor	47.03	353	P	P	18 07 29.9	+0.6
	baz=171						
R55A	Marlinton	47.03	354	P	P	18 07 30.7	+1.3
	baz=172						
S50A	Richmond	47.07	349	P	P	18 07 29.5	-0.1
	baz=166						
Z35A	Perchaven, San	47.12	334	P	P	18 07 31.4	+1.4
TX32	Lajitas Array	47.19	324	P	P	18 07 30.8	0.0
TXAR	Lajitas Array	47.19	324	P	P	18 07 31.1	+0.3
	comp=Z,9.7nm,0.6s,baz=148,slow=8.8,SNR=73						
TXAR				pP	pP	18 08 02.8	-0.7
	comp=Z,0.8nm,0.5s,baz=149,slow=11,SNR=2.8						
TXAR	Lajitas Array	47.19	324	P	P	18 07 30.6	-0.1
TX31	Lajitas Ar. Si	47.19	324	P	P	18 07 30.9	+0.1
S49A	Springfield	47.34	348	P	P	18 07 31.3	-0.4
	baz=165						
W39A	Magazine	47.35	338	P	P	18 07 31.6	-0.2
W39A				IAmb	IAmb	18 07 32.8	
	comp=Z,32nm,1.4s						
W39A	Magazine	47.35	338	P	P	18 07 32.1	+0.3
	baz=154						
FCAR	Ozark Folk Cen	47.40	340	P	P	18 07 31.9	-0.2
X37A	Clayton	47.42	336	P	P	18 07 32.5	+0.2
X37A				IAmb	IAmb	18 07 33.9	
	comp=Z,23nm,1.0s						
Q58A	Fox Den Farm,	47.48	356	P	P	18 07 34.0	+1.3
	baz=176						
R51A	Hillsboro	47.53	350	P	P	18 07 35.2	+2.1
	baz=168						
Q57A	Strasburg	47.62	356	P	P	18 07 35.3	+1.4
	baz=175						
ABTX	Abilene, Hawle	47.64	331	P	P	18 07 34.4	+0.3
ABTX	Abilene, Hawle	47.64	331	P	P	18 07 34.8	+0.7
	baz=145						
R50A	Paris	47.64	349	P	P	18 07 33.7	-0.3
	baz=167						
PBMO	Poplar Bluff	47.68	342	P	P	18 07 32.8	-1.5
PBMO				IAmb	IAmb	18 09 01.9	
	comp=Z,19nm,1.1s						
Q56A	Snyder Ridge,	47.69	355	P	P	18 07 35.6	+1.2
	baz=174						
Q53A	Leroy	47.77	352	P	P	18 07 35.6	+0.7
	baz=170						
Q54A	Coxs Mills	47.80	353	P	P	18 07 34.8	-0.5
Q54A				IAmb	IAmb	18 08 10.7	
	comp=Z,18nm,0.6s						
Q54A	Coxs Mills	47.80	353	P	P	18 07 35.8	+0.6
	baz=171						
R49A	Shelbyville	47.81	348	P	P	18 07 34.8	-0.5
	baz=166						
WCI	Wyandotte Cave	47.98	347	P	P	18 07 36.3	-0.3
	baz=164						
U40A	Yellville	48.06	340	P	P	18 07 36.0	-1.3
	baz=155						
T42A	Van Buren	48.11	342	P	P	18 07 36.1	-1.5
P56A	Dayton Farm, R	48.12	355	P	P	18 07 38.6	+1.0
	baz=174						
Q50A	Georgetown	48.13	350	P	P	18 07 37.5	-0.2
	baz=167						
S44A	Carbondale	48.20	344	P	P	18 07 37.2	-1.1
S44A				IAmb	IAmb	18 08 19.9	
	comp=Z,23nm,1.0s						
MCWV	Mont Chateau	48.37	354	P	P	18 07 40.1	+0.6
	baz=173						
P53A	Whipple	48.37	353	P	P	18 07 39.3	-0.2
P53A				IAmb	IAmb	18 08 15.2	
	comp=Z,18nm,0.6s						
P53A	Whipple	48.37	353	P	P	18 07 39.8	+0.3
	baz=171						
P54A	Burton	48.38	354	P	P	18 07 40.2	+0.5
	baz=172						
Q48A	North Vernon	48.54	348	P	P	18 07 40.2	-0.6
	baz=165						
MGMO	Mountain Grove	48.59	341	P	P	18 07 40.6	-0.8
MGMO				IAmb	IAmb	18 07 42.0	
	comp=Z,18nm,0.9s						
P52A	Corning	48.61	352	P	P	18 07 41.2	-0.2
	baz=170						
O58A	Lewisberry	48.62	357	P	P	18 07 42.6	+1.1
	baz=177						
TUL1	Leonard	48.74	337	P	P	18 07 42.9	+0.4
	baz=151						
O60A	Telford	48.76	359	P	P	18 07 44.1	+1.6
	baz=179						
O59A	Robesonia	48.78	358	P	P	18 07 44.3	+1.7
	baz=178						
FNO	Franklin	48.83	335	P	P	18 07 42.6	-0.5
O56A	Blue Knob Stat	48.86	356	P	P	18 07 44.3	+1.0
	baz=174						
WMOK	Wichita Mounta	48.99	333	P	P	18 07 44.5	+0.1
	baz=147						
O52A	Adamsville	49.05	352	P	P	18 07 44.7	0.0
	baz=170						
CCM	Cathedral Cave	49.10	342	P	P	18 07 43.8	-1.4
CCM				IAmb	IAmb	18 09 07.4	
	comp=Z,12nm,0.8s						
CCM	Cathedral Cave	49.10	342	P	P	18 07 44.0	-1.1

	baz=158						
O51A	Pataskala	49.18	352	P	P	18 07 45.9	+0.2
	baz=169						
ACSO	Alum Creek Sta	49.32	351	P	P	18 07 46.1	-0.7
	baz=169						
N58A	Sunbury	49.32	358	P	P	18 07 48.0	+1.2
	baz=177						
N59A	State Game Lan	49.37	359	P	P	18 07 47.9	+0.7
	baz=178						
N55A	Marion Center	49.40	355	P	P	18 07 48.4	+1.0
	baz=174						
S39A	Bolivar	49.43	340	P	P	18 07 45.6	-2.1
S39A				IAmb	IAmb	18 07 47.6	
	comp=Z,14nm,0.9s						
N53A	Lisbon	49.61	354	P	P	18 07 49.1	+0.1
	baz=172						
N54A	Moraine State	49.67	354	P	P	18 07 49.5	0.0
N54A				IAmb	IAmb	18 08 25.1	
	comp=Z,15nm,0.7s						
N54A	Moraine State	49.67	354	P	P	18 07 49.1	-0.3
	baz=173						
O48A	Farmland	49.71	349	P	P	18 07 48.8	-1.0
	baz=166						
M57A	Sunshine Farm,	49.84	357	P	P	18 07 51.7	+1.0
	baz=176						
M58A	Price’s Panora	49.85	358	P	P	18 07 51.9	+1.1
	baz=177						
N50A	Nevada	49.87	351	P	P	18 07 50.6	-0.4
	baz=169						
N51A	Ashland	49.91	352	P	P	18 07 50.9	-0.4
	baz=170						
MNTX	Cornudas Mount	49.94	325	P	P	18 07 50.7	-1.0
MNTX				IAmb	IAmb	18 07 52.5	
	comp=Z,20nm,1.4s						
M56A	Emporium	50.04	356	P	P	18 07 53.1	+0.8
	baz=175						
M55A	Ridgway	50.07	356	P	P	18 07 52.9	+0.4
	baz=174						
P43A	Skaggs, Pawnee	50.10	345	P	P	18 07 51.6	-1.1
N49A	Columbus Grove	50.19	350	P	P	18 07 52.8	-0.5
	baz=167						
SFIN	Lafayette	50.22	347	P	P	18 07 52.1	-1.5
SFIN	Lafayette	50.22	347	P	P	18 07 52.8	-0.8
	baz=164						
MSTX	Muleshoe	50.27	329	P	P	18 07 54.3	+0.1
MSTX				IAmb	IAmb	18 09 38.3	
	comp=Z,29nm,1.2s						
N48A	Decatur	50.27	349	P	P	18 07 53.3	-0.7
	baz=166						
N47A	Urbana	50.41	349	P	P	18 07 53.7	-1.4
N47A	Urbana	50.41	349	P	P	18 07 53.6	-1.4
	baz=166,SNR=5.2						
L57A	Andrews Acres	50.49	358	P	P	18 07 56.6	+1.0
	baz=177						
L58A	Harry Jones Me	50.50	359	P	P	18 07 56.7	+1.1
	baz=178						
BINY	Binghamton	50.66	358	P	P	18 07 58.3	+1.4
	baz=178						
L56A	Greenwood	50.66	357	P	P	18 07 57.4	+0.5
	baz=176,SNR=5.5						
L53A	Girard	50.68	354	P	P	18 07 57.0	0.0
	baz=172,SNR=8.9						
M49A	Liberty Center	50.69	351	P	P	18 07 56.8	-0.3
	baz=168						
L55A	Hinsdale	50.76	356	P	P	18 07 58.2	+0.6
	baz=175,SNR=5.2						
ERPA	Erie	50.82	355	P	P	18 07 58.5	+0.4
	baz=173						
L54A	Sinclairville	50.87	355	P	P	18 07 58.6	+0.1
	baz=174						
HDIL	Hopedale	50.90	345	P	P	18 07 56.8	-1.9
HDIL	Hopedale	50.90	345	P	P	18 07 57.9	-0.8
	baz=161						
HRV	Adam Dziewonsk	51.01	3	P	P	18 08 01.3	+1.9
	baz=184						
K61A	Williamstown	51.11	1	P	P	18 08 02.2	+1.9
	baz=181						
K54A	Basiliko Farm,	51.20	356	P	P	18 08 01.6	+0.7
	baz=175						
K57A	Scipio Center	51.20	358	P	P	18 08 01.5	+0.6
	baz=177						
K58A	Earlville	51.21	359	P	P	18 08 02.3	+1.3
	baz=178						
L48A	N Adams	51.22	350	P	P	18 08 00.3	-0.8
	baz=167						
P38A	Dawn	51.25	341	P	P	18 08 00.3	-1.0
P38A				IAmb	IAmb	18 08 35.8	
	comp=Z,9.6nm,0.7s						
L49A	Milan	51.28	351	P	P	18 08 01.2	-0.2
	baz=168						
N41A	Harden Midland	51.45	344	P	P	18 08 01.0	-1.8
L46A	Eue Claire	51.62	349	P	P	18 08 04.0	-0.1
	baz=165						
J56A	Wolcott	51.76	358	P	P	18 08 05.8	+0.8
	baz=177						
J55A	Hilton	51.80	357	P	P	18 08 06.1	+0.8
	baz=176						
KSU1	Kansas State U	51.85	338	P	P	18 08 05.4	-0.4
	baz=152						
J54A	Appleton	51.85	356	P	P	18 08 06.2	+0.5
	baz=175						
J57A	Williamstown	51.87	358	P	P	18 08 05.3	-0.5
J57A	Williamstown	51.87	358	P	P	18 08 07.0	+1.2
	baz=178						
121A	Cookes Peak, D	51.93	324	P	P	18 08 07.6	+0.9
121A				IAmb	IAmb	18 08 08.6	
	comp=Z,20nm,1.1s						
121A	Cookes Peak, D	51.93	324	P	P	18 08 07.3	+0.6
	baz=136						
J52A	Paris	51.98	354	P	P	18 08 06.9	+0.3
	baz=172						
319A	Douglas	52.01	322	P	P	18 08 07.8	+0.5
319A				IAmb	IAmb	18 08 08.9	
	comp=Z,27nm,0.8s						
K48A	Perry	52.01	351	P	P	18 08 06.4	-0.4
	baz=168						
R32A	Long Quarter,	52.08	336	P	P	18 08 07.4	-0.1
I58A	Old Forge	52.13	359	P	P	18 08 09.2	+1.4
	baz=179						
J48A	Bridge Port	52.44	351	P	P	18 08 10.1	0.0
	baz=168						
J47A	Sunmer	52.55	350	P	P	18 08 10.2	-0.7
	baz=167						
I51A	Listowel	52.59	354	P	P	18 08 10.9	-0.3
	baz=172,SNR=6.5						
I55A	Frankford	52.74	357	P	P	18 08 12.4	+0.2
	baz=176						
CBKS	Cedar Bluff	52.83	335	P	P	18 08 13.6	+0.5
	baz=148						
H58A	Gabriels	52.85	0	P	P	18 08 13.8	+0.7
	baz=180						
H57A	Richville	52.91	359	P	P	18 08 14.2	+0.8
	baz=179						
ANMO	Albuquerque	52.96	327	P	P	18 08 14.0	-0.3
	comp=Z,6.7nm,1.0s,baz=135,slow=8.2,SNR=10						
ANMO	Albuquerque	52.96	327	P	P	18 08 14.5	+0.3
ANMO				IAmb	IAmb	18 08 15.7	
	comp=Z,16nm,1.4s						
ANMO	Albuquerque	52.96	327	P	P	18 08 14.6	+0.3
	baz=139						
H55A	Tweed	53.05	357	P	P	18 08 15.3	+0.8
	baz=177						
LONY	Lake Ozonia	53.05	360	P	P	18 08 15.6	+1.0
	baz=180						
H56A	Elgin	53.05	358	P	P	18 08 15.6	+1.1
	baz=178						
N35A	Tabor	53.06	340	P	P	18 08 13.7	-1.0
H53A	Bobcaygeon	53.15	356	P	P	18 08 15.3	0.0
	baz=175						
I48A	Sherman Twp	53.30	352	P	P	18 08 18.0	+1.6
	baz=168						
JFWS	Jewell Farm	53.36	345	P	P	18 08 15.5	-1.3
	baz=160						
G57A	Newington	53.54	359	P	P	18 08 18.8	+0.7
	baz=179						
TUC	Tucson	53.58	321	P	P	18 08 18.4	-0.4
TUC				IAmb	IAmb	18 08 19.8	
	comp=Z,9.6nm,0.8s						
TUC	Tucson	53.58	321	P	P	18 08 18.9	+0.2
	baz=133						
T25A	Trinidad	53.59	330	P	P	18 08 19.4	+0.6
T25A				IAmb	IAmb	18 08 20.5	
	comp=Z,24nm,1.0s						
T25A	Trinidad	53.59	330	P	P	18 08 19.5	+0.6
	baz=142						
G53A	Haliburton	53.70	356	P	P	18 08 19.5	+0.3
	baz=175,SNR=6.4						
G55A	Calabogie	53.73	358	P	P	18 08 20.3	+0.9
	baz=177						
G62A	West of Eustis	53.76	3	P	P	18 08 21.0	+1.3
	baz=185						
G61A	St-Isidore-de-	53.78	2	P	P	18 08 21.1	+1.2
	baz=184						
H46A	Fife Lake	53.88	350	P	P	18 08 19.3	-1.3
	baz=167						
G54A	Lake Saint Pet	53.94	357	P	P	18 08 21.0	0.0
	baz=176						
KSCO	Kaye Shedlock’	54.25	333	P	P	18 08 23.4	-0.1
KSCO	Kaye Shedlock’	54.25	333	P	P	18 08 24.1	+0.6
	baz=145						
BGNE	Belgrade	54.44	338	P	P	18 08 23.7	-1.0
BGNE	Belgrade	54.44	338	P	P	18 08 24.8	+0.1
	baz=151						
ALGO	Algonquin Park	54.49	357	P	P	18 08 25.0	+0.1
	baz=176						
F51A	Arnstein	54.59	355	P	P	18 08 25.6	-0.1
	baz=173						
SDCO	Great Sand Dun	54.60	330	P	P	18 08 26.5	+0.2
SDCO				IAmb	IAmb	18 08 27.8	
	comp=Z,12nm,0.8s						
SDCO	Great Sand Dun	54.60	330	P	P	18 08 26.7	+0.4
	baz=141						
214A	Organ Pipe Nat	54.62	320	P	P	18 08 26.6	+0.4
214A	Organ Pipe Nat	54.62	320	P	P	18 08 27.0	+0.7
	baz=131						
X18A	Snowflake	54.62	324	P	P	18 08 26.3	0.0
X18A				IAmb	IAmb	18 08 27.9	
	comp=Z,12nm,0.8s						
F49A	Sandfield	54.64	353	P	P	18 08 24.6	-1.4
	baz=171						
F48A	Evansville	54.77	353	P	P	18 08 25.8	-1.1
	baz=170						
E57A	Chemin Saint G	54.85	0	P	P	18 08 28.0	+0.4
	baz=180						
W18A	Petrified Fore	54.91	325	P	P	18 08 29.1	+0.7
W18A				IAmb	IAmb	18 08 30.1	
	comp=Z,23nm,1.2s						
W18A	Petrified Fore	54.91	325	P	P	18 08 29.0	+0.5
	baz=136						
E54A	Lac Daplat, Po	54.93	358	P	P	18 08 28.3	+0.2
	baz=177						
E56A	St. Veronique	54.98	359	P	P	18 08 29.5	+1.0
	baz=179						
F45A	CMU Biological	55.04	350	P	P	18 08 27.8	-1.1
	baz=167						
E51A	G1948 Merrick	55.16	356	P	P	18 08 29.9	+0.1
	baz=174						
S22A	4UR Ranch, Cre	55.27	329	P	P	18 08 31.5	+0.3
	baz=140						
E48A	Lockeyer	55.36	353	P	P	18 08 30.7	-0.5
	baz=171,SNR=6.1						
X16A	Lo Mia Camp, P	55.42	323	P	P	18 08 32.4	+0.2
X16A				IAmb	IAmb	18 08 33.7	
	comp=Z,12nm,0.7s						
D57A	Chemin Vers le	55.45	0	P	P	18 08 32.6	+0.8
	baz=181						
D55A	Sainte-Anne-du	55.46	359	P	P	18 08 32.4	+0.5
	baz=179						
E47A	Iron Bridge	55.47	353	P	P	18 08 30.8	-1.1
	baz=169						
D56A	ZEC Mazanza, M	55.48	360	P	P	18 08 32.6	+0.5
	baz=180						
D58A	Chemin du LacG	55.55	1	P	P	18 08 33.5	+0.9
	baz=182						
OGNE	Ogallala	55.58	335	P	P	18 08 33.7	+0.7
	baz=146						
D53A	Lac Vacive, Po	55.59	357	P	P	18 08 32.8	-0.1
	baz=176						
D54A	Lac Fusel, La	55.62	358	P	P	18 08 33.3	+0.2
	baz=177						
MVCO	Mesa Verde	55.74	327	P	P	18 08 32.0	-2.5
MVCO				IAmb	IAmb	18 08 45.7	
	comp=Z,10nm,0.9s						
D61A	St Aubert, Com	55.76	3	P	P	18 08 34.2	+0.2
	baz=185						
LATQ	La Tuque	55.84	1	P	P	18 08 35.7	+1.2
	baz=182						
ECSD	EROS Data Cent	55.95	341	P	P	18 08 34.5	-1.1
ECSD	EROS Data Cent	55.95	341	P	P	18 08 34.6	-0.9
	baz=153						
D46A	Sault St. Mari	56.00	352	P	P	18 08 34.3	-1.4
	baz=168						
D47A	Chapleau	56.04	353	P	P	18 08 35.3	-0.8
	baz=170						
Y14A	Wickenburg	56.05	321	P	P	18 08 36.3	-0.2
WUAZ	Wupatki	56.14	324	P	P	18 08 37.9	+0.7
WUAZ	Wupatki	56.14	324	P	P	18 08 38.1	+0.9
	baz=134						
SPMN	Marine on St.	56.18	344	P	P	18 08 35.6	-1.5
	baz=158						
PV15	Paradox Valley	56.58	328	P	P	18 08 41.3	+0.9
GLA	Glamis	56.62	319	P	P	18 08 40.9	+0.4
	baz=130						
Y12C	Blythe	56.88	320	P	P	18 08 42.1	-0.1
Y12C	Blythe	56.88	320	P	P	18 08 42.6	+0.4
	baz=131						
PDMCI	Parker Dam,Lak	57.00	321	P	P	18 08 43.1	+0.1
	baz=131						
E38A	The Farm, Brul	57.15	346	P	P	18 08 42.6	-1.2
E38A				IAmb	IAmb	18 09 18.9	
	comp=Z,11nm,0.7s						
IKP	In-Ko-Pah, Jac	57.21	318	P	P	18 08 43.6	-1.1
	baz=129						
N23A	Red Feather La	57.28	332	P	P	18 08 46.0	+0.7
	baz=142						
U15A	North Rim	57.31	324	P	P	18 08 46.0	+0.4
U15A				IAmb	IAmb	18 08 47.4	
	comp=Z,12nm,0.9s						
W13A	Hualapai Mount	57.36	322	P	P	18 08 46.4	+0.5
W13A				IAmb	IAmb	18 08 47.8	
	comp=Z,12nm,1.0s						
BC3	Big Chuckawall	57.41	319	P	P	18 08 46.8	+0.7
	baz=130						
IRM	Iron Mountain	57.53	320	P	P	18 08 47.7	+0.8
	baz=130						
LSQQ	Lebel-sur-Quev	57.54	358	P	P	18 08 47.1	+0.6
	baz=177						
BELC	Belle Mtn. Jos	57.98	319	P	P	18 08 50.8	+0.6
	baz=129						
KNB	Kanab	58.02	324	P	P	18 08 51.0	+0.5
PFO	Pinyon Flats O	58.03	319	P	P	18 08 51.0	+0.5
	comp=Z,2.6nm,0.4s,baz=118,slow=6.8,SNR=7.3						
PFO	Pinyon Flats O	58.03	319	IAmb	IAmb	18 08 54.0	
	comp=Z,7.8nm,0.8s						
GMRC	Granite Mounta	58.26	320	P	P	18 08 52.4	+0.3
	baz=130						
LCMT	Little Creek M	58.27	324	P	P	18 08 52.9	+0.8
MATQ	Matagami	58.27	357	P	P	18 08 51.9	+0.3
	baz=176						
EYMN	Ely	58.39	347	P	P	18 08 51.2	-1.4
EYMN				IAmb	IAmb	18 09 27.6	
	comp=Z,13nm,0.9s						
EYMN	Ely	58.39	347	P	P	18 08 51.0	-1.5
	baz=160						
RWWY	Rawlins	58.49	332	P	P	18 08 53.3	-0.4
MURC	Murrieta	58.51	318	P	P	18 08 54.5	+0.8
	baz=128						
MSU	Marysvale	58.70	326	P	P	18 08 54.7	-0.4
CCUT	Cedar City	58.70	324	P	P	18 08 56.0	+0.8
HEC	Hector,Ludlow	58.72	320	P	P	18 08 56.5	+1.3
	baz=129						
TUQ	Turquoise Moun	58.84	321	P	P	18 08 56.8	+0.7
	baz=130						
K22A	Casper	58.93	333	P	P	18 08 57.4	+0.8
	baz=142						
RSSD	Black Hills	59.04	335	P	P	18 08 58.1	+0.7
RSSD				IAmb	IAmb	18 08 59.4	
	comp=Z,12nm,0.8s						
RSSD	Black Hills	59.04	335	P	P	18 08 58.3	+0.9
	baz=145						
SHPR	Sheep Range	59.07	322	P	P	18 08 57.9	+0.3
SHPR				IAmb	IAmb	18 08 59.3	
	comp=Z,16nm,1.3s						
CIS	Catalina Islan	59.20	317	P	P	18 08 58.9	+0.4
	baz=127						
GSC	Goldstone, Bar	59.32	320	P	P	18 08 59.6	+0.3
GSC	Goldstone, Bar	59.32	320	P	P	18 08 59.6	+0.3
	baz=129						
PSUT	Pine Spring	59.66	325	P	P	18 09 02.3	+0.5
EDW2	Edwards Air Fo	59.82	319	P	P	18 09 02.9	+0.1
	baz=128						
E28A	Huff	59.83	339	P	P	18 09 02.6	0.0
E28A					pP	18 09 35.3	-1.4
AGMN	Agassiz Nation	59.83	344	P	P	18 09 02.0	-0.4
AGMN					pP	18 09 34.5	-2.1
AGMN				IAmb	IAmb	18 09 39.5	
	comp=Z,9.3nm,0.7s						
AGMN	Agassiz Nation	59.83	344	P	P	18 09 01.4	-1.1
	baz=155						
LRMC	Laurel Mtn Rad	59.98	320	P	P	18 09 04.1	+0.2
	baz=129						
TPNV	Topopah Spring	60.02	322	P	P	18 09 05.0	+0.8
TPNV				IAmb	IAmb	18 09 06.0	
	comp=Z,17nm,1.1s						
TPNV	Topopah Spring	60.02	322	P	P	18 09 05.2	+1.0
	baz=130						
FURC	Furnace Creek,	60.09	321	P	P	18 09 05.3	+0.9
	baz=130						
MPMC	Manual Prospec	60.22	320	P	P	18 09 05.9	+0.2
	baz=129						
DUG	Dugway, Tooele	60.23	327	P	P	18 09 06.1	+0.6
DUG				IAmb	IAmb	18 09 07.2	
	comp=Z,16nm,1.0s						
DUG	Dugway, Tooele	60.23	327	P	P	18 09 06.2	+0.7
	baz=135						
BW06	Boulder Array	60.44	331	P	P	18 09 07.5	+0.5
	baz=139						
PDAR	Pinedale Array	60.44	331	P	P	18 09 06.8	-0.3
	comp=Z,1.9nm,0.6s,baz=146,slow=9.0,SNR=7.8						
R11A	Troy Canyon, C	60.54	323	P	P	18 09 07.9	+0.2
R11A	Troy Canyon, C	60.54	323	P	P	18 09 08.3	+0.6
	baz=132						
MDND	Maddock	60.57	341	P	P	18 09 09.1	+1.6
	baz=151						
ISA	Isabella, Lake	60.61	319	P	P	18 09 06.7	-1.4
ISA	Isabella, Lake	60.61	319	P	P	18 09 08.2	+0.1
	baz=128						
CWC	Cottonwood Cre	60.83	320	P	P	18 09 10.1	+0.4
	baz=129						
PKM	Mcpherson Peak	61.02	318	P	P	18 09 11.9	+0.8
	baz=126						
TIN	Tinemaha, Big	61.31	321	P	P	18 09 13.9	+1.1
	baz=129						
ULM	Lac du Bonnet	61.61	344	P	P	18 09 13.4	-1.0
	comp=Z,2.9nm,0.4s,baz=159,slow=6.2,SNR=11						
ULM				pP	pP	18 09 48.7	-0.1
	comp=Z,3.7nm,0.7s,baz=152,slow=4.2,SNR=2.8						
ULM	Lac du Bonnet	61.61	344	P	P	18 09 13.7	-0.8
ULM				IAmb	IAmb	18 09 27.5	
	comp=Z,9.1nm,0.6s						
FXWY	Fox Creek	61.80	331	P	P	18 09 16.6	+0.4
ELK	Elko	61.95	326	P	P	18 09 16.9	-0.3
	comp=Z,1.2nm,0.6s,baz=86,slow=6.5,SNR=7.0						
ELK	Elko	61.95	326	P	P	18 09 16.5	-0.7
FLWY	Flagg Ranch	61.98	331	P	P	18 09 17.6	+0.3
FLWY				IAmb	IAmb	18 09 18.8	
	comp=Z,15nm,0.8s						
LAO	LASA Array	62.02	336	P	P	18 09 16.5	-0.8
LAO				IAmb	IAmb	18 09 17.9	
	comp=Z,10nm,0.6s						
LAO	LASA Array	62.02	336	P	P	18 09 17.5	+0.1
	baz=144						
RLMT	Red Lodge	62.10	333	P	P	18 09 18.2	+0.1
RLMT	Red Lodge	62.10	333	P	P	18 09 18.5	+0.4
	baz=140						
NV11	Mina Array Sit	62.13	322	P	P	18 09 18.4	+0.1
OMMB	Old Mammoth Mi	62.14	321	P	P	18 09 19.0	+0.4
OMMB				IAmb	IAmb	18 09 20.0	
	comp=Z,13nm,1.0s						
H17A	Grant Village	62.15	331	P	P	18 09 19.4	+0.9
MDPB	Devils Postpil	62.20	321	P	P	18 09 19.4	+0.4
NVAR	Mina Array Bea	62.22	322	P	P	18 09 19.6	+0.5
	comp=Z,3.1nm,0.7s,baz=136,slow=7.1,SNR=25						
NVAR	Mina Array Bea	62.22	322	P	P	18 09 19.0	0.0
YNE	Yellowstone No	62.35	332	P	P	18 09 20.1	+0.2
YNR	Norris Junctio	62.44	332	P	P	18 09 21.5	+1.0
KVN	Kaiserville	62.49	323	P	P	18 09 20.8	0.0
YMR	Madison River	62.54	331	P	P	18 09 22.2	+1.1
YHH	Holmes Hill	62.58	331	P	P	18 09 22.4	+1.0
DGMT	Dagmar	62.70	338	P	P	18 09 22.9	+1.1
	baz=146						
YHB	Horse Butte	62.71	331	P	P	18 09 22.6	+0.4
YHL	Hebgen Lake	62.78	331	P	P	18 09 23.2	+0.5
GCMT	Greycliff	62.79	333	P	P	18 09 22.5	-0.1
QLMT	Earthquake Lak	62.88	331	P	P	18 09 24.1	+0.8
WAKR	Walker	62.96	321	P	P	18 09 24.8	+0.8
WAKR				IAmb	IAmb	18 09 25.9	
	comp=Z,24nm,1.4s						
YERR	Yerington	63.14	322	P	P	18 09 25.9	+0.8
YERR				IAmb	IAmb	18 09 26.2	
	comp=Z,6.8nm,0.7s						
MCMT	McKenzie Canyo	63.56	330	P	P	18 09 28.8	+0.9
SCHQ	Schefferville	63.59	5	P	P	18 09 27.7	+0.2
	comp=Z,3.7nm,0.9s,baz=200,slow=8.1,SNR=2.2						
SCHQ				pP	PcP	18 10 02.9	+0.2
	comp=Z,30nm,0.8s,baz=197,slow=4.7,SNR=15						
MFID	Camas Ranch	64.09	328	P	P	18 09 31.5	+0.3
AFDM	Forest Hills D	64.18	321	P	P	18 09 31.9	+0.2
EGMT	Eagleton	64.55	334	P	P	18 09 33.5	-0.5
EGMT				IAmb	IAmb	18 09 35.0	
	comp=Z,16nm,0.8s						
EGMT	Eagleton	64.55	334	P	P	18 09 34.3	+0.3
	baz=141						
ORV	Oroville	64.87	321	P	P	18 09 36.9	+0.7
ORV				IAmb	IAmb	18 09 38.1	
	comp=Z,22nm,1.1s						
J08A	Circle Bar Ran	65.48	326	P	P	18 09 39.2	-1.0
J08A				IAmb	IAmb	18 10 18.7	
	comp=Z,6.6nm,0.4s						
O03E	Paynes Creek	65.50	322	P	P	18 09 40.2	-0.1
	baz=127						
MSO	Missoula	65.54	331	P	P	18 09 41.5	+0.9
MSO				IAmb	IAmb	18 09 42.1	
	comp=Z,16nm,0.8s						
MSO	Missoula	65.54	331	P	P	18 09 41.4	+0.9
	baz=136						
MOD	Modoc Plateau	65.59	324	P	P	18 09 40.5	-0.4
MOD				IAmb	IAmb	18 09 42.2	
	comp=Z,24nm,1.4s						
JTMT	Jette	66.36	332	P	P	18 09 46.5	+0.7
JTMT				IAmb	IAmb	18 09 47.3	
	comp=Z,10.0nm,0.8s						
M04C	Macdoel	66.42	323	P	P	18 09 46.7	+0.4
	baz=128						
N02D	Trinity Center	66.46	322	P	P	18 09 45.9	-0.6
	baz=126						
I07A	Izee	66.52	326	P	P	18 09 47.1	+0.3
I07A				IAmb	IAmb	18 09 48.4	
	comp=Z,12nm,0.8s						
F10A	Beach Ranch, E	66.56	329	P	P	18 09 47.8	+0.8
F10A				IAmb	IAmb	18 09 51.8	
	comp=Z,10nm,0.9s						
M02C	Callahan	66.80	322	P	P	18 09 48.2	-0.3
	baz=126						
YBH	Yreka Blue Hor	66.91	323	P	P	18 09 48.1	-1.2
	comp=Z,4.5nm,0.7s,baz=117,slow=4.5,SNR=5.0						
L04D	Klamath Falls	66.96	323	P	P	18 09 50.0	+0.3
	baz=127						
J05D	Fort Rock, OR	66.99	325	P	P	18 09 50.4	+0.6
	baz=128						
PINE	Pine Mountain	67.14	325	P	P	18 09 51.6	+0.8
PINE				IAmb	IAmb	18 09 53.1	
	comp=Z,12nm,1.0s						
WALA	Waterton Lakes	67.15	333	P	P	18 09 50.6	-0.1
WALA				IAmb	IAmb	18 09 51.7	
	comp=Z,12nm,0.8s						
FFC	Flin Flon	67.30	343	P	P	18 09 50.9	-0.5
J04D	Umpqua Nationa	67.46	324	P	P	18 09 53.3	+0.4
	baz=128						
L02E	Cave Junction	67.70	322	P	P	18 09 54.8	+0.7
	baz=126						
I05D	Terrebonne, OR	67.70	325	P	P	18 09 55.3	+1.1
	baz=129						
I04A	Tendick Farm,	67.97	324	P	P	18 09 55.9	0.0
	baz=128						
K02D	Willamette Mer	68.05	323	P	P	18 09 56.4	-0.1
	baz=126						
NEW	Newport	68.08	331	P	P	18 09 56.2	-0.2
	comp=Z,4.3nm,0.7s,baz=109,slow=7.2,SNR=5.6						
NEW	Newport	68.08	331	P	P	18 09 56.3	-0.2
NEW	Newport	68.08	331	P	P	18 09 56.5	0.0
	baz=134						
G05D	Wamic, OR	68.26	326	P	P	18 09 59.0	+1.4
	baz=129						
E07A	Sunnyside	68.31	328	P	P	18 09 58.7	+0.8
C09A	Chrisman Ranch	68.33	330	P	P	18 09 58.8	+0.8
I02D	Swisshome	68.99	324	P	P	18 10 03.0	+0.9
	baz=126						
B08A	Colville Reser	69.23	330	P	P	18 10 03.4	-0.1
D05A	Enumclaw	69.84	328	P	P	18 10 07.9	+0.6

D05A				IAmb	IAmb	18 10 08.5	
	comp=Z,24nm,0.9s						
B05A	Bryant	70.58	328	P	P	18 10 12.0	+0.3
	baz=129						
D03D	Eldon	70.64	327	P	P	18 10 12.5	+0.3
	baz=128						
LIC	Lamto	70.67	80	*e*P	P	18 10 13.0	0.0
	comp=Z,32nm,0.7s						
TIC	Toumodi	70.76	80	*e*P	P	18 10 13.6	0.0
	comp=Z,52nm,0.8s						
DBIC	Dimbokro	70.92	80	P	P	18 10 14.8	+0.3
	comp=Z,31nm,0.6s,baz=241,slow=5.4,SNR=55						
DBIC				pP	pP	18 10 50.4	+0.6
	comp=Z,19nm,0.5s,baz=245,slow=5.5,SNR=5.3						
DBIC	Dimbokro	70.92	80	P	P	18 10 14.7	+0.1
KIC	Kosan Boka	70.97	80	*e*P	P	18 10 15.1	+0.2
	comp=Z,68nm,0.7s						
VNA2	Neumayer--Watz	74.40	162	P	P	18 10 35.0	+0.9
	baz=296,slow=5.5						
BBB	Bella Bella	76.02	329	P	P	18 10 43.3	-0.3
	comp=Z,11nm,0.9s,baz=119,slow=18,SNR=1.5						
SNAA	Sanae	76.02	162	P	P	18 10 44.3	+0.9
SNAA	Sanae	76.02	162	P	P	18 10 43.6	+0.2
SFJD	Kangerlussuaq	77.42	9	P	P	18 10 50.9	-0.2
	comp=Z,0.2nm,0.7s,baz=187,slow=16,SNR=1.5						
SFJD				pP	pP	18 11 27.2	+0.3
	comp=Z,1.1nm,1.0s,baz=160,slow=5.5,SNR=4.1						
YKA	Yellowknife Ar	77.44	342	P	P	18 10 51.0	-0.3
	comp=Z,5.0nm,0.6s,baz=140,slow=6.6,SNR=64						
YKA				pP	pP	18 11 28.4	+1.3
	comp=Z,2.8nm,0.6s,baz=138,slow=6.7,SNR=4.7						
TOA0	Torodi Ar. Sit	78.55	75	P	P	18 10 57.9	-0.6
TOA0				IAmb	IAmb	18 11 04.1	
	comp=Z,22nm,0.7s						
TOA0				pP	pP	18 11 34.0	-0.4
TORD	Torodi Ar. Bea	78.55	75	P	P	18 10 58.5	0.0
	comp=Z,15nm,0.5s,baz=239,slow=4.7,SNR=43						
TORD				pP	pP	18 11 34.7	+0.3
	comp=Z,14nm,0.7s,baz=279,slow=5.1,SNR=7.7						
QSPA	South Pole Qui	81.43	180	P	P	18 11 13.9	+0.8
QSPA				IAmb	IAmb	18 11 15.1	
	comp=Z,31nm,1.4s						
TAM	Tamanrasset	84.10	66	P	P	18 11 29.4	+1.5
TAM				IAmb	IAmb	18 12 06.4	
	comp=Z,8.7nm,0.7s						
RES	Resolute Bay	84.18	355	P	P	18 11 27.4	+0.5
SUMG	Summit	84.36	10	P	P	18 11 29.1	+0.8
EKA	Eskdalemuir Ar	86.61	33	P	P	18 11 39.9	+0.5
	comp=Z,0.9nm,0.6s,baz=233,slow=7.0,SNR=2.0						
CTGM	Chitina Glacie	86.70	333	P	P	18 11 40.2	+0.4
CTGM				IAmb	IAmb	18 11 41.5	
	comp=Z,8.9nm,0.8s						
BARN	Barnard Glacie	86.88	333	P	P	18 11 41.4	+0.6
BARN				IAmb	IAmb	18 11 42.3	
	comp=Z,24nm,1.6s						
INK	Inuvik	87.19	341	P	P	18 11 41.6	-0.2
DAWY	Dawson	87.21	336	P	P	18 11 41.7	-0.4
TGL	Tana Glacier	87.28	333	P	P	18 11 43.0	+0.4
TGL				IAmb	IAmb	18 11 44.5	
	comp=Z,13nm,1.0s						
CRQM	Cirque	87.42	333	P	P	18 11 43.3	-0.1
CRQM				IAmb	IAmb	18 11 44.6	
	comp=Z,11nm,0.8s						
MCARA	McCarthy VSAT	87.62	333	P	P	18 11 44.6	+0.6
VRDI	Verde Repeater	87.75	333	P	P	18 11 45.1	+0.2
VRDI				IAmb	IAmb	18 12 24.1	
	comp=Z,15nm,0.8s						
BCAR	Beaver Creek A	87.75	335	P	P	18 11 44.9	+0.1
EGAK	Eagle	88.21	337	P	P	18 11 46.6	-0.1
EGAK				IAmb	IAmb	18 12 26.4	
	comp=Z,14nm,1.2s						
VNDA	Vanda	88.47	190	P	P	18 11 48.4	+0.5
	comp=Z,2.6nm,0.8s,baz=125,slow=3.0,SNR=11						
VNDA	Vanda	88.47	190	P	P	18 11 49.1	+1.3
VNDA				IAmb	IAmb	18 12 50.0	
	comp=Z,3.9nm,0.3s						
SCRK	Sand Creek	89.02	336	P	P	18 11 50.8	+0.1
SCRK				IAmb	IAmb	18 11 51.7	
	comp=Z,7.3nm,0.6s						
RIDG	Independent Ri	89.29	335	P	P	18 11 51.8	-0.1
RIDG				IAmb	IAmb	18 12 31.1	
	comp=Z,9.2nm,0.8s						
SCM	Sheep Creek Mo	89.70	333	P	P	18 11 54.0	+0.1
SCM				IAmb	IAmb	18 12 33.0	
	comp=Z,14nm,0.8s						
SML	Sawmill	90.14	333	P	P	18 11 55.1	-0.9
SYO	Syowa Base	90.27	161	⇑*e*P	P	18 11 56.0	-0.4
HDA	Harding Lake	90.39	336	P	P	18 11 56.6	-0.3
HDA	Harding Lake	90.39	336	P	P	18 11 57.1	+0.2
	baz=109						
GHO	Glory Hole Cre	90.40	333	P	P	18 11 55.9	-1.3
GHO				IAmb	IAmb	18 12 36.1	
	comp=Z,11nm,0.8s						
IL31		90.48	336	P	P	18 11 56.5	-0.8
ILAR	Eielson Array	90.48	336	P	P	18 11 56.8	-0.6
	comp=Z,1.2nm,0.3s,baz=140,slow=3.0,SNR=9.6						
ILAR				pP	pP	18 12 34.8	+0.7
	comp=Z,2.5nm,0.8s,baz=141,slow=3.0,SNR=6.1						
ILAR	Eielson Array	90.48	336	P	P	18 11 56.7	-0.7
BMAR	Burnt Mountain	90.53	339	P	P	18 11 57.6	0.0
CCB	Clear Creek Bu	90.81	336	P	P	18 11 58.8	-0.1
POKR	Poker Plat Res	90.81	336	P	P	18 11 59.5	+0.5
	baz=109						
RND	Reindeer	90.86	334	P	P	18 11 59.3	0.0
RND				IAmb	IAmb	18 12 39.3	
	comp=Z,11nm,0.9s						
WRH	Wood River Hil	90.88	335	P	P	18 11 59.1	-0.2
WRH					pP	18 12 37.7	+1.8
WRH				IAmb	IAmb	18 12 38.7	
	comp=Z,6.7nm,1.0s						
COLA	College	90.91	336	P	P	18 11 58.5	-0.8
COLA				IAmb	IAmb	18 12 38.9	
	comp=Z,10nm,0.8s						
TCOL	CIGO, UAF Yank	90.91	336	P	P	18 11 59.7	+0.3
	baz=109						
MDM	Murphy Dome	91.08	336	P	P	18 12 00.4	+0.2
NEA	Nenana	91.31	335	P	P	18 12 00.0	-1.3
NEA				IAmb	IAmb	18 12 40.1	
	comp=Z,13nm,1.1s						
BWN	Browne	91.35	335	P	P	18 12 00.8	-0.6
TRF	Thorofare Moun	91.50	334	P	P	18 12 01.7	-0.7
SKT	Skwentna	91.64	333	P	P	18 12 02.3	-0.5
KTH	Kantishna Hill	91.80	334	P	P	18 12 03.0	-0.6
KTH				IAmb	IAmb	18 12 20.5	
	comp=Z,7.0nm,1.0s						
RSO	Redoubt South	91.83	331	P	P	18 12 02.4	-1.6
BPAW	Bear Paw Mtn.	91.97	335	P	P	18 12 03.7	-0.6
BPAW				IAmb	IAmb	18 12 05.0	
	comp=Z,9.0nm,0.9s						
MLY	Manley	92.13	336	P	P	18 12 04.7	-0.4
MLY				IAmb	IAmb	18 12 05.6	
	comp=Z,8.2nm,1.3s						
DAVOX	Davos/Dischmat	92.33	43	P	P	18 12 08.3	+1.7
	comp=Z,9.6nm,0.8s,baz=319,slow=19,SNR=2.8						
TOLK	Toolik Lake Re	92.71	339	P	P	18 12 07.5	-0.2
	baz=107						
MOTA	Moosalm	93.25	43	*i* PcP	P	18 12 16.2	+5.4
	comp=Z,3.8nm,0.6s						
SQTA	Sankt Quirin	93.30	43	*e*PcP	P	18 12 16.5	+5.6
	comp=Z,3.7nm,0.5s						
WTTA	Wattenberg	93.59	43	*i* PcP	P	18 12 18.7	+6.3
	comp=Z,6.8nm,0.9s						
ABTA	Abfaltersbach	94.11	44	*i* PcP	P	18 12 21.0	+6.3
	comp=Z,3.7nm,0.6s						
MYKA	Terra Mystica	94.86	44	*i* PcP	P	18 12 24.5	+6.4
	comp=Z,1.6nm,0.3s						
NB2	NORSAR Subarra	95.38	29	P	P	18 12 22.0	+1.9
	comp=Z,3.1nm,0.9s,baz=260,slow=4.4						
NOA	NORSAR Array B	95.38	29	P	P	18 12 21.7	+1.6
	comp=Z,0.8nm,0.9s,baz=258,slow=4.5,SNR=3.3						
NOA				pP	pP	18 12 57.4	+0.4
	comp=Z,1.4nm,0.9s,baz=259,slow=4.5,SNR=3.7						
MOA	Molln	95.44	43	*e*PcP	P	18 12 27.2	+6.6
	comp=Z,0.8nm,0.3s						
ARSA	Arzberg	96.21	43	*e*PcP	P	18 12 30.5	+6.3
	comp=Z,1.0nm,0.3s						
CONA	Conrad Observa	96.51	43	*e*PcP	P	18 12 32.0	+6.4
	comp=Z,3.9nm,0.9s						
MODS	Modra-Piesok	97.50	42	*e*PDIFF	P	18 12 29.7	-0.3
VYHS	Vyhne	98.54	42	*e*PDIFF	Pdif	18 12 41.1	+6.5
AKTO	Aktyubinsk	122.77	34	PKP	PKPdf	18 17 51.3	+0.1
	comp=Z,0.8nm,0.6s,baz=216,slow=12,SNR=4.4						
AKTO				pPKP	pPKPdf	18 18 31.0	+1.4
	comp=Z,1.1nm,0.5s,baz=305,slow=5.1,SNR=3.8						
ABKAR	Akbulak array	124.45	35		PKiKP	18 17 55.5	+0.8
STKA	Stephens Creek	127.03	219	PKP	PKPdf	18 17 59.9	-0.1
	comp=Z,5.1nm,0.7s,baz=113,slow=3.9,SNR=14						
STKA				pPKP	pPKPdf	18 18 38.0	-0.4
	comp=Z,1.9nm,0.7s,baz=278,slow=5.9,SNR=2.9						
STKA	Stephens Creek	127.03	219		PKPdf	18 18 00.1	+0.1
BVAR	Borovoye Array	127.38	26	PKP	PKiKP	18 18 00.7	+0.2
	comp=Z,1.0nm,0.7s,baz=264,slow=1.5,SNR=8.5						
ZAA0	Zalesovo Array	131.85	16		PKPdf	18 18 07.8	-0.6
ZAA0				pPKPdf	pPKPdf	18 18 48.3	+1.4
ZALV	Zalesovo Beam	131.85	16	PKP	PKPdf	18 18 08.9	+0.5
	comp=Z,3.0nm,0.7s,baz=253,slow=3.0,SNR=12						
ZALV				pPKP	pPKPdf	18 18 48.4	+1.6
	comp=Z,3.9nm,0.6s,baz=299,slow=3.5,SNR=5.8						
ZALV				SKPbc	SKPbc	18 21 20.9	-0.2
	comp=Z,1.4nm,0.8s,baz=309,slow=2.8,SNR=2.1						
ZALV	Zalesovo Beam	131.85	16		PKPdf	18 18 08.1	-0.3
KURK	Kurchatov	132.50	23		pPKPdf	18 18 53.3	+5.1
KURK	Kurchatov	132.50	23		PKPdf	18 18 10.3	+0.6
KURBB	Kurchatov Arra	132.54	23	PKP	PKPdf	18 18 10.3	+0.5
	comp=Z,1.3nm,0.7s,baz=310,slow=3.0,SNR=6.8						
KURBB				pPKP	pPKPdf	18 18 48.9	+0.7
	comp=Z,3.1nm,0.8s,baz=311,slow=2.6,SNR=4.3						
KLR	Kul'dur	134.05	336	PKP	PKPdf	18 18 12.9	+0.2
	comp=Z,1.4nm,0.6s,baz=86,slow=3.7,SNR=10						
KLR				pPKP	pPKPdf	18 18 51.7	+0.6
	comp=Z,1.3nm,0.6s,baz=63,slow=4.4,SNR=3.2						
AAK	Ala-Archa	136.51	34	PKP	PKPdf	18 18 17.3	-0.4
	comp=Z,0.6nm,0.5s,baz=170,slow=3.2,SNR=4.0						
MAKZ	Makanchi	136.97	24		PKPdf	18 18 18.6	+0.4
MK31	Makanchi Array	137.10	24		PKPdf	18 18 18.7	+0.2
MKAR	Makanchi Array	137.10	24	PKP	PKPdf	18 18 18.3	-0.2
	comp=Z,1.3nm,0.7s,baz=9.5,slow=1.9,SNR=15						
MKAR				pPKP	pPKPdf	18 18 57.3	+0.3
	comp=Z,3.2nm,0.9s,baz=0.0,slow=1.6,SNR=4.6						
MKAR				SKPbc	SKPbc	18 21 38.2	-0.2
	comp=Z,1.3nm,0.9s,baz=332,slow=3.2,SNR=6.3						
MKAR	Makanchi Array	137.10	24		PKPdf	18 18 18.5	0.0
MKAR				pPKPdf	pPKPdf	18 18 54.8	-2.1
AS31	Alice Springs	137.62	220		PKPpre	18 18 08.3	
AS31				PKPdf	PKPdf	18 18 20.1	-0.1
ASAR	Alice Springs	137.62	220	PKhKP	PKPpre	18 18 09.8	
	comp=Z,0.9nm,0.7s,baz=130,slow=2.7,SNR=11						
ASAR				PKP	PKPdf	18 18 18.4	-1.8
	comp=Z,3.3nm,0.5s,baz=123,slow=2.4,SNR=6.1						
ASAR				pPKP	pPKPdf	18 18 58.4	-0.2
	comp=Z,1.1nm,0.6s,baz=128,slow=2.3,SNR=3.2						
ASAR	Alice Springs	137.62	220		PKPpre	18 18 09.3	
USRK	Ussuriysk Ar.	137.86	332	PKP	PKPdf	18 18 20.3	+0.4
	comp=Z,3.1nm,0.9s,baz=232,slow=2.2,SNR=5.0						
KSH	Kashi	139.42	36	PKP	PKPdf	18 18 21.0	-2.1
KSH				sPKP		18 19 20.0	
KSH				PP	PP	18 21 21.8	+3.6
KSH				PKS	PKSdf	18 21 56.5	-2.8
KSH				SKKS		18 27 54.3	
MJAR	Matsushiro Arr	139.47	318	PKP	PKPdf	18 18 22.8	-0.4
	comp=Z,2.0nm,0.8s,baz=84,slow=3.1,SNR=4.4						
WR0	Warramunga Arr	139.77	225		PKPpre	18 18 15.5	
WRA	Warramunga Arr	139.92	225	PKhKP	PKPpre	18 18 15.5	
	comp=Z,0.7nm,0.4s,baz=113,slow=2.0,SNR=17						
WRA				PKP	PKPdf	18 18 24.3	-0.2
	comp=Z,5.4nm,0.5s,baz=123,slow=2.0,SNR=21						
WRA				pPKP	pPKPdf	18 19 02.5	-0.4
	comp=Z,2.6nm,0.7s,baz=131,slow=1.9,SNR=3.9						
WRA	Warramunga Arr	139.92	225		PKPpre	18 18 16.1	
WRA				PKPdf	PKPdf	18 18 24.0	-0.5
WB0	Warramunga Arr	140.00	225		PKPpre	18 18 16.2	
SONM	Songino Array	140.98	359	PKhKP	PKPpre	18 18 19.3	
	comp=Z,0.3nm,0.4s,baz=335,slow=3.3,SNR=4.5						
KS19	Wonju Array Si	144.97	328		PKPbc	18 18 31.5	-1.0
KSRS	Korea Array	144.98	328	PKP	PKPbc	18 18 32.1	-0.3
	comp=Z,6.9nm,0.8s,baz=48,slow=3.1,SNR=38						
KSRS				pPKP	pPKPdf	18 19 10.1	-1.3
	comp=Z,4.8nm,0.8s,baz=34,slow=2.3,SNR=4.8						
KSAR	Wonju Array Be	145.01	328		PKPbc	18 18 31.7	-0.8
JNU	Nakatsue	146.32	320	PKPbc	PKPdf	18 18 35.3	-0.1
	comp=Z,4.0nm,0.6s,baz=328,slow=2.3,SNR=9.4						
JNU				pPKPbc	pPKPdf	18 19 13.8	0.0
	comp=Z,10nm,0.8s,baz=108,slow=4.2,SNR=4.9						
KNRA	Kununurra	146.69	223		PKPbc	18 18 37.5	-0.7
PSA00	Pilbara Seismi	146.86	205		PKPdf	18 18 36.2	-0.4
MTN	Manton Dam	146.86	230		PKPdf	18 18 36.8	+0.1
FITZ	Fitzroy Crossi	146.87	216	PKPbc	PKPbc	18 18 38.7	+0.1
	comp=Z,27nm,0.8s,baz=188,slow=5.5,SNR=50						
FITZ	Fitzroy Crossi	146.87	216		PKPdf	18 18 36.9	+0.2
FAKI	Fak Fak	151.09	248		PKiKP	18 18 50.0	0.0
HYB	Hyderabad	152.24	69	*i* PKP	PKPab	18 19 02.5	+0.1
HYB				*e*pPKP	pPKPbc	18 19 29.0	-1.3
LZH	Lanzhou	152.67	3	*e*PKPbc	PKPdf	18 18 44.0	-1.5
LZH				pPKP	pPKPdf	18 19 25.0	+0.9
LZH				sPKP		18 19 40.8	
SIJI	Sorong	152.77	251	PKPbc	PKPbc	18 18 53.2	-0.1
	comp=Z,4.4nm,0.6s,baz=272,slow=22,SNR=6.1						
CD2	Chengdu	157.81	4	PKP	PKPdf	18 18 51.0	-1.5
CMAR	Chiang Mai Arr	168.30	33	PKP	PKPdf	18 19 02.1	-0.6
	comp=Z,0.6nm,0.7s,baz=273,slow=1.6,SNR=5.5						
CMAR				PKPab	PKPab	18 20 12.7	+0.8
	comp=Z,0.5nm,0.6s,baz=316,slow=6.0,SNR=2.3						

IDC 27 18:01:30.2±2.8, 5°16S×133°30E, h0^{km}, mb3.4/1, mb1 3.4/4, mb1mx3.2/32, mbtmp3.2/4, ML3.0/3, MS3.7/2, Ms1 3.7/2, ms1mx2.8/30, Error ellipse: s-maj=99.3km s-min=30.5km az=85.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.72	176	Pn	Pn	18 04 59.8	-0.2
	0.0nm,0.3s,baz=356,slow=13,SNR=1.2						
WRA				Sn	Sn	18 07 33.0	-11
	baz=358,slow=20,SNR=1.3						
FITZ	Fitzroy Crossi	14.88	210	Pn	Pn	18 05 02.1	+0.2
	0.1nm,0.3s,baz=39,slow=14,SNR=2.0						
FITZ				Sn	Sn	18 07 47.9	+0.2
	0.1nm,0.3s,baz=104,slow=4.4,SNR=1.8						
ASAR	Alice Springs	18.41	178	P	P	18 05 47.1	0.0
	0.1nm,0.3s,baz=4.8,slow=12,SNR=7.4						
LEM	Lembang	25.59	265	LR	LR	18 17 58.0	
	comp=Z,143nm,20.2s,baz=36,slow=39						
AFI	Afiamalu	54.75	103	LR	LR	18 35 09.9	
	comp=Z,75nm,18.7s,baz=187,slow=37						
MKAR	Makanchi Array	68.55	325	P	P	18 12 34.8	0.0
	0.4nm,1.0s,baz=123,slow=5.3,SNR=2.8						

JMA 27 18:10:38.0, 24°43N×123°95E, h0^{km}, M0.3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIJ	Ishigaki jima	0.19	111	P	Pg	18 10 42.0	+0.4
JIJ				S	Sg	18 10 44.7	+0.7
JKRS	Kuro-shima	0.20	164	P	Pg	18 10 42.2	+0.4
JKRS				S	Sg	18 10 45.5	+1.1
IRIF	Iriomote-Funau	0.22	245	P	Pg	18 10 42.7	+0.4
IRIF				S	Sg	18 10 46.2	+1.1
JISG	Ishigakijimahi	0.36	64	P	Pg	18 10 45.7	+0.7
JISG				*e*S	Sg	18 10 51.4	+1.7

TAP 27 18:11:32.1, 24°47N×121°82E, h20^{km}, ML2.2, 1D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau	0.08	242	*i* P	Pb	18 11 36.5	+0.6
	baz=238						
ENA				S	Sb	18 11 39.2	+0.6
	baz=238						
TWC	Suao	0.14	11	⇓*i*P	Pb	18 11 37.1	+0.7
	baz=14						
TWC				*i* S	Sb	18 11 40.2	+1.0
	baz=14						
ENTT	Nioudou	0.29	307	P	Pb	18 11 39.5	+0.9
	baz=307						
ENTT				*e*S	Sb	18 11 43.7	+0.7
	baz=307						
TWE	Neicheng	0.29	331	P	Pb	18 11 39.4	+0.7
	baz=333						
TWE				*e*S	Sb	18 11 44.6	+1.5
	baz=333						
EOS1	EOS1	0.29	74	*e*P	Pb	18 11 39.0	+0.4
	baz=73						
EOS1				*e*S	Sb	18 11 44.3	+1.2
	baz=73						
NDT	Datong Townshi	0.31	296	*e*P	Pb	18 11 39.9	+0.9
	baz=295						
NDT				*e*S	Sb	18 11 45.1	+1.4
	baz=295						
SLBB	Yuanshan	0.33	330	P	Pb	18 11 39.5	+0.1
	baz=329						
SLBB				*e*S	Sb	18 11 44.5	+0.2
	baz=329						
NACB	Ninganchiao	0.36	215	*e*P	Pb	18 11 39.8	+0.1
	baz=215						
NACB				*e*S	Sb	18 11 45.5	+0.6
	baz=215						
NNSB	Datong	0.40	265	*e*P	Pb	18 11 40.9	+0.4
	baz=264						
NNSB				*e*S	Sb	18 11 47.4	+1.1
	baz=264						
NNSH	Datong	0.40	265	P	Pb	18 11 41.4	+0.8
	baz=264						
NNSH				*e*S	Sb	18 11 47.2	+0.9
	baz=264						
ETLH	Xiulin Townshi	0.40	230	*e*P	Pb	18 11 40.5	-0.1
	baz=229						
NNS	Nan Shan	0.41	266	*e*P	Pb	18 11 41.5	+0.8
	baz=265						
NWLT	Wulai	0.42	317	*e*P	Pb	18 11 41.6	+0.7
	baz=316						
NWLT				*e*S	Sb	18 11 47.8	+0.9
	baz=316						
YHNB	Yeheng	0.45	297	*e*P	Pb	18 11 42.3	+0.9
	baz=296						
YHNB				*e*S	Sb	18 11 49.0	+1.2
	baz=296						
NSK	Sanguang	0.47	296	*e*P	Pb	18 11 42.6	+0.9
	baz=296						
NSK				*e*S	Sb	18 11 49.1	+0.8
	baz=296						
TIPB	Shuangxi	0.50	1	*e*P	Pb	18 11 42.7	+0.4
TIPB				*e*S	Sb	18 11 49.6	+0.3
WHF	Hehuan Shan	0.60	238	*e*P	Pb	18 11 44.6	+0.4
	baz=237						
YM01	YM01	0.71	341	*e*P	Pn	18 11 47.3	+0.1
	baz=341						
CHGB	Renai	0.71	236	*e*P	Pn	18 11 47.2	-0.1
	baz=235						
YM10	YM10	0.72	341	*e*P	Pb	18 11 46.4	+0.3
	baz=341						
YM04	YM04	0.73	339	*e*P	Pn	18 11 47.0	-0.3
	baz=339						
YM05	YM05	0.73	342	*e*P	Pb	18 11 46.6	+0.4
	baz=341						
YM11	YM11	0.73	342	*e*P	Pb	18 11 46.8	+0.6
	baz=342						
ESL	Shilin	0.74	209	*e*P	Pb	18 11 46.3	0.0
	baz=207						
LIOB	Emei	0.75	284	*e*P	Pn	18 11 48.7	+1.0
	baz=283						
NSTT	Nanjuang	0.76	283	*e*P	Pn	18 11 48.9	+1.1
	baz=282						
OWD	Renai	0.78	229	*e*P	Pb	18 11 47.2	+0.2
	baz=229						
WHP	Taichung City	0.82	257	*e*P	Pn	18 11 48.5	-0.1
	baz=256						
VWDT	VWDT	0.94	221	*e*P	Pn	18 11 50.7	+0.5
	baz=221						

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*NIED **27** 18:17:00, 42°80N×142°70E, h35^{km}, Mw4.2 Best double couple: $M_0$2.26000×10^{15} NP1:ϕ_s149.00000°, δ90.00000°, λ47.00000°. NP2:ϕ_s59.00000°, δ43.00000°, λ180.00000°.*

*SKHL **27** 18:17:53.7±0.5, 42°52N×142°66E, h69^{km}±2^{km}, mb4.8/6*

*NEIC **27** 18:17:53.2±2.5, 42°78N±0°07×142°8E±0°1, h33^{km}±7^{km}, mb4.2/9, Error ellipse: s-maj=12.8km s-min=8.4km az=62.0*

*JMA **27** 18:17:54.2±0.1, 42°78N×142°67E, h29^{km}±2^{km}, M4.0 Broadband fault plane solution: P waves. NP1: ϕ_s39.00000°, δ23.00000°, λ140.00000°. NP2: ϕ_s166.00000°, δ75.00000°, λ72.00000°. Principal axes: T Plg56.0000°, Azm53.0000°; N Plg18.0000°, Azm171.0000°; P Plg28.0000°, Azm271.0000°;*

JMA Felt II J1.

*MOS **27** 18:17:54.6±1.1, 42°73N×142°76E, h67^{km}, mb4.3/9 Error ellipse: s-maj=7.6km s-min=6.0km az=84.5*

*IDC **27** 18:17:55.8±1.8, 42°81N×142°61E, h53^{km}±12^{km}, mb3.7/19, mb1 3.8/25, mb1mx3.6/81, mbtmp3.9/25, MS3.3/7, Ms1 3.4/7, ms1mx3.0/50, Error ellipse: s-maj=17.3km s-min=10.9km az=132.0*

ISC 27 18:17:54.4±0.6, 42°73N±0°03×142°70E±0°03, h38^{km}±1^{km}, n146, σ1s95/160, mb4.0/30, MS3.5/3, 14C-13D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JBT2	Biratori 2	0.25	282	⇑P	Pn	18 18 00.0	-2.8
JSHD	Hidakashinhida	0.36	208	⇑P	Pn	18 18 02.8	-0.1
JFR	Furan	0.44	350	⇑P	Pn	18 18 02.4	-1.7
JNBK	Urakawa-nobuka	0.45	175	⇑P	Pn	18 18 04.3	+0.1
JCH	Churui	0.50	103	⇓P	Pn	18 18 04.8	-0.2
JCH				*e*S	Sn	18 18 12.4	-0.1
JIAM	Iburiatsuma	0.58	260	P	Pn	18 18 06.3	0.0
JTHR	Tokachihiroo	0.62	134	⇓P	Pn	18 18 06.2	-0.6
JTHR				S	Sn	18 18 15.2	-0.3
JEM	Erimo	0.79	154	P	Pn	18 18 10.6	+1.7
ERM	Erimo	0.79	154	*ce*PN	Pn	18 18 09.2	+0.3
ERM	Erimo	0.79	154	Pn	Pn	18 18 08.9	0.0
JAB	Ashibetsu	0.85	336	P	Pn	18 18 08.7	-1.1
JOB	Onbets	0.85	78	⇓P	Pn	18 18 10.0	+0.2
JEW	Eniwo	0.93	277	⇓P	Pn	18 18 10.3	-0.5
JAR	Ashorobuto	0.97	54	⇑P	Pn	18 18 11.2	-0.2
JAR				S	Sn	18 18 24.2	+0.2
JISS	Ishikarishitsu	1.09	301	⇓P	Pn	18 18 12.6	-0.4
JISS				S	Sn	18 18 27.0	+0.2
JKK2	Kamakawa 2	1.14	2	⇑P	Pn	18 18 13.4	-0.5
JKK2				S	Sn	18 18 28.7	+0.4
JHR	Hokuryu	1.24	325	P	Pn	18 18 15.0	-0.1
ASAJ	Asahikawa	1.39	357	P	Pn	18 18 17.0	-0.2
	250nm,0.3s,baz=206,slow=17,SNR=1343						
ASAJ				S	Sn	18 18 34.3	0.0
	96nm,0.3s,baz=348,slow=33,SNR=13						
ASAJ				LR	LR	18 19 07.7	
	comp=Z,235nm,20.7s,baz=166,slow=55						
GLVR	Golovnino	2.29	63	*e*P	Pn	18 18 30.7	+1.1
GLVR				AMB	AMB	18 18 34.4	
	210nm,0.3s						
GLVR				*e*S	Sn	18 18 57.6	+1.0
GLVR				A	A	18 18 59.0	
	990nm,0.5s						
GLVR				A	A	18 18 59.0	
	1µm,0.5s						
GLVR	Golovnino	2.29	63	*e*PN	Pn	18 18 30.7	+1.1
GLVR				*e*S	Sn	18 18 58.2	+1.6
GLVR				pmax	pmax		
	comp=Z,214nm,0.1s						
GLVR				smax	smax		
	comp=N,985nm,0.4s						
GLVR				smax	smax		
	comp=E,1µm,0.3s						
NMR	Nemuro--Hokkai	2.31	73	*e*P	Pn	18 18 29.3	-0.5
NMR				*i* S	Sn	18 18 56.2	-0.8
NMR	Nemuro--Hokkai	2.31	73	*e*PN	Pn	18 18 29.1	-0.7
NMR				*i* S	Sn	18 18 55.3	-1.7
GRPR	Tuman	2.57	60	*e*P	Pn	18 18 34.8	+1.4
GRPR				AMB	AMB	18 18 37.0	
	comp=E,190nm,0.3s						
GRPR				*i* S	Sn	18 19 05.9	+2.4
GRPR				A	A	18 19 08.0	
	comp=E,850nm,0.5s						
GRPR				A	A	18 19 08.0	
	comp=E,860nm,0.5s						
GRPR	Tuman	2.57	60	*e*PN	Pn	18 18 34.8	+1.4
GRPR				*i* S	Sn	18 19 05.9	+2.4
GRPR				pmax	pmax		
	comp=Z,194nm,0.2s						
GRPR				smax	smax		
	comp=N,849nm,0.4s						
GRPR				smax	smax		
	comp=E,856nm,0.4s						
YUK	Yuzh-Kuril'sk	2.65	59	*e*P	Pn	18 18 36.5	+2.0
YUK				AMB	AMB	18 18 38.0	
	comp=E,270nm,0.3s						
YUK				*i* S	Sn	18 19 08.6	+3.3
YUK				A	A	18 19 13.0	
	comp=E,710nm,0.4s						
YUK				A	A	18 19 13.0	
	comp=E,550nm,0.4s						
YUK	Yuzh-Kuril'sk	2.65	59	*e*PN	Pn	18 18 36.5	+2.0
YUK				*i* S	Sn	18 19 08.6	+3.3

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YUK                                  pmax   pmax
       comp=E,51µm,0.2s
YUK                                  pmax   pmax
       comp=Z,268µm,0.2s
YUK                                  pmax   pmax
       comp=N,46µm,0.1s
YUK                                  smax   smax
       comp=E,554nm,0.2s
YUK                                  smax   smax
       comp=N,709nm,0.3s
YSS    Yuzh-Sakhalins     4.22   1  eP     Pn      18 18 57.8 +1.7
YSS                                  AMB    AMB     18 18 58.8
       comp=N,20nm,0.6s
YSS                                 eS     Sn      18 19 46.7 +2.5
YSS    Yuzh-Sakhalins     4.22   1  ePN    Pn      18 18 57.8 +1.7
YSS                                 eS     Sn      18 19 42.6 -1.6
YSS                                  pmax   pmax
       comp=Z,20nm,0.6s
YSS                                  smax   smax
       comp=E,30nm,0.7s
YSS                                  MLR    MLR
       comp=Z,400nm,14.0s
YSS                                  MLR    MLR
       comp=N,300nm,13.0s
YSS    Yuzh-Sakhalins     4.22   1         Pn      18 18 55.5 -0.6
KUR    Kuril'sk           4.49  54  i P    Pn      18 19 03.0 +3.2
KUR                                  AMB    AMB     18 19 04.6
       comp=N,20nm,0.3s
KUR                                  AMB    AMB     18 19 04.6
       comp=N,40nm,0.3s
KUR                                  AMB    AMB     18 19 04.6
       comp=N,90nm,0.3s
KUR                                 eS     Sn      18 19 54.8 +4.1
KUR                                  A      A       18 20 07.0
       comp=N,161nm,0.3s
KUR                                  A      A       18 20 07.0
       comp=N,78nm,0.3s
KUR    Kuril'sk           4.49  54c iPN    Pn      18 19 03.0 +3.2
KUR                                 eS     Sn      18 19 56.5 +5.8
KUR                                  pmax   pmax
       comp=N,21nm,0.2s
KUR                                  pmax   pmax
       comp=E,35nm,0.2s
KUR                                  pmax   pmax
       comp=Z,90nm,0.2s
KUR                                  smax   smax
       comp=N,106nm,0.5s
KUR                                  smax   smax
       comp=E,78nm,0.7s
TEY    Ternei             4.97 300  eP     Pn      18 19 09.2 +2.8
TEY                                  AMB    AMB     18 19 11.2
       comp=E,10.0nm,0.7s
TEY                                  AMB    AMB     18 19 11.2
       comp=E,10.0nm,0.7s
TEY    Ternei             4.97 300⇑ ePN    Pn      18 19 10.5 +4.1
TEY                                  pmax   pmax
       comp=N,10.0nm,0.7s
TEY                                  pmax   pmax
       comp=Z,10.0nm,0.7s
UGL    Uglegorsk          6.37 356  eP     Pn      18 19 28.5 +3.0
UGL                                  AMB    AMB     18 19 29.1
       comp=Z,20nm,0.7s
MJA0   Matsu Arr-Jizo     7.07 211  ePN    Pn      18 19 40.7 +5.4
MJB9   Matsu-Tunnel       7.08 211         Pn      18 19 37.7 +2.3
MAJO   Matsushiro         7.08 211   PN    Pn      18 19 37.7 +2.3
MAJO   Matsushiro         7.08 211         Pn      18 19 37.7 +2.3
MJAR   Matsushiro Arr     7.08 211   P     Pn      18 19 37.4 +1.9
       comp=Z,0.1nm,0.3s,baz=22,slow=13,SNR=6.6
MJAR                                 LR     LR      18 22 52.2
       comp=Z,289nm,19.2s,baz=25,slow=42
MJAR   Matsushiro Arr     7.08 211   PN    Pn      18 19 36.6 +1.1
MJAR   Matsushiro Arr     7.08 211   Pn    Pn      18 19 36.5 +1.1
USA0B  Ussuriysk Arra     7.93 284dePN     Pn      18 19 50.5 +3.5
USRK   Ussuriysk Ar.      7.93 284   P     Pn      18 19 49.0 +2.0
       baz=94,slow=14,SNR=4.1
USRK   Ussuriysk Ar.      7.93 284   PN    Pn      18 19 50.1 +3.1
USRK   Ussuriysk Ar.      7.93 284   Pn    Pn      18 19 50.1 +3.1
VLA    Vladivostok        7.95 276dePN     Pn      18 19 51.0 +3.8
TYV    Tymovskoe          8.14 360  eP     Pn      18 19 54.6 +4.8
TYV                                  AMB    AMB     18 19 55.3
       comp=Z,6.0nm,1.0s
TYV                                  AMB    AMB     18 19 59.0
       comp=Z,200nm,3.0s
TYV                                 eS     Sn      18 21 23.5 +3.1
TYV                                  A      A       18 21 24.3
       comp=Z,3.0nm,1.0s
TYV                                  A      A       18 21 31.5
       comp=Z,700nm,6.0s
TYV    Tymovskoe          8.14 360  ePN    Pn      18 19 54.6 +4.8
TYV                                 eS     Sn      18 21 23.5 +3.1
TYV                                  pmax   pmax
       comp=Z,7.0nm,1.0s
TYV                                  pmax   pmax
       comp=Z,200nm,3.4s
TYV                                  smax   smax
       comp=E,3.0nm,1.4s
TYV                                  smax   smax
       comp=N,700nm,5.9s
KLR    Kul'dur           10.01 314   P     Pn      18 20 16.5 +1.0
       comp=N,0.1nm,0.3s,baz=113,slow=16,SNR=6.0
KLR                                  LR     LR      18 24 04.1
       comp=N,62nm,20.5s,baz=146,slow=37
KLR    Kul'dur           10.01 314  eP     Pn      18 20 17.8 +2.3
KLR    Kul'dur           10.01 314⇓ ePN    Pn      18 20 17.8 +2.3
NKL    Nikolayevsk       10.52 353  eP     Pn      18 20 25.6 +3.3
EKMR   Ekimchan          12.23 331  eP     Pn      18 20 48.0 +2.2
EKMR                                 AMB    AMB     18 20 58.0
       comp=N,4.0nm,0.8s
KSRS   Korea Array       12.48 250   P     Pn      18 20 51.5 +2.2
       baz=62,slow=14,SNR=10.0
KSRS                                 LR     LR      18 25 20.2
       comp=N,134nm,18.9s,baz=28,slow=36
KSRS   Korea Array       12.48 250  ePN    Pn      18 20 53.4 +4.2
TJN    Taejon            13.42 247⇑ ePN    P       18 21 07.7 -3.2
PETK   Petropavlovsk-    14.42  39   P     Pn      18 21 17.8 +2.1
       comp=N,0.5nm,0.3s,baz=39,slow=12,SNR=4.5
PETK                                 LR     LR      18 27 33.2
       comp=N,110nm,18.7s,baz=239,slow=40
ZEA    Zeya              15.04 322  eP     Pn      18 21 21.0 -2.9
ZEA    Zeya              15.04 322  eP     Pn      18 21 19.8 -4.1
ZEA                                  pmax   pmax
       comp=Z,12nm,1.0s
BMKR   Bomnak            15.04 328  eP     Pn      18 21 23.0 -1.0
MA2    Magadan           17.59  14   P     Pn      18 21 56.6 +0.3
       comp=Z,0.2nm,0.3s,baz=202,slow=14,SNR=4.7
MA2    Magadan           17.59  14deP      P       18 21 57.6 +0.6
MA2    Magadan           17.59  14   P     Pn      18 21 55.6 -0.6
YAK    Yakutsk           20.82 343   P     P       18 22 32.5 +0.2
       comp=Z,2.0nm,0.4s,baz=324,slow=1.4,SNR=2.7
YAK    Yakutsk           20.82 343  eP     P       18 22 32.9 +0.6
YAK    Yakutsk           20.82 343⇑ eP     P       18 22 32.9 +0.6
YAK                                  pmax   pmax
       comp=Z,6.0nm,0.7s
SEY    Seymchan          21.02  12   P     P       18 22 33.2 -1.2
       comp=Z,8.1nm,0.9s,baz=197,slow=7.8,SNR=31
SEY    Seymchan          21.02  12⇓ iP     P       18 22 33.0 -1.4
HHC    Hu-ho-hao-te      23.23 276  eP     P       18 22 57.5 -0.7
ULN    Ulaanbaatar       25.44 294  eP     P       18 23 17.7 -0.9
ULN    Ulaanbaatar       25.44 294⇓ iP     P       18 23 17.7 -0.9
ULN                                  pmax   pmax
       comp=Z,3.0nm,1.4s
SONM   Songino Array     25.89 294   P     P       18 23 21.3 -1.4
       comp=Z,1.2nm,0.9s,baz=86,slow=9.0,SNR=5.4
SONM   Songino Array     25.89 294  eP     P       18 23 23.5 +0.9
SONM                                 pmax   pmax
       comp=Z,1.0nm,0.9s
SONM   Songino Array     25.89 294   P     P       18 23 21.2 -1.4
TIXI   Tiksi             29.79 351⇓ eP     P       18 23 54.2 -2.8
TIXI                                 pmax   pmax
       comp=Z,1.0nm,1.1s
H11N2  WAKE ISLAND Hy 30.68 131      T      T       18 55 49.4
       baz=324,slow=75,SNR=86
H11N1  WAKE ISLAND Hy 30.69 131      T      T       18 55 41.6
       baz=324,slow=75,SNR=63
H11N3  WAKE ISLAND Hy 30.70 131      T      T       18 55 51.3
       baz=324,slow=75,SNR=61
H11S1  WAKE ISLAND Hy 31.56 132      T      T       18 56 50.4
       baz=326,slow=76,SNR=58
H11S3  WAKE ISLAND Hy 31.57 133      T      T       18 56 51.3
       baz=326,slow=76,SNR=42
H11S2  WAKE ISLAND Hy 31.58 133      T      T       18 56 58.0
       baz=326,slow=76,SNR=47
KMI    Kunming           37.11 255   P     P       18 25 01.3 -0.2
DGZ    Jazzator, Alta    38.12 300⇑ eP     P       18 25 09.5 -0.2
DGZ                                 i *PP  sP      18 25 32.3 +7.4
DGZ                                  pmax   pmax
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       comp=Z,5.0nm,1.0s
ZALV   Zalesovo Beam     39.02 307   P     P       18 25 14.8 -2.2
       comp=Z,0.8nm,0.4s,baz=97,slow=7.6,SNR=5.6
ZALV                                 PcP    PcP     18 27 25.8 -0.7
       comp=Z,0.5nm,0.3s,baz=265,slow=13,SNR=1.5
ZALV                                 ScP    ScP     18 31 10.2 -1.5
       comp=Z,0.3nm,0.3s,baz=108,slow=4.8,SNR=4.7
ZALV   Zalesovo Beam     39.02 307  eP     P       18 25 16.3 -0.7
ZALV                                 pmax   pmax
       comp=Z,1.0nm,0.4s
WMQ    Urumqi            39.43 291  eP     P       18 25 25.3 +4.6
WMQ                                  pP     pP      18 25 30.8 -0.8
IMAR   Indian Mountai    41.31  34   P     P       18 25 35.1 -0.7
MK31   Makanchi Array    42.16 297   P     P       18 25 41.8 -1.3
MK31                                 pmax   pmax
       comp=Z,3.0nm,1.0s
MK31   Makanchi Array    42.16 297   P     P       18 25 41.8 -1.3
MKAR   Makanchi Array    42.16 297   P     P       18 25 42.0 -1.2
       comp=Z,1.9nm,0.8s,baz=80,slow=9.1,SNR=12
MKAR                                 ScP    ScP     18 31 23.3 -1.0
       comp=Z,0.2nm,0.6s,baz=85,slow=1.5,SNR=2.8
MKAR   Makanchi Array    42.16 297   P     P       18 25 41.8 -1.3
MAKZ   Makanchi          42.37 297   P     P       18 25 43.6 -1.1
MAKZ                                 pmax   pmax
       comp=Z,3.0nm,1.0s
MAKZ   Makanchi          42.37 297   P     P       18 25 43.6 -1.1
MAKZ                                 IAmb   IAmb    18 25 47.7
       comp=Z,2.7nm,0.9s
KURK   Kurchatov         43.40 304  eP     P       18 25 51.8 -1.2
KURK   Kurchatov         43.40 304⇑ eP     P       18 25 51.8 -1.2
KURK                                 pmax   pmax
       comp=Z,4.0nm,0.7s
KURK   Kurchatov         43.40 304   P     P       18 25 52.0 -1.0
KURK                                 IAmb   IAmb    18 25 55.4
       comp=Z,3.0nm,0.7s
KURBB  Kurchatov Arra    43.48 304   P     P       18 25 52.2 -1.3
       comp=Z,1.8nm,0.4s,baz=74,slow=8.7,SNR=8.0
CHTO   Chiang Mai        43.88 251   P     P       18 25 56.9 -0.3
CHTO                                 pmax   pmax
       comp=Z,4.0nm,1.0s
CHTO   Chiang Mai        43.88 251   P     P       18 25 56.9 -0.3
CHTO                                 IAmb   IAmb    18 25 58.4
       comp=Z,4.2nm,0.9s
CMAR   Chiang Mai Arr    44.12 251   P     P       18 25 58.6 -0.5
       comp=Z,1.3nm,0.9s,baz=44,slow=6.7,SNR=7.8
CMAR                                 LR     LR      18 45 56.3
       comp=Z,61nm,18.6s,baz=100,slow=38
CMAR   Chiang Mai Arr    44.12 251  eP     P       18 25 59.5 +0.4
CMAR                                 pmax   pmax
       comp=Z,1.0nm,0.9s
IL31                     44.22  35   P     P       18 25 59.1 -0.2
IL31                                 IAmb   IAmb    18 27 39.9
       comp=Z,14nm,1.9s
ILAR   Eielson Array     44.22  35   P     P       18 25 58.8 -0.7
       comp=Z,1.4nm,0.8s,baz=267,slow=7.0,SNR=14
ILAR   Eielson Array     44.22  35  eP     P       18 25 58.7 -0.7
ILAR                                 pmax   pmax
       comp=Z,2.0nm,0.9s
ILAR   Eielson Array     44.22  35   P     P       18 25 59.0 -0.4
BCAR   Beaver Creek A    46.70  37   P     P       18 26 20.1 +0.9
ODAN   Odare             47.28 269  eP     P       18 26 24.2 -0.1
       comp=Z,5.4nm,0.5s
BVAR   Borovoye Array    47.62 309   P     P       18 26 25.2 -1.2
       comp=Z,1.0nm,0.5s,baz=82,slow=9.2,SNR=17
BVAR                                 PcP    PcP     18 27 55.0 -0.5
       comp=Z,0.6nm,0.6s,baz=72,slow=4.8,SNR=3.9
BRVK   Borovoye          47.67 309  eP     P       18 26 25.6 -1.1
BRVK   Borovoye          47.67 309⇓ eP     P       18 26 25.7 -1.0
JIRN   Jiri              47.71 271  eP     P       18 26 27.0 -0.9
GUN    Gumba             47.80 271  eP     P       18 26 28.0 -0.5
       comp=Z,24nm,0.8s
RAMN   Ramite            47.81 270  eP     P       18 26 27.8 -0.7
       comp=Z,18nm,0.8s
PKI    Pulchoki          48.34 271  eP     P       18 26 32.5 -0.1
       comp=Z,11nm,1.0s
DMN    Daman             48.54 271  eP     P       18 26 34.1  0.0
GKN    Gorkha            48.67 272  eP     P       18 26 34.4 -0.6
       comp=Z,5.4nm,0.4s
INK    Inuvik            48.91  29   P     P       18 26 35.4 -0.7
       comp=Z,0.8nm,0.6s,baz=214,slow=3.3,SNR=6.1
DANN   Dangsing          49.12 273  eP     P       18 26 38.4 -0.2
       comp=Z,16nm,0.6s
KSH    Kashi             49.18 290   P     P       18 26 43.8 +5.1
KSH                                  pP     sP      18 27 07.0  +13
KSH                                  PP     PP      18 28 39.8 +7.3
KSH                                  PcS    PcS     18 32 00.5 +2.4
KSH                                  S      S       18 33 39.8 -1.9
KK31   Karatay Array     51.29 297   P     P       18 26 53.0 -1.5
KK31                                 pmax   pmax
       comp=Z,14nm,2.0s
KK31   Karatay Array     51.29 297   P     P       18 26 53.0 -1.5
KKAR   Karatay Array     51.29 297   P     P       18 26 53.1 -1.5
KKAR                                 pmax   pmax
       comp=Z,14nm,2.0s
KKAR   Karatay Array     51.29 297   P     P       18 26 53.0 -1.5
KKAR   Karatay Array     51.29 297   P     P       18 26 53.0 -1.5
KKAR                                 IAmb   IAmb    18 26 57.1
       comp=Z,14nm,2.0s
ARU    Arti              52.85 316   P     P       18 27 01.0 -4.8
ABKAR  Akbulak array     55.14 308   P     P       18 27 21.8 -0.9
AKTO   Aktyubinsk        55.71 310   P     P       18 27 26.7  0.0
       comp=Z,0.6nm,0.5s,baz=98,slow=15,SNR=3.7
YKA    Yellowknife Ar    58.43  32   P     P       18 27 45.4 -0.3
       comp=Z,0.6nm,0.8s,baz=302,slow=6.1,SNR=8.5
GEYT   Alibeck           62.04 297   LR    LR      18 55 28.6
       comp=Z,40nm,19.6s,baz=270,slow=36
OBN    Obninsk           64.17 322  eP     P       18 28 22.6 -2.1
OBN    Obninsk           64.17 322  i P    P       18 28 22.6 -2.1
OBN                                 i               18 28 55.9
OBN                                  pmax   pmax
       comp=Z,4.0nm,0.6s
FINES  FINESS Array B    64.26 332   P     P       18 28 23.6 -1.6
       comp=Z,2.1nm,0.6s,baz=44,slow=6.3,SNR=11
KIV    Kislovodsk        67.97 310  eP     P       18 28 46.7 -2.8
KIV    Kislovodsk        67.97 310  eP     P       18 28 46.7 -2.8
KIV                                  pmax   pmax
       comp=Z,19nm,1.0s
KBZ    Khabaz            67.99 310   P     P       18 28 49.2 -0.2
       comp=Z,2.4nm,0.8s,baz=29,slow=5.5,SNR=8.7
KBZ    Khabaz            67.99 310  eP     P       18 28 50.1 +0.7
KBZ    Khabaz            67.99 310⇑ eP     P       18 28 50.1 +0.7
HFS    Hagfors           69.32 335   P     P       18 28 55.9 -1.5
       comp=Z,1.3nm,0.5s,baz=60,slow=8.8,SNR=11
NB2    NORSAR Subarra    69.33 337   P     P       18 28 57.1 -0.4
       comp=Z,1.9nm,0.8s,baz=34,slow=6.5
NOA    NORSAR Array B    69.33 337   P     P       18 28 56.2 -1.3
       comp=Z,0.8nm,0.6s,baz=36,slow=6.2,SNR=9.2
NOA                                  LR     LR      19 03 19.4
       comp=Z,20nm,18.1s,baz=290,slow=39
NOA    NORSAR Array B    69.33 337  eP     P       18 28 56.8 -0.7
NOA                                  pmax   pmax
       comp=Z,1.0nm,0.6s
NVAR   Mina Array Bea    70.85  55   P     P       18 29 07.9 +0.4
       comp=Z,0.5nm,0.6s,baz=284,slow=5.1,SNR=3.7
PDAR   Pinedale Array    73.02  47   P     P       18 29 20.2 -0.2
       comp=Z,0.8nm,0.8s,baz=286,slow=2.8,SNR=4.5
ABTX   Abilene, Hawle    85.75  49         P       18 30 21.8 -7.9
TXAR   Lajitas Array     85.89  53   P     P       18 30 30.0 -0.6
       comp=Z,0.8nm,0.8s,baz=295,slow=3.3,SNR=4.9
TXAR   Lajitas Array     85.89  53   P     P       18 30 30.0 -0.6
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NEIC ***27*** *18:20:20.5±1.4, 24°.26S±0°.09×179°.8W±0°.1, h498^{km}±6^{km}, mb4.8/88, Error ellipse: s-maj=17.7km s-min=13.4km az=97.0*

MOS ***27*** *18:20:20.6±1.2, 24°.22S×179°.85W, h504^{km}, mb4.7/6, Error ellipse: s-maj=12.3km s-min=9.2km az=115.1*

IDC ***27*** *18:20:21.9±0.7, 24°.26S×179°.93W, h507^{km}±6^{km}, mb4.0/23, mb1 4.1/26, mb1mx3.9/45, mbtmp4.9/26, Error ellipse: s-maj=10.3km s-min=9.5km az=53.0*

ISC 27 18:20:21.2±0.5**, 24°.26S**±0°.04×**179°.77W**±0°.06**, h507^{km}**±4^{km}**, h508^{km}:pP-P, n379,** σ1^{s}**25**/417**, mb4.7**/71**, 36C-36D, South of Fiji Islands**

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Code   Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op     ISC        h  m  s    ISC
RIZ    Raoul Island       5.23 162   P     P       18 21 53.7 +3.1
RIZ                                  S     S       18 23 04.0 +0.4
RAO    Raoul Island       5.24 162   P     P       18 21 50.9 +0.3
       308nm,0.3s,baz=76,slow=6.0,SNR=18
RAO                                  S     S       18 23 02.4 -1.4
       129nm,0.3s,baz=71,slow=23,SNR=2.4
RAO    Raoul Island       5.24 162   P     P       18 21 51.2 +0.6
RAO    Raoul Island       5.24 162   P     P       18 21 51.2 +0.6
GLKZ   Green Lake         5.25 162   P     P       18 21 51.0 +0.3
GLKZ                                 S     S       18 23 02.2 -1.8
MSVF   Nonsavu            6.80 342⇓ eP     P       18 22 06.0 +0.1
MSVF   Nonsavu            6.80 342   P     P       18 22 06.2 +0.4
AFI    Afiamalu          12.76  38   P     P       18 23 08.2 +0.3
       4.8nm,0.3s,baz=202,slow=22,SNR=11
AFI                                  S     S       18 25 20.8 -4.5
       3.1nm,0.3s,baz=58,slow=23,SNR=3.6
AFI    Afiamalu          12.76  38   P     P       18 23 07.9  0.0
AFI    Afiamalu          12.76  38   P     P       18 23 07.9  0.0
DZM    Mont Dzumac       12.87 277   P     P       18 23 08.5 -0.6
       2.0nm,0.3s,baz=68,slow=21,SNR=13
MXZ    Matakaoa Point    13.37 187   P     P       18 23 14.6 +0.7
MXZ    Matakaoa Point    13.37 187   P     P       18 23 15.3 +1.3
MXZ                                  S     S       18 25 37.2 +0.8
WMGZ   Waiomatatini S    13.61 186   P     P       18 23 18.6 +2.1
WMGZ                                 S     S       18 25 37.2 -3.9
HAZ    Te Kaha           13.62 188   P     P       18 23 17.7 +1.1
HAZ                                  S     S       18 25 40.9 -0.4
PKGZ   Pakihiroa         13.71 187   P     P       18 23 18.8 +1.1
PKGZ                                 S     S       18 25 41.2 -2.0
RUGZ   Raukumara Rang    13.84 188   P     P       18 23 19.3 +0.2
RUGZ                                 S     S       18 25 45.1 -0.7
PUZ    Puketiti          13.88 187   P     P       18 23 21.4 +2.1
PUZ                                  S     S       18 25 45.1 -1.2
TOZ    Tahuroa Road      14.03 196   P     P       18 23 24.9 +4.0
URZ    Urewera           14.21 190   P     P       18 23 22.1 -0.7
       11nm,0.3s,baz=286,slow=0.5,SNR=18
URZ                                  S     S       18 25 50.5 -2.1
       4.5nm,0.3s,baz=244,slow=22,SNR=14
URZ    Urewera           14.21 190   P     P       18 23 21.2 -1.6
URZ    Urewera           14.21 190   P     P       18 23 23.4 +0.6
URZ                                  S     S       18 25 54.4 +1.7
MWZ    Matawai           14.22 189   P     P       18 23 23.8 +0.8
MWZ                                  S     S       18 25 51.8 -1.2
TKGZ   Te Karaka         14.29 188   P     P       18 23 33.6  +10
RAGZ   Rawiri            14.40 189   P     P       18 23 25.1 +0.2
RAGZ                                 S     S       18 25 56.0 -0.3
MUGZ   Murupara          14.48 191   P     P       18 23 25.6 -0.1
MUGZ                                 S     S       18 25 54.0 -3.9
RIGZ   Rimuhau           14.56 188   P     P       18 23 28.1 +1.6
RIGZ                                 S     S       18 25 58.2 -1.2
BKZ    Black Stump Fm    15.20 191   P     P       18 23 31.7 -1.5
BKZ                                  IAmb   IAmb    18 23 35.6
       comp=Z,17nm,1.0s
FUNA   Funafuti          15.67 356   P     P       18 23 37.1 -1.3
TSZ    Takapari Road     16.16 192   P     S       18 26 29.5  0.0
BFZ    Birch Farm        16.72 191   P     P       18 23 47.3 -1.6
BFZ    Birch Farm        16.72 191   P     S       18 26 38.5 -0.6
MRZ    Mangatainoka R    16.82 192   P     S       18 26 36.1 -4.8
TIWZ   Tintock           16.87 191   P     S       18 26 39.5 -2.4
OGWZ   Otaki Gorge       17.05 193   P     S       18 26 42.9 -1.9
HOWZ   Holdsworth Sta    17.06 192   P     S       18 26 40.1 -4.8
KIW    Kapiti Island     17.15 194   P     S       18 26 43.4 -3.1
TMWZ   Te Maipa          17.19 191   P     S       18 26 46.1 -1.1
MTW    Mount Morrison    17.32 192   P     S       18 26 46.4 -2.7
DUWZ   D'Urville Isla    17.33 196   P     S       18 26 47.7 -1.7
SNZO   South Karori      17.62 194   P     P       18 23 56.6 -0.9
TCW    Tory Channel      17.63 195   P     S       18 26 50.2 -4.0
QRZ    Quartz Range      17.74 200   P     P       18 23 59.0 +0.4
QRZ                                  IAmb   IAmb    18 24 53.2
       comp=Z,48nm,1.2s
PLWZ   Palliser          17.76 192   P     P       18 23 57.4 -1.5
PLWZ   Palliser          17.76 192   P     S       18 26 54.8 -1.6
NNZ    Nelson            17.86 197   P     P       18 23 58.2 -1.5
NNZ                                  IAmb   IAmb    18 24 48.6
       comp=Z,26nm,0.8s
TUWZ   Tuamarina         17.91 196   P     P       18 23 58.5 -1.6
TUWZ   Tuamarina         17.91 196   P     S       18 26 54.2 -4.6
CMWZ   Cape Campbell     18.15 195   P     S       18 27 04.2 +1.5
THZ    Tophouse          18.50 198   P     P       18 24 05.2 -0.4
THZ                                  IAmb   IAmb    18 24 56.7
       comp=Z,26nm,0.7s
THZ    Tophouse          18.50 198   P     S       18 27 07.3 -1.1
RAR    Rarotonga         18.69  85   P     P       18 24 07.2 -0.3
       comp=Z,0.8nm,0.3s,baz=18,slow=3.1,SNR=4.7
LTZ    Lake Taylor       19.62 198   P     P       18 24 13.7 -2.1
LTZ    Lake Taylor       19.62 198   P     S       18 27 26.5  0.0
OXZ    Oxford            20.18 198   P     P       18 24 20.7 -0.2
RPZ    Rata Peaks        20.82 199   P     P       18 24 26.5 -0.2
       comp=Z,7.5nm,0.4s,baz=331,slow=4.9,SNR=7.9
RPZ    Rata Peaks        20.82 199   P     P       18 24 25.1 -1.6
RPZ                                  IAmb   IAmb    18 25 12.7
       comp=Z,44nm,1.4s
FOZ    Fox Glacier       21.05 201   P     P       18 24 28.4 -0.3
HNR    Honiara           24.33 304   P     P       18 24 56.1 -2.3
       comp=Z,84nm,0.8s,baz=60,slow=3.5,SNR=8.2
HNR    Honiara           24.33 304   P     P       18 24 57.2 -1.2
HNR                                  pmax   pmax
       comp=Z,80nm,0.8s
HNR    Honiara           24.33 304   P     P       18 24 57.2 -1.2
ARMA   Armidale          26.10 250   P     P       18 25 14.9 +0.8
ARMA                                 IAmb   IAmb    18 25 51.9
       comp=Z,78nm,1.9s
TARA   Tarawa            26.43 343   P     P       18 25 16.6 -0.4
EIDS   Eidsvold          26.46 261   P     P       18 25 17.9 +0.6
EIDS                                 IAmb   IAmb    18 25 18.1
       comp=Z,22nm,0.8s
CTA    Charters Tower    31.69 271   P     P       18 26 03.4 +0.6
       comp=Z,62nm,0.4s,baz=94,slow=11,SNR=109
CTA    Charters Tower    31.69 271   P     P       18 26 03.5 +0.6
CTA                                  pmax   pmax
       comp=Z,119nm,0.7s
CTAO   Charters Tower    31.69 271   P     P       18 26 03.5 +0.6
CTAO                                 pmax   pmax
       comp=Z,102nm,0.7s
TOO    Toolangi          32.44 238   P     P       18 26 09.6 +0.6
TOO                                  pmax   pmax
       comp=Z,48nm,1.7s
TOO    Toolangi          32.44 238   P     P       18 26 09.6 +0.6
TOO                                  IAmb   IAmb    18 27 24.2
       comp=Z,48nm,1.7s
KRVT   Keravat (AS076    33.63 302   P     P       18 26 18.1 -1.2
       comp=Z,34nm,0.6s,baz=80,slow=1.0,SNR=5.7
STKA   Stephens Creek    34.79 249   P     P       18 26 29.2 +0.3
       comp=Z,6.9nm,0.5s,baz=94,slow=10,SNR=30
STKA                                 PcP    PcP     18 28 48.4 +0.2
       comp=Z,1.9nm,0.6s,baz=58,slow=7.0,SNR=3.6
STKA   Stephens Creek    34.79 249   P     P       18 26 29.4 +0.5
STKA                                 pmax   pmax
       comp=Z,2.0nm,0.7s
STKA   Stephens Creek    34.79 249   P     P       18 26 29.4 +0.5
PMG    Port Moresby      34.81 289   P     P       18 26 29.1 -0.1
       comp=Z,44nm,0.7s,baz=73,slow=5.8,SNR=25
PMG    Port Moresby      34.81 289d iP     P       18 26 28.8 -0.5
PMG                                  pmax   pmax
       comp=Z,211nm,0.8s
PMG    Port Moresby      34.81 289   P     P       18 26 29.4 +0.1
COEN   Coen              36.38 279   P     P       18 26 42.8 +0.5
COEN                                 IAmb   IAmb    18 26 43.8
       comp=Z,15nm,0.8s
PATS   Pohnpei           37.58 323   P     P       18 26 52.4 +0.2
BBOO   Buckleboo         39.50 247   P     P       18 27 07.0 -0.6
BBOO                                 IAmb   IAmb    18 27 07.7
       comp=Z,22nm,1.2s
AS31   Alice Springs     42.19 261   P     P       18 27 28.9 -0.3
ASAR   Alice Springs     42.19 261   P     P       18 27 28.9 -0.3
       comp=Z,9.8nm,0.5s,baz=95,slow=7.0,SNR=293
ASAR                                 pP     pP      18 29 01.6 +1.4
       comp=Z,1.5nm,0.7s,baz=92,slow=7.3,SNR=2.5
ASAR                                 ScP    ScP     18 32 16.1 +2.2
       comp=Z,2.5nm,0.8s,baz=109,slow=3.9,SNR=11
ASAR                                 S      S       18 33 09.6 -2.9
       comp=Z,0.6nm,0.7s,baz=98,slow=18,SNR=6.5
ASAR   Alice Springs     42.19 261   P     P       18 27 28.6 -0.6
ASAR   Alice Springs     42.19 261   P     P       18 27 28.6 -0.6
WR0    Warramunga Arr    42.41 266   P     P       18 27 30.0 -1.0
WR0                                  IAmb   IAmb    18 27 30.6
       comp=Z,18nm,0.5s
WB0    Warramunga Arr    42.59 267   P     P       18 27 31.6 -0.8
WRA    Warramunga Arr    42.60 266   P     P       18 27 31.4 -1.0
       comp=Z,28nm,0.5s,baz=101,slow=8.1,SNR=221
WRA                                  pP     pP      18 29 05.7 +2.0
       comp=Z,1.1nm,0.5s,baz=105,slow=6.9,SNR=1.7
WRA                                  PcP    pwP     18 29 10.6 +0.8
       comp=Z,4.2nm,0.9s,baz=103,slow=3.3,SNR=5.0
WRA                                  ScP    ScP     18 32 18.6 +3.0
       comp=Z,9.0nm,1.0s,baz=101,slow=4.1,SNR=24
WRA                                  S      S       18 33 13.9 -4.4
       comp=Z,1.7nm,0.8s,baz=99,slow=13,SNR=3.7
WRA    Warramunga Arr    42.60 266   P     P       18 27 30.7 -1.8
WRA                                  pmax   pmax
       comp=Z,3.0nm,0.8s
WRA    Warramunga Arr    42.60 266   P     P       18 27 30.6 -1.8
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JAY	Jayapura	43.85	293	P	P	18 27 42.1	-0.2
	comp=Z,23nm,0.8s						
GENI	Genyem	44.26	293	P	P	18 27 43.9	-1.5
	comp=Z,2µmcomp=Z,60nm,0.9s						
WAKE	Wake Island	45.25	342	P	P	18 27 51.9	-1.0
FORT	Forrest	46.39	250	P	P	18 28 00.4	-1.2
MTN	Manton Dam	47.70	275	P	P	18 28 10.3	-1.3
MTN				IAmb	IAmb	18 28 11.2	
	comp=Z,14nm,0.7s						
KNRA	Kununurra	48.90	270	P	P	18 28 20.3	-0.3
KNRA				IAmb	IAmb	18 28 21.2	
	comp=Z,58nm,0.9s						
FAKI	Fak Fak	50.89	287	P	P	18 28 34.7	-0.6
FITZ	Fitzroy Crossi	51.02	266	P	P	18 28 36.0	-0.1
	comp=Z,26nm,0.6s,baz=116,slow=5.2,SNR=79						
FITZ				pP	pP	18 30 13.7	+1.5
	comp=Z,5.3nm,0.9s,baz=143,slow=7.3,SNR=4.3						
FITZ				ScP	ScP	18 32 54.0	+2.9
	comp=Z,2.2nm,0.8s,baz=203,slow=5.3,SNR=3.2						
FITZ	Fitzroy Crossi	51.02	266	P	P	18 28 36.0	-0.1
FITZ				IAmb	IAmb	18 28 37.6	
	comp=Z,25nm,0.7s						
GUMO	Guam	51.07	314	P	P	18 28 36.2	-0.3
GUMO				pmax	pmax		
	comp=Z,163nm,1.1s						
GUMO	Guam	51.07	314	P	P	18 28 36.2	-0.3
VNDA	Vanda	54.05	185	P	P	18 28 58.2	+1.3
	comp=Z,2.0nm,0.6s,baz=352,slow=7.8,SNR=14						
VNDA				ScP	ScP	18 33 04.2	+0.9
	comp=Z,1.4nm,0.8s,baz=358,slow=4.7,SNR=6.2						
VNDA	Vanda	54.05	185	P	P	18 28 56.9	0.0
VNDA				pmax	pmax		
	comp=Z,12nm,1.6s						
VNDA	Vanda	54.05	185	P	P	18 28 56.9	0.0
AAI	Ambon	54.10	284	P	P	18 28 57.6	-0.7
	comp=Z,20nm,0.7s						
SOEI	Soe	55.09	275	P	P	18 29 06.0	+0.6
SOEI				IAmb	IAmb	18 29 07.5	
	comp=Z,58nm,1.1s						
PSAD2	Pilbara Seismi	55.19	260	P	P	18 29 05.0	-1.0
PSAD2				IAmb	IAmb	18 29 49.6	
	comp=Z,43nm,1.6s						
PSAC2	Pilbara Seismi	55.26	260	P	P	18 29 05.8	-0.6
NLAI	Namlea	55.27	284	P	P	18 29 06.3	-0.3
	comp=Z,35nm,1.0s						
PSA00	Pilbara Seismi	55.31	260	P	P	18 29 05.2	-1.6
PSA00	Pilbara Seismi	55.31	260	P	P	18 29 06.0	-0.8
PSA00				IAmb	IAmb	18 31 10.4	
	comp=Z,30nm,1.4s						
TNTI	Ternate	56.94	288	P	P	18 29 17.5	-0.7
MORW	Morawa	56.95	250	P	P	18 29 17.5	-0.5
MMRI	Maumere	57.37	275	P	P	18 29 20.3	-0.8
MMRI				IAmb	IAmb	18 29 21.4	
	comp=Z,28nm,0.7s						
CASY	Casey	59.89	206	P	P	18 29 37.0	-0.1
LUWI	Luwuk	60.12	284	P	P	18 29 39.4	-0.2
LUWI				IAmb	IAmb	18 29 40.4	
	comp=Z,41nm,1.0s						
PLAI	Plampang	61.35	273	P	P	18 29 44.6	-3.1
	comp=Z,753nmcomp=Z,63nm,0.8s						
MPSI	Mapaga	63.30	283	P	P	18 29 59.6	-0.8
JAGI	Jajag, Banyuwa	64.80	272	P	P	18 30 08.3	-1.6
JAGI				IAmb	IAmb	18 30 09.5	
	comp=Z,23nm,0.9s						
UGM	Wanagama	68.32	271	P	P	18 30 31.5	-0.4
KKM	Kota Kinabalu	69.21	287	P	P	18 30 37.0	-0.3
KKM				IAmb	IAmb	18 30 38.0	
	comp=Z,19nm,0.5s						
CISI	Cisompet, Garu	70.93	270	P	P	18 30 46.4	-1.2
CISI				IAmb	IAmb	18 30 47.1	
	comp=Z,30nm,0.8s						
SBUM	Sibu	71.09	282	P	P	18 30 48.0	-0.4
SBUM	Sibu	71.09	282	P	P	18 30 48.0	-0.4
JOW	Kunigami	71.39	312	P	P	18 30 50.5	+0.7
	comp=Z,1.4nm,0.6s,baz=170,slow=14,SNR=5.0						
JOW	Kunigami	71.39	312	P	P	18 30 49.6	-0.2
JOW				IAmb	IAmb	18 30 52.0	
	comp=Z,71nm,1.7s						
XMIS	Christmas Isla	71.79	266	P	P	18 30 52.1	-0.4
XMIS				IAmb	IAmb	18 30 52.8	
	comp=Z,30nm,0.7s						
MJAR	Matsushiro Arr	72.31	326	P	P	18 30 54.8	-0.1
	comp=Z,8.4nm,0.7s,baz=156,slow=5.9,SNR=23						
MJAR	Matsushiro Arr	72.31	326	P	P	18 30 54.2	-0.8
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MJAR	Matsushiro Arr	72.31	326	P	P	18 30 54.2	-0.8
MAJO	Matsushiro	72.31	326	P	P	18 30 55.2	+0.2
MAJO				pmax	pmax		
	comp=Z,13nm,0.8s						
MAJO	Matsushiro	72.31	326	P	P	18 30 55.1	+0.2
MAT	Matsushiro	72.31	326	P	P	18 30 55.0	0.0
MJB9	Matsu-Tunnel	72.31	326	P	P	18 30 55.1	+0.1
KSM	Kuching	72.38	280	P	P	18 30 55.9	0.0
KSM				IAmb	IAmb	18 30 56.7	
	comp=Z,29nm,0.7s						
YOJ	Yonaguni jima	73.62	307	P	P	18 31 02.6	-0.1
YOJ				pmax	pmax		
	comp=Z,192nm,1.2s						
YOJ	Yonaguni jima	73.62	307	P	P	18 31 02.6	-0.1
YULB	Yu-li	74.25	305	P	P	18 31 05.4	-1.0
YULB				IAmb	IAmb	18 32 33.4	
	comp=Z,66nm,1.8s						
TPUB	Ta-pu	74.70	305	P	P	18 31 07.4	-1.5
SSLB	Suanglung	74.73	305	P	P	18 31 07.6	-1.5
ADK	Adak	75.86	2	P	P	18 31 14.7	0.0
ADK				pmax	pmax		
	comp=Z,196nm,1.5s						
ADK	Adak	75.86	2	P	P	18 31 14.7	0.0
NIKH	Nikolski High	77.48	7	P	P	18 31 23.8	+0.3
MAW	Mawson	77.49	200	P	P	18 31 24.8	+1.3
	comp=Z,2.1nm,0.6s,baz=115,slow=7.6,SNR=3.9						
MAW	Mawson	77.49	200	P	P	18 31 24.5	+0.9
MAW				pmax	pmax		
	comp=Z,9.0nm,1.9s						
MAW	Mawson	77.49	200	P	P	18 31 24.5	+0.9
TJN	Taejon	78.26	319	⇑eP	P	18 31 28.3	+0.1
MYKOM	Kota Tinggi	78.34	277	P	P	18 31 29.1	0.0
YSS	Yuzh-Sakhalins	78.55	335	eP	P	18 31 30.2	+0.8
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
YSS	Yuzh-Sakhalins	78.55	335	P	P	18 31 29.7	+0.3
YSS				IAmb	IAmb	18 31 31.6	
	comp=Z,22nm,0.7s						
KSRS	Korea Array	78.66	320	P	P	18 31 31.2	+1.0
	comp=Z,4.8nm,0.6s,baz=133,slow=5.7,SNR=32						
KSAR	Wonju Array Be	78.67	320	P	P	18 31 31.4	+1.1
KSAR	Wonju Array Be	78.67	320	P	P	18 31 31.4	+1.1
KS19	Wonju Array Si	78.72	320	P	P	18 31 31.5	+0.9
AKUT	Akutan	79.00	8	P	P	18 31 31.5	-0.1
PEA0B	Petropavlovsk-	79.49	346	deP	P	18 31 33.2	-1.1
PEA0B	Petropavlovsk-	79.49	346	P	P	18 31 34.8	+0.5
PEA0B				IAmb	IAmb	18 31 35.9	
	comp=Z,60nm,1.4s						
PETK	Petropavlovsk-	79.49	346	P	P	18 31 35.0	+0.7
	comp=Z,9.2nm,0.6s,baz=131,slow=6.7,SNR=12						
NJ2	Nanjing	81.05	311	eP	P	18 31 44.5	+1.5
USA0B	Ussuriysk Arra	81.18	327	deP	P	18 31 44.3	+1.0
USA0B	Ussuriysk Arra	81.18	327	P	P	18 31 44.5	+1.2
USRK	Ussuriysk Ar.	81.18	327	P	P	18 31 44.5	+1.1
	comp=Z,7.0nm,0.6s,baz=154,slow=4.1,SNR=14						
TYV	Tymovskoe	81.81	337	eP	P	18 31 46.4	0.0
TYV				pmax	pmax		
	comp=Z,100nm,4.0s						
TYV				pmax	pmax		
	comp=Z,14nm,1.2s						
IPM	Ipoh	82.03	279	P	P	18 31 48.4	0.0
IPM				IAmb	IAmb	18 31 49.3	
	comp=Z,14nm,0.7s						
IPM	Ipoh	82.03	279	P	P	18 31 49.0	+0.5
MDJ	Mudanjiang	82.68	326	P	P	18 31 52.3	+1.3
SYO	Syowa Base	82.72	193	⇑eP	P	18 31 49.4	-1.5
SYO	Syowa Base	82.72	193	⇓ePcP	PcP	18 31 53.0	-1.4
WHN	Wuhan	83.39	308	⇑P	P	18 31 56.0	+1.1
CN2	Changchun	84.30	324	eP	P	18 32 00.0	+0.9
SNAA	Sanae	84.31	179	P	P	18 31 58.6	-0.3
SNAA	Sanae	84.31	179	P	P	18 31 58.8	-0.1
SNAA				pmax	pmax		
	comp=Z,40nm,2.0s						
SNAA	Sanae	84.31	179	P	P	18 31 58.8	-0.1
SNAA				IAmb	IAmb	18 32 45.7	
	comp=Z,40nm,2.0s						
VNA3	Neumayer Olymp	84.51	177	P	P	18 31 59.4	-0.5
VNA2	Neumayer--Watz	84.93	177	P	P	18 32 01.8	0.0
	baz=196,slow=3.4						
KLR	Kul'dur	84.94	330	P	P	18 32 03.4	+1.2
	comp=Z,3.8nm,0.9s,baz=41,slow=1.9,SNR=9.1						
KLR	Kul'dur	84.94	330	d iP	P	18 32 03.0	+0.9
KLR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MA2	Magadan	86.97	345	P	P	18 32 11.6	0.0
	comp=Z,4.1nm,0.7s,baz=163,slow=4.7,SNR=7.7						
MA2	Magadan	86.97	345	deP	P	18 32 11.4	-0.2
MA2				pmax	pmax		
	comp=Z,12nm,1.1s						
MA2	Magadan	86.97	345	P	P	18 32 11.5	0.0
MA2				IAmb	IAmb	18 32 12.8	
	comp=Z,11nm,0.9s						
BRLK	Bradley Lake	87.01	14	P	P	18 32 12.4	+0.6
SVW2	Sparrevohn	87.28	11	P	P	18 32 13.1	+0.1
SVW2				IAmb	IAmb	18 33 52.4	
	comp=Z,25nm,1.8s						
PBKT	Sadao Pong	87.29	289	P	P	18 32 15.3	+1.3
PLCA	Paso Flores	87.86	134	P	P	18 32 18.3	+1.8
	comp=Z,2.9nm,0.8s,baz=80,slow=4.7,SNR=8.7						
RC01	Rabbit Creek A	88.45	14	P	P	18 32 19.0	+0.6
RC01				IAmb	IAmb	18 32 19.7	
	comp=Z,14nm,1.0s						
EFI	East Falkland	88.80	148	⇑eP	P	18 32 20.9	+0.4
EFI				pmax	pmax		
	comp=Z,42nm,1.0s						
TTA	Tatalina	88.91	11	P	P	18 32 21.4	+0.7
TTA	Tatalina	88.91	11	P	P	18 32 21.4	+0.7
XAN	Xi'an	89.13	308	P	P	18 32 23.5	+1.2
XAN				pP	PcP	18 32 46.0	+23
GHO	Glory Hole Cre	89.24	14	P	P	18 32 22.9	+0.7
GHO				IAmb	IAmb	18 32 23.4	
	comp=Z,14nm,0.9s						
KMI	Kunming	89.62	298	P	P	18 32 25.5	+0.5
SCM	Sheep Creek Mo	89.66	15	P	P	18 32 24.9	+0.7
SCM				pmax	pmax		
	comp=Z,14nm,1.0s						
SCM	Sheep Creek Mo	89.66	15	P	P	18 32 24.9	+0.7
SCM				IAmb	IAmb	18 32 25.6	
	comp=Z,14nm,1.0s						
SEY	Seymchan	89.66	348	P	P	18 32 24.6	+0.6
	comp=Z,6.4nm,0.7s,baz=154,slow=5.1,SNR=39						
SEY	Seymchan	89.66	348	⇑eP	P	18 32 24.7	+0.7
CM31	Chiang Mai Arr	89.85	290	P	P	18 32 27.7	+1.7
CM31				IAmb	IAmb	18 32 28.7	
	comp=Z,11nm,1.1s						
CMAR	Chiang Mai Arr	89.85	290	P	P	18 32 27.4	+1.4
	comp=Z,5.7nm,0.9s,baz=136,slow=3.0,SNR=34						
CMAR	Chiang Mai Arr	89.85	290	P	P	18 32 27.6	+1.6
CMAR	Chiang Mai Arr	89.85	290	P	P	18 32 27.6	+1.6
CHTO	Chiang Mai	90.00	291	P	P	18 32 28.2	+1.5
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CHTO	Chiang Mai	90.00	291	P	P	18 32 28.2	+1.5
CHTO				IAmb	IAmb	18 32 29.1	
	comp=Z,7.2nm,0.8s						
GLB	Gilahina Butte	90.18	16	P	P	18 32 26.9	+0.3
GLB				IAmb	IAmb	18 33 20.8	
	comp=Z,13nm,1.5s						
BALM	Baldy	90.23	17	P	P	18 32 27.8	+0.9
BALM				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BALM	Baldy	90.23	17	P	P	18 32 27.8	+0.9
BALM				IAmb	IAmb	18 32 28.5	
	comp=Z,8.1nm,1.2s						
KTH	Kantishna Hill	90.42	12	P	P	18 32 27.4	-0.3
TXAR	Lajitas Array	90.44	58	P	P	18 32 30.1	+1.4
	comp=Z,1.9nm,0.7s,baz=206,slow=11,SNR=11						
TXAR	Lajitas Array	90.44	58	P	P	18 32 30.0	+1.4
TRF	Thorofare Moun	90.45	13		P	18 32 27.7	-0.2
TRF				IAmb	IAmb	18 32 28.4	
	comp=Z,8.5nm,0.9s						
RND	Reindeer	90.71	13	P	P	18 32 29.2	+0.2
RND				pmax	pmax		
	comp=Z,6.0nm,0.8s						
RND	Reindeer	90.71	13	P	P	18 32 29.2	+0.2
RND				IAmb	IAmb	18 32 29.9	
	comp=Z,6.2nm,0.8s						
HHC	Hu-ho-hao-te	90.82	315	eP	P	18 32 31.0	+0.9
HDA	Harding Lake	92.00	14	P	P	18 32 34.9	+0.1
CCB	Clear Creek Bu	92.02	13	P	P	18 32 34.6	-0.3
BCAR	Beaver Creek A	92.07	16	P	P	18 32 35.9	+0.7
IMAR	Indian Mountai	92.12	10	P	P	18 32 35.8	+0.5
IL31		92.32	13	P	P	18 32 36.1	-0.1
IL31				IAmb	IAmb	18 32 36.8	
	comp=Z,13nm,1.9s						
ILAR	Eielson Array	92.32	13	P	P	18 32 35.8	-0.6
	comp=Z,1.0nm,0.6s,baz=223,slow=5.7,SNR=8.5						
ILAR	Eielson Array	92.32	13	P	P	18 32 36.0	-0.3
ILAR	Eielson Array	92.32	13	P	P	18 32 36.0	-0.3
BILL	Bilibino	92.60	355	i P	P	18 32 37.2	-0.3
BILL				i *PP	pwP	18 34 32.6	-0.8
BILL				i		18 36 23.6	
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BILL	Bilibino	92.60	355	P	P	18 32 37.9	+0.4
BILL				IAmb	IAmb	18 32 38.9	
	comp=Z,5.1nm,0.9s						
DAWY	Dawson	93.50	17	P	P	18 32 42.6	+0.8
DAWY				IAmb	IAmb	18 33 50.1	
	comp=Z,20nm,1.8s						
EGAK	Eagle	93.64	16	P	P	18 32 43.0	+0.7
EGAK				IAmb	IAmb	18 32 43.5	
	comp=Z,3.6nm,0.8s						
LZH	Lanzhou	93.76	308	eP	P	18 32 45.3	+1.5
LZH				pP	pwP	18 34 40.3	-0.4
LZH				sP	sP	18 35 28.3	+1.8
YAK	Yakutsk	94.98	339	eP	P	18 32 48.3	-0.1
YAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NNA	Nana	96.63	106	⇑eP	P	18 32 54.9	-2.3
NNA				pmax	pmax		
	comp=Z,13nm,1.0s						
ULN	Ulaanbaatar	97.13	319	⇓eP	P	18 32 58.5	-0.2
ULN				pmax	pmax		
	comp=Z,6.0nm,2.9s						
SONM	Songino Array	97.51	319	P	Pdif	18 32 59.2	-1.2
	comp=Z,0.2nm,0.5s,baz=157,slow=4.1,SNR=2.7						
TIXI	Tiksi	101.94	345	⇓eP	Pdif	18 33 17.4	-2.0
ZALV	Zalesovo Beam	112.36	320	PKiKP	PKiKP	18 37 57.2	-1.5
	comp=Z,0.7nm,0.4s,baz=126,slow=0.8,SNR=4.8						
MK31	Makanchi Array	112.55	313	⇓ePKIKP	PKiKP	18 37 58.4	-1.0
MKAR	Makanchi Array	112.55	313	Pdiff	Pdif	18 34 08.9	+1.7
	comp=Z,0.2nm,0.8s,baz=144,slow=3.2,SNR=2.2						
MKAR				PKiKP	PKiKP	18 37 58.4	-1.0
	comp=Z,0.7nm,0.5s,baz=189,slow=1.1,SNR=12						
MKAR				SKP	SKPdf	18 40 45.2	-1.3
	comp=Z,0.8nm,0.7s,baz=90,slow=1.2,SNR=6.6						
MKAR				PKKPbc	PKKPbc	18 48 50.6	-0.1
	comp=Z,0.6nm,0.7s,baz=272,slow=3.7,SNR=5.4						
KSH	Kashi	115.65	304	PKP	PKiKP	18 38 08.3	+2.6
KSH				PP	PP	18 39 25.5	+7.6
KSH				sPKP		18 40 48.3	
KSH				SKS	SKSdf	18 44 34.0	+4.4
KSH				SKKS	SKKSac	18 45 28.5	+2.8
KURBB	Kurchatov Arra	115.65	316	PKP	PKPdf	18 38 04.2	-0.9
	comp=Z,1.1nm,0.4s,baz=110,slow=1.4,SNR=4.1						
AAK	Ala-Archa	117.28	307	PKP	PKPdf	18 38 07.8	-1.0
	comp=Z,2.4nm,1.1s,baz=304,slow=1.9,SNR=4.9						
AAK	Ala-Archa	117.28	307	⇑iPKIKP	PKPdf	18 38 08.6	-0.2
KK31	Karatay Array	120.25	307	PKIKP	PKPdf	18 38 14.2	-0.1
KK31	Karatay Array	120.25	307		PKPdf	18 38 14.2	-0.1
KKAR	Karatay Array	120.25	307	PKIKP	PKPdf	18 38 13.6	-0.7
KKAR	Karatay Array	120.25	307		PKPdf	18 38 13.6	-0.7
KKAR	Karatay Array	120.25	307		PKPdf	18 38 14.3	0.0
BVAR	Borovoye Array	120.85	319	PKP	PKPdf	18 38 14.8	-0.3
	comp=Z,2.4nm,0.4s,baz=118,slow=2.3,SNR=29						
BRVK	Borovoye	120.91	319	⇑iPKIKP	PKPdf	18 38 14.5	-0.7
ARU	Arti	127.30	324	PKP	PKPdf	18 38 27.1	-0.2
	comp=Z,2.4nm,0.4s,baz=27,slow=0.0,SNR=13						
ARU	Arti	127.30	324	i PKIKP	PKPdf	18 38 27.1	-0.2
ARU						18 40 35.0	
ARU						18 44 50.0	
ARU				SS	SS	18 57 01.8	-2.9
AKTO	Aktyubinsk	128.70	316	PKP	PKPdf	18 38 30.1	-0.1
	comp=Z,2.4nm,0.7s,baz=76,slow=3.5,SNR=14						
GEYT	Alibeck	129.33	300	PKP	PKPdf	18 38 32.0	+0.2
	comp=Z,1.7nm,0.7s,baz=344,slow=4.8,SNR=4.5						
GEYT				SKPbc	SKPbc	18 41 06.5	+0.6
	comp=Z,2.8nm,0.8s,baz=177,slow=3.0,SNR=7.0						
KIRV	Kirov	131.34	328	SKPbc	SKPbc	18 41 12.7	+0.2
	comp=Z,13nm,0.7s,baz=110,slow=3.1,SNR=7.7						
KIRV	Kirov	131.34	328	⇑ePKIKP	PKiKP	18 38 36.6	+0.7
LVZ	Lovozero	131.53	343	⇓iPKIKP	PKiKP	18 38 37.6	+1.4
ARCES	ARCESS Array B	132.28	348	PKhKP	PKPpre	18 38 26.9	
	comp=Z,1.8nm,0.9s,baz=50,slow=1.9,SNR=4.4						
ARCES				PKP	PKPdf	18 38 36.9	+0.4
	comp=Z,1.5nm,0.5s,baz=122,slow=1.6,SNR=11						
ARCES				SKPbc	SKPbc	18 41 16.2	+0.7
	comp=Z,5.9nm,0.8s,baz=37,slow=8.2,SNR=6.2						
FINES	FINESS Array B	138.85	341	PKhKP	PKPpre	18 38 40.4	
	comp=Z,1.5nm,0.5s,baz=44,slow=3.5,SNR=3.8						
FINES				PKP	PKiKP	18 38 50.2	-0.9
	comp=Z,1.5nm,0.4s,baz=36,slow=2.4,SNR=12						
FINES				SKPbc	SKPbc	18 41 36.4	+0.6
	comp=Z,5.7nm,0.6s,baz=45,slow=3.5,SNR=19						
VSR	Storozhevoye	139.83	322	⇑iPKIKP	PKPdf	18 38 51.7	+0.8
KBZ	Khabaz	140.17	310	PKhKP	PKPpre	18 38 45.5	
	comp=Z,1.1nm,0.9s,baz=223,slow=14,SNR=2.7						
KBZ				SKPbc	SKiKP	18 41 41.4	-0.8
	comp=Z,1.6nm,0.8s,baz=9.4,slow=5.0,SNR=4.4						
VSU	Vasula	140.97	338	d iPKIKP	PKiKP	18 38 57.9	+2.3
BCA	Borcka	141.65	307	⇑P	PKPdf	18 38 50.4	-4.2
NB2	NORSAR Subarra	142.46	351	PKP	PKPdf	18 38 51.4	-4.0
	comp=Z,1.3nm,0.7s,baz=8.7,slow=3.0						
NOA	NORSAR Array B	142.46	351	PKhKP	PKPpre	18 38 52.0	
	comp=Z,3.2nm,0.9s,baz=16,slow=4.6,SNR=12						
NOA				SKPbc	SKPbc	18 41 45.7	+0.5
	comp=Z,1.0nm,0.8s,baz=14,slow=4.1,SNR=3.5						
NAO01	NORSAR Array S	142.70	351		PKPpre	18 38 52.8	
KONO	Kongsberg	144.02	352	PKIKP	PKPbc	18 38 57.3	-0.1
KONO	Kongsberg	144.02	352		PKPbc	18 38 57.3	-0.1
AKASG	Malin Array Be	145.38	327	PKPbc	PKPbc	18 39 01.3	-0.5
	comp=Z,6.6nm,0.4s,baz=46,slow=4.2,SNR=60						
AKASG				SKPbc	SKiKP	18 41 53.0	+0.3
	comp=Z,3.5nm,0.6s,baz=44,slow=2.7,SNR=13						
AKBB	Malin Array Si	145.38	327	PKIKP	PKPdf	18 39 01.1	+0.4
AKBB	Malin Array Si	145.38	327		PKPdf	18 39 01.1	+0.4
KIEV	Kiev	145.40	327	PKIKP	PKPdf	18 39 01.0	+0.3
SUW	Suwalki	145.67	336	PKIKP	PKPbc	18 39 02.2	-0.4
SUW	Suwalki	145.67	336		PKPbc	18 39 02.2	-0.4
GAZ	Gaziantep	145.92	301		PKPbc	18 39 04.6	+0.7
DIKM	Dikmen	146.16	309	⇑P	PKPbc	18 39 03.9	-0.5
KLNR	Kaliningrad	146.24	339	⇑ePKIKP	PKPbc	18 39 03.3	-0.8
BZK	Bozkurt	146.93	311	⇓P	PKPbc	18 39 07.3	+0.9
BSD	Bornholm Skovb	147.31	344	i PKP2	PKPbc	18 39 07.0	0.0
BSD				pmax	pmax		
	comp=Z,4.0nm,0.4s						
SORM	Soroca	147.41	324	⇓P	PKPbc	18 39 07.4	-0.1
SORM	Soroca	147.41	324	⇓PKP2	PKPbc	18 39 07.4	-0.1
ILGA	Ilgaz	147.46	309		PKPbc	18 39 07.8	-0.3
MILM	Milestii Mici	147.87	322	⇑P	PKPbc	18 39 08.7	-0.1
BR131	Keskin Array S	147.96	307	PKP2	PKPbc	18 39 09.1	-0.3
BR131	Keskin Array S	147.96	307		PKPbc	18 39 09.1	-0.3
BRTR	Keskin Array B	147.96	307	PKPbc	PKPbc	18 39 09.3	-0.1
	comp=Z,5.3nm,0.7s,baz=143,slow=5.0,SNR=34						
BRTR				PKPab	PKPab	18 39 14.4	+0.5
	comp=Z,7.1nm,0.6s,baz=87,slow=3.5,SNR=23						
BRTR	Keskin Array B	147.96	307	PKP2	PKPbc	18 39 09.4	0.0
BRTR	Keskin Array B	147.96	307		PKPbc	18 39 09.4	0.0
MMAI	Mount Meron Ar	148.04	294	PKPbc	PKiKP	18 39 10.8	-0.3
	comp=Z,14nm,0.4s,baz=73,slow=5.7,SNR=52						
BEL	Belsk	148.28	336	ePKP	PKiKP	18 39 10.5	-0.3
BEL	Belsk	148.28	336	ePKP2	PKiKP	18 39 10.5	-0.3
ANTO	Ankara	148.53	307	⇓P	PKPbc	18 39 11.1	+0.4
ANTO	Ankara	148.53	307	⇓PKP2	PKPbc	18 39 11.1	+0.4
ANTO	Ankara	148.53	307		PKPbc	18 39 11.2	+0.5
EIL	Elat	148.67	288	PKPbc	PKPbc	18 39 11.8	+0.5
	comp=Z,6.4nm,0.5s,baz=340,slow=1.4,SNR=8.3						
JURR	Jurilovca	149.02	318	⇑P	PKPbc	18 39 11.7	+0.1
KWP	Kalwaria Pacla	149.18	331	ePKP	PKiKP	18 39 12.5	-0.3
KWP	Kalwaria Pacla	149.18	331		PKPbc	18 39 12.4	+0.5
TOPG	Topolog	149.26	319	⇓P	PKPbc	18 39 12.5	+0.3
BIZ	Bicaz	149.35	324	⇓P	PKiKP	18 39 13.1	-0.1
BUR08	Bucovina Ar. S	149.37	326		PKiKP	18 39 13.4	0.0
BURAR	Bucovina Array	149.38	326	⇓P	PKiKP	18 39 13.8	+0.4
BURAR	Bucovina Array	149.38	326	⇓PKP2	PKiKP	18 39 13.8	+0.4
BURAR	Bucovina Array	149.38	326		PKPbc	18 39 13.0	+0.4
BSEG	Bad Segeberg	149.41	348	ePKPbc	PKiKP	18 39 12.9	-0.2
	baz=23,slow=2.4						
CSS	Mathiatis	149.44	298		PKPbc	18 39 13.1	+0.1
MDUB	Mudurnu	149.45	309		PKPbc	18 39 12.9	-0.1
TIRR	Tirgusor	149.46	318		PKPbc	18 39 13.1	+0.4
HARR	Harsova	149.63	319	⇑P	PKiKP	18 39 14.0	+0.1
VRI	Vrincioaia	149.66	322	⇑P	PKPbc	18 39 13.3	+0.1
MANR	Mangalia	149.69	317	⇓P	PKiKP	18 39 14.2	+0.2
LEF	Lefka	149.76	299	⇑P	PKiKP	18 39 14.2	-0.3
BISRR	Bisoca	149.86	321	⇓P	PKiKP	18 39 14.7	+0.3
OJC	Ojcow	149.95	335	ePKP	PKiKP	18 39 14.1	-0.2
OJC	Ojcow	149.95	335		PKPbc	18 39 13.8	+0.1
MLR	Muntele Rosu	150.32	322	⇓P	PKiKP	18 39 15.4	-0.1
MLR	Muntele Rosu	150.32	322	⇓PKIKP	PKiKP	18 39 15.4	-0.1
DOPR	Dopca	150.34	323	⇑P	PKiKP	18 39 15.8	+0.4
TRPA	Tarpa	150.34	329	⇓P	PKiKP	18 39 15.0	-0.2
NIE	Niedzica	150.37	333	ePKP	PKiKP	18 39 16.0	+0.7
NIE	Niedzica	150.37	333	ePKIKP	PKiKP	18 39 16.0	+0.7
KSP	Ksiaz	150.69	339	ePKP	PKiKP	18 39 16.2	+0.3
KSP	Ksiaz	150.69	339	ePKIKP	PKiKP	18 39 16.2	+0.3
CJR	Cluj-Napoca	150.81	326	⇑P	PKiKP	18 39 16.2	-0.1
CJR	Cluj-Napoca	150.81	326	⇑PKIKP	PKiKP	18 39 16.2	-0.1
VOIR		150.86	323	⇓P	PKPbc	18 39 16.2	+0.1
VOIR		150.86	323	⇓PKIKP	PKPbc	18 39 16.2	+0.1
OSTC	Ostas	150.97	339	⇑ePKP	PKiKP	18 39 16.7	+0.2
UPC	Upice	151.07	339	⇑ePKP	PKiKP	18 39 16.7	0.0
UPC	Upice	151.07	339	ePKIKP	PKiKP	18 39 16.7	0.0
DPC	Dobruska-Polom	151.10	338	⇑ePKP	PKiKP	18 39 17.3	+0.5
DPC				ex	x	18 39 27.5	
DPC	Dobruska-Polom	151.10	338	ePKIKP	PKiKP	18 39 17.3	+0.5
DPC				e		18 39 27.5	
ARR	Arges	151.13	323	⇓P	PKiKP	18 39 18.2	+1.1
MORC	Moravsky Berou	151.16	336	⇓P	PKiKP	18 39 17.2	+0.3
MORC	Moravsky Berou	151.16	336	PKIKP	PKiKP	18 39 17.0	+0.1
MORC	Moravsky Berou	151.16	336	ePKP	PKiKP	18 39 17.2	+0.3
MORC				e		18 39 27.4	
MORC	Moravsky Berou	151.16	336		PKiKP	18 39 17.0	+0.1
KRLC	Kraliky	151.18	338	⇑ePKP	PKPbc	18 39 16.7	+0.1
KRLC				ePKPAB	PKPab	18 39 27.3	+0.5
KRLC	Kraliky	151.18	338	ePKIKP	PKPbc	18 39 16.7	+0.1
KRLC				e		18 39 27.3	
CLL	Collm	151.25	343	⇓iPKPbc	PKiKP	18 39 18.0	+1.0
	comp=Z,18nm,0.7s						
CLL				ePKPab	PKPab	18 39 28.0	+1.0
	comp=Z,6.0nm,1.0s						
CLL				e		18 41 27.0	
CLL	Collm	151.25	343	ePKPbc	PKiKP	18 39 18.0	+1.0
	baz=23,slow=2.4						
CLL	Collm	151.25	343	⇓iPKIKP	PKiKP	18 39 18.0	+1.0
CLL				e		18 39 28.0	
CLL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CLL				pmax	pmax		
	comp=Z,18nm,1.0s						
CLL	Collm	151.25	343		PKiKP	18 39 17.7	+0.7
CLZ	Clausthal	151.38	347	ePKPbc	PKiKP	18 39 17.6	+0.3
	baz=23,slow=2.4						
BRG	Berggiesshubel	151.39	342	⇓iPKP	PKiKP	18 39 17.4	+0.1
	comp=Z,14nm,0.5s						
BRG	Berggiesshubel	151.39	342	ePKP	PKPab	18 39 27.6	+0.1
	comp=Z,5.8nm,1.1s						
BRG	Berggiesshubel	151.39	342	ePKPbc	PKiKP	18 39 17.5	+0.1
	baz=23,slow=2.4						
BRG	Berggiesshubel	151.39	342	⇓iPKIKP	PKiKP	18 39 17.4	+0.1
BRG				e		18 39 27.6	
BRG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BRG				pmax	pmax		
	comp=Z,14nm,1.1s						
HUMR	Humele	151.45	321	⇑P	PKPbc	18 39 17.2	-0.1
FBE	Freiberg	151.51	342	ePKPbc	PKiKP	18 39 18.0	+0.4
	baz=23,slow=2.4						
PVCC	Panska Ves	151.51	341	⇑ePKP	PKiKP	18 39 18.1	+0.5
PVCC				ePKPAB	PKPab	18 39 28.6	+0.5
PVCC	Panska Ves	151.51	341	ePKIKP	PKiKP	18 39 18.1	+0.5
PVCC				e		18 39 28.6	
ELL	Elmali	151.68	303	PKIKP	PKiKP	18 39 18.5	-0.1
ELL	Elmali	151.68	303		PKiKP	18 39 18.5	-0.1
VYHS	Vyhne	151.70	333	ePKIKP	PKiKP	18 39 18.3	+0.2
VYHS				e		18 39 29.9	
VYHS	Vyhne	151.70	333	ePKP	PKiKP	18 39 18.3	+0.2
VYHS				e		18 39 29.9	
ELND	Elena	151.84	318	⇓P	PKiKP	18 39 18.8	+0.3
JAVC	Velka Javorina	151.87	335	ePKP	PKiKP	18 39 19.8	+1.4
JAVC				e		18 39 31.5	
VRAC	Vranov	151.89	337	⇓P	PKPab	18 39 30.7	+0.9
VRAC	Vranov	151.89	337	ePKP	PKiKP	18 39 18.5	+0.1
VRAC				e		18 39 30.8	

SIRR	Siria	152.09	327	⇑P	PKiKP	18 39 19.3	+0.4
GZR	Gura Zlata	152.11	325	⇑P	PKPbc	18 39 18.8	-0.1
GZR	Gura Zlata	152.11	325	⇑PKIKP	PKPbc	18 39 18.8	-0.1
KRUC	Moravsky	152.17	337	ePKP	PKiKP	18 39 19.2	+0.2
KRUC				e		18 39 31.7	
PLVB	Pleven	152.33	320	⇑P	PKiKP	18 39 19.9	+0.4
BZS	Buzias	152.56	326	⇑P	PKiKP	18 39 20.0	+0.1
BZS	Buzias	152.56	326	⇑PKIKP	PKiKP	18 39 20.0	+0.1
KHC	Kasperske Hory	153.05	340	⇑ePKP	PKiKP	18 39 21.0	+0.2
KHC				ePKPAB	PKPab	18 39 35.4	+0.7
KHC	Kasperske Hory	153.05	340	ePKIKP	PKiKP	18 39 21.0	+0.2
KHC				e		18 39 35.4	
GERES	GERESS Array B	153.26	340	PKPbc	PKPbc	18 39 21.0	-0.3
	comp=Z,1.0nm,0.6s,baz=27,slow=3.3,SNR=6.8						
GERES				PKPab	PKPab	18 39 36.0	+0.3
	comp=Z,1.0nm,0.6s,baz=22,slow=4.7,SNR=6.9						
CONA	Conrad Observa	153.31	336	i PKPab	PKPab	18 39 37.1	+1.2
	comp=Z,6.1nm,0.7s						
BCLA	Clavier	153.59	353	PKPab	PKPab	18 39 36.9	0.0
VTS	Vitosha	153.61	320	⇑P	PKPab	18 39 39.1	+1.5
VTS	Vitosha	153.61	320	⇑PKP2	PKPab	18 39 39.1	+1.5
VTS	Vitosha	153.61	320		PKPab	18 39 39.0	+1.5
BMRD	Maredsous	153.76	353	PKPab	PKPab	18 39 36.1	-1.5
MOA	Molln	153.95	338	i PKPab	PKPab	18 39 39.6	+1.0
	comp=Z,7.4nm,1.3s						
ARSA	Arzberg	154.01	336	i PKPab	PKPab	18 39 39.5	+0.7
	comp=Z,3.3nm,0.7s						
SOKA	Soboth	154.67	336	i PKPab	PKPab	18 39 42.2	+0.4
	comp=Z,6.9nm,1.2s						
BFO	Black Forest	155.13	347	PKP2	PKPab	18 39 43.1	-0.5
BFO	Black Forest	155.13	347		PKPab	18 39 43.1	-0.5
MYKA	Terra Mystica	155.22	338	i PKPab	PKPab	18 39 44.1	0.0
	comp=Z,11nm,1.0s						
WATA	Walderalm	155.25	341	i PKPab	PKPab	18 39 44.9	+0.6
	comp=Z,4.8nm,0.6s						
WTTA	Wattenberg	155.30	341	i PKPab	PKPab	18 39 45.4	+0.9
	comp=Z,3.8nm,0.5s						
RETA	Reutte	155.34	343	i PKPab	PKPab	18 39 45.4	+0.8
	comp=Z,5.8nm,0.7s						
MOTA	Moosalm	155.38	342	i PKPab	PKPab	18 39 45.8	+0.9
	comp=Z,7.6nm,1.1s						
DAVA	Damuels	155.76	344	i PKPab	PKPab	18 39 47.1	+0.5
	comp=Z,6.9nm,0.8s						
TORD	Torodi Ar. Bea	168.87	187	PKPab	PKPab	18 40 44.6	+0.1
	comp=Z,1.9nm,0.7s,baz=179,slow=4.3,SNR=9.1						

NIED ***27*** *18:46:00, 38.°40N×142.°20E, h35^{km}, Mw4.0 Best double couple: M$_0$1.13000×10^{15} NP1:ϕ_s188.00000°, δ84.00000°, λ-67.00000°. NP2:ϕ_s291.00000°, δ24.00000°, λ-165.00000°.*

JMA ***27*** *18:46:03.7±0.1, 38.°42N×142.°17E, h37^{km}±1^{km}, M4.0*

JMA Felt II J1.

NEIC ***27*** *18:46:05.2±0.5, 38.°39N±0.°08×142.°2E±0.°1, h51^{km}±10^{km}, mb4.3/7, Error ellipse: s-maj=17.0km s-min=10.0km az=116.0*

IDC ***27*** *18:46:06.0±2.0, 38.°41N×142.°27E, h51^{km}±18^{km}, mb3.6/15, mb1 3.8/20, mb1mx3.6/54, mbtmp3.9/20, ML3.6/3, MS3.0/5, Ms1 3.0/5, ms1mx2.7/50, Error ellipse: s-maj=18.5km s-min=10.4km az=113.0*

ISC 27 18:45:59.7±2.2**, 38.°34N**±0.°04×**142.°31E**±0.°06**, h5**^{km}±12^{km}**, n77, σ1.^{s}65**/83**, mb4.0**/19**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.66	268	P	Pb	18 46 14.9	+1.2
JIKH				S	Sb	18 46 22.5	-0.7
JIO	Ouri	0.76	279	P	Pb	18 46 16.4	+1.0
JIO				S	Sg	18 46 24.9	+0.7
JKMT	Kesennumamotoy	0.81	306	P	Pb	18 46 16.7	+0.6
JKMT				S	Sg	18 46 25.8	+0.2
OFUJ	Ofunato	0.89	326	P	Pb	18 46 18.0	+0.4
OFUJ				S	Sg	18 46 28.0	-0.4
JMK	Ichinoseki	1.05	306	P	Pb	18 46 20.3	0.0
JMK				eS	Sg	18 46 32.0	-1.4
JMM	Marumori	1.28	249	P	Pn	18 46 23.9	-0.3
JMM				eS	Sb	18 46 38.8	-2.3
JOU	Okura	1.29	272	P	Pn	18 46 24.3	-0.1
JOU				S	Sb	18 46 39.5	-1.9
JOM	Ohasama	1.38	325	P	Pn	18 46 25.4	-0.2
JOM				S	Sb	18 46 41.6	-2.3
JFK	Kawauchi	1.49	230	P	Pn	18 46 27.1	-0.1
JFK				S	Sn	18 46 44.3	-2.7
JYK	Kaneyama	1.63	291	P	Pn	18 46 29.0	0.0
JYK				S	Sn	18 46 48.3	-2.1
JRG	Rokugo	1.68	309	P	Pn	18 46 29.9	+0.2
JYS	Shirataka	1.77	267	P	Pn	18 46 31.3	+0.4
MAJO	Matsushiro	3.72	242		Pn	18 46 59.8	+2.0
MAT	Matsushiro	3.72	242	P	Pn	18 46 59.7	+1.9
MAT				S	Sb	18 47 47.4	-3.9
MJAR	Matsushiro Arr	3.72	242	P	Pn	18 47 01.3	+3.5
	2.1nm,0.3s,baz=53,slow=12,SNR=78						
MJAR				S	Sn	18 47 45.9	+3.9
	0.3nm,0.3s,baz=315,slow=40,SNR=1.5						
MJAR				LR	LR	18 48 40.7	
	comp=Z,293nm,18.2s,baz=75,slow=42						
MJAR	Matsushiro Arr	3.72	242		Pn	18 46 59.6	+1.8
MJB9	Matsu-Tunnel	3.72	243		Pn	18 46 59.8	+2.0
ERM	Erimo	3.73	10		Pn	18 46 59.9	+2.0
INU	Inuyama	5.19	236		Pn	18 47 21.0	+3.1
JHJ2	Mitsune	5.59	202	Pn	Pn	18 47 26.1	+2.5
JHJ	Hachijo jima 2	5.60	202	P	Pn	18 47 25.4	+1.8
	44nm,0.3s,baz=93,slow=2.9,SNR=6.6						
JHJ				S	Sn	18 48 24.7	-3.6
	22nm,0.3s,baz=90,slow=21,SNR=1.4						
ASAJ	Asahikawa	5.78	2	P	Pn	18 47 28.2	+2.2
	1.3nm,0.3s,baz=201,slow=16,SNR=18						
ASAJ				S	Sn	18 48 31.7	-0.9
	baz=29,slow=25,SNR=1.4						
USA0B	Ussuriysk Arra	9.72	310	Pn	Pn	18 48 22.3	+2.1
USRK	Ussuriysk Ar.	9.72	310	P	Pn	18 48 21.6	+1.5
	baz=119,slow=13,SNR=1.7						
USRK				LR	LR	18 51 54.7	
	comp=Z,118nm,20.6s,baz=174,slow=36						
JNU	Nakatsue	10.65	244	P	Pn	18 48 35.0	+2.2
	0.6nm,0.3s,baz=35,slow=3.7,SNR=6.7						
JNU	Nakatsue	10.65	244	Pn	Pn	18 48 35.2	+2.4
KSRS	Korea Array	11.40	270	LR	LR	18 52 35.4	
	comp=Z,94nm,20.7s,baz=76,slow=34						
KLR	Kul'dur	13.28	328	LR	LR	18 54 10.8	
	comp=Z,42nm,19.8s,baz=146,slow=37						
MA2	Magadan	21.93	12	LR	LR	18 59 20.8	
	comp=Z,32nm,18.6s,baz=330,slow=36						
HHC	Hu-ho-hao-te	23.77	286	eP	P	18 51 10.5	-2.6
SEY	Seymchan	25.38	11	P	P	18 51 28.6	+1.2
	1.1nm,0.6s,baz=223,slow=11,SNR=12						
SONM	Songino Array	27.68	302	P	P	18 51 48.4	-0.2
	0.5nm,0.5s,baz=104,slow=9.2,SNR=4.0						
ENH	Enshi	28.17	263	P	P	18 51 52.2	-0.9
H11N2	WAKE ISLAND Hy	28.25	124	T	T	19 22 12.4	
	baz=316,slow=75,SNR=514						
H11N1	WAKE ISLAND Hy	28.26	124	T	T	19 22 10.6	
	baz=316,slow=75,SNR=704						
H11N3	WAKE ISLAND Hy	28.27	124	T	T	19 22 15.3	
	baz=316,slow=75,SNR=781						
H11S1	WAKE ISLAND Hy	29.01	126	T	T	19 23 07.9	
	baz=318,slow=76,SNR=201						
H11S3	WAKE ISLAND Hy	29.01	126	T	T	19 23 08.1	
	baz=318,slow=76,SNR=260						
H11S2	WAKE ISLAND Hy	29.03	126	T	T	19 23 09.8	
	baz=318,slow=76,SNR=140						
KMI	Kunming	35.87	260	P	P	18 53 01.5	+0.7
WMQ	Urumqi	40.90	296	eP	P	18 53 43.0	+0.2
ZALV	Zalesovo Beam	41.57	311	P	P	18 53 46.6	-1.5
	1.0nm,0.3s,baz=84,slow=8.7,SNR=4.6						
ZALV	Zalesovo Beam	41.57	311	P	P	18 53 47.2	-0.9
CMAR	Chiang Mai Arr	42.52	255	P	P	18 53 55.6	-0.6
	0.4nm,0.7s,baz=47,slow=8.3,SNR=5.0						
MK31	Makanchi Array	44.04	301	P	P	18 54 07.2	-1.1
MKAR	Makanchi Array	44.04	301	P	P	18 54 07.7	-0.6
	0.4nm,0.4s,baz=83,slow=11,SNR=15						
MKAR	Makanchi Array	44.04	301	P	P	18 54 07.0	-1.2
MAKZ	Makanchi	44.25	301	P	P	18 54 08.7	-1.2
MAKZ				IAmb	IAmb	18 54 20.7	
	comp=Z,4.1nm,1.1s						
KURK	Kurchatov	45.70	307	P	P	18 54 20.1	-1.2
KURK				IAmb	IAmb	18 54 31.7	
	comp=Z,5.5nm,0.8s						
KURBB	Kurchatov Arra	45.77	307	P	P	18 54 21.2	-0.7
	comp=Z,3.0nm,0.4s,baz=81,slow=8.2,SNR=20						
TAPN	Taplejung	46.57	273	eP	P	18 54 28.8	-0.1
	comp=Z,4.2nm,0.4s						
ODAN	Odare	47.05	273	eP	P	18 54 32.0	-0.6
	comp=Z,7.1nm,0.5s						
JIRN	Jiri	47.61	274	eP	P	18 54 37.0	-0.1
	comp=Z,3.4nm,0.3s						
GUN	Gumba	47.74	275	eP	P	18 54 38.0	-0.1
	comp=Z,8.1nm,0.3s						
ILAR	Eielson Array	48.01	33	P	P	18 54 39.2	-0.1
	comp=Z,0.5nm,0.7s,baz=252,slow=6.6,SNR=4.4						
PKI	Pulchoki	48.27	275	eP	P	18 54 41.2	-0.9
	comp=Z,2.2nm,0.4s						
PKIN	Phulchoki	48.27	275	eP	P	18 54 41.3	-0.8
	comp=Z,4.4nm,0.4s						
DMN	Daman	48.49	275	eP	P	18 54 43.2	-0.6
	comp=Z,2.7nm,0.4s						
GKN	Gorkha	48.67	276	eP	P	18 54 44.8	-0.2
	comp=Z,8.9nm,0.4s						
DANN	Dangsing	49.20	277	eP	P	18 54 49.1	-0.1
	comp=Z,23nm,0.5s						
KSH	Kashi	50.53	293	P	P	18 55 03.5	+4.4
KSH				pP	sP	18 55 15.5	+15
KSH				PcP	PcP	18 56 20.3	+3.3
KSH				PcS	PcS	19 00 14.3	0.0
KSH				S	S	19 02 16.5	+2.8
PCA	Pinnacle	51.66	39	P	P	18 55 07.2	0.0
ABKAR	Akbulak array	57.65	310	P	P	18 55 49.5	-1.1
WR0	Warramunga Arr	58.45	189	P	P	18 55 56.4	-0.1
WR0				IAmb	IAmb	18 55 57.0	
	comp=Z,2.6nm,0.8s						
WRA	Warramunga Arr	58.45	189	P	P	18 55 56.4	-0.1
	comp=Z,2.3nm,0.4s,baz=6.4,slow=7.4,SNR=51						
WRA	Warramunga Arr	58.45	189	P	P	18 55 55.7	-0.8
AS31	Alice Springs	62.18	189	P	P	18 56 21.3	-0.7
AS31				IAmb	IAmb	18 56 24.4	
	comp=Z,0.6nm,0.5s						
ASAR	Alice Springs	62.18	189	P	P	18 56 22.4	+0.4
	comp=Z,1.7nm,0.7s,baz=5.1,slow=4.5,SNR=35						
ASAR	Alice Springs	62.18	189	P	P	18 56 21.6	-0.5
YKA	Yellowknife Ar	62.33	31	P	P	18 56 22.4	-0.1
	comp=Z,0.2nm,0.5s,baz=300,slow=5.2,SNR=4.0						
ARCES	ARCESS Array B	63.03	339	P	P	18 56 28.2	+1.0
	comp=Z,5.4nm,1.1s,baz=48,slow=11,SNR=1.9						
FINES	FINESS Array B	67.99	332	P	P	18 56 58.4	-0.9
	comp=Z,1.5nm,0.9s,baz=25,slow=7.8,SNR=3.5						
NB2	NORSAR Subarra	73.26	337	P	P	18 57 42.3	+11
	comp=Z,0.7nm,0.8s,baz=39,slow=6.2						
NOA	NORSAR Array B	73.26	337	P	P	18 57 31.3	-0.3
	comp=Z,0.3nm,0.7s,baz=38,slow=5.8,SNR=1.5						
PDAR	Pinedale Array	76.25	46	P	P	18 57 49.6	+0.2
	comp=Z,0.4nm,0.5s,baz=2.9,slow=3.6,SNR=5.8						
TXAR	Lajitas Array	88.77	53	P	P	18 58 54.6	-0.2
	comp=Z,0.3nm,0.6s,baz=303,slow=5.0,SNR=2.1						
H06N1	SOCORRO T-PHAS	90.89	65	T	T	20 41 41.9	
	SNR=7.3						

KEA 27 18:46:06.1±0.0**, 40.°89N**×**122.°55E, h0**^{km}**, ML3.1**/4**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUJ	Sinuiju	1.68	117	Pg	Pg	18 46 38.3	0.0
SUJ				Sg	Sg	18 47 00.1	0.0
PYS	Pyongsong	3.02	122	Pg	Pb	18 47 01.6	+0.9
PYS				Sg	Sb	18 47 39.6	+1.4
PYAG	Pyongyang	3.08	126	Pg	Pb	18 47 02.4	+0.7
PYAG				Sg	Sb	18 47 40.6	+0.8
HJU	Haeju	3.76	138	Pg	Pg	18 47 17.4	-0.8
HJU				Sg	Sb	18 48 03.0	+3.6
HHU	Hamhung	3.92	103	Sg	Sg	18 48 14.2	+2.1

IGIL ***27*** *18:54:55.6, 36.°92N×9.°20W, h29^{km}, ML1.2*

INMG ***27*** *18:54:55.6±1.6, 36.°91N×9.°18W, h28^{km}±4^{km}, ML1.4, Error ellipse: s-maj=8.9km s-min=5.3km az=84.0*

MDD ***27*** *18:54:55.4±1.4, 36.°94N×9.°22W, h30^{km}±8^{km}, mb3.7/1, mbLg1.9/1, Error ellipse: s-maj=12.1km s-min=11.2km az=130.0, PRXIMO*

ISC 27 18:54:53.6±2.9**, 37.°00N**±0.°09×**9.°13W**±0.°10**, h16**^{km}±10^{km}**, n29, σ0.^{s}64**/52**, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	Vila Bisbo	0.28	61	P	Pn	18 55 03.4	+0.3
	2.3nm,0.0s,SNR=7.9						
PFVI				S	Sn	18 55 09.5	+0.5
	14nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	0.28	61	ePg	Pn	18 55 03.4	+0.3
PFVI				eSg	Sn	18 55 09.4	+0.4
PFVI				A	A	18 55 10.2	
	23nm,0.4s						
MORF	Marmelete	0.49	51	eP	Pn	18 55 06.4	+0.4
MORF				eS	Sn	18 55 14.5	+0.1
MORF				AML	AML	18 55 14.8	
	comp=N,18nm,0.2s						
MORF	Marmelete	0.49	51	P	Pn	18 55 06.4	+0.4
MORF				S	Sn	18 55 14.5	+0.1
	comp=N,18nm,0.2s						
MORF	Marmelete	0.49	51	ePg	Pn	18 55 06.4	+0.4
MORF				eSg	Sn	18 55 14.6	+0.2
MORF				A	A	18 55 15.7	
	comp=N,12nm,0.1s						
PTEO	Sao Teotonio	0.64	31	P	Pn	18 55 08.5	+0.5
PTEO				S	Sn	18 55 18.4	+0.6
	comp=N,3.6nm,0.2s						
PTEO	Sao Teotonio	0.64	31	eP	Pn	18 55 08.5	+0.5
PTEO				eS	Sn	18 55 18.4	+0.6
PTEO				A	A	18 55 19.3	
	comp=N,7.2nm,0.2s						
PBDV	Barranco-do-Ve	0.99	75	P	Pg	18 55 13.1	+0.3
PBDV				S	Sn	18 55 26.2	-0.4
	comp=N,3.9nm,0.5s						
PBDV	Barranco-do-Ve	0.99	75	eP	Pg	18 55 13.1	+0.3
PBDV				eS	Sn	18 55 26.2	-0.4
PBDV				A	A	18 55 33.1	
	comp=N,3.9nm,0.5s						
PCVE	Castro Verde	1.08	54	P	Pg	18 55 14.8	+0.3
PCVE				S	Sg	18 55 29.9	+1.3
	comp=N,1.8nm,0.4s						
PCVE	Castro Verde	1.08	54	eP	Pg	18 55 14.8	+0.3
PCVE				eS	Sg	18 55 29.9	+1.3
PCVE				A	A	18 55 30.1	
	comp=N,1.8nm,0.4s						
MESJ	Messejana	1.11	41	eP	Pg	18 55 15.1	0.0
MESJ				eS	Sg	18 55 29.5	-0.2
MESJ				AML	AML	18 55 31.4	
	comp=N,2.1nm,0.2s						
MESJ	Messejana	1.11	41	P	Pg	18 55 15.1	0.0
MESJ				S	Sg	18 55 29.5	-0.2
	comp=N,2.1nm,0.2s						
MESJ	Messejana	1.11	41	eP	Pg	18 55 15.1	0.0
MESJ				eS	Sg	18 55 30.0	+0.3
MESJ				A	A	18 55 31.6	
	comp=N,3.5nm,0.4s						
PVAQ	Vaqueiros	1.20	70	P	Pg	18 55 16.0	-0.8
PVAQ				S	Sg	18 55 31.5	-1.0
	comp=N,2.5nm,0.3s						
PVAQ	Vaqueiros	1.20	70	eP	Pg	18 55 16.0	-0.8
PVAQ				eS	Sg	18 55 31.5	-1.0
PVAQ				A	A	18 55 37.3	
	comp=N,2.5nm,0.3s						
PNCL	Nicolau / Gran	1.21	23	P	Pg	18 55 16.8	-0.2
PNCL				S	Sn	18 55 31.9	-0.1
	comp=N,3.6nm,0.8s						
PNCL	Nicolau / Gran	1.21	23	eP	Pg	18 55 16.8	-0.2
PNCL				eS	Sn	18 55 31.9	-0.1
PNCL				A	A	18 55 35.8	
	comp=N,3.6nm,0.8s						
EGRO	El Granado	1.42	67	P	Pb	18 55 19.4	-0.3
	comp=N,0.2nm,0.0s,SNR=7.9						
EGRO				S	Sg	18 55 38.8	-0.7
	comp=N,0.6nm,0.1s,SNR=7.9						
EVO	Evora	1.77	30	Sn	Sn	18 55 45.3	-0.5
	comp=N,2.3nm,0.3s						
EVO	Evora	1.77	30	eSn	Sn	18 55 45.3	-0.5
EVO				A	A	18 55 46.4	
	comp=N,2.3nm,0.3s						
PMAFR	Mafra	1.96	357	eSn	Sn	18 55 50.6	+0.2
EMIN	Mina Concepcio	2.11	68	P	Pn	18 55 28.8	+0.6
	comp=N,0.3nm,0.1s,SNR=7.9						
EMIN				S	Sn	18 55 54.6	+0.6
	comp=N,0.2nm,0.1s,SNR=7.9						
PMTG	Montargil	2.19	19	Sn	Sn	18 55 55.1	-1.0
	comp=N,1.6nm,0.2s						
PMTG	Montargil	2.19	19	eSn	Sn	18 55 55.1	-1.0
PMTG				A	A	18 55 58.4	
	comp=N,1.6nm,0.2s						
PESTR	Estremoz	2.23	33	eSn	Sn	18 55 56.7	-0.5
EBAD	Badajoz	2.43	43	P	Pn	18 55 33.5	+0.9
	comp=N,0.3nm,0.1s,SNR=7.9						
EBAD				S	Sn	18 56 01.8	-0.2
	comp=N,0.5nm,0.1s,SNR=7.9						
PMRV	Marv??o	2.79	29	Pn	Pn	18 55 38.1	+0.5
PMRV				Sn	Sn	18 56 09.5	-1.4
	comp=N,1.5nm,0.2s						
PMRV	Marv??o	2.79	29	ePn	Pn	18 55 38.1	+0.5
PMRV				eSn	Sn	18 56 09.5	-1.4
PMRV				A	A	18 56 11.7	
	comp=N,1.5nm,0.2s						

IDC 27 19:15:05.7±55.0**, 21.°85S**×**174.°51W, h0**^{km}**, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.7**/30**, mbtmp3.9**/3**, Error ellipse: s-maj=1029.0km s-min=182.9km az=86.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	40.18	246	P	P	19 22 42.2	-1.6
	0.6nm,0.4s,baz=76,slow=12,SNR=3.1						
ASAR	Alice Springs	47.40	257	P	P	19 23 42.0	-0.1
	0.5nm,0.5s,baz=91,slow=6.9,SNR=19						
WRA	Warramunga Arr	47.65	262	P	P	19 23 44.9	+0.8
	2.4nm,0.6s,baz=98,slow=8.1,SNR=40						

ISC 27 19:26:45.9±1.0**, 50.°09N**±0.°04×**18.°42E**±0.°03**, h0**^{km}**, n14, σ0.^{s}64**/25**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.31	215	ePG	Pg	19 26 52.2	+0.4
OKC				eSG	Sg	19 26 56.3	+0.6
	comp=Z,38nm,0.6s						
MORC	Moravsky Berou	0.65	241	ePG	Pg	19 26 58.6	+0.3
MORC				eSG	Sg	19 27 07.6	+1.0
OJC	Ojcow	0.90	81	ePg	Pg	19 27 02.7	-0.4
OJC				eSg	Sg	19 27 15.6	+0.9
KRLC	Kraliky	1.05	270	ePG	Pg	19 27 05.5	-0.6
KRLC				eSG	Sg	19 27 20.5	+0.8
	comp=Z,24nm,1.4s						
JAVC	Velka Javorina	1.32	202	ePG	Pg	19 27 11.5	+0.2
DPC	Dobruska-Polom	1.37	282	ePG	Pg	19 27 12.1	-0.1
DPC				eSG	Sn	19 27 31.2	0.0
	comp=Z,10nm,0.5s						
NIE	Niedzica	1.39	118	ePg	Pg	19 27 12.6	0.0
NIE				eSg	Sn	19 27 32.3	+0.5
VRAC	Vranov	1.42	237	ePG	Pn	19 27 12.4	-0.6
VRAC				eSG	Sg	19 27 31.2	-0.3
OSTC	Ostas	1.49	289	eSG	Sn	19 27 35.6	+1.6
	comp=Z,6.6nm,0.8s						
UPC	Upice	1.60	286	eSG	Sg	19 27 37.4	+0.2
	comp=Z,7.0nm,0.8s						
VYHS	Vyhne	1.62	170	ePG	Pn	19 27 15.2	-0.5
VYHS				eSG	Sb	19 27 37.6	-0.1
KRUC	Moravsky	1.67	233	ePN	Pn	19 27 17.0	+0.6
KRUC				eSG	Sn	19 27 38.8	+0.3
SMOL	Smolenice	1.71	203	ePG	Pb	19 27 17.6	-0.5
SMOL				eSG	Sn	19 27 38.7	-0.7
KHC	Kasperske Hory	3.29	255	ePG	Pg	19 27 48.0	-0.9
KHC				eSG	Sg	19 28 31.8	+0.2
	comp=Z,2.7nm,0.6s						

IDC ***27*** *19:36:48.7±3.6, 34.°74N×70.°30E, h72^{km}±31^{km}, mb3.3/6, mb1 3.3/12, mb1mx3.1/48, mbtmp3.5/12, MS3.7/1, Ms1 3.7/1, ms1mx2.5/34, Error ellipse: s-maj=24.0km s-min=20.7km az=82.0*

NNC ***27*** *19:36:50.5±6.1, 35.°00N×70.°59E, h0^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=74.2km s-min=47.1km az=105.0*

ISC 27 19:36:44.3±0.9**, 34.°50N**±0.°07×**70.°36E**±0.°08**, h35**^{km}**, n28, σ2.^{s}30**/33**, mb3.6**/6**, 3C-3D, Southeastern Afghanistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DHRM	DHARAMSHALA	5.45	113	eP	Pn	19 38 07.3	+4.0
DHRM				eS	Sn	19 39 07.9	+2.9
DHRM				IAML		19 39 11.6	
	comp=N,60nm,0.8s						
DHRM				IAML		19 39 13.3	
	comp=E,127nm,0.8s						
SMLA	Simla	6.64	119	eP	Pn	19 38 20.6	+1.1
SMLA				eS	Sn	19 39 36.1	+2.2
SMLA				IAML		19 39 40.7	
	comp=E,68nm,0.5s						
SMLA				IAML		19 39 41.1	
	comp=N,52nm,0.5s						
KK31	Karatay Array	8.59	1	⇑Pn	Pn	19 38 48.6	+2.4
	comp=N,1.7nm,0.5s,baz=197,slow=15,SNR=24						
KK31				⇓Sn	Sn	19 40 23.4	+1.5
	comp=N,1.5nm,0.4s,baz=190,slow=21,SNR=7.1						
AAK	Ala-Archa	8.74	20	P	Pn	19 38 50.4	+2.0
	comp=N,0.3nm,0.3s,baz=172,slow=7.3,SNR=9.4						
AAK				S	Sn	19 40 25.4	-0.4
	baz=252,slow=23,SNR=1.5						
AAK	Ala-Archa	8.74	20	⇓Pn	Pn	19 38 51.8	+3.4
	comp=N,4.4nm,1.0s						
AAK				⇑Sn	Sn	19 40 27.6	+1.8
	comp=N,7.5nm,1.0s						
CHMS	Chumysh	9.15	21	⇑Pn	Pn	19 38 56.4	+2.6
	comp=N,2.8nm,0.7s						
CHMS				⇓Sn	Sn	19 40 33.1	-2.5
	comp=N,3.8nm,0.9s						
GEYT	Alibeck	10.46	293	P	Pn	19 39 13.5	+1.6
	comp=N,0.1nm,0.3s,baz=110,slow=12,SNR=2.0						
DANN	Dangsing	12.98	115	eP	Pn	19 39 45.3	-1.2
	comp=N,10nm,0.7s						
GKN	Gorkha	13.82	114	eP	Pn	19 39 56.1	-1.8
DMN	Daman	14.38	115	eP	Pn	19 40 02.9	-2.7
	comp=N,7.5nm,0.6s						
KKN	Kakani	14.41	114	eP	Pn	19 40 03.5	-2.6
	comp=N,5.8nm,0.6s						
PKIN	Phulchoki	14.61	114	eP	Pn	19 40 05.2	-3.6
	comp=N,8.0nm,0.6s						
PKI	Pulchoki	14.63	114	eP	Pn	19 40 05.9	-3.1
	comp=N,8.1nm,0.6s						
JIRN	Jiri	15.17	112	eP	Pn	19 40 14.1	-2.3
	comp=N,9.7nm,0.5s						
MKAR	Makanchi Array	15.23	33	P	Pn	19 40 16.9	+0.2
	comp=N,0.1nm,0.3s,baz=208,slow=11,SNR=7.7						
TAPN	Taplejung	16.50	111	eP	Pn	19 40 30.1	-3.2
	comp=N,9.9nm,0.9s						
ODAN	Odare	16.50	113	eP	Pn	19 40 28.5	-4.8
	comp=N,4.5nm,0.5s						
KURBB	Kurchatov Arra	17.18	18	P	Pn	19 40 40.9	-0.5
	comp=N,0.0nm,0.3s,baz=208,slow=10,SNR=6.2						
AKTO	Aktyubinsk	18.30	334	P	P	19 40 54.4	-0.8
	comp=N,0.1nm,0.3s,baz=153,slow=16,SNR=4.0						
BVAR	Borovoye Array	18.52	0	P	P	19 40 57.6	+0.1
	comp=N,0.3nm,0.3s,baz=168,slow=11,SNR=10.0						
BVAR				S	Sn	19 44 19.9	-3.8
	comp=N,0.0nm,0.3s,baz=199,slow=31,SNR=3.0						
ZALV	Zalesovo Beam	21.95	23	P	P	19 41 34.2	-0.5
	comp=N,0.8nm,0.3s,baz=214,slow=10,SNR=1.8						
SONM	Songino Array	29.93	53	P	P	19 42 50.3	+1.2
	comp=N,0.4nm,0.8s,baz=262,slow=9.8,SNR=2.2						
FINES	FINESS Array B	38.87	328	P	P	19 44 05.2	-0.8
	comp=N,0.5nm,0.6s,baz=108,slow=12,SNR=1.3						
NB2	NORSAR Subarra	45.68	324	P	P	19 45 00.3	-1.1
	comp=Z,0.4nm,0.5s,baz=98,slow=7.9						
NOA	NORSAR Array B	45.68	324	P	P	19 45 00.4	-1.0
	comp=Z,0.6nm,0.6s,baz=97,slow=7.8,SNR=5.5						
TGY	Tagaytay City	49.81	101	LR	LR	20 09 13.8	
	comp=Z,85nm,19.7s,baz=120,slow=39						
YKA	Yellowknife Ar	83.26	2	P	P	19 49 06.1	-0.8
	comp=Z,0.6nm,0.7s,baz=354,slow=4.9,SNR=12						
ASAR	Alice Springs	83.55	124	P	P	19 49 08.9	-0.1
	comp=Z,0.3nm,0.7s,baz=316,slow=5.2,SNR=8.9						

TUL ***27*** *20:05:16.6±1.6, 35.°90N±0.°02×97.°29W±0.°03, h5^{km}±7^{km}, ML3.2, Error ellipse: s-maj=3.0km s-min=2.4km az=86.0*

ANF ***27*** *20:05:16.6±0.7, 35.°84N×97.°28W, h0^{km}, ML3.7/8, Error ellipse: s-maj=11.4km s-min=2.8km az=164.0*

NEIC ***27*** *20:05:17.0±1.4, 35.°90N±0.°02×97.°29W±0.°02, h5^{km}±2^{km}, Error ellipse: s-maj=3.2km s-min=3.0km az=261.0*

ISC 27 20:05:16.9±1.1**, 35.°89N**±0.°03×**97.°29W**±0.°03**, h7**^{km}±10^{km}**, n54, σ0.^{s}93**/64**, Oklahoma**

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

OK005	Luther M Schoo	0.25	162		Pg	20 05 22.2	+0.3
ADOK	Arcadia Dam	0.25	196		Pg	20 05 22.1	+0.2
ADOK				Sg	Sg	20 05 25.8	+0.6
OKCFA	Oklahoma City	0.50	196		Pg	20 05 26.6	0.0
OKCFA				Sg	Sg	20 05 33.7	+0.7
OKCSW	OKLAHOMA CITY	0.50	194		Pg	20 05 26.7	+0.1
OKCSW				Sg	Sg	20 05 34.0	+0.7
FNO	Franklin	0.64	188		Pg	20 05 29.4	+0.1
FNO				Sg	Sg	20 05 38.5	+0.9
W35A	Tecumseh	0.81	155		Pg	20 05 31.9	-0.6
T35A	Sooner Cattle	1.20	31		Pg	20 05 39.3	-0.6
T35A				Sg	Sb	20 05 55.4	-0.2
TUL1	Leonard	1.21	89		Pg	20 05 38.9	-1.3
TUL1				Sg	Sg	20 05 55.7	-0.2
TUL1	Leonard	1.21	89	P	Pg	20 05 38.9	-1.3
	baz=270						
TUL1				S	Sg	20 05 55.7	-0.2
	baz=270						
U32A	Winter Ranch,	1.47	290		Pn	20 05 43.7	-0.1
WMOK	Wichita Mounta	1.68	227		Pn	20 05 47.2	+0.6
WMOK	Wichita Mounta	1.68	227	P	Pn	20 05 47.3	+0.6
	baz=46						
WMOK				S	Sn	20 06 09.2	+0.7
	baz=46						
X37A	Clayton	2.04	129		Pn	20 05 52.5	+1.0
U38A	Gravette	2.41	76		Pn	20 05 58.2	+1.4
Z35A	Perchaven, San	2.56	179	Pn	Pn	20 05 58.6	-0.1
HHAR	Hobbs	2.74	81		Pn	20 06 01.9	+0.6
R32A	Long Quarter,	2.77	336		Pn	20 06 02.9	+1.2
W39A	Magazine	2.94	103		Pn	20 06 04.7	+0.7
W39A	Magazine	2.94	103	P	Pn	20 06 04.7	+0.7
	baz=285						
W39A				S	Sn	20 06 41.1	+1.6
	baz=285						
Z38A	Mt. Pleasant	3.24	143		Pn	20 06 08.6	+0.4
MIAR	Mount Ida	3.32	113		Pn	20 06 10.8	+1.6
MIAR	Mount Ida	3.32	113	P	Pn	20 06 10.7	+1.4
	baz=295						
MIAR				S	Sn	20 06 50.0	+1.0
	baz=295						
CBKS	Cedar Bluff	3.51	327	Pn	Pn	20 06 12.8	+1.0
U40A	Yellville	3.62	81		Pn	20 06 12.7	-0.6
S39A	Bolivar	3.65	59		Pn	20 06 14.6	+0.8
AMTX	Amarillo	3.73	256		Pn	20 06 12.7	-2.3
AMTX	Amarillo	3.73	256	Pb	Pb	20 06 22.7	-0.4
	baz=73						
ABTX	Abilene, Hawle	3.80	212	Pn	Pn	20 06 14.6	-1.3
WHTX	Lake Whitney,	3.90	182		Pn	20 06 16.5	-0.6
WHTX	Lake Whitney,	3.90	182	Pb	Pb	20 06 24.7	-1.2
	baz=2.0						
X40A	Basin Creek Fa	3.91	110		Pn	20 06 18.1	+0.8
X40A	Basin Creek Fa	3.91	110	P	Pn	20 06 18.3	+1.0
	baz=292						
237A	Washetta, Mont	4.07	162	Pn	Pn	20 06 17.8	-1.7
WLAR	White Oak Lake	4.08	121	Pn	Pn	20 06 18.5	-1.1
WHAR	Wooly Hollow	4.12	97		Pn	20 06 21.0	+0.8
W41B	Gary Mavity, V	4.17	98		Pn	20 06 21.5	+0.6
W41B	Gary Mavity, V	4.17	98	P	Pn	20 06 21.5	+0.6
	baz=282						
FCAR	Ozark Folk Cen	4.19	89		Pn	20 06 22.4	+1.2
UALR	University of	4.19	104	Pn	Pn	20 06 22.4	+1.2
MGMO	Mountain Grove	4.23	71	Pn	Pn	20 06 22.5	+0.7
ETX02	Prairie Street	4.64	148	Pn	Pn	20 06 27.0	-0.3
R40A	Maddies Statio	4.67	58	Pn	Pn	20 06 28.1	+0.3
P38A	Dawn	4.77	37		Pn	20 06 30.3	+1.2
N33A	J Bar K, Exete	4.84	359	Pn	Pn	20 06 32.1	+2.0
MSTX	Muleshoe	4.90	249		Pn	20 06 30.2	-0.9
LCAR	Lake Charles	4.98	86	Pn	Pn	20 06 32.4	+0.4
435B	Jarrell	5.10	183	Pn	Pn	20 06 32.5	-1.2
T42A	Van Buren	5.12	75	Pn	Pn	20 06 33.5	-0.5
KSCO	Kaye Shedlock'	5.27	308		Pn	20 06 35.8	-0.3
CCM	Cathedral Cave	5.30	64		Pn	20 06 36.2	-0.2
BGNE	Belgrade	5.55	353	Pn	Pn	20 06 39.5	-0.4
PBMO	Poplar Bluff	5.61	79	Pn	Pn	20 06 40.4	-0.2
T25A	Trinidad	5.87	284	Pn	Pn	20 06 44.4	-0.1
OGNE	Ogallala	6.27	325		Pn	20 06 49.9	0.0

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*IDC **27** 20:10:42.2±1.0, 42°.41S×42°.55E, h0^{km}, mb3.8/7, mb1 3.9/8, mb1mx3.7/35, mbtmp3.8/8, ML3.4/1, MS3.6/13, Ms1 3.6/13, ms1mx3.4/32, Error ellipse: s-maj=57.0km s-min=20.8km az=35.0*

ISC 27 20:10:44.1±1.1**, 42°.4S**±0°.3×**42°.4E**±0°.3**, h13**^{km}**, n22, σ0^{s}.71**/11**, mb3.7**/7**, MS3.6**/11**, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOSA	Boshof	19.59	309	P	Pn	20 15 13.3	-0.1
	0.1nm,0.3s,baz=144,slow=15,SNR=2.1						
BOSA				LR	LR	20 21 42.9	
	comp=Z,73nm,18.2s,baz=158,slow=34						
SUR	Sutherland	19.85	293	LR	LR	20 20 58.9	
	comp=Z,90nm,21.6s,baz=132,slow=31						
LBTB	Lobatse	22.25	316	LR	LR	20 22 53.8	
	comp=Z,110nm,19.8s,baz=140,slow=33						
MATP	Matopo	24.89	328	P	P	20 16 05.6	-1.2
	7.9nm,1.2s,baz=145,slow=11,SNR=3.9						
MATP				LR	LR	20 24 32.4	
	comp=Z,126nm,18.6s,baz=164,slow=33						
MAW	Mawson	27.53	163	LR	LR	20 24 20.2	
	comp=Z,107nm,21.4s,baz=338,slow=30						
LSZ	Lusaka	29.71	331	LR	LR	20 27 03.7	
	comp=Z,98nm,21.0s,baz=145,slow=33						
VNDA	Vanda	54.75	167	LR	LR	20 42 27.8	
	comp=Z,33nm,18.7s,baz=267,slow=35						
H01W2	Cape Leeuwin H	54.97	108	T	T	21 19 43.6	
	baz=239,slow=75,SNR=91						
H01W3	Cape Leeuwin H	54.98	108	T	T	21 19 43.8	
	baz=239,slow=75,SNR=99						
H01W1	Cape Leeuwin H	54.99	108	T	T	21 19 43.0	
	baz=239,slow=75,SNR=83						
DBIC	Dimbokro	65.09	306	LR	LR	20 49 36.8	
	comp=Z,40nm,18.0s,baz=308,slow=36						
TORD	Torodi Ar. Bea	66.77	316	P	P	20 21 36.2	+1.0
	1.2nm,0.9s,baz=156,slow=6.0,SNR=3.9						
TORD				LR	LR	20 49 11.0	
	comp=Z,45nm,19.6s,baz=320,slow=35						
STKA	Stephens Creek	75.34	120	P	P	20 22 27.5	+0.3
	1.1nm,0.6s,baz=336,slow=8.9,SNR=2.9						
STKA				LR	LR	20 47 47.9	
	comp=Z,56nm,20.4s,baz=28,slow=30						
ASAR	Alice Springs	75.47	109	P	P	20 22 27.6	-0.6
	0.4nm,0.8s,baz=232,slow=3.9,SNR=4.9						
WRA	Warramunga Arr	78.18	106	P	P	20 22 43.5	0.0
	0.5nm,0.7s,baz=221,slow=4.8,SNR=11						
CMAR	Chiang Mai Arr	79.85	54	P	P	20 22 52.5	+0.1
	0.2nm,0.6s,baz=232,slow=4.4,SNR=2.1						
CMAR				LR	LR	20 55 51.7	
	comp=Z,44nm,18.2s,baz=202,slow=34						
BRTR	Keskin Array B	82.17	353	P	P	20 23 04.4	0.0
	0.3nm,0.4s,baz=149,slow=9.8,SNR=3.6						
KEST	Kesra	83.47	333	LR	LR	21 00 46.5	
	comp=Z,73nm,18.4s,baz=280,slow=36						
LPAZ	La Paz	93.58	244	LR	LR	21 01 15.1	
	comp=Z,36nm,18.8s,baz=313,slow=32						
TXAR	Lajitas Array	149.79	255	PKPbc	PKPbc	20 30 33.3	-0.6
	2.1nm,1.0s,baz=134,slow=3.6,SNR=6.3						
ULM	Lac du Bonnet	150.50	300	PKPbc	PKiKP	20 30 35.0	-0.4
	3.7nm,0.8s,baz=94,slow=3.9,SNR=8.3						
YKA	Yellowknife Ar	155.77	334	PKPab	PKPab	20 31 04.2	+0.9
	0.5nm,1.0s,baz=50,slow=4.7,SNR=5.7						

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*IDC **27** 20:16:52.7±26.0, 21°.47S×173°.62W, h0^{km}, mb4.1/4, mb1 4.3/4, mb1mx3.8/28, mbtmp4.1/4, Error ellipse: s-maj=486.1km s-min=154.1km az=75.0*

*NEIC **27** 20:17:11.8±1.2, 21°.7S±0°.3×175°.4W±0°.2, h46^{km}±17^{km}, mb4.4/12, Error ellipse: s-maj=42.5km s-min=22.6km az=151.0*

ISC 27 20:17:11.6±1.0**, 21°.7S**±0°.2×**175°.5W**±0°.2**, h35**^{km}**, n17, σ0^{s}.94**/17**, mb4.4**/11**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	5.81	64	Pn	Pn	20 18 35.4	0.0
KHZ	Kahutara	22.61	202	P	P	20 22 08.6	-0.6
LTZ	Lake Taylor	23.39	203	P	P	20 22 18.2	+1.0
LTZ				IAmb	IAmb	20 22 27.5	
	comp=Z,31nm,1.3s						
CTA	Charters Tower	35.74	265	P	P	20 24 08.6	+1.3
	comp=Z,4.7nm,0.6s,baz=98,slow=9.5,SNR=12						
STKA	Stephens Creek	39.43	246	P	P	20 24 38.8	+0.3
	comp=Z,1.1nm,0.5s,baz=97,slow=10,SNR=3.9						
STKA	Stephens Creek	39.43	246	P	P	20 24 38.5	0.0
BBOO	Buckleboo	44.16	245	P	P	20 25 17.0	-0.1
BBOO				IAmb	IAmb	20 25 38.0	
	comp=Z,19nm,1.4s						
AS31	Alice Springs	46.56	257	P	P	20 25 35.4	-0.9
ASAR	Alice Springs	46.56	257	P	P	20 25 35.2	-1.1
	comp=Z,2.3nm,0.7s,baz=99,slow=7.7,SNR=40						
WB0	Warramunga Arr	46.77	263	P	P	20 25 37.2	-0.7
WB0				IAmb	IAmb	20 25 38.9	
	comp=Z,2.2nm,0.8s						
WB2	Warramunga Arr	46.78	263	P	P	20 25 37.1	-0.9
WB2				IAmb	IAmb	20 25 40.0	
	comp=Z,3.1nm,1.1s						
WRAB	Tennant Creek	46.78	263	P	P	20 25 36.5	-1.5
WRAB				IAmb	IAmb	20 26 03.3	
	comp=Z,7.5nm,1.4s						
WRA	Warramunga Arr	46.79	263	P	P	20 25 37.7	-0.4
	comp=Z,1.0nm,0.7s,baz=100,slow=8.3,SNR=18						
WRA	Warramunga Arr	46.79	263	P	P	20 25 37.8	-0.3
FORT	Forrest	51.01	247	P	P	20 26 09.0	-1.3
KNRA	Kununurra	52.95	266	P	P	20 26 24.0	-0.9
KNRA				IAmb	IAmb	20 26 26.6	
	comp=Z,7.1nm,1.1s						
FITZ	Fitzroy Crossi	55.22	263	P	P	20 26 42.5	+1.1
FITZ				IAmb	IAmb	20 26 52.3	
	comp=Z,5.2nm,1.2s						

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*GCG **27** 20:36:03.3±0.8, 12°.23N×88°.42W, h50^{km}±155^{km}, MD4.5*

*IDC **27** 20:36:12.2±1.3, 13°.08N×88°.60W, h68^{km}±11^{km}, mb4.1/22, mb1 4.3/25, mb1mx4.1/45, mbtmp4.4/25, MS3.7/5, Ms1 3.7/5, ms1mx3.2/28, Error ellipse: s-maj=19.1km s-min=8.6km az=48.0*

*SNET **27** 20:36:12.3±1.6, 12°.89N×88°.83W, h55^{km}±13^{km}, ML4.8*

*NEIC **27** 20:36:13.5±1.7, 12°.90N±0°.06×88°.71W±0°.05, h84^{km}±5^{km}, Error ellipse: s-maj=11.2km s-min=1.6km az=216.0*

*UCR **27** 20:36:13.0±2.0, 12°.94N×88°.82W, h57^{km}±14^{km}, ML4.7, mb4.7(NEIC)*

*INET **27** 20:36:13.3, 12°.91N×88°.82W, h32^{km}, ML4.5*

ISC 27 20:36:12.5±0.7**, 12°.95N**±0°.05×**88°.78W**±0°.03**, h72**^{km}±5^{km}**, n595, σ1^{s}.18**/631**, mb4.7**/110**, 6C-19D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALJI	Alcalda de J	0.43	28	⇓*i*P	Pn	20 36 24.6	-0.3
ALJI				*e*S	Sn	20 36 34.1	+0.3
ALJI	Alcalda de J	0.43	28	⇓*i*P	Pn	20 36 24.6	-0.3
ALJI				*e*S	Sn	20 36 34.1	+0.3
COEB	Comit de Eme	0.60	24	⇓*i*P	Pn	20 36 26.5	-0.1
COEB				*e*S	Sn	20 36 36.7	-0.2
COEB				IAML		20 36 39.8	
	comp=Z,35µm,0.3s						
COEB	Comit de Eme	0.60	24	⇓*i*P	Pn	20 36 26.5	-0.1
COEB				*e*S	Sn	20 36 36.7	-0.2
COEB				IAML		20 36 39.8	
	comp=Z,35µm,0.3s						
JUCU	Jucuar¡n	0.60	60	⇓*i*P	Pn	20 36 26.3	-0.3
JUCU				*e*S	Sn	20 36 36.6	-0.2
JUCU				*e*S	Sn	20 36 36.9	0.0
JUCU	Jucuar¡n	0.60	60	⇓*i*P	Pn	20 36 26.3	-0.3
JUCU				*e*S	Sn	20 36 36.9	0.0
TECA	Tecapa	0.60	26	⇓*i*P	Pn	20 36 26.8	0.0
TECA	Tecapa	0.60	26	⇓*i*P	Pn	20 36 26.8	0.0
SNVI	San Vicente	0.66	355	⇑*i*P	Pn	20 36 28.1	+0.7
SNVI	San Vicente	0.66	355	⇑*i*P	Pn	20 36 28.1	+0.7
LCY	Lacayo	0.67	45	⇓*i*P	Pn	20 36 27.5	+0.2
LCY	Lacayo	0.67	45	⇓*i*P	Pn	20 36 27.5	+0.2
COEG	Centro de Oper	0.67	352	⇓*i*P	Pn	20 36 26.9	-0.4
COEG				*e*S	Sn	20 36 37.6	-0.7
COEG	Centro de Oper	0.67	352	⇓*i*P	Pn	20 36 26.9	-0.4
COEG				*e*S	Sn	20 36 37.6	-0.7
RANC	El Ranchito	0.68	45	⇑*i*P	Pn	20 36 27.7	+0.2
RANC	El Ranchito	0.68	45	⇑*i*P	Pn	20 36 27.7	+0.2
PACA	Pacayal	0.68	41	⇓*i*P	Pn	20 36 27.7	+0.2
PACA				IAML		20 36 42.4	
	comp=Z,74µm,0.3s						
PACA	Pacayal	0.68	41	⇓*i*P	Pn	20 36 27.7	+0.2
PACA				IAML		20 36 42.4	
	comp=Z,74µm,0.3s						
UESV	Universidad de	0.68	359	*e*P	Pn	20 36 27.3	-0.2
UESV				*e*S	Sn	20 36 38.5	+0.1
UESV	Universidad de	0.68	359	*e*P	Pn	20 36 27.3	-0.2
UESV				*e*S	Sn	20 36 38.5	+0.1
VSM	San Miguel	0.68	46	*e*P	Pn	20 36 27.9	+0.3
VSM	San Miguel	0.68	46	*e*P	Pn	20 36 27.9	+0.3
LFRS	El Faro	0.72	338	⇓*i*P	Pn	20 36 27.4	-0.5
LALI	Alcalda de L	0.75	315	*e*P	Pn	20 36 27.3	-0.9
LALI				*e*S	Sn	20 36 37.9	-1.8
LALI	Alcalda de L	0.75	315	*e*P	Pn	20 36 27.3	-0.9
LALI				*e*S	Sn	20 36 37.9	-1.8
LOMA	Loma Larga	0.79	331	*e*P	Pn	20 36 28.2	-0.5
LOMA				*e*S	Sn	20 36 39.9	-0.8
LOMA				IAML		20 36 41.2	
	comp=Z,24µm,0.3s						
LOMA	Loma Larga	0.79	331	*e*P	Pn	20 36 28.2	-0.5
LOMA				*e*S	Sn	20 36 39.9	-0.8
LOMA				IAML		20 36 41.2	
	comp=Z,24µm,0.3s						
AEIL	Aeropuerto Ilo	0.81	336	*e*P	Pn	20 36 28.9	0.0
AEIL				*e*S	Sn	20 36 41.1	+0.1
AEIL	Aeropuerto Ilo	0.81	336	*e*P	Pn	20 36 28.9	0.0
AEIL				*e*S	Sn	20 36 41.1	+0.1
LBRS	Las Brisas	0.83	342	*e*P	Pn	20 36 29.0	-0.1
UDBS	Universidad Do	0.84	334	*e*P	Pn	20 36 29.1	-0.2
UDBS				*e*S	Sn	20 36 41.2	-0.5
UDBS				IAML		20 36 43.3	
	comp=Z,25µm,0.4s						
UDBS	Universidad Do	0.84	334	*e*P	Pn	20 36 29.1	-0.2
UDBS				*e*S	Sn	20 36 41.2	-0.5
UDBS				IAML		20 36 43.3	
	comp=Z,25µm,0.4s						
SNET	Serv Nac Est T	0.86	329	*e*P	Pn	20 36 28.9	-0.5
SNET				IAML		20 36 43.0	
	comp=Z,14µm,0.3s						
SNET	Serv Nac Est T	0.86	329	*e*P	Pn	20 36 28.9	-0.5
SNET				IAML		20 36 43.0	
	comp=Z,14µm,0.3s						
SNET	Serv Nac Est T	0.86	329		Pn	20 36 29.1	-0.4
OPAM	Oficina de Pla	0.86	332	*e*P	Pn	20 36 29.2	-0.3
OPAM				*e*S	Sn	20 36 41.5	-0.6
OPAM	Oficina de Pla	0.86	332	*e*P	Pn	20 36 29.2	-0.3
OPAM				*e*S	Sn	20 36 41.5	-0.6
CUSC	Alcaldia de Cu	0.87	333	*e*P	Pn	20 36 29.4	-0.2
CUSC				*e*S	Sn	20 36 41.8	-0.4
CUSC	Alcaldia de Cu	0.87	333	*e*P	Pn	20 36 29.4	-0.2
CUSC				*e*S	Sn	20 36 41.8	-0.4
UESS	Universidad de	0.87	332	*e*P	Pn	20 36 29.6	0.0
UESS				*e*S	Sn	20 36 41.9	-0.4
UESS	Universidad de	0.87	332	*e*P	Pn	20 36 29.6	0.0
UESS				*e*S	Sn	20 36 41.9	-0.4
UEES	Universidad Ev	0.89	330	*e*P	Pn	20 36 29.4	-0.4
UEES				*e*S	Sn	20 36 41.6	-1.1
UEES	Universidad Ev	0.89	330	*e*P	Pn	20 36 29.4	-0.4
UEES				*e*S	Sn	20 36 41.6	-1.1
BOQS	Boqueron	0.92	328	⇓*i*P	Pn	20 36 30.2	-0.2
LCND	La Caada	0.94	67	*e*P	Pn	20 36 30.7	+0.4
LCND				*e*S	Sn	20 36 44.9	+1.3
LCND				IAML		20 36 48.1	
	comp=Z,30µm,0.3s						
LCND	La Caada	0.94	67	*e*P	Pn	20 36 30.7	+0.4
LCND				*e*S	Sn	20 36 44.9	+1.3
LCND				IAML		20 36 48.1	
	comp=Z,30µm,0.3s						
CNCH	Conchagua	0.98	70	⇓*i*P	Pn	20 36 31.2	+0.2
CNCH				*e*S	Sn	20 36 46.0	+1.3
CNCH	Conchagua	0.98	70	⇓*i*P	Pn	20 36 31.2	+0.2
CNCH				*e*S	Sn	20 36 46.0	+1.3
FAGO	Alcalda de S	0.99	41	*e*P	Pn	20 36 31.3	+0.3
FAGO				*e*P	Sn	20 36 45.4	+0.6
FAGO	Alcalda de S	0.99	41	*e*P	Pn	20 36 31.3	+0.3
CSGN	Cosiguina Volc	1.19	89	*e*P	Pn	20 36 34.8	+1.2
CSGN	Cosiguina Volc	1.19	89		Pn	20 36 34.4	+0.9
CEVE	Cerro Verde	1.20	317	*e*P	Pn	20 36 33.9	0.0
CEVE				IAML		20 36 54.5	
	comp=Z,19µm,0.3s						
CEVE	Cerro Verde	1.20	317	*e*P	Pn	20 36 33.9	0.0
CEVE				IAML		20 36 54.5	
	comp=Z,19µm,0.3s						
SBLS	San Blas	1.21	317	*e*P	Pn	20 36 34.0	+0.1
SBLS	San Blas	1.21	317	*e*P	Pn	20 36 34.0	+0.1
LLGN	La Laguna	1.22	352	*e*P	Pn	20 36 34.2	+0.2
LLGN				*e*P	Pn	20 36 34.4	+0.4
LLGN				*e*S	Sn	20 36 50.4	+0.4
LLGN				IAML		20 36 52.1	
	comp=Z,6µm,0.6s						
LLGN	La Laguna	1.22	352	*e*P	Pn	20 36 34.4	+0.4
LLGN				*e*S	Sn	20 36 50.4	+0.4
LLGN				IAML		20 36 52.1	
	comp=Z,6µm,0.6s						
SNJE	San Jose	1.22	319	*e*P	Pn	20 36 34.1	+0.1
SNJE	San Jose	1.22	319	*e*P	Pn	20 36 34.1	+0.1
RTR	El Retiro	1.27	318	*e*P	Pn	20 36 35.1	+0.4
RTR	El Retiro	1.27	318	*e*P	Pn	20 36 35.1	+0.4
UNIC	Universidad Ca	1.27	324	*e*P	Pn	20 36 35.0	+0.4
UNIC	Universidad Ca	1.27	324	*e*P	Pn	20 36 35.0	+0.4
MTO3	Montecristo	1.55	339	⇑*i*P	Pn	20 36 38.8	+0.4
MTO3	Montecristo	1.55	339	⇑*i*P	Pn	20 36 38.8	+0.4
CRIN	San Cristobal	1.70	98	*e*P	Pn	20 36 41.3	+1.0
TGUH	Tegucigalpa,Un	1.83	53		Pn	20 36 43.1	+1.0
IXG	Ixpaco	2.02	307	*e*P	Pn	20 36 44.7	0.0
IXG	Ixpaco	2.02	307	*e*P	Pn	20 36 44.7	0.0
IXG	Ixpaco	2.02	307	*e*P	Pn	20 36 45.8	+1.1
IXG				*e*S	Sn	20 37 19.3	+10
NBG	Las Nubes	2.23	317	*e*P	Pn	20 36 49.5	+1.9
NBG				*e*S	Sn	20 37 26.0	+12
MOMN	Momotombo	2.25	104	*e*P	Pn	20 36 46.0	-1.6
MOMN	Momotombo	2.25	104	*e*P	Pn	20 36 46.0	-1.6
COPN	Copaltepe	2.27	109	*e*P	Pn	20 36 45.9	-1.9
COPN	Copaltepe	2.27	109	*e*P	Pn	20 36 45.9	-1.9
PCG	Pacaya	2.28	309	*e*P	Pn	20 36 50.4	+2.1
PCG				*e*S	Sn	20 37 25.7	+10
MRL	Marmol	2.29	338	*e*P	Pn	20 36 49.5	+1.1
MRL	Marmol	2.29	338	*e*P	Pn	20 36 49.5	+1.1
MRL	Marmol	2.29	338	*e*P	Pn	20 36 50.1	+1.7
MRL				*e*S	Sn	20 37 27.9	+12
FUG	Fuego 3	2.50	307	*e*P	Pn	20 36 51.4	+0.3
FUG				*e*S	Sn	20 37 30.4	+10
APG	El Apazote	2.62	321	P	Pn	20 36 52.7	-0.1
	comp=Z,14nm,0.3s,baz=119,slow=7.5,SNR=14						
APG				S	Sn	20 37 31.3	+7.7
	comp=Z,30nm,0.3s,baz=59,slow=17,SNR=2.1						
APG				LR	LR	20 37 42.0	
	comp=Z,66nm,21.4s,baz=103,slow=34						
MATN	Matagalpa	2.78	90	*e*P	Pn	20 36 55.3	+0.4
ERG	Entre ros, C	3.09	299	*e*P	Pn	20 36 59.5	+0.5
ERG				*e*S	Sn	20 37 43.4	+8.5
STG3	Santiaguito 3,	3.23	303	*e*P	Pn	20 37 02.7	+1.7
STG3				*e*S	Sn	20 37 47.9	+9.4
ACON	Acoyapa	3.65	105	*e*P	Pn	20 37 06.5	-0.1
ACON	Acoyapa	3.65	105		Pn	20 37 04.9	-1.8
GBS3	Finca Las Img	3.90	123	*e*P	Pn	20 37 11.4	+1.3
THIG		3.91	300		Pn	20 37 10.8	+0.7
LAPC	Finca la Perla	3.93	123	*e*P	Pn	20 37 11.6	+1.1
GUAI	GUAI	4.16	129	*e*P	Pn	20 37 15.2	+1.5
COLC	Colonia	4.17	123	*e*P	Pn	20 37 15.0	+1.2
CUI	Cuipilapa	4.21	122	*e*P	Pn	20 37 16.6	+2.3
CUI				*e*S	Sn	20 38 02.2	-0.1
PLVR	Palo Verde	4.24	127	*e*P	Pn	20 37 17.0	+2.2
PLVR				*e*S	Sn	20 38 02.3	-0.9
JTS	Las Juntas de	4.59	125	P	Pn	20 37 20.7	+1.3
	comp=Z,7.9nm,0.3s,baz=13,slow=17,SNR=12						
JTS				S	Sn	20 38 10.7	-0.8
	comp=Z,8.9nm,0.3s,baz=26,slow=22,SNR=1.1						
JTS	Las Juntas de	4.59	125	*e*P	Pn	20 37 22.1	+2.6
JTS	Las Juntas de	4.59	125		Pn	20 37 21.1	+1.7
CCIG	Comitan	4.64	316		Pn	20 37 22.7	+2.4
CCIG	Comitan	4.64	316		Pn	20 37 22.9	+2.6
CEDE	Laguna Cedeo	4.68	121	*e*P	Pn	20 37 21.5	+0.7
ARE1	Arenal 1	4.68	121	*e*P	Pn	20 37 24.1	+3.4
PCIG		5.10	303		Pn	20 37 28.1	+1.7
CMIG	Matias Romero	7.19	306	P	Pn	20 37 55.4	+0.4
	comp=Z,2.5nm,0.3s,baz=118,slow=9.8,SNR=17						
CMIG				S	Sn	20 39 12.2	-3.1
	comp=Z,3.1nm,0.3s,baz=131,slow=10.0,SNR=1.9						
TEIG	Tepich	7.25	4	P	Pn	20 37 57.5	+1.6
	comp=Z,27nm,0.3s,SNR=38						
TEIG				LR	LR	20 41 05.1	
	comp=Z,272nm,21.9s,baz=257,slow=41						
TEIG	Tepich	7.25	4		Pn	20 37 58.2	+2.4
BRU2	Volcan	7.27	124	*e*P	Pn	20 37 58.8	+2.5
ICCO	Coco Island	7.55	167	⇓*e*P	Pn	20 38 03.2	+3.3
TLIG	Tlapa	10.50	297		Pn	20 38 41.5	+1.2
MTDJ	Mount Denham	12.03	63		Pn	20 39 04.3	+3.0
833A	Chaparral WMA,	18.22	329	P	Pn	20 40 22.1	+1.5
	baz=145						
SDV	Santo Domingo	18.27	101	P	P	20 40 20.2	-0.5
	comp=Z,5.1nm,0.3s,baz=285,slow=8.2,SNR=4.7						
SDV	Santo Domingo	18.27	101	P	P	20 40 20.8	0.0
344A	Westbrook Farm	18.50	355		Pn	20 40 26.6	+2.6
352A	Blakely	18.78	10	P	Pn	20 40 29.2	+1.9
TIGA	Tifton	19.01	14	Pn	Pn	20 40 31.5	+1.5
TIGA				IAmb	IAmb	20 40 32.2	
	comp=Z,42nm,0.8s						
TIGA	Tifton	19.01	14	P	Pn	20 40 31.6	+1.5
	baz=195						
435B	Jarrell	19.52	337	P	P	20 40 35.0	+0.8
435B				IAmb	IAmb	20 40 36.9	
	comp=Z,29nm,0.7s						
435B	Jarrell	19.52	337	P	P	20 40 35.1	+1.0
	baz=154						
152A	Waverly Hall	19.98	10	P	Pn	20 40 41.4	0.0
152A				IAmb	IAmb	20 40 42.8	
	comp=Z,22nm,0.7s						
LRAL	Lakeview Retre	20.06	4	P	Pn	20 40 42.4	0.0
LRAL	Lakeview Retre	20.06	4	P	Pn	20 40 42.4	0.0
	baz=185,SNR=6.0						
Z47A	Carrollton	20.17	2	P	Pn	20 40 43.2	-0.4
Z47A				IAmb	IAmb	20 40 46.6	
	comp=Z,36nm,0.7s						
JCT	Junction City	20.20	331	P	P	20 40 42.4	+0.8
JCT	Junction City	20.20	331	P	P	20 40 42.0	+0.3
	baz=147,SNR=5.7						
154A	Montrose	20.25	14	P	Pn	20 40 43.9	-0.8
Z50A	Ashland	20.38	7	P	Pn	20 40 46.3	+0.1
Z50A	Ashland	20.38	7	P	Pn	20 40 47.3	+1.1
	baz=188						
WHTX	Lake Whitney,	20.56	339	P	P	20 40 46.3	+0.8
WHTX				IAmb	IAmb	20 41 03.8	
	comp=Z,51nm,1.1s						
157A	Early Branch	20.89	19	P	Pn	20 40 52.3	+0.2
	baz=201						
GOGA	Godfrey	20.94	13	P	Pn	20 40 51.4	-1.3
GOGA				IAmb	IAmb	20 40 53.7	
	comp=Z,34nm,0.8s						
GOGA	Godfrey	20.94	13	P	Pn	20 40 52.0	-0.7
	baz=194,SNR=8.2						
HPIG		21.07	314	P	P	20 40 47.7	-3.5
HPIG				IAmb	IAmb	20 41 10.4	
	comp=Z,14nm,0.5s						
Y52A	Lilburn	21.26	11	P	P	20 40 53.0	+0.1
Y52A				IAmb	IAmb	20 40 57.3	
	comp=Z,19nm,0.7s						
Y52A	Lilburn	21.26	11	P	P	20 40 54.7	+1.8
	baz=192						
TXAR	Lajitas Array	21.38	322	P	P	20 40 56.0	+1.7
	comp=Z,6.9nm,0.7s,baz=142,slow=11,SNR=37						
TXAR				ScP	ScP	20 48 27.8	+1.1
	comp=Z,0.5nm,0.7s,baz=193,slow=3.9,SNR=4.6						
TXAR	Lajitas Array	21.38	322	P	P	20 40 55.7	+1.4
TX31	Lajitas Ar. Si	21.38	322	P	P	20 40 55.8	+1.4
TX32	Lajitas Array	21.38	322	P	P	20 40 55.8	+1.4
Z56A	Williston	21.38	17	P	P	20 40 56.6	+2.4
Z56A	Williston	21.38	17	P	P	20 40 57.5	+3.3
	baz=200						
OXF	Oxford	21.48	359	P	P	20 40 56.8	+1.6
OXF				IAmb	IAmb	20 41 32.6	
	comp=Z,23nm,0.8s						
OXF	Oxford	21.48	359	P	P	20 40 56.6	+1.4
	baz=178						
NHSC	New Hope	21.55	20	P	P	20 40 58.9	+2.9
	baz=203						
Z57A	Bowman	21.55	19	P	P	20 40 59.0	+2.9
	baz=202						
FPAL	Fort Paine	21.69	7	P	P	20 40 58.3	+0.8
FPAL				IAmb	IAmb	20 41 01.3	
	comp=Z,21nm,0.8s						
X40A	Basin Creek Fa	21.76	351	P	P	20 41 00.7	+2.5
	baz=169						
Y55A	Saluda	21.82	16	P	P	20 41 00.2	+1.3
	baz=198,SNR=5.0						
Y56A	Pelion	21.84	17	P	P	20 41 01.1	+2.1
	baz=200						
Z58A	St. Stephen	21.88	20	P	P	20 41 02.1	+2.6
	baz=204						

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MIAR  Mount Ida        21.94 349  P     P     20 41 01.1 +0.9
MIAR                              IAmb  IAmb  20 41 04.6
      comp=Z,20nm,0.7s
MIAR  Mount Ida        21.94 349  P     P     20 41 01.0 +0.9
      baz=167,SNR=11
PLAL  Pickwick Lake    21.95   2  P     P     20 41 01.2 +0.9
ABTX  Abilene, Hawle   21.97 335  P     P     20 41 02.7 +2.2
ABTX  Abilene, Hawle   21.97 335  P     P     20 41 02.5 +1.9
      baz=151
UALR  University of    21.97 352  P     P     20 41 01.7 +1.3
UALR                              IAmb  IAmb  20 41 04.1
      comp=Z,24nm,0.8s
HODGE Hodges           22.00  15  P     P     20 41 02.6 +1.8
HODGE                             IAmb  IAmb  20 41 03.5
      comp=Z,17nm,0.8s
X53A  Estanollee       22.03  12  P     P     20 41 01.6 +0.5
      baz=194,SNR=5.3
X54A  Belton           22.27  14  P     P     20 41 04.9 +1.1
      baz=196
SWET  Sewanee          22.32   6        P     20 41 04.5 +0.2
SWET                              IAmb  IAmb  20 41 10.9
      comp=Z,38nm,1.4s
Y57A  Sumter           22.32  19  P     P     20 41 05.8 +1.5
Y57A  Sumter           22.32  19  P     P     20 41 05.9 +1.6
      baz=202
W41B  Gary Mavity, V   22.35 353  P     P     20 41 05.5 +0.9
W41B  Gary Mavity, V   22.35 353  P     P     20 41 05.6 +1.1
      baz=171,SNR=6.6
W50A  Signal Mountai   22.38   7  P     P     20 41 04.9  0.0
X55A  Gracelyn & Ava   22.39  16  P     P     20 41 06.3 +1.3
      baz=198,SNR=5.3
Y58A  Scranton         22.45  20  P     P     20 41 06.9 +1.2
      baz=204
WHAR  Wooly Hollow     22.47 352  P     P     20 41 07.0 +1.2
X56A  White Oak        22.57  17  P     P     20 41 08.0 +1.1
      baz=200,SNR=6.1
BG3   Lake Jocassee    22.58  13  P     P     20 41 08.4 +1.3
W39A  Magazine         22.61 349  P     P     20 41 08.1 +0.8
W39A  Magazine         22.61 349  P     P     20 41 08.4 +1.1
      baz=167
PAULI Pauline          22.67  15  P     P     20 41 09.3 +1.2
PAULI                             IAmb  IAmb  20 41 09.9
      comp=Z,30nm,1.2s
CPCT  Cooper Cave      22.73   9  P     P     20 41 09.2 +0.6
V48A  Smith Brothers   22.76   4  P     P     20 41 09.7 +0.8
Y59A  Loris            22.80  22  P     P     20 41 10.1 +0.8
      baz=205
X57A  Johnson Farm,    22.82  19  P     P     20 41 10.9 +1.3
      baz=202
W54A  Cherokee Point   22.83  14  P     P     20 41 10.9 +1.2
      baz=196,SNR=11
BIRD  Birdtown, Kers   22.88  18  P     P     20 41 10.9 +0.7
BIRD                              IAmb  IAmb  20 41 12.1
      comp=Z,32nm,0.6s
FCAR  Ozark Folk Cen   23.04 353  P     P     20 41 12.5 +0.7
FCAR                              IAmb  IAmb  20 41 13.3
      comp=Z,18nm,0.5s
TKL   Tuckaleechee C   23.06  10  P     P     20 41 11.8 -0.2
      comp=Z,21nm,0.7s,baz=196,slow=11,SNR=9.5
TKL                               LR    LR    20 49 53.5
      comp=Z,187nm,19.5s,baz=204,slow=36
TKL   Tuckaleechee C   23.06  10  P     P     20 41 12.5 +0.5
TKL                               IAmb  IAmb  20 41 13.7
      comp=Z,22nm,0.8s
Y60A  Bolivia          23.06  23  P     P     20 41 12.9 +0.9
Y60A  Bolivia          23.06  23  P     P     20 41 12.8 +0.8
      baz=207
WVT   Waverly          23.10   2  P     P     20 41 12.5 +0.2
WVT   Waverly          23.10   2  P     P     20 41 11.9 -0.4
      baz=182
KMSC  Kings Mountain   23.10  16  P     P     20 41 13.2 +0.8
KMSC                              IAmb  IAmb  20 41 13.8
      comp=Z,22nm,0.6s
KMSC  Kings Mountain   23.10  16  P     P     20 41 12.9 +0.6
      baz=198,SNR=5.9
LCAR  Lake Charles     23.12 355  P     P     20 41 12.3 -0.2
CLTN  Cedars of Leba   23.15   5  P     P     20 41 12.4 -0.4
X58A  Rowland          23.15  20  P     P     20 41 13.5 +0.7
      baz=204
V53A  Saluda           23.25  12  P     P     20 41 14.7 +0.8
V53A                              IAmb  IAmb  20 41 16.6
      comp=Z,25nm,0.7s
W56A  Indian Trail     23.30  17  P     P     20 41 15.1 +0.9
      baz=200
W57A  Gilead           23.49  18  P     P     20 41 16.4 +0.4
      baz=202
WMOK  Wichita Mounta   23.51 339  P     P     20 41 16.7 +0.4
WMOK  Wichita Mounta   23.51 339  P     P     20 41 17.0 +0.7
      baz=155
FNO   Franklin         23.54 342  P     P     20 41 17.1 +0.6
V54A  Nebo             23.55  14  P     P     20 41 17.5 +0.9
      baz=197
STVI  Saint Thomas     23.55  74  P     P     20 41 15.6 -1.1
STVI                              IAmb  IAmb  20 41 33.9
      comp=Z,30nm,0.8s
U40A  Yellville        23.59 352  P     P     20 41 17.9 +0.9
U40A                              IAmb  IAmb  20 41 19.7
      comp=Z,34nm,0.8s
U40A  Yellville        23.59 352  P     P     20 41 17.5 +0.6
      baz=170,SNR=20
W58A  Raeford          23.61  20  P     P     20 41 17.4 +0.3
      baz=204,SNR=11
U49A  Red Boiling Sp   23.62   6  P     P     20 41 16.9 -0.2
X60A  Albert Glenn T   23.66  23  P     P     20 41 18.1 +0.6
      baz=207
HHAR  Hobbs            23.69 350  P     P     20 41 19.1 +1.3
HHAR                              IAmb  IAmb  20 41 21.1
      comp=Z,11nm,0.6s
PBMO  Poplar Bluff     23.77 357  P     P     20 41 18.4 -0.1
PBMO                              IAmb  IAmb  20 41 21.2
      comp=Z,18nm,0.6s
PCRV  Puerto La Cruz   23.81  94  P     P     20 41 19.3 +0.2
      comp=Z,15nm,0.6s,baz=198,slow=6.5,SNR=5.6
PLCV  Puerto La Cruz   23.86  94  P     P     20 41 19.3 -0.2
U38A  Gravette         23.93 349  P     P     20 41 20.2 +0.2
V56A  Mocksville       23.96  17  P     P     20 41 20.6 +0.4
      baz=200,SNR=6.9
T47A  Sharon Grove     23.98   3  P     P     20 41 20.0 -0.4
T42A  Van Buren        24.07 355  P     P     20 41 20.7 -0.5
MNTX  Cornudas Mount   24.11 323  P     P     20 41 23.4 +1.8
      baz=137
W60A  Pink Hill        24.18  23  P     P     20 41 23.1 +0.9
      baz=207
T49A  Edmonton         24.23   6  P     P     20 41 22.7 +0.1
      baz=188
V57A  Coltrane Farms   24.24  18  P     P     20 41 23.5 +0.8
      baz=202
U54A  Nelsons Funny    24.29  14  P     P     20 41 23.7 +0.4
U54A                              IAmb  IAmb  20 41 26.4
      comp=Z,24nm,0.6s
U54A  Nelsons Funny    24.29  14  P     P     20 41 24.0 +0.7
      baz=196
MGMO  Mountain Grove   24.30 353  P     P     20 41 23.4 +0.1
V58A  Windy Hill, Pi   24.36  19  P     P     20 41 24.2 +0.4
V58A  Windy Hill, Pi   24.36  19  P     P     20 41 24.1 +0.3
      baz=203,SNR=10.0
U55A  TA2, Sparta      24.46  15  P     P     20 41 25.4 +0.5
      baz=198
MSTX  Muleshoe         24.50 331  P     P     20 41 25.4 +0.1
MSTX                              IAmb  IAmb  20 41 26.8
      comp=Z,23nm,0.7s
MSTX  Muleshoe         24.50 331  P     P     20 41 25.1 -0.1
      baz=145,SNR=11
W61A  Ground Anchor    24.57  24  P     P     20 41 26.5 +0.9
      baz=208
V59A  Middlesex        24.63  21  P     P     20 41 26.9 +0.6
      baz=205
S44A  Carbondale       24.65 359  P     P     20 41 26.3 -0.1
S44A                              IAmb  IAmb  20 41 27.2
      comp=Z,14nm,0.7s
T54A  Tazewell         24.86  14  P     P     20 41 29.1 +0.5
      baz=197
U57A  Blanch           24.88  18  P     P     20 41 29.2 +0.7
      baz=202
S49A  Springfield      24.93   7  P     P     20 41 28.4 -0.6
      baz=188
S39A  Bolivar          24.97 351  P     P     20 41 29.4  0.0
V60A  Jim Taylor Roa   24.98  23  P     P     20 41 31.0 +1.5
      baz=207
U58A  Oxford           25.09  20  P     P     20 41 31.0 +0.5
      baz=204
CCM   Cathedral Cave   25.10 355  P     P     20 41 30.4 -0.2
CCM                               IAmb  IAmb  20 41 31.7
      comp=Z,27nm,0.7s
CCM   Cathedral Cave   25.10 355  P     P     20 41 30.8 +0.2
      baz=174
T55A  Pulaski          25.11  15  P     P     20 41 31.1 +0.4
      baz=198
WCI   Wyandotte Cave   25.27   5  P     P     20 41 32.1 -0.1
WCI                               IAmb  IAmb  20 41 32.6
      comp=Z,22nm,0.7s
WCI   Wyandotte Cave   25.27   5  P     P     20 41 31.9 -0.2
      baz=186
BLA   Blacksburg       25.29  16  P     P     20 41 32.6 +0.2
      baz=199
T57A  Hurt             25.42  18  P     P     20 41 34.0 +0.5
T57A  Hurt             25.42  18  P     P     20 41 34.1 +0.6
      baz=202
R40A  Maddies Statio   25.43 354  P     P     20 41 33.5  0.0
R49A  Shelbyville      25.44   7  P     P     20 41 32.9 -0.8
R49A                              IAmb  IAmb  20 42 20.8
      comp=Z,22nm,1.2s
R49A  Shelbyville      25.44   7  P     P     20 41 32.9 -0.8
      baz=188
R50A  Paris            25.54   8  P     P     20 41 34.6 +0.1
      baz=190
T58A  Grand View Acr   25.60  19  P     P     20 41 35.3 +0.2
      baz=203
S54A  Dingess, Beckl   25.63  14  P     P     20 41 35.3 -0.1
S54A                              IAmb  IAmb  20 42 08.1
      comp=Z,32nm,1.4s
U60A  Pendleton        25.64  22  P     P     20 41 36.3 +0.8
      baz=207
OLIL  Olney            25.69   1  P     P     20 41 35.9  0.0
Q44A  Meyer Farm, Va   25.85 360  P     P     20 41 37.2 -0.1
Q44A                              IAmb  IAmb  20 41 55.4
      comp=Z,14nm,0.8s
T59A  Double "B" Far   25.95  21  P     P     20 41 38.8 +0.5
T59A                              IAmb  IAmb  20 41 40.4
      comp=Z,12nm,0.7s
T59A  Double "B" Far   25.95  21  P     P     20 41 38.5 +0.2
      baz=205
R54A  Victor           26.07  14  P     P     20 41 39.4  0.0
      baz=197
121A  Cookes Peak, D   26.13 321  P     P     20 41 42.9 +2.7
      baz=134
Q49A  Aurora           26.18   7  P     P     20 41 39.9 -0.4
      baz=188
S57A  Dark Hollow, R   26.22  18  P     P     20 41 40.3 -0.4
      baz=202
R55A  Marlinton        26.38  15  P     P     20 41 42.4 +0.2
R55A                              IAmb  IAmb  20 41 43.5
      comp=Z,13nm,0.6s
R55A  Marlinton        26.38  15  P     P     20 41 42.3  0.0
      baz=199
Q51A  Peebles          26.41  10  P     P     20 41 41.9 -0.6
Q51A  Peebles          26.41  10  P     P     20 41 42.2 -0.3
      baz=192
Q52A  Bidwell          26.54  11  P     P     20 41 43.7  0.0
      baz=194
P48A  Milroy           26.57   6  P     P     20 41 42.6 -1.3
P48A                              IAmb  IAmb  20 42 29.6
      comp=Z,47nm,1.7s
P48A  Milroy           26.57   6  P     P     20 41 43.1 -0.8
      baz=187
Q53A  Leroy            26.60  13  P     P     20 41 43.8 -0.3
      baz=196
P40A  Paris            26.63 354  P     P     20 41 44.0 -0.4
P40A                              IAmb  IAmb  20 41 45.2
      comp=Z,23nm,0.8s
R56A  Bull Pasture M   26.69  17  P     P     20 41 45.6 +0.5
      baz=200
R58B  Mineral          26.74  19  P     P     20 41 45.5 +0.2
R58B  Mineral          26.74  19  P     P     20 41 46.1 +0.7
      baz=204
R57A  Stanardsville    26.84  18  P     P     20 41 46.8 +0.5
      baz=202,SNR=5.9
Q54A  Coxs Mills       26.87  14  P     P     20 41 46.6  0.0
Q54A  Coxs Mills       26.87  14  P     P     20 41 46.4 -0.1
      baz=197,SNR=8.9
P38A  Dawn             26.90 352  P     P     20 41 46.9 +0.1
P38A                                    pP    20 42 04.7 +1.0
P38A                              IAmb  IAmb  20 42 05.4
      comp=Z,24nm,0.8s
S60A  Water View       26.93  22  P     P     20 41 48.1 +1.1
      baz=207
R58A  Rapidan          27.01  19  P     P     20 41 48.3 +0.5
      baz=203
Q55A  Buckhannon       27.06  15  P     P     20 41 48.4  0.0
      baz=199
O44A  Mansfield        27.10   1  P     P     20 41 48.1 -0.5
O44A                              IAmb  IAmb  20 41 48.6
      comp=Z,14nm,0.6s
ANMO  Albuquerque      27.12 327  P     P     20 41 50.2 +1.1
      comp=Z,1.6nm,0.5s,baz=143,slow=13,SNR=6.0
ANMO  Albuquerque      27.12 327  P     P     20 41 50.5 +1.4
ANMO  Albuquerque      27.12 327  P     P     20 41 51.1 +1.9
      baz=140
CBN   Corbin Frederi   27.12  20  P     P     20 41 49.3 +0.5
      baz=205
P52A  Corning          27.22  11  P     P     20 41 49.8 +0.1
      baz=194
P53A  Whipple          27.23  13  P     P     20 41 49.9 +0.2
P53A                              IAmb  IAmb  20 41 51.2
      comp=Z,17nm,0.9s
P53A  Whipple          27.23  13  P     P     20 41 50.3 +0.5
      baz=196
Q56A  Snyder Ridge,    27.34  16  P     P     20 41 51.7 +0.9
Q56A                              IAmb  IAmb  20 42 38.5
      comp=Z,48nm,1.4s
Q56A  Snyder Ridge,    27.34  16  P     P     20 41 51.8 +0.9
      baz=200
SFIN  Lafayette        27.36   3  P     P     20 41 50.0 -1.0
      baz=183
O50A  Cable            27.47   9  P     P     20 41 51.7 -0.2
      baz=191
P54A  Burton           27.54  14  P     P     20 41 53.0 +0.4
      baz=198
Q57A  Strasburg        27.56  18  P     P     20 41 53.1 +0.4
      baz=202
P55A  Reedsville       27.61  15  P     P     20 41 53.2  0.0
      baz=199
O51A  Pataskala        27.63  10  P     P     20 41 53.1 -0.3
      baz=193
ACSO  Alum Creek Sta   27.65  10  P     P     20 41 53.2 -0.3
ACSO                              IAmb  IAmb  20 41 54.0
      comp=Z,16nm,0.9s
ACSO  Alum Creek Sta   27.65  10  P     P     20 41 53.5  0.0
      baz=192
Q58A  Fox Den Farm,    27.70  19  P     P     20 41 54.4 +0.5
      baz=204
N41A  Harden Midland   27.71 357  P     P     20 41 53.6 -0.4
N41A                              IAmb  IAmb  20 41 54.1
      comp=Z,12nm,0.6s
O52A  Adamsville       27.74  11  P     P     20 41 54.3 -0.1
O52A                              IAmb  IAmb  20 41 54.8
      comp=Z,17nm,0.6s
O52A  Adamsville       27.74  11  P     P     20 41 54.3 -0.1
      baz=194
MCWV  Mont Chateau     27.75  15  P     P     20 41 54.3 -0.1
MCWV                              IAmb  IAmb  20 42 33.6
      comp=Z,30nm,1.8s
MCWV  Mont Chateau     27.75  15  P     P     20 41 54.7 +0.3
      baz=199
T25A  Trinidad         27.86 333  P     P     20 41 57.3 +1.6
T25A                              IAmb  IAmb  20 41 58.4
      comp=Z,12nm,0.7s
T25A  Trinidad         27.86 333  P     P     20 41 56.9 +1.2
      baz=146,SNR=6.3
P56A  Dayton Farm, R   27.87  17  P     P     20 41 55.9 +0.4
      baz=201
N47A  Urbana           27.95   5  P     P     20 41 55.4 -0.8
      baz=186
N48A  Decatur          28.00   6  P     P     20 41 55.9 -0.7
      baz=188
O53A  New Philadelph   28.00  12  P     P     20 41 56.8 +0.2
      baz=196
P57A  Homestead Farm   28.09  18  P     P     20 41 58.1 +0.6
P57A                              IAmb  IAmb  20 41 59.3
      comp=Z,19nm,0.7s
P57A  Homestead Farm   28.09  18  P     P     20 41 58.0 +0.6
      baz=202,SNR=7.1
O54A  Avella           28.12  14  P     P     20 41 57.7  0.0
O54A                              IAmb  IAmb  20 41 58.2
      comp=Z,15nm,0.8s
O54A  Avella           28.12  14  P     P     20 41 57.7  0.0
      baz=197
N50A  Nevada           28.15   9  P     P     20 41 58.0  0.0
      baz=192
N49A  Columbus Grove   28.16   7  P     P     20 41 56.8 -1.2
N49A  Columbus Grove   28.16   7  P     P     20 41 57.6 -0.4
      baz=189
P58A  Pank, Wackersv   28.32  19  P     P     20 41 59.7 +0.3
      baz=204
SDMD  Soldier’s Deli   28.39  20  P     P     20 42 00.5 +0.4
SDMD                              IAmb  IAmb  20 42 01.4
      comp=Z,11nm,0.7s
N51A  Ashland          28.42  10  P     P     20 41 59.8 -0.6
      baz=193
M47A  Cromwell         28.44   5  P     P     20 41 59.4 -1.1
      baz=186
N52A  McGinn’s Farm,   28.45  11  P     P     20 42 00.3 -0.3
      baz=194
N53A  Lisbon           28.61  13  P     P     20 42 01.8 -0.4
N53A                              IAmb  IAmb  20 42 02.4
      comp=Z,14nm,0.5s
N53A  Lisbon           28.61  13  P     P     20 42 01.7 -0.4
      baz=196
P59A  Jarrettsville    28.71  20  P     P     20 42 03.6 +0.7
      baz=206
KSCO  Kaye Shedlock’   28.71 337  P     P     20 42 03.9 +0.8
KSCO  Kaye Shedlock’   28.71 337  P     P     20 42 03.9 +0.8
      baz=151
M50A  Fremont          28.79   9  P     P     20 42 03.3 -0.3
M50A  Fremont          28.79   9  P     P     20 42 03.1 -0.5
      baz=192
SDCO  Great Sand Dun   28.85 332  P     P     20 42 05.2 +0.5
SDCO  Great Sand Dun   28.85 332  P     P     20 42 06.0 +1.4
      baz=144
O57A  Amberson         28.87  18  P     P     20 42 05.0 +0.6
      baz=203
N54A  Moraine State    28.95  14  P     P     20 42 05.2 +0.1
N54A                              IAmb  IAmb  20 42 05.6
      comp=Z,17nm,0.6s
N54A  Moraine State    28.95  14  P     P     20 42 04.9 -0.2
      baz=198,SNR=5.0
O58A  Lewisberry       29.01  19  P     P     20 42 05.9 +0.3
      baz=204
SCIA  State Center     29.11 353  P     P     20 42 06.8 +0.4
SCIA                              IAmb  IAmb  20 42 07.0
      comp=Z,13nm,0.5s
SCIA  State Center     29.11 353  P     P     20 42 06.6 +0.2
      baz=171
L48A  N Adams          29.13   7  P     P     20 42 06.6 -0.2
      baz=189
P60A  Greenville       29.16  21  P     P     20 42 07.7 +0.8
P60A                              IAmb  IAmb  20 42 08.3
      comp=Z,11nm,0.8s
P60A  Greenville       29.16  21  P     P     20 42 07.7 +0.8
      baz=207
PAGS  Pennsylvania G   29.17  19  P     P     20 42 07.2 +0.1
PAGS                              IAmb  IAmb  20 42 08.8
      comp=Z,11nm,0.8s
SSPA  Standing Stone   29.19  17  P     P     20 42 07.4 +0.1
      baz=202
M53A  WI Miller and    29.25  13  P     P     20 42 07.8  0.0
      baz=196
N56A  West Decatur     29.34  16  P     P     20 42 08.8 +0.3
      baz=201
L49A  Milan            29.38   8  P     P     20 42 08.3 -0.6
      baz=190
O59A  Robesonia        29.42  20  P     P     20 42 09.6 +0.3
      baz=205
L50A  Kingsville       29.45   9  P     P     20 42 09.1 -0.4
      baz=192
S22A  4UR Ranch, Cre   29.48 330  P     P     20 42 11.6 +1.4
S22A  4UR Ranch, Cre   29.48 330  P     P     20 42 11.8 +1.6
      baz=142,SNR=12
M54A  Oil Creek Stat   29.54  14  P     P     20 42 10.5 +0.2
M54A                              IAmb  IAmb  20 42 11.1
      comp=Z,10nm,0.7s
M54A  Oil Creek Stat   29.54  14  P     P     20 42 10.5 +0.2
      baz=198
M55A  Ridgway          29.73  15  P     P     20 42 11.8 -0.2
M55A                              IAmb  IAmb  20 42 12.4
      comp=Z,11nm,0.8s
M55A  Ridgway          29.73  15  P     P     20 42 11.8 -0.2
      baz=200
K38A  Parkersburg      29.79 354  P     P     20 42 12.0 -0.5
L53A  Girard           29.84  13  P     P     20 42 12.2 -0.7
      baz=197
JFWS  Jewell Farm      29.88 358  P     P     20 42 12.6 -0.7
      baz=177
M56A  Emporium         29.90  16  P     P     20 42 13.2 -0.2
M56A                              IAmb  IAmb  20 42 33.2
      comp=Z,14nm,0.9s
M56A  Emporium         29.90  16  P     P     20 42 13.4 -0.1
      baz=201
K48A  Perry            30.02   7  P     P     20 42 13.2 -1.3
      baz=189
ERPA  Erie             30.05  13  P     P     20 42 14.9 +0.1
ERPA  Erie             30.05  13  P     P     20 42 14.6 -0.2
      baz=197
M57A  Sunshine Farm,   30.06  18  P     P     20 42 15.2 +0.3
M57A                              IAmb  IAmb  20 42 40.8
      comp=Z,38nm,1.6s
M57A  Sunshine Farm,   30.06  18  P     P     20 42 15.2 +0.3
      baz=203
K49A  Clarkson         30.08   8  P     P     20 42 14.1 -1.0
      baz=190,SNR=5.2
N59A  State Game Lan   30.10  20  P     P     20 42 15.7 +0.4
N59A                              IAmb  IAmb  20 42 35.1
      comp=Z,36nm,1.4s
N59A  State Game Lan   30.10  20  P     P     20 42 15.8 +0.4
      baz=206
N60A  Cedar Hill Far   30.29  21  P     P     20 42 17.2 +0.2
      baz=207
M58A  Price’s Panora   30.29  19  P     P     20 42 17.0  0.0
      baz=204
L54A  Sinclairville    30.32  14  P     P     20 42 16.7 -0.5
      baz=198
L55A  Hinsdale         30.48  15  P     P     20 42 18.3 -0.4
      baz=200
K52A  Tillsonburg      30.53  12  P     P     20 42 18.8 -0.2
      baz=195
ISCO  Idaho Springs    30.59 334  P     P     20 42 20.9 +0.9
WVNY  West Valley, N   30.65  15  P     P     20 42 19.9 -0.2
WVNY                              IAmb  IAmb  20 42 20.6
      comp=Z,16nm,0.9s
SMCO  Snowmass         30.69 332  P     P     20 42 22.8 +1.8
J49A  Marlette         30.69   8  P     P     20 42 18.9 -1.6
      baz=191,SNR=7.1
M59A  Waymart          30.78  20  P     P     20 42 21.3  0.0
      baz=206
PV02  Paradox Valley   30.79 328  P     P     20 42 24.4 +2.7
PV13  Radium Mtn., P   30.80 328  P     P     20 42 24.8 +3.1
K54A  Basiliko Farm,   30.82  15  P     P     20 42 21.1 -0.5
      baz=199
I42A  Draeger Farm,    30.83 360  P     P     20 42 20.9 -0.8
PAL   Palisades        30.84  22  P     P     20 42 21.3 -0.5
PAL   Palisades        30.84  22  P     P     20 42 21.6 -0.1
      baz=209
M60A  Port Jervis      30.86  21  P     P     20 42 22.0 +0.1
      baz=208
PV03  Paradox Valley   30.88 328  P     P     20 42 24.3 +1.8
PV03                              IAmb  IAmb  20 42 26.4
      comp=Z,8.3nm,0.8s
PV12  Saucer Basin,    30.91 328  P     P     20 42 24.8 +2.1
PV12                              IAmb  IAmb  20 42 26.4
      comp=Z,16nm,0.7s
PV18  Skein Mesa, Pa   30.91 328  P     P     20 42 23.9 +1.2
PV18                              IAmb  IAmb  20 42 26.5
      comp=Z,13nm,0.7s
PV11  David Mesa, Pa   30.93 328  P     P     20 42 24.6 +1.7
PV11                              IAmb  IAmb  20 42 28.6
      comp=Z,12nm,0.8s
PV17  East Wray Mesa   30.96 328  P     P     20 42 24.8 +1.6
PV17                              IAmb  IAmb  20 42 26.5
      comp=Z,15nm,0.7s
PV16  Nyswonger Mesa   30.96 328  P     P     20 42 25.1 +1.9
PV19  Morning Glory    31.00 328  P     P     20 42 24.2 +0.7
PV19                              IAmb  IAmb  20 42 26.7
      comp=Z,10nm,0.7s
PV20  West Nyswonger   31.01 328  P     P     20 42 24.6 +1.0
PV04  Paradox Valley   31.02 328  P     P     20 42 25.0 +1.4
PV04                              IAmb  IAmb  20 42 27.1
      comp=Z,10nm,0.8s
J52A  Paris            31.02  12  P     P     20 42 22.7 -0.7
      baz=196
PV22  Blue Mesa, Par   31.07 329  P     P     20 42 26.3 +2.2
K55A  Perry            31.09  15  P     P     20 42 24.0  0.0
      baz=200
L58A  Harry Jones Me   31.09  19  P     P     20 42 24.4 +0.4
      baz=205
PV23  Carpenter Ridg   31.12 328  P     P     20 42 25.6 +0.9
PV23                              IAmb  IAmb  20 42 28.4
      comp=Z,15nm,0.8s
M61A  Granite Spring   31.15  22  P     P     20 42 25.0 +0.5
      baz=209
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BINY	Binghamton	31.19	19	P	P	20 42 24.9	0.0
	baz=204						
I37A	Lemond, Waseca	31.21	354	P	P	20 42 24.9	-0.1
I37A				IAmb	IAmb	20 42 25.8	
	comp=Z,14nm,0.6s						
K56A	Middlesex	31.26	16	P	P	20 42 25.3	-0.2
	baz=202						
I49A	Point Hope	31.30	8	P	P	20 42 24.8	-1.0
I49A	Point Hope	31.30	8	P	P	20 42 25.0	-0.8
	baz=191						
PDMCI	Parker Dam,Lak	31.33	317	P	P	20 42 28.5	+2.3
	baz=127						
ECSD	EROS Data Cent	31.41	349	P	P	20 42 25.9	-0.9
H43A	Windswept, Lux	31.42	1	P	P	20 42 26.0	-0.9
J54A	Appleton	31.46	14	P	P	20 42 26.8	-0.4
J54A	Appleton	31.46	14	P	P	20 42 26.9	-0.3
	baz=199						
I51A	Listowel	31.46	11	P	P	20 42 26.7	-0.5
	baz=194						
L59A	Walton	31.49	20	P	P	20 42 27.4	-0.1
	baz=206						
K57A	Scipio Center	31.52	17	P	P	20 42 27.5	-0.3
	baz=203						
L60A	Shokan	31.59	21	P	P	20 42 28.5	+0.1
	baz=208						
N23A	Red Feather La	31.64	335	P	P	20 42 30.6	+1.4
N23A				IAmb	IAmb	20 42 31.4	
	comp=Z,6.4nm,0.7s						
N23A	Red Feather La	31.64	335	P	P	20 42 30.7	+1.4
	baz=147						
PTGA	Pitinga	31.64	113	P	P	20 42 28.0	-1.2
PTGA				IAmb	IAmb	20 43 37.4	
	comp=Z,21nm,1.6s						
H45A	Beulah	31.65	4	P	P	20 42 27.3	-1.6
	baz=185						
J55A	Hilton	31.66	15	P	P	20 42 28.7	-0.3
J55A				IAmb	IAmb	20 43 34.3	
	comp=Z,28nm,1.4s						
J55A	Hilton	31.66	15	P	P	20 42 29.0	0.0
	baz=200						
K58A	Earlville	31.81	19	P	P	20 42 30.3	0.0
K58A	Earlville	31.81	19	P	P	20 42 30.3	0.0
	baz=205						
I52A	Shelburne	31.88	12	P	P	20 42 30.4	-0.5
	baz=196						
J56A	Wolcott	31.92	17	P	P	20 42 30.7	-0.5
J56A	Wolcott	31.92	17	P	P	20 42 30.6	-0.7
	baz=202,SNR=6.0						
GLMI	Grayling	31.96	6	P	P	20 42 30.7	-1.0
	baz=188						
H48A	Harrisville	31.98	7	P	P	20 42 31.1	-0.7
H48A	Harrisville	31.98	7	P	P	20 42 30.7	-1.1
	baz=190,SNR=5.3						
O20A	White River Ci	32.04	331	P	P	20 42 34.5	+1.9
O20A	White River Ci	32.04	331	P	P	20 42 34.6	+2.0
	baz=142,SNR=19						
G45A	Suttons Bay	32.09	4	P	P	20 42 31.5	-1.3
G45A	Suttons Bay	32.09	4	P	P	20 42 31.6	-1.1
	baz=186						
KNB	Kanab	32.21	322	P	P	20 42 34.1	-0.1
G40A	Rib Lake	32.23	358	P	P	20 42 32.9	-1.1
G40A				IAmb	IAmb	20 42 35.1	
	comp=Z,33nm,2.0s						
J57A	Williamstown	32.29	18	P	P	20 42 34.2	-0.3
J57A	Williamstown	32.29	18	P	P	20 42 34.0	-0.5
	baz=204						
SPMN	Marine on St.	32.35	355	P	P	20 42 34.3	-0.7
SPMN	Marine on St.	32.35	355	P	P	20 42 34.2	-0.8
	baz=173,SNR=15						
SRU	San Rafael Swe	32.39	327	P	P	20 42 37.1	+1.4
J58A	Remsen	32.46	18	P	P	20 42 35.9	-0.1
J58A	Remsen	32.46	18	P	P	20 42 35.6	-0.5
	baz=205						
H52A	Wyevale	32.49	12	P	P	20 42 35.6	-0.6
	baz=196						
I55A	Frankford	32.58	15	P	P	20 42 36.5	-0.5
	baz=200						
GMRC	Granite Mounta	32.63	316	P	P	20 42 39.7	+1.9
	baz=125						
H53A	Bobcaygeon	32.70	14	P	P	20 42 37.5	-0.5
	baz=198						
F45A	CMU Biological	32.74	4	P	P	20 42 37.0	-1.4
	baz=186						
SADO	Sadowa	32.76	13	P	P	20 42 37.9	-0.8
	comp=Z,20nm,0.5s,baz=248,slow=6.5,SNR=26						
SADO	Sadowa	32.76	13	P	P	20 42 37.6	-1.0
P17A	Butcher Ranch,	32.77	328	P	P	20 42 40.6	+1.5
RWWY	Rawlins	32.83	334	P	P	20 42 40.1	+0.5
RWWY				IAmb	IAmb	20 42 40.8	
	comp=Z,12nm,0.7s						
I58A	Old Forge	32.86	19	P	P	20 42 39.1	-0.4
	baz=205						
DELO	Deloro Mine	32.88	15	P	P	20 42 39.0	-0.7
BCX	Boston College	33.03	24	P	P	20 42 38.4	-2.5
COWI	Conover	33.04	360	P	P	20 42 39.9	-1.1
F48A	Evansville	33.18	8	P	P	20 42 41.0	-1.3
	baz=191,SNR=5.5						
F49A	Sandfield	33.20	9	P	P	20 42 40.9	-1.5
	baz=192,SNR=5.2						
G53A	Haliburton	33.21	13	P	P	20 42 42.0	-0.5
	baz=198						
H56A	Elgin	33.30	16	P	P	20 42 42.9	-0.5
	baz=202						
I59A	Olmsteadville	33.30	20	P	P	20 42 43.5	+0.1
	baz=207						
NCB	Newcomb	33.35	19	P	P	20 42 44.0	+0.2
K22A	Casper	33.35	336	P	P	20 42 44.8	+0.8
K22A				IAmb	IAmb	20 42 45.7	
	comp=Z,7.2nm,0.6s						
K22A	Casper	33.35	336	P	P	20 42 45.0	+1.0
	baz=147						
E43A	Lone Tree Farm	33.35	2	P	P	20 42 42.5	-1.3
H57A	Richville	33.43	18	P	P	20 42 43.9	-0.6
	baz=204						
SAML	Samuel	33.46	129	P	P	20 42 44.2	-0.8
SAML				IAmb	IAmb	20 42 45.6	
	comp=Z,7.6nm,0.8s						
PLVO	Plevna	33.50	15	P	P	20 42 44.4	-0.6
I60A	Shoreham	33.54	20	P	P	20 42 45.2	-0.2
	baz=208						
G54A	Lake Saint Pet	33.59	14	P	P	20 42 45.0	-0.9
	baz=199						
E38A	The Farm, Brul	33.63	357	P	P	20 42 45.8	-0.3
E38A				IAmb	IAmb	20 42 46.0	
	comp=Z,8.0nm,0.6s						
E44A	Grand Marais A	33.65	4	P	P	20 42 44.8	-1.6
	baz=185						
F52A	Sundridge	33.71	12	P	P	20 42 45.9	-0.9
	baz=197						
RSSD	Black Hills	33.71	340	P	P	20 42 48.4	+1.2
RSSD				IAmb	IAmb	20 42 49.8	
	comp=Z,6.6nm,0.7s						
RSSD	Black Hills	33.71	340	P	P	20 42 48.3	+1.2
	baz=152						
E47A	Iron Bridge	33.72	7	P	P	20 42 46.0	-0.9
	baz=190						
H58A	Gabriels	33.76	19	P	P	20 42 46.6	-0.8
	baz=206						
G55A	Calabogie	33.79	15	P	P	20 42 46.9	-0.7
	baz=201						
E48A	Lockeyer	33.89	8	P	P	20 42 47.3	-1.1
	baz=192						
D46A	Sault St. Mari	34.07	6	P	P	20 42 48.7	-1.2
	baz=188						
ALGO	Algonquin Park	34.13	13	P	P	20 42 49.9	-0.6
	baz=199						
EDW2	Edwards Air Fo	34.28	315	P	P	20 42 54.7	+2.7
	baz=122						
E52A	Mattawa	34.31	12	P	P	20 42 51.1	-0.9
	baz=198						
D47A	Chapleau	34.33	7	P	P	20 42 50.8	-1.5
	baz=190						
TCUT	Toone Canyon	34.34	329	P	P	20 42 53.3	+0.6
E51A	G1948 Merrick	34.38	11	P	P	20 42 51.5	-1.2
	baz=196,SNR=6.4						
D48A	Paudash Townsh	34.62	8	P	P	20 42 53.0	-1.8
	baz=192,SNR=5.0						
E53A	Dumoine, Ponti	34.62	14	P	P	20 42 53.9	-0.8
	baz=199						
PD31	Pinedale Array	34.73	333	P	P	20 42 56.0	0.0
PDAR	Pinedale Array	34.73	333	P	P	20 42 55.9	-0.2
	comp=Z,1.5nm,0.7s,baz=135,slow=8.9,SNR=16						
PDAR				PcP	PcP	20 45 28.1	-0.3
	comp=Z,0.5nm,0.5s,baz=136,slow=6.0,SNR=4.8						
PDAR				ScP	ScP	20 49 08.2	+0.5
	comp=Z,0.7nm,0.8s,baz=152,slow=6.7,SNR=4.3						
PDAR	Pinedale Array	34.73	333	P	P	20 42 56.0	0.0
BW06	Boulder Array	34.73	333	P	P	20 42 56.1	+0.1
BW06	Boulder Array	34.73	333	P	P	20 42 55.7	-0.3
	baz=143						
HWUT	Hardware Ranch	34.78	329	P	P	20 42 57.8	+1.4
E54A	Lac Daplat, Po	34.78	14	P	P	20 42 55.0	-1.2
	baz=200						
D50A	G1974 Best Tow	34.93	11	P	P	20 42 56.3	-1.0
	baz=195						
D51A	Lot 18 Range I	34.94	11	P	P	20 42 56.5	-1.0
	baz=196						
EYMN	Ely	34.96	357	P	P	20 42 56.0	-1.7
EYMN				IAmb	IAmb	20 42 58.9	
	comp=Z,4.6nm,0.6s						
EYMN	Ely	34.96	357	P	P	20 42 56.4	-1.3
	baz=175						
D53A	Lac Vacive, Po	35.27	13	P	P	20 43 00.3	-0.1
D53A	Lac Vacive, Po	35.27	13	P	P	20 42 59.9	-0.4
	baz=199,SNR=5.3						
AHID	Auburn Hatcher	35.44	331	P	P	20 43 03.8	+1.8
AHID				IAmb	IAmb	20 43 04.9	
	comp=Z,8.0nm,0.6s						
LPAZ	La Paz	35.51	144	P	P	20 43 02.9	-0.4
	comp=Z,1.1nm,0.5s,baz=338,slow=8.3,SNR=3.8						
VES	Vestal, Richgr	35.55	315	P	P	20 43 06.3	+3.4
	baz=122						
D54A	Lac Fusel, La	35.58	14	P	P	20 43 02.2	-0.8
	baz=200						
G62A	West of Eustis	35.72	22	P	P	20 43 04.4	+0.2
	baz=211						
AGMN	Agassiz Nation	35.73	352	P	P	20 43 03.6	-0.7
AGMN				IAmb	IAmb	20 43 04.2	
	comp=Z,13nm,0.8s						
AGMN	Agassiz Nation	35.73	352	P	P	20 43 03.5	-0.8
	baz=168,SNR=6.8						
D55A	Sainte-Anne-du	35.76	16	P	P	20 43 03.7	-0.7
	baz=202						
REDW	Red Top Meadow	35.78	332	P	P	20 43 06.2	+1.1
SNOW	Snow King Moun	35.82	332	P	P	20 43 05.4	0.0
SNOW				IAmb	IAmb	20 43 09.1	
	comp=Z,11nm,0.8s						
TPAW	Teton Pass	35.93	332	P	P	20 43 05.9	-0.5
TPAW				IAmb	IAmb	20 43 10.2	
	comp=Z,6.6nm,0.8s						
MDND	Maddock	35.95	348	P	P	20 43 06.0	-0.1
MDND	Maddock	35.95	348	P	P	20 43 05.8	-0.4
	baz=162,SNR=5.2						
FXWY	Fox Creek	36.08	332	P	P	20 43 09.4	+1.8
ELK	Elko	36.11	325	P	P	20 43 09.6	+1.7
D57A	Chemin Vers le	36.19	17	P	P	20 43 07.4	-0.9
	baz=205						
VLDQ	Val d'Or	36.30	13	P	P	20 43 08.1	-1.0
NVAR	Mina Array Bea	36.48	319	P	P	20 43 12.7	+1.6
	comp=Z,1.8nm,0.8s,baz=136,slow=7.4,SNR=9.8						
NVAR				PcP	PcP	20 45 33.8	+0.1
	comp=Z,1.0nm,0.6s,baz=137,slow=3.7,SNR=7.6						
NVAR				ScP	ScP	20 49 15.3	+1.2
	comp=Z,0.7nm,0.7s,baz=135,slow=4.9,SNR=6.2						
RLMT	Red Lodge	36.51	335	P	P	20 43 11.6	+0.4
RLMT				IAmb	IAmb	20 43 13.5	
	comp=Z,9.6nm,0.9s						
RLMT	Red Lodge	36.51	335	P	P	20 43 11.6	+0.4
	baz=145,SNR=11						
D58A	Chemin du LacG	36.56	18	P	P	20 43 10.6	-0.8
	baz=206						
LAO	LASA Array	36.70	340	P	P	20 43 12.1	-0.6
	baz=151						
YNE	Yellowstone No	36.72	335	P	P	20 43 13.4	+0.4
LATQ	La Tuque	36.85	18	P	P	20 43 13.6	-0.2
	baz=206						
YMR	Madison River	36.86	333	P	P	20 43 15.7	+1.5
YHH	Holmes Hill	36.90	334	P	P	20 43 15.7	+1.1
YHB	Horse Butte	37.02	333	P	P	20 43 18.2	+2.5
YHL	Hebgen Lake	37.10	333	P	P	20 43 17.7	+1.4
GCMT	Greycliff	37.22	336	P	P	20 43 17.5	+0.3
LSQQ	Lebel-sur-Quev	37.30	13	P	P	20 43 16.5	-1.1
	baz=199						
ULM	Lac du Bonnet	37.65	353	P	P	20 43 19.1	-1.4
	comp=Z,12nm,0.6s,baz=171,slow=8.3,SNR=29						
ULM				LR	LR	20 59 49.2	
	comp=Z,128nm,18.3s,baz=101,slow=38						
ULM	Lac du Bonnet	37.65	353	P	P	20 43 19.1	-1.4
DGMT	Dagmar	37.66	343	P	P	20 43 21.4	+0.7
DGMT	Dagmar	37.66	343	P	P	20 43 21.2	+0.5
	baz=155,SNR=12						
MCMT	McKenzie Canyo	37.83	332	P	P	20 43 24.3	+1.8
MATQ	Matagami	37.83	12	P	P	20 43 20.9	-1.2
	baz=198,SNR=6.8						
D62A	Allapoint, All	37.84	22	P	P	20 43 22.0	-0.2
	baz=212						
DLMT	Dillon	38.12	333	P	P	20 43 26.4	+1.6
LRM	Limekiln Ridge	38.41	333	P	P	20 43 28.6	+1.3
EGMT	Eagleton	39.09	338	P	P	20 43 33.9	+1.0
EGMT	Eagleton	39.09	338	P	P	20 43 33.8	+1.0
	baz=146,SNR=26						
BATG	Bathurst New B	39.16	25	P	P	20 43 33.2	0.0
MSO	Missoula	39.85	333	P	P	20 43 39.6	+0.5
	baz=140						
WALA	Waterton Lakes	41.56	335	P	P	20 43 54.6	+1.4
FFC	Flin Flon	42.95	349	P	P	20 44 04.2	-0.1
FFC				IAmb	IAmb	20 44 04.8	
	comp=Z,9.9nm,0.6s						
B05A	Bryant	44.77	329	P	P	20 44 19.0	+0.1
	baz=131						
SCHQ	Schefferville	45.19	18	P	P	20 44 20.3	-1.9
	comp=Z,12nm,0.6s,baz=216,slow=6.0,SNR=18						
SCHQ	Schefferville	45.19	18	P	P	20 44 20.8	-1.4
BDFB	Brasilia	49.33	124	P	P	20 44 54.2	-0.8
	comp=Z,4.3nm,0.4s,baz=295,slow=8.9,SNR=7.6						
BDFB	Brasilia	49.33	124	P	P	20 44 53.6	-1.4
CPUP	Villa Florida	49.60	142	P	P	20 44 56.7	0.0
	comp=Z,1.5nm,0.5s,baz=329,slow=9.7,SNR=4.1						
FRB	Frobisher Bay	52.68	11	P	P	20 45 17.4	-1.9
	comp=Z,14nm,0.5s,baz=216,slow=8.7,SNR=56						
YKA	Yellowknife Ar	52.80	345	P	P	20 45 19.8	-0.4
	comp=Z,12nm,0.7s,baz=138,slow=8.5,SNR=224						
YKA				ScP	ScP	20 50 18.3	-1.6
	comp=Z,0.3nm,0.8s,baz=145,slow=4.2,SNR=4.0						
YKA				LR	LR	21 09 33.5	
	comp=Z,74nm,18.8s,baz=0.0,slow=38						
DLBC	Dease Lake	54.91	335	P	P	20 45 36.8	+1.0
	comp=Z,7.6nm,0.7s,baz=126,slow=6.0,SNR=12						
DLBC	Dease Lake	54.91	335	P	P	20 45 36.8	+1.0
DLBC				IAmb	IAmb	20 45 38.3	
	comp=Z,7.8nm,0.8s						
PLCA	Paso Flores	56.02	163	P	P	20 45 44.7	+0.7
	comp=Z,1.9nm,0.7s,baz=156,slow=7.4,SNR=4.8						
PLCA	Paso Flores	56.02	163	IAmb	IAmb	20 46 41.0	
	comp=Z,19nm,1.6s						
RES	Resolute Bay	61.82	358	P	P	20 46 22.1	-1.5
RES				IAmb	IAmb	20 46 23.3	
	comp=Z,4.8nm,0.8s						
BCAR	Beaver Creek A	62.27	336	P	P	20 46 26.4	-0.5
INK	Inuvik	62.35	343	P	P	20 46 26.8	-0.3
	comp=Z,8.3nm,0.7s,baz=116,slow=6.6,SNR=30						
INK	Inuvik	62.35	343	P	P	20 46 26.5	-0.6
RIDG	Independent Ri	63.80	336	P	P	20 46 37.3	+0.3
RIDG				IAmb	IAmb	20 46 39.0	
	comp=Z,6.2nm,1.0s						
GHO	Glory Hole Cre	64.75	333	P	P	20 46 43.1	-0.2
GHO				IAmb	IAmb	20 46 44.2	
	comp=Z,7.8nm,1.0s						
PRP	Porcupine Dome	64.84	337	P	P	20 46 43.3	-0.5
PRP				IAmb	IAmb	20 46 44.5	
	comp=Z,4.2nm,0.8s						
RC01	Rabbit Creek A	64.88	332	P	P	20 46 44.0	0.0
RC01				IAmb	IAmb	20 46 44.3	
	comp=Z,6.4nm,0.9s						
HDA	Harding Lake	64.92	336	P	P	20 46 43.8	-0.4
HDA				IAmb	IAmb	20 46 44.6	
	comp=Z,7.0nm,1.2s						
HDA	Harding Lake	64.92	336	P	P	20 46 43.5	-0.7
	baz=114						
IL31		65.04	336	P	P	20 46 44.4	-0.6
ILAR	Eielson Array	65.04	336	P	P	20 46 44.4	-0.6
	comp=Z,2.5nm,0.9s,baz=119,slow=5.1,SNR=21						
ILAR				LR	LR	21 18 11.6	
	comp=Z,63nm,19.1s,baz=75,slow=39						
ILAR	Eielson Array	65.04	336	P	P	20 46 44.1	-0.9
RND	Reindeer	65.31	335	P	P	20 46 46.6	-0.3
RND				IAmb	IAmb	20 46 47.9	
	comp=Z,9.3nm,0.9s						
BMAR	Burnt Mountain	65.36	339	P	P	20 46 47.0	-0.1
POKR	Poker Plat Res	65.40	337	P	P	20 46 46.9	-0.4
	baz=114						
MCK	McKinley	65.46	335	P	P	20 46 47.9	+0.1
MDM	Murphy Dome	65.65	336	P	P	20 46 49.0	+0.1
MDM				IAmb	IAmb	20 48 53.5	
	comp=Z,23nm,1.8s						
NEA	Nenana	65.84	336	P	P	20 46 49.8	-0.4
TRF	Thorofare Moun	65.93	334	P	P	20 46 50.5	-0.5
KTH	Kantishna Hill	66.23	334	P	P	20 46 52.3	-0.5
BPAW	Bear Paw Mtn.	66.44	335	P	P	20 46 53.6	-0.5
BPAW				IAmb	IAmb	20 46 54.3	
	comp=Z,5.4nm,0.9s						
PPLA	Purkeypile	66.56	333	P	P	20 46 54.1	-0.9
MLY	Manley	66.66	336	P	P	20 46 54.9	-0.5
MLY				IAmb	IAmb	20 46 55.9	
	comp=Z,6.3nm,0.9s						
COLD	Coldfoot	67.25	338	P	P	20 46 59.5	+0.4
TOLK	Toolik Lake Re	67.58	340	P	P	20 47 01.1	-0.1
TOLK				IAmb	IAmb	20 47 02.0	
	comp=Z,5.4nm,0.7s						
TOLK	Toolik Lake Re	67.58	340	P	P	20 47 01.0	-0.2
	baz=113,SNR=6.6						
NB2	NORSAR Subarra	83.56	29	P	P	20 48 32.9	+0.2
	comp=Z,0.5nm,0.7s,baz=286,slow=5.3						
NOA	NORSAR Array B	83.56	29	P	P	20 48 32.6	-0.1
	comp=Z,0.5nm,0.8s,baz=290,slow=5.3,SNR=2.3						
ARCES	ARCESS Array B	86.13	19	P	P	20 48 43.5	-1.9
	comp=Z,2.9nm,1.0s,baz=347,slow=5.0,SNR=3.7						
CLL	Collm	87.23	38	*e*pP	pP	20 49 11.0	+0.3
TORD	Torodi Ar. Bea	87.56	77	P	P	20 48 50.8	-2.7
	comp=Z,0.4nm,0.5s,baz=288,slow=5.4,SNR=5.5						
FINES	FINESS Array B	90.09	26	P	P	20 49 03.1	-1.3
	comp=Z,0.4nm,0.7s,baz=210,slow=33,SNR=1.1						
BOSA	Boshof	117.08	116	PKP	PKPdf	20 54 50.0	-0.1
	comp=Z,2.5nm,0.8s,baz=176,slow=1.4,SNR=3.1						
SONM	Songino Array	118.00	348	PKP	PKPdf	20 54 50.1	-1.3
	comp=Z,0.3nm,0.3s,baz=323,slow=1.1,SNR=5.1						
MATP	Matopo	119.76	106	PKP	PKPdf	20 54 52.1	-3.4
	comp=Z,2.9nm,0.7s,baz=284,slow=2.4,SNR=12						
MKAR	Makanchi Array	119.99	7	PKP	PKPdf	20 54 52.7	-2.4
	comp=Z,0.2nm,0.3s,baz=327,slow=2.4,SNR=4.5						
KSH	Kashi	125.91	15	PKP	PKPdf	20 55 05.0	-1.9
KSH				sPKP		20 55 43.0	
KSH				PP	PP	20 57 02.5	+3.4
KSH				SKS	SKSdf	21 02 05.5	-7.3
KSH	Kashi	125.91	15	SS	SS	21 13 48.5	-5.7
STKA	Stephens Creek	130.24	239	PKP	PKiKP	20 55 16.0	+0.1
	comp=Z,0.6nm,0.4s,baz=70,slow=2.4,SNR=4.6						
WRA	Warramunga Arr	138.16	255	PKP	PKiKP	20 55 31.8	-0.5
	comp=Z,1.9nm,0.6s,baz=88,slow=2.0,SNR=14						
ASAR	Alice Springs	138.24	249	PKhKP	PKPpre	20 55 24.9	
	comp=Z,0.4nm,0.6s,baz=108,slow=3.2,SNR=5.9						
ASAR				PKP	PKiKP	20 55 31.9	-0.5
	comp=Z,1.2nm,0.6s,baz=95,slow=2.2,SNR=14						
ASAR	Alice Springs	138.24	249		PKPpre	20 55 25.3	
FITZ	Fitzroy Crossi	146.48	257	PKPbc	PKPab	20 55 47.3	-0.3
	comp=Z,1.5nm,0.5s,baz=97,slow=1.8,SNR=9.4						
FITZ	Fitzroy Crossi	146.48	257		PKPbc	20 55 46.3	-0.2
CMAR	Chiang Mai Arr	147.88	346	PKPbc	PKPdf	20 55 48.4	+0.9
	comp=Z,2.7nm,0.7s,baz=336,slow=3.4,SNR=17						
CMAR	Chiang Mai Arr	147.88	346		PKPbc	20 55 49.6	-0.8

IDC 27 20:37:10.3±8.1**, 31°.85S**×**178°.87W, h77**^{km}±55^{km}**, mb3.5**/2**, mb1 3.9**/3**, mb1mx3.5**/26**, mbtmp4.0**/3**, ML4.4**/1**, Error ellipse: s-maj=97.3km s-min=29.4km az=144.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.72	18	P	Pn	20 37 50.7	-1.0
	70nm,0.3s,baz=246,slow=22,SNR=2.3						
RAO				S	Sn	20 38 24.6	+1.0
	52nm,0.3s,baz=109,slow=20,SNR=1.8						
ASAR	Alice Springs	42.31	269	P	P	20 44 56.9	+0.1
	0.6nm,0.4s,baz=106,slow=7.4,SNR=10.0						
WRA	Warramunga Arr	43.44	274	P	P	20 45 05.5	-0.3
	0.6nm,0.3s,baz=114,slow=8.1,SNR=22						
FINES	FINESS Array B	146.24	339	PKPbc	PKPdf	20 56 40.0	0.0
	1.1nm,0.5s,baz=31,slow=4.4,SNR=15						
BRTR	Keskin Array B	152.60	296	PKPbc	PKiKP	20 56 58.4	+0.1
	0.1nm,0.4s,baz=130,slow=4.1,SNR=4.2						

NNC 27 21:10:50.8±16.0**, 36°.89N**×**70°.04E, h0**^{km}**, mb3.9, mpv3.5, 3C-2D, Error ellipse: s-maj=135.5km s-min=120.7km az=149.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	5.95	27	P	Pn	21 12 20.4	-0.1
	SNR=35						
KK31	Karatay Array	6.22	3	Pn	Pn	21 12 26.7	+2.8
	1.4nm,0.3s,baz=188,slow=14,SNR=36						
KK31				⇑Sn	Sn	21 13 39.9	+4.2
	3.6nm,0.6s,baz=193,slow=25,SNR=11						
UCH	Uchtor	6.36	32	P	Pn	21 12 25.3	-0.9
	SNR=6.5						
EKS2	Erkin-Say	6.45	25	P	Pn	21 12 28.2	+1.1
	SNR=13						
KZA	Kyzart	6.57	36	P	Pn	21 12 28.4	-0.6
	SNR=7.9						
AAK	Ala-Archa	6.69	29	P	Pn	21 12 30.0	-0.5
	SNR=6.4						
AAK	Ala-Archa	6.69	29	⇓Pn	Pn	21 12 29.8	-0.7
	3.0nm,0.7s						
AAK				⇑Sn	Sn	21 13 46.4	-1.1
	8.8nm,0.8s						
CHMS	Chumysh	7.10	29	⇑Pn	Pn	21 12 34.9	-1.0
	1.3nm,0.4s						
CHMS				⇓Sn	Sn	21 13 55.8	-1.6
	8.5nm,0.8s						
TKM2	Tokmak 2	7.39	34	P	Pn	21 12 38.1	-2.0
	SNR=6.2						

NEIC ***27*** *21:21:40.1±0.8, 63°.27N±0°.04×150°.53W±0°.09, h134*^{km}*±5*^{km}*, Error ellipse: s-maj=6.1km s-min=5.7km az=148.0*

AEIC 27 21:21:41.0±1.2**, 63°.27N**±0°.04×**150°.52W**±0°.09**, h125**^{km}±4^{km}**, ML2.5**/88**, Error ellipse: s-maj=6.0km s-min=5.5km az=143.0, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRF	Thorofare Moun	0.21	30		Pn	21 21 58.8	+0.4
TRF					Sn	21 22 12.1	+0.5
KTH	Kantishna Hill	0.34	328		Pn	21 21 58.9	+0.1
KTH					Sn	21 22 12.2	0.0
HUR	Hurricane	0.50	126		Pn	21 21 59.5	0.0
HUR					Sn	21 22 14.1	+0.8
CAST	Castle Rocks	0.72	283		Pn	21 22 00.9	-0.1
RND	Reindeer	0.76	79		Pn	21 22 01.5	+0.1
RND					Sn	21 22 17.3	+0.5
PPLA	Purkeypile	0.85	244		Pn	21 22 02.2	0.0
PPLA					Sn	21 22 18.5	+0.3
MCK	McKinley	0.85	56		Pn	21 22 02.3	+0.2
MCK					Sn	21 22 18.2	+0.2
BPAW	Bear Paw Mtn.	0.86	346		Pn	21 22 02.2	+0.1
WAT2	Susitna Watana	0.93	108		Pn	21 22 02.7	-0.2
WAT2					Sn	21 22 19.6	+0.1
WAT1	Susitna Watana	1.00	115		Pn	21 22 03.4	-0.1
WAT1					Sn	21 22 20.9	+0.5
CHUM	Lake Minchumin	1.01	308		Pn	21 22 03.5	0.0
CHUM					Sn	21 22 20.3	-0.3
BWN	Browne	1.02	27		Pn	21 22 04.2	+0.6
DHY	Denali Highway	1.44	96		Pn	21 22 08.1	0.0
WAT6	Susitna Watana	1.45	117		Pn	21 22 07.8	-0.4
NEA	Nenana	1.46	25		Pn	21 22 08.0	-0.2
NEA					Sn	21 22 28.2	-0.7
WRH	Wood River Hil	1.62	41		Pn	21 22 09.8	-0.2
GHO	Glory Hole Cre	1.68	153		Pn	21 22 10.7	-0.1
MLY	Manley	1.77	357		Pn	21 22 11.7	-0.2
SML	Sawmill	1.78	144		Pn	21 22 11.5	-0.6
PMR	Palmer	1.80	158		Pn	21 22 12.2	0.0
PMR	Palmer	1.80	158	Sn	Sn	21 22 34.7	-1.4
SUA	Susitna One	1.82	183		Pn	21 22 12.7	+0.1
CCB	Clear Creek Bu	1.83	40		Pn	21 22 12.3	-0.2
HDA	Harding Lake	1.95	53		Pn	21 22 13.8	-0.2
MDM	Murphy Dome	1.97	30		Pn	21 22 14.1	-0.2
TCOL	CIGO, UAF Yank	1.99	35		Pn	21 22 14.1	-0.4
COLA	College	1.99	35	Pn	Pn	21 22 14.4	-0.1
COLA	College	1.99	35		Sn	21 22 39.4	-0.7
COLA				Sn	Sn	21 22 40.2	+0.1
SCM	Sheep Creek Mo	2.06	133		Pn	21 22 14.9	-0.6
PS08	TAPS Pump Stn8	2.08	50		Pn	21 22 15.3	-0.2
KNK	Knik Glacier	2.10	152		Pn	21 22 15.5	-0.4

PS10	TAPS Pump St10	2.15	84		Pn	21 22 17.6	+1.1
BGL	Barrier Glacie	2.20	204		Pn	21 22 17.6	+0.4
IL31		2.20	45		Pn	21 22 16.7	-0.3
ILAR	Eielson Array	2.20	45		Pn	21 22 14.7	-2.4
RC01	Rabbit Creek A	2.22	170		Pn	21 22 17.0	-0.4
CKL	Chakachamna La	2.25	203		Pn	21 22 18.0	+0.1
POKR	Poker Plat Res	2.29	35		Pn	21 22 18.3	0.0
TT01	Tatalina	2.53	264		Pn	21 22 20.6	-0.7
RIDG	Independent Ri	2.59	77		Pn	21 22 21.9	-0.1
HARP	HAARP	2.61	107		Sn	21 22 41.9	-12
PS06	TAPS Pump Stn6	2.62	7		Pn	21 22 22.4	0.0
PWL	Port Wells	2.63	156		Pn	21 22 21.9	-0.7
SLKM	Skilak Lake	2.78	177		Pn	21 22 24.3	-0.2
DFR	Drift River	2.88	202		Pn	21 22 25.8	-0.1
GLI	Glacier Island	2.89	145		Pn	21 22 24.7	-1.2
RDWB	Redoubt West	3.00	203		Pn	21 22 27.8	+0.3
SCRK	Sand Creek	3.00	73		Pn	21 22 27.4	-0.1
RSO	Redoubt South	3.01	202	Pn	Pn	21 22 26.6	-1.2
RED	Redoubt Volcan	3.05	201		Pn	21 22 28.3	+0.2
IM03		3.06	334		Pn	21 22 27.6	-0.5
IMAR	Indian Mountai	3.06	334		Pn	21 22 27.4	-0.7
MENT	Mentasta	3.11	93		Pn	21 22 29.0	+0.2
PRP	Porcupine Dome	3.13	42	Pn	Pn	21 22 28.5	-0.7
FID	Port Fidalgo	3.17	141		Pn	21 22 28.4	-1.1
SEW	Seward	3.22	170		Pn	21 22 29.6	-0.6
SVW2	Sparrevohn	3.22	230		Pn	21 22 29.7	-0.6
HIN	Hinchinbrook I	3.46	145		Pn	21 22 32.3	-1.1
BRLK	Bradley Lake	3.52	183		Pn	21 22 33.9	-0.4
EYAK	Cordova Ski Ar	3.54	138	Pn	Pn	21 22 35.3	+0.9
BRSE	Bradley Lake S	3.54	182		Pn	21 22 33.9	-0.6
GLB	Gilahina Butte	3.62	117		Pn	21 22 35.0	-0.6
CNPM	China Poot	3.77	186		Pn	21 22 37.2	-0.4
GOAT	Goat Mountain	3.84	132		Pn	21 22 37.5	-1.0
VRDI	Verde Repeater	3.89	119		Pn	21 22 38.5	-0.8
BC03		3.97	89		Pn	21 22 39.2	-0.8
BCAR	Beaver Creek A	3.97	89		Pn	21 22 38.6	-1.5
MCARA	McCarthy VSAT	3.98	115		Pn	21 22 40.0	-0.2
COLD	Coldfoot	3.98	2	Pn	Pn	21 22 41.5	+1.3
FYU	Fort Yukon	4.00	32	Pn	Pn	21 22 40.2	-0.3
RAGM	Ragged Mountai	4.00	134	Pn	Pn	21 22 40.0	-0.7
CRQM	Cirque	4.29	123	Pn	Pn	21 22 44.0	-0.7
PTPK	Patty Peak	4.31	115		Pn	21 22 44.6	-0.2
EGAK	Eagle	4.39	66		Pn	21 22 45.4	-0.3
TGL	Tana Glacier	4.41	121	Pn	Pn	21 22 45.6	-0.6
BALM	Baldy	4.44	117		Pn	21 22 45.6	-1.0
KIAG	Kiagna River	4.50	118		Pn	21 22 45.9	-1.4
BARN	Barnard Glacie	4.71	114	Pn	Pn	21 22 50.0	-0.2
BM03	Burnt Mountain	4.84	28		Pn	21 22 51.4	-0.5
BMAR	Burnt Mountain	4.86	28	Pn	Pn	21 22 51.5	-0.5
CTGM	Chitina Glacie	4.89	114	Pn	Pn	21 22 52.5	-0.1
DAWY	Dawson	5.02	76		Pn	21 22 53.7	-0.5
TOLK	Toolik Lake Re	5.41	4	Pn	Pn	21 23 01.1	+1.7
CHX	Chaix Hills	5.51	121		Pn	21 23 00.9	0.0
KABU	Katmai Buttres	5.53	207		Pn	21 23 01.6	+0.4
KDAK	Kodiak Island	5.60	191	Pn	Pn	21 23 00.6	-1.3
PCA	Pinnacle	5.83	118		Pn	21 23 04.3	-0.8
OHAK	Old Harbor	6.22	194	Pn	Pn	21 23 09.6	-0.8
PNL	Peninsula	6.43	119		Pn	21 23 12.4	-0.8
ANM	Nome	6.68	288	Pn	Pn	21 23 15.3	-1.1
SII	Sitkinak Islan	6.98	197	Pn	Pn	21 23 21.0	+0.5
RDOG	Red Dog Mine	7.01	319	Pn	Pn	21 23 20.2	-0.7
DHAK	Deception Hill	7.27	120	Pn	Pn	21 23 23.4	-1.1
WHY	Whitehorse	7.82	103	Pn	Pn	21 23 30.7	-1.2
CHIR	Chirikof Islan	7.91	201	Pn	Pn	21 23 33.3	+0.3
CHGN	Chignik	8.04	213	Pn	Pn	21 23 31.9	-2.9

NEIC ***27*** *21:30:01.6±1.2, 5.°28S±0.°06×152.°4E±0.°2, h57km±8km, mb4.1/23, Error ellipse: s-maj=27.6km s-min=6.5km az=78.0*

IDC ***27*** *21:30:01.4±2.5, 5.°40S×152.°41E, h63km±16km, mb3.6/11, mb1 3.8/12, mb1mx3.5/47, mbtmp3.9/12, MS3.0/3, Ms1 3.0/3, ms1mx2.7/28, Error ellipse: s-maj=34.3km s-min=11.6km az=112.0*

ISC 27 21:29:59.1±0.9**, 5.°40S**±0.°07×**152.°5E**±0.°1**, h40**km**, n42,** σ**1.ˢ25**/42**, mb4.1**/22**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.20	336	P	Pn	21 30 19.4	0.0
	2μm,0.3s,baz=177,slow=0.6,SNR=551						
KRVT				S	Sn	21 30 37.2	+2.7
	548nm,0.3s,baz=64,slow=21,SNR=8.2						
KRVT				LR	LR	21 30 47.5	
	comp=Z,607nm,20.9s,baz=18,slow=40						
RABL	Rabaul	1.26	343	Pn	Pn	21 30 20.7	+0.5
PMG	Port Moresby	6.64	233	P	Pn	21 31 36.7	+2.4
	baz=270,slow=18,SNR=1.3						
PMG				S	Sn	21 32 45.7	-3.0
	1.5nm,0.3s,baz=177,slow=11,SNR=4.0						
PMG				LR	LR	21 33 39.8	
	comp=Z,98nm,18.8s,baz=42,slow=33						
GUMO	Guam	20.34	338	LR	LR	21 42 12.9	
	comp=Z,33nm,19.0s,baz=198,slow=36						
MTN	Manton Dam	22.36	249	P	P	21 34 54.6	+0.6
MTN				IAmb	IAmb	21 34 55.6	
	comp=Z,5.5nm,0.9s						
WB0	Warramunga Arr	22.70	229	P	P	21 34 59.0	+1.5
WR0	Warramunga Arr	22.70	229	P	P	21 35 00.2	+2.6
WB2	Warramunga Arr	22.83	229	P	P	21 34 59.2	+0.2
WRA	Warramunga Arr	22.84	229	P	P	21 34 58.7	-0.4
	comp=Z,1.5nm,0.7s,baz=52,slow=9.7,SNR=6.4						
KNRA	Kununurra	25.46	245	P	P	21 35 25.2	+1.6
KNRA				IAmb	IAmb	21 35 38.4	
	comp=Z,6.4nm,0.8s						
AS31	Alice Springs	25.52	223	P	P	21 35 26.9	+2.7
ASAR	Alice Springs	25.52	223	P	P	21 35 25.1	+1.0
	comp=Z,0.8nm,0.4s,baz=90,slow=8.3,SNR=20						
FITZ	Fitzroy Crossi	29.13	242	P	P	21 35 57.3	+0.7
	comp=Z,1.5nm,0.6s,baz=87,slow=7.7,SNR=5.2						
FITZ				LR	LR	21 47 12.7	
	comp=Z,53nm,19.9s,baz=32,slow=36						
FITZ	Fitzroy Crossi	29.13	242	P	P	21 35 57.0	+0.5
FITZ				IAmb	IAmb	21 36 10.1	
	comp=Z,3.2nm,0.9s						
CMAR	Chiang Mai Arr	57.88	296	P	P	21 39 45.2	-2.3
	comp=Z,0.6nm,0.4s,baz=121,slow=4.3,SNR=2.0						
SONM	Songino Array	66.69	328	P	P	21 40 45.1	-1.0
	comp=Z,0.6nm,0.6s,baz=152,slow=4.6,SNR=5.2						
SONM	Songino Array	66.69	328	IAmb	IAmb	21 40 47.4	
	comp=Z,1.0nm,1.0s						
ANM	Nome	76.43	17	P	P	21 41 44.7	+0.4
ANM				IAmb	IAmb	21 41 45.8	
	comp=Z,3.3nm,0.9s						
RDOG	Red Dog Mine	79.63	16	P	P	21 42 02.2	+0.2
GHO	Glory Hole Cre	80.52	24	P	P	21 42 07.3	+0.3
GHO				IAmb	IAmb	21 42 18.3	
	comp=Z,3.0nm,1.0s						
MKAR	Makanchi Array	80.60	319	P	P	21 42 07.0	-0.7
	comp=Z,0.4nm,0.6s,baz=95,slow=8.1,SNR=8.4						
KTH	Kantishna Hill	80.67	22	P	P	21 42 07.7	-0.1
KTH				IAmb	IAmb	21 42 20.0	
	comp=Z,2.2nm,1.0s						
SML	Sawmill	80.78	24	P	P	21 42 08.7	+0.3
MAKZ	Makanchi	80.81	319	P	P	21 42 08.1	-0.6
TRF	Thorofare Moun	80.86	22	P	P	21 42 08.4	-0.5
TRF				IAmb	IAmb	21 42 16.3	
	comp=Z,2.0nm,1.0s						
IMAR	Indian Mountai	81.04	20	P	P	21 42 09.8	+0.3
SCM	Sheep Creek Mo	81.21	25	P	P	21 42 11.2	+0.6
SCM				IAmb	IAmb	21 42 29.1	
	comp=Z,3.5nm,0.9s						
RND	Reindeer	81.39	23	P	P	21 42 11.1	-0.5
RND				IAmb	IAmb	21 42 23.4	
	comp=Z,5.6nm,1.2s						
ZALV	Zalesovo Beam	81.50	326	P	P	21 42 12.0	-0.2
	comp=Z,0.6nm,0.4s,baz=101,slow=6.9,SNR=2.7						
ZALV	Zalesovo Beam	81.50	326	P	P	21 42 10.9	-1.4
MCK	McKinley	81.52	23	P	P	21 42 12.0	-0.2
MLY	Manley	81.54	21	P	P	21 42 13.0	+0.7
WRH	Wood River Hil	82.22	22	P	P	21 42 15.6	-0.3
WRH				IAmb	IAmb	21 42 28.0	
	comp=Z,2.6nm,0.9s						
CCB	Clear Creek Bu	82.41	22	P	P	21 42 16.1	-0.7
CCB				IAmb	IAmb	21 42 30.6	
	comp=Z,2.1nm,1.0s						
IL31		82.82	22	P	P	21 42 18.5	-0.3
ILAR	Eielson Array	82.82	22	P	P	21 42 17.6	-1.3
	comp=Z,1.6nm,0.8s,baz=246,slow=5.4,SNR=16						
CTGM	Chitina Glacie	83.41	27	P	P	21 42 22.5	+0.2
CTGM				IAmb	IAmb	21 42 24.7	
	comp=Z,2.2nm,0.8s						
KURBB	Kurchatov Arra	84.10	322	P	P	21 42 24.5	-1.3
	comp=Z,0.8nm,0.8s,baz=106,slow=4.4,SNR=8.7						
BVAR	Borovoye Array	89.56	323	P	P	21 42 51.3	-1.1
	comp=Z,1.0nm,0.7s,baz=130,slow=4.6,SNR=6.3						
YKA	Yellowknife Ar	96.08	28	P	P	21 43 22.9	+0.6
	comp=Z,0.6nm,1.0s,baz=267,slow=4.2,SNR=5.4						
TORD	Torodi Ar. Bea	150.22	287	PKPbc	PKPbc	21 49 46.5	-0.5
	comp=Z,0.5nm,0.7s,baz=115,slow=5.4,SNR=2.9						
BDFB	Brasilia	150.83	136	PKPbc	PKPbc	21 49 48.7	+0.1
	comp=Z,0.9nm,0.3s,baz=211,slow=11,SNR=3.5						

IDC 27 22:07:32.4±2.2**, 3.°13N**×**125.°59E, h0**km**, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.2**/38**, mbtmp3.2**/3**, Error ellipse: s-maj=199.3km s-min=28.5km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	24.49	160	P	P	22 12 53.7	+0.1
	0.3nm,0.4s,baz=339,slow=10,SNR=5.8						
ASAR	Alice Springs	27.84	164	P	P	22 13 23.8	0.0
	0.1nm,0.3s,baz=334,slow=6.9,SNR=2.5						
MKAR	Makanchi Array	57.40	326	P	P	22 17 22.6	-0.2
	0.1nm,0.4s,baz=119,slow=8.0,SNR=4.1						

GCG ***27*** *22:18:59.9±0.3, 13.°59N×91.°38W, h17km±3km, MD4.2*

INET ***27*** *22:19:02.8, 13.°72N×91.°29W, h15km, ML4.5*

NEIC ***27*** *22:19:03.3±2.1, 13.°74N±0.°07×91.°37W±0.°05, h53km±10km, mb4.4/15, Md4.2/17(MEX), Error ellipse: s-maj=10.4km s-min=6.7km az=206.0*

SNET ***27*** *22:19:03.3±2.0, 13.°82N×91.°21W, h24km±12km, ML4.1*

UCR ***27*** *22:19:03.4±2.0, 13.°83N×91.°21W, h25km±12km, ML3.9, mb4.4(NEIC)*

MEX ***27*** *22:19:04.8±0.5, 13.°70N×91.°51W, h10km, MD4.2*

IDC ***27*** *22:19:05.9±2.3, 13.°83N×91.°14W, h84km±17km, mb3.5/6, mb1 3.8/10, mb1mx3.5/42, mbtmp3.9/10, MS2.9/2, Ms1 2.9/2, ms1mx2.6/26, Error ellipse: s-maj=25.0km s-min=22.4km az=45.0*

ISC 27 22:19:02.7±1.2**, 13.°69N**±0.°07×**91.°35W**±0.°04**, h55**km±11km**, n95,** σ**1.ˢ20**/116**, mb4.0**/12**, 2C-4D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERG	Entre ros, C	0.78	344	eP	Pn	22 19 18.0	+0.4
FUG	Fuego 3	0.90	33	eP	Pn	22 19 18.4	-1.1
PCG	Pacaya	1.01	46	eP	Pn	22 19 20.2	-0.7
IXG	Ixpaco	1.01	61	⇓iP	Pn	22 19 18.8	-2.0
IXG	Ixpaco	1.01	61	⇓iP	Pn	22 19 18.8	-2.0
IXG	Ixpaco	1.01	61	eP	Pn	22 19 19.7	-1.1
STG3	Santiaguito 3,	1.04	348	eP	Pn	22 19 20.6	-0.6
NBG	Las Nubes	1.32	47	eP	Pn	22 19 25.6	+0.5
THIG		1.50	324	i P	Pn	22 19 26.1	-1.1
THIG				i S	Sn	22 19 44.3	-1.4
THIG		1.50	324		Pn	22 19 26.1	-1.1
THIG					Sn	22 19 44.3	-1.4
APG	El Apazote	1.57	33	P	Pn	22 19 28.0	-0.4
	94nm,0.3s,baz=206,slow=6.6,SNR=368						
APG				S	Sn	22 19 47.4	-0.3
	191nm,0.3s,baz=42,slow=23,SNR=32						
APG				LR	LR	22 19 57.6	
	comp=Z,284nm,18.5s,baz=223,slow=39						
RTR	El Retiro	1.67	83	eP	Pn	22 19 29.6	-0.1
RTR	El Retiro	1.67	83	eP	Pn	22 19 29.6	-0.1
CEVE	Cerro Verde	1.69	85	eP	Pn	22 19 29.5	-0.5
CEVE				eS	Sn	22 19 49.6	-1.0
CEVE	Cerro Verde	1.69	85	eP	Pn	22 19 29.5	-0.5
CEVE				eS	Sn	22 19 49.6	-1.0
SBLS	San Blas	1.69	85	eP	Pn	22 19 29.6	-0.4
SBLS	San Blas	1.69	85	eP	Pn	22 19 29.6	-0.4
SNJE	San Jose	1.71	84	eP	Pn	22 19 30.0	-0.3
SNJE	San Jose	1.71	84	eP	Pn	22 19 30.0	-0.3
LALI	Alcalda de L	1.99	96	eP	Pn	22 19 33.8	-0.1
LALI				eS	Sn	22 19 56.4	-1.3
LALI				IAML		22 19 59.4	
	comp=Z,789nm,0.6s						
LALI	Alcalda de L	1.99	96	eP	Pn	22 19 33.8	-0.1
LALI				eS	Sn	22 19 56.4	-1.3
LALI				IAML		22 19 59.4	
	comp=Z,789nm,0.6s						
BOQS	Boqueron	2.02	88	eP	Pn	22 19 34.7	+0.2
MTO3	Montecristo	2.06	70	⇑iP	Pn	22 19 34.2	-0.9
MTO3				eS	Sn	22 19 59.8	+0.1
MTO3	Montecristo	2.06	70	⇑iP	Pn	22 19 34.2	-0.9
MTO3				eS	Sn	22 19 59.8	+0.1
SNET	Serv Nac Est T	2.06	90	eP	Pn	22 19 35.1	+0.1
SNET				IAML		22 20 07.5	
	comp=Z,2μm,0.2s						
SNET	Serv Nac Est T	2.06	90	eP	Pn	22 19 35.1	+0.1
SNET				IAML		22 20 07.5	
	comp=Z,2μm,0.2s						
SNET	Serv Nac Est T	2.06	90		Pn	22 19 35.5	+0.5
LOMA	Loma Larga	2.12	91	eP	Pn	22 19 35.6	-0.3
LOMA				eS	Sn	22 19 59.7	-1.5
LOMA	Loma Larga	2.12	91	eP	Pn	22 19 35.6	-0.3
LOMA				eS	Sn	22 19 59.7	-1.5
MRL	Marmol	2.13	49	⇓iP	Pn	22 19 35.5	-0.5
MRL	Marmol	2.13	49	⇓iP	Pn	22 19 35.5	-0.5
MRL	Marmol	2.13	49	eP	Pn	22 19 36.4	+0.4
MRL				eS	Sn	22 20 05.0	+3.5
LFRS	El Faro	2.23	91	eP	Pn	22 19 37.6	+0.3
LBRS	Las Brisas	2.25	88	eP	Pn	22 19 37.7	+0.2
COEG	Centro de Oper	2.41	91	eP	Pn	22 19 40.2	+0.5
COEG				eS	Sn	22 20 06.2	-1.8
COEG				IAML		22 20 12.2	
	comp=Z,1μm,0.3s						
COEG	Centro de Oper	2.41	91	eP	Pn	22 19 40.2	+0.5
COEG				eS	Sn	22 20 06.2	-1.8
COEG				IAML		22 20 12.2	
	comp=Z,1μm,0.3s						
CCIG	Comitan	2.69	344	eP	Pn	22 19 45.2	+1.6
CCIG				i S	Sn	22 20 16.0	+0.9
CCIG	Comitan	2.69	344		Pn	22 19 44.2	+0.5
CCIG	Comitan	2.69	344		Pn	22 19 45.2	+1.6
CCIG					Sn	22 20 16.0	+0.9
PCIG		2.70	318	eP	Pn	22 19 43.9	+0.3
PCIG				i S	Sn	22 20 14.4	-0.6
PCIG		2.70	318		Pn	22 19 43.9	+0.3
PCIG					Sn	22 20 14.4	-0.6
COEB	Comit de Eme	2.75	94	eP	Pn	22 19 45.3	+0.9
COEB	Comit de Eme	2.75	94	eP	Pn	22 19 45.3	+0.9
TECA	Tecapa	2.78	94	eP	Pn	22 19 45.5	+0.6
TECA	Tecapa	2.78	94	eP	Pn	22 19 45.5	+0.6
PACA	Pacayal	2.96	94	eP	Pn	22 19 48.1	+0.9
PACA	Pacayal	2.96	94	eP	Pn	22 19 48.1	+0.9
LCND	La Caada	3.39	96	eP	Pn	22 19 54.1	+1.0
LCND	La Caada	3.39	96	eP	Pn	22 19 54.1	+1.0
CNCH	Conchagua	3.45	96	eP	Pn	22 19 54.7	+0.7
CNCH	Conchagua	3.45	96	eP	Pn	22 19 54.7	+0.7
TGIG		3.51	331	eP	Pn	22 19 56.7	+1.8
TGIG				i S	Sn	22 20 36.3	+1.1
TGIG		3.51	331		Pn	22 19 56.7	+1.8
TGIG					Sn	22 20 36.3	+1.1
CSGN	Cosiguina Volc	3.76	100	Pn	Pn	22 20 00.3	+2.0
TGUH	Tegucigalpa,Un	3.98	84		Pn	22 20 02.2	+0.8
CMIG	Matias Romero	4.80	315	P	Pn	22 20 14.4	+2.0
	comp=Z,7.1nm,0.3s,baz=102,slow=9.9,SNR=29						
CMIG				S	Sn	22 21 05.7	-1.1
	comp=Z,4.0nm,0.3s,baz=111,slow=15,SNR=5.0						
CMIG				LR	LR	22 22 22.5	
	comp=Z,124nm,21.5s,baz=139,slow=40						
CMIG	Matias Romero	4.80	315	eP	Pn	22 20 13.4	+1.0
CMIG				i S	Sn	22 21 06.8	0.0
CMIG	Matias Romero	4.80	315		Pn	22 20 13.4	+1.0
CMIG					Sn	22 21 06.8	0.0
ACON	Acoyapa	6.26	105	Pn	Pn	22 20 34.8	+2.3
JTS	Las Juntas de	7.12	118	P	Pn	22 20 47.1	+2.9
	comp=Z,4.2nm,0.3s,baz=23,slow=17,SNR=6.0						
JTS				S	Sn	22 22 08.5	+4.7
	baz=351,slow=19,SNR=1.2						
JTS	Las Juntas de	7.12	118		Pn	22 20 47.0	+2.7
TEIG	Tepich	7.14	24	P	Pn	22 20 44.4	-0.1
	comp=Z,21nm,0.3s,baz=181,slow=0.0,SNR=75						
TEIG				LR	LR	22 23 48.4	
	comp=Z,115nm,19.3s,baz=75,slow=41						
TEIG	Tepich	7.14	24		Pn	22 20 44.5	+0.1
TLIG	Tlapa	7.94	300		Pn	22 20 57.1	+1.4
553A	Crawfordville	17.62	20		P	22 23 05.8	+1.1
553A				IAmb	IAmb	22 23 17.6	
	comp=Z,58nm,0.8s						
TXAR	Lajitas Array	19.30	326	P	Pn	22 23 25.3	+0.5
	comp=Z,0.2nm,0.3s,baz=149,slow=12,SNR=10						
TXAR	Lajitas Array	19.30	326	P	P	22 23 24.1	+0.8
TX31	Lajitas Ar. Si	19.30	326	P	P	22 23 23.5	+0.1
TX32	Lajitas Array	19.30	326		Pn	22 23 26.2	+1.4
MNTX	Cornudas Mount	22.07	327	P	P	22 23 54.0	+1.0
MNTX				IAmb	IAmb	22 23 56.0	
	comp=Z,5.4nm,0.9s						
TKL	Tuckaleechee C	22.91	16	P	P	22 23 60.0	-2.0
	comp=Z,1.9nm,0.4s,baz=170,slow=14,SNR=5.4						
TKL	Tuckaleechee C	22.91	16	IAmb	IAmb	22 24 03.9	
	comp=Z,2.9nm,0.6s						
SADO	Sadowa	32.68	16	P	P	22 25 28.0	-1.6
	comp=Z,1.3nm,0.4s,baz=242,slow=5.5,SNR=3.9						
SADO	Sadowa	32.68	16	IAmb	IAmb	22 25 38.7	
	comp=Z,2.6nm,1.1s						
ELK	Elko	34.09	327	P	P	22 25 43.1	+0.7
	comp=Z,0.5nm,0.4s,baz=140,slow=6.8,SNR=4.1						
ELK	Elko	34.09	327	IAmb	IAmb	22 25 44.7	
	comp=Z,0.9nm,0.7s						
EYMN	Ely	34.15	360		P	22 25 41.4	-1.1
NVAR	Mina Array Bea	34.31	321	P	P	22 25 45.9	+1.7
	comp=Z,1.0nm,0.7s,baz=128,slow=8.5,SNR=10						
NVAR	Mina Array Bea	34.31	321	P	P	22 25 45.4	+1.2
YKA	Yellowknife Ar	51.47	346	P	P	22 28 01.4	-0.9
	comp=Z,0.4nm,0.6s,baz=149,slow=8.0,SNR=7.6						
SEW	Seward	62.56	331	P	P	22 29 21.1	+0.4
SEW				IAmb	IAmb	22 29 34.0	
	comp=Z,5.9nm,1.2s						
GHO	Glory Hole Cre	62.95	333	P	P	22 29 23.8	+0.4
GHO				IAmb	IAmb	22 29 25.0	
	comp=Z,8.1nm,1.2s						
ANGG	Ammassalik, Gr	63.08	22	P	P	22 29 25.1	+1.1
BRLK	Bradley Lake	63.11	331	P	P	22 29 24.8	+0.3
CNPM	China Poot	63.20	330	P	P	22 29 25.4	+0.4
CNPM				IAmb	IAmb	22 29 38.7	
	comp=Z,10nm,1.1s						
KDAK	Kodiak Island	63.31	328	P	P	22 29 25.6	-0.1
KDAK				IAmb	IAmb	22 29 32.0	
	comp=Z,12nm,1.1s						
ILAR	Eielson Array	63.37	337	P	P	22 29 25.9	-0.1
	comp=Z,0.2nm,0.5s,baz=131,slow=6.1,SNR=2.6						
OHAK	Old Harbor	63.51	328	P	P	22 29 26.8	-0.3
BWN	Browne	64.13	336	P	P	22 29 30.5	-0.5
RSO	Redoubt South	64.23	331	P	P	22 29 31.8	-0.2
PPLA	Purkeypile	64.79	334	P	P	22 29 35.2	-0.3
PPLA				IAmb	IAmb	22 29 53.9	
	comp=Z,3.9nm,1.1s						
MKAR	Makanchi Array	119.53	5	PKP	PKPdf	22 37 44.0	-2.5
	comp=Z,0.1nm,0.6s,baz=325,slow=2.3,SNR=1.7						
WRA	Warramunga Arr	135.93	255	PKP	PKPdf	22 38 19.0	+0.6
	comp=Z,0.4nm,1.0s,baz=84,slow=2.9,SNR=2.0						
ASAR	Alice Springs	136.15	250	PKP	PKPdf	22 38 19.2	+0.5
	comp=Z,0.3nm,0.9s,baz=88,slow=4.9,SNR=1.7						
CMAR	Chiang Mai Arr	146.48	342	PKPbc	PKPdf	22 38 37.2	0.0
	comp=Z,1.5nm,0.5s,baz=340,slow=2.8,SNR=8.5						

IDC 27 22:35:30.6±49.0**, 16.°47S**×**177.°25W, h0**km**, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.6**/54**, mbtmp4.0**/3**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.5**/33**, Error ellipse: s-maj=917.5km s-min=161.3km az=78.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	22.27	192	LR	LR	22 46 46.3	
	comp=Z,81nm,19.4s,baz=242,slow=30						
STKA	Stephens Creek	40.30	240	P	P	22 43 10.3	+0.6
	1.2nm,0.4s,baz=84,slow=10,SNR=6.3						
WRA	Warramunga Arr	45.99	258	P	P	22 43 55.5	-0.6
	0.5nm,0.7s,baz=95,slow=7.8,SNR=8.0						
ASAR	Alice Springs	46.26	253	P	P	22 43 57.8	-0.3
	3.5nm,0.5s,baz=89,slow=8.1,SNR=70						

IDC ***27*** *22:39:28.4±1.7, 1.°81N×124.°91E, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.5/47, mbtmp3.8/4, ML4.0/1, MS3.4/1, Ms1 3.4/1, ms1mx2.5/36, Error ellipse: s-maj=122.0km s-min=21.9km az=67.0*

DJA ***27*** *22:39:57.8±0.9, 1°N±7°×12°4E±°, h225km±8km, M3.6/7, MLv3.6/7*

NEIC ***27*** *22:39:59.0±1.7, 0.°63N±0.°09×123.°3E±0.°1, h294km±8km, mb4.1/11, Error ellipse: s-maj=18.0km s-min=13.5km az=84.0*

ISC 27 22:39:57.9±1.0**, 0.°7N**±0.°1×**124.°31E**±0.°05**, h250**km**, n31,** σ**1.ˢ51**/27**, mb4.0**/8**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	0.35	250	P	S	22 40 56.4	+0.5
LUWI	Luwuk	2.31	222	P	S	22 41 17.7	-1.4
LUWI	Luwuk	2.31	222		Pn	22 40 43.0	-0.3
LUWI				S	S	22 41 18.4	-0.8
MRSI	Marisa	2.38	265	P	Pn	22 40 42.9	-1.0
TNTI	Ternate	3.06	89	P	S	22 41 31.6	-1.5
APSI	Ampana	3.10	239	P	Pn	22 40 51.5	0.0
APSI				S	S	22 41 32.5	-1.4
SANI	Sanana	3.20	148	P	Pn	22 40 52.4	-0.2
LBMI	Labuha	3.46	112	P	Pn	22 40 54.5	-1.0
LBMI				S	S	22 41 38.5	-2.6
KAPI	Kappang	7.27	219		Pn	22 41 35.6	-6.5
BKB	Balikpapan	7.66	255	Pn	Pn	22 41 35.6	-11
KKM	Kota Kinabalu	9.67	304		Pn	22 42 03.1	-9.3
SOEI	Soe	10.38	180	Pn	Pn	22 42 20.7	-0.8
KNRA	Kununurra	16.85	165	P	P	22 43 39.2	+1.1
KNRA				IAmb	IAmb	22 43 42.9	
	comp=Z,7.0nm,0.6s						
LEM	Lembang	18.25	246	LR	LR	22 52 03.8	
	comp=Z,110nm,18.6s,baz=32,slow=39						
FITZ	Fitzroy Crossi	18.72	176	P	P	22 44 00.7	+2.3
	comp=Z,0.3nm,0.3s,baz=355,slow=11,SNR=16						
FITZ	Fitzroy Crossi	18.72	176	P	P	22 43 59.6	+1.3
MDSI	Maura Dua	20.76	255	P	P	22 44 18.8	-1.4
WB0	Warramunga Arr	22.61	155	P	P	22 44 39.2	+1.6
WB0				IAmb	IAmb	22 44 39.8	
	comp=Z,4.1nm,0.6s						
WRA	Warramunga Arr	22.74	155	P	P	22 44 40.7	+1.8
	comp=Z,2.8nm,0.3s,baz=335,slow=10,SNR=58						
WRA	Warramunga Arr	22.74	155	P	P	22 44 39.7	+0.9
WB2	Warramunga Arr	22.75	155	P	P	22 44 40.6	+1.7
WB2				IAmb	IAmb	22 44 41.2	
	comp=Z,6.0nm,0.4s						
WR0	Warramunga Arr	22.84	155	P	P	22 44 41.7	+1.9
WR0				IAmb	IAmb	22 44 41.9	
	comp=Z,1.9nm,0.5s						
COEN	Coen	23.69	129	P	P	22 44 50.4	+2.9
COEN				IAmb	IAmb	22 45 07.0	
	comp=Z,2.9nm,0.9s						
ASAR	Alice Springs	25.95	160	P	P	22 45 09.8	+2.0
	comp=Z,0.4nm,0.5s,baz=340,slow=7.5,SNR=11						
ASAR	Alice Springs	25.95	160	P	P	22 45 07.1	-0.7
FORT	Forrest	31.50	174	P	P	22 45 55.3	-1.4
FORT				IAmb	IAmb	22 46 06.2	
	comp=Z,8.8nm,0.9s						
KAAM	Kaadhehdhoo	51.31	270	P	P	22 48 26.5	-11
MKAR	Makanchi Array	58.73	327	P	P	22 49 23.9	-5.8
	comp=Z,0.3nm,0.4s,baz=129,slow=8.1,SNR=14						
MAKZ	Makanchi	58.90	327	P	P	22 49 25.0	-6.0
PEA0B	Petropavlovsk-	59.14	23	P	P	22 49 32.4	+0.1
PETK	Petropavlovsk-	59.14	23	P	P	22 49 32.6	+0.2

JMA ***27*** *22:47:36.0±0.2, 35.°64N×140.°07E, h72km±2km, M3.5 Broadband fault plane solution: P waves. NP1: φs155.00000°, δ20.00000°, λ68.00000°. NP2: φs358.00000°, δ71.00000°, λ98.00000°. Principal axes: T Plg63.0000°, Azm281.0000°; N Plg8.0000°, Azm176.0000°; P Plg26.0000°, Azm82.0000°;*

JMA Felt I J1.

IDC ***27*** *22:47:38.4±2.0, 35.°45N×139.°76E, h80km±14km, mb3.3/4, mb1 3.5/5, mb1mx3.1/46, mbtmp3.7/5 Error ellipse: s-maj=36.9km s-min=7.3km az=68.0*

ISC 27 22:47:36.7±0.9**, 35.°59N**±0.°04×**140.°05E**±0.°04**, h74**km±6km**, n26,** σ**0.ˢ72**/36**, mb3.7**/4**, 3C-8D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCN	Nagara	0.21	144	⇑P	Pn	22 47 47.8	-0.1
JCN				eS	Sn	22 47 56.4	+0.4
TOK	Tokyo	0.25	292	⇓P	Pn	22 47 48.2	+0.2
TOK				eS	Sn	22 47 57.1	+0.8

JSMT	**Sammumatsuo**	**0.33**	**81**	⇑P	**Pn**	**22 47 48.1**	**-0.4**
JSMT				*e*S	**Sn**	**22 47 56.9**	**-0.3**
JOD2	**Odawara 2**	**0.85**	**248**	⇓P	**Pn**	**22 47 53.2**	**-0.4**
JOD2				S	**Sn**	**22 48 05.1**	**-1.1**
BSO3	**Boso 3**	**0.87**	**154**	⇑P	**Pn**	**22 47 53.1**	**-0.5**
BSO3				*e*S	**Sn**	**22 48 06.3**	**+0.1**
JAG	**Ashikaga**	**0.96**	**330**	⇓P	**Pn**	**22 47 54.3**	**-0.7**
JAG				*e*S	**Sn**	**22 48 07.2**	**-1.4**
JIM2	**Oshima 3**	**1.01**	**210**	P	**Pn**	**22 47 54.5**	**-1.0**
JIM2				S	**Sn**	**22 48 08.3**	**-1.2**
JRY	**Ryogami san**	**1.02**	**295**	⇓P	**Pn**	**22 47 55.9**	**+0.2**
JRY				*e*S	**Sn**	**22 48 09.9**	**0.0**
JFNN	**Fujinakano**	**1.18**	**251**	⇓P	**Pn**	**22 47 57.7**	**0.0**
JFNN				S	**Sn**	**22 48 13.4**	**0.0**
BSO1	**Boso 1**	**1.21**	**140**	P	**Pn**	**22 47 56.9**	**-0.6**
BSO1				S	**Sn**	**22 48 12.8**	**-0.3**
JYN	**Shimob**	**1.23**	**266**	⇓P	**Pn**	**22 47 58.3**	**-0.1**
JYN				*e*S	**Sn**	**22 48 14.6**	**0.0**
JIZS	**Izushimoda**	**1.29**	**228**	⇓P	**Pn**	**22 47 58.9**	**-0.2**
JIZS				S	**Sn**	**22 48 15.3**	**-0.7**
JKT	**Katashina**	**1.34**	**331**	⇓P	**Pn**	**22 47 59.1**	**-0.7**
JKT				S	**Sn**	**22 48 15.9**	**-1.3**
MJAR	**Matsushiro Arr**	**1.77**	**303**	P	**Pn**	**22 48 05.7**	**+0.4**
	3.5nm,0.3s,baz=146,slow=14,SNR=80						
MJAR				S	**Sn**	**22 48 25.8**	**-1.3**
	3.2nm,0.3s,baz=126,slow=21,SNR=4.8						
MJAR				LR	LR	22 48 45.3	
	comp=Z,29nm,19.0s,baz=260,slow=41						
MAT	**Matsushiro**	**1.77**	**303**	P	**Pn**	**22 48 05.8**	**+0.4**
MAT				S	**Sn**	**22 48 25.8**	**-1.3**
JHJ	**Hachijo jima 2**	**2.48**	**185**	P	**Pn**	**22 48 15.0**	**+0.1**
	48nm,0.3s,baz=8.1,slow=16,SNR=8.1						
JHJ				S	**Sn**	**22 48 43.2**	**-0.9**
	62nm,0.3s,baz=78,slow=22,SNR=6.5						
H11N2	**WAKE ISLAND Hy**	**28.42**	**117**	T	T	23 23 07.7	
	baz=308,slow=75,SNR=15						
H11N1	**WAKE ISLAND Hy**	**28.43**	**117**	T	T	23 23 11.4	
	baz=308,slow=75,SNR=17						
H11N3	**WAKE ISLAND Hy**	**28.44**	**117**	T	T	23 23 09.4	
	baz=308,slow=75,SNR=15						
H11S1	**WAKE ISLAND Hy**	**29.07**	**119**	T	T	23 23 33.6	
	baz=311,slow=76,SNR=8.3						
H11S3	**WAKE ISLAND Hy**	**29.07**	**119**	T	T	23 23 39.2	
	baz=311,slow=76,SNR=7.0						
H11S2	**WAKE ISLAND Hy**	**29.08**	**119**	T	T	23 23 39.2	
	baz=311,slow=76,SNR=5.5						
MKAR	**Makanchi Array**	**43.97**	**303**	P	**P**	**22 55 37.4**	**+1.0**
	0.5nm,0.5s,baz=85,slow=9.5,SNR=9.0						
WRA	**Warramunga Arr**	**55.49**	**187**	P	**P**	**22 57 03.7**	**-0.3**
	0.4nm,0.4s,baz=0.8,slow=7.5,SNR=16						
ASAR	**Alice Springs**	**59.22**	**187**	P	**P**	**22 57 30.4**	**+0.1**
	0.2nm,0.4s,baz=22,slow=10,SNR=2.3						
FINES	**FINESS Array B**	**69.57**	**332**	P	**P**	**22 58 37.8**	**+0.4**
	1.4nm,0.9s,baz=69,slow=7.6,SNR=6.7						

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*KRNET **27** 23:18:17.7±0.1, 43°.51N×78°.70E, h35km, mb2.0*
*SOME **27** 23:18:20.9, 42°.80N×79°.08E, h10km*
*NNC **27** 23:18:21.2±0.5, 42°.83N×79°.11E, h0km, mb2.5, mpv2.5,*
Error ellipse: s-maj=3.5km s-min=1.2km az=156.0
ISC 27 23:18:20.5±1.4**, 42°.78N**±0°.05×**79°.07E**±0°.03**, h3km**±11km**,**
n38, σ1^s**66**/70**, 10C-11D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UZB	**Uzynbulak**	**0.37**	**355**	⇓*i*P	**Pg**	**23 18 27.9**	**+0.3**
	13nm,0.1s						
UZB				⇓*e*S	**Sg**	**23 18 33.0**	**+0.5**
	9.9nm,0.1s						
UZB	**Uzynbulak**	**0.37**	**355**	P	**Pg**	**23 18 27.9**	**+0.3**
	13nm,0.1s						
UZB				S	**Sg**	**23 18 33.0**	**+0.5**
	9.9nm,0.1s						
SHLS	**Shalkode**	**0.48**	**37**	*e*P	**Pn**	**23 18 34.3**	**0.0**
	1.6nm,0.1s						
SHLS				*e*S	**Sb**	**23 18 43.9**	**+4.9**
	5.9nm,0.2s						
SHLS	**Shalkode**	**0.48**	**37**	P	**Pn**	**23 18 34.3**	**0.0**
	1.6nm,0.1s						
SHLS				S	**Sb**	**23 18 43.9**	**+4.9**
	5.9nm,0.2s						
SATY	**Saty**	**0.56**	**300**	*e*P	**Pg**	**23 18 31.8**	**+0.6**
	0.7nm,0.1s						
SATY				*e*S	**Sg**	**23 18 39.5**	**+0.9**
	29nm,0.1s						
SATY	**Saty**	**0.56**	**300**	P	**Pg**	**23 18 31.8**	**+0.6**
	0.7nm,0.1s						
SATY				S	**Sg**	**23 18 39.4**	**+0.9**
	29nm,0.1s						
PRZ	**Przheval'sk**	**0.57**	**239**	⇓*i*P	**Pn**	**23 18 37.2**	**+1.5**
	baz=91						
PRZ				⇓*i*S	**Sn**	**23 18 51.2**	**+5.4**
	baz=91						
PDGK	**Podgornoye**	**0.63**	**29**	P	**Pg**	**23 18 32.4**	**-0.1**
	1.8nm,0.1s						
PDGK				S	**Sb**	**23 18 40.8**	**-2.7**
	4.0nm,0.1s						
PDGK	**Podgornoye**	**0.63**	**29**	⇓P	**Pg**	**23 18 32.2**	**-0.4**
	0.6nm,0.2s						
PDGK				⇑S	**Sg**	**23 18 40.3**	**-0.5**
	1.4nm,0.2s						
KPKS	**Kokpek**	**0.74**	**338**	⇓*i*P	**Pg**	**23 18 34.7**	**0.0**
	11nm,0.2s						
KPKS				⇓*i*S	**Sg**	**23 18 44.6**	**+0.2**
	11nm,0.3s						
ANVS	**Anan'yevo**	**1.03**	**271**	⇑*i*P	**Pg**	**23 18 37.2**	**-3.1**
	baz=27						
ANVS				⇑*i*S	**Sg**	**23 18 51.1**	**-2.5**
	baz=27						
KTMS	**Ketmen**	**1.15**	**54**	*e*P	**Pg**	**23 18 42.3**	**-0.3**
	1.4nm,0.1s						
KTMS				*e*S	**Sb**	**23 18 57.4**	**-1.2**
	2.7nm,0.2s						
KTMS	**Ketmen**	**1.15**	**54**	P	**Pg**	**23 18 42.3**	**-0.3**
	1.4nm,0.1s						
KTMS				S	**Sb**	**23 18 57.3**	**-1.2**
	2.7nm,0.2s						
KOTS	**Kotyrbulak**	**1.51**	**288**	*e*P	**Pb**	**23 18 49.5**	**+0.3**
	1.2nm,0.2s						
KOTS				*e*S	**Sg**	**23 19 09.9**	**+1.0**
	3.4nm,0.3s						
KOTS	**Kotyrbulak**	**1.51**	**288**	P	**Pb**	**23 18 49.5**	**+0.3**
	1.2nm,0.2s						
KOTS				S	**Sg**	**23 19 09.9**	**+1.0**
	3.4nm,0.3s						
MDOK	**Medeo**	**1.53**	**285**	*e*P	**Pn**	**23 18 48.7**	**-0.2**
	0.8nm,0.3s						
MDOK				*e*S	**Sn**	**23 19 08.8**	**-0.6**
	2.0nm,0.5s						
MDOK	**Medeo**	**1.53**	**285**	⇓P	**Pn**	**23 18 49.4**	**+0.6**
	3.6nm,1.3s						
MDOK				⇓S	**Sg**	**23 19 10.8**	**+1.1**
	5.7nm,1.2s						
MDOK	**Medeo**	**1.53**	**285**	Pg	**Pn**	**23 18 48.7**	**-0.2**
	0.8nm,0.3s						
MDOK				Lg	Lg	23 19 08.8	
	2.0nm,0.5s						
KDJ	**Kajisay**	**1.54**	**246**	⇑*i*P	**Pn**	**23 18 47.8**	**-1.2**
	baz=19						
KDJ				⇑*i*S	**Sn**	**23 19 10.1**	**+0.5**
	baz=19						
TNSS	**Tian-Shan**	**1.58**	**280**	*e*P	**Pb**	**23 18 50.5**	**-0.1**
	0.5nm,0.1s						
TNSS				*e*S	**Sb**	**23 19 11.4**	**+0.3**
	0.9nm,0.2s						
TNSS	**Tian-Shan**	**1.58**	**280**	P	**Pb**	**23 18 50.5**	**-0.1**
	0.5nm,0.1s						
TNSS				S	**Sb**	**23 19 11.4**	**+0.3**
	0.9nm,0.2s						
DJR	**Jarkent**	**1.64**	**18**	*e*P	**Pg**	**23 18 51.0**	**-0.8**
	0.4nm,0.1s						
DJR				*e*S	**Sg**	**23 19 12.5**	**-0.6**
	7.2nm,0.2s						
DJR	**Jarkent**	**1.64**	**18**	P	**Pg**	**23 18 51.0**	**-0.8**
	0.4nm,0.1s						
DJR				S	**Sg**	**23 19 12.5**	**-0.6**
	7.2nm,0.2s						
ARXS	**Arharly**	**1.70**	**328**	*e*P	**Pb**	**23 18 51.9**	**-0.4**
	0.8nm,0.2s						
ARXS				*e*S	**Sg**	**23 19 14.3**	**-0.6**
	7.3nm,0.3s						
ARXS	**Arharly**	**1.70**	**328**	P	**Pb**	**23 18 51.9**	**-0.4**
	0.8nm,0.2s						
ARXS				S	**Sg**	**23 19 14.4**	**-0.6**
	7.3nm,0.3s						
IZV	**Izvestkoviy**	**1.82**	**279**	*e*P	**Pb**	**23 18 55.4**	**+0.8**
	0.6nm,0.1s						
IZV				*e*S	**Sg**	**23 19 19.9**	**+0.9**
	2.3nm,0.1s						
IZV	**Izvestkoviy**	**1.82**	**279**	P	**Pb**	**23 18 55.4**	**+0.8**
	0.6nm,0.1s						
IZV				S	**Sg**	**23 19 19.9**	**+0.9**
	2.3nm,0.1s						
CHKK	**Chushkaly**	**1.86**	**306**	*e*P	**Pb**	**23 18 55.2**	**+0.1**
	0.3nm,0.1s						
CHKK				⇑*i*S	**Sb**	**23 19 19.3**	**+0.5**
	2.9nm,0.2s						
CHKK	**Chushkaly**	**1.86**	**306**	P	**Pb**	**23 18 55.2**	**+0.1**
	0.3nm,0.1s						
CHKK				S	**Sb**	**23 19 19.3**	**+0.5**
	2.9nm,0.2s						
KTBS	**Karatobe**	**1.98**	**299**	*e*P	**Pb**	**23 18 57.3**	**+0.2**
	0.3nm,0.1s						
KTBS				*e*S	**Sb**	**23 19 23.1**	**+0.9**
	4.2nm,0.2s						
KTBS	**Karatobe**	**1.98**	**299**	Pg	**Pb**	**23 18 57.3**	**+0.2**
	0.3nm,0.1s						
KTBS				Lg	Lg	23 19 23.1	
	4.2nm,0.2s						
KUU	**Kurty**	**2.28**	**300**	*e*P	**Pb**	**23 19 03.2**	**+0.9**
	0.4nm,0.2s						
KUU				*e*S	**Sg**	**23 19 33.3**	**-0.5**
	1.6nm,0.2s						
KUU	**Kurty**	**2.28**	**300**	Pg	**Pb**	**23 19 03.2**	**+0.9**
	0.4nm,0.2s						
KUU				Lg	Lg	23 19 33.3	
	1.6nm,0.2s						
BOOM	**Boomskoye usch**	**2.33**	**264**	⇑*i*P	Pn	23 18 54.8	-5.0
	baz=44						
BOOM				⇑*i*S	**Sn**	**23 19 22.0**	**-7.0**
	baz=44						
KAPS	**Kapalarasan**	**2.52**	**5**	*e*P	**Pb**	**23 19 06.8**	**+0.5**
	0.3nm,0.1s						
KAPS				*e*S	**Sg**	**23 19 38.6**	**-2.6**
	2.2nm,0.2s						
KAPS	**Kapalarasan**	**2.52**	**5**	Pg	**Pb**	**23 19 06.8**	**+0.5**
	0.3nm,0.1s						
KAPS				Lg	Lg	23 19 38.6	
	2.2nm,0.2s						
NRN	**Naryn**	**2.65**	**241**	⇑*i*P	**Pn**	**23 19 03.6**	**-0.8**
	baz=25						
NRN				⇑*i*S	**Sn**	**23 19 37.3**	**+0.1**
	baz=25						
AAK	**Ala-Archa**	**3.38**	**269**	⇓Pg	**Pb**	**23 19 21.4**	**+0.4**
	1.6nm,0.8s						
AAK				⇓Lg	Lg	23 20 08.5	
	3.5nm,1.3s						

LJU 27 23:31:26.4, 45°.75N×14°.85E, h2km, ML0.1, 1D,
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VISS	**Visnje**	**0.05**	**350**	⇓*i*Pg	Pg	23 31 27.5	0.0
VISS				*i* Sg	Sg	23 31 28.4	+0.1
	comp=Z,5.0nm,0.0s						

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*ROM **27** 23:31:58.0±0.1, 39°.638N±0°.007×16°.00E±0°.02, h100km,*
ML3.5/27, Error ellipse: s-maj=1.5km s-min=0.8km
az=256.0
*TIR **27** 23:31:60.0, 39°.88N×16°.46E, h74km, Md3.8/7*
ISC 27 23:31:57.8±1.4**, 39°.67N**±0°.04×**16°.10E**±0°.04**, h103km**±7km**,**
n115, σ1^s**15**/106**, 12C-14D, Southern Italy**
PDG 27 23:31:57.8±0.5**, 39°.70N×16°.14E, h100km**±1km**, ML3.7**/11**,**
Error ellipse: s-maj=0.6km s-min=1.4km az=0.0,
Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0702	**Acquaformosa (**	**0.05**	**346**	P	**Pn**	**23 32 12.1**	**-0.1**
T0702				S	**Sn**	**23 32 21.8**	**-1.2**
CET2	**Cetraro**	**0.18**	**219**	P	**Pn**	**23 32 12.4**	**0.0**
CET2				S	**Sn**	**23 32 21.8**	**-1.5**
CET2				AML	AML		
	comp=N,38300μm,0.6s						
CET2				AML	AML		
	comp=E,38150μm,1.4s						
CET2				AML	AML		
	comp=E,38150μm,1.4s						
CET2				AML	AML		
	comp=N,38300μm,0.6s						
MMN	**Mormanno**	**0.24**	**339**	⇑P	**Pn**	**23 32 12.6**	**+0.2**
MMN				S	**Sn**	**23 32 22.7**	**-0.7**
MMN				AML	AML		
	comp=N,2260μm,0.4s						
MMN				AML	AML		
	comp=E,1505μm,0.2s						
SALB	**San Lorenzo Be**	**0.28**	**42**	⇓P	**Pn**	**23 32 13.3**	**+0.5**
SALB				S	**Sn**	**23 32 23.8**	**-0.2**
SALB				AML	AML		
	comp=E,4215μm,0.3s						
SALB				AML	AML		
	comp=N,2485μm,0.7s						
SALB				AML	AML		
	comp=N,2725μm,0.7s						
SALB				AML	AML		
	comp=E,4390μm,0.3s						
SALB				AML	AML		
	comp=N,2480μm,0.7s						
CUC	**Castrocucco**	**0.39**	**326**	P	**Pn**	**23 32 13.1**	**-0.2**
CUC				S	**Sn**	**23 32 23.4**	**-1.5**
CUC				AML	AML		
	comp=E,3260μm,0.3s						
CUC				AML	AML		
	comp=E,3265μm,0.3s						
CUC				AML	AML		
	comp=E,4135μm,0.3s						
CUC				AML	AML		
	comp=N,2720μm,0.4s						
CUC				AML	AML		
	comp=N,2200μm,0.4s						
CELI	**Celico**	**0.41**	**130**	⇓P	**Pn**	**23 32 14.7**	**+1.2**
CELI				AML	AML		
	comp=N,1410μm,1.6s						
CELI				AML	AML		
	comp=E,3895μm,0.9s						
CELI				AML	AML		
	comp=N,3450μm,1.6s						
CELI				AML	AML		
	comp=E,1575μm,0.9s						
CAR1	**CAROLEI**	**0.42**	**168**	⇑P	**Pn**	**23 32 13.3**	**-0.1**
CAR1				S	**Sn**	**23 32 24.0**	**-1.2**
CAR1				AML	AML		
	comp=N,2665μm,0.2s						
CAR1				AML	AML		
	comp=E,3045μm,0.4s						
CAR1				AML	AML		
	comp=N,3430μm,1.1s						
CAR1				AML	AML		
	comp=E,3895μm,1.1s						
CAR1				AML	AML		
	comp=E,3050μm,0.4s						
ORI	**Oriolo Calabro**	**0.48**	**34**	⇓P	**Pn**	**23 32 14.6**	**+0.8**
ORI				S	**Sn**	**23 32 26.7**	**+1.0**
ORI				AML	AML		
	comp=E,4890μm,0.4s						
ORI				AML	AML		
	comp=N,4035μm,0.4s						
SCHR	**S. Chirico Rap**	**0.53**	**358**	⇓P	**Pn**	**23 32 15.1**	**+0.8**
SCHR				S	**Sn**	**23 32 26.7**	**+0.2**
SCHR				AML	AML		
	comp=E,1495μm,0.5s						
SCHR				AML	AML		
	comp=N,1795μm,0.3s						
SCHR				AML	AML		
	comp=E,1500μm,0.5s						
SIRI	**Monte Sirino -**	**0.54**	**341**	⇑P	**Pn**	**23 32 14.4**	**+0.1**
SIRI				S	**Sn**	**23 32 26.2**	**-0.5**
SIRI				AML	AML		
	comp=N,2240μm,0.2s						
SIRI				AML	AML		
	comp=N,2205μm,0.3s						
SIRI				AML	AML		
	comp=N,2235μm,0.2s						
SIRI				AML	AML		
	comp=E,2265μm,0.4s						
SIRI				AML	AML		
	comp=E,2310μm,0.4s						
MGR	**Morigerati**	**0.63**	**318**	⇑P	**Pn**	**23 32 14.8**	**-0.1**
MGR				S	**Sn**	**23 32 26.7**	**-1.0**
MGR				AML	AML		
	comp=E,3020μm,0.9s						
MGR				AML	AML		
	comp=N,2320μm,0.2s						
MTSN	**Montesano sull**	**0.65**	**336**	⇑P	**Pn**	**23 32 15.2**	**0.0**
MTSN				AML	AML		
	comp=E,1520μm,1.0s						
MTSN				AML	AML		
	comp=N,1485μm,0.4s						
BULG	**Bulgheria - Ca**	**0.69**	**307**	⇑P	**Pn**	**23 32 15.7**	**+0.2**
BULG				S	**Sn**	**23 32 28.5**	**-0.3**
BULG				AML	AML		
	comp=E,3570μm,0.8s						
BULG				AML	AML		
	comp=N,5785μm,0.3s						
BULG				AML	AML		
	comp=N,5985μm,0.3s						
BULG				AML	AML		
	comp=N,5780μm,0.3s						
BULG				AML	AML		
	comp=N,5980μm,0.3s						
BULG				AML	AML		
	comp=E,3575μm,0.8s						
BULG				AML	AML		
	comp=E,3760μm,0.2s						
MCEL	**Monticello**	**0.69**	**341**	P	**Pn**	**23 32 16.1**	**+0.6**
MCEL				S	**Sn**	**23 32 29.2**	**+0.3**
TIP	**Timpagrande**	**0.71**	**134**	P	**Pn**	**23 32 16.1**	**+0.5**
TIP	**Timpagrande**	**0.71**	**134**	⇓P	**Pn**	**23 32 16.2**	**+0.6**
TIP				AML	AML		
	comp=E,328μm,0.5s						
TIP				AML	AML		
	comp=N,180μm,0.7s						
TIP				AML	AML		
	comp=E,328μm,0.5s						
TIP				AML	AML		
	comp=N,180μm,0.7s						
TIP				AML	AML		
	comp=E,401μm,0.5s						
TIP				AML	AML		
	comp=N,240μm,0.9s						
CRAC	**Craco**	**0.74**	**20**	⇓P	**Pn**	**23 32 17.0**	**+1.1**
CRAC				S	**Sn**	**23 32 31.2**	**+1.7**
CRAC				AML	AML		
	comp=E,8475μm,0.2s						
CRAC				AML	AML		
	comp=E,8460μm,0.2s						
CRAC				AML	AML		
	comp=N,7215μm,0.4s						
SERS	**Sersale**	**0.78**	**144**	⇓P	**Pn**	**23 32 17.0**	**+0.7**
SERS				S	**Sn**	**23 32 30.6**	**+0.3**
SERS				AML	AML		
	comp=N,438μm,0.9s						
SERS				AML	AML		
	comp=E,547μm,1.1s						
SERS				AML	AML		
	comp=E,438μm,0.3s						
SERS				AML	AML		
	comp=N,544μm,1.1s						
SERS				AML	AML		
	comp=N,437μm,0.9s						
LADO	**San Nicola del**	**0.78**	**119**	⇓P	**Pn**	**23 32 16.7**	**+0.5**
LADO				AML	AML		
	comp=E,608μm,0.9s						
LADO				AML	AML		
	comp=E,607μm,0.9s						
LADO				AML	AML		
	comp=N,376μm,0.6s						
SLCN	**Sala Consilina**	**0.81**	**334**	P	**Pn**	**23 32 17.0**	**+0.4**
SLCN				AML	AML		
	comp=E,3745μm,0.4s						
SLCN				AML	AML		
	comp=E,352μm,1.4s						
SLCN				AML	AML		
	comp=N,2185μm,0.5s						
SLCN				AML	AML		
	comp=N,424μm,0.9s						
GRI	**Girifalco**	**0.88**	**164**	P	**Pn**	**23 32 18.2**	**+1.0**
GRI				AML	AML		
	comp=E,892μm,1.4s						
GRI				AML	AML		
	comp=N,696μm,0.3s						
CMPR	**Campora**	**0.89**	**317**	⇑P	**Pn**	**23 32 17.6**	**+0.2**
CMPR				S	**Sn**	**23 32 31.6**	**-0.5**
CMPR				AML	AML		
	comp=E,1915μm,0.7s						
CMPR				AML	AML		
	comp=N,1955μm,0.5s						
MIGL	**Miglionico**	**0.97**	**16**	AML	AML		
	comp=E,3710μm,0.3s						
MIGL				AML	AML		
	comp=N,2610μm,0.6s						
CDRU	**Civita di Ruta**	**1.02**	**324**	P	**Pn**	**23 32 18.9**	**+0.1**
CDRU				S	**Sn**	**23 32 33.9**	**-0.7**
CDRU				AML	AML		
	comp=E,1370μm,0.6s						
CDRU				AML	AML		
	comp=N,651μm,0.3s						
JOPP	**Joppolo**	**1.07**	**189**	⇑P	**Pn**	**23 32 19.3**	**0.0**
JOPP				S	**Sn**	**23 32 34.3**	**-1.2**
JOPP				AML	AML		
	comp=E,2075μm,0.2s						
JOPP				AML	AML		
	comp=N,1715μm,0.1s						
MATE	**Matera**	**1.08**	**25**	⇑P	**Pn**	**23 32 18.6**	**-0.7**
MATE				⇓S	**Sn**	**23 32 35.3**	**-0.2**
MATE	**Matera**	**1.08**	**25**	AML	AML		
	comp=E,1095μm,1.6s						
MATE				AML	AML		
	comp=N,1335μm,1.3s						
IST3	**Stromboli F**	**1.10**	**218**	⇑P	**Pn**	**23 32 19.5**	**0.0**
IST3				AML	AML		
	comp=N,10885μm,0.2s						
IST3				AML	AML		
	comp=E,8780μm,0.2s						
IST3				AML	AML		
	comp=N,10880μm,0.2s						
ACER	**Acerenza**	**1.12**	**354**	P	**Pn**	**23 32 20.0**	**+0.2**
ACER				AML	AML		
	comp=E,4535μm,0.3s						
ACER				AML	AML		
	comp=N,3350μm,0.4s						
ACER				AML	AML		
	comp=E,4705μm,0.3s						
ACER				AML	AML		
	comp=N,3495μm,0.4s						
ACER				AML	AML		
	comp=E,4540μm,0.3s						
ISTR	**Stromboli Gino**	**1.13**	**219**	⇓P	**Pn**	**23 32 20.3**	**+0.4**
ISTR				AML	AML		
	comp=E,2115μm,1.1s						
ISTR				AML	AML		
	comp=N,2525μm,0.2s						
MRLC	**Muro Lucano**	**1.18**	**337**	AML	AML		
	comp=E,678μm,0.4s						
MRLC				AML	AML		
	comp=N,1117μm,0.3s						
MRLC				AML	AML		
	comp=E,697μm,0.4s						
MRLC				AML	AML		
	comp=E,698μm,0.4s						
MRLC				AML	AML		
	comp=N,1175μm,0.3s						
PLAC	**Placanica**	**1.25**	**168**	AML	AML		
	comp=E,402μm,0.3s						
PLAC				AML	AML		
	comp=N,404μm,0.5s						
TAR1	**Taranto**	**1.25**	**46**	⇓*i*Pg	**Pn**	**23 32 20.7**	**-0.5**
TAR1				Sg	**Sn**	**23 32 37.9**	**-1.0**
SG1	**Sgolgore (BA)**	**1.25**	**21**	⇓*i*Pg	**Pn**	**23 32 20.8**	**-0.5**
SG1				Sg	**Sn**	**23 32 37.8**	**-1.2**
PALZ	**Palazzo San Ge**	**1.28**	**355**	AML	AML		
	comp=E,2935μm,0.3s						
PALZ				AML	AML		
	comp=N,2025μm,0.6s						
AMUR	**Altamura**	**1.29**	**17**	AML	AML		
	comp=N,2025μm,0.6s						
AMUR				AML	AML		
	comp=E,1715μm,0.6s						
MCRV	**Calabrutti - M**	**1.32**	**328**	AML	AML		
	comp=N,1032μm,0.8s						
MCRV				AML	AML		
	comp=E,725μm,0.6s						
VULT	**Monte Vulture**	**1.34**	**344**	AML	AML		
	comp=N,1595μm,0.4s						
VULT				AML	AML		
	comp=N,1565μm,0.4s						
VULT				AML	AML		

	comp=E,1425µm,0.4s						
VULT				AML	AML		
	comp=N,1560µm,0.4s						
VULT				AML	AML		
	comp=E,1495µm,0.4s						
NOCI	**Noci**	**1.34**	**33**	AML	AML		
	comp=N,2130µm,0.5s						
NOCI				AML	AML		
	comp=E,2205µm,0.4s						
MRVN	**Minervino Murg**	**1.39**	**3**	AML	AML		
	comp=N,1730µm,0.4s						
MRVN				AML	AML		
	comp=E,1915µm,0.3s						
CEL	**Celeste**	**1.42**	**187**	AML	AML		
	comp=E,378µm,1.4s						
CEL				AML	AML		
	comp=N,410µm,0.4s						
CEL				AML	AML		
	comp=E,444µm,1.4s						
CEL				AML	AML		
	comp=N,504µm,0.4s						
MSCL	**Scilla**	**1.46**	**190**	AML	AML		
	comp=N,2615µm,0.7s						
MSCL				AML	AML		
	comp=E,3305µm,0.6s						
MSRU	**Castanea**	**1.48**	**198**	AML	AML		
	comp=E,2045µm,0.4s						
MSRU				AML	AML		
	comp=N,2010µm,0.8s						
CAFE	**Carife**	**1.51**	**334**	AML	AML		
	comp=N,357µm,0.4s						
CAFE				AML	AML		
	comp=E,610µm,0.7s						
GMB	**Gambarie**	**1.51**	**188**	AML	AML		
	comp=N,2925µm,0.2s						
GMB				AML	AML		
	comp=E,2715µm,0.7s						
MILZ	**Milazzo**	**1.55**	**206**	AML	AML		
	comp=E,1550µm,1.6s						
MILZ				AML	AML		
	comp=N,1785µm,0.4s						
MILZ				AML	AML		
	comp=N,1790µm,0.4s						
BAI	**Bari**	**1.55**	**22**	⇓*i*Pg	**Pn**	**23 32 24.2**	**-0.6**
BAI				Sg	**Sn**	**23 32 44.4**	**-1.0**
SGTA	**Sant Agata di**	**1.57**	**339**	AML	AML		
	comp=E,324µm,1.5s						
SGTA				AML	AML		
	comp=N,181µm,1.6s						
SOI	**Samo**	**1.59**	**181**	AML	AML		
	comp=E,370µm,0.5s						
SOI				AML	AML		
	comp=N,200µm,0.9s						
MESG	**Mesagne**	**1.63**	**55**	AML	AML		
	comp=E,2435µm,0.8s						
MESG				AML	AML		
	comp=N,3270µm,1.1s						
MPNC	**Port Mandanici**	**1.63**	**201**	AML	AML		
	comp=E,3110µm,0.5s						
MPNC				AML	AML		
	comp=N,2420µm,1.3s						
MRB1	**Monte Rocchett**	**1.69**	**330**	AML	AML		
	comp=N,498µm,0.5s						
MRB1				AML	AML		
	comp=E,470µm,1.4s						
MTTG	**Motta San Giov**	**1.69**	**191**	AML	AML		
	comp=N,622µm,1.0s						
MTTG				AML	AML		
	comp=E,455µm,1.5s						
MPAZ	**Palizzi**	**1.71**	**182**	AML	AML		
	comp=N,503µm,0.7s						
MPAZ				AML	AML		
	comp=E,610µm,0.8s						
MCSR	**Castroreale**	**1.73**	**203**	AML	AML		
	comp=N,5180µm,0.3s						
MCSR				AML	AML		
	comp=E,2270µm,0.3s						
PAOL	**Paolisi**	**1.79**	**320**	AML	AML		
	comp=N,198µm,0.3s						
PAOL				AML	AML		
	comp=E,174µm,0.3s						
AIO	**Antillo**	**1.83**	**202**	AML	AML		
	comp=E,657µm,0.3s						
AIO				AML	AML		
	comp=N,638µm,0.6s						
SCTE	**Santa Cesarea**	**1.87**	**77**	AML	AML		
	comp=N,2155µm,1.4s						
SCTE				AML	AML		
	comp=E,2250µm,0.6s						
MUCR	**Ucria**	**1.89**	**211**	AML	AML		
	comp=E,294µm,1.0s						
MUCR				AML	AML		
	comp=N,458µm,0.5s						
MSAG	**Monte S. Angel**	**2.05**	**356**	AML	AML		
	comp=N,1730µm,1.6s						
MSAG				AML	AML		
	comp=E,750µm,0.3s						
EMSG	**Monte Spagnolo**	**2.05**	**206**	AML	AML		
	comp=N,968µm,0.5s						
EMSG				AML	AML		
	comp=E,1520µm,0.5s						
EPZF	**Pizzo Felice**	**2.08**	**208**	AML	AML		
	comp=E,729µm,0.4s						
EPZF				AML	AML		
	comp=N,927µm,0.3s						
SGRT	**San Giovanni R**	**2.10**	**353**	AML	AML		
	comp=E,800µm,0.5s						
SGRT				AML	AML		
	comp=N,868µm,0.7s						
MELA	**Melanico ??? S**	**2.17**	**340**	AML	AML		
	comp=E,378µm,1.6s						
MELA				AML	AML		
	comp=N,464µm,0.3s						
BSSO	**Busso**	**2.20**	**329**	AML	AML		
	comp=E,69µm,1.5s						
BSSO				AML	AML		
	comp=N,74µm,1.6s						
ESML	**S. M. di Licod**	**2.26**	**205**	AML	AML		
	comp=N,288µm,0.6s						
ESML				AML	AML		
	comp=E,334µm,0.7s						
HLNI	**Lentini**	**2.51**	**203**	AML	AML		
	comp=N,259µm,0.3s						
HLNI				AML	AML		
	comp=E,238µm,1.5s						
VLO	**Vlora**	**2.73**	**72**	P	**Pn**	**23 32 41.1**	**+1.2**
VLO	**Vlora**	**2.73**	**72**	*i* PN	**Pn**	**23 32 40.9**	**+1.0**
VLO				*i* SN	**Sn**	**23 33 10.1**	**-2.2**
HAVL	**Avola**	**2.81**	**196**	AML	AML		
	comp=N,496µm,0.3s						
HAVL				AML	AML		
	comp=E,371µm,1.5s						
KEK	**Kerkira**	**2.85**	**88**	P	**Pn**	**23 32 42.5**	**+0.8**
KEK	**Kerkira**	**2.85**	**88**	AML	AML		
	comp=N,134µm,0.4s						
KEK				AML	AML		
	comp=E,127µm,0.4s						
SRN	**Sarande**	**3.01**	**85**	P	**Pn**	**23 32 44.6**	**+0.9**
SRN	**Sarande**	**3.01**	**85**	*i* PN	**Pn**	**23 32 42.2**	**-1.5**
SRN				*i* SN	**Sn**	**23 33 16.1**	**-3.0**
TPE	**Tepelena**	**3.07**	**77**	P	**Pn**	**23 32 45.8**	**+1.3**
TPE	**Tepelena**	**3.07**	**77**	*i* PN	**Pn**	**23 32 45.1**	**+0.6**
TPE				*i* SN	**Sn**	**23 33 19.0**	**-1.5**
IGT	**Igoumenitsa**	**3.27**	**91**	P	**Pn**	**23 32 48.3**	**+1.1**
TIR	**Tirane**	**3.32**	**58**	*i* PN	**Pn**	**23 32 48.7**	**+0.8**
TIR				*i* SN	**Sn**	**23 33 25.0**	**-1.6**
TIR	**Tirane**	**3.32**	**58**	⇑P	**Sn**	**23 33 24.6**	**-2.0**
TIR	**Tirane**	**3.32**	**58**	AML	AML		
	comp=E,390µm,0.9s						
TIR				AML	AML		
	comp=N,470µm,1.2s						
DBRK	**Dubrovnik**	**3.37**	**27**	*i* Pn	**Pn**	**23 32 48.3**	**-0.3**
DBRK				Sn	**Sn**	**23 33 25.7**	**-2.0**
STON	**Ston**	**3.42**	**20**	*e*Pn	**Pn**	**23 32 48.6**	**-0.5**
STON				Sn	**Sn**	**23 33 27.1**	**-1.7**
STON	**Ston**	**3.42**	**20**	AML	AML		
	comp=N,137µm,0.4s						
STON				AML	AML		
	comp=E,89µm,1.6s						
LKD2	**Lefkada island**	**3.65**	**103**	P	**Pn**	**23 32 53.7**	**+1.4**
PDG	**Podgorica**	**3.65**	**40**	⇓P	**Sn**	**23 33 32.4**	**-1.9**
PDG	**Podgorica**	**3.65**	**40**	AML	AML		
	comp=N,170µm,0.5s						
PDG				AML	AML		
	comp=E,168µm,0.4s						
JAN	**Janina**	**3.67**	**89**	P	**Pn**	**23 32 54.6**	**+2.0**
FSK	**Fiskardo**	**3.68**	**108**	P	**Pn**	**23 32 53.7**	**+1.0**
MAKA	**Makarska**	**3.68**	**11**	*e*Pn	**Pn**	**23 32 52.2**	**-0.5**
EVGI	**Lefkada island**	**3.69**	**105**	P	**Pn**	**23 32 54.0**	**+1.1**
VSK1	**VASILIKIADES**	**3.70**	**108**	P	**Pn**	**23 32 54.0**	**+1.1**
PUK	**Puka**	**3.73**	**49**	*i* PN	**Pn**	**23 32 54.0**	**+0.6**
PUK				*i* SN	**Sn**	**23 33 35.3**	**-1.2**
PUK	**Puka**	**3.73**	**49**	AML	AML		
	comp=N,309µm,1.1s						
PUK				AML	AML		
	comp=E,324µm,0.2s						
VLS	**Valsamata**	**3.81**	**112**	P	**Pn**	**23 32 55.1**	**+0.7**
VLS	**Valsamata**	**3.81**	**112**	AML	AML		
	comp=N,148µm,1.2s						
VLS				AML	AML		
	comp=E,132µm,0.9s						
OHR	**Ohrid**	**3.87**	**67**	*i* Pn	**Pn**	**23 32 57.6**	**+2.3**
PHP	**Peshkopia**	**3.87**	**57**	*i* PN	**Pn**	**23 32 56.3**	**+1.1**
PHP				*i* SN	**Sn**	**23 33 38.1**	**-1.6**
NEST	**Nestorio**	**3.87**	**77**	P	**Pn**	**23 32 57.9**	**+2.5**
RICI	**Ricice**	**3.90**	**11**	*e*Pn	**Pn**	**23 32 55.5**	**-0.2**
RICI				Sn	**Sn**	**23 33 39.2**	**-1.3**
KFL	**Anninata**	**3.98**	**112**	P	**Pn**	**23 32 57.5**	**+0.8**
ZIRJ	**Zirje**	**4.00**	**355**	*e*Pn	**Pn**	**23 32 56.9**	**-0.1**
BCI	**Bajram Curri**	**4.03**	**47**	*i* PN	**Pn**	**23 32 58.6**	**+1.1**
PDO	**Prodromos**	**4.09**	**104**	P	**Pn**	**23 33 00.1**	**+1.8**
FNA	**Florina**	**4.19**	**73**	P	**Pn**	**23 33 01.1**	**+1.5**
MORI	**Morici**	**4.20**	**356**	*i* Pn	**Pn**	**23 32 59.9**	**+0.2**
MORI				Sn	**Sn**	**23 33 46.5**	**-1.3**
PVO	**Paravola**	**4.35**	**102**	P	**Pn**	**23 33 03.4**	**+1.7**
DUGI	**Dugi Otok**	**4.39**	**350**	*e*Pn	**Pn**	**23 33 02.2**	**-0.1**
SKO	**Skopje**	**4.66**	**59**	*i* Pn	**Pn**	**23 33 08.0**	**+2.1**
UDBI	**Udbina**	**4.86**	**357**	*i* Pn	**Pn**	**23 33 10.4**	**+1.7**
NVLJ	**Novalja**	**4.97**	**350**	*i* Pn	**Pn**	**23 33 10.7**	**+0.6**
NVLJ				Sn	**Sn**	**23 34 05.9**	**-0.5**
OZLJ	**Ozalj**	**5.96**	**356**	*e*Pn	**Pn**	**23 33 23.5**	**+0.1**
OBKA	**Obir**	**6.93**	**351**	*e*Pn	**Pn**	**23 33 38.9**	**+2.2**
	comp=E,2.6nm,0.4s						
OBKA				*e*Sn	**Sn**	**23 34 55.3**	**+1.2**
	comp=E,3.2nm,0.5s						
SOKA	**Soboth**	**7.05**	**354**	*i* Sn	**Sn**	**23 34 58.5**	**+1.5**
	comp=E,0.9nm,0.5s						
BZS	**Buzias**	**7.20**	**33**	⇑P	**Pn**	**23 33 40.2**	**-0.1**
MOA	**Molln**	**8.28**	**351**	*i* Pn	**Pn**	**23 33 57.4**	**+2.3**
	comp=E,0.8nm,0.3s						
MOA				*e*Sn	**Sn**	**23 35 26.8**	**-0.1**
	comp=E,2.1nm,0.6s						

NIED ***27*** *23:33:00, 38°.50N×141°.90E, h53^{km}, Mw3.8 Best double couple: M$_0$5.84000×10^{14} NP1:φ$_s$176.00000°, δ63.00000°, λ39.00000°. NP2:φ$_s$66.00000°, δ56.00000°, λ147.00000°.*

JMA ***27*** *23:33:54.8, 38°.46N×141°.90E, h55^{km}±1^{km}, M3.8*

JMA Felt I J1.

IDC ***27*** *23:33:55.5±2.3, 38°.52N×141°.95E, h67^{km}±22^{km}, mb3.1/8, mb1 3.5/12, mb1mx3.3/37, mbtmp3.6/12, MS2.5/1, Ms1 2.5/1, ms1mx2.1/17, Error ellipse: s-maj=24.1km s-min=15.2km az=115.0*

ISC 27 23:33:53.9±1.2**, 38°.46N**±0°.05×**141°.97E**±0°.09**, h50**^{km}±9^{km}**, n32,** σ1^{s}**35**/41**, mb3.5**/8**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.42**	**250**	P	**Pn**	**23 34 04.9**	**+0.6**
JIKH				S	**Sn**	**23 34 12.0**	**+0.3**
JIO	**Ouri**	**0.49**	**270**	P	**Pn**	**23 34 05.5**	**+0.5**
JIO				S	**Sn**	**23 34 13.0**	**0.0**
JKMT	**Kesennumamotoy**	**0.53**	**312**	P	**Pn**	**23 34 06.1**	**+0.7**
JKMT				S	**Sn**	**23 34 14.3**	**+0.5**
OFUJ	**Ofunato**	**0.67**	**339**	P	**Pn**	**23 34 08.0**	**+0.8**
OFUJ				S	**Sn**	**23 34 17.6**	**+0.8**
JMK	**Ichinoseki**	**0.77**	**310**	P	**Pn**	**23 34 09.2**	**+0.7**
JMK				*e*S	**Sn**	**23 34 19.7**	**+0.6**
JOU	**Okura**	**1.03**	**265**	P	**Pn**	**23 34 12.3**	**+0.3**
JOU				*e*S	**Sn**	**23 34 25.4**	**-0.1**
JMM	**Marumori**	**1.10**	**238**	P	**Pn**	**23 34 13.0**	**0.0**
JMM				S	**Sn**	**23 34 26.5**	**-0.6**
JOM	**Ohasama**	**1.14**	**333**	P	**Pn**	**23 34 14.4**	**+0.8**
JYK	**Kaneyama**	**1.34**	**290**	P	**Pn**	**23 34 16.9**	**+0.7**
JYK				S	**Sn**	**23 34 33.4**	**+0.4**
JFK	**Kawauchi**	**1.39**	**219**	P	**Pn**	**23 34 17.3**	**+0.3**
JFK				*e*S	**Sn**	**23 34 34.2**	**-0.1**
JRG	**Rokugo**	**1.40**	**312**	P	**Pn**	**23 34 17.9**	**+0.8**
JYS	**Shirataka**	**1.52**	**262**	P	**Pn**	**23 34 19.4**	**+0.8**
JYS				*e*S	**Sn**	**23 34 37.5**	**+0.2**
JFT	**Otama**	**1.60**	**235**	P	**Pn**	**23 34 20.4**	**+0.7**
JFT				*e*S	**Sn**	**23 34 39.2**	**0.0**
MJAR	**Matsushiro Arr**	**3.55**	**239**	P	**Pn**	**23 34 48.7**	**+2.2**
	1.1nm,0.3s,baz=39,slow=14,SNR=44						
MJAR				S	**Sn**	**23 35 30.8**	**+3.6**
	0.1nm,0.3s,baz=118,slow=25,SNR=1.1						
MJAR				LR	LR	23 36 24.8	
	comp=Z,68nm,19.7s,baz=190,slow=42						
MAT	**Matsushiro**	**3.55**	**239**	P	**Pn**	**23 34 48.7**	**+2.2**
MAT				*e*S	**Sn**	**23 35 30.8**	**+3.5**
JHJ	**Hachijo jima 2**	**5.62**	**199**	P	**Pn**	**23 35 15.1**	**+0.2**
	22nm,0.3s,baz=89,slow=9.0,SNR=1.8						
JHJ				S	**Sn**	**23 36 14.1**	**-3.9**
	7.2nm,0.3s,baz=66,slow=20,SNR=1.8						
ASAJ	**Asahikawa**	**5.67**	**5**	P	**Pn**	**23 35 15.4**	**-0.2**
	1.7nm,0.3s,baz=182,slow=13,SNR=10						
ASAJ				S	**Sn**	**23 36 16.9**	**-2.5**
	0.6nm,0.3s,baz=255,slow=20,SNR=1.2						
USRK	**Ussuriysk Ar.**	**9.45**	**311**	P	**Pn**	**23 36 07.5**	**+0.3**
	baz=122,slow=15,SNR=2.0						
SONM	**Songino Array**	**27.39**	**302**	P	**P**	**23 39 33.2**	**-1.4**
	0.2nm,0.5s,baz=119,slow=9.2,SNR=2.5						
H11N2	**WAKE ISLAND Hy**	**28.53**	**124**	T	T	00 10 01.9	
	baz=316,slow=75,SNR=250						
H11N1	**WAKE ISLAND Hy**	**28.54**	**124**	T	T	00 10 05.7	
	baz=316,slow=75,SNR=258						
H11N3	**WAKE ISLAND Hy**	**28.55**	**124**	T	T	00 10 06.4	
	baz=316,slow=75,SNR=218						
H11S1	**WAKE ISLAND Hy**	**29.30**	**126**	T	T	00 10 58.7	
	baz=318,slow=76,SNR=75						
H11S3	**WAKE ISLAND Hy**	**29.30**	**126**	T	T	00 10 59.9	
	baz=318,slow=76,SNR=92						
H11S2	**WAKE ISLAND Hy**	**29.31**	**126**	T	T	00 10 59.3	
	baz=318,slow=76,SNR=84						
ZALV	**Zalesovo Beam**	**41.30**	**311**	P	**P**	**23 41 33.0**	**-1.1**
	0.7nm,0.4s,baz=85,slow=8.3,SNR=3.6						
MKAR	**Makanchi Array**	**43.75**	**301**	P	**P**	**23 41 53.5**	**-0.7**
	0.2nm,0.5s,baz=83,slow=10,SNR=4.2						
ILAR	**Eielson Array**	**48.06**	**33**	P	**P**	**23 42 27.8**	**-0.1**
	0.5nm,1.0s,baz=288,slow=6.6,SNR=2.5						
WRA	**Warramunga Arr**	**58.53**	**188**	P	**P**	**23 43 45.0**	**-0.2**
	0.4nm,0.5s,baz=7.5,slow=6.9,SNR=1.2						
ASAR	**Alice Springs**	**62.26**	**188**	P	**P**	**23 44 10.1**	**-0.5**
	0.2nm,0.7s,baz=11,slow=5.9,SNR=1.8						
YKA	**Yellowknife Ar**	**62.36**	**31**	P	**P**	**23 44 11.4**	**+0.6**
	0.3nm,0.8s,baz=302,slow=5.8,SNR=3.5						
PDAR	**Pinedale Array**	**76.36**	**46**	P	**P**	**23 45 38.0**	**0.0**
	0.4nm,0.7s,baz=338,slow=3.2,SNR=4.2						

IDC ***27*** *23:50:50.2±0.3, 29°.13S×68°.74W, h0^{km}, mb5.3/20, mb1 5.3/25, mb1mx5.3/30, mbtmp5.2/25, ML4.9/4, MS5.1/25, Ms1 5.1/25, ms1mx5.1/28, Error ellipse: s-maj=15.7km s-min=10.7km az=79.0*

MOS ***27*** *23:50:51.1±0.9, 29°.08S×68°.68W, h10^{km}, mb5.7/34, MS5.3/16, Error ellipse: s-maj=11.6km s-min=6.4km az=95.4*

GUC ***27*** *23:50:51.8±0.6, 29°.10S×68°.86W, h8^{km}±5^{km}, ML5.6*

SJA ***27*** *23:50:51.6±0.9, 29°.21S×68°.86W, h21^{km}±12^{km}, ML5.7, MW5.6*

VAO ***27*** *23:50:51.9±0.3, 29°.15S×68°.73W, h10^{km}, mb5.6*

BJI ***27*** *23:50:52.0±0.0, 29°.20S×68°.70W, h10^{km}, mB5.4/57, Ms5.6/48, Ms7 5.5/46*

NEIC ***27*** *23:50:52.2±1.4, 29°.17S±0°.04×68°.75W±0°.04, h10^{km}±1^{km}, mb5.9/537, Ms_20 5.4/247, Mwb5.6/18, Mww5.7, Md5.7(SJA), ML5.6(GUC), Mwc5.7(GCMT), Error ellipse: s-maj=6.8km s-min=4.2km az=222.0*

NEIC ***27*** *23:50:52.2, 29°.17S×68°.75W, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.84; M$_{\theta\theta}$-0.85; M$_{\phi\phi}$0.02; M$_{r\theta}$-0.64; M$_{\theta\phi}$3.07; M$_{\phi r}$-0.32; Fault plane solution: M$_0$3.26000×10^{17} NP1:φ$_s$267.50000°, δ80.00000°, λ15.40000°. NP2:φ$_s$174.76000°, δ74.84000°, λ169.63000°. Principal axes: T 2.8959, Plg18.0000°, Azm132.0000°; N 0.6410, Plg72.0000°, Azm300.0000°; P -3.5369, Plg4.0000°, Azm41.0000°;*

NEIC ***27*** *23:50:59, 29°.41S×68°.87W, h27^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.86; M$_{\theta\theta}$0.51; M$_{\phi\phi}$-1.37; M$_{r\theta}$-1.21; M$_{\theta\phi}$3.85; M$_{\phi r}$-0.04; Fault plane solution: M$_0$4.21000×10^{17} NP1:φ$_s$278.00000°, δ83.00000°, λ19.00000°. NP2:φ$_s$186.00000°, δ71.00000°, λ172.00000°. Principal axes: T 3.8569, Plg18.0000°, Azm144.0000°; N 0.6354, Plg70.0000°, Azm299.0000°; P -4.4923, Plg8.0000°, Azm51.0000°;*

GCMT ***27*** *23:51:00.2±0.1, 29°.31S±0°.01×68°.74W±0°.01, h28^{km}, MW5.7/144, Moment Tensor Solution. s130,c220; s144,c270; Duration: 1^{s}7 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.87±.05; M$_{\theta\theta}$0.19±.05; M$_{\phi\phi}$-1.06±.05; M$_{r\theta}$-1.80±.11; M$_{\theta\phi}$3.69±.04; M$_{\phi r}$0.66±.10; Best double couple: M$_0$4.18100×10^{17} NP1:φ$_s$185.00000°, δ63.00000°, λ177.00000°. NP2:φ$_s$277.00000°, δ87.00000°, λ28.00000°. Principal axes: T 3.6730, Plg21.0000°, Azm144.0000°; N 1.0130, Plg62.0000°, Azm282.0000°; P -4.6880, Plg17.0000°, Azm48.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***27*** *23:51:00, 29°.41S×68°.98W, h30^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.35; M$_{\theta\theta}$-0.38; M$_{\phi\phi}$0.02; M$_{r\theta}$-0.74; M$_{\theta\phi}$3.39; M$_{\phi r}$-2.62; Fault plane solution: M$_0$4.37000×10^{17} NP1:φ$_s$177.00000°, δ83.00000°, λ143.00000°. NP2:φ$_s$272.00000°, δ54.00000°, λ9.00000°. Principal axes: T 4.6463, Plg30.0000°, Azm128.0000°; N -0.6235, Plg53.0000°, Azm348.0000°; P -4.0229, Plg19.0000°, Azm230.0000°;*

ISC 27 23:50:51.1±0.7**, 29°.14S**±0°.02×**68°.83W**±0°.02**, h4**^{km}±3^{km}**, n1400,** σ1^{s}**39**/1175**, mb5.9**/285**, MS5.4**/167**, 36C-46D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGUA	**GUANDACOL**	**0.45**	**139**	*i* P	**Pg**	**23 51 01.1**	**+1.3**
AGUA				*e*S	**Sg**	**23 51 07.5**	**+1.8**
VCA	**Vinchina**	**0.68**	**54**	*e*P	**Pb**	**23 51 06.1**	**+0.5**
VCA				*i* S	**Sb**	**23 51 17.0**	**+1.5**
VCA	**Vinchina**	**0.68**	**54**	*i* P	**Pb**	**23 51 06.7**	**+1.1**
VCA				*e*S	**Sn**	**23 51 17.2**	**-1.6**
VCA				IAML		23 51 19.4	
	comp=Z,330µm,0.3s						
ACDV	**Cuesta del Vie**	**1.06**	**194**	*i* P	**Pg**	**23 51 11.3**	**0.0**
AROD	**Rodeo**	**1.17**	**209**	*i* P	**Pg**	**23 51 12.8**	**-0.7**
ACCO	**Cerro Coronel**	**1.46**	**188**	*i* P	**Pn**	**23 51 18.0**	**-0.6**
LCO	**Las Campanas**	**1.65**	**274**	Pn	**Pb**	**23 51 21.6**	**-0.6**
LCO				Sn	**Sg**	**23 51 43.2**	**-0.8**
GO03	**Copiap**	**1.98**	**321**	⇑*i*P	**Pb**	**23 51 27.1**	**-0.7**
GO03				*i* S	**Sg**	**23 51 53.4**	**-1.3**
GO03				IAML		23 51 59.4	
	comp=E,28µm,0.6s						
GO03	**Copiap**	**1.98**	**321**		**Pb**	**23 51 27.7**	**-0.1**
GO03				Sn	**Sb**	**23 51 52.3**	**-0.5**
GO03	**Copiap**	**1.98**	**321**	*i* P	**Pb**	**23 51 27.3**	**-0.5**
GO04	**Tololo Observa**	**2.00**	**239**	*i* S	**Sb**	**23 51 53.6**	**0.0**
GO04				IAML		23 52 04.8	
	comp=E,166µm,0.6s						
GO04	**Tololo Observa**	**2.00**	**239**		**Pb**	**23 51 27.8**	**-0.4**
GO04				Sn	**Sb**	**23 51 52.8**	**-0.8**
GO04	**Tololo Observa**	**2.00**	**239**	*i* P	**Pb**	**23 51 27.8**	**-0.4**
RTLL	**Cerro Villicun**	**2.20**	**172**	*i* P	**Pn**	**23 51 30.3**	**+1.7**
ZON	**Zonda**	**2.40**	**177**	*i* P	**Pb**	**23 51 34.0**	**-0.9**
RTLS	**Leoncito**	**2.68**	**189**	*i* P	**Pb**	**23 51 39.6**	**-0.3**
RTLS				IAML		23 52 18.0	
	comp=Z,24µm,0.5s						
RTCV	**Cerro Valdivia**	**2.72**	**175**	*i* P	**Pb**	**23 51 39.1**	**-1.3**
CYA	**Choya**	**2.75**	**76**	*e*P	**Pb**	**23 51 39.3**	**-1.5**
CYA	**Choya**	**2.75**	**76**	*i* P	**Pb**	**23 51 39.7**	**-1.2**
CO02	**Combarbal**	**2.79**	**222**	*e*P	**Pb**	**23 51 39.8**	**-1.7**
CO02				*i* S	**Sb**	**23 52 16.2**	**+0.1**
ARCO	**CERRO ARCO**	**3.69**	**181**	*i* P	**Pn**	**23 51 52.9**	**+3.8**
ARCO				IAML		23 52 53.8	
	comp=Z,13µm,0.6s						
AAGR	**Agrelo**	**3.93**	**180**	*i* P	**Pn**	**23 51 55.9**	**+3.6**
GO02	**Mina Guanaco**	**4.02**	**350**	⇑*i*P	**Pn**	**23 51 56.9**	**+3.1**
GO02				*i* S	**Sb**	**23 52 48.8**	**-3.1**
GO02	**Mina Guanaco**	**4.02**	**350**		**Pn**	**23 51 56.6**	**+2.8**
ROCH	**El Roble**	**4.25**	**206**	*e*P	**Pn**	**23 52 00.0**	**+3.1**
ROCH				*i* S	**Sn**	**23 52 52.6**	**+5.5**
ROC1	**El Roble**	**4.26**	**206**		**Pn**	**23 51 59.0**	**+2.1**
ROC1	**El Roble**	**4.26**	**206**	*i* P	**Pn**	**23 52 00.0**	**+3.0**
PEL	**Peldehue**	**4.29**	**201**	⇑*i*P	**Pn**	**23 52 00.3**	**+3.0**
PEL				*e*S	**Sn**	**23 52 49.1**	**+1.2**
PEL	**Peldehue**	**4.29**	**201**	P	**Pn**	**23 52 00.0**	**+2.7**
PEL	**Peldehue**	**4.29**	**201**		**Pn**	**23 51 60.0**	**+2.7**
PEL	**Peldehue**	**4.29**	**201**	*i* P	**Pn**	**23 52 00.4**	**+3.0**
FCH	**Farellones**	**4.36**	**196**	⇑*i*P	**Pn**	**23 52 02.7**	**+4.3**
FCH				*i* S	**Sn**	**23 52 53.5**	**+3.7**
PB14	**IPOC Station P**	**4.71**	**342**		**Pn**	**23 52 05.2**	**+1.8**
PB14	**IPOC Station P**	**4.71**	**342**	*i* P	**Pn**	**23 52 06.5**	**+3.2**
LMEL	**Las Melosas**	**4.84**	**194**	*e*P	**Pn**	**23 52 08.6**	**+3.7**
LAMA	**Las Malvinas**	**5.79**	**183**	*i* P	**Pn**	**23 52 19.8**	**+2.1**
PB10	**IPOC Station P**	**5.82**	**344**		**Pn**	**23 52 19.4**	**+1.2**
PB10	**IPOC Station P**	**5.82**	**344**	*i* P	**Pn**	**23 52 19.6**	**+1.4**
PB15	**IPOC Station P**	**5.94**	**354**		**Pn**	**23 52 22.3**	**+2.3**
PB15	**IPOC Station P**	**5.94**	**354**	*i* P	**Pn**	**23 52 22.9**	**+2.8**
AZAP	**Zapla**	**5.94**	**35**	*i* P	**Pn**	**23 52 24.2**	**+4.1**
PUMA	**Malargue**	**6.36**	**185**	*i* P	**Pn**	**23 52 28.3**	**+2.7**
PB05	**IPOC Station P**	**6.38**	**349**	*i* P	**Pn**	**23 52 27.1**	**+1.0**
GO05	**Huala**	**6.42**	**203**		**Pn**	**23 52 26.1**	**-0.4**
PB06	**IPOC Station P**	**6.45**	**354**	*i* P	**Pn**	**23 52 29.3**	**+2.3**
LVC	**Limon Verde**	**6.50**	**359**	Pn	**Pn**	**23 52 30.1**	**+2.1**
	comp=Z,34nm,0.3s,baz=188,slow=9.0,SNR=174						
LVC				Lg	Lg	23 54 17.7	
	comp=Z,176nm,0.3s,baz=80,slow=17,SNR=5.7						
LVC	**Limon Verde**	**6.50**	**359**	P	**Pn**	**23 52 29.0**	**+1.0**
LVC	**Limon Verde**	**6.50**	**359**		**Pn**	**23 52 29.0**	**+1.0**
EDS3	**Malargue**	**6.63**	**184**	*i* P	**Pn**	**23 52 31.6**	**+2.1**
PB04	**IPOC Station P**	**6.88**	**350**		**Pn**	**23 52 33.3**	**+0.2**
PB09	**IPOC Station P**	**7.32**	**357**		**Pn**	**23 52 41.1**	**+2.0**
PB07	**IPOC Station P**	**7.45**	**352**		**Pn**	**23 52 41.6**	**+0.8**
PB01	**IPOC Station P**	**8.09**	**356**		**Pn**	**23 52 50.0**	**+0.5**
PATCX	**Punta Patache**	**8.37**	**351**		**Pn**	**23 52 52.8**	**-0.5**
PB11	**IPOC Station P**	**9.37**	**355**		**Pn**	**23 53 05.8**	**-1.4**
GO01	**Chusmiza**	**9.44**	**358**		**Pn**	**23 53 08.1**	**-0.3**
CPUP	**Villa Florida**	**10.56**	**77**	Pn	**Pn**	**23 53 23.3**	**-0.1**
	comp=Z,4.8nm,0.3s,baz=262,slow=12,SNR=73						
CPUP				Lg	Lg	23 56 24.9	
	comp=Z,24nm,0.3s,baz=358,slow=15,SNR=3.1						
CPUP				LR	LR	23 57 49.9	
	comp=Z,21µm,18.7s,baz=257,slow=40						
CPUP	**Villa Florida**	**10.56**	**77**	*e*P	**Pn**	**23 53 22.5**	**-0.8**
ITQB	**Itaqui**	**10.66**	**96**	*e*P	**Pn**	**23 53 23.9**	**-0.7**
LPA	**La Plata**	**10.88**	**125**	PN	Pn	23 53 19.6	-8.1
LPA				PPP	PPP	23 53 45.3	
LPA				S	**Sn**	**23 55 27.4**	**-2.6**
LPA				PCP	**PcP**	**23 59 25.2**	**-2.7**
LPA				PKIKP	**PKiKP**	**00 07 28.6**	**+1.8**
LPA				SKIKS		00 14 28.6	
PLCA	**Paso Flores**	**11.65**	**186**	Pn	**Pn**	**23 53 37.4**	**-0.9**
	comp=Z,2.6nm,0.3s,baz=184,slow=14,SNR=79						
PLCA				Lg	Lg	23 57 01.8	
	comp=Z,4.1nm,0.3s,baz=76,slow=22,SNR=3.5						
PLCA				LR	LR	23 58 23.6	
	comp=Z,54µm,18.1s,baz=194,slow=39						
PLCA	**Paso Flores**	**11.65**	**186**	*e*P	**Pn**	**23 53 38.1**	**-0.1**
LPAZ	**La Paz**	**12.81**	**3**	Pn	**Pn**	**23 53 55.4**	**+0.7**
	comp=Z,1.9nm,0.3s,baz=200,slow=7.6,SNR=34						
LPAZ	**La Paz**	**12.81**	**3**	P	**Pn**	**23 53 55.7**	**+1.0**
LPAZ	**La Paz**	**12.81**	**3**		**Pn**	**23 53 55.7**	**+1.0**
LPAZ	**La Paz**	**12.81**	**3**	*e*P	**Pn**	**23 53 55.0**	**+0.3**
OGAUY	**Aigu**	**13.08**	**117**	*e*P	**Pn**	**23 53 56.4**	**-1.3**
PLTB	**Pedras Altas**	**13.39**	**105**	*e*P	**Pn**	**23 53 59.8**	**-2.2**
CPSB	**Cacapava Do Su**	**13.43**	**99**	*e*P	**Pn**	**23 54 00.9**	**-1.6**
GO07	**Milladeo Hill,**	**14.48**	**194**		**Pn**	**23 54 14.5**	**-2.3**
AQDB	**Aquidauana**	**14.71**	**57**	*e*P	**Pn**	**23 54 19.5**	**-0.5**
ITAB	**Concordia**	**14.85**	**87**	*e*P	**Pn**	**23 54 20.7**	**-1.2**
SIV	**San Ignacio**	**14.91**	**30**	Pn	**Pn**	**23 54 21.6**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=225,slow=14,SNR=20						
SIV				LR	LR	00 01 03.0	
	comp=Z,17µm,18.7s,baz=227,slow=41						
CNLB	**Canela**	**15.70**	**95**	*e*P	**Pn**	**23 54 31.8**	**-1.4**
TRCB	**Terra Rica**	**15.87**	**70**	*e*P	**Pn**	**23 54 35.0**	**-0.5**
PCMB	**Pacaembu**	**17.55**	**69**	*e*P	**Pn**	**23 54 55.9**	**-0.9**
C2SB	**Chapadao do Su**	**17.88**	**58**	*e*P	**P**	**23 55 01.7**	**+0.2**
SALV	**Santo Antonio**	**17.89**	**45**	*e*P	**Pn**	**23 54 59.4**	**-1.7**
FRTB	**Fartura**	**18.21**	**76**	*e*P	**Pn**	**23 55 04.1**	**-0.9**
NNA	**Nana**	**18.63**	**335**	Pn	**Pn**	**23 55 10.9**	**+0.8**
	comp=Z,1.3nm,0.3s,baz=243,slow=5.9,SNR=16						

NNA				LR	LR	00 01 05.7	
	comp=Z,5µm,22.0s,baz=156,slow=33						
NNA	**Nana**	**18.63**	**335**	*d i*P	**Pn**	**23 55 11.4**	**+1.3**
NNA	**Nana**	**18.63**	**335**	P	**Pn**	**23 55 11.7**	**+1.5**
ITRB	**Iturama**	**19.24**	**65**	*e*P	**P**	**23 55 16.9**	**+0.3**
SPB	**Sao Paulo**	**19.94**	**79**	*e*P	**P**	**23 55 23.2**	**-1.0**
BB19B	**Bebedouro**	**20.05**	**71**	*e*P	**P**	**23 55 24.9**	**-0.5**
RCLB	**Rio Claro- Sao**	**20.30**	**76**	*e*P	**P**	**23 55 27.4**	**-0.7**
VAO	**Valinhos**	**20.55**	**78**	*e*P	**P**	**23 55 30.3**	**-0.6**
ARAG	**Araguaiana, MT**	**20.61**	**53**	*e*P	**P**	**23 55 31.5**	**0.0**
SAML	**Samuel**	**20.78**	**16**	P	**P**	**23 55 34.0**	**+0.7**
SAML				pmax	pmax		
	comp=Z,169nm,1.0s						
SAML				MLR	MLR		
	comp=Z,13µm,19.0s						
SAML	**Samuel**	**20.78**	**16**	P	**P**	**23 55 34.0**	**+0.7**
SAML	**Samuel**	**20.78**	**16**	IAMs_20	IAMs_20	00 04 13.0	
	comp=Z,13µm,19.0s						
SAML	**Samuel**	**20.78**	**16**	*e*P	Pn	23 55 34.3	-1.4
PARB	**Paraibuna**	**21.59**	**80**	*e*P	**P**	**23 55 40.9**	**-1.2**
CLDB	**Colider**	**21.88**	**36**	*e*P	**P**	**23 55 41.4**	**-3.8**
IPMB	**Ipameri, GO**	**21.88**	**64**	*e*P	**P**	**23 55 44.0**	**-1.3**
GO09	**Cerro Castillo**	**22.26**	**186**	P	**P**	**23 55 50.8**	**+1.8**
GO09				IAmb	IAmb	23 55 57.3	
	comp=Z,685nm,1.4s						
GO09				IAMs_20	IAMs_20	00 04 55.0	
	comp=Z,14µm,19.0s						
ESAR	**Angra dos Reis**	**22.72**	**80**	*e*P	**P**	**23 55 52.5**	**-1.6**
BSCB	**Bom Sucesso**	**23.22**	**75**	*e*P	**P**	**23 55 57.7**	**-1.8**
BDFB	**Brasilia**	**23.42**	**59**	P	**P**	**23 55 59.4**	**-2.1**
	comp=Z,92nm,0.8s,baz=230,slow=9.2,SNR=57						
BDFB				LR	LR	00 05 24.6	
	comp=Z,5µm,19.2s,baz=233,slow=37						
ATAH	**Atahualpa**	**23.68**	**336**	P	**P**	**23 56 05.3**	**+1.0**
	comp=Z,47nm,0.9s,baz=160,slow=8.2,SNR=32						
ATAH				LR	LR	00 05 19.1	
	comp=Z,2µm,19.3s,baz=128,slow=37						
EFI	**East Falkland**	**23.90**	**163**	⇓*e*P	**P**	**23 56 05.3**	**-0.5**
EFI				pmax	pmax		
	comp=Z,167nm,0.9s						
EFI	**East Falkland**	**23.90**	**163**	P	**P**	**23 56 05.2**	**-0.6**
EFI				IAmb	IAmb	23 56 13.0	
	comp=Z,406nm,0.9s						
JANB	**Januaria**	**26.62**	**63**	*e*P	**P**	**23 56 29.6**	**-1.3**
SJMB	**Sao Joao De Ma**	**27.26**	**74**	*e*P	**P**	**23 56 35.4**	**-1.2**
BSFB	**Barra de Sao F**	**27.48**	**74**	*e*P	**P**	**23 56 37.2**	**-1.4**
SMTB	**Santa Maria do**	**28.37**	**49**	*e*P	**P**	**23 56 45.8**	**-0.8**
PTGA	**Pitinga**	**29.49**	**18**	P	**P**	**23 56 56.9**	**+0.4**
	comp=Z,43nm,0.8s,baz=199,slow=10,SNR=27						
PTGA				LR	LR	00 09 47.8	
	comp=Z,11µm,19.2s,baz=203,slow=39						
PTGA	**Pitinga**	**29.49**	**18**	P	**P**	**23 56 56.4**	**-0.1**
PTGA				IAmb	IAmb	23 57 07.9	
	comp=Z,198nm,1.1s						
PTGA	**Pitinga**	**29.49**	**18**	*e*P	**P**	**23 56 56.5**	**-0.1**
NBIT	**Itapeh - BA**	**30.59**	**69**	*e*P	**P**	**23 57 05.8**	**-0.5**
FLOC	**Florencia**	**31.24**	**347**	*e*P	**P**	**23 57 14.3**	**+2.3**
FLOC	**Florencia**	**31.24**	**347**	P	**P**	**23 57 12.9**	**+0.9**
GCUF	**Volcan Galeras**	**31.28**	**343**	*e*P	**P**	**23 57 16.1**	**+3.2**
MACC	**Macarena, Meta**	**31.48**	**350**	*e*P	**P**	**23 57 15.0**	**+0.9**
CRUC	**La Cruz**	**31.51**	**344**	*e*P	**P**	**23 57 18.1**	**+3.3**
GARC	**Garzon, Huila**	**31.80**	**347**	*e*P	**P**	**23 57 19.0**	**+1.8**
SOTA	**Rioblanco**	**31.98**	**345**	*e*P	**P**	**23 57 21.2**	**+2.2**
PCON	**Cinco Dias**	**32.12**	**346**	*e*P	**P**	**23 57 23.4**	**+3.0**
NBPN	**Ponto Novo - B**	**32.34**	**62**	*e*P	**P**	**23 57 20.4**	**-1.3**
GR1C	**Gorgona, Isla**	**33.19**	**343**	*e*P	**P**	**23 57 30.9**	**+1.8**
VILC	**Villavicencio,**	**33.39**	**351**	*e*P	**P**	**23 57 32.0**	**+1.0**
ORTC	**Ortega, Tolima**	**33.44**	**348**	*e*P	**P**	**23 57 32.5**	**+1.2**
YOTC	**Yotoco, Valle**	**33.72**	**346**	*e*P	**P**	**23 57 34.2**	**+0.4**
CHIC	**Chingaza**	**33.91**	**351**	*e*P	**P**	**23 57 34.9**	**-0.9**
ANIL	**Santa Ana**	**34.03**	**348**	*e*P	P	23 57 43.3	+6.6
TOLC	**Tolima**	**34.11**	**348**	*e*P	**P**	**23 57 38.3**	**+0.8**
NBLA	**Lagarto - SE**	**34.13**	**64**	*e*P	**P**	**23 57 35.2**	**-2.2**
ROSC	**El Rosal**	**34.20**	**350**	P	**P**	**23 57 38.9**	**+0.6**
	comp=Z,5.9nm,0.3s,baz=144,slow=19,SNR=5.7						
ROSC				LR	LR	00 13 18.2	
	comp=Z,8µm,19.3s,baz=196,slow=39						
ROSC	**El Rosal**	**34.20**	**350**	P	**P**	**23 57 38.9**	**+0.6**
HOPE	**Hope Point**	**34.33**	**146**	P	**P**	**23 57 39.0**	**+0.4**
HOPE				pmax	pmax		
	comp=Z,212nm,1.0s						
HOPE				MLR	MLR		
	comp=Z,8µm,22.0s						
HOPE	**Hope Point**	**34.33**	**146**	P	**P**	**23 57 39.0**	**+0.4**
HOPE				IAmb	IAmb	23 57 40.5	
	comp=Z,212nm,1.0s						
HOPE				IAMs_20	IAMs_20	00 09 59.4	
	comp=Z,8µm,22.0s						
RREF	**El Recreo**	**34.42**	**348**	*e*P	**P**	**23 57 42.8**	**+2.3**
PLMC	**San Jos del P**	**34.60**	**347**	*e*P	**P**	**23 57 42.3**	**+0.8**
GUY2C	**Guyana, Caldas**	**34.74**	**349**	*e*P	**P**	**23 57 44.2**	**+1.1**
PAYG	**Puerto Ayora**	**34.94**	**320**	P	**P**	**23 57 45.0**	**+0.7**
PAYG				IAmb	IAmb	23 57 52.4	
	comp=Z,185nm,1.6s						
SPBC	**San Pablo de B**	**34.96**	**351**	*e*P	**P**	**23 57 44.0**	**-0.6**
NBTA	**Tacaratu-PE**	**35.05**	**62**	*e*P	**P**	**23 57 44.4**	**-0.9**
RUSC	**La Rusia**	**35.07**	**353**	*e*P	**P**	**23 57 46.4**	**+0.4**
RUSC	**La Rusia**	**35.07**	**353**	P	**P**	**23 57 46.9**	**+0.9**
CBOC	**Ciudad Bolivar**	**35.48**	**348**	*e*P	**P**	**23 57 50.4**	**+1.2**
TAMC	**Tame, Arauca**	**35.49**	**355**	*e*P	**P**	**23 57 48.1**	**-0.9**
NBMA	**Muriti-CE**	**35.65**	**59**	*e*P	**P**	**23 57 49.5**	**-1.0**
HELC	**Santa Helena**	**35.72**	**349**	*e*P	**P**	**23 57 51.9**	**+0.5**
NBPS	**Pedro II - PI**	**35.77**	**52**	*e*P	**P**	**23 57 50.7**	**-0.9**
BARC	**Barichara**	**35.77**	**353**	*e*P	**P**	**23 57 51.3**	**-0.4**
PMSA	**Palmer Station**	**35.77**	**176**	P	**P**	**23 57 51.3**	**+0.3**
	comp=Z,117nm,1.0s,baz=8.8,slow=7.3,SNR=7.6						
PMSA	**Palmer Station**	**35.77**	**176**	P	**P**	**23 57 51.1**	**+0.2**
PMSA				IAmb	IAmb	23 57 52.9	
	comp=Z,271nm,1.2s						
PMSA	**Palmer Station**	**35.77**	**176**	*e*P	**P**	**23 57 51.7**	**+0.8**
PTBC	**PUERTO BERRIO,**	**35.89**	**350**	*e*P	**P**	**23 57 50.8**	**-1.7**
NBAN	**Anadia - AL**	**36.11**	**64**	*e*P	**P**	**23 57 53.5**	**-0.9**
SOLC	**Bahia Solano**	**36.12**	**345**	*e*P	**P**	**23 57 57.0**	**+2.6**
NBPB	**Pedra_Branca-C**	**36.27**	**55**	*e*P	**P**	**23 57 55.0**	**-0.8**
PAMC	**Pamplona, Colo**	**36.46**	**354**	*e*P	**P**	**23 57 57.0**	**-0.9**
DBBC	**Dabeiba**	**36.65**	**348**	*e*P	**P**	**23 58 00.7**	**+1.6**
ZARC	**Zaragoza, Cauc**	**36.88**	**350**	*e*P	**P**	**23 57 59.6**	**-1.4**
UREC	**San Jos de Ur**	**37.24**	**349**	*e*P	**P**	**23 58 03.5**	**-0.5**
NBMO	**Morrinhos-CE**	**37.51**	**52**	*e*P	**P**	**23 58 05.3**	**-1.1**
NBRF	**Rio Formoso -**	**37.61**	**64**	*e*P	**P**	**23 58 05.9**	**-1.3**
SDV	**Santo Domingo**	**37.85**	**357**	P	**P**	**23 58 08.5**	**-0.9**
SDV				IAmb	IAmb	23 58 15.3	
	comp=Z,160nm,1.1s						
SDV	**Santo Domingo**	**37.85**	**357**	IAMs_20	IAMs_20	00 15 09.1	
	comp=Z,6µm,22.0s						
SDV	**Santo Domingo**	**37.85**	**357**	*e*P	**P**	**23 58 08.4**	**-0.9**
SDV				*e*S	**S**	**00 04 01.2**	**-0.2**
BAUV	**El Baul**	**37.87**	**1**	*e*P	**P**	**23 58 08.0**	**-1.3**
SMLC	**San Martn de**	**38.06**	**352**	*e*P	**P**	**23 58 08.7**	**-2.2**
NBCL	**Cascavel-CE**	**38.10**	**55**	*e*P	**P**	**23 58 10.5**	**-0.8**
ORIV	**Oritupano**	**38.35**	**9**	*e*P	**P**	**23 58 10.8**	**-2.5**
RCBR	**Riachuelo**	**38.79**	**60**	P	**P**	**23 58 15.9**	**-1.3**
RCBR				pmax	pmax		
	comp=Z,139nm,1.1s						
RCBR				MLR	MLR		
	comp=Z,4µm,18.0s						
RCBR	**Riachuelo**	**38.79**	**60**	P	**P**	**23 58 15.9**	**-1.3**
RCBR	**Riachuelo**	**38.79**	**60**	IAMs_20	IAMs_20	00 13 33.9	
	comp=Z,4µm,18.0s						
RCBR	**Riachuelo**	**38.79**	**60**	*e*P	**P**	**23 58 17.4**	**+0.2**
NBPV	**Pedro Velho**	**38.88**	**61**	*e*P	**P**	**23 58 16.9**	**-1.0**
SJCC	**San Jacinto, C**	**39.29**	**350**	*e*P	**P**	**23 58 21.5**	**+0.2**
BCIP	**Isla Barro Col**	**39.54**	**343**	P	**P**	**23 58 24.3**	**+1.0**
BCIP				pmax	pmax		
	comp=Z,186nm,1.0s						
BCIP				MLR	MLR		
	comp=Z,2µm,18.0s						
BCIP	**Isla Barro Col**	**39.54**	**343**	P	**P**	**23 58 24.3**	**+1.0**
BCIP				IAmb	IAmb	23 58 30.7	
	comp=Z,186nm,1.0s						
TPP	**Pointe-a-Pierr**	**39.87**	**11**	*e*P	P	23 58 34.6	+8.5
GUIV	**Guiria**	**40.07**	**10**	*e*P	**P**	**23 58 28.4**	**+0.7**
TRN	**Trinidad (W)**	**40.20**	**11**	*e*P	**P**	**23 58 31.9**	**+3.0**
URIC	**Uribia, Colomb**	**40.72**	**355**	*e*P	**P**	**23 58 29.6**	**-3.5**
URIC	**Uribia, Colomb**	**40.72**	**355**	P	**P**	**23 58 32.8**	**-0.3**
TOSP	**Speyside**	**40.99**	**12**	*e*P	**P**	**23 58 35.4**	**+0.1**
TOSP	**Speyside**	**40.99**	**12**	P	**P**	**23 58 34.4**	**-1.0**
TOSP				IAmb	IAmb	23 58 44.2	
	comp=Z,188nm,1.0s						
GRGR	**Grenville**	**41.61**	**11**	*e*P	**P**	**23 58 40.6**	**+0.1**
GRGR	**Grenville**	**41.61**	**11**	P	**P**	**23 58 39.7**	**-0.8**
GRGR				IAMs_20	IAMs_20	00 16 49.3	
	comp=Z,4µm,22.0s						
GRHS	**Sauteurs**	**41.70**	**11**	*e*P	**P**	**23 58 42.3**	**+1.1**
GRSS	**Sisters**	**41.78**	**11**	*e*P	**P**	**23 58 42.1**	**+0.3**
GCMP	**Grenada, Carri**	**42.00**	**11**	*e*P	P	23 58 38.3	-5.3
JTS	**Las Juntas de**	**42.18**	**336**	⇑*e*P	**P**	**23 58 46.1**	**+1.0**
JTS				pmax	pmax		
	comp=Z,105nm,1.0s						
JTS	**Las Juntas de**	**42.18**	**336**	P	**P**	**23 58 45.9**	**+0.8**
SVB	**Belmont**	**42.80**	**11**	*e*P	**P**	**23 58 51.9**	**+1.7**
SVCV	**St. Vincent, C**	**42.81**	**11**	*e*P	**P**	**23 58 49.5**	**-0.7**
SVV	**Soufriere Volc**	**42.85**	**11**	*e*P	**P**	**23 58 51.1**	**+0.6**
BBSP	**Saint Philip**	**42.96**	**13**	*e*P	**P**	**23 58 55.5**	**+4.0**
BBGH	**Gun Hill**	**42.98**	**13**	*e*P	**P**	**23 58 52.1**	**+0.5**
MCLT	**Moule a Chique**	**43.28**	**11**	*e*P	**P**	**23 58 53.3**	**-0.7**
MCLT	**Moule a Chique**	**43.28**	**11**	P	**P**	**23 58 54.6**	**+0.6**
MCLT				IAmb	IAmb	23 59 08.4	
	comp=Z,204nm,1.0s						
ACON	**Acoyapa**	**43.81**	**337**	P	**P**	**23 58 58.5**	**+0.2**
FDF	**Fort de France**	**44.24**	**11**	*e*P	**P**	**23 59 00.9**	**-0.9**
FDF	**Fort de France**	**44.24**	**11**	IAmb	IAmb	23 59 09.1	
	comp=Z,224nm,0.9s						
FDF				IAMs_20	IAMs_20	00 18 29.7	
	comp=Z,4µm,22.0s						
MDPO	**Dominica; Chan**	**45.02**	**10**	*e*P	**P**	**23 59 05.4**	**-2.6**
DWS	**Wesley**	**45.04**	**10**	*e*P	P	23 59 15.1	+7.0
MDVC	**Dominica, Viel**	**45.07**	**10**	*e*P	**P**	**23 59 10.2**	**+1.9**
MDPV	**Dominica, Penn**	**45.08**	**10**	*e*P	**P**	**23 59 11.6**	**+3.1**
CSGN	**Cosiguina Volc**	**45.61**	**334**	P	**P**	**23 59 13.6**	**+0.8**
SKI	**Saint Kitts**	**46.58**	**8**	*e*P	**P**	**23 59 22.1**	**+1.8**
SKI	**Saint Kitts**	**46.58**	**8**	P	**P**	**23 59 20.9**	**+0.6**
SKI				pmax	pmax		
	comp=Z,316nm,1.1s						
SKI	**Saint Kitts**	**46.58**	**8**	P	**P**	**23 59 20.9**	**+0.6**
SEUS	**St. Eustatius**	**46.70**	**8**	*e*P	P	23 59 27.1	+5.8
SEUS	**St. Eustatius**	**46.70**	**8**	IAMs_20	IAMs_20	00 19 53.4	
	comp=Z,4µm,22.0s						
CDVI	**St. Croix**	**46.78**	**5**	P	**P**	**23 59 21.6**	**-0.3**
CDVI				IAmb	IAmb	00 00 34.3	
	comp=Z,94nm,0.8s						
SABA	**Saba**	**46.80**	**7**	*e*P	**P**	**23 59 25.9**	**+3.9**
SABA	**Saba**	**46.80**	**7**	P	**P**	**23 59 22.6**	**+0.6**
SABA				IAMs_20	IAMs_20	00 19 57.0	
	comp=Z,4µm,21.0s						
ICMP	**Isla Caja de M**	**46.81**	**3**	P	**P**	**23 59 23.3**	**+1.3**
MLPR	**Magueyes Islan**	**46.87**	**2**	P	**P**	**23 59 22.2**	**-0.3**
CRPR	**Cabo Rojo, PR**	**46.90**	**2**	IAmb	IAmb	23 59 28.8	
	comp=Z,127nm,0.9s						
SNET	**Serv Nac Est T**	**46.92**	**332**	P	**P**	**23 59 23.9**	**+0.9**
SNET				IAmb	IAmb	23 59 33.1	
	comp=Z,176nm,1.0s						
OBIP	**Obispado Ponce**	**46.96**	**3**	IAmb	IAmb	23 59 28.9	
	comp=Z,112nm,0.8s						
PDPR	**Patillas Dam,**	**46.96**	**4**	P	**P**	**23 59 22.3**	**-0.9**
PDPR				IAmb	IAmb	23 59 28.4	
	comp=Z,71nm,0.9s						
ANWB	**Willy Bob**	**47.03**	**9**	*e*P	**P**	**23 59 24.2**	**+0.5**
ANWB	**Willy Bob**	**47.03**	**9**	P	**P**	**23 59 23.9**	**+0.1**
ANWB				IAmb	IAmb	23 59 30.6	
	comp=Z,183nm,1.1s						
SJG	**San Juan**	**47.05**	**3**	P	**P**	**23 59 24.0**	**+0.1**
SJG				pmax	pmax		
	comp=Z,201nm,1.6s						
SJG	**San Juan**	**47.05**	**3**	P	**P**	**23 59 24.0**	**+0.1**
SJG				IAmb	IAmb	23 59 29.0	
	comp=Z,201nm,1.6s						
MPR	**Mayaguez**	**47.10**	**2**	P	**P**	**23 59 24.4**	**+0.1**
MPR				IAmb	IAmb	23 59 29.8	
	comp=Z,126nm,1.1s						
JAKH	**Jacmel**	**47.24**	**355**	P	**P**	**23 59 25.5**	**+0.1**
SMRT	**St. Maarten**	**47.24**	**7**	*e*P	**P**	**23 59 28.8**	**+3.3**
SMRT	**St. Maarten**	**47.24**	**7**	P	**P**	**23 59 24.8**	**-0.7**
SMRT				IAmb	IAmb	23 59 30.1	
	comp=Z,147nm,1.3s						
SMRT				IAMs_20	IAMs_20	00 20 10.7	
	comp=Z,4µm,21.0s						
GCPR	**Guaynabo City**	**47.25**	**4**	P	**P**	**23 59 25.4**	**-0.1**
AOPR	**Arecibo Observ**	**47.25**	**3**	P	**P**	**23 59 25.7**	**+0.2**
AOPR				IAmb	IAmb	23 59 30.7	
	comp=Z,193nm,1.5s						
BANI	**BANI**	**47.28**	**358**	P	**P**	**23 59 26.2**	**+0.3**
CUPR	**Culebra, Puert**	**47.30**	**5**	P	**P**	**23 59 24.4**	**-1.4**
EMPR	**Esperanza - Ma**	**47.39**	**3**	P	**P**	**23 59 27.2**	**+0.6**
EMPR				IAmb	IAmb	23 59 31.3	
	comp=Z,130nm,0.8s						
DR12	**Loma Pena Alta**	**47.65**	**359**	P	**P**	**23 59 28.0**	**-0.7**
MTDJ	**Mount Denham**	**47.84**	**349**	P	**P**	**23 59 30.7**	**+0.5**
SDDR	**Presa de Saban**	**47.90**	**357**	P	**P**	**23 59 30.9**	**+0.2**
SDDR				IAmb	IAmb	23 59 58.6	
	comp=Z,86nm,1.1s						
SDDR				IAMs_20	IAMs_20	00 21 30.7	
	comp=Z,4µm,19.0s						
SC01	**Santiago de lo**	**48.32**	**358**	P	**P**	**23 59 34.2**	**+0.4**
APG	**El Apazote**	**48.61**	**332**	LR	LR	00 16 40.0	
	comp=Z,877nm,20.6s,baz=134,slow=32						
GTBY	**Guantanamo Bay**	**49.16**	**352**	P	**P**	**23 59 40.1**	**-0.2**
GTBY				IAmb	IAmb	23 59 47.6	
	comp=Z,162nm,1.1s						
FSCY	**Frank Sound, G**	**49.63**	**345**	P	**P**	**23 59 43.8**	**0.0**
CBCY	**The Bluff, Cay**	**49.73**	**346**	P	**P**	**23 59 44.6**	**+0.1**
GRTK	**Grand Turk**	**50.41**	**357**	P	**P**	**23 59 49.0**	**-0.8**
CMIG	**Matias Romero**	**52.40**	**328**	LR	LR	00 18 04.4	
	comp=Z,720nm,20.9s,baz=148,slow=31						
TEIG	**Tepich**	**52.55**	**337**	P	**P**	**00 00 05.7**	**-0.1**
VNA3	**Neumayer Olymp**	**52.88**	**160**	P	**P**	**00 00 07.9**	**+0.1**
VNA1	**Neumayer--Stat**	**53.12**	**159**	P	**P**	**00 00 10.0**	**+0.5**
VNA2	**Neumayer--Watz**	**53.48**	**159**	P	**P**	**00 00 12.3**	**+0.1**
	baz=287,slow=8.8						
TLIG	**Tlapa**	**54.60**	**325**	P	**P**	**00 00 21.7**	**+0.6**
SNAA	**Sanae**	**55.09**	**159**	P	**P**	**00 00 23.9**	**-0.1**
SNAA	**Sanae**	**55.09**	**159**	P	**P**	**00 00 23.8**	**-0.2**
	comp=Z,131nm,0.9s,baz=281,slow=7.4,SNR=294						
SNAA	**Sanae**	**55.09**	**159**	*c i*P	**P**	**00 00 23.1**	**-0.9**
SNAA	**Sanae**	**55.09**	**159**	P	**P**	**00 00 23.8**	**-0.2**
SNAA				IAMs_20	IAMs_20	00 23 43.4	
	comp=Z,2µm,20.0s						
060A	**Indiantown**	**56.94**	**348**	P	**P**	**00 00 37.6**	**+0.1**
MOIG	**Morelia**	**57.71**	**323**	P	**P**	**00 00 44.5**	**+1.1**
MOIG				IAmb	IAmb	00 00 51.1	
	comp=Z,89nm,0.9s						
DWPF	**Disney Wildern**	**58.19**	**347**	P	**P**	**00 00 46.6**	**+0.3**
DWPF				IAmb	IAmb	00 00 52.2	
	comp=Z,107nm,0.8s						
DWPF	**Disney Wildern**	**58.19**	**347**	P	**P**	**00 00 46.8**	**+0.4**
	baz=167						
SHEL	**Horse Pasture**	**59.11**	**92**	P	**P**	**00 00 51.8**	**-1.4**
SHEL				pmax	pmax		
	comp=Z,168nm,1.2s						
SHEL	**Horse Pasture**	**59.11**	**92**	P	**P**	**00 00 51.8**	**-1.4**
SHEL				IAmb	IAmb	00 01 39.2	
	comp=Z,168nm,1.1s						
NVL	**N'lazarevskaya**	**59.73**	**158**	*e*P	**P**	**00 00 52.4**	**-4.1**
NVL				*e*		00 03 08.8	
NVL				*e*PPP	PPP	00 04 36.7	
NVL				*e*SS	SS	00 13 06.3	+3.4
NVL				*e*SSS	SSS	00 15 36.4	
NVL				pmax	pmax		
	comp=Z,253nm,1.0s						
NVL				MLR	MLR		
	comp=Z,2µm,17.0s						
ZAIG	**Zacatecas**	**60.99**	**324**	P	**P**	**00 01 06.3**	**+0.2**
QSPA	**South Pole Qui**	**61.08**	**180**	P	**P**	**00 01 06.3**	**+0.2**
QSPA	**South Pole Qui**	**61.08**	**180**	IAMs_20	IAMs_20	00 25 31.9	
	comp=Z,2µm,19.0s						
TIGA	**Tifton**	**61.86**	**346**	IAmb	IAmb	00 01 17.0	
	comp=Z,128nm,0.9s						
TIGA	**Tifton**	**61.86**	**346**	P	**P**	**00 01 11.5**	**0.0**
	baz=165,SNR=10						
257A	**Skidaway Islan**	**61.88**	**348**	P	**P**	**00 01 12.6**	**+1.1**
257A				IAMs_20	IAMs_20	00 27 10.4	
	comp=Z,2µm,22.0s						
SACV	**Santiago Islan**	**61.89**	**51**	P	**P**	**00 01 12.5**	**+0.5**
SACV				IAmb	IAmb	00 01 20.5	
	comp=Z,170nm,1.2s						
SACV	**Santiago Islan**	**61.89**	**51**	IAMs_20	IAMs_20	00 29 32.6	
	comp=Z,2µm,18.0s						
255A	**Hazlehurst**	**62.10**	**347**	P	**P**	**00 01 13.3**	**+0.2**
255A				IAmb	IAmb	00 01 19.2	
	comp=Z,138nm,1.1s						
352A	**Blakely**	**62.20**	**344**	IAMs_20	IAMs_20	00 31 33.1	
	comp=Z,2µm,20.0s						
CSU	**Charleston Sou**	**62.70**	**349**	P	**P**	**00 01 17.2**	**+0.2**
NHSC	**New Hope**	**62.84**	**349**	P	**P**	**00 01 18.8**	**+0.8**
NHSC					**pP**	**00 01 19.2**	**-0.8**
NHSC	**New Hope**	**62.84**	**349**	P	**P**	**00 01 17.6**	**-0.4**
	baz=169,SNR=8.4						
KVTX	**Kingsville**	**62.87**	**331**	P	**P**	**00 01 18.5**	**+0.2**
Z58A	**St. Stephen**	**63.00**	**350**	P	**P**	**00 01 19.4**	**+0.3**
	baz=169,SNR=10						
250A	**Grady**	**63.00**	**343**	IAmb	IAmb	00 01 24.4	
	comp=Z,109nm,0.9s						
Z57A	**Bowman**	**63.11**	**349**	P	**P**	**00 01 20.1**	**+0.3**
	baz=168,SNR=12						
Z56A	**Williston**	**63.25**	**348**	P	**P**	**00 01 21.1**	**+0.4**
Z56A	**Williston**	**63.25**	**348**	P	**P**	**00 01 21.3**	**+0.6**
	baz=168,SNR=8.2						
152A	**Waverly Hall**	**63.30**	**345**	P	**P**	**00 01 20.6**	**-0.4**
152A				IAmb	IAmb	00 01 26.2	
	comp=Z,65nm,0.9s						
Y60A	**Bolivia**	**63.43**	**351**	P	**P**	**00 01 22.1**	**+0.2**
	baz=171,SNR=8.1						
Y59A	**Loris**	**63.51**	**351**	P	**P**	**00 01 23.5**	**+1.1**
Y59A				IAmb	IAmb	00 01 28.8	
	comp=Z,72nm,0.9s						
Y59A	**Loris**	**63.51**	**351**	P	**P**	**00 01 22.8**	**+0.4**
	baz=170						
Y58A	**Scranton**	**63.54**	**350**	P	**P**	**00 01 23.0**	**+0.4**
	baz=169,SNR=12						
GOGA	**Godfrey**	**63.74**	**346**	P	**P**	**00 01 23.3**	**-0.7**
	baz=166,SNR=7.1						
344A	**Westbrook Farm**	**63.76**	**339**	P	**P**	**00 01 24.3**	**+0.2**
Y57A	**Sumter**	**63.76**	**349**	IAmb	IAmb	00 01 30.5	
	comp=Z,99nm,0.9s						
Y57A	**Sumter**	**63.76**	**349**	P	**P**	**00 01 24.4**	**+0.3**
	baz=169,SNR=8.2						
441A	**DeRidder**	**63.92**	**337**	P	**P**	**00 01 26.0**	**+0.8**
Y55A	**Saluda**	**63.94**	**348**	P	**P**	**00 01 24.9**	**-0.4**
	baz=167,SNR=13						
X60A	**Albert Glenn T**	**63.96**	**352**	P	**P**	**00 01 26.5**	**+1.1**
	baz=171,SNR=9.7						
735A	**Kenedy**	**63.98**	**332**	P	**P**	**00 01 26.2**	**+0.6**
Z51A	**Franklin**	**64.02**	**345**	P	**P**	**00 01 26.3**	**+0.4**
Z51A				IAMs_20	IAMs_20	00 30 52.3	
	comp=Z,2µm,20.0s						
X59A	**McDuffie Farm,**	**64.04**	**351**	P	**P**	**00 01 26.5**	**+0.6**
	baz=170,SNR=6.9						
X58A	**Rowland**	**64.13**	**350**	P	**P**	**00 01 26.6**	**+0.1**
Z50A	**Ashland**	**64.14**	**344**	P	**P**	**00 01 25.9**	**-0.7**
	baz=163,SNR=88						
HKT	**Hockley**	**64.16**	**334**	P	**P**	**00 01 27.4**	**+0.7**
HKT				pmax	pmax		
	comp=Z,103nm,1.1s						
HKT	**Hockley**	**64.16**	**334**	P	**P**	**00 01 27.4**	**+0.7**
HKT				IAmb	IAmb	00 01 33.7	
	comp=Z,103nm,1.1s						
JSC	**Jenkinsville**	**64.17**	**349**	P	**P**	**00 01 26.7**	**-0.1**
JSC				pmax	pmax		
	comp=Z,28nm,0.9s						
JSC	**Jenkinsville**	**64.17**	**349**	P	**P**	**00 01 26.7**	**-0.1**
833A	**Chaparral WMA,**	**64.19**	**330**	P	**P**	**00 01 26.9**	**-0.1**
833A	**Chaparral WMA,**	**64.19**	**330**	P	**P**	**00 01 28.2**	**+1.1**
	baz=150,SNR=66						
LRAL	**Lakeview Retre**	**64.19**	**343**	IAmb	IAmb	00 01 32.8	
	comp=Z,68nm,0.9s						
LRAL	**Lakeview Retre**	**64.19**	**343**	P	**P**	**00 01 26.0**	**-1.0**
	baz=162,SNR=32						
342A	**Flagon Creek P**	**64.20**	**338**	P	**P**	**00 01 28.5**	**+1.4**
HODGE	**Hodges**	**64.30**	**348**	IAMs_20	IAMs_20	00 31 13.5	
	comp=Z,2µm,20.0s						
Y52A	**Lilburn**	**64.30**	**346**	IAmb	IAmb	00 01 33.6	
	comp=Z,88nm,1.1s						
Y52A				IAMs_20	IAMs_20	00 28 52.7	
	comp=Z,2µm,22.0s						
Y52A	**Lilburn**	**64.30**	**346**	P	**P**	**00 01 27.1**	**-0.6**
	baz=165,SNR=9.3						
X56A	**White Oak**	**64.33**	**349**	P	**P**	**00 01 27.5**	**-0.3**
	baz=168,SNR=11						
146A	**Union**	**64.37**	**341**	P	**P**	**00 01 28.7**	**+0.6**
BIRD	**Birdtown, Kers**	**64.39**	**349**	IAmb	IAmb	00 01 34.1	
	comp=Z,56nm,0.9s						
VBMS	**Vicksburg**	**64.41**	**340**	P	**P**	**00 01 29.1**	**+0.8**
	baz=159,SNR=7.7						
X55A	**Gracelyn & Ava**	**64.42**	**348**	P	**P**	**00 01 28.3**	**-0.1**
	baz=168,SNR=12						
W61A	**Ground Anchor**	**64.44**	**353**	P	**P**	**00 01 29.6**	**+1.1**
	baz=172						
W58A	**Raeford**	**64.57**	**351**	P	**P**	**00 01 29.7**	**+0.3**
	baz=170,SNR=24						
CNNC	**Cliffs of the**	**64.61**	**352**	P	**P**	**00 01 30.1**	**+0.4**
CNNC				IAmb	IAmb	00 01 36.3	
	comp=Z,74nm,0.8s						
CNNC	**Cliffs of the**	**64.61**	**352**	P	**P**	**00 01 30.6**	**+1.0**
	baz=171,SNR=6.0						
X54A	**Belton**	**64.63**	**348**	P	**P**	**00 01 29.6**	**-0.2**
	baz=167,SNR=12						
X53A	**Estanollee**	**64.76**	**347**	P	**P**	**00 01 30.7**	**0.0**
	baz=166,SNR=10						
PAULI	**Pauline**	**64.79**	**348**	IAmb	IAmb	00 01 37.2	
	comp=Z,83nm,1.2s						
W57A	**Gilead**	**64.81**	**350**	IAmb	IAmb	00 01 36.8	
	comp=Z,66nm,0.8s						
W57A	**Gilead**	**64.81**	**350**	P	**P**	**00 01 30.9**	**0.0**
	baz=169,SNR=21						
Y49A	**Blount Mountai**	**64.83**	**344**	IAmb	IAmb	00 01 36.9	
	comp=Z,82nm,0.9s						
W56A	**Indian Trail**	**64.89**	**349**	P	**P**	**00 01 31.2**	**-0.3**
	baz=169,SNR=23						
KMSC	**Kings Mountain**	**65.02**	**349**	IAmb	IAmb	00 01 38.6	
	comp=Z,60nm,0.9s						
KMSC	**Kings Mountain**	**65.02**	**349**	P	**P**	**00 01 32.1**	**-0.2**
	baz=168,SNR=12						
V60A	**Jim Taylor Roa**	**65.05**	**352**	P	**P**	**00 01 33.5**	**+1.0**
W54A	**Cherokee Point**	**65.12**	**348**	P	**P**	**00 01 32.7**	**-0.3**
	baz=167,SNR=27						
143A	**Socs Landing,**	**65.13**	**339**	P	**P**	**00 01 33.8**	**+0.7**
X51A	**Calhoun**	**65.15**	**345**	P	**P**	**00 01 33.4**	**+0.2**
X51A	**Calhoun**	**65.15**	**345**	P	**P**	**00 01 32.8**	**-0.4**
	baz=164,SNR=60						
V59A	**Middlesex**	**65.17**	**352**	P	**P**	**00 01 33.5**	**+0.2**
	baz=171,SNR=8.7						
FPAL	**Fort Paine**	**65.30**	**345**	P	**P**	**00 01 33.8**	**-0.4**
FPAL				IAmb	IAmb	00 01 39.5	
	comp=Z,75nm,0.9s						
V58A	**Windy Hill, Pi**	**65.31**	**351**	P	**P**	**00 01 33.4**	**-0.8**
V58A				IAmb	IAmb	00 01 40.6	
	comp=Z,75nm,0.9s						
V58A	**Windy Hill, Pi**	**65.31**	**351**	P	**P**	**00 01 33.9**	**-0.4**
	baz=170,SNR=28						
NATX	**Nacogdoches**	**65.36**	**336**	P	**P**	**00 01 35.7**	**+1.1**
	baz=155,SNR=11						
W52A	**Murphy**	**65.46**	**346**	IAmb	IAmb	00 01 41.5	
	comp=Z,81nm,0.9s						
V57A	**Coltrane Farms**	**65.50**	**350**	P	**P**	**00 01 35.2**	**-0.2**
	baz=169,SNR=19						
V56A	**Mocksville**	**65.53**	**350**	P	**P**	**00 01 35.5**	**-0.1**
	baz=169,SNR=32						
X48A	**Hartselle**	**65.55**	**344**	IAMs_20	IAMs_20	00 31 03.8	
	comp=Z,1µm,19.0s						
435B	**Jarrell**	**65.59**	**333**	P	**P**	**00 01 36.7**	**+0.6**
435B				IAmb	IAmb	00 01 42.8	
	comp=Z,109nm,0.9s						
435B	**Jarrell**	**65.59**	**333**	P	**P**	**00 01 37.2**	**+1.1**
	baz=152,SNR=6.9						
U59A	**Littleton**	**65.69**	**352**	P	**P**	**00 01 37.1**	**+0.5**
U59A				IAmb	IAmb	00 01 43.5	
	comp=Z,56nm,1.1s						
U59A	**Littleton**	**65.69**	**352**	P	**P**	**00 01 37.0**	**+0.3**
	baz=171,SNR=7.5						
V55A	**Taylorsville**	**65.69**	**349**	P	**P**	**00 01 36.5**	**-0.2**
V55A				IAmb	IAmb	00 01 43.2	
	comp=Z,114nm,1.1s						
V55A	**Taylorsville**	**65.69**	**349**	P	**P**	**00 01 36.5**	**-0.2**
	baz=168,SNR=31						
V54A	**Nebo**	**65.75**	**348**	P	**P**	**00 01 36.9**	**-0.2**
	baz=167,SNR=32						
V53A	**Saluda**	**65.80**	**348**	IAmb	IAmb	00 01 43.0	
	comp=Z,59nm,0.8s						
V53A				IAMs_20	IAMs_20	00 29 20.2	
	comp=Z,2µm,22.0s						
U58A	**Oxford**	**65.83**	**351**	P	**P**	**00 01 38.0**	**+0.5**
	baz=171,SNR=7.4						
CPCT	**Cooper Cave**	**65.93**	**346**	IAmb	IAmb	00 01 44.3	
	comp=Z,108nm,1.0s						
U57A	**Blanch**	**65.97**	**351**	P	**P**	**00 01 38.5**	**0.0**
	baz=170,SNR=29						
TKL	**Tuckaleechee C**	**65.98**	**347**	IAmb	IAmb	00 01 44.3	
	comp=Z,102nm,0.9s						
HPIG		**66.00**	**324**	P	**P**	**00 01 38.7**	**-0.4**
HPIG				IAmb	IAmb	00 01 46.2	
	comp=Z,72nm,0.9s						
HPIG				IAMs_20	IAMs_20	00 26 41.2	
	comp=Z,2µm,19.0s						
U56A	**King**	**66.04**	**350**	P	**P**	**00 01 39.8**	**+0.9**

U56A				IAmb	IAmb	00 01 45.2	
	comp=Z,76nm,0.9s						
U56A	King	66.04	350	P	P	00 01 39.2	+0.3
	baz=169,SNR=8.4						
Z41A	Richland Creek	66.09	338	P	P	00 01 40.1	+0.8
Z41A	Richland Creek	66.09	338	P	P	00 01 39.9	+0.6
	baz=157,SNR=10						
V52A	Sevierville	66.12	347	IAmb	IAmb	00 01 45.2	
	comp=Z,105nm,0.9s						
V52A				IAMs_20	IAMs_20	00 29 44.7	
	comp=Z,2µm,21.0s						
OXF	Oxford	66.23	342	P	P	00 01 39.7	-0.5
	baz=160,SNR=11						
JCT	Junction City	66.23	331	P	P	00 01 41.1	+0.8
	baz=151,SNR=50						
V51A	Loudon	66.23	346	IAmb	IAmb	00 01 46.0	
	comp=Z,86nm,0.9s						
T59A	Double "B" Far	66.27	352	P	P	00 01 40.8	+0.5
T59A	Double "B" Far	66.27	352	P	P	00 01 41.1	+0.7
	baz=172,SNR=7.8						
LPIG	La Paz	66.29	319	LR	LR	00 24 02.0	
	comp=Z,321nm,20.1s,baz=140,slow=30						
U55A	TA2, Sparta	66.30	349	P	P	00 01 40.5	-0.1
	baz=168,SNR=7.6						
PLAL	Pickwick Lake	66.32	343	IAmb	IAmb	00 01 46.3	
	comp=Z,120nm,0.9s						
T60A	Surry	66.35	353	P	P	00 01 40.4	-0.5
T60A				IAmb	IAmb	00 01 48.2	
	comp=Z,74nm,0.9s						
U54A	Nelsons Funny	66.45	349	P	P	00 01 41.2	-0.4
	baz=168,SNR=37						
T57A	Hurt	66.52	351	IAmb	IAmb	00 01 48.1	
	comp=Z,48nm,0.9s						
T57A	Hurt	66.52	351	P	P	00 01 42.0	+0.1
	baz=170,SNR=8.5						
WHTX	Lake Whitney,	66.61	334	P	P	00 01 43.2	+0.5
	baz=153,SNR=23						
T56A	Rocky Mt	66.66	350	P	P	00 01 43.1	+0.2
	baz=169,SNR=29						
X43A	Marvell	66.66	340	P	P	00 01 43.6	+0.7
X43A	Marvell	66.66	340	P	P	00 01 43.6	+0.7
	baz=159,SNR=12						
TZTN	Tazewell	66.79	347	P	P	00 01 42.9	-0.9
TZTN				IAmb	IAmb	00 01 49.6	
	comp=Z,80nm,1.3s						
TZTN	Tazewell	66.79	347	P	P	00 01 43.0	-0.7
	baz=166,SNR=6.6						
T55A	Pulaski	66.86	350	P	P	00 01 44.3	+0.1
	baz=169,SNR=29						
BLA	Blacksburg	66.89	350	IAmb	IAmb	00 01 50.6	
	comp=Z,51nm,0.8s						
BLA	Blacksburg	66.89	350	P	P	00 01 44.6	+0.2
	baz=169,SNR=8.7						
T54A	Tazewell	66.93	349	P	P	00 01 44.3	-0.4
	baz=168,SNR=25						
MET	Memphis--Engin	66.95	341	P	P	00 01 44.6	-0.1
S58A	Poland Farm, P	66.97	352	IAmb	IAmb	00 01 51.8	
	comp=Z,60nm,1.0s						
S58A	Poland Farm, P	66.97	352	P	P	00 01 45.3	+0.5
	baz=171,SNR=6.8						
TXAR	Lajitas Array	67.00	327	P	P	00 01 45.9	+0.5
	comp=Z,8.4nm,0.8s,baz=145,slow=8.3,SNR=39						
TXAR				PKP2bc		00 30 13.1	
	comp=Z,2.0nm,1.1s,baz=313,slow=4.4,SNR=6.5						
T53A	Wise	67.02	348	P	P	00 01 44.4	-0.9
	baz=167,SNR=9.9						
S59A	Mechanicsville	67.03	353	P	P	00 01 46.1	+0.9
	baz=172,SNR=5.8						
U49A	Red Boiling Sp	67.22	345	IAmb	IAmb	00 01 51.7	
	comp=Z,61nm,0.8s						
S57A	Dark Hollow, R	67.23	351	IAmb	IAmb	00 01 53.4	
	comp=Z,102nm,1.1s						
S57A	Dark Hollow, R	67.23	351	P	P	00 01 46.6	+0.2
	baz=170,SNR=21						
S56A	Natural Bridge	67.23	351	P	P	00 01 46.7	+0.1
	baz=170,SNR=19						
T52A	Hallie	67.23	348	P	P	00 01 46.6	+0.1
T52A				IAmb	IAmb	00 03 36.3	
	comp=Z,70nm,0.5s						
X40A	Basin Creek Fa	67.23	339	P	P	00 01 46.0	-0.6
	baz=157,SNR=7.8						
T51A	Gray	67.27	347	P	P	00 01 46.2	-0.6
	baz=166,SNR=35						
R58B	Mineral	67.29	352	IAmb	IAmb	00 01 54.0	
	comp=Z,78nm,1.0s						
R58B	Mineral	67.29	352	P	P	00 01 47.5	+0.6
	baz=171,SNR=20						
WVT	Waverly	67.34	343	P	P	00 01 46.4	-0.8
WVT				pmax	pmax		
	comp=Z,267nm,0.9s						
WVT	Waverly	67.34	343	P	P	00 01 46.4	-0.8
WVT	Waverly	67.34	343	P	P	00 01 46.5	-0.7
	baz=162						
R59A	King George, V	67.44	353	P	P	00 01 48.6	+0.9
	baz=172,SNR=6.0						
S55A	Lewisburg	67.46	350	P	P	00 01 48.2	+0.2
	baz=169,SNR=24						
CBN	Corbin Frederi	67.47	353	P	P	00 01 48.7	+0.7
LPAR	Lepanto	67.50	341	P	P	00 01 49.4	+1.1
T50A	Nancy	67.51	346	P	P	00 01 47.4	-0.9
	baz=165,SNR=10.0						
MIAR	Mount Ida	67.52	338	P	P	00 01 48.5	+0.1
	baz=157,SNR=121						
S54A	Dingess, Beckl	67.61	349	IAmb	IAmb	00 01 55.1	
	comp=Z,100nm,1.1s						
S54A	Dingess, Beckl	67.61	349	P	P	00 01 48.6	-0.3
	baz=168,SNR=18						
S53A	Williamson	67.63	349	P	P	00 01 49.2	+0.1
	baz=167,SNR=6.5						
R58A	Rapidan	67.64	352	P	P	00 01 49.6	+0.6
	baz=171,SNR=11						
W41B	Gary Mavity, V	67.68	339	P	P	00 01 49.5	+0.1
W41B	Gary Mavity, V	67.68	339	P	P	00 01 49.4	0.0
	baz=158,SNR=72						
R57A	Stanardsville	67.70	352	P	P	00 01 49.8	+0.3
	baz=171,SNR=36						
T49A	Edmonton	67.74	346	IAmb	IAmb	00 01 55.5	
	comp=Z,138nm,1.1s						
T49A	Edmonton	67.74	346	P	P	00 01 49.0	-0.8
	baz=164,SNR=37						
LNXT	Lenox	67.75	342	P	P	00 01 50.8	+0.9
LNXT				IAmb	IAmb	00 01 55.8	
	comp=Z,113nm,0.8s						
UTMT	University of	67.81	343	P	P	00 01 50.5	+0.3
GLAT	Glass	67.85	342	P	P	00 01 51.1	+0.7
S51A	Beattyville	67.86	347	IAmb	IAmb	00 01 56.3	
	comp=Z,75nm,1.0s						
S51A	Beattyville	67.86	347	P	P	00 01 49.9	-0.6
	baz=166,SNR=25						
PEBM	Pemiscott Bayo	67.86	342	P	P	00 01 50.8	+0.3
R55A	Marlinton	67.90	350	IAmb	IAmb	00 01 57.9	
	comp=Z,78nm,0.9s						
R55A	Marlinton	67.90	350	P	P	00 01 51.5	+0.7
	baz=169,SNR=27						
R56A	Bull Pasture M	67.92	351	P	P	00 01 52.3	+1.4
	baz=170,SNR=5.8						
R54A	Victor	67.93	350	P	P	00 01 50.7	-0.3
	baz=168,SNR=22						
T47A	Sharon Grove	67.98	344	P	P	00 01 51.1	-0.2
ABTX	Abilene, Hawle	68.03	332	P	P	00 01 52.1	+0.3
	baz=151,SNR=49						
S50A	Richmond	68.06	347	P	P	00 01 50.8	-0.9
	baz=165,SNR=30						
HICK	Hickman	68.09	342	P	P	00 01 52.4	+0.4
Q60A	Greensboro	68.11	354	P	P	00 01 51.4	-0.5
Q60A				IAmb	IAmb	00 01 59.4	
	comp=Z,123nm,1.0s						
Q60A				IAMs_20	IAMs_20	00 33 06.1	
	comp=Z,2µm,21.0s						
Q60A	Greensboro	68.11	354	P	P	00 01 51.7	-0.3
	baz=173						
PENMO	Penman	68.11	342	P	P	00 01 52.4	+0.3
W39A	Magazine	68.19	338	P	P	00 01 53.3	+0.7
	baz=157,SNR=131						
Q58A	Fox Den Farm,	68.23	353	P	P	00 01 53.2	+0.5
	baz=172,SNR=5.6						
R53A	Hurricane	68.23	349	P	P	00 01 52.0	-0.8
R53A	Hurricane	68.23	349	P	P	00 01 52.9	+0.1
	baz=168,SNR=6.7						
HENM	Henderson Moun	68.32	342	P	P	00 01 54.0	+0.6
S49A	Springfield	68.34	346	P	P	00 01 52.9	-0.6
	baz=164,SNR=10						
R52A	Catlettsburg	68.36	348	P	P	00 01 53.3	-0.3
	baz=167,SNR=5.5						
Q57A	Strasburg	68.41	352	P	P	00 01 54.8	+0.9
	baz=171,SNR=45						
R51A	Hillsboro	68.50	348	P	P	00 01 54.1	-0.4
	baz=166,SNR=24						
Q56A	Snyder Ridge,	68.52	351	IAmb	IAmb	00 02 02.0	
	comp=Z,79nm,1.0s						
Q56A	Snyder Ridge,	68.52	351	P	P	00 01 55.4	+0.8
	baz=170,SNR=18						
Q55A	Buckhannon	68.59	351	P	P	00 01 55.8	+0.7
	baz=169,SNR=18						
R50A	Paris	68.62	347	IAmb	IAmb	00 02 01.0	
	comp=Z,55nm,1.0s						
R50A	Paris	68.62	347	P	P	00 01 54.9	-0.4
	baz=165,SNR=11						
Q53A	Leroy	68.68	349	P	P	00 01 55.5	-0.1
	baz=168,SNR=8.3						
Q54A	Coxs Mills	68.69	350	P	P	00 01 55.2	-0.5
	baz=169,SNR=6.2						
P58A	Pank, Wackersv	68.73	353	P	P	00 01 56.7	+0.8
	baz=172,SNR=15						
P59A	Jarrettsville	68.77	354	P	P	00 01 57.2	+1.1
	baz=173,SNR=19						
R49A	Shelbyville	68.80	346	IAmb	IAmb	00 02 03.7	
	comp=Z,77nm,1.1s						
R49A				IAMs_20	IAMs_20	00 31 31.8	
	comp=Z,2µm,21.0s						
R49A	Shelbyville	68.80	346	P	P	00 01 55.6	-0.8
	baz=165,SNR=23						
P57A	Homestead Farm	68.81	352	P	P	00 01 56.1	-0.2
P57A				IAmb	IAmb	00 02 04.4	
	comp=Z,110nm,0.9s						
P57A	Homestead Farm	68.81	352	P	P	00 01 57.6	+1.2
	baz=171,SNR=22						
P60A	Greenville	68.89	354	P	P	00 01 57.1	+0.2
P60A				IAmb	IAmb	00 02 03.9	
	comp=Z,51nm,0.9s						
P60A	Greenville	68.89	354	P	P	00 01 57.9	+1.0
	baz=174,SNR=6.4						
Q52A	Bidwell	68.90	349	P	P	00 01 56.5	-0.4
	baz=167,SNR=9.3						
P56A	Dayton Farm, R	68.93	352	P	P	00 01 58.1	+1.0
	baz=171,SNR=23						
U40A	Yellville	68.96	339	P	P	00 01 57.2	-0.2
	baz=158,SNR=89						
WCI	Wyandotte Cave	68.98	345	P	P	00 01 56.5	-1.0
WCI				pmax	pmax		
	comp=Z,87nm,0.9s						
WCI	Wyandotte Cave	68.98	345	P	P	00 01 56.5	-1.0
WCI				IAmb	IAmb	00 02 02.9	
	comp=Z,87nm,0.9s						
WCI	Wyandotte Cave	68.98	345	P	P	00 01 56.4	-1.0
	baz=164						
USIN	University of	69.05	344	P	P	00 01 58.8	+0.9
USIN				IAmb	IAmb	00 02 03.4	
	comp=Z,127nm,1.1s						
P55A	Reedsville	69.06	351	P	P	00 01 58.3	+0.3
	baz=170,SNR=19						
T42A	Van Buren	69.06	341	IAmb	IAmb	00 02 04.1	
	comp=Z,128nm,0.9s						
O61A	Allentown	69.09	355	P	P	00 01 59.3	+1.3
	baz=175,SNR=6.2						
Q50A	Georgetown	69.10	347	P	P	00 01 57.7	-0.5
	baz=166,SNR=11						
MVL	Millersville	69.14	354	IAmb	IAmb	00 02 06.3	
	comp=Z,88nm,1.0s						
Q51A	Peebles	69.16	348	IAmb	IAmb	00 02 04.5	
	comp=Z,103nm,0.9s						
Q51A	Peebles	69.16	348	P	P	00 01 58.1	-0.5
	baz=166,SNR=25						
MCWV	Mont Chateau	69.21	351	P	P	00 01 58.9	0.0
	baz=170,SNR=8.1						
P54A	Burton	69.25	350	P	P	00 01 59.1	0.0
	baz=169,SNR=38						
P53A	Whipple	69.27	350	IAmb	IAmb	00 02 05.7	
	comp=Z,82nm,0.9s						
P53A	Whipple	69.27	350	P	P	00 01 59.6	+0.4
	baz=168,SNR=8.2						
O58A	Lewisberry	69.32	353	P	P	00 02 00.4	+0.8
	baz=172,SNR=6.9						
SYO	Syowa Base	69.37	159⇓	*i*P	P	00 01 58.0	-1.6
SYO	Syowa Base	69.37	159⇓	*i*pP	P	00 02 01.0	+1.4
SYO	Syowa Base	69.37	159⇓	*i*sP	sP	00 02 04.0	+1.6
VNDA	Vanda	69.37	190	P	P	00 02 00.5	+0.9
	comp=Z,38nm,1.0s,baz=138,slow=5.4,SNR=109						
VNDA				PKP2bc		00 30 05.7	
	comp=Z,1.3nm,1.0s,baz=251,slow=2.1,SNR=3.6						
VNDA				LR	LR	00 30 06.3	
	comp=Z,1µm,18.8s,baz=139,slow=34						
VNDA	Vanda	69.37	190	IAmb	IAmb	00 02 01.7	
	comp=Z,75nm,1.1s						
O60A	Telford	69.38	355	P	P	00 02 00.5	+0.6
	baz=174,SNR=7.1						
PAGS	Pennsylvania G	69.41	354	IAmb	IAmb	00 02 07.6	
	comp=Z,73nm,0.9s						
Q49A	Aurora	69.43	347	P	P	00 01 59.4	-0.9
	baz=165,SNR=28						
O59A	Robesonia	69.44	354	P	P	00 02 00.9	+0.6
	baz=173,SNR=13						
O57A	Amberson	69.48	353	P	P	00 02 01.4	+0.8
	baz=172,SNR=14						
FNO	Franklin	69.49	335	P	P	00 02 00.7	-0.1
TUL1	Leonard	69.51	337	P	P	00 02 01.0	+0.1
	baz=155,SNR=65						
MGMO	Mountain Grove	69.52	340	P	P	00 02 01.5	+0.7
U38A	Gravette	69.52	338	IAmb	IAmb	00 02 06.8	
	comp=Z,120nm,0.8s						
Q48A	North Vernon	69.53	346	P	P	00 02 00.1	-0.8
	baz=164,SNR=10						
P52A	Corning	69.54	349	P	P	00 02 00.1	-0.8
	baz=168,SNR=19						
P51A	Williamsport	69.55	348	IAmb	IAmb	00 02 06.8	
	comp=Z,100nm,0.9s						
P51A	Williamsport	69.55	348	P	P	00 02 00.6	-0.4
	baz=167,SNR=5.6						
WMOK	Wichita Mounta	69.55	334	P	P	00 02 00.6	-0.5
	baz=152,SNR=39						
OKCSW	OKLAHOMA CITY	69.64	335	P	P	00 02 02.1	+0.5
O56A	Blue Knob Stat	69.65	352	IAmb	IAmb	00 02 08.3	
	comp=Z,69nm,1.0s						
O56A	Blue Knob Stat	69.65	352	P	P	00 02 02.0	+0.3
	baz=171,SNR=16						
LUPA	Lehigh Univers	69.65	355	P	P	00 02 01.4	-0.1
BRNJ	Basking Ridge	69.67	355	P	P	00 02 01.9	+0.2
BRNJ				IAmb	IAmb	00 02 09.6	
	comp=Z,122nm,1.0s						
O55A	Ligonier	69.68	351	P	P	00 02 02.2	+0.4
	baz=170,SNR=18						
N61A	South Mountain	69.72	356	P	P	00 02 03.3	+1.3
	baz=175,SNR=6.7						
CPNY	Central Park	69.74	356	P	P	00 02 01.8	-0.4
CPNY				IAMs_20	IAMs_20	00 35 12.4	
	comp=Z,2µm,19.0s						
MNTX	Cornudas Mount	69.78	327	IAmb	IAmb	00 02 08.3	
	comp=Z,57nm,0.8s						
MNTX	Cornudas Mount	69.78	327	P	P	00 02 02.1	-0.5
	baz=146,SNR=55						
O54A	Avella	69.80	351	P	P	00 02 02.2	-0.4
	baz=169,SNR=7.3						
P50A	Jamestown	69.81	348	P	P	00 02 01.8	-0.8
	baz=166,SNR=24						
OLIL	Olney	69.88	344	IAmb	IAmb	00 02 08.6	
	comp=Z,119nm,1.1s						
N60A	Cedar Hill Far	69.90	355	P	P	00 02 03.8	+0.7
	baz=174,SNR=19						
P49A	Miami Univ. Ec	69.91	347	P	P	00 02 02.3	-0.9
	baz=165,SNR=25						
SSPA	Standing Stone	69.93	353	P	P	00 02 03.4	+0.1
SSPA				IAmb	IAmb	00 02 13.0	
	comp=Z,60nm,0.9s						
SSPA	Standing Stone	69.93	353	P	P	00 02 03.8	+0.5
	baz=172						
BLO	Bloomington	69.94	345	IAmb	IAmb	00 02 08.4	
	comp=Z,75nm,0.8s						
O52A	Adamsville	69.96	349	IAmb	IAmb	00 02 09.5	
	comp=Z,70nm,0.9s						
O52A	Adamsville	69.96	349	P	P	00 02 03.1	-0.4
	baz=168,SNR=18						
P48A	Milroy	69.98	346	IAmb	IAmb	00 02 08.5	
	comp=Z,66nm,0.9s						
P48A	Milroy	69.98	346	P	P	00 02 02.5	-1.2
	baz=164,SNR=8.7						
O53A	New Philadelph	69.99	350	P	P	00 02 03.4	-0.3
	baz=168						
N59A	State Game Lan	70.00	354	IAmb	IAmb	00 02 11.9	
	comp=Z,83nm,0.9s						
N59A	State Game Lan	70.00	354	P	P	00 02 04.5	+0.8
	baz=173,SNR=17						
N58A	Sunbury	70.01	354	IAmb	IAmb	00 02 11.6	
	comp=Z,79nm,0.9s						
N58A	Sunbury	70.01	354	P	P	00 02 04.3	+0.6
	baz=173,SNR=15						
N57A	Milroy	70.01	353	P	P	00 02 04.2	+0.4
	baz=172,SNR=17						
CCM	Cathedral Cave	70.06	341	P	P	00 02 04.0	-0.2
CCM				pmax	pmax		
	comp=Z,335nm,0.9s						
CCM	Cathedral Cave	70.06	341	P	P	00 02 04.0	-0.2
CCM	Cathedral Cave	70.06	341	P	P	00 02 04.0	-0.2
	baz=159						
ODNJ	Ogdensburg	70.08	355	IAmb	IAmb	00 02 11.9	
	comp=Z,74nm,0.9s						
O51A	Pataskala	70.12	349	P	P	00 02 03.8	-0.7
	baz=167,SNR=20						
N55A	Marion Center	70.20	352	P	P	00 02 05.5	+0.5
	baz=170,SNR=56						
YLE	Yale	70.21	357	P	P	00 02 05.6	+0.6
YLE				IAmb	IAmb	00 02 13.0	
	comp=Z,83nm,0.9s						
M61A	Granite Spring	70.25	356	P	P	00 02 04.8	-0.4
	baz=175,SNR=6.9						
N56A	West Decatur	70.26	352	P	P	00 02 05.5	+0.1
	baz=171,SNR=22						
ACSO	Alum Creek Sta	70.26	349	IAmb	IAmb	00 02 11.3	
	comp=Z,120nm,0.9s						
ACSO	Alum Creek Sta	70.26	349	P	P	00 02 04.9	-0.5
	baz=167,SNR=25						
Q44A	Meyer Farm, Va	70.27	343	IAmb	IAmb	00 02 10.9	
	comp=Z,145nm,1.0s						
O50A	Cable	70.29	348	P	P	00 02 04.9	-0.7
	baz=166,SNR=16						
M60A	Port Jervis	70.32	355	P	P	00 02 06.4	+0.8
	baz=174,SNR=9.4						
M62A	Hamden	70.33	357	P	P	00 02 06.5	+0.8
	baz=176,SNR=5.1						
HSIG		70.46	321	IAmb	IAmb	00 02 14.0	
	comp=Z,70nm,1.0s						
O49A	Covington	70.47	347	IAmb	IAmb	00 02 12.5	
	comp=Z,134nm,1.1s						
O49A	Covington	70.47	347	P	P	00 02 06.0	-0.6
	baz=166,SNR=20						
N53A	Lisbon	70.48	350	P	P	00 02 07.0	+0.3
	baz=169,SNR=5.2						
MSTX	Muleshoe	70.51	331	P	P	00 02 07.3	+0.2
	baz=149						
N54A	Moraine State	70.51	351	IAmb	IAmb	00 02 13.7	
	comp=Z,105nm,1.0s						
N54A	Moraine State	70.51	351	P	P	00 02 07.1	+0.2
	baz=170,SNR=22						
M58A	Price’s Panora	70.52	354	P	P	00 02 07.5	+0.6
	baz=173,SNR=17						
M57A	Sunshine Farm,	70.55	353	IAmb	IAmb	00 02 14.3	
	comp=Z,60nm,1.0s						
M57A	Sunshine Farm,	70.55	353	P	P	00 02 07.7	+0.6
	baz=172,SNR=7.2						
M59A	Waymart	70.59	355	P	P	00 02 08.1	+0.7
	baz=174,SNR=22						
N52A	McGinn’s Farm,	70.62	350	P	P	00 02 07.5	0.0
	baz=168,SNR=6.6						
LIC	Lamto	70.62	71	*e*P	P	00 02 07.3	-0.9
	comp=Z,107nm,0.8s						
KSPA	Keystone Colle	70.64	354	IAmb	IAmb	00 02 15.3	
	comp=Z,61nm,0.9s						
T35A	Sooner Cattle	70.67	337	IAmb	IAmb	00 02 14.8	
	comp=Z,131nm,0.9s						
O48A	Farmland	70.69	347	P	P	00 02 07.0	-1.0
	baz=165,SNR=27						
L63A	North Scituate	70.70	358	P	P	00 02 08.7	+0.7
	baz=177,SNR=5.1						
L64A	Middleborough	70.75	358	P	P	00 02 08.8	+0.6
	baz=178						
BRYW	Bryant College	70.75	358	P	P	00 02 09.6	+1.3
BRYW				IAmb	IAmb	00 02 16.1	
	comp=Z,68nm,1.0s						
M56A	Emporium	70.80	353	IAmb	IAmb	00 02 16.1	
	comp=Z,104nm,0.9s						
M56A	Emporium	70.80	353	P	P	00 02 08.9	+0.2
	baz=171,SNR=18						
N50A	Nevada	70.82	349	P	P	00 02 08.2	-0.5
	baz=167,SNR=20						
N51A	Ashland	70.83	349	IAmb	IAmb	00 02 14.8	
	comp=Z,60nm,1.0s						
N51A	Ashland	70.83	349	P	P	00 02 09.2	+0.4
	baz=167,SNR=7.0						
M55A	Ridgway	70.86	352	IAmb	IAmb	00 02 15.8	
	comp=Z,162nm,1.0s						
M55A	Ridgway	70.86	352	P	P	00 02 09.2	+0.2
	baz=171,SNR=20						
TIC	Toumodi	70.86	71	*e*P	P	00 02 09.1	-0.6
	comp=Z,452nm,1.6s						
KIC	Kosan Boka	70.93	71	*e*P	P	00 02 09.2	-0.9
	comp=Z,187nm,1.0s						
L60A	Shokan	70.95	356	P	P	00 02 10.6	+1.0
	baz=175,SNR=7.6						
M54A	Oil Creek Stat	71.01	351	IAmb	IAmb	00 02 16.4	
	comp=Z,89nm,1.0s						
M54A	Oil Creek Stat	71.01	351	P	P	00 02 09.9	0.0
	baz=170,SNR=17						
DBIC	Dimbokro	71.01	71	P	P	00 02 10.9	+0.4
	comp=Z,57nm,0.8s,baz=218,slow=6.4,SNR=41						
DBIC				LR	LR	00 32 00.7	
	comp=Z,2µm,18.1s,baz=209,slow=35						
M53A	WI Miller and	71.08	351	P	P	00 02 10.5	+0.2
	baz=169,SNR=20						
L58A	Harry Jones Me	71.13	354	P	P	00 02 11.3	+0.7
	baz=173,SNR=19						
N49A	Columbus Grove	71.15	348	P	P	00 02 10.1	-0.6
	baz=166,SNR=27						
L57A	Andrews Acres	71.17	354	P	P	00 02 11.2	+0.2
	baz=172,SNR=5.3						
M51A	Elyria	71.20	349	P	P	00 02 10.6	-0.5
	baz=168,SNR=18						
L59A	Walton	71.21	355	IAmb	IAmb	00 02 19.1	
	comp=Z,136nm,0.9s						
L59A	Walton	71.21	355	P	P	00 02 12.0	+0.9
	baz=174,SNR=17						
ALLY	Alegheny Colle	71.21	351	IAmb	IAmb	00 02 17.5	
	comp=Z,96nm,1.0s						
SFIN	Lafayette	71.22	345	IAmb	IAmb	00 02 16.5	
	comp=Z,132nm,1.1s						
SFIN	Lafayette	71.22	345	P	P	00 02 09.8	-1.4
	baz=163,SNR=27						
TBI	Tubuai	71.23	253	*e*P	P	00 02 12.8	+1.0
	comp=Z,277nm,1.2s						
TBI				*e*S	S	00 11 28.0	-2.0
	comp=Z,506nm,33.0s						
TBI				*e*LQ	LQ	00 21 02.2	
	comp=Z,3µm,31.5s						
TBI				*e*LR	LR	00 24 00.0	
	comp=Z,2µm,26.8s,baz=105						
N48A	Decatur	71.25	347	P	P	00 02 10.4	-0.9
	baz=165,SNR=30						
M52A	Chesterland	71.28	350	IAmb	IAmb	00 02 17.8	
	comp=Z,109nm,1.0s						
M52A				IAMs_20	IAMs_20	00 33 18.2	
	comp=Z,1µm,22.0s						
M52A	Chesterland	71.28	350	P	P	00 02 11.2	-0.3
	baz=168,SNR=16						
BINY	Binghamton	71.29	354	IAmb	IAmb	00 02 18.8	
	comp=Z,71nm,1.0s						
BINY	Binghamton	71.29	354	P	P	00 02 12.2	+0.5
	baz=173,SNR=14						
O44A	Mansfield	71.32	344	IAmb	IAmb	00 02 16.6	
	comp=Z,109nm,0.8s						
L61B	Northampton	71.33	357	P	P	00 02 12.3	+0.5
	baz=176,SNR=6.5						
HRV	Adam Dziewonsk	71.34	358	P	P	00 02 13.1	+1.3
HRV				pmax	pmax		
	comp=Z,73nm,1.1s						
HRV	Adam Dziewonsk	71.34	358	P	P	00 02 13.1	+1.3
HRV				IAmb	IAmb	00 02 19.7	
	comp=Z,73nm,1.1s						
HRV	Adam Dziewonsk	71.34	358	P	P	00 02 12.6	+0.8
	baz=177						
L56A	Greenwood	71.38	353	IAmb	IAmb	00 02 19.2	
	comp=Z,140nm,1.1s						
L56A	Greenwood	71.38	353	P	P	00 02 12.3	+0.1
	baz=172,SNR=18						
N47A	Urbana	71.40	347	P	P	00 02 11.3	-0.9
	baz=164,SNR=8.9						
M50A	Fremont	71.41	349	IAmb	IAmb	00 02 18.3	
	comp=Z,105nm,0.9s						
M50A	Fremont	71.41	349	P	P	00 02 12.0	-0.3
	baz=167,SNR=6.8						
319A	Douglas	71.44	324	P	P	00 02 14.1	+1.2
319A				IAmb	IAmb	00 02 20.4	
	comp=Z,93nm,0.9s						
319A				IAMs_20	IAMs_20	00 30 04.2	
	comp=Z,2µm,20.0s						
K62A	Royalston	71.52	357	P	P	00 02 14.0	+1.1

	baz=177						
L55A	**Hinsdale**	**71.52**	**352**	P	**P**	**00 02 13.4**	**+0.4**
	baz=171,SNR=17						
L53A	**Girard**	**71.53**	**351**	P	**P**	**00 02 12.9**	**-0.1**
	baz=169,SNR=7.6						
K61A	**Williamstown**	**71.57**	**357**	P	**P**	**00 02 14.2**	**+0.9**
	baz=176						
121A	**Cookes Peak, D**	**71.62**	**326**	IAmb	IAmb	00 02 21.7	
	comp=Z,98nm,0.9s						
121A				IAMs_20	IAMs_20	00 30 05.0	
	comp=Z,2µm,20.0s						
121A	**Cookes Peak, D**	**71.62**	**326**	P	**P**	**00 02 15.5**	**+1.5**
	baz=145,SNR=50						
M49A	**Liberty Center**	**71.65**	**348**	P	**P**	**00 02 13.2**	**-0.5**
	baz=166,SNR=23						
ERPA	**Erie**	**71.65**	**351**	IAmb	IAmb	00 02 20.7	
	comp=Z,128nm,0.9s						
ERPA	**Erie**	**71.65**	**351**	P	**P**	**00 02 13.7**	**-0.1**
	baz=170,SNR=16						
TRY	**Troy**	**71.66**	**356**	P	**P**	**00 02 14.8**	**+1.1**
TRY				IAmb	IAmb	00 02 21.4	
	comp=Z,109nm,1.0s						
P40A	**Paris**	**71.66**	**341**	P	**P**	**00 02 13.9**	**0.0**
L54A	**Sinclairville**	**71.68**	**352**	P	**P**	**00 02 14.3**	**+0.3**
	baz=170,SNR=47						
K59A	**Cooperstown**	**71.78**	**355**	P	**P**	**00 02 15.2**	**+0.6**
	baz=174,SNR=17						
M48A	**Edgerton**	**71.79**	**347**	IAmb	IAmb	00 02 20.4	
	comp=Z,165nm,1.0s						
M48A				IAMs_20	IAMs_20	00 34 55.9	
	comp=Z,2µm,20.0s						
M48A	**Edgerton**	**71.79**	**347**	P	**P**	**00 02 14.1**	**-0.6**
	baz=165						
K58A	**Earlville**	**71.83**	**355**	IAmb	IAmb	00 02 21.8	
	comp=Z,103nm,1.0s						
K58A	**Earlville**	**71.83**	**355**	P	**P**	**00 02 15.2**	**+0.4**
	baz=174,SNR=17						
M47A	**Cromwell**	**71.85**	**347**	P	**P**	**00 02 14.2**	**-0.8**
	baz=164,SNR=22						
K57A	**Scipio Center**	**71.87**	**354**	P	**P**	**00 02 15.1**	**0.0**
	baz=173,SNR=6.3						
HDIL	**Hopedale**	**71.90**	**344**	IAmb	IAmb	00 02 20.6	
	comp=Z,137nm,0.8s						
HDIL	**Hopedale**	**71.90**	**344**	P	**P**	**00 02 14.7**	**-0.6**
	baz=161,SNR=7.7						
K56A	**Middlesex**	**71.91**	**353**	P	**P**	**00 02 15.5**	**+0.2**
	baz=172,SNR=17						
K54A	**Basiliko Farm,**	**71.97**	**352**	P	**P**	**00 02 16.1**	**+0.4**
	baz=171,SNR=33						
L50A	**Kingsville**	**72.00**	**349**	P	**P**	**00 02 15.0**	**-0.8**
	baz=167,SNR=6.9						
K55A	**Perry**	**72.02**	**353**	P	**P**	**00 02 16.2**	**+0.2**
	baz=171,SNR=19						
J60A	**Lant Hill Farm**	**72.15**	**356**	P	**P**	**00 02 17.7**	**+1.0**
	baz=176,SNR=5.2						
P38A	**Dawn**	**72.18**	**340**	IAmb	IAmb	00 02 22.7	
	comp=Z,88nm,0.8s						
L48A	**N Adams**	**72.19**	**348**	P	**P**	**00 02 16.2**	**-0.8**
	baz=166,SNR=29						
J61A	**Chester**	**72.21**	**357**	P	**P**	**00 02 18.2**	**+1.1**
	baz=176,SNR=7.2						
L49A	**Milan**	**72.22**	**348**	P	**P**	**00 02 16.9**	**-0.3**
	baz=166,SNR=19						
MEH	**Mehetia**	**72.34**	**259**	*e*P	**P**	**00 02 19.8**	**+1.2**
	comp=Z,35nm,1.1s						
J58A	**Remsen**	**72.39**	**355**	P	**P**	**00 02 20.2**	**+2.0**
AAM	**Ann Arbor**	**72.39**	**349**	P	**P**	**00 02 17.8**	**-0.4**
AAM				pmax	pmax		
	comp=Z,63nm,1.0s						
AAM	**Ann Arbor**	**72.39**	**349**	P	**P**	**00 02 17.8**	**-0.4**
AAM				IAmb	IAmb	00 02 27.5	
	comp=Z,63nm,0.9s						
AAM	**Ann Arbor**	**72.39**	**349**	P	**P**	**00 02 17.7**	**-0.4**
	baz=166						
M44A	**Midewin, Midew**	**72.39**	**345**	IAmb	IAmb	00 02 23.4	
	comp=Z,100nm,0.9s						
M44A				IAMs_20	IAMs_20	00 34 19.9	
	comp=Z,1µm,20.0s						
K52A	**Tillsonburg**	**72.40**	**351**	P	**P**	**00 02 18.1**	**-0.2**
	baz=169,SNR=6.3						
J59A	**Piesco**	**72.44**	**356**	IAmb	IAmb	00 02 25.6	
	comp=Z,76nm,1.0s						
J59A	**Piesco**	**72.44**	**356**	P	**P**	**00 02 18.9**	**+0.5**
	baz=175,SNR=16						
J56A	**Wolcott**	**72.44**	**354**	IAmb	IAmb	00 02 25.3	
	comp=Z,103nm,0.9s						
J56A	**Wolcott**	**72.44**	**354**	P	**P**	**00 02 18.4**	**0.0**
	baz=173,SNR=12						
J57A	**Williamstown**	**72.50**	**355**	IAmb	IAmb	00 02 26.0	
	comp=Z,82nm,0.9s						
J57A	**Williamstown**	**72.50**	**355**	P	**P**	**00 02 19.0**	**+0.2**
	baz=173,SNR=17						
J55A	**Hilton**	**72.52**	**353**	P	**P**	**00 02 19.2**	**+0.2**
HNH	**Hanover**	**72.56**	**357**	P	**P**	**00 02 19.8**	**+0.6**
HNH				IAmb	IAmb	00 02 27.0	
	comp=Z,76nm,1.0s						
L46A	**Eue Claire**	**72.61**	**346**	IAmb	IAmb	00 02 24.9	
	comp=Z,172nm,1.1s						
L46A				IAMs_20	IAMs_20	00 34 01.7	
	comp=Z,2µm,20.0s						
L46A	**Eue Claire**	**72.61**	**346**	P	**P**	**00 02 18.6**	**-0.9**
	baz=164,SNR=6.3						
J54A	**Appleton**	**72.62**	**353**	P	**P**	**00 02 18.8**	**-0.7**
J54A	**Appleton**	**72.62**	**353**	P	**P**	**00 02 19.5**	**0.0**
	baz=171						
KSU1	**Kansas State U**	**72.67**	**338**	P	**P**	**00 02 19.7**	**-0.2**
	baz=155,SNR=8.1						
K50A	**Casco**	**72.68**	**349**	P	**P**	**00 02 19.3**	**-0.6**
	baz=167,SNR=16						
I58A	**Old Forge**	**72.70**	**355**	P	**P**	**00 02 20.3**	**+0.3**
	baz=174,SNR=7.9						
I62A	**Tamworth**	**72.70**	**358**	P	**P**	**00 02 21.0**	**+1.0**
	baz=178						
I59A	**Olmsteadville**	**72.73**	**356**	P	**P**	**00 02 20.5**	**+0.3**
	baz=175,SNR=5.2						
I60A	**Shoreham**	**72.75**	**357**	P	**P**	**00 02 21.0**	**+0.7**
	baz=176,SNR=6.5						
I61A	**Oroboro, Fairl**	**72.78**	**357**	P	**P**	**00 02 21.1**	**+0.6**
	baz=177,SNR=5.4						
R32A	**Long Quarter,**	**72.79**	**336**	IAmb	IAmb	00 02 27.2	
	comp=Z,140nm,1.0s						
J52A	**Paris**	**72.82**	**351**	P	**P**	**00 02 20.6**	**-0.1**
	baz=169,SNR=27						
K49A	**Clarkson**	**72.83**	**349**	P	**P**	**00 02 19.9**	**-0.9**
	baz=167						
I63A	**Otisfield**	**72.86**	**359**	IAmb	IAmb	00 02 29.2	
	comp=Z,84nm,1.1s						
I63A	**Otisfield**	**72.86**	**359**	P	**P**	**00 02 22.5**	**+1.7**
	baz=178						
TUC	**Tucson**	**72.95**	**324**	P	**P**	**00 02 23.0**	**+1.1**
TUC				pmax	pmax		
	comp=Z,53nm,1.4s						
TUC	**Tucson**	**72.95**	**324**	P	**P**	**00 02 23.0**	**+1.1**
TUC	**Tucson**	**72.95**	**324**	P	**P**	**00 02 23.0**	**+1.1**
	baz=142						
K48A	**Perry**	**72.96**	**348**	P	**P**	**00 02 20.8**	**-0.7**
	baz=166,SNR=24						
ANMO	**Albuquerque**	**72.97**	**328**	P	**P**	**00 02 22.9**	**+0.8**
ANMO				pmax	pmax		
	comp=Z,66nm,1.0s						
ANMO	**Albuquerque**	**72.97**	**328**	P	**P**	**00 02 22.9**	**+0.8**
ANMO				IAmb	IAmb	00 02 29.4	
	comp=Z,66nm,0.9s						
ANMO	**Albuquerque**	**72.97**	**328**	IAMs_20	IAMs_20	00 31 37.7	
	comp=Z,1µm,18.0s						
ANMO	**Albuquerque**	**72.97**	**328**	P	**P**	**00 02 23.4**	**+1.3**
	baz=146						
I57A	**Carthage**	**72.99**	**355**	P	**P**	**00 02 22.0**	**+0.3**
	baz=174,SNR=15						
K47A	**Vermontville**	**72.99**	**348**	P	**P**	**00 02 20.8**	**-0.9**
	baz=165,SNR=24						
LBNH	**Lisbon**	**73.08**	**358**	P	**P**	**00 02 23.2**	**+0.9**
	baz=177						
PECO	**Prince Edward**	**73.11**	**354**	IAmb	IAmb	00 02 29.5	
	comp=Z,68nm,0.9s						
VAH	**Vaihoa**	**73.11**	**262**	*e*P	**P**	**00 02 24.0**	**+0.9**
	comp=Z,49nm,1.1s						
L44A	**Lake County Fo**	**73.12**	**345**	IAmb	IAmb	00 02 28.4	
	comp=Z,144nm,0.9s						
L44A	**Lake County Fo**	**73.12**	**345**	P	**P**	**00 02 22.0**	**-0.5**
	baz=163,SNR=5.9						
K46A	**Dorr**	**73.16**	**347**	P	**P**	**00 02 21.5**	**-1.2**
	baz=164,SNR=7.7						
I53A	**Kortright Cn E**	**73.28**	**352**	P	**P**	**00 02 23.4**	**0.0**
	baz=170,SNR=6.1						
J49A	**Marlette**	**73.33**	**349**	P	**P**	**00 02 22.8**	**-1.0**
	baz=167,SNR=20						
L42A	**Oliver, Polo**	**73.36**	**344**	P	**P**	**00 02 24.3**	**+0.4**
L42A				IAmb	IAmb	00 02 30.0	
	comp=Z,86nm,1.1s						
H58A	**Gabriels**	**73.37**	**356**	P	**P**	**00 02 24.3**	**+0.3**
	baz=175,SNR=7.6						
H61A	**Lyndonville**	**73.38**	**358**	P	**P**	**00 02 25.1**	**+1.1**
	baz=177,SNR=14						
J48A	**Bridge Port**	**73.38**	**349**	P	**P**	**00 02 23.5**	**-0.6**
	baz=166,SNR=46						
I51A	**Listowel**	**73.45**	**351**	P	**P**	**00 02 24.2**	**-0.2**
	baz=169,SNR=26						
I55A	**Frankford**	**73.45**	**353**	P	**P**	**00 02 24.5**	**+0.1**
	baz=172,SNR=13						
H63A	**New Sharon**	**73.46**	**359**	P	**P**	**00 02 25.8**	**+1.4**
	baz=179,SNR=5.2						
H65A	**Eastbrook**	**73.48**	**0**	P	**P**	**00 02 25.4**	**+0.8**
	baz=180,SNR=5.2						
H57A	**Richville**	**73.49**	**355**	P	**P**	**00 02 24.7**	**+0.1**
	baz=174,SNR=6.9						
CBKS	**Cedar Bluff**	**73.50**	**335**	IAmb	IAmb	00 02 31.6	
	comp=Z,151nm,0.9s						
CBKS	**Cedar Bluff**	**73.50**	**335**	P	**P**	**00 02 25.6**	**+0.6**
	baz=152,SNR=23						
J47A	**Sunmer**	**73.51**	**348**	IAmb	IAmb	00 02 30.6	
	comp=Z,127nm,1.0s						
J47A	**Sunmer**	**73.51**	**348**	P	**P**	**00 02 24.1**	**-0.6**
	baz=165,SNR=8.8						
H59A	**Cadyville**	**73.57**	**356**	P	**P**	**00 02 25.6**	**+0.5**
	baz=176,SNR=7.7						
H66A	**Whiting**	**73.58**	**1**	P	**P**	**00 02 26.0**	**+0.9**
	baz=181						
I52A	**Shelburne**	**73.59**	**351**	P	**P**	**00 02 25.4**	**+0.1**
	baz=170,SNR=16						
LONY	**Lake Ozonia**	**73.59**	**356**	P	**P**	**00 02 26.1**	**+0.8**
H56A	**Elgin**	**73.69**	**354**	P	**P**	**00 02 26.1**	**+0.3**
	baz=173,SNR=9.2						
K43A	**Burlington**	**73.71**	**345**	IAmb	IAmb	00 02 32.1	
	comp=Z,140nm,1.1s						
PAE	**Paea**	**73.73**	**259**	*e*P	**P**	**00 02 27.9**	**+1.1**
	comp=Z,13nm,1.1s						
H55A	**Tweed**	**73.73**	**354**	P	**P**	**00 02 26.2**	**+0.1**
	baz=172,SNR=14						
214A	**Organ Pipe Nat**	**73.75**	**322**	P	**P**	**00 02 26.9**	**+0.4**
214A				IAmb	IAmb	00 02 34.2	
	comp=Z,135nm,0.9s						
214A	**Organ Pipe Nat**	**73.75**	**322**	P	**P**	**00 02 28.0**	**+1.5**
	baz=141,SNR=62						
PPT2	**Papeete2**	**73.76**	**259**	*e*P	**P**	**00 02 28.4**	**+1.3**
	comp=Z,68nm,1.2s						
PPT2				*e*S	**SKiKP**	**00 11 54.7**	**-3.0**
	comp=Z,660nm,31.2s						
PPT2	**Papeete2**	**73.76**	**259**	*e*LQ	LQ	00 22 08.7	
	comp=Z,4µm,29.0s						
PPT2				*e*LR	LR	00 25 13.8	
	comp=Z,4µm,23.0s,baz=111						
PPT	**Papeete**	**73.77**	**259**	LR	LR	00 26 44.5	
	comp=Z,2µm,21.0s,baz=107,slow=29						
J46A	**Howard City**	**73.77**	**347**	P	**P**	**00 02 25.6**	**-0.7**
	baz=165,SNR=6.3						
I49A	**Point Hope**	**73.85**	**350**	IAmb	IAmb	00 02 32.5	
	comp=Z,141nm,1.0s						
I49A	**Point Hope**	**73.85**	**350**	P	**P**	**00 02 26.1**	**-0.6**
	baz=167,SNR=7.2						
H53A	**Bobcaygeon**	**73.90**	**353**	P	**P**	**00 02 26.9**	**-0.1**
	baz=171,SNR=18						
T25A	**Trinidad**	**73.90**	**331**	P	**P**	**00 02 28.2**	**+0.7**
T25A				IAmb	IAmb	00 02 35.0	
	comp=Z,145nm,1.1s						
T25A	**Trinidad**	**73.90**	**331**	P	**P**	**00 02 28.7**	**+1.2**
	baz=148,SNR=57						
G63A	**Kingsbury**	**73.91**	**359**	P	**P**	**00 02 28.0**	**+0.9**
	baz=179						
G60A	**Masonville**	**73.95**	**357**	P	**P**	**00 02 29.2**	**+1.8**
	baz=177,SNR=5.3						
G65A	**Princeton**	**74.00**	**1**	P	**P**	**00 02 29.0**	**+1.4**
	baz=181						
G62A	**West of Eustis**	**74.02**	**359**	P	**P**	**00 02 28.8**	**+1.0**
	baz=178,SNR=10						
G64A	**Maxfield**	**74.04**	**0**	P	**P**	**00 02 28.6**	**+0.8**
	baz=180						
PKME	**Peaks-Kenny Pk**	**74.05**	**360**	P	**P**	**00 02 28.7**	**+0.8**
	baz=180						
G58A	**Ormstown**	**74.09**	**356**	P	**P**	**00 02 28.7**	**+0.6**
	baz=175,SNR=5.7						
G57A	**Newington**	**74.10**	**355**	P	**P**	**00 02 28.5**	**+0.3**
	baz=174,SNR=7.7						
G61A	**St-Isidore-de-**	**74.11**	**358**	P	**P**	**00 02 28.9**	**+0.6**
	baz=177						
H52A	**Wyevale**	**74.12**	**352**	P	**P**	**00 02 27.9**	**-0.4**
	baz=170,SNR=18						
SCIA	**State Center**	**74.20**	**341**	IAmb	IAmb	00 02 34.8	
	comp=Z,85nm,0.9s						
I47A	**Gladwin**	**74.21**	**348**	IAmb	IAmb	00 02 35.1	
	comp=Z,169nm,0.9s						
I47A	**Gladwin**	**74.21**	**348**	P	**P**	**00 02 28.4**	**-0.5**
	baz=166,SNR=21						
I48A	**Sherman Twp**	**74.23**	**349**	P	**P**	**00 02 28.4**	**-0.6**
	baz=166,SNR=20						
X18A	**Snowflake**	**74.29**	**326**	IAMs_20	IAMs_20	00 32 20.8	
	comp=Z,2µm,19.0s						
I46A	**Reed City**	**74.31**	**348**	P	**P**	**00 02 28.5**	**-1.0**
	baz=165,SNR=8.9						
JFWS	**Jewell Farm**	**74.36**	**344**	IAmb	IAmb	00 02 35.6	
	comp=Z,99nm,0.9s						
JFWS	**Jewell Farm**	**74.36**	**344**	P	**P**	**00 02 29.6**	**-0.2**
	baz=161,SNR=22						
G55A	**Calabogie**	**74.39**	**354**	P	**P**	**00 02 29.9**	**0.0**
	baz=173						
N33A	**J Bar K, Exete**	**74.42**	**338**	P	**P**	**00 02 30.4**	**+0.2**
G53A	**Haliburton**	**74.45**	**353**	P	**P**	**00 02 30.4**	**+0.1**
	baz=171,SNR=16						
F63A	**Nahmakanta, Br**	**74.49**	**360**	P	**P**	**00 02 31.4**	**+0.9**
	baz=180						
F64A	**Sherman**	**74.65**	**0**	P	**P**	**00 02 32.4**	**+1.0**
	baz=180						
W18A	**Petrified Fore**	**74.66**	**326**	P	**P**	**00 02 32.4**	**+0.4**
W18A				IAmb	IAmb	00 02 39.5	
	comp=Z,146nm,1.1s						
W18A				IAMs_20	IAMs_20	00 32 35.5	
	comp=Z,1µm,18.0s						
W18A	**Petrified Fore**	**74.66**	**326**	P	**P**	**00 02 33.4**	**+1.4**
	baz=144,SNR=40						
G54A	**Lake Saint Pet**	**74.66**	**353**	P	**P**	**00 02 31.5**	**0.0**
	baz=172,SNR=12						
H48A	**Harrisville**	**74.67**	**349**	IAmb	IAmb	00 02 37.6	
	comp=Z,182nm,1.1s						
H48A	**Harrisville**	**74.67**	**349**	P	**P**	**00 02 31.2**	**-0.3**
	baz=167,SNR=15						
H47A	**Mio**	**74.72**	**349**	P	**P**	**00 02 31.4**	**-0.4**
	baz=166,SNR=6.2						
LMN	**Caledonia Moun**	**74.73**	**3**	P	**P**	**00 02 32.5**	**+0.6**
SUR	**Sutherland**	**74.76**	**119**	LR	LR	00 32 21.7	
	comp=Z,2µm,18.8s,baz=241,slow=33						
SUR	**Sutherland**	**74.76**	**119**	P	**P**	**00 02 32.7**	**-0.1**
SUR				IAMs_20	IAMs_20	00 33 17.6	
	comp=Z,2µm,19.0s						
K38A	**Parkersburg**	**74.76**	**342**	IAmb	IAmb	00 02 37.7	
	comp=Z,111nm,0.9s						
KSCO	**Kaye Shedlock’**	**74.77**	**333**	P	**P**	**00 02 32.9**	**+0.4**
KSCO				IAmb	IAmb	00 02 40.3	
	comp=Z,216nm,1.2s						
F60A	**Warwick**	**74.81**	**358**	P	**P**	**00 02 32.5**	**+0.2**
	baz=177						
SDCO	**Great Sand Dun**	**74.88**	**331**	P	**P**	**00 02 34.3**	**+1.0**
	baz=147,SNR=46						
F55A	**Otter Lake**	**74.93**	**355**	P	**P**	**00 02 33.4**	**+0.4**
	baz=173,SNR=5.5						
X16A	**Lo Mia Camp, P**	**74.95**	**325**	IAmb	IAmb	00 02 41.3	
	comp=Z,104nm,1.1s						
X16A				IAMs_20	IAMs_20	00 32 27.6	
	comp=Z,2µm,21.0s						
I42A	**Draeger Farm,**	**74.97**	**345**	IAmb	IAmb	00 02 39.1	
	comp=Z,94nm,0.9s						
GLMI	**Grayling**	**75.01**	**348**	IAmb	IAmb	00 02 39.6	
	comp=Z,161nm,1.1s						
GLMI	**Grayling**	**75.01**	**348**	P	**P**	**00 02 33.3**	**-0.3**
	baz=166,SNR=6.4						
F52A	**Sundridge**	**75.19**	**352**	P	**P**	**00 02 34.1**	**-0.4**
	baz=170,SNR=22						
E60A	**Ste Agathe de**	**75.19**	**358**	P	**P**	**00 02 34.3**	**-0.2**
	baz=178						
ALGO	**Algonquin Park**	**75.21**	**353**	P	**P**	**00 02 34.3**	**-0.3**
	baz=172,SNR=15						
E64A	**Bridgewater**	**75.21**	**1**	P	**P**	**00 02 35.3**	**+0.7**
	baz=181						
G47A	**Hillman**	**75.22**	**349**	P	**P**	**00 02 35.2**	**+0.5**
	baz=166,SNR=8.0						
BGNE	**Belgrade**	**75.26**	**338**	P	**P**	**00 02 35.4**	**+0.3**
	baz=154,SNR=11						
E58A	**La Victoria**	**75.27**	**357**	P	**P**	**00 02 35.2**	**+0.2**
	baz=176,SNR=15						
H43A	**Windswept, Lux**	**75.28**	**346**	IAmb	IAmb	00 02 40.7	
	comp=Z,100nm,0.8s						
E57A	**Chemin Saint G**	**75.35**	**356**	P	**P**	**00 02 35.8**	**+0.3**
	baz=175,SNR=5.3						
Y14A	**Wickenburg**	**75.38**	**323**	P	**P**	**00 02 36.1**	**+0.1**
F51A	**Arnstein**	**75.39**	**352**	P	**P**	**00 02 35.3**	**-0.4**
	baz=170,SNR=13						
G45A	**Suttons Bay**	**75.41**	**348**	IAmb	IAmb	00 02 41.8	
	comp=Z,66nm,0.9s						
G45A	**Suttons Bay**	**75.41**	**348**	P	**P**	**00 02 35.5**	**-0.3**
	baz=165,SNR=7.1						
S22A	**4UR Ranch, Cre**	**75.46**	**330**	P	**P**	**00 02 37.8**	**+1.1**
S22A	**4UR Ranch, Cre**	**75.46**	**330**	P	**P**	**00 02 37.8**	**+1.1**
	baz=146,SNR=24						
F49A	**Sandfield**	**75.51**	**350**	P	**P**	**00 02 35.8**	**-0.6**
	baz=168,SNR=36						
G46A	**Petoskey**	**75.53**	**348**	P	**P**	**00 02 36.2**	**-0.3**
	baz=166						
E56A	**St. Veronique**	**75.54**	**356**	P	**P**	**00 02 36.5**	**0.0**
	baz=174,SNR=12						
E53A	**Dumoine, Ponti**	**75.59**	**354**	P	**P**	**00 02 36.8**	**0.0**
	baz=172,SNR=16						
E52A	**Mattawa**	**75.60**	**353**	P	**P**	**00 02 36.4**	**-0.5**
	baz=171,SNR=12						
E54A	**Lac Daplat, Po**	**75.60**	**354**	P	**P**	**00 02 36.7**	**-0.2**
	baz=172,SNR=16						
F48A	**Evansville**	**75.66**	**350**	P	**P**	**00 02 36.7**	**-0.5**
	baz=168,SNR=16						
GLA	**Glamis**	**75.68**	**321**	P	**P**	**00 02 38.2**	**+0.5**
GLA				pmax	pmax		
	comp=Z,41nm,1.0s						
GLA	**Glamis**	**75.68**	**321**	P	**P**	**00 02 38.2**	**+0.5**
D60A	**Saint Jean D’O**	**75.72**	**359**	P	**P**	**00 02 38.0**	**+0.5**
	baz=178						
Q24A	**Divide**	**75.75**	**332**	P	**P**	**00 02 39.4**	**+1.0**
Q24A				IAmb	IAmb	00 02 45.6	
	comp=Z,126nm,0.9s						
Q24A	**Divide**	**75.75**	**332**	P	**P**	**00 02 39.4**	**+1.0**
	baz=148						
MVCO	**Mesa Verde**	**75.77**	**328**	IAmb	IAmb	00 02 45.7	
	comp=Z,120nm,1.0s						
MVCO	**Mesa Verde**	**75.77**	**328**	P	**P**	**00 02 39.4**	**+1.0**
	baz=145,SNR=44						
WUAZ	**Wupatki**	**75.78**	**325**	IAmb	IAmb	00 02 46.2	
	comp=Z,115nm,1.0s						
WUAZ				IAMs_20	IAMs_20	00 31 44.3	
	comp=Z,1µm,20.0s						
WUAZ	**Wupatki**	**75.78**	**325**	P	**P**	**00 02 40.1**	**+1.7**
	baz=142,SNR=37						
D63A	**Stockholm**	**75.83**	**1**	P	**P**	**00 02 39.1**	**+0.9**
	baz=180,SNR=11						
D59A	**Saint-Raymond**	**75.84**	**358**	P	**P**	**00 02 38.6**	**+0.4**
	baz=177						
D62A	**Allapoint, All**	**75.87**	**360**	IAmb	IAmb	00 02 46.2	
	comp=Z,128nm,1.1s						
D62A	**Allapoint, All**	**75.87**	**360**	P	**P**	**00 02 39.0**	**+0.7**
	baz=180,SNR=13						
E51A	**G1948 Merrick**	**75.94**	**352**	P	**P**	**00 02 38.7**	**-0.1**
	baz=170,SNR=21						
D57A	**Chemin Vers le**	**75.94**	**356**	P	**P**	**00 02 39.1**	**+0.2**
	baz=175,SNR=14						
D58A	**Chemin du LacG**	**75.97**	**357**	P	**P**	**00 02 39.5**	**+0.5**
	baz=176,SNR=12						
D61A	**St Aubert, Com**	**76.00**	**359**	P	**P**	**00 02 39.8**	**+0.7**
	baz=179						
F45A	**CMU Biological**	**76.00**	**348**	P	**P**	**00 02 38.9**	**-0.3**
	baz=165,SNR=22						
D56A	**ZEC Mazanza, M**	**76.02**	**356**	P	**P**	**00 02 39.3**	**0.0**
	baz=175						
D55A	**Sainte-Anne-du**	**76.04**	**355**	P	**P**	**00 02 39.3**	**-0.1**
	baz=174,SNR=14						
Y12C	**Blythe**	**76.04**	**322**	IAmb	IAmb	00 02 47.3	
	comp=Z,78nm,0.9s						
Y12C	**Blythe**	**76.04**	**322**	P	**P**	**00 02 41.3**	**+1.6**
	baz=140,SNR=24						
IKP	**In-Ko-Pah, Jac**	**76.08**	**320**	P	**P**	**00 02 41.9**	**+1.8**
	baz=139						
SWSC	**Sam W. Stewart**	**76.13**	**321**	P	**P**	**00 02 41.8**	**+1.5**
	baz=139						
OGNE	**Ogallala**	**76.22**	**335**	IAmb	IAmb	00 02 50.5	
	comp=Z,85nm,1.0s						
OGNE	**Ogallala**	**76.22**	**335**	P	**P**	**00 02 41.4**	**+0.7**
	baz=150						
E48A	**Lockeyer**	**76.23**	**351**	P	**P**	**00 02 40.2**	**-0.2**
	baz=168,SNR=20						
LATQ	**La Tuque**	**76.25**	**357**	P	**P**	**00 02 40.9**	**+0.4**
	baz=176						
PDMCI	**Parker Dam,Lak**	**76.26**	**323**	P	**P**	**00 02 42.0**	**+1.1**
	baz=140,SNR=14						
D54A	**Lac Fusel, La**	**76.27**	**355**	P	**P**	**00 02 39.9**	**-0.8**
	baz=173,SNR=16						
D53A	**Lac Vacive, Po**	**76.29**	**354**	IAmb	IAmb	00 02 47.7	
	comp=Z,67nm,0.9s						
D53A	**Lac Vacive, Po**	**76.29**	**354**	P	**P**	**00 02 40.6**	**-0.2**
	baz=172,SNR=16						
E47A	**Iron Bridge**	**76.37**	**350**	P	**P**	**00 02 40.9**	**-0.4**
	baz=167,SNR=46						
BAR	**Barrett**	**76.42**	**320**	P	**P**	**00 02 42.8**	**+0.8**
BAR				IAmb	IAmb	00 02 49.2	
	comp=Z,67nm,0.9s						
MONP2	**Monument Peak**	**76.44**	**320**	P	**P**	**00 02 43.9**	**+1.6**
	baz=138,SNR=5.6						
D51A	**Lot 18 Range I**	**76.47**	**353**	P	**P**	**00 02 41.5**	**-0.3**
	baz=170,SNR=21						
BC3	**Big Chuckawall**	**76.47**	**321**	P	**P**	**00 02 43.4**	**+1.1**
	baz=139,SNR=41						
PV01	**Paradox Valley**	**76.56**	**329**	IAmb	IAmb	00 02 50.4	
	comp=Z,101nm,1.2s						
D50A	**G1974 Best Tow**	**76.60**	**352**	P	**P**	**00 02 42.5**	**-0.1**
	baz=170,SNR=23						
ISCO	**Idaho Springs**	**76.65**	**332**	P	**P**	**00 02 44.4**	**+0.9**
	baz=147,SNR=63						
PV15	**Paradox Valley**	**76.68**	**329**	IAmb	IAmb	00 02 51.3	
	comp=Z,131nm,1.2s						
IRM	**Iron Mountain**	**76.69**	**322**	P	**P**	**00 02 44.6**	**+1.2**
	baz=140,SNR=32						
PV13	**Radium Mtn., P**	**76.69**	**329**	IAmb	IAmb	00 02 50.9	
	comp=Z,118nm,1.0s						
PV02	**Paradox Valley**	**76.69**	**329**	IAmb	IAmb	00 02 51.0	
	comp=Z,95nm,1.1s						
SMCO	**Snowmass**	**76.71**	**330**	IAmb	IAmb	00 02 51.5	
	comp=Z,100nm,1.0s						
PV05	**Paradox Valley**	**76.75**	**328**	IAmb	IAmb	00 02 51.0	
	comp=Z,107nm,1.0s						
PV05				IAMs_20	IAMs_20	00 34 06.7	
	comp=Z,1µm,19.0s						
PV03	**Paradox Valley**	**76.78**	**329**	IAmb	IAmb	00 02 51.3	
	comp=Z,78nm,1.1s						
PV18	**Skein Mesa, Pa**	**76.80**	**329**	IAmb	IAmb	00 02 51.3	
	comp=Z,86nm,1.0s						
PV12	**Saucer Basin,**	**76.81**	**329**	IAmb	IAmb	00 02 51.6	
	comp=Z,93nm,1.0s						
PV12				IAMs_20	IAMs_20	00 33 53.3	
	comp=Z,2µm,19.0s						
PV11	**David Mesa, Pa**	**76.83**	**329**	IAmb	IAmb	00 02 51.6	
	comp=Z,90nm,1.2s						
PV17	**East Wray Mesa**	**76.85**	**329**	IAmb	IAmb	00 02 51.6	
	comp=Z,81nm,1.0s						
D48A	**Paudash Townsh**	**76.86**	**351**	P	**P**	**00 02 43.4**	**-0.6**
	baz=168,SNR=15						
ECSD	**EROS Data Cent**	**76.86**	**340**	IAmb	IAmb	00 02 50.2	
	comp=Z,128nm,1.0s						
ECSD	**EROS Data Cent**	**76.86**	**340**	P	**P**	**00 02 43.9**	**-0.2**
	baz=155,SNR=62						
NEE2	**Needles Airpor**	**76.87**	**323**	P	**P**	**00 02 46.0**	**+1.6**
	baz=140						
PV19	**Morning Glory**	**76.89**	**329**	IAMs_20	IAMs_20	00 33 44.3	
	comp=Z,1µm,20.0s						
D46A	**Sault St. Mari**	**76.92**	**349**	P	**P**	**00 02 43.7**	**-0.7**
	baz=166,SNR=19						
PV04	**Paradox Valley**	**76.92**	**329**	IAmb	IAmb	00 02 52.2	
	comp=Z,86nm,1.2s						
D47A	**Chapleau**	**76.93**	**350**	P	**P**	**00 02 43.7**	**-0.8**
	baz=167,SNR=16						
E43A	**Lone Tree Farm**	**76.94**	**347**	IAmb	IAmb	00 02 51.8	
	comp=Z,101nm,0.8s						
PV14	**Lion Creek, Pa**	**76.95**	**329**	IAmb	IAmb	00 02 52.3	
	comp=Z,98nm,1.1s						
PV14				IAMs_20	IAMs_20	00 33 59.3	
	comp=Z,2µm,19.0s						
U15A	**North Rim**	**76.96**	**325**	P	**P**	**00 02 45.7**	**+0.5**
U15A				IAmb	IAmb	00 02 53.0	
	comp=Z,89nm,0.9s						
U15A				IAMs_20	IAMs_20	00 32 10.4	
	comp=Z,1µm,22.0s						
PV10	**Paradox Valley**	**76.97**	**329**	IAmb	IAmb	00 02 51.9	

	comp=Z,115nm,1.0s						
E44A	Grand Marais A	76.98	348	P	P	00 02 44.8	+0.2
	baz=165,SNR=6.2						
PV22	Blue Mesa, Par	76.98	329	IAmb	IAmb	00 02 52.5	
	comp=Z,83nm,1.1s						
XPFO	Pion Flat	76.99	321	P	P	00 02 46.3	+1.1
PFO	Pinyon Flats O	77.00	321	*de*P	P	00 02 45.7	+0.4
PFO				pmax	pmax		
	comp=Z,18nm,0.9s						
PFO	Pinyon Flats O	77.00	321	P	P	00 02 46.3	+1.0
PFO				IAmb	IAmb	00 02 52.9	
	comp=Z,76nm,1.1s						
PFO	Pinyon Flats O	77.00	321	P	P	00 02 46.6	+1.4
	baz=138,SNR=5.8						
PV23	Carpenter Ridg	77.01	329	IAmb	IAmb	00 02 52.7	
	comp=Z,94nm,1.2s						
MAW	Mawson	77.03	163	P	P	00 02 45.0	+0.1
	comp=Z,174nm,0.9s,baz=214,slow=6.3,SNR=112						
MAW				LR	LR	00 39 25.9	
	comp=Z,2µm,18.3s,baz=222,slow=38						
MAW	Mawson	77.03	163	P	P	00 02 45.0	+0.1
BELC	Belle Mtn. Jos	77.03	321	P	P	00 02 46.4	+0.9
	baz=139,SNR=23						
PV21	Cone Mtn., Par	77.09	329	IAmb	IAmb	00 02 53.1	
	comp=Z,72nm,1.1s						
PV09	Paradox Valley	77.11	329	P	P	00 02 46.4	+0.3
SPMN	Marine on St.	77.17	343	IAmb	IAmb	00 02 51.8	
	comp=Z,88nm,1.1s						
SPMN	Marine on St.	77.17	343	P	P	00 02 45.2	-0.6
	baz=159,SNR=26						
VLDQ	Val d'Or	77.29	354	IAmb	IAmb	00 02 53.8	
	comp=Z,79nm,1.0s						
MURC	Murrieta	77.40	320	P	P	00 02 48.9	+1.4
	baz=138,SNR=17						
GMRC	Granite Mounta	77.44	322	P	P	00 02 49.0	+1.3
	baz=139,SNR=52						
N23A	Red Feather La	77.71	332	P	P	00 02 50.4	+1.1
N23A	Red Feather La	77.71	332	P	P	00 02 50.1	+0.8
	baz=147,SNR=25						
HEC	Hector,Ludlow	77.84	322	P	P	00 02 51.8	+1.8
	baz=139,SNR=5.2						
TSUM	Tsumeb	77.87	105	LR	LR	00 31 58.0	
	comp=Z,2µm,22.0s,baz=238,slow=32						
TSUM	Tsumeb	77.87	105	P	P	00 02 50.8	+0.2
TSUM				IAmb	IAmb	00 02 52.2	
	comp=Z,90nm,1.1s						
TSUM	Tsumeb	77.87	105	IAMs_20	IAMs_20	00 31 13.6	
	comp=Z,2µm,22.0s						
O20A	White River Ci	78.05	330	IAmb	IAmb	00 02 58.5	
	comp=Z,154nm,1.1s						
O20A	White River Ci	78.05	330	P	P	00 02 52.2	+1.1
	baz=145,SNR=52						
TUQ	Turquoise Moun	78.07	322	P	P	00 02 52.6	+1.3
	baz=139,SNR=27						
BFSC	Mount Baldy Ra	78.13	320	P	P	00 02 52.6	+1.0
	baz=138,SNR=12						
E38A	The Farm, Brul	78.15	344	IAmb	IAmb	00 02 57.5	
	comp=Z,69nm,0.9s						
LSQQ	Lebel-sur-Quev	78.19	355	P	P	00 02 51.3	-0.1
	baz=173						
SUSD	Miller	78.23	338	IAmb	IAmb	00 02 57.7	
	comp=Z,94nm,0.9s						
SUSD	Miller	78.23	338	P	P	00 02 51.7	-0.1
	baz=153,SNR=5.6						
MWC	Mount Wilson	78.34	320	P	P	00 02 54.1	+1.2
MWC				pmax	pmax		
	comp=Z,59nm,1.0s						
MWC	Mount Wilson	78.34	320	P	P	00 02 54.1	+1.2
PASC	Pasadena Art C	78.37	320	IAmb	IAmb	00 03 00.2	
	comp=Z,78nm,1.0s						
GSC	Goldstone, Bar	78.45	322	P	P	00 02 54.6	+1.3
	baz=138,SNR=23						
SHPR	Sheep Range	78.48	324	IAmb	IAmb	00 03 01.1	
	comp=Z,76nm,1.0s						
PMOZ	Porto Moniz, M	78.71	42	*e*LR	LR	00 32 43.9	
	comp=Z,1µm,18.0s						
TMUT	Trail Mountain	78.71	328	P	P	00 02 55.8	+0.9
TCRU	Three Creeks R	78.75	327	P	P	00 02 56.0	+0.9
EDW2	Edwards Air Fo	78.79	321	P	P	00 02 55.9	+0.8
	baz=138,SNR=18						
BLG	Laguna Peak, P	78.82	319	P	P	00 02 55.8	+0.5
	baz=137						
RWWY	Rawlins	78.90	332	IAmb	IAmb	00 03 02.0	
	comp=Z,126nm,0.9s						
MATQ	Matagami	78.94	354	P	P	00 02 55.1	-0.5
	baz=172,SNR=12						
RDMU	Red Mountain	78.99	330	P	P	00 02 57.2	+0.8
LRMC	Laurel Mtn Rad	79.06	321	P	P	00 02 57.9	+1.2
	baz=138,SNR=6.3						
FURC	Furnace Creek,	79.35	322	P	P	00 02 59.4	+1.3
	baz=139,SNR=23						
MPMC	Manual Prospec	79.38	322	P	P	00 02 59.4	+0.8
	baz=138,SNR=31						
TPNV	Topopah Spring	79.39	323	IAmb	IAmb	00 03 06.1	
	comp=Z,77nm,0.9s						
TPNV	Topopah Spring	79.39	323	P	P	00 02 59.9	+1.4
	baz=139,SNR=80						
EYMN	Ely	79.39	345	IAmb	IAmb	00 03 04.3	
	comp=Z,88nm,1.1s						
EYMN	Ely	79.39	345	P	P	00 02 57.5	-0.5
	baz=160,SNR=57						
K22A	Casper	79.42	333	IAmb	IAmb	00 03 08.8	
	comp=Z,126nm,1.1s						
K22A	Casper	79.42	333	P	P	00 02 59.6	+1.1
	baz=147,SNR=32						
ISA	Isabella, Lake	79.63	321	P	P	00 03 01.1	+1.4
	baz=137,SNR=33						
RSSD	Black Hills	79.71	335	P	P	00 03 00.4	+0.2
RSSD				pmax	pmax		
	comp=Z,67nm,1.0s						
RSSD	Black Hills	79.71	335	P	P	00 03 00.4	+0.2
RSSD	Black Hills	79.71	335	P	P	00 03 00.8	+0.6
	baz=149						
PKM	Mcpherson Peak	79.81	320	P	P	00 03 02.4	+1.4
	baz=136,SNR=23						
BOSA	Boshof	79.86	117	P	P	00 03 01.0	-0.5
	comp=Z,44nm,0.7s,baz=260,slow=3.9,SNR=89						
BOSA				LR	LR	00 36 47.6	
	comp=Z,2µm,18.1s,baz=236,slow=35						
BOSA	Boshof	79.86	117	P	P	00 03 01.0	-0.5
CWC	Cottonwood Cre	79.98	322	P	P	00 03 03.0	+1.2
	baz=138						
D32A	Dogwood Acres,	80.07	341	IAmb	IAmb	00 03 07.8	
	comp=Z,125nm,0.9s						
VES	Vestal, Richgr	80.10	321	P	P	00 03 03.6	+1.5
	baz=137,SNR=22						
R11A	Troy Canyon, C	80.10	324	P	P	00 03 03.4	+1.0
	baz=140,SNR=95						
DUG	Dugway, Tooele	80.17	327	P	P	00 03 03.6	+0.9
	baz=142,SNR=16						
SMMC	Simmler	80.22	320	P	P	00 03 05.0	+2.1
	baz=136						
TIN	Tinemaha, Big	80.52	322	P	P	00 03 05.9	+1.3
	baz=138,SNR=21						
PAGB	Antelope Grade	80.67	320	IAmb	IAmb	00 03 12.8	
	comp=Z,90nm,1.0s						
E28A	Huff	80.69	338	IAmb	IAmb	00 03 11.7	
	comp=Z,216nm,1.1s						
HWUT	Hardware Ranch	80.72	329	IAmb	IAmb	00 03 12.2	
	comp=Z,76nm,0.9s						
HWUT				IAMs_20	IAMs_20	00 36 32.8	
	comp=Z,1µm,20.0s						
BW06	Boulder Array	80.77	331	P	P	00 03 06.1	+0.2
	baz=145,SNR=27						
PDAR	Pinedale Array	80.77	331	P	P	00 03 05.8	-0.2
	comp=Z,14nm,0.8s,baz=128,slow=7.2,SNR=59						
PDAR				PKKPbc	PKKPbc	00 21 43.6	-3.2
	comp=Z,1.0nm,0.8s,baz=216,slow=0.7,SNR=7.0						
PDAR				PKPPKP	P'P'df	00 29 50.6	+6.8
	comp=Z,0.8nm,1.0s,baz=333,slow=1.7,SNR=4.8						
PDAR				LR	LR	00 37 21.1	
	comp=Z,353nm,20.4s,baz=132,slow=34						
PDAR	Pinedale Array	80.77	331	P	P	00 03 03.8	-2.2
AGMN	Agassiz Nation	80.81	342	P	P	00 03 05.6	-0.1
	baz=156,SNR=33						
SPUT	South Promonto	80.88	328	P	P	00 03 07.6	+1.1
MLAC	Mammoth, Mammo	81.27	322	P	P	00 03 10.1	+1.3
	baz=137						
PMPB	Monarch Peak	81.33	320	P	P	00 03 09.9	+1.1
PMPB				IAmb	IAmb	00 03 17.2	
	comp=Z,85nm,1.2s						
OMMB	Old Mammoth Mi	81.34	322	IAmb	IAmb	00 03 16.2	
	comp=Z,75nm,0.9s						
AHID	Auburn Hatcher	81.44	330	IAmb	IAmb	00 03 16.1	
	comp=Z,99nm,1.1s						
MDND	Maddock	81.48	340	P	P	00 03 09.8	+0.5
	baz=153,SNR=20						
NV11	Mina Array Sit	81.50	323	P	P	00 03 10.0	+0.2
NVAR	Mina Array Bea	81.57	323	P	P	00 03 10.8	+0.5
	comp=Z,11nm,0.9s,baz=160,slow=6.1,SNR=45						
NVAR				PKKPbc	PKKPbc	00 21 42.7	-2.0
	comp=Z,1.6nm,0.8s,baz=293,slow=0.8,SNR=6.3						
NVAR				PKPPKP	P'P'df	00 29 53.0	+10
	comp=Z,0.4nm,0.4s,baz=253,slow=1.5,SNR=4.3						
NVAR				LR	LR	00 34 55.5	
	comp=Z,379nm,20.1s,baz=142,slow=32						
NVAR	Mina Array Bea	81.57	323	P	P	00 03 10.6	+0.2
ELK	Elko	81.76	326	P	P	00 03 11.5	+0.2
	comp=Z,12nm,1.0s,baz=138,slow=3.6,SNR=38						
ELK				PKKPbc	PKKPbc	00 21 40.9	-3.6
	comp=Z,1.1nm,0.8s,baz=31,slow=2.1,SNR=4.5						
LBTB	Lobatse	81.81	114	LR	LR	00 34 24.0	
	comp=Z,618nm,19.0s,baz=240,slow=32						
LBTB	Lobatse	81.81	114	IAmb	IAmb	00 03 12.0	
	comp=Z,67nm,0.8s						
SAO	San Andreas Ge	82.08	320	P	P	00 03 13.4	+0.6
SAO				pmax	pmax		
	comp=Z,25nm,1.0s						
SAO	San Andreas Ge	82.08	320	P	P	00 03 13.4	+0.6
WAKR	Walker	82.23	322	IAmb	IAmb	00 03 21.3	
	comp=Z,63nm,1.0s						
FLWY	Flagg Ranch	82.32	331	IAmb	IAmb	00 03 25.2	
	comp=Z,92nm,1.0s						
YERR	Yerington	82.48	323	IAmb	IAmb	00 03 22.2	
	comp=Z,65nm,0.9s						
H17A	Grant Village	82.53	331	P	P	00 03 16.4	+1.2
	baz=144,SNR=15						
RLMT	Red Lodge	82.58	332	IAmb	IAmb	00 03 22.2	
	comp=Z,66nm,0.8s						
RLMT	Red Lodge	82.58	332	P	P	00 03 15.9	+0.4
	baz=145,SNR=62						
LKWY	Lake	82.59	331	P	P	00 03 16.3	+0.7
LKWY				pmax	pmax		
	comp=Z,31nm,0.9s						
LKWY				MLR	MLR		
	comp=Z,2µm,21.0s						
LKWY	Lake	82.59	331	P	P	00 03 16.3	+0.7
LKWY				IAMs_20	IAMs_20	00 44 16.2	
	comp=Z,2µm,21.0s						
ULM	Lac du Bonnet	82.60	343	P	P	00 03 14.4	-0.8
	comp=Z,21nm,0.9s,baz=152,slow=3.7,SNR=38						
ULM				PKKPbc	PKKPdf	00 21 38.6	+4.2
	comp=Z,3.6nm,0.9s,baz=334,slow=3.6,SNR=6.8						
ULM				LR	LR	00 40 51.6	
	comp=Z,428nm,21.5s,baz=146,slow=36						
ULM	Lac du Bonnet	82.60	343⇑	*e*P	P	00 03 14.2	-0.9
ULM	Lac du Bonnet	82.60	343	IAmb	IAmb	00 03 21.4	
	comp=Z,124nm,1.0s						
YMP	Mirror Lake Pl	82.63	332	P	P	00 03 15.7	-0.2
LAO	LASA Array	82.70	335	IAMs_20	IAMs_20	00 44 01.0	
	comp=Z,992nm,19.0s						
LAO	LASA Array	82.70	335	P	P	00 03 16.1	+0.3
	baz=148,SNR=22						
PNTR	Pine Nut	82.74	323	IAmb	IAmb	00 03 24.2	
	comp=Z,102nm,0.8s						
YUF	Upper Falls	82.75	331	P	P	00 03 17.2	+0.8
RUBR	Rubicon Trail	83.01	322	P	P	00 03 19.0	+1.1
RUBR				IAmb	IAmb	00 03 28.0	
	comp=Z,108nm,1.0s						
PAHR	Pah Rah Range	83.08	323	IAmb	IAmb	00 03 25.3	
	comp=Z,98nm,1.0s						
DGMT	Dagmar	83.50	337	P	P	00 03 20.4	+0.5
	baz=149,SNR=62						
SCHQ	Schefferville	83.65	1	P	P	00 03 19.8	-0.7
	comp=Z,13nm,1.1s,baz=196,slow=3.5,SNR=11						
BEKR	Beckworth	83.71	323	IAmb	IAmb	00 03 28.3	
	comp=Z,60nm,1.0s						
ORV	Oroville	84.10	322	IAmb	IAmb	00 03 30.2	
	comp=Z,86nm,1.1s						
GDXM	Geysers	84.28	321	P	P	00 03 25.2	+1.0
WVOR	Wild Horse Val	84.71	325	P	P	00 03 26.7	+0.4
WVOR				pmax	pmax		
	comp=Z,46nm,1.5s						
WVOR	Wild Horse Val	84.71	325	P	P	00 03 26.7	+0.4
O03E	Paynes Creek	84.79	322	P	P	00 03 26.7	0.0
	baz=136,SNR=6.8						
CASY	Casey	84.88	180	P	P	00 03 26.9	+0.1
HRY	Holter Researc	84.91	332	P	P	00 03 25.2	-2.0
EGMT	Eagleton	85.15	334	IAmb	IAmb	00 03 34.3	
	comp=Z,71nm,1.1s						
EGMT	Eagleton	85.15	334	P	P	00 03 28.1	-0.2
	baz=145,SNR=29						
O02D	Mt. Diablo Mer	85.24	322	P	P	00 03 29.1	+0.1
	baz=135						
J08A	Circle Bar Ran	85.31	326	IAmb	IAmb	00 03 36.2	
	comp=Z,95nm,1.0s						
KCPM	Cahto Peak	85.33	321		P	00 03 30.4	+0.9
KCPM				IAmb	IAmb	00 03 37.0	
	comp=Z,69nm,1.0s						
N02D	Trinity Center	85.75	322	P	P	00 03 31.1	-0.4
	baz=135						
KMRM	Mail Ridge	85.77	321	P	P	00 03 32.5	+0.9
KMRM				IAmb	IAmb	00 03 39.1	
	comp=Z,68nm,1.0s						
MSO	Missoula	85.89	331	IAmb	IAmb	00 03 41.2	
	comp=Z,112nm,1.6s						
MSO	Missoula	85.89	331	P	P	00 03 32.6	+0.5
	baz=142,SNR=20						
M02C	Callahan	86.13	322	P	P	00 03 33.4	+0.1
	baz=135,SNR=5.7						
KHMM	Horse Mountain	86.24	322	P	P	00 03 34.4	+0.4
YBH	Yreka Blue Hor	86.29	323	P	P	00 03 33.3	-0.9
	comp=Z,4.1nm,0.7s,baz=152,slow=3.8,SNR=9.8						
YBH	Yreka Blue Hor	86.29	323	P	P	00 03 34.3	+0.1
YBH				pmax	pmax		
	comp=Z,38nm,1.4s						
YBH	Yreka Blue Hor	86.29	323	P	P	00 03 34.3	+0.1
I07A	Izee	86.35	326	IAmb	IAmb	00 03 41.3	
	comp=Z,56nm,1.0s						
L04D	Klamath Falls	86.42	323	P	P	00 03 34.7	-0.1
	baz=135						
J05D	Fort Rock, OR	86.63	325	P	P	00 03 36.6	+0.7
	baz=136,SNR=17						
PFVI	Vila Bisbo	86.66	44	IAMs_20	IAMs_20	00 41 55.4	
	comp=Z,2µm,20.0s						
PFVI	Vila Bisbo	86.66	44	*e*S	S	00 14 21.5	+7.7
JTMT	Jette	86.75	331	IAmb	IAmb	00 03 42.9	
	comp=Z,66nm,0.9s						
PTEO	Sao Teotonio	86.99	44	*e*P	P	00 03 38.6	+1.1
J04D	Umpqua Nationa	87.05	324	P	P	00 03 38.5	+0.5
	baz=135						
L02E	Cave Junction	87.06	323	P	P	00 03 38.6	+0.7
	baz=134,SNR=5.3						
PBDV	Barranco-do-Ve	87.27	44	*i* LQ	LQ	00 03 43.4	
PBDV	Barranco-do-Ve	87.27	44	*e*S	S	00 14 23.1	+3.3
PCVE	Castro Verde	87.46	44	*e*P	P	00 03 41.6	+1.8
PNCL	Nicolau / Gran	87.47	43	*i* LQ	LQ	00 03 51.0	
K02D	Willamette Mer	87.47	323	P	P	00 03 40.8	+0.9
	baz=134,SNR=15						
MESJ	Messejana	87.48	44	*e*P	P	00 03 42.5	+2.6
PVAQ	Vaqueiros	87.51	44	IAMs_20	IAMs_20	00 38 58.9	
	comp=Z,2µm,21.0s						
PVAQ	Vaqueiros	87.51	44	*e*S	S	00 14 23.3	+1.3
PVAQ	Vaqueiros	87.51	44	*e*LQ	LQ	00 31 22.6	
PVAQ				*e*LR	LR	00 36 31.8	
	comp=Z,1µm,18.0s						
PMAFR	Mafra	87.57	42	*e*S	S	00 14 25.4	+2.8
I04A	Tendick Farm,	87.60	324	P	P	00 03 40.4	-0.1
	baz=135,SNR=6.2						
WALA	Waterton Lakes	87.63	332	P	P	00 03 39.9	-0.7
G06A	Carlson Farm,	87.75	326	P	P	00 03 41.2	+0.1
G06A				IAmb	IAmb	00 03 48.2	
	comp=Z,61nm,1.1s						
PBEJ	Beja	87.81	44	*e*P	P	00 03 44.3	+2.7
E08A	Dider Farm, El	87.92	328	P	P	00 03 42.0	+0.2
I03D	Drain, OR	88.01	324	P	P	00 03 42.9	+0.6
	baz=135						
BFZ	Birch Farm	88.04	224	P	P	00 03 43.0	+0.2
BFZ				IAmb	IAmb	00 03 45.0	
	comp=Z,61nm,1.1s						
HAWA	Hanford	88.06	328	IAmb	IAmb	00 03 49.2	
	comp=Z,56nm,1.1s						
G05D	Wamic, OR	88.08	326	P	P	00 03 43.4	+0.7
	baz=136,SNR=5.1						
H04A	Detroit Lake	88.11	325	IAmb	IAmb	00 03 49.0	
	comp=Z,67nm,1.0s						
TAM	Tamanrasset	88.22	63	P	P	00 03 44.0	0.0
TAM				pmax	pmax		
	comp=Z,27nm,1.1s						
TAM				MLR	MLR		
	comp=Z,2µm,21.0s						
TAM	Tamanrasset	88.22	63	P	P	00 03 44.0	0.0
TAM				IAMs_20	IAMs_20	00 43 24.6	
	comp=Z,2µm,21.0s						
PSBE	So Bento	88.22	42	*i* LQ	LQ	00 03 48.0	
FFC	Flin Flon	88.27	341	P	P	00 03 42.8	-0.5
FFC				pmax	pmax		
	comp=Z,40nm,1.2s						
FFC	Flin Flon	88.27	341	P	P	00 03 42.8	-0.5
PMTG	Montargil	88.27	43	*i* LQ	LQ	00 03 49.3	
E07A	Sunnyside	88.34	328	P	P	00 03 44.8	+1.0
NEW	Newport	88.37	330	P	P	00 03 42.7	-1.3
	comp=Z,6.9nm,1.0s,baz=96,slow=3.9,SNR=5.3						
NEW	Newport	88.37	330	P	P	00 03 43.5	-0.5
	baz=139,SNR=7.3						
PTOM	Tomar	88.52	42	*i* LQ	LQ	00 03 53.7	
PESTR	Estremoz	88.52	43	*e*S	S	00 14 31.8	+0.2
C09A	Chrisman Ranch	88.53	329	IAmb	IAmb	00 03 51.1	
	comp=Z,70nm,0.9s						
KHZ	Kahutara	88.56	221	P	P	00 03 45.1	-0.1
KHZ				IAmb	IAmb	00 03 47.2	
	comp=Z,94nm,1.1s						
COR	Corvallis	88.61	324	P	P	00 03 46.3	+1.2
COR				pmax	pmax		
	comp=Z,307nm,1.2s						
COR	Corvallis	88.61	324	P	P	00 03 46.3	+1.2
F05D	White Salmon	88.61	326	P	P	00 03 46.0	+0.8
	baz=136						
LSZ	Lusaka	88.64	107	LR	LR	00 38 10.6	
	comp=Z,2µm,21.3s,baz=242,slow=32						
LSZ	Lusaka	88.64	107	P	P	00 03 46.2	-0.1
LSZ				pmax	pmax		
	comp=Z,182nm,1.8s						
LSZ	Lusaka	88.64	107	P	P	00 03 46.2	-0.1
LSZ				IAmb	IAmb	00 03 48.6	
	comp=Z,182nm,1.8s						
PCAS	Casmilo, Conde	88.75	42	*e*P	P	00 03 46.2	+0.3
BSWZ	Blackbirch Sta	88.81	222	P	P	00 03 47.5	+1.0
BKZ	Black Stump Fm	88.81	225	P	P	00 03 46.7	+0.1
OXZ	Oxford	88.83	220	P	P	00 03 45.6	-0.9
OXZ				IAmb	IAmb	00 03 50.1	
	comp=Z,54nm,1.1s						
TUWZ	Tuamarina	88.95	222	P	P	00 03 48.0	+0.9
URZ	Urewera	88.97	226	P	P	00 03 47.0	-0.2
URZ				IAmb	IAmb	00 03 49.2	
	comp=Z,61nm,1.1s						
PMRV	Marv??o	89.00	43	*i* LQ	LQ	00 03 57.8	
PMRV	Marv??o	89.00	43	*e*LQ	LQ	00 32 01.3	
PMRV				*e*LR	LR	00 36 33.7	
	comp=Z,1µm,18.0s						
LTZ	Lake Taylor	89.05	220	IAmb	IAmb	00 03 50.0	
	comp=Z,89nm,0.9s						
F04A	Amboy	89.12	326	IAmb	IAmb	00 03 53.8	
	comp=Z,66nm,0.9s						
RPZ	Rata Peaks	89.12	219	P	P	00 03 48.5	+0.6
	comp=Z,58nm,0.9s,baz=42,slow=2.0,SNR=15						
RPZ	Rata Peaks	89.12	219	IAmb	IAmb	00 03 49.6	
	comp=Z,92nm,1.0s						
PCBR	Castelo Branco	89.21	43	*i* LQ	LQ	00 03 54.6	
WHZ	Wether Hill Ro	89.31	216	IAmb	IAmb	00 03 50.2	
	comp=Z,69nm,1.0s						
THZ	Tophouse	89.34	221	P	P	00 03 49.4	+0.3
THZ				IAmb	IAmb	00 03 51.2	
	comp=Z,114nm,1.1s						
NNZ	Nelson	89.41	222	P	P	00 03 49.3	0.0
NNZ				IAmb	IAmb	00 03 58.0	
	comp=Z,116nm,1.3s						
MTE	Manteigas	89.53	42	*i* LQ	LQ	00 03 55.1	
MTE	Manteigas	89.53	42	*e*LQ	LQ	00 32 48.5	
MTE				*e*LR	LR	00 37 59.6	
	comp=Z,2µm,20.0s						
PYZ	Puysegur Point	89.77	215	P	P	00 03 50.5	-0.4
D05A	Enumclaw	89.80	327	IAmb	IAmb	00 03 57.4	
	comp=Z,114nm,1.0s						
FOZ	Fox Glacier	89.92	218	P	P	00 03 51.6	+0.1
PVRL	Vila Real	89.99	41	*i* LQ	LQ	00 03 56.5	
E03A	Lebam	90.11	326	IAmb	IAmb	00 03 59.2	
	comp=Z,83nm,1.0s						
PGAV	Gavieira, Arco	90.12	41	*i* LQ	LQ	00 04 04.2	
PGAV	Gavieira, Arco	90.12	41	*e*LQ	LQ	00 32 42.4	
PGAV				*e*LR	LR	00 38 37.0	
	comp=Z,2µm,18.0s						
QRZ	Quartz Range	90.16	222	P	P	00 03 51.6	-1.2
QRZ				IAmb	IAmb	00 04 00.4	
	comp=Z,36nm,0.8s						
HIZ	Hauiti	90.22	225	P	P	00 03 53.3	+0.2
HIZ				IAmb	IAmb	00 03 56.6	
	comp=Z,147nm,1.4s						
MVO	Moncorvo	90.32	42	*e*P	P	00 03 53.5	+0.1
MVO	Moncorvo	90.32	42	*e*LQ	LQ	00 31 55.8	
MVO				*e*LR	LR	00 37 12.9	
	comp=Z,2µm,20.0s						
B06A	Marblemount	90.52	328	IAmb	IAmb	00 03 60.0	
	comp=Z,52nm,1.0s						
D03D	Eldon	90.58	327	P	P	00 03 54.6	+0.3
	baz=135,SNR=6.6						
B05A	Bryant	90.62	328	P	P	00 03 54.0	-0.4
	baz=136,SNR=16						
PAB	San Pablo	90.91	44	IAMs_20	IAMs_20	00 45 02.8	
	comp=Z,2µm,20.0s						
A04D	Lummi Island	91.23	328	P	P	00 03 57.4	+0.1
	baz=135,SNR=12						
KEST	Kesra	97.81	53	LR	LR	00 48 30.5	
	comp=Z,3µm,21.0s,baz=184,slow=35						
MBAR	Mbarara	98.07	95	IAMs_20	IAMs_20	00 51 05.5	
	comp=Z,1µm,22.0s						
YKA	Yellowknife Ar	98.39	340	P	P	00 04 28.7	-1.0
	comp=Z,4.4nm,0.8s,baz=138,slow=5.0,SNR=59						
YKA				PP	PP	00 08 33.0	+2.8
	comp=Z,1.2nm,0.8s,baz=136,slow=8.7,SNR=5.1						
YKA				PKKPbc	PKKPbc	00 20 58.7	-3.8
	comp=Z,0.7nm,0.8s,baz=321,slow=2.7,SNR=3.9						
YKA				PKKPab	PKKPab	00 21 25.7	
	comp=Z,0.7nm,0.9s,baz=327,slow=3.0,SNR=5.5						
YKA				LR	LR	00 50 20.3	
	comp=Z,676nm,21.6s,baz=0.0,slow=36						
DLBC	Dease Lake	100.97	332	P	Pdif	00 04 40.5	-1.0
	comp=Z,4.2nm,1.0s,baz=195,slow=4.4,SNR=4.8						
ABPO	Ambohimpanom	101.92	120	IAMs_20	IAMs_20	00 44 50.9	
	comp=Z,1µm,20.0s						
MSSA	Maissana	102.15	46	IAMs_20	IAMs_20	00 53 23.7	
	comp=Z,1µm,19.0s						
CASP	Castiglione de	102.28	48	IAMs_20	IAMs_20	00 56 54.0	
	comp=Z,840nm,19.0s						
UCC	Uccle	102.35	38	IAMs_20	IAMs_20	00 51 51.6	
	comp=Z,1µm,20.0s						
VLC	Villacollemand	102.62	46	IAMs_20	IAMs_20	00 50 17.0	
	comp=Z,729nm,18.0s						
OSSC	Osservatorio P	102.87	47	IAMs_20	IAMs_20	00 52 29.6	
	comp=Z,1µm,19.0s						
KMBO	Kilima Mbogo	103.46	99	IAMs_20	IAMs_20	00 52 15.3	
	comp=Z,1µm,19.0s						
MURB	Monte Urbino	103.58	48	IAMs_20	IAMs_20	00 49 44.3	
	comp=Z,720nm,19.0s						
DAVA	Damuels	103.78	43	*i* pPKiKP	PKiKP	00 09 15.0	+2.7
	comp=Z,38nm,1.8s						
INTR	Introdacqua	103.92	50	IAMs_20	IAMs_20	00 53 10.4	
	comp=Z,2µm,20.0s						
FETA	Feichten	104.17	44	*i* PKiKP	PKiKP	00 09 11.9	-1.1
	comp=Z,7.6nm,1.2s						
CTI	Castel Tesino	104.29	45	IAMs_20	IAMs_20	00 50 29.1	
	comp=Z,862nm,21.0s						
RETA	Reutte	104.41	44	*i* pPKiKP	PKiKP	00 09 18.1	+4.8
	comp=Z,40nm,1.5s,SNR=6.6						
MOTA	Moosalm	104.55	44	*i* PP	PP	00 09 21.0	+3.7
	comp=Z,32nm,1.5s,SNR=6.5						
SQTA	Sankt Quirin	104.56	44	*i* PP	PP	00 09 18.1	+0.8
	comp=Z,32nm,1.2s,SNR=6.2						
WATA	Walderalm	104.83	44	*i* PP	PP	00 09 23.0	+3.6
	comp=Z,28nm,1.3s,SNR=5.7						
WTTA	Wattenberg	104.83	44	*i* PP	PP	00 09 22.8	+3.3
	comp=Z,36nm,1.5s						
RES	Resolute Bay	104.97	353	PKKPbc	PKKPbc	00 20 39.5	-3.9
	comp=Z,1.8nm,0.8s,baz=1.0,slow=3.7,SNR=5.5						
RES				PKKPab	PKKPab	00 20 57.2	+0.8
	comp=Z,4.0nm,1.0s,baz=333,slow=6.9,SNR=6.5						
ABTA	Abfaltersbach	105.14	45	*i* PKiKP	PKiKP	00 09 07.7	-7.1
	comp=Z,8.5nm,1.4s						
ABTA				*i* PP	PP	00 09 25.6	+3.9
	comp=Z,57nm,1.5s,SNR=6.9						
TRI	Trieste	105.46	46	IAMs_20	IAMs_20	00 55 18.4	
	comp=Z,1µm,18.0s						
GRA1	Grafenberg Arr	105.68	42	IAMs_20	IAMs_20	00 50 05.7	
	comp=Z,1µm,21.0s						
GRF	Grafenberg Arr	105.68	42	*e*PP	PP	00 09 28.0	+2.6
GRF				*e*L	L	00 50 07.3	
	comp=Z,909nm,21.4s						
MYKA	Terra Mystica	105.79	45	*i* PP	PP	00 09 28.9	+2.5
	comp=Z,78nm,1.5s,SNR=7.7						

KBA	Koelnbreinsper	105.80	45	i PKiKP	PKiKP	00 09 10.9	-5.1
	comp=Z,9.8nm,1.7s						
KBA				i PP	PP	00 09 28.1	+1.5
	comp=Z,36nm,1.4s						
OBKA	Obir	106.30	46	i PKiKP	PKiKP	00 09 11.4	-5.5
	comp=Z,18nm,1.9s						
OBKA				i PP	PP	00 09 32.9	+2.7
	comp=Z,80nm,1.4s						
DZM	Mont Dzumac	106.34	233	eLR	LR	00 40 25.9	
	comp=Z,2µm,30.2s						
NKC	Novy Kostel	106.63	41	AMS	AMS	00 50 30.0	
	comp=Z,1µm,22.7s						
SOKA	Soboth	106.67	46	i PP	PP	00 09 32.4	-0.6
	comp=Z,75nm,1.5s						
MOA	Molln	106.69	44	i PP	PP	00 09 33.2	+0.2
	comp=Z,39nm,1.5s						
GEC2	GERESS Array S	106.77	43	IAMs_20	IAMs_20	00 58 18.7	
	comp=Z,884nm,19.0s						
GERES	GERESS Array B	106.77	43	PKKPbc	PKKPbc	00 20 35.5	-1.8
	comp=Z,1.2nm,1.0s,baz=106,slow=4.3,SNR=4.6						
KHC	Kasperske Hory	106.82	43	ePP	PP	00 09 31.2	-2.7
KHC				AMS	AMS	00 55 50.0	
	comp=Z,800nm,18.5s						
ARSA	Arzberg	107.22	45	i PP	PP	00 09 38.4	+1.6
	comp=Z,14nm,1.4s						
CLL	Collm	107.41	41	ePP	PP	00 09 41.0	+2.9
	comp=Z,38nm,2.0s						
CLL				ePPPP		00 13 43.0	
CLL				eSKSac	SKSac	00 16 00.0	+9.3
CLL				eSKKSac	SKKSac	00 16 42.0	-0.3
CLL				eSdif	Sdif	00 17 12.0	-2.1
CLL				e		00 18 06.0	
CLL				ePS	PS	00 18 54.0	-5.3
CLL				ePPS	PPS	00 19 59.0	
CLL				eSS	SS	00 24 48.0	0.0
CLL				e		00 27 36.0	
CLL				eSSS	SSS	00 28 42.0	
CLL				eSSSS		00 32 06.0	
CLL				Lm	MLR	00 55 00.0	
	comp=N,800nm,19.4s						
CLL				Lm	MLR	00 55 00.0	
	comp=E,1µm,18.8s						
CLL				Lm	MLR	00 55 00.0	
	comp=Z,2µm,18.1s						
BALM	Baldy	107.60	331	IAMs_20	IAMs_20	00 56 22.8	
	comp=Z,671nm,20.0s						
PDG	Podgorica	107.70	51	IAMs_20	IAMs_20	00 56 06.5	
	comp=Z,916nm,19.0s						
CONA	Conrad Observa	107.70	45	i PKiKP	PKiKP	00 09 19.2	-0.2
	comp=Z,2.9nm,1.1s						
CONA				i PP	PP	00 09 38.0	-2.5
	comp=Z,19nm,1.7s						
PRA	Prague	107.72	42	AMS	AMS	00 55 40.0	
	comp=Z,1µm,22.3s						
PRU	Pruhonice	107.75	42	AMS	AMS	00 55 40.0	
	comp=Z,1µm,21.9s						
PVCC	Panska Ves	107.98	42	AMS	AMS	00 52 20.0	
	comp=Z,1µm,17.6s						
TREC	Trest	108.03	43	AMS	AMS	00 55 40.0	
	comp=Z,1µm,21.8s						
INK	Inuvik	108.10	339	Pdiff	Pdif	00 05 13.2	+0.4
	comp=Z,1.2nm,1.0s,baz=184,slow=6.0,SNR=2.5						
INK				PKKPbc	PKKPbc	00 20 29.7	-3.7
	comp=Z,2.6nm,0.9s,baz=354,slow=1.7,SNR=5.4						
BCAR	Beaver Creek A	108.33	333		Pdif	00 05 14.2	+0.1
KRUC	Moravsky	108.48	44	ePP	PP	00 09 47.5	+1.5
FNA	Florina	108.52	53	IAMs_20	IAMs_20	00 55 56.1	
	comp=Z,1µm,19.0s						
VRAC	Vranov	108.70	44	⇓P	PP	00 09 36.8	-11
VRAC	Vranov	108.70	44	ePP	PP	00 09 49.4	+1.8
UPC	Upice	108.82	42	AMS	AMS	00 53 00.0	
	comp=Z,1µm,20.2s						
DPC	Dobruska-Polom	108.94	42	ePP	PP	00 09 42.2	-7.2
DPC				AMS	AMS	00 53 20.0	
	comp=Z,800nm,21.9s						
OSTC	Ostas	108.96	42	AMS	AMS	00 53 00.0	
	comp=Z,1µm,22.2s						
LIT	Litokhoron	109.04	54	IAMs_20	IAMs_20	01 00 44.0	
	comp=Z,1µm,18.0s						
KRLC	Kraliky	109.11	43	ePP	PP	00 09 46.3	-4.3
JAVC	Velka Javorina	109.18	44	ePP	PP	00 09 51.0	-0.2
MORC	Moravsky Berou	109.45	43	IAMs_20	IAMs_20	00 56 41.9	
	comp=Z,956nm,20.0s						
OKC	Ostrava-Krasne	109.84	43	AMS	AMS	00 56 50.0	
	comp=Z,900nm,16.6s						
MDVR	Moldovita	110.24	49	⇓P	PP	00 09 44.7	-14
NB2	NORSAR Subarra	110.46	31	PKPdf	PKiKP	00 09 24.6	+0.5
	comp=Z,1.1nm,1.1s,baz=248,slow=1.9						
NOA	NORSAR Array B	110.46	31	PKiKP	PKiKP	00 09 24.3	+0.2
	comp=Z,0.6nm,0.9s,baz=246,slow=2.0,SNR=3.0						
NOA				PKKPab	PKKPab	00 20 33.4	+0.7
	comp=Z,1.4nm,0.9s,baz=68,slow=4.5,SNR=5.9						
BZS	Buzias	110.48	49	⇓P	PP	00 10 06.2	+5.6
VTS	Vitosha	110.49	52	IAMs_20	IAMs_20	00 58 20.7	
	comp=Z,1µm,21.0s						
HERR	Herculane	110.75	49	⇑P	PP	00 10 06.1	+3.6
NIE	Niedzica	110.99	44	ePKiKP	PKiKP	00 09 25.5	0.0
NIE	Niedzica	110.99	44	i PKIKP	PKiKP	00 09 25.5	0.0
ILAR	Eielson Array	111.11	333	Pdiff	Pdif	00 05 31.1	+4.8
	comp=Z,0.8nm,0.9s,baz=172,slow=4.1,SNR=4.8						
ILAR				PKiKP	PKiKP	00 09 24.0	-1.2
	comp=Z,1.0nm,0.9s,baz=157,slow=2.7,SNR=5.1						
ILAR				PP	PP	00 10 02.7	-1.9
	comp=Z,2.9nm,1.0s,baz=103,slow=5.5,SNR=5.5						
ILAR				PKKPbc	PKKPbc	00 20 20.2	-3.4
	comp=Z,1.1nm,0.9s,baz=281,slow=3.9,SNR=6.6						
ILAR	Eielson Array	111.11	333	i PKIKP	PKiKP	00 09 24.0	-1.2
VLAD	Vladila	111.78	51	⇓P	PP	00 10 14.0	+4.0
CHIR	Chirikof Islan	111.86	323	IAMs_20	IAMs_20	00 52 21.9	
	comp=Z,811nm,20.0s						
TRPA	Tarpa	111.94	46	⇑P	PKiKP	00 09 26.7	-0.5
UZH	Uzhgorod	111.95	46	ePKIKP	PKiKP	00 09 27.8	+0.5
UZH				i		00 10 11.2	
HUMR	Humele	112.34	50	⇓P	PKKPab	00 20 27.4	+2.3
ARR	Arges	112.39	50	⇑P	PKiKP	00 09 27.9	-0.4
ARR	Arges	112.39	50	⇓P	PKKPab	00 20 27.6	+2.7
ELND	Elena	112.42	52	⇑P	PP	00 10 19.5	+4.9
ELND	Elena	112.42	52	⇓P	PKKPab	00 20 27.5	+2.7
KWP	Kalwaria Pacla	112.54	45	ePKiKP	PKiKP	00 09 27.9	-0.5
KWP	Kalwaria Pacla	112.54	45	i PKIKP	PKiKP	00 09 27.9	-0.5
KWP	Kalwaria Pacla	112.54	45	IAMs_20	IAMs_20	00 55 38.3	
	comp=Z,1µm,22.0s						
KLNR	Kaliningrad	112.67	39	⇑iPKIKP	PKiKP	00 09 27.1	-1.3
VOIR		112.69	50	⇑P	PP	00 09 52.2	-24
STKA	Stephens Creek	112.78	208	PP	PP	00 10 13.4	-2.6
	comp=Z,2.5nm,0.9s,baz=78,slow=2.9,SNR=3.2						
MLR	Muntele Rosu	113.30	50	⇑P	PKiKP	00 09 22.1	-8.0
MLR	Muntele Rosu	113.30	50	⇑P	PKKPab	00 20 23.6	+2.6
MLR	Muntele Rosu	113.30	50	⇑PKIKP	PKiKP	00 09 22.1	-8.0
BURAR	Bucovina Array	113.48	47	⇓P	PKiKP	00 09 29.5	-0.9
BURAR	Bucovina Array	113.48	47	⇓P	PKKPab	00 20 21.9	+1.9
BURAR	Bucovina Array	113.48	47	⇓PKIKP	PKiKP	00 09 29.5	-0.9
TOLK	Toolik Lake Re	113.53	337	P	PKiKP	00 09 29.5	-0.2
	baz=110						
BISRR	Bisoca	113.83	50	⇓P	PKiKP	00 09 31.1	0.0
BISRR	Bisoca	113.83	50	⇑P	PKKPab	00 20 22.2	+3.6
BIZ	Bicaz	113.85	48	⇓P	PKiKP	00 09 30.6	-0.4
PLOR	Plostina	113.88	50	⇓P	PKiKP	00 09 29.7	-1.4
PLOR	Plostina	113.88	50	⇑P	PKKPab	00 20 20.3	+2.0
PLOR	Plostina	113.88	50	⇓PKIKP	PKiKP	00 09 29.7	-1.4
VRI	Vrincioaia	113.94	50	⇓P	PKiKP	00 09 30.1	-1.1
VRI	Vrincioaia	113.94	50	⇑P	PKKPab	00 20 20.2	+2.2
VRI	Vrincioaia	113.94	50	⇓PKIKP	PKiKP	00 09 30.1	-1.1
TESR	Tescani	114.08	49	⇑P	PKKPab	00 20 19.2	+1.8
ISP	Isparta	114.10	59	IAMs_20	IAMs_20	01 03 29.0	
	comp=Z,675nm,19.0s						
SUW	Suwalki	114.16	40	ePKiKP	PKPdf	00 09 30.9	-0.4
SUW	Suwalki	114.16	40	i PKIKP	PKPdf	00 09 30.9	-0.4
ATD	Arta Tunnel	114.39	90	IAMs_20	IAMs_20	00 54 33.3	
	comp=Z,1µm,20.0s						
HARR	Harsova	114.39	51	⇑P	PKKPab	00 20 19.1	+3.1
TIRR	Tirgusor	114.65	51	⇓P	PKPdf	00 09 32.4	-0.2
TIRR	Tirgusor	114.65	51	⇓PKIKP	PKPdf	00 09 32.4	-0.1
CFR	Carcaliu	114.68	51	⇓P	PKPdf	00 09 32.1	-0.5
CFR	Carcaliu	114.68	51	⇓PKIKP	PKPdf	00 09 32.1	-0.5
TOPG	Topolog	114.75	51	⇓P	PKPdf	00 09 32.3	-0.5
TOPG	Topolog	114.75	51	⇓P	PKKPab	00 20 17.0	+2.5
CSS	Mathiatis	115.32	63	IAMs_20	IAMs_20	00 53 17.4	
	comp=Z,983nm,22.0s						
MILM	Milestii Mici	115.62	49	⇑P	PKPdf	00 09 33.1	-1.2
KIS	Kishinev	115.65	49	ePP	PP	00 10 38.0	+0.6
KIS				eL	L	00 47 08.0	
KIS				LRM	MLR	01 02 30.0	
	comp=Z,300nm,20.0s						
SORM	Soroca	115.66	48	⇓P	PKPdf	00 09 33.0	-1.3
SORM	Soroca	115.66	48	⇓PKIKP	PKPdf	00 09 33.0	-1.3
ANTO	Ankara	116.42	57	IAMs_20	IAMs_20	01 01 32.4	
	comp=Z,1µm,21.0s						
AKASG	Malin Array Be	116.86	45	PKP	PKPdf	00 09 35.4	-1.2
	comp=Z,1.5nm,0.6s,baz=273,slow=2.3,SNR=13						
AKASG				PP	PP	00 10 42.7	-3.1
	comp=Z,5.1nm,1.0s,baz=258,slow=6.1,SNR=11						
AKASG	Malin Array Be	116.86	45		PKPdf	00 09 35.1	-1.4
AKBB	Malin Array Si	116.86	45	⇓iPKIKP	PKPdf	00 09 35.1	-1.5
BR131	Keskin Array S	117.00	58d	iPKIKP	PKPdf	00 09 36.7	-0.8
BRTR	Keskin Array B	117.00	58	PKP	PKPdf	00 09 36.9	-0.6
	comp=Z,3.2nm,0.8s,baz=185,slow=3.2,SNR=20						
BRTR				PP	PP	00 10 49.2	+2.0
	comp=Z,4.5nm,1.0s,baz=232,slow=6.1,SNR=6.1						
BRTR				PKKPbc	PKKPbc	00 20 03.1	+0.2
	comp=Z,1.5nm,0.9s,baz=97,slow=3.8,SNR=6.7						
BRTR	Keskin Array B	117.00	58		PKPdf	00 09 35.8	-1.7
VSU	Vasula	117.18	36	⇓iPKIKP	PKPdf	00 09 35.8	-1.1
FINES	FINESS Array B	117.44	33	PKP	PKPdf	00 09 36.3	-1.0
	comp=Z,2.0nm,0.9s,baz=329,slow=3.3,SNR=4.9						
FINES				PKKPbc	PKKPbc	00 19 59.6	-2.1
	comp=Z,4.9nm,0.9s,baz=102,slow=4.2,SNR=10						
BZK	Bozkurt	117.88	55	⇓P	PKPdf	00 09 37.8	-1.1
NWAO	Narrogin (SRO)	118.00	186	IAMs_20	IAMs_20	01 01 31.1	
	comp=Z,1µm,18.0s						
RDOG	Red Dog Mine	118.19	335	IAMs_20	IAMs_20	01 02 48.2	
	comp=Z,674nm,22.0s						
ARCES	ARCESS Array B	118.47	24	PKP	PKPdf	00 09 38.0	-1.2
	comp=Z,3.6nm,0.9s,baz=230,slow=0.9,SNR=5.3						
ARCES				PKKPbc	PKKPab	00 19 56.3	-0.8
	comp=Z,3.8nm,0.8s,baz=81,slow=5.8,SNR=10.0						
NIKH	Nikolski High	118.55	317	IAMs_20	IAMs_20	01 03 44.3	
	comp=Z,1µm,21.0s						
SIM	Simferopol'	118.70	52	ePKIKP	PKPdf	00 09 39.6	-0.8
SIM				pmax	pmax		
	comp=Z,10.0nm,1.1s						
DIKM	Dikmen	118.71	56	⇑P	PKPdf	00 09 38.1	-2.4
PUL	Pulkovo	119.23	35	⇑iPKIKP	PKPdf	00 09 39.2	-1.7
APA	Apatity	121.23	26	⇓iPKIKP	PKPdf	00 09 40.9	-3.6
APA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
OBN	Obninsk	122.00	41d	iPKIKP	PKPdf	00 09 45.8	-0.5
OBN				e		00 09 49.5	
OBN				e		00 09 50.8	
OBN				SS	SS	00 27 55.0	-4.8
OBN				pmax	pmax		
	comp=Z,30nm,1.2s						
OBN				MLR	MLR		
	comp=Z,763nm,20.0s						
OBN	Obninsk	122.00	41	IAMs_20	IAMs_20	01 01 46.3	
	comp=Z,994nm,21.0s						
SOC	Sochi	122.34	55	i PKIKP	PKPdf	00 09 46.4	-1.0
SOC				e		00 11 21.7	
SOC				ePS	PS	00 21 15.5	-2.8
SOC				eSS	SS	00 27 58.9	-6.0
SOC				pmax	pmax		
	comp=Z,25nm,0.8s						
MOS	Moscow	122.66	40	i PKIKP	PKPdf	00 09 45.9	-1.7
MOS				e		00 11 22.4	
MOS				pmax	pmax		
	comp=Z,32nm,1.0s						
MOS				MLR	MLR		
	comp=E,1µm,21.0s						
MOS				MLR	MLR		
	comp=Z,1µm,21.0s						
ASAR	Alice Springs	123.12	205	PKP	PKPdf	00 09 48.1	-1.6
	comp=Z,7.3nm,0.9s,baz=152,slow=2.2,SNR=48						
ASAR				SKKPbc	SKKPbc	00 23 30.8	+2.8
	comp=Z,1.7nm,1.0s,baz=347,slow=5.4,SNR=5.3						
ASAR	Alice Springs	123.12	205		PKPdf	00 09 47.8	-1.9
VSR	Storozhevoye	123.14	46d	iPKIKP	PKPdf	00 09 47.7	-1.0
LPSR	Galich'ya Gora	123.14	44	i PKIKP	PKPdf	00 09 47.5	-1.1
LPSR				pmax	pmax		
	comp=Z,40nm,1.4s						
LPSR				MLR	MLR		
	comp=Z,1µm,23.0s						
BCA	Borcka	123.32	57	⇓P	PKPdf	00 09 49.2	-0.2
KLMR	Klimovskoe	123.87	34	ePKIKP	PKPdf	00 09 47.3	-2.5
KLMR				pmax	pmax		
	comp=Z,39nm,1.1s						
KLMR	Klimovskoe	123.87	34	ePKPdf	PKPdf	00 09 47.4	-2.4
KLMR				AMP		00 09 55.4	
	comp=Z,39nm,1.1s						
KLMR				LR	LR	00 54 09.7	
KLMR				AMP		01 07 06.7	
	comp=Z,1µm,17.8s						
SOCY	Socotra	124.41	95	IAMs_20	IAMs_20	01 04 55.8	
	comp=Z,1µm,20.0s						
KIV	Kislovodsk	124.53	55	⇓P	PKPdf	00 09 51.4	-0.3
KIV	Kislovodsk	124.53	55	i PKIKP	PKPdf	00 09 51.3	-0.4
KIV				e		00 11 37.6	
KIV				ePS	PS	00 21 36.6	-1.2
KIV				eSS	SS	00 28 32.3	-0.5
KIV				pmax	pmax		
	comp=Z,72nm,1.1s						
KIV	Kislovodsk	124.53	55		PKPdf	00 09 51.2	-0.6
KBZ	Khabaz	124.64	55	PKP	PKPdf	00 09 51.5	-0.3
	comp=Z,13nm,1.0s,baz=235,slow=2.8,SNR=24						
AKH	Akhalkalaki	124.69	58	⇓P	PKiKP	00 09 53.0	+0.4
VRH	Novokhopyorsk	124.73	46	i PKIKP	PKPdf	00 09 50.2	-1.5
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
GOF	Gofitskoye	124.94	53	⇑ePKIKP	PKPdf	00 09 52.3	0.0
GOF				pmax	pmax		
	comp=Z,40nm,0.8s						
NCK	Nalchik	125.11	55	⇓iPKIKP	PKPdf	00 09 52.8	0.0
ZEI	Tsey	125.22	56	i PKIKP	PKPdf	00 09 52.1	-1.1
ZEI				pmax	pmax		
	comp=Z,12nm,0.9s						
GNI	Garni	125.40	60	IAMs_20	IAMs_20	01 10 17.1	
	comp=Z,503nm,19.0s						
WR0	Warramunga Arr	126.23	208	PKPdf	PKPdf	00 09 53.8	-1.8
WR0				IAMs_20	IAMs_20	00 57 03.7	
	comp=Z,1µm,21.0s						
WR6	Warramunga Arr	126.27	207	IAMs_20	IAMs_20	00 57 14.8	
	comp=Z,1µm,20.0s						
WR4	Warramunga Arr	126.29	207	IAMs_20	IAMs_20	00 57 15.3	
	comp=Z,1µm,21.0s						
WC3	Warramunga Arr	126.30	207	IAMs_20	IAMs_20	00 57 15.5	
	comp=Z,1µm,21.0s						
WR3	Warramunga Arr	126.30	207	IAMs_20	IAMs_20	00 57 15.6	
	comp=Z,1µm,21.0s						
WR2	Warramunga Arr	126.31	207	IAMs_20	IAMs_20	00 57 05.0	
	comp=Z,956nm,20.0s						
WR1	Warramunga Arr	126.32	207	IAMs_20	IAMs_20	00 56 56.3	
	comp=Z,909nm,19.0s						
WRA	Warramunga Arr	126.32	207	PKP	PKPdf	00 09 54.7	-1.2
	comp=Z,20nm,0.9s,baz=160,slow=1.6,SNR=48						
WRAB	Tennant Creek	126.33	207c	iPKIKP	PKPdf	00 09 54.6	-1.3
WRAB	Tennant Creek	126.33	207		PKPdf	00 09 55.0	-0.9
WRAB	Tennant Creek	126.33	207	IAMs_20	IAMs_20	00 57 05.2	
	comp=Z,1µm,22.0s						
WC2	Warramunga Arr	126.33	207	IAMs_20	IAMs_20	00 57 16.4	
	comp=Z,1µm,21.0s						
WB5	Warramunga Arr	126.37	207	IAMs_20	IAMs_20	00 57 15.5	
	comp=Z,902nm,18.0s						
WB0	Warramunga Arr	126.46	207	IAMs_20	IAMs_20	00 57 09.9	
	comp=Z,1µm,21.0s						
PRGR	Permogore	126.77	33	ePKIKP	PKPdf	00 09 49.3	-6.0
PRGR				pmax	pmax		
	comp=Z,28nm,0.9s						
PMG	Port Moresby	128.30	228	⇓iPKIKP	PKPdf	00 09 59.7	0.0
PMG				pmax	pmax		
	comp=Z,78nm,1.0s						
PMG	Port Moresby	128.30	228	IAMs_20	IAMs_20	00 57 15.2	
	comp=Z,608nm,19.0s						
PSAB2	Pilbara Seismi	128.91	190	IAMs_20	IAMs_20	01 00 13.2	
	comp=Z,848nm,20.0s						
KIRV	Kirov	129.02	36	i PKIKP	PKPdf	00 09 59.5	-0.1
MBWA	Marble Bar	129.31	190	IAMs_20	IAMs_20	01 05 23.0	
	comp=Z,940nm,20.0s						
BILL	Bilibino	129.58	336d	iPKIKP	PKPdf	00 10 00.7	+0.2
BILL				e		00 10 03.5	
BILL				e		00 10 05.6	
BILL						00 12 10.0	
BILL				PS	PS	00 22 12.0	-9.0
BILL				pmax	pmax		
	comp=Z,13nm,1.1s						
BILL				MLR	MLR		
	comp=Z,431nm,20.0s						
BILL	Bilibino	129.58	336		PKPdf	00 10 00.4	-0.1
UOSS	Minazif	131.23	81	IAMs_20	IAMs_20	01 06 36.9	
	comp=Z,1µm,22.0s						
KNRA	Kununurra	132.31	203	IAMs_20	IAMs_20	01 01 24.4	
	comp=Z,692nm,19.0s						
MTN	Manton Dam	134.02	208	PKPdf	PKPdf	00 10 09.9	-0.7
MTN				IAMs_20	IAMs_20	01 02 15.2	
	comp=Z,968nm,21.0s						
ARU	Arti	134.26	38	i PKIKP	PKPdf	00 10 09.7	0.0
ARU						00 12 42.4	
ARU				SS	SS	00 30 29.3	-2.3
ARU	Arti	134.26	38		PKPdf	00 10 10.0	+0.3
AKTO	Aktyubinsk	135.07	46	PKP	PKPdf	00 10 11.1	-0.3
	comp=Z,3.4nm,0.8s,baz=309,slow=3.2,SNR=11						
AKTO				PP	PP	00 12 47.6	+0.8
	comp=Z,7.0nm,1.1s,baz=233,slow=6.8,SNR=5.0						
SVE	Sverdlovsk	135.27	37	i PKIKP	PKPdf	00 10 09.8	-1.7
SVE				pmax	pmax		
	comp=Z,25nm,2.0s						
SVE				MLR	MLR		
	comp=Z,1µm,24.0s						
GEYT	Alibeck	135.43	64	PKP	PKPdf	00 10 12.0	-0.6
	comp=Z,6.8nm,0.8s,baz=251,slow=4.4,SNR=13						
GEYT				PP	PP	00 12 52.5	+2.9
	comp=Z,4.0nm,0.9s,baz=290,slow=4.3,SNR=5.3						
GYA0B	ALIBECK ARRAY	135.43	64	IAMs_20	IAMs_20	01 18 53.7	
	comp=Z,503nm,20.0s						
ASHT	Ashkhabad	135.64	64	IAMs_20	IAMs_20	01 15 36.3	
	comp=Z,442nm,19.0s						
TIXI	Tiksi	136.35	352c	iPKIKP	PKPdf	00 10 11.9	-1.2
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TIXI				MLR	MLR		
	comp=Z,471nm,22.0s						
TIXI	Tiksi	136.35	352		PKPdf	00 10 12.1	-1.0
TIXI				IAMs_20	IAMs_20	01 10 04.3	
	comp=Z,491nm,21.0s						
AB31	Akbulak array	136.46	48	i PKHKP	PKPpre	00 10 03.6	
ABKAR	Akbulak array	136.46	48	PKPdf	PKPdf	00 10 14.2	+0.2
SEY	Seymchan	137.04	334	PKP	PKPdf	00 10 13.9	-0.7
	comp=Z,16nm,0.9s,baz=146,slow=6.7,SNR=5.2						
SEY				PP	PP	00 13 03.2	+4.6
	comp=Z,3.9nm,0.7s,baz=109,slow=3.7,SNR=4.8						
SEY	Seymchan	137.04	334	⇑iPKIKP	PKPdf	00 10 15.0	+0.3
NRIK	Noril'sk	137.51	12	PKP	PKPdf	00 10 14.9	-0.4
	comp=Z,4.6nm,0.9s,baz=21,slow=3.8,SNR=9.1						
NRIK	Noril'sk	137.51	12	⇓ePKIKP	PKPdf	00 10 15.8	+0.4
HRA	Herat	138.39	70	PKPdf	PKPdf	00 10 18.5	+0.2
HRA				IAMs_20	IAMs_20	01 10 19.4	
	comp=Z,879nm,21.0s						
PEA0B	Petropavlovsk-	138.54	319	⇑iPKIKP	PKiKP	00 10 21.8	+1.9
PETK	Petropavlovsk-	138.54	319	PKP	PKPdf	00 10 16.4	-1.4
	comp=Z,6.3nm,0.8s,baz=92,slow=4.5,SNR=5.7						
PETK	Petropavlovsk-	138.54	319	PKIKP	PKPdf	00 10 17.6	-0.1
PETK	Petropavlovsk-	138.54	319		PKPdf	00 10 17.6	-0.1
SOEI	Soe	139.32	200		PKPdf	00 10 21.2	+0.6
MA2	Magadan	139.47	330c	iPKIKP	PKiKP	00 10 21.8	+0.2
MA2				pmax	pmax		
	comp=Z,13nm,1.3s						
MA2	Magadan	139.47	330		PKiKP	00 10 21.4	-0.2
MA2	Magadan	139.47	330	IAMs_20	IAMs_20	01 20 16.4	
	comp=Z,518nm,20.0s						
XMIS	Christmas Isla	140.25	171	IAMs_20	IAMs_20	01 09 26.2	
	comp=Z,790nm,20.0s						
BRVK	Borovoye	141.76	40c	iPKIKP	PKPdf	00 10 23.4	-0.2
BRVK	Borovoye	141.76	40		PKPdf	00 10 21.2	-2.4
BVAR	Borovoye Array	141.83	40	PKP	PKPdf	00 10 20.8	-2.9
	comp=Z,4.1nm,0.8s,baz=308,slow=3.6,SNR=19						
CISI	Cisompet, Garu	143.37	174	IAMs_20	IAMs_20	01 09 07.9	
	comp=Z,547nm,20.0s						
PALK	Pallekele	143.99	121	PKP	PKPab	00 10 26.0	-0.1
	comp=Z,21nm,1.0s,baz=245,slow=6.3,SNR=6.1						
PALK	Pallekele	143.99	121	⇑ePKIKP	PKPbc	00 10 26.9	+0.3
PALK	Pallekele	143.99	121		PKPbc	00 10 26.6	0.0
KBL	Kabul	144.00	70	PKIKP	PKPab	00 10 25.0	-0.8
KBL				MLR	MLR		
	comp=Z,700nm,22.0s						
KBL	Kabul	144.00	70		PKPab	00 10 25.0	-0.8
KBL				IAMs_20	IAMs_20	01 13 21.9	
	comp=Z,691nm,22.0s						
LEM	Lembang	144.08	174	PKP	PKPbc	00 10 27.2	+0.3
	comp=Z,191nm,0.9s,baz=136,slow=2.7,SNR=18						
CHM	Chimkent	144.13	57	PKIKP	PKiKP	00 10 32.8	+1.1
POO	Poona	144.40	99	ex	PKPab	00 10 26.5	-1.0
SIJI	Sorong	144.50	216	PKP	PKPab	00 10 27.9	-0.1
	comp=Z,283nm,0.9s,baz=90,slow=2.2,SNR=58						
KK31	Karatay Array	144.68	56	i PKIKP	PKPab	00 10 26.5	-1.3
KKAR	Karatay Array	144.68	56	PKIKP	PKPab	00 10 26.8	-1.0
KKAR	Karatay Array	144.68	56		PKPab	00 10 26.8	-1.0
YAK	Yakutsk	144.92	345	ePKHKP	PKPpre	00 10 23.2	
YAK				pmax	pmax		
	comp=Z,207nm,1.4s						
YAK				pmax	pmax		
	comp=N,115nm,1.9s						
YAK				pmax	pmax		
	comp=E,76nm,1.5s						
YAK				MLR	MLR		
	comp=N,342nm,24.0s						
YAK				MLR	MLR		
	comp=E,178nm,26.0s						
YAK	Yakutsk	144.92	345		PKPab	00 10 27.2	-0.7
KAPI	Kappang	145.05	195	PKPbc	PKPbc	00 10 29.8	-0.1
	comp=E,272nm,0.9s,baz=197,slow=2.4,SNR=105						
KAPI	Kappang	145.05	195	PKIKP	PKPbc	00 10 29.5	-0.4
KAPI				MLR	MLR		
	comp=Z,800nm,20.0s						
KAPI	Kappang	145.05	195		PKPbc	00 10 29.5	-0.4
KAPI	Kappang	145.05	195	IAMs_20	IAMs_20	01 16 22.1	
	comp=Z,827nm,20.0s						
GUMO	Guam	145.17	251	PKIKP	PKPbc	00 10 29.8	-0.4
GUMO	Guam	145.17	251		PKPbc	00 10 29.8	-0.4
URV	Uravakonda	145.68	107	ePKPab	PKPdf	00 10 30.5	-1.1
KLRI	Killari	146.57	101	ePKPdf	PKPdf	00 10 31.9	-1.2
KLRI				ePKPbc	PKPbc	00 10 32.6	-1.9
KLRI				ePKPab	PKPab	00 10 33.9	-1.7
KUR	Kuril'sk	146.98	309	ePKP2	PKiKP	00 10 36.8	-0.6
KUR				e		00 14 03.2	
KUR				ePPP	PPP	00 17 20.5	
KUR				pmax	pmax		
	comp=Z,368nm,1.2s						
KUR				pmax	pmax		
	comp=Z,797nm,7.0s						
SKHT	Srikalahasti	147.08	111	ePKPab	PKPbc	00 10 35.9	-0.1
EKS2	Erkin-Say	147.12	56	P	PKPdf	00 10 34.0	+0.6
	SNR=29						
AML	Almayashu	147.16	57	P	PKPdf	00 10 34.4	+0.5
	SNR=33						
KURBB	Kurchatov Arra	147.43	40	PKPbc	PKPdf	00 10 33.9	+0.5
	comp=Z,36nm,0.8s,baz=300,slow=3.3,SNR=73						
KURK	Kurchatov	147.43	39c	ePKIKP	PKPdf	00 10 33.4	-0.1
KURK				pmax	pmax		
	comp=Z,99nm,1.3s						
KURK	Kurchatov	147.43	39		PKPdf	00 10 33.6	+0.2
NIL	Nilore	147.44	72	PKIKP	PKPdf	00 10 34.2	+0.1
NIL	Nilore	147.44	72		PKPdf	00 10 34.2	+0.1
NIL	Nilore	147.44	72	IAMs_20	IAMs_20	01 22 26.6	
	comp=Z,645nm,20.0s						
USP	Ospenovka	147.50	54	P	PKPdf	00 10 34.4	+0.4
	SNR=25						
SRLM	Srisailam	147.62	107	ePKPdf	PKPdf	00 10 34.2	-0.6
AAK	Ala-Archa	147.64	55	PKPbc	PKPdf	00 10 35.0	+0.7
	comp=Z,37nm,0.9s,baz=206,slow=2.7,SNR=41						
AAK	Ala-Archa	147.64	55	P	PKPdf	00 10 35.0	+0.7
	SNR=63						
AAK	Ala-Archa	147.64	55c	iPKIKP	PKPdf	00 10 34.5	+0.2
AAK	Ala-Archa	147.64	55		PKPdf	00 10 34.9	+0.7
AAK	Ala-Archa	147.64	55	IAMs_20	IAMs_20	01 18 29.5	
	comp=Z,760nm,21.0s						
FRU1	Bishkek	147.70	55	IAMs_20	IAMs_20	01 19 50.1	
	comp=Z,588nm,20.0s						
UCH	Uchtor	147.74	56	P	PKPdf	00 10 35.8	+0.9
	SNR=53						
CHMS	Chumysh	147.74	55	P	PKPdf	00 10 35.1	+0.8
	SNR=33						
TNTI	Ternate	147.83	212		PKPbc	00 10 36.9	-1.3
HYB	Hyderabad	147.95	104	i PKP	PKPdf	00 10 35.0	-0.4
HYB				e		00 10 43.5	
HYB	Hyderabad	147.95	104	eP	PKPdf	00 10 34.4	-1.0
HYB				IAmb	IAmb	00 10 46.2	
	comp=Z,93nm,1.0s						
HYBB	Hyderabad (bro	147.95	104	ePKPdf	PKPdf	00 10 34.3	-1.1
KBK	Karagaybulak	147.96	55	P	PKPdf	00 10 35.4	+0.5
	SNR=48						
NJS	Nagarjunasagar	148.18	106	ePKPdf	PKPdf	00 10 35.3	-0.4
KZA	Kyzart	148.31	56	P	PKPdf	00 10 37.0	+1.3
	SNR=19						
TKM2	Tokmak 2	148.36	55	P	PKPdf	00 10 35.7	+0.1
	SNR=55						
ADKI	Addanki	148.39	108	ePKPdf	PKPdf	00 10 35.5	-0.6
SRSP	Sriramsagar	148.44	101	ePKPdf	PKPdf	00 10 35.3	-0.8

ZALV	**Zalesovo Beam**	**148.66**	**30**	PKPbc	**PKPbc**	**00 10 37.4**	**-1.8**
	comp=Z,78nm,0.9s,baz=262,slow=2.3,SNR=84						
ZALV	**Zalesovo Beam**	**148.66**	**30**	PKIKP	**PKPdf**	**00 10 34.3**	**-1.1**
ZALV	**Zalesovo Beam**	**148.66**	**30**		**PKPdf**	**00 10 34.2**	**-1.1**
ULHL	**Ulahol**	**148.99**	**56**	P	**PKiKP**	**00 10 41.3**	**-0.7**
	SNR=7.3						
RPR	**Rampur**	**149.22**	**102**	*e*PKPdf	**PKPdf**	**00 10 37.3**	**-0.1**
BHPL	**Bhopal**	**149.22**	**93**	*e*P	**PKPbc**	**00 10 41.0**	**-0.6**
BHPL				IAmb	IAmb	00 10 48.4	
	comp=Z,45nm,0.9s						
KNDC	**Almaty**	**149.26**	**54**	PKIKP	**PKPdf**	**00 10 36.8**	**0.0**
BKB	**Balikpapan**	**149.28**	**191**	IAMs_20	IAMs_20	01 14 52.8	
	comp=Z,772nm,20.0s						
KSH	**Kashi**	**149.32**	**61**	PKPbc	**PKPdf**	**00 10 38.3**	**+1.2**
KSH				PKS	**PKSdf**	**00 14 11.8**	**-0.3**
KSH				PP	**PP**	**00 14 17.5**	**+3.7**
KSH				SKKS		00 21 05.8	
KSH				AMB	AMB		
	comp=Z,1µm,4.9s						
KSH				LR	LR		
	comp=Z,1µm,19.8s						
KSH				LR	LR		
	comp=Z,1µm,16.3s						
KSH				LR	LR		
	comp=Z,1µm,17.3s						
MYLAV	**Mylavaram**	**149.39**	**107**	*e*PKPdf	**PKPdf**	**00 10 37.6**	**-0.1**
MYLAV				*e*PKiKP	**PKPbc**	**00 10 42.2**	**+0.2**
YSS	**Yuzh-Sakhalins**	**149.71**	**315**	PKP2	**PKPbc**	**00 10 41.5**	**-0.4**
YSS	**Yuzh-Sakhalins**	**149.71**	**315**		**PKPbc**	**00 10 41.5**	**-0.4**
YSS				IAMs_20	IAMs_20	01 24 15.0	
	comp=Z,523nm,19.0s						
NGP	**Nagpur**	**149.93**	**98**	*e*x	**PKPbc**	**00 10 42.2**	**-1.1**
NGP				*e*x	x	00 13 47.9	
BHK	**Bhakra**	**149.97**	**77**	*e*x	**PKPab**	**00 10 46.0**	**-2.9**
NDI	**New Delhi**	**150.33**	**82**	*e*x	**PKPbc**	**00 10 43.0**	**-1.1**
NDI				*e*x	x	00 10 49.5	
PVM	**Polavaram**	**150.46**	**107**	*e*PKPdf	**PKPdf**	**00 10 39.1**	**-0.2**
PVM				*e*PKiKP	**PKPbc**	**00 10 44.5**	**-0.1**
SMLA	**Simla**	**150.59**	**78**	*e*P	**PKPdf**	**00 10 39.8**	**+0.6**
SMLA				IAmb	IAmb	00 10 56.5	
	comp=Z,105nm,0.6s						
ASAJ	**Asahikawa**	**150.90**	**309**	PKPbc	**PKPbc**	**00 10 44.3**	**-0.6**
	comp=Z,42nm,0.9s,baz=308,slow=16,SNR=3.6						
PDGK	**Podgornoye**	**150.99**	**52**	PKIKP	**PKPdf**	**00 10 40.6**	**+1.0**
ERM	**Erimo**	**151.16**	**305**	PKIKP	**PKiKP**	**00 10 46.7**	**+0.6**
ERM	**Erimo**	**151.16**	**305**		**PKiKP**	**00 10 46.7**	**+0.6**
ERM				IAMs_20	IAMs_20	01 05 54.0	
	comp=Z,696nm,22.0s						
RPSI	**Rantau Prapat**	**151.23**	**154**	PKPbc	**PKPbc**	**00 10 45.9**	**-0.8**
MAKZ	**Makanchi**	**151.24**	**44**	PKIKP	**PKPdf**	**00 10 39.9**	**+0.1**
MAKZ	**Makanchi**	**151.24**	**44**		**PKPdf**	**00 10 39.0**	**-0.8**
MAKZ				PKPbc	**PKPbc**	**00 10 45.6**	**-0.1**
GRNR	**Gornyy**	**151.25**	**326⇑**	*i*PKIKP	**PKPbc**	**00 10 45.3**	**-0.3**
GRNR				pmax	pmax		
	comp=Z,30nm,1.0s						
BOD	**Bodaibo**	**151.26**	**357**	*e*PKIKP	**PKPbc**	**00 10 44.2**	**-1.1**
BOD				pmax	pmax		
	comp=Z,80nm,1.5s						
PSI	**Prapat**	**151.33**	**154**	PKP	**PKPdf**	**00 10 39.5**	**-1.6**
	comp=Z,6.5nm,0.6s,baz=211,slow=5.8,SNR=13						
PSI				PKPbc	**pPKPdf**	**00 10 45.8**	**+2.6**
	comp=Z,50nm,0.9s,baz=122,slow=0.7,SNR=33						
MK31	**Makanchi Array**	**151.44**	**44**	*i* PKIKP	**PKPdf**	**00 10 39.2**	**-0.9**
MK31	**Makanchi Array**	**151.44**	**44**	PKPbc	**PKiKP**	**00 10 46.5**	**-0.2**
MKAR	**Makanchi Array**	**151.44**	**44**	PKP	**PKPdf**	**00 10 39.2**	**-0.9**
	comp=Z,2.0nm,0.7s,baz=278,slow=1.8,SNR=18						
MKAR				PKPbc	**PKPbc**	**00 10 45.9**	**-0.3**
	comp=Z,54nm,0.8s,baz=307,slow=2.9,SNR=127						
MYKOM	**Kota Tinggi**	**151.92**	**164**	PKPab	**PKPab**	**00 10 56.7**	**-0.4**
MYKOM				IAMs_20	IAMs_20	01 12 00.2	
	comp=Z,729nm,22.0s						
KSM	**Kuching**	**152.47**	**178**	PKPab	**PKPab**	**00 10 59.0**	**-0.5**
KSM				IAMs_20	IAMs_20	01 17 38.1	
	comp=Z,786nm,21.0s						
ZEA	**Zeya**	**152.76**	**339**	*e*PKIKP	**PKPbc**	**00 10 47.8**	**-1.1**
ZEA				pmax	pmax		
	comp=Z,96nm,1.8s						
CHLP	**Challavanipeta**	**153.09**	**107**	*e*PKPdf	**PKPdf**	**00 10 42.4**	**-0.9**
SBUM	**Sibu**	**153.44**	**182**		**PKPab**	**00 11 04.1**	**+0.6**
SBUM				IAMs_20	IAMs_20	01 15 30.9	
	comp=Z,418nm,22.0s						
IPM	**Ipoh**	**153.65**	**157**	PKPbc	**PKPbc**	**00 10 51.2**	**-0.8**
DAV	**Davao City (W)**	**154.18**	**215**	IAMs_20	IAMs_20	01 32 23.3	
	comp=Z,595nm,22.0s						
KCP	**Kidapawan**	**154.37**	**213⇓**	*e*P	**PKPdf**	**00 10 45.2**	**-0.2**
TEY	**Ternei**	**154.40**	**315**	*e*PKIKP	**PKPbc**	**00 10 51.3**	**-1.4**
KLR	**Kul'dur**	**154.52**	**328**	PKP	**PKPdf**	**00 10 43.5**	**-1.0**
	comp=Z,3.0nm,0.9s,baz=62,slow=3.1,SNR=9.5						
KLR				PKPbc	**PKPbc**	**00 10 52.0**	**-0.9**
	comp=Z,10nm,1.0s,baz=358,slow=2.7,SNR=17						
DANN	**Dangsing**	**155.97**	**85**	*e*P	**PKPdf**	**00 10 47.2**	**-0.3**
	comp=Z,73nm,0.8s						
MJAR	**Matsushiro Arr**	**156.17**	**295**	PKP	**PKPdf**	**00 10 46.1**	**-1.0**
	comp=Z,1.7nm,0.6s,baz=253,slow=1.3,SNR=7.4						
MJAR				PKPab	**PKPab**	**00 11 14.7**	**-0.2**
	comp=Z,11nm,1.0s,baz=131,slow=1.5,SNR=9.5						
MJAR	**Matsushiro Arr**	**156.17**	**295**		**PKPdf**	**00 10 46.5**	**-0.6**
MAJO	**Matsushiro**	**156.17**	**295**	IAMs_20	IAMs_20	01 34 02.2	
	comp=Z,478nm,22.0s						
MAT	**Matsushiro**	**156.17**	**295**	*e*PKP	**PKPdf**	**00 10 46.6**	**-0.5**
MJB9	**Matsu-Tunnel**	**156.17**	**295**	IAMs_20	IAMs_20	01 34 01.6	
	comp=Z,494nm,22.0s						
WMQ	**Urumqi**	**156.22**	**46**	*e*PKP	**PKPdf**	**00 10 46.3**	**-0.7**
WMQ				PKPab	**PKPab**	**00 11 16.3**	**+1.5**
WMQ				PP	**PP**	**00 14 52.0**	**-0.4**
WMQ				SS	SS	00 34 38.5	-4.3
WMQ				AMB	AMB		
	comp=Z,99nm,6.7s						
WMQ				LR	LR		
	comp=Z,480nm,22.5s						
WMQ				LR	LR		
	comp=Z,520nm,20.9s						
WMQ				LR	LR		
	comp=Z,750nm,24.3s						
MOY	**Mondy**	**156.25**	**16**	*e*PKIKP	**PKPdf**	**00 10 48.0**	**+1.2**
MOY				pmax	pmax		
	comp=Z,80nm,2.4s						
IRK	**Irkutsk**	**156.36**	**11**	*e*PKIKP	**PKPdf**	**00 10 46.6**	**-0.2**
IRK				pmax	pmax		
	comp=Z,71nm,2.1s						
GKN	**Gorkha**	**156.68**	**86**	*e*P	**PKPdf**	**00 10 47.4**	**-0.8**
TLY	**Talaya**	**156.79**	**12**	PKP	**PKPdf**	**00 10 46.8**	**-0.6**
	comp=Z,2.0nm,0.5s,baz=242,slow=2.5,SNR=5.9						
TLY				PKPab	**PKPab**	**00 11 17.4**	**+0.5**
	comp=Z,7.5nm,0.7s,baz=4.3,slow=4.7,SNR=6.4						
TLY	**Talaya**	**156.79**	**12***c*	*i*PKIKP	**PKPdf**	**00 10 47.6**	**+0.2**
TLY				pmax	pmax		
	comp=Z,53nm,1.8s						
TLY	**Talaya**	**156.79**	**12**		**PKPdf**	**00 10 48.4**	**+1.0**
TLY					**PKPab**	**00 11 17.6**	**+0.7**
TLY				IAMs_20	IAMs_20	01 28 05.4	
	comp=Z,684nm,20.0s						
DMN	**Daman**	**157.03**	**87**	*e*P	**PKPdf**	**00 10 48.1**	**-0.7**
KKN	**Kakani**	**157.21**	**87**	*e*P	**PKPdf**	**00 10 48.5**	**-0.5**
PKIN	**Phulchoki**	**157.28**	**88**	*e*P	**PKPdf**	**00 10 47.9**	**-1.2**
PKI	**Pulchoki**	**157.28**	**88**	*e*P	**PKPdf**	**00 10 48.0**	**-1.2**
INU	**Inuyama**	**157.32**	**292**	IAMs_20	IAMs_20	01 11 17.5	
	comp=Z,421nm,21.0s						
USRK	**Ussuriysk Ar.**	**157.63**	**318**	PKPab	**PKPab**	**00 11 20.6**	**-0.2**
	comp=Z,8.2nm,1.0s,baz=85,slow=1.4,SNR=5.0						
GUN	**Gumba**	**157.75**	**87**	*e*P	**PKPdf**	**00 10 49.0**	**-0.8**
	comp=Z,105nm,1.3s						
ZAK	**Zakamensk**	**157.96**	**14**	*e*PKIKP	**PKPdf**	**00 10 48.7**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
JIRN	**Jiri**	**157.98**	**88**	*e*P	**PKPdf**	**00 10 49.1**	**-1.0**
RAMN	**Ramite**	**158.21**	**90**	*e*P	**PKPdf**	**00 10 49.9**	**-0.4**
	comp=Z,72nm,1.2s						
MDJ	**Mudanjiang**	**158.73**	**322**	IAMs_20	IAMs_20	01 17 34.8	
	comp=Z,582nm,22.0s						
HIA	**Hailar**	**158.86**	**344**	IAMs_20	IAMs_20	01 32 27.3	
	comp=Z,747nm,20.0s						
ODAN	**Odare**	**158.88**	**90**	*e*P	**PKPdf**	**00 10 50.7**	**-0.4**
	comp=Z,42nm,1.0s						
TAPN	**Taplejung**	**159.26**	**89**	*e*P	**PKPdf**	**00 10 50.9**	**-0.7**
SONM	**Songino Array**	**160.97**	**10**	PKP	**PKPdf**	**00 10 52.4**	**-0.2**
	comp=Z,4.2nm,1.0s,baz=191,slow=0.1,SNR=28						
SONM				PKPab	**PKPab**	**00 11 35.4**	**+0.1**
	comp=Z,5.5nm,0.8s,baz=321,slow=3.5,SNR=8.9						
SONM	**Songino Array**	**160.97**	**10**		**PKPdf**	**00 10 52.1**	**-0.5**
ULN	**Ulaanbaatar**	**161.03**	**9**	PKIKP	**PKPdf**	**00 10 52.6**	**-0.1**
ULN	**Ulaanbaatar**	**161.03**	**9**		**PKPdf**	**00 10 52.6**	**-0.1**
CN2	**Changchun**	**161.44**	**326**	*e*PKP	**PKPab**	**00 11 41.0**	**+3.6**
CN2				PP	PP	00 15 35.0	+15
SHL	**Shillong**	**162.50**	**97**	PKP2	**PKPab**	**00 11 42.8**	**-0.1**
SHL	**Shillong**	**162.50**	**97**		**PKPab**	**00 11 42.8**	**-0.1**
LSA	**Lhasa**	**162.54**	**83**	PKP	**PKPdf**	**00 10 55.5**	**+0.2**
KSRS	**Korea Array**	**163.74**	**305**	PKP	**PKPdf**	**00 10 55.0**	**-0.5**
	comp=Z,4.9nm,1.0s,baz=100,slow=0.8,SNR=20						
KSRS				PKPab	**PKPab**	**00 11 48.5**	**+0.8**
	comp=Z,7.8nm,1.1s,baz=69,slow=4.5,SNR=4.5						
KSAR	**Wonju Array Be**	**163.78**	**305**	PKIKP	**PKPdf**	**00 10 54.0**	**-1.6**
KSAR	**Wonju Array Be**	**163.78**	**305**		**PKPdf**	**00 10 54.0**	**-1.6**
SNY	**Shenyang**	**163.83**	**325**	⇓PKP	**PKPdf**	**00 10 55.8**	**+0.3**
SNY				PP	**PP**	**00 15 35.3**	**+2.2**
SNY				AMB	AMB		
	comp=Z,350nm,8.4s						
CMAR	**Chiang Mai Arr**	**164.57**	**131**	PKP	**PKPdf**	**00 10 56.5**	**-0.3**
	comp=Z,4.1nm,0.9s,baz=253,slow=2.4,SNR=32						
CMAR				PKPab	**PKPab**	**00 11 50.8**	**-1.0**
	comp=Z,9.5nm,0.9s,baz=237,slow=4.2,SNR=16						
CMAR	**Chiang Mai Arr**	**164.57**	**131**		**PKPdf**	**00 10 55.7**	**-1.2**
CHTO	**Chiang Mai**	**164.83**	**130**	PKIKP	**PKPdf**	**00 10 56.5**	**-0.6**
CHTO						00 11 51.9	
CHTO	**Chiang Mai**	**164.83**	**130**		**PKPdf**	**00 10 56.5**	**-0.6**
CHTO					**PKPab**	**00 11 51.9**	**-1.0**
GTA	**Gaotai**	**166.12**	**39**	PKP	**PKPdf**	**00 10 57.8**	**+0.1**
GTA				PP	**PP**	**00 15 50.5**	**+5.1**
GTA				SKKS		00 22 34.5	
GTA				AMB	AMB		
	comp=Z,220nm,11.0s						
GTA				LR	LR		
	comp=Z,330nm,23.1s						
GTA				LR	LR		
	comp=Z,320nm,22.7s						
GTA				LR	LR		
	comp=Z,930nm,23.7s						
DL2	**Dalian**	**166.97**	**321**	PKP	**PKPdf**	**00 10 59.3**	**+1.1**
DL2				PP	**PP**	**00 15 49.0**	**-0.6**
DL2				AMB	AMB		
	comp=Z,250nm,6.1s						
DL2				LR	LR		
	comp=Z,390nm,20.2s						
DL2				LR	LR		
	comp=Z,500nm,21.5s						
DL2				LR	LR		
	comp=Z,640nm,23.0s						
HHC	**Hu-ho-hao-te**	**168.31**	**359**	*e*PKP	**PKPdf**	**00 10 59.3**	**0.0**
HHC				sPKP		00 11 06.5	
HHC				PP	**PP**	**00 15 56.0**	**+0.2**
HHC				SS	SS	00 36 48.5	+1.6
HHC				AMB	AMB		
	comp=Z,420nm,9.0s						
HHC				LR	LR		
	comp=Z,930nm,21.2s						
HHC				LR	LR		
	comp=Z,600nm,22.5s						
HHC				LR	LR		
	comp=Z,1µm,22.6s						
BJI	**Beijing**	**168.38**	**341**	PKP	**PKPdf**	**00 10 54.5**	**-4.6**
BTO	**Baotou**	**168.53**	**4**	*e*PKP	**PKPdf**	**00 10 59.0**	**-0.4**
QIZ	**Qiongzhong**	**169.86**	**173**	PKP	**PKPdf**	**00 10 59.0**	**-1.7**
QIZ				PP	**PP**	**00 16 04.3**	**+0.8**
QIZ				SS	SS	00 37 06.0	+3.9
QIZ				AMB	AMB		
	comp=Z,170nm,11.8s						
QIZ				LR	LR		
	comp=Z,330nm,21.1s						
QIZ				LR	LR		
	comp=Z,460nm,18.1s						
QIZ				LR	LR		
	comp=Z,460nm,22.1s						
LZH	**Lanzhou**	**170.72**	**40**	*e*PKP	**PKPdf**	**00 10 59.0**	**-1.9**
LZH				PP	**PP**	**00 16 09.0**	**+0.1**
LZH				AMB	AMB		
	comp=Z,320nm,7.1s						
LZH				LR	LR		
	comp=Z,520nm,16.5s						
LZH				LR	LR		
	comp=Z,790nm,15.2s						
LZH				LR	LR		
	comp=Z,770nm,16.8s						
TIA	**Tai'an**	**171.35**	**326**	PKP	**PKPdf**	**00 11 00.0**	**-1.0**
TIA				PP	**PP**	**00 16 14.5**	**+2.9**
TIA				AMB	AMB		
	comp=Z,220nm,9.4s						
TIA				LR	LR		
	comp=Z,350nm,21.6s						
TIA				LR	LR		
	comp=Z,460nm,18.0s						
TIA				LR	LR		
	comp=Z,780nm,22.6s						
TIY	**Taiyuan**	**171.39**	**353**	*e*PKP	**PKPdf**	**00 11 00.8**	**-0.3**
TIY				PP	**PP**	**00 16 14.8**	**+3.6**
TIY				AMB	AMB		
	comp=Z,290nm,8.9s						
TIY				LR	LR		
	comp=Z,360nm,15.7s						
TIY				LR	LR		
	comp=Z,440nm,14.3s						
TIY				LR	LR		
	comp=Z,540nm,20.0s						
KMI	**Kunming**	**171.49**	**116**	PKP	**PKPdf**	**00 11 01.3**	**-0.4**
KMI				sPKP		00 11 09.8	
QZH	**Quanzhou**	**172.17**	**239**	*i* PKP	**PKPdf**	**00 11 04.8**	**+3.1**
QZH				PP	**PP**	**00 16 20.8**	**+4.3**
QZH				SKKS		00 23 03.5	
QZH				AMB	AMB		
	comp=Z,150nm,6.4s						
QZH				LR	LR		
	comp=Z,360nm,19.4s						
QZH				LR	LR		
	comp=Z,370nm,17.5s						
QZH				LR	LR		
	comp=Z,570nm,19.0s						
CD2	**Chengdu**	**173.34**	**73**	PKP	**PKPdf**	**00 11 01.0**	**-1.1**
CD2				pPKP	pPKPdf	00 11 04.5	+0.2
CD2				PP	**PP**	**00 16 25.3**	**+2.6**
CD2				SKKS		00 23 06.3	
CD2				AMB	AMB		
	comp=Z,450nm,5.5s						
CD2				LR	LR		
	comp=Z,1µm,28.4s						
CD2				LR	LR		
	comp=Z,680nm,18.6s						
CD2				LR	LR		
	comp=Z,900nm,18.1s						
XAN	**Xi'an**	**174.75**	**21**	PKP	**PKPdf**	**00 11 02.8**	**+0.3**
XAN				pPKP	sPKPdf	00 11 08.0	+2.6
XAN				PKPab	**PKPab**	**00 12 35.5**	**-0.9**
XAN				AMB	AMB		
	comp=Z,160nm,5.7s						
XAN				LR	LR		
	comp=Z,510nm,22.0s						
XAN				LR	LR		
	comp=Z,400nm,23.0s						
XAN				LR	LR		
	comp=Z,950nm,21.1s						
XAN	**Xi'an**	**174.75**	**21**	PKP2	**PKPab**	**00 12 35.9**	**-0.5**
GYA	**Guiyang**	**175.19**	**123**	PKP	**PKPdf**	**00 11 02.3**	**-0.7**
GYA				PKPab	**PKPab**	**00 12 38.0**	**-0.9**
GYA				PKS		00 14 33.3	
GYA				PP	**PP**	**00 16 34.5**	**+3.1**
GYA				SKKS		00 23 14.8	
GYA				SS	**SS**	**00 37 57.0**	**0.0**
GYA				AMB	AMB		
	comp=Z,270nm,9.0s						
GYA				LR	LR		
	comp=Z,230nm,22.6s						
GYA				LR	LR		
	comp=Z,260nm,19.8s						
GYA				LR	LR		
	comp=Z,640nm,18.8s						
WHN	**Wuhan**	**176.91**	**298**	PKP	**PKPdf**	**00 11 02.0**	**-1.1**
WHN				PKPab	**pPKPab**	**00 12 49.8**	**+0.9**
WHN				SKKS		00 23 26.0	
WHN				AMB	AMB		
	comp=Z,610nm,6.6s						
WHN				LR	LR		
	comp=Z,990nm,15.1s						
WHN				LR	LR		
	comp=Z,460nm,11.8s						
WHN				LR	LR		
	comp=Z,2µm,19.6s						

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*NEIC **27** 23:56:59.9±1.4, 60.°47N±0.°02×151.°59W±0.°06, h86^{km}±5^{km},*
Error ellipse: s-maj=4.6km s-min=3.0km az=75.0
*IDC **27** 23:56:59.5±1.6, 60.°34N×151.°46W, h91^{km}±23^{km}, mb3.3/8,*
mb1 3.4/12, mb1mx3.2/59, mbtmp3.6/12, MS3.7/1,
Ms1 3.7/1, ms1mx2.6/31, Error ellipse: s-maj=35.8km
s-min=13.5km az=119.0
*AEIC **27** 23:57:01.2±1.3, 60.°46N±0.°03×151.°59W±0.°06, h77^{km}±3^{km},*
ML3.2/106, Error ellipse: s-maj=4.2km s-min=3.5km
az=121.0
ISC 27 23:57:00.0±0.7, **60.°48N**±0.°04×**151.°57W**±0.°04, **h89**^{km}±6^{km},
n132, σ**1.°00**/145, **mb3.7**/8, **Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPN	**Captain Cook N**	**0.35**	**35**		**Pn**	**23 57 14.5**	**+1.0**
RDT	**Redoubt**	**0.43**	**283**		**Pn**	**23 57 13.2**	**-1.0**
DFR	**Drift River**	**0.57**	**282**		**Pn**	**23 57 14.4**	**-0.9**
DFR					**Sn**	**23 57 25.2**	**-1.4**
RSO	**Redoubt South**	**0.59**	**269**		**Pn**	**23 57 14.7**	**-0.9**
RED	**Redoubt Volcan**	**0.60**	**265**		**Pn**	**23 57 14.6**	**-1.0**
RED					**Sn**	**23 57 25.8**	**-1.3**
RDJH	**Redoubt Jeurge**	**0.62**	**281**		**Pn**	**23 57 15.1**	**-0.7**
RDJH					**Sn**	**23 57 26.3**	**-1.3**
RDWB	**Redoubt West**	**0.63**	**271**		**Pn**	**23 57 15.0**	**-0.9**
RDWB					**Sn**	**23 57 26.5**	**-1.3**
SLKM	**Skilak Lake**	**0.67**	**87**		**Pn**	**23 57 15.6**	**-0.5**
SLKM					**Sn**	**23 57 27.0**	**-1.1**
SPCR	**Spurr Chakacha**	**0.79**	**337**		**Pn**	**23 57 16.9**	**-0.4**
SPCR					**Sn**	**23 57 29.8**	**-0.6**
BRLK	**Bradley Lake**	**0.79**	**154**		**Pn**	**23 57 16.9**	**-0.4**
BRLK					**Sn**	**23 57 29.9**	**-0.5**
HOM	**Homer**	**0.82**	**183**		**Pn**	**23 57 17.6**	**-0.1**
HOM					**Sn**	**23 57 30.2**	**-0.6**
BRSE	**Bradley Lake S**	**0.85**	**151**		**Pn**	**23 57 17.5**	**-0.4**
BRSE					**Sn**	**23 57 30.5**	**-0.9**
CGLM	**Capps Glacier**	**0.86**	**346**		**Pn**	**23 57 18.0**	**-0.1**
IVE	**Iliamna Volcan**	**0.86**	**238**		**Pn**	**23 57 17.5**	**-0.7**
SPBG	**Spurr Blockage**	**0.88**	**334**		**Pn**	**23 57 18.1**	**-0.2**
SPBG					**Sn**	**23 57 32.1**	**0.0**
ILW	**Iliamna West**	**0.89**	**242**		**Pn**	**23 57 17.9**	**-0.7**
ILS	**Iliamna Low So**	**0.92**	**236**		**Pn**	**23 57 18.2**	**-0.5**
FIS	**Fire Island**	**0.94**	**44**		**Pn**	**23 57 19.9**	**+1.0**
CNPM	**China Poot**	**0.97**	**170**		**Pn**	**23 57 19.1**	**-0.2**
STLK	**Strandline Lak**	**1.03**	**353**		**Pn**	**23 57 20.1**	**+0.1**
SUA	**Susitna One**	**1.07**	**22**		**Pn**	**23 57 20.8**	**+0.3**
RC01	**Rabbit Creek A**	**1.09**	**55**		**Pn**	**23 57 20.8**	**+0.2**
SEW	**Seward**	**1.12**	**109**		**Pn**	**23 57 20.4**	**-0.6**
AUP	**Augustine Pinn**	**1.46**	**221**		**Pn**	**23 57 25.4**	**+0.2**
AUQ	**Augustine Qik'**	**1.46**	**220**		**Pn**	**23 57 25.3**	**+0.1**
AUH	**Augustine H**	**1.47**	**221**		**Pn**	**23 57 25.6**	**+0.3**
AUW	**Augustine West**	**1.47**	**222**		**Pn**	**23 57 25.4**	**+0.1**
PMR	**Palmer**	**1.63**	**46**		**Pn**	**23 57 27.3**	**0.0**
PWL	**Port Wells**	**1.64**	**75**		**Pn**	**23 57 27.2**	**-0.2**
KNK	**Knik Glacier**	**1.78**	**57**		**Pn**	**23 57 29.5**	**+0.2**
GHO	**Glory Hole Cre**	**1.82**	**43**		**Pn**	**23 57 29.9**	**0.0**
FOSS	**Fourpeaked Sta**	**2.00**	**214**		**Pn**	**23 57 32.4**	**+0.2**
SML	**Sawmill**	**2.06**	**48**		**Pn**	**23 57 33.0**	**+0.1**
SVW2	**Sparrevohn**	**2.06**	**289**		**Pn**	**23 57 32.0**	**-1.0**
GLI	**Glacier Island**	**2.23**	**78**		**Pn**	**23 57 34.7**	**-0.5**
PPLA	**Purkeypile**	**2.44**	**353**		**Pn**	**23 57 38.5**	**+0.4**
SCM	**Sheep Creek Mo**	**2.46**	**55**		**Pn**	**23 57 38.5**	**+0.2**
JPK	**Jack Peak**	**2.50**	**75**		**Pn**	**23 57 39.1**	**+0.3**
HIN	**Hinchinbrook I**	**2.51**	**90**		**Pn**	**23 57 37.8**	**-1.1**
FID	**Port Fidalgo**	**2.52**	**82**		**Pn**	**23 57 37.4**	**-1.6**
KAHC	**Katmai Hardscr**	**2.54**	**225**		**Pn**	**23 57 39.0**	**-0.4**
HUR	**Hurricane**	**2.67**	**19**		**Pn**	**23 57 41.8**	**+0.8**
KDAK	**Kodiak Island**	**2.75**	**191**	P	**Pn**	**23 57 40.9**	**-1.2**
	6.3nm,0.3s,baz=46,slow=10,SNR=673						
KDAK				S	**Sn**	**23 58 11.5**	**-3.0**
	14nm,0.3s,baz=174,slow=18,SNR=12						
WAT1	**Susitna Watana**	**2.76**	**30**		**Pn**	**23 57 43.2**	**+0.9**
WAT6	**Susitna Watana**	**2.79**	**39**		**Pn**	**23 57 43.6**	**+0.8**
MID	**Middleton Isla**	**2.83**	**110**		**Pn**	**23 57 42.4**	**-0.8**
KCG	**Knife Ck. Glac**	**2.83**	**221**		**Pn**	**23 57 43.6**	**+0.4**
WAT2	**Susitna Watana**	**2.87**	**28**		**Pn**	**23 57 44.5**	**+0.7**
EYAK	**Cordova Ski Ar**	**2.88**	**86**		**Pn**	**23 57 43.5**	**-0.2**
KABU	**Katmai Buttres**	**2.92**	**222**		**Pn**	**23 57 44.7**	**+0.3**
TRF	**Thorofare Moun**	**3.04**	**11**		**Pn**	**23 57 46.3**	**+0.1**
CAHL	**Cahill**	**3.10**	**220**		**Pn**	**23 57 47.5**	**+0.6**
KTH	**Kantishna Hill**	**3.10**	**5**		**Pn**	**23 57 47.3**	**+0.5**
RND	**Reindeer**	**3.21**	**22**		**Pn**	**23 57 48.8**	**+0.5**
TT01	**Tatalina**	**3.23**	**321**		**Pn**	**23 57 48.6**	**+0.1**
TTA	**Tatalina**	**3.25**	**321**		**Pn**	**23 57 48.9**	**+0.1**
DHY	**Denali Highway**	**3.28**	**36**		**Pn**	**23 57 50.1**	**+0.8**
PS11	**TAPS Pump St11**	**3.35**	**59**		**Pn**	**23 57 50.8**	**+0.7**
GOAT	**Goat Mountain**	**3.38**	**85**		**Pn**	**23 57 49.5**	**-1.1**
OHAK	**Old Harbor**	**3.39**	**196**		**Pn**	**23 57 49.3**	**-1.4**
RAGM	**Ragged Mountai**	**3.42**	**89**		**Pn**	**23 57 50.5**	**-0.6**
MCK	**McKinley**	**3.49**	**20**		**Pn**	**23 57 52.6**	**+0.5**
HARP	**HAARP**	**3.63**	**55**	Pn	**Pn**	**23 57 51.7**	**-2.3**
BPAW	**Bear Paw Mtn.**	**3.64**	**4**		**Pn**	**23 57 53.7**	**-0.4**
PLK3	**Peulik 3**	**3.70**	**223**		**Pn**	**23 57 56.0**	**+1.1**
BWN	**Browne**	**3.83**	**14**	Pn	**Pn**	**23 57 56.7**	**0.0**
BERG	**Berg Lake**	**3.90**	**88**		**Pn**	**23 57 57.1**	**-0.5**
GLB	**Gilahina Butte**	**3.90**	**72**		**Pn**	**23 57 57.5**	**-0.2**
PS10	**TAPS Pump St10**	**4.03**	**40**		**Pn**	**23 58 01.2**	**+1.9**
VRDI	**Verde Repeater**	**4.04**	**76**		**Pn**	**23 57 59.1**	**-0.5**
CRQM	**Cirque**	**4.16**	**83**	Pn	**Pn**	**23 58 01.8**	**+0.5**
SII	**Sitkinak Islan**	**4.16**	**200**		**Pn**	**23 58 00.2**	**-1.1**
MCARA	**McCarthy VSAT**	**4.26**	**74**	Pn	**Pn**	**23 58 03.2**	**+0.6**
NEA	**Nenana**	**4.27**	**15**		**Pn**	**23 58 02.7**	**+0.1**
TGL	**Tana Glacier**	**4.31**	**83**	Pn	**Pn**	**23 58 04.0**	**+0.7**
WRH	**Wood River Hil**	**4.32**	**20**		**Pn**	**23 58 03.5**	**+0.3**
MENT	**Mentasta**	**4.47**	**53**		**Pn**	**23 58 05.8**	**+0.4**
PTPK	**Patty Peak**	**4.51**	**77**		**Pn**	**23 58 06.1**	**0.0**
CCB	**Clear Creek Bu**	**4.53**	**21**		**Pn**	**23 58 06.5**	**+0.4**
RIDG	**Independent Ri**	**4.54**	**41**		**Pn**	**23 58 07.8**	**+1.5**
KIAG	**Kiagna River**	**4.55**	**80**		**Pn**	**23 58 05.9**	**-0.6**
BALM	**Baldy**	**4.56**	**79**		**Pn**	**23 58 06.8**	**+0.2**
MLY	**Manley**	**4.58**	**4**		**Pn**	**23 58 07.7**	**+0.8**
PS08	**TAPS Pump Stn8**	**4.63**	**26**		**Pn**	**23 58 08.3**	**+0.8**
TCOL	**CIGO, UAF Yank**	**4.73**	**20**		**Pn**	**23 58 09.7**	**+0.9**
COLA	**College**	**4.73**	**20**		**Pn**	**23 58 09.0**	**+0.2**
COLA	**College**	**4.73**	**20**		**Pn**	**23 58 09.2**	**+0.4**
MDM	**Murphy Dome**	**4.75**	**17**		**Pn**	**23 58 09.4**	**+0.3**
IL31		**4.82**	**25**	Sn	**Sn**	**23 59 04.0**	**-0.4**
ILAR	**Eielson Array**	**4.82**	**25**	P	**Pn**	**23 58 10.8**	**+0.8**
	3.8nm,0.3s,baz=207,slow=14,SNR=140						
ILAR				S	**Sn**	**23 59 02.6**	**-1.9**
	6.6nm,0.3s,baz=198,slow=28,SNR=8.4						
ILAR	**Eielson Array**	**4.82**	**25**		**Pn**	**23 58 10.3**	**+0.3**
ILAR				Sn	**Sn**	**23 59 03.4**	**-1.1**
BARN	**Barnard Glacie**	**4.89**	**79**	Pn	**Pn**	**23 58 12.0**	**+0.8**
SCRK	**Sand Creek**	**4.99**	**42**		**Pn**	**23 58 12.8**	**+0.4**
POKR	**Poker Plat Res**	**5.03**	**20**		**Pn**	**23 58 13.6**	**+0.7**
CTGM	**Chitina Glacie**	**5.05**	**80**		**Pn**	**23 58 13.2**	**-0.1**
CHIR	**Chirikof Islan**	**5.14**	**206**	Pn	**Pn**	**23 58 15.1**	**+0.7**
BC03		**5.32**	**57**		**Pn**	**23 58 17.3**	**+0.5**
BCAR	**Beaver Creek A**	**5.32**	**57**		**Pn**	**23 58 16.5**	**-0.3**
CHGN	**Chignik**	**5.52**	**224**	Pn	**Pn**	**23 58 19.9**	**+0.3**
YUK1	**Sand Pete Hill**	**5.58**	**68**		**Pn**	**23 58 20.2**	**-0.2**
IM03		**5.61**	**351**		**Pn**	**23 58 19.8**	**-1.0**
IMAR	**Indian Mountai**	**5.61**	**351**		**Pn**	**23 58 20.7**	**-0.1**
PCA	**Pinnacle**	**5.64**	**89**	Pn	**Pn**	**23 58 21.5**	**+0.2**
PRP	**Porcupine Dome**	**5.75**	**26**		**Pn**	**23 58 23.5**	**+0.6**
PNL	**Peninsula**	**6.15**	**92**		**Pn**	**23 58 27.4**	**-0.7**
EGAK	**Eagle**	**6.45**	**44**		**Pn**	**23 58 32.7**	**+0.6**
COLD	**Coldfoot**	**6.80**	**4**	Pn	**Pn**	**23 58 38.8**	**+1.8**
DHAK	**Deception Hill**	**6.88**	**96**		**Pn**	**23 58 38.2**	**+0.1**
SDPT	**Sand Point**	**7.00**	**227**	Pn	**Pn**	**23 58 39.9**	**+0.2**
CNBA	**Chernabura Isl**	**7.12**	**221**	Pn	**Pn**	**23 58 41.1**	**-0.2**
ANM	**Nome**	**7.58**	**309**	Pn	**Pn**	**23 58 48.2**	**+0.6**
BM03	**Burnt Mountain**	**7.61**	**21**		**Pn**	**23 58 47.5**	**-0.5**
BMAR	**Burnt Mountain**	**7.62**	**21**		**Pn**	**23 58 47.8**	**-0.3**
SKAG	**Skagway**	**8.21**	**90**	Pn	**Pn**	**23 58 57.8**	**+1.6**
WHY	**Whitehorse**	**8.22**	**81**	Pn	**Pn**	**23 58 57.7**	**+1.3**
TOLK	**Toolik Lake Re**	**8.24**	**5**	Pn	**Pn**	**23 58 59.4**	**+2.8**
FALS	**False Pass**	**8.48**	**234**	Pn	**Pn**	**23 59 00.2**	**+0.3**
EPYK	**Eagle Plains**	**8.88**	**42**	Pn	**Pn**	**23 59 05.6**	**+0.2**
INK	**Inuvik**	**11.02**	**37**	P	**Pn**	**23 59 35.5**	**+1.2**
	0.2nm,0.3s,baz=252,slow=14,SNR=5.0						
INK				S	**Sn**	**00 01 29.1**	**-6.4**
	0.0nm,0.3s,baz=284,slow=4.2,SNR=2.0						
DLBC	**Dease Lake**	**11.14**	**91**	Pn	**Pn**	**23 59 38.1**	**+2.0**
YKA	**Yellowknife Ar**	**17.60**	**67**	P	**Pn**	**00 00 59.4**	**+0.2**
	0.1nm,0.3s,baz=277,slow=12,SNR=7.4						
RES	**Resolute Bay**	**24.52**	**32**	P	**P**	**00 02 11.0**	**+0.5**
	0.4nm,0.5s,baz=308,slow=3.9,SNR=5.1						
NRIK	**Noril'sk**	**43.78**	**334**	LR	LR	00 25 48.4	
	comp=Z,99nm,21.9s,baz=100,slow=39						
ARCES	**ARCESS Array B**	**50.26**	**1**	P	**P**	**00 05 45.5**	**-1.0**
	4.2nm,0.9s,baz=17,slow=8.9,SNR=4.8						
SONM	**Songino Array**	**55.08**	**307**	P	**P**	**00 06 23.8**	**+1.4**

	1.3nm,0.7s,baz=43,slow=7.2,SNR=9.5						
FINES	FINESS Array B	58.39	1	P	P	00 06 45.4	-0.1
	0.5nm,0.5s,baz=15,slow=8.1,SNR=9.8						
BVAR	Borovoye Array	61.97	333	P	P	00 07 10.0	-0.1
	0.3nm,0.5s,baz=24,slow=14,SNR=3.0						
KURK	Kurchatov	62.03	326	P	P	00 07 10.9	+0.5
KURBB	Kurchatov Arra	62.14	326	P	P	00 07 10.9	-0.2
	0.2nm,0.4s,baz=30,slow=6.5,SNR=3.4						
MKAR	Makanchi Array	64.50	322	P	P	00 07 27.0	+0.1
	0.1nm,0.4s,baz=44,slow=8.6,SNR=2.4						
AKASG	Malin Array Be	69.17	359	P	P	00 07 56.1	-0.2
	0.4nm,0.3s,baz=4.5,slow=6.6,SNR=4.5						
BOSA	Boshof	148.07	5	PKPbc	PKPbc	00 16 34.6	-0.3
	4.3nm,1.1s,baz=333,slow=2.3,SNR=3.7						

VAO ***28*** *00:10:35.7±0.4, 29°.31S×68°.75W, $h10^{km}$, mb4.8*

IDC ***28*** *00:10:35.5±0.4, 29°.31S×68°.61W, $h0^{km}$, mb4.7/24, mb1 4.8/30, mb1mx4.7/37, mbtmp4.7/30, ML4.4/6, MS4.4/7, Ms1 4.4/7, ms1mx4.1/22, Error ellipse: s-maj=17.4km s-min=11.0km az=70.0*

MOS ***28*** *00:10:36.0±1.4, 29°.15S×68°.77W, $h10^{km}$, mb5.2/39, Error ellipse: s-maj=11.7km s-min=6.4km az=102.2*

SJA ***28*** *00:10:37.2±0.7, 29°.35S×68°.87W, $h25^{km}\pm7^{km}$, ML4.8, MW4.9*

GUC ***28*** *00:10:38.2±0.5, 29°.07S×68°.86W, $h11^{km}\pm5^{km}$, ML4.8, MW4.7*

NEIC ***28*** *00:10:40.4±2.0, 29°.19S±0°.05×68°.80W±0°.05, $h28^{km}\pm3^{km}$, mb5.2/375, Md4.9(SJA), Error ellipse: s-maj=7.8km s-min=4.7km az=218.0*

ISC 28 00:10:35.4±1.3**, 29°.23S**±0°.03×**68°.76W**±0°.04**, $h1^{km}\pm8^{km}$, n892,** σ**2ˢ.30**/866**, mb5.2**/211**, 15C-6D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGUA	GUANDACOL	0.35	137	iP	Pb	00 10 45.2	+0.7
AGUA				eS	Sb	00 10 51.9	+1.4
AGUA				IAML		00 10 53.0	
	comp=Z,52µm,0.6s						
ACDV	Cuesta del Vie	0.99	198	iP	Pg	00 10 54.5	+0.1
ACDV				eS	Sg	00 11 06.4	-0.7
ACDV				IAML		00 11 14.5	
	comp=Z,12µm,0.9s						
AROD	Rodeo	1.12	213	iP	Pg	00 10 56.7	-0.2
ACCO	Cerro Coronel	1.38	191	iP	Pg	00 11 01.8	0.0
LCO	Las Campanas	1.71	277	P	Pn	00 11 05.6	-1.0
LCO	Las Campanas	1.71	277	Pn	Pn	00 11 05.6	-1.0
GO04	Tololo Observa	2.01	242		Pn	00 11 11.7	+1.0
GO04	Tololo Observa	2.01	242	iP	Pn	00 11 11.4	+0.7
GO03	Copiap	2.09	321	⇑iP	Pn	00 11 11.1	-0.5
GO03				iS	Sn	00 11 35.8	-2.5
GO03				IAML		00 11 38.7	
	comp=N,3µm,0.2s						
GO03	Copiap	2.09	321		Pn	00 11 11.4	-0.2
GO03	Copiap	2.09	321	iP	Pn	00 11 11.2	-0.4
RTLL	Cerro Villicun	2.10	173	iP	Pb	00 11 14.3	-0.2
ZON	Zonda	2.31	178	iP	Pb	00 11 17.9	0.0
ZON				IAML		00 11 56.4	
	comp=Z,5µm,0.8s						
RTLS	Leoncito	2.60	190	iP	Pb	00 11 23.2	+0.2
RTLS				IAML		00 12 03.4	
	comp=Z,11µm,0.8s						
RTCV	Cerro Valdivia	2.63	176	iP	Pb	00 11 23.2	-0.2
CYA	Choya	2.71	74	⇑iP	Pb	00 11 23.2	-1.6
CYA				iS	Sb	00 11 58.3	-0.2
CYA				IAML		00 12 09.1	
	comp=N,4µm,0.8s						
CYA	Choya	2.71	74	iP	Pb	00 11 23.6	-1.2
CYA				IAML		00 12 05.2	
	comp=Z,5µm,1.2s						
CO02	Combarbal	2.76	224	iP	Pb	00 11 24.1	-1.5
CO02				iS	Sb	00 12 00.3	+0.2
CO02				IAML		00 12 04.8	
	comp=N,12µm,0.3s						
ACAN	Cantantal	3.32	156	iP	Pb	00 11 34.9	-0.2
ASAL	Salagasta	3.35	181	iP	Pb	00 11 33.3	-2.3
ARCO	CERRO ARCO	3.60	182	iP	Pb	00 11 36.7	-3.3
ARCO				IAML		00 12 37.3	
	comp=Z,4µm,0.7s						
AAGR	Agrelo	3.84	181	iP	Pn	00 11 39.7	+3.9
GO02	Mina Guanaco	4.12	349	iP	Pn	00 11 40.5	+0.7
GO02				iS	Sn	00 12 27.4	-1.4
GO02	Mina Guanaco	4.12	349		Pn	00 11 41.8	+2.0
ROC1	El Roble	4.20	207		Pn	00 11 43.9	+3.0
ROC1	El Roble	4.20	207	iP	Pn	00 11 43.5	+2.6
PEL	Peldehue	4.23	202	P	Pn	00 11 43.6	+2.5
PEL	Peldehue	4.23	202		Pn	00 11 43.6	+2.5
PEL	Peldehue	4.23	202	iP	Pn	00 11 45.4	+4.3
PB14	IPOC Station P	4.82	342		Pn	00 11 49.6	+0.2
PB14	IPOC Station P	4.82	342	iP	Pn	00 11 49.9	+0.5
LAMA	Las Malvinas	5.70	184	iP	Pn	00 12 03.8	+2.6
PB10	IPOC Station P	5.92	344		Pn	00 12 06.8	+2.6
PB10	IPOC Station P	5.92	344	iP	Pn	00 12 03.2	-1.0
AZAP	Zapla	5.98	34	iP	Pn	00 12 08.5	+3.1
AZAP				IAML		00 13 50.7	
	comp=Z,336nm,1.0s						
PB15	IPOC Station P	6.03	354		Pn	00 12 06.9	+0.8
PB15	IPOC Station P	6.03	354	iP	Pn	00 12 08.1	+2.1
GO05	Huala	6.36	204		Pn	00 12 10.4	+0.1
PB05	IPOC Station P	6.48	348	iP	Pn	00 12 11.3	-0.8
PB06	IPOC Station P	6.54	353	iP	Pn	00 12 15.5	+2.6
EDS3	Malargue	6.54	185	iP	Pn	00 12 16.3	+3.3
LVC	Limon Verde	6.60	359	Pn	Pn	00 12 14.7	+0.7
	comp=Z,9.7nm,0.3s,baz=181,slow=8.8,SNR=42						
LVC				Lg	Lg	00 14 04.5	
	comp=Z,36nm,0.3s,baz=338,slow=15,SNR=6.3						
LVC				LR	LR	00 15 06.5	
	comp=Z,3µm,18.9s,baz=189,slow=41						
LVC	Limon Verde	6.60	359	P	Pn	00 12 14.5	+0.6
LVC	Limon Verde	6.60	359		Pn	00 12 14.5	+0.6
LVC	Limon Verde	6.60	359	eP	Pn	00 12 14.5	+0.6
LVC	Limon Verde	6.60	359	iP	Pn	00 12 14.6	+0.7
LVC				IAML		00 14 09.5	
	comp=Z,268nm,1.2s						
PB04	IPOC Station P	6.98	349		Pn	00 12 18.5	-0.5
PB04	IPOC Station P	6.98	349	iP	Pn	00 12 17.8	-1.2
PB09	IPOC Station P	7.42	357		Pn	00 12 25.4	+0.4
PB09	IPOC Station P	7.42	357	iP	Pn	00 12 25.5	+0.5
PB07	IPOC Station P	7.54	352		Pn	00 12 24.9	-1.8
PB01	IPOC Station P	8.18	355		Pn	00 12 34.1	-1.4
PATCX	Punta Patache	8.47	351		Pn	00 12 40.6	+1.3
PB11	IPOC Station P	9.46	355		Pn	00 12 51.0	-2.1
GO01	Chusmiza	9.53	358		Pn	00 12 53.7	-0.6
PSGCX	Pisagua	9.67	352		Pn	00 12 55.3	-0.6
CPUP	Villa Florida	10.53	77	Pn	Pn	00 13 07.2	-0.3
	comp=Z,2.6nm,0.3s,baz=256,slow=11,SNR=15						
CPUP				Lg	Lg	00 16 16.9	
	comp=Z,7.6nm,0.3s,baz=173,slow=20,SNR=6.6						
CPUP				LR	LR	00 16 59.0	
	comp=Z,870nm,21.0s,baz=166,slow=37						
CPUP	Villa Florida	10.53	77	P	Pn	00 13 09.0	+1.5
CPUP	Villa Florida	10.53	77		Pn	00 13 09.0	+1.5
PB16	IPOC Station P	10.87	356		Pn	00 13 12.2	-0.5
PLCA	Paso Flores	11.57	187	Pn	Pn	00 13 20.5	-1.3
	comp=Z,0.6nm,0.3s,baz=193,slow=12,SNR=12						
PLCA				Lg	Lg	00 16 49.5	
	comp=Z,0.9nm,0.3s,baz=226,slow=18,SNR=3.1						
PLCA				LR	LR	00 18 26.4	
	comp=Z,2µm,19.8s,baz=194,slow=41						
PLCA	Paso Flores	11.57	187	P	Pn	00 13 23.1	+1.4
PLCA	Paso Flores	11.57	187	Pn	Pn	00 13 23.1	+1.4
PLCA	Paso Flores	11.57	187	eP	Pn	00 13 19.9	-1.9
LPAZ	La Paz	12.90	3	Pn	Pn	00 13 39.9	-0.6
	comp=Z,0.5nm,0.3s,baz=221,slow=5.1,SNR=11						
LPAZ	La Paz	12.90	3	eP	Pn	00 13 39.9	-0.6
PLTB	Pedras Altas	13.31	105	eP	Pn	00 13 45.6	+0.1
GO07	Milladeo Hill,	14.40	195		Pn	00 14 01.6	+1.2
SIV	San Ignacio	14.96	30	Pn	Pn	00 14 07.7	-0.5
	comp=Z,0.8nm,0.3s,baz=219,slow=13,SNR=5.7						
SIV				LR	LR	00 20 56.2	
	comp=Z,1µm,20.1s,baz=160,slow=42						
PTGB	Pitanga	15.55	77	eP	Pn	00 14 16.2	+0.3
TRCB	Terra Rica	15.84	70	eP	Pn	00 14 19.9	+0.1
PCMB	Pacaembu	17.52	68	eP	Pn	00 14 40.5	-0.7
C2SB	Chapadao do Su	17.87	58	eP	Pn	00 14 45.7	+0.3
SALV	Santo Antonio	17.91	45	eP	Pn	00 14 45.9	0.0
FRTB	Fartura	18.18	76	eP	Pn	00 14 49.1	-0.2
NNA	Nana	18.74	335	P	Pn	00 14 57.7	+1.6
	comp=Z,0.9nm,0.3s,baz=194,slow=10,SNR=6.5						
NNA				LR	LR	00 21 08.0	
	comp=Z,736nm,18.7s,baz=98,slow=34						
NNA	Nana	18.74	335	⇑eP	P	00 14 54.0	-1.8
NNA	Nana	18.74	335	P	P	00 14 54.0	-1.8
ITRB	Iturama	19.23	65	eP	P	00 15 01.1	-0.1
SPB	Sao Paulo	19.90	79	eP	P	00 15 08.0	-0.5
BB19B	Bebedouro	20.02	71	eP	P	00 15 08.5	-1.3
RCLB	Rio Claro- Sao	20.26	75	eP	P	00 15 11.2	-1.3
VAO	Valinhos	20.52	77	eP	P	00 15 14.4	-0.9
ARAG	Araguaiana, MT	20.62	53	eP	P	00 15 14.4	-1.8
SAML	Samuel	20.85	16	P	P	00 15 18.7	-0.1
SAML				pmax	pmax		
	comp=Z,24nm,0.8s						
SAML	Samuel	20.85	16	P	P	00 15 18.7	-0.1
SAML	Samuel	20.85	16	eP	P	00 15 19.3	+0.5
PARB	Paraibuna	21.55	80	eP	P	00 15 24.5	-1.9
IPMB	Ipameri, GO	21.87	64	eP	P	00 15 28.7	-1.1
CLDB	Colider	21.92	36	eP	P	00 15 27.4	-2.9
GO09	Cerro Castillo	22.18	186	P	P	00 15 32.6	-0.2
ESAR	Angra dos Reis	22.67	80	eP	P	00 15 36.9	-1.4
BSCB	Bom Sucesso	23.18	75	eP	P	00 15 42.0	-1.9
BDFB	Brasilia	23.41	59	P	P	00 15 44.7	-1.5
	comp=Z,102nm,1.4s,baz=224,slow=15,SNR=7.0						
BDFB	Brasilia	23.41	59	P	P	00 15 45.8	-0.4
BDFB				pmax	pmax		
	comp=Z,40nm,1.2s						
BDFB	Brasilia	23.41	59	P	P	00 15 45.8	-0.4
ATAH	Atahualpa	23.78	336	P	P	00 15 52.0	+1.8
	comp=Z,4.9nm,0.7s,baz=166,slow=10.0,SNR=5.6						
EFI	East Falkland	23.80	163	⇑eP	P	00 15 51.0	+1.4
EFI				pmax	pmax		
	comp=Z,199nm,1.9s						
EFI	East Falkland	23.80	163	P	P	00 15 51.2	+1.6
EFI				IAmb	IAmb	00 15 58.3	
	comp=Z,57nm,0.8s						
GO10	Punta Arenas	23.96	183	P	P	00 15 52.4	+1.2
JANB	Januaria	26.60	63	eP	P	00 16 13.8	-1.8
SJMB	Sao Joao De Ma	27.23	74	eP	P	00 16 20.5	-0.6
BSFB	Barra de Sao F	27.45	74	eP	P	00 16 22.5	-0.6
SMTB	Santa Maria do	28.38	49	eP	P	00 16 30.7	-0.8
PTGA	Pitinga	29.56	18	P	P	00 16 42.4	+0.5
	comp=Z,7.5nm,0.6s,baz=202,slow=14,SNR=10						
PTGA	Pitinga	29.56	18	P	P	00 16 41.9	+0.1
PTGA				IAmb	IAmb	00 16 50.9	
	comp=Z,30nm,1.0s						
PTGA	Pitinga	29.56	18	eP	P	00 16 42.1	+0.3
NBIT	Itapeh - BA	30.57	69	eP	P	00 16 49.5	-1.4
FLOC	Florencia	31.34	347	P	P	00 16 56.0	-1.6
PCON	Cinco Dias	32.22	346	eP	P	00 17 08.5	+2.5
NBPN	Ponto Novo - B	32.33	61	eP	P	00 17 04.2	-2.2
POPC	Popayan, Colom	32.49	345	eP	P	00 17 09.3	+1.3
ORTC	Ortega, Tolima	33.53	348	eP	P	00 17 19.6	+2.7
YOTC	Yotoco, Valle	33.82	346	eP	P	00 17 15.8	-3.6
NBLA	Lagarto - SE	34.12	64	eP	P	00 17 20.4	-1.6
ROSC	El Rosal	34.30	350	LR	LR	00 31 55.0	
	comp=Z,1µm,18.3s,baz=270,slow=37						
ROSC	El Rosal	34.30	350	P	P	00 17 24.4	+0.5
RREF	El Recreo	34.52	348	eP	P	00 17 29.1	+3.0
PLMC	San Jos del P	34.70	347	eP	P	00 17 29.4	+2.3
GUY2C	Guyana, Caldas	34.84	348	eP	P	00 17 28.9	+0.1
NBTA	Tacaratu-PE	35.04	61	eP	P	00 17 28.0	-2.1
PAYG	Puerto Ayora	35.05	320	P	P	00 17 28.2	-1.7
RUSC	La Rusia	35.17	353	eP	P	00 17 30.5	-1.1
CBOC	Ciudad Bolivar	35.58	348	eP	P	00 17 35.1	+0.3
NBMA	Muriti-CE	35.64	58	eP	P	00 17 34.1	-1.1
PMSA	Palmer Station	35.68	177	P	P	00 17 33.6	-1.3
	comp=Z,22nm,0.9s,baz=328,slow=13,SNR=6.3						
PMSA				LR	LR	00 31 15.0	
	comp=Z,850nm,18.0s,baz=350,slow=35						
PMSA	Palmer Station	35.68	177	eP	P	00 17 33.4	-1.5
NBPS	Pedro II - PI	35.78	52	eP	P	00 17 35.2	-1.2
HELC	Santa Helena	35.81	348	eP	P	00 17 38.4	+1.4
PTBC	PUERTO BERRIO,	35.98	350	eP	P	00 17 32.5	-5.5
NBAN	Anadia - AL	36.10	64	eP	P	00 17 37.6	-1.4
NBPB	Pedra_Branca-C	36.27	55	eP	P	00 17 39.3	-1.2
DBBC	Dabeiba	36.75	348	eP	P	00 17 45.1	+0.5
ZARC	Zaragoza, Cauc	36.98	350	eP	P	00 17 44.0	-2.6
UREC	San Jos de Ur	37.34	349	eP	P	00 17 50.1	+0.5
MDP	Montagnes des	37.49	27	P	P	00 17 49.8	-1.0
	comp=Z,24nm,0.7s,baz=203,slow=8.2,SNR=16						
NBMO	Morrinhos-CE	37.52	52	eP	P	00 17 50.5	-0.7
NBRF	Rio Formoso -	37.59	64	eP	P	00 17 51.0	-0.8
SDV	Santo Domingo	37.94	357	eP	P	00 17 51.9	-2.9
SDV	Santo Domingo	37.94	357	P	P	00 17 53.5	-1.4
SDV				IAmb	IAmb	00 17 58.5	
	comp=Z,32nm,1.0s						
SDV	Santo Domingo	37.94	357	eP	P	00 17 54.8	0.0
NBCL	Cascavel-CE	38.11	55	eP	P	00 17 56.1	-0.1
SMLC	San Martn de	38.16	351	eP	P	00 17 53.1	-3.4
SJCC	San Jacinto, C	39.39	350	eP	P	00 18 04.4	-2.5
URIC	Uribia, Colomb	40.81	355	P	P	00 18 17.9	-0.7
TOSP	Speyside	41.07	12	P	P	00 18 20.2	-0.5
TOSP				IAmb	IAmb	00 18 26.8	
	comp=Z,32nm,0.7s						
GRGR	Grenville	41.69	10	P	P	00 18 22.7	-3.2
JTS	Las Juntas de	42.28	336	⇑eP	P	00 18 32.7	+1.9
JTS				pmax	pmax		
	comp=Z,22nm,1.1s						
OBIP	Obispado Ponce	47.04	3	P	P	00 19 07.3	-1.3
OBIP				IAmb	IAmb	00 19 11.0	
	comp=Z,19nm,0.7s						
PDPR	Patillas Dam,	47.05	4	P	P	00 19 08.2	-0.5
PDPR				IAmb	IAmb	00 19 10.8	
	comp=Z,21nm,0.9s						
APG	El Apazote	48.72	332	P	P	00 19 22.5	+0.5
	comp=Z,12nm,1.0s,baz=170,slow=9.1,SNR=7.1						
GRTK	Grand Turk	50.50	357	P	P	00 19 34.7	-0.5
CCIG	Comitan	50.57	330	P	P	00 19 34.5	-1.5
CMIG	Matias Romero	52.51	328	P	P	00 19 51.8	+1.5
	comp=Z,9.1nm,0.9s,baz=131,slow=3.2,SNR=13						
TEIG	Tepich	52.65	337	P	P	00 19 50.5	-0.8
VNA3	Neumayer Olymp	52.77	160	P	P	00 19 51.4	-0.3
VNA1	Neumayer--Stat	53.02	159	P	P	00 19 53.9	+0.4
VNA2	Neumayer--Watz	53.38	159	P	P	00 19 55.9	-0.3
	baz=283,slow=9.2						
PTCN	Pitcairn Islan	54.20	259	P	P	00 20 01.4	-1.5
TLIG	Tlapa	54.70	324	P	P	00 20 05.4	-1.2
SNAA	Sanae	54.99	159	P	P	00 20 07.4	-0.6
SNAA	Sanae	54.99	159	P	P	00 20 07.4	-0.6
	comp=Z,10nm,0.8s,baz=281,slow=6.8,SNR=6.1						
SNAA	Sanae	54.99	159	d iP	P	00 20 07.8	-0.2
SNAA	Sanae	54.99	159	IAmb	IAmb	00 20 22.0	
	comp=Z,19nm,1.1s						
NVL	N'lazarevskaya	59.62	158	eP	P	00 20 38.5	-2.1
NVL				pmax	pmax		
	comp=Z,19nm,0.9s						
553A	Crawfordville	60.95	344	P	P	00 20 49.1	-1.0
QSPA	South Pole Qui	60.99	180	P	P	00 20 50.1	-0.2
QSPA				IAmb	IAmb	00 20 51.2	
	comp=Z,29nm,0.9s						
ZAIG	Zacatecas	61.09	324	P	P	00 20 51.0	-0.7
BBSR	BB Station	61.39	4	P	P	00 20 52.4	-0.6
BBSR				IAmb	IAmb	00 20 59.5	
	comp=Z,36nm,1.1s						
TIGA	Tifton	61.96	346	P	P	00 20 60.0	+3.0
	baz=165						
255A	Hazlehurst	62.20	347	P	P	00 20 56.5	-2.1
255A				IAmb	IAmb	00 21 02.3	
	comp=Z,37nm,1.1s						
RGRS	Roger Stewart	62.74	349	P	P	00 21 02.0	-0.2
CSU	Charleston Sou	62.80	349	P	P	00 21 01.6	-0.9
NHSC	New Hope	62.94	349	P	P	00 21 07.3	+3.9
	baz=169						
154A	Montrose	63.00	346	P	P	00 21 01.8	-2.0
Z58A	St. Stephen	63.10	350	P	P	00 21 08.2	+3.7
	baz=169						
250A	Grady	63.11	343	P	P	00 21 03.6	-0.9
250A				IAmb	IAmb	00 21 07.7	
	comp=Z,31nm,0.9s						
Z57A	Bowman	63.21	349	P	P	00 21 08.4	+3.2
	baz=168						
Z56A	Williston	63.35	348	P	P	00 21 05.9	-0.3
152A	Waverly Hall	63.40	345	P	P	00 21 06.7	+0.2
152A				IAmb	IAmb	00 21 09.5	
	comp=Z,11nm,0.9s						
346A	Big Creek Wild	63.42	340	P	P	00 21 06.1	-0.6
Y60A	Bolivia	63.53	351	P	P	00 21 10.5	+3.2
	baz=171						
Y58A	Scranton	63.64	350	P	P	00 21 08.4	+0.4
Y58A	Scranton	63.64	350	P	P	00 21 11.6	+3.6
	baz=169						
GOGA	Godfrey	63.84	346	P	P	00 21 08.8	-0.6
GOGA				pmax	pmax		
	comp=Z,14nm,1.1s						
GOGA	Godfrey	63.84	346	P	P	00 21 08.8	-0.6
GOGA				IAmb	IAmb	00 21 14.4	
	comp=Z,14nm,1.1s						
GOGA	Godfrey	63.84	346	P	P	00 21 12.1	+2.6
	baz=166						
Y57A	Sumter	63.86	349	P	P	00 21 08.7	-0.8
Y57A				IAmb	IAmb	00 21 13.7	
	comp=Z,20nm,0.8s						
344A	Westbrook Farm	63.87	339	P	P	00 21 09.3	-0.3
Y55A	Saluda	64.04	348	P	P	00 21 13.8	+3.1
	baz=167						
X60A	Albert Glenn T	64.06	352	P	P	00 21 14.4	+3.6
	baz=171						
735A	Kenedy	64.09	332	P	P	00 21 10.5	-0.7
X58A	Rowland	64.23	350	P	P	00 21 12.0	+0.1
X58A				IAmb	IAmb	00 21 16.2	
	comp=Z,24nm,0.8s						
X58A	Rowland	64.23	350	P	P	00 21 15.7	+3.8
	baz=170						
Z50A	Ashland	64.24	344	P	P	00 21 10.8	-1.2
Z50A				IAmb	IAmb	00 21 15.6	
	comp=Z,34nm,1.0s						
Z50A	Ashland	64.24	344	P	P	00 21 14.5	+2.4
	baz=163,SNR=12						
HKT	Hockley	64.27	334	P	P	00 21 11.4	-0.8
HKT				pmax	pmax		
	comp=Z,21nm,1.1s						
HKT	Hockley	64.27	334	P	P	00 21 11.4	-0.8
HKT				IAmb	IAmb	00 21 17.5	
	comp=Z,21nm,1.1s						
833A	Chaparral WMA,	64.30	330	P	P	00 21 12.0	-0.6
833A	Chaparral WMA,	64.30	330	P	P	00 21 16.8	+4.3
	baz=150,SNR=12						
LRAL	Lakeview Retre	64.30	343	P	P	00 21 12.3	-0.1
LRAL				IAmb	IAmb	00 21 16.0	
	comp=Z,20nm,1.1s						
LRAL	Lakeview Retre	64.30	343	P	P	00 21 15.2	+2.8
	baz=162,SNR=6.5						
342A	Flagon Creek P	64.31	338	P	P	00 21 12.9	+0.4
HODGE	Hodges	64.40	348	P	P	00 21 12.2	-0.9
Y52A	Lilburn	64.40	346	P	P	00 21 13.1	-0.1
Y52A				IAmb	IAmb	00 21 17.4	
	comp=Z,12nm,0.8s						
Y52A	Lilburn	64.40	346	P	P	00 21 15.8	+2.6
	baz=165						
X56A	White Oak	64.43	349	P	P	00 21 16.0	+2.7
	baz=168						
146A	Union	64.47	341	P	P	00 21 13.2	-0.4
BIRD	Birdtown, Kers	64.49	349	P	P	00 21 13.4	-0.2
BIRD				IAmb	IAmb	00 21 17.3	
	comp=Z,15nm,1.0s						
X55A	Gracelyn & Ava	64.52	348	P	P	00 21 17.1	+3.3
	baz=168						
W58A	Raeford	64.67	350	P	P	00 21 18.2	+3.4
	baz=170,SNR=5.2						
X54A	Belton	64.73	348	P	P	00 21 18.5	+3.2
	baz=167						
Z47A	Carrollton	64.73	342	IAmb	IAmb	00 21 19.0	
	comp=Z,32nm,0.9s						
X53A	Estanollee	64.86	347	P	P	00 21 18.9	+2.8
	baz=166						
W57A	Gilead	64.91	350	P	P	00 21 16.9	+0.6
W57A				IAmb	IAmb	00 21 20.1	
	comp=Z,11nm,0.8s						
W57A	Gilead	64.91	350	P	P	00 21 19.7	+3.3
	baz=169						
Y49A	Blount Mountai	64.93	344	P	P	00 21 15.5	-1.1
Y49A				IAmb	IAmb	00 21 20.7	
	comp=Z,21nm,1.0s						
W56A	Indian Trail	64.99	349	P	P	00 21 19.6	+2.7
	baz=169						
KMSC	Kings Mountain	65.12	349	P	P	00 21 21.0	+3.2
	baz=168						
W54A	Cherokee Point	65.22	348	P	P	00 21 21.8	+3.4
	baz=167,SNR=6.2						
143A	Socs Landing,	65.24	339	P	P	00 21 19.3	+0.7
X51A	Calhoun	65.25	345	P	P	00 21 19.4	+0.8
X51A	Calhoun	65.25	345	P	P	00 21 21.8	+3.1
	baz=165,SNR=13						
V59A	Middlesex	65.26	352	P	P	00 21 22.3	+3.6
	baz=171						
BG3	Lake Jocassee	65.27	347	P	P	00 21 19.2	+0.5
FPAL	Fort Paine	65.40	345	P	P	00 21 19.2	-0.4
FPAL				IAmb	IAmb	00 21 22.7	
	comp=Z,22nm,1.0s						
V58A	Windy Hill, Pi	65.41	351	P	P	00 21 19.2	-0.5
V58A				IAmb	IAmb	00 21 23.3	
	comp=Z,16nm,0.8s						
V58A	Windy Hill, Pi	65.41	351	P	P	00 21 23.1	+3.4
	baz=170,SNR=5.6						
NATX	Nacogdoches	65.46	336	P	P	00 21 20.6	+0.6
NATX	Nacogdoches	65.46	336	P	P	00 21 24.6	+4.5
	baz=155,SNR=6.7						
W52A	Murphy	65.56	346	P	P	00 21 20.6	-0.1
W52A				IAmb	IAmb	00 21 24.1	
	comp=Z,12nm,0.8s						
V57A	Coltrane Farms	65.60	350	P	P	00 21 24.1	+3.2
	baz=170						
V56A	Mocksville	65.63	350	P	P	00 21 24.8	+3.7
	baz=169,SNR=7.2						
X48A	Hartselle	65.66	343	P	P	00 21 20.8	-0.5
435B	Jarrell	65.69	333	P	P	00 21 20.7	-0.9
435B				IAmb	IAmb	00 21 26.0	
	comp=Z,20nm,0.8s						
435B	Jarrell	65.69	333	P	P	00 21 25.4	+3.9
	baz=153						
Y45A	Yeager Farm, C	65.77	341	P	P	00 21 20.8	-1.2
U59A	Littleton	65.79	352	P	P	00 21 25.3	+3.2
	baz=171						
V55A	Taylorsville	65.79	349	P	P	00 21 21.6	-0.5
V55A				IAmb	IAmb	00 21 25.9	
	comp=Z,16nm,0.8s						
V55A	Taylorsville	65.79	349	P	P	00 21 25.2	+3.1
	baz=168,SNR=6.1						
V54A	Nebo	65.84	348	P	P	00 21 25.8	+3.3
	baz=167,SNR=6.6						
V53A	Saluda	65.90	347	P	P	00 21 22.7	-0.1
V53A				IAmb	IAmb	00 21 27.3	
	comp=Z,20nm,1.1s						
U58A	Oxford	65.92	351	P	P	00 21 26.9	+4.0
	baz=171						
W50A	Signal Mountai	65.96	345	P	P	00 21 23.0	-0.3
CPCT	Cooper Cave	66.03	346	P	P	00 21 22.6	-1.1
CPCT				IAmb	IAmb	00 21 27.5	
	comp=Z,21nm,1.0s						
U57A	Blanch	66.07	351	P	P	00 21 27.2	+3.3
	baz=170,SNR=6.3						
TKL	Tuckaleechee C	66.08	347	P	P	00 21 23.6	-0.4
TKL				pmax	pmax		
	comp=Z,21nm,1.1s						
TKL	Tuckaleechee C	66.08	347	P	P	00 21 23.6	-0.4
TKL				IAmb	IAmb	00 21 27.5	
	comp=Z,21nm,1.1s						
237A	Washetta, Mont	66.10	335	P	P	00 21 25.5	+1.3
HPIG		66.11	324	P	P	00 21 24.2	-0.4
SWET	Sewanee	66.12	345	P	P	00 21 24.4	+0.1
U56A	King	66.14	350	P	P	00 21 24.1	-0.2
U56A				IAmb	IAmb	00 21 28.4	
	comp=Z,12nm,0.7s						
U56A	King	66.14	350	P	P	00 21 28.0	+3.6
	baz=169						
Z41A	Richland Creek	66.19	338	P	P	00 21 24.4	-0.4
Z41A	Richland Creek	66.19	338	P	P	00 21 28.6	+3.9
	baz=157,SNR=6.3						
V52A	Sevierville	66.22	347	P	P	00 21 25.0	+0.1
V52A				IAmb	IAmb	00 21 27.9	
	comp=Z,18nm,0.8s						
OXF	Oxford	66.33	341	P	P	00 21 25.8	+0.2
OXF				pmax	pmax		
	comp=Z,92nm,1.0s						
OXF	Oxford	66.33	341	P	P	00 21 25.8	+0.2
OXF	Oxford	66.33	341	P	P	00 21 28.1	+2.5
	baz=160,SNR=6.9						
V51A	Loudon	66.33	346	P	P	00 21 26.7	+1.1
V51A				IAmb	IAmb	00 21 29.8	
	comp=Z,24nm,1.1s						
JCT	Junction City	66.34	331	P	P	00 21 29.7	+3.9
	baz=151,SNR=10						
U55A	TA2, Sparta	66.40	349	P	P	00 21 29.1	+3.0
	baz=168						
PLAL	Pickwick Lake	66.42	343	P	P	00 21 26.2	+0.1
PLAL				IAmb	IAmb	00 21 29.5	
	comp=Z,22nm,0.9s						
T58A	Grand View Acr	66.47	351	P	P	00 21 30.3	+3.9
	baz=171,SNR=9.1						
U54A	Nelsons Funny	66.55	349	P	P	00 21 27.3	+0.3
U54A	Nelsons Funny	66.55	349	P	P	00 21 30.3	+3.2
	baz=168,SNR=8.4						

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T57A  Hurt             66.61 351  P      P      00 21 27.4 +0.1
T57A  Hurt             66.61 351  P      P      00 21 31.0 +3.6
      baz=170
WLAR  White Oak Lake   66.69 338  P      P      00 21 27.9  0.0
WHTX  Lake Whitney,    66.71 334  P      P      00 21 28.5 +0.4
WHTX  Lake Whitney,    66.71 334  P      P      00 21 31.6 +3.5
      baz=153,SNR=7.4
T56A  Rocky Mt         66.76 350  P      P      00 21 32.2 +3.9
      baz=169,SNR=6.1
X43A  Marvell          66.76 340  P      P      00 21 28.7 +0.4
X43A  Marvell          66.76 340  P      P      00 21 32.4 +4.1
      baz=159
V48A  Smith Brothers   66.83 344  P      P      00 21 28.7  0.0
Z38A  Mt. Pleasant     66.94 336  P      P      00 21 30.1 +0.6
T55A  Pulaski          66.96 350  P      P      00 21 33.3 +3.7
      baz=169,SNR=6.4
T54A  Tazewell         67.03 349  P      P      00 21 33.3 +3.1
      baz=168
CLTN  Cedars of Leba   67.05 345  P      P      00 21 31.4 +1.2
CLTN                              IAmb   IAmb   00 21 33.9
      comp=Z,27nm,0.8s
S58A  Poland Farm, P   67.06 352  P      P      00 21 31.0 +0.8
S58A                              IAmb   IAmb   00 21 34.5
      comp=Z,18nm,1.1s
S58A  Poland Farm, P   67.06 352  P      P      00 21 34.0 +3.8
      baz=171
TXAR  Lajitas Array    67.10 327  P      P      00 21 30.3 -0.5
      comp=Z,11nm,0.9s,baz=139,slow=7.8,SNR=28
TXAR  Lajitas Array    67.10 327  P      P      00 21 29.9 -0.9
TXAR  Lajitas Array    67.10 327  P      P      00 21 29.9 -0.9
TX31  Lajitas Ar. Si   67.10 327  IAmb   IAmb   00 21 35.5
      comp=Z,11nm,0.8s
TX32  Lajitas Array    67.10 327  IAmb   IAmb   00 21 35.4
      comp=Z,11nm,0.8s
T53A  Wise             67.12 348  P      P      00 21 33.6 +2.9
      baz=167
S57A  Dark Hollow, R   67.32 351  P      P      00 21 35.8 +3.9
      baz=170,SNR=7.2
S56A  Natural Bridge   67.33 351  P      P      00 21 35.7 +3.8
      baz=170
U49A  Red Boiling Sp   67.33 345  P      P      00 21 31.6 -0.3
U49A                              IAmb   IAmb   00 21 35.0
      comp=Z,12nm,0.8s
T51A  Gray             67.38 347  P      P      00 21 35.0 +2.7
      baz=166,SNR=6.7
R58B  Mineral          67.39 352  P      P      00 21 32.7 +0.4
R58B                              IAmb   IAmb   00 21 36.8
      comp=Z,21nm,1.1s
R58B  Mineral          67.39 352  P      P      00 21 35.9 +3.7
      baz=171
UALR  University of    67.45 339  P      P      00 21 32.2 -0.5
UALR                              IAmb   IAmb   00 21 36.9
      comp=Z,33nm,0.9s
WVT   Waverly          67.45 343  P      P      00 21 30.7 -2.0
WVT                               pmax   pmax
      comp=Z,56nm,0.9s
WVT   Waverly          67.45 343  P      P      00 21 30.7 -2.0
WVT   Waverly          67.45 343  P      P      00 21 35.1 +2.5
      baz=162
S55A  Lewisburg        67.56 350  P      P      00 21 36.5 +3.1
      baz=169,SNR=6.4
T50A  Nancy            67.61 346  P      P      00 21 36.0 +2.4
      baz=165,SNR=6.1
MIAR  Mount Ida        67.63 338  P      P      00 21 34.2 +0.3
MIAR                              pmax   pmax
      comp=Z,39nm,1.0s
MIAR  Mount Ida        67.63 338  P      P      00 21 34.2 +0.3
MIAR  Mount Ida        67.63 338  P      P      00 21 37.1 +3.2
      baz=157,SNR=19
S54A  Dingess, Beckl   67.71 349  P      P      00 21 33.6 -0.7
S54A                              IAmb   IAmb   00 21 38.3
      comp=Z,26nm,1.1s
S54A  Dingess, Beckl   67.71 349  P      P      00 21 37.3 +3.0
      baz=168
R58A  Rapidan          67.73 352  P      P      00 21 37.9 +3.5
      baz=171
W41B  Gary Mavity, V   67.78 339  P      P      00 21 35.0 +0.2
W41B  Gary Mavity, V   67.78 339  P      P      00 21 38.1 +3.3
      baz=158,SNR=20
R57A  Stanardsville    67.80 352  P      P      00 21 39.0 +4.2
      baz=171,SNR=8.2
Z35A  Perchaven, San   67.83 334  P      P      00 21 36.5 +1.4
T49A  Edmonton         67.84 346  P      P      00 21 35.5 +0.4
T49A                              IAmb   IAmb   00 21 39.2
      comp=Z,24nm,0.9s
T49A  Edmonton         67.84 346  P      P      00 21 37.8 +2.7
      baz=164,SNR=12
GNAR  Gosnell          67.87 341  P      P      00 21 35.9 +0.5
WHAR  Wooly Hollow     67.91 339  P      P      00 21 35.8 +0.2
UTMT  University of    67.91 343  P      P      00 21 35.9 +0.3
S51A  Beattyville      67.96 347  IAmb   IAmb   00 21 39.0
      comp=Z,10nm,0.8s
S51A  Beattyville      67.96 347  P      P      00 21 38.7 +2.8
      baz=166
R55A  Marlinton        68.00 350  P      P      00 21 36.7 +0.5
R55A                              IAmb   IAmb   00 21 40.6
      comp=Z,26nm,1.1s
R55A  Marlinton        68.00 350  P      P      00 21 40.3 +4.1
      baz=169,SNR=5.6
R54A  Victor           68.03 350  P      P      00 21 39.2 +2.8
      baz=168
T47A  Sharon Grove     68.09 344  P      P      00 21 37.8 +1.1
ABTX  Abilene, Hawle   68.14 332  P      P      00 21 40.7 +3.5
      baz=151,SNR=16
S50A  Richmond         68.16 347  P      P      00 21 39.6 +2.4
      baz=165,SNR=9.4
HICK  Hickman          68.19 342  P      P      00 21 38.2 +0.8
W39A  Magazine         68.29 338  P      P      00 21 41.8 +3.8
      baz=157,SNR=21
FCAR  Ozark Folk Cen   68.41 340  P      P      00 21 39.1 +0.4
HENM  Henderson Moun   68.42 342  P      P      00 21 39.9 +1.1
S49A  Springfield      68.44 346  P      P      00 21 41.3 +2.4
      baz=165,SNR=5.5
T45A  Paducah          68.50 343  P      P      00 21 40.2 +1.0
Q57A  Strasburg        68.51 352  P      P      00 21 43.8 +4.5
      baz=171,SNR=6.3
R51A  Hillsboro        68.60 348  P      P      00 21 42.9 +3.1
      baz=166,SNR=6.0
Q56A  Snyder Ridge,    68.61 351  P      P      00 21 44.0 +4.0
      baz=170
Q55A  Buckhannon       68.69 351  P      P      00 21 44.5 +4.0
      baz=169
R50A  Paris            68.72 347  P      P      00 21 43.4 +2.7
      baz=166
PBMO  Poplar Bluff     68.75 341  P      P      00 21 40.8  0.0
Q53A  Leroy            68.78 349  P      P      00 21 44.2 +3.2
      baz=168,SNR=5.2
Q54A  Coxs Mills       68.79 350  IAmb   IAmb   00 21 44.8
      comp=Z,15nm,1.0s
Q54A  Coxs Mills       68.79 350  P      P      00 21 44.1 +3.0
      baz=169
P58A  Pank, Wackersv   68.83 353  P      P      00 21 45.8 +4.6
      baz=172
P59A  Jarrettsville    68.86 354  P      P      00 21 46.0 +4.6
      baz=173,SNR=6.8
P57A  Homestead Farm   68.90 352  P      P      00 21 46.2 +4.4
      baz=171,SNR=7.2
R49A  Shelbyville      68.90 346  IAmb   IAmb   00 21 45.2
      comp=Z,14nm,1.0s
R49A  Shelbyville      68.90 346  P      P      00 21 44.3 +2.5
      baz=165,SNR=5.4
Q52A  Bidwell          69.00 349  P      P      00 21 45.3 +2.9
      baz=167
P56A  Dayton Farm, R   69.03 352  P      P      00 21 46.9 +4.4
      baz=171,SNR=6.4
U40A  Yellville        69.06 339  P      P      00 21 46.0 +3.1
      baz=158,SNR=24
WCI   Wyandotte Cave   69.08 345  P      P      00 21 44.0 +1.1
WCI                               pmax   pmax
      comp=Z,16nm,0.8s
WCI   Wyandotte Cave   69.08 345  P      P      00 21 44.0 +1.1
WCI                               IAmb   IAmb   00 21 45.7
      comp=Z,16nm,0.8s
WCI   Wyandotte Cave   69.08 345  P      P      00 21 45.2 +2.3
      baz=164
P55A  Reedsville       69.16 351  P      P      00 21 47.2 +3.8
      baz=170
T42A  Van Buren        69.17 341  P      P      00 21 44.9 +1.5
T42A                              IAmb   IAmb   00 21 47.8
      comp=Z,32nm,1.0s
Q50A  Georgetown       69.20 347  P      P      00 21 46.5 +2.9
      baz=166
MVL   Millersville     69.24 354  P      P      00 21 45.3 +1.5
MVL                               IAmb   IAmb   00 21 49.5
      comp=Z,27nm,1.1s
Q51A  Peebles          69.26 348  P      P      00 21 43.7 -0.2
Q51A                              IAmb   IAmb   00 21 47.8
      comp=Z,22nm,0.9s
Q51A  Peebles          69.26 348  P      P      00 21 46.9 +2.9
      baz=166,SNR=6.1
SYO   Syowa Base       69.27 159⇓ePP     P      00 21 41.6 -2.1
SYO   Syowa Base       69.27 159⇓ipP            00 21 50.2
SYO   Syowa Base       69.27 159⇓isP            00 21 54.2
S44A  Carbondale       69.29 343  P      P      00 21 44.9 +0.7
VNDA  Vanda            69.30 190  P      P      00 21 43.6 -0.2
      comp=Z,5.3nm,1.1s,baz=154,slow=4.0,SNR=13
SIUC  Southern Illin   69.30 343  P      P      00 21 44.9 +0.7
MCWV  Mont Chateau     69.31 351  P      P      00 21 45.2 +0.9
W35A  Tecumseh         69.31 336  P      P      00 21 45.0 +0.6
P54A  Burton           69.34 350  P      P      00 21 47.6 +3.1
      baz=169,SNR=10
P53A  Whipple          69.37 350  P      P      00 21 45.4 +0.8
P53A                              IAmb   IAmb   00 21 48.9
      comp=Z,20nm,1.0s
P53A  Whipple          69.37 350  P      P      00 21 48.0 +3.3
      baz=168
O58A  Lewisberry       69.42 353  P      P      00 21 49.0 +4.0
      baz=172,SNR=6.5
O59A  Robesonia        69.53 354  P      P      00 21 50.1 +4.4
      baz=173
Q49A  Aurora           69.53 347  P      P      00 21 48.3 +2.6
      baz=165,SNR=7.0
O57A  Amberson         69.58 353  P      P      00 21 50.0 +4.1
      baz=172
FNO   Franklin         69.60 335  P      P      00 21 47.9 +1.7
TUL1  Leonard          69.61 337  P      P      00 21 47.4 +1.2
TUL1  Leonard          69.61 337  P      P      00 21 49.5 +3.3
      baz=155,SNR=28
MGMO  Mountain Grove   69.62 340  P      P      00 21 46.1 -0.2
U38A  Gravette         69.62 338  IAmb   IAmb   00 21 50.1
      comp=Z,27nm,0.8s
P52A  Corning          69.64 349  P      P      00 21 49.3 +3.0
      baz=168,SNR=5.1
Q48A  North Vernon     69.64 346  P      P      00 21 49.0 +2.7
      baz=164
WMOK  Wichita Mounta   69.66 334  P      P      00 21 47.2 +0.7
WMOK                              pmax   pmax
      comp=Z,10.0nm,1.0s
WMOK  Wichita Mounta   69.66 334  P      P      00 21 47.2 +0.7
WMOK  Wichita Mounta   69.66 334  P      P      00 21 49.3 +2.8
      baz=152,SNR=12
O56A  Blue Knob Stat   69.74 352  P      P      00 21 48.1 +1.1
O56A                              IAmb   IAmb   00 21 52.7
      comp=Z,20nm,1.1s
O56A  Blue Knob Stat   69.74 352  P      P      00 21 51.3 +4.3
      baz=171
LUPA  Lehigh Univers   69.75 355  P      P      00 21 48.2 +1.2
OKCFA Oklahoma City    69.76 335  P      P      00 21 48.4 +1.3
O55A  Ligonier         69.78 351  P      P      00 21 51.1 +3.9
      baz=170
MNTX  Cornudas Mount   69.89 327  IAmb   IAmb   00 21 52.0
      comp=Z,13nm,0.8s
MNTX  Cornudas Mount   69.89 327  P      P      00 21 51.0 +3.0
      baz=146,SNR=13
P50A  Jamestown        69.91 348  P      P      00 21 50.8 +2.9
      baz=166,SNR=6.1
OLIL  Olney            69.98 344  P      P      00 21 48.3 -0.1
OLIL                              IAmb   IAmb   00 21 51.2
      comp=Z,16nm,0.8s
N60A  Cedar Hill Far   70.00 355  P      P      00 21 52.7 +4.2
      baz=174,SNR=6.3
P49A  Miami Univ. Ec   70.01 347  P      P      00 21 50.9 +2.3
      baz=165,SNR=7.0
SSPA  Standing Stone   70.03 353  P      P      00 21 52.8 +4.1
      baz=172
O52A  Adamsville       70.06 349  IAmb   IAmb   00 21 52.2
      comp=Z,16nm,0.8s
O52A  Adamsville       70.06 349  P      P      00 21 51.9 +3.0
      baz=168
P48A  Milroy           70.08 346  IAmb   IAmb   00 21 52.2
      comp=Z,13nm,0.8s
P48A  Milroy           70.08 346  P      P      00 21 51.0 +1.9
      baz=165
O53A  New Philadelph   70.09 350  P      P      00 21 52.0 +2.9
      baz=168
N59A  State Game Lan   70.10 354  P      P      00 21 49.7 +0.6
N59A                              IAmb   IAmb   00 21 54.0
      comp=Z,16nm,0.9s
N59A  State Game Lan   70.10 354  P      P      00 21 53.7 +4.5
      baz=174
N58A  Sunbury          70.11 354  IAmb   IAmb   00 21 58.1
      comp=Z,16nm,0.8s
N58A  Sunbury          70.11 354  P      P      00 21 53.4 +4.2
      baz=173,SNR=6.1
N57A  Milroy           70.11 353  P      P      00 21 53.2 +4.0
      baz=172,SNR=6.4
CCM   Cathedral Cave   70.17 341  P      P      00 21 48.3 -1.3
CCM                               pmax   pmax
      comp=Z,77nm,0.9s
CCM   Cathedral Cave   70.17 341  P      P      00 21 48.3 -1.3
CCM   Cathedral Cave   70.17 341  P      P      00 21 52.9 +3.3
      baz=159
O51A  Pataskala        70.22 349  P      P      00 21 52.8 +2.9
      baz=167
N55A  Marion Center    70.30 352  P      P      00 21 54.4 +4.0
      baz=171,SNR=8.7
N56A  West Decatur     70.35 352  P      P      00 21 54.7 +4.0
      baz=171
ACSO  Alum Creek Sta   70.36 348  IAmb   IAmb   00 21 54.6
      comp=Z,25nm,0.9s
ACSO  Alum Creek Sta   70.36 348  P      P      00 21 53.7 +3.0
      baz=167,SNR=6.4
Q44A  Meyer Farm, Va   70.37 343  IAmb   IAmb   00 21 53.5
      comp=Z,19nm,0.8s
O50A  Cable            70.39 348  P      P      00 21 53.5 +2.5
      baz=166
M60A  Port Jervis      70.41 355  P      P      00 21 55.4 +4.4
      baz=175
O49A  Covington        70.57 347  IAmb   IAmb   00 21 56.2
      comp=Z,25nm,0.9s
O49A  Covington        70.57 347  P      P      00 21 54.4 +2.4
      baz=166
N53A  Lisbon           70.58 350  IAmb   IAmb   00 21 57.8
      comp=Z,18nm,1.1s
N53A  Lisbon           70.58 350  P      P      00 21 54.6 +2.6
      baz=169
LIC   Lamto            70.59  71  ePKP1  P      00 21 52.6 -0.2
      comp=Z,94nm,1.0s
M58A  Price’s Panora   70.61 354  P      P      00 21 56.7 +4.5
      baz=173,SNR=6.9
N54A  Moraine State    70.61 351  P      P      00 21 56.1 +3.8
      baz=170,SNR=6.7
MSTX  Muleshoe         70.62 330  P      P      00 21 55.9 +3.4
      baz=149
M57A  Sunshine Farm,   70.64 353  P      P      00 21 52.8 +0.4
M57A                              IAmb   IAmb   00 21 57.4
      comp=Z,16nm,1.1s
M57A  Sunshine Farm,   70.64 353  P      P      00 21 56.6 +4.2
      baz=172
M59A  Waymart          70.69 355  P      P      00 21 57.2 +4.5
      baz=174,SNR=8.0
KSPA  Keystone Colle   70.73 354  P      P      00 21 52.1 -0.9
KSPA                              IAmb   IAmb   00 21 58.0
      comp=Z,20nm,1.1s
KSCT  Kent School, K   70.74 356  P      P      00 21 52.4 -0.6
T35A  Sooner Cattle    70.77 337  P      P      00 21 53.8 +0.5
T35A                              IAmb   IAmb   00 21 58.0
      comp=Z,37nm,1.1s
L63A  North Scituate   70.79 358  P      P      00 21 57.7 +4.4
      baz=177
O48A  Farmland         70.79 347  P      P      00 21 56.0 +2.7
      baz=165
TIC   Toumodi          70.83  71  ePKP1  P      00 21 51.7 -2.6
M56A  Emporium         70.90 353  P      P      00 21 54.5 +0.5
M56A                              IAmb   IAmb   00 21 59.3
      comp=Z,22nm,0.8s
M56A  Emporium         70.90 353  P      P      00 21 57.4 +3.4
      baz=171,SNR=7.0
KIC   Kosan Boka       70.91  71  ePKP1  P      00 21 51.8 -2.9
      comp=Z,77nm,0.9s
N50A  Nevada           70.92 348  P      P      00 21 56.7 +2.6
      baz=167
N51A  Ashland          70.93 349  P      P      00 21 54.7 +0.5
AMTX  Amarillo         70.94 332  P      P      00 21 55.0 +0.5
AMTX                              IAmb   IAmb   00 21 59.3
      comp=Z,24nm,1.0s
AMTX  Amarillo         70.94 332  P      P      00 21 57.9 +3.3
      baz=150
M55A  Ridgway          70.95 352  P      P      00 21 55.5 +1.2
M55A                              IAmb   IAmb   00 21 58.5
      comp=Z,28nm,0.9s
M55A  Ridgway          70.95 352  P      P      00 21 58.2 +3.9
      baz=171,SNR=9.1
DBIC  Dimbokro         70.98  71  P      P      00 21 54.8 -0.4
      comp=Z,30nm,0.8s,baz=210,slow=5.3,SNR=15
DBIC  Dimbokro         70.98  71  P      P      00 21 56.0 +0.8
DBIC                              pmax   pmax
      comp=Z,27nm,0.8s
DBIC  Dimbokro         70.98  71  P      P      00 21 56.0 +0.8
DBIC                              IAmb   IAmb   00 22 00.8
      comp=Z,27nm,0.8s
L60A  Shokan           71.05 356  P      P      00 21 58.8 +4.0
      baz=175
M54A  Oil Creek Stat   71.10 351  P      P      00 21 55.8 +0.5
M54A                              IAmb   IAmb   00 22 00.7
      comp=Z,28nm,1.1s
M54A  Oil Creek Stat   71.10 351  P      P      00 21 58.4 +3.1
      baz=170,SNR=6.0
M53A  WI Miller and    71.18 351  P      P      00 21 59.1 +3.4
      baz=169
U32A  Winter Ranch,    71.19 335  P      P      00 21 56.1 +0.2
P43A  Skaggs, Pawnee   71.19 343  P      P      00 21 55.9 +0.1
L58A  Harry Jones Me   71.22 354  P      P      00 22 00.2 +4.2
      baz=174,SNR=6.2
N49A  Columbus Grove   71.25 348  P      P      00 21 59.2 +3.1
      baz=166,SNR=12
L57A  Andrews Acres    71.27 354  P      P      00 21 60.0 +3.7
      baz=173
L59A  Walton           71.30 355  P      P      00 21 57.9 +1.5
L59A                              IAmb   IAmb   00 22 01.8
      comp=Z,38nm,1.1s
L59A  Walton           71.30 355  P      P      00 22 01.1 +4.6
      baz=174,SNR=6.3
ALLY  Alegheny Colle   71.31 351  P      P      00 21 57.0 +0.5
ALLY                              IAmb   IAmb   00 22 00.3
      comp=Z,33nm,1.1s
SFIN  Lafayette        71.32 345  P      P      00 21 56.9 +0.4
SFIN                              IAmb   IAmb   00 21 59.2
      comp=Z,22nm,0.8s
SFIN  Lafayette        71.32 345  P      P      00 21 58.8 +2.3
      baz=163,SNR=6.3
N48A  Decatur          71.35 347  P      P      00 21 59.5 +2.8
      baz=165,SNR=7.6
M52A  Chesterland      71.38 350  P      P      00 21 57.7 +0.8
M52A                              IAmb   IAmb   00 22 01.0
      comp=Z,26nm,0.9s
M52A  Chesterland      71.38 350  P      P      00 22 00.2 +3.3
      baz=168
BINY  Binghamton       71.39 354  P      P      00 21 58.0 +1.1
BINY  Binghamton       71.39 354  P      P      00 22 00.9 +4.0
      baz=173
L61B  Northampton      71.42 357  P      P      00 22 01.6 +4.5
      baz=176
O44A  Mansfield        71.42 344  P      P      00 21 57.4 +0.2
O44A                              IAmb   IAmb   00 21 59.9
      comp=Z,23nm,0.8s
L56A  Greenwood        71.48 353  P      P      00 21 59.3 +1.7
L56A                              IAmb   IAmb   00 22 03.0
      comp=Z,34nm,1.1s
L56A  Greenwood        71.48 353  P      P      00 22 01.5 +4.0
      baz=172,SNR=7.3
N47A  Urbana           71.50 347  P      P      00 21 58.3 +0.6
N47A                              IAmb   IAmb   00 22 01.1
      comp=Z,41nm,1.1s
N47A  Urbana           71.50 347  P      P      00 21 60.0 +2.3
      baz=164,SNR=9.5
M50A  Fremont          71.51 349  P      P      00 21 58.2 +0.5
M50A                              IAmb   IAmb   00 22 01.6
      comp=Z,24nm,0.9s
M50A  Fremont          71.51 349  P      P      00 22 00.8 +3.1
      baz=167
319A  Douglas          71.54 324  P      P      00 21 58.2 -0.1
319A                              IAmb   IAmb   00 22 03.6
      comp=Z,22nm,0.9s
L55A  Hinsdale         71.62 352  P      P      00 22 02.4 +4.0
      baz=171,SNR=5.8
L53A  Girard           71.62 351  P      P      00 22 01.6 +3.2
      baz=170,SNR=5.7
121A  Cookes Peak, D   71.73 326  P      P      00 22 00.9 +1.4
121A                              IAmb   IAmb   00 22 04.9
      comp=Z,20nm,0.8s
121A  Cookes Peak, D   71.73 326  P      P      00 22 04.3 +4.9
      baz=145,SNR=12
M49A  Liberty Center   71.75 348  P      P      00 22 02.1 +3.0
      baz=166,SNR=6.8
ERPA  Erie             71.75 351  P      P      00 21 59.1  0.0
ERPA                              IAmb   IAmb   00 22 03.4
      comp=Z,29nm,0.8s
P40A  Paris            71.77 341  P      P      00 21 59.9 +0.6
L54A  Sinclairville    71.78 352  P      P      00 22 03.2 +3.9
      baz=170,SNR=12
WVNY  West Valley, N   71.86 352  P      P      00 22 00.7 +0.9
WVNY                              IAmb   IAmb   00 22 04.6
      comp=Z,35nm,0.9s
M48A  Edgerton         71.89 347  P      P      00 22 00.4 +0.4
M48A                              IAmb   IAmb   00 22 03.6
      comp=Z,27nm,0.8s
M48A  Edgerton         71.89 347  P      P      00 22 02.9 +2.9
      baz=165
K58A  Earlville        71.92 355  P      P      00 22 00.2  0.0
K58A                              IAmb   IAmb   00 22 05.0
      comp=Z,20nm,0.9s
K58A  Earlville        71.92 355  P      P      00 22 04.2 +4.0
      baz=174
M47A  Cromwell         71.95 347  P      P      00 22 03.0 +2.7
      baz=165,SNR=5.3
HDIL  Hopedale         72.00 344  P      P      00 22 00.8 +0.1
HDIL                              IAmb   IAmb   00 22 03.8
      comp=Z,31nm,0.7s
HDIL  Hopedale         72.00 344  P      P      00 22 03.3 +2.7
      baz=161
K56A  Middlesex        72.01 353  P      P      00 22 04.2 +3.5
      baz=172
K54A  Basiliko Farm,   72.07 352  P      P      00 22 05.0 +4.0
      baz=171,SNR=5.5
L50A  Kingsville       72.10 349  P      P      00 22 03.2 +2.0
      baz=167
K55A  Perry            72.11 353  P      P      00 22 05.0 +3.7
      baz=172
P38A  Dawn             72.28 340  IAmb   IAmb   00 22 06.0
      comp=Z,24nm,0.7s
L48A  N Adams          72.28 348  P      P      00 22 05.1 +2.8
      baz=166,SNR=5.9
J61A  Chester          72.31 357  P      P      00 22 07.2 +4.8
      baz=176
L49A  Milan            72.32 348  P      P      00 22 05.8 +3.3
      baz=166,SNR=5.6
M44A  Midewin, Midew   72.50 345  P      P      00 22 03.6 +0.1
M44A                              IAmb   IAmb   00 22 07.7
      comp=Z,28nm,1.1s
K52A  Tillsonburg      72.50 351  P      P      00 22 07.1 +3.5
      baz=169
J59A  Piesco           72.53 356  P      P      00 22 05.7 +1.9
J59A  Piesco           72.53 356  P      P      00 22 08.2 +4.4
      baz=175
J56A  Wolcott          72.53 354  P      P      00 22 04.8 +1.0
J56A                              IAmb   IAmb   00 22 08.1
      comp=Z,24nm,0.9s
J56A  Wolcott          72.53 354  P      P      00 22 07.4 +3.6
      baz=173
N41A  Harden Midland   72.54 343  P      P      00 22 05.6 +1.7
J57A  Williamstown     72.59 354  P      P      00 22 05.4 +1.3
J57A                              IAmb   IAmb   00 22 08.6
      comp=Z,20nm,1.0s
J57A  Williamstown     72.59 354  P      P      00 22 08.0 +3.9
      baz=173
J55A  Hilton           72.62 353  P      P      00 22 04.0 -0.3
J55A                              IAmb   IAmb   00 22 09.3
      comp=Z,20nm,0.9s
L46A  Eue Claire       72.72 346  P      P      00 22 05.1 +0.2
L46A                              IAmb   IAmb   00 22 07.7
      comp=Z,30nm,0.7s
L46A  Eue Claire       72.72 346  P      P      00 22 07.5 +2.6
      baz=164
J54A  Appleton         72.72 352  P      P      00 22 03.1 -1.8
J54A                              IAmb   IAmb   00 22 09.8
      comp=Z,15nm,0.9s
KSU1  Kansas State U   72.77 338  P      P      00 22 08.3 +3.0
      baz=155
K50A  Casco            72.78 349  P      P      00 22 05.8 +0.5
K50A                              IAmb   IAmb   00 22 08.8
      comp=Z,32nm,0.8s
I58A  Old Forge        72.79 355  P      P      00 22 08.7 +3.4
      baz=174
I60A  Shoreham         72.84 357  P      P      00 22 09.6 +4.0
      baz=176
R32A  Long Quarter,    72.89 336  P      P      00 22 06.9 +0.8
R32A                              IAmb   IAmb   00 22 10.4
      comp=Z,31nm,0.9s
J52A  Paris            72.92 351  P      P      00 22 09.4 +3.4
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      baz=169,SNR=8.1
TUC   Tucson           73.06 324  P       P       00 22 06.2 -1.1
TUC                               pmax    pmax
      comp=Z,7.0nm,1.2s
TUC   Tucson           73.06 324  P       P       00 22 06.2 -1.1
TUC   Tucson           73.06 324  P       P       00 22 11.5 +4.2
      baz=142
K48A  Perry            73.06 348  P       P       00 22 09.8 +2.9
      baz=166,SNR=7.2
ANMO  Albuquerque      73.08 328  P       P       00 22 07.8 +0.3
ANMO                              pmax    pmax
      comp=Z,13nm,0.9s
ANMO  Albuquerque      73.08 328  P       P       00 22 07.8 +0.3
ANMO  Albuquerque      73.08 328  P       P       00 22 11.9 +4.4
      baz=146
I57A  Carthage         73.09 355  P       P       00 22 11.0 +3.9
      baz=174
K47A  Vermontville     73.09 348  P       P       00 22 09.6 +2.5
      baz=165,SNR=6.0
PECO  Prince Edward    73.20 354  P       P       00 22 08.1 +0.4
PECO                              IAmb    IAmb    00 22 12.2
      comp=Z,15nm,0.8s
K46A  Dorr             73.26 347  P       P       00 22 10.6 +2.5
      baz=165
N38A  Joes South For   73.28 341  P       P       00 22 08.8 +0.5
N38A                              IAmb    IAmb    00 22 14.4
      comp=Z,35nm,1.1s
J49A  Marlette         73.43 349  P       P       00 22 11.7 +2.6
      baz=167
H58A  Gabriels         73.46 356  P       P       00 22 13.3 +4.0
      baz=175
L42A  Oliver, Polo     73.46 344  P       P       00 22 09.9 +0.6
L42A                              IAmb    IAmb    00 22 13.3
      comp=Z,18nm,0.9s
H61A  Lyndonville      73.47 358  P       P       00 22 14.0 +4.7
      baz=177
J48A  Bridge Port      73.48 349  P       P       00 22 10.0 +0.6
J48A                              IAmb    IAmb    00 22 13.2
      comp=Z,39nm,0.9s
J48A  Bridge Port      73.48 349  P       P       00 22 12.4 +3.0
      baz=166,SNR=8.4
I51A  Listowel         73.54 351  P       P       00 22 13.2 +3.4
      baz=169,SNR=10
I55A  Frankford        73.55 353  P       P       00 22 13.3 +3.6
      baz=172
EMMW  East Machias     73.59   1  P       P       00 22 10.2 +0.2
EMMW                              IAmb    IAmb    00 22 22.8
      comp=Z,34nm,1.2s
J47A  Sunmer           73.61 348  P       P       00 22 09.9 -0.3
J47A                              IAmb    IAmb    00 22 13.8
      comp=Z,32nm,0.9s
J47A  Sunmer           73.61 348  P       P       00 22 12.6 +2.4
      baz=165
CBKS  Cedar Bluff      73.61 335  P       P       00 22 11.1 +0.7
CBKS                              pmax    pmax
      comp=Z,36nm,0.8s
CBKS  Cedar Bluff      73.61 335  P       P       00 22 11.1 +0.7
CBKS                              IAmb    IAmb    00 22 14.9
      comp=Z,36nm,0.8s
CBKS  Cedar Bluff      73.61 335  P       P       00 22 14.2 +3.8
      baz=152,SNR=7.3
H56A  Elgin            73.79 354  P       P       00 22 15.0 +3.8
      baz=173
H55A  Tweed            73.83 354  P       P       00 22 14.5 +3.1
      baz=172
FRNY  Flat Rock        73.84 356  P       P       00 22 12.5 +1.0
214A  Organ Pipe Nat   73.85 322  P       P       00 22 12.6 +0.7
214A                              IAmb    IAmb    00 22 17.4
      comp=Z,29nm,0.9s
214A  Organ Pipe Nat   73.85 322  P       P       00 22 16.8 +4.9
      baz=141,SNR=15
J46A  Howard City      73.87 347  P       P       00 22 14.5 +2.9
      baz=165
L40A  Anamosa          73.91 343  P       P       00 22 11.8 -0.2
I49A  Point Hope       73.95 349  P       P       00 22 12.1  0.0
I49A                              IAmb    IAmb    00 22 15.7
      comp=Z,30nm,0.8s
I49A  Point Hope       73.95 349  P       P       00 22 15.2 +3.0
      baz=167
H53A  Bobcaygeon       74.00 353  P       P       00 22 15.8 +3.4
      baz=171
T25A  Trinidad         74.01 331  P       P       00 22 12.7 -0.2
T25A                              IAmb    IAmb    00 22 18.1
      comp=Z,24nm,0.9s
T25A  Trinidad         74.01 331  P       P       00 22 17.5 +4.5
      baz=148,SNR=13
N35A  Tabor            74.06 339  P       P       00 22 13.7 +0.8
G62A  West of Eustis   74.11 359  P       P       00 22 17.7 +4.6
      baz=178
H52A  Wyevale          74.22 352  P       P       00 22 17.1 +3.5
      baz=170
SCIA  State Center     74.30 341  P       P       00 22 14.7 +0.4
SCIA                              IAmb    IAmb    00 22 19.7
      comp=Z,28nm,0.9s
I47A  Gladwin          74.31 348  P       P       00 22 15.6 +1.4
I47A                              IAmb    IAmb    00 22 17.9
      comp=Z,29nm,0.8s
I47A  Gladwin          74.31 348  P       P       00 22 17.3 +3.1
      baz=166,SNR=6.2
I48A  Sherman Twp      74.33 349  P       P       00 22 17.5 +3.2
      baz=166,SNR=9.3
X18A  Snowflake        74.40 326  P       P       00 22 15.9 +0.7
I46A  Reed City        74.41 348  P       P       00 22 17.4 +2.6
      baz=165
JFWS  Jewell Farm      74.46 344  P       P       00 22 16.2 +1.0
JFWS                              pmax    pmax
      comp=Z,17nm,0.6s
JFWS  Jewell Farm      74.46 344  P       P       00 22 16.2 +1.0
JFWS                              IAmb    IAmb    00 22 18.8
      comp=Z,17nm,0.6s
JFWS  Jewell Farm      74.46 344  P       P       00 22 18.5 +3.4
      baz=161,SNR=5.3
N33A  J Bar K, Exete   74.53 338  P       P       00 22 17.1 +1.5
G53A  Haliburton       74.54 353  P       P       00 22 19.3 +3.7
      baz=171,SNR=5.3
G54A  Lake Saint Pet   74.76 353  P       P       00 22 20.2 +3.4
      baz=172
W18A  Petrified Fore   74.77 326  P       P       00 22 18.6 +1.3
W18A                              IAmb    IAmb    00 22 23.2
      comp=Z,30nm,1.1s
W18A  Petrified Fore   74.77 326  P       P       00 22 22.1 +4.7
      baz=144,SNR=9.5
H48A  Harrisville      74.77 349  P       P       00 22 18.0 +1.1
H48A  Harrisville      74.77 349  P       P       00 22 20.1 +3.3
      baz=167
K38A  Parkersburg      74.86 342  P       P       00 22 18.1 +0.6
K38A                              IAmb    IAmb    00 22 21.4
      comp=Z,28nm,0.9s
KSCO  Kaye Shedlock’   74.88 333  P       P       00 22 18.2 +0.3
KSCO                              IAmb    IAmb    00 22 22.9
      comp=Z,33nm,1.0s
KSCO  Kaye Shedlock’   74.88 333  P       P       00 22 22.4 +4.6
      baz=150
SDCO  Great Sand Dun   74.98 331  P       P       00 22 19.8 +1.0
SDCO  Great Sand Dun   74.98 331  P       P       00 22 22.8 +4.1
      baz=147,SNR=8.0
113A  Mohawk Valley,   74.99 322  P       P       00 22 18.3 -0.2
F55A  Otter Lake       75.03 355  P       P       00 22 22.4 +4.0
      baz=173
X16A  Lo Mia Camp, P   75.06 325  IAmb    IAmb    00 22 25.1
      comp=Z,24nm,1.1s
I42A  Draeger Farm,    75.07 345  P       P       00 22 19.3 +0.6
I42A                              IAmb    IAmb    00 22 22.4
      comp=Z,18nm,0.8s
GLMI  Grayling         75.11 348  P       P       00 22 19.2 +0.4
GLMI                              IAmb    IAmb    00 22 22.8
      comp=Z,28nm,0.8s
GLMI  Grayling         75.11 348  P       P       00 22 21.9 +3.1
      baz=166
F52A  Sundridge        75.28 352  P       P       00 22 23.2 +3.3
      baz=170,SNR=6.4
ALGO  Algonquin Park   75.30 353  P       P       00 22 23.4 +3.4
      baz=172,SNR=7.7
G47A  Hillman          75.32 349  P       P       00 22 22.9 +2.9
      baz=166,SNR=5.1
E58A  La Victoria      75.36 357  P       P       00 22 23.7 +3.4
      baz=176
H43A  Windswept, Lux   75.38 346  P       P       00 22 19.9 -0.5
I40A  Norwalk          75.47 344  P       P       00 22 21.8 +0.8
I40A                              IAmb    IAmb    00 22 24.5
      comp=Z,14nm,0.6s
F51A  Arnstein         75.49 352  P       P       00 22 24.2 +3.2
      baz=170,SNR=5.1
G45A  Suttons Bay      75.50 348  P       P       00 22 21.6 +0.5
G45A                              IAmb    IAmb    00 22 25.0
      comp=Z,19nm,0.9s
G45A  Suttons Bay      75.50 348  P       P       00 22 24.1 +2.9
      baz=165
S22A  4UR Ranch, Cre   75.56 330  P       P       00 22 23.6 +1.5
S22A  4UR Ranch, Cre   75.56 330  P       P       00 22 26.2 +4.2
      baz=146
F49A  Sandfield        75.61 350  P       P       00 22 24.7 +3.0
      baz=168,SNR=7.1
G46A  Petoskey         75.63 348  P       P       00 22 25.0 +3.1
      baz=166
E56A  St. Veronique    75.63 356  P       P       00 22 25.3 +3.5
      baz=174
E53A  Dumoine, Ponti   75.69 354  P       P       00 22 25.5 +3.3
      baz=172
E54A  Lac Daplat, Po   75.70 354  P       P       00 22 25.7 +3.5
      baz=172
F48A  Evansville       75.76 350  P       P       00 22 25.7 +3.1
      baz=168,SNR=7.9
GLA   Glamis           75.78 321  P       P       00 22 23.6 +0.5
GLA                               pmax    pmax
      comp=Z,9.0nm,0.9s
GLA   Glamis           75.78 321  P       P       00 22 23.6 +0.5
Q24A  Divide           75.86 332  P       P       00 22 24.7 +1.0
Q24A                              IAmb    IAmb    00 22 28.8
      comp=Z,24nm,0.8s
Q24A  Divide           75.86 332  P       P       00 22 28.2 +4.5
      baz=148
MVCO  Mesa Verde       75.88 328  P       P       00 22 24.7 +0.9
MVCO                              IAmb    IAmb    00 22 29.0
      comp=Z,22nm,0.9s
MVCO  Mesa Verde       75.88 328  P       P       00 22 28.3 +4.5
      baz=145,SNR=14
WUAZ  Wupatki          75.89 325  P       P       00 22 25.2 +1.4
WUAZ                              IAmb    IAmb    00 22 29.4
      comp=Z,25nm,0.9s
WUAZ  Wupatki          75.89 325  P       P       00 22 28.8 +5.0
      baz=142,SNR=13
D62A  Allapoint, All   75.96 360  P       P       00 22 25.5 +1.8
D62A                              IAmb    IAmb    00 22 28.8
      comp=Z,28nm,1.0s
E51A  G1948 Merrick    76.03 352  P       P       00 22 27.6 +3.5
      baz=170
D57A  Chemin Vers le   76.03 356  P       P       00 22 28.1 +4.0
      baz=175
D58A  Chemin du LacG   76.06 357  P       P       00 22 28.3 +4.0
      baz=176
F45A  CMU Biological   76.10 348  P       P       00 22 27.4 +2.9
      baz=165,SNR=5.2
D56A  ZEC Mazanza, M   76.12 356  P       P       00 22 28.1 +3.5
      baz=175
D55A  Sainte-Anne-du   76.14 355  P       P       00 22 28.1 +3.4
      baz=174
Y12C  Blythe           76.15 322  P       P       00 22 25.8 +0.7
Y12C                              IAmb    IAmb    00 22 30.5
      comp=Z,16nm,0.8s
Y12C  Blythe           76.15 322  P       P       00 22 29.5 +4.4
      baz=140,SNR=6.7
I37A  Lemond, Waseca   76.30 342  P       P       00 22 26.7 +1.0
OGNE  Ogallala         76.33 335  P       P       00 22 28.1 +2.0
OGNE                              IAmb    IAmb    00 22 30.8
      comp=Z,16nm,0.8s
E48A  Lockeyer         76.33 351  P       P       00 22 29.3 +3.5
      baz=168,SNR=9.3
D54A  Lac Fusel, La    76.36 354  P       P       00 22 29.2 +3.2
      baz=173
PDMCI Parker Dam,Lak   76.37 323  P       P       00 22 30.8 +4.5
      baz=140
D53A  Lac Vacive, Po   76.38 354  IAmb    IAmb    00 22 30.4
      comp=Z,22nm,1.1s
D53A  Lac Vacive, Po   76.38 354  P       P       00 22 29.6 +3.5
      baz=172,SNR=6.4
E47A  Iron Bridge      76.47 350  P       P       00 22 29.7 +3.1
      baz=167,SNR=12
BAR   Barrett          76.53 320  P       P       00 22 27.7 +0.4
BAR                               IAmb    IAmb    00 22 32.9
      comp=Z,21nm,1.1s
E46A  Sault Ste Mari   76.55 349  P       P       00 22 27.1 +0.1
E46A                              IAmb    IAmb    00 22 31.7
      comp=Z,35nm,1.0s
D51A  Lot 18 Range I   76.57 353  P       P       00 22 30.6 +3.4
      baz=170,SNR=5.0
BC3   Big Chuckawall   76.58 321  P       P       00 22 32.2 +4.5
      baz=139,SNR=13
K31A  O'Neill          76.65 338  P       P       00 22 28.1 +0.3
PV01  Paradox Valley   76.66 329  P       P       00 22 28.9 +0.6
G40A  Rib Lake         76.67 345  P       P       00 22 29.3 +1.5
F42A  Maple Grove Fa   76.68 346  P       P       00 22 28.7 +0.8
D50A  G1974 Best Tow   76.70 352  P       P       00 22 31.3 +3.5
      baz=170,SNR=7.9
ISCO  Idaho Springs    76.76 332  P       P       00 22 28.8  0.0
ISCO                              pmax    pmax
      comp=Z,10.0nm,0.9s
ISCO  Idaho Springs    76.76 332  P       P       00 22 28.8  0.0
ISCO  Idaho Springs    76.76 332  P       P       00 22 33.1 +4.3
      baz=148,SNR=12
PV15  Paradox Valley   76.79 329  P       P       00 22 28.7 -0.2
PV15                              IAmb    IAmb    00 22 34.5
      comp=Z,18nm,1.1s
IRM   Iron Mountain    76.80 322  P       P       00 22 33.4 +4.6
      baz=140,SNR=9.4
PV13  Radium Mtn., P   76.80 329  P       P       00 22 29.0 +0.1
PV13                              IAmb    IAmb    00 22 34.6
      comp=Z,23nm,0.9s
PV02  Paradox Valley   76.80 329  P       P       00 22 29.3 +0.3
PV02                              IAmb    IAmb    00 22 34.8
      comp=Z,18nm,1.0s
SMCO  Snowmass         76.81 330  IAmb    IAmb    00 22 34.7
      comp=Z,22nm,0.9s
W13A  Hualapai Mount   76.85 323  P       P       00 22 30.3 +1.0
PV05  Paradox Valley   76.86 328  P       P       00 22 30.1 +0.7
PV05                              IAmb    IAmb    00 22 34.7
      comp=Z,22nm,1.0s
PV03  Paradox Valley   76.89 329  P       P       00 22 31.1 +1.6
PV18  Skein Mesa, Pa   76.91 329  P       P       00 22 29.7 +0.1
PV18                              IAmb    IAmb    00 22 35.0
      comp=Z,15nm,0.9s
PV12  Saucer Basin,    76.92 329  P       P       00 22 30.4 +0.8
MAW   Mawson           76.92 163  P       P       00 22 28.9 -0.2
      comp=Z,14nm,0.8s,baz=224,slow=8.6,SNR=11
PV11  David Mesa, Pa   76.93 329  P       P       00 22 31.1 +1.3
PV07  Paradox Valley   76.94 329  P       P       00 22 30.0 +0.2
D48A  Paudash Townsh   76.96 351  P       P       00 22 32.3 +2.9
      baz=168,SNR=5.6
PV17  East Wray Mesa   76.96 329  IAmb    IAmb    00 22 35.3
      comp=Z,15nm,0.9s
PV16  Nyswonger Mesa   76.96 329  P       P       00 22 30.3 +0.4
ECSD  EROS Data Cent   76.97 340  P       P       00 22 30.2 +0.7
ECSD                              IAmb    IAmb    00 22 33.4
      comp=Z,23nm,0.8s
ECSD  EROS Data Cent   76.97 340  P       P       00 22 32.8 +3.3
      baz=155,SNR=14
PV19  Morning Glory    76.99 329  P       P       00 22 31.0 +1.0
PV20  West Nyswonger   77.01 329  P       P       00 22 30.1  0.0
D46A  Sault St. Mari   77.02 349  P       P       00 22 32.5 +2.8
      baz=166,SNR=5.1
PV04  Paradox Valley   77.03 329  P       P       00 22 31.4 +1.2
D47A  Chapleau         77.03 350  P       P       00 22 32.5 +2.7
      baz=167
E43A  Lone Tree Farm   77.05 347  P       P       00 22 30.7 +0.9
E43A                              IAmb    IAmb    00 22 34.0
      comp=Z,19nm,0.8s
U15A  North Rim        77.07 325  IAmb    IAmb    00 22 36.2
      comp=Z,21nm,0.9s
PV10  Paradox Valley   77.07 329  P       P       00 22 30.7 +0.1
PV10                              IAmb    IAmb    00 22 35.6
      comp=Z,22nm,0.9s
E44A  Grand Marais A   77.08 348  P       P       00 22 33.7 +3.7
      baz=165
PV22  Blue Mesa, Par   77.09 329  P       P       00 22 31.4 +0.8
XPFO  Pion Flat        77.10 321  P       P       00 22 31.0 +0.4
PFO   Pinyon Flats O   77.10 321⇑eP       P       00 22 30.7  0.0
PFO                               pmax    pmax
      comp=Z,22nm,1.4s
PFO   Pinyon Flats O   77.10 321  P       P       00 22 31.3 +0.6
PFO   Pinyon Flats O   77.10 321  P       P       00 22 35.4 +4.7
      baz=139
PV23  Carpenter Ridg   77.12 329  P       P       00 22 31.1 +0.3
BELC  Belle Mtn. Jos   77.14 321  P       P       00 22 35.5 +4.6
      baz=139
PV21  Cone Mtn., Par   77.19 329  P       P       00 22 31.8 +0.6
PV09  Paradox Valley   77.22 329  P       P       00 22 31.8 +0.4
COWI  Conover          77.22 346  P       P       00 22 32.1 +1.2
COWI                              IAmb    IAmb    00 22 35.3
      comp=Z,16nm,1.1s
SPMN  Marine on St.    77.27 343  P       P       00 22 32.0 +0.8
SPMN                              IAmb    IAmb    00 22 34.5
      comp=Z,16nm,0.7s
SPMN  Marine on St.    77.27 343  P       P       00 22 34.0 +2.9
      baz=159,SNR=5.7
VLDQ  Val d'Or         77.38 354  P       P       00 22 33.0 +1.3
VLDQ                              IAmb    IAmb    00 22 37.0
      comp=Z,19nm,1.1s
MURC  Murrieta         77.50 320  P       P       00 22 37.5 +4.7
      baz=138
GMRC  Granite Mounta   77.55 322  P       P       00 22 37.8 +4.7
      baz=139,SNR=15
TSUM  Tsumeb           77.79 105  P       P       00 22 34.6 -0.4
      comp=Z,3.8nm,0.9s,baz=241,slow=11,SNR=3.2
TSUM  Tsumeb           77.79 105  IAmb    IAmb    00 22 42.6
      comp=Z,6.7nm,0.8s
N23A  Red Feather La   77.82 332  P       P       00 22 35.9 +1.2
N23A  Red Feather La   77.82 332  P       P       00 22 39.4 +4.7
      baz=147,SNR=6.7
PKCU  Pink Cliffs      77.87 326  P       P       00 22 35.8 +0.6
HEC   Hector,Ludlow    77.94 322  P       P       00 22 40.4 +5.1
      baz=139
PHWY  Pilot Hill       77.96 333  P       P       00 22 36.2 +0.7
O20A  White River Ci   78.16 330  P       P       00 22 37.4 +0.9
O20A                              IAmb    IAmb    00 22 42.2
      comp=Z,33nm,1.1s
O20A  White River Ci   78.16 330  P       P       00 22 40.9 +4.4
      baz=146,SNR=13
TUQ   Turquoise Moun   78.18 322  P       P       00 22 41.3 +4.6
      baz=139,SNR=7.7
BFSC  Mount Baldy Ra   78.23 320  P       P       00 22 41.1 +4.1
      baz=138
E38A  The Farm, Brul   78.25 344  P       P       00 22 37.5 +0.9
LSQQ  Lebel-sur-Quev   78.28 354  P       P       00 22 40.2 +3.6
      baz=173
MTPU  Mount Pierson    78.28 326  P       P       00 22 38.9 +1.4
SRU   San Rafael Swe   78.35 328  P       P       00 22 38.3 +0.7
SRU                               pmax    pmax
      comp=Z,15nm,0.9s
SRU   San Rafael Swe   78.35 328  P       P       00 22 38.3 +0.7
SZCU  Shurtz Canyon    78.38 325  P       P       00 22 39.4 +1.6
MWC   Mount Wilson     78.45 320  P       P       00 22 38.5 +0.3
MWC                               pmax    pmax
      comp=Z,10.0nm,0.8s
MWC   Mount Wilson     78.45 320  P       P       00 22 38.5 +0.3
Q16A  Castle Valley    78.50 328  P       P       00 22 38.8 +0.4
GSC   Goldstone, Bar   78.55 322  P       P       00 22 39.6 +0.9
GSC                               pmax    pmax
      comp=Z,8.0nm,0.9s
GSC   Goldstone, Bar   78.55 322  P       P       00 22 39.5 +0.9
GSC   Goldstone, Bar   78.55 322  P       P       00 22 43.4 +4.7
      baz=139,SNR=5.3
SHPR  Sheep Range      78.59 323  P       P       00 22 39.2 +0.2
SHPR                              IAmb    IAmb    00 22 44.3
      comp=Z,14nm,0.9s
MSU   Marysvale        78.65 327  P       P       00 22 40.2 +0.9
MSU   Marysvale        78.65 327  P       P       00 22 40.2 +0.9
P17A  Butcher Ranch,   78.74 328  P       P       00 22 41.1 +1.4
TMUT  Trail Mountain   78.81 328  P       P       00 22 41.8 +1.5
TCRU  Three Creeks R   78.86 327  P       P       00 22 42.5 +2.0
EDW2  Edwards Air Fo   78.89 321  P       P       00 22 44.6 +4.0
      baz=138
RWWY  Rawlins          79.00 332  P       P       00 22 42.2 +0.9
RWWY                              IAmb    IAmb    00 22 45.2
      comp=Z,30nm,0.8s
MATQ  Matagami         79.03 354  P       P       00 22 43.8 +3.0
      baz=172
FURC  Furnace Creek,   79.46 322  P       P       00 22 48.3 +4.9
      baz=139,SNR=5.2
PSUT  Pine Spring      79.48 326  P       P       00 22 45.4 +1.5
MPMC  Manual Prospec   79.49 322  P       P       00 22 48.0 +4.1
      baz=138,SNR=5.4
TPNV  Topopah Spring   79.49 323  P       P       00 22 45.4 +1.5
TPNV                              pmax    pmax
      comp=Z,14nm,0.9s
TPNV  Topopah Spring   79.49 323  P       P       00 22 45.4 +1.5
TPNV                              IAmb    IAmb    00 22 49.4
      comp=Z,14nm,0.9s
TPNV  Topopah Spring   79.49 323  P       P       00 22 48.6 +4.7
      baz=139,SNR=13
EYMN  Ely              79.50 345  P       P       00 22 44.3 +0.9
EYMN                              IAmb    IAmb    00 22 47.5
      comp=Z,16nm,0.9s
EYMN  Ely              79.50 345  P       P       00 22 46.4 +3.0
      baz=160,SNR=10
K22A  Casper           79.53 333  P       P       00 22 45.3 +1.4
K22A                              IAmb    IAmb    00 22 49.0
      comp=Z,20nm,0.9s
K22A  Casper           79.53 333  P       P       00 22 48.4 +4.5
      baz=147,SNR=9.5
MPU   Maple Canyon     79.58 328  P       P       00 22 44.9 +0.6
ISA   Isabella, Lake   79.73 321  P       P       00 22 45.9 +0.8
ISA                               pmax    pmax
      comp=Z,13nm,1.0s
ISA   Isabella, Lake   79.73 321  P       P       00 22 45.9 +0.8
ISA   Isabella, Lake   79.73 321  P       P       00 22 50.0 +4.9
      baz=137,SNR=7.7
NLU   North Lily Min   79.74 328  P       P       00 22 45.6 +0.4
BOSA  Boshof           79.77 117  P       P       00 22 44.8 -0.9
      comp=Z,3.4nm,0.7s,baz=272,slow=3.5,SNR=5.7
RSSD  Black Hills      79.81 335  P       P       00 22 46.5 +0.9
RSSD                              pmax    pmax
      comp=Z,18nm,0.9s
RSSD  Black Hills      79.81 335  P       P       00 22 46.5 +0.9
RSSD                              IAmb    IAmb    00 22 50.5
      comp=Z,18nm,0.9s
RSSD  Black Hills      79.81 335  P       P       00 22 49.3 +3.8
      baz=149
PKM   Mcpherson Peak   79.92 320  P       P       00 22 51.0 +4.7
      baz=136,SNR=9.4
JLU   Jordanelle       79.97 328  P       P       00 22 47.7 +1.2
CWC   Cottonwood Cre   80.09 322  P       P       00 22 51.7 +4.5
      baz=138
D32A  Dogwood Acres,   80.18 341  P       P       00 22 48.7 +1.6
D32A                              IAmb    IAmb    00 22 51.0
      comp=Z,48nm,1.1s
VES   Vestal, Richgr   80.20 321  P       P       00 22 52.2 +4.7
      baz=137,SNR=6.1
R11A  Troy Canyon, C   80.21 324  P       P       00 22 50.7 +3.0
R11A  Troy Canyon, C   80.21 324  P       P       00 22 52.4 +4.6
      baz=140,SNR=13
DUG   Dugway, Tooele   80.28 327  P       P       00 22 50.2 +2.1
DUG                               pmax    pmax
      comp=Z,6.0nm,1.0s
DUG   Dugway, Tooele   80.28 327  P       P       00 22 50.1 +2.1
DUG   Dugway, Tooele   80.28 327  P       P       00 22 52.3 +4.2
      baz=142
TCUT  Toone Canyon     80.36 329  P       P       00 22 49.2 +0.6
TIN   Tinemaha, Big    80.62 322  P       P       00 22 55.0 +5.1
      baz=138,SNR=5.9
PAGB  Antelope Grade   80.77 320  P       P       00 22 52.4 +1.7
PAGB                              IAmb    IAmb    00 22 56.0
      comp=Z,16nm,0.9s
E28A  Huff             80.80 338  P       P       00 22 51.9 +1.4
HWUT  Hardware Ranch   80.82 329  P       P       00 22 51.7 +0.7
HWUT                              IAmb    IAmb    00 22 55.5
      comp=Z,15nm,0.8s
BW06  Boulder Array    80.88 331  P       P       00 22 52.8 +1.5
BW06  Boulder Array    80.88 331  P       P       00 22 55.1 +3.8
      baz=145,SNR=10
PD31  Pinedale Array   80.88 331  P       P       00 22 53.7 +2.3
PDAR  Pinedale Array   80.88 331  P       P       00 22 52.0 +0.6
      comp=Z,7.3nm,0.8s,baz=124,slow=5.6,SNR=12
PDAR  Pinedale Array   80.88 331  P       P       00 22 54.5 +3.2
AGMN  Agassiz Nation   80.92 342  P       P       00 22 51.5 +0.5
AGMN                              IAmb    IAmb    00 22 55.3
      comp=Z,19nm,0.9s
AGMN  Agassiz Nation   80.92 342  P       P       00 22 54.4 +3.4
      baz=156,SNR=11
OMMB  Old Mammoth Mi   81.45 322  P       P       00 22 55.3 +0.7
OMMB                              IAmb    IAmb    00 22 59.9
      comp=Z,14nm,0.8s
HVU   Hansel Valley    81.51 328  P       P       00 22 56.0 +1.4
HVU                               pmax    pmax
      comp=Z,9.0nm,0.6s
HVU   Hansel Valley    81.51 328  P       P       00 22 56.0 +1.4
AHID  Auburn Hatcher   81.54 330  P       P       00 22 56.0 +1.1
MDND  Maddock          81.58 340  P       P       00 22 56.0 +1.4
MDND  Maddock          81.58 340  P       P       00 22 58.8 +4.2
      baz=153,SNR=7.4
NV11  Mina Array Sit   81.60 323  P       P       00 22 57.0 +1.8
NVAR  Mina Array Bea   81.68 323  P       P       00 22 56.9 +1.2
      comp=Z,6.8nm,0.9s,baz=162,slow=6.2,SNR=22
NVAR  Mina Array Bea   81.68 323  P       P       00 22 58.0 +2.4
LBTB  Lobatse          81.72 114  P       P       00 22 55.3 -0.9
      comp=Z,3.0nm,0.6s,baz=246,slow=5.8,SNR=4.8
ELK   Elko             81.87 326  P       P       00 22 58.8 +2.2
      comp=Z,6.8nm,0.8s,baz=142,slow=3.3,SNR=23
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ELK	Elko	81.87	326	P	P	00 22 58.9	+2.2
REDW	Red Top Meadow	81.92	330	P	P	00 22 58.2	+1.4
RYN	Ryan	81.94	323	P	P	00 22 58.3	+1.4
SNOW	Snow King Moun	81.95	331	P	P	00 22 58.4	+1.4
KVN	Kaiserville	82.03	323	P	P	00 22 56.9	-0.6
KVN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KVN	Kaiserville	82.03	323	P	P	00 22 56.9	-0.6
WAKR	Walker	82.34	322	P	P	00 23 00.5	+1.4
FLWY	Flagg Ranch	82.43	331	IAmb	IAmb	00 23 04.4	
	comp=Z,17nm,0.8s						
CMB	Columbia Colle	82.51	321	P	P	00 23 00.8	+1.0
CMB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CMB	Columbia Colle	82.51	321	P	P	00 23 00.8	+1.0
YERR	Yerington	82.58	323	P	P	00 23 01.9	+1.6
YERR				IAmb	IAmb	00 23 05.4	
	comp=Z,12nm,0.8s						
YPP	Pitchstone Pla	82.63	331	P	P	00 23 02.0	+1.4
H17A	Grant Village	82.63	331	P	P	00 23 01.4	+0.8
H17A	Grant Village	82.63	331	P	P	00 23 04.9	+4.3
	baz=144,SNR=5.6						
RLMT	Red Lodge	82.68	332	IAmb	IAmb	00 23 05.4	
	comp=Z,19nm,0.7s						
RLMT	Red Lodge	82.68	332	P	P	00 23 04.8	+4.0
	baz=145,SNR=15						
LKWY	Lake	82.69	331	P	P	00 23 01.9	+1.0
LKWY				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LKWY	Lake	82.69	331	P	P	00 23 01.9	+1.0
ULM	Lac du Bonnet	82.71	343	P	P	00 23 02.4	+1.9
	comp=Z,22nm,1.0s,baz=153,slow=5.0,SNR=19						
ULM	Lac du Bonnet	82.71	343	⇓eP	P	00 23 02.5	+2.1
ULM	Lac du Bonnet	82.71	343	P	P	00 23 01.4	+1.0
ULM				IAmb	IAmb	00 23 04.6	
	comp=Z,21nm,0.9s						
YMP	Mirror Lake Pl	82.73	332	P	P	00 23 02.2	+1.1
LAO	LASA Array	82.81	335	P	P	00 23 02.5	+1.3
LAO				IAmb	IAmb	00 23 06.0	
	comp=Z,34nm,1.1s						
LAO	LASA Array	82.81	335	P	P	00 23 05.0	+3.9
	baz=148,SNR=6.6						
PNTR	Pine Nut	82.85	323	P	P	00 23 04.0	+2.3
PNTR				IAmb	IAmb	00 23 07.4	
	comp=Z,26nm,0.7s						
YNR	Norris Junctio	82.93	331	P	P	00 23 03.2	+1.1
YMR	Madison River	83.02	331	P	P	00 23 05.1	+2.5
VCNR	Virginia City	83.03	323	P	P	00 23 04.7	+2.0
YHB	Horse Butte	83.18	331	P	P	00 23 05.2	+1.9
PAHR	Pah Rah Range	83.19	323	P	P	00 23 05.1	+1.7
PAHR				IAmb	IAmb	00 23 08.5	
	comp=Z,14nm,0.9s						
YHL	Hebgen Lake	83.25	331	P	P	00 23 05.7	+1.9
QLMT	Earthquake Lak	83.34	331	P	P	00 23 06.1	+1.9
GCMT	Greycliff	83.39	333	P	P	00 23 06.3	+2.0
AFDM	Forest Hills D	83.49	322	P	P	00 23 05.8	+1.0
DGMT	Dagmar	83.61	337	P	P	00 23 06.8	+1.5
DGMT	Dagmar	83.61	337	P	P	00 23 09.3	+4.0
	baz=149,SNR=9.6						
BEKR	Beckworth	83.82	323	P	P	00 23 07.9	+1.2
MCMT	McKenzie Canyo	83.95	330	P	P	00 23 09.7	+2.4
MFID	Camas Ranch	84.20	328	P	P	00 23 09.1	+0.6
ORV	Oroville	84.21	322	P	P	00 23 11.3	+2.8
ORV				pmax	pmax		
	comp=Z,12nm,1.0s						
ORV	Oroville	84.21	322	P	P	00 23 11.3	+2.8
ORV				IAmb	IAmb	00 23 13.4	
	comp=Z,12nm,0.9s						
DLMT	Dillon	84.27	331	P	P	00 23 09.9	+1.1
CASY	Casey	84.79	180	P	P	00 23 11.0	-0.2
CASY				IAmb	IAmb	00 23 19.1	
	comp=Z,14nm,0.9s						
O03E	Paynes Creek	84.90	322	P	P	00 23 15.1	+3.1
	baz=136						
EGMT	Eagleton	85.25	334	P	P	00 23 14.7	+1.0
EGMT				IAmb	IAmb	00 23 17.6	
	comp=Z,13nm,0.9s						
EGMT	Eagleton	85.25	334	P	P	00 23 16.9	+3.3
	baz=145						
MOD	Modoc Plateau	85.27	324	P	P	00 23 14.7	+0.8
J08A	Circle Bar Ran	85.42	326	P	P	00 23 15.5	+0.9
J08A				IAmb	IAmb	00 23 19.4	
	comp=Z,17nm,0.8s						
MATP	Matopo	86.28	111	P	P	00 23 20.8	+1.2
	comp=Z,1.3nm,0.5s,baz=274,slow=5.7,SNR=7.3						
YBH	Yreka Blue Hor	86.40	323	P	P	00 23 21.0	+1.5
	comp=Z,2.5nm,0.8s,baz=78,slow=1.8,SNR=7.3						
I07A	Izee	86.46	326	P	P	00 23 21.3	+1.5
I07A				IAmb	IAmb	00 23 24.5	
	comp=Z,8.3nm,0.8s						
J05D	Fort Rock, OR	86.74	325	P	P	00 23 25.2	+3.9
	baz=136						
JTMT	Jette	86.86	331	IAmb	IAmb	00 23 26.1	
	comp=Z,14nm,0.7s						
PINE	Pine Mountain	86.96	325	P	P	00 23 22.9	+0.6
PINE				IAmb	IAmb	00 23 27.4	
	comp=Z,21nm,0.8s						
G08A	Pilot Rock	87.09	327	P	P	00 23 23.5	+0.7
K02D	Willamette Mer	87.58	323	P	P	00 23 29.3	+4.1
	baz=134						
WALA	Waterton Lakes	87.73	332	P	P	00 23 27.9	+2.1
HAWA	Hanford	88.17	328	P	P	00 23 29.0	+1.2
HAWA				IAmb	IAmb	00 23 32.4	
	comp=Z,6.9nm,0.8s						
TAM	Tamanrasset	88.20	63	P	P	00 23 28.9	+0.1
TAM				pmax	pmax		
	comp=Z,4.0nm,1.1s						
FFC	Flin Flon	88.37	341	ceP	P	00 23 32.3	+3.7
FFC				pmax	pmax		
	comp=Z,27nm,1.7s						
FFC	Flin Flon	88.37	341	P	P	00 23 30.0	+1.5
NEW	Newport	88.48	330	P	P	00 23 31.1	+1.8
	comp=Z,2.8nm,0.8s,baz=126,slow=7.7,SNR=4.3						
NEW	Newport	88.48	330	P	P	00 23 30.5	+1.2
NEW	Newport	88.48	330	P	P	00 23 30.5	+1.2
NEW	Newport	88.48	330	P	P	00 23 32.4	+3.1
	baz=139						
LSZ	Lusaka	88.56	107	P	P	00 23 31.3	+0.7
	comp=Z,2.1nm,0.8s,baz=157,slow=4.7,SNR=3.2						
LSZ	Lusaka	88.56	107	P	P	00 23 31.3	+0.7
LSZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
LSZ	Lusaka	88.56	107	IAmb	IAmb	00 23 39.7	
	comp=Z,6.8nm,1.1s						
F04A	Amboy	89.22	326	P	P	00 23 33.6	+0.8
LTY	Liberty	89.34	328	P	P	00 23 34.6	+1.2
LON	Longmire	89.51	327	P	P	00 23 36.2	+2.0
LON				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LON	Longmire	89.51	327	P	P	00 23 36.2	+2.0
B05A	Bryant	90.73	328	P	P	00 23 43.0	+3.3
	baz=136						
YKA	Yellowknife Ar	98.49	340	P	Pdif	00 24 17.1	+2.1
	comp=Z,2.2nm,0.9s,baz=138,slow=5.0,SNR=17						
ILAR	Eielson Array	111.22	333	PP	PP	00 29 55.1	+5.0
	comp=Z,1.0nm,0.9s,baz=113,slow=6.3,SNR=4.3						
KLNR	Kaliningrad	112.71	39	⇑iPKIKP	PKiKP	00 29 14.3	+1.0
AKASG	Malin Array Be	116.88	45	PKP	PKiKP	00 29 23.1	+1.7
	comp=Z,0.2nm,0.3s,baz=268,slow=2.8,SNR=1.2						
AKBB	Malin Array Si	116.88	45	⇑iPKIKP	PKiKP	00 29 23.9	+2.5
BRTR	Keskin Array B	117.00	58	PKP	PKiKP	00 29 23.9	+1.6
	comp=Z,0.2nm,0.3s,baz=182,slow=3.2,SNR=2.6						
BRTR				PP	PP	00 30 31.4	-0.6
	comp=Z,0.7nm,1.0s,baz=247,slow=7.9,SNR=3.6						
ASAR	Alice Springs	123.06	205	PKP	PKPdf	00 29 33.2	-1.1
	comp=Z,0.9nm,0.5s,baz=133,slow=1.8,SNR=12						
ASAR	Alice Springs	123.06	205	PKIKP	PKPdf	00 29 33.4	-1.0
ASAR	Alice Springs	123.06	205		PKPdf	00 29 33.4	-1.0
KIV	Kislovodsk	124.53	55	ePKIKP	PKiKP	00 29 36.8	0.0
KIV				pmax	pmax		
	comp=Z,18nm,1.1s						
KBZ	Khabaz	124.65	55	⇑iPKIKP	PKiKP	00 29 40.1	+3.2
ZEI	Tsey	125.22	56	i PKIKP	PKiKP	00 29 49.0	+11
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WRA	Warramunga Arr	126.27	207	PKP	PKPdf	00 29 38.5	-2.1
	comp=Z,0.7nm,0.5s,baz=161,slow=1.6,SNR=16						
WRA	Warramunga Arr	126.27	207	PKIKP	PKPdf	00 29 39.3	-1.3
WRA	Warramunga Arr	126.27	207		PKPdf	00 29 39.3	-1.3
WRAB	Tennant Creek	126.28	207	⇑iPKIKP	PKPdf	00 29 39.3	-1.3
BILL	Bilibino	129.69	336	⇑iPKIKP	PKPdf	00 29 44.6	-0.9
BILL						00 29 48.0	
BILL				e		00 32 00.4	
BILL				PS	PS	00 42 10.0	+3.4
BILL				SSS	SSS	00 54 07.0	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,314nm,19.0s						
GEYT	Alibeck	135.41	64	PKP	PKiKP	00 29 58.7	-0.1
	comp=Z,0.9nm,0.5s,baz=224,slow=6.0,SNR=2.6						
TIXI	Tiksi	136.44	352	⇓iPKIKP	PKiKP	00 30 01.6	+1.8
ABKAR	Akbulak array	136.48	48		PKPdf	00 29 59.2	+0.4
SEY	Seymchan	137.15	334	⇑iPKIKP	PKiKP	00 30 03.1	+1.6
CHM	Chimkent	144.13	57	PKIKP	PKiKP	00 30 18.8	+2.3
KK31	Karatay Array	144.68	56	PKIKP	PKPab	00 30 11.4	-1.2
KK31	Karatay Array	144.68	56		PKPab	00 30 11.4	-1.2
KKAR	Karatay Array	144.68	56	PKIKP	PKPab	00 30 11.1	-1.5
KKAR	Karatay Array	144.68	56		PKPab	00 30 11.1	-1.5
KAPI	Kappang	144.98	195	PKP2	PKPab	00 30 13.8	-0.6
KAPI	Kappang	144.98	195		PKPab	00 30 13.8	-0.6
YAK	Yakutsk	145.02	345	ePKIKP	PKPbc	00 30 10.9	-2.2
YAK				pmax	pmax		
	comp=Z,15nm,0.6s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.0s						
NIL	Nilore	147.41	72	PKP2	PKPbc	00 30 20.8	-0.5
NIL	Nilore	147.41	72		PKPbc	00 30 20.8	-0.5
KURK	Kurchatov	147.46	40	⇑ePKIKP	PKPdf	00 30 18.1	-0.2
KURK	Kurchatov	147.46	40		PKPdf	00 30 18.5	+0.2
AAK	Ala-Archa	147.64	56	⇑ePKIKP	PKPdf	00 30 19.5	+0.4
AAK	Ala-Archa	147.64	56		PKPbc	00 30 21.2	-0.7
HYB	Hyderabad	147.87	104	i PKP	PKPbc	00 30 22.0	-1.0
ZALV	Zalesovo Beam	148.71	30	PKPbc	PKPbc	00 30 22.9	-1.2
	comp=E,4.1nm,0.6s,baz=301,slow=3.1,SNR=11						
ZALV	Zalesovo Beam	148.71	30	PKIKP	PKPdf	00 30 20.7	+0.4
ZALV	Zalesovo Beam	148.71	30		PKPdf	00 30 20.7	+0.4
KSH	Kashi	149.31	61	PKPbc	PKPbc	00 30 25.0	-1.2
KSH				PKS	PKSdf	00 33 56.5	-0.4
KSH				PP	PP	00 34 01.8	+3.2
KSH				SKKS		00 40 50.5	
KSH				AMB	AMB		
	comp=E,430nm,5.3s						
KSH				LR	LR		
	comp=E,290nm,12.5s						
KSH				LR	LR		
	comp=E,200nm,10.7s						
KSH				LR	LR		
	comp=E,240nm,13.0s						
PDGK	Podgornoye	150.99	52	PKIKP	PKiKP	00 30 32.0	+1.2
PSI	Prapat	151.22	154	PKIKP	PKPbc	00 30 29.9	-1.7
MAKZ	Makanchi	151.26	44	PKIKP	PKPbc	00 30 27.9	-2.6
MAKZ	Makanchi	151.26	44		PKPbc	00 30 29.2	-1.3
MAKZ				PKPab	PKPab	00 30 39.0	+0.5
BOD	Bodaibo	151.36	357	ePKIKP	PKiKP	00 30 32.8	+2.0
BOD				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MK31	Makanchi Array	151.46	44	i PKIKP	PKPbc	00 30 29.1	-1.9
MK31	Makanchi Array	151.46	44	PKPab	PKPab	00 30 40.0	+0.7
MKAR	Makanchi Array	151.46	44	PKPbc	PKPbc	00 30 29.4	-1.6
	comp=Z,2.4nm,0.8s,baz=304,slow=2.4,SNR=21						
MKAR	Makanchi Array	151.46	44	PKIKP	PKPbc	00 30 28.7	-2.3
MKAR	Makanchi Array	151.46	44		PKPbc	00 30 28.7	-2.3
MKAR				PKPab		00 30 40.3	
WMQ	Urumqi	156.24	46	ePKP	PKPdf	00 30 31.0	-0.8
WMQ				AMB	AMB		
	comp=Z,140nm,5.1s						
WMQ				LR	LR		
	comp=Z,470nm,20.3s						
WMQ				LR	LR		
	comp=Z,520nm,20.3s						
WMQ				LR	LR		
	comp=Z,520nm,22.1s						
TLY	Talaya	156.87	12	ePKIKP	PKPdf	00 30 42.1	+10
SONM	Songino Array	161.05	10	PKPab	PKPab	00 31 19.6	-0.8
	comp=Z,0.7nm,1.0s,baz=325,slow=2.3,SNR=2.5						
CMAR	Chiang Mai Arr	164.47	131	PKPab	PKPab	00 31 36.9	+0.8
	comp=Z,0.5nm,0.3s,baz=229,slow=1.0,SNR=1.4						
HHC	Hu-ho-hao-te	168.41	359	ePKP	PKPdf	00 30 45.3	+1.2
LZH	Lanzhou	170.75	40	ePKP	PKPdf	00 30 44.5	-1.3
LZH				LR	LR		
	comp=Z,310nm,15.2s						
LZH				LR	LR		
	comp=Z,350nm,15.0s						
LZH				LR	LR		
	comp=Z,430nm,16.7s						
NJ2	Nanjing	172.86	295	ePKP	PKPdf	00 30 45.0	-1.6
NJ2				LR	LR		
	comp=Z,740nm,20.3s						
NJ2				LR	LR		
	comp=Z,360nm,18.9s						
NJ2				LR	LR		
	comp=Z,920nm,19.1s						
CD2	Chengdu	173.30	74	PKP	PKPdf	00 30 45.5	-1.4
GYA	Guiyang	175.10	123	ePKP	PKPdf	00 30 45.5	-2.3
GYA				PKPab	PKPab	00 32 24.0	+0.8
GYA				PKS	PKSdf	00 34 17.8	-2.3
GYA				PP	PP	00 36 17.5	+1.8
GYA				SKKS		00 43 01.0	
GYA				SS	SS	00 57 37.3	-3.8
GYA				AMB	AMB		
	comp=Z,130nm,8.2s						
GYA				LR	LR		
	comp=Z,230nm,22.2s						
GYA				LR	LR		
	comp=Z,360nm,20.8s						
GYA				LR	LR		
	comp=Z,440nm,21.2s						

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*IDC **28** 00:59:20.8±3.2, 37°.32N×72°.28E, h162^{km}±25^{km}, mb3.2/8, mb1 3.2/14, mb1mx3.1/36, mbtmp3.6/14, MS4.2/1, Ms1 4.2/1, ms1mx3.2/22, Error ellipse: s-maj=28.3km s-min=18.6km az=165.0*

*NNC **28** 00:59:25.8±2.1, 37°.74N×71°.91E, h161^{km}±35^{km}, mb3.0, mpv3.9, Error ellipse: s-maj=20.3km s-min=12.4km az=169.0*

ISC 28 00:59:20.8±0.6**, 37°.47N**±0°.06×**72°.10E**±0°.06**, h150**^{km}**, n46, σ2^{s}18**/53**, mb3.4**/8**, 7C-4D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	4.82	14	P	Pn	01 00 35.4	+3.2
	SNR=132						
UCH	Uchtor	5.10	21	P	Pn	01 00 38.9	+2.9
	SNR=30						
KZA	Kyzart	5.20	27	P	Pn	01 00 39.7	+2.4
	SNR=8.4						
EKS2	Erkin-Say	5.34	13	P	Pn	01 00 42.2	+3.3
	SNR=20						
AAK	Ala-Archa	5.48	19	P	Pn	01 00 44.1	+3.4
	7.2nm,0.3s,baz=170,slow=5.8,SNR=115						
AAK				S	Sn	01 01 44.2	+1.1
	2.8nm,0.3s,baz=130,slow=22,SNR=16						
AAK	Ala-Archa	5.48	19	P	Pn	01 00 44.2	+3.4
	SNR=37						
AAK	Ala-Archa	5.48	19	⇑P	Pn	01 00 43.9	+3.2
	12nm,0.4s						
AAK				⇓S	Sn	01 01 43.4	+0.3
	33nm,1.1s						
KBK	Karagaybulak	5.62	22	P	Pn	01 00 46.7	+4.1
	SNR=7.6						
ULHL	Ulahol	5.74	32	P	Pn	01 00 46.6	+2.4
	SNR=9.4						
KK31	Karatay Array	5.76	348	P	Pn	01 00 46.7	+2.4
	3.9nm,0.3s,baz=154,slow=12,SNR=84						
KK31				S	Sn	01 01 49.5	0.0
	19nm,0.3s,baz=165,slow=22,SNR=28						
THN	Thein Dam	5.83	148	eP	Pn	01 00 48.0	+2.7
THN				eS	Sn	01 01 51.5	+0.2
CHMS	Chumysh	5.88	19	P	Pn	01 00 49.2	+3.3
	SNR=7.6						
CHMS	Chumysh	5.88	19	⇑P	Pn	01 00 48.6	+2.7
	9.9nm,0.7s						
CHMS				⇑S	Sn	01 01 52.4	-0.2
	18nm,0.7s						
TKM2	Tokmak 2	6.07	25	P	Pn	01 00 51.5	+3.0
	SNR=6.8						
MDOK	Medeo	6.83	32	P	Pn	01 01 00.8	+2.1
	5.5nm,0.7s						
GEYT	Alibeck	11.09	277	P	Pn	01 01 55.6	+0.4
	0.7nm,0.3s,baz=116,slow=9.8,SNR=12						
GYA0B	ALIBECK ARRAY	11.09	277	⇑P	Pn	01 01 57.0	+1.8
GYA0B				⇓S	Sn	01 03 56.6	-1.2
MAKZ	Makanchi	11.86	35	⇑P	Pn	01 02 07.5	+2.4
MK31	Makanchi Array	11.99	36	⇑P	P	01 02 10.7	-2.8
	0.1nm,0.3s,baz=207,slow=9.9,SNR=5.9						
MKAR	Makanchi Array	11.99	36	P	Pn	01 02 08.9	+2.0
	0.1nm,0.3s,baz=232,slow=7.1,SNR=2.7						
DANN	Dangsing	13.35	130	eP	Pn	01 02 23.8	-1.0
	29nm,0.3s						
KURBB	Kurchatov Arra	13.93	17	P	P	01 02 34.1	-0.8
	0.1nm,0.3s,baz=207,slow=11,SNR=6.6						
GKN	Gorkha	14.14	128	eP	Pn	01 02 34.6	-0.1
	37nm,0.2s						
AB31	Akbulak array	14.71	327	P	Pn	01 02 42.3	+0.9
	1.0nm,0.4s,baz=136,slow=11,SNR=41						
AB31				⇑S	Sn	01 05 18.6	-5.9
	1.7nm,0.5s,baz=148,slow=22,SNR=9.3						
DMN	Daman	14.71	128	eP	Pn	01 02 41.6	-0.4
	9.8nm,0.2s						
PKIN	Phulchoki	14.92	128	eP	P	01 02 44.7	-1.7
PKI	Pulchoki	14.93	128	eP	Pn	01 02 44.7	0.0
GUN	Gumba	15.00	125	eP	Pn	01 02 45.5	-0.1
JIRN	Jiri	15.37	125	eP	P	01 02 50.6	-0.9
	80nm,0.4s						
BVAR	Borovoye Array	15.60	356	P	Pn	01 02 52.1	-0.4
	0.1nm,0.3s,baz=150,slow=7.0,SNR=2.4						
RAMN	Ramite	16.12	126	eP	P	01 02 59.6	-0.1
	22nm,0.4s						
AKTO	Aktyubinsk	16.42	327	P	Pn	01 03 04.2	+1.7
	1.4nm,0.3s,baz=126,slow=9.5,SNR=22						
AKTO	Aktyubinsk	16.42	327	⇓P	Pn	01 03 05.1	+2.6
	3.8nm,0.5s						
AKTO				⇓S	S	01 06 02.4	-2.4
	2.9nm,0.6s						
TAPN	Taplejung	16.58	123	eP	Pn	01 03 05.9	+1.0
ODAN	Odare	16.69	125	eP	Pn	01 03 07.6	+1.3
	6.6nm,0.3s						
ZALV	Zalesovo Beam	18.67	24	P	P	01 03 27.5	+0.3
	0.7nm,0.3s,baz=222,slow=9.9,SNR=14						
ARU	Arti	21.03	339	P	P	01 03 53.3	+0.8
	0.9nm,0.5s,baz=348,slow=20,SNR=6.2						
KBZ	Khabaz	22.97	295	P	P	01 04 12.9	+0.8
	1.4nm,0.9s,baz=121,slow=12,SNR=4.3						
BRTR	Keskin Array B	29.99	286	P	P	01 05 17.3	+1.9
	0.2nm,0.4s,baz=99,slow=7.0,SNR=3.1						
FINES	FINESS Array B	37.19	325	P	P	01 06 17.4	+0.3
	0.7nm,0.6s,baz=116,slow=8.7,SNR=5.4						
ARCES	ARCESS Array B	40.59	337	P	P	01 06 46.3	+1.0
	2.8nm,0.8s,baz=101,slow=9.5,SNR=5.0						
NB2	NORSAR Subarra	44.15	322	P	P	01 07 14.3	+0.1
	comp=Z,0.2nm,0.5s,baz=94,slow=7.9						
NOA	NORSAR Array B	44.15	322	P	P	01 07 13.7	-0.4
	comp=Z,0.5nm,0.6s,baz=94,slow=7.7,SNR=4.1						
MJAR	Matsushiro Arr	51.78	70	LR	LR	01 34 14.4	
	comp=Z,218nm,20.5s,baz=320,slow=40						
YKA	Yellowknife Ar	80.24	3	P	P	01 11 13.2	-1.1
	comp=Z,0.3nm,0.4s,baz=353,slow=5.0,SNR=5.6						
WRA	Warramunga Arr	81.76	123	P	P	01 11 19.8	-3.1
	comp=Z,0.3nm,0.6s,baz=324,slow=4.9,SNR=0.9						

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*IDC **28** 01:18:56.5±1.2, 7°.18N×124°.82E, h0^{km}, mb3.6/6, mb1 3.7/6, mb1mx3.5/37, mbtmp3.6/6, Error ellipse: s-maj=23.2km s-min=10.7km az=8.0*

*MAN **28** 01:18:56.6, 7°.32N×124°.90E, h1^{km}, MS3.8*

MAN Intensity II - Carmen North Cotabato.

ISC 28 01:18:57.7±1.1**, 7°.35N**±0°.03×**124°.95E**±0°.04**, h14**^{km}±8^{km}**, n21, σ1^{s}57**/25**, mb3.5**/6**, 2C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	Kidapawan	0.37	158	⇑iP	Pg	01 19 04.5	-0.6
KCP				i S	Sn	01 19 19.4	+3.6
BUKP	Musuan	0.54	12	eP	Pg	01 19 07.3	-0.9
BUKP				eS	Sb	01 19 16.5	-0.1
DMPH	Davao City--Mi	0.61	116	⇓iP	Pg	01 19 01.1	-8.6
DMPH				i S	Sn	01 19 19.4	-2.3
DAV	Davao City (W)	0.68	114	Pg	Pb	01 19 10.8	-0.6
	679nm,0.3s,baz=306,slow=2.0,SNR=29						
DAV				Lg	Lg	01 19 22.1	
	631nm,0.3s,baz=168,slow=23,SNR=14						
CTBH	Cotabato--PC H	0.71	260	⇓iP	Pg	01 19 10.0	-1.5
SKMP	Bagumbayan, Su	0.92	206	eP	Pb	01 19 13.2	-2.3
CGP	Cagayan de Oro	1.12	347	⇑iP	Pb	01 19 17.6	-1.4
CGP				i S	Sb	01 19 33.0	-0.5
GSPH	General Santos	1.26	180	⇓iP	Pg	01 19 25.1	+3.2
GSPH				i S	Sg	01 19 40.6	+2.3
MATI	Mati	1.36	107	eP	Pn	01 19 20.4	-1.9
DDMP	Don Marcelino,	1.45	149	eP	Pn	01 19 23.1	-0.4
DDMP				eS	Sg	01 19 44.1	-0.4
PAGZ	Pagadian	1.63	288	eP	Pn	01 19 25.4	-0.6
BUTP	Butuan	1.74	22	eP	Pb	01 19 29.4	0.0
BUTP				eS	Sg	01 19 55.5	+1.9
TBP	Tagbilaran	2.56	335	i P	Pg	01 20 00.5	+14
SNPH	Sibulan	2.61	319	eP	Pn	01 19 39.6	+0.1
SNPH				eS	Sb	01 20 17.6	+1.4
MSLP	Maasin	2.77	358	eP	Pn	01 19 35.3	-6.4
FITZ	Fitzroy Crossi	25.30	178	P	P	01 24 23.2	-0.8
	2.3nm,0.9s,baz=346,slow=8.1,SNR=2.4						
WRA	Warramunga Arr	28.65	161	P	P	01 24 55.5	+1.2
	0.4nm,0.4s,baz=321,slow=12,SNR=5.4						
ASAR	Alice Springs	32.05	164	P	P	01 25 22.9	-1.3
	0.3nm,0.5s,baz=340,slow=6.6,SNR=3.3						
STKA	Stephens Creek	42.12	159	P	P	01 26 49.6	-0.1
	0.8nm,0.5s,baz=357,slow=8.7,SNR=3.9						
SONM	Songino Array	43.33	342	P	P	01 27 01.4	+1.9
	0.4nm,0.8s,baz=169,slow=8.2,SNR=2.9						
MKAR	Makanchi Array	53.59	325	P	P	01 28 20.0	+1.6
	0.1nm,0.5s,baz=110,slow=11,SNR=2.1						

MAN 28 01:28:30.0, 7°.34N×124°.90E, h2^{km}, mb4.4, ML3.2, MS3.0, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	Kidapawan	0.38	150	⇓iP	Pb	01 28 38.5	-0.9
KCP				i S	Sb	01 28 55.0	+9.2
BUKP	Musuan	0.56	17	eP	Pg	01 28 41.0	+0.2
BUKP				eS	Sn	01 28 55.0	0.0
CTBH	Cotabato--PC H	0.66	260	⇓iP	Pn	01 28 46.1	-0.2
SKMP	Bagumbayan, Su	0.89	204	eP	Pg	01 28 46.4	-0.6
SKMP				eS	Sn	01 29 03.7	+0.7
DDMP	Don Marcelino,	1.47	147	eP	Pn	01 28 56.0	-1.5
DDMP				eS	Sn	01 29 17.8	+0.5
PAGZ	Pagadian	1.59	289	eP	Pn	01 28 58.3	-0.9
PAGZ				eS	Sg	01 29 21.0	-0.1

KEA 28 01:40:48.9±0.0**, 36°.61N×127°.85E, h0**^{km}**, ML3.3**/6**, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HJU	Haeju	2.21	311	Pg	Pb	01 41 30.0	+0.2
HJU				Sg	Sb	01 41 58.0	+0.3
WOSN	Wonsan	2.57	353	Pg	Pb	01 41 34.2	-1.7
WOSN				Sg	Sb	01 42 08.9	+0.9
PYAG	Pyongyang	2.94	326	Sg	Sb	01 42 20.3	+1.6
PYS	Pyongsong	3.07	330	Pg	Pb	01 41 45.8	+1.4
PYS				Sg	Sb	01 42 23.7	+1.3
HHU	Hamhung	3.32	356	Pg	Pb	01 41 49.0	+0.4
HHU				Sg	Sg	01 42 33.1	-2.5
SUJ	Sinuiju	4.37	324	Sg	Sg	01 43 04.6	-4.7
KGE	Kanggye	4.43	348	Sg	Sg	01 43 11.4	+0.1

NNC 28 01:52:32.2±1.1**, 41°.94N×83°.58E, h0**^{km}**, mb3.7, mpv3.4, 9C-1D, Error ellipse: s-maj=8.9km s-min=5.8km az=158.0, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	Shalkode	3.28	293	Pg	Pn	01 53 26.4	+1.4
	15nm,0.2s						
SHLS				Lg	Lg	01 54 07.9	
	49nm,0.5s						
PDGK	Podgornoye	3.32	296	Pg	Pb	01 53 31.4	-0.7
	0.7nm,0.4s						
PDGK				Lg	Lg	01 54 16.4	
	12nm,0.6s						
PDGK	Podgornoye	3.32	296	⇑Pn	Pn	01 53 26.4	+0.8
	1.5nm,0.7s						
PDGK				⇑Pg	Pg	01 53 34.6	-1.3
	4.6nm,0.6s						
PDGK				⇑Lg	Lg	01 54 19.1	
	32nm,0.8s						
UZB	Uzynbulak	3.58	291	Pg	Pb	01 53 36.6	+0.2
	2.3nm,0.3s						

UZB				Lg	Lg	01 54 25.6	
	11nm,0.4s						
DJR	Jarkent	3.66	312	Pg	Pb	01 53 38.8	+1.0
	1.7nm,0.3s						
DJR				Lg	Lg	01 54 29.6	
	10nm,0.6s						
SATY	Saty	3.99	288	Pg	Pb	01 53 44.0	+0.6
	5.7nm,0.7s						
SATY				Lg	Lg	01 54 38.7	
	11nm,0.3s						
KAPS	Kapalarasan	4.54	319	Pg	Pb	01 53 53.9	+1.2
	4.9nm,0.4s						
KAPS				Lg	Lg	01 54 55.3	
	7.4nm,1.0s						
ARXS	Arharly	4.79	300	Pg	Pb	01 53 58.8	+1.8
	2.7nm,0.3s						
ARXS				Lg	Lg	01 55 03.6	
	12nm,0.4s						
MK31	Makanchi Array	4.95	350	⇓Pn	Pn	01 53 49.1	+1.4
	0.2nm,0.4s,baz=167,slow=14,SNR=6.8						
MK31				⇑Pg	Pg	01 54 03.3	-3.6
	2.0nm,0.5s,baz=166,slow=16,SNR=24						
MK31				⇑Lg	Lg	01 55 09.6	
	4.4nm,0.6s,baz=164,slow=29,SNR=5.5						
KOTS	Kotyrbulak	4.95	287	Pg	Pb	01 54 02.1	+2.3
	4.2nm,0.2s						
KOTS				Lg	Lg	01 55 09.3	
	35nm,0.4s						
MDOK	Medeo	4.98	286	Pg	Pb	01 54 03.0	+2.8
	4.5nm,0.2s						
MDOK				Lg	Lg	01 55 10.9	
	7.6nm,0.4s						
MAKZ	Makanchi	5.01	347	⇑Pg	Pb	01 54 04.0	+3.3
	2.5nm,0.8s						
MAKZ				⇑Lg	Lg	01 55 12.2	
	5.0nm,0.8s						
TNSS	Tian-Shan	5.03	285	Pg	Pb	01 54 03.2	+2.0
	2.7nm,0.5s						
TNSS				Lg	Lg	01 55 11.5	
	6.0nm,0.5s						
CHKK	Chushkaly	5.21	294	Pg	Pg	01 54 08.1	-3.9
	1.1nm,0.1s						
CHKK				Lg	Lg	01 55 19.5	
	4.6nm,0.2s						
KTBS	Karatobe	5.37	292	Pg	Pb	01 54 10.8	+3.9
	0.8nm,0.4s						
KTBS				Lg	Lg	01 55 24.5	
	8.9nm,0.7s						
ZSN	Zaisan	5.59	9	Pg	Pb	01 54 12.0	+1.4
	5.1nm,0.3s						
ZSN				Lg	Lg	01 55 26.5	
	16nm,0.6s						
KUU	Kurty	5.67	293	Pg	Pg	01 54 16.9	-3.8
	1.9nm,0.8s						
KUU				Lg	Lg	01 55 34.7	
	3.7nm,0.6s						
KST	Kastek	5.74	284	Pg	Pg	01 54 17.8	-4.3
	4.4nm,0.6s						
KST				Lg	Lg	01 55 36.2	
	2.9nm,0.5s						
DGS	Degeres	5.91	285	Pg	Pb	01 54 20.5	+4.4
	1.3nm,0.3s						
DGS				Lg	Lg	01 55 41.2	
	4.1nm,0.4s						
KURBB	Kurchatov Arra	9.36	340	⇑Lg	Lg	01 57 31.2	
	6.4nm,0.8s						
KURK	Kurchatov	9.43	340	⇑Lg	Lg	01 57 33.2	
	6.2nm,1.0s						

IDC 28 02:27:34.2±3.9, 20°.26S×169°.73E, h0km, mb3.8/3, mb1 3.9/4, mb1mx3.6/22, mbtmp3.7/4, ML3.2/1, MS3.1/2, Ms1 3.1/2, ms1mx2.7/26, Error ellipse: s-maj=133.8km s-min=36.6km az=138.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	3.56	239	Pn	Pn	02 28 31.9	+1.1
	2.1nm,0.3s,baz=36,slow=17,SNR=19						
DZM				Sn	Sn	02 29 13.0	-0.6
	19nm,0.3s,baz=104,slow=22,SNR=24						
DZM				LR	LR	02 29 27.6	
	comp=Z,140nm,20.9s,baz=8.0,slow=32						
STKA	Stephens Creek	27.71	240	P	P	02 33 24.4	+0.1
	2.0nm,0.8s,baz=95,slow=12,SNR=6.2						
WRA	Warramunga Arr	33.20	264	P	P	02 34 12.9	-0.1
	0.3nm,0.5s,baz=97,slow=8.1,SNR=4.5						
ASAR	Alice Springs	33.35	258	P	P	02 34 13.8	-0.5
	0.5nm,0.4s,baz=83,slow=8.4,SNR=7.3						
ASAR				LR	LR	02 47 29.4	
	comp=Z,49nm,18.3s,baz=49,slow=36						
GERES	GERESS Array B	145.60	332	PKPbc	PKPdf	02 47 13.9	-0.6
	0.2nm,0.3s,baz=26,slow=3.4,SNR=4.3						

IDC 28 02:27:53.9±3.5, 33°.75S×178°.30W, h0km, mb3.8/2, mb1 4.1/3, mb1mx3.7/25, mbtmp3.9/3, ML4.0/1, Error ellipse: s-maj=81.2km s-min=37.8km az=119.0

WEL 28 02:27:54.6±0.6, 34°S±6°×17°8W±1°4, h33km, M4.6/13, mB4.6/2, ML4.9/11, MLv4.6/13, Mw(mB)3.8/2

ISC 28 02:27:54.8±2.3, 33°.7S±0°.1×178°.0W±0°.3, h35km, n23, σ1ˢ.95/32, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	4.40	1	P	Pn	02 28 56.6	-2.5
GLKZ				S	Sn	02 29 46.4	-2.6
MXZ	Matakaoa Point	4.92	217	P	Pn	02 29 05.7	-0.5
MXZ				S	Sn	02 30 01.5	-0.3
PKGZ	Pakihiroa	5.28	216	P	Pn	02 29 10.5	-0.8
PKGZ				S	Sn	02 30 08.3	-2.7
MWZ	Matawai	5.90	217	P	Pn	02 29 20.1	+0.4
MWZ				S	Sn	02 30 22.9	-3.2
URZ	Urewera	6.06	220	Pn	Pn	02 29 22.0	+0.1
	4.1nm,0.3s,baz=279,slow=2.9,SNR=16						
URZ				Sn	Sn	02 30 29.4	-0.6
	4.8nm,0.3s,baz=115,slow=20,SNR=12						
WHHZ	Waihua	6.63	214	S	Sn	02 30 45.9	+2.0
ARHZ	Aropaoanui	6.89	214	P	Pn	02 29 32.3	-0.9
ARHZ				S	Sn	02 30 52.0	+1.7
MCHZ	McNeill Hill	7.17	215	P	Pn	02 29 39.8	+2.7
MCHZ				S	Sn	02 30 56.6	-0.8
KWHZ	Kaweka Forest	7.29	216	P	Pn	02 29 38.8	0.0
KWHZ				S	Sn	02 30 56.6	-3.8
KAHZ	Kahuranaki	7.37	213	P	Pn	02 29 40.2	+0.3
KAHZ				S	Sn	02 31 01.0	-1.3
KRHZ	Kereru	7.49	216	P	Pn	02 29 40.8	-0.7
KRHZ				S	Sn	02 31 04.5	-0.6
NGZ	Ngauruhoe	7.54	221	P	Pn	02 29 44.1	+1.8
PXZ	Pawanui	7.57	212	P	Pn	02 29 31.2	-11
PXZ				S	Sn	02 30 59.9	-7.2
MOVZ	Moawhango	7.62	220	S	Sn	02 31 06.4	-2.1
PNHZ	Pukenui	7.78	215	S	Sn	02 31 11.1	-1.2
PRHZ	Porangahau	7.86	212	P	Pn	02 29 48.0	+1.4
PRHZ				S	Sn	02 31 06.7	-7.6
TSZ	Takapari Road	8.01	216	P	Pn	02 29 50.9	+2.3
TSZ				S	Sn	02 31 15.6	-2.3
ANWZ	Angora Road	8.09	212	S	Sn	02 31 16.4	-3.5
DVHZ	Dannevirke	8.10	214	S	Sn	02 31 18.7	-1.5
MRZ	Mangatainoka R	8.66	215	S	Sn	02 31 26.4	-7.5
ASAR	Alice Springs	43.05	270	P	P	02 35 53.5	+2.2
	0.8nm,0.6s,baz=112,slow=7.5,SNR=9.1						
WRA	Warramunga Arr	44.33	275	P	P	02 36 03.6	+2.0
	0.7nm,0.3s,baz=117,slow=7.8,SNR=5.8						
FINES	FINESS Array B	148.20	338	PKPbc	PKPab	02 47 40.1	+0.9
	1.0nm,0.8s,baz=38,slow=5.6,SNR=1.9						

WEL 28 02:31:26.0±0.7, 31°S±5°×17°9E±°, h33km, M4.7/5, mB4.8/1, ML5.0/5, MLv4.7/5, Mw(mB)4.0/1, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.53	62	P	Pn	02 32 16.6	-1.9
GLKZ				S	Sn	02 32 58.2	-1.0
HAZ	Te Kaha	6.79	185	P	Pn	02 33 09.2	+5.9
HAZ				S	Sn	02 34 25.4	+5.9
WMGZ	Waiomatatini S	6.83	181	P	Pn	02 33 07.5	+3.7
WMGZ				S	Sn	02 34 25.4	+5.0
PKGZ	Pakihiroa	6.91	183	P	Pn	02 33 09.2	+4.2
PKGZ				S	Sn	02 34 25.4	+3.0
PUZ	Puketiti	7.08	182	P	Pn	02 33 10.9	+3.5
PUZ				S	Sn	02 34 28.0	+1.2
ARHZ	Aropaoanui	8.36	188	P	Pn	02 33 25.3	+0.4
ARHZ				S	Sn	02 34 59.3	+1.2
MCHZ	McNeill Hill	8.58	189	P	Pn	02 33 28.7	+0.8
MCHZ				S	Sn	02 35 05.3	+1.8
KWHZ	Kaweka Forest	8.60	191	P	Pn	02 33 27.8	-0.4
KWHZ				S	Sn	02 35 05.3	+1.1
MOVZ	Moawhango	8.71	194	S	Sn	02 35 09.5	+2.7
KRHZ	Kereru	8.83	191	S	Sn	02 35 06.1	-3.4
KAHZ	Kahuranaki	8.90	188	P	Pn	02 33 29.5	-2.8
KAHZ				S	Sn	02 35 08.6	-2.8
PNHZ	Pukenui	9.12	191	P	Pn	02 33 34.6	-0.7
PNHZ				S	Sn	02 35 13.7	-3.0
PXZ	Pawanui	9.14	188	P	Pn	02 33 34.6	-0.9
PXZ				S	Sn	02 35 13.7	-3.4
TSZ	Takapari Road	9.30	192	S	Sn	02 35 23.9	+2.7
PRHZ	Porangahau	9.40	189	S	Sn	02 35 19.7	-3.9
DVHZ	Dannevirke	9.50	191	S	Sn	02 35 24.7	-1.3
ANWZ	Angora Road	9.61	189	P	Pn	02 33 40.5	-1.4
ANWZ				S	Sn	02 35 27.3	-1.4

THE 28 02:37:12.9, 38°.34N×20°.44E, h10km, ML2.5/11, Error ellipse: s-maj=0.8km s-min=0.2km az=261.0

ATH 28 02:37:12.3, 38°.34N×20°.43E, h15km±1km, ML2.5/6, Error ellipse: s-maj=2.0km s-min=0.7km az=257.0

ISC 28 02:37:12.0±0.8, 38°.35N±0°.02×20°.40E±0°.03, h15km±5km, n51, σ0ˢ.66/85, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF1	Kardakata, Kep	0.10	142	P	Pg	02 37 15.0	-0.2
KEF1				S	Sg	02 37 16.7	-0.5
KEF4	Livadi, Kephal	0.10	167	P	Pg	02 37 15.2	0.0
KEF4				S	Sg	02 37 17.3	0.0
VSK1	VASILIKIADES	0.14	67	P	Pg	02 37 15.7	-0.1
VSK1				S	Sg	02 37 17.6	-0.7
KEF3	Kipouria, Keph	0.15	194	P	Pg	02 37 16.3	+0.4
KEF3				S	Sg	02 37 19.3	+0.8
KONA	Konidatara, Ke	0.15	63	P	Pg	02 37 15.9	0.0
KONA				S	Sg	02 37 18.3	-0.2
KONA				AML	AML	02 37 18.5	
	comp=N,4345µm,0.1s						
KONA				AML	AML	02 37 18.6	
	comp=E,4475µm,0.2s						
LXR1	Lixouri, Cepha	0.16	168	P	Pg	02 37 16.2	+0.3
LXR1				S	Sg	02 37 19.1	+0.6
	comp=E,25µm,0.1s						
LXRA	Lixouri, Kepha	0.16	168	P	Pg	02 37 16.2	+0.3
LXRA				S	Sg	02 37 19.2	+0.6
FSK	Fiskardo	0.17	51	P	Pg	02 37 16.2	+0.1
FSK				S	Sg	02 37 19.0	+0.1
	comp=E,3µm,0.1s						
FSK	Fiskardo	0.17	51	P	Pg	02 37 16.3	+0.1
FSK				S	Sg	02 37 19.0	+0.1
FSK				AML	AML	02 37 19.3	
	comp=E,7857µm,0.2s						
FSK				AML	AML	02 37 19.4	
	comp=N,2961µm,0.1s						
CHV1	Chavriata, Kef	0.17	184	P	Pg	02 37 16.5	+0.4
CHV1				S	Sg	02 37 19.5	+0.6
ARGA	Argostoli. Kep	0.19	160	P	Pg	02 37 16.5	+0.1
ARGA				S	Sg	02 37 19.5	+0.2
ARG2	Argostoli	0.19	158	P	Pg	02 37 16.5	+0.1
ARG2				S	Sg	02 37 19.3	-0.1
	comp=N,5µm,0.1s						
KEF2	Argostoli. Kep	0.20	159	P	Pg	02 37 16.6	0.0
KEF2				S	Sg	02 37 19.7	0.0
VLS	Valsamata	0.23	139	P	Pg	02 37 17.0	-0.2
VLS				S	Sg	02 37 20.2	-0.4
	comp=N,2µm,0.2s						
VLS	Valsamata	0.23	139	P	Pg	02 37 16.9	-0.2
VLS				S	Sg	02 37 20.2	-0.4
VLS				AML	AML	02 37 20.4	
	comp=E,3252µm,0.1s						
VLS				AML	AML	02 37 20.4	
	comp=N,2993µm,0.2s						
EVGI	Lefkada island	0.34	37	P	Pg	02 37 19.4	+0.5
EVGI				S	Sg	02 37 24.7	+1.0
EVGI	Lefkada island	0.34	37	P	Pg	02 37 19.4	+0.5
EVGI				S	Sg	02 37 24.6	+1.0
KFL	Anninata	0.39	128	P	Pg	02 37 19.8	-0.1
KFL				S	Sg	02 37 25.3	0.0
	comp=N,2µm,0.3s						
KFL	Anninata	0.39	128	P	Pg	02 37 19.6	-0.3
KFL				S	Sg	02 37 25.3	0.0
KFL				AML	AML	02 37 26.1	
	comp=E,3722µm,0.2s						
KFL				AML	AML	02 37 26.2	
	comp=N,3720µm,0.3s						
MGNA	Meganis	0.43	46	P	Pg	02 37 20.7	+0.1
MGNA				S	Sg	02 37 27.2	+0.7
LKD2	Lefkada island	0.48	25	P	Pg	02 37 21.8	+0.3
LKD2				S	Sb	02 37 29.3	+0.2
LKD2	Lefkada island	0.48	25	P	Pg	02 37 21.8	+0.3
TSLK	Tsoukalades, L	0.51	23	P	Pg	02 37 22.6	+0.4
TSLK	Tsoukalades, L	0.51	23	P	Pg	02 37 22.6	+0.4
AST1	Astakos	0.58	71	P	Pg	02 37 23.3	0.0
AST1				S	Sb	02 37 31.8	+0.1
	comp=N,1µm,0.3s						
PDO	Prodromos	0.67	68	P	Pg	02 37 24.9	-0.1
PDO				S	Sb	02 37 34.9	+0.6
	comp=N,635nm,0.4s						
PDO	Prodromos	0.67	68	P	Pg	02 37 24.9	-0.1
PDO				AML	AML	02 37 38.5	
	comp=N,997µm,0.3s						
PDO				AML	AML	02 37 40.3	
	comp=E,752µm,0.5s						
PVO	Paravola	0.93	73	P	Pg	02 37 29.9	0.0
PVO				S	Sn	02 37 43.2	-0.2
	comp=E,275nm,0.2s						
PVO	Paravola	0.93	73	P	Pg	02 37 29.9	0.0
PVO				AML	AML	02 37 45.8	
	comp=E,577µm,0.2s						
PVO				AML	AML	02 37 45.8	
	comp=N,511µm,0.3s						
DRO	Drossia	1.11	111	P	Pb	02 37 32.5	-0.4
DRO				S	Sn	02 37 49.3	+1.2
	comp=N,240nm,0.4s						
DRO	Drossia	1.11	111	P	Pb	02 37 32.3	-0.5
EFP	Efpalio	1.19	86	P	Pb	02 37 33.6	-0.6
EFP				S	Sn	02 37 51.3	+1.4
	comp=N,138nm,0.3s						
EFP	Efpalio	1.19	86	P	Pb	02 37 33.7	-0.5
ANX	Ano Chora	1.22	78	P	Pn	02 37 34.6	0.0
ANX				S	Sn	02 37 51.6	+0.7
	comp=N,140nm,0.7s						
ANX	Ano Chora	1.22	78	P	Pn	02 37 34.6	0.0
EVR	Evrytania	1.24	63	P	Pn	02 37 35.0	+0.1
EVR	Evrytania	1.24	63	P	Pn	02 37 34.9	+0.1
LAKA	Lakka	1.25	95	P	Pn	02 37 34.8	-0.1
SERG	Sergoula	1.31	87	P	Pn	02 37 35.8	+0.1
SERG				S	Sg	02 37 54.2	+0.1
SERG	Sergoula	1.31	87	P	Pn	02 37 35.5	-0.2
TRIZ	Trizonia	1.32	89	P	Pn	02 37 35.8	0.0
TRIZ	Trizonia	1.32	89	P	Pn	02 37 35.7	-0.1
AMT	Artemida-Makis	1.32	128	P	Pg	02 37 37.9	+0.5
KALE	Kalithea	1.37	88	P	Pn	02 37 36.6	0.0
DBRK	Dubrovnik	4.64	339	Sn	Sn	02 39 14.1	-1.0
STON	Ston	4.96	336	*e*Pn	Pn	02 38 26.6	+0.7
STON				Sn	Sn	02 39 21.7	-1.2
MAKA	Makarska	5.55	334	*e*Pn	Pn	02 38 34.3	+0.3
MAKA				Sn	Sn	02 39 35.8	-1.8
RICI	Ricice	5.70	335	*i* Pn	Pn	02 38 36.8	+0.7
RICI				Sn	Sn	02 39 39.4	-1.9
ZIRJ	Zirje	6.40	327	*e*Pn	Pn	02 38 46.8	+1.1
ZIRJ				Sn	Sn	02 39 56.9	-1.5
MORI	Morici	6.55	329	*i* Pn	Pn	02 38 49.1	+1.4
MORI				Sn	Sn	02 40 00.9	-1.1
DUGI	Dugi Otok	6.92	326	*i* Pn	Pn	02 38 54.2	+1.4
DUGI				Sn	Sn	02 40 09.3	-2.0

NIED 28 02:43:00, 36°.90N×144°.00E, h14km, Mw3.8 Best double couple: M₀5.08000×10¹⁴ NP1:φs202.00000°, δ66.00000°, λ-104.00000°. NP2:φs53.00000°, δ27.00000°, λ-62.00000°.

IDC 28 02:43:48.1±0.9, 36°.79N×144°.30E, h0km, mb3.7/12, mb1 4.0/18, mb1mx3.8/42, mbtmp3.9/18, ML3.8/5, MS2.9/2, Ms1 2.9/2, ms1mx2.4/44, Error ellipse: s-maj=22.4km s-min=17.4km az=156.0

JMA 28 02:43:51.8±0.3, 36°.89N×143°.97E, h48km, M4.2

NEIC 28 02:43:52.5±2.8, 36°.78N±0°.09×144°.3E±0°.1, h32km±5km, mb4.2/5, Error ellipse: s-maj=17.5km s-min=11.3km az=115.0

ISC 28 02:43:53.8±0.7, 36°.92N±0°.07×144°.04E±0°.07, h35km, n53, σ1ˢ.39/52, mb3.8/15, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	2.56	281	P	Pn	02 44 31.5	-1.4
ONAJ	Iwakimizuishiy	2.60	275	P	Pn	02 44 32.2	-1.2
JMM	Marumori	2.75	291	P	Pn	02 44 34.1	-1.3
JFFD	Fukushimafurud	2.79	274	P	Pn	02 44 34.9	-1.0
JMK	Ichinoseki	3.01	313	P	Pn	02 44 37.7	-1.3
JFT	Otama	3.01	282	P	Pn	02 44 37.1	-1.9
JOU	Okura	3.04	299	P	Pn	02 44 38.7	-0.7
JOU				S	Sn	02 45 13.0	-1.6
JOM	Ohasama	3.34	320	P	Pn	02 44 42.4	-1.1
JOM				S	Sn	02 45 19.1	-2.9
BSO1	Boso 1	3.36	229	P	Pn	02 44 42.2	-1.1
JYK	Kaneyama	3.52	306	P	Pn	02 44 45.3	-0.8
JYK				*e*S	Sn	02 45 25.5	-1.0
JAG	Ashikaga	3.72	264	P	Pn	02 44 47.8	-0.9
JAG				S	Sn	02 45 29.1	-2.2
JRY	Ryogami san	4.24	259	P	Pn	02 44 54.6	-1.3
JRY				S	Sn	02 45 41.8	-2.3
JOD2	Odawara 2	4.34	249	P	Pn	02 44 56.0	-1.3
MJAR	Matsushiro Arr	4.70	267	Pn	Pn	02 45 02.3	+0.1
	3.0nm,0.3s,baz=88,slow=14,SNR=69						
MJAR				LR	LR	02 47 49.6	
	comp=Z,84nm,18.6s,baz=80,slow=50						
MJAR	Matsushiro Arr	4.70	267		Pn	02 45 02.0	-0.2
MAJO	Matsushiro	4.70	267		Pn	02 45 02.2	0.0
MAT	Matsushiro	4.70	267	P	Pn	02 45 02.7	+0.5
MAT				*e*S	Sn	02 45 54.6	-0.9
MJB9	Matsu-Tunnel	4.70	267		Pn	02 45 02.2	-0.1
ERM	Erimo	5.13	353	Pn	Pn	02 45 05.6	-2.5
JHJ	Hachijo jima 2	5.16	224	Pn	Pn	02 45 06.0	-2.5
	16nm,0.3s,baz=106,slow=23,SNR=8.4						
INU	Inuyama	5.89	257		Pn	02 45 17.5	-1.1
JKA	Kamikawa-asahi	7.27	352		Pn	02 45 36.5	-0.9
ASAJ	Asahikawa	7.27	352	Pn	Pn	02 45 36.5	-1.0
	4.1nm,0.3s,baz=186,slow=16,SNR=8.5						
USRK	Ussuriysk Ar.	11.69	312	Pn	Pn	02 46 38.9	+0.9
	baz=117,slow=14,SNR=7.3						
KSRS	Korea Array	12.86	277	Pn	Pn	02 46 55.8	+1.7
	0.0nm,0.3s,baz=90,slow=14,SNR=6.0						
KSRS				LR	LR	02 51 44.2	
	comp=Z,64nm,19.5s,baz=82,slow=36						
KLR	Kul'dur	15.20	328	Pn	P	02 47 28.6	-1.8
	0.2nm,0.3s,baz=135,slow=11,SNR=11						
H11N2	WAKE ISLAND Hy	26.32	124	T	T	03 16 21.6	
	baz=317,slow=75,SNR=111						
H11N1	WAKE ISLAND Hy	26.33	124	T	T	03 16 20.6	
	baz=317,slow=75,SNR=47						
H11N3	WAKE ISLAND Hy	26.34	124	T	T	03 16 20.9	
	baz=317,slow=75,SNR=76						
H11S1	WAKE ISLAND Hy	27.07	127	T	T	03 17 15.1	
	baz=318,slow=76,SNR=19						
H11S3	WAKE ISLAND Hy	27.07	127	T	T	03 17 21.2	
	baz=318,slow=76,SNR=17						
H11S2	WAKE ISLAND Hy	27.09	127	T	T	03 17 22.2	
	baz=318,slow=76,SNR=19						
ULN	Ulaanbaatar	29.16	304	P	P	02 49 53.8	+2.0
ULN				IAmb	IAmb	02 49 56.7	
	comp=Z,5.9nm,1.2s						
SONM	Songino Array	29.59	304	P	P	02 49 58.0	+2.5
	comp=Z,1.6nm,0.9s,baz=106,slow=9.6,SNR=7.8						
SONM	Songino Array	29.59	304	IAmb	IAmb	02 50 01.6	
	comp=Z,1.5nm,1.0s						
CMAR	Chiang Mai Arr	43.51	258	P	P	02 51 55.5	+1.5
	comp=Z,0.8nm,0.3s,baz=40,slow=5.8,SNR=5.1						
ZALV	Zalesovo Beam	43.54	313	P	P	02 51 54.9	+1.0
	comp=Z,0.3nm,0.3s,baz=82,slow=3.2,SNR=1.2						
MK31	Makanchi Array	45.95	303	P	P	02 52 14.4	+1.2
MK31				IAmb	IAmb	02 52 21.7	
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	45.95	303	P	P	02 52 13.8	+0.5
	comp=Z,0.6nm,0.7s,baz=83,slow=9.9,SNR=7.1						
MKAR	Makanchi Array	45.95	303	P	P	02 52 14.0	+0.7
KURK	Kurchatov	47.65	309	P	P	02 52 27.2	+0.8
KURK				IAmb	IAmb	02 52 38.6	
	comp=Z,4.3nm,0.6s						
ILAR	Eielson Array	48.46	32	P	P	02 52 32.4	-0.2
	comp=Z,0.7nm,0.8s,baz=257,slow=6.8,SNR=8.2						
KKAR	Karatay Array	54.99	301	P	P	02 53 22.0	+0.4
WB2	Warramunga Arr	57.29	191	P	P	02 53 35.9	-2.2
ABKAR	Akbulak array	59.61	311	P	P	02 53 54.5	+0.5
ASAR	Alice Springs	61.02	191	P	P	02 54 02.6	-1.2
	comp=Z,0.5nm,0.8s,baz=16,slow=5.3,SNR=5.1						
YKA	Yellowknife Ar	62.84	31	P	P	02 54 14.5	-1.1
	comp=Z,0.4nm,0.8s,baz=298,slow=6.4,SNR=6.5						
FINES	FINESS Array B	69.88	333	P	P	02 55 01.7	+1.0
	comp=Z,1.3nm,0.8s,baz=18,slow=10,SNR=2.5						
KBZ	Khabaz	72.56	312	P	P	02 55 18.8	+1.6
	comp=Z,2.5nm,0.9s,baz=67,slow=3.0,SNR=6.7						
NVAR	Mina Array Bea	73.36	54	P	P	02 55 21.5	-0.9
	comp=Z,0.5nm,0.6s,baz=297,slow=6.5,SNR=5.3						
NB2	NORSAR Subarra	75.08	338	P	P	02 55 32.4	+0.6
	comp=Z,0.2nm,0.5s,baz=30,slow=6.5						
NOA	NORSAR Array B	75.08	338	P	P	02 55 32.7	+0.9
	comp=Z,0.2nm,0.5s,baz=44,slow=8.1,SNR=1.3						
TXAR	Lajitas Array	88.51	54	P	P	02 56 42.9	-0.2
	comp=Z,0.4nm,0.6s,baz=303,slow=3.7,SNR=6.4						

SJA 28 03:00:41.9±0.9, 19°.86S×70°.83W, h9km±12km, ML3.7, MW3.7

IDC 28 03:00:41.1±1.2, 19°.83S×70°.82W, h0km, mb3.4/5, mb1 3.7/7, mb1mx3.7/25, mbtmp3.6/7, ML3.5/2, MS3.0/2, Ms1 3.0/2, ms1mx2.7/15, Error ellipse: s-maj=30.7km s-min=16.2km az=66.0

GUC 28 03:00:42.9±0.8, 19°.86S×70°.91W, h32km±7km, ML3.7

ISC 28 03:00:39.6±1.4, 19°.85S±0°.02×70°.94W±0°.05, h1km±9km, n40, σ1ˢ.26/62, mb3.7/3, 7C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.81	72	⇑*i*P	Pb	03 00 56.6	0.0
PSGC				*i* S	Sb	03 01 07.6	-0.6
PSGC				IAML		03 01 09.9	
	comp=E,3µm,0.5s						
PSGCX	Pisagua	0.81	72	*e*P	Pb	03 00 56.5	-0.1
PSGCX				*e*S	Sb	03 01 06.8	-1.3
PSGCX				IAML		03 01 08.5	
	comp=Z,3µm,0.4s						
TA01	Diego Aracena	1.01	135	⇑*e*P	Pb	03 00 59.7	-0.2
TA01				*e*S	Sb	03 01 12.9	-0.7
TA01				IAML		03 01 17.7	
	comp=E,4µm,0.6s						
PATCX	Punta Patache	1.22	142	⇓*i*P	Pg	03 01 03.5	+0.6
PATCX				*i* S	Sn	03 01 19.6	-1.4
PATCX				IAML		03 01 23.0	
	comp=E,2µm,0.4s						
PATCX	Punta Patache	1.22	142	*e*P	Pg	03 01 04.3	+1.4
PATCX				*e*S	Sn	03 01 19.5	-1.5
PATCX				IAML		03 01 22.2	
	comp=Z,1µm,0.6s						
PB11	IPOC Station P	1.22	86	⇑*i*P	Pg	03 01 03.3	+0.4
PB11				*i* S	Sn	03 01 19.6	-1.6
PB11				IAML		03 01 21.1	
	comp=E,7µm,0.6s						
PB11	IPOC Station P	1.22	86	*e*P	Pg	03 01 03.4	+0.4
PB11				*e*S	Sg	03 01 18.9	+0.2
PB11				IAML		03 01 20.4	
	comp=Z,4µm,0.3s						
PB12	IPOC Station P	1.36	25	⇑*i*P	Pg	03 01 06.2	+0.5
PB12	IPOC Station P	1.36	25	*i* P	Pg	03 01 06.5	+0.8
PB12				IAML		03 01 32.0	
	comp=Z,875nm,1.2s						
AP01	Chacalluta	1.58	21	*e*P	Pg	03 01 10.2	+0.3
AP01				IAML		03 01 35.0	
	comp=E,2µm,0.6s						
GO01	Chusmiza	1.66	84	⇑*i*P	Pb	03 01 10.9	-0.3
GO01				*i* S	Sg	03 01 33.4	+0.5
PB08	IPOC Station P	1.71	100	⇑*i*P	Pb	03 01 11.5	-0.6
PB08	IPOC Station P	1.71	100	*e*P	Pb	03 01 11.7	-0.4
PB08				*e*S	Sg	03 01 34.0	-0.5
PB08				IAML		03 01 37.1	
	comp=Z,917nm,1.1s						
PB02	IPOC Station P	1.76	146	⇓*i*P	Pb	03 01 11.8	-0.9
PB02				*e*S	Sb	03 01 35.0	-0.4
PB02	IPOC Station P	1.76	146	*e*P	Pb	03 01 11.8	-0.9
PB02				*e*S	Sg	03 01 37.7	+1.5

PB02				IAML		03 01 38.5	
	comp=Z,2µm,0.7s						
PB01	IPOC Station P	1.81	131	⇓*i*P	Pb	03 01 13.1	-0.5
PB01				*i* S	Sg	03 01 37.0	-0.7
PB01				IAML		03 01 40.7	
	comp=N,1µm,0.4s						
PB16	IPOC Station P	2.03	42	⇑*i*P	Pb	03 01 17.3	-0.3
PB16	IPOC Station P	2.03	42	*e*P	Pb	03 01 17.3	-0.3
PB16				*e*S	Sg	03 01 44.5	-0.4
PB16				IAML		03 01 51.3	
	comp=Z,808nm,0.8s						
PB07	IPOC Station P	2.11	152	*e*P	Pn	03 01 16.5	+0.2
PB07				*e*S	Sg	03 01 47.1	-0.3
PB07				IAML		03 01 55.0	
	comp=Z,890nm,0.6s						
PB03	IPOC Station P	2.45	153	*e*P	Pn	03 01 21.3	+0.4
PB03				*e*S	Sg	03 01 59.8	+1.4
PB03				IAML		03 02 14.8	
	comp=Z,294nm,0.5s						
PB09	IPOC Station P	2.50	141	⇓*e*P	Pb	03 01 23.5	-2.0
PB09				*i* S	Sb	03 01 56.8	-0.2
PB09	IPOC Station P	2.50	141	*e*P	Pb	03 01 24.2	-1.3
PB09				*e*S	Sb	03 01 57.9	+1.0
PB09				IAML		03 02 04.4	
	comp=Z,890nm,0.7s						
PB04	IPOC Station P	2.58	163	*i* P	Pn	03 01 22.3	-0.3
PB04				*e*S	Sg	03 02 03.4	+0.9
PB05	IPOC Station P	3.06	167	*i* P	Pn	03 01 28.5	-0.8
PB05				*e*S	Sg	03 02 18.9	+0.8
PB05				IAML		03 02 44.1	
	comp=Z,156nm,0.7s						
PB06	IPOC Station P	3.11	156	*i* P	Pn	03 01 29.9	-0.1
PB06				*e*S	Sg	03 02 16.9	-2.9
PB06				IAML		03 02 28.3	
	comp=Z,365nm,0.7s						
LVC	Limon Verde	3.34	146	Pn	Pn	03 01 35.4	+2.2
	comp=Z,3.1nm,0.3s,baz=351,slow=8.7,SNR=27						
LVC				Sn	Sn	03 02 14.5	+0.7
	comp=Z,8.7nm,0.3s,baz=274,slow=20,SNR=4.6						
LVC				Lg	Lg	03 02 25.3	
	comp=Z,24nm,0.3s,baz=214,slow=17,SNR=15						
LVC	Limon Verde	3.34	146	*i* P	Pn	03 01 35.1	+1.9
LVC				*e*S	Sg	03 02 24.4	-2.4
LVC				IAML		03 02 38.9	
	comp=Z,130nm,0.7s						
PB15	IPOC Station P	3.61	158	*i* P	Pn	03 01 36.7	-0.2
PB15				*e*S	Sg	03 02 34.3	-1.3
PB15				IAML		03 02 39.6	
	comp=Z,336nm,0.6s						
PB10	IPOC Station P	3.66	174	*i* P	Pn	03 01 36.2	-1.2
PB10				IAML		03 02 59.6	
	comp=Z,48nm,0.9s						
LPAZ	La Paz	4.44	37	Pn	Pb	03 01 56.0	-2.8
	comp=Z,0.4nm,0.3s,baz=196,slow=10.0,SNR=10						
LPAZ	La Paz	4.44	37	*i* P	Pb	03 01 56.5	-2.3
PB14	IPOC Station P	4.78	174	*i* P	Pn	03 01 51.7	-1.3
PB14				IAML		03 03 27.5	
	comp=Z,47nm,0.9s						
SIV	San Ignacio	10.15	69	Pn	Pn	03 03 07.0	+0.4
	comp=Z,0.6nm,0.3s,baz=260,slow=9.0,SNR=22						
SIV				LR	LR	03 07 29.6	
	comp=Z,112nm,19.1s,baz=300,slow=41						
PLCA	Paso Flores	20.82	179	P	Pn	03 05 23.9	-1.1
	comp=Z,3.3nm,1.0s,baz=189,slow=13,SNR=5.4						
PTGA	Pitinga	21.83	31	P	P	03 05 33.1	-0.6
	comp=Z,1.9nm,0.5s,baz=196,slow=13,SNR=5.3						
PTGA				LR	LR	03 14 35.7	
	comp=Z,36nm,19.7s,baz=338,slow=38						
BDFB	Brasilia	22.23	83	P	P	03 05 39.1	+1.0
	comp=Z,1.1nm,0.4s,baz=203,slow=12,SNR=2.3						
TXAR	Lajitas Array	58.20	326	P	P	03 10 38.5	+2.8
	comp=Z,0.0nm,0.3s,baz=151,slow=10.0,SNR=1.3						
YKA	Yellowknife Ar	89.02	341	P	P	03 13 36.2	+0.4
	comp=Z,0.5nm,1.1s,baz=129,slow=5.3,SNR=4.2						
MKAR	Makanchi Array	145.36	33	PKPbc	PKiKP	03 20 20.3	-3.0
	comp=Z,0.3nm,0.7s,baz=318,slow=3.9,SNR=2.5						
SONM	Songino Array	152.00	4	PKPbc	PKiKP	03 20 38.4	+1.3
	comp=Z,0.2nm,0.5s,baz=288,slow=1.4,SNR=1.4						

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*IDC **28** 03:04:31.1±6.6, 11°.13S×165°.97E, h41^{km}±58^{km}, mb3.9/6, mb1 4.0/7, mb1mx3.6/45, mbtmp4.1/7, ML3.9/1, MS3.1/7, Ms1 3.1/7, ms1mx2.9/26, Error ellipse: s-maj=37.7km s-min=31.3km az=148.0*

ISC 28 03:04:33.1±0.9, **11°.24S**±0°.09×**166°.0E**±0°.2, **h61**^{km}, **n13**, σ**1^{s}.48**/11, **mb3.8**/6, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.23	286	LR	LR	03 07 46.6	
	comp=Z,46nm,21.0s,baz=129,slow=32						
DZM	Mont Dzumac	10.78	178	P	Pn	03 07 06.1	+1.2
	0.8nm,0.3s,baz=140,slow=23,SNR=39						
DZM				S	Sn	03 09 01.2	-2.8
	0.4nm,0.3s,baz=144,slow=19,SNR=1.6						
DZM				LR	LR	03 10 04.6	
	comp=Z,67nm,18.8s,baz=19,slow=31						
KRVT	Keravat (AS076	15.47	295	LR	LR	03 13 48.9	
	comp=Z,79nm,19.6s,baz=120,slow=36						
AFI	Afiamalu	21.84	99	LR	LR	03 15 58.8	
	comp=Z,54nm,20.6s,baz=12,slow=31						
WRA	Warramunga Arr	31.66	250	P	P	03 10 50.5	-0.4
	0.9nm,0.7s,baz=80,slow=8.9,SNR=4.3						
WRA				PcP	PcP	03 13 42.5	+0.7
	0.5nm,1.1s,baz=69,slow=2.7,SNR=5.2						
WRA				LR	LR	03 22 45.4	
	comp=Z,45nm,18.3s,baz=190,slow=35						
RPZ	Rata Peaks	32.65	173	P	P	03 11 01.1	+1.8
	11nm,0.8s,baz=0.0,slow=3.0,SNR=4.5						
ASAR	Alice Springs	32.94	244	P	P	03 11 01.6	-0.5
	0.9nm,0.8s,baz=74,slow=9.8,SNR=9.7						
ASAR				PcP	PcP	03 13 45.6	+0.3
	0.7nm,0.7s,baz=75,slow=3.3,SNR=7.7						
PETK	Petropavlovsk-	64.48	354	LR	LR	03 36 60.0	
	comp=Z,26nm,20.0s,baz=60,slow=30						
ILAR	Eielson Array	83.61	18	P	P	03 16 54.7	+0.2
	0.6nm,0.6s,baz=241,slow=5.3,SNR=4.8						
MKAR	Makanchi Array	93.84	317	P	P	03 17 44.3	+0.5
	1.0nm,0.6s,baz=94,slow=6.8,SNR=4.2						
YKA	Yellowknife Ar	95.02	27	P	P	03 17 46.9	-1.9
	0.1nm,0.5s,baz=252,slow=4.3,SNR=4.3						
NRIK	Noril'sk	96.39	340	LR	LR	04 00 30.6	
	comp=Z,26nm,19.6s,baz=22,slow=35						
ARCES	ARCESS Array B	116.59	346	PKP	PKiKP	03 23 09.6	-0.2
	4.6nm,1.0s,baz=94,slow=2.8,SNR=3.7						

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*BJI **28** 03:09:50.9±0.0, 26°.80N×96°.01E, h60^{km}, mB4.5/20, mb4.4/29, ML4.5/3, Ms3.7/7, Ms7 3.6/1*

*IDC **28** 03:09:51.0±0.7, 26°.61N×96°.15E, h76^{km}±5^{km}, mb3.6/18, mb1 3.8/19, mb1mx3.6/48, mbtmp3.9/19, MS3.3/7, Ms1 3.3/7, ms1mx3.0/29, Error ellipse: s-maj=22.5km s-min=10.7km az=50.0*

*NEIC **28** 03:09:53.7±1.7, 26°.41N±0°.09×95°.9E±0°.1, h97^{km}±7^{km}, mb4.1/20, Error ellipse: s-maj=15.5km s-min=11.2km az=45.0*

ISC 28 03:09:51.8±0.4, **26°.51N**±0°.05×**95°.82E**±0°.04, **h83**^{km}, **n80**, σ**2^{s}.19**/95, **mb4.0**/26, **Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	Shillong	3.66	256	*e*P	Pn	03 10 47.2	+0.8
SHL				*e*S	Sn	03 11 26.7	-1.9
SHL				IAML		03 11 30.9	
	comp=E,334nm,0.1s						
SHL				IAML		03 11 31.4	
	comp=N,561nm,0.4s						
SHL	Shillong	3.66	256	Pn	Pn	03 10 47.0	+0.7
LSA	Lhasa	5.20	309	P	Pn	03 11 09.0	+1.4
LSA				S	Sn	03 12 06.8	+0.3
LSA				smax	smax		
	comp=N,420nm,0.6s						
LSA				smax	smax		
	comp=N,700nm,0.7s						
LSA	Lhasa	5.20	309		Pn	03 11 08.9	+1.4
BRDH	Bariadhala	5.39	226	S	Sn	03 12 10.6	+0.2
	comp=N,48nm,0.3s,baz=178,slow=14,SNR=3.8						
KMI	Kunming	6.39	101	P	Pn	03 11 23.3	-0.3
KMI				S	Sn	03 12 35.5	+0.3
KMI				pmax	pmax		
	comp=N,33nm,1.0s						
KMI				pmax	pmax		
	comp=N,120nm,3.8s						
KMI				LR	LR		
	comp=N,420nm,8.1s						
KMI				LR	LR		
	comp=N,190nm,7.5s						
TAPN	Taplejung	7.29	278	*e*Pn	Pn	03 11 35.8	-0.1
TAPN				*e*Sn	Sn	03 12 55.2	-2.0
	comp=N,215nm,0.4s						
ODAN	Odare	7.55	275	*e*Pn	Pn	03 11 38.8	-0.6
ODAN				*e*Sn	Sn	03 13 01.6	-1.9
	comp=N,218nm,0.3s						
CHTO	Chiang Mai	8.19	159		Pn	03 11 49.4	+1.4
RAMN	Ramite	8.25	275	*e*Pn	Pn	03 11 49.4	+0.4
RAMN				*e*Sn	Sn	03 13 18.8	-2.0
	comp=N,143nm,0.3s						
CM31	Chiang Mai Arr	8.52	160		Pn	03 11 54.1	+1.6
CMAR	Chiang Mai Arr	8.52	160	P	Pn	03 11 53.4	+0.9
	comp=N,1.4nm,0.3s,baz=335,slow=13,SNR=125						
CMAR				LR	LR	03 15 12.7	
	comp=N,84nm,19.5s,baz=360,slow=38						
CMAR	Chiang Mai Arr	8.52	160		Pn	03 11 53.5	+1.0
JIRN	Jiri	8.66	280	*e*Pn	Pn	03 11 54.7	0.0
JIRN				*e*Sn	Sn	03 13 27.1	-3.7
	comp=N,265nm,0.3s						
GUN	Gumba	8.96	281	*e*Pn	Pn	03 11 58.3	-0.4
GUN				*e*Sn	Sn	03 13 34.5	-3.6
	comp=N,123nm,0.3s						
PKI	Pulchoki	9.34	279	*e*Pn	Pn	03 12 03.0	-0.9
PKIN	Phulchoki	9.35	279	*e*Pn	Pn	03 12 03.0	-1.0
PKIN				*e*Sn	Sn	03 13 43.9	-3.8
	comp=N,198nm,0.5s						
DMN	Daman	9.61	279	*e*Pn	Pn	03 12 06.4	-1.2
DMN				*e*Sn	Sn	03 13 50.6	-3.4
	comp=N,144nm,0.6s						
GKN	Gorkha	10.06	281	*e*Pn	Pn	03 12 12.2	-1.4
GKN				*e*Sn	Sn	03 14 00.4	-4.4
	comp=N,145nm,0.3s						
DANN	Dangsing	10.87	282	*e*Pn	Pn	03 12 21.7	-3.0
DANN				*e*Sn	Sn	03 14 17.4	-7.3
	comp=N,120nm,0.4s						
PBKT	Sadao Pong	10.99	153		Pn	03 12 26.6	+0.5
BWNR	Bhubaneshwar	11.08	238	*e*x	Pn	03 12 28.0	+0.7
BWNR				*e*x	Sn	03 14 26.5	-3.0
XAN	Xi'an	13.57	53	P	Pn	03 12 58.8	-2.0
XAN				pP	P	03 13 04.8	-2.1
XAN				pmax	pmax		
	comp=N,7.0nm,0.8s						
NGP	Nagpur	16.24	254	*e*x	Pn	03 13 34.1	-0.9
NGP				*e*x	Sn	03 16 28.7	-6.1
WHN	Wuhan	16.77	72	P	Pn	03 13 37.5	-4.0
WHN				pmax	pmax		
	comp=N,58nm,0.9s						
HYB	Hyderabad	18.38	244	*i* P	Pn	03 14 06.0	+4.8
WMQ	Urumqi	18.48	341	*e*P	Pn	03 14 06.0	+3.7
HHC	Hu-ho-hao-te	19.35	38	*e*P	Pn	03 14 14.8	+2.2
HHC				pmax	pmax		
	comp=N,17nm,0.7s						
HHC				pmax	pmax		
	comp=N,70nm,3.8s						
NIL	Nilore	20.76	295	P	P	03 14 26.4	+0.4
SONM	Songino Array	22.85	19	P	P	03 14 47.6	-0.5
	comp=N,0.9nm,0.8s,baz=194,slow=9.7,SNR=4.7						
SONM				ScP	ScP	03 22 05.2	-1.5
	comp=N,0.4nm,0.6s,baz=217,slow=4.0,SNR=3.1						
SONM	Songino Array	22.85	19	P	P	03 14 48.9	+0.7
MK31	Makanchi Array	22.90	336	P	P	03 14 50.1	+1.5
MKAR	Makanchi Array	22.90	336	P	P	03 14 49.5	+0.9
	comp=N,1.3nm,0.5s,baz=138,slow=13,SNR=5.3						
MKAR	Makanchi Array	22.90	336	P	P	03 14 50.7	+2.1
MAKZ	Makanchi	23.03	335	P	P	03 14 51.6	+1.7
MAKZ				IAmb	IAmb	03 15 33.9	
	comp=Z,6.0nm,0.9s						
ULN	Ulaanbaatar	23.07	20	P	P	03 14 53.7	+3.3
ULN				IAmb	IAmb	03 15 15.2	
	comp=Z,6.1nm,1.1s						
AAK	Ala-Archa	23.71	318	P	P	03 14 58.3	+1.9
	comp=Z,1.0nm,0.4s,baz=106,slow=12,SNR=6.5						
AAK	Ala-Archa	23.71	318	P	P	03 14 58.7	+2.3
AAK				IAmb	IAmb	03 15 32.1	
	comp=Z,6.5nm,1.1s						
PSI	Prapat	23.77	172	LR	LR	03 26 03.6	
	comp=Z,74nm,19.9s,baz=314,slow=41						
ARSB	Arslanbob	23.93	314	P	P	03 14 59.9	+1.6
ARSB				IAmb	IAmb	03 15 35.4	
	comp=Z,21nm,1.6s						
KBL	Kabul	24.36	296	P	P	03 15 03.9	+1.5
TLY	Talaya	25.83	11	LR	LR	03 26 36.9	
	comp=Z,66nm,19.7s,baz=334,slow=39						
KKAR	Karatay Array	26.42	315	P	P	03 15 23.2	+2.6
KURBB	Kurchatov Arra	27.47	336	P	P	03 15 30.6	+0.6
	comp=Z,1.1nm,0.8s,baz=148,slow=9.3,SNR=11						
KURBB				pP	pP	03 15 49.7	+0.5
	comp=Z,3.1nm,0.6s,baz=144,slow=10,SNR=9.9						
KURBB				ScP	ScP	03 22 19.3	-0.3
	comp=Z,0.2nm,0.3s,baz=151,slow=2.3,SNR=5.3						
KURK	Kurchatov	27.52	336	P	P	03 15 33.0	+2.6
KURK				IAmb	IAmb	03 16 02.0	
	comp=Z,5.2nm,0.8s						
KURK	Kurchatov	27.52	336		ScP	03 22 19.3	-0.4
ZALV	Zalesovo Beam	28.59	346	P	P	03 15 40.4	+0.5
	comp=Z,0.6nm,0.3s,baz=190,slow=4.4,SNR=1.1						
KSRS	Korea Array	29.20	60	LR	LR	03 28 25.5	
	comp=Z,30nm,18.7s,baz=305,slow=39						
JNU	Nakatsue	31.02	69	LR	LR	03 28 46.1	
	comp=Z,111nm,19.8s,baz=14,slow=37						
BVAR	Borovoye Array	32.58	331	P	P	03 16 14.9	-0.2
	comp=Z,1.7nm,0.7s,baz=146,slow=11,SNR=9.9						
BRVK	Borovoye	32.65	331	P	P	03 16 17.2	+1.6
BRVK				IAmb	IAmb	03 16 18.1	
	comp=Z,2.7nm,0.8s						
GEYT	Alibeck	33.66	299	P	P	03 16 27.4	+2.6
	comp=Z,3.3nm,0.9s,baz=140,slow=9.4,SNR=5.3						
GEYT				LR	LR	03 31 42.9	
	comp=Z,49nm,18.3s,baz=235,slow=39						
GEYT	Alibeck	33.66	299	P	P	03 16 26.7	+1.9
ABKAR	Akbulak array	35.79	319	P	P	03 16 44.5	+1.6
MJAR	Matsushiro Arr	37.23	64	P	P	03 16 52.5	-2.9
	comp=Z,1.0nm,0.5s,baz=297,slow=8.0,SNR=2.9						
MJAR				sP	pP	03 17 20.6	+5.5
	comp=Z,2.0nm,0.7s,baz=270,slow=9.7,SNR=3.1						
AKTO	Aktyubinsk	37.43	320	P	P	03 16 57.8	+0.9
	comp=Z,1.9nm,0.9s,baz=127,slow=8.9,SNR=6.6						
SOEI	Soe	45.42	139	P	P	03 18 01.8	-0.9
KBZ	Khabaz	45.78	306	LR	LR	03 40 38.2	
	comp=Z,50nm,18.8s,baz=316,slow=40						
BR131	Keskin Array S	52.76	301	P	P	03 18 59.6	+1.1
BRTR	Keskin Array B	52.76	301	P	P	03 18 59.6	+1.1
	comp=Z,1.1nm,0.7s,baz=116,slow=9.5,SNR=9.6						
BRTR	Keskin Array B	52.76	301	P	P	03 18 59.4	+0.9
AKASG	Malin Array Be	55.32	315	P	P	03 19 17.1	+0.3
	comp=Z,0.5nm,0.5s,baz=82,slow=6.4,SNR=7.6						
FINES	FINESS Array B	57.42	328	pP	pP	03 19 52.4	-0.5
	comp=Z,1.4nm,0.8s,baz=86,slow=5.9,SNR=2.3						
MLR	Muntele Rosu	57.83	309	P	P	03 19 36.6	+1.8
ARCES	ARCESS Array B	58.55	337	P	P	03 19 40.4	+1.1
	comp=Z,2.5nm,1.0s,baz=102,slow=8.4,SNR=1.2						
WB0	Warramunga Arr	59.30	137	P	P	03 19 44.6	-0.6
WRAB	Tennant Creek	59.40	137	P	P	03 19 45.4	-0.5
WRA	Warramunga Arr	59.41	137	P	P	03 19 45.4	-0.5
	comp=Z,10nm,0.7s,baz=326,slow=7.5,SNR=100						
AS31	Alice Springs	62.00	140	P	P	03 20 03.0	-0.5
AS31				IAmb	IAmb	03 20 03.9	
	comp=Z,1.5nm,0.5s						
ASAR	Alice Springs	62.00	140	P	P	03 20 02.5	-1.1
	comp=Z,4.9nm,0.6s,baz=323,slow=6.5,SNR=56						
ASAR	Alice Springs	62.00	140	P	P	03 20 02.9	-0.6
NB2	NORSAR Subarra	64.60	328	P	P	03 20 18.8	-1.4
	comp=Z,1.4nm,1.1s,baz=81,slow=6.5						
NOA	NORSAR Array B	64.60	328	P	P	03 20 19.7	-0.5
	comp=Z,0.9nm,1.0s,baz=82,slow=6.5,SNR=3.8						
NOA				pP	pP	03 20 39.5	-2.5
	comp=Z,0.5nm,0.8s,baz=82,slow=6.4,SNR=2.7						
CLL	Collm	65.42	317	*e*P	P	03 20 27.0	+1.4
GERES	GERESS Array B	65.51	314	P	P	03 20 27.2	+0.8
	comp=Z,0.4nm,0.4s,baz=76,slow=5.6,SNR=8.0						
GERES				pP	pP	03 20 46.8	-1.6
	comp=Z,1.0nm,0.8s,baz=79,slow=6.9,SNR=3.6						
STKA	Stephens Creek	72.64	140	P	P	03 21 09.9	-0.6
	comp=Z,3.0nm,0.7s,baz=338,slow=7.5,SNR=10						
STKA	Stephens Creek	72.64	140	IAmb	IAmb	03 21 10.8	
	comp=Z,0.9nm,0.8s						
ILAR	Eielson Array	76.99	23	P	P	03 21 34.2	-1.0
	comp=Z,0.5nm,1.0s,baz=336,slow=3.6,SNR=4.7						
ILAR				pP	pP	03 21 53.4	-4.2
	comp=Z,0.4nm,0.8s,baz=316,slow=5.0,SNR=3.4						
YKA	Yellowknife Ar	88.02	14	P	P	03 22 30.9	-1.6
	comp=Z,0.2nm,0.8s,baz=324,slow=4.0,SNR=2.2						
YKA				pP	pP	03 22 51.6	-3.6
	comp=Z,0.7nm,0.9s,baz=332,slow=4.1,SNR=6.8						
BDFB	Brasilia	144.67	280	PKP	PKPdf	03 29 20.4	+0.6
	comp=Z,1.6nm,0.6s,baz=61,slow=12,SNR=3.8						

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*NEIC **28** 03:11:50.0±1.8, 62°.06N±0°.03×140°.93W±0°.08, h11^{km}±5^{km}, Error ellipse: s-maj=6.0km s-min=3.6km az=106.0*

*PGC **28** 03:11:50.6±0.0, 62°.07N×140°.93W, h10^{km}, ML2.8/11, 233km Wnw of Haines Jct., Yt Southern Yukon Territory, Canada*

ISC 28 03:11:49.5±0.9, **62°.06N**±0°.02×**140°.87W**±0°.02, **h15**^{km}±7^{km}, **n74**, σ**1^{s}.43**/105, **Southern Yukon Territory**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK1	Sand Pete Hill	0.19	59	P	Pg	03 11 54.6	+0.6
YUK1				S	Sg	03 11 57.7	+0.6
YUK1	Sand Pete Hill	0.19	59		Pg	03 11 54.6	+0.6
YUK2	White River	0.27	178	P	Pb	03 11 56.0	-0.2
YUK2				S	Sb	03 12 00.2	-0.5
YUK2	White River	0.27	178		Pb	03 11 56.0	-0.2
YUK2					Sb	03 12 00.2	-0.5
YUK3	Moose Creek	0.34	146	P	Pb	03 11 57.1	-0.4
YUK3				S	Sb	03 12 02.2	-0.6
YUK3	Moose Creek	0.34	146		Pb	03 11 57.1	-0.4
BVCY	Beaver Creek	0.36	0	P	Pb	03 11 57.1	-0.6
BVCY				S	Sg	03 12 01.7	-0.2
BVCY	Beaver Creek	0.36	0		Pb	03 11 57.0	-0.6
BVCY					Sg	03 12 01.7	-0.2
BARN	Barnard Glacie	1.07	201		Pg	03 12 09.5	-0.7
BARN					Sb	03 12 24.2	+0.5
BC03		1.10	338		Pb	03 12 10.0	-0.2
BCAR	Beaver Creek A	1.10	338	Pn	Pg	03 12 09.8	-0.9
CTGM	Chitina Glacie	1.12	192	P	Pb	03 12 10.7	+0.1
CTGM				S	Sb	03 12 25.7	+0.6
CTGM	Chitina Glacie	1.12	192		Pb	03 12 10.7	+0.1
PTPK	Patty Peak	1.16	222	P	Pg	03 12 11.2	-0.7
PTPK				S	Sg	03 12 26.6	-0.4
PTPK	Patty Peak	1.16	222		Pg	03 12 11.1	-0.7
PTPK					Sg	03 12 26.4	-0.6
MCARA	McCarthy VSAT	1.23	238		Pg	03 12 12.3	-0.9
MCARA					Sb	03 12 28.9	+0.8
BALM	Baldy	1.25	215	P	Pg	03 12 12.6	-1.0
BALM				S	Sg	03 12 28.9	-0.8
BALM	Baldy	1.25	215		Pg	03 12 12.5	-1.0
YUK4	Talbot Arm	1.28	123	P	Pn	03 12 13.9	+0.8
YUK4				S	Sb	03 12 30.8	+1.1
YUK4	Talbot Arm	1.28	123		Pn	03 12 13.7	+0.7
KIAG	Kiagna River	1.34	213	P	Pg	03 12 14.3	-1.1
KIAG				S	Sb	03 12 32.3	+0.8
KIAG	Kiagna River	1.34	213		Pg	03 12 14.3	-1.1
KIAG					Sb	03 12 32.4	+0.8
GRNC	Granite Creek	1.40	198	Pn	Pg	03 12 15.5	-0.9
GRNC				Sg	Sg	03 12 33.6	-0.9
GRNC	Granite Creek	1.40	198		Pg	03 12 15.5	-0.9
GRNC					Sg	03 12 33.7	-0.9
VRDI	Verde Repeater	1.49	237		Pn	03 12 16.6	+0.7
GLB	Gilahina Butte	1.53	248		Pn	03 12 16.9	+0.5
GLB					Sn	03 12 37.0	+1.0
MENT	Mentasta	1.59	305		Pn	03 12 18.0	+0.8
TGL	Tana Glacier	1.61	217		Pb	03 12 19.1	0.0
TGL					Sb	03 12 40.2	+1.0
YUK6	Outpost Mounta	1.64	132	Pn	Pb	03 12 19.4	-0.2
YUK6				Sg	Sg	03 12 43.0	+0.6
CRQM	Cirque	1.70	221		Pn	03 12 20.2	+1.3
YUK5	Granite Creek	1.71	122	Pn	Pn	03 12 19.9	+0.9
YUK5				Pg	Pg	03 12 21.8	-0.6
YUK5				Sg	Sg	03 12 44.5	-0.1
YUK5	Granite Creek	1.71	122		Pn	03 12 19.8	+0.9
PCA	Pinnacle	1.99	171	Pg	Pg	03 12 26.4	-1.2
PCA				Sg	Sg	03 12 53.8	+0.4
PCA	Pinnacle	1.99	171	Pn	Pb	03 12 26.1	+0.6
YUK7	Dusty Glacier	2.02	138	Pn	Pb	03 12 25.3	-0.7
YUK7				Sg	Sg	03 12 53.3	-1.1
YUK7	Dusty Glacier	2.02	138		Pb	03 12 25.4	-0.7
HYT	Haines Junctio	2.03	126	Pn	Pn	03 12 24.3	+0.9
HYT				Pg	Pg	03 12 27.9	-0.6
HYT				Sg	Sg	03 12 53.9	-1.0
HYT	Haines Junctio	2.03	126		Pn	03 12 24.4	+1.0
DAWY	Dawson	2.12	18	Pn	Pn	03 12 25.4	+0.8
DAWY				Pg	Pg	03 12 28.6	-1.6
DAWY				Sg	Sb	03 12 55.5	+1.5
DAWY	Dawson	2.12	18		Pn	03 12 25.3	+0.8
SCRK	Sand Creek	2.40	325		Pn	03 12 29.0	+0.7
RIDG	Independent Ri	2.48	315		Pn	03 12 30.1	+0.6
RAGM	Ragged Mountai	2.49	229	Pn	Pn	03 12 31.9	+2.4
PNL	Peninsula	2.50	163	Pg	Pg	03 12 36.0	-1.5
PNL	Peninsula	2.50	163	Pg	Pg	03 12 36.0	-1.5
EGAK	Eagle	2.73	357		Pn	03 12 33.6	+0.8
FID	Port Fidalgo	3.00	247		Pn	03 12 39.0	+2.5
SCM	Sheep Creek Mo	3.06	269	Pn	Pn	03 12 39.7	+2.3
DHY	Denali Highway	3.18	292	Pn	Pn	03 12 40.2	+1.1
WHY	Whitehorse	3.21	113	Pn	Pn	03 12 41.2	+1.7
WHY				Pg	Pg	03 12 49.1	-1.8
WHY				Sg	Sg	03 13 30.8	-1.6
WHY	Whitehorse	3.21	113		Pn	03 12 40.4	+1.0
GLI	Glacier Island	3.21	251	Pn	Pn	03 12 41.7	+2.3
HDA	Harding Lake	3.62	313		Pn	03 12 45.2	+0.1
PS08	TAPS Pump Stn8	3.67	315		Pn	03 12 45.7	+0.1
SKAG	Skagway	3.76	131	Pn	Pn	03 12 49.7	+2.8
GHO	Glory Hole Cre	3.82	269	Pn	Pn	03 12 49.8	+2.0
ILAR	Eielson Array	3.84	318	Pn	Pn	03 12 47.9	-0.1
RND	Reindeer	3.92	294	Pn	Pn	03 12 51.0	+1.8
PRP	Porcupine Dome	4.04	331	Pn	Pn	03 12 52.2	+1.3
MCK	McKinley	4.06	298	Pn	Pn	03 12 53.0	+2.0
CCB	Clear Creek Bu	4.06	313		Pn	03 12 50.5	-0.6
WRH	Wood River Hil	4.06	310	Pn	Pn	03 12 50.8	-0.3
POKR	Poker Plat Res	4.25	319		Pn	03 12 53.8	+0.2
MDM	Murphy Dome	4.40	315	Pn	Pn	03 12 56.5	+0.8
BWN	Browne	4.44	302	Pn	Pn	03 12 57.7	+1.4
NEA	Nenana	4.48	308	Pn	Pn	03 12 58.8	+1.9
TRF	Thorofare Moun	4.55	292	Pn	Pn	03 12 60.0	+2.0
SUA	Susitna One	4.73	267	Pn	Pn	03 13 03.1	+2.7
FYU	Fort Yukon	4.91	339	Pn	Pn	03 13 03.6	+0.9
FYU					Sn	03 13 60.0	+0.9
MLY	Manley	5.33	308	Pn	Pn	03 13 08.4	0.0
BMAR	Burnt Mountain	5.62	345		Pn	03 13 13.0	+0.5
DLBC	Dease Lake	6.50	119	Sg	Sg	03 15 13.6	-4.3
COLD	Coldfoot	6.55	326	Sg	Sg	03 15 11.4	-8.1
INK	Inuvik	6.99	23	Pn	Pn	03 13 31.7	+0.5

NNC 28 03:27:25.7±2.6, **37°.46N**×**71°.56E**, **h142**^{km}±60^{km}, **mb2.9, mpv3.7, 4C, Error ellipse: s-maj=25.2km s-min=17.2km az=27.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	5.64	23	P	Pn	03 28 47.1	-0.4
	3.2nm,0.5s						
AAK				⇑S	Sn	03 29 52.6	+1.1
	5.7nm,0.7s						
KK31	Karatay Array	5.69	352	P	Pn	03 28 48.6	+0.5
	4.9nm,0.5s,baz=179,slow=16,SNR=60						
KK31				S	Sn	03 29 53.2	+0.7
	0.5nm,0.2s,baz=176,slow=14,SNR=9.2						
CHMS	Chumysh	6.04	23	⇑P	Pn	03 28 52.4	-0.5
	4.5nm,0.6s						
CHMS				⇑S	Sn	03 30 01.0	0.0
	3.5nm,0.7s						
AB31	Akbulak array	14.48	328	P	Pn	03 30 45.1	+1.3
	0.5nm,0.6s,baz=136,slow=14,SNR=7.5						
AB31				⇑S	Sn	03 33 22.4	-1.7
	1.2nm,0.7s,baz=156,slow=23,SNR=3.6						

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*NIC **28** 03:31:08.0±0.0, 36°.81N×31°.57E, h24^{km}±3^{km}, Ml2.7/2*

*DDA **28** 03:31:09.7, 36°.16N×31°.09E, h36^{km}±2^{km}, ML2.0*

ISC 28 03:31:12.3±1.3, **36°.20N**±0°.04×**31°.07E**±0°.03, **h35**^{km}±6^{km}, **n17**, σ**2^{s}.40**/31, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKUM	Antalya-Kumluc	0.60	282	*i* P	Pb	03 31 23.2	-1.4
AKUM				*i* S	Sb	03 31 32.8	-0.2
AKUM				IAML		03 31 37.0	
	comp=N,62nm,0.3s						
AKUM				IAML		03 31 38.0	
	comp=E,66nm,0.5s						
KEPZ	Antalya-Kepez	0.82	32	*i* P	Pn	03 31 26.7	-0.8
KEPZ				*i* S	Sn	03 31 34.9	-3.5
KORT	Korkueli	0.98	324	*i* P	Pn	03 31 31.8	+2.0

KORT				*i* S	Sn	03 31 43.5	+0.9
KORT				IAML		03 31 51.0	
	comp=E,35nm,0.7s						
GAZI	Gazipasa	1.01	88	*i* P	Pn	03 31 28.0	-2.1
GAZI				*i* S	Sn	03 31 36.8	-6.2
GAZI				IAML		03 31 43.0	
	comp=E,40nm,0.4s						
ELL	Elmali	1.08	301	P	Pn	03 31 31.4	+0.2
ELL				S	Sb	03 31 48.8	+2.1
AKAS	Kas	1.18	272	*i* P	Pn	03 31 31.6	-0.9
AKAS				*i* S	Sn	03 31 44.7	-2.8
AKAS				IAML		03 32 07.0	
	comp=N,59nm,1.4s						
AKAS				IAML		03 32 09.0	
	comp=E,35nm,1.9s						
ERMK	Ermenek	1.55	73	*i* P	Pn	03 31 38.6	+0.9
ERMK				*i* S	Sn	03 31 58.0	+1.3
ERMK				IAML		03 32 05.0	
	comp=E,24nm,0.4s						
ERMK				IAML		03 32 07.0	
	comp=N,28nm,0.5s						
AKMS	Akamas	1.57	139	P	Pn	03 31 38.7	+1.0
AKMS				AML	AML	03 32 05.4	
	comp=N,0.3nm,0.5s						
AKMS				AML	AML	03 32 07.6	
	comp=N,0.2nm,0.4s						
GOLH	Golhisar	1.59	311	*i* P	Pn	03 31 40.0	+1.9
GOLH				*i* S	Sn	03 32 00.4	+2.9
GOLH				IAML		03 32 12.0	
	comp=N,28nm,1.9s						
ALFC	Alefka	1.63	130	P	Pn	03 31 37.5	-1.1
ALFC				S	Sn	03 32 01.5	+3.2
ALFC				AML	AML	03 32 06.4	
	comp=N,0.2nm,0.3s						
ALFC				AML	AML	03 32 06.4	
	comp=N,0.2nm,0.3s						
ALFC				AML	AML	03 32 07.7	
	comp=N,0.2nm,0.5s						
ALFC				AML	AML	03 32 07.7	
	comp=N,0.2nm,0.5s						
FETY	Fethiye	1.66	286	*i* P	Pn	03 31 39.3	+0.3
FETY				*i* S	Sn	03 31 56.1	-3.0
FETY				IAML		03 32 09.0	
	comp=E,17nm,1.9s						
BAGO	Egridir - ISPA	1.80	353	*i* P	Pn	03 31 43.7	+2.7
NATA	Nata	1.88	139	P	Pn	03 31 42.6	+0.7
NATA				S	Sb	03 32 10.4	+1.3
DOGA	KONYA_Doganhis	1.96	14	*i* P	Pn	03 31 45.4	+2.1
DOGA				*i* S	Sn	03 32 06.2	-0.5
DOGA				IAML		03 32 14.0	
	comp=E,16nm,0.5s						
DOGA				IAML		03 32 15.0	
	comp=N,21nm,0.5s						
SZAC	Souni	2.07	134	P	Pn	03 31 45.1	+0.5
SZAC				S	Sn	03 32 13.5	+4.4
TAVA	DENIZLI_Tavas	2.14	307	*i* P	Pn	03 31 46.6	+1.0
TAVA				*i* S	Sn	03 32 08.0	-3.0
TAVA				IAML		03 32 19.0	
	comp=E,17nm,2.1s						
TAVA				IAML		03 32 21.0	
	comp=N,8.9nm,0.5s						
MVOU	Mavrovouni	2.40	119	P	Pn	03 31 45.4	-3.7
MVOU				S	Sn	03 32 16.8	-0.5

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*SJA **28** 03:43:37.0±1.2, 23°.97S×67°.18W, h187^{km}±13^{km}, ML3.5, MW3.4*

*NEIC **28** 03:43:38.3±1.0, 23°.97S±0°.09×67°.4W±0°.2, h208^{km}±23^{km}, Error ellipse: s-maj=26.3km s-min=11.8km az=104.0*

*GUC **28** 03:43:39.8±0.5, 23°.86S×67°.50W, h213^{km}±6^{km}, ML4.0*

ISC 28 03:43:37.0±1.4**, 23°.95S**±0°.05×**67°.21W**±0°.04**, h195**^{km}±12^{km}**, n42,** σ1^{s}.**22**/66**, 11C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AZAP	Zapla	1.97	98	*i* P	Pn	03 44 15.0	-0.1
AZAP				*e*S	S	03 44 43.3	-1.4
LVC	Limon Verde	2.06	310	⇓*i*P	Pn	03 44 17.1	+0.9
LVC				*e*S	S	03 44 46.0	-0.6
LVC	Limon Verde	2.06	310		Pn	03 44 17.1	+0.9
LVC	Limon Verde	2.06	310	*i* P	Pn	03 44 17.1	+0.9
LVC				*e*S	S	03 44 46.8	+0.3
PB15	IPOC Station P	2.21	289	⇑*i*P	Pn	03 44 18.6	+1.1
PB15				*i* S	S	03 44 48.5	-0.5
PB15	IPOC Station P	2.21	289		Pn	03 44 18.6	+1.1
PB15	IPOC Station P	2.21	289	*i* P	Pn	03 44 18.6	+1.1
PB15				*e*S	S	03 44 48.5	-0.5
YJA	Yavi	2.36	42	*e*P	Pn	03 44 19.8	+0.4
YJA				*e*S	S	03 44 50.7	-1.7
GO02	Mina Guanaco	2.48	240	⇑*i*P	Pn	03 44 21.5	+0.9
GO02				*i* S	S	03 44 54.4	-0.3
GO02	Mina Guanaco	2.48	240		Pn	03 44 21.6	+0.9
PB06	IPOC Station P	2.50	299	⇑*i*P	Pn	03 44 21.9	+1.1
PB06				*i* S	S	03 44 53.8	-1.0
PB06				IAML		03 44 56.1	
	comp=E,449nm,0.4s						
PB06	IPOC Station P	2.50	299	*e*P	Pn	03 44 21.9	+1.1
PB06				*e*S	S	03 44 54.9	0.0
PB06				IAML		03 44 57.9	
	comp=Z,179nm,0.4s						
PB09	IPOC Station P	2.85	318	⇑*i*P	Pn	03 44 26.4	+1.6
PB09				*e*S	S	03 45 01.4	-0.6
PB09				IAML		03 45 04.8	
	comp=N,120nm,0.5s						
PB09	IPOC Station P	2.85	318		Pn	03 44 26.1	+1.3
PB09	IPOC Station P	2.85	318	*e*P	Pn	03 44 26.5	+1.6
PB09				*e*S	S	03 45 02.4	+0.3
PB09				IAML		03 45 05.7	
	comp=Z,80nm,0.4s						
PB05	IPOC Station P	2.96	291	⇑*i*P	Pn	03 44 26.6	+0.5
PB05				*i* S	S	03 45 02.2	-2.1
PB05	IPOC Station P	2.96	291	*i* P	Pn	03 44 26.8	+0.7
PB05				*e*S	S	03 45 02.6	-1.7
PB05				IAML		03 45 11.8	
	comp=Z,66nm,0.8s						
PB14	IPOC Station P	3.00	256		Pn	03 44 26.9	+0.3
PB14	IPOC Station P	3.00	256	*i* P	Pn	03 44 27.1	+0.5
PB14				*e*S	S	03 45 04.0	-1.3
PB14				IAML		03 45 08.3	
	comp=Z,53nm,0.2s						
PB03	IPOC Station P	3.02	308	⇑*i*P	Pn	03 44 27.5	+0.7
PB03				*i* S	S	03 45 04.0	-1.5
PB03				IAML		03 45 05.5	
	comp=E,278nm,0.3s						
PB03	IPOC Station P	3.02	308	*e*P	Pn	03 44 27.5	+0.7
PB03				*e*S	S	03 45 03.7	-1.8
PB03				IAML		03 45 05.2	
	comp=Z,230nm,0.4s						
PB10	IPOC Station P	3.10	277	⇑*i*P	Pn	03 44 28.5	+0.9
PB10				*i* S	S	03 45 04.6	-2.5
PB10	IPOC Station P	3.10	277		Pn	03 44 28.3	+0.8
PB10	IPOC Station P	3.10	277	*i* P	Pn	03 44 28.5	+0.9
PB10				*e*S	S	03 45 06.0	-1.0
PB10				IAML		03 45 08.3	
	comp=Z,43nm,0.2s						
PB04	IPOC Station P	3.15	300	⇑*i*P	Pn	03 44 29.2	+0.8
PB04				*i* S	S	03 45 06.6	-1.8
PB04				IAML		03 45 09.4	
	comp=N,294nm,0.5s						
PB04	IPOC Station P	3.15	300		Pn	03 44 29.2	+0.8
PB04	IPOC Station P	3.15	300	*i* P	Pn	03 44 29.1	+0.7
PB04				*e*S	S	03 45 06.7	-1.7
PB07	IPOC Station P	3.32	311	⇑*i*P	Pn	03 44 31.1	+0.7
PB07				*i* S	S	03 45 10.1	-2.0
PB07				IAML		03 45 11.1	
	comp=E,378nm,0.3s						
PB07	IPOC Station P	3.32	311		Pn	03 44 31.2	+0.7
PB07	IPOC Station P	3.32	311	*e*P	Pn	03 44 31.0	+0.7
PB07				*e*S	S	03 45 10.0	-2.0
PB07				IAML		03 45 10.9	
	comp=Z,179nm,0.3s						
PB01	IPOC Station P	3.58	323	⇑*i*P	Pn	03 44 34.0	+0.5
PB01				*i* S	S	03 45 15.8	-2.0
PB01	IPOC Station P	3.58	323		Pn	03 44 34.1	+0.5
PB02	IPOC Station P	3.61	316	⇑*i*P	Pn	03 44 34.3	+0.4
PB02				*i* S	S	03 45 15.8	-2.6
PATCX	Punta Patache	4.14	318		Pn	03 44 41.3	+0.8
GO03	Copiap	4.54	216		Pn	03 44 44.9	-0.5
GO01	Chusmiza	4.64	336	Pn	Pn	03 44 49.1	+1.8
PB11	IPOC Station P	4.75	331		Pn	03 44 48.1	-0.2
PSGCX	Pisagua	5.11	327	Pn	Pn	03 44 52.1	-0.7
PB16	IPOC Station P	5.99	339	Pn	Pn	03 45 06.3	+1.7
PB12	IPOC Station P	6.06	331	Pn	Pn	03 45 04.6	-0.5
LPAZ	La Paz	7.67	353	Pn	Pn	03 45 27.9	+1.3
BDFB	Brasilia	19.84	69	P	P	03 47 55.0	+1.7

SSNC 28 03:53:36.8±0.4**, 21°.45N×75°.28W, h30**^{km}±6^{km}**, MD2.4, ML1.1, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCC	Rio Carpintero	1.50	195	*e*P	Pn	03 54 00.1	-1.6
RCC				*e*S	Sn	03 54 16.1	-4.2
RCC				IAML		03 54 18.4	
	comp=N,1.2nm,0.3s						
RCC				IAML		03 54 18.4	
	comp=E,1.0nm,0.3s						
RCC	Rio Carpintero	1.50	195	*e*P	Pn	03 54 00.1	-1.6
RCC				*e*S	Sn	03 54 17.7	-2.6
RCC				IAML		03 54 18.4	
	comp=N,1.2nm,0.3s						
RCC				IAML		03 54 18.4	
	comp=E,1.0nm,0.3s						

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*IDC **28** 03:54:49.0±0.8, 19°.13N×67°.21W, h0^{km}, mb3.6/9, mb1 3.9/11, mb1mx3.7/31, mbtmp3.7/11, ML3.1/2, MS3.2/2, Ms1 3.2/2, ms1mx2.7/32, Error ellipse: s-maj=26.8km s-min=14.4km az=55.0*

*NEIC **28** 03:54:51.0±1.7, 19°.18N±0°.03×67°.17W±0°.04, h10^{km}±1^{km}, Md3.4/35(RSPR), Error ellipse: s-maj=6.5km s-min=4.7km az=78.0*

*RSPR **28** 03:54:54.2, 19°.26N×67°.19W, h24^{km}±22^{km}, MD3.4/13*

ISC 28 03:54:53.3±0.6**, 19°.12N**±0°.04×**67°.21W**±0°.04**, h29**^{km}**, n80,** σ**0^{s}.97**/90**, mb3.7**/9**, 12C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.66	172	*e*S	Sn	03 55 17.3	+1.3
AGPR	Aguadilla, PR	0.66	172	⇑*e*P	Pn	03 55 06.9	+0.3
AGPR	Aguadilla, PR	0.66	172		Pb	03 55 05.7	-0.6
AGPR	Aguadilla, PR	0.66	172		Sn	03 55 17.3	+1.3
AOPR	Arecibo Observ	0.88	151	⇑*e*P	Pn	03 55 09.7	0.0
AOPR				*e*S	Sn	03 55 22.8	+1.1
AOPR	Arecibo Observ	0.88	151	*e*S	Sn	03 55 23.1	+1.5
AOPR	Arecibo Observ	0.88	151	⇑*e*P	Pn	03 55 09.8	0.0
AOPR	Arecibo Observ	0.88	151		Pn	03 55 09.8	0.0
AOPR					Sn	03 55 23.1	+1.5
EMPR	Esperanza - Ma	0.91	135	⇑*e*P	Pb	03 55 10.7	+0.2
EMPR	Esperanza - Ma	0.91	135	*e*S	Sn	03 55 22.8	+0.7
EMPR	Esperanza - Ma	0.91	135		Pb	03 55 11.0	+0.6
EMPR	Esperanza - Ma	0.91	135		Sn	03 55 22.8	+0.7
MPR	Mayaguez	0.91	176		Pn	03 55 10.0	-0.1
LSP	Las Mesas	0.95	173	⇑*e*P	Pb	03 55 10.9	-0.2
LSP	Las Mesas	0.95	173	*e*S	Sb	03 55 24.9	+1.6
LSP	Las Mesas	0.95	173		Pb	03 55 10.9	-0.2
LSP					Sb	03 55 24.9	+1.6
UUPR	Utuado, UPR, P	0.98	152		Pn	03 55 11.1	0.0
UUPR					Sb	03 55 25.2	+0.9
CRPR	Cabo Rojo, PR	1.11	175	⇑*e*P	Pb	03 55 13.6	-0.3
CRPR	Cabo Rojo, PR	1.11	175	*e*S	Sb	03 55 29.2	+1.2
CRPR	Cabo Rojo, PR	1.11	175		Pb	03 55 13.6	-0.3
CRPR					Sb	03 55 29.2	+1.2
MLPR	Magueyes Islan	1.16	172	⇓*e*P	Pn	03 55 13.9	+0.4
MLPR	Magueyes Islan	1.16	172	*e*S	Sb	03 55 30.1	+0.8
MLPR	Magueyes Islan	1.16	172		Pn	03 55 13.8	+0.3
MLPR	Magueyes Islan	1.16	172		Sb	03 55 30.1	+0.8
GBPR	Guanica, Bosqu	1.18	165	⇓*e*P	Pn	03 55 14.4	+0.6
GBPR	Guanica, Bosqu	1.18	165	*e*S	Sb	03 55 30.9	+0.9
GBPR	Guanica, Bosqu	1.18	165		Pn	03 55 14.4	+0.6
GBPR					Sb	03 55 30.9	+0.9
OBIP	Obispado Ponce	1.21	152	⇑*e*P	Pn	03 55 14.4	+0.1
OBIP	Obispado Ponce	1.21	152	*e*S	Sb	03 55 31.2	+0.3
OBIP	Obispado Ponce	1.21	152		Sb	03 55 31.2	+0.3
OBIP	Obispado Ponce	1.21	152		Pn	03 55 13.6	-0.8
PCDR	Punta Cana, DR	1.27	242	⇑*i*P	Pb	03 55 15.8	-0.7
PCDR	Punta Cana, DR	1.27	242		Pb	03 55 16.1	-0.4
GCPR	Guaynabo City	1.34	127	⇑*e*P	Pn	03 55 15.8	-0.2
GCPR	Guaynabo City	1.34	127	*e*S	Sn	03 55 33.4	+0.6
GCPR	Guaynabo City	1.34	127		Pn	03 55 15.8	-0.2
GCPR					Sn	03 55 33.4	+0.6
ICMP	Isla Caja de M	1.39	152	⇓*e*P	Pn	03 55 17.6	+0.8
ICMP	Isla Caja de M	1.39	152	*e*S	Sb	03 55 35.7	-0.1
ICMP	Isla Caja de M	1.39	152		Pn	03 55 17.5	+0.8
ICMP	Isla Caja de M	1.39	152		Sb	03 55 35.7	-0.1
SJG	San Juan	1.42	135	Pn	Pn	03 55 16.5	-0.6
	48nm,0.3s,baz=306,slow=12,SNR=70						
SJG				Sn	Sn	03 55 35.4	+0.6
	159nm,0.3s,baz=325,slow=20,SNR=9.4						
SJG	San Juan	1.42	135		Pn	03 55 17.7	+0.6
IGPR	InterUniversit	1.55	138	⇑*e*P	Pn	03 55 19.8	+0.8
IGPR	InterUniversit	1.55	138	*e*S	Sb	03 55 39.5	-1.1
IGPR	InterUniversit	1.55	138		Pn	03 55 19.8	+0.8
IGPR	InterUniversit	1.55	138		Sb	03 55 39.5	-1.1
PDPR	Patillas Dam,	1.57	134	⇑*e*P	Pn	03 55 19.7	+0.5
PDPR	Patillas Dam,	1.57	134	*e*S	Sn	03 55 39.6	+1.1
PDPR	Patillas Dam,	1.57	134		Sn	03 55 39.6	+1.1
PDPR	Patillas Dam,	1.57	134		Pn	03 55 19.4	+0.3
CUPR	Culebra, Puert	2.00	114	⇑*e*P	Pn	03 55 24.8	-0.3
CUPR	Culebra, Puert	2.00	114		Pn	03 55 25.1	+0.1
DR12	Loma Pena Alta	2.08	261		Pn	03 55 27.0	+0.7
STVI	Saint Thomas	2.27	109	⇑*e*P	Pn	03 55 29.1	+0.4
STVI	Saint Thomas	2.27	109		Pn	03 55 29.0	+0.2
SDD	Santo Domingo	2.65	256		Pn	03 55 35.5	+1.4
CDVI	St. Croix	2.69	120		Pn	03 55 36.5	+2.0
BANI	BANI	3.07	257		Pn	03 55 41.9	+1.9
SC01	Santiago de lo	3.34	276		Pn	03 55 45.4	+1.8
SDDR	Presa de Saban	3.86	269		Pn	03 55 52.3	+1.5
PCRV	Puerto La Cruz	9.23	164	Pn	Pn	03 57 04.4	-0.2
	0.4nm,0.3s,baz=349,slow=3.6,SNR=1.6						
PCRV				Sn	Sn	03 58 45.4	-2.3
	0.7nm,0.3s,baz=56,slow=13,SNR=3.0						
PLCV	Puerto La Cruz	9.26	164		Pn	03 57 04.4	-0.5
PLCV					Sn	03 58 45.4	-2.8
SDV	Santo Domingo	10.70	199	Pn	Pn	03 57 24.2	-0.7
	0.8nm,0.3s,baz=0.0,slow=9.1,SNR=3.5						
SDV	Santo Domingo	10.70	199	Pn	Pn	03 57 23.4	-1.5
RUSC	La Rusia	14.34	204	*e*P	Pn	03 58 15.8	+0.8
RUSC	La Rusia	14.34	204	Pn	Pn	03 58 15.3	+0.3
ROSC	El Rosal	15.80	207	Pn	P	03 58 36.8	-1.1
	1.1nm,0.3s,baz=17,slow=19,SNR=1.8						
ROSC	El Rosal	15.80	207	Pn	Pn	03 58 32.0	-2.2
Y57A	Sumter	18.92	324	P	Pn	03 59 12.2	-0.3
BIRD	Birdtown, Kers	19.43	325	P	P	03 59 17.5	+0.2
PTGA	Pitinga	20.97	159	P	P	03 59 32.8	-1.5
	1.1nm,0.5s,baz=270,slow=20,SNR=1.9						
PTGA				LR	LR	04 08 14.8	
	comp=Z,43nm,19.6s,baz=326,slow=38						
TKL	Tuckaleechee C	22.03	322	P	P	03 59 55.1	+10
	6.0nm,0.4s,baz=138,slow=10.0,SNR=19						
TKL				S	S	04 03 47.4	+0.3
	4.1nm,1.0s,baz=42,slow=16,SNR=1.9						
APG	El Apazote	22.60	263	P	P	03 59 52.0	-0.1
	1.9nm,0.7s,baz=99,slow=13,SNR=1.7						
TXAR	Lajitas Array	34.65	294	P	P	04 01 40.8	+0.4
	0.5nm,0.8s,baz=101,slow=5.2,SNR=6.5						
CPUP	Villa Florida	46.19	168	P	P	04 03 16.1	+0.5
	2.2nm,0.7s,baz=4.8,slow=7.3,SNR=7.1						
NVAR	Mina Array Bea	48.09	305	P	P	04 03 31.0	+0.2
	0.5nm,0.9s,baz=107,slow=5.3,SNR=2.8						
YKA	Yellowknife Ar	54.16	335	P	P	04 04 14.6	-1.0
	0.1nm,0.5s,baz=112,slow=7.8,SNR=2.6						
ILAR	Eielson Array	68.48	333	P	P	04 05 51.5	-1.1
	0.2nm,0.8s,baz=90,slow=4.2,SNR=2.2						
ILAR				LR	LR	04 38 20.8	
	comp=Z,20nm,18.5s,baz=122,slow=38						
ARCES	ARCESS Array B	73.20	22	P	P	04 06 22.2	+1.1
	2.5nm,0.9s,baz=302,slow=5.2,SNR=1.7						
FINES	FINESS Array B	74.96	30	P	P	04 06 32.7	+1.3
	0.5nm,0.6s,baz=258,slow=7.0,SNR=1.3						

RSNC 28 03:57:38.7±1.1**, 3°.92N×71°.44W, h0**^{km}±10^{km}**, ML2.4, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTGC	Puerto Gaitan,	0.74	292	*e*P	Pg	03 57 52.0	-0.9
PTGC				*e*S	Sg	03 58 03.4	+0.8
PTGC				*i*		03 58 06.2	
	comp=Z,67nm,0.2s						
VILC	Villavicencio,	2.25	275	*e*P	Pn	03 58 16.3	-1.1
VILC				*e*S	Sn	03 58 45.9	-0.1
VILC				*i*		03 58 58.9	
	comp=Z,40nm,0.4s						
CHIC	Chingaza	2.39	287	*e*P	Pn	03 58 18.7	-0.8
CHIC				*e*S	Sn	03 58 47.9	-1.8
CHIC				*i*		03 59 01.1	
	comp=Z,12nm,0.3s						
TAMC	Tame, Arauca	2.52	352	*e*P	Pn	03 58 19.8	-1.2
TAMC				*e*S	Sn	03 58 51.9	-0.6
TAMC				*i*		03 58 59.8	
	comp=Z,18nm,0.2s						
MACC	Macarena, Meta	2.98	234	*e*P	Pn	03 58 28.0	+0.7
MACC				*e*S	Sb	03 59 07.8	-1.9
MACC				*i*		03 59 14.7	
	comp=Z,16nm,0.4s						
SPBC	San Pablo de B	3.13	303	*e*P	Pn	03 58 27.9	-1.6
SPBC				*e*S	Sn	03 59 06.8	-0.9
SPBC				*i*		03 59 22.4	
	comp=Z,7.1nm,0.4s						

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*ANF **28** 04:15:29.3±0.2, 33°.18N×115°.62W, h17^{km}±2^{km}, ML3.5/31, Error ellipse: s-maj=2.1km s-min=1.4km az=139.0*

*PAS **28** 04:15:29.8±2.4, 33°.18N±0°.07×115°.60W±0°.08, h1^{km}±7^{km}, ML3.4/136, Error ellipse: s-maj=13.0km s-min=5.3km az=47.0*

*SCEDC **28** 04:15:29.8, 33°.18N×115°.60W, h1^{km}*

*NEIC **28** 04:15:30.3±6.3, 33°.10N±0°.05×115°.76W±0°.09, h2^{km}±7^{km}, Error ellipse: s-maj=11.5km s-min=5.4km az=67.0*

ISC 28 04:15:30.1±0.8**, 33°.18N**±0°.02×**115°.62W**±0°.02**, h15**^{km}±7^{km}**, n94,** σ1^{s}.**25**/116**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLIC	Calipatria	0.09	116		Pg	04 15 31.7	-1.4
FRK	Frink	0.22	356		Pg	04 15 34.3	-0.8
SWSC	Sam W. Stewart	0.28	213	P	Pg	04 15 35.7	-0.2
	baz=36,SNR=484						
SUP	Superstition M	0.28	217		Pg	04 15 35.9	-0.1
SUP					Sg	04 15 40.3	+0.2
SALN	Salton City	0.32	288		Pg	04 15 37.0	+0.3
BATC	Bat Cave Butte	0.34	327		Pg	04 15 37.3	+0.3
COK2	Cook Ranch 2	0.34	195		Pg	04 15 37.3	+0.3
SNR	Schaffner Ranc	0.35	154		Pg	04 15 37.2	-0.1
DREC	Desert Rsrch C	0.40	159		Pg	04 15 38.4	+0.3
WESC	Westside Schoo	0.43	193		Pg	04 15 38.9	+0.2
BC3	Big Chuckawall	0.49	16		Pg	04 15 39.6	-0.4
BC3					Sg	04 15 46.6	0.0
BC3	Big Chuckawall	0.49	16	P	Pg	04 15 39.2	-0.7
	baz=194,SNR=450						
BC3				S	Sg	04 15 46.5	-0.1
	baz=194						
HAY	Hayfield	0.53	354		Pg	04 15 40.4	-0.2
CTCC	Cactus City	0.57	327		Pg	04 15 41.1	-0.1
CTCC					Sb	04 15 50.2	+0.5
CBKC	Canebrake	0.60	242		Pg	04 15 41.7	-0.1
IKP	In-Ko-Pah, Jac	0.67	218		Pg	04 15 42.8	-0.4
IKP					Sg	04 15 52.2	+0.2
IKP	In-Ko-Pah, Jac	0.67	218	P	Pg	04 15 42.8	-0.4
	baz=39,SNR=164						
IKP				S	Sg	04 15 52.2	+0.2
	baz=39						
BORC	Borrego Spring	0.67	278		Pg	04 15 42.9	-0.4
BORC					Sg	04 15 52.3	+0.2
GLA	Glamis	0.68	101		Pg	04 15 42.3	-1.0
GLA	Glamis	0.68	101		Sg	04 15 51.0	-1.3
GLA	Glamis	0.68	101	P	Pg	04 15 42.4	-0.9
	baz=281,SNR=121						
GLA				S	Sg	04 15 51.7	-0.6
	baz=281						
RMX	La Rumorosa	0.69	214		Pg	04 15 43.6	0.0
MONP2	Monument Peak	0.73	247		Pg	04 15 43.9	-0.5
MONP2	Monument Peak	0.73	247	P	Pg	04 15 43.9	-0.5
	baz=67,SNR=141						
MONP2				S	Sg	04 15 54.0	-0.1
	baz=67						
XPFO	Pion Flat	0.82	302		Pg	04 15 45.0	-1.0
XPFO	Pion Flat	0.82	302		Pg	04 15 45.0	-1.0
XPFO					Sg	04 15 57.3	+0.4
PFO	Pinyon Flats O	0.82	302		Pg	04 15 44.9	-1.2
PFO	Pinyon Flats O	0.82	302		Pg	04 15 45.2	-0.9
PFO	Pinyon Flats O	0.82	302	P	Pg	04 15 45.0	-1.1
	baz=121,SNR=277						
PFO				S	Sg	04 15 57.1	+0.2
	baz=121						
BELC	Belle Mtn. Jos	0.88	339		Pg	04 15 46.3	-0.9
BELC					Sg	04 15 58.2	-0.5
BELC	Belle Mtn. Jos	0.88	339	P	Pg	04 15 46.3	-0.9
	baz=158,SNR=149						
BELC				S	Sb	04 15 59.3	+0.6
	baz=158						
FRD	Ford Ranch, An	0.88	291		Pg	04 15 46.4	-0.8
FRD					Sg	04 15 59.0	+0.3
SNDA	J Saunders Pla	0.91	294		Pg	04 15 46.9	-0.9
TPC	Twentynine Pal	0.99	339		Pg	04 15 48.0	-1.3
EW2	E Wide Canyon	1.00	319		Pg	04 15 47.9	-1.6
CRY	Cary Ranch	1.01	293		Pg	04 15 48.3	-1.3
BAR	Barrett	1.01	241		Pg	04 15 48.2	-1.5
BAR					Sg	04 16 02.5	-0.4
TKX	Tecate	1.03	234		Pg	04 15 49.4	-0.6
TKX					Sg	04 16 02.8	-0.6
IRM	Iron Mountain	1.05	22		Pg	04 15 49.0	-1.5
IRM	Iron Mountain	1.05	22	P	Pg	04 15 48.8	-1.6
	baz=201,SNR=693						
IRM				S	Sb	04 16 04.9	+1.2
	baz=201						
PLM	Palomar	1.05	280		Pg	04 15 49.1	-1.4
EML	El Monte Cty P	1.07	255		Pg	04 15 48.9	-1.8
EML					Sg	04 16 03.7	-1.0
BLYC	Blythe	1.08	58		Pg	04 15 50.4	-0.6
Y12C	Blythe	1.08	58	P	Pg	04 15 48.9	-2.1
	baz=238,SNR=347						
Y12C				S	Sb	04 16 05.1	+0.7
	baz=238						
DPP	Dos Picos Cty	1.12	261		Pg	04 15 49.8	-1.9
DPP					Sg	04 16 04.8	-1.6
HWB	Hans Werner Br	1.13	263		Pg	04 15 49.9	-2.0
SDRC	San Diego Road	1.20	249		Pg	04 15 51.0	-2.1
SDRC					Sg	04 16 06.7	-2.0
ESJX	Sierra Juarez	1.20	193		Pg	04 15 51.6	-1.7
ESJX					Sg	04 16 07.9	-1.1
OLP	Otay Lakes Par	1.24	243		Pg	04 15 52.0	-2.0
DGR	Domenigoni Val	1.25	292		Pg	04 15 51.6	-2.6
BACC	Bachelor Mtn.	1.26	290		Pg	04 15 51.8	-2.7
109C	Camp Elliot, M	1.28	257	P	Pg	04 15 52.3	-2.4
	baz=77,SNR=57						
109C				S	Sg	04 16 09.1	-2.3
	baz=77						
CPE	Camp Elliot	1.28	257		Pg	04 15 52.1	-2.6
GORC	Green Oak Ranc	1.35	269		Pn	04 15 53.1	-1.3
MURC	Murrieta	1.38	288	P	Pn	04 15 54.1	-0.8
	baz=107,SNR=123						
GMRC	Granite Mounta	1.60	359	Pg	Pb	04 16 00.2	+0.7
	baz=178,SNR=141						
GMRC				Sg	Sg	04 16 21.8	+0.1
	baz=178						
PDMCI	Parker Dam,Lak	1.67	47	Pg	Pb	04 16 00.9	+0.5
	baz=228,SNR=164						
HEC	Hector,Ludlow	1.75	340	Pg	Pg	04 16 03.3	-0.4
	baz=160,SNR=65						
NEE2	Needles Airpor	1.79	27		Pb	04 16 03.0	+0.4
NEE2	Needles Airpor	1.79	27	Pg	Pg	04 16 03.6	-0.9
	baz=207						
BFSC	Mount Baldy Ra	2.00	302	Pb	Pn	04 16 04.3	+0.8
	baz=121,SNR=29						
RRX	Edison Barstow	2.04	326	Pg	Pg	04 16 09.5	+0.2
	baz=145,SNR=12						
SFX	San Felipe	2.23	163		Pn	04 16 08.8	+2.2
TUQ	Turquoise Moun	2.27	354	Pg	Pg	04 16 12.6	-0.9
	baz=173,SNR=54						
MWC	Mount Wilson	2.28	298		Pb	04 16 10.6	-0.5
GSC	Goldstone, Bar	2.33	335	Pg	Pg	04 16 14.1	-0.7
	baz=154,SNR=43						
CIS	Catalina Islan	2.35	276	Pg	Pb	04 16 13.6	+1.4
	baz=95						
PASC	Pasadena Art C	2.36	296		Pb	04 16 13.6	+1.3
DECC	Green Verdugo	2.50	296	Pg	Pg	04 16 17.7	-0.3
	baz=114,SNR=9.5						
EDW2	Edwards Air Fo	2.60	311	Pg	Pb	04 16 18.4	+2.0
	baz=130,SNR=53						
214A	Organ Pipe Nat	2.67	116	P	Pn	04 16 10.9	-1.6
	baz=298,SNR=21						
SHOC	Shoshone, Teco	2.77	349	Pg	Pg	04 16 22.0	-1.1
	baz=168,SNR=63						

OSI	Osito Audit: C	2.95	300		Pg	04 16 26.3	-0.3
MPMC	Manual Prospec	3.26	332	Pg	Pg	04 16 33.6	+1.1
	baz=151,SNR=25						
ARVC	Arvin	3.29	307	Pg	Pg	04 16 32.6	-0.6
	baz=125,SNR=9.7						
SHPR	Sheep Range	3.34	6		Pn	04 16 23.3	+1.4
ISA	Isabella, Lake	3.42	317		Pg	04 16 34.2	-1.4
FURC	Furnace Creek,	3.44	343	Pg	Pg	04 16 36.1	+0.2
	baz=162						
TPNV	Topopah Spring	3.80	352	Pg	Pg	04 16 42.2	-0.6
	baz=172						
GRAC	Grapevine Rang	4.07	340	Pg	Pg	04 16 48.0	0.0
	baz=159						
TUC	Tucson	4.17	101		Pn	04 16 34.4	+1.2
TUC	Tucson	4.17	101	Pg	Pg	04 16 48.8	-1.1
	baz=283						
R11A	Troy Canyon, C	5.16	0	Pg	Pg	04 17 07.3	-1.6
	baz=180						
319A	Douglas	5.66	107		Pg	04 17 19.7	+1.2
NVAR	Mina Array Bea	5.67	338		Pg	04 17 17.1	-1.6
KVN	Kaiserville	6.19	342		Pg	04 17 26.6	-2.0
CMB	Columbia Colle	6.21	323		Pg	04 17 25.3	-3.6
121A	Cookes Peak, D	6.62	93	P	Pn	04 17 07.0	-0.1
	baz=278						
PNTR	Pine Nut	6.72	333		Pg	04 17 39.7	+1.0
DUG	Dugway, Tooele	7.36	17		Pg	04 17 48.2	-2.6
PV11	David Mesa, Pa	7.50	45		Pb	04 17 46.1	+6.2
ELK	Elko	7.56	2		Pg	04 17 52.1	-2.7
PV07	Paradox Valley	7.72	45		Pg	04 17 52.6	-5.3
ANMO	Albuquerque	7.81	74		Pg	04 17 58.3	-1.2

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*JMA **28** 04:28:12.6±0.2, 31°.75N×140°.47E, h99^{km}±3^{km}, M3.0*
*IDC **28** 04:28:20.5±20.0, 32°.16N×140°.01E, h145^{km}±103^{km}, mb3.3/6, mb1 3.4/7, mb1mx3.1/33, mbtmp3.7/7, Error ellipse: s-maj=237.4km s-min=41.2km az=168.0*
ISC 28 04:28:13.0±1.5**, 31°.8N**±0°.1×**140°.5E**±0°.1**, h99**^{km}**, n18, σ1^{s}.72**/22**, mb3.4**/6**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	1.40	334	P	Pn	04 28 38.5	+0.6
JHJ2	Mitsune	1.42	335	P	Pn	04 28 38.9	+0.7
JHJ2				S	Sn	04 28 58.2	+0.8
BSO3	Boso 3	2.98	360	P	Pn	04 28 59.7	+1.5
BSO3				*e*S	Sn	04 29 35.4	+2.4
TK02	Tokai 2	3.15	313	P	Pn	04 29 01.6	+1.1
JIE	Ise	4.11	310	P	Pn	04 29 13.9	+0.4
JAO	Obara	4.39	323	P	Pn	04 29 18.8	+1.4
JRY	Ryogami san	4.40	343	P	Pn	04 29 18.8	+1.2
JAG	Ashikaga	4.68	349	P	Pn	04 29 21.7	+0.3
JAG				*e*S	Sn	04 30 15.8	+1.3
JHO	Hitachi	4.79	0	P	Pn	04 29 23.4	+0.7
JHO				*e*S	Sn	04 30 14.1	-2.9
MJAR	Matsushiro Arr	5.09	339	P	Pn	04 29 28.5	+1.6
	0.1nm,0.3s,baz=172,slow=13,SNR=1.7						
JFK	Kawauchi	5.55	3	*e*S	Sn	04 30 31.1	-4.4
MKAR	Makanchi Array	46.44	306	P	P	04 36 27.5	-2.2
	0.3nm,0.5s,baz=79,slow=9.5,SNR=3.8						
ILAR	Eielson Array	54.33	30	P	P	04 37 30.6	+1.7
	0.1nm,0.4s,baz=262,slow=6.3,SNR=4.0						
ARCES	ARCESS Array B	68.62	340	P	P	04 39 05.0	+0.1
	6.0nm,1.1s,baz=62,slow=6.4,SNR=1.9						
FINES	FINESS Array B	73.09	333	P	P	04 39 31.2	-0.9
	0.5nm,0.5s,baz=87,slow=4.5,SNR=7.5						
NB2	NORSAR Subarra	78.71	337	P	P	04 40 03.8	-0.3
	comp=Z,0.3nm,0.5s,baz=43,slow=5.9						
NOA	NORSAR Array B	78.71	337	P	P	04 40 03.8	-0.3
	comp=Z,0.6nm,0.7s,baz=42,slow=5.4,SNR=4.2						
BRTR	Keskin Array B	81.76	312	P	P	04 40 20.9	-0.1
	comp=Z,0.3nm,0.6s,baz=76,slow=6.1,SNR=2.4						

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*KNET **28** 04:33:31.6±0.3, 43°.05N×74°.90E, h9^{km}±4^{km}, ml1.1, Error ellipse: s-maj=1.7km s-min=1.4km az=45.0*
*NNC **28** 04:33:31.5±0.2, 43°.03N×74°.91E, h3^{km}±2^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=2.3km s-min=1.5km az=121.0, Suspected Mining explosion.*
*SOME **28** 04:33:31.6, 43°.07N×74°.88E*
ISC 28 04:33:31.7±0.8**, 43°.04N**±0°.03×**74°.90E**±0°.02**, h0**^{km}**, n20, σ0^{s}.69**/35**, 14C-2D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHMS	Chumysh	0.12	251	⇑P	Pg	04 33 34.2	+0.2
	14nm,0.2s,SNR=30						
CHMS				⇑S	Sg	04 33 36.5	+1.0
	51nm,0.3s						
CHMS	Chumysh	0.12	251	⇑P	Pg	04 33 34.1	+0.1
	3.2nm,0.2s						
CHMS				⇑S	Sg	04 33 36.2	+0.7
	35nm,0.8s						
USP	Ospenovka	0.38	308	⇑P	Pg	04 33 39.0	+0.1
	6.7nm,0.1s,SNR=41						
USP				⇑S	Sg	04 33 44.6	+0.8
	16nm,0.3s						
KBK	Karagaybulak	0.38	175	⇑P	Pg	04 33 39.7	+0.7
	12nm,0.1s,SNR=15						
KBK				⇑S	Sb	04 33 46.2	-1.8
	18nm,0.2s						
SGDS	Sogindy	0.46	334	P	Pg	04 33 40.6	+0.1
	1.4nm,0.1s						
SGDS				S	Sg	04 33 47.1	+0.6
	3.8nm,0.0s						
AAK	Ala-Archa	0.50	217	⇑P	Pg	04 33 41.6	+0.3
	1.2nm,0.1s,SNR=9.8						
AAK				⇓S	Sg	04 33 49.0	+1.2
	6.9nm,0.3s						
AAK	Ala-Archa	0.50	217	⇑P	Pg	04 33 41.4	+0.2
	0.4nm,0.2s						
AAK				⇑S	Sg	04 33 48.7	+1.0
	3.2nm,0.3s						
TKM2	Tokmak 2	0.52	103	⇑P	Pg	04 33 41.7	0.0
	2.8nm,0.1s,SNR=24						
TKM2				⇑S	Sg	04 33 49.6	+1.2
	7.9nm,0.1s						
DGS	Degeres	0.67	72	P	Pg	04 33 44.7	+0.2
	1.4nm,0.1s						
DGS				S	Sg	04 33 54.1	+0.9
	7.3nm,0.5s						
KST	Kastek	0.78	89	P	Pg	04 33 46.6	0.0
	2.2nm,0.1s						
KST				S	Sg	04 33 57.2	+0.6
	3.7nm,0.4s						
UCH	Uchtor	0.86	200	⇑P	Pg	04 33 48.3	+0.1
	0.5nm,0.1s,SNR=6.7						
KRBS	Karabastau	0.87	40	P	Pg	04 33 48.3	0.0
	1.2nm,0.1s						
KRBS				S	Sg	04 34 00.4	+0.8
	1.2nm,0.2s						
EKS2	Erkin-Say	0.91	246	⇓P	Pg	04 33 49.1	0.0
	1.2nm,0.1s,SNR=6.0						
MRKS	Merke	1.27	257	P	Pg	04 33 55.0	-1.0
	1.1nm,0.1s						
MRKS				S	Sg	04 34 12.1	-0.3
	2.9nm,0.9s						
KUU	Kurty	1.35	50	P	Pg	04 33 57.2	-0.4
	1.4nm,0.1s						
KUU				S	Sb	04 34 15.8	0.0
	4.9nm,0.4s						
KTBS	Karatobe	1.46	62	P	Pn	04 33 59.3	-0.1
	1.3nm,0.1s						
KTBS				S	Sb	04 34 19.0	0.0
	9.2nm,0.6s						
TNSS	Tian-Shan	1.50	89	P	Pn	04 33 59.2	-1.1
	4.4nm,0.2s						
TNSS				S	Sg	04 34 19.3	-0.6
	3.4nm,0.3s						
BTLS	Baital	2.10	343	Pg	Pb	04 34 10.9	+0.3
	0.7nm,0.2s						
BTLS				Lg	Lg	04 34 39.2	
	3.6nm,0.5s						
ARXS	Arharly	2.43	60	Pg	Pb	04 34 16.9	+0.6
	0.7nm,0.4s						
ARXS				Lg	Lg	04 34 49.0	
	3.5nm,0.6s						
SATY	Saty	2.57	88	Pg	Pb	04 34 18.8	+0.1
	1.5nm,0.2s						
SATY				Lg	Lg	04 34 52.8	
	6.1nm,0.7s						

ROM 28 04:35:47.1±0.1**, 42°.840N**±0°.002×**13°.617E**±0°.003**, h25**^{km}**, ML1.2**/2**, 1C-1D, Error ellipse: s-maj=0.2km s-min=0.1km az=256.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFFI	Offida	0.11	28	⇓P	Pb	04 35 52.0	+0.1
TERO	Teramo	0.22	183	P	Pb	04 35 53.2	+0.1
TERO				S	Sb	04 35 57.5	+0.4
TERO				AML	AML		
	comp=N,41µm,0.1s						
TERO				AML	AML		
	comp=E,47µm,0.8s						
SMA1	SAN MARTINO	0.29	225	P	Pb	04 35 54.3	+0.1
SMA1				S	Sb	04 35 59.4	+0.4
NRCA	Norcia	0.37	269	P	Pb	04 35 55.4	+0.1
NRCA				S	Sb	04 36 01.4	+0.6
NRCA				AML	AML		
	comp=N,103µm,0.1s						
NRCA				AML	AML		
	comp=E,68µm,1.4s						
CSP1	Cessapalombo	0.39	310	P	Pb	04 35 55.7	0.0
CSP1				S	Sb	04 36 02.1	+0.5
FDMO	Fiordimonte	0.44	297	P	Pb	04 35 56.3	0.0
FDMO				S	Sb	04 36 03.1	+0.6
PP3	Marolino	0.54	359	⇑P	Pn	04 36 00.3	+1.2
PIEI	Pieia	1.05	312	P	Pb	04 36 07.1	+0.4
ATPI	Pietralunga -	1.08	305	P	Pn	04 36 05.8	-0.8

ROM 28 04:36:04.0±0.2**, 43°.503N**±0°.004×**12°.371E**±0°.005**, h7**^{km}±1^{km}**, ML1.0**/2**, 2C-2D, Error ellipse: s-maj=0.5km s-min=0.2km az=17.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATPI	Pietralunga -	0.06	156	S	Sg	04 36 07.1	+0.1
ATPI				AML	AML		
	comp=E,258µm,0.1s						
ATPI				AML	AML		
	comp=N,214µm,0.1s						
BADI	Badiali	0.09	274	⇑P	Pg	04 36 06.5	+0.3
BADI				S	Sg	04 36 08.4	+0.7
BADI				AML	AML		
	comp=N,193µm,0.3s						
BADI				AML	AML		
	comp=E,154µm,0.2s						
ATVO	AVT- Monte Val	0.12	168	⇑P	Pg	04 36 07.1	+0.4
ATVO	AVT- Monte Val	0.12	168	P	Pg	04 36 07.1	+0.4
ATVO				S	Sg	04 36 09.4	+0.9
PIEI	Pieia	0.12	74	S	Sg	04 36 09.7	+1.1
PIEI				AML	AML		
	comp=E,124µm,0.8s						
PIEI				AML	AML		
	comp=N,98µm,1.0s						
ATMI	Monte Miggiano	0.18	204	S	Sg	04 36 12.0	+1.7
NARO	Abbazia di Nar	0.19	55	P	Pg	04 36 08.1	+0.3
ATFO	Monte Foce - G	0.20	133	P	Pg	04 36 08.8	+0.7
ATFO				S	Sg	04 36 12.1	+1.4
FRON	Frontone	0.26	87	⇓P	Pg	04 36 09.5	+0.4
MURB	Monte Urbino	0.27	155	⇓P	Pg	04 36 09.9	+0.7
CAFI	Castiglion Fio	0.34	240	P	Pg	04 36 11.2	+0.6

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*SOF **28** 04:41:44.8, 42°.16N×23°.58E, h8^{km}, MD3.2*
*BEO **28** 04:41:45.9±0.6, 42°.17N×23°.57E, h7^{km}±2^{km}, ML3.1/12*
*THE **28** 04:41:45.7, 42°.16N×23°.49E, h1^{km}±1^{km}, ML3.5/8, Error ellipse: s-maj=1.7km s-min=0.6km az=58.0*
*SKO **28** 04:41:46.4, 42°.17N×23°.53E, h1^{km}*
*ISK **28** 04:41:49.7, 41°.91N×23°.92E, h5^{km}, ML3.6/20*
*DDA **28** 04:41:51.0, 42°.10N×23°.81E, h35^{km}±143^{km}, ML3.3*
ISC 28 04:41:45.2±1.1**, 42°.15N**±0°.01×**23°.57E**±0°.02**, h3**^{km}±9^{km}**, n135, σ1^{s}.52**/199**, 41C-29D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	Krupnik	0.46	232	*i* P	Pg	04 41 54.3	+0.3
VTS	Vitosha	0.53	332	P	Pg	04 41 54.4	-1.0
VTS				S	Sg	04 42 01.7	-0.6
VTS	Vitosha	0.53	332	*e*Pg	Pg	04 41 55.0	-0.4
VTS				*e*Sg	Sg	04 42 01.9	-0.4
VTS	Vitosha	0.53	332	⇑P	Pg	04 41 55.1	-0.4
VTS				⇑S	Sg	04 42 00.9	-1.4
VTS	Vitosha	0.53	332	*i* P	Pg	04 41 55.0	-0.4
SOF	Sofiya	0.56	342	*i* P	Pg	04 41 55.6	-0.4
MMB	Musomiste	0.57	168	*i* P	Pb	04 41 57.6	-0.3
PGB	Panagyurishte	0.60	48	*i* P	Pg	04 41 56.6	-0.1
NVR	Nevrokopi	0.83	165	P	Pg	04 42 01.8	+0.7
NVR				S	Sb	04 42 13.7	-0.2
	2µm,0.3s						
PLD	Plovdiv	0.85	93	*i* P	Pg	04 42 01.8	+0.4
PLD	Plovdiv	0.85	93	PG	Pb	04 42 02.8	+0.3
PLD				SG	Sg	04 42 12.5	+0.1
BOSS	Bosilegrad	0.88	294	*e*Pg	Pg	04 42 01.7	-0.3
BOSS				*e*Sg	Sg	04 42 13.9	+0.5
RZN	Rozhen	0.97	118	*i* P	Pg	04 42 04.4	+0.5
SRS	Serrai	1.03	179	P	Pg	04 42 05.0	0.0
SRS				S	Sb	04 42 20.0	+0.3
KNT	Kendrikon	1.11	207	P	Pg	04 42 06.2	-0.3
KNT				S	Sg	04 42 21.5	+0.7
	2µm,0.6s						
VAY	Valandovo	1.12	222	*e*Pg	Pg	04 42 06.5	-0.1
VAY				*e*Sg	Sg	04 42 21.3	+0.2
ZAPS	Zavoj	1.32	329	*e*Pg	Pb	04 42 10.8	+0.2
ZAPS				*e*Sg	Sg	04 42 27.0	-0.5
SOH	Sokhos	1.34	187	P	Pn	04 42 10.6	-0.2
SOH				S	Sn	04 42 29.5	+0.4
	2µm,0.4s						
KAVA	Kavala	1.35	148	P	Pn	04 42 11.3	+0.3
KAVA				S	Sn	04 42 31.7	+2.3
	2µm,0.4s						
PLVB	Pleven	1.46	32	⇑P	Pb	04 42 13.2	+0.2
PLVB				⇑S	Sg	04 42 34.4	+2.3
DIM	Dimitrovgrad	1.47	93	*i* P	Pb	04 42 13.3	+0.2
KDZ	Kurdzhali	1.47	109	*i* P	Pn	04 42 11.3	-1.3
KDZ	Kurdzhali	1.47	109	PN	Pn	04 42 11.9	-0.7
KDZ				SN	Sn	04 42 28.1	-4.2
GRG	Griva	1.48	217	P	Pn	04 42 13.1	+0.3
GRG				S	Sn	04 42 32.2	-0.4
THE	Thessaloniki	1.58	197	P	Pn	04 42 14.7	+0.6
THE				S	Sb	04 42 36.0	+0.5
	678nm,0.6s						
HORT	Hortiatis	1.59	193	P	Pn	04 42 14.9	+0.6
HORT				S	Sb	04 42 35.9	+0.1
	495nm,0.6s						
SKO	Skopje	1.59	264	*e*Pn	Pb	04 42 14.9	-0.4
SKO	Skopje	1.59	264	*i* Pg	Pn	04 42 14.4	+0.1
SKO				*i* Sg	Sg	04 42 37.4	+0.9
SKO				*e*Lg	Lg	04 42 40.1	
	comp=E,12nm,0.7s						
BLKB	Belogradchik	1.61	336	⇑S	Sn	04 42 34.8	-1.1
PVL	Pavlikeni	1.68	50	*e*P	Pn	04 42 14.2	-1.3
RDO	Rodhopi	1.79	124	P	Pn	04 42 17.5	+0.6
RDO				S	Sg	04 42 42.8	+0.2
	comp=E,2µm,0.3s						
RDO	Rodhopi	1.79	124	PN	Pb	04 42 18.0	-0.5
OUR	Ouranopolis	1.84	170	P	Pn	04 42 18.3	+0.6
OUR				S	Sb	04 42 42.6	-0.3
	comp=E,1µm,0.5s						
ELND	Elena	1.87	65	⇑P	Pn	04 42 19.0	+0.9
ELND				⇓S	Sn	04 42 42.8	+0.5
BAIL	Bailesti	1.88	355	⇑S	Sb	04 42 43.0	-0.9
ZAGS	Zajecar	1.93	330	*e*Pn	Pn	04 42 18.5	-0.4
ZAGS				*e*Sn	Sn	04 42 43.3	-0.3
VLAD	Vladila	1.95	18	⇑P	Pn	04 42 18.9	-0.2
VLAD				⇑S	Sb	04 42 46.7	+0.8
ZIMR		2.00	41	⇓S	Sg	04 42 49.5	-0.1
SZH	Strazhica	2.07	57	*e*P	Pb	04 42 24.3	+0.9
SELS	Selova	2.10	301	*e*Pn	Pn	04 42 21.1	-0.2
SELS				*e*Sn	Sn	04 42 46.7	-1.2
PUNG	Punghina	2.18	348	⇑P	Pn	04 42 22.2	-0.1
PUNG				⇑S	Sn	04 42 49.5	-0.2
PAIG	Paliouri	2.22	178	P	Pn	04 42 23.1	+0.2
SMTH	Samothraki Isl	2.24	138	P	Pn	04 42 23.2	0.0
ALN	Alexandroupoli	2.24	123	P	Pn	04 42 24.0	+0.7
ALN	Alexandroupoli	2.24	123	PN	Pn	04 42 23.9	+0.7
JMB	Yambol	2.26	81	*i* P	Pn	04 42 23.9	+0.5
COPA	Copaceanca	2.32	31	⇓P	Pb	04 42 28.8	+1.1
COPA				⇑S	Sb	04 42 56.8	+0.1
OHR	Ohrid	2.32	244	*i* Pn	Pn	04 42 26.1	+1.8
OHR				*i* Sn	Sn	04 42 54.8	+1.4
OHR				*e*Lg	Lg	04 43 04.0	
	comp=E,90nm,0.8s						
EDRB	Edirne	2.39	96	P	Pn	04 42 25.3	+0.1
EDRB	Edirne	2.39	96	PN	Pb	04 42 27.5	-1.3
EDRB				SN	Sn	04 42 55.1	+0.2
ENEZ	Enez	2.40	125	PN	Pn	04 42 26.6	+1.2
UKOP	Uzunkopru-Edir	2.51	113	PN	Pn	04 42 28.5	+1.6
LIA	Limnos Island	2.56	151	P	Pn	04 42 28.0	+0.4
RAZG	Razgrad	2.58	56	⇑P	Pb	04 42 31.2	-0.9
RAZG				⇓S	Sb	04 43 06.1	+1.8
HUMR	Humele	2.59	23	⇑P	Pn	04 42 28.5	+0.5
HUMR				⇓S	Sb	04 43 02.2	-2.3
DJES	Djerdap	2.63	343	*e*Pn	Pn	04 42 28.0	-0.5
KUBS	Kucevo	2.65	329	*e*Pn	Pn	04 42 28.4	-0.4
KIRK	Kırklareli	2.66	97	*i* P	Pn	04 42 28.8	-0.1
KIRK				*i* S	Sn	04 42 58.9	-2.7
ERIK	Erikli-Kesan	2.66	123	PN	Pn	04 42 30.3	+1.3
KESN	Edirne-Kesan	2.69	118	*i* P	Pn	04 42 29.9	+0.2
KESN				*i* S	Sn	04 43 00.2	-2.7
KESN				IAML		04 43 15.0	
	comp=N,512nm,0.4s						
KESN				IAML		04 43 17.0	
	comp=E,579nm,0.5s						
GRUS	Gruza	2.72	311	*e*Pn	Pn	04 42 29.9	+0.1
GRUS				*e*Sn	Sn	04 43 02.9	-0.2
SGRR	Singureni	2.72	40	⇓P	Pn	04 42 30.7	+1.0
SGRR				⇑S	Sn	04 43 05.4	+2.3
XOR	Xorichti	2.80	186	P	Pn	04 42 31.3	+0.4
GELI	Tayfur-Gelibol	2.81	128	PN	Pn	04 42 32.3	+1.4
BUC1	Bucharest	2.84	38	⇑S	Sb	04 43 09.6	-2.0
NEO	Neokhori	2.85	185	P	Pn	04 42 32.5	+0.9
HERR	Herculane	2.85	343	⇑P	Pn	04 42 31.2	-0.5
HERR				⇑S	Sn	04 43 04.7	-1.8
SJES	Sjenica	2.87	294	*e*Pn	Pn	04 42 32.0	0.0
IVAS	Ivanjica	2.89	301	*e*Pn	Pn	04 42 31.9	-0.2
MDVR	Moldovita	2.96	333	⇑P	Pn	04 42 32.9	-0.2
MDVR				⇓S	Sn	04 43 08.9	-0.2
ROIA	ROIAK	2.97	70	P	Pn	04 42 33.3	+0.1
BOZC	Bozcaada	2.98	140	PN	Pn	04 42 34.9	+1.6
BOZC	Bozcaada	2.98	140	*i* P	Pn	04 42 32.8	-0.5
BOZC				*i* S	Sn	04 43 08.0	-1.5
BOZC				IAML		04 43 23.0	
	comp=E,90nm,1.4s						
BOZC				IAML		04 43 23.0	
	comp=N,109nm,0.8s						
LPK	Lapseki	2.99	125	PN	Pn	04 42 35.1	+1.6
PRD	Provadia	3.01	68	*i* P	Pb	04 42 38.2	-1.3
RKY	Sarkoy-Tekirda	3.08	117	PN	Pn	04 42 36.4	+1.6
SART	Tekirdag	3.08	117	*i* P	Pn	04 42 33.6	-1.3
SART				*i* S	Sn	04 43 09.0	-3.3
SART				IAML		04 43 29.0	
	comp=E,128nm,0.8s						
SART				IAML		04 43 30.0	
	comp=N,158nm,0.7s						
TRUS	Trudelj	3.10	313	*e*Pn	Pn	04 42 35.1	0.0
TRUS				*e*Sn	Sn	04 43 12.9	+0.2
EZN	Ezine	3.12	137	PN	Pn	04 42 36.0	+0.7
SULR		3.20	37	⇑P	Pn	04 42 37.1	+0.8
SULR				⇑S	Sn	04 43 17.3	+2.4
PDG	Podgorica	3.21	276	⇑P	Pn	04 42 35.9	-0.6
PDG				⇓S	Sn	04 43 13.2	-2.1
DIVS	Divibare	3.26	308	*e*Pn	Pn	04 42 37.1	-0.2
DIVS				*e*Sn	Sn	04 43 15.4	-1.3
CRLT	Corlu	3.29	107	PN	Pn	04 42 40.3	+2.7
GZR	Gura Zlata	3.29	350	⇑P	Pn	04 42 37.4	-0.3
GZR				⇓S	Sn	04 43 15.7	-1.7
BAYC	CANAKKALE_Bayr	3.30	136	*i* P	Pn	04 42 38.9	+1.2
BAYC				*i* S	Sn	04 43 14.0	-3.5
LOT	Lotru	3.30	2	⇑P	Pn	04 42 37.5	-0.4
ARR	Arges	3.31	13	⇑P	Pn	04 42 38.4	+0.5
ARR				⇓S	Sn	04 43 18.0	+0.3
KRBG	Karabiga-Canak	3.31	121	PN	Pn	04 42 39.7	+1.8
LEHL	Lehliu	3.32	45	⇓S	Sn	04 43 21.5	+3.6
MRMT	Marmara Adasi	3.40	116	PN	Pn	04 42 40.4	+1.2
VOIR		3.46	18	⇓P	Pn	04 42 40.8	+0.8
VOIR				⇓S	Sn	04 43 22.4	+1.0
BBLS	Lazići	3.50	301	*e*Pn	Pn	04 42 40.6	0.0
BBLS				*e*Sn	Sn	04 43 21.4	-1.1
CTYL	Yalikoy Yolu	3.59	99	PN	Pn	04 42 44.7	+2.9
SLVT	Silivri	3.60	103	PN	Pn	04 42 44.4	+2.6
ICOR	Ion Corvin	3.67	56	⇓P	Pn	04 42 46.7	+3.9
ICOR				⇑S	Sg	04 43 41.7	-1.3
ISR	Istrita	3.67	35	⇓S	Sg	04 43 44.0	+0.9
AMRR	Amara	3.69	47	⇓S	Sn	04 43 30.4	+3.4
EDC	Edincik	3.71	118	PN	Pn	04 42 45.6	+2.3
BZS	Buzias	3.74	339	*e*Pn	Pn	04 42 43.1	-0.7
BZS	Buzias	3.74	339	⇑P	Pn	04 42 43.1	-0.7
BZS				⇑S	Sg	04 43 43.6	-1.7
MLR	Muntele Rosu	3.76	26	⇓P	Pn	04 42 46.3	+2.2
MLR				⇑S	Sn	04 43 29.8	+0.9
CTKS	Kestanelik-??a	3.81	102	PN	Pn	04 42 46.9	+2.2
DOPR	Dopca	4.04	18	⇓P	Pn	04 42 39.3	-8.6
MANR	Mangalia	4.04	64	⇑P	Pn	04 42 49.3	+1.4
MANR				⇑S	Sn	04 43 36.7	+1.0
DBRK	Dubrovnik	4.05	279	*e*Pn	Pn	04 42 50.8	+2.8
HARR	Harsova	4.07	50	⇓P	Pn	04 42 49.8	+1.5
BISRR	Bisoca	4.09	33	⇑P	Pn	04 42 51.8	+3.2
ZEDA	zmir-Bergama	4.16	139	*i* P	Pn	04 42 50.7	+1.2
ZEDA				*i* S	Sn	04 43 37.0	-1.6
KLYT	Kilyos	4.20	101	PN	Pn	04 42 53.1	+3.1
STEP	BALIKESIR_Sava	4.20	130	*i* P	Pn	04 42 51.6	+1.5
STEP				*i* S	Sn	04 43 36.8	-2.9
STEP				IAML		04 44 05.0	
	comp=N,68nm,1.1s						
STEP				IAML		04 44 07.0	
	comp=E,57nm,0.9s						
TIRR	Tirgusor	4.22	55	⇓P	Pn	04 42 51.8	+1.4
TIRR				⇓S	Sb	04 43 47.5	-3.9
OZUR		4.25	21	⇓P	Pn	04 42 52.5	+1.5
OZUR				⇑S	Sn	04 43 42.4	+1.3
ISK	Istanbul-Kandi	4.26	103	PN	Pn	04 42 53.9	+3.0
ARMT	Armutlu	4.29	110	PN	Pn	04 42 53.9	+2.5
PLOR	Plostina	4.32	30	⇑P	Pn	04 42 54.0	+2.3
PLOR				⇓S	Sn	04 43 44.0	+1.4
SIRR	Siria	4.34	342	⇑P	Pn	04 42 51.6	-0.4
VRI	Vrincioaia	4.36	30	⇑P	Pn	04 42 54.5	+2.2
VRI				⇑S	Sn	04 43 45.8	+2.2
STON	Ston	4.40	281	*e*Pn	Pn	04 42 54.8	+2.0
STON				Sn	Sn	04 43 46.4	+1.9
TOPG	Topolog	4.43	50	⇓P	Pn	04 42 54.7	+1.4
TOPG				⇑S	Sb	04 43 55.8	-1.7
URLA	Izmir	4.44	148	*i* P	Pn	04 42 54.0	+0.6
CFR	Carcaliu	4.49	46	⇓P	Pn	04 42 55.2	+1.1
CFR				⇑S	Sb	04 43 57.8	-1.3
DURS	Dursunbey	4.51	123	*i* P	Pn	04 42 56.2	+1.7
DURS				*i* S	Sn	04 43 44.0	-3.4
DURS				IAML		04 44 17.0	
	comp=N,32nm,0.5s						
DURS				IAML		04 44 17.0	
	comp=E,36nm,0.6s						
NEGR	Negresti	4.59	41	⇓S	Sn	04 43 48.0	-1.3
TLCR		4.87	50	⇑P	Pn	04 43 00.8	+1.6
TLCR				⇓S	Sn	04 43 54.7	-1.4
TESR	Tescani	4.89	26	⇓P	Pn	04 43 01.2	+1.6
TESR				⇑S	Sn	04 43 58.3	+1.7
RICI	Ricice	4.92	288	*i* Pn	Pn	04 43 02.9	+2.9
RICI				Sn	Sn	04 44 00.3	+2.9
MAKA	Makarska	4.96	285	*e*Pn	Pn	04 43 02.9	+2.4
USAK	Uak-Merkez	5.39	128	*i* P	Pn	04 43 08.1	+1.5
BURAR	Bucovina Array	5.59	12	⇓P	Pn	04 43 11.0	+1.7
ZIRJ	Zirje	6.01	287	*e*Pn	Pn	04 43 17.9	+2.9
ZIRJ				Sn	Sn	04 44 24.1	-0.2
MORI	Morici	6.01	289	*e*Pn	Pn	04 43 18.3	+3.3
DUGI	Dugi Otok	6.50	289	*e*Pn	Pn	04 43 24.1	+2.4
NVLJ	Novalja	6.78	294	*e*Pn	Pn	04 43 26.8	+1.2
VYHS	Vyhne	7.17	334	*e*PN	Pn	04 43 31.7	+0.9
MODS	Modra-Piesok	7.64	327	*e*PN	Pn	04 43 36.9	-0.5

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*KRNET **28** 05:05:48.0±0.1, 42°.26N×70°.18E, mb2.7*
*NNC **28** 05:05:49.3±0.2, 42°.63N×70°.49E, h0^{km}, mb3.1, mpv2.7, Error ellipse: s-maj=1.0km s-min=0.9km az=67.0*
*SOME **28** 05:05:49.2, 42°.62N×70°.52E, h10^{km}*
ISC 28 05:05:47.3±1.1**, 42°.64N**±0°.04×**70°.50E**±0°.04**, h16**^{km}±10^{km}**, n28, σ1^{s}.14**/52**, 24C-13D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JBG	Jabagly	0.22	172	P	Pb	05 05 53.4	+0.4
	80nm,0.1s						
JBG				S	Sg	05 05 55.8	-0.1
	208nm,0.1s						
KK07	Karatay Array	0.45	360	⇑P	Pn	05 05 58.6	-0.6
KK07				⇑S	Sb	05 06 05.0	+1.6
KK06	Karatay Array	0.46	2	⇓P	Pn	05 05 58.6	-0.7
KK06				⇓S	Sb	05 06 05.1	+1.5

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KK02  Karatay Array     0.47   1 ⇑P     Pn      05 05 58.9  -0.5
KK02                             ⇑S     Sb      05 06 05.3  +1.5
KK03  Karatay Array     0.47 360 ⇓P     Pn      05 05 58.8  -0.6
KK03                             ⇓S     Sb      05 06 05.3  +1.4
KK31  Karatay Array     0.47   1 ⇑P     Pn      05 05 58.8  -0.6
      0.5nm,0.2s,baz=182,slow=17,SNR=89
KK31                              S     Sb      05 06 05.2  +1.3
      31nm,0.2s,baz=183,slow=31,SNR=32
KK01  Karatay Array     0.47   0 ⇑P     Pn      05 05 58.8  -0.6
KK01                             ⇑S     Sb      05 06 05.3  +1.4
KK08  Karatay Array     0.47 359 ⇓P     Pn      05 05 58.9  -0.6
KK08                             ⇑S     Sb      05 06 05.4  +1.4
KK04  Karatay Array     0.47   0 ⇑P     Pn      05 05 59.0  -0.5
KK04                             ⇓S     Sb      05 06 05.6  +1.5
KK05  Karatay Array     0.48   2 ⇓P     Pn      05 05 59.0  -0.6
KK05                             ⇑S     Sb      05 06 05.7  +1.4
KK09  Karatay Array     0.48 360 ⇑P     Pn      05 05 59.1  -0.6
KK09                             ⇑S     Sb      05 06 05.8  +1.4
BRLS  Borolday          0.63 309 eP     Pn      05 06 01.6  -0.1
      3.6nm,0.2s
BRLS                             eS     Sn      05 06 10.3  -1.0
      13nm,0.2s
BRLS  Borolday          0.63 309  P     Pn      05 06 01.6  -0.1
      1.2nm,0.1s
BRLS                              S     Sn      05 06 10.3  -1.0
      2.8nm,0.2s
ARK   Arkit             1.37 127⇑iP     Pg      05 06 14.0  +0.2
      baz=9.0
ARK                             ⇑iS     Sg      05 06 33.3  +1.6
      baz=9.0
MRKS  Merke             2.01  86 eP     Pg      05 06 26.1  +0.2
      3.2nm,0.2s
MRKS                             eS     Sg      05 06 52.1  +0.1
      7.3nm,0.2s
MRKS  Merke             2.01  86  Pg    Pg      05 06 26.9  +1.0
      3.6nm,0.2s
MRKS                              Lg    Lg      05 06 53.6
      7.6nm,0.2s
ARSB  Arslanbob         2.27 125⇓iP     Pb      05 06 27.3  -0.7
      baz=13
ARSB                            ⇓iS     Sb      05 06 55.9  +0.1
      baz=13
EKS2  Erkin-Say         2.42  88⇑iP     Pg      05 06 33.0  -0.7
      baz=80
EKS2                            ⇑iS     Sg      05 07 05.8  +0.8
      baz=80
AML   Almayashu         2.42 101⇓iP     Pg      05 06 32.5  -1.3
      baz=92
AML                             ⇓iS     Sg      05 07 04.8  -0.3
      baz=92
ARLS  Aral              2.94 104⇑iP     Pb      05 06 38.8  -0.7
      baz=96
ARLS                            ⇑iS     Sb      05 07 15.8  +0.6
      baz=96
AAK   Ala-Archa         2.95  89⇑iP     Pb      05 06 40.3  +0.8
      baz=82
AAK                             ⇑iS     Sb      05 07 18.3  +2.9
      baz=82
AAK   Ala-Archa         2.95  89 ⇓Pg    Pg      05 06 42.7  -1.1
      0.6nm,0.4s
AAK                              ⇓Lg    Lg      05 07 21.7
      1.9nm,0.6s
UCH   Uchtor            3.00  97⇑iP     Pb      05 06 40.8  +0.2
      baz=89
UCH                             ⇑iS     Sb      05 07 19.2  +2.1
      baz=89
USP   Ospenovka         3.00  77⇑iP     Pb      05 06 41.7  +1.3
      baz=71
USP                             ⇑iS     Sg      05 07 20.8  -3.0
      baz=71
DGS   Degeres           3.92  79 eP     Pg      05 07 01.6  -0.7
      1.2nm,0.3s
DGS                              eS     Sg      05 07 52.7  -0.3
      2.0nm,0.4s
DGS   Degeres           3.92  79  Pg    Pg      05 07 01.6  -0.7
      1.2nm,0.3s
DGS                               Lg    Lg      05 07 52.7
      2.0nm,0.4s
KRBS  Karabastau        3.93  73 eP     Pg      05 07 01.8  -0.8
      0.8nm,0.4s
KRBS                             eS     Sg      05 07 53.1  -0.3
      1.1nm,0.4s
KRBS  Karabastau        3.93  73  Pg    Pg      05 07 01.8  -0.8
      0.7nm,0.3s
KRBS                              Lg    Lg      05 07 53.4
      0.9nm,0.4s
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*JMA **28** 05:07:14.0±0.1,42°.78N×142°.68E,h26km±2km,M3.6*
Broadband fault plane solution: P waves. NP1: φs345.00000°,δ18.00000°,λ85.00000°. NP2: φs170.00000°,δ72.00000°,λ92.00000°. Principal axes: T Plg63.0000°, Azm83.0000°; N Plg2.0000°, Azm350.0000°; P Plg27.0000°, Azm259.0000°;
JMA Felt I J1.
*IDC **28** 05:07:16.3±2.2,42°.86N×142°.66E,h56km±18km,mb3.3/10, mb1 3.6/11,mb1mx3.4/33,mbtmp3.6/11,ML2.5/1 Error ellipse: s-maj=27.1km s-min=16.6km az=110.0*
ISC 28 05:07:13.2±0.9,**42°.82N**±0°.03×**142°.70E**±0°.04,**h29**km±7km, **n33,σ0s.88**/33,**mb3.5**/9,**4C-7D,Hokkaido region**

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Code  Station Name       Δ°   AZ°   Phase ID        Time      Res
                                 Op     ISC      h  m  s     ISC
JBT2  Biratori 2        0.25 261 ⇑P     Pb      05 07 19.6  -0.3
JBT2                             eS     Sb      05 07 24.9  +0.4
JFR   Furan             0.35 347 ⇑P     Pn      05 07 22.0  -0.5
JSHD  Hidakashinhida    0.44 203  P     Pb      05 07 22.9  +0.2
JCH   Churui            0.53 112 ⇓P     Pb      05 07 24.3  +0.3
JNBK  Urakawa-nobuka    0.54 176 ⇑P     Pb      05 07 23.9  -0.3
JIAM  Iburiatsuma       0.61 252 ⇓P     Pn      05 07 25.9   0.0
JTHR  Tokachihiroo      0.69 140 ⇓P     Pb      05 07 25.8  -0.9
JTHR                              S     Sb      05 07 34.7  -1.1
JAB   Ashibetsu         0.77 333  P     Pn      05 07 28.2   0.0
JOB   Onbets            0.84  84 ⇓P     Pn      05 07 29.5  +0.4
JEM   Erimo             0.87 157  P     Pb      05 07 29.8  +0.1
JAR   Ashorobuto        0.92  58 ⇓P     Pn      05 07 30.6  +0.4
JEW   Eniwo             0.92 272 ⇓P     Pb      05 07 29.8  -0.8
JISS  Ishikarishitsu    1.05 296 ⇓P     Pn      05 07 32.1  +0.1
JISS                              S     Sn      05 07 46.5  +0.9
JKK2  Kamakawa 2        1.06   2 ⇑P     Pn      05 07 33.0  +0.9
JKK2                              S     Sn      05 07 48.2  +2.3
JHR   Hokuryu           1.17 323  P     Pb      05 07 34.7  -0.1
JHR                               S     Sn      05 07 50.4  +1.7
ASAJ  Asahikawa         1.30 357  P     Pb      05 07 36.7  -0.3
      70nm,0.3s,baz=195,slow=9.6,SNR=80
ASAJ                              S     Sb      05 07 54.0  +0.6
      27nm,0.3s,baz=48,slow=12,SNR=6.2
MJAR  Matsushiro Arr    7.16 210  P     Pn      05 08 57.3  +1.3
      0.1nm,0.3s,baz=29,slow=12,SNR=1.6
SEY   Seymchan         20.93  12  P     P       05 11 51.9  -1.5
      1.4nm,0.3s,baz=196,slow=7.5,SNR=13
H11N2 WAKE ISLAND Hy   30.74 131  T     T       05 45 07.2
      baz=324,slow=75,SNR=20
H11N1 WAKE ISLAND Hy   30.75 131  T     T       05 45 06.5
      baz=324,slow=75,SNR=12
H11N3 WAKE ISLAND Hy   30.76 131  T     T       05 45 08.5
      baz=324,slow=75,SNR=15
H11S1 WAKE ISLAND Hy   31.62 133  T     T       05 46 06.1
      baz=326,slow=76,SNR=16
H11S3 WAKE ISLAND Hy   31.62 133  T     T       05 46 07.3
      baz=326,slow=76,SNR=10
H11S2 WAKE ISLAND Hy   31.64 133  T     T       05 46 11.2
      baz=326,slow=76,SNR=8.2
MKAR  Makanchi Array   42.13 297  P     P       05 15 02.9   0.0
      0.6nm,0.9s,baz=84,slow=9.3,SNR=5.3
ILAR  Eielson Array    44.15  35  P     P       05 15 18.4  -0.4
      0.7nm,0.9s,baz=261,slow=6.9,SNR=8.9
YKA   Yellowknife Ar   58.35  32  P     P       05 17 04.6  -0.7
      0.1nm,0.4s,baz=303,slow=6.5,SNR=5.1
WRA   Warramunga Arr   62.92 189  P     P       05 17 38.1  +1.3
      0.4nm,1.1s,baz=8.0,slow=4.3,SNR=2.2
FINES FINESS Array B   64.19 331  P     P       05 17 43.3  -1.5
      0.4nm,0.4s,baz=34,slow=7.1,SNR=4.8
NOA   NORSAR Array B   69.25 337  P     P       05 18 17.0  -0.2
      0.3nm,0.6s,baz=38,slow=6.2,SNR=2.4
NVAR  Mina Array Bea   70.80  55  P     P       05 18 27.9  +0.6
      0.5nm,0.3s,baz=260,slow=5.4,SNR=6.1
PDAR  Pinedale Array   72.96  47  P     P       05 18 39.9  -0.3
      0.3nm,0.6s,baz=242,slow=3.2,SNR=4.0
TXAR  Lajitas Array    85.84  53  P     P       05 19 50.3  -0.1
      0.7nm,0.9s,baz=298,slow=3.1,SNR=5.8
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WEL 28 05:24:19.1,40°.6S±0°.9×**17°6E**±°,**h32**km±1km,**M3.6**/11, **ML3.9**/11,**MLv3.6**/11,**Error ellipse: s-maj=0.0km s-min=0.0km az=117.1,North Island**

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Code  Station Name       Δ°   AZ°   Phase ID        Time      Res
                                 Op     ISC      h  m  s     ISC
PRWZ  Pori Road         0.13  47  P     Pb      05 24 25.2  +0.2
PRWZ                              S     Sb      05 24 30.2  +1.1
TIWZ  Tintock           0.14 168  P     Pb      05 24 25.3  +0.2
TIWZ                              S     Sb      05 24 30.2  +1.0
MRZ   Mangatainoka R    0.20 265  P     Pn      05 24 26.0   0.0
MRZ                               S     Sn      05 24 30.9  +0.6
POWZ  Post Office Ro    0.26 346  P     Pn      05 24 26.6  -0.1
POWZ                              S     Sn      05 24 32.7  +1.0
BFZ   Birch Farm        0.31  97  P     Pb      05 24 27.1  +0.2
BFZ                               S     Sn      05 24 33.2  +0.4
HOWZ  Holdsworth Sta    0.36 225  P     Pn      05 24 28.2   0.0
HOWZ                              S     Sn      05 24 34.2  +0.1
CPWZ  Castlepoint       0.38 135  P     Pn      05 24 28.9  +0.6
CPWZ                              S     Sn      05 24 37.7  +3.1
DVHZ  Dannevirke        0.42  35  P     Pb      05 24 28.6  +0.1
DVHZ                              S     Sb      05 24 35.1  +0.2
TMWZ  Te Maipa          0.46 176  P     Pn      05 24 29.8  +0.2
ANWZ  Angora Road       0.51  69  P     Pn      05 24 30.3  +0.1
OGWZ  Otaki Gorge       0.54 251  P     Pn      05 24 31.1  +0.4
MTW   Mount Morrison    0.58 207  P     Pn      05 24 31.3  +0.2
TSZ   Takapari Road     0.59   8  P     Pn      05 24 31.4  +0.1
OHWZ  Ohakea            0.60 317  P     Pn      05 24 32.6  +1.2
PRHZ  Porangahau        0.71  58  P     Pb      05 24 33.0  -0.1
WPHZ  Waipukurau        0.73  38  P     Pb      05 24 34.1  +0.5
KIW   Kapiti Island     0.74 253  P     Pb      05 24 34.3  +0.6
CAW   Cannon Point      0.75 232  P     Pb      05 24 34.1  +0.3
TRWZ  Traveller         0.76 189  P     Pb      05 24 33.9  -0.1
PNHZ  Pukenui           0.78  20  P     Pb      05 24 34.5  +0.2
PAWZ  Paruwai Farm      0.80 203  P     Pn      05 24 34.3  +0.1
MSWZ  Moikau Station    0.89 210  P     Pn      05 24 35.5   0.0
PXZ   Pawanui           0.99  52  P     Pn      05 24 36.9  +0.1
PLWZ  Palliser          1.03 206  P     Pn      05 24 37.0  -0.3
WEL   Wellington        1.04 232  P     Pn      05 24 37.8  +0.4
BHW   Baring Head       1.06 224  P     Pn      05 24 37.9  +0.1
KRHZ  Kereru            1.08  22  P     Pn      05 24 38.5  +0.5
WAZ   Wanganui          1.11 323  P     Pb      05 24 41.0  +1.2
KAHZ  Kahuranaki        1.16  43  P     Pn      05 24 39.3  +0.2
BHHZ  Black Hill Sta    1.17   8  P     Pb      05 24 40.3  -0.5
MOVZ  Moawhango         1.24 357  P     Pb      05 24 41.5  -0.5
MTVZ  Mangateitei       1.29 347  P     Pb      05 24 43.2  +0.3
KWHZ  Kaweka Forest     1.30  20  P     Pn      05 24 41.7  +0.6
TCW   Tory Channel      1.32 244  P     Pn      05 24 41.7  +0.4
CKHZ  Cape Kidnapper    1.36  44  P     Pn      05 24 42.1  +0.1
TRVZ  Turoa             1.36 350  P     Pb      05 24 44.0  -0.2
MCHZ  McNeill Hill      1.36  29  P     Pn      05 24 42.5  +0.5
WHVZ  Whangaehu Hut     1.37 352  P     Pb      05 24 44.3  -0.1
TUVZ  Tukino            1.38 354  P     Pb      05 24 44.4  -0.1
FWVZ  Far West T-bar    1.41 351  P     Pb      05 24 44.7  -0.3
PKVZ  Pokaka            1.41 344  P     Pb      05 24 44.7  -0.1
DUWZ  D'Urville Isla    1.47 263  P     Pn      05 24 44.6  +1.1
NGZ   Ngauruhoe         1.48 353  P     Pb      05 24 45.5  -0.6
WTVZ  West Tongariro    1.54 353  P     Pb      05 24 46.3  -0.9
KRVZ  Karewarewa        1.56 354  P     Pb      05 24 46.7  -0.8
BKZ   Black Stump Fm    1.56  19  P     Pn      05 24 45.0  +0.4
TWVZ  Taurewa           1.60 349  P     Pb      05 24 47.2  -1.0
LREZ  Lake Rotokare     1.62 316  P     Pb      05 24 49.0  +0.6
ARHZ  Aropaoanui        1.64  33  P     Pn      05 24 46.3  +0.6
TUWZ  Tuamarina         1.64 241  P     Pn      05 24 45.8  +0.1
RITZ  Rihia Road        1.67   0  P     Pb      05 24 47.7  -1.5
KATZ  Kakaramea         1.67 356  P     Pb      05 24 48.5  -0.9
NMHZ  Naumai            1.71  26  P     Pn      05 24 47.4  +0.6
VRZ   Vera Road         1.73 331  P     Pb      05 24 49.6  -0.7
RATZ  Rangitukua        1.78 358  P     Pb      05 24 50.3  -0.8
BSWZ  Blackbirch Sta    1.83 234  P     Pn      05 24 48.1  -0.3
PREZ  Palmer Road       1.84 315  P     Pb      05 24 52.0  -0.1
MRHZ  Matea Rd          1.86  14  P     Pn      05 24 49.3  +0.5
DREZ  Durham Road       1.93 318  P     Pb      05 24 53.6   0.0
WATZ  Wairara           1.94 357  P     Pn      05 24 50.9  +1.0
MTHZ  Maungataniwha     1.95  23  P     Pn      05 24 50.8  +0.8
NMEZ  Namu Road         1.95 308  P     Pb      05 24 54.0   0.0
KHEZ  Kahui Hut         1.95 313  P     Pb      05 24 53.9  -0.1
NNZ   Nelson            1.96 252  P     Pn      05 24 50.7  +0.6
RAHZ  Arahi             1.97  29  P     Pn      05 24 50.3   0.0
PKE   Pukeiti           2.04 315  P     Pb      05 24 55.3  -0.2
NBEZ  Newall Road No    2.05 311  P     Pb      05 24 55.5  -0.2
ALRZ  Allen Road        2.11  11  P     Pb      05 24 59.4  +2.6
MHGZ  Mahia Peninsul    2.17  47  P     Pn      05 24 52.1  -1.0
PRRZ  Plateau Road      2.18  11  P     Pb      05 25 00.0  +2.0
SNGZ  Shannon Statio    2.19  32  P     Pn      05 24 53.0  -0.3
RTZ   Ruatahuna         2.21  24  P     Pn      05 24 53.5  -0.1
HIZ   Hauiti            2.26 340  P     Pb      05 24 57.5  -1.8
TLZ   Tolley Road       2.32 354  P     Pb      05 25 00.1  -0.3
PRGZ  Paritu Road       2.33  43  P     Pn      05 24 54.3  -0.9
RIGZ  Rimuhau           2.44  38  P     Pn      05 24 56.0  -0.7
TARZ  Mount Tarawera    2.46  12  P     Pn      05 24 57.2  +0.1
RAGZ  Rawiri            2.46  30  P     Pn      05 24 56.2  -0.9
KHZ   Kahutara          2.48 224  P     Pn      05 24 56.0  -1.2
THZ   Tophouse          2.48 242  P     Pn      05 24 57.0  -0.4
QRZ   Quartz Range      2.53 265  P     Pn      05 24 58.7  +0.7
URZ   Urewera           2.58  23  P     Pn      05 24 57.4  -1.1
MWZ   Matawai           2.65  30  P     Pn      05 24 58.4  -1.2
TOZ   Tahuroa Road      2.92 355  P     Pb      05 25 08.6  -2.0
RUGZ  Raukumara Rang    3.03  29  P     Pn      05 25 03.8  -1.2
GVZ   Greta Valley S    3.13 221  P     Pn      05 25 04.7  -1.6
DSZ   Denniston Nort    3.24 249  P     Pn      05 25 08.2  +0.4
PKGZ  Pakihiroa         3.25  33  P     Pn      05 25 07.2  -0.8
HAZ   Te Kaha           3.25  28  P     Pn      05 25 07.9   0.0
LTZ   Lake Taylor       3.42 230  P     Pn      05 25 09.3  -1.1
MKAZ  Moumakai          3.58 351  P     Pb      05 25 17.3  -4.4
OKCZ  Okains Bay        3.71 213  P     Pn      05 25 12.1  -2.1
MQZ   McQueen's Vall    3.87 217  P     Pn      05 25 14.0  -2.4
FOZ   Fox Glacier       5.33 235  P     Pn      05 25 42.7  +6.2
LBZ   Lake Benmore      5.61 226  P     Pn      05 25 38.9  -1.4
ODZ   Otahua Downs      5.83 219  P     Pn      05 25 41.4  -1.8
CTZ   Chatham Island    6.39 121  P     Pn      05 25 50.5  -0.5
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*NEIC **28** 05:28:36.5±1.1,15°.92S±0°.10×72°.3W±0°.1,h93km±17km, mb4.1/2,ML4.1(ARE),Error ellipse: s-maj=18.6km s-min=12.1km az=61.0*
*ARE **28** 05:28:37±2.9,15°.7S±0°.1×72°.2W±0°.1,h72km±9km,Error ellipse: s-maj=0.0km s-min=0.0km az=139.0*
ISC 28 05:28:36.3±1.1,**15°.91S**±0°.09×**72°.3W**±0°.1,**h100**km,**n18, σ1s.08**/18,**Southern Peru**

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Code  Station Name       Δ°   AZ°   Phase ID        Time      Res
                                 Op     ISC      h  m  s     ISC
PB12  IPOC Station P    3.29 145        Pn      05 29 26.5  +0.5
PB16  IPOC Station P    3.60 132        Pn      05 29 32.1  +1.4
LPAZ  La Paz            4.04  96        Pn      05 29 36.5  -0.1
PSGCX Pisagua           4.22 151        Pn      05 29 38.2  -0.3
PB11  IPOC Station P    4.59 147        Pn      05 29 43.5  -0.1
GO01  Chusmiza          4.77 142        Pn      05 29 47.4  +1.0
PATCX Punta Patache     5.29 158        Pn      05 29 53.3  +0.2
PB01  IPOC Station P    5.76 153        Pn      05 29 59.3  -0.1
NNA   Nana              5.88 311  Pn    Pn      05 30 01.3  +0.3
PB07  IPOC Station P    6.22 159        Pn      05 30 06.0  +0.2
PB09  IPOC Station P    6.53 154        Pn      05 30 10.9  +0.9
PB04  IPOC Station P    6.71 163        Pn      05 30 12.1  -0.2
LVC   Limon Verde       7.40 155        Pn      05 30 22.5  +0.6
PB10  IPOC Station P    7.74 168  Pn    Pn      05 30 25.5  -0.7
PB14  IPOC Station P    8.85 169  Pn    Pn      05 30 40.7  -0.9
GO02  Mina Guanaco      9.55 165  Pn    Pn      05 30 51.2  +0.1
PTGA  Pitinga          19.39  40  P     P       05 32 51.5  -3.0
PTGA                              IAmb  IAmb    05 32 52.3
      comp=Z,6.2nm,1.3s
JSC   Jenkinsville     50.64 350  P     P       05 37 26.7  +1.5
JSC                               IAmb  IAmb    05 37 27.6
      comp=Z,5.0nm,1.2s
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*IDC **28** 06:20:33.9±1.5,19°.10S×169°.17E,h155km±10km,mb3.9/9, mb1 4.0/10,mb1mx3.8/33,mbtmp4.4/10,Error ellipse: s-maj=21.7km s-min=19.5km az=39.0*
*NEIC **28** 06:20:36.2±1.6,19°.2S±0°.1×169°.1E±0°.1,h172km±6km, mb4.6/35,Error ellipse: s-maj=18.2km s-min=12.1km az=145.0*
ISC 28 06:20:33.5±0.5,**19°.16S**±0°.08×**169°.12E**±0°.07,**h147**km,**n67, σ1s.23**/72,**mb4.5**/20,**Vanuatu Islands**

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Code  Station Name       Δ°   AZ°   Phase ID        Time      Res
                                 Op     ISC      h  m  s     ISC
DZM   Mont Dzumac       3.83 220  P     Pn      06 21 31.7  +0.1
      79nm,0.3s,baz=36,slow=5.3,SNR=916
DZM                               S     Sn      06 22 17.2  +0.6
      17nm,0.3s,baz=130,slow=22,SNR=3.6
DZM   Mont Dzumac       3.83 220        Pn      06 21 31.7  +0.1
DZM                               Sn    Sn      06 22 17.8  +1.1
MSVF  Nonsavu           8.59  82  Pn    Pn      06 22 38.3  +3.4
OUZ   Omahuta          16.48 167  P     P       06 24 17.2  +1.0
EIDS  Eidsvold         17.80 246  P     Pn      06 24 33.7  +1.6
EIDS                              IAmb  IAmb    06 24 49.5
      comp=Z,19nm,1.3s
AFI   Afiamalu         19.04  77  P     Pn      06 24 46.1  -0.8
ARMA  Armidale         19.41 231  P     Pn      06 24 54.1  +3.0
ARMA                              IAmb  IAmb    06 25 03.0
      comp=Z,22nm,1.4s
HIZ   Hauiti           19.92 167  P     Pn      06 24 55.7  -1.2
MXZ   Matakaoa Point   20.02 158  P     P       06 24 56.3  +1.5
URZ   Urewera          20.26 162  P     P       06 24 57.9  +0.5
      comp=Z,18nm,0.6s,baz=316,slow=5.5,SNR=22
URZ   Urewera          20.26 162  P     P       06 24 58.3  +0.9
URZ                               IAmb  IAmb    06 25 05.9
      comp=Z,19nm,0.7s
BKZ   Black Stump Fm   20.93 164  P     P       06 25 05.0  +0.4
BKZ                               IAmb  IAmb    06 25 08.8
      comp=Z,13nm,0.8s
CTA   Charters Tower   21.56 264  P     P       06 25 11.7  +0.2
      comp=Z,3.2nm,0.3s,baz=87,slow=12,SNR=13
QRZ   Quartz Range     21.79 173  P     P       06 25 17.0  +3.3
NNZ   Nelson           22.29 172  P     P       06 25 20.4  +1.7
BFZ   Birch Farm       22.30 166  P     P       06 25 18.4  -0.5
BFZ                               IAmb  IAmb    06 25 23.3
      comp=Z,23nm,0.8s
SNZO  South Karori     22.59 169  P     P       06 25 22.7  +1.2
THZ   Tophouse         22.76 173  P     P       06 25 23.7  +0.4
THZ                               IAmb  IAmb    06 25 35.1
      comp=Z,29nm,1.3s
MSWZ  Moikau Station   22.79 168  P     P       06 25 22.9  -0.6
BSWZ  Blackbirch Sta   22.85 171  P     P       06 25 24.6  +0.6
PLWZ  Palliser         22.94 168  P     P       06 25 24.4  -0.6
KHZ   Kahutara         23.48 172  P     P       06 25 28.3  -1.5
KHZ                               IAmb  IAmb    06 25 42.0
      comp=Z,42nm,1.3s
LTZ   Lake Taylor      23.70 174  P     P       06 25 32.2  +0.3
LTZ                               IAmb  IAmb    06 25 33.8
      comp=Z,20nm,0.7s
OXZ   Oxford           24.22 175  P     P       06 25 36.6  +0.1
OXZ                               IAmb  IAmb    06 25 48.6
      comp=Z,18nm,1.0s
FOZ   Fox Glacier      24.31 179  P     P       06 25 37.5  +0.2
LBZ   Lake Benmore     25.17 178  P     P       06 25 44.9  -0.2
STKA  Stephens Creek   27.79 237  P     P       06 26 09.6  +0.8
      comp=Z,3.1nm,0.4s,baz=70,slow=9.8,SNR=17
STKA                              pP    pwP     06 26 43.3  -2.3
      comp=Z,2.6nm,0.8s,baz=66,slow=11,SNR=3.4
STKA                              PcP   PcP     06 29 21.6  +0.1
      comp=Z,1.0nm,0.4s,baz=67,slow=3.5,SNR=3.6
STKA  Stephens Creek   27.79 237  P     P       06 26 09.8  +1.0
STKA                                    PcP     06 29 22.1  +0.5
BBOO  Buckleboo        32.53 239  P     P       06 26 51.1  +0.5
WR0   Warramunga Arr   32.56 263  P     P       06 26 50.1  -0.9
WB0   Warramunga Arr   32.72 263  P     P       06 26 51.7  -0.7
WB2   Warramunga Arr   32.74 263  P     P       06 26 51.8  -0.8
WRA   Warramunga Arr   32.75 263  P     P       06 26 51.7  -1.0
      comp=Z,1.6nm,0.3s,baz=97,slow=7.0,SNR=5.3
WRA   Warramunga Arr   32.75 263  IAmb  IAmb    06 26 54.5
      comp=Z,0.3nm,0.9s
AS31  Alice Springs    33.04 256  P     P       06 26 55.0  -0.1
AS31                              IAmb  IAmb    06 26 55.5
      comp=Z,6.9nm,0.4s
ASAR  Alice Springs    33.04 256  P     P       06 26 55.0  -0.2
      comp=Z,9.9nm,0.5s,baz=84,slow=8.9,SNR=271
ASAR                              pP    pwP     06 27 29.1  -2.6
      comp=Z,1.9nm,0.7s,baz=83,slow=9.2,SNR=2.4
ASAR                              PcP   PcP     06 29 34.6  -0.9
      comp=Z,0.6nm,0.7s,baz=88,slow=3.7,SNR=3.3
ASAR  Alice Springs    33.04 256  P     P       06 26 54.5  -0.7
MTN   Manton Dam       37.00 274  P     P       06 27 29.3  +0.2
MTN                               IAmb  IAmb    06 27 29.6
      comp=Z,5.9nm,0.6s
KNRA  Kununurra        38.60 269  P     P       06 27 42.5  -0.1
KNRA                              IAmb  IAmb    06 27 52.3
      comp=Z,13nm,1.3s
FORT  Forrest          38.78 245  P     P       06 27 43.9  -0.1
FORT                              IAmb  IAmb    06 27 44.2
      comp=Z,21nm,1.4s
FITZ  Fitzroy Crossi   41.14 264  P     P       06 28 03.8  +0.2
      comp=Z,5.8nm,0.6s,baz=95,slow=6.7,SNR=31
FITZ                              pP    pP      06 28 35.8  +1.2
      comp=Z,2.5nm,0.8s,baz=127,slow=6.8,SNR=2.7
FITZ  Fitzroy Crossi   41.14 264  P     P       06 28 04.0  +0.5
FITZ                              IAmb  IAmb    06 28 04.8
      comp=Z,5.9nm,0.6s
PSA00 Pilbara Seismi   46.11 258  P     P       06 28 43.6  +0.3
PSA00                             IAmb  IAmb    06 28 44.3
      comp=Z,9.8nm,0.6s
NWAO  Narrogin (SRO)   48.15 243  P     P       06 28 58.7  -0.2
VNDA  Vanda            58.51 182  P     P       06 30 13.2  -0.6
      comp=Z,0.7nm,0.6s,baz=4.7,slow=5.9,SNR=5.7
VNDA  Vanda            58.51 182  P     P       06 30 13.7  -0.1
CASY  Casey            60.15 203  P     P       06 30 24.4  -0.8
CASY                              IAmb  IAmb    06 30 30.9
      comp=Z,8.1nm,1.2s
NJ2   Nanjing          70.07 316 eP     P       06 31 32.5  +2.8
QSPA  South Pole Qui   70.89 180  P     P       06 31 34.0  -0.4
QSPA                              IAmb  IAmb    06 31 35.0
      comp=Z,8.5nm,0.8s
HHC   Hu-ho-hao-te     80.09 319 eP     P       06 32 29.8  +2.7
SONM  Songino Array    87.09 323  P     P       06 33 01.7  -1.0
      comp=Z,0.7nm,0.6s,baz=151,slow=3.4,SNR=5.5
SONM  Songino Array    87.09 323  P     P       06 33 02.3  -0.4
SNAA  Sanae            89.24 183  P     P       06 33 11.5  -1.0
VNA3  Neumayer Olymp   89.83 180  P     P       06 33 13.8  -1.4
VNA2  Neumayer--Watz   90.12 181  P     P       06 33 15.6  -1.0
      baz=167,slow=3.9
ILAR  Eielson Array    90.19  17  P     P       06 33 14.6  -2.1
      comp=Z,0.1nm,0.5s,baz=219,slow=6.9,SNR=2.0
WMQ   Urumqi           97.07 314 eP     Pdif    06 33 50.8  +1.8
MKAR  Makanchi Array  101.60 316  P     Pdif    06 34 09.8  +0.8
      comp=Z,0.1nm,0.4s,baz=82,slow=5.5,SNR=2.3
MKAR  Makanchi Array  101.60 316        Pdif    06 34 09.4  +0.4
ARCES ARCESS Array B  124.96 345  PKP   PKPdf   06 39 14.4  -1.1
      comp=Z,0.8nm,0.5s,baz=57,slow=3.1,SNR=8.3
ARCES ARCESS Array B  124.96 345        PKPdf   06 39 14.2  -1.3
GEC2  GERESS Array S  144.37 332  PKPdf PKPbc   06 39 51.3  +0.3
GERES GERESS Array B  144.37 332  PKP   PKPab   06 39 50.5  -0.3
      comp=Z,1.5nm,0.6s,baz=355,slow=2.8,SNR=8.6
RCBR  Riachuelo       145.01 133        PKPbc   06 39 51.7  -2.2
DAVOX Davos/Dischmat  147.61 333  PKPbc PKPbc   06 40 00.7  -0.1
      comp=Z,3.1nm,0.4s,baz=270,slow=2.0,SNR=3.9
SGRT  San Giovanni R  148.07 321  PKPbc PKPbc   06 40 01.6  -0.5
ZCCA  Zocca           148.95 329  PKPbc PKiKP   06 40 04.9  -0.5
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*NNC **28** 06:35:56.1±0.9,53°.71N×90°.49E,h0km,mb3.6,mpv3.3, Error ellipse: s-maj=6.8km s-min=4.4km az=63.0*
ASRS 28 06:35:47.2,53°.74N×91°.08E,M2.2,6C-5D,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

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Code  Station Name       Δ°   AZ°   Phase ID        Time      Res
                                 Op     ISC      h  m  s     ISC
ZAA0  Zalesovo Array    3.71 276 ⇑Pg    Pg      06 36 57.8  -0.5
      2.0nm,0.8s
ZAA0                             ⇑Lg    Lg      06 37 42.7
      12nm,1.1s
KURK  Kurchatov         8.22 253 ⇑Pn    Pn      06 37 51.4  +3.7
      2.0nm,0.7s
KURK                             ⇓Sn    Sn      06 39 22.6  +1.4
      7.8nm,0.8s
KURK                             ⇑Lg    Lg      06 40 06.9
      31nm,1.0s
MK31  Makanchi Array    8.94 222 ⇓Pn    Pn      06 38 03.0  +5.5
      2.9nm,1.1s,baz=37,slow=13,SNR=11
MK31                             ⇓Sn    Sn      06 39 42.9  +4.1
      1.7nm,0.8s,baz=37,slow=34,SNR=5.6
MK31                             ⇑Lg    Lg      06 40 33.0
      16nm,1.1s,baz=31,slow=27,SNR=3.6
MAKZ  Makanchi          9.05 224 ⇓Pn    Pn      06 38 04.0  +4.9
      1.8nm,0.9s
MAKZ                             ⇓Sn    Sn      06 39 45.3  +3.6
      3.0nm,0.9s
MAKZ                             ⇑Lg    Lg      06 40 35.5
      15nm,1.1s
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*TAP **28** 06:46:42.6,24°.64N×122°.40E,h104km±1km,ML2.6,C*

JMA ***28*** *06:46:44.2±0.2, 24°.75N×122°.43E, h86km*

ISC 28 06:46:43.8±2.5**, 24°.64N**±0°.08×**122°.40E**±0°.05**, h95**km±16km**,**
n27, σ0s.45/43**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.26**	**250**	*e*P	**Pn**	**06 46 57.9**	**+0.3**
	baz=250						
EOS1				*i* S	**Sn**	**06 47 08.8**	**+0.9**
	baz=250						
TWC	**Suao**	**0.50**	**267**	P	**Pn**	**06 46 58.7**	**-0.4**
	baz=266						
TWC				*e*S	**Sn**	**06 47 10.1**	**-0.4**
	baz=266						
TWB1	**Santiao Chiao**	**0.53**	**315**	*e*P	**Pn**	**06 46 59.1**	**-0.1**
	baz=315						
JYNG	**Yonagunijimaku**	**0.53**	**111**	P	**Pn**	**06 46 59.1**	**-0.2**
YOJ	**Yonaguni jima**	**0.58**	**108**	*i* P	**Pn**	**06 46 59.6**	**-0.1**
	baz=106						
YOJ				*e*S	**Sn**	**06 47 12.2**	**+0.6**
	baz=106						
ILA	**Ilan**	**0.61**	**282**	*e*P	**Pn**	**06 46 59.5**	**-0.4**
	baz=282						
TIPB	**Shuangxi**	**0.62**	**302**	*i* P	**Pn**	**06 46 59.8**	**-0.3**
	baz=302						
TIPB				*e*S	**Sn**	**06 47 11.4**	**-0.9**
	baz=302						
ENA	**Nanau**	**0.64**	**251**	*e*P	**Pn**	**06 47 00.3**	**+0.1**
	baz=250						
ENA				*i* S	**Sn**	**06 47 12.9**	**+0.4**
	baz=250						
TWE	**Neicheng**	**0.67**	**277**	*e*P	**Pn**	**06 47 00.6**	**+0.1**
	baz=276						
TWE				*e*S	**Sn**	**06 47 13.3**	**+0.3**
	baz=276						
ENTT	**Nioudou**	**0.76**	**270**	P	**Pn**	**06 47 01.6**	**+0.3**
	baz=269						
ENTT				*i* S	**Sn**	**06 47 14.8**	**+0.3**
	baz=269						
NDT	**Datong Townshi**	**0.81**	**268**	*e*P	**Pn**	**06 47 02.4**	**+0.5**
	baz=267						
NDT				*i* S	**Sn**	**06 47 15.8**	**+0.4**
	baz=267						
TWA	**Mucha**	**0.82**	**295**	*e*P	**Pn**	**06 47 01.7**	**-0.2**
	baz=294						
NWLT	**Wulai**	**0.83**	**280**	*e*P	**Pn**	**06 47 02.0**	**0.0**
	baz=279						
NACB	**Ninganchiao**	**0.87**	**238**	*e*P	**Pn**	**06 47 01.5**	**-1.0**
	baz=237						
NACB				*i* S	**Sn**	**06 47 15.9**	**-0.6**
	baz=237						
YHNB	**Yeheng**	**0.93**	**272**	*e*P	**Pn**	**06 47 03.4**	**+0.2**
	baz=271						
YHNB				S	**Sn**	**06 47 17.8**	**0.0**
	baz=271						
ETLH	**Xiulin Townshi**	**0.94**	**243**	*i* P	**Pn**	**06 47 03.1**	**-0.2**
	baz=242						
ETLH				*e*S	**Sn**	**06 47 17.3**	**-0.7**
	baz=242						
NNSB	**Datong**	**0.95**	**257**	*e*P	**Pn**	**06 47 03.6**	**+0.1**
	baz=257						
NNSB				*e*S	**Sn**	**06 47 18.6**	**+0.4**
	baz=257						
NNSH	**Datong**	**0.95**	**257**	*e*P	**Pn**	**06 47 04.2**	**+0.7**
	baz=257						
NNSH				*e*S	**Sn**	**06 47 17.9**	**-0.3**
	baz=257						
WHF	**Hehuan Shan**	**1.15**	**245**	*e*P	**Pn**	**06 47 05.8**	**-0.2**
	baz=244						
WHF				*e*S	**Sn**	**06 47 22.4**	**-0.3**
	baz=244						
TWT	**Tachien**	**1.18**	**251**	*e*S	**Sn**	**06 47 23.4**	**+0.4**
	baz=251						
IRIF	**Iriomote-Funau**	**1.25**	**104**	*e*S	**Sn**	**06 47 24.1**	**+0.1**
CHGB	**Renai**	**1.26**	**243**	S	**Sn**	**06 47 24.5**	**-0.2**
	baz=242						
VWDT	**VWDT**	**1.45**	**233**	*e*P	**Pn**	**06 47 09.3**	**+0.2**
	baz=232						
VWDT				*e*S	**Sn**	**06 47 28.6**	**+0.2**
	baz=232						
HGSD	**Ruisui**	**1.45**	**218**	*e*P	**Pn**	**06 47 09.4**	**+0.2**
	baz=218						
HGSD				S	**Sn**	**06 47 28.2**	**-0.2**
	baz=218						
EHY	**Hungye**	**1.50**	**221**	*i* P	**Pn**	**06 47 09.6**	**-0.2**
	baz=220						
SSLB	**Suanglung**	**1.57**	**238**	*e*P	**Pn**	**06 47 11.8**	**+1.0**
	baz=237						
YULB	**Yu-li**	**1.60**	**219**	*e*P	**Pn**	**06 47 10.5**	**-0.6**
	baz=219						

IDC ***28*** *06:59:05.5±1.1, 30°.87N×103°.65E, h0km, mb3.4/5, mb1 3.7/7, mb1mx3.4/44, mbtmp3.5/7, Error ellipse: s-maj=37.5km s-min=19.8km az=62.0*

BJI ***28*** *06:59:06.9±0.0, 31°.40N×103°.84E, h20km, ML3.3/8*

ISC 28 06:59:06.5±0.8**, 31°.15N**±0°.10×**104°.15E**±0°.09**, h14**km**, n11,**
σ2s.35/12**, mb3.5**/5**, 1C, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.41**	**235**⇑	*i*Pg	**Pg**	**06 59 15.3**	**+0.6**
CD2				Sg	**Sg**	**06 59 22.5**	**+2.2**
CD2				smax	smax		
	comp=N,1μm,0.5s						
CD2				smax	smax		
	comp=E,1μm,0.7s						
XAN	**Xi'an**	**4.96**	**53**	Pg	**Pb**	**07 00 33.8**	**+0.7**
XAN				Sn	**Sn**	**07 01 16.5**	**-1.2**
XAN				smax	smax		
	comp=N,96nm,1.1s						
XAN				smax	smax		
	comp=E,100nm,1.0s						
CMAR	**Chiang Mai Arr**	**13.48**	**202**	Pn	**Pn**	**07 02 14.7**	**-2.9**
	baz=15,slow=12,SNR=1.3						
SONM	**Songino Array**	**16.75**	**5**	P	**P**	**07 03 05.8**	**+2.8**
	baz=205,slow=6.4,SNR=1.8						
WMQ	**Urumqi**	**18.14**	**319**	*e*P	**Pn**	**07 03 13.3**	**-4.7**
KSRS	**Korea Array**	**20.60**	**66**	P	Pn	07 03 52.2	+4.8
	0.5nm,0.3s,baz=256,slow=8.8,SNR=1.9						
MKAR	**Makanchi Array**	**22.97**	**319**	P	**P**	**07 04 11.2**	**+0.6**
	0.9nm,1.1s,baz=108,slow=14,SNR=3.2						
ZALV	**Zalesovo Beam**	**26.70**	**334**	P	**P**	**07 04 46.2**	**+1.2**
	0.4nm,0.3s,baz=212,slow=7.0,SNR=3.8						
KURBB	**Kurchatov Arra**	**27.23**	**323**	P	**P**	**07 04 51.0**	**+1.1**
	0.2nm,0.2s,baz=126,slow=9.2,SNR=4.1						
WRA	**Warramunga Arr**	**58.49**	**146**	P	**P**	**07 09 03.4**	**+1.0**
	0.6nm,0.6s,baz=338,slow=7.6,SNR=5.5						
ASAR	**Alice Springs**	**61.51**	**149**	P	**P**	**07 09 23.9**	**+0.8**
	0.4nm,0.8s,baz=338,slow=7.0,SNR=3.5						

IDC ***28*** *07:07:44.5±0.5, 3°.69S×151°.29E, h0km, mb4.4/25, mb1 4.5/27, mb1mx4.5/44, mbtmp4.4/27, ML3.2/2, MS4.0/26, Ms1 4.0/26, ms1mx4.0/32, Error ellipse: s-maj=15.2km s-min=10.8km az=74.0*

MOS ***28*** *07:07:46.6±1.1, 3°.59S×151°.19E, h25km, mb4.8/26, Error ellipse: s-maj=12.0km s-min=6.9km az=95.8*

NEIC ***28*** *07:07:46.1±1.7, 3°.72S±0°.07×151°.21E±0°.06, h10km, mb4.9/67, Error ellipse: s-maj=13.1km s-min=9.7km az=212.0*

BJI ***28*** *07:07:48.2±0.0, 3°.59S×151°.76E, h51km, mB5.1/35, mb4.8/45, Ms4.7/22, Ms7 4.4/22*

DJA ***28*** *07:07:49.8±0.9, 4°S±4°×15°2E±°, h34km±8km, M4.7/29, mb4.8/29, mB5.3/11, MLv4.8/2, Mw(mB)4.7/11*

GCMT ***28*** *07:07:50.1±0.2, 3°.54S±0°.01×151°.25E±0°.01, h16km±1km, MW4.9/110, Moment Tensor Solution. s33,c39; s110,c150; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.40±.09; $M_{\theta\theta}$1.16±.08; $M_{\phi\phi}$-0.76±.08; $M_{r\theta}$-0.22±.24; $M_{\theta\phi}$2.91±.07; $M_{\phi r}$0.23±.21; Best double couple: $M_0$3.08500×10^{16} NP1:ϕ_s189.00000°, δ84.00000°, λ-175.00000°. NP2:ϕ_s99.00000°, δ85.00000°, λ-6.00000°. Principal axes: T 3.2630, Plg1.0000°, Azm144.0000°; N -0.3590, Plg83.0000°, Azm240.0000°; P -2.9070, Plg7.0000°, Azm54.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 07:07:49.5±0.3**, 3°.70S**±0°.05×**151°.38E**±0°.06**, h35**km**, n201,**
σ1s.56/191**, mb4.8**/86**, MS4.1**/33**, 2C, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.88**	**133**	Pn	**Pn**	**07 08 03.7**	**-1.7**
	351nm,0.3s,baz=130,slow=0.9,SNR=88						
KRVT				Sn	**Sn**	**07 08 17.9**	**+0.9**
	773nm,0.3s,baz=268,slow=17,SNR=14						
RABL	**Rabaul**	**0.92**	**122**		**Pn**	**07 08 04.0**	**-2.0**
PMG	**Port Moresby**	**7.05**	**216**	Pn	**Pn**	**07 09 30.3**	**+0.1**
	4.5nm,0.3s,baz=32,slow=11,SNR=16						
PMG	**Port Moresby**	**7.05**	**216**	*i* P	**Pn**	**07 09 31.2**	**+1.0**
PMG	**Port Moresby**	**7.05**	**216**		**Pn**	**07 09 31.1**	**+0.8**
HNR	**Honiara**	**10.24**	**124**	LR	LR	07 14 17.1	
	comp=Z,3μm,21.5s,baz=298,slow=38						
PATS	**Pohnpei**	**12.55**	**33**	Pn	Pn	07 10 50.6	+4.9
COEN	**Coen**	**13.01**	**218**		**Pn**	**07 10 53.1**	**+1.1**
CTA	**Charters Tower**	**17.03**	**197**	P	**Pn**	**07 11 44.9**	**-0.2**
	0.4nm,0.3s,baz=36,slow=16,SNR=3.2						
CTA				LR	LR	07 18 24.8	
	comp=Z,405nm,19.6s,baz=18,slow=38						
CTAO	**Charters Tower**	**17.03**	**197**	P	**P**	**07 11 47.2**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,55nm,1.3s						
GUMO	**Guam**	**18.36**	**340**	LR	LR	07 17 29.0	
	comp=Z,394nm,21.9s,baz=145,slow=32						
GUMO	**Guam**	**18.36**	**340**	P	**P**	**07 12 00.7**	**-0.5**
GUMO				pmax	pmax		
	comp=Z,308nm,1.5s						
GUMO	**Guam**	**18.36**	**340**		**P**	**07 12 00.7**	**-0.5**
FAKI	**Fak Fak**	**19.11**	**272**	P	**Pn**	**07 12 11.4**	**+0.7**
	comp=Z,579nmcomp=Z,32nm,0.8s						
FAKI	**Fak Fak**	**19.11**	**272**	P	**P**	**07 12 07.7**	**-1.9**
SIJI	**Sorong**	**20.29**	**277**	P	**P**	**07 12 22.3**	**-0.2**
	comp=Z,42nm,0.9s,baz=103,slow=6.5,SNR=6.3						
EIDS	**Eidsvold**	**21.54**	**181**	P	**P**	**07 12 36.5**	**+0.6**
MTN	**Manton Dam**	**21.98**	**244**	P	**P**	**07 12 38.4**	**-2.3**
WB0	**Warramunga Arr**	**23.01**	**225**	P	**P**	**07 12 49.4**	**-2.2**
WR0	**Warramunga Arr**	**23.04**	**224**	P	**P**	**07 12 49.8**	**-2.0**
WR0				IAmb	IAmb	07 12 58.2	
	comp=Z,47nm,0.9s						
WB2	**Warramunga Arr**	**23.16**	**224**	P	**P**	**07 12 51.5**	**-1.6**
WRA	**Warramunga Arr**	**23.16**	**224**	P	**P**	**07 12 51.3**	**-1.8**
	comp=Z,20nm,1.0s,baz=48,slow=10,SNR=56						
WRA				LR	LR	07 22 32.5	
	comp=Z,390nm,20.0s,baz=30,slow=38						
WRA	**Warramunga Arr**	**23.16**	**224**	P	**P**	**07 12 50.9**	**-2.3**
WRA	**Warramunga Arr**	**23.16**	**224**	P	**P**	**07 12 50.9**	**-2.3**
DZM	**Mont Dzumac**	**23.39**	**143**	*e*P	**P**	**07 12 57.0**	**+1.6**
	comp=Z,171nm,1.3s						
DZM				*e*S	**S**	**07 17 00.5**	**-5.8**
	comp=Z,335nm,25.2s						
DZM				*e*LR	LR	07 18 39.2	
	comp=Z,2μm,25.1s						
DZM	**Mont Dzumac**	**23.39**	**143**	P	**P**	**07 12 56.2**	**+0.8**
	comp=Z,28nm,0.8s,baz=285,slow=5.6,SNR=15						
DZM	**Mont Dzumac**	**23.39**	**143**	P	**P**	**07 12 57.0**	**+1.6**
LBMI	**Labuha**	**24.05**	**277**	P	**P**	**07 13 07.3**	**+5.6**
	comp=Z,2μmcomp=Z,49nm,0.4s						
KNRA	**Kununurra**	**25.23**	**240**	P	**P**	**07 13 11.2**	**-1.2**
KNRA				IAmb	IAmb	07 13 18.9	
	comp=Z,38nm,1.4s						
SANI	**Sanana**	**25.41**	**273**	P	**P**	**07 13 17.6**	**+3.5**
	comp=Z,49nm,1.1s						
AS31	**Alice Springs**	**26.05**	**219**	P	**P**	**07 13 18.6**	**-1.2**
ASAR	**Alice Springs**	**26.05**	**219**	P	**P**	**07 13 19.2**	**-0.6**
	comp=Z,13nm,0.8s,baz=53,slow=7.9,SNR=43						
ASAR				LR	LR	07 24 29.9	
	comp=Z,363nm,18.3s,baz=44,slow=39						
ASAR	**Alice Springs**	**26.05**	**219**	P	**P**	**07 13 18.5**	**-1.4**
ASAR	**Alice Springs**	**26.05**	**219**	P	**P**	**07 13 18.5**	**-1.4**
SOEI	**Soe**	**27.57**	**256**	P	**P**	**07 13 37.8**	**+4.0**
	comp=Z,979nmcomp=Z,44nm,1.0s						
SOEI	**Soe**	**27.57**	**256**	P	**P**	**07 13 34.4**	**+0.7**
FITZ	**Fitzroy Crossi**	**28.98**	**238**	P	**P**	**07 13 45.0**	**-1.0**
	comp=Z,9.7nm,0.8s,baz=61,slow=8.9,SNR=20						
FITZ				LR	LR	07 25 59.8	
	comp=Z,350nm,21.4s,baz=62,slow=38						
FITZ	**Fitzroy Crossi**	**28.98**	**238**	P	**P**	**07 13 44.4**	**-1.6**
FITZ				IAmb	IAmb	07 13 54.9	
	comp=Z,27nm,1.3s						
STKA	**Stephens Creek**	**29.50**	**197**	P	**P**	**07 13 50.0**	**-0.6**
	comp=Z,3.0nm,0.6s,baz=29,slow=13,SNR=14						
STKA				LR	LR	07 25 29.1	
	comp=Z,435nm,18.1s,baz=9.7,slow=36						
STKA	**Stephens Creek**	**29.50**	**197**	P	**P**	**07 13 51.0**	**+0.5**
STKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
STKA	**Stephens Creek**	**29.50**	**197**	P	**P**	**07 13 51.0**	**+0.5**
KAPI	**Kappang**	**31.56**	**266**	P	**P**	**07 14 07.1**	**-1.9**
	comp=Z,6.9nm,0.8s,baz=194,slow=19,SNR=2.1						
KAPI	**Kappang**	**31.56**	**266**	P	**P**	**07 14 07.4**	**-1.6**
KAPI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KAPI	**Kappang**	**31.56**	**266**	P	**P**	**07 14 07.4**	**-1.6**
JCJ	**Chichijima**	**31.88**	**344**	LR	LR	07 25 34.9	
	comp=Z,286nm,21.9s,baz=135,slow=34						
FORT	**Forrest**	**34.77**	**217**	P	**P**	**07 14 35.0**	**-1.8**
FORT				IAmb	IAmb	07 14 37.5	
	comp=Z,19nm,0.8s						
TGY	**Tagaytay City**	**34.99**	**301**	LR	LR	07 26 15.1	
	comp=Z,289nm,21.3s,baz=9.5,slow=32						
PSA00	**Pilbara Seismi**	**35.40**	**237**	P	**P**	**07 14 39.6**	**-2.7**
PSA00				IAmb	IAmb	07 14 46.0	
	comp=Z,26nm,1.2s						
PWJI	**Pagerwojo**	**39.59**	**262**	P	**P**	**07 15 20.1**	**+2.2**
	comp=Z,19nm,0.8s						
PBKI	**Pangkalan Bun**	**39.66**	**270**	P	P	07 15 23.8	+5.3
	comp=Z,19μmcomp=Z,957nm,0.7s						
PCJI	**Pacitan**	**40.22**	**262**	P	**P**	**07 15 25.6**	**+2.5**
	comp=Z,40nm,0.9s						
KSM	**Kuching**	**41.37**	**276**	P	**P**	**07 15 31.2**	**-1.4**
KSM				IAmb	IAmb	07 15 37.5	
	comp=Z,22nm,1.2s						
JNU	**Nakatsue**	**41.45**	**334**	P	**P**	**07 15 31.7**	**-1.4**
JNU				IAmb	IAmb	07 15 33.2	
	comp=Z,44nm,1.4s						
URZ	**Urewera**	**41.65**	**149**	P	**P**	**07 15 35.8**	**+1.3**
	comp=Z,7.9nm,0.7s,baz=41,slow=2.2,SNR=6.9						
URZ	**Urewera**	**41.65**	**149**	P	**P**	**07 15 34.9**	**+0.3**
URZ				IAmb	IAmb	07 15 49.1	
	comp=Z,26nm,1.2s						
MJAR	**Matsushiro Arr**	**41.88**	**344**	P	**P**	**07 15 34.0**	**-2.5**
	comp=Z,1.2nm,0.4s,baz=178,slow=10,SNR=4.5						
MJAR				LR	LR	07 31 40.5	
	comp=Z,135nm,20.5s,baz=200,slow=34						
MJAR	**Matsushiro Arr**	**41.88**	**344**	P	**P**	**07 15 34.6**	**-1.9**
MJAR				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MJAR	**Matsushiro Arr**	**41.88**	**344**	P	**P**	**07 15 34.6**	**-1.9**
TUWZ	**Tuamarina**	**42.67**	**155**	P	**P**	**07 15 44.0**	**+1.2**
BHW	**Baring Head**	**43.05**	**154**	P	**P**	**07 15 47.1**	**+1.2**
BFZ	**Birch Farm**	**43.09**	**152**	P	**P**	**07 15 47.2**	**+0.8**
BFZ				IAmb	IAmb	07 16 05.4	
	comp=Z,20nm,1.0s						
LTZ	**Lake Taylor**	**43.13**	**157**	P	**P**	**07 15 48.9**	**+2.3**
LTZ				IAmb	IAmb	07 16 06.9	
	comp=Z,34nm,1.4s						
KHZ	**Kahutara**	**43.32**	**156**	P	**P**	**07 15 48.5**	**+0.4**
PLWZ	**Palliser**	**43.35**	**154**	P	**P**	**07 15 48.6**	**+0.2**
RPZ	**Rata Peaks**	**43.48**	**159**	P	**P**	**07 15 50.7**	**+1.2**
LEM	**Lembang**	**43.67**	**264**	LR	LR	07 36 41.7	
	comp=Z,118nm,19.0s,baz=146,slow=40						
TJN	**Taejon**	**45.75**	**333**	*i* P	**P**	**07 16 05.3**	**-2.3**
KSRS	**Korea Array**	**46.39**	**334**	P	**P**	**07 16 12.1**	**-0.6**
	comp=Z,2.7nm,0.9s,baz=153,slow=8.4,SNR=4.9						
KSRS				LR	LR	07 36 07.2	
	comp=Z,134nm,18.4s,baz=145,slow=37						
QIZ	**Qiongzhong**	**46.69**	**300**	P	**P**	**07 16 14.8**	**-0.5**
QIZ				S	**S**	**07 23 04.0**	**+1.1**
QIZ				pmax	pmax		
	comp=Z,11nm,1.1s						
QIZ				LR	LR		
	comp=Z,160nm,20.2s						
QIZ				LR	LR		
	comp=Z,190nm,28.4s						
QIZ				LR	LR		
	comp=Z,320nm,24.0s						
NJ2	**Nanjing**	**47.11**	**321**	*e*P	**P**	**07 16 18.5**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
NJ2				LR	LR		
	comp=Z,420nm,19.9s						
NJ2				LR	LR		
	comp=Z,240nm,17.1s						
NJ2				LR	LR		
	comp=Z,900nm,23.7s						
USA0B	**Ussuriysk Arra**	**50.77**	**342**	*i* P	**P**	**07 16 45.2**	**-1.0**
USRK	**Ussuriysk Ar.**	**50.77**	**342**	P	**P**	**07 16 46.1**	**-0.1**
	comp=Z,3.6nm,0.8s,baz=161,slow=12,SNR=4.8						
USRK				LR	LR	07 37 52.7	
	comp=Z,99nm,18.1s,baz=147,slow=36						
USRK	**Ussuriysk Ar.**	**50.77**	**342**	P	**P**	**07 16 45.4**	**-0.7**
USRK	**Ussuriysk Ar.**	**50.77**	**342**	P	**P**	**07 16 45.4**	**-0.7**
GYA	**Guiyang**	**52.61**	**307**	*e*P	**P**	**07 17 01.3**	**+0.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PBKT	**Sadao Pong**	**53.72**	**294**	P	**P**	**07 17 08.9**	**+0.3**
PBKT				IAmb	IAmb	07 17 14.1	
	comp=Z,10nm,1.1s						
XAN	**Xi'an**	**54.86**	**317**	P	P	07 17 22.0	+5.3
XAN				pP	sP	07 17 30.8	+0.6
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,73nm,7.5s						
XAN				LR	LR		
	comp=Z,200nm,19.7s						
XAN				LR	LR		
	comp=Z,180nm,23.1s						
XAN				LR	LR		
	comp=Z,340nm,19.8s						
KMI	**Kunming**	**55.20**	**304**	P	**P**	**07 17 22.8**	**+3.3**
KMI				pmax	pmax		
	comp=Z,20nm,0.7s						
KMI				LR	LR		
	comp=Z,230nm,26.8s						
KMI				LR	LR		
	comp=Z,200nm,29.0s						
KMI				LR	LR		
	comp=Z,140nm,23.4s						
KLR	**Kul'dur**	**55.41**	**344**	P	**P**	**07 17 20.4**	**+0.1**
	comp=Z,2.6nm,0.8s,baz=132,slow=8.2,SNR=6.4						
KLR	**Kul'dur**	**55.41**	**344**	*i* P	**P**	**07 17 18.9**	**-1.4**
KLR				pmax	pmax		
	comp=Z,9.0nm,1.4s						
CM31	**Chiang Mai Arr**	**56.13**	**295**	P	**P**	**07 17 26.0**	**0.0**
CMAR	**Chiang Mai Arr**	**56.13**	**295**	P	**P**	**07 17 26.7**	**+0.7**
	comp=Z,10nm,0.9s,baz=112,slow=5.4,SNR=28						
CMAR				LR	LR	07 41 26.0	
	comp=Z,140nm,18.9s,baz=116,slow=36						
CMAR	**Chiang Mai Arr**	**56.13**	**295**	P	**P**	**07 17 26.3**	**+0.3**
CMAR	**Chiang Mai Arr**	**56.13**	**295**	P	**P**	**07 17 26.3**	**+0.3**
CHTO	**Chiang Mai**	**56.24**	**295**	P	**P**	**07 17 26.6**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,26nm,1.4s						
CHTO	**Chiang Mai**	**56.24**	**295**	P	**P**	**07 17 26.6**	**-0.2**
PETK	**Petropavlovsk-**	**56.85**	**5**	P	**P**	**07 17 31.3**	**+0.7**
	comp=Z,1.3nm,0.4s,baz=190,slow=13,SNR=6.5						
PETK				LR	LR	07 43 41.6	
	comp=Z,71nm,18.0s,baz=237,slow=38						
PETK	**Petropavlovsk-**	**56.85**	**5**	P	**P**	**07 17 33.9**	**+3.4**
PETK	**Petropavlovsk-**	**56.85**	**5**	P	**P**	**07 17 33.9**	**+3.4**
CD2	**Chengdu**	**56.95**	**311**	*e*P	**P**	**07 17 31.5**	**-0.2**
HHC	**Hu-ho-hao-te**	**57.34**	**325**	*e*P	**P**	**07 17 37.3**	**+3.0**
HHC				pmax	pmax		
	comp=Z,90nm,1.0s						
HHC				pmax	pmax		
	comp=Z,330nm,5.4s						
PPT	**Papeete**	**59.41**	**108**	LR	LR	07 39 48.6	
	comp=Z,95nm,19.4s,baz=256,slow=32						
PPT2	**Papeete2**	**59.41**	**108**	*e*LQ	LQ	07 32 48.0	
	comp=Z,373nm,31.8s						
PPT2				*e*LR	LR	07 35 25.7	
	comp=Z,109nm,22.2s						
LZH	**Lanzhou**	**59.46**	**316**	*e*P	P	07 17 56.0	+6.7
LZH				pP	sP	07 18 05.5	+2.5
LZH				sP	pwP	07 18 10.8	+8.2
TBI	**Tubuai**	**60.30**	**115**	*e*LQ	LQ	07 33 22.7	
	comp=Z,373nm,25.0s						
TBI				*e*LR	LR	07 35 40.8	
	comp=Z,316nm,30.5s						
ZEA	**Zeya**	**60.70**	**344**	*e*P	**P**	**07 17 56.0**	**-1.2**
ZEA				pmax	pmax		
	comp=Z,17nm,1.0s						
MA2	**Magadan**	**63.09**	**360**	*i* P	**P**	**07 18 11.7**	**-1.5**
MA2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ULN	**Ulaanbaatar**	**64.33**	**329**	*i* P	**P**	**07 18 20.8**	**-1.0**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ULN	**Ulaanbaatar**	**64.33**	**329**	P	**P**	**07 18 21.8**	**-0.1**
ULN				IAmb	IAmb	07 18 30.5	
	comp=Z,12nm,1.4s						
SONM	**Songino Array**	**64.65**	**328**	P	**P**	**07 18 24.2**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=149,slow=5.3,SNR=12						
SONM				LR	LR	07 44 35.5	
	comp=Z,202nm,21.6s,baz=104,slow=34						
SONM	**Songino Array**	**64.65**	**328**	P	**P**	**07 18 23.5**	**-0.4**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONM	**Songino Array**	**64.65**	**328**	P	**P**	**07 18 23.5**	**-0.4**
SEY	**Seymchan**	**66.46**	**1**	*i* P	**P**	**07 18 33.8**	**-1.3**
YAK	**Yakutsk**	**67.63**	**349**	*i* P	**P**	**07 18 43.0**	**+0.5**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ZAK	**Zakamensk**	**67.83**	**329**	*e*P	**P**	**07 18 44.2**	**0.0**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BOD	**Bodaibo**	**68.27**	**340**	*e*P	**P**	**07 18 45.9**	**-0.8**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.7s						
TLY	**Talaya**	**68.43**	**330**	P	**P**	**07 18 48.7**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=107,slow=20,SNR=1.9						
TLY	**Talaya**	**68.43**	**330**	*i* P	**P**	**07 18 48.0**	**+0.1**
TLY				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TLY	**Talaya**	**68.43**	**330**	P	**P**	**07 18 47.9**	**+0.1**
MOY	**Mondy**	**69.75**	**329**	*e*P	**P**	**07 18 56.8**	**+0.6**
MOY				pmax	pmax		
	comp=Z,17nm,2.4s						
BILL	**Bilibino**	**72.34**	**6**⇑	*i*P	**P**	**07 19 11.8**	**+0.4**
BILL				*e**PP	**pP**	**07 19 19.0**	**-2.5**
BILL				*e*		07 19 29.3	
BILL				*e*		07 29 00.0	
BILL				SS	SS	07 33 14.0	+3.2
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,93nm,17.0s						
VNDA	**Vanda**	**73.97**	**178**	P	**P**	**07 19 21.9**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=320,slow=6.3,SNR=6.2						
VNDA				LR	LR	07 50 40.6	
	comp=Z,70nm,18.2s,baz=332,slow=35						
WMQ	**Urumqi**	**73.98**	**318**	*e*P	**P**	**07 19 23.0**	**+1.3**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,97nm,5.3s						
WMQ				LR	LR		
	comp=Z,150nm,19.9s						
WMQ				LR	LR		
	comp=Z,200nm,18.7s						
WMQ				LR	LR		
	comp=Z,190nm,24.9s						
ANM	**Nome**	**75.17**	**18**	P	**P**	**07 19 29.4**	**+1.4**
ANM				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ANM	**Nome**	**75.17**	**18**	P	**P**	**07 19 29.4**	**+1.4**
DGZ	**Jazzator, Alta**	**76.36**	**323**	*i* P	**P**	**07 19 34.8**	**-0.6**
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SVW2	**Sparrevohn**	**76.39**	**24**	P	**P**	**07 19 36.7**	**+1.6**
SVW2				IAmb	IAmb	07 19 45.6	
	comp=Z,7.9nm,0.9s						
TIXI	**Tiksi**	**76.64**	**353**	LR	LR	07 53 41.5	
	comp=Z,56nm,19.4s,baz=174,slow=36						
TIXI	**Tiksi**	**76.64**	**353**	*i* P	**P**	**07 19 33.3**	**-2.9**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
CNPM	**China Poot**	**77.35**	**26**	P	**P**	**07 19 39.8**	**-0.8**
BRLK	**Bradley Lake**	**77.63**	**26**	P	**P**	**07 19 42.0**	**-0.1**
BRLK				IAmb	IAmb	07 19 51.8	
	comp=Z,19nm,1.2s						
SEW	**Seward**	**78.42**	**26**	P	**P**	**07 19 47.9**	**+1.5**
SUA	**Susitna One**	**78.55**	**25**	P	**P**	**07 19 47.5**	**+0.2**
SUA				IAmb	IAmb	07 19 58.3	
	comp=Z,7.8nm,1.0s						
MK31	**Makanchi Array**	**78.57**	**319**	P	**P**	**07 19 47.6**	**-0.1**
MK31				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MK31	**Makanchi Array**	**78.57**	**319**	P	**P**	**07 19 47.5**	**-0.1**
MKAR	**Makanchi Array**	**78.57**	**319**	P	**P**	**07 19 47.7**	**+0.1**
	comp=Z,3.4nm,0.8s,baz=99,slow=7.5,SNR=20						
MKAR	**Makanchi Array**	**78.57**	**319**	P	**P**	**07 19 47.3**	**-0.4**
MAKZ	**Makanchi**	**78.78**	**319**	P	**P**	**07 19 48.0**	**-0.8**
MAKZ				pmax	pmax		

	comp=Z,8.0nm,0.9s						
MAKZ	Makanchi	78.78	319	P	P	07 19 48.0	-0.8
MAKZ				IAmb	IAmb	07 19 54.0	
	comp=Z,8.1nm,0.9s						
RC01	Rabbit Creek A	78.78	25	P	P	07 19 49.4	+1.0
RC01				IAmb	IAmb	07 19 58.2	
	comp=Z,16nm,1.0s						
PMR	Palmer	79.28	25	P	P	07 19 54.0	+2.9
PMR				pmax	pmax		
	comp=Z,23nm,1.4s						
PMR	Palmer	79.28	25	P	P	07 19 54.0	+2.9
PMR				IAmb	IAmb	07 20 00.0	
	comp=Z,23nm,1.4s						
GHO	Glory Hole Cre	79.46	25	P	P	07 19 53.9	+1.6
GHO				IAmb	IAmb	07 20 11.6	
	comp=Z,12nm,1.1s						
ZALV	Zalesovo Beam	79.46	327	P	P	07 19 51.3	-1.0
	comp=Z,0.8nm,0.4s,baz=104,slow=6.3,SNR=4.5						
ZALV	Zalesovo Beam	79.46	327	P	P	07 19 50.7	-1.6
ZALV	Zalesovo Beam	79.46	327	P	P	07 19 50.7	-1.6
KNK	Knik Glacier	79.48	25	P	P	07 19 54.2	+1.9
KNK				IAmb	IAmb	07 20 07.3	
	comp=Z,26nm,1.4s						
KTH	Kantishna Hill	79.55	23	P	P	07 19 52.9	+0.2
KTH				IAmb	IAmb	07 20 11.8	
	comp=Z,15nm,1.2s						
SML	Sawmill	79.72	25	P	P	07 19 54.0	+0.4
SML				pmax	pmax		
	comp=Z,26nm,1.2s						
SML	Sawmill	79.72	25	P	P	07 19 55.0	+1.3
TRF	Thorofare Moun	79.74	23	P	P	07 19 54.6	+0.8
BPAW	Bear Paw Mtn.	79.81	22	P	P	07 19 54.7	+0.7
IMAR	Indian Mountai	79.84	20	P	P	07 19 55.4	+1.3
MLY	Manley	80.38	21	P	P	07 19 58.1	+1.0
MLY				IAmb	IAmb	07 20 12.8	
	comp=Z,17nm,1.3s						
MCK	McKinley	80.41	23	P	P	07 19 57.8	+0.6
MCK				pmax	pmax		
	comp=Z,24nm,1.0s						
MCK	McKinley	80.41	23	P	P	07 19 57.8	+0.6
DHY	Denali Highway	80.71	24	P	P	07 20 01.1	+2.0
DHY				IAmb	IAmb	07 20 07.7	
	comp=Z,11nm,1.1s						
NEA	Nenana	80.77	22	P	P	07 19 59.7	+0.5
NEA				IAmb	IAmb	07 20 07.1	
	comp=Z,8.9nm,1.1s						
WRH	Wood River Hil	81.09	22	P	P	07 20 01.5	+0.6
WRH				IAmb	IAmb	07 20 09.2	
	comp=Z,11nm,1.0s						
KSH	Kashi	81.15	311	P	P	07 20 04.5	+2.6
KSH				pP	pwP	07 20 14.0	-1.4
KSH				S	S	07 30 11.0	+1.3
KSH				SKS	SKSac	07 30 16.3	-2.4
KSH				sS	ScS	07 30 29.3	+1.6
KSH				pmax	pmax		
	comp=Z,15nm,0.9s						
KSH				pmax	pmax		
	comp=Z,310nm,6.5s						
KSH				LR	LR		
	comp=Z,140nm,11.1s						
KSH				LR	LR		
	comp=Z,73nm,9.9s						
KSH				LR	LR		
	comp=Z,260nm,11.2s						
CCB	Clear Creek Bu	81.28	22	P	P	07 20 02.4	+0.6
CCB				IAmb	IAmb	07 20 20.9	
	comp=Z,13nm,1.2s						
COLA	College	81.37	22	P	P	07 20 02.3	0.0
COLA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
COLA	College	81.37	22	P	P	07 20 02.3	0.0
COLA				IAmb	IAmb	07 20 10.5	
	comp=Z,8.9nm,0.9s						
HDA	Harding Lake	81.50	23	P	P	07 20 03.4	+0.3
GLB	Gilahina Butte	81.50	26	P	P	07 20 06.3	+3.1
GLB				IAmb	IAmb	07 20 12.8	
	comp=Z,18nm,1.2s						
IL31		81.69	22	P	P	07 20 02.6	-1.4
ILAR	Eielson Array	81.69	22	P	P	07 20 04.0	0.0
	comp=Z,2.3nm,0.7s,baz=248,slow=5.5,SNR=24						
ILAR	Eielson Array	81.69	22	P	P	07 20 02.7	-1.3
ILAR	Eielson Array	81.69	22	P	P	07 20 02.7	-1.3
RIDG	Independent Ri	82.03	24	P	P	07 20 07.1	+1.2
RIDG				IAmb	IAmb	07 20 18.8	
	comp=Z,10.0nm,1.0s						
KURK	Kurchatov	82.04	322	*e*P	P	07 20 04.3	-1.8
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KURK	Kurchatov	82.04	322	P	P	07 20 05.8	-0.3
NIL	Nilore	82.19	305	P	P	07 20 07.5	+0.1
NIL				pmax	pmax		
	comp=Z,18nm,0.8s						
NIL	Nilore	82.19	305	P	P	07 20 07.5	+0.1
BARN	Barnard Glacie	82.31	27	P	P	07 20 09.1	+1.6
BARN				IAmb	IAmb	07 20 27.6	
	comp=Z,11nm,1.1s						
CTGM	Chitina Glacie	82.42	27	P	P	07 20 10.1	+2.0
SCRK	Sand Creek	82.47	24	P	P	07 20 09.2	+0.9
AAK	Ala-Archa	82.89	314	P	P	07 20 10.7	-0.3
	comp=Z,3.1nm,0.8s,baz=117,slow=4.3,SNR=9.0						
AAK	Ala-Archa	82.89	314	P	P	07 20 11.7	+0.7
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AAK	Ala-Archa	82.89	314	P	P	07 20 11.7	+0.7
BCAR	Beaver Creek A	83.01	25	P	P	07 20 12.1	+1.1
ARSB	Arslanbob	83.74	312	P	P	07 20 15.7	+0.3
ARSB				pmax	pmax		
	comp=Z,22nm,1.3s						
ARSB	Arslanbob	83.74	312	P	P	07 20 15.7	+0.3
EGAK	Eagle	83.92	23	P	P	07 20 17.2	+1.6
EGAK				IAmb	IAmb	07 20 35.9	
	comp=Z,9.0nm,1.1s						
NRIK	Noril'sk	84.48	341	P	P	07 20 18.6	+0.3
	comp=Z,6.4nm,0.9s,baz=105,slow=4.9,SNR=12						
NRIK				LR	LR	07 59 38.4	
	comp=Z,85nm,18.3s,baz=129,slow=37						
NRIK	Noril'sk	84.48	341	*i* P	P	07 20 16.4	-1.9
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KKAR	Karatay Array	85.85	314	P	P	07 20 25.9	+0.1
KKAR	Karatay Array	85.85	314	P	P	07 20 25.9	+0.1
MAW	Mawson	86.03	203	LR	LR	07 56 04.0	
	comp=Z,95nm,20.4s,baz=62,slow=34						
QSPA	South Pole Qui	86.25	180	P	P	07 20 27.0	-0.4
QSPA				IAmb	IAmb	07 20 38.7	
	comp=Z,15nm,1.2s						
BVAR	Borovoye Array	87.52	323	P	P	07 20 33.2	-0.5
	comp=Z,2.8nm,0.8s,baz=94,slow=5.9,SNR=10						
BRVK	Borovoye	87.59	323	*e*P	P	07 20 31.8	-2.2
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
INK	Inuvik	87.94	21	P	P	07 20 35.2	-0.2
INK				pmax	pmax		
	comp=Z,9.0nm,2.7s						
NVAR	Mina Array Bea	92.53	52	P	P	07 20 59.9	+2.1
	comp=Z,0.9nm,0.9s,baz=274,slow=5.3,SNR=6.3						
NVAR				LR	LR	07 59 48.7	
	comp=Z,53nm,18.4s,baz=216,slow=34						
NVAR	Mina Array Bea	92.53	52	P	P	07 21 02.1	+4.3
SYO	Syowa Base	94.22	200	⇑*e*sP	P	07 21 11.4	+6.8
ARU	Arti	94.62	326	LR	LR	08 02 56.9	
	comp=Z,234nm,21.9s,baz=104,slow=35						
AKTO	Aktyubinsk	94.98	320	LR	LR	08 03 29.2	
	comp=Z,119nm,21.6s,baz=79,slow=35						
YKA	Yellowknife Ar	95.12	28	P	P	07 21 09.8	+1.0
	comp=Z,0.5nm,0.8s,baz=263,slow=4.3,SNR=7.3						
YKA				LR	LR	08 00 25.6	
	comp=Z,53nm,20.6s,baz=0.0,slow=33						
PDAR	Pinedale Array	99.16	47	LR	LR	07 59 56.6	
	comp=Z,99nm,20.0s,baz=280,slow=32						
GERES	GERESS Array B	122.38	328	PKP	PKiKP	07 26 41.4	-0.1
	comp=Z,0.4nm,0.2s,baz=54,slow=2.3,SNR=3.6						
GERES	GERESS Array B	122.38	328	PKIKP	PKPdf	07 26 40.7	-0.6
GERES	GERESS Array B	122.38	328		PKPdf	07 26 40.7	-0.6
GRA1	Grafenberg Arr	123.12	330		PKPdf	07 26 40.0	-2.6
GRF	Grafenberg Arr	123.12	330	PKIKP	PKPdf	07 26 40.0	-2.6
BDFB	Brasilia	152.84	136	PKPbc	PKiKP	07 27 46.0	+1.7
	comp=Z,1.5nm,0.7s,baz=242,slow=5.2,SNR=3.1						
BDFB				PKPab	PKPab	07 27 56.4	+1.3
	comp=Z,4.0nm,0.8s,baz=232,slow=7.3,SNR=5.7						
BDFB	Brasilia	152.84	136	PKIKP	PKiKP	07 27 46.4	+2.1
BDFB						07 27 56.1	
BDFB	Brasilia	152.84	136		PKiKP	07 27 46.4	+2.1
BDFB					PKPab	07 27 56.1	+1.0
DBIC	Dimbokro	156.15	278	PKPab	PKPab	07 28 09.1	-0.1
	comp=Z,5.5nm,0.9s,baz=94,slow=6.9,SNR=3.9						
DBIC	Dimbokro	156.15	278	PKP2	PKPab	07 28 08.9	-0.3
DBIC	Dimbokro	156.15	278		PKPab	07 28 08.9	-0.3

NNC ***28*** *07:12:12.6±0.2, 50°.01N×78°.65E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=2.4km s-min=1.0km az=78.0, Suspected Mining explosion.*
ASRS ***28*** *07:12:15.9±0.4, 50°N±3°×7°9E±°, h10^{km}, MLh3.5/7, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
ISC 28 07:12:15.1±0.8**, 50°.10N**±0°.04×**78°.77E**±0°.04**, h0^{km}, n44,** σ1^s**21**/63**, 19C-5D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.51	342	⇑P	Pg	07 12 24.1	-0.8
KUR07				⇑S	Sg	07 12 32.7	+1.1
KUR06	Kurchatov Arra	0.53	343	⇑P	Pg	07 12 24.5	-0.8
KUR06				⇑S	Sg	07 12 33.4	+1.3
KUR14	Kurchatov Arra	0.53	348	⇑P	Pg	07 12 24.5	-0.7
KUR14				⇑S	Sg	07 12 32.9	+0.7
KUR15	Kurchatov Arra	0.54	346	⇑P	Pg	07 12 24.7	-0.8
KUR15				⇑S	Sg	07 12 33.1	+0.6
KURBB	Kurchatov Arra	0.55	344	⇑P	Pg	07 12 24.8	-0.8
	25nm,0.3s						
KURBB				⇑S	Sg	07 12 33.3	+0.6
	250nm,0.5s						
KUR16	Kurchatov Arra	0.56	342	⇑P	Pg	07 12 25.0	-0.8
KUR16				⇓S	Sg	07 12 33.6	+0.5
KUR05	Kurchatov Arra	0.57	345	⇑P	Pg	07 12 25.1	-0.8
KUR05				⇓S	Sg	07 12 34.0	+0.7
KUR17	Kurchatov Arra	0.57	341	⇑P	Pg	07 12 25.1	-0.9
KUR17				⇓S	Sg	07 12 33.7	+0.4
KUR04	Kurchatov Arra	0.58	346	⇑P	Pg	07 12 25.5	-0.7
KUR04				⇑S	Sg	07 12 34.4	+0.6
KURK	Kurchatov	0.63	352	P	Pg	07 12 26.6	-0.5
KURK				S	Sg	07 12 34.7	-0.5
SEM	Semipalatinsk	1.00	71	P	Pg	07 12 33.3	-1.0
	9.1nm,0.1s						
SEM				S	Sb	07 12 49.1	-0.2
	38nm,0.1s						
MAKZ	Makanchi	3.92	146	⇑Pn	Pn	07 13 15.1	-1.5
	0.2nm,0.2s						
MAKZ				⇑Pg	Pb	07 13 22.4	-2.7
	2.1nm,0.4s						
MAKZ				⇓Lg	Lg	07 14 18.0	
	7.7nm,0.6s						
UKR	Ust'-Kan	3.92	75	P	Pn	07 13 17.3	+0.7
BRZS	Berezniki	3.93	271	Pg	Pb	07 13 23.7	-1.5
	14nm,0.2s						
BRZS				Lg	Lg	07 14 15.5	
	19nm,0.4s						
MK31	Makanchi Array	4.05	143	⇓Pn	Pn	07 13 17.2	-1.2
	0.4nm,0.2s,baz=326,slow=10,SNR=78						
MK31				⇑Pg	Pb	07 13 25.2	-2.1
	1.4nm,0.3s,baz=92,slow=1.6,SNR=21						
MK31				Lg	Lg	07 14 19.4	
	4.5nm,0.4s,baz=334,slow=27,SNR=9.4						
MKAR	Makanchi Array	4.05	143	P	Pn	07 13 17.7	-0.6
MKAR				S	Sn	07 14 07.9	+1.4
ZSN	Zaisan	4.82	121	Pg	Pb	07 13 35.9	-4.5
	6.4nm,0.2s						
ZSN				Lg	Lg	07 14 36.8	
	8.4nm,0.4s						
KAPS	Kapalarasan	4.83	175	Pg	Pb	07 13 38.5	-2.1
	2.6nm,0.3s						
KAPS				Lg	Lg	07 14 42.0	
	7.4nm,0.9s						
DGZ	Jazzator, Alta	5.62	91	P	Pn	07 13 40.6	+0.7
DGZ				S	Sn	07 14 45.5	+0.4
CHBI	Chibit, Altay	5.62	84	P	Pn	07 13 40.8	+1.0
CHBI				S	Sn	07 14 46.2	+1.1
ELT	Eltsovka	5.63	53	P	Pn	07 13 41.0	+1.0
ELT				S	Sn	07 14 45.4	+0.2
ARTR	Artybash	5.65	69	P	Pn	07 13 41.3	+1.0
ARTR				S	Sn	07 14 46.2	+0.5
AKAR	Aktash	5.69	84	P	Pn	07 13 42.3	+1.4
AKAR				S	Sn	07 14 48.6	+1.6
DJR	Jarkent	5.81	173	Pg	Pb	07 13 57.6	+0.4
	1.1nm,0.2s						
DJR				Lg	Lg	07 15 13.9	
	5.5nm,0.3s						
ULGR	Ulagan, Altay	5.91	81	P	Pn	07 13 44.3	+0.3
ULGR				S	Sn	07 14 52.4	+0.1
ARXS	Arharly	5.92	187	Pg	Pb	07 13 58.2	-1.0
	1.5nm,0.4s						
ARXS				Lg	Lg	07 15 14.8	
	15nm,0.5s						
BTLS	Baital	5.98	214	Pg	Pb	07 13 58.8	-1.3
	1.1nm,0.3s						
BTLS				Lg	Lg	07 15 16.1	
	3.1nm,0.5s						
BRVK	Borovoye	6.06	303	S	Sn	07 14 54.0	-2.0
CUR	Chagan-Uzun	6.17	86	P	Pn	07 13 48.2	+0.7
CUR				S	Sn	07 15 00.7	+1.9
TASR	Tashtagol	6.29	61	S	Sn	07 15 02.9	+1.2
KUU	Kurty	6.42	196	Pg	Pb	07 14 08.2	+0.5
	1.4nm,0.2s						
KUU				Lg	Lg	07 15 32.2	
	10nm,0.5s						
KTBS	Karatobe	6.54	193	Pg	Pb	07 14 10.0	+0.3
	1.7nm,0.3s						
KTBS				Lg	Lg	07 15 35.0	
	6.7nm,0.6s						
KRBS	Karabastau	6.74	199	Pg	Pb	07 14 13.9	+0.7
	1.2nm,0.3s						
KRBS				Lg	Lg	07 15 42.1	
	2.0nm,0.3s						
PDGK	Podgornoye	6.79	176	Pg	Pb	07 14 14.6	+0.7
	0.6nm,0.2s						
PDGK				Lg	Lg	07 15 43.1	
	2.9nm,0.5s						
PDGK	Podgornoye	6.79	176	⇑Lg	Lg	07 15 43.6	
	6.4nm,0.7s						
UZB	Uzynbulak	6.95	178	Pg	Pb	07 14 18.7	+1.9
	1.0nm,0.3s						
UZB				Lg	Lg	07 15 50.1	
	3.1nm,0.4s						
KOTS	Kotyrbulak	6.96	190	Pg	Pb	07 14 18.3	+1.4
	3.7nm,0.2s						
KOTS				Lg	Lg	07 15 49.0	
	5.7nm,0.3s						
SHLS	Shalkode	6.96	176	Pg	Pb	07 14 19.0	+2.1
	2.3nm,0.2s						
SHLS				Lg	Lg	07 15 50.7	
	5.4nm,0.6s						
DGS	Degeres	7.16	198	Pg	Pb	07 14 21.7	+1.4
	3.5nm,0.4s						
DGS				Lg	Lg	07 15 55.0	
	8.2nm,0.5s						
TNSS	Tian-Shan	7.17	191	Pg	Pb	07 14 21.7	+1.0
	1.6nm,0.2s						
TNSS				Lg	Lg	07 15 54.8	
	3.7nm,0.4s						
SGDS	Sogindy	7.23	205	Pg	Pb	07 14 21.9	+0.5
	2.1nm,0.3s						
SGDS				Lg	Lg	07 15 56.1	
	2.4nm,0.4s						
KST	Kastek	7.31	196	Pg	Pb	07 14 25.0	+2.1
	2.3nm,0.4s						
KST				Lg	Lg	07 16 01.5	
	3.6nm,0.3s						
VEH	Verkhnyaya Baz	7.85	62	S	Sn	07 15 40.2	+0.2
MRKS	Merke	8.29	210	Pg	Pb	07 14 42.4	+3.0
	1.4nm,0.4s						
MRKS				Lg	Lg	07 16 31.2	
	2.2nm,0.4s						

IDC 28 07:15:39.8±1.4**, 0°.60N**×**126°.60E, h0^{km}, mb3.4**/4**, mb1 3.6**/4**, mb1mx3.3**/42**, mbtmp3.4**/4**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx2.9**/23**, Error ellipse: s-maj=147.2km s-min=22.1km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.89	107	LR	LR	07 18 42.1	
	comp=Z,788nm,21.5s,baz=52,slow=37						
WRA	Warramunga Arr	21.78	160	P	P	07 20 33.6	+0.1
	0.4nm,0.5s,baz=339,slow=11,SNR=12						
ASAR	Alice Springs	25.14	164	P	P	07 21 06.8	-0.1
	0.5nm,0.6s,baz=347,slow=12,SNR=8.3						
SONM	Songino Array	50.21	342	P	P	07 24 38.2	+0.5
	0.4nm,0.6s,baz=142,slow=7.2,SNR=2.5						
MKAR	Makanchi Array	60.05	326	P	P	07 25 48.2	-0.5
	0.3nm,0.3s,baz=118,slow=8.8,SNR=6.1						

JMA 28 07:31:51.3, 24°.46N×123°.57E, h8^{km}±2^{km}, M1.5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.19	130	P	Pg	07 31 55.2	0.0
IRIF				S	Sg	07 31 58.6	+0.7
HATJ	Hateruma jima	0.46	152	P	Pg	07 32 00.0	-0.1
HATJ				S	Sg	07 32 06.6	+0.5
JKRS	Kuro-shima	0.46	119	P	Pg	07 32 00.3	+0.1
JKRS				S	Sg	07 32 07.0	+0.8
YOJ	Yonaguni jima	0.51	270	P	Pg	07 32 01.3	+0.1
YOJ				S	Sg	07 32 07.9	0.0
JIJ	Ishigaki jima	0.53	100	P	Pg	07 32 01.5	-0.1
JIJ				S	Sg	07 32 09.0	+0.5
JYNG	Yonagunijimaku	0.57	269	*e*S	Sg	07 32 10.4	+0.6
JISG	Ishigakijimahi	0.69	79	P	Pg	07 32 04.6	+0.1
JISG				S	Sb	07 32 14.6	-0.6
JTJ	Tarama	1.05	80	P	Pb	07 32 11.8	+0.1
JTJ				S	Sn	07 32 26.4	-0.7

TAP 28 07:32:48.2, 24°.37N×121°.74E, h9^{km}, ML1.5, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau	0.06	5	P	Pg	07 32 50.7	+0.6
	baz=12						
ENA				*e*S	Sg	07 32 51.8	+0.4
	baz=12						
NACB	Ninganchiao	0.23	213	*e*P	Pg	07 32 54.3	+1.3
	baz=213						
NACB				*e*S	Sg	07 32 58.4	+2.2
	baz=213						
TWC	Suao	0.26	23	*e*P	Pb	07 32 54.4	-0.7
	baz=25						
ETLH	Xiulin Townshi	0.28	235	*e*P	Pb	07 32 55.3	-0.3
	baz=234						
NDT	Datong Townshi	0.31	319	*e*P	Pb	07 32 55.7	-0.2
	baz=318						
NDT				*e*S	Sb	07 33 00.6	-0.5
	baz=318						
ENTT	Nioudou	0.31	330	*e*P	Pb	07 32 55.5	-0.4
	baz=330						
ENTT				*e*S	Sb	07 33 00.4	-0.8
	baz=330						
NNSB	Datong	0.33	280	*e*P	Pb	07 32 56.2	-0.1
	baz=280						
NNSB				*e*S	Sb	07 33 01.0	-0.8
	baz=280						
NNSH	Datong	0.33	280	*e*P	Pb	07 32 56.3	0.0
	baz=280						
NNSH				S	Sb	07 33 00.8	-1.0
	baz=280						
NNS	Nan Shan	0.34	282	*e*P	Pb	07 32 56.0	-0.5
	baz=281						
NNS				*e*S	Sb	07 33 01.1	-1.0
	baz=281						
EOS1	EOS1	0.40	64	*e*P	Pg	07 32 56.5	+0.4
	baz=63						
WHF	Hehuan Shan	0.48	242	*e*P	Pb	07 32 59.4	+0.2
	baz=241						

IDC ***28*** *07:50:37.4±3.1, 32°.83S×70°.52W, h60^{km}±28^{km}, mb3.5/3, mb1 3.7/6, mb1mx3.6/24, mbtmp3.6/6, ML3.3/3, Error ellipse: s-maj=46.8km s-min=21.6km az=93.0*
NEIC ***28*** *07:50:40.6±1.6, 32°.98S±0°.03×70°.5W±0°.2, h95^{km}±4^{km}, Error ellipse: s-maj=19.2km s-min=3.5km az=83.0*
GUC ***28*** *07:50:40.5±0.8, 32°.92S×70°.54W, h99^{km}±4^{km}, ML4.2*
SJA ***28*** *07:50:42.0±1.1, 32°.78S×70°.53W, h75^{km}, ML3.3, MW3.5*
ISC 28 07:50:40.6±0.6**, 32°.96S**±0°.04×**70°.56W**±0°.05**, h95^{km}**±5^{km}**, n57,** σ1^s**10**/72**, mb4.0**/6**, 4C-6D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PEL	Peldehue	0.21	209	⇑*i*P	Pn	07 50 53.5	-0.8
PEL				*i* S	Sn	07 51 04.5	0.0
PEL				IAML		07 51 05.2	
	comp=E,10µm,0.4s						
PEL	Peldehue	0.21	209		Pn	07 50 53.9	-0.4
PEL				Sn	Sn	07 51 04.5	0.0
PEL	Peldehue	0.21	209	*i* P	Pn	07 50 54.0	-0.3
PEL				*e*S	Sn	07 51 05.9	+1.4
ROCH	El Roble	0.38	268	⇑*i*P	Pn	07 50 55.5	+0.1
ROCH				*i* S	Sn	07 51 06.6	+0.3
ROC1	El Roble	0.38	267		Pn	07 50 55.4	+0.1
ROC1				Sn	Sn	07 51 06.5	+0.2
ROC1	El Roble	0.38	267	*i* P	Pn	07 50 55.5	+0.1
ROC1				*e*S	Sn	07 51 06.8	+0.5
FCH	Farellones	0.43	148	⇑*i*P	Pn	07 50 55.6	-0.1
FCH				*i* S	Sn	07 51 07.5	+0.4
FCH				IAML		07 51 10.0	
	comp=E,11µm,0.1s						
CLCH	Cerro Calan	0.44	177	⇓*i*P	Pn	07 50 55.5	0.0
CLCH				*i* S	Sn	07 51 07.1	+0.5
CLCH				IAML		07 51 09.1	
	comp=E,10µm,0.5s						
MT05	Renca	0.46	199	⇓*i*P	Pn	07 50 55.7	+0.1
MT05				*i* S	Sn	07 51 07.4	+0.6
MT05				IAML		07 51 09.3	
	comp=E,23µm,0.2s						
FSR	Penalolen	0.52	177	⇓*i*P	Pn	07 50 57.1	+1.0
FSR				*i* S	Sn	07 51 09.4	+1.8
MT03	Universidad Ad	0.54	175	⇓*i*P	Pn	07 50 56.2	-0.1
MT03				*i* S	Sn	07 51 08.6	+0.6
MT03				IAML		07 51 09.9	
	comp=E,17µm,0.2s						
RCDM	Rinconada Maip	0.57	201	*e*P	Pn	07 50 56.9	+0.5
RCDM				*e*S	Sn	07 51 09.5	+1.2
ANTU	Antumapu	0.61	186	⇓*i*P	Pn	07 50 57.9	+1.0
ANTU				*i* S	Sn	07 51 10.2	+1.2
ANTU				IAML		07 51 10.9	
	comp=N,11µm,0.2s						
LMEL	Las Melosas	0.94	161	⇓*i*P	Pn	07 51 00.4	+0.3
LMEL				*e*S	Sn	07 51 15.8	+1.1
LMEL				IAML		07 51 19.4	
	comp=N,8µm,0.2s						
ARCO	CERRO ARCO	1.38	86	*i* P	Pn	07 51 05.9	+0.7
ARCO				IAML		07 51 31.1	
	comp=Z,695nm,0.6s						
AAGR	Agrelo	1.46	95	*i* P	Pn	07 51 07.0	+0.7
ASAL	Salagasta	1.50	76	*i* P	Pn	07 51 07.4	+0.7
RTLS	Leoncito	1.58	43	*i* P	Pn	07 51 09.1	+1.3
RTLS				IAML		07 51 35.7	
	comp=Z,279nm,0.6s						
CO02	Combarbal	1.79	348	⇑*i*P	Pn	07 51 10.4	0.0
RTCV	Cerro Valdivia	2.03	58	*i* P	Pn	07 51 14.6	+1.2
ZON	Zonda	2.13	49	*i* P	Pn	07 51 15.5	+0.8
ZON				IAML		07 51 48.7	
	comp=Z,108nm,0.4s						
GO05	Huala	2.34	209		Pn	07 51 16.6	-1.0
GO05	Huala	2.34	209	*i* P	Pn	07 51 16.5	-1.0
RTLL	Cerro Villicun	2.40	48	*i* P	Pn	07 51 19.0	+0.6
RTLL				IAML		07 52 25.8	
	comp=Z,271nm,1.5s						
ACCO	Cerro Coronel	2.69	29	*i* P	Pn	07 51 23.3	+1.0
GO04	Tololo Observa	2.78	356		Pn	07 51 23.3	-0.3
GO04				Sn	Sn	07 51 57.0	+0.4
GO04	Tololo Observa	2.78	356	*i* P	Pn	07 51 23.3	-0.3
AROD	Rodeo	2.93	19	*i* P	Pn	07 51 27.4	+1.8
ACDV	Cuesta del Vie	3.04	24	*i* P	Pn	07 51 28.3	+1.3
ACDV				IAML		07 52 37.8	
	comp=Z,98nm,1.2s						
MRA	San Martin	4.12	84	*i* P	Pn	07 51 40.3	-1.2
MRA				IAML		07 52 43.3	
	comp=Z,61nm,0.6s						
CYA	Choya	6.09	44	*i* P	Pn	07 52 05.2	-2.9
CYA				IAML		07 53 46.8	
	comp=Z,9.3nm,0.5s						
GO06	Curarrehue	6.65	186	Pn	Pn	07 52 15.9	+0.1
PLCA	Paso Flores	7.76	180	P	Pn	07 52 29.3	-1.5
	comp=Z,0.1nm,0.3s,baz=26,slow=24,SNR=1.0						
PLCA	Paso Flores	7.76	180	Pn	Pn	07 52 29.8	-1.0
GO02	Mina Guanaco	7.81	6	Pn	Pn	07 52 28.8	-3.0
PB14	IPOC Station P	8.30	1	Pn	Pn	07 52 35.2	-3.3
LVC	Limon Verde	10.41	8	P	Pn	07 53 01.5	-5.8
	comp=Z,0.2nm,0.3s,baz=162,slow=10,SNR=1.5						
CPUP	Villa Florida	13.26	64	P	Pn	07 53 42.2	-2.9

	comp=Z,0.1nm,0.3s,baz=233,slow=5.1,SNR=2.3						
CPUP	Villa Florida	13.26	64	Pn	Pn	07 53 45.6	+0.5
EFI	East Falkland	20.81	158	P	P	07 55 14.3	+0.2
EFI				IAmb	IAmb	07 55 26.8	
	comp=Z,75nm,1.3s						
SNAA	Sanae	52.09	158	P	P	07 59 40.1	-0.4
SNAA				IAmb	IAmb	07 59 51.5	
	comp=Z,4.3nm,1.2s						
TEIG	Tepich	55.53	340	P	P	08 00 06.5	+0.5
QSPA	South Pole Qui	57.28	180	P	P	08 00 17.7	-0.4
VNDA	Vanda	65.36	191	P	P	08 01 14.3	+2.1
	comp=Z,0.4nm,0.3s,baz=121,slow=2.6,SNR=7.6						
VNDA	Vanda	65.36	191	P	P	08 01 14.4	+2.1
VNDA				IAmb	IAmb	08 01 14.6	
	comp=Z,4.9nm,1.4s						
TXAR	Lajitas Array	69.45	329	P	P	08 01 39.3	+0.6
	comp=Z,0.6nm,0.5s,baz=161,slow=9.7,SNR=12						
TXAR	Lajitas Array	69.45	329	P	P	08 01 39.9	+1.1
TX31	Lajitas Ar. Si	69.45	329	P	P	08 01 40.0	+1.3
TX31				IAmb	IAmb	08 01 55.7	
	comp=Z,3.4nm,1.5s						
TX32	Lajitas Array	69.45	329	P	P	08 01 40.0	+1.2
WVT	Waverly	70.60	345	P	P	08 01 45.6	+0.1
WVT				IAmb	IAmb	08 01 46.1	
	comp=Z,4.4nm,0.7s						
PDAR	Pinedale Array	83.41	332	P	P	08 02 57.7	+0.3
	comp=Z,0.2nm,0.5s,baz=134,slow=6.4,SNR=2.7						
IMAR	Indian Mountai	116.95	333	PKPdf	PKiKP	08 09 13.6	+0.3
RDOG	Red Dog Mine	120.98	334	PKPdf	PKPdf	08 09 18.9	-2.1
WRA	Warramunga Arr	122.26	208	PKP	PKPdf	08 09 24.3	-0.8
	comp=Z,0.2nm,0.4s,baz=160,slow=1.7,SNR=5.6						
BVAR	Borovoye Array	145.68	42	PKPbc	PKPab	08 10 08.7	+0.3
	comp=Z,1.0nm,0.5s,baz=263,slow=5.8,SNR=7.5						
KSH	Kashi	152.34	67	PKPbc	PKPdf	08 10 17.5	-1.2
KSH				pPKP	pPKPdf	08 10 44.3	-1.5
KSH				PKS	PKSdf	08 13 51.5	-1.7
KSH				PP	PP	08 14 09.0	-0.1
ZALV	Zalesovo Beam	152.69	32	PKPbc	PKPbc	08 10 25.7	0.0
	comp=Z,1.2nm,0.3s,baz=301,slow=3.1,SNR=6.9						

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*SOME **28** 07:53:24.4, 42°.65N×75°.82E*

*NNC **28** 07:53:25.4±1.0, 42°.68N×75°.84E, h0^{km}, mpv2.7, Error ellipse: s-maj=6.6km s-min=4.5km az=166.0, Suspected Mining explosion.*

*KRNET **28** 07:53:25.8±0.1, 42°.78N×75°.87E, h19^{km}, mb1.9*

ISC 28 07:53:24.5±0.8**, 42°.75N**±0°.02×**75°.85E**±0°.02**, h0^{km}, n23, σ0^s.64**/45**, 24C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TKM2	Tokmak 2	0.25	313	⇑iP	Pb	07 53 31.3	-0.9
	baz=5.0						
TKM2				⇑iS	Sb	07 53 35.3	-1.9
	baz=5.0						
BOOM	Boomskoye usch	0.27	166	⇑iP	Pb	07 53 32.0	-0.3
	baz=70						
BOOM				⇑iS	Sb	07 53 36.3	-1.2
	baz=70						
KST	Kastek	0.30	16	P	Pb	07 53 32.8	-0.2
	33nm,0.1s						
KST				S	Sb	07 53 39.2	+0.6
	21nm,0.6s						
DGS	Degeres	0.50	353	P	Pb	07 53 35.6	-0.7
	2.2nm,0.1s						
DGS				S	Sb	07 53 43.9	-0.2
	5.6nm,0.3s						
MTBS	Maitube	0.57	48	P	Pb	07 53 37.0	-0.4
	9.1nm,0.3s						
MTBS				S	Sb	07 53 46.4	+0.2
	11nm,0.2s						
ULHL	Ulahol	0.58	150	⇑iP	Pb	07 53 37.1	-0.6
	baz=53						
ULHL				⇑iS	Sb	07 53 45.1	-1.5
	baz=53						
KBK	Karagaybulak	0.67	262	⇑iP	Pb	07 53 39.2	-0.1
	baz=60						
KBK				⇑iS	Sb	07 53 49.0	-0.2
	baz=60						
KZA	Kyzart	0.81	214	⇑iP	Pb	07 53 41.5	-0.2
	baz=14						
KZA				⇑iS	Sb	07 53 53.4	+0.1
	baz=14						
CHMS	Chumysh	0.85	288	⇓iP	Pb	07 53 41.6	-0.5
	baz=85						
CHMS				⇓iS	Sb	07 53 53.5	-0.6
	baz=85						
TNSS	Tian-Shan	0.85	70	P	Pb	07 53 42.2	-0.3
	1.0nm,0.3s						
TNSS				S	Sb	07 53 55.3	+0.5
	2.7nm,0.4s						
KRBS	Karabastau	0.95	352	P	Pn	07 53 44.4	-0.9
	1.1nm,0.3s						
KRBS				S	Sn	07 53 59.2	-0.5
	0.9nm,0.3s						
AAK	Ala-Archa	1.01	264	⇑iP	Pb	07 53 44.8	-0.2
	baz=63						
AAK				⇑iS	Sb	07 53 59.2	+0.4
	baz=63						
UCH	Uchtor	1.12	243	⇑iP	Pb	07 53 47.0	0.0
	baz=42						
UCH				⇑iS	Sb	07 54 02.8	+0.5
	baz=42						
USP	Ospenovka	1.12	298	⇑iP	Pb	07 53 46.2	-0.6
	baz=96						
USP				⇑iS	Sb	07 54 01.2	-0.7
	baz=96						
KTBS	Karatobe	1.14	32	P	Pn	07 53 48.2	+0.4
	1.8nm,0.2s						
KTBS				S	Sn	07 54 04.7	+0.5
	4.2nm,0.8s						
KDJ	Kajisay	1.16	122	⇑iP	Pb	07 53 47.4	-0.2
	baz=23						
KDJ				⇑iS	Sb	07 54 03.3	0.0
	baz=23						
NRN	Naryn	1.32	175	⇓iP	Pn	07 53 51.2	+0.7
	baz=77						
NRN				⇓iS	Sn	07 54 09.4	+0.4
	baz=77						
ANVS	Anan'yevo	1.34	88	⇑iP	Pn	07 53 50.4	-0.3
	baz=89						
ANVS				⇑iS	Sn	07 54 08.7	-0.6
	baz=89						
ARLS	Aral	1.44	232	⇑iP	Pb	07 53 52.9	+0.6
	baz=32						
ARLS				⇑iS	Sn	07 54 11.6	-0.1
	baz=32						
EKS2	Erkin-Say	1.53	267	⇑iP	Pg	07 53 53.7	-0.2
	baz=66						
EKS2				⇑iS	Sn	07 54 14.5	+0.6
	baz=66						
AML	Almayashu	1.71	250	⇓iP	Pg	07 53 57.1	-0.3
	baz=49						
AML				⇓iS	Sg	07 54 20.1	+0.6
	baz=49						
MRKS	Merke	1.93	271	P	Pb	07 54 00.2	-0.5
	0.7nm,0.1s						
MRKS				S	Sb	07 54 25.8	+0.4
	1.7nm,0.2s						
ARXS	Arharly	2.05	44	Pg	Pg	07 54 04.9	+1.0
	0.8nm,0.1s						
ARXS				Lg	Lg	07 54 33.7	
	2.4nm,0.4s						

IDC 28 08:05:39.6±1.6**, 13°.16S×166°.68E, h0^{km}, mb3.5**/4**, mb1 3.7**/5**, mb1mx3.6**/38**, mbtmp3.6**/5**, ML3.5**/1**, Error ellipse: s-maj=54.3km s-min=31.1km az=127.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	8.87	181	Pn	Pn	08 07 49.4	+0.2
	0.6nm,0.3s,baz=4.8,slow=15,SNR=1.8						
DZM				Sn	Sn	08 09 20.2	-10
	0.1nm,0.3s,baz=286,slow=20,SNR=1.7						
WRA	Warramunga Arr	31.69	253	P	P	08 12 05.7	+0.5
	0.4nm,0.7s,baz=85,slow=8.9,SNR=6.2						
ASAR	Alice Springs	32.73	247	P	P	08 12 13.8	-0.5
	0.2nm,0.5s,baz=71,slow=9.4,SNR=4.1						
ILAR	Eielson Array	85.22	18	P	P	08 18 18.2	+0.6
	0.4nm,0.8s,baz=230,slow=4.5,SNR=5.0						
MKAR	Makanchi Array	95.67	317	P	P	08 19 07.2	-0.1
	0.2nm,0.6s,baz=91,slow=6.1,SNR=2.1						
ARCES	ARCESS Array B	118.59	345	PKP	PKPdf	08 24 27.6	-1.4
	3.4nm,0.9s,baz=69,slow=3.0,SNR=1.5						

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*IDC **28** 08:08:54.7±4.7, 12°.47N×143°.39E, h117^{km}±39^{km}, mb3.4/5, mb1 3.7/5, mb1mx3.2/44, mbtmp3.8/5, MS3.5/1, Ms1 3.5/1, ms1mx2.6/30, Error ellipse: s-maj=105.0km s-min=18.0km az=113.0*

*NEIC **28** 08:08:55.6±2.0, 12°.6N±0°.1×143°.5E±0°.1, h129^{km}±9^{km}, mb4.2/13, Error ellipse: s-maj=21.2km s-min=13.0km az=128.0*

ISC 28 08:08:57.7±0.8**, 12°.6N**±0°.1×**143°.7E**±0°.1**, h150^{km}, n28, σ1^s.58**/22**, mb4.1**/10**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.55	49	P	Pn	08 09 25.4	-2.4
	82nm,0.3s,baz=336,slow=20,SNR=50						
GUMO				S	Sn	08 09 49.9	-1.0
	113nm,0.3s,baz=56,slow=16,SNR=14						
GUMO	Guam	1.55	49		Pn	08 09 25.8	-2.0
GUMO				Sn	Sn	08 09 49.5	-1.4
PATS	Pohnpei	15.52	110		P	08 12 33.1	+3.3
FAKI	Fak Fak	19.11	217	Pn	Pn	08 13 10.2	-1.5
FAKI				IAmb	IAmb	08 13 11.6	
	comp=Z,6.3nm,0.8s						
H11S3	WAKE ISLAND Hy	22.94	72	T	T	08 37 25.6	
	baz=262						
H11S1	WAKE ISLAND Hy	22.96	72	T	T	08 37 30.8	
	baz=262						
H11S2	WAKE ISLAND Hy	22.96	72	T	T	08 37 26.9	
	baz=262						
H11N1	WAKE ISLAND Hy	23.40	69	T	T	08 37 47.6	
	baz=260						
H11N2	WAKE ISLAND Hy	23.41	69	T	T	08 37 45.6	
	baz=260						
H11N3	WAKE ISLAND Hy	23.42	69	T	T	08 37 48.3	
	baz=260						
TARA	Tarawa	31.06	109	P	P	08 15 00.8	-1.0
WB0	Warramunga Arr	33.40	196	P	P	08 15 21.1	-1.1
WB0				IAmb	IAmb	08 15 21.9	
	comp=Z,2.3nm,0.8s						
WR0	Warramunga Arr	33.55	196	P	P	08 15 22.4	-1.0
WR0				IAmb	IAmb	08 15 22.9	
	comp=Z,2.4nm,0.7s						
WB2	Warramunga Arr	33.58	196	P	P	08 15 22.7	-1.0
WB2				IAmb	IAmb	08 15 23.7	
	comp=Z,3.7nm,0.8s						
WRA	Warramunga Arr	33.59	196	P	P	08 15 22.6	-1.1
	comp=Z,2.3nm,0.6s,baz=17,slow=9.4,SNR=18						
WRA	Warramunga Arr	33.59	196	IAmb	IAmb	08 15 27.8	
	comp=Z,0.1nm,0.6s						
AS31	Alice Springs	37.26	195	P	P	08 15 55.1	+0.1
ASAR	Alice Springs	37.26	195	P	P	08 15 54.0	-1.1
	comp=Z,0.9nm,0.4s,baz=21,slow=12,SNR=9.7						
ASAR	Alice Springs	37.26	195	P	P	08 15 55.0	-0.1
STKA	Stephens Creek	44.24	183	P	P	08 16 50.9	-1.3
	comp=Z,1.6nm,0.3s,baz=11,slow=5.2,SNR=3.2						
STKA	Stephens Creek	44.24	183	P	P	08 16 51.9	-0.3
FORT	Forrest	45.63	199	P	P	08 17 02.9	-0.3
BBOO	Buckleboo	45.70	189	P	P	08 17 03.4	-0.4
BBOO				IAmb	IAmb	08 17 12.8	
	comp=Z,12nm,1.5s						
TOO	Toolangi	49.90	178	P	P	08 17 37.8	+1.8
TOO				IAmb	IAmb	08 17 49.3	
	comp=Z,7.7nm,1.4s						
BRDH	Bariadhala	50.37	289	LR	LR	08 42 00.6	
	comp=Z,48nm,18.1s,baz=124,slow=40						
TIXI	Tiksi	59.73	355	P	P	08 18 46.2	+0.1
ILAR	Eielson Array	69.99	25	P	P	08 19 55.4	+2.8
	comp=Z,0.2nm,0.6s,baz=253,slow=6.2,SNR=1.8						
YKA	Yellowknife Ar	84.30	27	P	P	08 21 13.5	+1.0
	comp=Z,0.1nm,0.5s,baz=283,slow=6.9,SNR=4.1						

IDC 28 08:09:27.3±1.3**, 3°.70S×151°.40E, h0^{km}, mb3.5**/5**, mb1 3.7**/5**, mb1mx3.5**/35**, mbtmp3.5**/5**, Error ellipse: s-maj=27.3km s-min=18.2km az=33.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	0.87	134	Pn	Pn	08 09 46.9	+0.1
	27nm,0.3s,baz=331,slow=4.6,SNR=8.3						
KRVT				Sn	Sn	08 10 01.0	+0.9
	32nm,0.3s,baz=166,slow=21,SNR=6.2						
WRA	Warramunga Arr	23.18	225	P	P	08 14 34.9	-0.9
	0.8nm,0.8s,baz=48,slow=9.7,SNR=7.3						
ASAR	Alice Springs	26.07	219	P	P	08 15 02.2	-0.5
	0.4nm,0.7s,baz=53,slow=9.4,SNR=5.4						
FITZ	Fitzroy Crossi	28.99	239	P	P	08 15 30.8	+1.8
	0.7nm,0.5s,baz=80,slow=12,SNR=2.2						
MKAR	Makanchi Array	78.59	319	P	P	08 21 30.8	-0.2
	0.2nm,0.6s,baz=88,slow=4.4,SNR=2.4						
ILAR	Eielson Array	81.68	22	P	P	08 21 47.2	-0.1
	0.2nm,0.7s,baz=242,slow=6.9,SNR=2.5						

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*MIRAS **28** 08:14:22.0±0.0, 55°.05N×57°.48E, h0^{km}, ML2.4/8*

ISC 28 08:14:18.3±1.0**, 54°.95N**±0°.03×**57°.75E**±0°.08**, h0^{km}, n16, σ2^s.67**/30**, 12C-4D, Ural Mountains region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARU	Arti	1.56	17	⇑eP	Pn	08 14 42.8	-4.5
	baz=23						
ARU				i S	Sg	08 15 03.5	-4.8
	41nm,0.8s,baz=23						
ARU	Arti	1.56	17	⇑eP	Pn	08 14 42.8	-4.5
	baz=23						
ARU				i S	Sg	08 15 03.5	-4.8
	41nm,0.8s,baz=23						
SVE	Sverdlovsk	2.49	40	⇑eP	Pn	08 14 59.4	-0.7
	baz=44						
SVE				i S	Sn	08 15 31.9	+0.7
	23nm,0.4s,baz=44						
SVE	Sverdlovsk	2.49	40	⇑eP	Pn	08 14 59.4	-0.7
	baz=44						
SVE				i S	Sn	08 15 31.9	+0.7
	23nm,0.4s,baz=44						
PR3R	Kungur	2.54	351	⇑eP	Pn	08 15 00.5	-0.2
	baz=354						
PR3R				i S	Sn	08 15 31.9	-0.4
	35nm,0.7s,baz=354						
PR3R	Kungur	2.54	351	⇑eP	Pn	08 15 00.5	-0.2
	baz=354						
PR3R				i S	Sn	08 15 31.9	-0.4
	35nm,0.7s,baz=354						
PR4R	Vlasy	3.19	340	⇑eP	Pb	08 15 14.9	-0.9
	baz=342						
PR4R				i S	Sb	08 15 53.1	-2.1
	35nm,0.6s,baz=342						
PR4R	Vlasy	3.19	340	⇑eP	Pb	08 15 14.9	-0.9
	baz=342						
PR4R				i S	Sb	08 15 53.1	-2.1
	35nm,0.6s,baz=342						
PR0R	Verkhnechusovs	3.28	354	eP	Pn	08 15 13.8	+2.9
	baz=357						
PR0R				i S	Sn	08 15 53.3	+2.7
	4.6nm,0.3s,baz=357						
PR0R	Verkhnechusovs	3.28	354	eP	Pn	08 15 13.8	+2.9
	baz=357						
PR0R				i S	Sn	08 15 53.3	+2.7
	4.6nm,0.3s,baz=357						
PR7R	Sarany	3.66	8	⇑eP	Pn	08 15 20.5	+4.4
	baz=11						
PR7R				i S	Sn	08 16 04.5	+4.6
	37nm,0.6s,baz=11						
PR7R	Sarany	3.66	8	⇑eP	Pn	08 15 20.5	+4.4
	baz=11						
PR7R				i S	Sn	08 16 04.5	+4.6
	37nm,0.6s,baz=11						
PR1R	Pomanovo	4.29	353	eP	Pb	08 15 36.7	+2.2
	baz=355						
PR1R				i S	Sb	08 16 27.2	+0.5
	8.8nm,0.5s,baz=355						
PR1R	Pomanovo	4.29	353	eP	Pb	08 15 36.7	+2.2
	baz=355						
PR1R				i S	Sb	08 16 27.2	+0.5
	8.8nm,0.5s,baz=355						
AKTO	Aktyubinsk	4.52	178	⇓Pg	Pb	08 15 40.3	+1.8
	1.4nm,0.7s						
AKTO				⇓Sn	Sn	08 16 22.6	+1.4
	2.9nm,0.8s						
AKTO				⇓Lg	Lg	08 16 41.9	
	4.8nm,1.0s						
AB31	Akbulak array	5.86	166	⇑Pn	Pn	08 15 45.0	-1.3
	1.4nm,0.9s,baz=349,slow=12,SNR=5.4						
AB31				⇓Sn	Sn	08 16 52.2	-2.0
	0.6nm,0.7s,baz=345,slow=23,SNR=4.0						
AB31				⇑Lg	Lg	08 17 22.8	
	1.5nm,0.8s,baz=352,slow=28,SNR=3.7						

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*KRSC **28** 08:25:11.6±1.1, 53°.67N×161°.93E, h40^{km}±23^{km}, ML3.6*

*IDC **28** 08:25:11.9±1.2, 54°.33N×161°.57E, h0^{km}, mb3.3/5, mb1 3.7/6, mb1mx3.4/53, mbtmp3.3/6, ML2.6/1, MS2.8/2, Ms1 2.8/2, ms1mx2.5/39, Error ellipse: s-maj=102.9km s-min=18.5km az=148.0*

ISC 28 08:25:13.6±0.8**, 53°.68N**±0°.04×**161°.94E**±0°.05**, h20^{km}, n41, σ1^s.58**/60**, mb3.2**/5**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	1.28	244	eP	Pn	08 25 35.1	-1.3
SPN				eS	Sn	08 25 49.3	-3.7
KII	Karymskiy	1.52	285	eP	Pn	08 25 38.1	-1.6
NLC	Nalytchevo	1.63	253	eP	Pn	08 25 40.2	-0.9
NLC				eS	Sn	08 25 59.1	-2.4
KZV	Kizimen	1.73	327	eP	Pn	08 25 41.9	-0.8
KZV				eS	Sn	08 26 01.4	-2.8
TUMD	Tumrok D	1.77	330	eP	Pn	08 25 42.2	-0.9
TUMD				eS	Sn	08 26 02.1	-3.0
SDLR	Sedlovina	1.87	259	eP	Pn	08 25 42.9	-1.6
SDLR				eS	Sn	08 26 05.4	-2.2
TUMR	Tumrok	1.92	328	eP	Pn	08 25 44.7	-0.5
TUMR				eS	Sn	08 26 06.6	-2.2
SMAR	Somma	1.92	259	eP	Pn	08 25 44.8	-0.5
SMAR				eS	Sn	08 26 07.1	-1.9
UGLR	Uglovaya	1.92	257	eP	Pn	08 25 44.0	-1.2
KRER	Koryakskii	1.94	260	eP	Pn	08 25 44.5	-1.1
AVH	Avacha	1.96	259	eP	Pn	08 25 44.8	-0.9
KRX	Arik	1.99	262	eP	Pn	08 25 44.9	-1.3
KRX				eS	Sn	08 26 09.0	-1.6
KOK	Koryaka	2.01	260	eP	Pn	08 25 44.4	-2.1
DALK	Dalny	2.01	253	eP	Pn	08 25 45.2	-1.2
DALK				eS	Sn	08 26 08.6	-2.4
KMNR	Kamenistaya	2.30	335	eP	Pn	08 25 50.7	+0.2
KMNR				eS	Sn	08 26 17.6	-0.7
BZGR	Bezymyannyi-Gr	2.38	343	eP	Pn	08 25 51.8	+0.3
BZGR				eS	Sn	08 26 19.5	-0.7
RUS	Russkaya	2.41	240	eP	Pn	08 25 51.3	-0.6
RUS				eS	Sn	08 26 19.0	-1.8
ZLN	Zelenaya	2.43	345	eP	Pn	08 25 53.6	+1.3
KRMR	Karymshinskiy	2.44	251	eP	Pn	08 25 51.4	-0.8
KRMR				eS	Sn	08 26 19.0	-2.4
KIRR	Kirishev	2.46	339	eP	Pn	08 25 51.8	-0.9
LGNR	Loginova	2.52	344	eP	Pn	08 25 54.0	+0.4
CIRR	Tsirk	2.54	345	eP	Pn	08 25 54.0	+0.2
MTVR	Mutnovka	2.56	244	eP	Pn	08 25 54.1	0.0
MTVR				eS	Sn	08 26 23.8	-0.9
GRL	Gorelyy	2.59	246	eP	Pn	08 25 54.5	+0.1
GRL				eS	Sn	08 26 24.5	-0.8
KBTR	Krutoberegovo	2.59	11	eP	Pn	08 25 54.3	0.0
KBTR				eS	Sn	08 26 23.9	-1.2
PETK	Petropavlovsk-	2.60	259	Pn	Pn	08 25 54.8	+0.3
	6.3nm,0.3s,baz=78,slow=20,SNR=63						
PETK				Sn	Sn	08 26 26.6	+1.1
	4.0nm,0.3s,baz=74,slow=19,SNR=4.8						
PETK				LR	LR	08 26 57.6	
	comp=Z,28nm,20.1s,baz=60,slow=41						
KBG	Krutoberegovo	2.62	9	eP	Pn	08 25 56.2	+1.5
ASAK	Asacha	2.76	244	eP	Pn	08 25 57.4	+0.6
BKI	Bering	2.81	55	eP	Pn	08 25 56.1	-1.2
BKI				eS	Sn	08 26 27.0	-3.6
BDR	Baidarnaya	2.93	352	eP	Pn	08 25 59.1	0.0
ESO	Esso	2.93	322	eP	Pn	08 25 58.8	-0.2
ESO				eS	Sn	08 26 33.4	-0.2
SRDR	Sredinnyy	2.94	335	eP	Pn	08 25 59.6	+0.4
APC	Apacha	2.96	257	eP	Pn	08 26 00.4	+0.9
APC				eS	Sn	08 26 34.9	+0.5
SRKR	Sorokina	3.02	352	eP	Pn	08 26 00.3	0.0
MIPR	Malaya Ipel'ka	3.43	248	eP	Pn	08 26 07.2	+1.3
MJAR	Matsushiro Arr	23.78	233	P	P	08 30 29.2	+4.5
	0.8nm,0.4s,baz=36,slow=8.9,SNR=1.2						
ILAR	Eielson Array	27.62	46	P	P	08 30 58.9	-0.4
	0.5nm,0.9s,baz=262,slow=7.9,SNR=5.6						
YKA	Yellowknife Ar	41.98	44	P	P	08 33 01.0	-1.7
	0.1nm,0.7s,baz=280,slow=7.5,SNR=1.8						
NEW	Newport	48.65	62	LR	LR	08 53 13.9	
	comp=Z,64nm,18.4s,baz=69,slow=35						
NVAR	Mina Array Bea	54.51	72	P	P	08 34 41.4	+1.4
	0.1nm,0.3s,baz=310,slow=7.6,SNR=4.6						
TXAR	Lajitas Array	69.39	68	P	P	08 36 20.6	+0.6
	0.1nm,0.5s,baz=292,slow=2.4,SNR=2.2						

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*NEIC **28** 08:32:50.0±1.9, 39°.67N±0°.06×142°.8E±0°.1, h35^{km}±1^{km}, mb4.4/10, Error ellipse: s-maj=15.3km s-min=6.9km az=301.0*

*JMA **28** 08:32:51.9±0.1, 39°.76N×142°.57E, h50^{km}±1^{km}, M3.6*

JMA Felt I J1.

*IDC **28** 08:32:52.9±2.3, 39°.75N×142°.67E, h61^{km}±21^{km}, mb3.6/14, mb1 3.7/18, mb1mx3.5/46, mbtmp3.9/18, ML3.4/4, Error ellipse: s-maj=23.7km s-min=12.9km az=99.0*

ISC 28 08:32:51.7±1.3**, 39°.74N**±0°.04×**142°.60E**±0°.09**, h47^{km}**±11^{km}**, n62, σ1^s.42**/70**, mb3.9**/17**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	0.60	290	P	Pn	08 33 04.2	+0.2
JTH				S	Sn	08 33 13.1	+0.2
MIYJ	Miyakonagasawa	0.63	255	P	Pn	08 33 04.5	+0.2
MIYJ				S	Sn	08 33 13.4	0.0
JKEN	Kujiedanarisaw	0.83	305	P	Pn	08 33 06.9	-0.1
JKEN				S	Sn	08 33 17.8	-0.4
OFUJ	Ofunato	0.98	228	P	Pn	08 33 09.4	+0.4
OFUJ				eS	Sn	08 33 21.9	+0.2
JKZ	Kuzumaki	1.01	284	P	Pn	08 33 09.8	+0.3
JKZ				S	Sn	08 33 22.6	0.0
JOM	Ohasama	1.05	256	P	Pn	08 33 10.4	+0.5
JANG	Nango	1.05	308	P	Pn	08 33 09.7	-0.3
JANG				eS	Sn	08 33 22.8	-0.7
JMK	Ichinoseki	1.33	234	P	Pn	08 33 14.3	+0.5
JMK				eS	Sn	08 33 30.5	+0.2
JRG	Rokugo	1.56	258	P	Pn	08 33 17.4	+0.5
JRG				S	Sn	08 33 37.3	+1.3
JTM	Tenmabayashi	1.57	312	P	Pn	08 33 17.4	+0.3
JTM				S	Sn	08 33 36.7	+0.4
JAH	Hinai	1.58	287	P	Pn	08 33 17.8	+0.6
JAH				S	Sn	08 33 37.4	+1.0
JIO	Ouri	1.61	218	P	Pn	08 33 17.8	+0.2
JIO				eS	Sn	08 33 36.7	-0.5
ERM	Erimo	2.31	10	Pn	Pn	08 33 27.9	+0.6
ERM				Sn	Sn	08 33 54.8	+0.4
JKA	Kamikawa-asahi	4.37	360		Pn	08 33 57.0	+1.5
JKA					Sn	08 34 44.7	-0.5
ASAJ	Asahikawa	4.38	360	P	Pn	08 33 57.0	+1.5
	1.4nm,0.3s,baz=180,slow=31,SNR=6.2						
ASAJ				S	Sn	08 34 44.7	-0.5
	1.7nm,0.3s,baz=246,slow=19,SNR=2.3						
MJAR	Matsushiro Arr	4.71	229	P	Pn	08 34 02.3	+2.1
	0.3nm,0.3s,baz=32,slow=14,SNR=21						
MJAR	Matsushiro Arr	4.71	229		Pn	08 33 59.8	-0.4
MJB9	Matsu-Tunnel	4.71	229		Pn	08 34 02.2	+2.0
MAJO	Matsushiro	4.71	229		Pn	08 34 02.2	+2.0
MAT	Matsushiro	4.71	229	P	Pn	08 34 02.2	+2.0
MAT				eS	Sn	08 34 58.7	+5.2
INU	Inuyama	6.24	227	Pn	Pn	08 34 22.4	+1.3
JHJ	Hachijo jima 2	6.99	200	P	Pn	08 34 31.6	+0.2
	8.8nm,0.3s,baz=316,slow=12,SNR=1.8						
JHJ				S	Sn	08 35 42.8	-6.7
	4.5nm,0.3s,baz=72,slow=20,SNR=1.5						
KSRS	Korea Array	11.71	263	P	Pn	08 35 38.8	+2.7
	0.6nm,0.3s,baz=74,slow=15,SNR=2.8						
PEA0B	Petropavlovsk-	16.89	33	Pn	Pn	08 36 43.3	-1.3
PEA0B				IAmb	IAmb	08 36 48.8	
	comp=Z,38nm,1.4s						
MA2	Magadan	20.52	12	P	P	08 37 25.8	+0.1
	comp=Z,1.2nm,0.3s,baz=135,slow=1.6,SNR=3.6						
MA2	Magadan	20.52	12	IAmb	IAmb	08 37 27.1	
	comp=Z,2.9nm,0.8s						
SEY	Seymchan	23.96	11	P	P	08 38 01.6	+0.4
	comp=Z,2.9nm,0.9s,baz=196,slow=6.8,SNR=12						
SONM	Songino Array	27.16	299	P	P	08 38 31.0	+0.3
	comp=Z,0.5nm,0.7s,baz=108,slow=9.3,SNR=2.9						
SONM	Songino Array	27.16	299	IAmb	IAmb	08 38 31.2	
	comp=Z,0.5nm,0.8s						
H11N2	WAKE ISLAND Hy	28.87	127	T	T	09 09 26.9	

	baz=318,slow=75,SNR=176						
H11N1	**WAKE ISLAND Hy**	28.88	127	T	T	09 09 26.6	
	baz=318,slow=75,SNR=175						
H11N3	**WAKE ISLAND Hy**	28.89	127	T	T	09 09 26.5	
	baz=318,slow=75,SNR=173						
H11S1	**WAKE ISLAND Hy**	29.68	129	T	T	09 10 27.6	
	baz=321,slow=76,SNR=70						
H11S3	**WAKE ISLAND Hy**	29.68	129	T	T	09 10 27.7	
	baz=321,slow=76,SNR=49						
H11S2	**WAKE ISLAND Hy**	29.69	129	T	T	09 10 28.8	
	baz=321,slow=76,SNR=45						
ZALV	**Zalesovo Beam**	40.84	310	P	P	08 40 28.2	-0.3
	comp=Z,0.5nm,0.4s,baz=101,slow=7.7,SNR=4.3						
SIJI	**Sorong**	41.73	197	P	P	08 40 37.0	+0.8
	comp=Z,4.6nm,0.3s,baz=30,slow=20,SNR=4.2						
MK31	**Makanchi Array**	43.53	300	P	P	08 40 50.6	0.0
MKAR	**Makanchi Array**	43.53	300	P	P	08 40 50.0	-0.6
	comp=Z,0.5nm,0.4s,baz=82,slow=9.5,SNR=6.3						
MKAR	**Makanchi Array**	43.53	300	P	P	08 40 50.1	-0.4
IMAR	**Indian Mountai**	43.86	32		P	08 40 55.1	+2.1
KURK	**Kurchatov**	45.05	306	P	P	08 41 02.1	-0.5
KURK				IAmb	IAmb	08 41 02.6	
	comp=Z,1.9nm,0.6s						
RC01	**Rabbit Creek A**	45.66	39	P	P	08 41 04.5	-2.8
RC01				IAmb	IAmb	08 41 09.3	
	comp=Z,8.1nm,1.3s						
ILAR	**Eielson Array**	46.72	34	P	P	08 41 13.5	-2.1
	comp=Z,0.5nm,0.9s,baz=266,slow=6.5,SNR=6.0						
ILAR	**Eielson Array**	46.72	34	P	P	08 41 14.7	-0.9
KKAR	**Karatay Array**	52.61	299	P	P	08 42 00.5	-0.2
ABKAR	**Akbulak array**	56.94	309	P	P	08 42 31.9	0.0
WB0	**Warramunga Arr**	59.69	189	P	P	08 42 50.8	-0.6
RES	**Resolute Bay**	59.75	15	P	P	08 42 50.8	-0.3
WR0	**Warramunga Arr**	59.86	189	P	P	08 42 51.8	-0.8
WR0				IAmb	IAmb	08 42 52.9	
	comp=Z,5.2nm,1.4s						
WRA	**Warramunga Arr**	59.87	189	P	P	08 42 52.0	-0.5
	comp=Z,1.0nm,0.5s,baz=7.2,slow=6.9,SNR=24						
WRA	**Warramunga Arr**	59.87	189	P	P	08 42 51.9	-0.7
YKA	**Yellowknife Ar**	61.01	31	P	P	08 43 00.2	+0.3
	comp=Z,0.3nm,0.9s,baz=301,slow=5.3,SNR=3.8						
ASAR	**Alice Springs**	63.60	189	P	P	08 43 17.6	-0.1
	comp=Z,0.1nm,0.5s,baz=352,slow=4.1,SNR=6.8						
FINES	**FINESS Array B**	66.86	332	P	P	08 43 38.2	-0.1
	comp=Z,0.6nm,0.5s,baz=28,slow=13,SNR=5.6						
NC405	**NORSAR Array S**	71.85	337	P	P	08 44 09.5	+0.3
NB2	**NORSAR Subarra**	72.05	337	P	P	08 44 10.3	-0.2
	comp=Z,0.4nm,0.5s,baz=35,slow=6.2						
NOA	**NORSAR Array B**	72.05	337	P	P	08 44 10.3	-0.2
	comp=Z,0.6nm,0.6s,baz=38,slow=6.0,SNR=4.6						
AKASG	**Malin Array Be**	72.73	322	P	P	08 44 14.4	-0.2
	comp=Z,0.7nm,0.4s,baz=47,slow=6.1,SNR=6.5						
BRG	**Berggiesshubel**	79.20	330	*e*P	P	08 44 52.4	+0.9
	comp=Z,5.4nm,1.0s						
GERES	**GERESS Array B**	80.90	329	P	P	08 45 00.6	-0.2
	comp=Z,0.4nm,0.2s,baz=35,slow=3.6,SNR=2.0						
GERES	**GERESS Array B**	80.90	329	P	P	08 45 01.0	+0.1

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*GCG **28** 08:37:47.9±0.7, 13.°33N×90.°54W, h50^{km}±49^{km}, MD3.5*

*SNET **28** 08:37:49.8±0.9, 13.°50N×90.°46W, h20^{km}±2^{km}, ML3.2*

ISC 28 08:37:48.7±2.0**, 13.°47N**±0.°09×**90.°47W**±0.°05**, h14**^{km}±10^{km}**, n21, σ0.^{s}74**/37**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	**Ixpaco**	0.70	2	*e*P	Pn	08 38 03.9	-0.4
CEVE	**Cerro Verde**	0.89	67	*e*P	Pn	08 38 06.7	-0.4
CEVE				*e*S	Sn	08 38 19.7	-0.3
CEVE				IAML		08 38 21.5	
	comp=Z,2µm,0.2s						
SBLS	**San Blas**	0.90	66	*e*P	Pn	08 38 06.7	-0.5
SBLS				*e*S	Sn	08 38 19.5	-0.6
RTR	**El Retiro**	0.91	62	*e*P	Pn	08 38 07.0	-0.2
RTR				*e*S	Sn	08 38 19.4	-0.8
PCG	**Pacaya**	0.93	352	*e*P	Pn	08 38 07.1	-0.4
PCG				*e*S	Sn	08 38 22.2	+1.4
SNJE	**San Jose**	0.93	65	*e*P	Pn	08 38 07.0	-0.5
SNJE				*e*S	Sn	08 38 20.2	-0.6
UNIC	**Universidad Ca**	1.03	60	*e*P	Pg	08 38 08.5	-0.1
FUG	**Fuego 3**	1.04	340	*e*P	Pb	08 38 08.1	-0.4
FUG				*e*S	Sn	08 38 24.9	+1.5
NBG	**Las Nubes**	1.12	6	*e*P	Pg	08 38 11.1	+0.8
NBG				*e*S	Sn	08 38 27.6	+2.1
UEES	**Universidad Ev**	1.22	78	*e*P	Pb	08 38 11.4	-0.3
UEES				*e*S	Sg	08 38 28.8	+0.6
SNET	**Serv Nac Est T**	1.22	80	*e*P	Pn	08 38 11.0	-0.4
SNET				*e*S	Sg	08 38 28.0	-0.2
SNET				IAML		08 38 31.1	
	comp=Z,273nm,0.2s						
UESS	**Universidad de**	1.26	79	*e*P	Pb	08 38 11.9	-0.4
OPAM	**Oficina de Pla**	1.26	79	*e*P	Pb	08 38 12.0	-0.3
OPAM				*e*S	Sg	08 38 29.7	+0.3
LOMA	**Loma Larga**	1.27	82	*e*P	Pn	08 38 11.9	-0.3
LOMA				*e*S	Sg	08 38 30.5	+0.5
UDBS	**Universidad Do**	1.30	79	*e*P	Pn	08 38 12.4	-0.1
UDBS				*e*S	Sg	08 38 30.8	+0.1
MTO3	**Montecristo**	1.42	49	*e*P	Pb	08 38 14.1	-1.0
MTO3				*e*S	Sg	08 38 33.9	-0.6
COEG	**Centro de Oper**	1.55	84	*e*P	Pn	08 38 16.3	+0.3
COEG				*e*S	Sb	08 38 36.9	+0.1
STG3	**Santiaguito 3,**	1.63	319	*e*P	Pn	08 38 16.1	-1.1
STG3				*e*S	Sn	08 38 37.5	-0.6
MRL	**Marmol**	1.77	25	*e*P	Pn	08 38 19.2	0.0
COEB	**Comit de Eme**	1.89	89	*e*P	Pn	08 38 20.8	+0.2
LCND	**La Caada**	2.52	93	*e*P	Pn	08 38 29.9	+0.8
LCND				*e*S	Sn	08 39 00.8	+1.1
LCND				IAML		08 39 10.1	
	comp=Z,69nm,0.2s						

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*KRNET **28** 09:01:45.0±0.1, 41.°00N×69.°94E, h15^{km}, mb2.7*

ISC 28 09:01:45.8±1.1**, 40.°99N**±0.°06×**69.°90E**±0.°05**, h10**^{km}**, n12, σ1.^{s}74**/23**, 14C-8D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAS	**Tashkent**	0.57	306	⇓*i*P	Pg	09 01 56.2	-0.6
	baz=4.0						
TAS				⇓*i*S	Sg	09 02 04.5	+0.2
	baz=4.0						
BTK	**Batken**	1.17	143	⇓*i*P	Pb	09 02 06.8	-1.3
	baz=44						
BTK				⇓*i*S	Sg	09 02 22.7	-0.7
	baz=44						
ARK	**Arkit**	1.75	62	⇑*i*P	Pb	09 02 16.8	-1.2
	baz=62						
ARK				⇑*i*S	Sg	09 02 40.0	-1.9
	baz=62						
KK31	**Karatay Array**	2.16	12	Pg	Pn	09 02 22.1	+0.2
	1.0nm,0.2s,baz=196,slow=15,SNR=48						
KK31				Lg	Lg	09 02 52.2	
	2.9nm,0.3s,baz=206,slow=28,SNR=16						
ARSB	**Arslanbob**	2.35	81	⇓*i*P	Pb	09 02 26.2	-2.1
	baz=81						
ARSB				⇓*i*S	Sb	09 02 55.4	-2.0
	baz=81						
AML	**Almayashu**	3.06	67	⇑*i*P	Pn	09 02 36.3	+1.6
	baz=67						
AML				⇑*i*S	Sn	09 03 13.2	+1.7
	baz=67						
EKS2	**Erkin-Say**	3.34	59	⇓*i*P	Pn	09 02 40.4	+2.2
	baz=59						
EKS2				⇓*i*S	Sn	09 03 19.3	+1.3
	baz=59						
ARLS	**Aral**	3.43	74	⇑*i*P	Pn	09 02 41.4	+1.9
	baz=74						
ARLS				⇑*i*S	Sn	09 03 22.4	+2.0
	baz=74						
UCH	**Uchtor**	3.67	69	⇑*i*P	Pn	09 02 44.8	+1.8
	baz=69						
UCH				⇑*i*S	Sn	09 03 28.5	+1.9
	baz=69						
AAK	**Ala-Archa**	3.80	63	⇑*i*P	Pn	09 02 46.6	+2.0
	baz=63						
AAK				⇑*i*S	Sn	09 03 31.0	+1.5
	baz=63						
USP	**Ospenovka**	4.10	55	⇑*i*P	Pn	09 02 50.9	+2.3
	baz=55						
USP				⇑*i*S	Sn	09 03 37.6	+0.9
	baz=55						
KZA	**Kyzart**	4.16	73	⇑*i*P	Pn	09 02 51.9	+2.2
	baz=73						
KZA				⇑*i*S	Sn	09 03 39.7	+1.2
	baz=73						

IDC 28 09:01:50.6±1.9**, 4.°67S**×**144.°85E, h0**^{km}**, mb3.3**/3**, mb1 3.5**/4**, mb1mx3.3**/37**, mbtmp3.3**/4**, MS3.6**/2**, Ms1 3.6**/2**, ms1mx2.8**/18**, Error ellipse: s-maj=81.5km s-min=28.5km az=111.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	18.31	213	P	P	09 06 06.6	+0.1
	baz=36,slow=12,SNR=0.5						
ASAR	**Alice Springs**	21.64	208	P	P	09 06 42.3	-0.4
	0.3nm,0.5s,baz=32,slow=12,SNR=10						
RAO	**Raoul Island**	42.88	129	LR	LR	09 24 02.2	
	comp=Z,211nm,19.4s,baz=147,slow=31						
CMAR	**Chiang Mai Arr**	50.74	298	LR	LR	09 34 46.5	
	comp=Z,16nm,18.1s,baz=210,slow=39						
MKAR	**Makanchi Array**	75.12	321	P	P	09 13 34.9	+0.1
	0.2nm,0.6s,baz=94,slow=6.2,SNR=1.6						
ILAR	**Eielson Array**	85.11	24	P	P	09 14 28.4	+0.1
	0.3nm,0.7s,baz=260,slow=5.2,SNR=4.9						

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*NERS **28** 09:04:16.2±0.0, 65.°04N×148.°15E, h17^{km}*

*YARS **28** 09:04:18.3±0.0, 65.°17N×147.°54E, h10^{km}, ML2.5/4*

ISC 28 09:04:16.1±0.8**, 65.°09N**±0.°03×**147.°75E**±0.°05**, h10**^{km}**, n12, σ2.^{s}83**/36**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKR	**Artyk**	1.45	232	*e*Pg	Pg	09 04 44.4	+0.5
	106nm,0.3s						
ATKR				*e*Sg	Sg	09 05 03.4	+0.9
	438nm,0.5s						
ATKR				*e*Sg	Sg	09 05 03.4	+0.9
	659nm,0.3s						
UNR	**Ust'-Nera**	2.00	257	*e*Pg	Pb	09 04 52.8	+0.3
	16nm,0.4s						
UNR				*e*Sg	Sg	09 05 18.8	-1.5
	68nm,0.7s						
UNR				*e*Sg	Sg	09 05 18.8	-1.5
	67nm,0.6s						
SUUS	**Susuman**	2.32	175	*e*P	Pn	09 04 53.5	-0.9
SUUS				*e*Pg	Pb	09 04 57.2	-0.8
SUUS				Pgmax		09 05 04.3	
	20nm,0.3s						
SUUS				*e*Sg	Sb	09 05 26.9	+0.1
SUUS				Sgmax		09 05 31.7	
	210nm,0.4s						
MOMR	**Moma**	2.33	309	*e*Pg	Pb	09 04 58.0	-0.1
	18nm,0.3s						
MOMR				*e*Sg	Sg	09 05 27.7	-3.0
	82nm,0.5s						
MOMR				*e*Sg	Sg	09 05 27.7	-3.0
	118nm,0.7s						
SEY	**Seymchan**	2.97	135	*e*P	Pn	09 05 01.8	-1.4
SEY				*e*Pg	Pb	09 05 06.6	-2.5
SEY				Pgmax		09 05 09.8	
	30nm,0.4s						
SEY				*e*Sg	Sb	09 05 45.6	+0.2
SEY				Sgmax		09 05 47.9	
	80nm,0.2s						
SEY				Sgmax		09 05 47.9	
	90nm,0.3s						
OCHR	**Omchak**	3.43	179	*e*P	Pn	09 05 09.0	-0.7
OCHR				*e*Pg	Pb	09 05 19.0	+2.0
OCHR				*e*Sg	Sb	09 06 02.5	+3.8
OCHR				Sgmax		09 06 11.5	
	30nm,0.4s						
YBGR	**Belaya Gora**	3.52	351	*e*Pn	Pn	09 05 12.5	+1.8
	1.4nm,0.4s						
YBGR				*e*Pg	Pb	09 05 20.2	+1.9
	14nm,0.6s						
YBGR				*e*Sn	Sn	09 05 52.6	+0.3
YBGR				*e*Sg	Sb	09 06 04.7	+3.7
TLAR	**Talaya**	4.50	150	*e*P	Pn	09 05 23.1	-1.1
TLAR				*e*Pg	Pb	09 05 36.2	+1.1
TLAR				Pgmax		09 05 36.3	
	10.0nm,0.4s						
TLAR				*e*S	Sn	09 06 15.0	-1.6
TLAR				*e*Sg	Sb	09 06 33.1	+3.8
TLAR				Sgmax		09 06 42.3	
	60nm,0.3s						
MGD	**Magadan 1**	5.24	163	*e*	Sb	09 06 54.5	+3.9
DEPR	**Deputatskiy**	5.29	328	*e*Pn	Pn	09 05 36.7	+1.7
DEPR				*e*Pg	Pb	09 05 51.5	+3.1
DEPR				*e*Sn	Sn	09 06 35.7	-0.2
	5.1nm,1.0s						
DEPR				*e*Sn	Sn	09 06 35.7	-0.2
	4.4nm,1.1s						
DEPR				*e*Sg	Sg	09 07 00.5	-5.1
	8.0nm,0.6s						
DEPR				*e*Sg	Sg	09 07 00.5	-5.1
	14nm,1.2s						
MA2	**Magadan**	5.71	164	*e*Sg	Sg	09 07 15.8	-3.3
MA2				Sgmax		09 07 22.2	
	10.0nm,0.5s						
MA2				Sgmax		09 07 22.2	
	20nm,0.6s						
BTGS	**Batagay**	5.86	302	*e*Sg	Sg	09 07 17.7	-6.4
	18nm,1.0s						
BTGS				*e*Sg	Sg	09 07 17.7	-6.4
	6.0nm,0.6s						

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*ISK **28** 09:34:07.5, 38.°10N×26.°16E, h6^{km}, ML2.8/11*

*ATH **28** 09:34:07.8, 38.°09N×26.°09E, h20^{km}±6^{km}, ML2.6/2, Error ellipse: s-maj=6.4km s-min=1.3km az=35.0*

*DDA **28** 09:34:08.8, 38.°12N×26.°19E, h7^{km}±1^{km}, ML2.3*

*THE **28** 09:34:08.2, 38.°10N×26.°11E, h12^{km}±1^{km}, ML2.4/4, Error ellipse: s-maj=2.5km s-min=1.0km az=85.0*

ISC 28 09:34:07.8±0.9**, 38.°09N**±0.°02×**26.°14E**±0.°02**, h13**^{km}±8^{km}**, n31, σ0.^{s}51**/53**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOS	**Chios island**	0.30	347	P	Pg	09 34 14.1	0.0
CHOS				S	Sg	09 34 18.3	-0.1
	2µm,0.2s						
CHOS	**Chios island**	0.30	347	P	Pg	09 34 14.1	0.0
CHOS				S	Sg	09 34 18.6	+0.2
CHOS				AML	AML	09 34 19.3	
	comp=N,2342µm,0.1s						
CHOS				AML	AML	09 34 20.5	
	comp=E,3816µm,0.2s						
CHOS	**Chios island**	0.30	347	PG	Pg	09 34 14.1	0.0
CHOS				SG	Sg	09 34 18.2	-0.1
URLA	**Izmir**	0.45	53	PG	Pg	09 34 16.4	-0.4
URLA				SG	Sg	09 34 22.7	-0.1
URLA	**Izmir**	0.45	53	*i* P	Pg	09 34 16.6	-0.1
URLA				*i* S	Sg	09 34 22.6	-0.2
URLA				IAML		09 34 23.0	
	comp=E,397nm,0.3s						
URLA				IAML		09 34 24.0	
	comp=N,215nm,0.2s						
DGB	**zmir**	0.59	94	*i* P	Pg	09 34 19.4	+0.1
DGB				*i* S	Sg	09 34 27.5	+0.3
DGB				IAML		09 34 28.0	
	comp=N,124nm,0.6s						
KRBN	**Karaburun**	0.60	33	PG	Pg	09 34 18.9	-0.6
KRBN				SG	Sg	09 34 27.7	+0.3
PSRA	**Psara**	0.64	315	P	Pg	09 34 20.3	0.0
PSRA				S	Sg	09 34 28.5	-0.2
SMG	**Samos**	0.67	125	P	Pb	09 34 21.4	0.0
SMG				S	Sb	09 34 31.4	+0.8
	comp=N,538nm,0.5s						
SMG	**Samos**	0.67	125	P	Pb	09 34 21.5	0.0
SMG				S	Sb	09 34 31.3	+0.6
SMG				AML	AML	09 34 32.9	
	comp=N,780µm,0.3s						
SMG				AML	AML	09 34 32.9	
	comp=E,1212µm,0.5s						
BLCB	**Balcova**	0.77	67	PG	Pg	09 34 22.2	-0.6
BLCB				SG	Sb	09 34 33.3	-0.1
FOCM	**Foa**	0.77	37	PG	Pg	09 34 22.1	-0.8
FOCM				SG	Sb	09 34 33.4	-0.1
GCAM	**G?zelcaml?**	0.95	114	PG	Pg	09 34 26.1	-0.1
APE	**Apeiranthos**	1.13	205	P	Pb	09 34 28.9	-0.4
APE				S	Sb	09 34 44.7	+0.8
APE	**Apeiranthos**	1.13	205	P	Pb	09 34 28.7	-0.5
APE	**Apeiranthos**	1.13	205	PN	Pb	09 34 29.6	+0.3
SIGR	**SIGRI**	1.14	349	P	Pb	09 34 29.5	+0.2
SIGR				S	Sb	09 34 44.2	+0.2
	comp=E,175nm,0.7s						
SIGR	**SIGRI**	1.14	349	P	Pb	09 34 29.7	+0.3
SIGR	**SIGRI**	1.14	349	PN	Pn	09 34 29.9	+0.5
ZEDA	**zmir-Bergama**	1.14	40	*i* P	Pb	09 34 29.6	+0.2
ZEDA				*i* S	Sb	09 34 42.7	-1.4
ZEDA				IAML		09 34 46.0	
	comp=N,56nm,0.3s						
ZEDA				IAML		09 34 47.0	
	comp=E,51nm,0.2s						
DKL	**Dikili**	1.15	31	PN	Pb	09 34 29.6	+0.1
DKL				SN	Sn	09 34 45.6	+0.5
PRK	**Paraskevi**	1.16	5	P	Pb	09 34 29.8	+0.2
PRK				S	Sb	09 34 44.6	+0.1
	comp=E,172nm,0.4s						
PRK	**Paraskevi**	1.16	5	P	Pb	09 34 29.9	+0.2
AYVA	**Ayvalik**	1.29	19	*i* P	Pn	09 34 31.6	+0.1
AYVA				*i* S	Sb	09 34 47.7	-0.6
AYVA				IAML		09 34 51.0	
	comp=E,35nm,0.3s						
AYVA				IAML		09 34 54.0	
	comp=N,77nm,0.5s						
KARY	**Karystos**	1.34	268	P	Pn	09 34 32.4	+0.1
AYDB	**Zeytinkoy-Aydi**	1.39	96	PN	Pb	09 34 34.1	+0.4
AYDB				SN	Sg	09 34 53.1	+0.4
IOSP	**Ios island**	1.53	207	P	Pn	09 34 34.3	-0.5
IOSP				S	Sn	09 34 53.6	-0.8
BAYC	**CANAKKALE_Bayr**	1.68	11	*i* P	Pn	09 34 35.8	-1.0
BAYC				*i* S	Sb	09 34 59.4	-0.1
BAYC				IAML		09 35 08.0	
	comp=E,23nm,0.5s						
EZN	**Ezine**	1.74	5	PN	Pn	09 34 38.7	+1.1
BOZC	**Bozcaada**	1.75	358	PN	Pn	09 34 38.9	+1.1
STEP	**BALIKESIR_Sava**	1.78	43	*i* P	Pg	09 34 41.3	-0.7
STEP				*i* S	Sb	09 35 03.2	+0.7
STEP				IAML		09 35 07.0	
	comp=E,64nm,0.7s						
STEP				IAML		09 35 08.0	
	comp=N,46nm,0.5s						

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*DJA **28** 09:37:28.7±0.3, 6°S±4°×10°5E±°, h10^{km}, M4.4/12, mb4.7/2, MLv4.3/12*

*NEIC **28** 09:37:31.2±1.7, 5.°92S±0.°09×105.°01E±0.°08, h92^{km}±8^{km}, mb4.0/11, Error ellipse: s-maj=14.2km s-min=9.2km az=217.0*

*IDC **28** 09:37:34.0±2.5, 5.°79S×105.°13E, h111^{km}±19^{km}, mb3.5/12, mb1 3.6/13, mb1mx3.5/50, mbtmp3.9/13, MS2.7/3, Ms1 2.8/3, ms1mx2.6/44, Error ellipse: s-maj=41.2km s-min=11.3km az=51.0*

ISC 28 09:37:31.9±0.5**, 5.°99S**±0.°09×**104.°97E**±0.°07**, h100**^{km}**, n53, σ1.^{s}20**/58**, mb3.9**/18**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	**Kota Agung**	0.66	315	P	Pn	09 37 46.6	-2.3
KASI				S	Sn	09 37 57.7	-4.0
SBJI	**Serang**	1.16	97	P	Pn	09 37 52.5	-1.6
LWLI	**Liwa**	1.32	317	P	Pn	09 37 55.7	-0.4
LWLI				S	Sn	09 38 16.0	+1.6
MDSI	**Maura Dua**	1.69	332	P	Pn	09 38 00.7	+0.2
DBJI	**Dramaga**	1.86	108	P	Pn	09 38 01.8	-0.9
SKJI	**Sukabumi**	1.87	123	P	Pn	09 38 01.0	-1.9
CBJI	**Citeko**	1.92	103	P	Pn	09 38 05.0	+1.6
CNJI	**Cibinong**	2.52	122	P	Pn	09 38 09.3	-1.9
MNAI	**Manna**	2.58	309	P	Pn	09 38 12.6	+0.6
MNAI	**Manna**	2.58	309	Pn	Pn	09 38 11.2	-0.9
LEM	**Lembang**	2.76	108	P	Pn	09 38 15.4	+0.7
	48nm,0.3s,baz=197,slow=8.7,SNR=39						
LEM				LR	LR	09 39 44.1	
	comp=Z,129nm,21.8s,baz=137,slow=49						
LEM	**Lembang**	2.76	108	P	Pn	09 38 15.1	+0.5
CISI	**Cisompet, Garu**	3.23	119	P	Pn	09 38 19.1	-1.7
CISI	**Cisompet, Garu**	3.23	119		Pn	09 38 19.5	-1.3
CISI				Sn	Sn	09 38 57.7	-0.8
KSI	**Kapahiang**	3.31	314	P	Pn	09 38 22.6	+0.7
UGM	**Wanagama**	5.84	109	P	Pn	09 38 56.0	0.0
	0.3nm57nm,0.7s						
UGM	**Wanagama**	5.84	109		Pn	09 38 55.7	-0.3
PCJI	**Pacitan**	6.54	110	P	Pn	09 39 05.8	+0.2
JAGI	**Jajag, Banyuwa**	9.44	106		Pn	09 39 44.4	-0.6
COCO	**West Island**	10.12	232	Pn	Pn	09 39 55.3	+1.0
KAPI	**Kappang**	14.75	87	LR	LR	09 47 39.8	
	comp=Z,49nm,18.1s,baz=64,slow=42						
PSA00	**Pilbara Seismi**	21.15	139	P	P	09 42 10.0	+0.9
FITZ	**Fitzroy Crossi**	23.49	123	P	P	09 42 33.8	+0.8
	1.1nm,0.8s,baz=304,slow=3.6,SNR=5.1						
FITZ	**Fitzroy Crossi**	23.49	123	P	P	09 42 31.9	-1.1
CMAR	**Chiang Mai Arr**	25.01	346	P	P	09 42 45.0	-1.6
	1.1nm,0.3s,baz=196,slow=9.4,SNR=1.5						
CMAR				LR	LR	09 53 07.4	
	comp=Z,14nm,18.6s,baz=190,slow=38						
KNRA	**Kununurra**	25.25	114	P	P	09 42 47.6	-1.3
KNRA				IAmb	IAmb	09 42 59.3	
	comp=Z,8.0nm,1.0s						
MTN	**Manton Dam**	26.68	107	P	P	09 42 59.9	-1.9
MTN				IAmb	IAmb	09 43 07.1	
	comp=Z,7.1nm,1.2s						
H01W3	**Cape Leeuwin H**	29.98	165	T	T	10 14 52.9	
	baz=341,slow=76,SNR=12						
H01W1	**Cape Leeuwin H**	29.99	165	T	T	10 14 54.0	
	baz=341,slow=76,SNR=11						
H01W2	**Cape Leeuwin H**	29.99	165	T	T	10 14 54.0	
	baz=341,slow=76,SNR=15						
WB0	**Warramunga Arr**	31.71	118	P	P	09 43 47.2	+0.7
WB0				IAmb	IAmb	09 43 47.3	
	comp=Z,1.8nm,0.9s						
WRA	**Warramunga Arr**	31.73	119	P	P	09 43 47.0	+0.4
	comp=Z,0.3nm,0.4s,baz=294,slow=10.0,SNR=0.7						
WRA				PcP	PcP	09 46 37.3	+1.2
	comp=Z,0.4nm,0.4s,baz=305,slow=1.9,SNR=4.7						
WB2	**Warramunga Arr**	31.74	119	P	P	09 43 47.0	+0.3
WB2				IAmb	IAmb	09 43 57.5	
	comp=Z,3.5nm,1.3s						
WR0	**Warramunga Arr**	31.91	119	P	P	09 43 46.5	-1.7
WR0				IAmb	IAmb	09 43 58.8	
	comp=Z,4.2nm,1.4s						
ASAR	**Alice Springs**	32.92	125	P	P	09 43 58.0	+1.0
	comp=Z,0.3nm,0.4s,baz=301,slow=8.2,SNR=6.4						
ASAR				pP	pP	09 44 20.1	+0.6
	comp=Z,0.7nm,0.9s,baz=298,slow=8.4,SNR=2.7						
ASAR				PcP	PcP	09 46 40.9	+1.6
	comp=Z,0.5nm,0.6s,baz=314,slow=2.7,SNR=5.9						
ASAR				S	S	09 49 06.9	-0.9
	comp=Z,0.5nm,0.7s,baz=286,slow=15,SNR=7.2						
STKA	**Stephens Creek**	42.81	132	P	P	09 45 21.6	+1.5
	comp=Z,1.8nm,0.5s,baz=310,slow=8.2,SNR=6.8						
STKA	**Stephens Creek**	42.81	132	P	P	09 45 21.5	+1.4
SONM	**Songino Array**	53.61	1	P	P	09 46 43.4	+0.5
	comp=Z,0.5nm,0.5s,baz=167,slow=12,SNR=3.9						
SONM				PcP	PcP	09 47 49.0	+0.8
	comp=Z,1.9nm,0.7s,baz=174,slow=4.1,SNR=10.0						
SONM	**Songino Array**	53.61	1	P	P	09 46 42.8	-0.1
SONM					PcP	09 47 47.5	-0.7
USRK	**Ussuriysk Ar.**	55.58	23	P	P	09 46 57.0	0.0
	comp=Z,1.8nm,0.5s,baz=209,slow=3.5,SNR=4.8						
USRK	**Ussuriysk Ar.**	55.58	23	P	P	09 46 56.2	-0.9
MK31	**Makanchi Array**	56.27	341	P	P	09 47 01.5	-0.5
MK31				IAmb	IAmb	09 47 10.6	
	comp=Z,1.4nm,1.2s						
MKAR	**Makanchi Array**	56.27	341	P	P	09 47 01.0	-1.0
	comp=Z,0.5nm,0.4s,baz=156,slow=8.5,SNR=9.5						
MKAR	**Makanchi Array**	56.27	341	P	P	09 47 01.4	-0.6
KLR	**Kul'dur**	59.75	20	P	P	09 47 25.8	-0.4
	comp=Z,1.1nm,0.5s,baz=221,slow=5.6,SNR=7.5						
KURBB	**Kurchatov Arra**	60.83	341	P	P	09 47 32.6	-0.9
	comp=Z,0.7nm,0.7s,baz=154,slow=6.3,SNR=4.4						
KURK	**Kurchatov**	60.88	341	P	P	09 47 32.9	-0.9
ABKAR	**Akbulak array**	67.52	330	P	P	09 48 16.7	-0.6
BRTR	**Keskin Array B**	79.65	312	P	P	09 49 28.9	+0.1
	comp=Z,0.5nm,0.6s,baz=121,slow=5.6,SNR=2.6						
FINES	**FINESS Array B**	89.93	332	P	P	09 50 20.6	+1.0
	comp=Z,1.3nm,0.8s,baz=115,slow=12,SNR=2.1						
FINES	**FINESS Array B**	89.93	332	P	P	09 50 20.1	+0.5
TXAR	**Lajitas Array**	144.37	46	PKP	PKPdf	09 56 57.5	+0.3
	comp=Z,3.3nm,0.7s,baz=282,slow=1.3,SNR=46						
TXAR	**Lajitas Array**	144.37	46		PKPdf	09 56 57.8	+0.6

MAN 28 09:46:24.4, 9.°73N×123.°63E, h3^{km}**, mb4.3, ML3.2, MS2.9, 1C-2D, Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	0.23	100	*e*P	Pg	09 46 29.2	+0.3
TBP				*i* S	Sg	09 46 32.5	+0.5

SNPH	**Sibulan**	**0.55**	**225**	⇑*i*P	Pb	09 46 36.2	-0.6
SNPH				*i* S	Sb	09 46 45.1	+0.1
LLP	**Lapu-Lapu**	**0.67**	**29**	⇓*e*P	Pg	09 46 37.8	+0.5
LLP				*i* S	Sb	09 46 47.7	-0.7
MSLP	**Maasin**	**1.27**	**72**	*e*P	Pg	09 46 48.4	-0.5
MSLP				*e*S	Sn	09 47 07.0	+0.2
GUIM	**Jordan**	**1.36**	**311**	*e*P	Pn	09 46 49.8	-0.5
GUIM				*e*S	Sn	09 47 09.1	+0.2
OCLP	**Ormoc**	**1.62**	**36**	*e*P	Pn	09 46 53.5	-0.5
OCLP				*e*S	Sn	09 47 15.6	+0.1
PAGZ	**Pagadian**	**1.89**	**188**	*e*P	Pn	09 46 58.4	+0.8
PAGZ				*e*S	Sn	09 47 22.0	0.0
RCP	**Roxas**	**2.02**	**334**	⇓*e*P	Pn	09 47 00.4	+1.0

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*IDC **28** 09:59:01.1±6.5, 31°.52N×142°.42E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.3/52, mbtmp3.4/5, ML2.8/1, Error ellipse: s-maj=239.5km s-min=27.6km az=69.0*

*JMA **28** 09:59:04.4±0.5, 31°.75N×142°.55E, h100km, M3.4*

ISC 28 09:59:05.8±1.2**, 31°.61N**±0°.07×**142°.6E**±0°.1**, h49**km**, n15,** σ**1s.87**/19**, mb3.4**/4**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**2.75**	**303**	*e*S	**Sn**	**10 00 18.1**	**-1.4**
JHJ2	**Mitsune**	**2.76**	**304**	P	**Pn**	**09 59 46.6**	**-0.9**
JHJ2				S	**Sn**	**10 00 18.6**	**-1.1**
BSO1	**Boso 1**	**3.31**	**337**	P	**Pn**	**09 59 53.1**	**-1.6**
BSO1				*e*S	**Sn**	**10 00 31.4**	**-1.1**
JMKN	**Mikurajimanish**	**3.38**	**313**	*e*S	**Sn**	**10 00 33.6**	**-1.3**
BSO3	**Boso 3**	**3.62**	**332**	P	**Pn**	**09 59 57.9**	**-1.2**
BSO4	**Boso 4**	**3.85**	**332**	P	**Pn**	**10 00 01.6**	**-0.8**
JCJ	**Chichijima**	**4.51**	**184**	Sn	**Sn**	**10 00 59.9**	**-2.8**
	8.1nm,0.3s,baz=283,slow=22,SNR=5.4						
JOD2	**Odawara 2**	**4.66**	**322**	P	**Pn**	**10 00 12.0**	**-1.6**
JRY	**Ryogami san**	**5.35**	**326**	P	**Pn**	**10 00 21.7**	**-1.4**
JRY				*e*S	**Sn**	**10 01 20.9**	**-2.5**
MJAR	**Matsushiro Arr**	**6.10**	**325**	Pn	**Pn**	**10 00 30.4**	**-3.0**
	0.2nm,0.3s,baz=142,slow=12,SNR=11						
MJAR				Sn	**Sn**	**10 01 41.6**	**-0.3**
	0.1nm,0.3s,baz=276,slow=28,SNR=1.8						
JMK	**Ichinoseki**	**7.41**	**352**	P	**Pn**	**10 00 49.3**	**-2.0**
SONM	**Songino Array**	**31.84**	**311**	P	**P**	**10 05 28.4**	**+2.3**
	0.3nm,0.5s,baz=96,slow=7.7,SNR=1.7						
MKAR	**Makanchi Array**	**47.95**	**307**	P	**P**	**10 07 41.5**	**+2.0**
	0.3nm,0.7s,baz=90,slow=8.6,SNR=3.1						
KURBB	**Kurchatov Arra**	**50.20**	**312**	P	**P**	**10 07 58.3**	**+1.7**
	0.7nm,0.6s,baz=87,slow=7.4,SNR=8.4						
WRA	**Warramunga Arr**	**51.86**	**190**	P	**P**	**10 08 09.8**	**+0.5**
	0.3nm,0.8s,baz=5.6,slow=7.6,SNR=1.0						

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*IDC **28** 10:05:56.3±0.6, 19°.14S×173°.16W, h0km, mb4.5/17, mb1 4.7/18, mb1mx4.6/32, mbtmp4.5/18, ML4.6/1, MS4.1/11, Ms1 4.1/11, ms1mx3.8/33, Error ellipse: s-maj=23.8km s-min=15.4km az=141.0*

*NEIC **28** 10:05:57.3±2.8, 18°.95S±0°.06×173°.1W±0°.1, h10km±1km, mb4.8/119, Error ellipse: s-maj=21.4km s-min=10.0km az=93.0*

*GCMT **28** 10:06:01.3±0.4, 19°.11S±0°.04×172°.67W±0°.04, h18km±1km, MW4.8/68, Moment Tensor Solution. s18,c21; s68,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.06±.17; $M_{\theta\theta}$-1.15±.11; $M_{\phi\phi}$-0.91±.10; $M_{r\theta}$-0.52±.23; $M_{\theta\phi}$-0.71±.05; $M_{\phi r}$0.48±.23; Best double couple: $M_0$2.00200×10^{16} NP1:ϕ_s35.00000°,δ46.00000°,λ68.00000°. NP2: ϕ_s245.00000°,δ48.00000°,λ111.00000°. Principal axes: T 2.2510, Plg75.0000°, Azm225.0000°; N -0.5030, Plg15.0000°, Azm51.0000°; P -1.7530, Plg1.0000°, Azm320.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 10:05:59.2±0.4**, 18°.85S**±0°.07×**173°.20W**±0°.08**, h21**km**, n233,** σ**1s.31**/198**, mb4.8**/67**, MS4.2**/12**, 9C-14D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**3.10**	**95**		Pn	10 06 38.5	-8.3
NIUE				Sn	Sn	10 07 09.3	-14
AFI	**Afiamalu**	**5.10**	**16**	Pn	**Pn**	**10 07 10.5**	**-4.0**
	9.0nm,0.3s,baz=317,slow=1.2,SNR=14						
AFI				Sn	Sn	10 08 03.4	-9.4
	12nm,0.3s,baz=33,slow=16,SNR=4.1						
AFI	**Afiamalu**	**5.10**	**16**		**Pn**	**10 07 11.4**	**-3.1**
AFI				Sn	**Sn**	**10 08 08.8**	**-4.0**
RAR	**Rarotonga**	**12.83**	**103**	Pn	Pn	10 08 52.5	-7.9
	8.3nm,0.3s,baz=252,slow=7.8,SNR=6.4						
RAR				LR	LR	10 13 23.0	
	comp=Z,736nm,18.9s,baz=267,slow=35						
DZM	**Mont Dzumac**	**19.34**	**257**	*e*P	**Pn**	**10 10 24.3**	**-0.3**
	130nm,1.4s						
DZM				*e*LR	LR	10 15 04.3	
	comp=Z,464nm,21.2s						
DZM	**Mont Dzumac**	**19.34**	**257**	P	**P**	**10 10 23.7**	**+0.2**
	2.0nm,0.3s,baz=78,slow=18,SNR=14						
DZM	**Mont Dzumac**	**19.34**	**257**	P	**Pn**	**10 10 24.6**	**0.0**
DZM				IAmb	IAmb	10 10 29.4	
	comp=Z,28nm,0.7s						
OUZ	**Omahuta**	**20.07**	**213**	P	**P**	**10 10 31.4**	**+0.2**
KUZ	**Kuaotunu**	**20.31**	**206**	P	Pn	10 10 34.9	-1.0
HAZ	**Te Kaha**	**20.42**	**201**	P	Pn	10 10 36.8	-0.3
PKGZ	**Pakihiroa**	**20.44**	**200**	P	Pn	10 10 37.4	0.0
PUZ	**Puketiti**	**20.55**	**200**	P	**P**	**10 10 37.5**	**+1.1**
WIAZ	**Waiheke Island**	**20.61**	**207**	P	Pn	10 10 38.6	-0.7
MBAZ	**Motutapu North**	**20.69**	**208**	P	Pn	10 10 39.5	-0.8
ETAZ	**East Tamaki Re**	**20.83**	**208**	P	Pn	10 10 41.6	-0.4
KBAZ	**Karaka Road Bo**	**20.96**	**207**	P	Pn	10 10 42.5	-1.0
AWAZ	**Awhitu Peninsu**	**21.05**	**208**	P	**P**	**10 10 42.5**	**+0.8**
URZ	**Urewera**	**21.10**	**202**	P	**P**	**10 10 39.8**	**-2.6**
	comp=Z,14nm,0.5s,baz=66,slow=1.6,SNR=22						
URZ				S	**S**	**10 14 32.3**	**-3.9**
	comp=Z,16nm,0.9s,baz=64,slow=22,SNR=4.1						
URZ	**Urewera**	**21.10**	**202**	P	**P**	**10 10 40.8**	**-1.6**
URZ				IAmb	IAmb	10 10 47.3	
	comp=Z,31nm,0.9s						
RATZ	**Rangitukua**	**22.12**	**203**	P	P	10 10 38.6	-15
BKZ	**Black Stump Fm**	**22.13**	**202**	P	**P**	**10 10 51.7**	**-1.8**
HIZ	**Hauiti**	**22.18**	**205**	P	**P**	**10 10 55.0**	**+1.1**
HIZ				IAmb	IAmb	10 11 02.9	
	comp=Z,85nm,1.2s						
KATZ	**Kakaramea**	**22.25**	**203**	P	P	10 10 37.4	-17
PAE	**Paea**	**22.46**	**91**	*e*T	T	10 33 48.7	
	comp=Z,1.8nm,0.3s						
PPT2	**Papeete2**	**22.47**	**91**	*e*P	**P**	**10 10 57.3**	**0.0**
	comp=Z,50nm,1.2s						
PPT2				*e*LQ	LQ	10 15 20.6	
	comp=Z,534nm,25.8s						
PPT2				*e*LR	LR	10 15 48.6	
	comp=Z,706nm,28.8s,baz=248						
PPT	**Papeete**	**22.47**	**91**	LR	LR	10 17 59.3	
	comp=Z,487nm,18.2s,baz=260,slow=32						
TBI	**Tubuai**	**22.58**	**106**	*e*LQ	LQ	10 15 25.7	
	comp=Z,302nm,25.8s						
TBI				*e*LR	LR	10 15 54.8	
	comp=Z,564nm,31.2s,baz=287						
BFZ	**Birch Farm**	**23.57**	**200**	P	**P**	**10 11 08.2**	**-0.1**
BFZ				IAmb	IAmb	10 11 26.2	
	comp=Z,56nm,1.2s						
TUWZ	**Tuamarina**	**25.04**	**203**	P	**P**	**10 11 22.4**	**+0.5**
NNZ	**Nelson**	**25.08**	**204**	P	**P**	**10 11 21.8**	**-0.4**
NNZ				IAmb	IAmb	10 11 22.2	
	comp=Z,51nm,1.5s						
QRZ	**Quartz Range**	**25.09**	**206**	P	**P**	**10 11 21.7**	**-0.6**
BSWZ	**Blackbirch Sta**	**25.32**	**203**	P	**P**	**10 11 24.1**	**-0.3**
THZ	**Tophouse**	**25.73**	**204**	P	**P**	**10 11 27.4**	**-0.8**
KHZ	**Kahutara**	**26.05**	**203**	P	**P**	**10 11 30.6**	**-0.3**
KHZ				IAmb	IAmb	10 11 43.7	
	comp=Z,26nm,0.9s						
OXZ	**Oxford**	**27.39**	**204**	P	**P**	**10 11 41.8**	**-1.4**
RPZ	**Rata Peaks**	**28.10**	**205**	P	**P**	**10 11 50.6**	**+1.1**
	comp=Z,12nm,0.5s,baz=358,slow=0.8,SNR=17						
FOZ	**Fox Glacier**	**28.46**	**206**	P	**P**	**10 11 53.3**	**+0.7**
LBZ	**Lake Benmore**	**29.01**	**205**	P	**P**	**10 11 55.9**	**-1.7**
ODZ	**Otahua Downs**	**29.38**	**204**	P	**P**	**10 12 00.5**	**-0.3**
ODZ				IAmb	IAmb	10 12 16.9	
	comp=Z,21nm,1.3s						
WKZ	**Wanaka**	**29.85**	**206**	P	**P**	**10 12 03.8**	**-1.2**
DCZ	**Deep Cove**	**31.15**	**207**	P	**P**	**10 12 15.8**	**-0.6**
DCZ				IAmb	IAmb	10 12 26.6	
	comp=Z,28nm,1.2s						
WHZ	**Wether Hill Ro**	**31.15**	**206**	P	**P**	**10 12 15.9**	**-0.6**
WHZ				IAmb	IAmb	10 12 33.1	
	comp=Z,14nm,0.9s						
EIDS	**Eidsvold**	**33.65**	**252**	P	**P**	**10 12 37.7**	**-1.0**
CAN	**Canberra**	**37.18**	**236**	P	**P**	**10 13 07.9**	**-1.1**
PMG	**Port Moresby**	**39.50**	**278**	P	**P**	**10 13 28.8**	**+0.2**
	comp=Z,22nm,1.0s,baz=242,slow=13,SNR=4.4						
PMG	**Port Moresby**	**39.50**	**278**	P	**P**	**10 13 29.9**	**+1.3**
PMG				IAmb	IAmb	10 13 32.5	
	comp=Z,20nm,0.9s						
TOO	**Toolangi**	**40.52**	**234**	P	**P**	**10 13 36.5**	**-0.5**
COEN	**Coen**	**42.06**	**270**	P	**P**	**10 13 49.2**	**-0.6**
STKA	**Stephens Creek**	**42.57**	**243**	P	**P**	**10 13 52.5**	**-1.3**
	comp=Z,6.2nm,0.8s,baz=87,slow=8.6,SNR=9.7						
STKA	**Stephens Creek**	**42.57**	**243**	P	**P**	**10 13 52.4**	**-1.3**
BBOO	**Buckleboo**	**47.33**	**242**	P	**P**	**10 14 30.5**	**-1.2**
BBOO				IAmb	IAmb	10 14 32.5	
	comp=Z,8.0nm,0.8s						
WR0	**Warramunga Arr**	**49.14**	**260**	P	**P**	**10 14 44.8**	**-1.0**
WR0				IAmb	IAmb	10 14 46.3	
	comp=Z,7.6nm,0.7s						
WB0	**Warramunga Arr**	**49.31**	**260**	P	**P**	**10 14 44.9**	**-2.2**
AS31	**Alice Springs**	**49.31**	**255**	P	**P**	**10 14 46.1**	**-1.0**
AS31				IAmb	IAmb	10 14 50.3	
	comp=Z,9.1nm,1.1s						
ASAR	**Alice Springs**	**49.31**	**255**	P	**P**	**10 14 46.0**	**-1.1**
	comp=Z,25nm,0.9s,baz=93,slow=7.2,SNR=179						
ASAR				S	**S**	**10 21 49.6**	**-3.1**
	comp=Z,0.7nm,0.8s,baz=91,slow=16,SNR=4.6						
ASAR				LR	LR	10 35 57.6	
	comp=Z,209nm,20.2s,baz=94,slow=37						
ASAR	**Alice Springs**	**49.31**	**255**	P	**P**	**10 14 45.9**	**-1.3**
WB2	**Warramunga Arr**	**49.32**	**260**	P	**P**	**10 14 45.8**	**-1.4**
WRA	**Warramunga Arr**	**49.33**	**260**	P	**P**	**10 14 45.7**	**-1.6**
	comp=Z,8.9nm,0.6s,baz=97,slow=8.3,SNR=36						
WRA				S	**S**	**10 21 49.7**	**-3.4**
	comp=Z,1.0nm,1.1s,baz=99,slow=14,SNR=4.3						
WRA	**Warramunga Arr**	**49.33**	**260**	P	**P**	**10 14 45.3**	**-2.0**
MTN	**Manton Dam**	**53.72**	**268**	P	**P**	**10 15 19.1**	**-1.0**
KNRA	**Kununurra**	**55.31**	**264**	P	**P**	**10 15 31.4**	**-0.3**
FAKI	**Fak Fak**	**55.62**	**280**	P	**P**	**10 15 33.6**	**-0.4**
FITZ	**Fitzroy Crossi**	**57.75**	**260**	P	**P**	**10 15 49.1**	**0.0**
FITZ				IAmb	IAmb	10 15 50.6	
	comp=Z,13nm,1.2s						
PSA00	**Pilbara Seismi**	**62.46**	**255**	P	**P**	**10 16 20.8**	**-0.6**
PSA00	**Pilbara Seismi**	**62.46**	**255**	P	**P**	**10 16 21.4**	**0.0**
PSA00				IAmb	IAmb	10 16 23.9	
	comp=Z,16nm,0.8s						
NWAO	**Narrogin (SRO)**	**63.14**	**242**	LR	LR	10 42 50.2	
	comp=Z,171nm,19.4s,baz=111,slow=35						
MORW	**Morawa**	**64.64**	**246**	P	**P**	**10 16 35.8**	**+0.1**
QSPA	**South Pole Qui**	**71.21**	**180**	P	**P**	**10 17 16.0**	**-0.5**
	comp=Z,4.7nm,0.9s,baz=63,slow=2.5,SNR=9.6						
QSPA	**South Pole Qui**	**71.21**	**180**	P	**P**	**10 17 15.7**	**-0.8**
QSPA				IAmb	IAmb	10 17 18.7	
	comp=Z,4.9nm,0.9s						
MJAR	**Matsushiro Arr**	**71.70**	**320**	P	**P**	**10 17 21.4**	**+1.7**
	comp=Z,4.2nm,0.8s,baz=156,slow=6.0,SNR=13						
MJAR	**Matsushiro Arr**	**71.70**	**320**	P	**P**	**10 17 20.4**	**+0.7**
MAJO	**Matsushiro**	**71.70**	**320**	P	**P**	**10 17 20.9**	**+1.2**
MAJO				IAmb	IAmb	10 17 23.6	
	comp=Z,8.0nm,1.0s						
MAT	**Matsushiro**	**71.70**	**320**	P	**P**	**10 17 21.2**	**+1.5**
MAT				*e*S	**S**	**10 26 35.8**	**-2.8**
MJB9	**Matsu-Tunnel**	**71.71**	**320**	P	**P**	**10 17 21.2**	**+1.4**
MJB9				IAmb	IAmb	10 17 23.6	
	comp=Z,8.5nm,1.0s						
JNU	**Nakatsue**	**74.30**	**314**	P	**P**	**10 17 36.8**	**+1.6**
JNU				IAmb	IAmb	10 17 39.7	
	comp=Z,15nm,0.9s						
AFDM	**Forest Hills D**	**75.45**	**40**	P	**P**	**10 17 43.1**	**+1.4**
MDPB	**Devils Postpil**	**75.79**	**42**	P	**P**	**10 17 44.8**	**+0.8**
PETK	**Petropavlovsk-**	**75.96**	**342**	P	**P**	**10 17 46.9**	**+2.6**
	comp=Z,4.3nm,0.9s,baz=131,slow=4.0,SNR=2.4						
WAKR	**Walker**	**76.11**	**41**	IAmb	IAmb	10 17 59.5	
	comp=Z,6.9nm,1.1s						
SBUM	**Sibu**	**76.24**	**277**	P	**P**	**10 17 49.0**	**+2.2**
PNTR	**Pine Nut**	**76.37**	**40**	IAmb	IAmb	10 18 00.9	
	comp=Z,7.1nm,0.9s						
NVAR	**Mina Array Bea**	**76.77**	**41**	P	**P**	**10 17 50.4**	**+0.9**
	comp=Z,3.0nm,0.8s,baz=227,slow=9.3,SNR=20						
NVAR	**Mina Array Bea**	**76.77**	**41**	P	**P**	**10 17 48.0**	**-1.4**
NV11	**Mina Array Sit**	**76.86**	**41**	P	**P**	**10 17 50.4**	**+0.4**
NV11				IAmb	IAmb	10 18 03.5	
	comp=Z,7.7nm,1.1s						
PAHR	**Pah Rah Range**	**76.88**	**40**	P	**P**	**10 17 50.4**	**+0.4**
KVN	**Kaiserville**	**77.27**	**41**	P	**P**	**10 17 53.0**	**+0.7**
SHPR	**Sheep Range**	**77.66**	**44**	P	**P**	**10 17 54.5**	**0.0**
SHPR				IAmb	IAmb	10 18 08.4	
	comp=Z,8.8nm,1.3s						
KSM	**Kuching**	**77.71**	**276**	P	**P**	**10 17 55.1**	**+0.1**
TUC	**Tucson**	**78.43**	**50**	P	**P**	**10 17 59.4**	**+0.6**
TUC				IAmb	IAmb	10 18 12.9	
	comp=Z,8.4nm,1.2s						
R11A	**Troy Canyon, C**	**78.44**	**43**	P	**P**	**10 17 58.3**	**-0.5**
H04A	**Detroit Lake**	**78.47**	**34**	P	**P**	**10 17 56.0**	**-2.5**
KSRS	**Korea Array**	**78.76**	**316**	P	**P**	**10 18 02.7**	**+2.4**
	comp=Z,5.0nm,0.9s,baz=132,slow=5.9,SNR=16						
KSAR	**Wonju Array Be**	**78.78**	**316**	P	**P**	**10 18 02.9**	**+2.5**
CCUT	**Cedar City**	**79.44**	**44**	P	**P**	**10 18 05.4**	**+1.1**
SZCU	**Shurtz Canyon**	**79.64**	**44**	P	**P**	**10 18 04.0**	**-1.4**
PSUT	**Pine Spring**	**79.66**	**43**	P	**P**	**10 18 03.3**	**-2.2**
ELK	**Elko**	**80.04**	**41**	IAmb	IAmb	10 18 21.0	
	comp=Z,12nm,1.4s						
USRK	**Ussuriysk Ar.**	**80.25**	**323**	P	**P**	**10 18 11.5**	**+3.2**
	comp=Z,1.9nm,0.8s,baz=120,slow=7.5,SNR=5.0						
USRK	**Ussuriysk Ar.**	**80.25**	**323**	P	**P**	**10 18 07.4**	**-0.9**
MTPU	**Mount Pierson**	**80.49**	**44**	P	**P**	**10 18 12.6**	**+2.5**
G08A	**Pilot Rock**	**80.61**	**35**	P	**P**	**10 18 08.5**	**-1.8**
MSU	**Marysvale**	**80.75**	**44**	P	**P**	**10 18 12.9**	**+1.5**
TMUT	**Trail Mountain**	**81.81**	**44**	P	**P**	**10 18 18.1**	**+1.0**
F10A	**Beach Ranch, E**	**81.98**	**36**	P	**P**	**10 18 16.8**	**-0.8**
SRU	**San Rafael Swe**	**82.16**	**44**	P	**P**	**10 18 17.4**	**-1.5**
TX31	**Lajitas Ar. Si**	**82.38**	**56**	IAmb	IAmb	10 18 34.6	
	comp=Z,8.1nm,1.3s						
TX32	**Lajitas Array**	**82.38**	**56**	P	**P**	**10 18 20.0**	**-0.1**
TX32				IAmb	IAmb	10 18 34.6	
	comp=Z,8.2nm,1.3s						
TXAR	**Lajitas Array**	**82.38**	**56**	P	**P**	**10 18 21.4**	**+1.3**
	comp=Z,1.9nm,0.9s,baz=212,slow=6.9,SNR=16						
TXAR	**Lajitas Array**	**82.38**	**56**	P	**P**	**10 18 18.0**	**-2.1**
NJ2	**Nanjing**	**82.40**	**307**	*e*P	**P**	**10 18 22.0**	**+2.0**
PV05	**Paradox Valley**	**82.58**	**46**	IAmb	IAmb	10 18 36.1	
	comp=Z,14nm,1.3s						
GHO	**Glory Hole Cre**	**82.65**	**11**	IAmb	IAmb	10 18 42.4	
	comp=Z,9.4nm,1.0s						
PV14	**Lion Creek, Pa**	**82.78**	**45**	IAmb	IAmb	10 18 25.4	
	comp=Z,7.9nm,0.9s						
PV13	**Radium Mtn., P**	**82.81**	**46**	IAmb	IAmb	10 18 25.4	
	comp=Z,7.5nm,1.1s						
PV23	**Carpenter Ridg**	**82.83**	**45**	P	**P**	**10 18 21.6**	**-0.8**
PV03	**Paradox Valley**	**82.83**	**46**	IAmb	IAmb	10 18 36.2	
	comp=Z,14nm,1.4s						
PV11	**David Mesa, Pa**	**82.84**	**46**	P	**P**	**10 18 21.8**	**-0.6**
PV11				IAmb	IAmb	10 18 37.0	
	comp=Z,12nm,1.1s						
PV21	**Cone Mtn., Par**	**82.91**	**45**	IAmb	IAmb	10 18 26.2	
	comp=Z,8.9nm,0.9s						
PV01	**Paradox Valley**	**82.96**	**46**	IAmb	IAmb	10 18 36.7	
	comp=Z,9.7nm,1.1s						
ANM	**Nome**	**83.37**	**3**	IAmb	IAmb	10 18 28.4	
	comp=Z,8.5nm,1.4s						
KLR	**Kul'dur**	**83.51**	**327**	P	**P**	**10 18 28.0**	**+2.7**
	comp=Z,1.1nm,0.8s,baz=144,slow=5.0,SNR=1.9						
BARN	**Barnard Glacie**	**83.57**	**15**	IAmb	IAmb	10 18 40.1	
	comp=Z,12nm,1.2s						
CN2	**Changchun**	**83.85**	**320**	*e*P	**P**	**10 18 30.5**	**+3.3**
S22A	**4UR Ranch, Cre**	**83.96**	**47**	P	**P**	**10 18 28.6**	**+0.3**
S22A				IAmb	IAmb	10 18 32.1	
	comp=Z,8.9nm,1.0s						
TRF	**Thorofare Moun**	**83.97**	**10**	P	**P**	**10 18 28.0**	**+0.5**
TRF				IAmb	IAmb	10 18 42.5	
	comp=Z,8.2nm,1.0s						
REDW	**Red Top Meadow**	**84.21**	**40**	IAmb	IAmb	10 18 43.7	
	comp=Z,14nm,1.4s						
TPAW	**Teton Pass**	**84.22**	**40**	P	**P**	**10 18 27.6**	**-1.9**
TPAW				IAmb	IAmb	10 18 43.8	
	comp=Z,8.4nm,1.2s						
DLMT	**Dillon**	**84.26**	**38**	P	**P**	**10 18 28.2**	**-1.3**
DLMT				IAmb	IAmb	10 18 33.9	
	comp=Z,8.4nm,1.3s						
SNOW	**Snow King Moun**	**84.33**	**40**	IAmb	IAmb	10 18 43.6	
	comp=Z,7.9nm,1.2s						
IMW	**Indian Meadow**	**84.45**	**40**	IAmb	IAmb	10 18 45.0	
	comp=Z,8.3nm,1.2s						
QLMT	**Earthquake Lak**	**84.66**	**39**	P	**P**	**10 18 32.0**	**+0.4**
FLWY	**Flagg Ranch**	**84.69**	**40**	P	**P**	**10 18 31.4**	**-0.4**
FLWY				IAmb	IAmb	10 18 48.0	
	comp=Z,7.0nm,0.9s						
PDAR	**Pinedale Array**	**84.70**	**42**	P	**P**	**10 18 32.5**	**+0.6**
	comp=Z,2.3nm,0.9s,baz=205,slow=3.3,SNR=14						
PDAR	**Pinedale Array**	**84.70**	**42**	P	**P**	**10 18 30.5**	**-1.4**
CMIG	**Matias Romero**	**84.86**	**70**	LR	LR	10 48 25.0	
	comp=Z,90nm,18.4s,baz=203,slow=30						
MSTX	**Muleshoe**	**85.12**	**52**	IAmb	IAmb	10 18 47.8	
	comp=Z,10nm,1.0s						
LKWY	**Lake**	**85.13**	**40**	IAmb	IAmb	10 18 39.5	
	comp=Z,4.7nm,1.0s						
RIDG	**Independent Ri**	**85.23**	**12**	IAmb	IAmb	10 18 48.2	
	comp=Z,10.0nm,1.0s						
BCAR	**Beaver Creek A**	**85.29**	**14**	P	**P**	**10 18 34.3**	**+0.2**
HDA	**Harding Lake**	**85.44**	**11**	P	**P**	**10 18 35.0**	**+0.2**
HDA				IAmb	IAmb	10 18 49.8	
	comp=Z,12nm,1.0s						
CCB	**Clear Creek Bu**	**85.50**	**11**	P	**P**	**10 18 34.2**	**-0.8**
SCRK	**Sand Creek**	**85.62**	**12**	P	**P**	**10 18 35.1**	**-0.7**
SCRK				IAmb	IAmb	10 18 39.8	
	comp=Z,5.9nm,1.0s						
MDM	**Murphy Dome**	**85.71**	**10**	P	**P**	**10 18 36.8**	**+0.6**
IL31		**85.78**	**11**	P	**P**	**10 18 36.2**	**-0.2**
ILAR	**Eielson Array**	**85.78**	**11**	P	**P**	**10 18 37.1**	**+0.7**
	comp=Z,2.6nm,0.9s,baz=226,slow=4.8,SNR=13						
ILAR	**Eielson Array**	**85.78**	**11**	P	**P**	**10 18 36.5**	**+0.1**
IMAR	**Indian Mountai**	**85.85**	**8**	P	**P**	**10 18 38.0**	**+1.3**
AMTX	**Amarillo**	**86.33**	**51**	P	**P**	**10 18 39.2**	**-0.8**
DAWY	**Dawson**	**86.70**	**14**	IAmb	IAmb	10 18 55.9	
	comp=Z,12nm,1.1s						
ABTX	**Abilene, Hawle**	**86.91**	**54**	P	**P**	**10 18 41.9**	**-0.9**
EGAK	**Eagle**	**86.92**	**13**	P	**P**	**10 18 42.8**	**+0.7**
EGAK				IAmb	IAmb	10 18 56.7	
	comp=Z,10nm,1.1s						
PLCA	**Paso Flores**	**87.06**	**132**	LR	LR	10 49 48.9	
	comp=Z,101nm,19.1s,baz=65,slow=30						
IPM	**Ipoh**	**87.45**	**276**	P	**P**	**10 18 46.5**	**+0.6**
BJI	**Beijing**	**87.98**	**314**	P	**P**	**10 18 51.0**	**+3.3**
BMAR	**Burnt Mountain**	**88.59**	**11**	P	**P**	**10 18 51.6**	**+1.6**
HHC	**Hu-ho-hao-te**	**91.50**	**313**	*e*P	**P**	**10 19 05.5**	**+1.1**
INK	**Inuvik**	**91.56**	**14**	P	**P**	**10 19 04.9**	**+1.2**
INK				IAmb	IAmb	10 19 07.8	
	comp=Z,11nm,1.4s						
JTS	**Las Juntas de**	**91.63**	**80**	LR	LR	10 54 20.0	
	comp=Z,82nm,18.3s,baz=30,slow=32						
NNA	**Nana**	**92.08**	**103**	LR	LR	10 51 33.6	
	comp=Z,54nm,18.8s,baz=260,slow=30						
ATAH	**Atahualpa**	**92.24**	**98**	LR	LR	10 52 43.4	
	comp=Z,128nm,18.0s,baz=244,slow=30						
YKA	**Yellowknife Ar**	**93.17**	**23**	P	**P**	**10 19 11.7**	**+0.4**
	comp=Z,1.2nm,0.9s,baz=229,slow=4.1,SNR=17						
CD2	**Chengdu**	**93.77**	**301**	*e*P	**P**	**10 19 15.5**	**+0.5**
CMAR	**Chiang Mai Arr**	**93.87**	**288**	P	**P**	**10 19 17.9**	**+2.2**
	comp=Z,1.5nm,0.8s,baz=127,slow=3.0,SNR=7.6						
CMAR	**Chiang Mai Arr**	**93.87**	**288**	P	**P**	**10 19 16.8**	**+1.1**
LVC	**Limon Verde**	**95.34**	**116**	LR	LR	10 53 09.0	
	comp=Z,84nm,18.3s,baz=234,slow=30						
LZH	**Lanzhou**	**95.42**	**306**	*e*P	**P**	**10 19 25.0**	**+2.4**
LZH				pP	sP	10 19 30.3	+0.3
LZH				sP	pwP	10 19 33.3	+0.4
LPAZ	**La Paz**	**98.44**	**110**	LR	LR	10 55 29.7	
	comp=Z,101nm,19.6s,baz=288,slow=30						
KURK	**Kurchatov**	**115.84**	**318**		**PKPdf**	**10 24 40.5**	**+0.4**
KURBB	**Kurchatov Arra**	**115.90**	**318**	PKP	**PKiKP**	**10 24 40.5**	**+0.3**
	comp=Z,1.5nm,0.9s,baz=97,slow=2.1,SNR=10						
KSH	**Kashi**	**117.65**	**305**	PKP	**PKiKP**	**10 24 46.0**	**+1.9**
KSH	**Kashi**	**117.65**	**305**	SS	SS	10 42 19.0	+10
BVAR	**Borovoye Array**	**120.70**	**321**	PKP	**PKiKP**	**10 24 50.2**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=48,slow=2.2,SNR=9.9						
BRVK	**Borovoye**	**120.75**	**321**		**PKPdf**	**10 24 48.7**	**-0.7**
ARU	**Arti**	**126.35**	**327**	PKP	**PKiKP**	**10 25 01.1**	**+0.5**
	comp=Z,2.0nm,0.2s,baz=348,slow=4.8,SNR=5.8						
ABKAR	**Akbulak array**	**127.94**	**318**	PKPdf	**PKiKP**	**10 25 04.6**	**+0.6**
AKTO	**Aktyubinsk**	**128.78**	**320**	PKP	**PKiKP**	**10 25 06.0**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=344,slow=1.2,SNR=3.8						
FINES	**FINESS Array B**	**135.34**	**347**	PKP	**PKiKP**	**10 25 18.3**	**-0.1**
	comp=Z,2.4nm,0.9s,baz=112,slow=5.1,SNR=3.9						
AKASG	**Malin Array Be**	**143.57**	**336**	PKP	**PKiKP**	**10 25 34.0**	**-1.6**
	comp=Z,0.5nm,0.4s,baz=41,slow=3.3,SNR=4.2						
AKASG	**Malin Array Be**	**143.57**	**336**		PKPbc	10 25 30.0	+0.4
KMBO	**Kilima Mbogo**	**144.09**	**240**		**PKPdf**	**10 25 34.1**	**-0.6**
SORM	**Soroca**	**145.95**	**334**	⇓P	**PKPab**	**10 25 38.6**	**+0.9**
OJC	**Ojcow**	**147.03**	**345**	*e*PKP	**PKPab**	**10 25 42.0**	**+0.2**
OJC	**Ojcow**	**147.03**	**345**	PKPbc	**PKPab**	**10 25 41.9**	**+0.1**
KSP	**Ksiaz**	**147.20**	**349**	*e*PKP	**PKPab**	**10 25 42.7**	**+0.3**
CLL	**Collm**	**147.25**	**353**	*i* PKPbc	**PKiKP**	**10 25 43.4**	**+0.2**
	comp=Z,11nm,0.8s						
CLL				⇓*i*PKPab	**sPKPdf**	**10 25 45.5**	**-1.1**
	comp=Z,28nm,1.1s						
CLL				*i*		10 25 55.8	
CLL	**Collm**	**147.25**	**353**	PKPbc	**PKPab**	**10 25 42.2**	**-0.4**
OSTC	**Ostas**	**147.49**	**349**	*e*PKPAB	**PKiKP**	**10 25 44.0**	**+0.2**
BUR08	**Bucovina Ar. S**	**147.60**	**337**	PKPbc	**PKiKP**	**10 25 44.2**	**0.0**
BURAR	**Bucovina Array**	**147.61**	**336**	⇑P	**PKPab**	**10 25 44.4**	**+0.1**
BURAR	**Bucovina Array**	**147.61**	**336**	PKPbc	**PKiKP**	**10 25 44.2**	**0.0**
DPC	**Dobruska-Polom**	**147.67**	**349**	*e*PKPAB	**PKPab**	**10 25 44.6**	**+0.3**
GAZ	**Gaziantep**	**147.74**	**311**	PKPbc	**PKiKP**	**10 25 44.7**	**-0.1**
BIZ	**Bicaz**	**147.82**	**335**	⇓P	**PKPab**	**10 25 45.3**	**+0.2**
KRLC	**Kraliky**	**147.84**	**348**	⇑*e*PKP	**PKiKP**	**10 25 43.9**	**-0.6**
MORC	**Moravsky Berou**	**147.97**	**347**	*e*PKP	**PKPab**	**10 25 45.3**	**-0.2**
MORC	**Moravsky Berou**	**147.97**	**347**	PKPbc	**PKPbc**	**10 25 43.8**	**+0.9**
ILGA	**Ilgaz**	**148.08**	**320**	PKPab	**PKPab**	**10 25 46.7**	**+0.1**
TRPA	**Tarpa**	**148.12**	**340**	⇑P	**PKPbc**	**10 25 43.9**	**+0.6**
JURR	**Jurilovca**	**148.28**	**329**	⇓P	**PKPdf**	**10 25 39.8**	**-0.7**
CFR	**Carcaliu**	**148.32**	**331**	⇓P	**PKPdf**	**10 25 41.9**	**+1.4**
PRU	**Pruhonice**	**148.32**	**350**	*e*PKPAB	**PKiKP**	**10 25 45.9**	**+0.4**
VRI	**Vrincioaia**	**148.42**	**333**	⇓P	**PKPdf**	**10 25 41.8**	**+1.1**
TOPG	**Topolog**	**148.43**	**330**	⇓P	**PKiKP**	**10 25 46.1**	**+0.3**
PLOR	**Plostina**	**148.46**	**333**	⇓P	**PKiKP**	**10 25 45.5**	**-0.5**
VRAC	**Vranov**	**148.61**	**348**	*e*PKP	**PKiKP**	**10 25 46.9**	**+0.8**
TIRR	**Tirgusor**	**148.73**	**329**	⇑P	**PKiKP**	**10 25 47.0**	**+0.5**
HARR	**Harsova**	**148.78**	**330**	⇑P	**PKiKP**	**10 25 47.3**	**+0.8**
VYHS	**Vyhne**	**148.86**	**344**	*e*PKP	**PKiKP**	**10 25 47.4**	**+0.7**
VYHS				*e*		10 25 49.1	
KRUC	**Moravsky**	**148.89**	**348**	*e*PKP	**PKiKP**	**10 25 47.2**	**+0.5**
BR131	**Keskin Array S**	**148.89**	**318**		**PKiKP**	**10 25 47.4**	**+0.2**
BRTR	**Keskin Array B**	**148.89**	**318**	PKPbc	**PKiKP**	**10 25 47.3**	**+0.1**
	comp=Z,5.8nm,1.0s,baz=127,slow=3.1,SNR=18						
BRTR	**Keskin Array B**	**148.89**	**318**	PKPbc	**PKiKP**	**10 25 47.2**	**+0.1**
BRTR				PKPab	**pPKPbc**	**10 25 51.8**	**+0.4**
GRF	**Grafenberg Arr**	**149.03**	**354**	*e*PKP	**PKiKP**	**10 25 46.8**	**-0.1**
	baz=8.0,slow=1.6						
MLR	**Muntele Rosu**	**149.05**	**333**	⇑P	**PKPbc**	**10 25 44.9**	**-1.1**
MLR	**Muntele Rosu**	**149.05**	**333**		**PKiKP**	**10 25 47.1**	**-0.1**
DRGR		**149.22**	**338**	⇓P	**PKPab**	**10 25 50.7**	**-0.1**
KHC	**Kasperske Hory**	**149.31**	**351**	*e*PKPAB	**PKPab**	**10 25 49.8**	**-1.1**
KHC	**Kasperske Hory**	**149.31**	**351**		**PKiKP**	**10 25 47.5**	**-0.1**
MODS	**Modra-Piesok**	**149.35**	**346**	*e*PKP	**PKiKP**	**10 25 48.0**	**+0.3**
VOIR		**149.47**	**334**	⇑P	**PKPbc**	**10 25 47.2**	**+0.2**
GEC2	**GERESS Array S**	**149.57**	**351**		**PKiKP**	**10 25 48.7**	**+0.5**
GERES	**GERESS Array B**	**149.57**	**351**	PKPbc	**PKiKP**	**10 25 48.9**	**+0.7**
	comp=Z,4.8nm,1.0s,baz=33,slow=3.2,SNR=13						
ARR	**Arges**	**149.69**	**335**	⇓P	**PKPab**	**10 25 50.7**	**-2.0**
ASF	**Jabal al Asfar**	**149.89**	**302**	PKPbc	**PKiKP**	**10 25 50.4**	**+1.0**
	comp=Z,3.3nm,0.8s,baz=140,slow=1.9,SNR=7.4						
MDUB	**Mudurnu**	**149.96**	**321**	PKPdf	**PKPdf**	**10 25 41.8**	**-1.7**
MDUB					**PKiKP**	**10 25 49.6**	**+0.3**
SIRR	**Siria**	**150.04**	**339**	⇓P	**PKiKP**	**10 25 49.7**	**+0.6**
GZR	**Gura Zlata**	**150.40**	**337**	⇓P	**PKiKP**	**10 25 50.7**	**+0.7**
BZS	**Buzias**	**150.62**	**339**	⇓P	**PKiKP**	**10 25 51.3**	**+1.0**
MMAI	**Mount Meron Ar**	**150.78**	**305**	PKPbc	**PKiKP**	**10 25 52.8**	**+1.6**
	comp=Z,7.3nm,0.8s,baz=54,slow=4.2,SNR=7.0						
HERR	**Herculane**	**150.97**	**337**	⇑P	**PKiKP**	**10 25 52.0**	**+0.9**
PLVB	**Pleven**	**151.30**	**332**	⇑P	**PKiKP**	**10 25 51.8**	**0.0**
MDVR	**Moldovita**	**151.31**	**338**	⇓P	**PKiKP**	**10 25 52.9**	**+1.1**
STAL	**STALIGIAL**	**152.24**	**351**		**PKiKP**	**10 25 54.1**	**+0.4**
STAL				PKPab	**PKPab**	**10 26 04.6**	**+1.5**

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*IDC **28** 10:09:02.8±8.6, 15°.97S×177°.01W, h0km, mb4.3/3, mb1 4.6/3, mb1mx3.8/29, mbtmp4.3/3, MS3.8/2, Ms1 3.8/2, ms1mx3.2/29, Error ellipse: s-maj=383.3km s-min=37.7km az=141.0*

*NEIC **28** 10:09:06.8±1.5, 15°.3S±0°.2×177°.4W±0°.1, h10km±1km, mb4.2/4, Error ellipse: s-maj=28.5km s-min=18.1km az=175.0*

ISC 28 10:09:09.5±1.3**, 15°.6S**±0°.5×**177°.3W**±0°.2**, h35**km**, n12,** σ**0s.58**/12**, mb4.2**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.61**	**73**	Pn	**Pn**	**10 10 30.3**	**-0.2**

AFI				Sn	Sn	10 11 33.9	+0.1
HNR	Honiara	23.04	283	LR	LR	10 22 19.1	
	comp=Z,207nm,19.3s,baz=105,slow=34						
WRA	Warramunga Arr	46.13	257	P	P	10 17 29.7	-1.2
	2.2nm,0.3s,baz=95,slow=5.9,SNR=4.9						
AS31	Alice Springs	46.47	252	P	P	10 17 34.2	+0.7
ASAR	Alice Springs	46.47	252	P	P	10 17 34.0	+0.5
	4.8nm,0.5s,baz=84,slow=8.6,SNR=19						
QSPA	South Pole Qui	74.42	180	P	P	10 20 49.9	+6.0
QSPA				IAmb	IAmb	10 20 51.2	
	comp=Z,2.5nm,1.0s						
CCB	Clear Creek Bu	83.13	12	P	P	10 21 31.9	+0.5
IMAR	Indian Mountai	83.26	9	P	P	10 21 32.1	+0.1
IL31		83.44	13	P	P	10 21 32.6	-0.3
IL31				IAmb	IAmb	10 21 34.4	
	comp=Z,2.6nm,1.3s						
ILAR	Eielson Array	83.44	13	P	P	10 21 33.2	+0.3
	comp=Z,0.6nm,0.8s,baz=221,slow=6.3,SNR=4.7						
SONM	Songino Array	92.53	319	LR	LR	11 03 26.6	
	comp=Z,40nm,18.1s,baz=101,slow=35						
CLF	Chambon-Foret	147.69	1		PKPdf	10 28 47.2	-0.5
CLF				PKPbc	PKPbc	10 28 50.7	+0.3
CLF				PKPab	PKiKP	10 28 52.9	+0.4

IDC 28 10:13:48.8±25.0**, 34°.99N×80°.54E, h0^{km}, mb3.3**/1**, mb1 3.3**/3**, mb1mx3.1**/27**, mbtmp3.3**/3**, ML3.0**/2**, MS3.8**/1**, Ms1 3.8**/1**, ms1mx2.8**/25**, Error ellipse: s-maj=367.2km s-min=71.3km az=41.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	11.87	6	Pn	Pn	10 16 40.4	+1.2
	0.2nm,0.3s,baz=184,slow=13,SNR=5.6						
ZALV	Zalesovo Beam	19.19	8	P	P	10 18 13.3	-0.6
	0.1nm,0.3s,baz=191,slow=14,SNR=2.1						
SONM	Songino Array	23.12	48	P	P	10 18 56.6	+0.1
	0.8nm,0.7s,baz=242,slow=12,SNR=6.3						
GNI	Garni	28.71	291	LR	LR	10 33 09.3	
	comp=Z,220nm,21.2s,baz=130,slow=40						

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*SNET **28** 10:23:56.2±1.1, 13°.46N×90°.34W, h23^{km}±6^{km}, ML3.1*
*GCG **28** 10:23:58.8±0.4, 13°.59N×90°.50W, h30^{km}±4^{km}, MD3.5*
ISC 28 10:23:55.9±2.5**, 13°.4N**±0°.1×**90°.37W**±0°.06**, h25^{km}**±14^{km}**, n11, σ0^{s}.65**/20**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	Ixpaco	0.74	355	eP	Pn	10 24 10.7	-0.2
CEVE	Cerro Verde	0.83	61	eP	Pb	10 24 11.9	+0.1
CEVE				eS	Sn	10 24 23.0	-0.6
CEVE				IAML		10 24 25.7	
	comp=Z,1µm,0.2s						
SBLS	San Blas	0.83	61	eP	Pb	10 24 11.9	0.0
SBLS				eS	Sn	10 24 23.5	-0.3
RTR	El Retiro	0.84	57	eP	Pb	10 24 11.7	-0.3
RTR				eS	Sn	10 24 24.1	+0.1
SNJE	San Jose	0.86	60	eP	Pb	10 24 12.3	-0.1
SNJE				eS	Sn	10 24 24.7	+0.2
PCG	Pacaya	0.98	347	eP	Pb	10 24 14.8	+0.3
PCG				eS	Sn	10 24 29.3	+1.8
FUG	Fuego 3	1.11	336	eP	Pn	10 24 16.1	+0.2
FUG				eS	Sb	10 24 29.6	-1.0
UEES	Universidad Ev	1.14	75	eP	Pn	10 24 16.0	-0.3
UEES				eS	Sb	10 24 31.9	+0.5
UEES				IAML		10 24 34.3	
	comp=Z,313nm,0.2s						
LOMA	Loma Larga	1.19	80	eP	Pn	10 24 17.2	+0.2
LOMA				eS	Sb	10 24 33.2	+0.4
LOMA				IAML		10 24 35.2	
	comp=Z,282nm,0.2s						
MTO3	Montecristo	1.38	45	eP	Pn	10 24 19.2	-0.5
STG3	Santiaguito 3,	1.72	318	eP	Pn	10 24 24.6	+0.2
STG3				eS	Sn	10 24 44.8	-1.0

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*BGR **28** 10:23:56.8±0.0, 36°.48N×72°.36E, h33^{km}, mb5.0*
*IDC **28** 10:24:09.5±2.2, 37°.02N×71°.35E, h81^{km}±19^{km}, mb4.5/35, mb1 4.6/39, mb1mx4.6/42, mbtmp4.9/39, MS3.9/17, Ms1 3.9/17, ms1mx3.7/32, Error ellipse: s-maj=11.8km s-min=8.2km az=11.0*
*MOS **28** 10:24:10.8±1.0, 37°.24N×71°.33E, h99^{km}, mb5.2/68, Error ellipse: s-maj=4.2km s-min=3.2km az=94.2*
*BJI **28** 10:24:11.4±0.0, 37°.29N×71°.39E, h98^{km}, mB5.0/45, mb5.0/64*
*GCMT **28** 10:24:12.5±0.2, 37°.16N±0°.02×71°.09E±0°.02, h101^{km}±2^{km}, MW5.0/120, Moment Tensor Solution. s57,c63; s120,c180; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.79±.07; $M_{\theta\theta}$-3.26±.09; $M_{\phi\phi}$0.47±.08; $M_{r\theta}$0.94±.07; $M_{\theta\phi}$-0.81±.09; $M_{\phi r}$-0.65±.06; Best double couple: $M_0$3.34300×10^{16} NP1:ϕ_s240.00000°, δ41.00000°, λ62.00000°. NP2:ϕ_s95.00000°, δ55.00000°, λ112.00000°. Principal axes: T 3.1550, Plg71.0000°, Azm58.0000°; N 0.3750, Plg18.0000°, Azm262.0000°; P -3.5300, Plg7.0000°, Azm170.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NNC **28** 10:24:12.9±1.7, 37°.47N×70°.86E, h123^{km}±24^{km}, mb4.8, mpv5.4 Error ellipse: s-maj=16.0km s-min=9.9km az=164.0*
*NEIC **28** 10:24:12.5±1.8, 37°.24N±0°.05×71°.24E±0°.07, h101^{km}±4^{km}, mb5.2/220, Error ellipse: s-maj=8.6km s-min=7.0km az=101.0*
ISC 28 10:24:10.4±0.4**, 37°.22N**±0°.03×**71°.26E**±0°.03**, h84^{km}**±3^{km}**, h84^{km}:pP-P, n844, σ1^{s}.77**/877**, mb5.2**/257**, 46C-55D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	3.23	215	P	Pn	10 25 01.1	+2.0
KBL	Kabul	3.23	215	PN	Pn	10 25 01.1	+2.0
KBL						10 25 39.3	
KBL	Kabul	3.23	215	Pn	Pn	10 25 01.1	+2.0
KBL				Sn	Sn	10 25 39.3	+2.7
CEP	Cherat	3.43	171	⇓P	Pn	10 25 03.8	+2.0
CEP				S	Sn	10 25 46.0	+4.6
CHCP	Chirah Chowk	3.91	155	P	Pn	10 25 10.4	+2.2
NIL	Nilore	3.91	155	PN	Pn	10 25 11.0	+2.7
NIL	Nilore	3.91	155		Pn	10 25 10.9	+2.7
ARSB	Arslanbob	4.31	17	PN	Pn	10 25 15.3	+1.6
ARSB				S	Sn	10 26 03.8	+1.0
ARSB	Arslanbob	4.31	17		Pn	10 25 15.3	+1.6
ARSB				Sn	Sn	10 26 03.8	+1.0
KSH	Kashi	4.35	57	P	Pn	10 25 13.5	-0.8
KSH				sP		10 25 36.5	
KSH				S	Sn	10 26 00.5	-3.4
KSH				pmax	pmax		
	comp=Z,210nm,0.7s						
KSH				pmax	pmax		
	comp=Z,5µm,4.5s						
KSH				smax	smax		
	comp=N,19µm,0.7s						
KSH				smax	smax		
	comp=E,11µm,0.6s						
TAS	Tashkent	4.38	340	PN	Pn	10 25 15.8	+1.3
TAS	Tashkent	4.38	340		Pn	10 25 15.8	+1.3
TAS				Sn	Sn	10 26 03.9	-0.3
THW	Thamme Wali	4.43	175	P	Pn	10 25 15.7	+0.4
JBG	Jabagly	5.23	354	d iPN	Pn	10 25 28.0	+1.8
AML	Almayashu	5.25	20	P	Pn	10 25 28.5	+1.7
	SNR=731						
CHM	Chimkent	5.25	346	⇓iP	Pn	10 25 28.0	+1.6
CHM				eS	Sn	10 26 25.9	+0.3
CHM	Chimkent	5.25	346	d iPN	Pn	10 25 27.9	+1.6
JMU	Jammu	5.39	145	i P	Pn	10 25 23.0	-5.3
JMU				i S	Sn	10 26 22.0	-7.0
SARP	Sargodha	5.41	167	P	Pn	10 25 27.7	-0.9
UCH	Uchtor	5.59	26	P	Pn	10 25 33.7	+2.2
	SNR=136						
DZA	Taraz	5.67	0	⇓iP	Pn	10 25 33.5	+1.5
DZA				eS	Sn	10 26 35.1	-0.6
DZA	Taraz	5.67	0	d iPN	Pn	10 25 33.5	+1.5
KZA	Kyzart	5.74	31	P	Pn	10 25 35.7	+2.3
	SNR=118						
EKS2	Erkin-Say	5.77	19	P	Pn	10 25 35.9	+2.4
	SNR=240						
KK31	Karatay Array	5.91	355	⇓P	Pn	10 25 36.6	+1.3
	197nm,0.3s,baz=182,slow=13,SNR=4593						
KK31				⇓S	Sn	10 26 37.9	-3.6
	410nm,0.4s,baz=174,slow=19,SNR=7.8						
KK31	Karatay Array	5.91	355	ePN	Pn	10 25 36.6	+1.3
KK31	Karatay Array	5.91	355		Pn	10 25 36.9	+1.6
KK31				Sn	Sn	10 26 40.6	-0.9
KKAR	Karatay Array	5.91	355	PN	Pn	10 25 36.7	+1.4
KKAR	Karatay Array	5.91	355		Pn	10 25 35.4	+0.1
KKAR				Sn	Sn	10 26 41.4	-0.2
KKAR	Karatay Array	5.91	355		Pn	10 25 36.7	+1.4
KKAR				Sn	Sn	10 26 39.8	-1.7
BRLS	Borolday	5.91	350	eS	Sn	10 26 34.5	-7.1
AAK	Ala-Archa	5.95	24	P	Pn	10 25 38.7	+2.6
	34nm,0.3s,baz=186,slow=6.7,SNR=194						
AAK				S	Sn	10 26 44.9	+2.0
	80nm,0.3s,baz=325,slow=22,SNR=19						
AAK	Ala-Archa	5.95	24	P	Pn	10 25 38.6	+2.6
	SNR=144						
AAK	Ala-Archa	5.95	24	i Pn	Pn	10 25 38.9	+2.8
	SNR=220						
AAK	Ala-Archa	5.95	24	⇓P	Pn	10 25 38.7	+2.6
	256nm,0.5s						
AAK				⇑S	Sn	10 26 44.5	+1.5
	740nm,0.6s						
AAK	Ala-Archa	5.95	24		Pn	10 25 38.6	+2.5
AAK					Sn	10 26 43.9	+1.0
THN	Thein Dam	6.02	141	i P	Pn	10 25 37.2	+0.4
THN				eS	Sn	10 26 42.0	-2.3
KBK	Karagaybulak	6.12	26	P	Pn	10 25 41.2	+2.8
	SNR=47						
FRU1	Bishkek	6.15	24	PN	Pn	10 25 42.1	+3.4
FRU1	Bishkek	6.15	24		Pn	10 25 42.1	+3.4
FRU1				Sn	Sn	10 26 49.0	+1.3
ULHL	Ulahol	6.32	36	P	Pn	10 25 43.6	+2.5
	SNR=30						
CHMS	Chumysh	6.36	24	P	Pn	10 25 44.1	+2.6
	SNR=97						
CHMS	Chumysh	6.36	24	⇓P	Pn	10 25 43.7	+2.1
	222nm,0.6s						
CHMS				⇑S	Sn	10 26 52.9	+0.2
	432nm,0.6s						
BOOM	Boomskoye usch	6.37	33	PN	Pn	10 25 44.2	+2.4
BOOM	Boomskoye usch	6.37	33		Pn	10 25 44.4	+2.5
BOOM				Sn	Sn	10 26 53.9	+0.6
DHRM	DHARAMSHALA	6.46	139	eP	Pn	10 25 43.0	-0.2
DHRM				eS	Sn	10 26 52.3	-3.2
USP	Ospenovka	6.53	21	P	Pn	10 25 45.8	+2.0
	SNR=74						
TKM2	Tokmak 2	6.59	29	P	Pn	10 25 47.2	+2.4
	SNR=154						
SGDS	Sogindy	6.74	21	⇓iP	Pn	10 25 48.3	+1.7
	43nm,0.4s						
SGDS				eS	Sn	10 27 01.5	-0.3
MTBS	Maitube	7.10	32	⇑iP	Pn	10 25 54.1	+2.4
MTBS	Maitube	7.10	32	⇑iPN	Pn	10 25 54.1	+2.4
BHK	Bhakra	7.19	142	ex	Pn	10 25 54.8	+2.0
BHK				ex	Sn	10 27 08.2	-4.8
TNSS	Tian-Shan	7.26	35	eP	Pn	10 25 56.0	+1.8
TNSS	Tian-Shan	7.26	35	ePN	Pn	10 25 55.9	+1.8
AAA	Alma-Ata	7.38	34	eP	Pn	10 25 57.8	+2.4
	140nm,0.6s						
AAA				eS	Sn	10 27 15.2	-2.4
AAA	Alma-Ata	7.38	34	ePN	Pn	10 25 57.8	+2.4
AAA				pmax	pmax		
	comp=Z,140nm,0.6s						
MDOK	Medeo	7.40	35	eP	Pn	10 25 57.8	+2.0
MDOK	Medeo	7.40	35	⇓P	Pn	10 25 58.0	+2.1
	comp=Z,117nm,0.6s						
MDOK	Medeo	7.40	35	ePN	Pn	10 25 57.8	+2.0
KNDC	Almaty	7.41	34	⇑P	Pn	10 25 58.9	+3.0
	comp=Z,403nm,0.8s						
KNDC	Almaty	7.41	34	PN	Pn	10 25 59.1	+3.3
KUU	Kurty	7.70	28	eP	Pn	10 26 01.2	+1.4
	comp=Z,61nm,0.9s						
KUU				eS	Sn	10 27 24.6	-0.8
KUU	Kurty	7.70	28	ePN	Pn	10 26 01.2	+1.4
KUU				pmax	pmax		
	comp=Z,61nm,0.9s						
SMLA	Simla	7.80	139	eP	Pn	10 26 00.6	-0.5
SMLA				eS	Sn	10 27 21.3	-6.5
HRA	Herat	7.86	252		Pn	10 26 03.2	+1.1
CHKK	Chushkaly	7.93	32	eP	Pn	10 26 03.8	+0.8
CHKK	Chushkaly	7.93	32	ePN	Pn	10 26 03.7	+0.8
SATY	Saty	7.99	41	eP	Pn	10 26 05.5	+1.6
	comp=Z,21nm,0.8s						
SATY				eS	Sn	10 27 29.1	-3.6
SATY	Saty	7.99	41	ePN	Pn	10 26 05.5	+1.6
SATY				pmax	pmax		
	comp=Z,21nm,0.8s						
BTLS	Baital	8.09	14	⇓iP	Pn	10 26 05.8	+0.7
	comp=Z,18nm,0.6s						
BTLS				eS	Sn	10 27 33.2	-1.7
BTLS	Baital	8.09	14	d iPN	Pn	10 26 05.7	+0.7
BTLS				pmax	pmax		
	comp=Z,18nm,0.6s						
KPKS	Kokpek	8.42	40	⇑iP	Pn	10 26 10.7	+0.9
	comp=Z,108nm,1.1s						
KPKS	Kokpek	8.42	40	c iPN	Pn	10 26 10.6	+0.9
KPKS				pmax	pmax		
	comp=Z,108nm,1.1s						
SHLS	Shalkode	8.63	44	⇑iP	Pn	10 26 16.9	+4.4
	comp=Z,36nm,0.6s						
SHLS				eS	Sn	10 27 54.1	+5.9
SHLS	Shalkode	8.63	44	c iPN	Pn	10 26 16.9	+4.4
SHLS				pmax	pmax		
	comp=Z,36nm,0.6s						
PDGK	Podgornoye	8.76	43	⇑P	Pn	10 26 15.1	+0.7
	comp=Z,87nm,1.2s						
PDGK	Podgornoye	8.76	43	PN	Pn	10 26 15.0	+0.7
DDI	Dehra Dun	8.90	139	eP	Pn	10 26 16.4	+0.2
TDK	Taldyqorghan	9.46	32	⇓eP	Pn	10 26 24.5	+0.7
	comp=Z,95nm,0.6s						
TDK	Taldyqorghan	9.46	32	deP	Pn	10 26 24.4	+0.7
TDK				pmax	pmax		
	comp=Z,95nm,0.6s						
AYAN	Aya Nagar	10.01	149	eP	Pn	10 26 28.6	-2.7
SONA	Sohna	10.20	150	ex	Sn	10 28 17.6	-8.7
JASL	Jaisalmer	10.27	182	eP	Pn	10 26 32.5	-2.4
GEYT	Alibeck	10.46	278	P	Pn	10 26 33.8	-3.7
	comp=Z,12nm,0.3s,baz=106,slow=11,SNR=34						
GEYT				S	Sn	10 28 22.8	-10
	comp=Z,43nm,0.3s,baz=125,slow=13,SNR=13						
GEYT				LR	LR	10 31 52.3	
	comp=Z,535nm,18.7s,baz=80,slow=44						
GEYT	Alibeck	10.46	278		Pn	10 26 33.9	-3.6
GYA0B	ALIBECK ARRAY	10.46	278	⇑P	Pn	10 26 33.8	-3.6
GYA0B				⇑S	Sn	10 28 25.6	-7.2
GYA0B	ALIBECK ARRAY	10.46	278		Pn	10 26 33.9	-3.6
PTH	Pithoragarh	10.70	133	ex	Pn	10 26 33.8	-7.0
PTH				ex	x	10 28 16.0	
LGTI	Lohaghat	10.79	133	eP	Pn	10 26 39.6	-2.3
LGTI				eS	Sn	10 28 30.4	-10
AJM	Ajmer	11.09	164	i P	Pn	10 26 42.0	-4.0
AJM				i x	x	10 28 42.0	
MAKZ	Makanchi	12.45	36	⇑P	Pn	10 27 04.0	-0.3
	comp=Z,83nm,1.0s						
MAKZ	Makanchi	12.45	36	P	Pn	10 27 04.1	-0.2
MAKZ	Makanchi	12.45	36		Pn	10 27 04.1	-0.2
MK31	Makanchi Array	12.59	37	⇓P	Pn	10 27 05.4	-0.8
	comp=Z,87nm,0.9s,baz=216,slow=13,SNR=318						
MK31	Makanchi Array	12.59	37	i P	Pn	10 27 05.3	-0.8
MK31	Makanchi Array	12.59	37		Pn	10 27 05.7	-0.4
MKAR	Makanchi Array	12.59	37	P	Pn	10 27 06.2	0.0
	comp=Z,2.1nm,0.3s,baz=220,slow=14,SNR=203						
MKAR	Makanchi Array	12.59	37		Pn	10 27 04.9	-1.3
BRZS	Berezniki	12.80	4	⇓iP	Pn	10 27 07.5	-1.5
	comp=Z,157nm,1.2s						
BRZS				eLR	LR	10 31 58.0	
BRZS	Berezniki	12.80	4	d iP	Pn	10 27 07.5	-1.5
BRZS				pmax	pmax		
	comp=Z,157nm,1.2s						
DANN	Dangsing	13.73	127	eP	Pn	10 27 17.8	-3.8
	comp=Z,149nm,0.4s						
BHUJ	Bhuj	13.99	186	eP	Pn	10 27 21.6	-3.2
WMQ	Urumqi	14.12	57	P	Pn	10 27 26.3	-0.1
WMQ				pP	P	10 27 41.5	+10
WMQ				S	Sn	10 29 58.0	-3.7
WMQ				pmax	pmax		
	comp=Z,63nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,230nm,4.9s						
WMQ				LR	LR		
	comp=Z,690nm,5.3s						
WMQ				LR	LR		
	comp=Z,400nm,7.5s						
WMQ				LR	LR		
	comp=Z,310nm,23.9s						
WMQ	Urumqi	14.12	57	P	Pn	10 27 26.5	+0.1
WMQ	Urumqi	14.12	57		Pn	10 27 26.5	+0.1
ZSN	Zaisan	14.32	40	eP	Pn	10 27 31.7	+2.7
ZSN				eS	Sn	10 30 03.3	-3.2
ZSN	Zaisan	14.32	40	eP	Pn	10 27 31.7	+2.7
ZSN				eS	Sn	10 30 03.2	-3.2
KURBB	Kurchatov Arra	14.37	19	P	Pn	10 27 27.6	-2.0
	comp=Z,0.3nm,0.3s,baz=209,slow=12,SNR=64						
KURBB				S	Sn	10 30 15.3	+7.7
	comp=Z,0.2nm,0.3s,baz=208,slow=19,SNR=6.2						
KURK	Kurchatov	14.48	19	⇓P	Pn	10 27 28.7	-2.2
	comp=Z,118nm,1.2s						
KURK	Kurchatov	14.48	19	i P	Pn	10 27 28.6	-2.4
KURK				pmax	pmax		
	comp=Z,118nm,1.2s						
KURK	Kurchatov	14.48	19		Pn	10 27 28.9	-2.0
GKN	Gorkha	14.53	125	eP	Pn	10 27 27.7	-4.2
	comp=Z,110nm,0.2s						
AB31	Akbulak array	14.57	329	⇓P	Pn	10 27 29.3	-2.9
	comp=Z,126nm,0.7s,baz=139,slow=13,SNR=1336						
AB31				⇑S	Sn	10 30 04.5	-7.8
	comp=Z,265nm,0.6s,baz=150,slow=23,SNR=18						
AB31	Akbulak array	14.57	329	eP	Pn	10 27 29.2	-2.9
ABKAR	Akbulak array	14.57	329		Pn	10 27 29.1	-3.0
ABKAR	Akbulak array	14.57	329	Pn	Pn	10 27 29.5	-2.6
SEM	Semipalatinsk	14.68	23	eP	Pn	10 27 30.8	-2.9
SEM	Semipalatinsk	14.68	23	eP	Pn	10 27 30.8	-2.9
BHPL	Bhopal	14.91	157	ex	Pn	10 27 32.9	-3.8
BHPL				IVmB_BB		10 27 41.9	
	comp=Z,1µm,0.5s						
KKN	Kakani	15.09	125	eP	Pn	10 27 34.7	-4.5
DMN	Daman	15.10	125	eP	Pn	10 27 35.5	-3.8
PKIN	Phulchoki	15.31	125	eP	Pn	10 27 37.7	-4.3
PKI	Pulchoki	15.32	125	eP	Pn	10 27 37.8	-4.5
GUN	Gumba	15.41	123	eP	Pn	10 27 38.8	-4.6
JIRN	Jiri	15.78	123	eP	Pn	10 27 43.8	-4.3
	comp=Z,310nm,0.4s						
BVAR	Borovoye Array	15.82	358	P	Pn	10 27 46.5	-1.5
	comp=Z,7.5nm,0.3s,baz=168,slow=12,SNR=112						
BVAR				S	Sn	10 30 36.3	-6.2
	comp=Z,5.3nm,0.3s,baz=168,slow=21,SNR=6.4						
BRVK	Borovoye	15.85	358	⇓P	Pn	10 27 46.7	-1.8
	comp=Z,83nm,0.8s						
BRVK				⇓S	Sn	10 30 38.0	-5.4
	comp=Z,136nm,1.0s						
BRVK	Borovoye	15.85	358	P	Pn	10 27 46.9	-1.5
BRVK	Borovoye	15.85	358	P	Pn	10 27 47.1	-1.3
BRVK				pmax	pmax		
	comp=Z,60nm,0.7s						
BRVK	Borovoye	15.85	358	P	Pn	10 27 47.1	-1.3
AKTO	Aktyubinsk	16.27	328	P	Pn	10 27 52.2	-1.4
	comp=Z,6.5nm,0.3s,baz=135,slow=13,SNR=76						
AKTO				S	Sn	10 30 43.6	-10
	comp=Z,8.4nm,0.3s,baz=14,slow=21,SNR=6.4						
AKTO	Aktyubinsk	16.27	328	⇑P	Pn	10 27 50.3	-3.3
	comp=Z,124nm,0.8s						
AKTO				⇓S	Sn	10 30 45.1	-8.4
	comp=Z,278nm,0.9s						
RAMN	Ramite	16.52	124	eP	Pn	10 27 53.9	-3.3
BANOM	Banah	16.99	233	i Pn	Pn	10 28 02.3	-0.5
	SNR=14						
BANOM	Banah	16.99	233	P	Pn	10 28 03.7	+0.9
	SNR=7.9						
SHME	Shamm	17.00	233	i Pn	Pn	10 28 03.1	+0.2
	SNR=16						
TAPN	Taplejung	17.01	121	eP	Pn	10 27 59.9	-3.4
DGZ	Jazzator, Alta	17.08	38	c iP	Pn	10 28 01.9	-1.9
ODAN	Odare	17.11	123	eP	Pn	10 28 01.0	-3.4
	comp=Z,213nm,0.8s						
NGP	Nagpur	17.38	155	ex	Pn	10 28 05.1	-2.4
NGP				ex	Sn	10 31 15.0	-5.7
MDH	Madha	17.43	231	P	P	10 28 06.2	-2.0
MDH	Madha	17.43	231	P	P	10 28 08.1	-0.2
MSFE	Esma-Masafi	17.48	232	Pn	Pn	10 28 10.2	+1.5
WSAR	Wadi Sarin	17.68	221	P	P	10 28 10.4	-0.4
	comp=Z,1.0nm,0.3s,baz=60,slow=6.0,SNR=13						
WSAR	Wadi Sarin	17.68	221	P	P	10 28 11.6	+0.7
UOSS	Minazif	17.75	231	P	P	10 28 12.1	+0.4
UOSS	Minazif	17.75	231	P	P	10 28 12.1	+0.4
LKRN	Lenkeran, Azer	17.79	282	P	P	10 28 12.2	+0.2
HATD	Hatta, Dubai	17.88	231	P	P	10 28 13.2	0.0
WBK	Wadi Bani Khal	18.02	220	P	P	10 28 15.8	+1.1
ASHO	Ashiyiah	18.03	230	i P	P	10 28 15.8	+1.0
	SNR=22						
ASHO	Ashiyiah	18.03	230	P	P	10 28 15.8	+1.0
	SNR=16						
NAZ	Nazwa, Dubai	18.06	232	i P	P	10 28 14.7	-0.4
	SNR=8.8						
HOQ	Hoqain	18.12	225	P	P	10 28 16.8	+1.0
LSA	Lhasa	18.19	109	P	Pn	10 28 18.8	+1.0
LSA				pmax	pmax		
	comp=Z,53nm,0.6s						
LSA	Lhasa	18.19	109	P	P	10 28 16.5	-0.5
LSA				pmax	pmax		
	comp=Z,28nm,0.8s						
LSA	Lhasa	18.19	109	P	P	10 28 16.5	-0.5
BOK	Bokaro	18.35	133	ex	P	10 28 16.3	-2.0
AKT	Akhty	18.68	290	eP	P	10 28 21.3	-0.5
AKT				eS	S	10 31 49.4	-0.5
AKT				pmax	pmax		
	comp=Z,26nm,0.5s						
ALNE	Al Ain	18.68	230	i P	P	10 28 22.6	+0.6
	SNR=27						
POO	Poona	18.76	172	ex	S	10 31 50.4	-1.3
ARQ	Araqi	18.77	227	P	P	10 28 24.0	+1.1
	SNR=6.5						
AJN	Ajban	18.79	232	P	Pn	10 28 25.0	+0.6
	SNR=5.8						
MAK	Makhachkala	19.03	295	eP	P	10 28 23.3	-2.3
MAK				eS	S	10 31 53.9	-3.2
MAK				pmax	pmax		
	comp=Z,209nm,1.4s						
MAK				MLR	MLR		
	comp=Z,262nm,16.0s						
SEKA	Sheki	19.05	290	P	P	10 28 27.1	+1.2
ZAA0	Zalesovo Array	19.17	25	⇓P	P	10 28 27.1	+0.1
	comp=Z,10nm,0.6s						
ZAA0	Zalesovo Array	19.17	25	P	P	10 28 27.3	+0.3
ZAA0				IAmb	IAmb	10 28 28.1	
	comp=Z,88nm,0.6s						
ZALV	Zalesovo Beam	19.17	25	P	P	10 28 27.2	+0.2
	comp=Z,18nm,0.3s,baz=223,slow=11,SNR=393						
ZALV				S	S	10 31 53.5	-6.3
	baz=219,slow=30,SNR=1.7						
ZALV				LR	LR	10 36 11.5	
	comp=Z,260nm,20.6s,baz=210,slow=37						
ZALV	Zalesovo Beam	19.17	25	P	P	10 28 26.9	-0.1
GANJ	Ganja	19.68	288	P	P	10 28 34.5	+1.7
KAD	Karad	20.00	172	i x	P	10 28 41.9	+5.5
KAD				i x	Sn	10 32 23.4	-0.3
GROC	Groznyy	20.31	295	eP	P	10 28 41.3	+1.9
GROC				e*SP	sP	10 29 07.2	-0.3
GROC				eS	S	10 32 24.9	+2.6
GROC				pmax	pmax		
	comp=Z,61nm,0.7s						
NAX	Nakhchivan	20.33	283	P	P	10 28 41.3	+1.5
GUWA	GUWAHATI	20.52	117	eP	P	10 28 42.4	+0.6
HYB	Hyderabad	20.75	160	i P	P	10 28 44.0	-0.4
HYB				eS	S	10 32 21.0	-10
HYB	Hyderabad	20.75	160	eP	P	10 28 44.5	+0.1
SVE	Sverdlovsk	20.86	343	deP	P	10 28 46.4	+1.1
SVE				eS	S	10 32 30.5	-2.5
SVE				pmax	pmax		
	comp=Z,74nm,0.9s						
MZR	Muzera	20.86	232	i P	P	10 28 45.8	+0.2
	SNR=9.1						
MZR	Muzera	20.86	232	P	P	10 28 45.6	-0.1
	SNR=11						
GNI	Garni	20.89	286	P	P	10 28 46.9	+1.0
	comp=Z,39nm,0.6s,baz=74,slow=2.7,SNR=8.4						
GNI	Garni	20.89	286	i P	Pn	10 28 49.1	-0.1
	SNR=10						
GNI	Garni	20.89	286	P	Pn	10 28 49.2	0.0
GNI				pmax	pmax		
	comp=Z,96nm,0.9s						
GNI	Garni	20.89	286	P	Pn	10 28 49.1	0.0
GNI				IAmb	IAmb	10 28 57.5	
	comp=Z,96nm,0.9s						
ARU	Arti	21.02	340	P	P	10 28 48.3	+1.2
	comp=Z,11nm,0.5s,baz=160,slow=7.3,SNR=44						
ARU				S	S	10 32 28.3	-7.9
	comp=Z,8.3nm,0.4s,baz=295,slow=22,SNR=8.9						
ARU	Arti	21.02	340	d iP	P	10 28 48.2	+1.2
ARU						10 29 17.6	

ARU				S	**S**	**10 32 40.9**	**+4.7**
ARU				SS	Sn	10 33 11.6	+24
ARU				pmax	pmax		
	comp=Z,60nm,0.8s						
ARU	**Arti**	**21.02**	**340**	P	**P**	**10 28 48.5**	**+1.4**
ARU				IAmb	IAmb	10 28 54.7	
	comp=Z,105nm,1.2s						
TEZP	**TEZPUR**	**21.07**	**114**	*e*P	**P**	**10 28 48.2**	**+0.4**
TEZP				IAmb	IAmb	10 28 54.1	
	comp=Z,118nm,1.2s						
TEZP				*i* pP	**pP**	**10 29 10.8**	**+5.1**
BWNR	**Bhubaneshwar**	**21.09**	**139**	*e*P	**P**	**10 28 49.8**	**+1.8**
BWNR				*i* x	x	10 28 52.7	
ZEI	**Tsey**	**21.64**	**293**	*e*P	**P**	**10 28 53.5**	**-0.4**
ZEI				pmax	pmax		
	comp=Z,23nm,0.6s						
NCK	**Nalchik**	**21.94**	**295**	*i* P	**P**	**10 28 57.4**	**+0.5**
NCK				pmax	pmax		
	comp=Z,46nm,0.9s						
KARS	**Kars**	**22.15**	**288**	P	**P**	**10 29 04.2**	**+4.8**
KBZ	**Khabaz**	**22.47**	**296**	P	**P**	**10 29 02.5**	**-0.1**
	comp=Z,13nm,0.8s,baz=116,slow=7.6,SNR=26						
KBZ				S	**S**	**10 33 06.6**	**+3.4**
	comp=Z,9.1nm,0.8s,baz=266,slow=15,SNR=1.6						
KBZ				LR	LR	10 40 49.9	
	comp=Z,91nm,18.3s,baz=103,slow=44						
KBZ	**Khabaz**	**22.47**	**296**	*i* P	**P**	**10 29 01.8**	**-0.7**
KBZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GTA	**Gaotai**	**22.47**	**76**	P	**P**	**10 29 03.5**	**+0.7**
GTA				pP	pP	10 29 24.0	+3.1
GTA				sP	sP	10 29 36.8	+4.8
GTA				S	**S**	**10 32 57.8**	**-5.9**
GTA				pmax	pmax		
	comp=Z,75nm,1.2s						
GTA				pmax	pmax		
	comp=Z,330nm,6.2s						
GTA				LR	LR		
	comp=Z,210nm,8.3s						
GTA				LR	LR		
	comp=Z,230nm,8.9s						
GTA				LR	LR		
	comp=Z,130nm,13.1s						
NEY	**Neytrino**	**22.54**	**294**	*i* P	**P**	**10 29 05.0**	**+1.4**
NEY				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GOF	**Gofitskoye**	**22.57**	**299**	⇑*e*P	**P**	**10 29 04.4**	**+0.8**
GOF				pmax	pmax		
	comp=Z,62nm,0.8s						
KVAR	**Kislovodsk Arr**	**22.64**	**296**	P	**P**	**10 29 04.5**	**0.0**
	comp=Z,3.6nm,0.5s,baz=270,slow=20,SNR=2.4						
KVAR				S	**S**	**10 33 12.1**	**+5.7**
	comp=Z,37nm,0.8s,baz=197,slow=11,SNR=4.3						
SHA1	**Shidzhatmaz**	**22.64**	**296**	*i* P	**P**	**10 29 04.5**	**-0.2**
KIV	**Kislovodsk**	**22.65**	**296**	P	**P**	**10 29 04.4**	**-0.2**
KIV	**Kislovodsk**	**22.65**	**296**	*e*P	**P**	**10 29 04.7**	**+0.1**
KIV				*e*S	**S**	**10 33 07.7**	**+1.3**
KIV				pmax	pmax		
	comp=Z,47nm,1.1s						
KIV				MLR	MLR		
	comp=Z,303nm,14.0s						
KIV	**Kislovodsk**	**22.65**	**296**	P	**P**	**10 29 03.9**	**-0.7**
BRDH	**Bariadhala**	**22.77**	**124**	P	**P**	**10 29 03.0**	**-2.9**
	comp=Z,77nm,0.3s,baz=282,slow=18,SNR=1.7						
BCA	**Borcka**	**23.26**	**290**	⇓P	**P**	**10 29 13.0**	**+2.5**
DMTO	**DMTO**	**24.16**	**221**	P	**P**	**10 29 18.2**	**-0.6**
WHFO	**Wadi Hawf**	**24.62**	**223**	P	**P**	**10 29 22.5**	**-0.6**
WHFO				P	**P**	**10 29 22.5**	**-0.6**
WHFO				S	**S**	**10 33 44.1**	**+5.7**
WHFO				S	**S**	**10 33 44.1**	**+5.7**
SOC	**Sochi**	**24.75**	**295**	*e*P	**P**	**10 29 22.5**	**-1.5**
SOC				*e**PP	**pP**	**10 29 40.1**	**-3.8**
SOC				*e*S	**S**	**10 33 40.6**	**+0.6**
SOC				pmax	pmax		
	comp=Z,34nm,0.9s						
SOC				MLR	MLR		
	comp=Z,180nm,16.0s						
VRH	**Novokhopyorsk**	**25.16**	**313**	*e*P	**P**	**10 29 28.1**	**+0.5**
VRH				*e*S	**S**	**10 33 46.1**	**-0.3**
VRH				pmax	pmax		
	comp=Z,30nm,0.8s						
VRH				smax	smax		
	comp=E,230nm,2.3s						
ABTO	**Aybut**	**25.34**	**223**	P	**P**	**10 29 29.3**	**-0.3**
	SNR=7.9						
MOY	**Mondy**	**25.45**	**46**	*e*P	**P**	**10 29 32.3**	**+1.9**
MOY				pmax	pmax		
	comp=Z,96nm,1.7s						
KIRV	**Kirov**	**25.69**	**333**	P	**P**	**10 29 33.4**	**+1.1**
	comp=Z,61nm,0.7s,baz=180,slow=2.2,SNR=16						
KIRV	**Kirov**	**25.69**	**333**	*i* P	**P**	**10 29 31.8**	**-0.4**
MALT	**Malatya**	**25.91**	**283**	P	**P**	**10 29 37.8**	**+3.1**
LZH	**Lanzhou**	**26.10**	**83**	*e*P	**P**	**10 29 38.0**	**+1.6**
LZH				pP	pP	10 29 57.3	+0.4
LZH				S	**S**	**10 34 04.8**	**+3.0**
LZH				sS	sS	10 34 42.0	+4.9
LZH				pmax	pmax		
	comp=Z,34nm,1.2s						
LZH				pmax	pmax		
	comp=Z,200nm,5.4s						
LZH				LR	LR		
	comp=Z,170nm,14.0s						
LZH				LR	LR		
	comp=Z,200nm,14.2s						
LZH				LR	LR		
	comp=Z,250nm,15.2s						
ZAK	**Zakamensk**	**26.36**	**50**	*e*P	**P**	**10 29 39.7**	**+1.1**
ZAK				pmax	pmax		
	comp=Z,26nm,1.2s						
VORD	**Divnogorie**	**26.52**	**311**	*e*P	**P**	**10 29 40.2**	**+0.4**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VSR	**Storozhevoye**	**26.67**	**312**	*e*P	**P**	**10 29 41.2**	**0.0**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VORR	**Voronezh**	**26.80**	**313**	*e*P	**P**	**10 29 42.0**	**-0.4**
VORR				pmax	pmax		
	comp=Z,400nm,0.8s						
TLY	**Talaya**	**26.99**	**47**	P	**P**	**10 29 46.1**	**+2.0**
	comp=Z,5.7nm,0.5s,baz=248,slow=9.1,SNR=15						
TLY	**Talaya**	**26.99**	**47**	*e*P	**P**	**10 29 46.2**	**+2.0**
TLY				*e*		10 30 23.0	
TLY				*e*PPP	PPP	10 30 36.4	
TLY				pmax	pmax		
	comp=Z,34nm,0.8s						
TLY				MLR	MLR		
	comp=E,109nm,6.0s						
TLY	**Talaya**	**26.99**	**47**	P	**P**	**10 29 46.1**	**+2.0**
GAZ	**Gaziantep**	**27.04**	**280**	P	**P**	**10 29 46.4**	**+1.5**
LPSR	**Galich'ya Gora**	**27.29**	**315**	*e*P	**P**	**10 29 46.9**	**+0.1**
LPSR				*e*S	**S**	**10 34 26.5**	**+6.6**
LPSR				pmax	pmax		
	comp=Z,30nm,0.8s						
LPSR				smax	smax		
	comp=N,450nm,2.0s						
IRK	**Irkutsk**	**27.55**	**46**	*e*P	**P**	**10 29 50.2**	**+1.1**
IRK				pmax	pmax		
	comp=Z,81nm,2.4s						
CD2	**Chengdu**	**27.55**	**94**	P	**P**	**10 29 50.5**	**+1.1**
CD2				pP	pP	10 30 11.5	+1.6
CD2				S	**S**	**10 34 29.5**	**+4.9**
CD2				sS	sS	10 35 01.5	+1.4
CD2				pmax	pmax		
	comp=Z,110nm,6.5s						
CD2				LR	LR		
	comp=Z,260nm,11.0s						
CD2				LR	LR		
	comp=Z,180nm,9.2s						
CD2				LR	LR		
	comp=Z,160nm,10.0s						
SONM	**Songino Array**	**27.76**	**56**	P	**P**	**10 29 52.6**	**+1.4**
	comp=Z,26nm,0.8s,baz=256,slow=10.0,SNR=128						
SONM				LR	LR	10 41 11.1	
	comp=Z,231nm,20.3s,baz=266,slow=37						
SONM	**Songino Array**	**27.76**	**56**	P	**P**	**10 29 51.4**	**+0.3**
ULN	**Ulaanbaatar**	**28.20**	**56**	*c* *i*P	**P**	**10 29 56.1**	**+1.0**
ULN				pmax	pmax		
	comp=Z,28nm,0.8s						
ULN	**Ulaanbaatar**	**28.20**	**56**	P	**P**	**10 29 56.2**	**+1.0**
ULN				IAmb	IAmb	10 29 57.3	
	comp=Z,37nm,0.7s						
ASF	**Jabal al Asfar**	**28.60**	**270**	P	**P**	**10 30 00.2**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=303,slow=21,SNR=3.9						
BZK	**Bozkurt**	**28.95**	**291**	⇑P	**P**	**10 30 03.4**	**+1.8**
PRGR	**Permogore**	**29.21**	**335**	*e*P	**P**	**10 30 03.5**	**-0.2**
PRGR				pmax	pmax		
	comp=Z,14nm,0.9s						
ILGA	**Ilgaz**	**29.23**	**289**	P	**P**	**10 30 04.1**	**-0.3**
MOS	**Moscow**	**29.24**	**320**	*e*P	**P**	**10 30 04.2**	**+0.2**
MOS				*e*		10 30 35.8	
MOS				*e*PPP	PPP	10 31 07.0	
MOS				*e*S	**S**	**10 34 49.8**	**-0.7**
MOS				pmax	pmax		
	comp=Z,65nm,0.6s						
KMI	**Kunming**	**29.37**	**105**	P	**P**	**10 30 06.0**	**+0.2**
KMI				S	**S**	**10 34 51.0**	**-2.6**
KMI				sS	sS	10 35 28.8	-0.3
KMI				pmax	pmax		
	comp=Z,16nm,0.6s						
KMI				pmax	pmax		
	comp=Z,86nm,6.0s						
KMI				LR	LR		
	comp=Z,220nm,22.9s						
KMI				LR	LR		
	comp=Z,110nm,28.3s						
KMI				LR	LR		
	comp=Z,370nm,36.8s						
BR131	**Keskin Array S**	**29.42**	**287**	P	**P**	**10 30 07.9**	**+1.8**
	SNR=8.6						
BR131	**Keskin Array S**	**29.42**	**287**	*c* *i*P	**P**	**10 30 07.4**	**+1.4**
BR131	**Keskin Array S**	**29.42**	**287**	P	**P**	**10 30 06.7**	**+0.6**
BRTR	**Keskin Array B**	**29.43**	**287**	P	**P**	**10 30 07.5**	**+1.4**
	comp=Z,6.8nm,0.7s,baz=100,slow=8.4,SNR=28						
BRTR				LR	LR	10 44 47.0	
	comp=Z,64nm,20.0s,baz=76,slow=42						
BRTR	**Keskin Array B**	**29.43**	**287**	P	**P**	**10 30 06.6**	**+0.6**
MMAI	**Mount Meron Ar**	**29.52**	**273**	P	**P**	**10 30 07.2**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=57,slow=5.3,SNR=3.7						
OBN	**Obninsk**	**29.54**	**318**	P	**P**	**10 30 07.7**	**+1.1**
	comp=Z,20nm,0.6s,baz=112,slow=21,SNR=13						
OBN	**Obninsk**	**29.54**	**318**	*c* *i*P	**P**	**10 30 07.7**	**+1.1**
OBN				*e*		10 30 32.0	
OBN				*e*		10 30 40.3	
OBN						10 31 01.0	
OBN				*e*		10 33 10.6	
OBN				*e*S	**S**	**10 34 55.7**	**+0.6**
OBN				SS	**ScP**	**10 36 40.0**	**-3.9**
OBN				pmax	pmax		
	comp=Z,73nm,0.6s						
OBN				MLR	MLR		
	comp=Z,238nm,19.0s						
OBN	**Obninsk**	**29.54**	**318**	P	**P**	**10 30 07.5**	**+0.9**
ANTO	**Ankara**	**30.05**	**287**	P	**P**	**10 30 14.0**	**+2.5**
ANTO				pmax	pmax		
	comp=Z,17nm,1.2s						
BTO	**Baotou**	**30.18**	**71**	*e*P	**P**	**10 30 12.5**	**-0.2**
CHTO	**Chiang Mai**	**30.38**	**120**	P	**P**	**10 30 15.0**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CHTO	**Chiang Mai**	**30.38**	**120**	P	**P**	**10 30 15.0**	**+0.5**
CMAR	**Chiang Mai Arr**	**30.62**	**120**	P	**P**	**10 30 15.8**	**-0.9**
	comp=Z,2.7nm,0.7s,baz=310,slow=8.5,SNR=18						
CMAR	**Chiang Mai Arr**	**30.62**	**120**	P	**P**	**10 30 16.3**	**-0.4**
CMAR	**Chiang Mai Arr**	**30.62**	**120**	P	**P**	**10 30 16.3**	**-0.4**
XAN	**Xi'an**	**30.64**	**85**	P	**P**	**10 30 17.5**	**+0.7**
XAN				pmax	pmax		
	comp=Z,32nm,1.0s						
XAN				pmax	pmax		
	comp=Z,55nm,4.8s						
XAN				LR	LR		
	comp=Z,140nm,17.7s						
XAN				LR	LR		
	comp=Z,290nm,17.8s						
XAN				LR	LR		
	comp=Z,200nm,14.4s						
XAN	**Xi'an**	**30.64**	**85**	P	**P**	**10 30 17.5**	**+0.7**
XAN				pmax	pmax		
	comp=Z,32nm,1.0s						
XAN	**Xi'an**	**30.64**	**85**	P	**P**	**10 30 17.4**	**+0.7**
KLMR	**Klimovskoe**	**30.96**	**330**	*e*P	P	10 30 13.8	-5.4
KLMR				pmax	pmax		
	comp=Z,26nm,0.8s						
KLMR	**Klimovskoe**	**30.96**	**330**	*e*P	P	10 30 13.8	-5.4
KLMR				AMP		10 30 20.9	
	comp=Z,26nm,0.8s						
MDUB	**Mudurnu**	**31.19**	**289**	P	**P**	**10 30 23.1**	**+1.5**
MDUB				IAmb	IAmb	10 30 24.4	
	comp=Z,70nm,0.8s						
HHC	**Hu-ho-hao-te**	**31.32**	**71**	*e*P	**P**	**10 30 23.8**	**+1.1**
HHC				pmax	pmax		
	comp=Z,1μm,4.4s						
GYA	**Guiyang**	**31.76**	**99**	⇓*i*P	**P**	**10 30 27.8**	**+1.0**
GYA				pP	pP	10 30 47.5	0.0
GYA				sP	sP	10 30 59.3	+1.6
GYA				PP	**PnPn**	**10 31 35.8**	**+1.7**
GYA				S	S	10 35 21.5	-9.3
GYA				sS	sS	10 36 06.5	+0.1
GYA				ScP	**ScP**	**10 36 51.3**	**-0.7**
GYA				pmax	pmax		
	comp=Z,30nm,0.8s						
GYA				pmax	pmax		
	comp=Z,70nm,5.6s						
ISP	**Isparta**	**32.14**	**284**	P	**P**	**10 30 30.8**	**+0.8**
ISP				pmax	pmax		
	comp=Z,15nm,0.7s						
ISP	**Isparta**	**32.14**	**284**	P	**P**	**10 30 30.8**	**+0.8**
ENH	**Enshi**	**32.37**	**91**	P	**P**	**10 30 32.4**	**+0.5**
SLVN	**Son La**	**32.38**	**110**	P	**P**	**10 30 32.8**	**+0.7**
KIS	**Kishinev**	**32.62**	**301**	*e*P	**P**	**10 30 35.0**	**+1.1**
KIS	**Kishinev**	**32.62**	**301**	*e*P	**P**	**10 30 35.0**	**+1.1**
KIS				*e*		10 30 57.0	
KIS				*e*		10 31 07.5	
AKASG	**Malin Array Be**	**32.67**	**308**	P	**P**	**10 30 34.5**	**+0.3**
	comp=Z,8.4nm,0.6s,baz=82,slow=7.0,SNR=28						
AKASG				PcP	**PcP**	**10 33 18.3**	**+0.1**
	comp=Z,5.5nm,0.8s,baz=87,slow=2.6,SNR=5.0						
AKASG				LR	LR	10 45 54.7	
	comp=Z,94nm,18.6s,baz=75,slow=40						
AKASG	**Malin Array Be**	**32.67**	**308**	*i* P	**P**	**10 30 32.5**	**-1.7**
AKASG				pmax	pmax		
	comp=Z,12nm,0.5s						
AKASG	**Malin Array Be**	**32.67**	**308**	P	**P**	**10 30 34.1**	**-0.1**
AKASG					**PcP**	**10 33 17.7**	**-0.4**
AKBB	**Malin Array Si**	**32.67**	**308**	P	**P**	**10 30 34.5**	**+0.3**
AKBB				pmax	pmax		
	comp=Z,18nm,0.7s						
AKBB	**Malin Array Si**	**32.67**	**308**	P	**P**	**10 30 34.5**	**+0.3**
AKBB				IAmb	IAmb	10 30 35.6	
	comp=Z,18nm,0.7s						
TOPG	**Topolog**	**32.92**	**297**	⇓P	**P**	**10 30 37.9**	**+1.3**
SORM	**Soroca**	**32.98**	**303**	⇓P	**P**	**10 30 37.7**	**+0.7**
SORM	**Soroca**	**32.98**	**303**	⇓P	**P**	**10 30 37.7**	**+0.7**
CFR	**Carcaliu**	**33.09**	**298**	⇓P	**P**	**10 30 39.3**	**+1.3**
CFR	**Carcaliu**	**33.09**	**298**	⇓P	**P**	**10 30 39.3**	**+1.3**
PBKT	**Sadao Pong**	**33.32**	**120**	P	**P**	**10 30 41.0**	**+0.8**
NRIK	**Noril'sk**	**33.38**	**10**	P	**P**	**10 30 41.6**	**+1.3**
	comp=Z,24nm,0.9s,baz=202,slow=6.4,SNR=24						
NRIK				LR	LR	10 46 15.4	
	comp=Z,169nm,18.0s,baz=210,slow=40						
NRIK	**Noril'sk**	**33.38**	**10**	*i* P	**P**	**10 30 41.3**	**+1.0**
NRIK				pmax	pmax		
	comp=Z,27nm,1.1s						
TMCR	**Tamitsa**	**33.49**	**334**	*e*P	**P**	**10 30 40.8**	**-0.4**
TMCR				pmax	pmax		
	comp=Z,26nm,0.5s						
MANT	**Manisa**	**33.52**	**285**	P	**P**	**10 30 43.9**	**+1.7**
VRI	**Vrincioaia**	**34.06**	**299**	⇓P	**P**	**10 30 48.9**	**+2.4**
VRI	**Vrincioaia**	**34.06**	**299**	⇓P	**P**	**10 30 48.9**	**+2.4**
TESR	**Tescani**	**34.10**	**300**	⇑P	**P**	**10 30 48.3**	**+1.5**
PLOR	**Plostina**	**34.11**	**299**	⇑P	**P**	**10 30 49.4**	**+2.4**
PLOR	**Plostina**	**34.11**	**299**	⇑P	**P**	**10 30 49.4**	**+2.4**
BIZ	**Bicaz**	**34.48**	**301**	⇓P	**P**	**10 30 51.9**	**+1.9**
MLR	**Muntele Rosu**	**34.62**	**298**	⇓P	**P**	**10 30 54.3**	**+2.9**
MLR	**Muntele Rosu**	**34.62**	**298**	P	**P**	**10 30 53.6**	**+2.2**
MLR				pmax	pmax		
	comp=Z,36nm,1.1s						
MLR	**Muntele Rosu**	**34.62**	**298**	P	**P**	**10 30 53.6**	**+2.2**
MLR				IAmb	IAmb	10 30 55.2	
	comp=Z,36nm,1.1s						
BOD	**Bodaibo**	**34.66**	**40**	*e*P	**P**	**10 30 52.0**	**+0.5**
BOD				pmax	pmax		
	comp=Z,73nm,1.2s						
ELND	**Elena**	**34.87**	**294**	⇓P	**P**	**10 30 55.2**	**+1.8**
BJI	**Beijing**	**34.92**	**71**	P	**P**	**10 30 54.5**	**+0.6**
BJI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
EZN	**Ezine**	**34.98**	**288**	P	**P**	**10 30 56.9**	**+2.5**
DOPR	**Dopca**	**34.99**	**299**	⇓P	**P**	**10 30 56.6**	**+2.1**
BURAR	**Bucovina Array**	**35.08**	**302**	⇑P	**P**	**10 30 56.7**	**+1.4**
BURAR	**Bucovina Array**	**35.08**	**302**	⇑P	**P**	**10 30 56.7**	**+1.4**
BURAR	**Bucovina Array**	**35.08**	**302**	P	**P**	**10 30 55.9**	**+0.6**
BUR08	**Bucovina Ar. S**	**35.09**	**302**	P	**P**	**10 30 56.6**	**+1.1**
VOIR		**35.25**	**298**	⇓P	**P**	**10 30 58.2**	**+1.3**
VOIR		**35.25**	**298**	⇓P	**P**	**10 30 58.2**	**+1.3**
KARP	**Karpathos**	**35.31**	**281**	P	**P**	**10 30 58.5**	**+1.1**
IZAR	**Zarasai**	**35.33**	**316**	*e*P	**P**	**10 30 58.9**	**+1.7**
ISAL	**Salakas**	**35.36**	**316**	*e*P	**P**	**10 30 59.0**	**+1.5**
ARCR	**ARCALIA**	**35.67**	**301**	⇓P	**P**	**10 31 03.1**	**+2.8**
VSU	**Vasula**	**35.76**	**321**	*e*P	**P**	**10 31 01.5**	**+0.7**
VSU	**Vasula**	**35.76**	**321**	*ce*P	**P**	**10 31 01.2**	**+0.4**
VSU				pmax	pmax		
	comp=Z,158nm,1.0s						
LVV	**L'vov**	**35.91**	**306**	*e*P	**P**	**10 31 03.3**	**+1.0**
WHN	**Wuhan**	**36.14**	**88**	⇓P	**P**	**10 31 05.8**	**+1.3**
WHN				pmax	pmax		
	comp=Z,66nm,1.1s						
APE	**Apeiranthos**	**36.18**	**284**	⇑P	**P**	**10 31 05.8**	**+1.0**
APE	**Apeiranthos**	**36.18**	**284**	⇑P	**P**	**10 31 05.8**	**+1.0**
PABE	**Paberze**	**36.55**	**315**	*e*P	**P**	**10 31 08.8**	**+1.2**
HIA	**Hailar**	**36.70**	**55**	P	**P**	**10 31 09.2**	**+0.1**
HIA				pmax	pmax		
	comp=Z,18nm,0.9s						
HIA	**Hailar**	**36.70**	**55**	P	**P**	**10 31 09.2**	**+0.1**
HIA				IAmb	IAmb	10 31 11.5	
	comp=Z,18nm,0.9s						
KWP	**Kalwaria Pacla**	**36.76**	**305**	*e*P	**P**	**10 31 12.1**	**+2.5**
KWP	**Kalwaria Pacla**	**36.76**	**305**	*e*P	**P**	**10 31 12.1**	**+2.5**
KWP	**Kalwaria Pacla**	**36.76**	**305**	P	**P**	**10 31 10.5**	**+0.9**
KWP				IAmb	IAmb	10 31 13.1	
	comp=Z,56nm,1.4s						
SUW	**Suwalki**	**36.78**	**313**	P	**P**	**10 31 09.0**	**-0.6**
SUW				pmax	pmax		
	comp=Z,48nm,1.2s						
SUW	**Suwalki**	**36.78**	**313**	P	**P**	**10 31 09.0**	**-0.6**
SUW				IAmb	IAmb	10 31 12.2	
	comp=Z,48nm,1.2s						
VTS	**Vitosha**	**36.83**	**294**	⇓P	**P**	**10 31 12.4**	**+2.0**
VTS	**Vitosha**	**36.83**	**294**	⇓P	**P**	**10 31 12.4**	**+2.0**
VTS	**Vitosha**	**36.83**	**294**	P	**P**	**10 31 11.5**	**+1.1**
GZR	**Gura Zlata**	**36.85**	**298**	⇓P	**P**	**10 31 11.7**	**+1.2**
LVZ	**Lovozero**	**36.87**	**338**	*ce*P	**P**	**10 31 09.8**	**-0.5**
LVZ				pmax	pmax		
	comp=Z,152nm,2.5s						
TRPA	**Tarpa**	**36.88**	**303**	⇓P	**P**	**10 31 12.7**	**+2.2**
FIA1	**FINESS Array S**	**37.01**	**326**	P	**P**	**10 31 12.2**	**+0.7**
FIA1				IAmb	IAmb	10 31 13.5	
	comp=Z,45nm,0.8s						
FINES	**FINESS Array B**	**37.01**	**326**	P	**P**	**10 31 12.5**	**+1.1**
	comp=Z,34nm,0.7s,baz=106,slow=11,SNR=118						
FINES				LR	LR	10 47 37.1	
	comp=Z,249nm,20.5s,baz=108,slow=38						
FINES	**FINESS Array B**	**37.01**	**326**	P	**P**	**10 31 12.0**	**+0.6**
UZH	**Uzhgorod**	**37.03**	**304**	*e*P	**P**	**10 31 13.1**	**+1.3**
UZH				*e*		10 31 35.5	
UZH				*e*		10 32 46.3	
UZH				*e*S	**S**	**10 36 51.1**	**-0.1**
UBPT	**Khong Chiam**	**37.35**	**117**	P	**P**	**10 31 14.2**	**-0.7**
BZS	**Buzias**	**37.65**	**299**	⇑P	**P**	**10 31 19.1**	**+2.0**
BZS	**Buzias**	**37.65**	**299**	⇑P	**P**	**10 31 19.1**	**+2.0**
MDVR	**Moldovita**	**37.66**	**298**	⇓P	**P**	**10 31 19.0**	**+1.7**
PBUR	**Paburge**	**37.77**	**316**	*e*P	**P**	**10 31 18.9**	**+0.9**
LIT	**Litokhoron**	**37.82**	**290**	P	**P**	**10 31 19.0**	**+0.3**
LIT				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LIT	**Litokhoron**	**37.82**	**290**	P	**P**	**10 31 19.0**	**+0.3**
SLIT	**Slitere, Latvi**	**37.85**	**319**	*e*P	**P**	**10 31 19.0**	**+0.4**
NIE	**Niedzica**	**38.33**	**305**	*e*P	**P**	**10 31 24.9**	**+2.1**
NIE	**Niedzica**	**38.33**	**305**	*e*P	**P**	**10 31 24.9**	**+2.1**
FNA	**Florina**	**38.52**	**291**	P	**P**	**10 31 24.6**	**+0.1**
FNA				pmax	pmax		
	comp=Z,18nm,0.8s						
FNA	**Florina**	**38.52**	**291**	P	**P**	**10 31 24.6**	**+0.1**
FNA				IAmb	IAmb	10 31 26.2	
	comp=Z,18nm,0.8s						
OJC	**Ojcow**	**38.64**	**306**	*e*P	**P**	**10 31 26.4**	**+1.0**
OJC	**Ojcow**	**38.64**	**306**	*e*P	**P**	**10 31 26.4**	**+1.0**
OJC	**Ojcow**	**38.64**	**306**	P	**P**	**10 31 25.8**	**+0.3**
PSZ	**Piszkesteto**	**38.66**	**303**	⇓P	**P**	**10 31 27.7**	**+2.1**
PSZ	**Piszkesteto**	**38.66**	**303**	P	**P**	**10 31 27.2**	**+1.6**
PSZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PSZ	**Piszkesteto**	**38.66**	**303**	P	**P**	**10 31 27.2**	**+1.6**
NJ2	**Nanjing**	**39.17**	**83**	*e*P	**P**	**10 31 30.5**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,22nm,0.5s						
VYHS	**Vyhne**	**39.33**	**304**	*e*P	**P**	**10 31 32.9**	**+1.7**
VYHS				pmax	pmax		
	comp=Z,22nm,1.5s						
VYHS	**Vyhne**	**39.33**	**304**	*e*P	**P**	**10 31 32.9**	**+1.7**
MORC	**Moravsky Berou**	**40.11**	**306**	⇓P	**P**	**10 31 39.1**	**+1.4**
MORC	**Moravsky Berou**	**40.11**	**306**	P	**P**	**10 31 39.2**	**+1.5**
MORC				pmax	pmax		
	comp=Z,11nm,0.9s						
MORC	**Moravsky Berou**	**40.11**	**306**	*e*P	**P**	**10 31 39.1**	**+1.4**
MORC	**Moravsky Berou**	**40.11**	**306**	P	**P**	**10 31 39.2**	**+1.5**
MODS	**Modra-Piesok**	**40.38**	**304**	*e*P	**P**	**10 31 40.5**	**+0.7**
MODS				pmax	pmax		
	comp=Z,15nm,1.1s						
MODS	**Modra-Piesok**	**40.38**	**304**	*e*P	**P**	**10 31 40.5**	**+0.7**
ARCES	**ARCESS Array B**	**40.56**	**337**	P	**P**	**10 31 42.3**	**+1.2**
	comp=Z,18nm,0.7s,baz=111,slow=8.7,SNR=77						
ARCES				LR	LR	10 49 42.9	
	comp=Z,414nm,19.5s,baz=151,slow=38						
ARCES	**ARCESS Array B**	**40.56**	**337**	P	**P**	**10 31 42.0**	**+0.9**
ARE0	**ARCESS Array S**	**40.56**	**337**	*e*P	**P**	**10 31 42.4**	**+1.2**
ARE0	**ARCESS Array S**	**40.56**	**337**	P	**P**	**10 31 42.3**	**+1.2**
KRLC	**Kraliky**	**40.59**	**306**	*e*P	**P**	**10 31 42.8**	**+1.2**
KRLC				*e*pP	**pP**	**10 32 05.3**	**+2.7**
KRLC	**Kraliky**	**40.59**	**306**	*e*P	**P**	**10 31 42.8**	**+1.2**
KRLC				*e*		10 32 05.3	
VRAC	**Vranov**	**40.76**	**305**	⇑P	**P**	**10 31 44.8**	**+1.8**
VRAC	**Vranov**	**40.76**	**305**	⇑P	**P**	**10 31 44.8**	**+1.8**
VRAC	**Vranov**	**40.76**	**305**	*e*P	**P**	**10 31 44.6**	**+1.6**
DPC	**Dobruska-Polom**	**40.87**	**307**	*e*P	**P**	**10 31 45.5**	**+1.6**
DPC				*e*pP	**pP**	**10 32 02.7**	**-2.2**
DPC	**Dobruska-Polom**	**40.87**	**307**	*e*P	**P**	**10 31 45.5**	**+1.6**
KRUC	**Moravsky**	**40.90**	**305**	*e*P	**P**	**10 31 45.8**	**+1.6**
SOP	**Sopron**	**40.92**	**303**	P	**P**	**10 31 46.5**	**+2.2**
SOP				pmax	pmax		
	comp=Z,23nm,1.1s						
KTK1	**Kautokeino**	**41.05**	**336**	*e*P	**P**	**10 31 45.9**	**+0.8**
UPC	**Upice**	**41.06**	**307**	*e*P	**P**	**10 31 46.9**	**+1.5**
UPC	**Upice**	**41.06**	**307**	*e*P	**P**	**10 31 46.9**	**+1.5**
CN2	**Changchun**	**41.09**	**63**	*e*P	**P**	**10 31 46.0**	**+0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CONA	**Conrad Observa**	**41.36**	**303**	*i* P	**P**	**10 31 49.4**	**+1.4**
	comp=Z,15nm,0.9s,SNR=10						
ZEA	**Zeya**	**41.43**	**48**	*e*P	**P**	**10 31 50.2**	**+1.8**
ZEA				pmax	pmax		
	comp=N,31nm,0.8s						
ZEA				pmax	pmax		
	comp=E,59nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,87nm,1.0s						
HAMF	**Hammerfest**	**41.64**	**338**	*e*P	**P**	**10 31 51.7**	**+1.8**
BSD	**Bornholm Skovb**	**41.66**	**314**	*i* P	**P**	**10 31 49.4**	**-0.8**
	comp=Z,3.7nm,0.5s						
BSD	**Bornholm Skovb**	**41.66**	**314**	*i* P	**P**	**10 31 49.4**	**-0.8**
BSD				pmax	pmax		
	comp=Z,4.0nm,0.5s						
GROS	**Grobnik**	**41.78**	**301**	*i* P	**P**	**10 31 52.5**	**+1.0**
PERS	**Pernice**	**42.02**	**301**	*i* P	**P**	**10 31 54.7**	**+1.3**
PRU	**Pruhonice**	**42.03**	**306**	*e*P	**P**	**10 31 55.3**	**+1.9**
PRU	**Pruhonice**	**42.03**	**306**	*e*P	**P**	**10 31 55.3**	**+1.9**
SOKA	**Soboth**	**42.07**	**301**	*e*P	**P**	**10 31 55.4**	**+1.5**
	comp=Z,22nm,1.1s,SNR=7.4						
BRG	**Berggiesshubel**	**42.35**	**308**	⇑*i*P	**P**	**10 31 57.3**	**+1.4**
	comp=Z,20nm,0.8s						
BRG				*e*pP	**pP**	**10 32 19.5**	**+2.5**
	comp=Z,12nm,1.0s						
BRG				*i* sP	**sP**	**10 32 30.0**	**+2.9**
	comp=Z,23nm,1.4s						
BRG				*e*PCP	**PcP**	**10 33 48.9**	**+1.1**
	comp=Z,32nm,1.7s						
BRG	**Berggiesshubel**	**42.35**	**308**	*e*P	**P**	**10 31 57.2**	**+1.3**
	comp=Z,20nm,0.8s,baz=84,slow=7.9						
BRG	**Berggiesshubel**	**42.35**	**308**	⇑*i*P	**P**	**10 31 57.3**	**+1.4**
BRG				*e**PP	**pP**	**10 32 19.5**	**+2.5**
BRG				*i* *SP	**sP**	**10 32 30.0**	**+2.9**
BRG				*e*		10 33 48.9	
BRG				pmax	pmax		

	comp=Z,20nm,0.8s						
BRG				pmax	pmax		
	comp=Z,12nm,1.0s						
OBKA	Obir	42.43	301	i P	P	10 31 58.0	+1.2
	comp=Z,5.7nm,0.7s,SNR=5.2						
MOA	Molln	42.44	303	i P	P	10 31 57.8	+1.1
	comp=Z,4.2nm,0.5s						
IPM	Ipoh	42.47	133	P	P	10 31 56.8	-0.5
IPM				IAmb	IAmb	10 31 58.0	
	comp=Z,37nm,0.8s						
IPM	Ipoh	42.47	133	P	P	10 31 57.0	-0.3
PSI	Prapat	42.66	137	P	P	10 31 57.9	-1.0
PSI				pmax	pmax		
	comp=Z,22nm,1.0s						
GEC2	GERESS Array S	42.69	305	eP	P	10 31 59.7	+0.8
	comp=Z,7.3nm,1.0s,baz=84,slow=7.9						
GEC2	GERESS Array S	42.69	305	P	P	10 31 59.2	+0.3
GERES	GERESS Array B	42.69	305	P	P	10 31 59.7	+0.8
	comp=Z,2.4nm,0.7s,baz=79,slow=6.9,SNR=17						
GERES				PcP	PcP	10 33 49.6	+0.5
	comp=Z,3.7nm,0.8s,baz=67,slow=3.5,SNR=5.8						
GERES	GERESS Array B	42.69	305	P	P	10 31 59.0	+0.2
GERES					PcP	10 33 48.8	-0.3
TRO	Tromso	42.70	336	eP	P	10 31 59.6	+1.2
FBE	Freiberg	42.72	308	eP	P	10 32 00.3	+1.4
	comp=Z,24nm,0.8s,baz=84,slow=7.9						
KHC	Kasperske Hory	42.74	305	eP	P	10 32 00.7	+1.5
KHC				epP	pP	10 32 18.0	-2.3
KHC	Kasperske Hory	42.74	305	eP	P	10 32 00.7	+1.5
KHC	Kasperske Hory	42.74	305	P	P	10 31 59.3	+0.2
RPSI	Rantau Prapat	42.74	137	P	P	10 31 57.9	-1.6
CLL	Collm	42.91	308	i P	P	10 32 02.0	+1.6
	comp=Z,16nm,1.0s						
CLL				esP	sP	10 32 35.0	+3.3
CLL				e		10 32 43.0	
CLL				ePP	PP	10 33 40.0	-1.3
CLL				e		10 33 56.0	
CLL				e		10 34 08.0	
CLL				ePPP	PPP	10 34 16.0	
CLL				esS	sS	10 38 54.0	-1.5
CLL	Collm	42.91	308	eP	P	10 32 02.0	+1.6
	comp=Z,16nm,1.0s,baz=84,slow=7.9						
CLL	Collm	42.91	308	i P	P	10 32 02.0	+1.6
CLL				e		10 32 35.0	
CLL				pmax	pmax		
	comp=Z,11nm,1.0s						
CLL	Collm	42.91	308	P	P	10 31 58.5	-1.9
CADS	Cadrg	43.03	301	eP	P	10 32 02.5	+0.9
MYKA	Terra Mystica	43.03	301	i P	P	10 32 02.3	+0.7
	comp=Z,10nm,1.0s						
KBA	Koelnbreinsper	43.16	302	i P	P	10 32 03.7	+0.9
	comp=Z,6.1nm,0.8s						
GSI	Gunungsitoli	43.20	140	P	P	10 32 03.8	+0.6
GSI				IAmb	IAmb	10 32 05.0	
	comp=Z,49nm,0.8s						
YAK	Yakutsk	43.26	36	i P	P	10 32 03.1	0.0
YAK				pmax	pmax		
	comp=Z,136nm,0.8s						
YAK	Yakutsk	43.26	36	P	P	10 32 03.2	+0.1
MOR8	Moi Rana	43.30	330	eP	P	10 32 03.6	+0.3
TANN	Tannenbergstha	43.33	307	eP	P	10 32 05.2	+1.3
	comp=Z,16nm,1.0s,baz=84,slow=7.9						
GUNZ	Gunzen	43.41	307	eP	P	10 32 05.9	+1.3
	comp=Z,8.1nm,1.0s,baz=84,slow=7.9						
STEI	Steigen	43.43	333	eP	P	10 32 05.5	+1.1
PLN	Plauen	43.51	307	eP	P	10 32 06.5	+1.2
	comp=Z,7.9nm,0.9s,baz=84,slow=7.9						
ROTZ	Rotzenmuhle	43.56	306	eP	P	10 32 07.3	+1.5
	comp=Z,11nm,1.1s,baz=84,slow=7.9						
MANZ	Manzenberg	43.60	307	eP	P	10 32 07.5	+1.5
	comp=Z,10nm,1.0s,baz=84,slow=7.9						
NC405	NORSAR Array S	43.70	323	P	P	10 32 07.4	+0.7
STAL	STALIGIAL	43.72	301	P	P	10 32 07.5	+0.4
STAL				IAmb	IAmb	10 32 08.7	
	comp=Z,29nm,1.1s						
NC602	NORSAR Array S	43.75	322	eP	P	10 32 07.4	+0.3
NC602	NORSAR Array S	43.75	322	P	P	10 32 07.1	0.0
NORES	NORESS Array B	43.75	322	P	P	10 32 07.1	0.0
NORES				pmax	pmax		
	comp=Z,26nm,0.7s						
ABTA	Abfaltersbach	43.78	302	i P	P	10 32 08.0	+0.4
	comp=Z,16nm,1.5s						
MOX	Moxa	43.84	308	eP	P	10 32 09.1	+1.1
	comp=Z,12nm,0.9s,baz=84,slow=7.9						
MDJ	Mudanjiang	43.87	61	P	P	10 32 08.3	+0.1
MDJ				pP	pP	10 32 30.0	+0.2
MDJ				pmax	pmax		
	comp=Z,18nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,130nm,3.6s						
MDJ	Mudanjiang	43.87	61	P	P	10 32 08.3	+0.1
NC303	NORSAR Array S	43.88	323	P	P	10 32 08.8	+0.7
KONS	Konsvik	43.89	331	eP	P	10 32 08.9	+0.9
STOK	Stokkvaagen	43.89	330	eP	P	10 32 08.0	-0.1
NB201	NORSAR Array S	43.90	323	P	P	10 32 08.8	+0.5
NB2	NORSAR Subarra	43.94	323	P	P	10 32 08.8	+0.2
	comp=Z,57nm,0.7s,baz=94,slow=7.9						
NB2	NORSAR Subarra	43.94	323	P	P	10 32 08.8	+0.2
	baz=94,slow=7.9						
NOA	NORSAR Array B	43.94	323	P	P	10 32 09.0	+0.4
	comp=Z,46nm,0.7s,baz=95,slow=7.9,SNR=400						
NOA				LR	LR	10 51 32.2	
	comp=Z,132nm,19.2s,baz=90,slow=37						
NSS	Namsos	44.00	328	eP	P	10 32 10.0	+1.0
NAO01	NORSAR Array S	44.08	322	P	P	10 32 09.9	+0.2
LOF	Lofoten	44.10	333	eP	P	10 32 10.2	+0.5
NRCA	Norcia	44.12	296	P	P	10 32 11.9	+1.5
NBO00	NORSAR Array S	44.15	323	P	P	10 32 10.8	+0.5
NC204	NORSAR Array S	44.17	323	P	P	10 32 10.8	+0.3
GRF	Grafenberg Arr	44.20	306	eP	P	10 32 12.9	+2.0
	comp=Z,18nm,1.1s,baz=84,slow=7.9						
WTTA	Wattenberg	44.28	303	i P	P	10 32 12.3	+0.5
	comp=Z,23nm,1.0s,SNR=6.3						
WTTA	Wattenberg	44.28	303	P	P	10 32 12.2	+0.5
WATA	Walderalm	44.31	303	i P	P	10 32 12.3	+0.3
	comp=Z,21nm,1.4s						
TJN	Taejon	44.36	73	ceP	P	10 32 11.3	-1.0
BSEG	Bad Segeberg	44.36	312	eP	P	10 32 13.5	+1.5
	comp=Z,26nm,0.7s,baz=84,slow=7.9						
SSLB	Suanglung	44.39	93	P	P	10 32 14.2	+1.5
KS19	Wonju Array Si	44.39	72	P	P	10 32 11.7	-0.9
KS19				IAmb	IAmb	10 32 14.5	
	comp=Z,40nm,1.3s						
KSAR	Wonju Array Be	44.42	72	P	P	10 32 12.3	-0.5
KSAR	Wonju Array Be	44.42	72	P	P	10 32 12.3	-0.5
MURB	Monte Urbino	44.45	297	P	P	10 32 13.5	+0.5
KSRS	Korea Array	44.45	72	P	P	10 32 12.8	-0.1
	comp=Z,28nm,1.1s,baz=283,slow=6.7,SNR=48						
CTI	Castel Tesino	44.49	301	P	P	10 32 13.7	+0.4
CTI				pmax	pmax		
	comp=Z,16nm,0.9s						
CTI	Castel Tesino	44.49	301	P	P	10 32 13.7	+0.4
CLZ	Clausthal	44.50	309	eP	P	10 32 14.3	+1.1
	comp=Z,32nm,1.5s,baz=84,slow=7.9						
KLR	Kul'dur	44.55	54	c iP	P	10 32 14.0	+0.4
KLR				pmax	pmax		
	comp=Z,23nm,0.9s						
SQTA	Sankt Quirin	44.58	303	i P	P	10 32 14.2	+0.1
	comp=Z,11nm,0.9s						
NRDL	Niedersach Rie	44.60	310	eP	P	10 32 15.2	+1.4
	comp=Z,25nm,1.1s,baz=84,slow=7.9						
MOTA	Moosalm	44.63	303	i P	P	10 32 14.7	+0.2
	comp=Z,19nm,0.9s,SNR=6.5						
BJO1	Bjornoya	44.65	342	eP	P	10 32 15.3	+1.3
KONO	Kongsberg	44.66	321	eP	P	10 32 15.0	+0.6
KONO	Kongsberg	44.66	321	P	P	10 32 14.7	+0.3
KONO				pmax	pmax		
	comp=Z,31nm,0.7s						
KONO	Kongsberg	44.66	321	P	P	10 32 14.7	+0.3
KONO				IAmb	IAmb	10 32 15.9	
	comp=Z,31nm,0.7s						
GTTG	Gottingen	44.78	309	eP	P	10 32 17.0	+1.5
	comp=Z,32nm,0.8s,baz=84,slow=7.9						
RETA	Reutte	44.83	303	i P	P	10 32 16.5	+0.5
	comp=Z,7.8nm,0.8s						
FETA	Feichten	44.94	302	i P	P	10 32 17.1	+0.1
	comp=Z,16nm,1.0s						
TIXI	Tiksi	45.03	22	ceP	P	10 32 17.5	+0.4
TIXI				pmax	pmax		
	comp=Z,137nm,1.0s						
TIXI	Tiksi	45.03	22	P	P	10 32 17.7	+0.6
DOMB	Dombas	45.03	324	eP	P	10 32 18.3	+0.9
UBR	Ueberruh	45.23	304	eP	P	10 32 19.8	+0.6
	comp=Z,23nm,0.9s,baz=84,slow=7.9						
OSSC	Osservatorio P	45.29	298	P	P	10 32 20.4	+0.7
OSSC				IAmb	IAmb	10 32 22.2	
	comp=Z,27nm,0.9s						
SKAR	Skarslia	45.34	322	eP	P	10 32 21.7	+1.9
SALO	Salr	45.34	301	P	P	10 32 21.3	+1.3
SALO				IAmb	IAmb	10 32 22.3	
	comp=Z,39nm,0.8s						
DAVA	Damuels	45.46	303	i P	P	10 32 21.6	+0.5
	comp=Z,38nm,0.8s,SNR=14						
USA0B	Ussuriysk Arra	45.64	61	i P	P	10 32 21.2	-1.1
USRK	Ussuriysk Ar.	45.64	61	P	P	10 32 22.2	0.0
	comp=Z,6.6nm,0.6s,baz=278,slow=6.8,SNR=14						
USRK	Ussuriysk Ar.	45.64	61	P	P	10 32 21.7	-0.6
VLC	Villacollemand	45.75	299	P	P	10 32 24.7	+1.4
VLC				IAmb	IAmb	10 32 35.7	
	comp=Z,40nm,1.1s						
MOL	Molde	45.77	325	eP	P	10 32 24.4	+1.3
VLA	Vladivostok	45.82	63	i P	P	10 32 23.8	+0.1
VLA				pmax	pmax		
	comp=Z,65nm,0.9s						
BKNI	Bangkinang	45.87	136	P	P	10 32 24.2	-0.3
TNS	Taunus Mts	45.90	307	eP	P	10 32 25.6	+1.1
	comp=Z,8.7nm,0.9s,baz=84,slow=7.9						
TUE	Stuetta	45.97	302	P	P	10 32 25.9	+0.7
IBBN	Ibbenburen	46.05	310	eP	P	10 32 26.5	+1.1
	comp=Z,29nm,0.8s,baz=84,slow=7.9						
ODD1	Odda	46.17	321	eP	P	10 32 27.9	+1.6
BLS5	Blasjo	46.26	320	eP	P	10 32 28.1	+1.1
MYKOM	Kota Tinggi	46.29	132	P	P	10 32 27.8	+0.1
MYKOM				IAmb	IAmb	10 32 29.1	
	comp=Z,40nm,0.8s						
MYKOM	Kota Tinggi	46.29	132	P	P	10 32 28.0	+0.3
BFO	Black Forest	46.29	305	eP	P	10 32 28.0	+0.6
	comp=Z,11nm,1.0s,baz=84,slow=7.9						
BFO	Black Forest	46.29	305	P	P	10 32 27.9	+0.4
BFO	Black Forest	46.29	305	P	P	10 32 27.9	+0.4
MSSA	Maissana	46.32	299	P	P	10 32 28.6	+0.8
HYA	Hoyanger	46.38	323	eP	P	10 32 29.1	+1.2
BUG	Bochum--Univer	46.47	309	eP	P	10 32 29.7	+1.0
	comp=Z,30nm,1.3s,baz=84,slow=7.9						
HSPB	Hornsund (broa	46.50	345	eP	P	10 32 31.0	+2.5
AHRW	Bad Neuenahr-A	46.72	308	eP	P	10 32 32.0	+1.3
	comp=Z,16nm,0.8s,baz=84,slow=7.9						
BER	Bergen	46.81	322	eP	P	10 32 32.6	+1.4
SPITS	Spitsbergen Ar	46.84	347	P	P	10 32 33.2	+1.9
SPITS				pmax	pmax		
	comp=Z,2.0nm,0.2s						
ASK	Askoy	46.87	322	eP	P	10 32 33.0	+1.2
KMY	Karmoy	46.89	320	eP	P	10 32 33.2	+1.4
FOO	Floro	46.93	323	eP	P	10 32 33.2	+1.1
ECH	Echery	47.08	305	P	P	10 32 34.0	+0.4
ECH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ECH	Echery	47.08	305	P	P	10 32 34.0	+0.4
GRNR	Gornyy	47.29	52	⇑iP	P	10 32 36.2	+1.0
GRNR				eS	S	10 39 26.3	+4.1
GRNR				pmax	pmax		
	comp=Z,30nm,0.9s						
GRNR				smax	smax		
	comp=E,8.0nm,0.8s						
SENIN	Lac Senin/Sane	47.38	302	P	P	10 32 36.1	-0.1
SENIN				IAmb	IAmb	10 32 37.6	
	comp=Z,22nm,0.8s						
MEM	Membach	47.38	308	⇓P	P	10 32 37.3	+1.4
MEM				pP	pP	10 32 59.0	+1.7
WLF	Walferdange	47.46	307	⇓P	P	10 32 38.1	+1.7
WLF	Walferdange	47.46	307	eP	P	10 32 37.9	+1.4
	comp=Z,32nm,0.8s,baz=84,slow=7.9						
WLF	Walferdange	47.46	307	P	P	10 32 36.7	+0.2
WLF				pmax	pmax		
	comp=Z,29nm,0.8s						
WLF	Walferdange	47.46	307	P	P	10 32 36.7	+0.2
WLF				IAmb	IAmb	10 32 39.1	
	comp=Z,29nm,0.8s						
KBS	Kingsbay	47.96	347	eP	P	10 32 41.9	+1.9
KBS	Kingsbay	47.96	347	P	P	10 32 42.0	+2.1
KBS				pmax	pmax		
	comp=Z,92nm,0.8s						
KBS	Kingsbay	47.96	347	P	P	10 32 42.0	+2.1
BGES	Gesves	48.00	308	⇓P	P	10 32 42.0	+1.3
BNI	Bardonecchia	48.11	301	P	P	10 32 41.9	+0.1
BNI				pmax	pmax		
	comp=Z,30nm,1.2s						
BNI	Bardonecchia	48.11	301	P	P	10 32 41.9	+0.1
JNU	Nakatsue	48.21	76	P	P	10 32 43.2	+0.7
JNU				IAmb	IAmb	10 32 44.1	
	comp=Z,46nm,0.8s						
BMRD	Maredsous	48.22	308	P	P	10 32 43.6	+1.3
	comp=Z,15nm,1.0s						
DOU	Dourbes	48.37	308	⇓P	P	10 32 45.1	+1.7
SNF	Seneffe	48.48	308	P	P	10 32 45.4	+1.0
KEST	Kesra	49.01	288	P	P	10 32 49.4	+0.7
	comp=Z,13nm,0.6s,baz=294,slow=0.3,SNR=14						
KEST	Kesra	49.01	288	P	P	10 32 50.0	+1.3
KEST				IAmb	IAmb	10 32 51.1	
	comp=Z,15nm,0.7s						
KMBO	Kilima Mbogo	49.47	227	P	P	10 32 52.2	-0.4
KMBO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KMBO	Kilima Mbogo	49.47	227	P	P	10 32 52.2	-0.4
LRW	Lerwick	50.06	322	IAmb	IAmb	10 32 56.5	
	comp=Z,80nm,1.2s						
LRW				eP	P	10 32 56.5	+0.3
KSM	Kuching	50.57	125	P	P	10 33 01.2	+0.6
KSM				IAmb	IAmb	10 33 02.1	
	comp=Z,19nm,0.9s						
KSM	Kuching	50.57	125	P	P	10 33 01.0	+0.4
SBUM	Sibu	51.10	123	P	P	10 33 04.0	-0.6
SBUM	Sibu	51.10	123	P	P	10 33 06.0	+1.4
KKM	Kota Kinabalu	51.33	116	P	P	10 33 07.3	+0.9
HPK	Haverah Park	51.34	314	eP	P	10 33 06.7	+0.8
HPK				IAmb	IAmb	10 33 06.8	
	comp=Z,68nm,0.8s						
EDMD	Edmundbyers	51.35	315	eP	P	10 33 06.5	+0.4
WOL	Wolverton	51.71	310	eP	P	10 33 09.3	+0.6
WOL				IAmb	IAmb	10 33 10.1	
	comp=Z,58nm,0.8s						
EDI	Edinburgh	51.81	316	eP	P	10 33 10.0	+0.6
EDI				IAmb	IAmb	10 33 10.5	
	comp=Z,60nm,0.9s						
EKA	Eskdalemuir Ar	51.92	316	P	P	10 33 10.3	+0.1
EKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KESW	Keswick, Cumbr	52.05	315	eP	P	10 33 11.9	+0.7
KESW				IAmb	IAmb	10 33 13.8	
	comp=Z,101nm,1.5s						
INU	Inuyama	52.06	71	P	P	10 33 10.8	-0.7
INU				IAmb	IAmb	10 33 13.3	
	comp=Z,24nm,0.8s						
INVG	Invergeldie, C	52.17	317	eP	P	10 33 12.3	+0.2
INVG				IAmb	IAmb	10 33 12.6	
	comp=Z,34nm,1.0s						
YSS	Yuzh-Sakhalins	52.24	55	⇑iP	P	10 33 12.9	+0.2
YSS				pmax	pmax		
	comp=Z,60nm,0.9s						
YSS				MLR	MLR		
	comp=Z,400nm,14.0s						
YSS	Yuzh-Sakhalins	52.24	55	P	P	10 33 12.7	0.0
HLM1	Long Mynd	52.41	312	eP	P	10 33 14.5	+0.6
HLM1				IAmb	IAmb	10 33 15.2	
	comp=Z,28nm,0.8s						
SPMM	Sapulut	52.43	117	P	P	10 33 16.0	+1.4
MJB9	Matsu-Tunnel	52.49	69	P	P	10 33 14.2	-0.6
MJB9				IAmb	IAmb	10 33 15.2	
	comp=Z,32nm,0.8s						
MAJO	Matsushiro	52.49	69	P	P	10 33 14.0	-0.8
MAJO				pmax	pmax		
	comp=Z,31nm,0.8s						
MAJO	Matsushiro	52.49	69	P	P	10 33 14.0	-0.8
MAJO				IAmb	IAmb	10 33 15.2	
	comp=Z,31nm,0.8s						
MAT	Matsushiro	52.49	69	P	P	10 33 14.0	-0.8
MJAR	Matsushiro Arr	52.50	69	P	P	10 33 14.2	-0.6
	comp=Z,22nm,0.9s,baz=290,slow=9.7,SNR=54						
MJAR	Matsushiro Arr	52.50	69	P	P	10 33 14.5	-0.3
MJAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MJAR	Matsushiro Arr	52.50	69	P	P	10 33 14.5	-0.3
PGBU	Glenifferbraes	52.55	316	eP	P	10 33 15.4	+0.6
PGBU				IAmb	IAmb	10 33 16.6	
	comp=Z,26nm,0.8s						
KAC	Achnashellach	52.62	319	eP	P	10 33 15.8	+0.4
LLW	Llanuwychllyn	52.79	313	eP	P	10 33 17.4	+0.7
LLW				IAmb	IAmb	10 33 18.1	
	comp=Z,16nm,0.7s						
KPL	Plockton	52.84	318	eP	P	10 33 17.6	+0.7
KPL				IAmb	IAmb	10 33 19.2	
	comp=Z,39nm,1.0s						
MBAR	Mbarara	53.10	234	P	P	10 33 19.7	+0.1
MBAR				pmax	pmax		
	comp=Z,14nm,0.8s						
MBAR	Mbarara	53.10	234	P	P	10 33 19.7	+0.1
MBAR				IAmb	IAmb	10 33 20.3	
	comp=Z,14nm,0.8s						
RSBS	Rosebush, Pemb	53.66	312	eP	P	10 33 23.3	+0.2
RSBS				IAmb	IAmb	10 33 23.7	
	comp=Z,17nm,0.7s						
MA2	Magadan	53.67	38	i P	P	10 33 23.2	+0.2
MA2				pmax	pmax		
	comp=Z,19nm,1.2s						
MA2	Magadan	53.67	38	P	P	10 33 23.0	0.0
MA2				IAmb	IAmb	10 33 24.7	
	comp=Z,26nm,1.1s						
SEY	Seymchan	53.70	34	i P	P	10 33 24.0	+0.8
HTL	Hartland	53.77	311	eP	P	10 33 24.4	+0.5
HTL				IAmb	IAmb	10 33 24.9	
	comp=Z,31nm,0.7s						
DAG	Danmarks Havn	54.10	343	⇑iP	P	10 33 27.2	+1.3
	comp=Z,68nm,0.8s						
DAG	Danmarks Havn	54.10	343	⇑iP	P	10 33 27.2	+1.3
DAG				pmax	pmax		
	comp=Z,68nm,0.8s						
SCO	Scoresbysund	56.48	336	i P	P	10 33 45.1	+2.0
	comp=Z,11nm,0.9s						
SCO	Scoresbysund	56.48	336	P	P	10 33 44.9	+1.8
SCO				pmax	pmax		
	comp=Z,15nm,1.0s						
SCO	Scoresbysund	56.48	336	P	P	10 33 44.9	+1.8
PAB	San Pablo	57.63	298	P	P	10 33 52.3	+0.4
PAB				pmax	pmax		
	comp=Z,36nm,1.5s						
PAB	San Pablo	57.63	298	P	P	10 33 52.3	+0.4
PAB				IAmb	IAmb	10 33 53.6	
	comp=Z,36nm,1.4s						
TAM	Tamanrasset	57.68	275	P	P	10 33 53.2	+0.7
TAM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TAM	Tamanrasset	57.68	275	P	P	10 33 53.2	+0.7
BILL	Bilibino	57.87	26	c iP	P	10 33 54.1	+1.2
BILL				pmax	pmax		
	comp=Z,48nm,0.9s						
BILL	Bilibino	57.87	26	P	P	10 33 54.1	+1.2
MPSI	Mapaga	57.92	118	P	P	10 33 54.3	+0.3
	comp=Z,58nm,1.1s						
KBKI	Kotabaru	57.99	124	P	P	10 33 54.6	+0.1
	comp=Z,30nm,0.9s						
MVO	Moncorvo	58.85	300	eP	P	10 34 00.8	+0.5
MRSI	Marisa	59.28	116	P	P	10 34 03.3	-0.2
	comp=Z,920nmcomp=Z,116nm,1.0s						
PETK	Petropavlovsk-	59.31	44	P	P	10 34 02.8	-0.4
	comp=Z,3.6nm,0.6s,baz=248,slow=2.7,SNR=5.1						
PETK				LR	LR	10 59 50.9	
	comp=Z,101nm,20.0s,baz=242,slow=36						
PCAB	Cabril	59.32	301	eP	P	10 34 04.9	+1.4
PGAV	Gavieira, Arco	59.38	302	eP	P	10 34 05.1	+1.1
MTE	Manteigas	59.52	300	P	P	10 34 06.2	+1.2
MTE				IAmb	IAmb	10 34 07.2	
	comp=Z,24nm,0.8s						
MTE	Manteigas	59.52	300	eP	P	10 34 06.5	+1.5
PVIS	Viseu	59.64	300	eP	P	10 34 07.0	+1.3
PMRV	Marv??o	59.83	299	eP	P	10 34 08.3	+1.3
APSI	Ampana	60.04	117	P	P	10 34 08.7	0.0
	comp=Z,486nmcomp=Z,46nm,1.1s						
COI	Coimbra	60.21	300	eP	P	10 34 10.7	+1.2
ABPO	Ambohimpanom	60.35	206	P	P	10 34 11.2	+0.4
ABPO				pmax	pmax		
	comp=Z,18nm,0.8s						
ABPO	Ambohimpanom	60.35	206	P	P	10 34 11.2	+0.4
ABPO				IAmb	IAmb	10 34 12.1	
	comp=Z,18nm,0.8s						
SUMG	Summit	60.45	341	⇑iP	P	10 34 12.8	+1.6
	comp=Z,164nm,0.8s						
SUMG	Summit	60.45	341	⇑iP	P	10 34 12.8	+1.6
SUMG				pmax	pmax		
	comp=Z,160nm,0.8s						
SUMG	Summit	60.45	341	P	P	10 34 12.7	+1.6
PTOM	Tomar	60.46	299	eP	P	10 34 12.6	+1.3
PMTG	Montargil	60.57	298	eP	P	10 34 13.0	+1.0
PBEJ	Beja	60.77	297	eP	P	10 34 14.3	+0.9
PSBE	So Bento	60.77	299	eP	P	10 34 15.3	+1.9
SPSI	Sidrap Palu	60.90	121	P	P	10 34 14.3	-0.2
	comp=Z,15nm,0.7s						
PVAQ	Vaqueiros	60.94	297	P	P	10 34 14.1	-0.4
PVAQ				IAmb	IAmb	10 34 16.4	
	comp=Z,44nm,1.0s						
PVAQ	Vaqueiros	60.94	297	eP	P	10 34 15.6	+1.1
PCVE	Castro Verde	61.06	297	eP	P	10 34 13.4	-2.0
MESJ	Messejana	61.10	297	eP	P	10 34 15.9	+0.3
MESJ	Messejana	61.10	297	eP	P	10 34 16.4	+0.8
PBDV	Barranco-do-Ve	61.16	297	eP	P	10 34 17.4	+1.3
PNCL	Nicolau / Gran	61.20	298	eP	P	10 34 17.7	+1.4
PTEO	Sao Teotonio	61.59	297	eP	P	10 34 20.3	+1.4
KULLO	Kullorsuaq	63.42	346	i P	P	10 34 31.4	+0.9
	comp=Z,22nm,0.8s						
KULLO	Kullorsuaq	63.42	346	i P	P	10 34 31.4	+0.9
KULLO				pmax	pmax		
	comp=Z,22nm,0.8s						
TULEG	Thule	63.76	350	P	P	10 34 32.8	0.0
TULEG				IAmb	IAmb	10 34 34.5	
	comp=Z,51nm,1.4s						
ANGG	Ammassalik, Gr	63.86	334	P	P	10 34 34.9	+1.4
SANI	Sanana	63.94	115	P	P	10 34 33.7	-1.1
	comp=Z,18nm,0.9s						
WBSI	Waikabubak, Su	64.84	126	P	P	10 34 37.9	-2.8
	comp=Z,1µmcomp=Z,92nm,1.1s						
ILULI	Ilulissat	65.79	341	P	P	10 34 46.9	+0.9
ILULI				pmax	pmax		
	comp=Z,60nm,0.8s						
ILULI	Ilulissat	65.79	341	P	P	10 34 46.9	+0.9
BASI	Baing, Sumba	66.04	125	P	P	10 34 46.3	-2.1
	comp=Z,1µmcomp=Z,106nm,1.1s						
LSZ	Lusaka	66.11	226	P	P	10 34 48.1	-0.8
LSZ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LSZ	Lusaka	66.11	226	P	P	10 34 48.1	-0.8
SFJD	Kangerlussuaq	67.16	339	i P	P	10 34 55.3	+0.5
SFJD	Kangerlussuaq	67.16	339	i P	P	10 34 55.3	+0.5
SFJD	Kangerlussuaq	67.16	339	P	P	10 34 54.9	+0.1
SFJD				IAmb	IAmb	10 34 56.5	
	comp=Z,31nm,0.9s						
RDOG	Red Dog Mine	67.51	19	P	P	10 34 57.4	+0.4
RDOG				IAmb	IAmb	10 34 58.8	
	comp=Z,40nm,1.1s						
RES	Resolute Bay	68.00	356	P	P	10 35 00.8	+0.9
RES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
RES	Resolute Bay	68.00	356	P	P	10 35 00.8	+0.9
ANM	Nome	69.29	23	P	P	10 35 09.6	+1.5
ANM				pmax	pmax		
	comp=Z,50nm,0.9s						
ANM	Nome	69.29	23	P	P	10 35 09.6	+1.5
ANM				IAmb	IAmb	10 35 10.7	
	comp=Z,50nm,0.9s						
MATP	Matopo	70.08	223	i P	P	10 35 06.7	-7.0
MATP	Matopo	70.08	223	i P	P	10 35 06.7	-7.0
TOLK	Toolik Lake Re	70.17	15	P	P	10 35 14.8	+1.2
TOLK	Toolik Lake Re	70.17	15	P	P	10 35 14.8	+1.2
	baz=326,SNR=105						
A36M	Sachs Harbour	70.47	5	P	P	10 35 16.4	+1.1
	baz=346						
COLD	Coldfoot	71.22	16	P	P	10 35 20.8	+0.9
COLD				IAmb	IAmb	10 35 22.1	
	comp=Z,50nm,1.0s						
IMAR	Indian Mountai	71.42	18	P	P	10 35 21.6	+0.4
BMAR	Burnt Mountain	72.19	14	P	P	10 35 27.1	+1.4
FYU	Fort Yukon	72.82	14	P	P	10 35 31.2	+1.8
MLY	Manley	72.93	17	P	P	10 35 30.6	+0.4
MLY				IAmb	IAmb	10 35 32.1	
	comp=Z,40nm,1.0s						
C36M	Paulatuk	73.14	6	P	P	10 35 31.8	+0.5
C36M	Paulatuk	73.14	6	P	P	10 35 31.8	+0.5
	baz=347						
INK	Inuvik	73.16	9	P	P	10 35 32.6	+1.2
INK				pmax	pmax		
	comp=Z,135nm,1.4s						
INK	Inuvik	73.16	9	P	P	10 35 32.5	+1.2
MDM	Murphy Dome	73.57	16	P	P	10 35 34.9	+1.0
MDM				IAmb	IAmb	10 35 35.9	
	comp=Z,71nm,1.1s						

POKR	Poker Plat Res	73.61	16	P	P	10 35 35.6	+1.4
	baz=329,SNR=32						
BPAW	Bear Paw Mtn.	73.64	18	P	P	10 35 34.6	+0.3
BPAW				IAmb	IAmb	10 35 35.9	
	comp=Z,60nm,1.0s						
PRP	Porcupine Dome	73.67	15	P	P	10 35 35.6	+1.0
NEA	Nenana	73.70	17	P	P	10 35 35.2	+0.5
TCOL	CIGO, UAF Yank	73.73	16	P	P	10 35 36.1	+1.3
	baz=328,SNR=21						
COLA	College	73.73	16	P	P	10 35 35.2	+0.4
COLA				pmax	pmax		
	comp=Z,116nm,0.8s						
COLA	College	73.73	16	P	P	10 35 35.2	+0.4
CCB	Clear Creek Bu	73.93	16	P	P	10 35 36.1	+0.2
BWN	Browne	73.95	17	P	P	10 35 37.1	+0.9
WRH	Wood River Hil	74.02	17	P	P	10 35 36.6	+0.1
WRH				IAmb	IAmb	10 35 37.6	
	comp=Z,28nm,0.9s						
IL31		74.03	16	P	P	10 35 36.8	+0.2
IL31				IAmb	IAmb	10 35 37.8	
	comp=Z,38nm,0.9s						
ILAR	Eielson Array	74.03	16	P	P	10 35 36.6	0.0
	comp=Z,25nm,0.9s,baz=321,slow=4.6,SNR=204						
ILAR				PP	PP	10 38 23.0	+0.9
	comp=Z,2.1nm,0.7s,baz=321,slow=6.9,SNR=5.7						
ILAR				LR	LR	11 14 14.1	
	comp=Z,66nm,18.1s,baz=34,slow=40						
ILAR	Eielson Array	74.03	16	P	P	10 35 36.5	-0.1
KTH	Kantishna Hill	74.12	18	P	P	10 35 37.5	+0.3
PSA00	Pilbara Seismi	74.25	134	P	P	10 35 36.8	-1.6
PSA00				IAmb	IAmb	10 35 38.1	
	comp=Z,27nm,0.9s						
PSA00	Pilbara Seismi	74.25	134	P	P	10 35 36.9	-1.5
PSA00				IAmb	IAmb	10 35 38.7	
	comp=Z,19nm,0.8s						
HDA	Harding Lake	74.33	16	P	P	10 35 37.8	-0.5
HDA				IAmb	IAmb	10 35 39.5	
	comp=Z,23nm,0.8s						
HDA	Harding Lake	74.33	16	P	P	10 35 37.9	-0.4
	baz=329,SNR=28						
PPLA	Purkeypile	74.34	19	P	P	10 35 38.9	+0.4
TRF	Thorofare Moun	74.36	18	P	P	10 35 38.5	-0.2
TRF				IAmb	IAmb	10 35 41.8	
	comp=Z,21nm,0.7s						
MCK	McKinley	74.45	17	P	P	10 35 38.9	-0.2
MCK				pmax	pmax		
	comp=Z,28nm,0.7s						
MCK	McKinley	74.45	17	P	P	10 35 38.9	-0.2
MCK				IAmb	IAmb	10 35 40.5	
	comp=Z,28nm,0.7s						
EPYK	Eagle Plains	74.51	11	P	P	10 35 39.8	+0.4
EPYK				IAmb	IAmb	10 35 41.1	
	comp=Z,55nm,1.3s						
EPYK	Eagle Plains	74.51	11	P	P	10 35 39.9	+0.5
	baz=337						
RND	Reindeer	74.75	17	P	P	10 35 40.8	-0.1
RND				pmax	pmax		
	comp=Z,41nm,0.7s						
RND	Reindeer	74.75	17	P	P	10 35 40.8	-0.1
RND				IAmb	IAmb	10 35 41.7	
	comp=Z,41nm,0.7s						
SVW2	Sparrevohn	74.86	22	P	P	10 35 42.1	+0.6
SVW2				IAmb	IAmb	10 35 43.9	
	comp=Z,34nm,1.0s						
DBIC	Dimbokro	74.95	267	P	P	10 35 41.7	-1.0
	comp=Z,1.5nm,0.5s,baz=35,slow=13,SNR=4.4						
DBIC				LR	LR	11 11 55.2	
	comp=Z,45nm,18.8s,baz=158,slow=38						
KIC	Kosan Boka	75.04	267	*e*P	P	10 35 41.7	-1.5
	comp=Z,18nm,1.0s						
TIC	Toumodi	75.09	267	*e*P	P	10 35 42.5	-1.1
	comp=Z,5.6nm,0.4s						
FITZ	Fitzroy Crossi	75.15	127	P	P	10 35 42.0	-1.7
	comp=Z,5.9nm,0.9s,baz=309,slow=4.8,SNR=9.1						
FITZ	Fitzroy Crossi	75.15	127	P	P	10 35 42.2	-1.4
EGAK	Eagle	75.20	14	P	P	10 35 43.9	+0.6
EGAK				IAmb	IAmb	10 35 45.2	
	comp=Z,37nm,0.9s						
SCRK	Sand Creek	75.35	15	IAmb	IAmb	10 35 46.2	
	comp=Z,53nm,1.0s						
LIC	Lamto	75.35	267	*e*P	P	10 35 43.4	-1.6
	comp=Z,19nm,0.9s						
LIC	Lamto	75.35	267	P	P	10 35 43.4	-1.6
LBTB	Lobatse	75.35	222	*i* P	P	10 35 44.4	-0.4
LBTB	Lobatse	75.35	222	*i* P	P	10 35 44.4	-0.4
LBTB	Lobatse	75.35	222	IAmb	IAmb	10 35 45.0	
	comp=Z,21nm,0.8s						
RIDG	Independent Ri	75.37	16	IAmb	IAmb	10 35 45.6	
	comp=Z,77nm,1.2s						
KNRA	Kununurra	75.44	123	P	P	10 35 44.3	-1.0
TSUM	Tsumeb	75.53	232	P	P	10 35 45.4	-0.5
GHO	Glory Hole Cre	76.12	18	P	P	10 35 49.0	+0.3
DAWY	Dawson	76.17	13	IAmb	IAmb	10 35 50.8	
	comp=Z,50nm,0.8s						
PMR	Palmer	76.22	19	IAmb	IAmb	10 35 50.4	
	comp=Z,50nm,0.8s						
BCAR	Beaver Creek A	76.61	15	P	P	10 35 51.6	+0.2
BRLK	Bradley Lake	77.29	20	P	P	10 35 54.8	-0.5
BRLK				IAmb	IAmb	10 35 55.9	
	comp=Z,52nm,0.8s						
CNPM	China Poot	77.39	21	IAmb	IAmb	10 35 56.4	
	comp=Z,24nm,0.9s						
SEW	Seward	77.40	20	IAmb	IAmb	10 35 56.5	
	comp=Z,23nm,0.8s						
FID	Port Fidalgo	77.61	18	IAmb	IAmb	10 35 59.7	
	comp=Z,71nm,1.2s						
MCARA	McCarthy VSAT	77.86	16	P	P	10 35 59.2	+0.8
MCARA				IAmb	IAmb	10 36 00.5	
	comp=Z,31nm,0.8s						
VRDI	Verde Repeater	77.90	16	P	P	10 35 59.3	+0.4
VRDI				IAmb	IAmb	10 36 00.8	
	comp=Z,51nm,1.1s						
HIN	Hinchinbrook I	77.91	18	IAmb	IAmb	10 36 00.6	
	comp=Z,105nm,1.5s						
EYAK	Cordova Ski Ar	77.96	18	IAmb	IAmb	10 36 01.1	
	comp=Z,65nm,1.0s						
MORW	Morawa	78.17	141	IAmb	IAmb	10 35 59.9	
	comp=Z,34nm,0.9s						
BALM	Baldy	78.31	16	IAmb	IAmb	10 36 03.2	
	comp=Z,48nm,0.9s						
RAGM	Ragged Mountai	78.36	17	IAmb	IAmb	10 36 03.6	
	comp=Z,48nm,1.0s						
CRQM	Cirque	78.39	16	IAmb	IAmb	10 36 03.5	
	comp=Z,47nm,0.8s						
BOSA	Boshof	78.43	220	*i* P	P	10 36 01.0	-1.0
BOSA	Boshof	78.43	220	P	P	10 36 01.2	-0.9
	comp=Z,24nm,0.8s,baz=31,slow=4.9,SNR=43						
BOSA	Boshof	78.43	220	*i* P	P	10 36 01.0	-1.0
BOSA	Boshof	78.43	220	P	P	10 36 00.9	-1.2
BOSA				IAmb	IAmb	10 36 02.1	
	comp=Z,27nm,0.8s						
BARN	Barnard Glacie	78.44	16	IAmb	IAmb	10 36 04.7	
	comp=Z,53nm,1.0s						
KDAK	Kodiak Island	78.45	22	P	P	10 36 02.1	+0.4
KDAK				pmax	pmax		
	comp=Z,101nm,0.9s						
KDAK	Kodiak Island	78.45	22	P	P	10 36 02.0	+0.4
TGL	Tana Glacier	78.46	16	P	P	10 36 02.2	+0.4
TGL				IAmb	IAmb	10 36 03.9	
	comp=Z,51nm,0.9s						
CNBA	Chernabura Isl	78.49	27	P	P	10 36 01.8	-0.2
CNBA				IAmb	IAmb	10 36 02.7	
	comp=Z,53nm,0.8s						
CTGM	Chitina Glacie	78.60	16	IAmb	IAmb	10 36 04.9	
	comp=Z,45nm,0.8s						
WHY	Whitehorse	80.14	13	IAmb	IAmb	10 36 12.3	
	comp=Z,23nm,0.9s						
YKA	Yellowknife Ar	80.52	3	P	P	10 36 13.6	+0.7
	comp=Z,35nm,0.7s,baz=352,slow=5.1,SNR=601						
YKA				PKKPbc	PKKPbc	10 54 50.5	-2.5
	comp=Z,0.5nm,0.8s,baz=159,slow=2.7,SNR=7.2						
YKA				LR	LR	11 16 45.6	
	comp=Z,67nm,18.2s,baz=0.0,slow=39						
DHAK	Deception Hill	80.96	15	P	P	10 36 16.4	+1.1
DHAK				IAmb	IAmb	10 36 18.0	
	comp=Z,56nm,1.0s						
SKAG	Skagway	81.18	13	IAmb	IAmb	10 36 19.0	
	comp=Z,47nm,0.9s						
SCHQ	Schefferville	81.52	337	P	P	10 36 19.0	+0.7
	comp=Z,10.0nm,0.8s,baz=38,slow=4.7,SNR=14						
SCHQ				LR	LR	11 12 04.3	
	comp=Z,126nm,19.4s,baz=35,slow=35						
SCHQ	Schefferville	81.52	337	IAmb	IAmb	10 36 19.8	
	comp=Z,33nm,1.2s						
NWAO	Narrogin (SRO)	81.91	142	P	P	10 36 18.2	-2.2
	comp=Z,17nm,0.8s,baz=312,slow=4.1,SNR=11						
NWAO	Narrogin (SRO)	81.91	142	P	P	10 36 19.9	-0.6
NWAO	Narrogin (SRO)	81.91	142	P	P	10 36 18.3	-2.2
NWAO				IAmb	IAmb	10 36 19.2	
	comp=Z,24nm,0.9s						
NWAO	Narrogin (SRO)	81.91	142	P	P	10 36 18.0	-2.5
NWAO				IAmb	IAmb	10 36 19.2	
	comp=Z,20nm,0.9s						
BESE	Bessie Mountai	82.09	13	IAmb	IAmb	10 36 23.8	
	comp=Z,45nm,0.9s						
WRA	Warramunga Arr	82.19	122	P	P	10 36 19.9	-2.4
	comp=Z,2.9nm,0.9s,baz=324,slow=5.0,SNR=19						
WRA				PKKPbc	PKKPbc	10 54 50.8	+1.2
	comp=Z,1.2nm,0.8s,baz=128,slow=1.8,SNR=2.5						
WRA				PKPPKP	P'P'df	11 02 55.5	+1.2
	comp=Z,0.6nm,0.7s,baz=114,slow=2.1,SNR=0.6						
JIS	Juneau Island	82.47	13	P	P	10 36 24.4	+1.2
JIS				IAmb	IAmb	10 36 25.9	
	comp=Z,44nm,1.0s						
DLBC	Dease Lake	83.05	11	P	P	10 36 26.8	+0.5
DLBC				IAmb	IAmb	10 36 28.7	
	comp=Z,43nm,0.9s						
SIT	Sitka	83.43	14	P	P	10 36 29.1	+0.9
SIT				pmax	pmax		
	comp=Z,48nm,0.9s						
SIT	Sitka	83.43	14	P	P	10 36 29.1	+0.9
SIT				IAmb	IAmb	10 36 30.8	
	comp=Z,48nm,0.9s						
SUR	Sutherland	83.74	221	P	P	10 36 30.1	-0.2
AS31	Alice Springs	84.49	125	P	P	10 36 33.0	-1.1
ASAR	Alice Springs	84.49	125	P	P	10 36 31.7	-2.4
	comp=Z,2.8nm,0.8s,baz=321,slow=5.4,SNR=29						
ASAR				PKKPbc	PKKPbc	10 54 45.1	+0.7
	comp=Z,0.7nm,0.7s,baz=117,slow=2.8,SNR=11						
ASAR				PKPPKP	P'P'df	11 02 50.2	+0.4
	comp=Z,0.4nm,0.9s,baz=145,slow=4.6,SNR=4.1						
ASAR	Alice Springs	84.49	125	P	P	10 36 31.6	-2.5
PMG	Port Moresby	84.60	106	LR	LR	11 17 58.7	
	comp=Z,528nm,19.8s,baz=121,slow=38						
FORT	Forrest	86.01	134	IAmb	IAmb	10 36 40.5	
	comp=Z,17nm,0.9s						
FFC	Flin Flon	88.24	356	P	P	10 36 52.6	+0.6
FFC				pmax	pmax		
	comp=Z,51nm,1.2s						
FFC	Flin Flon	88.24	356	P	P	10 36 52.6	+0.6
FFC				IAmb	IAmb	10 36 53.8	
	comp=Z,51nm,1.2s						
MATQ	Matagami	89.13	340	P	P	10 36 57.6	+1.3
	baz=24						
LSQQ	Lebel-sur-Quev	89.59	340	P	P	10 36 59.8	+1.4
	baz=25						
LATQ	La Tuque	89.84	336	P	P	10 37 00.8	+1.2
	baz=28						
D58A	Chemin du LacG	90.13	336	P	P	10 37 02.1	+1.1
	baz=28						
D57A	Chemin Vers le	90.52	337	P	P	10 37 03.8	+1.0
	baz=27						
VLDQ	Val d'Or	90.58	340	IAmb	IAmb	10 37 05.2	
	comp=Z,12nm,0.8s						
CTA	Charters Tower	90.65	115	P	P	10 37 02.0	-1.7
	comp=Z,1.5nm,0.7s,baz=229,slow=9.3,SNR=2.8						
D56A	ZEC Mazanza, M	90.76	338	P	P	10 37 04.9	+1.0
	baz=26						
E58A	La Victoria	90.90	336	P	P	10 37 05.4	+0.8
	baz=28						
D55A	Sainte-Anne-du	91.00	338	P	P	10 37 06.3	+1.2
	baz=26						
E57A	Chemin Saint G	91.14	337	P	P	10 37 06.8	+1.0
	baz=27						
D54A	Lac Fusel, La	91.23	339	P	P	10 37 06.8	+0.7
	baz=25						
D53A	Lac Vacive, Po	91.59	339	P	P	10 37 09.1	+1.3
	baz=24						
E54A	Lac Daplat, Po	92.03	339	P	P	10 37 10.3	+0.4
	baz=25						
D51A	Lot 18 Range I	92.04	340	P	P	10 37 10.3	+0.5
	baz=23						
D50A	G1974 Best Tow	92.09	341	P	P	10 37 10.8	+0.7
	baz=23						
ULM	Lac du Bonnet	92.17	352	P	P	10 37 10.6	+0.3
	comp=Z,12nm,1.0s,baz=7.4,slow=5.5,SNR=14						
ULM				LR	LR	11 20 52.7	
	comp=Z,71nm,19.2s,baz=350,slow=37						
E53A	Dumoine, Ponti	92.22	339	P	P	10 37 11.8	+1.1
	baz=24						
E51A	G1948 Merrick	92.59	340	P	P	10 37 13.4	+1.0
	baz=23,SNR=5.3						
E52A	Mattawa	92.59	340	P	P	10 37 13.0	+0.6
	baz=24						
D48A	Paudash Townsh	92.59	342	P	P	10 37 13.2	+0.7
	baz=21,SNR=5.6						
ALGO	Algonquin Park	92.72	339	P	P	10 37 13.6	+0.6
	baz=24						
G55A	Calabogie	92.97	338	P	P	10 37 14.8	+0.7
	baz=25						
D47A	Chapleau	93.01	343	P	P	10 37 15.4	+1.0
	baz=20,SNR=8.6						
F52A	Sundridge	93.22	340	P	P	10 37 16.6	+1.3
	baz=23,SNR=5.0						
G54A	Lake Saint Pet	93.24	339	P	P	10 37 16.2	+0.7
	baz=24						
F51A	Arnstein	93.26	340	P	P	10 37 16.2	+0.7
	baz=23,SNR=5.3						
E48A	Lockeyer	93.33	342	P	P	10 37 16.7	+0.9
	baz=21,SNR=8.0						
D46A	Sault St. Mari	93.39	343	P	P	10 37 17.1	+1.0
	baz=19,SNR=12						
H56A	Elgin	93.42	337	P	P	10 37 17.6	+1.3
	baz=25						
E47A	Iron Bridge	93.62	343	P	P	10 37 18.0	+0.8
	baz=20,SNR=7.3						
G53A	Haliburton	93.64	339	P	P	10 37 18.2	+0.9
	baz=24						
EYMN	Ely	93.83	348	IAmb	IAmb	10 37 19.6	
	comp=Z,20nm,1.1s						
EYMN	Ely	93.83	348	P	P	10 37 18.6	+0.5
	baz=14						
J59A	Piesco	93.88	336	P	P	10 37 19.6	+1.1
	baz=27						
E46A	Sault Ste Mari	93.94	343	IAmb	IAmb	10 37 19.7	
	comp=Z,11nm,0.7s						
F49A	Sandfield	93.97	342	P	P	10 37 19.9	+1.1
	baz=21						
F48A	Evansville	94.05	342	P	P	10 37 19.9	+0.8
	baz=21,SNR=6.2						
B05A	Bryant	94.06	9	P	P	10 37 20.1	+1.0
	baz=349,SNR=6.7						
AGMN	Agassiz Nation	94.09	351	P	P	10 37 19.7	+0.4
AGMN				IAmb	IAmb	10 37 20.6	
	comp=Z,15nm,0.9s						
AGMN	Agassiz Nation	94.09	351	P	P	10 37 19.8	+0.5
	baz=10						
H53A	Bobcaygeon	94.13	339	P	P	10 37 20.3	+0.8
	baz=24						
B08A	Colville Reser	94.28	7	IAmb	IAmb	10 37 22.0	
	comp=Z,16nm,1.0s						
C06D	Leavenworth	94.54	8	P	P	10 37 22.2	+0.9
	baz=350						
NEW	Newport	94.56	6	P	P	10 37 22.2	+0.7
NEW				pmax	pmax		
	comp=Z,19nm,0.9s						
NEW	Newport	94.56	6	P	P	10 37 22.2	+0.7
NEW	Newport	94.56	6	P	P	10 37 22.5	+1.0
	baz=353,SNR=17						
DGMT	Dagmar	94.59	357	P	P	10 37 23.3	+1.7
	baz=3.6						
D03D	Eldon	94.65	10	P	P	10 37 23.9	+2.0
	baz=349						
F45A	CMU Biological	94.86	344	P	P	10 37 23.4	+0.5
	baz=18						
G47A	Hillman	94.96	343	P	P	10 37 24.2	+0.9
	baz=20						
EGMT	Eagleton	95.13	1	P	P	10 37 25.6	+1.4
	baz=359,SNR=15						
LTY	Liberty	95.22	8	IAmb	IAmb	10 37 25.7	
	comp=Z,5.8nm,0.8s						
JTMT	Jette	95.27	4	IAmb	IAmb	10 37 27.4	
	comp=Z,25nm,1.4s						
H48A	Harrisville	95.28	342	P	P	10 37 26.0	+1.2
	baz=20						
LON	Longmire	95.59	9	IAmb	IAmb	10 37 28.0	
	comp=Z,13nm,0.8s						
D08A	Wollman Farm,	95.61	7	IAmb	IAmb	10 37 27.6	
	comp=Z,7.9nm,0.7s						
E04D	Cinebar	95.68	10	P	P	10 37 26.8	+0.2
	baz=349						
K54A	Basiliko Farm,	95.96	338	P	P	10 37 29.0	+1.0
	baz=24						
L56A	Greenwood	96.05	337	P	P	10 37 28.7	+0.3
	baz=24						
E08A	Dider Farm, El	96.15	7	IAmb	IAmb	10 37 30.3	
	comp=Z,10.0nm,0.9s						
MSO	Missoula	96.20	4	IAmb	IAmb	10 37 30.6	
	comp=Z,20nm,1.5s						
MSO	Missoula	96.20	4	P	P	10 37 29.4	+0.3
	baz=356,SNR=5.5						
L55A	Hinsdale	96.28	338	P	P	10 37 29.8	+0.4
	baz=24						
LAO	LASA Array	96.44	358	P	P	10 37 31.8	+1.7
	baz=2.0,SNR=10						
F10A	Beach Ranch, E	96.83	6	IAmb	IAmb	10 37 37.7	
	comp=Z,10nm,1.4s						
DLMT	Dillon	97.72	3	IAmb	IAmb	10 37 38.3	
	comp=Z,7.2nm,1.0s						
RLMT	Red Lodge	98.03	0	P	Pdif	10 37 38.9	+1.3
	baz=360,SNR=7.0						
I07A	Izee	98.49	8	IAmb	IAmb	10 37 42.4	
	comp=Z,6.7nm,1.0s						
LKWY	Lake	98.58	1	IAmb	IAmb	10 37 47.4	
	comp=Z,6.6nm,0.9s						
ECSD	EROS Data Cent	98.68	351	Pdiff	Pdif	10 37 40.7	+0.5
	baz=9.7						
H17A	Grant Village	98.75	1	IAmb	IAmb	10 37 44.8	
	comp=Z,11nm,1.2s						
H17A	Grant Village	98.75	1	Pdiff	Pdif	10 37 43.8	+3.0
	baz=358						
RSSD	Black Hills	98.92	357	P	Pdif	10 37 42.8	+1.2
RSSD				pmax	pmax		
	comp=Z,11nm,1.4s						
RSSD	Black Hills	98.92	357	P	Pdif	10 37 42.8	+1.3
RSSD				IAmb	IAmb	10 37 43.5	
	comp=Z,11nm,1.4s						
RSSD	Black Hills	98.92	357	Pdiff	Pdif	10 37 42.7	+1.2
	baz=3.8						
FLWY	Flagg Ranch	99.06	1	IAmb	IAmb	10 37 49.5	
	comp=Z,6.2nm,1.0s						
IMW	Indian Meadow	99.24	2	IAmb	IAmb	10 37 47.0	
	comp=Z,10nm,1.4s						
J08A	Circle Bar Ran	99.31	7	P	Pdif	10 37 44.7	+1.5
J08A				IAmb	IAmb	10 37 48.8	
	comp=Z,7.6nm,1.0s						
PDAR	Pinedale Array	100.39	1	P	Pdif	10 37 48.5	+0.4
	comp=Z,0.6nm,0.6s,baz=52,slow=3.3,SNR=7.4						
NVAR	Mina Array Bea	104.21	8	Pdiff	Pdif	10 38 06.0	+0.9
	comp=Z,1.2nm,0.8s,baz=1.5,slow=2.5,SNR=8.4						
TXAR	Lajitas Array	113.62	355	Pdiff	Pdif	10 38 50.2	+3.1
	comp=Z,0.5nm,1.0s,baz=119,slow=1.6,SNR=3.4						
TXAR				PKiKP	PKiKP	10 42 39.6	+0.3
	comp=Z,0.5nm,0.8s,baz=135,slow=0.2,SNR=4.5						
TXAR				PP	PP	10 43 31.4	+0.3
	comp=Z,1.0nm,1.0s,baz=20,slow=2.9,SNR=4.0						
TXAR				PKKPbc	PKKPbc	10 53 20.6	-1.5
	comp=Z,0.5nm,0.8s,baz=188,slow=5.1,SNR=5.0						
TXAR				PKKPab	PKKPab	10 53 28.5	-5.0
	comp=Z,0.9nm,0.8s,baz=185,slow=8.0,SNR=11						
HPIG		116.12	357		PKPdf	10 42 44.6	+0.3
ZAIG	Zacatecas	120.05	353		PKiKP	10 42 53.4	+1.2
SDV	Santo Domingo	121.89	314	PKP	PKPdf	10 42 55.0	-0.6
	comp=Z,13nm,0.8s,baz=24,slow=3.6,SNR=14						
SMLC	San Martn de	123.88	317	*e*P	PKPdf	10 42 56.7	-2.5
CMIG	Matias Romero	124.43	344	PKP	PKPdf	10 42 59.1	-1.1
	comp=Z,5.8nm,0.9s,baz=306,slow=3.8,SNR=9.3						
CCIG	Comitan	124.53	341		PKiKP	10 43 00.8	-0.1
APG	El Apazote	125.28	338	PKP	PKPdf	10 43 01.4	-0.7
	comp=Z,3.4nm,0.7s,baz=289,slow=8.8,SNR=4.0						
RUSC	La Rusia	125.72	314	*e*P	PKPdf	10 43 02.8	-0.5
RUSC	La Rusia	125.72	314		PKPdf	10 43 02.9	-0.5
ACON	Acoyapa	126.29	331		PKPdf	10 43 03.8	-0.1
SPBC	San Pablo de B	126.48	315	*e*P	PKPdf	10 43 04.2	-0.1
DBBC	Dabeiba	126.51	318	*e*P	PKiKP	10 43 05.2	+0.4
NORC	Norcasia	127.00	316	*e*P	PKPdf	10 43 04.8	-0.5
QSPA	South Pole Qui	127.01	180	PKP	PKPdf	10 43 01.9	-1.7
	comp=Z,4.3nm,0.9s,baz=278,slow=1.7,SNR=9.8						
QSPA	South Pole Qui	127.01	180		PKPdf	10 43 02.4	-1.3
CHIC	Chingaza	127.12	314	*e*P	PKPdf	10 43 05.1	-0.8
ROSC	El Rosal	127.28	315	PKP	PKiKP	10 43 07.7	+0.9
	comp=Z,86nm,0.8s,baz=115,slow=5.6,SNR=23						
ROSC	El Rosal	127.28	315	*e*P	PKPdf	10 43 04.6	-1.7
ROSC	El Rosal	127.28	315		PKiKP	10 43 07.2	+0.4
ORTC	Ortega, Tolima	128.57	315	*e*P	PKPdf	10 43 07.5	-0.8
YOTC	Yotoco, Valle	129.12	316	*e*P	PKPdf	10 43 08.8	-0.6
PCON	Cinco Dias	130.51	315	*e*P	PKiKP	10 43 13.8	+0.3
FLOC	Florencia	130.70	314	*e*P	PKPdf	10 43 11.2	-1.1
SOTA	Rioblanco	130.79	315	*e*P	PKiKP	10 43 13.7	-0.2
SIV	San Ignacio	133.00	284	PKP	PKPdf	10 43 16.9	+0.4
	comp=Z,1.2nm,0.7s,baz=134,slow=3.4,SNR=6.1						
CPUP	Villa Florida	135.45	269	PKP	PKPdf	10 43 20.5	-0.2
	comp=Z,2.0nm,0.8s,baz=121,slow=2.4,SNR=4.8						
CPUP	Villa Florida	135.45	269		PKPdf	10 43 20.0	-0.7
LPAZ	La Paz	138.58	289	PKP	PKPdf	10 43 28.2	+0.7
	comp=Z,1.8nm,0.8s,baz=214,slow=14,SNR=3.9						
LPAZ	La Paz	138.58	289	PKIKP	PKPdf	10 43 28.1	+0.5
LPAZ	La Paz	138.58	289		PKPdf	10 43 28.1	+0.5
PAYG	Puerto Ayora	139.84	331		PKPdf	10 43 30.0	+0.7
GO04	Tololo Observa	147.82	271		PKPbc	10 43 45.4	-0.7
PLCA	Paso Flores	150.26	251	PKP	PKPdf	10 43 46.5	+0.1
	comp=Z,3.4nm,1.1s,baz=80,slow=6.1,SNR=2.5						
PLCA				PKPbc	PKPbc	10 43 51.1	-0.5
	comp=Z,2.9nm,0.7s,baz=325,slow=4.4,SNR=7.0						
PLCA	Paso Flores	150.26	251		PKPdf	10 43 45.6	-0.8
PLCA				PKPbc	PKPbc	10 43 51.6	0.0
PLCA				PKPab	PKPab	10 43 58.8	+0.7
PLCA	Paso Flores	150.26	251		PKPbc	10 43 51.8	+0.2
GO05	Huala	150.30	263		PKPbc	10 43 50.1	-1.7
GO05				PKPab	PKPab	10 43 56.7	-1.7

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*ISK **28** 10:25:22.8, 37°.29N×42°.65E, h5^{km}, ML2.5/5*
*DDA **28** 10:25:26.6, 37°.39N×42°.54E, h7^{km}±6^{km}, ML2.1*
ISC 28 10:25:24.8±1.6, **37°.33N**±0°.06×**42°.65E**±0°.04, **h3**^{km}±11^{km},
n12, σ1^s.**04**/20, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRT	Sirnak	0.24	316	PG	Pg	10 25 29.1	-0.3
SIRT				SG	Sg	10 25 34.4	+1.9
HAKT	HAKKARI	0.87	75	*i* P	Pg	10 25 41.5	0.0
HAKT				*i* S	Sn	10 25 58.6	+1.1
HAKT				IAML		10 26 00.0	
	comp=E,26nm,0.7s						
SRTM	Siirt_Merkez	0.88	319	*i* P	Pg	10 25 41.3	-0.3
SRTM				IAML		10 26 01.0	
	comp=E,59nm,0.5s						
AKDM	Akdamar-Van	1.03	15	PG	Pg	10 25 44.4	-0.1
AKDM				SG	Sn	10 26 00.4	-1.0
BLIS	Bitlis-Merkez	1.16	339	*i* P	Pb	10 25 47.1	-0.5
BTMN	Batman	1.23	297	*i* P	Pn	10 25 48.9	-0.1
BTMN				IAML		10 26 10.0	
	comp=E,172nm,0.5s						
GURO	Guroymak-BITLI	1.31	338	PN	Pb	10 25 49.9	-0.3
GURO				SN	Sn	10 26 09.6	+1.3
SVAN	Silvan-Diyarba	1.41	306	PN	Pg	10 25 51.1	-0.7
SVAN				SN	Sn	10 26 11.9	+1.3
SVAN	Silvan-Diyarba	1.41	306	*i* P	Pg	10 25 51.2	-0.6
SVAN				*i* S	Sn	10 26 11.6	+1.0
SVAN				IAML		10 26 20.0	
	comp=N,19nm,0.6s						
MARD	Mardin	1.49	270	*i* P	Pb	10 25 52.2	-1.0
MARD				*i* S	Sg	10 26 14.3	+1.6
MARD				IAML		10 26 18.0	
	comp=N,175nm,0.5s						
MUSM	Mu-Merkez	1.66	328	*i* P	Pb	10 25 54.7	-1.3
MUSM				*i* S	Sg	10 26 17.8	-0.2
MAZI	Mazidag	1.76	275	PN	Pn	10 25 55.8	-0.5

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*ATH **28** 10:27:05.0, 36°.25N×26°.91E, h100^{km}±10^{km}, ML3.0/2,*
Error ellipse: s-maj=10.6km s-min=2.0km az=116.0
*HLW **28** 10:27:05.4, 35°.91N×27°.07E, h15^{km}±23^{km}, Md4.1*
*DDA **28** 10:27:07.3, 35°.87N×27°.52E, h7^{km}±4^{km}, ML2.4*
*ISK **28** 10:27:07.0, 36°.22N×27°.07E, h84^{km}, ML2.9/8*
*THE **28** 10:27:07.2, 36°.23N×26°.92E, h103^{km}±3^{km}, ML2.9/4, Error*
ellipse: s-maj=3.8km s-min=0.6km az=128.0
ISC 28 10:27:03.6±1.4, **36°.16N**±0°.05×**26°.99E**±0°.04, **h120**^{km}±9^{km},
n47, σ1^s.**72**/65, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.62	167	P	Pn	10 27 23.4	+1.0
KARP				S	Sn	10 27 35.5	-1.0
	665nm,0.2s						
KARP	Karpathos	0.62	167	P	Pn	10 27 23.3	+1.0
KARP				S	Sn	10 27 36.2	-0.3

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KARP                                    AML    AML    10 27 38.3
       comp=E,1168µm,0.1s
KARP                                    AML    AML    10 27 39.7
       comp=N,1513µm,0.1s
KARP   Karpathos           0.62 167     PG     Pn     10 27 23.3 +1.0
KARP                                    SG     Sn     10 27 35.3 -1.2
DAT    Datca               0.74  39     P      Pn     10 27 23.4  0.0
DAT                                     S      Sn     10 27 36.0 -2.3
DAT    Datca               0.74  39     PG     Pn     10 27 23.3  0.0
DAT                                     SG     Sn     10 27 34.9 -3.4
DAT    Datca               0.74  39   i P      Pn     10 27 23.4  0.0
DAT                                   i S      Sn     10 27 36.0 -2.3
ARG    Arkhangelos         0.92  86     P      Pn     10 27 26.1 +1.4
ARG                                     S      Sn     10 27 40.6 -0.2
       comp=N,832nm,0.3s
ARG    Arkhangelos         0.92  86     P      Pn     10 27 26.0 +1.2
ARG                                     S      Sn     10 27 40.6 -0.2
ARG    Arkhangelos         0.92  86     PG     Pn     10 27 25.4 +0.7
AMGA   Amorgos Island      1.11 308     P      Pn     10 27 26.5 -0.2
STIA   Sitia Lasithi       1.20 218     P      Pn     10 27 29.6 +2.0
STIA                                    S      Sn     10 27 46.1 +0.3
THR2   Thira island,       1.29 283     P      Pn     10 27 29.2 +0.7
THR6   Thira Island,       1.30 279     P      Pn     10 27 29.4 +0.7
THR3   Thira Island,       1.31 282     P      Pn     10 27 29.5 +0.8
YER    Yerkesik            1.43  46     P      Pn     10 27 31.5 +1.4
YER    Yerkesik            1.43  46     PN     Pn     10 27 31.5 +1.4
NPS    Neapolis            1.43 232     P      Pn     10 27 31.7 +1.5
NPS                                     S      Sn     10 27 49.9 -0.5
       comp=N,275nm,0.3s
NPS    Neapolis            1.43 232     P      Pn     10 27 31.6 +1.4
NPS                                     AML    AML    10 27 51.0
       comp=N,499µm,0.3s
NPS                                     AML    AML    10 27 53.0
       comp=E,564µm,0.3s
TURN   Turunc              1.48  61     PN     Pn     10 27 28.2 -2.5
IOSP   Ios island          1.48 293     P      Pn     10 27 31.1 +0.4
APE    Apeiranthos         1.49 308     P      Pn     10 27 31.1 +0.3
APE    Apeiranthos         1.49 308     P      Pn     10 27 30.8  0.0
DALY   Dalyan (Mula)       1.49  63     PN     Pn     10 27 32.6 +1.7
DALY   Dalyan (Mula)       1.49  63   i P      Pn     10 27 32.5 +1.7
DALY                                  i S      Sn     10 27 51.5 -0.1
DALY                                    IAML          10 27 55.0
       comp=N,59nm,0.6s
LAST   Lasithi             1.58 232     P      Pn     10 27 33.5 +1.5
LAST                                    S      Sn     10 27 53.4 -0.2
       comp=N,162nm,0.4s
LAST   Lasithi             1.58 232     P      Pn     10 27 33.6 +1.5
FETY   Fethiye             1.75  74     P      Pn     10 27 35.4 +1.4
FETY   Fethiye             1.75  74     PN     Pn     10 27 35.9 +1.9
FETY   Fethiye             1.75  74   i P      Pn     10 27 35.7 +1.7
FETY                                  i S      Sn     10 27 55.8 -1.4
FETY                                    IAML          10 27 58.0
       comp=N,50nm,0.4s
IDI    Anoyia              1.92 244     P      Pn     10 27 37.3 +1.3
IDI                                     S      Sn     10 28 00.2 -0.6
IDI    Anoyia              1.92 244     P      Pn     10 27 37.2 +1.3
TAVA   DENIZLI_Tavas       2.02  49   i P      Pn     10 27 38.6 +1.3
AKAS   Kas                 2.12  87     PN     Pn     10 27 40.9 +2.4
AKAS   Kas                 2.12  87   i P      Pn     10 27 40.3 +1.7
AKAS                                  i S      Sn     10 28 03.3 -2.0
AKAS                                    IAML          10 28 07.0
       comp=N,49nm,0.4s
GOLH   Golhisar            2.33  62   i P      Pn     10 27 43.3 +2.1
IMMV   Iera Moni Meta      2.54 255     P      Pn     10 27 44.9 +1.1
VLI    Veliai              3.32 281     P      Pn     10 27 54.8 +0.8
SLUM   Salum               4.88 198     P      Pn     10 28 16.1 +1.1
       baz=200
SLUM                                    S      Sn     10 29 06.7 -3.8
       baz=200
SWA2                       7.01 191     P      Pn     10 28 45.5 +1.8
       baz=192
SWA2                                    S      Sn     10 29 57.2 -4.8
       baz=192
HNAT   Natroun             7.18 154     P      Pn     10 28 47.0 +1.0
       baz=153
HNAT                                    S      Sn     10 30 02.1 -4.0
       baz=153
KOT    Kottamia            7.42 145     P      Pn     10 28 51.7 +2.5
       baz=144
HSAF   As Saff             7.56 148     P      Pn     10 28 52.9 +1.8
       baz=147
RSH                        7.64 131     P      Pn     10 28 53.0 +0.8
       baz=129
GLL    Jalalah             7.67 148     P      Pn     10 28 54.2 +1.6
       baz=147
SUZ    Suez                7.98 140     P      Pn     10 28 59.2 +2.5
       baz=139
HFRF   Wahat Farafira      9.05 173     P      Pn     10 29 13.4 +2.2
       baz=172
HKAT   Jabal Katrina       9.64 140     P      Pn     10 29 20.7 +1.3
       baz=139
```

IDC 28 10:39:16.7±2.2**, 13°.14S**×**74°.26W, h98**km±24km**, mb3.0**/1**, mb1 3.3**/4**, mb1mx3.1**/36**, mbtmp3.5**/4**, Error ellipse: s-maj=78.1km s-min=19.4km az=27.0, Central Peru**

```
Code   Station Name         Δ°   AZ°    Phase ID          Time      Res
                                        Op     ISC       h  m  s    ISC
NNA    Nana                2.77 294     P      Pn     10 39 58.4 -1.1
       13nm,0.3s,baz=121,slow=14,SNR=20
NNA                                     S      Sn     10 40 33.1 +0.8
       44nm,0.3s,baz=186,slow=20,SNR=9.5
LPAZ   La Paz              6.71 119     P      Pn     10 40 53.4 +0.2
       0.2nm,0.3s,baz=304,slow=7.3,SNR=2.8
ATAH   Atahualpa           7.22 325     P      Pn     10 41 00.4 +0.3
       1.4nm,0.3s,baz=144,slow=5.7,SNR=4.3
YKA    Yellowknife Ar     81.68 342     P      P      10 51 23.1 -0.8
       0.2nm,0.6s,baz=131,slow=7.0,SNR=5.8
SONM   Songino Array     145.41 359     PKPbc  PKPab  10 58 44.1 +0.2
       0.5nm,0.8s,baz=8.7,slow=1.9,SNR=3.9
```

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*SOME **28** 10:42:40.0, 40°.73N×79°.53E, h10km*

*NNC **28** 10:42:41.0±2.7, 40°.82N×79°.75E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=17.8km s-min=16.4km az=1.0*

*KRNET **28** 10:42:46.8±0.1, 41°.33N×79°.92E, mb2.7*

ISC 28 10:42:42.5±2.5**, 40°.8N**±0°.1×**79°.61E**±0°.07**, h1**km±14km**, n23, σ1ˢ62**/38**, 12C-2D, Southern Xinjiang**

```
Code   Station Name         Δ°   AZ°    Phase ID          Time      Res
                                        Op     ISC       h  m  s    ISC
PRZ    Przheval'sk         1.89 332⇑i P      Pb     10 43 16.7 -1.2
       baz=16
PRZ                                ⇑i S      Sn     10 43 38.4 -2.3
       baz=16
KDJ    Kajisay             2.25 306⇓e P      Pg     10 43 26.0 +0.4
       baz=92
KDJ                                ⇓i S      Sb     10 43 54.4 +2.1
       baz=92
SHLS   Shalkode            2.33 357   e P      Pb     10 43 24.6 -0.8
       14nm,0.2s
SHLS                                  e S      Sb     10 43 57.0 +2.2
       23nm,0.6s
SHLS   Shalkode            2.33 357     Pg     Pb     10 43 24.5 -0.9
       14nm,0.2s
SHLS                                    Lg     Lg     10 43 57.0
       23nm,0.6s
UZB    Uzynbulak           2.36 349   e P      Pb     10 43 24.7 -1.2
       5.3nm,0.2s
UZB                                   e S      Sb     10 43 57.1 +1.5
       12nm,0.4s
UZB    Uzynbulak           2.36 349     Pg     Pb     10 43 24.7 -1.2
       5.3nm,0.2s
UZB                                     Lg     Lg     10 43 57.4
       12nm,0.4s
SATY   Saty                2.41 338   e P      Pb     10 43 25.6 -1.2
       6.7nm,0.3s
SATY                                  e S      Sb     10 43 58.5 +1.6
       17nm,0.3s
SATY   Saty                2.41 338     Pg     Pb     10 43 25.2 -1.5
       6.7nm,0.3s
SATY                                    Lg     Lg     10 43 58.1
       17nm,0.3s
ANVS   Anan'yevo           2.44 324⇑i P      Pb     10 43 26.3 -1.0
       baz=12
ANVS                               ⇑i S      Sn     10 43 55.1 +0.9
       baz=12
PDGK   Podgornoye          2.51 358     Pg     Pb     10 43 26.4 -1.9
       3.4nm,0.3s
PDGK                                    Lg     Lg     10 44 00.2
       10nm,0.6s
PDGK   Podgornoye          2.51 358    ⇑Pg     Pb     10 43 26.4 -1.9
       3.7nm,0.4s
PDGK                                   ⇑Lg     Lg     10 43 60.0
       14nm,0.5s
KPKS   Kokpek              2.73 346   e P      Pb     10 43 31.2 -1.0
       10nm,0.3s
KPKS                                  e S      Sb     10 44 08.2 +2.0
       18nm,0.3s
NRN    Naryn               2.80 284⇑i P      Pg     10 43 36.7 +0.6
       baz=73
NRN                                ⇑i S      Sg     10 44 13.2 +0.8
       baz=73
TNSS   Tian-Shan           2.98 319   e P      Pb     10 43 35.1 -1.4
       3.5nm,0.3s
TNSS                                  e S      Sb     10 44 14.8 +1.2
       7.0nm,0.4s
TNSS   Tian-Shan           2.98 319     Pg     Pb     10 43 36.7 +0.2
       4.6nm,0.4s
TNSS                                    Lg     Lg     10 44 17.6
       7.0nm,0.4s
MDOK   Medeo               3.02 322   e P      Pb     10 43 35.3 -1.9
       2.1nm,0.2s
MDOK                                  e S      Sb     10 44 14.9 +0.3
       8.2nm,0.5s
KOTS   Kotyrbulak          3.05 323   e P      Pb     10 43 36.6 -1.0
       6.4nm,0.2s
KOTS                                  e S      Sb     10 44 17.3 +2.0
       16nm,0.5s
KOTS   Kotyrbulak          3.05 323     Pg     Pb     10 43 37.2 -0.3
       7.4nm,0.3s
KOTS                                    Lg     Lg     10 44 18.5
       16nm,0.5s
BOOM   Boomskoye usch      3.22 302⇑i P      Pb     10 43 39.5 -1.0
       baz=93
BOOM                               ⇑i S      Sb     10 44 18.2 -2.1
       baz=93
KTBS   Karatobe            3.62 324   e P      Pb     10 43 46.6 -0.6
       1.9nm,0.3s
KTBS                                  e S      Sb     10 44 34.3 +2.8
       4.7nm,0.3s
KAPS   Kapalarasan         4.46 358   e P      Pb     10 44 03.4 +1.7
       1.0nm,0.5s
KAPS                                  e S      Sg     10 45 03.2 -2.7
       2.8nm,0.5s
KAPS   Kapalarasan         4.46 358     Pg     Pb     10 44 04.4 +2.7
       1.0nm,0.5s
KAPS                                    Lg     Lg     10 45 05.1
       2.8nm,0.5s
MK31   Makanchi Array      6.28  17    ⇑Pn     Pn     10 44 16.2 +0.1
       baz=194,slow=14,SNR=11
MK31                                   ⇑Sn     Sn     10 45 27.0 -1.4
       0.4nm,0.5s,baz=190,slow=23
```

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*NNC **28** 11:06:10.4±0.5, 50°.78N×73°.82E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=6.3km s-min=3.7km az=43.0, Suspected Mining explosion.*

*IDC **28** 11:06:11.8±0.8, 51°.17N×73°.95E, h0km, mb3.3/3, mb1 3.5/9, mb1mx3.3/51, mbtmp3.3/9, ML2.5/5, Error ellipse: s-maj=16.8km s-min=7.6km az=33.0*

ISC 28 11:06:10.8±0.7**, 50°.97N**±0°.06×**73°.70E**±0°.05**, h0**km**, n20, σ2ˢ78**/22**, mb3.7**/3**, 9C-8D, Central Kazakhstan**

```
Code   Station Name         Δ°   AZ°    Phase ID          Time      Res
                                        Op     ISC       h  m  s    ISC
BVAR   Borovoye Array      2.90 316     Pn     Pn     11 06 59.1 +0.9
       0.8nm,0.3s,baz=125,slow=12,SNR=25
BVAR                                    Lg     Lg     11 07 41.9
       1.8nm,0.3s,baz=124,slow=29,SNR=9.9
BRVK   Borovoye            2.97 316    ⇓Pn     Pn     11 07 00.1 +1.0
       9.3nm,0.7s
BRVK                                   ⇑Sn     Sb     11 07 41.8 +0.5
       172nm,0.9s
KURBB  Kurchatov Arra      3.08  95     Pn     Pn     11 06 59.3 -1.4
       0.1nm,0.3s,baz=278,slow=14,SNR=46
KURBB                                   Lg     Lg     11 07 44.0
       0.4nm,0.3s,baz=278,slow=31,SNR=16
KURBB  Kurchatov Arra      3.08  95    ⇑Pn     Pn     11 06 59.3 -1.4
       14nm,0.7s
KURBB                                  ⇑Lg     Lg     11 07 46.0
       372nm,0.9s
MAKZ   Makanchi            6.86 124    ⇓Pg     Pb     11 08 12.0 +1.1
       2.7nm,1.1s
MAKZ                                   ⇑Lg     Lg     11 09 44.4
       42nm,1.1s
MK31   Makanchi Array      7.04 123    ⇑Pg     Pb     11 08 16.3 +2.5
       1.1nm,0.6s,baz=305,slow=14,SNR=5.5
MK31                                   ⇓Lg     Lg     11 09 49.2
       22nm,0.8s,baz=316,slow=26,SNR=5.8
MKAR   Makanchi Array      7.04 123     Pn     Pn     11 07 56.4 +1.4
       0.4nm,0.3s,baz=330,slow=8.3,SNR=1.8
MKAR                                    Sn     Sn     11 09 14.6 -1.1
       0.4nm,0.3s,baz=226,slow=44,SNR=1.5
MKAR                                    Lg     Lg     11 09 53.9
       0.5nm,0.3s,baz=318,slow=26,SNR=12
ZALV   Zalesovo Beam       7.42  62     Pn     Pn     11 07 58.0 -2.1
       0.0nm,0.3s,baz=248,slow=12,SNR=4.7
ZALV                                    Sn     Sn     11 09 27.1 +2.2
       0.4nm,0.3s,baz=249,slow=24,SNR=5.8
ZALV                                    Lg     Lg     11 10 03.7
       0.4nm,0.3s,baz=32,slow=42,SNR=1.9
CHMS   Chumysh             8.01 174    ⇑Lg     Lg     11 10 18.8
       29nm,0.9s
KK31   Karatay Array       8.17 197    ⇑Pn     Pn     11 08 06.8 -3.7
       0.3nm,0.5s,baz=24,slow=14,SNR=4.9
KK31                                   ⇓Sn     Sn     11 09 41.3 -2.2
       3.3nm,0.9s,baz=10,slow=20,SNR=4.4
KK31                                   ⇓Lg     Lg     11 10 24.3
       15nm,1.0s,baz=17,slow=28,SNR=4.9
AAK    Ala-Archa           8.36 176     Pn     Pn     11 08 16.1 +2.8
       0.1nm,0.3s,baz=218,slow=16,SNR=2.3
AAK                                     Sn     Sn     11 09 55.5 +7.2
       0.2nm,0.3s,baz=226,slow=20,SNR=3.9
AAK                                     Lg     Lg     11 10 36.4
       0.3nm,0.3s,baz=15,slow=23,SNR=8.8
AAK    Ala-Archa           8.36 176    ⇓Sn     Sn     11 09 45.3 -3.1
       3.6nm,0.8s
AAK                                    ⇓Lg     Lg     11 10 30.8
       40nm,0.9s
PDGK   Podgornoye          8.60 151    ⇑Lg     Lg     11 10 37.9
       29nm,1.0s
AB31   Akbulak array       9.01 264    ⇑Lg     Lg     11 10 57.9
       8.9nm,1.1s
AKTO   Aktyubinsk          9.97 273     Pn     Pn     11 08 32.5 -2.7
       0.1nm,0.3s,baz=78,slow=13,SNR=2.3
AKTO                                    Sn     Sn     11 10 32.0 +4.4
       baz=251,slow=23,SNR=3.7
AKTO                                    Lg     Lg     11 11 24.8
       0.1nm,0.3s,baz=237,slow=6.3,SNR=7.6
AKTO   Aktyubinsk          9.97 273    ⇓Lg     Lg     11 11 27.9
       12nm,1.1s
ARU    Arti               10.50 307     Pn     Pn     11 08 42.5 +0.2
       0.0nm,0.3s,baz=282,slow=17,SNR=1.3
ARU                                     Lg     Lg     11 11 44.2
       0.0nm,0.3s,baz=340,slow=23,SNR=6.1
SONM   Songino Array      21.41  86     P      P      11 10 59.0 -1.0
       0.2nm,0.3s,baz=287,slow=12,SNR=2.0
ILAR   Eielson Array      60.38  19     P      P      11 16 18.8 -2.3
       0.5nm,0.8s,baz=325,slow=4.4,SNR=5.0
YKA    Yellowknife Ar     66.69   4     P      P      11 17 02.7 -0.1
       0.5nm,0.9s,baz=355,slow=6.4,SNR=8.1
```

IDC 28 11:20:20.7±2.6**, 5°.26S**×**133°.28E, h0**km**, mb3.5**/1**, mb1 3.8**/5**, mb1mx3.5**/34**, mbtmp3.7**/5**, ML4.0**/4**, Error ellipse: s-maj=92.9km s-min=21.0km az=81.0, Aru Islands region**

```
Code   Station Name         Δ°   AZ°    Phase ID          Time      Res
                                        Op     ISC       h  m  s    ISC
SIJI   Sorong              4.80 335     Pn     Pn     11 21 35.9 +1.5
       4.0nm,0.3s,baz=256,slow=20,SNR=13
SIJI                                    Sn     Sn     11 22 30.0 -0.7
       4.9nm,0.3s,baz=138,slow=23,SNR=8.5
WRA    Warramunga Arr     14.63 176     Pn     Pn     11 23 48.0 -1.1
       1.5nm,0.3s,baz=260,slow=26,SNR=90
WRA                                     Sn     Sn     11 26 30.8 -1.4
       0.6nm,0.3s,baz=72,slow=9.1,SNR=12
FITZ   Fitzroy Crossi     14.78 210     Pn     Pn     11 23 52.3 +1.2
       0.3nm,0.3s,baz=34,slow=11,SNR=11
FITZ                                    Sn     Sn     11 26 34.2 -1.6
       0.5nm,0.3s,baz=206,slow=15,SNR=9.4
ASAR   Alice Springs      18.31 178     P      P      11 24 37.2 +0.7
       0.2nm,0.3s,baz=4.3,slow=10,SNR=23
MKAR   Makanchi Array     68.62 325     P      P      11 31 25.3 -0.4
       0.2nm,0.4s,baz=111,slow=8.1,SNR=5.8
```

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*ISK **28** 11:20:39.6, 37°.07N×27°.42E, h17km, ML2.5/6*

*DDA **28** 11:20:39.9, 37°.03N×27°.45E, h10km, ML1.9*

ISC 28 11:20:39.2±0.8**, 37°.11N**±0°.03×**27°.61E**±0°.03**, h10**km**, n16, σ1ˢ75**/25**, Turkey**

```
Code   Station Name         Δ°   AZ°    Phase ID          Time      Res
                                        Op     ISC       h  m  s    ISC
BDRM   Kayabasi            0.14 251   i P      Pg     11 20 42.1 -0.4
BDRM                                    IAML          11 20 43.0
       comp=N,3µm,0.4s
BDRM                                  i S      Sg     11 20 43.3 -1.4
BODT   Bodrum              0.25 259     PG     Pg     11 20 43.5 -0.8
BODT                                    SG     Sg     11 20 45.9 -1.7
DATC   Datca-Mugla         0.35 174     PG     Pb     11 20 47.5 -0.1
DAT    Datca               0.38 184     PG     Pg     11 20 46.7 -0.1
DAT    Datca               0.38 184   i P      Pg     11 20 46.4 -0.4
DAT                                   i S      Sg     11 20 51.8 -0.1
DAT                                     IAML          11 20 53.0
       comp=E,40nm,0.6s
YER    Yerkesik            0.54  87     PG     Pn     11 20 53.7 +0.7
AYDN   Tasoluk             0.59  21   i P      Pn     11 20 53.7  0.0
AYDN                                  i S      Sn     11 21 03.2 -0.2
AYDN                                    IAML          11 21 05.0
       comp=E,63nm,0.4s
MRSB   Marmaris-Mugla      0.61 130     PG     Pn     11 20 53.9 -0.1
GCAM   G?zelcaml?          0.66 333     PG     Pb     11 20 53.0 +0.2
GCAM   G?zelcaml?          0.66 333   i P      Pb     11 20 53.1 +0.2
GCAM                                  i S      Sn     11 21 04.0 -1.0
TURN   Turunc              0.83 106     PG     Pg     11 20 54.1 -1.1
TURN                                    SG     Sg     11 21 04.9 -1.1
TURN   Turunc              0.83 106   i P      Pg     11 20 52.0 -3.1
TURN                                  i S      Sg     11 21 03.1 -2.9
TURN                                    IAML          11 21 06.0
       comp=N,120nm,0.4s
AYDB   Zeytinkoy-Aydi      0.86  15     PG     Pn     11 20 58.5 +0.9
AYDB                                    SG     Sn     11 21 12.3 +2.0
DALY   Dalyan (Mula)       0.89 109     PG     Pn     11 20 59.5 +1.8
ARG    Arkhangelos         0.98 155     PG     Pn     11 20 59.7 +0.6
TAVA   DENIZLI_Tavas       1.10  71   i P      Pn     11 21 03.6 +2.8
TAVA                                  i S      Sn     11 21 20.8 +4.8
TAVA                                    IAML          11 21 32.0
       comp=N,34nm,1.0s
```

IDC 28 11:26:30.9±13.0**, 18°.06S**×**176°.38W, h0**km**, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.4**/37**, mbtmp3.5**/3**, MS3.1**/4**, Ms1 3.1**/4**, ms1mx2.8**/23**, Error ellipse: s-maj=597.9km s-min=40.8km az=142.0, Fiji Islands region**

```
Code   Station Name         Δ°   AZ°    Phase ID          Time      Res
                                        Op     ISC       h  m  s    ISC
DZM    Mont Dzumac        16.62 253     LR     LR     11 35 28.1
       comp=Z,32nm,21.2s,baz=337,slow=32
HNR    Honiara            24.51 287     LR     LR     11 41 13.8
       comp=Z,40nm,18.6s,baz=2.5,slow=36
PPT    Papeete            25.52  93     LR     LR     11 39 38.9
       comp=Z,28nm,19.5s,baz=280,slow=31
WRA    Warramunga Arr     46.50 259     P      P      11 35 00.8 +0.4
       0.3nm,1.0s,baz=122,slow=10,SNR=1.6
ASAR   Alice Springs      46.60 254     P      P      11 35 00.7 -0.5
       0.4nm,0.6s,baz=86,slow=7.9,SNR=6.0
SIJI   Sorong             54.15 282     LR     LR     11 57 43.3
       comp=Z,42nm,20.3s,baz=130,slow=35
ILAR   Eielson Array      85.61  12     P      P      11 39 10.8  0.0
       0.4nm,1.0s,baz=225,slow=4.7,SNR=4.3
```

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*IDC **28** 11:39:06.2±0.8, 58°.67N×142°.68W, h0km, mb3.9/15, mb1 4.0/21, mb1mx3.8/67, mbtmp3.9/21, ML3.6/6, MS3.4/10, Ms1 3.4/10, ms1mx3.0/55, Error ellipse: s-maj=17.7km s-min=9.3km az=23.0*

*NEIC **28** 11:39:08.9±1.5, 58°.61N±0°.05×142°.76W±0°.07, h22km±4km, mb4.2/12, ML3.8(OTT), ML3.6/82(AEIC), Error ellipse: s-maj=7.9km s-min=5.3km az=189.0*

*PGC **28** 11:39:08.5±0.5, 58°.64N×142°.54W, h10km, ML3.8/10, ML4.0, 189km Wsw of Yakutat, Ak Gulf Of Alaska*

*AEIC **28** 11:39:10±1.7, 58°.52N±0°.03×142°.75W±0°.07, h12km±4km, Error ellipse: s-maj=6.3km s-min=0.9km az=55.0*

ISC 28 11:39:08.9±0.5**, 58°.58N**±0°.05×**142°.66W**±0°.04**, h23**km**, n185, σ1ˢ44**/211**, mb4.1**/20**, MS3.7**/6**, Gulf of Alaska**

```
Code   Station Name         Δ°   AZ°    Phase ID          Time      Res
                                        Op     ISC       h  m  s    ISC
CYK    Cape Yakataga       1.52   3            Pn     11 39 34.1 -0.4
CHX    Chaix Hills         1.69  27            Pn     11 39 36.9 -0.2
YKU2   Yakutat             1.81  57            Pn     11 39 38.7 +0.2
YKU2                                    Sn     Sn     11 40 01.0 +0.3
PCA    Pinnacle            1.96  38     Pn     Pn     11 39 40.5 -0.3
PCA                                     Sn     Sn     11 40 02.8 -1.8
PCA    Pinnacle            1.96  38            Pn     11 39 40.5 -0.3
PCA                                     Sn     Sn     11 40 03.2 -1.5
PNL    Peninsula           2.01  56     Pn     Pn     11 39 40.9 -0.5
PNL                                     Sn     Sn     11 40 03.6 -2.2
PNL    Peninsula           2.01  56            Pn     11 39 40.8 -0.5
MID    Middleton Isla      2.09 296            Pn     11 39 40.5 -1.8
MID                                            Sn     11 40 04.7 -2.9
RAGM   Ragged Mountai      2.09 331            Pn     11 39 41.5 -1.0
RAGM                                    Sn     Sn     11 40 06.5 -1.2
TGL    Tana Glacier        2.19 358            Pn     11 39 43.0 -0.9
TGL                                            Sn     11 40 08.0 -2.4
CRQM   Cirque              2.20 354            Pn     11 39 43.0 -1.1
CRQM                                    Sn     Sn     11 40 08.7 -2.0
GRNC   Granite Creek       2.21  12     Pn     Pn     11 39 43.9 -0.5
GRNC                                    Sn     Sn     11 40 09.3 -1.7
GRNC   Granite Creek       2.21  12            Pn     11 39 43.9 -0.5
GRNC                                           Sn     11 40 09.1 -2.0
GOAT   Goat Mountain       2.27 333            Pn     11 39 43.6 -1.4
KIAG   Kiagna River        2.36   4     Pn     Pn     11 39 45.7 -0.6
KIAG                                    Sn     Sn     11 40 12.9 -1.7
KIAG   Kiagna River        2.36   4            Pn     11 39 45.7 -0.6
KIAG                                           Sn     11 40 13.0 -1.7
DHAK   Deception Hill      2.37  75            Pn     11 39 45.8 -0.5
BALM   Baldy               2.48   4     Pn     Pn     11 39 47.3 -0.5
BALM                                    Sn     Sn     11 40 15.9 -1.4
BALM   Baldy               2.48   4            Pn     11 39 47.3 -0.5
BALM                                           Sn     11 40 15.3 -2.0
CTGM   Chitina Glacie      2.49  15     Pn     Pn     11 39 47.6 -0.5
CTGM                                    Sn     Sn     11 40 16.0 -1.8
CTGM   Chitina Glacie      2.49  15            Pn     11 39 47.6 -0.5
EYAK   Cordova Ski Ar      2.53 323            Pn     11 39 47.0 -1.5
BARN   Barnard Glacie      2.54  11            Pn     11 39 48.4 -0.5
PTPK   Patty Peak          2.62   2     Pn     Pn     11 39 49.8 -0.2
PTPK                                    Sn     Sn     11 40 19.6 -1.5
PTPK   Patty Peak          2.62   2            Pn     11 39 49.7 -0.2
HIN    Hinchinbrook I      2.68 315            Pn     11 39 49.6 -0.9
VRDI   Verde Repeater      2.69 352            Pn     11 39 50.1 -0.8
MCARA  McCarthy VSAT       2.82 356            Pn     11 39 52.0 -0.6
FID    Port Fidalgo        2.92 320            Pn     11 39 52.7 -1.1
GLB    Gilahina Butte      2.93 349            Pn     11 39 53.1 -1.0
YUK7   Dusty Glacier       3.02  48     Pn     Pn     11 39 56.0 +0.5
YUK7                                    Sn     Sn     11 40 30.5 -0.5
YUK7   Dusty Glacier       3.02  48            Pn     11 39 56.0 +0.5
PS12   TAPS Pump St12      3.17 338            Pn     11 39 56.6 -0.6
YUK6   Outpost Mounta      3.22  41     Pn     Pn     11 39 59.0 +0.8
YUK6                                    Sn     Sn     11 40 34.5 -1.4
YUK6   Outpost Mounta      3.22  41            Pn     11 39 59.0 +0.8
GLI    Glacier Island      3.22 318            Pn     11 39 56.4 -1.6
YUK2   White River         3.35  15     Pn     Pn     11 40 00.6 +0.8
YUK2                                    Sn     Sn     11 40 37.6 -1.2
YUK2   White River         3.35  15            Pn     11 40 00.4 +0.6
YUK3   Moose Creek         3.40  18     Pn     Pn     11 40 01.3 +0.7
YUK3                                    Sn     Sn     11 40 39.5 -0.7
YUK3   Moose Creek         3.40  18            Pn     11 40 01.3 +0.7
YUK4   Talbot Arm          3.44  34     Pn     Pn     11 40 03.7 +2.6
YUK4                                    Sn     Sn     11 40 42.1 +1.0
YUK4   Talbot Arm          3.44  34            Pn     11 40 03.9 +2.8
HYT    Haines Junctio      3.45  47     Pn     Pn     11 40 01.3  0.0
HYT                                     Sn     Sn     11 40 39.6 -1.9
HYT    Haines Junctio      3.45  47            Pn     11 40 01.5 +0.2
YUK5   Granite Creek       3.53  41     Pn     Pn     11 40 03.1 +0.7
YUK5                                    Sn     Sn     11 40 42.3 -1.1
PWL    Port Wells          3.67 311            Pn     11 40 02.7 -1.5
YUK1   Sand Pete Hill      3.74  16     Pn     Pn     11 40 06.0 +0.7
YUK1                                    Sn     Sn     11 40 47.5 -1.1
YUK1   Sand Pete Hill      3.74  16            Pn     11 40 06.0 +0.7
PS11   TAPS Pump St11      3.78 340            Pn     11 40 05.5 -0.2
SEW    Seward              3.80 297            Pn     11 40 04.4 -1.5
SKAG   Skagway             3.89  74            Pn     11 40 07.2  0.0
BVCY   Beaver Creek        3.95  12     Pn     Pn     11 40 08.6 +0.5
BVCY                                    Sn     Sn     11 40 52.4 -1.3
BVCY   Beaver Creek        3.95  12            Pn     11 40 08.7 +0.5
SCM    Sheep Creek Mo      4.01 327            Pn     11 40 08.0 -0.9
HARP   HAARP               4.03 343     Pn     Pb     11 40 28.2 +9.2
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KNK	Knik Glacier	4.07	317		Pn	11 40 07.0	-2.7
BESE	Bessie Mountai	4.09	87	Pn	Pn	11 40 09.2	-0.8
BESE				Sn	Sn	11 40 54.6	-2.5
BESE	Bessie Mountai	4.09	87		Pn	11 40 09.7	-0.3
SIT	Sitka	4.21	108	Pn	Pn	11 40 10.1	-1.5
SML	Sawmill	4.30	321		Pn	11 40 11.7	-1.2
SLKM	Skilak Lake	4.31	300		Pn	11 40 11.0	-1.9
BRSE	Bradley Lake S	4.32	289		Pn	11 40 12.0	-1.1
JIS	Juneau Island	4.36	90		Pn	11 40 13.5	-0.1
RC01	Rabbit Creek A	4.37	308		Pn	11 40 12.8	-1.0
BRLK	Bradley Lake	4.40	289		Pn	11 40 13.3	-0.8
MENT	Mentasta	4.41	354		Pn	11 40 14.3	0.0
PMR	Palmer	4.43	316		Pn	11 40 13.8	-0.7
WHY	Whitehorse	4.47	59	Pn	Pn	11 40 15.3	0.0
WHY				Sn	Sn	11 41 04.3	-2.3
WHY	Whitehorse	4.47	59		Pn	11 40 15.5	+0.3
GHO	Glory Hole Cre	4.48	318		Pn	11 40 14.9	-0.4
BC03		4.53	5		Pn	11 40 15.8	-0.1
BCAR	Beaver Creek A	4.53	5		Pn	11 40 15.7	-0.3
CNPM	China Poot	4.53	286		Pn	11 40 15.2	-0.7
WAT6	Susitna Watana	4.74	330		Pn	11 40 17.9	-1.0
HOM	Homer	4.75	287	Pn	Pn	11 40 19.1	+0.1
DHY	Denali Highway	5.07	335		Pn	11 40 23.1	-0.3
WAT2	Susitna Watana	5.27	329		Pn	11 40 25.8	-0.5
RIDG	Independent Ri	5.29	349		Pn	11 40 26.5	+0.1
KDAK	Kodiak Island	5.31	266	Pn	Pn	11 40 25.4	-1.2
	13nm,0.3s,baz=66,slow=5.8,SNR=305						
KDAK				Sn	Sn	11 41 22.9	-4.1
	11nm,0.3s,baz=129,slow=21,SNR=13						
KDAK				LR	LR	11 42 50.4	
	comp=Z,245nm,18.8s,baz=73,slow=42						
KDAK	Kodiak Island	5.31	266		Pn	11 40 25.9	-0.7
SCRK	Sand Creek	5.46	354		Pn	11 40 29.0	+0.2
RSO	Redoubt South	5.47	295		Pn	11 40 29.6	+0.4
SKT	Skwentna	5.58	311		Pn	11 40 30.1	-0.3
RND	Reindeer	5.71	331		Pn	11 40 31.8	-0.4
DAWY	Dawson	5.73	15	Pn	Pn	11 40 32.5	+0.1
DAWY				Sn	Sn	11 41 33.8	-3.6
DAWY	Dawson	5.73	15		Pn	11 40 32.7	+0.2
OHAK	Old Harbor	5.83	261		Pn	11 40 32.7	-1.0
WRAK	Wrangell Islan	5.97	107	Pn	Pn	11 40 35.7	+0.1
MCK	McKinley	6.00	332		Pn	11 40 35.8	-0.3
TRF	Thorofare Moun	6.13	326		Pn	11 40 37.6	-0.5
HDA	Harding Lake	6.20	343		Pn	11 40 38.4	-0.5
HDA	Harding Lake	6.20	343	P	Pn	11 40 38.5	-0.4
	baz=158						
EGAK	Eagle	6.27	6		Pn	11 40 40.0	+0.3
PS08	TAPS Pump Stn8	6.31	343		Pn	11 40 39.6	-0.8
PPLA	Purkeypile	6.37	317		Pn	11 40 41.3	0.0
KTH	Kantishna Hill	6.40	325		Pn	11 40 41.6	0.0
WRH	Wood River Hil	6.46	339		Pn	11 40 42.9	+0.5
SII	Sitkinak Islan	6.52	257	Pn	Pn	11 40 42.5	-0.7
IL31		6.53	344		Pn	11 40 42.5	-0.8
ILAR	Eielson Array	6.53	344	Pn	Pn	11 40 42.5	-0.9
	1.5nm,0.3s,baz=166,slow=13,SNR=93						
ILAR				Sn	Sn	11 41 55.7	-1.5
	0.9nm,0.3s,baz=169,slow=22,SNR=6.4						
ILAR				LR	LR	11 43 23.4	
	comp=Z,119nm,18.5s,baz=143,slow=40						
ILAR	Eielson Array	6.53	344		Pn	11 40 42.1	-1.4
CCB	Clear Creek Bu	6.57	340		Pn	11 40 42.5	-1.4
DLBC	Dease Lake	6.62	86	Pn	Pn	11 40 45.8	+1.0
	3.2nm,0.3s,baz=300,slow=9.0,SNR=48						
DLBC				Sn	Sn	11 41 58.1	-1.4
	3.1nm,0.3s,baz=226,slow=23,SNR=9.5						
DLBC	Dease Lake	6.62	86	Pn	Pn	11 40 45.0	+0.2
DLBC				Sn	Sn	11 41 55.8	-3.8
DLBC	Dease Lake	6.62	86		Pn	11 40 45.5	+0.7
KABU	Katmai Buttres	6.64	273		Pn	11 40 45.2	+0.2
NEA	Nenana	6.75	336		Pn	11 40 46.5	+0.1
COLA	College	6.78	341		Pn	11 40 45.4	-1.4
TCOL	CIGO, UAF Yank	6.78	341	P	Pn	11 40 45.7	-1.1
	baz=156						
BPAW	Bear Paw Mtn.	6.83	328		Pn	11 40 46.4	-1.1
MDM	Murphy Dome	6.93	340	Pn	Pn	11 40 48.4	-0.5
POKR	Poker Plat Res	6.94	343	P	Pn	11 40 48.1	-1.0
	baz=158						
SVW2	Sparrevohn	6.98	297		Pn	11 40 49.2	-0.4
PRP	Porcupine Dome	7.10	350		Pn	11 40 50.7	-0.6
MLY	Manley	7.52	333		Pn	11 40 56.5	-0.4
CHIR	Chirikof Islan	7.56	254	Pn	Pn	11 40 56.7	-0.8
VIB	Van Inlet	7.79	129	Pn	Pn	11 40 59.9	-0.9
VIB				Sn	Sn	11 42 21.9	-6.3
TT01	Tatalina	7.85	309		Pn	11 41 00.3	-1.1
DIB	Dawson Inlet,	7.85	129	Pn	Pn	11 41 00.6	-0.9
DIB				Sn	Sn	11 42 24.6	-5.0
DIB	Dawson Inlet,	7.85	129	Pn	Pn	11 41 00.8	-0.7
TTA	Tatalina	7.86	309		Pn	11 41 01.9	+0.2
RUBB	Prince Rupert	8.08	116	Pn	Pn	11 41 03.9	-0.8
RUBB				Sn	Sn	11 42 30.0	-5.1
MOBC	Moresby Island	8.11	128	Pn	Pn	11 41 05.3	+0.2
MOBC				Sn	Sn	11 42 31.4	-4.4
MOBC	Moresby Island	8.11	128	Pn	Pn	11 41 05.2	+0.2
FYU	Fort Yukon	8.11	353		Pn	11 41 05.2	+0.3
EPYK	Eagle Plains	8.29	17		Pn	11 41 08.2	+0.7
CHGN	Chignik	8.79	262	Pn	Pn	11 41 14.5	+0.1
BMAR	Burnt Mountain	8.93	355		Pn	11 41 16.6	+0.3
IMAR	Indian Mountai	9.04	330		Pn	11 41 18.0	+0.3
CNBA	Chernabura Isl	10.03	255		Pn	11 41 31.6	+0.2
BBB	Bella Bella	10.45	121	Pn	Pn	11 41 38.0	+1.0
	0.2nm,0.3s,baz=146,slow=16,SNR=1.7						
BBB				Sn	Sn	11 43 30.6	-2.7
	0.4nm,0.3s,baz=99,slow=18,SNR=1.7						
BBB				LR	LR	11 45 00.4	
	comp=Z,61nm,20.0s,baz=92,slow=34						
TOLK	Toolik Lake Re	10.55	346	Pn	Pn	11 41 39.6	+1.2
TOLK	Toolik Lake Re	10.55	346	P	Pn	11 41 39.9	+1.4
	baz=160						
INK	Inuvik	10.57	19	Pn	Pn	11 41 38.4	-0.3
	0.1nm,0.3s,baz=206,slow=13,SNR=5.1						
INK				Sn	Sn	11 43 29.2	-7.0
	0.2nm,0.3s,baz=94,slow=27,SNR=1.9						
INK				LR	LR	11 46 10.0	
	comp=Z,213nm,18.2s,baz=160,slow=40						
INK	Inuvik	10.57	19	Pn	Pn	11 41 37.1	-1.6
INK	Inuvik	10.57	19		Pn	11 41 38.2	-0.4
C36M	Paulatuk	13.46	29		Pn	11 42 17.4	-0.7
C36M	Paulatuk	13.46	29	P	Pn	11 42 17.3	-0.8
	baz=226						
UNV	Unalaska Valle	14.05	261	Pn	Pn	11 42 25.2	-1.1
YKA	Yellowknife Ar	14.29	62	Pn	Pn	11 42 28.2	-1.3
	0.1nm,0.3s,baz=266,slow=13,SNR=5.2						
A36M	Sachs Harbour	15.20	21	P	Pn	11 42 40.5	-1.2
	baz=217						
WALA	Waterton Lakes	19.32	107	P	P	11 43 34.1	+1.8
EGMT	Eagleton	22.09	104	P	P	11 44 03.4	+1.2
EGMT				IAmb	IAmb	11 44 09.7	
	comp=Z,5.9nm,0.9s						
FFC	Flin Flon	22.44	82	P	P	11 44 06.9	+1.1
FFC				IAmb	IAmb	11 44 08.1	
	comp=Z,7.3nm,0.8s						
RES	Resolute Bay	23.83	29	P	P	11 44 20.2	+0.6
	comp=Z,1.2nm,0.6s,baz=251,slow=11,SNR=13						
RES	Resolute Bay	23.83	29	P	P	11 44 20.8	+1.1
RLMT	Red Lodge	24.32	109	P	P	11 44 26.5	+1.8
IMW	Indian Meadow	24.40	113	P	P	11 44 26.8	+1.2
IMW				IAmb	IAmb	11 44 44.1	
	comp=Z,6.4nm,0.9s						
PDAR	Pinedale Array	25.91	113	P	P	11 44 41.1	+1.9
	comp=Z,0.5nm,0.8s,baz=29,slow=3.4,SNR=4.6						
ULM	Lac du Bonnet	27.95	87	P	P	11 44 57.4	+0.2
	comp=Z,1.2nm,0.6s,baz=290,slow=8.1,SNR=3.0						
ULM				LR	LR	11 56 33.4	
	comp=Z,122nm,18.1s,baz=348,slow=38						
MSU	Marysvale	28.07	122	P	P	11 44 60.0	+1.4
FRB	Frobisher Bay	34.24	49	LR	LR	12 00 11.4	
	comp=Z,116nm,18.2s,baz=329,slow=37						
SFJD	Kangerlussuaq	39.12	39	LR	LR	12 02 38.3	
	comp=Z,8.3nm,18.0s,baz=222,slow=36						
TXAR	Lajitas Array	39.58	120	P	P	11 46 41.0	+2.8
	comp=Z,0.2nm,0.6s,baz=328,slow=5.9,SNR=2.9						
TXAR	Lajitas Array	39.58	120	P	P	11 46 39.8	+1.5
NRIK	Noril'sk	47.37	338	P	P	11 47 40.6	+0.3
	comp=Z,5.0nm,0.8s,baz=51,slow=7.1,SNR=5.6						
H11N2	WAKE ISLAND Hy	53.12	245	T	T	12 47 24.8	
	baz=30,slow=76,SNR=6.2						
H11N3	WAKE ISLAND Hy	53.12	245	T	T	12 47 33.3	
	baz=30,slow=76,SNR=22						
H11N1	WAKE ISLAND Hy	53.13	245	T	T	12 47 19.9	
	baz=30,slow=76,SNR=6.9						
H11S1	WAKE ISLAND Hy	54.26	245	T	T	12 48 55.7	
	baz=30,slow=76,SNR=20						
H11S2	WAKE ISLAND Hy	54.27	245	T	T	12 48 37.4	
	baz=30,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	54.28	245	T	T	12 48 42.2	
	baz=30,slow=76,SNR=3.3						
SONM	Songino Array	59.78	313	P	P	11 49 13.3	+1.5
	comp=Z,0.3nm,0.5s,baz=21,slow=9.3,SNR=2.9						
FINES	FINESS Array B	59.99	6	P	P	11 49 12.4	-0.4
	comp=Z,1.5nm,0.6s,baz=12,slow=8.6,SNR=7.6						
ZAA0	Zalesovo Array	61.46	330	P	P	11 49 22.8	-0.1
ZALV	Zalesovo Beam	61.46	330	P	P	11 49 23.3	+0.3
	comp=Z,2.1nm,0.6s,baz=18,slow=5.7,SNR=9.4						
ZALV	Zalesovo Beam	61.46	330	P	P	11 49 22.9	-0.1
BVAR	Borovoye Array	65.57	339	P	P	11 49 50.3	+0.2
	comp=Z,0.6nm,0.4s,baz=38,slow=5.6,SNR=6.9						
KURK	Kurchatov	65.97	333	P	P	11 49 53.2	+0.5
KURBB	Kurchatov Arra	66.08	333	P	P	11 49 53.4	0.0
	comp=Z,2.9nm,0.7s,baz=27,slow=6.3,SNR=15						
SJG	San Juan	67.70	92	LR	LR	12 20 29.1	
	comp=Z,63nm,20.0s,baz=100,slow=37						
MK31	Makanchi Array	68.65	329	P	P	11 50 09.6	-0.2
MK31				IAmb	IAmb	11 50 10.3	
	comp=Z,1.4nm,0.9s						
MKAR	Makanchi Array	68.65	329	P	P	11 50 09.4	-0.4
	comp=Z,1.1nm,0.4s,baz=30,slow=6.3,SNR=16						
MKAR	Makanchi Array	68.65	329	P	P	11 50 09.7	-0.1
MAKZ	Makanchi	68.72	329	P	P	11 50 10.0	-0.2
MAKZ				IAmb	IAmb	11 50 10.5	
	comp=Z,2.2nm,0.7s						
AKASG	Malin Array Be	70.88	5	P	P	11 50 23.1	-0.3
	comp=Z,0.6nm,0.4s,baz=355,slow=6.0,SNR=6.1						
ABKAR	Akbulak array	70.94	345	P	P	11 50 24.0	+0.2
GERES	GERESS Array B	71.19	16	P	P	11 50 26.3	+0.8
	comp=Z,0.4nm,0.5s,baz=353,slow=6.9,SNR=2.6						
ROSC	El Rosal	74.69	106	LR	LR	12 28 02.4	
	comp=Z,65nm,18.5s,baz=106,slow=39						
BR131	Keskin Array S	82.01	3	P	P	11 51 27.4	+0.5
BR131				IAmb	IAmb	11 51 28.2	
	comp=Z,1.9nm,0.8s						
BRTR	Keskin Array B	82.01	3	P	P	11 51 27.0	+0.1
	comp=Z,1.3nm,0.8s,baz=5.5,slow=3.8,SNR=6.8						
BRTR	Keskin Array B	82.01	3	P	P	11 51 27.1	+0.3
NIL	Nilore	83.35	330	P	P	11 51 34.6	+0.8
NNA	Nana	88.04	117	LR	LR	12 31 42.3	
	comp=Z,32nm,21.4s,baz=11,slow=36						
CMAR	Chiang Mai Arr	88.19	303	P	P	11 51 58.8	+0.8
	comp=Z,0.7nm,0.4s,baz=22,slow=6.8,SNR=4.5						

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*JMA **28** 11:41:41.1, 22°.52N×121°.69E, h35^{km}*
*TAP **28** 11:41:42.1, 22°.55N×121°.70E, h22^{km}, ML2.5, C*
ISC 28 11:41:41.8±1.0, **22°.57N**±0°.03×**121°.68E**±0°.03, **h26**^{km}±8^{km}, **n49**, σ**0^s.56**/75, **1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWH	Lutao	0.23	307	⇑*i*P	Pb	11 41 48.0	0.0
	baz=302						
TWH				*i* S	Sb	11 41 51.9	-0.3
	baz=302						
TTN	Taitung	0.52	291	*e*P	Pb	11 41 52.8	+0.3
	baz=293						
TTN				*i* S	Sb	11 42 00.6	+0.9
	baz=293						
LAY	Lan-yu	0.54	192	*e*P	Pb	11 41 52.7	0.0
	baz=186						
LAY				*e*S	Sb	11 42 00.0	-0.2
	baz=186						
CHKT	Chengkung	0.60	332	*i* P	Pb	11 41 53.5	-0.3
	baz=343						
CHKT				*i* S	Sb	11 42 01.7	-0.2
	baz=343						
TWGBT	Beinan	0.60	294	P	Pb	11 41 53.7	-0.1
	baz=304						
TWGBT				S	Sb	11 42 02.7	+0.7
	baz=304						
TWG	Pinlang	0.61	294	*e*P	Pb	11 41 54.1	+0.2
	baz=304						
TWG				*e*S	Sb	11 42 02.3	+0.1
	baz=304						
ECL	Taimali	0.67	273	*i* P	Pb	11 41 54.6	-0.2
	baz=274						
ECL				*e*S	Sb	11 42 03.3	-0.5
	baz=274						
FULB	Fuli	0.72	331	*i* P	Pb	11 41 55.5	-0.3
	baz=330						
FULB				*e*S	Sb	11 42 04.8	-0.5
	baz=330						
TAW	Tawu	0.75	254	*i* P	Pb	11 41 56.2	-0.1
	baz=255						
EAST	Anshuo	0.79	257	*i* P	Pb	11 41 56.8	-0.1
	baz=266						
EAST				*e*S	Sb	11 42 06.7	-0.5
	baz=266						
TWF1	Yuli	0.85	336	*e*P	Pb	11 41 57.8	-0.2
	baz=336						
TWF1				*e*S	Sb	11 42 08.8	-0.3
	baz=336						
ELDTW	Lidau	0.87	316	*i* P	Pb	11 41 57.7	-0.6
	baz=324						
ELDTW				*e*S	Sb	11 42 09.0	-0.6
	baz=324						
YULB	Yu-li	0.89	337	P	Pb	11 41 58.2	-0.4
	baz=346						
YULB				*i* S	Sb	11 42 09.9	-0.3
	baz=346						
HGSD	Ruisui	0.95	346	*e*P	Pb	11 42 00.1	+0.5
	baz=345						
HGSD				*e*S	Sb	11 42 11.6	-0.2
	baz=345						
MASBT	Mashibuluo	0.97	273	P	Pn	11 41 59.6	-0.1
	baz=280						
SSD	Sandimen	0.98	281	*e*P	Pb	11 42 00.6	+0.5
	baz=281						
EHY	Hungye	0.99	341	P	Pn	11 42 00.0	0.0
	baz=348						
EHY				*e*S	Sb	11 42 12.8	-0.2
	baz=348						
SCZT	Fangliau	1.00	259	*e*P	Pn	11 42 00.2	+0.1
	baz=260						
TWKBT	Hengchun	1.02	232	*e*P	Pb	11 42 00.7	0.0
	baz=234						
TWKBT				*e*S	Sn	11 42 14.0	+0.2
	baz=234						
TWK1	Hengchun	1.02	233	*e*P	Pn	11 42 00.3	-0.1
	baz=234						
TWK1				*e*S	Sn	11 42 14.0	+0.1
	baz=234						
STYT	Tauyuan	1.03	305	*i* P	Pn	11 42 00.7	0.0
	baz=306						
STYT				*e*S	Sb	11 42 13.7	-0.6
	baz=306						
SLGT	Liugui	1.04	294	*e*P	Pn	11 42 00.6	-0.1
	baz=294						
EGFH	Guangfu	1.12	348	*e*S	Sb	11 42 17.1	+0.4
	baz=358						
SGST	Jiashian	1.13	297	*e*P	Pb	11 42 02.4	-0.3
	baz=303						
WTP	Ta-pu	1.19	305	*e*P	Pb	11 42 04.2	+0.5
	baz=305						
TPUB	Ta-pu	1.21	307	*e*P	Pb	11 42 04.3	+0.3
	baz=307						
CHN1	Nanshi	1.22	300	*e*P	Pb	11 42 05.2	+0.9
	baz=300						
ESL	Shilin	1.26	350	*e*P	Pb	11 42 05.3	+0.4
	baz=358						
ESL				S	Sn	11 42 19.1	-0.8
	baz=358						
SNST	Tainan City	1.27	301	*e*P	Pb	11 42 05.5	+0.5
	baz=301						
CHN4	Tsaushan	1.27	308	*e*P	Pb	11 42 05.5	+0.5
	baz=316						
VWDT	VWDT	1.28	337	*e*P	Pb	11 42 04.7	-0.5
	baz=348						
VWDT				*e*S	Sn	11 42 20.1	-0.2
	baz=348						
TWK	Hsinying	1.30	303	P	Pb	11 42 06.0	+0.4
	baz=303						
WHYT	Xinyi Township	1.35	326	*e*P	Pb	11 42 06.6	+0.1
	baz=333						
CHN5	Tsauling	1.38	318	*e*P	Pb	11 42 07.4	+0.4
	baz=318						
SSLB	Suanglung	1.38	331	*e*P	Pb	11 42 07.7	+0.6
	baz=341						
OWD	Renai	1.45	342	*e*P	Pn	11 42 07.2	+0.7
	baz=341						
OWD				*e*S	Sn	11 42 24.2	-0.6
	baz=341						
TYC	Yuchr	1.53	331	*e*P	Pb	11 42 10.0	+0.5
	baz=337						
WHF	Hehuan Shan	1.61	347	*e*P	Pb	11 42 10.2	-1.0
	baz=346						
ETLH	Xiulin Townshi	1.64	354	*e*P	Pn	11 42 09.7	+0.6
	baz=352						
WHP	Taichung City	1.83	339	*e*P	Pb	11 42 14.7	+0.1
	baz=346						
NNSB	Datong	1.87	352	*e*P	Pb	11 42 14.1	-1.3
	baz=1.0						
NNSH	Datong	1.87	352	*e*P	Pn	11 42 13.6	+1.4
	baz=360						
YHNB	Yeheng	2.11	353	*e*P	Pn	11 42 16.7	+1.2
	baz=1.0						
HATJ	Hateruma jima	2.45	52	P	Pn	11 42 20.8	+0.6
HATJ				*e*S	Sn	11 42 49.4	+0.1
IRIF	Iriomote-Funau	2.58	47	P	Pn	11 42 22.8	+0.9
IRIF				*e*S	Sn	11 42 53.1	+0.7
JKRS	Kuro-shima	2.71	52	P	Pn	11 42 24.7	+1.0
JKRS				*e*S	Sn	11 42 55.2	-0.5
JIJ	Ishigaki jima	2.88	51	P	Pn	11 42 26.2	+0.1
JIJ				*e*S	Sn	11 42 58.7	-1.3
JISG	Ishigakijimahi	3.14	50	P	Pn	11 42 29.7	+0.1
JISG				S	Sn	11 43 05.5	-0.8
JTJ	Tarama	3.46	53	P	Pn	11 42 34.8	+0.8
JTJ				*e*S	Sn	11 43 13.5	-0.6

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*MOS **28** 11:45:18.8±1.1, 60°.62N×145°.26E, h12^{km}, mb4.3/21, Error ellipse: s-maj=11.1km s-min=6.8km az=88.0*
*NERS **28** 11:45:18.5±0.0, 60°.68N×145°.32E, h2^{km}*
*IDC **28** 11:45:19.5±0.5, 60°.62N×145°.30E, h0^{km}, mb3.9/21, mb1 4.0/27, mb1mx3.9/80, mbtmp3.9/27, ML4.2/4, MS3.3/13, Ms1 3.3/13, ms1mx3.1/45, Error ellipse: s-maj=13.4km s-min=7.2km az=14.0*
*NEIC **28** 11:45:20.8±1.0, 60°.60N±0°.08×145°.2E±0°.1, h14^{km}±4^{km}, mb4.5/40, Error ellipse: s-maj=11.3km s-min=7.4km az=197.0*
ISC 28 11:45:19.1±0.7, **60°.63N**±0°.03×**145°.35E**±0°.03, **h1**^{km}±4^{km}, **n151**, σ**1^s.41**/169, **mb4.2**/51, **MS3.2**/9, **4C-5D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCHR	Omchak	1.60	49	⇓*i*P	Pb	11 45 48.2	-1.3
OCHR				⇓*i*Pg	Pg	11 45 49.1	-0.7
OCHR				Pgmax		11 45 49.9	
	140nm,0.3s						
OCHR				Pgmax		11 45 49.9	
	1µm,0.3s						
OCHR				*e*Sg	Sg	11 46 09.6	-0.9
OCHR				Sgmax		11 46 11.5	
	1µm,0.7s						
OCHR				Sgmax		11 46 11.5	
	3µm,0.4s						
OKHR	Okhotsk	1.65	221	⇓*i*P	Pn	11 45 33.7	-15
OKHR				Pgmax		11 45 33.7	
	500nm,0.2s						
OKHR				*e*S	Sn	11 45 57.1	-14
OKHR				Sgmax		11 45 58.4	
	1µm,0.3s						
OKHR				Sgmax		11 45 58.4	
	1µm,0.2s						
SUUS	Susuman	2.54	31	*e*P	Pn	11 46 00.5	-0.9
SUUS				*e*Pg	Pb	11 46 04.4	-1.0
SUUS				Pgmax		11 46 09.6	
	170nm,0.2s						
SUUS				Pgmax		11 46 09.6	
	240nm,0.2s						
SUUS				Pgmax		11 46 09.6	
	190nm,0.2s						
SUUS				*e*		11 46 26.1	
SUUS				*e*Sg	Sg	11 46 37.3	-3.3
SUUS				Sgmax		11 46 39.6	
	4µm,0.6s						
SUUS				Sgmax		11 46 39.6	
	1µm,0.4s						
SUUS	Susuman	2.54	31	*e*P	Pn	11 46 00.5	-0.9
SUUS				*e*		11 46 37.3	
SUUS				pmax	pmax		
	comp=Z,190nm,0.2s						
SUUS				smax	smax		
	comp=N,1µm,0.4s						
SUUS				smax	smax		
	comp=E,4µm,0.6s						
MGD	Magadan 1	2.74	100	*e*P	Pn	11 46 04.4	+0.3
MGD				*e*Pg	Pb	11 46 09.0	+0.2
MGD				Pgmax		11 46 12.5	
	comp=E,90nm,0.2s						
MGD				Pgmax		11 46 12.5	
	comp=E,20nm,0.2s						
MGD				Pgmax		11 46 12.5	
	comp=E,80nm,0.2s						
MGD				*e*Sg	Sg	11 46 45.6	-1.4
MGD				Sgmax		11 46 46.5	
	comp=E,3µm,0.4s						
MGD				Sgmax		11 46 46.5	
	comp=E,1µm,0.2s						
MGD	Magadan 1	2.74	100	*e*P	Pn	11 46 04.4	+0.3
MGD				*e*		11 46 45.6	
MGD				pmax	pmax		
	comp=Z,2µm,0.3s						
MGD				smax	smax		
	comp=N,3µm,0.4s						
MGD				smax	smax		
	comp=E,1µm,0.2s						
MA2	Magadan	2.91	109	Pn	Pn	11 46 07.1	+0.6
	comp=E,4.8nm,0.3s,baz=299,slow=13,SNR=28						
MA2				Pg	Pg	11 46 13.1	-1.8
	comp=E,16nm,0.3s,baz=314,slow=17,SNR=38						
MA2				Lg	Lg	11 46 50.8	
	comp=E,147nm,0.3s,baz=12,slow=20,SNR=9.1						
MA2	Magadan	2.91	109	*e*P	Pn	11 46 07.1	+0.6
MA2				*e*Pg	Pg	11 46 13.1	-1.8
MA2				Pgmax		11 46 19.5	
	comp=E,60nm,0.3s						
MA2				*e*S	Sn	11 46 42.0	-0.1
MA2				*e*Sg	Sg	11 46 52.1	-0.5
MA2				Sgmax		11 46 53.7	
	comp=E,1µm,0.5s						
MA2				Sgmax		11 46 53.7	
	comp=E,540nm,0.4s						
MA2	Magadan	2.91	109	*e*P	Pn	11 46 07.1	+0.6
MA2				*e*		11 46 51.9	
MA2				pmax	pmax		
	comp=Z,60nm,0.3s						
MA2				smax	smax		
	comp=N,1µm,0.5s						
MA2				smax	smax		
	comp=E,540nm,0.4s						
MA2	Magadan	2.91	109		Pn	11 46 06.7	+0.3
MA2					Pg	11 46 13.9	-1.0
MA2				Sn	Sn	11 46 42.4	+0.3
TLAR	Talaya	3.48	79	*e*P	Pn	11 46 15.3	+1.0
TLAR				Pmax		11 46 16.4	
	comp=E,20nm,0.2s						
TLAR				*e*Pg	Pg	11 46 25.3	-0.5
TLAR				Pgmax		11 46 26.2	
	comp=E,670nm,0.6s						
TLAR				Pgmax		11 46 26.2	
	comp=E,350nm,0.4s						
TLAR				Pgmax		11 46 26.2	
	comp=E,460nm,0.4s						
TLAR				*e*S	Sn	11 46 56.7	+0.5
TLAR				*e*Sg	Sg	11 47 09.1	-1.8
TLAR				Sgmax		11 47 14.8	
	comp=E,3µm,0.5s						
TLAR				Sgmax		11 47 14.8	
	comp=E,2µm,0.3s						
SEY	Seymchan	4.06	52	Pn	Pn	11 46 22.7	+0.5
	comp=E,5.5nm,0.3s,baz=256,slow=15,SNR=36						
SEY				Pg	Pg	11 46 33.1	-3.7
	comp=E,18nm,0.3s,baz=244,slow=16,SNR=23						
SEY				Lg	Lg	11 47 25.6	
	comp=E,59nm,0.3s,baz=77,slow=2.1,SNR=17						
SEY	Seymchan	4.06	52	*e*P	Pn	11 46 22.6	+0.4
SEY				*e*Pg	Pg	11 46 34.3	-2.5
SEY				Pgmax		11 46 36.8	
	comp=E,50nm,0.2s						
SEY				Pgmax		11 46 36.8	
	comp=E,30nm,0.2s						
SEY				Pgmax		11 46 36.8	
	comp=E,90nm,0.5s						
SEY				*e*		11 47 09.5	
SEY				*e*Sg	Sg	11 47 27.1	-2.3
SEY				Sgmax		11 47 32.9	

	comp=E,240nm,0.2s						
SEY				Sgmax		11 47 32.9	
	comp=E,320nm,0.2s						
SEY	**Seymchan**	**4.06**	**52**	eP	**Pn**	**11 46 22.6**	**+0.4**
SEY				pmax	pmax		
	comp=Z,90nm,0.5s						
OMS	**Omsukchan**	**5.33**	**65**	ePg	Pg	11 46 56.5	-4.6
OMS				Pgmax		11 46 59.3	
	comp=Z,60nm,0.6s						
OMS				eSg	**Sg**	**11 48 05.8**	**-4.3**
OMS				Sgmax		11 48 19.9	
	comp=Z,90nm,0.7s						
OMS				Sgmax		11 48 19.9	
	comp=Z,90nm,0.6s						
YAK	**Yakutsk**	**7.66**	**287**	Pn	**Pn**	**11 47 13.8**	**+2.2**
	comp=Z,0.3nm,0.3s,baz=294,slow=0.9,SNR=2.1						
YAK				Pg	Pb	11 47 37.1	+4.5
	comp=Z,0.6nm,0.3s,baz=289,slow=1.5,SNR=4.0						
YAK				Lg	Lg	11 49 15.8	
	comp=Z,0.2nm,0.3s,baz=178,slow=21,SNR=7.6						
YAK	**Yakutsk**	**7.66**	**287**	eP	**Pn**	**11 47 12.1**	**+0.5**
YAK				e		11 48 36.6	
YAK				pmax	pmax		
	comp=Z,12nm,0.4s						
YAK				smax	smax		
	comp=N,16nm,0.6s						
YAK				smax	smax		
	comp=E,29nm,0.8s						
YAK	**Yakutsk**	**7.66**	**287**	Pn	**Pn**	**11 47 10.6**	**-1.0**
YAK				Sn	**Sn**	**11 48 34.7**	**-4.2**
PEA0B	**Petropavlovsk-**	**10.11**	**133**	P	**Pn**	**11 47 44.9**	**-0.3**
PEA0B	**Petropavlovsk-**	**10.11**	**133**	Pn	**Pn**	**11 47 44.9**	**-0.3**
PETK	**Petropavlovsk-**	**10.11**	**133**	Pn	**Pn**	**11 47 47.6**	**+2.4**
	comp=E,1.4nm,0.3s,baz=334,slow=9.8,SNR=32						
PETK				LR	LR	11 52 37.1	
	comp=E,81nm,18.5s,baz=247,slow=43						
PETK	**Petropavlovsk-**	**10.11**	**133**	Pn	**Pn**	**11 47 44.5**	**-0.7**
PET	**Petropavlovsk**	**10.53**	**130**	⇑eP	**Pn**	**11 47 48.5**	**-2.4**
PET				pmax	pmax		
	comp=Z,42nm,1.7s						
BILL	**Bilibino**	**11.66**	**42**	⇑eP	**Pn**	**11 48 07.6**	**+1.3**
BILL				S	**Sn**	**11 50 19.0**	**+2.0**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,151nm,16.0s						
TIXI	**Tiksi**	**12.84**	**336**	Pn	**Pn**	**11 48 23.0**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=147,slow=16,SNR=12						
TIXI				Lg	Lg	11 52 03.7	
	comp=Z,0.3nm,0.3s,baz=72,slow=22,SNR=7.5						
TIXI				LR	LR	11 53 45.7	
	comp=Z,173nm,18.2s,baz=129,slow=39						
TIXI	**Tiksi**	**12.84**	**336**	ceP	**Pn**	**11 48 21.9**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.7s						
TIXI	**Tiksi**	**12.84**	**336**		**Pn**	**11 48 21.1**	**-1.3**
KLR	**Kul'dur**	**13.80**	**220**	Pn	**P**	**11 48 43.7**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=9.6,slow=12,SNR=9.7						
KLR				Lg	Lg	11 52 34.9	
	comp=Z,0.1nm,0.3s,baz=277,slow=17,SNR=3.5						
KLR				LR	LR	11 54 23.0	
	comp=Z,166nm,18.1s,baz=304,slow=39						
KLR	**Kul'dur**	**13.80**	**220**	iP	**Pn**	**11 48 35.1**	**-0.5**
KLR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BOD	**Bodaibo**	**16.20**	**274**	eP	**Pn**	**11 49 02.7**	**-4.9**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.4s						
ASAJ	**Asahikawa**	**16.62**	**187**	LR	LR	11 56 12.4	
	comp=Z,90nm,19.3s,baz=76,slow=39						
USRK	**Ussuriysk Ar.**	**18.30**	**212**	P	**P**	**11 49 35.8**	**+1.6**
	baz=358,slow=11,SNR=4.8						
USRK				LR	LR	11 56 09.1	
	comp=Z,64nm,20.0s,baz=275,slow=36						
USRK	**Ussuriysk Ar.**	**18.30**	**212**	P	**P**	**11 49 33.4**	**-0.7**
HIA	**Hailar**	**18.45**	**243**	P	**Pn**	**11 49 34.8**	**-1.0**
HIA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HIA	**Hailar**	**18.45**	**243**	P	**Pn**	**11 49 34.8**	**-1.0**
MDJ	**Mudanjiang**	**18.59**	**217**	P	**Pn**	**11 49 39.5**	**+2.0**
MDJ				sP	sP	11 49 43.8	+5.7
ERM	**Erimo**	**18.69**	**185**	P	**Pn**	**11 49 37.5**	**-1.2**
ERM				pmax	pmax		
	comp=Z,82nm,1.4s						
ERM	**Erimo**	**18.69**	**185**	P	**Pn**	**11 49 37.5**	**-1.2**
CN2	**Changchun**	**20.66**	**224**	eP	Pn	11 50 02.0	-0.1
CN2				eS	**S**	**11 53 45.8**	**-5.3**
ANM	**Nome**	**22.54**	**59**	P	**P**	**11 50 20.2**	**+0.2**
ANM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ANM	**Nome**	**22.54**	**59**	P	**P**	**11 50 20.2**	**+0.2**
TLY	**Talaya**	**24.50**	**267**	P	**P**	**11 50 40.8**	**+1.4**
	comp=Z,1.8nm,0.6s,baz=11,slow=7.2,SNR=4.1						
TLY	**Talaya**	**24.50**	**267**	iP	**P**	**11 50 37.7**	**-1.8**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TLY	**Talaya**	**24.50**	**267**	P	**P**	**11 50 39.2**	**-0.3**
MJB9	**Matsu-Tunnel**	**24.53**	**194**	P	**P**	**11 50 38.9**	**-1.1**
MJB9				IAmb	IAmb	11 50 40.2	
	comp=Z,7.9nm,0.6s						
MAJO	**Matsushiro**	**24.54**	**194**	P	**P**	**11 50 38.8**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MAJO	**Matsushiro**	**24.54**	**194**	P	**P**	**11 50 38.8**	**-1.2**
MAJO				IAmb	IAmb	11 50 40.2	
	comp=Z,7.7nm,0.7s						
MAT	**Matsushiro**	**24.54**	**194**	P	**P**	**11 50 39.3**	**-0.6**
MJAR	**Matsushiro Arr**	**24.54**	**194**	P	**P**	**11 50 39.9**	**0.0**
	comp=Z,5.5nm,0.7s,baz=0.7,slow=12,SNR=17						
MJAR	**Matsushiro Arr**	**24.54**	**194**	P	**P**	**11 50 38.7**	**-1.2**
NRIK	**Noril'sk**	**24.95**	**315**	LR	LR	12 01 31.7	
	comp=Z,70nm,20.4s,baz=26,slow=39						
NRIK	**Noril'sk**	**24.95**	**315**	iP	**P**	**11 50 44.1**	**+0.7**
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ULN	**Ulaanbaatar**	**25.34**	**257**	iP	**P**	**11 50 47.3**	**0.0**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ULN	**Ulaanbaatar**	**25.34**	**257**	P	**P**	**11 50 46.3**	**-1.0**
SONM	**Songino Array**	**25.68**	**258**	P	**P**	**11 50 51.3**	**+1.0**
	comp=Z,1.4nm,0.8s,baz=64,slow=9.8,SNR=8.9						
SONM				Lg	Lg	11 58 46.0	
	comp=Z,1.0nm,1.0s,baz=37,slow=30,SNR=6.6						
SONM				LR	LR	12 01 37.1	
	comp=Z,48nm,18.6s,baz=86,slow=38						
SONM	**Songino Array**	**25.68**	**258**	P	**P**	**11 50 49.6**	**-0.7**
KSRS	**Korea Array**	**25.69**	**213**	P	**P**	**11 50 51.4**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=251,slow=39,SNR=3.1						
KSRS				LR	LR	12 01 03.6	
	comp=Z,33nm,20.2s,baz=0.0,slow=37						
IMAR	**Indian Mountai**	**26.88**	**52**	P	**P**	**11 51 01.2**	**+0.3**
BJI	**Beijing**	**27.38**	**234**	P	**P**	**11 51 06.5**	**+0.9**
BJT	**Baijiatuau**	**27.40**	**234**	P	**P**	**11 51 05.1**	**-0.7**
BJT				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BJT	**Baijiatuau**	**27.40**	**234**	P	**P**	**11 51 05.1**	**-0.7**
BJT				IAmb	IAmb	11 51 07.1	
	comp=Z,9.8nm,0.9s						
JHJ	**Hachijo jima 2**	**27.76**	**190**	LR	LR	12 04 00.3	
	comp=Z,43nm,19.7s,baz=72,slow=40						
COLD	**Coldfoot**	**27.85**	**49**	P	**P**	**11 51 10.2**	**+0.7**
HHC	**Hu-ho-hao-te**	**28.63**	**242**	eP	**P**	**11 51 17.0**	**+0.1**
KTH	**Kantishna Hill**	**28.88**	**56**	P	**P**	**11 51 18.9**	**+0.1**
KTH				IAmb	IAmb	11 51 23.8	
	comp=Z,6.3nm,0.8s						
TRF	**Thorofare Moun**	**29.18**	**56**	P	**P**	**11 51 22.1**	**+0.5**
COLA	**College**	**29.58**	**53**	P	**P**	**11 51 27.0**	**+2.1**
COLA				pmax	pmax		
	comp=Z,8.0nm,2.9s						
MCK	**McKinley**	**29.61**	**55**	IAmb	IAmb	11 51 30.2	
	comp=Z,7.9nm,0.9s						
RND	**Reindeer**	**29.78**	**56**	P	**P**	**11 51 27.9**	**+1.0**
RND				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RND	**Reindeer**	**29.78**	**56**	P	**P**	**11 51 27.9**	**+1.0**
RND				IAmb	IAmb	11 51 32.5	
	comp=Z,3.5nm,0.8s						
BMAR	**Burnt Mountain**	**29.83**	**47**	P	**P**	**11 51 27.8**	**+0.5**
FYU	**Fort Yukon**	**29.92**	**49**	P	**P**	**11 51 28.4**	**+0.5**
FYU				IAmb	IAmb	11 51 33.1	
	comp=Z,8.8nm,0.9s						
IL31		**30.00**	**53**	P	**P**	**11 51 29.0**	**+0.4**
IL31				IAmb	IAmb	11 51 33.2	
	comp=Z,5.8nm,0.8s						
ILAR	**Eielson Array**	**30.00**	**53**	P	**P**	**11 51 29.3**	**+0.6**
	comp=Z,4.2nm,0.8s,baz=284,slow=6.1,SNR=30						
ILAR	**Eielson Array**	**30.00**	**53**	P	**P**	**11 51 28.7**	**0.0**
KDAK	**Kodiak Island**	**30.86**	**67**	LR	LR	12 05 17.1	
	comp=Z,57nm,18.1s,baz=110,slow=39						
MENT	**Mentasta**	**32.07**	**54**	P	**P**	**11 51 47.9**	**+0.9**
MENT				IAmb	IAmb	11 51 51.2	
	comp=Z,7.3nm,0.9s						
EGAK	**Eagle**	**32.20**	**50**	P	**P**	**11 51 49.2**	**+1.1**
EGAK				IAmb	IAmb	11 51 52.0	
	comp=Z,3.9nm,0.8s						
ZALV	**Zalesovo Beam**	**32.31**	**286**	P	**P**	**11 51 49.1**	**0.0**
	comp=Z,0.3nm,0.3s,baz=37,slow=44,SNR=1.4						
ZALV	**Zalesovo Beam**	**32.31**	**286**	P	**P**	**11 51 48.6**	**-0.5**
BCAR	**Beaver Creek A**	**32.78**	**53**	P	**P**	**11 51 53.1**	**-0.1**
VRDI	**Verde Repeater**	**33.04**	**57**	P	**P**	**11 51 55.5**	**-0.1**
VRDI				IAmb	IAmb	11 51 59.8	
	comp=Z,4.5nm,0.8s						
MCARA	**McCarthy VSAT**	**33.13**	**57**	P	**P**	**11 51 56.9**	**+0.6**
CRQM	**Cirque**	**33.41**	**58**	P	**P**	**11 51 60.0**	**+1.1**
NJ2	**Nanjing**	**33.48**	**223**	eP	**P**	**11 51 57.5**	**-2.0**
DGZ	**Jazzator, Alta**	**33.72**	**278**	iP	**P**	**11 52 01.5**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WHN	**Wuhan**	**36.44**	**228**	P	P	11 52 34.0	+9.0
KURK	**Kurchatov**	**37.30**	**285**	ceP	**P**	**11 52 30.5**	**-1.7**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.7s						
KURK	**Kurchatov**	**37.30**	**285**	P	**P**	**11 52 31.4**	**-0.8**
KURBB	**Kurchatov Arra**	**37.41**	**285**	P	**P**	**11 52 32.5**	**-0.6**
	comp=Z,2.2nm,0.7s,baz=52,slow=8.7,SNR=12						
WMQ	**Urumqi**	**37.70**	**270**	eP	**P**	**11 52 37.0**	**+1.2**
MK31	**Makanchi Array**	**38.22**	**278**	P	**P**	**11 52 39.1**	**-1.0**
MK31				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MK31	**Makanchi Array**	**38.22**	**278**	P	**P**	**11 52 39.1**	**-1.0**
MKAR	**Makanchi Array**	**38.22**	**278**	P	**P**	**11 52 39.6**	**-0.5**
	comp=Z,0.9nm,0.9s,baz=62,slow=8.7,SNR=5.2						
MKAR				LR	LR	12 09 38.6	
	comp=Z,67nm,20.5s,baz=350,slow=38						
MKAR	**Makanchi Array**	**38.22**	**278**	P	**P**	**11 52 39.3**	**-0.8**
RES	**Resolute Bay**	**39.31**	**21**	P	**P**	**11 52 51.2**	**+2.5**
	comp=Z,4.7nm,0.8s,baz=311,slow=8.5,SNR=20						
RES	**Resolute Bay**	**39.31**	**21**	P	**P**	**11 52 49.9**	**+1.1**
RES				IAmb	IAmb	11 52 52.5	
	comp=Z,4.8nm,0.8s						
BVAR	**Borovoye Array**	**39.59**	**294**	P	**P**	**11 52 52.5**	**+1.1**
	comp=Z,0.8nm,0.7s,baz=48,slow=8.9,SNR=5.7						
BRVK	**Borovoye**	**39.61**	**294**	iP	**P**	**11 52 50.1**	**-1.5**
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ARU	**Arti**	**42.37**	**305**	P	**P**	**11 53 16.2**	**+1.9**
	comp=Z,0.5nm,0.3s,baz=0.4,slow=6.4,SNR=4.5						
ARU	**Arti**	**42.37**	**305**	diP	**P**	**11 53 14.4**	**+0.1**
ARU						11 54 50.6	
ARU				S	**S**	**11 59 37.6**	**+1.7**
ARU				SS	**SS**	**12 02 45.1**	**+1.2**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ARU	**Arti**	**42.37**	**305**	P	**P**	**11 53 14.9**	**+0.6**
ARU				IAmb	IAmb	11 53 17.8	
	comp=Z,5.0nm,1.0s						
DAG	**Danmarks Havn**	**42.48**	**355**	P	**P**	**11 53 16.7**	**+1.8**
DAG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
YKA	**Yellowknife Ar**	**43.06**	**42**	P	**P**	**11 53 19.8**	**+0.1**
	comp=Z,1.8nm,0.9s,baz=310,slow=7.3,SNR=15						
AAK	**Ala-Archa**	**45.05**	**280**	iP	**P**	**11 53 33.3**	**-2.9**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AAK	**Ala-Archa**	**45.05**	**280**	P	**P**	**11 53 35.5**	**-0.8**
AAK				IAmb	IAmb	11 53 40.6	
	comp=Z,3.2nm,0.8s						
KMI	**Kunming**	**45.87**	**239**	P	**P**	**11 53 45.8**	**+2.8**
KK31	**Karatay Array**	**46.62**	**283**	P	**P**	**11 53 47.9**	**-0.5**
KK31				*PP	**sP**	**11 53 51.8**	**+2.6**
KK31				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KK31	**Karatay Array**	**46.62**	**283**	P	**P**	**11 53 47.9**	**-0.5**
KK31				pP	**sP**	**11 53 51.8**	**+2.6**
KK31				IAmb	IAmb	11 53 52.2	
	comp=Z,5.6nm,0.9s						
KKAR	**Karatay Array**	**46.62**	**283**	P	**P**	**11 53 47.5**	**-0.9**
KKAR	**Karatay Array**	**46.62**	**283**	P	**P**	**11 53 47.5**	**-0.9**
KSH	**Kashi**	**46.71**	**276**	P	P	11 53 53.0	+3.7
KSH				pP	sP	11 53 58.0	+7.9
KSH				PcP	**PcP**	**11 55 26.0**	**+3.2**
KSH				PcS	**PcS**	**11 59 18.5**	**+0.8**
KSH				S	**S**	**12 00 42.5**	**+2.9**
KSH				ScS	**ScS**	**12 03 43.5**	**-1.5**
AKTO	**Aktyubinsk**	**46.88**	**299**	P	**P**	**11 53 50.9**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=62,slow=12,SNR=2.7						
ABKAR	**Akbulak array**	**46.91**	**297**	P	**P**	**11 53 50.1**	**-0.4**
FINES	**FINESS Array B**	**49.67**	**327**	P	**P**	**11 54 11.0**	**-0.6**
	comp=Z,1.4nm,0.7s,baz=131,slow=5.5,SNR=4.3						
FINES	**FINESS Array B**	**49.67**	**327**	iP	**P**	**11 54 13.5**	**+1.8**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**49.67**	**327**	P	**P**	**11 54 11.2**	**-0.5**
OBN	**Obninsk**	**51.61**	**316**	⇓eP	**P**	**11 54 25.9**	**-0.5**
OBN				e		11 54 29.9	
OBN				SS	**SS**	**12 05 23.0**	**0.0**
OBN				pmax	pmax		
	comp=Z,13nm,0.5s						
OBN				MLR	MLR		
	comp=Z,116nm,14.0s						
NIL	**Nilore**	**52.68**	**274**	P	**P**	**11 54 34.6**	**-0.1**
NIL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NIL	**Nilore**	**52.68**	**274**	P	**P**	**11 54 34.6**	**-0.1**
NIL				IAmb	IAmb	11 54 41.3	
	comp=Z,4.2nm,0.8s						
NEW	**Newport**	**52.83**	**56**	LR	LR	12 17 54.8	
	comp=Z,78nm,18.4s,baz=108,slow=37						
CMAR	**Chiang Mai Arr**	**53.38**	**239**	LR	LR	12 19 39.1	
	comp=Z,20nm,18.8s,baz=0.0,slow=39						
NB2	**NORSAR Subarra**	**53.63**	**334**	P	**P**	**11 54 43.3**	**+1.9**
	comp=Z,0.5nm,0.6s,baz=32,slow=6.5						
NOA	**NORSAR Array B**	**53.63**	**334**	P	**P**	**11 54 40.7**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=26,slow=7.4,SNR=5.0						
VSR	**Storozhevoye**	**53.84**	**312**	iP	**P**	**11 54 41.4**	**-1.6**
VSR				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KBL	**Kabul**	**54.02**	**278**	P	**P**	**11 54 44.1**	**-0.8**
KBL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KBL	**Kabul**	**54.02**	**278**	P	**P**	**11 54 44.1**	**-0.8**
KBL				IAmb	IAmb	11 54 49.3	
	comp=Z,6.4nm,1.1s						
MCMT	**McKenzie Canyo**	**57.35**	**56**	P	**P**	**11 55 09.0**	**+0.4**
AKASG	**Malin Array Be**	**57.76**	**318**	P	**P**	**11 55 10.3**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=33,slow=7.8,SNR=5.9						
GCMT	**Greycliff**	**57.83**	**53**	P	**P**	**11 55 12.5**	**+0.6**
YHH	**Holmes Hill**	**58.19**	**54**	P	**P**	**11 55 15.3**	**+0.7**
YNE	**Yellowstone No**	**58.34**	**54**	P	**P**	**11 55 16.2**	**+0.6**
KIV	**Kislovodsk**	**58.41**	**304**	eP	**P**	**11 55 16.3**	**+0.4**
KIV				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KBZ	**Khabaz**	**58.51**	**304**	iP	**P**	**11 55 16.5**	**0.0**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
RLMT	**Red Lodge**	**58.54**	**53**	P	**P**	**11 55 17.1**	**+0.1**
ELK	**Elko**	**59.71**	**60**	P	**P**	**11 55 26.7**	**+1.6**
	comp=Z,1.2nm,0.7s,baz=335,slow=11,SNR=4.4						
ELK	**Elko**	**59.71**	**60**	P	**P**	**11 55 26.1**	**+1.0**
ELK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ELK	**Elko**	**59.71**	**60**	P	**P**	**11 55 26.1**	**+1.0**
NVAR	**Mina Array Bea**	**60.28**	**64**	P	**P**	**11 55 30.1**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=292,slow=5.7,SNR=4.2						
NVAR	**Mina Array Bea**	**60.28**	**64**	P	**P**	**11 55 29.4**	**+0.3**
PDAR	**Pinedale Array**	**60.39**	**55**	P	**P**	**11 55 30.1**	**+0.3**
	comp=Z,1.6nm,0.9s,baz=7.8,slow=1.9,SNR=7.9						
PDAR	**Pinedale Array**	**60.39**	**55**	P	**P**	**11 55 29.7**	**0.0**
CCUT	**Cedar City**	**63.17**	**61**	P	**P**	**11 55 49.1**	**+0.5**
SMCO	**Snowmass**	**64.47**	**55**	IAmb	IAmb	11 56 02.7	
	comp=Z,4.9nm,0.9s						
U15A	**North Rim**	**64.58**	**61**	P	**P**	**11 55 57.8**	**-0.1**
U15A				IAmb	IAmb	11 56 03.4	
	comp=Z,5.4nm,1.1s						
TXAR	**Lajitas Array**	**74.34**	**58**	P	**P**	**11 56 58.5**	**+0.4**
	comp=Z,0.1nm,0.5s,baz=306,slow=2.1,SNR=2.7						
TXAR	**Lajitas Array**	**74.34**	**58**	P	**P**	**11 56 58.2**	**+0.1**
TXAR	**Lajitas Array**	**74.34**	**58**	P	**P**	**11 56 58.2**	**+0.1**
ASAR	**Alice Springs**	**84.51**	**191**	P	**P**	**11 57 52.8**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=9.3,slow=5.7,SNR=6.6						
ASAR	**Alice Springs**	**84.51**	**191**	P	**P**	**11 57 52.5**	**-0.7**
BOSA	**Boshof**	**129.18**	**281**	PKP	**PKiKP**	**12 04 27.8**	**-1.4**
	comp=Z,2.0nm,0.8s,baz=225,slow=1.4,SNR=3.6						

IDC 28 11:46:24.0±439.0**,57°.47N**×**29°.64E,h0^{km},Error ellipse: s-maj=96.0km s-min=60.0km az=147.0,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**4.20**	**97**	i		12 15 15.0	
	baz=283,slow=347,SNR=0.7						
I37NO	**I37NO**	**12.63**	**342**	i		13 01 40.0	
	baz=152,slow=327,SNR=1.2						
I31KZ	**AKTYUBINSK INF**	**18.05**	**101**	i		13 35 20.0	
	baz=300,slow=326,SNR=1.3						

DJA 28 12:01:55.8±1.4**,10°S**±5°×**11°4E**±°**,h14^{km}**±12^{km}**,M3.8**/11**, mb4.2**/1**,MLv3.5**/11**,South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	**1.16**	**359**	P	Pn	12 02 16.9	-0.8
DNP	**Denpasar**	**1.40**	**47**	P	Pn	12 02 21.0	0.0
DNP				S	Sb	12 02 39.7	+0.1
GMJI	**Gumukmas**	**1.54**	**332**	P	Pn	12 02 21.8	-1.0
GMJI				S	Sn	12 02 42.1	-0.5
SRBI	**Singaraja**	**1.86**	**34**	P	Pn	12 02 27.6	+0.4
PWJI	**Pagerwojo**	**2.84**	**304**	P	Pn	12 02 41.4	+0.7
PCJI	**Pacitan**	**3.29**	**296**	P	Pn	12 02 46.5	-0.4
PLAI	**Plampang**	**3.65**	**78**	P	Pn	12 02 51.1	-0.8
CISI	**Cisompet, Garu**	**6.62**	**288**	P	Pn	12 03 32.8	0.0
BKSI	**Bulukumba**	**7.30**	**54**	P	Pn	12 03 41.7	-0.3

IDC 28 12:07:23.7±2.2**,6°.50S**×**129°.62E,h0^{km},mb3.6**/1**, mb1 3.9**/3**,mb1mx3.6**/22**,mbtmp3.7**/3**,ML4.0**/2**,Error ellipse: s-maj=123.1km s-min=31.3km az=69.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.13**	**162**	Pn	Pn	12 10 45.8	+0.4
	0.8nm,0.3s,baz=344,slow=9.9,SNR=18						
WRA				Sn	Sn	12 13 11.4	-12
	0.7nm,0.3s,baz=330,slow=22,SNR=8.2						
ASAR	**Alice Springs**	**17.56**	**167**	P	Pn	12 11 29.2	-0.9
	0.6nm,0.3s,baz=336,slow=10,SNR=28						
ASAR				S	Sn	12 14 34.1	-12
	0.2nm,0.3s,baz=346,slow=25,SNR=5.4						
MKAR	**Makanchi Array**	**67.60**	**327**	P	P	12 18 22.4	+0.2
	0.4nm,0.6s,baz=116,slow=6.6,SNR=5.8						

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*NEIC **28** 12:19:50.2±1.1, 19°.18N±0°.04×67°.15W±0°.03, h12^{km}±7^{km}, Error ellipse: s-maj=5.5km s-min=4.0km az=203.0*

*RSPR **28** 12:19:51.5, 19°.07N×67°.15W, h103^{km}±5^{km}, MD3.2/6*

ISC 28 12:19:47.4±1.6**,19°.29N**±0°.07×**67°.11W**±0°.03**,h7^{km}**±11^{km}**, n32,**σ**0^{s}69**/43**,8C,Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.82**	**180**	Pn	**Pn**	**12 20 05.2**	**-0.3**
AGPR				Sn	**Sb**	**12 20 15.8**	**+0.4**
AOPR	**Arecibo Observ**	**1.00**	**160**	eS	**Sn**	**12 20 23.6**	**+1.3**
AOPR	**Arecibo Observ**	**1.00**	**160**	⇑eP	**Pn**	**12 20 08.1**	**+0.2**
AOPR	**Arecibo Observ**	**1.00**	**160**		**Pn**	**12 20 08.1**	**+0.2**
AOPR					**Sn**	**12 20 22.6**	**+0.3**
MPR	**Mayaguez**	**1.08**	**181**		**Pg**	**12 20 08.9**	**+0.8**
MPR				Sn	**Sb**	**12 20 22.4**	**-0.2**
LSP	**Las Mesas**	**1.11**	**179**	eS	**Sn**	**12 20 25.4**	**+0.3**
LSP	**Las Mesas**	**1.11**	**179**	⇑eP	**Pg**	**12 20 09.8**	**+1.0**
LSP	**Las Mesas**	**1.11**	**179**		**Pg**	**12 20 09.8**	**+1.0**
LSP					**Sn**	**12 20 25.4**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.28**	**180**	⇑eP	**Pg**	**12 20 12.1**	**+0.1**
CRPR	**Cabo Rojo, PR**	**1.28**	**180**	eS	**Sn**	**12 20 28.7**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.28**	**180**		**Pg**	**12 20 12.0**	**0.0**
CRPR					**Sb**	**12 20 28.1**	**-0.4**
MLPR	**Magueyes Islan**	**1.32**	**177**	⇑eP	**Pg**	**12 20 12.8**	**0.0**
MLPR	**Magueyes Islan**	**1.32**	**177**	eS	**Sb**	**12 20 29.7**	**+0.1**
MLPR	**Magueyes Islan**	**1.32**	**177**		**Pg**	**12 20 12.7**	**-0.1**
MLPR					**Sn**	**12 20 28.9**	**-1.1**
OBIP	**Obispado Ponce**	**1.33**	**159**	⇑eP	**Pb**	**12 20 12.4**	**-0.4**
OBIP	**Obispado Ponce**	**1.33**	**159**	eS	**Sb**	**12 20 30.2**	**+0.2**
OBIP	**Obispado Ponce**	**1.33**	**159**		**Pb**	**12 20 12.3**	**-0.4**
OBIP					**Sb**	**12 20 29.9**	**-0.1**
GCPR	**Guaynabo City**	**1.38**	**135**	⇑eP	**Pg**	**12 20 14.8**	**+0.8**
GCPR	**Guaynabo City**	**1.38**	**135**	eS	**Sg**	**12 20 32.2**	**+0.3**
GCPR	**Guaynabo City**	**1.38**	**135**		**Pg**	**12 20 14.2**	**+0.2**
GCPR					**Sg**	**12 20 32.6**	**+0.7**
PCDR	**Punta Cana, DR**	**1.43**	**237**	⇑eP	**Pg**	**12 20 14.8**	**0.0**
PCDR	**Punta Cana, DR**	**1.43**	**237**	eS	**Sg**	**12 20 33.6**	**+0.2**
PCDR	**Punta Cana, DR**	**1.43**	**237**		**Pg**	**12 20 14.7**	**-0.2**
PCDR					**Sg**	**12 20 33.3**	**-0.2**
SJG	**San Juan**	**1.49**	**142**		**Pg**	**12 20 15.9**	**-0.1**
SJG				Sn	**Sg**	**12 20 35.0**	**-0.4**
ICMP	**Isla Caja de M**	**1.51**	**158**	Pn	**Pg**	**12 20 16.1**	**-0.2**
ICMP				Sn	**Sb**	**12 20 34.3**	**-0.7**
PDPR	**Patillas Dam,**	**1.64**	**141**	Pn	**Pg**	**12 20 18.5**	**-0.4**
MTP	**Monte Pirata**	**1.90**	**129**	Pn	**Pb**	**12 20 21.9**	**-0.5**
CUPR	**Culebra, Puert**	**1.99**	**119**	⇑eP	**Pb**	**12 20 23.2**	**-0.8**
CUPR	**Culebra, Puert**	**1.99**	**119**	eS	**Sb**	**12 20 48.0**	**-1.0**
DR12	**Loma Pena Alta**	**2.20**	**257**		**Pb**	**12 20 26.0**	**-1.7**
STVI	**Saint Thomas**	**2.25**	**114**	Pn	**Pb**	**12 20 27.7**	**-0.7**
SDDR	**Presa de Saban**	**3.96**	**266**	Pn	**Pn**	**12 20 50.7**	**+2.1**

KEA 28 12:23:42.4±0.0**,40°.54N**×**122°.43E,h0^{km},ML2.5**/1**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUJ	**Sinuiju**	**1.64**	**105**	Pg	Pb	12 24 13.0	-0.5
SUJ				Sg	Sn	12 24 33.1	-1.1
PYS	**Pyongsong**	**2.93**	**115**	Sg	Sb	12 25 13.0	+1.1
KGE	**Kanggye**	**3.21**	**81**	Sg	Sb	12 25 17.9	-1.9

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*IPEC **28** 12:46:12.6±0.2, 50°.06N×18°.49E, h1^{km}±2^{km}, ML2.1/3, Error ellipse: s-maj=2.1km s-min=1.1km az=160.0*

*VIE **28** 12:46:12.6±0.4, 50°.11N×18°.42E, h0^{km}, mb2.1/4, ml2.7/4, Error ellipse: s-maj=3.4km s-min=2.8km az=24.0 33 km NNE of Ostrava Suspected Mining induced.*

*PRU **28** 12:46:13.1±0.0, 50°.02N×18°.41E, h0^{km}*

ISC 28 12:46:12.4±0.8**,50°.07N**±0°.03×**18°.45E**±0°.02**,h0^{km},n25,** σ**1^{s}13**/48**,Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.30**	**220**	ePG	**Pg**	**12 46 19.1**	**+0.9**
OKC				eSG	**Sg**	**12 46 22.9**	**+0.8**
	comp=Z,200nm,0.7s						
MORC	**Moravsky Berou**	**0.65**	**244**	ePg	**Pg**	**12 46 25.2**	**+0.3**
	baz=65						
MORC				eSg	**Sg**	**12 46 33.5**	**+0.2**
	42nm,0.3s,baz=65						
MORC	**Moravsky Berou**	**0.65**	**244**	ePG	**Pg**	**12 46 25.3**	**+0.3**
MORC				eSG	**Sg**	**12 46 33.6**	**+0.2**
OJC	**Ojcow**	**0.88**	**80**	ePg	**Pg**	**12 46 29.3**	**0.0**
OJC				eSg	**Sb**	**12 46 42.3**	**-0.7**
KRLC	**Kraliky**	**1.07**	**271**	ePG	**Pg**	**12 46 32.3**	**-0.7**
KRLC				eSG	**Sg**	**12 46 46.4**	**-0.4**
	comp=Z,34nm,0.6s						
NIE	**Niedzica**	**1.37**	**118**	ePg	**Pb**	**12 46 39.0**	**+0.1**
NIE				eSg	**Sn**	**12 46 58.9**	**+1.3**
DPC	**Dobruska-Polom**	**1.39**	**282**	ePG	**Pg**	**12 46 38.8**	**-0.3**
DPC				eSG	**Sg**	**12 46 57.4**	**+0.2**
	comp=Z,55nm,0.4s						
VRAC	**Vranov**	**1.42**	**238**	ePg	**Pn**	**12 46 39.2**	**-0.3**
	baz=58						
VRAC				eSg	**Sg**	**12 46 57.8**	**-0.3**
	28nm,0.2s,baz=58						
VRAC	**Vranov**	**1.42**	**238**	ePG	**Pn**	**12 46 39.2**	**-0.3**
VRAC				eSG	**Sg**	**12 46 57.9**	**-0.2**
OSTC	**Ostas**	**1.51**	**290**	ePG	**Pn**	**12 46 40.6**	**-0.2**
OSTC				eSG	**Sn**	**12 47 01.3**	**+0.1**
	comp=Z,24nm,0.4s						
KSP	**Ksiaz**	**1.58**	**300**	ePg	**Pn**	**12 46 41.5**	**-0.2**
KSP				eSg	**Sn**	**12 47 02.8**	**0.0**
VYHS	**Vyhne**	**1.60**	**171**	ePG	**Pn**	**12 46 41.7**	**-0.2**
VYHS				eSG	**Sn**	**12 47 02.9**	**-0.3**

UPC	**Upice**	**1.62**	**287**	*e*PG	**Pb**	**12 46 42.8**	**-0.4**
UPC				*e*SG	**Sg**	**12 47 04.8**	**+0.3**
	comp=Z,19nm,0.4s						
KRUC	**Moravsky**	**1.67**	**234**	*e*Pn	**Pn**	**12 46 43.1**	**+0.1**
	baz=53						
KRUC				*e*Sg	**Sn**	**12 47 05.6**	**+0.5**
	12nm,0.2s,baz=53						
KRUC	**Moravsky**	**1.67**	**234**	*e*PN	**Pn**	**12 46 43.2**	**+0.2**
KRUC				*e*SG	**Sn**	**12 47 05.6**	**+0.5**
SMOL	**Smolenice**	**1.69**	**204**	*e*SG	**Sn**	**12 47 02.2**	**-3.4**
MODS	**Modra-Piesok**	**1.86**	**205**	*e*PG	**Pn**	**12 46 46.1**	**+0.5**
MODS				*e*SG	**Sn**	**12 47 08.1**	**-1.7**
MODS				*e*LG	Lg	12 47 11.2	
ZST	**Bratislava**	**2.07**	**206**	*e*SN	**Sn**	**12 47 13.1**	**-1.8**
KECS	**Kecovo**	**2.07**	**139**	*e*PG	**Pg**	**12 46 53.1**	**+1.0**
KECS				*e*SN	**Sn**	**12 47 13.5**	**-1.5**
PRU	**Pruhonice**	**2.52**	**270**	*e*PN	**Pn**	**12 46 51.0**	**-3.6**
PRU				*e*PG	**Pb**	**12 46 58.0**	**-0.5**
PRU				*e*SG	**Sb**	**12 47 30.9**	**+0.9**
	comp=Z,15nm,0.8s						
PVCC	**Panska Ves**	**2.53**	**282**	*e*SG	**Sg**	**12 47 33.6**	**0.0**
	comp=Z,32nm,0.6s						
CONA	**Conrad Observa**	**2.74**	**219**	*e*Pn	**Pn**	**12 46 58.1**	**+0.4**
	0.4nm,0.1s						
CONA				Sn	**Sn**	**12 47 29.8**	**-1.6**
	2.5nm,0.2s						
KHC	**Kasperske Hory**	**3.30**	**255**	*e*PN	**Pn**	**12 47 04.8**	**-0.6**
KHC				*e*PG	**Pb**	**12 47 13.6**	**+1.7**
KHC				*e*SG	**Sg**	**12 47 57.0**	**-1.5**
	comp=Z,9.0nm,0.4s						
MOA	**Molln**	**3.54**	**233**	*e*Sn	**Sn**	**12 47 51.8**	**+0.6**
	1.1nm,0.2s						
CLL	**Collm**	**3.68**	**292**	*e*Pg	**Pg**	**12 47 25.0**	**+2.1**
CLL				*e*Sg	**Sg**	**12 48 12.0**	**+1.5**
	comp=Z,12nm,0.8s						

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*WEL **28** 12:52:36.6±0.5, 32°S±6°×18°0E±1°3, h33km, M4.4/12, mB4.9/6, ML4.7/12, MLv4.5/12, Mw(mB)4.2/6*

*IDC **28** 12:52:38.8±6.8, 32°.37S×179°.96W, h326km±74km, mb3.2/2, mb1 3.4/4, mb1mx3.1/25, mbtmp4.0/4, Error ellipse: s-maj=81.1km s-min=44.4km az=1.0*

ISC 28 12:52:34.8±2.0**, 32°.3S**±0°.1×**179°.4W**±0°.2**, h300km, n58, σ1ˢ89**/66**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.27**	**23**	S	S	12 54 04.2	-16
MXZ	**Matakaoa Point**	**5.60**	**199**	P	**Pn**	**12 54 01.2**	**+2.0**
MXZ				S	**S**	**12 55 06.2**	**-1.0**
WMGZ	**Waiomatatini S**	**5.81**	**197**	P	**Pn**	**12 54 04.4**	**+2.6**
WMGZ				S	**S**	**12 55 13.9**	**+2.1**
HAZ	**Te Kaha**	**5.93**	**202**	P	**Pn**	**12 54 03.4**	**+0.2**
HAZ				S	**S**	**12 55 13.1**	**-1.3**
PUZ	**Puketiti**	**6.09**	**198**	P	**Pn**	**12 54 06.8**	**+1.7**
PUZ				S	**S**	**12 55 18.5**	**+0.6**
RUGZ	**Raukumara Rang**	**6.16**	**202**	P	**Pn**	**12 54 07.2**	**+1.2**
RUGZ				S	**S**	**12 55 16.7**	**-2.9**
TWGZ	**Tauwhareparae**	**6.26**	**199**	P	**Pn**	**12 54 10.5**	**+3.3**
TWGZ				S	**S**	**12 55 22.8**	**+1.1**
OPRZ	**Ohinepanea**	**6.46**	**210**	P	**Pn**	**12 54 12.7**	**+3.1**
MARZ	**Manawahe**	**6.54**	**208**	P	**Pn**	**12 54 13.6**	**+3.1**
MWZ	**Matawai**	**6.54**	**202**	P	**Pn**	**12 54 11.1**	**+0.5**
MWZ				S	**S**	**12 55 26.6**	**-1.3**
URZ	**Urewera**	**6.61**	**205**	P	**Pn**	**12 54 13.2**	**+1.8**
	2.3nm,0.3s,baz=257,slow=3.4,SNR=48						
URZ				S	**S**	**12 55 28.7**	**-0.7**
	3.6nm,0.3s,baz=252,slow=22,SNR=21						
URZ	**Urewera**	**6.61**	**205**	P	**Pn**	**12 54 12.3**	**+0.9**
URZ				S	**S**	**12 55 27.8**	**-1.6**
RIGZ	**Rimuhau**	**6.82**	**199**	P	**Pn**	**12 54 16.3**	**+2.4**
MUGZ	**Murupara**	**6.93**	**206**	P	**Pn**	**12 54 15.8**	**+0.6**
RTZ	**Ruatahuna**	**6.98**	**204**	P	**Pn**	**12 54 15.9**	**+0.1**
PRGZ	**Paritu Road**	**6.99**	**198**	P	**Pn**	**12 54 19.4**	**+3.4**
SNGZ	**Shannon Statio**	**7.01**	**201**	P	**Pn**	**12 54 17.5**	**+1.3**
ALRZ	**Allen Road**	**7.17**	**208**	P	**Pn**	**12 54 19.9**	**+1.8**
RAHZ	**Arahi**	**7.21**	**202**	P	**Pn**	**12 54 20.7**	**+2.0**
MTHZ	**Maungataniwha**	**7.24**	**204**	P	**Pn**	**12 54 20.8**	**+1.8**
TLZ	**Tolley Road**	**7.32**	**213**	P	**Pn**	**12 54 23.8**	**+3.8**
KUTZ	**Kaahu Road**	**7.32**	**211**	P	**Pn**	**12 54 22.9**	**+2.9**
MRHZ	**Matea Rd**	**7.37**	**206**	P	**Pn**	**12 54 22.0**	**+1.3**
NMHZ	**Naumai**	**7.47**	**203**	P	**Pn**	**12 54 23.7**	**+1.8**
WATZ	**Wairara**	**7.54**	**210**	P	**Pn**	**12 54 25.2**	**+2.5**
ARHZ	**Aropaoanui**	**7.56**	**202**	P	**Pn**	**12 54 24.6**	**+1.7**
BKZ	**Black Stump Fm**	**7.64**	**205**	P	**Pn**	**12 54 23.4**	**-0.6**
KATZ	**Kakaramea**	**7.78**	**209**	P	**Pn**	**12 54 28.4**	**+2.6**
HIZ	**Hauiti**	**7.79**	**215**	P	**Pn**	**12 54 29.9**	**+4.2**
MCHZ	**McNeill Hill**	**7.82**	**203**	P	**Pn**	**12 54 27.2**	**+1.2**
KWHZ	**Kaweka Forest**	**7.89**	**204**	P	**Pn**	**12 54 28.2**	**+1.1**
WTVZ	**West Tongariro**	**7.94**	**209**	P	**Pn**	**12 54 29.2**	**+1.4**
TWVZ	**Taurewa**	**7.97**	**210**	P	**Pn**	**12 54 28.9**	**+0.9**
NGZ	**Ngauruhoe**	**7.99**	**209**	P	**Pn**	**12 54 29.8**	**+1.5**
TUVZ	**Tukino**	**8.04**	**209**	P	**Pn**	**12 54 30.5**	**+1.5**
FWVZ	**Far West T-bar**	**8.08**	**209**	P	**Pn**	**12 54 29.9**	**+0.4**
BHHZ	**Black Hill Sta**	**8.08**	**206**	P	**Pn**	**12 54 29.5**	**+0.2**
KAHZ	**Kahuranaki**	**8.08**	**201**	P	**Pn**	**12 54 30.1**	**+0.8**
KRHZ	**Kereru**	**8.11**	**204**	P	**Pn**	**12 54 29.1**	**-0.5**
MOVZ	**Moawhango**	**8.12**	**208**	P	**Pn**	**12 54 29.9**	**0.0**
PKVZ	**Pokaka**	**8.19**	**210**	P	**Pn**	**12 54 31.7**	**+1.0**
MTVZ	**Mangateitei**	**8.22**	**209**	P	**Pn**	**12 54 32.1**	**+1.1**
PXZ	**Pawanui**	**8.30**	**200**	P	**Pn**	**12 54 32.6**	**+0.6**
VRZ	**Vera Road**	**8.32**	**213**	P	**Pn**	**12 54 34.4**	**+2.2**
PNHZ	**Pukenui**	**8.41**	**204**	P	**Pn**	**12 54 33.3**	**0.0**
PRHZ	**Porangahau**	**8.59**	**201**	P	**Pn**	**12 54 36.2**	**+0.7**
TSZ	**Takapari Road**	**8.62**	**204**	P	**Pn**	**12 54 35.6**	**-0.4**
WAZ	**Wanganui**	**8.73**	**210**	P	**Pn**	**12 54 38.1**	**+0.8**
PKE	**Pukeiti**	**8.74**	**216**	P	**Pn**	**12 54 41.0**	**+3.6**
LREZ	**Lake Rotokare**	**8.75**	**213**	P	**Pn**	**12 54 39.4**	**+1.9**
DVHZ	**Dannevirke**	**8.76**	**203**	P	**Pn**	**12 54 37.5**	**-0.2**
KHEZ	**Kahui Hut**	**8.80**	**216**	P	**Pn**	**12 54 41.6**	**+3.3**
ANWZ	**Angora Road**	**8.81**	**201**	P	**Pn**	**12 54 38.8**	**+0.5**
PRWZ	**Pori Road**	**9.06**	**203**	P	**Pn**	**12 54 41.4**	**+0.1**
RPZ	**Rata Peaks**	**13.66**	**211**	P	**Pn**	**12 55 36.2**	**-1.0**
	1.0nm,0.3s,baz=19,slow=4.1,SNR=9.9						
ASAR	**Alice Springs**	**41.85**	**270**	P	**P**	**12 59 54.4**	**-2.0**
	0.7nm,0.4s,baz=106,slow=7.4,SNR=28						
WRA	**Warramunga Arr**	**43.01**	**275**	P	**P**	**13 00 03.1**	**-2.6**
	1.1nm,0.5s,baz=115,slow=7.7,SNR=2.7						
FINES	**FINESS Array B**	**146.46**	**338**	PKPbc	**PKPdf**	**13 11 40.0**	**+1.9**
	0.3nm,0.3s,baz=72,slow=4.5,SNR=6.1						

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*NAO **28** 12:53:09.2±1.3, 67°.68N×33°.66E, ML2.1*

HEL 28 12:53:06.9±0.4**, 68°.06N**×**33°.90E, h0km, ML1.9, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APZ9	**Apatity**	**0.53**	**201**	Pg	Pg	12 53 11.8	-5.2
APZ9				Lg	Lg	12 53 14.1	
APZ9	**Apatity**	**0.53**	**201**	Pg	Pg	12 53 11.8	-5.2
APZ9				Sg	Sg	12 53 14.1	-10
APA0	**Apatity Array**	**0.57**	**217**	Pg	Pg	12 53 14.2	-3.7
	baz=85,slow=16						
APA0				Lg	Lg	12 53 18.3	
	baz=80,slow=28						
APA0				Rg	Rg	12 53 19.2	
	baz=78,slow=56						
APA0	**Apatity Array**	**0.57**	**217**	Pg	Pg	12 53 14.2	-3.7
	baz=85,slow=16						
APA0				Sg	Sg	12 53 18.3	-6.9
	baz=80,slow=28						
APA0				Rg	Rg	12 53 19.2	
	baz=78,slow=56						
VRF	**Varrio**	**1.65**	**261**	PG	Pn	12 53 37.1	0.0
	baz=75						
VRF				MSG		12 53 56.4	
	comp=Z,9.3nm,0.2s						
VRF				SG	Sn	12 53 57.4	-1.6
KU6	**Riekki**	**2.58**	**219**	PN	Pn	12 53 48.2	-1.6
	baz=36						
KU6				SN	Sn	12 54 18.8	-3.0
KU6				MSG		12 54 23.1	
	comp=Z,6.4nm,0.2s						
SGF	**Sodankyl**	**2.87**	**261**	PG	Pb	12 53 57.7	-1.3
	baz=71						
SGF				SB	Sb	12 54 32.5	-2.0
MSF	**Maaselka**	**2.88**	**224**	PN	Pn	12 53 53.5	-0.5
MSF				SN	Sn	12 54 28.1	-1.2
KEV	**Kevo**	**3.02**	**307**	Pn	Pb	12 54 00.9	-0.5
KEV				Sn	Sb	12 54 39.1	+0.4
KEV				Lg	Lg	12 54 49.0	
KEV	**Kevo**	**3.02**	**307**	Pn	Pb	12 54 00.9	-0.5
KEV				Sn	Sb	12 54 39.1	+0.4
KEV				Sg	Sg	12 54 49.0	+5.4
KEV	**Kevo**	**3.02**	**307**	PG	Pb	12 54 01.1	-0.2
KEV				MSG		12 54 35.5	
	comp=Z,2.2nm,0.2s						
KEV				SG	Sb	12 54 39.5	+0.8
RNF	**Rovaniemi**	**3.38**	**248**	PN	Pn	12 54 00.2	-0.6
RNF				SN	Sn	12 54 40.2	-1.4
ARA0	**ARCESS Array S**	**3.39**	**300**	Pn	Pb	12 54 05.1	-2.7
	baz=122,slow=16						
ARA0				Pg	Pg	12 54 13.0	+1.2
	baz=119,slow=16						
ARA0				Sn	Sb	12 54 46.3	-3.2
	baz=124,slow=28						
ARA0				Lg	Lg	12 54 57.1	
	baz=115,slow=37						
ARA0	**ARCESS Array S**	**3.39**	**300**	Pn	Pb	12 54 05.1	-2.7
	baz=122,slow=16						
ARA0				Pg	Pg	12 54 13.0	+1.2
	baz=119,slow=16						
ARA0				Sn	Sb	12 54 46.3	-3.2
	baz=124,slow=28						
ARE0	**ARCESS Array S**	**3.39**	**300**	*e*P	Pb	12 54 05.1	-2.6
ARE0				*e*S	Sb	12 54 46.0	-3.5
ARE0				IAML		12 55 05.6	
	comp=Z,4.3nm,0.4s						
ARE0	**ARCESS Array S**	**3.39**	**300**	PB	Pb	12 54 04.9	-2.9
ARE0				SB	Sb	12 54 47.4	-2.0
HEF	**Hetta**	**3.83**	**280**	Pn	Pn	12 54 08.6	+1.6
HEF				Sn	Sn	12 54 53.7	+1.0
HEF	**Hetta**	**3.83**	**280**	Pn	Pn	12 54 08.6	+1.6
HEF	**Hetta**	**3.83**	**280**	PB	Pn	12 54 09.5	+2.5
KTK1	**Kautokeino**	**4.03**	**289**	*e*P	Pn	12 54 13.3	+3.5
KTK1				*e*S	Sn	12 54 58.9	+1.2
KTK1				IAML		12 55 22.6	
	comp=Z,3.4nm,0.5s						
LANU	**Lannavaara**	**4.47**	**275**	PN	Pn	12 54 16.9	+1.1

HEL 28 12:54:22.9±0.1**, 63°.64N**×**26°.02E, h0km, ML0.6, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUF	**Merijarvi**	**0.93**	**323**	*e*P	Pg	12 54 39.2	-1.4
OUF				*e*S	Sg	12 54 51.0	-1.5
SUF	**Sumiainen**	**0.93**	**176**	*e*P	Pg	12 54 39.6	-1.0
SUF				*e*S	Sg	12 54 51.0	-1.6
OBF0	**Syolatti, Pyha**	**1.16**	**318**	*e*S	Sg	12 54 59.1	-1.2
OBF4	**Vikkela, Lumij**	**1.24**	**342**	*e*P	Pg	12 54 45.3	-1.4
OBF4				*e*S	Sg	12 55 01.2	-1.6
KAF	**Kangasniemi**	**1.54**	**175**	*e*P	Pn	12 54 50.3	-1.2
KAF				*e*S	Sn	12 55 10.3	-1.9
KAF				MSG		12 55 13.9	
	comp=Z,0.3nm,0.1s						
KEF	**Keuruu**	**1.57**	**200**	*e*P	Pn	12 54 50.9	-1.1
KEF				*e*S	Sn	12 55 10.9	-2.0
KEF				MSG		12 55 16.0	
	comp=Z,0.4nm,0.1s						
VAF	**Ylistaro**	**1.63**	**250**	*e*P	Pn	12 54 52.4	-0.3
VAF				*e*S	Sn	12 55 12.9	-1.4

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*KRNET **28** 13:01:20.8±0.1, 40°.79N×69°.25E, mb2.8*

ISC 28 13:01:21.2±3.5**, 40°.7N**±0°.1×**68°.9E**±0°.2**, h35km, n6, σ0ˢ78**/11**, 7C-5D, Southeastern Uzbekistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**1.63**	**112**	⇓*i*P	**Pn**	**13 01 47.4**	**0.0**
	baz=21						
BTK				⇓*i*S	**Sn**	**13 02 06.7**	**-0.5**
	baz=21						
KK31	**Karatay Array**	**2.72**	**27**	⇑Pn	**Pn**	**13 02 02.1**	**-0.3**
	1.8nm,0.3s,baz=197,slow=15,SNR=17						
KK31				⇓Lg	Lg	13 02 32.3	
	7.0nm,0.4s,baz=204,slow=24,SNR=15						
AML	**Almayashu**	**3.92**	**67**	⇑*i*P	**Pn**	**13 02 19.9**	**+0.7**
	baz=67						
AML				⇑*i*S	**Sn**	**13 03 03.7**	**-0.5**
	baz=67						
EKS2	**Erkin-Say**	**4.19**	**60**	⇑*i*P	**Pn**	**13 02 23.7**	**+1.0**
	baz=60						
EKS2				⇑*i*S	**Sn**	**13 03 09.9**	**-0.5**
	baz=60						
UCH	**Uchtor**	**4.53**	**68**	⇑*i*P	**Pn**	**13 02 28.4**	**+0.8**
	baz=68						
UCH				⇑*i*S	**Sn**	**13 03 18.7**	**-0.6**
	baz=68						
AAK	**Ala-Archa**	**4.66**	**63**	⇓*i*P	**Pn**	**13 02 30.1**	**+0.9**
	baz=63						
AAK				⇓*i*S	**Sn**	**13 03 21.2**	**-0.9**
	baz=63						

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*IDC **28** 13:16:50.6±7.5, 1°.49N×97°.63E, h0km, mb3.7/2, mb1 3.8/3, mb1mx3.3/42, mbtmp3.7/3, ML4.1/1, MS3.6/1, Ms1 3.6/1, ms1mx2.5/45, Error ellipse: s-maj=137.2km s-min=34.1km az=162.0*

*DJA **28** 13:16:57.9±1.4, 1°N±2°×9°9E±°, h23km±12km, M2.8/6, MLv2.8/6*

ISC 28 13:16:57.3±1.1**, 1°.24N**±0°.05×**99°.05E**±0°.08**, h100km, n11, σ0ˢ75**/13**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.47**	**273**	P	**Pn**	**13 17 23.8**	**+0.5**
GSI				S	**Sn**	**13 17 42.1**	**-0.8**
PBSI	**Pulau Batu**	**1.50**	**211**	P	**Pn**	**13 17 23.2**	**-0.4**
PSI	**Prapat**	**1.56**	**355**	Pn	**Pn**	**13 17 23.2**	**-1.2**
	10nm,0.3s,baz=350,slow=8.7,SNR=28						
PSI				Sn	**Sn**	**13 17 44.7**	**-0.2**
	2.1nm,0.3s,baz=359,slow=23,SNR=6.6						
SISI	**Saibi**	**2.55**	**179**	P	**Pn**	**13 17 36.4**	**-0.7**
SISI				S	**Sn**	**13 18 06.9**	**-0.7**
PDSI	**Padang**	**2.56**	**146**	P	**Pn**	**13 17 37.8**	**+0.5**
KCSI	**Kotacane, Aceh**	**2.60**	**331**	P	**Pn**	**13 17 38.0**	**+0.2**
TPTI		**2.74**	**317**	P	**Pn**	**13 17 39.3**	**-0.3**
CMAR	**Chiang Mai Arr**	**17.11**	**360**	Pn	**P**	**13 20 50.4**	**-0.1**
	0.3nm,0.3s,baz=184,slow=12,SNR=3.0						
WRA	**Warramunga Arr**	**40.50**	**123**	LR	LR	13 44 11.6	
	comp=Z,78nm,20.4s,baz=260,slow=39						
MKAR	**Makanchi Array**	**47.67**	**344**	P	**P**	**13 25 24.1**	**+0.4**
	0.4nm,0.5s,baz=168,slow=7.7,SNR=4.7						
ZALV	**Zalesovo Beam**	**53.83**	**350**	P	**P**	**13 26 10.9**	**+1.2**
	0.5nm,0.3s,baz=175,slow=7.2,SNR=4.4						

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*IDC **28** 13:28:44.4±1.7, 11°.03S×121°.13E, h0km, mb3.8/3, mb1 3.9/6, mb1mx3.6/44, mbtmp3.7/6, ML3.5/3, Error ellipse: s-maj=76.2km s-min=24.1km az=58.0*

*DJA **28** 13:28:49.4±0.4, 11°S±5°×12°1E±°, h47km±45km, M3.9/6, mB4.5/1, mb3.9/4, MLv3.9/6, Mw(mB)3.7/1*

ISC 28 13:28:47.7±0.9**, 11°.41S**±0°.07×**120°.92E**±0°.08**, h35km, n13, σ2ˢ58**/17**, mb3.9**/3**, South of Sumba**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BASI	**Baing, Sumba**	**1.23**	**344**	P	**Pn**	**13 29 07.7**	**-0.7**
WBSI	**Waikabubak, Su**	**2.31**	**319**	P	**Pn**	**13 29 22.9**	**-0.5**
EDFI	**Ende, Flores**	**2.75**	**16**	P	**Pn**	**13 29 28.6**	**-0.9**
MMRI	**Maumere**	**3.05**	**25**	P	**Pn**	**13 29 32.7**	**-0.7**
SOEI	**Soe**	**3.68**	**64**	P	**Pn**	**13 29 44.2**	**+2.0**
SOEI				S	**Sn**	**13 30 26.7**	**+2.2**
PLAI	**Plampang**	**4.02**	**309**	P	**Pn**	**13 29 46.3**	**-0.5**
BKSI	**Bulukumba**	**6.10**	**352**	P	**Pn**	**13 30 14.6**	**-0.8**
	0.1nm380nm13nm,0.6s						
FITZ	**Fitzroy Crossi**	**8.06**	**146**	Pn	**Pn**	**13 30 45.9**	**+3.5**
	0.5nm,0.3s,baz=334,slow=11,SNR=23						
FITZ				Sn	**Sn**	**13 32 12.2**	**-0.2**
	3.1nm,0.3s,baz=182,slow=18,SNR=23						
WRA	**Warramunga Arr**	**15.45**	**125**	Pn	**Pn**	**13 32 24.0**	**+0.9**
	0.2nm,0.3s,baz=304,slow=15,SNR=18						
WRA				Sn	**Sn**	**13 35 06.7**	**-6.5**
	0.4nm,0.3s,baz=50,slow=16,SNR=9.0						
ASAR	**Alice Springs**	**17.36**	**136**	P	**P**	**13 32 50.1**	**+1.7**
	0.1nm,0.3s,baz=314,slow=12,SNR=35						
ASAR				S	**Sn**	**13 35 54.9**	**-4.6**
	0.2nm,0.3s,baz=313,slow=24,SNR=13						
MJAR	**Matsushiro Arr**	**50.40**	**18**	P	**P**	**13 37 40.6**	**-1.0**
	1.6nm,0.8s,baz=200,slow=10,SNR=4.3						
MKAR	**Makanchi Array**	**67.45**	**332**	P	**P**	**13 39 40.6**	**+0.7**
	0.3nm,0.5s,baz=142,slow=8.2,SNR=5.8						
ZALV	**Zalesovo Beam**	**71.96**	**339**	P	**P**	**13 40 07.7**	**+0.3**
	0.4nm,0.3s,baz=149,slow=3.4,SNR=2.5						

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*TAP **28** 13:38:28.5, 24°.05N×122°.42E, h32km, ML3.4, D*

*JMA **28** 13:38:28.1±0.2, 23°.99N×122°.42E, h26km±4km, M2.6*

ISC 28 13:38:28.3±1.0**, 24°.01N**±0°.02×**122°.41E**±0°.02**, h30km**±11km**, n129, σ0ˢ85**/236**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.59**	**334**	P	**Pb**	**13 38 40.1**	**-0.2**
	baz=326						
EOS1				*i* S	**Sb**	**13 38 48.8**	**+0.4**
	baz=326						
JYNG	**Yonagunijimaku**	**0.66**	**48**	P	**Pb**	**13 38 40.9**	**-0.4**
JYNG				S	**Sb**	**13 38 49.4**	**-0.7**
YOJ	**Yonaguni jima**	**0.71**	**51**	P	**Pb**	**13 38 41.7**	**-0.5**
	baz=52						
YOJ				S	**Sn**	**13 38 52.0**	**-0.2**
	baz=52						
YOJ	**Yonaguni jima**	**0.71**	**51**	P	**Pb**	**13 38 41.7**	**-0.5**
YOJ				*e*S	**Sb**	**13 38 50.8**	**-0.8**
HWA	**Hwalien**	**0.74**	**267**	*e*P	**Pb**	**13 38 42.8**	**+0.1**
	baz=251						
HWA				*e*S	**Sn**	**13 38 53.3**	**+0.3**
	baz=251						
ENA	**Nanau**	**0.74**	**304**	*i* P	**Pb**	**13 38 42.6**	**-0.1**
	baz=309						
ENA				*i* S	**Sn**	**13 38 53.1**	**+0.1**
	baz=309						
ENLB	**Shoufeng**	**0.75**	**262**	P	**Pb**	**13 38 42.2**	**-0.6**
	baz=248						
ENLB				S	**Sn**	**13 38 53.5**	**+0.2**
	baz=248						
TWD	**Chiawan**	**0.75**	**275**	P	**Pn**	**13 38 43.3**	**+0.4**
	baz=272						
TWD				S	**Sb**	**13 38 52.7**	**0.0**
	baz=272						
NACB	**Ninganchiao**	**0.76**	**282**	P	**Pb**	**13 38 42.8**	**-0.4**
	baz=265						
NACB				S	**Sb**	**13 38 53.4**	**+0.2**
	baz=265						
TWC	**Suao**	**0.79**	**319**	*i* P	**Pn**	**13 38 42.7**	**-0.7**
	baz=317						
TWC				*i* S	**Sb**	**13 38 52.8**	**-1.0**
	baz=317						
ETLH	**Xiulin Townshi**	**0.87**	**283**	P	**Pn**	**13 38 44.5**	**-0.2**
	baz=269						
ETLH				S	**Sb**	**13 38 56.4**	**+0.1**
	baz=269						
ESL	**Shilin**	**0.92**	**258**	P	**Pn**	**13 38 44.7**	**-0.5**
	baz=247						
ESL				S	**Sn**	**13 38 57.3**	**-0.2**
	baz=247						
EGFH	**Guangfu**	**0.96**	**249**	*i* P	**Pn**	**13 38 45.7**	**-0.1**
	baz=246						
EGFH				*i* S	**Sb**	**13 38 59.2**	**+0.4**
	baz=246						
ILA	**Ilan**	**0.96**	**321**	*e*P	**Pb**	**13 38 47.0**	**+0.6**
	baz=311						
ILA				S	**Sb**	**13 38 59.4**	**+0.5**
	baz=311						
TWE	**Neicheng**	**0.98**	**316**	*i* P	**Pn**	**13 38 46.2**	**+0.1**
	baz=314						
TWE				S	**Sb**	**13 38 59.2**	**-0.1**
	baz=314						
NTC	**Toucheng**	**0.99**	**328**	*i* P	**Pn**	**13 38 46.5**	**+0.2**
	baz=325						
NTC				*i* S	**Sn**	**13 38 59.4**	**+0.1**
	baz=325						
ENTT	**Nioudou**	**0.99**	**309**	*i* P	**Pn**	**13 38 46.5**	**+0.2**
	baz=294						
ENTT				S	**Sb**	**13 39 00.2**	**+0.5**
	baz=294						
NDT	**Datong Townshi**	**1.01**	**306**	*i* P	**Pn**	**13 38 46.8**	**+0.3**
	baz=290						
NDT				*i* S	**Sb**	**13 39 00.8**	**+0.7**
	baz=290						
SLBB	**Yuanshan**	**1.02**	**316**	*i* P	**Pn**	**13 38 46.6**	**-0.2**
	baz=314						
SLBB				*e*S	**Sb**	**13 39 00.8**	**+0.1**
	baz=314						
NNSB	**Datong**	**1.03**	**294**	P	**Pn**	**13 38 46.8**	**0.0**
	baz=280						
NNSB				S	**Sn**	**13 39 00.5**	**+0.1**
	baz=280						
NNSH	**Datong**	**1.03**	**294**	*i* P	**Pn**	**13 38 46.9**	**+0.1**
	baz=281						
NNSH				S	**Sb**	**13 39 00.7**	**-0.1**
	baz=281						
NNS	**Nan Shan**	**1.04**	**294**	*i* P	**Pn**	**13 38 47.0**	**0.0**
	baz=280						
NNS				S	**Sb**	**13 39 01.5**	**+0.3**
	baz=280						
HGSD	**Ruisui**	**1.04**	**240**	P	**Pn**	**13 38 46.7**	**-0.3**
	baz=238						
HGSD				S	**Sn**	**13 39 00.3**	**-0.2**
	baz=238						
WHF	**Hehuan Shan**	**1.06**	**277**	*i* P	**Pn**	**13 38 47.5**	**0.0**
	baz=262						
WHF				S	**Sb**	**13 39 02.0**	**+0.1**
	baz=262						
TWB1	**Santiao Chiao**	**1.06**	**339**	*i* P	**Pn**	**13 38 47.0**	**-0.3**
	baz=353						
TWB1				S	**Sb**	**13 39 01.9**	**+0.1**
	baz=353						
TIPB	**Shuangxi**	**1.09**	**331**	*i* P	**Pn**	**13 38 47.8**	**+0.1**
	baz=329						
TIPB				S	**Sn**	**13 39 01.6**	**-0.3**
	baz=329						
EHY	**Hungye**	**1.12**	**243**	*i* P	**Pn**	**13 38 48.0**	**0.0**
	baz=254						
EHY				S	**Sn**	**13 39 02.7**	**+0.3**
	baz=254						
NWLT	**Wulai**	**1.13**	**313**	*i* P	**Pb**	**13 38 48.8**	**-0.4**
	baz=310						
NWLT				*i* S	**Sb**	**13 39 04.2**	**+0.6**
	baz=310						
OWD	**Renai**	**1.13**	**267**	P	**Pn**	**13 38 48.5**	**+0.2**
	baz=264						
OWD				*i* S	**Sn**	**13 39 02.5**	**-0.4**
	baz=264						
CHGB	**Renai**	**1.13**	**273**	P	**Pn**	**13 38 48.6**	**+0.3**
	baz=260						
CHGB				S	**Sn**	**13 39 03.0**	**-0.1**
	baz=260						
YHNB	**Yeheng**	**1.15**	**305**	P	**Pn**	**13 38 48.9**	**+0.4**
	baz=291						
YHNB				S	**Sb**	**13 39 04.0**	**-0.2**
	baz=291						
TWT	**Tachien**	**1.15**	**282**	*e*P	**Pb**	**13 38 50.3**	**+0.5**
	baz=269						
TWT				S	**Sn**	**13 39 03.7**	**+0.1**
	baz=269						
NSK	**Sanguang**	**1.17**	**305**	*i* P	**Pn**	**13 38 48.9**	**+0.2**
	baz=289						
NSK				S	**Sn**	**13 39 04.0**	**+0.3**
	baz=289						
TDCB	**Techi**	**1.17**	**282**	P	**Pb**	**13 38 49.8**	**-0.3**
	baz=269						
TDCB				S	**Sn**	**13 39 04.4**	**+0.5**
	baz=269						
VWDT	**VWDT**	**1.19**	**258**	P	**Pn**	**13 38 49.4**	**+0.4**
	baz=255						
VWDT				S	**Sn**	**13 39 04.7**	**+0.5**
	baz=255						
YULB	**Yu-li**	**1.19**	**239**	P	**Pn**	**13 38 49.1**	**+0.1**
	baz=251						
YULB				S	**Sn**	**13 39 04.3**	**0.0**
	baz=251						
NWF	**Wu-fen Shan**	**1.20**	**332**	*i* P	**Pn**	**13 38 49.3**	**+0.1**
	baz=330						
NWF				*i* S	**Sb**	**13 39 06.4**	**+0.6**
	baz=330						
WFSB	**Wu-fen Shan**	**1.20**	**332**	P	**Pn**	**13 38 49.3**	**+0.2**
	baz=330						
WFSB				S	**Sb**	**13 39 06.0**	**+0.4**
	baz=330						
TWF1	**Yuli**	**1.21**	**237**	*i* P	**Pn**	**13 38 49.5**	**+0.2**
	baz=224						
TWF1				S	**Sn**	**13 39 05.7**	**+0.9**
	baz=224						
TWA	**Mucha**	**1.22**	**322**	P	**Pb**	**13 38 50.6**	**-0.3**
	baz=320						
TWA				S	**Sb**	**13 39 06.5**	**+0.1**
	baz=320						
NHDH	**Xindian Distri**	**1.24**	**320**	P	**Pb**	**13 38 51.2**	**0.0**
	baz=317						

NHDH				S	**Sb**	**13 39 07.9**	**+1.0**
	baz=317						
IRIF	**Iriomote-Funau**	**1.25**	**75**	P	**Pb**	**13 38 50.5**	**-0.7**
IRIF				*e*S	**Sb**	**13 39 06.2**	**-0.7**
HATJ	**Hateruma jima**	**1.27**	**88**	P	**Pb**	**13 38 52.6**	**+0.9**
TATO	**Taipei**	**1.28**	**319**	P	**Pb**	**13 38 51.4**	**-0.4**
	baz=316						
TATO				S	**Sb**	**13 39 08.5**	**+0.7**
	baz=316						
FULB	**Fuli**	**1.31**	**232**	*i* P	**Pn**	**13 38 50.4**	**-0.3**
	baz=219						
FULB				S	**Sn**	**13 39 07.8**	**+0.7**
	baz=219						
TAP	**Taipei**	**1.31**	**321**	*e*P	**Pb**	**13 38 51.8**	**-0.6**
	baz=319						
TAP				S	**Sb**	**13 39 09.4**	**+0.5**
	baz=319						
CHKT	**Chengkung**	**1.32**	**227**	*i* P	**Pn**	**13 38 49.2**	**-1.6**
	baz=224						
CHKT				S	**Sn**	**13 39 06.2**	**-1.2**
	baz=224						
WLTB	**Daxi**	**1.35**	**309**	P	**Pb**	**13 38 52.7**	**-0.3**
	baz=294						
WLTB				S	**Sb**	**13 39 09.8**	**-0.1**
	baz=294						
SSLB	**Suanglung**	**1.35**	**261**	P	**Pn**	**13 38 51.9**	**+0.6**
	baz=258						
SSLB				S	**Sn**	**13 39 07.8**	**-0.4**
	baz=258						
DPDB	**Guoxing**	**1.36**	**271**	*i* P	**Pb**	**13 38 52.5**	**-0.7**
	baz=261						
DPDB				S	**Sb**	**13 39 09.9**	**-0.3**
	baz=261						
WHP	**Taichung City**	**1.36**	**281**	*i* P	**Pb**	**13 38 53.3**	**0.0**
	baz=269						
WHP				S	**Sb**	**13 39 10.5**	**+0.1**
	baz=269						
YM01	**YM01**	**1.36**	**326**	P	**Pn**	**13 38 51.7**	**+0.3**
	baz=338						
YM01				S	**Sb**	**13 39 10.2**	**-0.2**
	baz=338						
YM10	**YM10**	**1.38**	**326**	P	**Pn**	**13 38 51.7**	**0.0**
	baz=338						
YM10				S	**Sb**	**13 39 10.4**	**-0.3**
	baz=338						
YM11	**YM11**	**1.38**	**327**	P	**Pn**	**13 38 52.2**	**+0.5**
	baz=324						
YM11				*e*S	**Sb**	**13 39 10.1**	**-0.7**
	baz=324						
SMLT	**Sun Moon Lake**	**1.39**	**265**	*i* P	**Pn**	**13 38 52.7**	**+0.8**
	baz=262						
SMLT				S	**Sn**	**13 39 10.4**	**+1.2**
	baz=262						
YM08	**YM08**	**1.39**	**328**	P	**Pn**	**13 38 52.0**	**+0.3**
	baz=325						
YM08				*e*S	**Sb**	**13 39 10.1**	**-1.0**
	baz=325						
TWS1	**Kuangyinshan**	**1.41**	**320**	*e*P	**Pb**	**13 38 53.1**	**-1.0**
	baz=335						
TWS1				*e*S	**Sb**	**13 39 11.5**	**-0.2**
	baz=335						
LIOB	**Emei**	**1.42**	**297**	*i* P	**Pb**	**13 38 53.8**	**-0.4**
	baz=294						
LIOB				S	**Sb**	**13 39 11.4**	**-0.6**
	baz=294						
ANP	**Anpu**	**1.42**	**325**	*e*P	**Pn**	**13 38 52.9**	**+0.6**
	baz=323						
TYC	**Yuchr**	**1.43**	**266**	*i* P	**Pn**	**13 38 53.3**	**+1.1**
	baz=263						
TYC				S	**Sn**	**13 39 10.0**	**+0.1**
	baz=263						
NSTT	**Nanjuang**	**1.43**	**296**	*i* P	**Pb**	**13 38 53.9**	**-0.4**
	baz=293						
NSTT				S	**Sb**	**13 39 12.2**	**+0.1**
	baz=293						
YUS	**Yu-Shan**	**1.44**	**249**	*i* P	**Pn**	**13 38 53.5**	**+0.7**
	baz=246						
YUS				S	**Sn**	**13 39 10.9**	**0.0**
	baz=246						
TWY	**Chenhua**	**1.46**	**330**	*e*P	**Pb**	**13 38 53.7**	**-1.1**
	baz=328						
TWY				*e*S	**Sb**	**13 39 12.0**	**-1.0**
	baz=328						
WHYT	**Xinyi Township**	**1.46**	**258**	P	**Pb**	**13 38 54.1**	**-0.8**
	baz=244						
WHYT				S	**Sb**	**13 39 12.6**	**-0.5**
	baz=244						
NCUH	**Zhongli**	**1.47**	**311**	P	**Pn**	**13 38 53.5**	**+0.7**
	baz=307						
NCUH				S	**Sb**	**13 39 13.4**	**+0.1**
	baz=307						
JKRS	**Kuro-shima**	**1.48**	**81**	P	**Pb**	**13 38 55.1**	**-0.1**
SBCB	**Hsinchu**	**1.51**	**301**	*e*S	**Sb**	**13 39 14.8**	**+0.1**
	baz=298						
ELDTW	**Lidau**	**1.52**	**238**	*i* P	**Pn**	**13 38 53.5**	**-0.1**
	baz=235						
ELDTW				S	**Sn**	**13 39 11.8**	**-0.7**
	baz=235						
TWQ1	**Liyutan**	**1.53**	**283**	*i* P	**Pb**	**13 38 55.9**	**-0.3**
	baz=280						
TWQ1				S	**Sb**	**13 39 15.9**	**+0.8**
	baz=280						
WJS	**Zhushan**	**1.55**	**263**	P	**Pb**	**13 38 56.1**	**-0.3**
	baz=260						
WJS				*e*S	**Sb**	**13 39 17.0**	**+1.3**
	baz=260						
ALS	**Alishan**	**1.55**	**252**	P	**Pb**	**13 38 55.7**	**-0.9**
	baz=249						
ALS				S	**Sn**	**13 39 14.7**	**+1.1**
	baz=249						
TWH	**Lutao**	**1.55**	**214**	*i* P	**Pn**	**13 38 54.0**	**0.0**
	baz=211						
TWH				S	**Sn**	**13 39 13.0**	**-0.1**
	baz=211						
NSY	**Sanyi**	**1.56**	**285**	S	**Sb**	**13 39 16.8**	**+0.9**
	baz=282						
NMLH	**Miaoli**	**1.57**	**290**	*e*P	**Pb**	**13 38 56.0**	**-0.7**
	baz=286						
NMLH				S	**Sb**	**13 39 16.5**	**+0.3**
	baz=286						
WNT	**Mingjian**	**1.59**	**266**	P	**Pn**	**13 38 55.5**	**+1.1**
	baz=262						
WNT				S	**Sb**	**13 39 17.0**	**+0.4**
	baz=262						
TCU	**Taichung**	**1.59**	**275**	S	**Sb**	**13 39 17.6**	**+0.8**
	baz=272						
PTSB	**Yuanli**	**1.62**	**286**	*e*S	**Sb**	**13 39 17.5**	**0.0**
	baz=283						
JIJ	**Ishigaki jima**	**1.62**	**77**	P	**Pn**	**13 38 55.9**	**+1.0**
JIJ				S	**Sb**	**13 39 16.0**	**-1.6**
CHN5	**Tsauling**	**1.64**	**256**	*i* P	**Pb**	**13 38 57.4**	**-0.6**
	baz=244						
CHN5				S	**Sb**	**13 39 17.5**	**-0.8**
	baz=244						
PCYT	**Pengchaiyu**	**1.64**	**349**	P	**Pn**	**13 38 54.8**	**-0.4**
	baz=334						
WDJ	**Dajia District**	**1.65**	**282**	*e*S	**Sb**	**13 39 18.0**	**-0.6**
	baz=279						
WCHH	**Zhanghua**	**1.69**	**273**	S	**Sb**	**13 39 19.7**	**-0.1**
	baz=269						
TWGBT	**Beinan**	**1.71**	**226**	P	**Pn**	**13 38 55.9**	**-0.2**
	baz=235						
TWGBT				S	**Sn**	**13 39 16.5**	**-0.5**
	baz=235						
TTN	**Taitung**	**1.71**	**223**	*e*S	**Sn**	**13 39 17.9**	**+1.0**
	baz=221						
TWG	**Pinlang**	**1.71**	**226**	*i* P	**Pn**	**13 38 55.9**	**-0.3**
	baz=235						
TWG				S	**Sn**	**13 39 16.6**	**-0.4**
	baz=235						
WGK	**Gukeng**	**1.72**	**260**	*e*S	**Sb**	**13 39 20.9**	**+0.3**
	baz=257						
STYT	**Tauyuan**	**1.74**	**241**	*i* P	**Pn**	**13 38 57.7**	**+1.1**
	baz=230						
STYT				S	**Sn**	**13 39 19.7**	**+1.9**
	baz=230						
WDLH	**Douliu**	**1.75**	**260**	P	**Pb**	**13 38 58.7**	**-1.0**
	baz=257						
WDLH				S	**Sb**	**13 39 21.3**	**0.0**
	baz=257						
TPUB	**Ta-pu**	**1.78**	**247**	P	**Pb**	**13 38 58.9**	**-1.4**
	baz=244						
TPUB				S	**Sb**	**13 39 21.6**	**-0.7**
	baz=244						
CHN4	**Tsaushan**	**1.79**	**249**	P	**Pb**	**13 38 59.7**	**-0.9**
	baz=246						
CHN4				S	**Sb**	**13 39 22.0**	**-0.6**
	baz=246						
WTP	**Ta-pu**	**1.82**	**246**	*i* P	**Pb**	**13 38 59.5**	**-1.4**
	baz=243						
WTP				S	**Sb**	**13 39 22.8**	**-0.5**
	baz=243						
JISG	**Ishigakijimahi**	**1.82**	**71**	P	**Pn**	**13 38 58.3**	**+0.6**
JISG				*e*S	**Sn**	**13 39 20.5**	**+0.7**
RLNB	**Erlin**	**1.88**	**267**	*e*P	**Pb**	**13 39 01.1**	**-0.9**
	baz=277						
RLNB				S	**Sb**	**13 39 24.9**	**-0.2**
	baz=277						
CHY	**Chiayi**	**1.89**	**255**	S	**Sb**	**13 39 24.7**	**-0.8**
	baz=252						
SLGT	**Liugui**	**1.91**	**238**	*i* P	**Pn**	**13 39 00.8**	**+1.9**
	baz=228						
SLGT				S	**Sb**	**13 39 24.7**	**-1.3**
	baz=228						
TWK	**Hsinying**	**1.91**	**248**	*i* P	**Pb**	**13 39 01.5**	**-1.1**
	baz=245						
TWK				*i* S	**Sb**	**13 39 25.1**	**-1.0**
	baz=245						
CHN1	**Nanshi**	**1.91**	**245**	*i* P	**Pb**	**13 39 01.7**	**-0.9**
	baz=242						
CHN1				*i* S	**Sb**	**13 39 25.9**	**-0.2**
	baz=242						
SGST	**Jiashian**	**1.92**	**241**	*e*P	**Pb**	**13 39 01.1**	**-1.5**
	baz=229						
SGST				S	**Sb**	**13 39 25.3**	**-0.9**
	baz=229						
SNST	**Tainan City**	**1.93**	**246**	P	**Pb**	**13 39 02.3**	**-0.5**
	baz=244						
SNST				*i* S	**Sb**	**13 39 26.0**	**-0.3**
	baz=244						
ECL	**Taimali**	**1.94**	**224**	P	**Pn**	**13 38 59.4**	**+0.1**
	baz=221						
ECL				*i* S	**Sn**	**13 39 21.9**	**-0.9**
	baz=221						
WTCT	**Ta-ch'eng**	**1.96**	**266**	S	**Sb**	**13 39 26.9**	**-0.3**
	baz=275						
WLGB	**Puzi**	**2.01**	**255**	*e*S	**Sb**	**13 39 28.4**	**-0.4**
	baz=253						
SSD	**Sandimen**	**2.06**	**233**	*i* P	**Pb**	**13 39 03.7**	**-1.4**
	baz=225						
SSD				S	**Sn**	**13 39 28.1**	**+2.3**
	baz=225						
LAY	**Lan-yu**	**2.12**	**202**	P	**Pn**	**13 39 02.0**	**+0.3**
	baz=200						
LAY				S	**Sn**	**13 39 28.0**	**+0.8**
	baz=200						
CHN8	**Yiju**	**2.12**	**252**	S	**Sb**	**13 39 30.4**	**-1.7**
	baz=250						
MASBT	**Mashibuluo**	**2.15**	**230**	P	**Pn**	**13 39 03.4**	**+1.2**
	baz=223						
MASBT				*e*S	**Sn**	**13 39 28.9**	**+1.0**
	baz=223						
EAST	**Anshuo**	**2.17**	**222**	*i* P	**Pn**	**13 39 02.5**	**0.0**
	baz=220						
EAST				*e*S	**Sn**	**13 39 28.5**	**+0.1**
	baz=220						
TWM1	**Shoushan**	**2.18**	**237**	*e*S	**Sb**	**13 39 32.8**	**-0.8**
	baz=236						
JTJ	**Tarama**	**2.18**	**73**	P	**Pn**	**13 39 04.4**	**+1.8**
SSPT	**Xinbi**	**2.28**	**228**	P	**Pn**	**13 39 06.2**	**+2.2**
	baz=221						
SSPT				*e*S	**Sn**	**13 39 33.0**	**+1.9**
	baz=221						
SCZT	**Fangliau**	**2.32**	**226**	P	**Pb**	**13 39 07.3**	**-2.2**
	baz=218						
SCZT				*e*S	**Sn**	**13 39 33.4**	**+1.3**
	baz=218						
WLCH	**Liuqiu**	**2.50**	**229**	P	**Pb**	**13 39 11.1**	**-1.4**
	baz=241						
WLCH				*e*S	**Sb**	**13 39 42.8**	**0.0**
	baz=241						
HEN	**Hengchun**	**2.52**	**218**	*e*S	**Sn**	**13 39 40.5**	**+3.4**
	baz=215						
TWKBT	**Hengchun**	**2.53**	**216**	P	**Pn**	**13 39 08.3**	**+0.9**
	baz=213						
TWKBT				S	**Sn**	**13 39 37.4**	**0.0**
	baz=213						
TWK1	**Hengchun**	**2.54**	**216**	P	**Pn**	**13 39 08.4**	**+0.9**
	baz=213						
TWK1				*e*S	**Sn**	**13 39 39.1**	**+1.7**
	baz=213						
WDGT	**Dungji**	**2.63**	**254**	*i* P	**Pn**	**13 39 10.5**	**+1.7**
	baz=241						
WDGT				S	**Sn**	**13 39 40.9**	**+1.2**
	baz=241						
PHUB	**P'eng-hu**	**2.65**	**260**	*e*P	**Pn**	**13 39 10.8**	**+1.8**
	baz=271						
PHUB				S	**Sn**	**13 39 41.4**	**+1.3**
	baz=271						
PNG	**Penghu**	**2.65**	**261**	*e*P	**Pn**	**13 39 11.1**	**+2.0**
	baz=258						
PNG				S	**Sn**	**13 39 41.8**	**+1.5**
	baz=258						
PTTC	**Pingtan**	**2.82**	**302**	*e*P	**Pn**	**13 39 11.5**	**+0.1**
	baz=298						
PTTC				*e*S	**Sn**	**13 39 43.0**	**-1.4**
	baz=298						
VCHM	**Qimei**	**2.85**	**254**	*e*P	**Pn**	**13 39 12.7**	**+0.9**
	baz=252						
VCHM				S	**Sn**	**13 39 47.3**	**+2.2**
	baz=252						
VWUC	**VWUC**	**2.87**	**290**	P	**Pn**	**13 39 12.2**	**+0.1**
	baz=287						
VWUC				*e*S	**Sn**	**13 39 44.1**	**-1.5**
	baz=287						
MATB	**Ma-tsu**	**3.09**	**314**	*e*P	**Pn**	**13 39 16.0**	**+0.9**
	baz=298						
MATB				S	**Sn**	**13 39 50.6**	**-0.4**
	baz=298						
PTMZ	**Houxiangcun**	**3.17**	**290**	P	**Pn**	**13 39 16.4**	**+0.2**
	baz=286						
PTMZ				*e*S	**Sn**	**13 39 51.1**	**-1.9**
	baz=286						
XPSS	**Dashiqiu**	**3.53**	**326**	*e*P	**Pn**	**13 39 21.2**	**0.0**
	baz=322						
KNM	**Kinmen**	**3.65**	**277**	*e*S	**Sn**	**13 40 07.0**	**+2.0**
	baz=273						
KNMB	**Chin-men Tao**	**3.70**	**278**	P	**Pn**	**13 39 24.2**	**+0.7**
	baz=274						
KNMB				S	**Sn**	**13 40 05.3**	**-0.9**
	baz=274						
MHZQ	**Yeshan**	**3.71**	**305**	*e*S	**Sn**	**13 40 05.0**	**-1.2**
	baz=300						
AXDP	**Jialang**	**4.14**	**283**	P	**Pn**	**13 39 30.9**	**+1.3**
	baz=269						
AXDP				S	**Sn**	**13 40 17.6**	**+0.6**
	baz=269						
ZPLA	**Ao Xicun**	**4.26**	**270**	P	**Pn**	**13 39 32.5**	**+1.2**
	baz=267						
ZPLA				S	**Sn**	**13 40 18.4**	**-1.7**
	baz=267						

IDC 28 13:39:44.9±4.9**, 19°.77S**×**174°.92W, h0**^{km}**, mb4.1**/4**,**
mb1 4.3/4**, mb1mx3.6**/43**, mbtmp4.1**/4**, Error ellipse:**
s-maj=157.6km s-min=94.0km az=169.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.44**	**263**	P	P	13 46 52.9	+1.2
	1.5nm,0.4s,baz=81,slow=13,SNR=7.8						
STKA	**Stephens Creek**	**40.70**	**244**	P	P	13 47 27.5	+0.1
	1.0nm,0.6s,baz=72,slow=19,SNR=3.0						
ASAR	**Alice Springs**	**47.50**	**256**	P	P	13 48 21.4	-0.7
	2.4nm,0.6s,baz=97,slow=7.5,SNR=73						
ASAR				PcP	PcP	13 49 52.3	-0.2
	0.5nm,0.8s,baz=109,slow=3.0,SNR=4.6						
WRA	**Warramunga Arr**	**47.57**	**261**	P	P	13 48 21.8	-0.9
	1.0nm,0.3s,baz=97,slow=7.7,SNR=36						

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*DJA **28** 14:12:23.4±0.5, 6°S±12°×11°0E±°, h533^{km}±8^{km}, M4.0/13,*
mB4.7/4, mb4.2/5, MLv3.9/13, Mw(mB)4.0/4
*IDC **28** 14:12:24.3±2.7, 5°.67S×110°.49E, h548^{km}±27^{km}, mb2.8/8,*
mb1 2.8/10, mbmx2.7/33, mbtmp3.7/10, Error ellipse:
s-maj=60.1km s-min=11.5km az=55.0
ISC 28 14:12:23.3±0.6**, 5°.9S**±0°.1×**110°.3E**±0°.1**, h550**^{km}**, n35,**
σ1^{s}.16/41**, mb3.4**/8**, Java Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UWJI	**Ujung Watu**	**0.80**	**130**	P	**P**	**14 13 28.3**	**-0.9**
YOGI	**Yogyakarta**	**1.90**	**181**	P	**P**	**14 13 32.2**	**-0.4**
UGM	**Wanagama**	**2.00**	**175**	P	**P**	**14 13 32.2**	**-0.9**
UGM				S	**S**	**14 14 27.1**	**-2.7**
WOJI	**Wonogiri, Jawa**	**2.00**	**163**	P	**P**	**14 13 32.3**	**-0.7**
WOJI				S	**S**	**14 14 28.1**	**-1.6**
GRJI	**Gresik**	**2.36**	**115**	P	**P**	**14 13 34.3**	**-0.4**
PCJI	**Pacitan**	**2.42**	**160**	P	**P**	**14 13 33.7**	**-1.4**
PCJI				S	**S**	**14 14 31.1**	**-2.3**
PWJI	**Pagerwojo**	**2.56**	**145**	P	**P**	**14 13 34.3**	**-1.5**
LEM	**Lembang**	**2.85**	**251**	S	**S**	**14 14 38.4**	**+0.3**
	4.0nm,0.3s,baz=347,slow=22,SNR=7.7						
CISI	**Cisompet, Garu**	**2.99**	**237**	P	**P**	**14 13 37.7**	**-0.7**
CNJI	**Cibinong**	**3.47**	**246**	P	**P**	**14 13 40.6**	**-0.8**
GMJI	**Gumukmas**	**3.88**	**127**	P	**P**	**14 13 42.1**	**-2.2**
JAGI	**Jajag, Banyuwa**	**4.57**	**124**	P	**P**	**14 13 47.8**	**-1.8**
SRBI	**Singaraja**	**5.31**	**114**	P	**P**	**14 13 55.3**	**-0.5**
KASI	**Kota Agung**	**5.82**	**273**	P	**P**	**14 13 59.7**	**-0.6**
MDSI	**Maura Dua**	**6.29**	**283**	P	**P**	**14 14 05.0**	**+0.4**
	0.1nm12nm,0.8s						
MNAI	**Manna**	**7.50**	**281**	P	**P**	**14 14 16.1**	**-0.2**
	0.7nm4µm154nm,0.6s						
KAPI	**Kappang**	**9.42**	**85**	P	**P**	**14 14 33.5**	**-1.9**
	1.3nm,0.3s,baz=266,slow=4.5,SNR=4.5						
FITZ	**Fitzroy Crossi**	**19.24**	**130**	P	**P**	**14 16 14.2**	**+1.6**
	0.1nm,0.3s,baz=329,slow=12,SNR=1.5						
CMAR	**Chiang Mai Arr**	**26.69**	**335**	P	**P**	**14 17 19.9**	**+0.8**
	1.7nm,0.8s,baz=171,slow=7.9,SNR=12						
WRA	**Warramunga Arr**	**27.18**	**123**	P	**P**	**14 17 24.3**	**+0.9**
	0.2nm,0.5s,baz=302,slow=9.6,SNR=1.5						
WRA				PcP	**PcP**	**14 20 25.9**	**+0.2**
	0.1nm,0.3s,baz=330,slow=1.8,SNR=4.8						
ASAR	**Alice Springs**	**28.74**	**130**	P	**P**	**14 17 39.0**	**+2.0**
	0.2nm,0.8s,baz=309,slow=8.1,SNR=4.8						
ASAR				PcP	**PcP**	**14 20 30.5**	**+0.9**
	0.1nm,0.3s,baz=311,slow=2.0,SNR=5.1						
ASAR				ScP	**ScP**	**14 23 21.1**	**+1.9**
	0.3nm,1.0s,baz=305,slow=2.2,SNR=1.6						
STKA	**Stephens Creek**	**39.00**	**135**	P	**P**	**14 19 03.8**	**+0.8**
	0.7nm,0.5s,baz=338,slow=10,SNR=4.4						
ODAN	**Odare**	**39.43**	**327**	*e*P	**P**	**14 19 06.5**	**-0.2**
	13nm,0.5s						
TAPN	**Taplejung**	**39.65**	**328**	*e*P	**P**	**14 19 08.9**	**+0.4**
JIRN	**Jiri**	**40.72**	**326**	*e*P	**P**	**14 19 17.3**	**+0.1**
	16nm,0.5s						
GUN	**Gumba**	**41.08**	**326**	*e*P	**P**	**14 19 20.1**	**+0.1**
	13nm,0.5s						
PKI	**Pulchoki**	**41.08**	**325**	*e*P	**P**	**14 19 19.8**	**-0.2**
DMN	**Daman**	**41.28**	**325**	*e*P	**P**	**14 19 21.4**	**-0.1**
	7.3nm,0.4s						
GKN	**Gorkha**	**41.85**	**325**	*e*P	**P**	**14 19 25.5**	**-0.4**
DANN	**Dangsing**	**42.62**	**324**	*e*P	**P**	**14 19 31.7**	**-0.4**
	10nm,0.6s						
SONM	**Songino Array**	**53.62**	**357**	P	**P**	**14 20 53.0**	**-0.5**
	0.7nm,0.5s,baz=177,slow=8.1,SNR=8.8						
MKAR	**Makanchi Array**	**58.07**	**338**	P	**P**	**14 21 23.9**	**-0.3**
	1.5nm,0.3s,baz=150,slow=7.2,SNR=38						
ZALV	**Zalesovo Beam**	**63.37**	**343**	P	**P**	**14 21 57.9**	**-0.9**
	0.9nm,0.4s,baz=164,slow=4.8,SNR=6.6						
BRTR	**Keskin Array B**	**83.60**	**311**	P	**P**	**14 23 54.5**	**+0.1**
	0.5nm,0.6s,baz=108,slow=3.3,SNR=3.7						
TXAR	**Lajitas Array**	**140.35**	**50**	PKP	**PKiKP**	**14 30 52.8**	**-0.8**
	0.1nm,0.6s,baz=228,slow=1.5,SNR=3.6						

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*IDC **28** 14:28:37.2±7.6, 7°.87N×38°.16E, h0^{km}, mb3.7/7, mb1 3.9/7,*
mb1mx3.5/39, mbtmp3.7/7, Error ellipse: s-maj=162.5km
s-min=48.0km az=16.0
ISC 28 14:28:36.6±1.6**, 7°.6N**±0°.2×**38°.1E**±0°.3**, h10**^{km}**, n9, σ0^{s}.36**/10**,**
mb3.9/7**, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DESE	**Dese**	**3.85**	**23**	*e*P	**Pb**	**14 29 44.7**	**-0.2**
DESE				*e*S	**Sg**	**14 30 40.7**	**+0.3**
KBZ	**Khabaz**	**36.27**	**6**	P	**P**	**14 35 39.3**	**-0.7**
	1.5nm,0.8s,baz=181,slow=6.2,SNR=5.3						
GERES	**GERESS Array B**	**45.99**	**338**	P	**P**	**14 37 00.5**	**+0.3**
	0.2nm,0.2s,baz=145,slow=10,SNR=1.9						
MKAR	**Makanchi Array**	**54.32**	**36**	P	**P**	**14 38 03.5**	**+0.2**
	0.8nm,0.8s,baz=242,slow=5.2,SNR=7.1						
KURBB	**Kurchatov Arra**	**54.45**	**31**	P	**P**	**14 38 04.3**	**+0.1**
	0.4nm,0.9s,baz=234,slow=8.7,SNR=2.0						
NB2	**NORSAR Subarra**	**56.99**	**345**	P	**P**	**14 38 22.4**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=149,slow=7.4						
NOA	**NORSAR Array B**	**56.99**	**345**	P	**P**	**14 38 22.5**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=148,slow=6.8,SNR=4.3						
ZALV	**Zalesovo Beam**	**59.53**	**30**	P	**P**	**14 38 40.4**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=246,slow=13,SNR=4.5						
SONM	**Songino Array**	**69.92**	**42**	P	**P**	**14 39 48.3**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=258,slow=7.2,SNR=2.6						

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*THE **28** 14:32:36.5, 38°.16N×20°.42E, h14^{km}, ML3.4/8, Error*
ellipse: s-maj=0.9km s-min=0.6km az=244.0
*ATH **28** 14:32:36.2, 38°.15N×20°.42E, h16^{km}, ML2.7/11, Error*
ellipse: s-maj=1.4km s-min=0.9km az=235.0
ISC 28 14:32:36.2±1.1**, 38°.15N**±0°.04×**20°.41E**±0°.05**, h17**^{km}±4^{km}**,**
n42, σ0^{s}.35/67**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.04**	**329**	P	**Pg**	**14 32 39.3**	**+0.1**
CHV1				S	**Sg**	**14 32 41.2**	**-0.1**
	69µm,0.1s						
LXR1	**Lixouri, Cepha**	**0.06**	**23**	P	**Pg**	**14 32 39.4**	**+0.1**
LXR1				S	**Sg**	**14 32 41.4**	**-0.1**
	40µm,0.2s						
LXRA	**Lixouri, Kepha**	**0.06**	**22**	P	**Pg**	**14 32 39.4**	**0.0**
ARGA	**Argostoli. Kep**	**0.06**	**61**	P	**Pg**	**14 32 39.2**	**-0.1**
ARGA				S	**Sg**	**14 32 40.9**	**-0.6**
KEF2	**Argostoli. Kep**	**0.06**	**73**	P	**Pg**	**14 32 39.3**	**-0.1**
KEF2				S	**Sg**	**14 32 41.0**	**-0.6**
ARG2	**Argostoli**	**0.07**	**63**	P	**Pg**	**14 32 39.3**	**-0.1**
ARG2				S	**Sg**	**14 32 41.0**	**-0.6**
	74µm,0.1s						
KEF3	**Kipouria, Keph**	**0.07**	**319**	P	**Pg**	**14 32 39.6**	**+0.1**
KEF3				S	**Sg**	**14 32 41.4**	**-0.3**
KEF4	**Livadi, Kephal**	**0.11**	**6**	P	**Pg**	**14 32 39.9**	**0.0**
KEF4				S	**Sb**	**14 32 42.3**	**-0.1**
KEF1	**Kardakata, Kep**	**0.14**	**20**	P	**Pg**	**14 32 40.1**	**0.0**
VLS	**Valsamata**	**0.14**	**78**	P	**Pg**	**14 32 40.1**	**-0.2**
VLS				S	**Sg**	**14 32 42.6**	**-0.4**
	51µm,0.1s						
VLS	**Valsamata**	**0.14**	**78**	P	**Pg**	**14 32 40.1**	**-0.2**
VLS				S	**Sg**	**14 32 42.6**	**-0.4**
VLS				AML	AML	14 32 42.7	
	comp=N,43751µm,0.1s						
VLS				AML	AML	14 32 42.8	
VSK1	**VASILIKIADES**	**0.29**	**25**	P	**Pg**	**14 32 42.4**	**-0.1**
VSK1				S	**Sg**	**14 32 47.0**	**+0.2**
	comp=N,7µm,0.2s						
KFL	**Anninata**	**0.30**	**97**	P	**Pg**	**14 32 42.7**	**+0.1**
KFL				S	**Sg**	**14 32 47.3**	**+0.2**
	comp=N,7µm,0.3s						
KFL	**Anninata**	**0.30**	**97**	P	**Pg**	**14 32 42.7**	**+0.1**
KFL				S	**Sg**	**14 32 47.0**	**-0.1**
KFL				AML	AML	14 32 48.1	
	comp=E,17728µm,0.2s						
KFL				AML	AML	14 32 48.1	
	comp=N,10766µm,0.3s						
KONA	**Konidatara, Ke**	**0.30**	**25**	P	**Pg**	**14 32 42.7**	**-0.1**
KONA				S	**Sg**	**14 32 47.4**	**+0.2**
KONA				AML	AML	14 32 47.7	
	comp=N,6714µm,0.3s						
KONA				AML	AML	14 32 51.3	
	comp=E,3269µm,0.2s						
FSK	**Fiskardo**	**0.33**	**21**	P	**Pg**	**14 32 43.1**	**-0.1**
FSK				S	**Sg**	**14 32 48.2**	**+0.2**
	comp=E,2µm,0.1s						
FSK	**Fiskardo**	**0.33**	**21**	P	**Pg**	**14 32 43.1**	**-0.1**
FSK				S	**Sg**	**14 32 48.0**	**-0.1**
FSK				AML	AML	14 32 48.5	
	comp=N,3056µm,0.2s						
FSK				AML	AML	14 32 49.4	
	comp=E,5665µm,0.1s						
EVGI	**Lefkada island**	**0.51**	**22**	P	**Pg**	**14 32 46.1**	**-0.3**
EVGI				S	**Sb**	**14 32 53.9**	**0.0**
EVGI	**Lefkada island**	**0.51**	**22**	P	**Pg**	**14 32 46.1**	**-0.3**
EVGI				S	**Sb**	**14 32 53.7**	**-0.2**
MGNA	**Meganis**	**0.59**	**30**	P	**Pg**	**14 32 47.4**	**-0.4**
MGNA				S	**Sg**	**14 32 55.6**	**-0.2**
MGNA				AML	AML	14 32 58.0	
	comp=E,1118µm,0.1s						
MGNA				AML	AML	14 32 58.3	
	comp=N,840µm,0.1s						
VTN	**Vitineika**	**0.66**	**110**	P	**Pg**	**14 32 48.7**	**-0.3**
AST1	**Astakos**	**0.66**	**53**	P	**Pg**	**14 32 48.9**	**-0.3**
AST1				S	**Sb**	**14 32 59.3**	**+1.1**

	comp=N,902nm,0.3s						
LKD2	Lefkada island	0.67	17	P	Pg	14 32 49.1	-0.3
LKD2	Lefkada island	0.67	17	P	Pg	14 32 49.1	-0.3
LKD2				S	Sb	14 32 58.5	+0.1
LKD2				AML	AML	14 33 07.0	
	comp=N,517µm,0.3s						
LKD2				AML	AML	14 33 07.7	
	comp=E,538µm,0.2s						
TSLK	Tsoukalades, L	0.70	16	P	Pg	14 32 48.9	-1.1
TSLK	Tsoukalades, L	0.70	16	P	Pg	14 32 49.3	-0.7
TSLK				S	Sb	14 32 59.5	0.0
TSLK				AML	AML	14 33 05.8	
	comp=E,686µm,0.5s						
TSLK				AML	AML	14 33 07.3	
	comp=N,835µm,0.4s						
PDO	Prodromos	0.76	53	P	Pg	14 32 50.5	-0.5
PDO	Prodromos	0.76	53	P	Pg	14 32 50.5	-0.5
PDO				S	Sb	14 33 01.6	+0.7
PDO				AML	AML	14 33 08.2	
	comp=E,877µm,0.6s						
PDO				AML	AML	14 33 10.8	
	comp=N,1245µm,0.3s						
RLS	Riolos of Patr	0.84	96	P	Pb	14 32 52.1	-0.2
RLS	Riolos of Patr	0.84	96	P	Pb	14 32 52.1	-0.2
RLS				S	Sg	14 33 03.5	0.0
RLS				AML	AML	14 33 07.8	
	comp=N,438µm,0.4s						
RLS				AML	AML	14 33 12.2	
	comp=E,329µm,0.5s						
PVO	Paravola	0.99	62	P	Pb	14 32 55.3	+0.3
PVO	Paravola	0.99	62	P	Pb	14 32 55.2	+0.3
PVO				S	Sn	14 33 08.8	-0.2
PVO				AML	AML	14 33 11.7	
	comp=E,930µm,0.3s						
PVO				AML	AML	14 33 15.6	
	comp=N,680µm,0.3s						
DRO	Drossia	1.04	100	P	Pb	14 32 55.9	+0.1
DRO	Drossia	1.04	100	P	Pb	14 32 56.0	+0.2
DRO				S	Sn	14 33 10.6	+0.3
DRO				AML	AML	14 33 16.9	
	comp=E,1009µm,0.2s						
DRO				AML	AML	14 33 21.5	
	comp=N,543µm,0.3s						
EFP	Efpalio	1.21	76	P	Pn	14 32 58.0	-0.3
EFP	Efpalio	1.21	76	P	Pn	14 32 58.2	-0.1
LAKA	Lakka	1.24	85	P	Pb	14 32 59.2	+0.1
ANX	Ano Chora	1.27	69	P	Pn	14 32 59.6	+0.4
SERG	Sergoula	1.32	78	P	Pn	14 33 00.2	+0.3
IGT	Igoumenitsa	1.39	358	P	Pb	14 33 02.2	+0.5
ITM	Ithomi	1.54	128	P	Pg	14 33 05.4	-0.4
KEK	Kerkira	1.64	343	P	Pb	14 33 05.7	-0.2

WEL 28 14:34:06.6±0.6**, 32°S**±5°×**18°0W**±1°1**, h132**$^{km}\pm28^{km}$**,**
M4.4/12**, mB4.6**/3**, MLv4.5**/12**, Mw(mB)3.9**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.48	27	P	Pn	14 34 59.0	-0.6
RIZ	Raoul Island	3.50	26	P	Pn	14 34 59.2	-0.6
WMGZ	Waiomatatini S	5.62	195	P	Pn	14 35 33.3	+5.3
WMGZ				S	Sn	14 36 34.5	+3.0
HAZ	Te Kaha	5.73	200	P	Pn	14 35 32.0	+2.6
HAZ				S	Sn	14 36 35.9	+1.8
PUZ	Puketiti	5.90	196	P	Pn	14 35 33.4	+1.6
PUZ				S	Sn	14 36 38.5	+0.3
RUGZ	Raukumara Rang	5.95	200	P	Pn	14 35 34.4	+1.8
RUGZ				S	Sn	14 36 38.9	-0.8
OUZ	Omahuta	6.25	241	P	Pn	14 35 37.4	+1.0
MWZ	Matawai	6.34	200	P	Pn	14 35 37.7	+0.1
MWZ				S	Sn	14 36 47.2	-1.6
URZ	Urewera	6.40	203	P	Pn	14 35 38.2	-0.2
URZ				S	Sn	14 36 47.7	-2.5
RIGZ	Rimuhau	6.62	197	P	Pn	14 35 42.8	+1.3
MUGZ	Murupara	6.71	204	P	Pn	14 35 42.2	-0.5
RTZ	Ruatahuna	6.76	203	P	Pn	14 35 41.4	-2.1
SNGZ	Shannon Statio	6.81	200	P	Pn	14 35 43.8	-0.2
MTHZ	Maungataniwha	7.03	203	P	Pn	14 35 46.6	-0.3
TLZ	Tolley Road	7.08	212	P	Pn	14 35 49.2	+1.6
MRHZ	Matea Rd	7.15	205	P	Pn	14 35 47.2	-1.5
NMHZ	Naumai	7.26	202	P	Pn	14 35 48.1	-2.0
HIZ	Hauiti	7.54	215	P	Pn	14 35 54.0	+0.2
MCHZ	McNeill Hill	7.61	202	P	Pn	14 35 53.6	-1.2
KWHZ	Kaweka Forest	7.68	203	P	Pn	14 35 53.6	-2.1
TWVZ	Taurewa	7.74	209	P	Pn	14 35 53.4	-3.2
NGZ	Ngauruhoe	7.76	208	P	Pn	14 35 54.4	-2.6
KAHZ	Kahuranaki	7.88	200	P	Pn	14 35 54.7	-3.7
KRHZ	Kereru	7.90	203	P	Pn	14 35 55.0	-3.6
MTVZ	Mangateitei	7.99	208	P	Pn	14 35 56.6	-3.4
VRZ	Vera Road	8.08	212	P	Pn	14 35 59.0	-2.1
PXZ	Pawanui	8.10	199	P	Pn	14 35 56.8	-4.6
PNHZ	Pukenui	8.20	203	P	Pn	14 35 58.1	-4.5
TSZ	Takapari Road	8.41	203	P	Pn	14 35 59.8	-5.7
PKE	Pukeiti	8.50	215	P	Pn	14 36 04.7	-2.0
LREZ	Lake Rotokare	8.51	213	P	Pn	14 36 03.9	-3.0
ANWZ	Angora Road	8.61	200	P	Pn	14 36 04.0	-4.2
BFZ	Birch Farm	8.88	200	P	Pn	14 36 05.6	-6.2

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*GCG **28** 14:36:04.6±3.2, 13.°43N×85.°31W, h50$^{km}\pm999^{km}$, MD5.1*

*MOS **28** 14:36:08.4±1.3, 11.°85N×86.°29W, h67^{km}, mb5.3/19, Error ellipse: s-maj=15.2km s-min=6.1km az=116.4*

*UCR **28** 14:36:08.8±1.7, 11.°70N×86.°60W, h35$^{km}\pm174^{km}$, MD4.1, ML5.4, mb5.6(NEIC)*

*NEIC **28** 14:36:08.1±3.0, 11.°65N±0.°04×86.°55W±0.°06, h46$^{km}\pm1^{km}$, mb5.2/246, Ms_20 4.8/357, Mwb5.5/53, Mww5.6, Md5.6(SNET), ML5.2(UCR), Mwc5.6(GCMT), Error ellipse: s-maj=9.9km s-min=7.3km az=73.0*

*IDC **28** 14:36:09.1±0.4, 12.°07N×86.°16W, h60$^{km}\pm3^{km}$, mb4.5/24, mb1 4.6/29, mb1mx4.4/43, mbtmp4.7/29, MS4.9/26, Ms1 4.9/26, ms1mx4.8/30, Error ellipse: s-maj=18.6km s-min=5.4km az=58.0*

*INET **28** 14:36:09.1, 11.°61N×86.°65W, h44^{km}, ML5.3*

*SNET **28** 14:36:10.3±0.9, 11.°86N×86.°68W, h20$^{km}\pm18^{km}$, ML5.6*

*NEIC **28** 14:36:10.8, 11.°65N×86.°58W, h51^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.12; $M_{\theta\theta}$-0.62; $M_{\phi\phi}$-0.50; $M_{r\theta}$1.42; $M_{\theta\phi}$0.46; $M_{\phi r}$-1.92; Fault plane solution: $M_0 2.62000\times10^{17}$ NP1:ϕ_s303.77000°, δ12.54000°, λ71.97000°. NP2:ϕ_s142.21000°, δ78.08000°, λ93.94000°. Principal axes: T 2.6820, Plg57.0000°, Azm57.0000°; N -0.1352, Plg4.0000°, Azm321.0000°; P -2.5469, Plg33.0000°, Azm229.0000°;*

*GCMT **28** 14:36:12.1±0.1, 11.°54N±0.°01×86.°73W±0.°01, h54$^{km}\pm1^{km}$, MW5.6/142, Moment Tensor Solution. s123,c198; s142,c272; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M_{rr}1.46±.04; $M_{\theta\theta}$-1.28±.03; $M_{\phi\phi}$-0.18±.04; $M_{r\theta}$1.39±.03; $M_{\theta\phi}$1.14±.03; $M_{\phi r}$-1.70±.04; Best double couple: $M_0 2.81500\times10^{17}$ NP1:ϕ_s280.00000°, δ23.00000°, λ54.00000°. NP2:ϕ_s138.00000°, δ72.00000°, λ104.00000°. Principal axes: T 2.6300, Plg61.0000°, Azm69.0000°; N 0.3660, Plg13.0000°, Azm314.0000°; P -2.9990, Plg26.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **28** 14:36:13, 11.°53N×86.°73W, h62^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.44; $M_{\theta\theta}$-1.23; $M_{\phi\phi}$-0.21; $M_{r\theta}$1.32; $M_{\theta\phi}$1.40; $M_{\phi r}$-1.66; Fault plane solution: $M_0 2.88000\times10^{17}$ NP1:ϕ_s141.00000°, δ71.00000°, λ105.00000°. NP2:ϕ_s281.00000°, δ24.00000°, λ53.00000°. Principal axes: T 2.5215, Plg61.0000°, Azm74.0000°; N 0.6114, Plg14.0000°, Azm316.0000°; P -3.1329, Plg24.0000°, Azm219.0000°;*

*NEIC **28** 14:36:13, 11.°56N×86.°66W, h50^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.09; $M_{\theta\theta}$-0.71; $M_{\phi\phi}$-0.39; $M_{r\theta}$2.04; $M_{\theta\phi}$0.86; $M_{\phi r}$-1.90; Fault plane solution: $M_0 3.08000\times10^{17}$ NP1:ϕ_s133.00000°, δ78.00000°, λ92.00000°. NP2:ϕ_s304.00000°, δ12.00000°, λ82.00000°. Principal axes: T 2.9008, Plg57.0000°, Azm45.0000°; N 0.3251, Plg2.0000°, Azm312.0000°; P -3.2259, Plg33.0000°, Azm221.0000°;*

*UPA **28** 14:36:13.4±2.7, 11.°83N×86.°39W, h60^{km}, MW5.6*

ISC 28 14:36:08.7±0.4**, 11.°75N**±0.°04×**86.°52W**±0.°04**, h59**$^{km}\pm3^{km}$**, h59**^{km}**:pP-P, n955,** σ**1^{s}82**/769**, mb5.2**/150**, MS4.9**/224**, 4C-11D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	Copaltepe	0.43	351	⇑iP	Pn	14 36 17.8	-2.1
COPN	Copaltepe	0.43	351	⇑iP	Pn	14 36 17.8	-2.1
MOMN	Momotombo	0.65	358	⇓iP	Pn	14 36 20.6	-1.8
MOMN	Momotombo	0.65	358	⇓iP	Pn	14 36 20.6	-1.8
CRIN	San Cristobal	1.07	331	eP	Pn	14 36 28.3	+0.5
MATN	Matagalpa	1.31	26	⇓eP	Pn	14 36 32.8	+1.9
ACON	Acoyapa	1.33	81	⇓eP	Pn	14 36 32.3	+1.1
ACON	Acoyapa	1.33	81	Pn	Pn	14 36 32.3	+1.1
GBS3	Finca Las Img	1.42	133	iP	Pn	14 36 31.5	-0.9
GB1A	Borinquen Arri	1.44	130	eP	Pn	14 36 32.1	-0.6
BUEV	Buena Vista	1.45	131	eP	Pn	14 36 32.3	-0.5
BUAI	Buenos Aires	1.45	127	iP	Pn	14 36 32.8	0.0
NY14	Universidad de	1.46	139	iP	Pn	14 36 32.7	-0.2
CSGN	Cosiguina Volc	1.58	320	eP	Pn	14 36 35.8	+1.2
CSGN	Cosiguina Volc	1.58	320		Pn	14 36 35.8	+1.2
CSGN				Sn	Sn	14 36 56.7	+2.6
GUAB	Guayabo de Bag	1.64	129	iP	Pn	14 36 35.4	+0.1
HORNC	Hornillas	1.67	128	iP	Pn	14 36 35.8	-0.1
COLC	Colonia	1.68	130	iP	Pn	14 36 35.9	-0.1
CUI	Cuipilapa	1.72	129	eP	Pn	14 36 36.6	+0.2
CUI				eS	Sn	14 36 57.5	+0.2
PLVR	Palo Verde	1.81	140	eP	Pn	14 36 37.7	0.0
PLVR				eS	Sn	14 37 01.9	+2.3
PTEN	Parque Tenorio	1.82	124	iP	Pn	14 36 38.2	+0.4
ACAL	Aguas Claras	1.83	127	iP	Pn	14 36 38.4	+0.4
CNCH	Conchagua	1.98	320	eP	Pn	14 36 40.1	+0.1
CNCH				eS	Sn	14 37 03.6	-0.3
CNCH				IAML		14 37 09.2	
	comp=Z,97µm,0.5s						
CNCH	Conchagua	1.98	320	eP	Pn	14 36 40.1	+0.1
CNCH				eS	Sn	14 37 03.6	-0.3
CNCH				IAML		14 37 09.2	
	comp=Z,97µm,0.5s						
LCND	La Caada	2.04	319	eP	Pn	14 36 40.8	0.0
LCND				eS	Sn	14 37 05.0	-0.2
LCND				IAML		14 37 14.7	
	comp=Z,36µm,0.3s						
LCND	La Caada	2.04	319	eP	Pn	14 36 40.8	0.0
LCND				eS	Sn	14 37 05.0	-0.2
LCND				IAML		14 37 14.7	
	comp=Z,36µm,0.3s						
JTS	Las Juntas de	2.12	133	P	Pn	14 36 41.9	+0.1
	comp=Z,786nm,0.3s,baz=47,slow=10,SNR=375						
JTS				S	Sn	14 37 09.3	+2.3
	comp=Z,1µm,0.3s,baz=283,slow=23,SNR=18						
JTS	Las Juntas de	2.12	133	iP	Pn	14 36 41.9	+0.1
JTS				iS	Sn	14 37 05.9	-1.1
JTS	Las Juntas de	2.12	133	⇓eP	Pn	14 36 42.0	+0.1
JTS	Las Juntas de	2.12	133		Pn	14 36 41.8	0.0
CEDE	Laguna Cedeo	2.18	125	eP	Pn	14 36 43.4	+0.6
ARE1	Arenal 1	2.19	126	⇓eP	Pn	14 36 43.3	+0.6
FORC	Fortuna	2.22	125	iP	Pn	14 36 44.4	+1.2
JUCU	Jucuar¡n	2.25	312	eP	Pn	14 36 43.5	-0.2
JUCU				eS	Sn	14 37 10.6	+0.1
JUCU	Jucuar¡n	2.25	312	eP	Pn	14 36 43.5	-0.2
JUCU				eS	Sn	14 37 10.6	+0.1
BLLM	Bellamira	2.37	315	eP	Pn	14 36 45.9	+0.6
BLLM	Bellamira	2.37	315	eP	Pn	14 36 45.9	+0.6
LCY	Lacayo	2.40	314	eP	Pn	14 36 46.4	+0.7
LCY	Lacayo	2.40	314	eP	Pn	14 36 46.4	+0.7
RANC	El Ranchito	2.40	314	eP	Pn	14 36 46.4	+0.6
RANC				eS	Sn	14 37 14.7	+0.6
RANC	El Ranchito	2.40	314	eP	Pn	14 36 46.4	+0.6
RANC				eS	Sn	14 37 14.7	+0.6
TGUH	Tegucigalpa,Un	2.41	342		Pn	14 36 47.7	+1.8
PACA	Pacayal	2.45	314	eP	Pn	14 36 47.0	+0.6
PACA				eS	Sn	14 37 15.0	-0.4
PACA	Pacayal	2.45	314	eP	Pn	14 36 47.0	+0.6
PACA				eS	Sn	14 37 15.0	-0.4
FAGO	Alcalda de S	2.48	321	eP	Pn	14 36 47.2	+0.5
FAGO				eS	Sn	14 37 15.9	+0.2
FAGO	Alcalda de S	2.48	321	eP	Pn	14 36 47.2	+0.5
FAGO				eS	Sn	14 37 15.9	+0.2
SRA1	San Ramn	2.60	129	eP	Pn	14 36 49.5	+1.0
COEB	Comit de Eme	2.62	312	eP	Pn	14 36 49.5	+0.7
COEB				eS	Sn	14 37 19.8	+0.3
COEB				IAML		14 37 30.6	
	comp=Z,21µm,0.4s						
COEB	Comit de Eme	2.62	312	eP	Pn	14 36 49.5	+0.7
COEB				eS	Sn	14 37 19.8	+0.3
COEB				IAML		14 37 30.6	
	comp=Z,21µm,0.4s						
HDC	Heredia	2.94	126	iP	Pn	14 36 55.6	+2.5
HDC				iS	Sn	14 37 30.3	+3.0
HDC	Heredia	2.94	126	eP	Pn	14 36 54.0	+0.9
COEG	Centro de Oper	2.96	309	eP	Pn	14 36 54.1	+0.8
COEG				eS	Sn	14 37 27.3	-0.4
COEG	Centro de Oper	2.96	309	eP	Pn	14 36 54.1	+0.8
COEG				eS	Sn	14 37 27.3	-0.4
SJS	Escuela Geolog	3.02	126	eP	Pn	14 36 56.2	+1.9
LFRS	El Faro	3.10	307	eP	Pn	14 36 55.1	-0.2
LBRS	Las Brisas	3.15	309	eP	Pn	14 36 56.8	+0.7
LCR2	La Lucha 2	3.18	129	⇓eP	Pn	14 36 57.0	+0.5
AEIL	Aeropuerto Ilo	3.19	308	eP	Pn	14 36 57.2	+0.7
AEIL				eS	Sn	14 37 33.3	0.0
AEIL	Aeropuerto Ilo	3.19	308	eP	Pn	14 36 57.2	+0.7
AEIL				eS	Sn	14 37 33.3	0.0
LOMA	Loma Larga	3.20	306	eP	Pn	14 36 56.8	+0.1
LOMA	Loma Larga	3.20	306	eP	Pn	14 36 56.8	+0.1
CUSC	Alcaldia de Cu	3.25	307	eP	Pn	14 36 58.4	+1.0
CUSC				eS	Sn	14 37 34.9	0.0
CUSC	Alcaldia de Cu	3.25	307	eP	Pn	14 36 58.4	+1.0
CUSC				eS	Sn	14 37 34.9	0.0
OPAM	Oficina de Pla	3.26	307	eP	Pn	14 36 57.9	+0.4
OPAM				eS	Sn	14 37 35.0	-0.1
OPAM	Oficina de Pla	3.26	307	eP	Pn	14 36 57.9	+0.4
OPAM				eS	Sn	14 37 35.0	-0.1
SNET	Serv Nac Est T	3.27	306		Pn	14 36 58.5	+0.9
SNET				Sn	Sn	14 37 34.5	-0.9
BOQS	Boqueron	3.34	306	eP	Pn	14 36 59.4	+0.7
EDDO	Dominical	3.60	133	eP	Pn	14 37 04.6	+2.5
CEVE	Cerro Verde	3.66	305	eP	Pn	14 37 03.7	+0.6
CEVE				eS	Sn	14 37 46.5	+1.3
CEVE	Cerro Verde	3.66	305	eP	Pn	14 37 03.7	+0.6
CEVE				eS	Sn	14 37 46.5	+1.3
EDLM	Las Mercedes	3.79	130	eP	Pn	14 37 07.1	+2.4
EDPN	Palmar Norte	4.09	132	eP	Pn	14 37 12.3	+3.4
EDBA	Buenos Aires	4.10	129	eP	Pn	14 37 11.2	+2.2
PTJ1	Puerto Jimnez	4.50	135	iP	Pn	14 37 17.5	+3.1
PTJ1				iS	Sn	14 38 08.0	+2.6
IXG	Ixpaco	4.52	303	eP	Pn	14 37 16.3	+1.5
EDSV	San Vito	4.55	130	eP	Pn	14 37 19.4	+4.2
CNI2	El Empalme, Bo	4.60	120	eP	Pn	14 37 17.4	+1.6
NBG	Las Nubes	4.67	308	eP	Pn	14 37 21.1	+4.1
MLIR3	Monte Lirio, C	4.68	129	iP	Pn	14 37 21.3	+4.4
MLIR3	Monte Lirio, C	4.68	129	iS	Sn	14 38 10.4	+0.4
PCG	Pacaya	4.77	304	eP	Pn	14 37 23.0	+4.7
BRU2	Volcan	4.78	128	eP	Pn	14 37 20.8	+2.4
BRU2				eS	Sn	14 38 15.4	+2.8
BRU2	Volcan	4.78	128	eP	Pn	14 37 20.8	+2.4
SBAR3	San Bartolo, C	4.95	133	eP	Pn	14 37 24.5	+4.0
BCO2	Palmira	4.95	127	eP	Pn	14 37 22.9	+2.2
BCO2				iS	Sn	14 38 17.9	+1.1
LESP3	La Esperanza,	4.95	132	eP	Pn	14 37 23.6	+3.0
LNBQ3	Los Naranjos,	4.98	126	iP	Pn	14 37 25.0	+3.9
FUG	Fuego 3	4.99	303	eP	Pn	14 37 24.3	+3.0
APG	El Apazote	5.02	311	P	Pn	14 37 24.2	+2.5
	comp=Z,12nm,0.3s,baz=122,slow=4.8,SNR=33						
APG				S	Sn	14 38 21.1	+2.6
	comp=Z,43nm,0.3s,baz=80,slow=20,SNR=5.4						
BAGA3	Bagala, Chiriq	5.11	129	eP	Pn	14 37 26.9	+4.1
DVD	David	5.19	129	eP	Pn	14 37 27.0	+3.2
LOCO3	Loma Colorada,	5.23	129	eP	Pn	14 37 29.2	+4.8
LOMA3	Las Lomas, Chi	5.24	129	eP	Pn	14 37 28.5	+4.0
PEDE3	Pedregal, Chir	5.24	129	eP	Pn	14 37 27.1	+2.6
PRVC	Isla de Provid	5.29	72	eP	Pn	14 37 27.8	+2.6
CHIR3	Chiriqui UPA,	5.31	129	eP	Pn	14 37 27.6	+2.2
ERG	Entre ros, C	5.60	299	eP	Pn	14 37 32.5	+3.1
ERG				eS	Sn	14 38 42.8	+10
STG3	Santiaguito 3,	5.73	301	eP	Pn	14 37 33.9	+2.5
REME3	Remedios, Chir	5.80	127	eP	Pn	14 37 38.5	+6.4
NANC3	Nancito, Chiri	5.87	126	eP	Pn	14 37 37.7	+4.5
PVID3	Puerto Vidal,	6.08	127	eP	Pn	14 37 41.8	+5.8
ICCO	Coco Island	6.19	185	eP	Pn	14 37 36.1	-1.5
CNAZ3	Canazas, Verag	6.23	122	eP	Pn	14 37 46.6	+8.5
SFRA3	San Francisco,	6.48	122	eP	Pn	14 37 44.2	+2.7
GMAL	Guarumal, Vera	6.55	127	eP	Pn	14 37 46.1	+3.6
CALO3	Calobre, Verag	6.55	121	eP	Pn	14 37 46.2	+3.7
STIA3	Santiago, Vera	6.56	123	eP	Pn	14 37 48.3	+5.7
OCU3	Ocu, Herrera	6.81	123	iP	Pn	14 37 48.9	+2.9
MLIR	Monte Lirio	7.01	110	eP	Pn	14 37 46.7	-2.1
VTON	El Valle, Cocl	7.04	116	eP	Pn	14 37 52.1	+2.8
BCIP	Isla Barro Col	7.06	111	iP	Pn	14 37 50.4	+0.9
BCIP	Isla Barro Col	7.06	111	P	Pn	14 37 50.2	+0.8
BCIP	Isla Barro Col	7.06	111	eP	Pn	14 37 50.4	+0.9
BCIP	Isla Barro Col	7.06	111		Pn	14 37 50.2	+0.8
CCIG	Comitan	7.07	310		Pn	14 37 53.5	+3.8
CACAO	El Cacao, Vera	7.09	128	iP	Pn	14 37 53.7	+3.7
ZANG	Zanguenga, Cho	7.11	112	eP	Pn	14 37 53.2	+3.0
FRIJ	El Hiral	7.14	110	iP	Pn	14 37 51.5	+1.0
CHOR3	La Chorrera	7.23	112	eP	Pn	14 37 47.4	-4.4
AZU	Azuero	7.31	122	eP	Pn	14 37 56.4	+3.6
UPA	Univ. de Panam	7.40	111	eP	Pn	14 37 56.8	+2.6
PCRI3	Pocri, Los San	7.51	122	eP	Pn	14 37 59.1	+3.5
PEDA3	Pedasi	7.66	123	eP	Pn	14 38 01.5	+3.8
CHPO	Chepo, Panama	7.72	109	iP	Pn	14 38 01.1	+2.6
CNTA3	Canitas, Panam	7.92	108	eP	Pn	14 38 03.1	+1.9
TEIG	Tepich	8.59	349	P	Pn	14 38 09.5	-0.9
	comp=Z,1.6nm,0.3s,baz=350,slow=0.0,SNR=4.9						
TEIG				LR	LR	14 41 53.2	
	comp=Z,13µm,21.3s,baz=74,slow=41						
TEIG	Tepich	8.59	349		Pn	14 38 14.3	+3.8
UPD2	Meteti	8.96	110	iP	Pn	14 38 20.8	+5.4
FSCY	Frank Sound, G	9.11	34		Pn	14 38 21.4	+4.0
CMIG	Matias Romero	9.68	304	P	Pn	14 38 27.1	+1.7
	comp=Z,15nm,0.3s,baz=130,slow=8.6,SNR=59						
CMIG				S	Sn	14 40 15.1	+2.4
	comp=Z,10nm,0.3s,baz=127,slow=20,SNR=2.7						
CMIG				LR	LR	14 42 51.5	
	comp=Z,9µm,20.5s,baz=119,slow=41						
MTDJ	Mount Denham	10.80	52		Pn	14 38 46.6	+5.8
DBBC	Dabeiba	11.21	114	eP	Pn	14 38 48.5	+2.1
SJCC	San Jacinto, C	11.29	98	eP	Pn	14 38 47.9	+0.5
SJCC	San Jacinto, C	11.29	98	eP	Pn	14 38 49.0	+1.5
UREC	San Jos de Ur	11.53	109	eP	Pn	14 38 52.5	+1.8
CBOC	Ciudad Bolivar	11.92	119	eP	Pn	14 39 03.5	+7.4
HELC	Santa Helena	12.18	116	eP	Pn	14 38 58.8	-1.1
ZARC	Zaragoza, Cauc	12.25	109	eP	P	14 39 08.9	-2.1
YOTC	Yotoco, Valle	12.69	127	eP	Pn	14 39 02.1	-4.5
GUY2C	Guyana, Caldas	12.79	120	eP	Pn	14 39 04.8	-3.5
CODC	Agustn Codazz	12.97	97	eP	Pn	14 39 10.3	-0.1
RREF	El Recreo	12.98	121	eP	Pn	14 39 14.3	+3.3
PTBC	PUERTO BERRIO,	12.98	112	eP	Pn	14 39 07.5	-3.0
TLIG	Tlapa	13.01	298		Pn	14 39 12.8	+1.9
ANIL	Santa Ana	13.15	122	eP	P	14 39 21.2	-0.2
BRRC	Barranca, Sant	13.45	109	eP	Pn	14 39 14.3	-2.5
OCAC	Ocana	13.46	104	eP	Pn	14 39 19.0	+1.9
ORTC	Ortega, Tolima	13.61	124	eP	P	14 39 24.7	-1.5
SOTA	Rioblanco	13.71	133	eP	Pn	14 39 23.9	+3.1
PCON	Cinco Dias	13.73	132	eP	P	14 39 24.7	-3.3
GCUF	Volcan Galeras	13.87	138	eP	Pn	14 39 25.2	+2.3
ROSC	El Rosal	13.88	119	P	Pn	14 39 22.9	-0.1
	comp=Z,2.4nm,0.3s,baz=342,slow=11,SNR=10						
ROSC				LR	LR	14 45 00.1	
	comp=Z,4µm,21.7s,baz=335,slow=39						
ROSC	El Rosal	13.88	119	eP	Pn	14 39 23.9	+0.8
PAMC	Pamplona, Colo	14.31	107	eP	P	14 39 33.6	-0.8
RUSC	La Rusia	14.49	113	eP	Pn	14 39 33.4	+2.2
FLOC	Florencia	14.78	132	eP	Pn	14 39 36.1	+1.7
VILC	Villavicencio,	14.79	120	eP	Pn	14 39 34.8	0.0
TAMC	Tame, Arauca	15.47	109	eP	P	14 39 47.0	+0.2
MACC	Macarena, Meta	15.78	126	eP	Pn	14 39 44.3	-3.1
SDV	Santo Domingo	15.89	99	P	Pn	14 39 49.7	+0.8
	comp=Z,3.9nm,0.3s,baz=285,slow=5.9,SNR=64						
SDV				LR	LR	14 47 40.4	
	comp=Z,838nm,19.8s,baz=278,slow=44						
SDV	Santo Domingo	15.89	99	P	P	14 39 51.2	-0.4
SDV				IAmb	IAmb	14 39 55.4	
	comp=Z,150nm,0.9s						
SDV	Santo Domingo	15.89	99	eP	Pn	14 39 50.3	+1.4
DWPF	Disney Wildern	16.96	16	P	P	14 40 07.3	+4.1
	baz=197						
DR12	Loma Pena Alta	17.94	65	P	Pn	14 40 16.3	+2.0
TIGA	Tifton	19.78	7	P	Pn	14 40 38.4	+2.3
	baz=189,SNR=40						
441A	DeRidder	19.89	343	P	P	14 40 35.4	+0.1
344A	Westbrook Farm	19.99	349	IAMs_20	IAMs_20	14 49 13.2	
	comp=Z,4µm,22.0s						
HKT	Hockley	20.07	336	P	P	14 40 36.4	-0.8
HKT				pmax	pmax		
	comp=Z,333nm,1.6s						
HKT	Hockley	20.07	336	P	P	14 40 36.4	-0.8
833A	Chaparral WMA,	20.42	326	P	P	14 40 40.9	-0.2
833A				IAmb	IAmb	14 41 15.8	
	comp=Z,167nm,1.0s						
833A	Chaparral WMA,	20.42	326	P	Pn	14 40 42.7	-1.0
	baz=142,SNR=13						
ATAH	Atahualpa	20.43	156	P	Pn	14 40 44.9	+0.5
	comp=Z,91nm,0.9s,baz=347,slow=6.2,SNR=35						
SJG	San Juan	20.66	70	P	P	14 40 44.3	+0.4
	comp=Z,16nm,0.3s,baz=296,slow=5.8,SNR=6.8						
SJG				LR	LR	14 49 01.8	
	comp=Z,2µm,19.9s,baz=248,slow=38						
SJG	San Juan	20.66	70	IAMs_20	IAMs_20	14 47 35.4	
	comp=Z,5µm,21.0s						
VBMS	Vicksburg	20.70	350	IAMs_20	IAMs_20	14 49 30.0	
	comp=Z,4µm,22.0s						
VBMS	Vicksburg	20.70	350	P	Pn	14 40 49.5	+2.5
	baz=169						
257A	Skidaway Islan	20.75	13	IAMs_20	IAMs_20	14 48 24.8	
	comp=Z,6µm,22.0s						
152A	Waverly Hall	20.88	4	IAMs_20	IAMs_20	14 48 50.1	
	comp=Z,3µm,21.0s						
154A	Montrose	21.00	8	IAMs_20	IAMs_20	14 48 29.2	
	comp=Z,4µm,21.0s						
LRAL	Lakeview Retre	21.19	359	P	P	14 40 52.9	+3.6
LRAL				IAmb	IAmb	14 41 11.7	
	comp=Z,121nm,1.1s						
LRAL	Lakeview Retre	21.19	359	P	P	14 40 52.5	+3.2
	baz=179,SNR=26						
NATX	Nacogdoches	21.28	341	P	P	14 40 52.8	+2.5
	baz=158						
143A	Socs Landing,	21.33	349	IAMs_20	IAMs_20	14 50 04.7	
	comp=Z,4µm,22.0s						
Z50A	Ashland	21.41	1	IAmb	IAmb	14 40 58.3	
	comp=Z,119nm,1.0s						
Z50A	Ashland	21.41	1	P	P	14 40 55.0	+3.3
	baz=182,SNR=38						
157A	Early Branch	21.44	13	P	P	14 40 57.2	+5.2
	baz=195,SNR=7.9						
Z51A	Franklin	21.50	3	IAmb	IAmb	14 40 59.5	
	comp=Z,86nm,0.9s						
435B	Jarrell	21.53	333	P	P	14 40 54.5	+1.4
	baz=150,SNR=10						
PCRV	Puerto La Cruz	21.54	92	P	P	14 40 55.0	+1.6
	comp=Z,185nm,0.9s,baz=246,slow=5.0,SNR=29						
PCRV				LR	LR	14 50 22.7	
	comp=Z,3µm,21.4s,slow=40						
PLCV	Puerto La Cruz	21.59	92	P	P	14 40 55.0	+1.1
158A	Hollywood	21.68	15	P	P	14 40 59.3	+4.7
	baz=197						
GOGA	Godfrey	21.74	7	P	P	14 40 58.2	+3.0
GOGA				pmax	pmax		
	comp=Z,131nm,0.9s						
GOGA	Godfrey	21.74	7	IAmb	IAmb	14 41 01.7	
	comp=Z,81nm,0.9s						
GOGA	Godfrey	21.74	7	IAMs_20	IAMs_20	14 49 03.8	
	comp=Z,4µm,21.0s						
GOGA	Godfrey	21.74	7	P	P	14 40 58.3	+3.0
	baz=188,SNR=26						
237A	Washetta, Mont	21.89	338	IAmb	IAmb	14 41 27.4	
	comp=Z,168nm,1.1s						
Z56A	Williston	21.98	12	IAMs_20	IAMs_20	14 49 01.4	
	comp=Z,5µm,22.0s						
Y49A	Blount Mountai	22.00	0	IAmb	IAmb	14 41 23.9	
	comp=Z,86nm,0.9s						
NHSC	New Hope	22.04	14	IAMs_20	IAMs_20	14 49 14.7	
	comp=Z,6µm,22.0s						
NHSC	New Hope	22.04	14	P	P	14 41 02.3	+3.9
	baz=197						
Z57A	Bowman	22.10	13	P	P	14 41 03.2	+4.2
	baz=195,SNR=7.0						
Y52A	Lilburn	22.12	5	IAMs_20	IAMs_20	14 49 16.0	
	comp=Z,4µm,22.0s						
Y52A	Lilburn	22.12	5	P	P	14 41 02.5	+3.1
	baz=186,SNR=30						
Z41A	Richland Creek	22.17	346	IAMs_20	IAMs_20	14 51 09.8	
	comp=Z,5µm,22.0s						
JCT	Junction City	22.34	329	P	P	14 41 03.4	+1.6
	baz=144,SNR=31						
Z58A	St. Stephen	22.34	15	P	P	14 41 05.5	+3.8
	baz=198,SNR=8.6						
Z59A	Georgetown, SC	22.39	16	P	P	14 41 05.4	+3.1

	baz=199						
Y55A	Saluda	22.49	10	P	P	14 41 05.5	+2.2
	baz=192,SNR=14						
WHTX	Lake Whitney,	22.52	335	IAmb	IAmb	14 41 34.4	
	comp=Z,96nm,0.8s						
WHTX	Lake Whitney,	22.52	335	P	P	14 41 04.8	+1.1
	baz=151,SNR=26						
WLAR	White Oak Lake	22.65	346	IAMs_20	IAMs_20	14 51 36.6	
	comp=Z,3µm,21.0s						
FPAL	Fort Paine	22.70	2	IAmb	IAmb	14 41 09.2	
	comp=Z,63nm,0.8s						
HODGE	Hodges	22.71	9	IAmb	IAmb	14 41 27.8	
	comp=Z,80nm,1.1s						
HODGE				IAMs_20	IAMs_20	14 49 32.6	
	comp=Z,4µm,21.0s						
X51A	Calhoun	22.76	4	P	P	14 41 08.5	+2.3
	baz=184,SNR=16						
OXF	Oxford	22.81	354	P	P	14 41 06.8	+0.1
OXF				pmax	pmax		
	comp=Z,174nm,1.1s						
OXF				MLR	MLR		
	comp=Z,2µm,20.0s						
OXF	Oxford	22.81	354	P	P	14 41 06.8	+0.1
OXF	Oxford	22.81	354	P	P	14 41 08.2	+1.6
	baz=173,SNR=12						
X53A	Estanollee	22.84	7	P	P	14 41 09.2	+2.2
	baz=188,SNR=8.4						
Y57A	Sumter	22.86	13	IAmb	IAmb	14 41 33.6	
	comp=Z,122nm,1.1s						
Y57A				IAMs_20	IAMs_20	14 49 50.5	
	comp=Z,5µm,21.0s						
Y58A	Scranton	22.92	15	IAMs_20	IAMs_20	14 49 42.2	
	comp=Z,5µm,22.0s						
X54A	Belton	23.00	9	P	P	14 41 11.0	+2.3
	baz=190,SNR=6.0						
X55A	Gracelyn & Ava	23.05	10	P	P	14 41 11.3	+2.2
	baz=192,SNR=16						
PLAL	Pickwick Lake	23.17	357	IAmb	IAmb	14 41 13.8	
	comp=Z,66nm,0.8s						
X56A	White Oak	23.18	12	P	P	14 41 12.7	+2.3
	baz=194,SNR=19						
X40A	Basin Creek Fa	23.35	347	IAmb	IAmb	14 41 15.0	
	comp=Z,163nm,1.9s						
X40A				IAMs_20	IAMs_20	14 51 32.2	
	comp=Z,4µm,21.0s						
X40A	Basin Creek Fa	23.35	347	P	P	14 41 12.7	+0.7
	baz=164,SNR=10						
X57A	Johnson Farm,	23.35	13	P	P	14 41 14.4	+2.3
	baz=196,SNR=8.5						
W52A	Murphy	23.36	5	IAmb	IAmb	14 41 30.2	
	comp=Z,60nm,0.8s						
W52A				IAMs_20	IAMs_20	14 49 53.6	
	comp=Z,4µm,22.0s						
PAULI	Pauline	23.36	10	IAMs_20	IAMs_20	14 50 32.8	
	comp=Z,3µm,20.0s						
SWET	Sewanee	23.36	1	IAmb	IAmb	14 41 16.5	
	comp=Z,74nm,0.7s						
W50A	Signal Mountai	23.37	2	IAmb	IAmb	14 41 34.3	
	comp=Z,63nm,0.8s						
Y60A	Bolivia	23.41	18	P	P	14 41 14.6	+2.1
	baz=201						
W45A	Hickory Valley	23.43	354	IAmb	IAmb	14 41 46.6	
	comp=Z,100nm,1.1s						
BIRD	Birdtown, Kers	23.45	13	IAmb	IAmb	14 41 17.1	
	comp=Z,71nm,0.9s						
BIRD				IAMs_20	IAMs_20	14 50 17.1	
	comp=Z,5µm,21.0s						
SEUS	St. Eustatius	23.47	73	IAMs_20	IAMs_20	14 49 00.6	
	comp=Z,5µm,19.0s						
SMRT	St. Maarten	23.49	72	P	P	14 41 13.1	-0.5
SMRT				IAMs_20	IAMs_20	14 48 40.3	
	comp=Z,4µm,21.0s						
HPIG		23.50	313	IAmb	IAmb	14 41 18.6	
	comp=Z,54nm,0.9s						
HPIG				IAMs_20	IAMs_20	14 52 05.8	
	comp=Z,3µm,20.0s						
W54A	Cherokee Point	23.56	9	P	P	14 41 16.6	+2.6
	baz=191,SNR=15						
MIAR	Mount Ida	23.58	345	P	P	14 41 14.7	+0.5
MIAR				pmax	pmax		
	comp=Z,90nm,1.0s						
MIAR	Mount Ida	23.58	345	IAmb	IAmb	14 41 17.1	
	comp=Z,58nm,0.9s						
MIAR				IAMs_20	IAMs_20	14 51 54.2	
	comp=Z,4µm,22.0s						
MIAR	Mount Ida	23.58	345	P	P	14 41 14.9	+0.7
	baz=163,SNR=29						
Z35A	Perchaven, San	23.62	337	IAmb	IAmb	14 41 43.4	
	comp=Z,91nm,0.8s						
X58A	Rowland	23.62	15	IAMs_20	IAMs_20	14 50 13.8	
	comp=Z,5µm,22.0s						
X58A	Rowland	23.62	15	P	P	14 41 16.9	+2.3
	baz=198						
SKI	Saint Kitts	23.67	74	IAMs_20	IAMs_20	14 48 48.9	
	comp=Z,5µm,21.0s						
TX31	Lajitas Ar. Si	23.69	320	P	P	14 41 16.6	+1.3
TX31				IAmb	IAmb	14 41 19.9	
	comp=Z,56nm,0.7s						
TX32	Lajitas Array	23.69	320	IAmb	IAmb	14 41 19.9	
	comp=Z,57nm,0.7s						
TXAR	Lajitas Array	23.69	320	P	P	14 41 16.0	+0.7
	comp=Z,55nm,0.7s,baz=143,slow=9.9,SNR=133						
TXAR				pP	pP	14 41 29.4	+0.1
	comp=Z,22nm,0.7s,baz=141,slow=9.3,SNR=5.6						
TXAR				PcP	PcP	14 44 59.2	+0.9
	comp=Z,3.4nm,0.8s,baz=134,slow=3.9,SNR=4.5						
TXAR				ScP	ScP	14 48 33.4	+1.5
	comp=Z,25nm,1.1s,baz=142,slow=4.3,SNR=34						
TXAR				LR	LR	14 52 15.9	
	comp=Z,455nm,19.8s,baz=0.0,slow=41						
TXAR	Lajitas Array	23.69	320	P	P	14 41 16.6	+1.2
TXAR						14 45 00.0	
TXAR	Lajitas Array	23.69	320	P	P	14 41 16.6	+1.2
TXAR					PcP	14 45 00.0	+1.6
TXAR					ScP	14 48 34.1	+2.3
KMSC	Kings Mountain	23.76	11	IAmb	IAmb	14 41 43.2	
	comp=Z,50nm,0.8s						
KMSC				IAMs_20	IAMs_20	14 50 16.3	
	comp=Z,4µm,21.0s						
KMSC	Kings Mountain	23.76	11	P	P	14 41 18.0	+2.2
	baz=193,SNR=14						
V48A	Smith Brothers	23.88	359	IAmb	IAmb	14 41 37.1	
	comp=Z,44nm,0.8s						
W41B	Gary Mavity, V	23.89	348	IAMs_20	IAMs_20	14 51 22.4	
	comp=Z,4µm,22.0s						
W41B	Gary Mavity, V	23.89	348	P	P	14 41 17.2	+0.3
	baz=166,SNR=12						
W56A	Indian Trail	23.89	12	P	P	14 41 19.5	+2.5
	baz=194,SNR=9.1						
TKL	Tuckaleechee C	23.93	6	P	P	14 41 18.9	+1.6
	comp=Z,61nm,0.9s,baz=161,slow=6.5,SNR=19						
TKL	Tuckaleechee C	23.93	6	IAmb	IAmb	14 41 24.3	
	comp=Z,119nm,1.1s						
TKL				IAMs_20	IAMs_20	14 50 32.8	
	comp=Z,4µm,22.0s						
LPAR	Lepanto	23.99	352	IAMs_20	IAMs_20	14 50 48.2	
	comp=Z,3µm,20.0s						
WHAR	Wooly Hollow	24.01	348	IAmb	IAmb	14 41 54.8	
	comp=Z,115nm,1.5s						
WHAR				IAMs_20	IAMs_20	14 51 25.6	
	comp=Z,4µm,22.0s						
ABTX	Abilene, Hawle	24.02	332	P	P	14 41 18.9	+0.7
	baz=147,SNR=25						
V51A	Loudon	24.02	4	IAmb	IAmb	14 41 35.8	
	comp=Z,90nm,1.1s						
W57A	Gilead	24.04	13	IAmb	IAmb	14 41 24.5	
	comp=Z,164nm,1.4s						
W57A				IAMs_20	IAMs_20	14 50 35.7	
	comp=Z,4µm,21.0s						
W57A	Gilead	24.04	13	P	P	14 41 20.0	+1.7
	baz=196,SNR=14						
V53A	Saluda	24.05	7	IAmb	IAmb	14 41 24.6	
	comp=Z,118nm,1.3s						
V53A				IAMs_20	IAMs_20	14 50 46.9	
	comp=Z,4µm,20.0s						
W58A	Raeford	24.09	15	P	P	14 41 20.9	+2.1
	baz=198,SNR=12						
X37A	Clayton	24.12	342	IAmb	IAmb	14 41 52.0	
	comp=Z,93nm,0.9s						
V52A	Sevierville	24.13	6	IAMs_20	IAMs_20	14 50 29.1	
	comp=Z,4µm,22.0s						
CLTN	Cedars of Leba	24.23	0	IAmb	IAmb	14 41 25.1	
	comp=Z,72nm,0.7s						
W39A	Magazine	24.25	345	IAmb	IAmb	14 41 23.7	
	comp=Z,77nm,1.2s						
W39A	Magazine	24.25	345	P	P	14 41 20.9	+0.6
	baz=163,SNR=20						
V54A	Nebo	24.27	9	P	P	14 41 23.1	+2.6
	baz=191,SNR=21						
WVT	Waverly	24.30	357	P	P	14 41 22.4	+1.7
WVT				pmax	pmax		
	comp=Z,36nm,1.0s						
WVT				MLR	MLR		
	comp=Z,2µm,19.0s						
WVT	Waverly	24.30	357	P	P	14 41 22.4	+1.7
WVT	Waverly	24.30	357	P	P	14 41 22.8	+2.1
	baz=177						
GNAR	Gosnell	24.31	353	IAMs_20	IAMs_20	14 50 33.8	
	comp=Z,3µm,22.0s						
V55A	Taylorsville	24.47	10	P	P	14 41 24.8	+2.5
V55A				IAmb	IAmb	14 41 26.9	
	comp=Z,78nm,1.1s						
V55A				IAMs_20	IAMs_20	14 50 26.1	
	comp=Z,4µm,22.0s						
V55A	Taylorsville	24.47	10	P	P	14 41 24.8	+2.5
	baz=193,SNR=15						
FCAR	Ozark Folk Cen	24.56	349	IAMs_20	IAMs_20	14 51 28.2	
	comp=Z,3µm,22.0s						
V56A	Mocksville	24.56	12	P	P	14 41 25.2	+2.1
	baz=194,SNR=14						
ANWB	Willy Bob	24.62	73	IAMs_20	IAMs_20	14 49 24.2	
	comp=Z,4µm,22.0s						
U49A	Red Boiling Sp	24.66	1	IAmb	IAmb	14 41 44.6	
	comp=Z,112nm,1.1s						
V57A	Coltrane Farms	24.79	13	P	P	14 41 27.2	+2.0
	baz=196,SNR=15						
TZTN	Tazewell	24.83	6	P	P	14 41 27.4	+1.8
TZTN				IAmb	IAmb	14 41 32.0	
	comp=Z,63nm,1.0s						
TZTN	Tazewell	24.83	6	P	P	14 41 27.6	+2.1
	baz=187,SNR=7.8						
V58A	Windy Hill, Pi	24.86	14	IAMs_20	IAMs_20	14 50 50.4	
	comp=Z,5µm,22.0s						
V58A	Windy Hill, Pi	24.86	14	P	P	14 41 27.8	+2.0
	baz=197,SNR=20						
U54A	Nelsons Funny	25.02	9	IAMs_20	IAMs_20	14 50 53.8	
	comp=Z,3µm,22.0s						
U54A	Nelsons Funny	25.02	9	P	P	14 41 29.6	+2.3
	baz=191,SNR=18						
V59A	Middlesex	25.05	16	P	P	14 41 29.6	+2.1
	baz=199,SNR=12						
U56A	King	25.11	12	IAMs_20	IAMs_20	14 51 18.0	
	comp=Z,4µm,20.0s						
U56A	King	25.11	12	P	P	14 41 30.8	+2.8
	baz=194,SNR=7.6						
U55A	TA2, Sparta	25.13	10	P	P	14 41 30.4	+2.0
	baz=193,SNR=17						
U40A	Yellville	25.16	348	IAMs_20	IAMs_20	14 52 22.9	
	comp=Z,3µm,22.0s						
U40A	Yellville	25.16	348	P	P	14 41 28.7	+0.2
	baz=166,SNR=16						
T50A	Nancy	25.20	3	P	P	14 41 30.2	+1.3
	baz=184						
T51A	Gray	25.21	5	P	P	14 41 30.7	+1.7
	baz=186,SNR=9.0						
T49A	Edmonton	25.26	2	P	P	14 41 30.6	+1.2
	baz=182						
HHAR	Hobbs	25.32	346	P	P	14 41 30.5	+0.4
HHAR				IAMs_20	IAMs_20	14 52 55.4	
	comp=Z,4µm,21.0s						
T53A	Wise	25.38	7	P	P	14 41 32.3	+1.7
	baz=189						
FNO	Franklin	25.40	339	P	P	14 41 31.1	+0.4
U57A	Blanch	25.41	14	P	P	14 41 32.7	+1.8
	baz=197,SNR=16						
T52A	Hallie	25.45	7	IAMs_20	IAMs_20	14 51 39.0	
	comp=Z,4µm,20.0s						
WMOK	Wichita Mounta	25.46	336	P	P	14 41 33.4	+2.1
WMOK				pmax	pmax		
	comp=Z,198nm,1.1s						
WMOK				MLR	MLR		
	comp=Z,1µm,19.0s						
WMOK	Wichita Mounta	25.46	336	P	P	14 41 33.4	+2.1
WMOK	Wichita Mounta	25.46	336	P	P	14 41 33.4	+2.1
	baz=151,SNR=27						
NNA	Nana	25.47	158	P	P	14 41 33.0	+1.5
	comp=Z,20nm,0.8s,baz=341,slow=7.0,SNR=6.6						
NNA				pP	pP	14 41 47.9	+2.0
	comp=Z,21nm,0.8s,baz=328,slow=6.6,SNR=3.4						
NNA	Nana	25.47	158	*i* P	P	14 41 30.6	-1.0
NNA				pmax	pmax		
	comp=Z,55nm,1.0s						
TUL1	Leonard	25.47	342	IAmb	IAmb	14 42 01.4	
	comp=Z,67nm,0.9s						
TUL1	Leonard	25.47	342	P	P	14 41 31.4	0.0
	baz=159,SNR=6.0						
T42A	Van Buren	25.50	351	IAMs_20	IAMs_20	14 51 34.2	
	comp=Z,3µm,21.0s						
U58A	Oxford	25.57	15	P	P	14 41 34.1	+1.9
	baz=198,SNR=9.6						
U38A	Gravette	25.58	345	IAMs_20	IAMs_20	14 52 53.2	
	comp=Z,4µm,22.0s						
T54A	Tazewell	25.59	9	P	P	14 41 34.3	+1.8
	baz=191,SNR=16						
LPIG	La Paz	25.70	302	P	P	14 41 36.9	+3.3
	comp=Z,44nm,0.3s,baz=322,slow=7.5,SNR=3.7						
T55A	Pulaski	25.78	11	P	P	14 41 36.6	+2.4
	baz=193,SNR=17						
T56A	Rocky Mt	25.84	12	P	P	14 41 37.1	+2.4
	baz=195,SNR=6.6						
S51A	Beattyville	25.91	5	IAmb	IAmb	14 41 56.6	
	comp=Z,47nm,0.8s						
S51A				IAMs_20	IAMs_20	14 51 33.2	
	comp=Z,5µm,22.0s						
S51A	Beattyville	25.91	5	P	P	14 41 36.8	+1.5
	baz=187						
BLA	Blacksburg	25.93	11	IAMs_20	IAMs_20	14 51 44.0	
	comp=Z,3µm,20.0s						
BLA	Blacksburg	25.93	11	P	P	14 41 38.1	+2.5
	baz=194						
S49A	Springfield	25.95	2	P	P	14 41 38.4	+2.8
	baz=183						
T57A	Hurt	25.97	13	IAmb	IAmb	14 42 01.5	
	comp=Z,81nm,1.2s						
T57A				IAMs_20	IAMs_20	14 51 35.0	
	comp=Z,4µm,21.0s						
T57A	Hurt	25.97	13	P	P	14 41 38.0	+2.1
	baz=196,SNR=12						
U60A	Pendleton	26.02	17	P	P	14 41 38.5	+2.2
	baz=201						
T58A	Grand View Acr	26.09	15	P	P	14 41 38.8	+1.9
	baz=198,SNR=6.1						
S53A	Williamson	26.12	8	P	P	14 41 40.9	+3.7
	baz=190						
S54A	Dingess, Beckl	26.35	9	IAMs_20	IAMs_20	14 51 35.0	
	comp=Z,4µm,22.0s						
S54A	Dingess, Beckl	26.35	9	P	P	14 41 41.6	+2.2
	baz=192						
WCI	Wyandotte Cave	26.37	0	IAMs_20	IAMs_20	14 52 50.2	
	comp=Z,2µm,19.0s						
WCI	Wyandotte Cave	26.37	0	P	P	14 41 42.5	+3.0
	baz=181						
T59A	Double "B" Far	26.37	16	P	P	14 41 42.1	+2.7
T59A	Double "B" Far	26.37	16	P	P	14 41 41.8	+2.3
	baz=200,SNR=5.4						
MNTX	Cornudas Mount	26.39	322	IAmb	IAmb	14 41 45.8	
	comp=Z,196nm,1.9s						
MNTX	Cornudas Mount	26.39	322	P	P	14 41 40.4	+0.6
	baz=135,SNR=23						
R49A	Shelbyville	26.45	2	P	P	14 41 42.2	+2.0
	baz=183						
S55A	Lewisburg	26.46	11	P	P	14 41 42.8	+2.5
	baz=193,SNR=8.7						
R50A	Paris	26.49	4	IAMs_20	IAMs_20	14 52 03.6	
	comp=Z,3µm,22.0s						
R50A	Paris	26.49	4	P	P	14 41 42.0	+1.4
	baz=185						
CCM	Cathedral Cave	26.53	352	P	P	14 41 43.3	+2.4
CCM				pmax	pmax		
	comp=Z,76nm,1.4s						
CCM				MLR	MLR		
	comp=Z,2µm,20.0s						
CCM	Cathedral Cave	26.53	352	P	P	14 41 43.2	+2.4
CCM				IAmb	IAmb	14 42 15.7	
	comp=Z,76nm,1.4s						
CCM	Cathedral Cave	26.53	352	IAMs_20	IAMs_20	14 52 27.5	
	comp=Z,2µm,20.0s						
CCM	Cathedral Cave	26.53	352	P	P	14 41 41.1	+0.2
	baz=170						
S39A	Bolivar	26.54	348	IAmb	IAmb	14 41 58.5	
	comp=Z,36nm,0.7s						
S39A				IAMs_20	IAMs_20	14 50 02.6	
	comp=Z,2µm,19.0s						
S56A	Natural Bridge	26.56	12	P	P	14 41 43.6	+2.4
	baz=195						
R51A	Hillsboro	26.57	5	P	P	14 41 42.6	+1.4
	baz=186,SNR=9.9						
T35A	Sooner Cattle	26.62	342	IAMs_20	IAMs_20	14 54 08.6	
	comp=Z,2µm,22.0s						
MSTX	Muleshoe	26.63	329	P	P	14 41 42.2	+0.2
	baz=143,SNR=48						
R52A	Catlettsburg	26.70	7	P	P	14 41 43.9	+1.5
	baz=188						
T60A	Surry	26.77	18	IAMs_20	IAMs_20	14 52 10.0	
	comp=Z,5µm,22.0s						
S57A	Dark Hollow, R	26.77	13	IAMs_20	IAMs_20	14 52 10.1	
	comp=Z,4µm,21.0s						
S57A	Dark Hollow, R	26.77	13	P	P	14 41 44.3	+1.2
	baz=197						
R54A	Victor	26.78	10	P	P	14 41 45.0	+1.8
	baz=192,SNR=12						
R53A	Hurricane	26.78	8	IAmb	IAmb	14 41 47.6	
	comp=Z,32nm,0.5s						
R53A	Hurricane	26.78	8	P	P	14 41 44.7	+1.5
	baz=190,SNR=6.1						
AMTX	Amarillo	26.84	332	P	P	14 41 44.7	+0.8
	baz=146						
S58A	Poland Farm, P	26.85	15	P	P	14 41 45.5	+1.7
	baz=199						
R40A	Maddies Statio	26.92	350	IAMs_20	IAMs_20	14 52 21.8	
	comp=Z,3µm,22.0s						
R55A	Marlinton	27.03	11	IAmb	IAmb	14 41 52.7	
	comp=Z,86nm,1.3s						
R55A				IAMs_20	IAMs_20	14 52 18.0	
	comp=Z,3µm,20.0s						
R55A	Marlinton	27.03	11	P	P	14 41 47.7	+2.2
	baz=194,SNR=7.3						
Q49A	Aurora	27.18	3	P	P	14 41 47.9	+1.1
	baz=184						
R58B	Mineral	27.22	15	P	P	14 41 49.1	+1.9
	baz=199						
R56A	Bull Pasture M	27.29	12	P	P	14 41 50.6	+2.7
	baz=195,SNR=5.8						
Q51A	Peebles	27.31	5	IAMs_20	IAMs_20	14 52 28.2	
	comp=Z,3µm,21.0s						
Q51A	Peebles	27.31	5	P	P	14 41 49.5	+1.6
	baz=187,SNR=17						
Q53A	Leroy	27.36	9	P	P	14 41 50.0	+1.7
	baz=191,SNR=9.2						
Q52A	Bidwell	27.36	7	P	P	14 41 50.2	+1.8
	baz=189,SNR=8.0						
R57A	Stanardsville	27.38	14	P	P	14 41 50.6	+2.0
	baz=197,SNR=14						
R58A	Rapidan	27.51	15	P	P	14 41 51.6	+1.9
	baz=198						
Q54A	Coxs Mills	27.59	10	IAmb	IAmb	14 42 09.7	
	comp=Z,33nm,0.7s						
Q54A	Coxs Mills	27.59	10	P	P	14 41 52.2	+1.8
	baz=192,SNR=11						
P48A	Milroy	27.61	2	P	P	14 41 51.2	+0.6
	baz=182						
P49A	Miami Univ. Ec	27.71	3	P	P	14 41 52.4	+0.9
	baz=184						
Q55A	Buckhannon	27.73	11	P	P	14 41 53.9	+2.2
	baz=194						
P51A	Williamsport	27.79	6	IAMs_20	IAMs_20	14 53 04.9	
	comp=Z,3µm,20.0s						
P51A	Williamsport	27.79	6	P	P	14 41 53.9	+1.7
	baz=187						
Q56A	Snyder Ridge,	27.95	12	IAmb	IAmb	14 42 14.6	
	comp=Z,68nm,1.1s						
Q56A				IAMs_20	IAMs_20	14 52 24.3	
	comp=Z,4µm,22.0s						
Q56A	Snyder Ridge,	27.95	12	P	P	14 41 56.2	+2.6
	baz=195,SNR=9.3						
P53A	Whipple	27.99	8	IAmb	IAmb	14 41 56.6	
	comp=Z,80nm,1.1s						
P53A				IAMs_20	IAMs_20	14 52 50.4	
	comp=Z,2µm,21.0s						
P53A	Whipple	27.99	8	P	P	14 41 55.9	+1.9
	baz=191,SNR=11						
P52A	Corning	28.04	7	P	P	14 41 56.0	+1.6
	baz=189						
Q57A	Strasburg	28.11	13	P	P	14 41 57.5	+2.4
	baz=197						
Q58A	Fox Den Farm,	28.20	15	P	P	14 41 57.9	+2.1
	baz=198						
P54A	Burton	28.25	10	P	P	14 41 58.1	+1.7
	baz=193						
P55A	Reedsville	28.27	11	P	P	14 41 58.5	+1.9
	baz=194						
O49A	Covington	28.39	4	IAMs_20	IAMs_20	14 53 01.8	
	comp=Z,3µm,20.0s						
O49A	Covington	28.39	4	P	P	14 41 58.4	+0.9
	baz=185						
O50A	Cable	28.40	5	P	P	14 41 58.8	+1.2
	baz=186,SNR=14						
MCWV	Mont Chateau	28.42	11	P	P	14 41 59.9	+2.1
	baz=194						
P38A	Dawn	28.45	349	IAMs_20	IAMs_20	14 53 58.1	
	comp=Z,2µm,21.0s						
121A	Cookes Peak, D	28.45	320	IAmb	IAmb	14 42 06.6	
	comp=Z,66nm,1.1s						
121A	Cookes Peak, D	28.45	320	P	P	14 42 00.5	+2.1
	baz=132,SNR=24						
P56A	Dayton Farm, R	28.47	13	P	P	14 42 01.0	+2.8
	baz=196,SNR=9.4						
O51A	Pataskala	28.49	6	P	P	14 41 59.9	+1.4
	baz=188						
SFIN	Lafayette	28.52	359	P	P	14 41 59.0	+0.4
	baz=179						
HSIG		28.53	311	IAMs_20	IAMs_20	14 54 13.0	
	comp=Z,3µm,22.0s						
ACSO	Alum Creek Sta	28.54	6	IAmb	IAmb	14 42 17.4	
	comp=Z,97nm,1.4s						
ACSO				IAMs_20	IAMs_20	14 52 53.8	
	comp=Z,4µm,22.0s						
ACSO	Alum Creek Sta	28.54	6	P	P	14 42 00.3	+1.4
	baz=187,SNR=6.9						
O52A	Adamsville	28.55	8	IAMs_20	IAMs_20	14 52 43.2	
	comp=Z,3µm,22.0s						
O52A	Adamsville	28.55	8	P	P	14 42 00.6	+1.6
	baz=190,SNR=6.7						
P57A	Homestead Farm	28.63	14	P	P	14 42 02.2	+2.5
P57A				IAmb	IAmb	14 42 20.6	
	comp=Z,123nm,1.4s						
P57A				IAMs_20	IAMs_20	14 53 27.4	
	comp=Z,4µm,20.0s						
P57A	Homestead Farm	28.63	14	P	P	14 42 02.3	+2.5
	baz=198,SNR=9.9						
SRIG	Santa Rosalia	28.68	306	IAMs_20	IAMs_20	14 54 17.7	
	comp=Z,2µm,20.0s						
KSU1	Kansas State U	28.68	343	IAMs_20	IAMs_20	14 54 42.1	
	comp=Z,3µm,22.0s						
KSU1	Kansas State U	28.68	343	P	P	14 42 00.4	+0.3
	baz=159						
BBSR	BB Station	28.70	41	P	P	14 42 02.0	+1.7
BBSR				IAmb	IAmb	14 42 06.6	
	comp=Z,74nm,1.0s						
O53A	New Philadelph	28.77	8	P	P	14 42 02.3	+1.4
	baz=191,SNR=10						
HDIL	Hopedale	28.79	356	IAmb	IAmb	14 42 03.6	
	comp=Z,38nm,0.7s						
HDIL	Hopedale	28.79	356	P	P	14 42 01.5	+0.4
	baz=174						
P58A	Pank, Wackersv	28.81	15	P	P	14 42 03.4	+2.2
	baz=199,SNR=8.0						
O54A	Avella	28.83	10	P	P	14 42 03.1	+1.7
	baz=193						
N47A	Urbana	29.02	1	P	P	14 42 07.3	+4.2
	baz=182						
N48A	Decatur	29.02	2	P	P	14 42 03.7	+0.6
	baz=183						
N50A	Nevada	29.06	5	P	P	14 42 04.5	+1.1
	baz=187,SNR=5.2						
N49A	Columbus Grove	29.13	4	IAmb	IAmb	14 42 22.9	
	comp=Z,67nm,0.8s						
N49A				IAMs_20	IAMs_20	14 53 35.4	
	comp=Z,3µm,22.0s						
N49A	Columbus Grove	29.13	4	P	P	14 42 05.1	+1.0
	baz=185,SNR=16						
PTGA	Pitinga	29.15	113	P	P	14 42 04.2	-0.3
	comp=Z,3.1nm,0.8s,baz=304,slow=16,SNR=3.1						
PTGA				LR	LR	14 54 32.0	
	comp=Z,2µm,21.4s,baz=296,slow=38						
PTGA	Pitinga	29.15	113	P	P	14 42 05.2	+0.7
PTGA				IAMs_20	IAMs_20	14 54 10.3	
	comp=Z,3µm,21.0s						
P59A	Jarrettsville	29.15	16	P	P	14 42 05.8	+1.5
	baz=201,SNR=6.1						
N52A	McGinn’s Farm,	29.26	8	P	P	14 42 06.4	+1.2
	baz=190						
O56A	Blue Knob Stat	29.26	13	IAmb	IAmb	14 42 25.9	
	comp=Z,75nm,1.2s						

O56A	Blue Knob Stat baz=196	29.26	13	P	P	14 42 07.5	+2.2
N51A	Ashland comp=Z,3µm,19.0s	29.28	6	IAMs_20	IAMs_20	14 53 58.4	
N51A	Ashland baz=188	29.28	6	P	P	14 42 06.2	+0.8
ANMO	Albuquerque comp=Z,6.8nm,0.5s,baz=141,slow=6.5,SNR=20	29.35	325	P	P	14 42 07.3	+0.9
ANMO	Albuquerque	29.35	325	eP	P	14 42 06.8	+0.5
ANMO	Albuquerque	29.35	325	P	P	14 42 07.5	+1.1
ANMO	Albuquerque baz=137	29.35	325	P	P	14 42 07.8	+1.5
N53A	Lisbon comp=Z,3µm,22.0s	29.37	9	IAMs_20	IAMs_20	14 53 06.8	
N53A	Lisbon baz=191,SNR=7.3	29.37	9	P	P	14 42 07.6	+1.4
CBKS	Cedar Bluff comp=Z,2µm,21.0s	29.41	339	IAMs_20	IAMs_20	14 55 18.3	
O57A	Amberson baz=198,SNR=13	29.41	14	P	P	14 42 08.6	+2.0
O58A	Lewisberry baz=199,SNR=8.2	29.50	15	P	P	14 42 09.6	+2.2
P60A	Greenville comp=Z,2µm,20.0s	29.56	17	IAMs_20	IAMs_20	14 54 42.0	
P60A	Greenville baz=202	29.56	17	P	P	14 42 09.3	+1.4
N54A	Moraine State comp=Z,3µm,19.0s	29.66	10	IAMs_20	IAMs_20	14 51 41.5	
N54A	Moraine State baz=193	29.66	10	P	P	14 42 10.5	+1.7
M48A	Edgerton baz=184	29.66	3	P	P	14 42 09.1	+0.3
N55A	Marion Center baz=195	29.67	12	P	P	14 42 10.2	+1.3
M49A	Liberty Center baz=185,SNR=5.1	29.69	4	P	P	14 42 09.9	+0.8
M50A	Fremont baz=187	29.69	5	P	P	14 42 10.1	+1.0
PSUB	Penn St. - Bra comp=Z,2µm,18.0s	29.72	17	IAMs_20	IAMs_20	14 54 55.3	
SSPA	Standing Stone	29.76	13	P	P	14 42 11.7	+2.1
SSPA	Standing Stone baz=197	29.76	13	P	P	14 42 11.4	+1.8
O59A	Robesonia baz=201,SNR=16	29.87	16	P	P	14 42 13.1	+2.4
N56A	West Decatur baz=196,SNR=7.5	29.94	13	P	P	14 42 13.4	+2.1
N57A	Milroy baz=198,SNR=6.2	29.95	14	P	P	14 42 13.4	+2.0
T25A	Trinidad baz=143,SNR=9.9	29.96	331	P	P	14 42 13.9	+2.2
M53A	WI Miller and baz=192,SNR=10	30.01	9	P	P	14 42 13.5	+1.6
M52A	Chesterland comp=Z,3µm,22.0s	30.02	8	IAMs_20	IAMs_20	14 53 27.0	
N35A	Tabor comp=Z,3µm,22.0s	30.09	346	IAMs_20	IAMs_20	14 55 51.4	
O60A	Telford baz=202	30.10	17	P	P	14 42 13.9	+1.3
L48A	N Adams baz=184	30.13	3	P	P	14 42 13.3	+0.4
N58A	Sunbury baz=199,SNR=12	30.23	15	P	P	14 42 15.8	+2.0
M54A	Oil Creek Stat comp=Z,126nm,1.9s	30.24	10	IAmb	IAmb	14 42 45.8	
M54A	comp=Z,3µm,22.0s			IAMs_20	IAMs_20	14 53 47.0	
M54A	Oil Creek Stat baz=193	30.24	10	P	P	14 42 15.5	+1.6
L42A	Oliver, Polo comp=Z,60nm,1.1s	30.26	355	IAmb	IAmb	14 42 16.2	
TUC	Tucson comp=Z,3µm,22.0s	30.27	316	IAMs_20	IAMs_20	14 54 55.4	
TUC	Tucson baz=127	30.27	316	P	P	14 42 16.1	+1.7
L49A	Milan baz=185	30.34	4	P	P	14 42 16.0	+1.2
M55A	Ridgway comp=Z,3µm,20.0s	30.37	12	IAMs_20	IAMs_20	14 54 22.4	
M55A	Ridgway baz=195	30.37	12	P	P	14 42 16.9	+1.7
N33A	J Bar K, Exete comp=Z,3µm,22.0s	30.43	343	IAMs_20	IAMs_20	14 55 58.6	
L40A	Anamosa comp=Z,45nm,1.1s	30.47	353	IAmb	IAmb	14 42 41.5	
L40A	comp=Z,2µm,20.0s			IAMs_20	IAMs_20	14 54 34.8	
M56A	Emporium baz=196,SNR=12	30.50	12	P	P	14 42 17.8	+1.5
AAM	Ann Arbor comp=Z,3µm,20.0s	30.54	4	IAMs_20	IAMs_20	14 54 38.7	
N59A	State Game Lan comp=Z,53nm,0.8s	30.55	16	IAmb	IAmb	14 42 20.2	
N59A	State Game Lan baz=201,SNR=21	30.55	16	P	P	14 42 19.3	+2.6
L53A	Girard baz=192,SNR=13	30.58	9	P	P	14 42 18.3	+1.4
M57A	Sunshine Farm, baz=198,SNR=15	30.60	14	P	P	14 42 19.1	+2.0
SCIA	State Center comp=Z,2µm,22.0s	30.61	350	IAMs_20	IAMs_20	14 54 23.3	
KSCO	Kaye Shedlock’ comp=Z,2µm,21.0s	30.70	335	IAMs_20	IAMs_20	14 56 54.3	
KSCO	Kaye Shedlock’ baz=148	30.70	335	P	P	14 42 18.9	+0.8
N60A	Cedar Hill Far baz=202,SNR=6.8	30.70	17	P	P	14 42 20.0	+2.0
ERPA	Erie comp=Z,3µm,22.0s	30.78	10	IAMs_20	IAMs_20	14 54 15.3	
ERPA	Erie baz=193,SNR=10	30.78	10	P	P	14 42 20.1	+1.4
M58A	Price’s Panora baz=200,SNR=8.9	30.80	15	P	P	14 42 20.6	+1.8
K46A	Dorr baz=182	30.82	1	P	P	14 42 18.6	-0.5
K47A	Vermontville baz=183,SNR=8.7	30.83	2	P	P	14 42 19.0	-0.1
SDCO	Great Sand Dun	30.97	330	P	P	14 42 22.6	+1.9
SDCO	Great Sand Dun baz=142,SNR=37	30.97	330	P	P	14 42 21.8	+1.0
K48A	Perry baz=185,SNR=8.2	31.00	3	P	P	14 42 20.8	+0.2
SAML	Samuel	31.01	131	P	P	14 42 19.1	-1.9
SAML	comp=Z,19nm,1.0s			pmax	pmax		
SAML	comp=Z,1µm,19.0s			MLR	MLR		
SAML	Samuel	31.01	131	P	P	14 42 19.1	-1.9
L54A	Sinclairville baz=194	31.01	10	P	P	14 42 22.0	+1.3
X18A	Snowflake comp=Z,2µm,21.0s	31.12	321	IAMs_20	IAMs_20	14 57 03.1	
L55A	Hinsdale baz=195	31.13	12	P	P	14 42 23.3	+1.6
KSPA	Keystone Colle	31.15	16	P	P	14 42 24.4	+2.5
KSPA	comp=Z,47nm,1.0s			IAmb	IAmb	14 42 24.7	
PAL	Palisades baz=204	31.18	19	P	P	14 42 23.7	+1.5
JFWS	Jewell Farm comp=Z,62nm,1.2s	31.21	355	IAmb	IAmb	14 42 24.7	
JFWS	Jewell Farm comp=Z,2µm,19.0s	31.21	355	IAMs_20	IAMs_20	14 52 07.5	
JFWS	Jewell Farm baz=173	31.21	355	P	P	14 42 23.0	+0.5
M59A	Waymart baz=201,SNR=15	31.23	16	P	P	14 42 24.6	+2.0
BGNE	Belgrade comp=Z,2µm,21.0s	31.25	343	IAMs_20	IAMs_20	14 56 58.3	
BGNE	Belgrade baz=158,SNR=7.7	31.25	343	P	P	14 42 23.2	+0.3
M60A	Port Jervis baz=203,SNR=7.5	31.25	17	P	P	14 42 24.7	+1.8
K38A	Parkersburg comp=Z,33nm,0.6s	31.26	351	IAmb	IAmb	14 42 48.0	
K38A	comp=Z,2µm,21.0s			IAMs_20	IAMs_20	14 55 01.5	
L56A	Greenwood baz=197,SNR=9.3	31.26	13	P	P	14 42 24.7	+1.7
L57A	Andrews Acres baz=198,SNR=8.4	31.30	14	P	P	14 42 24.7	+1.5
W18A	Petrified Fore comp=Z,52nm,1.0s	31.38	322	IAmb	IAmb	14 42 29.0	
W18A	Petrified Fore baz=132	31.38	322	P	P	14 42 26.4	+2.1
J47A	Sunmer baz=183	31.40	2	P	P	14 42 24.2	0.0
214A	Organ Pipe Nat comp=Z,3µm,22.0s	31.47	314	IAMs_20	IAMs_20	14 55 49.0	
214A	Organ Pipe Nat baz=124	31.47	314	P	P	14 42 26.1	+1.2
K54A	Basiliko Farm, baz=195	31.49	11	P	P	14 42 25.9	+1.0
M61A	Granite Spring baz=204	31.50	19	P	P	14 42 26.9	+1.9
J48A	Bridge Port baz=185	31.52	4	P	P	14 42 25.3	+0.2
J45A	Montague comp=Z,2µm,21.0s	31.57	0	IAMs_20	IAMs_20	14 54 00.9	
L58A	Harry Jones Me baz=200,SNR=14	31.58	15	P	P	14 42 27.5	+1.8
J49A	Marlette baz=186	31.63	5	P	P	14 42 26.1	0.0
S22A	4UR Ranch, Cre baz=140,SNR=26	31.63	328	P	P	14 42 27.7	+1.1
BINY	Binghamton baz=200,SNR=16	31.70	15	P	P	14 42 28.5	+1.7
K55A	Perry baz=196	31.72	12	P	P	14 42 28.3	+1.3
J52A	Paris baz=191	31.81	8	P	P	14 42 28.4	+0.7
K56A	Middlesex baz=197,SNR=9.9	31.85	13	P	P	14 42 29.4	+1.3
M62A	Hamden baz=206	31.90	20	P	P	14 42 29.5	+1.0
L59A	Walton comp=Z,3µm,20.0s	31.93	16	IAMs_20	IAMs_20	14 56 13.8	
L59A	Walton baz=202,SNR=13	31.93	16	P	P	14 42 30.8	+1.9
L60A	Shokan baz=203,SNR=12	31.98	17	P	P	14 42 31.2	+2.0
X16A	Lo Mia Camp, P	32.00	319	P	P	14 42 31.9	+2.2
X16A	comp=Z,23nm,0.8s			IAmb	IAmb	14 42 34.2	
X16A	comp=Z,2µm,20.0s			IAMs_20	IAMs_20	14 57 19.2	
K57A	Scipio Center baz=199,SNR=5.7	32.07	14	P	P	14 42 31.2	+1.2
MEDO	Medina comp=Z,3µm,20.0s	32.07	11	IAMs_20	IAMs_20	14 55 15.3	
I42A	Draeger Farm, comp=Z,65nm,1.2s	32.09	357	IAmb	IAmb	14 42 32.5	
OGNE	Ogallala comp=Z,2µm,22.0s	32.12	338	IAMs_20	IAMs_20	14 57 26.1	
OGNE	Ogallala baz=151	32.12	338	P	P	14 42 32.4	+1.8
MVCO	Mesa Verde baz=137	32.12	326	P	P	14 42 32.1	+1.2
J54A	Appleton comp=Z,3µm,21.0s	32.14	11	IAMs_20	IAMs_20	14 55 19.2	
M63A	Gales Ferry baz=207	32.15	21	P	P	14 42 32.9	+2.2
I47A	Gladwin baz=184,SNR=5.5	32.20	3	P	P	14 42 30.9	-0.2
I40A	Norwalk comp=Z,2µm,19.0s	32.22	354	IAMs_20	IAMs_20	14 55 14.0	
I49A	Point Hope baz=187	32.23	5	P	P	14 42 31.5	+0.1
I51A	Listowel baz=190,SNR=11	32.29	7	P	P	14 42 32.3	+0.4
K58A	Earlville baz=200,SNR=12	32.31	15	P	P	14 42 33.6	+1.5
L61A	Hillsdale 1, H baz=204,SNR=5.5	32.37	18	P	P	14 42 34.6	+1.9
I48A	Sherman Twp baz=185	32.41	4	P	P	14 42 32.9	-0.1
J56A	Wolcott baz=198,SNR=13	32.51	13	P	P	14 42 34.8	+1.0
K59A	Cooperstown baz=202,SNR=14	32.53	16	P	P	14 42 35.4	+1.4
K31A	O'Neill comp=Z,3µm,22.0s	32.55	343	IAMs_20	IAMs_20	14 57 14.5	
ISCO	Idaho Springs comp=Z,2µm,21.0s	32.65	332	IAMs_20	IAMs_20	14 58 07.9	
ISCO	Idaho Springs baz=144,SNR=7.9	32.65	332	P	P	14 42 36.2	+0.7
WUAZ	Wupatki comp=Z,36nm,1.1s	32.65	321	IAmb	IAmb	14 42 40.1	
WUAZ	comp=Z,2µm,22.0s			IAMs_20	IAMs_20	14 56 48.6	
WUAZ	Wupatki baz=131,SNR=24	32.65	321	P	P	14 42 36.9	+1.4
K60A	Five Rivers En baz=203	32.66	17	P	P	14 42 37.0	+1.9
I52A	Shelburne baz=192	32.66	8	P	P	14 42 36.3	+1.1
I37A	Lemond, Waseca comp=Z,37nm,0.8s	32.69	351	IAmb	IAmb	14 43 00.6	
L63A	North Scituate baz=208	32.71	21	P	P	14 42 37.5	+1.9
Y14A	Wickenburg comp=Z,1µm,19.0s	32.73	317	IAMs_20	IAMs_20	14 58 23.6	
J57A	Williamstown baz=199,SNR=8.8	32.83	14	P	P	14 42 37.9	+1.2
L61B	Northampton baz=206,SNR=8.4	32.87	19	P	P	14 42 38.5	+1.4
K61A	Williamstown baz=204,SNR=8.7	32.89	18	P	P	14 42 39.7	+2.5
H48A	Harrisville baz=186,SNR=5.8	32.95	4	P	P	14 42 37.8	+0.1
J58A	Remsen comp=Z,43nm,0.8s	32.96	15	IAmb	IAmb	14 42 56.8	
J58A	Remsen baz=200,SNR=9.9	32.96	15	P	P	14 42 39.1	+1.3
PV02	Paradox Valley comp=Z,42nm,1.2s	32.98	327	IAmb	IAmb	14 42 41.9	
PV13	Radium Mtn., P comp=Z,55nm,1.3s	32.99	327	IAmb	IAmb	14 42 41.8	
ECSD	EROS Data Cent comp=Z,72nm,1.4s	33.04	347	IAmb	IAmb	14 42 39.9	
ECSD	EROS Data Cent comp=Z,3µm,22.0s	33.04	347	IAMs_20	IAMs_20	14 56 44.6	
ECSD	EROS Data Cent baz=162,SNR=18	33.04	347	P	P	14 42 37.6	-0.9
PV03	Paradox Valley comp=Z,27nm,0.6s	33.07	327	IAmb	IAmb	14 42 55.6	
PV16	Nyswonger Mesa comp=Z,27nm,0.6s	33.15	327	IAmb	IAmb	14 42 43.8	
G45A	Suttons Bay baz=182,SNR=9.1	33.18	1	P	P	14 42 39.4	-0.3
PV19	Morning Glory	33.19	327	P	P	14 42 41.5	+1.4
PV20	West Nyswonger comp=Z,25nm,0.6s	33.20	327	IAmb	IAmb	14 42 56.5	
K62A	Royalston baz=206,SNR=5.1	33.21	19	P	P	14 42 41.2	+1.2
I55A	Frankford baz=196	33.23	12	P	P	14 42 41.0	+0.9
PV22	Blue Mesa, Par comp=Z,71nm,1.5s	33.25	327	IAmb	IAmb	14 42 44.7	
PV14	Lion Creek, Pa comp=Z,25nm,0.7s	33.25	327	IAmb	IAmb	14 42 45.1	
H52A	Wyevale baz=192,SNR=9.4	33.27	9	P	P	14 42 41.1	+0.7
J59A	Piesco baz=202,SNR=9.5	33.27	16	P	P	14 42 41.5	+1.0
LPAZ	La Paz comp=Z,2.5nm,0.6s,baz=324,slow=6.3,SNR=11	33.27	146	P	P	14 42 41.8	+0.3
LPAZ	comp=Z,817nm,21.3s,baz=318,slow=36			LR	LR	14 56 12.3	
LPAZ	La Paz	33.27	146	eP	P	14 42 42.4	+0.9
LPAZ	La Paz	33.27	146	P	P	14 42 42.4	+0.9
I58A	Old Forge baz=201,SNR=10	33.35	15	P	P	14 42 42.4	+1.1
PV21	Cone Mtn., Par comp=Z,48nm,1.6s	33.37	327	IAmb	IAmb	14 42 44.8	
J60A	Lant Hill Farm baz=204,SNR=8.7	33.37	18	P	P	14 42 43.5	+2.2
G47A	Hillman baz=185	33.38	3	P	P	14 42 41.4	0.0
H53A	Bobcaygeon baz=194,SNR=15	33.41	10	P	P	14 42 42.7	+1.0
I57A	Carthage baz=200	33.41	14	P	P	14 42 42.9	+1.2
K63A	Dunstable baz=207	33.47	20	P	P	14 42 43.9	+1.7
GLA	Glamis comp=Z,2µm,22.0s	33.49	314	IAMs_20	IAMs_20	14 56 56.6	
GLA	Glamis baz=123,SNR=5.6	33.49	314	P	P	14 42 44.5	+1.9
SADO	Sadowa comp=Z,40nm,1.0s	33.51	10	IAmb	IAmb	14 42 43.6	
G40A	Rib Lake comp=Z,31nm,1.1s	33.55	355	IAmb	IAmb	14 42 44.9	
G40A	comp=Z,2µm,20.0s			IAMs_20	IAMs_20	14 55 52.2	
H55A	Tweed baz=197	33.65	12	P	P	14 42 44.6	+0.8
Y12C	Blythe comp=Z,2µm,20.0s	33.66	315	IAMs_20	IAMs_20	14 58 09.1	
Y12C	Blythe baz=124	33.66	315	P	P	14 42 45.9	+1.9
N23A	Red Feather La baz=144	33.68	333	P	P	14 42 45.5	+1.1
PDMCI	Parker Dam,Lak baz=125,SNR=12	33.71	316	P	P	14 42 46.2	+1.7
J61A	Chester baz=205,SNR=7.7	33.72	18	P	P	14 42 46.3	+1.9
I59A	Olmsteadville baz=203,SNR=14	33.74	17	P	P	14 42 45.9	+1.2
SPMN	Marine on St. baz=169,SNR=12	33.79	352	P	P	14 42 44.2	-0.8
NCB	Newcomb comp=Z,2µm,21.0s	33.81	16	IAMs_20	IAMs_20	14 57 09.5	
F45A	CMU Biological baz=182,SNR=6.1	33.83	1	P	P	14 42 45.5	+0.2
J62A	Henniker baz=206,SNR=6.1	33.85	19	P	P	14 42 47.8	+2.2
H56A	Elgin baz=198,SNR=13	33.89	13	P	P	14 42 46.6	+0.8
G53A	Haliburton baz=194,SNR=11	33.93	10	P	P	14 42 46.8	+0.5
I60A	Shoreham baz=204,SNR=7.3	33.95	17	P	P	14 42 47.8	+1.4
H57A	Richville baz=200,SNR=7.3	33.97	14	P	P	14 42 47.3	+0.8
W13A	Hualapai Mount comp=Z,1µm,19.0s	34.01	318	IAMs_20	IAMs_20	14 59 06.3	
F49A	Sandfield baz=188,SNR=7.1	34.11	6	P	P	14 42 47.4	-0.3
F48A	Evansville baz=187,SNR=6.2	34.12	5	P	P	14 42 47.4	-0.4
MDP	Montagnes des comp=Z,1µm,21.9s,baz=280,slow=39	34.13	98	LR	LR	14 58 14.7	
PB12	IPOC Station P	34.14	152	P	P	14 42 47.8	-0.6
O20A	White River Ci baz=140,SNR=24	34.16	330	P	P	14 42 49.9	+1.3
IKP	In-Ko-Pah, Jac baz=121	34.20	312	P	P	14 42 51.6	+2.8
H58A	Gabriels baz=202,SNR=12	34.24	16	P	P	14 42 49.8	+0.9
BC3	Big Chuckawall baz=123,SNR=11	34.26	314	P	P	14 42 51.4	+2.0
SUSD	Miller comp=Z,2µm,22.0s	34.29	344	IAMs_20	IAMs_20	14 58 27.5	
SUSD	Miller baz=158	34.29	344	P	P	14 42 49.2	-0.2
G54A	Lake Saint Pet baz=195,SNR=16	34.29	11	P	P	14 42 49.7	+0.4
COWI	Conover comp=Z,50nm,1.2s	34.30	357	IAmb	IAmb	14 42 51.1	
IRM	Iron Mountain baz=124,SNR=8.1	34.32	315	P	P	14 42 52.3	+2.5
I61A	Oroboro, Fairl baz=205,SNR=7.9	34.36	18	P	P	14 42 51.7	+1.7
G55A	Calabogie baz=197,SNR=9.6	34.42	12	P	P	14 42 51.1	+0.6
F52A	Sundridge baz=192,SNR=6.8	34.48	9	P	P	14 42 51.1	+0.1
E43A	Lone Tree Farm comp=Z,31nm,0.9s	34.51	359	IAmb	IAmb	14 42 51.5	
F51A	Arnstein baz=192	34.52	8	P	P	14 42 51.1	-0.2
H59A	Cadyville baz=202,SNR=6.4	34.58	16	P	P	14 42 52.7	+0.8
I62A	Tamworth baz=207,SNR=7.2	34.59	19	P	P	14 42 53.8	+1.9
BAR	Barrett comp=Z,1µm,20.0s	34.62	312	IAMs_20	IAMs_20	14 57 50.5	
G57A	Newington baz=200	34.67	14	P	P	14 42 53.4	+0.8
E47A	Iron Bridge baz=186,SNR=17	34.70	4	P	P	14 42 52.9	0.0
LBNH	Lisbon comp=Z,68nm,1.5s	34.73	19	IAmb	IAmb	14 42 57.4	
LBNH	Lisbon baz=206	34.73	19	P	P	14 42 55.1	+2.0
E44A	Grand Marais A baz=181,SNR=7.4	34.76	1	P	P	14 42 54.0	+0.7
H60A	Morristown baz=204	34.78	17	P	P	14 42 54.7	+1.1
E48A	Lockeyer baz=188,SNR=12	34.81	5	P	P	14 42 53.9	+0.1
BELC	Belle Mtn. Jos baz=123,SNR=8.6	34.83	314	P	P	14 42 56.0	+1.7
ALGO	Algonquin Park baz=195,SNR=16	34.84	10	P	P	14 42 54.4	+0.3
XPFO	Pion Flat comp=Z,1µm,20.0s	34.94	313	IAMs_20	IAMs_20	14 58 12.0	
PFO	Pinyon Flats O	34.95	313	i P	P	14 42 57.1	+1.8
PFO	comp=Z,18nm,1.0s			pmax	pmax		
PFO	Pinyon Flats O comp=Z,1µm,20.0s	34.95	313	IAMs_20	IAMs_20	14 58 12.0	
PFO	Pinyon Flats O baz=122	34.95	313	P	P	14 42 59.6	+4.2
G58A	Ormstown baz=202	34.95	15	P	P	14 42 56.2	+1.2
H61A	Lyndonville baz=205	34.99	18	P	P	14 42 57.2	+1.8
I63A	Otisfield baz=208,SNR=5.3	34.99	20	P	P	14 42 57.2	+1.8
GMRC	Granite Mounta baz=124	35.02	316	P	P	14 42 57.7	+1.8
109C	Camp Elliot, M comp=Z,2µm,22.0s	35.04	312	IAMs_20	IAMs_20	14 57 04.6	
F55A	Otter Lake baz=198	35.05	12	P	P	14 42 56.8	+0.9
E52A	Mattawa baz=194,SNR=7.2	35.06	10	P	P	14 42 55.9	0.0
D46A	Sault St. Mari baz=184,SNR=5.5	35.09	3	P	P	14 42 55.9	-0.2
PSGCX	Pisagua	35.09	152	P	P	14 42 56.5	-0.1
PSGCX	comp=Z,35nm,1.0s			IAmb	IAmb	14 42 59.2	
PSGCX	comp=Z,2µm,21.0s			IAMs_20	IAMs_20	14 56 40.0	
E51A	G1948 Merrick baz=192,SNR=12	35.17	8	P	P	14 42 57.3	+0.4
H62A	Milan baz=207	35.27	19	P	P	14 42 59.5	+1.7
D47A	Chapleau baz=186,SNR=7.6	35.30	4	P	P	14 42 57.5	-0.6
E53A	Dumoine, Ponti baz=195,SNR=9.4	35.32	11	P	P	14 42 58.5	+0.3
K22A	Casper baz=145,SNR=9.2	35.36	334	P	P	14 42 59.7	+0.9
G60A	Masonville baz=204	35.38	17	P	P	14 42 59.8	+1.1
PB11	IPOC Station P comp=Z,2µm,22.0s	35.45	152	IAMs_20	IAMs_20	14 56 53.5	
E54A	Lac Daplat, Po baz=196,SNR=11	35.46	11	P	P	14 42 59.8	+0.4
MURC	Murrieta baz=121	35.47	313	P	P	14 43 01.8	+2.0
HEC	Hector,Ludlow baz=123,SNR=6.9	35.51	315	P	P	14 43 02.7	+2.6
D48A	Paudash Townsh baz=188,SNR=20	35.53	6	P	P	14 42 59.7	-0.3
TUQ	Turquoise Moun baz=124	35.56	316	P	P	14 43 02.2	+1.6
RSSD	Black Hills	35.61	338	P	P	14 43 03.1	+2.1
RSSD	comp=Z,31nm,1.4s			pmax	pmax		
RSSD	comp=Z,1µm,20.0s			MLR	MLR		
RSSD	Black Hills	35.61	338	P	P	14 43 03.1	+2.1
RSSD	comp=Z,31nm,1.4s			IAmb	IAmb	14 43 21.2	
RSSD	Black Hills baz=150	35.61	338	P	P	14 43 02.2	+1.2
D49A	Beulah Townshi baz=189	35.67	6	P	P	14 43 01.1	-0.2
SHPR	Sheep Range comp=Z,2µm,22.0s	35.67	319	IAMs_20	IAMs_20	14 58 30.4	
E55A	Montcerf-Lytto baz=198	35.70	12	P	P	14 43 01.9	+0.4
H63A	New Sharon baz=208	35.72	20	P	P	14 43 04.0	+2.4
D51A	Lot 18 Range I baz=192,SNR=7.3	35.73	8	P	P	14 43 01.8	+0.1
D50A	G1974 Best Tow baz=191,SNR=6.4	35.74	8	P	P	14 43 01.7	-0.1
G61A	St-Isidore-de- baz=206	35.79	18	P	P	14 43 04.1	+1.8

F59A	**Saint Guilaume**	**35.94**	**16**	P	**P**	**14 43 04.5**	**+1.0**
	baz=203						
H64A	**Troy**	**35.98**	**21**	P	**P**	**14 43 06.2**	**+2.4**
	baz=210						
D53A	**Lac Vacive, Po**	**35.99**	**10**	IAmb	IAmb	14 43 05.8	
	comp=Z,27nm,0.8s						
D53A	**Lac Vacive, Po**	**35.99**	**10**	P	**P**	**14 43 04.5**	**+0.5**
	baz=195						
E56A	**St. Veronique**	**36.02**	**14**	P	**P**	**14 43 05.0**	**+0.8**
	baz=199						
G62A	**West of Eustis**	**36.04**	**19**	P	**P**	**14 43 06.2**	**+1.7**
	baz=207,SNR=8.3						
GSC	**Goldstone, Bar**	**36.09**	**316**	IAMs_20	IAMs_20	14 59 43.4	
	comp=Z,2µm,20.0s						
E57A	**Chemin Saint G**	**36.10**	**15**	P	**P**	**14 43 05.5**	**+0.5**
	baz=201						
D54A	**Lac Fusel, La**	**36.25**	**11**	P	**P**	**14 43 06.5**	**+0.3**
	baz=196,SNR=16						
G63A	**Kingsbury**	**36.26**	**20**	P	**P**	**14 43 08.0**	**+1.7**
	baz=209						
F60A	**Warwick**	**36.28**	**17**	P	**P**	**14 43 07.4**	**+0.9**
	baz=205,SNR=6.1						
E58A	**La Victoria**	**36.29**	**16**	P	**P**	**14 43 07.1**	**+0.7**
	baz=202,SNR=7.5						
EYMN	**Ely**	**36.32**	**354**	IAmb	IAmb	14 43 08.0	
	comp=Z,33nm,1.2s						
EYMN	**Ely**	**36.32**	**354**	P	**P**	**14 43 05.5**	**-1.3**
	baz=172,SNR=11						
EYMN				ScP	**ScP**	**14 49 11.0**	**-1.1**
	baz=172						
D32A	**Dogwood Acres,**	**36.36**	**348**	IAMs_20	IAMs_20	14 57 54.6	
	comp=Z,2µm,22.0s						
D55A	**Sainte-Anne-du**	**36.37**	**13**	P	**P**	**14 43 07.6**	**+0.5**
	baz=198,SNR=19						
H65A	**Eastbrook**	**36.38**	**22**	P	**P**	**14 43 09.4**	**+2.1**
	baz=211						
PKME	**Peaks-Kenny Pk**	**36.50**	**21**	P	**P**	**14 43 10.2**	**+1.9**
	baz=209,SNR=7.1						
D56A	**ZEC Mazanza, M**	**36.55**	**14**	P	**P**	**14 43 08.9**	**+0.2**
	baz=200						
DUG	**Dugway, Tooele**	**36.62**	**325**	IAMs_20	IAMs_20	14 59 42.7	
	comp=Z,1µm,21.0s						
DUG	**Dugway, Tooele**	**36.62**	**325**	P	**P**	**14 43 10.8**	**+1.2**
	baz=134,SNR=10						
DUG				ScP	**ScP**	**14 49 13.7**	**+0.2**
	baz=134						
TPNV	**Topopah Spring**	**36.64**	**318**	P	**P**	**14 43 11.7**	**+1.8**
TPNV				pmax	pmax		
	comp=Z,14nm,0.9s						
TPNV				MLR	MLR		
	comp=Z,2µm,21.0s						
TPNV	**Topopah Spring**	**36.64**	**318**	P	**P**	**14 43 11.7**	**+1.8**
TPNV				IAMs_20	IAMs_20	14 59 18.1	
	comp=Z,2µm,21.0s						
TPNV	**Topopah Spring**	**36.64**	**318**	P	**P**	**14 43 11.6**	**+1.7**
	baz=126,SNR=18						
TPNV				ScP	**ScP**	**14 49 16.8**	**+3.0**
	baz=126						
G64A	**Maxfield**	**36.68**	**21**	P	**P**	**14 43 11.1**	**+1.3**
	baz=210						
EDW2	**Edwards Air Fo**	**36.69**	**314**	ScP	**ScP**	**14 49 15.2**	**+1.4**
	baz=121						
E28A	**Huff**	**36.73**	**344**	IAMs_20	IAMs_20	14 59 42.0	
	comp=Z,2µm,22.0s						
D57A	**Chemin Vers le**	**36.73**	**14**	P	**P**	**14 43 10.7**	**+0.4**
	baz=201,SNR=5.3						
FURC	**Furnace Creek,**	**36.77**	**317**	P	**P**	**14 43 12.8**	**+2.1**
	baz=124						
FURC				ScP	**ScP**	**14 49 17.3**	**+3.4**
	baz=124						
LRMC	**Laurel Mtn Rad**	**36.79**	**315**	P	**P**	**14 43 12.9**	**+1.8**
	baz=122,SNR=8.1						
LRMC				ScP	**ScP**	**14 49 17.0**	**+2.8**
	baz=122						
E60A	**Ste Agathe de**	**36.79**	**17**	P	**P**	**14 43 11.3**	**+0.5**
	baz=205						
BW06	**Boulder Array**	**36.82**	**331**	P	**P**	**14 43 12.2**	**+0.8**
BW06				IAMs_20	IAMs_20	15 00 42.2	
	comp=Z,2µm,21.0s						
BW06	**Boulder Array**	**36.82**	**331**	P	**P**	**14 43 11.6**	**+0.3**
	baz=140,SNR=7.0						
PDAR	**Pinedale Array**	**36.82**	**331**	P	**P**	**14 43 10.8**	**-0.6**
	comp=Z,3.3nm,0.5s,baz=128,slow=10,SNR=38						
PDAR				pP	**pP**	**14 43 25.9**	**-0.3**
	comp=Z,4.4nm,0.6s,baz=130,slow=11,SNR=8.4						
PDAR				PcP	**PcP**	**14 45 31.9**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=123,slow=3.3,SNR=3.1						
PDAR				ScP	**ScP**	**14 49 13.5**	**-0.8**
	comp=Z,1.6nm,0.8s,baz=134,slow=6.4,SNR=7.0						
PDAR				LR	LR	15 01 06.0	
	comp=Z,2µm,21.9s,baz=144,slow=41						
PDAR	**Pinedale Array**	**36.82**	**331**	P	**P**	**14 43 12.0**	**+0.6**
HWUT	**Hardware Ranch**	**36.94**	**328**	P	**P**	**14 43 13.2**	**+0.8**
HWUT				IAmb	IAmb	14 43 34.5	
	comp=Z,35nm,0.9s						
HWUT					**PcP**	**14 45 34.5**	**+1.8**
F63A	**Nahmakanta, Br**	**36.95**	**20**	IAmb	IAmb	14 43 14.0	
	comp=Z,41nm,1.1s						
F63A	**Nahmakanta, Br**	**36.95**	**20**	P	**P**	**14 43 13.6**	**+1.4**
	baz=209,SNR=6.6						
MPMC	**Manual Prospec**	**36.97**	**316**	P	**P**	**14 43 14.1**	**+1.4**
	baz=123,SNR=16						
MPMC				ScP	**ScP**	**14 49 18.4**	**+3.4**
	baz=123						
R11A	**Troy Canyon, C**	**37.05**	**321**	P	**P**	**14 43 14.9**	**+1.5**
	baz=128,SNR=21						
R11A				ScP	**ScP**	**14 49 17.8**	**+2.6**
	baz=128						
D58A	**Chemin du LacG**	**37.06**	**16**	P	**P**	**14 43 13.8**	**+0.8**
	baz=202,SNR=10						
G65A	**Princeton**	**37.06**	**22**	P	**P**	**14 43 14.8**	**+1.7**
	baz=212						
OSI	**Osito Audit: C**	**37.07**	**313**	IAMs_20	IAMs_20	14 58 19.3	
	comp=Z,3µm,22.0s						
AGMN	**Agassiz Nation**	**37.26**	**350**	IAMs_20	IAMs_20	14 56 29.3	
	comp=Z,2µm,18.0s						
AGMN	**Agassiz Nation**	**37.26**	**350**	P	**P**	**14 43 14.1**	**-0.6**
	baz=165,SNR=24						
SIV	**San Ignacio**	**37.34**	**137**	P	**P**	**14 43 15.1**	**-0.7**
	comp=Z,42nm,0.8s,baz=321,slow=8.8,SNR=92						
SIV				ScP	**ScP**	**14 49 16.9**	**+0.5**
	comp=Z,6.7nm,1.0s,baz=326,slow=5.9,SNR=6.7						
F64A	**Sherman**	**37.35**	**21**	IAmb	IAmb	14 43 17.8	
	comp=Z,43nm,1.1s						
F64A	**Sherman**	**37.35**	**21**	P	**P**	**14 43 17.1**	**+1.6**
	baz=210,SNR=6.0						
LATQ	**La Tuque**	**37.35**	**15**	P	**P**	**14 43 16.1**	**+0.6**
	baz=202,SNR=9.1						
GRAC	**Grapevine Rang**	**37.40**	**317**	P	**P**	**14 43 18.5**	**+2.3**
	baz=124						
ISA	**Isabella, Lake**	**37.43**	**315**	IAMs_20	IAMs_20	15 00 12.9	
	comp=Z,2µm,21.0s						
ISA	**Isabella, Lake**	**37.43**	**315**	ScP	**ScP**	**14 49 19.5**	**+2.9**
	baz=122						
D60A	**Saint Jean D'O**	**37.44**	**18**	P	**P**	**14 43 16.9**	**+0.7**
	baz=206,SNR=5.3						
AHID	**Auburn Hatcher**	**37.56**	**330**	IAMs_20	IAMs_20	15 01 28.7	
	comp=Z,2µm,21.0s						
CWC	**Cottonwood Cre**	**37.57**	**316**	P	**P**	**14 43 19.7**	**+1.9**
	baz=123						
MDND	**Maddock**	**37.62**	**346**	IAMs_20	IAMs_20	15 00 54.7	
	comp=Z,2µm,20.0s						
MDND	**Maddock**	**37.62**	**346**	P	**P**	**14 43 17.8**	**0.0**
	baz=159,SNR=7.3						
E63A	**Oxbow**	**37.81**	**21**	IAmb	IAmb	14 43 21.5	
	comp=Z,22nm,0.9s						
E63A	**Oxbow**	**37.81**	**21**	P	**P**	**14 43 21.0**	**+1.6**
	baz=210						
REDW	**Red Top Meadow**	**37.88**	**331**	IAMs_20	IAMs_20	15 00 55.4	
	comp=Z,2µm,22.0s						
D61A	**St Aubert, Com**	**37.92**	**18**	P	**P**	**14 43 21.7**	**+1.4**
	baz=207,SNR=8.1						
PKM	**Mcpherson Peak**	**37.99**	**313**	P	**P**	**14 43 24.2**	**+2.9**
	baz=119,SNR=5.0						
E64A	**Bridgewater**	**38.01**	**21**	P	**P**	**14 43 22.4**	**+1.3**
	baz=211						
LSQQ	**Lebel-sur-Quev**	**38.03**	**10**	P	**P**	**14 43 21.2**	**0.0**
	baz=195						
TPAW	**Teton Pass**	**38.03**	**331**	P	**P**	**14 43 23.2**	**+1.6**
TPAW				IAmb	IAmb	14 43 42.5	
	comp=Z,30nm,0.8s						
PQI	**Presque Isle**	**38.16**	**21**	IAmb	IAmb	14 43 41.0	
	comp=Z,22nm,0.8s						
D62A	**Allapoint, All**	**38.17**	**19**	P	**P**	**14 43 23.6**	**+1.2**
	baz=208,SNR=10						
FXWY	**Fox Creek**	**38.18**	**331**	IAMs_20	IAMs_20	15 01 39.1	
	comp=Z,1µm,22.0s						
LVC	**Limon Verde**	**38.26**	**153**	P	**P**	**14 43 25.0**	**+1.1**
	comp=Z,39nm,1.0s,baz=320,slow=6.0,SNR=27						
LVC	**Limon Verde**	**38.26**	**153**	*e*P	**P**	**14 43 25.8**	**+1.9**
LVC	**Limon Verde**	**38.26**	**153**	*e*P	**P**	**14 43 26.1**	**+2.2**
FLWY	**Flagg Ranch**	**38.36**	**332**	IAMs_20	IAMs_20	15 02 03.0	
	comp=Z,2µm,22.0s						
ELK	**Elko**	**38.36**	**324**	P	**P**	**14 43 26.0**	**+1.5**
ELK						14 45 39.0	
ELK				pmax	pmax		
	comp=Z,28nm,1.2s						
ELK				MLR	MLR		
	comp=Z,900nm,22.0s						
ELK	**Elko**	**38.36**	**324**	P	**P**	**14 43 25.9**	**+1.5**
ELK					**PcP**	**14 45 39.0**	**+1.8**
D63A	**Stockholm**	**38.45**	**20**	P	**P**	**14 43 25.6**	**+0.9**
	baz=210						
RLMT	**Red Lodge**	**38.53**	**334**	P	**P**	**14 43 25.7**	**-0.1**
	baz=143,SNR=11						
H17A	**Grant Village**	**38.54**	**332**	IAMs_20	IAMs_20	15 02 07.8	
	comp=Z,2µm,22.0s						
H17A	**Grant Village**	**38.54**	**332**	P	**P**	**14 43 28.8**	**+2.8**
	baz=140,SNR=8.5						
MATQ	**Matagami**	**38.60**	**9**	P	**P**	**14 43 26.0**	**0.0**
	baz=194,SNR=14						
LAO	**LASA Array**	**38.60**	**338**	P	**P**	**14 43 26.5**	**+0.3**
	baz=148						
LMN	**Caledonia Moun**	**38.68**	**24**	IAmb	IAmb	14 43 44.6	
	comp=Z,43nm,0.8s						
NV11	**Mina Array Sit**	**38.73**	**319**	IAMs_20	IAMs_20	15 00 23.4	
	comp=Z,2µm,22.0s						
NVAR	**Mina Array Bea**	**38.82**	**319**	P	**P**	**14 43 29.4**	**+1.0**
	comp=Z,7.6nm,0.9s,baz=133,slow=8.0,SNR=36						
NVAR				pP	**pP**	**14 43 42.9**	**-0.4**
	comp=Z,5.3nm,0.8s,baz=128,slow=8.1,SNR=8.0						
NVAR				PcP	**PcP**	**14 45 39.6**	**+1.0**
	comp=Z,9.0nm,0.8s,baz=131,slow=4.1,SNR=9.6						
NVAR				ScP	**S**	**14 49 23.6**	**+1.4**
	comp=Z,4.8nm,0.9s,baz=126,slow=4.6,SNR=10						
NVAR				LR	LR	15 00 35.5	
	comp=Z,2µm,21.9s,baz=132,slow=38						
NVAR	**Mina Array Bea**	**38.82**	**319**	P	**P**	**14 43 29.7**	**+1.4**
NVAR					**PcP**	**14 45 40.7**	**+2.0**
NVAR					**S**	**14 49 25.6**	**+3.5**
MDPB	**Devils Postpil**	**38.89**	**317**	IAMs_20	IAMs_20	15 02 00.6	
	comp=Z,1µm,20.0s						
KVN	**Kaiserville**	**39.05**	**320**	IAMs_20	IAMs_20	15 00 49.9	
	comp=Z,2µm,22.0s						
RYN	**Ryan**	**39.08**	**319**	IAMs_20	IAMs_20	15 00 44.6	
	comp=Z,2µm,22.0s						
ULM	**Lac du Bonnet**	**39.15**	**350**	P	**P**	**14 43 29.0**	**-1.6**
	comp=Z,13nm,0.4s,baz=168,slow=8.8,SNR=36						
ULM				ScP	**ScP**	**14 49 22.8**	**+0.1**
	comp=Z,5.3nm,0.7s,baz=194,slow=4.2,SNR=6.9						
ULM				LR	LR	15 00 36.7	
	comp=Z,872nm,21.4s,baz=161,slow=38						
ULM	**Lac du Bonnet**	**39.15**	**350**	IAmb	IAmb	14 43 31.7	
	comp=Z,65nm,1.2s						
PMPB	**Monarch Peak**	**39.34**	**314**	IAMs_20	IAMs_20	15 01 30.4	
	comp=Z,2µm,20.0s						
BATG	**Bathurst New B**	**39.38**	**22**	IAmb	IAmb	14 43 34.6	
	comp=Z,37nm,1.0s						
DGMT	**Dagmar**	**39.46**	**341**	P	**P**	**14 43 33.8**	**+0.5**
	baz=152,SNR=6.9						
WAKR	**Walker**	**39.60**	**318**	IAMs_20	IAMs_20	15 00 49.5	
	comp=Z,2µm,22.0s						
YERR	**Yerington**	**39.74**	**319**	IAMs_20	IAMs_20	15 00 55.2	
	comp=Z,1µm,20.0s						
GBN	**Guysborough**	**39.75**	**28**	IAMs_20	IAMs_20	14 56 03.6	
	comp=Z,2µm,20.0s						
CMB	**Columbia Colle**	**39.98**	**317**	P	**P**	**14 43 39.2**	**+1.4**
CMB				pmax	pmax		
	comp=Z,12nm,1.2s						
CMB	**Columbia Colle**	**39.98**	**317**	IAMs_20	IAMs_20	15 02 20.4	
	comp=Z,1µm,19.0s						
PNTR	**Pine Nut**	**40.03**	**319**	IAMs_20	IAMs_20	15 01 15.9	
	comp=Z,1µm,21.0s						
VCNR	**Virginia City**	**40.18**	**319**	IAMs_20	IAMs_20	15 01 11.8	
	comp=Z,1µm,20.0s						
DLMT	**Dillon**	**40.21**	**331**	IAMs_20	IAMs_20	15 02 33.0	
	comp=Z,1µm,22.0s						
GO02	**Mina Guanaco**	**40.23**	**156**	P	**P**	**14 43 41.6**	**+1.3**
PAHR	**Pah Rah Range**	**40.24**	**320**	P	**P**	**14 43 43.1**	**+3.1**
PAHR				IAMs_20	IAMs_20	15 01 15.5	
	comp=Z,1µm,21.0s						
MFID	**Camas Ranch**	**40.46**	**327**	IAMs_20	IAMs_20	15 02 13.4	
	comp=Z,1µm,21.0s						
AFDM	**Forest Hills D**	**40.85**	**318**	IAMs_20	IAMs_20	15 03 00.5	
	comp=Z,1µm,19.0s						
BEKR	**Beckworth**	**40.95**	**319**	P	**P**	**14 43 47.0**	**+1.1**
EGMT	**Eagleton**	**41.05**	**336**	IAMs_20	IAMs_20	15 02 09.4	
	comp=Z,1µm,21.0s						
EGMT	**Eagleton**	**41.05**	**336**	P	**P**	**14 43 46.6**	**+0.1**
	baz=144,SNR=10						
SALV	**Santo Antonio**	**41.05**	**131**	*e*P	**P**	**14 43 45.8**	**-1.0**
WVOR	**Wild Horse Val**	**41.40**	**323**	IAmb	IAmb	14 43 52.4	
	comp=Z,51nm,1.1s						
ORV	**Oroville**	**41.52**	**318**	P	**P**	**14 43 51.7**	**+1.3**
ORV				pmax	pmax		
	comp=Z,23nm,1.1s						
ORV	**Oroville**	**41.52**	**318**	IAMs_20	IAMs_20	15 03 24.3	
	comp=Z,1µm,21.0s						
MCCM	**Marconi Confer**	**41.73**	**315**	IAMs_20	IAMs_20	15 00 57.7	
	comp=Z,2µm,20.0s						
MSO	**Missoula**	**41.93**	**332**	P	**P**	**14 43 53.7**	**0.0**
	baz=138,SNR=15						
GDXM	**Geysers**	**42.00**	**316**	IAMs_20	IAMs_20	15 03 30.9	
	comp=Z,2µm,21.0s						
BMO	**Blue Mountains**	**42.21**	**327**	P	**P**	**14 43 55.7**	**-0.4**
BMO				pmax	pmax		
	comp=Z,16nm,1.2s						
BMO				MLR	MLR		
	comp=Z,1µm,21.0s						
BMO	**Blue Mountains**	**42.21**	**327**	P	**P**	**14 43 55.7**	**-0.4**
BMO				IAMs_20	IAMs_20	15 03 48.8	
	comp=Z,1µm,21.0s						
HOPS	**Hopland Field**	**42.28**	**316**	IAMs_20	IAMs_20	15 01 43.3	
	comp=Z,2µm,22.0s						
I07A	**Izee**	**42.92**	**325**	P	**P**	**14 44 02.2**	**+0.4**
F10A	**Beach Ranch, E**	**42.92**	**328**	IAMs_20	IAMs_20	15 03 51.7	
	comp=Z,2µm,21.0s						
M04C	**Macdoel**	**42.95**	**321**	P	**P**	**14 44 02.5**	**+0.3**
	baz=124						
G08A	**Pilot Rock**	**43.38**	**327**	IAMs_20	IAMs_20	15 05 38.8	
	comp=Z,1µm,20.0s						
YBH	**Yreka Blue Hor**	**43.47**	**320**	IAMs_20	IAMs_20	15 02 58.8	
	comp=Z,2µm,22.0s						
KHMM	**Horse Mountain**	**43.67**	**318**	IAMs_20	IAMs_20	15 02 56.1	
	comp=Z,2µm,19.0s						
E09A	**Wood Farm, Sta**	**43.76**	**328**	IAMs_20	IAMs_20	15 05 51.8	
	comp=Z,1µm,20.0s						
ARAG	**Araguaiana, MT**	**43.87**	**128**	*e*P	**P**	**14 44 07.5**	**-2.1**
HUMO	**Hull Mountain**	**44.10**	**321**	IAMs_20	IAMs_20	15 04 09.5	
	comp=Z,1µm,21.0s						
AQDB	**Aquidauana**	**44.10**	**136**	*e*P	**P**	**14 44 10.3**	**-1.1**
DRLN	**Deer Lake**	**44.44**	**27**	P	**P**	**14 44 13.2**	**-0.6**
DRLN				IAmb	IAmb	14 44 14.6	
	comp=Z,66nm,1.1s						
D08A	**Wollman Farm,**	**44.52**	**328**	IAMs_20	IAMs_20	15 05 52.9	
	comp=Z,1µm,21.0s						
RPN	**Rapa Nui**	**44.54**	**210**	LR	LR	14 58 13.2	
	comp=Z,1µm,18.1s,baz=12,slow=29						
FFC	**Flin Flon**	**44.57**	**347**	P	**P**	**14 44 13.8**	**-1.0**
FFC				pmax	pmax		
	comp=Z,19nm,0.7s						
FFC				MLR	MLR		
	comp=Z,2µm,22.0s						
FFC	**Flin Flon**	**44.57**	**347**	P	**P**	**14 44 13.8**	**-1.0**
FFC				IAmb	IAmb	14 44 17.0	
	comp=Z,19nm,0.7s						
FFC				IAMs_20	IAMs_20	15 04 45.7	
	comp=Z,2µm,22.0s						
G05D	**Wamic, OR**	**44.65**	**325**	P	**P**	**14 44 16.8**	**+1.2**
	baz=128						
H04A	**Detroit Lake**	**44.81**	**324**	IAmb	IAmb	14 44 19.1	
	comp=Z,48nm,1.2s						
H04A				IAMs_20	IAMs_20	15 04 58.6	
	comp=Z,2µm,20.0s						
I03D	**Drain, OR**	**44.94**	**322**	P	**P**	**14 44 18.0**	**+0.2**
	baz=124						
LTY	**Liberty**	**45.56**	**328**	IAMs_20	IAMs_20	15 06 47.2	
	comp=Z,1µm,18.0s						
F04A	**Amboy**	**45.69**	**325**	IAMs_20	IAMs_20	15 05 56.7	
	comp=Z,1µm,20.0s						
SCHQ	**Schefferville**	**45.69**	**16**	P	**P**	**14 44 22.4**	**-1.2**
	comp=Z,11nm,0.4s,baz=214,slow=5.2,SNR=25						
SCHQ				LR	LR	15 03 44.8	
	comp=Z,4µm,22.0s,baz=211,slow=37						
SCHQ	**Schefferville**	**45.69**	**16**	P	**P**	**14 44 22.9**	**-0.8**
SCHQ				IAmb	IAmb	14 44 26.4	
	comp=Z,43nm,1.3s						
LON	**Longmire**	**45.85**	**326**	IAMs_20	IAMs_20	15 06 45.0	
	comp=Z,1µm,21.0s						
E03A	**Lebam**	**46.69**	**325**	IAMs_20	IAMs_20	15 04 49.2	
	comp=Z,1µm,22.0s						
B06A	**Marblemount**	**46.78**	**328**	IAMs_20	IAMs_20	15 05 55.8	
	comp=Z,1µm,22.0s						
BDFB	**Brasilia**	**46.84**	**125**	P	**P**	**14 44 31.4**	**-1.9**
	comp=Z,14nm,0.9s,baz=281,slow=7.4,SNR=9.4						
BDFB				LR	LR	15 05 04.9	
	comp=Z,2µm,20.6s,baz=304,slow=37						
CPUP	**Villa Florida**	**47.32**	**143**	P	**P**	**14 44 35.3**	**-1.4**
	comp=Z,8.8nm,1.0s,baz=328,slow=9.4,SNR=6.3						
CPUP				pP	**pP**	**14 44 52.3**	**+0.3**
	comp=Z,7.8nm,0.7s,baz=306,slow=10,SNR=6.0						
CPUP				LR	LR	15 04 53.1	
	comp=Z,494nm,20.0s,baz=318,slow=36						
PGC	**Sidney**	**47.89**	**328**	IAMs_20	IAMs_20	15 06 18.9	
	comp=Z,1µm,21.0s						
IPMB	**Ipameri, GO**	**47.99**	**127**	*e*P	**P**	**14 44 39.9**	**-2.3**
GO05	**Huala**	**48.52**	**164**	P	**P**	**14 44 45.9**	**0.0**
SPB	**Sao Paulo**	**51.92**	**133**	IAMs_20	IAMs_20	15 08 14.8	
	comp=Z,1µm,22.0s						
BBB	**Bella Bella**	**52.38**	**329**	IAMs_20	IAMs_20	15 10 46.9	
	comp=Z,1µm,20.0s						
GO06	**Curarrehue**	**52.96**	**165**	P	**P**	**14 45 16.6**	**-2.8**
RCBR	**Riachuelo**	**53.29**	**106**	IAMs_20	IAMs_20	15 10 42.5	
	comp=Z,771nm,19.0s						
PLTB	**Pedras Altas**	**53.54**	**145**	*e*P	**P**	**14 45 22.7**	**-1.0**
YKA	**Yellowknife Ar**	**54.52**	**344**	P	**P**	**14 45 28.8**	**-1.5**
	comp=Z,2.4nm,0.4s,baz=140,slow=7.7,SNR=55						
YKA				pP	**pP**	**14 45 44.9**	**-1.1**
	comp=Z,6.3nm,0.8s,baz=138,slow=7.5,SNR=12						
YKA				ScP	**ScP**	**14 50 26.1**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=141,slow=4.9,SNR=6.1						
DLBC	**Dease Lake**	**56.93**	**334**	IAmb	IAmb	14 45 50.5	
	comp=Z,28nm,1.2s						
TAOE	**Nuku Hiva Isla**	**57.12**	**251**	*e*LR	LR	15 02 32.7	
	comp=Z,5µm,27.0s,baz=65						
TAOE	**Nuku Hiva Isla**	**57.12**	**251**	*e*T	T	15 46 36.0	
	comp=Z,28nm,0.2s						
SIT	**Sitka**	**58.54**	**331**	IAMs_20	IAMs_20	15 13 33.8	
	comp=Z,1µm,21.0s						
SKAG	**Skagway**	**59.78**	**334**	IAMs_20	IAMs_20	15 14 27.5	
	comp=Z,898nm,21.0s						
RES	**Resolute Bay**	**63.09**	**358**	P	**P**	**14 46 27.8**	**-1.8**
CTGM	**Chitina Glacie**	**63.13**	**333**	IAmb	IAmb	14 46 33.7	
	comp=Z,22nm,1.4s						
BARN	**Barnard Glacie**	**63.31**	**333**	IAmb	IAmb	14 46 46.4	
	comp=Z,42nm,2.0s						
EPYK	**Eagle Plains**	**64.03**	**340**	P	**P**	**14 46 36.0**	**0.0**
	baz=123						
INK	**Inuvik**	**64.14**	**342**	P	**P**	**14 46 34.5**	**-2.1**
	comp=Z,5.1nm,0.8s,baz=146,slow=5.0,SNR=16						
INK	**Inuvik**	**64.14**	**342**	P	**P**	**14 46 37.0**	**+0.4**
INK				pmax	pmax		
	comp=Z,22nm,1.3s						
INK	**Inuvik**	**64.14**	**342**	P	**P**	**14 46 37.0**	**+0.4**
INK				IAmb	IAmb	14 47 10.4	
	comp=Z,22nm,1.3s						
VRDI	**Verde Repeater**	**64.17**	**333**	IAmb	IAmb	14 46 40.3	
	comp=Z,47nm,2.0s						
BCAR	**Beaver Creek A**	**64.26**	**335**	P	**P**	**14 46 37.4**	**-0.2**
EGAK	**Eagle**	**64.80**	**337**	P	**P**	**14 46 40.4**	**-0.6**
EGAK				IAmb	IAmb	14 46 42.4	
	comp=Z,50nm,1.9s						
RIDG	**Independent Ri**	**65.80**	**335**	IAmb	IAmb	14 47 17.0	
	comp=Z,21nm,1.2s						
SML	**Sawmill**	**66.56**	**333**	P	**P**	**14 46 53.8**	**+1.3**
HDA	**Harding Lake**	**66.91**	**336**	IAmb	IAmb	14 46 57.1	
	comp=Z,48nm,1.4s						
RC01	**Rabbit Creek A**	**66.96**	**332**	IAmb	IAmb	14 46 56.8	
	comp=Z,28nm,1.3s						
IL31		**67.02**	**336**	P	**P**	**14 46 54.3**	**-1.0**
IL31				IAmb	IAmb	14 46 57.6	
	comp=Z,68nm,1.9s						
ILAR	**Eielson Array**	**67.02**	**336**	P	**P**	**14 46 53.3**	**-2.0**
	comp=Z,3.0nm,0.4s,baz=140,slow=5.4,SNR=89						
ILAR	**Eielson Array**	**67.02**	**336**	P	**P**	**14 46 54.4**	**-0.9**
ILAR	**Eielson Array**	**67.02**	**336**	P	**P**	**14 46 54.4**	**-0.9**
SUMG	**Summit**	**67.04**	**14**	*i* P	**P**	**14 46 55.0**	**-0.8**
	comp=Z,30nm,0.9s						
SUMG				*i*		14 47 10.8	
SUMG	**Summit**	**67.04**	**14**	*i* P	**P**	**14 46 55.0**	**-0.8**
SUMG				*i*		14 47 10.8	
SUMG				pmax	pmax		
	comp=Z,30nm,0.9s						
SUMG	**Summit**	**67.04**	**14**	P	**P**	**14 46 54.4**	**-1.4**
SUMG				IAmb	IAmb	14 46 59.6	
	comp=Z,19nm,1.1s						
BRLK	**Bradley Lake**	**67.11**	**330**	P	**P**	**14 46 55.7**	**-0.3**
BMAR	**Burnt Mountain**	**67.25**	**339**	P	**P**	**14 46 56.9**	**+0.1**
RND	**Reindeer**	**67.33**	**334**	P	**P**	**14 46 57.2**	**-0.2**
RND				pmax	pmax		
	comp=Z,48nm,1.3s						
RND	**Reindeer**	**67.33**	**334**	P	**P**	**14 46 57.2**	**-0.2**
POKR	**Poker Plat Res**	**67.37**	**336**	P	**P**	**14 46 57.3**	**-0.3**
	baz=112,SNR=9.6						
MCK	**McKinley**	**67.48**	**335**	P	**P**	**14 46 57.8**	**-0.5**
MCK	**McKinley**	**67.48**	**335**	IAmb	IAmb	14 47 28.1	
	comp=Z,43nm,1.6s						
SUA	**Susitna One**	**67.54**	**332**	IAmb	IAmb	14 47 00.8	
	comp=Z,24nm,1.3s						
KTH	**Kantishna Hill**	**68.26**	**334**	IAmb	IAmb	14 47 05.4	
	comp=Z,50nm,1.8s						
BPAW	**Bear Paw Mtn.**	**68.46**	**335**	IAmb	IAmb	14 47 05.7	
	comp=Z,30nm,1.3s						
PPLA	**Purkeypile**	**68.61**	**333**	IAmb	IAmb	14 47 07.6	
	comp=Z,30nm,1.2s						
PPT2	**Papeete2**	**68.75**	**246**	*e*S	**S**	**14 56 13.6**	**+7.1**
	comp=Z,428nm,25.0s						
PPT2	**Papeete2**	**68.75**	**246**	*e*LR	LR	15 07 55.6	
	comp=Z,4µm,24.8s,baz=64						
TOLK	**Toolik Lake Re**	**69.46**	**340**	P	**P**	**14 47 10.9**	**+0.4**
	baz=111						
SVW2	**Sparrevohn**	**69.70**	**331**	P	**P**	**14 47 10.9**	**-1.3**
IMAR	**Indian Mountai**	**70.14**	**336**	P	**P**	**14 47 13.7**	**-1.0**
CHGN	**Chignik**	**70.27**	**326**	P	**P**	**14 47 14.9**	**-0.8**
TBI	**Tubuai**	**70.75**	**240**	*e*S	**S**	**14 56 32.8**	**+3.1**
	comp=Z,440nm,34.8s						
TBI	**Tubuai**	**70.75**	**240**	*e*LR	LR	15 08 52.0	
	comp=Z,4µm,26.0s,baz=68						
TBI	**Tubuai**	**70.75**	**240**	*e*T	T	16 03 40.5	
	comp=Z,7.3nm,0.3s						
DAG	**Danmarks Havn**	**73.62**	**13**	*i* P	**P**	**14 47 34.0**	**-1.4**
DAG				*i*		14 47 49.4	
DAG	**Danmarks Havn**	**73.62**	**13**	*i* P	**P**	**14 47 34.0**	**-1.4**
DAG				*i*		14 47 49.4	
RAR	**Rarotonga**	**79.02**	**246**	LR	LR	15 13 49.9	
	comp=Z,831nm,19.8s,baz=88,slow=28						
DBIC	**Dimbokro**	**80.54**	**85**	LR	LR	15 21 10.7	
	comp=Z,337nm,22.0s,baz=265,slow=34						
SPITS	**Spitsbergen Ar**	**81.20**	**12**	P	**P**	**14 48 16.5**	**-1.2**
	comp=Z,17nm,1.0s,baz=267,slow=5.6,SNR=2.4						
NB2	**NORSAR Subarra**	**83.53**	**29**	P	**P**	**14 48 28.7**	**-1.6**
	comp=Z,9.5nm,1.4s,baz=284,slow=5.1						
NOA	**NORSAR Array B**	**83.53**	**29**	P	**P**	**14 48 28.6**	**-1.6**
	comp=Z,1.2nm,0.7s,baz=285,slow=4.9,SNR=11						
NOA				pP	**pP**	**14 48 45.0**	**-1.8**
	comp=Z,3.4nm,0.8s,baz=286,slow=5.0,SNR=4.2						
NOA				LR	LR	15 22 40.1	
	comp=Z,942nm,21.1s,baz=275,slow=34						
BILL	**Bilibino**	**85.50**	**339**	⇓*i*P	**P**	**14 48 40.3**	**+0.3**
BILL				*e**PP	**pP**	**14 48 55.6**	**-1.0**
BILL				*e*S	**S**	**14 59 02.8**	**-3.8**
BILL				*e*		15 00 38.1	
BILL				pmax	pmax		
	comp=Z,15nm,1.3s						
BILL				MLR	MLR		
	comp=Z,2µm,22.0s						
BILL	**Bilibino**	**85.50**	**339**	P	**P**	**14 48 40.0**	**0.0**
BILL				IAmb	IAmb	14 48 42.3	
	comp=Z,18nm,1.3s						
ARCES	**ARCESS Array B**	**86.54**	**19**	P	**P**	**14 48 42.4**	**-2.7**
	comp=Z,5.0nm,1.0s,baz=279,slow=4.8,SNR=7.5						
ARCES	**ARCESS Array B**	**86.54**	**19**	P	**P**	**14 48 46.0**	**+0.9**
ARCES	**ARCESS Array B**	**86.54**	**19**	P	**P**	**14 48 46.0**	**+0.9**
NKC	**Novy Kostel**	**86.73**	**39**	AMS	AMS	15 21 30.0	
	comp=Z,2µm,21.8s						
CLL	**Collm**	**86.80**	**38**	*e*pP	**pP**	**14 49 04.0**	**+0.5**
CLL				*e*		14 49 17.0	
CLL				*e*S	**S**	**14 59 13.0**	**-6.9**
CLL				*e*sS	sS	14 59 50.0	+1.6
CLL				*e*PPS	PPS	15 00 42.0	
CLL				*e*SS	**SS**	**15 05 00.0**	**-2.3**

CLL				*e*		15 09 18.0	
CLL				Lm	MLR	15 22 00.0	
	comp=Z,1µm,21.3s						
BRG	**Berggiesshubel**	**87.48**	**39**	*e*P	**pP**	**14 49 07.0**	**+0.2**
	comp=Z,13nm,1.6s						
BRG				*e*		14 49 20.1	
	comp=Z,22nm,2.0s						
BRG				*e*		14 56 58.4	
	comp=Z,6.0nm,1.1s						
KHC	**Kasperske Hory**	**87.72**	**40**	*e*P	**P**	**14 48 51.0**	**-0.3**
KHC				*e*pP	**pP**	**14 49 07.8**	**-0.3**
KHC				AMS	AMS	15 22 40.0	
	comp=Z,3µm,21.8s						
KHC	**Kasperske Hory**	**87.72**	**40**	*i* P	**P**	**14 48 51.5**	**+0.2**
KHC				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GERES	**GERESS Array B**	**87.87**	**41**	P	**P**	**14 48 49.5**	**-2.6**
	comp=Z,0.5nm,0.6s,baz=298,slow=3.9,SNR=3.8						
GERES				pP	**pP**	**14 49 08.1**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=316,slow=4.1,SNR=3.3						
GERES				LR	LR	15 23 24.6	
	comp=Z,2µm,21.6s,baz=304,slow=32						
GERES	**GERESS Array B**	**87.87**	**41**	P	**P**	**14 48 51.7**	**-0.4**
GERES	**GERESS Array B**	**87.87**	**41**	P	**P**	**14 48 51.7**	**-0.4**
KEST	**Kesra**	**87.92**	**54**	LR	LR	15 23 34.3	
	comp=Z,1µm,21.9s,baz=250,slow=32						
PVCC	**Panska Ves**	**87.96**	**39**	AMS	AMS	15 20 50.0	
	comp=Z,1µm,21.8s						
PRA	**Prague**	**88.00**	**39**	AMS	AMS	15 22 10.0	
	comp=Z,2µm,24.6s						
PRU	**Pruhonice**	**88.09**	**39**	AMS	AMS	15 22 30.0	
	comp=Z,2µm,21.2s						
AFI	**Afiamalu**	**88.27**	**256**	LR	LR	15 18 26.2	
	comp=Z,922nm,20.7s,baz=42,slow=29						
UPC	**Upice**	**88.85**	**39**	AMS	AMS	15 24 40.0	
	comp=Z,1µm,23.5s						
TREC	**Trest**	**88.88**	**40**	AMS	AMS	15 23 40.0	
	comp=Z,3µm,21.2s						
OSTC	**Ostas**	**88.96**	**38**	AMS	AMS	15 21 20.0	
	comp=Z,1µm,23.8s						
DPC	**Dobruska-Polom**	**89.08**	**39**	AMS	AMS	15 21 30.0	
	comp=Z,1µm,21.0s						
KRLC	**Kraliky**	**89.45**	**39**	AMS	AMS	15 21 40.0	
	comp=Z,1µm,23.7s						
APA	**Apatity**	**90.03**	**19**	⇓*i*P	P	14 49 11.1	+9.4
APA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
FINES	**FINESS Array B**	**90.19**	**26**	P	**P**	**14 49 01.0**	**-1.5**
	comp=Z,0.9nm,0.6s,baz=254,slow=3.6,SNR=3.7						
FINES				LR	LR	15 26 09.7	
	comp=Z,2µm,21.7s,baz=322,slow=33						
FINES	**FINESS Array B**	**90.19**	**26**	P	**P**	**14 49 01.5**	**-1.1**
FINES	**FINESS Array B**	**90.19**	**26**	P	**P**	**14 49 01.5**	**-1.1**
OKC	**Ostrava-Krasne**	**90.36**	**39**	AMS	AMS	15 23 00.0	
	comp=Z,1µm,21.0s						
VYHS	**Vyhne**	**91.22**	**40**	*e*P	**P**	**14 49 06.7**	**-1.0**
VYHS	**Vyhne**	**91.22**	**40**	*e*P	**P**	**14 49 06.7**	**-1.0**
TIXI	**Tiksi**	**93.49**	**349**	P	**P**	**14 49 15.4**	**-2.3**
	comp=Z,1.7nm,0.3s,baz=326,slow=8.3,SNR=20						
TIXI				pP	**pP**	**14 49 35.1**	**+0.7**
	comp=Z,1.5nm,0.4s,baz=18,slow=4.1,SNR=4.3						
TIXI	**Tiksi**	**93.49**	**349**	P	**P**	**14 49 16.1**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TIXI	**Tiksi**	**93.49**	**349**	P	**P**	**14 49 16.1**	**-1.5**
AKASG	**Malin Array Be**	**96.56**	**35**	LR	LR	15 29 53.9	
	comp=Z,1µm,21.3s,baz=295,slow=34						
AKASG	**Malin Array Be**	**96.56**	**35**	*i* P	**P**	**14 49 32.0**	**-0.1**
VNA3	**Neumayer Olymp**	**96.86**	**162**	P	**P**	**14 49 30.5**	**-2.5**
VNA2	**Neumayer--Watz**	**97.49**	**161**	P	**P**	**14 49 35.0**	**-0.8**
	baz=267,slow=5.2						
KIS	**Kishinev**	**98.01**	**39**	*e*P	Pdif	14 49 44.0	+5.2
KIS	**Kishinev**	**98.01**	**39**	*e*PP	PKiKP	14 53 58.0	-14
KIS	**Kishinev**	**98.01**	**39**	*e*P	Pdif	14 49 44.0	+5.2
NRIK	**Noril'sk**	**99.00**	**2**	LR	LR	15 35 58.1	
	comp=Z,1µm,21.1s,baz=6.0,slow=36						
SNAA	**Sanae**	**99.08**	**161**	Pdiff	**Pdif**	**14 49 43.4**	**+0.4**
SNAA	**Sanae**	**99.08**	**161**	P	**Pdif**	**14 49 42.2**	**-0.8**
SNAA				pmax	pmax		
	comp=Z,13nm,1.3s						
SNAA	**Sanae**	**99.08**	**161**	P	**Pdif**	**14 49 42.2**	**-0.8**
SNAA				IAmb	IAmb	14 49 44.1	
	comp=Z,12nm,1.3s						
YSS	**Yuzh-Sakhalins**	**106.87**	**327**	⇓*e*P	**Pdif**	**14 50 13.1**	**-5.1**
YSS				*e*		15 01 28.8	
YSS				MLR	MLR		
	comp=Z,700nm,13.0s						
YSS				MLR	MLR		
	comp=N,300nm,12.0s						
DZM	**Mont Dzumac**	**109.98**	**251**	*e*LR	LR	15 27 07.2	
	comp=N,1µm,23.6s						
MAK	**Makhachkala**	**111.23**	**34**	*e*P	**Pdif**	**14 50 34.7**	**-3.0**
MAK				*i*		14 54 34.2	
MAK				*e*		14 54 54.6	
MAK				*e*		14 55 14.0	
MAK				*e*PS	**PS**	**15 04 47.4**	**-0.8**
MAK				pmax	pmax		
	comp=Z,100nm,1.1s						
SYO	**Syowa Base**	**113.38**	**162**	⇑*e*Pdiff	**Pdif**	**14 50 48.0**	**+1.5**
SYO	**Syowa Base**	**113.38**	**162**	⇓*e*X	**Pdif**	**14 50 53.4**	**+6.9**
ZALV	**Zalesovo Beam**	**114.14**	**6**	PKKPbc	PKKPbc	15 05 24.9	+0.7
	comp=Z,0.7nm,0.7s,baz=156,slow=3.9,SNR=3.9						
KURK	**Kurchatov**	**116.46**	**10**	PKIKP	**PKPdf**	**14 54 45.5**	**-0.5**
KURBB	**Kurchatov Arra**	**116.53**	**11**	PKP	**PKPdf**	**14 54 45.5**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=333,slow=1.5,SNR=5.5						
KURBB				PKKPbc	**PKKPbc**	**15 05 13.1**	**-2.7**
	comp=Z,0.8nm,0.8s,baz=169,slow=2.4,SNR=4.3						
SONM	**Songino Array**	**119.58**	**350**	PKP	**PKPdf**	**14 54 51.4**	**-0.8**
	comp=Z,0.6nm,0.4s,baz=340,slow=2.7,SNR=4.1						
SONM				PKKPbc	**PKKPbc**	**15 05 02.3**	**-2.7**
	comp=Z,0.5nm,0.4s,baz=204,slow=3.2,SNR=4.4						
MKAR	**Makanchi Array**	**120.86**	**9**	PKP	**PKPdf**	**14 54 51.8**	**-2.8**
	comp=Z,0.2nm,0.4s,baz=5.2,slow=2.1,SNR=4.9						
KSRS	**Korea Array**	**121.34**	**328**	PKP	**PKPdf**	**14 54 54.9**	**-0.8**
	comp=Z,4.0nm,0.6s,baz=9.7,slow=1.5,SNR=19						
KSRS				pPKP	**pPKPdf**	**14 55 12.2**	**-0.9**
	comp=Z,2.0nm,0.7s,baz=15,slow=1.8,SNR=3.7						
KSRS				SKP		14 58 27.9	
	comp=Z,2.5nm,0.9s,baz=41,slow=1.5,SNR=6.7						
WMQ	**Urumqi**	**124.44**	**5**	*e*PKP	**PKPdf**	**14 55 01.8**	**+0.1**
WMQ				AMB	AMB		
	comp=Z,78nm,6.9s						
WMQ				LR	LR		
	comp=Z,800nm,23.5s						
WMQ				LR	LR		
	comp=Z,280nm,23.5s						
WMQ				LR	LR		
	comp=Z,1µm,25.3s						
HHC	**Hu-ho-hao-te**	**125.05**	**343**	*e*P	**PKiKP**	**14 55 10.0**	**+6.7**
KSH	**Kashi**	**126.45**	**17**	PKP	**PKPdf**	**14 55 03.0**	**-2.7**
KSH				sPKP		14 55 40.0	
KSH				PP	**PP**	**14 57 03.8**	**+3.4**
KSH				PKS	**PKSdf**	**14 58 38.5**	**-3.9**
KSH				SKKS		15 03 45.5	
KSH				AMB	AMB		
	comp=Z,250nm,4.5s						
KSH				LR	LR		
	comp=Z,170nm,11.7s						
KSH				LR	LR		
	comp=Z,300nm,13.2s						
KSH				LR	LR		
	comp=Z,250nm,15.8s						
TOO	**Toolangi**	**127.00**	**232**	PKIKP	**PKPdf**	**14 55 06.8**	**+0.2**
TOO	**Toolangi**	**127.00**	**232**		**PKPdf**	**14 55 06.8**	**+0.2**
CTA	**Charters Tower**	**128.75**	**254**	PKP	**PKiKP**	**14 55 11.2**	**+0.1**
	comp=Z,5.0nm,0.9s,baz=42,slow=3.2,SNR=7.2						
GTA	**Gaotai**	**128.76**	**354**	*e*PKP	**PKPdf**	**14 55 10.3**	**+0.2**
NJ2	**Nanjing**	**130.13**	**332**	*e*PKP	**PKPdf**	**14 55 13.0**	**+0.3**
LZH	**Lanzhou**	**131.42**	**349**	*e*PKP	**PKPdf**	**14 55 10.5**	**-4.8**
LZH				sPKP		14 55 47.0	
STKA	**Stephens Creek**	**131.50**	**238**	PKP	**PKiKP**	**14 55 15.9**	**-0.3**
	comp=Z,4.3nm,0.5s,baz=82,slow=2.8,SNR=20						
STKA				SKP		14 58 43.6	
	comp=Z,3.6nm,0.9s,baz=99,slow=13,SNR=7.9						
WHN	**Wuhan**	**133.40**	**335**	PKP	**PKPdf**	**14 55 19.5**	**+0.6**
CD2	**Chengdu**	**136.45**	**347**	PKP	**PKPdf**	**14 55 23.5**	**-1.2**
CD2				PP	**PP**	**14 58 05.5**	**+0.8**
CD2				AMB	AMB		
	comp=Z,100nm,7.3s						
CD2				LR	LR		
	comp=Z,1µm,20.2s						
CD2				LR	LR		
	comp=Z,610nm,22.7s						
CD2				LR	LR		
	comp=Z,1µm,17.5s						
ASAR	**Alice Springs**	**139.85**	**247**	PKhKP	PKPpre	14 55 23.8	
	comp=Z,2.4nm,0.8s,baz=108,slow=3.1,SNR=16						
ASAR				PKP	**PKPdf**	**14 55 31.4**	**+0.3**
	comp=Z,4.9nm,0.7s,baz=107,slow=2.4,SNR=14						
ASAR				SKPbc	**SKiKP**	**14 59 04.5**	**-0.4**
	comp=Z,2.3nm,0.8s,baz=100,slow=2.3,SNR=7.5						
GYA	**Guiyang**	**139.91**	**341**	*e*PKP	**PKPdf**	**14 55 31.5**	**+0.2**
GYA				PP	**PP**	**14 58 28.8**	**+2.4**
GYA				PKS	**PKSdf**	**14 59 05.5**	**-2.1**
GYA				SKKS		15 05 12.3	
GYA				SS	**SS**	**15 16 45.5**	**+2.6**
GYA				AMB	AMB		
	comp=Z,80nm,6.4s						
GYA				LR	LR		
	comp=Z,390nm,22.4s						
GYA				LR	LR		
	comp=Z,280nm,23.5s						
GYA				LR	LR		
	comp=Z,550nm,24.9s						
WRA	**Warramunga Arr**	**139.94**	**253**	PKhKP	PKPpre	14 55 24.7	
	comp=Z,2.3nm,0.7s,baz=95,slow=2.9,SNR=14						
WRA				PKP	**PKPdf**	**14 55 31.5**	**+0.2**
	comp=Z,6.9nm,0.6s,baz=89,slow=1.8,SNR=23						
WRA				SKPbc	**SKPbc**	**14 59 03.7**	**+1.3**
	comp=Z,1.8nm,0.8s,baz=94,slow=2.4,SNR=6.4						
SIJI	**Sorong**	**140.98**	**283**	PKP	**PKPdf**	**14 55 34.0**	**+0.6**
	comp=Z,7.4nm,1.0s,baz=67,slow=6.1,SNR=4.7						
KMI	**Kunming**	**142.25**	**346**	PKP	**PKPdf**	**14 55 34.8**	**-0.9**
KMI				LR	LR		
	comp=Z,380nm,29.3s						
KMI				LR	LR		
	comp=Z,280nm,24.7s						
KMI				LR	LR		
	comp=Z,620nm,27.0s						
CTBH	**Cotabato--PC H**	**144.06**	**300**	⇑*e*P	**PKPab**	**14 55 36.5**	**+0.2**
QIZ	**Qiongzhong**	**145.42**	**332**	PKPbc	**PKPbc**	**14 55 40.5**	**-0.5**
QIZ				SS	SS	15 17 48.8	+1.9
QIZ				LR	LR		
	comp=Z,270nm,18.4s						
QIZ				LR	LR		
	comp=Z,250nm,19.6s						
QIZ				LR	LR		
	comp=Z,380nm,21.1s						
QIZ	**Qiongzhong**	**145.42**	**332**		**PKPab**	**14 55 41.7**	**+0.5**
KNRA	**Kununurra**	**145.53**	**259**		**PKPab**	**14 55 41.8**	**0.0**
HYB	**Hyderabad**	**147.48**	**27**	*i* PKP	**PKiKP**	**14 55 50.0**	**+0.6**
FITZ	**Fitzroy Crossi**	**148.32**	**255**	PKP	**PKPdf**	**14 55 46.2**	**+0.4**
	comp=Z,13nm,0.8s,baz=296,slow=1.8,SNR=7.7						
FITZ				PKPbc	**PKiKP**	**14 55 50.5**	**-0.5**
	comp=Z,13nm,0.7s,baz=61,slow=4.4,SNR=14						
CMAR	**Chiang Mai Arr**	**149.50**	**350**	PKP	**PKPdf**	**14 55 47.5**	**-0.4**
	comp=Z,5.5nm,0.8s,baz=342,slow=3.3,SNR=25						
CMAR				PKPbc	**PKPbc**	**14 55 50.9**	**-1.4**
	comp=Z,5.5nm,0.8s,baz=342,slow=3.5,SNR=12						
NWAO	**Narrogin (SRO)**	**149.69**	**222**	PKPbc	**PKPbc**	**14 55 52.4**	**0.0**
	comp=Z,51nm,0.9s,baz=130,slow=4.4,SNR=18						
NWAO	**Narrogin (SRO)**	**149.69**	**222**		**PKPbc**	**14 55 52.0**	**-0.4**
KAPI	**Kappang**	**153.18**	**282**	PKPbc	**PKPbc**	**14 55 59.4**	**-1.6**
	comp=Z,3.8nm,0.4s,baz=246,slow=7.0,SNR=4.3						
PSI	**Prapat**	**164.56**	**339**	PKP	**PKPdf**	**14 56 05.9**	**-1.2**
	comp=Z,2.7nm,0.4s,baz=160,slow=3.6,SNR=4.9						
RPSI	**Rantau Prapat**	**164.66**	**339**		**PKPdf**	**14 56 05.9**	**-1.1**
LEM	**Lembang**	**165.22**	**288**	PKP	**PKPdf**	**14 56 06.3**	**-1.4**
	comp=Z,6.5nm,0.3s,baz=106,slow=8.8,SNR=6.6						

NEIC ***28*** *14:37:12.8±2.9, 17°.05S±0°.05×176°.78W±0°.08, h10*^{km}*±1*^{km}*, mb4.8/31, Mwb5.4/16, Mww5.5, Mwc5.6(GCMT), Error ellipse: s-maj=12.9km s-min=7.9km az=65.0*

IDC ***28*** *14:37:13.8±0.9, 17°.16S×176°.77W, h0*^{km}*, mb4.3/15, mb1 4.5/16, mb1mx4.2/40, mbtmp4.3/16, ML3.6/1, MS5.0/25, Ms1 5.0/25, ms1mx4.9/30, Error ellipse: s-maj=26.5km s-min=17.3km az=118.0*

BJI ***28*** *14:37:15.5±0.0, 17°.33S×177°.03W, h17*^{km}*, mB5.3/14, mb4.8/14, Ms5.1/12, Ms7 4.9/10*

NEIC ***28*** *14:37:21, 17°.23S×176°.74W, h19*^{km}*, Moment Tensor Solution. Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*-0.17;* $M_{\theta\theta}$*-2.47;* $M_{\phi\phi}$*2.64;* $M_{r\theta}$*0.21;* $M_{\theta\phi}$*1.43;* $M_{\phi r}$*0.61; Fault plane solution:* M_0*3.00000×*10^{17} *NP1:*ϕ_s*60.00000°, δ83.00000°, λ9.00000°. NP2:*ϕ_s*329.00000°, δ82.00000°, λ173.00000°. Principal axes: T 3.1367, Plg11.0000°, Azm285.0000°; N -0.2932, Plg79.0000°, Azm99.0000°; P -2.8435, Plg1.0000°, Azm195.0000°;*

NEIC ***28*** *14:37:21, 17°.13S×176°.53W, h12*^{km}*, Moment Tensor Solution. Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*-0.52;* $M_{\theta\theta}$*-1.41;* $M_{\phi\phi}$*1.92;* $M_{r\theta}$*-0.97;* $M_{\theta\phi}$*1.02;* $M_{\phi r}$*-0.71; Fault plane solution:* M_0*2.33000×*10^{17} *NP1:*ϕ_s*57.00000°, δ83.00000°, λ-33.00000°. NP2:*ϕ_s*152.00000°, δ56.00000°, λ-172.00000°. Principal axes: T 2.5152, Plg18.0000°, Azm109.0000°; N -0.4195, Plg56.0000°, Azm227.0000°; P -2.0957, Plg28.0000°, Azm9.0000°;*

GCMT ***28*** *14:37:21.8±0.1, 17°.22S±0°.01×176°.75W±0°.01, h18*^{km}*, MW5.6/151, Moment Tensor Solution. s108, c189; s151, c297; Duration: 1*^{s}*5 Moment tensor: Scale* 10^{17} *Nm;* M_{rr}*-0.16±.03;* $M_{\theta\theta}$*-2.26±.03;* $M_{\phi\phi}$*2.43±.03;* $M_{r\theta}$*0.25±.08;* $M_{\theta\phi}$*1.34±.03;* $M_{\phi r}$*0.71±.08; Best double couple:* M_0*2.79200×*10^{17} *NP1:*ϕ_s*329.00000°, δ80.00000°, λ171.00000°. NP2:*ϕ_s*61.00000°, δ81.00000°, λ11.00000°. Principal axes: T 2.9670, Plg14.0000°, Azm285.0000°; N -0.3430, Plg76.0000°, Azm99.0000°; P -2.6170, Plg1.0000°, Azm195.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***28*** *14:37:22.5, 17°.06S×177°.14W, h10*^{km}*, Moment Tensor Solution. Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*-0.14;* $M_{\theta\theta}$*-1.09;* $M_{\phi\phi}$*1.24;* $M_{r\theta}$*0.38;* $M_{\theta\phi}$*0.90;* $M_{\phi r}$*0.27; Fault plane solution:* M_0*1.55000×*10^{17} *NP1:*ϕ_s*333.66000°, δ72.68000°, λ179.80000°. NP2:*ϕ_s*63.72000°, δ89.81000°, λ17.32000°. Principal axes: T 1.6282, Plg12.0000°, Azm290.0000°; N -0.1673, Plg73.0000°, Azm64.0000°; P -1.4609, Plg12.0000°, Azm197.0000°;*

ISC 28 14:37:13.7±0.4, **17°.22S**±0°.08×**176°.67W**±0°.06, **h10**^{km}, **n100**, σ**2**^{s}**30**/89, **mb4.8**/39, **MS5.1**/29, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.07**	**263**		**Pn**	**14 38 28.2**	**-1.7**
AFI	**Afiamalu**	**5.75**	**56**	LR	LR	14 40 30.1	
	comp=Z,6µm,19.9s,baz=232,slow=34						
AFI	**Afiamalu**	**5.75**	**56**	Pn	**Pn**	**14 38 38.0**	**-1.2**
NIUE	**Niue**	**6.67**	**107**	Pn	**Pn**	**14 38 53.2**	**+1.5**
RAO	**Raoul Island**	**12.03**	**185**	LR	LR	14 44 02.4	
	comp=Z,18µm,20.3s,baz=34,slow=34						
RAR	**Rarotonga**	**16.44**	**107**	LR	LR	14 46 00.3	
	comp=Z,6µm,21.1s,baz=258,slow=32						
DZM	**Mont Dzumac**	**16.62**	**250**	*e*P	**Pn**	**14 41 06.8**	**-0.2**
	148nm,1.4s						
DZM				*e*LR	LR	14 44 58.8	
	comp=Z,9µm,24.3s						
DZM	**Mont Dzumac**	**16.62**	**250**	Pn	**Pn**	**14 41 07.5**	**+0.5**
	0.2nm,0.3s,baz=86,slow=17,SNR=4.2						
DZM				LR	LR	14 46 19.3	
	comp=Z,8µm,20.6s,baz=82,slow=33						
DZM	**Mont Dzumac**	**16.62**	**250**	Pn	**Pn**	**14 41 04.0**	**-3.0**
DZM				IAmb	IAmb	14 41 17.5	
	comp=Z,70nm,1.3s						
URZ	**Urewera**	**21.66**	**193**	P	**P**	**14 42 05.8**	**+1.4**
	comp=Z,17nm,0.8s,baz=2.5,slow=3.8,SNR=8.4						
URZ				LR	LR	14 49 12.8	
	comp=Z,12µm,20.8s,baz=48,slow=33						
URZ	**Urewera**	**21.66**	**193**	P	**P**	**14 42 03.6**	**-0.8**
HNR	**Honiara**	**24.02**	**286**	LR	LR	14 50 23.2	
	comp=Z,7µm,19.4s,baz=116,slow=33						
HNR	**Honiara**	**24.02**	**286**	P	**P**	**14 42 24.6**	**-4.4**
BFZ	**Birch Farm**	**24.17**	**193**	P	**P**	**14 42 29.2**	**-1.0**
BFZ				IAmb	IAmb	14 42 31.0	
	comp=Z,20nm,0.9s						
NNZ	**Nelson**	**25.40**	**198**	P	**P**	**14 42 40.2**	**-1.1**
NNZ				IAmb	IAmb	14 42 47.4	
	comp=Z,30nm,1.4s						
PAE	**Paea**	**25.84**	**95**	*e*T	T	15 09 14.7	
	comp=Z,2.6nm,0.3s						
PPT2	**Papeete2**	**25.85**	**95**	*e*S	**S**	**14 47 10.6**	**-5.0**
	comp=Z,1µm,27.5s						
PPT2				*e*LQ	LQ	14 48 00.4	
	comp=Z,5µm,26.8s						
PPT2				*e*LR	LR	14 49 04.0	
	comp=Z,14µm,27.0s,baz=259						
PPT2	**Papeete2**	**25.85**	**95**	*e*T	T	15 09 16.0	
	comp=Z,4.0nm,0.3s						
PPT	**Papeete**	**25.85**	**95**	LR	LR	14 50 18.6	
	comp=Z,3µm,19.7s,baz=262,slow=30						
TVO	**Taravao**	**26.14**	**95**	*e*T	T	15 09 37.5	
	comp=Z,1.6nm,0.3s						
TBI	**Tubuai**	**26.21**	**108**	*e*S	**S**	**14 47 18.1**	**-3.1**
	comp=Z,1µm,29.5s						
TBI				*e*LR	LR	14 49 14.6	
	comp=Z,14µm,28.5s,baz=280						
TBI	**Tubuai**	**26.21**	**108**	*e*T	T	15 09 36.6	
	comp=Z,5.6nm,0.3s						
RPZ	**Rata Peaks**	**28.38**	**199**	P	**P**	**14 43 10.5**	**+2.3**
	comp=Z,5.1nm,0.6s,baz=75,slow=2.2,SNR=5.6						
RPZ				LR	LR	14 54 10.6	
	comp=Z,14µm,18.7s,baz=38,slow=36						
RPZ	**Rata Peaks**	**28.38**	**199**	P	**P**	**14 43 06.2**	**-2.0**
RPZ				IAmb	IAmb	14 43 15.8	
	comp=Z,24nm,1.3s						
EIDS	**Eidsvold**	**31.06**	**249**	P	**P**	**14 43 27.4**	**-4.7**
EIDS				IAmb	IAmb	14 43 36.4	
	comp=Z,24nm,1.4s						
ARMA	**Armidale**	**31.72**	**240**	P	**P**	**14 43 34.6**	**-3.4**
KRVT	**Keravat (AS076**	**33.26**	**289**	LR	LR	14 56 06.4	
	comp=Z,6µm,19.8s,baz=125,slow=34						
CTA	**Charters Tower**	**35.20**	**259**	P	**P**	**14 44 09.4**	**+1.1**
	comp=Z,6.6nm,0.8s,baz=87,slow=10,SNR=14						
CTA				LR	LR	14 57 15.7	
	comp=Z,5µm,18.1s,baz=90,slow=34						
CAN	**Canberra**	**35.44**	**233**	P	**P**	**14 44 07.8**	**-2.5**
CAN				IAmb	IAmb	14 44 13.5	
	comp=Z,20nm,1.4s						
PMG	**Port Moresby**	**36.00**	**278**	P	**P**	**14 44 16.8**	**+1.5**
	comp=Z,8.2nm,0.8s,baz=42,slow=4.1,SNR=4.0						
PMG				LR	LR	14 56 33.7	
	comp=Z,2µm,20.0s,baz=86,slow=32						
PMG	**Port Moresby**	**36.00**	**278**	P	P	14 44 10.1	-5.2
TAOE	**Nuku Hiva Isla**	**36.48**	**82**	*e*T	T	15 22 29.6	
	comp=Z,32nm,0.3s						
COEN	**Coen**	**38.77**	**269**	P	**P**	**14 44 37.8**	**-1.0**
TOO	**Toolangi**	**38.89**	**231**	P	**P**	**14 44 39.9**	**+0.3**
TOO				IAmb	IAmb	14 44 45.5	
	comp=Z,25nm,1.4s						
STKA	**Stephens Creek**	**40.41**	**241**	P	**P**	**14 44 53.2**	**+0.9**
	comp=Z,2.2nm,0.8s,baz=82,slow=7.7,SNR=5.5						
STKA				LR	LR	15 00 30.2	
	comp=Z,1µm,18.5s,baz=71,slow=35						
STKA	**Stephens Creek**	**40.41**	**241**	P	**P**	**14 44 51.4**	**-0.9**
GENI	**Genyem**	**44.80**	**284**	P	**P**	**14 45 29.7**	**+1.6**
	comp=Z,2µmcomp=Z,51nm,1.5s						
BBOO	**Buckleboo**	**45.19**	**241**	P	**P**	**14 45 27.9**	**-3.2**
WB0	**Warramunga Arr**	**46.36**	**259**	P	**P**	**14 45 38.4**	**-2.0**
WB0				IAmb	IAmb	14 45 47.8	
	comp=Z,14nm,1.3s						
WB2	**Warramunga Arr**	**46.38**	**259**	P	**P**	**14 45 40.9**	**+0.2**
WB2				IAmb	IAmb	14 45 42.6	
	comp=Z,19nm,1.4s						
WRAB	**Tennant Creek**	**46.38**	**259**	P	**P**	**14 45 39.4**	**-1.2**
WRAB				IAmb	IAmb	14 45 42.5	
	comp=Z,16nm,1.4s						
WRA	**Warramunga Arr**	**46.39**	**259**	P	**P**	**14 45 40.3**	**-0.5**
	comp=Z,2.3nm,0.9s,baz=94,slow=6.7,SNR=17						
WRA				LR	LR	15 04 13.9	
	comp=Z,3µm,18.0s,baz=90,slow=35						
WRA	**Warramunga Arr**	**46.39**	**259**	P	**P**	**14 45 39.4**	**-1.4**
AS31	**Alice Springs**	**46.58**	**254**	P	**P**	**14 45 41.4**	**-0.8**
ASAR	**Alice Springs**	**46.58**	**254**	P	**P**	**14 45 42.5**	**+0.3**
	comp=Z,14nm,0.7s,baz=89,slow=8.3,SNR=50						
ASAR				S	**S**	**14 52 31.6**	**+0.2**
	comp=Z,0.6nm,1.1s,baz=81,slow=17,SNR=6.5						
ASAR				LR	LR	15 04 36.7	
	comp=Z,3µm,18.5s,baz=94,slow=35						
ASAR	**Alice Springs**	**46.58**	**254**	P	**P**	**14 45 40.7**	**-1.5**
MTN	**Manton Dam**	**50.48**	**267**	P	**P**	**14 46 10.7**	**-1.6**
MTN				IAmb	IAmb	14 46 13.0	
	comp=Z,11nm,1.2s						
FORT	**Forrest**	**51.80**	**244**	P	**P**	**14 46 21.8**	**-0.2**
FORT				IAmb	IAmb	14 46 29.6	
	comp=Z,9.8nm,0.8s						
KNRA	**Kununurra**	**52.22**	**263**	P	**P**	**14 46 24.8**	**-0.5**
FITZ	**Fitzroy Crossi**	**54.78**	**260**	P	**P**	**14 46 42.6**	**-1.5**
FITZ				IAmb	IAmb	14 46 56.2	
	comp=Z,14nm,1.5s						
NLAI	**Namlea**	**56.85**	**278**	P	**P**	**14 46 59.9**	**+0.9**
	comp=Z,20nm,1.8s						
LBMI	**Labuha**	**57.32**	**281**	P	**P**	**14 47 04.3**	**+1.9**
	comp=Z,32nm,2.0s						
SOEI	**Soe**	**57.74**	**269**	P	**P**	**14 47 05.7**	**+0.2**
	comp=Z,866nmcomp=Z,60nm,1.1s						
SOEI	**Soe**	**57.74**	**269**	P	**P**	**14 47 04.4**	**-1.1**
SANI	**Sanana**	**58.28**	**278**	P	**P**	**14 47 08.5**	**-0.6**
	comp=Z,20nm,1.6s						
VNDA	**Vanda**	**61.27**	**185**	P	**P**	**14 47 30.7**	**+2.0**
	comp=Z,1.1nm,0.9s,baz=347,slow=7.8,SNR=3.3						
VNDA				LR	LR	15 09 36.5	
	comp=Z,765nm,21.6s,baz=28,slow=32						
VNDA	**Vanda**	**61.27**	**185**	P	**P**	**14 47 27.6**	**-1.1**
MORW	**Morawa**	**62.28**	**246**	P	**P**	**14 47 35.5**	**-0.8**
APSI	**Ampana**	**62.75**	**278**	P	**P**	**14 47 40.6**	**+0.9**
	comp=Z,480nmcomp=Z,27nm,1.4s						
MJAR	**Matsushiro Arr**	**68.37**	**322**	P	**P**	**14 48 16.6**	**+1.0**
	comp=Z,1.3nm,0.9s,baz=178,slow=6.9,SNR=2.4						
MJAR	**Matsushiro Arr**	**68.37**	**322**	P	**P**	**14 48 12.9**	**-2.7**
ADK	**Adak**	**68.81**	**360**	P	**P**	**14 48 16.9**	**-1.0**
GSTR	**Great Sitkin T**	**69.02**	**0**	P	**P**	**14 48 15.9**	**-3.4**
PCJI	**Pacitan**	**70.64**	**267**	P	**P**	**14 48 30.5**	**+0.4**
	comp=Z,47nm,1.4s						
QSPA	**South Pole Qui**	**72.83**	**180**	P	**P**	**14 48 43.8**	**+1.3**
QSPA				IAmb	IAmb	14 48 45.9	
	comp=Z,11nm,1.1s						
PEA0B	**Petropavlovsk-**	**73.46**	**344**	P	**P**	**14 48 43.8**	**-2.3**
PETK	**Petropavlovsk-**	**73.46**	**344**	P	**P**	**14 48 45.6**	**-0.5**
	comp=Z,6.3nm,0.9s,baz=116,slow=10,SNR=5.5						
PETK				LR	LR	15 16 54.0	
	comp=Z,628nm,19.5s,baz=121,slow=32						
PETK	**Petropavlovsk-**	**73.46**	**344**	P	**P**	**14 48 43.0**	**-3.1**
KSRS	**Korea Array**	**75.31**	**317**	P	**P**	**14 48 58.9**	**+1.7**
	comp=Z,0.2nm,0.4s,baz=122,slow=5.9,SNR=4.5						
KSRS				LR	LR	15 19 03.3	
	comp=Z,181nm,19.0s,baz=101,slow=33						
USRK	**Ussuriysk Ar.**	**77.00**	**325**	LR	LR	15 19 09.1	
	comp=Z,368nm,18.6s,baz=70,slow=33						
NVAR	**Mina Array Bea**	**77.78**	**43**	P	**P**	**14 49 14.0**	**+2.4**
	comp=Z,1.3nm,0.9s,baz=230,slow=7.0,SNR=4.3						
NVAR				LR	LR	15 17 09.4	
	comp=Z,816nm,19.5s,baz=232,slow=31						
NJ2	**Nanjing**	**78.80**	**309**	*e*P	**P**	**14 49 16.5**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
SEW	**Seward**	**80.15**	**13**	P	**P**	**14 49 21.6**	**-2.0**
SEW				IAmb	IAmb	14 49 26.4	
	comp=Z,15nm,1.2s						
QIZ	**Qiongzhong**	**80.70**	**293**	P	**P**	**14 49 29.0**	**+1.4**
QIZ				PP	**PP**	**14 52 27.8**	**-4.0**
QIZ				S	**S**	**14 59 32.5**	**-3.2**
QIZ				SS	**SS**	**15 04 50.3**	**+1.1**
QIZ				LR	LR		
	comp=Z,260nm,21.6s						
QIZ				LR	LR		
	comp=Z,470nm,19.6s						
QIZ				LR	LR		
	comp=Z,700nm,25.5s						
WHN	**Wuhan**	**81.55**	**305**	P	**P**	**14 49 33.3**	**+1.4**
WHN				S	**S**	**14 59 49.5**	**+5.4**
WHN				LR	LR		
	comp=Z,620nm,15.9s						
WHN				LR	LR		
	comp=Z,370nm,11.9s						
WHN				LR	LR		
	comp=Z,1µm,22.7s						
TXAR	**Lajitas Array**	**84.23**	**57**	LR	LR	15 21 17.1	
	comp=Z,315nm,18.6s,baz=0.0,slow=31						
BJI	**Beijing**	**84.48**	**315**	P	**P**	**14 49 49.3**	**+2.5**
BJI				PP	**PP**	**14 52 59.5**	**-2.9**
BJI				SS	SS	15 05 45.0	+0.5
BJI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BJI				LR	LR		
	comp=Z,360nm,20.0s						
BJI				LR	LR		
	comp=Z,260nm,13.9s						
ILAR	**Eielson Array**	**84.86**	**12**	P	**P**	**14 49 48.6**	**+0.4**
	comp=Z,3.3nm,1.0s,baz=212,slow=5.1,SNR=9.5						
MAW	**Mawson**	**85.06**	**199**	LR	LR	15 25 15.2	
	comp=Z,2µm,19.4s,baz=126,slow=34						
PDAR	**Pinedale Array**	**85.72**	**43**	LR	LR	15 21 11.8	
	comp=Z,451nm,20.0s,baz=238,slow=31						
XAN	**Xi'an**	**87.17**	**307**	P	**P**	**14 50 03.5**	**+3.0**

XAN				pP	pwP	14 50 10.0	+4.0
XAN				pmax	pmax		
	comp=Z,11nm,1.5s						
HHC	**Hu-ho-hao-te**	**87.99**	**314**	*e*P	P	14 50 12.5	+8.2
KMI	**Kunming**	**89.01**	**297**	P	**P**	**14 50 10.0**	**+0.4**
KMI				pP	pwP	14 50 20.0	+4.9
KMI				S	**SKSac**	**15 00 47.8**	**+7.8**
KMI				sS	ScS	15 01 11.5	+7.8
KMI				pmax	pmax		
	comp=Z,17nm,0.6s						
KMI				pmax	pmax		
	comp=Z,53nm,4.3s						
KMI				LR	LR		
	comp=Z,370nm,18.8s						
KMI				LR	LR		
	comp=Z,520nm,19.8s						
KMI				LR	LR		
	comp=Z,930nm,23.7s						
CMAR	**Chiang Mai Arr**	**90.23**	**289**	P	**P**	**14 50 17.9**	**+2.7**
	comp=Z,0.3nm,0.4s,baz=104,slow=3.8,SNR=5.1						
CMAR				LR	LR	15 26 54.4	
	comp=Z,273nm,21.7s,baz=105,slow=33						
YKA	**Yellowknife Ar**	**93.02**	**24**	LR	LR	15 24 38.4	
	comp=Z,1μm,21.9s,baz=0.0,slow=31						
SONM	**Songino Array**	**94.12**	**319**	P	**P**	**14 50 34.4**	**+1.7**
	comp=Z,0.5nm,0.8s,baz=123,slow=4.5,SNR=2.0						
ULM	**Lac du Bonnet**	**97.32**	**40**	LR	LR	15 28 05.2	
	comp=Z,1μm,20.3s,baz=256,slow=31						
KSH	**Kashi**	**114.02**	**306**	PKP	**PKiKP**	**14 55 56.5**	**+2.9**
KSH				PP	**PP**	**14 56 55.0**	**+7.1**
KSH				PKS	**PKSdf**	**14 59 32.5**	**+2.2**
KSH				AMB	AMB		
	comp=Z,120nm,5.6s						
KSH				LR	LR		
	comp=Z,180nm,11.9s						
KSH				LR	LR		
	comp=Z,93nm,8.2s						
KIS	**Kishinev**	**143.62**	**330**	*e*PPP	PPP	14 56 08.0	
KIS				*e*SKKS	SKiKP	15 00 40.0	+11
KIS				*e*L	L	15 22 52.0	
KIS				LRM	MLR	15 28 44.0	
	comp=Z,2μm,22.0s						
BURAR	**Bucovina Array**	**144.76**	**334**	PKPdf	**PKPdf**	**14 56 50.1**	**-0.9**
CLL	**Collm**	**145.13**	**349**	*e*PKPdf	**PKPdf**	**14 56 52.0**	**+0.6**
CLL				Lm	MLR	15 59 00.0	
	comp=Z,600nm,20.2s						
UPC	**Upice**	**145.27**	**346**	*e*PKP	**PKiKP**	**14 56 54.4**	**-1.2**
DPC	**Dobruska-Polom**	**145.34**	**345**	*e*PKP	**PKiKP**	**14 56 53.8**	**-2.0**
BRTR	**Keskin Array B**	**145.46**	**317**	PKPbc	**PKPab**	**14 56 54.1**	**+1.4**
	comp=Z,2.5nm,0.7s,baz=106,slow=2.1,SNR=11						
BRTR	**Keskin Array B**	**145.46**	**317**		**PKPab**	**14 56 52.2**	**-0.5**
VYHS	**Vyhne**	**146.34**	**341**	*e*PKP	**PKiKP**	**14 56 57.0**	**-0.9**
GRF	**Grafenberg Arr**	**146.99**	**351**	*e*PKP	**PKiKP**	**14 56 58.7**	**-0.5**
	baz=14,slow=1.6						
GRF				*e*L	L	15 48 47.3	
	comp=Z,229nm,22.0s						
KHC	**Kasperske Hory**	**147.10**	**348**	*e*PKP	**PKiKP**	**14 56 58.9**	**-0.6**
GERES	**GERESS Array B**	**147.35**	**347**	PKPbc	**PKPab**	**14 56 59.0**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=32,slow=2.4,SNR=5.2						
GERES	**GERESS Array B**	**147.35**	**347**		**PKPbc**	**14 56 56.3**	**-1.4**

IDC 28 14:41:17.3±8.5**, 16°.30S**×**177°.69W, h0^{km}, mb3.8**/3**, mb1 4.1**/3**, mb1mx3.5**/44**, mbtmp3.8**/3**, Error ellipse: s-maj=379.9km s-min=39.0km az=141.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.62**	**258**	P	P	14 49 40.9	+1.1
	0.3nm,0.3s,baz=91,slow=7.8,SNR=3.0						
ASAR	**Alice Springs**	**45.90**	**253**	P	P	14 49 41.1	-1.0
	2.1nm,0.8s,baz=85,slow=8.2,SNR=6.4						
ILAR	**Eielson Array**	**84.18**	**13**	P	P	14 53 50.1	0.0
	0.9nm,1.0s,baz=224,slow=5.0,SNR=4.8						

IDC 28 14:46:31.9±1.2**, 3°.97S**×**151°.37E, h0^{km}, mb3.3**/4**, mb1 3.5**/4**, mb1mx3.3**/49**, mbtmp3.3**/4**, Error ellipse: s-maj=30.2km s-min=16.9km az=19.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.73**	**117**	Pn	Pn	14 46 49.2	-0.3
	17nm,0.3s,baz=294,slow=2.2,SNR=10						
KRVT				Sn	Sn	14 47 03.5	+2.0
	46nm,0.3s,baz=60,slow=20,SNR=13						
WRA	**Warramunga Arr**	**22.97**	**225**	P	P	14 51 37.5	-0.8
	1.4nm,1.2s,baz=52,slow=9.9,SNR=4.6						
ASAR	**Alice Springs**	**25.84**	**219**	P	P	14 52 06.0	+0.6
	0.3nm,0.8s,baz=54,slow=9.5,SNR=1.7						
MKAR	**Makanchi Array**	**78.77**	**319**	P	P	14 58 37.4	+0.9
	0.2nm,0.6s,baz=116,slow=8.1,SNR=2.1						
ILAR	**Eielson Array**	**81.94**	**22**	P	P	14 58 52.5	-0.7
	0.2nm,0.7s,baz=231,slow=5.7,SNR=1.6						

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*IDC **28** 14:54:41.2±0.8, 17°.30S×176°.88W, h0^{km}, mb4.2/13, mb1 4.4/13, mb1mx4.1/33, mbtmp4.2/13, MS4.7/18, Ms1 4.7/18, ms1mx4.5/31, Error ellipse: s-maj=34.7km s-min=17.3km az=132.0*

*GCMT **28** 14:54:49.0±0.2, 17°.23S±0°.01×176°.72W±0°.01, h14^{km}±1^{km}, MW5.2/130, Moment Tensor Solution. s41,c55; s130,c211; Duration: 1^{s}.0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.01±.02; $M_{\theta\theta}$-0.65±.02; $M_{\phi\phi}$0.66±.02; $M_{r\theta}$0.08±.04; $M_{\theta\phi}$0.41±.01; $M_{\phi r}$0.38±.05; Best double couple: $M_0$0.85700×10^{17} NP1:ϕ_s63.00000°,δ73.00000°, λ14.00000°. NP2:ϕ_s329.00000°,δ76.00000°,λ162.00000°. Principal axes: T 0.9420, Plg22.0000°, Azm286.0000°; N -0.1690, Plg68.0000°, Azm112.0000°; P -0.7730, Plg2.0000°, Azm17.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 28 14:54:42.6±0.9**, 17°.3S**±0°.2×**176°.8W**±0°.2**, h10^{km}, n29, σ1^{s}.22**/16**, mb4.2**/13**, MS4.8**/17**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**11.94**	**185**	LR	LR	15 01 28.2	
	comp=Z,7μm,19.2s,baz=28,slow=34						
DZM	**Mont Dzumac**	**16.48**	**251**	*e*P	**P**	**14 58 39.0**	**+2.2**
	70nm,1.4s						
DZM				*e*LR	LR	15 02 30.4	
	comp=Z,3μm,24.6s						
DZM	**Mont Dzumac**	**16.48**	**251**	LR	LR	15 03 55.3	
	comp=Z,2μm,18.2s,baz=82,slow=34						
RAR	**Rarotonga**	**16.54**	**106**	LR	LR	15 03 26.2	
	comp=Z,2μm,20.9s,baz=288,slow=32						
URZ	**Urewera**	**21.56**	**193**	P	**P**	**14 59 31.1**	**-1.1**
	11nm,0.8s,baz=99,slow=5.1,SNR=5.3						
HNR	**Honiara**	**23.92**	**286**	LR	LR	15 07 51.2	
	comp=Z,2μm,19.5s,baz=121,slow=33						
PPT2	**Papeete2**	**25.97**	**95**	*e*LQ	LQ	15 05 34.1	
	919nm,24.2s						
PPT2				*e*LR	LR	15 06 39.4	
	comp=Z,4μm,27.0s						
TBI	**Tubuai**	**26.31**	**108**	*e*LR	LR	15 06 51.7	
	comp=Z,4μm,28.5s						
RPZ	**Rata Peaks**	**28.27**	**199**	P	**P**	**15 00 37.5**	**+1.4**
	5.9nm,0.7s,baz=34,slow=7.3,SNR=1.8						
KRVT	**Keravat (AS076**	**33.16**	**289**	LR	LR	15 13 43.0	
	comp=Z,1μm,18.1s,baz=105,slow=34						
CTA	**Charters Tower**	**35.06**	**260**	P	**P**	**15 01 35.7**	**-0.4**
	3.7nm,0.9s,baz=88,slow=12,SNR=5.2						
PMG	**Port Moresby**	**35.88**	**278**	LR	LR	15 15 21.2	
	comp=Z,731nm,18.3s,baz=92,slow=35						
STKA	**Stephens Creek**	**40.27**	**241**	P	**P**	**15 02 19.6**	**-0.4**
	0.9nm,0.7s,baz=347,slow=9.7,SNR=2.9						
STKA				LR	LR	15 17 12.8	
	comp=Z,518nm,18.2s,baz=63,slow=34						
WRA	**Warramunga Arr**	**46.25**	**259**	P	**P**	**15 03 06.6**	**-2.0**
	1.8nm,1.0s,baz=92,slow=7.3,SNR=7.2						
WRA				LR	LR	15 21 41.3	
	comp=Z,1μm,18.5s,baz=120,slow=35						
ASAR	**Alice Springs**	**46.43**	**254**	P	**P**	**15 03 08.8**	**-1.2**
	8.5nm,0.8s,baz=90,slow=8.0,SNR=85						
ASAR				LR	LR	15 22 12.7	
	comp=Z,969nm,18.1s,baz=88,slow=36						
VNDA	**Vanda**	**61.18**	**185**	LR	LR	15 29 40.9	
	comp=Z,507nm,18.4s,baz=73,slow=34						
PETK	**Petropavlovsk-**	**73.50**	**344**	P	**P**	**15 06 15.8**	**+0.5**
	3.4nm,0.9s,baz=134,slow=6.2,SNR=2.6						
NVAR	**Mina Array Bea**	**77.93**	**43**	P	**P**	**15 06 41.6**	**+0.3**
	1.2nm,1.0s,baz=216,slow=10.0,SNR=7.7						
NVAR				LR	LR	15 35 04.1	
	comp=Z,482nm,18.3s,baz=220,slow=31						
SEY	**Seymchan**	**83.54**	**346**	P	**P**	**15 07 11.4**	**+1.0**
	4.3nm,1.2s,baz=139,slow=3.3,SNR=5.9						
PMSA	**Palmer Station**	**83.76**	**157**	LR	LR	15 34 55.0	
	comp=Z,198nm,20.7s,baz=295,slow=29						
MAW	**Mawson**	**84.95**	**199**	LR	LR	15 42 41.0	
	comp=Z,392nm,19.4s,baz=180,slow=34						
ILAR	**Eielson Array**	**84.96**	**12**	P	**P**	**15 07 16.6**	**-1.1**
	2.9nm,1.1s,baz=220,slow=4.9,SNR=14						
ILAR				LR	LR	15 37 11.1	
	comp=Z,381nm,21.6s,baz=194,slow=30						
PSI	**Prapat**	**85.36**	**274**	LR	LR	15 47 53.4	
	comp=Z,227nm,18.5s,baz=120,slow=37						
PDAR	**Pinedale Array**	**85.86**	**43**	P	**P**	**15 07 22.9**	**-0.1**
	0.6nm,0.9s,baz=219,slow=1.9,SNR=3.8						
PDAR				LR	LR	15 40 16.9	
	comp=Z,211nm,18.9s,baz=294,slow=32						
CMAR	**Chiang Mai Arr**	**90.13**	**289**	P	**P**	**15 07 44.5**	**+0.8**
	0.3nm,0.3s,baz=122,slow=3.4,SNR=1.8						
YKA	**Yellowknife Ar**	**93.14**	**24**	P	**P**	**15 07 56.9**	**+0.3**
	0.5nm,0.9s,baz=240,slow=4.2,SNR=5.2						
YKA				LR	LR	15 42 16.9	
	comp=Z,437nm,21.7s,baz=0.0,slow=31						
ULM	**Lac du Bonnet**	**97.46**	**40**	LR	LR	15 45 11.6	
	comp=Z,426nm,20.5s,baz=268,slow=31						
BRTR	**Keskin Array B**	**145.42**	**316**	PKPbc	**PKPdf**	**15 14 21.4**	**-0.1**
	2.5nm,0.9s,baz=104,slow=3.1,SNR=9.1						
GERES	**GERESS Array B**	**147.39**	**347**	PKPbc	**PKPab**	**15 14 27.1**	**-1.5**
	1.0nm,0.8s,baz=351,slow=4.3,SNR=8.5						

INET 28 15:00:39.4, 11°.61N×86°.65W, h55^{km}, ML3.5, Near coast of Nicaragua

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*IDC **28** 15:12:32.7±6.6, 21°.58S×170°.60E, h124^{km}±41^{km}, mb3.2/3, mb1 3.4/4, mb1mx3.1/23, mbtmp3.7/4, MS4.0/1, Ms1 4.0/1, ms1mx3.2/14, Error ellipse: s-maj=142.8km s-min=43.8km az=160.0*

ISC 28 15:12:29.4±1.4**, 22°.0S**±0°.4×**170°.9E**±0°.1**, h100^{km}, n11, σ1^{s}.11**/13**, mb3.5**/3**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.11**	**268**	P	**Pn**	**15 13 31.2**	**+1.1**
	12nm,0.3s,baz=127,slow=10,SNR=185						
DZM				S	**Sn**	**15 14 16.3**	**-0.9**
	49nm,0.3s,baz=134,slow=22,SNR=17						
CTA	**Charters Tower**	**23.05**	**270**	P	**P**	**15 17 26.0**	**-0.3**
	1.4nm,0.5s,baz=94,slow=12,SNR=5.6						
ASAR	**Alice Springs**	**34.05**	**260**	P	**P**	**15 19 03.6**	**-0.7**
	0.4nm,0.6s,baz=84,slow=9.4,SNR=22						
ASAR				pP	**pP**	**15 19 26.9**	**+1.6**
	0.4nm,0.8s,baz=90,slow=9.3,SNR=4.4						
WRA	**Warramunga Arr**	**34.12**	**267**	P	**P**	**15 19 03.4**	**-1.6**
	0.4nm,0.7s,baz=99,slow=8.5,SNR=5.7						
WRA				pP	**pP**	**15 19 27.4**	**+1.4**
	0.2nm,0.5s,baz=98,slow=8.4,SNR=5.0						
GUMO	**Guam**	**43.60**	**322**	LR	LR	15 37 16.8	
	comp=Z,205nm,20.5s,baz=84,slow=34						
SNAA	**Sanae**	**86.48**	**182**	P	**P**	**15 25 00.4**	**-0.2**
VNA3	**Neumayer Olymp**	**87.01**	**180**	P	**P**	**15 25 02.8**	**-0.4**
VNA2	**Neumayer--Watz**	**87.33**	**181**	P	**P**	**15 25 04.6**	**-0.1**
	baz=167,slow=3.9						
VNA1	**Neumayer--Stat**	**87.61**	**180**	P	**P**	**15 25 06.0**	**0.0**
ARCES	**ARCESS Array B**	**128.11**	**345**	PKP	**PKPdf**	**15 31 21.9**	**-1.2**
	2.5nm,0.9s,baz=54,slow=1.6,SNR=1.5						
GERES	**GERESS Array B**	**147.63**	**331**	PKPbc	**PKPdf**	**15 32 00.6**	**+1.2**
	0.8nm,0.7s,baz=23,slow=3.3,SNR=5.4						

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*PDG **28** 15:32:28.2±0.5, 38°.30N×20°.22E, h2^{km}±2^{km}, ML3.7/12, Error ellipse: s-maj=1.7km s-min=1.7km az=0.0*

*IDC **28** 15:32:30.3±3.6, 38°.64N×20°.65E, h0^{km}, mb3.6/6, mb1 3.6/8, mb1mx3.4/43, mbtmp3.6/8, ML3.8/1, MS3.6/1, Ms1 3.6/1, ms1mx2.8/48, Error ellipse: s-maj=81.1km s-min=20.4km az=49.0*

*THE **28** 15:32:30.4, 38°.29N×20°.42E, h13^{km}, ML3.7/12, Error ellipse: s-maj=1.0km s-min=0.4km az=247.0*

*ATH **28** 15:32:30.6, 38°.28N×20°.45E, h12^{km}±1^{km}, ML3.3/13, Error ellipse: s-maj=1.3km s-min=0.5km az=244.0*

ISC 28 15:32:30.2±0.7**, 38°.29N**±0°.02×**20°.42E**±0°.03**, h14^{km}**±4^{km}**, n80, σ0^{s}.96**/124**, mb3.6**/6**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	**Livadi, Kephal**	**0.04**	**168**	P	**Pg**	**15 32 32.7**	**0.0**
KEF4				S	**Sg**	**15 32 34.2**	**-0.1**
KEF1	**Kardakata, Kep**	**0.05**	**110**	P	**Pg**	**15 32 32.5**	**-0.2**
KEF1				S	**Sg**	**15 32 33.9**	**-0.6**
LXR1	**Lixouri, Cepha**	**0.10**	**169**	P	**Pg**	**15 32 33.3**	**+0.1**
LXR1				S	**Sg**	**15 32 35.6**	**+0.4**
	196μm,0.2s						
LXRA	**Lixouri, Kepha**	**0.10**	**169**	P	**Pg**	**15 32 33.3**	**+0.2**
LXRA				S	**Sg**	**15 32 35.4**	**+0.2**
KEF3	**Kipouria, Keph**	**0.10**	**210**	P	**Pg**	**15 32 33.6**	**+0.3**
KEF3				S	**Sg**	**15 32 35.9**	**+0.4**
CHV1	**Chavriata, Kef**	**0.11**	**193**	P	**Pg**	**15 32 33.6**	**+0.2**
CHV1				S	**Sg**	**15 32 35.8**	**+0.2**
	268μm,0.1s						
ARGA	**Argostoli. Kep**	**0.13**	**157**	P	**Pg**	**15 32 33.5**	**-0.1**
ARGA				S	**Sg**	**15 32 35.6**	**-0.3**
ARG2	**Argostoli**	**0.13**	**153**	P	**Pg**	**15 32 33.5**	**-0.1**
ARG2				S	**Sg**	**15 32 35.6**	**-0.3**
	105μm,0.1s						
KEF2	**Argostoli. Kep**	**0.14**	**156**	P	**Pg**	**15 32 33.7**	**-0.1**
KEF2				S	**Sg**	**15 32 35.8**	**-0.4**
VSK1	**VASILIKIADES**	**0.16**	**45**	P	**Pg**	**15 32 34.3**	**+0.1**
VSK1				S	**Sg**	**15 32 36.8**	**-0.1**
	45μm,0.2s						
KONA	**Konidatara, Ke**	**0.18**	**43**	P	**Pg**	**15 32 34.6**	**+0.2**
KONA				S	**Sg**	**15 32 37.6**	**+0.4**
KONA				AML	AML	15 32 38.0	
	comp=N,33444μm,0.2s						
KONA				AML	AML	15 32 41.5	
	comp=E,40793μm,0.5s						
VLS	**Valsamata**	**0.18**	**130**	P	**Pg**	**15 32 34.1**	**-0.3**
VLS				S	**Sg**	**15 32 36.8**	**-0.5**
	comp=E,105μm,0.1s						
VLS	**Valsamata**	**0.18**	**130**	P	**Pg**	**15 32 34.1**	**-0.3**
VLS				S	**Sg**	**15 32 36.8**	**-0.5**
VLS				AML	AML	15 32 37.0	
VLS				AML	AML	15 32 37.0	
FSK	**Fiskardo**	**0.20**	**35**	P	**Pg**	**15 32 35.0**	**+0.2**
FSK				S	**Sg**	**15 32 38.3**	**+0.5**
	comp=E,26μm,0.3s						
FSK	**Fiskardo**	**0.20**	**35**	P	**Pg**	**15 32 35.0**	**+0.2**
FSK				S	**Sg**	**15 32 38.0**	**+0.2**
FSK				AML	AML	15 32 38.7	
	comp=N,37566μm,0.3s						
FSK				AML	AML	15 32 39.2	
	comp=E,67412μm,0.2s						
KFL	**Anninata**	**0.35**	**122**	P	**Pg**	**15 32 37.0**	**-0.2**
KFL				S	**Sg**	**15 32 42.1**	**+0.1**
	comp=E,14μm,0.4s						
KFL	**Anninata**	**0.35**	**122**	P	**Pg**	**15 32 37.1**	**-0.2**
KFL				S	**Sg**	**15 32 42.1**	**+0.1**
KFL				AML	AML	15 32 42.6	
	comp=N,26951μm,0.5s						
KFL				AML	AML	15 32 42.9	
	comp=E,30521μm,0.4s						
EVGI	**Lefkada island**	**0.38**	**30**	P	**Pg**	**15 32 38.1**	**+0.3**
EVGI				S	**Sg**	**15 32 43.7**	**+0.7**
EVGI	**Lefkada island**	**0.38**	**30**	P	**Pg**	**15 32 38.1**	**+0.3**
EVGI				S	**Sb**	**15 32 43.9**	**-0.6**
MGNA	**Meganis**	**0.47**	**39**	P	**Pg**	**15 32 39.3**	**-0.1**
MGNA				S	**Sb**	**15 32 46.5**	**-0.5**
MGNA				AML	AML	15 32 47.4	
	comp=N,16376μm,0.2s						
MGNA				AML	AML	15 32 47.5	
	comp=E,14954μm,0.3s						
LKD2	**Lefkada island**	**0.53**	**21**	P	**Pg**	**15 32 40.5**	**-0.1**
LKD2				S	**Sg**	**15 32 47.8**	**+0.1**
	comp=E,2μm,0.2s						
LKD2	**Lefkada island**	**0.53**	**21**	P	**Pg**	**15 32 40.6**	**-0.1**
LKD2				S	**Sg**	**15 32 48.0**	**+0.3**
LKD2				AML	AML	15 32 49.9	
	comp=E,4593μm,0.3s						
LKD2				AML	AML	15 32 54.1	
	comp=N,4443μm,0.2s						
TSLK	**Tsoukalades, L**	**0.56**	**19**	P	**Pg**	**15 32 41.3**	**+0.1**
TSLK	**Tsoukalades, L**	**0.56**	**19**	P	**Pg**	**15 32 41.3**	**+0.1**
TSLK				S	**Sg**	**15 32 49.2**	**+0.5**
TSLK				AML	AML	15 32 55.9	
	comp=E,5582μm,0.6s						
TSLK				AML	AML	15 32 56.1	
	comp=N,4993μm,0.3s						
AST1	**Astakos**	**0.58**	**65**	P	**Pg**	**15 32 41.4**	**-0.2**
AST1				S	**Sb**	**15 32 50.7**	**+0.4**
	comp=N,10μm,0.3s						
PDO	**Prodromos**	**0.68**	**63**	P	**Pg**	**15 32 43.0**	**-0.3**
PDO				S	**Sb**	**15 32 53.9**	**+0.9**
	comp=N,7μm,0.4s						
PDO	**Prodromos**	**0.68**	**63**	P	**Pg**	**15 32 43.3**	**0.0**
PDO				S	**Sb**	**15 32 52.8**	**-0.2**
PDO				AML	AML	15 32 57.1	
	comp=E,10686μm,0.4s						
PDO				AML	AML	15 32 57.9	
	comp=N,8376μm,0.3s						
VTN	**Vitineika**	**0.71**	**122**	P	**Pg**	**15 32 43.9**	**-0.1**
RLS	**Riolos of Patr**	**0.86**	**106**	P	**Pg**	**15 32 46.2**	**-0.6**
RLS				S	**Sb**	**15 32 59.1**	**+0.8**
RLS	**Riolos of Patr**	**0.86**	**106**	P	**Pg**	**15 32 46.3**	**-0.6**
RLS				S	**Sg**	**15 32 58.1**	**0.0**
PVO	**Paravola**	**0.93**	**69**	P	**Pb**	**15 32 47.4**	**-0.7**
PVO	**Paravola**	**0.93**	**69**	P	**Pb**	**15 32 48.1**	**0.0**
PVO				S	**Sg**	**15 33 00.4**	**+0.1**
PVO				AML	AML	15 33 04.4	
	comp=E,5186μm,0.3s						
PVO				AML	AML	15 33 09.1	
	comp=N,4359μm,0.4s						
DRO	**Drossia**	**1.08**	**108**	P	**Pb**	**15 32 50.2**	**-0.4**
DRO				S	**Sg**	**15 33 05.0**	**0.0**
DRO				AML	AML	15 33 14.5	
	comp=N,3354μm,0.4s						
DRO				AML	AML	15 33 14.6	
	comp=E,4914μm,0.4s						
EFP	**Efpalio**	**1.18**	**83**	P	**Pn**	**15 32 51.4**	**-0.9**
EFP				S	**Sg**	**15 33 08.8**	**+0.5**
	comp=E,885nm,0.5s						
EFP	**Efpalio**	**1.18**	**83**	P	**Pn**	**15 32 51.5**	**-0.7**
ANX	**Ano Chora**	**1.22**	**75**	P	**Pn**	**15 32 52.6**	**-0.3**
ANX	**Ano Chora**	**1.22**	**75**	P	**Pn**	**15 32 52.8**	**-0.1**
LAKA	**Lakka**	**1.23**	**92**	P	**Pn**	**15 32 52.5**	**-0.5**
LAKA				S	**Sg**	**15 33 10.7**	**+0.8**
	comp=E,515nm,0.6s						
LAKA	**Lakka**	**1.23**	**92**	P	**Pn**	**15 32 52.5**	**-0.5**
IGT	**Igoumenitsa**	**1.24**	**357**	P	**Pb**	**15 32 53.5**	**+0.1**
IGT	**Igoumenitsa**	**1.24**	**357**	P	**Pb**	**15 32 53.8**	**+0.4**
IGT				S	**Sg**	**15 33 11.8**	**+1.6**
IGT				AML	AML	15 33 16.6	
	comp=N,884μm,0.2s						
IGT				AML	AML	15 33 18.2	
	comp=E,1078μm,0.4s						
EVR	**Evrytania**	**1.26**	**60**	P	**Pn**	**15 32 53.1**	**-0.3**
EVR	**Evrytania**	**1.26**	**60**	P	**Pn**	**15 32 53.2**	**-0.2**
EVR				S	**Sg**	**15 33 11.0**	**+0.3**
EVR				AML	AML	15 33 17.4	
	comp=E,1018μm,0.6s						
EVR				AML	AML	15 33 22.6	
	comp=N,1071μm,0.4s						
AMT	**Artemida-Makis**	**1.27**	**126**	P	**Pg**	**15 32 54.8**	**+0.1**
SERG	**Sergoula**	**1.30**	**84**	P	**Pn**	**15 32 53.6**	**-0.3**
SERG	**Sergoula**	**1.30**	**84**	P	**Pn**	**15 32 53.8**	**-0.1**
JAN	**Janina**	**1.40**	**14**	P	**Pg**	**15 32 56.8**	**-0.4**
KEK	**Kerkira**	**1.50**	**341**	P	**Pb**	**15 32 57.9**	**+0.1**
KEK				S	**Sg**	**15 33 20.1**	**+1.7**
KEK				AML	AML	15 33 30.9	
	comp=E,696μm,0.6s						
KEK				AML	AML	15 33 33.4	
	comp=N,551μm,0.6s						
KASA	**Kassiopi**	**1.50**	**346**	P	**Pg**	**15 32 59.8**	**+0.8**
MAKR	**Makrakomi, Fth**	**1.52**	**61**	P	**Pb**	**15 32 58.7**	**+0.5**
MEV	**Metsovon**	**1.62**	**23**	P	**Pg**	**15 33 01.0**	**-0.3**
ITM	**Ithomi**	**1.64**	**132**	P	**Pg**	**15 33 01.0**	**-0.6**
VLX	**Vlachokerasia**	**1.81**	**120**	P	**Pb**	**15 33 03.4**	**+0.3**
KPRO	**Kipourio**	**1.82**	**24**	P	**Pb**	**15 33 04.1**	**+0.9**
PENT	**Pentalofos**	**1.98**	**16**	P	**Pb**	**15 33 06.7**	**+0.6**
NEST	**Nestorio**	**2.17**	**13**	P	**Pb**	**15 33 09.4**	**0.0**
OHR	**Ohrid**	**2.83**	**6**	*i* Pn	**Pb**	**15 33 18.2**	**-2.3**
IDI	**Anoyia**	**4.68**	**129**	Pn	**Pn**	**15 33 44.2**	**+3.7**
	comp=N,0.1nm,0.3s,baz=205,slow=16,SNR=1.3						
IDI				Sn	**Sn**	**15 34 38.4**	**+3.9**
	comp=N,1.4nm,0.3s,baz=311,slow=22,SNR=6.1						
DBRK	**Dubrovnik**	**4.70**	**339**	*e*Pn	**Pn**	**15 33 40.0**	**-0.6**
DBRK				Sn	**Sn**	**15 34 32.4**	**-2.6**
STON	**Ston**	**5.02**	**337**	*e*Pn	**Pn**	**15 33 44.7**	**-0.3**
STON				Sn	**Sn**	**15 34 40.5**	**-2.3**
MAKA	**Makarska**	**5.61**	**334**	*e*Pn	**Pn**	**15 33 53.3**	**+0.1**
MAKA				Sn	**Sn**	**15 34 54.8**	**-2.7**
RICI	**Ricice**	**5.76**	**335**	*e*Pn	**Pn**	**15 33 55.2**	**0.0**
RICI				Sn	**Sn**	**15 34 59.0**	**-2.1**
ZIRJ	**Zirje**	**6.46**	**328**	*e*Pn	**Pn**	**15 34 04.4**	**-0.3**
ZIRJ				Sn	**Sn**	**15 35 16.3**	**-1.9**
MORI	**Morici**	**6.61**	**329**	*i* Pn	**Pn**	**15 34 07.6**	**+0.8**
MORI				Sn	**Sn**	**15 35 19.6**	**-2.3**
DUGI	**Dugi Otok**	**6.98**	**326**	*e*Pn	**Pn**	**15 34 12.4**	**+0.4**
DUGI				Sn	**Sn**	**15 35 28.7**	**-2.4**
UDBI	**Udbina**	**7.14**	**332**	*e*Pn	**Pn**	**15 34 15.7**	**+1.5**
UDBI				Sn	**Sn**	**15 35 33.3**	**-1.9**
NVLJ	**Novalja**	**7.52**	**328**	*i* Pn	**Pn**	**15 34 19.8**	**+0.5**
MLR	**Muntele Rosu**	**8.29**	**28**	LR	LR	15 38 36.1	
	comp=N,490nm,21.8s,baz=30,slow=46						
SOKA	**Soboth**	**9.27**	**336**	*e*Pn	**Pn**	**15 34 43.2**	**-0.3**
	comp=N,3.0nm,0.3s						
OBKA	**Obir**	**9.28**	**334**	*i* Pn	**Pn**	**15 34 44.2**	**+0.5**
	comp=N,2.2nm,0.2s						
OBKA				*i* Sn	**Sn**	**15 36 26.1**	**-1.7**
	comp=N,1.2nm,0.2s						
MYKA	**Terra Mystica**	**9.71**	**331**	*e*Pn	**Pn**	**15 34 50.7**	**+1.1**
	comp=N,1.3nm,0.2s						
MOA	**Molln**	**10.55**	**337**	*i* Pn	**Pn**	**15 35 02.0**	**+1.1**
	comp=N,1.3nm,0.2s,SNR=4.1						
GERES	**GERESS Array B**	**11.61**	**337**	Pn	**Pn**	**15 35 14.7**	**-0.8**
	comp=N,0.2nm,0.3s,baz=160,slow=16,SNR=4.7						
HFS	**Hagfors**	**22.27**	**351**	P	**P**	**15 37 25.4**	**-1.2**
	comp=N,1.8nm,0.6s,baz=169,slow=16,SNR=7.7						
FINES	**FINESS Array B**	**23.44**	**7**	P	**P**	**15 37 37.2**	**-1.5**
	comp=N,1.3nm,0.7s,baz=199,slow=10,SNR=6.8						
NB2	**NORSAR Subarra**	**23.49**	**349**	P	**P**	**15 37 39.4**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=162,slow=9.3						
NOA	**NORSAR Array B**	**23.49**	**349**	P	**P**	**15 37 39.0**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=160,slow=9.9,SNR=4.1						
ARCES	**ARCESS Array B**	**31.42**	**3**	P	**P**	**15 38 49.8**	**-0.8**
	comp=Z,2.2nm,0.8s,baz=188,slow=11,SNR=1.5						
MKAR	**Makanchi Array**	**45.31**	**58**	P	**P**	**15 40 47.1**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=273,slow=7.6,SNR=5.1						
ZALV	**Zalesovo Beam**	**45.68**	**48**	P	**P**	**15 40 49.3**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=286,slow=8.9,SNR=2.2						

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*NEIC **28** 15:32:42.9±1.7, 17°.9S±0°.1×178°.6W±0°.1, h569^{km}±7^{km}, mb4.4/83, Error ellipse: s-maj=18.7km s-min=13.8km az=132.0*

*IDC **28** 15:32:42.2±1.3, 17°.98S×178°.51W, h562^{km}±14^{km}, mb3.9/20, mb1 4.0/22, mb1mx3.8/39, mbtmp4.8/22, Error ellipse: s-maj=14.9km s-min=9.5km az=151.0*

ISC 28 15:32:43.1±0.4**, 17°.91S**±0°.08×**178°.44W**±0°.07**, h579^{km}, n120, σ1^{s}.24**/108**, mb4.4**/60**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.35**	**272**	P	**P**	**15 34 03.5**	**+0.8**
AFI	**Afiamalu**	**7.54**	**59**	P	**P**	**15 34 35.5**	**-2.0**
	7.6nm,0.3s,baz=192,slow=22,SNR=16						
AFI				S	**S**	**15 36 06.4**	**-4.7**
	0.2nm,0.3s,baz=322,slow=19,SNR=1.3						
AFI	**Afiamalu**	**7.54**	**59**	P	**P**	**15 34 35.4**	**-2.1**
DZM	**Mont Dzumac**	**14.80**	**251**	P	**P**	**15 35 49.0**	**-1.1**
	4.4nm,0.3s,baz=299,slow=23,SNR=38						
DZM	**Mont Dzumac**	**14.80**	**251**	P	**P**	**15 35 49.1**	**-1.0**
KNTN	**Kanton**	**16.42**	**24**	P	**P**	**15 36 03.2**	**-2.2**
URZ	**Urewera**	**20.65**	**190**	P	**P**	**15 36 42.0**	**-1.5**
	8.4nm,1.0s,baz=330,slow=8.1,SNR=2.3						
URZ	**Urewera**	**20.65**	**190**	IAmb	IAmb	15 36 56.1	
	comp=Z,15nm,1.1s						
BKZ	**Black Stump Fm**	**21.64**	**191**	P	**P**	**15 36 50.7**	**-1.7**
BKZ				IAmb	IAmb	15 36 58.3	
	comp=Z,11nm,1.1s						
EIDS	**Eidsvold**	**29.24**	**250**	P	**P**	**15 37 58.8**	**-0.7**
ARMA	**Armidale**	**29.91**	**240**	P	**P**	**15 38 06.2**	**+0.8**
RABL	**Rabaul**	**31.83**	**292**	P	**P**	**15 38 20.9**	**-1.0**
KRVT	**Keravat (AS076**	**31.90**	**292**	P	**P**	**15 38 21.6**	**-0.8**
	comp=Z,28nm,0.5s,baz=249,slow=2.6,SNR=6.0						
CTA	**Charters Tower**	**33.41**	**261**	P	**P**	**15 38 34.7**	**-0.4**

	comp=Z,13nm,0.6s,baz=90,slow=11,SNR=29						
CAN	Canberra	33.68	233	P	P	15 38 37.6	+0.4
CAN				IAmb	IAmb	15 38 38.5	
	comp=Z,18nm,0.8s						
PMG	Port Moresby	34.43	280	P	P	15 38 44.2	+0.6
	comp=Z,42nm,0.8s,baz=86,slow=8.0,SNR=12						
PMG	Port Moresby	34.43	280	P	P	15 38 44.0	+0.4
COEN	Coen	37.07	270	P	P	15 39 05.8	+0.3
TOO	Toolangi	37.15	231	P	P	15 39 06.7	+0.9
STKA	Stephens Creek	38.60	241	P	P	15 39 18.4	+0.7
	comp=Z,28nm,0.5s,baz=90,slow=9.9,SNR=104						
STKA	Stephens Creek	38.60	241	P	P	15 39 18.4	+0.7
STKA				IAmb	IAmb	15 39 19.1	
	comp=Z,9.5nm,1.1s						
JAY	Jayapura	42.88	286	P	P	15 39 52.7	+0.9
	comp=Z,26nm,1.0s						
BBOO	Buckleboo	43.38	241	P	P	15 39 55.6	+0.1
MLH	Mauna Loa	43.52	32	P	P	15 39 58.3	+1.4
HMH	Humu'ula Sheep	43.56	32	P	P	15 39 58.0	+0.7
KEKH	Kekaha	43.68	26	P	P	15 39 58.6	+0.8
WR0	Warramunga Arr	44.41	260	P	P	15 40 02.6	-1.0
WR0				IAmb	IAmb	15 40 05.4	
	comp=Z,7.0nm,0.8s						
WB0	Warramunga Arr	44.57	260	P	P	15 40 03.6	-1.2
WB0				IAmb	IAmb	15 40 04.7	
	comp=Z,19nm,0.7s						
WB2	Warramunga Arr	44.59	260	P	P	15 40 04.0	-1.0
WRAB	Tennant Creek	44.59	260	P	P	15 40 04.0	-1.0
WRA	Warramunga Arr	44.60	260	P	P	15 40 03.8	-1.3
	comp=Z,12nm,0.5s,baz=94,slow=7.0,SNR=171						
WRA				PcP	PcP	15 41 35.4	+0.1
	comp=Z,1.4nm,0.5s,baz=100,slow=3.9,SNR=4.9						
WRA				ScP	ScP	15 44 35.2	+2.4
	comp=Z,0.6nm,0.9s,baz=94,slow=3.8,SNR=3.1						
WRA	Warramunga Arr	44.60	260	P	P	15 40 04.0	-1.1
WRA					PcP	15 41 35.3	0.0
AS31	Alice Springs	44.76	254	P	P	15 40 06.1	-0.2
ASAR	Alice Springs	44.76	254	P	P	15 40 06.0	-0.3
	comp=Z,132nm,0.6s,baz=88,slow=8.4,SNR=1753						
ASAR				PcP	PcP	15 41 36.2	+0.4
	comp=Z,2.0nm,0.4s,baz=96,slow=4.0,SNR=4.2						
ASAR				ScP	ScP	15 44 36.0	+2.5
	comp=Z,0.6nm,0.7s,baz=92,slow=4.1,SNR=4.1						
ASAR				S	S	15 45 60.0	-2.1
	comp=Z,0.6nm,0.9s,baz=88,slow=15,SNR=5.4						
ASAR	Alice Springs	44.76	254	P	P	15 40 05.8	-0.5
ASAR					PcP	15 41 36.4	+0.6
MTN	Manton Dam	48.77	268	P	P	15 40 35.6	-0.9
MTN				IAmb	IAmb	15 40 36.3	
	comp=Z,17nm,0.7s						
FORT	Forrest	49.98	245	P	P	15 40 44.6	-0.5
KNRA	Kununurra	50.46	264	P	P	15 40 48.5	-0.3
SIJI	Sorong	52.20	283	P	P	15 41 01.6	+0.1
	comp=Z,34nm,0.6s,baz=110,slow=6.3,SNR=26						
FITZ	Fitzroy Crossi	53.00	261	P	P	15 41 07.1	+0.1
	comp=Z,3.5nm,0.3s,baz=108,slow=3.1,SNR=8.5						
FITZ	Fitzroy Crossi	53.00	261	P	P	15 41 06.4	-0.7
LBMI	Labuha	55.79	282	P	P	15 41 27.2	+0.5
	comp=Z,19nm,0.7s						
SOEI	Soe	56.04	270	P	P	15 41 29.9	+1.3
	comp=Z,64nm,0.8s						
SOEI	Soe	56.04	270	P	P	15 41 29.9	+1.3
SANI	Sanana	56.71	280	P	P	15 41 32.5	-0.5
	comp=Z,28nm,1.2s						
PSA00	Pilbara Seismi	57.88	255	P	P	15 41 40.3	-0.6
PSA00				IAmb	IAmb	15 41 41.1	
	comp=Z,18nm,0.6s						
PSA00	Pilbara Seismi	57.88	255	P	P	15 41 39.8	-1.0
PSA00				IAmb	IAmb	15 41 40.3	
	comp=Z,19nm,0.6s						
MMRI	Maumere	58.27	271	P	P	15 41 42.5	-1.1
MMRI				IAmb	IAmb	15 41 55.8	
	comp=Z,21nm,1.0s						
NWAO	Narrogin (SRO)	59.18	242	P	P	15 41 49.4	-0.1
NWAO	Narrogin (SRO)	59.18	242	P	P	15 41 49.3	-0.1
NWAO				IAmb	IAmb	15 41 50.7	
	comp=Z,9.0nm,0.8s						
VNDA	Vanda	60.45	185	P	P	15 41 55.9	-1.1
	comp=Z,0.7nm,0.3s,baz=8.3,slow=3.0,SNR=12						
VNDA	Vanda	60.45	185	P	P	15 41 55.7	-1.3
MORW	Morawa	60.45	246	P	P	15 41 57.4	-0.6
GIRL	Giralia	62.87	253	P	P	15 42 14.5	+0.8
JAGI	Jajag, Banyuwa	66.01	269	P	P	15 42 32.4	-1.3
JAGI				IAmb	IAmb	15 42 33.1	
	comp=Z,22nm,0.7s						
MJAR	Matsushiro Arr	67.89	323	P	P	15 42 44.7	-0.1
	comp=Z,1.6nm,0.5s,baz=134,slow=5.5,SNR=5.8						
MJAR	Matsushiro Arr	67.89	323	P	P	15 42 44.8	+0.1
KKM	Kota Kinabalu	68.71	284	P	P	15 42 49.7	-0.6
KKM				IAmb	IAmb	15 42 52.7	
	comp=Z,12nm,1.0s						
UGM	Wanagama	69.61	268	P	P	15 42 55.3	-0.3
ATKA	Atka Island	69.91	3	P	P	15 42 55.3	-1.1
ATKA				IAmb	IAmb	15 43 07.8	
	comp=Z,29nm,1.1s						
QSPA	South Pole Qui	72.15	180	P	P	15 43 10.9	+1.3
SSLB	Suanglung	72.21	303	P	P	15 43 08.7	-1.9
SSLB				IAmb	IAmb	15 43 17.8	
	comp=Z,5.5nm,0.7s						
TPUB	Ta-pu	72.23	302	P	P	15 43 09.9	-0.9
TPUB				IAmb	IAmb	15 43 11.0	
	comp=Z,12nm,0.8s						
KSM	Kuching	72.65	277	P	P	15 43 13.7	+0.4
KSM				IAmb	IAmb	15 43 15.0	
	comp=Z,20nm,0.8s						
LEM	Lembang	72.68	268	P	P	15 43 13.7	0.0
	comp=Z,30nm,0.7s,baz=122,slow=22,SNR=10.0						
PETK	Petropavlovsk-	73.67	345	P	P	15 43 18.6	+0.3
	comp=Z,4.5nm,0.7s,baz=137,slow=8.7,SNR=9.4						
PETK	Petropavlovsk-	73.67	345	P	P	15 43 17.7	-0.6
KSRS	Korea Array	74.68	318	P	P	15 43 25.8	+1.5
	comp=Z,0.5nm,0.6s,baz=133,slow=6.8,SNR=2.5						
MDPB	Devils Postpil	78.50	44	P	P	15 43 47.5	+2.0
YBH	Yreka Blue Hor	78.54	39	P	P	15 43 47.5	+2.0
BEKR	Beckworth	78.91	42	P	P	15 43 48.5	+1.0
HUMO	Hull Mountain	78.92	38	P	P	15 43 49.8	+2.5
PNTR	Pine Nut	78.96	43	P	P	15 43 50.0	+2.1
PNTR				IAmb	IAmb	15 43 50.8	
	comp=Z,14nm,0.9s						
NVAR	Mina Array Bea	79.44	44	P	P	15 43 52.2	+1.8
	comp=Z,4.0nm,0.7s,baz=224,slow=8.7,SNR=36						
NVAR	Mina Array Bea	79.44	44	P	P	15 43 51.9	+1.4
KVN	Kaiserville	79.91	43	P	P	15 43 54.7	+1.8
CNPM	China Poot	80.29	14	P	P	15 43 54.9	+0.8
CNPM				IAmb	IAmb	15 43 56.2	
	comp=Z,11nm,1.0s						
BRLK	Bradley Lake	80.58	14	P	P	15 43 56.2	+0.6
BRLK				IAmb	IAmb	15 43 56.9	
	comp=Z,6.4nm,0.8s						
H04A	Detroit Lake	80.61	37	P	P	15 43 57.3	+1.2
H04A				IAmb	IAmb	15 43 58.2	
	comp=Z,6.6nm,0.7s						
RSO	Redoubt South	80.81	13	P	P	15 43 57.4	+0.4
I07A	Izee	81.82	39	IAmb	IAmb	15 44 05.3	
	comp=Z,7.0nm,0.8s						
SUA	Susitna One	82.14	13	IAmb	IAmb	15 44 04.5	
	comp=Z,7.2nm,0.7s						
319A	Douglas	82.45	54	IAmb	IAmb	15 44 09.7	
	comp=Z,8.6nm,0.8s						
U15A	North Rim	82.54	48	IAmb	IAmb	15 44 09.8	
	comp=Z,9.8nm,0.8s						
KNK	Knik Glacier	82.60	14	IAmb	IAmb	15 44 07.1	
	comp=Z,6.0nm,0.7s						
GHO	Glory Hole Cre	82.81	14	IAmb	IAmb	15 44 08.1	
	comp=Z,12nm,0.6s						
SCM	Sheep Creek Mo	83.23	14	IAmb	IAmb	15 44 10.3	
	comp=Z,14nm,0.6s						
GLB	Gilahina Butte	83.77	16	IAmb	IAmb	15 44 13.0	
	comp=Z,7.2nm,0.6s						
BALM	Baldy	83.83	17	IAmb	IAmb	15 44 13.1	
	comp=Z,6.8nm,0.5s						
MAW	Mawson	83.85	200	P	P	15 44 13.2	+1.1
	comp=Z,1.7nm,0.5s,baz=140,slow=9.9,SNR=1.6						
PSI	Prapat	83.85	275	P	P	15 44 12.6	-0.8
	comp=Z,2.8nm,0.3s,baz=141,slow=23,SNR=6.4						
TRF	Thorofare Moun	84.01	12	IAmb	IAmb	15 44 13.6	
	comp=Z,13nm,0.9s						
RND	Reindeer	84.27	13	IAmb	IAmb	15 44 15.3	
	comp=Z,8.5nm,0.6s						
MCK	McKinley	84.55	13	IAmb	IAmb	15 44 16.4	
	comp=Z,9.9nm,1.1s						
WRH	Wood River Hil	85.37	13	IAmb	IAmb	15 44 21.4	
	comp=Z,4.7nm,0.8s						
CCB	Clear Creek Bu	85.59	13	IAmb	IAmb	15 44 20.5	
	comp=Z,3.6nm,0.6s						
ILAR	Eielson Array	85.89	13	P	P	15 44 21.4	-0.4
	comp=Z,1.5nm,0.4s,baz=220,slow=5.1,SNR=44						
ILAR	Eielson Array	85.89	13	P	P	15 44 21.9	0.0
TX31	Lajitas Ar. Si	86.02	58	IAmb	IAmb	15 44 27.2	
	comp=Z,5.5nm,0.8s						
TX32	Lajitas Array	86.02	58	IAmb	IAmb	15 44 27.2	
	comp=Z,5.6nm,0.8s						
TXAR	Lajitas Array	86.02	58	P	P	15 44 26.0	+2.6
	comp=Z,4.9nm,0.8s,baz=220,slow=5.9,SNR=43						
TXAR	Lajitas Array	86.02	58	P	P	15 44 26.4	+2.9
IMW	Indian Meadow	87.00	42	IAmb	IAmb	15 44 30.9	
	comp=Z,6.6nm,0.8s						
PD31	Pinedale Array	87.37	43	IAmb	IAmb	15 44 31.8	
	comp=Z,3.1nm,0.7s						
PDAR	Pinedale Array	87.37	43	P	P	15 44 30.9	+1.2
	comp=Z,2.7nm,0.6s,baz=217,slow=3.6,SNR=34						
PDAR	Pinedale Array	87.37	43	P	P	15 44 31.1	+1.4
BMAR	Burnt Mountain	88.66	12	P	P	15 44 36.1	+1.2
CMAR	Chiang Mai Arr	88.85	290	P	P	15 44 38.2	+1.4
	comp=Z,1.6nm,0.9s,baz=120,slow=3.0,SNR=11						
SNAA	Sanae	90.60	179	P	P	15 44 44.1	+0.1
VNA3	Neumayer Olymp	90.74	176	P	P	15 44 45.4	+0.8
VNA2	Neumayer--Watz	91.18	177	P	P	15 44 46.9	+0.2
INK	Inuvik	91.89	15	IAmb	IAmb	15 44 50.6	
	comp=Z,4.7nm,1.0s						
YKA	Yellowknife Ar	94.34	25	P	P	15 45 00.9	-0.1
	comp=Z,0.7nm,0.5s,baz=238,slow=4.4,SNR=12						
MKAR	Makanchi Array	109.11	314	PKiKP	PKiKP	15 50 07.0	-0.7
	comp=Z,0.2nm,0.5s,baz=61,slow=1.8,SNR=4.0						
BRTR	Keskin Array B	144.76	315	PKP	PKPdf	15 51 15.4	+0.4
	comp=Z,0.9nm,0.5s,baz=122,slow=3.1,SNR=7.4						
CLL	Collm	145.45	347	*e*PKPbc	PKPab	15 51 19.0	+0.5
BRG	Berggiesshubel	145.66	346	*e*PKP	PKPbc	15 51 18.8	+1.1
	comp=Z,2.5nm,1.1s						
VYHS	Vyhne	146.40	339	*e*PKP	PKPbc	15 51 20.6	+0.8
VYHS				*e*		15 51 23.8	
GERES	GERESS Array B	147.60	345	PKPbc	PKPbc	15 51 23.7	+0.6
	comp=Z,0.6nm,0.5s,baz=28,slow=2.3,SNR=5.6						
GERES	GERESS Array B	147.60	345		PKPbc	15 51 24.1	+1.0

DJA 28 15:34:32.6±0.5**,6˚S**±3˚×**13˚0E**±˚**,h176**^{km}±9^{km}**,M3.9**/7**,**
mB4.5/1**,mb3.7**/1**,MLv4.0**/7**,Mw(mB)3.7**/1**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.59	159	P	Pn	15 35 17.1	+0.9
SAUI				S	Sn	15 35 51.5	+1.4
MSAI	Masohi	2.61	327	P	Pn	15 35 16.9	+0.5
MSAI				S	Sn	15 35 49.9	-0.7
FAKI	Fak Fak	3.22	36	P	Pn	15 35 24.9	+1.1
FAKI				S	Sn	15 36 02.6	-1.2
SANI	Sanana	5.58	308	P	Pn	15 35 54.6	+0.5
SOEI	Soe	7.34	235	P	Pn	15 36 17.2	-0.2

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*IDC **28** 16:01:37.8±1.5, 5°.67S×153°.15E, h0^{km}, mb3.8/8, mb1 3.9/10, mb1mx3.8/39, mbtmp3.9/10, ML2.8/2, Error ellipse: s-maj=35.7km s-min=17.0km az=100.0*

ISC 28 16:01:43.0±1.2**,5°.65S**±0°.07×**153°.2E**±0°.1**,h37**^{km}**,n11,**
σ**0**^{s}**92**/13**,mb3.7**/8**,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.75	319	Pn	Pn	16 02 09.9	-0.9
	40nm,0.3s,baz=164,slow=1.8,SNR=98						
KRVT				Sn	Sn	16 02 32.1	+0.2
	54nm,0.3s,baz=13,slow=19,SNR=20						
PMG	Port Moresby	7.03	238	Pn	Pn	16 03 23.1	-0.3
	1.7nm,0.3s,baz=38,slow=10,SNR=7.5						
PMG				Sn	Sn	16 04 43.4	+1.2
	1.4nm,0.3s,baz=295,slow=15,SNR=2.9						
CTA	Charters Tower	15.85	204	Pn	Pn	16 05 24.0	+0.5
	0.2nm,0.3s,baz=36,slow=17,SNR=2.3						
WRA	Warramunga Arr	23.18	230	P	P	16 06 45.2	-1.4
	2.3nm,1.0s,baz=54,slow=9.5,SNR=10.0						
ASAR	Alice Springs	25.79	224	P	P	16 07 10.9	+0.2
	0.8nm,0.8s,baz=57,slow=9.5,SNR=18						
STKA	Stephens Creek	28.25	201	P	P	16 07 31.9	-0.8
	1.4nm,0.8s,baz=356,slow=16,SNR=3.4						
FITZ	Fitzroy Crossi	29.59	243	P	P	16 07 44.0	-0.8
	1.3nm,0.5s,baz=56,slow=8.6,SNR=9.9						
PETK	Petropavlovsk-	58.66	3	P	P	16 11 36.6	+0.2
	4.2nm,1.1s,baz=162,slow=6.3,SNR=2.0						
SONM	Songino Array	67.23	328	P	P	16 12 35.0	+1.3
	0.2nm,0.4s,baz=137,slow=2.3,SNR=2.8						
MKAR	Makanchi Array	81.20	319	P	P	16 13 56.1	+1.0
	0.3nm,0.8s,baz=105,slow=7.6,SNR=3.6						
ZALV	Zalesovo Beam	82.06	326	P	P	16 13 59.3	-0.1
	0.5nm,0.4s,baz=104,slow=6.6,SNR=2.3						

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*IDC **28** 16:14:55.8±0.4, 5°.58S×153°.03E, h0^{km}, mb4.9/39, mb1 4.9/41, mb1mx4.8/51, mbtmp4.9/41, ML3.5/2, MS4.4/28, Ms1 4.5/28, ms1mx4.3/39, Error ellipse: s-maj=13.8km s-min=9.0km az=82.0*

*BJI **28** 16:14:57.4±0.0, 5°.22S×153°.39E, h22^{km}, mB5.3/67, mb4.8/66, Ms5.1/66, Ms7 4.7/59*

*NEIC **28** 16:14:57.1±2.4, 5°.59S±0°.07×153°.02E±0°.08, h10^{km}±1^{km}, mb5.1/52, Error ellipse: s-maj=12.8km s-min=11.2km az=91.0*

*MOS **28** 16:15:00.1±0.9, 5°.57S×153°.01E, h44^{km}, mb5.4/29, Error ellipse: s-maj=11.0km s-min=6.9km az=91.4*

*GCMT **28** 16:15:02.1±0.1, 5°.86S±0°.01×153°.05E±0°.01, h15^{km}, MW5.2/123, Moment Tensor Solution. s100,c141; s123,c218; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.63±.02; $M_{\theta\theta}$-0.57±.01; $M_{\phi\phi}$-0.06±.01; $M_{r\theta}$0.58±.03; $M_{\theta\phi}$0.15±.01; $M_{\phi r}$-0.19±.03; Best double couple: $M_0$0.87100×10^{17} NP1:ϕ_s284.00000°,δ23.00000°, λ87.00000°. NP2:ϕ_s107.00000°,δ67.00000°,λ91.00000°. Principal axes: T 0.8820, Plg68.0000°, Azm20.0000°; N -0.0210, Plg1.0000°, Azm287.0000°; P -0.8600, Plg22.0000°, Azm196.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **28** 16:15:02.1±0.4, 5˚S±3˚×15˚3E±˚, h64^{km}±5^{km}, M5.0/21, mb5.1/21, mB5.4/16, MLv5.3/3, Mw(mB)4.9/16, Mwp5.4/3*

ISC 28 16:14:59.3±0.6**,5°.59S**±0°.04×**153°.10E**±0°.05**,h23**^{km}±3^{km}**,**
n284,σ**1**^{s}**68**/328**,mb5.0**/93**,MS4.5**/46**,11C-1D,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.66	320	Pn	Pn	16 15 27.3	+0.2
	357nm,0.3s,baz=173,slow=1.3,SNR=343						
KRVT				Sn	Sn	16 15 47.3	-0.4
	799nm,0.3s,baz=186,slow=2.1,SNR=6.2						
KRVT				LR	LR	16 16 10.4	
	comp=Z,11μm,19.8s,baz=89,slow=46						
RABL	Rabaul	1.67	326		Pn	16 15 27.4	+0.2
PMG	Port Moresby	7.00	237	Pn	Pn	16 16 40.9	+0.5
	9.4nm,0.3s,baz=54,slow=6.6,SNR=32						
PMG				Sn	Sn	16 18 01.9	+2.5
	39nm,0.3s,baz=75,slow=20,SNR=14						
PMG				LR	LR	16 19 48.2	
	comp=Z,2μm,18.7s,baz=31,slow=42						
PMG	Port Moresby	7.00	237	*ce*P	Pn	16 16 40.1	-0.4
PMG				pmax	pmax		
	comp=Z,791nm,1.0s						
PMG	Port Moresby	7.00	237		Pn	16 16 41.3	+0.8
HNR	Honiara	7.79	120	Pn	Pn	16 16 56.2	+4.8
	comp=Z,4.9nm,0.3s,baz=141,slow=0.4,SNR=3.7						
HNR				Sn	Sn	16 18 24.4	+5.5
	baz=312,slow=20,SNR=1.8						
HNR				LR	LR	16 19 20.6	
	comp=Z,2μm,18.1s,baz=304,slow=34						
HNR	Honiara	7.79	120	*e*P	Pb	16 17 05.0	-8.7
COEN	Coen	12.83	229	P	Pn	16 17 59.3	-1.1
	baz=13,SNR=4.6						
COEN	Coen	12.83	229		Pn	16 18 00.2	-0.2
GENI	Genyem	13.23	282	P	Pn	16 18 07.1	+1.2
	comp=Z,3μmcomp=Z,3μmcomp=Z,102nm,1.5s						
PATS	Pohnpei	13.40	23	P	Pn	16 18 05.0	-3.2
	baz=13,SNR=3.1						
PATS	Pohnpei	13.40	23		Pn	16 18 06.6	-1.6
MTSU	Mount Surprise	15.13	214	P	Pn	16 18 32.0	+0.2
	baz=15,SNR=114						
CTA	Charters Tower	15.87	204	Pn	Pn	16 18 42.7	+1.3
	comp=Z,0.8nm,0.3s,baz=28,slow=13,SNR=29						
CTA				LR	LR	16 24 05.5	
	comp=Z,2μm,19.7s,baz=24,slow=35						
CTAO	Charters Tower	15.87	204	P	Pn	16 18 41.9	+0.5
CTAO				pmax	pmax		
	comp=Z,71nm,1.2s						
EIDS	Eidsvold	19.76	185	P	P	16 19 27.6	-0.2
	baz=20,SNR=27						
EIDS	Eidsvold	19.76	185	P	P	16 19 28.1	+0.3
EIDS				IAmb	IAmb	16 19 29.6	
	comp=Z,80nm,1.1s						
QIS	Mount Isa	19.82	220	P	P	16 19 28.9	+0.3
	baz=20,SNR=56						
GUMO	Guam	20.73	337	P	P	16 19 38.9	+0.5
	comp=Z,280nm,1.1s,baz=117,slow=5.7,SNR=4.5						
GUMO	Guam	20.73	337	P	P	16 19 39.3	+0.9
GUMO				pmax	pmax		
	comp=Z,338nm,1.2s						
DZM	Mont Dzumac	20.86	143	*e*P	P	16 19 38.1	-1.8
	comp=Z,163nm,1.2s						
DZM				*e*LR	LR	16 24 43.3	
	comp=Z,4μm,25.3s						
DZM	Mont Dzumac	20.86	143	P	P	16 19 40.7	+0.9
	comp=Z,70nm,1.1s,baz=201,slow=7.0,SNR=13						
DZM	Mont Dzumac	20.86	143	P	P	16 19 40.0	+0.1
DZM				IAmb	IAmb	16 19 52.7	
	comp=Z,82nm,1.2s						
RMQ	Roma	21.19	191	P	P	16 19 43.3	0.0
	baz=21,SNR=63						
KDU	Kakadu	21.53	249	P	P	16 19 46.3	-0.8
	baz=22,SNR=51						
SIJI	Sorong	22.29	281	P	P	16 19 54.4	-0.9
	comp=Z,9.6nm,0.4s,baz=131,slow=7.3,SNR=12						
QLP	Quilpie	22.52	201	P	P	16 19 57.2	-0.4
	baz=23,SNR=4.5						
MTN	Manton Dam	22.83	250	P	P	16 19 59.6	-1.4
	baz=23,SNR=10						
MTN	Manton Dam	22.83	250	P	P	16 20 00.0	-1.0
WR0	Warramunga Arr	23.01	230	P	P	16 19 59.2	-3.6
WB0	Warramunga Arr	23.01	231	P	P	16 20 02.1	-0.8
WB0				IAmb	IAmb	16 20 07.1	
	comp=Z,101nm,1.1s						
WRAB	Tennant Creek	23.14	230	P	P	16 20 03.1	-1.1
WRAB				pmax	pmax		
	comp=Z,86nm,1.1s						
WRAB	Tennant Creek	23.14	230	P	P	16 20 03.1	-1.1
WRAB				IAmb	IAmb	16 20 08.2	
	comp=Z,86nm,1.1s						
WB2	Warramunga Arr	23.15	230	P	P	16 20 03.3	-1.0
WRA	Warramunga Arr	23.16	230	P	P	16 20 02.9	-1.5
	comp=Z,96nm,1.1s,baz=54,slow=8.7,SNR=42						
WRA				PcP	PcP	16 23 52.1	-0.5
	comp=Z,4.0nm,0.8s,baz=48,slow=2.7,SNR=5.0						
WRA				S	S	16 24 11.8	-3.0
	comp=Z,0.8nm,0.7s,baz=53,slow=17,SNR=2.5						
WRA				ScP	ScP	16 27 33.5	+4.1
	comp=Z,3.1nm,0.9s,baz=74,slow=3.0,SNR=6.1						
WRA				LR	LR	16 29 50.5	
	comp=Z,2μm,18.5s,baz=60,slow=39						
WRA	Warramunga Arr	23.16	230	P	P	16 20 02.4	-2.0
WRA					PcP	16 23 53.2	+0.6
ARMA	Armidale	24.73	183	P	P	16 20 19.5	+0.3
	baz=25,SNR=9.9						
ARMA	Armidale	24.73	183	P	P	16 20 18.4	-0.9
ARMA				IAmb	IAmb	16 20 24.2	
	comp=Z,55nm,1.2s						
AS31	Alice Springs	25.77	224	P	P	16 20 28.0	-0.7
ASAR	Alice Springs	25.78	224	P	P	16 20 27.8	-0.9
	comp=Z,21nm,0.8s,baz=62,slow=8.4,SNR=122						
ASAR				PcP	PcP	16 23 59.3	+1.0
	comp=Z,3.2nm,0.9s,baz=58,slow=3.0,SNR=4.3						
ASAR				S	S	16 24 52.8	-4.0
	comp=Z,0.6nm,0.7s,baz=45,slow=8.0,SNR=2.0						
ASAR				ScP	ScP	16 27 39.2	+2.5
	comp=Z,0.6nm,0.9s,baz=64,slow=4.7,SNR=1.9						
ASAR				LR	LR	16 30 21.3	
	comp=Z,1μm,20.2s,baz=48,slow=36						
ASAR	Alice Springs	25.78	224	P	P	16 20 27.9	-0.8
ASAR	Alice Springs	25.78	224	P	P	16 20 27.9	-0.8
ASAR					PcP	16 23 59.0	+0.7
ASAR					ScP	16 27 44.1	+7.4
KNRA	Kununurra	25.90	245	P	P	16 20 29.5	-0.3
	baz=26,SNR=18						
KNRA	Kununurra	25.90	245	P	P	16 20 29.9	+0.1
CMSA	Cobar Meteorol	26.73	194	P	P	16 20 37.1	0.0
	baz=27,SNR=10						
SANI	Sanana	27.27	276	P	P	16 20 38.9	-3.4
	comp=Z,27nm,1.0s						
H11S3	WAKE ISLAND Hy	27.43	29	T	T	16 49 52.8	
	baz=206,slow=74,SNR=7.3						
H11S2	WAKE ISLAND Hy	27.44	29	T	T	16 49 57.3	
	baz=206,slow=74,SNR=2.1						
H11S1	WAKE ISLAND Hy	27.45	29	T	T	16 49 52.9	
	baz=206						
STKA	Stephens Creek	28.28	201	P	P	16 20 50.4	-0.7
	baz=28,SNR=7.6						
STKA	Stephens Creek	28.28	201	P	P	16 20 49.5	-1.6
	comp=Z,22nm,0.9s,baz=358,slow=7.9,SNR=42						
STKA				LR	LR	16 32 06.0	
	comp=Z,2μm,19.2s,baz=19,slow=36						
STKA	Stephens Creek	28.28	201	P	P	16 20 49.3	-1.8
STKA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
STKA	Stephens Creek	28.28	201	P	P	16 20 49.3	-1.8
FITZ	Fitzroy Crossi	29.55	243	P	P	16 21 01.6	-0.9
	baz=30,SNR=78						
FITZ	Fitzroy Crossi	29.55	243	P	P	16 21 01.8	-0.8
	comp=Z,35nm,0.6s,baz=73,slow=7.5,SNR=157						
FITZ				LR	LR	16 33 49.4	
	comp=Z,423nm,20.3s,baz=67,slow=38						
FITZ	Fitzroy Crossi	29.55	243	P	P	16 21 02.0	-0.5
FITZ				IAmb	IAmb	16 21 02.8	
	comp=Z,34nm,0.7s						
WRKA	Warakurna	30.64	228	P	P	16 21 10.6	-1.6
	baz=31,SNR=20						
HTT	Hallett	30.68	204	P	P	16 21 11.6	-0.7
	baz=31,SNR=15						
BBOO	Buckleboo	31.40	208	P	P	16 21 17.4	-1.3
	baz=32,SNR=12						
BBOO	Buckleboo	31.40	208	P	P	16 21 17.2	-1.5
BBOO				IAmb	IAmb	16 21 20.7	
	comp=Z,20nm,0.9s						
ARPS	Mount Arapiles	32.70	197	P	P	16 21 29.7	-0.4
	baz=33,SNR=5.5						
JCJ	Chichijima	34.17	343	LR	LR	16 34 02.5	
	comp=Z,292nm,19.2s,baz=150,slow=34						
FORT	Forrest	34.37	220	P	P	16 21 43.9	-0.8
	baz=34,SNR=8.3						
FORT	Forrest	34.37	220	P	P	16 21 42.4	-2.3
PSA00	Pilbara Seismi	35.89	241	P	P	16 21 56.9	-1.1
PSA00	Pilbara Seismi	35.89	241	P	P	16 21 57.8	-0.1
PSA00				IAmb	IAmb	16 21 58.4	
	comp=Z,12nm,0.8s						
JAGI	Jajag, Banyuwa	38.74	263	P	P	16 22 20.2	-2.0
JAGI				IAmb	IAmb	16 22 32.9	
	comp=Z,32nm,1.0s						
MEEK	Meekatharra	38.97	234	P	P	16 22 23.1	-0.9
	baz=39,SNR=17						
URZ	Urewera	39.16	150	P	P	16 22 25.9	+0.5
	comp=Z,20nm,1.2s,baz=121,slow=5.1,SNR=3.1						
URZ				LR	LR	16 37 54.3	
	comp=Z,2μm,18.2s,baz=359,slow=35						
URZ	Urewera	39.16	150	IAmb	IAmb	16 22 41.2	
	comp=Z,54nm,1.4s						
RPZ	Rata Peaks	41.13	160	P	P	16 22 41.7	0.0
	comp=Z,11nm,0.8s,baz=343,slow=5.8,SNR=5.2						
RPZ				LR	LR	16 38 09.5	
	comp=Z,2μm,19.7s,baz=328,slow=34						
RPZ	Rata Peaks	41.13	160	IAmb	IAmb	16 22 49.2	
	comp=Z,39nm,1.3s						
KLBR	Kellerberrin	41.99	228	P	P	16 22 47.3	-1.6
	baz=42,SNR=11						
MORW	Morawa	42.09	232	P	P	16 22 48.7	-1.1
	baz=42,SNR=4.8						
MORW	Morawa	42.09	232	P	P	16 22 47.6	-2.1
BLDU	Ballidu	42.28	229	P	P	16 22 49.9	-1.4
	baz=42,SNR=6.6						
MUN	Mundaring	43.32	228	P	P	16 22 58.7	-1.0
	baz=44,SNR=6.3						
JNU	Nakatsue	43.90	333	P	P	16 23 04.2	-0.2
	comp=Z,46nm,1.0s,baz=136,slow=7.5,SNR=14						
MJAR	Matsushiro Arr	44.17	343	P	P	16 23 04.3	-2.2
	comp=Z,11nm,1.0s,baz=162,slow=8.3,SNR=17						
MJAR				PcP	PcP	16 24 51.7	+0.5
	comp=Z,6.0nm,1.0s,baz=162,slow=2.6,SNR=7.0						
MJAR				LR	LR	16 38 23.2	
	comp=Z,231nm,21.5s,baz=170,slow=32						
MAJO	Matsushiro	44.17	343	P	P	16 23 02.8	-3.7
MAJO				pmax	pmax		
	comp=Z,22nm,1.2s						
MAT	Matsushiro	44.17	343	P	P	16 23 03.9	-2.6

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MAT                                  S        S         16 29 39.0 +0.6
MJB9  Matsu-Tunnel     44.18 343     P        P         16 23 03.7  -2.8
MJB9                                 IAmb     IAmb      16 23 08.8
      comp=Z,22nm,1.2s
CISI  Cisompet, Garu   45.01 265     P        P         16 23 10.7  -2.9
      comp=Z,2µmcomp=Z,104nm,1.1s
CNJI  Cibinong         45.69 265     P        P         16 23 15.8  -3.1
      comp=Z,2µmcomp=Z,140nm,1.2s
TJN   Taejon           48.21 332ceP           P         16 23 37.1  -1.1
MDSI  Maura Dua        48.73 269     P        P         16 23 39.5  -3.1
KSRS  Korea Array      48.84 333     P        P         16 23 42.4  -0.6
      comp=Z,4.3nm,1.0s,baz=138,slow=8.2,SNR=9.9
KSRS                                 LR       LR        16 41 44.2
      comp=Z,245nm,19.1s,baz=248,slow=33
QIZ   Qiongzhong       49.12 301     P        P         16 23 39.0  -6.6
QIZ                                  S        S         16 30 44.3  -5.5
NJ2   Nanjing          49.64 321    eP        P         16 23 51.0 +1.7
NJ2                                  S        S         16 31 00.5 +3.8
NJ2                                  sS       sS        16 31 06.5  -0.4
NJ2                                  pmax     pmax
      comp=Z,8.0nm,0.5s
NJ2                                  pmax     pmax
      comp=Z,400nm,6.7s
NJ2                                  LR       LR
      comp=Z,880nm,17.5s
NJ2                                  LR       LR
      comp=Z,830nm,15.6s
NJ2                                  LR       LR
      comp=Z,570nm,19.9s
JKA   Kamikawa-asahi   50.38 350     P        P         16 23 54.7   0.0
ASAJ  Asahikawa        50.38 350     P        P         16 23 54.7   0.0
      comp=Z,30nm,1.0s,baz=240,slow=11,SNR=5.9
WHN   Wuhan            51.63 316     P        P         16 24 01.8  -2.5
WHN                                  S        S         16 31 24.5 +0.2
WHN                                  LR       LR
      comp=Z,1µm,17.2s
WHN                                  LR       LR
      comp=Z,530nm,14.7s
WHN                                  LR       LR
      comp=Z,1µm,15.9s
DL2   Dalian           53.00 329     P        P         16 24 16.0 +1.7
DL2                                  ScS      ScS       16 34 00.8  -2.0
DL2                                  pmax     pmax
      comp=Z,260nm,5.7s
DL2                                  LR       LR
      comp=Z,490nm,17.3s
DL2                                  LR       LR
      comp=Z,490nm,14.5s
DL2                                  LR       LR
      comp=Z,570nm,24.1s
USA0B Ussuriysk Arra   53.09 341   i P        P         16 24 13.6  -1.3
USRK  Ussuriysk Ar.    53.09 341     P        P         16 24 14.9   0.0
      comp=Z,12nm,1.0s,baz=167,slow=9.6,SNR=9.5
YSS   Yuzh-Sakhalins   53.11 351    eP        P         16 24 14.5  -0.5
YSS                                 ePPP      PPP       16 27 21.2
YSS                                 eS        S         16 31 38.0  -6.1
YSS                                  MLR      MLR
      comp=N,300nm,15.0s
YSS                                  MLR      MLR
      comp=Z,600nm,15.0s
YSS                                  MLR      MLR
      comp=E,300nm,14.0s
MDJ   Mudanjiang       54.26 339     P        P         16 24 23.3  -0.2
MDJ                                  pP       pP        16 24 29.5 +0.1
MDJ                                  sP       sP        16 24 31.8   0.0
MDJ                                  S        S         16 32 02.8 +3.1
MDJ                                  pmax     pmax
      comp=E,15nm,1.3s
MDJ                                  pmax     pmax
      comp=E,430nm,5.3s
SNY   Shenyang         54.34 333    ⇑P        P         16 24 23.3  -0.8
SNY                                  S        S         16 32 03.3 +2.5
SNY                                  pmax     pmax
      comp=E,230nm,6.4s
SNY                                  LR       LR
      comp=E,320nm,16.4s
SNY                                  LR       LR
      comp=E,490nm,16.4s
SNY                                  LR       LR
      comp=E,590nm,15.7s
GYA   Guiyang          55.11 308    eP        P         16 24 33.3 +3.2
GYA                                  PP       PP        16 26 37.3 +3.6
GYA                                  S        S         16 32 15.3 +3.3
GYA                                  ScS      ScS       16 34 18.5  -0.1
GYA                                  pmax     pmax
      comp=E,10.0nm,0.8s
GYA                                  pmax     pmax
      comp=E,150nm,8.1s
GYA                                  LR       LR
      comp=E,260nm,14.4s
GYA                                  LR       LR
      comp=E,310nm,17.9s
GYA                                  LR       LR
      comp=E,440nm,19.4s
CN2   Changchun        55.14 336    eP        P         16 24 29.0  -0.9
CN2                                 eS        S         16 32 11.8 +0.2
CN2                                  pmax     pmax
      comp=E,10.0nm,1.0s
CN2                                  pmax     pmax
      comp=E,230nm,4.0s
CN2                                  LR       LR
      comp=E,330nm,15.0s
CN2                                  LR       LR
      comp=E,440nm,15.0s
CN2                                  LR       LR
      comp=E,390nm,12.0s
SKR   Severo-Kuril's   56.11     2ceP         P         16 24 36.3  -0.4
BJI   Beijing          56.71 327     P        P         16 24 39.8  -1.4
BJI                                  S        S         16 32 33.8 +1.2
BJI                                  pmax     pmax
      comp=E,8.0nm,1.0s
BJI                                  pmax     pmax
      comp=E,260nm,8.4s
BJI                                  LR       LR
      comp=E,390nm,19.2s
BJI                                  LR       LR
      comp=E,380nm,15.9s
TYV   Tymovskoe        56.95 352    eP        P         16 24 47.0 +4.4
TYV                                  pmax     pmax
      comp=Z,18nm,1.4s
TYV                                  pmax     pmax
      comp=Z,200nm,4.7s
PPT   Papeete          57.21 107     P        P         16 24 46.4 +1.2
      comp=Z,21nm,0.8s,baz=62,slow=21,SNR=1.7
PPT                                  LR       LR        16 46 43.8
      comp=Z,188nm,19.0s,baz=276,slow=33
PPT2  Papeete2         57.21 107    eP        P         16 24 45.6 +0.3
      comp=Z,60nm,1.3s
PPT2                                eS        S         16 32 35.4  -4.8
      comp=Z,580nm,24.5s
PPT2                                eLQ       LQ        16 39 07.2
      comp=Z,893nm,25.5s
PPT2                                eLR       LR        16 41 33.4
      comp=Z,412nm,25.5s
PAE   Paea             57.21 107    eP        P         16 24 45.0  -0.2
      comp=Z,7.7nm,1.1s
XAN   Xi'an            57.40 317     P        P         16 24 45.8  -0.5
XAN                                  pP       sP        16 24 53.5  -1.1
XAN                                  S        S         16 32 43.8 +1.8
XAN                                  pmax     pmax
      comp=Z,7.0nm,1.0s
XAN                                  pmax     pmax
      comp=Z,160nm,4.9s
XAN                                  LR       LR
      comp=Z,350nm,23.7s
XAN                                  LR       LR
      comp=Z,530nm,17.4s
XAN                                  LR       LR
      comp=Z,470nm,17.9s
TIAR  Tiarei           57.43 107    eP        P         16 24 46.4  -0.4
      comp=Z,12nm,0.9s
TVO   Taravao          57.53 107    eP        P         16 24 47.7 +0.1
      comp=Z,24nm,1.2s
KMI   Kunming          57.67 304     P        P         16 24 50.5 +1.9
KMI                                  sP       pwP       16 24 59.3  -0.3
KMI                                  PP       PP        16 26 56.8 +0.1
KMI                                  S        S         16 32 44.8  -1.5
KMI                                  pmax     pmax
      comp=Z,11nm,1.2s
KMI                                  pmax     pmax
      comp=Z,89nm,4.7s
KMI                                  LR       LR
      comp=Z,550nm,24.4s
KMI                                  LR       LR
      comp=Z,350nm,21.2s
KMI                                  LR       LR
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      comp=Z,310nm,19.9s
KLR   Kul'dur          57.68 344     P        P         16 24 47.6  -0.4
      comp=Z,7.8nm,1.1s,baz=146,slow=5.4,SNR=13
KLR                                  PcP      PcP       16 25 42.4 +1.6
      comp=Z,4.2nm,0.7s,baz=155,slow=1.7,SNR=4.5
KLR                                  LR       LR        16 49 00.3
      comp=Z,211nm,18.6s,baz=167,slow=36
KLR   Kul'dur          57.68 344c iP          P         16 24 47.5  -0.4
KLR                                  pmax     pmax
      comp=Z,14nm,1.3s
TBI   Tubuai           57.97 114    eS        S         16 32 45.7  -4.1
      comp=Z,99nm,29.8s
TBI                                 eLQ       LQ        16 39 23.6
      comp=Z,1µm,31.5s
TBI                                 eLR       LR        16 41 47.8
      comp=Z,456nm,22.2s
CMAR  Chiang Mai Arr   58.48 296     P        P         16 24 54.3 +0.2
      comp=Z,2.8nm,0.9s,baz=113,slow=5.3,SNR=22
CMAR                                 LR       LR        16 51 51.7
      comp=Z,115nm,18.0s,baz=100,slow=38
CMAR  Chiang Mai Arr   58.48 296   i P        P         16 24 55.0 +0.9
CMAR                                 pmax     pmax
      comp=Z,5.0nm,0.9s
PET   Petropavlovsk    58.58     4  eP        P         16 24 57.3 +3.2
PET                                 eS        S         16 32 58.9 +2.2
PET                                  MLR      MLR
      comp=Z,500nm,14.0s
PET                                  MLR      MLR
      comp=Z,400nm,13.0s
PEA0B Petropavlovsk-   58.61     3 i P        P         16 24 54.1  -0.2
PEA0B Petropavlovsk-   58.61     3   P        P         16 24 54.8 +0.5
PETK  Petropavlovsk-   58.61     3   P        P         16 24 54.3   0.0
      comp=Z,10.0nm,0.5s,baz=167,slow=8.5,SNR=60
PETK                                 LR       LR        16 47 06.1
      comp=Z,237nm,20.9s,baz=231,slow=33
PETK  Petropavlovsk-   58.61     3   P        P         16 24 54.7 +0.4
PETK  Petropavlovsk-   58.61     3   P        P         16 24 54.7 +0.4
CD2   Chengdu          59.47 311    eP        P         16 25 00.8   0.0
CD2   Chengdu          59.47 311     P        P         16 25 01.0 +0.2
CD2                                  pP       sP        16 25 08.5  -0.7
CD2                                  S        S         16 33 12.3 +3.1
CD2                                  sS       sS        16 33 24.0 +4.8
CD2                                  pmax     pmax
      comp=Z,30nm,0.4s
CD2                                  pmax     pmax
      comp=Z,270nm,5.3s
CD2                                  LR       LR
      comp=Z,670nm,14.7s
CD2                                  LR       LR
      comp=Z,760nm,18.6s
HHC   Hu-ho-hao-te     59.86 324    eP        P         16 25 04.3 +0.9
HHC                                  pmax     pmax
      comp=Z,81nm,1.0s
HHC                                  pmax     pmax
      comp=Z,320nm,6.5s
LZH   Lanzhou          62.00 316    eP        P         16 25 19.8 +1.7
LZH                                  pP       sP        16 25 26.3  -0.2
LZH                                  sP       pwP       16 25 30.0 +0.7
LZH                                  S        S         16 33 42.3 +0.7
LZH                                  pmax     pmax
      comp=Z,18nm,0.9s
LZH                                  pmax     pmax
      comp=Z,200nm,5.4s
LZH                                  LR       LR
      comp=Z,420nm,14.3s
LZH                                  LR       LR
      comp=Z,470nm,13.6s
LZH                                  LR       LR
      comp=Z,560nm,16.3s
ZEA   Zeya             62.98 343    eP        P         16 25 23.4  -0.7
ZEA                                  pmax     pmax
      comp=N,24nm,1.0s
ZEA                                  pmax     pmax
      comp=Z,28nm,1.2s
ZEA                                  pmax     pmax
      comp=Z,400nm,9.0s
MA2   Magadan          64.99 359     P        P         16 25 36.8  -0.4
      comp=Z,174nm,1.3s,baz=158,slow=7.0,SNR=66
MA2   Magadan          64.99 359ceP           P         16 25 36.6  -0.6
MA2                                  pmax     pmax
      comp=Z,61nm,1.0s
MA2   Magadan          64.99 359     P        P         16 25 36.8  -0.4
TAOE  Nuku Hiva Isla   66.24    97  eLR       LR        16 45 45.6
      comp=Z,314nm,21.1s
GTA   Gaotai           66.43 317    eP        P         16 25 46.5  -0.6
GTA                                  pP       pP        16 25 51.3  -1.9
GTA                                  sP       sP        16 25 54.0  -1.5
GTA                                  S        S         16 34 34.8  -1.5
GTA                                  pmax     pmax
      comp=Z,8.0nm,1.4s
GTA                                  pmax     pmax
      comp=Z,200nm,6.2s
GTA                                  LR       LR
      comp=Z,150nm,12.4s
GTA                                  LR       LR
      comp=Z,190nm,11.7s
GTA                                  LR       LR
      comp=Z,260nm,18.2s
CIT   Chita            66.54 335    eP        P         16 25 47.3  -0.1
CIT                                 e                   16 25 58.1
CIT                                 e                   16 26 18.9
CIT                                  pmax     pmax
      comp=Z,47nm,1.2s
ULN   Ulaanbaatar      66.82 328c iP          P         16 25 50.0 +0.6
ULN                                  pmax     pmax
      comp=Z,17nm,1.1s
ULN   Ulaanbaatar      66.82 328     P        P         16 25 50.4 +0.9
ULN                                  IAmb     IAmb      16 25 51.4
      comp=Z,16nm,1.0s
SONM  Songino Array    67.15 328     P        P         16 25 51.9 +0.4
      comp=Z,10nm,0.9s,baz=136,slow=5.7,SNR=54
SONM                                 LR       LR        16 54 10.5
      comp=Z,201nm,20.9s,baz=122,slow=35
SONM  Songino Array    67.15 328     P        P         16 25 52.1 +0.6
SONM                                 pmax     pmax
      comp=Z,12nm,1.0s
SONM  Songino Array    67.15 328     P        P         16 25 52.1 +0.6
SEY   Seymchan         68.33 360     P        P         16 25 58.1  -0.3
      comp=Z,7.9nm,0.3s,baz=306,slow=0.4,SNR=103
LSA   Lhasa            68.93 305     P        P         16 26 04.0 +0.6
LSA                                  pmax     pmax
      comp=Z,35nm,1.0s
YAK   Yakutsk          69.80 348     P        P         16 26 07.7 +0.2
      comp=Z,4.0nm,0.4s,baz=86,slow=6.4,SNR=13
YAK   Yakutsk          69.80 348c iP          P         16 26 06.1  -1.5
YAK                                 e*PP      pwP       16 26 21.2 +2.1
YAK                                 e                   16 26 28.4
YAK                                 eS        S         16 35 11.6  -3.8
YAK                                 e*SS      SKiKP     16 35 59.6 +5.9
YAK                                 eSSS      SSS       16 42 49.8
YAK                                  pmax     pmax
      comp=Z,37nm,1.3s
YAK                                  pmax     pmax
      comp=N,13nm,1.2s
YAK                                  pmax     pmax
      comp=E,8.0nm,1.3s
YAK                                  smax     smax
      comp=N,188nm,4.2s
YAK                                  smax     smax
      comp=E,140nm,3.6s
ZAK   Zakamensk        70.32 329    eP        P         16 26 11.0  -0.1
ZAK                                  pmax     pmax
      comp=Z,28nm,1.2s
TLY   Talaya           70.91 330     P        P         16 26 15.1 +0.5
      comp=Z,8.5nm,0.9s,baz=148,slow=4.7,SNR=20
TLY                                  LR       LR        16 57 49.3
      comp=Z,168nm,19.1s,baz=124,slow=36
TLY   Talaya           70.91 330    eP        P         16 26 14.8 +0.2
TLY                                 eS        S         16 35 29.7 +0.9
TLY                                  pmax     pmax
      comp=Z,16nm,1.1s
TLY                                  MLR      MLR
      comp=Z,771nm,19.0s
IRK   Irkutsk          70.94 331    eP        P         16 26 13.4  -1.4
IRK                                  pmax     pmax
      comp=Z,28nm,1.0s
TAPN  Taplejung        71.06 301    eP        P         16 26 16.4   0.0
      comp=Z,63nm,1.2s
ODAN  Odare            71.20 301    eP        P         16 26 17.1  -0.1
      comp=Z,58nm,0.9s
RAMN  Ramite           71.90 301    eP        P         16 26 21.1  -0.3
VNDA  Vanda            72.03 178     P        P         16 26 21.4 +0.4
      comp=Z,2.5nm,0.8s,baz=336,slow=5.3,SNR=14
VNDA  Vanda            72.03 178     P        P         16 26 21.5 +0.5
VNDA                                 pmax     pmax
      comp=Z,12nm,1.3s
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VNDA  Vanda            72.03 178     P        P         16 26 21.4 +0.5
MOY   Mondy            72.24 329    eP        P         16 26 23.0 +0.2
MOY                                  pmax     pmax
      comp=Z,52nm,1.1s
JIRN  Jiri             72.45 301    eP        P         16 26 24.8   0.0
GUN   Gumba            72.78 301    eP        P         16 26 27.0 +0.2
      comp=Z,70nm,0.9s
PKI   Pulchoki         73.09 301    eP        P         16 26 28.3  -0.3
      comp=Z,68nm,1.3s
PKIN  Phulchoki        73.10 301    eP        P         16 26 28.1  -0.5
KKN   Kakani           73.26 301    eP        P         16 26 29.3  -0.2
PALK  Pallekele        73.35 279     P        P         16 26 30.4 +0.4
PALK                                 pmax     pmax
      comp=Z,15nm,1.0s
DMN   Daman            73.36 301    eP        P         16 26 30.1   0.0
      comp=Z,72nm,1.0s
GKN   Gorkha           73.86 301    eP        P         16 26 32.7  -0.2
      comp=Z,93nm,1.2s
BILL  Bilibino         74.05     5c iP        P         16 26 32.8  -0.2
BILL                                e*PP      sP        16 26 41.6   0.0
BILL                                e                   16 26 46.8
BILL                                e                   16 29 14.7
BILL                                ePPP      PPP       16 31 03.7
BILL                                eS        S         16 36 05.4 +1.4
BILL                                e                   16 36 45.4
BILL                                 SS       SS        16 40 42.0  -7.3
BILL                                 pmax     pmax
      comp=Z,38nm,1.3s
BILL                                 MLR      MLR
      comp=Z,195nm,18.0s
BILL  Bilibino         74.05     5   P        P         16 26 33.7 +0.7
DANN  Dangsing         74.70 301    eP        P         16 26 37.6  -0.4
      comp=Z,50nm,1.0s
OHAK  Old Harbor       76.12    27   P        P         16 26 45.2 +0.2
OHAK                                 IAmb     IAmb      16 26 45.4
      comp=Z,27nm,1.3s
ANM   Nome             76.44    17   P        P         16 26 46.6  -0.2
ANM                                  pmax     pmax
      comp=Z,10.0nm,1.0s
ANM   Nome             76.44    17   P        P         16 26 46.6  -0.2
WMQ   Urumqi           76.52 317    eP        P         16 26 47.8   0.0
WMQ                                  pP       pP        16 26 52.5  -1.5
WMQ                                  sP       pwP       16 26 58.5  -0.6
WMQ                                  S        S         16 36 32.0  -0.6
WMQ                                  SS       SS        16 41 29.5 +1.5
WMQ                                  pmax     pmax
      comp=Z,15nm,1.5s
WMQ                                  pmax     pmax
      comp=Z,270nm,5.3s
WMQ                                  LR       LR
      comp=Z,180nm,20.1s
WMQ                                  LR       LR
      comp=Z,130nm,19.1s
WMQ                                  LR       LR
      comp=Z,300nm,23.5s
HYB   Hyderabad        77.03 289   i P        P         16 26 50.0  -1.1
RSO   Redoubt South    78.19    24   P        P         16 26 55.9  -1.0
CNPM  China Poot       78.30    25   P        P         16 26 56.9  -0.4
CNPM                                 IAmb     IAmb      16 26 58.3
      comp=Z,22nm,0.8s
BRLK  Bradley Lake     78.58    25   P        P         16 26 58.4  -0.5
BRLK                                 IAmb     IAmb      16 26 59.9
      comp=Z,22nm,1.2s
TIXI  Tiksi            78.72 352     P        P         16 26 59.5 +0.1
      comp=Z,2.8nm,0.5s,baz=133,slow=5.9,SNR=16
TIXI                                 LR       LR        16 58 11.1
      comp=Z,126nm,21.7s,baz=150,slow=33
TIXI  Tiksi            78.72 352ceP           P         16 27 00.0 +0.7
TIXI                                 pmax     pmax
      comp=Z,17nm,1.3s
TIXI  Tiksi            78.72 352     P        P         16 27 00.1 +0.8
TIXI                                 IAmb     IAmb      16 27 11.5
      comp=Z,15nm,1.2s
DGZ   Jazzator, Alta   78.89 323   i P        P         16 27 01.2 +0.2
DGZ                                  pmax     pmax
      comp=Z,21nm,1.1s
SUA   Susitna One      79.56    24   P        P         16 27 03.0  -1.3
RC01  Rabbit Creek A   79.77    25   P        P         16 27 04.3  -1.0
RC01                                 IAmb     IAmb      16 27 05.5
      comp=Z,16nm,1.0s
KNK   Knik Glacier     80.47    25   P        P         16 27 07.4  -1.7
KTH   Kantishna Hill   80.63    22   P        P         16 27 08.6  -1.5
KTH                                  IAmb     IAmb      16 27 09.4
      comp=Z,14nm,1.2s
SML   Sawmill          80.72    24   P        P         16 27 10.3  -0.2
SML                                  pmax     pmax
      comp=Z,45nm,1.4s
SML   Sawmill          80.72    24   P        P         16 27 10.3  -0.2
TRF   Thorofare Moun   80.81    22   P        P         16 27 10.4  -0.7
TRF                                  IAmb     IAmb      16 27 11.5
      comp=Z,14nm,1.1s
IMAR  Indian Mountai   81.03    19   P        P         16 27 11.8  -0.2
MK31  Makanchi Array   81.11 319   i P        P         16 27 12.7  -0.2
MK31  Makanchi Array   81.11 319     P        P         16 27 13.5 +0.6
MKAR  Makanchi Array   81.11 319     P        P         16 27 13.1 +0.2
      comp=Z,11nm,0.9s,baz=101,slow=5.6,SNR=58
MKAR                                 PKKPbc   PKKPbc    16 45 50.4  -1.0
      comp=Z,0.3nm,0.8s,baz=264,slow=4.5,SNR=4.1
MKAR                                 LR       LR        17 02 22.8
      comp=Z,241nm,19.8s,baz=117,slow=35
MKAR  Makanchi Array   81.11 319   i P        P         16 27 13.1 +0.2
MKAR                                 pmax     pmax
      comp=Z,13nm,0.9s
MKAR  Makanchi Array   81.11 319     P        P         16 27 13.3 +0.4
MAKZ  Makanchi         81.32 319   i P        P         16 27 13.7  -0.3
MAKZ                                 pmax     pmax
      comp=Z,24nm,1.2s
MAKZ  Makanchi         81.32 319     P        P         16 27 14.1 +0.1
MAKZ                                 IAmb     IAmb      16 27 17.3
      comp=Z,17nm,1.0s
RND   Reindeer         81.34    23   P        P         16 27 12.5  -1.3
RND                                  pmax     pmax
      comp=Z,15nm,1.0s
RND   Reindeer         81.34    23   P        P         16 27 12.5  -1.3
RND                                  IAmb     IAmb      16 27 14.4
      comp=Z,15nm,1.0s
MLY   Manley           81.51    21   P        P         16 27 14.0  -0.6
MLY                                  IAmb     IAmb      16 27 15.4
      comp=Z,16nm,1.2s
ZAA0  Zalesovo Array   81.97 326     P        P         16 27 17.1  -0.2
ZAA0                                 IAmb     IAmb      16 27 17.8
      comp=Z,22nm,1.1s
ZALV  Zalesovo Beam    81.97 326     P        P         16 27 16.6  -0.6
      comp=Z,15nm,0.9s,baz=104,slow=6.3,SNR=39
ZALV                                 LR       LR        17 03 35.0
      comp=Z,183nm,21.6s,baz=104,slow=36
ZALV  Zalesovo Beam    81.97 326     P        P         16 27 16.7  -0.5
PDGK  Podgornoye       82.02 315   i P        P         16 27 16.5  -1.4
PDGK                                 pmax     pmax
      comp=Z,15nm,1.3s
CCB   Clear Creek Bu   82.37    22   P        P         16 27 18.1  -1.0
TCOL  CIGO, UAF Yank   82.47    22   P        P         16 27 18.4  -1.2
      baz=239
HDA   Harding Lake     82.58    22   P        P         16 27 19.4  -0.8
HDA   Harding Lake     82.58    22   P        P         16 27 19.7  -0.5
      baz=240
POKR  Poker Plat Res   82.75    22   P        P         16 27 20.3  -0.8
      baz=240
MCARA McCarthy VSAT    82.76    26   P        P         16 27 20.5  -0.7
MCARA                                IAmb     IAmb      16 27 22.4
      comp=Z,18nm,1.1s
ILAR  Eielson Array    82.78    22   P        P         16 27 19.4  -1.9
      comp=Z,9.0nm,1.1s,baz=254,slow=4.2,SNR=39
ILAR                                 LR       LR        17 02 10.8
      comp=Z,297nm,19.5s,baz=240,slow=34
ILAR  Eielson Array    82.78    22   P        P         16 27 20.8  -0.5
ILAR  Eielson Array    82.78    22   P        P         16 27 20.8  -0.5
BALM  Baldy            82.90    26   P        P         16 27 20.8  -1.4
CTGM  Chitina Glacie   83.32    27   P        P         16 27 23.4  -0.9
CTGM                                 IAmb     IAmb      16 27 25.6
      comp=Z,15nm,1.1s
KSH   Kashi            83.67 311     P        P         16 27 29.0 +2.4
KSH                                  pP       sP        16 27 36.0 +0.8
KSH                                  PP       PP        16 30 45.3 +5.7
KSH                                  S        S         16 37 50.8 +2.6
KSH                                  SS       SS        16 43 22.5 +7.2
KSH                                  pmax     pmax
      comp=Z,38nm,0.9s
KSH                                  pmax     pmax
      comp=Z,420nm,5.1s
KSH                                  LR       LR
      comp=Z,170nm,11.2s
KSH                                  LR       LR
      comp=Z,170nm,12.7s
KSH                                  LR       LR
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             comp=Z,220nm,12.9s
TOLK  Toolik Lake Re    83.87  18   P         P           16 27 27.1 +0.3
             baz=237
ULHL  Ulahol            84.07 313   P         P           16 27 29.5 +0.8
             SNR=13
QSPA  South Pole Qui    84.37 180   P         P           16 27 29.8 +0.1
             comp=Z,9.7nm,0.8s,baz=341,slow=1.6,SNR=24
QSPA  South Pole Qui    84.37 180   P         P           16 27 29.9 +0.3
KURK  Kurchatov         84.57 322 i P         P           16 27 30.1 -0.6
KURK                                pmax      pmax
             comp=Z,36nm,1.1s
KURBB Kurchatov Arra    84.60 322   P         P           16 27 30.5 -0.4
             comp=Z,15nm,1.0s,baz=108,slow=3.9,SNR=59
TKM2  Tokmak 2          84.69 314   P         P           16 27 32.1 +0.3
             SNR=19
KZA   Kyzart            84.76 313   P         P           16 27 33.8 +1.4
             SNR=38
BMAR  Burnt Mountain    84.89  20   P         P           16 27 32.6 +0.6
MAW   Mawson            84.96 203   P         P           16 27 31.4 -0.9
             comp=Z,2.6nm,0.5s,baz=101,slow=8.5,SNR=9.2
MAW                                 LR        LR          17 02 23.6
             comp=Z,243nm,20.5s,baz=60,slow=34
MAW   Mawson            84.96 203   P         P           16 27 31.6 -0.8
MAW                                 pmax      pmax
             comp=Z,7.0nm,1.5s
MAW   Mawson            84.96 203   P         P           16 27 31.6 -0.8
KBK   Karagaybulak      85.10 314   P         P           16 27 34.6 +0.8
             SNR=11
CHMS  Chumysh           85.31 314   P         P           16 27 35.1 +0.4
             SNR=13
CHMS  Chumysh           85.31 314 i P         P           16 27 34.5 -0.2
CHMS                                pmax      pmax
             comp=Z,37nm,1.2s
UCH   Uchtor            85.32 313   P         P           16 27 36.4 +1.0
             SNR=31
AAK   Ala-Archa         85.42 313   P         P           16 27 36.1 +0.6
             comp=Z,8.4nm,0.8s,baz=106,slow=4.4,SNR=23
AAK   Ala-Archa         85.42 313   P         P           16 27 35.8 +0.5
             SNR=13
AAK   Ala-Archa         85.42 313 i P         P           16 27 35.7 +0.3
AAK                                 pmax      pmax
             comp=Z,15nm,1.2s
AAK   Ala-Archa         85.42 313   P         P           16 27 35.9 +0.5
USP   Ospenovka         85.55 314   P         P           16 27 36.3 +0.4
             SNR=13
AML   Almayashu         85.90 313   P         P           16 27 38.8 +0.7
             SNR=39
EKS2  Erkin-Say         85.94 313   P         P           16 27 38.6 +0.6
             SNR=17
NRIK  Noril'sk          86.80 341   P         P           16 27 41.3 -0.1
             comp=Z,13nm,0.8s,baz=115,slow=4.9,SNR=20
NRIK                                LR        LR          17 08 44.3
             comp=Z,192nm,18.2s,baz=126,slow=37
NRIK  Noril'sk          86.80 341 i P         P           16 27 41.0 -0.4
NRIK                                pmax      pmax
             comp=Z,17nm,1.0s
EPYK  Eagle Plains      87.28  22   P         P           16 27 44.1 +0.3
             baz=250
DLBC  Dease Lake        87.91  31   P         P           16 27 47.2 +0.1
             comp=Z,5.5nm,1.1s,baz=208,slow=12,SNR=4.3
INK   Inuvik            89.08  21   P         P           16 27 51.7 -0.6
             comp=Z,6.0nm,0.9s,baz=230,slow=5.6,SNR=11
BVAR  Borovoye Array    90.05 323   P         P           16 27 56.5 -0.7
             comp=Z,9.2nm,0.7s,baz=107,slow=5.0,SNR=51
BRVK  Borovoye          90.12 323   P         P           16 27 55.9 -1.6
NVAR  Mina Array Bea    92.34  52   P         P           16 28 08.5  0.0
             comp=Z,0.8nm,0.7s,baz=254,slow=5.6,SNR=6.4
NVAR                                LR        LR          17 02 56.5
             comp=Z,548nm,20.4s,baz=280,slow=31
A36M  Sachs Harbour     92.70  18   P         P           16 28 09.0 -0.1
             baz=260
SYO   Syowa Base        93.02 199⇑eP        P           16 28 08.0 -2.7
YKA   Yellowknife Ar    95.98  28   P         P           16 28 23.4 -0.9
             comp=Z,3.6nm,1.0s,baz=267,slow=4.3,SNR=22
YKA                                 PKiKP     PKiKP       16 33 03.7 +0.6
             comp=Z,0.3nm,0.7s,baz=257,slow=1.3,SNR=3.9
YKA                                 PKKP      PKKPdf      16 45 16.7 +0.9
             comp=Z,0.1nm,0.5s,baz=79,slow=3.6,SNR=3.6
YKA                                 LR        LR          17 07 12.9
             comp=Z,258nm,20.2s,baz=0.0,slow=33
SVE   Sverdlovsk        95.99 326 eP         P           16 28 23.4 -1.1
ABKAR Akbulak array     96.26 319   P         P           16 28 24.5 -1.4
ARU   Arti              97.13 326   P         P           16 28 28.0 -1.7
             comp=Z,1.8nm,0.7s,baz=103,slow=4.4,SNR=9.6
ARU   Arti              97.13 326d iP         P           16 28 28.1 -1.6
ARU                                                       16 32 26.5
ARU                                 PPP       PPP         16 34 33.8
ARU                                 S         SKSac       16 39 02.8 -2.6
ARU                                 SS        SS          16 46 23.8 -4.9
ARU                                 pmax      pmax
             comp=Z,12nm,1.0s
GEYT  Alibeck           97.33 307   LR        LR          17 13 13.5
             comp=Z,128nm,21.0s,baz=15,slow=36
AKTO  Aktyubinsk        97.51 320   P         P           16 28 30.5 -1.1
             comp=Z,0.8nm,0.6s,baz=137,slow=4.6,SNR=4.5
PDAR  Pinedale Array    99.16  48   P         Pdif        16 28 41.1 +1.6
             comp=Z,0.3nm,0.7s,baz=275,slow=4.2,SNR=2.5
PDAR                                LR        LR          17 09 51.9
             comp=Z,800nm,18.6s,baz=272,slow=33
RES   Resolute Bay     101.09  15   P         Pdif        16 28 48.1 +1.1
             comp=Z,0.9nm,0.8s,baz=300,slow=5.8,SNR=4.5
SNAA  Sanae            101.28 188   Pdiff     Pdif        16 28 44.7 -3.4
VNA2  Neumayer--Watz   102.53 186   Pdiff     Pdif        16 28 54.8 +1.2
FINES FINESS Array B   111.89 336   Pdiff     Pdif        16 29 36.9 +1.6
             comp=Z,0.6nm,0.6s,baz=62,slow=3.3,SNR=3.7
FINES                               PKiKP     PKiKP       16 33 33.2 +1.0
             comp=Z,2.5nm,0.9s,baz=83,slow=4.3,SNR=5.0
AKASG Malin Array Be   115.31 324   PKP       PKiKP       16 33 38.6 -0.5
             comp=Z,1.0nm,0.6s,baz=58,slow=2.3,SNR=4.7
BRTR  Keskin Array B   116.05 312   PKP       PKiKP       16 33 41.4 +0.3
             comp=Z,1.1nm,0.8s,baz=159,slow=5.3,SNR=6.5
D47A  Chapleau         116.69  39   P         PKPdf       16 33 41.9  0.0
             baz=292
D48A  Paudash Townsh   117.46  39   P         PKPdf       16 33 43.2 -0.2
             baz=293
E48A  Lockeyer         117.51  40   P         PKiKP       16 33 43.5  0.0
             baz=293
NB2   NORSAR Subarra   117.75 340   PKPdf     PKiKP       16 33 44.6 +1.0
             comp=Z,0.8nm,1.0s,baz=44,slow=1.9
NOA   NORSAR Array B   117.75 340   PKP       PKPdf       16 33 43.2 -0.3
             comp=Z,0.9nm,0.8s,baz=46,slow=1.9,SNR=5.4
LSQQ  Lebel-sur-Quev   119.54  35   P         PKPdf       16 33 47.2 -0.1
             baz=299
ALGO  Algonquin Park   120.33  39   P         PKPdf       16 33 48.8 -0.1
             baz=296
D56A  ZEC Mazanza, M   121.83  37   P         PKPdf       16 33 51.6 -0.2
             baz=300
VYHS  Vyhne            122.30 326 ePKIKP     PKiKP       16 33 53.9 +1.1
VYHS  Vyhne            122.30 326 ePKP       PKiKP       16 33 53.8 +1.0
Q57A  Strasburg        122.90  47   P         PKPdf       16 33 54.0 -0.1
             baz=292
H58A  Gabriels         123.47  39   P         PKPdf       16 33 54.7 -0.3
             baz=299
BRG   Berggiesshubel   123.50 330 ePKP       PKiKP       16 33 55.1 +0.1
             comp=Z,4.2nm,1.0s
BRG   Berggiesshubel   123.50 330 ePKIKP     PKiKP       16 33 55.2 +0.1
BRG                                 pmax      pmax
             comp=Z,4.0nm,1.0s
CLL   Collm            123.68 331 ePKPdf     PKiKP       16 33 57.0 +1.6
             comp=Z,6.0nm,0.9s
CLL   Collm            123.68 331 ePKIKP     PKiKP       16 33 57.0 +1.6
CLL                                 pmax      pmax
             comp=Z,16nm,0.9s
G59A  Clarenceville    123.76  38   P         PKiKP       16 33 55.8 +0.1
             baz=300
D61A  St Aubert, Com   124.39  35   P         PKPdf       16 33 56.7  0.0
             baz=304
E61A  Lac Etchemin     124.65  35   P         PKiKP       16 33 57.9 +0.4
             baz=304
KHC   Kasperske Hory   124.77 329 ePKP       PKiKP       16 33 57.8 +0.1
KHC   Kasperske Hory   124.77 329 ePKIKP     PKiKP       16 33 57.8 +0.1
GERES GERESS Array B   124.88 328   PKP       PKPdf       16 33 57.7  0.0
             comp=Z,2.7nm,0.8s,baz=42,slow=2.2,SNR=14
MEM   Membach          127.37 334   PKPdf     PKPdf       16 34 01.7 -0.6
BMRD  Maredsous        128.13 335   PKPdf     PKPdf       16 34 03.3 -0.5
LPAZ  La Paz           133.78 119   PKP       PKiKP       16 34 17.2 -0.2
             comp=Z,4.7nm,0.6s,baz=271,slow=3.0,SNR=14
LPAZ                                SKPbc     SKPab       16 37 47.4 +1.1
             comp=Z,4.6nm,1.1s,baz=305,slow=3.1,SNR=11
CPUP  Villa Florida    136.68 139   PKP       PKiKP       16 34 22.4 +0.1
             comp=Z,1.6nm,0.7s,baz=220,slow=0.7,SNR=5.5
BDFB  Brasilia         150.30 136   PKP       PKPdf       16 34 46.8 +2.1
             comp=Z,5.3nm,0.4s,baz=238,slow=6.2,SNR=4.9
BDFB                                PKPbc     PKPbc       16 34 50.0 +0.1
             comp=Z,3.9nm,0.4s,baz=243,slow=4.5,SNR=4.9
DBIC  Dimbokro         158.05 274   PKPab     PKPab       16 35 30.3 +1.4
             comp=Z,5.4nm,0.9s,baz=90,slow=3.0,SNR=3.9
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WEL 28 16:24:35.5, 44°S±4°×17°0E±°, h12km, M3.5/23, ML3.5/7, MLv3.5/23, Error ellipse: s-maj=0.0km s-min=0.0km az=0.7, South Island

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Code  Station Name       Δ°   AZ°     Phase ID            Time     Res
                                      Op        ISC      h  m  s   ISC
LBZ   Lake Benmore       0.40 118     P         Pb       16 24 44.9 +0.4
LBZ                                   S         Sb       16 24 51.4 +0.8
JCZ   Jackson Bay        0.67 280     P         Pb       16 24 49.3 +0.3
JCZ                                   S         Sb       16 24 57.9 -0.4
FOZ   Fox Glacier        0.67   8     P         Pb       16 24 48.9 -0.2
WKZ   Wanaka             0.80 217     P         Pb       16 24 51.3  0.0
EAZ   Earnscleugh        1.07 195     P         Pn       16 24 56.2 -0.1
EAZ                                   S         Sn       16 25 11.2 +0.2
ODZ   Otahua Downs       1.09 142     P         Pn       16 24 56.7 +0.2
ODZ                                   S         Sn       16 25 11.3 -0.1
RPZ   Rata Peaks         1.09  64     P         Pn       16 24 57.1 +0.5
RPZ                                   S         Sb       16 25 10.5  0.0
MSZ   Milford Sound      1.35 249     P         Pg       16 25 01.4 -0.1
MSZ                                   S         Sn       16 25 18.5 +0.5
WVZ   Waitaha Valley     1.35  34     P         Pg       16 25 01.1 -0.3
MLZ   Mavora Lakes       1.62 223     P         Pb       16 25 05.5 +0.1
TUZ   Tuapeka            1.76 181     P         Pb       16 25 07.0 -0.6
HHSZ  Highcliff Hill     1.81 160     P         Pg       16 25 10.1  0.0
OXZ   Oxford             1.91  64     P         Pb       16 25 09.2 -1.0
INZ   Inchbonnie         1.95  42     P         Pb       16 25 11.0 +0.2
WHZ   Wether Hill Ro     2.10 216     P         Pn       16 25 11.1 +0.7
MQZ   McQueen’s Vall     2.19  78     P         Pn       16 25 13.3 +1.6
DCZ   Deep Cove          2.21 234     P         Pb       16 25 14.1 -1.2
AKCZ  Akaroa Harbour     2.34  83     P         Pg       16 25 21.4 +1.0
LTZ   Lake Taylor        2.35  54     P         Pn       16 25 15.8 +1.9
SYZ   Scrubby Hill       2.37 189     P         Pn       16 25 15.1 +0.9
OKCZ  Okains Bay         2.48  80     P         Pn       16 25 17.4 +1.7
GVZ   Greta Valley S     2.72  64     P         Pn       16 25 20.8 +1.9
APZ   The Paps           2.90 204     P         Pn       16 25 21.5 +0.1
DSZ   Denniston Nort     2.90  33     P         Pn       16 25 23.4 +2.0
PYZ   Puysegur Point     2.90 226     P         Pn       16 25 23.1 +1.6
KHZ   Kahutara           3.32  59     P         Pn       16 25 30.6 +3.4
THZ   Tophouse           3.39  45     P         Pn       16 25 29.9 +1.7
QRZ   Quartz Range       3.97  33     P         Pn       16 25 38.1 +2.0
NNZ   Nelson             4.03  44     P         Pn       16 25 41.2 +4.3
DUWZ  D’Urville Isla     4.61  44     P         Pn       16 25 50.0 +5.0
KHEZ  Kahui Hut          5.87  35     P         Pn       16 26 05.4 +3.1
PKE   Pukeiti            5.94  34     P         Pn       16 26 06.4 +3.2
VRZ   Vera Road          6.33  39     P         Pn       16 26 12.2 +3.7
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*IDC **28** 16:43:20.4±0.8, 5°63S×153°08E, h0km, mb4.0/15, mb1 4.1/16, mb1mx3.9/40, mbtmp4.0/16, ML2.2/1, Error ellipse: s-maj=22.7km s-min=15.5km az=108.0*

*NEIC **28** 16:43:21.2±1.8, 5°66S±0°10×153°24E±0°06, h10km±2km, mb4.3/5, Error ellipse: s-maj=17.7km s-min=7.1km az=154.0*

ISC 28 16:43:25.7±0.7, 5°63S±0°07×153°12E±0°10, h37km, n27, σ1ˢ08/31, mb4.1/15, New Ireland region

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Code  Station Name       Δ°   AZ°     Phase ID            Time     Res
                                      Op        ISC      h  m  s   ISC
KRVT  Keravat (AS076     1.71 320     Pn        Pn       16 43 52.4 -0.6
             76nm,0.3s,baz=168,slow=1.7,SNR=161
KRVT                                  Sn        Sn       16 44 14.8 +1.3
             94nm,0.3s,baz=116,slow=20,SNR=3.9
RABL  Rabaul             1.72 326               Pn       16 43 52.4 -0.7
PMG   Port Moresby       7.00 237     Pn        Pn       16 45 05.5 -0.3
             2.6nm,0.3s,baz=45,slow=7.7,SNR=11
PMG                                   Sn        Sn       16 46 25.8 +1.6
             4.2nm,0.3s,baz=55,slow=22,SNR=8.1
PMG   Port Moresby       7.00 237     Pn        Pn       16 45 05.1 -0.7
PMG                                             Sn       16 46 25.6 +1.3
DZM   Mont Dzumac       20.82 143     P         P        16 48 05.5 +1.2
             6.2nm,0.8s,baz=6.4,slow=17,SNR=1.8
MTN   Manton Dam        22.85 250     P         P        16 48 25.0 -1.0
WRA   Warramunga Arr    23.16 230     P         P        16 48 28.1 -1.0
             1.4nm,0.9s,baz=54,slow=10,SNR=7.1
WRA   Warramunga Arr    23.16 230     P         P        16 48 26.7 -2.4
AS31  Alice Springs     25.77 224     P         P        16 48 52.5 -0.8
ASAR  Alice Springs     25.77 224     P         P        16 48 52.6 -0.7
             0.6nm,0.5s,baz=62,slow=9.0,SNR=20
ASAR                                  PcP       PcP      16 52 23.4 +0.7
             0.3nm,0.6s,baz=48,slow=2.7,SNR=6.3
ASAR  Alice Springs     25.77 224     P         P        16 48 51.5 -1.9
KNRA  Kununurra         25.91 245     P         P        16 48 54.7 +0.1
KNRA                                  IAmb      IAmb     16 49 09.8
             comp=Z,6.6nm,0.9s
FITZ  Fitzroy Crossi    29.56 243     P         P        16 49 25.4 -1.8
             comp=Z,3.2nm,0.6s,baz=63,slow=8.1,SNR=26
FITZ  Fitzroy Crossi    29.56 243     P         P        16 49 25.6 -1.6
FITZ                                  IAmb      IAmb     16 49 27.2
             comp=Z,3.5nm,0.6s
PETK  Petropavlovsk-    58.64   3     P         P        16 53 19.1 +0.1
             comp=Z,1.8nm,0.4s,baz=168,slow=8.2,SNR=20
PETK  Petropavlovsk-    58.64   3     P         P        16 53 18.2 -0.8
SONM  Songino Array     67.19 328     P         P        16 54 16.8 +0.6
             comp=Z,0.7nm,0.7s,baz=148,slow=3.4,SNR=4.8
SEY   Seymchan          68.37 360     P         P        16 54 23.5 +0.4
             comp=Z,0.6nm,0.5s,baz=83,slow=21,SNR=6.7
MKAR  Makanchi Array    81.16 319     P         P        16 55 38.2 +0.6
             comp=Z,1.0nm,0.8s,baz=103,slow=5.2,SNR=9.3
ZALV  Zalesovo Beam     82.01 326     P         P        16 55 41.5 -0.3
             comp=Z,1.6nm,0.7s,baz=116,slow=4.7,SNR=7.2
ILAR  Eielson Array     82.80  22     P         P        16 55 44.8 -1.0
             comp=Z,0.6nm,0.9s,baz=246,slow=5.8,SNR=3.1
KURBB Kurchatov Arra    84.64 322     P         P        16 55 55.4 -0.1
             comp=Z,1.2nm,0.9s,baz=114,slow=4.2,SNR=7.9
AAK   Ala-Archa         85.46 313     P         P        16 56 01.0 +0.9
             comp=Z,1.4nm,0.8s,baz=149,slow=5.1,SNR=6.2
NRIK  Noril'sk          86.84 341     P         P        16 56 07.0 +1.0
             comp=Z,1.3nm,0.5s,baz=59,slow=2.7,SNR=2.0
BVAR  Borovoye Array    90.09 323     P         P        16 56 21.2 -0.6
             comp=Z,1.4nm,0.7s,baz=113,slow=3.9,SNR=9.0
YKA   Yellowknife Ar    96.00  28     P         P        16 56 48.7 -0.1
             comp=Z,0.2nm,0.6s,baz=273,slow=4.0,SNR=2.3
LPAZ  La Paz           133.74 119     PKP       PKiKP    17 02 42.2 +0.5
             comp=Z,1.0nm,0.7s,baz=212,slow=1.1,SNR=4.3
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*ATA **28** 17:07:40.3±0.3, 39°15N×40°61E, h15km, ML2.1, MW3.9*

*DDA **28** 17:08:03.1, 39°66N×38°35E, h7km±3km, ML1.4*

ISC 28 17:08:03.5±1.2, 39°67N±0°03×38°38E±0°04, h8km±13km, n9, σ0ˢ57/14, Turkey

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Code  Station Name       Δ°   AZ°     Phase ID            Time     Res
                                      Op        ISC      h  m  s   ISC
REFA  Refahiye_ERZN      0.41 133   eP          Pg       17 08 10.9 -0.6
REFA                                  IAML               17 08 19.9
             comp=Z,8.5nm,0.2s
REFA  Refahiye_ERZN      0.41 133   i P         Pg       17 08 11.3 -0.2
REFA                                i S         Sg       17 08 17.4 +0.7
KEMA  Kemaliye           0.41 168   eP          Pg       17 08 11.3 -0.2
KEMA                                  IAML               17 08 18.3
             comp=Z,8.6nm,0.3s
KEMA  Kemaliye           0.41 168   i P         Pg       17 08 10.9 -0.7
KEMA                                i S         Sg       17 08 17.5 +0.5
KEMA                                  IAML               17 08 18.0
             comp=E,67nm,0.3s
SUSE  Susehri            0.55 346   i P         Pg       17 08 14.2 +0.1
SUSE                                i S         Sg       17 08 21.3 -0.1
SUSE                                  IAML               17 08 25.0
             comp=E,12nm,0.4s
CUKAN kangal_SIVAS       0.79 244   i P         Pg       17 08 18.0 -0.7
CUKAN                               i S         Sg       17 08 29.9 +0.9
KELT  Kelkit             0.82  55   i P         Pg       17 08 19.1 -0.2
HEKM  Malatya_Hekimh     0.86 203   i P         Pn       17 08 21.9 -0.1
HEKM                                i S         Sb       17 08 33.0 +0.5
TNCL  Tunceli-Merkez     1.06 121   i P         Pn       17 08 24.4 -0.3
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*DJA **28** 17:08:36.2±0.6, 4°S±4°×10°0E±°, h53km±23km, M4.0/7, mB5.3/1, mb4.8/2, MLv3.7/7, Mw(mB)4.7/1*

*IDC **28** 17:08:37.9±1.6, 2°96S×100°68E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.5/39, mbtmp3.6/7, MS3.8/1, Ms1 3.8/1, ms1mx2.8/41, Error ellipse: s-maj=67.7km s-min=19.9km az=53.0*

ISC 28 17:08:38.4±1.1, 3°49S±0°08×99°81E±0°10, h35km, n25, σ1ˢ44/20, mb3.7/7, Southwest of Sumatera

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Code  Station Name       Δ°   AZ°     Phase ID            Time     Res
                                      Op        ISC      h  m  s   ISC
PPSI  Pulau Pagai        0.75  15     P         Pn       17 08 51.7 -0.8
KRJI  Kerinci            2.16  50     P         Pn       17 09 11.7 -0.3
KRJI                                  S         Sn       17 09 38.5 +1.0
SISI  Saibi              2.27 341     P         Pn       17 09 12.0 -1.5
SISI                                  S         Sn       17 09 38.7 -1.5
PDSI  Padang             2.65  14     P         Pn       17 09 17.3 -1.3
PDSI                                  S         Sn       17 09 48.3 -1.2
KSI   Kapahiang          2.78  93     P         Pn       17 09 10.8  -10
SDSI  Sungai Dareh       3.01  32     P         Pn       17 09 22.9 -0.8
MNAI  Manna              3.25 105     P         Pn       17 09 26.6 -0.3
MNAI                                  S         Sn       17 10 04.4  0.0
MDSI  Maura Dua          4.46 103     P         Pn       17 09 43.3 -0.3
CNJI  Cibinong           8.21 118     P         Pn       17 10 32.5 -2.6
             25nm,0.7s
CISI  Cisompet, Garu     8.93 117     P         Pn       17 10 42.7 -2.3
CMAR  Chiang Mai Arr    21.83 358     P         P        17 13 28.3 +0.4
             1.0nm,0.6s,baz=185,slow=10,SNR=9.2
H08S2 Diego Garcia H    27.50 260     T         T        17 43 41.3
             baz=82,slow=75,SNR=14
H08S3 Diego Garcia H    27.50 260     T         T        17 43 41.8
             baz=82,slow=75,SNR=29
H08S1 Diego Carcia H    27.52 260     T         T        17 43 39.7
             baz=82,slow=75,SNR=7.8
H01W3 Cape Leeuwin H    33.95 159     T         T        17 51 15.6
             baz=331,slow=74
H01W2 Cape Leeuwin H    33.96 159     T         T        17 51 16.6
             baz=331,slow=74
H01W1 Cape Leeuwin H    33.96 159     T         T        17 51 25.8
             baz=331
WRA   Warramunga Arr    37.42 119     P         P        17 15 49.4 +0.8
             0.1nm,0.3s,baz=303,slow=8.7,SNR=7.8
ASAR  Alice Springs     38.55 124     P         P        17 15 58.7 +0.6
             0.1nm,0.3s,baz=298,slow=7.8,SNR=5.2
AAK   Ala-Archa         51.32 336     LR        LR       17 45 02.3
             comp=Z,83nm,18.3s,baz=234,slow=43
SONM  Songino Array     51.44   6     P         P        17 17 41.7 +1.5
             0.7nm,0.6s,baz=190,slow=7.7,SNR=4.2
MKAR  Makanchi Array    52.41 345     P         P        17 17 48.8 +1.4
             0.7nm,0.7s,baz=151,slow=8.9,SNR=8.9
ZALV  Zalesovo Beam     58.59 350     P         P        17 18 32.6 +1.0
             1.0nm,0.4s,baz=163,slow=5.6,SNR=7.9
BRTR  Keskin Array B    74.19 313     P         P        17 20 19.9 +7.9
             0.7nm,0.7s,baz=99,slow=4.7,SNR=4.4
TXAR  Lajitas Array    145.99  38     PKPbc     PKiKP    17 28 16.2 -2.5
             0.6nm,0.7s,baz=336,slow=2.0,SNR=5.1
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*JMA **28** 17:08:50.2±0.4, 33°05N×137°85E, h359km±4km, M3.3*

*IDC **28** 17:08:51.5±0.6, 32°97N×137°77E, h344km±6km, mb3.0/13, mb1 3.2/19, mb1mx3.1/51, mbtmp3.8/19, Error ellipse: s-maj=14.9km s-min=9.5km az=71.0*

ISC 28 17:08:50.7±0.6, 32°95N±0°06×137°91E±0°05, h341km, n54, σ1ˢ56/69, mb3.3/13, Southeast of Honshu

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Code  Station Name       Δ°   AZ°     Phase ID            Time     Res
                                      Op        ISC      h  m  s   ISC
TK02  Tokai 2            1.00 353     P         Pn       17 09 36.9 +1.8
TTO3  TONANKAI O.B.S     1.01 335     P         Pn       17 09 37.1 +1.9
TTO2  TONANKAI O.B.S     1.07 317     P         Pn       17 09 37.1 +1.8
TTO4  TONANKAI O.B.S     1.10 344     P         Pn       17 09 37.1 +1.6
TTO1  TONANKAI O.B.S     1.16 306     P         Pn       17 09 37.1 +1.4
TTO5  TONANKAI O.B.S     1.31 353     P         Pn       17 09 38.3 +1.7
TK04  Tokai 4            1.43 359     P         Pn       17 09 39.1 +1.8
JHJ   Hachijo jima 2     1.59  83     P         Pn       17 09 40.3 +1.8
             29nm,0.3s,baz=79,slow=23,SNR=16
JHJ                                   S         S        17 10 20.1 +3.5
             16nm,0.3s,baz=78,slow=22,SNR=7.8
JHJ2  Mitsune            1.61  84     P         Pn       17 09 40.4 +1.8
JAOM  Aogashimamukai     1.64 107     P         Pn       17 09 40.7 +1.9
JIE   Ise                1.75 326     P         Pn       17 09 40.3 +0.9
JIE                                 eS          S        17 10 18.6 +0.1
JTNC  Tanabenakahech     2.11 295     P         Pn       17 09 42.2 +0.3
JWY   Kouya              2.31 304     P         Pn       17 09 44.3 +0.8
JWY                                 eS          S        17 10 25.5 -0.4
JOD2  Odawara 2          2.51  23     P         Pn       17 09 45.7 +0.7
JOD2                                eS          S        17 10 28.0 -0.7
JYN   Shimob             2.60  12     P         Pn       17 09 47.5 +1.7
JYTA  Yamagatataniai     2.81 340     P         Pn       17 09 48.3 +0.7
JAI   Aioi               3.01 287     P         Pn       17 09 49.5 +0.1
BSO1  Boso 1             3.07  56     P         Pn       17 09 48.5 -0.8
BSO1                                eS          S        17 10 34.7 -1.9
JWT   Wachi              3.12 319     P         Pn       17 09 50.9 +0.5
JWT                                   S         S        17 10 37.6 -0.8
JRY   Ryogami san        3.17  15     P         Pn       17 09 51.9 +1.0
JRY                                 eS          S        17 10 39.2 -0.1
JMN   Monobe             3.46 284     P         Pn       17 09 54.1 +0.4
MJAR  Matsushiro Arr     3.59   4     P         Pn       17 09 55.5 +0.6
             0.2nm,0.3s,baz=178,slow=9.2,SNR=18
MJAR                                  S         S        17 10 45.0 -1.8
             0.1nm,0.3s,baz=185,slow=40,SNR=2.6
MAT   Matsushiro         3.59   4     P         Pn       17 09 55.5 +0.5
MAT                                 eS          S        17 10 45.0 -1.8
MAT   Matsushiro         3.59   4     P         Pn       17 09 55.5 +0.5
MAT                                   S         S        17 10 45.0 -1.8
JAG   Ashikaga           3.70  20     P         Pn       17 09 55.5 -0.5
JAG                                 eS          S        17 10 45.2 -3.4
JTO   Tosashimizu        4.29 270     P         Pn       17 10 02.3 +0.1
JHS   Saijyo             4.47 299     P         Pn       17 10 04.6 +0.5
JNU   Nakatsue           5.90 274     P         Pn       17 10 20.2 +0.1
             0.5nm,0.3s,baz=111,slow=2.6,SNR=9.2
JCJ   Chichijima         6.91 146     P         Pn       17 10 28.4 -3.5
             6.7nm,0.3s,baz=351,slow=20,SNR=7.2
JCJ                                   S         S        17 11 47.0 -7.1
             20nm,0.3s,baz=306,slow=22,SNR=11
KSRS  Korea Array        9.32 302     P         P        17 11 01.1 -1.7
             0.7nm,0.3s,baz=113,slow=13,SNR=22
KSRS                                  S         S        17 12 31.1  -15
             0.3nm,0.3s,baz=122,slow=38,SNR=3.4
ASAJ  Asahikawa         11.74  17     P         P        17 11 31.1 +1.5
             0.3nm,0.3s,baz=174,slow=16,SNR=1.7
USRK  Ussuriysk Ar.     12.15 339     P         P        17 11 34.0 -0.1
             baz=155,slow=9.6,SNR=13
KLR   Kul'dur           16.91 346     P         P        17 12 25.4 -0.7
             0.2nm,0.3s,baz=175,slow=6.3,SNR=7.7
SONM  Songino Array     28.00 311     P         P        17 14 11.7 +0.5
             1.3nm,0.6s,baz=120,slow=8.1,SNR=9.4
ZALV  Zalesovo Beam     42.68 316     P         P        17 16 15.0 +0.2
             0.6nm,0.4s,baz=109,slow=8.2,SNR=4.9
TAPN  Taplejung         43.44 276   eP          P        17 16 20.5 -1.0
             4.4nm,0.4s
MKAR  Makanchi Array    43.98 305     P         P        17 16 24.9 -0.4
             1.1nm,0.5s,baz=87,slow=9.7,SNR=29
MKAR                                  ScP       ScP      17 21 22.5 -0.3
             0.2nm,0.6s,baz=89,slow=5.9,SNR=2.6
RAMN  Ramite            44.50 276   eP          P        17 16 28.9 -1.0
             16nm,0.6s
JIRN  Jiri              44.60 277   eP          P        17 16 30.4 -0.4
             39nm,0.5s
GUN   Gumba             44.77 278   eP          P        17 16 31.3 -0.8
             14nm,0.7s
PKI   Pulchoki          45.28 278   eP          P        17 16 35.1 -0.9
             7.3nm,0.7s
PKIN  Phulchoki         45.29 278   eP          P        17 16 35.0 -1.0
             5.2nm,0.6s
GKN   Gorkha            45.77 279   eP          P        17 16 38.8 -0.9
             11nm,0.7s
DANN  Dangsing          46.39 279   eP          P        17 16 43.5 -1.1
             7.7nm,0.4s
FITZ  Fitzroy Crossi    52.09 195     P         P        17 17 27.5 +0.6
             1.8nm,1.0s,baz=16,slow=7.4,SNR=2.7
WRA   Warramunga Arr    52.70 184     P         P        17 17 31.0 -0.3
             0.6nm,0.5s,baz=0.5,slow=7.7,SNR=14
WRA                                   PcP       PcP      17 18 36.4 +0.3
             0.2nm,0.7s,baz=360,slow=4.3,SNR=1.8
ILAR  Eielson Array     54.47  31     P         P        17 17 44.1 +0.6
             0.6nm,0.8s,baz=280,slow=5.1,SNR=7.9
ASAR  Alice Springs     56.43 184     P         P        17 17 58.0 +0.2
             0.3nm,0.6s,baz=16,slow=11,SNR=12
ASAR                                  PcP       PcP      17 18 52.1 +1.8
             0.1nm,0.4s,baz=11,slow=5.2,SNR=2.0
YKA   Yellowknife Ar    68.77  28     P         P        17 19 19.3 +1.0
             0.2nm,0.4s,baz=294,slow=6.3,SNR=3.6
FINES FINESS Array B    71.06 332     P         P        17 19 31.9 -0.2
             0.5nm,0.5s,baz=72,slow=6.2,SNR=7.6
KBZ   Khabaz            71.36 310     P         P        17 19 34.1  0.0
             1.6nm,0.8s,baz=57,slow=1.6,SNR=5.3
AKASG Malin Array Be    75.73 322     P         P        17 19 58.6 -0.6
             0.6nm,0.5s,baz=58,slow=5.6,SNR=1.6
NOA   NORSAR Array B    76.80 336     P         P        17 20 04.9 -0.3
             0.2nm,0.7s,baz=45,slow=5.6,SNR=1.7
NVAR  Mina Array Bea    79.77  51     P         P        17 20 23.6 +1.6
             0.3nm,0.6s,baz=305,slow=5.4,SNR=2.6
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*IDC **28** 17:31:20.5±1.2, 35°83N×140°78E, h0km, mb3.4/5, mb1 3.5/7, mb1mx3.3/56, mbtmp3.4/7, ML2.8/2, MS3.6/2, Ms1 3.6/2, ms1mx2.7/29, Error ellipse: s-maj=26.3km s-min=22.4km az=149.0*

*JMA **28** 17:31:21.0±0.2, 35°.80N×140°.96E, h14^{km}±1^{km}, M3.6*
JMA Felt I J1.

ISC 28 17:31:21.6±0.9, **35°.81N**±0°.03×**140°.82E**±0°.07, **h11**^{km}±6^{km}, **n25**, σ0^{s}.**84**/25, **mb3.6**/5, **6C-1D**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	0.11	164	⇑P	Pg	17 31 24.4	0.0
CHOJ				S	Sg	17 31 26.9	+0.5
JIHU	**Itakohorinouch**	0.29	303	⇑P	Pb	17 31 29.5	+0.7
JSMT	**Sammumatsuo**	0.35	241	⇑P	Pb	17 31 30.3	+0.5
JHYU	**Hitachinakayam**	0.56	340	⇑P	Pb	17 31 33.3	-0.2
JHYU				S	Sb	17 31 41.8	+0.3
JCN	**Nagara**	0.64	232	⇑P	Pn	17 31 35.9	-0.7
JYT	**Yasato**	0.66	310	⇑P	Pb	17 31 34.7	-0.4
JYT				S	Sb	17 31 45.0	+0.7
JHO	**Hitachi**	0.82	346	⇓P	Pg	17 31 36.7	-0.8
JHO				S	Sb	17 31 48.9	-0.2
BSO3	**Boso 3**	1.04	194	P	Pg	17 31 39.9	-1.6
BSO3				S	Sg	17 31 54.4	-0.6
MJAR	**Matsushiro Arr**	2.24	290	Pn	Pn	17 31 58.2	-0.4
	1.0nm,0.3s,baz=88,slow=9.5,SNR=48						
MJAR				Sn	Sn	17 32 27.3	+1.1
	0.7nm,0.3s,baz=117,slow=14,SNR=6.0						
MAT	**Matsushiro**	2.24	290	P	Pn	17 31 58.7	+0.1
MAT				*e*S	Sn	17 32 27.1	+0.8
JHJ	**Hachijo jima 2**	2.82	198	Pn	Pn	17 32 07.1	+0.5
	8.6nm,0.3s,baz=87,slow=21,SNR=5.1						
JHJ				Sn	Sn	17 32 41.0	+0.5
	6.7nm,0.3s,baz=13,slow=23,SNR=1.3						
H11N2	**WAKE ISLAND Hy**	27.96	118	T	T	18 06 13.3	
	baz=311,slow=75,SNR=57						
H11N1	**WAKE ISLAND Hy**	27.97	118	T	T	18 06 08.7	
	baz=311,slow=75,SNR=46						
H11N3	**WAKE ISLAND Hy**	27.98	118	T	T	18 06 15.0	
	baz=311,slow=75,SNR=53						
H11S1	**WAKE ISLAND Hy**	28.63	120	T	T	18 06 59.8	
	baz=312,slow=75,SNR=111						
H11S3	**WAKE ISLAND Hy**	28.63	120	T	T	18 06 57.2	
	baz=312,slow=75,SNR=70						
H11S2	**WAKE ISLAND Hy**	28.64	120	T	T	18 07 01.5	
	baz=312,slow=75,SNR=55						
DAV	**Davao City (W)**	31.84	210	LR	LR	17 50 18.8	
	comp=Z,122nm,19.7s,baz=175,slow=36						
SIJI	**Sorong**	37.56	196	LR	LR	17 52 38.5	
	comp=Z,77nm,18.5s,baz=303,slow=34						
MKAR	**Makanchi Array**	44.37	303	P	P	17 39 32.0	0.0
	0.4nm,0.8s,baz=92,slow=8.0,SNR=2.8						
KURBB	**Kurchatov Arra**	46.39	309	P	P	17 39 47.5	-0.3
	0.4nm,0.7s,baz=84,slow=7.5,SNR=2.6						
ILAR	**Eielson Array**	50.78	32	P	P	17 40 21.0	-0.4
	0.2nm,0.7s,baz=280,slow=5.4,SNR=4.3						
RES	**Resolute Bay**	63.90	14	P	P	17 41 53.3	-0.6
	0.4nm,0.6s,baz=320,slow=7.9,SNR=2.1						
YKA	**Yellowknife Ar**	65.11	30	P	P	17 42 04.0	+2.1
	0.4nm,0.9s,baz=301,slow=6.4,SNR=3.6						
LPAZ	**La Paz**	147.72	61	PKPbc	PKiKP	17 51 08.4	-1.2
	0.6nm,0.5s,baz=280,slow=6.1,SNR=2.3						

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*TUL **28** 17:56:11.2±1.7, 36°.13N±0°.02×97°.63W±0°.05, h0^{km}±6^{km}, ML3.1, Error ellipse: s-maj=6.6km s-min=2.0km az=68.0*
*ANF **28** 17:56:11.7±1.2, 36°.13N×97°.62W, h6^{km}±8^{km}, ML3.5/5, Error ellipse: s-maj=4.9km s-min=2.7km az=138.0*
*NEIC **28** 17:56:11.4±2.1, 36°.12N±0°.02×97°.68W±0°.05, h3^{km}±6^{km}, Error ellipse: s-maj=6.7km s-min=0.6km az=70.0*

ISC 28 17:56:11.0±1.3, **36°.15N**±0°.03×**97°.65W**±0°.04, **h3**^{km}±11^{km}, **n60**, σ1^{s}.**07**/70, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADOK	**Arcadia Dam**	0.55	156	Pg	Pg	17 56 21.8	+0.4
OKCFA	**Oklahoma City**	0.75	168		Pg	17 56 25.5	+0.1
OKCFA				Sg	Sg	17 56 35.5	+0.4
OKCSW	**OKLAHOMA CITY**	0.77	167		Pg	17 56 25.9	+0.2
OKCSW				Sg	Sg	17 56 36.1	+0.6
FNO	**Franklin**	0.92	167		Pg	17 56 28.7	+0.2
FNO				Sg	Sb	17 56 41.0	-1.0
U32A	**Winter Ranch,**	1.12	282		Pg	17 56 32.7	+0.3
W35A	**Tecumseh**	1.18	148		Pg	17 56 32.7	-0.9
W35A				Sg	Sg	17 56 48.5	-0.3
T35A	**Sooner Cattle**	1.19	50		Pg	17 56 34.0	+0.3
TUL1	**Leonard**	1.52	99		Pn	17 56 38.7	-0.4
TUL1					Sn	17 56 59.4	+0.1
TUL1	**Leonard**	1.52	99	P	Pn	17 56 38.7	-0.4
	baz=279						
TUL1				S	Sb	17 56 59.6	+0.1
	baz=279						
WMOK	**Wichita Mounta**	1.69	214		Pn	17 56 41.6	+0.3
WMOK	**Wichita Mounta**	1.69	214	P	Pn	17 56 41.6	+0.3
	baz=34						
WMOK				S	Sb	17 57 04.2	-0.1
	baz=34						
R32A	**Long Quarter,**	2.42	340		Pn	17 56 53.1	+1.6
X37A	**Clayton**	2.43	129		Pn	17 56 53.3	+1.8
U38A	**Gravette**	2.65	83		Pn	17 56 56.6	+2.1
Z35A	**Perchaven, San**	2.83	173		Pn	17 56 57.9	+0.8
HHAR	**Hobbs**	3.00	86	Pn	Pn	17 56 59.8	+0.5
KSU1	**Kansas State U**	3.06	15	Sb	Sg	17 57 47.7	-1.4
	baz=196						
CBKS	**Cedar Bluff**	3.13	329		Pn	17 57 02.6	+1.4
W39A	**Magazine**	3.29	106		Pn	17 57 02.8	-0.5
AMTX	**Amarillo**	3.53	250		Pn	17 57 07.1	+0.4
Z38A	**Mt. Pleasant**	3.62	142		Pn	17 57 07.1	-0.8
MIAR	**Mount Ida**	3.69	115		Pn	17 57 08.9	0.0
MIAR	**Mount Ida**	3.69	115	S	Sn	17 57 54.2	+1.3
	baz=297						
S39A	**Bolivar**	3.79	65		Pn	17 57 11.3	+1.1
U40A	**Yellville**	3.88	86		Pn	17 57 12.4	+0.9
ABTX	**Abilene, Hawle**	3.89	206		Pn	17 57 11.5	-0.1
WHTX	**Lake Whitney,**	4.16	178		Pn	17 57 16.0	+0.7
WHTX	**Lake Whitney,**	4.16	178	P	Pn	17 57 16.0	+0.7
	baz=358						
WHTX				S	Sn	17 58 05.8	+1.5
	baz=358						
X40A	**Basin Creek Fa**	4.27	112		Pn	17 57 17.5	+0.7
237A	**Washetta, Mont**	4.41	159	Pn	Pn	17 57 18.7	-0.1
MGMO	**Mountain Grove**	4.44	75	Pn	Pn	17 57 20.0	+0.8
MGMO					Pb	17 57 28.6	-0.9
WHAR	**Wooly Hollow**	4.44	100		Pn	17 57 19.8	+0.6
WLAR	**White Oak Lake**	4.46	122	Pn	Pn	17 57 20.9	+1.5
FCAR	**Ozark Folk Cen**	4.48	92		Pn	17 57 21.3	+1.6
W41B	**Gary Mavity, V**	4.50	101		Pn	17 57 21.4	+1.4
UALR	**University of**	4.54	106	Pn	Pn	17 57 19.5	-1.0
MSTX	**Muleshoe**	4.74	244		Pn	17 57 22.2	-1.2
P38A	**Dawn**	4.75	42		Pn	17 57 24.9	+1.5
R40A	**Maddies Statio**	4.79	62		Pn	17 57 23.8	-0.2
KSCO	**Kaye Shedlock'**	4.88	307		Pn	17 57 26.6	+1.3
LCAR	**Lake Charles**	5.26	89	Pn	Pn	17 57 30.9	+0.5
BGNE	**Belgrade**	5.26	356	Pn	Pn	17 57 30.1	-0.4
T42A	**Van Buren**	5.34	79	Pn	Pn	17 57 30.6	-1.0
T42A					Pb	17 57 48.2	+3.2
CCM	**Cathedral Cave**	5.46	68		Pn	17 57 32.5	-0.7
T25A	**Trinidad**	5.53	282		Pn	17 57 33.9	-0.5
PBMO	**Poplar Bluff**	5.85	82	Pn	Pn	17 57 39.0	+0.5
JCT	**Junction City**	5.94	198		Pn	17 57 38.4	-1.4
SDCO	**Great Sand Dun**	6.49	287	Pn	Pn	17 57 49.5	+1.9
S44A	**Carbondale**	6.89	75	Pn	Pn	17 57 53.4	+0.5
SIUC	**Southern Illin**	6.93	75	Pn	Pn	17 57 52.2	-1.1
ISCO	**Idaho Springs**	7.27	302		Pn	17 57 57.3	-1.0
ANMO	**Albuquerque**	7.28	263	Pn	Pn	17 57 56.5	-1.9
K38A	**Parkersburg**	7.50	29	Pn	Pn	17 58 00.2	-1.0
ECSD	**EROS Data Cent**	7.61	6	Pn	Pn	17 58 01.9	-0.9
L40A	**Anamosa**	7.73	38	Pn	Pn	17 58 04.4	+0.1
N23A	**Red Feather La**	8.04	309	Pn	Pn	17 58 10.0	+1.1
SUSD	**Miller**	8.34	354	Pn	Pn	17 58 13.8	+1.1
TX31	**Lajitas Ar. Si**	8.48	218	Pn	Pn	17 58 15.8	+1.1
TX32	**Lajitas Array**	8.48	218	Pn	Pn	17 58 13.4	-1.4
TXAR	**Lajitas Array**	8.48	218	Pn	Pn	17 58 13.4	-1.4

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*ROM **28** 18:21:29.0±0.1, 44°.198N±0°.008×7°.42E±0°.01, h16^{km}, ML2.6/27, Error ellipse: s-maj=1.1km s-min=0.4km az=223.0*
*IASPEI **28** 18:21:29.3±0.8, 44°.22N±0°.02×7°.44E±0°.02, h14^{km}±4^{km}, Error ellipse: s-maj=2.4km s-min=2.2km az=169.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*GEN **28** 18:21:29.8, 44°.19N×7°.43E, h11^{km}±1^{km}, Ml2.7*
*STR **28** 18:21:29.6±0.4, 44°N±1°×°±°, h4^{km}±2^{km}, MLv2.8/6*
*LDG **28** 18:21:30.1±0.1, 44°.18N×7°.48E, h11^{km}, Md3.1/2, Ml2.9/42, Error ellipse: s-maj=1.6km s-min=1.5km az=33.0*

ISC 28 18:21:29.4±0.7, **44°.22N**±0°.01×**7°.42E**±0°.01, **h16**^{km}±3^{km}, **n123**, σ1^{s}.**38**/233, **3C-7D**, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENR	**Entracque**	0.01	351	P	Pg	18 21 32.2	-0.1
ENR				S	Sg	18 21 33.8	-0.6
ENR				AML	AML		
	comp=E,41450µm,0.2s						
ENR				AML	AML		
	comp=N,89050µm,0.1s						
ENR	**Entracque**	0.01	351	P	Pg	18 21 32.3	-0.1
ENR				S	Sg	18 21 33.7	-0.7
STV	**Sant Anna di V**	0.07	290	P	Pg	18 21 32.7	0.0
STV				S	Sg	18 21 34.5	-0.4
STV				AML	AML		
	comp=E,28850µm,0.2s						
STV				AML	AML		
	comp=N,71500µm,0.1s						
STV				AML	AML		
	comp=E,28850µm,0.2s						
STV	**Sant Anna di V**	0.07	290	P	Pg	18 21 32.7	0.0
STV				S	Sg	18 21 34.4	-0.5
SAOF	**Saorge**	0.25	158	Pg	Pg	18 21 34.8	-0.3
SAOF				Sg	Sg	18 21 37.8	-1.0
SAOF	**Saorge**	0.25	158	P	Pg	18 21 34.7	-0.3
SAOF				S	Sg	18 21 37.9	-0.9
SAOF				AML	AML		
	comp=E,2910µm,0.4s						
SAOF				AML	AML		
	comp=N,3870µm,0.5s						
ISO	**Isola**	0.27	262	Pg	Pg	18 21 35.7	+0.4
ISO				Sg	Sg	18 21 39.6	+0.2
GBOS	**Grotte di Boss**	0.30	86	⇑*i*P	Pg	18 21 35.9	0.0
GBOS				S	Sg	18 21 40.1	-0.2
GBOS				AML	AML		
	comp=E,1480µm,0.5s						
GBOS				AML	AML		
	comp=N,2535µm,0.4s						
GBOS	**Grotte di Boss**	0.30	86	P	Pg	18 21 35.9	0.0
GBOS				S	Sg	18 21 39.9	-0.3
DOI	**San Damiano**	0.31	336	⇓*i*P	Pb	18 21 36.6	0.0
DOI				S	Sg	18 21 41.3	+0.7
DOI				AML	AML		
	comp=E,5635µm,0.8s						
DOI				AML	AML		
	comp=N,7055µm,0.1s						
SBF	**Sospel**	0.36	178	*e*Pg	Pg	18 21 36.5	-0.3
SBF				*e*Sg	Sg	18 21 41.1	-0.8
	comp=N,2µm,0.3s						
PZZ	**Stroppo**	0.36	323	P	Pg	18 21 37.4	+0.5
PZZ				S	Sg	18 21 42.7	+0.7
PZZ				AML	AML		
	comp=N,5460µm,0.7s						
PZZ				AML	AML		
	comp=E,5820µm,0.1s						
PZZ	**Stroppo**	0.36	323	P	Pg	18 21 37.5	+0.5
PZZ				S	Sg	18 21 42.7	+0.7
ESCA	**l'Escarene**	0.39	185	Pg	Pg	18 21 37.2	-0.1
ESCA				Sg	Sg	18 21 42.3	-0.5
NEGI	**Seborga**	0.42	151	⇓*i*P	Pg	18 21 37.8	-0.2
NEGI				S	Sg	18 21 43.4	-0.4
NEGI				AML	AML		
	comp=N,4855µm,0.2s						
NEGI				AML	AML		
	comp=E,6030µm,0.1s						
NEGI	**Seborga**	0.42	151	P	Pg	18 21 37.8	-0.2
NEGI				S	Sg	18 21 43.2	-0.6
IMI	**Imperia**	0.46	132	⇑P	Pg	18 21 38.3	-0.3
IMI				S	Sg	18 21 44.2	-0.7
IMI				AML	AML		
	comp=E,3665µm,0.5s						
IMI				AML	AML		
	comp=N,5190µm,0.2s						
IMI	**Imperia**	0.46	132	P	Pg	18 21 38.3	-0.3
IMI				S	Sg	18 21 44.1	-0.8
RORO	**Rocca Rossa**	0.48	103	⇓P	Pg	18 21 38.6	-0.3
RORO				S	Sg	18 21 45.1	-0.3
RORO				AML	AML		
	comp=E,1485µm,1.5s						
RORO				AML	AML		
	comp=N,2565µm,1.4s						
RORO	**Rocca Rossa**	0.48	103	P	Pg	18 21 38.6	-0.3
RORO				S	Sg	18 21 44.9	-0.4
MON	**Monaco**	0.49	180	Pg	Pg	18 21 39.1	0.0
MON				Sg	Sg	18 21 45.6	-0.2
SURF	**Saint Ours**	0.51	301	Pg	Pg	18 21 40.0	+0.4
SURF				Sg	Sg	18 21 47.1	+0.6
CALF	**Calern**	0.59	218	Pg	Pg	18 21 41.2	+0.1
CALF				Sg	Sg	18 21 49.0	0.0
BHB	**Bricherasio**	0.63	350	⇓P	Pg	18 21 40.9	-0.9
BHB				S	Sg	18 21 50.5	+0.2
BHB				AML	AML		
	comp=E,576µm,1.5s						
BHB				AML	AML		
	comp=N,689µm,0.1s						
BHB				AML	AML		
	comp=E,575µm,1.5s						
BHB	**Bricherasio**	0.63	350	P	Pg	18 21 40.9	-0.9
BHB				S	Sg	18 21 50.5	+0.2
FINB	**Finale Ligure**	0.65	94	P	Pg	18 21 41.9	-0.2
FINB				S	Sg	18 21 50.5	-0.3
FINB				AML	AML		
	comp=N,604µm,0.2s						
FINB				AML	AML		
	comp=E,664µm,0.2s						
FINB				AML	AML		
	comp=N,604µm,0.2s						
QLNO	**Quiliano**	0.67	81	⇑P	Pg	18 21 42.5	-0.1
QLNO				S	Sg	18 21 51.2	-0.3
QLNO				AML	AML		
	comp=N,694µm,0.2s						
QLNO				AML	AML		
	comp=E,768µm,0.3s						
OGAG	**Argentiere**	0.67	291	Pg	Pn	18 21 46.2	+1.9
OGAG				Sg	Sn	18 21 58.2	+3.6
MBDF	**Montbardon**	0.69	318	*e*Pg	Pg	18 21 42.9	0.0
MBDF				*e*Sg	Sb	18 21 52.7	+0.3
	comp=E,400nm,0.3s						
OGDI	**Digne**	0.81	263	Pg	Pn	18 21 47.4	+1.2
OGDI				Sg	Sn	18 21 59.4	+1.4
RRL	**Rocca Remolon**	0.83	327	P	Pb	18 21 45.2	-0.4
RRL				S	Sb	18 21 57.3	+0.6
RRL				AML	AML		
	comp=N,323µm,1.5s						
RRL				AML	AML		
	comp=E,388µm,1.2s						
RRL	**Rocca Remolon**	0.83	327	P	Pb	18 21 45.2	-0.4
RRL				S	Sg	18 21 56.8	+0.1
FRF	**La Foret Royal**	0.87	221	*e*Pg	Pb	18 21 45.7	-0.3
FRF				*e*Sg	Sb	18 21 56.6	-0.7
	comp=E,174nm,0.2s						
PCP	**Piancastagn**	0.87	68	P	Pb	18 21 46.0	-0.1
PCP				S	Sg	18 21 57.8	+0.1
PCP				AML	AML		
	comp=E,738µm,0.2s						
PCP				AML	AML		
	comp=N,560µm,0.5s						
PCP	**Piancastagn**	0.87	68	P	Pb	18 21 45.9	-0.1
PCP				S	Sb	18 21 57.7	+0.2
ROTM	**Rocchetta Tana**	0.92	46	P	Pn	18 21 48.3	+0.8
ROTM				S	Sn	18 22 01.2	+0.8
ROTM	**Rocchetta Tana**	0.92	46	P	Pn	18 21 48.4	+0.8
ROTM				S	Sn	18 22 01.1	+0.8
MONC	**Moncucco Torin**	0.93	23	⇓P	Pg	18 21 47.8	+0.4
MONC				S	Sb	18 21 59.6	+0.5
MONC				AML	AML		
	comp=E,1100µm,0.6s						
MONC				AML	AML		
	comp=N,1059µm,0.4s						
MONC				AML	AML		
	comp=N,1060µm,0.4s						
RSP	**Reno Superiore**	0.93	353	⇓P	Pb	18 21 45.8	-1.5
RSP				AML	AML		
	comp=E,186µm,0.5s						
RSP				AML	AML		
	comp=N,196µm,0.7s						
RSP				AML	AML		
	comp=N,196µm,0.7s						
RSP				AML	AML		
	comp=E,186µm,0.5s						
RSP	**Reno Superiore**	0.93	353	P	Pb	18 21 45.7	-1.5
RSP				S	Sg	18 22 00.4	+0.6
BNI	**Bardonecchia**	0.99	328	P	Pb	18 21 47.8	-0.4
BNI				S	Sb	18 22 01.4	+0.4
BNI				AML	AML		
	comp=E,98µm,0.2s						
BNI				AML	AML		
	comp=N,74µm,0.4s						
BNI				AML	AML		
	comp=E,99µm,0.2s						
BNI				AML	AML		
	comp=N,74µm,0.4s						
BLAF	**les Blancs**	1.03	255	Pg	Pg	18 21 50.0	+0.7
BLAF				Sg	Sn	18 22 04.3	+1.0
LMR	**La Mourre**	1.11	217	*e*Pg	Pn	18 21 50.4	+0.2
LMR				*e*Sn	Sb	18 22 03.9	-0.3
LMR				*e*Sg	Sn	18 22 05.1	+0.1
	comp=N,214nm,0.2s						
MLYF	**Mely**	1.22	260	Pg	Pg	18 21 53.6	+0.7
MLYF				Sg	Sg	18 22 10.4	+1.7
LSD	**Lago del Serru**	1.25	351	⇓P	Pn	18 21 51.1	-1.3
LSD				AML	AML		
	comp=N,100µm,1.0s						
LSD				AML	AML		
	comp=E,171µm,0.2s						
LSD				AML	AML		
	comp=N,100µm,1.0s						
ORIF	**Oris-en-Rattie**	1.30	303	*e*Pn	Pb	18 21 54.3	+0.8
ORIF	**Oris-en-Rattie**	1.30	303	*e*Pg	Pg	18 21 55.0	+0.5
ORIF				*e*Sn	Sn	18 22 10.8	+0.7
	comp=N,98nm,0.3s						
ORIF				*e*Sg	Sg	18 22 13.1	+1.5
	comp=N,113nm,0.4s						
TRAV	**Traversella**	1.31	10	P	Pn	18 21 51.6	-1.5
TRAV				S	Sn	18 22 10.9	+0.6
BSTF	**la Bastide-des**	1.33	256	Pg	Pg	18 21 55.6	+0.7
BSTF				Sg	Sg	18 22 13.8	+1.6
ARTF	**Artigues**	1.33	242	Pg	Pg	18 21 54.8	-0.2
ARTF				Sg	Sg	18 22 12.7	+0.4
SMRF	**Simiane la Rot**	1.35	260	*e*Pn	Pb	18 21 54.7	+0.4
SMRF				*e*Sn	Sb	18 22 12.1	+0.7
	comp=N,140nm,0.3s						
SMRF				*e*Sg	Sg	18 22 14.1	+1.0
LPG	**La Plagne**	1.36	340	*e*Pn	Pb	18 21 54.7	0.0
LPG				*e*Sn	Sb	18 22 12.7	+0.7
	comp=N,44nm,0.3s						
CIRO	**Champorcher**	1.39	4	P	Pn	18 21 52.6	-1.7
CIRO				AML	AML		
	comp=E,59µm,1.6s						
CIRO				AML	AML		
	comp=E,60µm,1.6s						
CIRO				AML	AML		
	comp=N,51µm,0.2s						
LPL	**La Plagne**	1.39	340	*e*Pn	Pn	18 21 54.5	+0.3
LPL				*e*Sn	Sb	18 22 13.6	+1.1
	comp=N,34nm,0.2s						
LPL				*e*Sg	Sg	18 22 15.9	+1.7
	comp=N,40nm,0.3s						
GORR	**Gorreto**	1.40	73	P	Pn	18 21 54.4	+0.2
GORR				AML	AML		
	comp=E,200µm,0.3s						
GORR				AML	AML		
	comp=N,152µm,0.4s						
GORR				AML	AML		
	comp=E,199µm,0.3s						
RUSF	**Rustrel**	1.42	259	Pn	Pb	18 21 56.2	+0.7
RUSF				Pg	Pg	18 21 57.5	+0.7
RUSF				Sg	Sg	18 22 17.0	+1.6
MSSA	**Maissana**	1.51	86	P	Pn	18 21 55.4	-0.4
MSSA				S	Sn	18 22 15.4	+0.3
MSSA				AML	AML		
	comp=E,81µm,0.7s						
MSSA				AML	AML		
	comp=N,54µm,1.2s						
MSSA				AML	AML		
	comp=E,81µm,0.7s						
BOB	**Bobbio (Coli)**	1.55	69	P	Pb	18 21 57.4	-0.3
BOB				AML	AML		
	comp=N,252µm,1.0s						
BOB				AML	AML		
	comp=N,252µm,1.0s						
BOB				AML	AML		
	comp=E,154µm,0.9s						
MRGE	**Morge**	1.57	351	P	Pn	18 21 56.6	-0.1
MRGE				AML	AML		
	comp=E,47µm,0.6s						
MRGE				AML	AML		
	comp=N,73µm,0.5s						
MRGE				AML	AML		
	comp=E,47µm,0.6s						
MRGE				AML	AML		
	comp=N,73µm,0.5s						
GRN	**Grenoble**	1.57	311	Pn	Pg	18 21 59.6	0.0
GRN				Sn	Sg	18 22 19.9	-0.2
RSL	**Roselend**	1.57	339	Pn	Pb	18 21 58.7	+0.5
ASEAF	**Site Antares,**	1.69	213	Pn	Pb	18 21 59.6	-0.3
ASEAF				Sn	Sb	18 22 22.0	+1.2
PLMA	**Palmaria, Port**	1.76	95	P	Pn	18 21 59.0	-0.1
PLMA				S	Sn	18 22 21.0	-0.1
PLMA				AML	AML		
	comp=N,61µm,1.2s						
PLMA				AML	AML		
	comp=E,49µm,1.5s						
OGSM	**Saint Maurice**	1.85	319	Pn	Pb	18 22 02.9	+0.1
OGSM				Sn	Sb	18 22 26.7	+1.0
MMK	**Mattmark**	1.87	12	P	Pn	18 22 00.5	-0.4
MMK				AML	AML		
	comp=E,29µm,1.5s						
MMK				AML	AML		
	comp=N,36µm,1.3s						
EQUI	**Equi**	1.96	91	P	Pn	18 22 02.2	+0.2
EQUI				S	Sn	18 22 25.9	-0.4
EQUI				AML	AML		
	comp=N,44µm,0.4s						
EQUI				AML	AML		
	comp=E,30µm,1.4s						
PGF	**Pioggiola**	2.03	145	*e*Pn	Pn	18 22 01.9	-1.1
PGF	**Pioggiola**	2.03	145	*e*Pg	Pb	18 22 06.6	+0.7
PGF				*e*Sn	Sn	18 22 24.6	-3.4
	comp=E,16nm,0.2s						
VIVF	**Saint-Julien-l**	2.07	289	*e*Pn	Pn	18 22 04.6	+1.2
VIVF	**Saint-Julien-l**	2.07	289	*e*Pg	Pg	18 22 09.0	0.0
VIVF				*e*Sn	Sn	18 22 28.4	-0.4
VIVF				*e*Sg	Sg	18 22 36.5	+0.7
	comp=E,42nm,0.4s						
SARO	**Sassorosso**	2.14	90	P	Pn	18 22 04.9	+0.4
SARO				S	Sn	18 22 31.1	+0.3
MAIM	**Mastiano**	2.23	97	P	Pn	18 22 05.8	+0.2
MAIM				S	Sn	18 22 32.7	-0.2
MAIM				AML	AML		
	comp=E,38µm,1.6s						
MAIM				AML	AML		
	comp=N,28µm,1.4s						
OG35	**Corcelles**	2.25	325	Pn	Pn	18 22 07.8	+1.9
OG35				Sn	Sn	18 22 35.6	+2.3
POPM	**Popiglio**	2.41	93	P	Pn	18 22 08.3	+0.3
POPM				S	Sn	18 22 37.0	-0.3
POPM				AML	AML		
	comp=E,49µm,0.3s						
POPM				AML	AML		
	comp=N,39µm,0.2s						
TRBF	**Trabuc cave**	2.50	269	Pn	Pn	18 22 10.1	+0.9
TRBF				Sn	Sn	18 22 39.7	+0.4
CABF	**La Chapelle**	2.57	339	*e*Pn	Pn	18 22 10.7	+0.3
CABF	**La Chapelle**	2.57	339	*e*Pg	Pg	18 22 18.9	+0.3
CABF				*e*Sn	Sn	18 22 40.8	-0.5
CABF				*e*Sg	Sg	18 22 50.9	-1.0
	comp=N,13nm,0.7s						
LASF	**Ste Croix**	2.57	268	*e*Pn	Pn	18 22 11.0	+0.7
LASF	**Ste Croix**	2.57	268	*e*Pg	Pg	18 22 18.0	-0.6
LASF				*e*Sn	Sn	18 22 41.1	-0.1
	comp=N,14nm,0.2s						
MNTV	**Mantova**	2.58	68	S	Sg	18 22 53.0	+0.9
LBL	**Lubilhac**	3.14	290	Pn	Pn	18 22 20.4	+2.2
SMF	**Signal de Mont**	3.50	315	*e*Pn	Pn	18 22 24.0	+0.9
SMF				*e*Sn	Sn	18 23 03.8	-0.3
SMF				*e*Sg	Sg	18 23 20.6	-1.1
	comp=N,12nm,0.6s						
DAVA	**Damuels**	3.52	28	*e*Pn	Pn	18 22 26.8	+3.4
	comp=N,0.9nm,0.2s						
DAVA				*e*Sn	Sn	18 23 07.8	+3.0
	comp=N,8.3nm,0.5s						

HINF	Hinteralfeld	3.62	354	*e*Pn	Pn	18 22 24.5	-0.3
HINF	Hinteralfeld	3.62	354	*e*Pg	Pg	18 22 38.1	-0.6
HINF				*e*Sn	Sn	18 23 05.6	-1.5
	comp=N,3.5nm,0.2s						
FETA	Feichten	3.64	38	*i* Pn	Pn	18 22 28.9	+3.8
	comp=N,1.4nm,0.3s						
FETA				*e*Sn	Sn	18 23 10.2	+2.4
	comp=N,1.3nm,0.3s						
AVF	Avril sur Loir	3.84	313	*e*Pn	Pn	18 22 28.8	+1.0
AVF				*e*Sn	Sn	18 23 11.7	-0.9
	comp=N,3.3nm,0.4s						
AVF				*e*Sg	Sg	18 23 31.6	-1.2
	comp=N,2.2nm,0.3s						
HAU	Haudompre	3.86	349	*e*Pn	Pn	18 22 28.4	+0.4
HAU	Haudompre	3.86	349	*e*Pg	Pg	18 22 42.2	-1.1
HAU				*e*Sn	Sn	18 23 11.8	-1.2
	comp=N,5.8nm,0.3s						
MTLF	Montolieu	3.87	259	*e*Pn	Pn	18 22 29.1	+0.9
MTLF	Montolieu	3.87	259	*e*Pg	Pg	18 22 42.3	-1.2
MTLF				*e*Sn	Sn	18 23 10.7	-2.6
	comp=N,4.1nm,0.3s						
MTLF				*e*Sg	Sg	18 23 32.5	-1.1
	comp=N,4.7nm,0.4s						
CAF	Calviac	3.89	282	*e*Pn	Pn	18 22 29.5	+1.0
CAF				*e*Sn	Sn	18 23 13.4	-0.5
	comp=N,2.8nm,0.3s						
LOR	Lormes	3.94	322	*e*Pn	Pn	18 22 30.1	+1.0
	baz=140						
LOR				*e*Sn	Sn	18 23 13.8	-1.2
	comp=N,3.1nm,0.2s,baz=144						
LOR				*e*Sg	Sg	18 23 35.3	-0.5
	baz=142						
SSF	Saint Saulge	3.95	317	*e*Pn	Pn	18 22 30.0	+0.7
SSF				*e*Sn	Sn	18 23 13.7	-1.6
SSF				*e*Sg	Sg	18 23 35.6	-0.6
	comp=N,4.2nm,0.4s						
FOSV	Fossato di Vic	3.98	102	S	Sn	18 23 17.0	+1.0
BGF	Bois d'Agland	3.98	308	*e*Pn	Pn	18 22 30.7	+1.0
BGF				*e*Sn	Sn	18 23 15.0	-1.0
BGF				*e*Sg	Sg	18 23 36.1	-1.1
	comp=N,14nm,0.5s						
SQTA	Sankt Quirin	4.00	40	*i* Pn	Pn	18 22 33.3	+3.1
	comp=N,1.2nm,0.1s						
SQTA				*e*Sn	Sn	18 23 19.3	+2.6
	comp=N,2.7nm,0.3s						
MOTA	Moosalm	4.05	38	*i* Pn	Pn	18 22 33.5	+2.7
	comp=N,0.3nm,0.1s						
MOTA				*e*Sn	Sn	18 23 19.8	+1.9
	comp=N,1.4nm,0.3s						
FNEB	Nbias	4.08	253	P	Pn	18 22 32.6	+1.5
FNEB				Pn	Pb	18 22 33.1	-7.7
CDF	Champ du Feu	4.19	359	*e*Pn	Pn	18 22 32.8	+0.1
CDF				*e*Sn	Sn	18 23 19.3	-2.1
	comp=N,2.2nm,0.2s						
TCF	Toulx Ste Croi	4.22	301	*e*Pn	Pn	18 22 34.0	+1.0
TCF				*e*Sn	Sn	18 23 21.1	-0.8
TCF				*e*Sg	Sg	18 23 43.3	-1.5
	comp=N,2.8nm,0.4s						
WTTA	Wattenberg	4.24	43	*e*Pn	Pn	18 22 37.3	+3.9
	comp=N,0.9nm,0.2s						
WTTA				*e*Sn	Sn	18 23 24.3	+1.7
	comp=N,3.2nm,0.4s						
WATA	Walderalm	4.26	42	*e*Pn	Pn	18 22 37.8	+4.1
	comp=N,0.8nm,0.2s						
SFTF	Sexfontaines	4.32	338	*e*Pn	Pn	18 22 35.0	+0.7
SFTF				*e*Sn	Sn	18 23 22.8	-1.4
	comp=N,3.3nm,0.2s,baz=153						
RJF	Les Rejaudoux	4.34	287	*e*Pn	Pn	18 22 35.1	+0.4
RJF				*e*Sn	Sn	18 23 24.2	-0.7
	comp=N,1.7nm,0.3s						
RJF				*e*Sg	Sg	18 23 47.6	-1.2
	comp=N,3.8nm,0.4s						
ABTA	Abfaltersbach	4.38	53	*i* Pn	Pn	18 22 38.5	+3.2
	comp=N,1.4nm,0.3s						
ABTA				*e*Sn	Sn	18 23 28.0	+2.0
	comp=N,2.7nm,0.7s						
PAGF	Fort de Pagny	4.49	345	*e*Pn	Pn	18 22 37.2	+0.5
PAGF				*e*Sn	Sn	18 23 26.8	-1.8
	comp=N,1.9nm,0.2s,baz=163						
HYF	Humbligny	4.53	314	*e*Sn	Sn	18 23 27.3	-2.2
MEZF	Maizieres J'vi	4.58	340	*e*Pn	Pn	18 22 38.0	0.0
MEZF				*e*Sn	Sn	18 23 29.0	-1.9
	comp=N,2.1nm,0.2s,baz=161						
TERO	Teramo	4.78	107	P	Pb	18 22 54.4	+1.6
LFF	La Frestale	4.83	281	*e*Pn	Pn	18 22 42.6	+1.3
LFF				*e*Sg	Sg	18 24 00.9	-3.4
	comp=N,4.3nm,0.4s						
EPF	Esparros	5.28	259	*e*Pn	Pn	18 22 47.4	-0.1
EPF	Esparros	5.28	259	*e*Pg	Pg	18 23 07.4	-3.0
EPF				*e*Sn	Sn	18 23 44.2	-3.8
EPF				*e*Sg	Sg	18 24 15.8	-2.9
	comp=N,1.8nm,0.2s						
MFF	Saint Martin d	5.83	297	*e*P	Pn	18 22 59.7	+4.6
MFF				*e*Sg	Sg	18 24 32.8	-3.8
	comp=N,2.7nm,0.4s						
ETSF	Etsaut	5.95	260	*e*P	Pn	18 23 01.5	+4.7
ETSF				*e*Sn	Sn	18 24 03.1	-1.5
	comp=N,1.3nm,0.3s						
BAIF	Baives	6.24	341	*e*Pn	Pn	18 23 01.2	+0.5
BAIF	Baives	6.24	341	*e*Pg	Pg	18 23 26.1	-2.6
BAIF				*e*Sg	Sg	18 24 46.0	-3.4
	comp=N,0.5nm,0.2s						
SJPF	Ste Jean	6.37	263	*e*Pn	Pn	18 23 02.1	-0.4
LDF	La Druitiere	6.80	313	*e*Pn	Pn	18 23 09.1	+0.7
LDF				*e*Sn	Sn	18 24 22.9	-2.6
	comp=N,1.0nm,0.4s						
GRR	Gorron	7.09	309	*e*Pn	Pn	18 23 12.6	+0.3
GRR				*e*Sn	Sn	18 24 29.4	-3.1
	comp=N,0.7nm,0.3s						
FLN	La Foliniere	7.10	313	*e*Pn	Pn	18 23 13.0	+0.5
	baz=131						
FLN	La Foliniere	7.10	313	*e*P	Pn	18 23 18.2	+5.7
	baz=138						
FLN				*e*Sn	Sn	18 24 29.7	-3.0
	comp=N,1.4nm,0.2s						
SGMF	Saint Gilles	8.01	304	*e*Pn	Pn	18 23 25.6	+0.7

*NEIC **28** 18:37:44.2±3.2, 15°.3N±0°.2×95°.05W±0°.05, h34^{km}±11^{km}, Error ellipse: s-maj=25.0km s-min=6.8km az=177.0*

*MEX **28** 18:37:45.4±0.7, 15°.22N×95°.02W, h16^{km}±10^{km}, MD4.0*

ISC 28 18:37:40.4±1.8**, 15°.3N**±0°.1×**95°.00W**±0°.04**, h4**^{km}±13^{km}**, n16, σ1^{s}19**/25**, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.17	294	*e*P	Pg	18 38 03.6	+0.7
HUIG				*e*S	Sg	18 38 16.6	-1.4
HUIG	Huatulco	1.17	294		Pg	18 38 03.6	+0.7
HUIG					Sg	18 38 16.6	-1.4
PCIG		1.76	76	*e*P	Pn	18 38 11.9	+0.1
PCIG				*e*S	Sn	18 38 33.0	-1.7
PCIG		1.76	76		Pn	18 38 11.9	+0.1
CMIG	Matias Romero	1.79	3	*e*P	Pb	18 38 13.7	-0.2
CMIG				*i* S	Sn	18 38 34.6	-0.8
CMIG	Matias Romero	1.79	3		Pb	18 38 13.7	-0.2
PEIG	Puerto Escondi	2.19	289	*e*P	Pn	18 38 17.8	+0.2
TGIG		2.33	50	*i* P	Pn	18 38 21.5	+1.9
TGIG				*i* S	Sn	18 38 48.6	-0.2
TGIG		2.33	50		Pb	18 38 21.9	-1.1
VHO	Vista Hermosa	2.43	317	*i* P	Pn	18 38 22.4	+1.3
VHO				*i* S	Sn	18 38 50.9	-0.6
YOIG	Yosondua	2.90	303	*e*P	Pn	18 38 28.7	+1.0
YOIG				*e*S	Sn	18 39 03.0	-0.1
CCIG	Comitan	2.92	70		Pn	18 38 30.8	+2.9
PNIG	Pinotepa	3.20	290	*e*P	Pn	18 38 32.8	+1.2
PNIG				*i* S	Sn	18 39 09.3	-1.0
PNIG	Pinotepa	3.20	290		Pn	18 38 32.8	+1.2
TOIG	Toxpalan	3.42	325	*i* P	Pn	18 38 35.5	+0.8
TOIG				*i* S	Sn	18 39 15.1	-0.6
TEIG	Tepich	8.07	52	Pn	Pn	18 39 38.8	+0.4

*ANF **28** 18:39:43.0±0.2, 32°.90N×116°.21W, h14^{km}±2^{km}, ML2.7/16, Error ellipse: s-maj=2.2km s-min=1.5km az=179.0*

*NEIC **28** 18:39:43.6±0.9, 32°.87N±0°.01×116°.23W±0°.01, h16^{km}±2^{km}, Error ellipse: s-maj=1.8km s-min=1.7km az=101.0*

*PAS **28** 18:39:44.2±1.1, 32°.866N±0°.010×116°.22W±0°.01, h5^{km}±5^{km}, ML2.8/153, Error ellipse: s-maj=1.5km s-min=1.3km az=206.0*

*SCEDC **28** 18:39:44.2, 32°.87N×116°.22W, h4^{km}*

ISC 28 18:39:43.7±0.8**, 32°.87N**±0°.02×**116°.22W**±0°.02**, h13**^{km}±6^{km}**, n101, σ0^{s}72**/139**, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MONP2	Monument Peak	0.17	278		Pg	18 39 47.8	0.0
MONP2					Sg	18 39 50.6	-0.1
MONP2	Monument Peak	0.17	278	P	Pg	18 39 47.5	-0.4
	baz=99,SNR=342						
MONP2				S	Sg	18 39 50.5	-0.2
	baz=99						
CRR	Carrizo Plain	0.21	85		Pg	18 39 48.3	-0.1
IKP	In-Ko-Pah, Jac	0.24	157		Pg	18 39 48.8	-0.1
IKP					Sg	18 39 52.2	-0.1
IKP	In-Ko-Pah, Jac	0.24	157	P	Pg	18 39 48.5	-0.3
	baz=336,SNR=741						
IKP				S	Sg	18 39 52.2	-0.1
	baz=336						
RMX	La Rumorosa	0.29	156		Pb	18 39 50.8	0.0
RMX					Sb	18 39 55.6	0.0
SUP	Superstition M	0.34	75		Pg	18 39 50.7	0.0
SWSC	Sam W. Stewart	0.36	78		Pg	18 39 51.0	+0.1
SWSC					Sg	18 39 56.4	+0.4
SWSC	Sam W. Stewart	0.36	78	P	Pg	18 39 51.0	+0.1
	baz=257,SNR=84						
SWSC				S	Sg	18 39 55.8	-0.1
	baz=257						
COK2	Cook Ranch 2	0.41	92		Pg	18 39 52.4	+0.5
BAR	Barrett	0.42	244		Sg	18 39 58.0	+0.1
WESC	Westside Schoo	0.43	105		Pg	18 39 52.7	+0.6
BORC	Borrego Spring	0.43	338		Pg	18 39 52.2	-0.1
BORC					Sg	18 39 57.8	-0.3
TKX	Tecate	0.44	228		Pg	18 39 52.6	+0.1
TKX					Sg	18 39 58.5	+0.1
SALN	Salton City	0.46	26		Pg	18 39 52.9	+0.2
SGL	Mount Signal	0.47	118		Pg	18 39 52.9	-0.1
ERPC	Ernies Place	0.49	105		Pg	18 39 54.1	+0.8
EML	El Monte Cty P	0.53	273		Pg	18 39 53.9	-0.1
EML					Sg	18 40 00.8	-0.2
DPP	Dos Picos Cty	0.62	282		Pg	18 39 55.6	-0.2
DPP					Sg	18 40 03.8	-0.2
SDRC	San Diego Road	0.62	258		Pg	18 39 55.7	-0.1
SDRC					Sg	18 40 03.8	-0.2
HWB	Hans Werner Br	0.64	284		Pg	18 39 56.0	-0.2
HWB					Sg	18 40 04.4	-0.2
OLP	Otay Lakes Par	0.65	247		Pg	18 39 56.2	-0.2
OLP					Sg	18 40 04.7	-0.3
DREC	Desert Rsrch C	0.66	95		Pb	18 39 57.3	+0.4
SNR	Schaffner Ranc	0.66	90		Pb	18 39 57.5	+0.5
CBX	Cerro Bola	0.67	214		Pg	18 39 56.7	0.0
CBX					Sg	18 40 05.8	+0.2
FRD	Ford Ranch, An	0.70	333		Pg	18 39 57.4	+0.1
FRD					Sg	18 40 06.4	-0.2
FRD	Ford Ranch, An	0.70	333		Pg	18 39 57.4	+0.1
FRD					Sg	18 40 06.5	-0.2
FRK	Frink	0.72	42		Pg	18 39 57.2	-0.5
PLM	Palomar	0.72	312		Pg	18 39 57.9	+0.1
PLM					Sg	18 40 07.5	+0.1
BZNA	Buzz No.'s Pla	0.72	329		Pg	18 39 57.9	+0.1
BZNA					Sg	18 40 07.3	-0.1
109C	Camp Elliot, M	0.74	272		Pg	18 39 57.7	-0.4
109C	Camp Elliot, M	0.74	272	P	Pg	18 39 57.8	-0.4
	baz=92,SNR=32						
109C				S	Sg	18 40 07.6	-0.3
	baz=92						
CPE	Camp Elliot	0.74	272		Pg	18 39 57.8	-0.3
CPE					Sg	18 40 07.4	-0.5
SNDA	J Saunders Pla	0.76	334		Pg	18 39 58.5	+0.1
SNDA					Sg	18 40 08.5	+0.1
XPFO	Pion Flat	0.77	345		Pg	18 39 58.3	-0.2
XPFO	Pion Flat	0.77	345		Pg	18 39 58.3	-0.2
PFO	Pinyon Flats O	0.77	345		Pg	18 39 58.4	-0.3
PFO	Pinyon Flats O	0.77	345		Pg	18 39 58.3	-0.3
PFO	Pinyon Flats O	0.77	345	P	Pg	18 39 58.1	-0.5
	baz=165,SNR=27						
PFO				S	Sg	18 40 08.3	-0.4
	baz=165						
DNR	Dunn Ranch,Anz	0.78	334		Pg	18 39 58.9	+0.1
DNR					Sb	18 40 10.2	+0.6
TJX	Tijuana	0.79	243		Pg	18 39 59.1	+0.2
TJX					Sg	18 40 10.0	+0.7
CTCC	Cactus City	0.81	14		Pg	18 39 59.1	-0.2
CTCC					Sb	18 40 11.1	+0.7
CRY	Cary Ranch	0.82	328		Pg	18 39 59.7	+0.1
CRY					Sg	18 40 10.3	0.0
ESJX	Sierra Juarez	0.89	165		Pg	18 40 00.5	-0.4
GORC	Green Oak Ranc	0.89	289		Pb	18 40 00.2	-0.8
GORC					Sg	18 40 12.1	-0.6
COA	Coachella	0.92	90		Pb	18 40 00.7	-0.8
HAY	Hayfield	0.95	28		Pb	18 40 02.0	0.0
BACC	Bachelor Mtn.	1.01	317		Pb	18 40 02.9	-0.2
BC3	Big Chuckawall	1.01	39	P	Pb	18 40 02.1	-1.1
	baz=219						
BC3				S	Sb	18 40 15.0	-1.4
	baz=219						
DGR	Domenigoni Val	1.02	320		Pb	18 40 03.1	-0.1
DGR					Sb	18 40 16.5	-0.1
EW2	E Wide Canyon	1.08	352		Pb	18 40 03.8	-0.4
MURC	Murrieta	1.09	312		Pb	18 40 04.6	+0.1
MURC					Sb	18 40 18.8	+0.1
MURC	Murrieta	1.09	312	P	Pb	18 40 04.3	-0.2
	baz=132,SNR=19						
MURC				S	Sb	18 40 18.7	+0.1
	baz=132						
BELC	Belle Mtn. Jos	1.14	9		Pb	18 40 04.5	-1.0
BELC	Belle Mtn. Jos	1.14	9	P	Pb	18 40 04.4	-1.0
	baz=189,SNR=6.1						
BELC				S	Sb	18 40 18.9	-1.4
	baz=189						
GLA	Glamis	1.19	81		Pn	18 40 04.6	-1.5
GLA	Glamis	1.19	81	Pg	Pn	18 40 04.5	-1.5
GLA	Glamis	1.19	81	P	Pn	18 40 04.5	-1.5
	baz=261						
BLAC	Blackrock camp	1.21	353		Pn	18 40 05.7	-0.7
TPC	Twentynine Pal	1.24	7		Pn	18 40 05.9	-0.9
PEC	Perris	1.29	323		Pn	18 40 07.9	+0.5
SME	Santa Rosa Min	1.34	315		Pn	18 40 08.3	+0.2
RMR	Rimrock	1.37	348		Pn	18 40 08.5	-0.2
CFT	Crafton Hills	1.38	328		Pb	18 40 09.9	+0.6
GTM	Goat Mountain	1.43	356		Pn	18 40 08.9	-0.4
BBRC	Big Bear Solar	1.51	337		Pb	18 40 12.2	+0.6
BBRC	Big Bear Solar	1.51	337	Pb	Pn	18 40 10.9	+0.3
	baz=157						
HDB	Hidalgo Marine	1.53	358		Pb	18 40 12.7	+0.8
BTL	Butler Peak	1.53	335		Pn	18 40 11.4	+0.5
IRM	Iron Mountain	1.57	35	Pb	Pn	18 40 11.2	-0.1
	baz=215						
IRM				S	Sn	18 40 30.2	-1.2
	baz=215						
Y12C	Blythe	1.67	58	Pn	Pn	18 40 12.9	+0.3
SS2	San Sevaine	1.71	322		Pb	18 40 15.5	+0.6
SSK	Sunset Peak	1.82	318		Pb	18 40 17.1	+0.2
BFSC	Mount Baldy Ra	1.82	319	Sb	Sb	18 40 40.1	+0.5
	baz=138						
PEM	Pine Mountain	1.89	314		Pb	18 40 18.4	+0.4
CIAC	Catalina I. Ai	1.92	287		Sn	18 40 37.7	-2.2
CIS	Catalina Islan	1.92	287	Pb	Pn	18 40 16.6	+0.6
	baz=106						
CIS				S	Sn	18 40 40.9	+0.9
	baz=106						
SPX	San Pedro Mart	1.94	160		Pb	18 40 19.5	+0.5
HEC	Hector,Ludlow	1.96	357	Pg	Pb	18 40 20.0	+0.8
	baz=177						
SCI2	San Clemente I	1.96	274	P	Pn	18 40 16.8	+0.3
	baz=93						
GMRC	Granite Mounta	1.97	14	Pn	Pn	18 40 16.2	-0.6
	baz=194						
GMRC				Pg	Pb	18 40 20.2	+0.8
	baz=194,SNR=5.3						
XTL	Crystal Lake,	1.98	317		Pb	18 40 19.8	+0.3
MWC	Mount Wilson	2.04	312		Pb	18 40 20.2	-0.5
113A	Mohawk Valley,	2.07	92	Pn	Pn	18 40 17.1	-1.0
HOLC	Holcomb Ridge	2.08	320		Pb	18 40 21.6	+0.2
PASC	Pasadena Art C	2.09	309	Pn	Pn	18 40 16.7	-1.7
SBI	Santa Barbara	2.43	285		Pn	18 40 23.6	+0.6
GSC	Goldstone, Bar	2.48	349		Pn	18 40 23.7	0.0
GSC	Goldstone, Bar	2.48	349	Pg	Pb	18 40 29.6	+1.6
	baz=169,SNR=9.7						
EDW2	Edwards Air Fo	2.49	324	Pg	Pb	18 40 29.5	+1.2
	baz=143						
EDW2				Sb	Sb	18 41 00.4	+1.5
	baz=143						
TUQ	Turquoise Moun	2.57	5	Pn	Pn	18 40 24.9	-0.2
	baz=186						
TUQ				Pg	Pb	18 40 31.7	+1.9
	baz=186						
Y14A	Wickenburg	2.89	67	Pn	Pn	18 40 31.7	+2.2
W13A	Hualapai Mount	2.95	40	Pn	Pn	18 40 30.6	+0.2
214A	Organ Pipe Nat	3.02	107	Pn	Pn	18 40 31.6	+0.3
WBSM	Bird Springs	3.10	330		Pb	18 40 36.8	-2.0
ISA	Isabella, Lake	3.35	327		Pn	18 40 37.1	+1.3
SHPR	Sheep Range	3.73	13	Pn	Pn	18 40 41.1	0.0
TPNV	Topopah Spring	4.07	360	Pn	Pn	18 40 47.5	+1.8
LCMT	Little Creek M	4.80	30	Pn	Pn	18 40 57.2	+1.4
U15A	North Rim	4.81	41	Pn	Pn	18 40 57.5	+1.5
KNB	Kanab	4.99	33	Pn	Pn	18 40 59.9	+1.5

*GUC **28** 18:42:13.3±0.5, 19°.99S×70°.88W, h38^{km}±3^{km}, ML3.9*

*IDC **28** 18:42:17.5±1.1, 20°.12S×70°.57W, h0^{km}, mb3.6/1, mb1 4.0/4, mb1mx3.7/29, mbtmp3.9/4, ML3.6/3, MS2.8/1, Ms1 2.8/1, ms1mx2.3/29, Error ellipse: s-maj=32.4km s-min=16.7km az=72.0*

ISC 28 18:42:13.9±1.2**, 19°.98S**±0°.03×**70°.73W**±0°.07**, h6**^{km}±6^{km}**, n21, σ1^{s}76**/33**, 2C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.69	56	⇓*i*P	Pb	18 42 27.7	-0.6
PSGC				*i* S	Sb	18 42 38.7	+0.6
PATCX	Punta Patache	0.99	147	⇓*i*P	Pb	18 42 32.3	-1.2
PATCX				*e*S	Sn	18 42 46.8	-2.0
PATCX				IAML		18 42 50.6	
	comp=E,4μm,0.4s						
PB11	IPOC Station P	1.03	78	⇓*i*P	Pn	18 42 33.9	-1.1
PB11				*i* S	Sn	18 42 49.8	-0.1
PB11				IAML		18 42 54.3	
	comp=E,4μm,0.4s						
PB12	IPOC Station P	1.41	16	*e*P	Pn	18 42 38.5	-1.7
PB12				*e*S	Sn	18 42 57.7	-1.5
PB12				IAML		18 43 02.3	
	comp=N,2μm,0.5s						
GO01	Chusmiza	1.48	78	⇓*i*P	Pg	18 42 41.5	-0.7
GO01				*e*S	Sg	18 43 03.5	+2.1
GO01				IAML		18 43 06.5	
	comp=N,4μm,0.3s						
PB08	IPOC Station P	1.49	96	⇓*i*P	Pg	18 42 41.4	-1.0
PB08				*i* S	Sg	18 43 03.6	+1.8
PB08				IAML		18 43 08.9	
	comp=N,1μm,0.3s						
PB02	IPOC Station P	1.54	150	⇑*i*P	Pn	18 42 40.9	-1.1
PB02				*e*S	Sg	18 43 02.0	-1.4
PB02				IAML		18 43 12.3	
	comp=E,5μm,0.3s						
PB01	IPOC Station P	1.57	132	*e*P	Pb	18 42 41.8	-1.6
PB01				*e*S	Sg	18 43 03.7	-0.6
PB01				IAML		18 43 09.7	
	comp=E,3μm,0.3s						
AP01	Chacalluta	1.65	13	*e*P	Pn	18 42 42.5	-0.8
AP01				*e*S	Sn	18 43 03.6	-1.2
AP01				IAML		18 43 11.9	
	comp=E,4μm,0.5s						
PB07	IPOC Station P	1.90	156	*e*P	Pn	18 42 45.6	-1.5
PB07				*e*S	Sn	18 43 09.7	-1.8
PB07				IAML		18 43 24.7	
	comp=E,1μm,0.4s						
PB16	IPOC Station P	2.00	35	⇑*i*P	Pn	18 42 48.8	0.0
PB16				*i* S	Sg	18 43 17.7	-0.7
PB16				IAML		18 43 22.8	
	comp=E,954nm,0.6s						
LVC	Limon Verde	3.11	147	Pn	Pn	18 43 04.5	+0.7
	comp=E,6.7nm,0.3s,baz=330,slow=9.4,SNR=16						
LVC				Sn	Sn	18 43 42.0	+0.4
	comp=E,14nm,0.3s,baz=8.8,slow=20,SNR=7.0						
LVC				Lg	Lg	18 43 51.5	
	comp=E,31nm,0.3s,baz=38,slow=22,SNR=11						
LPAZ	La Paz	4.43	34	Pn	Pb	18 43 28.8	-3.7
	comp=E,1.1nm,0.3s,baz=246,slow=2.4,SNR=23						
LPAZ				Pg	Pg	18 43 39.2	+0.4
	comp=E,2.0nm,0.3s,baz=214,slow=13,SNR=12						
LPAZ				Lg	Lg	18 44 41.7	
	comp=E,0.5nm,0.3s,baz=284,slow=3.0,SNR=3.5						
NNA	Nana	9.89	323	LR	LR	18 48 40.4	
	comp=E,52nm,19.0s,baz=178,slow=38						
SIV	San Ignacio	10.01	68	Pn	Pn	18 44 39.3	+1.0
	comp=E,1.9nm,0.3s,baz=266,slow=11,SNR=30						
YKA	Yellowknife Ar	89.20	341	P	P	18 55 14.3	+4.2
	comp=E,0.2nm,0.5s,baz=122,slow=5.9,SNR=2.9						
ASAR	Alice Springs	130.41	210	PKP	PKiKP	19 01 30.5	+3.5
	comp=E,0.2nm,0.7s,baz=138,slow=1.7,SNR=1.6						
WRA	Warramunga Arr	133.34	213	PKP	PKiKP	19 01 37.0	+4.0
	comp=E,0.3nm,0.9s,baz=135,slow=1.9,SNR=2.0						
ZALV	Zalesovo Beam	141.27	23	PKP	PKiKP	19 01 50.3	+2.3
	comp=E,0.7nm,0.5s,baz=286,slow=5.4,SNR=3.9						
MKAR	Makanchi Array	145.36	33	PKPbc	PKiKP	19 01 57.3	+0.6
	comp=E,1.3nm,0.6s,baz=324,slow=2.8,SNR=13						
SONM	Songino Array	152.12	4	PKP	PKPbc	19 02 09.1	-1.4
	comp=E,0.2nm,0.7s,baz=345,slow=2.2,SNR=1.9						
SONM				PKPbc	sPKPbc	19 02 14.5	+1.8
	comp=E,0.7nm,0.6s,baz=323,slow=1.1,SNR=6.6						

*NEIC **28** 18:43:04.0±5.3, 12°.8S±0°.2×167°.9E±0°.3, h0^{km}±8^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=191.0*

*IDC **28** 18:43:04.2±61.0, 12°.81S×167°.86E, h0^{km}, mb3.8/3, mb1 4.0/3, mb1mx3.5/23, mbtmp3.8/3, MS3.4/1, Ms1 3.4/1, ms1mx2.7/35, Error ellipse: s-maj=1032.0km s-min=111.0km az=62.0*

*NEIC **28** 18:43:12.4±0.2, 13°.6S±0°.1×167°.6E±0°.3, h10^{km}±13^{km}, mb4.2/6, Error ellipse: s-maj=48.2km s-min=18.5km az=87.0*

ISC 28 18:43:18.6±5.2**, 13°.9S**±0°.2×**167°.3E**±0°.5**, h35**^{km}**, n11, σ1^{s}03**/12**, mb4.1**/6**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.21	185	Pn	Pn	18 45 15.2	-0.2
DZM				Sn	Sn	18 46 46.9	0.0
EIDS	Eidsvold	19.03	231	P	Pn	18 47 38.7	+0.1
EIDS				IAmb	IAmb	18 47 38.9	
	comp=Z,9.8nm,1.4s						
STKA	Stephens Creek	29.55	228	P	P	18 49 20.8	+0.7
	comp=Z,1.9nm,0.4s,baz=46,slow=8.2,SNR=9.4						
STKA				LR	LR	19 01 03.3	
	comp=Z,69nm,18.4s,baz=205,slow=35						
STKA	Stephens Creek	29.55	228	P	P	18 49 20.7	+0.6
WB0	Warramunga Arr	31.96	255		P	18 49 41.9	+0.4
WB0				IAmb	IAmb	18 49 59.9	
	comp=Z,6.0nm,1.5s						
WB2	Warramunga Arr	32.01	255	P	P	18 49 42.5	+0.4
WB2				IAmb	IAmb	18 49 59.7	
	comp=Z,8.5nm,1.6s						
WRAB	Tennant Creek	32.01	255	P	P	18 49 42.2	+0.2
WRAB				IAmb	IAmb	18 49 42.2	
	comp=Z,2.4nm,1.0s						
WRA	Warramunga Arr	32.02	255	P	P	18 49 39.6	-2.5
	comp=Z,0.3nm,0.6s,baz=86,slow=9.6,SNR=13						
ASAR	Alice Springs	32.97	248	P	P	18 49 50.0	-0.4
	comp=Z,0.4nm,0.5s,baz=74,slow=9.2,SNR=18						
ASAR	Alice Springs	32.97	248	P	P	18 49 49.1	-1.3
BBOO	Buckleboo	34.10	231	P	P	18 50 00.8	+0.7

*IDC **28** 19:17:17.0±2.3, 39°.43N×141°.74E, h111^{km}±19^{km}, mb3.1/5, mb1 3.2/9, mb1mx2.9/61, mbtmp3.6/9, Error ellipse: s-maj=38.4km s-min=17.0km az=86.0*

*JMA **28** 19:17:18.9, 39°.59N×141°.25E, h89^{km}±1^{km}, M3.0*

ISC 28 19:17:16.9±0.9**, 39°.56N**±0°.04×**141°.44E**±0°.09**, h101**^{km}±6^{km}**, n27, σ1^{s}63**/32**, mb3.4**/5**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOM	Ohasama	0.14	233	P	Pn	19 17 31.3	+0.2
JOM				S	Sn	19 17 40.6	-1.0
JSZI	Iwateshizukuis	0.42	296	P	Pn	19 17 32.2	0.0
JSZI				S	Sn	19 17 42.2	-1.5
JMK	Ichinoseki	0.63	196	P	Pn	19 17 34.7	+0.9
JMK				S	Sn	19 17 46.4	-0.1
JRG	Rokugo	0.65	256	P	Pn	19 17 33.9	0.0
JRG				S	Sn	19 17 45.2	-1.5
JANG	Nango	0.81	4	P	Pn	19 17 36.2	+0.7
JANG				S	Sn	19 17 49.4	0.0
JAH	Hinai	0.88	316	P	Pn	19 17 36.0	-0.1
JAH				S	Sn	19 17 48.8	-1.8
JYK	Kaneyama	1.06	233	P	Pn	19 17 38.3	+0.3
JYK				S	Sn	19 17 52.8	-1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIO	Ouri	1.11	184	P	Pn	19 17 40.2	+1.6
JIO				S	Sn	19 17 55.6	+0.7
JTM	Tenmabayashi	1.26	347	P	Pn	19 17 41.1	+0.8
JTM				S	Sn	19 17 57.4	-0.6
JOU	Okura	1.34	207	P	Pn	19 17 42.9	+1.6
JIW	Iwasaki	1.51	314	P	Pn	19 17 43.4	+0.1
MAT	Matsushiro	3.95	221	P	Pn	19 18 17.9	+2.5
MJAR	Matsushiro Arr	3.95	221	P	Pn	19 18 17.9	+2.4
	0.4nm,0.3s,baz=27,slow=15,SNR=24						
ASAJ	Asahikawa	4.63	10	P	Pn	19 18 25.6	+1.0
	1.4nm,0.3s,baz=216,slow=14,SNR=16						
ASAJ				S	Sn	19 19 14.1	-3.1
	0.5nm,0.3s,baz=37,slow=28,SNR=2.0						
JHJ	Hachijo jima 2	6.57	192	P	Pn	19 18 50.0	-0.9
	4.0nm,0.3s,baz=23,slow=18,SNR=2.1						
JHJ				S	Sn	19 20 00.1	-4.2
	9.3nm,0.3s,baz=79,slow=21,SNR=1.8						
USRK	Ussuriysk Ar.	8.44	306	P	Pn	19 19 18.8	+2.6
	baz=96,slow=13,SNR=3.5						
H11N2	WAKE ISLAND Hy	29.49	125	T	T	19 53 57.1	
	baz=317,slow=75,SNR=44						
H11N1	WAKE ISLAND Hy	29.50	125	T	T	19 53 58.8	
	baz=317,slow=75,SNR=65						
H11N3	WAKE ISLAND Hy	29.51	125	T	T	19 54 00.8	
	baz=317,slow=75,SNR=50						
H11S1	WAKE ISLAND Hy	30.28	127	T	T	19 54 55.5	
	baz=318,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	30.28	127	T	T	19 55 02.5	
	baz=318,slow=76,SNR=19						
H11S2	WAKE ISLAND Hy	30.30	127	T	T	19 55 03.8	
	baz=318,slow=76,SNR=11						
ZALV	Zalesovo Beam	40.27	310	P	P	19 24 44.9	+1.3
	0.8nm,0.4s,baz=103,slow=7.3,SNR=4.3						
MKAR	Makanchi Array	42.84	300	P	P	19 25 05.3	+0.5
	0.5nm,0.7s,baz=86,slow=10,SNR=6.8						
ASAR	Alice Springs	63.29	188	P	P	19 27 33.0	-1.9
	0.1nm,0.8s,baz=54,slow=9.1,SNR=12						
FINES	FINESS Array B	66.60	332	P	P	19 27 57.1	+1.2
	0.6nm,0.5s,baz=28,slow=13,SNR=3.9						
NOA	NORSAR Array B	71.87	337	P	P	19 28 29.6	+1.1
	0.2nm,0.5s,baz=34,slow=4.1,SNR=2.4						

*DDA **28** 19:25:12.6, 36°.79N×32°.00E, h7km±2km, ML2.8*
*ISK **28** 19:25:12.6, 36°.78N×32°.06E, h6km, ML2.8/10*
ISC 28 19:25:12.4±0.9**, 36°.81N**±0°.02×**32°.04E**±0°.03**, h16**km±8km**,**
n30, σ1s.58/37**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALAN	Alanya-ANTALYA	0.25	181	PG	Pg	19 25 17.8	-0.1
ALAN				SG	Sg	19 25 21.8	+0.1
KEPZ	Antalya-Kepez	0.36	285	*i* P	Pg	19 25 19.8	-0.1
KEPZ				*i* S	Sg	19 25 24.6	-0.4
KEPZ				IAML		19 25 36.0	
	comp=N,2μm,0.5s						
HDMB	Hadim	0.39	66	PG	Pb	19 25 21.6	+0.5
HDMB				SG	Sg	19 25 26.7	+0.7
GAZI	Gazipasa	0.61	159	PG	Pg	19 25 24.4	-0.1
GAZI				SG	Sg	19 25 32.4	-0.2
GAZI	Gazipasa	0.61	159	*i* P	Pb	19 25 25.0	+0.3
GAZI				*i* S	Sb	19 25 33.0	0.0
GAZI				IAML		19 25 48.0	
	comp=N,496nm,0.7s						
SEYD	Seydisehir-KON	0.62	345	PG	Pg	19 25 25.2	+0.5
SEYD				SG	Sb	19 25 35.2	+1.8
ERMK	Ermenek	0.72	103	*i* P	Pb	19 25 27.4	+0.7
ERMK				*i* S	Sb	19 25 37.4	+1.0
KMER	Konya-Meram	1.00	15	*i* P	Pg	19 25 32.2	+0.5
KMER				*i* S	Sg	19 25 42.9	-1.9
KRMN	Karaman	1.05	69	PG	Pg	19 25 32.2	-0.5
BERE	Bereket-Mersin	1.06	115	PG	Pg	19 25 32.9	0.0
TEKE	Tekeli-Mersin	1.09	127	PG	Pg	19 25 32.4	-1.1
KONT	Konya--Tatoy	1.17	13	PN	Pn	19 25 36.1	+2.0
KONT	Konya--Tatoy	1.17	13	*i* P	Pg	19 25 34.9	-0.1
KONT				*i* S	Sg	19 25 47.2	-2.9
TEVE	Tevekalti-Mers	1.19	108	PN	Pg	19 25 35.1	-0.2
DOGA	KONYA_Doganhis	1.33	347	*i* P	Pn	19 25 35.8	-0.6
DOGA				*i* S	Sb	19 25 48.9	-5.0
GULN	MERSIN_Gulnar	1.36	117	*i* P	Pn	19 25 37.1	+0.4
GULN				*i* S	Sb	19 25 50.5	-4.2
AKKU	Akkuyu-Mersin	1.38	117	PN	Pn	19 25 38.4	+1.5
KEBE	Keben-Mersin	1.39	104	PN	Pb	19 25 38.9	+0.8
LADK	Ladik-KONYA	1.42	10	PN	Pb	19 25 39.7	+1.2
IKL	Isikli	1.44	113	PN	Pb	19 25 39.5	+0.7
BAGO	Egridir - ISPA	1.55	320	*i* P	Pg	19 25 47.8	+5.7
SILI	Silifke-Mersin	1.58	106	PN	Pn	19 25 41.5	+1.8
KDHN	Kadinhani	1.71	2	*i* P	Pb	19 25 44.7	+1.1
KDHN				*i* S	Sn	19 25 56.6	-6.7
KIZK	Mersin	1.72	100	PN	Pn	19 25 43.8	+2.1
BRDR	BURDUR-Merkez	1.81	300	*i* P	Pg	19 25 55.0	+7.8
LEF	Lefka	1.82	157	PN	Pn	19 25 42.4	-0.6
GOLH	Golhisar	2.03	283	*i* P	Pg	19 25 51.8	+0.4
BOLV	Bolvadin	2.10	336	*i* P	Pg	19 26 01.2	+8.6
FETY	Fethiye	2.38	267	*i* P	Pg	19 26 04.5	+6.4
KHAL	Karahalli	2.56	308	*i* P	Pn	19 25 54.0	+0.8

JMA 28 19:26:09.4±0.1**, 24°.30N×123°.46E, h44**km±1km**, M2.5,**
Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.25	82	P	Pn	19 26 17.4	-0.1
IRIF				*e*S	Sn	19 26 23.3	+0.1
HATJ	Hateruma jima	0.40	127	P	Pn	19 26 18.9	-0.2
HATJ				*e*S	Sn	19 26 26.2	+0.3
YOJ	Yonaguni jima	0.44	292	P	Pn	19 26 19.6	0.0
YOJ				S	Sn	19 26 26.7	-0.1
JYNG	Yonagunijimaku	0.49	288	P	Pn	19 26 20.1	-0.1
JYNG				S	Sn	19 26 28.0	+0.1
JKRS	Kuro-shima	0.51	97	P	Pn	19 26 20.7	+0.3
JKRS				S	Sn	19 26 29.1	+0.9
JIJ	Ishigaki jima	0.63	84	P	Pn	19 26 21.9	-0.1
JIJ				S	Sn	19 26 30.9	0.0
JISG	Ishigakijimahi	0.83	70	P	Pn	19 26 24.8	+0.2
JISG				*e*S	Sn	19 26 36.3	+0.6
JTJ	Tarama	1.18	73	P	Pn	19 26 30.1	+0.6

TAP 28 19:26:13.8, 24°.78N×121°.46E, h1km**, ML0.9, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWLT	Wulai	0.04	93	P	Pg	19 26 15.0	+0.5
	baz=93						
YHNB	Yeheng	0.13	216	*e*P	Pg	19 26 17.7	+1.4
	baz=215						
YHNB				*e*S	Sg	19 26 20.9	+2.7
	baz=215						
NSK	Sanguang	0.14	222	*e*P	Pg	19 26 17.8	+1.3
	baz=219						
NSK				S	Sg	19 26 20.2	+1.9
	baz=219						
SLBB	Yuanshan	0.16	99	*i* P	Pg	19 26 18.2	+1.3
	baz=99						
SLBB				*i* S	Sg	19 26 21.6	+2.6
	baz=99						
ENTT	Nioudou	0.17	145	*e*P	Pg	19 26 18.4	+1.3
	baz=143						
ENTT				*e*S	Sg	19 26 21.9	+2.7
	baz=143						
TWA	Mucha	0.23	29	*e*P	Pg	19 26 19.6	+1.4
	baz=31						
TWA				*e*S	Sg	19 26 24.1	+2.9
	baz=31						
NTC	Toucheng	0.34	77	*e*P	Pb	19 26 22.3	-0.4
	baz=77						
NTC				*e*S	Sb	19 26 27.8	-0.8
	baz=77						

IDC 28 19:28:01.3±1.3**, 10°.31N×143°.39E, h0**km**, mb3.4**/5**,**
mb1 3.6/6**, mb1mx3.3**/44**, mbtmp3.4**/6**, ML3.6**/1**, Error ellipse: s-maj=58.4km s-min=23.0km az=101.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	3.57	24	Pn	Pn	19 28 59.9	+1.9
	4.7nm,0.3s,baz=221,slow=20,SNR=5.4						
GUMO				Sn	Sn	19 29 36.4	-4.5
	15nm,0.3s,baz=337,slow=23,SNR=9.4						
WRA	Warramunga Arr	31.35	197	P	P	19 34 23.8	0.0
	0.2nm,0.5s,baz=19,slow=9.6,SNR=4.9						
ASAR	Alice Springs	35.01	195	P	P	19 34 56.1	+0.3
	0.2nm,0.7s,baz=24,slow=9.7,SNR=2.1						
KURBB	Kurchatov Arra	66.21	321	P	P	19 38 51.1	+0.1
	0.4nm,0.6s,baz=106,slow=6.5,SNR=3.0						
BVAR	Borovoye Array	71.61	323	P	P	19 39 24.6	0.0
	0.3nm,0.5s,baz=93,slow=6.1,SNR=2.3						
ILAR	Eielson Array	72.14	25	P	P	19 39 26.4	-1.1
	0.2nm,0.4s,baz=260,slow=5.4,SNR=1.6						

*IDC **28** 19:29:11.1±4.2, 37°.20N×71°.91E, h190km±27km, mb3.3/3, mb1 3.3/10, mb1mx2.9/54, mbtmp3.8/10, Error ellipse: s-maj=47.0km s-min=21.5km az=159.0*
*NNC **28** 19:29:15.4±3.2, 37°.50N×71°.88E, h206km±47km, mb3.1, mpv4.4, Error ellipse: s-maj=33.4km s-min=19.4km az=10.0*
ISC 28 19:29:09.3±0.9**, 37°.10N**±0°.08×**71°.83E**±0°.07**, h200**km**, n35,**
σ2s.11/36**, mb3.3**/3**, 7C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.23	15	P	Pn	19 30 28.4	+1.5
	SNR=229						
UCH	Uchtor	5.53	21	P	Pn	19 30 32.1	+1.4
	SNR=92						
KZA	Kyzart	5.63	27	P	Pn	19 30 32.9	+0.8
	SNR=18						
EKS2	Erkin-Say	5.76	14	P	Pn	19 30 35.2	+1.7
	SNR=67						
AAK	Ala-Archa	5.90	20	P	Pn	19 30 36.9	+1.6
	19nm,0.3s,baz=146,slow=5.5,SNR=247						
AAK				S	Sn	19 31 40.7	-2.8
	2.0nm,0.3s,baz=314,slow=21,SNR=6.9						
AAK	Ala-Archa	5.90	20	P	Pn	19 30 37.0	+1.6
	SNR=102						
AAK	Ala-Archa	5.90	20	⇑P	Pn	19 30 36.8	+1.5
	29nm,0.4s						
AAK				⇓S	Sn	19 31 42.4	-1.0
	12nm,0.6s						
KBK	Karagaybulak	6.05	22	P	Pn	19 30 39.5	+2.3
	SNR=20						
KK31	Karatay Array	6.09	351	P	Pn	19 30 39.0	+1.4
	12nm,0.6s,baz=166,slow=16,SNR=94						
KK31				⇓S	Sn	19 31 44.4	-3.1
	16nm,0.5s,baz=172,slow=20,SNR=16						
ULHL	Ulahol	6.17	32	P	Pn	19 30 39.7	+0.9
	SNR=13						
CHMS	Chumysh	6.31	20	P	Pn	19 30 42.8	+2.3
	SNR=20						
CHMS	Chumysh	6.31	20	⇑P	Pn	19 30 41.7	+1.2
	16nm,0.6s						
CHMS				⇓S	Sn	19 31 50.1	-2.6
	8.5nm,0.7s						
USP	Ospenovka	6.50	18	P	Pn	19 30 45.0	+2.1
	SNR=16						
TKM2	Tokmak 2	6.50	25	P	Pn	19 30 44.6	+1.5
	SNR=30						
MDOK	Medeo	7.26	32	⇑P	Pn	19 30 53.8	+0.8
	22nm,0.6s						
KNDC	Almaty	7.27	31	⇑P	Pn	19 30 54.6	+1.6
	36nm,0.8s						
GEYT	Alibeck	10.92	279	P	P	19 31 42.3	-4.6
	0.5nm,0.3s,baz=119,slow=12,SNR=7.1						
GEYT				S	Sn	19 33 41.9	-0.3
	0.5nm,0.3s,baz=108,slow=18,SNR=3.1						
MAKZ	Makanchi	12.29	35	⇑P	Pn	19 31 57.1	-0.6
	1.5nm,0.8s						
MK31	Makanchi Array	12.42	35	⇑P	P	19 32 00.4	-3.0
	0.2nm,0.3s,baz=204,slow=10,SNR=11						
MKAR	Makanchi Array	12.42	35	P	P	19 31 59.7	-3.7
	0.1nm,0.3s,baz=214,slow=13,SNR=8.2						
GKN	Gorkha	14.09	126	*e*P	P	19 32 22.9	+0.6
	18nm,0.4s						
KURBB	Kurchatov Arra	14.35	17	P	P	19 32 24.6	-0.2
	0.1nm,0.3s,baz=202,slow=15,SNR=9.1						
KKN	Kakani	14.65	125	*e*P	P	19 32 29.9	+1.4
	2.6nm,0.3s						
PKI	Pulchoki	14.88	126	*e*P	P	19 32 33.0	+1.8
	6.4nm,0.5s						
GUN	Gumba	14.97	124	*e*P	P	19 32 33.1	+0.9
	8.1nm,0.5s						
JIRN	Jiri	15.34	124	*e*P	P	19 32 36.9	+0.6
	19nm,0.4s						
BVAR	Borovoye Array	15.96	357	P	Pn	19 32 44.4	+1.5
	0.3nm,0.3s,baz=166,slow=12,SNR=8.9						
RAMN	Ramite	16.08	125	*e*P	Pn	19 32 45.4	+0.5
	5.8nm,0.4s						
TAPN	Taplejung	16.56	121	*e*P	Pn	19 32 49.6	-1.1
	4.1nm,0.4s						
AKTO	Aktyubinsk	16.61	328	P	Pn	19 32 52.2	+1.5
	0.4nm,0.3s,baz=120,slow=7.4,SNR=4.5						
AKTO	Aktyubinsk	16.61	328	⇑P	Pn	19 32 54.6	+3.9
	1.3nm,0.5s						
ZALV	Zalesovo Beam	19.10	24	P	Pn	19 33 18.7	-1.2
	1.4nm,0.3s,baz=208,slow=10,SNR=25						
SONM	Songino Array	27.45	56	P	P	19 34 38.3	+1.6
	0.3nm,0.5s,baz=269,slow=8.6,SNR=3.2						
ARCES	ARCESS Array B	40.85	337	P	P	19 36 33.8	+2.7
	3.7nm,1.0s,baz=113,slow=8.0,SNR=1.6						
YKA	Yellowknife Ar	80.62	3	P	P	19 41 00.9	+1.8
	0.4nm,0.6s,baz=350,slow=4.8,SNR=8.8						

NNC 28 19:35:30.3±7.2**, 36°.66N×69°.68E, h58**km±376km**, mb3.5,**
mpv3.4, 2C-3D, Error ellipse: s-maj=88.7km s-min=58.4km az=80.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.47	5	⇑P	Pn	19 37 04.5	+1.6
	0.3nm,0.3s,baz=162,slow=7.0,SNR=8.4						
KK31				⇑S	Sn	19 38 15.1	-0.2
	1.3nm,0.5s,baz=190,slow=21,SNR=3.6						
AAK	Ala-Archa	7.03	30	⇓P	Pn	19 37 09.7	-1.0
	1.4nm,0.3s						
AAK				⇓S	Sn	19 38 31.0	+1.7
	3.7nm,0.6s						
CHMS	Chumysh	7.44	30	⇓P	Pn	19 37 15.3	-0.8
	4.6nm,0.8s						
MK31	Makanchi Array	13.81	39	P	Pn	19 38 43.1	0.0
	0.5nm,0.6s,baz=213,slow=11,SNR=9.3						

*NEIC **28** 20:04:22.5±1.4, 19°.7S±0°.1×177°.6W±0°.1, h570km±12km, mb4.3/30, Error ellipse: s-maj=20.7km s-min=15.9km az=188.0*
*IDC **28** 20:04:22.1±1.9, 19°.86S×177°.74W, h553km±27km, mb3.2/5, mb1 3.5/7, mb1mx3.2/28, mbtmp4.2/7, Error ellipse: s-maj=32.2km s-min=16.9km az=141.0*
ISC 28 20:04:22.2±0.5**, 19°.75S**±0°.09×**177°.66W**±0°.08**, h550**km**,**
n45, σ1s.91/48**, mb4.1**/16**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.54	296	P	P	20 05 51.7	+3.3
NIUE	Niue	7.32	86	P	P	20 06 14.0	+0.7
AFI	Afiamalu	8.09	45	P	P	20 06 20.9	0.0
	1.8nm,0.3s,baz=132,slow=16,SNR=4.0						
AFI				S	S	20 07 55.4	-2.9
	2.0nm,0.3s,baz=195,slow=20,SNR=3.0						
AFI	Afiamalu	8.09	45	P	P	20 06 20.7	-0.3
AFI					S	20 07 54.7	-3.6
DZM	Mont Dzumac	15.04	258	P	P	20 07 34.1	+1.9
	0.4nm,0.3s,baz=139,slow=19,SNR=5.7						
DZM	Mont Dzumac	15.04	258	P	P	20 07 32.2	+0.1
DZM				IAmb	IAmb	20 07 49.8	
	comp=Z,21nm,1.2s						
OUZ	Omahuta	17.24	205	P	P	20 07 55.5	+2.6
OUZ				IAmb	IAmb	20 07 56.0	
	comp=Z,8.1nm,0.7s						
URZ	Urewera	18.99	193	P	P	20 08 06.3	-2.6
	comp=Z,2.0nm,0.3s,baz=348,slow=5.6,SNR=10						
URZ	Urewera	18.99	193	P	P	20 08 05.7	-3.2
BKZ	Black Stump Fm	20.00	193	P	P	20 08 16.6	-1.5
BKZ				IAmb	IAmb	20 08 31.8	
	comp=Z,15nm,1.2s						
BFZ	Birch Farm	21.50	193	P	P	20 08 30.8	-0.9
QRZ	Quartz Range	22.62	200	P	P	20 08 41.6	0.0
THZ	Tophouse	23.36	198	P	P	20 08 47.9	-0.4
THZ				IAmb	IAmb	20 08 57.4	
	comp=Z,28nm,1.6s						
FOZ	Fox Glacier	25.94	201	P	P	20 09 09.7	-1.3
FOZ				IAmb	IAmb	20 09 18.4	
	comp=Z,22nm,1.3s						
DCZ	Deep Cove	28.56	203	P	P	20 09 33.3	-0.5
WHZ	Wether Hill Ro	28.65	201	P	P	20 09 35.2	+0.5
EIDS	Eidsvold	29.36	253	P	P	20 09 41.0	-0.2
EIDS				IAmb	IAmb	20 09 43.9	
	comp=Z,12nm,1.3s						
COEN	Coen	37.87	273	P	P	20 10 53.0	+0.2
COEN				IAmb	IAmb	20 10 53.3	
	comp=Z,5.9nm,0.6s						
STKA	Stephens Creek	38.41	243	P	P	20 10 56.2	-0.8
	comp=Z,2.0nm,0.8s,baz=88,slow=9.9,SNR=7.1						
STKA	Stephens Creek	38.41	243	P	P	20 10 56.5	-0.5
MCQ	Macquarie Isla	39.00	202	P	P	20 10 59.2	-2.2
BBOO	Buckleboo	43.17	243	P	P	20 11 34.7	-0.2
BBOO				IAmb	IAmb	20 11 35.2	
	comp=Z,5.0nm,0.6s						
WR0	Warramunga Arr	44.84	261	P	P	20 11 47.2	-0.8
AS31	Alice Springs	45.01	256	P	P	20 11 48.8	-0.5
AS31				IAmb	IAmb	20 11 50.3	
	comp=Z,2.4nm,0.3s						
ASAR	Alice Springs	45.01	256	P	P	20 11 48.7	-0.5
	comp=Z,4.5nm,0.7s,baz=86,slow=8.0,SNR=140						
ASAR				S	S	20 17 45.3	-2.9
	comp=Z,0.9nm,0.8s,baz=92,slow=16,SNR=9.4						
ASAR	Alice Springs	45.01	256	P	P	20 11 48.2	-1.0
WB2	Warramunga Arr	45.02	261	P	P	20 11 48.3	-1.0
WRAB	Tennant Creek	45.02	261	P	P	20 11 48.3	-1.0
WRAB				IAmb	IAmb	20 11 49.1	
	comp=Z,6.6nm,1.3s						
WRA	Warramunga Arr	45.03	261	P	P	20 11 48.5	-0.9
	comp=Z,1.6nm,0.3s,baz=98,slow=7.7,SNR=52						
WRA	Warramunga Arr	45.03	261	P	P	20 11 47.7	-1.7
MTN	Manton Dam	49.48	270	P	P	20 12 22.0	-0.9
MTN				IAmb	IAmb	20 12 22.7	
	comp=Z,4.8nm,0.8s						
KNRA	Kununurra	51.03	266	P	P	20 12 33.4	-0.7
KNRA				IAmb	IAmb	20 12 36.0	
	comp=Z,7.7nm,1.1s						
FITZ	Fitzroy Crossi	53.45	262	P	P	20 12 51.1	-0.4
SOEI	Soe	56.80	271	P	P	20 13 15.2	+0.1
SOEI				IAmb	IAmb	20 13 25.9	
	comp=Z,12nm,0.8s						
PSA00	Pilbara Seismi	58.15	256	P	P	20 13 23.0	-1.0
VNDA	Vanda	58.68	185	P	P	20 13 27.7	+1.1
GIRL	Giralia	63.06	254		PcP	20 14 34.2	+6.0
MJAR	Matsushiro Arr	69.80	323	P	P	20 14 36.8	-0.9
	comp=Z,1.4nm,0.6s,baz=139,slow=5.6,SNR=6.0						
MJAR	Matsushiro Arr	69.80	323	P	P	20 14 36.3	-1.4
KKM	Kota Kinabalu	69.89	284	P	P	20 14 36.7	-2.1
UGM	Wanagama	70.30	268	P	P	20 14 40.5	-0.7
QSPA	South Pole Qui	70.31	180	P	P	20 14 41.1	+0.7
QSPA				IAmb	IAmb	20 14 41.9	
	comp=Z,5.9nm,0.9s						
F07A	Phinny Hill Vi	83.64	36		PcP	20 16 01.0	+5.1
TXAR	Lajitas Array	86.38	57	P	P	20 16 08.1	+1.2
	comp=Z,0.4nm,0.6s,baz=235,slow=6.3,SNR=3.8						
GERES	GERESS Array B	149.57	345	PKPbc	PKPbc	20 23 09.2	-0.6
	comp=Z,0.3nm,0.5s,baz=1.9,slow=2.9,SNR=2.1						

*MEX **28** 20:25:21.7±0.3, 13°.36N×91°.05W, h15km, MD3.6*
*GCG **28** 20:25:22.2±0.4, 13°.80N×90°.70W, h62km±9km, MD3.3*
ISC 28 20:25:20.1±3.3**, 13°.6N**±0°.2×**90°.83W**±0°.07**, h29**km**, n6,**
σ0s.56/11**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	Ixpaco	0.71	33	*e*P	Pn	20 25 34.5	+0.2
PCG	Pacaya	0.84	15	*e*P	Pb	20 25 36.1	-0.3
PCG				*e*S	Sn	20 25 49.1	+1.3
FUG	Fuego 3	0.87	359	*e*P	Pb	20 25 36.8	0.0
FUG				*e*S	Sn	20 25 48.1	-0.3
NBG	Las Nubes	1.11	25	*e*P	Pn	20 25 39.5	-0.5
NBG				*e*S	Sb	20 25 55.0	-0.1
STG3	Santiaguito 3,	1.34	328	*e*P	Pb	20 25 44.3	-0.3
STG3				*e*S	Sb	20 26 01.4	-0.1
PCIG		3.13	313	*i* P	Pn	20 26 08.0	+0.5
PCIG				*i* S	Sn	20 26 43.8	-0.2

*IDC **28** 20:35:42.7±1.7, 22°.85N×99°.12E, h0km, mb3.2/2, mb1 3.1/3, mb1mx2.9/46, mbtmp3.0/3, ML3.2/1, Error ellipse: s-maj=48.0km s-min=17.0km az=90.0*
*BJI **28** 20:35:43.9±0.0, 22°.77N×99°.03E, h5km, ML3.5/6*
ISC 28 20:35:43.9±1.0**, 22°.77N**±0°.05×**98°.87E**±0°.08**, h10**km**, n19,**
σ1s.94/48**, Myanmar-China border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMMT	Chiang Mai	3.94	179	Pg	Pg	20 36 58.6	-0.8
CMMT				Pn	Pn	20 36 46.3	+1.9
CMMT				Sg	Sg	20 37 48.9	-1.6
KMI	Kunming	4.24	56	Pg	Pb	20 36 59.8	+1.0
KMI				Sg	Sb	20 37 49.3	-0.9
KMI				smax	smax		
	comp=N,120nm,1.2s						
KMI				smax	smax		
	comp=E,61nm,1.2s						
LAMP	Lampang	4.29	170	Pg	Pg	20 37 05.4	-0.6
LAMP				Pn	Pn	20 36 51.6	+2.4
LAMP				Sg	Sg	20 37 59.7	-1.9
CMAR	Chiang Mai Arr	4.29	179	Pn	Pn	20 36 51.0	+1.7
	0.3nm,0.3s,baz=358,slow=14,SNR=7.5						
CMAR				Pg	Pg	20 37 03.5	-2.7
	11nm,0.3s,baz=358,slow=17,SNR=121						
CMAR				Sn	Sn	20 37 41.9	+2.4
	2.6nm,0.3s,baz=350,slow=15,SNR=4.5						
CMAR				Lg	Lg	20 38 00.7	
	6.6nm,0.3s,baz=338,slow=6.2,SNR=2.1						
CM15	Chiang Mai Arr	4.30	179	Pg	Pg	20 37 03.8	-2.5
CM15				Pn	Pn	20 36 51.3	+1.9
CM15				Sg	Sg	20 38 01.7	-0.2
CM09	Chiang Mai Arr	4.30	179	Pg	Pg	20 37 04.7	-1.8
CM09				Pn	Pn	20 36 52.0	+2.5
CM09				Sg	Sg	20 38 02.4	+0.1
CM02	Chiang Mai Arr	4.31	179	Pg	Pg	20 37 04.3	-2.3
CM02				Pn	Pn	20 36 51.6	+2.0
CM02				Sg	Sg	20 38 02.0	-0.5
CM13	Chiang Mai Arr	4.33	180	Pg	Pg	20 37 04.5	-2.3
CM13				Pn	Pn	20 36 51.4	+1.6
CM13				Sg	Sg	20 38 03.3	+0.3
CM01	Chiang Mai Arr	4.33	179	Pg	Pg	20 37 04.1	-2.7
CM01				Pn	Pn	20 36 51.4	+1.6
CM01				Sg	Sg	20 38 02.3	-0.7
CM05	Chiang Mai Arr	4.35	179	Pg	Pg	20 37 05.2	-2.1
CM05				Pn	Pn	20 36 52.0	+1.9
CM05				Sg	Sg	20 38 04.1	+0.6
CM04	Chiang Mai Arr	4.35	179	Pg	Pg	20 37 04.5	-2.8
CM04				Pn	Pn	20 36 52.4	+2.3
CM04				Sg	Sg	20 38 02.9	-0.8
PHRA	Phrae	4.43	163	Pg	Pg	20 37 05.2	-3.8
PHRA				Pn	Pn	20 36 51.8	+0.5
PHRA				Sg	Sg	20 38 06.8	+0.4
PHRA				S	Sg	20 38 07.2	+0.8
MHMT	Maesarieng	4.66	191	Pg	Pg	20 37 10.1	-3.0
MHMT				Pn	Pn	20 36 56.6	+2.3
MHMT				S	Sg	20 38 14.0	+0.5
UTTA	Uttaradit	5.24	162	P	Pn	20 37 05.9	+3.5
UTTA				Pn	Pn	20 37 05.4	+3.0
UTTA				Pg	Pg	20 37 23.3	-1.0
PHIT	Phitsanulok	5.74	165	Pg	Pg	20 37 31.6	-2.3
PBKT	Sadao Pong	6.47	162	Pg	Pg	20 37 45.5	-2.5
PBKT				Pn	Pn	20 37 19.7	+0.3
WMQ	Urumqi	22.94	339	*e*P	P	20 40 47.5	-0.8
SONM	Songino Array	25.73	12	P	P	20 41 13.5	-1.1
	0.3nm,0.8s,baz=189,slow=10,SNR=3.2						
MKAR	Makanchi Array	27.45	335	P	P	20 41 30.7	+0.6
	0.2nm,0.7s,baz=137,slow=8.0,SNR=2.4						

*MOS **28** 20:48:00.5±1.4, 30°.00N×42°.73W, h10km, mb4.8/33, Error ellipse: s-maj=8.5km s-min=5.5km az=53.1*
*BJI **28** 20:48:00.0±0.0, 30°.00N×42°.70W, h10km, mB5.4/8, mb4.8/8, Ms5.2/7, Ms7 4.9/8*
*NEIC **28** 20:48:01.5±1.8, 29°.96N±0°.10×42°.5W±0°.1, h10km±4km, mb5.0/156, Error ellipse: s-maj=15.0km s-min=13.4km az=137.0*
*IDC **28** 20:48:01.4±0.5, 30°.12N×42°.56W, h0km, mb4.2/31, mb1 4.4/31, mb1mx4.3/54, mbtmp4.2/31, MS4.5/36, Ms1 4.5/36, ms1mx4.4/44, Error ellipse: s-maj=14.9km s-min=12.3km az=175.0*
*GCMT **28** 20:48:06.5±0.1, 30°.22N±0°.01×42°.61W±0°.01, h14km, MW5.3/149, Moment Tensor Solution. s104,c140;*

s149,c261; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.25±.01; $M_{\theta\theta}$0.57±.02; $M_{\phi\phi}$-0.31±.01; $M_{r\theta}$-0.39±.04; $M_{\theta\phi}$0.90±.02; $M_{\phi r}$-0.20±.03; Best double couple: $M_0$1.07200×10^{17} NP1:ϕ_s192.00000°,δ76.00000°, λ171.00000°. NP2:ϕ_s284.00000°,δ81.00000°,λ14.00000°.

Principal axes: T 1.2610, Plg16.0000°, Azm148.0000°; N -0.3790, Plg73.0000°, Azm314.0000°; P -0.8830, Plg4.0000°, Azm57.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

*BGR **28** 20:48:14.3±0.0, 30°.70N×41°.72W, h33^{km}, mb4.6*

ISC 28 20:48:03.0±0.4, **29°.94N**±0°.07×**42°.68W**±0°.06, **h14**^{km}, **n394**, σ1^{s}64/380, **mb4.8**/151, **MS4.6**/53, **19C-12D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBN	Guysborough	21.38	321	P	P	20 52 49.8	-0.2
PMOZ	Porto Moniz, M	21.93	76	P	P	20 52 53.4	-2.8
HAL	Halifax	22.09	317	P	P	20 52 56.4	-1.2
HAL				pmax	pmax		
	comp=Z,139nm,1.8s						
HAL	Halifax	22.09	317	P	P	20 52 56.4	-1.2
HAL				IAmb	IAmb	20 53 05.4	
	comp=Z,139nm,1.8s						
SKI	Saint Kitts	22.21	240	P	P	20 52 58.6	-0.6
SKI				pmax	pmax		
	comp=Z,135nm,1.0s						
SKI	Saint Kitts	22.21	240	P	P	20 52 58.6	-0.6
DRLN	Deer Lake	22.34	334	P	P	20 52 59.8	-0.5
DRLN				IAmb	IAmb	20 53 16.0	
	comp=Z,85nm,1.1s						
MACI	Morro de la Ar	22.92	88	P	P	20 53 04.1	-2.7
LMN	Caledonia Moun	23.49	319	P	P	20 53 13.2	+1.0
SJG	San Juan	24.40	246	LR	LR	21 01 01.6	
	comp=Z,793nm,21.9s,baz=66,slow=32						
G65A	Princeton	24.79	315	P	P	20 53 24.3	0.0
E63A	Oxbow	25.91	317	P	P	20 53 33.3	-1.3
E63A				IAmb	IAmb	20 53 40.7	
	comp=Z,72nm,1.4s						
MDP	Montagnes des	26.44	203	LR	LR	21 01 57.0	
	comp=Z,733nm,18.7s,baz=18,slow=31						
D62A	Allapoint, All	26.62	317	P	P	20 53 38.4	-2.5
D62A				IAmb	IAmb	20 53 55.6	
	comp=Z,32nm,1.4s						
J57A	Williamstown	29.70	306	P	P	20 54 06.9	-1.6
SCHQ	Schefferville	30.32	332	P	P	20 54 13.1	-0.8
	comp=Z,12nm,0.9s,baz=137,slow=9.1,SNR=11						
SCHQ				LR	LR	21 05 03.0	
	comp=Z,1μm,22.0s,baz=136,slow=34						
SCHQ	Schefferville	30.32	332	P	P	20 54 12.7	-1.2
L56A	Greenwood	30.51	303	P	P	20 54 16.0	+0.3
L56A				IAmb	IAmb	20 54 17.8	
	comp=Z,44nm,1.6s						
SADO	Sadowa	32.24	307	LR	LR	21 05 05.2	
	comp=Z,1μm,21.8s,baz=154,slow=32						
SDV	Santo Domingo	33.50	237	P	P	20 54 45.1	+2.7
SDV				IAmb	IAmb	20 54 47.3	
	comp=Z,27nm,0.9s						
BG3	Lake Jocassee	34.17	289	P	P	20 54 49.5	+1.6
ACSO	Alum Creek Sta	34.28	298	P	P	20 54 48.0	-0.8
ACSO				IAmb	IAmb	20 55 00.7	
	comp=Z,18nm,1.1s						
K50A	Casco	34.31	303	P	P	20 54 50.9	+1.9
K50A				IAmb	IAmb	20 55 01.2	
	comp=Z,23nm,1.1s						
M50A	Fremont	34.44	301	P	P	20 54 50.3	+0.2
M50A				IAmb	IAmb	20 55 04.2	
	comp=Z,58nm,1.7s						
PTGA	Pitinga	34.67	211	P	P	20 54 55.2	+2.9
PTGA				IAmb	IAmb	20 55 06.2	
	comp=Z,26nm,1.2s						
TKL	Tuckaleechee C	34.83	290	P	P	20 54 54.4	+0.8
	comp=Z,2.3nm,0.6s,baz=100,slow=8.8,SNR=1.4						
TKL				LR	LR	21 06 21.7	
	comp=Z,569nm,18.1s,baz=92,slow=32						
TKL	Tuckaleechee C	34.83	290	P	P	20 54 53.6	+0.1
TKL				pmax	pmax		
	comp=Z,39nm,1.7s						
TKL	Tuckaleechee C	34.83	290	P	P	20 54 53.6	+0.1
TKL				IAmb	IAmb	20 56 04.8	
	comp=Z,38nm,1.7s						
PAMC	Pamplona, Colo	36.05	237	*e*P	P	20 55 06.7	+2.0
G45A	Suttons Bay	36.83	306	P	P	20 55 10.5	0.0
G45A				IAmb	IAmb	20 55 22.5	
	comp=Z,80nm,1.7s						
RUSC	La Rusia	37.31	236	*e*P	P	20 55 18.0	+2.5
RUSC	La Rusia	37.31	236	P	P	20 55 15.5	0.0
BORG	Borgarnes	37.31	15	P	P	20 55 13.3	-1.1
	comp=Z,8.7nm,0.8s,baz=186,slow=6.5,SNR=1.7						
BORG	Borgarnes	37.31	15	P	P	20 55 12.6	-1.8
BORG				pmax	pmax		
	comp=Z,198nm,1.8s						
BORG	Borgarnes	37.31	15	P	P	20 55 12.6	-1.8
FRB	Frobisher Bay	37.62	341	P	P	20 55 16.1	-0.9
	comp=Z,9.0nm,1.0s,baz=152,slow=8.0,SNR=16						
FRB				LR	LR	21 08 43.6	
	comp=Z,804nm,21.4s,baz=141,slow=33						
FRB	Frobisher Bay	37.62	341	P	P	20 55 16.2	-0.8
FRB				pmax	pmax		
	comp=Z,15nm,1.8s						
PTBC	PUERTO BERRIO,	37.88	238	*e*P	P	20 55 21.2	+1.4
PLAL	Pickwick Lake	38.38	290	P	P	20 55 24.6	+0.8
NORC	Norcasia	38.83	238	*e*P	P	20 55 28.0	+0.1
DBBC	Dabeiba	38.88	241	*e*P	P	20 55 30.8	+2.5
HELC	Santa Helena	38.90	239	*e*P	P	20 55 31.4	+2.6
ROSC	El Rosal	38.92	236	LR	LR	21 10 49.7	
	comp=Z,865nm,21.8s,baz=36,slow=35						
T42A	Van Buren	40.64	293	P	P	20 55 43.4	+0.8
T42A				IAmb	IAmb	20 55 52.9	
	comp=Z,63nm,1.5s						
CCM	Cathedral Cave	40.69	295	P	P	20 55 44.2	+1.2
	baz=86						
YOTC	Yotoco, Valle	40.98	237	*e*P	P	20 55 45.4	-0.3
BNI	Bardonecchia	41.32	55	P	P	20 55 48.9	+0.6
BNI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BNI	Bardonecchia	41.32	55	P	P	20 55 48.9	+0.6
ISO	Isola	41.53	56	P	P	20 55 52.8	+2.8
ISO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
FCAR	Ozark Folk Cen	41.58	292	P	P	20 55 51.8	+1.4
FCAR				IAmb	IAmb	20 56 55.8	
	comp=Z,13nm,0.4s						
W41B	Gary Mavity, V	41.76	291	P	P	20 55 53.5	+1.6
SAOF	Saorge	41.89	56	P	P	20 55 51.1	-1.8
SAOF				pmax	pmax		
	comp=Z,13nm,0.9s						
UALR	University of	41.89	290	P	P	20 55 53.3	+0.3
UALR				IAmb	IAmb	20 56 05.5	
	comp=Z,49nm,1.4s						
U40A	Yellville	42.11	292	P	P	20 55 55.4	+0.6
U40A				IAmb	IAmb	20 56 05.0	
	comp=Z,50nm,1.6s						
TEIG	Tepich	42.18	268	LR	LR	21 12 06.8	
	comp=Z,574nm,18.4s,baz=26,slow=34						
SCO	Scoresbysund	42.22	10	*i* P	P	20 55 55.3	+0.1
	comp=Z,25nm,1.5s						
SCO	Scoresbysund	42.22	10	*i* P	P	20 55 55.3	+0.1
SCO				pmax	pmax		
	comp=Z,25nm,1.5s						
SCO	Scoresbysund	42.22	10	P	P	20 55 55.3	+0.1
SCO				IAmb	IAmb	20 56 16.2	
	comp=Z,56nm,1.9s						
TIC	Toumodi	42.30	116	*e*P	P	20 55 55.9	-0.6
S39A	Bolivar	42.35	294	P	P	20 55 56.2	-0.5
DBIC	Dimbokro	42.41	115	P	P	20 55 57.2	-0.1
	comp=Z,11nm,0.8s,baz=283,slow=8.0,SNR=12						
DBIC				LR	LR	21 10 54.6	
	comp=Z,1μm,20.9s,baz=284,slow=32						
DBIC	Dimbokro	42.41	115	P	P	20 55 56.5	-0.9
DBIC				pmax	pmax		
	comp=Z,23nm,1.2s						
DBIC	Dimbokro	42.41	115	P	P	20 55 56.5	-0.9
LIC	Lamto	42.55	116	*e*P	P	20 55 58.4	-0.1
	comp=Z,62nm,1.1s						
WLAR	White Oak Lake	42.68	289	P	P	20 55 58.9	-0.5
KIC	Kosan Boka	42.69	116	*e*P	P	20 55 59.4	-0.3
	comp=Z,22nm,0.9s						
BFO	Black Forest	42.75	50	P	P	20 55 58.0	-1.8
BFO				pmax	pmax		
	comp=Z,49nm,1.8s						
BFO	Black Forest	42.75	50	P	P	20 55 58.0	-1.8
BFO				IAmb	IAmb	20 56 02.7	
	comp=Z,48nm,1.8s						
SUMG	Summit	42.75	2	*i* P	P	20 55 59.1	-0.8
	comp=Z,56nm,1.0s						
SUMG	Summit	42.75	2	*i* P	P	20 55 59.1	-0.8
SUMG				pmax	pmax		
	comp=Z,56nm,1.0s						
SUMG	Summit	42.75	2	P	P	20 55 58.1	-1.9
MIAR	Mount Ida	42.93	290	P	P	20 56 01.7	+0.3
MIAR				pmax	pmax		
	comp=Z,51nm,1.8s						
MIAR	Mount Ida	42.93	290	P	P	20 56 01.7	+0.3
MIAR				IAmb	IAmb	20 56 12.3	
	comp=Z,51nm,1.8s						
HHAR	Hobbs	42.99	292	P	P	20 56 00.9	-1.0
HHAR				IAmb	IAmb	20 56 11.2	
	comp=Z,29nm,1.5s						
W39A	Magazine	43.01	291	P	P	20 56 01.7	-0.3
W39A				IAmb	IAmb	20 56 14.7	
	comp=Z,31nm,1.4s						
TUE	Stuetta	43.28	53	P	P	20 56 00.9	-3.4
U38A	Gravette	43.33	293	P	P	20 56 03.9	-0.8
U38A				IAmb	IAmb	20 56 14.8	
	comp=Z,46nm,1.6s						
SAML	Samuel	43.41	210	P	P	20 56 05.9	+0.5
SAML				pmax	pmax		
	comp=Z,16nm,1.0s						
SAML	Samuel	43.41	210	P	P	20 56 05.9	+0.5
TAM	Tamanrasset	43.52	88	P	P	20 56 07.8	+1.3
TAM				pmax	pmax		
	comp=Z,6.0nm,2.2s						
DAVOX	Davos/Dischmat	43.67	52	P	P	20 56 06.1	-1.3
	comp=Z,1.9nm,0.7s,baz=314,slow=6.0,SNR=4.8						
KEST	Kesra	43.68	68	P	P	20 56 06.4	-1.1
	comp=Z,14nm,1.1s,baz=175,slow=2.4,SNR=5.2						
KEST				LR	LR	21 11 08.0	
	comp=Z,334nm,21.2s,baz=217,slow=32						
KEST	Kesra	43.68	68	P	P	20 56 06.0	-1.5
KEST				IAmb	IAmb	20 56 32.3	
	comp=Z,28nm,1.2s						
DAVA	Damuels	43.70	51	*e*pP	P	20 56 08.0	+0.3
	comp=Z,13nm,1.4s						
PRMA	PARMA	43.89	55	P	P	20 56 08.1	-0.9
PRMA				IAmb	IAmb	20 56 18.9	
	comp=Z,22nm,0.8s						
SALO	Salr	44.06	54	P	P	20 56 08.6	-1.8
AGMN	Agassiz Nation	44.19	310	P	P	20 56 12.9	+1.5
FETA	Feichten	44.26	52	*e*pP	P	20 56 11.6	-0.6
	comp=Z,13nm,1.8s						
CASP	Castiglione de	44.29	58	P	P	20 56 09.8	-2.5
Z38A	Mt. Pleasant	44.30	288	P	P	20 56 11.3	-1.1
Z38A				IAmb	IAmb	20 56 42.9	
	comp=Z,22nm,0.6s						
RETA	Reutte	44.31	51	*e*pP	P	20 56 12.8	+0.3
	comp=Z,14nm,1.3s						
NATX	Nacogdoches	44.31	286	P	P	20 56 14.1	+1.5
ZCCA	Zocca	44.36	56	P	P	20 56 11.9	-0.9
ZCCA				IAmb	IAmb	20 56 52.7	
	comp=Z,48nm,1.4s						
X37A	Clayton	44.38	290	P	P	20 56 12.7	-0.5
X37A				IAmb	IAmb	20 57 36.9	
	comp=Z,31nm,1.7s						
ULM	Lac du Bonnet	44.39	313	P	P	20 56 12.8	-0.2
	comp=Z,3.0nm,0.8s,baz=84,slow=7.4,SNR=6.3						
ULM				LR	LR	21 13 07.4	
	comp=Z,614nm,21.1s,baz=92,slow=34						
ULM	Lac du Bonnet	44.39	313	*i* P	P	20 56 12.1	-0.9
ULM	Lac du Bonnet	44.39	313	P	P	20 56 11.9	-1.1
TUL1	Leonard	44.53	292	P	P	20 56 14.8	+0.6
MOTA	Moosalm	44.53	51	*e*sP	P	20 56 16.0	+1.7
	comp=Z,13nm,1.4s						
OSSC	Osservatorio P	44.56	57	P	P	20 56 13.5	-1.0
OSSC				IAmb	IAmb	20 56 34.3	
	comp=Z,27nm,1.3s						
ECSD	EROS Data Cent	44.56	303	P	P	20 56 13.9	-0.6
ECSD	EROS Data Cent	44.56	303	P	P	20 56 15.0	+0.5
	baz=89						
SQTA	Sankt Quirin	44.60	52	*e*sP	P	20 56 15.4	+0.5
	comp=Z,13nm,1.7s						
GRA1	Grafenberg Arr	44.79	48	P	P	20 56 13.2	-3.0
GRA1				IAmb	IAmb	20 57 32.6	
	comp=Z,40nm,1.8s						
GRF	Grafenberg Arr	44.79	48	*e*P	P	20 56 15.4	-0.8
	comp=Z,20nm,1.5s,baz=262,slow=7.8						
GRF	Grafenberg Arr	44.79	48	P	P	20 56 13.2	-3.0
GRF				pmax	pmax		
	comp=Z,40nm,1.8s						
BSEG	Bad Segeberg	44.82	42	P	P	20 56 16.2	-0.1
BSEG				pmax	pmax		
	comp=Z,28nm,0.8s						
WATA	Walderalm	44.85	52	pP	P	20 56 17.0	+0.1
	comp=Z,14nm,1.2s,SNR=6.0						
CTI	Castel Tesino	44.86	53	P	P	20 56 15.6	-1.3
CTI				pmax	pmax		
	comp=Z,16nm,1.3s						
CTI	Castel Tesino	44.86	53	P	P	20 56 15.6	-1.3
WTTA	Wattenberg	44.89	52	pP	P	20 56 16.1	-1.1
	comp=Z,24nm,1.9s,SNR=7.9						
D32A	Dogwood Acres,	44.90	308	P	P	20 56 16.9	-0.2
T35A	Sooner Cattle	44.97	294	P	P	20 56 15.8	-2.0
LATE	Laterza	44.99	58	P	P	20 56 16.2	-1.7
ABTA	Abfaltersbach	45.47	52	pP	P	20 56 21.5	-0.3
	comp=Z,14nm,0.9s,SNR=6.6						
STAL	STALIGIAL	45.60	53	P	P	20 56 20.4	-2.3
STAL				IAmb	IAmb	20 58 00.6	
	comp=Z,23nm,1.8s						
BDFB	Brasilia	45.61	187	P	P	20 56 25.4	+2.4
	comp=Z,5.6nm,0.8s,baz=0.7,slow=9.4,SNR=6.8						
BDFB				LR	LR	21 13 50.3	
	comp=Z,768nm,18.0s,baz=348,slow=34						
BDFB	Brasilia	45.61	187	P	P	20 56 22.3	-0.7
BDFB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BDFB	Brasilia	45.61	187	P	P	20 56 22.3	-0.7
NKC	Novy Kostel	45.62	47	AMS	AMS	21 12 50.0	
	comp=Z,1μm,19.0s						
NKC	Novy Kostel	45.62	47	P	P	20 56 23.4	+0.6
NKC				pmax	pmax		
	comp=Z,5.0nm,1.9s						
KONO	Kongsberg	45.78	34	P	P	20 56 23.5	-0.3
KONO				pmax	pmax		
	comp=Z,30nm,1.4s						
KONO	Kongsberg	45.78	34	P	P	20 56 23.5	-0.3
KONO				IAmb	IAmb	20 56 26.1	
	comp=Z,30nm,1.4s						
WET	Wettzell	45.82	49	P	P	20 56 24.2	-0.2
WET				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KBA	Koelnbreinsper	46.05	52	*e*pP	P	20 56 26.0	-0.4
	comp=Z,5.5nm,0.9s						
CLL	Collm	46.07	46	*i* P	P	20 56 27.1	+0.8
	comp=Z,12nm,1.1s						
CLL				*i*		20 56 36.8	
CLL				*e*S	S	21 03 09.0	-2.3
CLL				*e*SS	SS	21 06 44.0	+7.9
CLL				*e*SSS	SSS	21 07 32.0	
CLL				Lm	MLR	21 12 00.0	
	comp=Z,800nm,20.8s						
CLL	Collm	46.07	46	*i* P	P	20 56 27.1	+0.8
CLL				*e*S	S	21 03 09.0	-2.3
CLL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CLL				MLR	MLR		
	comp=Z,800nm,20.8s						
CLL	Collm	46.07	46	P	P	20 56 24.1	-2.2
AQU	L'Aquila	46.18	58	P	P	20 56 27.8	+0.4
AQU				pmax	pmax		
	comp=Z,29nm,1.1s						
MYKA	Terra Mystica	46.25	53	*e*sP	P	20 56 29.0	+1.1
	comp=Z,12nm,1.6s						
KHC	Kasperske Hory	46.28	49	*e*P	P	20 56 28.1	+0.1
KHC				*e*S	S	21 03 09.3	-5.2
KHC	Kasperske Hory	46.28	49	*e*P	P	20 56 28.1	+0.1
KHC				*e*S	S	21 03 09.3	-5.2
KHC	Kasperske Hory	46.28	49	P	P	20 56 27.7	-0.4
H10N2	ASCENSION HYDR	46.31	140	T	T	21 45 43.1	
	baz=325,slow=76,SNR=986						
H10N3	ASCENSION HYDR	46.31	140	T	T	21 46 04.5	
	baz=325,slow=76,SNR=720						
H10N1	ASCENSION HYDR	46.33	140	T	T	21 45 44.5	
	baz=325,slow=76,SNR=794						
GEC2	GERESS Array S	46.35	49	P	P	20 56 27.0	-1.7
GERES	GERESS Array B	46.35	49	P	P	20 56 28.2	-0.4
	comp=Z,0.9nm,0.8s,baz=268,slow=8.8,SNR=7.8						
GERES				LR	LR	21 12 46.4	
	comp=Z,423nm,19.0s,baz=262,slow=32						
GERES	GERESS Array B	46.35	49	P	P	20 56 27.1	-1.6
GERES	GERESS Array B	46.35	49	P	P	20 56 27.1	-1.6
BRG	Berggiesshubel	46.63	47	*e*P	P	20 56 31.6	+0.9
	comp=Z,7.2nm,1.3s						
BRG				PP	PP	20 58 22.0	+1.8
BRG				S	S	21 03 22.0	+2.7
BRG				SS	SS	21 06 58.0	+13
BRG	Berggiesshubel	46.63	47	*e*P	P	20 56 31.6	+0.9
BRG						20 58 22.0	
BRG				S	S	21 03 22.0	+2.7
BRG				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BRG				MLR	MLR		
	comp=N,990nm,19.8s						
BRG				MLR	MLR		
	comp=E,363nm,25.0s						
BRG				MLR	MLR		
	comp=Z,1μm,19.9s						
MDND	Maddock	46.68	309	P	P	20 56 31.5	+0.3
MOA	Molln	46.69	51	*e*pP	P	20 56 30.8	-0.5
	comp=Z,4.7nm,0.9s						
OBKA	Obir	46.87	53	pP	P	20 56 32.3	-0.5
	comp=Z,14nm,0.8s,SNR=6.0						
PRA	Prague	46.89	48	*e*S	S	21 03 30.9	+7.9
PRA				AMS	AMS	21 13 30.0	
	comp=Z,700nm,14.6s						
NOA	NORSAR Array B	46.94	33	P	P	20 56 32.2	-0.8
	comp=Z,2.9nm,1.1s,baz=254,slow=8.1,SNR=9.5						
NOA				LR	LR	21 12 42.1	
	comp=Z,418nm,20.0s,baz=255,slow=32						
PRU	Pruhonice	46.95	48	*e*S	S	21 03 20.6	-3.4
PRU				AMS	AMS	21 13 40.0	
	comp=Z,700nm,11.4s						
PRU	Pruhonice	46.95	48	P	P	20 56 33.9	+0.7
PRU				pmax	pmax		
	comp=Z,2.0nm,1.8s						
PVCC	Panska Ves	47.00	47	AMS	AMS	21 13 00.0	
	comp=Z,1μm,18.1s						
NC303	NORSAR Array S	47.07	32	P	P	20 56 32.8	-1.2
WMOK	Wichita Mounta	47.13	291	P	P	20 56 34.1	-0.8
WMOK				pmax	pmax		
	comp=Z,29nm,1.6s						
WMOK	Wichita Mounta	47.13	291	P	P	20 56 34.1	-0.8
WMOK				IAmb	IAmb	20 56 45.3	
	comp=Z,29nm,1.6s						
H10S3	ASCENSION HYDR	47.13	141	T	T	21 47 05.3	
	baz=326,slow=74,SNR=743						
H10S2	ASCENSION HYDR	47.15	141	T	T	21 47 06.4	
	baz=254,slow=74,SNR=484						
SOKA	Soboth	47.21	52	*e*pP	P	20 56 34.2	-1.2
	comp=Z,9.3nm,1.8s						
ARSA	Arzberg	47.54	52	*e*pP	P	20 56 36.7	-1.2
	comp=Z,12nm,1.2s						
CONA	Conrad Observa	47.77	51	sP	P	20 56 40.6	+0.9
	comp=Z,5.2nm,1.3s						
UPC	Upice	47.92	47	AMS	AMS	21 13 50.0	
	comp=Z,2μm,19.1s						
OSTC	Ostas	48.05	47	AMS	AMS	21 13 40.0	
	comp=Z,1μm,19.8s						
DPC	Dobruska-Polom	48.11	48	*e*P	P	20 56 41.9	-0.4
DPC				AMS	AMS	21 13 50.0	
	comp=Z,1μm,18.5s						
DPC	Dobruska-Polom	48.11	48	*e*P	P	20 56 41.9	-0.4
DPC				MLR	MLR		
	comp=Z,1μm,18.5s						
KRUC	Moravsky	48.13	49	P	P	20 56 42.9	+0.5
KRUC				pmax	pmax		
	comp=Z,6.0nm,1.9s						
SOP	Sopron	48.24	51	P	P	20 56 42.9	-0.3
SOP				pmax	pmax		
	comp=Z,9.0nm,1.0s						
DAG	Danmarks Havn	48.26	7	*i* P	P	20 56 42.0	-1.0
	comp=Z,6.3nm,1.1s						
DAG	Danmarks Havn	48.26	7	*i* P	P	20 56 42.0	-1.0
DAG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TULEG	Thule	48.29	352	P	P	20 56 43.0	-0.3
TULEG				IAmb	IAmb	20 56 46.3	
	comp=Z,18nm,1.1s						
KRLC	Kraliky	48.40	48	*e*P	P	20 56 44.5	0.0
KRLC				*e*S	S	21 03 49.9	+5.3
KRLC				AMS	AMS	21 14 20.0	
	comp=Z,600nm,18.6s						
KRLC	Kraliky	48.40	48	*e*P	P	20 56 44.5	0.0
KRLC				*e*S	S	21 03 49.9	+5.3
KRLC				MLR	MLR		
	comp=Z,600nm,18.6s						
FFC	Flin Flon	48.58	318	P	P	20 56 46.5	+0.7
FFC				pmax	pmax		
	comp=Z,12nm,1.0s						
FFC	Flin Flon	48.58	318	P	P	20 56 46.5	+0.7
FFC				IAmb	IAmb	20 56 55.6	
	comp=Z,12nm,1.0s						
JCT	Junction City	48.90	286	P	P	20 56 48.3	-0.4
JCT				pmax	pmax		
	comp=Z,15nm,1.0s						
JCT	Junction City	48.90	286	P	P	20 56 48.3	-0.4
JCT				IAmb	IAmb	20 57 00.6	
	comp=Z,15nm,0.9s						
JCT	Junction City	48.90	286	P	P	20 56 49.6	+1.0
	baz=75						
OKC	Ostrava-Krasne	49.28	48	*e*P	P	20 56 41.5	-10
OKC				*e*S	S	21 04 06.2	+9.3
OKC	Ostrava-Krasne	49.28	48	*e*P	P	20 56 41.5	-10
OKC				*e*S	S	21 04 06.2	+9.3
AMTX	Amarillo	49.44	292	P	P	20 56 52.6	-0.2
AMTX				IAmb	IAmb	20 57 03.7	
	comp=Z,29nm,1.3s						
VYHS	Vyhne	49.75	50	*e*P	P	20 56 54.2	-0.7
VYHS				pmax	pmax		
	comp=Z,7.0nm,1.2s						
VYHS	Vyhne	49.75	50	*e*P	P	20 56 54.2	-0.7
MSTX	Muleshoe	50.52	291	P	P	20 57 00.1	-0.9
MSTX				IAmb	IAmb	20 57 11.4	
	comp=Z,48nm,1.6s						
T25A	Trinidad	51.17	295	P	P	20 57 06.4	+0.4
Q24A	Divide	51.41	298	P	P	20 57 12.7	+4.8
	baz=80						
RES	Resolute Bay	51.68	344	P	P	20 57 08.0	-1.0
	comp=Z,3.5nm,1.0s,baz=117,slow=7.1,SNR=8.4						
RES	Resolute Bay	51.68	344	P	P	20 57 08.5	-0.5
RES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
RES	Resolute Bay	51.68	344	P	P	20 57 08.5	-0.5
BZS	Buzias	51.83	54	⇑P	P	20 57 10.7	+0.1
BZS	Buzias	51.83	54	⇑P	P	20 57 10.7	+0.1
LPAZ	La Paz	52.10	212	P	P	20 57 15.2	+1.7
	comp=Z,5.8nm,0.9s,baz=4.1,slow=6.0,SNR=16						
LPAZ				LR	LR	21 17 18.9	
	comp=Z,826nm,21.9s,baz=24,slow=34						
LPAZ	La Paz	52.10	212	P	P	20 57 13.8	+0.3
LPAZ				pmax	pmax		
	comp=Z,20nm,1.2s						
LPAZ	La Paz	52.10	212	P	P	20 57 13.8	+0.3
LPAZ				IAmb	IAmb	20 57 27.1	
	comp=Z,20nm,1.1s						
TRPA	Tarpa	52.24	50	⇑P	P	20 57 13.9	+0.4
TXAR	Lajitas Array	52.44	286	P	P	20 57 16.6	+1.2
	comp=Z,0.6nm,0.6s,baz=98,slow=9.0,SNR=6.0						
TXAR				LR	LR	21 18 43.5	
	comp=Z,121nm,20.1s,baz=0.0,slow=35						
TXAR	Lajitas Array	52.44	286	P	P	20 57 13.8	-1.7
TXAR	Lajitas Array	52.44	286	P	P	20 57 13.8	-1.7
TX31	Lajitas Ar. Si	52.44	286	P	P	20 57 14.6	-0.9
TX32	Lajitas Array	52.44	286	P	P	20 57 13.7	-1.8
DRGR		52.47	52	⇑P	P	20 57 24.9	+10
DRGR		52.47	52	⇑P	P	20 57 24.9	+9.5
GZR	Gura Zlata	52.67	54	⇓P	P	20 57 19.7	+2.8
S22A	4UR Ranch, Cre	52.94	297	P	P	20 57 20.3	+1.1
ANMO	Albuquerque	53.26	293	P	P	20 57 22.6	+1.1
	comp=Z,2.1nm,0.8s,baz=233,slow=5.7,SNR=6.4						
ANMO	Albuquerque	53.26	293	P	P	20 57 22.5	+0.9
ANMO				pmax	pmax		
	comp=Z,31nm,1.6s						
ANMO	Albuquerque	53.26	293	P	P	20 57 22.5	+0.9
ANMO				IAmb	IAmb	20 57 33.2	
	comp=Z,30nm,1.6s						
VTS	Vitosha	53.38	57	⇑P	P	20 57 22.3	0.0
VTS	Vitosha	53.38	57	⇑P	P	20 57 22.3	0.0
EGMT	Eagleton	53.49	310	P	P	20 57 24.0	+1.1
EGMT				IAmb	IAmb	20 57 39.2	
	comp=Z,19nm,1.1s						
EGMT	Eagleton	53.49	310	P	P	20 57 24.6	+1.7
	baz=84						
RLMT	Red Lodge	53.50	306	P	P	20 57 25.6	+2.4

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        baz=82
GCMT  Greycliff          53.69 307     P        P        20 57 24.4  -0.1
YNE   Yellowstone No     54.03 306     P        P        20 57 27.4  +0.2
BW06  Boulder Array      54.06 303     P        P        20 57 27.8  +0.4
BW06                                   IAmb     IAmb     20 57 31.7
        comp=Z,35nm,1.4s
BW06  Boulder Array      54.06 303     P        P        20 57 28.5  +1.1
        baz=80
PD31  Pinedale Array     54.06 303     P        P        20 57 27.4   0.0
PD31                                   IAmb     IAmb     20 57 31.7
        comp=Z,34nm,1.5s
PDAR  Pinedale Array     54.06 303     P        P        20 57 28.0  +0.6
        comp=Z,5.8nm,0.7s,baz=88,slow=8.6,SNR=14
PDAR                                   LR       LR       21 18 57.4
        comp=Z,952nm,19.8s,baz=89,slow=34
PDAR  Pinedale Array     54.06 303     P        P        20 57 26.4  -1.0
BUR08 Bucovina Ar. S     54.07  51     P        P        20 57 26.1  -1.1
BUR08                                  IAmb     IAmb     20 57 44.8
        comp=Z,16nm,1.4s
BURAR Bucovina Array     54.08  51 ⇑P       P        20 57 28.0  +0.7
BURAR Bucovina Array     54.08  51 ⇑P       P        20 57 28.0  +0.7
BURAR Bucovina Array     54.08  51     P        P        20 57 25.8  -1.5
FINES FINESS Array B     54.08  34     P        P        20 57 25.6  -1.3
        comp=Z,2.8nm,0.7s,baz=254,slow=7.1,SNR=12
FINES                                  LR       LR       21 17 38.7
        comp=Z,286nm,18.9s,baz=270,slow=33
FINES FINESS Array B     54.08  34     P        P        20 57 26.5  -0.4
FINES FINESS Array B     54.08  34     P        P        20 57 26.5  -0.4
VOIR                     54.25  53 ⇓P       P        20 57 31.0  +2.5
VOIR                     54.25  53 ⇓P       P        20 57 31.0  +2.5
VSU   Vasula             54.35  37ceP      P        20 57 29.3  +0.4
VSU                                    pmax     pmax
        comp=Z,55nm,1.1s
DOPR  Dopca              54.41  53 ⇓P       P        20 57 31.2  +1.6
RDMU  Red Mountain       54.46 301     P        P        20 57 30.1  -0.2
YHH   Holmes Hill        54.66 306     P        P        20 57 31.4  -0.4
ARCES ARCESS Array B     54.67  24     P        P        20 57 30.9  -0.2
        comp=Z,5.9nm,1.0s,baz=280,slow=5.4,SNR=4.7
ARCES                                  LR       LR       21 14 45.7
        comp=Z,245nm,20.3s,baz=304,slow=30
ARCES ARCESS Array B     54.67  24     P        P        20 57 30.4  -0.7
ARCES ARCESS Array B     54.67  24     P        P        20 57 30.4  -0.7
YMR   Madison River      54.76 306     P        P        20 57 32.1  -0.3
SNOW  Snow King Moun     54.81 304     P        P        20 57 32.4  -0.5
IMW   Indian Meadow      54.86 305     P        P        20 57 33.6  +0.3
IMW                                    IAmb     IAmb     20 57 38.1
        comp=Z,26nm,1.4s
MLR   Muntele Rosu       54.87  53 ⇓P       P        20 57 40.6  +7.6
MLR   Muntele Rosu       54.87  53     P        P        20 57 30.4  -2.6
MLR                                    pmax     pmax
        comp=Z,20nm,1.3s
MLR   Muntele Rosu       54.87  53     P        P        20 57 30.4  -2.6
MLR                                    IAmb     IAmb     20 58 11.7
        comp=Z,20nm,1.3s
YHL   Hebgen Lake        54.88 306     P        P        20 57 33.6  +0.2
REDW  Red Top Meadow     54.89 304     P        P        20 57 33.8  +0.4
YHB   Horse Butte        54.91 306     P        P        20 57 32.8  -0.7
121A  Cookes Peak, D     54.94 291     P        P        20 57 32.1  -1.8
TPAW  Teton Pass         54.94 304     P        P        20 57 33.4  -0.5
FXWY  Fox Creek          54.97 305     P        P        20 57 32.9  -1.1
AHID  Auburn Hatcher     55.18 303     P        P        20 57 35.5   0.0
AHID                                   IAmb     IAmb     20 57 45.7
        comp=Z,14nm,1.2s
ELND  Elena              55.24  56 ⇑P       P        20 57 35.9  +0.2
VRI   Vrincioaia         55.35  53 ⇓P       P        20 57 31.7  -4.7
VRI   Vrincioaia         55.35  53 ⇓P       P        20 57 31.7  -4.7
SRU   San Rafael Swe     55.48 299     P        P        20 57 37.8  +0.1
SRU                                    pmax     pmax
        comp=Z,73nm,1.9s
SRU   San Rafael Swe     55.48 299     P        P        20 57 37.8  +0.1
GO01  Chusmiza           55.54 211     P        P        20 57 38.3  -0.2
YKA   Yellowknife Ar     55.61 328     P        P        20 57 37.8  -0.2
        comp=Z,0.9nm,0.7s,baz=90,slow=7.5,SNR=11
YKA                                    PcP      PcP      20 58 38.1  +0.7
        comp=Z,0.7nm,0.7s,baz=93,slow=5.1,SNR=6.8
YKA                                    LR       LR       21 20 41.6
        comp=Z,1µm,19.8s,baz=0.0,slow=35
HWUT  Hardware Ranch     55.74 302     P        P        20 57 39.8  +0.3
PB11  IPOC Station P     55.83 211     P        P        20 57 40.5  +0.3
JLU   Jordanelle         55.86 301     P        P        20 57 40.0  -0.4
Q16A  Castle Valley      56.02 299     P        P        20 57 40.2  -1.3
SORM  Soroca             56.10  50 ⇓P       P        20 57 39.7  -2.0
SORM  Soroca             56.10  50 ⇓P       P        20 57 39.7  -2.0
AKASG Malin Array Be     56.31  47     P        P        20 57 41.8  -1.3
        comp=Z,0.9nm,0.5s,baz=277,slow=6.2,SNR=15
AKASG                                  LR       LR       21 19 39.7
        comp=Z,665nm,18.1s,baz=265,slow=34
AKASG Malin Array Be     56.31  47   i P        P        20 57 42.2  -1.0
AKASG                                  pmax     pmax
        comp=Z,2.0nm,0.6s
AKASG Malin Array Be     56.31  47     P        P        20 57 41.3  -1.8
AKBB  Malin Array Si     56.31  47     P        P        20 57 41.0  -2.2
AKBB                                   pmax     pmax
        comp=Z,29nm,1.8s
AKBB  Malin Array Si     56.31  47     P        P        20 57 41.0  -2.2
AKBB                                   IAmb     IAmb     20 57 55.7
        comp=Z,29nm,1.8s
MSO   Missoula           56.46 309     P        P        20 57 43.4  -1.1
NLU   North Lily Min     56.47 300     P        P        20 57 45.0  +0.3
MSU   Marysvale          56.88 299     P        P        20 57 47.5  -0.2
MSU   Marysvale          56.88 299     P        P        20 57 47.5  -0.2
PB01  IPOC Station P     56.88 210     P        P        20 57 47.3  -0.3
PB01                                   IAmb     IAmb     20 58 01.8
        comp=Z,8.4nm,0.7s
BGU   Big Grassy Mou     56.96 302     P        P        20 57 47.9  -0.3
DUG   Dugway, Tooele     56.96 301     P        P        20 57 47.9  -0.3
DUG                                    pmax     pmax
        comp=Z,12nm,1.1s
DUG   Dugway, Tooele     56.96 301     P        P        20 57 47.9  -0.3
DUG                                    IAmb     IAmb     20 57 59.5
        comp=Z,12nm,1.1s
DUG   Dugway, Tooele     56.96 301     P        P        20 57 50.7  +2.5
        baz=77
MTPU  Mount Pierson      57.00 298     P        P        20 57 48.4  -0.4
WUAZ  Wupatki            57.01 295     P        P        20 57 48.0  -0.6
X16A  Lo Mia Camp, P     57.36 294     P        P        20 57 49.7  -1.4
APA   Apatity            57.41  26⇓iP       P        20 57 39.5   -11
APA                                    pmax     pmax
        comp=Z,8.0nm,1.1s
U15A  North Rim          57.49 296     P        P        20 57 51.1  -1.0
U15A                                   IAmb     IAmb     20 58 03.5
        comp=Z,18nm,1.4s
CPUP  Villa Florida      57.69 196     LR       LR       21 20 20.2
        comp=Z,273nm,21.3s,baz=12,slow=34
CCUT  Cedar City         58.02 298     P        P        20 57 54.9  -1.0
PSUT  Pine Spring        58.15 299     P        P        20 57 56.2  -0.4
NEW   Newport            58.33 311     P        P        20 57 57.5   0.0
        comp=Z,5.5nm,0.9s,baz=78,slow=9.8,SNR=6.1
NEW   Newport            58.33 311     P        P        20 57 57.6   0.0
NEW                                    pmax     pmax
        comp=Z,11nm,1.0s
NEW   Newport            58.33 311     P        P        20 57 57.6   0.0
NEW                                    IAmb     IAmb     20 58 12.3
        comp=Z,11nm,1.0s
NEW   Newport            58.33 311     P        P        20 57 59.2  +1.6
        baz=79
MFID  Camas Ranch        58.44 305     P        P        20 57 58.3  -0.2
ELK   Elko               58.63 302     P        P        20 57 58.3  -1.7
ELK                                    pmax     pmax
        comp=Z,15nm,1.7s
ELK   Elko               58.63 302     P        P        20 57 58.3  -1.7
ELK                                    IAmb     IAmb     20 58 10.2
        comp=Z,14nm,1.7s
W13A  Hualapai Mount     59.10 295     P        P        20 58 04.2  +0.8
W13A                                   IAmb     IAmb     20 58 15.0
        comp=Z,15nm,1.4s
R11A  Troy Canyon, C     59.51 299     P        P        20 58 06.4  +0.3
R11A                                   IAmb     IAmb     20 58 16.8
        comp=Z,15nm,1.4s
R11A  Troy Canyon, C     59.51 299     P        P        20 58 09.4  +3.3
        baz=74
D08A  Wollman Farm,      59.77 310     P        P        20 58 07.6  +0.1
OBN   Obninsk            60.03  41⇓eP       P        20 58 10.2  +1.1
OBN                                   e*PP      pP       20 58 13.3  +0.5
OBN                                   e*SP      pwP      20 58 15.8  -0.4
OBN                                                      20 58 57.0
OBN                                   eS        S        21 06 27.9  +6.6
OBN                                    pmax     pmax
        comp=Z,29nm,1.7s
OBN                                    MLR      MLR
        comp=Z,228nm,15.0s
J08A  Circle Bar Ran     60.33 306     P        P        20 58 11.5  -0.1
TPNV  Topopah Spring     60.40 298     P        P        20 58 11.2  -1.0
TPNV                                   pmax     pmax
        comp=Z,18nm,1.3s
TPNV  Topopah Spring     60.40 298     P        P        20 58 11.2  -1.0
TPNV                                   IAmb     IAmb     20 58 23.8
        comp=Z,18nm,1.3s
TPNV  Topopah Spring     60.40 298     P        P        20 58 14.8  +2.5
        baz=73
KLMR  Klimovskoe         60.61  34   eP       P        20 58 11.1  -1.9
KLMR                                   pmax     pmax
        comp=Z,30nm,1.4s
KLMR  Klimovskoe         60.61  34   eP       P        20 58 11.1  -1.9
KLMR                                   AMP               20 58 15.3
        comp=Z,30nm,1.4s
KVN   Kaiserville        61.20 301     P        P        20 58 16.9  -0.8
KVN                                    pmax     pmax
        comp=Z,23nm,1.6s
KVN   Kaiserville        61.20 301     P        P        20 58 16.9  -0.8
KVN                                    IAmb     IAmb     20 58 27.8
        comp=Z,23nm,1.6s
NVAR  Mina Array Bea     61.53 300     P        P        20 58 20.3  +0.3
        comp=Z,0.9nm,0.7s,baz=67,slow=7.7,SNR=6.6
NVAR                                   LR       LR       21 23 54.6
        comp=Z,495nm,20.2s,baz=60,slow=35
NVAR  Mina Array Bea     61.53 300     P        P        20 58 19.5  -0.5
RYN   Ryan               61.64 300     P        P        20 58 19.8  -0.8
RYN                                    IAmb     IAmb     20 58 30.8
        comp=Z,16nm,1.4s
BR131 Keskin Array S     61.68  58     P        P        20 58 18.8  -2.0
BR131                                  pmax     pmax
        comp=Z,8.0nm,1.3s
BR131 Keskin Array S     61.68  58     P        P        20 58 18.8  -2.0
BRTR  Keskin Array B     61.68  58     P        P        20 58 20.5  -0.3
        comp=Z,2.6nm,0.9s,baz=274,slow=4.9,SNR=9.9
BRTR                                   LR       LR       21 24 29.5
        comp=Z,188nm,18.0s,baz=273,slow=36
BRTR  Keskin Array B     61.68  58ceP      P        20 58 24.2  +3.4
BRTR                                   pmax     pmax
        comp=Z,3.0nm,0.9s
BRTR  Keskin Array B     61.68  58     P        P        20 58 19.5  -1.3
LPSR  Galich'ya Gora     61.91  43   eP       P        20 58 22.3  +0.3
LPSR                                   pmax     pmax
        comp=Z,20nm,1.0s
VSR   Storozhevoye       62.39  45   eP       P        20 58 27.5  +2.3
VSR                                    pmax     pmax
        comp=Z,8.0nm,0.8s
ISA   Isabella, Lake     62.51 297     P        P        20 58 32.0  +5.6
        baz=71
VORD  Divnogorie         62.53  45   eP       P        20 58 25.8  -0.3
VORD                                   pmax     pmax
        comp=Z,50nm,1.8s
INK   Inuvik             62.86 335     P        P        20 58 27.7  -0.3
        comp=Z,5.4nm,0.9s,baz=48,slow=8.8,SNR=13
INK   Inuvik             62.86 335     P        P        20 58 27.4  -0.6
INK                                    pmax     pmax
        comp=Z,11nm,1.0s
INK   Inuvik             62.86 335     P        P        20 58 27.4  -0.6
INK                                    IAmb     IAmb     20 58 39.8
        comp=Z,11nm,0.9s
ANN   Anapa              62.95  52   eP       P        20 58 34.3  +5.3
CMB   Columbia Colle     63.22 300     P        P        20 58 29.3  -1.7
CMB                                    pmax     pmax
        comp=Z,41nm,2.0s
CMB   Columbia Colle     63.22 300     P        P        20 58 29.3  -1.7
VRH   Novokhopyorsk      63.94  44   eP       P        20 58 35.7  +0.2
VRH                                    pmax     pmax
        comp=Z,7.0nm,0.4s
DAWY  Dawson             66.34 332     P        P        20 58 51.2  +0.3
DAWY                                   IAmb     IAmb     20 59 00.9
        comp=Z,14nm,1.4s
KIV   Kislovodsk         66.79  52   eP       P        20 58 57.0  +2.8
KIV                                    pmax     pmax
        comp=Z,19nm,1.1s
KBZ   Khabaz             67.01  52     P        P        20 58 55.1  -0.3
        comp=Z,1.6nm,0.9s,baz=271,slow=14,SNR=3.9
KBZ                                    LR       LR       21 26 39.0
        comp=Z,132nm,18.9s,baz=321,slow=35
BMAR  Burnt Mountain     67.11 336     P        P        20 58 56.7  +0.9
FYU   Fort Yukon         67.69 335     P        P        20 58 58.6  -0.7
BCAR  Beaver Creek A     67.69 331     P        P        20 58 59.2  -0.4
ZEI   Tsey               68.03  52   eP       P        20 59 02.9  +0.7
ZEI                                    pmax     pmax
        comp=Z,10.0nm,1.4s
TOLK  Toolik Lake Re     68.31 338     P        P        20 59 03.7  +0.4
TOLK                                   IAmb     IAmb     21 00 05.6
        comp=Z,20nm,1.9s
IL31                     69.06 334     P        P        20 59 07.9   0.0
ILAR  Eielson Array      69.06 334     P        P        20 59 08.1  +0.1
        comp=Z,1.8nm,0.9s,baz=62,slow=3.8,SNR=11
ILAR                                   LR       LR       21 29 32.7
        comp=Z,1µm,18.5s,baz=77,slow=36
ILAR  Eielson Array      69.06 334     P        P        20 59 08.4  +0.4
ILAR  Eielson Array      69.06 334     P        P        20 59 08.3  +0.4
CCB   Clear Creek Bu     69.47 334     P        P        20 59 10.9  +0.4
CCB                                    IAmb     IAmb     20 59 20.8
        comp=Z,27nm,1.4s
WRH   Wood River Hil     69.66 334     P        P        20 59 11.4  -0.3
WRH                                    IAmb     IAmb     20 59 21.2
        comp=Z,18nm,1.4s
BWN   Browne             70.33 334     P        P        20 59 15.1  -0.7
BPAW  Bear Paw Mtn.      70.95 334     P        P        20 59 20.2  +0.6
TRF   Thorofare Moun     71.00 333     P        P        20 59 20.4  +0.3
IMAR  Indian Mountai     71.01 336     P        P        20 59 19.6  -0.4
KTH   Kantishna Hill     71.20 333     P        P        20 59 20.8  -0.4
KTH                                    IAmb     IAmb     20 59 34.4
        comp=Z,10nm,1.0s
ARU   Arti               71.40  35d iP       P        20 59 23.2  +0.7
ARU                                    S        S        21 08 43.1  +3.0
ARU                                    SS       SS       21 13 17.9  +4.0
ARU                                    pmax     pmax
        comp=Z,14nm,1.5s
ARU   Arti               71.40  35     P        P        20 59 21.5  -1.0
ARU                                    IAmb     IAmb     20 59 38.4
        comp=Z,9.9nm,1.2s
SKT   Skwentna           72.23 332     P        P        20 59 26.2  -1.1
SKT                                    IAmb     IAmb     20 59 50.2
        comp=Z,12nm,0.7s
SVE   Sverdlovsk         72.25  34   eP       P        20 59 29.1  +1.6
SVE                                    pmax     pmax
        comp=Z,16nm,1.3s
H09N1 TRISTAN DA CUN     72.48 155     T        T        22 18 52.9
        SNR=49
H09W1 TRISTAN DA CUN     72.50 155     T        T        22 18 54.2
        SNR=13
RDOG  Red Dog Mine       72.79 340     P        P        20 59 29.8  -0.8
RDOG                                   IAmb     IAmb     20 59 48.5
        comp=Z,13nm,1.2s
AKTO  Aktyubinsk         73.81  41     LR       LR       21 30 40.7
        comp=Z,379nm,19.8s,baz=309,slow=35
NRIK  Noril'sk           74.62  16     P        P        20 59 41.3   0.0
        comp=Z,0.7nm,0.3s,baz=315,slow=4.2,SNR=4.8
NRIK                                   LR       LR       21 31 09.9
        comp=Z,172nm,18.1s,baz=336,slow=35
PLCA  Paso Flores        74.91 202     P        P        20 59 45.9  +2.6
        comp=Z,2.3nm,0.9s,baz=278,slow=2.1,SNR=1.9
PLCA                                   LR       LR       21 33 22.5
        comp=Z,276nm,19.8s,baz=298,slow=36
PLCA  Paso Flores        74.91 202     P        P        20 59 44.1  +0.8
PLCA  Paso Flores        74.91 202     P        P        20 59 44.1  +0.8
ABKAR Akbulak array      75.47  41     P        P        20 59 43.8  -2.8
TIXI  Tiksi              78.52   3     LR       LR       21 29 30.2
        comp=Z,147nm,21.1s,baz=9.0,slow=32
TIXI  Tiksi              78.52   3ceP      P        21 00 04.9  +1.6
TIXI                                   pmax     pmax
        comp=Z,6.0nm,1.3s
TIXI  Tiksi              78.52   3     P        P        21 00 03.5  +0.2
BRVK  Borovoye           78.96  34ceP      P        21 00 08.1  +2.0
BRVK                                   pmax     pmax
        comp=Z,9.0nm,1.3s
BRVK  Borovoye           78.96  34     P        P        21 00 05.2  -0.9
GEYT  Alibeck            79.90  52     P        P        21 00 12.1  +0.5
        comp=Z,1.1nm,0.8s,baz=249,slow=11,SNR=2.3
GEYT                                   LR       LR       21 35 57.4
        comp=Z,127nm,18.2s,baz=270,slow=36
GEYT  Alibeck            79.90  52     P        P        21 00 08.6  -3.0
BILL  Bilibino           79.95 349ceP      P        21 00 12.3  +1.1
BILL                                   pmax     pmax
        comp=Z,7.0nm,1.7s
KURK  Kurchatov          84.45  33ceP      P        21 00 37.2  +2.1
KURK                                   pmax     pmax
        comp=Z,7.0nm,1.7s
KURK  Kurchatov          84.45  33     P        P        21 00 34.3  -0.8
KURK                                   IAmb     IAmb     21 00 37.8
        comp=Z,7.6nm,1.2s
ZAA0  Zalesovo Array     84.94  28     P        P        21 00 37.0  -0.5
ZALV  Zalesovo Beam      84.94  28     P        P        21 00 37.4  -0.1
        comp=Z,2.7nm,1.0s,baz=317,slow=10,SNR=7.8
ZALV                                   LR       LR       21 37 31.4
        comp=Z,169nm,19.9s,baz=320,slow=35
ZALV  Zalesovo Beam      84.94  28   i P        P        21 00 39.7  +2.2
ZALV                                   pmax     pmax
        comp=Z,2.0nm,0.9s
ZALV  Zalesovo Beam      84.94  28     P        P        21 00 36.5  -1.0
KKAR  Karatay Array      84.97  43     P        P        21 00 34.6  -3.3
KKAR  Karatay Array      84.97  43     P        P        21 00 34.6  -3.3
UOSS  Minazif            85.03  64     P        P        21 00 38.1  -0.5
BOSA  Boshof             87.13 125     LR       LR       21 35 28.5
        comp=Z,223nm,18.2s,baz=310,slow=33
AAK   Ala-Archa          87.56  41   i P        P        21 00 53.5  +2.6
AAK                                    pmax     pmax
        comp=Z,1.0nm,1.3s
MAKZ  Makanchi           88.75  34     P        P        21 00 54.9  -1.4
MAKZ                                   pmax     pmax
        comp=Z,9.0nm,1.6s
MAKZ  Makanchi           88.75  34     P        P        21 00 54.9  -1.4
MAKZ                                   IAmb     IAmb     21 01 24.5
        comp=Z,8.8nm,1.6s
MK31  Makanchi Array     88.91  34     P        P        21 00 56.4  -0.7
MK31                                   pmax     pmax
        comp=Z,2.0nm,1.2s
MK31  Makanchi Array     88.91  34     P        P        21 00 56.4  -0.7
MKAR  Makanchi Array     88.91  34     P        P        21 00 55.9  -1.1
        comp=Z,1.6nm,1.1s,baz=345,slow=4.1,SNR=8.8
MKAR                                   LR       LR       21 39 47.2
        comp=Z,539nm,19.9s,baz=314,slow=35
MKAR  Makanchi Array     88.91  34ceP      P        21 00 58.4  +1.4
MKAR                                   pmax     pmax
        comp=Z,1.0nm,1.0s
MKAR  Makanchi Array     88.91  34     P        P        21 00 55.3  -1.8
DGZ   Jazzator, Alta     89.17  30   i P        P        21 01 00.7  +2.4
DGZ                                    pmax     pmax
        comp=Z,1.0nm,1.1s
BOD   Bodaibo            90.41  12   eP       P        21 01 01.9  -1.8
BOD                                    pmax     pmax
        comp=Z,4.0nm,1.5s
KSH   Kashi              90.42  43     P        P        21 01 01.0  -3.4
KSH                                    pP       pwP      21 01 12.0  +0.5
KSH                                    PP       PP       21 04 37.5  -0.6
KSH                                    S        SKKSac   21 11 47.5  -2.0
KSH                                    pmax     pmax
        comp=Z,16nm,0.6s
KSH                                    LR       LR
        comp=Z,100nm,12.2s
KSH                                    LR       LR
        comp=Z,150nm,8.5s
KSH                                    LR       LR
        comp=Z,320nm,13.3s
TLY   Talaya             93.50  20ceP      P        21 01 21.1  +2.8
TLY                                    pmax     pmax
        comp=Z,3.0nm,1.7s
WMQ   Urumqi             93.69  34   eP       P        21 01 21.8  +2.5
WMQ                                    pP       pwP      21 01 30.8  +4.3
WMQ                                    pmax     pmax
        comp=Z,11nm,0.7s
WMQ                                    pmax     pmax
        comp=Z,80nm,5.7s
WMQ                                    LR       LR
        comp=Z,230nm,21.9s
WMQ                                    LR       LR
        comp=Z,410nm,21.9s
WMQ                                    LR       LR
        comp=Z,420nm,23.3s
PETK  Petropavlovsk-     95.42 348     LR       LR       21 43 18.6
        comp=Z,249nm,21.7s,baz=57,slow=35
SONM  Songino Array      97.74  20     LR       LR       21 44 24.5
        comp=Z,116nm,20.9s,baz=348,slow=35
CD2   Chengdu           111.58  31     Pdif     Pdif     21 02 36.0  -3.6
PPT2  Papeete2          112.94 262   eLR      LR       21 40 27.0
        comp=Z,224nm,27.5s
SYO   Syowa Base        114.91 157⇑ePdiff   Pdif     21 02 51.4  -1.8
TBI   Tubuai            115.22 257   eLR      LR       21 41 30.7
        comp=Z,191nm,29.2s
NJ2   Nanjing           115.90  17   ePKP     PKiKP    21 06 43.8  -1.8
QIZ   Qiongzhong        124.58  32     PKP      PKPdf    21 07 00.8  -1.8
QIZ                                    SS       SS       21 25 40.0  -0.5
QIZ                                    LR       LR
        comp=Z,160nm,18.6s
QIZ                                    LR       LR
        comp=Z,120nm,23.1s
QIZ                                    LR       LR
        comp=Z,130nm,14.7s
DZM   Mont Dzumac       152.73 280   eLR      LR       21 58 53.3
        comp=Z,257nm,21.9s
WRA   Warramunga Arr    169.69  16     PKP      PKPdf    21 08 11.0  +0.2
        comp=Z,0.7nm,1.2s,baz=335,slow=1.4,SNR=2.2
ASAR  Alice Springs     173.05  27     PKP      PKPdf    21 08 11.9  -0.4
        comp=Z,0.4nm,0.9s,baz=345,slow=0.6,SNR=2.5
ASAR                                   PKPab    PKPab    21 09 38.6  -0.6
        comp=Z,0.3nm,0.9s,baz=324,slow=2.5,SNR=2.1
ASAR  Alice Springs     173.05  27     PKIKP    PKPdf    21 08 10.9  -1.4
ASAR  Alice Springs     173.05  27     PKPdf    PKPdf    21 08 10.9  -1.4
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*IDC **28** 20:52:22.7±0.8, 18°.78N×144°.89E, h0km, mb3.6/10, mb1 3.9/10, mb1mx3.7/51, mbtmp3.6/10, Error ellipse: s-maj=33.4km s-min=17.8km az=89.0*

*NEIC **28** 20:52:23.9±1.4, 18°.8N±0°.1×144°.8E±0°.2, h9km±4km, mb4.2/5, Error ellipse: s-maj=32.2km s-min=14.5km az=92.0*

ISC 28 20:52:24.2±0.8**, 18°.8N**±0°.1×**144°.9E**±0°.2**, h10**km**, n26, σ0^s.97**/20**, mb3.8**/12**, Mariana Islands**

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Code  Station Name        Δ°   AZ°     Phase ID              Time      Res
                                       Op       ISC          h  m  s   ISC
H11S3 WAKE ISLAND Hy     20.66  87     T        T        21 18 54.5
        baz=275,slow=75,SNR=73
H11S1 WAKE ISLAND Hy     20.68  87     T        T        21 18 58.9
        baz=275,slow=75,SNR=48
H11S2 WAKE ISLAND Hy     20.68  87     T        T        21 18 57.1
        baz=275,slow=75,SNR=65
H11N1 WAKE ISLAND Hy     20.80  84     T        T        21 19 27.2
        baz=272,slow=74
H11N2 WAKE ISLAND Hy     20.80  84     T        T        21 19 30.8
        baz=272,slow=74
H11N3 WAKE ISLAND Hy     20.81  84     T        T        21 19 32.6
        baz=272,slow=74
KSRS  Korea Array        23.77 325     P        P        20 57 37.1  +0.2
        0.9nm,0.6s,baz=149,slow=9.1,SNR=3.5
FAKI  Fak Fak            24.93 211              S        21 02 13.8  +2.5
BJT   Baijiatuau         32.51 317     P        P        20 58 54.9  -0.3
WB2   Warramunga Arr     39.88 196     P        P        20 59 57.9  -0.5
WB2                                    IAmb     IAmb     20 59 59.8
        comp=Z,3.4nm,1.1s
WRA   Warramunga Arr     39.89 196     P        P        20 59 58.1  -0.3
        comp=Z,0.8nm,0.7s,baz=15,slow=9.2,SNR=5.8
SONM  Songino Array      42.57 322     P        P        21 00 21.6  +1.2
        comp=Z,0.3nm,0.6s,baz=129,slow=7.0,SNR=4.2
SONM  Songino Array      42.57 322     P        P        21 00 19.4  -1.0
ASAR  Alice Springs      43.57 195     P        P        21 00 27.9  -0.7
        comp=Z,0.4nm,0.6s,baz=18,slow=9.4,SNR=13
ASAR  Alice Springs      43.57 195     P        P        21 00 27.4  -1.2
STKA  Stephens Creek     50.51 184     P        P        21 01 22.2  -0.4
        comp=Z,1.9nm,0.8s,baz=349,slow=10,SNR=6.0
STKA  Stephens Creek     50.51 184     P        P        21 01 22.4  -0.2
BBOO  Buckleboo          52.03 189     P        P        21 01 33.1  -0.9
BBOO                                   IAmb     IAmb     21 02 02.7
        comp=Z,7.9nm,1.4s
ZALV  Zalesovo Beam      57.45 323     P        P        21 02 13.0  -0.1
        comp=Z,0.8nm,0.5s,baz=94,slow=5.9,SNR=3.8
ZALV  Zalesovo Beam      57.45 323     P        P        21 02 12.4  -0.8
MKAR  Makanchi Array     57.82 314     P        P        21 02 16.3  +0.3
        comp=Z,0.7nm,0.8s,baz=93,slow=6.1,SNR=4.4
MKAR  Makanchi Array     57.82 314     P        P        21 02 15.9   0.0
ILAR  Eielson Array      63.88  26     P        P        21 02 56.0  -0.9
        comp=Z,0.4nm,0.7s,baz=262,slow=6.2,SNR=1.9
ILAR  Eielson Array      63.88  26     P        P        21 02 56.4  -0.4
YKA   Yellowknife Ar     78.24  28     P        P        21 04 24.4  +0.4
        comp=Z,0.6nm,0.7s,baz=288,slow=5.1,SNR=8.4
NVAR  Mina Array Bea     83.67  52     P        P        21 04 55.2  +1.4
        comp=Z,0.2nm,0.5s,baz=282,slow=6.2,SNR=2.0
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JSN 28 20:52:41.2±1.9**, 17°.72N**×**78°.68W, h0**km±25km**, MD2.9, 1D, Jamaica region**

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Code  Station Name        Δ°   AZ°     Phase ID              Time      Res
                                       Op       ISC          h  m  s   ISC
MCJ   Malvern             0.96  78⇓iP       Pg       20 52 58.8  -0.9
MCJ                                  i S        Sg       20 53 11.9  -0.3
MTDJ  Mount Denham        1.20  65   i P        Pg       20 53 02.0  -2.2
MTDJ                                 i S        Sg       20 53 19.0  -0.8
PCJ   Portland Cotta      1.45  89   i P        Pn       20 53 06.7  -2.0
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BBJ	Bamboo Saint A	1.49	64	*i* P	Pn	20 53 06.8	-2.6
STH	Stony Hill	1.81	78	*i* P	Pn	20 53 13.8	+0.1

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*IDC **28** 21:08:24.5±2.2, 5°.60N×126°.39E, h0^{km}, mb3.2/4, mb1 3.4/4, mb1mx3.1/37, mbtmp3.2/4, Error ellipse: s-maj=136.5km s-min=18.1km az=68.0*
*MAN **28** 21:08:27.0, 5°.65N×126°.57E, h59^{km}, mb4.6, ML3.4, MS3.3*
ISC 28 21:08:24.9±2.0**, 5°.62N**±0°.07×**126°.38E**±0°.08**, h5**^{km}±13^{km}**, n11,** σ1^{s}.**36**/18**, mb3.2**/4**, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.82	306	*e*P	Pn	21 08 45.1	+2.0
DDMP				*e*S	Sn	21 08 59.0	+3.4
MATI	Mati	1.32	355	*e*P	Pg	21 08 50.8	+0.5
MATI				*e*S	Sn	21 09 07.6	-0.5
GSPH	General Santos	1.49	288	⇓*i*P	Pb	21 08 52.6	-0.6
GSPH				*i* S	Sn	21 09 10.6	-1.9
DAV	Davao City (W)	1.64	331	Pn	Pg	21 08 56.0	-0.4
	27nm,0.3s,baz=124,slow=3.6,SNR=1.5						
DAV				Sn	Sb	21 09 16.5	-0.2
	34nm,0.3s,baz=259,slow=20,SNR=6.2						
KCP	Kidapawan	1.88	317	⇑*i*P	Pb	21 08 59.1	-0.6
KCP				*i* S	Sn	21 09 20.5	-1.4
SKMP	Bagumbayan, Su	2.03	296	*e*P	Pb	21 09 01.6	-0.7
SKMP				*e*S	Sb	21 09 27.9	0.0
BUKP	Musuan	2.59	330	*e*P	Pn	21 09 08.0	+0.3
BUKP				*e*S	Sn	21 09 38.4	-1.2
FITZ	Fitzroy Crossi	23.58	182	P	P	21 13 36.4	-0.3
	0.6nm,0.5s,baz=360,slow=8.3,SNR=1.8						
WRA	Warramunga Arr	26.58	163	P	P	21 14 05.2	+1.0
	0.3nm,0.5s,baz=344,slow=11,SNR=1.6						
ASAR	Alice Springs	30.02	166	P	P	21 14 34.5	-0.5
	0.1nm,0.3s,baz=348,slow=7.3,SNR=4.5						
MKAR	Makanchi Array	55.81	325	P	P	21 18 03.6	+0.3
	0.1nm,0.5s,baz=127,slow=7.0,SNR=1.9						

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*JMA **28** 21:09:49.1±0.3, 37°.52N×144°.51E, h42^{km}, M3.4*
*IDC **28** 21:09:50.6±2.3, 36°.41N×144°.42E, h0^{km}, mb3.3/4, mb1 3.5/5, mb1mx3.3/40, mbtmp3.3/5, ML2.5/1, Error ellipse: s-maj=58.0km s-min=28.5km az=53.0*
ISC 28 21:09:46.1±1.3**, 37°.46N**±0°.06×**144°.87E**±0°.09**, h35**^{km}**, n22,** σ2^{s}.**30**/23**, mb3.4**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.82	288	P	Pn	21 10 29.3	+0.6
JIKH				*e*S	Sn	21 10 59.3	-2.2
JIO	Ouri	2.96	291	P	Pn	21 10 31.4	+0.9
JIO				*e*S	Sn	21 11 02.0	-2.7
OFUJ	Ofunato	2.99	304	P	Pn	21 10 32.2	+1.2
JKMT	Kesennumamotoy	3.00	298	P	Pn	21 10 31.8	+0.7
JKMT				*e*S	Sn	21 11 03.6	-2.2
JMK	Ichinoseki	3.24	298	P	Pn	21 10 34.8	+0.4
JOM	Ohasama	3.45	307	P	Pn	21 10 39.2	+1.8
JOM				*e*S	Sn	21 11 16.2	-0.8
JFT	Otama	3.61	272	P	Pn	21 10 41.1	+1.6
JFT				*e*S	Sn	21 11 19.1	-1.8
JRY	Ryogami san	5.01	255	P	Pn	21 10 59.1	+0.3
JRY				*e*S	Sn	21 11 51.2	-4.2
JCH	Churui	5.27	348	P	Pn	21 11 03.9	+1.5
JCH				*e*S	Sn	21 11 59.6	-2.3
MJAR	Matsushiro Arr	5.41	262	Pn	Pn	21 11 06.3	+2.0
	0.2nm,0.3s,baz=89,slow=15,SNR=10						
MJAR				Sn	Sn	21 12 07.3	+2.0
	0.0nm,0.3s,baz=144,slow=38,SNR=1.5						
NEM2	Nemuro 2	5.93	6	*e*S	Sn	21 12 15.2	-2.9
JHJ	Hachijo jima 2	6.01	225	Pn	Pn	21 11 11.9	-0.6
	2.9nm,0.3s,baz=49,slow=16,SNR=1.4						
JHJ				Sn	Sn	21 12 15.0	-5.0
	11nm,0.3s,baz=36,slow=23,SNR=5.7						
H11N2	WAKE ISLAND Hy	26.09	127	T	T	21 42 22.3	
	baz=318,slow=74,SNR=9.6						
H11N1	WAKE ISLAND Hy	26.10	127	T	T	21 42 27.0	
	baz=318,slow=74,SNR=3.2						
H11N3	WAKE ISLAND Hy	26.11	127	T	T	21 42 30.1	
	baz=318,slow=74,SNR=6.7						
H11S1	WAKE ISLAND Hy	26.87	129	T	T	21 43 33.2	
	baz=319						
H11S3	WAKE ISLAND Hy	26.87	129	T	T	21 43 20.9	
	baz=319						
H11S2	WAKE ISLAND Hy	26.89	129	T	T	21 43 24.9	
	baz=319						
MKAR	Makanchi Array	46.23	302	P	P	21 18 18.8	+11
	0.2nm,0.5s,baz=87,slow=7.9,SNR=2.3						
KURBB	Kurchatov Arra	47.91	308	P	P	21 18 33.8	+13
	0.2nm,0.5s,baz=81,slow=8.1,SNR=2.8						
WRA	Warramunga Arr	57.95	192	P	P	21 19 37.0	+2.0
	0.3nm,0.5s,baz=12,slow=7.4,SNR=1.3						
ASAR	Alice Springs	61.67	191	P	P	21 20 02.8	+2.2
	0.2nm,0.6s,baz=352,slow=5.7,SNR=1.1						

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*IDC **28** 21:13:17.7±1.2, 2°.41N×128°.75E, h0^{km}, mb3.5/6, mb1 3.6/7, mb1mx3.4/52, mbtmp3.5/7, ML3.4/1, MS3.5/1, Ms1 3.5/1, ms1mx2.6/34, Error ellipse: s-maj=104.0km s-min=18.0km az=66.0*
ISC 28 21:13:22.3±1.0**, 2°.5N**±0°.3×**129°.2E**±0°.6**, h35**^{km}**, n14,** σ1^{s}.**10**/8**, mb3.5**/6**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.95	148	Pn	Pn	21 14 21.9	+1.4
	2.4nm,0.3s,baz=317,slow=19,SNR=9.8						
SIJI				Sn	Sn	21 15 04.0	-1.7
	1.9nm,0.3s,baz=186,slow=22,SNR=2.2						
WRA	Warramunga Arr	22.88	167	P	P	21 18 22.3	-0.6
	0.4nm,0.3s,baz=346,slow=10,SNR=4.9						
ASAR	Alice Springs	26.42	170	P	P	21 18 56.4	+0.5
	0.2nm,0.4s,baz=351,slow=7.4,SNR=6.0						
JCJ	Chichijima	27.45	26	LR	LR	21 28 01.5	
	comp=Z,93nm,21.1s,baz=122,slow=32						
H11S3	WAKE ISLAND Hy	40.03	64	T	T	22 04 13.5	
	baz=252						
H11S2	WAKE ISLAND Hy	40.05	64	T	T	22 04 13.1	
	baz=252						
H11S1	WAKE ISLAND Hy	40.05	64	T	T	22 04 14.1	
	baz=252						
H11N1	WAKE ISLAND Hy	40.62	62	T	T	22 04 54.7	
	baz=249,slow=75,SNR=17						
H11N2	WAKE ISLAND Hy	40.63	62	T	T	22 04 59.7	
	baz=249,slow=75,SNR=13						
H11N3	WAKE ISLAND Hy	40.64	62	T	T	22 04 56.1	
	baz=249,slow=75,SNR=19						
SONM	Songino Array	49.26	340	P	P	21 22 07.4	-0.3
	0.4nm,0.7s,baz=156,slow=7.9,SNR=2.7						
MKAR	Makanchi Array	59.95	325	P	P	21 23 24.5	-0.7
	0.5nm,0.6s,baz=121,slow=8.3,SNR=10.0						
KURBB	Kurchatov Arra	64.09	327	P	P	21 23 53.0	+0.2
	0.6nm,0.5s,baz=128,slow=6.2,SNR=13						
BVAR	Borovoye Array	69.68	327	P	P	21 24 28.4	0.0
	0.2nm,0.4s,baz=104,slow=6.1,SNR=2.0						

IDC 28 21:29:20.1±21.0**, 76°.93N×13°.35W, h0**^{km}**, mb3.3**/1**, mb1 3.5**/4**, mb1mx3.1**/51**, mbtmp3.5**/4**, ML2.7**/3**, Error ellipse: s-maj=272.2km s-min=91.5km az=134.0, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARCES	ARCESS Array B	13.12	104	Pn	Pn	21 32 26.8	-0.7
	0.1nm,0.3s,baz=321,slow=14,SNR=1.1						
NOA	NORSAR Array B	17.94	139	P	Pn	21 33 30.9	+0.2
	0.0nm,0.3s,baz=338,slow=13,SNR=2.4						
HFS	Hagfors	19.19	136	P	P	21 33 45.0	+0.1
	0.2nm,0.3s,baz=354,slow=12,SNR=10						
FINES	FINESS Array B	20.21	118	P	P	21 33 55.5	-0.6
	1.3nm,0.8s,baz=354,slow=11,SNR=3.8						

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*IDC **28** 21:39:57.0±1.3, 35°.51N×27°.30E, h0^{km}, mb3.9/7, mb1 3.8/12, mb1mx3.5/51, mbtmp3.7/12, ML3.4/5, Error ellipse: s-maj=26.1km s-min=18.7km az=17.0*
*ISK **28** 21:39:58.6, 35°.31N×27°.10E, h14^{km}, ML3.6/11*
*NIC **28** 21:40:00.4±0.0, 35°.24N×27°.30E, h22^{km}±1^{km}, Ml4.2/4*
*DDA **28** 21:40:00.8, 35°.58N×27°.15E, h15^{km}±1^{km}, ML3.1*
*ATH **28** 21:40:01.4, 35°.46N×27°.17E, h39^{km}±1^{km}, ML3.5/7, Error ellipse: s-maj=3.0km s-min=1.1km az=149.0*
*THE **28** 21:40:02.6, 35°.48N×27°.27E, h34^{km}±1^{km}, ML3.5/8, Error ellipse: s-maj=3.0km s-min=1.4km az=114.0*
*HLW **28** 21:40:03.8, 35°.03N×27°.37E, h24^{km}±16^{km}, Md4.2, Ml4.0*
*GII **28** 21:40:04.0±0.0, 35°.09N×27°.65E, h20^{km}*
ISC 28 21:40:00.6±1.0**, 35°.26N**±0°.03×**27°.30E**±0°.03**, h35**^{km}±3^{km}**, n120,** σ1^{s}.**64**/169**, mb3.8**/7**, 6C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.30	338	P	Pb	21 40 08.1	-0.5
KARP				S	Sb	21 40 13.0	-1.0
	66µm,0.2s						
KARP	Karpathos	0.30	338	P	Pb	21 40 08.2	-0.5
KARP				S	Sb	21 40 13.1	-1.0
KARP				AML	AML	21 40 13.4	
KARP				AML	AML	21 40 13.8	
KARP	Karpathos	0.30	338	⇑P	Pb	21 40 08.1	-0.5
KARP				AML	AML	21 40 13.1	
	118nm,0.2s						
KARP				AML	AML	21 40 13.1	
	118nm,0.2s						
KARP				S	Sb	21 40 13.3	-0.8
KARP				AML	AML	21 40 13.4	
	163nm,0.4s						
KARP				AML	AML	21 40 13.4	
	163nm,0.4s						
ZKR	Zakros	0.90	261	P	Pn	21 40 17.6	+0.9
ZKR				S	Sb	21 40 30.7	+1.2
	3µm,0.5s						
ZKR	Zakros	0.90	261	P	Pn	21 40 17.6	+0.9
ZKR				S	Sb	21 40 30.5	+1.0
ZKR				AML	AML	21 40 35.9	
	comp=E,7015µm,0.4s						
ZKR				AML	AML	21 40 36.7	
	comp=N,3368µm,0.6s						
ZKR	Zakros	0.90	261	⇑P	Pn	21 40 17.6	+0.9
ZKR				S	Sb	21 40 30.6	+1.2
ZKR				AML	AML	21 40 35.3	
	comp=N,7.0nm,0.4s						
ZKR				AML	AML	21 40 35.3	
	comp=N,7.0nm,0.4s						
ZKR				AML	AML	21 40 36.0	
	comp=N,3.4nm,0.6s						
ZKR				AML	AML	21 40 36.0	
	comp=N,3.4nm,0.6s						
STIA	Sitia Lasithi	0.99	267	P	Pn	21 40 19.1	+1.1
STIA				S	Sb	21 40 32.5	+0.4
ARG	Arkhangelos	1.17	35	P	Pn	21 40 21.5	+1.1
ARG				S	Sn	21 40 36.4	+1.3
ARG				AML	AML	21 40 40.6	
	comp=E,4670µm,0.3s						
ARG				AML	AML	21 40 41.2	
	comp=N,3970µm,0.5s						
ARG	Arkhangelos	1.17	35	PN	Pn	21 40 22.0	+1.6
ARG	Arkhangelos	1.17	35	P	Pn	21 40 22.2	+1.8
ARG				S	Sb	21 40 38.0	+0.9
FRMA	Ierapetra Chan	1.31	259	P	Pn	21 40 22.9	+0.6
NPS	Neapolis	1.38	270	P	Pn	21 40 25.4	+2.0
NPS				S	Sn	21 40 42.5	+2.1
	comp=N,2µm,0.6s						
NPS	Neapolis	1.38	270	P	Pn	21 40 24.6	+1.3
NPS				S	Sn	21 40 40.7	+0.3
NPS				AML	AML	21 40 43.2	
	comp=N,3178µm,0.4s						
NPS				AML	AML	21 40 46.3	
	comp=E,3708µm,0.3s						
DAT	Datca	1.48	9	PN	Pn	21 40 25.4	+0.6
DAT				SN	Sn	21 40 44.9	+1.9
DAT	Datca	1.48	9	*i* P	Pn	21 40 24.9	0.0
DAT				*i* S	Sn	21 40 40.7	-2.3
DAT				IAML		21 40 48.0	
	comp=E,193nm,0.5s						
LAST	Lasithi	1.49	267	P	Pb	21 40 27.3	-0.5
LAST				S	Sn	21 40 45.0	+1.7
	comp=E,1µm,0.6s						
LAST	Lasithi	1.49	267	P	Pn	21 40 26.2	+1.2
LAST				S	Sn	21 40 44.9	+1.6
LAST				AML	AML	21 40 49.4	
	comp=E,1352µm,0.6s						
LAST				AML	AML	21 40 53.3	
	comp=N,1931µm,0.6s						
KOSK	Kos Island	1.51	350	PN	Pn	21 40 24.9	-0.2
KOSK				SN	Sn	21 40 44.5	+1.0
DATC	Datca-Mugla	1.52	11	PN	Pn	21 40 26.1	+0.8
DATC				SN	Sn	21 40 45.9	+2.0
MRSB	Marmaris-Mugla	1.62	26	PN	Pn	21 40 28.1	+1.4
SANT	Santorini	1.86	307	P	Pn	21 40 29.5	-0.4
SANT	Santorini	1.86	307	PN	Pn	21 40 28.7	-1.3
THT1	Athinios (Pele	1.89	307	P	Pn	21 40 30.0	-0.3
THR6	Thira Island,	1.89	306	P	Pn	21 40 30.2	-0.1
SAP2K	Karterados	1.89	308	P	Pn	21 40 29.8	-0.6
SAP1	Santorini-Akro	1.89	306	P	Pn	21 40 30.4	0.0
SAP1	Santorini-Akro	1.89	306	P	Pn	21 40 30.0	-0.4
DALY	Dalyan (Mula)	1.90	35	PN	Pn	21 40 32.6	+2.1
DALY	Dalyan (Mula)	1.90	35	*i* P	Pn	21 40 33.0	+2.6
DALY				*i* S	Sn	21 40 56.6	+3.4
DALY				IAML		21 41 08.0	
	comp=N,310nm,0.5s						
THR7	Fira-Santorini	1.91	308	P	Pn	21 40 30.4	-0.3
THR2	Thira island,	1.92	308	P	Pn	21 40 30.2	-0.6
THR2	Thira island,	1.92	308	P	Pn	21 40 30.4	-0.4
THT2	Imerovigli	1.92	308	PN	Pn	21 40 29.6	-1.2
TURN	Turunc	1.92	33	PN	Pn	21 40 29.1	-1.7
TURN	Turunc	1.92	33	*i* P	Pn	21 40 28.8	-2.0
TURN				*i* S	Sn	21 40 49.0	-4.8
TURN				IAML		21 41 03.0	
	comp=N,328nm,0.4s						
AMGA	Amorgos Island	1.93	324	P	Pn	21 40 30.3	-0.7
AMGA				S	Sn	21 40 50.4	-3.7
	comp=N,972nm,0.4s						
CMBO	Columbo, Santo	1.95	309	P	Pn	21 40 30.7	-0.5
CMBO	Columbo, Santo	1.95	309	P	Pn	21 40 31.0	-0.3
THR5	Thira Island,	1.96	307	P	Pn	21 40 31.3	0.0
IDI	Anoyia	1.97	271	P	Pn	21 40 32.9	+1.3
IDI				S	Sn	21 40 56.0	+0.9
	comp=N,455nm,0.4s						
IDI	Anoyia	1.97	271	Pn	Pn	21 40 32.9	+1.3
	comp=N,11nm,0.3s,baz=103,slow=3.8,SNR=37						
IDI				Sn	Sn	21 40 55.9	+0.8
	comp=N,18nm,0.3s,baz=270,slow=23,SNR=5.7						
IDI	Anoyia	1.97	271	P	Pn	21 40 33.0	+1.5
FETY	Fethiye	1.99	46	*i* P	Pb	21 40 37.4	+1.2
FETY				*i* S	Sb	21 41 02.1	+1.4
YER	Yerkesik	2.03	23	PN	Pn	21 40 33.7	+1.3
SIVA	Sivas	2.05	264	P	Pn	21 40 35.3	+2.7
SIVA	Sivas	2.05	264	P	Pn	21 40 34.8	+2.2
KSL	Kastellorizon	2.06	64	P	Pn	21 40 35.5	+2.8
KSL	Kastellorizon	2.06	64	⇑P	Pn	21 40 34.4	+1.7
KSL				S	Sn	21 41 00.1	+2.9
AKAS	Kas	2.11	62	*i* P	Pn	21 40 32.7	-0.8
IOSP	Ios island	2.19	312	P	Pn	21 40 34.3	-0.1
IOSP				AML	AML	21 41 00.9	
	comp=N,953µm,0.3s						
IOSP				AML	AML	21 41 01.6	
	comp=E,1002µm,0.3s						
APE	Apeiranthos	2.30	322	P	Pn	21 40 35.3	-0.8
APE				S	Sn	21 41 00.1	-3.1
	comp=E,598nm,0.5s						
APE	Apeiranthos	2.30	322	P	Pn	21 40 35.5	-0.6
APE				AML	AML	21 41 03.0	
	comp=E,1190µm,0.5s						
APE				AML	AML	21 41 04.0	
	comp=N,1393µm,0.4s						
APE	Apeiranthos	2.30	322	PN	Pn	21 40 35.5	-0.6
GCAM	G?zelcaml?	2.43	359	PN	Pn	21 40 38.7	+0.9
AYDN	Tasoluk	2.44	11	*i* P	Pn	21 40 38.8	+0.8
AYDN				*i* S	Sn	21 41 07.7	+1.1
AYDN				IAML		21 41 09.0	
	comp=N,156nm,0.6s						
VAM	Vamos	2.54	274	P	Pn	21 40 39.5	+0.2
VAM	Vamos	2.54	274	P	Pn	21 40 40.3	+1.1
TAVA	DENIZLI_Tavas	2.56	30	*i* P	Pn	21 40 41.7	+2.1
TAVA				*i* S	Sb	21 41 14.7	-2.1
GVD	Gavdhos	2.67	262	P	Pn	21 40 43.4	+2.3
GOLH	Golhisar	2.69	42	*i* P	Pn	21 40 44.2	+2.8
AKUM	Antalya-Kumluc	2.69	66	*i* P	Pn	21 40 43.7	+2.3
IMMV	Iera Moni Meta	2.72	275	P	Pn	21 40 42.8	+1.0
IMMV	Iera Moni Meta	2.72	275	P	Pn	21 40 43.1	+1.4
AYDB	Zeytinkoy-Aydi	2.72	10	PN	Pn	21 40 43.0	+1.1
KHAL	Karahalli	3.56	29	*i* P	Pn	21 40 54.0	+0.5
VLI	Veliai	3.82	294	P	Pn	21 40 57.3	+0.4
VLI				S	Sn	21 41 38.9	-1.8
	comp=N,165nm,0.7s						
AKMS	Akamas	4.13	92	P	Pn	21 41 03.2	+2.0
AKMS				AML	AML	21 41 52.8	
	comp=N,0.7nm,0.3s						
AKMS				AML	AML	21 41 54.1	
	comp=N,0.7nm,0.4s						
SLUM	Salum	4.15	205	P	Pn	21 41 03.4	+2.0
	baz=208						
SLUM				S	Sn	21 41 47.8	-0.8
	baz=208						
GAZI	Gazipasa	4.19	75	*i* P	Pn	21 41 03.2	+1.1
GAZI				*i* S	Sn	21 41 45.8	-4.1
ALFC	Alefka	4.34	90	⇑P	Pn	21 41 05.6	+1.5
NATA	Nata	4.35	95	P	Pn	21 41 06.1	+1.8
DOGA	KONYA_Doganhis	4.51	50	*i* P	Pn	21 41 09.8	+3.2
SZAC	Souni	4.61	95	⇑P	Pn	21 41 09.2	+1.3
SZAC				AML	AML	21 42 03.1	
	comp=N,0.7nm,0.7s						
SZAC				AML	AML	21 42 03.5	
	comp=N,0.6nm,0.3s						
KONT	Konya--Tatoy	4.87	55	*i* P	Pn	21 41 13.8	+2.4
ASGA	Asgata	4.91	94	P	Pn	21 41 13.3	+1.4
CSS	Mathiatis	4.95	92	Pn	Pn	21 41 13.7	+1.2
CSS	Mathiatis	4.95	92	⇑P	Pn	21 41 14.0	+1.5
KDHN	Kadinhani	5.05	48	*i* P	Pn	21 41 14.8	+0.9
MVOU	Mavrovouni	5.20	91	P	Pn	21 41 17.8	+2.0
BORA	Eskisehir	5.25	28	*i* P	Pn	21 41 17.3	+0.7
SWA2		6.20	195	P	Pn	21 41 32.1	+2.4
	baz=197						
SWA2				AMP		21 42 00.0	
	baz=197						
SWA2				S	Sn	21 42 35.8	-3.5
	baz=197						
HSAF	As Saff	6.68	146	P	Pn	21 41 38.5	+2.2
	baz=145						
BRTR	Keskin Array B	6.72	47	Pn	Pn	21 41 38.8	+1.8
	comp=N,0.1nm,0.3s,baz=225,slow=14,SNR=3.6						
BRTR				Sn	Sn	21 42 51.8	-0.6
	comp=N,0.1nm,0.3s,baz=215,slow=24,SNR=1.7						
GLL	Jalalah	6.79	145	P	Pn	21 41 39.8	+2.1
	baz=144						
HNTI	Hanita	6.88	106	Pn	Pn	21 41 39.9	+0.9
HNTI				Sn	Sn	21 42 53.7	-2.4
OFRI	`Ofer	6.91	110	Pn	Pn	21 41 39.2	-0.2
OFRI				Sn	Sn	21 42 54.2	-2.6
MMA0B	Mount Meron ar	7.08	106	Pn	Pn	21 41 42.6	+0.8
MMAI	Mount Meron Ar	7.08	106	Pn	Pn	21 41 42.2	+0.4
	comp=N,3.0nm,0.3s,baz=308,slow=12,SNR=23						
MMAI				Sn	Sn	21 43 02.0	+0.8
	comp=N,4.3nm,0.3s,baz=316,slow=25,SNR=11						
SLTI	Sal'it	7.12	113	Pn	Pn	21 41 42.6	+0.4
SLTI				Sn	Sn	21 43 00.7	-1.2
GEM	Giv'at Ha'Em	7.22	104	Pn	Pn	21 41 45.1	+1.4
GEM				Sn	Sn	21 43 02.4	-2.1
KSDI	Kefar Szold	7.23	104	Pn	Pn	21 41 44.4	+0.7
KSDI				Sn	Sn	21 43 02.7	-1.9
NATI	Neve Ativ	7.27	104	Pn	Pn	21 41 44.5	+0.3
NATI				Sn	Sn	21 43 03.9	-1.6
MMLI	Mount Malkishu	7.32	110	Pn	Pn	21 41 45.6	+0.5
MMLI				Sn	Sn	21 43 05.2	-1.8
KZIT	Kziot	7.37	124	Pn	Pn	21 41 47.2	+1.5
KZIT				Sn	Sn	21 43 06.1	-2.1
AMAZ	Amatzia	7.38	118	Pn	Pn	21 41 45.5	-0.3
AMAZ				Sn	Sn	21 43 06.2	-2.1
KSHT	Keshet	7.42	105	Pn	Pn	21 41 47.5	+1.1
HMDT	Nahal Hemdat	7.48	111	Pn	Pn	21 41 48.5	+1.3
QRNJ	Al-Qirein	7.48	111	Pn	Pn	21 41 48.1	+0.9
YTIR	Yattir	7.61	119	Pn	Pn	21 41 50.2	+1.1
YTIR				Sn	Sn	21 43 12.7	-1.5
DSI	Dead Sea	7.70	116	Pn	Pn	21 41 50.5	+0.3
GHAJ	Ghor Haditha	7.97	117	Pn	Pn	21 41 54.0	+0.1
ZFRI	Zfri	8.12	123	Pn	Pn	21 41 56.9	+0.9
ZFRI				Sn	Sn	21 43 23.7	-2.8
PRNI	Paran	8.13	125	Pn	Pn	21 41 56.9	+0.8
PRNI				Sn	Sn	21 43 24.0	-2.8
HFRF	Wahat Farafira	8.14	174	P	Pn	21 41 58.2	+2.0
	baz=173						
HRFI	Mount Harif	8.35	126	Pn	Pn	21 42 00.1	+0.9
HRFI				Sn	Sn	21 43 29.7	-2.6
MBRI	Mt Berech	8.43	128	Pn	Pn	21 42 01.0	+0.7
MBRI				Sn	Sn	21 43 31.6	-2.7
EIL	Elat	8.54	129	Pn	Pn	21 42 03.2	+1.5
	comp=N,0.5nm,0.3s,baz=353,slow=3.6,SNR=10						
EIL				Sn	Sn	21 43 33.0	-3.8
	comp=N,1.3nm,0.3s,baz=167,slow=3.1,SNR=8.5						
EIL	Elat	8.54	129	Pn	Pn	21 42 03.2	+1.5
ASF	Jabal al Asfar	8.57	108	Pn	Pn	21 42 04.1	+1.9
	comp=N,0.1nm,0.3s,baz=326,slow=6.3,SNR=2.2						
ASF				Sn	Sn	21 43 40.7	+2.9
	comp=N,0.2nm,0.3s,baz=358,slow=20,SNR=1.4						
HKAT	Jabal Katrina	8.80	138	P	Pn	21 42 07.2	+1.6
	baz=137						
KBZ	Khabaz	14.70	50	Pn	P	21 43 32.0	+0.5
	comp=N,0.1nm,0.3s,baz=234,slow=18,SNR=5.8						
AKASG	Malin Array Be	15.49	5	Pn	Pn	21 43 37.7	+1.4
	comp=N,1.0nm,0.3s,baz=192,slow=9.6,SNR=5.2						
GERES	GERESS Array B	16.88	328	Pn	Pn	21 43 53.2	-0.9
	comp=N,0.1nm,0.3s,baz=133,slow=8.2,SNR=2.4						
FINES	FINESS Array B	26.21	359	P	P	21 45 30.2	-1.6
	comp=N,0.8nm,0.7s,baz=169,slow=11,SNR=5.5						
AKTO	Aktyubinsk	26.91	46	P	P	21 45 38.1	-0.1
	comp=N,1.2nm,0.6s,baz=256,slow=13,SNR=3.7						
ARCES	ARCESS Array B	34.34	359	P	P	21 46 41.7	-1.8
	comp=N,1.6nm,0.9s,baz=172,slow=8.2,SNR=0.8						
MKAR	Makanchi Array	42.25	57	P	P	21 47 50.9	+0.5
	comp=N,1.2nm,0.6s,baz=280,slow=6.4,SNR=19						
ZALV	Zalesovo Beam	43.67	46	P	P	21 48 01.8	+0.1
	comp=N,0.9nm,0.5s,baz=261,slow=10.0,SNR=5.7						
SONM	Songino Array	58.06	51	P	P	21 49 51.4	+1.1
	comp=N,1.1nm,0.7s,baz=287,slow=7.6,SNR=6.9						
CMAR	Chiang Mai Arr	64.82	85	P	P	21 50 37.3	+1.1
	comp=N,0.4nm,0.3s,baz=281,slow=9.1,SNR=4.5						

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*IDC **28** 21:52:14.1±3.4, 37°.72N×72°.38E, h101^{km}±28^{km}, mb3.3/7, mb1 3.5/13, mb1mx3.3/46, mbtmp3.8/13, Error ellipse: s-maj=32.8km s-min=20.5km az=180.0*
*NNC **28** 21:52:17.9±1.3, 38°.10N×72°.19E, h160^{km}±22^{km}, mb3.3, mpv4.2, Error ellipse: s-maj=13.1km s-min=8.5km az=164.0*
ISC 28 21:52:15.7±0.6**, 37°.86N**±0°.05×**72°.35E**±0°.06**, h150**^{km}**, n45,** σ2^{s}.**81**/56**, mb3.2**/6**, 9C-4D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.39	13	P	Pn	21 53 21.7	+0.3
	SNR=104						
UCH	Uchtor	4.67	20	P	Pn	21 53 25.6	+0.5
	SNR=41						
KZA	Kyzart	4.77	27	P	Pn	21 53 26.3	0.0
	SNR=10						
EKS2	Erkin-Say	4.92	12	P	Pn	21 53 29.0	+0.9
	SNR=96						
AAK	Ala-Archa	5.05	18	P	Pn	21 53 30.7	+0.8
	15nm,0.3s,baz=173,slow=5.0,SNR=354						
AAK				S	Sn	21 54 25.7	-1.9
	2.1nm,0.3s,baz=199,slow=13,SNR=11						
AAK	Ala-Archa	5.05	18	P	Pn	21 53 30.9	+1.1
	SNR=50						
AAK	Ala-Archa	5.05	18	⇑P	Pn	21 53 30.2	+0.4
	21nm,0.4s						
AAK				⇓S	Sn	21 54 26.3	-1.4
	61nm,0.8s						
KBK	Karagaybulak	5.19	22	P	Pn	21 53 33.9	+2.2
	SNR=17						
ULHL	Ulahol	5.30	33	P	Pn	21 53 33.2	-0.1
	SNR=11						
KK31	Karatay Array	5.42	346	⇑P	Pn	21 53 34.5	-0.1
	31nm,0.3s,baz=155,slow=12,SNR=606						
KK31				S	Sn	21 54 33.3	-3.0
	85nm,0.5s,baz=153,slow=15,SNR=24						
CHMS	Chumysh	5.45	19	P	Pn	21 53 35.9	+0.9
	SNR=29						
CHMS	Chumysh	5.45	19	⇓P	Pn	21 53 35.4	+0.4
	16nm,0.4s						
CHMS				⇑S	Sn	21 54 35.7	-1.4
	26nm,0.6s						
USP	Ospenovka	5.64	16	P	Pn	21 53 38.1	+0.5
	SNR=11						
THN	Thein Dam	6.08	152	*e*x	Pn	21 53 43.5	+0.1
THN				*e*x	Sn	21 54 47.5	-4.6
MDOK	Medeo	6.39	33	⇓P	Pn	21 53 47.6	-0.1
	4.6nm,1.1s						
DHRM	DHARAMSHALA	6.47	149	*e*P	Pn	21 53 49.2	+0.3
DHRM				*e*x	Sn	21 54 57.0	-4.8
DHRM				IAML		21 55 02.9	
	comp=E,117nm,0.7s						
SMLA	Simla	7.80	148	*e*P	Pn	21 54 06.6	+0.1

SMLA				ex	Sn	21 55 25.8	-7.7
SMLA				IAML		21 55 27.5	
	comp=N,80nm,0.7s						
DDI	Dehra Dun	8.88	146	ex	Sn	21 55 55.0	-4.7
GEYT	Alibeck	11.25	275	P	Pn	21 54 51.5	-0.6
	comp=N,1.0nm,0.3s,baz=93,slow=11,SNR=8.7						
GEYT				S	Sn	21 56 51.4	-5.0
	comp=N,1.2nm,0.3s,baz=72,slow=9.3,SNR=4.5						
GYA0B	ALIBECK ARRAY	11.25	275	⇑P	Pn	21 54 51.2	-0.9
GYA0B				⇑S	Sn	21 56 55.0	-1.4
MK31	Makanchi Array	11.56	36	⇑P	Pn	21 54 56.0	-0.1
	comp=N,0.8nm,0.8s,baz=220,slow=10,SNR=4.4						
MKAR	Makanchi Array	11.56	36	P	Pn	21 54 56.9	+0.7
	comp=N,0.1nm,0.3s,baz=228,slow=13,SNR=6.9						
DANN	Dangsing	13.46	131	eP	Pn	21 55 18.6	-2.5
	comp=N,14nm,0.3s						
DANN				eS	Sn	21 57 38.3	-12
KURBB	Kurchatov Arra	13.50	17	P	Pn	21 55 19.6	-1.5
	comp=N,0.1nm,0.3s,baz=207,slow=12,SNR=4.2						
GKN	Gorkha	14.24	130	eP	Pn	21 55 28.3	-2.5
	comp=N,19nm,0.4s						
DMN	Daman	14.81	130	eP	Pn	21 55 35.8	-2.2
	comp=N,5.4nm,0.4s						
PKIN	Phulchoki	15.01	129	eP	Pn	21 55 38.6	-1.9
	comp=N,7.3nm,0.4s						
PKI	Pulchoki	15.02	129	eP	Pn	21 55 38.4	-2.3
	comp=N,5.6nm,0.4s						
GUN	Gumba	15.07	127	eP	Pn	21 55 38.6	-2.8
	comp=N,11nm,0.5s						
BVAR	Borovoye Array	15.23	355	P	Pn	21 55 43.2	+0.5
	comp=N,0.5nm,0.3s,baz=162,slow=14,SNR=21						
BVAR				S	Sn	21 58 25.1	-6.7
	comp=N,0.3nm,0.3s,baz=168,slow=23,SNR=5.1						
BRVK	Borovoye	15.27	355	⇑P	Pn	21 55 42.4	-0.8
	comp=N,12nm,1.5s						
BRVK				⇓S	Sn	21 58 28.0	-4.7
	comp=N,1.4nm,0.8s						
JIRN	Jiri	15.45	127	eP	Pn	21 55 43.4	-2.6
	comp=N,44nm,0.5s						
AKTO	Aktyubinsk	16.20	325	P	P	21 55 56.6	+1.6
	comp=N,1.9nm,0.3s,baz=131,slow=13,SNR=25						
AKTO				S	S	21 58 47.7	-6.9
	comp=N,0.1nm,0.3s,baz=107,slow=19,SNR=1.9						
AKTO	Aktyubinsk	16.20	325	⇑P	P	21 55 55.7	+0.6
	comp=N,10nm,0.8s						
AKTO				⇑S	S	21 58 50.1	-4.6
	comp=N,3.8nm,0.8s						
RAMN	Ramite	16.20	128	eP	Pn	21 55 53.6	-1.6
	comp=N,16nm,0.6s						
TAPN	Taplejung	16.63	125	eP	P	21 55 58.1	-2.2
	comp=N,15nm,0.7s						
ODAN	Odare	16.77	126	eP	P	21 56 00.6	-1.1
	comp=N,14nm,0.5s						
ZALV	Zalesovo Beam	18.23	24	P	Pn	21 56 19.8	+0.8
	comp=N,0.3nm,0.3s,baz=216,slow=12,SNR=7.4						
ARU	Arti	20.73	338	P	Pn	21 56 47.6	-0.8
	comp=N,0.9nm,0.4s,baz=146,slow=9.9,SNR=3.9						
KBZ	Khabaz	22.98	294	P	P	21 57 12.1	+5.0
	comp=N,0.6nm,0.8s,baz=92,slow=8.5,SNR=1.3						
SONM	Songino Array	26.69	57	P	P	21 57 44.7	+4.0
	comp=N,0.4nm,0.7s,baz=260,slow=13,SNR=3.7						
FINES	FINESS Array B	36.97	325	P	P	21 59 14.3	+4.2
	comp=N,1.2nm,0.8s,baz=97,slow=9.8,SNR=4.4						
ARCES	ARCESS Array B	40.31	337	P	P	21 59 41.9	+4.0
	comp=N,4.8nm,1.0s,baz=110,slow=9.7,SNR=2.2						
YKA	Yellowknife Ar	79.83	3	P	P	22 04 11.7	+4.7
	comp=N,0.4nm,0.6s,baz=351,slow=4.7,SNR=7.2						
WRA	Warramunga Arr	81.81	123	P	P	22 04 21.1	+3.0
	comp=N,0.3nm,0.7s,baz=322,slow=5.2,SNR=2.3						

ANF 28 21:57:16.4±0.7, 52°.05N×67°.80W, h10^{km}±17^{km}, ML3.9/1, Error ellipse: s-maj=19.1km s-min=4.9km az=26.0, Northern Quebec

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
D63A	Stockholm	5.03	182	P	Pn	21 58 31.8	+0.1
	baz=2.1,SNR=9.2						
D63A				S	Sn	21 59 31.1	+1.3
	baz=2.1						
D62A	Allapoint, All	5.04	190	P	Pn	21 58 32.8	+0.9
	baz=8.8,SNR=10						
D61A	St Aubert, Com	5.10	199	P	Pn	21 58 32.9	+0.1
	baz=17						
D60A	Saint Jean D'O	5.53	203	P	Pn	21 58 38.2	-0.5
	baz=20						
D60A				S	Sn	21 59 43.5	+1.3
	baz=20						
E64A	Bridgewater	5.64	180	P	Pn	21 58 40.2	0.0
	baz=0.2,SNR=6.6						
E64A				S	Sn	21 59 45.8	+0.8
	baz=0.2						
E63A	Oxbow	5.65	184	P	Pn	21 58 40.5	+0.1
	baz=3.9						
E63A				S	Sn	21 59 47.0	+1.8
	baz=3.9						
E61A	Lac Etchemin	5.89	198	P	Pn	21 58 43.8	+0.1
	baz=16						
D58A	Chemin du LacG	5.96	216	P	Pn	21 58 44.8	+0.2
	baz=32						
F64A	Sherman	6.21	184	P	Pn	21 58 47.6	-0.3
	baz=3.1,SNR=6.4						
D57A	Chemin Vers le	6.41	221	P	Pn	21 58 50.7	-0.1
	baz=36						
F63A	Nahmakanta, Br	6.41	188	P	Pn	21 58 50.7	-0.2
	baz=7.2,SNR=12						
F63A				S	Sn	22 00 05.0	+1.0
	baz=7.2						
G64A	Maxfield	6.83	186	P	Pn	21 58 55.7	-0.9
	baz=5.0,SNR=9.6						
PKME	Peaks-Kenny Pk	6.87	189	P	Pn	21 58 56.8	-0.2
	baz=7.7						
F59A	Saint Guilaume	7.02	210	P	Pn	21 58 59.8	+0.7
	baz=26						
G63A	Kingsbury	7.05	191	P	Pn	21 58 58.9	-0.7
	baz=9.2,SNR=12						
G63A				S	Sn	22 00 20.5	+0.8
	baz=9.2						
D55A	Sainte-Anne-du	7.09	228	P	Pn	21 58 59.9	-0.3
	baz=42						
G61A	St-Isidore-de-	7.21	201	P	Pn	21 59 01.9	+0.1
	baz=19						
E56A	St. Veronique	7.26	223	P	Pn	21 59 02.4	-0.1
	baz=38						
H66A	Whiting	7.28	177	P	Pn	21 59 03.2	+0.5
	baz=358						
G60A	Masonville	7.58	205	P	Pn	21 59 06.2	-0.6
	baz=22						
D53A	Lac Vacive, Po	8.13	236	P	Pn	21 59 14.1	-0.3
	baz=48						
E52A	Mattawa	9.15	235	P	Pn	21 59 28.2	-0.2
	baz=47						

IDC 28 22:19:57.4±6.2, 55°.64S×156°.46E, h0^{km}, mb4.0/2, mb1 4.3/2, mb1mx3.8/21, mbtmp4.0/2, MS3.4/1, Ms1 3.4/1, ms1mx2.8/25, Error ellipse: s-maj=324.9km s-min=68.5km az=71.0, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	22.06	177	LR	LR	22 31 16.2	
	comp=Z,87nm,18.7s,baz=342,slow=31						
H01W1	Cape Leeuwin H	35.53	288	T	T	23 06 23.3	
	baz=140,slow=75,SNR=9.4						
H01W2	Cape Leeuwin H	35.54	288	T	T	23 06 23.7	
	baz=140,slow=75,SNR=9.0						
H01W3	Cape Leeuwin H	35.55	288	T	T	23 06 25.2	
	baz=140,slow=75,SNR=8.4						
ASAR	Alice Springs	36.01	323	P	P	22 27 00.6	+0.4
	2.3nm,0.8s,baz=153,slow=7.9,SNR=24						
WRA	Warramunga Arr	39.34	326	P	P	22 27 27.5	-0.8
	1.2nm,0.7s,baz=162,slow=7.2,SNR=17						
H08S2	Diego Garcia H	80.33	271	T	T	00 01 13.1	
	baz=145						
H08S1	Diego Carcia H	80.34	271	T	T	00 01 19.4	
	baz=145						
H08S3	Diego Garcia H	80.35	271	T	T	00 01 16.0	
	baz=145						
AKASG	Malin Array Be	148.64	283	PKPbc	PKPbc	22 39 44.9	-0.3
	0.4nm,0.5s,baz=92,slow=2.5,SNR=2.4						

*IDC **28** 22:23:37.7±1.3, 45°.25N×107°.28W, h0^{km}, mb1 3.5/3, mb1mx3.2/42, mbtmp3.2/3, ML3.2/3, Error ellipse: s-maj=60.7km s-min=7.9km az=132.0*

*NEIC **28** 22:23:40.2±2.9, 45°.18N±0°.05×106°.88W±0°.07, h0^{km}±2^{km}, ML2.8/60, Error ellipse: s-maj=8.6km s-min=8.0km az=30.0*

ISC 28 22:23:38.9±0.9, 45°.19N±0°.04×106°.83W±0°.05, h0^{km}, n39, σ1^{s}.49/39, Montana

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAO	LASA Array	1.56	15		Pg	22 24 08.9	+0.2
LAO				IAML		22 24 33.2	
	130nm,0.4s						
LAO				IAML		22 24 38.0	
	131nm,0.8s						
RLMT	Red Lodge	1.73	269		Pn	22 24 09.0	-1.4
RLMT				IAML		22 24 37.3	
	118nm,0.6s						
GCMT	Greycliff	2.09	288		Pn	22 24 14.9	-0.3
RSSD	Black Hills	2.26	117		Pb	22 24 19.4	-1.3
RSSD				IAML		22 24 51.7	
	63nm,0.5s						
YNE	Yellowstone No	2.26	267		Pn	22 24 17.1	-0.6
YMP	Mirror Lake Pl	2.40	261		Pn	22 24 19.4	-0.4
K22A	Casper	2.54	175		Pn	22 24 21.5	0.0
K22A				IAML		22 24 58.6	
	comp=N,55nm,0.6s						
K22A				IAML		22 24 58.9	
	comp=E,47nm,0.6s						
LKWY	Lake	2.62	258	Pn	Pn	22 24 23.9	+1.3
YUF	Upper Falls	2.66	261	Pn	Pn	22 24 24.8	+1.6
YNR	Norris Junctio	2.77	262		Pn	22 24 26.9	+2.1
H17A	Grant Village	2.78	255		Pn	22 24 26.4	+1.4
YNM	Yellowstone No	2.79	262	Pn	Pn	22 24 26.2	+1.2
YHH	Holmes Hill	2.88	264		Pn	22 24 28.6	+2.3
FLWY	Flagg Ranch	2.98	250		Pn	22 24 29.4	+1.9
FLWY				IAML		22 25 28.7	
	comp=E,35nm,4.7s						
FLWY				IAML		22 25 42.3	
	comp=E,33nm,4.9s						
YPP	Pitchstone Pla	2.98	254		Pn	22 24 28.3	+0.7
YHL	Hebgen Lake	3.11	265		Pn	22 24 31.9	+2.5
BW06	Boulder Array	3.12	220		Pn	22 24 31.2	+1.7
BW06				IAML		22 25 14.3	
	comp=E,26nm,0.6s						
PD31	Pinedale Array	3.12	220		Pn	22 24 29.9	+0.4
PDAR	Pinedale Array	3.12	220	Pn	Pn	22 24 29.7	+0.2
	comp=E,3.2nm,0.3s,baz=50,slow=17,SNR=56						
PDAR				Lg	Lg	22 25 09.8	
	comp=E,4.6nm,0.3s,baz=56,slow=29,SNR=27						
PDAR	Pinedale Array	3.12	220		Pn	22 24 30.3	+0.8
YHB	Horse Butte	3.13	264		Pn	22 24 32.1	+2.5
IMW	Indian Meadow	3.21	248		Pn	22 24 33.0	+2.2
IMW				IAML		22 25 25.9	
	comp=E,24nm,0.5s						
QLMT	Earthquake Lak	3.28	265		Pn	22 24 33.5	+1.7
SNOW	Snow King Moun	3.30	240	Pn	Pn	22 24 32.9	+0.8
SNOW				IAML		22 25 39.9	
	comp=E,24nm,3.3s						
SNOW				IAML		22 25 51.2	
	comp=E,25nm,2.7s						
FXWY	Fox Creek	3.38	244		Pn	22 24 34.4	+1.2
TPAW	Teton Pass	3.41	242		Pb	22 24 41.1	+0.8
TPAW				IAML		22 25 17.0	
	comp=E,19nm,3.6s						
REDW	Red Top Meadow	3.42	239		Pb	22 24 38.0	-2.5
REDW				IAML		22 25 34.1	
	comp=E,26nm,3.2s						
REDW				IAML		22 25 43.1	
	comp=E,22nm,3.1s						
EGMT	Eagleton	3.48	326		Pn	22 24 35.0	+0.6
RWWY	Rawlins	3.51	185	Pn	Pn	22 24 35.7	+0.8
RWWY				IAML		22 25 29.9	
	comp=E,26nm,3.4s						
RWWY				IAML		22 25 56.8	
	comp=E,26nm,4.9s						
AHID	Auburn Hatcher	3.92	233		Pn	22 24 42.4	+1.9
AHID				IAML		22 26 30.8	
	comp=N,14nm,3.5s						
AHID				IAML		22 26 41.6	
	comp=E,15nm,4.6s						
LRM	Limekiln Ridge	4.00	281	Pn	Pn	22 24 41.0	-0.7
PHWY	Pilot Hill	4.01	165	Pn	Pn	22 24 42.4	+0.6
PHWY				IAML		22 27 01.4	
	comp=E,12nm,4.2s						
DLMT	Dillon	4.08	275	Pn	Pn	22 24 43.0	+0.5
MCMT	McKenzie Canyo	4.29	267	Pn	Pn	22 24 47.4	+1.8
N23A	Red Feather La	4.34	171	Pn	Pn	22 24 46.7	+0.4
HWUT	Hardware Ranch	4.97	226	Pn	Pn	22 24 56.3	+1.4
TCUT	Toone Canyon	5.27	221	Pg	Pg	22 25 19.8	-0.1
ULM	Lac du Bonnet	8.95	52	Pn	Pn	22 25 49.2	-0.1
	comp=E,0.7nm,0.3s,baz=236,slow=11,SNR=11						
ULM				Lg	Lg	22 28 16.7	
	comp=E,0.1nm,0.3s,baz=138,slow=20,SNR=2.6						
NVAR	Mina Array Bea	10.90	236	Pn	Pn	22 26 13.1	-3.2
	comp=E,0.1nm,0.3s,baz=38,slow=17,SNR=2.4						

*ATH **28** 22:31:03.6, 38°.21N×20°.42E, h13^{km}±1^{km}, ML2.5/8, Error ellipse: s-maj=1.8km s-min=0.9km az=238.0*

*THE **28** 22:31:03.7, 38°.21N×20°.42E, h13^{km}, ML3.2/8, Error ellipse: s-maj=0.9km s-min=0.4km az=255.0*

ISC 28 22:31:03.1±0.8, 38°.21N±0°.03×20°.40E±0°.04, h16^{km}±4^{km}, n44, σ0^{s}.66/67, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.03	214	P	Pg	22 31 06.1	+0.1
CHV1				S	Sg	22 31 07.8	0.0
	50μm,0.1s						
LXRA	Lixouri, Kepha	0.03	99	P	Pg	22 31 06.0	+0.1
LXRA				S	Sg	22 31 07.8	-0.1
LXR1	Lixouri, Cepha	0.03	97	P	Pg	22 31 06.0	0.0
LXR1				S	Sg	22 31 07.9	0.0
	23μm,0.2s						
KEF3	Kipouria, Keph	0.04	268	P	Pg	22 31 06.2	+0.1
KEF3				S	Sg	22 31 07.9	-0.1
KEF4	Livadi, Kephal	0.06	20	P	Pg	22 31 06.2	0.0
KEF4				S	Sg	22 31 08.0	-0.1
ARGA	Argostoli. Kep	0.07	114	P	Pg	22 31 06.2	-0.1
ARGA				S	Sg	22 31 07.6	-0.6
ARG2	Argostoli	0.07	111	P	Pg	22 31 06.2	-0.1
ARG2				S	Sg	22 31 07.8	-0.5
	19μm,0.1s						
KEF2	Argostoli. Kep	0.08	120	P	Pg	22 31 06.3	0.0
KEF2				S	Sg	22 31 08.0	-0.4
KEF1	Kardakata, Kep	0.09	37	P	Pg	22 31 06.4	-0.1
KEF1				S	Sg	22 31 08.2	-0.5
VLS	Valsamata	0.15	100	P	Pg	22 31 07.1	-0.1
VLS				S	Sg	22 31 09.6	-0.3
	9μm,0.1s						
VLS	Valsamata	0.15	100	P	Pg	22 31 07.1	-0.1
VLS				S	Sg	22 31 09.7	-0.2
VLS				AML	AML	22 31 09.8	
	comp=N,20346μm,0.1s						
VLS				AML	AML	22 31 09.9	
	comp=E,14830μm,0.1s						
VSK1	VASILIKIADES	0.24	32	P	Pg	22 31 08.7	+0.1
VSK1				S	Sg	22 31 12.7	+0.4
	comp=E,7μm,0.2s						
KONA	Konidatara, Ke	0.26	31	P	Pg	22 31 09.0	+0.1
KONA				S	Sg	22 31 12.9	+0.2
KONA				AML	AML	22 31 13.5	
	comp=E,6242μm,0.3s						
KONA				AML	AML	22 31 13.5	
	comp=N,8867μm,0.3s						
KFL	Anninata	0.32	107	P	Pg	22 31 09.9	+0.1
KFL				S	Sg	22 31 14.9	+0.5
	comp=N,4μm,0.4s						
KFL	Anninata	0.32	107	P	Pg	22 31 10.0	+0.1
KFL				S	Sg	22 31 15.0	+0.5
KFL				AML	AML	22 31 15.3	
	comp=N,8461μm,0.5s						
KFL				AML	AML	22 31 16.8	
	comp=E,7049μm,0.3s						
EVGI	Lefkada island	0.46	26	P	Pg	22 31 12.4	0.0
EVGI				S	Sb	22 31 19.6	+0.1
EVGI	Lefkada island	0.46	26	P	Pg	22 31 12.6	+0.2
EVGI				S	Sg	22 31 18.9	+0.2
MGNA	Meganis	0.55	34	P	Pg	22 31 13.8	-0.1
MGNA				S	Sg	22 31 21.7	+0.4
MGNA				AML	AML	22 31 22.8	
	comp=E,1260μm,0.1s						
MGNA				AML	AML	22 31 22.8	
	comp=N,910μm,0.3s						
LKD2	Lefkada island	0.62	19	P	Pg	22 31 14.9	-0.4
LKD2				S	Sg	22 31 24.2	+0.6
	comp=N,258nm,0.3s						
LKD2	Lefkada island	0.62	19	P	Pg	22 31 14.9	-0.4
KRI1	kERI	0.63	149	P	Pg	22 31 15.4	-0.2
KRI1				S	Sb	22 31 25.5	+1.0
	comp=N,2μm,0.2s						
TSLK	Tsoukalades, L	0.65	18	P	Pg	22 31 16.1	+0.2
TSLK	Tsoukalades, L	0.65	18	P	Pg	22 31 16.1	+0.2
VTN	Vitineika	0.68	115	P	Pg	22 31 16.9	+0.4
PDO	Prodromos	0.73	57	P	Pg	22 31 17.1	-0.3
PDO	Prodromos	0.73	57	P	Pg	22 31 17.2	-0.2
PDO				AML	AML	22 31 35.9	
	comp=E,504μm,0.2s						
PDO				AML	AML	22 31 36.0	
	comp=N,643μm,0.3s						
RLS	Riolos of Patr	0.85	100	P	Pg	22 31 19.3	-0.4
RLS	Riolos of Patr	0.85	100	P	Pg	22 31 19.5	-0.3
RLS				AML	AML	22 31 35.9	
	comp=N,344μm,0.3s						
RLS				AML	AML	22 31 37.9	
	comp=E,247μm,0.5s						
PVO	Paravola	0.98	65	P	Pb	22 31 22.0	+0.4
PVO	Paravola	0.98	65	P	Pb	22 31 22.1	+0.4
PVO				AML	AML	22 31 38.1	
	comp=N,506μm,0.4s						
PVO				AML	AML	22 31 38.3	
	comp=E,485μm,0.3s						
LAKA	Lakka	1.24	88	P	Pn	22 31 26.3	+0.4
LAKA				AML	AML	22 31 45.9	
	comp=N,253μm,0.4s						
LAKA				AML	AML	22 31 49.7	
	comp=E,123μm,0.5s						
EVR	Evrytania	1.31	57	P	Pb	22 31 27.9	+0.4
TRIZ	Trizonia	1.33	83	P	Pn	22 31 26.6	-0.4
IGT	Igoumenitsa	1.33	358	P	Pb	22 31 28.7	+1.0
MAKR	Makrakomi, Fth	1.58	59	P	Pb	22 31 33.1	+1.1
DBRK	Dubrovnik	4.78	340	ePn	Pn	22 32 14.8	+0.3
STON	Ston	5.09	337	i Pn	Pn	22 32 19.0	+0.2
STON				Sn	Sn	22 33 14.4	-2.8
MAKA	Makarska	5.69	334	ePn	Pn	22 32 27.6	+0.7
RICI	Ricice	5.83	336	ePn	Pn	22 32 29.2	+0.2
RICI				Sn	Sn	22 33 33.4	-2.1
ZIRJ	Zirje	6.53	328	ePn	Pn	22 32 38.6	+0.2
ZIRJ				Sn	Sn	22 33 50.9	-1.6
MORI	Morici	6.67	329	i Pn	Pn	22 32 41.2	+0.7
DUGI	Dugi Otok	7.05	327	ePn	Pn	22 32 46.1	+0.5
UDBI	Udbina	7.21	333	i Pn	Pn	22 32 49.5	+1.6
NVLJ	Novalja	7.59	329	ePn	Pn	22 32 53.6	+0.6

*IASPEI **28** 22:33:31.5±0.8, 37°.02N±0°.03×27°.46E±0°.03, h11^{km}±5^{km}, Error ellipse: s-maj=4.9km s-min=3.2km az=55.2, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*DDA **28** 22:33:31.2, 37°.03N×27°.47E, h11^{km}, ML2.7*

*THE **28** 22:33:31.9, 37°.02N×27°.45E, h4^{km}±4^{km}, ML2.6/3, Error ellipse: s-maj=5.7km s-min=0.8km az=47.0*

*ISK **28** 22:33:31.8, 37°.02N×27°.42E, h9^{km}, ML2.7/18*

*ATH **28** 22:33:32.0, 36°.99N×27°.37E, h25^{km}±1^{km}, ML2.6/2, Error ellipse: s-maj=2.5km s-min=1.1km az=50.0*

ISC 28 22:33:31.5±0.8, 37°.02N±0°.02×27°.49E±0°.02, h11^{km}±5^{km}, n44, σ1^{s}.06/57, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.05	319	i P	Pg	22 33 33.7	0.0
BDRM				i S	Sg	22 33 34.9	-0.4
BDRM				IAML		22 33 35.0	
	comp=E,4μm,0.4s						
BODT	Bodrum	0.15	285	PG	Pg	22 33 35.0	+0.1
BODT				SG	Sg	22 33 36.8	-0.5
DATC	Datca-Mugla	0.30	152	PG	Pg	22 33 38.6	+1.1
DAT	Datca	0.30	166	PG	Pg	22 33 38.1	+0.4
DAT				SG	Sb	22 33 43.6	-0.5
DAT	Datca	0.30	166	i P	Pg	22 33 37.9	+0.2
YER	Yerkesik	0.65	80	PG	Pb	22 33 45.6	+0.8
MRSB	Marmaris-Mugla	0.65	118	PG	Pb	22 33 45.4	+0.6
GCAM	G?zelcaml?	0.70	343	PG	Pg	22 33 45.3	+0.2
GCAM				SG	Sb	22 33 56.2	+0.7
GCAM	G?zelcaml?	0.70	343	i P	Pg	22 33 44.8	-0.4
GCAM				i S	Sg	22 33 54.6	+0.2
GCAM				IAML		22 34 00.0	
	comp=N,310nm,0.2s						
GCAM				IAML		22 34 00.0	
	comp=E,462nm,0.4s						
AYDN	Tasoluk	0.71	26	i S	Sg	22 33 54.9	+0.3
SMG	Samos	0.86	323	P	Pg	22 33 48.0	-0.1
SMG				S	Sb	22 34 00.4	+0.4
	comp=E,722nm,0.3s						
SMG	Samos	0.86	323	P	Pg	22 33 48.0	-0.1
SMG				S	Sb	22 34 00.1	+0.1
SMG				AML	AML	22 34 02.4	
	comp=N,1162μm,0.2s						
SMG				AML	AML	22 34 04.6	
	comp=E,1700μm,0.3s						
TURN	Turunc	0.91	99	PG	Pg	22 33 45.2	-3.8
TURN				SG	Sg	22 33 56.0	-4.8
ARG	Arkhangelos	0.96	147	P	Pg	22 33 49.9	0.0
ARG				S	Sn	22 34 04.8	+0.3
	comp=E,222nm,0.4s						
ARG	Arkhangelos	0.96	147	P	Pb	22 33 51.0	+1.0
ARG				S	Sb	22 34 04.5	+1.7
ARG				AML	AML	22 34 07.7	
	comp=N,432μm,0.4s						
ARG				AML	AML	22 34 08.1	
	comp=E,386μm,0.4s						
ARG	Arkhangelos	0.96	147	PG	Pb	22 33 51.1	+1.0
DALY	Dalyan (Mula)	0.96	102	PG	Pn	22 33 51.5	+0.6
DALY	Dalyan (Mula)	0.96	102	i P	Pb	22 33 51.0	+0.9
DALY				IAML		22 34 06.0	
	comp=E,178nm,0.2s						
AYDB	Zeytinkoy-Aydi	0.97	19	PG	Pb	22 33 51.3	+0.8
DGB	zmir	1.13	335	i P	Pb	22 33 52.8	-0.3
TAVA	DENIZLI_Tavas	1.22	68	i P	Pb	22 33 55.7	+1.1
AMGA	Amorgos Island	1.29	262	P	Pn	22 33 54.7	-0.8
AMGA				S	Sg	22 34 13.0	-0.1
	comp=E,175nm,0.5s						
AMGA	Amorgos Island	1.29	262	P	Pn	22 33 54.8	-0.8
FETY	Fethiye	1.34	106	PN	Pg	22 33 58.2	+1.0
FETY	Fethiye	1.34	106	i P	Pb	22 33 57.8	+1.1
BLCB	Balcova	1.40	346	PN	Pn	22 33 56.7	-0.4
KARP	Karpathos	1.50	190	P	Pn	22 33 58.7	+0.3
URLA	Izmir	1.51	332	PN	Pg	22 34 00.3	-0.2
URLA	Izmir	1.51	332	i P	Pg	22 34 00.2	-0.2
URLA				i S	Sn	22 34 18.4	+0.1
APE	Apeiranthos	1.57	272	P	Pn	22 33 58.9	-0.4
APE				S	Sn	22 34 18.7	-1.0
APE	Apeiranthos	1.57	272	P	Pn	22 33 58.9	-0.4
APE	Apeiranthos	1.57	272	PN	Pb	22 33 59.9	-0.6
KULA	Kula-Manisa	1.75	32	PN	Pb	22 34 04.2	+0.4
CHOS	Chios island	1.77	321	P	Pn	22 34 02.2	0.0
CHOS	Chios island	1.77	321	P	Pn	22 34 02.4	+0.2
CHOS	Chios island	1.77	321	PN	Pn	22 34 03.0	+0.8
IOSP	Ios island	1.79	261	P	Pn	22 34 01.9	-0.4
IOSP	Ios island	1.79	261	P	Pn	22 34 01.9	-0.4
AKAS	Kas	1.88	114	PN	Pb	22 34 06.1	+0.2
AKAS	Kas	1.88	114	i P	Pb	22 34 06.8	+0.9
KSL	Kastellorizon	1.90	117	P	Pb	22 34 06.2	+0.1
ELL	Elmali	1.96	97	PN	Pb	22 34 07.5	+0.2
ZEDA	zmir-Bergama	1.97	351	i P	Pg	22 34 09.3	+0.1
SIGR	SIGRI	2.54	330	P	Pn	22 34 14.2	+1.7

IDC 28 22:34:30.7±2.6, 38°.03S×75°.50W, h0^{km}, mb3.6/2, mb1 3.9/3, mb1mx3.6/21, mbtmp3.5/3, ML3.4/1, MS2.8/1, Ms1 2.8/1, ms1mx2.6/28, Error ellipse: s-maj=73.8km s-min=35.6km az=53.0, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	4.69	127	Pn	Pn	22 35 44.1	+1.3
	0.4nm,0.3s,baz=287,slow=17,SNR=11						
PLCA				Lg	Lg	22 36 42.2	
	3.8nm,0.3s,baz=301,slow=23,SNR=7.8						
PLCA				LR	LR	22 37 45.1	
	comp=Z,121nm,20.8s,baz=266,slow=42						
LPAZ	La Paz	22.61	19	P	P	22 39 34.5	+0.9
	0.8nm,0.3s,baz=208,slow=6.2,SNR=4.5						

TXAR	**Lajitas Array**	**72.00**	**334**	P	P	22 45 57.1	+0.8
	0.4nm,0.6s,baz=170,slow=8.4,SNR=4.3						
ZALV	**Zalesovo Beam**	**159.12**	**34**	PKPab	PKPab	22 55 04.2	-2.7
	0.2nm,0.3s,baz=290,slow=6.1,SNR=4.0						

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*IDC **28** 22:52:35.1±6.8, 27°.19N×59°.02E, h0km, mb3.5/4, mb1 3.5/5, mb1mx3.2/48, mbtmp3.5/5, ML3.4/1, MS3.7/2, Ms1 3.8/2, ms1mx2.8/32, Error ellipse: s-maj=129.4km s-min=35.9km az=171.0*

*TEH **28** 22:52:41.7, 27°.32N×58°.97E, h16km, ML3.6*

*OMAN **28** 22:52:49.5±0.8, 26°.97N×58°.76E, h20km±9km, ml3.1/14, Error ellipse: s-maj=3.8km s-min=3.6km az=64.0*

*DSN **28** 22:52:50.4±4.4, 27°.14N×54°.06E, h10km, ML3.5/5, Error ellipse: s-maj=72.8km s-min=24.5km az=11.0*

ISC 28 22:52:36.3±0.7, **27°.02N**±0°.03×**59°.17E**±0°.04, **h10**km, **n53**, σ**1s.83**/64, **mb3.6**/4, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHNJ	**Kahnooj**	**1.60**	**306**	*e*Pg	**Pb**	**22 53 06.2**	**+0.3**
NIAN	**Nian**	**2.15**	**285**	*e*Pg	**Pg**	**22 53 16.9**	**-0.6**
NIAN				*e*		22 53 43.3	
GENO	**Geno**	**2.70**	**279**	*e*Pn	**Pb**	**22 53 24.3**	**-0.5**
GENO				*e*		22 53 53.2	
BANOM	**Banah**	**2.80**	**248**	*e*P	**Pb**	**22 53 27.8**	**+1.4**
	SNR=46						
BANOM				S	**Sb**	**22 53 58.8**	**-1.9**
BANOM	**Banah**	**2.80**	**248**	P	**Pb**	**22 53 27.9**	**+1.5**
	SNR=45						
BANOM				S	**Sb**	**22 53 59.0**	**-1.8**
BANOM	**Banah**	**2.80**	**248**	*e*Pn	**Pb**	**22 53 27.8**	**+1.4**
SZD1	**Zahaedan-tmp**	**2.88**	**31**	*e*Pn	**Pb**	**22 53 27.8**	**0.0**
SHME	**Shamm**	**2.88**	**251**	*e*P	**Pb**	**22 53 29.1**	**+1.3**
	SNR=8.0						
SHME	**Shamm**	**2.88**	**251**	*e*Pn	**Pb**	**22 53 29.3**	**+1.5**
MDH	**Madha**	**3.10**	**237**	*e*P	**Pb**	**22 53 31.7**	**+0.2**
	SNR=15						
MDH	**Madha**	**3.10**	**237**	P	**Pb**	**22 53 32.0**	**+0.5**
	SNR=15						
MDH				S	**Sn**	**22 54 05.7**	**+3.3**
	SNR=8.4						
MDH	**Madha**	**3.10**	**237**	*e*Pn	**Pb**	**22 53 31.6**	**+0.1**
MSFE	**Esma-Masafi**	**3.17**	**239**	*e*Pn	**Pb**	**22 53 32.1**	**-0.7**
CHMN	**Cheshme madani**	**3.18**	**333**	*e*Pn	**Pn**	**22 53 28.5**	**+1.9**
UOSS	**Minazif**	**3.38**	**233**	P	**Pb**	**22 53 35.7**	**-0.6**
UOSS	**Minazif**	**3.38**	**233**	P	**Pb**	**22 53 36.0**	**-0.3**
UOSS				S	**Sn**	**22 54 11.1**	**+1.9**
UOSS	**Minazif**	**3.38**	**233**	*e*Pn	**Pb**	**22 53 35.8**	**-0.5**
NGRK	**Negar Kerman**	**3.39**	**321**	*e*	**Sn**	**22 54 09.8**	**-0.2**
HATD	**Hatta, Dubai**	**3.50**	**232**	P	**Pb**	**22 53 38.3**	**-0.1**
HATD	**Hatta, Dubai**	**3.50**	**232**	P	**Pb**	**22 53 37.8**	**-0.6**
HATD				S	**Sn**	**22 54 14.6**	**+2.2**
HATD	**Hatta, Dubai**	**3.50**	**232**	*e*Pn	**Pb**	**22 53 38.8**	**+0.4**
BIDO	**Bidbid**	**3.61**	**195**	P	**Pb**	**22 53 42.4**	**+2.2**
	SNR=17						
BIDO				S	**Sb**	**22 54 25.0**	**+1.0**
BIDO	**Bidbid**	**3.61**	**195**	*e*Pn	**Pb**	**22 53 42.3**	**+2.1**
TVBK	**TV Kerman**	**3.64**	**325**	*e*Pn	**Pn**	**22 53 35.2**	**+2.2**
TVBK				*e*		22 54 18.1	
ASHO	**Ashiyiah**	**3.65**	**231**	*i* P	**Pb**	**22 53 40.8**	**-0.1**
	SNR=10						
ASHO	**Ashiyiah**	**3.65**	**231**	P	**Pb**	**22 53 40.9**	**0.0**
ASHO				S	**Sn**	**22 54 19.3**	**+3.4**
ASHO	**Ashiyiah**	**3.65**	**231**	*e*Pn	**Pb**	**22 53 40.1**	**-0.7**
SOHO	**SOHO**	**3.73**	**220**	P	**Pb**	**22 53 41.9**	**-0.4**
	SNR=42						
SOHO				S	**Sb**	**22 54 23.5**	**-4.1**
SOHO	**SOHO**	**3.73**	**220**	*e*Pn	**Pb**	**22 53 41.8**	**-0.5**
NAZ	**Nazwa, Dubai**	**3.75**	**238**	*e*Pn	**Pb**	**22 53 39.8**	**-2.8**
WSAR	**Wadi Sarin**	**3.80**	**188**	P	**Pg**	**22 53 46.7**	**-2.3**
WSAR				S	**Sb**	**22 54 30.6**	**+1.1**
HOQ	**Hoqain**	**3.81**	**207**	P	**Pb**	**22 53 44.1**	**+0.4**
	SNR=144						
HOQ				S	**Sb**	**22 54 27.6**	**-2.4**
FAQ	**Al Faqa, Dubai**	**3.94**	**236**	S	**Sn**	**22 54 28.0**	**+4.8**
SMDO	**Samad**	**4.07**	**195**	P	**Pb**	**22 53 49.7**	**+1.5**
	SNR=23						
SMDO				S	**Sb**	**22 54 37.6**	**+0.1**
WBK	**Wadi Bani Khal**	**4.39**	**182**	P	**Pb**	**22 53 54.7**	**+1.1**
	SNR=249						
WBK				S	**Sb**	**22 54 45.5**	**-1.2**
NHDN	**Nehbandan**	**4.42**	**10**	*e*Pn	**Pn**	**22 53 46.3**	**+2.7**
NHDN				*e*		22 54 56.3	
JMDO	**Jabal Madar**	**4.73**	**192**	P	**Pb**	**22 53 59.5**	**+0.2**
	SNR=102						
JMDO				S	**Sb**	**22 54 54.7**	**-1.6**
JLN	**Jalan Bani Buh**	**4.85**	**177**	P	**Pb**	**22 54 00.4**	**-1.0**
JLN				S	**Sb**	**22 54 55.0**	**-4.9**
	SNR=11						
IDAH	**Dahanechah**	**5.73**	**6**	*e*Pn	**Pn**	**22 54 04.8**	**+3.1**
ISRV	**Sarvestan**	**5.84**	**295**	*e*Pn	**Pn**	**22 54 05.0**	**+1.7**
ITEG	**Tejag**	**5.87**	**356**	*e*Pn	**Pn**	**22 54 05.0**	**+1.5**
IMON	**Monand**	**6.17**	**4**	*e*Pn	**Pn**	**22 54 10.4**	**+2.7**
TPRV	**Parvadeh(Tabas**	**6.37**	**341**	*e*Pn	**Pn**	**22 54 11.6**	**+1.4**
TKDS	**Koohdasht(Taba**	**6.81**	**345**	*e*Pn	**Pn**	**22 54 17.8**	**+1.5**
IKAZ	**Kazeroun**	**7.02**	**295**	*e*Pn	**Pn**	**22 54 20.6**	**+1.1**
ABTO	**Aybut**	**11.05**	**211**	P	Pn	22 55 23.0	+8.5
	SNR=8.6						
AAK	**Ala-Archa**	**19.97**	**35**	P	**P**	**22 57 07.9**	**-1.0**
	0.1nm,0.3s,baz=195,slow=16,SNR=1.9						
AKTO	**Aktyubinsk**	**23.40**	**358**	P	**P**	**22 57 44.0**	**-1.2**
	1.5nm,0.6s,baz=175,slow=11,SNR=5.8						
BRTR	**Keskin Array B**	**24.71**	**307**	P	**P**	**22 57 56.2**	**-1.6**
	0.9nm,0.8s,baz=115,slow=11,SNR=6.7						
MKAR	**Makanchi Array**	**26.87**	**37**	P	**P**	**22 58 17.4**	**+0.3**
	0.2nm,0.4s,baz=223,slow=9.1,SNR=4.2						
ZALV	**Zalesovo Beam**	**32.88**	**28**	P	**P**	**22 59 09.8**	**-0.4**
	0.4nm,0.3s,baz=247,slow=11,SNR=3.6						
CMAR	**Chiang Mai Arr**	**37.53**	**95**	LR	LR	23 18 50.1	
	comp=Z,38nm,18.1s,baz=94,slow=42						
MDT	**Midelt**	**54.86**	**293**	LR	LR	23 29 38.7	
	comp=Z,178nm,21.3s,baz=317,slow=41						

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*NEIC **28** 22:57:01.1±1.9, 24°.2S±0°.2×178°.6W±0°.2, h531km±14km, mb4.1/11, Error ellipse: s-maj=31.7km s-min=7.3km az=139.0*

*IDC **28** 22:57:07.6±4.7, 23°.98S×179°.69W, h504km±38km, mb3.3/6, mb1 3.6/6, mb1mx3.2/37, mbtmp4.2/6, Error ellipse: s-maj=153.4km s-min=22.6km az=161.0*

ISC 28 22:57:02.0±0.9, **24°.2S**±0°.1×**178°.5W**±0°.1, **h550**km, **n21**, σ**2s.75**/19, **mb3.8**/9, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**5.09**	**174**	P	**P**	**22 58 30.3**	**-2.2**
MSVF	**Nonsavu**	**7.16**	**333**	P	**P**	**22 58 49.2**	**-2.6**
AFI	**Afiamalu**	**12.03**	**33**	P	**P**	**22 59 41.3**	**+0.2**
CTA	**Charters Tower**	**32.84**	**270**	P	**P**	**23 02 50.2**	**-0.7**
	8.2nm,0.4s,baz=94,slow=10,SNR=24						
ASAR	**Alice Springs**	**43.33**	**261**	P	**P**	**23 04 16.9**	**+0.8**
	2.5nm,0.7s,baz=96,slow=7.8,SNR=25						
ASAR				ScP	**ScP**	**23 09 01.1**	**+9.3**
	0.6nm,0.8s,baz=111,slow=4.2,SNR=5.0						
ASAR	**Alice Springs**	**43.33**	**261**	P	**P**	**23 04 16.5**	**+0.4**
WR0	**Warramunga Arr**	**43.55**	**266**	P	**P**	**23 04 17.1**	**-0.7**
WB2	**Warramunga Arr**	**43.73**	**266**	P	**P**	**23 04 19.3**	**0.0**
WB2				IAmb	IAmb	23 04 19.7	
	comp=Z,4.9nm,0.7s						
WB0	**Warramunga Arr**	**43.74**	**266**	P	**P**	**23 04 19.2**	**-0.1**
WB0				IAmb	IAmb	23 04 19.7	
	comp=Z,4.7nm,0.6s						
WRA	**Warramunga Arr**	**43.74**	**266**	P	**P**	**23 04 19.1**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=103,slow=8.3,SNR=46						
WRA	**Warramunga Arr**	**43.74**	**266**	P	**P**	**23 04 19.3**	**0.0**
FORT	**Forrest**	**47.49**	**250**	P	**P**	**23 04 47.9**	**+0.2**
FORT				IAmb	IAmb	23 05 05.3	
	comp=Z,7.8nm,0.8s						
KHU	**Kahuku**	**48.58**	**29**	P	**P**	**23 04 57.8**	**+1.7**
MTN	**Manton Dam**	**48.83**	**274**	P	**P**	**23 04 57.2**	**-0.6**
FITZ	**Fitzroy Crossi**	**52.16**	**265**	P	**P**	**23 05 23.6**	**+1.4**
	comp=Z,1.7nm,0.6s,baz=106,slow=7.8,SNR=6.9						
FITZ	**Fitzroy Crossi**	**52.16**	**265**	IAmb	IAmb	23 05 24.6	
	comp=Z,4.6nm,1.1s						
NVAR	**Mina Array Bea**	**84.01**	**43**	P	P	23 08 48.8	+14
	comp=Z,0.3nm,0.6s,baz=211,slow=9.8,SNR=4.1						
LCMT	**Little Creek M**	**86.46**	**47**	P	**P**	**23 08 44.4**	**-2.5**
SZCU	**Shurtz Canyon**	**86.88**	**46**	P	**P**	**23 08 51.4**	**+2.4**
TXAR	**Lajitas Array**	**89.42**	**57**	P	P	23 09 13.4	+13
	comp=Z,0.7nm,0.7s,baz=219,slow=7.0,SNR=4.4						
PV05	**Paradox Valley**	**89.81**	**48**	P	**P**	**23 09 01.0**	**-1.6**

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*IDC **28** 23:03:57.0±29.0, 22°.74S×173°.82W, h0km, mb4.2/4, mb1 4.3/4, mb1mx3.8/41, mbtmp4.2/4, Error ellipse: s-maj=545.2km s-min=156.7km az=79.0*

*NEIC **28** 23:04:02.7±2.2, 22°.5S±0°.1×174°.0W±0°.1, h34km±3km, mb4.3/19, Error ellipse: s-maj=20.3km s-min=10.5km az=129.0*

ISC 28 23:04:02.4±0.8, **22°.5S**±0°.1×**174°.1W**±0°.1, **h35**km, **n30**, σ**1s.90**/30, **mb4.3**/14, **Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**5.16**	**50**	Pn	**Pn**	**23 05 17.4**	**+0.2**
RAO	**Raoul Island**	**7.56**	**206**	Pn	**Pn**	**23 05 50.7**	**+0.5**
AFI	**Afiamalu**	**8.81**	**15**	Pn	**Pn**	**23 06 05.2**	**-2.3**
OUZ	**Omahuta**	**16.63**	**218**	Pn	**Pn**	**23 07 50.3**	**-2.5**
PLWZ	**Palliser**	**21.02**	**203**	P	**P**	**23 08 39.0**	**-4.2**
CMWZ	**Cape Campbell**	**21.57**	**204**	P	**P**	**23 08 45.9**	**-3.0**
MQZ	**McQueen's Vall**	**23.84**	**204**	P	**P**	**23 09 12.5**	**+0.3**
MQZ				IAmb	IAmb	23 09 16.8	
	comp=Z,5.9nm,0.8s						
LBZ	**Lake Benmore**	**25.39**	**207**	P	**P**	**23 09 27.8**	**+1.3**
LBZ				IAmb	IAmb	23 09 37.1	
	comp=Z,7.0nm,1.1s						
PYZ	**Puysegur Point**	**28.31**	**209**	P	**P**	**23 09 52.2**	**-0.5**
ARMA	**Armidale**	**31.61**	**248**	P	**P**	**23 10 23.7**	**+1.5**
ARMA				IAmb	IAmb	23 10 40.3	
	comp=Z,6.5nm,1.1s						
EIDS	**Eidsvold**	**31.92**	**258**	P	**P**	**23 10 25.2**	**+0.3**
EIDS				IAmb	IAmb	23 10 26.5	
	comp=Z,2.5nm,0.7s						
CAN	**Canberra**	**34.56**	**240**	P	**P**	**23 10 48.7**	**+0.8**
CTA	**Charters Tower**	**36.97**	**266**	P	**P**	**23 11 10.8**	**+2.1**
	comp=Z,1.5nm,0.3s,baz=102,slow=12,SNR=2.5						
TOO	**Toolangi**	**37.78**	**237**	P	**P**	**23 11 16.7**	**+1.3**
TOO				IAmb	IAmb	23 11 19.5	
	comp=Z,2.6nm,0.6s						
TAU	**Tasmania Unive**	**37.90**	**228**	P	**P**	**23 11 16.5**	**+0.2**
TAU				IAmb	IAmb	23 11 35.7	
	comp=Z,13nm,1.1s						
STKA	**Stephens Creek**	**40.29**	**247**	P	**P**	**23 11 37.7**	**+1.3**
	comp=Z,1.0nm,0.5s,baz=100,slow=12,SNR=4.7						
STKA	**Stephens Creek**	**40.29**	**247**	P	**P**	**23 11 37.7**	**+1.3**
BBOO	**Buckleboo**	**44.99**	**246**	P	**P**	**23 12 15.5**	**+0.9**
BBOO				IAmb	IAmb	23 12 17.0	
	comp=Z,4.8nm,1.1s						
AS31	**Alice Springs**	**47.65**	**258**	P	**P**	**23 12 34.1**	**-1.5**
ASAR	**Alice Springs**	**47.65**	**258**	P	**P**	**23 12 35.9**	**+0.3**
	comp=Z,1.4nm,0.4s,baz=98,slow=7.6,SNR=10.0						
ASAR	**Alice Springs**	**47.65**	**258**	P	**P**	**23 12 33.1**	**-2.5**
WR0	**Warramunga Arr**	**47.77**	**263**	P	**P**	**23 12 36.9**	**+0.3**
WB0	**Warramunga Arr**	**47.95**	**263**	P	**P**	**23 12 38.7**	**+0.7**
WB0				IAmb	IAmb	23 12 39.9	
	comp=Z,3.0nm,0.7s						
WB2	**Warramunga Arr**	**47.95**	**263**	P	**P**	**23 12 38.9**	**+1.0**
WB2				IAmb	IAmb	23 12 39.9	
	comp=Z,3.5nm,1.0s						
WRA	**Warramunga Arr**	**47.96**	**263**	P	**P**	**23 12 39.2**	**+1.1**
	comp=Z,1.8nm,0.4s,baz=103,slow=8.4,SNR=14						
WRA	**Warramunga Arr**	**47.96**	**263**	P	**P**	**23 12 38.6**	**+0.5**
FORT	**Forrest**	**51.89**	**248**	P	**P**	**23 13 08.6**	**+0.8**
KVN	**Kaiserville**	**80.55**	**41**	P	**P**	**23 16 16.1**	**+4.7**
KVN				IAmb	IAmb	23 16 30.8	
	comp=Z,4.6nm,0.8s						
W18A	**Petrified Fore**	**83.66**	**48**	P	**P**	**23 16 28.1**	**+0.3**
NEA	**Nenana**	**88.93**	**11**	P	**P**	**23 16 49.6**	**-3.2**

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*INET **28** 23:16:02.6, 12°.43N×87°.78W, h57km, ML5.4*

*SNET **28** 23:16:02.6±1.2, 12°.44N×87°.83W, h44km±57km, ML4.7*

*IDC **28** 23:16:02.6±1.1, 12°.68N×87°.55W, h71km±10km, mb4.0/19, mb1 4.2/23, mb1mx4.0/48, mbtmp4.3/23, MS3.5/16, Ms1 3.5/16, ms1mx3.3/35, Error ellipse: s-maj=20.9km s-min=7.6km az=54.0*

*NEIC **28** 23:16:03.7±1.6, 12°.53N±0°.05×87°.71W±0°.06, h78km±5km, mb4.6/186, Md4.7(SNET), Error ellipse: s-maj=9.3km s-min=6.6km az=51.0*

*UCR **28** 23:16:03.5±4.0, 12°.47N×87°.86W, h35km±999km, ML4.6, mb4.6(NEIC)*

*GCG **28** 23:16:05.9±0.6, 12°.59N×87°.97W, h26km±999km, MD4.6*

*MEX **28** 23:16:11.1±0.4, 12°.71N×88°.18W, h20km, MD4.5*

ISC 28 23:16:03.4±0.6, **12°.55N**±0°.05×**87°.77W**±0°.04, **h80**km±4km, **n286**, σ**1s.39**/293, **mb4.5**/93, **2C-2D**, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**0.47**	**25**	*e*P	**Pn**	**23 16 15.8**	**-1.3**
CSGN	**Cosiguina Volc**	**0.47**	**25**		**Pn**	**23 16 16.0**	**-1.0**
CSGN				Sn	**Sn**	**23 16 25.8**	**-1.3**
CRIN	**San Cristobal**	**0.71**	**78**	*e*P	**Pn**	**23 16 18.1**	**-1.2**
CNCH	**Conchagua**	**0.72**	**355**	*e*P	**Pn**	**23 16 18.1**	**-1.4**
CNCH				*e*S	**Sn**	**23 16 30.5**	**-1.0**
CNCH				IAML		23 16 33.9	
	comp=Z,71µm,0.3s						
CNCH	**Conchagua**	**0.72**	**355**	*e*P	**Pn**	**23 16 18.1**	**-1.4**
CNCH				*e*S	**Sn**	**23 16 30.5**	**-1.0**
CNCH				IAML		23 16 33.9	
	comp=Z,71µm,0.3s						
LCND	**La Caada**	**0.76**	**351**	*e*P	**Pn**	**23 16 18.5**	**-1.3**
LCND				*e*S	**Sn**	**23 16 31.0**	**-1.0**
LCND				IAML		23 16 34.1	
	comp=Z,35µm,0.3s						
LCND	**La Caada**	**0.76**	**351**	*e*P	**Pn**	**23 16 18.5**	**-1.3**
LCND				*e*S	**Sn**	**23 16 31.0**	**-1.0**
LCND				IAML		23 16 34.1	
	comp=Z,35µm,0.3s						
JUCU	**Jucuar¡n**	**0.84**	**326**	*e*P	**Pn**	**23 16 18.9**	**-1.8**
JUCU				*e*S	**Sn**	**23 16 31.5**	**-2.1**
JUCU	**Jucuar¡n**	**0.84**	**326**	*e*P	**Pn**	**23 16 18.9**	**-1.8**
JUCU				*e*S	**Sn**	**23 16 31.5**	**-2.1**
BLLM	**Bellamira**	**1.00**	**333**	⇓*i*P	**Pn**	**23 16 21.6**	**-0.9**
BLLM	**Bellamira**	**1.00**	**333**	⇓*i*P	**Pn**	**23 16 21.6**	**-0.9**
VSM	**San Miguel**	**1.00**	**330**	*e*P	**Pn**	**23 16 21.9**	**-0.9**
VSM	**San Miguel**	**1.00**	**330**	*e*P	**Pn**	**23 16 21.9**	**-0.9**
LCY	**Lacayo**	**1.01**	**329**	*e*P	**Pn**	**23 16 21.7**	**-1.0**
LCY	**Lacayo**	**1.01**	**329**	*e*P	**Pn**	**23 16 21.7**	**-1.0**
CNGN	**Cerro Negro**	**1.04**	**93**	*e*P	**Pn**	**23 16 21.2**	**-1.9**
PACA	**Pacayal**	**1.06**	**329**	*e*P	**Pn**	**23 16 22.4**	**-1.0**
PACA				*e*S	**Sn**	**23 16 37.7**	**-0.6**
PACA	**Pacayal**	**1.06**	**329**	*e*P	**Pn**	**23 16 22.4**	**-1.0**
PACA				*e*S	**Sn**	**23 16 37.7**	**-0.6**
ALJI	**Alcalda de J**	**1.10**	**315**	*e*P	**Pn**	**23 16 22.4**	**-1.3**
ALJI				*e*S	**Sn**	**23 16 37.5**	**-1.4**
ALJI				IAML		23 16 40.7	
	comp=Z,10µm,0.2s						
ALJI	**Alcalda de J**	**1.10**	**315**	*e*P	**Pn**	**23 16 22.4**	**-1.3**
ALJI				*e*S	**Sn**	**23 16 37.5**	**-1.4**
ALJI				IAML		23 16 40.7	
	comp=Z,10µm,0.2s						
TECA	**Tecapa**	**1.18**	**323**	*e*P	**Pn**	**23 16 23.9**	**-1.0**
TECA	**Tecapa**	**1.18**	**323**	*e*P	**Pn**	**23 16 23.9**	**-1.0**
FAGO	**Alcalda de S**	**1.19**	**344**	*e*P	**Pn**	**23 16 23.9**	**-0.9**
FAGO				*e*S	**Sn**	**23 16 40.2**	**-0.6**
FAGO	**Alcalda de S**	**1.19**	**344**	*e*P	**Pn**	**23 16 23.9**	**-0.9**
FAGO				*e*S	**Sn**	**23 16 40.2**	**-0.6**
COEB	**Comit de Eme**	**1.20**	**322**	*e*P	**Pn**	**23 16 23.9**	**-1.1**
COEB				*e*S	**Sn**	**23 16 40.3**	**-1.0**
COEB	**Comit de Eme**	**1.20**	**322**	*e*P	**Pn**	**23 16 23.9**	**-1.1**
COEB				*e*S	**Sn**	**23 16 40.3**	**-1.0**
COPN	**Copaltepe**	**1.21**	**108**	⇑*i*P	**Pn**	**23 16 22.6**	**-2.4**
COPN	**Copaltepe**	**1.21**	**108**	⇑*i*P	**Pn**	**23 16 22.6**	**-2.4**
COEG	**Centro de Oper**	**1.52**	**314**	*e*S	**Sn**	**23 16 47.6**	**-0.8**
COEG	**Centro de Oper**	**1.52**	**314**	*e*S	**Sn**	**23 16 47.6**	**-0.8**
TGUH	**Tegucigalpa,Un**	**1.57**	**18**		**Pn**	**23 16 29.9**	**+0.1**
TGUH				Sn	**Sn**	**23 16 49.6**	**-0.1**
LFRS	**El Faro**	**1.65**	**310**	*e*P	**Pn**	**23 16 30.2**	**-0.7**
LBRS	**Las Brisas**	**1.71**	**314**	*e*P	**Pn**	**23 16 31.7**	**0.0**
LOMA	**Loma Larga**	**1.75**	**309**	*e*P	**Pn**	**23 16 30.9**	**-1.3**
LOMA				*e*S	**Sn**	**23 16 53.2**	**-0.8**
LOMA				IAML		23 16 58.7	
	comp=Z,7µm,0.5s						
LOMA	**Loma Larga**	**1.75**	**309**	*e*P	**Pn**	**23 16 30.9**	**-1.3**
LOMA				*e*S	**Sn**	**23 16 53.2**	**-0.8**
LOMA				IAML		23 16 58.7	
	comp=Z,7µm,0.5s						
SNET	**Serv Nac Est T**	**1.82**	**308**	*e*P	**Pn**	**23 16 31.3**	**-1.7**
SNET				*e*S	**Sn**	**23 16 54.4**	**-1.1**
SNET				IAML		23 16 59.7	
	comp=Z,3µm,0.3s						
SNET	**Serv Nac Est T**	**1.82**	**308**	*e*P	**Pn**	**23 16 31.3**	**-1.7**
SNET				*e*S	**Sn**	**23 16 54.4**	**-1.1**
SNET				IAML		23 16 59.7	
	comp=Z,3µm,0.3s						
SNET	**Serv Nac Est T**	**1.82**	**308**	Sn	**Sn**	**23 16 54.9**	**-0.7**
BOQS	**Boqueron**	**1.89**	**309**	*e*P	**Pn**	**23 16 34.4**	**+0.3**
CEVE	**Cerro Verde**	**2.21**	**305**	*e*P	**Pn**	**23 16 38.6**	**+0.2**
CEVE	**Cerro Verde**	**2.21**	**305**	*e*P	**Pn**	**23 16 38.6**	**+0.2**
ACON	**Acoyapa**	**2.60**	**103**		**Pn**	**23 16 41.6**	**-1.8**
GB1A	**Borinquen Arri**	**2.89**	**126**	*e*P	**Pn**	**23 16 48.0**	**+0.6**
GB1A				*e*S	**Sn**	**23 17 18.7**	**-2.5**
BUEV	**Buena Vista**	**2.89**	**127**	*e*P	**Pn**	**23 16 48.1**	**+0.7**
IXG	**Ixpaco**	**3.06**	**302**	*e*P	**Pn**	**23 16 50.5**	**+0.7**
CUI	**Cuipilapa**	**3.17**	**126**	*e*P	**Pn**	**23 16 51.5**	**+0.3**
NBG	**Las Nubes**	**3.22**	**309**	*e*P	**Pn**	**23 16 53.6**	**+1.5**
PLVR	**Palo Verde**	**3.22**	**133**	*e*P	**Pn**	**23 16 51.7**	**-0.3**
FUG	**Fuego 3**	**3.54**	**303**	*e*P	**Pn**	**23 16 58.4**	**+2.1**
FUG				*e*S	**Sn**	**23 17 37.5**	**+0.5**
JTS	**Las Juntas de**	**3.56**	**129**	P	**Pn**	**23 16 55.8**	**-0.6**
	comp=Z,29nm,0.3s,baz=17,slow=13,SNR=49						
JTS				S	**Sn**	**23 17 34.6**	**-2.8**
	comp=Z,123nm,0.3s,baz=7.1,slow=19,SNR=4.3						
JTS	**Las Juntas de**	**3.56**	**129**	*e*P	**Pn**	**23 16 55.5**	**-0.8**
APG	**El Apazote**	**3.58**	**313**	P	**Pn**	**23 16 57.8**	**+1.0**
	comp=Z,2.6nm,0.3s,baz=126,slow=5.0,SNR=17						
CEDE	**Laguna Cedeo**	**3.63**	**124**	*e*P	**Pn**	**23 16 58.5**	**+1.1**
CEDE				*e*P		23 16 58.7	
CEDE				*e*S	**Sn**	**23 17 41.8**	**+2.5**
ARE1	**Arenal 1**	**3.64**	**125**	*e*P	**Pn**	**23 16 58.0**	**+0.5**
ARE1				*e*S	**Sn**	**23 17 40.2**	**+0.9**
SRA1	**San Ramn**	**4.05**	**127**	*e*P	**Pn**	**23 17 06.0**	**+2.9**
STG3	**Santiaguito 3,**	**4.28**	**301**	*e*P	**Pn**	**23 17 07.9**	**+1.6**
STG3				*e*S	**Sn**	**23 17 55.8**	**+0.7**
HDC	**Heredia**	**4.39**	**125**	*e*P	**Pn**	**23 17 08.5**	**+0.7**
LCR2	**La Lucha 2**	**4.63**	**127**	*e*P	**Pn**	**23 17 12.1**	**+0.9**
EDDO	**Dominical**	**5.04**	**130**	*e*P	**Pn**	**23 17 17.6**	**+1.0**
EDPN	**Palmar Norte**	**5.54**	**130**	*e*P	**Pn**	**23 17 25.0**	**+1.7**
EDBA	**Buenos Aires**	**5.55**	**127**	*e*P	**Pn**	**23 17 23.6**	**0.0**
CCIG	**Comitan**	**5.63**	**312**	*e*P	**Pn**	**23 17 27.2**	**+2.5**
PCIG		**6.15**	**301**	*e*P	**Pn**	**23 17 33.7**	**+2.0**
PCIG				*e*S	**Sn**	**23 18 35.5**	**-5.1**
BRU2	**Volcan**	**6.23**	**126**	*e*P	**Pn**	**23 17 33.7**	**+0.8**
ICCO	**Coco Island**	**7.00**	**174**	*e*P	**Pn**	**23 17 43.7**	**+0.4**
TEIG	**Tepich**	**7.65**	**356**	LR	LR	23 20 56.3	
	comp=Z,415nm,22.0s,baz=72,slow=39						
TEIG	**Tepich**	**7.65**	**356**	Pn	**Pn**	**23 17 53.7**	**+1.6**
CMIG	**Matias Romero**	**8.23**	**304**	P	**Pn**	**23 18 01.4**	**+1.3**
	comp=Z,1.4nm,0.3s,baz=132,slow=9.9,SNR=12						
CMIG				S	**Sn**	**23 19 31.8**	**+0.2**
	comp=Z,1.4nm,0.3s,baz=306,slow=12,SNR=1.3						
CMIG	**Matias Romero**	**8.23**	**304**	*e*P	**Pn**	**23 18 01.1**	**+1.0**
BCIP	**Isla Barro Col**	**8.48**	**113**		**Pn**	**23 18 03.9**	**+0.3**
FSCY	**Frank Sound, G**	**9.23**	**42**	Pn	**Pn**	**23 18 12.9**	**-0.9**
CBCY	**The Bluff, Cay**	**10.50**	**46**	Pn	**Pn**	**23 18 32.2**	**+1.2**
MTDJ	**Mount Denham**	**11.36**	**59**		**Pn**	**23 18 44.5**	**+1.6**
SJCC	**San Jacinto, C**	**12.62**	**101**	*e*P	**Pn**	**23 19 00.6**	**+0.5**
UREC	**San Jos de Ur**	**12.95**	**110**	*e*P	**P**	**23 19 12.8**	**+0.9**
ZARC	**Zaragoza, Cauc**	**13.67**	**110**	*e*P	**Pn**	**23 19 14.0**	**+0.2**
SMLC	**San Martn de**	**13.96**	**104**	*e*P	**P**	**23 19 22.1**	**-1.0**
YOTC	**Yotoco, Valle**	**14.14**	**126**	*e*P	**Pn**	**23 19 18.4**	**-1.7**
GTBY	**Guantanamo Bay**	**14.19**	**57**		**Pn**	**23 19 22.6**	**+2.0**
GUY2C	**Guyana, Caldas**	**14.24**	**120**	*e*P	**Pn**	**23 19 22.7**	**+0.8**
PTBC	**PUERTO BERRIO,**	**14.42**	**113**	*e*P	**P**	**23 19 28.8**	**+0.6**
RREF	**El Recreo**	**14.43**	**121**	*e*P	**Pn**	**23 19 25.4**	**+1.0**
NORC	**Norcasia**	**14.50**	**117**	*e*P	**P**	**23 19 27.9**	**-1.3**
OCAC	**Ocana**	**14.84**	**105**	*e*P	**P**	**23 19 34.3**	**+1.3**
ORTC	**Ortega, Tolima**	**15.07**	**124**	*e*P	**P**	**23 19 34.2**	**-1.3**
SOTA	**Rioblanco**	**15.14**	**132**	*e*P	**P**	**23 19 36.3**	**-0.4**
PCON	**Cinco Dias**	**15.16**	**131**	*e*P	**P**	**23 19 36.5**	**-0.5**
GCUF	**Volcan Galeras**	**15.27**	**137**	*e*P	**P**	**23 19 41.6**	**+3.4**
ROSC	**El Rosal**	**15.33**	**119**	LR	LR	23 26 08.9	
	comp=Z,133nm,18.1s,baz=309,slow=40						
PAMC	**Pamplona, Colo**	**15.71**	**108**	*e*P	**Pn**	**23 19 40.5**	**-0.2**
RUSC	**La Rusia**	**15.93**	**113**	*e*P	**P**	**23 19 45.4**	**0.0**
RUSC	**La Rusia**	**15.93**	**113**	Pn	**Pn**	**23 19 43.3**	**0.0**
CHIC	**Chingaza**	**15.94**	**118**	*e*P	**P**	**23 19 44.7**	**-0.9**
FLOC	**Florencia**	**16.21**	**131**	*e*P	**P**	**23 19 48.8**	**+0.7**
FLOC	**Florencia**	**16.21**	**131**	P	**Pn**	**23 19 46.6**	**+0.2**
SDV	**Santo Domingo**	**17.22**	**101**	P	**Pn**	**23 19 56.7**	**-2.4**
	comp=Z,0.7nm,0.3s,baz=274,slow=5.3,SNR=15						
SDV	**Santo Domingo**	**17.22**	**101**		**Pn**	**23 19 57.7**	**-1.4**
HKT	**Hockley**	**18.86**	**338**	P	**Pn**	**23 20 18.8**	**+0.3**
344A	**Westbrook Farm**	**19.01**	**352**	P	**P**	**23 20 19.6**	**+0.8**
344A				IAmb	IAmb	23 20 24.1	
	comp=Z,26nm,0.9s						
152A	**Waverly Hall**	**20.22**	**7**		Pn	23 20 34.8	+0.3
152A				IAmb	IAmb	23 20 36.1	
	comp=Z,26nm,0.8s						
LRAL	**Lakeview Retre**	**20.40**	**2**	P	**P**	**23 20 35.0**	**+1.1**
Z50A	**Ashland**	**20.68**	**4**	P	**P**	**23 20 38.6**	**+1.7**
Z41A	**Richland Creek**	**21.12**	**348**	P	**P**	**23 20 42.7**	**+1.1**
Z41A				IAmb	IAmb	23 20 57.6	
	comp=Z,19nm,0.8s						
GOGA	**Godfrey**	**21.13**	**10**	P	**P**	**23 20 43.0**	**+1.3**
GOGA				IAmb	IAmb	23 20 46.0	
	comp=Z,25nm,0.7s						
Y49A	**Blount Mountai**	**21.25**	**3**	P	**P**	**23 20 43.9**	**+0.9**
Y49A				IAmb	IAmb	23 20 51.9	
	comp=Z,19nm,0.9s						
Y52A	**Lilburn**	**21.48**	**8**	P	**P**	**23 20 46.5**	**+1.0**
Y52A				IAmb	IAmb	23 20 50.2	
	comp=Z,28nm,1.1s						
ATAH	**Atahualpa**	**21.66**	**154**	P	**P**	**23 20 49.3**	**+1.3**
	comp=Z,8.8nm,0.7s,baz=20,slow=6.2,SNR=7.8						
X48A	**Hartselle**	**21.81**	**2**	P	**P**	**23 20 48.9**	**-0.1**
X48A				IAmb	IAmb	23 20 51.2	
	comp=Z,16nm,0.7s						
FPAL	**Fort Paine**	**21.98**	**5**	P	**P**	**23 20 52.4**	**+1.5**
FPAL				IAmb	IAmb	23 21 09.6	
	comp=Z,24nm,1.3s						
HODGE	**Hodges**	**22.16**	**12**	P	**P**	**23 20 54.4**	**+1.7**
HODGE				IAmb	IAmb	23 20 57.1	
	comp=Z,12nm,0.8s						
TX31	**Lajitas Ar. Si**	**22.30**	**321**	P	**P**	**23 20 56.0**	**+1.5**
TX31				IAmb	IAmb	23 20 57.3	
	comp=Z,14nm,0.9s						
TX32	**Lajitas Array**	**22.30**	**321**	P	**P**	**23 20 56.0**	**+1.6**
TX32				IAmb	IAmb	23 20 57.3	
	comp=Z,15nm,0.9s						
TXAR	**Lajitas Array**	**22.30**	**321**	P	**P**	**23 20 53.8**	**-0.7**
	comp=Z,11nm,0.7s,baz=143,slow=10,SNR=40						
TXAR				PcP	**PcP**	**23 24 46.1**	**-1.4**
	comp=Z,0.7nm,0.6s,baz=150,slow=5.7,SNR=3.5						
TXAR				ScP	**ScP**	**23 28 20.1**	**+2.1**
	comp=Z,0.8nm,0.7s,baz=132,slow=5.2,SNR=5.9						
TXAR	**Lajitas Array**	**22.30**	**321**	P	**P**	**23 20 55.2**	**+0.8**
JSC	**Jenkinsville**	**22.43**	**14**	P	**P**	**23 20 57.0**	**+1.4**
Z35A	**Perchaven, San**	**22.43**	**339**	P	**P**	**23 20 56.4**	**+0.7**
Z35A				IAmb	IAmb	23 21 13.9	
	comp=Z,33nm,1.3s						
UALR	**University of**	**22.51**	**350**	P	**P**	**23 20 56.8**	**+0.3**
UALR				IAmb	IAmb	23 21 16.2	
	comp=Z,22nm,1.2s						
MIAR	**Mount Ida**	**22.52**	**347**	P	**P**	**23 20 58.1**	**+1.4**
MIAR				IAmb	IAmb	23 21 17.6	
	comp=Z,21nm,0.8s						
SWET	**Sewanee**	**22.63**	**4**	P	**P**	**23 20 58.6**	**+0.8**
W50A	**Signal Mountai**	**22.66**	**5**	P	**P**	**23 20 59.4**	**+1.3**
W50A				IAmb	IAmb	23 21 09.8	
	comp=Z,14nm,0.9s						
STVI	**Saint Thomas**	**22.72**	**72**	P	**P**	**23 20 58.0**	**-0.9**
ABTX	**Abilene, Hawle**	**22.75**	**333**	P	**P**	**23 20 59.8**	**+0.7**
ABTX				IAmb	IAmb	23 21 03.6	
	comp=Z,23nm,1.5s						
BG3	**Lake Jocassee**	**22.77**	**10**	P	**P**	**23 21 00.6**	**+1.4**
BG3				IAmb	IAmb	23 21 01.6	
	comp=Z,29nm,1.3s						
PAULI	**Pauline**	**22.82**	**13**	P	**P**	**23 21 01.1**	**+1.4**
PAULI					**pP**	**23 21 20.7**	**+4.5**
W41B	**Gary Mavity, V**	**22.89**	**351**	P	**P**	**23 21 00.2**	**-0.1**
BIRD	**Birdtown, Kers**	**22.97**	**16**	P	**P**	**23 21 02.1**	**+0.9**
CPCT	**Cooper Cave**	**22.99**	**7**	P	**P**	**23 21 02.6**	**+1.2**
CPCT				IAmb	IAmb	23 21 03.9	
	comp=Z,24nm,1.4s						
X37A	**Clayton**	**23.00**	**344**	P	**P**	**23 21 03.1**	**+1.5**
X37A				IAmb	IAmb	23 21 21.1	
	comp=Z,21nm,1.2s						
WHAR	**Wooly Hollow**	**23.01**	**350**	P	**P**	**23 21 02.3**	**+0.7**
WHAR				IAmb	IAmb	23 21 21.5	
	comp=Z,22nm,0.9s						
Y60A	**Bolivia**	**23.06**	**21**	P	**P**	**23 21 02.9**	**+0.8**
W39A	**Magazine**	**23.20**	**347**	P	**P**	**23 21 04.6**	**+1.2**
W39A				IAmb	IAmb	23 21 23.2	
	comp=Z,13nm,0.8s						

KMSC	Kings Mountain	23.23	13	IAmb	IAmb	23 21 24.7	
	comp=Z,14nm,0.8s						
TKL	Tuckaleechee C	23.29	8	P	P	23 21 03.8	-0.5
	comp=Z,10nm,0.8s,baz=147,slow=9.5,SNR=9.4						
TKL				LR	LR	23 30 03.0	
	comp=Z,38nm,19.4s,baz=172,slow=36						
TKL	Tuckaleechee C	23.29	8	IAmb	IAmb	23 21 07.6	
	comp=Z,24nm,1.1s						
FCAR	Ozark Folk Cen	23.57	351	P	P	23 21 07.0	+0.2
W57A	Gilead	23.58	16	P	P	23 21 07.6	+0.7
W57A				IAmb	IAmb	23 21 25.1	
	comp=Z,19nm,1.1s						
LCAR	Lake Charles	23.61	353	P	P	23 21 07.2	0.0
GLAT	Glass	23.66	357	P	P	23 21 07.7	+0.2
U49A	Red Boiling Sp	23.93	4	IAmb	IAmb	23 21 09.7	
	comp=Z,12nm,0.8s						
V55A	Taylorsville	23.94	13	P	P	23 21 11.7	+1.6
V55A					pP	23 21 31.0	+2.8
FNO	Franklin	24.23	341	P	P	23 21 14.0	+1.2
FNO					pP	23 21 31.9	+0.7
LPIG	La Paz	24.25	301	LR	LR	23 31 05.1	
	comp=Z,50nm,18.5s,baz=66,slow=37						
WMOK	Wichita Mounta	24.25	337	P	P	23 21 13.9	+1.0
TUL1	Leonard	24.36	344	P	P	23 21 15.4	+1.6
TUL1				IAmb	IAmb	23 21 35.0	
	comp=Z,30nm,1.1s						
V58A	Windy Hill, Pi	24.43	17	IAmb	IAmb	23 21 35.2	
	comp=Z,28nm,1.0s						
U54A	Nelsons Funny	24.46	12	IAmb	IAmb	23 21 20.4	
	comp=Z,42nm,1.1s						
T42A	Van Buren	24.56	354	P	P	23 21 15.5	-0.1
T42A				IAmb	IAmb	23 21 35.3	
	comp=Z,12nm,0.7s						
AMTX	Amarillo	25.57	333	IAmb	IAmb	23 21 29.6	
	comp=Z,16nm,0.8s						
CCM	Cathedral Cave	25.59	354	P	P	23 21 25.3	+0.3
CCM				IAmb	IAmb	23 21 44.7	
	comp=Z,20nm,0.7s						
WCI	Wyandotte Cave	25.61	3	P	P	23 21 25.6	+0.4
WCI				IAmb	IAmb	23 21 26.5	
	comp=Z,14nm,0.6s						
U32A	Winter Ranch,	25.79	339	P	P	23 21 28.3	+1.3
U32A				IAmb	IAmb	23 21 31.0	
	comp=Z,19nm,1.0s						
R50A	Paris	25.81	6		pP	23 21 46.3	+0.8
R40A	Maddies Statio	25.95	352	P	P	23 21 28.4	+0.1
R40A				IAmb	IAmb	23 21 47.4	
	comp=Z,9.9nm,0.6s						
T59A	Double "B" Far	25.99	19	P	P	23 21 30.2	+1.6
Q51A	Peebles	26.66	8		pP	23 21 53.7	+0.5
Q51A				IAmb	IAmb	23 21 54.9	
	comp=Z,17nm,0.7s						
Q54A	Coxs Mills	27.04	12	IAmb	IAmb	23 21 39.9	
	comp=Z,29nm,1.4s						
319A	Douglas	27.27	317	P	P	23 21 42.4	+1.9
P53A	Whipple	27.42	11	IAmb	IAmb	23 21 44.2	
	comp=Z,17nm,0.8s						
ACSO	Alum Creek Sta	27.89	8	P	P	23 21 46.6	+0.9
ACSO					pP	23 22 03.9	-0.5
ACSO				IAmb	IAmb	23 22 06.1	
	comp=Z,11nm,0.8s						
MCWV	Mont Chateau	27.89	13	P	P	23 21 46.7	+0.9
ANMO	Albuquerque	28.00	326	P	P	23 21 47.9	+0.8
P57A	Homestead Farm	28.18	16	IAmb	IAmb	23 21 51.6	
	comp=Z,8.5nm,0.6s						
P57A					pP	23 22 09.4	+2.4
N47A	Urbana	28.28	3	P	P	23 21 49.1	0.0
N47A				IAmb	IAmb	23 21 55.9	
	comp=Z,12nm,0.8s						
N49A	Columbus Grove	28.44	6	P	P	23 21 50.9	+0.3
N49A				IAmb	IAmb	23 21 52.3	
	comp=Z,7.4nm,0.8s						
N49A					pP	23 22 11.5	+2.3
SDCO	Great Sand Dun	29.67	331	P	P	23 22 02.5	+0.6
M54A	Oil Creek Stat	29.70	12	IAmb	IAmb	23 22 03.7	
	comp=Z,12nm,0.6s						
N59A	State Game Lan	30.15	18	P	P	23 22 06.9	+1.1
N59A				IAmb	IAmb	23 22 08.1	
	comp=Z,13nm,1.1s						
S22A	4UR Ranch, Cre	30.32	329	P	P	23 22 08.8	+1.2
S22A				IAmb	IAmb	23 22 10.2	
	comp=Z,5.2nm,0.6s						
X16A	Lo Mia Camp, P	30.60	319	P	P	23 22 12.0	+1.9
J45A	Montague	30.80	2	P	P	23 22 11.0	-0.4
WUAZ	Wupatki	31.27	321	P	P	23 22 17.2	+1.3
SMCO	Snowmass	31.51	331	IAmb	IAmb	23 22 21.8	
	comp=Z,4.6nm,0.7s						
PV13	Radium Mtn., P	31.66	327	P	P	23 22 20.3	+0.9
PV13				IAmb	IAmb	23 22 22.4	
	comp=Z,7.1nm,0.7s						
PV03	Paradox Valley	31.75	327	P	P	23 22 21.4	+1.2
PV05	Paradox Valley	31.75	327	P	P	23 22 21.1	+1.0
PV05				IAmb	IAmb	23 22 22.2	
	comp=Z,8.7nm,0.8s						
PV12	Saucer Basin,	31.77	328	P	P	23 22 21.2	+0.9
PV18	Skein Mesa, Pa	31.77	327	P	P	23 22 21.8	+1.4
PV07	Paradox Valley	31.78	328	P	P	23 22 21.3	+0.9
PV07				IAmb	IAmb	23 22 23.5	
	comp=Z,6.4nm,0.8s						
PV11	David Mesa, Pa	31.79	327	P	P	23 22 21.2	+0.7
PV16	Nyswonger Mesa	31.82	327	P	P	23 22 21.8	+1.0
PV17	East Wray Mesa	31.82	327	P	P	23 22 21.4	+0.6
PV19	Morning Glory	31.86	327	P	P	23 22 21.9	+0.8
PV20	West Nyswonger	31.87	327	P	P	23 22 22.8	+1.6
PV04	Paradox Valley	31.88	328	P	P	23 22 22.0	+0.7
PV22	Blue Mesa, Par	31.92	328	P	P	23 22 22.0	+0.3
PV22				IAmb	IAmb	23 22 24.0	
	comp=Z,7.5nm,1.1s						
PV10	Paradox Valley	31.94	327	P	P	23 22 21.8	0.0
PV23	Carpenter Ridg	31.98	328	P	P	23 22 23.0	+0.8
PV23				IAmb	IAmb	23 22 24.9	
	comp=Z,8.9nm,0.8s						
ECSD	EROS Data Cent	31.99	348	P	P	23 22 22.2	+0.2
ECSD				IAmb	IAmb	23 22 23.2	
	comp=Z,4.6nm,0.7s						
ECSD					pP	23 22 40.3	-0.5
J56A	Wolcott	32.03	15	P	P	23 22 22.4	+0.2
PV21	Cone Mtn., Par	32.04	328	P	P	23 22 23.0	+0.3
PV21				IAmb	IAmb	23 22 24.9	
	comp=Z,10nm,1.2s						
J57A	Williamstown	32.38	16	P	P	23 22 25.9	+0.5
J57A				IAmb	IAmb	23 22 29.4	
	comp=Z,15nm,1.1s						
U15A	North Rim	32.43	321	P	P	23 22 27.6	+1.4
SAML	Samuel	32.45	130	P	P	23 22 25.3	-0.9
SAML				IAmb	IAmb	23 22 27.4	
	comp=Z,10nm,0.8s						
SADO	Sadowa	32.95	11	P	P	23 22 30.0	-0.3
	comp=Z,6.9nm,0.6s,baz=244,slow=6.2,SNR=14						
SADO				LR	LR	23 37 53.4	
	comp=Z,50nm,18.3s,baz=198,slow=40						
SADO	Sadowa	32.95	11	IAmb	IAmb	23 22 31.6	
	comp=Z,13nm,1.1s						
PKCU	Pink Cliffs	33.11	323	P	P	23 22 34.8	+2.6
PFO	Pinyon Flats O	33.52	313	LR	LR	23 38 00.6	
	comp=Z,71nm,18.8s,baz=86,slow=39						
SZCU	Shurtz Canyon	33.67	322	P	P	23 22 37.9	+0.9
MSU	Marysvale	33.76	324	P	P	23 22 38.5	+0.8
RDMU	Red Mountain	33.85	329	P	P	23 22 39.0	+0.5
LPAZ	La Paz	34.61	145	P	P	23 22 46.3	+0.6
	comp=Z,1.8nm,0.7s,baz=310,slow=9.8,SNR=5.0						
LPAZ				LR	LR	23 36 43.3	
	comp=Z,78nm,19.4s,baz=308,slow=36						
PSUT	Pine Spring	34.74	323	P	P	23 22 47.4	+1.2
JLU	Jordanelle	34.84	328	P	P	23 22 47.9	+0.9
DUG	Dugway, Tooele	35.27	326	IAmb	IAmb	23 22 53.8	
	comp=Z,4.6nm,0.9s						
EYMN	Ely	35.42	356	P	P	23 22 51.7	0.0
EYMN				IAmb	IAmb	23 23 09.6	
	comp=Z,8.8nm,0.9s						
PB12	IPOC Station P	35.42	151	P	P	23 22 52.3	+0.2
D53A	Lac Vacive, Po	35.45	12	P	P	23 22 51.6	-0.2
PDAR	Pinedale Array	35.54	332	P	P	23 22 54.1	+1.1
	comp=Z,2.0nm,0.5s,baz=131,slow=11,SNR=15						
PDAR				LR	LR	23 41 24.5	
	comp=Z,47nm,19.3s,baz=106,slow=43						
R11A	Troy Canyon, C	35.67	321	P	P	23 22 55.0	+0.9
G62A	West of Eustis	35.72	21	P	P	23 22 54.8	+0.5
AGMN	Agassiz Nation	36.27	351	P	P	23 22 58.8	-0.1
AGMN					pP	23 23 17.4	-0.6
PSGCX	Pisagua	36.37	151	P	P	23 23 00.5	+0.4
PSGCX				IAmb	IAmb	23 23 01.9	
	comp=Z,7.0nm,0.8s						
MDND	Maddock	36.55	347		pP	23 23 20.4	0.0
PB11	IPOC Station P	36.73	151	P	P	23 23 03.9	+0.6
GO01	Chusmiza	36.87	150	P	P	23 23 05.2	+0.4
ELK	Elko	37.00	324	P	P	23 23 06.6	+1.0
	comp=Z,0.7nm,0.3s,baz=121,slow=7.1,SNR=12						
IMW	Indian Meadow	37.05	332	IAmb	IAmb	23 23 08.8	
	comp=Z,13nm,1.4s						
F64A	Sherman	37.06	23	P	P	23 23 06.8	+1.1
FLWY	Flagg Ranch	37.09	332	IAmb	IAmb	23 23 08.2	
	comp=Z,7.6nm,0.7s						
NVAR	Mina Array Bea	37.42	319	P	P	23 23 10.2	+1.1
	comp=Z,2.1nm,0.8s,baz=129,slow=7.5,SNR=16						
NVAR				PcP	PcP	23 25 27.4	+1.1
	comp=Z,1.4nm,0.6s,baz=128,slow=3.5,SNR=8.2						
NVAR				ScP	ScP	23 29 08.3	+1.7
	comp=Z,1.2nm,0.7s,baz=133,slow=4.9,SNR=10						
NVAR				LR	LR	23 41 03.4	
	comp=Z,64nm,18.1s,baz=65,slow=40						
NVAR	Mina Array Bea	37.42	319	P	P	23 23 10.9	+1.8
NVAR					PcP	23 25 27.6	+1.3
NVAR					ScP	23 29 09.1	+2.4
E63A	Oxbow	37.51	22	P	P	23 23 10.1	+0.7
YHB	Horse Butte	37.83	332		pP	23 23 33.9	+2.4
PB01	IPOC Station P	37.91	152	P	P	23 23 14.3	+1.1
GCMT	Greycliff	37.99	335	P	P	23 23 14.8	+1.1
QLMT	Earthquake Lak	37.99	332	P	P	23 23 15.2	+1.3
ULM	Lac du Bonnet	38.17	352	P	P	23 23 13.8	-1.2
	comp=Z,3.8nm,0.5s,baz=172,slow=9.7,SNR=12						
ULM				ScP	ScP	23 29 08.9	+0.1
	comp=Z,1.1nm,0.5s,baz=188,slow=3.5,SNR=5.0						
ULM				LR	LR	23 39 43.3	
	comp=Z,60nm,20.7s,baz=165,slow=37						
ULM	Lac du Bonnet	38.17	352	IAmb	IAmb	23 23 14.3	
	comp=Z,5.6nm,0.6s						
ULM					pP	23 23 32.8	-1.4
PB07	IPOC Station P	38.32	153	IAmb	IAmb	23 23 18.6	
	comp=Z,11nm,0.9s						
DLMT	Dillon	38.93	332	IAmb	IAmb	23 23 24.0	
	comp=Z,8.8nm,0.8s						
LVC	Limon Verde	39.53	152	P	P	23 23 27.4	+0.3
	comp=Z,6.5nm,0.7s,baz=318,slow=7.7,SNR=7.0						
LVC	Limon Verde	39.53	152	P	P	23 23 28.0	+1.0
LVC				IAmb	IAmb	23 23 29.8	
	comp=Z,9.4nm,0.8s						
EGMT	Eagleton	39.84	337	P	P	23 23 29.9	+0.8
WVOR	Wild Horse Val	40.04	324	IAmb	IAmb	23 23 32.6	
	comp=Z,5.0nm,0.8s						
J08A	Circle Bar Ran	40.53	325	P	P	23 23 35.9	+1.0
J08A				IAmb	IAmb	23 23 54.8	
	comp=Z,10nm,1.4s						
PB14	IPOC Station P	40.65	155	P	P	23 23 36.7	+0.5
MSO	Missoula	40.66	332	IAmb	IAmb	23 23 37.2	
	comp=Z,9.9nm,1.1s						
GO02	Mina Guanaco	41.46	155	P	P	23 23 44.4	+1.5
JTMT	Jette	41.50	333	P	P	23 23 42.9	+0.1
F10A	Beach Ranch, E	41.61	329	IAmb	IAmb	23 23 44.6	
	comp=Z,5.9nm,0.8s						
PINE	Pine Mountain	42.20	324	P	P	23 23 49.7	+1.1
PINE				IAmb	IAmb	23 23 56.7	
	comp=Z,6.5nm,1.0s						
HAWA	Hanford	43.08	328	P	P	23 23 55.3	-0.2
NEW	Newport	43.17	331	P	P	23 23 55.7	-0.6
	comp=Z,1.9nm,0.5s,baz=138,slow=12,SNR=5.1						
D08A	Wollman Farm,	43.21	329	P	P	23 23 57.1	+0.6
D08A				IAmb	IAmb	23 23 57.6	
	comp=Z,9.0nm,0.6s						
E07A	Sunnyside	43.35	328	P	P	23 23 58.5	+0.8
C09A	Chrisman Ranch	43.40	330	IAmb	IAmb	23 24 00.1	
	comp=Z,6.9nm,0.5s						
H04A	Detroit Lake	43.46	324	P	P	23 23 59.6	+1.0
H04A				IAmb	IAmb	23 24 04.3	
	comp=Z,11nm,1.0s						
FFC	Flin Flon	43.53	348	P	P	23 23 58.8	-0.2
FFC				IAmb	IAmb	23 24 01.1	
	comp=Z,5.0nm,0.7s						
LTY	Liberty	44.23	328	P	P	23 24 05.1	+0.3
LTY				IAmb	IAmb	23 24 05.6	
	comp=Z,3.3nm,0.6s						
B08A	Colville Reser	44.30	330	P	P	23 24 04.9	-0.3
B08A				IAmb	IAmb	23 24 05.9	
	comp=Z,5.4nm,0.9s						
LON	Longmire	44.51	327	P	P	23 24 07.4	+0.4
SCHQ	Schefferville	45.27	17	P	P	23 24 11.7	-1.1
	comp=Z,12nm,0.7s,baz=216,slow=5.9,SNR=40						
SCHQ	Schefferville	45.27	17	P	P	23 24 12.0	-0.8
GO04	Tololo Observa	45.51	159	P	P	23 24 15.1	-0.2
LLLB	Lillooet	47.04	331	IAmb	IAmb	23 24 29.6	
	comp=Z,6.6nm,0.7s						
ROC1	El Roble	48.02	161	P	P	23 24 35.4	+0.6
BDFB	Brasilia	48.29	124	P	P	23 24 35.2	-1.8
	comp=Z,2.1nm,0.7s,baz=245,slow=12,SNR=3.4						
BDFB	Brasilia	48.29	124	IAmb	IAmb	23 24 37.6	
	comp=Z,7.1nm,1.4s						
CPUP	Villa Florida	48.68	143	P	P	23 24 38.6	-1.1
	comp=Z,5.3nm,0.6s,baz=325,slow=8.7,SNR=15						
CPUP	Villa Florida	48.68	143	IAmb	IAmb	23 24 39.5	
	comp=Z,5.6nm,0.8s						
GO05	Huala	49.63	163	P	P	23 24 47.4	+0.6
YKA	Yellowknife Ar	53.43	345	P	P	23 25 13.9	-1.0
	comp=Z,0.9nm,0.6s,baz=143,slow=7.4,SNR=16						
YKA				PcP	PcP	23 26 20.2	-0.8
	comp=Z,0.8nm,0.6s,baz=147,slow=4.7,SNR=6.4						
YKA				ScP	ScP	23 30 12.9	+1.2
	comp=Z,0.5nm,0.5s,baz=142,slow=4.9,SNR=8.4						
YKA				LR	LR	23 49 25.3	
	comp=Z,75nm,18.0s,baz=0.0,slow=38						
PLCA	Paso Flores	55.36	164	P	P	23 25 29.9	+0.7
	comp=Z,10nm,0.8s,baz=254,slow=7.5,SNR=17						
TAOE	Nuku Hiva Isla	56.22	250	*e*LR	LR	23 41 55.7	
	comp=Z,122nm,26.3s						
CTGM	Chitina Glacie	61.88	334	P	P	23 26 14.7	+0.4
CTGM				IAmb	IAmb	23 26 16.9	
	comp=Z,5.5nm,1.1s						
BARN	Barnard Glacie	62.06	334	P	P	23 26 16.8	+1.2
RES	Resolute Bay	62.25	358	IAmb	IAmb	23 26 34.9	
	comp=Z,2.8nm,0.8s						
INK	Inuvik	63.02	343	P	P	23 26 19.7	-1.9
	comp=Z,2.2nm,1.0s,baz=198,slow=6.3,SNR=3.3						
BCAR	Beaver Creek A	63.03	336	P	P	23 26 21.5	-0.3
BCAR					pP	23 26 41.4	-1.1
ILAR	Eielson Array	65.80	336	P	P	23 26 39.0	-0.8
	comp=Z,1.1nm,0.8s,baz=107,slow=5.6,SNR=13						
ILAR				LR	LR	23 58 13.6	
	comp=Z,37nm,19.4s,baz=113,slow=38						
ILAR	Eielson Array	65.80	336	P	P	23 26 38.6	-1.2
BMAR	Burnt Mountain	66.08	339	P	P	23 26 41.4	-0.2
RND	Reindeer	66.09	334	IAmb	IAmb	23 26 42.3	
	comp=Z,5.5nm,0.9s						
RND					pP	23 27 00.9	-1.7
TRF	Thorofare Moun	66.71	334	P	P	23 26 46.0	+0.1
TRF				IAmb	IAmb	23 27 03.5	
	comp=Z,8.9nm,1.4s						
BPAW	Bear Paw Mtn.	67.22	335	P	P	23 26 48.1	-0.8
PPT2	Papeete2	67.97	245	*e*LR	LR	23 47 30.2	
	comp=Z,116nm,27.0s						
TBI	Tubuai	70.10	239	*e*LR	LR	23 48 29.7	
	comp=Z,74nm,27.2s						
DBIC	Dimbokro	81.68	85	LR	LR	00 00 37.1	
	comp=Z,36nm,19.7s,baz=296,slow=33						
ARCES	ARCESS Array B	86.19	19	P	P	23 28 34.1	-1.5
	comp=Z,2.3nm,0.8s,baz=306,slow=3.2,SNR=1.0						
ARCES				LR	LR	00 05 47.4	
	comp=Z,38nm,19.5s,baz=186,slow=35						
PETK	Petropavlovsk-	94.14	327	LR	LR	00 14 07.0	
	comp=Z,26nm,18.1s,baz=61,slow=37						
MA2	Magadan	94.22	334	LR	LR	00 16 28.5	
	comp=Z,23nm,18.5s,baz=46,slow=38						
KSH	Kashi	126.03	16	PKP	PKPdf	23 34 54.0	-2.9
KSH				sPKP		23 35 31.0	
KSH				PP	PP	23 36 53.3	+3.4
KSH				SKS	SKSdf	23 41 54.3	-7.6
KSH				SKKS	SKKSac	23 43 34.5	-7.5
STKA	Stephens Creek	130.88	239	PKP	PKiKP	23 35 07.1	+0.1
	comp=Z,1.8nm,0.7s,baz=1.5,slow=4.2,SNR=5.9						
WRA	Warramunga Arr	139.00	254	PKhKP	PKPpre	23 35 13.8	
	comp=Z,0.8nm,0.8s,baz=99,slow=2.6,SNR=7.7						
WRA				PKP	PKPdf	23 35 22.5	+0.9
	comp=Z,2.6nm,0.7s,baz=90,slow=2.2,SNR=22						
ASAR	Alice Springs	139.02	248	PKhKP	PKPpre	23 35 12.8	
	comp=Z,0.4nm,0.5s,baz=108,slow=3.1,SNR=8.0						
ASAR				PKP	PKPdf	23 35 22.6	+1.0
	comp=Z,2.0nm,0.7s,baz=109,slow=2.7,SNR=4.9						
CMAR	Chiang Mai Arr	148.49	348	PKPbc	PKPbc	23 35 40.7	-1.1
	comp=Z,1.5nm,0.4s,baz=344,slow=3.4,SNR=8.8						

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*ANF **28** 23:16:24.2±1.0, 36°.14N×96°.97W, h0^{km}±7^{km}, ML3.7/7, Error ellipse: s-maj=7.6km s-min=4.3km az=11.0*

*TUL **28** 23:16:24.3±1.2, 36°.17N±0°.02×96°.98W±0°.04, h7^{km}±7^{km}, ML3.2, Error ellipse: s-maj=4.9km s-min=2.1km az=82.0*

*NEIC **28** 23:16:24.6±1.4, 36°.16N±0°.01×96°.99W±0°.04, h5^{km}±2^{km}, Error ellipse: s-maj=5.1km s-min=2.0km az=82.0*

*IDC **28** 23:17:19.1±2.3, 35°.66N×99°.36W, h0^{km}, mb3.1/1, mb1 3.5/4, mb1mx3.3/52, mbtmp3.1/4, ML3.7/3, Error ellipse: s-maj=34.0km s-min=17.9km az=92.0*

ISC 28 23:16:23.7±1.2**, 36°.17N**±0°.03×**97°.00W**±0°.02**, h3^{km}**±10^{km}**, n49, σ1^{s}.32**/57**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK005	Luther M Schoo	0.54	197	Pg	Pg	23 16 34.7	+0.8
OK005				Sg	Sg	23 16 42.3	+1.4
ADOK	Arcadia Dam	0.60	211	Pg	Pg	23 16 36.1	+1.0
ADOK				Sg	Sg	23 16 44.2	+1.4
OK001	Jones High Sch	0.65	202	Pg	Pg	23 16 36.4	+0.3
OKCFA	Oklahoma City	0.84	207	Pg	Pg	23 16 40.1	+0.4
OKCFA					Pb	23 16 41.4	+0.5
OKCSW	OKLAHOMA CITY	0.84	206	Pg	Pg	23 16 40.5	+0.8
OKCSW				Sg	Sb	23 16 52.0	-0.6
T35A	Sooner Cattle	0.84	27	Pg	Pg	23 16 40.4	+0.5
FNO	Franklin	0.96	200		Pb	23 16 43.3	+0.2
FNO				Sg	Sb	23 16 56.0	-0.2
TUL1	Leonard	1.01	104	Pg	Pg	23 16 43.2	+0.2
TUL1	Leonard	1.01	104	P	Pg	23 16 42.8	-0.2
	baz=286						
TUL1				S	Sg	23 16 56.3	+0.3
	baz=286						
W35A	Tecumseh	1.02	174	Pg	Pg	23 16 43.2	0.0
U32A	Winter Ranch,	1.64	278	Pn	Pn	23 16 54.1	+0.7
WMOK	Wichita Mounta	2.04	226	Pn	Pn	23 16 59.7	+0.8
WMOK	Wichita Mounta	2.04	226	P	Pn	23 16 59.8	+0.8
	baz=45						
WMOK				S	Sb	23 17 28.0	+0.8
	baz=45						
X37A	Clayton	2.06	139	Pn	Pn	23 17 00.2	+1.0
U38A	Gravette	2.12	82	Pn	Pn	23 17 01.2	+1.1
HHAR	Hobbs	2.47	86	Pn	Pn	23 17 05.4	+0.5
R32A	Long Quarter,	2.64	329	Pn	Pn	23 17 08.3	+1.2
W39A	Magazine	2.79	109	Pn	Pn	23 17 09.8	+0.6
W39A	Magazine	2.79	109	P	Pn	23 17 10.4	+1.2
	baz=292						
W39A				S	Sn	23 17 44.7	+1.4
	baz=292						
Z35A	Perchaven, San	2.84	184	Pn	Pn	23 17 10.4	+0.5
MIAR	Mount Ida	3.23	119	Pn	Pn	23 17 15.9	+0.6
MIAR	Mount Ida	3.23	119	P	Pn	23 17 16.4	+1.1
	baz=301						
MIAR				S	Sn	23 17 55.4	+1.2
	baz=301						
S39A	Bolivar	3.31	62	Pn	Pn	23 17 17.2	+0.7
Z38A	Mt. Pleasant	3.34	150	Pn	Pn	23 17 15.5	-1.2
U40A	Yellville	3.35	86	Pn	Pn	23 17 17.4	+0.4
CBKS	Cedar Bluff	3.43	321	Pn	Pn	23 17 18.7	+0.6
CBKS	Cedar Bluff	3.43	321	Pb	Pb	23 17 26.8	+1.7
	baz=140						
CBKS				Sb	Sg	23 18 11.8	-1.9
	baz=140						
X40A	Basin Creek Fa	3.79	115	Pn	Pn	23 17 24.2	+1.2
MGMO	Mountain Grove	3.92	74	Pn	Pn	23 17 25.5	+0.6
WHAR	Wooly Hollow	3.93	101	Pn	Pn	23 17 24.8	-0.1
FCAR	Ozark Folk Cen	3.96	93	Pn	Pn	23 17 25.2	-0.1
W41B	Gary Mavity, V	3.99	103	Pn	Pn	23 17 26.6	+0.9
W41B	Gary Mavity, V	3.99	103	Sb	Sg	23 18 28.5	-3.3
	baz=286						
AMTX	Amarillo	4.03	253	Pn	Pn	23 17 28.0	+1.6
AMTX	Amarillo	4.03	253	S	Sn	23 18 17.1	+2.9
	baz=70						
UALR	University of	4.04	109	Pn	Pn	23 17 27.5	+1.0
ABTX	Abilene, Hawle	4.16	213	Pn	Pn	23 17 28.1	0.0
WHTX	Lake Whitney,	4.18	185		Pg	23 17 41.7	-2.1
237A	Washetta, Mont	4.27	166	Pn	Pn	23 17 29.6	+0.1
R40A	Maddies Statio	4.33	59	Pn	Pn	23 17 30.9	+0.5
P38A	Dawn	4.41	37	Pn	Pn	23 17 32.5	+1.1
Z41A	Richland Creek	4.51	129	Pn	Pn	23 17 32.9	0.0
N33A	J Bar K, Exete	4.58	356	Pn	Pn	23 17 35.0	+1.1
JCT	Junction City	6.14	203	S	Sn	23 19 03.2	-2.9
	baz=22						
SCIA	State Center	6.44	26	P	Pn	23 18 00.6	+1.2
	baz=208						
SCIA				S	Sn	23 19 11.3	-2.2
	baz=208						
ANMO	Albuquerque	7.81	264	Pn	Pg	23 18 49.3	-4.0
	0.4nm,0.3s,baz=82,slow=16,SNR=8.3						
ANMO				Lg	Lg	23 20 25.9	
	0.7nm,0.3s,baz=4.9,slow=14,SNR=5.6						
TXAR	Lajitas Array	8.83	221	Pn	Pg	23 19 05.7	-7.1
	0.6nm,0.3s,baz=38,slow=15,SNR=10.0						
PDAR	Pinedale Array	11.73	308	Pn	Pn	23 19 53.5	+41
	0.1nm,0.3s,baz=130,slow=29,SNR=1.8						
YKA	Yellowknife Ar	28.54	343	P	P	23 23 17.1	+57
	0.1nm,0.7s,baz=156,slow=9.5,SNR=2.0						

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*IDC **28** 23:26:52.7±1.3, 44°.53N×105°.72W, h0^{km}, mb1 3.2/3, mb1mx3.0/57, mbtmp3.0/3, ML2.6/2, Error ellipse: s-maj=44.6km s-min=8.5km az=142.0*

*NEIC **28** 23:26:53.9±1.6, 44°.51N±0°.03×105°.38W±0°.07, h0^{km}±2^{km}, ML3.2/70, Error ellipse: s-maj=9.5km s-min=4.4km az=63.0*

ISC 28 23:26:52.6±0.9**, 44°.52N**±0°.05×**105°.40W**±0°.06**, h0^{km}, n82, σ1^{s}.29**/84**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	1.05	112	Pn	Pn	23 27 15.1	+0.2
K22A	Casper	2.04	204		Pn	23 27 28.9	+0.5
K22A				IAML		23 27 57.4	
	comp=E,189nm,0.4s						
K22A				IAML		23 27 58.4	
	comp=N,248nm,0.5s						
LAO	LASA Array	2.24	345	Pn	Pb	23 27 33.5	-0.6
LAO					Sn	23 27 49.7	-10
LAO				IAML		23 28 06.8	
	comp=N,160nm,1.1s						
LAO				IAML		23 28 11.6	
	comp=N,172nm,0.8s						
RLMT	Red Lodge	2.82	284	Pn	Pn	23 27 40.2	+1.0
RWWY	Rawlins	3.13	206		Pn	23 27 43.9	+0.5
RWWY				IAML		23 28 21.9	
	comp=N,108nm,0.8s						
RWWY				IAML		23 28 23.6	
	comp=N,62nm,1.8s						
PHWY	Pilot Hill	3.22	181		Pn	23 27 45.2	+0.5
PHWY				IAML		23 28 19.5	
	comp=N,82nm,0.5s						
GCMT	Greycliff	3.28	294	Pn	Pn	23 27 46.8	+1.4
YNE	Yellowstone No	3.32	280	Pn	Pn	23 27 46.2	+0.2
YMP	Mirror Lake Pl	3.41	275		Pn	23 27 48.2	+0.9
BW06	Boulder Array	3.49	241		Pn	23 27 49.4	+1.0
PD31	Pinedale Array	3.49	241		Pn	23 27 49.0	+0.6
PDAR	Pinedale Array	3.49	241	Pn	Pn	23 27 49.4	+0.9
	comp=N,2.4nm,0.3s,baz=71,slow=12,SNR=22						
PDAR				Pg	Pb	23 27 54.5	-1.0
	comp=N,6.4nm,0.3s,baz=63,slow=19,SNR=30						
PDAR				Lg	Lg	23 28 36.6	
	comp=N,6.2nm,0.3s,baz=59,slow=31,SNR=16						
PDAR	Pinedale Array	3.49	241		Pn	23 27 49.7	+1.3
LKWY	Lake	3.58	272		Pn	23 27 52.7	+3.1
LKWY				IAML		23 29 24.4	
	comp=N,38nm,4.2s						
LKWY				IAML		23 29 35.9	
	comp=N,32nm,1.7s						
N23A	Red Feather La	3.65	187	Pn	Pn	23 27 52.1	+1.5
N23A				IAML		23 28 32.6	
	comp=E,44nm,0.7s						
N23A				IAML		23 28 41.2	
	comp=N,55nm,0.6s						
H17A	Grant Village	3.71	270		Pn	23 27 53.3	+1.9
YNR	Norris Junctio	3.78	275		Pn	23 27 52.0	-0.3
FLWY	Flagg Ranch	3.83	265		Pn	23 27 54.3	+1.2
FLWY				IAML		23 29 03.4	
	comp=N,47nm,1.6s						
FLWY				IAML		23 29 15.0	
	comp=N,33nm,1.4s						
YPP	Pitchstone Pla	3.88	268		Pn	23 27 55.3	+1.5
E28A	Huff	3.89	56	Pn	Pn	23 27 55.5	+1.9
YHH	Holmes Hill	3.90	276		Pn	23 27 54.9	+0.8
YMR	Madison River	3.98	274		Pn	23 27 56.3	+1.2
SNOW	Snow King Moun	4.01	257		Pn	23 27 58.1	+2.6

SNOW				IAML		23 29 05.9	
	comp=N,32nm,1.4s						
SNOW				IAML		23 29 22.7	
	comp=N,30nm,3.2s						
IMW	**Indian Meadow**	**4.04**	**263**		**Pn**	**23 27 57.2**	**+1.3**
IMW				IAML		23 29 02.1	
	comp=N,24nm,0.6s						
IMW				IAML		23 29 02.4	
	comp=N,26nm,0.5s						
REDW	**Red Top Meadow**	**4.11**	**256**		**Pn**	**23 27 59.4**	**+2.6**
REDW				IAML		23 29 09.7	
	comp=N,34nm,1.2s						
REDW				IAML		23 29 19.0	
	comp=N,31nm,4.8s						
TPAW	**Teton Pass**	**4.14**	**258**		**Pn**	**23 27 59.1**	**+1.7**
TPAW				IAML		23 28 57.9	
	comp=N,23nm,3.0s						
YHL	**Hebgen Lake**	**4.14**	**277**		**Pn**	**23 27 59.5**	**+2.2**
YHB	**Horse Butte**	**4.15**	**275**		**Pn**	**23 27 57.4**	**0.0**
FXWY	**Fox Creek**	**4.15**	**260**		**Pn**	**23 27 59.1**	**+1.6**
QLMT	**Earthquake Lak**	**4.32**	**276**		**Pn**	**23 28 01.7**	**+2.0**
OGNE	**Ogallala**	**4.35**	**144**		**Pn**	**23 28 01.1**	**+1.1**
AHID	**Auburn Hatcher**	**4.50**	**249**		**Pn**	**23 28 02.3**	**+0.1**
AHID				IAML		23 29 19.1	
	comp=E,29nm,1.4s						
AHID				IAML		23 29 19.2	
	comp=N,27nm,1.2s						
SUSD	**Miller**	**4.61**	**89**	Pn	**Pn**	**23 28 05.0**	**+1.4**
EGMT	**Eagleton**	**4.63**	**321**		**Pn**	**23 28 05.4**	**+1.6**
ISCO	**Idaho Springs**	**4.72**	**182**	Pn	**Pn**	**23 28 05.1**	**-0.2**
ISCO				IAML		23 30 02.5	
	comp=N,12nm,3.2s						
O20A	**White River Ci**	**4.87**	**207**		**Pn**	**23 28 07.2**	**0.0**
RDMU	**Red Mountain**	**5.01**	**219**	Pn	**Pn**	**23 28 07.8**	**-1.5**
HRY	**Holter Researc**	**5.02**	**298**	Pn	**Pn**	**23 28 09.8**	**+0.6**
LRM	**Limekiln Ridge**	**5.16**	**287**	Pn	**Pn**	**23 28 12.0**	**+0.7**
DLMT	**Dillon**	**5.18**	**282**	Pn	**Pn**	**23 28 12.1**	**+0.6**
DLMT					**Pg**	**23 28 31.9**	**0.0**
DLMT				IAML		23 29 42.9	
	comp=N,21nm,4.2s						
DLMT				IAML		23 30 01.0	
	comp=N,22nm,4.7s						
MDND	**Maddock**	**5.22**	**48**	Pn	**Pn**	**23 28 12.8**	**+0.9**
MDND					**Pg**	**23 28 32.4**	**-0.2**
MCMT	**McKenzie Canyo**	**5.33**	**276**	Pn	**Pn**	**23 28 15.2**	**+1.6**
HWUT	**Hardware Ranch**	**5.38**	**239**		**Pn**	**23 28 14.3**	**0.0**
HWUT				IAML		23 29 49.1	
	comp=N,21nm,1.7s						
SMCO	**Snowmass**	**5.47**	**193**		**Pn**	**23 28 16.2**	**+0.5**
Q24A	**Divide**	**5.56**	**178**	Pn	**Pn**	**23 28 16.9**	**0.0**
TCUT	**Toone Canyon**	**5.58**	**235**		**Pn**	**23 28 17.2**	**+0.1**
KSCO	**Kaye Shedlock'**	**5.88**	**158**	Pn	**Pn**	**23 28 22.0**	**+0.9**
JLU	**Jordanelle**	**5.94**	**231**	Pn	**Pn**	**23 28 23.1**	**+1.0**
HVU	**Hansel Valley**	**6.05**	**246**	Pn	**Pn**	**23 28 23.3**	**-0.2**
PV22	**Blue Mesa, Par**	**6.50**	**204**	Pn	**Pn**	**23 28 31.2**	**+1.5**
PV21	**Cone Mtn., Par**	**6.53**	**205**	Pn	**Pn**	**23 28 31.6**	**+1.4**
PV07	**Paradox Valley**	**6.55**	**203**	Pn	**Pn**	**23 28 31.5**	**+1.1**
PV15	**Paradox Valley**	**6.59**	**202**	Pn	**Pn**	**23 28 33.1**	**+2.0**
PV23	**Carpenter Ridg**	**6.64**	**205**	Pn	**Pn**	**23 28 33.1**	**+1.3**
PV04	**Paradox Valley**	**6.67**	**204**	Pn	**Pn**	**23 28 33.2**	**+1.2**
BGU	**Big Grassy Mou**	**6.67**	**240**	Pn	**Pn**	**23 28 33.7**	**+1.7**
PV12	**Saucer Basin,**	**6.71**	**204**	Pn	**Pn**	**23 28 34.1**	**+1.5**
PV14	**Lion Creek, Pa**	**6.72**	**205**	Pn	**Pn**	**23 28 33.9**	**+1.1**
PV10	**Paradox Valley**	**6.72**	**205**	Pn	**Pn**	**23 28 35.0**	**+2.2**
PV20	**West Nyswonger**	**6.73**	**205**	Pn	**Pn**	**23 28 33.7**	**+0.8**
NLU	**North Lily Min**	**6.74**	**230**	Pn	**Pn**	**23 28 34.9**	**+1.9**
PV11	**David Mesa, Pa**	**6.74**	**204**	Pn	**Pn**	**23 28 34.6**	**+1.6**
PV16	**Nyswonger Mesa**	**6.75**	**204**		**Pn**	**23 28 34.6**	**+1.6**
PV19	**Morning Glory**	**6.77**	**205**	Pn	**Pn**	**23 28 34.3**	**+1.0**
PV03	**Paradox Valley**	**6.78**	**204**	Pn	**Pn**	**23 28 35.3**	**+1.7**
TMUT	**Trail Mountain**	**6.79**	**222**	Pn	**Pn**	**23 28 34.8**	**+1.1**
PV17	**East Wray Mesa**	**6.79**	**204**	Pn	**Pn**	**23 28 35.6**	**+2.0**
PV02	**Paradox Valley**	**6.79**	**203**	Pn	**Pn**	**23 28 35.1**	**+1.4**
PV18	**Skein Mesa, Pa**	**6.80**	**204**	Pn	**Pn**	**23 28 35.0**	**+1.1**
PV01	**Paradox Valley**	**6.81**	**202**	Pn	**Pn**	**23 28 35.3**	**+1.3**
PV13	**Radium Mtn., P**	**6.86**	**203**	Pn	**Pn**	**23 28 34.8**	**+0.2**
JTMT	**Jette**	**6.96**	**301**	Pn	**Pn**	**23 28 38.0**	**+2.0**
DUG	**Dugway, Tooele**	**6.99**	**234**	Pn	**Pn**	**23 28 37.2**	**+0.8**
PV05	**Paradox Valley**	**7.01**	**205**	Pn	**Pn**	**23 28 36.2**	**-0.6**
L34A	**Svendsen Farm,**	**7.06**	**108**	Pn	**Pn**	**23 28 38.2**	**+1.0**
Q16A	**Castle Valley**	**7.07**	**220**	Pn	**Pn**	**23 28 38.4**	**+0.8**
CBKS	**Cedar Bluff**	**7.10**	**141**	Pn	**Pn**	**23 28 37.8**	**0.0**
WALA	**Waterton Lakes**	**7.40**	**311**	Pn	**Pn**	**23 28 41.6**	**-0.4**
MSU	**Marysvale**	**7.87**	**223**	Pn	**Pn**	**23 28 49.0**	**+0.5**
I10CA	**LAC DU BONNET**	**8.52**	**45**	*i*		00 19 10.0	
	baz=224,slow=328,SNR=2.8						
ULM	**Lac du Bonnet**	**8.63**	**45**	Pn	**Pn**	**23 28 59.2**	**+0.6**
	comp=N,0.4nm,0.3s,baz=229,slow=10,SNR=5.8						
ULM				Pg	Pg	23 29 30.1	-7.7
	comp=N,0.3nm,0.3s,baz=209,slow=16,SNR=1.9						
ULM				Lg	Lg	23 31 25.2	
	comp=N,0.4nm,0.3s,baz=137,slow=14,SNR=4.1						
YKA	**Yellowknife Ar**	**18.78**	**347**	P	**P**	**23 31 11.7**	**-1.4**
	comp=N,0.1nm,0.3s,baz=168,slow=13,SNR=2.7						

PDG ***28*** *23:28:20.7±0.3, 38°.12N×20°.30E, h18^{km}, ML3.8/12, Error ellipse: s-maj=0.9km s-min=0.9km az=0.0*

IDC ***28*** *23:28:20.7±1.4, 38°.35N×20°.39E, h0^{km}, mb3.7/7, mb1 3.6/14, mb1mx3.4/60, mbtmp3.5/14, ML3.3/7, MS3.6/1, Ms1 3.6/1, ms1mx2.5/52, Error ellipse: s-maj=23.0km s-min=17.8km az=29.0*

ATH ***28*** *23:28:21.9, 38°.15N×20°.41E, h14^{km}, ML3.3/21, Error ellipse: s-maj=1.8km s-min=0.8km az=237.0*

THE ***28*** *23:28:22.6, 38°.17N×20°.43E, h12^{km}, ML3.8/8, Error ellipse: s-maj=0.8km s-min=0.4km az=234.0*

ISC 28 23:28:22.0±0.7**, 38°.20N**±0°.03×**20°.43E**±0°.03**, h16**^{km}±3^{km}**, n135,** σ1^{s}**42**/174**, mb3.7**/7**, 6C-2D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LXRA	**Lixouri, Kepha**	**0.01**	**79**	P	**Pg**	**23 28 24.7**	**-0.1**
LXRA				S	**Sg**	**23 28 26.5**	**-0.2**
LXR1	**Lixouri, Cepha**	**0.01**	**77**	P	**Pg**	**23 28 24.8**	**0.0**
LXR1				S	**Sg**	**23 28 26.5**	**-0.2**
CHV1	**Chavriata, Kef**	**0.04**	**247**	P	**Pg**	**23 28 24.7**	**-0.2**
CHV1				S	**Sg**	**23 28 26.3**	**-0.5**
ARGA	**Argostoli. Kep**	**0.05**	**118**	P	**Pg**	**23 28 24.7**	**-0.3**
ARGA				S	**Sg**	**23 28 26.3**	**-0.5**
ARG2	**Argostoli**	**0.05**	**113**	P	**Pg**	**23 28 24.8**	**-0.2**
ARG2				S	**Sg**	**23 28 26.1**	**-0.8**
KEF2	**Argostoli. Kep**	**0.06**	**125**	P	**Pg**	**23 28 24.7**	**-0.3**
KEF2				S	**Sg**	**23 28 26.4**	**-0.7**
KEF4	**Livadi, Kephal**	**0.06**	**358**	P	**Pg**	**23 28 25.3**	**+0.2**
KEF4				S	**Sg**	**23 28 27.4**	**+0.3**
AGT1	**Agia Thekli**	**0.06**	**327**	P	**Pg**	**23 28 25.2**	**+0.1**
AGT1				S	**Sg**	**23 28 27.3**	**+0.2**
	189µm,0.2s						
KEF3	**Kipouria, Keph**	**0.06**	**274**	P	**Pg**	**23 28 25.0**	**-0.1**
KEF3				S	**Sg**	**23 28 26.9**	**-0.2**
KEF1	**Kardakata, Kep**	**0.09**	**24**	P	**Pg**	**23 28 25.5**	**+0.2**
KEF1				S	**Sg**	**23 28 27.6**	**+0.2**
VLS	**Valsamata**	**0.13**	**99**	P	**Pg**	**23 28 25.7**	**-0.1**
VLS				S	**Sg**	**23 28 28.1**	**-0.2**
	48µm,0.2s						
VLS	**Valsamata**	**0.13**	**99**	P	**Pg**	**23 28 25.7**	**-0.1**
VLS				S	**Sg**	**23 28 27.7**	**-0.6**
VLS				AML	AML	23 28 28.3	
VLS				AML	AML	23 28 28.4	
	comp=N,75657µm,0.2s						
VSK1	**VASILIKIADES**	**0.24**	**27**	P	**Pb**	**23 28 28.0**	**+0.1**
VSK1				S	**Sb**	**23 28 32.4**	**+0.5**
	comp=N,48µm,0.3s						
KONA	**Konidatara, Ke**	**0.25**	**27**	P	**Pb**	**23 28 28.4**	**+0.1**
KONA				S	**Sb**	**23 28 32.9**	**+0.5**
KONA				AML	AML	23 28 33.2	
	comp=E,43528µm,0.2s						
KONA				AML	AML	23 28 33.4	
	comp=N,87324µm,0.4s						
KFL	**Anninata**	**0.30**	**107**	P	**Pg**	**23 28 28.5**	**+0.1**
KFL				S	**Sg**	**23 28 32.5**	**-0.2**
	comp=N,19µm,0.4s						
KFL	**Anninata**	**0.30**	**107**	P	**Pg**	**23 28 28.4**	**0.0**
KFL				S	**Sg**	**23 28 32.6**	**-0.1**
KFL				AML	AML	23 28 36.0	
	comp=N,29341µm,0.4s						
KFL				AML	AML	23 28 38.2	
	comp=E,45433µm,0.3s						
EVGI	**Lefkada island**	**0.46**	**23**	P	**Pb**	**23 28 31.9**	**+0.1**
EVGI				S	**Sb**	**23 28 39.2**	**+0.9**
EVGI	**Lefkada island**	**0.46**	**23**	P	**Pb**	**23 28 31.8**	**+0.1**
EVGI				S	**Sn**	**23 28 39.6**	**-2.2**
MGNA	**Meganis**	**0.54**	**32**	P	**Pb**	**23 28 33.1**	**0.0**
MGNA				S	**Sn**	**23 28 42.1**	**-1.7**
MGNA				AML	AML	23 28 42.7	
	comp=E,6518µm,0.3s						
MGNA				AML	AML	23 28 44.8	
	comp=N,7135µm,0.2s						
LKD2	**Lefkada island**	**0.62**	**17**	P	**Pb**	**23 28 34.5**	**0.0**
LKD2				S	**Sb**	**23 28 43.4**	**+0.5**
	comp=N,3µm,0.4s						
LKD2	**Lefkada island**	**0.62**	**17**	P	**Pb**	**23 28 34.5**	**0.0**
LKD2				S	**Sb**	**23 28 43.4**	**+0.5**
LKD2				AML	AML	23 28 50.4	
	comp=N,4875µm,0.4s						
LKD2				AML	AML	23 28 53.8	
	comp=E,3657µm,0.4s						
AST1	**Astakos**	**0.62**	**56**	P	**Pb**	**23 28 34.6**	**+0.1**
AST1				S	**Sn**	**23 28 44.2**	**-1.6**
	comp=E,10µm,0.3s						
TSLK	**Tsoukalades, L**	**0.65**	**16**	P	**Pb**	**23 28 35.0**	**0.0**
TSLK	**Tsoukalades, L**	**0.65**	**16**	P	**Pb**	**23 28 35.3**	**+0.3**
TSLK				AML	AML	23 28 52.8	
	comp=E,7803µm,0.7s						
TSLK				AML	AML	23 28 53.3	
	comp=N,9140µm,0.5s						
VTN	**Vitineika**	**0.66**	**115**	P	**Pg**	**23 28 35.2**	**+0.2**
PDO	**Prodromos**	**0.72**	**56**	P	**Pb**	**23 28 36.4**	**+0.3**
PDO				S	**Sn**	**23 28 47.0**	**-1.1**
	comp=N,8µm,0.4s						
PDO	**Prodromos**	**0.72**	**56**	P	**Pb**	**23 28 36.4**	**+0.3**
PDO				AML	AML	23 28 52.9	
	comp=E,10038µm,0.4s						
PDO				AML	AML	23 28 56.5	
	comp=N,10858µm,0.4s						
RLS	**Riolos of Patr**	**0.83**	**99**	P	**Pg**	**23 28 37.8**	**-0.4**
RLS	**Riolos of Patr**	**0.83**	**99**	P	**Pg**	**23 28 37.8**	**-0.4**
RLS				AML	AML	23 28 55.7	
	comp=E,2108µm,0.6s						
RLS				AML	AML	23 29 00.8	
	comp=N,2638µm,0.4s						
PVO	**Paravola**	**0.96**	**64**	P	**Pn**	**23 28 41.1**	**+0.3**
PVO				S	**Sn**	**23 28 55.0**	**+0.9**
	comp=N,7µm,0.3s						
PVO	**Paravola**	**0.96**	**64**	P	**Pn**	**23 28 41.1**	**+0.3**
PVO				AML	AML	23 28 57.8	
	comp=E,19808µm,0.3s						
PVO				AML	AML	23 28 57.8	
	comp=N,9791µm,0.3s						
DRO	**Drossia**	**1.04**	**103**	P	**Pg**	**23 28 42.0**	**-0.2**
DRO	**Drossia**	**1.04**	**103**	P	**Pg**	**23 28 42.1**	**-0.1**
DRO				AML	AML	23 29 04.0	
	comp=E,4421µm,0.6s						
DRO				AML	AML	23 29 09.3	
	comp=N,3299µm,0.4s						
EFP	**Efpalio**	**1.19**	**78**	P	**Pn**	**23 28 44.1**	**+0.2**
EFP	**Efpalio**	**1.19**	**78**	P	**Pn**	**23 28 44.2**	**+0.2**
EFP				AML	AML	23 29 09.5	
	comp=E,3777µm,0.5s						
EFP				AML	AML	23 29 09.8	
	comp=N,3595µm,0.6s						
AMT	**Artemida-Makis**	**1.21**	**123**	P	**Pn**	**23 28 45.0**	**+0.7**
AMT				AML	AML	23 29 14.2	
	comp=N,2068µm,0.4s						
AMT				AML	AML	23 29 20.1	
	comp=E,3306µm,0.7s						
LAKA	**Lakka**	**1.22**	**88**	P	**Pg**	**23 28 45.1**	**-0.5**
LAKA				AML	AML	23 29 13.6	
	comp=N,1544µm,0.6s						
LAKA				AML	AML	23 29 17.0	
	comp=E,1836µm,0.7s						
EVR	**Evrytania**	**1.30**	**56**	P	**Pg**	**23 28 46.7**	**-0.4**
EVR	**Evrytania**	**1.30**	**56**	P	**Pg**	**23 28 46.5**	**-0.6**
EVR				AML	AML	23 29 14.9	
	comp=N,1361µm,0.7s						
EVR				AML	AML	23 29 15.3	
	comp=E,1610µm,0.7s						
TRIZ	**Trizonia**	**1.31**	**82**	P	**Pg**	**23 28 46.3**	**-0.9**
TRIZ	**Trizonia**	**1.31**	**82**	P	**Pb**	**23 28 46.2**	**0.0**
IGT	**Igoumenitsa**	**1.33**	**357**	P	**Pg**	**23 28 47.5**	**-0.3**
IGT	**Igoumenitsa**	**1.33**	**357**	P	**Pg**	**23 28 47.5**	**-0.3**
IGT				AML	AML	23 29 11.3	
	comp=N,1178µm,0.4s						
IGT				AML	AML	23 29 15.1	
	comp=E,1881µm,0.3s						
KALE	**Kalithea**	**1.36**	**81**	P	**Pb**	**23 28 47.0**	**-0.2**
KALE	**Kalithea**	**1.36**	**81**	P	**Pb**	**23 28 47.3**	**+0.1**
KALE				AML	AML	23 29 12.8	
	comp=N,1895µm,0.5s						
KALE				AML	AML	23 29 16.1	
	comp=E,1420µm,0.8s						
JAN	**Janina**	**1.49**	**13**	P	**Pg**	**23 28 51.6**	**+0.9**
JAN				AML	AML	23 29 16.8	
	comp=N,1495µm,0.3s						
JAN				AML	AML	23 29 18.7	
	comp=E,1660µm,0.5s						
MAKR	**Makrakomi, Fth**	**1.56**	**58**	P	**Pg**	**23 28 51.7**	**-0.4**
ITM	**Ithomi**	**1.56**	**130**	P	**Pb**	**23 28 50.7**	**+0.1**
KEK	**Kerkira**	**1.59**	**342**	P	**Pb**	**23 28 51.1**	**+0.1**
KEK				AML	AML	23 29 25.2	
	comp=N,736µm,0.5s						
KEK				AML	AML	23 29 27.4	
	comp=E,995µm,0.5s						
KASA	**Kassiopi**	**1.59**	**346**	P	**Pb**	**23 28 51.6**	**+0.6**
DSF	**Desfina**	**1.67**	**82**	P	**Pb**	**23 28 52.3**	**0.0**
DSF				AML	AML	23 29 30.4	
	comp=N,890µm,0.5s						
DSF				AML	AML	23 29 31.3	
	comp=E,693µm,0.5s						
PYL	**PYLOS**	**1.67**	**141**	P	**Pn**	**23 28 51.7**	**+1.1**
AGG	**Agios Georgios**	**1.70**	**61**	P	**Pg**	**23 28 55.1**	**+0.3**
MEV	**Metsovon**	**1.70**	**21**	P	**Pg**	**23 28 54.8**	**0.0**
THL	**Klokotos Trika**	**1.84**	**42**	P	**Pg**	**23 28 57.0**	**-0.4**
KPRO	**Kipourio**	**1.90**	**22**	P	**Pg**	**23 28 57.5**	**-1.0**
PROD	**Prodromos**	**1.95**	**87**	P	**Pb**	**23 28 57.7**	**+0.5**
PROD				AML	AML	23 29 33.7	
	comp=N,1163µm,0.7s						
PROD				AML	AML	23 29 34.8	
	comp=E,892µm,0.8s						
LTK	**Loutraki**	**2.01**	**94**	P	**Pb**	**23 28 57.6**	**-0.6**
LKR	**Lokris**	**2.07**	**77**	P	**Pb**	**23 28 59.2**	**0.0**
VIL2	**Platees**	**2.24**	**89**	P	**Pb**	**23 29 01.8**	**-0.2**
NEST	**Nestorio**	**2.27**	**12**	P	**Pb**	**23 29 02.7**	**+0.1**
DID	**Didima**	**2.33**	**106**	P	**Pb**	**23 29 02.0**	**-1.6**
KZN	**Kozani**	**2.35**	**26**	P	**Pb**	**23 29 03.6**	**-0.5**
KZN				AML	AML	23 29 38.3	
	comp=N,208µm,0.5s						
KZN				AML	AML	23 29 45.2	
	comp=E,594µm,0.6s						
NEO	**Neokhori**	**2.45**	**62**	P	**Pb**	**23 29 04.3**	**-1.4**
XOR	**Xorichti**	**2.46**	**61**	P	**Pb**	**23 29 04.5**	**-1.3**
VLI	**Veliai**	**2.48**	**126**	P	**Pb**	**23 29 05.2**	**-1.1**
MRKA	**Markates**	**2.53**	**77**	P	**Pb**	**23 29 05.0**	**-2.1**
VLY	**Voula,Athens**	**2.68**	**96**	P	**Pn**	**23 29 06.4**	**+1.9**
FNA	**Florina**	**2.68**	**16**	P	**Pb**	**23 29 07.4**	**-2.3**
PTL	**Penteli**	**2.71**	**92**	P	**Pn**	**23 29 07.4**	**+2.4**
AOS	**Alonnisos**	**2.87**	**69**	P	**Pn**	**23 29 09.8**	**+2.7**
OHR	**Ohrid**	**2.92**	**6**	*i* Pn	**Pb**	**23 29 11.8**	**-2.0**
TIP	**Timpagrande**	**3.03**	**290**	⇓P	**Pn**	**23 29 10.3**	**+0.9**
GRG	**Griva**	**3.15**	**28**	P	**Pn**	**23 29 13.8**	**+2.8**
TIR	**Tirane**	**3.17**	**352**	⇑P	**Pn**	**23 29 13.7**	**+2.5**
VAY	**Valandovo**	**3.53**	**27**	*i* Pn	**Pn**	**23 29 18.8**	**+2.7**
MATE	**Matera**	**3.78**	**311**	⇑P	**Pn**	**23 29 21.5**	**+2.0**
SG1	**Sgolgore (BA)**	**3.92**	**313**	*e*Pn	**Pn**	**23 29 23.5**	**+2.0**
SG1				Sn	**Sn**	**23 30 06.9**	**-0.3**
BAI	**Bari**	**3.99**	**318**	*e*Pn	**Pn**	**23 29 24.6**	**+2.1**
BAI				Sn	**Sn**	**23 30 09.7**	**+0.8**
DRME	**Dracevica, Mon**	**4.10**	**347**	*e*Pn	**Pn**	**23 29 25.0**	**+1.1**
APE	**Apeiranthos**	**4.21**	**104**	⇑P	**Pb**	**23 29 31.2**	**-4.4**
PDG	**Podgorica**	**4.32**	**348**	⇓P	**Pn**	**23 29 28.3**	**+1.3**
PDG	**Podgorica**	**4.32**	**348**	*e*Pn	**Pn**	**23 29 27.2**	**+0.2**
HCY	**Herceg Novi**	**4.49**	**341**	*e*Pn	**Pn**	**23 29 29.1**	**-0.3**
IDI	**Anoyia**	**4.61**	**128**	Pn	**Pn**	**23 29 34.0**	**+2.8**
	comp=E,0.7nm,0.3s,baz=320,slow=12,SNR=10						
IDI				Sn	**Sn**	**23 30 27.8**	**+3.4**
	comp=E,2.0nm,0.3s,baz=116,slow=21,SNR=2.0						
TREB	**Trebinje**	**4.78**	**341**	*e*Pn	**Pn**	**23 29 33.6**	**+0.2**
DBRK	**Dubrovnik**	**4.79**	**339**	*i* Pn	**Pn**	**23 29 33.7**	**+0.1**
DBRK				Sn	**Sn**	**23 30 28.0**	**-0.7**
VAE	**Valguarnera**	**4.82**	**263**	Pn	**Pn**	**23 29 36.0**	**+2.1**
	comp=E,1.0nm,0.3s,baz=47,slow=21,SNR=2.0						
VAE				Sn	**Sn**	**23 30 28.5**	**-0.9**
	comp=E,1.2nm,0.3s,baz=3.5,slow=20,SNR=1.8						
VTS	**Vitosha**	**4.91**	**25**	⇑P	**Pn**	**23 29 37.5**	**+2.2**
STON	**Ston**	**5.11**	**337**	*e*Pn	**Pn**	**23 29 37.9**	**+0.1**
STON				Sn	**Sn**	**23 30 35.4**	**-1.0**
STON	**Ston**	**5.11**	**337**	*e*Pn	**Pn**	**23 29 38.1**	**+0.3**
UPM	**Unac-Piva**	**5.13**	**347**	*e*Pn	**Pn**	**23 29 40.7**	**+2.4**
RUDO	**Rudo**	**5.47**	**352**	*e*Pn	**Pn**	**23 29 43.1**	**+0.2**
BLKB	**Belogradchik**	**5.68**	**17**	⇑P	**Pn**	**23 29 49.2**	**+3.5**
MAKA	**Makarska**	**5.70**	**334**	*e*Pn	**Pn**	**23 29 46.6**	**+0.6**
MAKA				Sn	**Sn**	**23 30 47.8**	**-3.3**
BBLS	**Lazići**	**5.71**	**353**	*e*Pn	**Pn**	**23 29 47.5**	**+1.3**
RICI	**Ricice**	**5.85**	**336**	*i* Pn	**Pn**	**23 29 48.5**	**+0.4**
RICI				Sn	**Sn**	**23 30 54.2**	**-0.5**
DIVS	**Divibare**	**5.90**	**357**	*e*Pn	**Pn**	**23 29 49.7**	**+0.8**
HAPS	**Han Pijesak,Bl**	**5.99**	**350**	*e*Pn	**Pn**	**23 29 49.5**	**-0.5**
ZIRJ	**Zirje**	**6.54**	**328**	*e*Pn	**Pn**	**23 29 57.6**	**0.0**
ZIRJ				Sn	**Sn**	**23 31 08.6**	**-3.1**
MORI	**Morici**	**6.69**	**329**	*i* Pn	**Pn**	**23 30 00.6**	**+1.0**
MORI				Sn	**Sn**	**23 31 13.5**	**-1.9**
MGRS	**Mrkonjic Grad**	**6.70**	**339**	*e*Pn	**Pn**	**23 30 01.4**	**+1.6**
FRGS	**Fruska Gora**	**6.97**	**356**	*e*Pn	Pn	23 29 56.2	-7.2
BLY	**Banja Luka**	**6.98**	**341**	⇑P	**Pn**	**23 30 03.5**	**0.0**
BLY	**Banja Luka**	**6.98**	**341**	*e*Pn	**Pn**	**23 30 05.2**	**+1.6**
DUGI	**Dugi Otok**	**7.07**	**327**	*e*Pn	**Pn**	**23 30 05.2**	**+0.5**
DUGI				Sn	**Sn**	**23 31 23.2**	**-1.4**
NVLJ	**Novalja**	**7.61**	**328**	*e*Pn	**Pn**	**23 30 12.9**	**+0.8**
MORH	**Mrgy, Hungar**	**8.12**	**351**	*e*Pn	**Pn**	**23 30 18.9**	**-0.2**
MLR	**Muntele Rosu**	**8.37**	**28**	Pn	**Pn**	**23 30 23.3**	**+0.6**
	comp=E,0.2nm,0.3s,baz=289,slow=16,SNR=1.7						
RIY	**Rijeka**	**8.39**	**330**	*e*Pn	**Pn**	**23 30 24.0**	**+1.1**
CRES	**Cresnjev**	**8.47**	**336**	*e*Pn	**Pn**	**23 30 24.3**	**+0.3**
CEY	**Cerknica**	**8.76**	**331**	*e*Pn	**Pn**	**23 30 28.7**	**+0.7**
LJU	**Ljubljana**	**8.98**	**333**	*e*Pn	**Pn**	**23 30 32.4**	**+1.4**
KEST	**Kesra**	**9.20**	**258**	Pn	**Pn**	**23 30 35.4**	**+1.2**
	comp=E,0.2nm,0.3s,baz=29,slow=7.3,SNR=4.1						
SOKA	**Soboth**	**9.36**	**337**	*e*Pn	**Pn**	**23 30 36.5**	**+0.2**
	comp=E,3.2nm,0.5s,SNR=8.1						
SOKA				*e*Sn	**Sn**	**23 32 16.4**	**-4.9**
	comp=E,0.7nm,0.3s						
OBKA	**Obir**	**9.37**	**334**	*i* Pn	**Pn**	**23 30 37.8**	**+1.4**
	comp=E,2.5nm,0.3s						
OBKA				*e*Sn	**Sn**	**23 32 18.6**	**-2.9**
	comp=E,4.0nm,0.5s						
ABTA	**Abfaltersbach**	**10.35**	**328**	*e*Pn	**Pn**	**23 30 50.8**	**+1.1**
	comp=E,0.7nm,0.3s						
ABTA				*e*Sn	**Sn**	**23 32 42.1**	**-3.2**
	comp=E,9.2nm,0.8s						
BRTR	**Keskin Array B**	**10.40**	**77**	Pn	**Pn**	**23 30 55.3**	**+4.7**
	comp=E,0.1nm,0.3s,baz=158,slow=30,SNR=1.4						
MOA	**Molln**	**10.64**	**337**	*e*Pn	**Pn**	**23 30 55.4**	**+1.6**
	comp=E,1.9nm,0.2s,SNR=5.3						
WTTA	**Wattenberg**	**11.12**	**327**	*e*Pn	**Pn**	**23 31 01.5**	**+1.1**
	comp=E,1.4nm,0.4s						
WTTA				*e*Sn	**Sn**	**23 33 01.8**	**-2.7**
	comp=E,2.7nm,0.5s						
WATA	**Walderalm**	**11.20**	**327**	*e*Pn	**Pn**	**23 31 03.6**	**+2.0**
	comp=E,0.7nm,0.2s						
WATA				*e*Sn	**Sn**	**23 33 03.5**	**-2.9**
	comp=E,3.1nm,0.5s						
FETA	**Feichten**	**11.34**	**324**	*e*Sn	**Sn**	**23 33 08.6**	**-1.2**
	comp=E,1.8nm,0.5s						
DAVOX	**Davos/Dischmat**	**11.57**	**321**	Pn	**Pn**	**23 31 08.4**	**+1.7**
	comp=E,0.1nm,0.3s,baz=137,slow=19,SNR=1.8						
DAVOX				Sn	**Sn**	**23 33 10.4**	**-5.2**
	comp=E,0.2nm,0.3s,baz=311,slow=18,SNR=2.3						
GERES	**GERESS Array B**	**11.70**	**338**	Pn	**Pn**	**23 31 06.7**	**-1.6**
	comp=E,0.2nm,0.3s,baz=156,slow=13,SNR=5.3						
MMAI	**Mount Meron Ar**	**13.23**	**108**	Pn	**Pn**	**23 31 27.8**	**-1.5**
	comp=E,0.2nm,0.3s,baz=304,slow=15,SNR=1.9						
AKASG	**Malin Array Be**	**13.97**	**24**	Pn	**Pn**	**23 31 39.1**	**-0.1**
	comp=E,0.4nm,0.3s,baz=211,slow=10.0,SNR=1.9						
HFS	**Hagfors**	**22.37**	**351**	P	**P**	**23 33 18.2**	**-1.0**
	comp=E,1.5nm,0.5s,baz=154,slow=12,SNR=18						
FINES	**FINESS Array B**	**23.54**	**7**	P	**P**	**23 33 30.3**	**-0.9**
	comp=E,0.8nm,0.4s,baz=172,slow=9.6,SNR=12						
NB2	**NORSAR Subarra**	**23.58**	**349**	P	**P**	**23 33 32.6**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=156,slow=9.3						
NOA	**NORSAR Array B**	**23.58**	**349**	P	**P**	**23 33 32.2**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=150,slow=9.8,SNR=7.8						
KIRV	**Kirov**	**27.68**	**33**	LR	LR	23 46 50.1	
	comp=Z,107nm,18.3s,baz=55,slow=40						
ARCES	**ARCESS Array B**	**31.52**	**3**	P	**P**	**23 34 42.9**	**0.0**
	comp=Z,1.8nm,0.9s,baz=190,slow=11,SNR=5.3						
KURBB	**Kurchatov Arra**	**42.28**	**54**	P	**P**	**23 36 14.4**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=276,slow=6.0,SNR=2.6						
MKAR	**Makanchi Array**	**45.35**	**58**	P	**P**	**23 36 39.5**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=270,slow=7.8,SNR=9.3						
ZALV	**Zalesovo Beam**	**45.73**	**48**	P	**P**	**23 36 42.5**	**+0.3**
	comp=Z,1.5nm,0.4s,baz=274,slow=8.3,SNR=7.9						

ATA ***28*** *23:46:20.7±2.1, 38°.83N×43°.47E, h15^{km}±22^{km}, ML2.6, MW3.6*

ISK ***28*** *23:46:20.1, 38°.80N×43°.57E, h5^{km}, ML3.1/15*

DDA ***28*** *23:46:21.5, 38°.82N×43°.55E, h10^{km}±1^{km}, ML2.9*

ISC 28 23:46:21.1±1.0**, 38°.81N**±0°.02×**43°.54E**±0°.03**, h7**^{km}±9^{km}**, n45,** σ0^{s}**97**/63**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VMUR	**Van-Muradiye**	**0.18**	**7**	*i* P	**Pg**	**23 46 24.9**	**+0.1**
VMUR				*i* S	**Sg**	**23 46 27.8**	**+0.6**
VMUR				IAML		23 46 29.0	
	comp=N,10µm,0.5s						
VANB	**Van**	**0.25**	**209**	PG	**Pb**	**23 46 27.2**	**-0.8**
VANB				SG	**Sb**	**23 46 33.0**	**+0.3**
TVAN	**Van**	**0.30**	**201**	*e*P	**Pg**	**23 46 27.4**	**+0.3**
TVAN				*e*S	**Sb**	**23 46 33.9**	**-0.5**
TVAN				IAML		23 46 38.1	
	comp=Z,2µm,1.3s						
CLDR	**Caldiran**	**0.44**	**41**	PG	**Pg**	**23 46 29.4**	**-0.3**
CLDR				SG	**Sb**	**23 46 37.3**	**-0.9**
CLDR	**Caldiran**	**0.44**	**41**	*i* P	**Pg**	**23 46 29.2**	**-0.5**
CLDR				*i* S	**Sg**	**23 46 36.0**	**+0.6**
CLDR				IAML		23 46 39.0	
	comp=E,518nm,0.4s						
GEVA	**Gevas**	**0.63**	**217**	*e*P	**Pg**	**23 46 32.5**	**-0.8**
GEVA				*e*S	**Sb**	**23 46 43.3**	**-0.3**
GEVA				IAML		23 46 47.4	
	comp=Z,313nm,0.5s						
GEVA	**Gevas**	**0.63**	**217**	*i* P	**Pg**	**23 46 32.8**	**-0.4**
GEVA				*i* S	**Sb**	**23 46 43.5**	**-0.1**
GEVA				IAML		23 46 49.0	
	comp=E,432nm,0.9s						
AKDM	**Akdamar-Van**	**0.66**	**222**	PG	**Pg**	**23 46 33.8**	**+0.1**
AKDM				SG	**Sb**	**23 46 44.3**	**-0.1**
DYDN	**Diyadin**	**0.74**	**9**	*e*P	**Pg**	**23 46 35.4**	**+0.1**
DYDN				*e*S	**Sb**	**23 46 46.8**	**0.0**
DYDN				IAML		23 47 05.3	
	comp=Z,174nm,0.5s						
DYDN	**Diyadin**	**0.74**	**9**	*i* P	**Pg**	**23 46 35.0**	**-0.3**
AGRB	**Hanur-Agry**	**0.87**	**331**	PG	**Pg**	**23 46 37.8**	**-0.1**
AGRB				SG	**Sb**	**23 46 51.2**	**+0.5**
IGDI	**IGDIR**	**1.13**	**21**	*e*P	**Pg**	**23 46 42.2**	**-0.6**
IGDI				*e*S	**Sn**	**23 47 00.1**	**+0.8**
IGDI				IAML		23 47 10.1	
	comp=Z,15nm,0.8s						
IGDI	**IGDIR**	**1.13**	**21**	*i* P	**Pg**	**23 46 42.5**	**-0.3**
BLIS	**Bitlis-Merkez**	**1.19**	**251**	*e*P	**Pb**	**23 46 42.7**	**-1.4**
BLIS				*e*S	**Sb**	**23 46 59.7**	**0.0**
BLIS				IAML		23 47 01.7	
	comp=Z,307nm,0.6s						
BLIS	**Bitlis-Merkez**	**1.19**	**251**	*i* P	**Pb**	**23 46 42.9**	**-1.2**
BLIS				*i* S	**Sg**	**23 46 58.9**	**-0.4**
BLIS				IAML		23 47 01.0	
	comp=N,636nm,1.0s						
TASB	**TASBURUN-IGDIR**	**1.29**	**25**	PN	**Pg**	**23 46 46.0**	**+0.2**
TASB				SN	**Sn**	**23 47 05.3**	**+2.2**
EATA	**Eleskirt**	**1.33**	**322**	*e*P	**Pb**	**23 46 46.4**	**-0.2**
EATA				*e*S	**Sg**	**23 47 03.7**	**0.0**
EATA				IAML		23 47 07.8	
	comp=Z,20nm,0.5s						
YOVA	**Hakkari_Yksek**	**1.36**	**154**	*i* P	**Pg**	**23 46 47.3**	**+0.1**
SRTM	**Siirt_Merkez**	**1.52**	**238**	*i* P	**Pg**	**23 46 49.9**	**-0.3**
SRTM				*i* S	**Sg**	**23 47 11.9**	**+2.1**
SRTM				IAML		23 47 17.0	
	comp=N,346nm,0.6s						
CUKT	**Cukurca**	**1.56**	**178**	PN	**Pn**	**23 46 49.1**	**-0.4**
SIRT	**Sirnak**	**1.57**	**214**	PN	**Pb**	**23 46 50.3**	**-0.3**
SIRN	**Sırnak**	**1.59**	**214**	*i* P	**Pb**	**23 46 51.0**	**+0.1**
MUSM	**Mu-Merkez**	**1.59**	**267**	*e*P	**Pn**	**23 46 49.2**	**-0.6**
MUSM				*e*S	**Sg**	**23 47 14.6**	**+2.4**
MUSM				IAML		23 47 15.0	
	comp=Z,37nm,0.6s						
MUSM	**Mu-Merkez**	**1.59**	**267**	*i* P	**Pn**	**23 46 49.3**	**-0.6**
GNI	**Garni**	**1.62**	**34**	PN	**Pb**	**23 46 50.8**	**-0.7**
VRTB	**Varto-Mus**	**1.66**	**283**	PN	**Pb**	**23 46 51.8**	**-0.4**
VRTB	**Varto-Mus**	**1.66**	**283**	*i* P	**Pg**	**23 46 52.5**	**-0.5**

KOPR	Koprukoy-ERZUR	1.76	312	PN	Pb	23 46 53.7	-0.1
HOMI	Horasan	1.77	315	eP	Pb	23 46 53.6	-0.4
KARS	Kars	1.85	349	PN	Pb	23 46 54.3	-1.0
EAK	Akyaka	1.87	1	eP	Pg	23 46 56.3	-0.6
EAK	Akyaka	1.87	1	iP	Pg	23 46 59.2	+2.2
BNGL	BINGOL	1.87	275	eP	Pn	23 46 51.0	-2.8
SVAN	Silvan-Diyarba	1.96	251	PN	Pb	23 46 55.9	-1.2
SVAN	Silvan-Diyarba	1.96	251	iP	Pb	23 46 56.5	-0.5
SVAN				iS	Sb	23 47 21.8	+0.1
SVAN				IAML		23 47 26.0	
	comp=N,73nm,0.8s						
SENK	Senkaya-Erzuru	1.97	333	PN	Pb	23 46 56.5	-1.0
AKDA	Akdag	2.12	308	eP	Pb	23 47 00.5	+0.5
AKDA				IAML		23 47 14.6	
	comp=Z,54nm,0.5s						
AKDA	Akdag	2.12	308	iP	Pg	23 47 00.8	-1.0
BNGB	Bingl	2.24	275	PN	Pb	23 47 00.6	-1.4
YEDI	Yedisu-Bingol	2.41	286	PN	Pb	23 47 02.8	-2.2
KRIK	Erzurum-spir	2.53	308	eP	Pg	23 47 09.9	+0.3
KRIK	Erzurum-spir	2.53	308	iP	Pg	23 47 11.0	+1.4
DBAD	Bademkaya	2.62	328	iP	Pg	23 47 11.4	+0.1
MAZI	Mazidag	2.79	242	PN	Pn	23 47 07.6	+1.3
DGRG	David-gareji	2.98	27	iP	Pb	23 47 13.6	-1.0

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*IDC **28** 23:48:17.9±2.1, 5°.68S×102°.08E, h0^{km}, mb3.7/8, mb1 3.9/9, mb1mx3.7/41, mbtmp3.8/9, ML3.9/1, MS3.1/2, Ms1 3.1/2, ms1mx2.5/56, Error ellipse: s-maj=84.6km s-min=17.2km az=53.0*

*NEIC **28** 23:48:21.9±1.9, 5°.50S±0°.07×102°.33E±0°.09, h22^{km}±7^{km}, mb4.0/8, Error ellipse: s-maj=13.6km s-min=9.6km az=76.0*

*DJA **28** 23:48:23.9±0.6, 5°S±4°×10°3E±°, h26^{km}±7^{km}, M4.3/9, mB5.4/1, mb4.4/3, MLv4.3/9, Mw(mB)4.8/1*

ISC 28 23:48:24.0±0.8**, 5°.45S**±0°.07×**102°.40E**±0°.08**, h34**^{km}**, n43, σ1^{s}.62**/40**, mb3.9**/13**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNAI	Manna	1.21	27	P	Pn	23 48 43.7	-0.9
MNAI				S	Sn	23 48 58.8	-1.0
MNAI	Manna	1.21	27	Pn	Pn	23 48 44.4	-0.2
MNAI				Sn	Sn	23 48 59.4	-0.4
LWLI	Liwa	1.70	76	P	Pn	23 48 48.6	-2.8
KSI	Kapahiang	1.79	6	P	Pn	23 48 53.5	+0.9
MDSI	Maura Dua	2.01	62	P	Pn	23 48 54.6	-0.9
MDSI				S	Sn	23 49 17.2	-2.3
KRJI	Kerinci	3.46	344	P	Pb	23 49 21.0	-3.7
PPSI	Pulau Pagai	3.58	318	P	Pn	23 49 19.7	+2.6
CNJI	Cibinong	5.05	112	P	Pn	23 49 36.7	-0.7
SISI	Saibi	5.26	321	P	Pn	23 49 42.5	+2.2
	0.1nm24nm,1.2s						
LEM	Lembang	5.36	105	Pn	Pn	23 49 43.8	+1.9
	3.5nm,0.3s,baz=345,slow=23,SNR=4.0						
LEM				LR	LR	23 51 47.8	
	comp=Z,72nm,20.9s,baz=210,slow=37						
CISI	Cisompet, Garu	5.77	112	P	Pn	23 49 47.2	-0.2
	0.3nm3µm50nm,0.6s						
CISI	Cisompet, Garu	5.77	112		Pn	23 49 46.7	-0.7
XMIS	Christmas Isla	5.95	147	Pn	Pn	23 49 45.6	-4.2
GSI	Gunungsitoli	8.26	324	Pn	Pn	23 50 21.2	-0.3
UGM	Wanagama	8.43	107	Pn	Pn	23 50 24.3	+0.4
JAGI	Jajag, Banyuwa	12.04	105	Pn	Pn	23 51 12.1	-1.3
BKB	Balikpapan	15.05	74	Pn	Pn	23 51 56.3	+2.0
MBWA	Marble Bar	22.94	135	P	P	23 53 29.6	+4.1
CMAR	Chiang Mai Arr	24.00	352	P	P	23 53 36.9	+1.2
	0.5nm,0.4s,baz=184,slow=8.1,SNR=1.6						
CMAR	Chiang Mai Arr	24.00	352	P	P	23 53 36.2	+0.4
FITZ	Fitzroy Crossi	25.95	121	P	P	23 53 53.6	+0.1
	0.7nm,0.5s,baz=153,slow=10,SNR=1.5						
FITZ	Fitzroy Crossi	25.95	121	P	P	23 53 51.7	-1.8
MTN	Manton Dam	29.28	107	P	P	23 54 24.4	+1.0
MTN				IAmb	IAmb	23 54 41.1	
	comp=Z,3.1nm,0.9s						
H08S2	Diego Garcia H	29.79	264	T	T	00 25 35.2	
	baz=88,slow=76,SNR=15						
H08S3	Diego Garcia H	29.80	264	T	T	00 25 32.7	
	baz=88,slow=76,SNR=38						
H08S1	Diego Carcia H	29.81	264	T	T	00 25 30.5	
	baz=88,slow=76,SNR=10						
H01W3	Cape Leeuwin H	31.24	161	T	T	00 27 21.4	
	SNR=2.9						
H01W2	Cape Leeuwin H	31.25	161	T	T	00 27 22.6	
H01W1	Cape Leeuwin H	31.25	161	T	T	00 27 22.6	
WB0	Warramunga Arr	34.22	117	P	P	23 55 06.4	-0.4
WB0				IAmb	IAmb	23 55 21.9	
	comp=Z,2.3nm,1.0s						
WRA	Warramunga Arr	34.23	118	P	P	23 55 06.1	-0.8
	comp=Z,0.4nm,0.5s,baz=296,slow=9.5,SNR=4.7						
WR0	Warramunga Arr	34.41	118	P	P	23 55 08.0	-0.5
ASAR	Alice Springs	35.32	124	P	P	23 55 15.9	-0.5
	comp=Z,0.5nm,0.5s,baz=304,slow=8.6,SNR=9.5						
BBOO	Buckleboo	41.52	135	P	P	23 56 09.2	+0.9
BBOO				IAmb	IAmb	23 56 15.9	
	comp=Z,3.6nm,1.1s						
STKA	Stephens Creek	45.09	131	P	P	23 56 37.4	+0.3
	comp=Z,2.0nm,0.4s,baz=312,slow=8.9,SNR=5.0						
SONM	Songino Array	53.17	3	P	P	23 57 39.1	+0.3
	comp=Z,0.6nm,0.7s,baz=183,slow=10,SNR=6.6						
MK31	Makanchi Array	54.98	343	P	P	23 57 51.8	-0.2
MK31				IAmb	IAmb	23 58 06.4	
	comp=Z,1.2nm,0.9s						
MKAR	Makanchi Array	54.98	343	P	P	23 57 51.6	-0.3
	comp=Z,0.3nm,0.4s,baz=153,slow=9.0,SNR=7.1						
MKAR				LR	LR	00 23 27.8	
	comp=Z,41nm,19.1s,baz=348,slow=38						
ZAA0	Zalesovo Array	60.99	348	P	P	23 58 34.4	+0.5
ZAA0				IAmb	IAmb	23 58 47.6	
	comp=Z,3.8nm,1.1s						
ZALV	Zalesovo Beam	60.99	348	P	P	23 58 33.3	-0.5
	comp=Z,0.6nm,0.5s,baz=163,slow=10,SNR=2.0						
PDAR	Pinedale Array	133.29	32	PKP	PKPdf	00 07 36.8	-0.3
	comp=Z,0.1nm,0.4s,baz=143,slow=25,SNR=1.5						
TXAR	Lajitas Array	145.77	43	PKPbc	PKPab	00 08 01.1	+0.3
	comp=Z,1.4nm,0.6s,baz=287,slow=0.9,SNR=15						
TXAR	Lajitas Array	145.77	43		PKPab	00 08 00.9	+0.1

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*GII **29** 00:01:51.0±0.0, 35°.75N×27°.47E, h10^{km}*

*NIC **29** 00:01:53.0±0.0, 35°.66N×27°.56E, h10^{km}±2^{km}, Ml3.9/5*

*ATH **29** 00:01:53.0, 35°.80N×27°.42E, h24^{km}±1^{km}, ML3.2/8, Error ellipse: s-maj=2.8km s-min=1.0km az=144.0*

*ISK **29** 00:01:53.2, 35°.76N×27°.46E, h14^{km}, ML3.5/17*

*THE **29** 00:01:53.6, 35°.79N×27°.47E, h1^{km}, ML3.2/13, Error ellipse: s-maj=1.3km s-min=0.5km az=127.0*

*DDA **29** 00:01:55.9, 35°.93N×27°.31E, h14^{km}±2^{km}, MW3.6*

ISC 29 00:01:53.1±1.0**, 35°.75N**±0°.02×**27°.50E**±0°.02**, h20**^{km}±3^{km}**, n119, σ1^{s}.22**/157**, 7C-1D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	0.34	233	P	Pb	00 02 00.2	-0.2
KARP				S	Sb	00 02 05.8	+0.3
	28µm,0.3s						
KARP	Karpathos	0.34	233	P	Pb	00 02 00.1	-0.2
KARP				S	Sb	00 02 05.9	+0.5
KARP				AML	AML	00 02 06.3	
	comp=N,47018µm,0.2s						
KARP				AML	AML	00 02 06.5	
	comp=E,63634µm,0.4s						
KARP	Karpathos	0.34	233	PG	Pb	00 02 00.4	-0.1
KARP				SG	Sb	00 02 05.6	+0.1
KARP	Karpathos	0.34	233	⇑P	Pb	00 02 00.3	-0.2
KARP				S	Sb	00 02 05.6	+0.1
KARP				AML	AML	00 02 05.9	
	comp=E,47nm,0.2s						
KARP				AML	AML	00 02 05.9	
	comp=E,47nm,0.2s						
KARP				AML	AML	00 02 06.1	
	comp=E,64nm,0.4s						
KARP				AML	AML	00 02 06.1	
	comp=E,64nm,0.4s						
ARG	Arkhangelos	0.69	48	P	Pb	00 02 06.7	+0.3
ARG				S	Sn	00 02 17.4	-0.3
	comp=E,2µm,0.3s						
ARG	Arkhangelos	0.69	48	P	Pb	00 02 06.7	+0.3
ARG				S	Sn	00 02 17.5	-0.3
ARG				AML	AML	00 02 18.1	
	comp=N,3183µm,0.3s						
ARG				AML	AML	00 02 19.4	
	comp=E,5229µm,0.3s						
ARG	Arkhangelos	0.69	48	PG	Pb	00 02 06.8	+0.3
ARG				SG	Sn	00 02 17.5	-0.3
ARG	Arkhangelos	0.69	48	⇑P	Pb	00 02 06.5	0.0
ARG				S	Sn	00 02 17.6	-0.1
DAT	Datca	0.98	4	PG	Pn	00 02 12.0	+0.2
DAT				SG	Sn	00 02 26.2	+1.2
DATC	Datca-Mugla	1.01	7	PG	Pn	00 02 12.9	+0.8
DATC				SG	Sn	00 02 27.7	+1.9
KOSK	Kos Island	1.08	337	P	Pb	00 02 13.9	+0.8
KOSK				S	Sn	00 02 28.1	+0.7
	comp=E,570nm,0.5s						
KOSK	Kos Island	1.08	337	PG	Pb	00 02 14.2	+1.1
MRSB	Marmaris-Mugla	1.11	30	PN	Pb	00 02 14.9	+1.2
ZKR	Zakros	1.22	239	P	Pb	00 02 16.0	+0.4
ZKR				S	Sn	00 02 34.0	+3.0
	comp=E,2µm,0.6s						
ZKR	Zakros	1.22	239	P	Pb	00 02 15.9	+0.4
ZKR				S	Sn	00 02 32.5	+1.5
ZKR				AML	AML	00 02 37.0	
	comp=N,1890µm,0.5s						
ZKR				AML	AML	00 02 38.2	
	comp=E,4620µm,0.7s						
ZKR	Zakros	1.22	239	PN	Pb	00 02 16.2	+0.6
ZKR				SN	Sn	00 02 32.9	+1.9
ZKR	Zakros	1.22	239	⇑P	Pb	00 02 15.9	+0.3
ZKR				S	Sn	00 02 33.6	+2.6
ZKR				AML	AML	00 02 37.5	
	comp=E,4.6nm,0.7s						
ZKR				AML	AML	00 02 37.5	
	comp=E,4.6nm,0.7s						
STIA	Sitia Lasithi	1.27	245	P	Pb	00 02 16.9	+0.5
STIA				S	Sb	00 02 35.4	+3.1
BDRM	Kayabasi	1.31	358	iP	Sb	00 02 36.2	+2.7
BDRM				iS	Sb	00 02 37.4	+3.9
BODT	Bodrum	1.31	353	PN	Pb	00 02 17.8	+0.7
DALY	Dalyan (Mula)	1.41	41	PN	Pb	00 02 19.6	+0.8
TURN	Turunc	1.43	38	PN	Pn	00 02 15.4	-2.5
TURN				SN	Sn	00 02 32.8	-3.2
TURN	Turunc	1.43	38	iP	Pn	00 02 15.2	-2.7
TURN				iS	Sn	00 02 30.4	-5.7
TURN				IAML		00 02 39.0	
	comp=N,638nm,0.5s						
YER	Yerkesik	1.52	24	PN	Pb	00 02 20.6	0.0
FETY	Fethiye	1.56	55	PN	Pb	00 02 22.3	+1.1
NPS	Neapolis	1.61	253	P	Pb	00 02 21.5	-0.7
NPS				S	Sb	00 02 42.9	+0.8
	comp=N,660nm,0.4s						
NPS	Neapolis	1.61	253	P	Pn	00 02 21.3	+0.9
NPS				S	Sb	00 02 42.6	+0.5
NPS				AML	AML	00 02 48.2	
	comp=N,1163µm,0.4s						
NPS				AML	AML	00 02 51.4	
	comp=E,1553µm,0.3s						
FRMA	Ierapetra Chan	1.62	243	P	Pn	00 02 21.1	+0.6
FRMA				S	Sn	00 02 41.2	+0.5
	comp=E,432nm,0.5s						
AMGA	Amorgos Island	1.69	310	P	Pn	00 02 21.8	+0.4
AMGA				S	Sb	00 02 44.6	+0.4
	comp=E,612nm,0.4s						
AMGA	Amorgos Island	1.69	310	P	Pn	00 02 21.6	+0.2
AMGA				AML	AML	00 02 50.6	
	comp=E,1266µm,0.4s						
AMGA				AML	AML	00 02 52.7	
	comp=N,1119µm,0.6s						
KSL	Kastellorizon	1.74	76	P	Pb	00 02 24.4	+0.1
KSL	Kastellorizon	1.74	76	P	Pb	00 02 24.5	+0.2
KSL				AML	AML	00 03 02.2	
	comp=N,511µm,0.9s						
KSL				AML	AML	00 03 03.5	
	comp=E,424µm,0.7s						
KSL	Kastellorizon	1.74	76	⇑P	Pb	00 02 23.9	-0.4
KSL				S	Sb	00 02 47.1	+1.4
LAST	Lasithi	1.75	251	P	Pb	00 02 23.7	-0.9
LAST				S	Sb	00 02 46.9	+0.8
	comp=E,435nm,0.4s						
LAST	Lasithi	1.75	251	P	Pb	00 02 23.7	-0.9
LAST				AML	AML	00 02 50.5	
	comp=E,783µm,0.4s						
LAST				AML	AML	00 02 52.6	
	comp=N,963µm,0.4s						
SANT	Santorini	1.76	291	P	Pn	00 02 23.3	+0.8
SANT				S	Sb	00 02 46.0	-0.5
	comp=N,308nm,0.3s						
SANT	Santorini	1.76	291	P	Pn	00 02 23.1	+0.6
SANT	Santorini	1.76	291	iP	Pn	00 02 23.2	+0.8
AKAS	Kas	1.77	74	PN	Pb	00 02 24.3	-0.7
AKAS	Kas	1.77	74	iP	Pb	00 02 24.7	-0.3
AKAS				IAML		00 02 57.0	
	comp=N,128nm,0.5s						
SAP2K	Karterados	1.79	292	P	Pn	00 02 23.6	+0.8
THT1	Athinios (Pele	1.79	291	P	Pn	00 02 23.5	+0.7
THR7	Fira-Santorini	1.80	292	P	Pn	00 02 24.0	+0.9
THR7	Fira-Santorini	1.80	292	P	Pn	00 02 24.0	+0.9
THR6	Thira Island,	1.81	290	P	Pn	00 02 24.0	+1.0
THR6	Thira Island,	1.81	290	P	Pn	00 02 23.9	+0.9
SAP1	Santorini-Akro	1.81	290	P	Pn	00 02 23.9	+0.8
THR2	Thira island,	1.81	293	P	Pn	00 02 23.9	+0.9
STAX	Taxiarchis Har	1.81	291	P	Pn	00 02 23.7	+0.6
THT2	Imerovigli	1.81	293	PN	Pn	00 02 24.1	+0.9
THR3	Thira Island,	1.82	292	P	Pn	00 02 23.9	+0.7
THR3	Thira Island,	1.82	292	P	Pn	00 02 23.8	+0.6
CMBO	Columbo, Santo	1.84	294	P	Pn	00 02 24.3	+0.8
CMBO				S	Sb	00 02 47.4	-1.2
	comp=N,1µm,0.6s						
CMBO	Columbo, Santo	1.84	294	P	Pn	00 02 24.3	+0.8
AYDN	Tasoluk	1.93	9	iP	Pb	00 02 26.4	-1.2
GCAM	G?zelcaml?	1.96	354	PN	Pb	00 02 27.1	-0.9
GCAM	G?zelcaml?	1.96	354	iP	Pb	00 02 26.9	-1.1
HRKL	Herakleio	2.00	258	P	Pn	00 02 27.0	+1.3
HRKL				S	Sb	00 02 52.7	-0.6
	comp=N,842nm,0.6s						
HRKL	Herakleio	2.00	258	PN	Pn	00 02 27.1	+1.3
SMG	Samos	2.02	345	P	Pn	00 02 26.9	+0.8
IOSP	Ios island	2.03	299	P	Pn	00 02 26.8	+0.7
IOSP	Ios island	2.03	299	P	Pn	00 02 26.9	+0.7
TAVA	DENIZLI_Tavas	2.05	33	iP	Pb	00 02 29.8	0.0
APE	Apeiranthos	2.06	310	P	Pn	00 02 27.1	+0.5
APE	Apeiranthos	2.06	310	P	Pn	00 02 27.3	+0.7
APE				AML	AML	00 02 53.3	
	comp=N,300µm,0.4s						
APE				AML	AML	00 02 54.3	
	comp=E,210µm,0.2s						
APE	Apeiranthos	2.06	310	PN	Pn	00 02 27.3	+0.7
APE	Apeiranthos	2.06	310	iP	Pn	00 02 26.9	+0.3
APE				iS	Sn	00 02 50.2	-1.4
IDI	Anoyia	2.18	258	P	Pn	00 02 29.0	+0.8
IDI				S	Sb	00 02 57.1	-1.3
	comp=E,200nm,0.5s						
IDI	Anoyia	2.18	258	P	Pn	00 02 29.3	+1.1
IDI	Anoyia	2.18	258	PN	Pn	00 02 29.4	+1.2
ELL	Elmali	2.19	62	PN	Pb	00 02 31.4	-0.7
AYDB	Zeytinkoy-Aydi	2.21	8	PN	Pn	00 02 29.8	+1.0
SIVA	Sivas	2.31	252	P	Pb	00 02 32.5	-1.7
DGB	zmir	2.35	348	iP	Pn	00 02 30.7	+0.2
AKUM	Antalya-Kumluc	2.38	75	iP	Pb	00 02 34.1	-1.1
KORT	Korkueli	2.62	61	iP	Pb	00 02 39.1	-0.3
KORT				iS	Sb	00 03 10.4	-0.7
KORT				IAML		00 03 36.0	
	comp=N,78nm,0.7s						
VAM	Vamos	2.71	264	P	Pn	00 02 36.4	+0.9
VAM				S	Sn	00 03 09.8	+2.1
	comp=N,172nm,0.6s						
VAM	Vamos	2.71	264	P	Pn	00 02 36.0	+0.5
SERI	Serifos	2.81	301	P	Pn	00 02 38.0	+1.2
SERI				S	Sn	00 03 11.3	+1.2
SERI	Serifos	2.81	301	P	Pn	00 02 38.0	+1.2
BRDR	BURDUR-Merkez	2.83	46	iP	Pb	00 02 40.6	-2.4
MANT	Manisa	2.86	17	iP	Pn	00 02 37.8	+0.1
MANT				iS	Sn	00 03 12.9	+1.2
CHOS	Chios island	2.87	337	P	Pn	00 02 38.6	+0.9
IMMV	Iera Moni Meta	2.88	265	P	Pn	00 02 38.8	+0.9
IMMV	Iera Moni Meta	2.88	265	PN	Pn	00 02 39.7	+1.9
GVD	Gavdhos	2.94	253	PN	Pb	00 02 42.9	-1.8
KHAL	Karahalli	3.06	31	iP	Pn	00 02 42.2	+1.8
USAK	Uak-Merkez	3.19	22	iP	Pn	00 02 43.4	+1.2
KARY	Karystos	3.35	314	P	Pn	00 02 45.9	+1.6
ATHU	Athens Univers	3.71	308	P	Pn	00 02 51.0	+1.8
VLI	Veliai	3.81	286	P	Pn	00 02 52.2	+1.6
DID	Didima	3.85	298	P	Pn	00 02 53.0	+1.8
GAZI	Gazipasa	3.94	82	iP	Pn	00 02 54.3	+1.9
AKMS	Akamas	4.02	99	P	Pn	00 02 54.4	+0.9
AKMS				AML	AML	00 03 42.3	
	comp=N,0.4nm,0.3s						
AKMS				AML	AML	00 03 43.4	
	comp=N,0.5nm,0.4s						
ALFC	Alefka	4.21	97	⇑P	Pn	00 02 56.9	+0.8
ALFC				AML	AML	00 03 50.7	
	comp=N,0.4nm,0.5s						
ALFC				AML	AML	00 03 51.0	
	comp=N,0.4nm,0.5s						
NATA	Nata	4.26	102	P	Pn	00 02 57.8	+1.0
MRKA	Markates	4.29	315	P	Pn	00 02 59.1	+1.8
SZAC	Souni	4.52	101	⇓P	Pn	00 03 01.1	+0.7
SZAC				AML	AML	00 04 00.5	
	comp=N,0.4nm,0.4s						
SZAC				AML	AML	00 04 01.5	
	comp=N,0.3nm,0.4s						
ASGA	Asgata	4.80	100	P	Pn	00 03 04.7	+0.4
CSS	Mathiatis	4.83	98	Pn	Pn	00 03 05.2	+0.5
CSS	Mathiatis	4.83	98	⇑P	Pn	00 03 05.6	+0.9
MVOU	Mavrovouni	5.07	97	⇑P	Pn	00 03 08.5	+0.6
MMA0B	Mount Meron ar	7.08	110	Pn	Pn	00 03 34.9	-0.7
SLTI	Sal'it	7.18	117	Pn	Pn	00 03 36.9	0.0
GEM	Giv'at Ha'Em	7.20	108	Pn	Pn	00 03 37.3	+0.1
KSDI	Kefar Szold	7.21	108	Pn	Pn	00 03 36.8	-0.5
NATI	Neve Ativ	7.24	108	Pn	Pn	00 03 37.1	-0.6
NATI				Sn	Sn	00 04 58.4	-0.9
AMAZ	Amatzia	7.48	122	Pn	Pn	00 03 41.1	0.0
HMDT	Nahal Hemdat	7.52	115	Pn	Pn	00 03 41.9	+0.3
HMDT				Sn	Sn	00 05 06.2	-0.1
KZIT	Kziot	7.53	128	Pn	Pn	00 03 41.5	-0.2
YTIR	Yattir	7.72	122	Pn	Pn	00 03 44.3	-0.1
YTIR				Sn	Sn	00 05 10.3	-1.0
DSI	Dead Sea	7.78	120	Pn	Pn	00 03 45.2	0.0
GHAJ	Ghor Haditha	8.06	121	Pn	Pn	00 03 49.3	+0.3
ZFRI	Zfri	8.27	127	Pn	Pn	00 03 52.0	+0.2
KRMI	Paran Flat	8.27	131	Pn	Pn	00 03 51.2	-0.8
PRNI	Paran	8.29	128	Pn	Pn	00 03 51.9	-0.2
HRFI	Mount Harif	8.52	130	Pn	Pn	00 03 55.2	-0.2
HRFI				Sn	Sn	00 05 29.4	-1.6
MBRI	Mt Berech	8.62	132	Pn	Pn	00 03 56.9	+0.2
EIL	Elat	8.73	132	Pn	Pn	00 03 57.8	-0.4

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*IDC **29** 00:07:13.7±0.8, 19°.59S×70°.71W, h0^{km}, mb4.1/10, mb1 4.2/14, mb1mx4.0/31, mbtmp4.1/14, ML3.7/4, MS3.5/8, Ms1 3.5/8, ms1mx3.3/24, Error ellipse: s-maj=26.7km s-min=13.7km az=60.0*

*GUC **29** 00:07:16.9±0.8, 19°.67S×70°.79W, h40^{km}±1^{km}, ML4.3*

*NEIC **29** 00:07:16.6±1.8, 19°.72S±0°.03×70°.84W±0°.03, h24^{km}±4^{km}, mb4.4/16, Mwr4.2/43, Error ellipse: s-maj=6.1km s-min=2.1km az=221.0*

*NEIC **29** 00:07:16.6, 19°.72S×70°.84W, h26^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.01; $M_{\theta\theta}$-0.74; $M_{\phi\phi}$-1.27; $M_{r\theta}$1.47; $M_{\theta\phi}$1.21; $M_{\phi r}$-1.22; Fault plane solution: $M_0$2.86000×10^{15} NP1:ϕ_s330.61000°, δ24.86000°, λ105.88000°. NP2:ϕ_s133.20000°, δ66.15000°, λ82.77000°. Principal axes: T 2.7665, Plg68.0000°, Azm29.0000°; N 0.1863, Plg7.0000°, Azm136.0000°; P -2.9528, Plg21.0000°, Azm229.0000°;*

*VAO **29** 00:07:22.0±0.8, 19°.65S×70°.57W, h74^{km}±5^{km}, mb4.1*

ISC 29 00:07:16.3±0.8**, 19°.67S**±0°.03×**70°.82W**±0°.05**, h22**^{km}±6^{km}**, n101, σ1^{s}.18**/111**, mb4.3**/11**, MS3.5**/5**, 5C-9D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.66	84	⇓iP	Pb	00 07 29.0	-0.3
PSGC				iS	Sb	00 07 38.3	+0.2
PSGCX	Pisagua	0.66	84		Pb	00 07 29.3	0.0
PSGCX					Sb	00 07 38.3	+0.1
TA01	Diego Aracena	1.07	146	⇑iP	Pn	00 07 36.2	+0.1
TA01				iS	Sn	00 07 50.4	+0.1
PB11	IPOC Station P	1.10	95	⇓iP	Pn	00 07 36.3	-0.3
PB11				iS	Sn	00 07 51.2	0.0
PB11	IPOC Station P	1.10	95		Pb	00 07 36.8	0.0
PB11				Sn	Sn	00 07 51.0	-0.1
PB12	IPOC Station P	1.15	24	⇓iP	Pn	00 07 36.9	-0.3
PB12				iS	Sn	00 07 52.8	+0.5
PB12	IPOC Station P	1.15	24		Pn	00 07 37.3	+0.1
PB12				Sn	Sn	00 07 53.2	+0.9
MNMC	Minye Minye	1.27	65	Pn	Pb	00 07 39.6	-0.2
PATCX	Punta Patache	1.31	151	⇑iP	Pn	00 07 39.5	+0.2
PATCX				iS	Sb	00 07 57.0	+0.4
PATCX	Punta Patache	1.31	151		Pn	00 07 39.6	+0.3
AP01	Chacalluta	1.37	19	⇑iP	Pn	00 07 40.7	+0.6
AP01				iS	Sb	00 07 58.6	+0.3
AP01				IAML		00 08 03.1	
	comp=N,15µm,0.4s						
GO01	Chusmiza	1.53	90	⇓iP	Pb	00 07 43.8	-0.6
GO01				iS	Sb	00 08 04.2	+0.7
GO01	Chusmiza	1.53	90		Pb	00 07 43.8	-0.6
PB08	IPOC Station P	1.64	107	⇓iP	Pn	00 07 45.2	+1.0
PB08				iS	Sb	00 08 06.1	-0.3
PB16	IPOC Station P	1.82	43	⇑iP	Pn	00 07 48.1	+1.3
PB16				iS	Sb	00 08 12.0	+0.2
PB16	IPOC Station P	1.82	43		Pn	00 07 48.1	+1.3
PB01	IPOC Station P	1.85	138	⇑iP	Pn	00 07 47.7	+0.8
PB01				iS	Sn	00 08 10.8	+1.1
PB01				IAML		00 08 17.1	
	comp=E,3µm,0.8s						
PB01	IPOC Station P	1.85	138		Pn	00 07 47.8	+0.9
PB02	IPOC Station P	1.86	152	⇓iP	Pn	00 07 47.5	+0.5
PB07	IPOC Station P	2.23	157	⇓iP	Pn	00 07 52.3	+0.2
PB07				iS	Sb	00 08 22.0	-1.2
PB07	IPOC Station P	2.23	157		Pn	00 07 52.2	+0.1
PB03	IPOC Station P	2.57	157	⇓iP	Pn	00 07 57.0	+0.2
PB03				iS	Sn	00 08 29.5	+2.0
PB03				IAML		00 08 46.0	
	comp=E,868nm,0.5s						
PB09	IPOC Station P	2.58	145	⇓iP	Pn	00 07 58.5	+1.5
PB09				iS	Sn	00 08 29.5	+1.7
PB09				IAML		00 08 45.0	
	comp=E,2µm,0.7s						
PB09	IPOC Station P	2.58	145		Pn	00 07 57.8	+0.8
PB04	IPOC Station P	2.72	167	IAML		00 08 52.8	
	comp=E,1µm,0.7s						
PB04	IPOC Station P	2.72	167		Pn	00 07 58.6	-0.4
LVC	Limon Verde	3.43	149	Pn	Pn	00 08 10.3	+1.5
	comp=E,5.5nm,0.3s,baz=332,slow=8.2,SNR=25						
LVC				Sn	Sn	00 08 50.5	+1.5
	comp=E,28nm,0.3s,baz=123,slow=18,SNR=8.2						
LVC				Lg	Lg	00 09 03.3	
	comp=E,40nm,0.3s,baz=76,slow=19,SNR=7.0						
LVC				LR	LR	00 09 45.2	
	comp=E,540nm,20.7s,baz=331,slow=44						
LVC	Limon Verde	3.43	149		Pn	00 08 09.6	+0.8
LVC	Limon Verde	3.43	149	eP	Pn	00 08 10.5	+1.8
LVC				eS	Sn	00 08 50.9	+1.9
PB15	IPOC Station P	3.74	161		Pn	00 08 12.4	-0.5
PB10	IPOC Station P	3.83	176		Pn	00 08 12.6	-1.4
LPAZ	La Paz	4.23	38	Pn	Pn	00 08 24.1	+4.1
	comp=E,1.7nm,0.3s,baz=206,slow=6.3,SNR=22						
LPAZ	La Paz	4.23	38	eP	Pn	00 08 24.2	+4.1
GO03	Copiap	7.91	176	Pn	Pn	00 09 08.8	-1.3
NNA	Nana	9.59	322	Pn	Pn	00 09 35.0	+1.9
	comp=E,0.4nm,0.3s,baz=212,slow=23,SNR=1.5						
NNA				Sn	Sn	00 11 18.5	-1.8
	comp=E,2.0nm,0.3s,baz=219,slow=18,SNR=1.9						
NNA	Nana	9.59	322	Pn	Pn	00 09 33.6	+0.5
SIV	San Ignacio	9.98	70	Pn	Pn	00 09 38.0	-0.5
	comp=E,0.9nm,0.3s,baz=276,slow=8.1,SNR=19						
SIV				LR	LR	00 14 04.9	
	comp=E,490nm,18.4s,baz=282,slow=42						
GO04	Tololo Observa	10.46	180	Pn	Pn	00 09 45.0	-0.2
SAML	Samuel	12.97	36	Pn	Pn	00 10 20.1	+0.7
SAML	Samuel	12.97	36	eP	Pn	00 10 20.8	+1.4
ROC1	El Roble	13.25	181	Pn	Pn	00 10 22.7	-0.8
CPUP	Villa Florida	14.07	121	Pn	Pn	00 10 34.0	-0.5
	comp=E,0.1nm,0.3s,baz=155,slow=8.1,SNR=2.2						
CPUP				LR	LR	00 16 37.3	
	comp=E,132nm,19.2s,baz=301,slow=40						
CPUP	Villa Florida	14.07	121	eP	Pn	00 10 35.1	+0.6
AQDB	Aquidauana	14.23	96	eP	Pn	00 10 36.8	+0.2
SALV	Santo Antonio	14.88	78	eP	Pn	00 10 45.2	-0.3
ITQB	Itaqui	16.28	130	eP	Pn	00 11 04.5	+0.8
CLDB	Colider	16.92	61	eP	Pn	00 11 10.3	-1.5
C2SB	Chapadao do Su	17.01	90	eP	Pn	00 11 12.2	-0.7
TRCB	Terra Rica	17.24	104	eP	Pn	00 11 15.1	-0.7
PTGB	Pitanga	18.07	110	eP	Pn	00 11 25.9	-0.4
PCMB	Pacaembu	18.41	99	eP	P	00 11 28.9	-1.3
ARAG	Araguaiana, MT	18.53	81	eP	P	00 11 29.9	-1.6
ITAB	Concordia	18.71	117	eP	P	00 11 32.7	-0.8

CPSB	Cacapava Do Su	19.01	128	*e*P	P	00 11 36.1	-0.5
ITRB	Iturama	19.27	94	*e*P	P	00 11 38.2	-1.4
CNLB	Canela	20.53	122	*e*P	P	00 11 52.8	-0.5
BB19B	Bebedouro	20.95	98	*e*P	P	00 11 56.5	-1.4
PLCA	Paso Flores	21.00	179	P	P	00 11 59.4	+1.0
	comp=E,3.2nm,0.9s,baz=263,slow=13,SNR=4.5						
PLCA				LR	LR	00 19 23.3	
	comp=E,96nm,19.3s,baz=252,slow=35						
PLCA	Paso Flores	21.00	179	P	P	00 11 58.3	0.0
PLCA				IAmb	IAmb	00 12 08.7	
	comp=Z,8.2nm,1.0s						
PLCA	Paso Flores	21.00	179	*e*P	Pn	00 12 00.0	-0.9
IPMB	Ipameri, GO	21.46	89	*e*P	P	00 12 02.1	-1.4
PTGA	Pitinga	21.62	31	P	P	00 12 03.5	-1.6
	comp=Z,18nm,0.3s,baz=290,slow=22,SNR=66						
PTGA	Pitinga	21.62	31	P	P	00 12 03.5	-1.6
PTGA				IAmb	IAmb	00 12 04.6	
	comp=Z,15nm,0.7s						
PTGA	Pitinga	21.62	31	*e*P	P	00 12 03.3	-1.8
FLOC	Florencia	21.65	347	P	P	00 12 06.9	+1.5
RCLB	Rio Claro- Sao	21.90	101	*e*P	P	00 12 06.8	-1.4
SPB	Sao Paulo	22.08	104	*e*P	P	00 12 08.9	-1.1
BDFB	Brasilia	22.09	83	P	P	00 12 08.4	-1.9
	comp=Z,1.1nm,0.3s,baz=210,slow=17,SNR=2.3						
BDFB				LR	LR	00 22 15.5	
	comp=Z,93nm,20.2s,baz=290,slow=41						
BDFB	Brasilia	22.09	83	IAmb	IAmb	00 12 17.6	
	comp=Z,6.0nm,1.1s						
VAO	Valinhos	22.46	103	*e*P	P	00 12 12.7	-1.5
PARB	Paraibuna	23.72	103	*e*P	P	00 12 25.3	-1.7
ROSC	El Rosal	24.60	352	P	P	00 12 36.3	+0.8
	comp=Z,7.0nm,0.4s,baz=126,slow=21,SNR=4.5						
ROSC				LR	LR	00 22 56.6	
	comp=Z,170nm,21.6s,baz=216,slow=38						
SMTB	Santa Maria do	24.91	68	*e*P	P	00 12 37.2	-0.8
JANB	Januaria	25.70	84	*e*P	P	00 12 43.0	-2.2
SJMB	Sao Joao De Ma	27.99	93	*e*P	P	00 13 03.8	-2.0
BSFB	Barra de Sao F	28.29	93	*e*P	P	00 13 06.5	-2.0
URIC	Uribia, Colomb	31.20	358	P	P	00 13 35.1	+1.0
NBPB	Pedra_Branca-C	33.47	69	*e*P	P	00 13 53.1	-1.1
ACON	Acoyapa	34.47	335	P	P	00 14 02.6	-0.1
RPN	Rapa Nui	36.01	251	LR	LR	00 24 45.3	
	comp=Z,167nm,18.9s,baz=60,slow=29						
APG	El Apazote	39.51	329	P	P	00 14 45.8	-0.1
	comp=Z,3.2nm,0.9s,baz=75,slow=16,SNR=1.6						
KNB	Kanab	68.90	325	P	P	00 18 20.7	+0.9
PDAR	Pinedale Array	71.64	331	P	P	00 18 37.3	+0.8
	comp=Z,0.3nm,0.5s,baz=154,slow=11,SNR=3.3						
NVAR	Mina Array Bea	72.96	323	P	P	00 18 46.1	+1.6
	comp=Z,0.4nm,0.5s,baz=164,slow=7.7,SNR=4.6						
ULM	Lac du Bonnet	73.05	343	P	P	00 18 44.5	+0.1
	comp=Z,0.7nm,0.6s,baz=143,slow=10,SNR=1.7						
YNE	Yellowstone No	73.60	332	P	P	00 18 48.8	+0.7
YHH	Holmes Hill	73.81	332	P	P	00 18 49.3	-0.1
PAHR	Pah Rah Range	74.44	323	P	P	00 18 53.8	+0.7
PAHR				IAmb	IAmb	00 18 56.3	
	comp=Z,4.2nm,0.9s						
MCMT	McKenzie Canyo	74.75	330	P	P	00 18 54.8	-0.1
BEKR	Beckworth	75.11	323	P	P	00 18 55.6	-1.3
MDT	Midelt	81.97	51	P	P	00 19 36.4	+1.5
	comp=Z,2.0nm,0.7s,baz=240,slow=7.1,SNR=2.3						
BOSA	Boshof	85.89	119	LR	LR	00 55 42.9	
	comp=Z,28nm,19.1s,baz=210,slow=34						
YKA	Yellowknife Ar	88.88	341	P	P	00 20 08.7	+0.3
	comp=Z,1.4nm,0.6s,baz=135,slow=5.2,SNR=28						
EPYK	Eagle Plains	98.69	338	IAmb	IAmb	00 21 07.6	
	comp=Z,1.8nm,1.1s						
H11S2	WAKE ISLAND Hy	125.85	279	T	T	02 45 01.1	
	baz=100,slow=75,SNR=26						
H11S1	WAKE ISLAND Hy	125.86	279	T	T	02 45 19.9	
	baz=100,slow=75,SNR=41						
H11S3	WAKE ISLAND Hy	125.87	279	T	T	02 45 29.6	
	baz=100,slow=75,SNR=27						
MKAR	Makanchi Array	145.14	33	PKPbc	PKPdf	00 26 52.0	-0.1
	comp=Z,2.9nm,0.8s,baz=322,slow=3.8,SNR=24						
MKAR	Makanchi Array	145.14	33		PKPab	00 26 51.9	+0.2
SONM	Songino Array	151.81	4	PKPbc	PKPbc	00 27 08.9	-0.6
	comp=Z,0.5nm,0.7s,baz=260,slow=0.6,SNR=5.5						
NJ2	Nanjing	164.92	327	*e*P	PKPdf	00 27 19.0	-0.1
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						

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*IDC **29** 00:18:19.4±0.8, 30°.56S×177°.59W, h0^{km}, mb4.7/6, mb1 4.8/8, mb1mx4.4/26, mbtmp4.6/8, ML3.9/2, MS3.5/6, Ms1 3.4/6, ms1mx3.1/29, Error ellipse: s-maj=31.0km s-min=19.4km az=119.0*

*NEIC **29** 00:18:22.4±1.8, 30°.46S±0°.05×177°.8W±0°.2, h18^{km}±4^{km}, mb4.6/28, Error ellipse: s-maj=20.0km s-min=6.7km az=99.0*

ISC 29 00:18:24.7±0.6**, 30°.62S**±0°.06×**177°.6W**±0°.1**, h33^{km}, n142,** σ**1^s.70**/123**, mb4.6**/17**, MS3.4**/7**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.39	350	Pn	Pn	00 18 45.5	-2.2
	408nm,0.3s,baz=178,slow=23,SNR=17						
RAO				Sn	Sn	00 18 59.1	-5.9
	3µm,0.3s,baz=86,slow=22,SNR=17						
MXZ	Matakaoa Point	7.70	205	Pn	Pn	00 20 14.3	-0.2
MXZ				Sn	Sn	00 21 41.6	+1.1
MXZ	Matakaoa Point	7.70	205	P	Pn	00 20 14.6	+0.2
WMGZ	Waiomatatini S	7.89	203	P	Pn	00 20 17.6	+0.5
HAZ	Te Kaha	8.06	207	P	Pn	00 20 19.3	-0.2
PKGZ	Pakihiroa	8.07	205	P	Pn	00 20 18.5	-1.1
PUZ	Puketiti	8.17	203	P	Pn	00 20 19.5	-1.4
RUGZ	Raukumara Rang	8.29	207	P	Pn	00 20 23.4	+0.8
CNGZ	Carnagh Statio	8.56	203	P	Pn	00 20 25.9	-0.3
MWZ	Matawai	8.67	206	P	Pn	00 20 27.6	-0.1
TGRZ	Tauranga	8.71	214	P	Pn	00 20 35.1	+6.8
URZ	Urewera	8.77	208	Pn	Pn	00 20 27.5	-1.6
	0.9nm,0.3s,baz=264,slow=3.8,SNR=13						
URZ				Sn	Sn	00 22 06.3	-0.4
	5.5nm,0.3s,baz=279,slow=3.8,SNR=14						
URZ	Urewera	8.77	208	P	Pn	00 20 27.7	-1.4
RIGZ	Rimuhau	8.91	204	P	Pn	00 20 30.4	-0.7
RTZ	Ruatahuna	9.12	208	P	Pn	00 20 31.7	-2.4
SNGZ	Shannon Statio	9.13	206	P	Pn	00 20 28.7	-5.4
SNGZ	Shannon Statio	9.13	206	P	Sn	00 22 16.2	+0.5
RAHZ	Arahi	9.34	206	P	Sn	00 22 20.0	-1.0
MTHZ	Maungataniwha	9.38	207	P	Pn	00 20 37.4	-0.2
MTHZ	Maungataniwha	9.38	207	P	Sn	00 22 22.4	+0.5
WHHZ	Waihua	9.43	205	P	Sn	00 22 22.7	-0.3
ARHZ	Aropaoanui	9.68	206	P	Sn	00 22 29.2	+0.1
BKZ	Black Stump Fm	9.79	208	Pn	Pn	00 20 43.8	+0.6
BKZ					Sn	00 22 32.8	+0.8
MCHZ	McNeill Hill	9.95	206	P	Sn	00 22 34.7	-1.2
HIZ	Hauiti	10.01	216	Pn	Pn	00 20 44.0	-2.2
KWHZ	Kaweka Forest	10.04	207	P	Sn	00 22 36.1	-2.0
KAHZ	Kahuranaki	10.19	205	P	Pn	00 20 46.7	-1.9
KAHZ	Kahuranaki	10.19	205	P	Sn	00 22 36.7	-5.1
KRHZ	Kereru	10.25	207	P	Sn	00 22 38.8	-4.4
PXZ	Pawanui	10.41	204	P	Sn	00 22 40.3	-6.6
BFZ	Birch Farm	11.20	205	P	Sn	00 22 48.0	-18
MRZ	Mangatainoka R	11.43	207	P	Pn	00 21 01.6	-4.0
MSWZ	Moikau Station	12.21	206	Pn	Pn	00 21 16.3	0.0
SNZO	South Karori	12.33	208	Pn	Pn	00 21 19.2	+1.3
PLWZ	Palliser	12.34	206	Pn	Pn	00 21 18.1	0.0
BHW	Baring Head	12.35	207	Pn	Pn	00 21 18.3	+0.2
NNZ	Nelson	12.83	212	Pn	Pn	00 21 24.4	-0.3
QRZ	Quartz Range	12.93	215	Pn	Pn	00 21 26.3	+0.2
BSWZ	Blackbirch Sta	13.01	209	Pn	Pn	00 21 28.8	+1.6
THZ	Tophouse	13.48	212	Pn	Pn	00 21 33.5	-0.1
THZ	Tophouse	13.48	212	P	Pn	00 21 31.5	-2.1
KHZ	Kahutara	13.73	209	Pn	Pn	00 21 36.0	-1.0
KHZ	Kahutara	13.73	209	P	Pn	00 21 33.3	-3.7
LTZ	Lake Taylor	14.57	211	Pn	Pn	00 21 47.4	-1.2
LTZ	Lake Taylor	14.57	211	P	Pn	00 21 46.7	-1.8
OXZ	Oxford	15.11	210	Pn	Pn	00 21 55.3	-0.4
OXZ				IAmb	IAmb	00 22 07.8	
	comp=Z,12nm,1.0s						
OXZ	Oxford	15.11	210	P	P	00 22 00.6	+0.1
MQZ	McQueen’s Vall	15.17	208	Pn	Pn	00 21 56.4	0.0
MQZ				IAmb	IAmb	00 22 15.7	
	comp=Z,15nm,1.0s						
WVZ	Waitaha Valley	15.51	214	P	P	00 22 03.2	-1.6
RPZ	Rata Peaks	15.86	211	Pn	Pn	00 22 05.1	-0.2
	comp=Z,0.6nm,0.3s,baz=90,slow=3.0,SNR=1.9						
RPZ				Sn	Sn	00 24 45.9	-14
	comp=Z,1.0nm,0.3s,baz=109,slow=12,SNR=2.2						
RPZ	Rata Peaks	15.86	211	IAmb	IAmb	00 22 10.4	
	comp=Z,10nm,1.1s						
FOZ	Fox Glacier	16.30	214	Pn	Pn	00 22 11.7	+0.8
FOZ	Fox Glacier	16.30	214	P	P	00 22 12.8	-0.8
DZM	Mont Dzumac	16.61	297	*e*P	P	00 22 27.2	+10
	comp=Z,19nm,0.6s						
DZM				*e*LR	LR	00 26 14.1	
	comp=Z,350nm,24.6s						
DZM	Mont Dzumac	16.61	297	LR	LR	00 26 36.4	
	comp=Z,153nm,19.0s,baz=112,slow=30						
LBZ	Lake Benmore	16.77	212		P	00 22 18.4	-0.5
ODZ	Otahua Downs	17.09	209	Pn	Pn	00 22 18.8	-2.2
MLZ	Mavora Lakes	18.47	213	P	P	00 22 36.6	-1.1
RAR	Rarotonga	18.58	64	LR	LR	00 27 45.0	
	comp=Z,203nm,19.7s,baz=266,slow=30						
LHI	Lord Howe Isla	19.98	261	P	P	00 22 52.9	-1.4
LHI				IAmb	IAmb	00 23 12.1	
	comp=Z,75nm,1.1s						
TBI	Tubuai	26.08	81	*e*LR	LR	00 30 38.9	
	comp=Z,139nm,26.8s						
TBI	Tubuai	26.08	81	*e*T	T	00 51 19.3	
	comp=Z,28nm,0.4s						
MGCD	Mangrove Creek	26.61	256	P	P	00 24 01.6	+1.5
	baz=27,SNR=6.6						
CNB	Canberra Magne	28.01	252	P	P	00 24 15.3	+2.5
	baz=28						
EIDS	Eidsvold	28.07	273	P	P	00 24 12.8	-0.4
EIDS				IAmb	IAmb	00 24 17.5	
	comp=Z,6.8nm,1.0s						
MILA	Mila	28.23	248	P	P	00 24 16.1	+1.5
	baz=29,SNR=3.3						
CAN	Canberra	28.30	252	P	P	00 24 13.3	-2.1
CAN				IAmb	IAmb	00 24 18.4	
	comp=Z,12nm,0.8s						
PAE	Paea	28.57	70	*e*T	T	00 54 21.0	
	comp=Z,8.6nm,0.3s						
PPT2	Papeete2	28.61	70	*e*LR	LR	00 31 43.8	
	comp=Z,132nm,26.0s,baz=243						
PPT2	Papeete2	28.61	70	*e*T	T	00 54 24.1	
	comp=Z,4.9nm,0.3s						
PPT	Papeete	28.63	69	LR	LR	00 36 48.0	
	comp=Z,22nm,18.1s,baz=194,slow=39						
TVO	Taravao	28.78	70	*e*T	T	00 54 36.8	
	comp=Z,2.3nm,0.3s						
RMQ	Roma	29.75	270	P	P	00 24 30.3	+2.2
	baz=30,SNR=4.9						
TOO	Toolangi	31.17	247	P	P	00 24 40.7	+0.1
TOO				IAmb	IAmb	00 24 56.8	
	comp=Z,5.7nm,1.0s						
CMSA	Cobar Meteorol	31.34	259	P	P	00 24 43.8	+1.7
	baz=32,SNR=14						
VAH	Vaihoa	31.46	68	*e*T	T	00 57 57.7	
	comp=Z,37nm,0.2s						
QLP	Quilpie	33.62	267	P	P	00 25 02.9	+0.7
	baz=34,SNR=7.1						
STKA	Stephens Creek	34.74	257	P	P	00 25 13.5	+1.7
	baz=35,SNR=70						
STKA	Stephens Creek	34.74	257	P	P	00 25 13.2	+1.3
	comp=Z,34nm,0.7s,baz=97,slow=10,SNR=109						
STKA				LR	LR	00 38 06.2	
	comp=Z,66nm,19.1s,baz=28,slow=34						
STKA	Stephens Creek	34.74	257	P	P	00 25 13.5	+1.7
STKA				IAmb	IAmb	00 25 14.2	
	comp=Z,6.6nm,0.6s						
MTSU	Mount Surprise	36.65	281	P	P	00 25 29.1	+0.7
	baz=37,SNR=6.2						
HTT	Hallett	36.75	254	P	P	00 25 30.2	+1.1
	baz=37,SNR=30						
BBOO	Buckleboo	39.22	254	P	P	00 25 50.2	+0.3
	baz=40,SNR=26						
BBOO	Buckleboo	39.22	254	P	P	00 25 50.1	+0.3
BBOO				IAmb	IAmb	00 25 52.1	
	comp=Z,14nm,0.7s						
COEN	Coen	39.64	286	P	P	00 25 54.2	+0.6
	baz=40,SNR=9.0						
COEN	Coen	39.64	286	P	P	00 25 53.3	-0.3
COEN				IAmb	IAmb	00 25 54.4	
	comp=Z,5.4nm,0.6s						
QIS	Mount Isa	39.65	274	P	P	00 25 53.4	-0.2
	baz=40,SNR=6.5						
AS31	Alice Springs	43.41	267	P	P	00 26 23.5	-1.0
AS31				IAmb	IAmb	00 26 24.7	
	comp=Z,3.7nm,0.4s						
ASAR	Alice Springs	43.41	267	P	P	00 26 24.2	-0.4
	comp=Z,8.1nm,0.5s,baz=104,slow=7.6,SNR=171						
ASAR				PcP	PcP	00 28 12.0	-0.6
	comp=Z,0.4nm,0.4s,baz=120,slow=4.4,SNR=2.2						
ASAR				LR	LR	00 44 09.4	
	comp=Z,75nm,18.6s,baz=73,slow=36						
ASAR	Alice Springs	43.41	267	P	P	00 26 23.4	-1.1
WR0	Warramunga Arr	44.24	272	P	P	00 26 30.2	-1.0
WB2	Warramunga Arr	44.41	272	P	P	00 26 31.6	-1.0
WRAB	Tennant Creek	44.42	272	P	P	00 26 31.9	-0.7
WRAB				IAmb	IAmb	00 26 32.6	
	comp=Z,14nm,0.7s						
WRA	Warramunga Arr	44.42	272	P	P	00 26 31.5	-1.1
	comp=Z,16nm,0.4s,baz=111,slow=8.1,SNR=138						
WRA	Warramunga Arr	44.42	272	P	P	00 26 31.2	-1.4
WB0	Warramunga Arr	44.45	272	P	P	00 26 31.5	-1.3
FORT	Forrest	46.30	255	P	P	00 26 47.2	-0.1
	baz=47,SNR=13						
FORT	Forrest	46.30	255	P	P	00 26 47.0	-0.4
WRKA	Warakurna	47.77	263	P	P	00 26 57.7	-1.2
	baz=48,SNR=20						
KNRA	Kununurra	51.04	274	P	P	00 27 24.1	+0.2
	baz=51,SNR=4.5						
KNRA	Kununurra	51.04	274	P	P	00 27 23.4	-0.6
KNRA				IAmb	IAmb	00 27 24.7	
	comp=Z,12nm,0.5s						
FITZ	Fitzroy Crossi	52.68	270	P	P	00 27 35.8	-0.3
	baz=53,SNR=9.6						
FITZ	Fitzroy Crossi	52.68	270	P	P	00 27 35.9	-0.3
FITZ				IAmb	IAmb	00 27 36.6	
	comp=Z,5.9nm,0.9s						
CASY	Casey	55.09	208	P	P	00 27 54.5	+1.4
CASY				IAmb	IAmb	00 27 54.9	
	comp=Z,14nm,0.8s						
MORW	Morawa	56.77	253	P	P	00 28 04.7	-1.0
MORW				IAmb	IAmb	00 28 21.2	
	comp=Z,7.5nm,1.1s						
QSPA	South Pole Qui	59.49	180	P	P	00 28 26.3	+2.0
MAW	Mawson	72.21	201	P	P	00 29 47.6	+1.6
	comp=Z,6.8nm,1.0s,baz=43,slow=3.1,SNR=3.6						
MAW	Mawson	72.21	201	IAmb	IAmb	00 29 48.6	
	comp=Z,1.1nm,0.8s						
SNAA	Sanae	77.92	178	P	P	00 30 28.1	+9.2
VNA3	Neumayer Olymp	78.06	176	P	P	00 30 29.0	+9.3
VNA2	Neumayer--Watz	78.50	177	P	P	00 30 31.1	+9.1
	baz=183,slow=4.0						
VNA1	Neumayer--Stat	78.73	176	P	P	00 30 32.9	+10
PSI	Prapat	85.78	276	LR	LR	01 09 28.4	
	comp=Z,32nm,20.0s,baz=148,slow=36						
PETK	Petropavlovsk-	86.11	345	P	P	00 31 02.0	+0.2
	comp=Z,2.1nm,0.4s,baz=167,slow=7.2,SNR=3.0						
NVAR	Mina Array Bea	88.19	43	P	P	00 31 12.8	+0.3
	comp=Z,0.7nm,0.8s,baz=204,slow=8.0,SNR=4.5						
PV15	Paradox Valley	94.12	47	P	P	00 31 36.6	-3.5
YKA	Yellowknife Ar	105.51	25	PKKPbc	PKKPbc	00 48 09.1	-1.1
	comp=Z,0.3nm,0.9s,baz=46,slow=3.1,SNR=5.4						
MK31	Makanchi Array	118.16	310		PKPdf	00 37 07.2	-0.9
MKAR	Makanchi Array	118.16	310	PKP	PKPdf	00 37 07.2	-0.9
	comp=Z,0.5nm,0.6s,baz=207,slow=1.6,SNR=8.4						
ZALV	Zalesovo Beam	118.41	318	PKP	PKPdf	00 37 05.9	-2.3
	comp=Z,0.7nm,0.6s,baz=95,slow=1.3,SNR=3.7						
KSH	Kashi	120.63	300	PKP	PKiKP	00 37 15.3	+2.0
KSH				PP	PP	00 38 47.5	+6.0
KSH				PKS	PKSdf	00 40 52.5	+2.6
KSH				SKKS		00 45 40.3	
KSH				LR	LR		
	comp=Z,180nm,10.1s						
KSH				LR	LR		
	comp=Z,110nm,12.5s						
KURBB	Kurchatov Arra	121.47	314	PKP	PKPdf	00 37 13.4	-0.8
	comp=Z,1.7nm,0.5s,baz=111,slow=1.9,SNR=28						
KKAR	Karatay Array	125.46	303		PKPdf	00 37 21.9	-0.3
BVAR	Borovoye Array	126.79	316	PKP	PKPdf	00 37 24.4	0.0
	comp=Z,2.0nm,0.5s,baz=145,slow=1.9,SNR=30						
BRVK	Borovoye	126.85	316		PKPdf	00 37 24.7	+0.2
ARU	Arti	133.46	321	PKP	PKPdf	00 37 37.0	+0.1
	comp=Z,0.9nm,0.5s,baz=159,slow=4.0,SNR=9.2						
ARU	Arti	133.46	321		PKPdf	00 37 37.0	+0.1
H10N3	ASCENSION HYDR	138.47	154	T	T	03 13 16.8	
	baz=203,slow=75,SNR=44						
H10N1	ASCENSION HYDR	138.48	154	T	T	03 13 17.3	
	baz=203,slow=75,SNR=60						
H10N2	ASCENSION HYDR	138.49	154	T	T	03 13 18.2	
	baz=203,slow=75,SNR=49						
ARCES	ARCESS Array B	138.87	348	PKP	PKPdf	00 37 45.6	-1.0
	comp=Z,5.6nm,1.0s,baz=43,slow=3.1,SNR=2.0						
FINES	FINESS Array B	145.46	340	PKPbc	PKPdf	00 37 57.7	-0.9
	comp=Z,14nm,0.8s,baz=65,slow=3.5,SNR=67						
FINES	FINESS Array B	145.46	340		PKPdf	00 37 57.5	-1.0
KBZ	Khabaz	145.50	304	PKPbc	PKPbc	00 37 59.4	+0.1
	comp=Z,2.2nm,0.8s,baz=1.7,slow=3.0,SNR=6.3						
NC303	NORSAR Array S	148.82	352		PKPbc	00 38 08.2	+0.1
NB201	NORSAR Array S	149.00	352		PKPbc	00 38 08.4	-0.2
NB2	NORSAR Subarra	149.02	352	PKP	PKPbc	00 38 08.5	-0.2
	comp=Z,1.6nm,0.6s,baz=12,slow=2.6						
NOA	NORSAR Array B	149.02	352	PKPbc	PKPbc	00 38 08.2	-0.4
	comp=Z,2.7nm,0.7s,baz=15,slow=4.2,SNR=15						
AKASG	Malin Array Be	151.67	323	PKPbc	PKPbc	00 38 14.8	-0.5
	comp=Z,4.3nm,0.5s,baz=48,slow=2.8,SNR=20						
BRTR	Keskin Array B	152.99	298	PKPbc	PKPbc	00 38 18.2	-0.6
	comp=Z,0.9nm,0.4s,baz=127,slow=3.9,SNR=6.1						
CLL	Collm	157.88	342	*e*pPKPab	pPKPab	00 38 57.0	-2.6
GERES	GERESS Array B	159.86	338	PKPab	PKPab	00 39 00.8	+1.5
	comp=Z,0.3nm,0.6s,baz=57,slow=3.6,SNR=2.3						

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*ATH **29** 00:19:41.6, 38°.15N×20°.40E, h13^{km}±1^{km}, ML2.7/5, Error ellipse: s-maj=2.3km s-min=1.1km az=230.0*

*THE **29** 00:19:42.3, 38°.19N×20°.43E, h11^{km}±1^{km}, ML2.5/8, Error ellipse: s-maj=1.4km s-min=0.6km az=239.0*

ISC 29 00:19:41.8±1.1**, 38°.17N**±0°.04×**20°.42E**±0°.04**, h13^{km}**±5^{km}**, n39,** σ**0^s.33**/64**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LXRA	Lixouri, Kepha	0.03	20	P	Pg	00 19 44.2	0.0
LXRA				S	Sg	00 19 46.1	+0.2
LXR1	Lixouri, Cepha	0.03	21	P	Pg	00 19 44.3	+0.1
CHV1	Chavriata, Kef	0.04	292	P	Pg	00 19 44.2	0.0
CHV1				S	Sg	00 19 45.9	0.0
ARGA	Argostoli. Kep	0.04	81	P	Pg	00 19 44.2	-0.1
ARGA				S	Sg	00 19 45.8	-0.2
KEF2	Argostoli. Kep	0.05	95	P	Pg	00 19 44.3	0.0
KEF2				S	Sg	00 19 45.6	-0.5
ARG2	Argostoli	0.05	81	P	Pg	00 19 44.3	0.0
ARG2				S	Sg	00 19 45.8	-0.3
KEF3	Kipouria, Keph	0.07	299	P	Pg	00 19 44.5	0.0
KEF3				S	Sg	00 19 46.2	-0.2
AGT1	Agia Thekli	0.09	339	P	Pg	00 19 44.8	+0.1
AGT1				S	Sg	00 19 46.9	+0.2
KEF4	Livadi, Kephal	0.09	0	P	Pg	00 19 44.8	+0.1
KEF4				S	Sg	00 19 47.1	+0.4
KEF1	Kardakata, Kep	0.11	19	P	Pg	00 19 45.0	0.0
KEF1				S	Sg	00 19 46.8	-0.4
VLS	Valsamata	0.13	87	P	Pg	00 19 45.2	-0.1
VLS				S	Sg	00 19 47.6	0.0
VLS	Valsamata	0.13	87	P	Pg	00 19 45.2	-0.1
VLS				S	Sg	00 19 47.6	0.0
VLS				AML	AML	00 19 47.8	
	comp=N,21125µm,0.1s						
VLS				AML	AML	00 19 48.1	
	comp=E,30302µm,0.1s						
VSK1	VASILIKIADES	0.26	25	P	Pg	00 19 47.6	+0.2
VSK1				S	Sg	00 19 50.9	-0.2
	comp=E,4µm,0.3s						
KONA	Konidatara, Ke	0.28	24	P	Pg	00 19 47.8	+0.2
KONA				S	Sb	00 19 52.7	-0.6
KONA				AML	AML	00 19 52.8	
	comp=E,3566µm,0.2s						
KONA				AML	AML	00 19 52.9	
	comp=N,4069µm,0.2s						
KFL	Anninata	0.29	102	P	Pg	00 19 48.0	+0.1
KFL				S	Sg	00 19 52.8	+0.8
	comp=N,1µm,0.4s						
KFL	Anninata	0.29	102	P	Pg	00 19 47.9	0.0
KFL				S	Sg	00 19 52.9	+0.8
KFL				AML	AML	00 19 53.0	
	comp=N,2283µm,0.4s						
KFL				AML	AML	00 19 55.1	
	comp=E,2201µm,0.4s						
EVGI	Lefkada island	0.49	22	P	Pg	00 19 51.4	0.0
EVGI				S	Sg	00 19 56.9	-1.0
EVGI	Lefkada island	0.49	22	P	Pg	00 19 51.4	0.0
EVGI				S	Sb	00 19 59.2	0.0
MGNA	Meganis	0.56	31	P	Pg	00 19 52.8	-0.1
AST1	Astakos	0.64	54	P	Pg	00 19 54.3	0.0
AST1				S	Sb	00 20 04.0	+0.3
	comp=E,768nm,0.2s						
LKD2	Lefkada island	0.65	16	P	Pg	00 19 54.2	-0.2
LKD2				S	Sg	00 20 02.9	0.0
	comp=E,195nm,0.4s						
LKD2	Lefkada island	0.65	16	P	Pg	00 19 54.2	-0.2
VTN	Vitineika	0.65	113	P	Pg	00 19 54.1	-0.4
VTN				S	Sb	00 20 04.7	+0.7
VTN	Vitineika	0.65	113	P	Pb	00 19 55.1	+0.1
TSLK	Tsoukalades, L	0.68	15	P	Pg	00 19 55.0	0.0
TSLK				S	Sg	00 20 04.5	+0.5
	comp=E,268nm,0.6s						
TSLK	Tsoukalades, L	0.68	15	P	Pg	00 19 55.2	+0.2
PDO	Prodromos	0.73	54	P	Pg	00 19 55.9	-0.1
PDO				S	Sb	00 20 06.5	+0.1
	comp=E,518nm,0.4s						
PDO	Prodromos	0.73	54	P	Pg	00 19 56.0	-0.1
PDO				AML	AML	00 20 12.4	
	comp=E,774µm,0.4s						
PDO				AML	AML	00 20 13.3	
	comp=N,700µm,0.3s						
RLS	Riolos of Patr	0.83	97	P	Pg	00 19 57.3	-0.6
RLS				S	Sn	00 20 10.8	-0.4
RLS	Riolos of Patr	0.83	97	P	Pg	00 19 57.6	-0.3
PVO	Paravola	0.97	62	P	Pb	00 20 00.6	+0.1
PVO				S	Sn	00 20 14.6	-0.2
	comp=N,542nm,0.3s						
PVO	Paravola	0.97	62	P	Pb	00 20 00.7	+0.2
PVO				AML	AML	00 20 17.2	
	comp=E,1207µm,0.3s						
PVO				AML	AML	00 20 17.3	
	comp=N,929µm,0.3s						
DRO	Drossia	1.04	102	P	Pb	00 20 01.3	-0.3
EFP	Efpalio	1.19	77	P	Pn	00 20 04.2	0.0
EFP				S	Sb	00 20 19.8	+0.2
	comp=N,128nm,0.5s						
EFP	Efpalio	1.19	77	P	Pg	00 20 05.3	+0.6
TRIZ	Trizonia	1.31	81	P	Pn	00 20 05.6	-0.2
EVR	Evrytania	1.32	55	P	Pn	00 20 06.1	+0.1
IGT	Igoumenitsa	1.36	357	P	Pb	00 20 07.5	+0.4
KALE	Kalithea	1.37	80	P	Pn	00 20 06.6	0.0

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*IDC **29** 00:20:38.5±8.4, 36°.29N×70°.35E, h61^{km}±39^{km}, mb3.4/4, mb1 3.4/9, mb1mx3.1/54, mbtmp3.7/9, ML3.4/5, MS3.2/3, Ms1 3.2/3, ms1mx2.7/28, Error ellipse: s-maj=118.4km s-min=28.7km az=159.0*

*NNC **29** 00:20:43.2±4.9, 36°.87N×69°.70E, h0^{km}, mb4.2, mpv3.6, Error ellipse: s-maj=48.8km s-min=28.9km az=169.0*

ISC 29 00:20:36.5±0.9**, 36°.17N**±0°.08×**70°.17E**±0°.07**, h35^{km}, n22,** σ**2^s.18**/22**, mb3.6**/3**, 1C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	5.91	128	*e*P	Pn	00 22 04.0	+2.5
THN				*e*S	Sn	00 23 03.5	-4.5
AML	Almayashu	6.55	24	P	Pn	00 22 12.1	+1.5
	SNR=42						
UCH	Uchtor	6.92	28	P	Pn	00 22 17.2	+1.5
	SNR=10						
KK31	Karatay Array	6.92	2	Pn	Pn	00 22 17.1	+1.7
	2.4nm,0.4s,baz=184,slow=13,SNR=52						
KK31				⇑Sn	Sn	00 23 30.0	-2.9
	1.3nm,0.3s,baz=186,slow=25,SNR=5.3						
EKS2	Erkin-Say	7.05	22	P	Pn	00 22 19.1	+1.8
	SNR=9.1						
KZA	Kyzart	7.09	32	P	Pn	00 22 19.2	+1.1
	SNR=5.8						
AAK	Ala-Archa	7.27	26	LR	LR	00 25 25.6	
	comp=Z,43nm,18.8s,baz=321,slow=40						
CHMS	Chumysh	7.68	26	P	Pn	00 22 26.5	+0.8
	SNR=7.5						
GEYT	Alibeck	9.80	284	P	Pn	00 22 58.0	+3.1
	1.1nm,0.3s,baz=115,slow=9.3,SNR=10						
GEYT				S	Sn	00 24 39.9	-3.7
	0.3nm,0.3s,baz=121,slow=14,SNR=1.8						
MKAR	Makanchi Array	13.95	37	P	Pn	00 23 51.3	-0.2
	0.1nm,0.3s,baz=223,slow=14,SNR=8.9						
MKAR				S	Sn	00 26 27.6	+2.5
	0.2nm,0.3s,baz=200,slow=29,SNR=6.6						
AB08	Akbulak array	15.05	333	⇓P	Pn	00 24 05.4	-1.0
	4.2nm,0.6s						
KURBB	Kurchatov Arra	15.65	20	P	Pn	00 24 14.6	+0.4

	0.0nm,0.3s,baz=212,slow=9.0,SNR=5.9						
AKTO	**Aktyubinsk**	**16.74**	**332**	P	**Pn**	**00 24 28.6**	**+0.5**
	0.4nm,0.3s,baz=139,slow=14,SNR=10						
AKTO	**Aktyubinsk**	**16.74**	**332**	⇓P	**Pn**	**00 24 29.2**	**+1.1**
	4.4nm,0.8s						
BVAR	**Borovoye Array**	**16.85**	**0**	P	**Pn**	**00 24 27.5**	**-2.0**
	0.2nm,0.3s,baz=167,slow=11,SNR=5.6						
ZALV	**Zalesovo Beam**	**20.49**	**25**	P	**P**	**00 25 08.9**	**-2.2**
	5.3nm,0.5s,baz=221,slow=11,SNR=16						
HHC	**Hu-ho-hao-te**	**32.50**	**69**	*e*P	P	00 27 10.0	+6.1
NRIK	**Noril'sk**	**34.57**	**11**	LR	LR	00 43 14.5	
	comp=Z,84nm,18.3s,baz=28,slow=39						
FINES	**FINESS Array B**	**37.38**	**327**	P	**P**	**00 27 45.6**	**+0.1**
	1.3nm,0.9s,baz=133,slow=12,SNR=2.4						
HFS	**Hagfors**	**42.91**	**322**	P	**P**	**00 28 30.5**	**-0.9**
	0.8nm,0.6s,baz=105,slow=11,SNR=6.3						
NOA	**NORSAR Array B**	**44.24**	**323**	P	**P**	**00 28 41.2**	**-0.9**
	0.1nm,0.4s,baz=99,slow=7.8,SNR=2.0						
DAV	**Davao City (W)**	**58.14**	**106**	LR	LR	00 57 53.6	
	comp=Z,42nm,20.4s,baz=170,slow=38						

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*NNC **29** 00:33:16.5±0.4, 43°.46N×79°.04E, h0^{km}, mb2.7, mpv2.1,*
Error ellipse: s-maj=3.7km s-min=2.4km az=175.0
*SOME **29** 00:33:17.8, 43°.40N×79°.02E, h5^{km}*
ISC 29 00:33:16.5±1.0, **43°.44N**±0°.05×**79°.07E**±0°.03, **h15**^{km}±10^{km},
n10, σ**0^s.30**/19, **1C-1D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KPKS	**Kokpek**	**0.28**	**276**	*e*P	**Pb**	**00 33 22.9**	**-0.4**
	3.1nm,0.1s						
KPKS				*e*S	**Sg**	**00 33 26.5**	**-0.2**
	6.1nm,0.1s						
UZB	**Uzynbulak**	**0.29**	**187**	*e*P	**Pg**	**00 33 23.0**	**+0.2**
	2.4nm,0.1s						
UZB				*e*S	**Sg**	**00 33 26.8**	**-0.2**
	5.4nm,0.1s						
UZB	**Uzynbulak**	**0.29**	**187**	P	**Pg**	**00 33 23.0**	**+0.2**
	2.7nm,0.3s						
UZB				S	**Sg**	**00 33 26.8**	**-0.2**
	5.0nm,0.1s						
PDGK	**Podgornoye**	**0.33**	**110**	P	**Pb**	**00 33 24.0**	**-0.1**
	0.5nm,0.2s						
PDGK				S	**Sg**	**00 33 28.2**	**+0.2**
	2.9nm,0.4s						
PDGK	**Podgornoye**	**0.33**	**110**	⇓P	**Pg**	**00 33 23.3**	**0.0**
	0.3nm,0.3s						
PDGK				⇑S	**Sb**	**00 33 28.9**	**-0.2**
	3.5nm,0.4s						
SATY	**Saty**	**0.61**	**232**	*e*P	**Pg**	**00 33 28.6**	**0.0**
	0.6nm,0.2s						
SATY				*e*S	**Sg**	**00 33 36.5**	**-0.3**
	9.8nm,0.2s						
SATY	**Saty**	**0.61**	**232**	P	**Pg**	**00 33 28.6**	**0.0**
	0.9nm,0.1s						
SATY				S	**Sg**	**00 33 36.5**	**-0.3**
	12nm,0.2s						
DJR	**Jarkent**	**1.03**	**30**	P	**Pb**	**00 33 36.2**	**+0.1**
	0.6nm,0.1s						
DJR				S	**Sg**	**00 33 49.9**	**-0.1**
	3.2nm,0.4s						
KOTS	**Kotyrbulak**	**1.44**	**263**	P	**Pb**	**00 33 43.2**	**+0.1**
	4.8nm,0.3s						
KOTS				S	**Sb**	**00 34 01.3**	**0.0**
	6.0nm,0.4s						
DGS	**Degeres**	**2.41**	**266**	Pg	**Pb**	**00 34 00.4**	**+0.8**
	0.5nm,0.4s						
DGS				Lg	Lg	00 34 31.1	
	2.2nm,0.4s						

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*IDC **29** 00:41:03.4±3.2, 40°.02S×176°.61E, h0^{km}, mb3.9/2,*
mb1 4.1/3, mb1mx3.8/21, mbtmp3.9/3, ML3.7/1, MS3.0/1,
Ms1 3.0/1, ms1mx2.6/24, Error ellipse: s-maj=72.4km
s-min=22.7km az=125.0
*WEL **29** 00:41:07.8, 40°.0S±0°.7×176°.5E±0°.8, h16^{km}±1^{km}, M3.9/124,*
ML4.3/17, MLv3.9/124, Error ellipse: s-maj=0.0km
s-min=0.0km az=67.3
ISC 29 00:41:07.6±0.9, **40°.00S**±0°.02×**176°.57E**±0°.03, **h27**^{km}±6^{km},
n143, σ**1^s.18**/153, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WPHZ	**Waipukurau**	**0.12**	**236**	P	**Pb**	**00 41 12.3**	**-0.3**
PXZ	**Pawanui**	**0.23**	**99**	P	**Pb**	**00 41 13.3**	**-0.4**
PXZ				S	**Sb**	**00 41 19.1**	**+1.1**
PRHZ	**Porangahau**	**0.27**	**169**	P	**Pb**	**00 41 15.0**	**+0.6**
PNHZ	**Pukenui**	**0.30**	**286**	P	**Pb**	**00 41 14.4**	**-0.3**
PNHZ				S	**Sn**	**00 41 19.9**	**-1.9**
KAHZ	**Kahuranaki**	**0.31**	**49**	P	**Pb**	**00 41 14.5**	**-0.4**
KAHZ				S	**Sb**	**00 41 21.1**	**+1.2**
KRHZ	**Kereru**	**0.39**	**337**	P	**Pb**	**00 41 15.3**	**-0.7**
DVHZ	**Dannevirke**	**0.43**	**226**	P	**Pn**	**00 41 17.4**	**-0.6**
ANWZ	**Angora Road**	**0.47**	**189**	P	**Pn**	**00 41 18.9**	**+0.4**
ANWZ				S	**Sn**	**00 41 28.3**	**+2.4**
TSZ	**Takapari Road**	**0.47**	**262**	P	**Pn**	**00 41 17.7**	**-0.9**
TSZ				S	**Sn**	**00 41 25.0**	**-1.1**
CKHZ	**Cape Kidnapper**	**0.52**	**49**	P	**Pb**	**00 41 18.6**	**+0.5**
MCHZ	**McNeill Hill**	**0.56**	**10**	P	**Pb**	**00 41 19.1**	**+0.2**
KWHZ	**Kaweka Forest**	**0.58**	**349**	P	**Pb**	**00 41 18.9**	**-0.4**
BHHZ	**Black Hill Sta**	**0.64**	**322**	P	**Pb**	**00 41 19.8**	**-0.4**
BHHZ				S	**Sb**	**00 41 28.7**	**-0.2**
PRWZ	**Pori Road**	**0.72**	**219**	P	**Pn**	**00 41 23.2**	**+1.2**
BFZ	**Birch Farm**	**0.73**	**200**	P	**Pn**	**00 41 23.1**	**+1.0**
BFZ				S	**Sn**	**00 41 35.3**	**+3.0**
POWZ	**Post Office Ro**	**0.73**	**237**	P	**Pn**	**00 41 22.7**	**+0.6**
ARHZ	**Aropaoanui**	**0.80**	**24**	P	**Pn**	**00 41 23.8**	**+0.7**
BKZ	**Black Stump Fm**	**0.83**	**356**	P	**Pn**	**00 41 23.4**	**-0.2**
MOVZ	**Moawhango**	**0.86**	**313**	P	**Pn**	**00 41 24.0**	**0.0**
NMHZ	**Naumai**	**0.92**	**12**	P	**Pb**	**00 41 25.7**	**+0.8**
TIWZ	**Tintock**	**0.94**	**214**	P	**Pb**	**00 41 26.3**	**+1.1**
CPWZ	**Castlepoint**	**0.95**	**197**	P	**Pb**	**00 41 26.6**	**+1.2**
OHWZ	**Ohakea**	**0.98**	**257**	P	**Pb**	**00 41 27.6**	**+1.6**
OHWZ				S	**Sn**	**00 41 44.3**	**+5.7**
MRZ	**Mangatainoka R**	**1.01**	**228**	P	**Pb**	**00 41 27.0**	**+0.7**
TUVZ	**Tukino**	**1.01**	**316**	P	**Pb**	**00 41 27.1**	**+0.5**
WHVZ	**Whangaehu Hut**	**1.04**	**313**	P	**Pb**	**00 41 27.5**	**+0.5**
MTVZ	**Mangateitei**	**1.04**	**305**	P	**Pb**	**00 41 27.7**	**+0.7**
TRVZ	**Turoa**	**1.05**	**311**	P	**Pb**	**00 41 27.7**	**+0.5**
WHHZ	**Waihua**	**1.05**	**29**	P	**Pb**	**00 41 27.0**	**-0.2**
DRZ	**Dome Shelter**	**1.06**	**313**	P	**Pb**	**00 41 28.0**	**+0.5**
FWVZ	**Far West T-bar**	**1.08**	**313**	P	**Pb**	**00 41 28.0**	**+0.3**
NGZ	**Ngauruhoe**	**1.11**	**317**	P	**Pb**	**00 41 28.6**	**+0.4**
RAHZ	**Arahi**	**1.15**	**21**	P	**Pb**	**00 41 28.5**	**-0.3**
KRVZ	**Karewarewa**	**1.15**	**321**	P	**Pb**	**00 41 29.3**	**+0.4**
RITZ	**Rihia Road**	**1.16**	**331**	P	**Pb**	**00 41 29.5**	**+0.6**
WTVZ	**West Tongariro**	**1.16**	**319**	P	**Pb**	**00 41 29.5**	**+0.4**
MTHZ	**Maungataniwha**	**1.16**	**11**	P	**Pb**	**00 41 28.6**	**-0.4**
HATZ	**Hinemaiaia**	**1.17**	**341**	P	**Pb**	**00 41 29.2**	**+0.2**
MRHZ	**Matea Rd**	**1.17**	**354**	P	**Pb**	**00 41 29.3**	**+0.2**
PKVZ	**Pokaka**	**1.18**	**306**	P	**Pb**	**00 41 30.0**	**+0.7**
HOWZ	**Holdsworth Sta**	**1.21**	**221**	P	**Pb**	**00 41 29.5**	**-0.3**
TMWZ	**Te Maipa**	**1.22**	**205**	P	**Pb**	**00 41 29.4**	**-0.6**
KATZ	**Kakaramea**	**1.23**	**326**	P	**Pb**	**00 41 30.5**	**+0.4**
WAZ	**Wanganui**	**1.24**	**281**	P	**Pb**	**00 41 31.9**	**+1.5**
TWVZ	**Taurewa**	**1.27**	**316**	P	**Pb**	**00 41 31.2**	**+0.2**
RATZ	**Rangitukua**	**1.29**	**331**	P	**Pb**	**00 41 31.7**	**+0.5**
KNZ	**Kokohu**	**1.30**	**42**	P	**Pn**	**00 41 29.5**	**-0.4**
MHGZ	**Mahia Peninsul**	**1.33**	**51**	P	**Pn**	**00 41 30.1**	**-0.3**
OGWZ	**Otaki Gorge**	**1.35**	**232**	P	**Pb**	**00 41 31.5**	**-0.6**
SNGZ	**Shannon Statio**	**1.35**	**26**	P	**Pn**	**00 41 30.8**	**+0.1**
WHTZ	**Whakaora**	**1.41**	**340**	P	**Pb**	**00 41 34.1**	**+0.9**
MTW	**Mount Morrison**	**1.42**	**215**	P	**Pn**	**00 41 31.6**	**+0.1**
RTZ	**Ruatahuna**	**1.42**	**13**	P	**Pn**	**00 41 32.1**	**+0.4**
WATZ	**Wairara**	**1.44**	**333**	P	**Pb**	**00 41 33.6**	**-0.2**
ALRZ	**Allen Road**	**1.44**	**353**	P	**Pb**	**00 41 33.3**	**-0.4**
PRGZ	**Paritu Road**	**1.48**	**44**	P	**Pn**	**00 41 32.0**	**-0.4**
PRRZ	**Plateau Road**	**1.50**	**355**	P	**Pb**	**00 41 33.7**	**-1.0**
WPRZ	**Whakapapatarin**	**1.51**	**348**	P	**Pb**	**00 41 34.9**	**+0.1**
MUGZ	**Murupara**	**1.53**	**6**	P	**Pn**	**00 41 33.5**	**+0.5**
KIW	**Kapiti Island**	**1.53**	**235**	P	**Pb**	**00 41 34.1**	**-1.1**
TRWZ	**Traveller**	**1.55**	**205**	P	**Pn**	**00 41 33.4**	**0.0**
RIGZ	**Rimuhau**	**1.59**	**36**	P	**Pn**	**00 41 33.7**	**-0.3**
CAW	**Cannon Point**	**1.59**	**225**	P	**Pn**	**00 41 34.4**	**+0.4**
KUTZ	**Kaahu Road**	**1.61**	**339**	P	**Pb**	**00 41 35.6**	**-1.0**
HRRZ	**Handcock Road**	**1.62**	**352**	P	**Pb**	**00 41 37.6**	**+0.8**
PAWZ	**Paruwai Farm**	**1.63**	**212**	P	**Pn**	**00 41 34.4**	**-0.2**
RAGZ	**Rawiri**	**1.64**	**24**	P	**Pn**	**00 41 34.7**	**+0.1**
VRZ	**Vera Road**	**1.65**	**301**	P	**Pb**	**00 41 38.1**	**+0.8**
RRRZ	**Republican Roa**	**1.66**	**359**	P	**Pn**	**00 41 35.5**	**+0.6**
GRRZ	**Galatos Road**	**1.68**	**348**	P	**Pb**	**00 41 36.4**	**-1.5**
HSRZ	**Hossack Road**	**1.70**	**351**	P	**Pn**	**00 41 36.5**	**+1.0**
MSWZ	**Moikau Station**	**1.74**	**215**	P	**Pn**	**00 41 35.5**	**-0.5**
HLRZ	**Highlands Stat**	**1.75**	**354**	P	**Pb**	**00 41 39.1**	**+0.1**
LREZ	**Lake Rotokare**	**1.75**	**287**	P	**Pb**	**00 41 40.3**	**+1.2**
TARZ	**Mount Tarawera**	**1.76**	**358**	P	**Pn**	**00 41 37.1**	**+0.7**
URZ	**Urewera**	**1.79**	**14**	Pn	**Pn**	**00 41 36.3**	**-0.3**
	19nm,0.3s,baz=232,slow=6.7,SNR=157						
URZ				Sn	**Sn**	**00 41 58.9**	**+0.4**
	24nm,0.3s,baz=338,slow=14,SNR=4.6						
URZ	**Urewera**	**1.79**	**14**	P	**Pn**	**00 41 36.3**	**-0.3**
MWZ	**Matawai**	**1.82**	**24**	P	**Pn**	**00 41 36.6**	**-0.5**
UTU	**Utuhina**	**1.84**	**351**	P	**Pb**	**00 41 43.3**	**+2.7**
TKGZ	**Te Karaka**	**1.85**	**33**	P	**Pn**	**00 41 37.0**	**-0.5**
TLZ	**Tolley Road**	**1.85**	**334**	P	**Pb**	**00 41 39.0**	**-1.7**
MKRZ	**Makatiti**	**1.86**	**358**	P	**Pb**	**00 41 41.4**	**+0.6**
PLWZ	**Palliser**	**1.86**	**212**	P	**Pn**	**00 41 37.0**	**-0.7**
WEL	**Wellington**	**1.88**	**226**	P	**Pn**	**00 41 38.0**	**+0.1**
EDRZ	**Edgecumbe**	**1.89**	**4**	P	**Pn**	**00 41 38.6**	**+0.4**
OMRZ	**Omania**	**1.90**	**355**	P	**Pb**	**00 41 42.0**	**+0.6**
BHW	**Baring Head**	**1.91**	**222**	P	**Pn**	**00 41 38.1**	**-0.2**
NGRZ	**Ngongotaha**	**1.92**	**351**	P	**Pb**	**00 41 43.8**	**+2.0**
MHEZ	**Mangahewa**	**1.96**	**297**	P	**Pb**	**00 41 44.3**	**+1.6**
PREZ	**Palmer Road**	**1.97**	**289**	P	**Pb**	**00 41 42.5**	**-0.3**
KARZ	**Kaharoa**	**1.99**	**353**	P	**Pb**	**00 41 45.0**	**+1.9**
HIZ	**Hauiti**	**1.99**	**318**	P	**Pb**	**00 41 41.2**	**-1.9**
DREZ	**Durham Road**	**2.00**	**293**	P	**Pb**	**00 41 43.7**	**+0.5**
MARZ	**Manawahe**	**2.01**	**2**	P	**Pn**	**00 41 40.9**	**+1.1**
KHEZ	**Kahui Hut**	**2.09**	**289**	P	**Pb**	**00 41 44.7**	**-0.1**
TCW	**Tory Channel**	**2.12**	**234**	P	**Pn**	**00 41 41.2**	**-0.1**
OPRZ	**Ohinepanea**	**2.15**	**360**	P	**Pn**	**00 41 43.0**	**+1.4**
PKE	**Pukeiti**	**2.15**	**291**	P	**Pb**	**00 41 45.9**	**0.0**
NMEZ	**Namu Road**	**2.16**	**285**	P	**Pb**	**00 41 45.9**	**0.0**
WHRZ	**Whale Island**	**2.16**	**9**	P	**Pn**	**00 41 41.9**	**+0.1**
DUWZ	**D'Urville Isla**	**2.18**	**247**	P	**Pn**	**00 41 42.5**	**+0.5**
KMRZ	**Kaimai**	**2.20**	**347**	P	**Pb**	**00 41 48.7**	**+2.0**
RUGZ	**Raukumara Rang**	**2.21**	**23**	P	**Pn**	**00 41 42.1**	**-0.4**
NBEZ	**Newall Road No**	**2.21**	**288**	P	**Pb**	**00 41 46.8**	**0.0**
PUZ	**Puketiti**	**2.33**	**35**	P	**Pn**	**00 41 43.0**	**-1.1**
TOZ	**Tahuroa Road**	**2.41**	**339**	P	**Pn**	**00 41 46.2**	**+1.0**
PKGZ	**Pakihiroa**	**2.41**	**30**	P	**Pn**	**00 41 44.9**	**-0.5**
HAZ	**Te Kaha**	**2.43**	**23**	P	**Pn**	**00 41 45.3**	**-0.1**
TUWZ	**Tuamarina**	**2.46**	**234**	P	**Pn**	**00 41 45.2**	**-0.6**
CMWZ	**Cape Campbell**	**2.50**	**225**	P	**Pn**	**00 41 46.5**	**0.0**
WMGZ	**Waiomatatini S**	**2.61**	**34**	P	**Pn**	**00 41 47.1**	**-0.9**
BSWZ	**Blackbirch Sta**	**2.67**	**229**	P	**Pn**	**00 41 48.2**	**-0.6**
NNZ	**Nelson**	**2.72**	**242**	P	**Pn**	**00 41 49.7**	**+0.3**
MXZ	**Matakaoa Point**	**2.79**	**30**	P	**Pn**	**00 41 50.2**	**-0.2**
MKAZ	**Moumakai**	**3.09**	**339**	P	**Pn**	**00 41 56.0**	**+1.4**
QRZ	**Quartz Range**	**3.19**	**254**	P	**Pn**	**00 41 56.1**	**+0.1**
THZ	**Tophouse**	**3.29**	**236**	P	**Pn**	**00 41 56.4**	**-0.9**
AWAZ	**Awhitu Peninsu**	**3.29**	**332**	P	**Pb**	**00 42 02.6**	**-2.6**
KUZ	**Kuaotunu**	**3.31**	**348**	P	**Pn**	**00 41 58.6**	**+0.9**
KHZ	**Kahutara**	**3.33**	**222**	P	**Pn**	**00 41 56.2**	**-1.6**
WTAZ	**Waiatarua**	**3.44**	**332**	P	**Pb**	**00 42 04.1**	**-3.6**
MBAZ	**Motutapu North**	**3.48**	**337**	P	**Pn**	**00 42 01.5**	**+1.6**
GVZ	**Greta Valley S**	**3.98**	**221**	P	**Pn**	**00 42 05.9**	**-0.9**
DSZ	**Denniston Nort**	**4.01**	**243**	P	**Pn**	**00 42 06.6**	**-0.7**
LTZ	**Lake Taylor**	**4.26**	**228**	P	**Pn**	**00 42 08.8**	**-1.9**
WCZ	**Waipu Caves**	**4.42**	**336**	P	**Pn**	**00 42 15.1**	**+2.3**
OKCZ	**Okains Bay**	**4.55**	**214**	P	**Pn**	**00 42 12.7**	**-2.0**
MQZ	**McQueen's Vall**	**4.72**	**217**	P	**Pn**	**00 42 15.4**	**-1.5**
INZ	**Inchbonnie**	**4.72**	**233**	P	**Pn**	**00 42 15.3**	**-1.7**
AKCZ	**Akaroa Harbour**	**4.74**	**214**	P	**Pn**	**00 42 16.2**	**-1.0**
WVZ	**Waitaha Valley**	**5.35**	**233**	P	**Pn**	**00 42 24.9**	**-0.7**
RPZ	**Rata Peaks**	**5.54**	**226**	Pn	**Pn**	**00 42 27.1**	**-1.2**
	2.2nm,0.3s,baz=294,slow=1.6,SNR=8.5						
RPZ				Sn	**Sn**	**00 43 26.9**	**-4.2**
	2.8nm,0.3s,baz=337,slow=23,SNR=14						
RPZ	**Rata Peaks**	**5.54**	**226**	P	**Pn**	**00 42 27.2**	**-1.2**
FOZ	**Fox Glacier**	**6.16**	**233**	P	**Pn**	**00 42 35.8**	**-0.9**
CTZ	**Chatham Island**	**6.31**	**129**	P	**Pn**	**00 42 38.6**	**-0.2**
LBZ	**Lake Benmore**	**6.46**	**225**	P	**Pn**	**00 42 39.5**	**-1.3**
ODZ	**Otahua Downs**	**6.68**	**219**	P	**Pn**	**00 42 42.6**	**-1.2**
JCZ	**Jackson Bay**	**7.08**	**232**	P	**Pn**	**00 42 47.6**	**-1.8**
JCZ				P	**Pn**	**00 42 47.6**	**-1.8**
MSZ	**Milford Sound**	**7.92**	**231**	P	**Pn**	**00 43 00.6**	**-0.3**
RAR	**Rarotonga**	**27.52**	**54**	LR	LR	00 54 49.2	
	comp=Z,35nm,20.4s,baz=155,slow=30						
ASAR	**Alice Springs**	**39.33**	**281**	P	**P**	**00 48 34.8**	**+0.2**
	1.5nm,0.9s,baz=129,slow=8.5,SNR=16						
WRA	**Warramunga Arr**	**41.22**	**286**	P	**P**	**00 48 50.2**	**0.0**
	1.3nm,0.6s,baz=128,slow=7.6,SNR=12						
ARCES	**ARCESS Array B**	**146.69**	**342**	PKPbc	**PKPbc**	**01 00 45.1**	**-0.6**
	3.2nm,0.9s,baz=33,slow=4.6,SNR=4.1						

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*HEL **29** 00:52:43.0, 67°.84N×20°.20E, h0^{km}, ML1.6, Explosion*
UPP 29 00:52:42.3±0.1, **67°.86N×20°.19E, h0^{km}, ML2.4,**
Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.11**	**30**	P	Pg	00 52 44.5	+0.1
KUA				S	Sg	00 52 46.4	+0.6
KUA	**Kurravaara**	**0.11**	**30**	*i* P	Pg	00 52 44.5	+0.1
KUA				*i* S	Sg	00 52 46.4	+0.6
KOVU	**Salmi**	**0.36**	**358**	P	Pg	00 52 49.4	+0.1
KOVU				S	Sg	00 52 54.7	+0.7
KOVU	**Salmi**	**0.36**	**358**	*i* P	Pg	00 52 49.4	+0.1
KOVU				*i* S	Sg	00 52 54.7	+0.7
NIKU	**Nikkaluokta**	**0.44**	**271**	P	Pg	00 52 50.7	+0.1
NIKU	**Nikkaluokta**	**0.44**	**271**	*i* P	Pg	00 52 50.7	+0.1
LANU	**Lannavaara**	**0.70**	**74**	P	Pg	00 52 55.9	+0.1
LANU	**Lannavaara**	**0.70**	**74**	*e*P	Pg	00 52 55.8	0.0
DUNU	**Dundret**	**0.76**	**169**	P	Pg	00 52 56.3	-0.4
DUNU	**Dundret**	**0.76**	**169**	*i* P	Pg	00 52 56.3	-0.4
MASU	**Masugnsbyn**	**0.80**	**120**	P	Pg	00 52 57.3	-0.3
MASU	**Masugnsbyn**	**0.80**	**120**	*i* P	Pg	00 52 57.3	-0.3
KIF	**Kilpisjarvi**	**1.17**	**11**	*e*PB	Pb	00 53 05.1	-0.3
KIF				MSG		00 53 20.1	
	comp=Z,6.4nm,0.2s						
KIF				*e*SN	Sn	00 53 24.1	+1.6
PAJU	**Pajala**	**1.41**	**125**	P	Pn	00 53 08.1	-1.1
PAJU	**Pajala**	**1.41**	**125**	*e*P	Pn	00 53 08.1	-1.1
HEF	**Hetta**	**1.41**	**65**	*e*PG	Pn	00 53 08.2	-1.0
	baz=249						
HEF				MSG		00 53 25.5	
	comp=Z,3.1nm,0.2s						
HEF				*e*SB	Sg	00 53 26.9	-0.7
ERTU	**Ertsjaerv**	**1.53**	**148**	*e*P	Pn	00 53 10.0	-0.7
ERTU				*e*SN	Sn	00 53 33.3	+2.1
TOF	**Tornio**	**2.42**	**136**	*e*PB	Pn	00 53 24.3	+1.3
	baz=325						
TOF				MSG		00 53 54.3	
	comp=Z,2.5nm,0.2s						
SGF	**Sodankyl**	**2.46**	**97**	*e*PB	Pb	00 53 25.6	-1.7
SGF				*e*SG	Sb	00 53 58.5	+0.5
ARE0	**ARCESS Array S**	**2.57**	**47**	*e*PB	Pn	00 53 26.7	+1.6
	baz=229						
ARE0				*e*SG	Sb	00 54 02.2	+0.9
RNF	**Rovaniemi**	**2.59**	**116**	*e*PB	Pn	00 53 27.2	+1.8
	baz=294						
RNF				*e*SG	Sb	00 54 02.1	+0.3
KEV	**Kevo**	**3.12**	**49**	MSG		00 54 15.0	
	comp=Z,1.8nm,0.2s						
KEV				*e*SB	Sb	00 54 15.7	-1.5

UPP 29 00:52:46.4±0.1, **67°.86N×20°.20E, h0^{km}, ML2.3,**
Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.11**	**30**	P	Pg	00 52 48.7	+0.2
KUA				S	Sg	00 52 50.3	+0.5
KOVU	**Salmi**	**0.36**	**358**	P	Pg	00 52 53.5	+0.1
KOVU				S	Sg	00 52 58.7	+0.7
NIKU	**Nikkaluokta**	**0.44**	**271**	P	Pg	00 52 54.8	0.0
LANU	**Lannavaara**	**0.70**	**74**	P	Pg	00 52 59.6	-0.2
DUNU	**Dundret**	**0.76**	**169**	P	Pg	00 53 00.7	-0.2
MASU	**Masugnsbyn**	**0.80**	**120**	P	Pg	00 53 01.4	-0.2
PAJU	**Pajala**	**1.41**	**125**	P	Pn	00 53 11.8	-1.5

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*MOS **29** 00:58:00.7±0.9, 52°.47N×170°.69W, h65^{km}, mb4.4/15,*
Error ellipse: s-maj=11.3km s-min=7.3km az=64.4
*IDC **29** 00:58:00.9±2.5, 52°.48N×170°.66W, h48^{km}±22^{km}, mb3.8/21,*
mb1 4.0/24, mb1mx3.9/50, mbtmp4.1/24, ML3.9/3, MS3.1/5,
Ms1 3.1/5, ms1mx2.8/39, Error ellipse: s-maj=19.7km
s-min=10.5km az=174.0
*NEIC **29** 00:58:02.0±2.1, 52°.5N±0°.1×170°.54W±0°.09, h59^{km}±6^{km},*
Error ellipse: s-maj=16.1km s-min=5.5km az=158.0
*AEIC **29** 00:58:02.0±3.7, 52°.5N±0°.1×170°.56W±0°.07, h23^{km}±4^{km},*
ML3.9, mb4.1/106(NEIC), Error ellipse: s-maj=15.2km
s-min=4.7km az=163.0
ISC 29 00:58:01.4±1.1, **52°.39N**±0°.09×**170°.51W**±0°.04, **h55**^{km}±8^{km},
n238, σ**1^s.21**/241, **mb4.2**/59, **MS3.0**/5, **3C, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**1.16**	**59**		**Pn**	**00 58 20.2**	**-1.1**
NIKH				Sn	**Sn**	**00 58 35.0**	**-1.2**
OKSP	**Okmok Steeple**	**1.60**	**57**		**Pn**	**00 58 26.6**	**-0.6**
OKSP					**Sn**	**00 58 46.2**	**-0.6**
OKFG	**Magazine Ridge**	**1.88**	**56**		**Pn**	**00 58 31.3**	**+0.3**
OKFG					**Sn**	**00 58 54.4**	**+0.8**
KOFP	**Korovin Flat P**	**2.20**	**268**		**Pn**	**00 58 35.6**	**+0.1**
KOFP					**Sn**	**00 59 02.3**	**+0.7**
KOKL	**Mount Kliuchef**	**2.26**	**270**		**Pn**	**00 58 36.6**	**+0.2**
ATKA	**Atka Island**	**2.27**	**267**		**Pn**	**00 58 35.9**	**-0.5**
ATKA					**Sn**	**00 59 03.1**	**-0.1**
MGOD	**Makushin Gods**	**2.60**	**56**		**Pn**	**00 58 41.4**	**+0.4**
MGOD					**Sn**	**00 59 13.0**	**+1.5**
MREP	**Makushin Rep't**	**2.68**	**56**		**Pn**	**00 58 42.6**	**+0.6**
MSW	**Makushin Switc**	**2.71**	**54**		**Pn**	**00 58 43.5**	**+1.0**
MNAT	**Makushin Natee**	**2.75**	**56**		**Pn**	**00 58 43.7**	**+0.8**
UNV	**Unalaska Valle**	**2.82**	**57**		**Pn**	**00 58 44.5**	**+0.6**
AKRB	**Akutan Reef Bi**	**3.18**	**55**		**Pn**	**00 58 50.1**	**+1.2**
AKMO	**Akutan Morgan**	**3.19**	**56**		**Pn**	**00 58 50.0**	**+1.0**
AHB	**Akutan Harbor**	**3.31**	**57**		**Pn**	**00 58 51.8**	**+1.2**
AKUT	**Akutan**	**3.34**	**57**		**Pn**	**00 58 52.5**	**+1.6**
AKSA	**Akutan Strait**	**3.38**	**57**		**Pn**	**00 58 52.1**	**+0.5**
AKSA	**Akutan Strait**	**3.38**	**57**		**Pn**	**00 58 52.7**	**+1.2**
GSTR	**Great Sitkin T**	**3.42**	**267**		**Pn**	**00 58 52.6**	**+0.4**
GSMY	**Great Sitkin M**	**3.43**	**266**		**Pn**	**00 58 52.9**	**+0.7**
GSTD	**Great Sitkin T**	**3.48**	**267**		**Pn**	**00 58 53.1**	**+0.1**
GSTD					**Sn**	**00 59 35.1**	**+2.1**
ADAG	**Mount Adagdak**	**3.77**	**266**		**Pn**	**00 58 57.6**	**+0.6**
ADK	**Adak**	**3.84**	**265**	P	**Pn**	**00 58 58.1**	**+0.3**
ADK	**Adak**	**3.84**	**265**		**Pn**	**00 58 58.1**	**+0.3**
ADK	**Adak**	**3.84**	**265**		**Pn**	**00 58 58.6**	**+0.8**
KIWB	**Kanaga Island**	**4.13**	**265**	Pn	**Pn**	**00 59 00.1**	**-1.7**
KIMD	**Kanaga Island**	**4.20**	**264**		**Pn**	**00 59 03.1**	**+0.3**
TAPA	**Tanaga Point A**	**4.54**	**266**		**Pn**	**00 59 08.3**	**+0.8**
TASE	**Tanaga Southea**	**4.67**	**266**		**Pn**	**00 59 10.4**	**+1.1**
SPIA	**Saint Paul Isl**	**4.80**	**2**	Pn	**Pn**	**00 59 12.7**	**+1.8**
FALS	**False Pass**	**4.89**	**57**	Pn	**Pn**	**00 59 14.0**	**+1.8**
DT1	**Dutton Round H**	**5.59**	**58**		**Pn**	**00 59 22.2**	**+0.4**
SDPT	**Sand Point**	**6.63**	**60**	Pn	**Pn**	**00 59 37.6**	**+1.5**
CNBA	**Chernabura Isl**	**6.94**	**65**	Pn	**Pn**	**00 59 40.2**	**0.0**
CHGN	**Chignik**	**8.08**	**56**	Pn	**Pn**	**00 59 56.8**	**+1.0**
SMY	**Shemya**	**9.38**	**278**	P	**Pn**	**01 00 12.5**	**-1.2**
SMY	**Shemya**	**9.38**	**278**	Pn	**Pn**	**01 00 12.5**	**-1.2**
CHIR	**Chirikof Islan**	**9.39**	**63**	Pn	**Pn**	**01 00 13.1**	**-0.7**
SII	**Sitkinak Islan**	**10.37**	**60**	Pn	**Pn**	**01 00 26.9**	**-0.3**
OHAK	**Old Harbor**	**11.04**	**57**	Pn	**Pn**	**01 00 34.3**	**-2.0**
GAMB	**Gambell**	**11.43**	**357**	Pn	**Pn**	**01 00 42.5**	**+0.9**
KDAK	**Kodiak Island**	**11.59**	**55**	P	**Pn**	**01 00 42.1**	**-1.7**
	1.5nm,0.3s,baz=286,slow=3.7,SNR=15						
KDAK				S	**Sn**	**01 02 44.6**	**-6.8**
	0.1nm,0.3s,baz=56,slow=18,SNR=1.3						
KDAK	**Kodiak Island**	**11.59**	**55**	P	**Pn**	**01 00 43.5**	**-0.3**
KDAK	**Kodiak Island**	**11.59**	**55**	Pn	**Pn**	**01 00 43.5**	**-0.3**
SVW2	**Sparrevohn**	**11.94**	**37**	Pn	**Pn**	**01 00 50.5**	**+2.0**
ANM	**Nome**	**12.49**	**10**	P	**Pn**	**01 00 57.8**	**+1.7**
ANM	**Nome**	**12.49**	**10**		**Pn**	**01 00 57.8**	**+1.7**
HOM	**Homer**	**12.78**	**48**	Pn	**Pn**	**01 01 01.7**	**+1.7**
TTA	**Tatalina**	**13.06**	**30**	P	**Pn**	**01 01 06.5**	**+2.5**
TTA	**Tatalina**	**13.06**	**30**		**Pn**	**01 01 06.5**	**+2.5**
BRLK	**Bradley Lake**	**13.17**	**48**	Pn	**Pn**	**01 01 05.4**	**0.0**
SEW	**Seward**	**13.97**	**48**	Pn	**Pn**	**01 01 15.2**	**-1.0**
SKT	**Skwentna**	**14.02**	**39**	Pn	**Pn**	**01 01 18.9**	**+2.0**
SUA	**Susitna One**	**14.05**	**42**	Pn	**Pn**	**01 01 18.0**	**+0.7**
RC01	**Rabbit Creek A**	**14.28**	**44**	Pn	**Pn**	**01 01 18.9**	**-1.4**
PPLA	**Purkeypile**	**14.32**	**36**	Pn	**Pn**	**01 01 21.2**	**+0.2**
GHO	**Glory Hole Cre**	**14.96**	**43**	Pn	**Pn**	**01 01 28.8**	**-0.4**
KNK	**Knik Glacier**	**14.98**	**44**	Pn	**Pn**	**01 01 28.4**	**-1.1**
MID	**Middleton Isla**	**15.21**	**53**	P	**Pn**	**01 01 33.8**	**+1.5**
MID				pmax	pmax		
	comp=Z,125nm,1.1s						
MID	**Middleton Isla**	**15.21**	**53**	Pn	**Pn**	**01 01 33.8**	**+1.5**
SML	**Sawmill**	**15.22**	**43**	Pn	**Pn**	**01 01 31.9**	**-0.7**
SML				IAmb	IAmb	01 01 41.9	
	comp=Z,6.8nm,1.2s						
GLI	**Glacier Island**	**15.35**	**47**	Pn	**Pn**	**01 01 32.3**	**-1.9**
GLI				IAmb	IAmb	01 01 32.8	
	comp=Z,11nm,1.0s						
HIN	**Hinchinbrook I**	**15.45**	**49**	Pn	**Pn**	**01 01 33.9**	**-1.6**
BPAW	**Bear Paw Mtn.**	**15.51**	**33**	P	**Pn**	**01 01 35.2**	**-1.0**
BPAW				IAmb	IAmb	01 01 45.2	
	comp=Z,5.9nm,1.0s						
FID	**Port Fidalgo**	**15.58**	**48**	Pn	**Pn**	**01 01 34.3**	**-2.9**
FID				IAmb	IAmb	01 01 34.7	
	comp=Z,7.6nm,0.9s						
SCM	**Sheep Creek Mo**	**15.65**	**44**	P	**Pn**	**01 01 37.1**	**-1.1**
SCM				pmax	pmax		
	comp=Z,20nm,1.3s						
SCM	**Sheep Creek Mo**	**15.65**	**44**	P	**Pn**	**01 01 37.1**	**-1.1**
SCM				IAmb	IAmb	01 01 49.8	
	comp=Z,20nm,1.3s						
RND	**Reindeer**	**15.84**	**37**	P	**Pn**	**01 01 41.1**	**+0.5**
RND				pmax	pmax		
	comp=Z,5.0nm,1.2s						
RND	**Reindeer**	**15.84**	**37**	Pn	**Pn**	**01 01 41.1**	**+0.5**
EYAK	**Cordova Ski Ar**	**15.85**	**49**	Pn	**Pn**	**01 01 41.7**	**+1.1**
MCK	**McKinley**	**16.00**	**36**	P	**Pn**	**01 01 42.6**	**+0.1**
MCK				pmax	pmax		
	comp=Z,11nm,1.3s						
MCK	**McKinley**	**16.00**	**36**	Pn	**Pn**	**01 01 42.6**	**+0.1**
MCK				IAmb	IAmb	01 02 00.4	
	comp=Z,10nm,1.3s						
IMAR	**Indian Mountai**	**16.02**	**25**	Pn	**P**	**01 01 44.8**	**-0.5**
MLY	**Manley**	**16.20**	**31**		**P**	**01 01 47.0**	**-0.4**
DHY	**Denali Highway**	**16.23**	**40**	Pn	**Pn**	**01 01 46.2**	**+0.7**
RAGM	**Ragged Mountai**	**16.30**	**50**	Pn	**Pn**	**01 01 44.8**	**-1.5**
RAGM				IAmb	IAmb	01 01 50.6	
	comp=Z,15nm,1.0s						
NEA	**Nenana**	**16.45**	**34**	Pn	**Pn**	**01 01 47.6**	**-0.5**
WRH	**Wood River Hil**	**16.73**	**35**	Pn	**Pn**	**01 01 51.6**	**-0.1**
MDM	**Murphy Dome**	**16.98**	**34**	Pn	**P**	**01 01 57.3**	**+1.4**
GLB	**Gilahina Butte**	**17.04**	**47**	Pn	**Pn**	**01 01 53.7**	**-1.9**
HDA	**Harding Lake**	**17.10**	**36**	Pn	**P**	**01 01 58.0**	**+0.7**
CRQM	**Cirque**	**17.13**	**50**	Pn	**Pn**	**01 01 56.0**	**-0.9**
VRDI	**Verde Repeater**	**17.13**	**48**	Pn	**Pn**	**01 01 55.4**	**-1.5**
TGL	**Tana Glacier**	**17.28**	**50**	Pn	**P**	**01 01 59.2**	**-0.2**
IL31		**17.33**	**35**		**P**	**01 01 60.0**	**+0.3**
ILAR	**Eielson Array**	**17.33**	**35**	P	**Pn**	**01 01 58.2**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=241,slow=8.9,SNR=2.7						
ILAR				PcP	**PcP**	**01 06 37.7**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=268,slow=3.4,SNR=7.2						
ILAR	**Eielson Array**	**17.33**	**35**	P	**P**	**01 02 00.9**	**+1.2**
ILAR	**Eielson Array**	**17.33**	**35**		**P**	**01 02 00.9**	**+1.2**
MCARA	**McCarthy VSAT**	**17.38**	**48**	Pn	**Pn**	**01 01 59.3**	**-0.4**
MCARA				IAmb	IAmb	01 02 06.3	
	comp=Z,5.7nm,0.7s						
RIDG	**Independent Ri**	**17.55**	**40**	Pn	**P**	**01 02 03.1**	**+0.8**
BALM	**Baldy**	**17.59**	**50**	P	**Pn**	**01 02 02.1**	**-0.2**
BALM				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BALM	**Baldy**	**17.59**	**50**		**Pn**	**01 02 02.1**	**-0.2**
MENT	**Mentasta**	**17.65**	**43**	Pn	**P**	**01 02 03.5**	**+0.1**
COLD	**Coldfoot**	**17.89**	**26**		**P**	**01 02 07.4**	**+1.5**
BARN	**Barnard Glacie**	**17.91**	**50**	P	**Pn**	**01 02 06.0**	**-0.4**
BARN				IAmb	IAmb	01 02 13.6	
	comp=Z,14nm,1.5s						
SCRK	**Sand Creek**	**18.00**	**40**		**Pn**	**01 02 08.5**	**+1.1**
CTGM	**Chitina Glacie**	**18.04**	**50**	P	**P**	**01 02 07.6**	**-0.1**
PCA	**Pinnacle**	**18.36**	**53**	P	**Pn**	**01 02 13.6**	**+1.9**
PCA				IAmb	IAmb	01 02 20.4	
	comp=Z,16nm,1.2s						
BCAR	**Beaver Creek A**	**18.51**	**44**	P	**P**	**01 02 12.9**	**+0.1**
TOLK	**Toolik Lake Re**	**19.10**	**24**	P	**Pn**	**01 02 20.6**	**+0.1**
TOLK				IAmb	IAmb	01 02 34.1	
	comp=Z,9.4nm,1.4s						
PEA0B	**Petropavlovsk-**	**19.18**	**285**	P	**P**	**01 02 19.9**	**-0.3**
PEA0B				pmax	pmax		
	comp=Z,27nm,1.4s						
PEA0B	**Petropavlovsk-**	**19.18**	**285**	P	**P**	**01 02 19.9**	**-0.3**
PEA0B				IAmb	IAmb	01 02 33.9	
	comp=Z,27nm,1.4s						
PETK	**Petropavlovsk-**	**19.18**	**285**	P	**P**	**01 02 20.7**	**+0.6**
	comp=Z,2.3nm,0.3s,baz=91,slow=13,SNR=12						
PETK	**Petropavlovsk-**	**19.18**	**285**	P	**P**	**01 02 20.5**	**+0.3**

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DHAK  Deception Hill     19.23  57  P      P       01 02 20.2 -0.5
DHAK                                IAmb   IAmb    01 02 27.6
      comp=Z,34nm,1.4s
BILL  Bilibino           19.26 333 eP      Pn      01 02 24.7 +2.3
BILL                                pmax   pmax
      comp=Z,9.0nm,2.5s
EGAK  Eagle              19.46  39  IAmb   IAmb    01 02 42.0
      comp=Z,6.9nm,1.1s
BMAR  Burnt Mountain     19.66  30  P      Pn      01 02 26.4 -0.7
HYT   Haines Junctio     19.83  52  P      Pn      01 02 29.9 +0.5
DAWY  Dawson             19.88  42  P      P       01 02 28.5 +0.8
SKAG  Skagway            20.74  56  P      P       01 02 38.4 +1.4
SKAG                                IAmb   IAmb    01 02 39.4
      comp=Z,12nm,0.7s
WHY   Whitehorse         21.08  53  P      P       01 02 42.8 +2.0
WHY                                 IAmb   IAmb    01 02 47.3
      comp=Z,4.8nm,1.0s
SEY   Seymchan           22.14 313  P      P       01 02 52.1 +0.1
      comp=Z,1.1nm,0.5s,baz=109,slow=11,SNR=8.1
SEY   Seymchan           22.14 313 iP      P       01 02 51.5 -0.5
MA2   Magadan            22.55 304  P      P       01 02 57.7 +1.3
      comp=Z,4.8nm,0.5s,baz=93,slow=13,SNR=7.3
MA2                                 LR     LR      01 13 44.4
      comp=Z,24nm,18.4s,baz=98,slow=42
MA2   Magadan            22.55 304ceP      P       01 02 57.8 +1.4
MA2                                 pmax   pmax
      comp=Z,5.0nm,1.7s
MA2   Magadan            22.55 304  P      P       01 02 58.1 +1.7
MA2                                 IAmb   IAmb    01 02 59.3
      comp=Z,4.7nm,0.7s
DIB   Dawson Inlet,      22.84  73  P      P       01 03 01.4 +2.0
DLBC  Dease Lake         23.47  59  P      P       01 03 08.4 +2.7
      comp=Z,3.5nm,0.7s,baz=268,slow=5.4,SNR=7.0
DLBC  Dease Lake         23.47  59  P      P       01 03 08.0 +2.2
DLBC                                IAmb   IAmb    01 03 09.6
      comp=Z,13nm,1.1s
INK   Inuvik             23.71  34  P      P       01 03 07.5 -0.2
      comp=Z,2.1nm,0.5s,baz=213,slow=11,SNR=21
INK   Inuvik             23.71  34  IAmb   IAmb    01 03 10.1
      comp=Z,2.9nm,0.7s
C36M  Paulatuk           27.30  34  P      P       01 03 41.5 +1.3
LLLB  Lillooet           29.87  74  P      P       01 04 05.6 +2.3
LLLB                                IAmb   IAmb    01 04 12.6
      comp=Z,5.3nm,1.1s
YKA   Yellowknife Ar     30.75  49  P      P       01 04 11.0 +0.1
      comp=Z,0.3nm,0.5s,baz=288,slow=8.8,SNR=4.9
YKA                                 PcP    PcP     01 07 07.2 +0.3
      comp=Z,0.1nm,0.5s,baz=279,slow=2.5,SNR=4.5
YKA                                 ScP    ScP     01 10 45.7 +1.1
      comp=Z,0.1nm,0.7s,baz=276,slow=2.8,SNR=3.6
B08A  Colville Reser     32.33  76  P      P       01 04 25.9 +0.9
B08A                                IAmb   IAmb    01 04 27.6
      comp=Z,2.4nm,0.7s
TIXI  Tiksi              32.35 329  LR     LR      01 18 29.9
      comp=Z,25nm,19.5s,baz=53,slow=38
ERM   Erimo              32.62 270  P      P       01 04 26.4 -1.1
ERM                                 pmax   pmax
      comp=Z,35nm,1.1s
ERM   Erimo              32.62 270  P      P       01 04 26.4 -1.1
NEW   Newport            33.68  75  P      P       01 04 38.5 +1.7
NEW                                 pmax   pmax
      comp=Z,4.0nm,0.7s
NEW   Newport            33.68  75  P      P       01 04 38.5 +1.7
JTMT  Jette              35.61  74  P      P       01 04 54.6 +1.1
JTMT                                IAmb   IAmb    01 04 55.5
      comp=Z,6.8nm,1.5s
KLR   Kul'dur            35.79 289  P      P       01 04 53.4 -1.5
      comp=Z,2.0nm,0.5s,baz=72,slow=6.4,SNR=17
KLR   Kul'dur            35.79 289 iP      P       01 04 53.0 -1.9
KLR                                 pmax   pmax
      comp=Z,1.0nm,0.3s
RES   Resolute Bay       36.65  26  LR     LR      01 21 42.8
      comp=Z,54nm,19.3s,baz=292,slow=39
KVN   Kaiserville        38.10  89  P      P       01 05 16.8 +1.9
KVN                                 pmax   pmax
      comp=Z,1.0nm,0.9s
KVN   Kaiserville        38.10  89  P      P       01 05 16.8 +1.9
KVN                                 IAmb   IAmb    01 05 17.9
      comp=Z,1.4nm,0.9s
RYN   Ryan               38.10  90  P      P       01 05 17.5 +2.6
RYN                                 IAmb   IAmb    01 05 18.0
      comp=Z,2.0nm,1.0s
EGMT  Eagleton           38.12  72  P      P       01 05 16.8 +2.0
EGMT                                IAmb   IAmb    01 05 23.9
      comp=Z,4.6nm,0.8s
H11S1 WAKE ISLAND Hy     38.24 216  T      T       01 46 09.9
      baz=22,slow=76,SNR=292
H11S2 WAKE ISLAND Hy     38.25 216  T      T       01 46 11.5
      baz=22,slow=76,SNR=296
H11S3 WAKE ISLAND Hy     38.26 216  T      T       01 46 12.6
      baz=22,slow=76,SNR=203
NVAR  Mina Array Bea     38.36  90  P      P       01 05 18.9 +1.9
      comp=Z,1.5nm,0.8s,baz=300,slow=8.6,SNR=8.8
NVAR                                PcP    PcP     01 07 30.5 +0.8
      comp=Z,0.7nm,0.8s,baz=332,slow=3.1,SNR=3.7
NVAR  Mina Array Bea     38.36  90  P      P       01 05 19.1 +2.0
ELK   Elko               38.83  85  P      P       01 05 22.9 +1.9
ELK                                 pmax   pmax
      comp=Z,3.0nm,1.1s
ELK   Elko               38.83  85  P      P       01 05 22.9 +1.9
ELK                                 IAmb   IAmb    01 05 24.9
      comp=Z,2.6nm,1.1s
YHL   Hebgen Lake        38.94  77  P      P       01 05 24.0 +2.1
MJAR  Matsushiro Arr     39.00 267  P      P       01 05 21.8 -0.3
      comp=Z,1.7nm,0.4s,baz=52,slow=8.1,SNR=6.2
MJAR                                PcP    PcP     01 07 31.2 -0.2
      comp=Z,1.6nm,0.6s,baz=47,slow=1.1,SNR=5.0
MJAR  Matsushiro Arr     39.00 267  P      P       01 05 24.3 +2.1
MJAR                                               01 07 31.2
MJAR                                pmax   pmax
      comp=Z,4.0nm,1.5s
MJAR  Matsushiro Arr     39.00 267  P      P       01 05 24.3 +2.1
MAJO  Matsushiro         39.00 267  P      P       01 05 21.6 -0.6
MAJO                                pmax   pmax
      comp=Z,21nm,1.4s
MAJO  Matsushiro         39.00 267  P      P       01 05 21.6 -0.6
MJB9  Matsu-Tunnel       39.00 267  P      P       01 05 21.8 -0.4
YNM   Yellowstone No     39.29  77  P      P       01 05 23.9 -0.9
YNR   Norris Junctio     39.31  77  P      P       01 05 25.5 +0.5
BGU   Big Grassy Mou     40.07  83  P      P       01 05 31.3 +0.1
R11A  Troy Canyon, C     40.08  88  P      P       01 05 31.7 +0.4
DUG   Dugway, Tooele     40.64  84  IAmb   IAmb    01 05 38.4
      comp=Z,3.5nm,0.9s
BW06  Boulder Array      41.08  78  P      P       01 05 41.0 +1.4
BW06                                IAmb   IAmb    01 05 41.2
      comp=Z,2.5nm,0.8s
PD31  Pinedale Array     41.08  78  P      P       01 05 40.0 +0.3
PD31                                IAmb   IAmb    01 05 41.2
      comp=Z,2.2nm,0.8s
PDAR  Pinedale Array     41.08  78  P      P       01 05 40.8 +1.1
      comp=Z,2.0nm,0.7s,baz=299,slow=5.0,SNR=21
PDAR  Pinedale Array     41.08  78  P      P       01 05 40.6 +1.0
GSC   Goldstone, Bar     41.29  93  P      P       01 05 42.0 +0.7
GSC                                 pmax   pmax
      comp=Z,5.0nm,1.0s
GSC   Goldstone, Bar     41.29  93  P      P       01 05 42.0 +0.7
GSC                                 IAmb   IAmb    01 05 43.9
      comp=Z,5.1nm,0.9s
MPU   Maple Canyon       41.46  83  P      P       01 05 43.3 +0.6
MSU   Marysvale          42.06  85  P      P       01 05 48.2 +0.5
MSU   Marysvale          42.06  85  P      P       01 05 48.2 +0.5
TMUT  Trail Mountain     42.16  84  P      P       01 05 49.6 +1.0
P17A  Butcher Ranch,     42.34  83  P      P       01 05 50.4 +0.5
LCMT  Little Creek M     42.36  88  P      P       01 05 50.9 +0.8
RDMU  Red Mountain       42.38  81  P      P       01 05 50.4 +0.2
SRU   San Rafael Swe     42.70  83  P      P       01 05 53.7 +0.9
SRU                                 pmax   pmax
      comp=Z,4.0nm,0.8s
SRU   San Rafael Swe     42.70  83  P      P       01 05 53.6 +0.9
W13A  Hualapai Mount     43.22  90  P      P       01 05 58.7 +1.6
W13A                                IAmb   IAmb    01 05 59.2
      comp=Z,2.7nm,0.9s
U15A  North Rim          43.32  88  P      P       01 05 59.4 +1.4
U15A                                IAmb   IAmb    01 06 00.8
      comp=Z,2.7nm,0.8s
RSSD  Black Hills        43.58  73  P      P       01 05 59.9  0.0
RSSD                                pmax   pmax
      comp=Z,2.0nm,0.8s
RSSD  Black Hills        43.58  73  P      P       01 05 59.9  0.0
RSSD                                IAmb   IAmb    01 06 04.3
      comp=Z,2.2nm,0.8s
PV09  Paradox Valley     43.93  83  P      P       01 06 03.7 +0.9
PV22  Blue Mesa, Par     44.11  83  P      P       01 06 03.7 -0.5
PV22                                IAmb   IAmb    01 06 07.5
      comp=Z,5.0nm,1.1s
PV04  Paradox Valley     44.13  83  P      P       01 06 04.3 -0.1
PV17  East Wray Mesa     44.17  83  P      P       01 06 05.0 +0.3
PV16  Nyswonger Mesa     44.18  83  P      P       01 06 05.2 +0.4
PV16                                IAmb   IAmb    01 06 06.9
      comp=Z,2.8nm,0.7s
PV11  David Mesa, Pa     44.21  83  P      P       01 06 05.2 +0.2
PV18  Skein Mesa, Pa     44.22  83  P      P       01 06 04.4 -0.7
PV18                                IAmb   IAmb    01 06 06.8
      comp=Z,4.0nm,0.7s
PV12  Saucer Basin,      44.24  83  IAmb   IAmb    01 06 09.2
      comp=Z,4.1nm,0.9s
PV03  Paradox Valley     44.25  83  P      P       01 06 05.6 +0.3
PV03                                IAmb   IAmb    01 06 07.0
      comp=Z,3.2nm,0.7s
PV02  Paradox Valley     44.35  83  P      P       01 06 06.6 +0.4
PV15  Paradox Valley     44.42  83  P      P       01 06 05.6 -1.1
PV15                                IAmb   IAmb    01 06 08.4
      comp=Z,6.6nm,1.2s
WUAZ  Wupatki            44.48  88  P      P       01 06 07.2 +0.1
WUAZ                                IAmb   IAmb    01 06 10.1
      comp=Z,2.6nm,0.7s
PV01  Paradox Valley     44.50  83  P      P       01 06 07.8 +0.4
Y14A  Wickenburg         44.53  91  P      P       01 06 07.4 -0.1
Y14A                                IAmb   IAmb    01 06 09.5
      comp=Z,2.5nm,0.9s
KSRS  Korea Array        44.71 276  P      P       01 06 08.0 -0.7
      comp=Z,2.2nm,0.7s,baz=54,slow=8.3,SNR=9.4
KSRS                                LR     LR      01 23 15.0
      comp=Z,19nm,20.7s,baz=348,slow=34
KSRS  Korea Array        44.71 276  P      P       01 06 08.0 -0.7
ULM   Lac du Bonnet      44.76  62  P      P       01 06 09.1 +0.2
      comp=Z,1.2nm,0.5s,baz=310,slow=9.2,SNR=4.7
ULM   Lac du Bonnet      44.76  62  IAmb   IAmb    01 06 14.8
      comp=Z,7.6nm,1.5s
AGMN  Agassiz Nation     45.85  64  IAmb   IAmb    01 06 18.6
      comp=Z,3.7nm,0.8s
214A  Organ Pipe Nat     46.01  93  P      P       01 06 19.9 +0.8
214A                                IAmb   IAmb    01 06 21.3
      comp=Z,4.0nm,1.0s
T25A  Trinidad           47.66  81  P      P       01 06 33.2 +1.0
121A  Cookes Peak, D     48.69  88  P      P       01 06 40.8 +0.6
DAG   Danmarks Havn      49.87   8 iP      P       01 06 47.7 -0.6
      comp=Z,3.8nm,0.6s
DAG   Danmarks Havn      49.87   8 iP      P       01 06 47.7 -0.6
DAG                                 pmax   pmax
      comp=Z,4.0nm,0.6s
SONM  Songino Array      50.68 300  P      P       01 06 54.7 -0.3
      comp=Z,0.5nm,0.4s,baz=49,slow=6.1,SNR=6.5
SONM                                PcP    PcP     01 08 11.1 -0.5
      comp=Z,0.9nm,0.6s,baz=51,slow=2.3,SNR=7.4
SONM  Songino Array      50.68 300  IAmb   IAmb    01 06 55.0
      comp=Z,0.9nm,1.0s
MNTX  Cornudas Mount     50.73  87  P      P       01 06 56.3 +0.8
MNTX                                IAmb   IAmb    01 06 57.4
      comp=Z,2.3nm,0.8s
SUMG  Summit             50.96  17 iP      P       01 06 57.3 +0.2
SUMG  Summit             50.96  17 iP      P       01 06 57.3 +0.2
HHC   Hu-ho-hao-te       52.26 290 eP      P       01 07 07.8 +1.0
TX31  Lajitas Ar. Si     53.45  88  IAmb   IAmb    01 07 17.5
      comp=Z,3.2nm,0.8s
TX32  Lajitas Array      53.45  88  IAmb   IAmb    01 07 17.5
      comp=Z,3.4nm,0.8s
TXAR  Lajitas Array      53.45  88  P      P       01 07 16.6 +0.9
      comp=Z,2.7nm,0.7s,baz=297,slow=5.4,SNR=44
TXAR                                PcP    PcP     01 08 23.1 +0.9
      comp=Z,0.6nm,0.6s,baz=236,slow=0.8,SNR=5.5
TXAR  Lajitas Array      53.45  88  P      P       01 07 16.4 +0.7
SCHQ  Schefferville      55.90  43  P      P       01 07 33.0 -0.1
      comp=Z,0.7nm,0.4s,baz=293,slow=7.8,SNR=6.2
ZALV  Zalesovo Beam      56.93 317  PcP    PcP     01 08 35.2 +0.1
      comp=Z,0.6nm,0.4s,baz=57,slow=5.3,SNR=4.0
ZALV                                LR     LR      01 33 12.5
      comp=Z,25nm,18.1s,baz=38,slow=37
ZALV  Zalesovo Beam      56.93 317  PcP    PcP     01 08 33.9 -1.2
ARCES ARCESS Array B     57.82 353  P      P       01 07 45.6 -0.8
      comp=Z,5.9nm,1.0s,baz=16,slow=9.2,SNR=5.1
ARCES                               PcP    PcP     01 08 38.1 -0.2
      comp=Z,4.0nm,0.7s,baz=29,slow=2.1,SNR=4.5
WMQ   Urumqi             62.96 307 eP      P       01 08 25.3 +3.4
MKAR  Makanchi Array     63.28 313  P      P       01 08 23.3 -0.7
      comp=Z,0.3nm,0.3s,baz=46,slow=6.4,SNR=9.1
MKAR                                PcP    PcP     01 09 00.5 -0.2
      comp=Z,0.2nm,0.5s,baz=47,slow=6.5,SNR=2.4
BRVK  Borovoye           63.28 324ceP      P       01 08 23.8  0.0
BRVK                                pmax   pmax
      comp=Z,8.0nm,2.5s
FINES FINESS Array B     65.74 351  P      P       01 08 38.8 -0.9
      comp=Z,1.5nm,0.7s,baz=6.2,slow=8.9,SNR=10.0
FINES                               PcP    PcP     01 09 10.2 -0.3
      comp=Z,0.8nm,0.6s,baz=5.7,slow=4.2,SNR=3.7
FINES FINESS Array B     65.74 351 iP      P       01 08 38.7 -1.0
FINES                               pmax   pmax
      comp=Z,2.0nm,0.6s
NB2   NORSAR Subarra     66.91 359  P      P       01 08 46.3 -0.9
      comp=Z,1.1nm,0.5s,baz=1.0,slow=6.5
NOA   NORSAR Array B     66.91 359  P      P       01 08 47.0 -0.3
      comp=Z,1.2nm,0.5s,baz=1.6,slow=6.4,SNR=20
NOA   NORSAR Array B     66.91 359  P      P       01 08 47.0 -0.3
NORES NORESS Array B     67.21 359  P      P       01 08 48.5 -0.6
NORES                               pmax   pmax
      comp=Z,1.0nm,0.4s
AAK   Ala-Archa          69.99 315ceP      P       01 09 06.3 -0.6
AAK                                 pmax   pmax
      comp=Z,1.0nm,1.0s
OBN   Obninsk            70.53 344 eP      P       01 09 06.5 -3.3
OBN                                e               01 09 29.4
OBN                                e               01 11 48.1
OBN                                 pmax   pmax
      comp=Z,4.0nm,0.6s
EKA   Eskdalemuir Ar     72.13   8  P      P       01 09 19.0 -0.4
CMAR  Chiang Mai Arr     75.93 282  P      P       01 09 42.5 +0.4
      comp=Z,2.5nm,0.6s,baz=25,slow=6.3,SNR=12
CMAR  Chiang Mai Arr     75.93 282  P      P       01 09 42.8 +0.7
GERES GERESS Array B     79.07 357  P      P       01 09 59.0 -0.4
      comp=Z,0.6nm,0.7s,baz=14,slow=5.9,SNR=4.6
WRA   Warramunga Arr     86.47 231  P      P       01 10 36.8 -1.1
      comp=Z,0.3nm,0.3s,baz=34,slow=6.0,SNR=4.6
WRA   Warramunga Arr     86.47 231  IAmb   IAmb    01 10 37.4
      comp=Z,0.1nm,1.0s
PSI   Prapat             88.15 272  P      P       01 10 46.4 +0.1
      comp=Z,8.6nm,0.6s,baz=317,slow=3.5,SNR=8.6
RPSI  Rantau Prapat      88.23 272  P      P       01 10 46.4 -0.1
FITZ  Fitzroy Crossi     89.26 239  P      P       01 10 50.7 -0.5
      comp=Z,1.0nm,0.7s,baz=288,slow=3.2,SNR=2.3
ASAR  Alice Springs      89.88 229  P      P       01 10 53.6 -0.4
      comp=Z,1.8nm,0.8s,baz=25,slow=4.7,SNR=18
ASAR  Alice Springs      89.88 229  P      P       01 10 53.3 -0.8
MAW   Mawson            150.46 219  PKPbc  PKPbc   01 17 45.1 +0.1
      comp=Z,2.1nm,0.6s,baz=90,slow=20,SNR=2.1
BOSA  Boshof            153.51 328  PKPbc  PKiKP   01 17 53.6  0.0
      comp=Z,1.1nm,0.5s,baz=45,slow=7.8,SNR=3.6
```

IDC 29 00:58:12.2±1.9**, 2°.06N**×**127°.67E, h0^{km}, mb3.6**/4**, mb1 3.9**/4**, mb1mx3.4**/45**, mbtmp3.7**/4**, Error ellipse: s-maj=110.1km s-min=22.9km az=70.0, Northern Molucca Sea**

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
FITZ  Fitzroy Crossi     20.13 186   P      P        01 02 48.4 +0.4
      0.7nm,0.6s,baz=354,slow=11,SNR=1.8
WRA   Warramunga Arr     22.83 164   P      P        01 03 17.6 +0.5
      2.5nm,0.5s,baz=343,slow=11,SNR=7.0
ASAR  Alice Springs      26.28 167   P      P        01 03 49.0 -0.6
      0.7nm,0.5s,baz=347,slow=7.0,SNR=16
MKAR  Makanchi Array     59.45 325   P      P        01 08 17.0 +0.1
      0.4nm,0.4s,baz=116,slow=7.6,SNR=11
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*KRNET **29** 01:15:17.9±0.1, 42°.57N×79°.29E, h19^{km}, mb2.3*
*NNC **29** 01:15:17.9±0.9, 42°.58N×79°.26E, h0^{km}, mb2.7, mpv2.4, Error ellipse: s-maj=6.1km s-min=3.1km az=163.0*
*SOME **29** 01:15:17.5, 42°.52N×79°.27E, h15^{km}*
ISC 29 01:15:17.4±1.4**, 42°.55N**±0°.05×**79°.27E**±0°.03**, h13^{km}**±13^{km}**, n29, σ0ˢ.82**/55**, 8C-4D, Lake Issyk-Kul region**

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
UZB   Uzynbulak           0.62 343  eP      Pg       01 15 29.5 -0.2
      baz=41
UZB                                 eS      Sg       01 15 38.0  0.0
      baz=41
UZB   Uzynbulak           0.62 343  eP      Pg       01 15 29.4 -0.2
      0.9nm,0.2s
UZB                                 eS      Sg       01 15 37.9  0.0
      9.1nm,0.2s
UZB   Uzynbulak           0.62 343   P      Pg       01 15 29.4 -0.2
      0.4nm,0.2s
UZB                                  S      Sg       01 15 37.9  0.0
      7.3nm,0.2s
PRZ   Przheval'sk         0.65 264⇑iP      Pg       01 15 30.5 +0.5
      baz=62
PRZ                               ⇑iS      Sb       01 15 39.9 +0.2
      baz=62
PDGK  Podgornoye          0.80  12   P      Pg       01 15 32.8 -0.1
      0.8nm,0.2s
PDGK                                 S      Sb       01 15 43.9  0.0
      0.9nm,0.3s
SATY  Saty                0.81 309  eP      Pg       01 15 33.0 -0.2
      0.7nm,0.2s
SATY                                eS      Sg       01 15 44.0 +0.1
      10nm,0.1s
SATY  Saty                0.81 309   P      Pg       01 15 33.0 -0.2
      1.0nm,0.2s
SATY                                 S      Sg       01 15 44.0 +0.1
      10.0nm,0.1s
KPKS  Kokpek              1.01 335  eP      Pb       01 15 36.7 -0.2
      2.3nm,0.1s
KPKS                                eS      Sg       01 15 50.2  0.0
      6.2nm,0.3s
KTMS  Ketmen              1.20  41  eP      Pb       01 15 40.1  0.0
      baz=41
KTMS                                eS      Sg       01 15 56.1  0.0
      baz=41
KTMS  Ketmen              1.20  41  eP      Pb       01 15 40.1  0.0
      2.5nm,0.1s
KTMS                                eS      Sg       01 15 56.0  0.0
      2.2nm,0.1s
KTMS  Ketmen              1.20  41   P      Pb       01 15 40.1  0.0
      1.2nm,0.1s
KTMS                                 S      Sg       01 15 56.0  0.0
      1.9nm,0.1s
ANVS  Anan'yevo           1.21 282⇑iP      Pb       01 15 40.5 +0.3
      baz=81
ANVS                              ⇑iS      Sg       01 15 57.9 +1.6
      baz=81
KDJ   Kajisay             1.61 256⇑iP      Pb       01 15 47.3 +0.3
      baz=55
KDJ                               ⇑iS      Sb       01 16 08.6 +1.3
      baz=55
KOTS  Kotyrbulak          1.73 294  eP      Pb       01 15 49.4 +0.3
      baz=93
KOTS                                eS      Sg       01 16 12.3 -0.7
      baz=93
KOTS  Kotyrbulak          1.73 294  eP      Pb       01 15 49.4 +0.3
      3.7nm,0.2s
KOTS                                eS      Sg       01 16 12.3 -0.7
      12nm,0.3s
KOTS  Kotyrbulak          1.73 294   P      Pb       01 15 49.4 +0.3
      3.7nm,0.2s
KOTS                                 S      Sg       01 16 12.3 -0.7
      12nm,0.3s
TNSS  Tian-Shan           1.78 287  eP      Pb       01 15 51.0 +0.9
      baz=86
TNSS                                eS      Sg       01 16 14.8 +0.1
      baz=86
DJR   Jarkent             1.82  12  eP      Pb       01 15 51.1 +0.4
      0.3nm,0.2s
DJR                                 eS      Sg       01 16 15.4 -0.6
      1.8nm,0.2s
DJR   Jarkent             1.82  12   P      Pb       01 15 51.1 +0.4
      0.4nm,0.2s
DJR                                  S      Sg       01 16 15.4 -0.6
      2.6nm,0.3s
ARXS  Arharly             1.97 328  eP      Pb       01 15 53.9 +0.7
      1.3nm,0.5s
ARXS                                eS      Sg       01 16 19.8 -0.9
      6.4nm,0.5s
ARXS  Arharly             1.97 328   Pg     Pb       01 15 53.9 +0.7
      1.3nm,0.5s
ARXS                                 Lg     Lg       01 16 19.8
      6.4nm,0.5s
CHKK  Chushkaly           2.12 309  eP      Pb       01 15 56.7 +1.0
      baz=8.0
CHKK                                eS      Sg       01 16 24.5 -1.0
      baz=8.0
ULHL  Ulahol              2.26 263⇓iP      Pb       01 15 58.5 +0.2
      baz=63
ULHL                              ⇓iS      Sg       01 16 28.6 -1.6
      baz=63
BOOM  Boomskoye usch      2.46 270⇑iP      Pb       01 16 00.5 -1.1
      baz=69
BOOM                              ⇑iS      Sb       01 16 31.7 -0.2
      baz=69
DGS   Degeres             2.66 286  eP      Pb       01 16 06.2 +1.2
      0.6nm,0.3s
DGS                                 eS      Sg       01 16 40.8 -2.1
      2.3nm,0.4s
DGS   Degeres             2.66 286   Pg     Pb       01 16 06.2 +1.2
      1.0nm,0.3s
DGS                                  Lg     Lg       01 16 40.8
      2.9nm,0.4s
TKM2  Tokmak 2            2.73 279⇓iP      Pb       01 16 04.9 -1.3
      baz=79
TKM2                              ⇓iS      Sb       01 16 39.9 +0.2
      baz=79
KAPS  Kapalarasan         2.74   1  eP      Pb       01 16 07.3 +1.1
      0.2nm,0.2s
KAPS                                eS      Sg       01 16 42.8 -2.4
      1.8nm,0.2s
KAPS  Kapalarasan         2.74   1   Pg     Pb       01 16 07.3 +1.1
      0.6nm,0.4s
KAPS                                 Lg     Lg       01 16 42.8
      2.2nm,0.2s
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*NEIC **29** 01:15:56.4±1.6, 17°.8S±0°.1×178°.6W±0°.1, h538^{km}±6^{km}, mb4.2/52, Error ellipse: s-maj=21.4km s-min=15.1km az=138.0*
*IDC **29** 01:15:56.9±1.4, 17°.90S×178°.54W, h544^{km}±17^{km}, mb3.7/18, mb1 3.9/20, mb1mx3.8/27, mbtmp4.5/20, Error ellipse: s-maj=15.6km s-min=10.0km az=127.0*
ISC 29 01:15:57.2±0.4**, 17°.79S**±0°.09×**178°.65W**±0°.08**, h550^{km}, n186, σ1ˢ.09**/181**, mb4.2**/39**, 25C-17D, Fiji Islands region**

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
MSVF  Nonsavu             3.15 271   P      P        01 17 12.1 -1.1
AFI   Afiamalu            7.66  61   P      P        01 17 51.6 -0.1
      15nm,0.3s,baz=350,slow=3.4,SNR=19
AFI                                  S      S        01 19 23.9 -1.6
      3.0nm,0.3s,baz=151,slow=21,SNR=1.6
AFI   Afiamalu            7.66  61   P      P        01 17 51.5 -0.2
DZM   Mont Dzumac        14.65 251   P      P        01 19 04.3 +1.1
      1.2nm,0.3s,baz=198,slow=10,SNR=10
OUZ   Omahuta            18.68 200   P      P        01 19 43.6 +2.5
URZ   Urewera            20.73 189   P      P        01 19 57.5 -2.2
      20nm,0.6s,baz=73,slow=1.4,SNR=16
URZ   Urewera            20.73 189   P      P        01 19 58.1 -1.6
LTZ   Lake Taylor        26.08 195   P      P        01 20 46.7 -0.6
OXZ   Oxford             26.65 195   P      P        01 20 51.3 -0.9
RPZ   Rata Peaks         27.27 196   P      P        01 20 55.9 -1.8
      7.3nm,0.4s,baz=18,slow=1.9,SNR=9.0
RPZ   Rata Peaks         27.27 196   IAmb   IAmb     01 21 02.2
      comp=Z,77nm,1.7s
FOZ   Fox Glacier        27.45 198   P      P        01 20 59.3  0.0
MLZ   Mavora Lakes       29.63 199   P      P        01 21 18.2 -0.1
TOO   Toolangi           37.07 231   P      P        01 22 22.3 +1.3
STKA  Stephens Creek     38.48 241   P      P        01 22 34.1 +1.5
      comp=Z,5.6nm,0.5s,baz=95,slow=10,SNR=24
STKA  Stephens Creek     38.48 241   P      P        01 22 33.5 +0.9
BBOO  Buckleboo          43.26 241   P      P        01 23 11.4 +0.8
BBOO                                 IAmb   IAmb     01 23 12.3
      comp=Z,9.3nm,0.8s
WRA   Warramunga Arr     44.43 259   P      P        01 23 20.1 +0.3
      comp=Z,1.5nm,0.5s,baz=92,slow=6.8,SNR=14
WRA                                  PcP    PcP      01 24 51.9 +0.4
      comp=Z,1.1nm,0.7s,baz=90,slow=3.2,SNR=6.3
WRA                                  S      S        01 29 09.7 -5.5
      comp=Z,0.2nm,0.5s,baz=121,slow=15,SNR=0.9
AS31  Alice Springs      44.60 254   P      P        01 23 20.9 -0.3
AS31                                 IAmb   IAmb     01 23 22.7
      comp=Z,3.4nm,0.6s
ASAR  Alice Springs      44.60 254   P      P        01 23 21.9 +0.8
      comp=Z,11nm,0.5s,baz=88,slow=8.3,SNR=286
ASAR                                 PcP    PcP      01 24 52.3 +0.1
      comp=Z,1.2nm,0.4s,baz=100,slow=4.1,SNR=6.7
ASAR                                 S      S        01 29 15.3 -2.2
      comp=Z,2.0nm,1.0s,baz=86,slow=16,SNR=16
ASAR  Alice Springs      44.60 254   P      P        01 23 21.1 -0.1
MTN   Manton Dam         48.57 268   P      P        01 23 50.9 -0.3
MTN                                  IAmb   IAmb     01 23 51.7
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	comp=Z,5.3nm,0.7s						
KNRA	Kununurra	50.27	264	P	P	01 24 03.8	+0.1
KNRA				IAmb	IAmb	01 24 04.8	
	comp=Z,8.3nm,0.7s						
PSA00	Pilbara Seismi	57.72	255	P	P	01 24 56.0	-0.1
VNDA	Vanda	60.54	185	P	P	01 25 14.6	+0.6
	comp=Z,2.2nm,1.0s,baz=360,slow=7.0,SNR=8.4						
MJAR	Matsushiro Arr	67.68	323	P	P	01 26 00.5	+0.6
	comp=Z,6.1nm,0.5s,baz=149,slow=6.5,SNR=16						
MJAR	Matsushiro Arr	67.68	323	P	P	01 25 59.5	-0.4
MAJO	Matsushiro	67.68	323	P	P	01 25 59.4	-0.6
MAT	Matsushiro	67.68	323	P	P	01 26 00.5	+0.5
MJB9	Matsu-Tunnel	67.69	323	P	P	01 25 59.8	-0.1
QSPA	South Pole Qui	72.26	180	P	P	01 26 27.7	+0.9
QSPA				IAmb	IAmb	01 26 28.2	
	comp=Z,6.2nm,0.9s						
KSM	Kuching	72.44	277	P	P	01 26 30.1	+1.3
KSM				IAmb	IAmb	01 26 30.8	
	comp=Z,14nm,0.9s						
PETK	Petropavlovsk-	73.51	345	P	P	01 26 34.6	+0.7
	comp=Z,8.0nm,0.6s,baz=139,slow=8.5,SNR=15						
PETK	Petropavlovsk-	73.51	345	P	P	01 26 34.0	0.0
KSRS	Korea Array	74.46	318	P	P	01 26 41.7	+2.0
	comp=Z,1.0nm,0.5s,baz=145,slow=5.0,SNR=2.8						
USRK	Ussuriysk Ar.	76.39	326	P	P	01 26 52.3	+2.1
	comp=Z,1.7nm,0.6s,baz=148,slow=4.7,SNR=7.2						
USRK	Ussuriysk Ar.	76.39	326	P	P	01 26 52.1	+1.9
CMB	Columbia Colle	77.91	43	P	P	01 26 59.2	+0.4
MDPB	Devils Postpil	78.55	44	IAmb	IAmb	01 30 06.2	
	comp=Z,8.7nm,0.8s						
NVAR	Mina Array Bea	79.50	44	P	P	01 27 08.4	+1.0
	comp=Z,1.9nm,0.7s,baz=224,slow=9.1,SNR=17						
NVAR	Mina Array Bea	79.50	44	P	P	01 27 07.6	+0.2
CN2	Changchun	79.79	322	*e*P	P	01 27 10.0	+1.5
MA2	Magadan	81.03	345	P	P	01 27 14.4	-0.2
	comp=Z,2.1nm,0.3s,baz=188,slow=9.4,SNR=5.4						
MA2	Magadan	81.03	345	IAmb	IAmb	01 27 15.2	
	comp=Z,5.0nm,0.8s						
SUA	Susitna One	82.07	13	IAmb	IAmb	01 27 21.3	
	comp=Z,7.5nm,0.7s						
X16A	Lo Mia Camp, P	82.28	50	P	P	01 27 23.2	+1.4
U15A	North Rim	82.61	48	P	P	01 27 24.7	+1.2
U15A				IAmb	IAmb	01 27 26.0	
	comp=Z,4.7nm,0.7s						
ELK	Elko	82.73	43	P	P	01 27 24.8	+0.9
GHO	Glory Hole Cre	82.75	14	P	P	01 27 23.1	-0.3
SEY	Seymchan	83.61	347	P	P	01 27 27.4	-0.1
	comp=Z,9.1nm,0.6s,baz=144,slow=5.9,SNR=57						
GLB	Gilahina Butte	83.72	16	P	P	01 27 28.2	0.0
GLB				IAmb	IAmb	01 27 29.0	
	comp=Z,7.4nm,0.6s						
MFID	Camas Ranch	83.73	41	P	P	01 27 30.3	+1.5
MFID				IAmb	IAmb	01 27 30.6	
	comp=Z,7.5nm,1.2s						
BALM	Baldy	83.78	17	P	P	01 27 28.6	+0.1
KTH	Kantishna Hill	83.91	12	IAmb	IAmb	01 27 29.3	
	comp=Z,5.5nm,0.8s						
BARN	Barnard Glacie	83.99	17	P	P	01 27 30.3	+0.6
BARN				IAmb	IAmb	01 27 30.9	
	comp=Z,4.8nm,0.8s						
F10A	Beach Ranch, E	84.25	38	P	P	01 27 32.0	+0.8
F10A				IAmb	IAmb	01 27 33.5	
	comp=Z,5.1nm,0.9s						
MCK	McKinley	84.48	13	IAmb	IAmb	01 27 32.8	
	comp=Z,5.9nm,0.8s						
WRH	Wood River Hil	85.31	13	IAmb	IAmb	01 27 36.9	
	comp=Z,5.4nm,0.9s						
CCB	Clear Creek Bu	85.52	13	IAmb	IAmb	01 27 36.5	
	comp=Z,3.9nm,0.6s						
IMAR	Indian Mountai	85.61	10	P	P	01 27 36.7	-0.5
IL31		85.83	13	IAmb	IAmb	01 27 38.6	
	comp=Z,2.7nm,0.6s						
ILAR	Eielson Array	85.83	13	P	P	01 27 37.6	-0.7
	comp=Z,1.8nm,0.4s,baz=220,slow=5.1,SNR=44						
ILAR	Eielson Array	85.83	13	P	P	01 27 37.8	-0.5
XAN	Xi'an	86.01	307	P	P	01 27 41.5	+1.6
XAN				pP	PcP	01 27 46.0	+4.3
TXAR	Lajitas Array	86.13	58	P	P	01 27 42.5	+1.8
	comp=Z,2.4nm,0.7s,baz=217,slow=6.2,SNR=30						
TXAR	Lajitas Array	86.13	58	P	P	01 27 42.2	+1.5
BILL	Bilibino	86.30	354	P	P	01 27 41.4	+0.9
MCMT	McKenzie Canyo	86.30	41	P	P	01 27 42.2	+0.9
REDW	Red Top Meadow	86.86	43	IAmb	IAmb	01 27 45.8	
	comp=Z,6.1nm,1.1s						
HHC	Hu-ho-hao-te	87.03	315	*e*P	P	01 27 45.3	+0.6
IMW	Indian Meadow	87.05	42	IAmb	IAmb	01 27 47.0	
	comp=Z,4.2nm,0.8s						
BW06	Boulder Array	87.43	44	IAmb	IAmb	01 27 47.8	
	comp=Z,2.3nm,0.7s						
PDAR	Pinedale Array	87.43	44	P	P	01 27 47.2	+0.5
	comp=Z,1.9nm,0.5s,baz=216,slow=3.4,SNR=22						
PDAR	Pinedale Array	87.43	44	P	P	01 27 46.8	+0.2
BMAR	Burnt Mountain	88.60	12	P	P	01 27 51.9	+0.6
CMAR	Chiang Mai Arr	88.63	290	P	P	01 27 54.4	+1.9
	comp=Z,2.2nm,0.9s,baz=100,slow=3.0,SNR=11						
CMAR	Chiang Mai Arr	88.63	290	P	P	01 27 53.9	+1.4
CHTO	Chiang Mai	88.75	290	P	P	01 27 54.3	+1.2
CHTO				IAmb	IAmb	01 27 55.3	
	comp=Z,3.4nm,1.0s						
SNAA	Sanae	90.72	179	P	P	01 28 00.6	-0.6
VNA3	Neumayer Olymp	90.87	176	P	P	01 28 01.6	-0.3
SONM	Songino Array	93.32	319	P	P	01 28 13.4	-0.2
	comp=Z,0.3nm,0.4s,baz=160,slow=4.6,SNR=4.1						
SONM	Songino Array	93.32	319	IAmb	IAmb	01 28 14.8	
	comp=Z,1.0nm,1.1s						
ZALV	Zalesovo Beam	108.00	322	PKiKP	PKiKP	01 33 20.6	-1.8
	comp=Z,0.8nm,0.6s,baz=165,slow=0.4,SNR=3.7						
MKAR	Makanchi Array	108.89	314	PKiKP	PKiKP	01 33 23.3	-1.0
	comp=Z,0.6nm,0.5s,baz=216,slow=0.5,SNR=14						
ARCES	ARCESS Array B	126.16	350	PKP	PKiKP	01 33 56.4	-0.8
	comp=Z,2.7nm,0.8s,baz=48,slow=1.8,SNR=7.9						
FINES	FINESS Array B	133.02	344	PKhKP	PKPpre	01 34 03.5	
	comp=Z,1.5nm,0.9s,baz=11,slow=3.9,SNR=4.0						
FINES				PKP	PKPdf	01 34 09.4	-0.4
	comp=Z,0.7nm,0.6s,baz=66,slow=1.7,SNR=6.6						
NB2	NORSAR Subarra	136.23	353	PKP	PKiKP	01 34 17.4	-0.4
	comp=Z,0.3nm,0.6s,baz=17,slow=2.6						
NOA	NORSAR Array B	136.23	353	PKP	PKiKP	01 34 17.0	-0.8
	comp=Z,0.5nm,0.8s,baz=14,slow=4.0,SNR=5.1						
AKASG	Malin Array Be	140.35	332	PKhKP	PKPpre	01 34 17.0	
	comp=Z,0.7nm,0.4s,baz=46,slow=4.0,SNR=5.6						
AKASG				PKP	PKiKP	01 34 24.3	-2.1
	comp=Z,0.6nm,0.4s,baz=37,slow=3.4,SNR=4.4						
SORM	Soroca	142.58	330	⇓P	PKPdf	01 34 24.8	-2.9
BZK	Bozkurt	143.19	318	⇑P	PKPdf	01 34 28.0	-1.0
LEOM	Leova	143.78	328	⇑P	PKPdf	01 34 29.6	-0.4
KWP	Kalwaria Pacla	143.87	336	*e*PKP	PKPdf	01 34 29.4	-0.7
TLCR		144.35	326	⇑P	PKPab	01 34 31.2	-0.1
BURAR	Bucovina Array	144.41	332	⇓P	PKPab	01 34 31.9	+0.3
BURAR	Bucovina Array	144.41	332		PKPab	01 34 31.5	-0.1
GHRR		144.49	328	⇓P	PKiKP	01 34 32.8	-2.3
BIZ	Bicaz	144.50	330	⇑P	PKPab	01 34 32.1	+0.3
BR131	Keskin Array S	144.54	315		PKPab	01 34 32.1	-0.3
BRTR	Keskin Array B	144.54	315	PKP	PKPab	01 34 31.8	-0.6
	comp=Z,3.2nm,0.5s,baz=99,slow=2.1,SNR=31						
BRTR	Keskin Array B	144.54	315		PKPdf	01 34 30.9	-0.8
TESR	Tescani	144.54	329	⇑P	PKPab	01 34 31.6	-0.4
CFR	Carcaliu	144.72	327	⇓P	PKPab	01 34 32.5	-0.1
TOPG	Topolog	144.79	326	⇑P	PKPab	01 34 33.0	+0.1
NIE	Niedzica	144.94	338	*e*PKP	PKPab	01 34 33.1	-0.4
KSP	Ksiaz	144.94	343	*e*PKP	PKPab	01 34 33.4	+0.1
VRI	Vrincioaia	144.96	329	⇑P	PKPab	01 34 32.9	-0.8
PLOR	Plostina	145.01	329	⇓P	PKPab	01 34 32.9	-0.9
ANTO	Ankara	145.04	316	⇓P	PKPab	01 34 33.4	-0.8
BMR	Baia Mare	145.11	334	⇑P	PKPbc	01 34 32.8	-0.3
TRPA	Tarpa	145.15	335	⇑P	PKPab	01 34 33.6	-0.6
HARR	Harsova	145.15	326	⇑P	PKPab	01 34 34.4	0.0
ARCR	ARCALIA	145.19	332	⇑P	PKPab	01 34 34.4	-0.1
OSTC	Ostas	145.22	343	*e*PKP	PKPab	01 34 34.2	-0.3
OZUR		145.26	330	⇓P	PKPab	01 34 34.5	-0.3
OKC	Ostrava-Krasne	145.29	341	*e*PKP	PKPab	01 34 34.0	-0.7
CLL	Collm	145.30	347	⇑*i*PKPbc	PKPab	01 34 34.7	0.0
	comp=Z,15nm,1.0s						
UPC	Upice	145.32	344	*e*PKP	PKPab	01 34 34.2	-0.6
DPC	Dobruska-Polom	145.37	343	*e*PKP	PKPab	01 34 34.5	-0.6
KRLC	Kraliky	145.49	342	*e*PKP	PKPab	01 34 34.6	-1.0
BRG	Berggiesshubel	145.50	346	*e*PKP	PKPab	01 34 34.4	-1.2
	comp=Z,6.8nm,0.8s						
AMRR	Amara	145.52	326	⇓P	PKiKP	01 34 37.2	0.0
MORC	Moravsky Berou	145.53	341	*e*PKP	PKPab	01 34 34.7	-1.0
DOPR	Dopca	145.54	330	⇑P	PKPab	01 34 35.4	-0.5
ISR	Istrita	145.58	328	⇑P	PKPab	01 34 35.1	-1.0
MLR	Muntele Rosu	145.62	329	⇓P	PKPab	01 34 36.2	-0.2
MLR	Muntele Rosu	145.62	329		PKPab	01 34 35.2	-1.2
PVCC	Panska Ves	145.67	345	*e*PKP	PKPab	01 34 35.4	-0.8
SULR		146.03	327	⇑P	PKiKP	01 34 37.5	-0.8
VOIR		146.09	330	⇑P	PKPab	01 34 36.8	-1.4
PRA	Prague	146.13	345	*e*PKP	PKPab	01 34 36.2	-1.8
DRGR		146.13	333	⇑P	PKPab	01 34 36.4	-1.9
PRU	Pruhonice	146.18	345	*e*PKP	PKPab	01 34 36.4	-1.8
PRU				*e*x	x	01 34 38.8	
VRAC	Vranov	146.23	342	⇓P	PKPab	01 34 36.9	-1.6
VRAC	Vranov	146.23	342	*e*PKP	PKPbc	01 34 36.5	+0.2
JAVC	Velka Javorina	146.30	340	*e*PKP	PKPab	01 34 37.9	-0.9
PSZ	Piszkesteto	146.34	337	⇓P	PKPbc	01 34 36.1	-0.6
PSZ	Piszkesteto	146.34	337		PKiKP	01 34 37.1	-1.9
ARR	Arges	146.34	330	⇓P	PKiKP	01 34 38.0	-1.0
NKC	Novy Kostel	146.43	347	*e*PKP	PKiKP	01 34 37.2	-1.8
KRUC	Moravsky	146.51	342	*e*PKP	PKPbc	01 34 37.2	+0.2
PBCC	Pribram	146.59	345	*e*PKP	PKPbc	01 34 37.4	+0.2
CSS	Mathiatis	146.83	307	PKPbc	PKPbc	01 34 38.5	+0.2
SIRR	Siria	146.99	334	⇑P	PKiKP	01 34 38.9	-1.4
MEM	Membach	147.05	355	PKPdf	PKPdf	01 34 35.6	+0.2
MEM				PKPbc	PKPbc	01 34 38.1	-0.2
LEF	Lefka	147.10	308	⇑P	PKPbc	01 34 37.9	-1.1
GZR	Gura Zlata	147.19	332	⇑P	PKPbc	01 34 39.0	0.0
GRF	Grafenberg Arr	147.20	348	*e*PKP	PKiKP	01 34 39.5	-1.1
	baz=18,slow=1.9						
KHC	Kasperske Hory	147.21	345	*e*PKP	PKiKP	01 34 39.4	-1.3
KHC				*e*x	x	01 34 42.5	
KHC	Kasperske Hory	147.21	345	PKPbc	PKiKP	01 34 39.4	-1.3
ELND	Elena	147.43	326	⇓P	PKPab	01 34 44.0	+0.5
GEC2	GERESS Array S	147.44	345	PKPbc	PKiKP	01 34 40.0	-1.3
GERES	GERESS Array B	147.44	345	PKPbc	PKiKP	01 34 39.9	-1.4
	comp=Z,5.7nm,0.6s,baz=24,slow=3.0,SNR=52						
VLAD	Vladila	147.45	328	⇑P	PKiKP	01 34 40.4	-0.9
BZS	Buzias	147.53	333	⇑P	PKiKP	01 34 39.9	-1.5
DOU	Dourbes	147.67	356	PKPbc	PKiKP	01 34 40.2	-1.3
DOU				PKPab	PKPab	01 34 44.0	-0.2
CONA	Conrad Observa	147.68	342	*e*PKiKP	PKiKP	01 34 40.8	-1.0
	comp=Z,5.6nm,0.6s,SNR=5.3						
HERR	Herculane	147.75	331	⇑P	PKiKP	01 34 40.4	-1.4
PLVB	Pleven	147.78	327	⇓P	PKiKP	01 34 40.6	-1.4
BANR	Banloc	147.92	333	⇓P	PKiKP	01 34 41.7	-0.5
WLF	Walferdange	147.97	354	PKiKP	PKiKP	01 34 41.8	-0.4
WLF	Walferdange	147.97	354	PKPbc	PKiKP	01 34 41.7	-0.4
MDVR	Moldovita	148.14	332	⇓P	PKPbc	01 34 40.8	-0.7
MOA	Molln	148.21	343	*e*PKPbc	PKPbc	01 34 41.1	-0.4
	comp=Z,4.2nm,1.2s						
ARSA	Arzberg	148.39	341	*i* PKPbc	PKiKP	01 34 41.8	-1.3
	comp=Z,3.5nm,0.9s						
BFO	Black Forest	149.01	351	PKPbc	PKiKP	01 34 43.5	-1.0
VTS	Vitosha	149.04	328	⇑P	PKiKP	01 34 44.3	-0.5
VTS	Vitosha	149.04	328	PKPbc	PKiKP	01 34 44.0	-0.8
SOKA	Soboth	149.06	342	*e*PKPbc	PKPbc	01 34 43.2	-0.5
	comp=Z,4.9nm,1.1s						
KBA	Koelnbreinsper	149.17	344	*e*PKPbc	PKPbc	01 34 43.4	-0.7
	comp=Z,3.3nm,0.5s						
WATA	Walderalm	149.36	346	*i* PKPbc	PKiKP	01 34 44.2	-1.1
	comp=Z,5.2nm,0.5s						
RETA	Reutte	149.39	347	*i* PKiKP	PKiKP	01 34 44.4	-0.9
	comp=Z,1.6nm,0.5s						
WTTA	Wattenberg	149.41	346	*e*PKiKP	PKiKP	01 34 44.8	-0.6
	comp=Z,11nm,0.6s,SNR=5.1						
MOTA	Moosalm	149.46	347	*i* PKPbc	PKiKP	01 34 44.5	-1.0
	comp=Z,4.9nm,0.8s						
MYKA	Terra Mystica	149.50	343	*e*PKPbc	PKPbc	01 34 43.9	-0.9
	comp=Z,4.0nm,0.5s						
SQTA	Sankt Quirin	149.55	347	*i* PKiKP	PKiKP	01 34 44.9	-0.8
	comp=Z,8.2nm,0.6s,SNR=5.3						
VNDS	Vrh nad Dolski	149.67	341	*i* PKPbc	PKiKP	01 34 44.9	-0.9
ABTA	Abfaltersbach	149.69	345	*i* PKPbc	PKPbc	01 34 44.6	-0.6
	comp=Z,8.5nm,0.6s,SNR=5.7						
DAVA	Damuels	149.76	348	*i* PKiKP	PKiKP	01 34 45.8	-0.4
	comp=Z,5.1nm,0.8s						
CRNS	Crni Vrh	149.82	342	*i* PKPbc	PKiKP	01 34 45.1	-1.1
FETA	Feichten	149.84	347	*e*PKiKP	PKiKP	01 34 45.5	-0.8
	comp=Z,7.1nm,0.8s						
BLY	Banja Luka	150.03	337	⇑P	PKiKP	01 34 45.9	-0.6
BOJS	Bojanci	150.04	340	*i* PKPbc	PKiKP	01 34 46.2	-0.3
STAL	STALIGIAL	150.09	344	PKPbc	PKPbc	01 34 45.5	-0.6
CTI	Castel Tesino	150.56	345	PKPbc	PKiKP	01 34 47.5	-0.3
CTI					PKPab	01 34 56.3	-0.2
PDG	Podgorica	151.09	332	⇓P	PKPbc	01 34 47.7	-0.7

*RSNC **29** 01:26:21.2±1.1, 7°.06N×73°.52W, h104^{km}±4^{km}, ML3.2, Mw3.5, Fault plane solution: NP1:φ$_{s}$14.00000°, δ59.00000°, λ38.00000°.*
*IDC **29** 01:26:23.7±6.7, 6°.95N×75°.18W, h116^{km}±94^{km}, mb2.9/1, mb1 3.2/2, mb1mx2.9/21, mbtmp3.3/2, ML1.9/1, Error ellipse: s-maj=302.8km s-min=39.5km az=82.0*
ISC 29 01:26:20.2±0.9, **7°.08N**±0°.03×**73°.51W**±0°.03, **h109**^{km}±6^{km}, **n32,** σ**1^{s}.14**/60, **5C-4D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRRC	Barranca, Sant	0.20	277	⇑*i*P	Pn	01 26 36.0	+0.5
BRRC				*e*S	Sn	01 26 47.6	+0.7
BRRC				*i*		01 26 52.7	
	comp=Z,330nm,0.3s						
BARC	Barichara	0.59	146	⇑*i*P	Pn	01 26 38.3	+0.4
BARC				*e*S	Sn	01 26 50.9	-0.3
PAMC	Pamplona, Colo	0.85	72	⇑*i*P	Pn	01 26 40.9	+0.5
PAMC				*e*S	Sn	01 26 55.8	+0.4
PAMC				*i*		01 26 59.0	
	comp=Z,406nm,0.2s						
PTBC	PUERTO BERRIO,	1.08	240	⇓*i*P	Pn	01 26 41.7	-0.5
PTBC				*e*S	Sn	01 26 58.3	-0.5
OCAC	Ocana	1.17	10	⇑*i*P	Pn	01 26 43.7	+0.4
OCAC				*e*S	Sn	01 27 01.4	+0.7
OCAC				*i*		01 27 08.6	
	comp=Z,473nm,0.1s						
RUSC	La Rusia	1.26	160	⇓*i*P	Pn	01 26 44.4	-0.2
RUSC				*e*S	Sn	01 27 02.5	-0.5
ZARC	Zaragoza, Cauc	1.39	287	*e*P	Pn	01 26 46.5	+0.8
ZARC				*e*S	Sn	01 27 05.3	+0.2
ZARC				*i*		01 27 09.5	
	comp=Z,320nm,0.2s						
SPBC	San Pablo de B	1.52	201	⇓*i*P	Pn	01 26 47.1	-0.3
SPBC				*e*S	Sn	01 27 06.9	-1.1
SPBC				*i*		01 27 13.5	
	comp=Z,229nm,0.2s						
SMLC	San Martn de	1.79	342	*e*P	Pn	01 26 50.6	0.0
SMLC				*e*S	Sn	01 27 14.1	+0.3
SMLC				*i*		01 27 17.2	
	comp=Z,427nm,0.1s						
TAMC	Tame, Arauca	1.83	110	⇓*i*P	Pn	01 26 51.5	+0.4
TAMC				*e*S	Sn	01 27 14.8	+0.3
NORC	Norcasia	2.02	222	*e*P	Pn	01 26 53.2	-0.3
NORC				*e*S	Sn	01 27 18.5	-0.4
NORC				*i*		01 27 24.9	
	comp=Z,100nm,0.2s						
UREC	San Jos de Ur	2.11	289	*e*P	Pn	01 26 54.6	0.0
UREC				*e*S	Sn	01 27 21.9	+1.1
UREC				*i*		01 27 26.7	
	comp=Z,181nm,0.3s						
HELC	Santa Helena	2.19	246	*e*P	Pn	01 26 56.3	+0.3
HELC				*e*S	Sn	01 27 23.8	+0.6
HELC				*i*		01 27 29.4	
	comp=Z,80nm,0.3s						
ROSC	El Rosal	2.37	200	P	Pn	01 27 00.3	+2.0
	comp=Z,7.1nm,0.3s,baz=92,slow=8.0,SNR=15						
ROSC				S	Sn	01 27 29.4	+2.0
	comp=Z,27nm,0.3s,baz=105,slow=20,SNR=16						
ROSC	El Rosal	2.37	200	*e*P	Pn	01 27 00.3	+2.0
ROSC				*e*S	Sn	01 27 29.6	+2.2
ROSC				*i*		01 27 36.7	
	comp=Z,126nm,0.5s						
CHIC	Chingaza	2.44	185	*e*P	Pn	01 26 59.4	+0.1
CHIC				*e*S	Sn	01 27 30.1	+0.8
GUY2C	Guyana, Caldas	2.61	225	*e*P	Pn	01 27 02.3	+0.9
GUY2C				*e*S	Sn	01 27 32.6	-0.5
GUY2C				*i*		01 27 43.4	
	comp=Z,57nm,0.3s						
CBOC	Ciudad Bolivar	2.76	244	*e*P	Pn	01 27 04.7	+1.5
CBOC				*e*S	Sn	01 27 36.1	-0.2
CODC	Agustn Codazz	2.84	1	*e*P	Pn	01 27 04.6	+0.6
CODC				*e*S	Sn	01 27 38.8	+1.1
CODC				*i*		01 27 45.4	
	comp=Z,71nm,0.5s						
ARGC	Ariguani, Magd	2.85	345	*e*P	Pn	01 27 05.8	+1.6
ARGC				*e*S	Sn	01 27 41.2	+3.0
ARGC				*i*		01 27 49.7	
	comp=Z,84nm,0.8s						
VILC	Villavicencio,	2.96	183	*e*P	Pn	01 27 06.1	+0.4
VILC				*e*S	Sn	01 27 42.1	+1.3
VILC				*i*		01 27 49.2	
	comp=Z,174nm,0.6s						
TOLC	Tolima	3.06	216	*e*P	Pn	01 27 09.1	+1.7
TOLC				*e*S	Sn	01 27 45.7	+2.0
ANIL	Santa Ana	3.19	216	*e*P	Pn	01 27 09.7	+0.7
ANIL				*e*S	Sn	01 27 46.0	-0.5
ANIL				*i*		01 27 55.4	
	comp=Z,113nm,0.2s						
SJCC	San Jacinto, C	3.25	330	*e*P	Pn	01 27 09.4	-0.1
SJCC				*e*S	Sn	01 27 45.1	-2.5
SJCC				*i*		01 28 00.9	
	comp=Z,37nm,0.3s						
SDV	Santo Domingo	3.37	58	⇑*i*P	Pn	01 27 11.8	+0.5
SDV				*e*S	Sn	01 27 51.1	+0.4
SDV				*i*		01 27 52.9	
	comp=Z,44nm,0.3s						
PLMC	San Jos del P	3.50	232	*e*P	Pn	01 27 13.6	+0.6
PLMC				*i*		01 28 03.2	
	comp=Z,34nm,0.2s						
ORTC	Ortega, Tolima	3.59	209	*e*P	Pn	01 27 15.1	+0.9
ORTC				*e*S	Sn	01 27 56.0	+0.1
ORTC				*i*		01 28 04.8	
	comp=Z,45nm,0.9s						
SMRC	Santa Marta, M	4.12	350	*e*P	Pn	01 27 22.6	+1.5
SMRC				*e*S	Sn	01 28 06.5	-1.9
SMRC				*i*		01 28 18.6	
	comp=Z,48nm,0.5s						
GARC	Garzon, Huila	5.25	202	*e*P	Pn	01 27 35.5	-1.2
GARC				*e*S	Sn	01 28 35.8	-0.3
GARC				*i*		01 28 42.7	
	comp=Z,26nm,0.2s						
YKA	Yellowknife Ar	62.89	340	P	P	01 36 34.6	+0.1
	comp=Z,0.3nm,0.8s,baz=132,slow=7.3,SNR=1.8						
ASAR	Alice Springs	148.94	235	PKPbc	PKPbc	01 45 54.7	-1.6
	comp=Z,0.2nm,0.3s,baz=122,slow=3.5,SNR=2.0						
WRA	Warramunga Arr	150.12	242	PKPbc	PKPbc	01 45 57.2	-2.0
	comp=Z,0.6nm,0.3s,baz=112,slow=2.2,SNR=3.2						

*SNET **29** 01:39:37.5±1.3, 12°.37N×87°.85W, h16^{km}±14^{km}, ML3.5*
*UCR **29** 01:39:38.8±0.9, 12°.39N×87°.80W, h39^{km}±168^{km}, ML3.5*
*INET **29** 01:39:39.6, 12°.48N×87°.71W, h62^{km}, ML3.5*
ISC 29 01:39:38.8±2.0, **12°.4N**±0°.1×**87°.78W**±0°.07, **h50**^{km}**, n23,** σ**0^{s}.45**/31**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.88	357	*e*P	Pn	01 39 54.6	-0.4
CNCH				*e*S	Sn	01 40 07.8	+0.9
CNCH	Conchagua	0.88	357	*e*P	Pn	01 39 54.6	-0.4
CNCH				*e*S	Sn	01 40 07.8	+0.9
LCND	La Caada	0.92	353	*e*P	Pn	01 39 55.1	-0.3
LCND				*e*S	Sn	01 40 07.5	-0.1
LCND				IAML		01 40 09.3	
	comp=Z,1μm,0.4s						
LCND	La Caada	0.92	353	*e*P	Pn	01 39 55.1	-0.3
LCND				*e*S	Sn	01 40 07.5	-0.1
LCND				IAML		01 40 09.3	
	comp=Z,1μm,0.4s						
BLLM	Bellamira	1.13	337	*e*P	Pn	01 39 58.2	-0.2
BLLM	Bellamira	1.13	337	*e*P	Pn	01 39 58.2	-0.2
VSM	San Miguel	1.14	335	*e*P	Pn	01 39 59.4	+0.8
VSM	San Miguel	1.14	335	*e*P	Pn	01 39 59.4	+0.8
PACA	Pacayal	1.19	334	*e*P	Pn	01 39 59.2	0.0
PACA				*e*S	Sn	01 40 14.8	+0.3
PACA				*e*S		01 40 15.2	
PACA	Pacayal	1.19	334	*e*P	Pn	01 39 59.2	0.0
PACA				*e*S	Sn	01 40 14.8	+0.3
PACA				*e*S		01 40 15.2	
ALJI	Alcalda de J	1.21	320	*e*P	Pn	01 39 58.6	-0.7
ALJI				*e*S	Sn	01 40 14.3	-0.3
ALJI				IAML		01 40 14.8	
	comp=Z,904nm,0.2s						
ALJI	Alcalda de J	1.21	320	*e*P	Pn	01 39 58.6	-0.7
ALJI				*e*S	Sn	01 40 14.3	-0.3
ALJI				IAML		01 40 14.8	
	comp=Z,904nm,0.2s						
MOMN	Momotombo	1.21	89	*e*P	Pn	01 39 59.3	-0.1
MOMN	Momotombo	1.21	89	*e*P	Pn	01 39 59.3	-0.1
TECA	Tecapa	1.30	327	*e*P	Pn	01 40 00.8	0.0
TECA	Tecapa	1.30	327	*e*P	Pn	01 40 00.8	0.0
COEB	Comit de Eme	1.32	326	*e*P	Pn	01 40 01.0	0.0
COEB				IAML		01 40 19.8	
	comp=Z,487nm,0.3s						
COEB	Comit de Eme	1.32	326	*e*P	Pn	01 40 01.0	0.0
COEB				IAML		01 40 19.8	
	comp=Z,487nm,0.3s						
FAGO	Alcalda de S	1.33	346	*e*P	Pn	01 40 00.4	-0.7
FAGO	Alcalda de S	1.33	346	*e*P	Pn	01 40 00.4	-0.7
LFRS	El Faro	1.75	315	*e*P	Pn	01 40 07.0	+0.2
LOMA	Loma Larga	1.84	313	*e*P	Pn	01 40 08.2	+0.1
LOMA				IAML		01 40 30.7	
	comp=Z,681nm,0.2s						
LOMA	Loma Larga	1.84	313	*e*P	Pn	01 40 08.2	+0.1
LOMA				IAML		01 40 30.7	
	comp=Z,681nm,0.2s						

*IDC **29** 01:44:37.4±3.2, 30°.53S×177°.78W, h0^{km}, mb3.7/3, mb1 3.9/4, mb1mx3.6/51, mbtmp3.7/4, ML3.1/1, Error ellipse: s-maj=74.0km s-min=27.1km az=113.0*
ISC 29 01:44:39.1±2.6, **30°.56S**±0°.08×**177°.4W**±0°.4, **h35**^{km}**, n6,** σ**1^{s}.55**/8**, mb3.8**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.36	342	Pn	Pn	01 45 02.3	+0.6
	26nm,0.3s,baz=303,slow=24,SNR=1.5						
RAO				Sn	Sn	01 45 16.4	-2.2
	428nm,0.3s,baz=38,slow=23,SNR=10.0						
URZ	Urewera	8.91	209	Pn	Pn	01 46 45.0	-0.3
	0.2nm,0.3s,baz=177,slow=20,SNR=1.4						
URZ				Sn	Sn	01 48 22.7	-1.7
	0.4nm,0.3s,baz=334,slow=21,SNR=1.4						
STKA	Stephens Creek	34.92	257	P	P	01 51 28.8	+1.2
	1.4nm,0.7s,baz=90,slow=10,SNR=4.1						
ASAR	Alice Springs	43.59	267	P	P	01 52 41.2	+1.1
	0.3nm,0.5s,baz=106,slow=8.1,SNR=6.6						
WRA	Warramunga Arr	44.59	272	P	P	01 52 48.7	+0.5
	0.7nm,0.4s,baz=111,slow=8.1,SNR=4.3						
FINES	FINESS Array B	145.46	340	PKPbc	PKiKP	02 04 15.7	-1.0
	0.4nm,0.4s,baz=66,slow=3.5,SNR=4.1						

ROM 29 01:51:23.3±0.2, **39°.427N**±0°.006×**15°.92E**±0°.01, **h59**^{km}±1^{km}**, ML1.9**/3**, 2C, Error ellipse: s-maj=1.2km s-min=0.5km az=253.0, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CET2	Cetraro	0.10	14	P	Pn	01 51 32.8	+0.5
CET2				S	Sn	01 51 39.1	+0.3
CET2				AML	AML		
	comp=E,306μm,0.3s						
CET2				AML	AML		
	comp=E,305μm,0.3s						
CET2				AML	AML		
	comp=N,456μm,0.5s						
CAR1	CAROLEI	0.28	128	⇑P	Pn	01 51 33.2	-0.1
CAR1				S	Sn	01 51 40.9	+0.4
CAR1				AML	AML		
	comp=N,98μm,0.7s						
CAR1				AML	AML		
	comp=N,98μm,0.7s						
CAR1				AML	AML		
	comp=E,134μm,1.4s						
T0702	Acquaformosa (	0.32	23	⇑P	Pn	01 51 33.5	-0.1
T0702				S	Sn	01 51 41.6	+0.5
CELI	Celico	0.46	93	P	Pn	01 51 34.9	0.0
CELI				S	Sn	01 51 43.6	+0.3
MMN	Mormanno	0.47	6	P	Pn	01 51 34.9	0.0
MMN				S	Sn	01 51 43.6	+0.4
MMN				AML	AML		
	comp=N,124μm,0.5s						
MMN				AML	AML		
	comp=E,69μm,0.2s						
SALB	San Lorenzo Be	0.56	36	P	Pn	01 51 36.0	0.0
SALB				S	Sn	01 51 46.1	+0.9
CUC	Castrocucco	0.57	352	P	Pn	01 51 36.2	+0.1
CUC				S	Sn	01 51 45.4	+0.1
SIRI	Monte Sirino -	0.76	357	P	Pn	01 51 38.2	-0.1
SIRI				S	Sn	01 51 49.3	+0.1
MGR	Morigerati	0.77	338	P	Pn	01 51 38.5	+0.2

MGR				S	Sn	01 51 50.1	+0.7
BULG	Bulgheria - Ca	0.78	327	P	Pn	01 51 39.3	+0.8
SCHR	S. Chirico Rap	0.78	9	P	Pn	01 51 38.9	+0.3
SCHR				S	Sn	01 51 50.7	+0.9
JOPP	Joppolo	0.82	182	P	Pn	01 51 39.6	+0.5
JOPP				S	Sn	01 51 51.2	+0.6

NIED ***29*** *01:53:00, 36°.40N×141°.80E, h20^{km}, Mw5.5 Best double couple: $M_0$1.75000×10^{17} NP1:ϕ_s22.00000°, δ74.00000°, λ91.00000°. NP2:ϕ_s200.00000°, δ16.00000°, λ88.00000°.*

BJI ***29*** *01:53:53.4±0.0, 36°.46N×141°.78E, h7^{km}, mB5.4/57, mb5.4/74, Ms5.5/91, Ms7 5.5/86*

IDC ***29*** *01:53:54.5±0.3, 36°.29N×141°.73E, h0^{km}, mb5.0/53, mb1 5.0/58, mb1mx5.0/69, mbtmp5.0/58, ML4.6/5, MS5.1/40, Ms1 5.1/40, ms1mx5.0/46, Error ellipse: s-maj=10.0km s-min=8.2km az=103.0*

MOS ***29*** *01:53:55.7±1.1, 36°.44N×141°.86E, h24^{km}, mb5.5/98, MS5.3/53, Error ellipse: s-maj=6.1km s-min=3.9km az=109.6*

NEIC ***29*** *01:53:57.7±1.7, 36°.32N±0°.05×141°.84E±0°.08, h20^{km}±1^{km}, mb5.2/308, Ms_20 5.2/291, Mwb5.4/64, Mwc5.5(GCMT), Error ellipse: s-maj=10.4km s-min=9.0km az=90.0*

JMA ***29*** *01:53:57.6±0.3, 36°.37N×141°.81E, h53^{km}, M5.3*

JMA Felt II J1.

NEIC ***29*** *01:53:57.3, 36°.35N×141°.78E, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.97; $M_{\theta\theta}$-0.40; $M_{\phi\phi}$-0.56; $M_{r\theta}$0.61; $M_{\theta\phi}$-0.36; $M_{\phi r}$1.21; Fault plane solution: $M_0$1.64000×10^{17} NP1:ϕ_s29.11000°, δ73.18000°, λ85.31000°. NP2:ϕ_s224.95000°, δ17.45000°, λ105.14000°. Principal axes: T 1.7007, Plg62.0000°, Azm292.0000°; N -0.1362, Plg4.0000°, Azm30.0000°; P -1.5645, Plg28.0000°, Azm123.0000°;*

GCMT ***29*** *01:54:01.7±0.1, 36°.35N±0°.01×141°.92E±0°.01, h23^{km}, MW5.5/152, Moment Tensor Solution. s119,c213; s152,c312; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.44±.02; $M_{\theta\theta}$-0.15±.02; $M_{\phi\phi}$-1.29±.02; $M_{r\theta}$0.44±.02; $M_{\theta\phi}$-0.50±.01; $M_{\phi r}$1.17±.03; Best double couple: $M_0$1.92200×10^{17} NP1:ϕ_s201.00000°, δ25.00000°, λ90.00000°. NP2:ϕ_s21.00000°, δ65.00000°, λ90.00000°. Principal axes: T 1.9020, Plg70.0000°, Azm291.0000°; N 0.0380, Plg0.0000°, Azm21.0000°; P -1.9430, Plg20.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***29*** *01:54:03, 36°.32N×142°.03E, h29^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.43; $M_{\theta\theta}$-0.08; $M_{\phi\phi}$-1.35; $M_{r\theta}$0.62; $M_{\theta\phi}$-0.64; $M_{\phi r}$1.56; Fault plane solution: $M_0$2.27000×10^{17} NP1:ϕ_s22.00000°, δ69.00000°, λ89.00000°. NP2:ϕ_s204.00000°, δ21.00000°, λ92.00000°. Principal axes: T 2.1713, Plg66.0000°, Azm291.0000°; N 0.1904, Plg1.0000°, Azm22.0000°; P -2.3617, Plg24.0000°, Azm112.0000°;*

BGR ***29*** *01:54:08.0±0.0, 37°.27N×140°.13E, h33^{km}, mb5.4*

ISC 29 01:53:57.8±0.5**, 36°.41N**±0°.03×**141°.83E**±0°.03**, h19**^{km}±2^{km}**, h20**^{km}**:pP-P, n1069,** σ**1**^{s}**76**/963**, mb5.2**/297**, MS5.2**/232**, 82C-38D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHYU	Hitachinakayam	1.00	266	⇓P	Pb	01 54 15.6	-0.9
JHYU				*e*S	Sb	01 54 28.3	-1.0
JHO	Hitachi	1.03	282	⇓P	Pb	01 54 15.8	-1.2
CHOJ	Chosi	1.05	228	⇑P	Pb	01 54 16.0	-1.4
ONAJ	Iwakimizuishiy	1.08	310	⇓P	Pb	01 54 16.6	-1.2
JIHU	Itakohorinouch	1.14	248	⇑P	Pn	01 54 17.9	-0.8
JIHU				*e*S	Sb	01 54 32.7	-0.5
JFK	Kawauchi	1.22	322	P	Pn	01 54 19.2	-0.7
JMST	Minamisoumatoc	1.51	331	⇑P	Pn	01 54 23.2	-0.6
JFT	Otama	1.63	313	⇓P	Pn	01 54 25.7	+0.3
JSB	Shiboa	1.63	291	P	Pn	01 54 25.8	+0.3
JMM	Marumori	1.67	331	⇑P	Pn	01 54 25.6	-0.4
BSO4	Boso 4	1.86	221	P	Pn	01 54 27.8	-0.7
BSO1	Boso 1	1.88	202	P	Pn	01 54 26.6	-1.8
JAG	Ashikaga	1.91	271	⇓P	Pn	01 54 28.3	-1.0
JIKH	Ishinomakikobu	1.92	352	⇑P	Pn	01 54 28.4	-1.0
BSO3	Boso 3	1.93	214	P	Pn	01 54 27.9	-1.4
JFY	Yanaizu	1.97	301	⇑P	Pn	01 54 30.6	+0.5
JIO	Ouri	2.08	350	⇑P	Pn	01 54 30.9	-0.7
JKT	Katashina	2.10	281	P	Pn	01 54 32.0	0.0
JRY	Ryogami san	2.40	261	P	Pn	01 54 35.0	-1.0
JHK	Hiroka	2.40	291	P	Pn	01 54 36.9	+0.8
JYK	Kaneyama	2.76	336	P	Pn	01 54 41.3	+0.3
MJAR	Matsushiro Arr	2.92	274	Pn	Pn	01 54 42.8	-0.3
	33nm,0.3s,baz=101,slow=8.3,SNR=396						
MJAR				Sn	Sn	01 55 18.1	+0.5
	24nm,0.3s,baz=78,slow=18,SNR=6.8						
MJAR				LR	LR	01 56 00.4	
	comp=Z,33μm,20.3s,baz=110,slow=45						
MJAR	Matsushiro Arr	2.92	274		Pn	01 54 43.3	+0.2
MAJO	Matsushiro	2.92	274	P	Pn	01 54 44.0	+0.8
MAJO	Matsushiro	2.92	274		Pn	01 54 44.0	+0.8
MAT	Matsushiro	2.92	274	P	Pn	01 54 44.0	+0.8
MAT	Matsushiro	2.92	274	P	Pn	01 54 43.6	+0.4
MAT				*e*S	Sn	01 55 18.5	+0.8
MJB9	Matsu-Tunnel	2.92	274		Pn	01 54 44.2	+1.0
JNG	Nsakai	3.00	271	P	Pn	01 54 45.0	+0.6
JJN	Nakama	3.02	284	P	Pn	01 54 46.1	+1.5
JNT	Takato	3.03	261	P	Pn	01 54 45.5	+0.7
MIYJ	Miyakonagasawa	3.16	360	P	Pn	01 54 45.2	-1.3
JSD	Sado	3.28	301	P	Pn	01 54 48.7	+0.6
JNY	Yasuok	3.38	253	⇑P	Pn	01 54 50.6	+1.0
JGN	Niukaw	3.65	268	P	Pn	01 54 54.4	+1.2
JHJ2	Mitsune	3.68	207		Pn	01 54 52.7	-1.0
JHJ	Hachijo jima 2	3.69	208	Pn	Pn	01 54 51.2	-2.6
	397nm,0.3s,baz=77,slow=8.7,SNR=43						
JHJ				Sn	Sn	01 55 34.2	-2.4
	322nm,0.3s,baz=84,slow=22,SNR=4.9						
INU	Inuyama	4.04	256		Pn	01 54 59.4	+0.8
JHG	Hegura jima	4.17	292	P	Pn	01 55 01.8	+1.4
JKG	Kaga	4.44	270	P	Pn	01 55 06.6	+2.6
ERM	Erimo	5.69	10	*ce*P	Pn	01 55 19.2	-2.0
ERM				pmax	pmax		
	comp=Z,127nm,1.0s						
ERM	Erimo	5.69	10		Pn	01 55 20.0	-1.2
NMR	Nemuro--Hokkai	7.57	22	⇓*i*P	Pn	01 55 44.2	-2.8
NMR				*i* S	Sn	01 57 06.0	-6.2
JKA	Kamikawa-asahi	7.72	4		Pn	01 55 50.0	+0.9
JKA					Sn	01 57 13.5	-2.4
ASAJ	Asahikawa	7.72	4	Pn	Pn	01 55 50.0	+0.9
	comp=Z,8.4nm,0.3s,baz=214,slow=12,SNR=19						
ASAJ				Sn	Sn	01 57 13.5	-2.4
	baz=31,slow=8.8,SNR=1.4						
ASAJ				LR	LR	01 59 27.3	
	comp=Z,16μm,21.9s,baz=186,slow=42						
ASAJ	Asahikawa	7.72	4	P	Pn	01 55 50.0	+0.9
GLVR	Golovnino	7.85	20	⇓*i*P	Pn	01 55 48.3	-2.5
GLVR				*e*S	Sn	01 57 14.6	-4.4
GLVR				pmax	pmax		
	comp=N,60nm,0.3s						
GLVR				pmax	pmax		
	comp=E,38nm,0.3s						
GLVR				pmax	pmax		
	comp=Z,156nm,0.3s						
GRPR	Tuman	8.15	21	*e*P	Pn	01 55 53.5	-1.5
GRPR				*e*S	Sn	01 57 21.0	-5.6
GRPR				pmax	pmax		
	comp=Z,304nm,0.3s						
GRPR				pmax	pmax		
	comp=E,116nm,0.4s						
GRPR				pmax	pmax		
	comp=N,72nm,0.1s						
YUK	Yuzh-Kuril'sk	8.22	21	⇑*i*P	Pn	01 55 53.8	-2.1
YUK				*i* S	Sn	01 57 22.4	-5.7
YUK				pmax	pmax		
	comp=Z,450nm,0.5s						
YUK				pmax	pmax		
	comp=E,64nm,0.6s						
YUK				pmax	pmax		
	comp=N,224nm,0.4s						
JCJ	Chichijima	9.29	178	Pn	Pn	01 56 06.8	-3.9
	comp=N,52nm,0.3s,baz=267,slow=22,SNR=23						
JCJ				Sn	Sn	01 57 43.9	-11
	comp=N,24nm,0.3s,baz=103,slow=22,SNR=1.5						
JCJ				LR	LR	02 00 01.9	
	comp=N,5μm,21.2s,baz=1.0,slow=40						
TEY	Ternei	9.48	337	⇑*e*P	Pn	01 56 14.2	+1.0
TEY						01 58 10.1	
TEY				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TEY				pmax	pmax		
	comp=N,20nm,1.1s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.9s						
TEY				MLR	MLR		
	comp=N,12μm,15.0s						
TEY				MLR	MLR		
	comp=E,7μm,15.0s						
TEY				MLR	MLR		
	comp=Z,18μm,15.0s						
JNU	Nakatsue	9.58	253	Pn	Pn	01 56 16.5	+1.8
	comp=Z,2.2nm,0.3s,baz=62,slow=9.3,SNR=16						
JNU				LR	LR	02 00 05.1	
	comp=Z,9μm,18.1s,baz=64,slow=39						
JNU	Nakatsue	9.58	253		Pn	01 56 14.9	+0.2
KUR	Kuril'sk	9.93	26	*e*P	Pn	01 56 20.5	+1.2
KUR				*e*S	Sn	01 58 04.6	-5.6
KUR				pmax	pmax		
	comp=Z,119nm,0.6s						
KUR				pmax	pmax		
	comp=N,67nm,0.3s						
KUR				pmax	pmax		
	comp=E,39nm,0.4s						
KUR				pmax	pmax		
	comp=Z,698nm,1.4s						
KUR				smax	smax		
	comp=N,138nm,0.5s						
KUR				smax	smax		
	comp=E,269nm,0.5s						
KUR				smax	smax		
	comp=E,1μm,3.0s						
KUR				smax	smax		
	comp=N,853nm,2.8s						
KUR				MLR	MLR		
	comp=Z,5μm,15.0s						
KUR				MLR	MLR		
	comp=E,10μm,14.0s						
KUR				MLR	MLR		
	comp=N,6μm,16.0s						
VLA	Vladivostok	10.17	314	*i* P	Pn	01 56 20.2	-2.4
MSHR	Mys Shultsa	10.29	310	*i* P	Pn	01 56 22.7	-1.6
YSS	Yuzh-Sakhalins	10.56	3	*e*P	Pn	01 56 26.7	-1.3
YSS				*e*S	Sn	01 58 20.3	-5.3
YSS				pmax	pmax		
	comp=Z,70nm,1.0s						
YSS				MLR	MLR		
	comp=Z,6μm,14.0s						
YSS				MLR	MLR		
	comp=N,4μm,13.0s						
YSS				MLR	MLR		
	comp=E,10μm,16.0s						
YSS	Yuzh-Sakhalins	10.56	3		Pn	01 56 27.7	-0.2
USA0B	Ussuriysk Arra	10.81	319	*i* P	Pn	01 56 32.3	+0.9
USA0B	Ussuriysk Arra	10.81	319		Pn	01 56 32.3	+0.9
USRK	Ussuriysk Ar.	10.81	319	Pn	Pn	01 56 33.6	+2.2
	baz=132,slow=12,SNR=24						
USRK				LR	LR	02 00 37.4	
	comp=E,22μm,18.3s,baz=122,slow=37						
USRK	Ussuriysk Ar.	10.81	319	P	Pn	01 56 32.6	+1.2
USRK	Ussuriysk Ar.	10.81	319		Pn	01 56 32.6	+1.2
KSRS	Korea Array	11.18	279	Pn	Pn	01 56 40.4	+3.9
	comp=E,1.2nm,0.3s,baz=96,slow=13,SNR=53						
KSRS				LR	LR	02 00 53.9	
	comp=E,15μm,19.5s,baz=76,slow=38						
KSAR	Wonju Array Be	11.21	279	P	Pn	01 56 39.3	+2.4
KSAR	Wonju Array Be	11.21	279		Pn	01 56 39.3	+2.4
KS19	Wonju Array Si	11.22	280		Pn	01 56 39.7	+2.5
INCN	Inchon	12.21	280	P	Pn	01 56 49.0	-1.6
INCN	Inchon	12.21	280	Pn	Pn	01 56 49.0	-1.6
MDJ	Mudanjiang	12.39	315	P	Pn	01 56 55.5	+2.4
MDJ				pmax	pmax		
	comp=E,20nm,1.2s						
MDJ				LR	LR		
	comp=E,13μm,18.1s						
MDJ				LR	LR		
	comp=E,14μm,17.1s						
MDJ				LR	LR		
	comp=E,26μm,17.2s						
MDJ	Mudanjiang	12.39	315		Pn	01 56 58.4	+5.3
UGL	Uglegorsk	12.66	1	*e*P	Pn	01 56 55.6	-1.1
UGL				S	Sn	01 59 09.6	-7.5
UGL				pmax	pmax		
	comp=Z,67nm,1.1s						
UGL				smax	smax		
	comp=N,5μm,16.2s						
UGL				MLR	MLR		
	comp=N,11μm,16.0s						
UGL				MLR	MLR		
	comp=E,12μm,16.0s						
UGL				MLR	MLR		
	comp=Z,7μm,16.0s						
TYV	Tymovskoe	14.46	2	*e*P	P	01 57 29.7	+1.8
TYV				pmax	pmax		
	comp=Z,600nm,5.8s						
TYV				pmax	pmax		
	comp=Z,64nm,1.0s						
CN2	Changchun	14.53	306	*e*P	Pn	01 57 21.5	-0.8
CN2				*e*pP	P	01 57 25.3	-3.4
CN2				*e*S	Sn	02 00 04.5	+1.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,1μm,14.0s						
CN2				LR	LR		
	comp=Z,12μm,16.0s						
CN2				LR	LR		
	comp=Z,16μm,16.0s						
CN2				LR	LR		
	comp=Z,15μm,16.0s						
KLR	Kul'dur	14.77	333	Pn	Pn	01 57 25.2	-0.3
	comp=Z,0.6nm,0.3s,baz=152,slow=8.3,SNR=8.9						
KLR				LR	LR	02 03 04.9	
	comp=Z,10μm,19.4s,baz=144,slow=37						
KLR	Kul'dur	14.77	333	⇑*e*P	Pn	01 57 24.5	-1.1
KLR				pmax	pmax		
	comp=Z,14nm,1.4s						
GRNR	Gornyy	14.87	347	⇓*i*P	Pn	01 57 26.2	-0.7
GRNR				*e*S	Sn	02 00 12.1	+1.1
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GRNR				smax	smax		
	comp=E,8.0nm,1.0s						
GRNR				MLR	MLR		
	comp=Z,8μm,15.0s						
SNY	Shenyang	15.15	296	⇓P	Pn	01 57 30.5	-0.2
SNY				pmax	pmax		
	comp=Z,52nm,1.3s						
SNY				pmax	pmax		
	comp=Z,2μm,14.3s						
SNY				LR	LR		
	comp=Z,11μm,15.5s						
SNY				LR	LR		
	comp=Z,21μm,18.4s						
SNY				LR	LR		
	comp=Z,31μm,16.3s						
DL2	Dalian	16.19	285	P	Pn	01 57 44.0	-0.1
DL2				S	Sn	02 00 45.8	+2.7
DL2				pmax	pmax		
	comp=Z,42nm,0.9s						
DL2				pmax	pmax		
	comp=Z,2μm,11.1s						
DL2				LR	LR		
	comp=Z,7μm,12.7s						
DL2				LR	LR		
	comp=Z,19μm,15.7s						
DL2				LR	LR		
	comp=Z,24μm,14.7s						
NKL	Nikolayevsk	16.76	358	*e*P	Pn	01 57 48.3	-2.9
NKL				pmax	pmax		
	comp=E,1.0nm,1.2s						
NKL				pmax	pmax		
	comp=Z,14nm,1.2s						
NKL				pmax	pmax		
	comp=N,6.0nm,0.7s						
SKR	Severo-Kuril's	17.59	31	*e*P	Pn	01 57 57.4	-4.2
SKR				*e*S	S	02 01 20.9	-3.3
SKR				pmax	pmax		
	comp=Z,200nm,3.0s						
SSE	Sheshan	17.95	259	P	P	01 58 06.8	+0.1
SSE				S	Sn	02 01 26.3	+0.4
SSE				LR	LR		
	comp=Z,4μm,15.1s						
SSE				LR	LR		
	comp=Z,3μm,13.7s						
NJ2	Nanjing	19.47	264	*e*P	Pn	01 58 24.8	+0.1
NJ2				pmax	pmax		
	comp=Z,18nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,540nm,4.9s						
NJ2				LR	LR		
	comp=Z,7μm,16.6s						
NJ2				LR	LR		
	comp=Z,9μm,14.0s						
NJ2				LR	LR		
	comp=Z,8μm,14.7s						
TIA	Tai'an	19.90	277	P	P	01 58 27.0	-1.1
TIA				pmax	pmax		
	comp=Z,31nm,1.2s						
TIA				LR	LR		
	comp=Z,7μm,14.4s						
TIA				LR	LR		
	comp=Z,6μm,16.1s						
TIA				LR	LR		
	comp=Z,7μm,16.5s						
PEA0B	Petropavlovsk-	20.07	29	*i* P	P	01 58 28.2	-1.6
PEA0B	Petropavlovsk-	20.07	29	P	P	01 58 29.9	+0.2
PETK	Petropavlovsk-	20.07	29	P	Pn	01 58 31.7	+0.1
	comp=Z,22nm,0.9s,baz=196,slow=10,SNR=12						
PETK				LR	LR	02 06 22.0	
	comp=Z,3μm,20.8s,baz=214,slow=37						
PETK	Petropavlovsk-	20.07	29	P	P	01 58 30.1	+0.3
YOJ	Yonaguni jima	20.08	239	P	P	01 58 30.1	0.0
YOJ				pmax	pmax		
	comp=Z,379nm,1.5s						
YOJ				MLR	MLR		
	comp=Z,6μm,21.0s						
YOJ	Yonaguni jima	20.08	239	P	P	01 58 30.1	0.0
ZEA	Zeya	20.09	334	*e*P	P	01 58 28.2	-1.7
ZEA				*e*		01 58 57.0	
ZEA				*e*S	Sn	02 02 19.0	+1.9
ZEA				*e*SS	SnSn	02 02 52.0	+20
ZEA				pmax	pmax		
	comp=E,60nm,0.9s						
ZEA				pmax	pmax		
	comp=N,120nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,150nm,1.0s						
ZEA				pmax	pmax		
	comp=N,600nm,14.0s						
ZEA				pmax	pmax		
	comp=E,500nm,14.0s						
ZEA				pmax	pmax		
	comp=Z,1μm,14.0s						
ZEA				pmax	pmax		
	comp=Z,1μm,15.0s						
ZEA				pmax	pmax		
	comp=E,500nm,14.0s						
ZEA				pmax	pmax		
	comp=N,600nm,15.0s						
ZEA				smax	smax		
	comp=E,1μm,12.0s						
ZEA				MLR	MLR		
	comp=Z,15μm,15.0s						
ZEA				MLR	MLR		
	comp=E,6μm,13.0s						
ZEA				MLR	MLR		
	comp=N,8μm,16.0s						
PET	Petropavlovsk	20.38	30	*e*P	Pn	01 58 35.1	-0.2
PET				*i* S	S	02 02 17.1	-3.4
PET				pmax	pmax		
	comp=Z,97nm,1.4s						
PET				pmax	pmax		
	comp=Z,1μm,10.4s						
PET				pmax	pmax		
	comp=Z,900nm,11.8s						
PET				MLR	MLR		
	comp=Z,4μm,15.0s						
PET				MLR	MLR		
	comp=Z,4μm,16.0s						
PET	Petropavlovsk	20.38	30	P	P	01 58 33.8	+0.7
PET				IAmb	IAmb	01 58 49.9	
	comp=Z,173nm,1.4s						
BJI	Beijing	20.45	288	P	P	01 58 31.5	-2.5
BJI				LR	LR		
	comp=Z,6μm,13.7s						
BJI				LR	LR		
	comp=Z,6μm,14.1s						
BJI				LR	LR		
	comp=Z,3μm,19.6s						
BJT	Baijiatuau	20.46	288	P	P	01 58 31.9	-2.2
BJT				pmax	pmax		
	comp=Z,109nm,1.4s						
BJT				MLR	MLR		
	comp=Z,5μm,19.0s						
BJT	Baijiatuau	20.46	288	P	P	01 58 31.9	-2.2
HIA	Hailar	20.58	316	P	P	01 58 34.1	-1.3
HIA				pmax	pmax		
	comp=Z,19nm,0.7s						
HIA				MLR	MLR		
	comp=Z,14μm,18.0s						
HIA	Hailar	20.58	316	P	P	01 58 34.0	-1.3
HIA	Hailar	20.58	316	IAMs_20	IAMs_20	02 06 41.8	
	comp=Z,14μm,18.0s						
YHNB	Yeheng	21.10	242	P	P	01 58 39.4	-1.8
YHNB				IAmb	IAmb	01 58 46.3	
	comp=Z,117nm,1.5s						
NACB	Ninganchiao	21.25	241	P	P	01 58 42.0	-0.8
NACB				IAMs_20	IAMs_20	02 07 29.9	
	comp=Z,6μm,20.0s						
SSLB	Suanglung	21.95	241	P	P	01 58 47.9	-2.4
YULB	Yu-li	21.96	239	P	P	01 58 48.5	-1.9
TPUB	Ta-pu	22.49	240	IAmb	IAmb	01 59 34.4	
	comp=Z,79nm,1.2s						
TPUB				IAMs_20	IAMs_20	02 08 10.6	
	comp=Z,7μm,21.0s						
TWG	Pinlang	22.50	239	IAMs_20	IAMs_20	02 07 33.6	
	comp=Z,10μm,22.0s						
GUMO	Guam	22.89	172	LR	LR	02 08 11.3	
	comp=Z,937nm,20.6s,baz=14,slow=38						
QZH	Quanzhou	22.96	247	P	P	01 59 00.3	-0.7
QZH				S	S	02 03 07.0	-3.3
QZH				LR	LR		
	comp=Z,2μm,20.4s						
QZH				LR	LR		
	comp=Z,6μm,19.0s						
QZH				LR	LR		
	comp=Z,7μm,18.3s						
KNMB	Chin-men Tao	23.39	246	IAMs_20	IAMs_20	02 09 15.6	
	comp=Z,7μm,18.0s						
TIY	Taiyuan	23.45	282	*e*P	P	01 59 06.3	+0.3
TIY				S	S	02 03 18.0	-0.5
TIY				pmax	pmax		
	comp=Z,480nm,7.7s						
TIY				LR	LR		
	comp=Z,5μm,11.2s						
TIY				LR	LR		
	comp=Z,15μm,14.3s						
TIY				LR	LR		
	comp=Z,19μm,14.6s						
WHN	Wuhan	23.61	264	⇑*i*P	P	01 59 06.8	-0.7
WHN				S	S	02 03 15.8	-5.2
WHN				pmax	pmax		
	comp=Z,110nm,1.1s						
WHN				pmax	pmax		
	comp=Z,810nm,8.4s						
WHN				LR	LR		
	comp=Z,14μm,12.7s						
WHN				LR	LR		
	comp=Z,15μm,13.7s						
WHN				LR	LR		
	comp=Z,30μm,14.6s						
MA2	Magadan	23.90	11	P	P	01 59 10.8	+0.8
	comp=Z,15nm,0.7s,baz=192,slow=9.9,SNR=10						
MA2				LR	LR	02 09 52.2	
	comp=Z,2μm,18.4s,baz=198,slow=40						
MA2	Magadan	23.90	11	*ce*P	P	01 59 09.3	-0.7
MA2				pmax	pmax		
	comp=Z,55nm,1.7s						
MA2	Magadan	23.90	11	P	P	01 59 10.0	0.0
MA2				IAmb	IAmb	01 59 36.8	
	comp=Z,52nm,0.8s						
HHC	Hu-ho-hao-te	23.99	290	*e*P	P	01 59 16.8	+5.6
HHC				S	S	02 03 30.5	+3.3
BTO	Baotou	25.16	289	*e*P	P	01 59 20.8	-1.1
CIT	Chita	25.36	317	*e*P	P	01 59 21.4	-2.1
CIT				*e*		01 59 35.8	
CIT				*e*		02 00 04.8	
CIT				pmax	pmax		
	comp=Z,173nm,1.7s						

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YAK   Yakutsk            26.75 347   P        P        01 59 36.4 +0.5
      comp=Z,117nm,0.8s,baz=281,slow=0.1,SNR=32
YAK                                  LR       LR       02 10 33.8
      comp=Z,4µm,18.5s,baz=150,slow=37
YAK   Yakutsk            26.75 347  eP        P        01 59 34.6 -1.3
YAK                                 e*PP      pwP      01 59 44.1 +0.1
YAK                                 e                  02 00 14.5
YAK                                 e                  02 02 57.3
YAK                                 eS        S        02 04 06.9 -3.5
YAK                                  pmax     pmax
      comp=Z,281nm,1.3s
YAK                                  pmax     pmax
      comp=N,214nm,1.2s
YAK                                  pmax     pmax
      comp=E,84nm,1.3s
YAK                                  pmax     pmax
      comp=Z,94nm,0.9s
YAK                                  pmax     pmax
      comp=E,81nm,1.1s
YAK                                  pmax     pmax
      comp=N,46nm,1.0s
YAK                                  smax     smax
      comp=E,305nm,5.2s
YAK                                  MLR      MLR
      comp=Z,8µm,15.0s
YAK                                  MLR      MLR
      comp=N,8µm,14.0s
YAK                                  MLR      MLR
      comp=E,3µm,13.0s
YAK   Yakutsk            26.75 347   P        P        01 59 35.2 -0.7
YAK                                  IAMs_20  IAMs_20  02 10 31.5
      comp=Z,6µm,18.0s
XAN   Xi'an              26.91 275   P        P        01 59 36.8 -0.9
XAN                                  pP       pwP      01 59 45.5  0.0
XAN                                  PP       PnPn     02 00 26.0 +6.1
XAN                                  S        S        02 04 03.3  -10
XAN                                  pmax     pmax
      comp=Z,15nm,1.0s
XAN                                  pmax     pmax
      comp=Z,680nm,8.9s
XAN                                  LR       LR
      comp=Z,3µm,16.8s
XAN                                  LR       LR
      comp=Z,6µm,14.7s
XAN                                  LR       LR
      comp=Z,6µm,13.3s
XAN   Xi'an              26.91 275   P        P        01 59 36.9 -0.9
XAN                                  pmax     pmax
      comp=Z,189nm,1.6s
XAN                                  MLR      MLR
      comp=Z,4µm,18.0s
XAN   Xi'an              26.91 275   P        P        01 59 36.9 -0.9
XAN   Xi'an              26.91 275   IAMs_20  IAMs_20  02 11 14.9
      comp=Z,4µm,18.0s
SEY   Seymchan           27.34  11   P        P        01 59 42.2 +1.1
      comp=Z,24nm,1.1s,baz=208,slow=8.6,SNR=29
SEY   Seymchan           27.34  11 i P        P        01 59 41.6 +0.4
H11N2 WAKE ISLAND Hy     27.55 120   T        T        02 29 02.3
      baz=312,slow=75,SNR=260
H11N1 WAKE ISLAND Hy     27.55 120   T        T        02 29 11.8
      baz=312,slow=75,SNR=143
H11N3 WAKE ISLAND Hy     27.56 120   T        T        02 29 03.6
      baz=312,slow=75,SNR=268
ENH   Enshi              27.62 267   P        P        01 59 42.5 -1.6
ENH                                  IAMs_20  IAMs_20  02 11 38.1
      comp=Z,6µm,18.0s
WAKE  Wake Island        27.68 121   IAMs_20  IAMs_20  02 08 45.5
      comp=Z,5µm,21.0s
HKPS  Hong Kong Po S     27.82 247   IAMs_20  IAMs_20  02 11 51.0
      comp=Z,6µm,19.0s
ULN   Ulaanbaatar        27.98 305c iP        P        01 59 47.3  0.0
ULN                                  pmax     pmax
      comp=Z,101nm,1.3s
ULN   Ulaanbaatar        27.98 305   P        P        01 59 47.0 -0.3
ULN   Ulaanbaatar        27.98 305   IAMs_20  IAMs_20  02 11 27.8
      comp=Z,7µm,18.0s
BOD   Bodaibo            28.23 328  eP        P        01 59 48.7 -0.5
BOD                                  pmax     pmax
      comp=Z,58nm,1.9s
H11S1 WAKE ISLAND Hy     28.24 122   T        T        02 30 09.1
      baz=314,slow=75,SNR=121
H11S3 WAKE ISLAND Hy     28.24 123   T        T        02 30 10.6
      baz=314,slow=75,SNR=108
H11S2 WAKE ISLAND Hy     28.26 123   T        T        02 29 58.7
      baz=314,slow=75,SNR=131
SONM  Songino Array      28.41 305   P        P        01 59 51.1  0.0
      comp=Z,81nm,0.9s,baz=105,slow=7.6,SNR=139
SONM                                 PcP      PcP      02 03 03.6 +0.5
      comp=Z,2.5nm,0.8s,baz=66,slow=3.6,SNR=2.4
SONM                                 LR       LR       02 11 36.3
      comp=Z,5µm,18.6s,baz=93,slow=37
SONM  Songino Array      28.41 305   P        P        01 59 50.9 -0.2
LZH   Lanzhou            30.50 281  eP        P        02 00 09.3 -0.5
LZH                                  pP       pP       02 00 12.5 -2.6
LZH                                  S        S        02 05 07.0 -3.4
LZH                                  sS       sS       02 05 17.5 -0.8
LZH                                  SS       ScP      02 06 51.8 +1.8
LZH                                  pmax     pmax
      comp=Z,51nm,1.1s
LZH                                  pmax     pmax
      comp=Z,470nm,5.8s
LZH                                  LR       LR
      comp=Z,8µm,14.1s
LZH                                  LR       LR
      comp=Z,12µm,15.3s
LZH                                  LR       LR
      comp=Z,13µm,16.2s
IRK   Irkutsk            30.76 313  eP        P        02 00 12.0 +0.3
IRK                                 e                  02 01 11.9
IRK                                 e                  02 03 10.6
IRK                                  pmax     pmax
      comp=Z,500nm,2.3s
ZAK   Zakamensk          30.92 309  eP        P        02 00 13.2  0.0
ZAK                                  pmax     pmax
      comp=Z,58nm,1.3s
TLY   Talaya             30.99 312   P        P        02 00 14.8 +1.0
      comp=Z,34nm,0.8s,baz=115,slow=11,SNR=21
TLY   Talaya             30.99 312c iP        P        02 00 13.8  0.0
TLY                                 e                  02 01 13.4
TLY                                 ePPP      PPP      02 01 27.1
TLY                                 eS        S        02 05 22.5 +5.1
TLY                                 eSS       SnSn     02 07 07.2 +9.1
TLY                                 eSSS      SSS      02 07 22.3
TLY                                  MLR      MLR
      comp=Z,28µm,16.0s
TLY   Talaya             30.99 312   P        P        02 00 14.0 +0.2
TLY                                  IAmb     IAmb     02 00 19.5
      comp=Z,72nm,1.1s
GYA   Guiyang            31.45 262⇑ iP        P        02 00 16.5 -1.7
GYA                                  pP       sP       02 00 24.8 -0.6
GYA                                  PP       PP       02 01 24.8 -4.4
GYA                                  PcP      PcP      02 03 13.8 +2.6
GYA                                  S        S        02 05 29.5 +4.3
GYA                                  ScP      ScP      02 06 54.0 +0.7
GYA                                  SS       SnSn     02 07 10.3 +0.3
GYA                                  pmax     pmax
      comp=Z,40nm,1.0s
GYA                                  pmax     pmax
      comp=Z,180nm,5.5s
GYA                                  LR       LR
      comp=Z,2µm,11.6s
GYA                                  LR       LR
      comp=Z,6µm,15.3s
GYA                                  LR       LR
      comp=Z,8µm,16.3s
CD2   Chengdu            32.01 271   P        P        02 00 22.3 -0.7
CD2                                  pP       pP       02 00 28.0 -0.4
CD2                                  sP       pwP      02 00 31.8 +1.0
CD2                                  S        S        02 05 31.0 -2.8
CD2                                  sS       sS       02 05 44.5 +2.8
CD2                                  pmax     pmax
      comp=Z,70nm,0.7s
CD2                                  pmax     pmax
      comp=Z,420nm,5.1s
CD2                                  LR       LR
      comp=Z,8µm,16.7s
CD2                                  LR       LR
      comp=Z,9µm,13.9s
CD2                                  LR       LR
      comp=Z,9µm,13.9s
MOY   Mondy              32.60 311  eP        P        02 00 27.8 -0.2
MOY                                  pmax     pmax
      comp=Z,61nm,1.4s
QIZ   Qiongzhong         32.98 247   P        P        02 00 33.8 +2.3
QIZ                                  S        S        02 05 53.0 +4.0
QIZ                                  pmax     pmax
      comp=Z,320nm,4.8s
QIZ                                  LR       LR
      comp=Z,3µm,16.1s
QIZ                                  LR       LR
      comp=Z,3µm,14.7s
QIZ                                  LR       LR
      comp=Z,4µm,17.5s
QIZ   Qiongzhong         32.98 247   IAMs_20  IAMs_20  02 15 49.7
      comp=Z,4µm,18.0s
KCP   Kidapawan          33.02 212⇑eP       P        02 00 31.2 -0.7
GTA   Gaotai             33.07 288   P        P        02 00 32.0 -0.3
GTA                                  pP       pP       02 00 36.3 -1.3
GTA                                  sP       sP       02 00 39.5 -0.2
GTA                                  PP       PnPn     02 01 43.0 +1.2
GTA                                  PcP      PcP      02 03 16.3 +0.8
GTA                                  S        S        02 05 42.0 -8.3
GTA                                  pmax     pmax
      comp=Z,32nm,1.1s
GTA                                  pmax     pmax
      comp=Z,390nm,6.9s
GTA                                  LR       LR
      comp=Z,3µm,21.3s
GTA                                  LR       LR
      comp=Z,6µm,16.5s
GTA                                  LR       LR
      comp=Z,6µm,17.2s
PATS  Pohnpei            33.07 149   IAMs_20  IAMs_20  02 12 48.8
      comp=Z,4µm,19.0s
BILL  Bilibino           34.53  16  eP        P        02 00 44.0 -0.5
BILL                                e                  02 01 55.7
BILL                                e                  02 03 19.1
BILL                                 pmax     pmax
      comp=Z,25nm,1.7s
BILL                                 MLR      MLR
      comp=Z,3µm,18.0s
BILL  Bilibino           34.53  16   P        P        02 00 44.5  0.0
BILL                                 IAmb     IAmb     02 01 16.8
      comp=Z,42nm,1.4s
BILL                                 IAMs_20  IAMs_20  02 16 07.5
      comp=Z,3µm,20.0s
KMI   Kunming            35.20 263   P        P        02 00 50.0 -1.0
KMI                                  pP       pP       02 00 53.5 -2.9
KMI                                  sP       sP       02 00 57.0 -1.5
KMI                                  PP       PP       02 02 12.5 +1.6
KMI                                  S        S        02 06 24.0 +0.3
KMI                                  sS       sS       02 06 32.5 +0.7
KMI                                  SS       SnSn     02 08 38.0 -3.2
KMI                                  ScS      ScS      02 11 08.8 -2.1
KMI                                  pmax     pmax
      comp=Z,68nm,1.1s
KMI                                  pmax     pmax
      comp=Z,180nm,3.1s
KMI                                  LR       LR
      comp=Z,5µm,14.9s
KMI                                  LR       LR
      comp=Z,7µm,16.2s
KMI                                  LR       LR
      comp=Z,8µm,14.9s
KMI   Kunming            35.20 263   IAMs_20  IAMs_20  02 17 20.0
      comp=Z,5µm,18.0s
MIDW  Midway             35.23  92   IAMs_20  IAMs_20  02 12 22.8
      comp=Z,4µm,19.0s
TIXI  Tiksi              35.95 353   P        P        02 00 57.1 +0.5
      comp=Z,20nm,1.1s,baz=144,slow=8.5,SNR=19
TIXI                                 LR       LR       02 16 47.7
      comp=Z,4µm,18.4s,baz=173,slow=38
TIXI  Tiksi              35.95 353ceP       P        02 00 55.7 -0.9
TIXI                                 pmax     pmax
      comp=Z,29nm,1.3s
TIXI  Tiksi              35.95 353   P        P        02 00 56.4 -0.2
TIXI                                 IAMs_20  IAMs_20  02 16 37.3
      comp=Z,4µm,19.0s
KWAJ  Kwajalein Atol     36.12 133   IAMs_20  IAMs_20  02 11 57.7
      comp=Z,3µm,22.0s
SLVN  Son La             36.19 256   IAmb     IAmb     02 01 04.1
      comp=Z,37nm,1.1s
SLVN                                 IAMs_20  IAMs_20  02 16 57.9
      comp=Z,2µm,18.0s
TNTI  Ternate            37.91 204   P        P        02 01 12.8 -1.0
KKM   Kota Kinabalu      38.26 224   P        P        02 01 16.9  0.0
SIJI  Sorong             38.37 197   P        P        02 01 16.3 -1.4
      comp=Z,13nm,0.5s,baz=1.5,slow=18,SNR=6.0
UBPT  Khong Chiam        38.58 247   IAmb     IAmb     02 01 21.8
      comp=Z,66nm,1.3s
UBPT                                 IAMs_20  IAMs_20  02 18 00.1
      comp=Z,3µm,21.0s
DLV   T  Lat             38.64 239   P        P        02 01 19.8 -0.6
GENI  Genyem             38.83 183   P        P        02 01 21.0 -0.6
      comp=Z,44nm,1.0s
FAKI  Fak Fak            40.13 195   P        P        02 01 33.3 +0.8
      comp=Z,35nm,0.8s
FAKI  Fak Fak            40.13 195   IAmb     IAmb     02 01 57.0
      comp=Z,39nm,1.0s
FAKI                                 IAMs_20  IAMs_20  02 15 55.6
      comp=Z,2µm,20.0s
MRSI  Marisa             40.23 212   P        P        02 01 32.3 -1.0
      comp=Z,2µmcomp=Z,114nm,1.4s
SANI  Sanana             41.01 205   P        P        02 01 38.2 -1.5
      comp=Z,944nmcomp=Z,82nm,1.0s
DGZ   Jazzator, Alta     41.03 306c iP        P        02 01 40.6 +0.8
DGZ                                  pmax     pmax
      comp=Z,150nm,1.0s
PBKT  Sadao Pong         41.18 252   P        P        02 01 40.8 -0.4
PBKT                                 IAmb     IAmb     02 01 42.4
      comp=Z,80nm,1.0s
PBKT                                 IAMs_20  IAMs_20  02 19 39.1
      comp=Z,2µm,20.0s
MPSI  Mapaga             41.26 214   P        P        02 01 39.9 -1.8
LUWI  Luwuk              41.26 210   P        P        02 01 41.3 -0.5
LUWI                                 IAmb     IAmb     02 01 46.0
      comp=Z,59nm,0.9s
WMQ   Urumqi             41.42 298   P        P        02 01 45.0 +2.0
WMQ                                  pP       sP       02 01 49.8 -0.7
WMQ                                  sP       pwP      02 01 52.5 +1.4
WMQ                                  PP       PP       02 03 24.3 +5.7
WMQ                                  S        S        02 08 01.3 +4.3
WMQ                                  sS       sS       02 08 09.0 +3.9
WMQ                                  ScS      ScS      02 11 42.0 -3.8
WMQ                                  pmax     pmax
      comp=Z,73nm,1.5s
WMQ                                  pmax     pmax
      comp=Z,420nm,4.7s
WMQ                                  LR       LR
      comp=Z,3µm,20.3s
WMQ                                  LR       LR
      comp=Z,4µm,19.1s
WMQ                                  LR       LR
      comp=Z,4µm,25.1s
CHTO  Chiang Mai         41.47 257   P        P        02 01 43.0 -0.5
CHTO                                 pmax     pmax
      comp=Z,35nm,1.0s
CHTO                                 MLR      MLR
      comp=Z,2µm,18.0s
CHTO  Chiang Mai         41.47 257   P        P        02 01 43.0 -0.5
CHTO                                 IAmb     IAmb     02 01 44.6
      comp=Z,35nm,0.9s
CHTO  Chiang Mai         41.47 257   IAMs_20  IAMs_20  02 20 35.5
      comp=Z,2µm,18.0s
CM31  Chiang Mai Arr     41.66 256   P        P        02 01 45.4 +0.3
      SNR=13
CM31  Chiang Mai Arr     41.66 256   P        P        02 01 44.8 -0.3
CMAR  Chiang Mai Arr     41.66 256   P        P        02 01 44.8 -0.4
      comp=Z,14nm,0.8s,baz=45,slow=6.4,SNR=48
CMAR                                 LR       LR       02 19 27.7
      comp=Z,1µm,20.9s,baz=55,slow=37
CMAR  Chiang Mai Arr     41.66 256 i P        P        02 01 44.7 -0.4
CMAR                                 pmax     pmax
      comp=Z,16nm,0.9s
CMAR  Chiang Mai Arr     41.66 256   P        P        02 01 44.3 -0.8
NLAI  Namlea             41.77 202   P        P        02 01 46.2 +0.2
      comp=Z,47nm,1.1s
TEZP  TEZPUR             42.53 271  eP        P        02 01 52.2  0.0
TEZP                                 IAmb     IAmb     02 01 57.6
      comp=Z,64nm,1.2s
ZAA0  Zalesovo Array     42.58 313   P        P        02 01 52.0 -0.2
ZAA0                                 IAmb     IAmb     02 01 57.2
      comp=Z,59nm,0.8s
ZALV  Zalesovo Beam      42.58 313   P        P        02 01 52.0 -0.2
      comp=Z,76nm,1.0s,baz=91,slow=6.3,SNR=110
ZALV                                 PcP      PcP      02 03 46.1 +1.8
      comp=Z,8.5nm,0.7s,baz=118,slow=2.8,SNR=2.9
ZALV                                 LR       LR       02 20 17.7
      comp=Z,5µm,19.8s,baz=85,slow=37
ZALV  Zalesovo Beam      42.58 313   P        P        02 01 51.8 -0.4
LSA   Lhasa              42.60 276   P        P        02 01 54.5 +1.2
LSA                                  pmax     pmax
      comp=Z,180nm,1.0s
LSA                                  LR       LR
      comp=Z,9µm,15.0s
LSA                                  LR       LR
      comp=Z,15µm,15.7s
LSA                                  LR       LR
      comp=Z,24µm,15.7s
LSA   Lhasa              42.60 276   P        P        02 01 54.1 +0.8
LSA   Lhasa              42.60 276   P        P        02 01 53.5 +0.2
LSA                                  pmax     pmax
      comp=Z,48nm,1.0s
LSA                                  MLR      MLR
      comp=Z,3µm,18.0s
LSA   Lhasa              42.60 276   P        P        02 01 53.5 +0.2
LSA                                  IAmb     IAmb     02 01 56.3
      comp=Z,48nm,1.0s
LSA                                  IAMs_20  IAMs_20  02 21 15.6
      comp=Z,3µm,18.0s
ZSN   Zaisan             42.90 303  eP        P        02 01 55.4 +0.4
ZSN                                 eS        S        02 08 21.7 +3.0
ZSN                                  pmax     pmax
      comp=Z,84nm,1.1s
ZSN                                  MLR      MLR
      comp=Z,966nm,13.0s
SBUM  Sibu               43.46 226   P        P        02 01 59.2 -0.6
SBUM  Sibu               43.46 226   P        P        02 01 59.0 -0.7
RDOG  Red Dog Mine       43.91  26   P        P        02 02 03.0 +0.2
RDOG                                 IAMs_20  IAMs_20  02 22 06.2
      comp=Z,2µm,20.0s
NRIK  Noril'sk           43.97 335   P        P        02 02 03.5 +0.2
      comp=Z,16nm,0.9s,baz=125,slow=6.0,SNR=18
NRIK                                 LR       LR       02 21 03.9
      comp=Z,3µm,19.8s,baz=96,slow=37
NRIK  Noril'sk           43.97 335 i P        P        02 02 03.9 +0.7
NRIK                                 pmax     pmax
      comp=Z,28nm,1.2s
BKB   Balikpapan         44.07 217   P        P        02 02 00.2 -4.4
MK31  Makanchi Array     44.73 303 i P        P        02 02 09.0 -0.7
MKAR  Makanchi Array     44.73 303   P        P        02 02 09.3 -0.4
      comp=Z,73nm,1.0s,baz=87,slow=8.0,SNR=161
MKAR                                 LR       LR       02 21 34.9
      comp=Z,4µm,19.9s,baz=81,slow=37
MKAR  Makanchi Array     44.73 303 i P        P        02 02 09.3 -0.4
MKAR                                 pmax     pmax
      comp=Z,72nm,1.0s
MAKZ  Makanchi           44.94 303 i P        P        02 02 10.6 -0.8
MAKZ                                 pmax     pmax
      comp=Z,91nm,1.1s
MAKZ  Makanchi           44.94 303   P        P        02 02 11.1 -0.2
MAKZ                                 IAMs_20  IAMs_20  02 21 20.8
      comp=Z,4µm,21.0s
SPSI  Sidrap Palu        45.15 212   P        P        02 02 10.2 -3.0
BRDH  Bariadhala         45.28 267   P        P        02 02 14.3  0.0
      comp=Z,83nm,0.3s,baz=100,slow=12,SNR=5.9
BRDH                                 LR       LR       02 24 21.3
      comp=Z,4µm,18.5s,baz=84,slow=40
KSM   Kuching            45.37 227   P        P        02 02 14.4 -0.6
KSM                                  IAmb     IAmb     02 02 16.6
      comp=Z,24nm,0.8s
KSM   Kuching            45.37 227   P        P        02 02 15.0  0.0
BNSI  Bone               45.40 211   P        P        02 02 15.6 +0.4
      comp=Z,887nmcomp=Z,83nm,1.1s
SIMRM Sittwe             45.56 263   P        P        02 02 17.5 +1.0
SIMRM                                IAmb     IAmb     02 02 19.3
      comp=Z,23nm,0.6s
CHIR  Chirikof Islan     45.76  44   IAMs_20  IAMs_20  02 23 09.8
      comp=Z,2µm,20.0s
PMG   Port Moresby       45.84 173   P        P        02 02 18.2 -0.5
      comp=Z,4.0nm,0.3s,baz=252,slow=20,SNR=1.3
PMG   Port Moresby       45.84 173ceP       P        02 02 22.6 +3.9
PMG                                  pmax     pmax
      comp=Z,112nm,1.3s
PMG   Port Moresby       45.84 173   P        P        02 02 18.5 -0.2
PMG                                  IAmb     IAmb     02 02 24.4
      comp=Z,30nm,1.1s
KAPI  Kappang            46.10 211   P        P        02 02 19.6 -1.1
      comp=Z,56nm,1.1s,baz=9.6,slow=5.2,SNR=29
KAPI  Kappang            46.10 211   P        P        02 02 21.3 +0.6
TAPN  Taplejung          46.32 275  eP        P        02 02 22.5 -0.3
      comp=Z,131nm,1.0s
SII   Sitkinak Islan     46.53  43   IAMs_20  IAMs_20  02 19 33.0
      comp=Z,2µm,18.0s
KURK  Kurchatov          46.58 309   P        P        02 02 24.4 +0.2
KURK                                 P        P        02 02 24.4 +0.2
KURK  Kurchatov          46.58 309 i P        P        02 02 23.4 -0.8
KURK                                 pmax     pmax
      comp=Z,77nm,0.9s
KURK  Kurchatov          46.58 309   P        P        02 02 23.6 -0.6
ODAN  Odare              46.79 274  eP        P        02 02 25.8 -0.6
      comp=Z,235nm,1.0s
OHAK  Old Harbor         46.99  42   IAMs_20  IAMs_20  02 21 20.4
      comp=Z,2µm,21.0s
IMAR  Indian Mountai     47.02  30   P        P        02 02 27.9 +0.5
KDAK  Kodiak Island      47.34  42   P        P        02 02 31.8 +1.7
      comp=Z,14nm,0.7s,baz=248,slow=4.0,SNR=14
KDAK  Kodiak Island      47.34  42   P        P        02 02 31.0 +1.0
KDAK                                 pmax     pmax
      comp=Z,31nm,1.0s
KDAK                                 MLR      MLR
      comp=Z,1µm,20.0s
KDAK  Kodiak Island      47.34  42   P        P        02 02 31.0 +1.0
KDAK                                 IAmb     IAmb     02 02 54.0
      comp=Z,31nm,0.9s
PDGK  Podgornoye         47.36 299 i P        P        02 02 30.0 -0.6
PDGK                                 pmax     pmax
      comp=Z,126nm,1.0s
RAMN  Ramite             47.38 275  eP        P        02 02 30.8 -0.3
      comp=Z,464nm,1.0s
JIRN  Jiri               47.41 276  eP        P        02 02 31.3 -0.1
      comp=Z,392nm,1.1s
SHLS  Shalkode           47.42 298  eP        P        02 02 28.7 -2.4
SHLS                                 pmax     pmax
      comp=Z,30nm,0.9s
SHLS                                 MLR      MLR
      comp=Z,2µm,13.0s
GUN   Gumba              47.55 276  eP        P        02 02 32.2 -0.3
      comp=Z,249nm,1.0s
UZB   Uzynbulak          47.74 298  eP        P        02 02 33.5  0.0
UZB                                  pmax     pmax
      comp=Z,36nm,1.0s
UZB                                  MLR      MLR
      comp=Z,1µm,14.0s
KPKS  Kokpek             47.90 299  eP        P        02 02 34.0 -0.7
KPKS                                eS        S        02 09 36.6 +5.5
KPKS                                 pmax     pmax
      comp=Z,56nm,1.9s
KPKS                                 MLR      MLR
      comp=Z,4µm,15.0s
BPAW  Bear Paw Mtn.      48.06  33   IAMs_20  IAMs_20  02 23 38.2
      comp=Z,1µm,19.0s
PKI   Pulchoki           48.07 276  eP        P        02 02 36.1 -0.4
      comp=Z,149nm,1.1s
PKIN  Phulchoki          48.08 276  eP        P        02 02 35.8 -0.7
      comp=Z,98nm,1.0s
KTH   Kantishna Hill     48.08  34   IAmb     IAmb     02 03 04.8
      comp=Z,25nm,1.0s
KTH                                  IAMs_20  IAMs_20  02 25 00.6
      comp=Z,1µm,19.0s
KKN   Kakani             48.08 277  eP        P        02 02 36.6 +0.1
      comp=Z,108nm,1.1s
SATY  Saty               48.20 298  eP        P        02 02 36.3 -0.8
MLY   Manley             48.20  32   P        P        02 02 36.5 -0.2
MLY                                  IAmb     IAmb     02 03 11.3
      comp=Z,15nm,0.8s
MLY                                  IAMs_20  IAMs_20  02 22 30.9
      comp=Z,1µm,20.0s
DMN   Daman              48.30 276  eP        P        02 02 38.3 +0.1
GKN   Gorkha             48.51 277  eP        P        02 02 39.3 -0.4
      comp=Z,444nm,1.1s
RC01  Rabbit Creek A     48.66  37   P        P        02 02 41.1 +0.9
RC01                                 IAmb     IAmb     02 03 03.9
      comp=Z,30nm,1.1s
HNR   Honiara            48.68 156   P        P        02 02 40.4 -0.4
HNR                                  pmax     pmax
      comp=Z,61nm,0.6s
HNR   Honiara            48.68 156   P        P        02 02 40.4 -0.4
HNR   Honiara            48.68 156   IAMs_20  IAMs_20  02 21 49.4
      comp=Z,2µm,20.0s
BWN   Browne             48.73  33   P        P        02 02 40.7  0.0
BWN                                  IAMs_20  IAMs_20  02 24 08.8
      comp=Z,2µm,20.0s
SOEI  Soe                48.80 203   P        P        02 02 41.9  0.0
      comp=Z,1µmcomp=Z,80nm,0.9s
SEW   Seward             48.84  38   P        P        02 02 41.9 +0.3
SEW                                  IAmb     IAmb     02 03 12.8
      comp=Z,19nm,0.9s
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TOLK	**Toolik Lake Re**	**48.88**	**27**	IAmb	IAmb	02 03 13.8	
	comp=Z,19nm,0.9s						
TOLK				IAMs_20	IAMs_20	02 22 58.7	
	comp=Z,2µm,20.0s						
TOLK	**Toolik Lake Re**	**48.88**	**27**	P	**P**	**02 02 43.1**	**+1.3**
	baz=266						
NEA	**Nenana**	**48.91**	**32**	IAmb	IAmb	02 03 11.1	
	comp=Z,42nm,1.2s						
MCK	**McKinley**	**48.97**	**33**	IAmb	IAmb	02 03 01.3	
	comp=Z,20nm,1.0s						
MCK				IAMs_20	IAMs_20	02 23 49.1	
	comp=Z,2µm,20.0s						
CHKK	**Chushkaly**	**48.99**	**300**	*e*P	**P**	**02 02 42.9**	**-0.2**
RND	**Reindeer**	**49.01**	**34**	IAmb	IAmb	02 03 11.0	
	comp=Z,18nm,0.9s						
RND				IAMs_20	IAMs_20	02 25 50.1	
	comp=Z,2µm,20.0s						
GHO	**Glory Hole Cre**	**49.02**	**36**	IAmb	IAmb	02 03 07.2	
	comp=Z,47nm,1.1s						
DANN	**Dangsing**	**49.06**	**278**	*e*P	**P**	**02 02 43.9**	**-0.2**
	comp=Z,334nm,0.9s						
IPM	**Ipoh**	**49.10**	**240**	P	**P**	**02 02 43.1**	**-1.1**
IPM				IAmb	IAmb	02 02 45.4	
	comp=Z,38nm,1.1s						
IPM				IAMs_20	IAMs_20	02 25 35.8	
	comp=Z,2µm,19.0s						
IPM	**Ipoh**	**49.10**	**240**	P	**P**	**02 02 44.0**	**-0.2**
MDOK	**Medeo**	**49.13**	**299**	*e*P	**P**	**02 02 44.5**	**+0.2**
MDOK				*e*S	**S**	**02 09 54.8**	**+6.2**
MDOK				MLR	MLR		
	comp=Z,6µm,17.0s						
MYKOM	**Kota Tinggi**	**49.16**	**234**	P	**P**	**02 02 44.0**	**-0.6**
AAA	**Alma-Ata**	**49.21**	**299**	*e*P	**P**	**02 02 44.6**	**-0.2**
AAA				pmax	pmax		
	comp=Z,27nm,1.2s						
AAA				MLR	MLR		
	comp=Z,6µm,17.0s						
TNSS	**Tian-Shan**	**49.23**	**299**	*e*P	**P**	**02 02 45.5**	**+0.1**
MDM	**Murphy Dome**	**49.27**	**32**	IAmb	IAmb	02 03 13.8	
	comp=Z,28nm,0.9s						
SML	**Sawmill**	**49.30**	**36**	IAmb	IAmb	02 03 09.4	
	comp=Z,30nm,1.0s						
BOK	**Bokaro**	**49.39**	**272**	*e*P	**P**	**02 02 45.6**	**-0.7**
BOK				IAmb	IAmb	02 02 47.7	
	comp=Z,34nm,0.9s						
COLA	**College**	**49.43**	**32**	P	**P**	**02 02 49.3**	**+3.3**
KUU	**Kurty**	**49.44**	**300**	*e*P	**P**	**02 02 45.5**	**-1.0**
KUU				pmax	pmax		
	comp=Z,72nm,1.2s						
KUU				MLR	MLR		
	comp=Z,3µm,14.0s						
CCB	**Clear Creek Bu**	**49.45**	**32**	IAMs_20	IAMs_20	02 25 20.0	
	comp=Z,1µm,19.0s						
POKR	**Poker Plat Res**	**49.61**	**32**	P	**P**	**02 02 50.1**	**+2.7**
	baz=271,SNR=8.8						
DHY	**Denali Highway**	**49.69**	**34**	P	**P**	**02 02 48.3**	**+0.1**
DHY				IAmb	IAmb	02 03 09.6	
	comp=Z,24nm,1.2s						
DHY				IAMs_20	IAMs_20	02 25 41.6	
	comp=Z,2µm,20.0s						
HDA	**Harding Lake**	**49.83**	**33**	IAmb	IAmb	02 03 16.9	
	comp=Z,16nm,0.8s						
HDA				IAMs_20	IAMs_20	02 24 48.9	
	comp=Z,2µm,19.0s						
HDA	**Harding Lake**	**49.83**	**33**	P	**P**	**02 02 50.2**	**+1.1**
	baz=272,SNR=6.6						
IL31		**49.84**	**32**	IAmb	IAmb	02 03 17.1	
	comp=Z,19nm,0.9s						
ILAR	**Eielson Array**	**49.84**	**32**	P	**P**	**02 02 50.5**	**+1.3**
	comp=Z,7.1nm,0.8s,baz=266,slow=5.9,SNR=34						
ILAR				LR	LR	02 26 19.0	
	comp=Z,900nm,18.8s,baz=280,slow=39						
ILAR	**Eielson Array**	**49.84**	**32**	P	**P**	**02 02 49.1**	**-0.1**
ULHL	**Ulahol**	**49.95**	**298**	P	**P**	**02 02 51.0**	**+0.4**
	SNR=12						
BOOM	**Boomskoye usch**	**50.10**	**298**	P	**P**	**02 02 51.8**	**+0.1**
BOOM				pmax	pmax		
	comp=Z,97nm,1.3s						
BOOM				MLR	MLR		
	comp=Z,7µm,20.0s						
BOOM	**Boomskoye usch**	**50.10**	**298**	P	**P**	**02 02 51.8**	**+0.1**
COEN	**Coen**	**50.11**	**178**	IAmb	IAmb	02 03 30.9	
	comp=Z,21nm,1.1s						
TKM2	**Tokmak 2**	**50.22**	**299**	P	**P**	**02 02 54.1**	**+1.5**
	SNR=39						
FID	**Port Fidalgo**	**50.27**	**37**	P	**P**	**02 02 53.0**	**+0.5**
FID				IAmb	IAmb	02 03 16.6	
	comp=Z,37nm,1.2s						
HIN	**Hinchinbrook I**	**50.29**	**38**	IAMs_20	IAMs_20	02 27 36.4	
	comp=Z,2µm,19.0s						
PLAI	**Plampang**	**50.36**	**212**	P	**P**	**02 02 52.4**	**-1.2**
	comp=Z,44nm,0.9s						
PRP	**Porcupine Dome**	**50.40**	**31**	IAMs_20	IAMs_20	02 24 06.9	
	comp=Z,1µm,20.0s						
BRZS	**Berezniki**	**50.45**	**309**	*e*P	**P**	**02 02 53.3**	**-0.8**
BRZS				pmax	pmax		
	comp=Z,60nm,1.5s						
BRZS				MLR	MLR		
	comp=Z,2µm,16.0s						
FYU	**Fort Yukon**	**50.48**	**30**	IAMs_20	IAMs_20	02 26 26.2	
	comp=Z,1µm,19.0s						
EYAK	**Cordova Ski Ar**	**50.64**	**38**	IAMs_20	IAMs_20	02 27 48.9	
	comp=Z,2µm,18.0s						
KZA	**Kyzart**	**50.71**	**298**	P	**P**	**02 02 57.6**	**+1.0**
	SNR=30						
BMAR	**Burnt Mountain**	**50.72**	**29**	P	**P**	**02 02 56.2**	**+0.4**
BTLS	**Baital**	**50.72**	**302**	*e*P	**P**	**02 02 55.1**	**-1.1**
BTLS				*e*S	**S**	**02 10 06.8**	**-3.7**
BTLS				pmax	pmax		
	comp=Z,14nm,0.9s						
BTLS				MLR	MLR		
	comp=Z,989nm,13.0s						
KBK	**Karagaybulak**	**50.75**	**299**	P	**P**	**02 02 56.9**	**+0.2**
	SNR=47						
RIDG	**Independent Ri**	**50.79**	**33**	IAMs_20	IAMs_20	02 25 04.2	
	comp=Z,1µm,19.0s						
CHMS	**Chumysh**	**50.79**	**299**	P	**P**	**02 02 56.7**	**0.0**
	SNR=20						
CHMS	**Chumysh**	**50.79**	**299**	*i* P	**P**	**02 02 56.3**	**-0.5**
CHMS				pmax	pmax		
	comp=Z,59nm,1.2s						
USP	**Ospenovka**	**50.89**	**300**	P	**P**	**02 02 57.5**	**-0.1**
	SNR=38						
KSH	**Kashi**	**50.97**	**295**	P	**P**	**02 03 02.5**	**+4.3**
KSH				pP	pwP	02 03 06.5	+0.1
KSH				PcP	**PcP**	**02 04 18.0**	**+3.7**
KSH				S	**S**	**02 10 19.5**	**+5.3**
KSH				ScS	**ScS**	**02 12 50.0**	**+2.0**
KSH				pmax	pmax		
	comp=Z,22nm,0.6s						
KSH				pmax	pmax		
	comp=Z,690nm,9.0s						
KSH				LR	LR		
	comp=Z,2µm,13.6s						
KSH				LR	LR		
	comp=Z,2µm,12.5s						
KSH				LR	LR		
	comp=Z,3µm,14.6s						
AAK	**Ala-Archa**	**51.08**	**299**	LR	LR	02 26 05.1	
	comp=Z,13µm,18.8s,baz=68,slow=38						
AAK	**Ala-Archa**	**51.08**	**299**	P	**P**	**02 02 59.0**	**-0.1**
	SNR=25						
AAK	**Ala-Archa**	**51.08**	**299**	*i* P	**P**	**02 02 59.4**	**+0.3**
	SNR=6.7						
AAK	**Ala-Archa**	**51.08**	**299**	P	**P**	**02 02 59.9**	**+0.8**
AAK				P	**P**	**02 02 59.9**	**+0.8**
AAK	**Ala-Archa**	**51.08**	**299***c*	*i*P	**P**	**02 02 58.5**	**-0.6**
AAK				pmax	pmax		
	comp=Z,47nm,1.1s						
AAK	**Ala-Archa**	**51.08**	**299**	P	**P**	**02 02 59.0**	**-0.1**
AAK				IAmb	IAmb	02 03 10.5	
	comp=Z,49nm,1.1s						
SCRK	**Sand Creek**	**51.15**	**33**	IAMs_20	IAMs_20	02 26 10.7	
	comp=Z,1µm,20.0s						
UCH	**Uchtor**	**51.19**	**298**	P	**P**	**02 03 01.1**	**+0.8**
	SNR=13						
RAGM	**Ragged Mountai**	**51.19**	**38**	IAMs_20	IAMs_20	02 28 24.3	
	comp=Z,2µm,18.0s						
BVAR	**Borovoye Array**	**51.24**	**313**	P	**P**	**02 02 59.5**	**-0.4**
	comp=Z,31nm,1.1s,baz=80,slow=8.3,SNR=60						
BRVK	**Borovoye**	**51.29**	**313**	*i* P	**P**	**02 02 59.6**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,43nm,1.1s						
BRVK	**Borovoye**	**51.29**	**313**	P	**P**	**02 03 00.2**	**-0.1**
BRVK				IAmb	IAmb	02 03 09.5	
	comp=Z,35nm,1.0s						
MENT	**Mentasta**	**51.36**	**34**	P	**P**	**02 03 02.0**	**+1.3**
MENT				IAMs_20	IAMs_20	02 27 13.4	
	comp=Z,2µm,19.0s						
GLB	**Gilahina Butte**	**51.48**	**36**	IAmb	IAmb	02 03 27.4	
	comp=Z,52nm,1.5s						
EKS2	**Erkin-Say**	**51.58**	**299**	P	**P**	**02 03 02.7**	**-0.1**
	SNR=28						
JAGI	**Jajag, Banyuwa**	**51.66**	**216**	P	**P**	**02 03 03.0**	**-0.4**
JAGI				IAmb	IAmb	02 03 29.7	
	comp=Z,31nm,1.0s						
VRDI	**Verde Repeater**	**51.68**	**37**	IAmb	IAmb	02 03 28.1	
	comp=Z,42nm,1.4s						
PSI	**Prapat**	**51.76**	**240**	LR	LR	02 26 47.6	
	comp=Z,1µm,18.2s,baz=34,slow=38						
PSI	**Prapat**	**51.76**	**240**	P	**P**	**02 03 03.9**	**-0.5**
PSI				pmax	pmax		
	comp=Z,14nm,0.8s						
PSI				MLR	MLR		
	comp=Z,1µm,20.0s						
AML	**Almayashu**	**51.80**	**299**	P	**P**	**02 03 05.2**	**+0.5**
	SNR=98						
RPSI	**Rantau Prapat**	**51.84**	**240**	P	**P**	**02 03 03.9**	**-1.0**
RPSI				IAMs_20	IAMs_20	02 26 18.3	
	comp=Z,1µm,20.0s						
MCARA	**McCarthy VSAT**	**51.87**	**36**	P	**P**	**02 03 05.9**	**+1.4**
MCARA				IAmb	IAmb	02 03 29.4	
	comp=Z,38nm,1.1s						
CRQM	**Cirque**	**51.90**	**37**	IAmb	IAmb	02 03 13.3	
	comp=Z,26nm,0.9s						
CRQM				IAMs_20	IAMs_20	02 23 12.5	
	comp=Z,1µm,22.0s						
TGL	**Tana Glacier**	**52.05**	**37**	IAMs_20	IAMs_20	02 23 38.9	
	comp=Z,1µm,20.0s						
BKNI	**Bangkinang**	**52.11**	**236**	P	**P**	**02 03 06.6**	**-0.2**
BKNI				IAMs_20	IAMs_20	02 27 27.4	
	comp=Z,1µm,18.0s						
BCAR	**Beaver Creek A**	**52.22**	**34**	P	**P**	**02 03 08.4**	**+1.2**
BALM	**Baldy**	**52.24**	**37**	IAMs_20	IAMs_20	02 23 13.2	
	comp=Z,1µm,22.0s						
EGAK	**Eagle**	**52.29**	**32**	IAMs_20	IAMs_20	02 25 05.0	
	comp=Z,1µm,21.0s						
SMRI	**Semarang**	**52.30**	**221**	P	**P**	**02 03 07.5**	**-0.7**
ARSB	**Arslanbob**	**52.55**	**298**	P	**P**	**02 03 10.3**	**+0.2**
ARSB	**Arslanbob**	**52.55**	**298**	P	**P**	**02 03 10.3**	**+0.2**
CTGM	**Chitina Glacie**	**52.74**	**37**	IAmb	IAmb	02 03 35.8	
	comp=Z,41nm,1.6s						
DDI	**Dehra Dun**	**52.76**	**283**	*e*P	**P**	**02 03 10.7**	**-0.9**
UGM	**Wanagama**	**52.99**	**220**	P	**P**	**02 03 11.7**	**-1.6**
SMLA	**Simla**	**53.12**	**284**	*e*P	**P**	**02 03 13.8**	**-0.4**
DAWY	**Dawson**	**53.15**	**33**	IAMs_20	IAMs_20	02 25 35.6	
	comp=Z,1µm,21.0s						
KNRA	**Kununurra**	**53.25**	**196**	P	**P**	**02 03 13.8**	**-1.3**
DHRM	**DHARAMSHALA**	**53.34**	**286**	*e*P	**P**	**02 03 15.4**	**-0.7**
DHRM				IAmb	IAmb	02 03 24.5	
	comp=Z,113nm,1.0s						
BHK	**Bhakra**	**53.59**	**285**	*e*x	**P**	**02 03 20.0**	**+2.3**
KK31	**Karatay Array**	**53.73**	**301**	*i* P	**P**	**02 03 17.9**	**-0.6**
KKAR	**Karatay Array**	**53.73**	**301**	P	**P**	**02 03 18.1**	**-0.4**
KKAR	**Karatay Array**	**53.73**	**301**	P	**P**	**02 03 18.1**	**-0.4**
GSI	**Gunungsitoli**	**53.77**	**240**	P	P	02 03 13.6	-5.5
GSI	**Gunungsitoli**	**53.77**	**240**	IAMs_20	IAMs_20	02 27 49.4	
	comp=Z,2µm,19.0s						
OPA	**Opana**	**53.81**	**88**	P	**P**	**02 03 21.1**	**+1.7**
OPA				pmax	pmax		
	comp=Z,238nm,1.5s						
OPA	**Opana**	**53.81**	**88**	P	**P**	**02 03 21.1**	**+1.7**
EPYK	**Eagle Plains**	**53.90**	**30**	P	**P**	**02 03 20.9**	**+1.4**
	baz=279						
JBG	**Jabagly**	**53.92**	**300**	*e*P	**P**	**02 03 20.4**	**+0.3**
JBG				*e*S	**S**	**02 11 00.2**	**+5.6**
JBG				pmax	pmax		
	comp=Z,14nm,0.9s						
JBG				MLR	MLR		
	comp=Z,1µm,15.0s						
CISI	**Cisompet, Garu**	**54.14**	**223**	P	**P**	**02 03 20.4**	**-1.5**
HYT	**Haines Junctio**	**54.60**	**36**	IAmb	IAmb	02 03 34.1	
	comp=Z,27nm,1.0s						
HYT				IAMs_20	IAMs_20	02 24 24.7	
	comp=Z,1µm,20.0s						
CHM	**Chimkent**	**54.62**	**300**	*e*P	**P**	**02 03 22.8**	**-2.2**
CHM				pmax	pmax		
	comp=Z,13nm,0.8s						
INK	**Inuvik**	**54.79**	**27**	P	**P**	**02 03 26.2**	**+0.4**
	comp=Z,9.1nm,0.8s,baz=277,slow=5.9,SNR=12						
INK	**Inuvik**	**54.79**	**27**	IAMs_20	IAMs_20	02 28 08.1	
	comp=Z,1µm,20.0s						
NIL	**Nilore**	**55.13**	**289**	P	**P**	**02 03 30.0**	**+1.1**
NIL				P	**P**	**02 03 30.0**	**+1.1**
NIL	**Nilore**	**55.13**	**289**	P	**P**	**02 03 28.7**	**-0.1**
NIL				pmax	pmax		
	comp=Z,51nm,1.0s						
NIL				MLR	MLR		
	comp=Z,2µm,19.0s						
NIL	**Nilore**	**55.13**	**289**	P	**P**	**02 03 28.7**	**-0.1**
NIL	**Nilore**	**55.13**	**289**	IAMs_20	IAMs_20	02 29 24.9	
	comp=Z,2µm,19.0s						
TAS	**Tashkent**	**55.17**	**299**	P	**P**	**02 03 29.8**	**+0.8**
TAS				pmax	pmax		
	comp=Z,76nm,0.9s						
TAS				MLR	MLR		
	comp=Z,7µm,19.0s						
TAS	**Tashkent**	**55.17**	**299**	P	**P**	**02 03 29.8**	**+0.8**
SVE	**Sverdlovsk**	**55.84**	**319**	*e*P	**P**	**02 03 34.4**	**+0.9**
SVE				pmax	pmax		
	comp=Z,65nm,1.0s						
SVE				MLR	MLR		
	comp=Z,8µm,16.0s						
WHY	**Whitehorse**	**55.90**	**36**	IAmb	IAmb	02 03 41.8	
	comp=Z,16nm,0.9s						
NGP	**Nagpur**	**56.19**	**273**	*e*P	**P**	**02 03 36.6**	**0.0**
NGP				*e*x	x	02 05 29.8	
FITZ	**Fitzroy Crossi**	**56.33**	**199**	P	**P**	**02 03 36.0**	**-1.4**
	comp=Z,7.4nm,0.7s,baz=39,slow=6.5,SNR=14						
FITZ	**Fitzroy Crossi**	**56.33**	**199**	P	**P**	**02 03 36.5**	**-0.9**
CTA	**Charters Tower**	**56.34**	**175**	P	**P**	**02 03 36.7**	**-0.8**
	comp=Z,3.5nm,0.7s,baz=3.5,slow=7.5,SNR=7.1						
WB8	**Warramunga Arr**	**56.36**	**188**	IAMs_20	IAMs_20	02 25 53.4	
	comp=Z,1µm,22.0s						
BHPL	**Bhopal**	**56.46**	**276**	*e*P	**P**	**02 03 38.2**	**-0.4**
WB3	**Warramunga Arr**	**56.47**	**188**	IAMs_20	IAMs_20	02 28 02.3	
	comp=Z,1µm,22.0s						
WC1	**Warramunga Arr**	**56.47**	**188**	IAMs_20	IAMs_20	02 25 46.4	
	comp=Z,1µm,22.0s						
WRAB	**Tennant Creek**	**56.48**	**188**	P	**P**	**02 03 36.9**	**-1.6**
WRAB				pmax	pmax		
	comp=Z,30nm,0.8s						
WRAB	**Tennant Creek**	**56.48**	**188**	P	**P**	**02 03 36.9**	**-1.6**
WRAB				IAmb	IAmb	02 04 04.1	
	comp=Z,30nm,0.8s						
WR0	**Warramunga Arr**	**56.48**	**188**	IAmb	IAmb	02 04 04.2	
	comp=Z,32nm,0.8s						
WB2	**Warramunga Arr**	**56.49**	**188**	P	**P**	**02 03 36.5**	**-2.0**
WB2				IAmb	IAmb	02 04 04.2	
	comp=Z,36nm,0.8s						
WR3	**Warramunga Arr**	**56.49**	**188**	IAMs_20	IAMs_20	02 25 47.9	
	comp=Z,1µm,22.0s						
WRA	**Warramunga Arr**	**56.49**	**188**	P	**P**	**02 03 36.1**	**-2.5**
	comp=Z,13nm,1.0s,baz=7.3,slow=7.1,SNR=26						
WRA				LR	LR	02 26 44.1	
	comp=Z,758nm,21.7s,baz=0.0,slow=35						
WB1	**Warramunga Ar.**	**56.51**	**188**	IAMs_20	IAMs_20	02 25 47.3	
	comp=Z,1µm,21.0s						
A36M	**Sachs Harbour**	**56.71**	**22**	P	**P**	**02 03 40.8**	**+1.2**
	baz=285						
ARU	**Arti**	**57.05**	**319**	P	**P**	**02 03 41.7**	**-0.5**
	comp=Z,19nm,0.9s,baz=72,slow=5.2,SNR=43						
ARU	**Arti**	**57.05**	**319***d*	*i*P	**P**	**02 03 41.3**	**-0.9**
ARU						02 04 39.1	
ARU						02 05 44.6	
ARU				PPP	PPP	02 07 03.0	
ARU				S	**S**	**02 11 34.4**	**-1.2**
ARU						02 13 29.8	
ARU				SS	**SS**	**02 15 21.1**	**-2.7**
ARU				pmax	pmax		
	comp=Z,79nm,1.1s						
ARU				MLR	MLR		
	comp=Z,6µm,16.0s						
ARU	**Arti**	**57.05**	**319**	P	**P**	**02 03 41.6**	**-0.6**
C36M	**Paulatuk**	**57.86**	**25**	IAmb	IAmb	02 03 51.3	
	comp=Z,25nm,1.1s						
C36M	**Paulatuk**	**57.86**	**25**	P	**P**	**02 03 47.7**	**+0.1**
	baz=288						
KBL	**Kabul**	**57.95**	**292**	P	**P**	**02 03 49.2**	**+0.1**
KBL				P	**P**	**02 03 49.2**	**+0.1**
KBL	**Kabul**	**57.95**	**292**	P	**P**	**02 03 48.7**	**-0.5**
KBL				pmax	pmax		
	comp=Z,50nm,1.1s						
KBL				MLR	MLR		
	comp=Z,2µm,20.0s						
KBL	**Kabul**	**57.95**	**292**	P	**P**	**02 03 48.7**	**-0.5**
KBL				IAmb	IAmb	02 03 50.8	
	comp=Z,50nm,1.1s						
KBL				IAMs_20	IAMs_20	02 30 17.0	
	comp=Z,2µm,20.0s						
HYB	**Hyderabad**	**58.52**	**269**	*i* P	**P**	**02 03 53.0**	**-0.1**
HYB	**Hyderabad**	**58.52**	**269**	*e*P	**P**	**02 03 52.6**	**-0.6**
HYB				IAmb	IAmb	02 03 54.8	
	comp=Z,15nm,0.7s						
DLBC	**Dease Lake**	**58.91**	**38**	IAMs_20	IAMs_20	02 29 18.3	
	comp=Z,1µm,20.0s						
AKTO	**Aktyubinsk**	**59.34**	**312**	P	**P**	**02 03 57.9**	**-0.5**
	comp=Z,19nm,1.0s,baz=75,slow=6.4,SNR=28						
ASAR	**Alice Springs**	**60.22**	**188**	P	**P**	**02 04 02.7**	**-1.9**
	comp=Z,7.7nm,0.8s,baz=10,slow=5.5,SNR=21						
ASAR				LR	LR	02 28 59.2	
	comp=Z,828nm,21.5s,baz=358,slow=35						
KIRV	**Kirov**	**60.95**	**323**	P	**P**	**02 04 09.1**	**-0.1**
	comp=Z,60nm,0.9s,baz=88,slow=2.2,SNR=24						
KIRV	**Kirov**	**60.95**	**323**	*i* P	**P**	**02 04 08.4**	**-0.7**
PSA00	**Pilbara Seismi**	**61.30**	**203**	P	**P**	**02 04 11.5**	**-0.4**
PSA00	**Pilbara Seismi**	**61.30**	**203**	IAMs_20	IAMs_20	02 30 12.6	
	comp=Z,1µm,20.0s						
PRGR	**Permogore**	**61.47**	**327**	*e*P	P	02 04 07.2	-5.4
PRGR				pmax	pmax		
	comp=Z,51nm,1.0s						
EIDS	**Eidsvold**	**62.06**	**171**	P	**P**	**02 04 17.1**	**+0.1**
EIDS				IAmb	IAmb	02 04 38.8	
	comp=Z,23nm,1.4s						
PALK	**Pallekele**	**62.56**	**258**	P	**P**	**02 04 20.2**	**-0.5**
PALK	**Pallekele**	**62.56**	**258**	P	**P**	**02 04 20.8**	**0.0**
PALK				pmax	pmax		
	comp=Z,31nm,1.2s						
PALK				MLR	MLR		
	comp=Z,1µm,21.0s						
PALK	**Pallekele**	**62.56**	**258**	P	**P**	**02 04 20.8**	**0.0**
PALK				IAmb	IAmb	02 04 34.5	
	comp=Z,31nm,1.1s						
PALK	**Pallekele**	**62.56**	**258**	IAMs_20	IAMs_20	02 31 59.9	
	comp=Z,1µm,21.0s						
DZM	**Mont Dzumac**	**62.65**	**154**	*e*P	P	02 04 26.5	+5.4
	comp=Z,81nm,1.2s						
DZM				*e*S	**S**	**02 12 53.4**	**+4.9**
	comp=Z,2µm,27.1s						
DZM	**Mont Dzumac**	**62.65**	**154**	*e*LR	LR	02 23 07.5	
	comp=Z,4µm,21.1s						
RES	**Resolute Bay**	**63.12**	**14**	P	**P**	**02 04 23.3**	**-0.2**
RES				pmax	pmax		
	comp=Z,22nm,0.8s						
RES	**Resolute Bay**	**63.12**	**14**	IAmb	IAmb	02 04 27.2	
	comp=Z,22nm,0.8s						
APA	**Apatity**	**63.39**	**336**⇓	*i*P	**P**	**02 04 25.0**	**-0.4**
APA				pmax	pmax		
	comp=Z,23nm,1.1s						
TMCR	**Tamitsa**	**63.45**	**332**	*e*P	**P**	**02 04 25.9**	**+0.1**
TMCR				pmax	pmax		
	comp=Z,89nm,1.3s						
YKA	**Yellowknife Ar**	**64.18**	**30**	P	**P**	**02 04 30.6**	**-0.1**
	comp=Z,7.9nm,0.8s,baz=299,slow=6.2,SNR=46						
YKA				LR	LR	02 32 51.2	
	comp=Z,449nm,21.8s,baz=0.0,slow=36						
YKA	**Yellowknife Ar**	**64.18**	**30**	*i* P	**P**	**02 04 31.7**	**+1.0**
YKA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ASHT	**Ashkhabad**	**64.23**	**299**	IAMs_20	IAMs_20	02 35 53.3	
	comp=Z,2µm,20.0s						
GEYT	**Alibeck**	**64.43**	**299**	P	**P**	**02 04 33.1**	**+0.2**
	comp=Z,16nm,0.9s,baz=8.5,slow=3.0,SNR=28						
GEYT				LR	LR	02 35 47.0	
	comp=Z,2µm,18.1s,baz=45,slow=39						
GEYT	**Alibeck**	**64.43**	**299**	P	**P**	**02 04 32.8**	**0.0**
GYA0	**ALIBECK ARRAY**	**64.43**	**299**	P	**P**	**02 04 31.5**	**-1.3**
GYA0B	**ALIBECK ARRAY**	**64.43**	**299**	IAmb	IAmb	02 04 38.1	
	comp=Z,22nm,0.8s						
GYA0B				IAMs_20	IAMs_20	02 36 00.5	
	comp=Z,2µm,19.0s						
KLMR	**Klimovskoe**	**64.46**	**328**	*e*P	**P**	**02 04 31.3**	**-1.2**
KLMR				pmax	pmax		
	comp=Z,81nm,1.4s						
KLMR				MLR	MLR		
	comp=Z,2µm,16.0s						
KLMR	**Klimovskoe**	**64.46**	**328**	*e*P	**P**	**02 04 31.4**	**-1.1**
KLMR				AMP		02 04 35.6	
	comp=Z,81nm,1.4s						
KLMR				LQ	LQ	02 27 11.3	
KLMR				LQ	LQ	02 27 11.3	
KLMR				LR	LR	02 28 47.4	
KLMR				AMP		02 35 43.5	
	comp=Z,2µm,16.4s						
ARCES	**ARCESS Array B**	**64.70**	**340**	P	**P**	**02 04 34.1**	**+0.1**
	comp=Z,17nm,0.9s,baz=51,slow=7.2,SNR=11						
ARCES				LR	LR	02 39 07.2	
	comp=Z,3µm,18.2s,baz=28,slow=42						
ARCES	**ARCESS Array B**	**64.70**	**340**	P	**P**	**02 04 34.5**	**+0.5**
ARCES	**ARCESS Array B**	**64.70**	**340**	P	**P**	**02 04 34.5**	**+0.5**
ARE0	**ARCESS Array S**	**64.70**	**340**	*e*P	**P**	**02 04 34.6**	**+0.6**
KTK1	**Kautokeino**	**65.66**	**340**	*e*P	**P**	**02 04 41.2**	**+1.0**
TULEG	**Thule**	**65.67**	**8**	P	**P**	**02 04 40.1**	**-0.2**
TULEG				IAmb	IAmb	02 04 43.0	
	comp=Z,37nm,1.1s						
TULEG				IAMs_20	IAMs_20	02 36 04.7	
	comp=Z,1µm,19.0s						
DAG	**Danmarks Havn**	**66.42**	**355**	*i* P	**P**	**02 04 45.3**	**+0.3**
	comp=Z,26nm,1.1s						
DAG	**Danmarks Havn**	**66.42**	**355**	*i* P	**P**	**02 04 45.3**	**+0.3**
DAG				pmax	pmax		
	comp=Z,26nm,1.1s						
D03D	**Eldon**	**67.28**	**47**	P	**P**	**02 04 54.8**	**+3.8**
	baz=299						
STKA	**Stephens Creek**	**67.93**	**180**	P	**P**	**02 04 53.9**	**-1.1**
	comp=Z,7.0nm,0.8s,baz=337,slow=8.7,SNR=6.6						
STKA				LR	LR	02 33 40.4	
	comp=Z,691nm,21.6s,baz=1.2,slow=35						
MOS	**Moscow**	**67.95**	**324**	*e*P	**P**	**02 04 53.7**	**-1.3**
MOS				*e*		02 05 19.4	
MOS				*e*		02 14 09.6	
MOS				pmax	pmax		
	comp=Z,114nm,1.3s						
MOS				pmax	pmax		
	comp=N,55nm,1.1s						
MOS				pmax	pmax		
	comp=E,50nm,1.3s						
FORT	**Forrest**	**68.07**	**193**	P	**P**	**02 04 55.3**	**-0.7**
E04D	**Cinebar**	**68.08**	**48**	P	**P**	**02 04 59.8**	**+3.8**
	baz=300						
VRH	**Novokhopyorsk**	**68.27**	**318**	*e*P	**P**	**02 04 56.2**	**-0.9**
VRH				pmax	pmax		
	comp=Z,50nm,1.5s						
VRH				MLR	MLR		
	comp=Z,6µm,16.0s						
C06D	**Leavenworth**	**68.37**	**46**	P	**P**	**02 05 01.9**	**+4.1**
	baz=301						
F04A	**Amboy**	**68.48**	**48**	P	**P**	**02 05 00.4**	**+1.8**
F04A				IAmb	IAmb	02 05 03.7	
	comp=Z,18nm,0.9s						
STEI	**Steigen**	**68.56**	**341**	*e*P	**P**	**02 04 59.9**	**+1.2**
KULLO	**Kullorsuaq**	**68.57**	**5**	*i* P	**P**	**02 04 59.3**	**+0.7**
	comp=Z,61nm,1.3s						
KULLO	**Kullorsuaq**	**68.57**	**5**	*i* P	**P**	**02 04 59.3**	**+0.7**
KULLO				pmax	pmax		
	comp=Z,61nm,1.3s						
OBN	**Obninsk**	**68.79**	**324**	P	**P**	**02 05 00.4**	**+0.1**
	comp=Z,13nm,1.1s,baz=310,slow=3.5,SNR=12						
OBN	**Obninsk**	**68.79**	**324**	*e*P	**P**	**02 05 00.2**	**-0.1**
OBN				*e*		02 05 23.1	
OBN				*e*		02 07 29.8	
OBN				*e*PPP	PPP	02 09 11.2	
OBN				pmax	pmax		
	comp=Z,77nm,1.3s						
OBN	**Obninsk**	**68.79**	**324**	P	**P**	**02 05 00.1**	**-0.1**
LTY	**Liberty**	**68.84**	**46**	IAmb	IAmb	02 05 14.8	
	comp=Z,16nm,1.1s						
LPSR	**Galich'ya Gora**	**68.99**	**320**	*e*P	**P**	**02 05 01.2**	**-0.4**
LPSR				pmax	pmax		
	comp=Z,70nm,1.4s						
LPSR				MLR	MLR		
	comp=Z,8µm,17.0s						
B08A	**Colville Reser**	**69.05**	**45**	IAmb	IAmb	02 05 08.9	
	comp=Z,15nm,1.0s						
I03D	**Drain, OR**	**69.05**	**51**	P	P	02 05 07.0	+4.9
	baz=301						
BBOO	**Buckleboo**	**69.07**	**185**	P	**P**	**02 05 01.2**	**-0.9**
BBOO				IAmb	IAmb	02 05 05.4	
	comp=Z,18nm,0.8s						

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BBOO                                 IAMs_20   IAMs_20  02 34 13.9
      comp=Z,811nm,20.0s
MAK   Makhachkala        69.10 308 eP        P        02 04 55.9 -6.6
MAK                                e                  02 07 29.6
MAK                                eS        S        02 13 56.0  -11
MAK                                eSS       SS       02 18 28.8 -3.5
MAK                                pmax      pmax
      comp=Z,81nm,1.2s
MAK                                MLR       MLR
      comp=Z,2µm,14.0s
MORW  Morawa             69.50 204 P         P        02 05 04.9  0.0
MORW                               IAmb      IAmb     02 05 22.5
      comp=Z,16nm,0.9s
G05D  Wamic, OR          69.50  48 P         P        02 05 09.5 +4.6
      baz=301
FIA1  FINESS Array S     69.52 332 P         P        02 05 04.7  0.0
FINES FINESS Array B     69.52 332 P         P        02 05 04.5 -0.2
      comp=Z,35nm,1.0s,baz=57,slow=7.0,SNR=40
FINES                              LR        LR       02 37 50.3
      comp=Z,2µm,20.1s,baz=30,slow=38
I04A  Tendick Farm,      69.58  50 P         P        02 05 09.8 +4.3
      baz=301
VSR   Storozhevoye       69.62 319 eP        P        02 05 05.1 -0.4
VSR                                pmax      pmax
      comp=Z,90nm,1.6s
VSR                                MLR       MLR
      comp=Z,7µm,15.0s
L02E  Cave Junction      69.67  52 P         P        02 05 11.3 +5.3
      baz=301
VORD  Divnogorie         69.69 319 eP        P        02 05 05.0 -0.9
VORD                               pmax      pmax
      comp=Z,60nm,1.6s
AKT   Akhty              69.72 307 eP        P        02 05 06.2 -0.3
AKT                                e                  02 05 28.0
AKT                                pmax      pmax
      comp=Z,38nm,1.0s
G06A  Carlson Farm,      69.92  48 P         P        02 05 10.3 +2.8
GROC  Groznyy            70.05 309 eP        P        02 05 05.1 -3.2
GROC                               e                  02 05 26.5
GROC                               pmax      pmax
      comp=Z,37nm,1.3s
J04D  Umpqua Nationa     70.06  51 P         P        02 05 13.1 +4.5
      baz=301
MOR8  Moi Rana           70.06 340 eP        P        02 05 07.0 -1.0
E08A  Dider Farm, El     70.19  46 IAMs_20   IAMs_20  02 35 35.5
      comp=Z,881nm,20.0s
NEW   Newport            70.35  44 P         P        02 05 12.3 +2.2
      comp=Z,11nm,0.9s,baz=302,slow=4.7,SNR=11
NEW   Newport            70.35  44 IAmb      IAmb     02 05 16.9
      comp=Z,16nm,1.1s
NEW   Newport            70.35  44 P         P        02 05 13.3 +3.2
      baz=303
YBH   Yreka Blue Hor     70.46  52 P         P        02 05 13.5 +2.5
      comp=Z,6.3nm,1.0s,baz=224,slow=1.5,SNR=5.8
YBH   Yreka Blue Hor     70.46  52 IAmb      IAmb     02 06 44.4
      comp=Z,52nm,1.8s
L04D  Klamath Falls      70.47  52 P         P        02 05 13.6 +2.5
      baz=302
LGD   Lagodekhi          70.49 308 P         P        02 05 11.1 +0.1
M02C  Callahan           70.55  53 P         P        02 05 16.7 +5.2
      baz=302
J05D  Fort Rock, OR      70.58  50 P         P        02 05 16.8 +5.1
      baz=302
E09A  Wood Farm, Sta     70.71  46 IAmb      IAmb     02 05 26.4
      comp=Z,25nm,1.1s
GOF   Gofitskoye         70.76 312⇑eP        P        02 05 12.9 +0.3
GOF                                pmax      pmax
      comp=Z,84nm,1.3s
N02D  Trinity Center     70.86  53 P         P        02 05 18.4 +4.9
      baz=302
M04C  Macdoel            70.99  52 P         P        02 05 18.4 +4.2
      baz=302
VSU   Vasula             71.16 330 eP        P        02 05 15.6 +0.8
VSU   Vasula             71.16 330ceP        P        02 05 15.2 +0.4
VSU                                pmax      pmax
      comp=Z,189nm,1.3s
I07A  Izee               71.21  49 P         P        02 05 16.5 +0.9
O02D  Mt. Diablo Mer     71.23  54 P         P        02 05 18.8 +3.1
      baz=302
GUDG  Gudauri            71.27 309 P         P        02 05 16.7 +0.7
SUMG  Summit             71.31   0 i P       P        02 05 16.0  0.0
      comp=Z,56nm,0.8s
SUMG  Summit             71.31   0 i P       P        02 05 16.0  0.0
SUMG                               pmax      pmax
      comp=Z,56nm,0.8s
SUMG  Summit             71.31   0 P         P        02 05 16.1 +0.2
SUMG                               IAmb      IAmb     02 05 33.7
      comp=Z,39nm,1.1s
ZEI   Tsey               71.45 310 eP        P        02 05 15.6 -1.5
ZEI                                pmax      pmax
      comp=Z,12nm,0.9s
TBLG  Delisi             71.50 308 P         P        02 05 17.8 +0.6
TBLG                               pmax      pmax
      comp=Z,29nm,1.1s
TBLG  Delisi             71.50 308 P         P        02 05 17.8 +0.6
TBLG                               IAmb      IAmb     02 05 31.1
      comp=Z,29nm,1.1s
KVAR  Kislovodsk Arr     71.56 311 P         P        02 05 18.9 +1.2
      comp=Z,37nm,1.1s,baz=270,slow=20,SNR=11
KBZ   Khabaz             71.56 311 P         P        02 05 17.7 +0.3
      comp=Z,27nm,1.0s,baz=62,slow=3.1,SNR=26
KBZ                                LR        LR       02 41 19.2
      comp=Z,2µm,18.0s,baz=51,slow=40
KIV   Kislovodsk         71.57 311 ⇑P        P        02 05 18.7 +1.0
KIV   Kislovodsk         71.57 311 i P       P        02 05 18.0 +0.3
      SNR=18
KIV   Kislovodsk         71.57 311 P         P        02 05 19.0 +1.3
KIV                                P         P        02 05 19.0 +1.3
KIV   Kislovodsk         71.57 311 eP        P        02 05 17.1 -0.6
KIV                                e                  02 07 52.7
KIV                                eS        S        02 14 35.0 -0.8
KIV                                eSS       SS       02 19 10.6 +0.3
KIV                                pmax      pmax
      comp=Z,213nm,1.1s
KIV                                pmax      pmax
      comp=Z,259nm,4.3s
KIV                                MLR       MLR
      comp=Z,3µm,18.0s
KIV   Kislovodsk         71.57 311 P         P        02 05 18.0 +0.3
HOPS  Hopland Field      71.67  55 IAMs_20   IAMs_20  02 32 33.2
      comp=Z,1µm,18.0s
WALA  Waterton Lakes     71.68  42 IAmb      IAmb     02 07 49.7
      comp=Z,13nm,0.8s
BANOM Banah              71.72 289 P         P        02 05 18.9 +0.1
BANOM Banah              71.72 289 P         P        02 05 20.7 +1.9
      SNR=5.4
BANOM                              P         P        02 05 20.7 +1.9
      SNR=5.4
SHME  Shamm              71.78 289 i P       P        02 05 19.1  0.0
      SNR=7.3
O03E  Paynes Creek       71.81  53 P         P        02 05 23.4 +4.3
      baz=302
ONI   Oni                71.84 310 P         P        02 05 20.4 +1.1
NEY   Neytrino           71.93 311 i P       P        02 05 19.4 -0.6
NEY                                pmax      pmax
      comp=Z,6.0nm,1.2s
GDXM  Geysers            71.95  55 IAMs_20   IAMs_20  02 32 50.6
      comp=Z,2µm,19.0s
NSS   Namsos             71.98 340 eP        P        02 05 19.9 +0.3
MDH   Madha              72.06 288 P         P        02 05 20.6 -0.1
MSFE  Esma-Masafi        72.13 289 i P       P        02 05 20.8 -0.5
      SNR=7.8
HOQ   Hoqain             72.19 286 P         P        02 05 21.9 +0.3
      SNR=8.7
HOQ                                P         P        02 05 21.9 +0.3
      SNR=8.7
JTMT  Jette              72.22  43 IAmb      IAmb     02 05 42.3
      comp=Z,21nm,1.1s
J08A  Circle Bar Ran     72.23  49 P         P        02 05 22.6 +0.9
J08A                               IAmb      IAmb     02 05 52.1
      comp=Z,22nm,1.2s
UOSS  Minazif            72.32 288 i P       P        02 05 21.8 -0.5
      SNR=13
UOSS  Minazif            72.32 288 P         P        02 05 22.0 -0.4
UOSS                               IAmb      IAmb     02 05 30.0
      comp=Z,24nm,1.0s
UOSS  Minazif            72.32 288 IAMs_20   IAMs_20  02 43 27.4
      comp=Z,869nm,19.0s
GNI   Garni              72.34 307 P         P        02 05 23.7 +1.2
      comp=Z,20nm,1.2s,baz=216,slow=3.9,SNR=3.3
GNI   Garni              72.34 307 P         P        02 05 23.8 +1.3
GNI   Garni              72.34 307 P         P        02 05 23.4 +0.9
GNI                                pmax      pmax
      comp=Z,108nm,1.6s
GNI                                MLR       MLR
      comp=Z,2µm,18.0s
GNI   Garni              72.34 307 P         P        02 05 23.4 +0.9
GNI   Garni              72.34 307 IAMs_20   IAMs_20  02 39 49.0
      comp=Z,2µm,18.0s
ORV   Oroville           72.40  54 P         P        02 05 24.4 +1.8
ORV                                pmax      pmax
      comp=Z,10.0nm,1.0s
HATD  Hatta, Dubai       72.44 288 i P       P        02 05 22.8 -0.3
      SNR=16
HATD  Hatta, Dubai       72.44 288 P         P        02 05 23.2 +0.2
      SNR=13
HATD                               P         P        02 05 23.2 +0.2
      SNR=13
AKH   Akhalkalaki        72.45 309 ⇑P        P        02 05 23.6 +0.5
AKH   Akhalkalaki        72.45 309 P         P        02 05 24.6 +1.5
AKH   Akhalkalaki        72.45 309 IAMs_20   IAMs_20  02 41 47.8
      comp=Z,2µm,18.0s
BGD   Bogdanovka         72.47 309 P         P        02 05 25.0 +1.7
SOHO  SOHO               72.50 287 P         P        02 05 23.7 +0.3
      SNR=11
SOHO                               P         P        02 05 23.7 +0.3
      SNR=11
ASHO  Ashiyiah           72.57 288 i P       P        02 05 23.3 -0.6
      SNR=17
ASHO  Ashiyiah           72.57 288 P         P        02 05 24.7 +0.8
      SNR=12
ASHO                               P         P        02 05 24.7 +0.8
      SNR=12
NWAO  Narrogin (SRO)     72.71 202 P         P        02 05 22.3 -1.9
      comp=Z,12nm,1.0s,baz=0.0,slow=2.0,SNR=2.7
BSY   Bisya              72.73 286 P         P        02 05 24.5 -0.4
BSY                                P         P        02 05 24.5 -0.4
SCO   Scoresbysund       72.77 354 i P       P        02 05 25.0 +0.8
      comp=Z,22nm,1.2s
SCO   Scoresbysund       72.77 354 i P       P        02 05 25.0 +0.8
SCO                                pmax      pmax
      comp=Z,22nm,1.2s
SCO   Scoresbysund       72.77 354 IAmb      IAmb     02 05 41.2
      comp=Z,62nm,1.7s
ARQ   Araqi              72.93 287 P         P        02 05 27.0 +0.9
      SNR=9.9
ARQ                                P         P        02 05 27.0 +0.9
      SNR=9.9
MSO   Missoula           72.94  44 P         P        02 05 28.6 +2.8
      baz=305,SNR=9.5
BEKR  Beckworth          72.97  53 IAmb      IAmb     02 06 51.4
      comp=Z,19nm,0.8s
AFDM  Forest Hills D     73.08  54 IAMs_20   IAMs_20  02 33 42.3
      comp=Z,886nm,20.0s
MHTO  MHTO               73.08 284 P         P        02 05 26.1 -0.8
      SNR=6.4
MHTO                               P         P        02 05 26.1 -0.8
      SNR=6.4
IZAR  Zarasai            73.11 328 eP        P        02 05 27.3 +0.8
MICGM Minsk              73.20 326 eP        P        02 05 27.0  0.0
MICGM                              eLR       LR       02 38 30.0
MICGM                              LRM       MLR      02 41 10.0
      comp=Z,5.4nm,20.0s
MNK   Minsk              73.20 326 eP        P        02 05 27.0  0.0
ISAL  Salakas            73.28 328 eP        P        02 05 27.5  0.0
NACGM Naroch             73.43 327 eP        P        02 05 29.0 +0.6
NACGM                              eS        SKiKP    02 15 06.0 +8.0
NACGM                              ePS                02 15 50.0
NACGM                              eSS       SS       02 20 18.0  +40
NACGM                              eLQ       LQ       02 33 09.0
NACGM                              eLR       LR       02 37 16.0
NACGM                              LRM       MLR      02 41 56.0
      comp=Z,7.3nm,14.0s
TBLU  Trondheim          73.45 339 eP        P        02 05 26.9 -1.5
BATM  Batumi             73.47 310 ⇓P        P        02 05 29.6 +0.7
BATM  Batumi             73.47 310 P         P        02 05 31.8 +2.9
SLIT  Slitere, Latvi     73.49 331 eP        P        02 05 29.1 +0.4
SOC   Sochi              73.56 312 eP        P        02 05 28.8 -0.6
SOC                                ePPP      PPP      02 09 55.1
SOC                                eS        S        02 14 56.8 -1.6
SOC                                eSS       SS       02 19 42.8 +2.2
SOC                                pmax      pmax
      comp=Z,28nm,0.8s
SOC                                MLR       MLR
      comp=Z,3µm,19.0s
BCA   Borcka             73.61 310 ⇑P        P        02 05 29.4 -0.4
PAHR  Pah Rah Range      73.68  53 IAmb      IAmb     02 05 50.1
      comp=Z,21nm,1.2s
MFID  Camas Ranch        73.80  48 IAmb      IAmb     02 06 01.6
      comp=Z,48nm,1.9s
SAO   San Andreas Ge     73.96  56 IAMs_20   IAMs_20  02 29 30.8
      comp=Z,890nm,18.0s
CMB   Columbia Colle     73.96  54 IAMs_20   IAMs_20  02 30 02.7
      comp=Z,883nm,20.0s
FFC   Flin Flon          74.05  33 P         P        02 05 32.3 +0.2
FFC                                pmax      pmax
      comp=Z,16nm,0.9s
FFC   Flin Flon          74.05  33 P         P        02 05 32.3 +0.2
ANN   Anapa              74.20 314 eP        P        02 05 28.1 -5.0
ANN                                e*PP      pP       02 05 34.6 -4.2
ANN                                eS        SKiKP    02 14 58.3 -1.2
ANN                                eSS       SS       02 19 48.1 -2.1
ANN                                pmax      pmax
      comp=Z,55nm,0.9s
ANN                                MLR       MLR
      comp=Z,3µm,18.0s
ANN                                MLR       MLR
      comp=E,3µm,18.0s
ANN                                MLR       MLR
      comp=N,2µm,17.0s
PABE  Paberze            74.24 328 eP        P        02 05 33.0 -0.2
ILULI Ilulissat          74.26   5 i P       P        02 05 33.7 +0.7
      comp=N,33nm,1.0s
ILULI Ilulissat          74.26   5 i P       P        02 05 33.7 +0.7
ILULI                              pmax      pmax
      comp=Z,33nm,1.0s
ILULI Ilulissat          74.26   5 IAmb      IAmb     02 05 36.4
      comp=Z,38nm,1.1s
WAKR  Walker             74.32  54 P         P        02 05 35.2 +1.0
WAKR                               IAMs_20   IAMs_20  02 34 31.2
      comp=Z,936nm,20.0s
EGMT  Eagleton           74.52  41 IAmb      IAmb     02 06 05.0
      comp=Z,27nm,1.0s
EGMT  Eagleton           74.52  41 P         P        02 05 38.0 +3.0
      baz=307,SNR=9.3
DLMT  Dillon             74.55  45 IAmb      IAmb     02 05 48.7
      comp=Z,35nm,1.2s
NC303 NORSAR Array S     74.70 338 eP        P        02 05 35.6 -0.1
MCMT  McKenzie Canyo     74.72  45 P         P        02 05 37.6 +1.1
PBUR  Paburge            74.73 330 eP        P        02 05 35.4 -0.6
DOMB  Dombas             74.75 339 eP        P        02 05 35.9 -0.2
MOL   Molde              74.75 340 eP        P        02 05 37.5 +1.5
HFS   Hagfors            74.79 336 P         P        02 05 35.9 -0.4
      comp=Z,28nm,1.0s,baz=43,slow=6.7,SNR=27
KVN   Kaiserville        74.88  53 IAmb      IAmb     02 05 51.6
      comp=Z,24nm,1.1s
NB2   NORSAR Subarra     74.89 337 P         P        02 05 36.5 -0.4
      comp=Z,53nm,1.2s,baz=39,slow=5.9
NB2   NORSAR Subarra     74.89 337 P         P        02 05 36.5 -0.4
      baz=39,slow=5.9
NOA   NORSAR Array B     74.89 337 P         P        02 05 36.5 -0.4
      comp=Z,34nm,1.0s,baz=39,slow=5.8,SNR=62
NOA                                LR        LR       02 40 51.5
      comp=Z,3µm,21.8s,baz=35,slow=38
AKASG Malin Array Be     74.99 323 P         P        02 05 36.9 -0.7
      comp=Z,17nm,0.7s,baz=46,slow=6.4,SNR=67
AKASG                              LR        LR       02 41 30.9
      comp=Z,3µm,19.8s,baz=45,slow=38
AKASG Malin Array Be     74.99 323 i P       P        02 05 36.9 -0.7
AKASG                              pmax      pmax
      comp=Z,16nm,0.7s
AKASG Malin Array Be     74.99 323 P         P        02 05 37.2 -0.4
AKBB  Malin Array Si     74.99 323 P         P        02 05 37.3 -0.3
AKBB                               pmax      pmax
      comp=Z,31nm,0.9s
AKBB                               MLR       MLR
      comp=Z,5µm,18.0s
AKBB  Malin Array Si     74.99 323 P         P        02 05 37.2 -0.3
AKBB                               IAmb      IAmb     02 05 38.9
      comp=Z,31nm,0.9s
NORES NORESS Array B     75.02 337 P         P        02 05 37.5 -0.1
NORES                              pmax      pmax
      comp=Z,3.0nm,0.2s
NVAR  Mina Array Bea     75.10  53 P         P        02 05 39.0 +0.3
      comp=Z,6.9nm,0.8s,baz=289,slow=5.2,SNR=33
NVAR                               LR        LR       02 34 48.6
      comp=Z,590nm,19.1s,baz=304,slow=33
NVAR  Mina Array Bea     75.10  53 P         P        02 05 39.3 +0.5
NV11  Mina Array Sit     75.19  53 P         P        02 05 40.0 +0.8
PAGB  Antelope Grade     75.34  56 IAMs_20   IAMs_20  02 30 10.3
      comp=Z,1µm,21.0s
ELK   Elko               75.70  50 P         P        02 05 43.3 +1.1
      comp=Z,4.3nm,0.7s,baz=294,slow=7.5,SNR=21
OSL   Oslo               75.90 337 eP        P        02 05 43.5 +0.8
SIM   Simferopol'        76.00 316ceP        P        02 05 43.7 +0.2
SIM                                S         SKSac    02 15 49.2 -4.0
SIM                                pmax      pmax
      comp=Z,26nm,0.7s
SIM                                MLR       MLR
      comp=Z,900nm,14.0s
SKAR  Skarslia           76.05 338 eP        P        02 05 44.9 +1.3
VES   Vestal, Richgr     76.06  56 P         P        02 05 46.4 +2.5
      baz=305,SNR=6.1
PKM   Mcpherson Peak     76.11  57 P         P        02 05 48.8 +4.2
      baz=305
YNE   Yellowstone No     76.22  44 P         P        02 05 46.2 +1.1
YPP   Pitchstone Pla     76.23  45 P         P        02 05 46.4 +1.2
FOO   Floro              76.23 340 eP        P        02 05 45.3 +0.8
HYA   Hoyanger           76.27 340 eP        P        02 05 46.0 +1.3
H17A  Grant Village      76.28  45 IAmb      IAmb     02 06 01.4
      comp=Z,31nm,1.1s
H17A  Grant Village      76.28  45 P         P        02 05 49.1 +3.7
      baz=308,SNR=13
IMW   Indian Meadow      76.38  45 IAmb      IAmb     02 06 00.4
      comp=Z,32nm,1.3s
CWC   Cottonwood Cre     76.38  55 P         P        02 05 49.4 +3.4
      baz=305
SFJD  Kangerlussuaq      76.48   5 i P       P        02 05 46.3 +0.5
SFJD  Kangerlussuaq      76.48   5 i P       P        02 05 46.3 +0.5
SFJD  Kangerlussuaq      76.48   5 P         P        02 05 46.8 +1.0
SFJD                               IAmb      IAmb     02 05 49.7
      comp=Z,26nm,1.1s
KONO  Kongsberg          76.48 337 eP        P        02 05 46.0  0.0
KONO  Kongsberg          76.48 337 P         P        02 05 46.6 +0.7
KONO                               pmax      pmax
      comp=Z,36nm,1.2s
KONO                               MLR       MLR
      comp=Z,4µm,18.0s
KONO  Kongsberg          76.48 337 P         P        02 05 46.6 +0.7
KONO                               IAmb      IAmb     02 05 51.2
      comp=Z,36nm,1.2s
FXWY  Fox Creek          76.48  46 IAmb      IAmb     02 06 04.3
      comp=Z,21nm,1.2s
GRAC  Grapevine Rang     76.53  54 P         P        02 05 50.0 +3.2
      baz=306
SHAO  Shalim             76.55 283 P         P        02 05 46.4 -0.7
SHAO                               P         P        02 05 46.4 -0.7
ISA   Isabella, Lake     76.57  56 P         P        02 05 47.3 +0.3
ISA                                pmax      pmax
      comp=Z,8.0nm,1.0s
ISA   Isabella, Lake     76.57  56 P         P        02 05 47.3 +0.3
ISA   Isabella, Lake     76.57  56 P         P        02 05 48.4 +1.4
      baz=305
RLMT  Red Lodge          76.57  44 P         P        02 05 46.4 -0.7
      baz=308
ARVC  Arvin              76.64  56 P         P        02 05 51.0 +3.6
      baz=305
REDW  Red Top Meadow     76.75  46 IAmb      IAmb     02 05 59.3
      comp=Z,21nm,1.2s
R11A  Troy Canyon, C     76.89  52 P         P        02 05 49.0 +0.1
      baz=306,SNR=15
AHID  Auburn Hatcher     76.97  46 P         P        02 05 49.1 -0.3
AHID                               IAmb      IAmb     02 06 20.9
      comp=Z,46nm,1.9s
MPMC  Manual Prospec     76.99  55 P         P        02 05 52.6 +3.0
      baz=306,SNR=7.4
OSI   Osito Audit: C     77.00  57 IAMs_20   IAMs_20  02 39 22.3
      comp=Z,1µm,19.0s
SORM  Soroca             77.08 321 ⇓P        P        02 05 48.9 -0.7
SORM  Soroca             77.08 321 ⇓P        P        02 05 48.9 -0.7
ASK   Askoy              77.11 340 eP        P        02 05 50.9 +1.4
DGMT  Dagmar             77.12  39 IAmb      IAmb     02 06 13.6
      comp=Z,47nm,1.4s
DGMT  Dagmar             77.12  39 P         P        02 05 50.9 +1.1
      baz=311
BER   Bergen             77.16 339 eP        P        02 05 50.1 +0.4
OUZ   Omahuta            77.16 154 IAMs_20   IAMs_20  02 36 43.6
      comp=Z,2µm,20.0s
FURC  Furnace Creek,     77.16  54 P         P        02 05 53.8 +3.6
      baz=306
ODD1  Odda               77.17 339 eP        P        02 05 50.2 +0.3
LAO   LASA Array         77.23  41 IAmb      IAmb     02 06 17.7
      comp=Z,23nm,0.9s
LAO   LASA Array         77.23  41 P         P        02 05 52.6 +2.1
      baz=310
SNCC  San Nicolas Is     77.24  58 IAMs_20   IAMs_20  02 41 23.8
      comp=Z,2µm,20.0s
DMTO  DMTO               77.25 283 P         P        02 05 50.9 -0.1
DMTO                               P         P        02 05 50.9 -0.1
TPNV  Topopah Spring     77.28  53 P         P        02 05 53.5 +2.4
      baz=306,SNR=7.4
EDW2  Edwards Air Fo     77.34  56 P         P        02 05 53.2 +1.9
      baz=306
DIKM  Dikmen             77.36 313 ⇑P        P        02 05 53.0 +1.8
HWUT  Hardware Ranch     77.41  47 IAmb      IAmb     02 06 03.6
      comp=Z,19nm,1.0s
DUG   Dugway, Tooele     77.51  49 IAmb      IAmb     02 05 59.5
      comp=Z,15nm,0.9s
DUG   Dugway, Tooele     77.51  49 P         P        02 05 54.8 +2.5
      baz=307,SNR=12
KIS   Kishinev           77.58 320 eP        P        02 05 48.0 -4.4
KIS                                eLQ       LQ       02 34 37.0
      comp=Z,1µm,18.0s
KIS                                eLR       LR       02 38 50.0
      comp=Z,7µm,16.0s
KIS   Kishinev           77.58 320 eP        P        02 05 48.0 -4.4
KIS                                MLR       MLR
      comp=Z,7µm,16.0s
BLS5  Blasjo             77.62 338 eP        P        02 05 52.9 +0.5
PASC  Pasadena Art C     77.62  57 IAMs_20   IAMs_20  02 36 48.7
      comp=Z,1µm,20.0s
MILM  Milestii Mici      77.64 320 ⇓P        P        02 05 51.9 -0.8
MWC   Mount Wilson       77.68  57 IAMs_20   IAMs_20  02 40 11.2
      comp=Z,2µm,18.0s
BW06  Boulder Array      77.87  46 P         P        02 05 56.3 +1.9
      baz=309
PDAR  Pinedale Array     77.87  46 P         P        02 05 53.9 -0.5
      comp=Z,3.2nm,0.7s,baz=243,slow=0.6,SNR=22
PDAR                               LR        LR       02 35 46.5
      comp=Z,202nm,21.6s,baz=339,slow=32
PSUT  Pine Spring        77.87  51 P         P        02 05 55.4 +0.9
GSC   Goldstone, Bar     77.88  55 P         P        02 05 57.8 +3.4
      baz=306
BZK   Bozkurt            77.91 313 ⇑P        P        02 05 51.0 -3.2
BFSC  Mount Baldy Ra     77.94  56 P         P        02 05 56.6 +1.9
      baz=306
RBK   Rabkut             77.96 283 P         P        02 05 54.7 -0.3
      SNR=6.3
RBK                                P         P        02 05 54.7 -0.3
      SNR=6.3
LVV   L'vov              78.08 324 eP        P        02 05 55.7 +0.6
IAS   Iasi               78.10 321 ⇑P        P        02 05 56.4 +1.1
IAS   Iasi               78.10 321 ⇑P        P        02 05 56.4 +1.1
BEL   Belsk              78.15 327 eP        P        02 05 56.8 +1.4
BEL   Belsk              78.15 327 eP        P        02 05 56.8 +1.4
LEOM  Leova              78.22 320 ⇑P        P        02 05 56.1 +0.2
LEOM  Leova              78.22 320 ⇑P        P        02 05 56.1 +0.2
STAV  Stavanger          78.24 338 eP        P        02 05 55.9 +0.1
SHPR  Sheep Range        78.25  53 P         P        02 05 57.5 +1.0
SHPR                               IAMs_20   IAMs_20  02 40 39.2
      comp=Z,687nm,20.0s
SNART Snartemo           78.28 337 eP        P        02 05 57.2 +1.2
MPU   Maple Canyon       78.34  49 P         P        02 05 57.4 +0.4
TUQ   Turquoise Moun     78.39  55 P         P        02 06 01.5 +4.3
      baz=306
GKP   Gorka Klasztor     78.61 330 eP        P        02 05 58.8 +0.8
GKP   Gorka Klasztor     78.61 330 eP        P        02 05 58.8 +0.8
MURC  Murrieta           78.62  57 P         P        02 06 02.1 +3.6
      baz=306
ILGA  Ilgaz              78.64 313 P         P        02 05 60.0 +1.3
ILGA                               IAmb      IAmb     02 06 01.3
      comp=Z,24nm,0.6s
ILGA                               IAMs_20   IAMs_20  02 45 18.4
      comp=Z,986nm,18.0s
ABTO  Aybut              78.76 283 P         P        02 05 59.1 -0.3
ABTO                               P         P        02 05 59.1 -0.3
TLCR                     78.77 318 ⇓P        P        02 05 59.5 +0.6
TLCR                     78.77 318 ⇓P        P        02 05 59.5 +0.6
KWP   Kalwaria Pacla     78.83 325 eP        P        02 05 59.6 +0.2
KWP                                ePcP      pwP      02 06 07.5 -0.4
KWP   Kalwaria Pacla     78.83 325 P         P        02 05 59.5 +0.2
KWP                                pmax      pmax
      comp=Z,79nm,1.1s
KWP                                MLR       MLR
      comp=Z,2µm,18.0s
KWP   Kalwaria Pacla     78.83 325 P         P        02 05 59.5 +0.2
GAZ   Gaziantep          78.88 308 P         P        02 05 59.7 -0.1
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GAZ				IAmb	IAmb	02 06 05.3	
	comp=Z,32nm,1.0s						
MSU	Marysvale	78.93	50	P	P	02 06 00.6	+0.3
MSU	Marysvale	78.93	50	P	P	02 06 00.6	+0.3
GMRC	Granite Mounta	78.95	55	P	P	02 06 03.6	+3.2
	baz=307						
BURAR	Bucovina Array	79.01	322	⇓P	P	02 05 60.0	-0.4
BURAR	Bucovina Array	79.01	322	⇓P	P	02 06 00.0	-0.4
BURAR	Bucovina Array	79.01	322	P	P	02 06 00.0	-0.4
JURR	Jurilovca	79.01	318	⇑P	P	02 06 00.7	+0.4
BIZ	Bicaz	79.02	321	⇑P	P	02 06 01.2	+0.8
TESR	Tescani	79.03	320	⇑P	P	02 06 00.1	-0.4
109C	Camp Elliot, M	79.10	57	IAMs_20	IAMs_20	02 40 47.9	
	comp=Z,1µm,19.0s						
PFO	Pinyon Flats O	79.11	56	P	P	02 06 03.5	+2.2
	comp=Z,6.5nm,0.9s,baz=302,slow=4.0,SNR=6.9						
PFO	Pinyon Flats O	79.11	56	P	P	02 06 01.9	+0.6
PFO				pmax	pmax		
	comp=Z,19nm,1.2s						
PFO	Pinyon Flats O	79.11	56	P	P	02 06 01.9	+0.6
PFO	Pinyon Flats O	79.11	56	IAMs_20	IAMs_20	02 37 06.2	
	comp=Z,2µm,20.0s						
PFO	Pinyon Flats O	79.11	56	P	P	02 06 05.6	+4.3
	baz=306						
XPFO	Pion Flat	79.11	56	P	P	02 06 01.8	+0.5
XPFO	Pion Flat	79.11	56	IAMs_20	IAMs_20	02 37 06.2	
	comp=Z,2µm,20.0s						
CFR	Carcaliu	79.13	319	⇑P	P	02 05 59.2	-1.8
CFR				⇓P	P	02 06 01.7	+0.7
CFR	Carcaliu	79.13	319	⇓P	P	02 06 01.7	+0.7
BELC	Belle Mtn. Jos	79.19	56	P	P	02 06 05.7	+4.0
	baz=307						
TOPG	Topolog	79.20	318	⇓P	P	02 06 02.3	+0.9
ODBI	Odobesti	79.31	320	⇑P	P	02 06 04.6	+2.7
VRI	Vrincioaia	79.42	320	⇓P	P	02 06 04.8	+2.3
VRI	Vrincioaia	79.42	320	⇓P	P	02 06 04.9	+2.3
KNB	Kanab	79.44	52	P	P	02 06 03.9	+0.8
KNB				pmax	pmax		
	comp=Z,42nm,1.3s						
KNB	Kanab	79.44	52	P	P	02 06 03.9	+0.8
TIRR	Tirgusor	79.46	318	⇑P	P	02 06 03.0	+0.3
TIRR	Tirgusor	79.46	318	⇑P	P	02 06 03.0	+0.3
PLOR	Plostina	79.47	320	⇑P	P	02 06 03.5	+0.6
PLOR	Plostina	79.47	320	⇑P	P	02 06 03.5	+0.6
BR131	Keskin Array S	79.51	312	P	P	02 06 03.6	+0.2
	SNR=11						
BR131				P	P	02 06 03.6	+0.2
	SNR=11						
BR131	Keskin Array S	79.51	312	IAmb	IAmb	02 06 05.8	
	comp=Z,26nm,1.1s						
BRTR	Keskin Array B	79.51	312	P	P	02 06 03.5	+0.2
	comp=Z,21nm,1.1s,baz=97,slow=3.3,SNR=50						
BRTR				LR	LR	02 45 56.2	
	comp=Z,985nm,18.4s,baz=33,slow=39						
BRTR	Keskin Array B	79.51	312	P	P	02 06 02.9	-0.5
BAR	Barrett	79.52	57	IAMs_20	IAMs_20	02 39 56.0	
	comp=Z,1µm,19.0s						
MONP2	Monument Peak	79.56	57	P	P	02 06 05.4	+1.6
	baz=307						
HARR	Harsova	79.56	318	⇑P	P	02 06 04.7	+1.3
HARR	Harsova	79.56	318	⇑P	P	02 06 04.7	+1.3
SRU	San Rafael Swe	79.57	49	P	P	02 06 04.1	+0.3
SRU				pmax	pmax		
	comp=Z,18nm,0.8s						
SRU	San Rafael Swe	79.57	49	P	P	02 06 04.1	+0.3
IRM	Iron Mountain	79.66	55	P	P	02 06 08.4	+4.3
	baz=307						
K22A	Casper	79.67	44	P	P	02 06 08.0	+3.8
	baz=310						
UZH	Uzhgorod	79.72	324	⇓*e*P	P	02 06 05.4	+1.3
UZH				*e*		02 06 10.6	
UZH				*i*		02 06 15.2	
UZH				*e*		02 09 07.0	
UZH				*e*S	S	02 16 06.4	+0.8
UZH				*e*		02 16 18.6	
UZH				*i*		02 16 25.1	
UZH				*e*		02 16 45.7	
UZH				*e*		02 21 15.7	
UZH				MLR	MLR		
	comp=N,680nm,16.0s						
UZH				MLR	MLR		
	comp=E,970nm,16.0s						
UZH				MLR	MLR		
	comp=Z,750nm,16.0s						
OJC	Ojcow	79.74	326	*e*P	P	02 06 04.2	0.0
OJC				*e*PcP	sP	02 06 11.8	-0.1
OJC	Ojcow	79.74	326	P	P	02 06 04.5	+0.3
OJC				pmax	pmax		
	comp=Z,59nm,1.3s						
OJC	Ojcow	79.74	326	P	P	02 06 04.5	+0.3
OJC				IAmb	IAmb	02 06 07.0	
	comp=Z,59nm,1.3s						
OZUR		79.75	321	⇓P	P	02 06 04.6	+0.2
BC3	Big Chuckawall	79.76	56	P	P	02 06 08.8	+4.1
	baz=307						
ARCR	ARCALIA	79.80	322	⇑P	P	02 06 05.9	+1.3
ULM	Lac du Bonnet	79.84	33	P	P	02 06 04.7	-0.1
	comp=Z,4.8nm,0.8s,baz=304,slow=5.9,SNR=9.1						
ULM				LR	LR	02 41 11.6	
	comp=Z,328nm,21.6s,baz=338,slow=36						
IKP	In-Ko-Pah, Jac	79.92	57	P	P	02 06 08.0	+2.4
	baz=307						
PGOR	Pogoanele	79.92	319	⇓P	P	02 06 00.5	-4.8
ANTO	Ankara	79.93	312	⇑P	P	02 06 06.3	+0.7
ANTO	Ankara	79.93	312	P	P	02 06 05.3	-0.2
ANTO				pmax	pmax		
	comp=Z,24nm,1.0s						
ANTO	Ankara	79.93	312	P	P	02 06 05.3	-0.2
ANTO				IAmb	IAmb	02 06 08.2	
	comp=Z,24nm,1.0s						
ANTO	Ankara	79.93	312	IAMs_20	IAMs_20	02 47 20.6	
	comp=Z,708nm,19.0s						
AMRR	Amara	79.94	319	⇑P	P	02 06 06.3	+0.9
AMRR	Amara	79.94	319	⇑P	P	02 06 06.3	+0.9
BR231	Keskin MP Arra	79.96	312	P	P	02 06 06.2	+0.5
BR231				IAmb	IAmb	02 06 08.4	
	comp=Z,35nm,1.3s						
TRPA	Tarpa	79.96	324	⇑P	P	02 06 05.5	+0.1
ISR	Istrita	80.01	319	⇓P	P	02 06 07.5	+1.6
ISR	Istrita	80.01	319	⇓P	P	02 06 07.5	+1.6
ICOR	Ion Corvin	80.02	318	⇑P	P	02 06 07.0	+1.2
DOPR	Dopca	80.04	321	⇑P	P	02 06 07.5	+1.5
RSSD	Black Hills	80.07	42	P	P	02 06 07.0	+0.6
RSSD				pmax	pmax		
	comp=Z,10.0nm,1.1s						
RSSD	Black Hills	80.07	42	P	P	02 06 07.0	+0.6
RSSD	Black Hills	80.07	42	P	P	02 06 08.7	+2.3
	baz=312						
MLR	Muntele Rosu	80.08	320	⇑P	P	02 06 07.3	+1.0
MLR	Muntele Rosu	80.08	320	P	P	02 06 06.2	-0.1
MLR				pmax	pmax		
	comp=Z,22nm,1.2s						
MLR				MLR	MLR		
	comp=Z,6µm,19.0s						
MLR	Muntele Rosu	80.08	320	P	P	02 06 06.2	-0.1
MLR				IAmb	IAmb	02 06 42.2	
	comp=Z,22nm,1.2s						
NIE	Niedzica	80.09	326	*e*P	P	02 06 06.2	0.0
NIE	Niedzica	80.09	326	*e*P	P	02 06 06.2	0.0
PDMCI	Parker Dam,Lak	80.24	55	P	P	02 06 10.0	+2.8
	baz=308						
O20A	White River Ci	80.30	47	P	P	02 06 10.4	+2.7
	baz=310						
Y12C	Blythe	80.32	55	IAMs_20	IAMs_20	02 42 28.0	
	comp=Z,1µm,19.0s						
Y12C	Blythe	80.32	55	P	P	02 06 12.1	+4.5
	baz=307						
CJR	Cluj-Napoca	80.43	322	⇑P	P	02 06 10.3	+2.2
CJR	Cluj-Napoca	80.43	322	⇑P	P	02 06 10.3	+2.2
MDUB	Mudurnu	80.49	314	P	P	02 06 08.5	-0.1
GLA	Glamis	80.54	56	IAMs_20	IAMs_20	02 38 19.9	
	comp=Z,1µm,19.0s						
GLA	Glamis	80.54	56	P	P	02 06 12.9	+4.0
	baz=307						
VOIR		80.57	320	⇑P	P	02 06 10.5	+1.6
VOIR		80.57	320	⇑P	P	02 06 10.5	+1.6
OKC	Ostrava-Krasne	80.75	327	*e*P	P	02 06 10.3	+0.6
OKC				AMS	AMS	02 45 00.0	
	comp=Z,3µm,17.8s						
OKC	Ostrava-Krasne	80.75	327	*e*P	P	02 06 10.3	+0.6
OKC				MLR	MLR		
	comp=Z,3µm,17.8s						
KSP	Ksiaz	80.81	328	*e*P	P	02 06 09.9	0.0
KSP				*e*PcP	pwP	02 06 18.7	+0.2
KSP	Ksiaz	80.81	328	*e*P	P	02 06 09.9	0.0
KSP				*e*		02 06 18.7	
ARR	Arges	80.83	321	⇑P	P	02 06 11.4	+1.1
PV21	Cone Mtn., Par	80.86	49	IAmb	IAmb	02 06 40.3	
	comp=Z,19nm,0.9s						
PV14	Lion Creek, Pa	80.95	49	IAmb	IAmb	02 06 18.3	
	comp=Z,36nm,0.9s						
PV22	Blue Mesa, Par	80.99	49	IAmb	IAmb	02 06 25.0	
	comp=Z,29nm,1.1s						
OSTC	Ostas	81.05	328	*e*P	P	02 06 10.7	-0.6
OSTC				*e*S	S	02 16 17.7	-1.9
OSTC				AMS	AMS	02 45 40.0	
	comp=Z,3µm,18.9s						
MORC	Moravsky Berou	81.06	327	⇑P	P	02 06 11.9	+0.5
MORC	Moravsky Berou	81.06	327	P	P	02 06 11.8	+0.4
MORC				pmax	pmax		
	comp=Z,28nm,1.3s						
MORC				MLR	MLR		
	comp=Z,3µm,18.0s						
MORC	Moravsky Berou	81.06	327	*e*P	P	02 06 11.4	0.0
MORC	Moravsky Berou	81.06	327	P	P	02 06 11.8	+0.4
MORC				IAmb	IAmb	02 06 14.1	
	comp=Z,28nm,1.3s						
N23A	Red Feather La	81.14	45	P	P	02 06 14.2	+2.0
	baz=311						
URZ	Urewera	81.14	153	IAMs_20	IAMs_20	02 43 54.1	
	comp=Z,861nm,20.0s						
SOCY	Socotra	81.16	279	P	P	02 06 10.2	-2.3
DPC	Dobruska-Polom	81.16	328	*e*P	P	02 06 12.6	+0.7
DPC				*e*S	S	02 16 20.0	-0.8
DPC				AMS	AMS	02 47 10.0	
	comp=Z,2µm,15.5s						
DPC	Dobruska-Polom	81.16	328	*e*P	P	02 06 12.6	+0.7
DPC				*e*S	S	02 16 20.0	-0.8
DPC				MLR	MLR		
	comp=Z,2µm,15.5s						
KRLC	Kraliky	81.17	328	*e*P	P	02 06 12.0	0.0
KRLC				*e*pP	pP	02 06 16.2	-1.5
KRLC	Kraliky	81.17	328	*e*P	P	02 06 12.0	0.0
KRLC				*e*		02 06 16.2	
UPC	Upice	81.18	328	*e*P	P	02 06 13.1	+1.2
UPC				*e*S	S	02 16 20.3	-0.5
UPC				AMS	AMS	02 45 50.0	
	comp=Z,3µm,15.8s						
UPC	Upice	81.18	328	*e*P	P	02 06 13.1	+1.2
UPC				*e*S	S	02 16 20.3	-0.5
UPC				MLR	MLR		
	comp=Z,3µm,15.8s						
HUMR	Humele	81.23	320	⇓P	P	02 06 13.2	+0.8
AGMN	Agassiz Nation	81.26	35	P	P	02 06 13.8	+1.4
	baz=316						
WUAZ	Wupatki	81.28	52	IAmb	IAmb	02 06 37.6	
	comp=Z,23nm,1.1s						
WUAZ	Wupatki	81.28	52	P	P	02 06 16.0	+3.0
	baz=309						
PV15	Paradox Valley	81.30	49	IAmb	IAmb	02 06 24.6	
	comp=Z,17nm,0.9s						
PV15				IAMs_20	IAMs_20	02 42 03.6	
	comp=Z,1µm,20.0s						
DEV	Deva	81.35	322	⇑P	P	02 06 13.5	+0.6
DEV	Deva	81.35	322	⇑P	P	02 06 13.5	+0.6
PSZ	Piszkesteto	81.36	325	⇓P	P	02 06 13.9	+0.8
PSZ	Piszkesteto	81.36	325	⇓P	P	02 06 13.9	+0.8
PSZ	Piszkesteto	81.36	325	IAmb	IAmb	02 06 18.2	
	comp=Z,27nm,1.0s						
COPA	Copaceanca	81.38	319	⇑P	P	02 06 13.6	+0.5
113A	Mohawk Valley,	81.42	56	IAMs_20	IAMs_20	02 38 21.8	
	comp=Z,1µm,19.0s						
VYHS	Vyhne	81.43	326	*e*P	P	02 06 13.8	+0.5
VYHS				pmax	pmax		
	comp=Z,26nm,1.3s						
VYHS	Vyhne	81.43	326	*e*P	P	02 06 13.8	+0.5
SMCO	Snowmass	81.66	47	IAmb	IAmb	02 06 32.3	
	comp=Z,26nm,1.4s						
JAVC	Velka Javorina	81.68	326	*e*P	P	02 06 15.6	+0.9
SIRR	Siria	81.70	323	⇑P	P	02 06 15.6	+0.8
BRG	Berggiesshubel	81.76	330	*e*P	P	02 06 15.4	+0.4
	comp=Z,15nm,1.1s						
BRG	Berggiesshubel	81.76	330	S	S	02 16 27.0	+0.2
BRG				SS	SS	02 21 47.0	+3.6
BRG	Berggiesshubel	81.76	330	*e*P	P	02 06 15.4	+0.4
BRG				S	S	02 16 27.0	+0.2
BRG				SS	SS	02 21 47.0	+3.6
BRG				pmax	pmax		
	comp=Z,15nm,1.1s						
BRG				MLR	MLR		
	comp=N,3µm,15.4s						
BRG				MLR	MLR		
	comp=E,1µm,13.0s						
BRG				MLR	MLR		
	comp=Z,3µm,15.4s						
GZR	Gura Zlata	81.76	322	⇑P	P	02 06 15.1	-0.1
GZR	Gura Zlata	81.76	322	⇑P	P	02 06 15.1	-0.1
PVCC	Panska Ves	81.76	329	*e*P	P	02 06 15.2	+0.2
PVCC				AMS	AMS	02 47 30.0	
	comp=Z,3µm,15.3s						
PVCC	Panska Ves	81.76	329	*e*P	P	02 06 15.2	+0.2
PVCC				MLR	MLR		
	comp=Z,3µm,15.3s						
CLL	Collm	81.80	330	*i* P	P	02 06 15.5	+0.3
	comp=Z,42nm,1.5s						
CLL				*i* pP	PcP	02 06 19.8	-1.1
CLL				*e*PP	PP	02 09 21.0	-0.7
CLL				*e*S	S	02 16 24.0	-3.2
CLL				*e*PS	PnS	02 17 18.0	+2.1
CLL				*e*PPS	PPS	02 17 30.0	
CLL				*e*SS	SS	02 21 36.0	-8.0
CLL				*e*		02 22 42.0	
CLL				*e*		02 26 12.0	
CLL				Lmax		02 47 00.0	
CLL	Collm	81.80	330	*i* P	P	02 06 15.5	+0.3
CLL				*i*		02 06 19.8	
CLL				*e*S	S	02 16 16.0	-11
CLL				pmax	pmax		
	comp=Z,42nm,1.5s						
CLL	Collm	81.80	330	IAmb	IAmb	02 06 17.7	
	comp=Z,21nm,1.0s						
VRAC	Vranov	81.82	327	⇑P	P	02 06 16.2	+0.8
VRAC	Vranov	81.82	327	⇑P	P	02 06 16.2	+0.8
VRAC	Vranov	81.82	327	*e*P	P	02 06 15.6	+0.2
ELND	Elena	81.85	318	⇑P	P	02 06 16.2	+0.5
VLAD	Vladila	81.90	320	⇑P	P	02 06 15.1	-0.8
X16A	Lo Mia Camp, P	81.92	53	IAMs_20	IAMs_20	02 34 26.0	
	comp=Z,734nm,21.0s						
MVCO	Mesa Verde	82.01	49	IAmb	IAmb	02 06 36.8	
	comp=Z,27nm,1.3s						
MVCO	Mesa Verde	82.01	49	P	P	02 06 20.0	+3.1
	baz=310						
SMOL	Smolenice	82.05	326	*e*P	P	02 06 17.9	+1.3
SMOL				pmax	pmax		
	comp=Z,15nm,1.4s						
SMOL	Smolenice	82.05	326	*e*P	P	02 06 17.9	+1.3
ISCO	Idaho Springs	82.05	46	P	P	02 06 17.8	+0.7
ISCO				pmax	pmax		
	comp=Z,15nm,1.4s						
ISCO	Idaho Springs	82.05	46	P	P	02 06 17.8	+0.7
ISCO	Idaho Springs	82.05	46	P	P	02 06 20.8	+3.7
	baz=311						
KRUC	Moravsky	82.09	327	*e*P	P	02 06 16.2	-0.6
ASF	Jabal al Asfar	82.13	304	P	P	02 06 16.7	-0.7
	comp=Z,7.6nm,1.1s,baz=48,slow=2.1,SNR=9.3						
PRA	Prague	82.17	329	*e*P	P	02 06 18.3	+1.1
PRA				AMS	AMS	02 47 00.0	
	comp=Z,3µm,15.3s						
PRA	Prague	82.17	329	*e*P	P	02 06 18.3	+1.1
PRA				MLR	MLR		
	comp=Z,3µm,15.3s						
BZS	Buzias	82.18	322	⇑P	P	02 06 17.0	-0.3
BZS	Buzias	82.18	322	⇑P	P	02 06 17.0	-0.3
PRU	Pruhonice	82.19	329	*e*P	P	02 06 17.1	-0.2
PRU				*e*pP	PcP	02 06 21.6	-1.0
PRU				*e*S	S	02 16 27.7	-3.5
PRU				AMS	AMS	02 47 00.0	
	comp=Z,3µm,13.3s						
PRU	Pruhonice	82.19	329	*e*P	P	02 06 17.1	-0.2
PRU				*e*		02 06 21.6	
PRU				*e*S	S	02 16 27.7	-3.5
PRU				MLR	MLR		
	comp=Z,3µm,13.3s						
PLVB	Pleven	82.20	319	⇑P	P	02 06 17.9	+0.4
MODS	Modra-Piesok	82.22	326	*e*P	P	02 06 17.4	-0.1
MODS				pmax	pmax		
	comp=Z,21nm,1.3s						
MODS	Modra-Piesok	82.22	326	*e*P	P	02 06 17.4	-0.1
TREC	Trest	82.31	328	*e*P	P	02 06 18.8	+0.8
TREC				AMS	AMS	02 47 30.0	
	comp=Z,4µm,14.8s						
TREC	Trest	82.31	328	*e*P	P	02 06 18.8	+0.8
TREC				MLR	MLR		
	comp=Z,4µm,14.8s						
BAIL	Bailesti	82.43	320	⇑P	P	02 06 19.6	+1.0
PUNG	Punghina	82.46	321	⇓P	P	02 06 20.4	+1.6
214A	Organ Pipe Nat	82.55	56	IAMs_20	IAMs_20	02 39 21.9	
	comp=Z,1µm,18.0s						
214A	Organ Pipe Nat	82.55	56	P	P	02 06 23.6	+4.0
	baz=308						
MMAI	Mount Meron Ar	82.60	306	P	P	02 06 20.0	+0.2
	comp=Z,10nm,0.9s,baz=50,slow=7.8,SNR=18						
ISP	Isparta	82.60	312	P	P	02 06 20.6	+0.8
ISP				pmax	pmax		
	comp=Z,20nm,0.8s						
ISP	Isparta	82.60	312	P	P	02 06 20.6	+0.8
ISP				IAmb	IAmb	02 06 20.9	
	comp=Z,20nm,0.8s						
ISP	Isparta	82.60	312	IAMs_20	IAMs_20	02 48 18.1	
	comp=Z,1µm,20.0s						
PBCC	Pribram	82.65	329	*e*P	P	02 06 20.4	+0.7
S22A	4UR Ranch, Cre	82.68	48	P	P	02 06 22.2	+1.7
	baz=311						
CSS	Mathiatis	82.71	308	P	P	02 06 20.0	-0.3
CSS				IAmb	IAmb	02 06 36.3	
	comp=Z,17nm,0.9s						
MDVR	Moldovita	82.72	322	⇓P	P	02 06 19.8	-0.4
NKC	Novy Kostel	82.86	330	*e*P	P	02 06 21.7	+0.9
NKC				AMS	AMS	02 47 00.0	
	comp=Z,3µm,15.6s						
NKC	Novy Kostel	82.86	330	*e*P	P	02 06 21.7	+0.9
NKC				MLR	MLR		
	comp=Z,3µm,15.6s						
Q24A	Divide	82.87	46	P	P	02 06 24.8	+3.3
	baz=312						
LEF	Lefka	82.89	309	⇑P	P	02 06 21.4	+0.3
KDZ	Kurdzhali	82.97	317	*e*P	P	02 06 21.8	+0.2
PLD	Plovdiv	83.05	318	P	P	02 06 24.7	+2.8
PLD				pmax	pmax		
	comp=Z,56nm,1.6s						
SOP	Sopron	83.06	326	P	P	02 06 23.1	+1.3
SOP				pmax	pmax		
	comp=Z,28nm,1.3s						
CONA	Conrad Observa	83.18	327	*e*P	P	02 06 22.7	0.0
	comp=Z,23nm,1.3s,SNR=10						
MORH	Mrgy, Hungar	83.18	324	*e*P	P	02 06 20.7	-1.8
KHC	Kasperske Hory	83.25	329	*e*P	P	02 06 22.8	-0.1
KHC				*e*x	x	02 06 48.0	
KHC				AMS	AMS	02 47 30.0	
	comp=Z,3µm,15.7s						
KHC	Kasperske Hory	83.25	329	*e*P	P	02 06 22.8	-0.1
KHC				MLR	MLR		
	comp=Z,3µm,15.7s						
KHC	Kasperske Hory	83.25	329	IAMs_20	IAMs_20	02 46 51.9	
	comp=Z,1µm,18.0s						
MSWZ	Moikau Station	83.28	155	P	P	02 06 22.4	-0.4
MANT	Manisa	83.33	313	P	P	02 06 23.4	-0.3
GERES	GERESS Array B	83.42	328	P	P	02 06 23.0	-0.8
	comp=Z,4.9nm,0.8s,baz=38,slow=5.0,SNR=34						
GERES				LR	LR	02 46 58.8	
	comp=Z,3µm,19.1s,baz=24,slow=38						
SDCO	Great Sand Dun	83.47	47	IAMs_20	IAMs_20	02 46 02.0	
	comp=Z,832nm,19.0s						
SDCO	Great Sand Dun	83.47	47	P	P	02 06 25.5	+0.9
	baz=312						
VTS	Vitosha	83.47	319	⇓P	P	02 06 24.8	+0.5
VTS	Vitosha	83.47	319	*e*P	P	02 06 24.7	+0.4
VTS	Vitosha	83.47	319	⇓P	P	02 06 24.8	+0.5
VTS	Vitosha	83.47	319	P	P	02 06 24.4	+0.2
VTS				IAmb	IAmb	02 06 27.3	
	comp=Z,39nm,1.4s						
EYMN	Ely	83.48	33	P	P	02 06 23.5	-0.6
	baz=319						
PMOR	Pomariorio Ree	83.63	114	*e*T	T	03 38 18.3	
	comp=Z,7.8nm,0.2s						
ELL	Elmali	83.67	311	P	P	02 06 25.5	+0.1
ELL				pmax	pmax		
	comp=Z,107nm,1.0s						
ELL	Elmali	83.67	311	P	P	02 06 25.5	+0.1
TUC	Tucson	83.67	54	IAMs_20	IAMs_20	02 40 17.8	
	comp=Z,1µm,20.0s						
TUC	Tucson	83.67	54	P	P	02 06 28.0	+2.6
	baz=309						
GRA1	Grafenberg Arr	83.78	330	IAmb	IAmb	02 06 27.8	
	comp=Z,30nm,1.0s						
GRA1				IAMs_20	IAMs_20	02 51 07.8	
	comp=Z,2µm,21.0s						
GRF	Grafenberg Arr	83.78	330	*e*P	P	02 06 25.3	-0.2
	comp=Z,39nm,1.3s,baz=44,slow=4.5						
EKA	Eskdalemuir Ar	83.83	341	P	P	02 06 25.5	-0.2
	comp=Z,2.2nm,0.6s,baz=36,slow=4.4,SNR=5.9						
ARSA	Arzberg	83.84	326	*e*PcP	P	02 06 26.4	+0.5
	comp=Z,11nm,1.4s						
BEHE	Becsehely	83.86	325	*e*P	P	02 06 27.3	+1.3
MMB	Musomiste	83.93	318	*e*P	P	02 06 26.8	+0.3
MOA	Molln	83.94	328	*e*PcP	P	02 06 27.0	+0.6
	comp=Z,16nm,1.3s,SNR=6.9						
OXZ	Oxford	83.99	158	IAMs_20	IAMs_20	02 37 11.3	
	comp=Z,1µm,22.0s						
PPT	Papeete	84.06	117	LR	LR	02 37 52.2	
	comp=Z,1µm,19.5s,baz=310,slow=31						
PPT2	Papeete2	84.07	117	*e*S	S	02 16 55.2	+3.9
	comp=Z,1µm,30.5s						
PPT2	Papeete2	84.07	117	*e*LR	LR	02 32 47.0	
	comp=Z,2µm,21.8s,baz=312						
DIVS	Divibare	84.07	322	⇑*i*P	P	02 06 26.5	-0.8
KKB	Krupnik	84.08	319	*e*P	P	02 06 27.4	+0.2
ECSD	EROS Data Cent	84.20	38	P	P	02 06 28.0	+0.2
	baz=316						
SRS	Serrai	84.33	318	P	P	02 06 28.5	0.0
SRS				pmax	pmax		
	comp=Z,26nm,1.2s						
E38A	The Farm, Brul	84.47	34	IAmb	IAmb	02 06 55.0	
	comp=Z,16nm,0.9s						
PERS	Pernice	84.49	326	*i* P	P	02 06 28.7	-0.6
SOKA	Soboth	84.50	326	*e*P	P	02 06 28.3	-1.0
	comp=Z,32nm,1.2s,SNR=20						
T25A	Trinidad	84.52	47	P	P	02 06 32.7	+2.9
	baz=312						
BBLS	Lazići	84.53	322	*e*P	P	02 06 29.3	-0.3
HAPS	Han Pijesak,Bl	84.60	323	⇑*i*P	P	02 06 28.9	-1.0
RUDO	Rudo	84.73	322	*e*P	P	02 06 28.9	-1.6
ANMO	Albuquerque	84.73	50	P	P	02 06 31.8	+0.8
ANMO				pmax	pmax		
	comp=Z,14nm,1.1s						
ANMO	Albuquerque	84.73	50	P	P	02 06 31.8	+0.8
ANMO				IAmb	IAmb	02 06 48.0	
	comp=Z,14nm,1.1s						
ANMO	Albuquerque	84.73	50	P	P	02 06 32.0	+1.0
	baz=311						
VAY	Valandovo	84.73	319	*i* P	P	02 06 30.6	0.0
VAY	Valandovo	84.73	319	P	P	02 06 31.3	+0.8
VAY				pmax	pmax		
	comp=Z,41nm,1.2s						
OBKA	Obir	84.84	327	*e*PcP	P	02 06 30.8	-0.3
	comp=Z,7.6nm,0.9s						
SKO	Skopje	84.87	320	*i* P	P	02 06 32.0	+0.8
KBA	Koelnbreinsper	84.93	328	*e*P	P	02 06 31.0	-0.6
	comp=Z,8.3nm,0.8s						
SPMN	Marine on St.	84.95	35	P	P	02 06 32.1	+0.5
	baz=319						
CRES	Cresnjev	84.95	326	*i* P	P	02 06 30.6	-0.9
CRES	Cresnjev	84.95	326	*e*P	P	02 06 31.3	-0.3
BLY	Banja Luka	84.96	324	⇓P	P	02 06 31.0	-0.6
BLY	Banja Luka	84.96	324	*e*P	P	02 06 31.1	-0.5
BLY	Banja Luka	84.96	324	IAmb	IAmb	02 07 09.5	
	comp=Z,11nm,1.0s						
EIL	Elat	85.00	303	P	P	02 06 32.5	+0.4
	comp=Z,19nm,1.1s,baz=72,slow=1.7,SNR=10						
MEM	Membach	85.02	334	⇑P	P	02 06 31.1	-0.6
	comp=Z,14nm,1.5s						
BGNE	Belgrade	85.08	41	P	P	02 06 34.2	+1.9
	baz=316						
OZLJ	Ozalj	85.11	325	*i* P	P	02 06 31.1	-1.2
MYKA	Terra Mystica	85.15	327	*e*P	P	02 06 31.6	-1.0
	comp=Z,3.7nm,0.6s						
BHOU	Houvegnez	85.23	333	P	P	02 06 33.2	+0.3
	comp=Z,16nm,1.3s						
319A	Douglas	85.25	54	IAmb	IAmb	02 07 22.4	
	comp=Z,20nm,1.0s						
319A				IAMs_20	IAMs_20	02 43 42.2	
	comp=Z,1µm,19.0s						
MGRS	Mrkonjic Grad	85.25	324	*e*P	P	02 06 33.9	+0.8
UPM	Unac-Piva	85.27	322	*e*P	P	02 06 30.6	-2.8

STU	Stuttgart	85.31	331	P	P	02 06 33.7	+0.4
STU	Stuttgart	85.31	331	P	P	02 06 33.7	+0.4
STU				IAMs_20	IAMs_20	02 51 47.5	
	comp=Z,1μm,19.0s						
BCLA	Clavier	85.42	334	⇑P	P	02 06 33.4	-0.4
	comp=Z,18nm,1.4s						
D41A	Chassel	85.43	32	IAmb	IAmb	02 06 59.3	
	comp=Z,17nm,0.9s						
121A	Cookes Peak, D	85.48	53	IAmb	IAmb	02 06 51.1	
	comp=Z,13nm,0.9s						
121A	Cookes Peak, D	85.48	53	P	P	02 06 36.2	+1.6
	baz=311						
CEY	Cerknica	85.49	326	*e*P	P	02 06 34.0	-0.3
WATA	Walderalm	85.49	329	*e*P	P	02 06 33.4	-1.0
	comp=Z,9.3nm,1.8s						
WTTA	Wattenberg	85.52	329	*e*P	P	02 06 33.6	-1.0
	comp=Z,5.7nm,1.2s						
BGES	Gesves	85.53	334	⇓P	P	02 06 33.7	-0.7
	comp=Z,14nm,1.3s						
ABTA	Abfaltersbach	85.55	328	*e*P	P	02 06 33.7	-1.0
	comp=Z,7.6nm,1.2s						
LIT	Litokhoron	85.64	318	IAmb	IAmb	02 06 36.7	
	comp=Z,28nm,1.1s						
HSIG		85.64	57	P	P	02 06 36.0	+0.7
HSIG				IAmb	IAmb	02 06 48.9	
	comp=Z,15nm,1.2s						
HSIG				IAMs_20	IAMs_20	02 44 16.7	
	comp=Z,1μm,19.0s						
PDG	Podgorica	85.66	321	⇑P	P	02 06 34.9	-0.2
PDG	Podgorica	85.66	321	*e*P	P	02 06 34.0	-1.1
MOTA	Moosalm	85.68	329	*e*PcP	P	02 06 35.4	0.0
	comp=Z,16nm,1.3s						
TAOE	Nuku Hiva Isla	85.70	104	*e*S	S	02 17 09.5	+1.8
	comp=Z,323nm,25.6s						
TAOE	Nuku Hiva Isla	85.70	104	*e*LR	LR	02 33 40.8	
	comp=Z,2μm,22.3s,baz=317						
RETA	Reutte	85.71	329	*e*P	P	02 06 34.7	-0.7
	comp=Z,22nm,1.3s,SNR=12						
SNF	Seneffe	85.71	334	P	P	02 06 35.6	+0.4
	comp=Z,23nm,1.3s						
BMRD	Maredsous	85.71	334	⇑P	P	02 06 34.5	-0.8
	comp=Z,23nm,1.4s						
SQTA	Sankt Quirin	85.73	329	*e*PcP	P	02 06 35.5	-0.1
	comp=Z,3.7nm,0.8s						
WLF	Walferdange	85.74	333	P	P	02 06 34.4	-1.0
WLF	Walferdange	85.74	333	P	P	02 06 37.3	+1.9
WLF				pmax	pmax		
	comp=Z,25nm,1.3s						
WLF				MLR	MLR		
	comp=Z,2μm,19.0s						
WLF	Walferdange	85.74	333	P	P	02 06 37.3	+1.9
WLF				IAmb	IAmb	02 06 38.9	
	comp=Z,25nm,1.3s						
FNA	Florina	85.75	319	IAmb	IAmb	02 07 21.6	
	comp=Z,15nm,1.2s						
OHR	Ohrid	85.82	320	*i* P	P	02 06 35.6	-0.5
SRIG	Santa Rosalia	85.83	59	IAMs_20	IAMs_20	02 47 00.7	
	comp=Z,1μm,18.0s						
SCHQ	Schefferville	85.84	16	P	P	02 06 36.5	+0.7
	comp=Z,5.6nm,0.9s,baz=1.6,slow=6.9,SNR=5.4						
SCHQ				LR	LR	02 45 34.4	
	comp=Z,1μm,21.9s,baz=342,slow=36						
SCHQ	Schefferville	85.84	16	IAmb	IAmb	02 08 33.3	
	comp=Z,51nm,1.7s						
DRME	Dracevica, Mon	85.87	321	⇑*i*P	P	02 06 36.4	+0.2
TREB	Trebinje	85.90	322	*e*P	P	02 06 26.7	-10
RICI	Ricice	85.92	323	P	P	02 06 36.0	-0.5
DOU	Dourbes	85.95	334	P	P	02 06 35.9	-0.5
BFO	Black Forest	86.01	331	P	P	02 06 36.4	-0.4
BFO				pmax	pmax		
	comp=Z,24nm,1.0s						
BFO				MLR	MLR		
	comp=Z,2μm,20.0s						
BFO	Black Forest	86.01	331	P	P	02 06 36.4	-0.4
BFO				IAmb	IAmb	02 06 39.5	
	comp=Z,24nm,1.0s						
BFO				IAMs_20	IAMs_20	02 48 19.9	
	comp=Z,2μm,20.0s						
HCY	Herceg Novi	86.03	322	*e*P	P	02 06 36.1	-0.9
CBKS	Cedar Bluff	86.06	44	IAMs_20	IAMs_20	02 45 27.8	
	comp=Z,860nm,19.0s						
FETA	Feichten	86.09	329	*e*P	P	02 06 35.9	-1.5
	comp=Z,8.4nm,1.1s						
G40A	Rib Lake	86.11	34	IAmb	IAmb	02 07 04.3	
	comp=Z,19nm,1.4s						
KARP	Karpathos	86.13	312	P	P	02 06 37.8	+0.1
DAVA	Damuels	86.23	330	*e*PcP	P	02 06 38.2	+0.1
	comp=Z,17nm,1.1s,SNR=6.7						
MORI	Morici	86.32	324	*i* P	P	02 06 38.2	-0.2
CTI	Castel Tesino	86.47	328	P	P	02 06 38.8	-0.4
CTI				pmax	pmax		
	comp=Z,9.0nm,1.2s						
CTI	Castel Tesino	86.47	328	P	P	02 06 38.8	-0.4
DUGI	Dugi Otok	86.53	325	*i* P	P	02 06 37.5	-1.9
ECH	Echery	86.56	332	P	P	02 06 38.7	-0.8
ECH				pmax	pmax		
	comp=Z,25nm,1.3s						
ECH	Echery	86.56	332	P	P	02 06 38.7	-0.8
ECH				IAmb	IAmb	02 06 55.1	
	comp=Z,25nm,1.3s						
E43A	Lone Tree Farm	86.64	31	IAmb	IAmb	02 07 04.6	
	comp=Z,36nm,1.8s						
E44A	Grand Marais A	86.89	31	P	P	02 06 42.4	+1.2
	baz=323						
SCIA	State Center	87.24	38	IAmb	IAmb	02 07 04.3	
	comp=Z,25nm,1.0s						
SCIA	State Center	87.24	38	P	P	02 06 44.5	+1.6
	baz=319						
MATQ	Matagami	87.37	24	P	P	02 06 43.7	+0.3
	baz=329						
D46A	Sault St. Mari	87.43	30	P	P	02 06 43.8	0.0
	baz=325						
KSU1	Kansas State U	87.56	42	P	P	02 06 44.6	+0.1
	baz=317						
MNTX	Cornudas Mount	87.56	52	P	P	02 06 45.4	+0.7
	baz=312						
AMTX	Amarillo	87.67	47	IAmb	IAmb	02 07 01.4	
	comp=Z,18nm,1.1s						
AMTX	Amarillo	87.67	47	P	P	02 06 48.3	+3.0
	baz=314						
E46A	Sault Ste Mari	87.75	30	IAmb	IAmb	02 07 30.6	
	comp=Z,20nm,1.1s						
I42A	Draeger Farm,	87.75	34	IAmb	IAmb	02 06 57.6	
	comp=Z,28nm,1.4s						
F45A	CMU Biological	87.81	31	P	P	02 06 46.4	+0.8
	baz=324						
TBI	Tubuai	87.92	121	*e*S	S	02 17 31.2	+2.6
	comp=Z,277nm,25.8s						
TBI	Tubuai	87.92	121	*e*LR	LR	02 34 41.9	
	comp=Z,2μm,23.2s,baz=308						
TBI	Tubuai	87.92	121	*e*T	T	03 43 44.4	
	comp=Z,15nm,0.3s						
SENIN	Lac Senin/Sane	88.02	330	IAMs_20	IAMs_20	02 53 58.0	
	comp=Z,1μm,20.0s						
ITM	Ithomi	88.03	316	IAMs_20	IAMs_20	02 50 28.8	
	comp=Z,2μm,20.0s						
D48A	Paudash Townsh	88.07	28	P	P	02 06 42.4	-4.4
	baz=326						
E47A	Iron Bridge	88.09	29	P	P	02 06 47.0	+0.1
	baz=325						
L40A	Anamosa	88.09	37	IAmb	IAmb	02 07 07.7	
	comp=Z,20nm,1.1s						
D49A	Beulah Townshi	88.16	28	P	P	02 06 47.2	-0.1
	baz=326						
LSQQ	Lebel-sur-Quev	88.19	24	P	P	02 06 47.0	-0.3
	baz=330						
MATE	Matera	88.26	321	⇑P	P	02 06 48.1	+0.3
G45A	Suttons Bay	88.27	32	P	P	02 06 49.0	+1.2
	baz=324						
NRCA	Norcia	88.33	325	P	P	02 06 47.8	-0.4
NRCA				IAMs_20	IAMs_20	02 46 10.4	
	comp=Z,978nm,22.0s						
G46A	Petoskey	88.38	31	P	P	02 06 49.5	+1.3
	baz=324						
H45A	Beulah	88.44	32	P	P	02 06 51.4	+2.8
	baz=323						
E48A	Lockeyer	88.50	29	P	P	02 06 48.5	-0.4
	baz=326						
AQU	L'Aquila	88.56	324	*e*P	P	02 06 49.7	+0.4
OSSC	Osservatorio P	88.64	326	IAmb	IAmb	02 06 57.9	
	comp=Z,15nm,1.3s						
MSSA	Maissana	88.76	328	IAmb	IAmb	02 06 51.8	
	comp=Z,29nm,1.4s						
F48A	Evansville	88.87	29	P	P	02 06 51.4	+0.8
	baz=326						
GLMI	Grayling	88.88	31	P	P	02 06 50.7	+0.1
	baz=324						
G47A	Hillman	88.91	30	P	P	02 06 51.6	+0.8
	baz=325						
D51A	Lot 18 Range I	89.04	27	P	P	02 06 51.1	-0.3
	baz=328						
F49A	Sandfield	89.15	29	P	P	02 06 51.8	-0.1
	baz=326						
H47A	Mio	89.23	31	P	P	02 06 52.7	+0.4
	baz=324						
E51A	G1948 Merrick	89.47	27	P	P	02 06 53.9	+0.4
	baz=328						
WMOK	Wichita Mounta	89.48	46	P	P	02 06 55.8	+2.0
	baz=315						
H48A	Harrisville	89.51	30	P	P	02 06 56.8	+3.2
	baz=325						
I47A	Gladwin	89.58	31	P	P	02 06 54.1	+0.1
	baz=324						
MSEY	Mahe Island	89.81	264	IAMs_20	IAMs_20	02 49 47.8	
	comp=Z,656nm,19.0s						
TXAR	Lajitas Array	90.24	53	P	P	02 06 58.1	+0.7
	comp=Z,4.9nm,0.7s,baz=298,slow=2.9,SNR=30						
TXAR				LR	LR	02 47 51.4	
	comp=Z,504nm,18.1s,baz=0.0,slow=36						
TXAR	Lajitas Array	90.24	53	P	P	02 06 57.5	0.0
TXAR	Lajitas Array	90.24	53	P	P	02 06 57.5	0.0
TUL1	Leonard	90.32	43	P	P	02 06 57.4	-0.2
TUL1				IAmb	IAmb	02 07 23.4	
	comp=Z,8.0nm,0.7s						
S39A	Bolivar	90.34	41	IAmb	IAmb	02 07 29.9	
	comp=Z,12nm,1.1s						
ATD	Arta Tunnel	90.34	285	IAMs_20	IAMs_20	02 54 26.1	
	comp=Z,906nm,18.0s						
R40A	Maddies Statio	90.44	40	IAmb	IAmb	02 07 23.4	
	comp=Z,19nm,1.3s						
J48A	Bridge Port	90.47	31	P	P	02 06 59.3	+1.2
	baz=325						
D56A	ZEC Mazanza, M	90.67	24	P	P	02 06 58.3	-0.8
	baz=331						
J49A	Marlette	90.69	31	P	P	02 07 01.1	+1.9
	baz=325						
U38A	Gravette	90.70	42	IAmb	IAmb	02 07 19.3	
	comp=Z,7.7nm,0.8s						
H52A	Wyevale	90.92	28	P	P	02 07 01.1	+0.9
	baz=328						
D57A	Chemin Vers le	90.98	24	P	P	02 07 00.3	-0.1
	baz=332						
HHAR	Hobbs	91.06	42	IAmb	IAmb	02 07 18.4	
	comp=Z,9.6nm,1.1s						
CCM	Cathedral Cave	91.14	39	P	P	02 07 01.8	+0.5
CCM				pmax	pmax		
	comp=Z,14nm,1.0s						
CCM	Cathedral Cave	91.14	39	P	P	02 07 01.8	+0.5
CCM				IAmb	IAmb	02 07 22.4	
	comp=Z,14nm,1.0s						
CCM	Cathedral Cave	91.14	39	P	P	02 07 02.2	+0.9
	baz=320						
L48A	N Adams	91.29	33	P	P	02 07 04.3	+2.3
	baz=324						
U40A	Yellville	91.59	41	P	P	02 07 03.0	-0.5
	baz=319						
T42A	Van Buren	92.00	40	IAmb	IAmb	02 07 26.8	
	comp=Z,12nm,1.1s						
WHTX	Lake Whitney,	92.21	47	IAMs_20	IAMs_20	02 52 49.9	
	comp=Z,1μm,20.0s						
FCAR	Ozark Folk Cen	92.33	41	IAmb	IAmb	02 07 27.4	
	comp=Z,16nm,1.1s						
PBMO	Poplar Bluff	92.53	39	IAmb	IAmb	02 07 29.4	
	comp=Z,13nm,1.1s						
MIAR	Mount Ida	92.55	43	IAmb	IAmb	02 07 29.3	
	comp=Z,15nm,1.1s						
MIAR	Mount Ida	92.55	43	P	P	02 07 09.2	+1.3
	baz=318						
L53A	Girard	93.04	30	P	P	02 07 10.9	+0.8
	baz=327						
O50A	Cable	93.11	33	P	P	02 07 11.3	+0.9
	baz=325						
M54A	Oil Creek Stat	93.65	30	IAMs_20	IAMs_20	02 57 15.8	
	comp=Z,1μm,19.0s						
735A	Kenedy	94.24	49	IAMs_20	IAMs_20	02 50 21.9	
	comp=Z,1μm,20.0s						
T49A	Edmonton	94.70	36	IAMs_20	IAMs_20	02 45 54.9	
	comp=Z,601nm,19.0s						
ZAIG	Zacatecas	95.42	57	IAMs_20	IAMs_20	02 44 42.6	
	comp=Z,1μm,20.0s						
KEST	Kesra	95.72	323	LR	LR	02 55 51.9	
	comp=Z,2μm,18.4s,baz=356,slow=39						
TLIG	Tlapa	101.71	58	IAMs_20	IAMs_20	02 53 57.7	
	comp=Z,687nm,20.0s						
KMBO	Kilima Mbogo	102.39	278	IAMs_20	IAMs_20	02 56 07.3	
	comp=Z,718nm,20.0s						
CCIG	Comitan	106.93	54	IAMs_20	IAMs_20	02 57 21.6	
	comp=Z,778nm,18.0s						
MBAR	Mbarara	107.24	282	IAMs_20	IAMs_20	03 02 24.0	
	comp=Z,798nm,20.0s						
TAM	Tamanrasset	108.10	318	IAMs_20	IAMs_20	03 03 23.2	
	comp=Z,836nm,18.0s						
SNET	Serv Nac Est T	110.72	54	IAMs_20	IAMs_20	03 01 21.0	
	comp=Z,493nm,20.0s						
LSZ	Lusaka	117.83	271	IAMs_20	IAMs_20	03 10 18.7	
	comp=Z,610nm,20.0s						
OBIP	Obispado Ponce	119.54	31	IAMs_20	IAMs_20	03 08 17.5	
	comp=Z,856nm,20.0s						
SABA	Saba	121.27	28	IAMs_20	IAMs_20	02 55 29.4	
	comp=Z,956nm,21.0s						
LBTB	Lobatse	124.89	263	PKIKP	PKiKP	02 12 57.7	+0.6
LBTB	Lobatse	124.89	263		PKiKP	02 12 57.7	+0.6
SDV	Santo Domingo	125.59	41	IAMs_20	IAMs_20	03 13 36.9	
	comp=Z,552nm,20.0s						
BOSA	Boshof	126.78	259	PKP	PKPdf	02 12 59.6	-0.8
	comp=Z,3.9nm,1.0s,baz=98,slow=4.8,SNR=4.3						
TSUM	Tsumeb	128.48	274	IAMs_20	IAMs_20	03 17 41.9	
	comp=Z,724nm,20.0s						
NNA	Nana	137.58	65	IAMs_20	IAMs_20	03 01 51.7	
	comp=Z,799nm,22.0s						
SNAA	Sanae	140.25	197	PKPdf	PKPdf	02 13 14.6	-10
VNA2	Neumayer--Watz	141.81	196	PKPdf	PKPdf	02 13 21.7	-5.2
VNA3	Neumayer Olymp	142.05	195	PKPdf	PKPdf	02 13 21.6	-5.8
VNA1	Neumayer--Stat	142.21	196	PKPdf	PKPdf	02 13 23.2	-4.4
SAML	Samuel	144.45	46	PKIKP	PKPbc	02 13 32.3	+0.5
SAML	Samuel	144.45	46		PKPbc	02 13 32.3	+0.5
PB12	IPOC Station P	146.63	67	PKPbc	PKPdf	02 13 37.7	+0.7
LPAZ	La Paz	146.72	61	PKPbc	PKPdf	02 13 38.5	+0.6
	comp=Z,9.9nm,0.8s,baz=360,slow=7.0,SNR=12						
LPAZ	La Paz	146.72	61	PKPbc	PKPbc	02 13 39.8	+0.3
MNMC	Minye Minye	147.50	67	PKPbc	PKPbc	02 13 41.0	-0.3
MNMC				IAMs_20	IAMs_20	03 08 48.5	
	comp=Z,648nm,20.0s						
PATCX	Punta Patache	148.10	70	IAMs_20	IAMs_20	03 14 38.5	
	comp=Z,645nm,20.0s						
GO01	Chusmiza	148.13	67		PKPbc	02 13 44.0	+0.8
PB01	IPOC Station P	148.73	69	PKPbc	PKiKP	02 13 45.6	0.0
PB07	IPOC Station P	148.82	71	PKPbc	PKiKP	02 13 46.9	+0.9
PB04	IPOC Station P	148.97	72	IAMs_20	IAMs_20	03 15 29.6	
	comp=Z,683nm,20.0s						
PB09	IPOC Station P	149.35	70		PKiKP	02 13 47.1	+0.1
LVC	Limon Verde	150.07	71	PKIKP	PKPbc	02 13 47.9	0.0
LVC	Limon Verde	150.07	71		PKPbc	02 13 47.9	0.0
GO04	Tololo Observa	152.12	87		PKiKP	02 13 53.5	+0.9
ROC1	El Roble	152.85	92		PKiKP	02 13 55.4	+1.3
PLCA	Paso Flores	154.40	110	PKPab	PKPab	02 14 12.6	+1.5
	comp=Z,4.2nm,1.0s,baz=181,slow=5.8,SNR=3.8						
BDFB	Brasilia	157.53	26	PKPab	PKPab	02 14 25.6	+0.6
	comp=Z,2.4nm,0.8s,baz=250,slow=14,SNR=3.1						

ATH 29 01:55:00.6, 38°.72N×23°.26E, h12^{km}±5^{km}, ML1.1/1, Error ellipse: s-maj=5.5km s-min=1.1km az=294.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LKR	Lokris	0.22	251	P	Pg	01 55 05.2	0.0
LKR				S	Sg	01 55 08.5	+0.1
LKR				AML	AML	01 55 09.2	
	comp=E,175μm,0.1s						
LKR				AML	AML	01 55 09.5	
	comp=N,136μm,0.1s						
MRKA	Markates	0.26	93	P	Pg	01 55 05.8	-0.1
MRKA				S	Sg	01 55 10.0	+0.5
VIL2	Platees	0.51	179	P	Pb	01 55 11.0	-0.4
PROD	Prodromos	0.54	212	P	Pg	01 55 11.1	0.0
PROD				S	Sb	01 55 19.1	-0.6
XOR	Xorichti	0.65	355	P	Pg	01 55 13.1	0.0
DSF	Desfina	0.65	242	P	Pg	01 55 13.2	-0.1
AOS	Alonnisos	0.66	47	P	Pg	01 55 13.2	-0.2

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*MOS **29** 01:55:15.4±0.8, 45°.40N×26°.27E, h153^{km}, mb4.1/3, Error ellipse: s-maj=6.1km s-min=4.0km az=102.1*

*SIGU **29** 01:55:15.7±0.1, 45°.4N±0°.5×26°.3E±0°.6, h154^{km}, mb3.2/14*

*NEIC **29** 01:55:16.0±0.8, 45°.38N±0°.04×26°.23E±0°.07, h156^{km}±4^{km}, Error ellipse: s-maj=7.2km s-min=5.9km az=113.0*

*BUC **29** 01:55:16.6±0.2, 45°.35N×26°.23E, h144^{km}±1^{km}, ml4.3/64, Error ellipse: s-maj=1.4km s-min=1.3km az=15.0*

*IDC **29** 01:55:16.3±0.5, 45°.46N×26°.17E, h146^{km}±3^{km}, mb3.4/8, mb1 3.2/17, mb1mx3.2/51, mbtmp3.7/17, MS3.1/1, Ms1 3.2/1, ms1mx2.4/31, Error ellipse: s-maj=14.1km s-min=12.3km az=123.0*

*PRU **29** 01:55:17.3±0.0, 45°.71N×26°.56E, h228^{km}, M4.3*

*SOF **29** 01:55:18.4, 45°.31N×26°.18E, h100^{km}, MD3.6*

*BEO **29** 01:55:19.8±0.6, 45°.26N×25°.59E, h0^{km}, ML3.3/11*

ISC 29 01:55:16.5±0.6, 45°.35N±0°.02×26°.23E±0°.02, h154^{km}±4^{km}, n390, σ1^{s}.32/597, mb3.7/11, 165C-115D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MLR	Muntele Rosu	0.25	306	⇑P	Pn	01 55 37.1	-0.3
MLR				⇑S	Sn	01 55 52.2	-1.3
MLR	Muntele Rosu	0.25	306	P	Pn	01 55 37.2	-0.3
	baz=149,slow=5.9						
MLR				S	Sn	01 55 52.4	-1.1
	260nm,0.3s,baz=204,slow=23,SNR=14						
MLR	Muntele Rosu	0.25	306	⇑P	Pn	01 55 37.1	-0.3
MLR				⇑S	Sn	01 55 52.2	-1.3
MLR	Muntele Rosu	0.25	306		Pn	01 55 37.2	-0.3
MLR					Sn	01 55 52.7	-0.7
ISR	Istrita	0.32	136	⇓P	Pn	01 55 37.3	-0.2
ISR				⇑S	Sn	01 55 51.5	-2.0
ISR	Istrita	0.32	136	⇓P	Pn	01 55 37.3	-0.2
ISR				⇑S	Sn	01 55 51.5	-2.0
ISR	Istrita	0.32	136	P	Pn	01 55 37.3	-0.2
ISR				S	Sn	01 55 53.3	-0.3
ISR	Istrita	0.32	136		Pn	01 55 37.4	-0.2
ISR					Sn	01 55 53.3	-0.3
SECR		0.33	200	⇑P	Pn	01 55 37.7	+0.1
SECR				⇑S	Sn	01 55 52.6	-0.9
SECR		0.33	200	⇑P	Pn	01 55 37.7	+0.1
SECR				⇑S	Sn	01 55 52.6	-0.9
SECR		0.33	200		Pn	01 55 37.7	+0.1
SECR					Sn	01 55 52.6	-0.9
BISRR	Bisoca	0.39	59	⇑P	Pn	01 55 37.9	+0.1
BISRR				⇑S	Sn	01 55 53.4	-0.8
BISRR	Bisoca	0.39	59	⇑P	Pn	01 55 37.9	+0.1
BISRR				⇑S	Sn	01 55 53.4	-0.8
BISRR	Bisoca	0.39	59		Pn	01 55 37.9	+0.1
BISRR					Sn	01 55 54.1	0.0
PLAR	PLOIESTI	0.45	199	⇑P	Pn	01 55 38.2	+0.3
PLAR				⇓S	Sn	01 55 53.3	-1.1
PLAR	PLOIESTI	0.45	199	⇑P	Pn	01 55 38.2	+0.3
PLAR				⇓S	Sn	01 55 53.3	-1.1
PLAR	PLOIESTI	0.45	199		Pn	01 55 38.2	+0.3
PLAR					Sn	01 55 54.9	+0.6
GRER		0.53	86	⇓P	Pn	01 55 38.8	+0.5
GRER				⇓S	Sn	01 55 54.5	-0.5
GRER		0.53	86	⇓P	Pn	01 55 38.8	+0.5
GRER				⇓S	Sn	01 55 54.5	-0.5
PLOR	Plostina	0.59	30	⇑P	Pn	01 55 38.2	-0.5
PLOR				⇑S	Sn	01 55 54.3	-1.4
PLOR	Plostina	0.59	30	⇑P	Pn	01 55 38.2	-0.5
PLOR				⇑S	Sn	01 55 54.3	-1.4
PLOR	Plostina	0.59	30	P	Pn	01 55 38.2	-0.5
PLOR						01 55 54.3	
PLOR	Plostina	0.59	30		Pn	01 55 38.2	-0.5
PLOR					Sn	01 55 54.3	-1.4
VRI	Vrincioaia	0.63	34	⇑P	Pn	01 55 38.6	-0.3
VRI				⇑S	Sn	01 55 55.1	-1.0
VRI	Vrincioaia	0.63	34	⇑P	Pn	01 55 38.6	-0.3
VRI				⇑S	Sn	01 55 55.1	-1.0
VRI	Vrincioaia	0.63	34	P	Pn	01 55 38.6	-0.3
VRI						01 55 55.2	
VRI	Vrincioaia	0.63	34		Pn	01 55 38.6	-0.3
VRI					Sn	01 55 55.1	-1.0
SULR		0.67	178	⇑P	Pn	01 55 39.2	+0.1
SULR				⇑S	Sn	01 55 55.5	-0.8
SULR		0.67	178	⇑P	Pn	01 55 39.2	+0.1
SULR				⇑S	Sn	01 55 55.5	-0.8
SULR		0.67	178		Pn	01 55 39.2	+0.1
SULR					Sn	01 55 56.8	+0.4
PGOR	Pogoanele	0.69	129	⇓P	Pn	01 55 39.4	+0.1
PGOR				⇑S	Sn	01 55 56.2	-0.4
PGOR	Pogoanele	0.69	129	⇓P	Pn	01 55 39.4	+0.1
PGOR				⇑S	Sn	01 55 56.2	-0.4
PGOR	Pogoanele	0.69	129		Pn	01 55 39.4	+0.1
PGOR					Sn	01 55 56.9	+0.4
ODBI	Odobesti	0.71	54	⇑P	Pn	01 55 39.9	+0.5
ODBI				⇑S	Sn	01 55 56.6	-0.4
ODBI	Odobesti	0.71	54	⇑P	Pn	01 55 39.9	+0.5
ODBI				⇑S	Sn	01 55 56.6	-0.4
ODBI	Odobesti	0.71	54		Pn	01 55 39.9	+0.5
ODBI					Sn	01 55 57.5	+0.5
OZUR		0.81	338	⇑P	Pn	01 55 39.4	-0.7
OZUR				⇓S	Sn	01 55 56.0	-2.4
OZUR		0.81	338	⇑P	Pn	01 55 39.4	-0.7
OZUR				⇓S	Sn	01 55 56.0	-2.4
OZUR		0.81	338		Pn	01 55 39.4	-0.7
OZUR					Sn	01 55 55.9	-2.4
MTUR	Matau	0.83	262	⇑P	Pn	01 55 39.9	-0.5
MTUR	Matau	0.83	262	⇑P	Pn	01 55 39.9	-0.5
MTUR	Matau	0.83	262	P	Pn	01 55 39.9	-0.5
MTUR	Matau	0.83	262		Pn	01 55 39.9	-0.5
VOIR		0.84	277	⇑P	Pn	01 55 39.8	-0.6
VOIR				⇓S	Sn	01 55 56.7	-1.9
VOIR		0.84	277	⇑P	Pn	01 55 39.8	-0.6
VOIR				⇓S	Sn	01 55 56.7	-1.9
VOIR		0.84	277	P	Pn	01 55 39.7	-0.6
VOIR				S	Sn	01 55 56.6	-2.0
VOIR		0.84	277		Pn	01 55 39.8	-0.6
VOIR					Sn	01 55 56.6	-2.0
DOPR	Dopca	0.86	317	⇑P	Pn	01 55 39.7	-0.7
DOPR				⇓S	Sn	01 55 57.1	-1.7
DOPR	Dopca	0.86	317	⇑P	Pn	01 55 39.7	-0.7
DOPR				⇓S	Sn	01 55 57.1	-1.7
DOPR	Dopca	0.86	317		Pn	01 55 39.8	-0.7
DOPR					Sn	01 55 57.0	-1.9
INCR	INCERC-Sediu C	0.91	183	⇑P	Pn	01 55 40.6	-0.2
INCR				⇑S	Sn	01 55 58.5	-0.8
INCR	INCERC-Sediu C	0.91	183	⇑P	Pn	01 55 40.6	-0.2
INCR				⇑S	Sn	01 55 58.5	-0.8
INCR	INCERC-Sediu C	0.91	183		Pn	01 55 40.6	-0.2
INCR					Sn	01 55 59.2	-0.1
LEHL	Lehliu	0.97	154	⇑P	Pn	01 55 41.2	-0.1
LEHL				⇑S	Sn	01 55 59.8	-0.4
LEHL	Lehliu	0.97	154	⇑P	Pn	01 55 41.2	-0.1
LEHL				⇑S	Sn	01 55 59.8	-0.4
LEHL	Lehliu	0.97	154		Pn	01 55 41.2	-0.1
LEHL					Sn	01 55 59.8	-0.4
BUC1	Bucharest	1.01	188	⇑P	Pn	01 55 41.6	0.0
BUC1	Bucharest	1.01	188	⇑P	Pn	01 55 41.6	0.0
BUC1	Bucharest	1.01	188	P	Pn	01 55 41.6	0.0
BUC1	Bucharest	1.01	188		Pn	01 55 41.6	0.0
GOLR		1.03	241	⇑P	Pn	01 55 41.9	+0.1
GOLR				⇑S	Sn	01 56 00.1	-1.0
GOLR		1.03	241	⇑P	Pn	01 55 41.9	+0.1
GOLR				⇑S	Sn	01 56 00.1	-1.0
GOLR		1.03	241		Pn	01 55 41.9	+0.1
GOLR					Sn	01 56 01.6	+0.4
TUDR		1.04	76	⇑P	Pn	01 55 41.0	-0.8
TUDR				⇑S	Sn	01 55 59.7	-1.6
TUDR		1.04	76	⇑P	Pn	01 55 41.0	-0.8
TUDR				⇑S	Sn	01 55 59.7	-1.6
TUDR		1.04	76		Pn	01 55 41.0	-0.8
TUDR					Sn	01 55 59.7	-1.6
AMRR	Amara	1.07	133	⇓P	Pn	01 55 42.0	-0.2
AMRR				⇓S	Sn	01 56 01.0	-0.8
AMRR	Amara	1.07	133	⇓P	Pn	01 55 42.0	-0.2
AMRR				⇓S	Sn	01 56 01.0	-0.8
AMRR	Amara	1.07	133		Sn	01 56 01.0	-0.8
GHRR		1.09	49	⇑P	Pn	01 55 42.2	-0.1
GHRR				⇑S	Sn	01 56 00.9	-1.2
GHRR		1.09	49	⇑P	Pn	01 55 42.2	-0.1
GHRR				⇑S	Sn	01 56 00.9	-1.2
GHRR		1.09	49		Pn	01 55 42.2	-0.1
GHRR					Sn	01 56 00.9	-1.2
ARR	Arges	1.13	272	⇑P	Pn	01 55 42.5	-0.2
ARR				⇑S	Sn	01 56 01.4	-1.4
ARR	Arges	1.13	272	⇑P	Pn	01 55 42.5	-0.2
ARR				⇑S	Sn	01 56 01.4	-1.4

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ARR	Arges	1.13	272		Pn	01 55 42.5	-0.2
ARR					Sn	01 56 01.2	-1.6
SGRR	Singureni	1.14	189	⇑P	Pn	01 55 42.5	-0.2
SGRR				⇓S	Sn	01 56 01.8	-1.0
SGRR	Singureni	1.14	189	⇑P	Pn	01 55 42.5	-0.2
SGRR				⇓S	Sn	01 56 01.8	-1.0
SGRR	Singureni	1.14	189		Pn	01 55 42.5	-0.2
SGRR					Sn	01 56 01.8	-1.0
NEGR	Negresti	1.17	80	⇑P	Pn	01 55 42.5	-0.5
NEGR				⇓S	Sn	01 56 01.8	-1.4
NEGR	Negresti	1.17	80	⇑P	Pn	01 55 42.5	-0.5
NEGR				⇓S	Sn	01 56 01.8	-1.4
TESR	Tescani	1.20	14	⇑P	Pn	01 55 42.7	-0.6
TESR				⇓S	Sn	01 56 01.6	-2.4
TESR	Tescani	1.20	14	⇑P	Pn	01 55 42.7	-0.6
TESR				⇓S	Sn	01 56 01.6	-2.4
TESR	Tescani	1.20	14		Pn	01 55 42.7	-0.6
TESR					Sn	01 56 01.4	-2.6
HUMR	Humele	1.21	228	⇑P	Pn	01 55 43.1	-0.3
HUMR				⇓S	Sn	01 56 02.9	-1.0
HUMR	Humele	1.21	228	⇑P	Pn	01 55 43.1	-0.3
HUMR				⇓S	Sn	01 56 02.9	-1.0
HUMR	Humele	1.21	228		Pn	01 55 43.1	-0.3
HUMR					Sn	01 56 02.9	-1.0
VARL	Varlezi	1.26	63	⇑S	Sn	01 56 03.6	-1.3
VARL	Varlezi	1.26	63	⇑S	Sn	01 56 03.6	-1.3
GISR	Galati	1.29	85	⇑P	Pn	01 55 43.8	-0.3
GISR				⇓S	Sn	01 56 04.0	-1.3
GISR	Galati	1.29	85	⇑P	Pn	01 55 43.8	-0.3
GISR				⇓S	Sn	01 56 04.0	-1.3
GISR	Galati	1.29	85		Pn	01 55 43.8	-0.3
GISR					Sn	01 56 03.8	-1.4
RASA	Rasa	1.31	150	⇑P	Pn	01 55 44.0	-0.3
RASA				⇓S	Sn	01 56 05.2	-0.4
RASA	Rasa	1.31	150	⇑P	Pn	01 55 44.0	-0.3
RASA				⇓S	Sn	01 56 05.2	-0.4
RASA	Rasa	1.31	150		Pn	01 55 44.0	-0.3
RASA					Sn	01 56 05.2	-0.4
BIR	Birlad	1.34	46	⇑P	Pn	01 55 44.3	-0.3
BIR				⇑S	Sn	01 56 04.4	-1.9
BIR	Birlad	1.34	46	⇑P	Pn	01 55 44.3	-0.3
BIR				⇑S	Sn	01 56 04.4	-1.9
BIR	Birlad	1.34	46	P	Pn	01 55 44.3	-0.3
BIR						01 56 04.4	
BIR	Birlad	1.34	46		Pn	01 55 44.3	-0.3
BIR					Sn	01 56 04.4	-1.9
CFR	Carcaliu	1.36	96	⇑P	Pn	01 55 43.9	-0.8
CFR				⇓S	Sn	01 56 04.5	-1.9
CFR	Carcaliu	1.36	96	⇑P	Pn	01 55 43.9	-0.8
CFR				⇓S	Sn	01 56 04.5	-1.9
CFR	Carcaliu	1.36	96	P	Pn	01 55 43.9	-0.8
CFR	Carcaliu	1.36	96		Pn	01 55 43.9	-0.8
HARR	Harsova	1.37	118	⇑P	Pn	01 55 44.5	-0.4
HARR	Harsova	1.37	118	⇑P	Pn	01 55 44.5	-0.4
HARR	Harsova	1.37	118	P	Pn	01 55 44.5	-0.4
HARR	Harsova	1.37	118		Pn	01 55 44.5	-0.4
GIUM	Giurgiulesti	1.40	84	⇑P	Pn	01 55 45.2	0.0
GIUM				⇓S	Sn	01 56 06.4	-0.9
GIUM	Giurgiulesti	1.40	84	P	Pn	01 55 45.1	0.0
GIUM				S	Sn	01 56 06.3	-0.9
GIUM	Giurgiulesti	1.40	84	⇑P	Pn	01 55 45.2	0.0
GIUM				⇓S	Sn	01 56 06.4	-0.9
GIUM	Giurgiulesti	1.40	84		Pn	01 55 45.2	0.0
GIUM					Sn	01 56 06.3	-0.9
COPA	Copaceanca	1.41	211	⇑P	Pn	01 55 45.1	-0.2
COPA				⇑S	Sn	01 56 06.4	-1.0
COPA	Copaceanca	1.41	211	⇑P	Pn	01 55 45.1	-0.2
COPA				⇑S	Sn	01 56 06.4	-1.0
COPA	Copaceanca	1.41	211		Pn	01 55 45.1	-0.2
COPA					Sn	01 56 06.4	-1.0
JOSR	Joseni	1.45	340	⇓P	Pn	01 55 45.0	-0.8
JOSR				⇓S	Sn	01 56 06.3	-2.1
JOSR	Joseni	1.45	340	⇓P	Pn	01 55 45.0	-0.8
JOSR				⇓S	Sn	01 56 06.3	-2.1
JOSR	Joseni	1.45	340		Pn	01 55 45.0	-0.8
MDB	Medias	1.52	302	⇓P	Pn	01 55 47.1	+0.7
MDB				⇓S	Sn	01 56 08.2	-1.3
MDB	Medias	1.52	302	⇓P	Pn	01 55 47.1	+0.7
MDB				⇓S	Sn	01 56 08.2	-1.3
MDB	Medias	1.52	302	P	Pn	01 55 47.2	+0.7
MDB						01 56 10.3	
MDB	Medias	1.52	302		Pn	01 55 47.2	+0.7
MDB					Sn	01 56 10.2	+0.7
TOPG	Topolog	1.59	106	⇑P	Pn	01 55 46.5	-0.8
TOPG				⇑S	Sn	01 56 08.8	-2.0
TOPG	Topolog	1.59	106	⇑P	Pn	01 55 46.5	-0.8
TOPG				⇑S	Sn	01 56 08.8	-2.0
BIZ	Bicaz	1.60	357	⇓P	Pn	01 55 47.7	+0.5
BIZ				⇓S	Sn	01 56 10.7	-0.4
BIZ	Bicaz	1.60	357	⇓P	Pn	01 55 47.7	+0.5
BIZ				⇓S	Sn	01 56 10.7	-0.4
BIZ	Bicaz	1.60	357		Pn	01 55 47.8	+0.5
BIZ					Sn	01 56 10.7	-0.4
GIRR	Girov	1.62	7	⇓P	Pn	01 55 47.5	0.0
GIRR	Girov	1.62	7	⇓P	Pn	01 55 47.5	0.0
GIRR	Girov	1.62	7		Sn	01 56 10.0	-1.5
CVDA	Cernavoda	1.64	128	⇓P	Pn	01 55 47.5	-0.2
CVDA				⇑S	Sn	01 56 10.8	-0.8
CVDA	Cernavoda	1.64	128	⇓P	Pn	01 55 47.5	-0.2
CVDA				⇑S	Sn	01 56 10.8	-0.8
CVDA	Cernavoda	1.64	128		Pn	01 55 47.5	-0.2
CVDA					Sn	01 56 10.1	-1.5
ICOR	Ion Corvin	1.66	137	⇑P	Pn	01 55 48.1	+0.1
ICOR				⇑S	Sn	01 56 11.1	-1.0
ICOR	Ion Corvin	1.66	137	⇑P	Pn	01 55 48.1	+0.1
ICOR				⇑S	Sn	01 56 11.1	-1.0
ICOR	Ion Corvin	1.66	137		Sn	01 56 10.9	-1.2
LOT	Lotru	1.74	274	⇑P	Pn	01 55 48.7	-0.2
LOT				⇑S	Sn	01 56 12.4	-1.4
LOT	Lotru	1.74	274	⇑P	Pn	01 55 48.7	-0.2
LOT				⇑S	Sn	01 56 12.4	-1.4
LOT	Lotru	1.74	274		Pn	01 55 48.7	-0.2
LOT					Sn	01 56 12.1	-1.7
TIRR	Tirgusor	1.79	119	⇓P	Pn	01 55 49.0	-0.4
TIRR				⇓S	Sn	01 56 12.7	-1.9
TIRR	Tirgusor	1.79	119	⇓P	Pn	01 55 49.0	-0.4
TIRR				⇓S	Sn	01 56 12.7	-1.9
TIRR	Tirgusor	1.79	119	P	Pn	01 55 48.9	-0.4
TIRR						01 56 12.6	
TIRR	Tirgusor	1.79	119		Pn	01 55 48.9	-0.4
TIRR	Tirgusor	1.79	119		Pn	01 55 49.0	-0.4
TIRR					Sn	01 56 12.6	-2.0
RAZG	Razgrad	1.79	174	⇑P	Pn	01 55 49.2	-0.3
RAZG				⇓S	Sn	01 56 13.3	-1.4
RAZG	Razgrad	1.79	174	⇑P	Pn	01 55 49.2	-0.3
RAZG				⇓S	Sn	01 56 13.3	-1.4
RAZG	Razgrad	1.79	174		Pn	01 55 49.2	-0.3
RAZG					Sn	01 56 13.3	-1.4
ZIMR		1.80	200	⇑P	Pn	01 55 49.5	0.0
ZIMR				⇑S	Sn	01 56 13.5	-1.3
ZIMR		1.80	200	⇑P	Pn	01 55 49.5	0.0
ZIMR				⇑S	Sn	01 56 13.5	-1.3
ZIMR		1.80	200	P	Pn	01 55 49.4	0.0
ZIMR						01 56 13.5	
ZIMR		1.80	200		Pn	01 55 49.4	0.0
ZIMR					Sn	01 56 13.5	-1.3
LEOM	Leova	1.80	51	⇑P	Pn	01 55 49.0	-0.5
LEOM				⇑S	Sn	01 56 13.1	-1.9
LEOM	Leova	1.80	51	P	Pn	01 55 48.9	-0.5
LEOM				S	Sn	01 56 12.8	-2.1
LEOM	Leova	1.80	51	⇑P	Pn	01 55 49.0	-0.5
LEOM				⇑S	Sn	01 56 13.1	-1.9
LEOM	Leova	1.80	51	P	Pn	01 55 48.9	-0.5
LEOM				S	Sn	01 56 12.8	-2.1
LEOM	Leova	1.80	51		Pn	01 55 49.0	-0.5
LEOM					Sn	01 56 12.8	-2.1
TLCR		1.83	94	⇑P	Pn	01 55 49.4	-0.4
TLCR				⇑S	Sn	01 56 14.2	-1.2
TLCR		1.83	94	⇑P	Pn	01 55 49.4	-0.4
TLCR				⇑S	Sn	01 56 14.2	-1.2
TLCR		1.83	94	P	Pn	01 55 49.4	-0.4
TLCR						01 56 14.1	
TLCR		1.83	94		Pn	01 55 49.4	-0.4
TLCR					Sn	01 56 14.1	-1.3
VLAD	Vladila	1.87	225	⇑P	Pn	01 55 49.9	-0.4
VLAD				⇓S	Sn	01 56 15.4	-0.9
VLAD	Vladila	1.87	225	⇑P	Pn	01 55 49.9	-0.4
VLAD				⇓S	Sn	01 56 15.4	-0.9
VLAD	Vladila	1.87	225		Pn	01 55 49.9	-0.4
VLAD					Sn	01 56 15.2	-1.1
MFTR	Murfatlar	1.95	126	⇓P	Pn	01 55 50.9	-0.3
MFTR				⇑S	Sn	01 56 16.2	-1.6
MFTR	Murfatlar	1.95	126	⇓P	Pn	01 55 50.9	-0.3
MFTR				⇑S	Sn	01 56 16.2	-1.6
MFTR	Murfatlar	1.95	126		Pn	01 55 50.9	-0.3
MFTR					Sn	01 56 16.0	-1.8
JURR	Jurilovca	1.96	106	⇓P	Pn	01 55 50.9	-0.4
JURR	Jurilovca	1.96	106	⇓P	Pn	01 55 50.9	-0.4
IAS	Iasi	2.07	26	⇓P	Pn	01 55 51.9	-0.6
IAS	Iasi	2.07	26	⇓P	Pn	01 55 51.9	-0.6
IAS				⇓S	Sn	01 56 17.6	-2.8
IAS	Iasi	2.07	26	P	Pn	01 55 51.9	-0.6
IAS	Iasi	2.07	26		Pn	01 55 51.9	-0.6
SZH	Strazhica	2.09	186	*i* P	Pn	01 55 52.6	-0.2
TSCT	Constanta Port	2.10	124	⇓P	Pn	01 55 52.7	-0.1
TSCT				⇓S	Sn	01 56 19.4	-1.4
TSCT	Constanta Port	2.10	124	⇓P	Pn	01 55 52.7	-0.1
TSCT				⇓S	Sn	01 56 19.4	-1.4
TSCT	Constanta Port	2.10	124		Pn	01 55 52.7	-0.1
TSCT					Sn	01 56 19.4	-1.4
EFOR	EFORIE	2.13	126	⇓P	Pn	01 55 53.2	-0.1
EFOR				⇓S	Sn	01 56 20.4	-1.2
EFOR	EFORIE	2.13	126	⇓P	Pn	01 55 53.2	-0.1
EFOR				⇓S	Sn	01 56 20.4	-1.2
EFOR	EFORIE	2.13	126		Pn	01 55 53.2	-0.1
EFOR					Sn	01 56 20.0	-1.6
PSN	Preselentsi	2.17	139	*i* P	Pn	01 55 54.2	+0.4
PSN	Preselentsi	2.17	139	P	Pn	01 55 53.8	0.0
PSN				S	Sn	01 56 22.4	-0.1
ARCR	ARCALIA	2.17	324	⇓P	Pn	01 55 53.4	-0.4
ARCR				⇓S	Sn	01 56 21.7	-0.9
ARCR	ARCALIA	2.17	324	⇓P	Pn	01 55 53.4	-0.4
ARCR				⇓S	Sn	01 56 21.7	-0.9
ARCR	ARCALIA	2.17	324		Pn	01 55 53.4	-0.4
NEF	NEVSHA	2.21	160	P	Pn	01 55 54.0	-0.3
NEF				S	Sn	01 56 22.5	-0.9
PVL	Pavlikeni	2.22	197	*i* P	Pn	01 55 55.6	+1.2
PVL	Pavlikeni	2.22	197	P	Pn	01 55 55.3	+0.9
PVL				S	Sn	01 56 24.5	+0.9
PLVB	Pleven	2.27	211	⇑P	Pn	01 55 54.8	-0.2
PLVB				⇑S	Sn	01 56 22.8	-1.8
PLVB	Pleven	2.27	211	⇑P	Pn	01 55 54.8	-0.2
PLVB				⇑S	Sn	01 56 22.8	-1.8
PLVB	Pleven	2.27	211		Pn	01 55 54.8	-0.2
MANR	Mangalia	2.27	131	⇓P	Pn	01 55 55.0	0.0
MANR				⇑S	Sn	01 56 23.7	-0.9
MANR	Mangalia	2.27	131	⇓P	Pn	01 55 55.0	0.0
MANR				⇑S	Sn	01 56 23.7	-0.9
MANR	Mangalia	2.27	131		Pn	01 55 55.0	0.0
MANR					Sn	01 56 23.2	-1.4
CJR	Cluj-Napoca	2.29	308	⇓P	Pn	01 55 55.3	+0.1
CJR	Cluj-Napoca	2.29	308	⇓P	Pn	01 55 55.3	+0.1
CJR	Cluj-Napoca	2.29	308	P	Pn	01 55 55.3	+0.1
CJR	Cluj-Napoca	2.29	308		Pn	01 55 55.3	+0.1
TSMN	Mangalia Port-	2.29	132	⇑P	Pn	01 55 54.1	-1.1
TSMN				⇑S	Sn	01 56 24.5	-0.5
TSMN	Mangalia Port-	2.29	132	⇑P	Pn	01 55 54.1	-1.1
TSMN				⇑S	Sn	01 56 24.5	-0.5
TSMN	Mangalia Port-	2.29	132		Pn	01 55 55.4	+0.2
TSMN					Sn	01 56 24.9	-0.1
PRD	Provadia	2.30	158	*i* P	Pn	01 55 55.8	+0.5
PRD	Provadia	2.30	158	P	Pn	01 55 55.5	+0.2
PRD				S	Sn	01 56 25.3	0.0
BURAR	Bucovina Array	2.38	343	⇓P	Pn	01 55 57.3	+1.0
BURAR	Bucovina Array	2.38	343	⇓P	Pn	01 55 57.3	+1.0
BURAR	Bucovina Array	2.38	343	P	Pn	01 55 57.3	+1.0
BURAR	Bucovina Array	2.38	343	Pn	Pn	01 55 56.8	+0.5
BURAR	Bucovina Array	2.38	343		Pn	01 55 57.4	+1.0
MILM	Milestii Mici	2.39	48	⇑P	Pn	01 55 55.7	-0.6
MILM	Milestii Mici	2.39	48	P	Pn	01 55 55.6	-0.6
MILM	Milestii Mici	2.39	48	⇑P	Pn	01 55 55.7	-0.6
MILM				⇓S	Sn	01 56 24.1	-3.0
MILM	Milestii Mici	2.39	48		Pn	01 55 55.7	-0.6
DEV	Deva	2.40	284	⇓P	Pn	01 55 56.3	-0.2
DEV				⇓S	Sn	01 56 26.5	-0.8
DEV	Deva	2.40	284	⇓P	Pn	01 55 56.3	-0.2
DEV				⇓S	Sn	01 56 26.5	-0.8
DEV	Deva	2.40	284	P	Pn	01 55 56.3	-0.2
DEV	Deva	2.40	284		Pn	01 55 56.3	-0.2
BUR08	Bucovina Ar. S	2.41	343	Pn	Pn	01 55 57.2	+0.6
ELND	Elena	2.43	186	⇑P	Pn	01 55 56.7	-0.2
ELND				⇓S	Sn	01 56 26.8	-1.2
ELND	Elena	2.43	186	⇑P	Pn	01 55 56.7	-0.2
ELND				⇓S	Sn	01 56 26.8	-1.2
ELND	Elena	2.43	186		Pn	01 55 56.7	-0.2
ELND					Sn	01 56 26.8	-1.2
GZR	Gura Zlata	2.44	272	⇑P	Pn	01 55 56.5	-0.4
GZR				⇓S	Sn	01 56 26.8	-1.4
GZR	Gura Zlata	2.44	272	⇑P	Pn	01 55 56.5	-0.4
GZR				⇓S	Sn	01 56 26.8	-1.4
GZR	Gura Zlata	2.44	272		Pn	01 55 56.5	-0.4
GZR					Sn	01 56 26.4	-1.8
KIS	Kishinev	2.44	46	*e*P	Pn	01 55 57.0	0.0
KIS				*e*S	Sn	01 56 25.0	-3.3
	500nm,0.8s						
KIS	Kishinev	2.44	46	⇓P	Pn	01 55 56.6	-0.4
KIS	Kishinev	2.44	46	*e*P	Pn	01 55 57.0	0.0
KIS				Pm		01 56 06.0	
KIS				*e*S	Sn	01 56 25.0	-3.3
KIS	Kishinev	2.44	46	⇓P	Pn	01 55 56.6	-0.4
KIS				⇑S	Sn	01 56 25.5	-2.8
KIS	Kishinev	2.44	46	*e*P	Pn	01 55 57.0	0.0
KIS				*e*S	Sn	01 56 25.4	-2.9
KIS				smax	smax		
	comp=N,480µm,0.8s						
KIS	Kishinev	2.44	46		Pn	01 55 56.6	-0.4
BAIL	Bailesti	2.45	238	⇑P	Pn	01 55 56.7	-0.3
BAIL				⇑S	Sn	01 56 27.7	-0.7
BAIL	Bailesti	2.45	238	⇑P	Pn	01 55 56.7	-0.3
BAIL				⇑S	Sn	01 56 27.7	-0.7
BAIL	Bailesti	2.45	238		Pn	01 55 56.7	-0.3
AVR	AVREN	2.45	155	P	Pn	01 55 57.0	-0.2
PUNG	Punghina	2.58	247	⇓P	Pn	01 55 57.6	-1.0
PUNG	Punghina	2.58	247	⇓P	Pn	01 55 57.6	-1.0
PUNG				⇑S	Sn	01 56 27.9	-3.3
PUNG	Punghina	2.58	247		Pn	01 55 57.6	-1.0
DJES	Djerdap	2.72	257	*e*Sg	Sn	01 56 30.8	-3.6
HERR	Herculane	2.74	262	⇓P	Pn	01 55 59.5	-1.2
HERR	Herculane	2.74	262	⇓P	Pn	01 55 59.5	-1.2
HERR	Herculane	2.74	262		Pn	01 55 59.5	-1.2
DRGR		2.84	302	*e*Pn	Pn	01 56 01.3	-0.7
DRGR		2.84	302	⇓P	Pn	01 56 01.6	-0.5
DRGR		2.84	302	⇓P	Pn	01 56 01.6	-0.5
DRGR		2.84	302	P	Pn	01 56 01.6	-0.5
DRGR		2.84	302		Pn	01 56 01.6	-0.5
JMB	Yambol	2.89	175	P	Pn	01 56 01.8	-0.8
CHRU	Chernivtsi	2.96	356	*i* P	Pn	01 56 03.2	-0.2
CHRU				Pm		01 56 04.2	
CHRU				*i* S	Sn	01 56 39.5	-0.3
CHRU				Sm		01 56 41.5	
BMR	Baia Mare	3.00	322	⇑P	Pn	01 56 03.7	-0.2
BMR	Baia Mare	3.00	322	⇑P	Pn	01 56 03.7	-0.2
BMR	Baia Mare	3.00	322	P	Pn	01 56 03.7	-0.2
BMR	Baia Mare	3.00	322		Pn	01 56 03.7	-0.2
RAKU	Rahkiv	3.04	333	⇓*i*P	Pn	01 56 04.5	+0.2
RAKU				Pm		01 56 05.1	
RAKU				*e*S	Sn	01 56 41.9	+0.4
RAKU				Sm		01 56 54.6	
BLKB	Belogradchik	3.07	237	⇑S	Sn	01 56 38.2	-4.2
KSV	Kosov	3.08	345	⇑*i*P	Pn	01 56 04.6	-0.3
KSV				Pm		01 56 05.7	
KSV				*e*S	Sn	01 56 41.9	-0.5
KSV				Sm		01 56 45.4	
NSLU	Nyzhne Selyshc	3.10	338	⇓*i*P	Pn	01 56 09.5	+4.3
NSLU				Pm		01 56 10.1	
NSLU				*i* S	Sn	01 56 50.5	+7.5
NSLU				Sm		01 57 04.9	
SORM	Soroca	3.15	27	⇓P	Pn	01 56 04.7	-1.0
SORM	Soroca	3.15	27	⇓P	Pn	01 56 04.7	-1.0
SORM				⇑S	Sn	01 56 39.8	-4.2
SORM	Soroca	3.15	27	P	Pn	01 56 04.7	-1.0
SORM	Soroca	3.15	27		Pn	01 56 04.7	-1.0
PGB	Panagyurishte	3.17	209	*i* P	Pn	01 56 07.1	+1.0
KMPD	K-Podol'skiy	3.22	3	⇑*i*P	Pn	01 56 05.9	-0.8
KMPD				*i* S	Sn	01 56 44.0	-1.7
ZAGS	Zajecar	3.24	243	*e*Pn	Pn	01 56 05.2	-1.8
ZAGS				*e*Sn	Sn	01 56 41.3	-4.8
MDVR	Moldovita	3.25	262	⇓P	Pn	01 56 06.2	-0.9
MDVR	Moldovita	3.25	262	⇓P	Pn	01 56 06.2	-0.9
MDVR	Moldovita	3.25	262		Pn	01 56 06.2	-0.9
BZS	Buzias	3.26	276	*e*Pn	Pn	01 56 06.3	-0.8
BZS	Buzias	3.26	276	P	Pn	01 56 06.4	-0.7
ZAPS	Zavoj	3.31	233	*e*Pn	Pn	01 56 07.8	-0.1
ZAPS				*e*Sn	Sn	01 56 43.6	-4.2
NDNU	Novodnistrovsk	3.34	13	⇓*i*P	Pn	01 56 07.4	-0.8
NDNU				Pm		01 56 07.7	
NDNU				*i* S	Sn	01 56 45.5	-3.0
NDNU				Sm		01 56 48.7	
PLD	Plovdiv	3.42	199	*e*P	Pn	01 56 08.3	-1.0
PLD	Plovdiv	3.42	199	P	Pn	01 56 08.8	-0.5
VTS	Vitosha	3.48	219	*e*Pn	Pn	01 56 10.2	0.0
VTS	Vitosha	3.48	219	⇑P	Pn	01 56 10.3	0.0
VTS	Vitosha	3.48	219	⇑P	Pn	01 56 10.3	0.0
VTS	Vitosha	3.48	219	*i* P	Pn	01 56 10.4	+0.2
VTS	Vitosha	3.48	219	P	Pn	01 56 10.2	0.0
VTS	Vitosha	3.48	219	Pn	Pn	01 56 10.2	0.0
EDRB	Edirne	3.52	174	*e*P	Pn	01 56 09.6	-0.9
KORU	Korolevo	3.53	324	⇑*i*P	Pn	01 56 10.9	+0.3
KORU				*e*S	Sn	01 56 52.6	-0.1
TRSU	Trosnyk	3.56	322	⇑*i*P	Pn	01 56 11.3	+0.4
TRSU				Pm		01 56 11.7	
TRSU				*e*S	Sn	01 56 53.8	+0.5
TRSU				Sm		01 57 11.2	
STNU	Starunia	3.57	341	⇑*i*P	Pn	01 56 11.5	+0.4
STNU				*i* S	Sn	01 56 53.5	-0.2
BOVS	Bovan	3.66	244	*e*Pn	Pn	01 56 11.8	-0.6
BOVS				*e*Sn	Sn	01 56 50.3	-5.5
MEZ	Mezhgor'ye	3.68	331	⇓*i*P	Pn	01 56 13.1	+0.6
MEZ				Pm		01 56 13.6	
MEZ				*e*S	Sn	01 56 55.9	-0.2
MEZ				Sm		01 57 01.4	
KDZ	Kurdzhali	3.74	189	*e*P	Pn	01 56 13.2	-0.2
KDZ	Kurdzhali	3.74	189	P	Pn	01 56 13.1	-0.3
KDZ				S	Sn	01 56 57.3	-0.4
TRPA	Tarpa	3.77	319	⇑P	Pn	01 56 12.9	-0.7
TRPA	Tarpa	3.77	319	⇑P	Pn	01 56 12.9	-0.7
BERU	Beregovo	3.80	321	⇓*i*P	Pn	01 56 13.7	-0.3
BERU				*e*S	Sn	01 56 58.9	0.0
HORU	Horodok	3.87	2	*i* P	Pn	01 56 14.6	-0.5
HORU				*e*S	Sn	01 56 59.9	-0.8
BOSS	Bosilegrad	3.93	225	*e*Pn	Pn	01 56 16.3	+0.4
BOSS				*e*Sn	Sn	01 56 57.4	-4.7
MUKU	Mukachevo	3.95	323	⇓*i*P	Pn	01 56 15.5	-0.5
MUKU				*e*S	Sn	01 57 02.3	0.0
BARS	Barje	4.06	233	*e*Pn	Pn	01 56 18.6	+1.0
BARS				*e*Sn	Sn	01 56 59.5	-5.6
MORS	Morshin	4.11	338	*i* P	Pn	01 56 18.1	0.0
MORS				*e*S	Sn	01 57 06.1	-0.1
CTYL	Yalikoy Yolu	4.15	158	*e*P	Pn	01 56 18.2	-0.5
MMB	Musomiste	4.17	207	P	Pn	01 56 22.5	+3.4
GRUS	Gruza	4.20	252	*e*Pn	Pn	01 56 18.7	-0.6
UKOP	Uzunkopru-Edir	4.22	176	*e*P	Pn	01 56 19.5	-0.2
RDO	Rodhopi	4.23	187	*e*P	Pn	01 56 19.6	-0.1
SELS	Selova	4.24	242	*e*Pn	Pn	01 56 18.6	-1.3
UZH	Uzhgorod	4.25	322	⇓*i*P	Pn	01 56 19.4	-0.6
UZH				Pm		01 56 21.0	
UZH				*e*S	Sn	01 57 09.9	+0.5
UZH				Sm		01 57 27.8	
UZH	Uzhgorod	4.25	322	*e*P	Pn	01 56 19.7	-0.3
UZH				*e*S	Sn	01 57 09.2	-0.2
UZH				smax	smax		
	comp=N,6.0nm,1.0s						
TRUS	Trudelj	4.29	257	*e*Pn	Pn	01 56 19.8	-0.8
SHIU	Shidnytsya	4.34	334	*i* P	Pn	01 56 21.4	+0.2
SHIU				Pm		01 56 27.3	
SHIU				*e*S	Sn	01 57 11.6	-0.1
SHIU				Sm		01 57 36.7	
SLVT	Silivri	4.36	160	*e*P	Pn	01 56 21.3	-0.2
STZU	Stuzhytsa	4.42	327	Pm		01 55 41.5	
STZU				⇓*i*P	Pn	01 56 22.8	+0.6
STZU				Sm		01 57 16.4	
ALN	Alexandroupoli	4.45	182	*e*P	Pn	01 56 22.5	-0.1
DIVS	Divibare	4.62	257	*e*Pn	Pn	01 56 24.4	-0.5
DIVS				*e*Sn	Sn	01 57 13.3	-5.0
SRS	Serrai	4.64	205	P	Pn	01 56 27.8	+2.6
ERIK	Erikli-Kesan	4.68	177	*e*P	Pn	01 56 25.8	+0.2
IVAS	Ivanjica	4.70	250	*e*Pn	Pn	01 56 25.2	-0.7
RKY	Sarkoy-Tekirda	4.71	171	*e*P	Pn	01 56 26.4	+0.3
LVV	L'vov	4.72	342	⇓*i*P	Pn	01 56 25.9	-0.2
LVV				Pm		01 56 27.3	
LVV				*e*S	Sn	01 57 20.1	-0.4
LVV				Sm		01 57 23.4	
LVV	L'vov	4.72	342	*e*P	Pn	01 56 26.2	+0.1
VAY	Valandovo	4.83	215	*i* Pn	Pn	01 56 30.7	+3.1
KNT	Kendrikon	4.84	211	*e*P	Pn	01 56 28.1	+0.3
KNT	Kendrikon	4.84	211	P	Pn	01 56 26.8	-1.0
KWP	Kalwaria Pacla	4.91	332	*e*P	Pn	01 56 29.5	+0.9
KWP	Kalwaria Pacla	4.91	332	*e*P	Pn	01 56 29.5	+0.9
GELI	Tayfur-Gelibol	4.95	178	*e*P	Pn	01 56 28.9	-0.3
SJES	Sjenica	4.95	247	*e*Pn	Pn	01 56 29.8	+0.5
KECS	Kecovo	5.03	311	*e*P	Pn	01 56 29.9	-0.4
KECS	Kecovo	5.03	311	*e*PN	Pn	01 56 29.9	-0.4
PSZ	Piszkesteto	5.07	303	P	Pn	01 56 29.9	-0.9
PSZ	Piszkesteto	5.07	303		Pn	01 56 29.9	-0.9
BBLS	Lazići	5.09	256	*e*Pn	Pn	01 56 31.1	-0.1
HORT	Hortiatis	5.27	207	*e*P	Pn	01 56 34.6	+1.0
OUR	Ouranopolis	5.27	199	*e*P	Pn	01 56 34.4	+0.9
SEV	Sevastopol'	5.34	96	*e*P	Pn	01 56 31.7	-2.6
SEV				Pm		01 56 32.8	
SEV				*e*S	Sn	01 57 30.6	-4.6
SEV				Sm		01 57 30.6	
SEV	Sevastopol'	5.34	96	*e*P	Pn	01 56 31.7	-2.6
SEV				*e*S	Sn	01 57 30.6	-4.6
BUD	Budapest	5.42	296	P	Pn	01 56 35.1	-0.3
BUD				pmax	pmax		
	comp=Z,18nm,0.7s						
SIM	Simferopol'	5.59	91	*e*P	Pn	01 56 37.5	-0.2
SIM	Simferopol'	5.59	91	P	Pn	01 56 36.7	-1.0
SIM				S	Sn	01 57 36.7	-4.5
SIM				pmax	pmax		
	comp=Z,10.0nm,1.7s						
SIM				smax	smax		
	comp=N,37nm,0.9s						
SIM				smax	smax		
	comp=E,24nm,1.0s						
AKASG	Malin Array Be	5.72	19	P	Pn	01 56 37.6	-1.7
	comp=E,3.8nm,0.3s,baz=205,slow=13,SNR=13						
AKASG				S	Sn	01 57 40.0	-4.3
	comp=E,2.7nm,0.3s,baz=200,slow=26,SNR=6.6						
AKBB	Malin Array Si	5.72	19	*i* P	Pn	01 56 36.2	-3.2
NIE	Niedzica	5.73	317	*e*P	Pn	01 56 39.8	+0.3
NIE	Niedzica	5.73	317	*e*P	Pn	01 56 39.8	+0.3
FNA	Florina	5.78	220	*e*P	Pn	01 56 40.8	+0.5
ALU	Alushta	5.83	94	*e*P	Pn	01 56 40.0	-0.9
ALU				Pm		01 56 40.3	
ALU				*e*S	Sn	01 57 45.4	-1.5
ALU				Sm		01 57 50.6	
ALU	Alushta	5.83	94	*e*P	Pn	01 56 40.0	-0.9
ALU				*e*S	Sn	01 57 45.4	-1.5
VYHS	Vyhne	5.96	305	*e*P	Pn	01 56 42.6	0.0
VYHS	Vyhne	5.96	305	*e*PN	Pn	01 56 42.6	0.0
MDUB	Mudurnu	6.08	141		Pn	01 56 44.8	+0.4
SUDU	Sudak	6.22	91	*e*P	Pn	01 56 45.4	-0.7
SUDU				Pm		01 56 46.3	
SUDU				*i* S	Sn	01 57 54.8	-1.4
SUDU				Sm		01 57 57.7	
SUDU	Sudak	6.22	91	*e*P	Pn	01 56 45.4	-0.7
SUDU				*i* S	Sn	01 57 54.8	-1.4
JAVC	Velka Javorina	6.82	304	*e*PN	Pn	01 56 54.6	+0.6
MODS	Modra-Piesok	6.84	299	*e*P	Pn	01 56 52.0	-2.3
MODS	Modra-Piesok	6.84	299	*e*PN	Pn	01 56 52.0	-2.3
SOP	Sopron	7.07	293	P	Pn	01 56 58.2	+0.9
SOP				pmax	pmax		
	comp=Z,13nm,0.8s						
CONA	Conrad Observa	7.59	294	*e*Pn	Pn	01 57 05.0	+0.6
	comp=Z,1.2nm,0.5s						
VRAC	Vranov	7.65	305	P	Pn	01 57 04.3	-0.8
	baz=117,slow=15,SNR=5.3						
VRAC	Vranov	7.65	305	*e*PN	Pn	01 57 05.4	+0.3
ARSA	Arzberg	7.66	288	*e*Pn	Pn	01 57 06.4	+1.2
	comp=Z,2.7nm,0.5s						
KRUC	Moravsky	7.66	303	*e*PN	Pn	01 57 05.2	0.0
BR131	Keskin Array S	7.84	133	*i* P	Pn	01 57 07.9	+0.1
BR131	Keskin Array S	7.84	133		Pn	01 57 07.2	-0.6
BRTR	Keskin Array B	7.84	133	P	Pn	01 57 07.8	+0.1
	comp=Z,0.2nm,0.3s,baz=322,slow=11,SNR=13						
BRTR	Keskin Array B	7.84	133	*i* P	Pn	01 57 07.9	+0.1
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						

BRTR	**Keskin Array B**	**7.84**	**133**	Pn	**Pn**	**01 57 07.7**	**-0.1**
SOKA	**Soboth**	**7.91**	**284**	ePn	**Pn**	**01 57 09.1**	**+0.4**
	comp=Z,2.3nm,0.6s						
KRLC	**Kraliky**	**7.94**	**310**	eP	**Pn**	**01 57 08.5**	**-0.4**
KRLC	**Kraliky**	**7.94**	**310**	eP	**Pn**	**01 57 08.5**	**-0.4**
GERES	**GERESS Array B**	**9.23**	**297**	P	**Pn**	**01 57 26.5**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=108,slow=13,SNR=8.5						
GERES	**GERESS Array B**	**9.23**	**297**	Pn	**Pn**	**01 57 26.7**	**+0.4**
KHC	**Kasperske Hory**	**9.40**	**298**	eP	**Pn**	**01 57 27.5**	**-0.9**
KHC	**Kasperske Hory**	**9.40**	**298**	iP	**Pn**	**01 57 29.0**	**+0.6**
KHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
OBN	**Obninsk**	**11.79**	**30**	⇑eP	**Pn**	**01 57 57.1**	**-2.6**
OBN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KIV	**Kislovodsk**	**11.81**	**91**	eP	**Pn**	**01 57 58.9**	**-1.2**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
VSU	**Vasula**	**13.14**	**1**	iP	**Pn**	**01 58 14.7**	**-2.3**
VSU				pmax	pmax		
	comp=Z,7.0nm,0.4s						
MMAI	**Mount Meron Ar**	**14.21**	**147**	P	**P**	**01 58 33.1**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=339,slow=16,SNR=3.8						
FINES	**FINESS Array B**	**16.13**	**360**	P	**Pn**	**01 58 51.3**	**-2.9**
	comp=Z,0.2nm,0.3s,baz=170,slow=12,SNR=7.0						
FINES	**FINESS Array B**	**16.13**	**360**	iP	**Pn**	**01 58 52.5**	**-1.7**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
HFS	**Hagfors**	**16.60**	**338**	P	**P**	**01 58 57.6**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=144,slow=8.6,SNR=5.3						
NAO01	**NORSAR Array S**	**17.98**	**335**	P	**P**	**01 59 14.7**	**-0.1**
NB2	**NORSAR Subarra**	**18.04**	**336**	P	**P**	**01 59 15.1**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=143,slow=11						
NOA	**NORSAR Array B**	**18.04**	**336**	P	**P**	**01 59 14.5**	**-1.1**
	comp=Z,0.0nm,0.3s,baz=146,slow=9.7,SNR=9.8						
NOA				LR	LR	02 06 01.4	
	comp=Z,56nm,20.6s,baz=345,slow=36						
KIRV	**Kirov**	**19.35**	**38**	P	**P**	**01 59 29.2**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=232,slow=9.4,SNR=4.3						
EKA	**Eskdalemuir Ar**	**21.10**	**309**	P	**P**	**01 59 49.5**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=107,slow=8.4,SNR=1.7						
AKTO	**Aktyubinsk**	**21.81**	**65**	P	**P**	**01 59 56.6**	**+0.4**
	comp=Z,0.9nm,0.4s,baz=280,slow=9.2,SNR=4.9						
ARU	**Arti**	**22.99**	**50**	P	**P**	**02 00 07.3**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=227,slow=8.4,SNR=12						
ARU	**Arti**	**22.99**	**50c**	iP	**P**	**02 00 07.4**	**-0.1**
ARU						02 00 44.9	
ARU				S	**S**	**02 04 06.8**	**+0.9**
ARU				SS	**SnSn**	**02 05 06.5**	**+9.0**
ARU				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ARU	**Arti**	**22.99**	**50**	P	**P**	**02 00 07.2**	**-0.3**
ARU				IAmb	IAmb	02 00 08.9	
	comp=Z,4.9nm,0.6s						
ABKAR	**Akbulak array**	**23.08**	**68**	P	**P**	**02 00 09.5**	**+1.1**
ARCES	**ARCESS Array B**	**24.26**	**359**	P	**P**	**02 00 18.3**	**-0.6**
	comp=Z,3.4nm,0.8s,baz=166,slow=5.6,SNR=7.6						
GEYT	**Alibeck**	**24.84**	**96**	P	**P**	**02 00 26.5**	**+2.0**
	comp=Z,1.3nm,0.5s,baz=278,slow=10,SNR=3.9						
GEYT	**Alibeck**	**24.84**	**96**	P	**P**	**02 00 26.0**	**+1.5**
BRVK	**Borovoye**	**29.40**	**59**	iP	**P**	**02 01 05.7**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BVAR	**Borovoye Array**	**29.47**	**59**	P	**P**	**02 01 07.1**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=282,slow=7.2,SNR=4.3						
AAK	**Ala-Archa**	**34.42**	**77**	iP	**P**	**02 01 51.5**	**+2.3**
AAK				pmax	pmax		
	comp=Z,1.0nm,1.2s						
DBIC	**Dimbokro**	**47.02**	**225**	P	**P**	**02 03 32.2**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=6.4,slow=6.4,SNR=12						
SONM	**Songino Array**	**52.77**	**56**	P	**P**	**02 04 17.1**	**+1.5**
	comp=Z,2.4nm,0.8s,baz=296,slow=8.4,SNR=3.1						
BILL	**Bilibino**	**63.03**	**16**	eP	**P**	**02 05 27.9**	**+1.4**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WRA	**Warramunga Arr**	**116.53**	**92**	PKP	**PKPdf**	**02 13 41.8**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=327,slow=1.7,SNR=1.9						
ASAR	**Alice Springs**	**118.64**	**96**	PKP	**PKPdf**	**02 13 45.8**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=333,slow=1.2,SNR=1.5						

MEX 29 02:19:05.4±0.3**, 30°.99N**×**113°.97W, h10**^{km}±9^{km}**, MD3.7, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPIG	**San Pedro Mart**	**1.29**	**273**	iP	Pn	02 19 26.1	-3.7
SPIG				eS	Sb	02 19 42.0	-4.7
HSIG		**3.27**	**126**	eP	Pn	02 19 54.3	-2.5
CGIG		**5.20**	**95**	eP	Pn	02 20 21.6	-1.8

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*IDC **29** 02:20:36.4±0.8, 28°.23N×105°.08E, h0^{km}, mb3.6/10, mb1 3.8/12, mb1mx3.6/35, mbtmp3.6/12, ML3.7/2, Error ellipse: s-maj=29.7km s-min=17.7km az=59.0*

*BJI **29** 02:20:38.8±0.0, 28°.25N×105°.00E, h13^{km}, ML3.5/11*

ISC 29 02:20:38.1±0.6**, 28°.22N**±0°.05×**105°.27E**±0°.07**, h10**^{km}**, n17,** σ**1^{s}54**/22**, mb3.8**/10**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GYA	**Guiyang**	**2.15**	**144**	Pn	**Pb**	**02 21 17.8**	**+0.5**
GYA				Sn	**Sb**	**02 21 46.5**	**+2.4**
GYA				smax	smax		
	comp=N,430nm,0.8s						
GYA				smax	smax		
	comp=E,190nm,0.8s						
CD2	**Chengdu**	**2.98**	**334**	Pn	**Pn**	**02 21 25.5**	**-0.1**
CD2				Pg	**Pb**	**02 21 32.3**	**+0.9**
CD2				Sn	**Sn**	**02 22 01.5**	**+0.1**
CD2				Sg	**Sg**	**02 22 18.3**	**+4.3**
CD2				smax	smax		
	comp=N,330nm,0.9s						
CD2				smax	smax		
	comp=E,650nm,1.0s						
XAN	**Xi'an**	**6.59**	**27**	Pg	**Pb**	**02 22 32.5**	**-0.4**
XAN				Sg	**Sg**	**02 24 09.3**	**-0.4**
XAN				smax	smax		
	comp=N,47nm,0.9s						
XAN				smax	smax		
	comp=E,43nm,1.4s						
CMAR	**Chiang Mai Arr**	**11.32**	**212**	Pn	**Pn**	**02 23 19.7**	**-0.3**
	0.3nm,0.3s,baz=23,slow=12,SNR=1.3						
SONM	**Songino Array**	**19.60**	**2**	P	**P**	**02 25 07.5**	**+0.9**
	0.1nm,0.3s,baz=187,slow=13,SNR=3.7						
WMQ	**Urumqi**	**21.01**	**322**	eP	**P**	**02 25 21.3**	**-0.6**
KSRS	**Korea Array**	**21.10**	**58**	P	**P**	**02 25 24.9**	**+2.1**
	0.7nm,0.5s,baz=235,slow=8.8,SNR=2.4						
MKAR	**Makanchi Array**	**25.84**	**322**	P	**P**	**02 26 08.8**	**-0.9**
	1.2nm,0.7s,baz=130,slow=12,SNR=15						
ZALV	**Zalesovo Beam**	**29.75**	**335**	P	**P**	**02 26 43.8**	**-0.8**
	1.2nm,0.7s,baz=140,slow=10,SNR=4.3						
GEYT	**Alibeck**	**40.31**	**296**	P	**P**	**02 28 15.5**	**-0.3**
	1.7nm,0.6s,baz=101,slow=7.7,SNR=5.5						
WRA	**Warramunga Arr**	**55.52**	**146**	P	**P**	**02 30 13.6**	**-0.1**
	0.7nm,0.6s,baz=335,slow=8.4,SNR=7.7						
ASAR	**Alice Springs**	**58.51**	**149**	P	**P**	**02 30 35.5**	**+0.7**
	0.4nm,0.5s,baz=328,slow=6.9,SNR=5.7						
FINES	**FINESS Array B**	**60.52**	**327**	P	**P**	**02 30 46.6**	**-1.6**
	0.5nm,0.6s,baz=102,slow=13,SNR=1.3						
NB2	**NORSAR Subarra**	**67.63**	**328**	P	**P**	**02 31 32.8**	**-2.2**
	comp=Z,0.3nm,0.6s,baz=72,slow=6.5						
NOA	**NORSAR Array B**	**67.63**	**328**	P	**P**	**02 31 33.1**	**-1.9**
	comp=Z,0.4nm,0.6s,baz=74,slow=6.6,SNR=3.9						
GERES	**GERESS Array B**	**70.29**	**315**	P	**P**	**02 31 50.7**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=76,slow=4.1,SNR=1.9						
YKA	**Yellowknife Ar**	**84.13**	**17**	P	**P**	**02 33 09.2**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=328,slow=4.6,SNR=2.1						

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*BEO **29** 02:30:29.6±0.8, 42°.19N×23°.55E, h7^{km}±3^{km}, ML2.2/9*

*SKO **29** 02:30:30.3, 42°.17N×23°.46E, h3^{km}*

*THE **29** 02:30:30.6, 42°.09N×23°.51E, h6^{km}, ML2.5/8, Error ellipse: s-maj=1.7km s-min=1.1km az=167.0*

ISC 29 02:30:29.1±1.1**, 42°.15N**±0°.02×**23°.48E**±0°.03**, h8**^{km}±9^{km}**, n42,** σ**0^{s}91**/71**, 16C-13D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VTS	**Vitosha**	**0.50**	**339**	ePg	**Pg**	**02 30 38.3**	**-0.5**
VTS				eSg	**Sg**	**02 30 45.1**	**-0.3**
VTS	**Vitosha**	**0.50**	**339**	⇑P	**Pg**	**02 30 38.1**	**-0.7**
VTS				⇑S	**Sg**	**02 30 44.9**	**-0.5**
BOSS	**Bosilegrad**	**0.82**	**295**	ePg	**Pb**	**02 30 44.9**	**-0.7**
BOSS				eSg	**Sb**	**02 30 56.3**	**-0.5**
NVR	**Nevrokopi**	**0.85**	**160**	P	**Pb**	**02 30 45.0**	**-1.1**
NVR				S	**Sg**	**02 30 57.4**	**+1.0**
	230nm,0.1s						
SRS	**Serrai**	**1.03**	**175**	P	**Pb**	**02 30 48.9**	**-0.3**
SRS				S	**Sg**	**02 31 03.3**	**+0.9**
	215nm,0.2s						
VAY	**Valandovo**	**1.07**	**220**	ePg	**Pn**	**02 30 50.0**	**-0.4**
VAY				eSg	**Sg**	**02 31 05.2**	**+1.7**
VAY	**Valandovo**	**1.07**	**220**	⇓iPg	**Pg**	**02 30 50.1**	**+0.5**
VAY				iSg	**Sg**	**02 31 05.3**	**+1.8**
VAY				eLg	Lg	02 31 07.4	
	comp=E,97nm,0.3s						
VAY				eLg	Lg	02 31 07.8	
	comp=N,76nm,0.3s						
KNT	**Kendrikon**	**1.08**	**204**	P	**Pb**	**02 30 49.6**	**-0.4**
KNT				S	**Sn**	**02 31 04.2**	**-1.5**
ZAPS	**Zavoj**	**1.28**	**331**	ePg	**Pn**	**02 30 52.9**	**-0.5**
ZAPS				eSg	**Sb**	**02 31 10.1**	**-0.1**
SOH	**Sokhos**	**1.33**	**184**	P	**Pb**	**02 30 53.7**	**-0.6**
SOH				S	**Sg**	**02 31 11.8**	**0.0**
	comp=N,188nm,0.4s						
KAVA	**Kavala**	**1.39**	**146**	P	**Pn**	**02 30 54.4**	**-0.4**
BARS	**Barje**	**1.40**	**299**	ePg	**Pg**	**02 30 56.5**	**+0.6**
BARS				eSg	**Sg**	**02 31 15.9**	**+1.9**
GRG	**Griva**	**1.44**	**214**	P	**Pb**	**02 30 56.6**	**+0.4**
GRG				S	**Sg**	**02 31 16.1**	**+0.8**
PLVB	**Pleven**	**1.50**	**34**	⇑P	**Pb**	**02 30 57.0**	**-0.1**
PLVB				⇓S	**Sb**	**02 31 16.5**	**+0.2**
HORT	**Hortiatis**	**1.58**	**191**	P	**Pb**	**02 30 58.2**	**-0.3**
HORT				S	**Sb**	**02 31 18.2**	**-0.4**
	comp=N,38nm,0.3s						
BLKB	**Belogradchik**	**1.59**	**338**	⇓S	**Sb**	**02 31 19.3**	**+0.4**
THAS	**Thassos island**	**1.80**	**148**	P	**Pn**	**02 31 00.2**	**-0.2**
THAS				S	**Sb**	**02 31 23.9**	**-1.1**
	comp=N,108nm,0.3s						
RDO	**Rodhopi**	**1.84**	**122**	P	**Pn**	**02 31 00.7**	**-0.3**
RDO				S	**Sb**	**02 31 24.9**	**-1.2**
	comp=N,188nm,0.3s						
OUR	**Ouranopolis**	**1.85**	**168**	P	**Pn**	**02 31 01.4**	**+0.3**
OUR				S	**Sb**	**02 31 24.8**	**-1.7**
	comp=N,128nm,0.4s						
ZAGS	**Zajecar**	**1.90**	**332**	ePn	**Pn**	**02 31 02.4**	**+0.6**
ZAGS				eSg	**Sg**	**02 31 29.5**	**-0.5**
ELND	**Elena**	**1.94**	**65**	⇓P	**Pn**	**02 31 03.0**	**+0.7**
ELND				⇓S	**Sb**	**02 31 29.0**	**+0.1**
VLAD	**Vladila**	**1.97**	**20**	⇓P	**Pn**	**02 31 02.7**	**0.0**
VLAD				⇑S	**Sn**	**02 31 27.2**	**-0.4**
BOVS	**Bovan**	**1.98**	**319**	ePn	**Pb**	**02 31 03.8**	**-1.5**
BOVS				eSg	**Sg**	**02 31 31.9**	**-0.6**
SELS	**Selova**	**2.04**	**302**	ePn	**Pn**	**02 31 03.9**	**+0.1**
ZIMR		**2.05**	**42**	⇑S	**Sb**	**02 31 31.5**	**-0.6**
PUNG	**Punghina**	**2.17**	**350**	⇓S	**Sb**	**02 31 34.0**	**-1.5**
ALN	**Alexandroupoli**	**2.30**	**122**	P	**Pn**	**02 31 07.6**	**+0.4**
ALN				S	**Sb**	**02 31 37.3**	**-2.0**
	comp=N,60nm,0.5s						
RAZG	**Razgrad**	**2.64**	**57**	⇑S	**Sn**	**02 31 45.6**	**+1.4**
GRUS	**Gruza**	**2.67**	**312**	ePn	**Pn**	**02 31 13.3**	**+0.9**
SGRR	**Singureni**	**2.76**	**41**	⇑P	**Pn**	**02 31 15.8**	**+2.2**
SGRR				⇑S	**Sn**	**02 31 47.4**	**+0.3**
SJES	**Sjenica**	**2.81**	**294**	ePn	**Pn**	**02 31 15.0**	**+0.6**
IVAS	**Ivanjica**	**2.83**	**301**	ePn	**Pn**	**02 31 15.2**	**+0.5**
HERR	**Herculane**	**2.84**	**345**	⇑P	**Pn**	**02 31 14.4**	**-0.3**
HERR				⇓S	**Sn**	**02 31 48.7**	**-0.4**
MDVR	**Moldovita**	**2.93**	**335**	⇓P	**Pn**	**02 31 16.3**	**+0.3**
MDVR				⇑S	**Sn**	**02 31 52.2**	**+0.9**
TRUS	**Trudelj**	**3.06**	**314**	ePn	**Pn**	**02 31 18.2**	**+0.5**
GZR	**Gura Zlata**	**3.28**	**351**	⇑P	**Pn**	**02 31 20.6**	**-0.2**
GZR				⇑S	**Sn**	**02 31 59.6**	**-0.6**
LOT	**Lotru**	**3.30**	**4**	⇓S	**Sn**	**02 32 01.2**	**+0.4**
VOIR		**3.48**	**19**	⇑P	**Pn**	**02 31 23.6**	**+0.1**
VOIR				⇑S	**Sn**	**02 32 04.9**	**-0.1**
BZS	**Buzias**	**3.72**	**339**	ePn	**Pn**	**02 31 26.8**	**0.0**
BZS	**Buzias**	**3.72**	**339**	⇑P	**Pn**	**02 31 26.4**	**-0.4**
BZS				⇓S	**Sn**	**02 32 12.2**	**+1.4**
PLOR	**Plostina**	**4.35**	**31**	⇑S	**Sn**	**02 32 27.3**	**+0.9**
VRI	**Vrincioaia**	**4.39**	**31**	⇓P	**Pn**	**02 31 37.8**	**+1.7**
VRI				⇓S	**Sn**	**02 32 29.3**	**+1.9**

IDC 29 02:36:31.0±5.3**, 4°.85S**×**132°.24E, h0**^{km}**, mb3.6**/1**, mb1 3.4**/3**, mb1mx3.3**/26**, mbtmp3.3**/3**, ML3.3**/2**, Error ellipse: s-maj=349.9km s-min=32.3km az=74.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.14**	**172**	Pn	Pn	02 40 07.1	+0.7
	0.1nm,0.3s,baz=354,slow=13,SNR=1.4						
WRA				Sn	Sn	02 42 36.4	-19
	0.1nm,0.3s,baz=337,slow=19,SNR=1.0						
ASAR	**Alice Springs**	**18.78**	**175**	P	P	02 40 51.5	-0.5
	0.1nm,0.3s,baz=344,slow=10,SNR=4.5						
ASAR				S	Sn	02 44 04.6	-19
	0.1nm,0.3s,baz=350,slow=27,SNR=4.5						
MKAR	**Makanchi Array**	**67.69**	**325**	P	P	02 47 30.3	+0.1
	0.3nm,0.4s,baz=116,slow=6.6,SNR=5.0						

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*JMA **29** 02:53:33.7±0.1, 36°.92N×141°.43E, h35^{km}±1^{km}, M4.1*

JMA Felt I J1.

*IDC **29** 02:53:33.8±1.1, 37°.19N×141°.40E, h0^{km}, mb3.5/7, mb1 3.7/8, mb1mx3.5/59, mbtmp3.4/8, ML2.6/1, Error ellipse: s-maj=26.0km s-min=22.5km az=149.0*

ISC 29 02:53:33.2±1.8**, 36°.95N**±0°.04×**141°.45E**±0°.07**, h4**^{km}±10^{km}**, n25,** σ**1^{s}57**/31**, mb3.4**/7**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.54**	**286**	P	**Pg**	**02 53 44.5**	**+0.9**
ONAJ				S	**Sg**	**02 53 52.1**	**+1.4**
JFK	**Kawauchi**	**0.62**	**312**	P	**Pg**	**02 53 45.9**	**+0.8**
JFK				S	**Sg**	**02 53 54.2**	**+1.0**
JFFD	**Fukushimafurud**	**0.73**	**282**	P	**Pg**	**02 53 47.2**	**+0.1**
JFFD				S	**Sg**	**02 53 56.4**	**-0.1**
JHO	**Hitachi**	**0.78**	**245**	P	**Pg**	**02 53 48.0**	**-0.2**
JHO				S	**Sg**	**02 53 58.1**	**-0.3**
JHYU	**Hitachinakayam**	**0.92**	**229**	P	**Pg**	**02 53 49.5**	**-1.4**
JHYU				eS	**Sg**	**02 54 01.1**	**-1.7**
JFT	**Otama**	**1.05**	**303**	P	**Pg**	**02 53 53.3**	**-0.1**
JFT				S	**Sg**	**02 54 07.0**	**-0.1**
JMM	**Marumori**	**1.05**	**330**	P	**Pg**	**02 53 52.8**	**-0.6**
JMM				S	**Sg**	**02 54 06.1**	**-1.0**
JFY	**Yanaizu**	**1.47**	**289**	P	**Pn**	**02 53 59.5**	**-0.9**
JFY				S	**Sn**	**02 54 18.5**	**-1.6**
JIO	**Ouri**	**1.50**	**357**	P	**Pn**	**02 53 59.6**	**-1.3**
JIO				S	**Sn**	**02 54 18.2**	**-2.7**
JOU	**Okura**	**1.55**	**336**	P	**Pn**	**02 54 01.1**	**-0.4**
JOU				eS	**Sn**	**02 54 20.5**	**-1.5**
MJAR	**Matsushiro Arr**	**2.63**	**262**	Pn	**Pn**	**02 54 16.6**	**+0.1**
	1.1nm,0.3s,baz=90,slow=14,SNR=13						
MJAR				Sn	**Sn**	**02 54 49.4**	**+0.5**
	2.0nm,0.3s,baz=296,slow=23,SNR=7.5						
MAT	**Matsushiro**	**2.64**	**262**	P	**Pn**	**02 54 16.3**	**-0.2**
MAT				eS	**Sn**	**02 54 44.6**	**-4.3**
SONM	**Songino Array**	**27.86**	**304**	P	**P**	**02 59 24.7**	**+0.8**
	0.3nm,0.5s,baz=108,slow=12,SNR=2.3						
H11N2	**WAKE ISLAND Hy**	**28.08**	**121**	T	T	03 28 43.5	
	baz=313,slow=75,SNR=490						
H11N1	**WAKE ISLAND Hy**	**28.09**	**121**	T	T	03 28 47.9	
	baz=313,slow=75,SNR=381						
H11N3	**WAKE ISLAND Hy**	**28.10**	**121**	T	T	03 28 50.6	
	baz=313,slow=75,SNR=392						
H11S1	**WAKE ISLAND Hy**	**28.79**	**123**	T	T	03 29 39.7	
	baz=315,slow=76,SNR=188						
H11S3	**WAKE ISLAND Hy**	**28.79**	**123**	T	T	03 29 44.7	
	baz=315,slow=76,SNR=121						
H11S2	**WAKE ISLAND Hy**	**28.80**	**123**	T	T	03 29 43.5	
	baz=315,slow=76,SNR=119						
MKAR	**Makanchi Array**	**44.19**	**302**	P	**P**	**03 01 42.6**	**-0.5**
	0.2nm,0.6s,baz=92,slow=8.9,SNR=3.2						
KURBB	**Kurchatov Arra**	**46.08**	**308**	P	**P**	**03 01 57.8**	**-0.2**
	0.4nm,0.6s,baz=83,slow=8.1,SNR=4.8						
ILAR	**Eielson Array**	**49.55**	**32**	P	**P**	**03 02 25.2**	**+0.5**
	0.3nm,0.7s,baz=262,slow=6.2,SNR=6.0						
WRA	**Warramunga Arr**	**56.98**	**188**	P	**P**	**03 03 22.7**	**+2.8**
	0.8nm,0.3s,baz=5.2,slow=7.2,SNR=2.9						
ASAR	**Alice Springs**	**60.71**	**188**	P	**P**	**03 03 49.2**	**+3.4**
	0.5nm,1.0s,baz=10,slow=7.7,SNR=4.3						
PDAR	**Pinedale Array**	**77.70**	**45**	P	**P**	**03 05 30.4**	**-1.0**
	0.3nm,0.8s,baz=320,slow=3.6,SNR=2.1						

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*ANF **29** 03:03:38.9±0.2, 33°.91N×117°.92W, h15^{km}±1^{km}, ML3.7/40, Error ellipse: s-maj=1.2km s-min=1.1km az=145.0*

*PAS **29** 03:03:39.8±1.1, 33°.93N±0°.05×117°.93W±0°.05, h7^{km}±7^{km}, ML3.6/253, Error ellipse: s-maj=7.5km s-min=6.1km az=198.0*

*SCEDC **29** 03:03:39.8, 33°.93N×117°.93W, h8^{km}*

*NEIC **29** 03:03:39.6±1.3, 33°.90N±0°.05×117°.96W±0°.03, h7^{km}±6^{km}, Error ellipse: s-maj=7.4km s-min=2.5km az=208.0*

*IDC **29** 03:03:41.8±2.2, 33°.99N×117°.68W, h0^{km}, mb1 3.0/4, mb1mx3.0/40, mbtmp2.6/4, ML3.1/4, Error ellipse: s-maj=26.5km s-min=7.9km az=53.0*

ISC 29 03:03:39.7±0.8**, 33°.93N**±0°.01×**117°.95W**±0°.01**, h17**^{km}±5^{km}**, n150,** σ**1^{s}20**/208**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RHC	**Rose Hills Cem**	**0.09**	**321**		**Pg**	**03 03 42.3**	**-0.8**
BREC	**Barre Substati**	**0.13**	**194**		**Pg**	**03 03 43.0**	**-0.4**
DLAC	**Del Amo**	**0.15**	**237**		**Pg**	**03 03 43.9**	**+0.1**
PSRC	**Puddingstone R**	**0.20**	**36**		**Sg**	**03 03 47.2**	**-0.6**
SANC	**Santa Ana**	**0.23**	**167**		**Pg**	**03 03 44.6**	**-0.3**
CHNC	**Chino**	**0.23**	**73**		**Pg**	**03 03 44.4**	**-0.5**
PEM	**Pine Mountain**	**0.24**	**15**		**Pg**	**03 03 44.7**	**-0.5**
GSA	**Caltech--GSA**	**0.26**	**324**		**Pg**	**03 03 45.1**	**-0.3**
GSA					**Sb**	**03 03 49.4**	**-0.7**
CBCC	**Caltech Broad**	**0.26**	**324**		**Pb**	**03 03 45.1**	**-0.8**
CBCC	**Caltech Broad**	**0.26**	**324**		**Sb**	**03 03 49.2**	**-0.9**
WTT2	**Watts, South G**	**0.26**	**274**		**Pb**	**03 03 46.2**	**+0.3**
PASC	**Pasadena Art C**	**0.31**	**320**		**Sb**	**03 03 50.5**	**-1.2**
CRNC	**Corona**	**0.32**	**100**		**Sg**	**03 03 50.5**	**-0.7**
MLSC	**Mira Loma**	**0.33**	**77**		**Pg**	**03 03 45.8**	**-0.8**
MLSC					**Sg**	**03 03 50.4**	**-0.9**
GR2C	**Griffith Obs.**	**0.35**	**303**		**Pg**	**03 03 46.6**	**-0.4**
SSK	**Sunset Peak**	**0.35**	**37**		**Pg**	**03 03 46.6**	**-0.5**
FMP	**Fort Macarthur**	**0.36**	**233**	P	**Pg**	**03 03 46.6**	**-0.6**
	baz=54,SNR=20						
FMP				S	**Sg**	**03 03 51.5**	**-0.8**
	baz=54						
LCGC	**La Cienega, Cu**	**0.37**	**281**		**Sg**	**03 03 51.1**	**-1.3**
XTL	**Crystal Lake,**	**0.37**	**11**		**Pg**	**03 03 46.8**	**-0.7**
BFSC	**Mount Baldy Ra**	**0.39**	**38**		**Pg**	**03 03 47.1**	**-0.6**
BFSC					**Sg**	**03 03 52.7**	**-0.5**
BFSC	**Mount Baldy Ra**	**0.39**	**38**	P	**Pg**	**03 03 47.1**	**-0.6**
	baz=216,SNR=639						
BFSC				S	**Sg**	**03 03 52.8**	**-0.5**
	baz=216						
CHFC	**Chilao Flat St**	**0.41**	**351**		**Sb**	**03 03 53.4**	**-1.2**
RPV	**Rancho Palos V**	**0.42**	**244**		**Pg**	**03 03 47.6**	**-0.7**
FON	**Fontana**	**0.45**	**68**		**Pg**	**03 03 48.0**	**-0.8**
FON					**Sg**	**03 03 54.4**	**-0.7**
DECC	**Green Verdugo**	**0.46**	**315**		**Sb**	**03 03 55.4**	**-0.4**
DECC	**Green Verdugo**	**0.46**	**315**	P	**Pg**	**03 03 48.4**	**-0.5**
	baz=135,SNR=46						
DECC				S	**Sb**	**03 03 55.4**	**-0.4**
	baz=135						
DJJ	**Donna J Jenkin**	**0.46**	**293**		**Pg**	**03 03 48.5**	**-0.5**
SS2	**San Sevaine**	**0.46**	**53**		**Pg**	**03 03 48.5**	**-0.5**
RVR	**Riverside**	**0.48**	**82**		**Sg**	**03 03 54.6**	**-1.1**
JNH	**Juniper Hills**	**0.52**	**359**		**Pg**	**03 03 49.3**	**-0.8**
JNH					**Sb**	**03 03 56.7**	**-1.0**
RSBC	**Riverside Bore**	**0.52**	**85**		**Pg**	**03 03 49.0**	**-1.0**
RSBC					**Sg**	**03 03 56.2**	**-0.7**
CLTC	**Calectric**	**0.55**	**73**		**Pg**	**03 03 49.9**	**-0.7**
CLTC					**Sg**	**03 03 57.2**	**-0.7**
CFSC	**Central Fire S**	**0.58**	**72**		**Pg**	**03 03 50.4**	**-0.8**
CSP	**Cedar Springs**	**0.61**	**53**		**Pg**	**03 03 51.0**	**-0.8**
CJV	**Casa Juvan**	**0.62**	**345**		**Pg**	**03 03 51.1**	**-0.9**
HLNC	**Highland**	**0.63**	**72**		**Pg**	**03 03 51.4**	**-0.8**
PEC	**Perris**	**0.65**	**93**		**Sg**	**03 04 00.2**	**-1.1**
CIAC	**Catalina I. Ai**	**0.66**	**217**		**Pg**	**03 03 51.6**	**-1.0**
CIAC					**Sg**	**03 04 01.9**	**+0.6**
CIS	**Catalina Islan**	**0.66**	**217**	P	**Pg**	**03 03 51.6**	**-1.0**
	baz=37,SNR=45						
CIS				S	**Sg**	**03 04 01.8**	**+0.5**
	baz=37						
OAT	**Oat Mountain**	**0.69**	**307**		**Pb**	**03 03 53.3**	**0.0**
CFT	**Crafton Hills**	**0.70**	**81**		**Sb**	**03 04 02.4**	**-0.5**
MURC	**Murrieta**	**0.71**	**118**		**Sb**	**03 04 01.9**	**-1.1**
MURC	**Murrieta**	**0.71**	**118**	P	**Pb**	**03 03 52.6**	**-1.0**
	baz=298,SNR=318						
MURC				S	**Sb**	**03 04 02.3**	**-0.8**
	baz=298						
SVD	**Seven Oaks Dam**	**0.72**	**76**		**Pb**	**03 03 53.0**	**-0.9**
SVD					**Sb**	**03 04 03.1**	**-0.5**
ADO	**Adelanto Recei**	**0.75**	**34**		**Pb**	**03 03 53.9**	**-0.5**
LEOC	**Leona Valley**	**0.76**	**337**		**Sg**	**03 04 04.1**	**-0.6**
BBSC	**Beaumont Base**	**0.80**	**90**		**Sb**	**03 04 05.8**	**0.0**
ALPC	**Antelope**	**0.81**	**339**		**Pb**	**03 03 54.5**	**-0.9**
HMTC	**Hemet**	**0.81**	**106**		**Sb**	**03 04 04.9**	**-1.3**
BACC	**Bachelor Mtn.**	**0.82**	**113**		**Pb**	**03 03 54.2**	**-1.3**
BACC					**Sb**	**03 04 05.2**	**-1.1**
DGR	**Domenigoni Val**	**0.83**	**109**		**Sb**	**03 04 05.1**	**-1.5**
FOXC	**Fox Airport**	**0.85**	**344**		**Pb**	**03 03 55.3**	**-0.7**
BTL	**Butler Peak**	**0.85**	**67**		**Pb**	**03 03 55.4**	**-0.8**
BTPC	**Burnt Peak**	**0.91**	**325**		**Pb**	**03 03 56.5**	**-0.7**
BBRC	**Big Bear Solar**	**0.91**	**68**		**Pb**	**03 03 56.4**	**-0.8**
BBRC	**Big Bear Solar**	**0.91**	**68**	P	**Pb**	**03 03 56.4**	**-0.8**
	baz=248,SNR=60						
BBRC				S	**Sb**	**03 04 08.9**	**-0.3**
	baz=248						
PYR	**Pyramid**	**0.92**	**314**		**Pg**	**03 03 56.9**	**-0.6**
OSI	**Osito Audit: C**	**0.94**	**317**		**Pg**	**03 03 57.2**	**-0.7**
OSI					**Sn**	**03 04 10.1**	**-1.1**
OSI	**Osito Audit: C**	**0.94**	**317**	P	**Pg**	**03 03 57.4**	**-0.6**
	baz=136,SNR=43						
OSI				S	**Sn**	**03 04 10.2**	**-1.1**
	baz=136						
BLG	**Laguna Peak, P**	**0.95**	**281**	P	**Pg**	**03 03 57.5**	**-0.6**
	baz=101,SNR=21						
BLG				S	**Sn**	**03 04 10.9**	**-0.5**
	baz=101						
EDW2	**Edwards Air Fo**	**0.95**	**358**	P	**Pb**	**03 03 57.1**	**-0.7**
	baz=177,SNR=212						
EDW2				S	**Sn**	**03 04 11.3**	**-0.2**
	baz=177						
TPO	**Tropico Hills**	**0.97**	**346**		**Pb**	**03 03 57.5**	**-0.7**
GORC	**Green Oak Ranc**	**0.98**	**142**		**Pb**	**03 03 56.4**	**-1.8**
GORC					**Sb**	**03 04 09.4**	**-1.5**
CRY	**Cary Ranch**	**1.07**	**110**		**Pb**	**03 03 58.8**	**-1.0**
CRY					**Sb**	**03 04 12.6**	**-1.1**
PLM	**Palomar**	**1.07**	**122**		**Pb**	**03 03 58.6**	**-1.3**
PLM					**Sb**	**03 04 12.8**	**-0.9**
SCI2	**San Clemente I**	**1.07**	**208**		**Pb**	**03 03 58.8**	**-1.0**
SCI2	**San Clemente I**	**1.07**	**208**	P	**Pb**	**03 03 59.9**	**+0.1**
	baz=28,SNR=25						
SCI2				S	**Sn**	**03 04 15.0**	**+0.5**
	baz=28						
GVDA	**Garner Valley**	**1.09**	**103**		**Sb**	**03 04 14.1**	**-0.2**
DEVC	**Devers**	**1.14**	**89**		**Pn**	**03 04 00.5**	**-0.4**
THC	**Tehachapi Micr**	**1.14**	**329**		**Pn**	**03 04 00.7**	**-0.4**
FRD	**Ford Ranch, An**	**1.20**	**111**		**Pn**	**03 04 01.1**	**-0.7**
HWB	**Hans Werner Br**	**1.22**	**137**		**Pn**	**03 04 00.4**	**-1.7**
RRX	**Edison Barstow**	**1.23**	**40**	P	**Pb**	**03 04 02.4**	**0.0**
	baz=219,SNR=27						
RRX				S	**Sg**	**03 04 19.2**	**-0.2**
	baz=219						
109C	**Camp Elliot, M**	**1.25**	**146**	P	**Pn**	**03 04 01.3**	**-1.1**
	baz=326,SNR=47						
109C				S	**Sn**	**03 04 17.4**	**-1.5**
	baz=326						
CPE	**Camp Elliot**	**1.25**	**146**		**Pn**	**03 04 01.3**	**-1.2**
EW2	**E Wide Canyon**	**1.28**	**89**		**Pn**	**03 04 02.8**	**0.0**
PFO	**Pinyon Flats O**	**1.28**	**104**	Pg	**Pn**	**03 04 02.7**	**-0.2**
	74nm,0.3s,baz=293,slow=16,SNR=564						
PFO				Lg	Lg	03 04 19.6	
	312nm,0.3s,baz=224,slow=4.1,SNR=33						
PFO	**Pinyon Flats O**	**1.28**	**104**		**Pn**	**03 04 02.5**	**-0.4**
PFO	**Pinyon Flats O**	**1.28**	**104**	Pb	**Pn**	**03 04 02.4**	**-0.5**
	baz=285,SNR=322						
PFO				S	**Sn**	**03 04 19.0**	**-0.7**
	baz=285						
XPFO	**Pion Flat**	**1.28**	**104**		**Pn**	**03 04 02.5**	**-0.4**
BLAC	**Blackrock camp**	**1.30**	**83**		**Pn**	**03 04 03.2**	**0.0**
DTP	**Desert Tortois**	**1.34**	**4**		**Pb**	**03 04 03.9**	**-0.5**
ARVC	**Arvin**	**1.40**	**329**		**Pb**	**03 04 05.2**	**-0.1**
ARVC	**Arvin**	**1.40**	**329**	Pb	**Pb**	**03 04 05.2**	**-0.1**
	baz=148,SNR=77						
ARVC				Sb	**Sg**	**03 04 24.5**	**-0.4**
	baz=148						
SNCC	**San Nicolas Is**	**1.48**	**243**	S	**Sn**	**03 04 24.6**	**0.0**
	baz=62						

SBC	Santa Barbara	1.55	290	Pb	Pb	03 04 08.2	+0.2
	baz=109,SNR=7.6						
LRMC	Laurel Mtn Rad	1.56	8	Pb	Pb	03 04 07.4	-0.8
	baz=188,SNR=33						
LRMC				S	Sb	03 04 27.8	+0.1
	baz=188						
HEC	Hector,Ludlow	1.61	56	Pb	Pn	03 04 08.0	+0.7
	baz=236,SNR=75						
HEC				Pg	Pb	03 04 09.2	+0.3
	baz=236						
HEC				Sb	Sb	03 04 29.6	+0.6
	baz=236						
BELC	Belle Mtn. Jos	1.62	87	Pb	Pn	03 04 07.7	+0.1
	baz=268						
BELC				Pg	Pb	03 04 09.1	-0.2
	baz=268,SNR=564						
BELC				Sb	Sb	03 04 30.3	+0.8
	baz=268						
BAR	Barrett	1.64	139	Pn	Pn	03 04 07.6	-0.2
MONP2	Monument Peak	1.64	129	Pb	Pn	03 04 07.8	-0.2
	baz=310,SNR=95						
MONP2				Sb	Sn	03 04 29.4	+0.5
	baz=310						
GSC	Goldstone, Bar	1.66	34	Pb	Pb	03 04 09.0	-0.9
	baz=214,SNR=664						
GSC				Sb	Sb	03 04 31.5	+1.0
	baz=214						
ISA	Isabella, Lake	1.78	346		Pb	03 04 10.3	-1.6
ISA	Isabella, Lake	1.78	346	P	Pn	03 04 10.2	+0.4
	baz=166,SNR=91						
ISA				S	Sb	03 04 33.1	-1.0
	baz=166						
PKM	Mcpherson Peak	1.82	302	Pb	Pb	03 04 12.0	-0.6
	baz=121,SNR=39						
PKM				Sb	Sg	03 04 37.4	-0.9
	baz=121						
CLC	China Lake	1.90	9		Pn	03 04 11.9	+0.5
IKP	In-Ko-Pah, Jac	2.00	129	Pb	Pn	03 04 14.5	+1.7
	baz=310,SNR=45						
IKP				Sb	Sb	03 04 40.9	+0.6
	baz=310						
SWSC	Sam W. Stewart	2.05	118	Pb	Pb	03 04 16.2	-0.2
	baz=299,SNR=45						
SWSC				Sb	Sb	03 04 43.2	+1.7
	baz=299						
GMRC	Granite Mounta	2.07	65	Pn	Pn	03 04 14.2	+0.4
	baz=246,SNR=95						
GMRC				Pb	Pb	03 04 17.1	+0.2
	baz=246						
GMRC				Sb	Sg	03 04 45.0	-1.5
	baz=246						
BC3	Big Chuckawall	2.09	97	Pn	Pn	03 04 14.5	+0.4
	baz=278,SNR=180						
BC3				Pb	Pb	03 04 17.2	0.0
	baz=278						
BC3				Sb	Sb	03 04 44.7	+1.6
	baz=278						
VES	Vestal, Richgr	2.12	334	P	Pb	03 04 15.9	-1.8
	baz=153,SNR=48						
VES				S	Sb	03 04 41.9	-1.9
	baz=153						
MPMC	Manual Prospec	2.15	10	Pn	Pn	03 04 15.6	+0.6
	baz=190,SNR=159						
MPMC				Pg	Pg	03 04 20.0	-1.1
	baz=190						
MPMC				Sb	Sg	03 04 48.4	-0.7
	baz=190						
TUQ	Turquoise Moun	2.24	47	Pn	Pn	03 04 17.0	+0.8
	baz=228						
TUQ				Pg	Pb	03 04 20.9	+1.1
	baz=228,SNR=26						
TUQ				Sb	Sg	03 04 51.3	-0.6
	baz=228						
IRM	Iron Mountain	2.34	84	Pn	Pn	03 04 17.0	-0.4
	baz=265,SNR=145						
IRM				Pg	Pb	03 04 22.0	+0.6
	baz=265						
IRM				Sb	Sb	03 04 52.8	+2.9
	baz=265						
SHOC	Shoshone, Teco	2.40	34	Pn	Pn	03 04 19.2	+1.0
	baz=215,SNR=40						
SHOC				Pg	Pg	03 04 23.9	-1.7
	baz=215						
SHOC				Sb	Sg	03 04 55.2	-1.5
	baz=215						
CWC	Cottonwood Cre	2.51	358	Pg	Pg	03 04 26.1	-1.6
	baz=177						
CWC				Sb	Sg	03 04 58.5	-1.8
	baz=177						
PAGB	Antelope Grade	2.61	314	Pn	Pb	03 04 23.1	-3.0
FURC	Furnace Creek,	2.68	19	Pg	Pg	03 04 30.1	-1.0
	baz=199						
GLA	Glamis	2.75	108		Pn	03 04 24.1	+1.0
GLA	Glamis	2.75	108	Pg	Pb	03 04 30.3	+1.8
	baz=290,SNR=20						
Y12C	Blythe	2.85	93	Pn	Pn	03 04 24.6	+0.1
Y12C	Blythe	2.85	93	Pn	Pn	03 04 24.2	-0.2
	baz=274,SNR=22						
Y12C				Pg	Pb	03 04 31.2	+1.0
	baz=274						
NEE2	Needles Airpor	2.88	72	Pn	Pn	03 04 26.3	+1.5
	baz=254,SNR=11						
NEE2				Sb	Sg	03 05 09.5	-2.6
	baz=254						
GRAC	Grapevine Rang	3.10	9	Pn	Pn	03 04 29.9	+2.1
	baz=189						
GRAC				Pg	Pg	03 04 37.9	-1.1
	baz=189,SNR=10						
TPNV	Topopah Spring	3.31	24		Pn	03 04 32.8	+1.8
TPNV	Topopah Spring	3.31	24	P	Pn	03 04 32.3	+1.3
	baz=205,SNR=28						
TPNV				Sb	Sg	03 05 24.7	-1.5
	baz=205						
SHPR	Sheep Range	3.44	41		Pn	03 04 34.4	+1.8
W13A	Hualapai Mount	3.55	70		Pn	03 04 34.7	+0.4
113A	Mohawk Valley,	3.69	107	Pn	Pn	03 04 37.3	+1.4
OMMB	Old Mammoth Mi	3.77	347	Pn	Pn	03 04 39.4	+2.0
MDPB	Devils Postpil	3.81	346	Pn	Pn	03 04 39.9	+2.1
SAO	San Andreas Ge	4.02	316	Pn	Pn	03 04 40.9	+0.4
Y14A	Wickenburg	4.11	89	Pn	Pn	03 04 41.7	-0.1
NV11	Mina Array Sit	4.50	358	Pn	Pn	03 04 48.9	+1.7
NVAR	Mina Array Bea	4.50	356	Pn	Pn	03 04 50.0	+2.7
	0.2nm,0.3s,baz=181,slow=14,SNR=2.9						
NVAR				Pg	Pb	03 05 01.4	+3.1
	1.1nm,0.3s,baz=183,slow=16,SNR=18						
NVAR				Lg	Lg	03 06 02.1	
	0.7nm,0.3s,baz=189,slow=34,SNR=2.2						
NVAR	Mina Array Bea	4.50	356	Pn	Pn	03 04 48.8	+1.5
CMB	Columbia Colle	4.55	335		Pn	03 04 49.4	+1.5
RYN	Ryan	4.71	354	Pn	Pn	03 04 52.0	+1.8
WAKR	Walker	4.72	346	Pn	Pn	03 04 51.7	+1.4
214A	Organ Pipe Nat	4.74	113	Pn	Pn	03 04 52.1	+1.6
R11A	Troy Canyon, C	4.80	23	Pn	Pn	03 04 53.2	+1.7
R11A	Troy Canyon, C	4.80	23	Pg	Pg	03 05 10.0	-1.7
	baz=204						
LCMT	Little Creek M	4.92	50		Pn	03 04 54.3	+1.4
KVN	Kaiserville	5.11	359	Pn	Pn	03 04 57.6	+1.9
YERR	Yerington	5.15	349	Pn	Pn	03 04 57.5	+1.2
CCUT	Cedar City	5.19	45		Pn	03 04 58.2	+1.5
KNB	Kanab	5.19	52		Pn	03 04 58.2	+1.5
U15A	North Rim	5.26	60		Pn	03 04 59.3	+1.5
PNTR	Pine Nut	5.32	346	Pn	Pn	03 04 59.9	+1.3
WUAZ	Wupatki	5.64	72	Pn	Pn	03 05 03.4	+0.5
PSUT	Pine Spring	5.66	35		Pn	03 05 05.0	+1.8
PKCU	Pink Cliffs	5.77	51		Pn	03 05 06.5	+1.7
MTPU	Mount Pierson	6.21	47	Pn	Pn	03 05 13.3	+2.3
MSU	Marysvale	6.53	44	Pn	Pn	03 05 17.3	+2.1
X18A	Snowflake	6.65	83	Pn	Pn	03 05 18.0	+1.2
W18A	Petrified Fore	6.88	78	Pn	Pn	03 05 21.4	+1.4
ELK	Elko	7.13	17	Pn	Pn	03 05 26.2	+2.7
	0.1nm,0.3s,baz=253,slow=14,SNR=2.1						
ELK				Lg	Lg	03 07 23.3	
	0.3nm,0.3s,baz=285,slow=16,SNR=5.0						
ELK	Elko	7.13	17	Pn	Pn	03 05 25.1	+1.6
PDAR	Pinedale Array	11.00	34	Pn	Pn	03 06 20.5	+4.0
	0.0nm,0.3s,baz=194,slow=14,SNR=2.0						
PDAR				Lg	Lg	03 09 21.6	
	0.1nm,0.3s,baz=213,slow=26,SNR=1.6						
TXAR	Lajitas Array	13.00	107	Pn	Pn	03 06 48.2	+4.4
	0.0nm,0.3s,baz=287,slow=12,SNR=1.7						

SJA **29** *03:03:46.2±1.3, 20°.02S×70°.80W, h10^{km}±6^{km}, ML3.7, MW3.7*
IDC **29** *03:03:46.8±1.2, 19°.88S×70°.75W, h0^{km}, mb3.8/2, mb1 4.0/4, mb1mx3.6/29, mbtmp3.8/4, ML3.5/2, Error ellipse: s-maj=39.9km s-min=26.7km az=73.0*
NEIC **29** *03:03:46.9±1.5, 20°.04S±0°.03×70°.80W±0°.01, h5^{km}±5^{km}, mb4.1/3, ML3.7(GUC), Error ellipse: s-maj=4.3km s-min=1.5km az=184.0*
GUC **29** *03:03:48.2±0.7, 20°.03S×70°.80W, h33^{km}±3^{km}, ML3.7*
ISC 29 03:03:45.8±1.4**, 20°.03S**±0°.02×**70°.84W**±0°.05**, h1**^{km}±10^{km}**, n66, σ1^{s}00**/93**, mb4.0**/4**, 10C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.80	58	⇑*i*P	Pb	03 04 02.0	-0.4
PSGC				*i* S	Sb	03 04 12.7	-1.1
PSGCX	Pisagua	0.80	58		Pb	03 04 02.0	-0.5
PSGCX	Pisagua	0.80	58	*e*P	Pb	03 04 02.1	-0.5
PSGCX				*e*S	Sb	03 04 12.3	-1.5
PSGCX				IAML		03 04 13.9	
	comp=Z,2µm,0.3s						
TA01	Diego Aracena	0.82	131	⇑*i*P	Pb	03 04 02.7	-0.1
TA01				*i* S	Sb	03 04 13.7	-0.6
PATCX	Punta Patache	1.02	141	⇓*i*P	Pg	03 04 06.0	+0.7
PATCX				IAML		03 04 29.4	
	comp=E,3µm,0.6s						
PATCX	Punta Patache	1.02	141		Pg	03 04 06.0	+0.7
PATCX	Punta Patache	1.02	141	*e*P	Pg	03 04 06.1	+0.7
PATCX				*e*S	Sn	03 04 20.9	-1.4
PATCX				IAML		03 04 24.7	
	comp=Z,2µm,0.5s						
PB11	IPOC Station P	1.14	77	⇑*i*P	Pg	03 04 07.9	+0.2
PB11				*i* S	Sb	03 04 23.0	-0.9
PB11	IPOC Station P	1.14	77		Pg	03 04 07.8	+0.2
PB11	IPOC Station P	1.14	77	*e*P	Pg	03 04 07.9	+0.2
PB11				*e*S	Sb	03 04 23.2	-0.6
PB11				IAML		03 04 25.2	
	comp=Z,1µm,0.4s						
MNMC	Minye Minye	1.47	53	⇑*i*P	Pn	03 04 13.4	-0.3
MNMC				*i* S	Sg	03 04 33.0	0.0
MNMC	Minye Minye	1.47	53		Pb	03 04 13.7	-0.4
MNMCX	Minye Minye	1.47	53	*e*P	Pn	03 04 13.4	-0.3
MNMCX				*e*S	Sg	03 04 34.1	+1.0
MNMCX				IAML		03 04 38.6	
	comp=Z,2µm,0.4s						
PB12	IPOC Station P	1.48	19	⇑*i*P	Pn	03 04 13.4	-0.3
PB12				*i* S	Sb	03 04 33.5	-0.1
PB12	IPOC Station P	1.48	19		Pn	03 04 13.7	0.0
PB12	IPOC Station P	1.48	19	*e*P	Pb	03 04 13.9	-0.3
PB12				*e*S	Sg	03 04 33.6	+0.1
PB12				IAML		03 04 36.0	
	comp=Z,832nm,0.5s						
PB02	IPOC Station P	1.56	146	⇓*i*P	Pn	03 04 14.7	0.0
PB02				*e*S	Sb	03 04 35.2	-0.6
PB02	IPOC Station P	1.56	146	*e*P	Pn	03 04 14.8	0.0
PB02				*e*S	Sg	03 04 36.3	+0.4
PB02				IAML		03 04 39.2	
	comp=Z,3µm,0.3s						
GO01	Chusmiza	1.58	77	⇑*i*P	Pb	03 04 15.5	-0.7
GO01				*i* S	Sg	03 04 36.8	0.0
GO01	Chusmiza	1.58	77		Pb	03 04 15.5	-0.7
PB08	IPOC Station P	1.58	94	⇑*i*P	Pn	03 04 15.4	0.0
PB08				*i* S	Sb	03 04 36.2	-0.7
PB08	IPOC Station P	1.58	94	*e*P	Pn	03 04 15.3	0.0
PB08				*e*S	Sg	03 04 37.3	+0.5
PB08				IAML		03 04 38.5	
	comp=Z,403nm,0.4s						
PB01	IPOC Station P	1.62	129	⇑*i*P	Pn	03 04 15.5	-0.1
PB01				*i* S	Sb	03 04 36.6	-1.0
PB01				IAML		03 04 41.5	
	comp=E,2µm,0.3s						
PB01	IPOC Station P	1.62	129		Pn	03 04 15.3	-0.3
PB01	IPOC Station P	1.62	129	*e*P	Pn	03 04 15.8	+0.2
PB01				*e*S	Sb	03 04 36.5	-1.0
PB01				IAML		03 04 40.8	
	comp=Z,527nm,0.4s						
AP01	Chacalluta	1.71	16	*e*P	Pb	03 04 17.7	-0.4
AP01				*e*S	Sb	03 04 39.7	-0.3
PB07	IPOC Station P	1.91	152	⇓*i*P	Pn	03 04 20.0	+0.4
PB07				IAML		03 04 52.2	
	comp=E,976nm,0.2s						
PB07	IPOC Station P	1.91	152		Pn	03 04 20.1	+0.4
PB07	IPOC Station P	1.91	152	*e*P	Pn	03 04 20.2	+0.4
PB07				*e*S	Sg	03 04 48.5	+1.3
PB07				IAML		03 04 52.5	
	comp=Z,706nm,0.7s						
PB16	IPOC Station P	2.10	37	⇑*i*P	Pb	03 04 23.9	-1.1
PB16				*i* S	Sb	03 04 51.3	-0.5
PB16	IPOC Station P	2.10	37		Pb	03 04 24.0	-1.0
PB16	IPOC Station P	2.10	37	*e*P	Pb	03 04 24.2	-0.8
PB16				*e*S	Sb	03 04 51.1	-0.7
PB16				IAML		03 04 57.1	
	comp=Z,474nm,1.0s						
PB09	IPOC Station P	2.31	140	⇑*i*P	Pb	03 04 27.2	-1.1
PB09				*i* S	Sb	03 04 57.7	+0.3
PB09				IAML		03 05 03.3	
	comp=E,872nm,0.3s						
PB09	IPOC Station P	2.31	140		Pb	03 04 27.0	-1.4
PB09	IPOC Station P	2.31	140	*i* P	Pb	03 04 27.2	-1.1
PB09				*e*S	Sg	03 04 59.4	-0.6
PB09				IAML		03 05 03.1	
	comp=Z,741nm,0.4s						
PB04	IPOC Station P	2.38	165	⇓*i*P	Pn	03 04 26.0	-0.2
PB04				IAML		03 05 11.7	
	comp=E,534nm,0.4s						
PB04	IPOC Station P	2.38	165		Pn	03 04 25.9	-0.2
PB04	IPOC Station P	2.38	165	*i* P	Pn	03 04 26.0	-0.2
PB04				*e*S	Sg	03 05 02.0	-0.5
PB05	IPOC Station P	2.87	168	*e*P	Pn	03 04 32.1	-0.7
PB05				*e*S	Sg	03 05 17.7	-0.5
PB05				IAML		03 05 28.6	
	comp=Z,233nm,0.6s						
PB06	IPOC Station P	2.92	156	⇓*i*P	Pn	03 04 33.4	-0.1
PB06				IAML		03 05 22.7	
	comp=E,369nm,0.4s						
PB06	IPOC Station P	2.92	156	*i* P	Pn	03 04 33.5	-0.1
PB06				*e*S	Sb	03 05 14.3	-0.6
PB06				IAML		03 05 22.3	
	comp=Z,429nm,0.7s						
LVC	Limon Verde	3.14	145	Pn	Pn	03 04 39.1	+2.4
	comp=Z,4.9nm,0.3s,baz=319,slow=10.0,SNR=42						
LVC				Sn	Sb	03 05 18.0	-3.5
	comp=Z,23nm,0.3s,baz=68,slow=13,SNR=5.6						
LVC	Limon Verde	3.14	145		Pn	03 04 39.0	+2.3
LVC	Limon Verde	3.14	145	*i* P	Pn	03 04 39.2	+2.5
LVC				*e*S	Sb	03 05 22.6	+1.1
LVC				IAML		03 05 26.0	
	comp=Z,130nm,0.6s						
PB15	IPOC Station P	3.41	158		Pn	03 04 40.2	-0.2
PB15	IPOC Station P	3.41	158	*i* P	Pn	03 04 40.5	+0.1
PB15				*e*S	Sb	03 05 30.0	+0.7
PB15				IAML		03 05 38.8	
	comp=Z,465nm,0.5s						
PB10	IPOC Station P	3.48	176		Pn	03 04 39.7	-1.4
PB10					Lg	03 05 41.0	
PB10	IPOC Station P	3.48	176	*i* P	Pn	03 04 40.3	-0.8
PB10				*e*S	Sn	03 05 12.7	-10
PB10				IAML		03 05 46.0	
	comp=Z,53nm,0.9s						
LPAZ	La Paz	4.52	35	Pn	Pn	03 05 00.8	+4.8
	comp=Z,0.8nm,0.3s,baz=213,slow=5.9,SNR=14						
LPAZ	La Paz	4.52	35		Pn	03 04 56.8	+0.8
LPAZ	La Paz	4.52	35	*i* P	Pb	03 05 03.5	-2.8
PB14	IPOC Station P	4.60	175		Pn	03 04 53.8	-3.0
PB14	IPOC Station P	4.60	175	*i* P	Pn	03 04 55.3	-1.5
PB14				IAML		03 06 21.4	
	comp=Z,50nm,0.5s						
GO02	Mina Guanaco	5.24	168		Pn	03 05 05.1	-0.5
SIV	San Ignacio	10.12	68	Pn	Pn	03 06 12.0	-0.3
	comp=Z,0.5nm,0.3s,baz=268,slow=10.0,SNR=16						
GO05	Huala	14.96	183	Pn	Pn	03 07 19.4	+0.9
PTGA	Pitinga	21.93	30	P	P	03 08 39.2	-1.6
	comp=Z,1.2nm,0.3s,baz=233,slow=20,SNR=2.7						
PTGA	Pitinga	21.93	30	IAmb	IAmb	03 08 48.5	
	comp=Z,7.6nm,1.4s						
WMOK	Wichita Mounta	60.59	334	P	P	03 13 59.8	+1.5
WMOK				IAmb	IAmb	03 14 12.7	
	comp=Z,4.0nm,0.8s						
QSPA	South Pole Qui	70.16	180	P	P	03 15 00.8	+0.8
QSPA				IAmb	IAmb	03 15 08.3	
	comp=Z,1.9nm,1.2s						
YKA	Yellowknife Ar	89.21	341	P	P	03 16 43.4	+0.5
	comp=Z,0.6nm,0.9s,baz=136,slow=4.7,SNR=8.8						
ASAR	Alice Springs	130.32	210	PKP	PKiKP	03 22 59.6	0.0
	comp=Z,0.3nm,0.8s,baz=116,slow=4.2,SNR=2.5						
WRA	Warramunga Arr	133.25	213	PKP	PKiKP	03 23 05.1	-0.5
	comp=Z,0.1nm,0.6s,baz=168,slow=1.9,SNR=1.3						
MKAR	Makanchi Array	145.45	33	PKPbc	PKPab	03 23 26.6	+0.7
	comp=Z,1.9nm,0.7s,baz=324,slow=4.2,SNR=24						
MKAR	Makanchi Array	145.45	33		PKPab	03 23 26.4	+0.5
SONM	Songino Array	152.17	4	PKPbc	PKiKP	03 23 43.8	+0.1
	comp=Z,0.6nm,0.7s,baz=19,slow=1.3,SNR=5.5						

TAP **29** *03:41:35.6, 24°.86N×122°.19E, h5^{km}±1^{km}, ML3.0, D*
JMA **29** *03:41:35.4±0.3, 24°.78N×122°.18E, h1^{km}±3^{km}, M2.6*
ISC 29 03:41:35.4±1.0**, 24°.83N**±0°.02×**122°.18E**±0°.02**, h7**^{km}±9^{km}**, n56, σ0^{s}49**/100**, 5C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.25	315	⇑*i*P	Pg	03 41 39.8	-0.5
	baz=311						
TWB1				*i* S	Sg	03 41 42.9	-0.8
	baz=311						
EOS1	EOS1	0.29	190	⇑P	Pb	03 41 42.3	-0.6
	baz=189						
EOS1				S	Sb	03 41 47.5	-0.4
	baz=189						
NTC	Toucheng	0.32	274	P	Pg	03 41 41.6	-0.1
	baz=269						
NTC				S	Sg	03 41 45.0	-1.0
	baz=269						
TIPB	Shuangxi	0.35	293	⇑*i*P	Pg	03 41 42.0	-0.3
	baz=289						
TIPB				S	Sg	03 41 47.2	+0.2
	baz=289						
TWC	Suao	0.38	234	*i* P	Pg	03 41 42.7	-0.1
	baz=230						
TWC				*i* S	Sg	03 41 48.4	+0.7
	baz=230						
ILA	Ilan	0.40	261	*e*S	Sg	03 41 48.3	-0.2
	baz=256						
NWF	Wu-fen Shan	0.43	303	⇑*i*P	Pg	03 41 43.8	-0.1
	baz=300						
NWF				*i* S	Sg	03 41 49.6	0.0
	baz=300						
WFSB	Wu-fen Shan	0.43	303	⇑P	Pg	03 41 43.8	-0.1
	baz=300						
WFSB				S	Sg	03 41 49.7	+0.1
	baz=300						
TWE	Neicheng	0.48	257	*i* P	Pg	03 41 44.7	0.0
	baz=253						
TWE				*i* S	Sg	03 41 51.3	+0.2
	baz=253						
SLBB	Yuanshan	0.50	261	P	Pg	03 41 45.1	-0.1
	baz=258						
SLBB				S	Sb	03 41 53.5	-0.8
	baz=258						
TWA	Mucha	0.56	285	P	Pg	03 41 46.7	+0.3
	baz=282						
TWA				S	Sg	03 41 54.2	+0.6
	baz=282						
ENA	Nanau	0.57	225	*i* P	Pb	03 41 47.3	-0.5
	baz=222						
ENA				S	Sb	03 41 55.4	-0.7
	baz=222						
ENTT	Nioudou	0.59	251	P	Pg	03 41 46.8	-0.1
	baz=248						
ENTT				S	Sg	03 41 55.4	+0.8
	baz=248						
NHDH	Xindian Distri	0.61	282	*e*S	Sg	03 41 56.1	+0.9
	baz=280						
NWLT	Wulai	0.62	265	*e*P	Pg	03 41 47.6	+0.2
	baz=262						
NWLT				*e*S	Sb	03 41 57.5	-0.1
	baz=262						
YM01	YM01	0.64	299	P	Pg	03 41 47.6	-0.1
	baz=297						
YM01				*e*S	Sb	03 41 57.7	-0.5
	baz=297						
TATO	Taipei	0.65	283	P	Pb	03 41 48.9	-0.2
	baz=280						
TATO				S	Sg	03 41 57.7	+1.3
	baz=280						
YM10	YM10	0.65	300	P	Pg	03 41 48.2	+0.2
	baz=297						
YM10				*e*S	Sg	03 41 57.5	+1.0
	baz=297						
NDT	Datong Townshi	0.65	250	P	Pg	03 41 47.9	-0.1
	baz=247						
NDT				S	Sb	03 41 58.8	+0.3
	baz=247						
YM05	YM05	0.65	301	P	Pg	03 41 47.6	-0.4
	baz=298						
YM05				*e*S	Sg	03 41 57.8	+1.3
	baz=298						
YM04	YM04	0.67	299	P	Pg	03 41 48.3	0.0
	baz=296						
YM04				*e*S	Sb	03 41 59.0	0.0
	baz=296						
TWY	Chenhua	0.69	310	*i* P	Pg	03 41 48.8	+0.1
	baz=308						
TWY				*i* S	Sb	03 41 59.4	-0.2
	baz=308						
YHNB	Yeheng	0.75	258	P	Pg	03 41 50.5	+0.6
	baz=255						
YHNB				S	Sb	03 42 01.7	+0.3
	baz=255						
NSK	Sanguang	0.77	258	P	Pg	03 41 50.4	+0.2
	baz=256						
NSK				S	Sb	03 42 01.7	-0.1
	baz=256						
JYNG	Yonagunijimaku	0.79	119	P	Pg	03 41 50.6	-0.1
JYNG				*e*S	Sg	03 42 01.2	+0.3
PCYT	Pengchaiyu	0.80	353	*e*P	Pg	03 41 50.1	-0.8
	baz=352						
PCYT				*e*S	Sb	03 42 03.2	+0.4
	baz=352						
NNSB	Datong	0.83	241	P	Pg	03 41 51.8	+0.3
	baz=239						
NNSB				S	Sb	03 42 03.5	-0.3
	baz=239						
NNSH	Datong	0.83	241	P	Pg	03 41 51.7	+0.3
	baz=239						
NNSH				*e*S	Sb	03 42 03.7	-0.1
	baz=239						
NNS	Nan Shan	0.83	242	P	Pg	03 41 51.6	+0.1
	baz=240						
NNS				S	Sg	03 42 02.7	+0.4
	baz=240						
YOJ	Yonaguni jima	0.84	116	P	Pg	03 41 51.3	-0.3
YOJ				*e*S	Sg	03 42 02.9	+0.4
NACB	Ninganchiao	0.85	219	P	Pg	03 41 51.7	0.0
	baz=218						
NACB				S	Sg	03 42 03.1	+0.4
	baz=218						
ETLH	Xiulin Townshi	0.89	226	P	Pg	03 41 52.5	-0.1
	baz=224						
ETLH				S	Sb	03 42 05.4	-0.1
	baz=224						
TWD	Chiawan	0.92	216	*i* P	Pg	03 41 52.9	-0.2
	baz=214						
TWD				*i* S	Sb	03 42 06.1	-0.2
	baz=214						
LIOB	Emei	1.08	260	*e*P	Pg	03 41 55.5	-0.6
	baz=258						
WHF	Hehuan Shan	1.08	231	*i* P	Pb	03 41 56.5	-0.2
	baz=229						
WHF				*i* S	Sg	03 42 10.4	+0.1
	baz=229						
TWT	Tachien	1.08	238	P	Pb	03 41 56.9	+0.2
	baz=237						
TWT				S	Sb	03 42 11.9	+0.8
	baz=237						
NSTT	Nanjuang	1.09	260	*e*P	Pg	03 41 55.9	-0.5
	baz=258						
TDCB	Techi	1.10	238	P	Pg	03 41 56.6	+0.1
	baz=237						
TDCB				S	Sb	03 42 12.6	+1.1
	baz=237						
CHGB	Renai	1.20	230	P	Pb	03 41 58.6	0.0
	baz=229						
CHGB				S	Sb	03 42 14.3	-0.1
	baz=229						
WHP	Taichung City	1.25	244	*e*P	Pg	03 41 59.6	0.0
	baz=242						
WHP				S	Sb	03 42 16.8	+0.8
	baz=242						
OWD	Renai	1.27	227	*e*P	Pg	03 41 59.4	-0.4
	baz=225						
OWD				*e*S	Sg	03 42 16.1	-0.1
	baz=225						

VWDT	VWDT	1.43	222	eP	Pn	03 42 02.1	+0.2
	baz=220						
VWDT				eS	Sb	03 42 21.1	+0.1
	baz=220						
IRIF	Iriomote-Funau	1.49	109	P	Pb	03 42 03.9	+0.3
HGSD	Ruisui	1.50	208	eP	Pn	03 42 03.2	+0.3
	baz=207						
HGSD				eS	Sg	03 42 23.8	0.0
	baz=207						
SMLT	Sun Moon Lake	1.50	231	eP	Pg	03 42 04.2	-0.1
	baz=230						
SMLT				S	Sb	03 42 21.9	-1.2
	baz=230						
TYC	Yuchr	1.52	233	eP	Pn	03 42 03.6	+0.5
	baz=231						
SSLB	Suanglung	1.53	227	eP	Pn	03 42 03.8	+0.5
	baz=226						
EHY	Hungye	1.54	211	eP	Pn	03 42 03.1	-0.3
	baz=210						
EHY				eS	Sn	03 42 23.4	-0.2
	baz=210						
YULB	Yu-li	1.65	210	eP	Pn	03 42 04.2	-0.7
	baz=209						
HATJ	Hateruma jima	1.67	117	eS	Sn	03 42 27.1	+0.3
JKRS	Kuro-shima	1.77	109	P	Pn	03 42 06.7	+0.2
JKRS				eS	Sb	03 42 31.3	+0.7
ALS	Alishan	1.82	224	eS	Sn	03 42 30.6	-0.4
	baz=223						
CHN5	Tsauling	1.84	228	eP	Pn	03 42 07.8	+0.2
	baz=227						
CHN5				eS	Sn	03 42 31.3	0.0
	baz=227						
JIJ	Ishigaki jima	1.84	104	P	Pb	03 42 09.1	-0.4
CHN4	Tsaushan	2.07	225	eP	Pn	03 42 10.7	0.0
	baz=224						
CHN4				eS	Sn	03 42 36.3	-0.5
	baz=224						
TPUB	Ta-pu	2.08	223	eP	Pn	03 42 11.8	+0.9
	baz=222						

IDC 29 03:53:00.7±1.9**,7°.40S×130°.36E,h0^{km},mb3.7**/2,
mb1 3.7/4**,mb1mx3.5**/29**,mbtmp3.6**/4**,ML3.5**/2**,Error ellipse: s-maj=131.1km s-min=30.1km az=70.0,**
Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.05	163	Pn	Pn	03 56 07.3	-0.2
	0.2nm,0.3s,baz=346,slow=13,SNR=12						
WRA				Sn	Sn	03 58 26.9	-6.6
	0.6nm,0.3s,baz=338,slow=25,SNR=6.7						
ASAR	Alice Springs	16.52	168	Pn	Pn	03 56 54.3	+0.3
	0.2nm,0.3s,baz=350,slow=9.7,SNR=14						
ASAR				Sn	Sn	03 59 49.9	-8.4
	0.1nm,0.3s,baz=359,slow=29,SNR=3.6						
MKAR	Makanchi Array	68.76	327	P	P	04 04 07.1	+0.5
	0.6nm,0.6s,baz=122,slow=7.2,SNR=8.0						
KURBB	Kurchatov Arra	73.04	328	P	P	04 04 31.9	-0.6
	0.3nm,0.5s,baz=128,slow=5.2,SNR=5.2						

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*IDC **29** 04:06:27.0±0.9,41°.55N×71°.28E,h0^{km},mb3.7/9, mb1 3.8/16,mb1mx3.6/61,mbtmp3.6/16,ML3.2/6,MS3.7/1, Ms1 3.7/1,ms1mx2.5/55,Error ellipse: s-maj=13.0km s-min=9.6km az=173.0*
*MOS **29** 04:06:28.2±2.1,41°.57N×71°.17E,h8^{km},mb4.1/3,Error ellipse: s-maj=10.0km s-min=6.1km az=87.3*
MOS Felt (II) at Zhany-Aiyl, Korgon-Say, Terek-Say.
*ISU **29** 04:06:29.1,41°.58N×71°.30E,h10^{km}*
*SOME **29** 04:06:29.2,41°.60N×71°.35E,h15^{km}*
*KRNET **29** 04:06:29.3±0.1,41°.62N×71°.31E,h19^{km},mb3.9*
*NNC **29** 04:06:31.0±1.0,41°.70N×71°.36E,h0^{km},mb4.2,mpv3.9, Error ellipse: s-maj=10.7km s-min=3.6km az=4.0*
*NEIC **29** 04:06:33.4±2.1,41°.69N±0°.06×71°.22E±0°.08,h41^{km}±2^{km}, mb4.0/2,Error ellipse: s-maj=9.0km s-min=8.2km az=134.0*
ISC 29 04:06:29.4±1.0**,41°.60N**±0°.02×**71°.20E**±0°.02**,h14**^{km}±7^{km},
n111,σ1^{s}.**86**/152**,mb3.7**/11**,42C-9D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	Arkit	0.60	71	⇑iP	Pg	04 06 40.0	-1.3
	baz=72						
ARK				⇑iS	Sg	04 06 47.4	-1.9
	baz=72						
ARK	Arkit	0.60	71	i P	Pg	04 06 39.7	-1.6
ARK				i S	Sg	04 06 47.3	-2.0
NAM	Namangan	0.70	150	i P	Pb	04 06 42.5	-0.8
NAM				i S	Sb	04 06 52.9	+0.1
CHRV	Charvak	0.94	273	P	Pn	04 06 48.1	0.0
CHRV				S	Sn	04 07 02.1	+0.7
JBG	Jabagly	0.96	329	ePG	Pn	04 06 48.6	+0.1
JBG				eS	Sn	04 07 02.7	+0.7
FRG	Fergana	0.97	153	i P	Pn	04 06 54.7	+6.1
FRG				S	Sn	04 07 14.3	+12
ANR	Andizhan	1.22	134	i P	Pn	04 06 52.3	+0.3
ANR				eS	Sn	04 07 11.9	+3.7
ARSB	Arslanbob	1.37	101	⇓iP	Pn	04 06 53.0	-1.2
	baz=3.0						
ARSB				⇓iS	Sb	04 07 09.9	-2.3
	baz=3.0						
TAS	Tashkent	1.46	260	⇓iP	Pg	04 06 57.7	+0.3
	baz=60						
TAS				⇓iS	Sg	04 07 18.5	+2.1
	baz=60						
TAS	Tashkent	1.46	260	PG	Pg	04 06 58.3	+0.9
TAS	Tashkent	1.46	260		Pg	04 06 58.3	+0.9
BTK	Batken	1.57	191	⇑iP	Pg	04 06 58.3	-1.2
	baz=93						
BTK				⇑iS	Sg	04 07 19.7	-0.2
	baz=93						
BTK	Batken	1.57	191	i P	Pg	04 06 58.1	-1.4
BTK				i S	Sg	04 07 31.5	+12
KK31	Karatay Array	1.59	341	P	Pb	04 06 58.9	+0.4
	55nm,0.3s,baz=151,slow=14,SNR=1002						
KK31				⇑S	Sb	04 07 19.6	+1.3
	184nm,0.3s,baz=157,slow=27,SNR=6.5						
KK31	Karatay Array	1.59	341	ePN	Pb	04 06 58.8	+0.4
KK31				S	Sg	04 07 20.2	-0.3
KK31	Karatay Array	1.59	341		Pb	04 06 58.5	+0.1
KKAR	Karatay Array	1.59	341	PN	Pb	04 06 58.5	0.0
KKAR	Karatay Array	1.59	341		Pb	04 06 58.7	+0.2
KKAR	Karatay Array	1.59	341		Pb	04 06 58.5	0.0
BRLS	Borolday	1.75	325	eP	Pb	04 07 00.5	-0.8
	1.4nm,0.2s						
BRLS				eS	Sb	04 07 23.6	+0.5
	714nm,0.3s						
BRLS	Borolday	1.75	325	P	Pb	04 07 00.5	-0.8
	1.4nm,0.2s						
BRLS				S	Sb	04 07 23.6	+0.5
	714nm,0.3s						
MRKS	Merke	1.89	52	eP	Pb	04 07 03.3	-0.4
	94nm,0.1s						
MRKS				eS	Sb	04 07 27.8	+0.6
	385nm,0.2s						
MRKS	Merke	1.89	52	P	Pb	04 07 03.3	-0.4
	94nm,0.1s						
MRKS				S	Sb	04 07 27.8	+0.6
	385nm,0.2s						
AML	Almayashu	1.94	73	⇑iP	Pn	04 07 03.1	+0.9
	baz=73						
AML				⇑eS	Sn	04 07 27.9	+1.4
	baz=73						
AML	Almayashu	1.94	73	P	Pn	04 07 03.4	+1.2
	SNR=736						
EKS2	Erkin-Say	2.19	60	⇑eP	Pn	04 07 06.1	+0.7
	baz=60						
EKS2				⇑iS	Sn	04 07 33.4	+1.0
	baz=60						
EKS2	Erkin-Say	2.19	60	P	Pn	04 07 07.3	+1.9
	SNR=53						
ARLS	Aral	2.35	83	⇑iP	Pn	04 07 08.7	+1.0
	baz=83						
ARLS				⇑iS	Sn	04 07 37.4	+1.0
	baz=83						
UCH	Uchtor	2.55	75	⇓eP	Pn	04 07 11.9	+1.2
	baz=75						
UCH				⇓iS	Sn	04 07 43.5	+1.7
	baz=75						
UCH	Uchtor	2.55	75	P	Pn	04 07 11.8	+1.2
	SNR=36						
AAK	Ala-Archa	2.66	66	Pn	Pn	04 07 14.1	+2.2
	4.7nm,0.3s,baz=198,slow=2.3,SNR=29						
AAK				Lg	Lg	04 07 50.5	
	23nm,0.3s,baz=359,slow=20,SNR=9.8						
AAK	Ala-Archa	2.66	66	⇓iP	Pn	04 07 13.0	+1.1
	baz=66						
AAK				⇓iS	Sn	04 07 44.9	+0.9
	baz=66						
AAK	Ala-Archa	2.66	66	P	Pn	04 07 14.1	+2.2
	SNR=12						
AAK	Ala-Archa	2.66	66	⇑Pn	Pn	04 07 13.8	+1.8
	3.2nm,0.3s						
AAK				⇑Pg	Pb	04 07 17.8	+0.9
	34nm,0.5s						
AAK				⇓Lg	Lg	04 07 51.1	
	66nm,0.5s						
AAK	Ala-Archa	2.66	66	PN	Pn	04 07 13.7	+1.8
AAK						04 07 17.7	
FRU1	Bishkek	2.82	63	⇑eP	Pn	04 07 15.0	+0.9
	baz=63						
FRU1				⇑iS	Sn	04 07 48.6	+0.7
	baz=63						
FRU1	Bishkek	2.82	63	PN	Pn	04 07 15.9	+1.8
FRU1	Bishkek	2.82	63		Pn	04 07 15.9	+1.8
USP	Ospenovka	2.96	55	⇑iP	Pn	04 07 16.4	+0.5
	baz=54						
USP				⇑iS	Sn	04 07 51.2	0.0
	baz=54						
USP	Ospenovka	2.96	55	P	Pn	04 07 17.1	+1.2
	SNR=16						
KBK	Karagaybulak	2.98	68	⇑eP	Pn	04 07 17.6	+1.2
	baz=68						
KBK				⇑iS	Sn	04 07 52.9	+0.9
	baz=68						
KBK	Karagaybulak	2.98	68	P	Pn	04 07 18.7	+2.4
	SNR=11						
CHMS	Chumysh	2.98	61	⇑iP	Pn	04 07 17.0	+0.8
	baz=61						
CHMS				⇑iS	Sn	04 07 52.1	+0.3
	baz=61						
CHMS	Chumysh	2.98	61	P	Pn	04 07 18.1	+1.9
	SNR=8.7						
CHMS	Chumysh	2.98	61	⇑Pn	Pn	04 07 17.8	+1.5
	2.6nm,0.3s						
CHMS				⇑Pg	Pb	04 07 22.0	-0.3
	28nm,0.7s						
CHMS				⇑Lg	Lg	04 07 59.8	
	106nm,0.6s						
CHMS	Chumysh	2.98	61	i PN	Pn	04 07 17.7	+1.5
CHMS				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KZA	Kyzart	3.06	80	⇑iP	Pn	04 07 19.2	+1.5
	baz=80						
KZA				⇑iS	Sn	04 07 56.1	+1.8
	baz=80						
KZA	Kyzart	3.06	80	P	Pb	04 07 22.7	-1.1
	SNR=47						
SGDS	Sogindy	3.14	53	Pg	Pb	04 07 24.8	-0.2
	comp=Z,26nm,0.2s						
SGDS				Lg	Lg	04 08 04.5	
	comp=Z,108nm,0.5s						
TKM2	Tokmak 2	3.52	67	⇑eP	Pn	04 07 24.8	+1.0
	baz=66						
TKM2				⇑iS	Sn	04 08 05.6	+0.3
	baz=66						
TKM2	Tokmak 2	3.52	67	P	Pb	04 07 31.9	+0.4
	SNR=5.5						
NRN	Naryn	3.61	91	⇑iP	Pn	04 07 26.2	+1.1
	baz=92						
NRN				⇑iS	Sn	04 08 07.3	-0.3
	baz=92						
BOOM	Boomskoye usch	3.64	74	⇑iP	Pn	04 07 27.0	+1.6
	baz=74						
BOOM				⇑iS	Sn	04 08 09.1	+0.9
	baz=74						
KST	Kastek	3.81	66	eP	Pb	04 07 36.9	+0.4
	comp=Z,26nm,0.5s						
KST				eS	Sb	04 08 25.5	+2.9
	comp=Z,139nm,0.6s						
KST	Kastek	3.81	66	Pg	Pb	04 07 36.9	+0.4
	comp=Z,26nm,0.5s						
KST				Lg	Lg	04 08 25.5	
	comp=Z,139nm,0.6s						
ULHL	Ulahol	3.82	79	⇑eP	Pn	04 07 29.6	+1.7
	baz=79						
ULHL				⇑iS	Sn	04 08 13.6	+1.0
	baz=79						
ULHL	Ulahol	3.82	79	P	Pb	04 07 36.8	+0.1
	SNR=7.3						
KRBS	Karabastau	3.91	56	eP	Pb	04 07 38.7	+0.7
	comp=Z,26nm,0.5s						
KRBS				eS	Sb	04 08 28.6	+3.4
	comp=Z,64nm,0.5s						
KRBS	Karabastau	3.91	56	Pg	Pb	04 07 38.7	+0.7
	comp=Z,26nm,0.5s						
KRBS				Lg	Lg	04 08 28.6	
	comp=Z,64nm,0.5s						
BTLS	Baital	4.02	30	eP	Pb	04 07 40.7	+0.8
	comp=Z,14nm,0.4s						
BTLS				eS	Sb	04 08 32.9	+4.7
	comp=Z,94nm,0.7s						
BTLS	Baital	4.02	30	Pg	Pb	04 07 40.7	+0.8
	comp=Z,14nm,0.4s						
BTLS				Lg	Lg	04 08 32.9	
	comp=Z,94nm,0.7s						
IZV	Izvestkoviy	4.26	69	eP	Pb	04 07 45.3	+1.1
	comp=Z,14nm,0.4s						
IZV				eS	Sb	04 08 40.5	+5.0
	comp=Z,69nm,0.6s						
IZV	Izvestkoviy	4.26	69	Pg	Pb	04 07 45.3	+1.1
	comp=Z,14nm,0.4s						
IZV				Lg	Lg	04 08 40.5	
	comp=Z,69nm,0.6s						
KUU	Kurty	4.42	57	eP	Pb	04 07 48.1	+1.3
	comp=Z,13nm,0.5s						
KUU				eS	Sb	04 08 44.9	+4.9
	comp=Z,78nm,0.5s						
KUU	Kurty	4.42	57	Pg	Pb	04 07 48.1	+1.3
	comp=Z,13nm,0.5s						
KUU				Lg	Lg	04 08 44.9	
	comp=Z,78nm,0.5s						
KDJ	Kajisay	4.50	81	⇑iP	Pn	04 07 39.0	+1.8
	baz=81						
KDJ				⇑iS	Sn	04 08 29.4	0.0
	baz=81						
KTBS	Karatobe	4.56	61	eP	Pb	04 07 50.5	+1.3
	comp=Z,13nm,0.4s						
KTBS				eS	Sb	04 08 49.4	+5.4
	comp=Z,100nm,0.5s						
KTBS	Karatobe	4.56	61	Pg	Pb	04 07 50.5	+1.3
	comp=Z,13nm,0.4s						
KTBS				Lg	Lg	04 08 49.3	
	comp=Z,100nm,0.5s						
MDOK	Medeo	4.61	68	⇑Pg	Pb	04 07 51.1	+1.2
	comp=Z,18nm,0.5s						
MDOK				⇑Lg	Lg	04 08 50.7	
	comp=Z,54nm,0.6s						
KOTS	Kotyrbulak	4.67	68	eP	Pb	04 07 52.8	+1.7
	comp=Z,38nm,0.4s						
KOTS				eS	Sb	04 08 53.4	+6.1
	comp=Z,128nm,0.5s						
KOTS	Kotyrbulak	4.67	68	Pg	Pb	04 07 52.8	+1.7
	comp=Z,38nm,0.4s						
KOTS				Lg	Lg	04 08 53.4	
	comp=Z,128nm,0.5s						
ARXS	Arharly	5.52	60	Pg	Pb	04 08 08.1	+2.5
	comp=Z,25nm,0.9s						
ARXS				Lg	Lg	04 09 20.1	
	comp=Z,48nm,0.5s						
PDGK	Podgornoye	6.37	72	⇑Pg	Pg	04 08 29.3	-2.0
	comp=Z,4.5nm,0.5s						
PDGK				⇑Lg	Lg	04 09 44.3	
	comp=Z,52nm,1.3s						
KBL	Kabul	7.25	194	P	Pn	04 08 17.8	+2.8
KBL	Kabul	7.25	194	Pn	Pn	04 08 17.8	+2.8
NIL	Nilore	8.10	168	P	Pn	04 08 30.0	+3.4
NIL	Nilore	8.10	168	Pn	Pn	04 08 30.0	+3.4
MK31	Makanchi Array	9.50	53	⇑Pn	Pn	04 08 45.6	-0.2
	comp=Z,0.5nm,0.4s,baz=236,slow=14,SNR=21						
MK31				Sn	Sn	04 10 53.0	+21
	comp=Z,0.6nm,0.4s,baz=237,slow=26,SNR=5.9						
MK31				⇑Lg	Lg	04 11 30.3	
	comp=Z,3.7nm,0.6s,baz=255,slow=26,SNR=3.0						
MK31	Makanchi Array	9.50	53	P	Pn	04 08 46.3	+0.5
MK31	Makanchi Array	9.50	53		Pn	04 08 46.3	+0.5
MKAR	Makanchi Array	9.50	53	Pn	Pn	04 08 46.7	+0.9
	comp=Z,0.4nm,0.3s,baz=234,slow=13,SNR=7.3						
MKAR				Lg	Lg	04 11 29.6	
	comp=Z,0.9nm,0.3s,baz=254,slow=26,SNR=7.3						
MKAR	Makanchi Array	9.50	53	eP	Pn	04 08 50.0	+4.3
MKAR	Makanchi Array	9.50	53		Pn	04 08 45.8	+0.1
KURBB	Kurchatov Arra	10.35	27	Pn	Pn	04 08 55.7	-1.6
	comp=Z,0.1nm,0.3s,baz=219,slow=13,SNR=4.1						
KURBB				Sn	Sn	04 10 49.2	-3.8
	comp=Z,0.0nm,0.3s,baz=260,slow=30,SNR=1.4						
KURBB				Lg	Lg	04 11 55.3	
	comp=Z,0.2nm,0.3s,baz=216,slow=28,SNR=6.6						
KURK	Kurchatov	10.46	27	i P	Pn	04 09 02.3	+3.5
KURK	Kurchatov	10.46	27		Pn	04 08 55.7	-3.1
GEYT	Alibeck	10.72	254	Pn	Pn	04 09 00.7	-1.7
	comp=Z,0.6nm,0.3s,baz=39,slow=5.5,SNR=1.8						
ABKAR	Akbulak array	11.00	318		Pn	04 09 05.8	-0.4
BVAR	Borovoye Array	11.44	358	Pn	Pn	04 09 12.0	-0.2
	baz=169,slow=16,SNR=2.9						
BVAR				Sn	Sn	04 11 14.2	-5.6
	comp=Z,1.6nm,0.3s,baz=167,slow=24,SNR=12						
BVAR				Lg	Lg	04 12 36.1	
	comp=Z,0.3nm,0.3s,baz=167,slow=28,SNR=1.5						
BRVK	Borovoye	11.48	357	i P	Pn	04 09 16.5	+3.8
BRVK	Borovoye	11.48	357		Pn	04 09 12.9	+0.2
AKTO	Aktyubinsk	12.71	318	Pn	Pn	04 09 29.4	-0.1
	comp=Z,0.1nm,0.3s,baz=117,slow=14,SNR=1.8						
AKTO				Sn	Sn	04 11 47.9	-2.9
	comp=Z,0.6nm,0.3s,baz=54,slow=14,SNR=5.0						
AKTO				Lg	Lg	04 13 14.3	
	baz=49,slow=20,SNR=1.1						
DGZ	Jazzator, Alta	13.93	49	i P	P	04 09 51.5	-2.9
ZALV	Zalesovo Beam	15.34	32	Pn	Pn	04 10 04.7	-0.5
	comp=Z,0.2nm,0.3s,baz=204,slow=14,SNR=1.6						
ZALV				Sn	Sn	04 12 52.1	-2.7
	baz=308,slow=43,SNR=2.2						
ZALV				Lg	Lg	04 14 37.4	
	comp=Z,0.1nm,0.3s,baz=233,slow=29,SNR=1.1						
ZALV	Zalesovo Beam	15.34	32	eP	P	04 10 10.0	+0.1
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARU	Arti	16.95	335	P	P	04 10 29.5	+1.7
ARU				S	S	04 13 41.0	-3.0
SONM	Songino Array	25.62	64	P	P	04 11 58.4	+0.1
	comp=Z,0.4nm,0.8s,baz=258,slow=6.8,SNR=1.8						
SONM	Songino Array	25.62	64	IAmb	IAmb	04 12 01.7	
	comp=Z,1.2nm,1.3s						
OBN	Obninsk	26.37	313	i P	P	04 12 05.4	+0.6
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRTR	Keskin Array B	28.41	279	P	P	04 12 24.7	+1.2
	comp=Z,0.3nm,0.7s,baz=93,slow=5.9,SNR=1.8						
FINES	FINESS Array B	33.45	322	P	P	04 13 07.7	+0.3
	comp=Z,1.3nm,0.9s,baz=107,slow=16,SNR=4.3						
ARCES	ARCESS Array B	36.54	335	P	P	04 13 35.1	+1.0
	comp=Z,4.9nm,1.0s,baz=62,slow=8.4,SNR=4.1						
GERES	GERESS Array B	40.29	301	P	P	04 14 07.0	+1.0
	comp=Z,0.9nm,0.5s,baz=62,slow=7.3,SNR=9.1						
NB2	NORSAR Subarra	40.50	320	P	P	04 14 07.8	+0.4
	comp=Z,0.4nm,0.5s,baz=90,slow=8.6						
NOA	NORSAR Array B	40.50	320	P	P	04 14 07.2	-0.3
	comp=Z,0.4nm,0.7s,baz=93,slow=7.6,SNR=6.8						
NOA	NORSAR Array B	40.50	320	eP	P	04 14 08.9	+1.5
PSI	Prapat	45.96	140	LR	LR	04 37 37.5	
	comp=Z,88nm,18.8s,baz=236,slow=41						
YKA	Yellowknife Ar	76.15	3	P	P	04 18 16.2	-0.2
	comp=Z,0.5nm,0.7s,baz=350,slow=5.5,SNR=1.0						
WRA	Warramunga Arr	84.58	123	P	P	04 19 01.0	-1.2
	comp=Z,0.4nm,0.7s,baz=331,slow=4.9,SNR=0.4						
AS31	Alice Springs	87.06	125	P	P	04 19 12.4	-2.1
AS31				IAmb	IAmb	04 20 47.4	
	comp=Z,1.3nm,1.4s						
ASAR	Alice Springs	87.06	125	P	P	04 19 13.4	-1.1
	comp=Z,0.3nm,0.8s,baz=315,slow=4.5,SNR=6.5						

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*BJI **29** 04:09:38.6±0.0,34°.01N×116°.97W,h6^{km},mB5.5/17, mb5.0/23,Ms5.1/13,Ms7 4.8/12*
*IASPEI **29** 04:09:42.0±0.8,33°.91N±0°.02×117°.93W±0°.01,h17^{km}±5^{km}, mb5.1/157,MS4.7/41,Error ellipse: s-maj=2.6km s-min=2.1km az=22.9,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*ANF **29** 04:09:41.6±0.2,33°.91N×117°.95W,h14^{km}±2^{km},ML5.7/46, Error ellipse: s-maj=1.6km s-min=1.4km az=152.0*
*IDC **29** 04:09:42.6±0.4,33°.91N×117°.84W,h0^{km},mb4.7/32, mb1 4.8/39,mb1mx4.7/47,mbtmp4.6/39,ML4.4/7,MS4.6/37, Ms1 4.6/37,ms1mx4.5/49,Error ellipse: s-maj=9.6km s-min=6.0km az=49.0*
*MOS **29** 04:09:42.4±1.0,33°.87N×117°.85W,h10^{km},mb5.2/43, Error ellipse: s-maj=6.6km s-min=6.2km az=101.2*
*SCEDC **29** 04:09:42.0,33°.92N×117°.94W,h8^{km}*
*PAS **29** 04:09:42.3±1.6,33°.93N±0°.03×117°.92W±0°.07,h5^{km}±3^{km}, Mwr5.1/6,mb5.1/244(NEIC),Error ellipse: s-maj=8.7km s-min=4.8km az=83.0*
*NEIC **29** 04:09:42.7±2.3,33°.86N±0°.05×117°.84W±0°.05,h4^{km}±1^{km}, Error ellipse: s-maj=6.8km s-min=5.7km az=191.0*
*GCMT **29** 04:09:47.3±0.2,34°.05N±0°.01×117°.89W±0°.01,h12^{km}, MW5.1/125,Moment Tensor Solution. s67,c89; s125,c198; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.21±.12; $M_{\theta\theta}$-7.41±.11; $M_{\phi\phi}$4.21±.11; $M_{r\theta}$-0.23±.32; $M_{\theta\phi}$0.18±.10; $M_{\phi r}$-1.35±.33; Best double couple: $M_0$6.28600×10^{16} NP1:ϕ_s130.00000°,δ65.00000°, λ155.00000°. NP2:ϕ_s232.00000°,δ67.00000°,λ27.00000°. Principal axes: T 5.1560, Plg35.0000°, Azm92.0000°; N 2.2710, Plg55.0000°, Azm269.0000°; P -7.4170, Plg1.0000°, Azm1.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **29** 04:09:50.7±0.0,34°.08N×119°.11W,h33^{km},mb4.8*
ISC 29 04:09:44.0±0.7**,33°.89N**±0°.02×**117°.92W**±0°.01**,h13**^{km}±4^{km},
n806,σ1^{s}.**81**/723**,mb5.1**/157**,MS4.7**/41**,4C-7D,Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FULC	Fullerton	0.01	179		Pg	04 09 43.7	-2.7
BREC	Barre Substati	0.09	212		Pg	04 09 45.2	-1.7
BREC					PcP	04 18 05.1	-8.3
RHC	Rose Hills Cem	0.14	327		Pg	04 09 44.5	-3.0
SANC	Santa Ana	0.18	170		Pg	04 09 46.9	-1.3
RCP2	Recreation Par	0.20	239		Pg	04 09 47.3	-1.2
PSRC	Puddingstone R	0.23	25		Pg	04 09 50.8	+1.8
GVRC	Garvey Reservo	0.23	315		PcP	04 18 06.4	-7.0
WTT2	Watts, South G	0.28	283		Pg	04 09 48.4	-1.5
CACC	Caltech Cellar	0.30	327		Pg	04 09 47.2	-3.1
CRNC	Corona	0.30	92		Pg	04 09 48.1	-2.1
CRNC					Sg	04 09 54.3	-0.1
GSA	Caltech--GSA	0.30	326		Pg	04 09 47.2	-3.1
GSA	Caltech--GSA	0.30	326		Pg	04 09 47.2	-3.1
CBCC	Caltech Broad	0.31	326		Pg	04 09 47.3	-3.0
MLSC	Mira Loma	0.32	68		Sb	04 09 54.2	-2.5
USC	University of	0.33	294		Pg	04 09 48.8	-1.9
FMP	Fort Macarthur	0.35	241	P	Pg	04 09 48.9	-2.3
	baz=55,SNR=580						
FMP				S	Sg	04 09 54.6	-1.4
	baz=55						
MWC	Mount Wilson	0.36	342		Pg	04 09 48.0	-3.3
PASC	Pasadena Art C	0.36	323		Pg	04 09 47.9	-3.4
SSK	Sunset Peak	0.38	30		Pg	04 09 48.8	-2.9
BHPC	Baldwin Hills	0.38	286		Pg	04 09 49.7	-1.9
GR2C	Griffith Obs.	0.39	307		Pg	04 09 48.8	-3.0
GR2C	Griffith Obs.	0.39	307		Sg	04 09 55.9	-1.2
LCGC	La Cienega, Cu	0.40	287		Pg	04 09 50.1	-1.8
XTL	Crystal Lake,	0.41	7		PcP	04 18 08.7	-5.0
BFSC	Mount Baldy Ra	0.42	32		Pn	04 09 56.3	+0.5
BFSC	Mount Baldy Ra	0.42	32	P	Pg	04 09 49.4	-3.0
	baz=216,SNR=1000						
BFSC				S	Pn	04 09 56.2	+0.5
	baz=216						
RPV	Rancho Palos V	0.42	251		Pg	04 09 49.9	-2.5
CHFC	Chilao Flat St	0.46	349		PcP	04 18 09.2	-4.5
FON	Fontana	0.46	62		Pg	04 09 50.4	-2.6
FON					Sb	04 09 57.8	-2.7
HLLC	North Hollywoo	0.47	309		Pg	04 09 50.2	-3.0
RVR	Riverside	0.47	76	⇓iP	Pg	04 09 50.6	-2.7
RVR				eS	Sb	04 09 58.5	-2.4
RVR	Riverside	0.47	76		Sb	04 09 58.5	-2.4
RVR					PcP	04 18 10.3	-3.1
SS2	San Sevaine	0.48	47		Pg	04 09 50.8	-2.7
DJJ	Donna J Jenkin	0.49	297		Pg	04 09 50.6	-3.1
DECC	Green Verdugo	0.50	317		Pg	04 09 50.6	-3.3

DECC	Green Verdugo	0.50	317	P	Pg	04 09 50.6	-3.3
	baz=136,SNR=1000						
DECC				S	Sg	04 09 58.1	-2.5
	baz=136						
RSBC	Riverside Bore	0.50	80		Pg	04 09 51.3	-2.6
RSBC					Sb	04 09 59.9	-2.0
RSBC	Riverside Bore	0.50	80		Pg	04 09 51.4	-2.6
RSBC					Sb	04 10 00.0	-1.9
CLTC	Calectric	0.55	67		Pg	04 09 52.2	-2.5
JNH	Juniper Hills	0.56	357		Pg	04 09 51.5	-3.5
HOLC	Holcomb Ridge	0.58	6		Pg	04 09 51.8	-3.5
CSP	Cedar Springs	0.62	48		Pg	04 09 53.4	-2.8
HLNC	Highland	0.63	68		Pg	04 09 53.7	-2.6
HLNC					Sb	04 10 03.8	-1.8
CIAC	Catalina I. Ai	0.63	221		Pg	04 09 53.8	-2.6
CIS	Catalina Islan	0.63	221	P	Pg	04 09 53.8	-2.6
	baz=37,SNR=1000						
CIS				S	Sg	04 10 04.2	-0.5
	baz=37						
PEC	Perris	0.63	89	⇓*i*P	Pg	04 09 53.8	-2.6
PEC				*e*S	Sb	04 10 04.0	-1.7
PEC	Perris	0.63	89		Sb	04 10 04.0	-1.7
PEC					PcP	04 18 13.5	0.0
MURC	Murrieta	0.67	115		Sn	04 10 06.0	-3.5
MURC	Murrieta	0.67	115	P	Pb	04 09 54.8	-2.7
	baz=297,SNR=1000						
MURC				S	Sn	04 10 06.0	-3.5
	baz=297						
CJV	Casa Juvan	0.67	344		Pg	04 09 53.3	-3.8
SVD	Seven Oaks Dam	0.72	72		Pg	04 09 55.2	-2.8
SVD					Sb	04 10 06.6	-1.5
AGOC	Agoura	0.75	291		Pg	04 09 55.9	-2.6
ADO	Adelanto Recei	0.78	31		Pg	04 09 56.2	-2.9
ADO					Sg	04 10 07.3	-2.0
BACC	Bachelor Mtn.	0.78	110		Pg	04 09 56.4	-2.8
BACC					PcP	04 18 16.4	+2.9
BBSC	Beaumont Base	0.79	87		Sn	04 10 09.4	-3.0
HMTC	Hemet	0.79	103		Pg	04 09 56.5	-2.8
HMTC					Sb	04 10 08.1	-1.9
DGR	Domenigoni Val	0.80	107		Sn	04 10 09.1	-3.5
DGR					PcP	04 18 16.5	+3.0
SBB	Saddle Back Bu	0.81	6		Pg	04 09 55.8	-3.8
LEOC	Leona Valley	0.81	337		PcP	04 18 15.5	+1.9
ALPC	Antelope	0.86	339		Pg	04 09 56.8	-3.9
FOXC	Fox Airport	0.90	343		Pg	04 09 57.6	-3.8
BBRC	Big Bear Solar	0.91	65	P	Pg	04 09 58.7	-3.0
	baz=248,SNR=1000						
BBRC				S	Sb	04 10 12.2	-1.8
	baz=248						
GORC	Green Oak Ranc	0.93	141		Pg	04 09 58.6	-3.4
GORC					Sb	04 10 12.4	-1.8
BTPC	Burnt Peak	0.96	326		Pg	04 09 58.7	-3.9
BTPC					Sg	04 10 12.5	-2.7
PYR	Pyramid	0.96	315	P	Pg	04 09 59.3	-3.3
PYR	Pyramid	0.96	315		Pg	04 09 59.3	-3.3
BALC	Balcom Canyon	0.96	296		Pg	04 09 59.5	-3.1
BLG	Laguna Peak, P	0.98	284		Pg	04 09 59.4	-3.5
BLG	Laguna Peak, P	0.98	284	P	Pg	04 09 59.3	-3.5
	baz=101,SNR=747						
BLG				S	Sg	04 10 14.6	-1.0
	baz=101						
OSI	Osito Audit: C	0.98	318		Sg	04 10 13.3	-2.6
OSI	Osito Audit: C	0.98	318	P	Pg	04 09 59.4	-3.6
	baz=137,SNR=332						
OSI				S	Sg	04 10 14.2	-1.7
	baz=137						
EDW2	Edwards Air Fo	1.00	357		Sg	04 10 14.8	-1.5
EDW2	Edwards Air Fo	1.00	357	P	Pg	04 09 59.4	-3.9
	baz=178,SNR=1000						
EDW2				S	Sg	04 10 15.4	-0.9
	baz=178						
SBI	Santa Barbara	1.01	247		Pg	04 10 00.5	-2.9
HYS	Haystack Butte	1.02	17		Pg	04 10 00.1	-3.6
TPO	Tropico Hills	1.02	346		Pg	04 09 59.7	-4.0
PLM	Palomar	1.03	121	P	Pg	04 10 00.7	-3.2
PLM	Palomar	1.03	121		Pg	04 10 00.7	-3.2
CRY	Cary Ranch	1.04	108		Pg	04 10 01.0	-3.0
CRY					Sn	04 10 16.2	-2.5
SCI2	San Clemente I	1.04	210		Pg	04 10 01.6	-2.6
SCI2	San Clemente I	1.04	210	P	Pg	04 10 01.5	-2.6
	baz=28,SNR=512						
SCI2				S	Sn	04 10 18.5	-0.1
	baz=28						
GVDA	Garner Valley	1.06	101		Pg	04 10 01.6	-2.9
GVDA					Sn	04 10 18.0	-1.4
BZNA	Buzz No.'s Pla	1.12	110		Pg	04 10 02.5	-3.1
DEVC	Devers	1.12	87		Pg	04 10 02.7	-2.9
DNR	Dunn Ranch,Anz	1.12	106		Pg	04 10 02.8	-2.8
STCC	Santa Clara	1.13	292		Pb	04 10 02.8	-2.5
FRD	Ford Ranch, An	1.17	109		Pg	04 10 03.3	-3.2
HWB	Hans Werner Br	1.18	136		Pb	04 10 02.6	-3.5
THC	Tehachapi Micr	1.19	329		Pn	04 10 03.0	-3.5
109C	Camp Elliot, M	1.21	145	Pg	Pb	04 10 03.8	-2.8
109C	Camp Elliot, M	1.21	145	P	Pb	04 10 03.2	-3.5
	baz=326,SNR=1000						
109C				S	Sn	04 10 20.8	-1.9
	baz=326						
CPE	Camp Elliot	1.21	145		Pb	04 10 03.2	-3.4
DPP	Dos Picos Cty	1.21	137		Pb	04 10 03.1	-3.6
MRVC	Morongo Valley	1.21	77		Pb	04 10 04.2	-2.7
PFO	Pinyon Flats O	1.25	102	Pg	Pb	04 10 04.7	-2.8
	3µm,0.3s,baz=283,slow=15,SNR=990						
PFO				Lg	Lg	04 10 22.9	
	7µm,0.3s,baz=268,slow=9.7,SNR=27						
PFO				LR	LR	04 10 26.0	
	comp=Z,5µm,18.6s,baz=232,slow=36						
PFO	Pinyon Flats O	1.25	102		Pb	04 10 04.8	-2.6
PFO	Pinyon Flats O	1.25	102	P	Pb	04 10 04.7	-2.8
	baz=284,SNR=1000						
PFO				S	Sn	04 10 22.8	-1.2
	baz=284						
RRX	Edison Barstow	1.25	38		Pn	04 10 04.6	-2.6
RRX	Edison Barstow	1.25	38	P	Pn	04 10 04.6	-2.6
	baz=220,SNR=1000						
RRX				S	Sn	04 10 22.8	-1.1
	baz=220						
XPFO	Pion Flat	1.25	102		Pb	04 10 04.8	-2.8
XPFO	Pion Flat	1.25	102		Pb	04 10 04.7	-2.8
I57US	PINON FLAT INF	1.26	102	Pg	Pb	04 10 05.2	-2.3
	baz=282,slow=24,SNR=1.1						
I57US				Lg	Lg	04 10 22.7	
	baz=293,slow=33						
I57US				*i*		04 16 06.6	
	baz=281,slow=309,SNR=3.7						
CCAC	Calif City Air	1.27	357		Pn	04 10 04.4	-3.0
TJR	Tejon Ranch	1.33	330		Pn	04 10 05.2	-3.0
EML	El Monte Cty P	1.34	137		Pn	04 10 05.2	-3.1
MPI	Mount Pinos, F	1.37	313		Pn	04 10 06.0	-3.0
DTP	Desert Tortois	1.38	3		Pn	04 10 06.1	-2.9
BORC	Borrego Spring	1.40	116		Pn	04 10 07.0	-2.2
RYS	Reyes Peak	1.40	303		Pn	04 10 07.0	-2.4
SDRC	San Diego Road	1.41	144		Pn	04 10 06.3	-2.9
ABL	Mount Abel	1.44	312		Pn	04 10 07.1	-2.9
ARVC	Arvin	1.45	329		Pn	04 10 07.3	-2.5
ARVC	Arvin	1.45	329	P	Pn	04 10 07.4	-2.4
	baz=149,SNR=1000						
ARVC				Sg	Sn	04 10 27.7	-1.0
	baz=149						
JFS	Joseph F. Stat	1.48	8		Pn	04 10 07.7	-2.7
SNCC	San Nicolas Is	1.48	245		Pn	04 10 06.9	-3.4
SNCC	San Nicolas Is	1.48	245	P	Pn	04 10 07.0	-3.3
	baz=63,SNR=110						
SNCC				S	Sn	04 10 26.6	-2.9
	baz=63						
TPC	Twentynine Pal	1.57	81		Pn	04 10 09.5	-2.1
SBC	Santa Barbara	1.58	291	P	Pn	04 10 09.4	-2.3
	baz=109,SNR=536						
MONP2	Monument Peak	1.60	128	Pn	Pn	04 10 10.1	-2.0
	baz=309,SNR=1000						
MONP2				Pg	Pg	04 10 12.3	-2.5
	baz=309						
MONP2				Sb	Sg	04 10 33.6	-1.9
	baz=309						
BELC	Belle Mtn. Jos	1.60	85	Pn	Pn	04 10 09.9	-2.2
	baz=268,SNR=1000						
BELC				Pg	Pg	04 10 12.6	-2.2
	baz=268						
BELC				Sb	Sg	04 10 34.0	-1.6
	baz=268						
LRMC	Laurel Mtn Rad	1.60	7	Pn	Pn	04 10 09.5	-2.6
	baz=188,SNR=1000						
LRMC				Pb	Pb	04 10 11.1	-2.4
	baz=188						
LRMC				Pg	Pg	04 10 13.2	-1.6
	baz=188						
LRMC				Sb	Sn	04 10 31.5	-1.2
	baz=188						
HEC	Hector,Ludlow	1.62	54	Pn	Pn	04 10 09.8	-2.4
	baz=236,SNR=1000						
HEC				Pg	Pg	04 10 13.0	-2.0
	baz=236						
HEC				Sb	Sg	04 10 33.7	-2.4
	baz=236						
GSC	Goldstone, Bar	1.69	33	Pn	Pn	04 10 11.2	-2.0
	baz=214,SNR=1000						
GSC				Pb	Pb	04 10 12.6	-2.3
	baz=214						
GSC				Pg	Pg	04 10 14.8	-1.6
	baz=214						
GSC				Sb	Sb	04 10 34.3	-1.8
	baz=214						
GSC				Sg	Sg	04 10 36.9	-1.5
	baz=214						
ISA	Isabella, Lake	1.83	346	P	Pn	04 10 12.6	-2.6
	baz=166,SNR=1000						
PKM	Mcpherson Peak	1.86	303	P	Pn	04 10 13.0	-2.7
	baz=122,SNR=1000						
IKP	In-Ko-Pah, Jac	1.96	129	P	Pn	04 10 14.8	-2.1
	baz=310,SNR=1000						
SWSC	Sam W. Stewart	2.01	117	P	Pn	04 10 15.5	-2.0
	baz=299,SNR=1000						
BC3	Big Chuckawall	2.07	96	P	Pn	04 10 16.7	-1.8
	baz=278,SNR=1000						
GMRC	Granite Mounta	2.08	64	P	Pn	04 10 16.0	-2.6
	baz=246,SNR=1000						
VES	Vestal, Richgr	2.17	334	P	Pn	04 10 17.4	-2.4
	baz=154,SNR=1000						
MPMC	Manual Prospec	2.20	9	P	Pn	04 10 17.9	-2.5
	baz=190,SNR=1000						
SMMC	Simmler	2.23	310	P	Pn	04 10 18.3	-2.3
	baz=129,SNR=472						
TUQ	Turquoise Moun	2.26	46	P	Pn	04 10 18.7	-2.5
	baz=228,SNR=1000						
IRM	Iron Mountain	2.32	82	P	Pn	04 10 19.2	-2.7
	baz=265,SNR=1000						
SHOC	Shoshone, Teco	2.42	34	P	Pn	04 10 21.4	-1.9
	baz=215,SNR=378						
CWC	Cottonwood Cre	2.55	357	P	Pn	04 10 23.6	-1.5
	baz=177						
VOG	Valley Oaks Go	2.71	334	P	Pn	04 10 25.5	-1.7
	baz=154,SNR=54						
GLA	Glamis	2.72	107	P	Pn	04 10 26.1	-1.3
	baz=289,SNR=102						
FURC	Furnace Creek,	2.72	18	P	Pn	04 10 26.1	-1.2
	baz=199,SNR=188						
MBIG	Mexicali	2.72	122		Pn	04 10 26.2	-1.1
Y12C	Blythe	2.83	92	P	Pn	04 10 26.5	-2.4
	baz=274,SNR=423						
NEE2	Needles Airpor	2.87	71	P	Pn	04 10 28.2	-1.3
	baz=254,SNR=70						
GRAC	Grapevine Rang	3.14	8	P	Pn	04 10 31.8	-1.3
	baz=189,SNR=387						
PDMCI	Parker Dam,Lak	3.17	81	P	Pn	04 10 32.2	-1.2
	baz=264,SNR=448						
TIN	Tinemaha, Big	3.17	356	P	Pn	04 10 32.4	-1.2
	baz=176,SNR=121						
TPNV	Topopah Spring	3.35	24	P	Pn	04 10 34.8	-1.4
	baz=205,SNR=1000						
SPIG	San Pedro Mart	3.51	143		Pn	04 10 37.3	-1.2
MLAC	Mammoth, Mammo	3.81	349	P	Pn	04 10 42.8	+0.2
	baz=169,SNR=264						
MDPB	Devils Postpil	3.86	346		Pn	04 10 43.4	+0.2
NV11	Mina Array Sit	4.54	358		Pn	04 10 53.4	+0.8
NVAR	Mina Array Bea	4.55	356	Pn	Pn	04 10 52.5	-0.2
	7.8nm,0.3s,baz=179,slow=15,SNR=127						
NVAR				Pg	Pb	04 11 02.9	-0.8
	58nm,0.3s,baz=186,slow=16,SNR=56						
NVAR				Lg	Lg	04 12 06.1	
	29nm,0.3s,baz=175,slow=32,SNR=1.6						
NVAR	Mina Array Bea	4.55	356		Pn	04 10 52.0	-0.6
214A	Organ Pipe Nat	4.71	113	P	Pn	04 10 54.0	-0.7
	baz=296,SNR=35						
R11A	Troy Canyon, C	4.84	22		Pn	04 10 56.1	-0.6
R11A	Troy Canyon, C	4.84	22	P	Pn	04 10 55.9	-0.8
	baz=204,SNR=110						
WUAZ	Wupatki	5.63	71		Pn	04 11 07.2	-0.3
WUAZ	Wupatki	5.63	71	P	Pn	04 11 07.5	-0.1
	baz=255,SNR=217						
PSUT	Pine Spring	5.69	34		Pn	04 11 08.5	+0.2
TUC	Tucson	6.19	103	P	Pn	04 11 13.3	-1.8
TUC	Tucson	6.19	103		Pn	04 11 13.3	-1.8
TUC	Tucson	6.19	103	P	Pn	04 11 14.9	-0.2
	baz=287						
W18A	Petrified Fore	6.87	77	P	Pn	04 11 25.6	+1.0
	baz=262,SNR=31						
O03E	Paynes Creek	7.11	335	P	Pn	04 11 28.2	+0.5
	baz=153,SNR=25						
ELK	Elko	7.17	17	Pn	Pn	04 11 29.0	+0.2
	5.4nm,0.3s,baz=205,slow=11,SNR=91						
ELK				Lg	Lg	04 13 26.3	
	17nm,0.3s,baz=303,slow=15,SNR=8.5						
O02D	Mt. Diablo Mer	7.39	330	P	Pn	04 11 31.6	+0.1
	baz=147						
DUG	Dugway, Tooele	7.51	31	P	Pn	04 11 35.5	+2.3
DUG				pmax	pmax		
	comp=Z,237nm,1.0s						
DUG	Dugway, Tooele	7.51	31	P	Pn	04 11 34.9	+1.6
	baz=215,SNR=65						
N02D	Trinity Center	8.03	333	P	Pn	04 11 43.2	+2.8
	baz=150						
MVCO	Mesa Verde	8.37	64	P	Pn	04 11 46.4	+1.3
	baz=250,SNR=30						
M02C	Callahan	8.45	334	P	Pn	04 11 49.4	+3.3
	baz=151						
M04C	Macdoel	8.47	340	P	Pn	04 11 49.1	+2.7
	baz=157,SNR=22						
PV03	Paradox Valley	8.54	57		Pn	04 11 48.6	+1.1
121A	Cookes Peak, D	8.60	96		Pn	04 11 48.7	+0.4
121A	Cookes Peak, D	8.60	96	P	Pn	04 11 48.6	+0.3
	baz=282,SNR=119						
YBH	Yreka Blue Hor	8.70	336	Pn	Pn	04 11 51.0	+1.4
	comp=Z,1.4nm,0.3s,baz=150,slow=8.3,SNR=67						
YBH				Lg	Lg	04 14 16.7	
	comp=Z,0.2nm,0.3s,baz=228,slow=22,SNR=4.3						
YBH				LR	LR	04 14 57.3	
	comp=Z,4µm,20.6s,baz=166,slow=36						
L04D	Klamath Falls	9.01	339	P	Pn	04 11 56.3	+2.5
	baz=156,SNR=19						
Y22D	IRIS PASSCAL I	9.14	86	P	Pn	04 11 56.9	+1.3
	baz=272						
K04D	Chiloquin, OR	9.23	342	P	Pn	04 12 02.7	+5.9
	baz=160,SNR=11						
L02E	Cave Junction	9.39	333	P	Pn	04 12 03.4	+4.4
	baz=150						
ANMO	Albuquerque	9.53	80	Pn	Pn	04 12 02.5	+1.4
	comp=Z,1.2nm,0.3s,baz=262,slow=11,SNR=38						
ANMO				Lg	Lg	04 14 43.6	
	comp=Z,2.3nm,0.3s,baz=6.5,slow=20,SNR=5.1						
ANMO				LR	LR	04 15 52.3	
	comp=Z,6µm,18.6s,baz=271,slow=39						
ANMO	Albuquerque	9.53	80	P	Pn	04 12 02.5	+1.4
	baz=267						
J05D	Fort Rock, OR	9.74	346	P	Pn	04 12 09.1	+5.3
	baz=164,SNR=25						
S22A	4UR Ranch, Cre	9.80	64	P	Pn	04 12 07.6	+2.9
	baz=250,SNR=35						
K02D	Willamette Mer	9.88	335	P	Pn	04 12 10.1	+4.4
	baz=151						
J04D	Umpqua Nationa	9.90	342	P	Pn	04 12 11.2	+5.1
	baz=159,SNR=18						
O20A	White River Ci	9.94	48	P	Pn	04 12 10.2	+3.5
	baz=234,SNR=42						
J01E	Myrtle Point	10.39	335	P	Pn	04 12 15.7	+3.1
	baz=151,SNR=6.9						
I04A	Tendick Farm,	10.49	342	P	Pn	04 12 17.9	+3.9
	baz=159,SNR=24						
I03D	Drain, OR	10.67	338	P	Pn	04 12 20.8	+4.4
	baz=155,SNR=17						
I05D	Terrebonne, OR	10.77	347	P	Pn	04 12 23.4	+5.5
	baz=165						
MNTX	Cornudas Mount	10.78	98	P	Pn	04 12 18.3	+0.3
	baz=285,SNR=34						
SDCO	Great Sand Dun	10.79	66	P	Pn	04 12 21.2	+2.8
	baz=253,SNR=20						
BW06	Boulder Array	11.03	34	P	Pn	04 12 25.3	+3.7
	baz=219,SNR=50						
PDAR	Pinedale Array	11.03	34	Pn	Pn	04 12 24.2	+2.7
	comp=Z,0.6nm,0.3s,baz=222,slow=10,SNR=80						
PDAR				Lg	Lg	04 15 27.5	
	comp=Z,0.2nm,0.3s,baz=190,slow=16,SNR=1.8						
PDAR				LR	LR	04 17 10.6	
	comp=Z,4µm,21.6s,baz=230,slow=41						
I02D	Swisshome	11.20	337	P	Pn	04 12 27.7	+4.1
	baz=154						
H04D	Lebanon	11.26	342	P	Pn	04 12 28.6	+4.1
	baz=159						
Q24A	Divide	11.47	60	P	Pn	04 12 32.0	+4.3
	baz=248						
T25A	Trinidad	11.48	70	P	Pn	04 12 31.3	+3.5
	baz=258,SNR=68						
ISCO	Idaho Springs	11.49	56	P	Pn	04 12 30.5	+2.6
ISCO				pmax	pmax		
	comp=Z,35nm,1.0s						
ISCO	Idaho Springs	11.49	56	P	Pn	04 12 30.6	+2.6
	baz=243						
G05D	Wamic, OR	11.64	348	P	Pn	04 12 33.8	+4.0
	baz=166,SNR=17						
LPIG	La Paz	11.80	144	Pn	Pn	04 12 35.3	+3.4
	comp=Z,2.7nm,0.3s,baz=158,slow=22,SNR=6.3						
LPIG				Lg	Lg	04 15 59.7	
	comp=Z,4.2nm,0.3s,baz=27,slow=18,SNR=1.6						
LPIG				LR	LR	04 17 02.5	
	comp=Z,2µm,21.6s,baz=333,slow=37						
N23A	Red Feather La	11.81	50	P	Pn	04 12 36.2	+3.8
	baz=238						
H17A	Grant Village	11.94	26	P	Pn	04 12 40.9	+6.9
	baz=211,SNR=26						
G03D	McMinnville, O	12.04	342	P	Pn	04 12 38.3	+3.2
	baz=158						
F05D	White Salmon	12.29	348	P	Pn	04 12 43.2	+4.6
	baz=166,SNR=8.8						
K22A	Casper	12.51	42	P	Pn	04 12 44.3	+2.5
	baz=229,SNR=48						
MSTX	Muleshoe	12.59	85	P	Pn	04 12 47.2	+4.4
	baz=274,SNR=31						
TXAR	Lajitas Array	12.97	107	Pn	Pn	04 12 50.0	+2.0
	comp=Z,1.8nm,0.3s,baz=293,slow=13,SNR=82						
TXAR				Lg	Lg	04 16 31.0	
	comp=Z,0.1nm,0.3s,baz=290,slow=27,SNR=3.2						
TXAR				LR	LR	04 18 16.9	
	comp=Z,3µm,18.6s,baz=0.0,slow=40						
RLMT	Red Lodge	13.05	28	P	P	04 12 53.9	-5.7
	baz=214,SNR=18						
E04D	Cinebar	13.14	346	P	P	04 12 55.6	-4.7
	baz=163,SNR=5.7						
D08A	Wollman Farm,	13.18	357		Pn	04 12 54.4	+3.7
J21C	J21C	13.20	327	S	S	04 16 44.9	+63
J35C	J35C	13.25	334	S	S	04 16 30.2	+48
MSO	Missoula	13.28	12		Pn	04 12 55.5	+3.3
MSO	Missoula	13.28	12	P	Pn	04 12 55.8	+3.6
	baz=195,SNR=48						
KSCO	Kaye Shedlock'	13.33	63	P	P	04 12 56.5	-6.1
	baz=252,SNR=12						
AMTX	Amarillo	13.46	81	P	Pn	04 12 57.5	+2.9
	baz=270						
J29C	J29C	13.68	328	S	S	04 16 41.1	+50
J36C	J36C	13.73	332	S	S	04 16 41.1	+49
J43C	J43C	13.76	335	S	S	04 17 02.5	+69
D03D	Eldon	14.18	346	P	P	04 13 10.1	-1.8
	baz=162,SNR=11						
J37C	J37C	14.23	330	S	S	04 16 54.2	+52
J44C	J44C	14.23	333	S	S	04 16 58.1	+55
J30C	J30C	14.28	327	S	S	04 16 55.8	+52
J30C				SS		04 18 41.3	
NEW	Newport	14.38	2	Pn	P	04 13 10.2	-3.9
	comp=Z,0.9nm,0.3s,baz=189,slow=14,SNR=13						
NEW				Lg	Lg	04 17 15.1	
	comp=Z,0.1nm,0.3s,baz=114,slow=18,SNR=1.6						
NEW				LR	LR	04 18 46.3	
	comp=Z,3µm,19.8s,baz=192,slow=38						
NEW	Newport	14.38	2	P	P	04 13 10.4	-3.7
NEW				pmax	pmax		
	comp=Z,93nm,1.9s						
NEW	Newport	14.38	2	P	P	04 13 10.2	-3.9
	baz=183,SNR=41						
OGNE	Ogallala	14.45	56	P	P	04 13 12.5	-2.5
	baz=246,SNR=9.9						
B05A	Bryant	14.70	349	P	P	04 13 17.3	-0.3
	baz=166,SNR=12						
J31C	J31C	14.73	326	S	S	04 17 11.5	+59
J31C				SS		04 18 45.3	
J45C	J45C	14.73	332	S	S	04 17 13.1	+60
J38C	J38C	14.73	329	S	S	04 17 13.2	+60
J52C	J52C	14.79	335	S	S	04 17 18.0	+64
RSSD	Black Hills	14.85	42	P	Pn	04 13 14.5	+0.8
RSSD	Black Hills	14.85	42		Pn	04 13 14.5	+0.8
RSSD	Black Hills	14.85	42	P	Pn	04 13 14.8	+1.0
	baz=231						
J39C	J39C	15.19	327	S	S	04 17 19.0	+57
J46C	J46C	15.20	330	S	S	04 17 21.3	+59
A04D	Lummi Island	15.25	348	P	P	04 13 26.3	+2.7
	baz=165,SNR=10						
J53C	J53C	15.27	333	S	S	04 17 19.7	+56
M03C7	M03C7	15.28	339	S	S	04 17 51.1	+87
PGC	Sidney	15.32	346	P	P	04 13 26.4	+2.0
ABTX	Abilene, Hawle	15.35	90	IAmb	IAmb	04 13 26.9	
	comp=Z,179nm,1.4s						
ABTX	Abilene, Hawle	15.35	90	P	P	04 13 22.0	-2.9
	baz=280,SNR=24						
EGMT	Eagleton	15.40	21	P	P	04 13 24.7	-0.8
	baz=206,SNR=71						
CBKS	Cedar Bluff	15.45	66	IAmb	IAmb	04 13 43.0	
	comp=Z,123nm,1.1s						
CBKS	Cedar Bluff	15.45	66	P	P	04 13 26.0	-0.1
	baz=257,SNR=12						
WALA	Waterton Lakes	15.45	10	P	P	04 13 23.9	-2.2
LAO	LASA Array	15.57	31	IAmb	IAmb	04 13 30.9	
	comp=Z,109nm,0.9s						
LAO	LASA Array	15.57	31	P	P	04 13 24.6	-2.9
	baz=219,SNR=58						
U32A	Winter Ranch,	15.68	76	IAmb	IAmb	04 13 49.0	
	comp=Z,155nm,1.6s						
JCT	Junction City	15.71	98	P	P	04 13 28.2	-0.9
	baz=287,SNR=24						
J47C	J47C	15.73	329	S	S	04 17 24.6	+51
J54C	J54C	15.75	332	S	S	04 17 28.9	+55
J67C	J67C	15.82	337	S	S	04 18 03.2	+88
WMOK	Wichita Mounta	15.84	82	P	P	04 13 28.0	-2.5
WMOK				pmax	pmax		
	comp=Z,69nm,1.1s						
WMOK	Wichita Mounta	15.84	82	P	P	04 13 27.6	-2.8
	baz=272,SNR=51						
J61C	J61C	15.97	334	S	S	04 17 38.7	+61
J55C	J55C	16.27	330	S	S	04 17 47.4	+63
J68C	J68C	16.36	336	S	S	04 18 06.4	+80
833A	Chaparral WMA,	16.80	104	P	P	04 13 43.9	+2.8
	baz=294,SNR=9.4						
J63C	J63C	16.93	331	S	S	04 17 59.9	+62
LLLB	Lillooet	16.96	351	P	P	04 13 44.5	+1.7
Z35A	Perchaven, San	17.23	86	IAmb	IAmb	04 13 49.5	
	comp=Z,137nm,0.9s						
WHTX	Lake Whitney,	17.29	91	P	P	04 13 48.6	+2.2
	baz=282,SNR=9.6						
BGNE	Belgrade	17.34	59	P	P	04 13 47.3	+0.3
	baz=251,SNR=8.4						
K31A	O'Neill	17.37	54	IAmb	IAmb	04 13 53.0	
	comp=Z,146nm,1.2s						
ZAIG	Zacatecas	17.45	125	P	P	04 13 50.8	+2.2
435B	Jarrell	17.46	95	P	P	04 13 49.8	+1.4
	baz=286,SNR=7.7						
N33A	J Bar K, Exete	17.64	61	IAmb	IAmb	04 14 25.9	
	comp=Z,130nm,1.1s						
DGMT	Dagmar	17.82	31	P	P	04 13 54.4	+2.1
	baz=220,SNR=37						
KSU1	Kansas State U	17.90	67	P	P	04 13 54.6	+1.4
	baz=260,SNR=8.9						
SUSD	Miller	18.05	49	P	P	04 13 56.9	+2.0
	baz=241,SNR=6.5						
TUL1	Leonard	18.26	77	P	P	04 13 58.5	+1.3
TUL1				IAmb	IAmb	04 14 00.1	
	comp=Z,204nm,1.4s						
TUL1	Leonard	18.26	77	P	P	04 13 58.8	+1.6
	baz=270,SNR=23						
237A	Washetta, Mont	18.65	90	P	Pn	04 14 01.3	-0.5
HKT	Hockley	19.15	96	P	Pn	04 14 07.3	-0.5
HKT				pmax	pmax		
	comp=Z,171nm,1.6s						
HKT	Hockley	19.15	96	P	Pn	04 14 07.3	-0.5
HKT				IAmb	IAmb	04 14 11.3	
	comp=Z,171nm,1.6s						
ECSD	EROS Data Cent	19.25	53	P	Pn	04 14 09.2	+0.2
	baz=246,SNR=40						
U38A	Gravette	19.40	76	P	Pn	04 14 11.1	+0.2
MDND	Maddock	19.59	39	IAmb	IAmb	04 14 22.1	
	comp=Z,95nm,0.9s						
MDND	Maddock	19.59	39	P	Pn	04 14 13.0	-0.1
	baz=231						
NATX	Nacogdoches	19.66	90	P	Pn	04 14 14.7	+0.8

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     baz=283
BBB  Bella Bella       19.71 341  LR    LR    04 21 32.8
     comp=Z,1µm,19.1s,baz=163,slow=36
W39A Magazine          19.92  79  IAmb  IAmb  04 14 33.8
     comp=Z,128nm,1.4s
W39A Magazine          19.92  79  P     Pn    04 14 16.3 -0.7
     baz=273,SNR=21
MIAR Mount Ida         20.14  81  P     Pn    04 14 19.0 -0.6
MIAR                              pmax  pmax
     comp=Z,271nm,1.5s
MIAR Mount Ida         20.14  81  P     Pn    04 14 18.6 -1.0
     baz=275,SNR=93
P38A Dawn              20.34  67  IAmb  IAmb  04 14 24.7
     comp=Z,172nm,1.4s
MOIG Morelia           20.53 129  P     Pn    04 14 24.0 -0.6
D32A Dogwood Acres,    20.60  44  IAmb  IAmb  04 14 26.8
     comp=Z,109nm,1.2s
WLAR White Oak Lake    20.61  84  P     P     04 14 22.4 -0.5
U40A Yellville         20.64  76  P     Pn    04 14 24.6 -0.9
     baz=271,SNR=26
X40A Basin Creek Fa    20.75  81  P     Pn    04 14 24.8 -2.1
     baz=276,SNR=20
Z41A Richland Creek    20.93  85  P     Pn    04 14 28.2 -0.7
     baz=279,SNR=13
SCIA State Center      21.03  60  P     P     04 14 29.4 +2.1
     baz=256,SNR=10
UALR University of     21.13  80  P     P     04 14 28.2 -0.2
W41B Gary Mavity, V    21.18  79  P     P     04 14 29.9 +0.9
     baz=274,SNR=28
I37A Lemond, Waseca    21.52  55  IAmb  IAmb  04 14 42.7
     comp=Z,94nm,1.0s
AGMN Agassiz Nation    21.89  42  IAmb  IAmb  04 14 47.1
     comp=Z,101nm,1.0s
AGMN Agassiz Nation    21.89  42  P     P     04 14 36.4 -0.1
     baz=237,SNR=52
CCM  Cathedral Cave    21.96  71  P     P     04 14 37.3 -0.1
CCM                               pmax  pmax
     comp=Z,107nm,1.3s
CCM  Cathedral Cave    21.96  71  P     P     04 14 37.2 -0.1
CCM                               IAmb  IAmb  04 14 41.7
     comp=Z,106nm,1.2s
CCM  Cathedral Cave    21.96  71  P     P     04 14 38.4 +1.1
     baz=267
LCAR Lake Charles      22.02  77  IAmb  IAmb  04 14 42.0
     comp=Z,78nm,1.1s
T42A Van Buren         22.05  74  IAmb  IAmb  04 14 44.7
     comp=Z,130nm,1.4s
SPMN Marine on St.     22.34  52  IAmb  IAmb  04 14 44.2
     comp=Z,63nm,1.0s
SPMN Marine on St.     22.34  52  P     P     04 14 42.5 +1.1
     baz=248,SNR=29
X43A Marvell           22.36  81  P     P     04 14 43.6 +1.9
     baz=276,SNR=6.5
L40A Anamosa           22.51  61  IAmb  IAmb  04 15 02.3
     comp=Z,79nm,1.2s
N41A Harden Midland    22.53  65  IAmb  IAmb  04 15 08.1
     comp=Z,61nm,1.1s
PBMO Poplar Bluff      22.59  75  IAmb  IAmb  04 14 46.6
     comp=Z,134nm,1.4s
ULM  Lac du Bonnet     23.00  38  P     P     04 14 47.8 -0.5
     comp=Z,44nm,0.9s,baz=230,slow=10.0,SNR=78
ULM                               Lg    Lg    04 21 49.4
     comp=Z,1.6nm,0.7s,baz=316,slow=18,SNR=1.7
ULM                               LR    LR    04 24 28.5
     comp=Z,3µm,19.7s,baz=234,slow=39
ULM  Lac du Bonnet     23.00  38 i P    P     04 14 46.6 -1.7
ULM  Lac du Bonnet     23.00  38  P     P     04 14 47.5 -0.8
JFWS Jewell Farm       23.40  59  IAmb  IAmb  04 14 53.7
     comp=Z,52nm,1.1s
JFWS Jewell Farm       23.40  59  P     P     04 14 52.6 +0.1
     baz=257,SNR=11
S44A Carbondale        23.52  72  IAmb  IAmb  04 15 20.6
     comp=Z,84nm,1.4s
OXF  Oxford            23.56  80  P     P     04 14 56.1 +2.0
     baz=277
FFC  Flin Flon         23.65  23  P     P     04 14 53.8 -0.9
FFC                               pmax  pmax
     comp=Z,48nm,0.9s
FFC  Flin Flon         23.65  23  P     P     04 14 53.8 -0.9
FFC                               IAmb  IAmb  04 15 12.3
     comp=Z,48nm,0.9s
E38A The Farm, Brul    23.68  50  IAmb  IAmb  04 15 44.1
     comp=Z,50nm,1.1s
HDIL Hopedale          23.69  65  P     P     04 14 56.2 +0.9
     baz=263,SNR=9.5
Q44A Meyer Farm, Va    23.75  69  IAmb  IAmb  04 15 25.5
     comp=Z,91nm,1.3s
TLIG Tlapa             23.77 128  P     P     04 14 57.1 +0.7
TLIG                              IAmb  IAmb  04 15 21.4
     comp=Z,61nm,1.4s
EYMN Ely               24.27  47  P     P     04 15 00.1 -0.6
EYMN Ely               24.27  47  P     P     04 15 00.7  0.0
     baz=244,SNR=16
OLIL Olney             24.46  70  IAmb  IAmb  04 15 46.9
     comp=Z,57nm,1.2s
I42A Draeger Farm,     24.58  57  IAmb  IAmb  04 15 21.2
     comp=Z,48nm,1.0s
PLAL Pickwick Lake     24.60  79  IAmb  IAmb  04 15 33.0
     comp=Z,81nm,1.6s
WRAK Wrangell Islan    24.62 341  IAmb  IAmb  04 15 15.5
     comp=Z,36nm,0.9s
WVT  Waverly           24.71  76  P     P     04 15 04.6 -0.2
WVT                               pmax  pmax
     comp=Z,69nm,1.1s
WVT  Waverly           24.71  76  P     P     04 15 04.6 -0.2
WVT  Waverly           24.71  76  P     P     04 15 05.8 +1.1
     baz=274
K43A Burlington        24.74  60  IAmb  IAmb  04 15 23.1
     comp=Z,54nm,0.9s
P46A Rosedale          25.19  68  IAmb  IAmb  04 15 12.5
     comp=Z,36nm,0.7s
SFIN Lafayette         25.33  66  IAmb  IAmb  04 15 37.3
     comp=Z,38nm,1.1s
SFIN Lafayette         25.33  66  P     P     04 15 11.0 +0.6
     baz=265
X48A Hartselle         25.51  80  IAmb  IAmb  04 15 13.6
     comp=Z,41nm,1.0s
H43A Windswept, Lux    25.52  57  IAmb  IAmb  04 15 21.2
     comp=Z,51nm,0.9s
V48A Smith Brothers    25.55  77  IAmb  IAmb  04 15 16.4
     comp=Z,30nm,0.9s
BLO  Bloomington       25.70  69  IAmb  IAmb  04 15 17.9
     comp=Z,49nm,0.9s
D41A Chassel           25.75  50  IAmb  IAmb  04 15 35.8
     comp=Z,59nm,1.1s
LRAL Lakeview Retre    25.77  83  IAmb  IAmb  04 15 18.9
     comp=Z,48nm,1.0s
LRAL Lakeview Retre    25.77  83  P     P     04 15 15.7 +1.3
     baz=281,SNR=14
WCI  Wyandotte Cave    25.87  71  P     P     04 15 15.7 +0.4
WCI                               pmax  pmax
     comp=Z,25nm,1.1s
WCI  Wyandotte Cave    25.87  71  P     P     04 15 15.7 +0.4
WCI  Wyandotte Cave    25.87  71  P     P     04 15 16.3 +1.0
     baz=270
DLBC Dease Lake        25.87 345  P     P     04 15 15.9 +0.8
     comp=Z,13nm,0.8s,baz=174,slow=7.2,SNR=13
DLBC Dease Lake        25.87 345  IAmb  IAmb  04 15 25.1
     comp=Z,51nm,1.1s
CLTN Cedars of Leba    25.92  76  IAmb  IAmb  04 15 17.8
     comp=Z,41nm,1.1s
L46A Eue Claire        26.11  63  P     P     04 15 18.0 +0.5
     baz=262
Q48A North Vernon      26.31  70  P     P     04 15 20.0 +0.7
     baz=269
N47A Urbana            26.44  65  IAmb  IAmb  04 15 42.8
     comp=Z,46nm,1.2s
N47A Urbana            26.44  65  P     P     04 15 20.7 +0.2
     baz=265
T49A Edmonton          26.50  74  P     P     04 15 22.5 +1.5
     baz=273,SNR=10.0
M47A Cromwell          26.54  64  P     P     04 15 22.1 +0.8
     baz=264
E43A Lone Tree Farm    26.56  53  P     P     04 15 20.6 -0.9
P48A Milroy            26.56  68  IAmb  IAmb  04 16 07.2
     comp=Z,43nm,1.1s
P48A Milroy            26.56  68  P     P     04 15 22.1 +0.5
     baz=268
K46A Dorr              26.59  61  P     P     04 15 22.1 +0.4
     baz=262
CMIG Matias Romero     26.59 123  P     P     04 15 23.5 +1.6
     comp=Z,11nm,0.8s,baz=314,slow=9.3,SNR=15
CMIG                              LR    LR    04 24 53.5
     comp=Z,2µm,20.6s,baz=214,slow=34
Z50A Ashland           26.62  82  P     P     04 15 21.6 -0.6
Z50A Ashland           26.62  82  P     P     04 15 23.6 +1.5
     baz=280,SNR=22
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S49A Springfield       26.67  72  P     P     04 15 23.3 +0.8
     baz=272
FPAL Fort Paine        26.67  79  IAmb  IAmb  04 15 31.2
     comp=Z,30nm,0.9s
R49A Shelbyville       26.75  71  P     P     04 15 24.4 +1.2
     baz=271
O48A Farmland          26.81  67  P     P     04 15 24.4 +0.6
     baz=267
W50A Signal Mountai    26.83  78  IAmb  IAmb  04 15 25.6
     comp=Z,35nm,0.8s
N48A Decatur           26.94  65  P     P     04 15 25.4 +0.4
     baz=266
Q49A Aurora            26.96  69  P     P     04 15 26.2 +1.0
     baz=270
T50A Nancy             27.06  74  P     P     04 15 26.8 +0.8
     baz=273
P49A Miami Univ. Ec    27.11  68  P     P     04 15 27.1 +0.6
     baz=269
G45A Suttons Bay       27.12  56  P     P     04 15 26.2 -0.3
     baz=257
K47A Vermontville      27.16  61  P     P     04 15 27.4 +0.5
     baz=262,SNR=8.8
M48A Edgerton          27.23  64  P     P     04 15 28.0 +0.4
     baz=265
X51A Calhoun           27.28  79  P     P     04 15 29.5 +1.4
     baz=278,SNR=10.0
E44A Grand Marais A    27.34  53  IAmb  IAmb  04 15 29.6
     comp=Z,51nm,1.1s
E44A Grand Marais A    27.34  53  P     P     04 15 28.8 +0.4
     baz=254,SNR=12
F45A CMU Biological    27.36  55  P     P     04 15 28.3 -0.4
     baz=256
J47A Sunmer            27.37  60  IAmb  IAmb  04 15 29.9
     comp=Z,46nm,1.1s
J47A Sunmer            27.37  60  P     P     04 15 29.4 +0.7
     baz=261
S50A Richmond          27.37  72  P     P     04 15 30.2 +1.3
     baz=272
R50A Paris             27.41  71  P     P     04 15 31.0 +1.8
     baz=271
O49A Covington         27.43  67  IAmb  IAmb  04 15 30.5
     comp=Z,60nm,1.6s
O49A Covington         27.43  67  P     P     04 15 29.8 +0.5
     baz=268
CPCT Cooper Cave       27.45  77  IAmb  IAmb  04 15 31.5
     comp=Z,36nm,1.0s
L48A N Adams           27.49  63  P     P     04 15 30.4 +0.5
     baz=264,SNR=6.8
V51A Loudon            27.55  76  IAmb  IAmb  04 15 32.4
     comp=Z,45nm,1.1s
N49A Columbus Grove    27.59  65  IAmb  IAmb  04 16 03.4
     comp=Z,61nm,1.5s
N49A Columbus Grove    27.59  65  P     P     04 15 31.2 +0.5
     baz=266
Q50A Georgetown        27.68  70  P     P     04 15 32.7 +1.1
     baz=270
I47A Gladwin           27.72  59  P     P     04 15 32.1 +0.2
     baz=260
152A Waverly Hall      27.72  83  IAmb  IAmb  04 15 34.2
     comp=Z,50nm,1.1s
G46A Petoskey          27.73  56  P     P     04 15 31.8 -0.2
     baz=257
T51A Gray              27.77  74  P     P     04 15 34.0 +1.5
     baz=274,SNR=6.8
M49A Liberty Center    27.78  64  P     P     04 15 32.9 +0.4
     baz=265
GLMI Grayling          27.79  57  IAmb  IAmb  04 16 07.0
     comp=Z,47nm,1.0s
GLMI Grayling          27.79  57  P     P     04 15 32.6  0.0
     baz=258
K48A Perry             27.82  61  P     P     04 15 33.5 +0.7
     baz=263
P50A Jamestown         27.82  68  P     P     04 15 33.9 +1.0
     baz=269,SNR=8.2
W52A Murphy            27.97  78  IAmb  IAmb  04 15 36.4
     comp=Z,62nm,1.6s
L49A Milan             28.00  63  P     P     04 15 35.5 +1.0
     baz=264
R51A Hillsboro         28.00  71  P     P     04 15 35.9 +1.4
     baz=272,SNR=12
S51A Beattyville       28.02  72  P     P     04 15 35.7 +1.1
     baz=273,SNR=11
TKL  Tuckaleechee C    28.03  77  P     P     04 15 35.6 +0.8
     comp=Z,16nm,1.0s,baz=235,slow=5.9,SNR=7.2
TKL                               Lg    Lg    04 24 29.7
     comp=Z,3.8nm,0.9s,baz=70,slow=6.5,SNR=3.6
TKL                               LR    LR    04 26 50.1
     comp=Z,2µm,18.1s,baz=276,slow=37
TKL  Tuckaleechee C    28.03  77  IAmb  IAmb  04 15 36.6
     comp=Z,41nm,1.2s
H47A Mio               28.04  58  P     P     04 15 34.5 -0.3
     baz=259
Y52A Lilburn           28.04  80  IAmb  IAmb  04 15 37.0
     comp=Z,52nm,1.2s
Y52A Lilburn           28.04  80  P     P     04 15 36.1 +1.2
     baz=280,SNR=5.8
TZTN Tazewell          28.12  75  P     P     04 15 36.5 +0.9
     baz=275
J48A Bridge Port       28.13  60  IAmb  IAmb  04 15 36.6
     comp=Z,53nm,1.1s
J48A Bridge Port       28.13  60  P     P     04 15 36.0 +0.4
     baz=262,SNR=5.9
V52A Sevierville       28.15  76  IAmb  IAmb  04 15 37.7
     comp=Z,43nm,1.1s
Q51A Peebles           28.17  69  P     P     04 15 37.0 +1.0
     baz=270,SNR=5.6
N50A Nevada            28.36  66  P     P     04 15 38.7 +1.0
     baz=267,SNR=5.6
P51A Williamsport      28.39  68  IAmb  IAmb  04 16 12.4
     comp=Z,65nm,1.5s
P51A Williamsport      28.39  68  P     P     04 15 39.0 +1.0
     baz=270
ACSO Alum Creek Sta    28.47  67  IAmb  IAmb  04 15 40.5
     comp=Z,31nm,0.8s
ACSO Alum Creek Sta    28.47  67  P     P     04 15 39.3 +0.7
     baz=268,SNR=11
M50A Fremont           28.48  64  IAmb  IAmb  04 16 35.8
     comp=Z,27nm,1.0s
M50A Fremont           28.48  64  P     P     04 15 39.3 +0.6
     baz=266
T52A Hallie            28.53  73  P     P     04 15 40.3 +1.0
     baz=274,SNR=5.5
X53A Estanollee        28.56  79  P     P     04 15 40.9 +1.4
     baz=279,SNR=5.9
J49A Marlette          28.60  60  P     P     04 15 40.1 +0.3
     baz=262
GOGA Godfrey           28.61  81  IAmb  IAmb  04 16 39.4
     comp=Z,90nm,1.9s
GOGA Godfrey           28.61  81  P     P     04 15 40.7 +0.8
     baz=281,SNR=5.4
D46A Sault St. Mari    28.66  53  P     P     04 15 40.2 -0.1
     baz=255
L50A Kingsville        28.70  63  P     P     04 15 41.6 +0.9
     baz=265,SNR=6.7
YKA  Yellowknife Ar    28.71   3  P     P     04 15 40.5 +0.1
     comp=Z,5.4nm,0.9s,baz=178,slow=8.4,SNR=45
YKA                               PcP   PcP   04 18 51.2 +0.7
     comp=Z,2.8nm,0.8s,baz=178,slow=3.3,SNR=5.5
YKA                               LR    LR    04 27 35.8
     comp=Z,2µm,21.5s,baz=0.0,slow=37
R52A Catlettsburg      28.73  71  P     P     04 15 42.2 +1.1
     baz=272
O51A Pataskala         28.75  67  P     P     04 15 42.1 +0.9
     baz=269
BG3  Lake Jocassee     28.80  78  IAmb  IAmb  04 15 43.9
     comp=Z,32nm,0.9s
V53A Saluda            28.80  76  IAmb  IAmb  04 15 43.9
     comp=Z,40nm,1.1s
T53A Wise              28.90  74  P     P     04 15 43.9 +1.3
     baz=275,SNR=6.5
K50A Casco             28.91  62  P     P     04 15 42.9 +0.3
     baz=264
Q52A Bidwell           29.01  70  P     P     04 15 44.2 +0.7
     baz=271
E47A Iron Bridge       29.06  54  P     P     04 15 43.7 -0.1
     baz=257
P52A Corning           29.11  68  P     P     04 15 44.8 +0.5
     baz=270
R53A Hurricane         29.28  71  P     P     04 15 47.1 +1.2
     baz=272
X54A Belton            29.31  79  P     P     04 15 47.7 +1.5
     baz=279
D47A Chapleau          29.32  53  P     P     04 15 46.2 +0.1
     baz=256
O52A Adamsville        29.34  67  IAmb  IAmb  04 15 47.9
     comp=Z,28nm,0.9s
O52A Adamsville        29.34  67  P     P     04 15 47.1 +0.6
     baz=269,SNR=5.2
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F48A Evansville        29.38  55  P     P     04 15 46.3 -0.3
     baz=259
W54A Cherokee Point    29.39  77  P     P     04 15 48.2 +1.3
     baz=278,SNR=5.8
N52A McGinn's Farm,    29.47  66  P     P     04 15 48.6 +1.0
     baz=268
V54A Nebo              29.49  76  P     P     04 15 48.6 +0.8
     baz=277,SNR=5.3
U54A Nelsons Funny     29.51  74  IAmb  IAmb  04 16 31.3
     comp=Z,32nm,1.1s
U54A Nelsons Funny     29.51  74  P     P     04 15 48.1 +0.1
     baz=276
TEIG Tepich            29.58 110  P     P     04 15 49.4 +0.8
     comp=Z,19nm,1.1s,baz=294,slow=0.0
TEIG                              LR    LR    04 29 30.8
     comp=Z,558nm,18.2s,baz=338,slow=40
TEIG Tepich            29.58 110  IAmb  IAmb  04 15 52.9
     comp=Z,127nm,1.9s
Q53A Leroy             29.59  70  P     P     04 15 49.5 +0.8
     baz=272
T54A Tazewell          29.66  73  P     P     04 15 50.5 +1.2
     baz=275,SNR=6.5
P53A Whipple           29.69  68  P     P     04 15 50.0 +0.5
     baz=271
M52A Chesterland       29.75  64  P     P     04 15 50.7 +0.7
     baz=267
F49A Sandfield         29.76  56  P     P     04 15 49.7 -0.3
     baz=259
E48A Lockeyer          29.82  54  P     P     04 15 50.4 -0.1
     baz=258
O53A New Philadelph    29.82  67  P     P     04 15 51.9 +1.2
     baz=270
Y55A Saluda            29.84  80  P     P     04 15 51.7 +0.9
     baz=280
R54A Victor            30.04  71  P     P     04 15 53.5 +0.8
     baz=273
KMSC Kings Mountain    30.07  77  P     P     04 15 53.7 +0.8
     baz=278,SNR=12
V55A Taylorsville      30.07  76  IAmb  IAmb  04 15 54.8
     comp=Z,42nm,1.0s
V55A Taylorsville      30.07  76  P     P     04 15 53.7 +0.8
     baz=277
N53A Lisbon            30.12  66  IAmb  IAmb  04 16 42.8
     comp=Z,49nm,1.3s
N53A Lisbon            30.12  66  P     P     04 15 54.2 +0.9
     baz=269,SNR=5.3
Q54A Coxs Mills        30.13  69  IAmb  IAmb  04 15 54.9
     comp=Z,22nm,0.8s
Q54A Coxs Mills        30.13  69  P     P     04 15 54.2 +0.8
     baz=272,SNR=5.7
U55A TA2, Sparta       30.13  74  P     P     04 15 54.8 +1.3
     baz=276,SNR=8.6
D48A Paudash Townsh    30.21  53  P     P     04 15 53.7 -0.3
     baz=257,SNR=6.0
M53A WI Miller and     30.26  65  P     P     04 15 55.2 +0.7
     baz=268
T55A Pulaski           30.28  73  P     P     04 15 55.7 +0.9
     baz=275,SNR=13
K52A Tillsonburg       30.31  62  P     P     04 15 55.1 +0.2
     baz=266
Z56A Williston         30.35  81  P     P     04 15 56.5 +1.1
     baz=281
P54A Burton            30.39  68  P     P     04 15 56.6 +0.9
     baz=271,SNR=6.1
X56A White Oak         30.42  78  P     P     04 15 56.7 +0.8
     baz=280
S55A Lewisburg         30.45  72  P     P     04 15 57.5 +1.1
     baz=274
O54A Avella            30.46  67  P     P     04 15 57.5 +1.2
     baz=270
D49A Beulah Townshi    30.53  53  P     P     04 15 56.9  0.0
     baz=257
BLA  Blacksburg        30.56  73  P     P     04 15 58.4 +1.0
     baz=275,SNR=7.7
V56A Mocksville        30.66  76  P     P     04 15 58.9 +0.8
     baz=278,SNR=7.1
W56A Indian Trail      30.68  77  P     P     04 15 58.9 +0.6
     baz=279,SNR=6.1
U56A King              30.68  75  IAmb  IAmb  04 15 60.0
     comp=Z,24nm,0.7s
U56A King              30.68  75  P     P     04 15 59.5 +1.1
     baz=277,SNR=5.4
R55A Marlinton         30.72  71  P     P     04 16 00.1 +1.3
     baz=274
N54A Moraine State     30.76  66  IAmb  IAmb  04 16 01.1
     comp=Z,42nm,1.1s
N54A Moraine State     30.76  66  P     P     04 16 00.2 +1.2
     baz=269,SNR=7.9
ERPA Erie              30.80  63  IAmb  IAmb  04 16 00.6
     comp=Z,28nm,1.1s
ERPA Erie              30.80  63  P     P     04 16 00.2 +0.9
     baz=267
BIRD Birdtown, Kers    30.86  78  IAmb  IAmb  04 16 01.2
     comp=Z,29nm,0.9s
MCWV Mont Chateau      30.88  68  P     P     04 16 01.1 +1.1
     baz=271
T56A Rocky Mt          30.89  73  P     P     04 16 01.3 +1.2
     baz=276,SNR=5.3
P55A Reedsville        30.89  68  P     P     04 16 01.3 +1.1
     baz=272
Z57A Bowman            30.90  81  P     P     04 16 01.3 +1.0
     baz=282
M54A Oil Creek Stat    31.02  64  IAmb  IAmb  04 16 02.8
     comp=Z,46nm,1.4s
M54A Oil Creek Stat    31.02  64  P     P     04 16 02.1 +0.8
     baz=268
APG  El Apazote        31.12 120  LR    LR    04 28 58.0
     comp=Z,462nm,19.4s,baz=302,slow=37
W57A Gilead            31.16  77  P     P     04 16 02.0 -0.5
     baz=279
X57A Johnson Farm,     31.18  78  P     P     04 16 03.3 +0.5
     baz=280
F51A Arnstein          31.25  56  P     P     04 16 02.6 -0.6
     baz=261
R56A Bull Pasture M    31.28  70  P     P     04 16 04.8 +1.2
     baz=274
O55A Ligonier          31.28  67  P     P     04 16 04.8 +1.3
     baz=271,SNR=8.5
L54A Sinclairville     31.30  63  P     P     04 16 04.8 +1.0
     baz=268,SNR=6.9
NHSC New Hope          31.37  81  P     P     04 16 06.1 +1.7
     baz=282
Q56A Snyder Ridge,     31.41  69  P     P     04 16 05.3 +0.6
     baz=273
U57A Blanch            31.51  74  P     P     04 16 06.7 +1.1
     baz=277
T57A Hurt              31.51  73  IAmb  IAmb  04 16 07.2
     comp=Z,20nm,0.8s
T57A Hurt              31.51  73  P     P     04 16 06.6 +1.0
     baz=276,SNR=6.1
D50A G1974 Best Tow    31.52  54  P     P     04 16 05.3 -0.3
     baz=259
N55A Marion Center     31.52  66  P     P     04 16 06.8 +1.1
     baz=270,SNR=7.5
SADO Sadowa            31.63  58  LR    LR    04 30 31.6
     comp=Z,527nm,18.8s,baz=288,slow=40
Y58A Scranton          31.63  79  P     P     04 16 07.6 +0.9
     baz=281
E51A G1948 Merrick     31.64  55  P     P     04 16 06.0 -0.6
     baz=260
F52A Sundridge         31.64  56  P     P     04 16 06.3 -0.4
     baz=262
P56A Dayton Farm, R    31.66  68  P     P     04 16 07.7 +0.8
     baz=272
M55A Ridgway           31.69  65  IAmb  IAmb  04 16 09.0
     comp=Z,32nm,0.9s
M55A Ridgway           31.69  65  P     P     04 16 08.2 +1.0
     baz=269,SNR=8.2
X58A Rowland           31.78  78  P     P     04 16 08.8 +0.8
     baz=280
K54A Basiliko Farm,    31.79  62  P     P     04 16 08.9 +0.9
     baz=267,SNR=5.2
W58A Raeford           31.79  77  P     P     04 16 08.6 +0.5
     baz=279
O56A Blue Knob Stat    31.85  67  P     P     04 16 09.8 +1.3
     baz=271,SNR=7.4
L55A Hinsdale          31.96  63  P     P     04 16 10.6 +1.1
     baz=268
R57A Stanardsville     31.97  71  P     P     04 16 11.2 +1.6
     baz=274
H53A Bobcaygeon        32.01  59  P     P     04 16 10.1 +0.2
     baz=264
Q57A Strasburg         32.01  69  P     P     04 16 10.9 +0.9
     baz=273
N56A West Decatur      32.05  66  P     P     04 16 11.2 +0.9
     baz=270,SNR=5.3
T58A Grand View Acr    32.09  73  P     P     04 16 11.3 +0.6
     baz=277,SNR=10
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M56A	Emporium	32.13	65	IAmb	IAmb	04 16 12.7	
	comp=Z,24nm,0.8s						
M56A	Emporium	32.13	65	P	P	04 16 12.1	+1.0
	baz=270						
U58A	Oxford	32.15	74	P	P	04 16 11.9	+0.7
	baz=277						
K55A	Perry	32.25	62	P	P	04 16 13.3	+1.2
	baz=268						
P57A	Homestead Farm	32.30	68	IAmb	IAmb	04 16 14.4	
	comp=Z,24nm,1.0s						
P57A	Homestead Farm	32.30	68	P	P	04 16 13.7	+1.2
	baz=273,SNR=6.6						
SSPA	Standing Stone	32.36	66	P	P	04 16 14.1	+1.1
SSPA				IAmb	IAmb	04 16 14.9	
	comp=Z,29nm,1.2s						
SSPA	Standing Stone	32.36	66	P	P	04 16 14.1	+1.1
	baz=271						
R58A	Rapidan	32.38	71	P	P	04 16 14.1	+0.9
	baz=275						
S58A	Poland Farm, P	32.41	72	P	P	04 16 14.0	+0.6
	baz=276						
W59A	Clinton	32.41	76	P	P	04 16 14.7	+1.2
	baz=279						
V59A	Middlesex	32.48	75	P	P	04 16 14.8	+0.7
	baz=279						
O57A	Amberson	32.56	67	P	P	04 16 16.3	+1.5
	baz=272,SNR=8.6						
Q58A	Fox Den Farm,	32.59	69	P	P	04 16 15.8	+0.8
	baz=274						
L56A	Greenwood	32.61	63	P	P	04 16 16.0	+0.7
	baz=269,SNR=7.6						
N57A	Milroy	32.61	66	P	P	04 16 16.4	+1.2
	baz=271,SNR=8.8						
U59A	Littleton	32.76	74	P	P	04 16 16.9	+0.4
	baz=278						
BCAR	Beaver Creek A	32.81	340	P	P	04 16 18.1	+1.4
E53A	Dumoine, Ponti	32.87	56	P	P	04 16 18.5	+1.1
	baz=262						
T59A	Double "B" Far	32.87	73	IAmb	IAmb	04 16 19.1	
	comp=Z,29nm,1.1s						
T59A	Double "B" Far	32.87	73	P	P	04 16 18.6	+1.1
	baz=277,SNR=5.6						
X60A	Albert Glenn T	32.89	77	P	P	04 16 18.2	+0.5
	baz=280						
M57A	Sunshine Farm,	32.92	65	P	P	04 16 19.3	+1.4
	baz=270,SNR=6.8						
D53A	Lac Vacive, Po	32.94	54	IAmb	IAmb	04 16 47.9	
	comp=Z,49nm,1.8s						
D53A	Lac Vacive, Po	32.94	54	P	P	04 16 17.7	-0.4
	baz=261						
DAWY	Dawson	32.98	343	IAmb	IAmb	04 16 28.4	
	comp=Z,25nm,1.1s						
O58A	Lewisberry	33.11	67	P	P	04 16 20.7	+1.1
	baz=272,SNR=5.8						
L57A	Andrews Acres	33.13	64	P	P	04 16 21.1	+1.3
	baz=270						
N58A	Sunbury	33.24	66	IAmb	IAmb	04 16 44.9	
	comp=Z,29nm,1.1s						
N58A	Sunbury	33.24	66	P	P	04 16 21.9	+1.2
	baz=272						
U60A	Pendleton	33.25	74	P	P	04 16 21.9	+1.1
	baz=278						
VLDQ	Val d'Or	33.28	52	IAmb	IAmb	04 16 20.0	
	comp=Z,26nm,0.9s						
SEW	Seward	33.33	332	IAmb	IAmb	04 16 31.4	
	comp=Z,29nm,1.1s						
M58A	Price’s Panora	33.43	65	P	P	04 16 23.9	+1.5
	baz=271,SNR=7.4						
MATQ	Matagami	33.49	49	P	P	04 16 22.8	0.0
	baz=257,SNR=9.1						
P59A	Jarrettsville	33.51	68	P	P	04 16 24.1	+1.0
	baz=274						
D54A	Lac Fusel, La	33.66	54	P	P	04 16 23.9	-0.4
	baz=262						
H56A	Elgin	33.66	59	P	P	04 16 24.0	-0.4
	baz=266						
O59A	Robesonia	33.66	67	P	P	04 16 25.4	+0.9
	baz=273						
BRLK	Bradley Lake	33.71	330	IAmb	IAmb	04 16 31.1	
	comp=Z,38nm,1.5s						
LSQQ	Lebel-sur-Quev	33.77	51	P	P	04 16 25.1	-0.1
	baz=259						
BINY	Binghamton	33.78	63	P	P	04 16 26.6	+1.2
	baz=270,SNR=5.8						
L58A	Harry Jones Me	33.88	64	P	P	04 16 27.7	+1.4
	baz=270,SNR=9.5						
KSPA	Keystone Colle	33.94	64	IAmb	IAmb	04 16 28.8	
	comp=Z,24nm,0.9s						
N59A	State Game Lan	33.96	66	IAmb	IAmb	04 16 29.0	
	comp=Z,31nm,0.9s						
N59A	State Game Lan	33.96	66	P	P	04 16 28.3	+1.3
	baz=272,SNR=8.3						
EGAK	Eagle	34.01	342	IAmb	IAmb	04 16 37.1	
	comp=Z,31nm,1.2s						
K58A	Earlville	34.03	62	IAmb	IAmb	04 16 29.2	
	comp=Z,26nm,0.8s						
K58A	Earlville	34.03	62	P	P	04 16 28.6	+0.9
	baz=269						
I57A	Carthage	34.06	60	P	P	04 16 28.1	+0.3
	baz=268						
SCRK	Sand Creek	34.14	340	IAmb	IAmb	04 16 37.0	
	comp=Z,25nm,1.1s						
GHO	Glory Hole Cre	34.19	334	IAmb	IAmb	04 17 21.9	
	comp=Z,30nm,1.3s						
M59A	Waymart	34.20	64	P	P	04 16 30.5	+1.4
	baz=271						
O60A	Telford	34.26	67	P	P	04 16 31.1	+1.6
	baz=273						
J58A	Remsen	34.31	61	P	P	04 16 30.7	+0.7
	baz=269						
EPYK	Eagle Plains	34.38	347	P	P	04 16 32.1	+1.7
	baz=152						
D55A	Sainte-Anne-du	34.44	55	P	P	04 16 30.7	-0.5
	baz=263						
N60A	Cedar Hill Far	34.47	66	P	P	04 16 32.8	+1.4
	baz=272						
L59A	Walton	34.48	63	P	P	04 16 32.8	+1.3
	baz=270						
I58A	Old Forge	34.55	61	P	P	04 16 32.7	+0.7
	baz=268						
K59A	Cooperstown	34.62	62	P	P	04 16 33.6	+0.9
	baz=270						
E56A	St. Veronique	34.69	56	P	P	04 16 32.9	-0.4
	baz=264						
M60A	Port Jervis	34.81	65	P	P	04 16 36.1	+1.7
	baz=272,SNR=11						
ODNJ	Ogdensburg	34.83	65	IAmb	IAmb	04 16 36.6	
	comp=Z,33nm,1.0s						
J59A	Piesco	34.88	61	P	P	04 16 35.5	+0.5
	baz=269						
O61A	Allentown	34.93	67	P	P	04 16 36.7	+1.4
	baz=274						
D56A	ZEC Mazanza, M	34.93	55	P	P	04 16 34.9	-0.5
	baz=264						
L60A	Shokan	35.09	64	P	P	04 16 38.2	+1.5
	baz=271						
H58A	Gabriels	35.14	59	P	P	04 16 37.8	+0.6
	baz=268						
E57A	Chemin Saint G	35.29	56	P	P	04 16 38.1	-0.3
	baz=265						
HDA	Harding Lake	35.34	339	IAmb	IAmb	04 16 46.2	
	comp=Z,67nm,2.0s						
HDA	Harding Lake	35.34	339	P	P	04 16 40.8	+2.2
	baz=136						
MCK	McKinley	35.49	337	IAmb	IAmb	04 16 48.5	
	comp=Z,37nm,1.4s						
D57A	Chemin Vers le	35.52	55	P	P	04 16 40.1	-0.3
	baz=264						
ILAR	Eielson Array	35.58	339	P	P	04 16 41.0	+0.3
	comp=Z,7.0nm,0.7s,baz=153,slow=7.1,SNR=36						
ILAR				LR	LR	04 31 48.5	
	comp=Z,935nm,21.0s,baz=148,slow=37						
ILAR	Eielson Array	35.58	339	P	P	04 16 40.9	+0.3
ILAR	Eielson Array	35.58	339	P	P	04 16 40.9	+0.3
L61A	Hillsdale 1, H	35.58	63	P	P	04 16 42.4	+1.4
	baz=272						
INK	Inuvik	35.60	350	P	P	04 16 41.5	+0.7
	comp=Z,28nm,1.2s,baz=146,slow=9.5,SNR=19						
INK	Inuvik	35.60	350	IAmb	IAmb	04 16 45.9	
	comp=Z,54nm,1.4s						
J60A	Lant Hill Farm	35.67	61	P	P	04 16 42.4	+0.7
	baz=270						
C36M	Paulatuk	35.68	356	P	P	04 16 42.5	+1.0
	baz=171,SNR=12						
I60A	Shoreham	35.77	60	P	P	04 16 42.9	+0.4
	baz=269						
G59A	Clarenceville	35.88	58	P	P	04 16 43.3	-0.1
	baz=268						
TCOL	CIGO, UAF Yank	35.94	339	P	P	04 16 47.2	+3.4
	baz=135						
POKR	Poker Plat Res	35.99	339	P	P	04 16 46.5	+2.2
	baz=136,SNR=16						
PPLA	Purkeypile	36.08	334	IAmb	IAmb	04 16 50.6	
	comp=Z,56nm,1.4s						
NEA	Nenana	36.11	338	IAmb	IAmb	04 16 53.6	
	comp=Z,26nm,1.0s						
H60A	Morristown	36.20	59	P	P	04 16 47.1	+0.8
	baz=269						
D58A	Chemin du LacG	36.21	55	P	P	04 16 46.2	-0.1
	baz=265						
LATQ	La Tuque	36.31	54	P	P	04 16 46.8	-0.3
	baz=265						
BPAW	Bear Paw Mtn.	36.41	336	IAmb	IAmb	04 16 57.2	
	comp=Z,71nm,1.7s						
I61A	Oroboro, Fairl	36.55	60	P	P	04 16 50.7	+1.5
	baz=270						
H61A	Lyndonville	36.76	59	P	P	04 16 52.4	+1.4
	baz=269						
BMAR	Burnt Mountain	36.97	343	P	P	04 16 54.5	+1.9
F61A	St Evariste	37.45	57	P	P	04 16 57.6	+0.7
	baz=268						
D60A	Saint Jean D’O	37.54	55	P	P	04 16 56.8	-0.7
	baz=267						
I63A	Otisfield	37.72	60	P	P	04 17 00.8	+1.6
	baz=271						
M66A	Nantucket	38.19	65	P	P	04 17 04.0	+0.8
	baz=275						
A36M	Sachs Harbour	38.36	356	P	P	04 17 04.5	+0.2
	baz=170,SNR=46						
IMAR	Indian Mountai	38.52	337	P	P	04 17 05.9	+0.3
D62A	Allapoint, All	38.83	55	P	P	04 17 08.7	+0.3
	baz=268						
G64A	Maxfield	39.01	58	P	P	04 17 10.7	+0.7
	baz=271						
TOLK	Toolik Lake Re	39.12	342	P	P	04 17 12.2	+1.4
	baz=136,SNR=24						
SCHQ	Schefferville	40.98	43	P	P	04 17 26.0	-0.3
	comp=Z,13nm,1.1s,baz=303,slow=5.9,SNR=6.5						
SCHQ				LR	LR	04 34 17.4	
	comp=Z,1µm,19.4s,baz=270,slow=36						
SCHQ	Schefferville	40.98	43	P	P	04 17 26.5	+0.2
ANM	Nome	41.97	332	P	P	04 17 36.3	+2.0
ANM				pmax	pmax		
	comp=Z,28nm,1.4s						
ANM	Nome	41.97	332	P	P	04 17 36.3	+2.0
RES	Resolute Bay	42.40	9	P	P	04 17 38.2	+0.6
RES				pmax	pmax		
	comp=Z,32nm,1.4s						
RES	Resolute Bay	42.40	9	P	P	04 17 38.2	+0.6
RDOG	Red Dog Mine	42.66	337	P	P	04 17 41.9	+2.1
SJCC	San Jacinto, C	45.84	111	*e*P	P	04 18 06.7	+0.7
SMLC	San Martn de	47.37	111	*e*P	P	04 18 18.3	+0.4
TAOE	Nuku Hiva Isla	47.45	210	*e*S	S	04 25 10.4	-2.5
	comp=Z,280nm,25.7s						
TAOE				*e*LQ	LQ	04 29 39.2	
	comp=Z,1µm,25.3s						
TAOE				*e*LR	LR	04 31 36.7	
	comp=Z,1µm,27.4s,baz=31						
CBOC	Ciudad Bolivar	47.76	116	*e*P	P	04 18 22.8	+1.6
PLMC	San Jos del P	48.20	117	*e*P	P	04 18 24.7	+0.2
OCAC	Ocana	48.30	111	*e*P	P	04 18 25.1	-0.3
PTBC	PUERTO BERRIO,	48.50	114	*e*P	P	04 18 26.1	-0.6
GCPR	Guaynabo City	48.58	95	P	P	04 18 28.9	+1.6
GUY2C	Guyana, Caldas	48.67	116	*e*P	P	04 18 29.7	+1.1
YOTC	Yotoco, Valle	48.77	118	*e*P	P	04 18 26.8	-2.1
NORC	Norcasia	48.81	115	*e*P	P	04 18 30.1	+1.0
RREF	El Recreo	48.89	117	*e*P	P	04 18 32.5	+2.0
PAMC	Pamplona, Colo	49.34	112	*e*P	P	04 18 33.9	+0.2
BARC	Barichara	49.43	113	*e*P	P	04 18 34.9	+0.7
ORTC	Ortega, Tolima	49.63	117	*e*P	P	04 18 36.0	+0.6
ROSC	El Rosal	49.70	116	P	P	04 18 37.9	+1.5
	comp=Z,12nm,0.8s,baz=290,slow=2.2,SNR=14						
ROSC				LR	LR	04 42 12.5	
	comp=Z,498nm,18.1s,baz=20,slow=39						
SOTA	Rioblanco	49.84	120	*e*P	P	04 18 39.6	+2.1
PCON	Cinco Dias	49.86	120	*e*P	P	04 18 40.0	+2.2
RUSC	La Rusia	49.95	114	*e*P	P	04 18 37.7	-0.7
CRUC	La Cruz	49.99	121	*e*P	P	04 18 39.5	+1.0
SDV	Santo Domingo	50.00	109	P	P	04 18 38.9	+0.5
SDV				IAmb	IAmb	04 18 40.4	
	comp=Z,31nm,0.9s						
SDV	Santo Domingo	50.00	109	*e*P	P	04 18 35.9	-2.5
CHIC	Chingaza	50.28	115	*e*P	P	04 18 40.6	-0.1
SFJD	Kangerlussuaq	50.47	28	*i* P	P	04 18 42.0	+1.0
SFJD	Kangerlussuaq	50.47	28	*i* P	P	04 18 42.0	+1.0
SFJD	Kangerlussuaq	50.47	28	P	P	04 18 42.1	+1.1
TAMC	Tame, Arauca	50.60	112	*e*P	P	04 18 43.2	+0.4
BILL	Bilibino	53.78	333	*e*P	P	04 19 07.1	+1.4
BILL				*e*		04 20 12.4	
BILL				*e*		04 21 06.5	
BILL				*e*PPP	PPP	04 22 14.4	
BILL				pmax	pmax		
	comp=Z,20nm,2.5s						
SUMG	Summit	54.90	21	*i* P	P	04 19 14.0	-0.3
	comp=Z,23nm,0.7s						
SUMG	Summit	54.90	21	*i* P	P	04 19 14.0	-0.3
SUMG				pmax	pmax		
	comp=Z,23nm,0.7s						
SUMG	Summit	54.90	21	P	P	04 19 14.6	+0.3
SUMG				IAmb	IAmb	04 19 17.8	
	comp=Z,36nm,1.5s						
ATAH	Atahualpa	55.37	130	LR	LR	04 40 10.9	
	comp=Z,444nm,18.1s,baz=319,slow=33						
DAG	Danmarks Havn	59.39	15	*i* P	P	04 19 45.0	-0.4
	comp=Z,4.9nm,0.7s						
DAG	Danmarks Havn	59.39	15	*i* P	P	04 19 45.0	-0.4
DAG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PPT	Papeete	59.40	216	LR	LR	04 38 24.0	
	comp=Z,402nm,21.0s,baz=20,slow=29						
PPT2	Papeete2	59.42	216	*e*S	S	04 27 52.8	-2.5
	comp=Z,197nm,26.5s						
PPT2				*e*LQ	LQ	04 34 45.5	
	comp=Z,549nm,24.8s						
PPT2				*e*LR	LR	04 37 19.8	
	comp=Z,986nm,24.8s,baz=22						
PET	Petropavlovsk	60.01	316	*e*P	P	04 19 49.2	-0.9
PET				*e*S	S	04 27 56.8	-5.3
PET				pmax	pmax		
	comp=Z,25nm,1.3s						
PET				MLR	MLR		
	comp=Z,300nm,18.0s						
NNA	Nana	60.06	132	LR	LR	04 41 32.4	
	comp=Z,378nm,19.3s,baz=322,slow=32						
NNA	Nana	60.06	132	*e*P	P	04 19 48.8	-2.1
NNA				pmax	pmax		
	comp=Z,12nm,1.3s						
SEY	Seymchan	60.30	328	*i* P	P	04 19 51.8	-0.1
PETK	Petropavlovsk-	60.54	316	P	P	04 19 54.7	+1.0
	comp=Z,3.9nm,0.6s,baz=92,slow=10,SNR=6.0						
PETK				LR	LR	04 44 51.6	
	comp=Z,112nm,18.6s,baz=64,slow=35						
PETK	Petropavlovsk-	60.54	316	P	P	04 19 55.5	+1.8
PETK	Petropavlovsk-	60.54	316	P	P	04 19 55.5	+1.8
MA2	Magadan	62.09	325	P	P	04 20 06.4	+2.3
	comp=Z,5.6nm,0.7s,baz=86,slow=8.8,SNR=8.7						
MA2				LR	LR	04 44 52.8	
	comp=Z,324nm,20.6s,baz=10.0,slow=34						
MA2	Magadan	62.09	325	*ce*P	P	04 20 06.4	+2.3
MA2				pmax	pmax		
	comp=Z,16nm,2.5s						
MA2	Magadan	62.09	325	P	P	04 20 07.3	+3.2
MA2				IAmb	IAmb	04 20 19.5	
	comp=Z,12nm,1.1s						
PTGA	Pitinga	64.26	110	P	P	04 20 18.9	-0.2
PTGA	Pitinga	64.26	110	*e*P	P	04 20 20.7	+1.6
TBI	Tubuai	64.34	212	*e*S	S	04 28 55.5	-1.8
	comp=Z,464nm,30.0s						
TBI				*e*LQ	LQ	04 36 41.5	
	comp=Z,732nm,32.5s						
TBI				*e*LR	LR	04 39 29.2	
	comp=Z,762nm,27.2s,baz=28						
TIXI	Tiksi	65.01	341	*i* P	P	04 20 24.0	+0.9
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TIXI	Tiksi	65.01	341	P	P	04 20 23.7	+0.5
SAML	Samuel	67.12	119	P	P	04 20 36.1	-1.5
SAML				pmax	pmax		
	comp=Z,19nm,1.2s						
SAML	Samuel	67.12	119	P	P	04 20 36.1	-1.5
SAML				IAmb	IAmb	04 20 37.9	
	comp=Z,19nm,1.1s						
LPAZ	La Paz	68.83	128	P	P	04 20 48.6	-0.4
	comp=Z,4.3nm,1.0s,baz=355,slow=5.0,SNR=10						
LPAZ				LR	LR	04 48 00.6	
	comp=Z,232nm,20.3s,baz=326,slow=33						
LPAZ	La Paz	68.83	128	IAmb	IAmb	04 21 02.4	
	comp=Z,17nm,1.4s						
LPAZ	La Paz	68.83	128	*e*P	P	04 20 49.6	+0.6
MNMC	Minye Minye	69.99	131	IAmb	IAmb	04 20 58.4	
	comp=Z,21nm,1.0s						
YAK	Yakutsk	70.13	332	P	P	04 20 54.6	-1.0
	comp=Z,7.9nm,0.4s,baz=297,slow=1.3,SNR=1.7						
YAK	Yakutsk	70.13	332	*e*P	P	04 20 57.2	+1.6
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK	Yakutsk	70.13	332	IAmb	IAmb	04 20 59.5	
	comp=Z,14nm,0.7s						
GO01	Chusmiza	70.64	131	IAmb	IAmb	04 21 28.7	
	comp=Z,14nm,1.1s						
PB01	IPOC Station P	71.49	133	P	P	04 21 05.4	+0.8
YSS	Yuzh-Sakhalins	71.82	315	*e*P	P	04 21 06.2	0.0
YSS				*e*		04 21 22.7	
LVC	Limon Verde	73.02	133	P	P	04 21 14.1	+0.1
LVC				pmax	pmax		
	comp=Z,15nm,1.1s						
LVC	Limon Verde	73.02	133	P	P	04 21 14.1	+0.1
LVC				IAmb	IAmb	04 21 35.7	
	comp=Z,14nm,1.1s						
LVC	Limon Verde	73.02	133	*e*P	P	04 21 16.9	+2.9
ARCES	ARCESS Array B	73.47	13	P	P	04 21 15.4	-0.3
	comp=Z,7.2nm,0.9s,baz=320,slow=5.4,SNR=6.8						
ARCES				LR	LR	04 55 33.9	
	comp=Z,1µm,19.2s,baz=354,slow=38						
NRIK	Noril'sk	75.39	351	P	P	04 21 27.4	+0.6
	comp=Z,8.7nm,0.8s,baz=56,slow=4.1,SNR=8.8						
NRIK				LR	LR	04 55 49.2	
	comp=Z,539nm,21.8s,baz=36,slow=37						
NRIK	Noril'sk	75.39	351	⇓*i*P	P	04 21 26.9	+0.1
NRIK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ZEA	Zeya	76.18	326	*e*P	P	04 21 33.3	+1.7
ZEA				pmax	pmax		
	comp=Z,56nm,1.8s						
LVZ	Lovozero	76.45	10	*ce*P	P	04 21 33.3	+0.4
LVZ				pmax	pmax		
	comp=Z,70nm,2.5s						
TEY	Ternei	76.47	315	⇓*e*P	P	04 21 35.4	+2.0
TEY				pmax	pmax		
	comp=E,10.0nm,1.2s						
TEY				pmax	pmax		
	comp=N,10.0nm,1.3s						
TEY				pmax	pmax		
	comp=Z,20nm,1.1s						
KLR	Kul'dur	76.73	321	P	P	04 21 37.1	+2.3
	comp=Z,1.6nm,0.8s,baz=28,slow=5.4,SNR=4.3						
KLR	Kul'dur	76.73	321	⇓*i*P	P	04 21 36.6	+1.8
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NB2	NORSAR Subarra	76.75	23	P	P	04 21 34.9	+0.2
	comp=Z,34nm,2.5s,baz=320,slow=5.9						
NB2	NORSAR Subarra	76.75	23	P	P	04 21 34.9	+0.2
	baz=320,slow=5.9						
NOA	NORSAR Array B	76.75	23	P	P	04 21 35.2	+0.4
	comp=Z,1.7nm,0.9s,baz=318,slow=5.7,SNR=7.6						
NOA				LR	LR	04 56 03.5	
	comp=Z,452nm,18.2s,baz=320,slow=36						
SALV	Santo Antonio	77.18	119	*e*P	P	04 21 39.6	+1.9
GO04	Tololo Observa	77.72	139	P	P	04 21 42.0	+1.3
GO04				IAmb	IAmb	04 21 44.8	
	comp=Z,18nm,1.1s						
BOD	Bodaibo	78.80	335	*e*P	P	04 21 45.2	-0.9
BOD				pmax	pmax		
	comp=Z,16nm,1.3s						
SMTB	Santa Maria do	78.95	109	*e*P	P	04 21 48.6	+1.0
USA0B	Ussuriysk Arra	79.63	317	P	P	04 21 51.4	+0.5
USA0B				pmax	pmax		
	comp=Z,11nm,0.9s						
USA0B	Ussuriysk Arra	79.63	317	P	P	04 21 51.4	+0.5
USRK	Ussuriysk Ar.	79.63	317	P	P	04 21 52.9	+1.9
	comp=Z,6.7nm,0.7s,baz=70,slow=6.3,SNR=8.9						
USRK	Ussuriysk Ar.	79.63	317	P	P	04 21 51.6	+0.6
USRK	Ussuriysk Ar.	79.63	317	P	P	04 21 51.5	+0.6
MJAR	Matsushiro Arr	80.31	308	P	P	04 21 55.8	+1.0
	comp=Z,1.9nm,0.6s,baz=42,slow=3.7,SNR=9.1						
MJAR	Matsushiro Arr	80.31	308	P	P	04 21 54.8	0.0
MJAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MJAR	Matsushiro Arr	80.31	308	P	P	04 21 54.8	0.0
MAJO	Matsushiro	80.31	308	P	P	04 21 55.4	+0.6
MAJO				pmax	pmax		
	comp=Z,52nm,1.9s						
MAJO	Matsushiro	80.31	308	P	P	04 21 55.4	+0.6
MAJO				IAmb	IAmb	04 21 59.4	
	comp=Z,52nm,1.9s						
MAT	Matsushiro	80.31	308	P	P	04 21 55.6	+0.8
MJB9	Matsu-Tunnel	80.31	308	P	P	04 21 55.3	+0.5
MJB9				IAmb	IAmb	04 21 59.4	
	comp=Z,57nm,1.9s						
FIA1	FINESS Array S	80.60	17	P	P	04 21 55.8	0.0
FINES	FINESS Array B	80.60	17	P	P	04 21 56.3	+0.5
	comp=Z,6.1nm,0.8s,baz=336,slow=5.4,SNR=28						
FINES				LR	LR	05 00 13.6	
	comp=Z,629nm,18.3s,baz=335,slow=38						
FINES	FINESS Array B	80.60	17	P	P	04 21 55.6	-0.2
FINES	FINESS Array B	80.60	17	P	P	04 21 55.6	-0.2
PVRL	Vila Real	81.48	46	*e*P	P	04 22 01.8	+0.8
PSBE	So Bento	81.91	48	*e*P	P	04 22 04.4	+1.1
MVO	Moncorvo	81.96	45	*e*P	P	04 22 05.8	+2.2
BGES	Gesves	82.17	33	PcP	PcP	04 22 07.5	-2.2
BCLA	Clavier	82.25	33	P	P	04 22 02.6	-2.2
PCBR	Castelo Branco	82.51	47	*e*P	P	04 22 07.1	+0.7
BDFB	Brasilia	82.72	114	P	P	04 22 09.1	+1.2
	comp=Z,16nm,1.2s,baz=335,slow=7.1,SNR=9.0						
BDFB				LR	LR	05 04 47.0	
	comp=Z,199nm,18.4s,baz=297,slow=40						
BDFB	Brasilia	82.72	114	P	P	04 22 08.1	+0.2
BDFB				pmax	pmax		
	comp=Z,29nm,1.4s						
BDFB	Brasilia	82.72	114	P	P	04 22 08.1	+0.2
PMRV	Marv??o	82.82	47	*e*P	P	04 22 09.4	+1.4
PNCL	Nicolau / Gran	82.92	49	*e*P	P	04 22 09.4	+0.8
CPUP	Villa Florida	83.01	128	P	P	04 22 09.7	+0.7
	comp=Z,3.9nm,0.7s,baz=311,slow=4.6,SNR=9.3						
CPUP				LR	LR	04 58 50.6	
	comp=Z,152nm,18.2s,baz=344,slow=36						
CPUP	Villa Florida	83.01	128	P	P	04 22 08.9	-0.1
CPUP				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CPUP	Villa Florida	83.01	128	P	P	04 22 08.9	-0.1
VSU	Vasula	83.37	18	*i* P	P	04 22 10.5	+0.1
VSU				pmax	pmax		
	comp=Z,23nm,1.2s						
CN2	Changchun	83.53	319	*e*P	P	04 22 13.3	+1.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
CN2				LR	LR		
	comp=Z,400nm,16.0s						
CN2				LR	LR		
	comp=Z,300nm,18.0s						
KLMR	Klimovskoe	83.81	11	*e*P	P	04 22 12.0	-0.7
KLMR				pmax	pmax		
	comp=Z,40nm,1.8s						
KLMR				MLR	MLR		
	comp=Z,832nm,16.0s						
KLMR	Klimovskoe	83.81	11	*e*P	P	04 22 12.0	-0.7
KLMR				AMP		04 22 18.7	
	comp=Z,40nm,1.8s						
KLMR				LR	LR	04 50 50.8	
KLMR				AMP		05 02 10.6	
	comp=Z,832nm,16.3s						
PRGR	Permogore	83.88	8	*e*P	P	04 22 13.1	+0.1
PRGR				pmax	pmax		
	comp=Z,14nm,0.9s						
CLL	Collm	84.84	28	*i* P	P	04 22 19.8	+1.7
	comp=Z,6.0nm,1.1s						
CLL				*e*		04 22 25.0	
CLL				*e*S	S	04 32 44.0	-1.9
CLL				*e*SS	SS	04 38 36.0	+19
CLL				*e*SSS	SSS	04 42 24.0	
CLL				*e*SSSS		04 44 42.0	
CLL				LmH		04 57 00.0	

	comp=N,800nm,19.8s						
CLL				LmH		04 57 00.0	
	comp=E,500nm,19.4s						
CLL				LmV		04 59 00.0	
	comp=Z,600nm,19.0s						
CLL	**Collm**	**84.84**	**28**	*i* P	**P**	**04 22 19.8**	**+1.7**
CLL				*e*		04 22 25.0	
CLL				*e*S	**S**	**04 32 44.0**	**-1.9**
CLL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CLL				MLR	MLR		
	comp=Z,600nm,19.0s						
GRF	**Grafenberg Arr**	**85.36**	**30**	*e*P	P	04 22 25.1	+4.3
	comp=Z,12nm,1.5s,baz=320,slow=4.5						
BRG	**Berggiesshubel**	**85.55**	**28**	*e*P	**P**	**04 22 23.1**	**+1.5**
	comp=Z,5.4nm,1.0s						
BRG	**Berggiesshubel**	**85.55**	**28**	*e*P	**P**	**04 22 23.1**	**+1.5**
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PLCA	**Paso Flores**	**86.13**	**146**	P	**P**	**04 22 25.6**	**+1.1**
	comp=Z,9.4nm,1.2s,baz=186,slow=20,SNR=3.8						
PLCA				LR	LR	04 54 11.3	
	comp=Z,404nm,19.2s,baz=240,slow=31						
PLCA	**Paso Flores**	**86.13**	**146**	P	**P**	**04 22 25.2**	**+0.6**
PLCA				pmax	pmax		
	comp=Z,23nm,1.4s						
PLCA	**Paso Flores**	**86.13**	**146**	P	**P**	**04 22 25.2**	**+0.6**
PLCA				IAmb	IAmb	04 22 27.5	
	comp=Z,23nm,1.4s						
SUW	**Suwalki**	**86.22**	**22**	P	**P**	**04 22 25.2**	**+0.3**
SUW				pmax	pmax		
	comp=Z,32nm,1.0s						
SUW	**Suwalki**	**86.22**	**22**	P	**P**	**04 22 25.2**	**+0.3**
KSRS	**Korea Array**	**86.27**	**313**	P	**P**	**04 22 27.2**	**+1.8**
	comp=Z,2.5nm,0.8s,baz=51,slow=5.0,SNR=7.9						
KSAR	**Wonju Array Be**	**86.30**	**313**	P	**P**	**04 22 26.1**	**+0.5**
KSAR	**Wonju Array Be**	**86.30**	**313**	P	**P**	**04 22 26.1**	**+0.5**
GERES	**GERESS Array B**	**87.05**	**30**	P	**P**	**04 22 29.6**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=258,slow=2.9,SNR=3.6						
GERES				LR	LR	05 03 09.4	
	comp=Z,664nm,18.5s,baz=318,slow=37						
KIRV	**Kirov**	**87.27**	**7**	P	**P**	**04 22 29.8**	**-0.2**
	comp=Z,13nm,0.8s,baz=334,slow=2.8,SNR=5.6						
TLY	**Talaya**	**87.32**	**336**	P	**P**	**04 22 30.3**	**-0.1**
	comp=Z,7.4nm,0.8s,baz=24,slow=2.7,SNR=9.9						
TLY	**Talaya**	**87.32**	**336**	*i* P	**P**	**04 22 31.1**	**+0.7**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TLY	**Talaya**	**87.32**	**336**	P	**P**	**04 22 30.5**	**+0.1**
TLY				IAmb	IAmb	04 22 40.5	
	comp=Z,14nm,1.0s						
MOY	**Mondy**	**88.22**	**337**	*e*P	**P**	**04 22 36.7**	**+1.9**
MOY				pmax	pmax		
	comp=Z,26nm,2.2s						
GUMO	**Guam**	**88.39**	**285**	LR	LR	04 55 03.5	
	comp=Z,125nm,21.9s,baz=110,slow=31						
ZAK	**Zakamensk**	**88.53**	**335**	*e*P	**P**	**04 22 37.3**	**+1.0**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
OBN	**Obninsk**	**88.69**	**14**	*e*P	**P**	**04 22 36.3**	**-0.5**
OBN				*e*		04 26 03.3	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.4s						
SONM	**Songino Array**	**89.48**	**332**	P	**P**	**04 22 42.4**	**+1.5**
	comp=Z,2.9nm,0.8s,baz=18,slow=3.2,SNR=20						
SONM				LR	LR	05 02 48.0	
	comp=Z,454nm,20.4s,baz=20,slow=36						
SONM	**Songino Array**	**89.48**	**332**	P	**P**	**04 22 40.4**	**-0.4**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONM	**Songino Array**	**89.48**	**332**	P	**P**	**04 22 40.4**	**-0.4**
SVE	**Sverdlovsk**	**89.64**	**1**	*e*P	**P**	**04 22 41.6**	**+0.4**
ARU	**Arti**	**89.99**	**2**	*d i*P	**P**	**04 22 43.4**	**+0.5**
ARU				S	**SKSac**	**04 33 12.8**	**-0.5**
ARU				SS	**SS**	**04 39 34.8**	**+3.4**
ARU				pmax	pmax		
	comp=Z,15nm,1.0s						
ARU				MLR	MLR		
	comp=Z,552nm,20.0s						
ARU	**Arti**	**89.99**	**2**	P	**P**	**04 22 42.8**	**-0.1**
ARU				IAmb	IAmb	04 22 52.1	
	comp=Z,13nm,0.9s						
ZALV	**Zalesovo Beam**	**90.34**	**347**	P	**P**	**04 22 45.6**	**+1.1**
	comp=Z,1.4nm,0.6s,baz=11,slow=4.4,SNR=7.8						
ZALV				LR	LR	05 07 29.7	
	comp=Z,362nm,20.7s,baz=12,slow=38						
ZALV	**Zalesovo Beam**	**90.34**	**347**	P	**P**	**04 22 44.2**	**-0.3**
ZALV	**Zalesovo Beam**	**90.34**	**347**	P	**P**	**04 22 44.2**	**-0.3**
DZM	**Mont Dzumac**	**90.91**	**244**	*e*LR	LR	04 51 52.3	
	comp=Z,220nm,22.1s						
AKASG	**Malin Array Be**	**90.92**	**20**	P	**P**	**04 22 46.9**	**-0.4**
	comp=Z,4.3nm,1.0s,baz=331,slow=4.1,SNR=9.3						
AKASG				LR	LR	05 04 54.6	
	comp=Z,638nm,18.0s,baz=345,slow=36						
AKASG	**Malin Array Be**	**90.92**	**20**	P	**P**	**04 22 46.9**	**-0.4**
AKBB	**Malin Array Si**	**90.92**	**20**	IAmb	IAmb	04 22 50.7	
	comp=Z,22nm,1.6s						
BJI	**Beijing**	**91.08**	**322**	P	**P**	**04 22 47.5**	**-0.8**
BJI				pmax	pmax		
	comp=Z,6.0nm,1.5s						
BURAR	**Bucovina Array**	**92.39**	**24**	P	**P**	**04 22 53.9**	**-0.4**
HHC	**Hu-ho-hao-te**	**92.77**	**325**	*e*P	**P**	**04 22 55.3**	**-0.9**
BRVK	**Borovoye**	**93.13**	**355**	*ce*P	**P**	**04 22 58.3**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BRVK	**Borovoye**	**93.13**	**355**	P	**P**	**04 22 57.6**	**+0.1**
BRVK				IAmb	IAmb	04 23 07.0	
	comp=Z,7.0nm,0.9s						
DGZ	**Jazzator, Alta**	**93.79**	**344**	*i* P	**P**	**04 23 02.4**	**+1.6**
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KURK	**Kurchatov**	**94.51**	**350**	*ce*P	**P**	**04 23 05.8**	**+2.0**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KURK	**Kurchatov**	**94.51**	**350**	P	**P**	**04 23 03.2**	**-0.7**
KEST	**Kesra**	**95.00**	**41**	LR	LR	05 03 08.6	
	comp=Z,246nm,21.3s,baz=314,slow=34						
NJ2	**Nanjing**	**95.39**	**314**	*e*P	**P**	**04 23 07.0**	**-1.3**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
ABKAR	**Akbulak array**	**97.21**	**1**	P	**P**	**04 23 15.5**	**-0.7**
MKAR	**Makanchi Array**	**97.65**	**346**	P	Pdif	04 23 18.4	+0.1
	comp=Z,0.9nm,0.9s,baz=33,slow=2.9,SNR=6.9						
MKAR				LR	LR	05 13 13.3	
	comp=Z,265nm,19.1s,baz=5.0,slow=39						
MKAR	**Makanchi Array**	**97.65**	**346**	*i* P	Pdif	04 23 18.3	0.0
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MKAR	**Makanchi Array**	**97.65**	**346**	P	Pdif	04 23 18.1	-0.2
WMQ	**Urumqi**	**99.21**	**342**	*e*P	**Pdif**	**04 23 25.5**	**+0.1**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,61nm,7.1s						
WMQ				LR	LR		
	comp=Z,92nm,23.7s						
WMQ				LR	LR		
	comp=Z,200nm,23.7s						
WMQ				LR	LR		
	comp=Z,350nm,23.7s						
LZH	**Lanzhou**	**100.20**	**327**	*e*P	**Pdif**	**04 23 26.0**	**-4.1**
LZH				pP	pPdif	04 23 31.5	-3.1
LZH				sP	sPdif	04 23 34.0	-2.2
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
KIV	**Kislovodsk**	**100.54**	**14**	*e*P	**Pdif**	**04 23 30.6**	**-0.7**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,712nm,20.0s						
WRAB	**Tennant Creek**	**115.24**	**262**	*i* PKIKP	**PKiKP**	**04 28 25.8**	**+0.3**
WRAB	**Tennant Creek**	**115.24**	**262**		**PKiKP**	**04 28 25.8**	**+0.3**
WRA	**Warramunga Arr**	**115.25**	**262**	PKP	**PKiKP**	**04 28 25.2**	**-0.3**
	comp=Z,2.9nm,1.2s,baz=51,slow=1.7,SNR=2.0						
CMAR	**Chiang Mai Arr**	**117.20**	**320**	PKP	**PKiKP**	**04 28 31.1**	**+1.6**
	comp=Z,1.4nm,0.3s,baz=332,slow=2.6,SNR=8.3						
ASAR	**Alice Springs**	**117.35**	**259**	PKP	**PKiKP**	**04 28 29.5**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=76,slow=2.4,SNR=16						
ASAR	**Alice Springs**	**117.35**	**259**	PKIKP	**PKiKP**	**04 28 29.1**	**-0.4**
ASAR	**Alice Springs**	**117.35**	**259**		**PKiKP**	**04 28 29.1**	**-0.4**
VNA3	**Neumayer Olymp**	**127.55**	**157**	PKPdf	**PKiKP**	**04 28 47.8**	**-0.4**
VNA2	**Neumayer--Watz**	**128.32**	**157**	PKPdf	**PKiKP**	**04 28 49.5**	**-0.2**
SYO	**Syowa Base**	**142.62**	**167**	⇓*i*pPdiff	pPdif	04 26 39.0	-3.0
LSZ	**Lusaka**	**144.27**	**67**	PKP	**PKPdf**	**04 29 19.7**	**-0.7**
	comp=Z,3.9nm,0.6s,baz=338,slow=6.0,SNR=6.3						
LSZ	**Lusaka**	**144.27**	**67**	PKIKP	**PKPdf**	**04 29 19.8**	**-0.5**
LSZ	**Lusaka**	**144.27**	**67**		**PKPdf**	**04 29 19.8**	**-0.5**
SUR	**Sutherland**	**145.57**	**99**	PKPbc	**PKPab**	**04 29 22.4**	**-0.3**
	comp=Z,34nm,0.8s,baz=274,slow=4.6,SNR=21						
SUR	**Sutherland**	**145.57**	**99**		**PKPab**	**04 29 23.3**	**+0.6**
MAW	**Mawson**	**146.24**	**181**	PKPbc	**PKPab**	**04 29 23.4**	**-0.5**
	comp=Z,9.6nm,0.8s,baz=211,slow=3.1,SNR=11						
LBTB	**Lobatse**	**147.16**	**84**	PKPbc	**PKPab**	**04 29 28.0**	**-0.9**
	comp=Z,9.8nm,0.8s,baz=288,slow=3.7,SNR=11						
LBTB	**Lobatse**	**147.16**	**84**	PKP2	**PKPbc**	**04 29 26.8**	**-0.5**
LBTB	**Lobatse**	**147.16**	**84**		**PKPbc**	**04 29 26.8**	**-0.5**
BOSA	**Boshof**	**148.20**	**91**	PKPbc	**PKPbc**	**04 29 28.6**	**-1.4**
	comp=Z,3.6nm,0.6s,baz=219,slow=2.4,SNR=7.3						
BOSA	**Boshof**	**148.20**	**91**	PKP2	**PKiKP**	**04 29 30.2**	**-1.5**
BOSA	**Boshof**	**148.20**	**91**		**PKiKP**	**04 29 30.1**	**-1.5**

*NIED **29** 04:11:00, 36°.30N×142°.00E, h17^{km}, Mw3.7 Best double couple: M$_0$3.58000×10^{14} NP1:ϕ$_s$353.00000°, δ74.00000°, λ50.00000°. NP2:ϕ$_s$245.00000°, δ43.00000°, λ156.00000°.*

*IDC **29** 04:11:38.8±2.1, 36°.17N×142°.04E, h0^{km}, mb3.7/4, mb1 3.8/6, mb1mx3.5/60, mbtmp3.8/6, ML3.5/2, MS2.9/2, Ms1 2.9/2, ms1mx2.4/53, Error ellipse: s-maj=45.9km s-min=25.2km az=66.0*

*NEIC **29** 04:11:39.9±1.0, 36°.21N±0°.06×142°.1E±0°.1, h10^{km}±1^{km}, mb4.3/5, Error ellipse: s-maj=14.4km s-min=9.0km az=76.0*

*JMA **29** 04:11:41.9±0.2, 36°.27N×141°.98E, h44^{km}, M3.6*

ISC 29 04:11:42.1±1.2, **36°.20N**±0°.05×**141°.97E**±0°.08, **h23^{km}, n38,** σ**0^{s}96**/36, **mb3.8**/7, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**1.03**	**241**	P	**Pn**	**04 12 00.9**	**-0.3**
CHOJ				S	**Sn**	**04 12 15.3**	**+0.4**
JHYU	**Hitachinakayam**	**1.13**	**277**	P	**Pn**	**04 12 01.5**	**-1.0**
JHYU				*e*S	**Sb**	**04 12 15.9**	**-1.3**
JIHU	**Itakohorinouch**	**1.20**	**259**	P	**Pn**	**04 12 03.3**	**-0.1**
JHO	**Hitachi**	**1.20**	**290**	P	**Pn**	**04 12 02.1**	**-1.4**
ONAJ	**Iwakimizuishiy**	**1.30**	**314**	P	**Pn**	**04 12 03.7**	**-1.3**
JFK	**Kawauchi**	**1.46**	**323**	P	**Pn**	**04 12 06.6**	**-0.5**
BSO1	**Boso 1**	**1.75**	**208**	P	**Pn**	**04 12 11.1**	**+0.6**
BSO1				S	**Sb**	**04 12 34.0**	**-0.5**
BSO3	**Boso 3**	**1.84**	**221**	P	**Pn**	**04 12 12.4**	**+0.4**
JAG	**Ashikaga**	**2.05**	**277**	P	**Pn**	**04 12 14.8**	**-0.4**
JFY	**Yanaizu**	**2.18**	**304**	*e*S	**Sn**	**04 12 45.0**	**+1.7**
JKT	**Katashina**	**2.27**	**285**	P	**Pn**	**04 12 18.4**	**+0.1**
JKT				*e*S	**Sn**	**04 12 45.3**	**-0.2**
JRY	**Ryogami san**	**2.50**	**267**	P	**Pn**	**04 12 20.9**	**-0.4**
JOD2	**Odawara 2**	**2.53**	**249**	P	**Pn**	**04 12 22.5**	**+0.7**
MJAR	**Matsushiro Arr**	**3.06**	**277**	Pn	**Pn**	**04 12 29.5**	**+0.4**
	1.2nm,0.3s,baz=100,slow=9.7,SNR=84						
MJAR				Sn	**Sn**	**04 13 05.7**	**+0.8**
	0.8nm,0.3s,baz=241,slow=28,SNR=6.2						
MAJO	**Matsushiro**	**3.06**	**277**		**Pn**	**04 12 29.6**	**+0.5**
MAT	**Matsushiro**	**3.06**	**277**	P	**Pn**	**04 12 29.9**	**+0.8**
MAT				S	**Sn**	**04 13 04.7**	**-0.3**
MJB9	**Matsu-Tunnel**	**3.06**	**278**		**Pn**	**04 12 30.1**	**+1.0**
JHJ2	**Mitsune**	**3.56**	**211**	Pn	**Pn**	**04 12 36.0**	**0.0**
JHJ	**Hachijo jima 2**	**3.57**	**211**	Pn	**Pn**	**04 12 36.4**	**+0.4**
	62nm,0.3s,baz=69,slow=24,SNR=16						
JHJ				Sn	**Sn**	**04 13 14.6**	**-2.9**
	54nm,0.3s,baz=213,slow=22,SNR=12						
INU	**Inuyama**	**4.12**	**260**		**Pn**	**04 12 44.0**	**+0.3**
ERM	**Erimo**	**5.88**	**9**	Pn	**Pn**	**04 13 06.7**	**-1.1**
USRK	**Ussuriysk Ar.**	**11.04**	**319**	LR	LR	04 17 52.5	
	comp=Z,60nm,21.8s,baz=154,slow=34						
H11N2	**WAKE ISLAND Hy**	**27.34**	**120**	T	T	04 46 54.3	
	baz=309						
H11N1	**WAKE ISLAND Hy**	**27.35**	**120**	T	T	04 47 06.6	
	baz=309						
H11N3	**WAKE ISLAND Hy**	**27.36**	**120**	T	T	04 46 56.7	
	baz=309						
ENH	**Enshi**	**27.73**	**267**	P	**P**	**04 17 28.0**	**-0.8**
ENH				IAmb	IAmb	04 17 30.0	
	comp=Z,6.3nm,0.7s						
H11S1	**WAKE ISLAND Hy**	**28.03**	**122**	T	T	04 47 44.3	
	baz=314						
H11S3	**WAKE ISLAND Hy**	**28.03**	**122**	T	T	04 47 50.1	
	baz=314						
H11S2	**WAKE ISLAND Hy**	**28.05**	**122**	T	T	04 47 54.1	
	baz=314						
SONM	**Songino Array**	**28.63**	**305**	P	**P**	**04 17 37.7**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=106,slow=9.3,SNR=6.8						
SONM	**Songino Array**	**28.63**	**305**	IAmb	IAmb	04 17 39.3	
	comp=Z,0.5nm,0.7s						
TLY	**Talaya**	**31.22**	**312**	LR	LR	04 29 10.1	
	comp=Z,30nm,21.8s,baz=16,slow=34						
ZALV	**Zalesovo Beam**	**42.81**	**313**	P	**P**	**04 19 38.9**	**+1.0**
	comp=Z,0.4nm,0.2s,baz=80,slow=8.4,SNR=1.6						
MK31	**Makanchi Array**	**44.94**	**303**	P	**P**	**04 19 57.0**	**+1.8**
MK31				IAmb	IAmb	04 20 00.7	
	comp=Z,7.0nm,2.0s						
MKAR	**Makanchi Array**	**44.94**	**303**	P	**P**	**04 19 55.5**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=89,slow=10.0,SNR=8.3						
MKAR	**Makanchi Array**	**44.94**	**303**	P	**P**	**04 19 56.0**	**+0.8**
KURK	**Kurchatov**	**46.80**	**309**	P	**P**	**04 20 10.2**	**+0.4**
KURK				IAmb	IAmb	04 20 22.1	
	comp=Z,2.0nm,0.8s						
WRA	**Warramunga Arr**	**56.31**	**189**	P	**P**	**04 21 20.6**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=1.6,slow=7.2,SNR=5.4						

*PAS **29** 04:11:53.8±1.3, 33°.920N±0°.006×117°.932W±0°.009, h2^{km}±6^{km}, ML3.2/2, Error ellipse: s-maj=1.1km s-min=0.8km az=65.0*

NEIC 29 04:11:53.8±0.8, **33°.939N**±0°.004×**117°.90W**±0°.01, **h11^{km}**±2^{km}**, Error ellipse: s-maj=1.4km s-min=0.6km az=91.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FULC	**Fullerton**	**0.07**	**197**		Pg	04 11 55.4	-0.8
RHC	**Rose Hills Cem**	**0.11**	**303**		Pg	04 11 56.3	-0.5
BREC	**Barre Substati**	**0.15**	**208**		Pg	04 11 56.9	-0.3
BREC					Sg	04 12 00.3	+0.6
PSRC	**Puddingstone R**	**0.17**	**26**		Pg	04 11 58.0	+0.3
DLAC	**Del Amo**	**0.19**	**241**		Pg	04 11 57.8	-0.1
CHNC	**Chino**	**0.19**	**72**		Pg	04 11 58.5	+0.5
GVRC	**Garvey Reservo**	**0.21**	**301**		Pg	04 11 58.3	-0.1
PEM	**Pine Mountain**	**0.23**	**6**		Pg	04 11 58.8	+0.2
SANC	**Santa Ana**	**0.23**	**178**		Pg	04 11 58.6	0.0
MLSC	**Mira Loma**	**0.29**	**77**		Pg	04 11 60.0	+0.3
MLSC					Sg	04 12 04.6	+1.0
CRNC	**Corona**	**0.29**	**103**		Pg	04 11 59.9	+0.2
WTT2	**Watts, South G**	**0.30**	**272**		Pg	04 12 00.2	+0.3
MWC	**Mount Wilson**	**0.31**	**335**		Pg	04 11 59.8	-0.5
SSK	**Sunset Peak**	**0.32**	**32**		Pg	04 12 00.8	+0.4
PASC	**Pasadena Art C**	**0.33**	**314**		Pg	04 11 59.8	-0.8
PASC					Sg	04 12 04.9	-0.1
XTL	**Crystal Lake,**	**0.36**	**5**		Pg	04 12 00.9	-0.1
BFSC	**Mount Baldy Ra**	**0.36**	**33**		Pg	04 12 01.2	+0.2
BFSC					Sb	04 12 07.1	-0.8
GR2C	**Griffith Obs.**	**0.38**	**298**		Pg	04 12 00.7	-0.6
CHFC	**Chilao Flat St**	**0.41**	**345**		Pg	04 12 01.3	-0.6
CHFC					Sg	04 12 07.2	-0.2
SS2	**San Sevaine**	**0.42**	**51**		Pg	04 12 02.6	+0.5
RVR	**Riverside**	**0.44**	**83**		Pg	04 12 02.5	0.0
RVR					Sg	04 12 08.9	+0.7
SME	**Santa Rosa Min**	**0.47**	**104**		Pg	04 12 02.9	-0.1
RSBC	**Riverside Bore**	**0.47**	**86**		Pg	04 12 03.3	+0.2
RSBC					Sb	04 12 10.4	-0.8
RSBC	**Riverside Bore**	**0.47**	**86**		Pg	04 12 03.2	+0.1
RSBC					Sb	04 12 10.4	-0.8
DECC	**Green Verdugo**	**0.48**	**311**		Pg	04 12 02.5	-0.7
DJJ	**Donna J Jenkin**	**0.49**	**290**		Pg	04 12 02.6	-0.8
JNH	**Juniper Hills**	**0.51**	**355**		Pg	04 12 03.4	-0.5
IR2C	**Iron Canyon**	**0.61**	**317**		Pg	04 12 05.0	-0.7
PEC	**Perris**	**0.61**	**94**		Pg	04 12 05.6	-0.2
PEC					Sb	04 12 14.6	-0.5
CJV	**Casa Juvan**	**0.62**	**341**		Pg	04 12 05.4	-0.6
CFT	**Crafton Hills**	**0.66**	**81**		Pg	04 12 06.7	+0.1
MURC	**Murrieta**	**0.68**	**120**		Pg	04 12 06.6	-0.3
SBB	**Saddle Back Bu**	**0.75**	**5**		Pg	04 12 08.5	+0.2
LEOC	**Leona Valley**	**0.77**	**334**		Pg	04 12 07.6	-1.1
HMTC	**Hemet**	**0.78**	**107**		Pg	04 12 08.3	-0.5
BACC	**Bachelor Mtn.**	**0.79**	**114**		Pg	04 12 08.2	-0.7
DGR	**Domenigoni Val**	**0.79**	**111**		Pg	04 12 08.6	-0.6
DGR					Sg	04 12 19.9	+0.3
ALPC	**Antelope**	**0.82**	**336**		Pg	04 12 08.6	-1.0
ALPC					Sg	04 12 19.7	-0.6
BTPC	**Burnt Peak**	**0.93**	**323**		Pg	04 12 10.7	-1.1
BTPC					Sg	04 12 23.5	-0.4

*PRE **29** 04:21:59.0±0.7, 23°.57S×25°.03E, h5^{km}, ML2.4*

*EAF **29** 04:22:02.7±1.2, 23°.80S×26°.28E, h10^{km}, MD3.5*

ISC 29 04:21:35.3±1.8, **22°.90S**±0°.08×**23°.91E**±0°.10, **h10^{km}, n9,** σ**1^{s}96**/15, **Botswana**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	**Lobatse**	**2.61**	**144**	*i* P	**Pg**	**04 22 26.3**	**+0.9**
LBTB	**Lobatse**	**2.61**	**144**	*i* P	**Pg**	**04 22 26.3**	**+0.9**
MATP	**Matopo**	**4.92**	**61**	*i* P	**Pb**	**04 23 04.0**	**+2.3**
MATP				*i* S	**Sn**	**04 23 45.9**	**-0.8**
MATP	**Matopo**	**4.92**	**61**	*i* P	**Pb**	**04 23 04.0**	**+2.3**
MATP				*i* S	**Sn**	**04 23 45.9**	**-0.8**
PRYS	**Parys**	**5.09**	**143**	*e*P	**Pb**	**04 23 01.2**	**-3.3**
PRYS				*e*S	**Sn**	**04 23 47.9**	**-2.8**
PRYS				AML	AML	04 23 55.1	
	comp=Z,16nm,0.3s						
BOSA	**Boshof**	**5.82**	**168**	*i* P	**Pb**	**04 23 15.6**	**-1.4**
BOSA				*i* S	**Sn**	**04 24 09.2**	**+0.4**
BOSA	**Boshof**	**5.82**	**168**	*i* P	**Pb**	**04 23 15.6**	**-1.4**
BOSA				*i* S	**Sn**	**04 24 09.2**	**+0.4**
UPI	**Upington**	**5.95**	**203**	*e*P	**Pg**	**04 23 28.4**	**-0.8**
UPI				*e*S	**Sb**	**04 24 32.9**	**+2.4**
UPI				AML	AML	04 24 36.9	
	comp=Z,35nm,0.7s						
PKA	**Prieska**	**6.83**	**188**	*e*P	**Pb**	**04 23 35.8**	**+1.7**
PKA				*e*S	Sb	04 24 45.8	-10
PKA				AML	AML	04 25 01.3	
	comp=Z,1.1nm,0.2s						

*IDC **29** 04:26:45.4±0.4, 6°.34S×154°.94E, h52^{km}±3^{km}, mb4.5/28, mb1 4.5/32, mb1mx4.4/47, mbtmp4.7/32, MS3.8/10, Ms1 3.8/10, ms1mx3.5/37, Error ellipse: s-maj=11.2km s-min=9.4km az=90.0*

*NEIC **29** 04:26:51.3±1.8, 6°.43S±0°.09×154°.93E±0°.08, h108^{km}±5^{km}, mb4.8/84, Error ellipse: s-maj=12.8km s-min=10.4km az=202.0*

*DJA **29** 04:26:53.8±0.8, 6°S±3°×15°5E±°, h120^{km}±5^{km}, M5.1/44, mB5.4/13, mb5.0/44, MLv5.5/1, Mw(mB)4.9/13*

ISC 29 04:26:45.7±0.3, **6°.32S**±0°.05×**154°.98E**±0°.05, **h56^{km}, n173,** σ**1^{s}46**/175, **mb4.9**/76, **1C, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.51**	**307**		Pn	04 27 45.5	+7.6
KRVT	**Keravat (AS076**	**3.56**	**304**	P	**Pn**	**04 27 41.1**	**+2.7**
	16nm,0.3s,baz=172,slow=3.9,SNR=11						
KRVT				S	**Sn**	**04 28 22.3**	**+3.0**
	97nm,0.3s,baz=224,slow=22,SNR=6.3						
HNR	**Honiara**	**5.81**	**122**	P	**Pn**	**04 28 10.9**	**+1.6**
	23nm,0.3s,baz=170,slow=2.2,SNR=4.6						
HNR				S	**Sn**	**04 29 19.9**	**+5.2**
	1.5nm,0.3s,baz=18,slow=20,SNR=0.9						
HNR				LR	LR	04 30 27.6	
	comp=Z,846nm,19.1s,baz=303,slow=38						
PMG	**Port Moresby**	**8.33**	**248**	P	**Pn**	**04 28 44.0**	**+0.1**
	44nm,0.3s,baz=52,slow=10,SNR=48						
PMG				S	**Sn**	**04 30 20.9**	**+4.2**
	16nm,0.3s,baz=230,slow=23,SNR=6.7						
PMG				LR	LR	04 31 50.5	
	comp=Z,770nm,21.3s,baz=47,slow=37						
PMG	**Port Moresby**	**8.33**	**248**		**Pn**	**04 28 46.6**	**+2.7**
COEN	**Coen**	**13.88**	**236**		**Pn**	**04 30 00.8**	**+1.1**
CTA	**Charters Tower**	**16.10**	**211**	P	**Pn**	**04 30 29.1**	**+0.6**
	0.5nm,0.3s,baz=34,slow=15,SNR=5.6						
DZM	**Mont Dzumac**	**19.18**	**146**	P	**Pn**	**04 31 06.7**	**+0.3**
	2.9nm,0.3s,baz=273,slow=9.6,SNR=26						
DZM				LR	LR	04 36 48.6	
	comp=Z,376nm,21.7s,baz=247,slow=31						
DZM	**Mont Dzumac**	**19.18**	**146**	P	**Pn**	**04 31 05.8**	**-0.5**
DZM				IAmb	IAmb	04 31 08.0	
	comp=Z,44nm,0.8s						
EIDS	**Eidsvold**	**19.31**	**191**	P	**Pn**	**04 31 07.9**	**+0.2**
EIDS				IAmb	IAmb	04 31 27.0	
	comp=Z,121nm,2.0s						
GUMO	**Guam**	**22.18**	**333**	LR	LR	04 40 04.9	
	comp=Z,59nm,20.6s,baz=192,slow=36						
FAKI	**Fak Fak**	**22.91**	**277**	P	**P**	**04 31 44.2**	**-0.9**
	comp=Z,691nmcomp=Z,71nm,0.8s						
FAKI	**Fak Fak**	**22.91**	**277**	P	**P**	**04 31 45.7**	**+0.6**
FAKI				IAmb	IAmb	04 32 02.5	
	comp=Z,51nm,0.8s						
WR0	**Warramunga Arr**	**24.04**	**234**	P	**P**	**04 31 56.4**	**+0.6**
WB0	**Warramunga Arr**	**24.06**	**234**	P	**P**	**04 31 56.6**	**+0.6**
ARMA	**Armidale**	**24.18**	**187**	P	**P**	**04 31 58.1**	**+1.1**
WRAB	**Tennant Creek**	**24.18**	**234**	P	**P**	**04 31 57.7**	**+0.6**
WRAB				IAmb	IAmb	04 31 58.6	
	comp=Z,53nm,1.1s						
WB2	**Warramunga Arr**	**24.18**	**234**	P	**P**	**04 31 57.6**	**+0.5**
WRA	**Warramunga Arr**	**24.20**	**234**	P	**P**	**04 31 57.7**	**+0.5**
	comp=Z,35nm,0.8s,baz=57,slow=9.6,SNR=22						
WRA				S	**S**	**04 36 11.3**	**-0.5**
	comp=Z,6.6nm,1.2s,baz=58,slow=15,SNR=3.8						
WRA				LR	LR	04 40 51.7	
	comp=Z,278nm,21.4s,baz=65,slow=35						
WRA	**Warramunga Arr**	**24.20**	**234**	P	**P**	**04 31 56.9**	**-0.3**
SIJI	**Sorong**	**24.27**	**282**	P	**P**	**04 31 58.1**	**+0.1**
	comp=Z,34nm,0.8s,baz=64,slow=10,SNR=12						
MTN	**Manton Dam**	**24.38**	**253**	P	**P**	**04 31 59.5**	**+0.6**
MTN				IAmb	IAmb	04 32 00.3	
	comp=Z,47nm,1.0s						
AS31	**Alice Springs**	**26.61**	**227**	P	**P**	**04 32 19.2**	**0.0**
ASAR	**Alice Springs**	**26.61**	**227**	P	**P**	**04 32 19.1**	**0.0**
	comp=Z,8.5nm,0.7s,baz=58,slow=8.4,SNR=125						
ASAR				PcP	**PcP**	**04 35 42.2**	**0.0**
	comp=Z,2.0nm,0.6s,baz=64,slow=2.9,SNR=5.1						
ASAR				S	**S**	**04 36 50.4**	**+0.1**
	comp=Z,0.7nm,0.9s,baz=67,slow=13,SNR=2.3						
ASAR				LR	LR	04 42 35.4	
	comp=Z,242nm,19.5s,baz=112,slow=36						
ASAR	**Alice Springs**	**26.61**	**227**	P	**P**	**04 32 17.7**	**-1.4**
KNRA	**Kununurra**	**27.34**	**248**	P	**P**	**04 32 25.5**	**-0.1**
KNRA				IAmb	IAmb	04 32 44.4	
	comp=Z,21nm,0.7s						
STKA	**Stephens Creek**	**28.34**	**205**	P	**P**	**04 32 34.1**	**-0.4**
	comp=Z,3.9nm,0.6s,baz=9.6,slow=8.6,SNR=11						
STKA				LR	LR	04 43 52.3	
	comp=Z,258nm,19.6s,baz=23,slow=36						
STKA	**Stephens Creek**	**28.34**	**205**	P	**P**	**04 32 33.6**	**-0.8**
SANI	**Sanana**	**29.22**	**277**	P	**P**	**04 32 41.0**	**-1.5**
	comp=Z,40nm,0.8s						
SOEI	**Soe**	**30.60**	**262**	P	**P**	**04 32 55.6**	**+0.8**
	comp=Z,35nm,0.8s						
FITZ	**Fitzroy Crossi**	**30.92**	**245**	P	**P**	**04 32 56.6**	**-0.8**
FITZ				IAmb	IAmb	04 32 57.8	
	comp=Z,18nm,0.8s						
KMSI	**Cibinong**	**31.69**	**281**	P	**P**	**04 33 04.7**	**+0.4**
	comp=Z,5µmcomp=Z,160nm,0.7s						
BBOO	**Buckleboo**	**31.70**	**211**	P	**P**	**04 33 03.0**	**-1.1**
DAV	**Davao City (W)**	**32.21**	**294**	LR	LR	04 44 09.1	
	comp=Z,66nm,20.3s,baz=156,slow=32						
MMRI	**Maumere**	**32.54**	**264**	P	**P**	**04 33 11.3**	**-0.5**
	comp=Z,138nm,0.8s						
MMRI	**Maumere**	**32.54**	**264**	P	**P**	**04 33 11.5**	**-0.3**
OUZ	**Omahuta**	**33.48**	**152**	P	**P**	**04 33 21.4**	**+1.7**
OUZ				IAmb	IAmb	04 33 21.6	
	comp=Z,17nm,1.1s						
MRSI	**Marisa**	**33.66**	**280**	P	pP	04 33 35.4	+0.4
APSI	**Ampana**	**33.68**	**278**	P	**P**	**04 33 22.7**	**+1.0**
	comp=Z,522nmcomp=Z,39nm,1.1s						
KAPI	**Kappang**	**35.08**	**270**	P	**P**	**04 33 33.6**	**-0.2**
	comp=Z,3.6nm,0.3s,baz=53,slow=9.0,SNR=5.7						
KAPI	**Kappang**	**35.08**	**270**	IAmb	IAmb	04 34 10.3	
	comp=Z,13nm,0.9s						
WBSI	**Waikabubak, Su**	**35.39**	**262**	P	**P**	**04 33 36.4**	**-0.1**
	comp=Z,894nmcomp=Z,77nm,0.8s						
MPSI	**Mapaga**	**35.63**	**279**	P	**P**	**04 33 36.7**	**-1.9**
	comp=Z,24nm,0.6s						
PLAI	**Plampang**	**36.95**	**264**	P	**P**	**04 33 48.1**	**-1.8**
	comp=Z,788nmcomp=Z,113nm,0.8s						
URZ	**Urewera**	**37.60**	**151**	P	**P**	**04 33 55.4**	**+0.4**
	comp=Z,6.5nm,0.4s,baz=300,slow=6.9,SNR=6.2						
BKZ	**Black Stump Fm**	**38.03**	**152**	P	**P**	**04 33 59.5**	**+0.8**
RPZ	**Rata Peaks**	**39.84**	**162**	P	**P**	**04 34 13.3**	**-0.4**
	comp=Z,16nm,0.8s,baz=205,slow=2.3,SNR=6.5						
JAGI	**Jajag, Banyuwa**	**40.53**	**264**	P	**P**	**04 34 17.2**	**-2.7**
	comp=Z,47nm,0.9s						
JAGI	**Jajag, Banyuwa**	**40.53**	**264**	P	**P**	**04 34 17.8**	**-2.1**
KKM	**Kota Kinabalu**	**40.59**	**287**	P	**P**	**04 34 20.0**	**-0.5**

MORW	**Morawa**	**43.14**	**234**	P	**P**	**04 34 40.7**	**-0.3**
MORW				IAmb	IAmb	04 34 41.0	
	comp=Z,12nm,0.8s						
PCJI	**Pacitan**	**43.48**	**265**	P	**P**	**04 34 42.5**	**-1.4**
	comp=Z,78nm,1.2s						
SBUM	**Sibu**	**43.57**	**280**	P	**P**	**04 34 46.1**	**+1.4**
SBUM	**Sibu**	**43.57**	**280**	P	**P**	**04 34 46.0**	**+1.3**
WOJI	**Wonogiri, Jawa**	**43.73**	**265**	P	**P**	**04 34 45.3**	**-0.6**
	comp=Z,3µmcomp=Z,24nm,1.4s						
NWAO	**Narrogin (SRO)**	**43.93**	**228**	P	**P**	**04 34 46.4**	**-0.9**
	comp=Z,4.5nm,0.6s,baz=59,slow=10,SNR=4.0						
KSM	**Kuching**	**45.26**	**278**	P	**P**	**04 34 58.7**	**+0.5**
JNU	**Nakatsue**	**45.41**	**331**	P	**P**	**04 34 58.6**	**-0.5**
	comp=Z,9.7nm,0.9s,baz=180,slow=2.0,SNR=2.8						
RAR	**Rarotonga**	**46.19**	**113**	P	**P**	**04 35 04.3**	**-1.0**
	comp=Z,7.8nm,0.5s,baz=296,slow=2.3,SNR=3.1						
CISI	**Cisompet, Garu**	**46.82**	**266**	P	**P**	**04 35 09.0**	**-1.5**
	comp=Z,3µmcomp=Z,72nm,0.7s						
CISI	**Cisompet, Garu**	**46.82**	**266**	P	**P**	**04 35 09.6**	**-0.9**
CNJI	**Cibinong**	**47.51**	**266**	P	**P**	**04 35 14.6**	**-1.2**
	comp=Z,186nm,1.0s						
KSRS	**Korea Array**	**50.34**	**332**	P	**P**	**04 35 37.2**	**+0.2**
	comp=Z,3.1nm,0.9s,baz=151,slow=9.0,SNR=8.5						
KSRS				pP	**pP**	**04 35 51.0**	**-1.0**
	comp=Z,2.8nm,0.8s,baz=159,slow=8.8,SNR=4.7						
MDSI	**Maura Dua**	**50.59**	**269**	P	**P**	**04 35 37.4**	**-2.0**
	comp=Z,14nm,1.2s						
NJ2	**Nanjing**	**51.39**	**320**	*e*P	**P**	**04 35 47.3**	**+2.3**
JKA	**Kamikawa-asahi**	**51.43**	**349**	P	**P**	**04 35 46.4**	**+1.3**
ASAJ	**Asahikawa**	**51.43**	**349**	P	**P**	**04 35 46.4**	**+1.3**
	comp=Z,5.4nm,0.9s,baz=60,slow=31,SNR=4.3						
MYKOM	**Kota Tinggi**	**51.68**	**277**	P	**P**	**04 35 48.0**	**+0.5**
SDSI	**Sungai Dareh**	**53.69**	**273**	P	**P**	**04 36 00.7**	**-1.7**
	comp=Z,56nm,1.0s						
USRK	**Ussuriysk Ar.**	**54.40**	**340**	P	**P**	**04 36 07.1**	**+0.1**
	comp=Z,2.1nm,0.7s,baz=138,slow=5.9,SNR=3.4						
PDSI	**Padang**	**54.65**	**273**	P	**P**	**04 36 08.6**	**-0.8**
IPM	**Ipoh**	**54.93**	**280**	P	**P**	**04 36 11.0**	**-0.4**
PPT	**Papeete**	**55.20**	**107**	P	**P**	**04 36 14.0**	**+0.6**
	comp=Z,24nm,0.9s,baz=66,slow=20,SNR=2.3						
CN2	**Changchun**	**56.58**	**335**	*e*P	**P**	**04 36 22.8**	**+0.1**
SLVN	**Son La**	**57.13**	**300**	IAmb	IAmb	04 36 44.9	
	comp=Z,14nm,1.1s						
PBKT	**Sadao Pong**	**58.05**	**294**	P	**P**	**04 36 34.9**	**+1.4**
PBKT				IAmb	IAmb	04 36 51.4	
	comp=Z,10nm,0.8s						
XAN	**Xi'an**	**59.21**	**316**	P	**P**	**04 36 41.3**	**-0.1**
XAN				pP	pP	04 36 46.0	-11
PETK	**Petropavlovsk-**	**59.24**	**2**	P	**P**	**04 36 42.4**	**+1.2**
	comp=Z,8.5nm,0.8s,baz=172,slow=8.7,SNR=7.9						
PETK				LR	LR	04 57 45.9	
	comp=Z,111nm,21.5s,baz=64,slow=31						
CMAR	**Chiang Mai Arr**	**60.48**	**295**	P	**P**	**04 36 51.7**	**+1.4**
	comp=Z,22nm,0.8s,baz=115,slow=5.1,SNR=76						
CMAR	**Chiang Mai Arr**	**60.48**	**295**	P	**P**	**04 36 51.3**	**+0.9**
CHTO	**Chiang Mai**	**60.60**	**296**	P	**P**	**04 36 52.2**	**+1.1**
CD2	**Chengdu**	**61.37**	**310**	P	**P**	**04 36 57.0**	**+0.8**
HHC	**Hu-ho-hao-te**	**61.54**	**324**	*e*P	**P**	**04 37 00.8**	**+3.5**
LZH	**Lanzhou**	**63.83**	**315**	*e*P	**P**	**04 37 15.5**	**+2.8**
LZH				pP	sP	04 37 39.8	+5.5
LZH				sP	PcP	04 37 50.8	+2.7
MA2	**Magadan**	**65.77**	**358**	P	**P**	**04 37 25.1**	**+0.5**
MA2				IAmb	IAmb	04 37 25.6	
	comp=Z,9.5nm,0.7s						
GTA	**Gaotai**	**68.24**	**317**	*e*P	**P**	**04 37 41.8**	**+0.9**
GTA				pP	pP	04 37 46.3	-10
GTA				sP	sP	04 37 49.3	-13
SONM	**Songino Array**	**68.76**	**327**	P	**P**	**04 37 44.4**	**+0.4**
	comp=Z,5.4nm,0.7s,baz=136,slow=5.7,SNR=38						
SONM				pP	**pP**	**04 37 59.0**	**-0.5**
	comp=Z,2.6nm,0.6s,baz=137,slow=4.5,SNR=8.0						
SONM	**Songino Array**	**68.76**	**327**	P	**P**	**04 37 44.1**	**+0.2**
LSA	**Lhasa**	**70.88**	**304**	P	**P**	**04 37 57.3**	**-0.5**
LSA				IAmb	IAmb	04 38 14.2	
	comp=Z,12nm,0.9s						
VNDA	**Vanda**	**71.25**	**178**	P	**P**	**04 37 59.1**	**+0.5**
	comp=Z,2.9nm,0.9s,baz=327,slow=5.6,SNR=13						
VNDA				pP	**pP**	**04 38 12.7**	**-1.4**
	comp=Z,2.6nm,0.8s,baz=314,slow=7.4,SNR=6.6						
VNDA	**Vanda**	**71.25**	**178**	P	**P**	**04 37 58.5**	**-0.1**
TLY	**Talaya**	**72.48**	**329**	P	**P**	**04 38 05.7**	**-0.7**
TAPN	**Taplejung**	**73.04**	**301**	*e*P	**P**	**04 38 11.4**	**+0.8**
	comp=Z,17nm,0.7s						
ODAN	**Odare**	**73.18**	**300**	*e*P	**P**	**04 38 12.1**	**+0.8**
	comp=Z,45nm,0.6s						
RAMN	**Ramite**	**73.88**	**300**	*e*P	**P**	**04 38 15.9**	**+0.4**
	comp=Z,9.1nm,0.5s						
JIRN	**Jiri**	**74.43**	**301**	*e*P	**P**	**04 38 19.5**	**+0.7**
BILL	**Bilibino**	**74.61**	**4**	P	**P**	**04 38 18.7**	**+0.2**
BILL				IAmb	IAmb	04 38 20.4	
	comp=Z,12nm,0.8s						
GUN	**Gumba**	**74.76**	**301**	*e*P	**P**	**04 38 20.8**	**+0.1**
	comp=Z,33nm,0.8s						
PKI	**Pulchoki**	**75.07**	**301**	*e*P	**P**	**04 38 22.1**	**-0.4**
KKN	**Kakani**	**75.24**	**301**	*e*P	**P**	**04 38 23.2**	**-0.1**
	comp=Z,20nm,0.6s						
PALK	**Pallekele**	**75.32**	**279**	P	**P**	**04 38 24.1**	**+0.3**
DMN	**Daman**	**75.34**	**301**	*e*P	**P**	**04 38 24.1**	**+0.2**
GKN	**Gorkha**	**75.84**	**301**	*e*P	**P**	**04 38 26.5**	**-0.2**
KDAK	**Kodiak Island**	**76.57**	**26**	P	**P**	**04 38 30.6**	**+0.8**
	comp=Z,4.0nm,0.9s,baz=188,slow=1.4,SNR=4.0						
KDAK				pP	**pP**	**04 38 46.1**	**+0.4**
	comp=Z,8.1nm,0.8s,baz=214,slow=1.9,SNR=6.8						
KDAK	**Kodiak Island**	**76.57**	**26**	IAmb	IAmb	04 38 47.3	
	comp=Z,12nm,0.9s						
ANM	**Nome**	**76.59**	**16**	P	**P**	**04 38 31.1**	**+1.2**
DANN	**Dangsing**	**76.68**	**301**	*e*P	**P**	**04 38 31.1**	**-0.5**
	comp=Z,13nm,0.7s						
WMQ	**Urumqi**	**78.32**	**317**	*e*P	**P**	**04 38 41.0**	**+0.9**
SUA	**Susitna One**	**79.47**	**23**	P	**P**	**04 38 45.6**	**-0.4**
RC01	**Rabbit Creek A**	**79.66**	**24**	P	**P**	**04 38 48.1**	**+1.1**
RC01				IAmb	IAmb	04 39 04.7	
	comp=Z,20nm,1.1s						
PMR	**Palmer**	**80.18**	**24**	IAmb	IAmb	04 39 07.2	
	comp=Z,13nm,0.9s						
GHO	**Glory Hole Cre**	**80.36**	**24**	IAmb	IAmb	04 39 08.0	
	comp=Z,16nm,1.0s						
GLI	**Glacier Island**	**80.63**	**25**	P	**P**	**04 38 53.9**	**+1.7**
GLI				IAmb	IAmb	04 39 09.5	
	comp=Z,14nm,0.8s						
SCM	**Sheep Creek Mo**	**81.03**	**24**	P	**P**	**04 38 55.3**	**+0.8**
SCM				IAmb	IAmb	04 39 12.0	
	comp=Z,21nm,1.0s						
IMAR	**Indian Mountai**	**81.10**	**19**	P	**P**	**04 38 55.1**	**+0.6**
RND	**Reindeer**	**81.29**	**22**	IAmb	IAmb	04 39 12.3	
	comp=Z,17nm,1.3s						
MCK	**McKinley**	**81.44**	**22**	IAmb	IAmb	04 39 13.6	
	comp=Z,16nm,0.9s						
DHY	**Denali Highway**	**81.67**	**23**	P	**P**	**04 38 58.8**	**+0.9**
WRH	**Wood River Hil**	**82.15**	**22**	P	**P**	**04 39 00.7**	**+0.5**
CRQM	**Cirque**	**82.25**	**26**	P	**P**	**04 39 01.9**	**+0.9**
CRQM				IAmb	IAmb	04 39 19.7	
	comp=Z,14nm,0.9s						
GLB	**Gilahina Butte**	**82.29**	**25**	IAmb	IAmb	04 39 18.6	
	comp=Z,16nm,0.9s						
VRDI	**Verde Repeater**	**82.34**	**25**	IAmb	IAmb	04 39 19.0	
	comp=Z,13nm,0.9s						
COLA	**College**	**82.46**	**21**	P	**P**	**04 39 01.8**	**+0.1**
COLA				IAmb	IAmb	04 39 17.9	
	comp=Z,31nm,1.6s						
MCARA	**McCarthy VSAT**	**82.59**	**25**	IAmb	IAmb	04 39 20.8	
	comp=Z,20nm,1.0s						
IL31		**82.75**	**22**	P	**P**	**04 39 03.5**	**+0.2**
IL31				IAmb	IAmb	04 39 19.1	
	comp=Z,19nm,1.6s						
ILAR	**Eielson Array**	**82.75**	**22**	P	**P**	**04 39 02.5**	**-0.8**
	comp=Z,1.6nm,0.8s,baz=255,slow=5.1,SNR=14						
ILAR				pP	**pP**	**04 39 18.4**	**-1.0**
	comp=Z,2.9nm,0.7s,baz=236,slow=5.1,SNR=13						
ILAR				LR	LR	05 09 49.6	
	comp=Z,143nm,20.9s,baz=237,slow=31						
ILAR	**Eielson Array**	**82.75**	**22**	P	**P**	**04 39 02.8**	**-0.5**
MK31	**Makanchi Array**	**82.89**	**319**	P	**P**	**04 39 04.3**	**-0.1**
MK31				IAmb	IAmb	04 39 21.4	
	comp=Z,9.0nm,0.8s						
MKAR	**Makanchi Array**	**82.89**	**319**	P	**P**	**04 39 04.3**	**-0.2**
	comp=Z,11nm,0.8s,baz=103,slow=5.5,SNR=94						
MKAR				pP	**pP**	**04 39 20.0**	**-0.3**
	comp=Z,14nm,0.8s,baz=102,slow=4.7,SNR=23						
MKAR	**Makanchi Array**	**82.89**	**319**	P	**P**	**04 39 03.6**	**-0.9**
MAKZ	**Makanchi**	**83.10**	**319**	P	**P**	**04 39 05.4**	**-0.1**
MAKZ				IAmb	IAmb	04 39 22.4	
	comp=Z,14nm,0.8s						
ZAA0	**Zalesovo Array**	**83.61**	**326**	P	**P**	**04 39 06.7**	**-1.3**
ZAA0				IAmb	IAmb	04 39 23.3	
	comp=Z,8.3nm,0.8s						
ZALV	**Zalesovo Beam**	**83.61**	**326**	P	**P**	**04 39 06.8**	**-1.2**
	comp=Z,6.8nm,0.8s,baz=110,slow=5.2,SNR=26						
ZALV				pP	**pP**	**04 39 22.0**	**-1.9**
	comp=Z,10.0nm,0.7s,baz=113,slow=5.5,SNR=14						
ZALV	**Zalesovo Beam**	**83.61**	**326**	P	**P**	**04 39 06.3**	**-1.6**
QSPA	**South Pole Qui**	**83.65**	**180**	P	**P**	**04 39 07.8**	**-0.4**
BCAR	**Beaver Creek A**	**83.89**	**24**	P	**P**	**04 39 09.6**	**+0.3**
BMAR	**Burnt Mountain**	**84.92**	**20**	P	**P**	**04 39 14.7**	**+0.3**
MAW	**Mawson**	**85.01**	**203**	P	**P**	**04 39 14.7**	**-0.1**
	comp=Z,10nm,0.6s,baz=94,slow=5.3,SNR=23						
MAW	**Mawson**	**85.01**	**203**	P	**P**	**04 39 14.4**	**-0.4**
KSH	**Kashi**	**85.57**	**310**	P	**P**	**04 39 21.0**	**+2.7**
KSH				PP	**PP**	**04 42 44.5**	**+6.8**
KSH	**Kashi**	**85.57**	**310**	S	**S**	**04 49 40.0**	**-6.2**
BOOM	**Boomskoye usch**	**86.20**	**313**	P	**P**	**04 39 21.5**	**0.0**
KURK	**Kurchatov**	**86.30**	**322**	P	**P**	**04 39 20.4**	**-1.1**
NIL	**Nilore**	**86.62**	**304**	P	**P**	**04 39 22.8**	**-0.8**
AAK	**Ala-Archa**	**87.28**	**313**	P	**P**	**04 39 26.8**	**0.0**
DLBC	**Dease Lake**	**87.57**	**31**	P	**P**	**04 39 27.4**	**-0.2**
	comp=Z,4.9nm,0.9s,baz=255,slow=4.5,SNR=3.6						
DLBC				pP	**pP**	**04 39 42.6**	**-1.0**
	comp=Z,7.0nm,1.0s,baz=155,slow=11,SNR=4.7						
NRIK	**Noril'sk**	**88.10**	**341**	P	**P**	**04 39 28.4**	**-1.4**
	comp=Z,1.1nm,0.3s,baz=85,slow=2.6,SNR=3.9						
NRIK				pP	**pP**	**04 39 43.9**	**-1.9**
	comp=Z,4.3nm,0.8s,baz=107,slow=4.6,SNR=4.3						
GAR	**Garm**	**89.80**	**309**	P	**P**	**04 39 38.6**	**-0.1**
GAR				IAmb	IAmb	04 39 54.6	
	comp=Z,12nm,1.4s						
KK31	**Karatay Array**	**90.25**	**313**	P	**P**	**04 39 38.8**	**-1.7**
KK31				IAmb	IAmb	04 41 55.3	
	comp=Z,13nm,1.9s						
KKAR	**Karatay Array**	**90.25**	**313**	P	**P**	**04 39 39.5**	**-1.1**
NVAR	**Mina Array Bea**	**91.31**	**52**	P	**P**	**04 39 47.4**	**+1.5**
	comp=Z,3.6nm,0.9s,baz=252,slow=6.5,SNR=16						
NVAR				pP	**pP**	**04 40 02.9**	**+0.8**
	comp=Z,2.6nm,0.9s,baz=258,slow=6.2,SNR=8.2						
NVAR	**Mina Array Bea**	**91.31**	**52**	P	**P**	**04 39 46.3**	**+0.4**
NV11	**Mina Array Sit**	**91.43**	**52**	IAmb	IAmb	04 40 04.7	
	comp=Z,8.9nm,1.2s						
BRVK	**Borovoye**	**91.82**	**323**	P	**P**	**04 39 46.2**	**-1.3**
BRVK				IAmb	IAmb	04 40 02.4	
	comp=Z,3.1nm,0.7s						
PFO	**Pinyon Flats O**	**92.26**	**57**	P	**P**	**04 39 50.0**	**-0.2**
XPFO	**Pion Flat**	**92.26**	**57**	P	**P**	**04 39 50.3**	**+0.1**
SYO	**Syowa Base**	**92.96**	**199**⇑	*e*P	**P**	**04 39 50.0**	**-2.5**
SHPR	**Sheep Range**	**93.60**	**54**	IAmb	IAmb	04 40 14.5	
	comp=Z,6.4nm,1.3s						
YKA	**Yellowknife Ar**	**95.75**	**28**	P	**P**	**04 40 05.8**	**+0.4**
	comp=Z,2.6nm,0.9s,baz=262,slow=4.3,SNR=26						
YKA				pP	**pP**	**04 40 21.8**	**+0.3**
	comp=Z,5.4nm,0.8s,baz=263,slow=4.3,SNR=29						
YKA				PKKPbc	**PKKPbc**	**04 56 51.7**	**-6.1**
	comp=Z,0.2nm,0.5s,baz=46,slow=3.4,SNR=5.8						
PDAR	**Pinedale Array**	**98.26**	**48**	P	**P**	**04 40 16.9**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=217,slow=1.5,SNR=4.1						
PDAR				pP	**pP**	**04 40 33.1**	**-0.7**
	comp=Z,0.9nm,0.9s,baz=188,slow=4.3,SNR=4.5						
TXAR	**Lajitas Array**	**102.95**	**61**	PKKPbc	PKKPbc	04 56 36.0	-0.3
	comp=Z,0.2nm,0.5s,baz=100,slow=4.5,SNR=4.6						
NB2	**NORSAR Subarra**	**119.06**	**341**	PKPdf	pPKPdf	04 45 42.5	-2.2
	comp=Z,0.3nm,0.7s,baz=44,slow=1.9						
NOA	**NORSAR Array B**	**119.06**	**341**	PKP	**PKPdf**	**04 45 27.0**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=128,slow=3.9,SNR=3.4						
NOA				pPKP	**pPKPdf**	**04 45 43.0**	**-1.7**
	comp=Z,0.7nm,0.7s,baz=47,slow=2.0,SNR=4.1						
BOSA	**Boshof**	**120.43**	**232**	PKP	**PKPdf**	**04 45 31.6**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=57,slow=4.8,SNR=3.6						
BRG	**Berggiesshubel**	**125.05**	**331**	*e*(P)	pPKPdf	04 45 55.2	-1.2
	comp=Z,2.6nm,0.8s						
GERES	**GERESS Array B**	**126.47**	**329**	PKP	**PKPdf**	**04 45 42.5**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=48,slow=2.0,SNR=7.7						
GERES				pPKP	**pPKPdf**	**04 45 58.2**	**-1.1**
	comp=Z,1.5nm,0.8s,baz=56,slow=2.4,SNR=9.6						
ABTA	**Abfaltersbach**	**128.42**	**328**	*e*PKiKP	pPKPdf	04 46 01.6	-1.5
	comp=Z,3.8nm,1.7s						
MOTA	**Moosalm**	**128.77**	**329**	*e*PKiKP	pPKPdf	04 46 02.5	-1.3
	comp=Z,4.4nm,0.9s						
FETA	**Feichten**	**129.17**	**329**	*e*PKiKP	pPKPdf	04 46 02.8	-1.8
	comp=Z,2.5nm,1.0s						
ROSC	**El Rosal**	**130.92**	**89**	PKP	**PKPdf**	**04 45 51.9**	**-0.7**
	comp=Z,3.5nm,0.4s,baz=139,slow=19,SNR=2.4						
ROSC				pPKP	**pPKPdf**	**04 46 08.4**	**-0.8**
	comp=Z,5.7nm,0.4s,baz=176,slow=19,SNR=3.4						
LPAZ	**La Paz**	**131.79**	**118**	PKP	**PKPdf**	**04 45 52.2**	**-2.1**
	comp=Z,1.2nm,0.7s,baz=270,slow=10,SNR=2.5						
BDFB	**Brasilia**	**148.46**	**134**	PKPbc	**PKPbc**	**04 46 26.2**	**-1.1**
	comp=Z,5.0nm,0.8s,baz=161,slow=6.2,SNR=5.2						
BDFB				pPKPbc	**pPKPdf**	**04 46 41.5**	**+1.1**
	comp=Z,5.2nm,0.6s,baz=244,slow=1.7,SNR=5.2						
BDFB	**Brasilia**	**148.46**	**134**		**PKPbc**	**04 46 26.8**	**-0.5**

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*BUD **29** 04:27:11.6, 48°.68N×20°.19E, h0^{km}±391^{km}, ML1.5/1*

KRSZO 29 04:27:11.7±1.7**, 48°.68N×20°.20E, h0^{km}, ML1.5, Error ellipse: s-maj=12.7km s-min=6.6km az=15.0, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KECS	**Kecovo**	**0.27**	**136**	*e*Pg	Pg	04 27 17.2	+0.4
KECS				*e*Sg	Sg	04 27 20.5	+0.2
KECS	**Kecovo**	**0.27**	**136**	*e*Pg	Pg	04 27 17.2	+0.4
KECS				Pg	Pg	04 27 17.2	+0.4
KECS				*e*Sg	Sg	04 27 20.5	+0.2
KECS				Sg	Sg	04 27 20.5	+0.2
KECS	**Kecovo**	**0.27**	**136**	*e*PG	Pg	04 27 17.2	+0.4
KECS				*e*SG	Sg	04 27 20.5	+0.2
KECS				*e*LG	Lg	04 27 24.0	
PSZ	**Piszkesteto**	**0.79**	**195**	*e*Pg	Pb	04 27 27.5	-0.8
PSZ				*e*Sg	Sb	04 27 39.8	+0.3
PSZ	**Piszkesteto**	**0.79**	**195**	*e*Pg	Pb	04 27 27.5	-0.8
PSZ				Pg	Pb	04 27 27.5	-0.8
PSZ				*e*Sb	Sb	04 27 39.8	+0.3
PSZ				Sb	Sb	04 27 39.8	+0.3
VYHS	**Vyhne**	**0.93**	**259**	*e*Pg	Pb	04 27 30.7	+0.1
VYHS				*e*Sg	Sb	04 27 43.0	-0.4
VYHS	**Vyhne**	**0.93**	**259**	*e*Pn	Pb	04 27 30.7	+0.1
VYHS				Pn	Pb	04 27 30.7	+0.1
VYHS				*e*Sb	Sb	04 27 43.0	-0.4
VYHS				Sb	Sb	04 27 43.0	-0.4
VYHS	**Vyhne**	**0.93**	**259**	*e*PG	Pb	04 27 30.7	+0.1
VYHS				*e*SG	Sb	04 27 43.0	-0.4

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*WEL **29** 04:27:42.2±1.7, 34°S±5°×18°0W±1°2, h0^{km}±17^{km}, M4.7/24, mB5.2/18, ML5.5/24, MLv5.2/24, Mw(mB)4.6/18*

*IDC **29** 04:27:51.2±2.9, 34°.59S×179°.56E, h298^{km}±27^{km}, mb3.8/5, mb1 3.8/7, mb1mx3.5/47, mbtmp4.4/7, Error ellipse: s-maj=35.2km s-min=26.6km az=23.0*

ISC 29 04:27:50.7±0.7**, 34°.56S**±0°.08×**179°.7E**±0°.1**, h300^{km}, n63, σ1^{s}58**/72**, mb4.0**/5**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.22**	**201**	P	**Pn**	**04 28 47.4**	**-1.1**
MXZ				S	**S**	**04 29 34.5**	**-0.2**
WMGZ	**Waiomatatini S**	**3.43**	**198**	P	**Pn**	**04 28 50.7**	**0.0**
WMGZ				S	**S**	**04 29 41.9**	**+3.2**
HAZ	**Te Kaha**	**3.56**	**206**	P	**Pn**	**04 28 51.0**	**-1.1**
HAZ				S	**S**	**04 29 41.5**	**+0.3**
RUGZ	**Raukumara Rang**	**3.79**	**206**	P	**Pn**	**04 28 53.9**	**-0.8**
RUGZ				S	**S**	**04 29 44.8**	**-1.0**
TKGZ	**Te Karaka**	**4.16**	**201**	P	**Pn**	**04 28 58.3**	**-0.3**
TKGZ				S	**S**	**04 29 55.6**	**+2.6**
MWZ	**Matawai**	**4.17**	**205**	P	**Pn**	**04 28 58.3**	**-0.5**
MWZ				S	**S**	**04 29 53.5**	**+0.2**
URZ	**Urewera**	**4.26**	**209**	P	**Pn**	**04 28 58.8**	**-0.9**
	4.1nm,0.3s,baz=284,slow=3.9,SNR=30						
URZ				S	**S**	**04 29 54.2**	**-0.8**
	57nm,0.3s,baz=4.4,slow=21,SNR=16						
URZ	**Urewera**	**4.26**	**209**	P	**Pn**	**04 28 58.8**	**-0.9**
URZ				S	**S**	**04 29 56.3**	**+1.3**
EDRZ	**Edgecumbe**	**4.29**	**214**	P	**Pn**	**04 29 02.6**	**+2.5**
RAGZ	**Rawiri**	**4.35**	**205**	P	**Pn**	**04 29 00.6**	**-0.2**
RAGZ				S	**S**	**04 29 59.3**	**+2.2**
RIGZ	**Rimuhau**	**4.43**	**200**	P	**Pn**	**04 29 01.4**	**-0.3**
RIGZ				S	**S**	**04 30 01.1**	**+2.4**
TARZ	**Mount Tarawera**	**4.50**	**214**	P	**Pn**	**04 29 06.0**	**+3.5**
MUGZ	**Murupara**	**4.58**	**211**	P	**Pn**	**04 29 03.4**	**0.0**
PRGZ	**Paritu Road**	**4.61**	**198**	P	**Pn**	**04 29 03.5**	**-0.1**
PRGZ				S	**S**	**04 30 01.5**	**-0.7**
RTZ	**Ruatahuna**	**4.62**	**208**	P	**Pn**	**04 29 02.6**	**-1.2**
RTZ				S	**S**	**04 30 03.2**	**+0.7**
SNGZ	**Shannon Statio**	**4.64**	**204**	P	**Pn**	**04 29 03.8**	**-0.2**
SNGZ				S	**S**	**04 30 05.6**	**+2.8**
HSRZ	**Hossack Road**	**4.69**	**216**	P	Pn	04 29 10.8	+6.2
KNZ	**Kokohu**	**4.75**	**200**	P	**Pn**	**04 29 04.7**	**-0.6**
MHGZ	**Mahia Peninsul**	**4.82**	**197**	P	**Pn**	**04 29 06.1**	**+0.1**
RAHZ	**Arahi**	**4.84**	**205**	P	**Pn**	**04 29 06.1**	**-0.3**
MTHZ	**Maungataniwha**	**4.88**	**208**	P	**Pn**	**04 29 06.7**	**-0.1**
WHHZ	**Waihua**	**4.94**	**203**	P	**Pn**	**04 29 07.3**	**-0.1**
MRHZ	**Matea Rd**	**5.03**	**211**	P	**Pn**	**04 29 07.9**	**-0.7**
NMHZ	**Naumai**	**5.11**	**207**	P	**Pn**	**04 29 09.3**	**-0.1**
ARHZ	**Aropaoanui**	**5.19**	**204**	P	**Pn**	**04 29 10.5**	**+0.2**
WATZ	**Wairara**	**5.25**	**217**	P	**Pn**	**04 29 12.7**	**+1.6**
BKZ	**Black Stump Fm**	**5.29**	**209**	P	**Pn**	**04 29 11.6**	**+0.1**
RATZ	**Rangitukua**	**5.35**	**215**	P	**Pn**	**04 29 14.0**	**+1.7**
RITZ	**Rihia Road**	**5.40**	**214**	P	**Pn**	**04 29 14.3**	**+1.4**
MCHZ	**McNeill Hill**	**5.45**	**206**	P	**Pn**	**04 29 14.4**	**+1.0**
CKHZ	**Cape Kidnapper**	**5.52**	**202**	P	**Pn**	**04 29 13.7**	**-0.5**
KWHZ	**Kaweka Forest**	**5.54**	**208**	P	**Pn**	**04 29 14.5**	**0.0**
KRVZ	**Karewarewa**	**5.60**	**215**	P	**Pn**	**04 29 16.3**	**+1.1**
KAHZ	**Kahuranaki**	**5.71**	**203**	P	**Pn**	**04 29 16.1**	**-0.4**
FWVZ	**Far West T-bar**	**5.76**	**214**	P	**Pn**	**04 29 18.7**	**+1.4**
WPHZ	**Waipukurau**	**6.09**	**205**	P	**Pn**	**04 29 23.5**	**+2.4**
ANWZ	**Angora Road**	**6.44**	**203**	P	**Pn**	**04 29 26.5**	**+1.3**
PRWZ	**Pori Road**	**6.69**	**205**	P	**Pn**	**04 29 28.9**	**+0.7**
TIWZ	**Tintock**	**6.92**	**205**	P	**Pn**	**04 29 31.9**	**+0.9**
RPZ	**Rata Peaks**	**11.36**	**214**	P	**Pn**	**04 30 23.2**	**-2.1**
	0.5nm,0.3s,baz=38,slow=15,SNR=1.4						
RPZ				S	**S**	**04 32 27.9**	**-4.2**
	2.1nm,0.3s,baz=3.7,slow=16,SNR=9.3						
CTA	**Charters Tower**	**32.88**	**287**	P	**P**	**04 33 56.6**	**-0.8**
	3.9nm,0.6s,baz=120,slow=9.6,SNR=3.3						
ASAR	**Alice Springs**	**41.18**	**273**	P	**P**	**04 35 06.7**	**-0.2**
	3.2nm,0.7s,baz=113,slow=7.5,SNR=6.5						
WRA	**Warramunga Arr**	**42.56**	**278**	P	**P**	**04 35 17.1**	**-0.8**
	1.3nm,0.3s,baz=115,slow=8.0,SNR=9.0						
SNAA	**Sanae**	**74.05**	**179**	P	P	04 39 01.4	+7.8
VNA3	**Neumayer Olymp**	**74.28**	**177**	P	P	04 39 02.8	+7.9
VNA2	**Neumayer--Watz**	**74.69**	**178**	P	P	04 39 05.5	+8.2
	baz=177,slow=4.9						
VNA1	**Neumayer--Stat**	**74.93**	**177**	P	P	04 39 06.8	+8.2
KSRS	**Korea Array**	**86.33**	**321**	P	**P**	**04 39 59.0**	**+0.1**
	1.1nm,0.5s,baz=136,slow=4.7,SNR=4.5						
PETK	**Petropavlovsk-**	**89.39**	**347**	P	**P**	**04 40 13.2**	**+0.2**
	8.6nm,0.7s,baz=142,slow=7.0,SNR=11						
MKAR	**Makanchi Array**	**118.93**	**309**	PKP	**PKiKP**	**04 46 04.0**	**+0.7**
	0.6nm,0.7s,baz=184,slow=1.9,SNR=5.3						
ZALV	**Zalesovo Beam**	**119.82**	**317**	PKP	**PKPdf**	**04 46 04.8**	**+0.1**
	0.7nm,0.5s,baz=130,slow=1.3,SNR=3.6						
ARCES	**ARCESS Array B**	**142.18**	**346**	PKP	**PKPdf**	**04 46 44.2**	**-2.1**
	5.0nm,0.9s,baz=47,slow=2.5,SNR=6.5						
KBZ	**Khabaz**	**145.63**	**299**	PKPbc	**PKPbc**	**04 46 54.5**	**+0.5**
	1.0nm,0.4s,baz=178,slow=5.1,SNR=4.9						
FINES	**FINESS Array B**	**148.28**	**336**	PKPbc	**PKPbc**	**04 47 01.2**	**+0.5**
	5.6nm,0.5s,baz=32,slow=4.6,SNR=57						
LIC	**Lamto**	**151.46**	**170**	*e*PKIKP	**PKPab**	**04 47 15.5**	**-3.7**
	18nm,0.9s						
KIC	**Kosan Boka**	**151.64**	**171**	*e*PKIKP	**PKPab**	**04 47 15.8**	**-4.1**
	32nm,1.0s						
TIC	**Toumodi**	**151.88**	**170**	*e*PKIKP	**PKiKP**	**04 47 15.8**	**+4.7**
DBIC	**Dimbokro**	**151.93**	**170**	PKPbc	**PKPbc**	**04 47 11.5**	**+0.6**
	1.3nm,0.3s,baz=117,slow=2.3,SNR=1.2						
NB2	**NORSAR Subarra**	**152.49**	**348**	PKP	**PKiKP**	**04 47 11.8**	**+0.9**
	comp=Z,1.7nm,0.5s,baz=15,slow=2.5						
NOA	**NORSAR Array B**	**152.49**	**348**	PKPbc	**PKiKP**	**04 47 11.8**	**+0.8**
	comp=Z,1.6nm,0.7s,baz=15,slow=4.6,SNR=20						
BRTR	**Keskin Array B**	**152.59**	**291**	PKPbc	**PKiKP**	**04 47 12.2**	**+0.2**
	comp=Z,1.5nm,0.5s,baz=156,slow=4.2,SNR=16						
AKASG	**Malin Array Be**	**153.21**	**316**	PKPbc	**PKiKP**	**04 47 13.6**	**+0.9**
	comp=Z,1.5nm,0.4s,baz=57,slow=2.5,SNR=9.4						
GERES	**GERESS Array B**	**162.37**	**328**	PKPab	**PKPab**	**04 48 04.8**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=28,slow=4.4,SNR=2.6						

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*IDC **29** 04:30:12.4±1.0, 12°.86N×143°.57E, h0^{km}, mb3.9/7, mb1 4.1/7, mb1mx3.8/45, mbtmp3.9/7, MS4.3/2, Ms1 4.2/2, ms1mx3.0/41, Error ellipse: s-maj=47.4km s-min=18.8km az=118.0*

ISC 29 04:30:14.2±0.9**, 12°.8N**±0°.2×**143°.7E**±0°.2**, h10^{km}, n13, σ1^{s}18**/10**, mb3.9**/7**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.34**	**55**	Pn	**Pb**	**04 30 39.3**	**-0.1**
	114nm,0.3s,baz=154,slow=3.5,SNR=52						
GUMO				Sn	**Sn**	**04 30 56.1**	**-0.8**
	246nm,0.3s,baz=0.3,slow=19,SNR=7.1						
GUMO				LR	LR	04 31 03.8	
	comp=Z,74nm,19.5s,baz=114,slow=35						
H11N1	**WAKE ISLAND Hy**	**23.25**	**70**	T	T	04 58 58.2	
	baz=255,slow=75,SNR=12						
H11N2	**WAKE ISLAND Hy**	**23.25**	**70**	T	T	04 59 00.3	
	baz=255,slow=75,SNR=12						
H11N3	**WAKE ISLAND Hy**	**23.26**	**70**	T	T	04 58 55.0	
	baz=255,slow=75,SNR=10						
WRA	**Warramunga Arr**	**33.85**	**196**	P	**P**	**04 36 56.4**	**-0.6**
	2.7nm,0.8s,baz=19,slow=9.7,SNR=5.3						
ASAR	**Alice Springs**	**37.52**	**195**	P	**P**	**04 37 26.9**	**-1.6**
	0.6nm,0.7s,baz=14,slow=8.0,SNR=2.6						
ASAR				PcP	**PcP**	**04 39 47.0**	**+0.2**
	0.5nm,0.8s,baz=38,slow=3.5,SNR=2.9						
STKA	**Stephens Creek**	**44.49**	**183**	P	**P**	**04 38 26.7**	**+0.9**
	0.8nm,0.3s,baz=4.0,slow=8.4,SNR=2.8						
ILAR	**Eielson Array**	**69.73**	**25**	P	**P**	**04 41 23.4**	**-0.7**
	0.3nm,0.4s,baz=250,slow=5.7,SNR=5.2						
YKA	**Yellowknife Ar**	**84.04**	**27**	P	**P**	**04 42 46.2**	**+1.4**
	0.1nm,0.3s,baz=286,slow=4.8,SNR=5.5						
ARCES	**ARCESS Array B**	**87.47**	**342**	P	**P**	**04 43 00.8**	**-0.9**
	4.8nm,0.9s,baz=64,slow=8.2,SNR=4.3						
NVAR	**Mina Array Bea**	**88.26**	**51**	P	**P**	**04 43 07.9**	**+1.4**
	0.3nm,0.5s,baz=275,slow=5.3,SNR=3.0						
MAW	**Mawson**	**98.30**	**202**	LR	LR	05 20 50.3	
	comp=Z,139nm,21.2s,baz=220,slow=31						
ULM	**Lac du Bonnet**	**98.49**	**34**	LR	LR	05 24 12.3	
	comp=Z,122nm,19.2s,baz=314,slow=33						

ROM 29 04:30:14.0±0.1**, 43°.491N**±0°.003×**12°.389E**±0°.004**, h9^{km}, ML1.4**/16**, Error ellipse: s-maj=0.3km s-min=0.2km az=208.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ATPI	**Pietralunga -**	**0.04**	**166**	P	Pg	04 30 15.9	+0.1
ATPI				S	Sg	04 30 17.0	-0.1
ATPI				AML	AML		
	comp=N,967µm,0.2s						
ATPI				AML	AML		
	comp=N,966µm,0.2s						
ATPI				AML	AML		
	comp=E,858µm,0.5s						
BADI	**Badiali**	**0.11**	**280**	P	Pg	04 30 17.0	+0.4
BADI				S	Sg	04 30 19.0	+0.6
BADI				AML	AML		
	comp=E,589µm,0.6s						
BADI				AML	AML		
	comp=N,660µm,0.6s						
BADI				AML	AML		
	comp=N,659µm,0.6s						
BADI				AML	AML		
	comp=E,590µm,0.6s						
ATVO	**AVT- Monte Val**	**0.11**	**173**	P	Pg	04 30 17.2	+0.6
ATVO				S	Sg	04 30 19.3	+0.8
ATVO				AML	AML		
	comp=N,343µm,0.2s						
ATVO				AML	AML		
	comp=E,461µm,0.4s						
PIEI	**Pieia**	**0.12**	**67**	P	Pg	04 30 17.2	+0.5
PIEI				S	Sg	04 30 19.8	+1.1
PIEI				AML	AML		
	comp=E,602µm,0.3s						
PIEI				AML	AML		
	comp=N,552µm,0.3s						
ATMI	**Monte Miggiano**	**0.18**	**209**	AML	AML		
	comp=E,192µm,0.3s						
ATMI				AML	AML		
	comp=N,268µm,0.2s						
ATFO	**Monte Foce - G**	**0.18**	**133**	P	Pg	04 30 18.4	+0.6
ATFO				S	Sg	04 30 21.8	+1.4
ATFO				AML	AML		
	comp=N,108µm,1.1s						
ATFO				AML	AML		
	comp=E,115µm,0.5s						
NARO	**Abbazia di Nar**	**0.18**	**49**	P	Pg	04 30 18.3	+0.5
NARO				S	Sg	04 30 21.8	+1.3

NARO				AML	AML		
	comp=E,118µm,0.3s						
NARO				AML	AML		
	comp=E,118µm,0.3s						
NARO				AML	AML		
	comp=N,125µm,0.2s						
PARC	Parchiule	0.19	325	P	Pg	04 30 18.7	+0.7
PARC				S	Sg	04 30 22.3	+1.5
PARC				AML	AML		
	comp=N,134µm,0.2s						
PARC				AML	AML		
	comp=E,105µm,0.1s						
PARC				AML	AML		
	comp=N,134µm,0.2s						
PARC				AML	AML		
	comp=E,106µm,0.1s						
PE3	Peglio	0.22	21	P	Pg	04 30 19.3	+0.8
PE3				AML	AML		
	comp=E,280µm,0.4s						
PE3				AML	AML		
	comp=E,280µm,0.4s						
PE3				AML	AML		
	comp=N,204µm,1.5s						
PE3	Peglio	0.22	21	Sn	Sg	04 30 23.9	+2.3
FRON	Frontone	0.25	84	P	Pg	04 30 19.5	+0.5
FRON				S	Sg	04 30 23.7	+1.4
FRON				AML	AML		
	comp=N,111µm,0.5s						
FRON				AML	AML		
	comp=E,59µm,0.1s						
FRON	Frontone	0.25	84	Sn	Sg	04 30 23.9	+1.6
MURB	Monte Urbino	0.25	156	P	Pg	04 30 19.8	+0.8
MURB				S	Sg	04 30 24.2	+1.8
MURB				AML	AML		
	comp=N,242µm,0.2s						
MURB				AML	AML		
	comp=E,367µm,1.4s						
SSFR	Montelago di S	0.29	101	P	Pg	04 30 20.3	+0.5
SSFR				S	Sb	04 30 25.4	-1.1
SSFR				AML	AML		
	comp=E,168µm,0.2s						
SSFR				AML	AML		
	comp=N,119µm,0.3s						
SSFR	Montelago di S	0.29	101	Sn	Sb	04 30 25.3	-1.1
MPAG	Monte Paganucc	0.30	63	P	Pg	04 30 20.6	+0.5
MPAG				S	Sb	04 30 25.8	-1.0
FOSV	Fossato di Vic	0.34	126	P	Pb	04 30 21.6	-0.6
FOSV				S	Sb	04 30 27.2	-0.4
FOSV	Fossato di Vic	0.34	126	Sn	Sb	04 30 27.2	-0.4
CRE	Caprese Michel	0.34	292	P	Pb	04 30 21.9	-0.5
CRE				S	Sb	04 30 26.9	-1.1
CRE				AML	AML		
	comp=E,55µm,0.2s						
CRE				AML	AML		
	comp=N,50µm,0.2s						
FSSB	Fossombrone	0.35	54	P	Pg	04 30 21.4	+0.6
FSSB				S	Sb	04 30 27.6	-0.5
FSSB				AML	AML		
	comp=N,112µm,0.3s						
FSSB				AML	AML		
	comp=E,98µm,0.9s						
CAFI	Castiglion Fio	0.35	242	P	Pg	04 30 21.5	+0.6
CAFI				AML	AML		
	comp=E,56µm,1.2s						
CAFI				AML	AML		
	comp=N,59µm,1.4s						
ARVD	Arcevia	0.40	89	P	Pg	04 30 22.4	+0.5
ARVD				S	Sb	04 30 29.1	-0.5
ARVD				AML	AML		
	comp=N,23µm,1.1s						
ARVD				AML	AML		
	comp=E,24µm,0.8s						
ASSB	Assisi San Ben	0.49	156	Sn	Sb	04 30 32.0	-0.1
ASSB				Sb	Sg	04 30 33.0	+3.1

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*MAN **29** 04:30:32.1, 9°.19N×126°.33E, h28^{km}, mb4.6, ML3.5, MS3.4*

*IDC **29** 04:30:41.6±5.5, 8°.88N×125°.53E, h148^{km}±42^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.2/42, mbtmp3.9/3, Error ellipse: s-maj=211.5km s-min=29.9km az=69.0*

ISC 29 04:30:27.7±1.5**, 9°.19N**±0°.03×**126°.41E**±0°.06**, h16**^{km}±10^{km}**, n26, σ1^{s}96**/35**, mb3.7**/3**, 3C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	0.81	255	eP	Pn	04 30 45.6	+1.1
BUTP				eS	Sb	04 30 56.3	+2.1
SCPH	Surigao	1.09	303	⇑iP	Pn	04 30 49.6	+1.3
SCPH				i S	Sn	04 31 03.8	+0.7
MSLP	Maasin	1.80	302	eP	Pg	04 31 01.6	-0.8
MSLP				eS	Sg	04 31 26.2	+0.5
CGP	Cagayan de Oro	1.85	247	⇓eP	Pb	04 31 01.5	+0.3
CGP				eS	Sn	04 31 20.9	-1.0
CGP	Cagayan de Oro	1.85	247	⇓eP	Pb	04 31 01.5	+0.3
CGP				eS	Sn	04 31 20.9	-1.0
BUKP	Musuan	1.86	226	eP	Pg	04 31 03.0	-0.5
BUKP				eS	Sn	04 31 24.3	+1.9
MATI	Mati	2.23	184	eP	Pb	04 31 05.8	-1.9
MATI				eS	Sb	04 31 35.4	+0.2
DAV	Davao City (W)	2.26	202	P	Pg	04 31 14.6	+3.5
	94nm,0.3s,baz=81,slow=6.4,SNR=4.6						
DAV				S	Sg	04 31 39.6	-0.8
	71nm,0.3s,baz=43,slow=16,SNR=1.8						
DAV				LR	LR	04 32 02.9	
	comp=Z,74nm,22.0s,baz=332,slow=45						
KCP	Kidapawan	2.53	211	⇑eP	Pn	04 31 09.1	+0.8
KCP				i S	Sg	04 31 46.8	-2.3
OCLP	Ormoc	2.57	316	eP	Pb	04 31 11.6	-1.9
OCLP				eS	Sb	04 31 45.4	+0.6
TBP	Tagbilaran	2.57	281	eP	Pb	04 31 11.3	-2.1
LLP	Lapu-Lapu	2.66	295	⇑eP	Pb	04 31 13.6	-1.5
LLP				eS	Sn	04 31 44.4	+2.3
DDMP	Don Marcelino,	3.14	193	eP	Pb	04 31 21.6	-1.7
DDMP				eS	Sn	04 31 57.0	+3.1
PAGZ	Pagadian	3.28	246	eP	Pn	04 31 20.4	+1.9
PAGZ				eS	Sn	04 31 54.0	-3.3
CNP	Catarman	3.73	333	eP	Pn	04 31 27.8	+3.1
CNP				eS	Sn	04 32 09.3	+1.0
RCP	Roxas	4.31	303	⇓eP	Pn	04 31 36.8	+4.0
PVCP	Virac	4.91	333	eP	Pn	04 31 42.3	+1.3
PVCP				eS	Sn	04 32 38.5	+1.0
WRA	Warramunga Arr	29.98	165	P	P	04 36 36.1	+0.3
	0.4nm,0.5s,baz=345,slow=9.6,SNR=1.9						
ASAR	Alice Springs	33.46	167	P	P	04 37 05.8	-0.6
	0.3nm,0.3s,baz=344,slow=7.2,SNR=4.5						
H11S3	WAKE ISLAND Hy	40.10	72	T	T	05 21 01.1	
	baz=262,slow=75,SNR=74						
H11S1	WAKE ISLAND Hy	40.12	72	T	T	05 21 02.0	
	baz=262,slow=75,SNR=71						
H11S2	WAKE ISLAND Hy	40.12	72	T	T	05 21 02.6	
	baz=262,slow=75,SNR=98						
H11N1	WAKE ISLAND Hy	40.47	70	T	T	05 21 31.6	
	baz=265,slow=75,SNR=32						
H11N2	WAKE ISLAND Hy	40.48	70	T	T	05 21 31.9	
	baz=265,slow=75,SNR=26						
H11N3	WAKE ISLAND Hy	40.49	70	T	T	05 21 39.7	
	baz=265,slow=75,SNR=30						
FINES	FINESS Array B	86.91	332	P	P	04 43 08.7	-3.0
	2.5nm,1.0s,baz=85,slow=4.4,SNR=7.0						

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*SCEDC **29** 04:30:52.0, 33°.92N×117°.93W, h4^{km}*

*ANF **29** 04:30:51.3±0.2, 33°.90N×117°.93W, h12^{km}±1^{km}, ML3.7/41, Error ellipse: s-maj=1.2km s-min=1.1km az=164.0*

*IDC **29** 04:30:51.3±2.2, 33°.77N×117°.90W, h0^{km}, mb3.1/2, mb1 3.4/5, mb1mx3.3/57, mbtmp2.9/5, ML3.3/3, Error ellipse: s-maj=28.1km s-min=9.6km az=43.0*

*PAS **29** 04:30:52.0±2.6, 33°.92N±0°.05×117°.93W±0°.04, h4^{km}±4^{km}, ML3.6/253, Error ellipse: s-maj=7.8km s-min=3.8km az=207.0*

*IASPEI **29** 04:30:51.6±0.8, 33°.91N±0°.02×117°.93W±0°.02, h16^{km}±5^{km}, Error ellipse: s-maj=2.7km s-min=2.5km az=56.8, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*NEIC **29** 04:30:52.5±3.0, 33°.88N±0°.02×117°.84W±0°.02, h4^{km}±5^{km}, Error ellipse: s-maj=2.8km s-min=1.4km az=213.0*

ISC 29 04:30:52.2±0.8**, 33°.91N**±0°.01×**117°.89W**±0°.01**, h12**^{km}±5^{km}**, n123, σ1^{s}48**/168**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FULC	Fullerton	0.05	213		Pg	04 30 53.2	-1.3
BREC	Barre Substati	0.13	216		Pg	04 30 54.9	-0.5
BREC					Sg	04 30 58.3	+0.6
RHC	Rose Hills Cem	0.14	311		Pg	04 30 54.5	-1.1
RHC					Sg	04 30 57.3	-0.6
DLAC	Del Amo	0.18	250		Pg	04 30 55.7	-0.5
PSRC	Puddingstone R	0.19	21		Pg	04 30 59.5	+3.0
CHNC	Chino	0.20	64		Pg	04 31 00.9	+4.4
SANC	Santa Ana	0.21	179		Pg	04 30 56.8	+0.1
GVRC	Garvey Reservo	0.23	306		Sg	04 31 01.1	+0.5
GVRC	Garvey Reservo	0.23	306		Pg	04 30 56.5	-0.7
CRNC	Corona	0.28	97		Pb	04 30 58.1	-1.1
MLSC	Mira Loma	0.29	71		Pb	04 30 58.1	-1.3
MLSC					Sb	04 31 02.9	-1.2
CACC	Caltech Cellar	0.29	320		Pg	04 30 57.1	-1.1
GSA	Caltech--GSA	0.30	319		Pg	04 30 57.2	-1.2
CBCC	Caltech Broad	0.30	319		Pn	04 31 01.7	-0.8
SSK	Sunset Peak	0.34	29		Pb	04 30 58.9	-1.5
PASC	Pasadena Art C	0.36	317		Pg	04 30 58.0	-1.4
PASC	Pasadena Art C	0.36	317		Sg	04 31 03.3	-0.9
BFSC	Mount Baldy Ra	0.38	31		Sb	04 31 05.2	-1.7
BFSC	Mount Baldy Ra	0.38	31	P	Pb	04 30 59.4	-1.6
	baz=215,SNR=109						
BFSC				S	Sb	04 31 05.6	-1.3
	baz=215						
XTL	Crystal Lake,	0.38	4		Pg	04 30 59.0	-1.0
FMP	Fort Macarthur	0.39	239	P	Pg	04 30 58.8	-1.2
	baz=56,SNR=43						
FMP				S	Sg	04 31 04.3	-0.9
	baz=56						
GR2C	Griffith Obs.	0.40	301		Sg	04 31 04.9	-0.6
GR2C	Griffith Obs.	0.40	301		Pg	04 30 58.9	-1.3
FON	Fontana	0.42	63		Pb	04 31 00.4	-1.2
RVR	Riverside	0.44	79		Sb	04 31 07.6	-0.9
RPV	Rancho Palos V	0.46	249		Pg	04 30 59.8	-1.4
RSBC	Riverside Bore	0.47	82		Pb	04 31 01.4	-1.1
RSBC	Riverside Bore	0.47	82		Pb	04 31 01.3	-1.2
RSBC					Sb	04 31 08.7	-0.7
DECC	Green Verdugo	0.50	313	P	Pg	04 31 00.6	-1.5
	baz=135,SNR=36						
DECC				S	Sg	04 31 07.9	-0.8
	baz=135						
JNH	Juniper Hills	0.54	354		Pg	04 31 01.6	-1.2
JNH					Sb	04 31 09.4	-2.1
CSP	Cedar Springs	0.59	49		Pb	04 31 03.4	-1.2
LRRC	Littlerock Res	0.62	350		Pg	04 31 03.1	-1.3
IR2C	Iron Canyon	0.64	319		Pg	04 31 02.9	-1.7
CJV	Casa Juvan	0.65	341		Pg	04 31 03.4	-1.6
CJV					Sg	04 31 12.7	-0.8
MURC	Murrieta	0.66	118		Pb	04 31 04.7	-1.0
MURC					Sb	04 31 14.5	-0.3
MURC	Murrieta	0.66	118	Pn	Pb	04 31 04.6	-1.0
	baz=298,SNR=184						
MURC				S	Sb	04 31 14.6	-0.3
	baz=298						
CFT	Crafton Hills	0.66	79		Pb	04 31 04.9	-0.8
CIAC	Catalina I. Ai	0.67	221		Pg	04 31 03.6	-1.6
CIS	Catalina Islan	0.67	221	P	Pg	04 31 03.7	-1.6
	baz=38,SNR=74						
CIS				S	Sg	04 31 12.9	-1.2
	baz=38						
SVD	Seven Oaks Dam	0.69	73		Pb	04 31 05.2	-1.0
ADO	Adelanto Recei	0.74	31		Pb	04 31 06.3	-0.9
ADO					Sb	04 31 17.6	+0.3
HMTC	Hemet	0.77	105		Pb	04 31 06.5	-1.1
HMTC					Sb	04 31 17.9	0.0
BACC	Bachelor Mtn.	0.77	113		Pb	04 31 06.4	-1.2
DGR	Domenigoni Val	0.78	109		Pb	04 31 06.7	-1.1
DGR					Sb	04 31 18.1	-0.2
LEOC	Leona Valley	0.80	335		Pg	04 31 05.8	-1.9
ALPC	Antelope	0.84	337		Pg	04 31 06.7	-1.8
FOXC	Fox Airport	0.88	341		Pg	04 31 07.6	-1.6
BBRC	Big Bear Solar	0.88	66	P	Pb	04 31 08.7	-0.9
	baz=248,SNR=77						
BBRC				S	Sn	04 31 21.7	-1.7
	baz=248						
GORC	Green Oak Ranc	0.94	144		Pg	04 31 08.4	-1.9
BTPC	Burnt Peak	0.95	324		Pg	04 31 08.7	-2.0
PYR	Pyramid	0.96	313		Pg	04 31 09.2	-1.6
EDW2	Edwards Air Fo	0.97	355		Pg	04 31 09.4	-1.6
EDW2	Edwards Air Fo	0.97	355	P	Pg	04 31 09.5	-1.5
	baz=177,SNR=209						
EDW2				S	Sb	04 31 24.1	+0.2
	baz=177						
BALC	Balcom Canyon	0.98	294		Pg	04 31 09.7	-1.3
OSI	Osito Audit: C	0.98	316	P	Pg	04 31 10.0	-1.2
	baz=137,SNR=7.7						
OSI				S	Sb	04 31 23.4	-0.8
	baz=137						
BLG	Laguna Peak, P	0.99	282	P	Pg	04 31 09.4	-2.0
	baz=101,SNR=34						
BLG				S	Sb	04 31 24.4	-0.1
	baz=101						
CRY	Cary Ranch	1.02	109		Pb	04 31 11.1	-0.9
PLM	Palomar	1.02	123		Pg	04 31 10.7	-1.3
SBI	Santa Barbara	1.04	246		Pg	04 31 10.2	-2.0
SCI2	San Clemente I	1.08	211	P	Pg	04 31 11.7	-1.3
	baz=29						
SCI2				S	Sg	04 31 25.8	-1.3
	baz=29						
THC	Tehachapi Micr	1.18	328		Pg	04 31 13.0	-2.0
DPP	Dos Picos Cty	1.21	139		Pg	04 31 13.1	-2.4
RRX	Edison Barstow	1.21	37		Pn	04 31 14.7	-0.4
RRX	Edison Barstow	1.21	37	P	Pn	04 31 14.9	-0.1
	baz=219,SNR=22						
RRX				S	Sn	04 31 32.1	+0.7
	baz=219						
109C	Camp Elliot, M	1.21	147	P	Pg	04 31 13.3	-2.3
	baz=326,SNR=60						
109C				S	Sb	04 31 30.3	-0.5
	baz=326						
CPE	Camp Elliot	1.21	147		Pg	04 31 13.3	-2.2
PFO	Pinyon Flats O	1.23	104	Pg	Pn	04 31 14.7	-0.7
	63nm,0.3s,baz=281,slow=15,SNR=288						
PFO				Lg	Lg	04 31 31.7	
	141nm,0.3s,baz=52,slow=12,SNR=22						
PFO	Pinyon Flats O	1.23	104	P	Pn	04 31 14.6	-0.7
	baz=284,SNR=216						
PFO				S	Sn	04 31 32.4	+0.4
	baz=284						
XPFO	Pion Flat	1.23	104		Pn	04 31 14.8	-0.7
BLAC	Blackrock camp	1.26	82		Pn	04 31 15.5	-0.3
EML	El Monte Cty P	1.34	139		Pn	04 31 15.5	-1.3
DTP	Desert Tortois	1.35	2		Pn	04 31 16.4	-0.6
MPI	Mount Pinos, F	1.37	311		Pn	04 31 16.3	-1.2
BORC	Borrego Spring	1.39	117		Pb	04 31 17.1	-1.0
ARVC	Arvin	1.44	328	P	Pn	04 31 17.8	-0.3
	baz=148,SNR=59						
ARVC				S	Sb	04 31 36.7	-0.6
	baz=148						
SNCC	San Nicolas Is	1.52	245	P	Pn	04 31 16.8	-2.4
	baz=63,SNR=9.1						
SNCC				S	Sn	04 31 37.5	-1.3
	baz=63						
LRMC	Laurel Mtn Rad	1.57	6	P	Pb	04 31 19.9	-1.5
	baz=188,SNR=48						
LRMC				S	Sg	04 31 40.8	-2.2
	baz=188						
BELC	Belle Mtn. Jos	1.58	86	Pn	Pb	04 31 19.8	-1.6
	baz=268,SNR=405						
BELC				Pb	Pg	04 31 21.4	-1.1
	baz=268						
BELC				Sb	Sg	04 31 43.1	+0.1
	baz=268						
HEC	Hector,Ludlow	1.58	54	P	Pb	04 31 20.1	-1.4
	baz=236,SNR=109						
HEC				Sb	Sg	04 31 42.8	-0.3
	baz=236						
MONP2	Monument Peak	1.59	129	Pn	Pn	04 31 19.1	-1.4
	baz=310,SNR=98						
MONP2				Pb	Pb	04 31 20.8	-1.0
	baz=310						
MONP2				S	Sg	04 31 41.8	-1.8
	baz=310						
BAR	Barrett	1.60	140		Pn	04 31 19.3	-1.1
SBC	Santa Barbara	1.60	290	P	Pn	04 31 20.0	-0.3
	baz=109,SNR=8.6						
GSC	Goldstone, Bar	1.65	33		Pb	04 31 21.5	-1.2
GSC	Goldstone, Bar	1.65	33	P	Pb	04 31 21.4	-1.3
	baz=214,SNR=167						
GSC				S	Sg	04 31 43.4	-2.0
	baz=214						
ISA	Isabella, Lake	1.81	345	P	Pn	04 31 22.8	-0.5
	baz=166,SNR=42						
ISA				S	Sn	04 31 46.5	+0.1
	baz=166						
PKM	Mcpherson Peak	1.86	302	P	Pn	04 31 23.3	-0.9
	baz=122,SNR=20						
IKP	In-Ko-Pah, Jac	1.95	130	Pb	Pb	04 31 26.8	-0.9
	baz=310,SNR=37						
IKP				Sb	Sg	04 31 53.1	-1.9
	baz=310						
SWSC	Sam W. Stewart	2.00	118	Pb	Pb	04 31 27.5	-1.0
	baz=299,SNR=56						
SWSC				Sb	Sg	04 31 55.9	-0.5
	baz=299						
GMRC	Granite Mounta	2.04	64	Pn	Pn	04 31 26.7	+0.1
	baz=246,SNR=84						
GMRC				Pb	Pg	04 31 29.5	-1.9
	baz=246						
BC3	Big Chuckawall	2.05	97	Pn	Pb	04 31 27.1	-2.3
	baz=278,SNR=185						
BC3				Pb	Pg	04 31 29.7	-1.7
	baz=278						
VES	Vestal, Richgr	2.16	333	P	Pn	04 31 28.1	0.0
	baz=154,SNR=42						
VES				S	Sn	04 31 55.5	+0.7
	baz=154						
MPMC	Manual Prospec	2.17	9	P	Pn	04 31 28.1	-0.2
	baz=190,SNR=108						
MPMC				Sb	Sg	04 32 01.2	-0.8
	baz=190						
TUQ	Turquoise Moun	2.22	46	P	Pn	04 31 29.0	0.0
	baz=228,SNR=71						
TUQ				Sg	Sg	04 32 04.2	+0.5
	baz=228						
SMMC	Simmler	2.23	309	P	Pn	04 31 28.5	-0.5
	baz=129,SNR=18						
IRM	Iron Mountain	2.29	83	Pn	Pn	04 31 29.5	-0.5
	baz=265,SNR=172						
IRM				Pb	Pg	04 31 34.2	-2.0
	baz=265						
SHOC	Shoshone, Teco	2.39	33	P	Pn	04 31 31.3	+0.1
	baz=215,SNR=19						
PAGB	Antelope Grade	2.66	314		Pb	04 31 38.7	-1.1
FURC	Furnace Creek,	2.69	18	Pg	Pg	04 31 43.7	+0.1
	baz=199,SNR=24						
FURC				Sg	Sg	04 32 20.6	+2.1
	baz=199						
GLA	Glamis	2.70	108		Pb	04 31 40.1	-0.4
GLA	Glamis	2.70	108	Pn	Pn	04 31 36.8	+1.2
	baz=289,SNR=28						
GLA				Pg	Pg	04 31 42.6	-1.4
	baz=289						
Y12C	Blythe	2.81	92		Pn	04 31 36.5	-0.5
Y12C	Blythe	2.81	92	Pn	Pn	04 31 37.2	+0.3
	baz=274,SNR=23						
Y12C				Pg	Pg	04 31 43.3	-2.7
	baz=274						
GRAC	Grapevine Rang	3.11	8	P	Pn	04 31 42.2	+1.1
	baz=189,SNR=16						
PMPB	Monarch Peak	3.31	315		Pb	04 31 47.7	-3.3
TPNV	Topopah Spring	3.31	23		Pn	04 31 45.4	+1.3
TPNV	Topopah Spring	3.31	23	P	Pn	04 31 45.2	+1.1
	baz=205,SNR=24						
TPNV				Sb	Sg	04 32 37.8	-0.9
	baz=205						
SHPR	Sheep Range	3.42	40		Pn	04 31 46.8	+1.2
W13A	Hualapai Mount	3.51	69		Pn	04 31 47.0	+0.2
113A	Mohawk Valley,	3.64	107		Pg	04 31 59.0	-2.9
MLAC	Mammoth, Mammo	3.79	349	Pg	Pg	04 32 04.1	-0.7
	baz=169						
MLAC				Sb	Sg	04 32 52.1	-1.8
	baz=169						
SAO	San Andreas Ge	4.07	315		Pb	04 32 04.4	+0.6
NVAR	Mina Array Bea	4.52	356	Pn	Pn	04 32 01.5	+0.8
	0.2nm,0.3s,baz=182,slow=15,SNR=5.1						
NVAR				Pg	Pg	04 32 14.1	-4.7
	0.5nm,0.3s,baz=186,slow=17,SNR=7.3						
NVAR				Lg	Lg	04 33 18.9	
	0.8nm,0.3s,baz=235,slow=44,SNR=1.0						
CMB	Columbia Colle	4.58	335		Pn	04 32 03.0	+1.6
214A	Organ Pipe Nat	4.70	113	Pg	Pg	04 32 22.8	+0.6
	baz=296						
R11A	Troy Canyon, C	4.80	22		Pg	04 32 21.4	-2.9
R11A	Troy Canyon, C	4.80	22	P	Pn	04 32 06.4	+1.8
	baz=204						
R11A				Sb	Sg	04 33 21.8	-4.7
	baz=204						
LCMT	Little Creek M	4.89	49		Pn	04 32 07.4	+1.7
KVN	Kaiserville	5.13	358		Pb	04 32 22.0	-0.1
W18A	Petrified Fore	6.84	78	Pg	Pg	04 32 58.8	-4.3
	baz=262						
PDAR	Pinedale Array	10.99	34	Pn	Pn	04 33 34.4	+4.9
	0.1nm,0.3s,baz=208,slow=13,SNR=3.6						
TXAR	Lajitas Array	12.95	107	Pn	Pn	04 33 59.6	+3.4
	0.0nm,0.3s,baz=287,slow=13,SNR=2.5						
YKA	Yellowknife Ar	28.68	3	P	P	04 36 51.9	+3.2
	0.1nm,0.7s,baz=179,slow=8.7,SNR=2.9						
ILAR	Eielson Array	35.56	339	P	P	04 37 51.0	+1.9
	0.3nm,0.8s,baz=152,slow=8.1,SNR=2.8						

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*VAO **29** 04:35:15.8±1.1, 6°.77N×72°.92W, h147^{km}±10^{km}, mb4.2*

*NEIC **29** 04:35:16.6±1.6, 6°.81N±0°.06×73°.01W±0°.07, h161^{km}±5^{km}, mb4.6/125, Error ellipse: s-maj=10.9km s-min=8.2km az=125.0*

*IDC **29** 04:35:16.4±0.5, 6°.82N×72°.97W, h162^{km}±5^{km}, mb3.8/14, mb1 4.0/22, mb1mx3.8/34, mbtmp4.4/22, Error ellipse: s-maj=9.9km s-min=6.8km az=127.0*

*RSNC **29** 04:35:17.1±1.0, 6°.83N×73°.16W, h148^{km}±4^{km}, ML4.5, Mw4.5, Fault plane solution: NP1:ϕ_s127.00000°, δ85.00000°, λ-142.00000°.*

ISC 29 04:35:16.1±0.5**, 6°.82N**±0°.03×**73°.12W**±0°.03**, h156**^{km}±4^{km}**, n370, σ1^{s}68**/373**, mb4.5**/66**, 12C-15D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.24	196	⇑iP	Pn	04 35 37.3	-0.2
BARC				eS	Sn	04 35 52.3	-1.5
BARC				i		04 35 55.0	
	comp=Z,16µm,0.3s						
PAMC	Pamplona, Colo	0.66	39	⇑eP	Pn	04 35 40.1	+0.5
PAMC				eS	Sn	04 35 57.3	-0.1
PAMC				i		04 35 59.6	
	comp=Z,6µm,0.6s						
RUSC	La Rusia	0.93	178	⇓iP	Pn	04 35 41.1	-0.3
RUSC				eS	Sn	04 35 59.8	-0.9
RUSC				i		04 36 01.2	
	comp=Z,5µm,0.3s						
RUSC	La Rusia	0.93	178		Pn	04 35 41.2	-0.3
PTBC	PUERTO BERRIO,	1.36	258	⇓iP	Pn	04 35 43.6	-1.0
PTBC				eS	Sn	04 36 04.6	-2.0
PTBC				i		04 36 10.2	
	comp=Z,3µm,0.3s						
TAMC	Tame, Arauca	1.37	106	⇑iP	Pn	04 35 45.7	+0.9
TAMC				eS	Sn	04 36 07.3	+0.4
TAMC				i		04 36 17.0	
	comp=Z,2µm,1.1s						
OCAC	Ocana	1.42	352	⇑iP	Pn	04 35 45.3	-0.1
OCAC				eS	Sn	04 36 07.1	-1.0
OCAC				i		04 36 15.6	
	comp=Z,3µm,0.4s						
SPBC	San Pablo de B	1.50	219	⇓iP	Pn	04 35 46.0	-0.2
SPBC				eS	Sn	04 36 07.9	-1.5
SPBC				i		04 36 14.1	
	comp=Z,5µm,0.4s						
ZARC	Zaragoza, Cauc	1.85	291	⇑iP	Pn	04 35 49.3	-0.6
ZARC				eS	Sn	04 36 14.9	-1.0
ZARC				i		04 36 20.2	
	comp=Z,3µm,0.6s						
NORC	Norcasia	2.14	234	eP	Pn	04 35 52.9	-0.4
NORC				eS	Sn	04 36 20.9	-1.1
NORC				i		04 36 26.4	
	comp=Z,3µm,0.2s						
SMLC	San Martn de	2.18	334	⇓iP	Pn	04 35 53.3	-0.4
SMLC				eS	Sn	04 36 21.9	-0.9
SMLC				i		04 36 25.5	
	comp=Z,2µm,0.3s						
CHIC	Chingaza	2.26	196	⇓iP	Pn	04 35 55.1	+0.1
CHIC				eS	Sn	04 36 24.9	-0.2
CHIC				i		04 36 29.8	
	comp=Z,2µm,0.4s						
ROSC	El Rosal	2.31	211	P	Pn	04 35 57.5	+1.9
	comp=Z,852nm,0.3s,baz=208,slow=14,SNR=1625						
ROSC				S	Sn	04 36 28.8	+2.8
	comp=Z,3µm,0.3s,baz=62,slow=20,SNR=24						

ROSC	El Rosal	2.31	211	⇓iP	Pn	04 35 57.0	+1.4
ROSC				eS	Sn	04 36 27.3	+1.3
ROSC	El Rosal	2.31	211		Pn	04 35 57.0	+1.4
CVER	Cruz Verde, Cu	2.48	203	eP	Pn	04 35 58.6	+1.0
CVER				eS	Sn	04 36 25.2	-4.6
HELC	Santa Helena	2.48	255	⇑eP	Pn	04 35 56.6	-1.0
HELC				eS	Sn	04 36 28.5	-1.1
HELC				i		04 36 36.1	
	comp=Z,2µm,0.4s						
UREC	San Jos de Ur	2.57	291	eP	Pn	04 35 56.7	-1.6
UREC				eS	Sn	04 36 27.8	-3.2
UREC				i		04 36 37.8	
	comp=Z,1µm,0.3s						
GUY2C	Guyana, Caldas	2.74	235	⇑iP	Pn	04 36 01.0	+0.1
GUY2C				eS	Sn	04 36 34.5	-1.0
GUY2C				i		04 36 43.3	
	comp=Z,3µm,0.5s						
VILC	Villavicencio,	2.75	192	eP	Pn	04 36 00.5	-0.2
VILC				eS	Sn	04 36 34.8	-0.6
VILC				i		04 36 40.7	
	comp=Z,3µm,0.4s						
PTGC	Puerto Gaitan,	2.78	159	⇓iP	Pn	04 36 00.4	-0.6
PTGC				eS	Sn	04 36 33.6	-2.2
PTGC				i		04 36 38.6	
	comp=Z,2µm,0.3s						
RREF	El Recreo	2.93	229	eP	Pn	04 36 03.2	-0.2
RREF				eS	Sn	04 36 40.3	+0.4
RREF				i		04 36 48.7	
	comp=Z,3µm,0.6s						
CBOC	Ciudad Bolivar	3.03	252	⇑iP	Pn	04 36 04.5	+0.2
CBOC				eS	Sn	04 36 41.0	-0.5
CBOC				i		04 36 55.9	
	comp=Z,891nm,0.7s						
DBBC	Dabeiba	3.08	274	i P	Pn	04 36 04.6	-0.1
DBBC				eS	Sn	04 36 40.7	-1.7
CODC	Agustn Codazz	3.11	354	⇓eP	Pn	04 36 04.5	-0.5
CODC				eS	Sn	04 36 41.9	-1.2
CODC				i		04 36 53.4	
	comp=Z,897nm,0.6s						
SDV	Santo Domingo	3.20	50	P	Pn	04 36 06.9	+0.5
	comp=Z,352nm,0.3s,baz=59,slow=23,SNR=2522						
SDV				S	Sn	04 36 44.2	-1.3
	comp=Z,186nm,0.3s,baz=58,slow=21,SNR=16						
SDV	Santo Domingo	3.20	50	⇑iP	Pn	04 36 06.7	+0.3
SDV				eS	Sn	04 36 43.2	-2.2
SDV				i		04 36 47.5	
	comp=Z,647nm,0.5s						
SDV	Santo Domingo	3.20	50		Pn	04 36 06.5	0.0
ARGC	Ariguani, Magd	3.22	340	eP	Pn	04 36 07.3	+0.8
ARGC				eS	Sn	04 36 44.5	-1.0
ARGC				i		04 36 52.6	
	comp=Z,627nm,0.6s						
ANIL	Santa Ana	3.25	225	eP	Pn	04 36 07.6	+0.5
ANIL				eS	Sn	04 36 47.8	+1.2
ORTC	Ortega, Tolima	3.59	216	eP	Pn	04 36 11.0	-0.2
ORTC				eS	Sn	04 36 54.0	-0.1
ORTC				i		04 36 58.6	
	comp=Z,1µm,0.7s						
SJCC	San Jacinto, C	3.67	326	eP	Pn	04 36 10.9	-1.4
SJCC				eS	Sn	04 36 52.1	-4.0
SJCC				i		04 37 06.5	
	comp=Z,709nm,0.6s						
PLMC	San Jos del P	3.68	239	⇑iP	Pn	04 36 12.7	+0.2
PLMC				eS	Sn	04 36 55.6	-0.7
PLMC				i		04 36 56.9	
	comp=Z,594nm,0.6s						
LCBC	Los crdobas,	3.80	302	eP	Pn	04 36 12.8	-1.2
LCBC				eS	Sn	04 36 59.4	+0.5
LCBC				i		04 37 03.1	
	comp=Z,650nm,0.5s						
YOTC	Yotoco, Valle	4.28	229	⇑iP	Pn	04 36 19.3	-1.0
YOTC				eS	Sn	04 37 05.1	-5.0
YOTC				i		04 37 21.3	
	comp=Z,258nm,2.4s						
GUVC	San Jose del G	4.28	173	eP	Pn	04 36 19.1	-1.1
GUVC				eS	Sn	04 37 08.2	-1.9
GUVC				i		04 37 14.9	
	comp=Z,1µm,0.2s						
SOLC	Bahia Solano	4.30	262	eP	Pn	04 36 20.2	-0.3
SMRC	Santa Marta, M	4.45	346	eP	Pn	04 36 22.3	0.0
SMRC				eS	Sn	04 37 10.1	-4.0
SMRC				i		04 37 14.4	
	comp=Z,386nm,0.5s						
CAPC	Capurgana	4.57	294	eP	Pn	04 36 20.4	-3.5
CAPC				eS	Sn	04 37 08.7	-8.0
CAPC				i		04 37 15.0	
	comp=Z,302nm,0.9s						
PIZC	Pizarro, Choco	4.61	247	eP	Pn	04 36 24.8	+0.4
PIZC				eS	Sn	04 37 16.9	-0.8
PIZC				i		04 37 31.1	
	comp=Z,294nm,0.6s						
PTAC	Punta Ardita,	4.67	274	eP	Pn	04 36 24.0	-1.2
PTAC				eS	Sn	04 37 10.4	-8.8
PTAC				i		04 37 25.0	
	comp=Z,436nm,0.3s						
MACC	Macarena, Meta	4.70	189	⇓iP	Pn	04 36 24.0	-1.8
MACC				eS	Sn	04 37 15.1	-5.0
MACC				i		04 37 19.6	
	comp=Z,693nm,0.9s						
URIC	Uribia, Colomb	4.97	13	eP	Pn	04 36 28.0	-1.3
URIC				eS	Sn	04 37 21.2	-5.3
URIC	Uribia, Colomb	4.97	13		Pn	04 36 27.9	-1.3
MALC	Bahia Malaga	5.04	237	eP	Pn	04 36 31.0	+0.8
MALC				eS	Sn	04 37 30.6	+2.6
MALC				i		04 37 41.6	
	comp=Z,220nm,0.9s						
GARC	Garzon, Huila	5.18	207	eP	Pn	04 36 30.4	-1.8
GARC				eS	Sn	04 37 23.6	-8.1
GARC				i		04 37 33.6	
	comp=Z,575nm,0.3s						
PCON	Cinco Dias	5.53	216	⇓eP	Pn	04 36 37.9	+0.6
PCON				i		04 37 53.2	
	comp=Z,160nm,0.6s						
FLOC	Florencia	5.79	206	⇓eP	Pn	04 36 39.2	-0.9
FLOC				eS	Sn	04 37 41.4	-4.4
FLOC				i		04 37 59.5	
	comp=Z,211nm,0.9s						
FLOC	Florencia	5.79	206		Pn	04 36 39.3	-0.8
GCUF	Volcan Galeras	6.98	217	eP	Pn	04 36 56.9	+0.5
GCUF				eS	Sn	04 38 07.1	-7.9
BCIP	Isla Barro Col	7.05	290	Pn	Pn	04 36 56.3	-0.6
PCRV	Puerto La Cruz	9.03	68	P	Pn	04 37 21.2	-1.9
	comp=Z,5.9nm,0.3s,baz=298,slow=5.8,SNR=16						
PLCV	Puerto La Cruz	9.06	68		Pn	04 37 21.2	-2.4
PCJ	Portland Cotta	11.55	340	⇓iP	Pn	04 37 58.9	+2.6
HOJ	Hope	11.66	343	⇑iP	Pn	04 38 00.1	+2.2
GWJ	Greenwich	11.72	343	i P	Pn	04 38 00.7	+1.9
STH	Stony Hill	11.75	342	⇓iP	Pn	04 38 01.5	+2.5
MCJ	Malvern	11.90	338	⇓iP	Pn	04 38 03.5	+2.5
MTDJ	Mount Denham	12.12	340		Pn	04 38 05.4	+1.4
BBJ	Bamboo Saint A	12.18	341	⇓iP	Pn	04 38 07.7	+3.1
JTS	Las Juntas de	12.20	287	P	Pn	04 38 06.8	+1.9
	comp=Z,0.5nm,0.3s,baz=286,slow=13,SNR=6.7						
SDDR	Presa de Saban	12.22	8		Pn	04 38 05.5	+0.4
SJG	San Juan	13.12	31	P	Pn	04 38 15.3	-1.3
	comp=Z,2.6nm,0.3s,baz=204,slow=15,SNR=6.4						
SJG				S	Sn	04 40 27.9	-14
	comp=Z,0.4nm,0.3s,baz=313,slow=19,SNR=2.1						
ATAH	Atahualpa	14.83	201	P	P	04 38 41.8	+1.3
	comp=Z,0.6nm,0.3s,baz=346,slow=8.3,SNR=2.2						
PTGA	Pitinga	15.12	119	P	Pn	04 38 40.0	-1.8
	comp=Z,0.3nm,0.3s,baz=285,slow=20,SNR=2.2						
PTGA	Pitinga	15.12	119	P	P	04 38 44.0	+0.8
PTGA	Pitinga	15.12	119	eP	Pn	04 38 39.0	-2.8
SAML	Samuel	18.53	148	P	P	04 39 20.3	-0.6
SAML				IAmb	IAmb	04 39 49.0	
	comp=Z,38nm,1.4s						
SAML	Samuel	18.53	148	eP	P	04 39 20.3	-0.6
APG	El Apazote	18.86	297	P	P	04 39 24.4	-0.3
	comp=Z,0.3nm,0.3s,baz=116,slow=12,SNR=2.3						
TEIG	Tepich	19.84	314	P	P	04 39 36.6	+1.6
	baz=123,slow=0.0						
TEIG	Tepich	19.84	314	IAmb	IAmb	04 39 40.3	
	comp=Z,25nm,0.6s						
MDP	Montagnes des	20.44	94	P	P	04 39 42.9	+1.4
	comp=Z,14nm,0.8s,baz=255,slow=5.6,SNR=4.7						
LPAZ	La Paz	23.49	168	P	P	04 40 12.8	+0.3
	comp=Z,0.9nm,0.5s,baz=19,slow=7.1,SNR=5.9						
LPAZ				pP	pP	04 40 44.0	+1.0
	comp=Z,8.6nm,0.7s,baz=344,slow=14,SNR=13						
LPAZ	La Paz	23.49	168	P	P	04 40 13.5	+1.0
LPAZ				IAmb	IAmb	04 40 47.8	
	comp=Z,12nm,1.1s						
LPAZ	La Paz	23.49	168	eP	P	04 40 11.8	-0.8
LPAZ				eS	S	04 44 13.4	-1.7
CLDB	Colider	24.62	135	eP	P	04 40 20.4	-1.9
CLDB				eS	S	04 44 32.5	+0.2
SIV	San Ignacio	25.61	152	P	P	04 40 29.9	-1.3
	comp=Z,0.8nm,0.7s,baz=337,slow=9.7,SNR=4.9						
SIV				pP	pP	04 41 04.0	-0.4
	comp=Z,2.6nm,0.6s,baz=337,slow=9.9,SNR=7.9						
152A	Waverly Hall	27.89	339	P	P	04 40 52.5	+1.1
152A				IAmb	IAmb	04 40 53.7	
	comp=Z,12nm,0.6s						
GOGA	Godfrey	28.14	341	P	P	04 40 55.7	+2.1
	baz=158						
Y55A	Saluda	28.17	344	P	P	04 40 55.8	+2.0
	baz=161						
SALV	Santo Antonio	28.42	143	eP	P	04 40 55.3	-0.9
X56A	White Oak	28.49	346	P	P	04 40 58.2	+1.6
	baz=163						
Z51A	Franklin	28.64	339	P	P	04 40 59.6	+1.5
Y52A	Lilburn	28.75	341	P	P	04 41 00.9	+1.9
	baz=157						
Z50A	Ashland	28.86	337	P	P	04 41 01.2	+1.2
Z50A				IAmb	IAmb	04 41 02.4	
	comp=Z,14nm,0.7s						
Z50A	Ashland	28.86	337	P	P	04 41 02.1	+2.1
	baz=153,SNR=5.7						
LRAL	Lakeview Retre	29.10	336	P	P	04 41 04.2	+2.1
	baz=151						
KMSC	Kings Mountain	29.18	346	P	P	04 41 04.4	+1.6
	baz=163						
V59A	Middlesex	29.19	351	P	P	04 41 04.0	+1.2
	baz=169						
LVC	Limon Verde	29.54	172	eP	P	04 41 06.2	-0.3
V55A	Taylorsville	29.83	347	P	P	04 41 10.6	+2.1
	baz=164						
SMTB	Santa Maria do	29.84	121	eP	P	04 41 07.1	-1.8
W52A	Murphy	29.84	342	P	P	04 41 09.9	+1.2
W52A				IAmb	IAmb	04 41 11.5	
	comp=Z,18nm,1.0s						
U58A	Oxford	29.85	351	P	P	04 41 10.1	+1.4
	baz=169						
V54A	Nebo	29.93	346	P	P	04 41 11.8	+2.3
	baz=162						
U57A	Blanch	30.02	350	P	P	04 41 11.2	+1.1
	baz=167						
T59A	Double "B" Far	30.28	353	P	P	04 41 13.6	+1.1
	baz=171						
X48A	Hartselle	30.35	337	IAmb	IAmb	04 41 16.0	
	comp=Z,14nm,0.9s						
T58A	Grand View Acr	30.39	351	P	P	04 41 14.7	+1.3
	baz=169						
T57A	Hurt	30.55	350	P	P	04 41 16.1	+1.2
	baz=168						
U54A	Nelsons Funny	30.61	346	P	P	04 41 17.1	+1.6
U54A	Nelsons Funny	30.61	346	P	P	04 41 17.5	+2.0
	baz=163						
V51A	Loudon	30.63	342	IAmb	IAmb	04 41 18.2	
	comp=Z,17nm,0.9s						
ARAG	Araguaiana, MT	30.76	137	eP	P	04 41 15.9	-1.0
T54A	Tazewell	31.07	347	P	P	04 41 21.4	+1.8
	baz=163						
TZTN	Tazewell	31.08	344	P	P	04 41 21.6	+2.0
	baz=160						
T53A	Wise	31.23	345	P	P	04 41 22.8	+1.9
	baz=162						
PLAL	Pickwick Lake	31.23	336	IAmb	IAmb	04 41 23.6	
	comp=Z,15nm,1.0s						
S57A	Dark Hollow, R	31.25	351	P	P	04 41 22.4	+1.4
	baz=169						
T52A	Hallie	31.46	345	P	P	04 41 24.8	+1.9
	baz=161						
S55A	Lewisburg	31.53	349	P	P	04 41 25.9	+2.3
	baz=166						
T51A	Gray	31.59	343	P	P	04 41 26.0	+2.0
	baz=159,SNR=5.5						
R58A	Rapidan	31.65	353	P	P	04 41 26.0	+1.5
	baz=171						
T50A	Nancy	31.90	342	P	P	04 41 28.8	+2.0
	baz=158						
R54A	Victor	32.02	348	P	P	04 41 29.7	+1.9
	baz=165						
AQDB	Aquidauana	32.08	148	eP	P	04 41 27.6	-0.8
S51A	Beattyville	32.12	344	P	P	04 41 30.6	+2.0
	baz=160						
WVT	Waverly	32.13	337	P	P	04 41 29.7	+1.0
WVT	Waverly	32.13	337	P	P	04 41 30.0	+1.3
	baz=152						
T49A	Edmonton	32.20	341	P	P	04 41 30.8	+1.4
	baz=156						
R53A	Hurricane	32.37	347	P	P	04 41 33.2	+2.4
	baz=163						
S50A	Richmond	32.38	343	P	P	04 41 33.0	+2.0
	baz=159						
Q56A	Snyder Ridge,	32.54	351	P	P	04 41 34.5	+2.2
	baz=169						
Q55A	Buckhannon	32.64	350	P	P	04 41 36.0	+2.8
	baz=167						
R51A	Hillsboro	32.74	345	P	P	04 41 35.9	+1.8
	baz=160						
S49A	Springfield	32.74	342	P	P	04 41 35.8	+1.7
	baz=157,SNR=7.5						
Q53A	Leroy	32.79	348	P	P	04 41 36.4	+2.0
	baz=164						
R50A	Paris	32.92	344	IAmb	IAmb	04 41 38.4	
	comp=Z,14nm,0.8s						
R50A	Paris	32.92	344	P	P	04 41 37.5	+1.9
	baz=159,SNR=5.9						
P56A	Dayton Farm, R	32.94	352	P	P	04 41 37.9	+2.2
	baz=169						
X40A	Basin Creek Fa	33.00	329	IAmb	IAmb	04 41 37.7	
	comp=Z,7.2nm,0.7s						
X40A	Basin Creek Fa	33.00	329	P	P	04 41 37.3	+0.9
	baz=142						
Q52A	Bidwell	33.05	347	P	P	04 41 38.2	+1.5
	baz=163						
R49A	Shelbyville	33.18	343	P	P	04 41 39.7	+1.9
	baz=158						
MCWV	Mont Chateau	33.25	351	P	P	04 41 40.6	+2.2
	baz=168						
W41B	Gary Mavity, V	33.25	331	P	P	04 41 39.4	+0.9
	baz=144						
P54A	Burton	33.30	350	P	P	04 41 40.9	+2.0
	baz=166						
O58A	Lewisberry	33.33	355	P	P	04 41 41.1	+2.0
	baz=173						
Q50A	Georgetown	33.35	344	P	P	04 41 41.4	+2.0
	baz=160						
P53A	Whipple	33.36	348	P	P	04 41 41.3	+1.9
	baz=165						
Q51A	Peebles	33.36	345	P	P	04 41 41.5	+2.1
	baz=161						
WHAR	Wooly Hollow	33.37	331	IAmb	IAmb	04 41 41.7	
	comp=Z,8.9nm,0.8s						
BDFB	Brasilia	33.41	132	P	P	04 41 39.5	-0.7
	comp=Z,2.7nm,0.8s,baz=300,slow=9.1,SNR=7.1						
BDFB	Brasilia	33.41	132	IAmb	IAmb	04 41 40.8	
	comp=Z,16nm,1.4s						
WCI	Wyandotte Cave	33.47	341	P	P	04 41 41.8	+1.4
WCI				IAmb	IAmb	04 41 42.5	
	comp=Z,15nm,0.7s						
WCI	Wyandotte Cave	33.47	341	P	P	04 41 41.9	+1.6
	baz=156						
LCAR	Lake Charles	33.47	333	IAmb	IAmb	04 41 42.1	
	comp=Z,6.9nm,0.6s						
O56A	Blue Knob Stat	33.66	352	P	P	04 41 44.4	+2.3
	baz=170						
P52A	Corning	33.66	347	P	P	04 41 43.9	+1.9
	baz=164,SNR=5.2						
O55A	Ligonier	33.70	351	P	P	04 41 44.9	+2.5
	baz=169						
Q49A	Aurora	33.76	343	P	P	04 41 45.1	+2.3
	baz=158						
FCAR	Ozark Folk Cen	33.77	332	IAmb	IAmb	04 41 44.3	
	comp=Z,21nm,1.1s						
Q48A	North Vernon	33.93	342	P	P	04 41 45.8	+1.5
	baz=157						
N60A	Cedar Hill Far	33.95	357	P	P	04 41 45.9	+1.4
	baz=176						
P50A	Jamestown	34.03	345	P	P	04 41 47.0	+1.8
	baz=161						
W39A	Magazine	34.04	329	IAmb	IAmb	04 41 47.5	
	comp=Z,19nm,1.1s						
W39A	Magazine	34.04	329	P	P	04 41 46.5	+1.1
	baz=141,SNR=6.0						
SIUC	Southern Illin	34.05	337	P	P	04 41 46.2	+0.8
O52A	Adamsville	34.06	348	P	P	04 41 47.5	+2.0
	baz=164						
O53A	New Philadelph	34.06	349	P	P	04 41 47.3	+1.8
	baz=165						
N55A	Marion Center	34.22	352	P	P	04 41 48.9	+2.1
	baz=169						
T42A	Van Buren	34.24	334	IAmb	IAmb	04 41 48.5	
	comp=Z,19nm,1.1s						
O51A	Pataskala	34.26	347	P	P	04 41 48.9	+1.8
	baz=163						
N56A	West Decatur	34.26	353	P	P	04 41 49.2	+1.9
	baz=171						
P48A	Milroy	34.33	343	P	P	04 41 48.5	+0.7
	baz=158						
ACSO	Alum Creek Sta	34.42	347	IAmb	IAmb	04 41 51.0	
	comp=Z,12nm,0.8s						
ACSO	Alum Creek Sta	34.42	347	P	P	04 41 50.6	+2.1
	baz=162						
O50A	Cable	34.49	346	P	P	04 41 51.0	+1.8
	baz=161,SNR=7.4						
U40A	Yellville	34.50	331	P	P	04 41 50.1	+0.8
	baz=144,SNR=23						
N54A	Moraine State	34.54	351	P	P	04 41 51.7	+2.1
	baz=168						
M57A	Sunshine Farm,	34.55	355	P	P	04 41 51.9	+2.2
	baz=173						
N52A	McGinn's Farm,	34.70	349	P	P	04 41 52.7	+1.7
	baz=165						
M56A	Emporium	34.81	353	P	P	04 41 53.8	+1.9
	baz=171						
IPMB	Ipameri, GO	34.81	135	eP	P	04 41 50.0	-2.3
M55A	Ridgway	34.87	353	P	P	04 41 54.1	+1.7
	baz=170						
HHAR	Hobbs	34.97	330	IAmb	IAmb	04 41 54.1	
	comp=Z,6.5nm,0.8s						
N50A	Nevada	34.97	347	P	P	04 41 55.0	+1.7
	baz=162						
M54A	Oil Creek Stat	35.03	351	IAmb	IAmb	04 41 56.5	
	comp=Z,23nm,1.2s						
M54A	Oil Creek Stat	35.03	351	P	P	04 41 55.6	+1.8
	baz=168						
L58A	Harry Jones Me	35.16	356	P	P	04 41 56.7	+1.8
	baz=175						
CCM	Cathedral Cave	35.17	335	P	P	04 41 55.7	+0.6
CCM	Cathedral Cave	35.17	335	P	P	04 41 55.9	+0.9
	baz=148						
L57A	Andrews Acres	35.19	355	P	P	04 41 57.0	+1.8
	baz=173						
ALLY	Alegheny Colle	35.24	351	IAmb	IAmb	04 41 58.5	
	comp=Z,16nm,1.1s						
U38A	Gravette	35.31	330	IAmb	IAmb	04 41 56.9	
	comp=Z,7.6nm,1.0s						
BINY	Binghamton	35.32	356	P	P	04 41 57.9	+1.7
	baz=175						
N49A	Columbus Grove	35.36	345	P	P	04 41 57.8	+1.2
	baz=161						
L56A	Greenwood	35.39	354	P	P	04 41 58.5	+1.6
	baz=172						
PCMB	Pacaembu	35.47	143	eP	P	04 41 56.4	-1.3
L55A	Hinsdale	35.53	353	P	P	04 41 59.8	+1.7
	baz=171						
L53A	Girard	35.55	351	P	P	04 41 59.6	+1.3
	baz=168						
ABTX	Abilene, Hawle	35.60	320	IAmb	IAmb	04 42 00.8	
	comp=Z,6.8nm,0.9s						
TUL1	Leonard	35.64	328	IAmb	IAmb	04 42 00.4	
	comp=Z,14nm,1.1s						
SFIN	Lafayette	35.68	342	P	P	04 42 00.5	+1.2
	baz=156,SNR=10						
L54A	Sinclairville	35.69	352	P	P	04 42 01.1	+1.7
	baz=169						
N47A	Urbana	35.73	344	P	P	04 42 00.6	+0.9
	baz=158						
S39A	Bolivar	35.79	332	IAmb	IAmb	04 42 02.0	
	comp=Z,5.8nm,0.6s						
R40A	Maddies Statio	35.81	334	IAmb	IAmb	04 42 01.2	
	comp=Z,9.2nm,0.6s						
K58A	Earlville	35.86	357	P	P	04 42 02.4	+1.5
	baz=176						
JANB	Januaria	35.89	127	eP	P	04 42 00.9	-0.6
K56A	Middlesex	35.92	355	P	P	04 42 03.1	+1.7
	baz=173						
K54A	Basiliko Farm,	35.98	353	P	P	04 42 03.6	+1.7
	baz=170						
L50A	Kingsville	36.11	348	P	P	04 42 04.5	+1.5
	baz=163						
CPUP	Villa Florida	36.34	156	eP	P	04 42 04.2	-0.9
L49A	Milan	36.39	347	P	P	04 42 07.5	+2.1
	baz=162						
L48A	N Adams	36.39	346	P	P	04 42 06.4	+1.0
	baz=161						
TXAR	Lajitas Array	36.46	312	P	P	04 42 06.8	+0.5
	comp=Z,1.2nm,0.4s,baz=127,slow=9.1,SNR=28						
TXAR				PcP	PcP	04 44 28.5	+1.5
	comp=Z,0.3nm,0.5s,baz=150,slow=4.8,SNR=5.0						
TXAR	Lajitas Array	36.46	312	P	P	04 42 07.0	+0.7
TX32	Lajitas Array	36.46	312	P	P	04 42 07.3	+1.0
WMOK	Wichita Mounta	36.48	323	IAmb	IAmb	04 42 07.3	
	comp=Z,9.2nm,1.2s						
WMOK	Wichita Mounta	36.48	323	P	P	04 42 06.1	-0.1
	baz=134,SNR=5.2						
J57A	Williamstown	36.53	356	P	P	04 42 07.9	+1.4
	baz=175						
HDIL	Hopedale	36.58	339	P	P	04 42 07.1	+0.1
	baz=152,SNR=6.1						
I58A	Old Forge	36.76	358	P	P	04 42 10.0	+1.5
	baz=177						
BB19B	Bebedouro	36.76	140	eP	P	04 42 07.9	-0.9
J52A	Paris	36.85	351	P	P	04 42 10.9	+1.8
	baz=168						
L46A	Eue Claire	36.94	344	P	P	04 42 11.2	+1.2
	baz=158						
K48A	Perry	37.13	347	P	P	04 42 12.4	+0.8
	baz=162						
K47A	Vermontville	37.21	345	P	P	04 42 13.0	+0.7
	baz=160						
K46A	Dorr	37.43	345	P	P	04 42 14.6	+0.5
	baz=159						
J49A	Marlette	37.45	348	P	P	04 42 15.3	+1.0
	baz=163						
I55A	Frankford	37.46	355	P	P	04 42 15.4	+1.1
	baz=172						
PTGB	Pitanga	37.46	148	eP	P	04 42 13.8	-1.0
I51A	Listowel	37.48	351	P	P	04 42 15.9	+1.3
	baz=167						
J48A	Bridge Port	37.52	347	P	P	04 42 16.1	+1.2
	baz=162						
H57A	Richville	37.55	357	P	P	04 42 16.3	+1.3
	baz=176						
I52A	Shelburne	37.61	352	P	P	04 42 16.9	+1.3
	baz=168						
J47A	Sunmer	37.71	346	P	P	04 42 17.6	+1.1
	baz=161						
H56A	Elgin	37.72	356	P	P	04 42 18.0	+1.5
	baz=175						
H55A	Tweed	37.75	355	P	P	04 42 17.9	+1.2
	baz=173						
H53A	Bobcaygeon	37.91	354	P	P	04 42 20.0	+1.9
	baz=171						
I49A	Point Hope	37.94	349	P	P	04 42 19.5	+1.1
	baz=164						
H52A	Wyevale	38.13	352	P	P	04 42 21.4	+1.4
	baz=169						
G57A	Newington	38.17	358	P	P	04 42 21.5	+1.3
	baz=177						
AMTX	Amarillo	38.35	321	IAmb	IAmb	04 42 23.6	
	comp=Z,18nm,1.1s						
AMTX	Amarillo	38.35	321	P	P	04 42 23.2	+1.1
	baz=130						
G55A	Calabogie	38.41	356	P	P	04 42 23.3	+1.0
	baz=174						
G53A	Haliburton	38.45	354	P	P	04 42 23.7	+1.1
	baz=171						
MSTX	Muleshoe	38.48	319	IAmb	IAmb	04 42 24.8	
	comp=Z,7.7nm,0.9s						
MSTX	Muleshoe	38.48	319	P	P	04 42 23.5	+0.3
	baz=128						
KSU1	Kansas State U	38.49	330	P	P	04 42 23.0	-0.1
	baz=140						
I46A	Reed City	38.52	346	P	P	04 42 24.6	+1.3
	baz=160						
L40A	Anamosa	38.59	338	IAmb	IAmb	04 42 23.9	
	comp=Z,10nm,0.5s						
G54A	Lake Saint Pet	38.67	354	P	P	04 42 25.4	+0.9
	baz=172						
H47A	Mio	38.86	347	P	P	04 42 27.9	+1.9
	baz=162						
MNTX	Cornudas Mount	38.97	314	P	P	04 42 27.9	+0.7
MNTX				IAmb	IAmb	04 42 29.6	
	comp=Z,8.9nm,1.1s						
MNTX	Cornudas Mount	38.97	314	P	P	04 42 28.1	+0.9
	baz=123,SNR=12						

JFWS	Jewell Farm	38.99	340	P	P	04 42 27.4	+0.2
	baz=152,SNR=10						
VAO	Valinhos	39.15	140	eP	P	04 42 27.4	-1.5
F52A	Sundridge	39.20	353	P	P	04 42 29.9	+1.1
	baz=170						
ALGO	Algonquin Park	39.22	355	P	P	04 42 30.0	+1.0
	baz=172						
SCIA	State Center	39.23	336	P	P	04 42 29.6	+0.4
	baz=147						
BSCB	Bom Sucesso	39.23	135	eP	P	04 42 27.8	-1.8
SPB	Sao Paulo	39.28	141	eP	P	04 42 28.6	-1.3
H45A	Beulah	39.31	345	P	P	04 42 30.5	+0.7
	baz=159,SNR=6.0						
G47A	Hillman	39.33	348	P	P	04 42 31.0	+1.1
	baz=163						
F51A	Arnstein	39.40	353	P	P	04 42 31.5	+0.9
	baz=169						
N35A	Tabor	39.41	333	IAmb	IAmb	04 42 31.2	
	comp=Z,8.6nm,0.6s						
I42A	Draeger Farm,	39.43	342	IAmb	IAmb	04 42 31.9	
	comp=Z,11nm,0.6s						
E57A	Chemin Saint G	39.45	359	P	P	04 42 32.2	+1.2
	baz=178,SNR=5.3						
F49A	Sandfield	39.56	350	P	P	04 42 32.6	+0.8
	baz=166,SNR=6.7						
E53A	Dumoine, Ponti	39.60	355	P	P	04 42 33.3	+1.1
	baz=173						
E52A	Mattawa	39.60	354	P	P	04 42 33.0	+0.8
	baz=171						
G45A	Suttons Bay	39.60	346	IAmb	IAmb	04 42 33.8	
	comp=Z,16nm,0.7s						
G45A	Suttons Bay	39.60	346	P	P	04 42 33.5	+1.2
	baz=160,SNR=5.6						
E56A	St. Veronique	39.61	358	P	P	04 42 33.3	+1.0
	baz=177						
E54A	Lac Daplat, Po	39.62	356	P	P	04 42 33.2	+0.8
	baz=174						
E63A	Oxbow	39.66	5	P	P	04 42 33.9	+1.3
	baz=187						
E64A	Bridgewater	39.71	6	P	P	04 42 34.4	+1.3
	baz=188						
F48A	Evansville	39.72	350	P	P	04 42 34.0	+0.8
	baz=165,SNR=5.9						
CBKS	Cedar Bluff	39.90	327	P	P	04 42 35.1	+0.2
	baz=136						
E51A	G1948 Merrick	39.94	353	P	P	04 42 36.4	+1.3
	baz=170						
D57A	Chemin Vers le	40.05	359	P	P	04 42 37.0	+1.1
	baz=179						
D55A	Sainte-Anne-du	40.10	357	P	P	04 42 37.4	+1.1
	baz=176						
D56A	ZEC Mazanza, M	40.10	358	P	P	04 42 37.4	+1.0
	baz=177						
F45A	CMU Biological	40.18	347	P	P	04 42 37.9	+1.0
	baz=161,SNR=6.3						
D62A	Allapoint, All	40.26	4	P	P	04 42 39.0	+1.4
	baz=186						
E48A	Lockeyer	40.27	350	P	P	04 42 39.0	+1.3
	baz=166,SNR=13						
D54A	Lac Fusel, La	40.30	356	P	P	04 42 38.9	+1.0
	baz=174						
D63A	Stockholm	40.30	5	P	P	04 42 39.2	+1.3
	baz=188						
D53A	Lac Vacive, Po	40.30	355	P	P	04 42 39.1	+1.1
	baz=173						
D61A	St Aubert, Com	40.31	3	P	P	04 42 39.9	+1.9
	baz=184						
LATQ	La Tuque	40.41	0	P	P	04 42 40.4	+1.6
	baz=180						
E47A	Iron Bridge	40.45	349	P	P	04 42 40.2	+1.1
	baz=164						
D51A	Lot 18 Range I	40.48	353	P	P	04 42 40.4	+1.0
	baz=170						
E46A	Sault Ste Mari	40.56	348	IAmb	IAmb	04 42 41.7	
	comp=Z,15nm,0.6s						
D50A	G1974 Best Tow	40.61	353	P	P	04 42 41.3	+0.8
	baz=170						
D48A	Paudash Townsh	40.89	351	P	P	04 42 43.9	+1.1
	baz=167,SNR=8.5						
D49A	Beulah Townshi	40.92	351	P	P	04 42 44.2	+1.2
	baz=167,SNR=5.3						
D47A	Chapleau	40.99	350	P	P	04 42 44.3	+0.6
	baz=165						
D46A	Sault St. Mari	41.01	349	P	P	04 42 44.5	+0.8
	baz=163						
E44A	Grand Marais A	41.16	347	IAmb	IAmb	04 42 47.5	
	comp=Z,30nm,1.2s						
E44A	Grand Marais A	41.16	347	P	P	04 42 46.1	+1.2
	baz=160						
T25A	Trinidad	41.49	321	P	P	04 42 49.9	+1.8
	baz=129						
COWI	Conover	41.51	343	IAmb	IAmb	04 42 49.9	
	comp=Z,13nm,1.0s						
ANMO	Albuquerque	41.51	317	P	P	04 42 49.2	+0.9
	comp=Z,0.8nm,0.5s,baz=145,slow=12,SNR=3.2						
ANMO	Albuquerque	41.51	317	IAmb	IAmb	04 42 52.6	
	comp=Z,2.5nm,1.1s						
SPMN	Marine on St.	41.91	339	IAmb	IAmb	04 43 48.0	
	comp=Z,29nm,1.9s						
ECSD	EROS Data Cent	42.15	334	IAmb	IAmb	04 42 53.6	
	comp=Z,12nm,1.1s						
ECSD	EROS Data Cent	42.15	334	P	P	04 42 52.7	-0.5
	baz=144,SNR=8.0						
LSQQ	Lebel-sur-Quev	42.22	356	P	P	04 42 54.5	+0.9
	baz=174						
SDCO	Great Sand Dun	42.55	321	P	P	04 42 58.3	+1.5
	baz=128,SNR=9.0						
MATQ	Matagami	42.96	356	P	P	04 43 00.4	+0.9
	baz=173						
TUC	Tucson	43.25	311	P	P	04 43 03.7	+1.5
	baz=118						
S22A	4UR Ranch, Cre	43.39	320	P	P	04 43 05.2	+1.7
	baz=127,SNR=6.6						
SUSD	Miller	43.74	333	P	P	04 43 05.8	-0.1
	baz=141,SNR=8.6						
W18A	Petrified Fore	43.87	315	IAmb	IAmb	04 43 09.8	
	comp=Z,9.4nm,1.0s						
W18A	Petrified Fore	43.87	315	P	P	04 43 09.5	+2.2
	baz=121						
EYMN	Ely	43.87	342	P	P	04 43 07.0	+0.1
EYMN	Ely	43.87	342	P	P	04 43 07.0	+0.1
	baz=153,SNR=19						
ISCO	Idaho Springs	43.91	323	P	P	04 43 09.1	+1.5
	baz=130,SNR=7.0						
MVCO	Mesa Verde	44.16	318	P	P	04 43 10.9	+1.2
	baz=124						
214A	Organ Pipe Nat	44.63	309	P	P	04 43 14.7	+1.5
	baz=116						
PV15	Paradox Valley	44.79	320	IAmb	IAmb	04 43 17.2	
	comp=Z,14nm,1.0s						
N23A	Red Feather La	44.80	324	P	P	04 43 16.3	+1.6
	baz=130						
WUAZ	Wupatki	45.22	315	P	P	04 43 19.3	+1.3
WUAZ	Wupatki	45.22	315	P	P	04 43 20.0	+2.0
	baz=120,SNR=9.0						
AGMN	Agassiz Nation	45.62	339	IAmb	IAmb	04 43 21.2	
	comp=Z,7.8nm,0.6s						
AGMN	Agassiz Nation	45.62	339	P	P	04 43 20.9	+0.2
	baz=147,SNR=8.8						
RSSD	Black Hills	45.94	329	P	P	04 43 24.7	+1.1
	baz=135						
E28A	Huff	46.16	334	IAmb	IAmb	04 43 26.1	
	comp=Z,21nm,0.7s						
KNB	Kanab	46.98	316	P	P	04 43 33.2	+1.5
ULM	Lac du Bonnet	47.28	340	P	P	04 43 33.2	-0.5
	comp=Z,11nm,0.5s,baz=145,slow=7.0,SNR=37						
ULM	Lac du Bonnet	47.28	340	IAmb	IAmb	04 43 34.5	
	comp=Z,12nm,0.7s						
NLU	North Lily Min	48.01	319	P	P	04 43 40.7	+1.0
BW06	Boulder Array	48.08	324	P	P	04 43 40.6	+0.4
	baz=128,SNR=5.7						
PDAR	Pinedale Array	48.08	324	P	P	04 43 40.5	+0.3
	comp=Z,1.6nm,0.5s,baz=130,slow=9.2,SNR=20						
PDAR	Pinedale Array	48.08	324	P	P	04 43 40.4	+0.2
SCHQ	Schefferville	48.14	5	P	P	04 43 40.7	+0.6
	comp=Z,7.5nm,0.6s,baz=182,slow=6.3,SNR=23						
SCHQ	Schefferville	48.14	5	P	P	04 43 40.3	+0.2
SCHQ				IAmb	IAmb	04 43 41.5	
	comp=Z,7.7nm,0.7s						
DUG	Dugway, Tooele	48.61	319	P	P	04 43 45.1	+0.9
	baz=122						
LAO	LASA Array	48.84	330	P	P	04 43 46.1	+0.3
	baz=134						
GSC	Goldstone, Bar	49.06	312	P	P	04 43 49.1	+1.4
	baz=115						
DGMT	Dagmar	49.15	333	P	P	04 43 49.2	+1.2
	baz=137,SNR=14						
REDW	Red Top Meadow	49.19	324	IAmb	IAmb	04 43 50.3	
	comp=Z,7.0nm,0.7s						
SNOW	Snow King Moun	49.20	324	P	P	04 43 49.8	+1.1
TPNV	Topopah Spring	49.37	314	P	P	04 43 51.6	+1.6
	baz=117						
R11A	Troy Canyon, C	49.54	316	P	P	04 43 52.7	+1.3
	baz=118						
NVAR	Mina Array Bea	51.48	315	P	P	04 44 07.1	+1.1
	comp=Z,1.4nm,0.8s,baz=121,slow=6.3,SNR=8.6						
EGMT	Eagleton	51.51	329	P	P	04 44 06.9	+1.1
	baz=131						
MFID	Camas Ranch	52.23	321	IAmb	IAmb	04 44 13.7	
	comp=Z,5.1nm,0.7s						
FFC	Flin Flon	53.09	340	P	P	04 44 17.1	-0.1
FFC				IAmb	IAmb	04 44 17.4	
	comp=Z,3.5nm,0.5s						
F10A	Beach Ranch, E	54.42	323	IAmb	IAmb	04 44 30.1	
	comp=Z,23nm,1.9s						
G08A	Pilot Rock	55.12	322	IAmb	IAmb	04 44 33.7	
	comp=Z,11nm,1.1s						
J05D	Fort Rock, OR	55.62	319	P	P	04 44 36.9	+1.0
	baz=116						
PINE	Pine Mountain	55.65	319	IAmb	IAmb	04 44 38.4	
	comp=Z,12nm,0.9s						
C09A	Chrisman Ranch	56.00	325	IAmb	IAmb	04 44 39.8	
	comp=Z,4.6nm,0.8s						
YKA	Yellowknife Ar	63.26	340	P	P	04 45 27.7	-0.1
	comp=Z,6.0nm,0.5s,baz=133,slow=7.1,SNR=192						
YKA				pP	pP	04 46 06.2	+1.4
	comp=Z,1.9nm,0.8s,baz=130,slow=7.5,SNR=2.4						
DBIC	Dimbokro	67.73	86	P	P	04 45 55.8	-1.5
	comp=Z,2.7nm,0.6s,baz=265,slow=8.5,SNR=7.0						
DBIC				pP	pP	04 46 34.1	-1.3
	comp=Z,2.2nm,0.8s,baz=295,slow=18,SNR=1.5						
SUMG	Summit	68.99	11	iP	P	04 46 04.0	-0.6
	comp=Z,24nm,0.6s						
SUMG	Summit	68.99	11	P	P	04 46 04.4	-0.1
SUMG				IAmb	IAmb	04 46 05.1	
	comp=Z,9.1nm,0.7s						
A36M	Sachs Harbour	72.43	345	P	P	04 46 25.0	+0.1
	baz=125						
INK	Inuvik	73.03	340	P	P	04 46 28.7	+0.2
INK				IAmb	IAmb	04 47 21.4	
	comp=Z,16nm,1.9s						
BCAR	Beaver Creek A	74.36	334	P	P	04 46 37.5	+1.1
HDA	Harding Lake	76.92	335	P	P	04 46 51.4	+0.5
	baz=102						
ILAR	Eielson Array	76.96	335	P	P	04 46 51.1	0.0
	comp=Z,1.1nm,0.9s,baz=106,slow=4.4,SNR=8.6						
ILAR	Eielson Array	76.96	335	P	P	04 46 50.9	-0.2
GHO	Glory Hole Cre	77.31	332	IAmb	IAmb	04 46 54.7	
	comp=Z,7.3nm,0.9s						
RND	Reindeer	77.56	333	IAmb	IAmb	04 46 56.4	
	comp=Z,7.2nm,0.8s						
SUA	Susitna One	78.13	331	IAmb	IAmb	04 46 59.2	
	comp=Z,5.2nm,0.8s						
ARCES	ARCESS Array B	86.67	20	P	P	04 47 41.1	-0.7
	comp=Z,5.6nm,1.0s,baz=282,slow=4.5,SNR=1.7						
FINES	FINESS Array B	88.44	28	P	P	04 47 49.6	-0.7
	comp=Z,1.1nm,0.7s,baz=338,slow=0.7,SNR=1.3						
ZALV	Zalesovo Beam	116.67	14	PKP	PKPdf	04 53 40.8	-0.9
	comp=Z,0.7nm,0.4s,baz=259,slow=3.7,SNR=2.8						
MKAR	Makanchi Array	122.32	20	PKP	PKPdf	04 53 52.2	-0.7
	comp=Z,0.5nm,0.4s,baz=311,slow=2.1,SNR=15						
SONM	Songino Array	125.58	0	PKP	PKPdf	04 53 58.9	-0.3
	comp=Z,0.5nm,0.5s,baz=266,slow=1.5,SNR=4.6						
KSH	Kashi	125.75	29	PKP	PKPdf	04 53 58.5	-1.3
KSH				sPKP		04 54 58.3	
KSH				PP	PP	04 55 57.3	+4.3
KSH				PKS	PKSdf	04 57 35.5	-1.0
KSH				SKKS		05 02 32.8	
ASAR	Alice Springs	149.11	234	PKPbc	PKPbc	04 54 45.9	-1.0
	comp=Z,1.8nm,0.7s,baz=119,slow=3.5,SNR=28						
WRA	Warramunga Arr	150.34	241	PKPbc	PKPbc	04 54 49.1	-0.8
	comp=Z,2.3nm,0.3s,baz=104,slow=3.2,SNR=6.0						
CMAR	Chiang Mai Arr	153.69	17	PKPbc	PKPbc	04 54 57.1	-0.4
	comp=Z,1.3nm,0.5s,baz=324,slow=3.8,SNR=2.2						

OMAN 29 04:44:05.0±0.3**, 17°.54N×59°.78E, h34**^{km}±84^{km}**, ml3.8**/7**,**
Error ellipse: s-maj=14.7km s-min=3.6km az=359.0,
Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MHTO	MHTO	3.83	334	P	Pn	04 45 01.3	-0.4
	SNR=71						
MHTO				S	Sn	04 45 47.0	+1.5
SHAO	Shalim	3.99	278	P	Pn	04 45 03.6	-0.1
	SNR=36						
SHAO				S	Sn	04 45 49.0	-0.4
JLN	Jalan Bani Buh	4.60	356	P	Pn	04 45 12.3	+0.1
JLN				S	Sn	04 46 05.9	+1.4
DMTO	DMTO	4.61	273	P	Pn	04 45 12.2	-0.1
	SNR=42						
DMTO				S	Sn	04 46 03.3	-1.4
JMDO	Jabal Madar	5.06	342	P	Pn	04 45 19.2	+0.7
	SNR=6.8						
JMDO				S	Sn	04 46 18.1	+2.3
WBK	Wadi Bani Khal	5.11	352	P	Pn	04 45 20.0	+0.9
	SNR=12						
WBK				S	Sn	04 46 18.4	+1.5
RBK	Rabkut	5.32	270	P	Pn	04 45 22.5	+0.4
RBK				S	Sn	04 46 21.9	-0.4

NIED ***29*** *04:51:00, 36°.40N×141°.80E, h17*^{km}*, Mw3.7 Best double couple:* M_0*3.92000×*10^{14} *NP1:*ϕ_s*13.00000°, δ69.00000°, λ79.00000°. NP2:*ϕ_s*223.00000°, δ23.00000°, λ117.00000°.*
IDC ***29*** *04:51:30.3±1.2, 36°.32N×142°.05E, h0*^{km}*, mb3.5/7, mb1 3.6/10, mb1mx3.5/47, mbtmp3.6/10, ML3.3/3, Error ellipse: s-maj=27.0km s-min=21.1km az=86.0*
JMA ***29*** *04:51:34.7±0.3, 36°.40N×141°.83E, h56*^{km}*, M3.6*
ISC 29 04:51:32.8±0.8**, 36°.37N**±0°.04×**141°.90E**±0°.05**, h19**^{km}**, n30, σ1**^{s}**.52**/30**, mb3.6**/7**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	1.06	269	P	Pg	04 51 52.8	-0.7
JHYU				eS	Sn	04 52 06.7	-0.2
CHOJ	Chosi	1.08	232	P	Pg	04 51 53.5	-0.2
CHOJ				eS	Sg	04 52 08.3	+0.4
JHO	Hitachi	1.10	283	P	Pb	04 51 52.9	-0.4
ONAJ	Iwakimizuishiy	1.15	310	P	Pg	04 51 53.7	-1.4
JFK	Kawauchi	1.29	321	P	Pg	04 51 56.5	-1.3
JFT	Otama	1.70	313	P	Pb	04 52 02.8	-0.7
JMM	Marumori	1.74	330	P	Pb	04 52 02.6	-1.5
BSO3	Boso 3	1.93	216	P	Pb	04 52 05.7	-1.6
JAG	Ashikaga	1.98	272	P	Pn	04 52 05.8	+0.5
JFY	Yanaizu	2.04	301	P	Pb	04 52 08.4	-0.9
JIO	Ouri	2.12	348	P	Pb	04 52 07.9	-2.8
JKT	Katashina	2.17	281	P	Pb	04 52 09.2	-2.4
JKT				eS	Sn	04 52 35.5	+1.0
MJAR	Matsushiro Arr	2.98	274	Pn	Pn	04 52 20.6	+1.5
	1.6nm,0.3s,baz=93,slow=9.3,SNR=53						
MJAR				Sn	Sb	04 52 58.7	-2.7
	0.9nm,0.3s,baz=90,slow=28,SNR=5.2						
MAT	Matsushiro	2.98	274	P	Pn	04 52 21.2	+2.0
MAT				S	Sn	04 52 53.1	-1.3
JHJ	Hachijo jima 2	3.68	209	Pn	Pn	04 52 29.3	+0.6
	13nm,0.3s,baz=42,slow=13,SNR=2.0						
JHJ				Sn	Sn	04 53 08.2	-3.4
	29nm,0.3s,baz=240,slow=20,SNR=2.6						
ASAJ	Asahikawa	7.75	4	Pn	Pn	04 53 25.1	+0.5
	0.5nm,0.3s,baz=232,slow=19,SNR=2.2						
H11N2	WAKE ISLAND Hy	27.47	120	T	T	05 26 53.2	
	baz=313,slow=74						
H11N1	WAKE ISLAND Hy	27.48	120	T	T	05 26 57.1	
	baz=313,slow=74						
H11N3	WAKE ISLAND Hy	27.49	120	T	T	05 26 51.5	
	baz=313						
H11S1	WAKE ISLAND Hy	28.17	123	T	T	05 27 41.0	
	baz=311						
H11S3	WAKE ISLAND Hy	28.17	123	T	T	05 27 40.6	
	baz=311						
H11S2	WAKE ISLAND Hy	28.19	123	T	T	05 27 40.9	
	baz=311						
SONM	Songino Array	28.48	305	P	P	04 57 28.3	+1.5
	1.2nm,0.5s,baz=96,slow=9.6,SNR=7.4						
ZALV	Zalesovo Beam	42.65	313	P	P	04 59 28.7	+0.8
	0.7nm,0.4s,baz=101,slow=7.7,SNR=4.3						
MKAR	Makanchi Array	44.80	303	P	P	04 59 46.6	+1.2
	0.5nm,0.6s,baz=89,slow=9.9,SNR=7.6						
WRA	Warramunga Arr	56.46	189	P	P	05 01 12.8	-0.7
	0.3nm,0.8s,baz=358,slow=7.3,SNR=1.8						
ASAR	Alice Springs	60.19	188	P	P	05 01 40.3	+0.8
	0.2nm,0.7s,baz=348,slow=4.1,SNR=2.1						
YKA	Yellowknife Ar	64.18	30	P	P	05 02 06.4	+0.6
	0.2nm,0.9s,baz=266,slow=6.1,SNR=2.8						
NB2	NORSAR Subarra	74.95	338	P	P	05 03 13.6	+1.3
	comp=Z,0.6nm,0.8s,baz=42,slow=5.9						
NOA	NORSAR Array B	74.95	338	P	P	05 03 13.8	+1.5
	comp=Z,0.7nm,0.8s,baz=40,slow=5.7,SNR=3.7						

NIED ***29*** *04:53:00, 36°.40N×141°.80E, h20*^{km}*, Mw4.2 Best double couple:* M_0*2.46000×*10^{15} *NP1:*ϕ_s*24.00000°, δ72.00000°, λ92.00000°. NP2:*ϕ_s*197.00000°, δ19.00000°, λ83.00000°.*
IDC ***29*** *04:53:42.3±0.6, 36°.34N×141°.87E, h0*^{km}*, mb4.0/21, mb1 4.1/26, mb1mx4.1/52, mbtmp4.0/26, ML3.7/3, MS3.7/4, Ms1 3.7/4, ms1mx3.1/49, Error ellipse: s-maj=16.1km s-min=12.4km az=108.0*
JMA ***29*** *04:53:46.2±0.3, 36°.39N×141°.82E, h58*^{km}*, M3.8*
NEIC ***29*** *04:53:46.7±1.9, 36°.26N±0°.05×142°.00E±0°.08, h33*^{km}*±2*^{km}*, mb4.4/14, Error ellipse: s-maj=9.8km s-min=7.9km az=97.0*
MOS ***29*** *04:53:46.7±1.2, 36°.42N×141°.98E, h44*^{km}*, mb4.5/21, Error ellipse: s-maj=10.2km s-min=6.5km az=118.9*
ISC 29 04:53:45.2±0.5**, 36°.36N**±0°.05×**142°.00E**±0°.05**, h19**^{km}**, n122, σ1**^{s}**.84**/120**, mb4.2**/39**, 6C-4D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	1.14	235	P	Pn	04 54 05.1	-1.0
CHOJ				eS	Sb	04 54 19.5	-1.1
JHYU	Hitachinakayam	1.14	269	P	Pn	04 54 04.3	-1.9
JHO	Hitachi	1.18	283	P	Pn	04 54 04.4	-2.4
ONAJ	Iwakimizuishiy	1.22	308	P	Pn	04 54 05.2	-2.1
JFK	Kawauchi	1.35	318	P	Pn	04 54 07.9	-1.2
JFT	Otama	1.76	311	P	Pn	04 54 14.1	-0.7
JMM	Marumori	1.79	328	P	Pn	04 54 13.8	-1.3
BSO1	Boso 1	1.90	206	P	Pn	04 54 15.8	-0.3
BSO3	Boso 3	1.98	218	P	Pn	04 54 17.0	-0.4
JAG	Ashikaga	2.06	273	P	Pn	04 54 17.1	-1.7
JFY	Yanaizu	2.12	300	P	Pn	04 54 20.0	+0.4
JIO	Ouri	2.15	346	P	Pn	04 54 19.6	-0.5
JKT	Katashina	2.25	281	P	Pn	04 54 20.9	-0.7
MJA0	Matsu Arr-Jizo	3.03	275	eP	Pn	04 54 32.5	+0.2
MJA0				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MJAR	Matsushiro Arr	3.06	274	Pn	Pn	04 54 31.3	-1.4
	comp=Z,2.1nm,0.3s,baz=95,slow=9.2,SNR=30						
MJAR				Sn	Sn	04 55 07.9	-0.9
	comp=Z,1.1nm,0.3s,baz=115,slow=14,SNR=4.7						
MJAR	Matsushiro Arr	3.06	274		Pn	04 54 32.2	-0.4
MAJO	Matsushiro	3.06	274	P	Pn	04 54 32.9	+0.2
MAJO	Matsushiro	3.06	274		Pn	04 54 32.9	+0.2
MAT	Matsushiro	3.06	274	P	Pn	04 54 32.8	+0.1
MAT				eS	Sn	04 55 06.1	-2.7
MJB9	Matsu-Tunnel	3.07	275		Pn	04 54 32.9	+0.2
JHJ2	Mitsune	3.71	210	Pn	Pn	04 54 41.6	+0.1
JHJ	Hachijo jima 2	3.71	210	Pn	Pn	04 54 41.6	0.0
	comp=Z,32nm,0.3s,baz=330,slow=21,SNR=7.0						
JHJ				Sn	Sn	04 55 20.6	-4.3
	comp=Z,36nm,0.3s,baz=233,slow=20,SNR=2.7						
INU	Inuyama	4.17	257	Pn	Pn	04 54 47.8	-0.1
NMR	Nemuro--Hokkai	7.56	21	eP	Pn	04 55 33.6	-0.8
NMR				eS	Sn	04 56 52.2	-7.3
ASAJ	Asahikawa	7.76	3	Pn	Pn	04 55 37.9	+0.8
	comp=Z,1.7nm,0.3s,baz=226,slow=11,SNR=5.5						
ASAJ				Sn	Sn	04 57 02.8	-1.6
	comp=Z,0.2nm,0.3s,baz=54,slow=19,SNR=1.9						
JKA	Kamikawa-asahi	7.76	3		Pn	04 55 37.9	+0.8
JKA					Sn	04 57 02.8	-1.6
GRPR	Tuman	8.15	20	eP	Pn	04 55 42.2	-0.3
GRPR				eS	Sn	04 57 07.4	-6.6
JCJ	Chichijima	9.24	179	Pn	Pn	04 55 55.7	-1.8
	comp=Z,14nm,0.3s,baz=291,slow=21,SNR=7.2						
JCJ				Sn	Sn	04 57 31.1	-10
	comp=Z,4.3nm,0.3s,baz=264,slow=19,SNR=1.5						
JNU	Nakatsue	9.71	254	Pn	Pn	04 56 04.8	+0.9
	comp=Z,0.3nm,0.3s,baz=16,slow=8.6,SNR=3.8						
JNU				LR	LR	05 00 01.1	
	comp=Z,357nm,18.7s,baz=49,slow=40						
YSS	Yuzh-Sakhalins	10.60	3	eP	Pn	04 56 12.3	-3.7
YSS				MLR	MLR		
	comp=Z,500nm,13.0s						
USA0B	Ussuriysk Arra	10.94	319	P	Pn	04 56 22.9	+2.2
USA0B	Ussuriysk Arra	10.94	319		Pn	04 56 22.9	+2.2
USRK	Ussuriysk Ar.	10.94	319	Pn	Pn	04 56 20.0	-0.7
	baz=125,slow=12,SNR=3.0						
USRK				LR	LR	05 00 14.5	
	comp=Z,504nm,19.5s,baz=39,slow=36						
USRK	Ussuriysk Ar.	10.94	319	P	Pn	04 56 24.0	+3.3
USRK	Ussuriysk Ar.	10.94	319		Pn	04 56 23.9	+3.3
KSRS	Korea Array	11.33	280	Pn	Pn	04 56 28.3	+2.3
	comp=Z,0.1nm,0.3s,baz=104,slow=14,SNR=8.2						
KSRS	Korea Array	11.33	280	eP	Pn	04 56 29.0	+3.0
CN2	Changchun	14.68	305	eP	Pn	04 57 14.5	+2.8
KLR	Kul'dur	14.88	333	⇑eP	P	04 57 17.1	-3.0
KLR				pmax	pmax		
	comp=Z,2.0nm,1.4s						
JOW	Kunigami	15.05	235	Pn	Pn	04 57 16.8	-0.1
ZEA	Zeya	20.19	334	eP	P	04 58 18.1	-0.5
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
MA2	Magadan	23.92	11	P	P	04 58 57.3	-0.4
	comp=Z,2.3nm,0.2s,baz=195,slow=20,SNR=2.7						
MA2				LR	LR	05 10 11.2	
	comp=Z,98nm,19.3s,baz=154,slow=41						
MA2	Magadan	23.92	11	⇓eP	P	04 59 02.0	+4.3
MA2				pmax	pmax		
	comp=Z,11nm,1.8s						
HHC	Hu-ho-hao-te	24.14	290	eP	P	04 59 00.5	+0.4
YAK	Yakutsk	26.83	347	eP	P	04 59 33.3	+9.2
YAK				e*PP	pwP	04 59 46.2	+14
YAK				e		05 02 52.6	
YAK				pmax	pmax		
	comp=Z,21nm,0.9s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
SEY	Seymchan	27.36	10	P	P	04 59 29.5	+0.6
	comp=E,0.9nm,0.7s,baz=196,slow=15,SNR=3.9						
SEY	Seymchan	27.36	10	⇓eP	P	04 59 32.9	+4.0
H11N2	WAKE ISLAND Hy	27.40	120	T	T	05 28 07.8	
	baz=312,slow=75						
H11N1	WAKE ISLAND Hy	27.41	121	T	T	05 28 15.1	
	baz=312,slow=75						
H11N3	WAKE ISLAND Hy	27.42	120	T	T	05 28 14.1	
	baz=312,slow=75						
ENH	Enshi	27.76	267	P	P	04 59 31.6	-1.3
H11S1	WAKE ISLAND Hy	28.10	123	T	T	05 29 02.6	
	baz=315,slow=75						
H11S3	WAKE ISLAND Hy	28.10	123	T	T	05 29 03.2	
	baz=315,slow=75						
H11S2	WAKE ISLAND Hy	28.11	123	T	T	05 29 03.3	
	baz=315,slow=75						
ULN	Ulaanbaatar	28.12	305	⇑eP	P	04 59 36.0	-0.1
ULN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ULN	Ulaanbaatar	28.12	305	P	P	04 59 36.3	+0.2
ULN				IAmb	IAmb	04 59 36.9	
	comp=Z,5.9nm,0.9s						
BOD	Bodaibo	28.35	328	eP	P	04 59 37.2	-0.6
BOD				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SONM	Songino Array	28.55	305	P	P	04 59 38.0	-1.9
	comp=Z,7.2nm,0.8s,baz=104,slow=6.4,SNR=23						
SONM	Songino Array	28.55	305	eP	P	04 59 39.9	0.0
SONM				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SONM	Songino Array	28.55	305	P	P	04 59 39.6	-0.3
ZAK	Zakamensk	31.06	309	eP	P	05 00 01.4	-0.6
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA	Gaotai	33.22	288	eP	P	05 00 20.3	-0.8
GTA				pP	pP	05 00 24.8	-1.4
GTA				sP	sP	05 00 27.8	0.0
BILL	Bilibino	34.54	16	eP	P	05 00 37.3	+5.2
BILL				e		05 01 56.0	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.1s						
DGZ	Jazzator, Alta	41.17	307	c iP	P	05 01 29.1	+0.6
DGZ				pmax	pmax		
	comp=Z,12nm,0.8s						
PBKT	Sadao Pong	41.30	253	P	P	05 01 29.6	-0.1
PBKT				IAmb	IAmb	05 01 30.2	

	comp=Z,9.7nm,1.1s						
WMQ	Urumqi	41.57	298	eP	P	05 01 33.5	+1.8
CMAR	Chiang Mai Arr	41.79	257	P	P	05 01 33.1	-0.6
	comp=Z,2.0nm,0.4s,baz=49,slow=6.0,SNR=7.9						
CMAR	Chiang Mai Arr	41.79	257	eP	P	05 01 33.6	-0.1
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZAA0	Zalesovo Array	42.72	313	P	P	05 01 40.8	-0.1
ZAA0				IAmb	IAmb	05 01 41.3	
	comp=Z,5.8nm,1.0s						
ZALV	Zalesovo Beam	42.72	313	P	P	05 01 40.8	-0.1
	comp=Z,1.8nm,0.4s,baz=94,slow=6.2,SNR=13						
ZALV	Zalesovo Beam	42.72	313	P	P	05 01 40.3	-0.5
NRIK	Noril'sk	44.07	335	⇓eP	P	05 01 53.1	+1.5
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MK31	Makanchi Array	44.88	303	P	P	05 01 58.1	-0.3
MK31				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MK31	Makanchi Array	44.88	303	P	P	05 01 58.1	-0.3
MKAR	Makanchi Array	44.88	303	P	P	05 01 58.0	-0.4
	comp=Z,2.4nm,0.7s,baz=89,slow=10.0,SNR=25						
MKAR	Makanchi Array	44.88	303	P	P	05 01 57.9	-0.4
KAPI	Kappang	46.13	212	P	P	05 02 08.0	-0.5
	comp=Z,3.4nm,0.2s,baz=98,slow=1.1,SNR=4.6						
KAPI	Kappang	46.13	212	IAmb	IAmb	05 02 10.3	
	comp=Z,13nm,1.1s						
KURK	Kurchatov	46.72	309	⇑eP	P	05 02 12.3	-0.5
KURK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KURK	Kurchatov	46.72	309	P	P	05 02 12.1	-0.7
KURK				IAmb	IAmb	05 02 13.1	
	comp=Z,6.2nm,0.8s						
ILAR	Eielson Array	49.81	32	P	P	05 02 37.5	+1.1
	comp=Z,0.6nm,1.0s,baz=258,slow=7.0,SNR=4.4						
ILAR	Eielson Array	49.81	32	eP	P	05 02 40.2	+3.7
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KSH	Kashi	51.11	295	P	P	05 02 52.3	+5.4
KSH				pP	pwP	05 03 04.0	+8.0
KSH				PcP	PcP	05 04 07.5	+5.1
KSH				PcS	PcS	05 08 02.5	+2.4
KSH				S	S	05 10 05.5	+1.7
AAK	Ala-Archa	51.23	299	eP	P	05 02 48.3	+0.6
AAK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
AAK	Ala-Archa	51.23	299	P	P	05 02 47.2	-0.4
AAK				IAmb	IAmb	05 02 51.8	
	comp=Z,2.5nm,0.7s						
BRVK	Borovoye	51.43	313	⇑eP	P	05 02 48.4	-0.4
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KKAR	Karatay Array	53.87	301	P	P	05 03 06.9	-0.2
KKAR	Karatay Array	53.87	301	P	P	05 03 06.8	-0.2
INK	Inuvik	54.77	27	P	P	05 03 13.9	+0.7
	comp=Z,0.5nm,0.6s,baz=287,slow=5.3,SNR=2.2						
INK	Inuvik	54.77	27	IAmb	IAmb	05 03 50.4	
	comp=Z,8.0nm,1.6s						
GAR	Garm	55.41	296	P	P	05 03 19.1	+0.6
FITZ	Fitzroy Crossi	56.33	199	P	P	05 03 25.0	0.0
	comp=Z,0.9nm,0.7s,baz=10,slow=6.0,SNR=2.2						
FITZ	Fitzroy Crossi	56.33	199	IAmb	IAmb	05 05 05.1	
	comp=Z,10nm,1.6s						
WRA	Warramunga Arr	56.47	189	P	P	05 03 25.3	-0.6
	comp=Z,0.7nm,0.4s,baz=6.7,slow=7.2,SNR=12						
WRA	Warramunga Arr	56.47	189	eP	P	05 03 26.4	+0.5
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARU	Arti	57.18	319	c iP	P	05 03 30.5	-0.1
ARU						05 04 25.7	
ARU						05 05 34.5	
ARU				S	S	05 11 19.1	-5.8
ARU				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ABKAR	Akbulak array	58.73	311	P	P	05 03 40.8	-0.8
ASAR	Alice Springs	60.19	189	P	P	05 03 51.2	-0.8
	comp=Z,0.8nm,0.8s,baz=12,slow=7.0,SNR=8.9						
RES	Resolute Bay	63.13	14	P	P	05 04 12.4	+1.3
RES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YKA	Yellowknife Ar	64.15	30	P	P	05 04 17.6	-0.4
	comp=Z,0.4nm,0.7s,baz=300,slow=6.1,SNR=11						
OBN	Obninsk	68.92	324	eP	P	05 04 48.0	-0.6
OBN				e		05 05 12.8	
OBN				e		05 07 22.4	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FINES	FINESS Array B	69.63	333	P	P	05 04 52.8	-0.1
	comp=Z,2.4nm,0.8s,baz=64,slow=8.7,SNR=6.6						
FINES	FINESS Array B	69.63	333	eP	P	05 04 51.3	-1.6
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
VSR	Storozhevoye	69.75	319	⇓eP	P	05 04 53.6	-0.2
VSR				pmax	pmax		
	comp=Z,51nm,1.2s						
KIV	Kislovodsk	71.70	311	eP	P	05 05 07.4	+1.4
KIV				pmax	pmax		
	comp=Z,16nm,1.0s						
NB2	NORSAR Subarra	74.99	338	P	P	05 05 24.9	-0.1
	comp=Z,0.8nm,0.6s,baz=40,slow=5.9						
NOA	NORSAR Array B	74.99	338	P	P	05 05 25.2	+0.3
	comp=Z,2.0nm,0.8s,baz=38,slow=5.8,SNR=13						
NVAR	Mina Array Bea	75.01	53	P	P	05 05 28.1	+2.3
	comp=Z,0.7nm,0.8s,baz=292,slow=5.4,SNR=4.9						
AKASG	Malin Array Be	75.12	323	P	P	05 05 25.8	0.0
	comp=Z,1.5nm,0.5s,baz=46,slow=6.2,SNR=13						
PDAR	Pinedale Array	77.80	46	P	P	05 05 42.5	+1.0
	comp=Z,0.2nm,0.5s,baz=158,slow=0.4,SNR=3.7						
PFO	Pinyon Flats O	79.02	56	P	P	05 05 54.9	+6.6
BRTR	Keskin Array B	79.65	312	P	P	05 05 50.9	-0.8
	comp=Z,1.5nm,1.0s,baz=116,slow=5.6,SNR=7.0						
BRTR	Keskin Array B	79.65	312	eP	P	05 05 51.9	+0.2
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
VYHS	Vyhne	81.55	326	eP	P	05 06 01.1	-0.4
VYHS	Vyhne	81.55	326	eP	P	05 06 01.1	-0.4
CLL	Collm	81.91	330	eP	P	05 06 05.0	+1.7
CLL	Collm	81.91	330	eP	P	05 06 05.0	+1.7
GERES	GERESS Array B	83.53	329	P	P	05 06 11.5	-0.4
	comp=Z,0.7nm,0.6s,baz=51,slow=7.0,SNR=5.9						
GERES	GERESS Array B	83.53	329	eP	P	05 06 11.8	-0.1
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PPT	Papeete	83.91	117	LR	LR	05 44 48.8	
	comp=Z,40nm,18.9s,baz=320,slow=36						
TXAR	Lajitas Array	90.15	53	P	P	05 06 45.8	+1.2
	comp=Z,0.3nm,0.7s,baz=302,slow=5.2,SNR=3.4						
LPAZ	La Paz	146.61	61	PKPbc	PKPbc	05 13 26.2	-0.5
	comp=Z,0.9nm,0.5s,baz=350,slow=1.5,SNR=7.0						

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*THE **29** 04:57:39.5, 34°.21N×25°.12E, h13^{km}±2^{km}, ML2.6/8, Error ellipse: s-maj=2.7km s-min=0.8km az=181.0*
*ATH **29** 04:57:40.7, 34°.29N×25°.02E, h18^{km}±5^{km}, ML2.7/4, Error ellipse: s-maj=6.7km s-min=1.6km az=351.0*
*HLW **29** 04:57:40.7, 34°.11N×25°.23E, h8^{km}±12^{km}, Md3.4, Ml3.5*
ISC 29 04:57:40.0±1.3, **34°.24N**±0°.03×**25°.10E**±0°.03, **h24**^{km}±14^{km}, **n27**, σ**1**^{s}.**11**/45, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIVA	Sivas	0.81	343	P	Pb	04 57 55.3	-0.1
SIVA				S	Sn	04 58 07.9	+0.7
SIVA	Sivas	0.81	343	P	Pb	04 57 55.3	-0.1
SIVA				S	Sb	04 58 05.7	-0.2
SIVA				AML	AML	04 58 14.7	
	comp=E,4587μm,0.7s						
SIVA				AML	AML	04 58 23.1	
	comp=N,3227μm,0.6s						
TMBK	Timbaki Herakl	0.87	342	P	Pb	04 57 55.8	-0.7
TMBK				S	Sn	04 58 09.4	+0.7
	comp=N,390nm,0.5s						
FRMA	Ierapetra Chan	0.93	34	P	Pn	04 57 58.6	+1.0
LAST	Lasithi	0.97	19	P	Pb	04 57 57.1	-1.1
LAST				S	Sn	04 58 11.1	-0.2
	comp=N,215nm,0.9s						
LAST	Lasithi	0.97	19	P	Pn	04 57 58.6	+0.4
LAST				AML	AML	04 58 24.0	
	comp=N,450μm,1.1s						
LAST				AML	AML	04 58 24.2	
	comp=E,417μm,0.8s						
GVD	Gavdhos	1.03	306	P	Pn	04 57 58.5	-0.4
GVD				S	Sn	04 58 13.9	+1.3
	comp=E,1μm,0.4s						
GVD	Gavdhos	1.03	306	P	Pn	04 57 58.5	-0.4
GVD				S	Sb	04 58 12.3	+0.2
GVD				AML	AML	04 58 20.0	
	comp=N,1690μm,0.4s						
GVD				AML	AML	04 58 20.2	
	comp=E,2300μm,0.4s						
GVDS	Gavdos	1.03	306	P	Pn	04 57 58.9	0.0
GVDS				S	Sn	04 58 13.6	+1.0
	comp=E,418nm,0.3s						
IDI	Anoyia	1.06	351	P	Pn	04 57 59.1	-0.3
IDI				S	Sn	04 58 14.8	+1.4
	comp=E,205nm,0.5s						
IDI	Anoyia	1.06	351	P	Pn	04 57 59.5	+0.1
IDI				S	Sn	04 58 13.4	0.0
IDI				AML	AML	04 58 24.2	
	comp=E,388μm,0.7s						
IDI				AML	AML	04 58 24.4	
	comp=N,415μm,0.4s						
KSTL	Kastelli Herak	1.06	359	P	Pn	04 57 57.1	-2.3
KSTL				S	Sb	04 58 11.9	-1.2
NPS	Neapolis	1.10	22	P	Pn	04 57 59.6	-0.4
NPS				S	Sn	04 58 15.0	+0.5
	comp=N,205nm,0.7s						
NPS	Neapolis	1.10	22	P	Pb	04 58 01.2	+0.8
STIA	Sitia Lasithi	1.26	40	P	Pn	04 58 01.7	-0.4
STIA				S	Sb	04 58 18.7	-0.1
ZKR	Zakros	1.27	46	P	Pn	04 58 01.4	-0.8
ZKR				S	Sb	04 58 19.0	-0.1
	comp=N,162nm,0.9s						
ZKR	Zakros	1.27	46	P	Pb	04 58 05.1	+1.9
VAM	Vamos	1.38	328	P	Pn	04 58 03.4	-0.4
VAM				S	Sn	04 58 21.6	+0.4
VAM	Vamos	1.38	328	P	Pb	04 58 04.8	-0.3
IMMV	Iera Moni Meta	1.52	323	P	Pn	04 58 05.1	-0.7
IMMV				S	Sn	04 58 25.4	+0.5
	comp=N,292nm,0.8s						
IMMV	Iera Moni Meta	1.52	323	P	Pb	04 58 08.3	+0.8
KARP	Karpathos	2.14	52	P	Pn	04 58 13.1	-1.1
KARP	Karpathos	2.14	52	P	Pb	04 58 18.2	+0.2
SLUM	Salum	2.75	178	P	Pn	04 58 23.6	+1.0
	baz=181						
SLUM				S	Sn	04 58 54.5	-0.5
	baz=181						
SWA2		4.99	176	P	Pn	04 58 54.4	+0.9
	baz=177						
SWA2				S	Sn	04 59 48.2	-2.2
	baz=177						
SWA2				AMP		05 00 00.0	
	baz=177						
GLL	Jalalah	7.29	128	P	Pn	04 59 26.4	+1.3
	baz=127						
HFRF	Wahat Farafira	7.59	158	P	Pn	04 59 29.9	+0.7
	baz=158						
HFRF				S	Sn	05 00 50.3	-4.1
	baz=158						

KEA 29 05:26:45.5±0.0, **40°.38N**×**122°.26E**, **h0**^{km}, **ML3.4**/5, **Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUJ	Sinuiju	1.74	98	Pg	Pb	05 27 17.7	-0.5
SUJ				Sg	Sn	05 27 39.6	-0.1
PYS	Pyongsong	2.99	111	Pg	Pb	05 27 40.8	+1.1
PYS				Sg	Sb	05 28 18.7	+2.0
PYAG	Pyongyang	3.01	115	Pg	Pb	05 27 40.9	+1.0
PYAG				Sg	Sg	05 28 20.3	-1.9
HJU	Haeju	3.56	130	Pg	Pg	05 27 53.0	-0.8
HJU				Sg	Sb	05 28 36.1	+2.9
HHU	Hamhung	4.07	95	Pg	Pg	05 28 02.5	-0.9
HHU				Sg	Sg	05 28 52.5	-3.6
WOSN	Wonsan	4.16	105	Sg	Sg	05 28 56.0	-3.2

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*UCR **29** 05:30:52.5±1.2, 13°.97N×90°.68W, h99^{km}±7^{km}, MD4.6, ML4.2, mb4.4(NEIC)*
*SNET **29** 05:30:52.4±1.1, 13°.97N×90°.70W, h97^{km}±8^{km}, ML4.3*
*MEX **29** 05:30:53.4±0.8, 13°.88N×90°.65W, h94^{km}±54^{km}, MD4.8*
*INET **29** 05:30:53.2, 13°.90N×90°.69W, h15^{km}, ML4.6*
*IDC **29** 05:30:53.8±0.8, 14°.20N×90°.59W, h112^{km}±5^{km}, mb3.7/11, mb1 3.9/16, mb1mx3.7/43, mbtmp4.1/16, MS2.8/3, Ms1 2.8/3, ms1mx2.6/26, Error ellipse: s-maj=17.4km s-min=9.1km az=49.0*
*NEIC **29** 05:30:53.0±2.3, 14°.08N±0°.06×90°.68W±0°.05, h109^{km}±6^{km}, mb4.4/83, Md4.3(SNET), Error ellipse: s-maj=9.5km s-min=6.1km az=201.0*
*GCG **29** 05:30:55.5±0.4, 14°.01N×90°.68W, h76^{km}±13^{km}, MD4.5*
ISC 29 05:30:53.2±0.7, **14°.07N**±0°.05×**90°.63W**±0°.04, **h106**^{km}±6^{km}, **n337**, σ**1**^{s}.**10**/351, **mb4.4**/39, **5D**, **Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IXG	Ixpaco	0.21	62	i P	Pn	05 31 07.0	-1.4
IXG	Ixpaco	0.21	62	i P	Pn	05 31 07.0	-1.4
IXG	Ixpaco	0.21	62	⇓iP	Pn	05 31 08.0	-0.4
PCG	Pacaya	0.32	5	⇓iP	Pn	05 31 09.0	+0.1
FUG	Fuego 3	0.43	332	⇓eP	Pn	05 31 09.2	-0.2
NBG	Las Nubes	0.58	28	eP	Pn	05 31 11.5	+0.9
APG	El Apazote	0.94	10	P	Pn	05 31 14.0	+0.2
	144nm,0.3s,baz=103,slow=12,SNR=1003						
APG				S	Sn	05 31 29.4	+0.3
	377nm,0.3s,baz=84,slow=19,SNR=29						
RTR	El Retiro	0.97	100	eP	Pn	05 31 13.5	-0.5
RTR	El Retiro	0.97	100	eP	Pn	05 31 13.5	-0.5
ERG	Entre ros, C	0.98	292	⇓iP	Pn	05 31 14.0	+0.2
SBLS	San Blas	1.01	103	eP	Pn	05 31 13.9	-0.5
SBLS	San Blas	1.01	103	eP	Pn	05 31 13.9	-0.5
CEVE	Cerro Verde	1.01	104	eP	Pn	05 31 13.8	-0.6
CEVE				eS	Sn	05 31 30.6	+0.2
CEVE				IAML		05 31 40.5	
	comp=Z,15μm,0.5s						
CEVE	Cerro Verde	1.01	104	eP	Pn	05 31 13.8	-0.6
CEVE				eS	Sn	05 31 30.6	+0.2
CEVE				IAML		05 31 40.5	
	comp=Z,15μm,0.5s						
SNJE	San Jose	1.02	101	eP	Pn	05 31 13.8	-0.7
SNJE	San Jose	1.02	101	eP	Pn	05 31 13.8	-0.7
UNIC	Universidad Ca	1.06	95	i P	Pn	05 31 14.1	-0.7
UNIC				IAML		05 31 14.3	
	comp=Z,1μm,0.3s						
UNIC				eS	Sn	05 31 31.6	+0.6
UNIC	Universidad Ca	1.06	95	i P	Pn	05 31 14.1	-0.7
UNIC				IAML		05 31 14.3	
	comp=Z,1μm,0.3s						
UNIC				eS	Sn	05 31 31.6	+0.6
STG3	Santiaguito 3,	1.11	305	⇓iP	Pn	05 31 15.3	-0.1
MTO3	Montecristo	1.28	75	eP	Pn	05 31 16.6	-0.7
MTO3	Montecristo	1.28	75	eP	Pn	05 31 16.6	-0.7
BOQS	Boqueron	1.36	104	eP	Pn	05 31 17.9	-0.4
MRL	Marmol	1.36	42	eP	Pn	05 31 19.0	+0.6
MRL	Marmol	1.36	42	eP	Pn	05 31 19.0	+0.6
UEES	Universidad Ev	1.40	104	eP	Pn	05 31 18.1	-0.6
UEES	Universidad Ev	1.40	104	eP	Pn	05 31 18.1	-0.6
LALI	Alcalda de L	1.40	114	eS	Sn	05 31 37.4	-0.5
LALI	Alcalda de L	1.40	114	eS	Sn	05 31 37.4	-0.5
SNET	Serv Nac Est T	1.41	105	IAML		05 31 47.6	
	comp=Z,3μm,0.3s						
SNET	Serv Nac Est T	1.41	105	IAML		05 31 47.6	
	comp=Z,3μm,0.3s						
SNET	Serv Nac Est T	1.41	105		Pn	05 31 18.2	-0.6
UESS	Universidad de	1.44	104	eP	Pn	05 31 18.9	-0.2
UESS	Universidad de	1.44	104	eP	Pn	05 31 18.9	-0.2
OPAM	Oficina de Pla	1.44	104	IAML		05 31 44.2	
	comp=Z,3μm,0.3s						
OPAM	Oficina de Pla	1.44	104	IAML		05 31 44.2	
	comp=Z,3μm,0.3s						
LOMA	Loma Larga	1.48	106	IAML		05 31 46.7	
	comp=Z,7μm,0.3s						
LOMA	Loma Larga	1.48	106	IAML		05 31 46.7	
	comp=Z,7μm,0.3s						
AEIL	Aeropuerto Ilo	1.52	104	eP	Pn	05 31 19.9	-0.2
AEIL				IAML		05 31 48.5	
	comp=Z,4μm,0.4s						
AEIL	Aeropuerto Ilo	1.52	104	eP	Pn	05 31 19.9	-0.2
AEIL				IAML		05 31 48.5	
	comp=Z,4μm,0.4s						
LBRS	Las Brisas	1.58	102	eP	Pn	05 31 20.6	-0.3
LFRS	El Faro	1.59	106	eP	Pn	05 31 20.3	-0.7
LLGN	La Laguna	1.64	87	eP	Pn	05 31 21.4	-0.2
LLGN	La Laguna	1.64	87	eP	Pn	05 31 21.4	-0.2
COEG	Centro de Oper	1.76	105	eP	Pn	05 31 22.7	-0.4
COEG				eS	Sn	05 31 46.9	+1.1
COEG				IAML		05 31 56.8	
	comp=Z,3μm,0.3s						
COEG	Centro de Oper	1.76	105	eP	Pn	05 31 22.7	-0.4
COEG				eS	Sn	05 31 46.9	+1.1
COEG				IAML		05 31 56.8	
	comp=Z,3μm,0.3s						
THIG		1.79	298	i P	Pn	05 31 23.4	+0.1
THIG				eS	Sn	05 31 46.2	0.0
THIG		1.79	298		Pn	05 31 23.4	+0.1
COEB	Comit de Eme	2.12	105	eP	Pn	05 31 27.4	-0.3
COEB	Comit de Eme	2.12	105	eP	Pn	05 31 27.4	-0.3
ALJI	Alcalda de J	2.14	110	eP	Pn	05 31 27.6	-0.2
ALJI				eS	Sn	05 31 55.1	+0.9
ALJI				IAML		05 31 59.0	
	comp=Z,975nm,0.4s						
ALJI	Alcalda de J	2.14	110	eP	Pn	05 31 27.6	-0.2
ALJI				eS	Sn	05 31 55.1	+0.9
ALJI				IAML		05 31 59.0	
	comp=Z,975nm,0.4s						
CCIG	Comitan	2.63	327	eP	Pn	05 31 35.5	+1.1
CCIG				i S	Sn	05 32 08.2	+2.1
CCIG	Comitan	2.63	327		Pn	05 31 35.5	+1.1
CCIG	Comitan	2.63	327		Pn	05 31 35.5	+1.1
PCIG		2.98	303	eP	Pn	05 31 39.1	+0.2
PCIG				eS	Sn	05 32 15.1	+1.1
PCIG		2.98	303		Pn	05 31 38.5	-0.3
CSGN	Cosiguina Volc	3.18	110		Pn	05 31 42.0	+0.4
CSGN				Sn	Sn	05 32 22.6	+3.6
TGUH	Tegucigalpa,Un	3.26	90		Pn	05 31 42.6	-0.2
TGIG		3.61	319	eP	Pn	05 31 47.1	-0.2
TGIG				i S	Sn	05 32 31.2	+2.2
TGIG		3.61	319		Pn	05 31 46.7	-0.6
CMIG	Matias Romero	5.08	307	P	Pn	05 32 06.1	-1.0
	comp=Z,35nm,0.3s,baz=95,slow=9.6,SNR=462						
CMIG				S	Sn	05 33 03.8	-0.8
	comp=Z,20nm,0.3s,baz=60,slow=19,SNR=3.6						
ACON	Acoyapa	5.72	111	eP	Pn	05 32 15.4	-0.3
ACON	Acoyapa	5.72	111		Pn	05 32 14.8	-0.9
GBS3	Finca Las Img	6.02	122	i P	Pn	05 32 19.8	-0.2
NY14	Universidad de	6.03	124	i P	Pn	05 32 21.1	+1.1
NY14				i S	Sn	05 33 27.1	-0.7
GB1A	Borinquen Arri	6.05	122	i P	Pn	05 32 20.5	+0.1
LAPC	Finca la Perla	6.05	122	i P	Pn	05 32 20.2	-0.1
BUEV	Buena Vista	6.05	122	eP	Pn	05 32 20.6	+0.2
GPS3	Bodega del ICE	6.11	122	i P	Pn	05 32 21.6	+0.5
CUI	Cuipilapa	6.33	122	eP	Pn	05 32 24.6	+0.5
PLVR	Palo Verde	6.35	125	eP	Pn	05 32 25.6	+1.0
PTEN	Parque Tenorio	6.45	121	i P	Pn	05 32 25.4	-0.3
ACAL	Aguas Claras	6.45	121	i P	Pn	05 32 25.9	+0.2
TEIG	Tepich	6.52	20	P	Pn	05 32 26.8	+0.1
	comp=Z,14nm,0.3s,SNR=31						
TEIG				S	Sn	05 33 37.7	-2.0
TEIG				LR	LR	05 34 43.0	
	comp=Z,111nm,19.1s,baz=70,slow=36						
TEIG	Tepich	6.52	20		Pn	05 32 26.7	0.0
JTS	Las Juntas de	6.71	123	P	Pn	05 32 29.5	+0.3
	comp=Z,29nm,0.3s,baz=175,slow=23,SNR=137						
JTS				S	Sn	05 33 43.8	-0.4
	comp=Z,5.5nm,0.3s,baz=358,slow=19,SNR=1.4						
JTS				LR	LR	05 34 51.0	
	comp=Z,70nm,18.6s,baz=3.5,slow=35						
JTS	Las Juntas de	6.71	123	eP	Pn	05 32 29.3	+0.1
CEDE	Laguna Cedeo	6.80	121	eP	Pn	05 32 31.1	+0.5
ARE1	Arenal 1	6.80	121	eP	Pn	05 32 31.9	+1.3
HDC	Heredia	7.55	122	eP	Pn	05 32 41.5	+0.7
LCR2	La Lucha 2	7.79	123	eP	Pn	05 32 44.4	+0.4
EDDO	Dominical	8.18	125	eP	Pn	05 32 50.0	+0.8
EDLM	Las Mercedes	8.38	124	eP	Pn	05 32 53.3	+1.3
TLIG	Tlapa	8.39	295		Pn	05 32 52.7	+0.6
EDPN	Palmar Norte	8.67	125	eP	Pn	05 32 56.9	+1.0
BRU2	Volcan	9.39	123	eP	Pn	05 33 06.6	+0.8
MOIG	Morelia	11.54	300		Pn	05 33 36.7	+1.8
ZAIG	Zacatecas	14.24	309	P	Pn	05 34 11.9	+1.5
061Z	Ochoppi	14.87	36		P	05 34 23.2	+2.1
DWPF	Disney Wildern	16.39	30		P	05 34 39.2	+1.3
DWPF	Disney Wildern	16.39	30	P	P	05 34 40.3	+2.3
	baz=213						
656A	Willston	16.97	25		Pn	05 34 45.5	+1.3
TIGA	Tifton	18.46	19	P	P	05 35 01.6	+0.9
TIGA	Tifton	18.46	19	P	P	05 35 02.5	+1.8
	baz=202						
ROSC	El Rosal	18.51	118	P	P	05 35 02.0	+0.2
	comp=Z,0.8nm,0.3s,baz=55,slow=23,SNR=2.1						
ROSC	El Rosal	18.51	118	P	P	05 35 00.7	-1.2
RUSC	La Rusia	19.09	113	P	P	05 35 07.7	-0.6
LRAL	Lakeview Retre	19.17	9	P	P	05 35 10.3	+1.8
LRAL				IAmb	IAmb	05 35 11.8	
	comp=Z,42nm,1.5s						
LRAL	Lakeview Retre	19.17	9	P	P	05 35 10.3	+1.8
	baz=191						
Z47A	Carrollton	19.18	7	P	P	05 35 11.2	+2.5
152A	Waverly Hall	19.29	15	P	P	05 35 11.8	+2.1
152A				IAmb	IAmb	05 35 12.2	
	comp=Z,22nm,0.8s						
FLOC	Florencia	19.32	129	P	Pn	05 35 12.3	-0.1
TX31	Lajitas Ar. Si	19.40	324	P	P	05 35 13.3	+2.2
TX32	Lajitas Array	19.40	324	P	P	05 35 12.8	+1.7
TXAR	Lajitas Array	19.40	324	P	P	05 35 11.9	+0.8
	comp=Z,0.1nm,0.3s,baz=146,slow=12,SNR=10						
TXAR				LR	LR	05 44 47.5	
	comp=Z,18nm,21.1s,baz=0.0,slow=43						
TXAR	Lajitas Array	19.40	324	P	P	05 35 13.1	+1.9
Z38A	Mt. Pleasant	19.51	349	P	P	05 35 12.6	+0.4
Z38A				IAmb	IAmb	05 35 13.7	
	comp=Z,22nm,0.8s						
Z50A	Ashland	19.57	12	P	P	05 35 14.5	+1.6
Z50A				IAmb	IAmb	05 35 18.3	
	comp=Z,21nm,0.9s						
Z50A	Ashland	19.57	12	P	P	05 35 14.4	+1.6
	baz=194,SNR=8.2						
Z51A	Franklin	19.79	14	P	P	05 35 17.4	+2.2
Y49A	Blount Mountai	20.07	10	P	P	05 35 19.3	+1.1
SDV	Santo Domingo	20.26	103	P	P	05 35 22.2	+1.5
	comp=Z,7.0nm,0.7s,baz=312,slow=6.3,SNR=11						
SDV	Santo Domingo	20.26	103	P	P	05 35 18.4	-2.3
SDV				IAmb	IAmb	05 35 25.2	
	comp=Z,8.7nm,0.8s						
GOGA	Godfrey	20.33	17	P	P	05 35 22.2	+1.2
GOGA				IAmb	IAmb	05 35 23.0	
	comp=Z,24nm,1.1s						
GOGA	Godfrey	20.33	17	P	P	05 35 22.6	+1.6
	baz=200,SNR=6.1						
X48A	Hartselle	20.55	8	P	P	05 35 24.3	+0.9
X48A				IAmb	IAmb	05 35 25.8	
	comp=Z,17nm,0.8s						
Y52A	Lilburn	20.59	16	P	P	05 35 25.4	+1.5
Y52A				IAmb	IAmb	05 35 27.2	
	comp=Z,17nm,0.7s						
Y52A	Lilburn	20.59	16	P	P	05 35 25.7	+1.9
	baz=198						
FPAL	Fort Paine	20.88	12	P	P	05 35 27.6	+0.6
FPAL				IAmb	IAmb	05 35 29.8	
	comp=Z,30nm,1.0s						
PLAL	Pickwick Lake	20.95	6	P	P	05 35 28.4	+0.7
W41B	Gary Mavity, V	21.06	356	P	P	05 35 29.2	+0.3
NHSC	New Hope	21.21	25	P	P	05 35 33.0	+2.5
W39A	Magazine	21.23	353	P	P	05 35 32.8	+2.2
Y55A	Saluda	21.32	20	P	P	05 35 33.3	+1.7
	baz=204						
X53A	Estanollee	21.40	17	P	P	05 35 33.8	+1.4
	baz=200						
HODGE	Hodges	21.46	19	P	P	05 35 34.3	+1.2
SWET	Sewanee	21.48	11	P	P	05 35 34.1	+0.7
SWET				IAmb	IAmb	05 35 35.0	
	comp=Z,12nm,0.5s						
W50A	Signal Mountai	21.58	12	P	P	05 35 34.9	+0.4
W50A				IAmb	IAmb	05 35 43.0	
	comp=Z,25nm,1.4s						
X54A	Belton	21.71	19	P	P	05 35 36.8	+1.0
	baz=202						
JSC	Jenkinsville	21.84	21	P	P	05 35 37.0	-0.2
V48A	Smith Brothers	21.85	8	P	P	05 35 37.3	0.0
WMOK	Wichita Mounta	21.86	342	P	P	05 35 37.8	+0.5
	baz=158						
Y57A	Sumter	21.92	23	P	P	05 35 38.5	+0.4
Y57A	Sumter	21.92	23	P	P	05 35 38.9	+0.9
	baz=208						
FNO	Franklin	21.96	345	P	P	05 35 38.3	-0.1
X56A	White Oak	22.11	21	P	P	05 35 40.6	+0.6
	baz=206						
TUL1	Leonard	22.24	349	P	P	05 35 39.7	-1.6
TUL1	Leonard	22.24	349	P	P	05 35 39.9	-1.4
	baz=167						

CLTN	Cedars of Leba	22.27	9	P	P	05 35 41.9	+0.2
CLTN				IAmb	IAmb	05 35 42.9	
	comp=Z,16nm,1.0s						
W54A	Cherokee Point	22.27	19	P	P	05 35 42.6	+0.9
	baz=202						
U40A	Yellville	22.28	355	P	P	05 35 40.2	-1.6
U40A	Yellville	22.28	355	P	P	05 35 41.1	-0.7
	baz=174						
HHAR	Hobbs	22.32	353	P	P	05 35 41.3	-0.9
TKL	Tuckaleechee C	22.36	15	P	P	05 35 42.3	-0.4
	comp=Z,7.4nm,0.5s,baz=192,slow=8.7,SNR=19						
TKL	Tuckaleechee C	22.36	15	P	P	05 35 43.0	+0.4
TKL				IAmb	IAmb	05 35 44.7	
	comp=Z,35nm,1.2s						
V52A	Sevierville	22.58	15	P	P	05 35 44.2	-0.7
V52A				IAmb	IAmb	05 35 46.8	
	comp=Z,26nm,1.2s						
KMSC	Kings Mountain	22.59	20	P	P	05 35 45.0	-0.1
	baz=204						
V53A	Saluda	22.63	17	P	P	05 35 45.1	-0.3
V53A				IAmb	IAmb	05 35 45.9	
	comp=Z,21nm,1.4s						
U49A	Red Boiling Sp	22.77	10	P	P	05 35 45.7	-1.0
U49A				IAmb	IAmb	05 35 47.9	
	comp=Z,18nm,0.8s						
W56A	Indian Trail	22.85	22	P	P	05 35 47.3	-0.3
	baz=206						
V54A	Nebo	22.98	18	P	P	05 35 48.7	-0.1
	baz=202						
T47A	Sharon Grove	23.04	7	P	P	05 35 48.8	-0.6
T47A				IAmb	IAmb	05 35 50.6	
	comp=Z,27nm,1.1s						
W58A	Raeford	23.26	24	P	P	05 35 50.8	-0.7
	baz=209						
TZTN	Tazewell	23.26	15	P	P	05 35 51.8	+0.3
	baz=198						
V55A	Taylorsville	23.28	20	P	P	05 35 51.5	-0.2
V55A				IAmb	IAmb	05 35 52.0	
	comp=Z,13nm,1.1s						
V55A	Taylorsville	23.28	20	P	P	05 35 51.3	-0.4
	baz=204						
T35A	Sooner Cattle	23.35	348	P	P	05 35 50.8	-1.5
T35A				IAmb	IAmb	05 35 51.6	
	comp=Z,16nm,1.0s						
T49A	Edmonton	23.39	10	P	P	05 35 51.7	-1.0
T49A				IAmb	IAmb	05 35 54.6	
	comp=Z,15nm,0.8s						
T49A	Edmonton	23.39	10	P	P	05 35 52.3	-0.3
	baz=193,SNR=8.4						
T50A	Nancy	23.43	12	P	P	05 35 52.7	-0.4
	baz=194,SNR=6.2						
T51A	Gray	23.57	13	P	P	05 35 54.4	+0.1
	baz=196						
SIUC	Southern Illin	23.58	3	P	P	05 35 54.8	+0.5
SIUC				IAmb	IAmb	05 35 55.8	
	comp=Z,15nm,1.2s						
S39A	Bolivar	23.65	355	P	P	05 35 54.5	-0.5
S39A				IAmb	IAmb	05 35 56.1	
	comp=Z,7.4nm,0.8s						
U54A	Nelsons Funny	23.71	18	P	P	05 35 55.6	0.0
U54A	Nelsons Funny	23.71	18	P	P	05 35 55.7	0.0
	baz=202						
V57A	Coltrane Farms	23.81	22	P	P	05 35 56.0	-0.5
	baz=207						
CCM	Cathedral Cave	23.89	359	P	P	05 35 57.1	-0.1
	baz=179						
W60A	Pink Hill	23.92	27	P	P	05 35 57.1	-0.3
	baz=212						
U55A	TA2, Sparta	23.93	19	P	P	05 35 57.2	-0.4
	baz=204						
T52A	Hallie	23.94	15	P	P	05 35 57.4	-0.2
	baz=199						
V58A	Windy Hill, Pi	23.98	24	P	P	05 35 57.5	-0.5
	baz=208						
CNNC	Cliffs of the	24.00	26	P	P	05 35 58.0	-0.1
	baz=212						
U56A	King	24.01	21	P	P	05 35 58.6	+0.4
	baz=205						
S49A	Springfield	24.09	10	P	P	05 35 58.8	-0.1
	baz=193						
S50A	Richmond	24.16	12	P	P	05 35 59.7	+0.2
	baz=195						
S51A	Beattyville	24.30	14	P	P	05 36 00.5	-0.3
S51A				IAmb	IAmb	05 36 01.2	
	comp=Z,9.6nm,0.5s						
S51A	Beattyville	24.30	14	P	P	05 36 00.6	-0.2
	baz=197						
ATAH	Atahualpa	24.32	149	P	P	05 36 04.2	+2.6
	comp=Z,12nm,1.0s,baz=306,slow=7.6,SNR=4.6						
WCI	Wyandotte Cave	24.37	8	P	P	05 36 01.5	0.0
WCI				IAmb	IAmb	05 36 02.7	
	comp=Z,26nm,1.1s						
WCI	Wyandotte Cave	24.37	8	P	P	05 36 01.1	-0.3
	baz=190						
R49A	Shelbyville	24.61	10	P	P	05 36 03.0	-0.6
R49A				IAmb	IAmb	05 36 04.4	
	comp=Z,10nm,0.6s						
R49A	Shelbyville	24.61	10	P	P	05 36 03.4	-0.2
	baz=193						
R50A	Paris	24.75	12	P	P	05 36 04.6	-0.4
	baz=195						
R51A	Hillsboro	24.93	13	P	P	05 36 06.3	-0.3
	baz=196						
T57A	Hurt	24.99	22	P	P	05 36 06.3	-0.8
T57A				IAmb	IAmb	05 36 22.1	
	comp=Z,32nm,1.5s						
ANMO	Albuquerque	25.22	328	P	P	05 36 08.5	-1.0
	comp=Z,0.4nm,0.4s,baz=63,slow=2.6,SNR=3.1						
ANMO	Albuquerque	25.22	328	P	P	05 36 08.2	-1.2
T59A	Double "B" Far	25.62	25	P	P	05 36 12.3	-0.5
T59A				IAmb	IAmb	05 36 13.7	
	comp=Z,6.5nm,0.7s						
T59A	Double "B" Far	25.62	25	P	P	05 36 12.3	-0.5
	baz=210						
Q51A	Peebles	25.68	13	P	P	05 36 12.8	-0.6
Q51A	Peebles	25.68	13	P	P	05 36 13.3	0.0
	baz=197,SNR=8.6						
Q52A	Bidwell	25.87	15	P	P	05 36 14.7	-0.4
	baz=199						
P49A	Miami Univ. Ec	25.89	11	P	P	05 36 14.3	-1.0
	baz=193						
Q53A	Leroy	25.97	16	P	P	05 36 15.7	-0.3
	baz=201						
P50A	Jamestown	26.14	12	P	P	05 36 17.3	-0.2
	baz=195						
P51A	Williamsport	26.18	13	P	P	05 36 17.4	-0.4
	baz=197						
Q54A	Coxs Mills	26.28	17	P	P	05 36 18.6	-0.2
	baz=202						
R58B	Mineral	26.36	23	P	P	05 36 19.2	-0.3
R58B				IAmb	IAmb	05 36 19.4	
	comp=Z,14nm,1.2s						
O48A	Farmland	26.53	9	P	P	05 36 19.7	-1.3
	baz=192						
O50A	Cable	26.70	12	P	P	05 36 21.9	-0.6
	baz=195,SNR=5.9						
Q56A	Snyder Ridge,	26.85	20	P	P	05 36 23.9	0.0
Q56A				IAmb	IAmb	05 36 32.2	
	comp=Z,17nm,1.2s						
ACSO	Alum Creek Sta	26.91	13	P	P	05 36 23.4	-1.0
ACSO	Alum Creek Sta	26.91	13	P	P	05 36 24.1	-0.4
	baz=197,SNR=6.1						
O51A	Pataskala	26.91	14	P	P	05 36 23.9	-0.6
	baz=198						
P54A	Burton	26.96	17	P	P	05 36 24.3	-0.6
	baz=202						
O52A	Adamsville	27.07	15	P	P	05 36 25.4	-0.4
	baz=199						
N49A	Columbus Grove	27.34	11	P	P	05 36 27.7	-0.5
N49A	Columbus Grove	27.34	11	P	P	05 36 27.8	-0.4
	baz=194						
O54A	Avella	27.52	17	P	P	05 36 29.4	-0.5
	baz=202						
P57A	Homestead Farm	27.65	21	P	P	05 36 31.0	0.0
	baz=207						
N51A	Ashland	27.70	14	P	P	05 36 30.7	-0.8
	baz=198						
N52A	McGinn’s Farm,	27.77	15	P	P	05 36 31.5	-0.6
	baz=199						
O55A	Ligonier	27.87	19	P	P	05 36 32.1	-0.9
	baz=204						
N53A	Lisbon	27.98	16	P	P	05 36 33.2	-0.7
N53A				IAmb	IAmb	05 36 33.7	
	comp=Z,6.0nm,0.5s						
N53A	Lisbon	27.98	16	P	P	05 36 33.3	-0.7
	baz=201						
M50A	Fremont	28.02	12	P	P	05 36 33.8	-0.5
M50A	Fremont	28.02	12	P	P	05 36 33.9	-0.5
	baz=196						
O56A	Blue Knob Stat	28.16	20	P	P	05 36 35.2	-0.5
O56A				IAmb	IAmb	05 36 35.4	
	comp=Z,10nm,1.1s						
O56A	Blue Knob Stat	28.16	20	P	P	05 36 35.2	-0.5
	baz=206						
L48A	N Adams	28.29	10	P	P	05 36 35.7	-1.0
	baz=193						
P59A	Jarrettsville	28.34	24	P	P	05 36 36.5	-0.7
	baz=210						
N54A	Moraine State	28.36	17	P	P	05 36 36.7	-0.7
	baz=202						
M52A	Chesterland	28.53	15	P	P	05 36 38.2	-0.6
	baz=199						
M53A	WI Miller and	28.61	16	P	P	05 36 38.7	-0.9
	baz=200						
L50A	Kingsville	28.68	12	P	P	05 36 39.8	-0.4
	baz=196						
SSPA	Standing Stone	28.72	20	P	P	05 36 40.4	-0.1
	baz=206						
N56A	West Decatur	28.83	20	P	P	05 36 41.0	-0.6
	baz=206						
K47A	Vermontville	28.91	9	P	P	05 36 40.5	-1.7
	baz=191						
PV12	Saucer Basin,	29.02	330	P	P	05 36 45.2	+1.7
L53A	Girard	29.20	16	P	P	05 36 43.9	-0.9
	baz=201						
K49A	Clarkson	29.27	11	P	P	05 36 44.1	-1.3
	baz=194						
M56A	Emporium	29.38	19	P	P	05 36 45.5	-0.9
	baz=205						
ERPA	Erie	29.43	16	P	P	05 36 46.1	-0.7
	baz=201						
M57A	Sunshine Farm,	29.60	21	P	P	05 36 48.0	-0.4
	baz=207						
L54A	Sinclairville	29.73	17	P	P	05 36 48.5	-1.0
	baz=203						
N59A	State Game Lan	29.73	23	P	P	05 36 48.9	-0.6
	baz=210						
K52A	Tillsonburg	29.86	15	P	P	05 36 50.0	-0.6
	baz=200						
M58A	Price’s Panora	29.87	22	P	P	05 36 49.9	-0.8
	baz=208						
J49A	Marlette	29.89	11	P	P	05 36 49.1	-1.8
	baz=195						
L55A	Hinsdale	29.94	18	P	P	05 36 50.4	-0.9
	baz=204						
N60A	Cedar Hill Far	29.95	24	P	P	05 36 50.7	-0.6
	baz=211						
ECSD	EROS Data Cent	30.00	351	P	P	05 36 51.3	-0.6
	baz=168						
L56A	Greenwood	30.17	20	P	P	05 36 52.5	-0.9
	baz=206						
L57A	Andrews Acres	30.29	21	P	P	05 36 53.3	-1.1
	baz=207						
ODNJ	Ogdensburg	30.32	24	P	P	05 36 54.7	-0.1
ODNJ				IAmb	IAmb	05 36 57.4	
	comp=Z,14nm,1.2s						
J52A	Paris	30.35	15	P	P	05 36 54.0	-0.9
	baz=200						
M59A	Waymart	30.39	23	P	P	05 36 54.6	-0.7
	baz=210						
M60A	Port Jervis	30.52	24	P	P	05 36 55.6	-0.9
	baz=212						
L58A	Harry Jones Me	30.68	22	P	P	05 36 56.7	-1.1
	baz=209						
K56A	Middlesex	30.75	19	P	P	05 36 57.8	-0.7
	baz=206						
I51A	Listowel	30.75	14	P	P	05 36 57.3	-1.2
	baz=198,SNR=5.0						
BINY	Binghamton	30.76	22	P	P	05 36 57.8	-0.8
BINY				IAmb	IAmb	05 36 59.5	
	comp=Z,7.6nm,1.1s						
BINY	Binghamton	30.76	22	P	P	05 36 57.8	-0.8
	baz=209						
L59A	Walton	31.10	23	P	P	05 37 00.6	-1.0
	baz=210						
SPMN	Marine on St.	31.11	357	P	P	05 36 59.5	-2.0
SPMN	Marine on St.	31.11	357	P	P	05 37 00.4	-1.2
	baz=176						
G45A	Suttons Bay	31.16	7	P	P	05 37 00.3	-1.6
G45A	Suttons Bay	31.16	7	P	P	05 37 00.4	-1.6
	baz=189						
H48A	Harrisville	31.16	10	P	P	05 37 01.0	-1.0
H48A	Harrisville	31.16	10	P	P	05 37 01.1	-0.9
	baz=194						
I52A	Shelburne	31.20	15	P	P	05 37 01.6	-0.9
	baz=200,SNR=8.6						
L60A	Shokan	31.24	24	P	P	05 37 02.0	-0.8
	baz=212						
KSCT	Kent School, K	31.32	25	P	P	05 37 02.3	-1.2
K58A	Earlville	31.38	21	P	P	05 37 02.9	-1.1
K58A				IAmb	IAmb	05 37 04.6	
	comp=Z,17nm,1.3s						
K58A	Earlville	31.38	21	P	P	05 37 03.1	-0.9
	baz=209						
F45A	CMU Biological	31.81	7	P	P	05 37 05.9	-1.8
	baz=190						
J57A	Williamstown	31.83	20	P	P	05 37 06.6	-1.3
J57A	Williamstown	31.83	20	P	P	05 37 06.4	-1.5
	baz=208						
I55A	Frankford	32.02	18	P	P	05 37 08.4	-1.1
	baz=204,SNR=9.4						
J58A	Remsen	32.03	21	P	P	05 37 08.7	-1.0
	baz=209						
H53A	Bobcaygeon	32.09	16	P	P	05 37 09.3	-0.9
	baz=202						
E43A	Lone Tree Farm	32.35	5	P	P	05 37 11.0	-1.5
E43A				IAmb	IAmb	05 37 11.3	
	comp=Z,4.3nm,0.6s						
F48A	Evansville	32.37	10	P	P	05 37 10.9	-1.7
	baz=195						
F49A	Sandfield	32.41	11	P	P	05 37 11.1	-1.9
	baz=196						
I58A	Old Forge	32.43	21	P	P	05 37 12.2	-1.1
	baz=209						
H55A	Tweed	32.47	18	P	P	05 37 12.3	-1.2
	baz=205						
G53A	Haliburton	32.59	16	P	P	05 37 13.3	-1.3
	baz=202						
E46A	Sault Ste Mari	32.63	8	P	P	05 37 12.9	-2.0
E46A				IAmb	IAmb	05 37 26.4	
	comp=Z,15nm,1.5s						
E47A	Iron Bridge	32.87	9	P	P	05 37 15.6	-1.4
	baz=193						
G54A	Lake Saint Pet	32.98	16	P	P	05 37 16.9	-1.2
	baz=203,SNR=8.3						
F51A	Arnstein	33.02	14	P	P	05 37 17.1	-1.2
	baz=199						
F52A	Sundridge	33.04	15	P	P	05 37 17.2	-1.3
	baz=200,SNR=7.3						
E48A	Lockeyer	33.08	11	P	P	05 37 17.6	-1.3
	baz=195						
D46A	Sault St. Mari	33.18	8	P	P	05 37 18.3	-1.5
	baz=192,SNR=6.5						
G55A	Calabogie	33.25	18	P	P	05 37 19.2	-1.1
	baz=205						
H58A	Gabriels	33.34	22	P	P	05 37 19.6	-1.6
	baz=210						
LONY	Lake Ozonia	33.38	21	P	P	05 37 20.2	-1.2
	baz=209,SNR=5.3						
D47A	Chapleau	33.48	9	P	P	05 37 20.5	-1.8
	baz=193						
ALGO	Algonquin Park	33.51	16	P	P	05 37 21.3	-1.2
	baz=202						
E52A	Mattawa	33.66	15	P	P	05 37 22.3	-1.5
	baz=201						
E51A	G1948 Merrick	33.69	14	P	P	05 37 23.0	-1.1
	baz=200,SNR=7.8						
EYMN	Ely	33.78	359	P	P	05 37 22.7	-2.3
	baz=179						
D48A	Paudash Townsh	33.82	11	P	P	05 37 23.2	-2.0
	baz=196						
REDW	Red Top Meadow	33.96	333	P	P	05 37 26.8	0.0
D49A	Beulah Townshi	34.00	11	P	P	05 37 25.7	-1.1
	baz=196						
E53A	Dumoine, Ponti	34.00	16	P	P	05 37 25.6	-1.3
	baz=203,SNR=6.5						
E54A	Lac Daplat, Po	34.19	17	P	P	05 37 27.3	-1.1
	baz=204						
D50A	G1974 Best Tow	34.21	13	P	P	05 37 26.8	-1.7
	baz=199						
D51A	Lot 18 Range I	34.24	14	P	P	05 37 27.4	-1.5
	baz=200						
AGMN	Agassiz Nation	34.40	354	P	P	05 37 28.8	-1.5
AGMN				IAmb	IAmb	05 37 29.3	
	comp=Z,4.5nm,0.8s						
AGMN	Agassiz Nation	34.40	354	P	P	05 37 28.9	-1.4
	baz=171						
NVAR	Mina Array Bea	34.46	320	P	P	05 37 31.8	+0.6
	comp=Z,0.8nm,0.6s,baz=136,slow=7.7,SNR=9.5						
NVAR	Mina Array Bea	34.46	320	P	P	05 37 32.8	+1.6
D53A	Lac Vacive, Po	34.64	16	P	P	05 37 31.4	-0.9
D53A	Lac Vacive, Po	34.64	16	P	P	05 37 31.7	-0.6
	baz=202,SNR=8.3						
TRQ	Mont Tremblant	34.79	20	P	P	05 37 32.9	-0.9
E56A	St. Veronique	34.92	19	P	P	05 37 33.6	-1.1
	baz=207						
D54A	Lac Fusel, La	34.99	17	P	P	05 37 34.2	-1.1
	baz=204,SNR=10						
E57A	Chemin Saint G	35.09	20	P	P	05 37 35.4	-0.9
	baz=209,SNR=5.6						
D55A	Sainte-Anne-du	35.21	18	P	P	05 37 36.1	-1.2
	baz=206,SNR=19						
VLDQ	Val d'Or	35.66	15	P	P	05 37 39.8	-1.3
D57A	Chemin Vers le	35.71	20	P	P	05 37 40.3	-1.2
	baz=209						
D58A	Chemin du LacG	36.12	21	P	P	05 37 43.7	-1.2
	baz=210						
ULM	Lac du Bonnet	36.33	354	P	P	05 37 44.7	-2.1
	comp=Z,1.8nm,0.4s,baz=172,slow=8.2,SNR=12						
ULM	Lac du Bonnet	36.33	354	P	P	05 37 44.2	-2.5
ULM				IAmb	IAmb	05 37 45.2	
	comp=Z,8.9nm,1.2s						
LSQQ	Lebel-sur-Quev	36.66	15	P	P	05 37 48.3	-1.3
	baz=203						
MATQ	Matagami	37.15	14	P	P	05 37 52.4	-1.3
	baz=201,SNR=18						
LPAZ	La Paz	37.47	143	P	P	05 37 57.3	-0.2
	comp=Z,1.0nm,0.6s,baz=356,slow=5.3,SNR=4.1						
LPAZ	La Paz	37.47	143	P	P	05 37 56.6	-0.9
FFC	Flin Flon	41.52	350	P	P	05 38 29.2	-0.8
SIV	San Ignacio	41.78	135	P	P	05 38 32.2	-0.4
	comp=Z,0.5nm,0.5s,baz=301,slow=12,SNR=2.8						
SCHQ	Schefferville	44.71	19	P	P	05 38 53.8	-1.9
	comp=Z,8.8nm,0.4s,baz=222,slow=6.3,SNR=73						
SCHQ	Schefferville	44.71	19	P	P	05 38 53.8	-1.9
YKA	Yellowknife Ar	51.27	346	P	P	05 39 44.4	-1.7
	comp=Z,0.3nm,0.5s,baz=139,slow=7.2,SNR=11						
RES	Resolute Bay	60.66	359	P	P	05 40 50.3	-2.4
RES				IAmb	IAmb	05 40 50.9	
	comp=Z,1.8nm,0.6s						
INK	Inuvik	60.75	343	P	P	05 40 51.9	-1.6
INK				IAmb	IAmb	05 41 03.8	
	comp=Z,2.8nm,1.2s						
IL31		63.30	336	P	P	05 41 08.9	-1.7
ILAR	Eielson Array	63.30	336	P	P	05 41 08.7	-1.9
	comp=Z,0.3nm,0.4s,baz=124,slow=4.8,SNR=17						
ILAR	Eielson Array	63.30	336	P	P	05 41 10.4	-0.2
BMAR	Burnt Mountain	63.68	340	P	P	05 41 12.0	-1.2
BPAW	Bear Paw Mtn.	64.67	335	P	P	05 41 17.7	-1.9
IMAR	Indian Mountai	66.42	337	P	P	05 41 29.8	-1.0
KSH	Kashi	125.25	13	PKP	PKPdf	05 49 42.8	+0.7
KSH				sPKP		05 50 20.8	
KSH				PP	PP	05 51 37.3	+5.6
KSH				PKS	PKSdf	05 53 19.5	+0.6
KSH				SKKS		05 58 19.0	
FITZ	Fitzroy Crossi	144.95	259	PKPbc	PKPab	05 50 18.6	+0.2
	comp=Z,0.6nm,0.4s,baz=355,slow=6.2,SNR=6.5						
FITZ	Fitzroy Crossi	144.95	259		PKPab	05 50 17.4	-1.0
CMAR	Chiang Mai Arr	146.33	343	PKPbc	PKPdf	05 50 21.2	-0.1
	comp=Z,1.2nm,0.3s,baz=321,slow=5.7,SNR=5.6						
CMAR	Chiang Mai Arr	146.33	343		PKPdf	05 50 21.0	-0.3

IASPEI ***29*** *05:37:13.7±0.8, 33.°93N±0.°02×117.°89W±0.°01, h17^{km}±5^{km}, Error ellipse: s-maj=2.4km s-min=1.9km az=24.2, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

ANF ***29*** *05:37:13.4±0.1, 33.°93N×117.°90W, h9^{km}±1^{km}, ML3.1/24, Error ellipse: s-maj=1.3km s-min=1.1km az=28.0*

NEIC ***29*** *05:37:13.7±1.3, 33.°93N±0.°01×117.°89W±0.°01, h19^{km}±1^{km}, Error ellipse: s-maj=1.5km s-min=1.4km az=165.0*

PAS ***29*** *05:37:14.1±2.1, 33.°923N±0.°008×117.°900W±0.°006, h4^{km}±4^{km}, ML3.1/240, Error ellipse: s-maj=1.2km s-min=0.7km az=153.0*

SCEDC ***29*** *05:37:14.0, 33.°93N×117.°88W, h1^{km}*

ISC 29 05:37:14.1±0.8**, 33.°92N**±0.°01×**117.°89W**±0.°01**, h18**^{km}±3^{km}**,**
n137, σ1.^{s}03/185**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FULC	Fullerton	0.05	209		Pg	05 37 15.8	-1.5
RHC	Rose Hills Cem	0.13	309		Pg	05 37 17.0	-1.1
BREC	Barre Substati	0.13	214		Pg	05 37 17.6	-0.5
BREC					Sg	05 37 21.1	+0.4
DLAC	Del Amo	0.18	248		Pg	05 37 18.6	-0.1
DLAC					Sg	05 37 22.9	+1.0
PSRC	Puddingstone R	0.19	22		Pg	05 37 21.0	+2.1
CHNC	Chino	0.19	65		Pg	05 37 18.3	-0.6
SANC	Santa Ana	0.21	179		Pg	05 37 19.0	-0.2
SANC					Sg	05 37 23.4	+0.7
GVRC	Garvey Reservo	0.23	305		Sg	05 37 23.4	+0.3
GVRC	Garvey Reservo	0.23	305		Pg	05 37 18.9	-0.6
PEM	Pine Mountain	0.25	4		Pg	05 37 18.9	-0.8
CRNC	Corona	0.28	99		Sg	05 37 24.1	-0.3
MLSC	Mira Loma	0.29	72		Pg	05 37 19.7	-0.7
MLSC					Sg	05 37 24.0	-0.8
CACC	Caltech Cellar	0.29	319		Pg	05 37 19.6	-0.9
CACC					Sg	05 37 24.1	-0.8
GSA	Caltech--GSA	0.29	318		Sg	05 37 24.1	-0.8
WTT2	Watts, South G	0.30	276		Pb	05 37 20.9	-0.1
MWC	Mount Wilson	0.34	336		Pg	05 37 20.1	-1.2
MWC	Mount Wilson	0.34	336		Sg	05 37 25.5	-0.8
SSK	Sunset Peak	0.34	29		Pg	05 37 20.6	-0.7
USC	University of	0.34	287		Pg	05 37 21.4	+0.1
USC					Sb	05 37 27.2	+0.4
PASC	Pasadena Art C	0.35	316		Pg	05 37 20.3	-1.2
PASC	Pasadena Art C	0.35	316		Sg	05 37 25.4	-1.2
BFSC	Mount Baldy Ra	0.37	31		Pg	05 37 21.1	-0.9
BFSC					Sg	05 37 26.5	-0.8
BFSC	Mount Baldy Ra	0.37	31	P	Pg	05 37 21.1	-0.9
	baz=211						
BFSC				S	Sg	05 37 26.5	-0.8
	baz=211						
XTL	Crystal Lake,	0.38	4		Pg	05 37 21.0	-1.0
FMP	Fort Macarthur	0.39	239		Pg	05 37 21.2	-0.9
FMP	Fort Macarthur	0.39	239	P	Pg	05 37 21.3	-0.9
	baz=58						
FMP				S	Sg	05 37 26.6	-1.0
	baz=58						
GR2C	Griffith Obs.	0.39	301		Pg	05 37 21.4	-0.9
GR2C					Sg	05 37 27.1	-0.7
LCGC	La Cienega, Cu	0.41	282		Pb	05 37 23.2	+0.3
CHFC	Chilao Flat St	0.43	345		Pg	05 37 21.6	-1.3
CHFC					Sg	05 37 27.7	-1.3
SS2	San Sevaine	0.43	48		Pg	05 37 22.4	-0.6
RVR	Riverside	0.44	80		Pg	05 37 22.2	-0.8
RVR					Sg	05 37 28.5	-0.5
SME	Santa Rosa Min	0.46	102		Pg	05 37 22.7	-0.7
RPV	Rancho Palos V	0.46	248		Pg	05 37 22.4	-1.1
RSBC	Riverside Bore	0.47	83		Pg	05 37 22.9	-0.7
RSBC	Riverside Bore	0.47	83		Sg	05 37 29.8	-0.3
DECC	Green Verdugo	0.50	313		Pg	05 37 23.0	-1.1
DECC					Sg	05 37 30.2	-0.7
DECC	Green Verdugo	0.50	313	P	Pg	05 37 23.0	-1.1
	baz=131						
DECC				S	Sg	05 37 30.2	-0.7
	baz=131						
DJJ	Donna J Jenkin	0.50	292		Pg	05 37 23.2	-1.1
JNH	Juniper Hills	0.53	354		Pg	05 37 23.6	-1.2
JNH					Sg	05 37 31.0	-1.0
HOLC	Holcomb Ridge	0.54	4		Pg	05 37 23.8	-1.2
CSP	Cedar Springs	0.58	49		Pg	05 37 25.0	-0.8
PEC	Perris	0.61	92		Pg	05 37 25.5	-0.7
PEC					Sg	05 37 33.7	-0.6
LRRC	Littlerock Res	0.62	349		Pg	05 37 25.1	-1.2
IR2C	Iron Canyon	0.63	318		Pg	05 37 25.3	-1.3
CFT	Crafton Hills	0.66	80		Pg	05 37 26.6	-0.6
MURC	Murrieta	0.66	118		Pg	05 37 26.5	-0.7
MURC					Sg	05 37 35.9	-0.1
MURC	Murrieta	0.66	118	P	Pg	05 37 26.5	-0.7
	baz=300						
MURC				S	Sg	05 37 35.8	-0.2
	baz=300						

CIAC	**Catalina I. Ai**	**0.67**	**220**		**Pg**	**05 37 27.0**	**-0.3**
CIAC					**Sg**	**05 37 36.4**	**0.0**
CIS	**Catalina Islan**	**0.68**	**220**	P	**Pg**	**05 37 27.0**	**-0.4**
	baz=40						
CIS				S	**Sg**	**05 37 36.3**	**-0.1**
	baz=40						
SVD	**Seven Oaks Dam**	**0.69**	**74**		**Pg**	**05 37 27.5**	**-0.1**
OAT	**Oat Mountain**	**0.73**	**306**		**Pg**	**05 37 28.1**	**-0.4**
ADO	**Adelanto Recei**	**0.74**	**31**		**Pg**	**05 37 27.9**	**-0.7**
SBB	**Saddle Back Bu**	**0.77**	**4**		**Pg**	**05 37 27.8**	**-1.4**
BACC	**Bachelor Mtn.**	**0.77**	**113**		**Pg**	**05 37 28.2**	**-1.0**
DGR	**Domenigoni Val**	**0.78**	**110**		**Pg**	**05 37 28.4**	**-1.0**
LEOC	**Leona Valley**	**0.79**	**334**		**Pg**	**05 37 27.9**	**-1.6**
BTL	**Butler Peak**	**0.81**	**65**		**Pg**	**05 37 29.2**	**-0.8**
ALPC	**Antelope**	**0.84**	**336**		**Pg**	**05 37 29.3**	**-1.2**
BBRC	**Big Bear Solar**	**0.88**	**67**		**Pg**	**05 37 30.3**	**-0.9**
BBRC	**Big Bear Solar**	**0.88**	**67**	P	**Pg**	**05 37 30.3**	**-0.9**
	baz=248						
GORC	**Green Oak Ranc**	**0.94**	**144**		**Pg**	**05 37 30.7**	**-1.7**
GORC					**Sg**	**05 37 43.4**	**-1.4**
BTPC	**Burnt Peak**	**0.95**	**324**		**Pg**	**05 37 31.1**	**-1.5**
PYR	**Pyramid**	**0.96**	**313**		**Pg**	**05 37 32.1**	**-0.6**
EDW2	**Edwards Air Fo**	**0.96**	**355**		**Pg**	**05 37 31.5**	**-1.4**
EDW2	**Edwards Air Fo**	**0.96**	**355**	P	**Pg**	**05 37 31.4**	**-1.4**
	baz=174						
BALC	**Balcom Canyon**	**0.97**	**294**		**Pg**	**05 37 32.5**	**-0.5**
OSI	**Osito Audit: C**	**0.98**	**315**		**Pg**	**05 37 31.6**	**-1.5**
OSI	**Osito Audit: C**	**0.98**	**315**	S	**Sg**	**05 37 45.1**	**-0.9**
	baz=134						
HYS	**Haystack Butte**	**0.98**	**16**		**Pg**	**05 37 32.0**	**-1.1**
BLG	**Laguna Peak, P**	**0.99**	**281**		**Sg**	**05 37 46.1**	**-0.3**
BLG	**Laguna Peak, P**	**0.99**	**281**	P	**Pg**	**05 37 31.8**	**-1.6**
	baz=100						
BLG				S	**Sg**	**05 37 45.9**	**-0.5**
	baz=100						
CRY	**Cary Ranch**	**1.02**	**110**		**Pg**	**05 37 33.4**	**-0.6**
CRY					**Sg**	**05 37 46.1**	**-1.3**
PLM	**Palomar**	**1.03**	**123**		**Pg**	**05 37 32.6**	**-1.5**
PLM					**Sg**	**05 37 46.9**	**-0.7**
SBI	**Santa Barbara**	**1.04**	**246**		**Pg**	**05 37 33.4**	**-0.9**
BZNA	**Buzz No.'s Pla**	**1.11**	**112**		**Pg**	**05 37 34.5**	**-1.1**
BZNA					**Sg**	**05 37 49.7**	**-0.4**
DNR	**Dunn Ranch,Anz**	**1.11**	**108**		**Pg**	**05 37 35.4**	**-0.2**
SNDA	**J Saunders Pla**	**1.13**	**109**		**Pg**	**05 37 35.4**	**-0.6**
SNDA					**Sb**	**05 37 50.6**	**+1.1**
FRD	**Ford Ranch, An**	**1.16**	**111**		**Pb**	**05 37 35.5**	**-0.1**
FRD					**Sg**	**05 37 50.5**	**-1.1**
FRD	**Ford Ranch, An**	**1.16**	**111**		**Pb**	**05 37 35.2**	**-0.3**
FRD					**Sg**	**05 37 50.3**	**-1.3**
THC	**Tehachapi Micr**	**1.18**	**327**		**Pg**	**05 37 35.2**	**-1.7**
HWB	**Hans Werner Br**	**1.18**	**139**		**Pb**	**05 37 34.6**	**-1.4**
HWB					**Sb**	**05 37 50.9**	**-0.1**
RRX	**Edison Barstow**	**1.21**	**38**	P	**Pb**	**05 37 36.4**	**-0.1**
	baz=218						
DPP	**Dos Picos Cty**	**1.21**	**139**		**Pn**	**05 37 35.1**	**-1.1**
DPP					**Sb**	**05 37 52.5**	**+0.7**
109C	**Camp Elliot, M**	**1.22**	**147**		**Pn**	**05 37 35.5**	**-0.8**
109C	**Camp Elliot, M**	**1.22**	**147**	P	**Pn**	**05 37 35.5**	**-0.8**
	baz=328						
109C				S	**Sb**	**05 37 51.6**	**-0.4**
	baz=328						
CPE	**Camp Elliot**	**1.22**	**147**		**Pn**	**05 37 35.5**	**-0.7**
CPE					**Sb**	**05 37 51.7**	**-0.3**
PFO	**Pinyon Flats O**	**1.23**	**104**		**Pn**	**05 37 36.6**	**+0.1**
PFO	**Pinyon Flats O**	**1.23**	**104**		**Pn**	**05 37 36.5**	**+0.1**
PFO	**Pinyon Flats O**	**1.23**	**104**	P	**Pn**	**05 37 36.7**	**+0.1**
	baz=285						
PFO				S	**Sb**	**05 37 53.3**	**+0.8**
	baz=285						
EW2	**E Wide Canyon**	**1.23**	**89**		**Pn**	**05 37 36.9**	**+0.4**
EW2					**Sb**	**05 37 53.4**	**+0.9**
XPFO	**Pion Flat**	**1.23**	**104**		**Pn**	**05 37 36.7**	**+0.1**
XPFO	**Pion Flat**	**1.23**	**104**		**Pn**	**05 37 36.4**	**-0.2**
BLAC	**Blackrock camp**	**1.26**	**83**		**Pn**	**05 37 37.2**	**+0.3**
TJR	**Tejon Ranch**	**1.31**	**328**		**Pn**	**05 37 38.0**	**+0.4**
TJR					**Sb**	**05 37 55.1**	**+0.3**
DTP	**Desert Tortois**	**1.35**	**2**		**Pn**	**05 37 38.2**	**+0.1**
EML	**El Monte Cty P**	**1.35**	**139**		**Pn**	**05 37 38.2**	**+0.2**
EML					**Sb**	**05 37 55.9**	**+0.2**
MPI	**Mount Pinos, F**	**1.37**	**311**		**Pn**	**05 37 39.1**	**+0.5**
MPI					**Sb**	**05 37 57.4**	**+0.7**
SDRC	**San Diego Road**	**1.42**	**146**		**Pn**	**05 37 38.9**	**-0.1**
SDRC					**Sn**	**05 37 56.8**	**-0.5**
ARVC	**Arvin**	**1.43**	**328**		**Pn**	**05 37 39.8**	**+0.6**
ARVC					**Sn**	**05 37 58.9**	**+1.2**
ARVC	**Arvin**	**1.43**	**328**	P	**Pn**	**05 37 39.8**	**+0.6**
	baz=147						
ARVC				S	**Sn**	**05 37 58.8**	**+1.2**
	baz=147						
TEJ	**El Tejon**	**1.47**	**334**		**Pn**	**05 37 40.8**	**+1.1**
OLP	**Otay Lakes Par**	**1.54**	**148**		**Sn**	**05 37 59.6**	**-0.4**
TPC	**Twentynine Pal**	**1.54**	**82**		**Pn**	**05 37 42.2**	**+1.4**
LRMC	**Laurel Mtn Rad**	**1.57**	**6**	S	**Sn**	**05 38 01.5**	**+0.4**
	baz=186						
BELC	**Belle Mtn. Jos**	**1.58**	**86**	P	**Pn**	**05 37 41.7**	**+0.4**
	baz=268						
BELC				S	**Sb**	**05 38 03.6**	**+1.1**
	baz=268						
HEC	**Hector,Ludlow**	**1.58**	**54**	P	**Pn**	**05 37 41.7**	**+0.4**
	baz=235						
MONP2	**Monument Peak**	**1.60**	**129**		**Pn**	**05 37 42.5**	**+0.9**
MONP2	**Monument Peak**	**1.60**	**129**	P	**Pn**	**05 37 42.0**	**+0.3**
	baz=311						
MONP2				S	**Sn**	**05 38 03.4**	**+1.4**
	baz=311						
BAR	**Barrett**	**1.60**	**140**		**Pn**	**05 37 41.4**	**-0.1**
BCW	**Bitter Crk WRg**	**1.62**	**309**		**Pn**	**05 37 42.7**	**+0.8**
GSC	**Goldstone, Bar**	**1.65**	**33**		**Pn**	**05 37 43.2**	**+1.0**
GSC	**Goldstone, Bar**	**1.65**	**33**	Pn	**Pn**	**05 37 42.6**	**+0.4**
GSC	**Goldstone, Bar**	**1.65**	**33**	P	**Pn**	**05 37 43.1**	**+0.9**
	baz=213						
GSC				S	**Sb**	**05 38 05.5**	**+1.1**
	baz=213						
CCCA	**Chr Cany lake**	**1.66**	**15**		**Pn**	**05 37 43.1**	**+0.7**
CBKC	**Canebrake**	**1.71**	**126**		**Pn**	**05 37 44.4**	**+1.4**
ISA	**Isabella, Lake**	**1.81**	**345**	Pn	**Pn**	**05 37 44.9**	**+0.4**
ISA	**Isabella, Lake**	**1.81**	**345**	P	**Pn**	**05 37 44.8**	**+0.4**
	baz=164						
ISA				S	**Sn**	**05 38 07.8**	**+0.8**
	baz=164						
PKM	**Mcpherson Peak**	**1.86**	**302**	P	**Pn**	**05 37 46.2**	**+0.9**
	baz=120						
CRR	**Carrizo Plain**	**1.91**	**122**		**Pb**	**05 37 49.0**	**+0.6**
FIGC	**Figueroa Mtn.**	**1.91**	**296**		**Pn**	**05 37 46.1**	**+0.2**
IKP	**In-Ko-Pah, Jac**	**1.96**	**130**	Pb	**Pn**	**05 37 48.7**	**+2.2**
	baz=311						
IKP				S	**Sb**	**05 38 13.9**	**+0.6**
	baz=311						
SWSC	**Sam W. Stewart**	**2.00**	**118**	Pb	**Pb**	**05 37 50.5**	**+0.6**
	baz=300						
SWSC				Sb	**Sb**	**05 38 16.7**	**+2.2**
	baz=300						
VES	**Vestal, Richgr**	**2.15**	**333**	S	**Sn**	**05 38 17.5**	**+2.1**
	baz=152						
SMMC	**Simmler**	**2.23**	**309**	P	**Pn**	**05 37 50.5**	**+0.4**
	baz=128						
ESJX	**Sierra Juarez**	**2.51**	**139**		**Pn**	**05 37 53.6**	**-0.6**
ESJX					**Pb**	**05 37 57.9**	**-0.8**
PAGB	**Antelope Grade**	**2.65**	**314**		**Pn**	**05 37 58.0**	**+2.0**
GLA	**Glamis**	**2.70**	**108**	Pn	**Pn**	**05 37 59.2**	**+2.5**
TPNV	**Topopah Spring**	**3.31**	**23**		**Pn**	**05 38 06.6**	**+1.4**
PMPB	**Monarch Peak**	**3.31**	**315**	Pn	**Pn**	**05 38 06.9**	**+1.8**
SHPR	**Sheep Range**	**3.42**	**40**		**Pn**	**05 38 08.1**	**+1.5**
W13A	**Hualapai Mount**	**3.51**	**69**		**Pn**	**05 38 08.3**	**+0.3**
Y14A	**Wickenburg**	**4.06**	**88**		**Pn**	**05 38 16.4**	**+0.9**
RYN	**Ryan**	**4.73**	**354**		**Pg**	**05 38 40.9**	**-3.8**
R11A	**Troy Canyon, C**	**4.80**	**22**	Pn	**Pn**	**05 38 27.5**	**+1.8**
R11A					**Pg**	**05 38 43.4**	**-2.6**
LCMT	**Little Creek M**	**4.89**	**50**		**Pn**	**05 38 28.6**	**+1.8**
KNB	**Kanab**	**5.17**	**52**		**Pn**	**05 38 32.5**	**+1.9**
U15A	**North Rim**	**5.23**	**60**		**Pn**	**05 38 33.3**	**+1.7**

ROM 29 05:40:20.3±0.2, 38°.502N±0°.007×15°.51E±0°.01, h136^{km}±1^{km}, ML2.5, 1D, Error ellipse: s-maj=1.0km s-min=0.9km az=123.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOPP	**Joppolo**	**0.32**	**71**	P	Pn	05 40 39.1	-0.1
JOPP				S	Sn	05 40 53.2	-0.4
JOPP	**Joppolo**	**0.32**	**71**	P	Pn	05 40 39.1	-0.1
JOPP				S	Sn	05 40 53.0	-0.6
JOPP				END			
JOPP				END			
LLI	**Lipari**	**0.44**	**263**	S	Sn	05 40 56.0	+1.5
MCSR	**Castroreale**	**0.48**	**205**	P	Pn	05 40 40.2	+0.1
MCSR				S	Sn	05 40 55.0	-0.1
MCSR				AML	AML		
	comp=N,100µm,1.6s						
MCSR				AML	AML		
	comp=E,86µm,0.9s						
MCSR				AML	AML		
	comp=N,100µm,1.6s						
MTTG	**Motta San Giov**	**0.52**	**163**	P	Pn	05 40 40.3	0.0
MTTG				S	Sn	05 40 55.3	0.0
MTTG	**Motta San Giov**	**0.52**	**163**	P	Pn	05 40 40.3	+0.1
MTTG				S	Sn	05 40 54.6	-0.6
MTTG				END			
MTTG				END			
AIO	**Antillo**	**0.57**	**202**	P	Pn	05 40 41.0	+0.4
AIO				S	Sn	05 40 56.0	+0.1
MPAZ	**Palizzi**	**0.68**	**144**	P	Pn	05 40 41.1	-0.1
MPAZ	**Palizzi**	**0.68**	**144**	P	Pn	05 40 41.2	0.0
MPAZ				S	Sn	05 40 54.9	-2.1
MPAZ				END			
MPAZ				END			
PLAC	**Placanica**	**0.73**	**94**	P	Pn	05 40 41.7	+0.1
PLAC				S	Sn	05 40 57.4	-0.3
GRI	**Girifalco**	**0.78**	**66**	P	Pn	05 40 42.5	+0.5
GRI				S	Sn	05 40 55.0	-3.4
CAR1	**CAROLEI**	**0.93**	**36**	P	Pn	05 40 43.2	0.0
CAR1	**CAROLEI**	**0.93**	**36**	P	Pn	05 40 43.2	0.0
CAR1				S	Sn	05 40 59.9	-0.7
SERS	**Sersale**	**1.07**	**60**	P	Pn	05 40 45.0	+0.5
SERS				S	Sn	05 41 02.9	0.0
CET2	**Cetraro**	**1.08**	**19**	P	Pn	05 40 45.1	+0.6
CET2				S	Sn	05 41 02.8	-0.3
CET2				AML	AML		
	comp=E,115µm,1.0s						
CET2				AML	AML		
	comp=N,128µm,0.5s						
CET2				AML	AML		
	comp=E,114µm,1.0s						
TIP	**Timpagrande**	**1.19**	**55**	P	Pn	05 40 46.1	+0.5
TIP				S	Sn	05 41 04.9	0.0
TIP	**Timpagrande**	**1.19**	**55**	P	Pn	05 40 45.7	+0.1
TIP				END			
T0702	**Acquaformosa (**	**1.30**	**20**	P	Pn	05 40 47.1	+0.4
T0702				S	Sn	05 41 06.6	-0.3
SALB	**San Lorenzo Be**	**1.52**	**25**	P	Pn	05 40 54.2	+5.0
CDRU	**Civita di Ruta**	**1.99**	**356**	S	Sn	05 41 19.0	-1.9
ACER	**Acerenza**	**2.31**	**8**	S	Sn	05 41 26.0	-1.7
ACER	**Acerenza**	**2.31**	**8**	S	Sn	05 41 22.0	-5.7
AMUR	**Altamura**	**2.55**	**19**	S	Sn	05 41 32.0	-1.0
NOCI	**Noci**	**2.58**	**27**	S	Sn	05 41 33.0	-0.7
PAOL	**Paolisi**	**2.63**	**344**	S	Sn	05 41 47.0	+12
PTRJ	**Pietraroja**	**2.96**	**346**	S	Sn	05 41 49.0	+6.6
VAGA	**Valle Agricola**	**3.07**	**342**	S	Sn	05 41 42.0	-2.9
VAGA	**Valle Agricola**	**3.07**	**342**	S	Sn	05 41 43.0	-1.9
RMP	**Rome, Mte Porz**	**3.94**	**328**	S	Sn	05 42 12.0	+6.8
VLS	**Valsamata**	**4.01**	**93**	S	Sn	05 42 12.0	+5.1
FIAM	**Fiamignano**	**4.18**	**335**	S	Sn	05 42 14.0	+3.0
STON	**Ston**	**4.67**	**20**	S	Sn	05 42 21.0	-1.5
ARVD	**Arcevia**	**5.35**	**340**	⇓P	Pn	05 41 40.3	+2.2
FSSB	**Fossombrone**	**5.58**	**339**	P	Pn	05 41 45.9	+4.8

IDC 29 05:43:35.9±1.7, 5°.45S×152°.66E, h0^{km}, mb3.7/4, mb1 4.0/5, mb1mx3.6/39, mbtmp3.8/5, ML1.9/1, Error ellipse: s-maj=35.0km s-min=18.5km az=103.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.30**	**331**	Pn	Pn	05 44 02.2	+0.8
	493nm,0.3s,baz=193,slow=0.9,SNR=145						
KRVT				Sn	Sn	05 44 19.8	+0.2
	223nm,0.3s,baz=294,slow=24,SNR=6.0						
KRVT				LR	LR	05 44 30.3	
	comp=Z,256nm,21.7s,baz=12,slow=42						
PMG	**Port Moresby**	**6.72**	**234**	Pn	Pn	05 45 18.1	+2.1
	1.4nm,0.3s,baz=341,slow=4.2,SNR=4.4						
PMG				Sn	Sn	05 46 33.1	-0.3
	2.1nm,0.3s,baz=308,slow=16,SNR=3.4						
WRA	**Warramunga Arr**	**22.92**	**229**	P	P	05 48 41.0	-0.7
	1.0nm,0.6s,baz=53,slow=9.8,SNR=2.1						
ASAR	**Alice Springs**	**25.58**	**223**	P	P	05 49 07.6	+0.6
	1.1nm,0.7s,baz=58,slow=9.6,SNR=15						
FITZ	**Fitzroy Crossi**	**29.23**	**242**	P	P	05 49 38.1	-1.6
	0.9nm,0.6s,baz=76,slow=7.6,SNR=2.1						
ILAR	**Eielson Array**	**82.81**	**22**	P	P	05 56 01.8	-0.1
	0.7nm,0.8s,baz=246,slow=5.5,SNR=8.2						

*PDG **29** 05:45:28.8±0.4, 34°.78N×22°.09E, h11^{km}±3^{km}, ML4.5/12, Error ellipse: s-maj=3.0km s-min=2.6km az=90.0*

*HLW **29** 05:45:31.3, 35°.17N×22°.63E, h29^{km}±35^{km}, Md4.6, Ml4.9*

*MOS **29** 05:45:32.5±1.2, 34°.95N×22°.51E, h16^{km}, mb4.3/16, Error ellipse: s-maj=7.3km s-min=3.6km az=79.4*

*IDC **29** 05:45:33.2±1.0, 35°.16N×22°.65E, h0^{km}, mb3.9/18, mb1 4.0/30, mb1mx3.9/70, mbtmp3.9/30, ML3.8/11, MS3.4/11, Ms1 3.4/11, ms1mx3.0/51, Error ellipse: s-maj=22.1km s-min=12.2km az=16.0*

*ATH **29** 05:45:34.8, 35°.02N×22°.50E, h30^{km}±7^{km}, ML3.9/16, Error ellipse: s-maj=7.2km s-min=1.2km az=260.0*

*NEIC **29** 05:45:34.2±2.9, 34°.98N±0°.09×22°.52E±0°.06, h15^{km}±5^{km}, Error ellipse: s-maj=12.8km s-min=6.8km az=194.0*

*THE **29** 05:45:36.2, 35°.01N×22°.47E, h15^{km}±3^{km}, ML3.9/12, Error ellipse: s-maj=4.1km s-min=0.7km az=224.0*

*GII **29** 05:45:42.5±0.3, 34°.59N×23°.19E, h40^{km}, mb4.2/4, MD4.0/4, Mm4.4/1*

ISC 29 05:45:35.0±1.1, 34°.98N±0°.04×22°.41E±0°.04, h24^{km}±7^{km}, n363, σ2^{s}00/379, mb4.0/33, MS3.4/6, 16C-16D, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANKY	**Antikythira Is**	**1.14**	**39**	P	**Pb**	**05 45 56.0**	**-0.1**
ANKY	**Antikythira Is**	**1.14**	**39**	P	**Pn**	**05 45 55.7**	**+0.1**
ANKY				S	**Sb**	**05 46 09.8**	**-0.8**
ANKY				AML	AML	05 46 20.0	
	comp=E,20064µm,0.8s						
ANKY				AML	AML	05 46 22.5	
	comp=N,16826µm,0.6s						
KTHR	**Kythira**	**1.36**	**21**	P	**Pb**	**05 45 59.3**	**-0.6**
KTHR				S	**Sb**	**05 46 16.9**	**0.0**
	comp=N,5µm,0.5s						
IMMV	**Iera Moni Meta**	**1.37**	**69**	P	**Pb**	**05 45 59.3**	**-0.7**
IMMV	**Iera Moni Meta**	**1.37**	**69**	P	**Pb**	**05 45 59.4**	**-0.6**
IMMV				S	**Sn**	**05 46 16.1**	**0.0**
IMMV				AML	AML	05 46 29.5	
	comp=N,15449µm,0.9s						
IMMV				AML	AML	05 46 32.4	
	comp=E,16590µm,0.7s						
GVD	**Gavdhos**	**1.39**	**95**	P	**Pn**	**05 45 59.0**	**+0.1**
GVD				S	**Sb**	**05 46 17.5**	**0.0**
	comp=E,5µm,0.4s						
GVD	**Gavdhos**	**1.39**	**95**	P	**Pn**	**05 45 58.9**	**+0.1**
GVD				S	**Sb**	**05 46 17.3**	**-0.2**
GVD				AML	AML	05 46 24.6	
	comp=E,11068µm,0.4s						
GVD				AML	AML	05 46 31.4	
	comp=N,9337µm,0.4s						
GVDS	**Gavdos**	**1.39**	**95**	P	**Pn**	**05 45 58.8**	**-0.1**
GVDS				S	**Sn**	**05 46 16.9**	**+0.4**
	comp=N,4µm,0.6s						
CHAN	**Chania**	**1.44**	**68**	P	**Pb**	**05 46 00.6**	**-0.5**
CHAN				S	**Sb**	**05 46 19.1**	**+0.1**
	comp=N,3µm,0.8s						
VAM	**Vamos**	**1.53**	**73**	P	**Pn**	**05 46 01.3**	**+0.5**
VAM				S	**Sn**	**05 46 20.3**	**+0.4**
	comp=N,4µm,0.8s						
VAM	**Vamos**	**1.53**	**73**	P	**Pn**	**05 46 01.3**	**+0.5**
VAM				AML	AML	05 46 36.0	
	comp=N,10220µm,0.8s						
VAM				AML	AML	05 46 40.7	
	comp=E,8199µm,0.6s						
VAM	**Vamos**	**1.53**	**73**	P	**Pn**	**05 46 01.3**	**+0.5**
VAM				S	**Sn**	**05 46 20.3**	**+0.4**
PRNS	**Prines Rethymn**	**1.76**	**77**	P	**Pn**	**05 46 04.0**	**+0.1**
PRNS				S	**Sn**	**05 46 25.6**	**+0.1**
MNVA	**Monemvasia**	**1.78**	**17**	P	**Pb**	**05 46 06.0**	**-0.9**
MNVA				AML	AML	05 46 47.4	
	comp=N,3835µm,1.7s						
MNVA				AML	AML	05 46 51.2	
	comp=E,5335µm,1.4s						
DYR	**Agios Nikonas**	**1.78**	**358**	P	**Pn**	**05 46 05.2**	**+0.9**
DYR				S	**Sb**	**05 46 28.4**	**-0.4**
	comp=E,872nm,0.8s						
VLI	**Veliai**	**1.78**	**14**	P	**Pn**	**05 46 04.6**	**+0.2**
VLI				S	**Sn**	**05 46 27.6**	**+1.3**
	comp=E,4µm,0.8s						
VLI	**Veliai**	**1.78**	**14**	P	**Pn**	**05 46 04.5**	**+0.2**
VLI				AML	AML	05 46 55.0	
	comp=N,13226µm,0.8s						
VLI				AML	AML	05 46 56.6	
	comp=E,11476µm,0.9s						
SIVA	**Sivas**	**1.97**	**88**	P	**Pn**	**05 46 07.7**	**+0.8**
SIVA				S	**Sn**	**05 46 32.1**	**+1.3**
	comp=E,5µm,0.8s						
SIVA	**Sivas**	**1.97**	**88**	P	**Pn**	**05 46 07.7**	**+0.8**
PYL	**PYLOS**	**1.98**	**344**	P	**Pn**	**05 46 08.3**	**+1.2**
PYL				S	**Sb**	**05 46 33.5**	**-1.2**
	comp=E,1µm,0.7s						
PYL	**PYLOS**	**1.98**	**344**	P	**Pn**	**05 46 08.1**	**+1.0**
PYL				AML	AML	05 46 56.9	
	comp=E,2266µm,1.0s						
PYL				AML	AML	05 47 00.3	
	comp=N,2175µm,0.7s						
IDI	**Anoyia**	**2.06**	**81**	P	**Pn**	**05 46 08.8**	**+0.7**
IDI				S	**Sn**	**05 46 33.2**	**+0.1**
	comp=N,1µm,0.8s						
IDI	**Anoyia**	**2.06**	**81**	Pn	**Pn**	**05 46 07.9**	**-0.3**
	comp=N,37nm,0.3s,baz=264,slow=10,SNR=132						
IDI				Sn	**Sn**	**05 46 30.7**	**-2.4**
	comp=N,29nm,0.3s,baz=272,slow=18,SNR=9.1						
IDI	**Anoyia**	**2.06**	**81**	P	**Pn**	**05 46 08.3**	**+0.1**
IDI				AML	AML	05 46 50.0	
	comp=N,3165µm,0.8s						
IDI				AML	AML	05 46 58.4	
	comp=E,2153µm,0.9s						
ITM	**Ithomi**	**2.23**	**350**	P	**Pn**	**05 46 12.0**	**+1.6**
ITM				AML	AML	05 46 57.7	
	comp=N,1729µm,0.5s						
ITM				AML	AML	05 47 07.1	
	comp=E,2405µm,0.8s						
ITM	**Ithomi**	**2.23**	**350**		**Pn**	**05 46 12.3**	**+1.9**
MHLO	**Agia Marina, M**	**2.35**	**43**	P	**Pn**	**05 46 12.6**	**+0.4**
MHLO				S	**Sn**	**05 46 40.8**	**+0.6**
	comp=E,6µm,0.8s						
MHLO	**Agia Marina, M**	**2.35**	**43**	P	**Pn**	**05 46 12.5**	**+0.4**
VLX	**Vlachokerasia**	**2.38**	**359**	P	**Pn**	**05 46 14.7**	**+2.0**
VLX				AML	AML	05 47 16.9	
	comp=E,5000µm,0.9s						
VLX				AML	AML	05 47 23.0	
	comp=N,2792µm,0.9s						
MHLA	**Plaka, Milos I**	**2.40**	**42**	P	**Pn**	**05 46 13.9**	**+1.1**
KRND	**KRANIDI**	**2.47**	**14**	P	**Pn**	**05 46 15.3**	**+1.5**
KRND				AML	AML	05 47 06.7	
	comp=N,2683µm,0.6s						
KRND				AML	AML	05 47 06.8	
	comp=E,3652µm,0.7s						
LAST	**Lasithi**	**2.52**	**85**	P	**Pn**	**05 46 15.4**	**+0.8**
DID	**Didima**	**2.61**	**15**	P	**Pn**	**05 46 16.2**	**+0.6**
DID				S	**Sn**	**05 46 48.1**	**+1.5**
	comp=E,1µm,1.1s						
DID	**Didima**	**2.61**	**15**	P	**Pn**	**05 46 16.3**	**+0.6**
DID				AML	AML	05 47 09.9	
	comp=N,1911µm,0.8s						
DID				AML	AML	05 47 10.0	
	comp=E,2166µm,1.1s						
AMT	**Artemida-Makis**	**2.61**	**348**	P	**Pn**	**05 46 17.9**	**+2.2**
NPS	**Neapolis**	**2.64**	**83**	P	**Pn**	**05 46 17.1**	**+1.0**
NPS				AML	AML	05 47 22.1	
	comp=N,2312µm,1.2s						
NPS				AML	AML	05 47 24.5	
	comp=E,2166µm,1.0s						
NPS	**Neapolis**	**2.64**	**83**	P	**Pn**	**05 46 17.8**	**+1.7**
SERI	**Serifos**	**2.75**	**37**	P	**Pn**	**05 46 17.9**	**+0.3**
THR5	**Thira Island,**	**2.79**	**58**	P	**Pn**	**05 46 17.8**	**-0.4**
SAP1	**Santorini-Akro**	**2.79**	**60**	P	**Pn**	**05 46 18.0**	**-0.2**
THR6	**Thira Island,**	**2.79**	**60**	P	**Pn**	**05 46 18.3**	**+0.1**
SAP3	**Santorini-Thir**	**2.79**	**58**	P	**Pn**	**05 46 18.3**	**+0.1**
STAX	**Taxiarchis Har**	**2.82**	**59**	P	**Pn**	**05 46 18.5**	**0.0**
THR3	**Thira Island,**	**2.82**	**59**	P	**Pn**	**05 46 18.3**	**-0.3**
THT1	**Athinios (Pele**	**2.83**	**59**	P	**Pn**	**05 46 18.5**	**-0.1**
SANT	**Santorini**	**2.84**	**60**	P	**Pn**	**05 46 19.1**	**+0.1**
SANT	**Santorini**	**2.84**	**60**	⇑P	**Pn**	**05 46 18.9**	**-0.1**
SANT	**Santorini**	**2.84**	**60**		**Pn**	**05 46 19.1**	**+0.1**
CMBO	**Columbo, Santo**	**2.85**	**58**	P	**Pn**	**05 46 19.0**	**0.0**
THR2	**Thira island,**	**2.86**	**58**	P	**Pn**	**05 46 19.5**	**+0.3**
IOSP	**Ios island**	**2.91**	**53**	P	**Pn**	**05 46 19.7**	**-0.2**
DRO	**Drossia**	**3.02**	**349**	P	**Pn**	**05 46 23.4**	**+2.0**
LOUT	**Loutraki**	**3.03**	**8**	P	**Pn**	**05 46 23.5**	**+2.0**
LTK	**Loutraki**	**3.07**	**8**	P	**Pn**	**05 46 23.4**	**+1.4**
LTK				AML	AML	05 47 27.3	
	comp=N,1422µm,1.4s						
LTK				AML	AML	05 47 34.9	
	comp=E,999µm,0.8s						
VLY	**Voula,Athens**	**3.07**	**21**	P	**Pn**	**05 46 22.3**	**+0.2**
VLY				AML	AML	05 47 26.3	
	comp=N,1433µm,0.6s						
VLY				AML	AML	05 47 29.7	
	comp=E,1600µm,0.7s						
ZKR	**Zakros**	**3.13**	**86**	P	**Pn**	**05 46 23.3**	**+0.5**
RLS	**Riolos of Patr**	**3.16**	**346**	P	**Pn**	**05 46 25.5**	**+2.2**
ATH	**Athens Observa**	**3.16**	**19**	P	**Pn**	**05 46 24.7**	**+1.4**
ATH				AML	AML	05 47 36.4	
	comp=E,1513µm,1.4s						
ATH				AML	AML	05 47 45.0	
	comp=N,1584µm,0.9s						
ATH	**Athens Observa**	**3.16**	**19**	P	**Pn**	**05 46 26.1**	**+2.8**
ATHU	**Athens Univers**	**3.18**	**20**	P	**Pn**	**05 46 24.4**	**+0.8**
LAKA	**Lakka**	**3.27**	**354**	P	**Pn**	**05 46 27.1**	**+2.3**
APE	**Apeiranthos**	**3.28**	**50**	P	**Pn**	**05 46 24.5**	**-0.4**
APE	**Apeiranthos**	**3.28**	**50**	⇓P	**Pn**	**05 46 24.2**	**-0.7**
APE	**Apeiranthos**	**3.28**	**50**	⇓P	**Pn**	**05 46 24.2**	**-0.7**
PTL	**Penteli**	**3.28**	**21**	P	**Pn**	**05 46 25.6**	**+0.7**
PROD	**Prodromos**	**3.29**	**7**	P	**Pn**	**05 46 26.0**	**+0.9**
VIL2	**Platees**	**3.30**	**12**	P	**Pn**	**05 46 25.2**	**0.0**
DION	**Dionisos Attik**	**3.32**	**21**	P	**Pn**	**05 46 26.1**	**+0.5**
AMGA	**Amorgos Island**	**3.38**	**56**	P	**Pn**	**05 46 25.9**	**-0.3**
KFL	**Anninata**	**3.38**	**338**	P	**Pn**	**05 46 27.4**	**+1.1**
TRIZ	**Trizonia**	**3.39**	**356**	P	**Pn**	**05 46 28.1**	**+1.7**
KALE	**Kalithea**	**3.41**	**356**	P	**Pn**	**05 46 28.1**	**+1.3**
DSF	**Desfina**	**3.42**	**2**	P	**Pn**	**05 46 27.8**	**+0.8**
KARY	**Karystos**	**3.45**	**28**	P	**Pn**	**05 46 27.4**	**+0.1**
EFP	**Efpalio**	**3.46**	**353**	P	**Pn**	**05 46 29.8**	**+2.4**
VLS	**Valsamata**	**3.51**	**336**	P	**Pn**	**05 46 28.8**	**+0.7**
KEF2	**Argostoli. Kep**	**3.53**	**335**	P	**Pn**	**05 46 29.5**	**+1.1**
KEF3	**Kipouria, Keph**	**3.62**	**333**	P	**Pn**	**05 46 30.7**	**+1.2**
KEF4	**Livadi, Kephal**	**3.64**	**335**	P	**Pn**	**05 46 31.0**	**+1.2**
KEF1	**Kardakata, Kep**	**3.64**	**335**	P	**Pn**	**05 46 30.8**	**+1.0**
LKR	**Lokris**	**3.69**	**7**	P	**Pn**	**05 46 31.4**	**+0.9**
PVO	**Paravola**	**3.70**	**349**	P	**Pn**	**05 46 33.2**	**+2.6**
KONA	**Konidatara, Ke**	**3.74**	**337**	P	**Pn**	**05 46 33.6**	**+2.4**
AXAR	**Agios Charalam**	**3.78**	**3**	P	**Pn**	**05 46 33.4**	**+1.5**
MRKA	**Markates**	**3.83**	**14**	P	**Pn**	**05 46 33.3**	**+0.7**
EVGI	**Lefkada island**	**3.90**	**339**	P	**Pn**	**05 46 34.7**	**+1.3**
KARP	**Karpathos**	**3.93**	**80**	P	**Pn**	**05 46 33.9**	**0.0**
KARP	**Karpathos**	**3.93**	**80**		**Pn**	**05 46 34.6**	**+0.7**
EVR	**Evrytania**	**3.96**	**353**	P	**Pn**	**05 46 37.6**	**+3.3**
MAKR	**Makrakomi, Fth**	**4.03**	**357**	P	**Pn**	**05 46 37.2**	**+2.0**
AGG	**Agios Georgios**	**4.03**	**359**	P	**Pn**	**05 46 36.6**	**+1.3**
AGG	**Agios Georgios**	**4.03**	**359**	P	**Pn**	**05 46 37.0**	**+1.7**
AGG	**Agios Georgios**	**4.03**	**359**		**Pn**	**05 46 37.0**	**+1.7**
LKD2	**Lefkada island**	**4.05**	**340**	P	**Pn**	**05 46 36.7**	**+1.1**
TSLK	**Tsoukalades, L**	**4.08**	**340**	P	**Pn**	**05 46 37.4**	**+1.4**
SLUM	**Salum**	**4.20**	**145**	P	**Pn**	**05 46 37.3**	**-0.3**
	baz=148						
SLUM				AMP		05 47 00.0	
	baz=148						
SLUM				S	**Sn**	**05 47 21.0**	**-4.8**
	baz=148						
SKIA	**Skiathos**	**4.26**	**11**	P	**Pn**	**05 46 39.3**	**+0.9**
BODT	**Bodrum**	**4.48**	**61**	*e*P	**Pn**	**05 46 41.4**	**0.0**
CHOS	**Chios island**	**4.49**	**40**	P	**Pn**	**05 46 41.8**	**+0.3**
DAT	**Datca**	**4.54**	**66**	*e*P	**Pn**	**05 46 41.9**	**-0.5**
URLA	**Izmir**	**4.76**	**44**	*e*P	**Pn**	**05 46 45.4**	**+0.1**
ARG	**Arkhangelos**	**4.82**	**74**	P	**Pn**	**05 46 46.5**	**+0.4**
IGT	**Igoumenitsa**	**4.83**	**341**	P	**Pn**	**05 46 47.5**	**+1.2**
PAIG	**Paliouri**	**5.04**	**11**	P	**Pn**	**05 46 50.1**	**+1.0**
PAIG				pmax	pmax		
	comp=Z,69nm,0.8s						
LIT	**Litokhoron**	**5.11**	**1**	P	**Pn**	**05 46 50.8**	**+0.7**
LIT						05 47 48.6	

LIT	Litokhoron	5.11	1		Pn	05 46 50.8	+0.7
LIT				Sn	Sn	05 47 48.6	+0.3
YER	Yerkesik	5.22	64	*e*P	Pn	05 46 53.8	+2.2
AYDB	Zeytinkoy-Aydi	5.32	55	*e*P	Pn	05 46 52.9	-0.1
TURN	Turunc	5.37	68	*e*P	Pn	05 46 48.1	-5.5
DALY	Dalyan (Mula)	5.39	68	*e*P	Pn	05 46 54.6	+0.7
MATC	Matruh	5.43	131	P	Pn	05 46 53.8	-0.7
	baz=133						
MATC				S	Sn	05 47 49.9	-6.3
	baz=133						
OUR	Ouranopolis	5.49	13	P	Pn	05 46 54.6	-0.6
FETY	Fethiye	5.67	71	*e*P	Pn	05 46 57.3	-0.5
EZN	Ezine	5.75	32	P	Pn	05 46 57.6	-1.2
FNA	Florina	5.85	352	P	Pn	05 47 00.8	+0.5
FNA				pmax	pmax		
	comp=Z,90nm,0.7s						
FNA	Florina	5.85	352		Pn	05 47 00.6	+0.3
FNA				Sn	Sn	05 48 03.2	-3.4
SOH	Sokhos	5.88	7	P	Pn	05 47 01.7	+1.1
SOH				pmax	pmax		
	comp=Z,35nm,0.9s						
GRG	Griva	5.96	360	P	Pn	05 47 01.9	+0.1
GRG				pmax	pmax		
	comp=Z,46nm,1.2s						
SCTE	Santa Cesarea	5.97	330	Pn	Pn	05 47 01.9	+0.1
SCTE				Sn	Sn	05 48 03.6	-5.8
AKAS	Kas	5.99	76	*e*P	Pn	05 47 02.1	-0.2
KULA	Kula-Manisa	6.13	53	*e*P	Pn	05 47 05.8	+1.6
TIP	Timpagrande	6.16	314	⇓P	Pn	05 47 03.9	-0.6
TIP				⇓S	Sn	05 48 06.7	-7.6
TIP	Timpagrande	6.16	314		Pn	05 47 03.9	-0.6
KNT	Kendrikon	6.18	3	P	Pn	05 47 05.8	+1.0
KNT				pmax	pmax		
	comp=Z,45nm,0.9s						
SRS	Serrai	6.20	8	P	Pn	05 47 06.3	+1.3
SRS				pmax	pmax		
	comp=Z,40nm,0.9s						
SWA2		6.28	155	P	Pn	05 47 05.0	-1.2
	baz=157						
SWA2				AMP		05 48 00.0	
	baz=157						
VAY	Valandovo	6.33	1	*i* Pn	Pn	05 47 07.5	+0.7
VAY	Valandovo	6.33	1	P	Pn	05 47 09.2	+2.4
VAY				pmax	pmax		
	comp=Z,51nm,0.8s						
ELL	Elmali	6.34	72	*e*P	Pn	05 47 07.6	+0.5
ELL	Elmali	6.34	72	P	Pn	05 47 06.8	-0.3
ELL	Elmali	6.34	72		Pn	05 47 06.8	-0.3
WDD	Wied Dalam	6.50	280	Pn	Pn	05 47 11.3	+2.2
ALN	Alexandroupoli	6.57	25	P	Pn	05 47 09.9	-0.1
ALN	Alexandroupoli	6.57	25		Pn	05 47 09.9	-0.1
TIR	Tirane	6.66	343	⇑P	Pn	05 47 12.9	+1.5
TIR				⇓S	Sn	05 48 23.1	-3.4
TIR	Tirane	6.66	343	P	Pn	05 47 12.0	+0.6
TIR	Tirane	6.66	343		Pn	05 47 12.0	+0.6
MMB	Musomiste	6.68	9	*e*P	Pn	05 47 11.8	+0.2
KORT	Korkueli	6.75	70	*e*P	Pn	05 47 14.5	+1.9
TAR1	Taranto	6.86	325	*e*Pn	Pn	05 47 13.1	-1.0
TAR1				Sn	Sn	05 48 24.1	-7.3
VAE	Valguarnera	6.93	293	Pn	Pn	05 47 17.9	+2.9
	baz=27,slow=16,SNR=0.5						
VAE				Sn	Sn	05 48 30.8	-2.4
	comp=Z,2.0nm,0.3s,baz=203,slow=4.6,SNR=5.8						
RZN	Rozhen	6.94	14	*e*P	Pn	05 47 14.9	-0.4
SKO	Skopje	7.02	354	*i* Pn	Pn	05 47 16.0	-0.3
KDZ	Kurdzhali	7.06	19	*e*P	Pn	05 47 16.5	-0.4
TVSB	Tavsanli	7.18	50	*e*P	Pn	05 47 14.5	-4.1
MATE	Matera	7.24	323	⇑P	Pn	05 47 19.1	-0.2
PLD	Plovdiv	7.33	13	P	Pn	05 47 22.5	+1.9
PLD				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SG1	Sgolgore (BA)	7.39	324	*e*Pn	Pn	05 47 21.0	-0.5
SG1				Sn	Sn	05 48 35.2	-9.4
DIM	Dimitrovgrad	7.47	18	*e*P	Pn	05 47 22.8	+0.4
BAI	Bari	7.51	326	*e*Pn	Pn	05 47 24.1	+1.1
BAI				Sn	Sn	05 48 39.6	-7.7
DRME	Dracevica, Mon	7.62	342	*e*Pn	Pn	05 47 22.5	-2.1
HBRG	Burj al `Arab	7.64	123	P	Pn	05 47 23.2	-1.7
	baz=125						
HBRG				AMP		05 48 00.0	
	baz=125						
VTS	Vitosha	7.65	5	⇓P	Pn	05 47 22.5	-2.6
VTS	Vitosha	7.65	5	*e*P	Pn	05 47 23.9	-1.2
VTS	Vitosha	7.65	5	P	Pn	05 47 25.8	+0.7
VTS	Vitosha	7.65	5		Pn	05 47 25.8	+0.7
ACER	Acerenza	7.73	320		Pn	05 47 26.6	+0.6
PDG	Podgorica	7.83	343	⇓P	Pn	05 47 26.0	-1.4
PDG	Podgorica	7.83	343	*e*Pn	Pn	05 47 27.0	-0.4
PDG	Podgorica	7.83	343		Pn	05 47 27.2	-0.2
CLTB	Caltabellotta	7.86	292	Pn	Pn	05 47 28.7	+0.8
CORL	Corleone	7.89	294		Pn	05 47 29.8	+1.5
HCY	Herceg Novi	8.06	339	*e*Pn	Pn	05 47 28.6	-1.9
TREB	Trebinje	8.35	339	*e*Pn	Pn	05 47 31.9	-2.6
DBRK	Dubrovnik	8.36	338	*e*Pn	Pn	05 47 32.8	-1.9
DBRK				Sn	Sn	05 48 57.6	-11
ELND	Elena	8.38	18	⇑P	Pn	05 47 34.7	-0.3
BRY	Bratogost	8.46	340	*e*Pn	Pn	05 47 33.3	-2.9
KIZT	Kizilcal	8.52	60	*e*P	Pn	05 47 37.8	+0.8
SGRT	San Giovanni R	8.55	324	Pn	Pn	05 47 36.0	-1.3
PLVB	Pleven	8.57	11	⇓P	Pn	05 47 46.3	+8.8
LEF	Lefka	8.60	86	⇓P	Pn	05 47 31.1	-6.9
PAOL	Paolisi	8.64	317		Pn	05 47 39.4	+0.8
UPM	Unac-Piva	8.65	343	*e*Pn	Pn	05 47 40.6	+1.8
STON	Ston	8.69	336	*e*Pn	Pn	05 47 37.3	-1.9
STON	Ston	8.69	336	*e*Pn	Pn	05 47 36.4	-2.7
HNAT	Natroun	8.76	125	P	Pn	05 47 38.5	-1.6
	baz=127						
RUDO	Rudo	8.94	346	*e*Pn	Pn	05 47 38.2	-4.4
CSS	Mathiatis	8.96	87	Pn	Pn	05 47 39.1	-3.9
BBLS	Lazići	9.17	346	*e*Pn	Pn	05 47 44.8	-1.0
MAKA	Makarska	9.29	335	*i* Pn	Pn	05 47 45.3	-2.1
MAKA				Sn	Sn	05 49 20.1	-11
DIVS	Divibare	9.29	349	*e*Pn	Pn	05 47 45.1	-2.4
HFRF	Wahat Farafira	9.30	145	P	Pn	05 47 45.7	-2.0
	baz=147						
HSAF	As Saff	9.40	122	P	Pn	05 47 46.5	-2.6
	baz=123						
KOT	Kottamia	9.42	120	P	Pn	05 47 46.2	-3.1
	baz=121						
KOT				AMP		05 49 00.0	
	baz=121						
RICI	Ricice	9.43	336	*e*Pn	Pn	05 47 48.9	-0.5
HAPS	Han Pijesak,BI	9.47	345	*e*Pn	Pn	05 47 47.8	-2.3
GLL	Jalalah	9.54	122	P	Pn	05 47 48.0	-2.8
	baz=123						
INTR	Introdacqua	9.68	319		Pn	05 47 53.8	+1.0
MDVR	Moldovita	9.80	357	⇑P	Pn	05 47 53.0	-1.5
TEKS	Tekeris	9.81	348	*e*Pn	Pn	05 47 51.8	-2.7
NBNS	Bani Suef	9.86	128	P	Pn	05 47 54.0	-1.3
	baz=129						
BR131	Keskin Array S	10.11	59	P	Pn	05 47 59.3	+0.5
BR131	Keskin Array S	10.11	59		Pn	05 47 59.3	+0.5
BRTR	Keskin Array B	10.11	59	Pn	Pn	05 47 58.2	-0.6
	comp=Z,0.3nm,0.3s,baz=232,slow=15,SNR=12						
BRTR				LR	LR	05 52 43.9	
	comp=Z,122nm,18.0s,baz=225,slow=44						
BRTR	Keskin Array B	10.11	59	*i* P	Pn	05 48 01.3	+2.5
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRTR	Keskin Array B	10.11	59		Pn	05 47 59.3	+0.5
ZIRJ	Zirje	10.12	331	*e*Pn	Pn	05 47 57.2	-1.5
MORI	Morici	10.27	332	*e*Pn	Pn	05 48 00.4	-0.4
MORI				Sn	Sn	05 49 44.2	-11
MGRS	Mrkonjic Grad	10.27	338	*e*Pn	Pn	05 47 58.4	-2.5
TAMRE	El Minia	10.29	133	P	Pn	05 47 59.5	-1.6
	baz=134						
ZAF	Zafarana	10.30	121	P	Pn	05 47 58.1	-3.3
	baz=122						
FRGS	Fruska Gora	10.36	350	*e*Pn	Pn	05 47 53.0	-9.0
GZR	Gura Zlata	10.40	1	⇑P	Pn	05 48 02.0	-0.7
GZR	Gura Zlata	10.40	1	⇑P	Pn	05 48 02.0	-0.7
ZNM	Zenema	10.48	119	P	Pn	05 48 01.5	-2.3
	baz=120						
BLY	Banja Luka	10.54	339	⇓P	Pn	05 48 02.1	-2.5
BLY	Banja Luka	10.54	339	*e*Pn	Pn	05 48 01.4	-3.2
BLY	Banja Luka	10.54	339		Pn	05 48 03.1	-1.4
DUGI	Dugi Otok	10.63	330	*e*Pn	Pn	05 48 05.8	0.0
DUGI				Sn	Sn	05 49 52.0	-12
VOIR		10.63	10	⇓P	Pn	05 47 59.4	-6.5
VOIR		10.63	10	⇓P	Pn	05 47 59.4	-6.5
NRCA	Norcia	10.67	320		Pn	05 48 07.5	+1.1
KEST	Kesra	10.70	278	Pn	Pn	05 48 09.0	+2.2
	comp=Z,0.1nm,0.3s,baz=63,slow=11,SNR=1.7						
KEST				Sn	Sn	05 50 02.2	-3.6
	comp=Z,0.2nm,0.3s,baz=70,slow=17,SNR=1.5						
KEST				LR	LR	05 51 57.3	
	comp=Z,83nm,20.7s,baz=360,slow=35						
HNTI	Hanita	10.76	97	Pn	Pn	05 48 05.8	-1.8
UDBI	Udbina	10.81	334	*e*Pn	Pn	05 48 08.7	+0.4
MLR	Muntele Rosu	10.84	13	Pn	Pn	05 48 08.8	+0.1
	comp=Z,0.3nm,0.3s,baz=199,slow=8.1,SNR=4.9						
MLR				LR	LR	05 53 14.6	
	comp=Z,204nm,19.9s,baz=121,slow=44						
MLR	Muntele Rosu	10.84	13	⇑P	Pn	05 48 08.5	-0.3
KZIT	Kziot	10.86	109	Pn	Pn	05 48 05.6	-3.4
KZIT				Sn	Sn	05 49 58.4	-11
SLTI	Sal'it	10.88	101	Pn	Pn	05 48 06.4	-2.9
SLTI				Sn	Sn	05 49 59.4	-11
ASUT		10.88	132	P	Pn	05 48 07.5	-1.8
	baz=133						
MMAI	Mount Meron Ar	10.96	97	Pn	Pn	05 48 07.8	-2.7
	comp=Z,3.5nm,0.3s,baz=279,slow=11,SNR=11						
MMAI				Sn	Sn	05 50 05.6	-6.8
	comp=Z,5.8nm,0.3s,baz=255,slow=20,SNR=7.1						
MMAI				LR	LR	05 54 23.1	
	comp=Z,54nm,18.4s,baz=295,slow=49						
GRB	Gharib	11.09	124	P	Pn	05 48 08.2	-3.9
	baz=125						
MMLI	Mount Malkishu	11.13	100	Pn	Pn	05 48 10.0	-2.7
KSDI	Kefar Szold	11.13	95	Pn	Pn	05 48 10.3	-2.4
HDK1	Dakhla	11.18	145	P	Pn	05 48 11.3	-2.1
	baz=147						
NVLJ	Novalja	11.18	331	*i* Pn	Pn	05 48 13.0	-0.3
NVLJ				Sn	Sn	05 50 05.8	-12
YTIR	Yattir	11.24	105	Pn	Pn	05 48 12.0	-2.3
YTIR				Sn	Sn	05 50 08.1	-11
HMDT	Nahal Hemdat	11.27	100	Pn	Pn	05 48 11.6	-3.0
HMDT				Sn	Sn	05 50 09.4	-10
VRI	Vrincioaia	11.36	15	⇑P	Pn	05 48 19.0	+3.3
VRI	Vrincioaia	11.36	15	⇑P	Pn	05 48 19.0	+3.3
DSI	Dead Sea	11.38	104	Pn	Pn	05 48 12.5	-3.5
KRMI	Paran Flat	11.46	112	Pn	Pn	05 48 14.0	-3.3
PRNI	Paran	11.57	110	Pn	Pn	05 48 14.9	-3.8
PRNI				Sn	Sn	05 50 15.2	-12
MORH	Mrgy, Hungar	11.58	347	*e*Pn	Pn	05 48 15.4	-3.3
ZFRI	Zfri	11.62	109	Pn	Pn	05 48 15.4	-3.9
GHAJ	Ghor Haditha	11.62	105	Pn	Pn	05 48 16.9	-2.5
HRFI	Mount Harif	11.74	111	Pn	Pn	05 48 18.3	-2.8
AKRG	Al Kharijah	11.75	141	P	Pn	05 48 18.7	-2.5
	baz=142						
MBRI	Mt Berech	11.76	113	Pn	Pn	05 48 18.6	-2.8
MBRI				Sn	Sn	05 50 20.8	-11
HKAT	Jabal Katrina	11.77	120	P	Pn	05 48 17.6	-4.0
	baz=121						
GTR	Jabal at Tayr	11.77	141	P	Pn	05 48 20.0	-1.5
	baz=142						
EIL	Elat	11.85	113	Pn	Pn	05 48 20.1	-2.4
	comp=Z,1.4nm,0.3s,baz=314,slow=9.7,SNR=23						
EIL				Sn	Sn	05 50 23.1	-11
	comp=Z,2.9nm,0.3s,baz=276,slow=7.2,SNR=6.8						
EIL	Elat	11.85	113	Pn	Pn	05 48 18.9	-3.7
HBST	Basata	11.92	115	P	Pn	05 48 20.9	-2.6
	baz=116						
TR1	Tor 1	12.05	122	P	Pn	05 48 22.3	-3.0
	baz=123						
CRES	Cresnjev	12.05	336	*e*Pn	Pn	05 48 22.9	-2.3
HDHB	Dhahab	12.11	118	P	Pn	05 48 23.4	-2.6
	baz=119						
HHRG	Al Ghardaqah	12.29	126	P	Pn	05 48 27.3	-1.3
	baz=127						
CEY	Cerknica	12.34	333	*e*Pn	Pn	05 48 28.7	-0.5
ASF	Jabal al Asfar	12.40	99	Pn	Pn	05 48 29.2	-1.0
	comp=Z,0.4nm,0.3s,baz=251,slow=6.0,SNR=4.0						
ASF				Sn	Sn	05 50 46.4	-1.3
	comp=Z,0.6nm,0.3s,baz=5.4,slow=18,SNR=2.2						
SOKA	Soboth	12.94	337	*e*Pn	Pn	05 48 36.7	-0.7
	comp=Z,1.0nm,0.3s						
SOKA				*e*Sn	Sn	05 50 49.3	-11
	comp=Z,2.8nm,0.5s						
OBKA	Obir	12.96	335	*e*Pn	Pn	05 48 38.1	+0.4
	comp=Z,1.4nm,0.3s						
OBKA				*e*Sn	Sn	05 50 50.6	-10
	comp=Z,14nm,0.8s						
PSZ	Piszkesteto	13.06	352	P	Pn	05 48 40.6	+1.5
PSZ	Piszkesteto	13.06	352	Pn	Pn	05 48 40.6	+1.5
ARSA	Arzberg	13.30	339	*e*Pn	Pn	05 48 41.5	-0.8
	comp=Z,1.4nm,0.4s						
ARSA				*e*Sn	Sn	05 50 59.8	-10
	comp=Z,1.1nm,0.4s						
MYKA	Terra Mystica	13.38	333	*e*Pn	Pn	05 48 45.3	+1.8
	comp=Z,0.8nm,0.3s						
MYKA				*e*Sn	Sn	05 51 04.1	-7.4
	comp=Z,3.0nm,0.4s						
CTI	Castel Tesino	13.74	327	P	Pn	05 48 47.7	-0.6
CTI	Castel Tesino	13.74	327		Pn	05 48 47.7	-0.6
CONA	Conrad Observa	13.83	341	Pn	Pn	05 48 52.9	+3.4
	comp=Z,0.9nm,0.5s						
KBA	Koelnbreinsper	13.87	333	*e*Pn	Pn	05 48 51.9	+1.7
	comp=Z,4.8nm,0.7s						
KBA				Sn	Sn	05 51 11.5	-12
	comp=Z,6.3nm,0.8s						
ABTA	Abfaltersbach	13.92	331	*e*Pn	Pn	05 48 51.8	+1.0
	comp=Z,2.5nm,0.7s						
ABTA				Sn	Sn	05 51 12.6	-12
	comp=Z,16nm,0.8s						
MOA	Molln	14.22	337	*e*Pn	Pn	05 48 55.5	+0.6
	comp=Z,4.8nm,0.7s						
MOA				*e*Sn	Sn	05 51 20.5	-11
	comp=Z,1.8nm,0.4s						
WTTA	Wattenberg	14.69	330	*e*Sn	Sn	05 51 32.2	-11
	comp=Z,7.1nm,0.5s						
WATA	Walderalm	14.78	330	*i* Sn	Sn	05 51 36.7	-8.8
	comp=Z,7.1nm,0.6s						
FETA	Feichten	14.89	327	*e*Pn	Pn	05 49 06.7	+2.6
	comp=Z,1.0nm,0.5s						
FETA				*e*Sn	Sn	05 51 35.9	-12
	comp=Z,2.3nm,0.7s						
VRAC	Vranov	14.94	345	Pn	P	05 49 07.4	-2.6
	comp=Z,0.3nm,0.3s,baz=171,slow=12,SNR=5.1						
MOTA	Moosalm	14.98	329	*e*P	P	05 49 08.7	-1.9
	comp=Z,0.9nm,0.4s						
MOTA				Sn	Sn	05 51 39.7	-11
	comp=Z,5.0nm,0.7s						
DAVOX	Davos/Dischmat	15.10	325	Pn	Pn	05 49 09.3	+2.4
	comp=Z,0.1nm,0.3s,baz=151,slow=18,SNR=1.9						
DAVOX				Sn	Sn	05 51 45.3	-8.1
MORC	Moravsky Berou	15.21	348	⇓P	P	05 49 13.7	+0.7
MORC	Moravsky Berou	15.21	348	P	P	05 49 13.3	+0.3
MORC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MORC	Moravsky Berou	15.21	348	P	P	05 49 13.2	+0.3
RETA	Reutte	15.24	329	*i* Sn	Sn	05 51 46.6	-10
	comp=Z,4.6nm,0.6s						
GERES	GERESS Array B	15.28	338	Pn	Pn	05 49 09.4	+0.3
	comp=Z,0.1nm,0.3s,baz=159,slow=13,SNR=7.8						
GERES				Sn	Sn	05 51 46.8	-11
	comp=Z,0.2nm,0.3s,baz=161,slow=26,SNR=4.2						
GERES				LR	LR	05 56 34.8	
	comp=Z,249nm,18.6s,baz=127,slow=44						
GERES	GERESS Array B	15.28	338		Pn	05 49 10.4	+1.2
DAVA	Damuels	15.47	326	*e*Pn	Pn	05 49 13.9	+2.1
	comp=Z,3.0nm,0.6s						
DAVA				*e*Sn	Sn	05 51 51.9	-11
	comp=Z,8.0nm,0.5s						
KHC	Kasperske Hory	15.57	338	*e*P	P	05 49 17.9	+0.9
KHC				*e*x	x	05 49 32.6	
KHC	Kasperske Hory	15.57	338	*e*P	P	05 49 17.9	+0.9
WET	Wettzell	15.80	336	P	P	05 49 20.6	+1.0
WET				pmax	pmax		
	comp=Z,9.0nm,1.1s						
DPC	Dobruska-Polom	15.99	346	*e*P	P	05 49 22.3	+0.7
DPC				*e*x	x	05 49 32.4	
DPC	Dobruska-Polom	15.99	346	*e*P	P	05 49 22.3	+0.7
PRU	Pruhonice	16.07	341	*e*P	P	05 49 23.1	+0.7
PRU	Pruhonice	16.07	341	*e*P	P	05 49 23.1	+0.7
SLE	Schleitheim	16.46	325	P	P	05 49 26.6	-0.3
SLE				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AKASG	Malin Array Be	16.47	15	Pn	Pn	05 49 20.6	-3.8
	comp=Z,0.6nm,0.3s,baz=207,slow=12,SNR=4.4						
AKASG	Malin Array Be	16.47	15	*i* P	P	05 49 26.5	-0.4
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKASG	Malin Array Be	16.47	15	P	Pn	05 49 24.9	+0.6
AKBB	Malin Array Si	16.47	15	P	Pn	05 49 24.5	+0.1
AKBB				pmax	pmax		
	comp=Z,14nm,1.2s						
AKBB	Malin Array Si	16.47	15	P	Pn	05 49 24.5	+0.1
CLL	Collm	17.68	340	*e*P	Pn	05 49 37.0	-2.5
CLL				*i* pP	pP	05 49 44.4	-1.3
CLL				*i* PP	PnPn	05 49 50.0	-0.1
CLL				*e*		05 49 57.0	
CLL				*e*		05 50 14.0	
CLL				LmH		05 55 00.0	
	comp=N,100nm,20.4s						
CLL				LmH		05 55 00.0	
	comp=E,200nm,22.0s						
CLL	Collm	17.68	340	P	Pn	05 49 39.7	+0.2
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CLL	Collm	17.68	340	P	Pn	05 49 39.6	+0.2
KIV	Kislovodsk	18.00	54	*e*P	Pn	05 49 41.4	-2.2
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
KBZ	Khabaz	18.06	55	Pn	Pn	05 49 43.3	-0.8
	comp=Z,0.2nm,0.3s,baz=252,slow=11,SNR=2.2						
GNI	Garni	18.42	67	LR	LR	05 57 14.9	
	comp=Z,66nm,21.1s,baz=266,slow=39						
ZEI	Tsey	18.43	59	*e*P	Pn	05 49 50.2	+1.2
ZEI				pmax	pmax		
	comp=Z,11nm,1.7s						
NCK	Nalchik	18.45	56	⇑*e*P	P	05 49 47.6	-1.2
KLNR	Kaliningrad	19.68	356	⇑*e*P	P	05 49 59.9	-2.3
NACGM	Naroch	20.15	7	*e*	Pn	05 50 10.0	+0.7
VSR	Storozhevoye	20.24	32	⇑*e*P	P	05 50 07.3	-1.0
VSR				pmax	pmax		
	comp=Z,38nm,1.1s						
BSEG	Bad Segeberg	20.77	340	P	P	05 50 14.1	+0.1
BSEG				pmax	pmax		
	comp=Z,27nm,1.2s						
LPSR	Galich'ya Gora	21.18	29	*e*P	P	05 50 19.4	+0.9
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
OBN	Obninsk	22.40	22	*e*P	P	05 50 31.3	-0.2
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,80nm,13.0s						
MDT	Midelt	22.51	272	P	P	05 50 35.6	+2.6
	comp=Z,3.3nm,0.8s,baz=86,slow=12,SNR=4.3						
MDT				LR	LR	06 01 25.4	
	comp=Z,107nm,19.5s,baz=102,slow=42						
VSU	Vasula	23.66	6	⇑*e*P	P	05 50 44.1	-0.3
VSU				pmax	pmax		
	comp=Z,126nm,3.4s						
HFS	Hagfors	25.80	350	P	P	05 51 03.4	-0.5
	comp=Z,1.9nm,0.4s,baz=157,slow=12,SNR=20						
FINES	FINESS Array B	26.58	4	P	P	05 51 09.7	-1.3
	comp=Z,0.6nm,0.3s,baz=176,slow=8.4,SNR=10						
FINES				LR	LR	06 02 36.8	
	comp=Z,106nm,20.0s,baz=273,slow=39						
FINES	FINESS Array B	26.58	4	*i* P	P	05 51 09.6	-1.4
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FINES	FINESS Array B	26.58	4	P	P	05 51 09.5	-1.4
FIA1	FINESS Array S	26.59	4	P	P	05 51 10.7	-0.3
FIA1				IAmb	IAmb	05 51 28.2	
	comp=Z,4.8nm,0.9s						
EKA	Eskdalemuir Ar	26.92	327	P	P	05 51 15.3	+1.1
	comp=Z,1.2nm,0.6s,baz=124,slow=7.8,SNR=5.0						
NAO01	NORSAR Array S	26.92	348	P	P	05 51 13.9	-0.2
NC405	NORSAR Array S	27.04	349	P	P	05 51 17.2	+2.1
NB2	NORSAR Subarra	27.05	348	P	P	05 51 15.2	-0.1
	comp=Z,0.9nm,0.7s,baz=160,slow=9.3						
NOA	NORSAR Array B	27.05	348	P	P	05 51 16.0	+0.7
	comp=Z,0.3nm,0.4s,baz=151,slow=10,SNR=9.1						
NOA	NORSAR Array B	27.05	348	P	P	05 51 16.0	+0.7
NC303	NORSAR Array S	27.20	348	P	P	05 51 19.0	+2.5
KLMR	Klimovskoe	28.13	18	*e*P	P	05 51 15.8	-9.1
KLMR				pmax	pmax		
	comp=Z,33nm,2.1s						
KLMR	Klimovskoe	28.13	18	*e*P	P	05 51 15.9	-9.0
KLMR				AMP		05 51 29.5	
	comp=Z,33nm,2.1s						
ATD	Arta Tunnel	29.83	137	LR	LR	06 02 13.4	
	comp=Z,50nm,18.5s,baz=86,slow=34						
PRGR	Permogore	30.48	22	*e*P	P	05 51 48.7	+3.0
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ARU	Arti	32.55	38	P	P	05 52 03.0	-1.0
	comp=Z,0.9nm,0.3s,baz=207,slow=18,SNR=3.1						
ARU	Arti	32.55	38	IAmb	IAmb	05 52 10.2	
	comp=Z,11nm,1.4s						
ARCES	ARCESS Array B	34.65	2	P	P	05 52 21.4	-0.7
	comp=Z,2.5nm,0.7s,baz=190,slow=9.8,SNR=13						
ARCES				LR	LR	06 07 58.5	
	comp=Z,154nm,19.1s,baz=50,slow=39						
ARCES	ARCESS Array B	34.65	2	P	P	05 52 25.0	+2.9
KK31	Karatay Array	37.79	63	P	P	05 52 48.3	-1.1
KK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KK31	Karatay Array	37.79	63	P	P	05 52 48.3	-1.1
KK31				IAmb	IAmb	05 53 01.5	
	comp=Z,2.4nm,0.8s						
KKAR	Karatay Array	37.79	63	P	P	05 52 47.6	-1.8
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KKAR	Karatay Array	37.79	63	P	P	05 52 47.6	-1.8
KKAR				IAmb	IAmb	05 53 01.5	
	comp=Z,2.4nm,0.8s						
BRVK	Borovoye	38.05	47	⇓*e*P	P	05 52 50.2	-1.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AAK	Ala-Archa	40.75	63	⇓*e*P	P	05 53 12.8	-1.4
BOOM	Boomskoye usch	41.83	63	P	P	05 53 22.2	-0.9
BOOM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BOOM	Boomskoye usch	41.83	63	P	P	05 53 22.1	-0.9
BOOM				IAmb	IAmb	05 53 36.8	
	comp=Z,2.7nm,0.7s						
KSH	Kashi	42.36	67	P	P	05 53 26.0	-1.4
KSH				sP	pP	05 53 33.3	-0.4
KSH				PcP	PcP	05 55 22.5	+2.0
KSH				PcS	PcS	05 59 11.3	-1.2
KSH				S	S	05 59 43.3	-4.0
KURK	Kurchatov	43.04	51	⇑*e*P	P	05 53 31.1	-1.5
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MK31	Makanchi Array	45.75	56	P	P	05 53 52.6	-1.8
MK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MK31	Makanchi Array	45.75	56	P	P	05 53 52.6	-1.8
MK31				IAmb	IAmb	05 54 07.3	
	comp=Z,1.5nm,0.7s						
MKAR	Makanchi Array	45.75	56	P	P	05 53 53.0	-1.4
	comp=Z,0.7nm,0.3s,baz=271,slow=8.1,SNR=16						
MKAR	Makanchi Array	45.75	56	P	P	05 53 53.3	-1.1
ZAA0	Zalesovo Array	46.75	46	IAmb	IAmb	05 54 08.6	
	comp=Z,2.8nm,0.6s						
ZALV	Zalesovo Beam	46.75	46	P	P	05 54 00.1	-1.9
	comp=Z,1.2nm,0.4s,baz=260,slow=8.9,SNR=5.1						
ZALV	Zalesovo Beam	46.75	46	P	P	05 54 00.3	-1.8
ZALV	Zalesovo Beam	46.75	46	P	P	05 54 00.3	-1.8
DGZ	Jazzator, Alta	48.76	52	⇑*e*P	P	05 54 16.8	-1.2
WMQ	Urumqi	50.04	59	*e*P	P	05 54 28.0	+0.3
FRB	Frobisher Bay	59.66	329	P	P	05 55 39.4	+2.5
	comp=Z,1.9nm,1.1s,baz=70,slow=15,SNR=2.3						
SONM	Songino Array	61.33	50	P	P	05 55 50.2	+1.4
	comp=Z,0.5nm,0.5s,baz=290,slow=6.3,SNR=4.7						
ULN	Ulaanbaatar	61.73	50	⇓*e*P	P	05 55 52.2	+0.7
ULN				pmax	pmax		
	comp=Z,4.0nm,1.5s						
BOD	Bodaibo	61.97	37	*e*P	P	05 55 51.8	-0.9
BOD				pmax	pmax		
	comp=Z,5.0nm,1.8s						
TIXI	Tiksi	62.12	20	P	P	05 55 53.6	+0.2
	comp=Z,1.2nm,0.3s,baz=342,slow=6.6,SNR=4.2						
TIXI	Tiksi	62.12	20	IAmb	IAmb	05 56 09.4	
	comp=Z,1.5nm,0.8s						
RES	Resolute Bay	63.25	345	P	P	05 56 02.2	+1.2
	comp=Z,0.9nm,0.8s,baz=4.8,slow=9.3,SNR=3.8						
BOSA	Boshof	63.31	177	LR	LR	06 25 43.9	
	comp=Z,49nm,21.1s,baz=12,slow=38						
HHC	Hu-ho-hao-te	67.60	55	*e*P	P	05 56 29.3	-0.6
BILL	Bilibino	73.78	13	*e*P	P	05 57 06.6	-0.2
BILL				*e*		05 57 21.9	
BILL				pmax	pmax		
	comp=Z,7.0nm,2.2s						
KLR	Kul'dur	75.36	40	P	P	05 57 18.1	+1.8
	comp=Z,0.5nm,0.5s,baz=329,slow=5.9,SNR=1.9						
MA2	Magadan	76.59	24	P	P	05 57 24.5	+1.3
	comp=Z,1.8nm,0.2s,baz=144,slow=22,SNR=1.5						

MA2	Magadan	76.59	24	IAmb	IAmb	05 57 36.0	
	comp=Z,9.2nm,1.5s						
YKA	Yellowknife Ar	76.90	341	P	P	05 57 26.6	+1.7
	comp=Z,0.4nm,0.7s,baz=39,slow=5.6,SNR=8.6						
ULM	Lac du Bonnet	79.17	325	P	P	05 57 39.1	+1.4
	comp=Z,0.8nm,0.6s,baz=68,slow=5.4,SNR=3.1						
ULM	Lac du Bonnet	79.17	325	IAmb	IAmb	05 57 39.3	
	comp=Z,2.1nm,0.9s						
ILAR	Eielson Array	80.22	355	P	P	05 57 45.6	+2.5
	comp=Z,0.4nm,0.9s,baz=243,slow=6.0,SNR=2.0						
WRA	Warramunga Arr	118.82	95	PKP	PKiKP	06 04 22.3	+0.6
	comp=Z,0.3nm,0.8s,baz=298,slow=1.9,SNR=2.4						
ASAR	Alice Springs	120.24	99	PKP	PKiKP	06 04 28.2	+3.7
	comp=Z,0.4nm,0.9s,baz=296,slow=1.0,SNR=4.1						

*SJA **29** 05:54:47.2±1.0, 29°.21S×68°.90W, h4^{km}±5^{km}, ML3.4, MW3.3*

*GUC **29** 05:54:47.0±0.8, 29°.12S×68°.94W, h8^{km}±7^{km}, ML4.2*

ISC 29 05:54:47.1±1.2**, 29°.20S**±0°.02×**68°.94W**±0°.03**, h4**^{km}±14^{km}**, n26, σ2^{s}.21**/50**, 3C-3D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGUA	GUANDACOL	0.49	126	eP	Pg	05 54 57.3	+0.8
AGUA				eS	Sb	05 55 04.6	-1.3
AGUA				IAML		05 55 04.8	
	comp=Z,4μm,0.2s						
VCA	Vinchina	0.79	55	⇓iP	Pb	05 55 02.6	-0.9
VCA				i S	Sb	05 55 14.1	-0.5
VCA	Vinchina	0.79	55	eP	Pb	05 55 02.6	-0.9
VCA				eS	Sb	05 55 14.4	-0.3
VCA				IAML		05 55 16.0	
	comp=Z,3μm,0.3s						
ACDV	Cuesta del Vie	0.98	189	eP	Pb	05 55 06.8	+0.1
ACDV				eS	Sb	05 55 20.0	-0.2
ACDV				IAML		05 55 24.2	
	comp=Z,417nm,0.4s						
AROD	Rodeo	1.07	205	eP	Pn	05 55 08.7	-0.5
AROD				eS	Sb	05 55 23.0	+0.1
ACCO	Cerro Coronel	1.39	184	eP	Pg	05 55 14.2	+0.4
ACCO				eS	Sg	05 55 35.1	+3.3
ACCO				IAML		05 55 36.4	
	comp=Z,283nm,0.2s						
AMOG	MOGNA	1.78	167	eP	Pb	05 55 20.4	+0.1
AMOG				eS	Sg	05 55 45.6	+1.3
AMOG				IAML		05 55 50.7	
	comp=Z,287nm,0.4s						
GO04	Tololo Observa	1.89	239	⇓iP	Pg	05 55 23.7	+0.5
GO04				i S	Sg	05 55 49.1	+1.5
GO04				IAML		05 55 50.4	
	comp=N,2μm,0.7s						
GO04	Tololo Observa	1.89	239	eP	Pg	05 55 23.7	+0.5
GO04				eS	Sg	05 55 49.2	+1.5
GO03	Copiap	1.96	324	⇑iP	Pg	05 55 24.0	-0.7
GO03				i S	Sb	05 55 48.0	-0.2
GO03	Copiap	1.96	324	eP	Pg	05 55 24.3	-0.3
GO03				eS	Sg	05 55 53.5	+3.4
RTLL	Cerro Villicun	2.16	169	eP	Pb	05 55 26.7	-0.2
RTLL				eS	Sb	05 55 55.0	+0.9
RTLL				IAML		05 55 56.0	
	comp=Z,432nm,0.4s						
ZON	Zonda	2.35	174	eP	Pb	05 55 30.1	0.0
ZON				eS	Sb	05 56 00.2	+0.7
ZON				IAML		05 56 11.6	
	comp=Z,143nm,0.6s						
RTLS	Leoncito	2.61	187	eP	Pb	05 55 35.5	+0.9
RTLS				eS	Sg	05 56 10.1	-0.9
RTLS				IAML		05 56 15.0	
	comp=Z,206nm,1.1s						
CO02	Combarbal	2.68	221	⇑iP	Pb	05 55 36.1	+0.4
CO02				eS	Sb	05 56 08.2	-0.7
CO02				IAML		05 56 16.1	
	comp=N,2μm,0.2s						
RTCV	Cerro Valdivia	2.68	173	i P	Pb	05 55 35.3	-0.3
RTCV				eS	Sb	05 56 10.8	+1.9
RTCV				IAML		05 56 14.2	
	comp=Z,147nm,0.6s						
CYA	Choya	2.86	75	⇓iP	Pb	05 55 35.6	-3.0
CYA				i S	Sb	05 56 11.8	-2.2
CYA	Choya	2.86	75	eP	Pb	05 55 36.0	-2.6
CYA				eS	Sb	05 56 15.5	+1.5
CYA				IAML		05 56 17.1	
	comp=Z,142nm,0.9s						
ACAN	Cantantal	3.42	154	i P	Pb	05 55 44.8	-3.4
ACAN				eS	Sb	05 56 32.8	+2.6
ACAN				IAML		05 56 40.0	
	comp=Z,90nm,0.9s						
ARCO	CERRO ARCO	3.63	180	i P	Pb	05 55 49.2	-2.8
ARCO				eS	Sg	05 56 40.7	-3.1
ARCO				IAML		05 56 49.1	
	comp=Z,89nm,0.5s						
AAGR	Agrelo	3.88	179	i P	Pb	05 55 52.7	-3.4
AAGR				eS	Sg	05 56 48.5	-3.2
AAGR				IAML		05 57 03.9	
	comp=Z,98nm,0.6s						
PEL	Peldehue	4.21	200	i P	Pb	05 55 57.3	-4.4
PEL				eS	Sg	05 56 59.4	-2.8
MRA	San Martin	4.24	140	i P	Pn	05 55 55.2	+2.6
MRA				eS	Sb	05 56 57.5	+3.6
FCH	Farellones	4.28	195	⇑iP	Pb	05 55 58.5	-4.6
FCH				i S	Sb	05 56 50.3	-4.8
FCH				IAML		05 57 04.6	
	comp=E,53nm,0.1s						
LAMA	Las Malvinas	5.73	182	i P	Pn	05 56 16.1	+3.3
GO05	Huala	6.33	203	i P	Pn	05 56 22.7	+1.6

*NIED **29** 05:55:00, 37°.80N×143°.50E, h11^{km}, Mw3.6 Best double couple: M$_0$3.08000×10^{14} NP1:φ$_s$170.00000°, δ61.00000°, λ-95.00000°. NP2:φ$_s$1.00000°, δ30.00000°, λ-81.00000°.*

*IDC **29** 05:55:53.8±1.1, 37°.50N×143°.99E, h0^{km}, mb3.7/8, mb1 3.9/11, mb1mx3.6/49, mbtmp3.7/11, ML3.4/3, Error ellipse: s-maj=31.2km s-min=19.4km az=135.0*

*JMA **29** 05:55:56.6±0.2, 37°.76N×143°.55E, h49^{km}, M3.8*

*NEIC **29** 05:55:58.9±2.4, 37°.68N±0°.04×143°.6E±0°.1, h37^{km}±7^{km}, mb4.6/5, Error ellipse: s-maj=14.8km s-min=5.2km az=89.0*

ISC 29 05:55:58.4±0.7**, 37°.75N**±0°.04×**143°.58E**±0°.07**, h35**^{km}**, n45, σ1^{s}.94**/53**, mb3.7**/10**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	1.76	289	P	Pn	05 56 25.1	-1.3
JIKH				S	Sn	05 56 45.6	-2.0
JIO	Ouri	1.89	293	P	Pn	05 56 27.0	-1.2
JIO				S	Sn	05 56 49.2	-1.7
JKMT	Kesennumamotoy	1.97	303	P	Pn	05 56 27.9	-1.3
JKMT				S	Sn	05 56 51.0	-1.7
OFUJ	Ofunato	2.00	312	P	Pn	05 56 28.3	-1.5
JMK	Ichinoseki	2.21	304	P	Pn	05 56 31.5	-1.1
JMK				S	Sn	05 56 57.5	-1.2
JOM	Ohasama	2.48	315	P	Pn	05 56 35.6	-0.8
JOM				S	Sn	05 57 04.4	-1.1
JFT	Otama	2.58	266	P	Pn	05 56 37.3	-0.4
JFT				S	Sn	05 57 07.6	-0.3
JYK	Kaneyama	2.79	296	P	Pn	05 56 40.4	-0.1
JYK				S	Sn	05 57 12.9	0.0
JANG	Nango	3.08	329	eS	Sn	05 57 17.9	-2.1
JAG	Ashikaga	3.55	249	P	Pn	05 56 50.3	-0.8
JAG				S	Sn	05 57 30.7	-1.1
BSO1	Boso 1	3.73	215	P	Pn	05 56 51.4	-1.7
BSO1				eS	Sn	05 57 34.5	-1.1
JRY	Ryogami san	4.13	247	P	Pn	05 56 58.1	-0.9
JRY				eS	Sn	05 57 42.7	-3.3
ERM	Erimo	4.28	356	Pn	Pn	05 56 59.7	-1.2
JOD2	Odawara 2	4.38	237	P	Pn	05 57 02.0	-0.5
JOD2				eS	Sn	05 57 48.9	-3.5
MJAR	Matsushiro Arr	4.45	256	Pn	Pn	05 57 04.4	+0.9
	1.0nm,0.3s,baz=77,slow=14,SNR=23						
MJAR				Sn	Sn	05 57 58.5	+4.4
	0.2nm,0.3s,baz=95,slow=28,SNR=1.2						
MJAR	Matsushiro Arr	4.45	256		Pn	05 57 03.2	-0.3
MAJO	Matsushiro	4.46	256		Pn	05 57 03.8	+0.3
MAT	Matsushiro	4.46	256	P	Pn	05 57 04.5	+1.0
MAT				eS	Sn	05 57 52.2	-1.9
MJB9	Matsu-Tunnel	4.46	256		Pn	05 57 04.0	+0.5
JKB	Kayabe	4.58	335	S	Sn	05 57 53.0	-4.0
JCH	Churui	4.86	358	P	Pn	05 57 07.2	-1.9
JCH				eS	Sn	05 57 59.7	-4.4
JHJ	Hachijo jima 2	5.56	215	Pn	Pn	05 57 16.3	-2.3
	5.7nm,0.3s,baz=32,slow=12,SNR=1.7						
JHJ				Sn	Sn	05 58 15.8	-5.5
	14nm,0.3s,baz=58,slow=22,SNR=1.4						
INU	Inuyama	5.80	248	Pn	Pn	05 57 22.4	+0.5
JKA	Kamikawa-asahi	6.41	354		Pn	05 57 31.2	+1.0
ASAJ	Asahikawa	6.41	354	Pn	Pn	05 57 31.2	+1.0
	0.9nm,0.3s,baz=196,slow=7.4,SNR=6.4						
H11N2	WAKE ISLAND Hy	27.09	125	T	T	06 29 54.9	
	baz=317,slow=74,SNR=8.0						
H11N1	WAKE ISLAND Hy	27.10	125	T	T	06 29 56.3	
	baz=317,slow=74,SNR=6.9						
H11N3	WAKE ISLAND Hy	27.11	125	T	T	06 29 59.7	
	baz=317,slow=74,SNR=7.7						
ZALV	Zalesovo Beam	42.72	312	P	P	06 03 56.5	+4.6
	0.6nm,0.5s,baz=67,slow=8.0,SNR=3.9						
CMAR	Chiang Mai Arr	43.34	256	P	P	06 04 00.5	+3.1
	0.9nm,0.3s,baz=52,slow=5.8,SNR=1.8						
CMAR	Chiang Mai Arr	43.34	256	P	P	06 03 59.6	+2.3
MKAR	Makanchi Array	45.20	302	P	P	06 04 16.7	+4.7
	0.3nm,0.6s,baz=82,slow=11,SNR=2.5						
MKAR	Makanchi Array	45.20	302	P	P	06 04 15.7	+3.8
TRF	Thorofare Moun	46.47	35	P	P	06 04 20.8	-1.1
TRF				IAmb	IAmb	06 04 32.2	
	comp=Z,8.1nm,1.5s						
ILAR	Eielson Array	47.97	33	P	P	06 04 34.0	+0.8
	comp=Z,0.7nm,0.7s,baz=260,slow=6.3,SNR=7.8						
ILAR	Eielson Array	47.97	33	P	P	06 04 34.3	+1.0
FID	Port Fidalgo	48.35	38	P	P	06 04 36.6	+0.3
CHGR	Chuyangaron	56.91	296	P	P	06 05 41.3	+1.2
CHGR				IAmb	IAmb	06 05 53.7	
	comp=Z,11nm,1.5s						
WB0	Warramunga Arr	57.86	190	P	P	06 05 42.9	-3.8
WRA	Warramunga Arr	58.04	190	P	P	06 05 47.3	-0.6
	comp=Z,0.1nm,0.5s,baz=9.5,slow=7.4,SNR=2.3						
WRA	Warramunga Arr	58.04	190	P	P	06 05 46.8	-1.1
YKA	Yellowknife Ar	62.32	31	P	P	06 06 17.9	+1.1
	comp=Z,0.1nm,0.7s,baz=299,slow=6.3,SNR=2.3						
FRB	Frobisher Bay	75.67	14	P	P	06 07 40.1	+0.5
	comp=Z,2.1nm,1.0s,baz=356,slow=7.2,SNR=4.1						
PDAR	Pinedale Array	75.93	47	P	P	06 07 43.0	+1.2
	comp=Z,0.4nm,0.7s,baz=318,slow=2.0,SNR=3.8						
VNDA	Vanda	115.55	176	PKPdf	PKiKP	06 14 35.9	+0.6

*IDC **29** 06:14:21.2±1.4, 18°.38S×69°.38W, h131^{km}±11^{km}, mb3.4/4, mb1 3.5/8, mb1mx3.3/28, mbtmp3.8/8, MS2.6/1, Ms1 2.6/1, ms1mx2.2/9, Error ellipse: s-maj=27.2km s-min=8.9km az=102.0*

*GUC **29** 06:14:21.2±0.6, 18°.30S×69°.67W, h121^{km}±3^{km}, ML3.9*

ISC 29 06:14:20.1±0.8**, 18°.29S**±0°.05×**69°.61W**±0°.08**, h123**^{km}±7^{km}**, n20, σ1^{s}.42**/28**, mb3.5**/3**, 6C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.11	113	⇓iP	Pn	06 14 38.5	+0.9
PB16				i S	Sn	06 14 51.8	+1.0
PB16				IAML		06 14 52.6	
	comp=N,8μm,0.2s						
AP01	Chacalluta	0.70	263	⇑iP	Pn	06 14 39.5	-0.2
AP01				eS	Sn	06 14 54.1	-0.4
PB12	IPOC Station P	0.75	245	⇑iP	Pn	06 14 39.8	-0.5
PB12				eS	Sn	06 14 54.6	-0.9
MNMC	Minye Minye	0.83	179	⇑iP	Pn	06 14 42.0	+0.7
MNMC				i S	Sn	06 14 57.5	+0.3
MNMC				IAML		06 14 59.9	
	comp=E,6μm,0.1s						
PSGC	Pisagua	1.39	200	⇑iP	Pn	06 14 46.4	-0.1
PSGC				i S	Sn	06 15 05.8	-0.8
GO01	Chusmiza	1.42	164	⇓iP	Pn	06 14 49.1	+1.7
GO01				i S	Sn	06 15 10.2	+2.1
PB11	IPOC Station P	1.46	182	⇑iP	Pn	06 14 47.9	+0.4
PB11				i S	Sn	06 15 08.5	+0.2
PB11				i S		06 15 08.9	
PB11				IAML		06 15 10.6	
	comp=N,2μm,0.3s						
PB08	IPOC Station P	1.89	167	⇑iP	Pn	06 14 54.1	+1.4
PB08				i S	Sn	06 15 19.2	+1.6
PB08				IAML		06 15 20.8	
	comp=E,846nm,0.2s						
TA01	Diego Aracena	2.32	193	IAML		06 15 25.0	
	comp=E,347nm,0.2s						
LPAZ	La Paz	2.44	36	P	Pn	06 15 02.4	+2.5
	comp=E,4.8nm,0.3s,baz=307,slow=3.9,SNR=202						
LPAZ				S	Sn	06 15 31.4	+1.1
	comp=E,3.3nm,0.3s,baz=77,slow=20,SNR=12						
PB01	IPOC Station P	2.74	178	IAML		06 15 38.3	
	comp=N,328nm,0.4s						
LVC	Limon Verde	4.34	171	P	Pn	06 15 25.8	+1.1
	comp=N,2.1nm,0.3s,baz=6.5,slow=8.2,SNR=30						
LVC				S	Sn	06 16 13.0	-1.7
	comp=N,3.9nm,0.3s,baz=154,slow=17,SNR=10						
SIV	San Ignacio	8.48	76	P	Pn	06 16 18.6	-1.5
	comp=N,0.9nm,0.3s,baz=264,slow=10,SNR=30						
SIV				S	Sn	06 17 50.3	-3.9
	comp=N,0.2nm,0.3s,baz=12,slow=21,SNR=3.3						
NNA	Nana	9.38	311	LR	LR	06 20 48.4	
	comp=N,37nm,19.3s,baz=317,slow=40						
PTGA	Pitinga	19.86	30	P	P	06 18 40.3	-1.3
	comp=N,1.5nm,0.3s,baz=273,slow=23,SNR=14						
BDFB	Brasilia	20.82	86	P	P	06 18 51.6	-0.5
	comp=N,1.3nm,0.4s,baz=262,slow=9.4,SNR=4.1						
PLCA	Paso Flores	22.38	182	P	P	06 19 08.2	-0.1
	comp=N,2.2nm,0.9s,baz=268,slow=3.7,SNR=2.8						
DBIC	Dimbokro	68.50	75	P	P	06 25 09.1	-0.6
	comp=N,2.3nm,0.5s,baz=242,slow=9.9,SNR=4.8						
YKA	Yellowknife Ar	87.96	341	P	P	06 26 56.3	+0.6
	comp=N,0.2nm,0.6s,baz=131,slow=5.3,SNR=5.2						
MKAR	Makanchi Array	143.37	33	PKP	PKPdf	06 33 40.0	-0.1
	comp=N,0.2nm,0.8s,baz=357,slow=2.9,SNR=2.1						

IDC 29 06:15:34.8±2.7**, 6°.36S**×**149°.01E, h91**^{km}±34^{km}**, mb3.6**/3**, mb1 3.9**/6**, mb1mx3.5**/37**, mbtmp4.0**/6**, MS3.1**/2**, Ms1 3.2**/2**, ms1mx2.7**/27**, Error ellipse: s-maj=90.5km s-min=15.4km az=132.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.54	211	P	Pn	06 16 28.5	+0.9
	8.4nm,0.3s,baz=28,slow=9.2,SNR=11						
PMG				S	Sn	06 17 08.3	-0.2
	59nm,0.3s,baz=159,slow=18,SNR=26						
KRVT	Keravat (AS076	3.63	56	P	Pn	06 16 28.8	0.0
	15nm,0.3s,baz=340,slow=22,SNR=3.6						
WRA	Warramunga Arr	19.63	225	P	P	06 19 56.6	+0.3
	0.7nm,0.3s,baz=48,slow=11,SNR=15						
ASAR	Alice Springs	22.52	219	P	P	06 20 28.1	+0.8
	1.2nm,0.5s,baz=54,slow=9.0,SNR=34						
FITZ	Fitzroy Crossi	25.61	241	P	P	06 20 55.8	-0.1
	3.2nm,0.5s,baz=63,slow=8.7,SNR=19						
KAPI	Kappang	29.14	271	LR	LR	06 35 20.3	
	comp=Z,46nm,19.2s,baz=71,slow=41						
CMAR	Chiang Mai Arr	55.18	298	LR	LR	06 49 42.0	
	comp=Z,16nm,21.9s,baz=130,slow=37						
ILAR	Eielson Array	85.03	23	P	P	06 27 59.9	-0.1
	0.2nm,0.5s,baz=258,slow=4.6,SNR=4.9						

IDC 29 06:40:03.2±1.9**, 60°.77N**×**61°.00E, h0**^{km}**, mb1 3.4**/7**, mb1mx3.2**/35**, mbtmp3.4**/7**, ML2.9**/7**, Error ellipse: s-maj=27.7km s-min=17.2km az=27.0, Ural Mountains region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARU	Arti	4.54	197	Pn	Pn	06 41 12.6	-0.5
	0.0nm,0.3s,baz=19,slow=11,SNR=5.7						
ARU				Sn	Sn	06 41 55.9	-11
	0.0nm,0.3s,baz=320,slow=23,SNR=5.8						
BVAR	Borovoye Array	9.30	142	Pn	Pn	06 42 16.8	-1.5
	0.6nm,0.3s,baz=325,slow=16,SNR=18						
AKTO	Aktyubinsk	10.50	191	Pn	Pn	06 42 33.5	-1.2
	0.2nm,0.3s,baz=14,slow=12,SNR=2.3						
KURBB	Kurchatov Arra	14.13	128	Pn	Pn	06 43 20.5	-3.7
	0.1nm,0.3s,baz=319,slow=12,SNR=3.4						
FINES	FINESS Array B	16.77	288	Pn	Pn	06 43 52.3	-6.8
	0.1nm,0.3s,baz=91,slow=12,SNR=2.2						
ARCES	ARCESS Array B	17.03	316	P	P	06 44 04.2	0.0
	0.2nm,0.3s,baz=111,slow=13,SNR=5.2						
MKAR	Makanchi Array	18.69	129	P	Pn	06 44 23.1	+0.1
	0.0nm,0.3s,baz=338,slow=9.7,SNR=2.0						

*DDA **29** 06:40:37.9, 35°.12N×32°.38E, h7^{km}±3^{km}, ML2.5*

*ISK **29** 06:40:38.6, 34°.83N×32°.60E, h21^{km}, ML2.6/12*

*NIC **29** 06:40:39.8±0.0, 34°.88N×32°.62E, h14^{km}±1^{km}, Ml2.7/4*

ISC 29 06:40:38.9±1.3**, 34°.89N**±0°.03×**32°.60E**±0°.03**, h13**^{km}±11^{km}**, n33, σ0^{s}.81**/46**, 3C-2D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NATA	Nata	0.11	195	⇑P	Pb	06 40 43.0	+0.1
NATA				S	Sb	06 40 46.0	+0.4
AKMS	Akamas	0.26	301	⇓P	Pb	06 40 45.6	+0.1
AKMS				S	Sb	06 40 50.9	+1.0
AKMS				AML	AML	06 40 53.0	
	2.7nm,0.2s						
AKMS				AML	AML	06 40 53.0	
	2.7nm,0.2s						
AKMS				AML	AML	06 40 57.5	
	2.4nm,0.3s						
AKMS				AML	AML	06 40 57.5	
	2.4nm,0.3s						
SZAC	Souni	0.26	119	⇑P	Pb	06 40 45.1	-0.5
SZAC				S	Sb	06 40 50.2	+0.1
SZAC				AML	AML	06 40 54.8	
	8.2nm,0.6s						
SZAC				AML	AML	06 40 54.8	
	8.2nm,0.6s						
SZAC				AML	AML	06 40 54.9	
	6.3nm,0.5s						
SZAC				AML	AML	06 40 54.9	
	6.3nm,0.5s						
ALFC	Alefka	0.27	359	⇓P	Pb	06 40 45.7	-0.1
ALFC				S	Sb	06 40 50.8	+0.5
ALFC				AML	AML	06 40 51.2	
	3.7nm,0.1s						
ALFC				AML	AML	06 40 51.2	
	3.7nm,0.1s						
ALFC				AML	AML	06 40 53.3	
	6.4nm,0.2s						
ALFC				AML	AML	06 40 53.3	
	6.4nm,0.2s						
LEF	Lefka	0.33	45	PG	Pb	06 40 46.7	0.0
LEF				SG	Sb	06 40 52.2	+0.2
LEF	Lefka	0.33	45	i P	Pg	06 40 45.9	+0.2
LEF				IAML		06 40 53.0	
	comp=N,444nm,0.4s						
LEF				IAML		06 40 55.0	
	comp=E,406nm,0.6s						
AKDN	Akdeniz- Kıbrı	0.51	36	PG	Pb	06 40 50.5	+0.7
ASGA	Asgata	0.54	100	⇑P	Pb	06 40 50.1	-0.2
ASGA				S	Sb	06 40 58.9	+1.0
ASGA				AML	AML	06 41 00.2	
	comp=E,2.5nm,0.5s						
ASGA				AML	AML	06 41 00.2	
	comp=E,2.5nm,0.5s						
ASGA				AML	AML	06 41 01.1	
	comp=E,2.6nm,0.5s						
ASGA				AML	AML	06 41 01.1	
	comp=E,2.6nm,0.5s						
CSS	Mathiatis	0.60	82	PG	Pb	06 40 51.0	-0.4
CSS				SG	Sb	06 41 00.7	+0.9
CSS	Mathiatis	0.60	82	P	Pb	06 40 51.0	-0.4
CSS				S	Sb	06 41 00.5	+0.8
ATHAL	Athalassa	0.70	68	P	Pn	06 40 53.6	-1.0
MVOU	Mavrovouni	0.85	81	P	Pb	06 40 55.1	-0.6
MVOU				S	Sn	06 41 08.5	-0.6
PARAL	Paralimni	1.18	84	P	Pg	06 41 01.9	+0.2
TEKE	Tekeli-Mersin	1.32	18	PN	Pb	06 41 03.3	-0.3
TEKE				SN	Sg	06 41 21.1	-0.5
GAZI	Gazipasa	1.37	350	PN	Pn	06 41 03.4	-0.4
GAZI	Gazipasa	1.37	350	i P	Pn	06 41 02.2	-1.6
EREN	Erenkoy	1.44	63	PN	Pn	06 41 04.6	-0.1
AKKU	Akkuyu-Mersin	1.49	31	PN	Pn	06 41 05.4	0.0
GULN	MERSIN_Gulnar	1.51	30	i P	Pn	06 41 04.7	-1.0
GULN				i S	Sn	06 41 25.1	-0.1
BERE	Bereket-Mersin	1.54	19	PN	Pn	06 41 06.4	+0.1
IKL	Isikli	1.61	33	PN	Pn	06 41 07.2	+0.1
TEVE	Tevekalti-Mers	1.69	24	PN	Pb	06 41 08.9	-1.1
KEBE	Keben-Mersin	1.80	30	PN	Pn	06 41 10.2	+0.4
OSC2	CSNet OBS 4	1.83	189	P	Pn	06 41 10.3	+0.2
OSC2				S	Sb	06 41 34.7	-0.3
KIZK	Mersin	2.03	38	PN	Pn	06 41 13.3	+0.5
HDMB	Hadim	2.08	357	PN	Pn	06 41 14.2	+0.5
KEPZ	Antalya-Kepez	2.17	338	i P	Pn	06 41 14.0	-0.9
SEYD	Seydisehir-KON	2.59	346	PN	Pn	06 41 21.3	+0.6
KERG	Konya-Eregli	2.81	26	i P	Pn	06 41 26.0	+2.3
KERG				i S	Sb	06 42 02.5	-1.0
KERG				IAML		06 42 05.0	
	comp=N,21nm,0.4s						
GULE	Gulek	2.97	36	i P	Pn	06 41 26.7	+0.7
GULE				IAML		06 42 10.0	
	comp=E,17nm,0.4s						
FETY	Fethiye	3.35	302	i P	Pn	06 41 29.3	-1.8
CMRD	Camardi-Nigde	3.38	34	PN	Pn	06 41 32.7	+1.2
GOLH	Golhisar	3.40	314	i P	Pn	06 41 33.5	+1.6

*THE **29** 07:02:58.9, 38°.31N×20°.39E, h13^{km}, ML2.5/5, Error ellipse: s-maj=1.2km s-min=0.4km az=262.0*

*ATH **29** 07:02:58.8, 38°.31N×20°.41E, h13^{km}, ML2.8/11, Error ellipse: s-maj=1.7km s-min=0.8km az=263.0*

ISC 29 07:02:58.5±0.8**, 38°.32N**±0°.02×**20°.39E**±0°.03**, h15**^{km}±4^{km}**, n56, σ0^{s}.62**/85**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.06	154	P	Pg	07 03 01.2	-0.2
KEF4				S	Sg	07 03 02.8	-0.4
AGT1	Agia Thekli	0.07	184	P	Pg	07 03 01.3	-0.1
AGT1				S	Sg	07 03 03.0	-0.3
KEF1	Kardakata, Kep	0.07	120	P	Pg	07 03 01.1	-0.3
KEF1				S	Sg	07 03 02.6	-0.8
KEF3	Kipouria, Keph	0.12	196	P	Pg	07 03 02.1	+0.2
KEF3				S	Sg	07 03 04.6	+0.4
LXR1	Lixouri, Cepha	0.12	161	P	Pg	07 03 02.1	+0.1
LXR1				S	Sg	07 03 04.5	+0.3
LXRA	Lixouri, Kepha	0.12	162	P	Pg	07 03 02.0	+0.1
LXRA				S	Sg	07 03 04.6	+0.3
CHV1	Chavriata, Kef	0.13	183	P	Pg	07 03 02.3	+0.2
CHV1				S	Sg	07 03 04.9	+0.4
ARGA	Argostoli. Kep	0.15	153	P	Pg	07 03 02.4	0.0
ARGA				S	Sg	07 03 04.8	-0.2
ARG2	Argostoli	0.16	150	P	Pg	07 03 02.5	0.0
ARG2				S	Sg	07 03 04.9	-0.2
VSK1	VASILIKIADES	0.17	56	P	Pg	07 03 02.6	-0.1
VSK1				S	Sg	07 03 05.4	0.0
KEF2	Argostoli. Kep	0.17	153	P	Pg	07 03 02.6	0.0
KEF2				S	Sg	07 03 05.1	-0.3
KONA	Konidatara, Ke	0.18	52	P	Pg	07 03 02.9	+0.1
KONA				S	Sg	07 03 05.7	-0.1
KONA				AML	AML	07 03 06.2	
	comp=N,15483μm,0.2s						
KONA				AML	AML	07 03 09.6	
	comp=E,9056μm,0.4s						
VLS	Valsamata	0.21	131	P	Pg	07 03 03.1	-0.2
VLS				S	Sg	07 03 06.2	-0.3
VLS	Valsamata	0.21	131	P	Pg	07 03 03.1	-0.2
VLS				S	Sg	07 03 06.0	-0.5
VLS				AML	AML	07 03 06.3	
	comp=N,32901μm,0.3s						
VLS				AML	AML	07 03 07.0	
	comp=E,13494μm,0.1s						
EVGI	Lefkada island	0.37	34	P	Pg	07 03 06.4	+0.3
EVGI				S	Sb	07 03 12.3	-0.1
EVGI	Lefkada island	0.37	34	P	Pg	07 03 06.4	+0.3
EVGI				S	Sg	07 03 11.4	+0.2
KFL	Anninata	0.38	123	P	Pg	07 03 06.0	-0.1
KFL				S	Sg	07 03 11.5	+0.2
KFL	Anninata	0.38	123	P	Pg	07 03 06.0	-0.1
KFL				S	Sg	07 03 11.6	+0.2
KFL				AML	AML	07 03 12.1	
	comp=N,15245μm,0.4s						
KFL				AML	AML	07 03 12.3	
	comp=E,15649μm,0.3s						
MGNA	Meganis	0.46	43	P	Pg	07 03 07.9	+0.1
MGNA				AML	AML	07 03 15.6	
	comp=E,2478μm,0.2s						
MGNA				AML	AML	07 03 16.0	
	comp=N,2440μm,0.1s						
LKD2	Lefkada island	0.52	24	P	Pg	07 03 08.8	+0.1
LKD2				S	Sb	07 03 16.8	+0.1
	comp=N,405nm,0.3s						
LKD2	Lefkada island	0.52	24	P	Pg	07 03 08.9	+0.1
LKD2				S	Sg	07 03 16.1	+0.3
LKD2				AML	AML	07 03 22.8	
	comp=N,962μm,0.3s						
LKD2				AML	AML	07 03 23.3	

	comp=E,682µm,0.2s						
TSLK	Tsoukalades, L	0.55	22	P	Pg	07 03 09.5	+0.1
TSLK				S	Sg	07 03 17.2	+0.5
	comp=E,478nm,0.5s						
TSLK	Tsoukalades, L	0.55	22	P	Pg	07 03 09.6	+0.2
AST1	Astakos	0.59	67	P	Pg	07 03 10.2	0.0
AST1				S	Sb	07 03 19.4	+0.6
KRI1	kERI	0.73	152	P	Pg	07 03 12.0	-0.8
KRI1				S	Sb	07 03 24.1	+1.2
VTN	Vitineika	0.74	122	P	Pg	07 03 12.4	-0.6
RLS	Riolos of Patr	0.89	107	P	Pg	07 03 15.1	-0.6
RLS				S	Sn	07 03 29.2	+0.1
	comp=E,212nm,0.4s						
RLS	Riolos of Patr	0.89	107	P	Pg	07 03 15.1	-0.6
RLS				AML	AML	07 03 34.4	
	comp=N,501µm,0.5s						
RLS				AML	AML	07 03 35.2	
	comp=E,359µm,0.3s						
PVO	Paravola	0.94	71	P	Pg	07 03 16.8	0.0
PVO				S	Sb	07 03 29.3	+0.5
	comp=E,685nm,0.2s						
PVO	Paravola	0.94	71	P	Pg	07 03 16.7	0.0
PVO				AML	AML	07 03 33.3	
	comp=E,1667µm,0.3s						
PVO				AML	AML	07 03 33.3	
	comp=N,1040µm,0.3s						
DRO	Drossia	1.10	109	P	Pb	07 03 19.0	-0.3
DRO				S	Sn	07 03 35.0	+0.6
	comp=N,368nm,0.4s						
DRO	Drossia	1.10	109	P	Pb	07 03 19.4	0.0
DRO				AML	AML	07 03 44.0	
	comp=N,967µm,0.4s						
DRO				AML	AML	07 03 44.0	
	comp=E,1126µm,0.5s						
EFP	Efpalio	1.20	84	P	Pg	07 03 21.6	0.0
EFP				AML	AML	07 03 44.3	
	comp=N,468µm,0.4s						
EFP				AML	AML	07 03 44.5	
	comp=E,597µm,0.4s						
IGT	Igoumenitsa	1.22	358	P	Pn	07 03 21.7	+0.6
LAKA	Lakka	1.25	93	P	Pn	07 03 21.4	-0.1
LAKA				AML	AML	07 03 42.6	
	comp=N,446µm,0.5s						
LAKA				AML	AML	07 03 49.2	
	comp=E,315µm,0.5s						
EVR	Evrytania	1.26	61	P	Pn	07 03 21.7	-0.1
AMT	Artemida-Makis	1.30	126	P	Pg	07 03 23.9	+0.2
AMT				AML	AML	07 03 54.3	
	comp=E,481µm,0.9s						
AMT				AML	AML	07 03 54.7	
	comp=N,811µm,0.8s						
TRIZ	Trizonia	1.32	87	P	Pn	07 03 22.9	+0.4
KALE	Kalithea	1.38	86	P	Pn	07 03 23.4	+0.1
KEK	Kerkira	1.47	342	P	Pb	07 03 26.1	+0.5
MAKR	Makrakomi, Fth	1.53	62	P	Pg	07 03 27.7	-0.2
ITM	Ithomi	1.66	132	P	Pb	07 03 28.9	0.0
AGG	Agios Georgios	1.68	64	P	Pb	07 03 29.2	+0.1
DSF	Desfina	1.68	86	P	Pb	07 03 29.7	+0.5
PYL	PYLOS	1.78	142	P	Pn	07 03 29.7	+1.0
VLX	Vlachokerasia	1.84	120	P	Pb	07 03 33.0	+1.1
PROD	Prodromos	1.98	91	P	Pb	07 03 34.4	+0.2
LTK	Loutraki	2.05	97	P	Pb	07 03 35.0	-0.5
DID	Didima	2.39	109	P	Pb	07 03 40.2	-1.1
DBRK	Dubrovnik	4.67	339	Sn	Sn	07 05 02.0	-0.5
STON	Ston	4.99	337	*e*Pn	Pn	07 04 13.4	+0.6
STON				Sn	Sn	07 05 08.9	-1.3
MAKA	Makarska	5.59	334	Sn	Sn	07 05 22.3	-2.6
RICI	Ricice	5.73	336	*e*Pn	Pn	07 04 23.2	+0.1
RICI				Sn	Sn	07 05 26.7	-1.9
ZIRJ	Zirje	6.43	328	*e*Pn	Pn	07 04 32.7	+0.1
MORI	Morici	6.58	329	*e*Pn	Pn	07 04 35.8	+1.2
DUGI	Dugi Otok	6.95	326	*e*Pn	Pn	07 04 40.9	+1.1
DUGI				Sn	Sn	07 05 56.7	-1.9

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*AEIC **29** 07:19:35±1.9, 53°.9N±0°.1×166°.5W±0°.1, h91^{km}±4^{km}, ML3.2, mb3.5/7(NEIC), Error ellipse: s-maj=16.3km s-min=6.4km az=149.0*

*NEIC **29** 07:19:36.4±1.9, 53°.93N±0°.08×166°.5W±0°.1, h94^{km}±5^{km}, Error ellipse: s-maj=14.9km s-min=1.3km az=137.0*

ISC 29 07:19:35.9±1.2**, 53°.7N**±0°.1×**166°.31W**±0°.07**, h94^{km}, n59, σ1^{s}.18**/60**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UNV	Unalaska Valle	0.18	320		Pn	07 19 49.2	0.0
MREP	Makushin Rep't	0.28	292		Pn	07 19 49.6	-0.1
MNAT	Makushin Natee	0.29	309		Pn	07 19 49.2	-0.5
MTBL	Makushin Table	0.34	320		Pn	07 19 49.8	-0.3
MGOD	Makushin Gods	0.35	285		Pn	07 19 49.8	-0.2
MSW	Makushin Switc	0.35	307		Pn	07 19 49.5	-0.5
AKMO	Akutan Morgan	0.42	24		Pn	07 19 50.3	-0.1
AKRB	Akutan Reef Bi	0.45	18		Pn	07 19 50.5	-0.1
AKBBA	Akutan Broad B	0.45	29		Pn	07 19 50.4	-0.2
LVA	Lava Point	0.48	19		Pn	07 19 50.7	-0.1
AKUT	Akutan	0.53	36		Pn	07 19 51.3	+0.1
AKUT				Sn	Sn	07 20 02.6	0.0
HSB	Akutan Spr's B	0.54	26		Pn	07 19 50.9	-0.3
AKSA	Akutan Strait	0.56	40		Pn	07 19 51.4	0.0
OKFG	Magazine Ridge	1.00	254		Pn	07 19 56.2	+0.4
WESP	Westdahl Peak	1.22	49		Pn	07 19 58.8	+0.4
OKSP	Okmok Steeple	1.27	250		Pn	07 19 59.1	+0.1
WESN	West Dahl Nort	1.33	49		Pn	07 19 59.2	-0.5
SSBA	Shishaldin	1.67	49		Pn	07 20 04.1	+0.1
NIKH	Nikolski High	1.69	245		Pn	07 20 04.8	+0.6
FALS	False Pass	2.05	55	Pn	Pn	07 20 10.1	+1.4
DT1	Dutton Round H	2.74	58		Pn	07 20 18.9	+1.0
SDPT	Sand Point	3.77	62		Pn	07 20 31.7	-0.1
SDPT				Sn	Sn	07 21 14.6	-0.5
SPIA	Saint Paul Isl	4.14	329		Pn	07 20 34.8	-2.0
CHGN	Chignik	5.23	57	Pn	Pn	07 20 52.2	+0.7
CHIR	Chirikof Islan	6.54	67	Pn	Pn	07 21 08.7	-0.6
ADK	Adak	6.55	258	Pn	Pn	07 21 10.9	+1.3
SII	Sitkinak Islan	7.51	63	Pn	Pn	07 21 21.8	-0.8
OHAK	Old Harbor	8.19	59	Pn	Pn	07 21 29.9	-1.9
KDAK	Kodiak Island	8.75	57	Pn	Pn	07 21 37.9	-1.4
SVW2	Sparrevohn	9.39	34	Pn	Pn	07 21 50.9	+2.8
RSO	Redoubt South	10.00	42	Pn	Pn	07 21 48.0	-8.6
BRLK	Bradley Lake	10.41	48	Pn	Pn	07 22 01.2	-0.8
SEW	Seward	11.20	48	Pn	Pn	07 22 11.0	-1.7
RC01	Rabbit Creek A	11.57	44	Pn	Pn	07 22 16.4	-1.4
PMR	Palmer	12.09	42	Pn	Pn	07 22 24.4	-0.2
KNK	Knik Glacier	12.27	44	Pn	Pn	07 22 27.1	+0.1
GHO	Glory Hole Cre	12.28	42	Pn	Pn	07 22 26.7	-0.5
HIN	Hinchinbrook I	12.66	50	Pn	Pn	07 22 30.0	-2.2
KTH	Kantishna Hill	12.67	33	Pn	Pn	07 22 34.0	+1.5
FID	Port Fidalgo	12.81	49	Pn	Pn	07 22 31.0	-3.2
SCM	Sheep Creek Mo	12.95	44	Pn	Pn	07 22 34.2	-2.0
BPAW	Bear Paw Mtn.	13.04	31	Pn	Pn	07 22 38.4	+1.1
EYAK	Cordova Ski Ar	13.06	50	Pn	Pn	07 22 35.9	-1.6
IMAR	Indian Mountai	13.79	22	P	P	07 22 53.1	+0.8
MLY	Manley	13.80	29	P	Pn	07 22 47.7	+0.6
GLB	Gilahina Butte	14.28	48	Pn	Pn	07 22 52.1	-1.3
CRQM	Cirque	14.34	51	P	Pn	07 22 52.1	-2.2
VRDI	Verde Repeater	14.36	49	P	Pn	07 22 52.7	-1.9
TGL	Tana Glacier	14.48	51	P	Pn	07 22 54.7	-1.3
MCARA	McCarthy VSAT	14.61	49	P	Pn	07 22 56.7	-0.8
BALM	Baldy	14.80	51	P	Pn	07 23 01.0	+0.9
CTGM	Chitina Glacie	15.24	52	P	Pn	07 23 06.7	+0.9
FYU	Fort Yukon	16.50	30	P	P	07 23 21.1	-1.1
FYU				IAmb	IAmb	07 23 27.1	
	comp=Z,3.9nm,1.3s						
EGAK	Eagle	16.84	39	P	P	07 23 25.3	-0.7
EGAK				IAmb	IAmb	07 23 25.8	
	comp=Z,3.0nm,1.4s						
HYT	Haines Junctio	17.02	54	P	P	07 23 29.2	+1.0
HYT				IAmb	IAmb	07 23 36.8	
	comp=Z,6.1nm,1.4s						
DAWY	Dawson	17.20	42	P	P	07 23 30.0	-0.1
BMAR	Burnt Mountain	17.26	29	P	P	07 23 30.1	-0.7
WHY	Whitehorse	18.26	55	P	Pn	07 23 45.0	+2.2
WHY				IAmb	IAmb	07 23 53.6	
	comp=Z,6.3nm,1.4s						
EPYK	Eagle Plains	19.22	37	P	P	07 23 51.8	-0.4
EPYK				IAmb	IAmb	07 23 57.7	
	comp=Z,3.0nm,1.1s						

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*NNC **29** 07:23:00.4±0.4, 44°.42N×74°.34E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=3.8km s-min=2.5km az=61.0, Suspected Mining explosion.*

*SOME **29** 07:23:00.4, 44°.43N×74°.42E*

*KNET **29** 07:23:01.7±0.6, 44°.32N×74°.35E, h5^{km}±3^{km}, ml2.2, Error ellipse: s-maj=4.0km s-min=3.0km az=58.0*

ISC 29 07:23:00.3±0.9**, 44°.41N**±0°.03×**74°.35E**±0°.03**, h0^{km}, n22, σ0^{s}.58**/34**, 11C-6D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTLS	Baital	0.67	341	P	Pg	07 23 13.0	0.0
	2.4nm,0.1s						
BTLS				S	Sg	07 23 21.8	+0.2
	18nm,0.3s						
SGDS	Sogindy	0.98	168	P	Pg	07 23 19.0	-0.1
	12nm,0.2s						
SGDS				S	Sg	07 23 32.1	+0.3
	18nm,0.2s						
USP	Ospenovka	1.15	175	⇑P	Pg	07 23 22.1	-0.2
	14nm,0.1s,SNR=56						
USP				⇓S	Sb	07 23 37.9	-0.7
	15nm,0.1s						
KRBS	Karabastau	1.19	126	P	Pg	07 23 23.1	0.0
	9.2nm,0.1s						
KRBS				S	Sb	07 23 39.3	-0.5
	10nm,0.3s						
CHMS	Chumysh	1.44	168	⇓P	Pn	07 23 27.3	-0.4
	14nm,0.2s,SNR=18						
CHMS				⇑S	Sn	07 23 48.4	+1.0
	16nm,0.2s						
KUU	Kurty	1.52	109	P	Pb	07 23 29.2	-0.2
	18nm,0.2s						
KUU				S	Sn	07 23 49.5	+0.3
	57nm,0.5s						
DGS	Degeres	1.56	138	P	Pg	07 23 30.1	0.0
	18nm,0.1s						
DGS				S	Sb	07 23 51.4	+1.1
	24nm,0.2s						
TKM2	Tokmak 2	1.74	148	⇓P	Pb	07 23 32.7	-0.6
	15nm,0.1s,SNR=19						
TKM2				⇓S	Sg	07 23 57.4	+1.1
	17nm,0.1s						
AAK	Ala-Archa	1.78	177	⇑P	Pb	07 23 33.7	-0.1
	18nm,0.2s,SNR=33						
AAK				⇓S	Sg	07 23 57.4	+0.1
	31nm,0.4s						
AAK	Ala-Archa	1.78	177	⇑Pn	Pb	07 23 33.7	-0.1
	8.4nm,0.3s						
AAK				⇑Sn	Sg	07 23 57.5	+0.1
	9.9nm,0.3s						
EKS2	Erkin-Say	1.80	194	⇑P	Pb	07 23 34.1	-0.1
	31nm,0.2s,SNR=26						
EKS2				⇑S	Sg	07 23 58.5	+0.5
	19nm,0.2s						
KBK	Karagaybulak	1.81	166	P	Pb	07 23 34.5	+0.1
	SNR=12						
MRKS	Merke	1.86	207	P	Pb	07 23 34.3	-0.8
	13nm,0.3s						
MRKS				S	Sb	07 23 58.4	-0.6
	32nm,0.2s						
IZV	Izvestkoviy	2.14	129	Pg	Pb	07 23 40.0	0.0
	13nm,0.2s						
IZV				Lg	Lg	07 24 08.4	
	13nm,0.2s						
UCH	Uchtor	2.19	177	⇑P	Pb	07 23 40.7	-0.3
	5.9nm,0.2s,SNR=20						
TNSS	Tian-Shan	2.33	125	Pg	Pb	07 23 43.1	-0.3
	4.0nm,0.3s						
TNSS				Lg	Lg	07 24 13.5	
	14nm,0.4s						
AML	Almayashu	2.33	192	⇑P	Pb	07 23 42.6	-0.8
	16nm,0.3s,SNR=44						
KZA	Kyzart	2.42	164	⇑P	Pb	07 23 44.6	-0.4
	8.2nm,0.2s,SNR=17						
ARXS	Arharly	2.50	93	Pg	Pb	07 23 45.8	-0.3
	2.6nm,0.2s						
ARXS				Lg	Lg	07 24 18.7	
	24nm,0.4s						
ULHL	Ulahol	2.57	147	P	Pb	07 23 46.0	-1.3
	4.6nm,0.2s,SNR=16						
KK31	Karatay Array	3.08	246	⇓Pg	Pg	07 23 59.2	0.0
	1.2nm,0.4s,baz=62,slow=17,SNR=6.7						
KK31				⇑Lg	Lg	07 24 34.9	
	1.7nm,0.3s,baz=64,slow=28,SNR=4.0						
BRLS	Borolday	3.56	249	Pg	Pg	07 24 09.6	+1.2
	1.0nm,0.5s						
BRLS				Lg	Lg	07 24 59.3	
	2.0nm,0.4s						

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*NIED **29** 07:39:00, 40°.90N×143°.30E, h20^{km}, Mw4.8 Best double couple: $M_0$1.72000×10^{16} NP1:ϕ_s12.00000°, δ77.00000°, λ65.00000°. NP2:ϕ_s256.00000°, δ28.00000°, λ151.00000°.*

*BJI **29** 07:39:42.5±0.0, 40°.99N×143°.37E, h14^{km}, mB4.9/51, mb5.0/74, Ms4.4/67, Ms7 4.2/62*

*IDC **29** 07:39:43.8±0.5, 40°.98N×143°.19E, h0^{km}, mb4.6/29, mb1 4.6/36, mb1mx4.6/44, mbtmp4.6/36, ML4.5/6, MS4.1/14, Ms1 4.1/14, ms1mx3.8/53, Error ellipse: s-maj=12.9km s-min=11.3km az=133.0*

*NEIC **29** 07:39:46.6±2.6, 40°.96N±0°.02×143°.43E±0°.08, h22^{km}±4^{km}, mb4.9/152, Error ellipse: s-maj=9.5km s-min=2.3km az=74.0*

*JMA **29** 07:39:47.0±0.1, 40°.92N×143°.26E, h26^{km}, M4.8*

JMA Felt II J1.

*MOS **29** 07:39:48.2±1.1, 41°.09N×143°.14E, h33^{km}, mb5.2/58, Error ellipse: s-maj=6.0km s-min=4.0km az=106.0*

*BGR **29** 07:39:52.5±0.0, 41°.34N×143°.02E, h33^{km}, mb4.9*

ISC 29 07:39:46.3±0.6**, 40°.95N**±0°.03×**143°.33E**±0°.04**, h18^{km}**±2^{km}**, h18^{km}:pP-P, n449, σ1^{s}.48**/436**, mb4.9**/168**, MS4.4**/25**, 49C-24D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERM	Erimo	1.08	353	c *i*P	Pg	07 40 06.9	-0.3
ERM				pmax	pmax		
	comp=Z,2µm,1.0s						
ERM	Erimo	1.08	353		Pg	07 40 06.9	-0.3
JEM	Erimo	1.08	353	⇑P	Pg	07 40 06.8	-0.4
JEM				*e*S	Sn	07 40 21.9	+0.9
JTHR	Tokachihiroo	1.35	359	⇑P	Pb	07 40 10.7	-0.3
JTHR				*e*S	Sb	07 40 28.4	+0.6
JNBK	Urakawa-nobuka	1.40	342	⇑P	Pb	07 40 11.6	-0.4
JNBK				*e*S	Sb	07 40 29.4	-0.1
JKEN	Kujiedanarisaw	1.44	240	P	Pn	07 40 10.6	-0.9
JKEN				S	Sn	07 40 28.3	-1.6
JARK	Aomorirokkasho	1.49	273	P	Pn	07 40 11.6	-0.6
JANG	Nango	1.50	248	⇓P	Pn	07 40 11.9	-0.4
JANG				S	Sn	07 40 30.0	-1.3
JCH	Churui	1.67	1	⇑P	Pn	07 40 14.9	+0.3
JCH				*e*S	Sn	07 40 36.1	+0.5
JTM	Tenmabayashi	1.73	265	P	Pn	07 40 15.5	+0.1
JTM				*e*S	Sn	07 40 36.4	-0.6
JOT	Ohata	1.78	285	⇑P	Pn	07 40 16.4	+0.3
JOT				*e*S	Sn	07 40 38.1	-0.2
JBT2	Biratori 2	1.97	339	⇑P	Pn	07 40 19.8	+1.0
JKB	Kayabe	1.97	299	⇑P	Pn	07 40 18.9	+0.2
JIAM	Iburiatsuma	1.98	328	P	Pb	07 40 20.9	-0.9
JOM	Ohasama	2.15	227	⇑P	Pn	07 40 21.9	+0.7
JFR	Furan	2.29	346	P	Pn	07 40 24.3	+1.2
JAK	Akkeshi	2.29	26	P	Pn	07 40 23.5	+0.4
JAK				*e*S	Sn	07 40 50.6	-0.2
JEW	Eniwo	2.36	324	P	Pn	07 40 25.0	+0.9
JAR	Ashorobuto	2.37	8	⇑P	Pn	07 40 24.3	0.0
JAR				*e*S	Sn	07 40 52.0	-0.9
JMK	Ichinoseki	2.57	220	⇑P	Pn	07 40 27.9	+0.9
JMK				*e*S	Sn	07 40 57.7	-0.1
JOMM	Oshimamatsumae	2.58	284	P	Pn	07 40 28.6	+1.5
JOMM				*e*S	Sn	07 40 58.2	+0.3
NMR	Nemuro--Hokkai	3.01	36	⇓*i*P	Pn	07 40 33.6	+0.6
NMR				*i* S	Sn	07 41 06.9	-1.6
ASAJ	Asahikawa	3.22	350	Pn	Pn	07 40 36.7	+0.8
	comp=Z,14nm,0.3s,baz=228,slow=8.9,SNR=98						
ASAJ				Sn	Sn	07 41 10.0	-3.7
	comp=Z,50nm,0.3s,baz=179,slow=27,SNR=7.0						
JKA	Kamikawa-asahi	3.22	351		Pn	07 40 36.7	+0.8
JKA					Sn	07 41 10.0	-3.7
GLVR	Golovnino	3.23	29	⇓*i*P	Pn	07 40 37.1	+1.1
GLVR				*i* S	Sn	07 41 13.7	-0.3
GLVR				pmax	pmax		
	comp=Z,519nm,0.5s						
GLVR				pmax	pmax		
	comp=N,80nm,0.2s						
GLVR				pmax	pmax		
	comp=E,100nm,0.1s						
GLVR				smax	smax		
	comp=E,695nm,0.2s						
GLVR				smax	smax		
	comp=N,2µm,0.4s						
GRPR	Tuman	3.54	30	*e*P	Pn	07 40 41.4	+1.1
GRPR				*e*S	Sn	07 41 19.8	-1.9
GRPR				pmax	pmax		
	comp=Z,361nm,0.4s						
GRPR				pmax	pmax		
	comp=N,145nm,0.2s						
GRPR				pmax	pmax		
	comp=E,119nm,0.2s						
GRPR				smax	smax		
	comp=E,1µm,0.4s						
GRPR				smax	smax		
	comp=N,2µm,0.7s						
YUK	Yuzh-Kuril'sk	3.61	30	*de*P	Pn	07 40 42.7	+1.4
KUR	Kuril'sk	5.42	36	*d i*P	Pn	07 41 07.6	+1.5
KUR				*i* S	Sn	07 42 06.8	-1.2
KUR				pmax	pmax		
	comp=Z,1µm,1.0s						
KUR				pmax	pmax		
	comp=Z,344nm,0.7s						
KUR				pmax	pmax		
	comp=E,87nm,0.6s						
KUR				pmax	pmax		
	comp=N,80nm,0.4s						
KUR				smax	smax		
	comp=E,397nm,0.8s						
KUR				smax	smax		
	comp=N,203nm,0.5s						
KUR				smax	smax		
	comp=N,2µm,2.5s						
KUR				smax	smax		
	comp=E,648nm,2.3s						
KUR				MLR	MLR		
	comp=Z,1µm,13.0s						
KUR				MLR	MLR		
	comp=N,2µm,11.0s						
MAJO	Matsushiro	5.95	224	P	Pn	07 41 15.2	+1.7
MAJO	Matsushiro	5.95	224		Pn	07 41 15.2	+1.7
MAT	Matsushiro	5.95	224	P	Pn	07 41 15.1	+1.6
MAT				*e*S	Sn	07 42 22.8	+1.7
MJAR	Matsushiro Arr	5.95	224	Pn	Pn	07 41 15.3	+1.8
	comp=N,1.3nm,0.3s,baz=32,slow=14,SNR=90						
MJAR				LR	LR	07 43 52.6	
	comp=N,1µm,19.8s,baz=55,slow=42						
MJAR	Matsushiro Arr	5.95	224	P	Pn	07 41 18.4	+4.9
MJAR	Matsushiro Arr	5.95	224		Pn	07 41 18.4	+4.9
MJB9	Matsu-Tunnel	5.95	224		Pn	07 41 15.2	+1.7
YSS	Yuzh-Sakhalins	6.02	356	*e*P	Pn	07 41 16.4	+2.0
YSS				*e*S	Sn	07 42 23.9	+1.1
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				MLR	MLR		
	comp=N,2µm,16.0s						
YSS	Yuzh-Sakhalins	6.02	356		Pn	07 41 13.8	-0.6
TEY	Ternei	6.41	312	⇑*e*P	Pn	07 41 20.6	+0.9
TEY				pmax	pmax		
	comp=N,20nm,1.4s						
TEY				pmax	pmax		
	comp=E,30nm,1.4s						
TEY				pmax	pmax		
	comp=Z,30nm,1.4s						
INU	Inuyama	7.48	224		Pn	07 41 36.0	+1.6
JHJ2	Mitsune	8.31	201	Pn	Pn	07 41 44.7	-1.1
JHJ	Hachijo jima 2	8.31	201	Pn	Pn	07 41 45.0	-0.9
	comp=Z,36nm,0.3s,baz=305,slow=22,SNR=14						
JHJ				Sn	Sn	07 43 12.9	-6.4
	comp=Z,26nm,0.3s,baz=55,slow=23,SNR=2.3						
VLA	Vladivostok	8.79	288	⇑*e*P	Pn	07 41 51.4	-1.1
USA0B	Ussuriysk Arra	8.98	295	c *i*P	Pn	07 41 56.8	+1.8
USA0B	Ussuriysk Arra	8.98	295		Pn	07 41 57.1	+2.1
USRK	Ussuriysk Ar.	8.98	295	Pn	Pn	07 41 55.4	+0.4
	baz=105,slow=14,SNR=55						
USRK				LR	LR	07 45 29.2	
	comp=Z,2µm,18.5s,baz=87,slow=39						
USRK	Ussuriysk Ar.	8.98	295	P	Pn	07 41 56.6	+1.6
USRK	Ussuriysk Ar.	8.98	295		Pn	07 41 56.6	+1.6
MSHR	Mys Shultsa	9.25	284	⇑*e*P	Pn	07 42 00.1	+1.4
TYV	Tymovskoe	9.93	358	*e*P	Pn	07 42 17.4	+9.4
TYV				pmax	pmax		
	comp=Z,23nm,1.3s						
TYV				pmax	pmax		
	comp=Z,100nm,4.7s						
MDJ	Mudanjiang	10.75	295	P	Pn	07 42 21.3	+2.1
MDJ				S	Sn	07 44 27.0	+8.0
MDJ				pmax	pmax		
	comp=Z,410nm,3.8s						
MDJ				LR	LR		
	comp=Z,860nm,15.6s						
MDJ				LR	LR		
	comp=Z,2µm,18.0s						
MDJ				LR	LR		
	comp=Z,2µm,17.5s						
MDJ	Mudanjiang	10.75	295		Pn	07 42 21.0	+1.8
GRNR	Gornyy	10.94	336	⇓*i*P	Pn	07 42 21.5	-0.3
GRNR				*e*S	Sn	07 44 24.1	+0.5
GRNR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GRNR				smax	smax		
	comp=N,3.0nm,0.9s						
KLR	Kul'dur	11.64	319	Pn	Pn	07 42 31.6	+0.2
	comp=N,0.5nm,0.3s,baz=120,slow=14,SNR=38						
KLR				LR	LR	07 47 22.0	
	comp=N,1µm,19.1s,baz=138,slow=40						
KLR	Kul'dur	11.64	319	c*e*P	Pn	07 42 32.7	+1.3
KLR				pmax	pmax		
	comp=Z,28nm,1.0s						
KSRS	Korea Array	12.45	259	Pn	Pn	07 42 43.9	+1.4
	comp=Z,0.6nm,0.3s,baz=69,slow=14,SNR=27						
KSRS				Sn	Sn	07 45 06.0	+5.2
	comp=Z,0.8nm,0.3s,baz=69,slow=24,SNR=4.7						
KSRS				LR	LR	07 47 19.9	
	comp=Z,1µm,18.2s,baz=67,slow=37						
KS19	Wonju Array Si	12.48	259		Pn	07 42 45.4	+2.5
KSAR	Wonju Array Be	12.49	259	P	Pn	07 42 44.4	+1.4
KSAR	Wonju Array Be	12.49	259		Pn	07 42 44.4	+1.4
OKH	Okha	12.62	359	*de*P	Pn	07 42 39.6	-5.1
JNU	Nakatsue	12.64	236	Pn	Pn	07 42 45.4	+0.2
	comp=Z,0.9nm,0.3s,baz=86,slow=2.8,SNR=2.9						
JNU				LR	LR	07 48 04.9	
	comp=Z,533nm,19.1s,baz=62,slow=40						
JNU	Nakatsue	12.64	236	Pn	Pn	07 42 46.6	+1.4
SKR	Severo-Kuril's	13.18	38	⇓*e*P	Pn	07 42 54.9	+2.5
TJN	Taejon	13.29	255	⇑*e*P	Pn	07 42 55.2	+1.3
CN2	Changchun	13.53	288	*e*P	Pn	07 42 58.0	+0.8
CN2				pmax	pmax		
	comp=Z,30nm,0.8s						
CN2				LR	LR		
	comp=Z,500nm,16.0s						
CN2				LR	LR		
	comp=Z,900nm,16.0s						
CN2				LR	LR		
	comp=Z,1µm,18.0s						
JCJ	Chichijima	13.85	184	Pn	Pn	07 43 02.1	+0.5
	comp=Z,7.9nm,0.3s,baz=269,slow=19,SNR=8.7						
JCJ				Sn	Sn	07 45 26.1	-8.8
	comp=Z,5.8nm,0.3s,baz=288,slow=21,SNR=1.5						
SNY	Shenyang	14.86	280	⇓P	Pn	07 43 16.5	+1.1
SNY				pmax	pmax		
	comp=Z,20nm,0.7s						
SNY				pmax	pmax		
	comp=Z,220nm,7.4s						
SNY				LR	LR		
	comp=Z,370nm,14.4s						
SNY				LR	LR		
	comp=Z,990nm,15.9s						
SNY				LR	LR		
	comp=Z,1µm,17.1s						
PEA0B	Petropavlovsk-	15.58	34	⇑*e*P	Pn	07 43 25.6	+0.7
PEA0B	Petropavlovsk-	15.58	34	Pn	Pn	07 43 23.8	-1.0
PETK	Petropavlovsk-	15.58	34	Pn	Pn	07 43 23.4	-1.5
	comp=Z,0.3nm,0.3s,baz=204,slow=12,SNR=6.9						
PETK				LR	LR	07 49 43.4	
	comp=Z,218nm,20.5s,baz=229,slow=38						
ZEA	Zeya	16.76	325	*e*P	Pn	07 43 37.0	-2.9
ZEA				pmax	pmax		
	comp=N,59nm,1.0s						
ZEA				pmax	pmax		
	comp=E,59nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,84nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,16.0s						
DL2	Dalian	16.77	270	P	Pn	07 43 40.0	-0.2
DL2				S	Sn	07 46 45.5	-0.5

DL2				pmax	pmax		
	comp=Z,42nm,0.9s						
HIA	**Hailar**	**18.56**	**305**	P	**P**	**07 44 00.0**	**-2.0**
HIA				pmax	pmax		
	comp=Z,47nm,0.9s						
HIA	**Hailar**	**18.56**	**305**	P	**P**	**07 44 00.0**	**-2.0**
HIA				IAmb	IAmb	07 44 03.6	
	comp=Z,47nm,0.9s						
MA2	**Magadan**	**19.23**	**12**	P	**P**	**07 44 07.5**	**-1.7**
	comp=Z,0.6nm,0.3s,baz=171,slow=8.3,SNR=7.3						
MA2				LR	LR	07 52 19.9	
	comp=Z,266nm,18.5s,baz=196,slow=39						
MA2	**Magadan**	**19.23**	**12**	⇓*e*P	**Pn**	**07 44 10.5**	**+0.3**
MA2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MA2	**Magadan**	**19.23**	**12**	P	**P**	**07 44 08.2**	**-1.0**
BJI	**Beijing**	**20.65**	**276**	P	**P**	**07 44 22.5**	**-2.3**
BJI				pmax	pmax		
	comp=Z,33nm,0.8s						
BJI				LR	LR		
	comp=Z,360nm,17.8s						
BJI				LR	LR		
	comp=Z,670nm,17.6s						
BJT	**Baijiatuau**	**20.66**	**276**	P	**P**	**07 44 21.7**	**-3.3**
BJT				pmax	pmax		
	comp=Z,27nm,0.9s						
BJT	**Baijiatuau**	**20.66**	**276**	P	**P**	**07 44 21.7**	**-3.3**
TIA	**Tai'an**	**21.00**	**266**	P	**P**	**07 44 26.5**	**-2.1**
TIA				pmax	pmax		
	comp=Z,150nm,1.5s						
TIA				LR	LR		
	comp=Z,300nm,17.4s						
TIA				LR	LR		
	comp=Z,360nm,20.3s						
TIA				LR	LR		
	comp=Z,550nm,20.2s						
NJ2	**Nanjing**	**21.53**	**253**	*e*P	**P**	**07 44 32.3**	**-2.1**
NJ2				pP	**pwP**	**07 44 40.0**	**-1.2**
NJ2				sP	**sP**	**07 44 45.0**	**+3.9**
NJ2				pmax	pmax		
	comp=Z,24nm,0.6s						
NJ2				LR	LR		
	comp=Z,540nm,13.3s						
NJ2				LR	LR		
	comp=Z,980nm,15.6s						
NJ2				LR	LR		
	comp=Z,1µm,18.9s						
YAK	**Yakutsk**	**22.67**	**343**	P	**P**	**07 44 43.3**	**-3.0**
	comp=Z,22nm,0.5s,baz=359,slow=4.5,SNR=13						
YAK				LR	LR	07 54 32.7	
	comp=Z,512nm,18.4s,baz=154,slow=39						
YAK	**Yakutsk**	**22.67**	**343**	*e*P	**P**	**07 44 41.0**	**-5.3**
YAK				e*PP	**pwP**	**07 44 51.7**	**-1.8**
YAK				*e*S	S	07 48 42.0	-11
YAK				e*SS	**pS**	**07 48 55.6**	**-2.7**
YAK				*e*		07 55 59.7	
YAK				pmax	pmax		
	comp=Z,77nm,0.9s						
YAK				pmax	pmax		
	comp=N,23nm,0.9s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.0s						
YAK				smax	smax		
	comp=E,82nm,2.8s						
YAK				smax	smax		
	comp=N,60nm,1.1s						
YAK				MLR	MLR		
	comp=Z,545nm,18.0s						
YAK				MLR	MLR		
	comp=E,307nm,16.0s						
YAK				MLR	MLR		
	comp=N,362nm,14.0s						
YAK	**Yakutsk**	**22.67**	**343**	P	**P**	**07 44 42.3**	**-4.0**
SEY	**Seymchan**	**22.67**	**11**	P	**P**	**07 44 43.9**	**-2.5**
	comp=N,13nm,0.8s,baz=193,slow=7.8,SNR=54						
HHC	**Hu-ho-hao-te**	**23.95**	**280**	*e*P	**P**	**07 44 59.5**	**0.0**
HHC				pmax	pmax		
	comp=N,110nm,0.8s						
HHC				pmax	pmax		
	comp=N,440nm,4.0s						
HHC				LR	LR		
	comp=N,1µm,11.5s						
HHC				LR	LR		
	comp=N,730nm,12.2s						
HHC				LR	LR		
	comp=N,1µm,12.0s						
YHNB	**Yeheng**	**24.47**	**235**	P	**P**	**07 45 02.2**	**-2.2**
YHNB				IAmb	IAmb	07 45 05.3	
	comp=Z,29nm,0.8s						
BTO	**Baotou**	**25.15**	**280**	*e*P	**P**	**07 45 07.0**	**-3.4**
BOD	**Bodaibo**	**25.19**	**322**	*e*P	**P**	**07 45 09.0**	**-1.5**
BOD				pmax	pmax		
	comp=Z,34nm,0.8s						
SSLB	**Suanglung**	**25.38**	**234**	P	**P**	**07 45 12.6**	**+0.1**
YULB	**Yu-li**	**25.46**	**233**	P	**P**	**07 45 12.2**	**-1.0**
YULB				IAmb	IAmb	07 45 19.9	
	comp=Z,20nm,1.0s						
WHN	**Wuhan**	**25.61**	**255**	⇓P	**P**	**07 45 13.8**	**-0.7**
WHN				S	S	07 49 28.8	-13
WHN				LR	LR		
	comp=Z,2µm,17.9s						
WHN				LR	LR		
	comp=Z,2µm,12.9s						
WHN				LR	LR		
	comp=Z,3µm,16.5s						
TPUB	**Ta-pu**	**25.94**	**234**	P	**P**	**07 45 18.5**	**+0.8**
TPUB				IAmb	IAmb	07 45 31.4	
	comp=Z,17nm,0.6s						
ULN	**Ulaanbaatar**	**26.64**	**297**	*c i*P	**P**	**07 45 23.4**	**-0.6**
ULN				pmax	pmax		
	comp=Z,19nm,0.7s						
ULN	**Ulaanbaatar**	**26.64**	**297**	P	**P**	**07 45 23.3**	**-0.7**
ULN				IAmb	IAmb	07 45 26.6	
	comp=Z,21nm,0.8s						
SONM	**Songino Array**	**27.09**	**297**	P	**P**	**07 45 27.6**	**-0.4**
	comp=Z,14nm,0.7s,baz=84,slow=8.8,SNR=78						
SONM				LR	LR	07 57 05.7	
	comp=Z,1µm,18.0s,baz=87,slow=39						
SONM	**Songino Array**	**27.09**	**297**	P	**P**	**07 45 26.8**	**-1.1**
GUMO	**Guam**	**27.29**	**177**	LR	LR	07 55 16.3	
	comp=Z,147nm,21.5s,baz=328,slow=34						
XAN	**Xi'an**	**28.03**	**267**	P	**P**	**07 45 34.8**	**-1.6**
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
XAN				pmax	pmax		
	comp=Z,93nm,3.5s						
XAN				LR	LR		
	comp=Z,160nm,13.1s						
XAN				LR	LR		
	comp=Z,410nm,18.0s						
XAN				LR	LR		
	comp=Z,370nm,20.0s						
XAN	**Xi'an**	**28.03**	**267**	P	**P**	**07 45 34.0**	**-2.4**
XAN				pmax	pmax		
	comp=Z,20nm,0.8s						
XAN	**Xi'an**	**28.03**	**267**	P	**P**	**07 45 34.0**	**-2.4**
XAN				IAmb	IAmb	07 45 40.1	
	comp=Z,20nm,0.8s						
IRK	**Irkutsk**	**28.78**	**306**	*e*P	**P**	**07 45 42.2**	**-0.7**
IRK				*e*		07 46 35.4	
IRK				pmax	pmax		
	comp=Z,82nm,1.3s						
TLY	**Talaya**	**29.10**	**305**	P	**P**	**07 45 45.4**	**-0.3**
	comp=Z,11nm,0.7s,baz=110,slow=8.3,SNR=16						
TLY	**Talaya**	**29.10**	**305**	*c i*P	**P**	**07 45 45.2**	**-0.5**
TLY				pmax	pmax		
	comp=Z,62nm,1.2s						
TLY				MLR	MLR		
	comp=Z,1µm,12.0s						
TLY	**Talaya**	**29.10**	**305**	P	**P**	**07 45 45.3**	**-0.5**
TLY				IAmb	IAmb	07 46 01.0	
	comp=Z,23nm,1.1s						
H11N2	**WAKE ISLAND Hy**	**29.17**	**129**	T	T	08 17 16.6	
	baz=318,slow=74,SNR=533						
H11N1	**WAKE ISLAND Hy**	**29.18**	**129**	T	T	08 17 16.5	
	baz=318,slow=74,SNR=491						
H11N3	**WAKE ISLAND Hy**	**29.19**	**129**	T	T	08 17 11.1	
	baz=318,slow=74,SNR=376						
ZAK	**Zakamensk**	**29.23**	**302**	*e*P	**P**	**07 45 45.8**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,19nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ENH	**Enshi**	**29.34**	**260**	P	**P**	**07 45 47.2**	**-0.9**
BILL	**Bilibino**	**29.86**	**17**	*ce*P	**P**	**07 45 52.7**	**+0.5**
BILL				*e*PPP	PPP	07 46 56.3	
BILL				*e*		07 48 54.5	
BILL				pmax	pmax		
	comp=Z,21nm,1.0s						
BILL	**Bilibino**	**29.86**	**17**	P	**P**	**07 45 52.8**	**+0.5**
BILL				IAmb	IAmb	07 45 54.3	
	comp=Z,27nm,1.2s						
H11S1	**WAKE ISLAND Hy**	**30.02**	**131**	T	T	08 18 19.7	
	baz=324,slow=76,SNR=192						
H11S3	**WAKE ISLAND Hy**	**30.02**	**131**	T	T	08 18 25.4	
	baz=324,slow=76,SNR=102						
H11S2	**WAKE ISLAND Hy**	**30.04**	**131**	T	T	08 18 17.7	
	baz=324,slow=76,SNR=104						
MOY	**Mondy**	**30.74**	**305**	*e*P	**P**	**07 46 00.4**	**0.0**
MOY				pmax	pmax		
	comp=Z,42nm,1.8s						
LZH	**Lanzhou**	**31.09**	**274**	*e*P	**P**	**07 46 04.8**	**+1.1**
LZH				pP	pwP	07 46 11.3	+0.3
LZH				sP	sP	07 46 15.3	+4.8
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				pmax	pmax		
	comp=Z,110nm,5.4s						
LZH				LR	LR		
	comp=Z,290nm,13.8s						
LZH				LR	LR		
	comp=Z,340nm,14.4s						
LZH				LR	LR		
	comp=Z,310nm,15.3s						
TIXI	**Tiksi**	**31.62**	**351**	P	**P**	**07 46 05.6**	**-2.1**
	comp=Z,2.4nm,0.5s,baz=138,slow=4.9,SNR=4.0						
TIXI	**Tiksi**	**31.62**	**351**	⇑*e*P	**P**	**07 46 05.8**	**-1.9**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TIXI	**Tiksi**	**31.62**	**351**	P	**P**	**07 46 06.4**	**-1.3**
GTA	**Gaotai**	**33.03**	**282**	*e*P	**P**	**07 46 20.3**	**-0.4**
GTA				pP	pP	07 46 24.5	-1.1
GTA				sP	pwP	07 46 28.0	0.0
GTA				pmax	pmax		
	comp=Z,13nm,1.0s						
GTA				pmax	pmax		
	comp=Z,74nm,6.9s						
GTA				LR	LR		
	comp=Z,260nm,16.5s						
GTA				LR	LR		
	comp=Z,710nm,17.9s						
GTA				LR	LR		
	comp=Z,820nm,19.2s						
CD2	**Chengdu**	**33.33**	**265**	P	**P**	**07 46 22.5**	**-0.7**
CD2				pP	pwP	07 46 29.0	-1.6
CD2				sP	sP	07 46 34.3	+4.2
CD2				S	**S**	**07 51 46.5**	**+3.4**
CD2				sS	sS	07 51 59.0	+7.9
CD2				pmax	pmax		
	comp=Z,60nm,0.6s						
CD2				pmax	pmax		
	comp=Z,140nm,4.1s						
CD2				LR	LR		
	comp=Z,430nm,13.7s						
CD2				LR	LR		
	comp=Z,410nm,14.7s						
CD2				LR	LR		
	comp=Z,610nm,13.7s						
GYA	**Guiyang**	**33.49**	**256**	⇓*i*P	**P**	**07 46 24.5**	**-0.2**
GYA				pP	pwP	07 46 33.8	+1.6
GYA				PP	**PP**	**07 47 38.5**	**-2.0**
GYA				PcP	**PcP**	**07 49 03.5**	**-2.0**
GYA				S	**S**	**07 51 44.0**	**-1.8**
GYA				sS	sS	07 51 57.3	+3.4
GYA				ScP	**ScP**	**07 52 49.0**	**0.0**
GYA				pmax	pmax		
	comp=Z,70nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,4.6s						
GYA				LR	LR		
	comp=Z,410nm,16.2s						
GYA				LR	LR		
	comp=Z,550nm,15.6s						
GYA				LR	LR		
	comp=Z,820nm,16.6s						
TBP	**Tagbilaran**	**35.58**	**214**	*e*P	**P**	**07 46 43.9**	**+1.2**
TBP				*i* S	**pP**	**07 46 47.4**	**-0.3**
QIZ	**Qiongzhong**	**35.98**	**243**	P	**P**	**07 46 46.5**	**+0.4**
QIZ				S	**S**	**07 52 25.0**	**+1.0**
QIZ				sS	sS	07 52 39.8	+7.7
QIZ				LR	LR		
	comp=Z,240nm,15.7s						
QIZ				LR	LR		
	comp=Z,220nm,20.1s						
QIZ				LR	LR		
	comp=Z,260nm,17.5s						
KMI	**Kunming**	**37.15**	**258**	P	**P**	**07 46 56.3**	**-0.1**
KMI				pP	pwP	07 47 02.8	-1.0
KMI				sP	sP	07 47 06.0	+2.7
KMI				S	**S**	**07 52 41.8**	**-0.4**
KMI				sS	sS	07 52 54.3	+3.9
KMI				pmax	pmax		
	comp=Z,47nm,1.2s						
KMI				pmax	pmax		
	comp=Z,88nm,3.1s						
KMI				LR	LR		
	comp=Z,380nm,16.5s						
KMI				LR	LR		
	comp=Z,420nm,17.4s						
KMI				LR	LR		
	comp=Z,680nm,18.2s						
ANM	**Nome**	**37.50**	**34**	P	**P**	**07 47 00.7**	**+2.1**
ANM				pmax	pmax		
	comp=Z,14nm,1.1s						
ANM	**Nome**	**37.50**	**34**	P	**P**	**07 47 00.7**	**+2.1**
KCP	**Kidapawan**	**37.51**	**211**	⇑*i*P	**P**	**07 47 01.3**	**+2.1**
SLVN	**Son La**	**38.59**	**252**	P	**P**	**07 47 08.0**	**-0.4**
SLVN				IAmb	IAmb	07 47 10.1	
	comp=Z,12nm,0.7s						
DGZ	**Jazzator, Alta**	**39.45**	**302**	*c i*P	**P**	**07 47 15.9**	**+0.5**
DGZ				pmax	pmax		
	comp=Z,35nm,0.7s						
NRIK	**Noril'sk**	**40.40**	**333**	P	**P**	**07 47 21.9**	**-1.0**
	comp=Z,7.0nm,0.7s,baz=109,slow=10,SNR=14						
NRIK				LR	LR	08 05 27.9	
	comp=Z,844nm,19.6s,baz=101,slow=38						
ZALV	**Zalesovo Beam**	**40.50**	**309**	P	**P**	**07 47 23.2**	**-0.6**
	comp=Z,20nm,0.5s,baz=89,slow=7.5,SNR=64						
ZALV				PcP	**PcP**	**07 49 26.2**	**+0.1**
	comp=Z,4.2nm,0.7s,baz=95,slow=3.3,SNR=3.5						
ZALV	**Zalesovo Beam**	**40.50**	**309**	P	**P**	**07 47 22.9**	**-1.0**
ZALV					**PcP**	**07 49 26.0**	**-0.1**
WMQ	**Urumqi**	**40.55**	**293**	P	**P**	**07 47 25.0**	**+0.6**
WMQ				pP	pwP	07 47 32.8	+1.0
WMQ				ScS	ScS	07 57 26.5	-2.8
WMQ				pmax	pmax		
	comp=Z,22nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,87nm,7.3s						
WMQ				LR	LR		
	comp=Z,310nm,15.7s						
WMQ				LR	LR		
	comp=Z,470nm,19.5s						
WMQ				LR	LR		
	comp=Z,540nm,21.3s						
SVW2	**Sparrevohn**	**41.54**	**40**	P	**P**	**07 47 34.4**	**+2.1**
UBPT	**Khong Chiam**	**41.57**	**243**	P	**P**	**07 47 33.5**	**+0.5**
DLV	**T Lat**	**42.05**	**237**	P	**P**	**07 47 37.9**	**+0.8**
DLV				IAmb	IAmb	07 47 39.0	
	comp=Z,17nm,0.6s						
IMAR	**Indian Mountai**	**42.54**	**33**	P	**P**	**07 47 42.2**	**+1.8**
IMAR				PcP	**PcP**	**07 49 34.6**	**+2.0**
KDAK	**Kodiak Island**	**43.23**	**45**	P	**P**	**07 47 47.0**	**+0.9**
	comp=Z,9.8nm,0.9s,baz=285,slow=6.8,SNR=6.6						
KDAK	**Kodiak Island**	**43.23**	**45**	P	**P**	**07 47 47.0**	**+0.9**
KDAK	**Kodiak Island**	**43.23**	**45**	P	**P**	**07 47 47.9**	**+1.9**
KDAK				IAmb	IAmb	07 47 59.8	
	comp=Z,31nm,1.1s						
MK31	**Makanchi Array**	**43.42**	**299**	*i* P	**P**	**07 47 47.2**	**-0.7**
MK31	**Makanchi Array**	**43.42**	**299**	P	**P**	**07 47 47.3**	**-0.5**
MK31				IAmb	IAmb	07 47 48.3	
	comp=Z,18nm,0.7s						
MKAR	**Makanchi Array**	**43.42**	**299**	P	**P**	**07 47 47.2**	**-0.7**
	comp=Z,16nm,0.6s,baz=83,slow=9.7,SNR=194						
MKAR				LR	LR	08 07 11.8	
	comp=Z,489nm,18.4s,baz=52,slow=38						
MKAR	**Makanchi Array**	**43.42**	**299**	P	**P**	**07 47 46.9**	**-0.9**
LSA	**Lhasa**	**43.46**	**272**	P	**P**	**07 47 49.1**	**+0.3**
LSA				pmax	pmax		
	comp=Z,27nm,1.4s						
LSA	**Lhasa**	**43.46**	**272**	P	**P**	**07 47 49.1**	**+0.3**
LSA				IAmb	IAmb	07 48 08.3	
	comp=Z,27nm,1.4s						
MAKZ	**Makanchi**	**43.63**	**299**	P	**P**	**07 47 48.7**	**-0.8**
MAKZ	**Makanchi**	**43.63**	**299**	P	**P**	**07 47 48.7**	**-0.8**
MAKZ				IAmb	IAmb	07 47 50.0	
	comp=Z,20nm,0.8s						
KTH	**Kantishna Hill**	**43.69**	**36**	IAmb	IAmb	07 48 04.4	
	comp=Z,27nm,1.3s						
CHTO	**Chiang Mai**	**43.78**	**253**	P	**P**	**07 47 50.8**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,19nm,0.8s						
CHTO	**Chiang Mai**	**43.78**	**253**	P	**P**	**07 47 50.8**	**-0.2**
CHTO				IAmb	IAmb	07 47 52.2	
	comp=Z,19nm,0.8s						
PBKT	**Sadao Pong**	**43.80**	**249**	IAmb	IAmb	07 47 52.4	
	comp=Z,14nm,1.1s						
CMAR	**Chiang Mai Arr**	**44.01**	**253**	P	**P**	**07 47 52.8**	**-0.1**
	comp=Z,8.5nm,0.8s,baz=46,slow=6.3,SNR=36						
CMAR	**Chiang Mai Arr**	**44.01**	**253**	*i* P	**P**	**07 47 53.4**	**+0.6**
CMAR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**44.01**	**253**	P	**P**	**07 47 52.9**	**+0.1**
RC01	**Rabbit Creek A**	**44.37**	**40**	IAmb	IAmb	07 48 09.2	
	comp=Z,19nm,1.2s						
MCK	**McKinley**	**44.57**	**36**	IAmb	IAmb	07 48 10.5	
	comp=Z,18nm,1.2s						
RND	**Reindeer**	**44.63**	**36**	IAmb	IAmb	07 48 10.7	
	comp=Z,12nm,1.0s						
GHO	**Glory Hole Cre**	**44.70**	**39**	IAmb	IAmb	07 48 12.4	
	comp=Z,14nm,0.8s						
MRSI	**Marisa**	**44.71**	**211**	P	**P**	**07 47 58.7**	**+0.3**
	comp=Z,42nm,1.1s						
KURK	**Kurchatov**	**44.80**	**305**	*c i*P	**P**	**07 47 58.1**	**-0.6**
KURK				pmax	pmax		
	comp=Z,48nm,0.8s						
KURK	**Kurchatov**	**44.80**	**305**	P	**P**	**07 47 57.8**	**-0.9**
KURBB	**Kurchatov Arra**	**44.87**	**305**	P	**P**	**07 47 58.9**	**-0.5**
	comp=Z,47nm,0.6s,baz=78,slow=8.6,SNR=278						
KURBB				PcP	**PcP**	**07 49 40.8**	**0.0**
	comp=Z,2.2nm,0.7s,baz=85,slow=3.9,SNR=2.4						
IL31		**45.41**	**34**	IAmb	IAmb	07 48 16.9	
	comp=Z,11nm,1.1s						
ILAR	**Eielson Array**	**45.41**	**34**	P	**P**	**07 48 04.8**	**+1.4**
	comp=Z,2.4nm,0.7s,baz=262,slow=6.2,SNR=39						
ILAR	**Eielson Array**	**45.41**	**34**	P	**P**	**07 48 04.2**	**+0.7**
ILAR	**Eielson Array**	**45.41**	**34**	P	**P**	**07 48 04.2**	**+0.7**
SCM	**Sheep Creek Mo**	**45.45**	**39**	IAmb	IAmb	07 48 17.3	
	comp=Z,11nm,1.0s						
LUWI	**Luwuk**	**45.78**	**209**	P	**P**	**07 48 08.4**	**+1.5**
APSI	**Ampana**	**46.09**	**211**	P	**P**	**07 48 09.3**	**0.0**
BMAR	**Burnt Mountain**	**46.20**	**31**	P	**P**	**07 48 11.9**	**+2.2**
PDGK	**Podgornoye**	**46.37**	**295**	*i* P	**P**	**07 48 10.2**	**-1.3**
PDGK				pmax	pmax		
	comp=Z,14nm,0.6s						
VRDI	**Verde Repeater**	**47.38**	**39**	IAmb	IAmb	07 48 34.1	
	comp=Z,11nm,1.1s						
MCARA	**McCarthy VSAT**	**47.55**	**39**	IAmb	IAmb	07 48 34.4	
	comp=Z,19nm,1.2s						
BCAR	**Beaver Creek A**	**47.84**	**36**	P	**P**	**07 48 24.8**	**+2.2**
EGAK	**Eagle**	**47.85**	**34**	IAmb	IAmb	07 48 35.6	
	comp=Z,15nm,1.5s						
BALM	**Baldy**	**47.94**	**39**	IAmb	IAmb	07 48 37.6	
	comp=Z,11nm,1.1s						
BARN	**Barnard Glacie**	**48.26**	**39**	IAmb	IAmb	07 48 39.9	
	comp=Z,7.6nm,0.9s						
CTGM	**Chitina Glacie**	**48.44**	**39**	IAmb	IAmb	07 48 48.2	
	comp=Z,7.8nm,1.0s						
ULHL	**Ulahol**	**48.99**	**295**	P	**P**	**07 48 31.6**	**-0.3**
	SNR=8.1						
BRVK	**Borovoye**	**49.17**	**310**	*c i*P	**P**	**07 48 32.9**	**0.0**
BRVK				pmax	pmax		
	comp=Z,14nm,0.8s						
BRVK	**Borovoye**	**49.17**	**310**	P	**P**	**07 48 32.6**	**-0.3**
TKM2	**Tokmak 2**	**49.17**	**296**	P	**P**	**07 48 33.5**	**+0.1**
	SNR=28						
KSM	**Kuching**	**49.34**	**226**		**P**	**07 48 34.5**	**-0.1**
KSM				IAmb	IAmb	07 48 36.5	
	comp=Z,16nm,0.9s						
EPYK	**Eagle Plains**	**49.40**	**32**	IAmb	IAmb	07 48 51.1	
	comp=Z,14nm,0.9s						
KBK	**Karagaybulak**	**49.72**	**296**	P	**P**	**07 48 37.0**	**-0.4**
	SNR=12						
KZA	**Kyzart**	**49.73**	**295**	P	**P**	**07 48 38.5**	**+0.6**
	SNR=7.0						
USP	**Ospenovka**	**49.79**	**297**	P	**P**	**07 48 37.4**	**-0.4**
	SNR=6.9						
AAK	**Ala-Archa**	**50.03**	**296**	P	**P**	**07 48 39.5**	**-0.4**
	SNR=7.3						
AAK	**Ala-Archa**	**50.03**	**296**	*i* P	**P**	**07 48 39.3**	**-0.5**
	SNR=18						
AAK	**Ala-Archa**	**50.03**	**296**	*ce*P	**P**	**07 48 39.4**	**-0.4**
AAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
AAK	**Ala-Archa**	**50.03**	**296**	P	**P**	**07 48 39.0**	**-0.8**
AAK				IAmb	IAmb	07 48 57.2	
	comp=Z,9.9nm,0.8s						
INK	**Inuvik**	**50.23**	**29**	P	**P**	**07 48 42.4**	**+1.7**
	comp=Z,4.7nm,0.6s,baz=302,slow=6.2,SNR=25						
INK	**Inuvik**	**50.23**	**29**	IAmb	IAmb	07 48 54.7	
	comp=Z,18nm,1.3s						
KSH	**Kashi**	**50.26**	**292**	P	**P**	**07 48 45.0**	**+3.4**
KSH				sP	pwP	07 48 55.8	+6.8
KSH				PP	**PP**	**07 50 41.8**	**+5.0**
KSH				PcS	**PcS**	**07 53 57.3**	**-0.3**
KSH				S	**S**	**07 55 56.5**	**+3.3**
KSH				ScS	**ScS**	**07 58 30.5**	**-1.5**
KSH				pmax	pmax		
	comp=Z,26nm,1.1s						
KSH				pmax	pmax		
	comp=Z,260nm,4.7s						
KSH				LR	LR		
	comp=Z,260nm,13.5s						
KSH				LR	LR		
	comp=Z,310nm,10.3s						
KSH				LR	LR		
	comp=Z,470nm,11.7s						
EKS2	**Erkin-Say**	**50.51**	**296**	P	**P**	**07 48 42.6**	**-0.8**
	SNR=8.8						
AML	**Almayashu**	**50.78**	**296**	P	**P**	**07 48 45.8**	**+0.1**
	SNR=14						
WHY	**Whitehorse**	**51.58**	**38**	P	**P**	**07 48 53.0**	**+1.9**
WHY				IAmb	IAmb	07 49 05.9	
	comp=Z,17nm,1.4s						
KK31	**Karatay Array**	**52.53**	**298**	*i* P	**P**	**07 48 57.2**	**-1.2**
KK31	**Karatay Array**	**52.53**	**298**	IAmb	IAmb	07 48 58.6	
	comp=Z,11nm,0.8s						
KKAR	**Karatay Array**	**52.53**	**298**	P	**P**	**07 48 57.4**	**-1.0**
KKAR	**Karatay Array**	**52.53**	**298**	P	**P**	**07 48 57.4**	**-1.0**
KKAR	**Karatay Array**	**52.53**	**298**	IAmb	IAmb	07 48 58.6	
	comp=Z,11nm,0.8s						
SVE	**Sverdlovsk**	**53.26**	**317**	*de*P	**P**	**07 49 03.8**	**+0.3**
SVE				pmax	pmax		
	comp=Z,64nm,0.9s						
ARU	**Arti**	**54.47**	**317**	LR	LR	08 15 02.8	
	comp=Z,363nm,19.4s,baz=130,slow=39						
ARU	**Arti**	**54.47**	**317**	*c i*P	**P**	**07 49 12.4**	**+0.1**
ARU						07 50 12.1	
ARU						07 51 12.8	
ARU				S	**S**	**07 56 50.5**	**+0.5**
ARU				SS	**SS**	**08 00 31.1**	**-0.8**
ARU				pmax	pmax		
	comp=Z,55nm,1.0s						
ARU	**Arti**	**54.47**	**317**	P	**P**	**07 49 12.0**	**-0.4**
MTN	**Manton Dam**	**54.70**	**195**	P	**P**	**07 49 14.6**	**+0.2**
MTN				IAmb	IAmb	07 49 28.8	
	comp=Z,8.8nm,0.9s						
NIL	**Nilore**	**54.88**	**286**	P	**P**	**07 49 16.0**	**+0.3**
NIL				pmax	pmax		
	comp=Z,32nm,0.9s						
NIL	**Nilore**	**54.88**	**286**	P	**P**	**07 49 16.0**	**+0.3**
ABKAR	**Akbulak array**	**56.61**	**309**	P	**P**	**07 49 27.3**	**-0.5**
GSI	**Gunungsitoli**	**57.10**	**239**	P	**P**	**07 49 32.5**	**+0.7**
AKTO	**Aktyubinsk**	**57.22**	**311**	P	**P**	**07 49 31.4**	**-0.8**
KBL	**Kabul**	**57.47**	**290**	P	**P**	**07 49 33.3**	**-1.2**
KBL				pmax	pmax		
	comp=Z,13nm,0.8s						
KBL	**Kabul**	**57.47**	**290**	P	**P**	**07 49 33.3**	**-1.2**
KBL				IAmb	IAmb	07 49 34.1	
	comp=Z,12nm,0.8s						
KNRA	**Kununurra**	**57.93**	**197**	P	**P**	**07 49 37.5**	**0.0**
KNRA				IAmb	IAmb	07 49 49.5	
	comp=Z,20nm,1.4s						
KIRV	**Kirov**	**58.06**	**322**	*i* P	**P**	**07 49 37.9**	**0.0**
BBB	**Bella Bella**	**58.25**	**46**	LR	LR	08 12 29.6	
	comp=Z,91nm,19.7s,baz=240,slow=34						
RES	**Resolute Bay**	**58.44**	**15**	P	**P**	**07 49 40.6**	**+0.2**

	comp=Z,9.3nm,0.8s,baz=303,slow=6.7,SNR=33						
RES	Resolute Bay	58.44	15	IAmb	IAmb	07 49 45.3	
	comp=Z,7.9nm,0.8s						
YKA	Yellowknife Ar	59.69	32	P	P	07 49 49.4	+0.2
	comp=Z,1.6nm,0.9s,baz=301,slow=6.1,SNR=23						
YKA	Yellowknife Ar	59.69	32	*i* P	P	07 49 50.1	+0.9
YKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HYB	Hyderabad	59.84	267	*i* P	P	07 49 50.0	-0.9
ARCES	ARCESS Array B	60.87	339	P	P	07 49 57.0	-0.2
	comp=Z,2.6nm,0.7s,baz=28,slow=5.5,SNR=6.3						
ARCES	ARCESS Array B	60.87	339	P	P	07 49 57.0	-0.2
ARCES	ARCESS Array B	60.87	339	P	P	07 49 56.3	-0.9
TULEG	Thule	61.03	8	P	P	07 49 57.1	-1.0
TULEG				IAmb	IAmb	07 49 59.0	
	comp=Z,12nm,0.9s						
WRAB	Tennant Creek	61.14	190	⇓*i*P	P	07 49 59.4	-0.1
WRAB				pmax	pmax		
	comp=Z,10.0nm,1.5s						
WR0	Warramunga Arr	61.14	189	IAmb	IAmb	07 50 10.7	
	comp=Z,5.1nm,0.6s						
WRA	Warramunga Arr	61.15	190	P	P	07 49 58.9	-0.7
	comp=Z,2.6nm,0.6s,baz=7.4,slow=6.7,SNR=13						
WRA	Warramunga Arr	61.15	190	*i* P	P	07 49 57.5	-2.1
WRA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WRA	Warramunga Arr	61.15	190	P	P	07 49 59.0	-0.7
KLMR	Klimovskoe	61.27	327	*e*P	P	07 49 57.6	-2.4
KLMR				pmax	pmax		
	comp=Z,38nm,1.9s						
KLMR	Klimovskoe	61.27	327	*e*P	P	07 49 57.6	-2.4
KLMR				AMP		07 50 03.6	
	comp=Z,38nm,1.9s						
DAG	Danmarks Havn	62.01	355	*i* P	P	07 50 05.0	+0.3
	comp=Z,7.6nm,0.9s						
DAG	Danmarks Havn	62.01	355	*i* P	P	07 50 05.0	+0.3
DAG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HRA	Herat	62.35	293	P	P	07 50 07.5	-0.5
GEYT	Alibeck	63.28	298	P	P	07 50 13.9	-0.1
	comp=Z,18nm,0.8s,baz=30,slow=3.6,SNR=26						
GEYT	Alibeck	63.28	298	P	P	07 50 13.4	-0.6
GYA0B	ALIBECK ARRAY	63.28	298	P	P	07 50 13.4	-0.6
KULLO	Kullorsuaq	63.94	6	*i* P	P	07 50 16.9	-0.7
	comp=Z,12nm,1.0s						
KULLO	Kullorsuaq	63.94	6	*i* P	P	07 50 16.9	-0.7
KULLO				pmax	pmax		
	comp=Z,12nm,1.0s						
AS31	Alice Springs	64.87	190	P	P	07 50 24.8	+0.5
ASAR	Alice Springs	64.88	190	P	P	07 50 24.6	+0.3
	comp=Z,3.2nm,0.9s,baz=0.8,slow=5.7,SNR=38						
ASAR	Alice Springs	64.88	190	P	P	07 50 24.1	-0.2
MOS	Moscow	65.02	323	*e*P	P	07 50 24.5	-0.4
MOS				*e*		07 50 41.3	
MOS				*e*		07 50 56.9	
MOS				*e*		07 52 49.3	
MOS				*e*PPP	PPP	07 54 21.4	
MOS				pmax	pmax		
	comp=Z,37nm,1.3s						
SUF	Sumiainen	65.17	333	P	P	07 50 27.0	+1.2
SUF				pmax	pmax		
	comp=Z,26nm,0.7s						
VRH	Novokhopyorsk	65.70	317	*e*P	P	07 50 27.5	-1.9
VRH				pmax	pmax		
	comp=Z,40nm,0.9s						
OBN	Obninsk	65.87	323	⇓*i*P	P	07 50 30.7	+0.3
OBN				*e*		07 50 49.7	
OBN				*e*		07 50 58.2	
OBN				*e*		07 52 54.4	
OBN				*e*PPP	PPP	07 54 30.0	
OBN				pmax	pmax		
	comp=Z,24nm,0.7s						
C09A	Chrisman Ranch	65.94	47	IAmb	IAmb	07 50 44.9	
	comp=Z,7.5nm,0.9s						
D08A	Wollman Farm,	66.01	48	P	P	07 50 33.3	+1.8
D08A				IAmb	IAmb	07 50 45.2	
	comp=Z,6.9nm,1.0s						
FIA1	FINESS Array S	66.06	332	P	P	07 50 30.9	-0.7
FINES	FINESS Array B	66.06	332	P	P	07 50 31.1	-0.4
	comp=Z,12nm,0.5s,baz=51,slow=7.4,SNR=124						
FINES	FINESS Array B	66.06	332	*i* P	P	07 50 31.5	-0.1
FINES				pmax	pmax		
	comp=Z,12nm,0.5s						
DZM	Mont Dzumac	66.27	157	*e*LR	LR	08 10 41.6	
	comp=Z,264nm,23.4s						
LPSR	Galich'ya Gora	66.27	320	*e*P	P	07 50 32.4	-0.7
LPSR				pmax	pmax		
	comp=Z,40nm,0.8s						
E09A	Wood Farm, Sta	66.76	48	IAmb	IAmb	07 50 50.3	
	comp=Z,13nm,1.1s						
SUMG	Summit	66.77	1	⇑*i*P	P	07 50 37.6	+1.1
	comp=Z,40nm,0.7s						
SUMG	Summit	66.77	1	P	P	07 50 37.0	+0.5
SUMG				pmax	pmax		
	comp=Z,17nm,0.7s						
SUMG	Summit	66.77	1	P	P	07 50 37.0	+0.5
YBH	Yreka Blue Hor	66.81	54	P	P	07 50 38.9	+2.1
	comp=Z,3.2nm,0.9s,baz=245,slow=11,SNR=5.5						
YBH	Yreka Blue Hor	66.81	54	IAmb	IAmb	07 50 50.9	
	comp=Z,6.7nm,1.1s						
VSR	Storozhevoye	66.99	319	*e*P	P	07 50 37.6	-0.1
VSR				pmax	pmax		
	comp=Z,20nm,0.8s						
VORD	Divnogorie	67.08	318	*e*P	P	07 50 37.7	-0.5
VORD				pmax	pmax		
	comp=Z,30nm,1.6s						
VSU	Vasula	67.85	330	⇓*e*P	P	07 50 44.5	+1.5
VSU				pmax	pmax		
	comp=Z,28nm,1.0s						
JTMT	Jette	68.16	45	P	P	07 50 44.8	-0.5
JTMT				IAmb	IAmb	07 50 59.5	
	comp=Z,7.7nm,1.0s						
GOF	Gofitskoye	68.62	312	⇑*e*P	P	07 50 49.0	+0.9
GOF				pmax	pmax		
	comp=Z,66nm,0.6s						
LGD	Lagodekhi	68.66	307	P	P	07 50 48.5	+0.1
NCK	Nalchik	69.24	310	⇓*e*P	P	07 50 53.0	+1.0
NCK				pmax	pmax		
	comp=Z,21nm,0.4s						
GUDG	Gudauri	69.34	309	P	P	07 50 53.5	+0.6
KIV	Kislovodsk	69.48	311	⇑P	P	07 50 54.5	+0.9
KIV	Kislovodsk	69.48	311	*i* P	P	07 50 54.4	+0.7
	SNR=7.1						
KIV	Kislovodsk	69.48	311	*e*P	P	07 50 54.2	+0.6
KIV				pmax	pmax		
	comp=Z,248nm,1.1s						
KIV	Kislovodsk	69.48	311	P	P	07 50 53.7	+0.1
ZEI	Tsey	69.48	309	*e*P	P	07 50 52.4	-1.4
ZEI				pmax	pmax		
	comp=Z,17nm,0.6s						
KBZ	Khabaz	69.50	310	P	P	07 50 53.9	+0.4
	comp=Z,28nm,0.9s,baz=43,slow=4.3,SNR=41						
FFC	Flin Flon	69.62	34	P	P	07 50 55.2	+1.0
FFC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
FFC	Flin Flon	69.62	34	P	P	07 50 55.2	+1.0
FFC				IAmb	IAmb	07 51 06.9	
	comp=Z,6.6nm,0.8s						
TBLG	Delisi	69.62	308	P	P	07 50 54.9	+0.5
TBLG				pmax	pmax		
	comp=Z,34nm,1.0s						
TBLG	Delisi	69.62	308	P	P	07 50 54.9	+0.5
ONI	Oni	69.87	309	P	P	07 50 57.3	+1.3
NEY	Neytrino	69.89	310	⇓*i*P	P	07 50 57.1	+0.8
NEY				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KZRT	Kazreti	70.04	308	P	P	07 50 58.0	+1.0
EGMT	Eagleton	70.37	43	IAmb	IAmb	07 51 12.7	
	comp=Z,9.2nm,1.1s						
DLMT	Dillon	70.54	46	IAmb	IAmb	07 51 14.1	
	comp=Z,8.5nm,0.9s						
NB2	NORSAR Subarra	71.16	338	P	P	07 51 03.5	0.0
	comp=Z,3.1nm,0.6s,baz=36,slow=6.5						
NOA	NORSAR Array B	71.16	338	P	P	07 51 03.1	-0.4
	comp=Z,4.4nm,0.7s,baz=37,slow=6.1,SNR=37						
RYN	Ryan	71.23	55	P	P	07 51 08.1	+3.7
KVN	Kaiserville	71.23	54	P	P	07 51 06.0	+1.5
KVN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KVN	Kaiserville	71.23	54	P	P	07 51 06.0	+1.5
KVN				IAmb	IAmb	07 51 18.7	
	comp=Z,10nm,1.0s						
NORES	NORESS Array B	71.31	337	P	P	07 51 03.9	-0.4
BANOM	Banah	71.39	288	P	P	07 51 05.3	-0.2
SHME	Shamm	71.43	289	*i* P	P	07 51 05.3	-0.4
	SNR=13						
NVAR	Mina Array Bea	71.48	55	P	P	07 51 06.8	+0.7
	comp=Z,3.0nm,0.9s,baz=290,slow=6.1,SNR=13						
NVAR	Mina Array Bea	71.48	55	P	P	07 51 08.2	+2.1
BCA	Borcka	71.65	309	⇓P	P	07 51 06.7	-0.1
ANN	Anapa	71.90	314	*e*P	P	07 51 04.1	-4.0
ANN				*e**PP	pwP	07 51 15.6	-0.3
ANN				*e*S	S	08 00 21.4	-6.7
ANN				pmax	pmax		
	comp=Z,84nm,1.0s						
UOSS	Minazif	72.05	288	*i* P	P	07 51 08.9	-0.5
	SNR=10						
UOSS	Minazif	72.05	288	P	P	07 51 08.9	-0.5
AKASG	Malin Array Be	72.12	322	P	P	07 51 08.6	-0.7
	comp=Z,4.2nm,0.4s,baz=44,slow=6.4,SNR=50						
AKASG	Malin Array Be	72.12	322	*i* P	P	07 51 09.0	-0.3
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.4s						
AKASG	Malin Array Be	72.12	322	P	P	07 51 09.1	-0.3
HATD	Hatta, Dubai	72.17	288	*i* P	P	07 51 10.0	-0.1
	SNR=8.8						
ASHO	Ashiyiah	72.31	287	P	P	07 51 10.8	-0.2
IMW	Indian Meadow	72.38	47	IAmb	IAmb	07 51 25.6	
	comp=Z,7.1nm,0.9s						
STKA	Stephens Creek	72.48	182	P	P	07 51 13.4	+1.8
	comp=Z,0.6nm,0.4s,baz=342,slow=16,SNR=3.7						
REDW	Red Top Meadow	72.78	47	IAmb	IAmb	07 51 30.4	
	comp=Z,10nm,1.3s						
LAO	LASA Array	73.06	42	IAmb	IAmb	07 51 20.1	
	comp=Z,11nm,1.1s						
R11A	Troy Canyon, C	73.21	54	IAmb	IAmb	07 51 30.4	
	comp=Z,11nm,1.4s						
DUG	Dugway, Tooele	73.69	51	P	P	07 51 20.7	+1.6
DUG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DUG	Dugway, Tooele	73.69	51	P	P	07 51 20.6	+1.6
PDAR	Pinedale Array	73.89	47	P	P	07 51 21.0	+0.7
	comp=Z,1.3nm,0.5s,baz=263,slow=1.0,SNR=19						
PDAR	Pinedale Array	73.89	47	P	P	07 51 21.4	+1.1
KVT	Kavak	75.10	312	P	P	07 51 29.0	+1.9
ULM	Lac du Bonnet	75.43	35	P	P	07 51 29.1	+0.3
	comp=Z,2.5nm,0.7s,baz=305,slow=4.7,SNR=7.0						
MALT	Malatya	75.54	308	P	P	07 51 31.5	+1.7
RSSD	Black Hills	75.94	43	P	P	07 51 31.8	-0.3
RSSD				pmax	pmax		
	comp=Z,6.0nm,1.0s						
RSSD	Black Hills	75.94	43	P	P	07 51 31.8	-0.3
BUR08	Bucovina Ar. S	76.15	322	IAmb	IAmb	07 51 34.4	
	comp=Z,10nm,0.7s						
BURAR	Bucovina Array	76.16	322	⇑P	P	07 51 33.4	+0.2
BURAR	Bucovina Array	76.16	322	P	P	07 51 33.4	+0.2
BURAR	Bucovina Array	76.16	322	P	P	07 51 33.3	+0.2
BIZ	Bicaz	76.23	321	⇑P	P	07 51 34.1	+0.7
TESR	Tescani	76.28	321	⇑P	P	07 51 34.1	+0.3
CFR	Carcaliu	76.50	319	⇑P	P	07 51 35.1	+0.1
CFR	Carcaliu	76.50	319	P	P	07 51 35.1	+0.1
OJC	Ojcow	76.62	327	*e*P	P	07 51 36.2	+0.6
OJC	Ojcow	76.62	327	*e*P	P	07 51 36.2	+0.6
OJC	Ojcow	76.62	327	IAmb	IAmb	07 51 37.1	
	comp=Z,11nm,0.7s						
SHAO	Shalim	76.73	282	P	P	07 51 37.1	+0.4
OZUR		77.00	321	⇑P	P	07 51 39.1	+1.3
TRPA	Tarpa	77.00	324	⇓P	P	07 51 38.7	+0.9
PV20	West Nyswonger	77.16	50	P	P	07 51 39.9	+0.8
PV20				IAmb	IAmb	07 51 53.2	
	comp=Z,16nm,1.3s						
PV17	East Wray Mesa	77.21	50	IAmb	IAmb	07 51 52.8	
	comp=Z,8.8nm,1.0s						
PV16	Nyswonger Mesa	77.21	50	P	P	07 51 40.7	+1.3
BSEG	Bad Segeberg	77.24	334	P	P	07 51 41.1	+2.1
BSEG				pmax	pmax		
	comp=Z,18nm,0.9s						
DOPR	Dopca	77.28	321	⇓P	P	07 51 40.8	+1.4
ISR	Istrita	77.33	320	⇑P	P	07 51 40.8	+1.0
ISR	Istrita	77.33	320	P	P	07 51 40.8	+1.0
BRTR	Keskin Array B	77.37	312	P	P	07 51 40.0	-0.2
	comp=Z,1.3nm,0.8s,baz=50,slow=1.9,SNR=7.6						
BRTR	Keskin Array B	77.37	312	*i* P	P	07 51 40.7	+0.5
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	Keskin Array B	77.37	312	P	P	07 51 40.0	-0.2
VOIR		77.83	321	⇑P	P	07 51 43.7	+1.2
VOIR		77.83	321	P	P	07 51 43.7	+1.2
MORC	Moravsky Berou	77.89	327	⇑P	P	07 51 43.3	+0.5
MORC	Moravsky Berou	77.89	327	P	P	07 51 44.5	+1.7
MORC				pmax	pmax		
	comp=Z,12nm,0.8s						
MORC	Moravsky Berou	77.89	327	*e*P	P	07 51 43.3	+0.5
MORC	Moravsky Berou	77.89	327	IAmb	IAmb	07 51 44.4	
	comp=Z,9.4nm,0.8s						
DPC	Dobruska-Polom	77.93	328	*e*P	P	07 51 44.2	+1.2
DPC	Dobruska-Polom	77.93	328	*e*P	P	07 51 44.2	+1.2
PSZ	Piszkesteto	78.33	325	⇑P	P	07 51 45.6	+0.3
PSZ	Piszkesteto	78.33	325	P	P	07 51 46.8	+1.5
PSZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PSZ	Piszkesteto	78.33	325	IAmb	IAmb	07 51 47.1	
	comp=Z,6.4nm,0.8s						
VYHS	Vyhne	78.34	326	*e*P	P	07 51 46.0	+0.7
VYHS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
VYHS	Vyhne	78.34	326	*e*P	P	07 51 46.0	+0.7
BRG	Berggiesshubel	78.44	330	*e*P	P	07 51 46.0	+0.3
	comp=Z,6.0nm,0.9s						
BRG				*e*		07 52 06.4	
	comp=Z,8.7nm,1.2s						
BRG	Berggiesshubel	78.44	330	*e*P	P	07 51 46.0	+0.3
BRG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CLL	Collm	78.44	331	⇑*i*P	P	07 51 46.4	+0.7
	comp=Z,13nm,0.9s						
CLL				*e*(PcP)	PcP	07 51 57.0	+2.1
CLL	Collm	78.44	331	⇑*i*P	P	07 51 46.4	+0.7
CLL				*e*		07 51 57.0	
CLL				pmax	pmax		
	comp=Z,13nm,0.9s						
CLL	Collm	78.44	331	P	P	07 51 46.4	+0.7
CLL				IAmb	IAmb	07 51 47.7	
	comp=Z,12nm,0.9s						
JAVC	Velka Javorina	78.55	327	*e*P	P	07 51 48.0	+1.5
VRAC	Vranov	78.64	328	⇑P	P	07 51 47.8	+0.9
VRAC	Vranov	78.64	328	P	P	07 51 47.8	+0.9
VRAC	Vranov	78.64	328	*e*P	P	07 51 47.6	+0.7
SIRR	Siria	78.80	323	⇓P	P	07 51 48.7	+0.8
KRUC	Moravsky	78.91	328	*e*P	P	07 51 49.0	+0.6
PRU	Pruhonice	78.92	329	*e*P	P	07 51 49.0	+0.6
PRU	Pruhonice	78.92	329	*e*P	P	07 51 49.0	+0.6
GZR	Gura Zlata	78.94	322	⇑P	P	07 51 49.0	+0.3
EYMN	Ely	79.05	34	P	P	07 51 49.4	+0.2
EYMN				IAmb	IAmb	07 51 50.4	
	comp=Z,7.2nm,0.8s						
TREC	Trest	79.09	328	*e*P	P	07 51 48.5	-0.9
TREC	Trest	79.09	328	*e*P	P	07 51 48.5	-0.9
BZS	Buzias	79.31	323	⇓P	P	07 51 50.9	+0.2
BZS	Buzias	79.31	323	P	P	07 51 50.8	+0.2
MOX	Moxa	79.49	331	P	P	07 51 53.4	+1.9
MOX				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HERR	Herculane	79.49	322	⇑P	P	07 51 51.7	+0.1
PLVB	Pleven	79.54	319	⇑P	P	07 51 51.9	-0.1
MDVR	Moldovita	79.90	322	⇑P	P	07 51 53.9	0.0
EKA	Eskdalemuir Ar	79.93	341	P	P	07 51 54.0	+0.2
EKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SOP	Sopron	79.93	327	P	P	07 51 55.8	+1.8
SOP				pmax	pmax		
	comp=Z,15nm,0.9s						
KHC	Kasperske Hory	79.98	329	*e*P	P	07 51 54.8	+0.6
KHC				*e*pP	PcP	07 52 04.1	+2.4
KHC	Kasperske Hory	79.98	329	*e*P	P	07 51 54.8	+0.6
KHC				*e*		07 52 04.1	
CONA	Conrad Observa	80.03	327	*i* P	P	07 51 55.3	+0.7
	comp=Z,7.6nm,1.0s						
GERES	GERESS Array B	80.16	329	P	P	07 51 54.5	-0.8
	comp=Z,3.5nm,0.9s,baz=30,slow=6.2,SNR=16						
GERES	GERESS Array B	80.16	329	P	P	07 51 54.8	-0.6
WET	Wettzell	80.24	330	P	P	07 51 57.5	+1.9
WET				pmax	pmax		
	comp=Z,9.0nm,1.2s						
PGB	Panagyurishte	80.39	319	*e*P	P	07 51 57.5	+0.9
GRA1	Grafenberg Arr	80.41	331	IAmb	IAmb	07 51 58.3	
	comp=Z,16nm,0.9s						
GRF	Grafenberg Arr	80.41	331	*e*P	P	07 51 57.0	+0.4
	comp=Z,14nm,0.9s,baz=33,slow=4.4						
GRF	Grafenberg Arr	80.41	331	P	P	07 51 58.3	+1.7
ARSA	Arzberg	80.70	327	*e*P	P	07 51 58.7	+0.5
	comp=Z,4.2nm,0.7s						
MOA	Molln	80.74	328	*e*PcP	P	07 51 59.5	+1.2
	comp=Z,2.4nm,0.7s						
VTS	Vitosha	80.79	320	⇓P	P	07 51 59.5	+0.6
VTS	Vitosha	80.79	320	*e*P	P	07 51 59.6	+0.7
VTS	Vitosha	80.79	320	P	P	07 51 59.6	+0.7
VTS				pmax	pmax		
	comp=Z,19nm,0.8s						
ANMO	Albuquerque	80.95	51	P	P	07 52 01.5	+1.5
SCHQ	Schefferville	81.17	17	P	P	07 52 00.7	+0.2
	comp=Z,4.1nm,0.8s,baz=337,slow=6.8,SNR=7.8						
SCHQ	Schefferville	81.17	17	IAmb	IAmb	07 52 02.1	
	comp=Z,7.6nm,0.9s						
PERS	Pernice	81.36	327	*i* P	P	07 52 02.0	+0.3
SOKA	Soboth	81.36	327	*e*P	P	07 52 02.2	+0.5
	comp=Z,13nm,0.6s,SNR=9.4						
OBKA	Obir	81.70	327	*i* PcP	P	07 52 04.3	+0.8
	comp=Z,9.2nm,0.7s						
KBA	Koelnbreinsper	81.73	328	*e*P	P	07 52 03.9	+0.1
	comp=Z,12nm,0.9s,SNR=9.7						
KBA	Koelnbreinsper	81.73	328	P	P	07 52 05.4	+1.6
KBA				pmax	pmax		
	comp=Z,16nm,0.8s						
MYKA	Terra Mystica	81.97	328	*e*P	P	07 52 04.4	-0.6
	comp=Z,4.2nm,0.6s						
SNF	Seneffe	82.12	335	P	P	07 52 05.1	-0.5
	comp=Z,11nm,1.0s						
BMRD	Maredsous	82.14	335	⇑P	P	07 52 05.6	-0.1
GBAS	Gorenja Brezov	82.20	327	*i* P	P	07 52 05.8	-0.4
WATA	Walderalm	82.22	329	*e*P	P	07 52 06.6	+0.2
	comp=Z,6.5nm,0.8s						
WTTA	Wattenberg	82.25	329	*e*PcP	P	07 52 07.1	+0.5
	comp=Z,9.0nm,0.8s						
WTTA	Wattenberg	82.25	329	P	P	07 52 08.4	+1.8
WTTA				pmax	pmax		
	comp=Z,13nm,0.8s						
ABTA	Abfaltersbach	82.33	328	*e*PcP	P	07 52 07.1	+0.3
	comp=Z,3.6nm,0.7s						
MOTA	Moosalm	82.39	329	*e*P	P	07 52 07.3	0.0
	comp=Z,16nm,0.9s,SNR=7.5						
RETA	Reutte	82.41	330	*e*PcP	P	07 52 07.7	+0.5
	comp=Z,13nm,0.8s,SNR=6.4						
SQTA	Sankt Quirin	82.45	329	*i* P	P	07 52 07.5	0.0
	comp=Z,6.8nm,0.7s						
BFO	Black Forest	82.61	332	P	P	07 52 07.5	-0.7
BFO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BFO	Black Forest	82.61	332	P	P	07 52 07.5	-0.7
STAL	STALIGIAL	82.65	328	P	P	07 52 07.4	-1.1
TRI	Trieste	82.67	327	IAmb	IAmb	07 52 09.4	
	comp=Z,13nm,0.9s						
FETA	Feichten	82.80	329	*e*P	P	07 52 09.3	-0.1
	comp=Z,6.9nm,0.8s						
PDG	Podgorica	82.84	322	⇑P	P	07 52 09.7	+0.3
DAVA	Damuels	82.91	330	*i* PcP	P	07 52 10.2	+0.3
	comp=Z,14nm,0.9s						
FNA	Florina	83.09	320	P	P	07 52 12.4	+1.5
FNA				pmax	pmax		
	comp=Z,19nm,0.7s						
FNA	Florina	83.09	320	IAmb	IAmb	07 52 11.6	
	comp=Z,9.1nm,0.9s						
ECH	Echery	83.12	332	P	P	07 52 12.0	+1.1
ECH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CTI	Castel Tesino	83.25	328	IAmb	IAmb	07 52 11.6	
	comp=Z,5.6nm,0.7s						
VLDQ	Val d'Or	84.25	26	P	P	07 52 15.5	-1.1
VLDQ				IAmb	IAmb	07 52 17.2	
	comp=Z,9.1nm,0.9s						
PMOR	Pomariorio Ree	84.43	115	*e*T	T	09 25 40.5	
	comp=Z,5.7nm,0.2s						
IGT	Igoumenitsa	84.56	319	P	P	07 52 20.5	+2.1
IGT				pmax	pmax		
	comp=Z,25nm,2.0s						
SENIN	Lac Senin/Sane	84.64	331	IAmb	IAmb	07 52 19.4	
	comp=Z,9.4nm,1.1s						
PPT2	Papeete2	85.11	118	*e*LR	LR	08 19 23.7	
	comp=Z,339nm,21.5s						
OSSC	Osservatorio P	85.49	327	IAmb	IAmb	07 52 24.2	
	comp=Z,6.5nm,0.9s						
TAOE	Nuku Hiva Isla	85.72	105	*e*LR	LR	08 20 07.0	
	comp=Z,391nm,26.2s						
BNI	Bardonecchia	85.99	331	P	P	07 52 27.5	+1.9
BNI				pmax	pmax		
	comp=Z,15nm,0.9s						
BNI	Bardonecchia	85.99	331	IAmb	IAmb	07 52 32.3	
	comp=Z,9.2nm,0.9s						
MEH	Mehetia	86.33	117	*e*T	T	09 28 04.0	
	comp=Z,14nm,0.3s						
TXAR	Lajitas Array	86.58	54	P	P	07 52 29.8	+1.1
	comp=Z,1.2nm,0.8s,baz=304,slow=3.7,SNR=9.3						
TXAR	Lajitas Array	86.58	54	P	P	07 52 30.0	+1.3
U40A	Yellville	87.42	42	IAmb	IAmb	07 52 33.9	
	comp=Z,4.7nm,0.8s						
TBI	Tubuai	89.28	122	*e*T	T	09 31 41.2	
	comp=Z,10nm,0.3s						
PSGCX	Pisagua	144.44	63	PKPdf	PKPab	07 59 20.1	+0.1
MNMC	Minye Minye	144.47	62	PKPdf	PKPbc	07 59 20.7	+0.1
SNAA	Sanae	144.92	198	PKPdf	PKPbc	07 59 20.4	+0.1
SNAA	Sanae	144.92	198	PKP2	PKPbc	07 59 20.3	0.0
SNAA	Sanae	144.92	198		PKPab	07 59 20.2	-0.1
VNA2	Neumayer--Watz	146.49	197	PKPdf	PKPbc	07 59 24.9	-0.3
VNA3	Neumayer Olymp	146.73	196	PKPdf	PKPbc	07 59 25.6	-0.3
SIV	San Ignacio	147.37	47	PKPbc	PKPbc	07 59 30.1	+0.8
	comp=Z,7.0nm,0.8s,baz=265,slow=1.9,SNR=12						

MOS ***29*** *07:46:48.7±0.7, 0°.88S×21°.82W, h13^{km}, mb5.4/50, MS5.2/10, Error ellipse: s-maj=13.9km s-min=5.8km az=53.0*

IDC ***29*** *07:46:48.2±0.4, 0°.82S×21°.86W, h0^{km}, mb4.6/35, mb1 4.7/36, mb1mx4.6/56, mbtmp4.6/36, ML4.8/1, MS5.1/20, Ms1 5.0/20, ms1mx5.0/24, Error ellipse: s-maj=13.5km s-min=11.4km az=151.0*

BJI ***29*** *07:46:48.0±0.0, 0°.90S×21°.90W, h10^{km}, mB5.8/18, mb5.6/7, Ms5.7/22, Ms7 5.4/20*

NEIC ***29*** *07:46:50.2, 0°.85S×21°.92W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.19; M$_{\theta\theta}$1.29; M$_{\phi\phi}$-1.09; M$_{r\theta}$0.52; M$_{\theta\phi}$-7.14; M$_{\phi r}$0.29; Fault plane solution: M$_0$7.26000×10^{17} NP1:φ$_s$175.19000°, δ85.68000°, λ-2.07000°. NP2:φ$_s$265.34000°, δ87.94000°, λ-175.68000°. Principal axes: T 7.3413, Plg2.0000°, Azm40.0000°; N -0.1562, Plg85.0000°, Azm291.0000°; P -7.1851, Plg5.0000°, Azm130.0000°;*

NEIC ***29*** *07:46:50.2±1.7, 0°.85S±0°.06×21°.92W±0°.08, h12^{km}±1^{km}, mb5.3/169, Ms_20 5.2/286, Mwb5.8/38, Mwc6.0/41, Mww5.9, Mwc6.0(GCMT) Error ellipse: s-maj=14.2km s-min=10.5km az=263.0*

NEIC ***29*** *07:46:54, 0°.84S×21°.78W, h20^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.01; M$_{\theta\theta}$1.49; M$_{\phi\phi}$-2.49; M$_{r\theta}$1.32; M$_{\theta\phi}$-7.76; M$_{\phi r}$0.68; Fault plane solution: M$_0$8.20000×10^{17} NP1:φ$_s$263.00000°, δ88.00000°, λ-170.00000°. NP2:φ$_s$173.00000°, δ80.00000°, λ-1.00000°. Principal axes: T 7.5704, Plg6.0000°, Azm37.0000°; N 1.1344, Plg80.0000°, Azm273.0000°; P -8.7048, Plg8.0000°, Azm128.0000°;*

GCMT ***29*** *07:46:55.2±0.1, 0°.69S×21°.73W, h24^{km}, MW5.9/164, Moment Tensor Solution. s157,c343; s164,c550; Duration: 2^{s}2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.13±.06; M$_{\theta\theta}$2.68±.06; M$_{\phi\phi}$-2.55±.06; M$_{r\theta}$1.51±.09; M$_{\theta\phi}$-8.79±.05; M$_{\phi r}$0.53±.09; Best double couple: M$_0$9.31000×10^{17} NP1:φ$_s$172.00000°, δ80.00000°, λ-2.00000°. NP2:φ$_s$262.00000°, δ88.00000°, λ-170.00000°. Principal axes: T 9.3220, Plg5.0000°, Azm36.0000°; N -0.0220, Plg80.0000°, Azm273.0000°; P -9.2980, Plg8.0000°, Azm127.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***29*** *07:46:58.7, 0°.45S×21°.59W, h28^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.02; M$_{\theta\theta}$0.26; M$_{\phi\phi}$-0.24; M$_{r\theta}$0.24; M$_{\theta\phi}$-0.98; M$_{\phi r}$-0.21; Fault plane solution: M$_0$1.06000×10^{18} NP1:φ$_s$81.78000°, δ78.18000°, λ169.47000°. NP2:φ$_s$173.96000°, δ79.69000°, λ12.01000°. Principal axes: T 1.1137, Plg16.0000°, Azm38.0000°; N -0.1071, Plg74.0000°, Azm214.0000°; P -1.0065, Plg1.0000°, Azm308.0000°;*

BGR 29 07:47:06.7±0.0, 0°.12N×18°.79W, h33^{km}, mb5.2

ISC 29 07:46:49.7±0.3, **0°.87S**±0°.05×**21°.82W**±0°.05, **h10^{km}, n713, σ1^{s}90**/607, **mb5.2**/198, **MS5.2**/192, **26C-33D, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N3	ASCENSION HYDR	10.06	134	T	T	07 59 29.8	
	baz=314,slow=74,SNR=282						
H10N2	ASCENSION HYDR	10.06	134	T	T	07 59 40.8	
	baz=314,slow=74,SNR=286						
H10N1	ASCENSION HYDR	10.08	134	T	T	07 59 31.2	
	baz=314,slow=74,SNR=382						
ASCN	Ascension	10.22	134		Pn	07 49 17.1	+0.4
H10S3	ASCENSION HYDR	10.74	139	T	T	08 00 34.1	
	baz=260,slow=74,SNR=444						
H10S2	ASCENSION HYDR	10.75	139	T	T	08 00 05.9	
	baz=320,slow=74,SNR=521						
RCBR	Riachuelo	14.89	250	Pn	Pn	07 50 16.9	-3.6
	2.8nm,0.3s,baz=78,slow=11,SNR=36						
RCBR				Sn	Sn	07 52 47.8	-18
	5.2nm,0.3s,baz=173,slow=21,SNR=6.7						
RCBR				LR	LR	07 54 34.9	
	comp=Z,9µm,19.5s,baz=50,slow=31						
RCBR	Riachuelo	14.89	250		Pn	07 50 15.8	-4.6
RCBR					Sn	07 52 48.7	-17
SACV	Santiago Islan	15.84	354		Pn	07 50 31.2	-1.8
LIC	Lamto	18.19	67	*e*P	Pn	07 51 02.2	-0.3
	397nm,1.3s						
LIC	Lamto	18.19	67	P	Pn	07 51 02.2	-0.3
TIC	Toumodi	18.36	66	*e*P	P	07 51 04.1	-0.6
	530nm,1.4s						
TIC	Toumodi	18.36	66	P	P	07 51 04.1	-0.6
TIC	Toumodi	18.36	66	P	P	07 51 04.1	-0.6
KIC	Kosan Boka	18.50	67	*e*P	P	07 51 05.7	-0.6
	230nm,1.1s						
KIC	Kosan Boka	18.50	67	P	P	07 51 05.7	-0.6
DBIC	Dimbokro	18.52	66	P	P	07 51 05.7	-0.7
	2.7nm,0.3s,baz=228,slow=13,SNR=28						
DBIC				LR	LR	07 56 36.0	
	comp=Z,4µm,21.8s,baz=228,slow=32						
DBIC	Dimbokro	18.52	66	P	P	07 51 06.0	-0.4
DBIC				pmax	pmax		
	comp=Z,305nm,1.5s						
DBIC	Dimbokro	18.52	66	P	P	07 51 06.0	-0.4
DBIC				IAmb	IAmb	07 51 11.1	
	comp=Z,306nm,1.5s						
BSFB	Barra de Sao F	25.82	225	*e*P	P	07 52 23.9	+2.5
JANB	Januaria	26.31	236	*e*P	P	07 52 25.0	-0.8
SMTB	Santa Maria do	26.85	252	*e*P	P	07 52 31.0	+0.2
BDFB	Brasilia	29.72	239	P	P	07 52 55.7	-0.8
	comp=Z,1.5nm,0.3s,baz=34,slow=7.7,SNR=4.6						
BDFB				LR	LR	08 04 02.2	
	comp=Z,7µm,18.1s,baz=63,slow=35						
IPMB	Ipameri, GO	31.00	235	*e*P	P	07 53 08.0	+0.2
SPB	Sao Paulo	33.57	226	IAMs_20	IAMs_20	08 04 45.2	
	comp=Z,4µm,21.0s						
FUL	Funchal	33.66	8	*e*T	T	08 28 10.2	
PMAR	Madeira	33.73	7	*e*T	T	08 28 14.8	
PMOZ	Porto Moniz, M	33.80	7	*e*LR	LR	08 02 52.8	
	comp=Z,2µm,20.0s						
PMOZ	Porto Moniz, M	33.80	7	*e*T	T	08 28 37.0	
CLDB	Colider	35.18	252	*e*P	P	07 53 43.4	-0.9
C2SB	Chapadao do Su	35.24	238	*e*P	P	07 53 45.5	+0.8
PCMB	Pacaembu	35.33	232	*e*P	P	07 53 46.5	+1.1
TAM	Tamanrasset	35.53	47	P	P	07 53 48.1	+0.7
TAM				pmax	pmax		
	comp=Z,72nm,1.1s						
TAM				MLR	MLR		
	comp=Z,5µm,18.0s						
TAM	Tamanrasset	35.53	47	P	P	07 53 48.1	+0.7
TAM				IAMs_20	IAMs_20	08 08 49.3	
	comp=Z,5µm,18.0s						
SALV	Santo Antonio	36.59	244	*e*P	P	07 53 56.7	+0.4
MDT	Midelt	37.24	24	P	P	07 54 02.4	+0.7
	comp=Z,26nm,1.2s,baz=222,slow=6.0,SNR=14						
PTGA	Pitinga	38.14	270	*e*P	P	07 54 09.8	+0.2
AQDB	Aquidauana	38.41	237	*e*P	P	07 54 13.6	+1.9
PFVI	Vila Bisbo	39.69	16	IAMs_20	IAMs_20	08 07 37.5	
	comp=Z,4µm,21.0s						
PFVI	Vila Bisbo	39.69	16	*e*PP	PP	07 56 03.8	+10
PFVI				*e*S	S	08 00 34.4	+8.7
PFVI				*e*SS	SS	08 03 14.7	-6.6
MORF	Marmelete	39.90	16	*e*PP	PP	07 55 56.0	+0.2
MORF				*e*S	S	08 00 30.5	+1.5
MORF				AMS	AMS	08 09 50.9	
	comp=Z,3µm,16.7s						
MORF	Marmelete	39.90	16	*e*PP	PP	07 56 07.5	+12
MORF				*e*S	S	08 00 37.9	+8.9
MORF				*e*SS	SS	08 03 21.0	-4.7
PBDV	Barranco-do-Ve	40.05	17	*e*P	P	07 54 27.2	+2.0
	comp=Z,95nm,1.7s						
PBDV	Barranco-do-Ve	40.05	17	*e*PP	PP	07 56 08.0	+11
PBDV				*e*S	S	08 00 39.3	+8.1
PBDV				*e*SS	SS	08 03 21.8	-6.8
PTEO	Sao Teotonio	40.10	16	*e*P	P	07 54 27.4	+1.9
	comp=Z,114nm,1.6s						
PVAQ	Vaqueiros	40.26	17	P	P	07 54 27.2	+0.3
PVAQ				IAmb	IAmb	07 54 30.1	
	comp=Z,84nm,1.2s						
PVAQ				IAMs_20	IAMs_20	08 08 17.8	
	comp=Z,4µm,21.0s						
PVAQ	Vaqueiros	40.26	17	*e*P	P	07 54 28.8	+1.9
	comp=Z,92nm,1.4s						
PVAQ	Vaqueiros	40.26	17	*e*PP	PP	07 56 06.9	+7.3
PVAQ				*e*S	S	08 00 38.6	+4.3
PVAQ				*e*SS	SS	08 03 29.2	-3.6
PVAQ				*e*LR	LR	08 05 52.3	
	comp=Z,2µm,20.0s						
PCVE	Castro Verde	40.38	17	*e*P	P	07 54 29.7	+1.8
	comp=Z,107nm,1.5s						
PCVE	Castro Verde	40.38	17	*e*PP	PP	07 56 08.3	+7.4
PCVE				*e*S	S	08 00 44.9	+8.9
PCVE				*e*SS	SS	08 03 30.4	-4.7
MESJ	Messejana	40.52	17	*e*P	P	07 54 29.3	+0.2
MESJ				*e*PP	PP	07 56 02.7	+0.2
MESJ				*e*S	S	08 00 40.0	+1.8
MESJ				AMS	AMS	08 10 19.1	
	comp=Z,3µm,16.6s						
MESJ	Messejana	40.52	17	*e*P	P	07 54 29.2	+0.2
MESJ				*e*		07 56 02.6	
MESJ				*e*S	S	08 00 39.9	+1.8
MESJ	Messejana	40.52	17	*e*P	P	07 54 31.5	+2.5
	comp=Z,50nm,1.4s						
PNCL	Nicolau / Gran	40.69	16	*e*PP	PP	07 56 15.3	+11
PNCL				*e*S	S	08 00 52.1	+12
PNCL				*e*SS	SS	08 03 42.0	+0.8
PBEJ	Beja	40.80	17	*e*P	P	07 54 33.2	+1.9
	comp=Z,72nm,1.6s						
LIS	Lisbon	41.09	15	*e*PP	PP	07 56 08.7	+0.1
LIS				*e*S	S	08 00 48.1	+1.6
LIS				AMS	AMS	08 07 41.1	
	comp=E,2µm,24.3s						
PMAFR	Mafra	41.28	15	*e*PP	PP	07 56 18.8	+8.1
PMAFR				*e*S	S	08 01 01.2	+12
PMAFR				*e*SS	SS	08 03 50.9	-2.1
SIV	San Ignacio	41.51	247	P	P	07 54 37.3	-0.2
	comp=E,10nm,1.0s,baz=100,slow=10,SNR=32						
PESTR	Estremoz	41.66	17	*e*S	S	08 01 07.0	+12
PESTR				*e*SS	SS	08 03 58.5	-2.0
PMTG	Montargil	41.66	16	*e*P	P	07 54 40.4	+2.0
	comp=E,52nm,1.7s						
PMTG	Montargil	41.66	16	*e*PP	PP	07 56 23.3	+8.5
PMTG				*e*S	S	08 01 08.2	+13
PMTG				*e*SS	SS	08 03 56.5	-4.1
PSBE	So Bento	41.93	15	*e*S	S	08 01 11.3	+12
PSBE				*e*SS	SS	08 03 57.7	-8.2
SAML	Samuel	41.94	258	P	P	07 54 41.5	+0.4
SAML				pmax	pmax		
	comp=Z,16nm,1.0s						
SAML				MLR	MLR		
	comp=Z,4µm,18.0s						
SAML	Samuel	41.94	258	P	P	07 54 41.5	+0.4
PTOM	Tomar	42.13	15	*e*P	P	07 54 44.7	+2.5
	comp=Z,99nm,1.9s						
PMRV	Marv??o	42.23	17	*e*P	P	07 54 45.1	+2.0
	comp=Z,76nm,1.5s						
PMRV				*e*S	S	08 01 14.5	+11
PMRV				*e*SS	SS	08 04 13.4	+1.5
PMRV				*e*LR	LR	08 06 44.9	
	comp=Z,2µm,20.0s						
CPUP	Villa Florida	42.51	230	P	P	07 54 46.1	+0.6
	comp=Z,3.0nm,0.9s,baz=38,slow=10,SNR=5.4						
CPUP				LR	LR	08 11 33.8	
	comp=Z,2µm,20.1s,baz=58,slow=35						
CPUP	Villa Florida	42.51	230	P	P	07 54 45.9	+0.3
PCAS	Casmilo, Conde	42.51	15	*e*S	S	08 01 19.4	+12
PCAS				*e*SS	SS	08 04 18.5	+1.1
PCBR	Castelo Branco	42.59	16	*e*P	P	07 54 48.3	+2.3
	comp=Z,51nm,1.6s						
COI	Coimbra	42.68	15	*e*S	S	08 01 23.0	+13
COI				*e*SS	SS	08 04 18.6	-2.1
TSUM	Tsumeb	42.69	118	P	P	07 54 48.6	+1.3
	comp=Z,15nm,1.0s,baz=280,slow=9.1,SNR=15						
TSUM	Tsumeb	42.69	118	P	P	07 54 48.7	+1.4
PLTB	Pedras Altas	42.95	221	*e*P	P	07 54 50.6	+1.5
MTE	Manteigas	43.09	16	*e*P	P	07 54 53.4	+3.3
MTE				*e*S	S	08 01 28.7	+12
MTE				*e*SS	SS	08 04 29.1	+0.2
MTE				*e*LR	LR	08 07 07.3	
	comp=Z,2µm,16.0s						
PAB	San Pablo	43.29	20	P	P	07 54 53.4	+1.6
PAB				pmax	pmax		
	comp=Z,82nm,1.7s						
PAB	San Pablo	43.29	20	P	P	07 54 53.4	+1.6
PAB				IAmb	IAmb	07 54 54.9	
	comp=Z,82nm,1.7s						
MVO	Moncorvo	43.95	16	*e*P	P	07 54 59.0	+2.0
	comp=Z,67nm,1.6s						
MVO				*e*S	S	08 01 36.8	+8.0
MVO				*e*SS	SS	08 04 50.1	+4.5
MVO				*e*LR	LR	08 07 33.3	
	comp=Z,1µm,20.0s						
PGAV	Gavieira, Arco	44.37	14	*e*S	S	08 01 43.0	+8.0
PGAV				*e*LR	LR	08 07 37.1	
	comp=Z,1µm,18.0s						
PBRG	Braganca	44.62	16	*e*S	S	08 01 52.6	+14
PBRG				*e*SS	ScS	08 05 11.3	+11
KEST	Kesra	46.58	35	P	P	07 55 17.6	-0.5
	comp=Z,18nm,1.1s,baz=171,slow=7.2,SNR=9.7						
KEST				PP	PP	07 57 03.3	-4.4
	comp=Z,27nm,1.0s,baz=190,slow=9.6,SNR=3.8						
KEST				LR	LR	08 15 39.3	
	comp=Z,6µm,20.1s,baz=180,slow=37						
KEST	Kesra	46.58	35	P	P	07 55 19.1	+1.0
KEST				IAmb	IAmb	07 57 06.5	
	comp=Z,46nm,1.1s						
LPA	La Plata	47.74	221	*e*P	P	07 55 20.5	-6.5
LPA				pP	pP	07 55 27.1	-1.4
LPA				PCP	PcP	07 56 51.8	-4.4
LPA				pPP		07 57 17.1	
LPA				PPP	PPP	07 58 07.0	
LPA				S	S	08 02 24.6	+1.2
LPA				PSP	PSP	08 02 40.7	
LPA				SCS	ScS	08 05 18.1	-3.0
LPA				SSS	SSS	08 06 42.9	
LPA				SKIKP		08 07 16.5	
LPAZ	La Paz	48.12	249	P	P	07 55 30.6	-0.4
	comp=Z,12nm,0.9s,baz=68,slow=5.8,SNR=26						
LPAZ				LR	LR	08 15 08.9	
	comp=Z,2µm,18.3s,baz=84,slow=35						
LPAZ	La Paz	48.12	249	P	P	07 55 30.6	-0.4
LPAZ				IAmb	IAmb	07 55 58.0	
	comp=Z,18nm,0.8s						
LPAZ	La Paz	48.12	249	*e*P	P	07 55 30.5	-0.4
SDV	Santo Domingo	49.58	282	P	P	07 55 42.0	+0.3
SDV	Santo Domingo	49.58	282	*e*P	P	07 55 42.2	+0.4
WDD	Wied Dalam	49.79	39	IAMs_20	IAMs_20	08 16 24.1	
	comp=Z,3µm,21.0s						
CLTB	Caltabellotta	50.12	36	P	P	07 55 46.7	+1.4
MNMC	Minye Minye	50.19	246	IAMs_20	IAMs_20	08 16 03.5	
	comp=Z,3µm,20.0s						
CORL	Corleone	50.38	36	P	P	07 55 49.3	+2.0
LVC	Limon Verde	50.59	241	IAMs_20	IAMs_20	08 17 31.2	
	comp=Z,2µm,20.0s						
LVC	Limon Verde	50.59	241	*e*P	P	07 55 49.4	-0.1
PB01	IPOC Station P	50.62	243	IAMs_20	IAMs_20	08 17 12.0	
	comp=Z,3µm,20.0s						
PB09	IPOC Station P	50.63	242	IAMs_20	IAMs_20	08 16 59.2	
	comp=Z,3µm,20.0s						
PB12	IPOC Station P	50.72	247	P	P	07 55 50.8	+0.5
SUR	Sutherland	50.92	132	P	P	07 55 52.7	+1.1
	comp=Z,9.4nm,0.8s,baz=283,slow=11,SNR=7.0						
SUR	Sutherland	50.92	132	P	P	07 55 53.1	+1.5
SUR	Sutherland	50.92	132	P	P	07 55 52.8	+1.1
SUR				IAmb	IAmb	07 56 33.6	
	comp=Z,29nm,1.1s						
SUR	Sutherland	50.92	132	IAMs_20	IAMs_20	08 15 03.3	
	comp=Z,2µm,18.0s						
PATCX	Punta Patache	51.15	244	IAMs_20	IAMs_20	08 17 21.1	
	comp=Z,2µm,21.0s						
PB07	IPOC Station P	51.18	243	P	P	07 55 51.9	-1.8
PB07				IAmb	IAmb	07 56 22.6	
	comp=Z,48nm,1.0s						
LSZ	Lusaka	51.38	109	P	P	07 55 55.1	-0.2
	comp=Z,12nm,0.9s,baz=283,slow=5.1,SNR=13						
LSZ	Lusaka	51.38	109	P	P	07 55 55.4	+0.1
LSZ				IAmb	IAmb	07 56 23.2	
	comp=Z,32nm,1.4s						
RUSC	La Rusia	51.62	278	*e*P	P	07 55 57.7	+0.2
RUSC	La Rusia	51.62	278	P	P	07 55 58.4	+0.9
LBTB	Lobatse	51.67	122	P	P	07 55 57.7	+0.4
	comp=Z,17nm,1.0s,baz=287,slow=8.2,SNR=13						
LBTB	Lobatse	51.67	122	P	P	07 55 58.0	+0.7
LBTB				IAmb	IAmb	07 56 13.9	
	comp=Z,33nm,1.0s						
BARC	Barichara	51.79	279	*e*P	P	07 55 58.7	+0.2
SAOF	Saorge	51.80	27	P	P	07 55 59.3	+1.5
SAOF				pmax	pmax		
	comp=Z,30nm,1.6s						
ORIF	Oris-en-Rattie	51.81	25	P	P	07 55 58.9	+1.0
ORIF				pmax	pmax		
	comp=Z,25nm,1.7s						
GO02	Mina Guanaco	52.02	238	P	P	07 55 59.5	-0.7
GO02				IAmb	IAmb	07 56 29.8	
	comp=Z,51nm,1.1s						
MACC	Macarena, Meta	52.10	273	*e*P	P	07 55 55.7	-4.9
CHIC	Chingaza	52.15	277	*e*P	P	07 55 59.1	-2.3
CEL	Celeste	52.17	38	IAMs_20	IAMs_20	08 17 17.9	
	comp=Z,3µm,22.0s						
BNI	Bardonecchia	52.25	25	P	P	07 56 02.7	+1.4
BNI				pmax	pmax		
	comp=Z,59nm,1.3s						
BNI	Bardonecchia	52.25	25	P	P	07 56 02.6	+1.4
BNI				IAmb	IAmb	07 56 04.7	
	comp=Z,59nm,1.3s						
BNI				IAMs_20	IAMs_20	08 16 21.4	
	comp=Z,3µm,20.0s						
PB14	IPOC Station P	52.53	239	IAMs_20	IAMs_20	08 18 49.7	
	comp=Z,2µm,19.0s						
MBAR	Mbarara	52.56	90	*de*P	P	07 56 06.7	+2.5
MBAR	Mbarara	52.56	90	P	P	07 56 06.2	+2.0
MBAR				IAmb	IAmb	07 56 25.4	
	comp=Z,38nm,1.1s						
SPBC	San Pablo de B	52.57	278	*e*P	P	07 56 00.2	-4.0
BOSA	Boshof	52.71	126	P	P	07 56 05.1	0.0
	comp=Z,13nm,1.0s,baz=304,slow=7.4,SNR=19						
BOSA				LR	LR	08 15 27.7	
	comp=Z,1µm,18.4s,baz=290,slow=33						
BOSA	Boshof	52.71	126	P	P	07 56 05.0	0.0
BOSA				pmax	pmax		
	comp=Z,22nm,1.1s						
BOSA	Boshof	52.71	126	P	P	07 56 05.0	0.0
ROSC	El Rosal	52.75	277	P	P	07 56 06.3	+0.5
	comp=Z,12nm,0.7s,baz=105,slow=8.3,SNR=9.3						
ROSC				LR	LR	08 17 47.9	
	comp=Z,2µm,18.1s,baz=126,slow=35						
ROSC	El Rosal	52.75	277	IAmb	IAmb	07 57 17.2	
	comp=Z,40nm,1.3s						
LATE	Laterza	52.81	31	IAMs_20	IAMs_20	08 16 50.7	
	comp=Z,3µm,18.0s						
LOR	Lormes	52.94	22	P	P	07 56 08.0	+1.8
LOR				pmax	pmax		
	comp=Z,35nm,1.7s						
MSSA	Maissana	52.95	28	IAmb	IAmb	07 56 08.3	
	comp=Z,35nm,1.2s						
MSSA				IAMs_20	IAMs_20	08 17 28.1	
	comp=Z,3µm,20.0s						
CLF	Chambon-Foret	53.02	20	IAMs_20	IAMs_20	08 17 55.4	
	comp=Z,2µm,19.0s						
PTBC	PUERTO BERRIO,	53.04	279	*e*P	P	07 56 04.8	-2.7
OSSC	Osservatorio P	53.19	30	P	P	07 56 09.6	+1.5
OSSC				IAMs_20	IAMs_20	08 16 35.6	
	comp=Z,2µm,20.0s						
PAOL	Paolisi	53.20	34	IAmb	IAmb	07 56 43.4	
	comp=Z,24nm,1.0s						
PAOL				IAMs_20	IAMs_20	08 21 46.0	
	comp=Z,3µm,20.0s						
VLC	Villacollemand	53.24	29	IAmb	IAmb	07 56 47.2	
	comp=Z,52nm,1.1s						
VLC				IAMs_20	IAMs_20	08 17 49.9	
	comp=Z,2µm,18.0s						
AQU	L'Aquila	53.47	32	P	P	07 56 11.6	+1.4
AQU				pmax	pmax		
	comp=Z,47nm,1.0s						
INTR	Introdacqua	53.50	33	P	P	07 56 10.7	+0.2
SENIN	Lac Senin/Sane	53.56	25	IAmb	IAmb	07 56 12.7	
	comp=Z,26nm,1.1s						
ORTC	Ortega, Tolima	53.60	275	*e*P	P	07 56 09.9	-1.8
MURB	Monte Urbino	53.65	31	IAmb	IAmb	07 56 26.8	
	comp=Z,43nm,1.1s						
NRCA	Norcia	53.65	32	IAmb	IAmb	07 56 48.2	
	comp=Z,24nm,1.0s						
PRMA	PARMA	53.66	28	P	P	07 56 12.9	+1.4
ZCCA	Zocca	53.67	29	IAMs_20	IAMs_20	08 16 25.2	
	comp=Z,3µm,20.0s						
GUY2C	Guyana, Caldas	53.82	277	*e*P	P	07 56 10.1	-3.7
FLOC	Florencia	53.88	273	*e*P	P	07 56 12.8	-1.0
LOMF	Lomont	54.16	24	P	P	07 56 16.6	+1.4
SALO	Salr	54.40	28	IAMs_20	IAMs_20	08 16 48.5	
	comp=Z,2µm,22.0s						
PCON	Cinco Dias	54.65	273	*e*P	P	07 56 19.5	-0.6
GO04	Tololo Observa	54.84	233	P	P	07 56 21.0	+0.2
GO04				IAMs_20	IAMs_20	08 20 32.6	
	comp=Z,2µm,19.0s						
SOTA	Rioblanco	54.86	273	*e*P	P	07 56 23.4	+2.0
SCTE	Santa Cesarea	54.86	37	IAMs_20	IAMs_20	08 22 23.2	
	comp=Z,2µm,18.0s						
ECH	Echery	54.99	23	P	P	07 56 22.3	+1.1
ECH				pmax	pmax		
	comp=Z,28nm,1.7s						
ECH	Echery	54.99	23	IAmb	IAmb	07 56 23.2	
	comp=Z,33nm,1.2s						
ECH				IAMs_20	IAMs_20	08 17 53.7	
	comp=Z,2µm,19.0s						
DAVOX	Davos/Dischmat	54.99	26	P	P	07 56 21.4	-0.1
	comp=Z,22nm,1.0s,baz=236,slow=8.4,SNR=19						
SLE	Schleitheim	55.17	25	P	P	07 56 23.0	+0.5
CTI	Castel Tesino	55.25	28	P	P	07 56 23.2	0.0
CTI				pmax	pmax		
	comp=Z,50nm,1.3s						
CTI	Castel Tesino	55.25	28	P	P	07 56 23.2	0.0
CTI				IAmb	IAmb	07 56 25.0	
	comp=Z,50nm,1.3s						
CTI				IAMs_20	IAMs_20	08 18 12.8	
	comp=Z,2µm,20.0s						
DAVA	Damuels	55.38	26	*i* P	P	07 56 24.5	+0.2
	comp=Z,40nm,1.0s,SNR=15						
ITM	Ithomi	55.40	42	IAMs_20	IAMs_20	08 20 38.7	
	comp=Z,2µm,20.0s						
BFO	Black Forest	55.55	24	*e*P	P	07 56 25.3	+0.1
	comp=Z,40nm,1.3s,baz=217,slow=7.2						
BFO	Black Forest	55.55	24	*ce*P	P	07 56 26.1	+0.9
BFO				pmax	pmax		
	comp=Z,8.0nm,1.7s						
BFO	Black Forest	55.55	24	P	P	07 56 25.8	+0.6
BFO				IAmb	IAmb	07 56 27.1	
	comp=Z,29nm,1.1s						
FETA	Feichten	55.56	27	*i* P	P	07 56 25.4	-0.1
	comp=Z,40nm,1.1s,SNR=17						
GCUF	Volcan Galeras	55.56	272	*e*P	P	07 56 25.6	-0.9
DOU	Dourbes	55.59	20	P	P	07 56 26.4	+1.0
DOU				pmax	pmax		
	comp=Z,18nm,1.2s						
NNA	Nana	55.66	256	⇑*e*P	P	07 56 28.9	+2.2
NNA				pmax	pmax		
	comp=Z,41nm,1.6s						
NNA	Nana	55.66	256	IAMs_20	IAMs_20	08 19 14.7	
	comp=Z,2µm,19.0s						
IGT	Igoumenitsa	55.69	39	P	P	07 56 28.5	+2.1
WLF	Walferdange	55.78	22	*e*P	P	07 56 27.3	+0.4
	comp=Z,34nm,1.4s,baz=217,slow=7.2						
UBR	Ueberruh	55.79	26	*e*P	P	07 56 27.0	-0.1
	comp=Z,66nm,1.2s,baz=217,slow=7.2						
LANF	Langenberg	55.86	23	P	P	07 56 28.5	+1.1
STAL	STALIGIAL	55.90	28	IAmb	IAmb	07 56 29.8	
	comp=Z,48nm,1.2s						
STAL				IAMs_20	IAMs_20	08 22 11.2	
	comp=Z,2µm,19.0s						
SQTA	Sankt Quirin	55.92	27	*i* P	P	07 56 27.9	-0.2
	comp=Z,42nm,1.1s,SNR=15						
RETA	Reutte	55.92	26	*i* P	P	07 56 28.0	0.0
	comp=Z,32nm,1.4s,SNR=9.8						
MOTA	Moosalm	55.97	26	*i* P	P	07 56 28.0	-0.4
	comp=Z,28nm,1.2s,SNR=9.0						
MOTA				*e*PP	PP	07 58 33.9	+0.6
	comp=Z,18nm,1.3s						
TRI	Trieste	56.01	29	P	P	07 56 29.7	+1.1
TRI				pmax	pmax		
	comp=Z,60nm,1.6s						
TRI	Trieste	56.01	29	IAMs_20	IAMs_20	08 19 56.2	
	comp=Z,2µm,19.0s						
UCC	Uccle	56.10	20	IAMs_20	IAMs_20	08 20 27.0	
	comp=Z,2µm,19.0s						
WTTA	Wattenberg	56.15	27	*i* P	P	07 56 29.6	-0.1
	comp=Z,36nm,1.2s,SNR=12						
ABTA	Abfaltersbach	56.17	28	*i* P	P	07 56 30.5	+0.7
	comp=Z,32nm,1.0s,SNR=25						
WATA	Walderalm	56.17	27	*i* P	P	07 56 29.5	-0.4
	comp=Z,29nm,1.4s,SNR=7.7						
FVI	Forni Avoltri	56.18	28	P	P	07 56 31.1	+1.2
FVI				pmax	pmax		
	comp=Z,27nm,1.6s						
KNDS	Knezji Dol	56.19	30	*i* P	P	07 56 30.6	+0.6
KTD	Kalmit	56.24	23	P	P	07 56 31.4	+1.2
STU	Stuttgart	56.25	24	*e*P	P	07 56 30.0	-0.3
	comp=Z,28nm,1.0s,baz=217,slow=7.2						
ROBS	Robic	56.27	29	*i* P	P	07 56 31.2	+0.8
ROBS				*e*S	S	08 04 24.2	+3.8
BOJS	Bojanci	56.61	31	*i* P	P	07 56 33.8	+1.0
BOJS				*e*S	S	08 04 28.0	+3.1
MYKA	Terra Mystica	56.61	29	*i* P	P	07 56 33.8	+0.8
	comp=Z,31nm,1.1s,SNR=13						
LJU	Ljubljana	56.63	30	*i* P	P	07 56 33.9	+0.9
FUR	Furstenfeldbru	56.66	26	*e*P	P	07 56 33.2	-0.1
	comp=Z,86nm,1.3s,baz=217,slow=7.2						
AGG	Agios Georgios	56.68	40	IAMs_20	IAMs_20	08 19 50.5	
	comp=Z,2µm,22.0s						
TOD	Tromm	56.75	23	P	P	07 56 34.9	+1.1
PDG	Podgorica	56.78	36	⇑P	P	07 56 35.4	+1.3
PDG	Podgorica	56.78	36	P	P	07 56 35.4	+1.3
PDG				IAMs_20	IAMs_20	08 23 12.9	
	comp=Z,2µm,18.0s						
KBA	Koelnbreinsper	56.80	28	*i* P	P	07 56 34.5	+0.1
	comp=Z,11nm,1.1s,SNR=5.9						
AHRW	Bad Neuenahr-A	56.84	22	*e*P	P	07 56 35.5	+1.1
	comp=Z,33nm,1.3s,baz=217,slow=7.2						
AHRW				*e*PP	PP	07 58 40.0	-0.9
OHR	Ohrid	56.90	38	*i* P	P	07 56 36.7	+1.6
OBKA	Obir	56.97	29	*i* P	P	07 56 36.2	+0.7
	comp=Z,14nm,1.3s						
RJOB	Jochberg	57.02	27	*e*P	P	07 56 35.1	-0.8
	comp=Z,28nm,0.9s,baz=217,slow=7.2						
FNA	Florina	57.07	38	P	P	07 56 37.4	+1.1
FNA				pmax	pmax		
	comp=Z,53nm,1.2s						
TNS	Taunus Mts	57.10	23	*e*P	P	07 56 36.6	+0.3
	comp=Z,33nm,1.2s,baz=217,slow=7.2						
TNS	Taunus Mts	57.10	23	P	P	07 56 37.6	+1.3
BLY	Banja Luka	57.11	32	IAMs_20	IAMs_20	08 21 03.4	
	comp=Z,2µm,20.0s						
LODK	Lodwar	57.32	85	P	P	07 56 40.5	+2.0
SOKA	Soboth	57.32	29	*i* P	P	07 56 38.6	+0.7
	comp=Z,36nm,1.2s,SNR=20						
LIT	Litokhoron	57.38	40	P	P	07 56 39.9	+1.5
LIT	Litokhoron	57.38	40	IAMs_20	IAMs_20	08 22 20.8	
	comp=Z,2µm,20.0s						
GRC1	Grafenberg Arr	57.40	25	P	P	07 56 39.0	+0.6
BUG	Bochum--Univer	57.65	21	*e*P	P	07 56 40.6	+0.5
	comp=Z,25nm,1.0s,baz=217,slow=7.2						
GO05	Huala	57.65	228	IAmb	IAmb	07 57 05.5	
	comp=Z,62nm,1.6s						
GO05				IAMs_20	IAMs_20	08 22 24.8	
	comp=Z,2µm,19.0s						
MOA	Molln	57.79	28	*i* P	P	07 56 40.6	-0.5
	comp=Z,18nm,1.1s,SNR=10						
MOA				*e*PP	PP	07 58 48.2	-1.1
	comp=Z,22nm,1.4s						
SKO	Skopje	57.80	37	*i* P	P	07 56 42.8	+1.5
GRA1	Grafenberg Arr	57.80	25	IAmb	IAmb	07 56 42.9	
	comp=Z,59nm,1.5s						
GRA1				IAMs_20	IAMs_20	08 20 04.4	
	comp=Z,2µm,20.0s						
GRF	Grafenberg Arr	57.80	25	*e*P	P	07 56 41.1	-0.1
	comp=Z,38nm,1.2s,baz=217,slow=7.2						
GRF				*e*PP	PP	07 58 48.7	-0.8

GRF	Grafenberg Arr	57.80	25	P	P	07 56 42.2	+1.0
GRG	Griva	57.80	39	P	P	07 56 43.0	+1.6
ARSA	Arzberg	57.96	29	*i* P	P	07 56 42.3	-0.1
	comp=Z,18nm,1.2s,SNR=8.3						
ARSA				*e*PP	PP	07 58 48.9	-2.1
	comp=Z,11nm,1.1s						
ESK	Eskdalemuir	58.05	12	IAMs_20	IAMs_20	08 17 52.3	
	comp=Z,2µm,20.0s						
WET	Wettzell	58.10	26	*e*P	P	07 56 43.2	-0.2
	comp=Z,38nm,1.2s,baz=217,slow=7.2						
WET				*e*PP	PP	07 58 49.9	-2.2
VAY	Valandovo	58.12	38	*i* P	P	07 56 44.7	+1.2
UBBA	Unterbreizbach	58.18	23	*e*P	P	07 56 44.4	+0.7
	comp=Z,58nm,1.8s,baz=217,slow=7.2						
GEC2	GERESS Array S	58.25	27	*e*P	P	07 56 44.3	-0.2
	comp=Z,36nm,1.3s,baz=217,slow=7.2						
GEC2	GERESS Array S	58.25	27	IAmb	IAmb	07 56 46.1	
	comp=Z,24nm,1.1s						
GERES	GERESS Array B	58.25	27	P	P	07 56 44.3	-0.2
	comp=Z,10nm,0.9s,baz=212,slow=6.3,SNR=44						
GERES				PP	PP	07 58 52.1	-1.4
	comp=Z,6.4nm,0.9s,baz=206,slow=8.9,SNR=5.9						
GERES				LR	LR	08 21 17.2	
	comp=Z,1µm,20.2s,baz=238,slow=36						
GERES	GERESS Array B	58.25	27	P	P	07 56 44.2	-0.3
ROTZ	Rotzenmuhle	58.28	25	*e*P	P	07 56 44.4	-0.2
	comp=Z,29nm,1.4s,baz=217,slow=7.2						
MANZ	Manzenberg	58.40	25	*e*P	P	07 56 45.3	-0.1
	comp=Z,28nm,1.2s,baz=217,slow=7.2						
KHC	Kasperske Hory	58.40	27	*e*P	P	07 56 45.8	+0.3
KHC				*e*pP	sP	07 56 50.4	+2.4
KHC				*e*S	S	08 04 50.0	+1.6
KHC				AMS	AMS	08 20 40.0	
	comp=Z,2µm,18.0s						
KHC	Kasperske Hory	58.40	27	*e*P	P	07 56 45.8	+0.3
KHC				*e*		07 56 50.4	
KHC				*e*S	S	08 04 50.0	+1.6
KHC				MLR	MLR		
	comp=Z,2µm,18.0s						
IBBN	Ibbenburen	58.53	21	*e*P	P	07 56 46.8	+0.6
	comp=Z,21nm,1.1s,baz=217,slow=7.2						
CONA	Conrad Observa	58.60	29	*i* P	P	07 56 47.2	+0.3
	comp=Z,27nm,1.2s,SNR=12						
CONA				*e*PP	PP	07 58 56.7	+0.1
	comp=Z,31nm,1.3s						
DRLN	Deer Lake	58.62	333	IAMs_20	IAMs_20	08 17 23.2	
	comp=Z,2µm,20.0s						
SRS	Serrai	58.64	39	P	P	07 56 48.3	+1.0
SRS				pmax	pmax		
	comp=Z,50nm,1.3s						
MOX	Moxa	58.70	24	*e*P	P	07 56 47.7	+0.3
	comp=Z,27nm,1.2s,baz=217,slow=7.2						
NKC	Novy Kostel	58.73	25	*e*S	S	08 04 56.3	+3.7
GTTG	Gottingen	58.74	23	*e*P	P	07 56 48.4	+0.7
	comp=Z,30nm,1.4s,baz=217,slow=7.2						
GTTG				*e*PP	PP	07 58 55.6	-2.1
KKB	Krupnik	58.74	38	*e*P	P	07 56 49.5	+1.6
WERN	Wernitzgruen	58.74	25	*e*P	P	07 56 47.9	0.0
	comp=Z,26nm,1.4s,baz=217,slow=7.2						
SOP	Sopron	58.77	29	P	P	07 56 49.3	+1.3
SOP				pmax	pmax		
	comp=Z,44nm,1.3s						
GUNZ	Gunzen	58.78	25	*e*P	P	07 56 48.1	0.0
	comp=Z,22nm,1.4s,baz=217,slow=7.2						
PLN	Plauen	58.80	25	*e*P	P	07 56 48.2	0.0
	comp=Z,21nm,1.2s,baz=217,slow=7.2						
TANN	Tannenbergstha	58.87	25	*e*P	P	07 56 48.7	0.0
	comp=Z,47nm,1.2s,baz=217,slow=7.2						
MMB	Musomiste	58.99	39	*e*P	P	07 56 50.7	+1.0
PBCC	Pribram	58.99	26	*e*P	P	07 56 49.6	+0.1
PBCC				*e*x	x	07 56 57.4	
KMBO	Kilima Mbogo	59.07	91	P	P	07 56 53.5	+2.5
KMBO	Kilima Mbogo	59.07	91	P	P	07 56 52.7	+1.7
KMBO				pmax	pmax		
	comp=Z,29nm,1.7s						
KMBO	Kilima Mbogo	59.07	91	P	P	07 56 52.7	+1.7
KMBO				IAmb	IAmb	07 57 13.2	
	comp=Z,29nm,1.6s						
CLZ	Clausthal	59.13	23	*e*P	P	07 56 50.9	+0.4
	comp=Z,12nm,1.4s,baz=217,slow=7.2						
NEUB	Neuenburg	59.19	24	*e*P	P	07 56 51.1	+0.3
	comp=Z,47nm,1.4s,baz=217,slow=7.2						
VTS	Vitosha	59.26	37	⇓P	P	07 56 52.7	+1.0
VTS	Vitosha	59.26	37	*e*P	P	07 56 53.0	+1.3
VTS	Vitosha	59.26	37	⇓P	P	07 56 52.7	+1.0
VTS	Vitosha	59.26	37	IAMs_20	IAMs_20	08 23 16.4	
	comp=Z,2µm,21.0s						
PLCA	Paso Flores	59.27	222	LR	LR	08 22 39.5	
	comp=Z,744nm,18.1s,baz=328,slow=36						
TREC	Trest	59.39	27	AMS	AMS	08 27 40.0	
	comp=Z,2µm,13.9s						
ZST	Bratislava	59.39	29	*e*P	P	07 56 52.2	-0.1
ZST				pmax	pmax		
	comp=Z,60nm,1.3s						
ZST	Bratislava	59.39	29	*e*P	P	07 56 52.2	-0.1
PRU	Pruhonice	59.46	26	*e*P	P	07 56 53.4	+0.7
PRU				*e*S	S	08 05 02.9	+0.9
PRU				AMS	AMS	08 21 50.0	
	comp=Z,2µm,15.7s						
PRU	Pruhonice	59.46	26	*e*P	P	07 56 53.4	+0.7
PRU				*e*S	S	08 05 02.9	+0.9
PRU				MLR	MLR		
	comp=Z,2µm,15.7s						
RETH	Rethem/Aller,	59.46	21	*e*P	P	07 56 53.7	+1.0
	comp=Z,31nm,1.3s,baz=217,slow=7.2						
ASSE	Asse, Remlinge	59.47	23	*e*P	P	07 56 53.2	+0.5
	comp=Z,15nm,1.3s,baz=217,slow=7.2						
NRDL	Niedersach Rie	59.54	22	*e*P	P	07 56 54.4	+1.2
	comp=Z,36nm,1.4s,baz=217,slow=7.2						
MODS	Modra-Piesok	59.59	29	*e*P	P	07 56 53.3	-0.5
MODS				pmax	pmax		
	comp=Z,59nm,1.2s						
MODS	Modra-Piesok	59.59	29	*e*P	P	07 56 53.2	-0.5
MDVR	Moldovita	59.63	35	⇑P	P	07 56 55.3	+1.2
FBE	Freiberg	59.63	25	*e*P	P	07 56 54.1	+0.2
	comp=Z,23nm,1.2s,baz=217,slow=7.2						
KRUC	Moravsky	59.65	28	*e*P	P	07 56 53.4	-0.7
KRUC				*e*PP	PP	07 59 03.3	-2.5
KRUC				*e*S	S	08 05 05.7	+1.2
RZN	Rozhen	59.66	39	*e*P	P	07 56 55.5	+1.0
SMOL	Smolenice	59.76	29	*e*P	P	07 56 55.6	+0.7
SMOL				pmax	pmax		
	comp=Z,16nm,1.2s						
SMOL	Smolenice	59.76	29	*e*P	P	07 56 55.6	+0.7
CLL	Collm	59.77	25	*i* P	P	07 56 56.0	+1.2
	comp=Z,36nm,1.7s						
CLL				*e*(sP)	pwP	07 57 04.0	+1.7
CLL				*e*PP	PP	07 59 05.0	-1.9
CLL				*e*PPP	PPP	08 00 30.0	
CLL				*e*S	S	08 05 09.0	+3.0
	comp=N,3µm,26.3s						
CLL				*e*S	S	08 05 09.0	+3.0
	comp=E,3µm,24.5s						
CLL				*e*SS	SS	08 09 06.0	+3.8
CLL				*e*SSS	SSS	08 11 36.0	
CLL	Collm	59.77	25	*e*P	P	07 56 56.1	+1.2
	comp=E,36nm,1.7s,baz=217,slow=7.2						
CLL	Collm	59.77	25	*i* P	P	07 56 56.0	+1.2
CLL				*e*		07 57 04.0	
CLL				*e*S	S	08 05 09.0	+3.0
CLL				pmax	pmax		
	comp=Z,36nm,1.7s						
CLL	Collm	59.77	25	IAmb	IAmb	07 56 56.9	
	comp=Z,51nm,2.0s						
BRG	Berggiesshubel	59.84	25	*e*P	P	07 56 55.3	-0.1
	comp=Z,13nm,1.2s						
BRG				*e*PP	PP	07 59 06.5	-1.0
	comp=Z,39nm,1.7s						
BRG				S	S	08 05 12.0	+5.0
BRG	Berggiesshubel	59.84	25	*e*P	P	07 56 55.2	-0.1
	comp=Z,13nm,1.2s,baz=217,slow=7.2						
BRG				*e*PP	PP	07 59 05.8	-1.8
BRG	Berggiesshubel	59.84	25	*e*P	P	07 56 55.3	-0.1
BRG				*e*		07 59 06.5	
BRG				S	S	08 05 12.0	+5.0
BRG				pmax	pmax		
	comp=Z,13nm,1.3s						
BRG				pmax	pmax		
	comp=Z,39nm,1.7s						
BRG				MLR	MLR		
	comp=N,1µm,12.6s						
BRG				MLR	MLR		
	comp=E,1µm,12.5s						
BRG				MLR	MLR		
	comp=Z,2µm,13.8s						
PVCC	Panska Ves	59.86	26	*e*P	P	07 56 56.2	+0.7
PVCC				*e*S	S	08 05 06.2	-1.0
PVCC				AMS	AMS	08 22 00.0	
	comp=Z,2µm,18.1s						
PVCC	Panska Ves	59.86	26	*e*P	P	07 56 56.2	+0.7
PVCC				*e*S	S	08 05 06.2	-1.0
PVCC				MLR	MLR		
	comp=Z,2µm,18.1s						
BUD	Budapest	59.87	31	P	P	07 56 57.3	+1.7
BUD				pmax	pmax		
	comp=Z,48nm,1.1s						
PLD	Plovdiv	59.88	39	*e*P	P	07 56 56.2	+0.4
PLD	Plovdiv	59.88	39	P	P	07 56 57.3	+1.5
PLD				pmax	pmax		
	comp=Z,188nm,1.4s						
VRAC	Vranov	59.91	28	⇓P	P	07 56 56.1	+0.2
VRAC	Vranov	59.91	28	⇓P	P	07 56 56.1	+0.2
VRAC	Vranov	59.91	28	*e*P	P	07 56 55.6	-0.3
VRAC				*e*PP	PP	07 59 05.8	-2.4
VRAC				*e*S	S	08 05 09.5	+1.6
BZS	Buzias	60.08	34	⇓P	P	07 56 58.2	+1.1
BZS	Buzias	60.08	34	⇓P	P	07 56 58.2	+1.1
KDZ	Kurdzhali	60.08	39	*e*P	P	07 56 57.2	0.0
HERR	Herculane	60.09	35	⇑P	P	07 56 58.4	+1.2
ALN	Alexandroupoli	60.09	40	IAmb	IAmb	07 56 59.1	
	comp=Z,38nm,1.5s						
JAVC	Velka Javorina	60.12	29	*e*P	P	07 56 58.0	+0.6
JAVC				*e*S	S	08 05 12.2	+1.5
VYHS	Vyhne	60.44	30	*e*P	P	07 57 00.2	+0.6
VYHS				pmax	pmax		
	comp=Z,60nm,1.2s						
VYHS	Vyhne	60.44	30	*e*P	P	07 57 00.2	+0.6
UPC	Upice	60.49	27	*e*P	P	07 57 00.5	+0.7
UPC				*e*S	S	08 05 14.9	-0.4
UPC				AMS	AMS	08 22 10.0	
	comp=Z,2µm,18.1s						
UPC	Upice	60.49	27	*e*P	P	07 57 00.5	+0.7
UPC				*e*S	S	08 05 14.9	-0.4
UPC				MLR	MLR		
	comp=Z,2µm,18.1s						
SIRR	Siria	60.50	33	⇑P	P	07 57 00.9	+0.9
DPC	Dobruska-Polom	60.52	27	*e*P	P	07 57 00.5	+0.4
DPC				*e*pP	sP	07 57 05.2	+2.6
DPC				*e*S	S	08 05 15.7	-0.1
DPC				AMS	AMS	08 22 40.0	
	comp=Z,2µm,19.2s						
DPC	Dobruska-Polom	60.52	27	*e*P	P	07 57 00.5	+0.4
DPC				*e*		07 57 05.2	
DPC				*e*S	S	08 05 15.7	-0.1
DPC				MLR	MLR		
	comp=Z,2µm,19.2s						
PLVB	Pleven	60.53	37	⇑P	P	07 57 01.8	+1.6
GZR	Gura Zlata	60.60	35	⇓P	P	07 57 01.7	+1.0
GZR	Gura Zlata	60.60	35	⇓P	P	07 57 01.7	+1.0
PSZ	Piszkesteto	60.60	31	⇓P	P	07 57 01.2	+0.4
PSZ	Piszkesteto	60.60	31	P	P	07 57 01.0	+0.3
PSZ				pmax	pmax		
	comp=Z,52nm,1.2s						
PSZ	Piszkesteto	60.60	31	P	P	07 57 01.0	+0.3
PSZ				IAMs_20	IAMs_20	08 21 29.7	
	comp=Z,2µm,22.0s						
MORC	Moravsky Berou	60.68	28	⇓P	P	07 57 01.7	+0.5
MORC	Moravsky Berou	60.68	28	⇓P	P	07 57 01.7	+0.5
MORC	Moravsky Berou	60.68	28	*e*P	P	07 57 01.3	+0.1
MORC				*e*PP	PP	07 59 12.6	-2.4
MORC				*e*S	S	08 05 18.8	+0.9
MORC	Moravsky Berou	60.68	28	IAmb	IAmb	07 57 03.1	
	comp=Z,39nm,1.2s						
BSEG	Bad Segeberg	60.76	21	*e*P	P	07 57 01.8	+0.2
	comp=Z,33nm,1.1s,baz=217,slow=7.2						
KSP	Ksiaz	60.85	27	*e*P	P	07 57 02.7	+0.4
KSP				*e*L	L	08 21 55.1	
	comp=Z,2µm,20.8s						
KSP	Ksiaz	60.85	27	*e*P	P	07 57 02.7	+0.4
DEV	Deva	60.96	34	⇓P	P	07 57 04.5	+1.4
DEV	Deva	60.96	34	⇓P	P	07 57 04.5	+1.4
RUE	Ruedersdorf	60.97	24	*e*P	P	07 57 03.5	+0.5
	comp=Z,51nm,1.4s,baz=217,slow=7.2						
EDC	Edincik	61.01	42	P	P	07 57 04.8	+1.2
OKC	Ostrava-Krasne	61.01	28	*e*P	P	07 57 04.2	+0.8
OKC				*e*x	x	07 57 10.9	
OKC				*e*S	S	08 05 24.9	+2.9
OKC				AMS	AMS	08 28 30.0	
	comp=Z,1µm,15.9s						
OKC	Ostrava-Krasne	61.01	28	*e*P	P	07 57 04.2	+0.8
OKC				*e*		07 57 10.9	
OKC				*e*S	S	08 05 24.9	+2.9
OKC				MLR	MLR		
	comp=Z,1µm,15.9s						
LOT	Lotru	61.20	35	⇑P	P	07 57 06.3	+1.4
KECS	Kecovo	61.27	31	*e*P	P	07 57 06.2	+1.0
KECS				pmax	pmax		
	comp=Z,12nm,1.1s						
KECS	Kecovo	61.27	31	*e*P	P	07 57 06.2	+1.0
DRGR		61.40	33	⇓P	P	07 57 06.9	+0.8
DRGR		61.40	33	⇓P	P	07 57 06.9	+0.8
ARR	Arges	61.65	35	⇓P	P	07 57 08.9	+1.0
NIE	Niedzica	61.78	30	*e*P	P	07 57 09.6	+0.9
NIE				*e*L	L	08 22 58.6	
	comp=Z,1µm,19.8s						
NIE	Niedzica	61.78	30	*e*P	P	07 57 09.6	+0.9
VOIR		61.93	36	⇓P	P	07 57 10.0	+0.2
VOIR		61.93	36	⇓P	P	07 57 10.0	+0.2
OJC	Ojcow	62.06	29	*e*P	P	07 57 10.9	+0.5
OJC				*e*L	L	08 23 12.2	
	comp=Z,1µm,19.2s						
OJC	Ojcow	62.06	29	*e*P	P	07 57 10.9	+0.5
TRPA	Tarpa	62.12	32	⇑P	P	07 57 11.1	+0.3
UZH	Uzhgorod	62.30	31	⇑*e*P	P	07 57 12.4	+0.4
UZH				*i*		07 57 15.7	
UZH				*i*		07 57 20.6	
UZH				*e*		07 57 47.8	
UZH				*e*		08 00 54.8	
UZH				*e*S	S	08 05 35.3	-3.0
UZH				*e*		08 05 56.6	
UZH				*e*		08 06 57.6	
UZH				MLR	MLR		
	comp=N,310nm,15.0s						
UZH				MLR	MLR		
	comp=E,260nm,15.0s						
UZH				MLR	MLR		
	comp=Z,210nm,15.0s						
DOPR	Dopca	62.43	35	⇑P	P	07 57 13.4	+0.4
MLR	Muntele Rosu	62.48	36	⇓P	P	07 57 14.2	+0.6
MLR	Muntele Rosu	62.48	36	⇓P	P	07 57 14.2	+0.6
MLR	Muntele Rosu	62.48	36	P	P	07 57 14.0	+0.5
CSS	Mathiatis	62.57	49	IAMs_20	IAMs_20	08 29 15.5	
	comp=Z,2µm,19.0s						
OZUR		62.73	35	⇑P	P	07 57 16.0	+0.9
KWP	Kalwaria Pacla	63.13	31	IAMs_20	IAMs_20	08 25 52.5	
	comp=Z,2µm,18.0s						
VRI	Vrincioaia	63.15	36	⇑P	P	07 57 17.8	-0.1
VRI	Vrincioaia	63.15	36	⇑P	P	07 57 17.8	-0.1
BURAR	Bucovina Array	63.26	34	⇑P	P	07 57 19.5	+0.8
BURAR	Bucovina Array	63.26	34	⇑P	P	07 57 19.5	+0.8
BURAR	Bucovina Array	63.26	34	P	P	07 57 19.1	+0.4
BUR08	Bucovina Ar. S	63.27	34	IAmb	IAmb	07 57 20.9	
	comp=Z,31nm,1.4s						
BIZ	Bicaz	63.38	35	⇓P	P	07 57 20.0	+0.7
CFR	Carcaliu	63.62	37	⇓P	P	07 57 20.8	-0.2
CFR	Carcaliu	63.62	37	⇓P	P	07 57 20.8	-0.2
T59A	Double "B" Far	63.78	312	IAMs_20	IAMs_20	08 16 46.4	
	comp=Z,1µm,18.0s						
LVV	L'vov	63.92	31	*i* P	P	07 57 23.0	+0.1
LVV				*e*S	S	08 05 57.3	-1.3
LVV				*i* PS		08 06 23.8	
LVV				*e*SS	SS	08 10 03.7	-3.6
LVV				*e*SSS	SSS	08 12 54.6	
LVV				pmax	pmax		
	comp=Z,140nm,1.3s						
LVV				MLR	MLR		
	comp=N,800nm,15.0s						
LVV				MLR	MLR		
	comp=E,1µm,15.0s						
LVV				MLR	MLR		
	comp=Z,1µm,15.0s						
ANTO	Ankara	64.16	44	⇑P	P	07 57 25.2	+0.5
ANTO	Ankara	64.16	44	⇑P	P	07 57 25.2	+0.5
ANTO	Ankara	64.16	44	P	P	07 57 25.2	+0.5
R58B	Mineral	64.40	313	IAMs_20	IAMs_20	08 18 25.4	
	comp=Z,1µm,21.0s						
BRTR	Keskin Array B	64.69	45	P	P	07 57 28.2	-0.1
	comp=Z,15nm,0.8s,baz=235,slow=5.8,SNR=62						
BRTR				PP	PP	07 59 48.7	-1.9
	comp=Z,1.4nm,0.8s,baz=224,slow=7.2,SNR=3.4						
BRTR	Keskin Array B	64.69	45	*i* P	P	07 57 28.7	+0.4
BRTR				pmax	pmax		
	comp=Z,15nm,0.8s						
BRTR	Keskin Array B	64.69	45	P	P	07 57 28.3	0.0
BR131	Keskin Array S	64.69	45	IAmb	IAmb	07 57 29.3	
	comp=Z,25nm,0.9s						
KIS	Kishinev	64.98	36	*e*P	P	07 57 30.0	+0.2
KIS	Kishinev	64.98	36	*e*PP	PP	08 00 06.0	+13
KIS				*e*ScP		08 02 04.0	
KIS				*e*S	S	08 06 06.0	-5.7
S57A	Dark Hollow, R	65.11	313	IAMs_20	IAMs_20	08 21 41.7	
	comp=Z,1µm,20.0s						
KONO	Kongsberg	65.15	17	IAMs_20	IAMs_20	08 25 10.1	
	comp=Z,2µm,19.0s						
SORM	Soroca	65.31	34	⇓P	P	07 57 30.8	-1.1
SORM	Soroca	65.31	34	⇓P	P	07 57 30.8	-1.1
Q56A	Snyder Ridge,	65.77	314	P	P	07 57 36.5	+1.3
	baz=113						
SUW	Suwalki	66.11	27	IAMs_20	IAMs_20	08 25 53.0	
	comp=Z,1µm,20.0s						
O55A	Ligonier	66.30	315	P	P	07 57 39.5	+0.9
	baz=113						
NBO00	NORSAR Array S	66.62	17	P	P	07 57 40.0	-0.1
SCHQ	Schefferville	66.63	334	P	P	07 57 40.0	-0.3
	comp=Z,2.5nm,0.9s,baz=65,slow=14,SNR=2.1						
SCHQ				LR	LR	08 22 01.9	
	comp=Z,1µm,20.4s,baz=136,slow=32						
SCHQ	Schefferville	66.63	334	P	P	07 57 40.3	0.0
SCHQ				IAmb	IAmb	07 59 27.7	
	comp=Z,51nm,1.9s						
V54A	Nebo	66.66	310	P	P	07 57 41.7	+0.8
	baz=109						
WVNY	West Valley, N	66.70	318	IAmb	IAmb	07 58 15.4	
	comp=Z,36nm,1.2s						
NB2	NORSAR Subarra	66.75	17	P	P	07 57 40.9	-0.1
	comp=Z,40nm,2.0s,baz=211,slow=6.9						
NB2	NORSAR Subarra	66.75	17	P	P	07 57 40.9	-0.1
	baz=211,slow=6.9						
NOA	NORSAR Array B	66.75	17	P	P	07 57 41.2	+0.2
	comp=Z,2.8nm,0.9s,baz=216,slow=6.4,SNR=7.3						
KVT	Kavak	66.91	44	P	P	07 57 43.8	+1.3
NC303	NORSAR Array S	66.94	17	P	P	07 57 42.9	+0.7
O54A	Avella	67.05	315	P	P	07 57 44.0	+0.7
	baz=112						
AKASG	Malin Array Be	67.17	32	P	P	07 57 42.8	-1.0
	comp=Z,29nm,0.9s,baz=236,slow=6.5,SNR=78						
AKASG	Malin Array Be	67.17	32	*i* P	P	07 57 43.2	-0.6
AKASG				pmax	pmax		
	comp=Z,29nm,0.9s						
AKASG	Malin Array Be	67.17	32	P	P	07 57 42.4	-1.3
AKBB	Malin Array Si	67.17	32	IAMs_20	IAMs_20	08 27 38.4	
	comp=Z,1µm,20.0s						
T53A	Wise	67.50	311	P	P	07 57 47.6	+1.3
	baz=109						
MALT	Malatya	67.61	48	P	P	07 57 47.8	+0.8
N53A	Lisbon	67.61	315	P	P	07 57 47.8	+0.9
	baz=112						
L53A	Girard	67.64	317	P	P	07 57 45.9	-1.1
	baz=113						
G53A	Haliburton	67.86	320	P	P	07 57 48.6	+0.3
	baz=116						
TKL	Tuckaleechee C	68.03	309	IAMs_20	IAMs_20	08 20 45.0	
	comp=Z,1µm,22.0s						
P52A	Corning	68.11	314	P	P	07 57 50.5	+0.4
	baz=111						
NACGM	Naroch	68.31	28	*e*	P	07 57 50.0	-1.0
NACGM				*e*LQ	LQ	08 18 10.0	
NACGM				*e*LR	LR	08 20 02.0	
NACGM				LRM	MLR	08 24 36.0	
MICGM	Minsk	68.60	29	*e*	P	07 57 52.0	-0.7
MNK	Minsk	68.60	29	*e*P	P	07 57 52.0	-0.7
ACSO	Alum Creek Sta	68.93	314	IAmb	IAmb	07 58 11.0	
	comp=Z,17nm,0.9s						
ACSO	Alum Creek Sta	68.93	314	P	P	07 57 55.6	+0.5
	baz=110						
Z50A	Ashland	69.04	306	P	P	07 57 56.5	+0.6
Z50A				IAmb	IAmb	07 58 10.6	
	comp=Z,22nm,1.1s						
Z50A				IAMs_20	IAMs_20	08 20 55.8	
	comp=Z,1µm,18.0s						
Z50A	Ashland	69.04	306	P	P	07 57 56.7	+0.8
	baz=106						
T50A	Nancy	69.26	310	P	P	07 57 57.9	+0.7
	baz=108						
P50A	Jamestown	69.31	313	P	P	07 57 57.9	+0.4
	baz=110						
ANN	Anapa	69.31	41	*e*P	P	07 57 54.5	-2.9
ANN				*e**PP	pP	07 57 57.9	-1.3
ANN				*e*		07 58 17.9	
ANN				*e*		08 00 26.6	
ANN				*e*S	S	08 07 00.5	-3.6
ANN				*e*SSS	SSS	08 14 39.9	
ANN				pmax	pmax		
	comp=Z,143nm,1.2s						
M50A	Fremont	69.38	315	P	P	07 57 57.7	-0.1
M50A				IAmb	IAmb	07 58 38.8	
	comp=Z,20nm,0.9s						
L50A	Kingsville	69.44	316	P	P	07 57 58.9	+0.6
	baz=111						
T49A	Edmonton	69.82	310	P	P	07 58 01.3	+0.6
	baz=107						
U49A	Red Boiling Sp	69.83	310	IAmb	IAmb	07 58 16.9	
	comp=Z,19nm,0.9s						
S49A	Springfield	69.83	311	P	P	07 58 00.9	+0.1
	baz=108						
R49A	Shelbyville	69.90	312	P	P	07 58 01.6	+0.4
	baz=108						
M49A	Liberty Center	70.06	315	P	P	07 58 02.9	+0.8
	baz=110						
K49A	Clarkson	70.15	316	P	P	07 58 03.2	+0.5
	baz=111						
V48A	Smith Brothers	70.43	309	P	P	07 58 04.6	+0.1
VSU	Vasula	70.43	25	⇓*e*P	P	07 58 04.5	+0.6
D49A	Beulah Townshi	70.48	321	P	P	07 58 05.2	+0.6
	baz=114						
Q48A	North Vernon	70.52	312	P	P	07 58 05.4	+0.5
	baz=108						
L48A	N Adams	70.54	315	P	P	07 58 06.1	+1.0
	baz=110						
VNA2	Neumayer--Watz	70.57	175	P	P	07 58 06.7	+2.0
	baz=345,slow=6.5						
N48A	Decatur	70.61	314	P	P	07 58 05.9	+0.5
	baz=109						
E48A	Lockeyer	70.67	320	P	P	07 58 07.2	+1.5
	baz=113						
VNA3	Neumayer Olymp	70.70	176	P	P	07 58 07.5	+2.1
SFJD	Kangerlussuaq	70.70	348	*i* P	P	07 58 05.8	+0.3
SFJD	Kangerlussuaq	70.70	348	*e*P	P	07 58 05.8	+0.3
T47A	Sharon Grove	70.99	310	IAmb	IAmb	07 58 10.1	
	comp=Z,38nm,1.6s						
K47A	Vermontville	71.18	316	P	P	07 58 09.4	+0.5
	baz=110						
PLAL	Pickwick Lake	71.21	307	IAmb	IAmb	07 58 14.7	
	comp=Z,28nm,1.6s						
SCO	Scoresbysund	71.23	360	*i* P	P	07 58 10.1	+1.5
SCO	Scoresbysund	71.23	360	*e*P	P	07 58 10.1	+1.5
WVT	Waverly	71.32	309	P	P	07 58 09.5	-0.4
WVT				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WVT	Waverly	71.32	309	P	P	07 58 09.4	-0.4
E47A	Iron Bridge	71.37	320	P	P	07 58 10.2	+0.2
	baz=112						
D47A	Chapleau	71.49	321	P	P	07 58 10.8	+0.1
	baz=112						
GLMI	Grayling	71.66	318	P	P	07 58 12.1	+0.3
GLMI	Grayling	71.66	318	P	P	07 58 12.0	+0.3
	baz=111						
SNAA	Sanae	71.73	174	P	P	07 58 14.2	+2.5
SNAA	Sanae	71.73	174	P	P	07 58 12.9	+1.1
	comp=Z,2.5nm,0.9s,baz=20,slow=15,SNR=2.8						
SNAA	Sanae	71.73	174	P	P	07 58 12.6	+0.9
SNAA				pmax	pmax		
	comp=Z,15nm,1.0s						
SNAA	Sanae	71.73	174	P	P	07 58 12.6	+0.9
P46A	Rosedale	71.81	312	IAmb	IAmb	07 58 28.0	
	comp=Z,18nm,0.8s						
L46A	Eue Claire	71.88	315	IAMs_20	IAMs_20	08 24 10.8	
	comp=Z,2µm,20.0s						
FINES	FINESS Array B	72.01	22	P	P	07 58 14.1	+0.6
	comp=Z,19nm,1.0s,baz=208,slow=3.7,SNR=26						
FINES				PP	PP	08 00 50.6	-2.9
	comp=Z,2.5nm,0.9s,baz=179,slow=14,SNR=2.4						
FINES				LR	LR	08 29 28.2	
	comp=Z,703nm,19.3s,baz=235,slow=36						

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FINES FINESS Array B   72.01  22   P        P        07 58 13.2  -0.2
FIA1  FINESS Array S   72.01  22   IAmb     IAmb     07 58 15.3
      comp=Z,31nm,1.1s
D46A  Sault St. Mari   72.02 320   P        P        07 58 14.0  +0.1
      baz=112
W45A  Hickory Valley   72.14 307   IAmb     IAmb     07 58 28.5
      comp=Z,35nm,1.1s
NEY   Neytrino         72.32  44⇓iP         P        07 58 16.9  +0.9
NEY                                pmax     pmax
      comp=Z,4.0nm,1.0s
KIV   Kislovodsk       72.52  43 i P        P        07 58 16.8  -0.3
      SNR=7.3
KIV   Kislovodsk       72.52  43 eP         P        07 58 17.3  +0.2
KIV                              eS         S        08 07 42.2  +0.5
KIV                                pmax     pmax
      comp=Z,90nm,1.1s
KIV                                pmax     pmax
      comp=Z,369nm,4.5s
KIV   Kislovodsk       72.52  43   P        P        07 58 17.4  +0.3
KBZ   Khabaz           72.59  43   P        P        07 58 18.0  +0.6
      comp=Z,16nm,0.9s,baz=265,slow=2.9,SNR=20
KBZ                                LR       LR       08 31 31.7
      comp=Z,1μm,21.8s,baz=258,slow=37
KBZ   Khabaz           72.59  43   P        P        07 58 18.0  +0.6
ONI   Oni              72.62  45   P        P        07 58 18.2  +0.5
SIUC  Southern Illin   72.81 310   IAMs_20  IAMs_20  08 21 51.9
      comp=Z,1μm,18.0s
S44A  Carbondale       72.83 310   IAMs_20  IAMs_20  08 21 54.1
      comp=Z,1μm,19.0s
GNI   Garni            72.84  47   P        P        07 58 19.7  +0.6
      comp=Z,14nm,0.3s,baz=241,slow=12,SNR=3.2
GNI   Garni            72.84  47   P        P        07 58 19.3  +0.2
GNI                                pmax     pmax
      comp=Z,127nm,1.6s
GNI   Garni            72.84  47   P        P        07 58 19.3  +0.2
VORD  Divnogorie       72.92  35 eP         P        07 58 18.2  -0.9
VORD                               pmax     pmax
      comp=Z,20nm,0.9s
VSR   Storozhevoye     72.95  35 eP         P        07 58 18.6  -0.7
VSR                                pmax     pmax
      comp=Z,50nm,1.5s
Q44A  Meyer Farm, Va   72.96 311   IAMs_20  IAMs_20  08 29 53.6
      comp=Z,1μm,20.0s
ZEI   Tsey             73.00  45 eP         P        07 58 19.4  -0.7
ZEI                                pmax     pmax
      comp=Z,16nm,1.0s
NCK   Nalchik          73.00  44⇑eP         P        07 58 21.1  +1.2
NCK                                pmax     pmax
      comp=Z,20nm,0.4s
OBN   Obninsk          73.22  31⇓eP         P        07 58 19.3  -1.5
OBN                              e                   07 58 37.6
OBN                              ePPP       PPP      08 02 47.6
OBN                                pmax     pmax
      comp=Z,52nm,1.7s
OBN                                MLR      MLR
      comp=Z,906nm,17.0s
OBN   Obninsk          73.22  31   IAMs_20  IAMs_20  08 22 39.4
      comp=Z,1μm,20.0s
LPSR  Galich'ya Gora   73.38  34 eP         P        07 58 21.3  -0.5
LPSR                               pmax     pmax
      comp=Z,20nm,1.0s
MOS   Moscow           74.04  30 eP         P        07 58 24.2  -1.4
MOS                              e                   07 58 31.8
MOS                              e                   07 58 39.1
MOS                              e                   08 01 09.7
MOS                              eS         SKiKP    08 07 54.1  -0.2
MOS                              eSS        SS       08 12 38.3  -4.8
MOS                                pmax     pmax
      comp=Z,82nm,1.3s
MOS                                MLR      MLR
      comp=Z,800nm,17.0s
SUMG  Summit           74.08 355 i P        P        07 58 27.3  +1.2
      comp=Z,21nm,0.9s
SUMG  Summit           74.08 355 i P        P        07 58 27.3  +1.2
SUMG                               pmax     pmax
      comp=Z,21nm,0.9s
SUMG  Summit           74.08 355   P        P        07 58 26.2  +0.1
SUMG                               IAmb     IAmb     07 59 13.9
      comp=Z,26nm,1.3s
I42A  Draeger Farm,    74.28 316   IAMs_20  IAMs_20  08 23 13.7
      comp=Z,1μm,22.0s
LGD   Lagodekhi        74.39  46   P        P        07 58 28.7  +0.7
VRH   Novokhopyorsk    74.42  36 eP         P        07 58 26.8  -1.2
VRH                                pmax     pmax
      comp=Z,40nm,1.1s
CCM   Cathedral Cave   74.44 310   P        P        07 58 28.0  -0.4
CCM                                pmax     pmax
      comp=Z,17nm,1.2s
CCM   Cathedral Cave   74.44 310   P        P        07 58 28.0  -0.4
CCM   Cathedral Cave   74.44 310   P        P        07 58 28.3  -0.1
      baz=104
W41B  Gary Mavity, V   74.59 307   P        P        07 58 28.8  -0.5
W41B                               IAmb     IAmb     07 59 01.4
      comp=Z,50nm,1.8s
WLAR  White Oak Lake   74.98 305   IAmb     IAmb     07 59 04.4
      comp=Z,35nm,1.2s
D41A  Chassel          75.00 319   P        P        07 58 31.1  -0.3
D41A                               IAmb     IAmb     07 59 08.3
      comp=Z,58nm,1.7s
COWI  Conover          75.08 318   P        P        07 58 30.2  -1.7
R40A  Maddies Statio   75.28 310   P        P        07 58 32.0  -1.2
U40A  Yellville        75.32 308   P        P        07 58 33.1  -0.4
      baz=102
MAK   Makhachkala      75.59  45 eP         P        07 58 29.0  -5.9
MAK                              eS         SKiKP    08 08 07.3  +10
MAK                                pmax     pmax
      comp=Z,199nm,1.1s
MAK                                MLR      MLR
      comp=Z,488nm,11.0s
W39A  Magazine         75.82 307   P        P        07 58 36.5  +0.1
W39A                               IAmb     IAmb     07 59 07.5
      comp=Z,34nm,1.4s
W39A  Magazine         75.82 307   P        P        07 58 37.0  +0.6
      baz=101
HHAR  Hobbs            76.16 308   P        P        07 58 37.0  -1.3
WHFO  Wadi Hawf        76.57  71   P        P        07 58 41.2  +0.1
RBK   Rabkut           76.95  72   P        P        07 58 44.0  +0.8
      SNR=6.5
ARCES ARCESS Array B   77.04  15   LR       LR       08 32 15.2
      comp=Z,657nm,19.6s,baz=229,slow=35
KLMR  Klimovskoe       77.20  26 eP         P        07 58 41.2  -2.4
KLMR                               S        S        08 08 34.0  +1.1
KLMR                               SS       SS       08 13 35.5  +4.8
KLMR                               pmax     pmax
      comp=Z,57nm,1.5s
KLMR                               MLR      MLR
      comp=Z,1μm,17.0s
KLMR  Klimovskoe       77.20  26 eP         P        07 58 41.2  -2.4
KLMR                             eP         P        07 58 41.2  -2.4
KLMR                             eP         P        07 58 41.2  -2.4
KLMR                               AMP               07 58 44.9
      comp=Z,57nm,1.5s
KLMR                               S        S        08 08 34.1  +1.1
KLMR                               S        S        08 08 34.1  +1.1
KLMR                               SS       SS       08 13 35.6  +4.8
KLMR                               SS       SS       08 13 35.6  +4.8
KLMR                               LQ       LQ       08 22 11.4
KLMR                               LQ       LQ       08 22 11.4
KLMR                               LR       LR       08 24 16.2
KLMR                               AMP               08 33 13.0
      comp=Z,1μm,17.3s
DAG   Danmarks Havn    77.57   1 i P        P        07 58 46.5  +1.1
      comp=Z,6.6nm,0.8s
DAG   Danmarks Havn    77.57   1 i P        P        07 58 46.5  +1.1
DAG                                pmax     pmax
      comp=Z,7.0nm,0.8s
DMTO  DMTO             77.67  72   P        P        07 58 46.8  -0.3
APA   Apatity          78.18  19⇓iP         PcP      07 58 58.7  +0.3
APA                                pmax     pmax
      comp=Z,13nm,0.9s
W35A  Tecumseh         78.31 306   P        P        07 58 50.1  -0.3
T35A  Sooner Cattle    78.31 308   IAmb     IAmb     07 59 05.5
      comp=Z,20nm,0.9s
Z35A  Perchaven, San   78.33 304   P        P        07 58 50.6   0.0
SHAO  Shalim           78.34  72   P        P        07 58 50.6  -0.3
SHAO  Shalim           78.34  72   P        P        07 58 52.2  +1.3
LVZ   Lovozero         78.75  19⇓eP         P        07 58 53.7  +1.5
LVZ                                pmax     pmax
      comp=Z,46nm,1.7s
OKCFA Oklahoma City    78.81 306   IAMs_20  IAMs_20  08 26 03.6
      comp=Z,1μm,18.0s
SYO   Syowa Base       79.25 161⇑iP         P        07 58 53.0  -1.8
SYO   Syowa Base       79.25 161⇓ipP        P        07 58 55.4  +0.6
ASHO  Ashiyiah         79.36  65   P        P        07 58 55.9  -0.5
ASHO  Ashiyiah         79.36  65   P        P        07 58 56.8  +0.3
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      SNR=11
HATD  Hatta, Dubai     79.44  65 i P        P        07 58 56.6  -0.3
      SNR=10
HATD  Hatta, Dubai     79.44  65   P        P        07 58 56.8  -0.1
833A  Chaparral WMA,   79.48 299   IAmb     IAmb     07 59 37.1
      comp=Z,25nm,1.2s
UOSS  Minazif          79.52  65 i P        P        07 58 56.4  -0.8
      SNR=17
UOSS  Minazif          79.52  65   P        P        07 58 57.0  -0.3
UOSS                               P        P        07 58 57.0  -0.3
UOSS  Minazif          79.52  65   P        P        07 58 56.5  -0.7
UOSS                               IAmb     IAmb     07 58 58.0
      comp=Z,37nm,0.9s
UOSS  Minazif          79.52  65   IAMs_20  IAMs_20  08 31 19.8
      comp=Z,1μm,21.0s
ECSD  EROS Data Cent   79.64 315   P        P        07 58 56.8  -0.8
      baz=101
ARQ   Araqi            79.65  66   P        P        07 58 59.0  +1.0
      SNR=14
BANOM Banah            79.70  64   P        P        07 58 57.5  -0.8
BANOM Banah            79.70  64   P        P        07 58 58.1  -0.2
      SNR=5.1
SOHO  SOHO             79.73  65   P        P        07 58 58.7  +0.2
      SNR=16
WMOK  Wichita Mounta   79.79 305   P        P        07 58 58.1  -0.5
WMOK  Wichita Mounta   79.79 305   P        P        07 58 58.3  -0.2
      baz=98
AGMN  Agassiz Nation   80.08 319   P        P        07 58 59.3  -0.4
AGMN  Agassiz Nation   80.08 319   P        P        07 58 59.5  -0.3
      baz=103
BSY   Bisya            80.22  67   P        P        07 59 01.3  +0.2
      SNR=9.1
ABTX  Abilene, Hawle   80.22 303   IAmb     IAmb     07 59 27.5
      comp=Z,34nm,1.4s
ABTX  Abilene, Hawle   80.22 303   P        P        07 59 01.3  +0.4
      baz=97
PRGR  Permogore        80.22  27 eP         P        07 58 59.3  -0.9
PRGR                               pmax     pmax
      comp=Z,28nm,1.0s
BGNE  Belgrade         80.34 312   IAMs_20  IAMs_20  08 29 21.8
      comp=Z,1μm,21.0s
ULM   Lac du Bonnet    80.51 321   P        P        07 59 01.4  -0.7
      comp=Z,2.4nm,0.8s,baz=55,slow=5.3,SNR=4.3
ULM                                LR       LR       08 28 53.5
      comp=Z,1μm,21.8s,baz=103,slow=31
ULM   Lac du Bonnet    80.51 321   P        P        07 59 00.7  -1.4
ULM                                pmax     pmax
      comp=Z,7.0nm,0.8s
ULM   Lac du Bonnet    80.51 321   P        P        07 59 00.7  -1.4
K31A  O'Neill          80.98 313   P        P        07 59 04.1  -0.7
K31A                               IAmb     IAmb     07 59 30.5
      comp=Z,31nm,1.0s
SMDO  Samad            81.02  67   P        P        07 59 05.6  +0.1
      SNR=16
CBKS  Cedar Bluff      81.13 309   IAmb     IAmb     07 59 25.8
      comp=Z,30nm,1.2s
WSAR  Wadi Sarin       81.57  66   P        P        07 59 07.2  -1.1
      comp=Z,9.1nm,1.0s,baz=260,slow=7.0,SNR=9.5
WBK   Wadi Bani Khal   81.83  67   P        P        07 59 10.1  +0.3
GEYT  Alibeck          82.60  52   P        P        07 59 13.7  +0.3
      comp=Z,2.2nm,0.7s,baz=352,slow=4.5,SNR=5.9
GEYT  Alibeck          82.60  52   P        P        07 59 13.0  -0.5
ASHT  Ashkhabad        82.81  52   IAMs_20  IAMs_20  08 32 11.4
      comp=Z,1μm,22.0s
MSTX  Muleshoe         82.97 304   IAmb     IAmb     07 59 42.4
      comp=Z,26nm,1.1s
MSTX  Muleshoe         82.97 304   P        P        07 59 16.6  +1.0
      baz=96
E28A  Huff             82.98 317   IAMs_20  IAMs_20  08 28 09.6
      comp=Z,1μm,21.0s
OGNE  Ogallala         83.17 311   P        P        07 59 17.2  +0.8
      baz=97
TXAR  Lajitas Array    83.31 300   P        P        07 59 17.3  -0.1
      comp=Z,1.3nm,0.9s,baz=124,slow=6.7,SNR=12
TXAR  Lajitas Array    83.31 300   P        P        07 59 16.8  -0.6
TXAR  Lajitas Array    83.31 300   P        P        07 59 16.8  -0.6
AKTO  Aktyubinsk       84.19  39   P        P        07 59 21.9  +0.5
      comp=Z,5.4nm,1.0s,baz=237,slow=5.9,SNR=9.5
AKTO                               PP       PP       08 02 35.8   0.0
      comp=Z,3.1nm,1.0s,baz=252,slow=7.2,SNR=3.6
FFC   Flin Flon        85.02 325ceP         P        07 59 26.9  +1.5
FFC                                pmax     pmax
      comp=Z,41nm,2.5s
FFC   Flin Flon        85.02 325   P        P        07 59 26.5  +1.1
FFC                                IAMs_20  IAMs_20  08 30 18.2
      comp=Z,1μm,22.0s
ABKAR Akbulak array    85.27  41   P        P        07 59 26.1  -0.7
ARU   Arti             85.40  33   P        P        07 59 27.5  +0.2
      comp=Z,2.0nm,0.7s,baz=211,slow=4.3,SNR=12
ARU   Arti             85.40  33c iP        P        07 59 27.8  +0.5
ARU                                                  08 02 44.9
ARU                                PPP      PPP      08 04 38.3
ARU                                S        S        08 09 52.7  -5.6
ARU                                pmax     pmax
      comp=Z,21nm,1.1s
ARU   Arti             85.40  33   P        P        07 59 26.8  -0.4
ARU                                IAmb     IAmb     07 59 29.0
      comp=Z,20nm,1.1s
SDCO  Great Sand Dun   85.52 308   P        P        07 59 29.7  +1.0
      baz=95
DGMT  Dagmar           85.58 319   IAmb     IAmb     07 59 42.5
      comp=Z,13nm,0.8s
DGMT  Dagmar           85.58 319   IAMs_20  IAMs_20  08 35 38.3
      comp=Z,1μm,19.0s
HRA   Herat            85.59  56   IAMs_20  IAMs_20  08 40 13.2
      comp=Z,1μm,20.0s
ISCO  Idaho Springs    85.77 310   P        P        07 59 29.0  -0.9
      baz=95
ANMO  Albuquerque      86.09 305   P        P        07 59 31.6  +0.1
      comp=Z,1.5nm,0.8s,baz=94,slow=6.8,SNR=6.4
ANMO  Albuquerque      86.09 305   P        P        07 59 31.5  +0.1
ANMO                               pmax     pmax
      comp=Z,8.0nm,1.0s
ANMO  Albuquerque      86.09 305   P        P        07 59 31.5  +0.1
ANMO  Albuquerque      86.09 305   IAMs_20  IAMs_20  08 33 53.2
      comp=Z,1μm,21.0s
ANMO  Albuquerque      86.09 305   P        P        07 59 32.6  +1.1
      baz=94
RES   Resolute Bay     86.40 345   P        P        07 59 31.9  +0.1
      comp=Z,1.9nm,0.9s,baz=112,slow=3.9,SNR=7.1
RES   Resolute Bay     86.40 345   P        P        07 59 32.0  +0.1
RES   Resolute Bay     86.40 345   P        P        07 59 32.8  +0.9
RES                                IAmb     IAmb     08 00 25.1
      comp=Z,23nm,1.7s
LAO   LASA Array       86.78 317   IAmb     IAmb     08 00 00.9
      comp=Z,25nm,1.1s
LAO   LASA Array       86.78 317   P        P        07 59 35.0  +0.5
      baz=95
MAW   Mawson           87.17 158   LR       LR       08 30 25.3
      comp=Z,1μm,20.7s,baz=282,slow=30
O20A  White River Ci   87.81 310   IAmb     IAmb     08 00 02.3
      comp=Z,24nm,1.4s
O20A  White River Ci   87.81 310   P        P        07 59 40.4  +0.7
      baz=93
MVCO  Mesa Verde       87.87 307   P        P        07 59 41.6  +1.4
      baz=93
PV01  Paradox Valley   87.97 308   P        P        07 59 41.9  +1.3
PV01                               IAmb     IAmb     08 00 07.6
      comp=Z,11nm,1.2s
PV12  Saucer Basin,    88.16 308   P        P        07 59 41.9  +0.4
PV12                               IAmb     IAmb     08 00 08.5
      comp=Z,16nm,1.1s
PV12                               IAMs_20  IAMs_20  08 38 57.9
      comp=Z,1μm,22.0s
PV13  Radium Mtn., P   88.17 308   IAmb     IAmb     08 00 08.5
      comp=Z,22nm,1.0s
PV03  Paradox Valley   88.19 308   IAmb     IAmb     08 00 02.5
      comp=Z,32nm,1.5s
PV11  David Mesa, Pa   88.21 308   P        P        07 59 42.3  +0.6
PV18  Skein Mesa, Pa   88.24 308   IAmb     IAmb     08 00 08.7
      comp=Z,17nm,1.1s
PV18                               IAMs_20  IAMs_20  08 33 06.1
      comp=Z,979nm,20.0s
PV04  Paradox Valley   88.24 308   IAmb     IAmb     08 00 08.7
      comp=Z,18nm,1.1s
PV17  East Wray Mesa   88.28 308   IAmb     IAmb     08 00 08.9
      comp=Z,15nm,0.9s
PV20  West Nyswonger   88.29 308   P        P        07 59 42.7  +0.7
PV20                               IAmb     IAmb     08 00 03.5
      comp=Z,12nm,0.8s
PV19  Morning Glory    88.30 308   IAmb     IAmb     08 00 03.1
      comp=Z,27nm,1.3s
PV19                               IAMs_20  IAMs_20  08 30 41.7
      comp=Z,888nm,21.0s
PV21  Cone Mtn., Par   88.31 308   IAmb     IAmb     08 00 07.0
      comp=Z,27nm,1.5s
PV23  Carpenter Ridg   88.33 308   P        P        07 59 42.8  +0.5
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PV23                               IAmb     IAmb     08 00 09.3
      comp=Z,14nm,0.8s
PV14  Lion Creek, Pa   88.33 308   IAmb     IAmb     08 00 02.5
      comp=Z,17nm,0.9s
PV05  Paradox Valley   88.38 308   P        P        07 59 41.9  -0.6
PV05                               IAmb     IAmb     08 00 08.9
      comp=Z,16nm,0.9s
RLMT  Red Lodge        88.80 315   IAmb     IAmb     07 59 45.2
      comp=Z,16nm,1.0s
RLMT  Red Lodge        88.80 315   P        P        07 59 41.6  -2.8
      baz=92
RDMU  Red Mountain     88.84 310   P        P        07 59 45.0  +0.3
PDAR  Pinedale Array   88.92 313   P        P        07 59 44.5  -0.5
      comp=Z,0.3nm,0.7s,baz=126,slow=4.6,SNR=3.8
PDAR                               LR       LR       08 34 28.3
      comp=Z,631nm,21.4s,baz=103,slow=32
PDAR  Pinedale Array   88.92 313   P        P        07 59 44.6  -0.3
BW06  Boulder Array    88.92 313   IAMs_20  IAMs_20  08 34 28.8
      comp=Z,854nm,21.0s
X18A  Snowflake        88.94 304   IAmb     IAmb     08 00 06.2
      comp=Z,16nm,1.4s
QSPA  South Pole Qui   89.20 180   P        P        07 59 46.2  +0.5
EGMT  Eagleton         89.25 318   IAMs_20  IAMs_20  08 33 15.5
      comp=Z,1μm,21.0s
FLWY  Flagg Ranch      89.79 314   IAMs_20  IAMs_20  08 35 07.3
      comp=Z,1μm,21.0s
REDW  Red Top Meadow   89.88 313   IAmb     IAmb     08 00 09.4
      comp=Z,13nm,1.1s
YHH   Holmes Hill      89.92 315   P        P        07 59 50.3  +0.6
IMW   Indian Meadow    89.96 314   IAMs_20  IAMs_20  08 35 13.3
      comp=Z,1μm,20.0s
TPAW  Teton Pass       89.96 313   P        P        07 59 49.9   0.0
WUAZ  Wupatki          90.13 305   IAmb     IAmb     08 00 04.4
      comp=Z,21nm,1.6s
WUAZ  Wupatki          90.13 305   P        P        07 59 52.3  +1.5
      baz=91
X16A  Lo Mia Camp, P   90.17 304   P        P        07 59 51.9  +0.9
TAS   Tashkent         91.41  49   IAMs_20  IAMs_20  08 43 17.8
      comp=Z,941nm,18.0s
Y14A  Wickenburg       91.46 304   IAmb     IAmb     08 00 21.6
      comp=Z,16nm,1.7s
BRVK  Borovoye         91.96  37⇑eP         P        07 59 58.7  +0.1
BRVK                               pmax     pmax
      comp=Z,5.0nm,1.5s
BRVK  Borovoye         91.96  37   IAMs_20  IAMs_20  08 41 42.6
      comp=Z,856nm,19.0s
BVAR  Borovoye Array   92.03  37   P        P        07 59 58.9  -0.1
      comp=Z,0.2nm,0.4s,baz=296,slow=44,SNR=2.7
YKA   Yellowknife Ar   92.06 332   P        P        07 59 58.5  -0.4
      comp=Z,2.8nm,0.7s,baz=96,slow=5.4,SNR=63
YKA                                LR       LR       08 38 15.8
      comp=Z,1μm,19.7s,baz=0.0,slow=34
JTMT  Jette            92.30 318   IAMs_20  IAMs_20  08 35 09.1
      comp=Z,843nm,21.0s
KKAR  Karatay Array    92.30  47   P        P        08 00 00.1  -0.4
KKAR  Karatay Array    92.30  47   P        P        08 00 00.1  -0.4
MFID  Camas Ranch      93.51 313   IAMs_20  IAMs_20  08 37 08.3
      comp=Z,890nm,20.0s
F10A  Beach Ranch, E   94.39 316   IAMs_20  IAMs_20  08 44 43.4
      comp=Z,827nm,19.0s
NIL   Nilore           94.71  56   IAMs_20  IAMs_20  08 39 43.3
      comp=Z,925nm,20.0s
C09A  Chrisman Ranch   94.98 318   IAMs_20  IAMs_20  08 37 28.1
      comp=Z,1μm,21.0s
E09A  Wood Farm, Sta   94.99 316   IAMs_20  IAMs_20  08 39 01.3
      comp=Z,731nm,18.0s
AAK   Ala-Archa        95.24  47   P        P        08 00 14.4  +0.2
      comp=Z,1.6nm,0.9s,baz=215,slow=7.5,SNR=4.4
AAK   Ala-Archa        95.24  47⇑eP         P        08 00 14.7  +0.5
AAK                                pmax     pmax
      comp=Z,5.0nm,1.2s
AAK   Ala-Archa        95.24  47   P        P        08 00 13.7  -0.5
AAK                                IAmb     IAmb     08 00 41.4
      comp=Z,9.8nm,1.4s
FRU1  Bishkek          95.33  47   IAMs_20  IAMs_20  08 43 40.1
      comp=Z,835nm,20.0s
NVAR  Mina Array Bea   95.62 308   LR       LR       08 39 17.0
      comp=Z,194nm,22.0s,baz=100,slow=33
I07A  Izee             96.13 314   IAMs_20  IAMs_20  08 41 04.6
      comp=Z,945nm,20.0s
BOOM  Boomskoye usch   96.32  48   IAMs_20  IAMs_20  08 41 25.5
      comp=Z,883nm,22.0s
PAHR  Pah Rah Range    96.38 310   IAMs_20  IAMs_20  08 45 10.4
      comp=Z,739nm,18.0s
WAKR  Walker           96.51 308   IAMs_20  IAMs_20  08 37 40.9
      comp=Z,831nm,22.0s
KSH   Kashi            96.58  50   P        P        08 00 20.5  +0.2
KSH                                sP       pwP      08 00 27.8  -0.3
KSH                                SKS      SKSac    08 10 55.0  -2.6
KSH                                S        S        08 11 36.8  -5.0
KSH                                sS       pS       08 11 44.8  +0.6
KSH                                pmax     pmax
      comp=Z,9.0nm,0.8s
KSH                                pmax     pmax
      comp=Z,89nm,5.7s
KSH                                LR       LR
      comp=Z,270nm,13.3s
KSH                                LR       LR
      comp=Z,790nm,13.9s
KSH                                LR       LR
      comp=Z,2μm,16.4s
LTY   Liberty          96.65 317   IAMs_20  IAMs_20  08 38 51.2
      comp=Z,843nm,21.0s
KURBB Kurchatov Arra   97.25  39   P        P        08 00 22.4  -0.4
      comp=Z,0.2nm,0.7s,baz=123,slow=8.9,SNR=4.0
KURBB                              PP       PP       08 04 15.6  -3.6
      comp=Z,3.4nm,1.2s,baz=282,slow=8.1,SNR=6.2
KURK  Kurchatov        97.29  39   P        P        08 00 22.3  -0.8
KURK                               pmax     pmax
      comp=Z,7.0nm,1.1s
KURK                               MLR      MLR
      comp=Z,600nm,19.0s
KURK  Kurchatov        97.29  39   P        P        08 00 22.2  -0.8
KURK                               IAmb     IAmb     08 04 16.7
      comp=Z,7.2nm,1.1s
LON   Longmire         97.48 317   IAMs_20  IAMs_20  08 36 19.2
      comp=Z,941nm,21.0s
NRIK  Noril'sk         97.58  20   LR       LR       08 48 31.8
      comp=Z,890nm,18.2s,baz=300,slow=38
F04A  Amboy            98.00 316   IAMs_20  IAMs_20  08 40 18.9
      comp=Z,1μm,21.0s
HUMO  Hull Mountain    98.78 313   IAMs_20  IAMs_20  08 40 18.9
      comp=Z,904nm,21.0s
MAKZ  Makanchi        100.07  43   IAMs_20  IAMs_20  08 49 28.1
      comp=Z,969nm,20.0s
MKAR  Makanchi Array  100.28  43   P        Pdif     08 00 35.4  -1.2
      comp=Z,0.5nm,0.9s,baz=37,slow=0.7,SNR=2.6
ZALV  Zalesovo Beam   100.45  35   PP       PP       08 04 38.0  -5.5
      comp=Z,1.1nm,0.7s,baz=277,slow=5.8,SNR=3.6
FYU   Fort Yukon      103.53 340   IAMs_20  IAMs_20  08 43 44.5
      comp=Z,648nm,20.0s
PRP   Porcupine Dome  104.18 339   IAMs_20  IAMs_20  08 42 56.5
      comp=Z,896nm,20.0s
SCRK  Sand Creek      104.38 337   IAMs_20  IAMs_20  08 40 49.8
      comp=Z,856nm,21.0s
WMQ   Urumqi          104.61  45   IAMs_20  IAMs_20  08 49 55.8
      comp=Z,710nm,19.0s
MENT  Mentasta        104.78 336   IAMs_20  IAMs_20  08 47 24.4
      comp=Z,946nm,19.0s
BALM  Baldy           105.09 334   IAMs_20  IAMs_20  08 46 20.7
      comp=Z,893nm,20.0s
MCARA McCarthy VSAT   105.22 335   IAMs_20  IAMs_20  08 42 44.3
      comp=Z,601nm,20.0s
COLA  College         105.35 339   IAMs_20  IAMs_20  08 45 08.6
      comp=Z,890nm,19.0s
CCB   Clear Creek Bu  105.46 339   IAMs_20  IAMs_20  08 46 24.3
      comp=Z,817nm,19.0s
CRQM  Cirque          105.56 334   IAMs_20  IAMs_20  08 43 28.8
      comp=Z,1μm,22.0s
WRH   Wood River Hil  105.66 339   IAMs_20  IAMs_20  08 45 19.6
      comp=Z,862nm,21.0s
NEA   Nenana          105.96 339   IAMs_20  IAMs_20  08 41 24.1
      comp=Z,976nm,22.0s
DHY   Denali Highway  106.15 337   IAMs_20  IAMs_20  08 47 31.5
      comp=Z,755nm,19.0s
MLY   Manley          106.28 340   IAMs_20  IAMs_20  08 42 19.9
      comp=Z,785nm,20.0s
BWN   Browne          106.32 339   IAMs_20  IAMs_20  08 41 45.6
      comp=Z,899nm,20.0s
MCK   McKinley        106.38 338   IAMs_20  IAMs_20  08 47 39.6
      comp=Z,762nm,20.0s
RND   Reindeer        106.53 338   IAMs_20  IAMs_20  08 42 05.7
      comp=Z,1μm,22.0s
BPAW  Bear Paw Mtn.   106.91 339   IAMs_20  IAMs_20  08 44 31.7
      comp=Z,705nm,19.0s
FID   Port Fidalgo    107.00 335   IAMs_20  IAMs_20  08 40 36.9
      comp=Z,960nm,22.0s
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SML	Sawmill	107.21	336	IAMs_20	IAMs_20	08 49 00.6	
	comp=Z,876nm,19.0s						
KTH	Kantishna Hill	107.21	339	IAMs_20	IAMs_20	08 42 24.6	
	comp=Z,882nm,21.0s						
PMR	Palmer	107.64	336	IAMs_20	IAMs_20	08 48 28.1	
	comp=Z,897nm,19.0s						
PPLA	Purkeypile	108.06	338	IAMs_20	IAMs_20	08 42 52.1	
	comp=Z,947nm,21.0s						
SUA	Susitna One	108.36	337	IAMs_20	IAMs_20	08 47 14.0	
	comp=Z,873nm,20.0s						
LSA	Lhasa	110.30	59	IAMs_20	IAMs_20	08 49 28.2	
	comp=Z,774nm,19.0s						
ANM	Nome	111.16	344	IAMs_20	IAMs_20	08 46 28.9	
	comp=Z,704nm,20.0s						
TLY	Talaya	111.90	33	IAMs_20	IAMs_20	08 58 55.6	
	comp=Z,690nm,19.0s						
BILL	Bilibino	112.73	357	⇓iPKIKP	PKiKP	08 05 25.0	-1.3
BILL				e		08 06 13.4	
BILL				ePPP	PPP	08 08 39.9	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,252nm,17.0s						
GTA	Gaotai	114.58	46	ePKP	PKiKP	08 05 31.3	+0.5
GTA				LR	LR		
	comp=Z,710nm,24.8s						
GTA				LR	LR		
	comp=Z,650nm,23.4s						
GTA				LR	LR		
	comp=Z,910nm,24.8s						
CHGN	Chignik	114.67	335	IAMs_20	IAMs_20	08 49 39.0	
	comp=Z,860nm,20.0s						
YAK	Yakutsk	115.32	14	IAMs_20	IAMs_20	08 55 38.7	
	comp=Z,724nm,22.0s						
SONM	Songino Array	115.34	36	PP	PP	08 06 27.4	-5.1
	comp=Z,0.6nm,0.8s,baz=332,slow=2.2,SNR=4.9						
ULN	Ulaanbaatar	115.71	36	⇑iPKIKP	PKiKP	08 05 31.6	-1.2
LZH	Lanzhou	118.76	49	ePKP	PKPdf	08 05 35.3	-3.7
LZH				SKKS		08 13 46.5	
LZH				SS	SS	08 23 12.8	-3.2
LZH				LR	LR		
	comp=Z,590nm,18.4s						
LZH				LR	LR		
	comp=Z,600nm,17.7s						
LZH				LR	LR		
	comp=Z,580nm,19.5s						
CD2	Chengdu	120.52	54	PKP	PKPdf	08 05 41.5	-0.9
CD2				PP	PP	08 07 08.8	-0.2
CD2				SS	SS	08 23 36.8	-2.0
CD2				AMB	AMB		
	comp=Z,200nm,7.1s						
CD2				LR	LR		
	comp=Z,1μm,17.2s						
CD2				LR	LR		
	comp=Z,900nm,21.6s						
CD2				LR	LR		
	comp=Z,980nm,21.6s						
HIA	Hailar	121.63	29	IAMs_20	IAMs_20	08 59 52.3	
	comp=Z,799nm,22.0s						
HHC	Hu-ho-hao-te	122.07	41	ePKP	PKPdf	08 05 45.8	+0.6
XAN	Xi'an	123.39	49	IAMs_20	IAMs_20	08 59 25.4	
	comp=Z,766nm,20.0s						
TBI	Tubuai	123.73	241	ePS	PS	08 17 24.1	-5.0
	comp=Z,125nm,28.8s						
TBI				eSS	SS	08 24 15.4	-4.6
	comp=Z,1μm,30.5s						
TBI	Tubuai	123.73	241	eLQ	LQ	08 38 42.0	
	comp=Z,2μm,35.8s						
TBI				eLR	LR	08 44 10.2	
	comp=Z,1μm,26.2s						
GYA	Guiyang	124.37	58	ePKP	PKPdf	08 05 48.0	-2.0
GYA				PP	PP	08 07 41.8	+6.4
GYA				PKS		08 09 24.5	
GYA				SKKS		08 14 34.0	
GYA				SS	SS	08 24 22.3	-6.0
GYA				AMB	AMB		
	comp=Z,50nm,8.5s						
GYA				LR	LR		
	comp=Z,430nm,16.9s						
GYA				LR	LR		
	comp=Z,400nm,23.2s						
GYA				LR	LR		
	comp=Z,760nm,25.1s						
ENH	Enshi	125.35	53	IAMs_20	IAMs_20	09 07 43.9	
	comp=Z,579nm,20.0s						
PPT2	Papeete2	125.41	248	eLQ	LQ	08 39 15.3	
	comp=Z,3μm,34.8s						
PPT2				eLR	LR	08 44 54.4	
	comp=Z,487nm,27.0s						
MYKOM	Kota Tinggi	125.68	88	IAMs_20	IAMs_20	08 53 53.1	
	comp=Z,607nm,22.0s						
CN2	Changchun	128.28	30	ePKP	PKPdf	08 05 52.8	-4.0
CN2				SS	SS	08 25 12.5	-2.3
CN2				LR	LR		
	comp=Z,700nm,16.0s						
CN2				LR	LR		
	comp=Z,400nm,16.0s						
CN2				LR	LR		
	comp=Z,700nm,16.0s						
WHN	Wuhan	129.05	50	PKP	PKPdf	08 05 55.0	-3.6
QIZ	Qiongzhong	129.33	66	PKP	PKPdf	08 05 57.5	-2.0
QIZ				PP	PP	08 08 07.0	-1.4
QIZ				SS	SS	08 25 34.0	+3.6
QIZ				LR	LR		
	comp=Z,350nm,22.6s						
QIZ				LR	LR		
	comp=Z,340nm,23.5s						
QIZ				LR	LR		
	comp=Z,440nm,22.6s						
MDJ	Mudanjiang	129.62	26	IAMs_20	IAMs_20	09 06 45.2	
	comp=Z,558nm,19.0s						
MORW	Morawa	129.93	130	IAMs_20	IAMs_20	08 55 01.3	
	comp=Z,511nm,20.0s						
USA0B	Ussuriysk Arra	130.98	25	IAMs_20	IAMs_20	09 04 31.3	
	comp=Z,628nm,21.0s						
NJ2	Nanjing	131.67	46	ePKP	PKPdf	08 06 04.5	+0.9
NJ2				LR	LR		
	comp=Z,710nm,24.6s						
NJ2				LR	LR		
	comp=Z,550nm,22.7s						
NJ2				LR	LR		
	comp=Z,960nm,23.5s						
HKPS	Hong Kong Po S	132.18	60	IAMs_20	IAMs_20	09 09 08.4	
	comp=Z,434nm,20.0s						
SSE	Sheshan	133.86	46	IAMs_20	IAMs_20	09 05 59.0	
	comp=Z,684nm,21.0s						
KSRS	Korea Array	134.15	34	PP	PP	08 08 36.7	-1.4
	comp=Z,1.6nm,0.9s,baz=310,slow=7.8,SNR=6.3						
KNMB	Chin-men Tao	134.94	55	IAMs_20	IAMs_20	09 05 14.2	
	comp=Z,549nm,20.0s						
ERM	Erimo	136.86	16	IAMs_20	IAMs_20	09 09 40.9	
	comp=Z,615nm,21.0s						
YHNB	Yeheng	137.28	53	IAMs_20	IAMs_20	09 08 02.8	
	comp=Z,564nm,21.0s						
TPUB	Ta-pu	137.29	56	IAMs_20	IAMs_20	09 07 27.5	
	comp=Z,502nm,22.0s						
SSLB	Suanglung	137.34	55	IAMs_20	IAMs_20	09 12 39.7	
	comp=Z,482nm,20.0s						
NACB	Ninganchiao	137.69	54	IAMs_20	IAMs_20	09 09 06.7	
	comp=Z,588nm,22.0s						
YULB	Yu-li	137.80	55	IAMs_20	IAMs_20	09 06 04.9	
	comp=Z,427nm,20.0s						
KKM	Kota Kinabalu	137.82	82	IAMs_20	IAMs_20	09 09 19.7	
	comp=Z,445nm,19.0s						
MAJO	Matsushiro	139.98	25	IAMs_20	IAMs_20	09 10 36.2	
	comp=Z,604nm,20.0s						
INU	Inuyama	140.44	28	IAMs_20	IAMs_20	09 13 19.1	
	comp=Z,553nm,19.0s						
KAPI	Kappang	141.18	99	IAMs_20	IAMs_20	09 09 18.5	
	comp=Z,437nm,20.0s						
MMRI	Maumere	142.96	106	IAMs_20	IAMs_20	09 22 41.6	
	comp=Z,373nm,19.0s						
STKA	Stephens Creek	143.84	156	PKP	PKPab	08 06 23.7	+0.8
	comp=Z,2.0nm,0.7s,baz=34,slow=2.7,SNR=7.8						
STKA	Stephens Creek	143.84	156		PKPab	08 06 20.2	-2.7
ASAR	Alice Springs	146.07	138	PKPbc	PKPdf	08 06 30.9	+0.8
	comp=Z,6.2nm,0.8s,baz=207,slow=2.5,SNR=64						
ASAR	Alice Springs	146.07	138	PKP2	PKPdf	08 06 30.3	+0.2
ASAR	Alice Springs	146.07	138		PKPdf	08 06 30.2	+0.2
AS31	Alice Springs	146.07	138		PKPdf	08 06 30.9	+0.8
KNRA	Kununurra	146.61	121		PKPbc	08 06 33.2	+0.6
WRA	Warramunga Arr	148.79	133	PKPbc	PKPbc	08 06 38.0	-0.5
	comp=Z,2.8nm,1.0s,baz=242,slow=2.4,SNR=9.1						
WRA	Warramunga Arr	148.79	133	PKP2	PKPbc	08 06 37.3	-1.2
WRA	Warramunga Arr	148.79	133		PKPbc	08 06 37.2	-1.2
WB2	Warramunga Arr	148.80	133		PKPbc	08 06 38.2	-0.3
WRAB	Tennant Creek	148.81	133	c iPKP2	PKPbc	08 06 39.0	+0.5
WRAB				pmax	pmax		
	comp=Z,7.0nm,1.7s						
WR0	Warramunga Arr	148.93	133		PKPbc	08 06 38.7	-0.2
WB0	Warramunga Arr	148.94	133		PKPbc	08 06 39.4	+0.5
MTN	Manton Dam	149.91	118		PKPbc	08 06 41.0	-0.4
DZM	Mont Dzumac	155.81	199	eSS	SS	08 30 40.4	+6.4
	comp=Z,2μm,25.6s						
DZM	Mont Dzumac	155.81	199	eLR	LR	08 58 55.7	
	comp=Z,1μm,34.0s						

NIED ***29*** *07:47:00, 40°.90N×143°.20E, h29^{km}, Mw3.8 Best double couple: M₀5.32000×10^{14} NP1:φ$_s$31.00000°, δ68.00000°, λ113.00000°. NP2:φ$_s$162.00000°, δ32.00000°, λ46.00000°.*

IDC ***29*** *07:47:09.1±1.1, 40°.97N×143°.50E, h0^{km}, mb3.7/11, mb1 3.8/14, mb1mx3.6/61, mbtmp3.7/14, ML2.9/3, Error ellipse: s-maj=27.4km s-min=18.8km az=95.0*

NEIC ***29*** *07:47:12.4±2.7, 40°.96N±0°.07×143°.5E±0°.1, h20^{km}±5^{km}, mb4.4/11, Error ellipse: s-maj=13.7km s-min=10.0km az=101.0*

JMA ***29*** *07:47:13.4±0.1, 40°.92N×143°.24E, h32^{km}, M3.8*

ISC 29 07:47:12.2±1.0, **40°.91N**±0°.05×**143°.36E**±0°.06, **h20**^{km}±8^{km}, **n58**, σ1^{s}**11**/63, **mb4.0**/15, **2C-1D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERM	Erimo	1.12	352		Pn	07 47 32.5	-0.2
JEM	Erimo	1.12	352	P	Pn	07 47 33.0	+0.3
JEM				eS	Sb	07 47 47.0	+0.1
JTHR	Tokachihiroo	1.38	358	P	Pn	07 47 36.8	+0.5
JTHR				eS	Sn	07 47 54.2	+0.2
JKEN	Kujiedanarisaw	1.44	241	P	Pn	07 47 36.5	-0.6
JKEN				eS	Sn	07 47 53.8	-1.6
JNBK	Urakawa-nobuka	1.44	342	⇑P	Pn	07 47 37.6	+0.4
JNBK				eS	Sn	07 47 55.5	0.0
JANG	Nango	1.50	250	P	Pn	07 47 37.7	-0.3
JANG				eS	Sn	07 47 55.7	-1.3
JARK	Aomorirokkasho	1.51	274	P	Pn	07 47 37.6	-0.5
JCH	Churui	1.70	0	P	Pn	07 47 41.0	+0.2
JCH				eS	Sn	07 48 01.5	-0.4
JTM	Tenmabayashi	1.74	267	P	Pn	07 47 41.7	+0.4
JTM				eS	Sn	07 48 02.1	-0.8
JOT	Ohata	1.81	286	⇑P	Pn	07 47 42.4	+0.2
JOT				eS	Sn	07 48 04.0	-0.5
JKB	Kayabe	2.01	300	P	Pn	07 47 45.0	+0.1
JKB				eS	Sn	07 48 08.4	-1.0
JBT2	Biratori 2	2.01	339	P	Pn	07 47 46.0	+1.0
JOM	Ohasama	2.14	229	P	Pn	07 47 47.9	+1.2
JAK	Akkeshi	2.31	25	P	Pn	07 47 49.7	+0.6
JAK				eS	Sn	07 48 16.7	-0.2
JFR	Furan	2.33	346	P	Pn	07 47 50.9	+1.6
JAR	Ashorobuto	2.41	7	⇓P	Pn	07 47 50.8	+0.4
JAR				eS	Sn	07 48 17.9	-1.4
JMK	Ichinoseki	2.56	221	P	Pn	07 47 54.0	+1.6
ASAJ	Asahikawa	3.25	350	Pn	Pn	07 48 02.9	+0.8
	2.6nm,0.3s,baz=226,slow=9.0,SNR=11						
JKA	Kamikawa-asahi	3.25	350		Pn	07 48 02.9	+0.8
MJAR	Matsushiro Arr	5.94	224	Pn	Pn	07 48 41.2	+2.2
	0.1nm,0.3s,baz=30,slow=15,SNR=5.2						
MJB9	Matsu-Tunnel	5.94	224	Pn	Pn	07 48 41.4	+2.4
MAJO	Matsushiro	5.94	224	Pn	Pn	07 48 38.0	-1.0
USRK	Ussuriysk Ar.	9.01	295	Pn	Pn	07 49 22.8	+1.6
	baz=104,slow=13,SNR=5.0						
USRK	Ussuriysk Ar.	9.01	295		Pn	07 49 23.8	+2.7
SEY	Seymchan	22.70	11	P	P	07 52 10.1	-2.2
	0.6nm,0.5s,baz=221,slow=20,SNR=2.2						
SONM	Songino Array	27.12	297	P	P	07 52 53.4	-0.4
	0.6nm,0.4s,baz=91,slow=7.6,SNR=4.8						
SONM	Songino Array	27.12	297	P	P	07 52 53.6	-0.2
H11N2	WAKE ISLAND Hy	29.13	129	T	T	08 23 53.8	
	baz=322,slow=74						
H11N1	WAKE ISLAND Hy	29.14	129	T	T	08 24 01.1	
	baz=322						
H11N3	WAKE ISLAND Hy	29.15	129	T	T	08 23 57.4	
	baz=322,slow=74						
H11S1	WAKE ISLAND Hy	29.98	131	T	T	08 25 04.7	
	baz=323						
H11S3	WAKE ISLAND Hy	29.98	131	T	T	08 25 03.7	
	baz=323						
H11S2	WAKE ISLAND Hy	30.00	131	T	T	08 24 55.8	
	baz=323						
ZALV	Zalesovo Beam	40.54	309	P	P	07 54 50.0	+0.3
	0.7nm,0.3s,baz=66,slow=5.0,SNR=2.3						
ZALV	Zalesovo Beam	40.54	309	P	P	07 54 49.2	-0.5
IMAR	Indian Mountai	42.56	33		P	07 55 08.3	+2.1
MK31	Makanchi Array	43.46	299	P	P	07 55 13.5	-0.2
MKAR	Makanchi Array	43.46	299	P	P	07 55 13.4	-0.3
	0.7nm,0.6s,baz=84,slow=11,SNR=9.1						
KURK	Kurchatov	44.83	305	P	P	07 55 24.4	-0.2
KURK				IAmb	IAmb	07 55 24.9	
	comp=Z,3.2nm,0.7s						
INK	Inuvik	50.26	29	P	P	07 56 06.6	+0.1
	comp=Z,0.8nm,0.7s,baz=292,slow=5.8,SNR=1.7						
INK	Inuvik	50.26	29	P	P	07 56 08.3	+1.9
KEKH	Kekaha	51.20	94	P	P	07 56 11.1	-3.1
KKAR	Karatay Array	52.57	298	P	P	07 56 23.6	-0.6
ABKAR	Akbulak array	56.65	309	P	P	07 56 54.1	+0.4
AKTO	Aktyubinsk	57.26	311	P	P	07 56 57.9	-0.1
	comp=Z,1.1nm,0.7s,baz=80,slow=12,SNR=2.4						
RES	Resolute Bay	58.47	15	P	P	07 57 05.1	-1.0
	comp=Z,1.0nm,1.1s,baz=333,slow=6.8,SNR=2.6						
RES	Resolute Bay	58.47	15	P	P	07 57 06.0	-0.1
RES				IAmb	IAmb	07 57 06.8	
	comp=Z,3.2nm,1.3s						
WB0	Warramunga Arr	60.94	190	P	P	07 57 24.5	+0.8
WB0				IAmb	IAmb	07 57 36.0	
	comp=Z,2.6nm,0.9s						
WRA	Warramunga Arr	61.12	190	P	P	07 57 25.2	+0.2
	comp=Z,0.5nm,0.4s,baz=5.3,slow=6.7,SNR=5.0						
WRA	Warramunga Arr	61.12	190	P	P	07 57 26.1	+1.2
ASAR	Alice Springs	64.84	190	P	P	07 57 50.8	+1.1
	comp=Z,0.2nm,0.6s,baz=5.7,slow=6.6,SNR=2.2						
FIA1	FINESS Array S	66.10	332	P	P	07 57 57.6	+0.2
FINES	FINESS Array B	66.10	332	P	P	07 57 57.4	0.0
	comp=Z,1.0nm,0.5s,baz=44,slow=7.6,SNR=7.8						
FINES	FINESS Array B	66.10	332	P	P	07 57 57.6	+0.2
KVAR	Kislovodsk Arr	69.52	311	P	P	07 58 21.2	+1.8
	comp=Z,19nm,1.2s,baz=27,slow=4.5,SNR=3.3						
AKASG	Malin Array Be	72.16	322	P	P	07 58 35.5	+0.3
	comp=Z,0.4nm,0.3s,baz=43,slow=6.3,SNR=1.4						
AKASG	Malin Array Be	72.16	322	P	P	07 58 35.6	+0.5
RLMT	Red Lodge	72.51	45	P	P	07 58 37.3	-0.4
RLMT				IAmb	IAmb	07 58 40.0	
	comp=Z,10nm,1.1s						

IDC ***29*** *07:50:12.9±0.7, 0°.89S×21°.78W, h0^{km}, mb4.2/16, mb1 4.3/16, mb1mx4.0/61, mbtmp4.2/16, Error ellipse: s-maj=23.6km s-min=18.2km az=172.0*

NEIC ***29*** *07:50:13.7±1.6, 0°.8S±0°.1×21°.88W±0°.04, h10^{km}±1^{km}, mb4.8/17, Error ellipse: s-maj=20.8km s-min=5.0km az=348.0*

ISC 29 07:50:15.3±0.5, **0°.9S**±0°.1×**21°.88W**±0°.10, **h18**^{km}, **n49**, σ1^{s}**18**/36, **mb4.3**/22, **1C, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N3	ASCENSION HYDR	10.07	133	T	T	08 03 08.1	
	baz=312,slow=74,SNR=19						
H10N2	ASCENSION HYDR	10.07	133	T	T	08 03 09.1	
	baz=312,slow=74,SNR=24						
H10N1	ASCENSION HYDR	10.09	133	T	T	08 03 09.9	
	baz=312,slow=74,SNR=18						
ASCN	Ascension	10.24	133	Pn	Pn	07 52 41.2	-0.2
H10S3	ASCENSION HYDR	10.74	138	T	T	08 04 00.3	
	baz=317,slow=74,SNR=19						
H10S2	ASCENSION HYDR	10.76	138	T	T	08 04 03.0	
	baz=263,slow=74,SNR=17						
RCBR	Riachuelo	14.82	250	Pn	Pn	07 53 39.5	-4.7
	6.0nm,0.3s,baz=64,slow=10,SNR=6.4						
RCBR				Sn	Sn	07 56 10.1	-18
	9.4nm,0.3s,baz=345,slow=23,SNR=12						
RCBR	Riachuelo	14.82	250		Pn	07 53 39.3	-4.9
LIC	Lamto	18.25	67	eP	Pn	07 54 19.7	-8.2
	129nm,0.7s						
TIC	Toumodi	18.42	66	eP	P	07 54 20.9	-9.0
	42nm,0.3s						
KIC	Kosan Boka	18.57	67	eP	P	07 54 21.6	-10
	270nm,1.3s						
DBIC	Dimbokro	18.58	66	P	P	07 54 23.4	-8.2
	7.8nm,0.3s,baz=134,slow=11,SNR=10						
DBIC	Dimbokro	18.58	66	P	P	07 54 20.4	-11
MCLT	Moule a Chique	41.34	292	P	P	07 57 57.3	-3.2
SIV	San Ignacio	41.44	247	P	P	07 58 01.9	+0.5
	4.8nm,0.8s,baz=96,slow=10,SNR=6.0						
TSUM	Tsumeb	42.72	118	P	P	07 58 11.8	-0.1
	4.9nm,0.9s,baz=78,slow=20,SNR=4.0						
TSUM	Tsumeb	42.72	118	P	P	07 58 11.7	-0.3
LPAZ	La Paz	48.06	249	P	P	07 58 55.0	+0.1
	8.1nm,0.8s,baz=76,slow=5.2,SNR=8.0						
LPAZ	La Paz	48.06	249	P	P	07 58 54.7	-0.2
MNMC	Minye Minye	50.12	246	P	P	07 59 09.8	-0.4
MNMC				IAmb	IAmb	07 59 23.7	
	comp=Z,6.8nm,0.8s						
LVC	Limon Verde	50.52	241	P	P	07 59 12.4	-1.0
PB09	IPOC Station P	50.56	242	P	P	07 59 13.2	-0.2
PB09				IAmb	IAmb	07 59 13.9	
	comp=Z,14nm,1.1s						
PB12	IPOC Station P	50.66	247	P	P	07 59 13.6	-0.5
PB12				IAmb	IAmb	07 59 25.1	
	comp=Z,11nm,0.9s						
PSGCX	Pisagua	50.73	245	P	P	07 59 13.1	-1.5
PSGCX				IAmb	IAmb	07 59 17.9	
	comp=Z,19nm,1.5s						
PB07	IPOC Station P	51.11	243	P	P	07 59 17.0	-0.6
PB07				IAmb	IAmb	07 59 17.8	
	comp=Z,14nm,0.7s						
LBTB	Lobatse	51.70	122	P	P	07 59 22.2	+0.4
	comp=Z,6.4nm,0.9s,baz=273,slow=8.6,SNR=3.6						
LBTB	Lobatse	51.70	122	P	P	07 59 22.3	+0.4
GO02	Mina Guanaco	51.95	238		P	07 59 24.1	+0.1
GO02				IAmb	IAmb	07 59 25.1	
	comp=Z,14nm,0.9s						
ROSC	El Rosal	52.70	277	P	P	07 59 30.7	+0.9
	comp=Z,4.4nm,0.5s,baz=47,slow=24,SNR=1.9						
ROSC	El Rosal	52.70	277	P	P	07 59 30.2	+0.4
ROSC				IAmb	IAmb	07 59 46.5	
	comp=Z,18nm,1.2s						
BOSA	Boshof	52.73	126	P	P	07 59 28.7	-0.8
	comp=Z,1.3nm,0.4s,baz=320,slow=14,SNR=2.2						
BOSA	Boshof	52.73	126	P	P	07 59 28.9	-0.6
GERES	GERESS Array B	58.30	27	P	P	08 00 08.0	-1.1
	comp=Z,1.2nm,0.8s,baz=293,slow=30,SNR=1.1						
R58B	Mineral	64.39	313	P	P	08 00 50.8	+0.4
BRTR	Keskin Array B	64.75	45	P	P	08 00 54.2	+1.2
	comp=Z,0.5nm,0.7s,baz=267,slow=2.9,SNR=1.6						
NOA	NORSAR Array B	66.80	17	P	P	08 01 04.5	-1.1
	comp=Z,0.3nm,0.8s,baz=162,slow=4.4,SNR=2.6						
AKASG	Malin Array Be	67.22	32	P	P	08 01 07.5	-1.0
	comp=Z,1.1nm,0.6s,baz=236,slow=6.9,SNR=2.5						
AKASG	Malin Array Be	67.22	32	P	P	08 01 06.8	-1.6
FINES	FINESS Array B	72.06	22	P	P	08 01 37.8	-0.3
	comp=Z,3.6nm,1.1s,baz=204,slow=4.2,SNR=4.0						
SYO	Syowa Base	79.24	161	⇑eX	P	08 02 31.0	+12
TXAR	Lajitas Array	83.28	300	P	P	08 02 43.5	+2.0
	comp=Z,2.2nm,0.9s,baz=115,slow=6.9,SNR=6.5						
TXAR	Lajitas Array	83.28	300	P	P	08 02 42.0	+0.5
ARU	Arti	85.46	33	P	P	08 02 53.7	+1.8
	comp=Z,1.2nm,0.6s,baz=220,slow=2.5,SNR=3.4						
ARU	Arti	85.46	33	P	P	08 02 53.2	+1.3
ARU				IAmb	IAmb	08 03 06.9	
	comp=Z,6.5nm,0.9s						
ANMO	Albuquerque	86.06	305	P	P	08 02 57.7	+2.1
	comp=Z,1.5nm,0.8s,baz=135,slow=5.1,SNR=3.8						
PDAR	Pinedale Array	88.90	313	P	P	08 03 11.9	+2.7
	comp=Z,0.3nm,0.8s,baz=99,slow=12,SNR=2.2						
YKA	Yellowknife Ar	92.06	332	P	P	08 03 22.8	-0.4
	comp=Z,0.4nm,0.7s,baz=96,slow=5.3,SNR=2.8						
ASAR	Alice Springs	146.08	138	PKPbc	PKPbc	08 09 55.0	-0.2
	comp=Z,1.3nm,0.7s,baz=216,slow=2.9,SNR=2.4						
ASAR	Alice Springs	146.08	138		PKPbc	08 09 55.4	+0.2

NEIC ***29*** *08:16:19.6±1.9, 22°.85S±0°.07×175°.9W±0°.2, h35^{km}±2^{km}, mb4.3/13, Error ellipse: s-maj=33.6km s-min=7.8km az=105.0*

IDC ***29*** *08:16:21.6±4.8, 22°.95S×176°.78W, h0^{km}, mb3.8/4, mb1 4.0/4, mb1mx3.6/42, mbtmp3.8/4, Error ellipse: s-maj=155.0km s-min=92.1km az=171.0*

ISC 29 08:16:20.0±1.2, **22°.8S**±0°.1×**175°.9W**±0°.2, **h35**^{km}, **n20**, σ1^{s}**93**/21, **mb4.3**/9, **Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	6.65	195	Pn	Pn	08 17 58.6	+3.4
URZ	Urewera	16.50	200	Pn	Pn	08 20 05.9	-2.8
URZ				IAmb	IAmb	08 20 16.9	
	comp=Z,12nm,1.1s						
BKZ	Black Stump Fm	17.52	200	Pn	Pn	08 20 18.0	-3.6
THZ	Tophouse	21.08	204	P	P	08 21 00.9	-0.4
THZ				IAmb	IAmb	08 21 10.4	
	comp=Z,22nm,1.4s						
LTZ	Lake Taylor	22.19	203	P	P	08 21 11.8	-1.4
FOZ	Fox Glacier	23.79	206	P	P	08 21 28.2	-1.1
CTA	Charters Tower	35.24	267	P	P	08 23 12.7	+1.2
	comp=Z,1.1nm,0.3s,baz=79,slow=9.9,SNR=1.9						
STKA	Stephens Creek	38.59	247	P	P	08 23 39.5	-0.3
	comp=Z,0.4nm,0.4s,baz=99,slow=13,SNR=3.1						
STKA	Stephens Creek	38.59	247	P	P	08 23 39.5	-0.3
BBOO	Buckleboo	43.30	246	P	P	08 24 16.4	-2.2
BBOO				IAmb	IAmb	08 24 21.7	
	comp=Z,8.6nm,1.5s						
AS31	Alice Springs	45.91	259	P	P	08 24 40.1	+0.5
ASAR	Alice Springs	45.91	259	P	P	08 24 39.6	+0.1
	comp=Z,0.5nm,0.3s,baz=92,slow=6.7,SNR=24						
ASAR				PcP	PcP	08 26 20.9	+4.6
	comp=Z,0.1nm,0.4s,baz=115,slow=3.7,SNR=4.2						
ASAR	Alice Springs	45.91	259	P	P	08 24 40.3	+0.7
WB0	Warramunga Arr	46.22	264	P	P	08 24 42.1	+0.1
WB0				IAmb	IAmb	08 24 45.8	
	comp=Z,5.5nm,1.4s						
WB2	Warramunga Arr	46.22	264	P	P	08 24 42.2	+0.2
WB2				IAmb	IAmb	08 24 59.0	
	comp=Z,5.4nm,1.4s						
WRA	Warramunga Arr	46.23	264	P	P	08 24 42.1	+0.1
	comp=Z,0.2nm,0.3s,baz=101,slow=8.1,SNR=12						
WRA	Warramunga Arr	46.23	264	P	P	08 24 41.6	-0.5
MLH	Mauna Loa	46.60	27	P	P	08 24 44.5	-0.6
CASY	Casey	62.71	206	P	P	08 26 41.0	0.0
SBUM	Sibu	74.29	280	P	P	08 27 52.9	-1.3
SBUM				IAmb	IAmb	08 27 53.7	
	comp=Z,1.9nm,0.5s						

IDC 29 08:23:19.9±2.3, **18°.18S**×**176°.53W**, **h0**^{km}, **mb4.0**/6, **mb1 4.3**/7, **mb1mx3.9**/43, **mbtmp4.1**/7, **ML3.5**/1, **MS4.2**/5, **Ms1 4.2**/5, **ms1mx3.7**/41, **Error ellipse: s-maj=129.6km s-min=21.2km az=147.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	6.24	48	Pn	Pn	08 24 53.0	-0.3
	1.2nm,0.3s,baz=8.5,slow=19,SNR=2.7						
DZM	Mont Dzumac	16.45	254	LR	LR	08 32 46.4	
	comp=Z,1μm,18.1s,baz=70,slow=34						
URZ	Urewera	20.77	194	LR	LR	08 34 47.0	
	comp=Z,520nm,21.7s,baz=42,slow=33						
PPT	Papeete	25.66	93	LR	LR	08 35 53.2	
	comp=Z,285nm,19.4s,baz=278,slow=29						
CTA	Charters Tower	35.16	261	P	P	08 30 16.6	+0.7
	3.7nm,1.0s,baz=85,slow=11,SNR=4.3						
STKA	Stephens Creek	40.07	242	P	P	08 30 56.6	-0.7
	3.3nm,0.9s,baz=71,slow=8.1,SNR=7.9						
WRA	Warramunga Arr	46.34	260	P	P	08 31 48.4	+0.3
	1.7nm,1.1s,baz=95,slow=7.5,SNR=7.0						
ASAR	Alice Springs	46.44	254	P	P	08 31 48.3	-0.6
	4.1nm,0.8s,baz=87,slow=8.0,SNR=29						
NVAR	Mina Array Bea	78.39	43	P	P	08 35 23.4	+0.6
	0.6nm,0.7s,baz=218,slow=6.8,SNR=3.8						
ELK	Elko	81.64	42	LR	LR	09 05 20.1	
	comp=Z,276nm,19.5s,baz=329,slow=31						
ILAR	Eielson Array	85.76	12	P	P	08 35 59.9	-0.7
	1.4nm,1.2s,baz=210,slow=4.7,SNR=2.6						
ULM	Lac du Bonnet	97.97	40	LR	LR	09 15 30.2	
	comp=Z,150nm,18.5s,baz=332,slow=32						

IDC ***29*** *08:55:38.1±1.2, 19°.54S×70°.76W, h0^{km}, mb3.7/3, mb1 4.0/6, mb1mx3.6/35, mbtmp3.8/5, ML3.7/3, MS3.1/2, Ms1 3.1/2, ms1mx2.8/24, Error ellipse: s-maj=34.2km s-min=17.1km az=73.0*

SJA ***29*** *08:55:39.9±0.7, 19°.60S×70°.76W, h25^{km}±2^{km}, ML3.9, MW3.9*

NEIC ***29*** *08:55:40.7±2.6, 19°.61S±0°.02×70°.80W±0°.05, h16^{km}±5^{km}, mb3.9/2, ML4.0(GUC), Error ellipse: s-maj=6.5km*

s-min=2.7km az=98.0

GUC ***29*** *08:55:41.9±0.7, 19°.60S×70°.73W, h38^{km}±1^{km}, ML4.0*

ISC 29 08:55:42.0±1.5**, 19°.58S**±0°.02×**70°.76W**±0°.06**, h24**^{km}±11^{km}**, n71, σ1^{s}25**/96**, mb4.0**/3**, 4C-10D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.60	91	⇓iP	Pb	08 55 53.3	-0.8
PSGC				iS	Sb	08 56 01.8	-0.4
PSGCX	Pisagua	0.60	91		Pb	08 55 53.2	-0.8
PSGCX	Pisagua	0.60	91	iP	Pb	08 55 53.3	-0.8
PSGCX				iS	Sb	08 56 01.7	-0.6
PSGCX				IAML		08 56 02.3	
	comp=Z,5µm,0.7s						
PB12	IPOC Station P	1.05	23	⇓iP	Pn	08 56 00.5	-0.8
PB12				iS	Sn	08 56 15.0	-0.3
PB12	IPOC Station P	1.05	23	Pn	Pn	08 56 00.2	-1.1
PB12				Sg	Sn	08 56 14.2	-1.1
PB12	IPOC Station P	1.05	23	iP	Pn	08 56 00.6	-0.8
PB12				iS	Sn	08 56 15.0	-0.3
PB12				IAML		08 56 16.8	
	comp=Z,2µm,0.4s						
PB11	IPOC Station P	1.06	100	⇓iP	Pn	08 56 00.7	-0.8
PB11				iS	Sn	08 56 15.1	-0.5
PB11	IPOC Station P	1.06	100	Pn	Pn	08 56 00.8	-0.8
PB11				Sg	Sn	08 56 14.7	-0.9
PB11	IPOC Station P	1.06	100	iP	Pn	08 56 00.7	-0.8
PB11				iS	Sn	08 56 15.1	-0.5
PB11				IAML		08 56 20.7	
	comp=Z,2µm,0.3s						
TA01	Diego Aracena	1.12	151	⇑iP	Pn	08 56 01.7	-0.6
TA01				iS	Sn	08 56 16.5	-0.4
MNMC	Minye Minye	1.19	68	⇓iP	Pn	08 56 03.2	-0.3
MNMC				iS	Sn	08 56 19.2	+0.1
MNMC				IAML		08 56 26.8	
	comp=N,13µm,0.1s						
MNMC	Minye Minye	1.19	68	Pn	Pn	08 56 03.2	-0.3
MNMC				Sn	Sn	08 56 19.2	+0.1
MNMCX	Minye Minye	1.19	68	iP	Pn	08 56 03.2	-0.3
MNMCX				iS	Sn	08 56 19.3	+0.3
MNMCX				IAML		08 56 25.0	
	comp=Z,6µm,0.3s						
AP01	Chacalluta	1.27	18	⇑iP	Pn	08 56 04.5	+0.2
AP01				iS	Sn	08 56 21.1	+0.5
AP01				IAML		08 56 25.7	
	comp=E,15µm,0.3s						
PATCX	Punta Patache	1.36	155	⇑iP	Pn	08 56 05.1	-0.5
PATCX				iS	Sn	08 56 22.7	-0.2
PATCX	Punta Patache	1.36	155		Pn	08 56 05.0	-0.6
PATCX				Sn	Sn	08 56 22.0	-0.9
PATCX	Punta Patache	1.36	155	iP	Pn	08 56 05.1	-0.5
PATCX				iS	Sb	08 56 23.9	+0.1
PATCX				IAML		08 56 33.5	
	comp=Z,920nm,0.4s						
GO01	Chusmiza	1.48	94	⇓iP	Pn	08 56 08.0	+0.3
GO01				iS	Sb	08 56 27.7	-0.1
GO01	Chusmiza	1.48	94	Pn	Pn	08 56 08.1	+0.3
GO01				Sn	Sb	08 56 27.7	-0.1
PB08	IPOC Station P	1.61	110	⇓iP	Pn	08 56 09.8	+0.4
PB08				iS	Sb	08 56 31.1	-0.4
PB08				IAML		08 56 35.6	
	comp=N,2µm,0.5s						
PB08	IPOC Station P	1.61	110	iP	Pn	08 56 09.8	+0.4
PB08				iS	Sb	08 56 31.1	-0.4
PB08				IAML		08 56 31.7	
	comp=Z,2µm,0.4s						
PB16	IPOC Station P	1.72	44	⇓iP	Pn	08 56 11.9	+0.9
PB16				iS	Sb	08 56 34.6	-0.2
PB16	IPOC Station P	1.72	44	Pn	Pn	08 56 12.2	+1.2
PB16				Sn	Sb	08 56 34.5	-0.2
PB16	IPOC Station P	1.72	44	iP	Pn	08 56 12.2	+1.2
PB16				iS	Sb	08 56 34.4	-0.3
PB16				IAML		08 56 38.7	
	comp=Z,4µm,0.4s						
PB01	IPOC Station P	1.88	141	⇑iP	Pn	08 56 12.8	0.0
PB01				iS	Sn	08 56 36.4	+0.5
PB01				IAML		08 56 42.0	
	comp=N,893nm,0.5s						
PB01	IPOC Station P	1.88	141	Pn	Pn	08 56 13.4	+0.6
PB01				Sn	Sn	08 56 36.1	+0.3
PB02	IPOC Station P	1.91	155	⇓iP	Pn	08 56 13.2	0.0
PB02	IPOC Station P	1.91	155	iP	Pn	08 56 12.9	-0.3
PB02				iS	Sn	08 56 35.9	-0.7
PB02				IAML		08 56 49.3	
	comp=Z,2µm,0.4s						
PB07	IPOC Station P	2.28	159	⇓iP	Pn	08 56 19.0	+0.5
PB07				IAML		08 56 59.6	
	comp=E,709nm,0.4s						
PB07	IPOC Station P	2.28	159		Pn	08 56 18.3	-0.1
PB07	IPOC Station P	2.28	159	iP	Pn	08 56 18.9	+0.5
PB07				iS	Sb	08 56 49.7	-0.9
PB07				IAML		08 56 54.8	
	comp=Z,735nm,0.7s						
PB09	IPOC Station P	2.62	147	⇓iP	Pn	08 56 24.1	+1.0
PB09				iS	Sn	08 56 55.4	+1.2
PB09				IAML		08 57 07.7	
	comp=N,919nm,0.7s						
PB09	IPOC Station P	2.62	147		Pn	08 56 23.8	+0.7
PB09	IPOC Station P	2.62	147	iP	Pn	08 56 25.4	+2.4
PB09				iS	Sb	08 57 03.2	+2.8
PB09				IAML		08 57 08.7	
	comp=Z,890nm,1.3s						
PB03	IPOC Station P	2.63	159	iP	Pn	08 56 22.8	-0.4
PB03				IAML		08 57 05.9	
	comp=Z,390nm,0.5s						
PB04	IPOC Station P	2.79	168		Pn	08 56 25.6	+0.1
PB04	IPOC Station P	2.79	168	iP	Pn	08 56 25.3	-0.2
PB05	IPOC Station P	3.29	171	iP	Pn	08 56 30.8	-1.5
PB05				IAML		08 57 39.2	
	comp=Z,150nm,0.7s						
PB06	IPOC Station P	3.30	161	iP	Pn	08 56 31.4	-1.0
PB06				iS	Sb	08 57 22.7	+2.9
PB06				IAML		08 57 34.0	
	comp=Z,290nm,0.7s						
LVC	Limon Verde	3.47	150	Pn	Pn	08 56 35.9	+1.0
	comp=Z,2.5nm,0.3s,baz=335,slow=12,SNR=3.1						
LVC				Sn	Sn	08 57 16.7	+1.2
	comp=Z,14nm,0.3s,baz=288,slow=20,SNR=6.8						
LVC				Lg	Lg	08 57 27.6	
	comp=Z,20nm,0.3s,baz=152,slow=12,SNR=14						
LVC				LR	LR	08 57 56.1	
	comp=Z,212nm,19.7s,baz=322,slow=39						
LVC	Limon Verde	3.47	150		Pn	08 56 35.5	+0.5
LVC	Limon Verde	3.47	150	iP	Pn	08 56 35.8	+0.9
LVC				iS	Sb	08 57 25.9	+0.9
LVC				IAML		08 57 33.8	
	comp=Z,91nm,1.4s						
PB15	IPOC Station P	3.80	162		Pn	08 56 38.8	-0.6
PB15	IPOC Station P	3.80	162	iP	Pn	08 56 39.2	-0.2
PB15				IAML		08 57 50.2	
	comp=Z,225nm,0.2s						
PB10	IPOC Station P	3.92	177	Pn	Pn	08 56 39.0	-1.7
PB10	IPOC Station P	3.92	177	iP	Pn	08 56 39.0	-1.7
PB10				iS	Sb	08 57 49.0	+12
PB10				IAML		08 57 56.0	
	comp=Z,48nm,0.6s						
LPAZ	La Paz	4.13	38	Pn	Pn	08 56 48.1	+3.9
	comp=Z,1.5nm,0.3s,baz=205,slow=7.7,SNR=23						
LPAZ				LR	LR	08 58 30.8	
	comp=Z,245nm,19.7s,baz=250,slow=42						
LPAZ	La Paz	4.13	38		Pn	08 56 47.6	+3.5
PB14	IPOC Station P	5.03	176		Pn	08 56 53.7	-2.7
PB14	IPOC Station P	5.03	176	iP	Pn	08 56 54.4	-2.0
PB14				IAML		08 58 28.4	
	comp=Z,45nm,0.8s						
YJA	Yavi	5.54	119	iP	Pn	08 57 10.9	+7.4
YJA				iS	Sb	08 58 20.8	-3.8
GO02	Mina Guanaco	5.66	169	Pn	Pn	08 57 03.5	-1.4
AZAP	Zapla	7.02	132	iP	Pn	08 57 30.4	+6.7
SIV	San Ignacio	9.90	70	Pn	Pn	08 58 02.0	-1.0
	comp=Z,1.1nm,0.3s,baz=255,slow=4.2,SNR=25						
SAML	Samuel	12.87	36	Pn	Pn	08 58 46.7	+3.1
CPUP	Villa Florida	14.07	121	Pn	Pn	08 59 01.0	+1.0
	comp=Z,0.1nm,0.3s,baz=320,slow=15,SNR=3.6						
CPUP	Villa Florida	14.07	121		Pn	08 59 02.5	+2.5
PLCA	Paso Flores	21.08	180	P	P	09 00 25.3	+0.6
	comp=Z,0.8nm,0.8s,baz=337,slow=15,SNR=0.9						
PLCA	Paso Flores	21.08	180	P	P	09 00 25.0	+0.2
PLCA				IAmb	IAmb	09 00 41.2	
	comp=Z,2.5nm,1.0s						
PTGA	Pitinga	21.52	31	P	P	09 00 27.3	-2.2
	comp=Z,3.9nm,0.4s,baz=222,slow=17,SNR=15						
PTGA	Pitinga	21.52	31	P	P	09 00 27.6	-1.9
PTGA				IAmb	IAmb	09 00 28.5	
	comp=Z,13nm,1.4s						
YKA	Yellowknife Ar	88.82	341	P	P	09 08 33.3	-0.2
	comp=Z,0.5nm,0.7s,baz=134,slow=5.1,SNR=12						
H11S2	WAKE ISLAND Hy	125.89	279	T	T	11 33 58.2	
	baz=101,slow=74,SNR=43						
H11S1	WAKE ISLAND Hy	125.90	279	T	T	11 33 58.4	
	baz=101,slow=74,SNR=28						
H11S3	WAKE ISLAND Hy	125.91	279	T	T	11 33 59.6	
	baz=101,slow=74,SNR=30						
H11N3	WAKE ISLAND Hy	125.93	281	T	T	11 33 54.8	
	baz=100,slow=75,SNR=8.6						
H11N2	WAKE ISLAND Hy	125.94	281	T	T	11 33 56.0	
	baz=100,slow=75,SNR=12						
H11N1	WAKE ISLAND Hy	125.94	281	T	T	11 33 57.9	
	baz=100,slow=75,SNR=6.5						
ASAR	Alice Springs	130.74	210	PKP	PKPdf	09 14 50.6	-1.5
	comp=Z,0.3nm,0.8s,baz=144,slow=1.7,SNR=2.0						
WRA	Warramunga Arr	133.65	213	PKP	PKPdf	09 14 57.4	-0.2
	comp=Z,0.2nm,0.7s,baz=137,slow=1.3,SNR=1.7						
MKAR	Makanchi Array	145.04	33	PKPbc	PKPdf	09 15 16.6	-0.8
	comp=Z,1.1nm,0.7s,baz=332,slow=3.9,SNR=11						

IDC ***29*** *08:55:40.8±1.4, 13°.03N×87°.32W, h0^{km}, mb3.5/5, mb1 3.7/8, mb1mx3.5/44, mbtmp3.5/8, ML3.3/2, Error ellipse: s-maj=38.4km s-min=13.4km az=49.0*

UCR ***29*** *08:55:47.7±1.4, 12°.50N×87°.82W, h52^{km}±32^{km}, ML3.9*

INET ***29*** *08:55:48.0, 12°.51N×87°.76W, h60^{km}, ML4.7*

SNET ***29*** *08:55:48.0±1.0, 12°.50N×87°.84W, h48^{km}±35^{km}, ML3.9*

ISC 29 08:55:47.3±1.0**, 12°.58N**±0°.07×**87°.77W**±0°.05**, h79**^{km}±8^{km}**, n55, σ0^{s}79**/69**, mb3.6**/6**, 2C, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.69	355	eP	Pn	08 56 02.7	-0.3
CNCH				eS	Sn	08 56 14.0	-0.6
CNCH	Conchagua	0.69	355	eP	Pn	08 56 02.7	-0.3
CNCH				eS	Sn	08 56 14.0	-0.6
LCND	La Caada	0.73	351	eP	Pn	08 56 03.1	-0.2
LCND				eS	Sn	08 56 15.4	+0.3
LCND				IAML		08 56 19.8	
	comp=Z,6µm,0.2s						
LCND	La Caada	0.73	351	eP	Pn	08 56 03.1	-0.2
LCND				eS	Sn	08 56 15.4	+0.3
LCND				IAML		08 56 19.8	
	comp=Z,6µm,0.2s						
BLLM	Bellamira	0.97	332	eP	Pn	08 56 06.1	+0.1
BLLM	Bellamira	0.97	332	eP	Pn	08 56 06.1	+0.1
LCY	Lacayo	0.98	329	eP	Pn	08 56 06.7	+0.6
LCY	Lacayo	0.98	329	eP	Pn	08 56 06.7	+0.6
PACA	Pacayal	1.03	329	eP	Pn	08 56 07.1	+0.3
PACA				eS	Sn	08 56 22.1	+0.7
PACA	Pacayal	1.03	329	eP	Pn	08 56 07.1	+0.3
PACA				eS	Sn	08 56 22.1	+0.7
ALJI	Alcalda de J	1.07	314	eP	Pn	08 56 06.9	-0.3
ALJI				eS	Sn	08 56 21.9	-0.2
ALJI				IAML		08 56 25.4	
	comp=Z,3µm,0.3s						
ALJI	Alcalda de J	1.07	314	eP	Pn	08 56 06.9	-0.3
ALJI				eS	Sn	08 56 21.9	-0.2
ALJI				IAML		08 56 25.4	
	comp=Z,3µm,0.3s						
TECA	Tecapa	1.15	322	eP	Pn	08 56 08.5	+0.1
TECA	Tecapa	1.15	322	eP	Pn	08 56 08.5	+0.1
COEB	Comit de Eme	1.17	321	eP	Pn	08 56 08.5	0.0
COEB				eS	Sn	08 56 24.5	+0.1
COEB				IAML		08 56 30.3	
	comp=Z,2µm,0.3s						
COEB	Comit de Eme	1.17	321	eP	Pn	08 56 08.5	0.0
COEB				eS	Sn	08 56 24.5	+0.1
COEB				IAML		08 56 30.3	
	comp=Z,2µm,0.3s						
MOMN	Momotombo	1.22	98	eP	Pn	08 56 09.0	0.0
MOMN	Momotombo	1.22	98	eP	Pn	08 56 09.0	0.0
COEG	Centro de Oper	1.49	314	eP	Pn	08 56 12.9	+0.3
COEG				eS	Sn	08 56 31.7	0.0
COEG				IAML		08 56 35.4	
	comp=Z,1µm,0.4s						
COEG	Centro de Oper	1.49	314	eP	Pn	08 56 12.9	+0.3
COEG				eS	Sn	08 56 31.7	0.0
COEG				IAML		08 56 35.4	
	comp=Z,1µm,0.4s						
TGUH	Tegucigalpa,Un	1.54	18	⇑iP	Pn	08 56 14.6	+1.2
TGUH	Tegucigalpa,Un	1.54	18	⇑iP	Pn	08 56 14.6	+1.2
LFRS	El Faro	1.63	310	eP	Pn	08 56 14.8	+0.5
LFRS				eS	Sn	08 56 35.2	+0.4
LBRS	Las Brisas	1.69	313	eP	Pn	08 56 16.3	+1.2
LOMA	Loma Larga	1.72	308	eP	Pn	08 56 16.0	+0.4
LOMA	Loma Larga	1.72	308	eP	Pn	08 56 16.0	+0.4
OPAM	Oficina de Pla	1.78	309	eS	Sn	08 56 38.8	+0.3
OPAM	Oficina de Pla	1.78	309	eS	Sn	08 56 38.8	+0.3
SNET	Serv Nac Est T	1.79	308	eP	Pn	08 56 17.2	+0.7
SNET				eS	Sn	08 56 39.2	+0.5
SNET	Serv Nac Est T	1.79	308	eP	Pn	08 56 17.2	+0.7
SNET				eS	Sn	08 56 39.2	+0.5
BOQS	Boqueron	1.86	308	eP	Pn	08 56 18.2	+0.7
ACON	Acoyapa	2.61	103	eP	Pn	08 56 26.7	-0.8
GBS3	Finca Las Img	2.89	128	eP	Pn	08 56 31.0	-0.2
GB1A	Borinquen Arri	2.91	127	eP	Pn	08 56 31.0	-0.6
LAPC	Finca la Perla	2.92	128	eP	Pn	08 56 32.0	+0.4
BUEV	Buena Vista	2.92	127	eP	Pn	08 56 32.0	+0.3
BUAI	Buenos Aires	2.93	125	eP	Pn	08 56 32.1	+0.3
COLC	Colonia	3.16	127	eP	Pn	08 56 35.1	+0.3
CUI	Cuipilapa	3.19	127	eP	Pn	08 56 36.0	+0.7
GUAI	GUAI	3.19	136	eP	Pn	08 56 35.5	+0.2
PLVR	Palo Verde	3.25	133	eP	Pn	08 56 37.2	+1.0
ACAL	Aguas Claras	3.31	126	eP	Pn	08 56 37.3	+0.4
APG	El Apazote	3.55	313	Pn	Pn	08 56 37.8	-2.6
	comp=Z,2.4nm,0.3s,baz=191,slow=14,SNR=22						
JTS	Las Juntas de	3.58	129	Pn	Pn	08 56 39.7	-0.9
	comp=Z,2.2nm,0.3s,baz=305,slow=19,SNR=32						
JTS				Pg		08 56 46.6	
	comp=Z,41nm,0.3s,baz=1.8,slow=20,SNR=70						
JTS				Sn	Sn	08 57 20.4	-1.4
	comp=Z,11nm,0.3s,baz=342,slow=19,SNR=2.3						
JTS				Lg	Lg	08 57 33.8	
	comp=Z,16nm,0.3s,baz=0.0,slow=20,SNR=9.4						
JTS	Las Juntas de	3.58	129	eP	Pn	08 56 41.0	+0.4
ARE1	Arenal 1	3.66	125	eP	Pn	08 56 43.0	+1.4
CASO	Castillo	3.67	125	eP	Pn	08 56 42.3	+0.6
LCR2	La Lucha 2	4.65	127	eP	Pn	08 56 58.2	+2.9
SDV	Santo Domingo	17.23	101	Pn	Pn	08 59 37.4	-5.8
	comp=Z,0.0nm,0.3s,baz=281,slow=10,SNR=1.5						
SJG	San Juan	21.56	73	P	P	09 00 24.7	-5.7
	comp=Z,11nm,0.2s,baz=265,slow=12,SNR=3.0						
TXAR	Lajitas Array	22.27	321	P	P	09 00 40.1	+2.1
	comp=Z,0.8nm,0.6s,baz=138,slow=11,SNR=11						
TKL	Tuckaleechee C	23.26	8	P	P	09 00 46.4	-1.5
	comp=Z,4.8nm,1.0s,baz=135,slow=4.3,SNR=2.6						
PDAR	Pinedale Array	35.51	332	P	P	09 02 36.7	0.0
	comp=Z,0.1nm,0.3s,baz=132,slow=12,SNR=2.1						
SCHQ	Schefferville	45.24	17	P	P	09 03 56.1	-0.5
	comp=Z,1.1nm,0.5s,baz=217,slow=10,SNR=5.8						
YKA	Yellowknife Ar	53.40	345	P	P	09 04 58.3	-0.3
	comp=Z,0.1nm,0.5s,baz=137,slow=7.3,SNR=2.3						

IDC ***29*** *09:02:17.9±1.6, 32°.53N×49°.79E, h0^{km}, mb3.7/11, mb1 3.9/13, mb1mx3.7/43, mbtmp3.8/13, ML3.8/2, MS3.3/2, Ms1 3.4/2, ms1mx2.7/48, Error ellipse: s-maj=36.8km s-min=20.1km az=0.0*

TEH ***29*** *09:02:18.9, 32°.53N×50°.02E, h8^{km}, ML4.0*

NEIC ***29*** *09:02:19.4±1.1, 32°.63N±0°.05×50°.0E±0°.1, h19^{km}±6^{km}, Error ellipse: s-maj=14.4km s-min=4.1km az=60.0*

THR ***29*** *09:02:20.7±1.1, 32°.54N×49°.97E, h15^{km}±9^{km}, ML3.8*

OMAN ***29*** *09:02:30.5±1.4, 31°.71N×49°.89E, h34^{km}, Error ellipse: s-maj=110.0km s-min=65.0km az=295.0*

ISC 29 09:02:18.7±0.5**, 32°.40N**±0°.03×**49°.96E**±0°.03**, h11**^{km}**, n114, σ2^{s}14**/123**, mb4.2**/20**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHBN	Jahan bin	0.62	105	ePg	Pg	09 02 32.4	+1.5
IPIR	Pirpir	0.84	70	ePg	Pg	09 02 33.7	-1.3
ROKH	ROKH	0.92	93	ePg	Pg	09 02 36.6	+0.2
SHGR	Shooshtar-Gavs	1.02	254	ePg	Pn	09 02 41.1	+2.1
SHGR				IAML		09 03 00.4	
	comp=N,2µm,0.3s						
SHGR				IAML		09 03 01.3	
	comp=E,2µm,0.6s						
SHGR	Shooshtar-Gavs	1.02	254	ePg	Pn	09 02 41.1	+2.1
KHMZ	Khomeyn	1.34	0	ePg	Pn	09 02 42.5	-1.0
KHMZ	Khomeyn	1.34	0	ePg	Pn	09 02 42.5	-1.0
AHWZ	Ahwaz	1.54	227	ePn	Pg	09 02 50.7	+2.4
BMDN	Meydan	1.59	323	ePn	Pn	09 02 47.3	+0.4
IKLH	Kolahrood	1.65	56	ePn	Pn	09 02 47.2	-0.6
IKMR	Kamar-syah	1.73	311	ePn	Pb	09 02 50.5	0.0
IGAR	Gharneh	1.77	89	ePn	Pn	09 02 51.0	+1.6
IGAR				e		09 02 56.0	
BDRS	Dareh Seyedi	1.79	330	ePn	Pn	09 02 51.2	+1.3
QAM	Ghamsar	1.84	42	ePn	Pn	09 02 51.1	+0.6
KLNJ	Kolanjah	1.97	134	ePn	Pb	09 02 56.0	+1.2
KLNJ				e		09 03 32.1	
IDOB	Doab	2.04	313	ePn	Pn	09 02 54.6	+1.4
IZEF	Zefreh	2.06	75	ePn	Pn	09 02 56.3	+2.7
IZEF				e		09 02 57.9	
IKFM	Kafar-mosalman	2.10	303	ePn	Pb	09 02 56.1	-0.7
IKFM				e		09 03 34.2	
HSAM	Samen	2.13	328	ePn	Pb	09 02 57.1	-0.5
IRAM	Ramesheh	2.14	105	ePn	Pb	09 02 57.7	0.0
ASAO	Ashtian	2.15	2	ePn	Pn	09 02 56.2	+1.5
ASAO	Ashtian	2.15	2	ePn	Pn	09 02 56.2	+1.5
GHVR	GHOM	2.36	28	ePn	Pn	09 02 59.8	+2.3
GHVR				IAML		09 03 34.9	
	comp=N,583nm,1.0s						
GHVR	GHOM	2.36	28	ePn	Pn	09 02 59.8	+2.3
KRSH	Karshahi	2.41	49	ePn	Pn	09 03 00.5	+2.3
HAGD	Aghdareh	2.51	344	ePn	Pn	09 03 01.9	+2.2
IQOM	Qom	2.61	21	ePn	Pn	09 03 02.3	+1.2
IQOM				e		09 03 39.9	
IKOM	Komasi	2.71	312	ePn	Pn	09 03 04.7	+2.4
IKOM				e		09 04 10.9	
IALM	Almabolaq	2.87	329	ePn	Pn	09 03 06.9	+2.2
IRAZ	Razeghan	3.00	360	ePn	Pn	09 03 08.2	+1.8
IKAZ	Kazeroun	3.07	148	ePn	Pb	09 03 11.4	-2.2
IKAZ				e		09 04 12.5	
KCHF	Cheshme Sefid,	3.08	308	ePn	Pn	09 03 09.1	+1.7
KER	Kermanshah	3.08	311	ePn	Pn	09 03 09.0	+1.5
HSRG	Sareghieh	3.16	334	ePn	Pn	09 03 10.8	+2.1
ISAD	Sadrabad	3.20	98	ePn	Pn	09 03 13.0	+3.8
IHSB	Hasanabad	3.22	20	ePn	Pn	09 03 12.0	+2.6
IMHD	Mahdasht	3.33	10	ePn	Pn	09 03 12.9	+2.0
IMHD				e		09 03 23.6	
IVIS	Veis	3.35	310	ePn	Pn	09 03 12.2	+1.0
IVIS				e		09 04 23.5	
IGHG	Ghaleghazi	3.43	305	ePn	Pn	09 03 13.4	+1.1
IGHG				e		09 04 27.0	
IDMV	Damavand	3.61	28	ePn	Pn	09 03 16.6	+1.7
IDMV				e		09 04 18.6	
CHTH	Charan	3.63	15	ePn	Pn	09 03 17.0	+1.8
CHTH	Charan	3.63	15	ePn	Pn	09 03 17.0	+1.8
AHBU	AHRAM	3.71	162	ePn	Pb	09 03 21.0	-3.2
GHB	Gharebagh	3.74	143	ePn	Pn	09 03 19.5	+2.8
IDHR	Dehrash	3.76	309	ePn	Pn	09 03 18.0	+1.1
IDHR				e		09 04 06.6	
ICHK	Chekchek	3.77	91	ePn	Pn	09 03 20.1	+3.1
YZKH	Yazd	3.92	89	ePn	Pn	09 03 22.5	+3.5
YZKH	Yazd	3.92	89	ePn	Pn	09 03 22.5	+3.5
ISRV	Sarvestan	4.05	137	ePn	Pn	09 03 23.9	+2.9
QALM	Alamut, Qazvin	4.06	8	ePn	Pn	09 03 22.0	+0.9
IPRN	Peran	4.31	27	ePn	Pn	09 03 25.8	+1.4
ZNJK	Zanjan	4.39	347	ePn	Pn	09 03 26.8	+1.3
ZNJK	Zanjan	4.39	347	ePn	Pn	09 03 26.8	+1.3
IGLO	Ghaloghah	5.20	37	ePn	Pn	09 03 39.7	+3.1
TPRV	Parvadeh(Tabas	5.71	82	ePn	Pn	09 03 46.4	+2.9
TKDS	Koohdasht(Taba	6.14	77	ePn	Pn	09 03 51.9	+2.4
TABS	Tabas	6.14	76	ePn	Pn	09 03 52.3	+2.8
TABS	Tabas	6.14	76	ePn	Pn	09 03 52.3	+2.8
GENO	Geno	7.34	131	ePn	Pn	09 04 08.1	+2.0
BANOM	Banah	8.51	138	P	Pn	09 04 24.8	+2.9
	SNR=7.3						
BANOM				S	Sn	09 05 57.6	-0.4
GEYT	Alibeck	8.66	48	Pn	Pn	09 04 28.3	+4.2
	comp=N,0.9nm,0.3s,baz=241,slow=12,SNR=5.9						
GEYT	Alibeck	8.66	48		Pn	09 04 20.9	-3.1
GYA0B	ALIBECK ARRAY	8.66	48	Pn	Pn	09 04 21.2	-2.9
GNI	Garni	8.80	333	Pn	Pn	09 04 22.5	-3.6
NAZ	Nazwa, Dubai	8.92	144	P	Pn	09 04 31.4	+3.9
NAZ				S	Sn	09 06 06.7	-1.4
MDH	Madha	9.00	140	P	Pn	09 04 29.4	+0.8
	SNR=6.1						
MDH				S	Sn	09 06 07.8	-2.2
UOSS	Minazif	9.23	142	P	Pn	09 04 33.1	+1.3
UOSS	Minazif	9.23	142		Pn	09 04 33.7	+1.8
UOSS				Sn	Sn	09 06 12.3	-3.4
ASHO	Ashiyiah	9.37	144	P	Pn	09 04 37.0	+3.2
	SNR=8.2						
ASHO				S	Sn	09 06 18.0	-1.3
	SNR=8.7						
MZR	Muzera	9.87	161	P	Pn	09 04 42.9	+2.4
SOHO	SOHO	10.07	143	P	Pn	09 04 46.0	+2.7
ARQ	Araqi	10.73	146	S	Sn	09 06 50.8	-1.8
HOQ	Hoqain	10.92	142	P	Pn	09 04 58.0	+3.0
HOQ				S	Sn	09 06 54.4	-2.9
ASF	Jabal al Asfar	11.06	272	Pn	Pn	09 04 57.0	+0.1
	comp=N,0.6nm,0.3s,baz=66,slow=7.4,SNR=3.8						
BSY	Bisya	11.56	144	P	Pn	09 05 06.5	+2.7
BSY				S	Sn	09 07 08.8	-4.2
SMDO	Samad	11.74	140	P	Pn	09 05 08.8	+2.6
SMDO				S	Sn	09 07 14.4	-3.0
WSAR	Wadi Sarin	11.92	138	Pn	Pn	09 05 11.7	+3.0
	comp=N,0.7nm,0.3s,baz=322,slow=5.3,SNR=7.9						
WSAR				Sn	Sn	09 07 16.6	-5.0
	comp=N,0.3nm,0.3s,baz=187,slow=19,SNR=1.9						
WSAR	Wadi Sarin	11.92	138	P	Pn	09 05 11.3	+2.6
JMDO	Jabal Madar	12.33	142	P	Pn	09 05 16.3	+2.0
WBK	Wadi Bani Khal	12.61	138	P	Pn	09 05 19.8	+1.7
WBK				S	Sn	09 07 35.8	-2.7
WHFO	Wadi Hawf	14.82	166	P	Pn	09 05 48.8	+0.4
	SNR=8.7						
BRTR	Keskin Array B	15.07	304	Pn	P	09 05 55.2	-1.9
	comp=N,0.1nm,0.3s,baz=132,slow=14,SNR=5.4						
SHAO	Shalim	15.20	159	P	Pn	09 05 54.3	+0.9
	SNR=7.8						
SHAO				S	Sn	09 08 38.5	-3.3
DMTO	DMTO	15.30	162	P	Pn	09 05 53.9	-0.8
	SNR=9.6						
DMTO				S	Sn	09 08 38.3	-5.9
DAMY	Dhamar	18.46	197	P	P	09 06 36.9	+2.0
DAMY				IAmb	IAmb	09 06 45.5	
	comp=Z,18nm,1.2s						
AKTO	Aktyubinsk	18.99	16	P	Pn	09 06 43.6	+2.8
	comp=Z,0.1nm,0.3s,baz=202,slow=12,SNR=2.4						
KARP	Karpathos	19.16	286	P	P	09 06 41.0	-1.1
SOCY	Socotra	20.45	169	P	P	09 06 54.5	-2.0
SOCY				IAmb	IAmb	09 06 56.2	
	comp=Z,14nm,1.3s						
IDI	Anoyia	21.00	285	P	P	09 07 01.7	-0.6
	comp=Z,6.1nm,0.5s,baz=82,slow=7.1,SNR=2.5						
ATD	Arta Tunnel	21.78	199	LR	LR	09 15 13.6	
	comp=Z,90nm,20.5s,baz=354,slow=36						
MLR	Muntele Rosu	22.69	312	P	P	09 07 22.6	+2.2
	comp=Z,6.3nm,0.7s,baz=4.6,slow=10,SNR=2.9						
AGG	Agios Georgios	23.33	294	P	P	09 07 26.9	0.0
AGG				IAmb	IAmb	09 07 35.9	
	comp=Z,14nm,1.3s						
AKASG	Malin Array Be	23.84	326	P	P	09 07 30.5	-1.3
	comp=Z,0.5nm,0.4s,baz=137,slow=9.9,SNR=4.2						
BVAR	Borovoye Array	25.34	30	P	P	09 07 46.1	+0.6
	comp=Z,1.0nm,0.6s,baz=209,slow=8.3,SNR=7.7						
KURBB	Kurchatov Arra	27.84	41	P	P	09 08 09.1	+1.1
	comp=Z,0.1nm,0.4s,baz=241,slow=9.4,SNR=6.0						
MKAR	Makanchi Array	28.53	50	P	P	09 08 15.7	+1.4
	comp=Z,0.2nm,0.5s,baz=250,slow=9.9,SNR=1.8						
MOA	Molln	31.03	310	epP	P	09 08 36.5	+0.1
	comp=Z,1.8nm,0.5s						
KBA	Koelnbreinsper	31.42	309	epP	P	09 08 40.3	+0.2
	comp=Z,2.9nm,0.6s						
GERES	GERESS Array B	31.68	312	P	P	09 08 41.4	-0.8
	comp=Z,0.5nm,0.5s,baz=107,slow=7.7,SNR=4.6						
GERES	GERESS Array B	31.68	312	P	P	09 08 40.7	-1.5
ABTA	Abfaltersbach	31.89	308	epP	P	09 08 44.2	+0.1
	comp=Z,3.3nm,0.7s						
WTTA	Wattenberg	32.60	308	pP	P	09 08 49.9	-0.5
	comp=Z,3.4nm,0.6s						
ZALV	Zalesovo Beam	32.82	39	P	P	09 08 52.9	+0.9
	comp=Z,0.8nm,0.6s,baz=239,slow=10.0,SNR=3.5						
ZALV	Zalesovo Beam	32.82	39	P	P	09 08 50.3	-1.6
SQTA	Sankt Quirin	32.87	308	epP	P	09 08 52.1	-0.6
	comp=Z,3.8nm,0.5s						
FINES	FINESS Array B	32.93	339	P	P	09 08 52.3	-0.6
	comp=Z,2.0nm,0.9s,baz=134,slow=8.2,SNR=4.6						
FETA	Feichten	33.15	308	epP	P	09 08 54.8	-0.4

	comp=Z,2.3nm,0.6s						
DAVA	**Damuels**	**33.77**	**308**	*e*P	**P**	**09 08 59.6**	**-1.0**
	comp=Z,4.1nm,0.5s						
NOA	**NORSAR Array B**	**38.10**	**330**	P	**P**	**09 09 36.7**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=121,slow=8.3,SNR=2.4						
NOA				LR	LR	09 27 53.3	
	comp=Z,44nm,18.0s,baz=40,slow=40						
SCHQ	**Schefferville**	**77.62**	**328**	P	**P**	**09 14 14.1**	**-0.8**
	comp=Z,1.6nm,0.6s,baz=34,slow=7.3,SNR=5.8						
SCHQ	**Schefferville**	**77.62**	**328**	P	**P**	**09 14 13.9**	**-1.0**
SCHQ				IAmb	IAmb	09 14 15.4	
	comp=Z,7.8nm,1.4s						
TOLK	**Toolik Lake Re**	**78.22**	**7**	P	**P**	**09 14 19.3**	**+1.2**
IMAR	**Indian Mountai**	**80.24**	**10**	P	**P**	**09 14 29.6**	**+0.6**
YKA	**Yellowknife Ar**	**84.62**	**353**	P	**P**	**09 14 51.9**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=9.0,slow=5.3,SNR=6.5						

IDC ***29*** *09:13:54.8±1.6, 2°.02S×141°.20E, h0^{km}, mb3.6/8, mb1 3.8/9, mb1mx3.6/46, mbtmp3.7/9, ML3.7/1, Error ellipse: s-maj=63.1km s-min=20.2km az=99.0*

ISC 29 09:13:57.9±1.5**, 2°.1S**±0°.1×**141°.2E**±0°.4**, h20^{km}, n12, σ0^{s}.45**/9**, mb3.7**/8**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.98**	**200**	P	**Pn**	**09 18 18.4**	**-0.6**
	0.2nm,0.3s,baz=22,slow=12,SNR=12						
FITZ	**Fitzroy Crossi**	**22.07**	**223**	P	**P**	**09 18 51.9**	**+0.1**
	1.5nm,0.8s,baz=40,slow=11,SNR=5.4						
ASAR	**Alice Springs**	**22.59**	**198**	P	**P**	**09 18 58.0**	**+0.6**
	1.8nm,0.7s,baz=30,slow=11,SNR=32						
H11S3	**WAKE ISLAND Hy**	**32.34**	**50**	T	T	09 55 15.0	
	baz=232,slow=75,SNR=17						
H11S2	**WAKE ISLAND Hy**	**32.35**	**50**	T	T	09 55 13.4	
	baz=232,slow=75,SNR=7.4						
H11S1	**WAKE ISLAND Hy**	**32.36**	**50**	T	T	09 55 10.2	
	baz=232,slow=75,SNR=9.1						
SONM	**Songino Array**	**58.27**	**333**	P	**P**	**09 23 51.6**	**+0.3**
	0.3nm,0.4s,baz=140,slow=7.5,SNR=2.3						
MKAR	**Makanchi Array**	**70.85**	**321**	P	**P**	**09 25 13.2**	**-0.3**
	0.3nm,0.4s,baz=108,slow=7.8,SNR=4.9						
ZALV	**Zalesovo Beam**	**72.68**	**329**	P	**P**	**09 25 23.9**	**-0.3**
	0.7nm,0.4s,baz=90,slow=4.3,SNR=2.5						
KURBB	**Kurchatov Arra**	**74.69**	**324**	P	**P**	**09 25 35.6**	**-0.5**
	0.2nm,0.3s,baz=107,slow=6.0,SNR=2.5						
BVAR	**Borovoye Array**	**80.25**	**325**	P	**P**	**09 26 07.1**	**-0.1**
	0.4nm,0.5s,baz=107,slow=4.8,SNR=2.9						
ILAR	**Eielson Array**	**84.23**	**24**	P	**P**	**09 26 27.8**	**0.0**
	0.2nm,0.6s,baz=264,slow=2.7,SNR=4.3						

PGC 29 09:46:43.2±0.4**, 52°.51N×132°.01W, h17^{km}, ML3.8**/17**, 83km Ssw of Sandspit, Bc Haida Gwaii Region, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNB	**Barry Inlet**	**0.17**	**66**	P	Pg	09 46 47.7	0.0
BNB				S	Sg	09 46 50.2	-0.5
HG3B	**Hotspring**	**0.35**	**78**	P	Pg	09 46 50.4	-0.1
HG3B				S	Sg	09 46 54.9	-0.6
HG1B	**Mitchell Dam**	**0.43**	**350**	P	Pg	09 46 51.8	-0.2
HG1B				S	Sg	09 46 57.4	-0.6
MOBC	**Moresby Island**	**0.64**	**2**	P	Pg	09 46 55.2	-0.6
MOBC				S	Sg	09 47 03.7	-0.7
DIB	**Dawson Inlet,**	**0.75**	**338**	P	Pb	09 46 56.9	-0.9
DIB				S	Sb	09 47 06.8	-0.9
VIB	**Van Inlet**	**0.81**	**337**	P	Pb	09 46 58.0	-0.9
VIB				S	Sb	09 47 08.8	-0.8
BNAB	**Bonilla**	**1.29**	**39**	P	Pn	09 47 05.3	-1.0
BNAB				S	Sn	09 47 22.0	-1.1
MASB	**Masset**	**1.51**	**360**	Pn	Pn	09 47 09.8	+0.4
MASB				Sg	Sg	09 47 31.1	-0.8
NDB	**Naden**	**1.56**	**339**	Pn	Pn	09 47 09.3	-0.8
NDB				Sn	Sb	09 47 30.4	-0.5
RUBB	**Prince Rupert**	**2.10**	**29**	Pn	Pn	09 47 17.1	-0.4
RUBB				Sn	Sn	09 47 42.9	-0.3
BBB	**Bella Bella**	**2.41**	**96**	Pn	Pn	09 47 20.8	-0.9
BBB				Sn	Sn	09 47 50.5	-0.2
HOLB	**Holberg**	**3.06**	**126**	Pn	Pn	09 47 30.0	-0.7
HOLB				Sn	Sn	09 48 04.5	-2.3
BCBC	**Bella Coola**	**3.22**	**90**	Pn	Pn	09 47 32.0	-0.8
BCBC				Sg	Sb	09 48 20.9	+2.3
PHC	**Port Hardy**	**3.37**	**120**	Pn	Pn	09 47 33.7	-1.2
PHC				Sn	Sn	09 48 12.0	-2.5
PACB	**Port Alice, BC**	**3.50**	**125**	Pn	Pn	09 47 35.6	-1.1
PACB				Sn	Sn	09 48 17.3	-0.4
MAYB	**Maynard**	**3.69**	**123**	Pn	Pn	09 47 38.2	-1.2
MAYB				Sn	Sn	09 48 20.2	-2.3
TLCB	**Telegraph Cove**	**3.78**	**119**	Pn	Pn	09 47 39.8	-0.7
TLCB				Sn	Sn	09 48 22.8	-1.7
EDB	**Eliza Dome**	**4.05**	**129**	Pn	Pn	09 47 44.7	+0.4
SPLB	**Strathcona Par**	**4.78**	**121**	Sn	Sn	09 48 45.0	-4.2
UBRB	**Upper Baezaeko**	**4.83**	**82**	Pn	Pn	09 47 56.1	+0.9
UBRB				Sn	Sn	09 48 49.8	-0.9
UBRB				Sg	Sg	09 49 12.0	-6.2
CBB	**Campbell River**	**4.85**	**118**	Pn	Pn	09 47 57.0	+1.8
CBB				Sn	Sn	09 48 50.4	-0.5
BTB	**Buttle Lake**	**5.10**	**124**	Pn	Pn	09 48 00.2	+1.3
NLLB	**Nanaimo Lost L**	**6.04**	**120**	Sg	Sb	09 49 48.2	+8.3
DLBC	**Dease Lake**	**6.05**	**10**	Pn	Pn	09 48 14.6	+2.8
DLBC				Sg	Sg	09 49 49.6	-7.5
YOUB	**Youbou, Lake C**	**6.10**	**123**	Sg	Sg	09 49 52.6	-6.3
LLLB	**Lillooet**	**6.59**	**103**	Sg	Sg	09 50 09.1	-5.5

SJA ***29*** *09:47:19.4±0.7, 35°.66S×74°.24W, h10^{km}, ML3.2, MW2.9*

GUC ***29*** *09:47:20.3±0.6, 36°.04S×74°.11W, h34^{km}±6^{km}, ML3.4*

ISC 29 09:47:17.1±3.2**, 36°.09S**±0°.06×**74°.3W**±0°.2**, h8^{km}**±14^{km}**, n15, σ2^{s}.19**/21**, 3C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCSP	**San Pedro de C**	**1.18**	**130**	⇓*i*P	**Pg**	**09 47 39.9**	**+0.1**
CCSP				*i* S	**Sg**	**09 47 54.3**	**-0.9**
CCSP				IAML		09 47 56.8	
	comp=E,706nm,0.3s						
BI03	**Tigo**	**1.24**	**128**	⇑*i*P	**Pg**	**09 47 40.7**	**-0.1**
BI03				*i* S	**Sg**	**09 47 55.5**	**-1.3**
BI03				IAML		09 47 59.3	
	comp=N,3μm,0.3s						
LAJA	**Laja**	**1.71**	**134**	*e*P	**Pn**	**09 47 47.0**	**-0.2**
LAJA				*i* S	**Sn**	**09 48 08.4**	**-0.8**
GO05	**Huala**	**2.18**	**61**	⇑*i*P	**Pn**	**09 47 53.5**	**-0.1**
GO05				*i* S	**Sn**	**09 48 18.5**	**-2.2**
GO05	**Huala**	**2.18**	**61**	*i* P	**Pn**	**09 47 53.5**	**-0.1**
GO05				*i* S	**Sn**	**09 48 18.7**	**-2.1**
PUMA	**Malargue**	**3.94**	**83**	*i* P	**Pn**	**09 48 21.9**	**+4.0**
ROC1	**El Roble**	**4.10**	**42**	*i* P	**Pn**	**09 48 20.2**	**0.0**
ROC1				*i* S	**Sn**	**09 49 07.2**	**-1.3**
GO06	**Curarrehue**	**4.12**	**149**	⇑*i*P	**Pn**	**09 48 21.7**	**+1.4**
PEL	**Peldehue**	**4.16**	**46**	*i* P	**Pn**	**09 48 22.3**	**+1.4**
PEL				*i* S	**Sn**	**09 49 08.0**	**-1.6**
LAMA	**Las Malvinas**	**4.27**	**76**	*i* P	**Pn**	**09 48 26.7**	**+4.3**
ARCO	**CERRO ARCO**	**5.46**	**55**	*i* P	**Pn**	**09 48 43.3**	**+4.5**
RTCV	**Cerro Valdivia**	**6.35**	**50**	*i* P	**Pn**	**09 48 52.6**	**+1.7**
RTCV				IAML		09 51 15.5	
	comp=Z,9.6nm,2.4s						
RTLL	**Cerro Villicun**	**6.76**	**47**	*i* P	**Pn**	**09 48 57.8**	**+1.2**
RTLL				IAML		09 50 52.9	
	comp=Z,11nm,2.3s						
AMOG	**MOGNA**	**7.04**	**45**	*i* P	**Pn**	**09 49 01.4**	**+1.0**
AMOG				IAML		09 51 21.7	
	comp=Z,2.3nm,1.0s						
AROD	**Rodeo**	**7.14**	**35**	*i* P	Pn	09 49 07.2	+5.1

NEIC ***29*** *10:02:46.4±1.7, 20°.03S±0°.02×70°.84W±0°.04, h10^{km}±1^{km}, mb4.1/6, Mwr3.9/41, ML4.1(GUC), Error ellipse: s-maj=6.8km s-min=3.9km az=273.0*

IDC ***29*** *10:02:46.8±0.7, 19°.95S×70°.65W, h0^{km}, mb3.9/6, mb1 4.2/8, mb1mx4.0/22, mbtmp4.0/8, ML4.0/2, Error ellipse: s-maj=24.1km s-min=14.6km az=64.0*

NEIC ***29*** *10:02:48, 20°.02S×70°.79W, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}5.31; $M_{\theta\theta}$-6.82; $M_{\phi\phi}$1.51; $M_{r\theta}$4.01; $M_{\theta\phi}$1.57; $M_{\phi r}$-3.71; Fault plane solution: $M_0$8.41000×10^{14} NP1:ϕ_s122.85000°, δ67.30000°, λ112.90000°. NP2:ϕ_s255.26000°, δ31.81000°, λ47.07000°. Principal axes: T 8.0782, Plg61.0000°, Azm67.0000°; N 0.6371, Plg21.0000°, Azm294.0000°; P -8.7152, Plg19.0000°, Azm196.0000°;*

GUC ***29*** *10:02:48.0±0.8, 20°.02S×70°.79W, h31^{km}±2^{km}, ML4.1*

ISC 29 10:02:45.8±1.6**, 20°.03S**±0°.02×**70°.81W**±0°.05**, h1^{km}**±10^{km}**, n63, σ1^{s}.09**/79**, mb4.0**/6**, 10C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.78**	**57**	⇑*i*P	**Pb**	**10 03 01.9**	**-0.3**
PSGC				*i* S	**Sb**	**10 03 12.3**	**-1.1**
PSGCX	**Pisagua**	**0.78**	**57**		**Pg**	**10 03 01.6**	**+0.8**
PSGCX				Sg	**Sb**	**10 03 12.1**	**-1.3**
TA01	**Diego Aracena**	**0.80**	**132**	⇓*i*P	**Pb**	**10 03 02.4**	**0.0**
TA01				*i* S	**Sb**	**10 03 13.1**	**-0.7**
PATCX	**Punta Patache**	**1.00**	**142**	⇓*i*P	**Pg**	**10 03 05.8**	**+0.7**
PATCX				*i* S	**Sg**	**10 03 18.9**	**+0.9**
PATCX				IAML		10 03 23.5	
	comp=E,10μm,0.4s						
PATCX	**Punta Patache**	**1.00**	**142**		**Pg**	**10 03 05.7**	**+0.7**
PATCX				Sg	**Sg**	**10 03 18.4**	**+0.4**
PB11	**IPOC Station P**	**1.12**	**76**	⇑*i*P	**Pg**	**10 03 07.6**	**+0.2**
PB11				*i* S	**Sb**	**10 03 22.6**	**-0.7**
PB11	**IPOC Station P**	**1.12**	**76**		**Pg**	**10 03 07.5**	**+0.2**
PB11				Sg	**Sg**	**10 03 22.3**	**+0.4**
MNMC	**Minye Minye**	**1.46**	**52**	⇑*i*P	**Pn**	**10 03 13.2**	**-0.3**
MNMC				*i* S	**Sg**	**10 03 32.6**	**0.0**
MNMC				IAML		10 03 36.0	
	comp=E,21μm,0.3s						
MNMC	**Minye Minye**	**1.46**	**52**		**Pn**	**10 03 13.2**	**-0.3**
MNMC				Sn	**Sb**	**10 03 32.3**	**-0.7**
PB12	**IPOC Station P**	**1.48**	**18**	⇑*i*P	**Pn**	**10 03 13.3**	**-0.4**
PB12				*i* S	**Sb**	**10 03 32.9**	**-0.6**
PB12	**IPOC Station P**	**1.48**	**18**		**Pn**	**10 03 13.2**	**-0.4**
PB12				Sn	**Sb**	**10 03 32.9**	**-0.6**
PB02	**IPOC Station P**	**1.54**	**146**	⇓*i*P	**Pn**	**10 03 14.6**	**0.0**
PB02				*i* S	**Sn**	**10 03 34.8**	**-0.5**
PB08	**IPOC Station P**	**1.56**	**94**	⇑*i*P	**Pn**	**10 03 15.0**	**0.0**
PB08				*i* S	**Sb**	**10 03 35.7**	**-0.5**
PB08				IAML		10 03 41.4	
	comp=N,1μm,0.6s						
GO01	**Chusmiza**	**1.57**	**77**	⇑*i*P	**Pn**	**10 03 15.2**	**+0.1**
GO01				*i* S	**Sg**	**10 03 36.1**	**-0.1**
GO01	**Chusmiza**	**1.57**	**77**		**Pn**	**10 03 15.2**	**+0.1**
GO01				Sn	**Sg**	**10 03 36.0**	**-0.1**
PB01	**IPOC Station P**	**1.60**	**129**	⇑*i*P	**Pn**	**10 03 15.2**	**-0.1**
PB01				*i* S	**Sn**	**10 03 35.9**	**-0.8**
PB01				IAML		10 03 39.5	
	comp=E,3μm,0.3s						
PB01	**IPOC Station P**	**1.60**	**129**		**Pn**	**10 03 15.2**	**-0.1**
PB01				Sn	**Sb**	**10 03 36.7**	**-0.3**
AP01	**Chacalluta**	**1.71**	**15**	⇑*i*P	**Pb**	**10 03 17.3**	**-0.7**
AP01				*e*S	**Sb**	**10 03 39.1**	**-0.8**
PB07	**IPOC Station P**	**1.90**	**153**	⇓*i*P	**Pn**	**10 03 19.9**	**+0.4**
PB07				*i* S	**Sb**	**10 03 45.4**	**-0.3**
PB07				IAML		10 03 50.7	
	comp=E,2μm,0.5s						
PB07	**IPOC Station P**	**1.90**	**153**		**Pn**	**10 03 20.0**	**+0.5**
PB16	**IPOC Station P**	**2.09**	**36**	⇑*i*P	**Pb**	**10 03 23.6**	**-1.3**
PB16				*i* S	**Sb**	**10 03 50.6**	**-0.9**
PB16	**IPOC Station P**	**2.09**	**36**		**Pb**	**10 03 23.7**	**-1.2**
PB03	**IPOC Station P**	**2.24**	**154**	⇓*i*P	**Pn**	**10 03 24.5**	**+0.3**
PB03				*i* S	**Sb**	**10 03 53.7**	**-1.7**
PB03				IAML		10 04 04.8	
	comp=E,963nm,0.6s						
PB09	**IPOC Station P**	**2.29**	**140**	⇑*i*P	**Pb**	**10 03 26.7**	**-1.4**
PB09				*i* S	**Sb**	**10 03 55.2**	**-1.8**
PB09				IAML		10 04 04.5	
	comp=E,2μm,0.5s						
PB09	**IPOC Station P**	**2.29**	**140**		**Pb**	**10 03 26.9**	**-1.2**
PB04	**IPOC Station P**	**2.38**	**165**		**Pn**	**10 03 25.6**	**-0.5**
LVC	**Limon Verde**	**3.12**	**146**	Pn	**Pn**	**10 03 38.8**	**+2.3**
	comp=E,19nm,0.3s,baz=315,slow=10,SNR=124						
LVC				Sn	**Sn**	**10 04 17.1**	**+2.6**
	comp=E,26nm,0.3s,baz=189,slow=17,SNR=6.7						
LVC				Lg	Lg	10 04 23.0	
	comp=E,105nm,0.3s,baz=83,slow=14,SNR=13						
LVC	**Limon Verde**	**3.12**	**146**		**Pn**	**10 03 38.1**	**+1.6**
PB15	**IPOC Station P**	**3.40**	**159**		**Pn**	**10 03 40.1**	**-0.1**
PB10	**IPOC Station P**	**3.48**	**176**		**Pn**	**10 03 39.8**	**-1.3**
LPAZ	**La Paz**	**4.51**	**35**	Pn	**Pn**	**10 04 00.3**	**+4.5**
	comp=E,1.7nm,0.3s,baz=232,slow=7.9,SNR=30						
LPAZ	**La Paz**	**4.51**	**35**		**Pn**	**10 03 59.2**	**+3.4**
PB14	**IPOC Station P**	**4.59**	**175**		**Pn**	**10 03 55.1**	**-1.6**
GO02	**Mina Guanaco**	**5.23**	**168**		**Pn**	**10 04 05.0**	**-0.4**
GO03	**Copiap**	**7.55**	**176**	Pn	**Pn**	**10 04 35.8**	**-1.3**
SIV	**San Ignacio**	**10.10**	**68**	Pn	**Pn**	**10 05 11.5**	**-0.6**
	comp=E,1.6nm,0.3s,baz=273,slow=11,SNR=31						
PLCA	**Paso Flores**	**20.64**	**179**	P	Pn	10 07 30.0	+0.9
	comp=E,3.3nm,0.9s,baz=254,slow=9.5,SNR=6.9						
PLCA	**Paso Flores**	**20.64**	**179**	P	**P**	**10 07 27.4**	**+0.6**
PTGA	**Pitinga**	**21.92**	**30**	P	**P**	**10 07 39.8**	**-0.9**
	comp=E,4.4nm,0.4s,baz=212,slow=13,SNR=12						
PTGA	**Pitinga**	**21.92**	**30**	P	**P**	**10 07 40.2**	**-0.6**
PTGA				IAmb	IAmb	10 07 42.9	
	comp=Z,6.3nm,0.5s						
FLOC	**Florencia**	**22.00**	**347**	P	**P**	**10 07 41.7**	**+0.2**
BDFB	**Brasilia**	**22.13**	**82**	P	**P**	**10 07 43.1**	**-0.1**
	comp=Z,2.2nm,0.6s,baz=274,slow=13,SNR=2.2						
BDFB	**Brasilia**	**22.13**	**82**	P	**P**	**10 07 41.9**	**-1.2**
BDFB				IAmb	IAmb	10 07 48.1	
	comp=Z,4.6nm,1.0s						
ROSC	**El Rosal**	**24.95**	**352**	P	**P**	**10 08 09.5**	**-1.8**
RUSC	**La Rusia**	**25.86**	**355**	P	**P**	**10 08 20.5**	**+0.9**
MDP	**Montagnes des**	**30.71**	**37**	P	**P**	**10 09 02.0**	**-0.5**
	comp=Z,31nm,1.2s,baz=201,slow=8.6,SNR=4.6						
TXAR	**Lajitas Array**	**58.42**	**326**	P	**P**	**10 12 44.3**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=151,slow=6.7,SNR=8.8						
NVAR	**Mina Array Bea**	**73.25**	**323**	P	**P**	**10 14 20.1**	**+1.1**
	comp=Z,0.8nm,0.9s,baz=164,slow=7.2,SNR=3.9						
YKA	**Yellowknife Ar**	**89.22**	**341**	P	**P**	**10 15 43.5**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=136,slow=5.0,SNR=27						
H11S2	**WAKE ISLAND Hy**	**125.91**	**279**	T	T	12 41 18.5	
	baz=101,slow=74,SNR=178						
H11S1	**WAKE ISLAND Hy**	**125.92**	**279**	T	T	12 41 14.1	
	baz=101,slow=74,SNR=89						
H11S3	**WAKE ISLAND Hy**	**125.93**	**279**	T	T	12 41 19.8	
	baz=101,slow=74,SNR=106						
H11N3	**WAKE ISLAND Hy**	**125.96**	**280**	T	T	12 41 11.5	
	baz=100,slow=74,SNR=63						
H11N2	**WAKE ISLAND Hy**	**125.97**	**280**	T	T	12 41 16.8	
	baz=100,slow=74,SNR=58						
H11N1	**WAKE ISLAND Hy**	**125.97**	**280**	T	T	12 41 14.6	
	baz=100,slow=74,SNR=35						
ASAR	**Alice Springs**	**130.33**	**210**	PKP	**PKiKP**	**10 21 59.1**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=121,slow=1.4,SNR=3.1						
WRA	**Warramunga Arr**	**133.25**	**213**	PKP	**PKiKP**	**10 22 05.1**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=154,slow=1.9,SNR=3.5						
ZALV	**Zalesovo Beam**	**141.34**	**23**	PKP	**PKPdf**	**10 22 17.7**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=306,slow=2.2,SNR=4.2						
MKAR	**Makanchi Array**	**145.44**	**33**	PKPbc	**PKPab**	**10 22 26.1**	**+0.4**
	comp=Z,4.5nm,0.7s,baz=324,slow=4.2,SNR=46						
KLR	**Kul'dur**	**145.72**	**333**	PKPbc	**PKPab**	**10 22 27.1**	**+0.4**
	comp=Z,2.0nm,0.7s,baz=22,slow=2.9,SNR=8.0						
USRK	**Ussuriysk Ar.**	**149.31**	**327**	PKPbc	**PKiKP**	**10 22 37.6**	**-0.1**
	comp=Z,2.7nm,0.8s,baz=16,slow=2.8,SNR=5.1						
MJAR	**Matsushiro Arr**	**149.76**	**309**	PKPbc	**PKiKP**	**10 22 38.9**	**0.0**
	comp=Z,1.7nm,0.9s,baz=117,slow=2.2,SNR=4.7						
SONM	**Songino Array**	**152.17**	**4**	PKPbc	**PKiKP**	**10 22 44.3**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=350,slow=1.1,SNR=9.5						

DNK ***29*** *10:48:58.7±1.8, 55°.98N×10°.76E, h15^{km}±24^{km}, Hypocentre not reviewed by the ISC*

UPP ***29*** *10:48:58.6±0.9, 56°.06N×10°.92E, h0^{km}, ML2.6, Suspected explosion*

BER ***29*** *10:49:01.7±1.4, 56°.17N×11°.02E, h0^{km}, ML1.4, Suspected explosion*

ISC 29 10:48:59.3±1.3**, 56°.17N**±0°.06×**11°.05E**±0°.06**, h0^{km}, n23, σ1^{s}.79**/35**, Denmark**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COP	**Copenhagen**	**0.92**	**122**	*i* P	**Pg**	**10 49 18.4**	**+1.6**
COP	**Copenhagen**	**0.92**	**122**	*i* P		10 49 18.5	
BJUU	**Bjuv**	**1.11**	**94**	P	**Pg**	**10 49 20.9**	**+0.4**
BJUU				S	**Sb**	**10 49 37.1**	**+0.9**
FABU	**Falkenberg**	**1.24**	**47**	P	**Pb**	**10 49 24.0**	**+0.5**
FABU				S	**Sn**	**10 49 41.4**	**+0.1**
ONAU	**Onsala**	**1.32**	**21**	P	**Pn**	**10 49 25.7**	**+0.9**
ONAU				S	**Sn**	**10 49 44.0**	**+0.9**
GOET	**G??ttrup**	**1.33**	**311**	*i* P	**Pn**	**10 49 27.5**	**+2.4**
GOET	**G??ttrup**	**1.33**	**311**	*e*P		10 49 27.5	
LUNU	**Lund**	**1.45**	**111**	P	**Pn**	**10 49 25.9**	**-0.9**
GNOU	**Gnosjoe**	**1.86**	**52**	P	**Pn**	**10 49 33.2**	**+0.8**
GNOU	**Gnosjoe**	**1.86**	**52**	P		10 49 33.2	
VXJU	**Vaexsjoe**	**2.28**	**69**	P	**Pn**	**10 49 39.0**	**+0.9**
VXJU	**Vaexsjoe**	**2.28**	**69**	P		10 49 39.0	
VANU	**Vaenersborg**	**2.39**	**13**	P	**Pn**	**10 49 41.0**	**+1.3**
VANU	**Vaenersborg**	**2.39**	**13**	P		10 49 41.0	
BSD	**Bornholm Skovb**	**2.43**	**114**	*i* P	**Pn**	**10 49 38.6**	**-1.6**
BSD	**Bornholm Skovb**	**2.43**	**114**	*i* P		10 49 38.6	
FKPU	**Falk**	**2.47**	**35**	P	**Pn**	**10 49 42.3**	**+1.6**
FKPU	**Falk**	**2.47**	**35**	P		10 49 42.3	
HOMB	**Homborsund**	**2.52**	**328**	*e*P	**Pn**	**10 49 41.6**	**+0.2**
HOMB				*e*S	**Sn**	**10 50 11.1**	**-1.6**
HOMB				IAML		10 50 13.6	
	comp=Z,4.1nm,0.6s						
HOMB	**Homborsund**	**2.52**	**328**	*i* P		10 49 41.7	
STRU	**Stroemstad**	**2.87**	**1**	*e*P	**Pn**	**10 49 47.2**	**+1.0**
STRU				*e*S	**Sn**	**10 50 20.4**	**-1.0**
KONO	**Kongsberg**	**3.57**	**348**	*e*P	**Pn**	**10 49 56.4**	**+0.6**
KONO				*e*S	**Sn**	**10 50 38.3**	**-0.5**
KONO				IAML		10 50 43.0	
	comp=Z,1.5nm,0.9s						
BLS5	**Blasjo**	**4.08**	**325**	*e*P	**Pn**	**10 50 03.0**	**+0.1**
ODD1	**Odda**	**4.43**	**330**	*e*P	**Pn**	**10 50 08.4**	**+0.8**
ODD1				IAML		10 51 14.2	
	comp=Z,1.8nm,0.7s						
NC602	**NORSAR Array S**	**4.58**	**3**	*e*P	**Pn**	**10 50 10.1**	**+0.3**
NC602				*e*S	**Sn**	**10 51 01.8**	**-1.9**
NC602				IAML		10 51 08.0	
	comp=Z,1.1nm,0.6s						
NAO01	**NORSAR Array S**	**4.69**	**359**	*e*P	**Pn**	**10 50 11.3**	**+0.1**
NAO01				IAML		10 50 59.8	
	comp=Z,0.9nm,0.6s						
NAO01				*e*S	**Sn**	**10 51 02.8**	**-3.4**
SKAR	**Skarslia**	**4.75**	**343**	*e*P	**Pn**	**10 50 12.1**	**0.0**
SKAR				IAML		10 51 01.9	
	comp=Z,0.9nm,0.7s						
NBO00	**NORSAR Array S**	**4.88**	**358**	*e*P	**Pn**	**10 50 14.4**	**+0.6**
NBO00				*e*S	**Sn**	**10 51 08.0**	**-2.9**
NB201	**NORSAR Array S**	**4.89**	**1**	*e*P	**Pn**	**10 50 14.6**	**+0.5**
NB201				*e*S	**Sn**	**10 51 08.0**	**-3.4**
NB201				IAML		10 51 11.2	
	comp=Z,1.5nm,0.8s						
NC303	**NORSAR Array S**	**5.07**	**2**	*e*P	**Pn**	**10 50 16.8**	**+0.3**
NC303				*e*S	**Sn**	**10 51 11.8**	**-3.9**
NC303				IAML		10 51 18.1	
	comp=Z,1.1nm,0.8s						
NC204	**NORSAR Array S**	**5.12**	**358**	*e*P	**Pn**	**10 50 17.3**	**+0.1**
NC204				*e*S	**Sn**	**10 51 12.0**	**-5.0**
NC204				IAML		10 51 19.9	
	comp=Z,1.8nm,0.9s						

IDC 29 10:53:16.8±2.8**, 7°.38N×93°.81E, h0^{km}, mb3.4**/5**, mb1 3.5**/5**, mb1mx3.3**/35**, mbtmp3.4**/5**, MS3.0**/5**, Ms1 3.0**/5**, ms1mx2.8**/32**, Error ellipse: s-maj=155.7km s-min=25.5km az=56.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**12.09**	**24**	LR	LR	11 00 30.5	
	comp=Z,53nm,18.6s,baz=165,slow=36						
PALK	**Pallekele**	**13.00**	**270**	LR	LR	11 00 16.2	
	comp=Z,30nm,20.7s,baz=105,slow=32						
LEM	**Lembang**	**19.72**	**135**	LR	LR	11 05 36.7	
	comp=Z,63nm,20.1s,baz=180,slow=38						
H08S3	**Diego Garcia H**	**25.97**	**235**	T	T	11 25 38.3	
	baz=55,slow=76,SNR=11						
H08S2	**Diego Garcia H**	**25.97**	**235**	T	T	11 25 33.4	
	baz=55,slow=76,SNR=4.9						
H08S1	**Diego Carcia H**	**25.99**	**235**	T	T	11 25 38.1	
	baz=55,slow=76,SNR=3.5						
AAK	**Ala-Archa**	**39.03**	**337**	LR	LR	11 18 30.6	
	comp=Z,26nm,18.6s,baz=262,slow=39						
MKAR	**Makanchi Array**	**40.50**	**348**	P	P	11 00 56.8	-0.6
	0.2nm,0.6s,baz=168,slow=9.9,SNR=3.0						
MKAR				LR	LR	11 21 49.6	
	comp=Z,30nm,18.2s,baz=298,slow=42						
ZALV	**Zalesovo Beam**	**47.00**	**353**	P	P	11 01 50.1	+0.5
	0.4nm,0.3s,baz=175,slow=6.5,SNR=1.4						
WRA	**Warramunga Arr**	**48.24**	**125**	P	P	11 01 59.3	-0.5
	0.2nm,0.7s,baz=306,slow=8.4,SNR=1.7						
ASAR	**Alice Springs**	**49.85**	**129**	P	P	11 02 12.3	+0.2
	0.2nm,0.7s,baz=302,slow=7.1,SNR=1.8						
FINES	**FINESS Array B**	**72.99**	**332**	P	P	11 04 48.1	0.0
	1.0nm,0.9s,baz=115,slow=10.0,SNR=3.8						

PRE ***29*** *11:01:59.3±1.1, 26°.29S×27°.32E, h2^{km}, ML3.3*

EAF ***29*** *11:02:04.4±1.0, 26°.44S×27°.88E, h47^{km}±155^{km}, MD4.0*

ISC 29 11:02:01.3±0.9**, 26°.43S**±0°.04×**27°.46E**±0°.06**, h17^{km}**±7^{km}**, n20, σ1^{s}.96**/28**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLOF	**Kloof**	**0.15**	**60**	*e*P	**Pg**	**11 02 05.1**	**-0.6**
KLOF				*e*S	**Sg**	**11 02 07.5**	**-1.0**
KLOF				AML	AML	11 02 08.1	
	comp=Z,40μm,0.2s						
PRYS	**Parys**	**0.51**	**190**	*e*P	**Pg**	**11 02 11.8**	**+0.3**
PRYS				*e*S	**Sb**	**11 02 20.8**	**+1.7**
PRYS				AML	AML	11 02 31.0	
	comp=Z,428nm,0.3s						
LBTB	**Lobatse**	**2.19**	**309**	*i* P	**Pb**	**11 02 42.1**	**+1.4**
LBTB	**Lobatse**	**2.19**	**309**	*i* P	**Pb**	**11 02 42.1**	**+1.4**
BOSA	**Boshof**	**2.93**	**221**	*i* P	**Pb**	**11 02 51.7**	**-1.6**
BOSA	**Boshof**	**2.93**	**221**	*i* P	**Pb**	**11 02 51.7**	**-1.6**
HVD	**Gariep Dam**	**4.51**	**202**	*e*P	**Pn**	**11 03 11.6**	**+2.6**
HVD				*e*S	**Sn**	**11 04 02.1**	**+0.9**
HVD				AML	AML	11 04 30.5	
	comp=Z,60nm,0.5s						
MOPA	**Mopani**	**4.60**	**52**	*e*P	**Pn**	**11 03 11.3**	**+1.2**
MOPA				*e*S	**Sn**	**11 04 03.2**	**-0.1**
MOPA				AML	AML	11 04 37.6	
	comp=Z,72nm,0.3s						
MSNA	**Messina**	**4.69**	**30**	*e*P	**Pn**	**11 03 10.5**	**-0.9**
MSNA				*e*S	**Sn**	**11 04 01.6**	**-3.9**
MSNA				AML	AML	11 04 32.5	
	comp=Z,75nm,0.2s						
PKA	**Prieska**	**5.27**	**231**	*e*P	**Pn**	**11 03 19.4**	**0.0**
PKA				*e*S	**Sn**	**11 04 18.8**	**-1.0**
PKA				AML	AML	11 04 53.8	
	comp=Z,31nm,0.5s						
UPI	**Upington**	**5.85**	**249**	*e*P	**Pn**	**11 03 27.7**	**+0.3**
UPI				*e*S	**Sn**	**11 04 30.5**	**-3.6**
UPI				AML	AML	11 05 13.7	
	comp=Z,74nm,0.6s						
MATP	**Matopo**	**6.05**	**9**	*i* P	**Pn**	**11 03 30.6**	**+0.4**
MATP	**Matopo**	**6.05**	**9**	*i* P	**Pn**	**11 03 30.6**	**+0.4**
KEIM	**Keimoes**	**6.19**	**247**	*e*P	**Pn**	**11 03 32.5**	**+0.3**
KEIM				*e*S	**Sn**	**11 04 39.2**	**-3.4**
KEIM				AML	AML	11 05 27.1	
	comp=Z,73nm,0.7s						
BUFB	**Buffelsbos**	**8.05**	**196**	*e*P	**Pn**	**11 03 59.5**	**+2.0**
BUFB				*e*S	**Sn**	**11 05 27.4**	**-0.8**
BUFB				AML	AML	11 05 45.6	
	comp=Z,8.5nm,0.4s						
CVNA	**Calvinia**	**8.42**	**231**	*e*P	**Pn**	**11 04 03.5**	**+0.8**
CVNA				*e*S	**Sn**	**11 05 33.8**	**-3.6**
CVNA				AML	AML	11 06 39.8	
	comp=Z,74nm,0.6s						
LSZ	**Lusaka**	**11.11**	**4**	*i* P	Pn	11 04 36.5	-3.3
LSZ	**Lusaka**	**11.11**	**4**	*i* P	Pn	11 04 36.5	-3.3
TSUM	**Tsumeb**	**11.60**	**306**	*i* P	**Pn**	**11 04 48.6**	**+2.2**
TSUM	**Tsumeb**	**11.60**	**306**	*i* P	**Pn**	**11 04 48.6**	**+2.2**

UCR ***29*** *11:16:42.9±0.6, 12°.48N×87°.83W, h55^{km}±17^{km}, ML3.6*

SNET ***29*** *11:16:42.8±0.5, 12°.45N×87°.85W, h34^{km}±6^{km}, ML3.7*

INET ***29*** *11:16:43.0, 12°.49N×87°.78W, h64^{km}, ML4.5*

ISC 29 11:16:43.3±1.9**, 12°.5N**±0°.1×**87°.82W**±0°.07**, h53^{km}**±43^{km}**, n29, σ0^{s}.40**/37**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCND	**La Caada**	**0.83**	**355**	*i* P	**Pn**	**11 16 58.5**	**-0.5**
LCND				*e*S	**Sn**	**11 17 10.6**	**+0.2**
LCND	**La Caada**	**0.83**	**355**	*i* P	**Pn**	**11 16 58.5**	**-0.5**
LCND				*e*S	**Sn**	**11 17 10.6**	**+0.2**
BLLM	**Bellamira**	**1.05**	**337**	*e*P	**Pn**	**11 17 01.4**	**-0.4**
BLLM	**Bellamira**	**1.05**	**337**	*e*P	**Pn**	**11 17 01.4**	**-0.4**
VSM	**San Miguel**	**1.05**	**335**	*e*P	**Pn**	**11 17 02.1**	**+0.1**
VSM	**San Miguel**	**1.05**	**335**	*e*P	**Pn**	**11 17 02.1**	**+0.1**
LCY	**Lacayo**	**1.05**	**334**	*e*P	**Pn**	**11 17 01.7**	**-0.2**
LCY	**Lacayo**	**1.05**	**334**	*e*P	**Pn**	**11 17 01.7**	**-0.2**

PACA	**Pacayal**	**1.11**	**334**	*e*P	**Pn**	**11 17 02.3**	**-0.3**
PACA				*e*S	**Sn**	**11 17 17.8**	**+0.8**
PACA	**Pacayal**	**1.11**	**334**	*e*P	**Pn**	**11 17 02.3**	**-0.3**
PACA				*e*S	**Sn**	**11 17 17.8**	**+0.8**
ALJI	**Alcalda de J**	**1.12**	**319**	*e*P	**Pn**	**11 17 02.2**	**-0.5**
ALJI				*e*S	**Sn**	**11 17 17.3**	**+0.1**
ALJI	**Alcalda de J**	**1.12**	**319**	*e*P	**Pn**	**11 17 02.2**	**-0.5**
ALJI				*e*S	**Sn**	**11 17 17.3**	**+0.1**
TECA	**Tecapa**	**1.22**	**327**	*e*P	**Pn**	**11 17 03.7**	**-0.5**
TECA	**Tecapa**	**1.22**	**327**	*e*P	**Pn**	**11 17 03.7**	**-0.5**
COEB	**Comit de Eme**	**1.23**	**326**	*e*P	**Pn**	**11 17 04.0**	**-0.4**
COEB				*e*S	**Sn**	**11 17 20.3**	**+0.3**
COEB				IAML		11 17 25.5	
	comp=Z,1μm,0.3s						
COEB	**Comit de Eme**	**1.23**	**326**	*e*P	**Pn**	**11 17 04.0**	**-0.4**
COEB				*e*S	**Sn**	**11 17 20.3**	**+0.3**
COEB				IAML		11 17 25.5	
	comp=Z,1μm,0.3s						
MOMN	**Momotombo**	**1.25**	**93**	*e*P	**Pn**	**11 17 04.3**	**-0.2**
MOMN	**Momotombo**	**1.25**	**93**	*e*P	**Pn**	**11 17 04.3**	**-0.2**
COEG	**Centro de Oper**	**1.54**	**318**	*e*P	**Pn**	**11 17 08.1**	**-0.4**
COEG				*e*S	**Sn**	**11 17 27.8**	**+0.3**
COEG				IAML		11 17 31.5	
	comp=Z,867nm,0.3s						
COEG	**Centro de Oper**	**1.54**	**318**	*e*P	**Pn**	**11 17 08.1**	**-0.4**
COEG				*e*S	**Sn**	**11 17 27.8**	**+0.3**
COEG				IAML		11 17 31.5	
	comp=Z,867nm,0.3s						
TGUH	**Tegucigalpa,Un**	**1.66**	**19**	*e*P	**Pn**	**11 17 09.8**	**-0.4**
TGUH	**Tegucigalpa,Un**	**1.66**	**19**	*e*P	**Pn**	**11 17 09.8**	**-0.4**
LFRS	**El Faro**	**1.67**	**314**	*e*P	**Pn**	**11 17 10.2**	**0.0**
LOMA	**Loma Larga**	**1.76**	**312**	*e*P	**Pn**	**11 17 11.2**	**-0.3**
LOMA	**Loma Larga**	**1.76**	**312**	*e*P	**Pn**	**11 17 11.2**	**-0.3**
SNET	**Serv Nac Est T**	**1.83**	**311**	*e*S	**Sn**	**11 17 34.9**	**+0.4**
SNET	**Serv Nac Est T**	**1.83**	**311**	*e*S	**Sn**	**11 17 34.9**	**+0.4**
UEES	**Universidad Ev**	**1.85**	**312**	IAML		11 17 37.7	
	comp=Z,510nm,0.3s						
UEES	**Universidad Ev**	**1.85**	**312**	IAML		11 17 37.7	
	comp=Z,510nm,0.3s						

IDC ***29*** *11:35:15.1±0.8, 0°.96N×132°.82E, h0^{km}, mb3.9/9, mb1 4.2/12, mb1mx3.9/39, mbtmp4.1/12, ML2.7/2, MS3.4/22, Ms1 3.4/22, ms1mx3.3/38, Error ellipse: s-maj=23.9km s-min=15.3km az=70.0*

NEIC ***29*** *11:35:17.1±1.1, 0°.97N±0°.06×132°.93E±0°.07, h16^{km}±3^{km}, mb4.5/24, Error ellipse: s-maj=11.9km s-min=7.6km az=58.0*

DJA ***29*** *11:35:29.7±1.1, 0°N±8°×13°3E±°, h10^{km}, M4.2/6, mb4.7/5, mB4.7/1, MLv4.0/6, Mw(mB)3.9/1*

ISC 29 11:35:16.7±0.5**, 0°.93N**±0°.05×**132°.96E**±0°.06**, h10**^{km}**, n84, σ1**^{s}**.59**/68**, mb4.3**/18**, MS3.4**/20**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.46**	**224**	Pn	**Pn**	**11 35 55.9**	**-1.1**
	12nm,0.3s,baz=36,slow=14,SNR=38						
SIJI				Sn	**Sn**	**11 36 26.2**	**-0.9**
	10nm,0.3s,baz=153,slow=17,SNR=9.0						
SIJI				LR	LR	11 37 01.1	
	comp=Z,678nm,18.7s,baz=67,slow=44						
RKPI	**Ransiki, Papua**	**2.71**	**153**	P	Pg	11 36 20.7	+12
RKPI				S	**Sn**	**11 36 32.6**	**-0.7**
FAKI	**Fak Fak**	**3.89**	**191**	P	**Pn**	**11 36 17.0**	**+0.4**
FAKI				S	Sn	11 36 53.7	-8.6
FAKI	**Fak Fak**	**3.89**	**191**		**Pn**	**11 36 17.3**	**+0.7**
FAKI				Sn	**Sn**	**11 37 02.5**	**+0.1**
TNTI	**Ternate**	**5.59**	**268**	Pn	**Pn**	**11 36 38.6**	**-1.5**
MSAI	**Masohi**	**5.85**	**223**	P	**Pn**	**11 36 45.3**	**+1.7**
	0.1nm739nm38nm,0.8s						
AAI	**Ambon**	**6.61**	**226**	P	**Pn**	**11 36 55.3**	**+1.3**
	0.2nm59nm,0.6s						
DAV	**Davao City (W)**	**9.56**	**310**	LR	LR	11 40 49.4	
	comp=Z,73nm,21.5s,baz=84,slow=36						
SOEI	**Soe**	**13.69**	**219**	P	**P**	**11 38 37.1**	**-3.0**
SOEI				S	**P**	**11 38 43.1**	**+3.0**
SOEI	**Soe**	**13.69**	**219**	Pn	**Pn**	**11 38 31.9**	**+0.6**
MTN	**Manton Dam**	**13.80**	**187**		**Pn**	**11 38 30.4**	**-2.2**
SPSI	**Sidrap Palu**	**14.05**	**250**	P	**P**	**11 38 47.3**	**+3.4**
MMRI	**Maumere**	**14.30**	**228**	Pn	**Pn**	**11 38 37.2**	**-2.2**
KAPI	**Kappang**	**14.45**	**246**	LR	LR	11 43 59.7	
	comp=Z,100nm,20.9s,baz=71,slow=37						
KNRA	**Kununurra**	**17.01**	**194**		**Pn**	**11 39 12.5**	**-2.4**
KNRA				IAmb	IAmb	11 39 20.4	
	comp=Z,33nm,0.8s						
KKM	**Kota Kinabalu**	**17.46**	**287**	Pn	**Pn**	**11 39 18.4**	**-2.3**
PMG	**Port Moresby**	**17.48**	**126**	P	**P**	**11 39 22.7**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=270,slow=13,SNR=4.1						
PMG				LR	LR	11 46 21.6	
	comp=Z,157nm,21.1s,baz=260,slow=38						
PMG	**Port Moresby**	**17.48**	**126**	Pn	**Pn**	**11 39 20.5**	**-0.2**
PMG				IAmb	IAmb	11 39 24.2	
	comp=Z,29nm,1.1s						
COEN	**Coen**	**17.92**	**146**	P	**Pn**	**11 39 26.8**	**+0.6**
KRVT	**Keravat (AS076**	**19.75**	**105**	P	**Pn**	**11 39 48.9**	**+0.4**
	comp=Z,1.6nm,0.3s,baz=48,slow=7.3,SNR=6.4						
KRVT				LR	LR	11 45 50.6	
	comp=Z,314nm,19.1s,baz=246,slow=32						
RABL	**Rabaul**	**19.85**	**105**	P	**P**	**11 39 48.3**	**+0.2**
FITZ	**Fitzroy Crossi**	**20.23**	**201**	P	**P**	**11 39 52.1**	**0.0**
	comp=Z,8.0nm,0.9s,baz=30,slow=12,SNR=17						
FITZ				LR	LR	11 49 26.0	
	comp=Z,43nm,19.6s,baz=20,slow=42						
FITZ	**Fitzroy Crossi**	**20.23**	**201**	P	**P**	**11 39 52.3**	**+0.1**
WB0	**Warramunga Arr**	**20.61**	**176**	P	**P**	**11 39 56.5**	**+0.1**
WRAB	**Tennant Creek**	**20.78**	**176**	P	**P**	**11 39 58.0**	**-0.1**
SBUM	**Sibu**	**20.79**	**274**	P	**P**	**11 39 58.4**	**+0.1**
WRA	**Warramunga Arr**	**20.79**	**176**	P	**P**	**11 39 58.6**	**+0.4**
	comp=Z,34nm,0.8s,baz=354,slow=11,SNR=17						
WRA				LR	LR	11 48 56.5	
	comp=Z,88nm,21.0s,baz=35,slow=39						
WB2	**Warramunga Arr**	**20.79**	**176**	P	**P**	**11 39 57.9**	**-0.4**
KSM	**Kuching**	**22.65**	**272**	P	**P**	**11 40 17.9**	**-0.5**
AS31	**Alice Springs**	**24.46**	**178**	P	**P**	**11 40 35.9**	**-0.2**
AS31				IAmb	IAmb	11 40 37.8	
	comp=Z,4.4nm,0.6s						
ASAR	**Alice Springs**	**24.46**	**178**	P	**P**	**11 40 36.0**	**-0.1**
	comp=Z,19nm,0.8s,baz=0.6,slow=12,SNR=204						
ASAR				LR	LR	11 51 12.9	
	comp=Z,86nm,21.9s,baz=1.0,slow=39						
ASAR	**Alice Springs**	**24.46**	**178**	P	**P**	**11 40 35.8**	**-0.3**
CTA	**Charters Tower**	**24.62**	**149**	P	**P**	**11 40 38.5**	**+1.0**
	comp=Z,1.2nm,0.5s,baz=301,slow=12,SNR=2.1						
YULB	**Yu-li**	**25.04**	**334**	P	**P**	**11 40 40.2**	**-1.1**
YULB				IAmb	IAmb	11 40 50.8	
	comp=Z,20nm,1.3s						
LEM	**Lembang**	**26.44**	**253**	LR	LR	11 53 42.9	
	comp=Z,49nm,20.5s,baz=68,slow=42						
JCJ	**Chichijima**	**27.49**	**18**	LR	LR	11 49 18.6	
	comp=Z,86nm,20.9s,baz=126,slow=31						
HNR	**Honiara**	**28.78**	**112**	LR	LR	11 51 45.4	
	comp=Z,102nm,21.3s,baz=268,slow=34						
FORT	**Forrest**	**31.87**	**188**	P	**P**	**11 41 42.5**	**+0.3**
JHJ	**Hachijo jima 2**	**32.66**	**11**	LR	LR	11 51 52.6	
	comp=Z,143nm,20.8s,baz=94,slow=30						
STKA	**Stephens Creek**	**33.64**	**167**	P	**P**	**11 41 57.5**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=331,slow=12,SNR=4.3						
STKA				LR	LR	11 57 11.7	
	comp=Z,139nm,18.1s,baz=14,slow=39						
STKA	**Stephens Creek**	**33.64**	**167**	P	**P**	**11 41 56.6**	**-1.0**
NJ2	**Nanjing**	**33.70**	**338**	*e*P	**P**	**11 41 59.3**	**+1.1**
MORW	**Morawa**	**33.94**	**207**	P	**P**	**11 41 59.9**	**-0.4**
MORW				IAmb	IAmb	11 42 07.8	
	comp=Z,14nm,1.2s						
PBKT	**Sadao Pong**	**35.13**	**298**	P	**P**	**11 42 09.4**	**-1.4**
PBKT				IAmb	IAmb	11 42 17.6	
	comp=Z,5.8nm,1.5s						
MJAR	**Matsushiro Arr**	**35.77**	**7**	LR	LR	11 53 45.1	
	comp=Z,80nm,21.9s,baz=155,slow=31						
KSRS	**Korea Array**	**36.64**	**353**	LR	LR	11 55 29.6	
	comp=Z,53nm,20.6s,baz=177,slow=33						
CMAR	**Chiang Mai Arr**	**37.65**	**300**	P	**P**	**11 42 31.8**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=122,slow=6.6,SNR=1.3						
CMAR				LR	LR	11 57 38.1	
	comp=Z,20nm,20.6s,baz=116,slow=36						
CMAR	**Chiang Mai Arr**	**37.65**	**300**	P	**P**	**11 42 31.3**	**-1.1**
CHTO	**Chiang Mai**	**37.80**	**300**	P	**P**	**11 42 33.1**	**-0.5**
H11N1	**WAKE ISLAND Hy**	**38.10**	**58**	T	T	12 22 42.1	
	baz=245,slow=75,SNR=24						
H11N2	**WAKE ISLAND Hy**	**38.11**	**58**	T	T	12 22 41.9	
	baz=245,slow=75,SNR=23						
H11N3	**WAKE ISLAND Hy**	**38.12**	**58**	T	T	12 22 42.4	
	baz=245,slow=75,SNR=19						
DZM	**Mont Dzumac**	**39.87**	**127**	*e*LR	LR	11 53 49.0	
	comp=Z,88nm,28.1s						
ASAJ	**Asahikawa**	**43.85**	**10**	LR	LR	12 00 19.8	
	comp=Z,42nm,19.1s,baz=254,slow=34						
HHC	**Hu-ho-hao-te**	**44.22**	**337**	*e*P	**P**	**11 43 28.8**	**+2.5**
SONM	**Songino Array**	**52.09**	**338**	P	**P**	**11 44 26.5**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=156,slow=7.6,SNR=4.1						
PETK	**Petropavlovsk-**	**55.92**	**18**	LR	LR	12 04 46.8	
	comp=Z,27nm,21.7s,baz=239,slow=32						
TLY	**Talaya**	**56.26**	**338**	LR	LR	12 09 26.7	
	comp=Z,46nm,19.7s,baz=124,slow=36						
WMQ	**Urumqi**	**58.64**	**323**	*e*P	**P**	**11 45 15.5**	**+1.2**
MK31	**Makanchi Array**	**63.44**	**324**	P	**P**	**11 45 45.8**	**-1.0**
MK31				IAmb	IAmb	11 45 53.5	
	comp=Z,4.6nm,1.4s						
MKAR	**Makanchi Array**	**63.44**	**324**	P	**P**	**11 45 45.6**	**-1.3**
	comp=Z,0.7nm,0.7s,baz=114,slow=7.9,SNR=6.5						
MKAR	**Makanchi Array**	**63.44**	**324**	P	**P**	**11 45 46.0**	**-0.9**
MAKZ	**Makanchi**	**63.64**	**323**	P	**P**	**11 45 47.5**	**-0.6**
MAKZ				IAmb	IAmb	11 45 54.7	
	comp=Z,4.4nm,1.1s						
KSH	**Kashi**	**64.43**	**314**	P	**P**	**11 45 56.8**	**+3.2**
KSH				pP	pwP	11 46 01.5	+1.0
KSH				PP	**PP**	**11 48 20.8**	**+5.4**
KSH				S	**S**	**11 54 34.5**	**+1.8**
KSH	**Kashi**	**64.43**	**314**	SS	SS	11 58 46.5	+3.6
ZALV	**Zalesovo Beam**	**65.96**	**331**	P	**P**	**11 46 02.3**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=132,slow=7.5,SNR=1.6						
ZALV	**Zalesovo Beam**	**65.96**	**331**	P	**P**	**11 46 02.1**	**-1.0**
KURK	**Kurchatov**	**67.48**	**326**	P	**P**	**11 46 11.7**	**-1.2**
KURK				IAmb	IAmb	11 46 19.5	
	comp=Z,5.7nm,1.2s						
KKAR	**Karatay Array**	**69.53**	**316**	P	**P**	**11 46 24.9**	**-1.1**
BRVK	**Borovoye**	**73.15**	**326**	P	**P**	**11 46 46.7**	**-0.9**
BRVK				IAmb	IAmb	11 46 52.8	
	comp=Z,2.6nm,0.7s						
NRIK	**Noril'sk**	**74.68**	**345**	LR	LR	12 20 30.5	
	comp=Z,37nm,20.3s,baz=84,slow=36						
GEYT	**Alibeck**	**77.49**	**309**	LR	LR	12 23 32.1	
	comp=Z,17nm,21.7s,baz=355,slow=37						
ABKAR	**Akbulak array**	**78.26**	**320**	P	**P**	**11 47 16.4**	**-0.5**
PPT2	**Papeete2**	**78.34**	**108**	*e*LR	LR	12 11 29.7	
	comp=Z,53nm,25.5s						
TBI	**Tubuai**	**78.97**	**114**	*e*LR	LR	12 11 55.9	
	comp=Z,44nm,37.2s						
VNDA	**Vanda**	**79.94**	**174**	P	**P**	**11 47 25.5**	**0.0**
	comp=Z,1.8nm,0.7s,baz=324,slow=6.6,SNR=5.3						
VNDA	**Vanda**	**79.94**	**174**	P	**P**	**11 47 24.9**	**-0.6**
VNDA				IAmb	IAmb	11 47 42.0	
	comp=Z,7.4nm,1.5s						
IMAR	**Indian Mountai**	**82.40**	**23**	P	**P**	**11 47 37.2**	**-1.6**
RND	**Reindeer**	**83.89**	**26**	P	**P**	**11 47 44.4**	**-2.3**
RND				IAmb	IAmb	11 48 02.5	
	comp=Z,8.2nm,1.4s						
ILAR	**Eielson Array**	**84.96**	**25**	P	**P**	**11 47 48.8**	**-3.2**
	comp=Z,1.0nm,0.7s,baz=251,slow=4.9,SNR=8.3						
ILAR	**Eielson Array**	**84.96**	**25**	P	**P**	**11 47 48.6**	**-3.4**
BMAR	**Burnt Mountain**	**86.25**	**23**	P	**P**	**11 47 56.4**	**-2.0**
ARCES	**ARCESS Array B**	**95.19**	**340**	LR	LR	12 34 06.9	
	comp=Z,35nm,22.0s,baz=337,slow=37						
LPAZ	**La Paz**	**154.21**	**127**	PKPab	**PKPab**	**11 55 33.0**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=207,slow=4.5,SNR=4.0						

TAP ***29*** *11:43:26.2, 24°.86N×122°.19E, h4^{km}, ML2.8, D*

JMA ***29*** *11:43:26.4±0.3, 24°.78N×122°.24E, h0^{km}±3^{km}, M2.4*

ISC 29 11:43:26.3±1.1**, 24°.84N**±0°.03×**122°.25E**±0°.02**, h6**^{km}±10^{km}**, n50, σ0**^{s}**.50**/71**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.29**	**306**	⇑*i*P	**Pg**	**11 43 31.8**	**-0.2**
	baz=309						
TWB1				S	**Sg**	**11 43 35.4**	**-0.5**
	baz=309						
EOS1	**EOS1**	**0.30**	**201**	*e*P	**Pb**	**11 43 33.6**	**-0.6**
	baz=199						
EOS1				*e*S	**Sb**	**11 43 38.9**	**-0.5**
	baz=199						
NTC	**Toucheng**	**0.38**	**273**	P	**Pg**	**11 43 33.7**	**+0.1**
	baz=267						
TIPB	**Shuangxi**	**0.41**	**290**	*e*P	**Pg**	**11 43 34.2**	**+0.1**
	baz=288						
TIPB				*e*S	**Sg**	**11 43 39.9**	**+0.3**
	baz=288						
TWC	**Suao**	**0.43**	**238**	P	**Pg**	**11 43 34.5**	**0.0**
	baz=230						
TWC				*e*S	**Sg**	**11 43 40.0**	**-0.1**
	baz=230						
NWF	**Wu-fen Shan**	**0.48**	**299**	P	**Pb**	**11 43 36.8**	**-0.5**
	baz=299						
NWF				*e*S	**Sg**	**11 43 42.4**	**+0.4**
	baz=299						
WFSB	**Wu-fen Shan**	**0.48**	**299**	*e*P	**Pg**	**11 43 36.0**	**+0.4**
	baz=298						
WFSB				*e*S	**Sg**	**11 43 42.3**	**+0.3**
	baz=298						
TWE	**Neicheng**	**0.54**	**258**	*e*P	**Pg**	**11 43 36.5**	**-0.2**
	baz=253						
TWE				*e*S	**Sg**	**11 43 43.9**	**+0.1**
	baz=253						
SLBB	**Yuanshan**	**0.56**	**262**	*e*P	**Pg**	**11 43 36.8**	**-0.3**
	baz=257						
ENA	**Nanau**	**0.61**	**229**	*e*P	**Pg**	**11 43 38.1**	**0.0**
	baz=223						
ENA				*e*S	**Sg**	**11 43 46.2**	**+0.1**
	baz=223						
TWA	**Mucha**	**0.62**	**284**	*e*P	**Pb**	**11 43 39.0**	**-0.6**
	baz=282						
TWA				*e*S	**Sb**	**11 43 48.3**	**-0.3**
	baz=282						
ENTT	**Nioudou**	**0.65**	**253**	P	**Pg**	**11 43 39.3**	**+0.5**
	baz=247						
NHDH	**Xindian Distri**	**0.67**	**281**	*e*P	**Pb**	**11 43 40.3**	**-0.1**
	baz=278						
NWLT	**Wulai**	**0.68**	**265**	*e*P	**Pg**	**11 43 39.8**	**+0.4**
	baz=261						
YM01	**YM01**	**0.69**	**297**	*e*P	**Pg**	**11 43 39.7**	**+0.1**
	baz=296						
YM01				*e*S	**Sg**	**11 43 49.4**	**+0.9**
	baz=296						
YM05	**YM05**	**0.70**	**298**	*e*P	**Pg**	**11 43 39.8**	**0.0**
	baz=297						
YM05				*e*S	**Sg**	**11 43 49.6**	**+0.7**
	baz=297						
YM10	**YM10**	**0.70**	**297**	*e*P	**Pg**	**11 43 40.3**	**+0.5**
	baz=296						
NDT	**Datong Townshi**	**0.71**	**251**	*e*P	**Pb**	**11 43 40.6**	**-0.5**
	baz=246						
YM04	**YM04**	**0.72**	**296**	*e*P	**Pg**	**11 43 40.1**	**0.0**
	baz=295						
TWY	**Chenhua**	**0.73**	**307**	*e*P	**Pg**	**11 43 40.2**	**-0.2**
	baz=306						
JYNG	**Yonagunijimaku**	**0.74**	**121**	P	**Pg**	**11 43 40.8**	**+0.3**
JYNG				S	**Sg**	**11 43 50.7**	**+0.6**
YOJ	**Yonaguni jima**	**0.79**	**118**	P	**Pg**	**11 43 41.4**	**0.0**
YOJ				S	**Sg**	**11 43 52.1**	**+0.5**
PCYT	**Pengchaiyu**	**0.81**	**349**	*e*P	**Pg**	**11 43 40.6**	**-1.2**
	baz=352						
YHNB	**Yeheng**	**0.81**	**258**	*e*P	**Pg**	**11 43 41.5**	**-0.3**
	baz=254						
NNSB	**Datong**	**0.89**	**243**	*e*P	**Pg**	**11 43 43.0**	**-0.3**
	baz=240						
NNSB				*e*S	**Sg**	**11 43 54.9**	**0.0**
	baz=240						
NNSH	**Datong**	**0.89**	**243**	*e*P	**Pg**	**11 43 43.2**	**-0.1**
	baz=240						
NNSH				*e*S	**Sb**	**11 43 55.8**	**-0.5**
	baz=240						
NACB	**Ninganchiao**	**0.89**	**222**	*e*P	**Pg**	**11 43 43.1**	**-0.2**
	baz=219						
NACB				*e*S	**Sg**	**11 43 54.6**	**-0.3**
	baz=219						
NNS	**Nan Shan**	**0.89**	**244**	*e*P	**Pb**	**11 43 43.8**	**-0.4**
	baz=239						
ETLH	**Xiulin Townshi**	**0.94**	**228**	*e*P	**Pg**	**11 43 43.7**	**-0.6**
	baz=225						
ETLH				*e*S	**Sg**	**11 43 56.4**	**-0.1**
	baz=225						
TWD	**Chiawan**	**0.96**	**218**	*e*P	**Pg**	**11 43 44.0**	**-0.7**
	baz=214						
WHF	**Hehuan Shan**	**1.13**	**233**	*e*P	**Pg**	**11 43 47.9**	**0.0**
	baz=229						
LIOB	**Emei**	**1.14**	**261**	*e*P	**Pn**	**11 43 49.0**	**+0.2**
	baz=247						
NSTT	**Nanjuang**	**1.15**	**260**	*e*P	**Pn**	**11 43 49.1**	**+0.1**
	baz=256						
CHGB	**Renai**	**1.25**	**232**	*e*P	**Pg**	**11 43 50.1**	**-0.1**
	baz=230						
CHGB				*e*S	**Sb**	**11 44 06.8**	**0.0**
	baz=230						
ESL	**Shilin**	**1.26**	**216**	*e*P	**Pg**	**11 43 49.1**	**-1.3**
	baz=223						
WHP	**Taichung City**	**1.31**	**245**	*e*P	**Pn**	**11 43 52.0**	**+0.8**
	baz=243						
WHP				*e*S	**Sn**	**11 44 09.3**	**+0.2**
	baz=243						
OWD	**Renai**	**1.31**	**228**	*e*P	**Pg**	**11 43 51.1**	**-0.4**
	baz=217						
OWD				*e*S	**Sn**	**11 44 09.4**	**+0.1**
	baz=217						
IRIF	**Iriomote-Funau**	**1.44**	**110**	P	**Pn**	**11 43 53.6**	**+0.7**
IRIF				*e*S	**Sg**	**11 44 12.2**	**-0.3**
DPDB	**Guoxing**	**1.45**	**237**	*e*P	**Pb**	**11 43 54.2**	**+0.5**
	baz=223						
VWDT	**VWDT**	**1.48**	**223**	*e*P	**Pg**	**11 43 54.8**	**+0.2**
	baz=220						
HGSD	**Ruisui**	**1.54**	**210**	*e*P	**Pb**	**11 43 55.0**	**-0.1**
	baz=192						
SMLT	**Sun Moon Lake**	**1.55**	**233**	*e*P	**Pg**	**11 43 57.1**	**+1.0**
	baz=230						
SSLB	**Suanglung**	**1.58**	**229**	*e*P	**Pn**	**11 43 55.4**	**+0.5**
	baz=227						
YULB	**Yu-li**	**1.68**	**211**	*e*P	**Pn**	**11 43 55.2**	**-1.1**
	baz=212						
WHYT	**Xinyi Township**	**1.71**	**229**	*e*P	**Pb**	**11 43 58.4**	**+0.3**
	baz=227						
FULB	**Fuli**	**1.85**	**208**	*e*P	**Pn**	**11 43 59.8**	**+1.2**
	baz=193						
ALS	**Alishan**	**1.86**	**225**	*e*P	**Pb**	**11 44 01.1**	**+0.1**
	baz=223						
CHN5	**Tsauling**	**1.89**	**230**	*e*P	**Pb**	**11 44 01.6**	**+0.3**
	baz=231						
CHN4	**Tsaushan**	**2.12**	**226**	*e*P	**Pb**	**11 44 05.0**	**-0.1**
	baz=227						
TPUB	**Ta-pu**	**2.13**	**224**	*e*P	**Pb**	**11 44 04.4**	**-0.9**
	baz=206						

NNC 29 11:54:44.0±3.9**, 48°.62N**×**78°.02E, h0**^{km}**, mb3.1, mpv2.7, 5C-3D, Error ellipse: s-maj=44.9km s-min=8.7km az=68.0, Suspected Mining explosion., Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.04**	**9**	⇑Pg	Pb	11 55 21.3	-0.5
	10nm,0.6s						
KURBB				⇑Lg	Lg	11 55 49.4	
	22nm,0.5s						
KURK	**Kurchatov**	**2.14**	**10**	⇑Pg	Pb	11 55 23.1	-0.5
	2.4nm,0.3s						
KURK				⇓Lg	Lg	11 55 50.9	
	10nm,0.6s						
MAKZ	**Makanchi**	**3.23**	**123**	⇑Pg	Pb	11 55 43.6	+1.4
	0.6nm,0.4s						
MAKZ				⇓Lg	Lg	11 56 28.2	
	1.5nm,0.4s						
MK31	**Makanchi Array**	**3.41**	**121**	⇓Pg	Pb	11 55 44.2	-1.1
	0.2nm,0.2s,baz=298,slow=12,SNR=26						
MK31				⇑Lg	Lg	11 56 33.2	
	1.2nm,0.4s,baz=316,slow=28,SNR=6.5						

IDC ***29*** *12:07:37.2±1.6, 19°.71S×177°.48W, h505^{km}±18^{km}, mb3.3/12, mb1 3.6/14, mb1mx3.3/32, mbtmp4.2/14, Error ellipse: s-maj=19.3km s-min=11.2km az=130.0*

NEIC ***29*** *12:07:39.5±0.8, 19°.7S±0°.1×177°.5W±0°.1, h534^{km}±7^{km}, mb4.1/29, Error ellipse: s-maj=20.0km s-min=15.0km az=120.0*

ISC 29 12:07:39.9±0.4**, 19°.62S**±0°.08×**177°.41W**±0°.08**, h550**^{km}**, n76, σ1**^{s}**.59**/84**, mb4.0**/25**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.70**	**293**	P	**P**	**12 09 07.8**	**+0.4**
AFI	**Afiamalu**	**7.83**	**44**	P	**P**	**12 09 34.2**	**-1.9**
	4.8nm,0.3s,baz=165,slow=8.1,SNR=7.4						
AFI				S	**S**	**12 11 06.4**	**-5.0**
	12nm,0.3s,baz=230,slow=18,SNR=11						
AFI	**Afiamalu**	**7.83**	**44**	P	**P**	**12 09 34.3**	**-1.9**
AFI					**S**	**12 11 06.7**	**-4.7**
FUNA	**Funafuti**	**11.51**	**343**	P	**P**	**12 10 13.2**	**-0.3**
OUZ	**Omahuta**	**17.46**	**205**	P	**P**	**12 11 11.2**	**-1.5**
OUZ				IAmb	IAmb	12 11 14.3	
	comp=Z,7.7nm,1.2s						
URZ	**Urewera**	**19.18**	**193**	P	**P**	**12 11 26.2**	**-2.2**
	comp=Z,1.9nm,0.3s,baz=279,slow=2.7,SNR=23						
URZ	**Urewera**	**19.18**	**193**	P	**P**	**12 11 26.0**	**-2.4**
WHZ	**Wether Hill Ro**	**28.86**	**201**	P	**P**	**12 12 53.9**	**-0.3**
ARMA	**Armidale**	**29.96**	**243**	P	**P**	**12 13 04.1**	**-0.1**
ARMA				IAmb	IAmb	12 13 05.1	
	comp=Z,5.4nm,0.8s						
TOO	**Toolangi**	**36.87**	**233**	P	**P**	**12 14 01.8**	**-0.3**
TOO				IAmb	IAmb	12 14 02.5	
	comp=Z,5.8nm,0.7s						
TAU	**Tasmania Unive**	**37.64**	**224**	P	**P**	**12 14 07.8**	**-0.6**
TAU				IAmb	IAmb	12 14 22.7	
	comp=Z,4.6nm,1.1s						
COEN	**Coen**	**38.09**	**272**	P	**P**	**12 14 12.6**	**+0.2**
COEN				IAmb	IAmb	12 14 27.1	
	comp=Z,6.9nm,0.9s						
STKA	**Stephens Creek**	**38.67**	**243**	P	**P**	**12 14 17.0**	**+0.1**
	comp=Z,6.2nm,0.8s,baz=96,slow=10,SNR=14						
STKA	**Stephens Creek**	**38.67**	**243**	P	**P**	**12 14 16.8**	**-0.1**
BBOO	**Buckleboo**	**43.44**	**243**	P	**P**	**12 14 54.2**	**-0.5**
WR0	**Warramunga Arr**	**45.09**	**261**	P	**P**	**12 15 07.2**	**-0.4**
AS31	**Alice Springs**	**45.27**	**256**	P	**P**	**12 15 08.8**	**-0.1**
ASAR	**Alice Springs**	**45.27**	**256**	P	**P**	**12 15 08.8**	**-0.2**
	comp=Z,8.3nm,0.8s,baz=95,slow=7.6,SNR=148						
ASAR				PcP	**PcP**	**12 16 37.9**	**+0.7**
	comp=Z,1.9nm,0.6s,baz=103,slow=3.9,SNR=11						
ASAR				S	**S**	**12 21 08.2**	**-1.4**
	comp=Z,1.9nm,0.8s,baz=92,slow=16,SNR=13						
ASAR	**Alice Springs**	**45.27**	**256**	P	**P**	**12 15 08.4**	**-0.5**
ASAR					**PcP**	**12 16 37.7**	**+0.5**
WB2	**Warramunga Arr**	**45.27**	**261**	P	**P**	**12 15 08.7**	**-0.3**
WB2				IAmb	IAmb	12 15 09.8	
	comp=Z,4.0nm,0.8s						
WRAB	**Tennant Creek**	**45.27**	**261**	P	**P**	**12 15 08.6**	**-0.5**
WRAB				IAmb	IAmb	12 15 14.8	
	comp=Z,4.8nm,1.1s						
WRA	**Warramunga Arr**	**45.28**	**261**	P	**P**	**12 15 08.7**	**-0.4**
	comp=Z,1.5nm,0.5s,baz=94,slow=6.6,SNR=16						
WRA				PcP	**PcP**	**12 16 37.2**	**0.0**
	comp=Z,0.9nm,0.7s,baz=98,slow=3.3,SNR=5.4						
WRA				S	**S**	**12 21 06.3**	**-3.5**
	comp=Z,0.4nm,1.0s,baz=102,slow=14,SNR=2.8						
MTN	**Manton Dam**	**49.72**	**270**	P	**P**	**12 15 42.8**	**+0.4**
MTN				IAmb	IAmb	12 15 43.4	
	comp=Z,4.5nm,0.7s						
FORT	**Forrest**	**50.16**	**246**	P	**P**	**12 15 44.5**	**-0.9**
KNRA	**Kununurra**	**51.28**	**265**	P	**P**	**12 15 53.3**	**-0.4**
KNRA				IAmb	IAmb	12 16 02.7	
	comp=Z,5.2nm,1.1s						
FITZ	**Fitzroy Crossi**	**53.70**	**262**	P	**P**	**12 16 11.1**	**+0.1**
SOEI	**Soe**	**57.04**	**271**	P	**P**	**12 16 34.5**	**+0.1**
PSA00	**Pilbara Seismi**	**58.41**	**256**	P	**P**	**12 16 43.4**	**-0.1**
PSA00				IAmb	IAmb	12 16 44.2	
	comp=Z,8.4nm,0.8s						
VNDA	**Vanda**	**58.83**	**185**	P	**P**	**12 16 46.4**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=343,slow=8.6,SNR=7.3						
MORW	**Morawa**	**60.68**	**247**	P	**P**	**12 16 58.0**	**-0.5**
MORW				IAmb	IAmb	12 16 58.4	
	comp=Z,5.5nm,0.8s						
CASY	**Casey**	**64.99**	**205**	P	**P**	**12 17 25.1**	**-0.5**
CASY				IAmb	IAmb	12 17 32.8	
	comp=Z,5.0nm,0.9s						
MJAR	**Matsushiro Arr**	**69.84**	**323**	P	**P**	**12 17 57.1**	**+1.4**
	comp=Z,0.9nm,0.4s,baz=141,slow=6.5,SNR=2.9						
MJAR	**Matsushiro Arr**	**69.84**	**323**	P	**P**	**12 17 56.7**	**+1.1**
MAJO	**Matsushiro**	**69.84**	**323**	P	**P**	**12 17 56.9**	**+1.2**
MAJO				IAmb	IAmb	12 18 04.5	
	comp=Z,5.1nm,1.1s						
QSPA	**South Pole Qui**	**70.44**	**180**	P	**P**	**12 17 59.5**	**+0.5**
TPUB	**Ta-pu**	**73.97**	**302**	P	**P**	**12 18 19.7**	**-0.2**
PETK	**Petropavlovsk-**	**75.57**	**345**	P	**P**	**12 18 29.9**	**+1.7**
	comp=Z,4.1nm,1.0s,baz=133,slow=9.5,SNR=8.4						
NVAR	**Mina Array Bea**	**80.00**	**43**	P	**P**	**12 18 55.6**	**+2.8**
	comp=Z,0.6nm,0.7s,baz=220,slow=8.9,SNR=3.7						
NVAR	**Mina Array Bea**	**80.00**	**43**	P	**P**	**12 18 55.2**	**+2.4**
I07A	**Izee**	**82.56**	**38**	P	**P**	**12 19 07.4**	**+1.9**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MAW	Mawson comp=Z,2.1nm,0.6s,baz=132,slow=5.2,SNR=2.3	82.58	200	P	P	12 19 05.4	+0.2
MAW	Mawson	82.58	200	P	P	12 19 05.1	-0.1
GHO	Glory Hole Cre	84.24	13	P	P	12 19 15.2	+1.7
GHO	comp=Z,4.6nm,1.1s			IAmb	IAmb	12 19 16.3	
TX32	Lajitas Array	86.11	57	P	P	12 19 25.8	+2.5
TXAR	Lajitas Array comp=Z,1.1nm,0.7s,baz=216,slow=6.3,SNR=17	86.11	57	P	P	12 19 26.2	+2.8
ILAR	Eielson Array comp=Z,0.1nm,0.4s,baz=233,slow=5.2,SNR=2.0	87.34	13	P	P	12 19 29.3	+1.2
PDAR	Pinedale Array comp=Z,0.6nm,0.7s,baz=216,slow=4.2,SNR=7.1	87.94	43	P	P	12 19 33.7	+1.9
PDAR	Pinedale Array	87.94	43	P	P	12 19 33.6	+1.8
VNA3	Neumayer Olymp	88.98	176	P	P	12 19 35.8	-0.1
VNA2	Neumayer--Watz baz=185,slow=3.8	89.43	177	P	P	12 19 38.1	+0.2
CMAR	Chiang Mai Arr comp=Z,0.9nm,1.0s,baz=103,slow=3.2,SNR=4.2	90.35	289	P	P	12 19 44.8	+1.6
CMAR	Chiang Mai Arr	90.35	289	P	P	12 19 44.1	+0.9
MKAR	Makanchi Array comp=Z,0.3nm,0.4s,baz=194,slow=0.6,SNR=4.3	111.00	314	PKiKP	PKiKP	12 25 11.1	+0.2
ARCES	ARCESS Array B comp=Z,7.4nm,1.0s,baz=4.8,slow=1.5,SNR=6.0	128.16	350	PKP	PKiKP	12 25 44.5	+0.6
FINES	FINESS Array B comp=Z,0.6nm,0.6s,baz=355,slow=1.5,SNR=0.8	135.08	344	PKP	PKiKP	12 25 58.4	+0.4
NOA	NORSAR Array B comp=Z,0.2nm,0.5s,baz=14,slow=3.9,SNR=1.7	138.17	354	PKP	PKiKP	12 26 03.5	-0.9
BRTR	Keskin Array B comp=Z,1.5nm,0.6s,baz=121,slow=3.4,SNR=6.7	146.65	314	PKPbc	PKPab	12 26 21.4	-2.0
BRTR	Keskin Array B	146.65	314		PKPab	12 26 21.6	-1.8
CLL	Collm comp=Z,5.0nm,0.7s	147.33	348	⇓*i*PKPbc	PKPab	12 26 24.1	-1.4
CLL				*e*PKPab	PKiKP	12 26 29.0	+5.5
DPC	Dobruska-Polom	147.45	344	*e*PKP	PKPab	12 26 24.1	-2.0
BRG	Berggiesshubel comp=Z,3.6nm,0.7s	147.54	347	*e*PKP	PKiKP	12 26 23.6	-0.4
PRU	Pruhonice	148.23	345	*e*PKP	PKPab	12 26 26.2	-3.1
KHC	Kasperske Hory	149.26	346	*e*PKP	PKiKP	12 26 28.4	+0.8
GEC2	GERESS Array S	149.50	345		PKiKP	12 26 28.7	+0.5
GERES	GERESS Array B comp=Z,2.3nm,0.6s,baz=354,slow=2.7,SNR=12	149.50	345	PKPbc	PKiKP	12 26 28.9	+0.7
CONA	Conrad Observa comp=Z,3.3nm,0.7s	149.77	342	*i* PKiKP	PKiKP	12 26 30.0	+1.2
MOA	Molln comp=Z,1.2nm,0.5s	150.28	344	*e*PKiKP	PKiKP	12 26 30.5	+0.8
SOKA	Soboth comp=Z,2.0nm,0.9s	151.15	342	*e*PKiKP	PKiKP	12 26 32.1	+0.5
KBA	Koelnbreinsper comp=Z,1.9nm,0.7s	151.23	345	*e*PKPbc	PKiKP	12 26 32.0	+0.1
WTTA	Wattenberg comp=Z,2.4nm,0.4s	151.45	347	*i* PKiKP	PKiKP	12 26 33.4	+1.1
MOTA	Moosalm comp=Z,7.5nm,1.4s	151.49	348	*e*PKiKP	PKiKP	12 26 33.1	+0.6
MYKA	Terra Mystica comp=Z,1.0nm,0.5s	151.57	344	*i* PKPbc	PKiKP	12 26 32.8	+0.3
SQTA	Sankt Quirin comp=Z,1.9nm,0.4s	151.58	348	*i* PKiKP	PKiKP	12 26 33.6	+1.1
ABTA	Abfaltersbach comp=Z,6.4nm,1.0s	151.75	346	*i* PKiKP	PKiKP	12 26 33.4	+0.6
DAVA	Damuels comp=Z,1.3nm,0.4s	151.77	349	*i* PKiKP	PKiKP	12 26 33.8	+0.8
FETA	Feichten comp=Z,1.2nm,0.5s	151.87	348	*i* PKiKP	PKiKP	12 26 34.4	+1.2

IDC 29 12:10:19.6±12.0**, 18°.48S×175°.72W, h0^{km}, mb3.7**/3**, mb1 4.0**/3**, mb1mx3.6**/31**, mbtmp3.7**/3**, MS3.5**/2**, Ms1 3.5**/2**, ms1mx2.7**/34**, Error ellipse: s-maj=570.4km s-min=39.7km az=143.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac comp=Z,171nm,18.1s,baz=37,slow=36	17.11	255	LR	LR	12 20 39.5	
WRA	Warramunga Arr 0.5nm,0.5s,baz=106,slow=5.5,SNR=5.3	47.05	260	P	P	12 18 53.1	-0.2
ASAR	Alice Springs 1.0nm,0.7s,baz=87,slow=8.3,SNR=6.7	47.10	255	P	P	12 18 53.6	-0.1
ASAR	comp=Z,48nm,20.6s,baz=119,slow=34			LR	LR	12 37 05.7	
ILAR	Eielson Array 0.3nm,0.7s,baz=222,slow=6.8,SNR=4.9	85.89	12	P	P	12 23 00.8	0.0

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*JMA **29** 12:27:38.7±0.2, 30°.10N×139°.10E, h466^{km}, M4.0*

*IDC **29** 12:27:40.1±0.8, 30°.04N×138°.59E, h426^{km}±7^{km}, mb3.4/25, mb1 3.5/30, mb1mx3.4/49, mbtmp4.2/30, Error ellipse: s-maj=11.8km s-min=8.8km az=91.0*

ISC 29 12:27:41.2±0.5**, 30°.05N**±0°.06×**138°.79E**±0°.09**, h450^{km}, n40, σ2^{s}.54**/50**, mb3.7**/25**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	3.14	16	P	P	12 28 47.6	-1.5
JHJ	Hachijo jima 2 51nm,0.3s,baz=203,slow=13,SNR=40	3.18	15	P	P	12 28 48.0	-1.4
JHJ	44nm,0.3s,baz=50,slow=23,SNR=6.9			S	S	12 29 40.8	-4.2
JHJ2	Mitsune	3.18	16	P	P	12 28 48.0	-1.4
JMKN	Mikurajimanish	3.89	10	P	P	12 28 53.8	-1.5
CBIJ	Chichi jima	4.19	134	P	P	12 28 55.4	-2.7
CBIJ				*e*S	S	12 29 53.8	-6.8
JCJ	Chichijima 22nm,0.3s,baz=356,slow=18,SNR=34	4.19	134	P	P	12 28 55.7	-2.4
JCJ	64nm,0.3s,baz=287,slow=19,SNR=19			S	S	12 29 55.4	-5.2
JTNC	Tanabenakahech	4.63	325	P	P	12 29 01.3	-0.6
JIE	Ise	4.68	338	P	P	12 29 03.1	+0.8
BSO1	Boso 1	4.95	21	P	P	12 29 02.6	-1.7
BSO1				*e*S	S	12 30 08.8	-3.5
JOD2	Odawara 2	5.21	3	P	P	12 29 05.7	-1.7
JOD2				*e*S	S	12 30 13.2	-4.7
JRY	Ryogami san	5.95	1	P	P	12 29 13.4	-1.5
JRY				*e*S	S	12 30 25.1	-6.5
MJAR	Matsushiro Arr 0.2nm,0.3s,baz=169,slow=11,SNR=13	6.50	356	P	P	12 29 18.3	-2.2
MJAR	0.1nm,0.3s,baz=152,slow=15,SNR=5.0			S	S	12 30 35.0	-6.8
KSRS	Korea Array 0.3nm,0.3s,baz=134,slow=10,SNR=7.5	11.67	312	P	P	12 30 15.8	-0.5
ASAJ	Asahikawa 0.5nm,0.3s,baz=188,slow=7.1,SNR=7.3	14.37	11	P	P	12 30 46.5	+1.2
PETK	Petropavlovsk- 4.7nm,1.1s,baz=212,slow=6.7,SNR=5.9	26.87	26	P	P	12 32 45.6	+1.8
SONM	Songino Array 0.9nm,0.5s,baz=124,slow=9.0,SNR=10	30.52	315	P	P	12 33 15.7	-0.4
MA2	Magadan 4.3nm,0.7s,baz=208,slow=9.9,SNR=4.5	30.62	12	P	P	12 33 17.9	+1.3
SEY	Seymchan 1.3nm,0.9s,baz=217,slow=10,SNR=5.4	34.05	11	P	P	12 33 47.1	+1.3
CMAR	Chiang Mai Arr 0.6nm,0.4s,baz=47,slow=7.8,SNR=8.2	37.94	262	P	P	12 34 18.2	-0.8
TIXI	Tiksi 0.7nm,0.4s,baz=159,slow=5.2,SNR=1.8	42.01	355	P	P	12 34 51.5	+0.5
ZALV	Zalesovo Beam 1.7nm,0.4s,baz=98,slow=8.6,SNR=8.6	45.31	318	P	P	12 35 16.6	-0.4
ZALV	0.9nm,0.6s,baz=72,slow=4.8,SNR=4.4			ScP	ScP	12 39 57.7	+0.9
MKAR	Makanchi Array 1.0nm,0.3s,baz=86,slow=9.9,SNR=24	46.31	308	P	P	12 35 24.5	-0.5
MKAR	0.2nm,0.3s,baz=94,slow=4.3,SNR=3.4			PcP	pwP	12 36 51.8	-4.0
MKAR	0.5nm,0.6s,baz=81,slow=5.8,SNR=6.1			ScP	ScP	12 40 02.4	+1.2
WRA	Warramunga Arr 3.1nm,0.5s,baz=1.5,slow=7.7,SNR=84	49.88	185	P	P	12 35 52.5	+0.5
AAK	Ala-Archa 1.9nm,0.5s,baz=105,slow=7.9,SNR=3.8	52.14	303	P	P	12 36 08.4	-0.1
ASAR	Alice Springs 1.4nm,0.5s,baz=3.3,slow=6.5,SNR=25	53.61	186	P	P	12 36 19.9	+0.8
BVAR	Borovoye Array 6.5nm,0.4s,baz=95,slow=7.6,SNR=74	53.86	316	P	P	12 36 20.5	0.0
ILAR	Eielson Array 1.0nm,0.6s,baz=260,slow=5.0,SNR=28	56.60	30	P	P	12 36 40.5	+1.1
ARU	Arti 1.8nm,0.4s,baz=82,slow=7.1,SNR=7.8	60.27	321	P	P	12 37 04.5	-0.1
INK	Inuvik 0.8nm,0.4s,baz=292,slow=5.9	61.61	25	P	P	12 37 14.7	+1.6
STKA	Stephens Creek 1.1nm,0.4s,baz=358,slow=5.8,SNR=5.5	61.64	177	P	P	12 37 14.9	+1.1
ARCES	ARCESS Array B 9.0nm,1.0s,baz=76,slow=7.9,SNR=7.8	69.77	340	P	P	12 38 05.5	+1.1
YKA	Yellowknife Ar 0.9nm,0.7s,baz=294,slow=5.5,SNR=16	70.96	28	P	P	12 38 13.2	+1.5
KBZ	Khabaz 3.0nm,0.8s,baz=90,slow=2.0,SNR=4.1	73.82	311	P	P	12 38 29.2	+0.6
FINES	FINESS Array B 1.2nm,0.3s,baz=58,slow=4.6,SNR=25	73.98	333	P	P	12 38 29.6	+0.4
NB2	NORSAR Subarra comp=Z,0.5nm,0.5s,baz=53,slow=5.6	79.75	337	P	P	12 39 01.2	+0.2
NOA	NORSAR Array B comp=Z,0.5nm,0.5s,baz=49,slow=4.8,SNR=5.4	79.75	337	P	P	12 39 01.5	+0.5
NVAR	Mina Array Bea comp=Z,0.8nm,0.6s,baz=288,slow=6.8,SNR=7.3	81.01	51	P	P	12 39 10.8	+2.4
BRTR	Keskin Array B comp=Z,2.0nm,0.9s,baz=97,slow=5.3,SNR=6.4	81.82	311	P	P	12 39 12.8	+0.5
PDAR	Pinedale Array comp=Z,0.3nm,0.6s,baz=337,slow=3.4,SNR=3.9	84.17	43	P	P	12 39 26.4	+2.0
TXAR	Lajitas Array comp=Z,0.4nm,0.7s,baz=29,slow=2.9,SNR=3.8	96.16	51	P	P	12 40 22.8	+2.5

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*IDC **29** 12:38:32.2±1.1, 24°.21N×121°.36E, h0^{km}, mb3.6/7, mb1 3.7/7, mb1mx3.5/42, mbtmp3.6/7, Error ellipse: s-maj=72.1km s-min=21.4km az=65.0*

*TAP **29** 12:38:32.9, 24°.34N×121°.42E, h7^{km}, ML4.0, C*

*JMA **29** 12:38:32.6, 24°.33N×121°.41E, h3^{km}, M3.7*

ISC 29 12:38:33.2±0.8**, 24°.34N**±0°.01×**121°.43E**±0°.01**, h6^{km}**±5^{km}**, n142, σ0^{s}.85**/240**, mb3.5**/7**, 33C-4D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	Datong baz=338	0.10	336	⇓*i*P	Pg	12 38 35.5	0.0
NNSB	baz=338			*i* S	Sg	12 38 37.0	0.0
NNSH	Datong baz=334	0.10	336	*i* P	Pg	12 38 35.5	0.0
NNSH	baz=334			S	Sg	12 38 36.9	-0.2
NNS	Nan Shan baz=339	0.12	334	⇓*i*P	Pg	12 38 35.7	0.0
NNS	baz=339			*e*S	Sg	12 38 37.6	+0.2
ETLH	Xiulin Townshi baz=167	0.14	159	*i* P	Pg	12 38 36.7	+0.7
ETLH	baz=167			*i* S	Sg	12 38 39.1	+1.1
NACB	Ninganchiao baz=137	0.22	137	⇑*i*P	Pg	12 38 38.0	+0.5
NACB	baz=137			*i* S	Sg	12 38 41.3	+0.8
WHF	Hehuan Shan baz=204	0.24	218	⇑*i*P	Pg	12 38 38.3	+0.3
WHF	baz=204			S	Sg	12 38 41.9	+0.6
TWT	Tachien baz=247	0.24	250	⇑*i*P	Pg	12 38 38.6	+0.6
TWT	baz=247			S	Sg	12 38 42.4	+1.1
TDCB	Techi baz=243	0.26	252	⇑*i*P	Pg	12 38 38.6	+0.3
TDCB	baz=243			*e*S	Sg	12 38 42.2	+0.4
NDT	Datong Townshi baz=18	0.28	16	⇑*i*P	Pg	12 38 38.6	0.0
NDT	baz=18			*e*S	Sg	12 38 42.5	+0.2
TWD	Chiawan baz=147	0.30	149	*e*P	Pb	12 38 39.6	-1.3
TWD	baz=147			*e*S	Sg	12 38 43.7	+0.8
ENA	Nanau baz=74	0.30	72	P	Pg	12 38 39.0	-0.1
ENA	baz=74			*e*S	Sg	12 38 43.4	+0.3
ENTT	Nioudou baz=17	0.33	22	⇑*i*P	Pg	12 38 39.5	-0.1
ENTT	baz=17			*e*S	Sg	12 38 44.3	+0.4
YHNB	Yeheng baz=354	0.34	352	⇑*i*P	Pg	12 38 40.0	+0.2
YHNB	baz=354			*e*S	Sg	12 38 43.9	-0.4
NSK	Sanguang baz=353	0.34	349	⇑*i*P	Pg	12 38 40.1	+0.2
NSK	baz=353			*e*S	Sg	12 38 44.1	-0.4
CHGB	Renai baz=218	0.36	220	⇑*i*P	Pg	12 38 40.3	+0.1
CHGB	baz=218			S	Sb	12 38 45.7	-2.4
HWA	Hwalien baz=154	0.39	156	*e*P	Pb	12 38 41.8	-0.7
HWA	baz=154			*e*S	Sb	12 38 47.9	-0.9
TWE	Neicheng baz=46	0.44	29	⇑*i*P	Pg	12 38 41.8	0.0
TWE	baz=46			*e*S	Sg	12 38 48.0	+0.5
OWD	Renai baz=209	0.44	211	⇑P	Pg	12 38 41.6	-0.2
OWD	baz=209			*e*S	Sb	12 38 48.3	-2.2
WHP	Taichung City baz=260	0.44	263	⇑*i*P	Pb	12 38 42.5	-0.9
WHP	baz=260			*e*S	Sb	12 38 48.5	-1.9
NWLT	Wulai baz=10.0	0.45	9	⇑*i*P	Pg	12 38 41.9	+0.1
NWLT	baz=10.0			*e*S	Sg	12 38 47.6	0.0
SLBB	Yuanshan baz=24	0.46	24	*e*P	Pg	12 38 41.1	-0.9
ENLB	Shoufeng baz=159	0.46	160	*e*P	Pg	12 38 41.9	-0.2
ENLB	baz=159			*e*S	Sb	12 38 49.9	-0.9
TWC	Suao baz=48	0.47	55	⇑*i*P	Pg	12 38 41.9	-0.3
TWC	baz=48			*e*S	Sg	12 38 48.3	-0.2
LIOB	Emei baz=312	0.49	309	⇑*i*P	Pb	12 38 43.5	-0.7
LIOB	baz=312			S	Sb	12 38 50.2	-1.4
NSTT	Nanjuang baz=310	0.49	307	⇑*i*P	Pb	12 38 43.4	-0.8
NSTT	baz=310			S	Sb	12 38 50.1	-1.5
ILA	Ilan baz=48	0.52	34	P	Pg	12 38 43.2	+0.1
ILA	baz=48			*e*S	Sb	12 38 51.8	-0.6
ESL	Shilin baz=177	0.52	180	⇑*i*P	Pb	12 38 43.4	-1.3
ESL	baz=177			*e*S	Sb	12 38 50.9	-1.6
WLTB	Daxi baz=345	0.54	343	⇑*i*P	Pb	12 38 44.7	-0.4
WLTB	baz=345			*e*S	Sb	12 38 52.0	-1.1
DPDB	Guoxing baz=226	0.55	237	⇑*i*P	Pb	12 38 44.3	-0.9
DPDB	baz=226			*e*S	Sb	12 38 52.3	-1.1
TWQ1	Liyutan baz=269	0.60	271	P	Pb	12 38 45.8	-0.2
TWQ1	baz=269			S	Sb	12 38 54.0	-0.8
SBCB	Hsinchu baz=320	0.61	319	*e*P	Pb	12 38 46.6	+0.4
SBCB	baz=320			*e*S	Sb	12 38 55.1	+0.1
NMLH	Miaoli baz=290	0.61	289	*e*P	Pb	12 38 46.5	+0.2
NMLH	baz=290			*e*S	Sb	12 38 54.9	-0.4
NSY	Sanyi baz=276	0.61	278	⇑*i*P	Pb	12 38 46.6	+0.2
NSY	baz=276			*e*S	Sb	12 38 54.8	-0.4
HSN	Hsinchu baz=324	0.62	318	*e*P	Pb	12 38 46.9	+0.4
HSN	baz=324			*e*S	Sb	12 38 56.0	+0.5
NHDH	Xindian Distri baz=9.0	0.63	8	*e*P	Pb	12 38 45.8	-0.8
NHDH	baz=9.0			*e*S	Sg	12 38 54.0	+0.5
NTC	Toucheng baz=44	0.63	35	*e*P	Pg	12 38 45.2	-0.2
VWDT	VWDT baz=208	0.64	204	⇑*i*P	Pg	12 38 45.1	-0.3
VWDT	baz=208			*e*S	Sg	12 38 53.6	-0.1
TATO	Taipei baz=5.0	0.64	5	*e*P	Pb	12 38 45.9	-0.8
TWA	Mucha baz=15	0.66	12	⇑*i*P	Pg	12 38 46.1	+0.3
TWA	baz=15			*e*S	Sg	12 38 55.1	+0.7
SMLT	Sun Moon Lake baz=235	0.66	227	⇑*i*P	Pb	12 38 46.1	-1.1
EGFH	Guangfu baz=179	0.66	180	P	Pb	12 38 46.1	-1.0
EGFH	baz=179			*e*S	Sg	12 38 54.8	+0.2
NCUH	Zhongli baz=343	0.67	341	*e*P	Pb	12 38 47.8	+0.6
NCUH	baz=343			*e*S	Sn	12 38 59.0	-1.0
NCU	National Centr baz=344	0.67	341	*e*P	Pb	12 38 47.8	+0.5
NCU	baz=344			*e*S	Sb	12 38 57.2	+0.4
PTSB	Yuanli baz=278	0.67	280	⇓*i*P	Pn	12 38 48.0	-1.2
PTSB	baz=278			*e*S	Sb	12 38 56.8	0.0
EOS1	EOS1 baz=72	0.67	71	⇓*i*P	Pg	12 38 46.5	+0.4
EOS1	baz=72			*e*S	Sb	12 38 56.4	-0.4
TYC	Yuchr baz=219	0.68	231	⇑*i*P	Pb	12 38 46.3	-1.1
TYC	baz=219			*e*S	Sb	12 38 55.7	-1.3
SSLB	Suanglung baz=216	0.70	219	⇑*i*P	Pg	12 38 46.1	-0.4
SSLB	baz=216			*e*S	Sb	12 38 56.1	-1.5
TAP	Taipei baz=19	0.70	6	*e*P	Pb	12 38 47.4	-0.5
TAP	baz=19			*e*S	Sg	12 38 56.6	+0.7
TAP1	Taipei baz=19	0.70	7	P	Pb	12 38 47.6	-0.3
TAP1	baz=19			*e*S	Sb	12 38 57.2	-0.7
TCU	Taichung baz=252	0.71	255	*e*P	Pn	12 38 49.0	-0.8
TCU	baz=252			*e*S	Sn	12 38 59.3	-1.8
WDJ	Dajia District baz=269	0.72	271	⇑*i*P	Pn	12 38 49.0	-0.9
WDJ	baz=269			*e*S	Sn	12 38 59.4	-1.8
TIPB	Shuangxi baz=19	0.73	30	⇑*i*P	Pg	12 38 46.9	-0.3
TIPB	baz=19			*e*S	Sg	12 38 56.3	-0.4
TWS1	Kuangyinshan baz=9.0	0.76	359	P	Pb	12 38 49.1	+0.3
TWS1	baz=9.0			*e*S	Sb	12 38 59.9	+0.4
NWF	Wu-fen Shan baz=25	0.80	24	*e*P	Pg	12 38 48.5	-0.1
NWF	baz=25			*e*S	Sb	12 39 00.1	-0.5
WFSB	Wu-fen Shan baz=25	0.80	24	*e*P	Pg	12 38 48.6	+0.1
WFSB	baz=25			*e*S	Sg	12 38 59.4	+0.4
YM01	YM01 baz=26	0.82	9	⇑*i*P	Pb	12 38 49.5	-0.4
YM01	baz=26			*e*S	Sg	12 39 00.1	+0.6
WJS	Zhushan baz=224	0.82	232	P	Pb	12 38 50.0	+0.1
WJS	baz=224			*e*S	Sb	12 39 00.6	-0.5
WNT	Mingjian baz=230	0.82	236	*e*P	Pn	12 38 50.4	-0.8
YM04	YM04 baz=24	0.82	7	*e*P	Pb	12 38 49.4	-0.5
YM04	baz=24			*e*S	Sg	12 38 59.9	+0.3
NTST	Danshui baz=1.0	0.82	1	*e*P	Pb	12 38 50.4	+0.4
YM10	YM10 baz=25	0.82	8	⇑*i*P	Pb	12 38 49.7	-0.3
YM10	baz=25			*e*S	Sg	12 39 00.2	+0.4
WHYT	Xinyi Township baz=220	0.83	220	*e*P	Pb	12 38 48.9	-1.1
EHY	Hungye baz=178	0.83	187	*e*P	Pb	12 38 49.0	-1.0
EHY	baz=178			*e*S	Sg	12 39 00.1	+0.1
WCHH	Zhanghua baz=249	0.83	252	*e*P	Pn	12 38 51.1	-0.3
WCHH	baz=249			*e*S	Sn	12 39 03.2	-0.9
YM05	YM05 baz=25	0.83	9	⇑*i*P	Pb	12 38 49.8	-0.3
YM05	baz=25			*e*S	Sg	12 39 00.4	+0.3
YM11	YM11 baz=26	0.84	9	⇑*i*P	Pb	12 38 49.9	-0.3
YM11	baz=26			*e*S	Sg	12 39 00.7	+0.6
HGSD	Ruisui baz=185	0.84	180	*e*P	Pb	12 38 49.6	-0.5
HGSD	baz=185			*e*S	Sg	12 39 00.4	+0.2
TWB1	Santiao Chiao baz=46	0.84	37	*e*P	Pg	12 38 48.9	-0.4
TWB1	baz=46			*e*S	Sg	12 38 59.5	-0.8
ANP	Anpu baz=24	0.85	6	⇑*i*P	Pb	12 38 50.2	-0.2
ANP	baz=24			*e*S	Sg	12 39 01.1	+0.5
YM08	YM08 baz=12	0.86	10	*e*P	Pb	12 38 50.0	-0.5
YM08	baz=12			*e*S	Sb	12 39 01.7	-0.6
YULB	Yu-li baz=174	0.95	187	*e*P	Pg	12 38 51.1	-0.3
YULB	baz=174			*e*S	Sg	12 39 03.4	-0.3
TWY	Chenhua baz=23	0.95	9	*e*P	Pb	12 38 51.9	-0.1
TWY	baz=23			*e*S	Sb	12 39 04.9	0.0
TWF1	Yuli baz=193	0.99	187	*e*P	Pb	12 38 52.0	-0.7
TWF1	baz=193			*e*S	Sb	12 39 05.4	-0.6
ALS	Alishan baz=222	1.00	215	P	Pb	12 38 52.3	-0.8
CHN5	Tsauling baz=219	1.01	223	*e*P	Pn	12 38 53.3	-0.6
CHN5	baz=219			*e*S	Sn	12 39 09.5	+1.0
WGK	Gukeng baz=227	1.02	231	*e*P	Pn	12 38 54.3	+0.2
WGK	baz=227			*e*S	Sn	12 39 10.7	+2.0
WDLH	Douliu baz=228	1.04	232	*e*P	Pn	12 38 54.1	-0.2
WDLH	baz=228			*e*S	Sn	12 39 10.1	+1.0
RLNB	Erlin baz=242	1.07	246	*e*P	Pn	12 38 54.8	+0.1
RLNB	baz=242			*e*S	Sn	12 39 10.4	+0.4
FULB	Fuli baz=194	1.14	186	*e*P	Pn	12 38 55.6	-0.1
FULB	baz=194			*e*S	Sn	12 39 11.4	-0.3
WTCT	Ta-ch'eng baz=242	1.15	246	*e*P	Pn	12 38 55.6	-0.2
WTCT	baz=242			*e*S	Sn	12 39 12.5	+0.7
CHN2	Minshiung baz=223	1.18	228	*e*P	Pn	12 38 56.9	+0.6
CHN2	baz=223			*e*S	Sn	12 39 14.4	+1.8
ELDTW	Lidau baz=185	1.20	198	*e*P	Pb	12 38 55.7	-0.7

ELDTW				eS	Sb	12 39 11.4	-0.9
	baz=185						
CHKT	Chengkung	1.23	183	eP	Pb	12 38 56.4	-0.5
	baz=168						
CHY	Chiayi	1.24	228	eP	Pn	12 38 57.6	+0.6
	baz=223						
CHY				eS	Sn	12 39 15.3	+1.2
	baz=223						
CHN4	Tsaushan	1.24	218	eP	Pn	12 38 57.6	+0.5
	baz=218						
TPUB	Ta-pu	1.26	216	⇑P	Pn	12 38 57.4	0.0
	baz=211						
TPUB				eS	Sn	12 39 16.3	+1.6
	baz=211						
WSF	Szhu	1.30	238	eP	Pn	12 38 58.2	+0.3
	baz=233						
WSF				eS	Sn	12 39 16.6	+1.0
	baz=233						
WTP	Ta-pu	1.32	215	eP	Pb	12 38 58.4	0.0
	baz=210						
WTP				eS	Sn	12 39 18.0	+2.0
	baz=210						
STYT	Tauyuan	1.32	208	eP	Pb	12 38 57.9	-0.5
	baz=191						
STYT				eS	Sn	12 39 17.4	+1.2
	baz=191						
WLGB	Puzi	1.34	231	eP	Pb	12 38 59.0	+0.3
	baz=226						
WLGB				eS	Sn	12 39 17.7	+1.2
	baz=226						
TWK	Hsinying	1.37	219	eP	Pb	12 38 59.5	+0.3
	baz=214						
TWK				eS	Sn	12 39 20.3	+3.0
	baz=214						
JYNG	Yonagunijimaku	1.39	85	P	Pn	12 38 59.2	+0.1
JYNG				S	Sg	12 39 17.7	-0.1
SNST	Tainan City	1.40	218	eP	Pg	12 39 00.4	+0.3
	baz=213						
SNST				eS	Sn	12 39 21.3	+3.2
	baz=213						
CHN1	Nanshi	1.41	216	i P	Pg	12 39 00.7	+0.5
	baz=211						
CHN1				eS	Sn	12 39 21.1	+2.7
	baz=211						
PCYT	Pengchaiyu	1.41	24	eP	Pn	12 38 58.6	-0.9
	baz=29						
PCYT				eS	Sb	12 39 17.5	-0.8
	baz=29						
YOJ	Yonaguni jima	1.45	85	P	Pn	12 39 00.2	+0.3
	baz=74						
YOJ	Yonaguni jima	1.45	85	P	Pn	12 39 00.0	+0.1
YOJ				eS	Sb	12 39 18.9	-0.3
SGST	Jiashian	1.47	212	eP	Pb	12 39 00.1	-0.8
	baz=206						
SGST				eS	Sn	12 39 21.3	+1.5
	baz=206						
CHN8	Yiju	1.49	229	eP	Pg	12 39 01.3	-0.4
	baz=237						
CHN8				eS	Sg	12 39 23.0	+2.0
	baz=237						
SLGT	Liugui	1.52	208	eP	Pg	12 39 02.1	-0.1
	baz=190						
SLGT				eS	Sg	12 39 23.0	+1.1
	baz=190						
TWG	Pinlang	1.54	192	eP	Pb	12 39 01.5	-0.6
	baz=193						
TWGBT	Beinan	1.54	192	eP	Pb	12 39 01.5	-0.7
	baz=174						
TWGBT				eS	Sg	12 39 23.5	+0.6
	baz=174						
CHN3	Shinhua	1.59	218	eP	Pg	12 39 04.1	+0.5
	baz=217						
SCLT	Jiali	1.62	225	eP	Pb	12 39 03.0	-0.4
	baz=243						
TWH	Lutao	1.62	178	eP	Pn	12 39 02.1	-0.2
	baz=161						
SSD	Sandimen	1.74	205	P	Pg	12 39 06.2	-0.5
	baz=200						
SSD				eS	Sg	12 39 31.1	+1.9
	baz=200						
TWM1	Shoushan	1.77	212	P	Pg	12 39 07.3	+0.2
	baz=210						
ECL	Taimali	1.79	194	P	Pb	12 39 06.0	-0.3
	baz=179						
ECL				eS	Sb	12 39 28.9	0.0
	baz=179						
MASBT	Mashibuluo	1.86	203	eP	Pg	12 39 07.7	-1.2
	baz=198						
MASBT				eS	Sg	12 39 34.4	+1.2
	baz=198						
SNJT	Kaohsiung City	1.87	213	eP	Pb	12 39 06.4	-1.3
	baz=211						
PNG	Penghu	1.88	246	eP	Pb	12 39 07.5	-0.4
	baz=241						
PNG				eS	Sb	12 39 30.9	-0.6
	baz=241						
PHUB	P'eng-hu	1.89	245	eP	Pn	12 39 05.0	-0.9
	baz=246						
PTTC	Pingtan	1.90	308	eP	Pn	12 39 05.4	-0.7
	baz=307						
VWUC	VWUC	1.92	290	P	Pn	12 39 05.4	-0.9
	baz=289						
WDGT	Dungji	1.94	237	eP	Pb	12 39 08.0	-1.0
	baz=237						
SSPT	Xinbi	2.01	203	eP	Pg	12 39 10.5	-1.2
	baz=201						
EAST	Anshuo	2.02	195	eP	Pg	12 39 10.6	-1.3
	baz=194						
TAW	Tawu	2.03	194	eP	Pb	12 39 09.3	-1.1
	baz=175						
SCZT	Fangliau	2.09	201	eP	Pb	12 39 11.1	-0.4
	baz=195						
SCZT				eS	Sb	12 39 37.0	-0.7
	baz=195						
IRIF	Iriomote-Funau	2.10	90	P	Pn	12 39 09.2	+0.3
IRIF				eS	Sn	12 39 35.6	+0.3
VCHM	Qimei	2.15	239	eP	Pn	12 39 10.3	+0.7
	baz=240						
PTMZ	Houxiangcun	2.21	289	eP	Pn	12 39 09.2	-1.2
	baz=289						
MATB	Ma-tsu	2.25	324	eP	Pn	12 39 10.9	-0.1
	baz=321						
JKRS	Kuro-shima	2.36	92	P	Pn	12 39 13.3	+0.9
JKRS				eS	Sn	12 39 42.3	+0.6
TWKBT	Hengchun	2.45	193	eP	Pb	12 39 16.2	-1.5
	baz=176						
JIJ	Ishigaki jima	2.48	89	P	Pn	12 39 14.2	+0.1
JIJ				eS	Sn	12 39 45.4	+0.8
JISG	Ishigakijimahi	2.64	84	P	Pn	12 39 16.5	+0.2
LYJJ	Jianjiangzhen	2.67	326	eP	Pn	12 39 16.3	-0.4
	baz=324						
KNM	Kinmen	2.73	272	eP	Pn	12 39 18.4	+0.9
	baz=274						
KNMB	Chin-men Tao	2.77	273	eP	Pn	12 39 17.3	-0.8
	baz=275						
MHZQ	Yeshan	2.79	309	eP	Pn	12 39 18.1	-0.3
	baz=307						
XPSS	Dashiqiu	2.81	337	eP	Pn	12 39 18.9	+0.2
	baz=334						
AXDP	Jialang	3.20	281	eP	Pn	12 39 23.1	-0.9
	baz=282						
ZPLA	Ao Xicun	3.38	264	eP	Pn	12 39 25.9	-0.7
	baz=266						
KSRS	Korea Array	14.21	22	Pn	P	12 42 02.1	-0.3
	0.2nm,0.3s,baz=195,slow=13,SNR=4.4						
SONM	Songino Array	26.32	337	P	P	12 44 10.6	+0.8
	0.5nm,0.5s,baz=148,slow=8.5,SNR=7.2						
MKAR	Makanchi Array	38.38	316	P	P	12 45 56.2	+1.0
	0.8nm,0.7s,baz=105,slow=9.9,SNR=12						
ZALV	Zalesovo Beam	40.24	327	P	P	12 46 10.2	-0.3
	0.8nm,0.6s,baz=116,slow=6.9,SNR=4.5						
WRA	Warramunga Arr	45.77	163	P	P	12 46 54.7	-1.0
	0.4nm,0.6s,baz=344,slow=8.7,SNR=1.3						
ASAR	Alice Springs	49.23	165	P	P	12 47 21.7	-0.8
	0.1nm,0.5s,baz=345,slow=6.7,SNR=2.1						
FINES	FINESS Array B	71.43	330	P	P	12 49 54.2	+0.1
	1.0nm,0.7s,baz=58,slow=8.4,SNR=3.5						
YKA	Yellowknife Ar	82.74	23	P	P	12 50 58.9	+1.2
	0.1nm,0.7s,baz=316,slow=4.1,SNR=2.8						

IDC 29 13:06:02.7±3.0**,22°.12N**×**141°.79E,h230**^{km}±76^{km}**,mb3.0**/3**, mb1 3.1**/4**,mb1mx2.8**/49**,mbtmp3.7**/4**,Error ellipse: s-maj=389.1km s-min=21.9km az=88.0,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	4.96	4	P	Pn	13 07 18.6	+1.3
	1.5nm,0.3s,baz=324,slow=18,SNR=1.2						
JCJ				S	S	13 08 16.3	-0.3
	2.1nm,0.3s,baz=299,slow=18,SNR=1.5						
WRA	Warramunga Arr	42.44	190	P	P	13 13 35.5	+0.4
	0.5nm,0.6s,baz=10,slow=8.5,SNR=7.4						
ASAR	Alice Springs	46.16	190	P	P	13 14 03.4	-1.1
	0.2nm,0.8s,baz=17,slow=13,SNR=4.2						
FINES	FINESS Array B	82.24	334	P	P	13 17 58.0	+0.1
	2.0nm,1.0s,baz=58,slow=7.2,SNR=5.9						

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*DDA **29** 13:06:28.7,37°.14N×36°.71E,h4^{km}±1^{km},ML2.5*
*ISK **29** 13:06:28.3,37°.14N×36°.73E,h5^{km},ML2.6/10*
ISC 29 13:06:28.2±1.2**,37°.09N**±0°.03×**36°.72E**±0°.02**,h2**^{km}±11^{km}**, n31,**σ**0^{s}.63**/46**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMA	Osmaniye	0.10	335	i P	Pg	13 06 30.0	-0.2
KAMA				IAML		13 06 31.0	
	comp=E,7μm,0.1s						
KAMA				i S	Sg	13 06 31.6	-0.1
KAMA				IAML		13 06 32.0	
	comp=N,3μm,0.2s						
HCB	Kahramanmara	0.29	30	i P	Pg	13 06 33.1	-0.7
AYKD	Aykdinkavak	0.33	12	i P	Pg	13 06 34.1	-0.4
AYKD				i S	Sg	13 06 39.1	+0.3
AYKD				IAML		13 06 40.0	
	comp=E,723nm,0.3s						
AYKD				IAML		13 06 41.0	
	comp=N,417nm,0.4s						
GAZ	Gaziantep	0.40	78	PG	Pg	13 06 36.2	+0.4
GAZ				SG	Sg	13 06 41.9	+0.9
KMRS	Kahramanmaras	0.44	19	PG	Pg	13 06 36.4	-0.2
KMRS				SG	Sg	13 06 42.2	0.0
ANDN	Andirin	0.57	328	i P	Pg	13 06 39.1	-0.1
ANDN				i S	Sg	13 06 46.7	+0.1
ANDN				IAML		13 06 47.0	
	comp=N,183nm,0.4s						
ANDN				IAML		13 06 47.0	
	comp=E,242nm,0.3s						
GZT	Gaziantep	0.72	68	i P	Pb	13 06 43.1	-0.5
GZT				i S	Sg	13 06 52.4	+1.1
GZT				IAML		13 06 54.0	
	comp=N,177nm,0.3s						
GZT				IAML		13 06 55.0	
	comp=E,183nm,0.5s						
CEYT	Ceyhan	0.78	264	PG	Pb	13 06 44.1	-0.4
TAHT	Tahtakopru-Hat	0.83	211	PG	Pb	13 06 45.9	+0.5
YURE	YUREGIR	0.91	253	PG	Pg	13 06 46.1	+0.4
YURE	YUREGIR	0.91	253	i P	Pg	13 06 45.0	-0.7
SAIM	ADANA	1.02	330	i P	Pg	13 06 46.9	-0.8
SAIM				i S	Sg	13 07 00.2	-0.7
SAIM				IAML		13 07 02.0	
	comp=E,190nm,0.3s						
SAIM				IAML		13 07 03.0	
	comp=N,282nm,0.3s						
AKO	Adana	1.08	290	i P	Pb	13 06 49.8	+0.1
AKO				i S	Sb	13 07 04.8	+0.5
AKO				IAML		13 07 06.0	
	comp=N,70nm,0.5s						
AKO				IAML		13 07 06.0	
	comp=E,129nm,0.4s						
KRTS	Karatas	1.20	245	PN	Pn	13 06 52.1	+0.1
ELBS	KAHRAMANMARAS	1.27	15	i P	Pn	13 06 53.0	-0.1
ELBS				i S	Sn	13 07 10.6	-0.3
ELBS				IAML		13 07 14.0	
	comp=N,138nm,0.6s						
ATAB	Bozova	1.31	73	i P	Pg	13 06 51.4	-1.8
ATAB				i S	Sb	13 07 10.5	-0.3
ATAB				IAML		13 07 15.0	
	comp=E,193nm,0.6s						
SARI	SarD1z-Kayseri	1.33	350	PN	Pb	13 06 54.3	+0.2
KARA	Karaisali	1.34	278	PN	Pn	13 06 53.6	-0.4
YAHY	KAYSERI_Yahyal	1.47	313	i P	Pb	13 06 56.2	-0.2
YAHY				i S	Sg	13 07 15.4	-0.1
YAHY				IAML		13 07 19.0	
	comp=E,34nm,0.5s						
YAHY				IAML		13 07 19.0	
	comp=N,34nm,0.8s						
CMRD	Camardi-Nigde	1.49	293	PN	Pn	13 06 55.9	-0.2
SURC	SANLIURFA_SURC	1.53	97	i P	Pn	13 06 55.2	-1.3
SURC				i S	Sg	13 07 17.7	+0.4
SURC				IAML		13 07 21.0	
	comp=N,80nm,0.5s						
SURC				IAML		13 07 23.0	
	comp=E,115nm,0.5s						
AKCD	Akcadag	1.53	38	i P	Pg	13 06 58.6	+1.0
AKCD				i S	Sg	13 07 18.8	+1.3
AKCD				IAML		13 07 21.0	
	comp=N,125nm,0.7s						
GULE	Gulek	1.57	278	i P	Pn	13 06 57.3	+0.1
GULE				i S	Sg	13 07 18.6	+0.1
MALT	Malatya	1.82	47	PN	Pn	13 07 00.9	+0.3
BNN	Bunyan	1.89	339	PN	Pn	13 07 02.3	+0.7
KERG	Konya-Eregli	2.10	280	i P	Pn	13 07 05.2	+0.7
KERG				i S	Sb	13 07 33.6	0.0
KERG				IAML		13 07 38.0	
	comp=N,28nm,0.5s						
CUKAN	kangal_SIVAS	2.30	15	i P	Pn	13 07 07.3	0.0
GULA	Gulagac	2.33	303	PN	Pn	13 07 08.3	+0.6
CUSAR	Sarkisla-SIVAS	2.35	351	i P	Pg	13 07 12.4	-0.9
CUSAR				IAML		13 07 49.0	
	comp=E,14nm,0.5s						
ARPR	Arapgir-MALATY	2.37	32	PN	Pn	13 07 08.7	+0.5
KEMA	Kemaliye	2.58	32	i P	Pg	13 07 18.0	+0.3
KEMA				IAML		13 07 56.0	
	comp=N,27nm,0.5s						
KEMA				IAML		13 07 58.0	
	comp=E,20nm,0.7s						

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*SJA **29** 13:21:10.1±0.7, 19°.81S×70°.96W,h78^{km}±9^{km},ML3.5, MW3.6*
*GUC **29** 13:21:11.9±0.5, 19°.77S×70°.88W,h39^{km}±2^{km},ML3.3*
ISC 29 13:21:08.0±1.7**,19°.78S**±0°.03×**71°.04W**±0°.07**,h11**^{km}±10^{km}**, n30,**σ**1^{s}.42**/52**,8C-3D,Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	0.88	78	⇓eP	Pg	13 21 25.3	+0.2
PSGC				eS	Sb	13 21 35.6	-1.7
PSGCX	Pisagua	0.88	78	i P	Pg	13 21 25.3	+0.2
PSGCX				i S	Sb	13 21 35.6	-1.6
PSGCX				IAML		13 21 39.6	
	comp=Z,600nm,0.2s						
TA01	Diego Aracena	1.12	134	⇑iP	Pg	13 21 30.0	+0.3
TA01				eS	Sg	13 21 43.4	-0.9
TA01				IAML		13 21 47.2	
	comp=E,1μm,0.3s						
PB11	IPOC Station P	1.30	89	⇓eP	Pb	13 21 32.2	-0.3
PB11				eS	Sb	13 21 48.2	-1.2
PB11				IAML		13 21 52.3	
	comp=N,1μm,0.2s						
PB11	IPOC Station P	1.30	89	i P	Pb	13 21 32.3	-0.3
PB11				i S	Sb	13 21 48.1	-1.2
PB11				IAML		13 21 50.7	
	comp=Z,828nm,0.4s						
PATCX	Punta Patache	1.33	141	⇑iP	Pn	13 21 33.7	+1.1
PATCX				eS	Sb	13 21 50.0	0.0
PATCX				IAML		13 21 55.7	
	comp=E,1μm,0.2s						
PATCX	Punta Patache	1.33	141	i P	Pn	13 21 33.5	+1.0
PATCX				IAML		13 21 54.5	
	comp=Z,553nm,0.4s						
PB12	IPOC Station P	1.34	30	⇑iP	Pn	13 21 34.3	+1.5
PB12				eS	Sb	13 21 50.6	+0.1
PB12				IAML		13 21 56.5	
	comp=N,772nm,0.5s						
PB12	IPOC Station P	1.34	30	i P	Pn	13 21 34.3	+1.5
PB12				eS	Sn	13 21 51.8	+1.2
PB12				IAML		13 21 55.1	
	comp=Z,429nm,0.5s						
MNMC	Minye Minye	1.51	65	⇓eP	Pn	13 21 36.2	+1.0
MNMC				eS	Sn	13 21 54.6	-0.4
MNMCX	Minye Minye	1.51	65	i P	Pn	13 21 36.2	+1.0
MNMCX				i S	Sg	13 21 55.9	-0.8
MNMCX				IAML		13 22 01.2	
	comp=Z,1μm,0.3s						
GO01	Chusmiza	1.74	87	⇑iP	Pn	13 21 39.9	+1.3
GO01				eS	Sb	13 22 01.5	-0.8
PB08	IPOC Station P	1.81	102	⇑iP	Pn	13 21 40.8	+1.4
PB08				eS	Sb	13 22 03.2	-1.0
PB08				IAML		13 22 04.5	
	comp=N,501nm,0.6s						
PB08	IPOC Station P	1.81	102	i P	Pn	13 21 40.6	+1.2
PB08				i S	Sn	13 22 02.3	-0.3
PB08				IAML		13 22 10.2	
	comp=Z,251nm,0.5s						
PB02	IPOC Station P	1.87	145	eP	Pn	13 21 41.4	+1.4
PB02				eS	Sn	13 22 04.2	+0.6
PB02	IPOC Station P	1.87	145	i P	Pn	13 21 41.3	+1.3
PB02				IAML		13 22 13.2	
	comp=Z,934nm,0.4s						
PB01	IPOC Station P	1.92	131	⇑iP	Pn	13 21 42.2	+1.5
PB16	IPOC Station P	2.04	45	⇑iP	Pn	13 21 44.8	+2.0
PB16				eS	Sb	13 22 10.4	-0.7
PB16				IAML		13 22 15.7	
	comp=N,442nm,0.4s						
PB16	IPOC Station P	2.04	45	i P	Pn	13 21 44.8	+2.0
PB16				i S	Sb	13 22 11.7	+0.6
PB07	IPOC Station P	2.22	151	i P	Pn	13 21 46.1	+1.3
PB07				i S	Sg	13 22 19.8	+0.5
PB07				IAML		13 22 22.8	
	comp=Z,305nm,1.1s						
PB03	IPOC Station P	2.56	152	i P	Pn	13 21 50.7	+1.2
PB03				i S	Sg	13 22 31.1	+0.9
PB03				IAML		13 22 34.2	
	comp=Z,194nm,0.4s						
PB09	IPOC Station P	2.62	140	⇑iP	Pn	13 21 52.6	+2.3
PB09				eS	Sn	13 22 24.1	+1.9
PB09				IAML		13 22 36.0	
	comp=N,341nm,0.4s						
PB09	IPOC Station P	2.62	140	i P	Pn	13 21 52.7	+2.3
PB09				i S	Sb	13 22 28.9	+1.7
PB09				IAML		13 22 35.5	
	comp=Z,292nm,0.4s						
PB04	IPOC Station P	2.67	162	i P	Pn	13 21 52.0	+0.9
PB04				i S	Sn	13 22 21.0	-2.6
PB05	IPOC Station P	3.15	166	i P	Pn	13 21 58.3	+0.6
PB06	IPOC Station P	3.21	155	i P	Pn	13 21 59.4	+0.9
PB06				IAML		13 22 52.6	
	comp=Z,100nm,0.8s						
LVC	Limon Verde	3.44	145	i P	Pn	13 22 05.0	+3.1
PB15	IPOC Station P	3.71	157	i P	Pn	13 22 06.3	+0.9
PB15				IAML		13 23 08.0	
	comp=Z,155nm,0.7s						
PB10	IPOC Station P	3.74	173	i P	Pn	13 22 06.2	+0.5
PB10				i S	Sn	13 22 46.5	-3.2
LPAZ	La Paz	4.44	39	i P	Pb	13 22 24.3	-2.1

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*JMA **29** 13:28:26.5±0.5, 33°.23N×141°.35E,h49^{km},M3.0*
*IDC **29** 13:28:27.5±3.9, 32°.69N×140°.02E,h0^{km},mb3.3/3, mb1 3.5/4,mb1mx3.2/45,mbtmp3.2/4,ML2.0/1,MS2.9/1, Ms1 2.9/1,ms1mx2.3/24,Error ellipse: s-maj=162.9km s-min=26.9km az=73.0*
ISC 29 13:28:31.2±1.4**,33°.19N**±0°.07×**141°.0E**±0°.1**,h65**^{km}**,n12,** σ**1^{s}.34**/10**,mb3.3**/3**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.01	266	P	Pn	13 28 48.8	-0.8
JAOM	Aogashimamukai	1.28	236	P	Pn	13 28 51.8	-1.4
JMKN	Mikurajimanish	1.38	301	P	Pn	13 28 53.5	-0.9
JMKN				S	Sn	13 29 12.6	+0.7
JHO	Hitachi	3.43	354	P	Pn	13 29 20.9	-1.4
MJAR	Matsushiro Arr	4.06	326	Pn	Pn	13 29 31.6	+0.7
	0.1nm,0.3s,baz=144,slow=12,SNR=10						
MJAR				Sn	Sn	13 30 15.2	-2.0
	baz=132,slow=13,SNR=1.2						
H11N2	WAKE ISLAND Hy	26.68	114	T	T	14 02 02.6	
	baz=307						
H11N1	WAKE ISLAND Hy	26.69	114	T	T	14 02 02.0	
	baz=307						
H11N3	WAKE ISLAND Hy	26.70	114	T	T	14 02 01.4	
	baz=307						
TLY	Talaya	32.73	316	LR	LR	13 48 44.2	
	comp=Z,22nm,20.7s,baz=34,slow=37						
MKAR	Makanchi Array	45.97	305	P	P	13 36 49.1	+1.3
	0.3nm,0.7s,baz=89,slow=7.9,SNR=2.9						
WRA	Warramunga Arr	53.22	188	P	P	13 37 42.8	-0.2
	0.4nm,0.6s,baz=5.9,slow=7.6,SNR=6.3						
ASAR	Alice Springs	56.95	188	P	P	13 38 10.8	+0.9
	0.2nm,0.8s,baz=1.2,slow=7.2,SNR=2.5						

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*IDC **29** 13:36:03.4±8.5, 30°.61S×177°.51W,h0^{km},mb3.9/3, mb1 4.0/4,mb1mx3.7/45,mbtmp3.9/4,ML2.8/1,Error ellipse: s-maj=164.4km s-min=26.8km az=102.0*
*NEIC **29** 13:36:08.0±2.6, 30°.5S±0°.2×17°8W±°,h33^{km}±70^{km}, mb4.2/9,Error ellipse: s-maj=179.7km s-min=7.9km az=98.0*
ISC 29 13:36:07.9±3.5**,30°.5S**±0°.1×**177°.7W**±0°.5**,h33**^{km}**,n16,** σ**1^{s}.35**/18**,mb4.1**/7**,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.27	351	Pn	Pn	13 36 30.2	+0.8
	37nm,0.3s,baz=74,slow=23,SNR=1.9						
RAO				Sn	Sn	13 36 44.0	-1.3
	210nm,0.3s,baz=72,slow=18,SNR=6.9						
URZ	Urewera	8.83	208	Pn	Pn	13 38 12.5	-0.8
	0.1nm,0.3s,baz=10,slow=11,SNR=0.9						
URZ				Sn	Sn	13 39 51.8	+0.2
	0.2nm,0.3s,baz=293,slow=13,SNR=0.9						
CTAO	Charters Tower	34.07	279	P	P	13 42 47.7	-1.7
STKA	Stephens Creek	34.70	257	P	P	13 42 57.1	+2.3
	2.2nm,0.7s,baz=90,slow=7.1,SNR=5.8						
STKA	Stephens Creek	34.70	257	P	P	13 42 54.6	-0.2
BBOO	Buckleboo	39.19	254	P	P	13 43 31.4	-1.5
BBOO				IAmb	IAmb	13 43 33.8	
	comp=Z,11nm,1.4s						
COEN	Coen	39.55	286	P	P	13 43 35.9	-0.2
ASAR	Alice Springs	43.36	267	P	P	13 44 08.8	+1.4
	comp=Z,0.5nm,0.5s,baz=106,slow=7.3,SNR=22						
ASAR	Alice Springs	43.36	267	P	P	13 44 07.7	+0.3
WR0	Warramunga Arr	44.18	272	P	P	13 44 15.7	+1.8
WR0				IAmb	IAmb	13 44 17.8	
	comp=Z,7.3nm,1.4s						
WB2	Warramunga Arr	44.35	272	P	P	13 44 17.0	+1.7
WRAB	Tennant Creek	44.35	272	P	P	13 44 16.6	+1.3
WRAB				IAmb	IAmb	13 44 21.1	
	comp=Z,3.5nm,1.1s						
WRA	Warramunga Arr	44.36	272	P	P	13 44 16.6	+1.3
	comp=Z,0.9nm,0.3s,baz=110,slow=8.1,SNR=31						
WRA	Warramunga Arr	44.36	272	P	P	13 44 14.9	-0.5
WB0	Warramunga Arr	44.38	272	P	P	13 44 16.8	+1.2
WB0				IAmb	IAmb	13 44 17.9	
	comp=Z,1.1nm,0.4s						
KNRA	Kununurra	50.97	274	P	P	13 45 07.1	+0.4

IDC 29 13:42:53.0±343.0**,28°.26S**×**121°.37E,h0**^{km}**,Error ellipse: s-maj=137.3km s-min=123.6km az=95.0,Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I07AU	WARRAMUNGA INF	14.44	58	i		15 13 50.0	
	baz=231,slow=316,SNR=3.3						
I05AU	HOBART INFRASO	25.60	131	i		16 19 50.0	
	baz=295,slow=325,SNR=1.4						

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*NIED **29** 13:44:00,24°.30N×121°.40E,h5^{km},Mw3.6 Best double couple: $M_0$3.05000×10^{14} NP1:ϕ_s186.00000°,δ74.00000°, λ-59.00000°. NP2:ϕ_s301.00000°,δ35.00000°, λ-151.00000°.*
*JMA **29** 13:44:25.8±0.1, 24°.33N×121°.39E,h4^{km},M3.7*
*TAP **29** 13:44:26.1, 24°.34N×121°.44E,h7^{km},ML3.9,C*
*IDC **29** 13:44:57.1±8.6, 24°.57N×121°.99E,h327^{km}±99^{km},mb2.9/6, mb1 3.0/7,mb1mx2.7/48,mbtmp3.6/7,Error ellipse: s-maj=72.6km s-min=16.3km az=65.0*
ISC 29 13:44:26.3±0.8**,24°.35N**±0°.01×**121°.43E**±0°.01**,h9**^{km}±4^{km}**, n143,**σ**0^{s}.89**/247**,mb3.5**/6**,44C-3D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	Datong	0.09	330	⇓iP	Pg	13 44 28.8	0.0
	baz=332						
NNSB				i S	Sg	13 44 30.3	-0.3
	baz=332						
NNSH	Datong	0.09	330	⇓iP	Pg	13 44 28.8	0.0
	baz=328						
NNSH				S	Sg	13 44 30.3	-0.3

	baz=328						
NNS	Nan Shan	0.11	329	⇓iP	Pg	13 44 29.0	0.0
	baz=334						
NNS				i S	Sg	13 44 30.9	-0.1
	baz=334						
ETLH	Xiulin Townshi	0.15	162	⇑iP	Pg	13 44 30.1	+0.5
	baz=171						
ETLH				i S	Sg	13 44 32.2	+0.3
	baz=171						
NACB	Ninganchiao	0.23	140	⇑iP	Pg	13 44 31.4	+0.5
	baz=139						
NACB				S	Sg	13 44 34.5	+0.4
	baz=139						
WHF	Hehuan Shan	0.25	217	⇑iP	Pg	13 44 31.6	0.0
	baz=206						
WHF				S	Sg	13 44 35.2	+0.1
	baz=206						
NDT	Datong Townshi	0.26	16	⇑iP	Pg	13 44 31.8	+0.2
	baz=16						
NDT				eS	Sg	13 44 35.9	+0.7
	baz=16						
TDCB	Techi	0.27	249	⇑iP	Pg	13 44 31.9	+0.2
	baz=240						
TDCB				S	Sg	13 44 35.3	-0.1
	baz=240						
ENA	Nanau	0.29	74	⇑iP	Pg	13 44 32.2	+0.1
	baz=73						
ENA				eS	Sg	13 44 36.8	+0.8
	baz=73						
TWD	Chiawan	0.31	151	⇑iP	Pg	13 44 32.9	+0.5
	baz=149						
TWD				eS	Sg	13 44 37.0	+0.5
	baz=149						
ENTT	Nioudou	0.32	23	⇑iP	Pg	13 44 32.8	+0.2
	baz=15						
ENTT				eS	Sg	13 44 37.6	+0.8
	baz=15						
YHNB	Yeheng	0.32	351	⇑iP	Pg	13 44 33.3	+0.5
	baz=352						
YHNB				eS	Sg	13 44 36.9	-0.2
	baz=352						
NSK	Sanguang	0.33	348	⇑iP	Pg	13 44 33.4	+0.4
	baz=351						
NSK				eS	Sg	13 44 37.4	0.0
	baz=351						
HWA	Hwalien	0.40	157	eP	Pb	13 44 35.0	-0.5
	baz=155						
HWA				eS	Sb	13 44 41.0	-0.8
	baz=155						
TWE	Neicheng	0.43	30	⇑iP	Pg	13 44 35.0	+0.3
	baz=44						
TWE				eS	Sg	13 44 41.2	+0.8
	baz=44						
NWLT	Wulai	0.43	8	eP	Pg	13 44 35.2	+0.5
	baz=2.0						
NWLT				eS	Sg	13 44 41.3	+0.8
	baz=2.0						
SLBB	Yuanshan	0.44	25	⇑iP	Pg	13 44 34.4	-0.6
	baz=26						
SLBB				eS	Sg	13 44 41.5	+0.6
	baz=26						
WHP	Taichung City	0.45	261	⇑iP	Pb	13 44 35.9	-0.6
	baz=261						
WHP				eS	Sg	13 44 41.9	+0.8
	baz=261						
OWD	Renai	0.46	211	⇑iP	Pg	13 44 34.8	-0.4
	baz=210						
OWD				eS	Sg	13 44 41.1	-0.2
	baz=210						
TWC	Suao	0.46	56	⇑iP	Pg	13 44 35.2	0.0
	baz=47						
TWC				eS	Sg	13 44 41.6	+0.3
	baz=47						
ENLB	Shoufeng	0.47	161	⇑iP	Pg	13 44 35.1	-0.3
	baz=160						
ENLB				S	Sg	13 44 41.8	+0.2
	baz=160						
LIOB	Emei	0.48	308	⇑iP	Pb	13 44 36.8	-0.1
	baz=311						
LIOB				eS	Sb	13 44 43.4	-0.7
	baz=311						
NSTT	Nanjuang	0.48	306	⇑iP	Pb	13 44 36.6	-0.4
	baz=308						
NSTT				eS	Sg	13 44 43.2	+1.1
	baz=308						
ILA	Ilan	0.51	35	eP	Pg	13 44 36.7	+0.5
	baz=46						
ILA				eS	Sb	13 44 44.3	-0.4
	baz=46						
WLTB	Daxi	0.53	342	⇑iP	Pb	13 44 37.9	+0.2
	baz=344						
WLTB				eS	Sb	13 44 45.0	-0.4
	baz=344						
ESL	Shilin	0.53	180	⇑iP	Pg	13 44 36.7	+0.1
	baz=178						
ESL				eS	Sg	13 44 44.2	+0.6
	baz=178						
DPDB	Guoxing	0.56	236	⇑iP	Pg	13 44 37.5	+0.4
	baz=226						
DPDB				eS	Sg	13 44 43.8	-0.7
	baz=226						
SBCB	Hsinchu	0.60	317	eP	Pb	13 44 39.1	+0.1
	baz=319						
SBCB				eS	Sb	13 44 48.5	+1.0
	baz=319						
TWQ1	Liyutan	0.60	270	⇑iP	Pb	13 44 39.1	+0.2
	baz=271						
TWQ1				eS	Sb	13 44 47.5	-0.1
	baz=271						
NMLH	Miaoli	0.61	288	eP	Pb	13 44 39.7	+0.5
	baz=289						
NMLH				eS	Sb	13 44 48.0	0.0
	baz=289						
NSY	Sanyi	0.62	276	⇑iP	Pb	13 44 39.8	+0.6
	baz=277						
NSY				eS	Sb	13 44 48.4	+0.4
	baz=277						
HSN	Hsinchu	0.62	317	eP	Pb	13 44 40.3	+1.1
	baz=323						
HSN				eS	Sb	13 44 49.3	+1.3
	baz=323						
NHDH	Xindian Distri	0.62	8	⇑iP	Pb	13 44 39.0	-0.3
	baz=20						
NHDH				eS	Sg	13 44 47.1	+0.7
	baz=20						
NTC	Toucheng	0.62	36	⇑iP	Pg	13 44 38.2	-0.1
	baz=44						
TATO	Taipei	0.63	5	⇑iP	Pb	13 44 39.2	-0.2
	baz=17						
TATO				eS	Sg	13 44 47.0	+0.3
	baz=17						
TWA	Mucha	0.64	12	i P	Pb	13 44 39.4	-0.3
	baz=14						
TWA				eS	Sb	13 44 48.5	-0.4
	baz=14						
VWDT	VWDT	0.65	204	⇑iP	Pg	13 44 38.4	-0.5
	baz=209						
VWDT				eS	Sg	13 44 47.4	+0.1
	baz=209						
NCUH	Zhongli	0.66	340	eP	Pn	13 44 41.3	-0.4
	baz=342						
NCUH				eS	Sn	13 44 52.7	+0.5
	baz=342						
NCU	National Centr	0.66	340	eP	Pn	13 44 41.1	-0.7
	baz=342						
NCU				eS	Sn	13 44 52.0	-0.2
	baz=342						
EOS1	EOS1	0.67	72	eP	Pb	13 44 39.6	-0.4
	baz=72						
EOS1				eS	Sb	13 44 49.3	0.0
	baz=72						
PTSB	Yuanli	0.67	279	eP	Pb	13 44 41.1	+1.0
	baz=280						
PTSB				eS	Sb	13 44 49.9	+0.4
	baz=280						
SMLT	Sun Moon Lake	0.67	227	⇑iP	Pg	13 44 39.4	+0.1
	baz=225						
SMLT				eS	Sg	13 44 48.4	+0.3
	baz=225						
EGFH	Guangfu	0.68	180	⇑iP	Pg	13 44 39.2	-0.2
	baz=180						
EGFH				eS	Sg	13 44 48.1	-0.1
	baz=180						
TYC	Yuchr	0.69	230	⇑iP	Pg	13 44 39.6	0.0
	baz=220						
TYC				eS	Sb	13 44 50.6	+0.6
	baz=220						
TAP	Taipei	0.69	6	eP	Pb	13 44 40.6	+0.1
	baz=18						
TAP				eS	Sb	13 44 50.6	+0.5
	baz=18						
SSLB	Suanglung	0.71	218	⇑iP	Pg	13 44 39.4	-0.6
	baz=217						
SSLB				eS	Sb	13 44 50.4	-0.3
	baz=217						
TIPB	Shuangxi	0.72	30	⇑iP	Pg	13 44 40.1	0.0
	baz=18						
TIPB				eS	Sg	13 44 49.2	-0.3
	baz=18						
TCU	Taichung	0.72	254	eP	Pb	13 44 41.7	+0.8
	baz=253						
TCU				eS	Sn	13 44 52.7	-1.0
	baz=253						
WDJ	Dajia District	0.72	270	⇑iP	Pn	13 44 42.1	-0.5
	baz=270						
WDJ				eS	Sb	13 44 52.6	+1.6
	baz=270						
TWS1	Kuangyinshan	0.75	359	⇑iP	Pb	13 44 42.4	+0.9
	baz=8.0						
TWS1				eS	Sb	13 44 52.7	+0.9
	baz=8.0						
NWF	Wu-fen Shan	0.79	24	eP	Pg	13 44 41.5	0.0
	baz=25						
NWF				eS	Sb	13 44 53.1	+0.1
	baz=25						
WFSB	Wu-fen Shan	0.79	24	eP	Pg	13 44 41.5	0.0
	baz=25						
WFSB				eS	Sb	13 44 52.6	-0.3
	baz=25						
YM01	YM01	0.81	9	⇑iP	Pb	13 44 42.7	+0.2
	baz=25						
YM01				eS	Sb	13 44 53.5	0.0
	baz=25						
YM04	YM04	0.81	7	⇑iP	Pb	13 44 42.8	+0.3
	baz=23						
YM04				eS	Sg	13 44 53.0	+0.6
	baz=23						
YM10	YM10	0.81	8	⇑iP	Pb	13 44 43.0	+0.4
	baz=24						
YM10				eS	Sg	13 44 52.8	+0.2
	baz=24						
NTST	Danshui	0.81	1	eP	Pn	13 44 43.6	-0.3
	baz=10.0						
NTST				eS	Sn	13 44 56.9	+0.9
	baz=10.0						
YM05	YM05	0.82	8	⇑iP	Pb	13 44 43.1	+0.4
	baz=24						
YM05				eS	Sb	13 44 54.0	0.0
	baz=24						
YM11	YM11	0.82	9	⇑iP	Pb	13 44 43.2	+0.4
	baz=25						
YM11				eS	Sb	13 44 55.6	+1.5
	baz=25						
TWB1	Santiao Chiao	0.83	37	eP	Pg	13 44 42.0	-0.2
	baz=45						
TWB1				eS	Sg	13 44 53.3	+0.2
	baz=45						
WNT	Mingjian	0.83	236	eP	Pb	13 44 43.5	+0.6
	baz=227						
WNT				eS	Sn	13 44 57.4	+0.9
	baz=227						
WJS	Zhushan	0.83	231	eP	Pb	13 44 43.2	+0.3
	baz=224						
WJS				eS	Sn	13 44 56.1	-0.4
	baz=224						
ANP	Anpu	0.84	5	⇑iP	Pb	13 44 43.5	+0.4
	baz=22						
ANP				eS	Sn	13 44 56.4	-0.5
	baz=22						
WHYT	Xinyi Township	0.84	219	eP	Pg	13 44 42.0	-0.5
	baz=220						
WCHH	Zhanghua	0.84	252	eP	Pn	13 44 44.0	-0.3
	baz=250						
WCHH				eS	Sn	13 44 58.0	+1.2
	baz=250						
EHY	Hungye	0.84	187	P	Pg	13 44 42.1	-0.4
	baz=179						
EHY				eS	Sb	13 44 53.9	-0.7
	baz=179						
HGSD	Ruisui	0.85	181	⇑P	Pb	13 44 43.0	-0.2
	baz=189						
TWY	Chenhua	0.94	9	eP	Pb	13 44 45.1	+0.5
	baz=11						
TWY				eS	Sb	13 44 58.5	+1.3
	baz=11						
YULB	Yu-li	0.96	187	⇑iP	Pg	13 44 44.4	-0.3
	baz=194						
YULB				eS	Sg	13 44 56.6	-0.6
	baz=194						
YUS	Yu-Shan	0.96	207	P	Pb	13 44 44.9	-0.5
	baz=213						
YUS				eS	Sb	13 44 58.3	-0.1
	baz=213						
TWF1	Yuli	1.00	187	eP	Pg	13 44 45.2	-0.3
	baz=194						
TWF1				eS	Sb	13 44 59.3	+0.3
	baz=194						
ALS	Alishan	1.01	215	P	Pg	13 44 45.6	-0.2
	baz=223						
CHN5	Tsauling	1.02	223	P	Pn	13 44 46.5	-0.3
	baz=220						
CHN5				eS	Sn	13 45 02.5	+1.3
	baz=220						
WGK	Gukeng	1.03	231	eP	Pn	13 44 47.1	+0.1
	baz=227						
WGK				eS	Sn	13 45 02.4	+0.9
	baz=227						
WDLH	Douliu	1.05	231	eP	Pn	13 44 47.6	+0.5
	baz=228						
WDLH				eS	Sn	13 45 04.4	+2.5
	baz=228						
RLNB	Erlin	1.08	245	eP	Pn	13 44 47.6	+0.1
	baz=242						
RLNB				eS	Sn	13 45 03.3	+0.7
	baz=242						
FULB	Fuli	1.15	186	eP	Pn	13 44 48.9	+0.3
	baz=184						
FULB				eS	Sn	13 45 05.0	+0.5
	baz=184						
WTCT	Ta-ch'eng	1.16	246	eP	Pn	13 44 48.8	+0.2
	baz=242						
WTCT				eS	Sn	13 45 05.9	+1.3
	baz=242						
CHN2	Minshiung	1.20	227	eP	Pn	13 44 50.4	+1.3
	baz=224						
CHN2				eS	Sn	13 45 07.2	+1.7
	baz=224						
ELDTW	Lidau	1.22	198	eP	Pg	13 44 48.3	-1.3
	baz=186						
ELDTW				eS	Sg	13 45 04.8	-0.6
	baz=186						
CHKT	Chengkung	1.25	183	eP	Pb	13 44 49.5	-0.4
	baz=168						
CHKT				eS	Sn	13 45 06.4	-0.3
	baz=168						
CHY	Chiayi	1.25	228	⇑iP	Pg	13 44 50.6	+0.3
	baz=224						
CHY				eS	Sn	13 45 09.0	+2.1
	baz=224						
CHN4	Tsaushan	1.26	218	eP	Pg	13 44 50.6	+0.3
	baz=214						
CHN4				eS	Sn	13 45 09.3	+2.3
	baz=214						
TPUB	Ta-pu	1.28	215	⇑iP	Pg	13 44 50.7	-0.1
	baz=212						
TPUB				eS	Sn	13 45 09.5	+2.0
	baz=212						
WSF	Szhu	1.31	238	eP	Pn	13 44 51.0	+0.2
	baz=234						
WSF				eS	Sn	13 45 09.7	+1.3
	baz=234						
WTP	Ta-pu	1.33	215	eP	Pg	13 44 51.7	-0.1
	baz=211						
WTP				eS	Sn	13 45 10.1	+1.2
	baz=211						
STYT	Tauyuan	1.33	208	eP	Pn	13 44 51.2	+0.1
	baz=191						
STYT				eS	Sn	13 45 12.1	+3.1
	baz=191						
WLGB	Puzi	1.35	230	eP	Pg	13 44 52.5	+0.3
	baz=230						
TWK	Hsinying	1.38	219	eP	Pg	13 44 53.0	+0.2
	baz=214						
TWK				eS	Sg	13 45 13.1	+2.3
	baz=214						
JYNG	Yonagunijimaku	1.38	85	P	Pg	13 44 52.5	-0.3
JYNG				S	Sg	13 45 11.1	+0.3
PCYT	Pengchaiyu	1.40	24	eP	Pn	13 44 51.6	-0.4
	baz=28						
PCYT				eS	Sb	13 45 10.1	-0.5
	baz=28						
SNST	Tainan City	1.41	218	eP	Pg	13 44 53.6	+0.2
	baz=213						
SNST				eS	Sg	13 45 13.6	+1.8
	baz=213						
CHN1	Nanshi	1.42	216	P	Pg	13 44 53.9	+0.2
	baz=212						
CHN1				eS	Sg	13 45 14.9	+2.7
	baz=212						
YOJ	Yonaguni jima	1.44	85	P	Pb	13 44 53.1	-0.2
	baz=74						
YOJ				eS	Sg	13 45 14.0	+1.3
	baz=74						
YOJ	Yonaguni jima	1.44	85	P	Pb	13 44 53.4	+0.1
YOJ				eS	Sb	13 45 11.9	+0.1
SGST	Jiashian	1.48	212	P	Pn	13 44 53.5	+0.4
	baz=201						
SGST				eS	Sg	13 45 14.5	+0.5
	baz=201						
CHN8	Yiju	1.50	229	eP	Pg	13 44 54.5	-0.5
	baz=237						
CHN8				eS	Sg	13 45 16.5	+2.0
	baz=237						
SLGT	Liugui	1.53	208	eP	Pg	13 44 55.1	-0.5
	baz=193						
SLGT				eS	Sg	13 45 17.1	+1.6
	baz=193						
TWG	Pinlang	1.56	192	eP	Pn	13 44 53.9	-0.2
	baz=176						
TWG				eS	Sn	13 45 14.5	0.0
	baz=176						
TWGBT	Beinan	1.56	192	eP	Pn	13 44 54.4	+0.2
	baz=176						
TWGBT				eS	Sg	13 45 16.7	+0.3
	baz=176						
SCLT	Jiali	1.63	224	eP	Pg	13 44 57.0	-0.5
	baz=219						
SCLT				eS	Sg	13 45 20.4	+1.7
	baz=219						
TWH	Lutao	1.63	179	eP	Pn	13 44 55.5	+0.4
	baz=162						
TAI1	Yung-k'ang	1.71	221	eP	Pb	13 44 58.2	+0.4
	baz=216						
TAI1				eS	Sg	13 45 23.6	+2.4
	baz=216						
SSD	Sandimen	1.76	205	eP	Pg	13 44 59.2	-0.8
	baz=200						
SSD				eS	Sg	13 45 23.6	+0.8
	baz=200						
TWM1	Shoushan	1.78	212	eP	Pg	13 44 59.7	-0.7
	baz=210						
ECL	Taimali	1.80	194	eP	Pb	13 44 59.3	0.0
	baz=176						
MASBT	Mashibuluo	1.88	203	eP	Pb	13 45 01.0	+0.2
	baz=198						
MASBT				eS	Sg	13 45 25.4	-1.3
	baz=198						
SNJT	Kaohsiung City	1.88	213	eP	Pb	13 45 00.7	0.0
	baz=211						
PNG	Penghu	1.89	246	eP	Pn	13 44 58.6	0.0
	baz=246						
PHUB	P'eng-hu	1.90	244	eP	Pn	13 44 57.9	-0.9
	baz=245						
PTTC	Pingtan	1.90	308	eP	Pn	13 44 59.5	+0.7
	baz=306						
VWUC	VWUC	1.92	290	eP	Pn	13 44 58.5	-0.5
	baz=289						
WDGT	Dungji	1.95	237	eP	Pn	13 44 59.9	+0.4
	baz=232						
WDGT				eS	Sb	13 45 25.8	-0.6
	baz=232						
SSPT	Xinbi	2.02	203	eP	Pb	13 45 03.4	+0.3
	baz=201						
EAST	Anshuo	2.03	195	eP	Pb	13 45 03.9	+0.5
	baz=181						
EAST				eS	Sb	13 45 29.9	+1.2
	baz=181						
IRIF	Iriomote-Funau	2.10	90	P	Pn	13 45 02.3	+0.8
IRIF				eS	Sn	13 45 29.0	+1.3
SCZT	Fangliau	2.10	201	eP	Pb	13 45 04.2	-0.4
	baz=187						
SCZT				eS	Sb	13 45 31.7	+0.9
	baz=187						
VCHM	Qimei	2.16	239	eP	Pn	13 45 02.0	-0.4
	baz=240						
WLCH	Liuqiu	2.21	206	eP	Pb	13 45 06.3	-0.1
	baz=203						
PTMZ	Houxiangcun	2.21	289	eP	Pn	13 45 02.6	-0.5
	baz=287						
MATB	Ma-tsu	2.24	323	eP	Pn	13 45 03.4	-0.2
	baz=321						
JKRS	Kuro-shima	2.35	92	P	Pn	13 45 06.5	+1.4
JKRS				S	Sn	13 45 35.9	+1.8
TWK1	Hengchun	2.46	194	eP	Pb	13 45 08.6	-2.1
	baz=177						
TWKBT	Hengchun	2.46	194	eP	Pn	13 45 08.5	+1.9
	baz=177						
JIJ	Ishigaki jima	2.47	89	P	Pn	13 45 07.6	+0.9
JIJ				eS	Sn	13 45 37.7	+0.7
JISG	Ishigakijimahi	2.63	84	P	Pn	13 45 09.7	+0.8
LYJJ	Jianjiangzhen	2.66	326	eP	Pn	13 45 09.4	0.0
	baz=323						
KNM	Kinmen	2.74	272	eP	Pn	13 45 11.9	+1.5
	baz=274						
KNMB	Chin-men Tao	2.78	273	eP	Pn	13 45 10.0	-0.9
	baz=274						
MHZQ	Yeshan	2.79	309	eP	Pn	13 45 11.8	+0.7
	baz=307						
XPSS	Dashiqiu	2.81	337	eP	Pn	13 45 10.7	-0.6
	baz=334						
JTJ	Tarama	2.99	84	P	Pn	13 45 14.7	+0.8
JTJ				eS	Sn	13 45 52.0	+2.1
AXDP	Jialang	3.20	281	eP	Pn	13 45 16.5	-0.2
	baz=281						
ZPLA	Ao Xicun	3.39	264	eP	Pn	13 45 19.3	-0.1
	baz=266						
JIRB	Irabujima	3.44	81	P	Pn	13 45 22.4	+2.4
JMJ	Miyako jima 2	3.54	82	eP	Pn	13 45 23.2	+1.8
	baz=84						
JMJ2	Miyako jima3	3.57	83	P	Pn	13 45 24.1	+2.3
KSRS	Korea Array	14.20	22	P	P	13 48 00.1	+5.1
	0.2nm,0.3s,baz=196,slow=12,SNR=5.2						
SONM	Songino Array	26.31	337	P	P	13 50 03.5	+1.2
	0.8nm,0.8s,baz=153,slow=9.8,SNR=4.8						
MKAR	Makanchi Array	38.38	316	P	P	13 51 49.7	+1.9
	0.5nm,0.6s,baz=105,slow=10,SNR=7.9						
ZALV	Zalesovo Beam	40.23	327	P	P	13 52 02.3	-0.8
	0.6nm,0.5s,baz=120,slow=8.7,SNR=2.4						
WRA	Warramunga Arr	45.78	163	P	P	13 52 47.6	-0.8
	0.5nm,0.8s,baz=343,slow=8.5,SNR=5.2						
ASAR	Alice Springs	49.24	165	P	P	13 53 13.9	-1.4
	0.2nm,0.8s,baz=353,slow=6.7,SNR=1.8						
FINES	FINESS Array B	71.42	330	P	P	13 55 42.7	-3.9
	1.1nm,0.7s,baz=20,slow=2.2,SNR=5.5						

IDC 29 13:45:25.6±1.2**, 27°.98N**×**104°.57E, h0**^{km}**, mb3.5**/4**,**
mb1 3.6/4**, mb1mx3.3**/49**, mbtmp3.5**/4**, Error ellipse:**
s-maj=237.0km s-min=22.3km az=58.0, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	25.66	323	P	P	13 50 57.1	0.0
	0.6nm,0.5s,baz=129,slow=11,SNR=9.7						
ZALV	Zalesovo Beam	29.73	336	P	P	13 51 33.3	-0.1
	0.6nm,0.6s,baz=140,slow=9.2,SNR=2.4						
WRA	Warramunga Arr	55.66	146	P	P	13 55 03.7	0.0
	0.1nm,0.3s,baz=328,slow=8.9,SNR=7.5						
ASAR	Alice Springs	58.62	148	P	P	13 55 24.6	-0.1
	0.5nm,1.1s,baz=335,slow=6.8,SNR=4.8						

*IDC **29** 13:46:25.9±3.7, 55°.87N×156°.85W, h0^{km}, mb3.3/4,*
mb1 3.3/6, mb1mx3.2/48, mbtmp3.2/6, ML2.7/2, MS3.6/1,
Ms1 3.6/1, ms1mx2.5/25, Error ellipse: s-maj=88.2km
s-min=22.5km az=159.0
*AEIC **29** 13:46:33±1.5, 56°.21N±0°.05×156°.42W±0°.02, h62^{km}±7^{km},*
ML3.0, Error ellipse: s-maj=7.6km s-min=1.8km az=175.0
*NEIC **29** 13:46:33.5±1.8, 56°.25N±0°.01×156°.51W±0°.06, h59^{km}±9^{km},*
Error ellipse: s-maj=5.2km s-min=1.6km az=101.0
ISC 29 13:46:33.7±1.0**, 56°.25N**±0°.06×**156°.46W**±0°.04**,**
h55^{km}±12^{km}**, n54,** σ1^{s}.**26**/61**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHIR	Chirikof Islan	0.64	132		Pn	13 46 47.4	+0.5
CHIR					Sn	13 46 56.9	+0.4
CHGN	Chignik	1.09	273		Pn	13 46 51.8	-1.0
CHGN					Sn	13 47 05.6	-1.3
SII	Sitkinak Islan	1.30	75		Pn	13 46 55.6	0.0
SII					Sn	13 47 11.4	-0.6
PLK3	Peulik 3	1.44	4		Pn	13 46 57.6	0.0
PLK3					Sn	13 47 15.9	+0.5
PLBL	Peulik Blue Cr	1.47	352		Pn	13 46 57.8	-0.1
VNSG	Veniaminof 6	1.48	266		Pn	13 46 57.8	-0.2
PLK2	Peulik 2	1.52	3		Pn	13 46 58.9	+0.4
PLK1	Peulik 1	1.56	357		Pn	13 46 59.2	+0.2
VNNF	Veniaminof 3	1.60	272		Pn	13 47 00.1	+0.4
VNFG	Fog Glacier, M	1.73	272		Pn	13 47 02.1	+0.6
KJL	Kejulik	1.87	15		Pn	13 47 03.4	0.0
CAHL	Cahill	1.91	19		Pn	13 47 04.1	+0.1
OHAK	Old Harbor	2.00	60		Pn	13 47 04.5	-0.5
OHAK					Sn	13 47 27.7	-1.2
ANCK	Angle Creek	2.02	15		Pn	13 47 05.5	+0.1
KABU	Katmai Buttres	2.12	17		Pn	13 47 07.1	+0.3
CNBA	Chernabura Isl	2.29	232		Pn	13 47 08.2	-0.8
CNBA					Sn	13 47 34.5	-1.4
SDPT	Sand Point	2.44	250		Pn	13 47 11.3	+0.2
SDPT					Sn	13 47 39.0	-0.8
KDAK	Kodiak Island	2.62	52	Pn	Pn	13 47 12.8	-0.6
	1.5nm,0.3s,baz=176,slow=5.5,SNR=65						
KDAK				Sn	Sn	13 47 41.7	-2.2
	6.9nm,0.3s,baz=268,slow=20,SNR=10						
KDAK	Kodiak Island	2.62	52		Pn	13 47 12.9	-0.5
PS4A	Pavlof South-4	3.18	256		Pn	13 47 21.1	-0.1
HAG	Hague Volcano	3.22	255		Pn	13 47 21.9	+0.1
CNPM	China Poot	4.30	38		Pn	13 47 36.2	-0.4
BRLK	Bradley Lake	4.60	38		Pn	13 47 39.7	-1.0
BRSE	Bradley Lake S	4.63	39		Pn	13 47 40.4	-0.7
RSO	Redoubt South	4.65	23		Pn	13 47 44.4	+2.8
SVW2	Sparrevohn	4.88	5	Pn	Pn	13 47 44.0	-0.5
SLKM	Skilak Lake	5.38	35		Pn	13 47 51.0	-0.4
RC01	Rabbit Creek A	5.98	33		Pn	13 48 00.9	+1.4
SUA	Susitna One	6.01	27	Pn	Pn	13 48 01.0	+1.0
PWL	Port Wells	6.28	39		Pn	13 48 02.0	-1.5
KNK	Knik Glacier	6.63	35		Pn	13 48 07.6	-0.8
TT01	Tatalina	6.68	2		Pn	13 48 08.4	-0.7
HIN	Hinchinbrook I	6.69	47		Pn	13 48 07.9	-1.3
FID	Port Fidalgo	6.90	45		Pn	13 48 10.0	-2.2
PPLA	Purkeypile	7.01	16	Pn	Pn	13 48 15.6	+1.9
SCM	Sheep Creek Mo	7.31	36		Pn	13 48 15.9	-1.9
BPAW	Bear Paw Mtn.	8.33	17	Pn	Pn	13 48 34.1	+2.4
TGL	Tana Glacier	8.44	52	Pn	Pn	13 48 33.0	-0.2
BWN	Browne	8.67	21	Pn	Pn	13 48 36.2	-0.1
BALM	Baldy	8.77	51	Pn	Pn	13 48 37.9	0.0
WRH	Wood River Hil	9.22	23	Pn	Pn	13 48 42.3	-1.5
ANM	Nome	9.42	336		Pn	13 48 46.7	+0.1
IL31		9.75	25	Pn	Pn	13 48 49.7	-1.3
ILAR	Eielson Array	9.75	25	Pn	Pn	13 48 48.0	-3.0
	0.1nm,0.3s,baz=213,slow=13,SNR=1.6						
ILAR				Sn	Sn	13 50 29.4	-10
	0.0nm,0.3s,baz=225,slow=14,SNR=1.5						
IMAR	Indian Mountai	9.85	6	Pn	Pn	13 48 51.5	-0.9
PRP	Porcupine Dome	10.69	25	Pn	Pn	13 49 04.0	0.0
GAMB	Gambell	10.70	321	Pn	Pn	13 49 04.5	+0.4
COLD	Coldfoot	11.40	12	Pn	Pn	13 49 12.8	-0.8
YKA	Yellowknife Ar	21.89	56	P	P	13 51 25.0	+3.4
	0.2nm,0.6s,baz=267,slow=10,SNR=2.0						
YKA	Yellowknife Ar	21.89	56	P	P	13 51 25.0	+3.4
PETK	Petropavlovsk-	26.31	283	P	P	13 52 02.7	-1.2
	1.4nm,0.7s,baz=70,slow=12,SNR=6.4						
SONM	Songino Array	55.50	306	P	P	13 56 02.5	-0.3
	0.9nm,0.5s,baz=53,slow=6.0,SNR=4.3						
ZALV	Zalesovo Beam	59.29	323	LR	LR	14 25 38.8	
	comp=Z,46nm,18.6s,baz=114,slow=40						
MKAR	Makanchi Array	66.17	320	P	P	13 57 14.7	-0.5
	0.1nm,0.6s,baz=34,slow=5.4,SNR=1.8						

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*NNC **29** 14:11:47.8±6.3, 37°.75N×71°.65E, h0^{km}, mb3.5, mpv3.3, Error ellipse: s-maj=49.8km s-min=43.4km az=160.0*

ISC 29 14:11:46.9±3.7**, 37°.4N**±0°.2×**71°.7E**±0°.2**, h109**^{km}**, n8, σ1^s.13**/10**, 1C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.98	18	P	Pn	14 13 00.6	+0.9
	SNR=35						
UCH	Uchtor	5.30	24	P	Pn	14 13 04.8	+0.7
	SNR=9.8						
KZA	Kyzart	5.43	30	P	Pn	14 13 05.9	0.0
	SNR=6.2						
EKS2	Erkin-Say	5.50	17	P	Pn	14 13 08.3	+1.8
	SNR=7.1						
AAK	Ala-Archa	5.67	22	P	Pn	14 13 10.1	+1.2
	SNR=8.2						
AAK	Ala-Archa	5.67	22	⇓P	Pn	14 13 09.1	+0.2
	2.3nm,0.3s						
AAK				⇑S	Sn	14 14 12.0	-0.6
	4.9nm,0.7s						
KK31	Karatay Array	5.76	352	P	Pn	14 13 11.2	+1.2
	0.7nm,0.3s,baz=174,slow=13,SNR=11						
KK31				⇓S	Sn	14 14 14.3	-0.4
	2.5nm,0.3s,baz=163,slow=22,SNR=18						
AB31	Akbulak array	14.57	328	P	Pn	14 15 06.6	-1.0
	0.2nm,0.5s,baz=135,slow=13,SNR=7.2						

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*IDC **29** 14:15:51.5±2.5, 36°.11N×142°.42E, h0^{km}, mb3.5/4, mb1 3.5/6, mb1mx3.3/38, mbtmp3.5/6, ML2.8/2, MS2.6/2, Ms1 2.7/2, ms1mx2.2/32, Error ellipse: s-maj=61.0km s-min=25.9km az=64.0*

*JMA **29** 14:15:56.0±0.3, 36°.27N×142°.06E, h61^{km}, M2.7*

ISC 29 14:15:55.3±1.4**, 36°.22N**±0°.06×**142°.17E**±0°.10**, h23**^{km}**, n21, σ1^s.34**/20**, mb3.5**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	1.19	244	P	Pn	14 16 16.2	-0.3
JHYU	Hitachinakayam	1.29	276	P	Pn	14 16 17.2	-0.7
JHO	Hitachi	1.35	287	P	Pn	14 16 17.6	-1.2
ONAJ	Iwakimizuishiy	1.41	309	P	Pn	14 16 18.3	-1.3
JFK	Kawauchi	1.55	318	P	Pn	14 16 20.3	-1.2
BSO1	Boso 1	1.84	212	P	Pn	14 16 25.0	0.0
JFT	Otama	1.96	312	P	Pn	14 16 26.6	-0.6
JAG	Ashikaga	2.21	276	P	Pn	14 16 29.9	-0.6
JRY	Ryogami san	2.66	267	P	Pn	14 16 36.2	-0.5
MJAR	Matsushiro Arr	3.21	277	Pn	Pn	14 16 44.2	-0.2
	0.2nm,0.3s,baz=119,slow=8.3,SNR=20						
MJAR				Sn	Sn	14 17 21.5	-0.5
	0.1nm,0.3s,baz=85,slow=14,SNR=2.4						
MJAR				LR	LR	14 18 14.7	
	comp=Z,42nm,19.7s,baz=55,slow=42						
MAT	Matsushiro	3.22	277	P	Pn	14 16 43.8	-0.6
MAT	Matsushiro	3.22	277	P	Pn	14 16 45.0	+0.6
MAT				*e*S	Sb	14 17 31.3	+0.8
JHJ	Hachijo jima 2	3.67	213	Pn	Pn	14 16 51.6	+0.9
	10nm,0.3s,baz=65,slow=20,SNR=5.7						
JHJ				Sn	Sn	14 17 30.1	-3.1
	6.6nm,0.3s,baz=57,slow=21,SNR=2.1						
H11N2	WAKE ISLAND Hy	27.21	120	T	T	14 50 04.4	
	baz=312						
H11N1	WAKE ISLAND Hy	27.22	121	T	T	14 50 08.7	
	baz=312						
H11N3	WAKE ISLAND Hy	27.23	120	T	T	14 50 06.6	
	baz=312						
SONM	Songino Array	28.75	305	P	P	14 21 51.9	+0.8
	0.8nm,0.8s,baz=117,slow=8.5,SNR=4.8						
CMAR	Chiang Mai Arr	41.89	257	LR	LR	14 41 40.9	
	comp=Z,12nm,18.6s,baz=195,slow=37						
MKAR	Makanchi Array	45.07	303	P	P	14 24 12.1	+2.7
	0.5nm,0.6s,baz=89,slow=9.0,SNR=7.1						
WRA	Warramunga Arr	56.35	189	P	P	14 25 33.9	-0.7
	0.2nm,0.8s,baz=4.0,slow=7.3,SNR=1.6						
ASAR	Alice Springs	60.08	189	P	P	14 25 58.6	-2.0
	0.2nm,0.5s,baz=0.6,slow=8.6,SNR=1.7						

MAN 29 14:33:41.3, 9°.92N×124°.24E, h6^{km}, mb4.3, ML3.2, MS2.9, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBP	Tagbilaran	0.44	239	*i* P	Pg	14 33 50.1	+0.3
TBP				*i* S	Sb	14 33 57.1	-1.2
LLP	Lapu-Lapu	0.48	326	⇓*e*P	Pg	14 33 50.6	0.0
LLP				*i* S	Pg	14 33 50.6	0.0
MSLP	Maasin	0.65	70	*e*P	Pb	14 33 54.5	-0.5
MSLP				*e*S	Sb	14 34 05.0	+0.7
SNPH	Sibulan	1.14	240	⇑*i*P	Pg	14 34 02.5	-0.9
SNPH				*i* S	Sb	14 34 19.3	+0.6
OCLP	Ormoc	1.18	18	*e*P	Pg	14 34 03.5	-0.6
OCLP				*e*S	Sb	14 34 20.2	+0.4
DCPH	Dipolog City	1.59	214	⇓*e*P	Sn	14 34 30.3	-0.6
GUIM	Jordan	1.77	294	*e*P	Pn	14 34 12.9	+0.4
GUIM				*e*S	Sb	14 34 37.2	+0.4
BUKP	Musuan	2.18	158	*e*P	Pn	14 34 18.4	+0.1
BUKP				*e*S	Sn	14 34 46.6	+1.0
PAGZ	Pagadian	2.22	203	*e*P	Pn	14 34 19.3	+0.6
PAGZ				*e*S	Sn	14 34 47.5	+0.9

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*NIED **29** 14:37:00, 46°.80N×152°.80E, h35^{km}, Mw3.9 Best double couple: M$_0$7.72000×10^{14} NP1:φ$_s$123.00000°, δ81.00000°, λ-35.00000°. NP2:φ$_s$220.00000°, δ55.00000°, λ-169.00000°.*

*SKHL **29** 14:37:26.1±0.1, 46°.27N×153°.15E, h63^{km}±7^{km}, mb4.2/2*

*MOS **29** 14:37:29.0±1.6, 46°.62N×152°.54E, h72^{km}, mb4.0/5, Error ellipse: s-maj=13.2km s-min=7.9km az=58.2*

*IDC **29** 14:37:32.1±2.6, 46°.82N×152°.54E, h83^{km}±23^{km}, mb3.3/14, mb1 3.5/18, mb1mx3.4/40, mbtmp3.7/18, MS2.8/6, Ms1 2.8/6, ms1mx2.6/22, Error ellipse: s-maj=23.3km s-min=13.7km az=133.0*

ISC 29 14:37:26.5±0.7**, 46°.38N**±0°.09×**152°.92E**±0°.08**, h40**^{km}**, n69, σ2^s.13**/74**, mb3.5**/14**, 2C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.71	254	*i* P	Pn	14 38 23.3	+2.0
KUR				AMB	AMB	14 38 23.8	
	50nm,0.6s						
KUR				*e*S	Sn	14 39 06.2	+2.4
KUR				A	A	14 39 07.0	
	110nm,0.4s						
KUR				A	A	14 39 07.0	
	50nm,0.4s						
KUR	Kuril'sk	3.71	254	c *i*PN	Pn	14 38 23.4	+2.1
KUR				*e*S	Sn	14 39 06.1	+2.3
KUR				pmax	pmax		
	comp=E,16nm,0.6s						
KUR				pmax	pmax		
	comp=Z,47nm,0.6s						
KUR				pmax	pmax		
	comp=N,15nm,0.4s						
KUR				smax	smax		
	comp=N,108nm,0.5s						
KUR				smax	smax		
	comp=E,45nm,0.3s						
YUK	Yuzh-Kuril'sk	5.51	247	*e*P	Pn	14 38 48.5	+2.5
YUK				AMB	AMB	14 38 49.0	
	comp=E,10.0nm,0.3s						
YUK				*e*S	Sn	14 39 50.3	+2.2
YUK				A	A	14 39 54.0	
	comp=E,80nm,0.5s						
YUK				A	A	14 39 54.0	
	comp=E,30nm,0.5s						
YUK	Yuzh-Kuril'sk	5.51	247	*e*PN	Pn	14 38 47.6	+1.6
YUK				*e*S	Sn	14 39 48.5	+0.4
YUK				pmax	pmax		
	comp=Z,55nm,0.2s						
YUK				smax	smax		
	comp=E,27nm,0.5s						
YUK				smax	smax		
	comp=N,74nm,0.6s						
GRPR	Tuman	5.59	247	*e*P	Pn	14 38 48.2	+1.1
GRPR				*e*S	Sn	14 39 49.8	-0.2
GRPR	Tuman	5.59	247	PN	Pn	14 38 48.2	+1.1
GRPR				S	Sn	14 39 49.8	-0.2
GLVR	Golovnino	5.87	246	*e*P	Pn	14 38 52.3	+1.4
GLVR				*e*S	Sn	14 39 56.6	-0.3
GLVR	Golovnino	5.87	246	*e*PN	Pn	14 38 52.3	+1.4
GLVR				*e*S	Sn	14 39 56.6	-0.3
NEM2	Nemuro 2	5.92	242	P	Pn	14 38 52.3	+0.6
NEM2				*e*S	Sn	14 39 56.0	-2.3
NMR	Nemuro--Hokkai	5.93	242	*e*P	Pn	14 38 52.3	+0.5
NMR				*e*S	Sn	14 39 56.5	-1.9
NMR	Nemuro--Hokkai	5.93	242	*e*PN	Pn	14 38 52.3	+0.5
JRA	Rausu	6.03	249	P	Pn	14 38 55.9	+2.8
JNK	Nakash	6.45	247	P	Pn	14 39 01.1	+2.1
JNK				*e*S	Sn	14 40 13.1	+1.8
JAK	Akkeshi	6.77	243	P	Pn	14 39 03.8	+0.5
JAK				*e*S	Sn	14 40 16.9	-2.1
JTKR	Abashiri--Toko	6.81	252	P	Pn	14 39 06.7	+2.9
YSS	Yuzh-Sakhalins	7.02	278	*e*P	Pn	14 39 09.5	+2.8
YSS				AMB	AMB	14 39 12.0	
	comp=N,10.0nm,0.7s						
YSS	Yuzh-Sakhalins	7.02	278	*e*PN	Pn	14 39 09.5	+2.8
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YSS				MLR	MLR		
	comp=Z,100nm,16.0s						
JMP	Maruseppu	7.16	254	P	Pn	14 39 12.7	+4.0
JAR	Ashorobuto	7.20	248	P	Pn	14 39 11.4	+2.2
JAR				*e*S	Sn	14 40 30.9	+1.3
JOB	Onbets	7.35	245	P	Pn	14 39 12.7	+1.4
PEA0B	Petropavlovsk-	7.41	23	⇓*e*PN	Pn	14 39 18.5	+6.5
PETK	Petropavlovsk-	7.41	23	P	Pn	14 39 12.5	+0.5
	comp=Z,0.2nm,0.3s,baz=180,slow=13,SNR=9.1						
JKK2	Kamakawa 2	7.62	254	P	Pn	14 39 18.2	+3.2
JKA	Kamikawa-asahi	7.63	256	*e*P	Pn	14 39 18.2	+3.1
ASAJ	Asahikawa	7.63	256	P	Pn	14 39 18.6	+3.5
ASAJ	Asahikawa	7.63	256	P	Pn	14 39 18.1	+3.1
	comp=Z,0.4nm,0.3s,baz=92,slow=18,SNR=12						
ASAJ				LR	LR	14 42 04.4	
	comp=Z,37nm,21.7s,baz=186,slow=36						
JCH	Churui	7.80	245	P	Pn	14 39 18.3	+0.9
JCH				*e*S	Sn	14 40 42.1	-2.3
TYV	Tymovskoe	8.14	307	*e*PN	Pn	14 39 34.6	+13
TYV				pmax	pmax		
	comp=Z,7.0nm,1.4s						
TYV				pmax	pmax		
	comp=Z,200nm,4.8s						
ERM	Erimo	8.26	242	⇓*e*PN	Pn	14 39 27.3	+3.6
JBT2	Biratori 2	8.35	248	P	Pn	14 39 26.9	+1.9
JKB	Kayabe	9.65	247	P	Pn	14 39 42.8	0.0
MA2	Magadan	13.28	355	P	Pn	14 40 31.6	-0.7
	comp=Z,0.2nm,0.3s,baz=202,slow=8.1,SNR=1.2						
MA2				LR	LR	14 44 58.2	
	comp=Z,38nm,19.7s,baz=78,slow=35						
KLR	Kul'dur	14.50	289	LR	LR	14 45 58.5	
	comp=Z,61nm,20.5s,baz=98,slow=36						
MJAR	Matsushiro Arr	14.75	233	P	P	14 40 58.8	+1.0
	comp=Z,0.0nm,0.3s,baz=34,slow=7.9,SNR=4.7						
MJAR				LR	LR	14 46 24.1	
	comp=Z,28nm,20.9s,baz=270,slow=36						
YAK	Yakutsk	20.56	328	⇑*e*P	P	14 41 59.8	-1.6
YAK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KSRS	Korea Array	20.56	253	P	Pn	14 42 03.5	-0.6
	comp=Z,1.5nm,0.7s,baz=61,slow=11,SNR=5.8						
KSRS				LR	LR	14 49 50.2	
	comp=Z,15nm,19.5s,baz=75,slow=36						
KSRS	Korea Array	20.56	253	*e*P	Pn	14 42 05.1	+1.0
KSRS	Korea Array	20.56	253	*e*P	Pn	14 42 05.1	+1.0
BILL	Bilibino	22.78	13	*e*P	P	14 42 26.6	+1.4
BILL	Bilibino	22.78	13	*e*P	P	14 42 26.6	+1.4
BILL				*e**PP	sP	14 42 45.7	+6.6
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
H11N2	WAKE ISLAND Hy	28.96	152	T	T	15 14 46.9	
	baz=340,slow=76,SNR=139						
H11N1	WAKE ISLAND Hy	28.97	152	T	T	15 14 56.8	
	baz=340,slow=76,SNR=95						
H11N3	WAKE ISLAND Hy	28.97	152	T	T	15 14 49.1	
	baz=340,slow=76,SNR=84						
H11S1	WAKE ISLAND Hy	30.04	153	T	T	15 16 16.1	
	baz=340,slow=76,SNR=79						
H11S3	WAKE ISLAND Hy	30.05	153	T	T	15 16 13.3	
	baz=340,slow=76,SNR=61						
H11S2	WAKE ISLAND Hy	30.06	153	T	T	15 15 58.7	
	baz=340,slow=76,SNR=60						
SONM	Songino Array	31.33	290	P	P	14 43 40.0	-3.1
	comp=Z,0.2nm,0.5s,baz=78,slow=9.0,SNR=1.2						
SONM	Songino Array	31.33	290	P	P	14 43 40.0	-3.1
ILAR	Eielson Array	36.92	38	P	P	14 44 31.3	+0.2
	comp=Z,0.3nm,0.6s,baz=172,slow=4.6,SNR=4.5						
INK	Inuvik	42.03	32	P	P	14 45 13.1	-0.4
	comp=Z,0.3nm,0.5s,baz=280,slow=6.1,SNR=1.8						
ZALV	Zalesovo Beam	42.72	306	PcP	PcP	14 47 09.8	-0.5
	comp=Z,0.3nm,0.4s,baz=182,slow=16,SNR=2.3						
ZALV				LR	LR	15 03 57.0	
	comp=Z,28nm,18.1s,baz=47,slow=38						
MKAR	Makanchi Array	46.99	298	P	P	14 45 51.3	-2.2
	comp=Z,0.6nm,0.8s,baz=73,slow=6.6,SNR=5.7						
MKAR				PcP	PcP	14 47 24.6	-0.6
	comp=Z,0.2nm,0.4s,baz=46,slow=4.2,SNR=4.0						
YKA	Yellowknife Ar	51.30	36	P	P	14 46 26.4	+0.3
	comp=Z,0.1nm,0.5s,baz=295,slow=6.7,SNR=3.8						
YKA				PcP	PcP	14 47 38.1	-2.4
	comp=Z,0.1nm,0.3s,baz=316,slow=19,SNR=1.5						
CMAR	Chiang Mai Arr	52.15	256	P	P	14 46 34.1	+1.0
	comp=Z,1.0nm,0.7s,baz=33,slow=6.4,SNR=5.8						
CMAR	Chiang Mai Arr	52.15	256	*e*P	P	14 46 34.7	+1.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	FINESS Array B	64.31	335	P	P	14 47 54.4	-3.0
	comp=Z,5.2nm,1.0s,baz=37,slow=7.4,SNR=6.8						
FINES	FINESS Array B	64.31	335	*e*P	P	14 47 55.6	-1.8
FINES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WRA	Warramunga Arr	68.12	199	P	P	14 48 24.0	+1.7
	comp=Z,0.5nm,1.1s,baz=19,slow=6.8,SNR=1.9						
WRA	Warramunga Arr	68.12	199	P	P	14 48 24.0	+1.7
NB2	NORSAR Subarra	68.53	341	P	P	14 48 22.9	-1.6
	comp=Z,0.5nm,0.6s,baz=28,slow=6.5						
NOA	NORSAR Array B	68.53	341	P	P	14 48 22.6	-1.8
	comp=Z,0.7nm,0.6s,baz=28,slow=6.3,SNR=6.9						
NOA	NORSAR Array B	68.53	341	*e*P	P	14 48 21.8	-2.7
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	Malin Array Be	71.78	326	P	P	14 48 41.5	-2.9
	comp=Z,0.2nm,0.3s,baz=35,slow=6.5,SNR=5.3						
AKASG	Malin Array Be	71.78	326	*e*P	P	14 48 44.1	-0.3
ASAR	Alice Springs	71.82	198	P	P	14 48 47.6	+2.7
	comp=Z,0.4nm,0.6s,baz=12,slow=5.8,SNR=8.7						
TXAR	Lajitas Array	77.79	60	P	P	14 49 20.9	+1.2
	comp=Z,0.3nm,0.8s,baz=292,slow=4.8,SNR=1.8						
KHC	Kasperske Hory	78.51	334	*e*P	P	14 49 22.5	-0.8
KHC	Kasperske Hory	78.51	334	*e*P	P	14 49 22.5	-0.8
GERES	GERESS Array B	78.72	334	P	P	14 49 22.4	-2.2
	comp=Z,0.5nm,0.6s,baz=32,slow=9.5,SNR=2.9						

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*IDC **29** 15:15:12.4±7.0, 36°.42N×141°.11E, h0^{km}, mb3.5/2, mb1 3.4/3, mb1mx3.1/50, mbtmp3.3/3, ML2.0/1, MS2.8/1, Ms1 2.8/1, ms1mx2.3/25, Error ellipse: s-maj=137.7km s-min=48.0km az=159.0*

*JMA **29** 15:15:13.4±0.2, 35°.99N×141°.15E, h35^{km}±2^{km}, M2.9*

ISC 29 15:15:11.6±2.7**, 36°.1N**±0°.1×**141°.3E**±0°.1**, h11**^{km}±15^{km}**, n17, σ0^s.71**/17**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.52	217	P	Pg	15 15 21.9	+0.1
CHOJ				S	Sg	15 15 28.1	-0.6
JHYU	Hitachinakayam	0.57	292	P	Pn	15 15 25.1	-0.6
JHYU				*e*S	Sb	15 15 33.1	+1.2
JIHU	Itakohorinouch	0.60	255	P	Pb	15 15 24.5	+0.3
JIHU				S	Sg	15 15 32.5	+1.2
JHO	Hitachi	0.73	312	P	Pn	15 15 27.8	-0.1
JSMT	Sammumatsuo	0.81	234	P	Pg	15 15 27.1	0.0
JSMT				*e*S	Sg	15 15 37.4	-0.2
JYT	Yasato	0.86	277	P	Pb	15 15 28.1	-0.4
JYT				S	Sg	15 15 38.3	-1.0
MJAR	Matsushiro Arr	2.49	281	Pn	Pn	15 15 51.9	-0.2
	0.4nm,0.3s,baz=90,slow=9.5,SNR=30						
MJAR				Sn	Sn	15 16 22.0	-0.5
	0.3nm,0.3s,baz=124,slow=21,SNR=1.8						
MAT	Matsushiro	2.49	281	P	Pn	15 15 52.2	+0.1
MAT				*e*S	Sn	15 16 21.6	-0.9
GUMO	Guam	22.67	171	LR	LR	15 28 52.3	
	comp=Z,21nm,19.3s,baz=240,slow=36						
H11N2	WAKE ISLAND Hy	27.81	119	T	T	15 50 06.7	
	baz=311,slow=75,SNR=8.0						
H11N1	WAKE ISLAND Hy	27.82	119	T	T	15 50 12.8	
	baz=311,slow=75,SNR=8.1						
H11N3	WAKE ISLAND Hy	27.83	119	T	T	15 50 10.0	
	baz=311,slow=75,SNR=8.9						
H11S1	WAKE ISLAND Hy	28.49	121	T	T	15 51 00.3	
	baz=313,slow=76,SNR=10						
H11S3	WAKE ISLAND Hy	28.49	121	T	T	15 51 00.4	
	baz=313,slow=76,SNR=8.2						
H11S2	WAKE ISLAND Hy	28.51	121	T	T	15 50 59.4	
	baz=313,slow=76,SNR=5.9						
ZALV	Zalesovo Beam	42.43	313	P	P	15 23 06.8	+0.6
	0.4nm,0.4s,baz=100,slow=12,SNR=2.2						
MKAR	Makanchi Array	44.49	303	P	P	15 23 22.9	-0.1
	0.4nm,0.7s,baz=93,slow=7.3,SNR=4.9						

IDC 29 15:19:42.5±2.4**, 8°.68S×151°.69E, h0**^{km}**, mb3.1**/3**, mb1 3.4**/5**, mb1mx3.2**/34**, mbtmp3.3**/5**, ML2.3**/2**, MS2.3**/1**, Ms1 2.3**/1**, ms1mx2.2**/10**, Error ellipse: s-maj=47.0km s-min=25.2km az=111.0, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	4.35	4	Pn	Pn	15 20 50.6	+0.7
	1.4nm,0.3s,baz=355,slow=11,SNR=2.0						
KRVT				Sn	Sn	15 21 41.9	+0.5
	4.9nm,0.3s,baz=44,slow=20,SNR=8.2						
KRVT				LR	LR	15 22 42.7	
	comp=Z,36nm,19.1s,baz=280,slow=41						
PMG	Port Moresby	4.53	260	Pn	Pn	15 20 51.8	-0.6
	2.2nm,0.3s,baz=82,slow=8.8,SNR=9.6						
PMG				Sn	Sn	15 21 47.1	+1.4
	1.5nm,0.3s,baz=87,slow=12,SNR=1.7						
WRA	Warramunga Arr	20.17	234	P	P	15 24 19.3	+0.5
	0.4nm,0.9s,baz=64,slow=10.0,SNR=2.1						
ASAR	Alice Springs	22.62	227	P	P	15 24 45.1	-0.1
	0.3nm,0.8s,baz=58,slow=9.3,SNR=7.4						
STKA	Stephens Creek	24.92	201	P	P	15 25 07.2	-0.2
	0.4nm,0.4s,baz=3.8,slow=7.3,SNR=3.5						

TAP 29 15:28:21.0, 23°.90N×121°.53E, h19^{km}, ML2.0, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENLB	Shoufeng	0.06	89	P	Pg	15 28 24.6	0.0
	baz=89						
ENLB				*e*S	Sg	15 28 28.5	+1.6
	baz=89						
HWA	Hwalien	0.10	41	*e*P	Pg	15 28 25.9	+1.1
	baz=45						
HWA				*e*S	Sg	15 28 30.1	+2.7
	baz=45						
ESL	Shilin	0.13	226	*i* P	Pg	15 28 25.5	+0.4
	baz=223						
ESL				*i* S	Sg	15 28 28.7	+0.8
	baz=223						
TWD	Chiawan	0.18	18	P	Pg	15 28 26.7	+0.8
	baz=19						
TWD				S	Sg	15 28 30.6	+1.4
	baz=19						
EGFH	Guangfu	0.25	203	P	Pg	15 28 27.3	+0.5
	baz=202						
EGFH				*e*S	Sg	15 28 31.5	+0.6
	baz=202						
NACB	Ninganchiao	0.28	12	P	Pb	15 28 27.5	+0.2
	baz=11						
NACB				S	Sg	15 28 32.6	+1.1
	baz=11						
ETLH	Xiulin Townshi	0.31	351	*e*P	Pb	15 28 28.6	+0.7
	baz=350						
ETLH				*e*S	Sb	15 28 33.2	+0.6
	baz=350						
OWD	Renai	0.33	279	*e*P	Pb	15 28 28.8	+0.3
	baz=278						
OWD				*e*S	Sb	15 28 34.1	+0.8
	baz=278						
WHF	Hehuan Shan	0.34	314	P	Pb	15 28 29.0	+0.2
	baz=315						
WHF				S	Sb	15 28 35.0	+1.0
	baz=315						
CHGB	Renai	0.36	295	P	Pb	15 28 29.6	+0.5
	baz=295						
CHGB				*e*S	Sb	15 28 36.2	+1.7
	baz=295						
VWDT	VWDT	0.39	248	P	Pb	15 28 29.7	+0.3
	baz=247						
VWDT				S	Sb	15 28 35.9	+0.9
	baz=247						
HGSD	Ruisui	0.42	194	P	Pb	15 28 30.4	+0.5
	baz=193						
EHY	Hungye	0.44	206	*e*P	Pb	15 28 30.3	+0.1

	baz=205						
TDCB	**Techi** baz=315	**0.49**	**316**	eP	Pb	15 28 31.6	+0.6
TDCB	baz=315			eS	Sb	15 28 39.0	+1.0
NNSB	**Datong** baz=345	**0.54**	**345**	P	Pg	15 28 32.2	+0.2
NNSB	baz=345			S	Sg	15 28 39.8	+0.5
NNSH	**Datong** baz=345	**0.54**	**345**	eP	Pg	15 28 32.2	+0.2
NNSH	baz=345			eS	Sg	15 28 39.7	+0.4
SSLB	**Suanglung** baz=257	**0.54**	**258**	eP	Pg	15 28 32.0	0.0
SSLB	baz=257			eS	Sg	15 28 39.4	+0.1
YULB	**Yu-li** baz=203	**0.55**	**203**	eP	Pb	15 28 30.5	-1.5
NNS	**Nan Shan** baz=345	**0.55**	**345**	eP	Pg	15 28 32.4	+0.2
NNS	baz=345			eS	Sg	15 28 40.5	+0.8
ENA	**Nanau** baz=20	**0.56**	**20**	eP	Pg	15 28 32.4	+0.2
ENA	baz=20			eS	Sg	15 28 41.1	+1.4
DPDB	**Guoxing** baz=283	**0.57**	**283**	eP	Pg	15 28 33.0	+0.5
SMLT	**Sun Moon Lake** baz=267	**0.58**	**268**	eP	Pg	15 28 33.0	+0.4
SMLT	baz=267			eS	Sn	15 28 42.2	-1.2
TWF1	**Yuli** baz=200	**0.59**	**202**	eP	Pg	15 28 33.1	+0.3
TYC	**Yuchr** baz=270	**0.62**	**270**	P	Pg	15 28 33.5	+0.1
TYC	baz=270			eS	Sg	15 28 42.6	+0.9
WHP	**Taichung City** baz=304	**0.65**	**305**	eP	Pn	15 28 34.9	-0.5
WHP	baz=304			eS	Sn	15 28 44.2	-1.0
WHYT	**Xinyi Township** baz=251	**0.66**	**252**	eP	Pg	15 28 34.5	+0.5
WHYT	baz=251			eS	Sg	15 28 43.8	+0.9
NDT	**Datong Townshi** baz=358	**0.70**	**358**	eP	Pn	15 28 35.8	-0.1
NDT	baz=358			eS	Sn	15 28 45.2	-0.9
ENTT	**Nioudou** baz=2.0	**0.73**	**2**	eP	Pn	15 28 36.0	-0.3
ENTT	baz=2.0			eS	Sn	15 28 46.5	-0.5
FULB	**Fuli** baz=197	**0.73**	**197**	eP	Pb	15 28 35.0	-0.2
WJS	**Zhushan** baz=263	**0.74**	**264**	eS	Sn	15 28 47.3	+0.1
ALS	**Alishan** baz=239	**0.77**	**240**	eP	Pg	15 28 36.2	0.0
ALS	baz=239			eS	Sg	15 28 47.3	+0.7
YHNB	**Yeheng** baz=349	**0.78**	**349**	eP	Pb	15 28 36.1	+0.1
YHNB	baz=349			eS	Sg	15 28 46.8	+0.1
NSK	**Sanguang** baz=348	**0.79**	**348**	eP	Pg	15 28 36.5	0.0
NSK	baz=348			eS	Sg	15 28 47.2	+0.3
TWE	**Neicheng** baz=9.0	**0.82**	**8**	eP	Pg	15 28 36.9	-0.2
TWQ1	**Liyutan** baz=302	**0.82**	**303**	eP	Pn	15 28 38.2	+0.6
TWQ1	baz=302			eS	Sn	15 28 52.1	+2.9
CHN5	**Tsauling** baz=248	**0.84**	**249**	eP	Pn	15 28 38.0	+0.1
CHN5	baz=248			eS	Sn	15 28 50.2	+0.4
NWLT	**Wulai** baz=358	**0.87**	**358**	eP	Pg	15 28 37.9	-0.2
NSTT	**Nanjuang** baz=326	**0.87**	**326**	eP	Pn	15 28 39.5	+1.2
NSTT	baz=326			eS	Sn	15 28 50.7	+0.2
LIOB	**Emei** baz=327	**0.88**	**327**	eP	Pn	15 28 39.6	+1.2
CHN4	**Tsaushan** baz=237	**1.02**	**238**	eP	Pg	15 28 40.8	-0.1
CHN4	baz=237			eS	Sg	15 28 55.6	+1.2
TPUB	**Ta-pu** baz=234	**1.02**	**234**	eP	Pn	15 28 40.5	+0.1
TPUB	baz=234			eS	Sg	15 28 54.9	+0.5
STYT	**Tauyuan** baz=223	**1.02**	**224**	eP	Pb	15 28 40.1	0.0
STYT	baz=223			eS	Sn	15 28 54.3	0.0
WTP	**Ta-pu** baz=231	**1.07**	**232**	eP	Pn	15 28 41.1	+0.2
WTP	baz=231			eS	Sg	15 28 55.8	0.0
TIPB	**Shuangxi** baz=13	**1.10**	**14**	eP	Pb	15 28 41.4	0.0
TIPB	baz=13			eS	Sg	15 28 56.9	+0.2
CHN1	**Nanshi** baz=232	**1.17**	**232**	eP	Pg	15 28 43.6	-0.1
CHN1	baz=232			eS	Sg	15 29 00.5	+1.5
SNST	**Tainan City** baz=234	**1.17**	**235**	eS	Sg	15 28 58.9	-0.1
SGST	**Jiashian** baz=226	**1.20**	**227**	eP	Pn	15 28 42.6	-0.1
SGST	baz=226			eS	Sg	15 29 00.0	+0.1
SLGT	**Liugui** baz=222	**1.22**	**222**	eP	Pn	15 28 43.1	+0.1

MAN 29 15:28:33.1, 9°.83N×124°.34E, h9^{km}, mb4.0, ML2.8, MS2.4, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.49**	**253**	i P	Pg	15 28 43.1	+0.4
TBP				i S	Sg	15 28 50.0	+0.9
MSLP	**Maasin**	**0.60**	**60**	eP	Pb	15 28 45.4	-0.3
MSLP				eS	Sb	15 28 55.5	+1.2
LLP	**Lapu-Lapu**	**0.61**	**323**	⇓iP	Pg	15 28 44.4	-0.5
LLP				i S	Sg	15 28 53.0	+0.2
SNPH	**Sibulan**	**1.19**	**246**	⇓iP	Pb	15 28 55.4	-0.5
SNPH				i S	Sn	15 29 12.6	+0.3
OCLP	**Ormoc**	**1.24**	**12**	eP	Pn	15 28 55.5	-1.2
OCLP				eS	Sn	15 29 13.4	-0.2
GUIM	**Jordan**	**1.89**	**295**	eP	Pn	15 29 05.8	+0.2
GUIM				eS	Sb	15 29 31.0	-0.6
PAGZ	**Pagadian**	**2.19**	**206**	eP	Pn	15 29 09.4	-0.3
PAGZ				eS	Sn	15 29 37.4	+0.5

JMA 29 15:29:02.0±0.1, 24°.85N×123°.37E, h29^{km}, M1.3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.51**	**220**	P	Pb	15 29 12.1	-0.4
YOJ				eS	Sb	15 29 19.3	-0.3
IRIF	**Iriomote-Funau**	**0.61**	**147**	P	Pb	15 29 13.7	-0.5
IRIF				S	Sb	15 29 22.2	-0.2
JKRS	**Kuro-shima**	**0.84**	**136**	P	Pn	15 29 17.5	-0.4
JKRS				S	Sb	15 29 28.8	-0.3
JIJ	**Ishigaki jima**	**0.85**	**124**	P	Pn	15 29 17.8	-0.3
JIJ				S	Sb	15 29 28.0	-1.4
HATJ	**Hateruma jima**	**0.88**	**153**	S	Sb	15 29 29.6	-0.6
JISG	**Ishigakijimahi**	**0.90**	**107**	eS	Sb	15 29 29.5	-1.0

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*NIED **29** 15:56:00, 24°.30N×122°.20E, h32^{km}, Mw3.6 Best double couple: $M_0$2.71000×10^{14} NP1:ϕ_s190.00000°, δ52.00000°, λ60.00000°. NP2:ϕ_s52.00000°, δ47.00000°, λ122.00000°.*
*TAP **29** 15:56:53.6, 24°.36N×122°.20E, h41^{km}, ML4.0, C*
*JMA **29** 15:56:53.1±0.1, 24°.27N×122°.21E, h49^{km}±2^{km}, M3.5*
*IDC **29** 15:57:06.2±6.3, 24°.40N×122°.14E, h168^{km}±63^{km}, mb3.3/7, mb1 3.3/8, mb1mx3.1/39, mbtmp3.7/8, Error ellipse: s-maj=43.8km s-min=14.4km az=67.0*
ISC 29 15:56:53.1±0.8, 24°.35N±0°.02×122°.24E±0°.02, h36^{km}±1^{km}, n149, σ1°.77/265, mb3.7/7, 5C-20D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1** baz=334	**0.22**	**334**	i P	Pn	15 57 01.2	+0.1
EOS1	baz=334			eS	Sn	15 57 07.0	-1.1
TWC	**Suao** baz=308	**0.44**	**306**	⇓iP	Pn	15 57 03.1	+0.4
TWC	baz=308			eS	Sn	15 57 09.7	+0.1
ENA	**Nanau** baz=285	**0.46**	**280**	⇓iP	Pn	15 57 03.4	+0.3
ENA	baz=285			eS	Sn	15 57 10.4	+0.3
ILA	**Ilan** baz=319	**0.61**	**313**	⇓iP	Pn	15 57 06.1	+0.8
ILA	baz=319			eS	Sn	15 57 16.0	+2.1
NACB	**Ninganchiao** baz=251	**0.61**	**254**	⇓iP	Pn	15 57 05.6	+0.2
NACB	baz=251			eS	Sn	15 57 14.2	+0.2
NTC	**Toucheng** baz=332	**0.62**	**324**	⇓iP	Pn	15 57 06.0	+0.5
NTC	baz=332			eS	Sn	15 57 14.8	+0.5
TWE	**Neicheng** baz=309	**0.64**	**306**	⇓iP	Pn	15 57 06.3	+0.6
TWE	baz=309			eS	Sn	15 57 15.5	+0.9
TWD	**Chiawan** baz=243	**0.64**	**246**	eP	Pn	15 57 06.0	+0.3
TWD	baz=243			eS	Sn	15 57 15.5	+0.8
JYNG	**Yonagunijimaku**	**0.65**	**81**	P	Pn	15 57 06.8	+0.9
JYNG				S	Sn	15 57 16.7	+1.8
ENTT	**Nioudou** baz=295	**0.68**	**296**	⇓iP	Pn	15 57 07.1	+0.9
ENTT	baz=295			eS	Sn	15 57 16.7	+1.1
SLBB	**Yuanshan** baz=309	**0.68**	**306**	eP	Pn	15 57 06.5	+0.2
SLBB	baz=309			eS	Sn	15 57 16.2	+0.6
HWA	**Hwalien** baz=234	**0.69**	**237**	eP	Pn	15 57 07.3	+1.0
HWA	baz=234			eS	Sn	15 57 17.7	+2.0
TWB1	**Santiao Chiao** baz=344	**0.69**	**341**	P	Pn	15 57 06.8	+0.4
TWB1	baz=344			eS	Sn	15 57 16.0	0.0
ETLH	**Xiulin Townshi** baz=247	**0.70**	**259**	⇑iP	Pn	15 57 07.2	+0.5
ETLH	baz=247			eS	Sn	15 57 16.7	+0.4
NDT	**Datong Townshi** baz=291	**0.71**	**291**	eP	Pn	15 57 07.7	+1.1
NDT	baz=291			eS	Sn	15 57 17.1	+0.9
YOJ	**Yonaguni jima** baz=82	**0.71**	**81**	⇓iP	Pn	15 57 07.7	+1.1
YOJ	baz=82			eS	Sn	15 57 18.2	+1.8
YOJ	**Yonaguni jima**	**0.71**	**81**	P	Pn	15 57 07.7	+1.1
YOJ				S	Sn	15 57 18.2	+1.8
TIPB	**Shuangxi** baz=330	**0.72**	**329**	⇑iP	Pn	15 57 07.6	+0.8
TIPB	baz=330			eS	Sn	15 57 16.8	0.0
ENLB	**Shoufeng** baz=230	**0.73**	**233**	eP	Pn	15 57 06.5	-0.4
ENLB	baz=230			eS	Sn	15 57 18.2	+1.4
NNSB	**Datong** baz=266	**0.78**	**276**	⇓iP	Pn	15 57 08.6	+0.8
NNSB	baz=266			eS	Sn	15 57 18.7	+0.4
NNSH	**Datong** baz=267	**0.78**	**276**	P	Pn	15 57 08.5	+0.8
NNSH	baz=267			eS	Sn	15 57 19.1	+0.8
NNS	**Nan Shan** baz=267	**0.79**	**277**	eP	Pn	15 57 08.7	+0.8
NNS	baz=267			eS	Sn	15 57 19.2	+0.6
NWLT	**Wulai** baz=311	**0.79**	**303**	eP	Pn	15 57 08.9	+1.1
NWLT	baz=311			eS	Sn	15 57 20.0	+1.6
NWF	**Wu-fen Shan** baz=342	**0.83**	**330**	⇓iP	Pn	15 57 09.1	+0.7
NWF	baz=342			eS	Sn	15 57 20.1	+0.7
WFSB	**Wu-fen Shan** baz=342	**0.83**	**330**	⇓iP	Pn	15 57 09.0	+0.8
WFSB	baz=342			eS	Sn	15 57 19.8	+0.5
YHNB	**Yeheng** baz=281	**0.85**	**292**	⇓iP	Pn	15 57 09.8	+1.2
YHNB	baz=281			eS	Sn	15 57 20.7	+0.9
TWA	**Mucha** baz=329	**0.86**	**317**	⇓iP	Pn	15 57 09.9	+1.1
TWA	baz=329			eS	Sn	15 57 21.9	+1.7
NHDH	**Xindian Distri** baz=324	**0.89**	**313**	eP	Pn	15 57 10.5	+1.4
NHDH	baz=324			eS	Sn	15 57 22.2	+1.4
ESL	**Shilin** baz=232	**0.91**	**234**	⇑iP	Pn	15 57 09.4	+0.1
ESL	baz=232			eS	Sn	15 57 22.6	+1.4
WHF	**Hehuan Shan** baz=256	**0.91**	**257**	eP	Pn	15 57 10.3	+0.6
WHF	baz=256			eS	Sn	15 57 22.6	+0.7
TATO	**Taipei** baz=324	**0.92**	**313**	⇓iP	Pn	15 57 10.7	+1.1
TATO	baz=324			eS	Sn	15 57 22.9	+1.3
TAP	**Taipei** baz=330	**0.96**	**316**	eP	Pn	15 57 11.1	+1.1
TAP	baz=330			eS	Sn	15 57 23.6	+1.3
TWT	**Tachien** baz=263	**0.97**	**265**	eP	Pn	15 57 11.9	+1.6
TWT	baz=263			eS	Sn	15 57 24.6	+1.5
TDCB	**Techi** baz=263	**0.99**	**265**	eP	Pn	15 57 11.8	+1.2
TDCB	baz=263			eS	Sn	15 57 24.4	+1.0
YM01	**YM01** baz=335	**1.00**	**323**	⇓P	Pn	15 57 11.2	+0.6
YM01	baz=335			eS	Sn	15 57 24.3	+0.8
EGFH	**Guangfu** baz=216	**1.00**	**228**	eP	Pn	15 57 10.8	+0.2
EGFH	baz=216			eS	Sn	15 57 24.8	+1.3
YM10	**YM10** baz=335	**1.01**	**323**	⇓iP	Pn	15 57 11.4	+0.6
YM10	baz=335			eS	Sn	15 57 24.5	+0.6
CHGB	**Renai** baz=240	**1.01**	**254**	⇓iP	Pn	15 57 11.7	+0.8
CHGB	baz=240			eS	Sn	15 57 24.6	+0.5
YM11	**YM11** baz=334	**1.01**	**324**	P	Pn	15 57 11.4	+0.6
YM11	baz=334			eS	Sn	15 57 25.0	+1.1
YM05	**YM05** baz=334	**1.02**	**323**	⇓iP	Pn	15 57 11.4	+0.5
YM05	baz=334			eS	Sn	15 57 24.4	+0.5
YM08	**YM08** baz=336	**1.02**	**325**	eP	Pn	15 57 11.2	+0.3
YM08	baz=336			eS	Sn	15 57 23.9	-0.2
YM04	**YM04** baz=334	**1.02**	**322**	⇓iP	Pn	15 57 11.6	+0.6
YM04	baz=334			eS	Sn	15 57 24.6	+0.5
WLTB	**Daxi** baz=290	**1.03**	**299**	eP	Pn	15 57 12.8	+1.9
WLTB	baz=290			eS	Sn	15 57 27.5	+3.4
OWD	**Renai** baz=236	**1.05**	**248**	⇓iP	Pn	15 57 11.8	+0.5
OWD	baz=236			eS	Sn	15 57 23.3	-1.5
TWS1	**Kuangyinshan** baz=328	**1.06**	**315**	P	Pn	15 57 12.5	+1.2
TWS1	baz=328			eS	Sn	15 57 26.9	+2.0
NTST	**Danshui** baz=331	**1.08**	**319**	eP	Pn	15 57 12.8	+1.1
NTST	baz=331			eS	Sn	15 57 27.8	+2.3
TWY	**Chenhua** baz=328	**1.09**	**328**	eP	Pn	15 57 12.7	+0.9
TWY	baz=328			eS	Sn	15 57 25.6	0.0
HGSD	**Ruisui** baz=212	**1.13**	**221**	⇑iP	Pn	15 57 12.7	+0.3
HGSD	baz=212			eS	Sn	15 57 26.3	-0.4
NCU	**National Centr** baz=303	**1.14**	**303**	eP	Pn	15 57 14.1	+1.6
NCU	baz=303			eS	Sn	15 57 31.0	+4.2
NCUH	**Zhongli** baz=302	**1.14**	**303**	eP	Pn	15 57 14.1	+1.6
NCUH	baz=302			eS	Sn	15 57 30.6	+3.7
LIOB	**Emei** baz=284	**1.15**	**285**	eP	Pn	15 57 14.6	+1.9
LIOB	baz=284			eS	Sn	15 57 29.9	+2.6
NSTT	**Nanjuang** baz=283	**1.16**	**284**	eP	Pn	15 57 14.6	+1.8
NSTT	baz=283			eS	Sn	15 57 28.7	+1.3
VWDT	**VWDT** baz=228	**1.16**	**240**	⇑iP	Pn	15 57 13.8	+0.9
VWDT	baz=228			eS	Sn	15 57 28.7	+1.2
WHP	**Taichung City** baz=266	**1.18**	**267**	P	Pn	15 57 14.9	+1.8
WHP	baz=266			eS	Sn	15 57 29.1	+1.1
EHY	**Hungye** baz=223	**1.19**	**225**	eP	Pn	15 57 13.1	-0.1
SBCB	**Hsinchu** baz=291	**1.22**	**291**	eP	Pn	15 57 15.6	+2.0
SBCB	baz=291			eS	Sn	15 57 30.6	+1.7
DPDB	**Guoxing** baz=246	**1.24**	**256**	P	Pn	15 57 15.2	+1.3
DPDB	baz=246			eS	Sn	15 57 30.6	+1.2
HSN	**Hsinchu** baz=293	**1.24**	**292**	eP	Pn	15 57 15.8	+2.0
HSN	baz=293			eS	Sn	15 57 32.4	+3.0
YULB	**Yu-li** baz=221	**1.28**	**222**	eP	Pn	15 57 14.4	-0.1
YULB	baz=221			eS	Sn	15 57 30.4	-0.1
PCYT	**Pengchaiyu** baz=342	**1.28**	**353**	eP	Pn	15 57 14.3	-0.2
PCYT	baz=342			eS	Sn	15 57 30.8	+0.3
SSLB	**Suanglung** baz=236	**1.30**	**245**	P	Pn	15 57 15.5	+0.7
SSLB	baz=236			eS	Sn	15 57 30.9	0.0
SMLT	**Sun Moon Lake** baz=239	**1.31**	**249**	eP	Pn	15 57 16.1	+1.2
SMLT	baz=239			eS	Sn	15 57 32.0	+0.8
TWF1	**Yuli** baz=232	**1.31**	**221**	P	Pn	15 57 14.9	0.0
TWF1	baz=232			eS	Sn	15 57 30.2	-1.0
NMLH	**Miaoli** baz=278	**1.33**	**278**	eP	Pn	15 57 17.1	+1.9
TWQ1	**Liyutan** baz=269	**1.33**	**270**	eP	Pn	15 57 17.3	+2.0
TWQ1	baz=269			eS	Sn	15 57 35.6	+3.8
TYC	**Yuchr** baz=241	**1.34**	**251**	eP	Pn	15 57 16.4	+1.2
TYC	baz=241			eS	Sn	15 57 32.4	+0.6
NSY	**Sanyi** baz=272	**1.35**	**273**	eP	Pn	15 57 17.6	+2.2
NSY	baz=272			eS	Sn	15 57 35.7	+3.6
IRIF	**Iriomote-Funau**	**1.36**	**90**	P	Pn	15 57 16.6	+1.1
IRIF				eS	Sn	15 57 33.8	+1.4
PTSB	**Yuanli** baz=273	**1.40**	**274**	eP	Pn	15 57 17.7	+1.6
PTSB	baz=273			eS	Sn	15 57 35.3	+1.9
WHYT	**Xinyi Township** baz=234	**1.42**	**243**	eP	Pn	15 57 18.0	+1.6
WHYT	baz=234			eS	Sn	15 57 35.5	+1.6
FULB	**Fuli** baz=205	**1.44**	**217**	eP	Pn	15 57 16.6	0.0
FULB	baz=205			eS	Sn	15 57 34.5	+0.3
TCU	**Taichung** baz=261	**1.44**	**262**	eP	Pn	15 57 18.8	+2.2
TCU	baz=261			eS	Sn	15 57 37.0	+2.7
YUS	**Yu-Shan** baz=222	**1.45**	**234**	eP	Pn	15 57 18.2	+1.0
YUS	baz=222			eS	Sn	15 57 35.3	-0.1
WDJ	**Dajia District** baz=269	**1.46**	**270**	eP	Pn	15 57 18.8	+2.0
WDJ	baz=269			eS	Sn	15 57 38.0	+3.2
HATJ	**Hateruma jima**	**1.46**	**101**	P	Pn	15 57 18.8	+1.9
WJS	**Zhushan** baz=237	**1.48**	**249**	eP	Pn	15 57 19.4	+2.3
WJS	baz=237			eS	Sn	15 57 38.2	+3.0
CHKT	**Chengkung** baz=202	**1.48**	**213**	eP	Pn	15 57 16.8	-0.4
CHKT	baz=202			eS	Sn	15 57 33.8	-1.4
WNT	**Mingjian** baz=251	**1.50**	**252**	eP	Pn	15 57 19.9	+2.6
WNT	baz=251			eS	Sn	15 57 39.1	+3.4
ALS	**Alishan** baz=227	**1.55**	**238**	eP	Pn	15 57 20.0	+1.6
ALS	baz=227			eS	Sn	15 57 40.5	+2.9
WCHH	**Zhanghua** baz=259	**1.56**	**260**	eP	Pn	15 57 19.9	+1.7
WCHH	baz=259			eS	Sn	15 57 41.0	+3.9
ELDTW	**Lidau** baz=216	**1.61**	**224**	eP	Pn	15 57 19.5	+0.4
ELDTW	baz=216			eS	Sn	15 57 38.7	+0.1
CHN5	**Tsauling** baz=230	**1.61**	**243**	eP	Pn	15 57 21.1	+2.0
CHN5	baz=230			eS	Sn	15 57 40.7	+2.1
JKRS	**Kuro-shima**	**1.62**	**94**	P	Pn	15 57 20.7	+1.6
JKRS				eS	Sn	15 57 41.0	+2.2
WGK	**Gukeng** baz=246	**1.67**	**247**	eP	Pn	15 57 22.0	+2.3
WGK	baz=246			eS	Sn	15 57 43.4	+3.5
WDLH	**Douliu** baz=246	**1.69**	**247**	eP	Pn	15 57 22.3	+2.3
WDLH	baz=246			eS	Sn	15 57 43.8	+3.4
JIJ	**Ishigaki jima**	**1.74**	**89**	P	Pn	15 57 21.5	+0.8
JIJ				eS	Sn	15 57 42.4	+0.7
TWH	**Lutao**	**1.77**	**203**	eP	Pn	15 57 21.2	-0.1

	baz=202						
TWH				*e*S	Sn	15 57 41.3	-1.3
	baz=202						
RLNB	Erlin	1.77	256	*e*P	Pn	15 57 23.3	+2.1
	baz=254						
RLNB				*e*S	Sn	15 57 45.3	+2.8
	baz=254						
STYT	Tauyuan	1.80	229	*e*P	Pn	15 57 23.2	+1.6
	baz=219						
STYT				*e*S	Sn	15 57 44.6	+1.4
	baz=219						
CHN4	Tsaushan	1.80	237	*e*P	Pn	15 57 24.2	+2.6
	baz=225						
CHN4				*e*S	Sn	15 57 46.0	+2.7
	baz=225						
TPUB	Ta-pu	1.81	235	*e*P	Pn	15 57 23.8	+2.1
	baz=226						
TPUB				*e*S	Sn	15 57 46.9	+3.6
	baz=226						
CHN2	Minshiung	1.81	244	*e*P	Pn	15 57 24.4	+2.7
	baz=231						
WTP	Ta-pu	1.85	234	*e*P	Pn	15 57 24.4	+2.1
	baz=222						
WTP				*e*S	Sn	15 57 47.1	+2.6
	baz=222						
WTCT	Ta-ch'eng	1.85	255	*e*P	Pn	15 57 24.1	+1.8
	baz=254						
WTCT				*e*S	Sn	15 57 46.9	+2.4
	baz=254						
TWGBT	Beinan	1.86	215	*e*P	Pn	15 57 22.0	-0.4
	baz=214						
TWGBT				*e*S	Sn	15 57 44.1	-0.5
	baz=214						
TWG	Pinlang	1.86	215	*e*P	Pn	15 57 21.9	-0.5
	baz=214						
TWG				*e*S	Sn	15 57 44.1	-0.6
	baz=214						
CHY	Chiayi	1.86	243	*e*P	Pn	15 57 25.0	+2.5
	baz=231						
CHY				*e*S	Sn	15 57 48.2	+3.4
	baz=231						
JISG	Ishigakijimahi	1.90	82	P	Pn	15 57 24.0	+1.0
JISG				*e*S	Sn	15 57 47.0	+1.2
TWK	Hsinying	1.93	236	*e*P	Pn	15 57 25.5	+2.1
	baz=225						
TWK				*e*S	Sn	15 57 48.7	+2.2
	baz=225						
CHN1	Nanshi	1.95	234	*e*P	Pn	15 57 25.8	+2.1
	baz=223						
CHN1				*e*S	Sn	15 57 50.6	+3.7
	baz=223						
SNST	Tainan City	1.95	235	*e*P	Pn	15 57 26.4	+2.8
	baz=225						
SNST				*e*S	Sn	15 57 50.1	+3.2
	baz=225						
SGST	Jiashian	1.97	231	*e*P	Pn	15 57 25.7	+1.7
	baz=230						
SGST				*e*S	Sn	15 57 49.5	+2.0
	baz=230						
WLGB	Puzi	1.97	244	*e*P	Pn	15 57 24.6	+0.6
	baz=231						
WLGB				*e*S	Sn	15 57 50.3	+2.8
	baz=231						
WSF	Szhu	1.97	249	*e*P	Pn	15 57 26.1	+2.2
	baz=248						
WSF				*e*S	Sn	15 57 50.7	+3.2
	baz=248						
SLGT	Liugui	1.99	228	*e*P	Pn	15 57 26.3	+2.1
	baz=227						
SLGT				*e*S	Sn	15 57 51.0	+3.1
	baz=227						
ECL	Taimali	2.10	214	*e*P	Pn	15 57 25.8	0.0
	baz=212						
CHN8	Yiju	2.11	242	*e*P	Pn	15 57 27.8	+2.0
	baz=230						
CHN8				*e*S	Sn	15 57 53.2	+2.4
	baz=230						
CHN3	Shinhua	2.13	234	*e*S	Sn	15 57 55.3	+3.9
	baz=233						
SSD	Sandimen	2.17	223	*e*P	Pn	15 57 28.6	+1.9
	baz=222						
SSD				*e*S	Sn	15 57 53.7	+1.3
	baz=222						
SCLT	Jiali	2.21	238	*e*P	Pn	15 57 30.1	+2.9
	baz=237						
SCLT				*e*S	Sn	15 57 57.4	+4.1
	baz=237						
TWM1	Shoushan	2.25	228	*e*P	Pn	15 57 31.9	+4.0
	baz=226						
JTJ	Tarama	2.26	82	P	Pn	15 57 29.7	+1.7
JTJ				S	Sn	15 57 56.2	+1.6
MASBT	Mashibuluo	2.27	221	*e*P	Pn	15 57 29.4	+1.3
	baz=220						
MASBT				*e*S	Sn	15 57 58.0	+3.1
	baz=220						
EAST	Anshuo	2.34	213	*e*P	Pn	15 57 29.1	0.0
	baz=211						
SNJT	Kaohsiung City	2.36	228	*e*P	Pn	15 57 33.3	+4.0
	baz=228						
SNJT				*e*S	Sn	15 58 03.6	+6.6
	baz=228						
LAY	Lan-yu	2.38	195	*e*P	Pn	15 57 28.9	-0.8
	baz=185						
SSPT	Xinbi	2.41	220	*e*P	Pn	15 57 32.5	+2.5
	baz=218						
SCZT	Fangliau	2.47	217	*e*P	Pn	15 57 32.4	+1.6
	baz=207						
SCZT				*e*S	Sn	15 58 02.2	+2.6
	baz=207						
PTTC	Pingtan	2.52	298	*e*P	Pn	15 57 31.7	+0.3
	baz=298						
PNG	Penghu	2.57	253	*e*P	Pn	15 57 33.2	+1.0
	baz=251						
PHUB	P'eng-hu	2.58	252	*e*P	Pn	15 57 33.1	+0.8
	baz=250						
PHUB				*e*S	Sn	15 58 02.2	-0.2
	baz=250						
WDGT	Dungji	2.60	246	*e*P	Pn	15 57 33.8	+1.2
	baz=245						
WDGT				*e*S	Sn	15 58 02.8	-0.1
	baz=245						
VWUC	VWUC	2.62	285	*e*P	Pn	15 57 33.0	+0.2
	baz=284						
WLCH	Liuqiu	2.62	221	*e*P	Pn	15 57 37.5	+4.6
	baz=219						
JIRB	Irabujima	2.71	79	P	Pn	15 57 35.3	+1.1
JIRB				*e*S	Sn	15 58 07.4	+1.6
TWKBT	Hengchun	2.73	209	*e*P	Pn	15 57 34.8	+0.3
	baz=207						
TWK1	Hengchun	2.73	209	*e*P	Pn	15 57 35.0	+0.5
	baz=207						
MATB	Ma-tsu	2.74	311	*e*P	Pn	15 57 34.7	+0.2
	baz=311						
JIKM	Ikemajima	2.80	78	P	Pn	15 57 37.6	+2.3
JIKM				S	Sn	15 58 10.1	+2.3
VCHM	Qimei	2.81	247	*e*P	Pn	15 57 36.8	+1.3
	baz=245						
VCHM				*e*S	Sn	15 58 07.8	-0.4
	baz=245						
JMJ	Miyako jima 2	2.82	80	*e*P	Pn	15 57 36.9	+1.3
	baz=81						
JMJ				*e*S	Sn	15 58 10.7	+2.3
	baz=81						
JMJ2	Miyako jima3	2.84	81	P	Pn	15 57 38.3	+2.4
JMJ2				*e*S	Sn	15 58 11.1	+2.2
JOGS	Gusukube	2.92	81	P	Pn	15 57 39.4	+2.5
JOGS				*e*S	Sn	15 58 13.0	+2.3
PTMZ	Houxiangcun	2.92	284	*e*P	Pn	15 57 37.2	+0.2
	baz=284						
LYJJ	Jianjiangzhen	3.13	315	*e*P	Pn	15 57 39.8	-0.1
	baz=325						
XPSS	Dashiqiu	3.17	325	*e*P	Pn	15 57 40.6	+0.3
	baz=332						
XPSS				*e*S	Sn	15 58 16.5	-0.4
	baz=332						
MHZQ	Yeshan	3.39	302	*e*P	Pn	15 57 43.6	+0.2
	baz=302						
KNM	Kinmen	3.47	272	*e*P	Pn	15 57 46.4	+1.9
	baz=271						
KNMB	Chin-men Tao	3.51	273	*e*P	Pn	15 57 44.9	-0.2
	baz=272						
AXDP	Jialang	3.92	279	P	Pn	15 57 51.3	+0.5
	baz=278						
ZPLA	Ao Xicun	4.12	265	*e*P	Pn	15 57 53.8	+0.3
	baz=263						
KSRS	Korea Array	13.94	19	P	P	16 00 16.8	+1.2
	0.1nm,0.3s,baz=196,slow=11,SNR=5.0						
SONM	Songino Array	26.60	336	P	P	16 02 27.9	-0.2
	2.2nm,0.7s,baz=152,slow=10,SNR=11						
MKAR	Makanchi Array	38.89	315	P	P	16 04 14.9	-0.3
	0.6nm,0.4s,baz=100,slow=9.8,SNR=16						
ZALV	Zalesovo Beam	40.63	327	P	P	16 04 27.3	-2.2
	0.6nm,0.4s,baz=99,slow=7.6,SNR=4.3						
WRA	Warramunga Arr	45.58	164	P	P	16 05 09.3	-0.4
	0.4nm,0.5s,baz=346,slow=8.6,SNR=9.9						
ASAR	Alice Springs	49.05	166	P	P	16 05 37.2	+0.4
	0.2nm,0.3s,baz=348,slow=6.6,SNR=9.5						
FINES	FINESS Array B	71.79	330	P	P	16 08 10.0	-1.6
	1.5nm,0.8s,baz=35,slow=5.1,SNR=3.4						
YKA	Yellowknife Ar	82.44	23	P	P	16 09 09.2	-2.2
	0.1nm,0.4s,baz=311,slow=4.5,SNR=3.8						

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*IASPEI **29** 16:02:05.7±0.8, 33.°90N±0.°02×117.°95W±0.°02, h18^{km}±6^{km}, Error ellipse: s-maj=2.8km s-min=2.2km az=18.6, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ANF **29** 16:02:05.3±0.2, 33.°89N×117.°95W, h16^{km}±1^{km}, ML3.5/40, Error ellipse: s-maj=1.2km s-min=1.1km az=126.0*

*NEIC **29** 16:02:05.9±2.9, 33.°82N±0.°03×117.°97W±0.°04, h13^{km}±5^{km}, Error ellipse: s-maj=5.8km s-min=3.3km az=139.0*

*PAS **29** 16:02:06.0±2.0, 33.°90N±0.°02×117.°96W±0.°04, h4^{km}±7^{km}, ML3.4/242, Error ellipse: s-maj=4.8km s-min=3.4km az=76.0*

*SCEDC **29** 16:02:06.0, 33.°90N×117.°96W, h4^{km}*

ISC 29 16:02:06.4±0.8, **33.°88N**±0.°02×**117.°97W**±0.°01, **h19**^{km}±5^{km}, **n129**, σ**1.^{s}24**/175, **Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FULC	Fullerton	0.04	108		Pg	16 02 09.3	-0.4
BREC	Barre Substati	0.08	189		Pg	16 02 11.9	+2.0
DLAC	Del Amo	0.11	252		Pb	16 02 09.6	+1.9
RHC	Rose Hills Cem	0.12	342		Pb	16 02 08.7	+0.5
SANC	Santa Ana	0.19	159		Pb	16 02 10.7	+0.3
PSRC	Puddingstone R	0.25	32		Pb	16 02 14.2	+2.2
WTT2	Watts, South G	0.25	285		Pg	16 02 12.2	0.0
CHNC	Chino	0.26	64		Pg	16 02 11.2	-1.2
CACC	Caltech Cellar	0.28	333		Pg	16 02 11.3	-1.5
GSA	Caltech--GSA	0.29	332		Pg	16 02 11.4	-1.4
CBCC	Caltech Broad	0.29	332		Pg	16 02 11.7	-1.1
CBCC					Sg	16 02 16.3	-1.0
USC	University of	0.30	297		Pg	16 02 12.0	-1.0
FMP	Fort Macarthur	0.32	238	P	Pg	16 02 12.5	-0.8
	baz=56,SNR=22						
FMP				S	Sg	16 02 17.6	-0.5
	baz=56						
CRNC	Corona	0.34	91		Sg	16 02 17.8	-0.8
PASC	Pasadena Art C	0.34	328		Pg	16 02 12.0	-1.7
PASC				Sg	Sg	16 02 17.4	-1.3
BHPC	Baldwin Hills	0.34	288		Pg	16 02 14.2	+0.4
MWC	Mount Wilson	0.35	347		Pg	16 02 12.1	-1.8
MWC				Sg	Sg	16 02 16.5	-2.6
MLSC	Mira Loma	0.36	70		Pg	16 02 12.5	-1.4
LCGC	La Cienega, Cu	0.36	289		Pg	16 02 14.5	+0.5
GR2C	Griffith Obs.	0.36	310		Sg	16 02 18.9	-0.4
GR2C	Griffith Obs.	0.36	310		Pg	16 02 12.9	-1.1
BFSC	Mount Baldy Ra	0.44	36	P	Pg	16 02 13.8	-1.6
	baz=216,SNR=473						
BFSC				S	Sg	16 02 20.3	-1.3
	baz=216						
CHFC	Chilao Flat St	0.45	354		Sg	16 02 20.3	-1.8
DJJ	Donna J Jenkin	0.46	299		Pg	16 02 14.6	-1.2
DJJ	Donna J Jenkin	0.46	299		Pg	16 02 14.6	-1.2
DECC	Green Verdugo	0.48	321		Sg	16 02 21.4	-1.3
DECC	Green Verdugo	0.48	321	P	Pg	16 02 14.7	-1.4
	baz=138,SNR=22						
DECC				S	Sg	16 02 21.5	-1.3
	baz=138						
FON	Fontana	0.49	64		Pg	16 02 14.7	-1.6
FON					Sg	16 02 21.7	-1.3
RVR	Riverside	0.50	77		Sg	16 02 22.0	-1.5
SS2	San Sevaine	0.50	50		Pg	16 02 15.2	-1.4
RSBC	Riverside Bore	0.54	80		Pg	16 02 15.9	-1.4
RSBC					Sg	16 02 23.2	-1.3
RSBC	Riverside Bore	0.54	80		Pg	16 02 15.8	-1.4
RSBC					Sg	16 02 23.4	-1.1
JNH	Juniper Hills	0.56	1		Pg	16 02 15.9	-1.8
JNH					Sg	16 02 23.5	-1.9
CLTC	Calectric	0.58	69		Pb	16 02 16.6	-1.2
CIAC	Catalina I. Ai	0.61	218		Pb	16 02 17.4	-0.9
CIS	Catalina Islan	0.61	218	P	Pb	16 02 17.4	-0.9
	baz=37,SNR=69						
CIS				S	Sb	16 02 27.7	+1.2
	baz=37						
CSP	Cedar Springs	0.65	51		Pb	16 02 17.8	-1.4
CJV	Casa Juvan	0.66	347		Pb	16 02 17.6	-1.7
CJV					Sb	16 02 26.8	-1.4
PEC	Perris	0.67	89		Pb	16 02 18.2	-1.2
MURC	Murrieta	0.70	114		Pb	16 02 18.8	-1.2
MURC					Sb	16 02 28.9	-0.4
MURC	Murrieta	0.70	114	P	Pb	16 02 18.9	-1.1
	baz=296,SNR=277						
MURC				S	Sb	16 02 29.3	0.0
	baz=296						
OAT	Oat Mountain	0.71	311		Pb	16 02 19.7	-0.5
LEOC	Leona Valley	0.80	340		Pb	16 02 20.0	-1.7
ADO	Adelanto Recei	0.80	33		Pb	16 02 20.6	-1.1
BACC	Bachelor Mtn.	0.82	109		Pb	16 02 20.7	-1.3
BACC					Sb	16 02 32.8	+0.1
BBSC	Beaumont Base	0.82	87		Pb	16 02 21.3	-0.8
BBSC					Sb	16 02 33.2	+0.4
DGR	Domenigoni Val	0.83	106		Sb	16 02 32.1	-1.0
FOXC	Fox Airport	0.89	346		Pb	16 02 21.8	-1.4
PYR	Pyramid	0.94	317		Pb	16 02 23.4	-0.8
BLG	Laguna Peak, P	0.94	284		Pb	16 02 23.1	-1.0
BLG	Laguna Peak, P	0.94	284	P	Pb	16 02 23.4	-0.7
	baz=102,SNR=20						
BLG				S	Sb	16 02 36.6	+0.4
	baz=102						
BTPC	Burnt Peak	0.94	328		Pb	16 02 22.8	-1.4
BBRC	Big Bear Solar	0.95	66		Pb	16 02 23.2	-1.1
BBRC	Big Bear Solar	0.95	66	P	Pb	16 02 23.2	-1.1
	baz=248,SNR=33						
BBRC				S	Sb	16 02 36.1	-0.5
	baz=248						
GORC	Green Oak Ranc	0.95	140		Pb	16 02 22.5	-1.8
OSI	Osito Audit: C	0.96	320		Pb	16 02 23.6	-0.8
OSI	Osito Audit: C	0.96	320	P	Pb	16 02 23.7	-0.8
	baz=138,SNR=28						
OSI				S	Sb	16 02 37.3	+0.5
	baz=138						
SBI	Santa Barbara	0.97	246		Pb	16 02 24.0	-0.6
EDW2	Edwards Air Fo	0.99	359	P	Pb	16 02 23.7	-1.3
	baz=178,SNR=353						
EDW2				S	Sb	16 02 38.4	+0.6
	baz=178						
TPO	Tropico Hills	1.02	348		Pb	16 02 24.1	-1.3
SCI2	San Clemente I	1.02	208		Pb	16 02 24.7	-0.8
SCI2	San Clemente I	1.02	208	P	Pb	16 02 24.7	-0.8
	baz=28,SNR=27						
SCI2				S	Sb	16 02 39.4	+0.9
	baz=28						
HYS	Haystack Butte	1.03	18		Pb	16 02 24.5	-1.2
PLM	Palomar	1.06	120		Pb	16 02 24.7	-1.6
CRY	Cary Ranch	1.07	107		Pb	16 02 25.3	-1.1
CRY					Sb	16 02 39.6	-0.5
STCC	Santa Clara	1.10	293		Pb	16 02 26.7	0.0
GVDA	Garner Valley	1.10	101		Pb	16 02 25.7	-1.1
DEVC	Devers	1.16	87		Pn	16 02 27.2	-0.4
THC	Tehachapi Micr	1.17	331		Pn	16 02 27.1	-0.9
HWB	Hans Werner Br	1.20	135		Pn	16 02 26.6	-1.6
109C	Camp Elliot, M	1.23	144		Pn	16 02 27.2	-1.3
109C	Camp Elliot, M	1.23	144	P	Pn	16 02 27.3	-1.2
	baz=325,SNR=43						
109C				S	Sb	16 02 44.8	+0.4
	baz=325						
CPE	Camp Elliot	1.23	144		Pn	16 02 27.2	-1.3
DPP	Dos Picos Cty	1.23	136		Pn	16 02 27.0	-1.6
RRX	Edison Barstow	1.27	39	Pb	Pn	16 02 29.1	-0.1
	baz=219,SNR=15						
RRX				S	Sn	16 02 46.6	+0.8
	baz=219						
PFO	Pinyon Flats O	1.28	102		Pn	16 02 29.1	-0.4
PFO	Pinyon Flats O	1.28	102		Pn	16 02 29.0	-0.4
PFO	Pinyon Flats O	1.28	102	Pb	Pn	16 02 29.0	-0.4
	baz=284,SNR=298						
PFO				S	Sb	16 02 46.2	0.0
	baz=284						
XPFO	Pion Flat	1.29	102		Pn	16 02 29.1	-0.4
EW2	E Wide Canyon	1.30	87		Pn	16 02 29.5	0.0
BLAC	Blackrock camp	1.32	82		Pn	16 02 30.0	0.0
DTP	Desert Tortois	1.38	4		Pn	16 02 30.5	-0.2
SCZ2	Santa Cruz Isl	1.39	275	Pb	Pn	16 02 31.6	+0.8
	baz=93,SNR=27						
ABL	Mount Abel	1.42	313		Pn	16 02 31.4	0.0
ARVC	Arvin	1.43	330	Pb	Pn	16 02 31.5	+0.2
	baz=149,SNR=29						
ARVC				Sb	Sn	16 02 51.0	+1.4
	baz=149						
SNCC	San Nicolas Is	1.45	244		Pn	16 02 30.3	-1.2
SNCC	San Nicolas Is	1.45	244	P	Pn	16 02 30.5	-1.1
	baz=63						
SNCC				S	Sn	16 02 49.2	-0.8
	baz=63						
LRMC	Laurel Mtn Rad	1.61	8	Pb	Pn	16 02 34.1	+0.2
	baz=188,SNR=60						
LRMC				S	Sn	16 02 54.4	+0.1
	baz=188						
BAR	Barrett	1.62	138		Pn	16 02 33.6	-0.3
MONP2	Monument Peak	1.63	127	Pb	Pn	16 02 34.1	-0.1
	baz=309,SNR=69						
MONP2				Sb	Sn	16 02 56.5	+1.7
	baz=309						
BELC	Belle Mtn. Jos	1.64	85	Pb	Pn	16 02 35.3	+0.9
	baz=267,SNR=421						
BELC				Sb	Sb	16 02 57.3	+0.8
	baz=267						
HEC	Hector,Ludlow	1.65	55	Pb	Pn	16 02 34.7	+0.3
	baz=236,SNR=156						
HEC				Sb	Sn	16 02 57.1	+2.0
	baz=236						
GSC	Goldstone, Bar	1.71	34		Pn	16 02 36.1	+0.8
GSC	Goldstone, Bar	1.71	34	Pb	Pn	16 02 35.8	+0.5
	baz=214,SNR=484						
GSC				Sb	Sn	16 02 57.8	+1.2
	baz=214						
ISA	Isabella, Lake	1.82	347		Pn	16 02 37.4	+0.6
ISA	Isabella, Lake	1.82	347	P	Pn	16 02 37.0	+0.2
	baz=166,SNR=58						
ISA				S	Sn	16 02 59.9	+0.5
	baz=166						
PKM	Mcpherson Peak	1.83	304	P	Pn	16 02 37.3	+0.3
	baz=122,SNR=42						
PKM				Sb	Sb	16 03 03.2	+1.3
	baz=122						
IKP	In-Ko-Pah, Jac	1.98	128		Pn	16 02 40.2	+1.1
IKP	In-Ko-Pah, Jac	1.98	128	P	Pn	16 02 39.0	0.0
	baz=310,SNR=34						
IKP				S	Sb	16 03 07.2	+0.9
	baz=310						
SWSC	Sam W. Stewart	2.04	117	Pb	Pb	16 02 42.9	+0.1
	baz=299,SNR=37						
SWSC				Sb	Sb	16 03 10.3	+2.5
	baz=299						
BC3	Big Chuckawall	2.10	96	Pn	Pn	16 02 41.2	+0.5
	baz=278,SNR=133						
BC3				Pb	Pb	16 02 43.9	-0.1
	baz=278						
BC3				Sb	Sb	16 03 12.1	+2.3
	baz=278						
GMRC	Granite Mounta	2.11	64	P	Pn	16 02 41.0	+0.2
	baz=246,SNR=91						
GMRC				Sb	Sb	16 03 12.3	+2.3
	baz=246						
VES	Vestal, Richgr	2.16	335	S	Sn	16 03 09.4	+1.8
	baz=154						
BCH	Branch Mountai	2.18	307		Pn	16 02 42.8	+1.1
SMMC	Simmler	2.20	311	P	Pn	16 02 43.2	+1.3
	baz=129,SNR=10						
MPMC	Manual Prospec	2.20	10	P	Pn	16 02 42.3	+0.1
	baz=190,SNR=121						
MPMC				Sb	Sb	16 03 15.4	+2.6
	baz=190						
MFS	McCloud Flat S	2.23	2		Pn	16 02 43.0	+0.5
TUQ	Turquoise Moun	2.29	47	Sb	Sb	16 03 17.2	+2.1
	baz=228						
IRM	Iron Mountain	2.36	83	Pn	Pn	16 02 43.5	-0.6
	baz=265,SNR=85						
IRM				Pb	Pb	16 02 48.4	+0.1
	baz=265						
IRM				Sb	Sb	16 03 19.3	+2.3
	baz=265						
SPG2	Springville 2	2.40	344		Pn	16 02 45.6	+0.8
SHOC	Shoshone, Teco	2.44	34	Pg	Pb	16 02 50.7	+1.0
	baz=215,SNR=18						
CWC	Cottonwood Cre	2.55	358	Pg	Pb	16 02 53.1	+1.5
	baz=178						
FURC	Furnace Creek,	2.73	19	Pg	Pb	16 02 56.7	+2.1
	baz=200,SNR=26						
FURC				Sg	Sg	16 03 34.5	+0.3
	baz=200						
GLA	Glamis	2.75	107	Pg	Pb	16 02 56.6	+1.6
	baz=289,SNR=22						
Y12C	Blythe	2.87	92	Pb	Pb	16 02 57.4	+0.4
	baz=274,SNR=19						
Y12C				Sg	Sg	16 03 36.8	-1.8
	baz=274						
TPNV	Topopah Spring	3.36	24		Pn	16 02 59.2	+1.2
TPNV	Topopah Spring	3.36	24	P	Pn	16 02 59.4	+1.4
	baz=205,SNR=15						
TPNV				Sb	Sg	16 03 52.0	-2.5
	baz=205						
SHPR	Sheep Range	3.48	41		Pn	16 03 01.2	+1.5
W13A	Hualapai Mount	3.58	69		Pn	16 03 01.3	+0.1
Y14A	Wickenburg	4.13	88		Pn	16 03 09.0	+0.6
214A	Organ Pipe Nat	4.74	113	Pg	Pg	16 03 37.8	+0.6
	baz=296						
R11A	Troy Canyon, C	4.86	23	Pn	Pn	16 03 20.2	+1.6
	baz=204						
R11A				Pg	Pg	16 03 36.5	-2.8
	baz=204						
LCMT	Little Creek M	4.96	50		Pn	16 03 21.9	+1.9
KVN	Kaiserville	5.16	359		Pn	16 03 25.5	+2.7
KNB	Kanab	5.23	52		Pn	16 03 25.6	+1.8
U15A	North Rim	5.30	60		Pn	16 03 26.8	+2.1
X16A	Lo Mia Camp, P	5.44	83		Pn	16 03 27.4	+0.8
MSU	Marysvale	6.58	44	Pn	Pn	16 03 43.9	+1.7
W18A	Petrified Fore	6.91	77	Pn	Pn	16 03 47.3	+0.6

IDC 29 16:10:15.1±6.5, **17.°70S**×**173.°06W**, **h0**^{km}, **mb3.6**/2, **mb1 4.0**/3, **mb1mx3.5**/43, **mbtmp3.8**/3, **ML4.3**/1, **MS3.6**/1, **Ms1 3.6**/1, **ms1mx2.6**/38, **Error ellipse: s-maj=223.4km s-min=33.0km az=131.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.96	18	Pn	Pn	16 11 17.4	+0.2
	21nm,0.3s,baz=220,slow=3.0,SNR=53						
AFI				Sn	Sn	16 11 48.6	-16
	59nm,0.3s,baz=63,slow=21,SNR=18						
RAO	Raoul Island	12.33	200	LR	LR	16 17 26.7	
	comp=Z,286nm,18.6s,baz=132,slow=35						
WRA	Warramunga Arr	49.68	259	P	P	16 19 08.3	-0.8
	0.2nm,0.3s,baz=97,slow=6.8,SNR=8.8						
ASAR	Alice Springs	49.75	254	P	P	16 19 10.2	+0.5
	0.7nm,0.3s,baz=91,slow=7.5,SNR=62						
BRTR	Keskin Array B	148.12	319	PKPbc	PKPbc	16 30 02.4	-0.8
	1.0nm,0.9s,baz=325,slow=1.8,SNR=1.8						

ISC 29 16:11:46.9±1.0, **49.°83N**±0.°05×**18.°54E**±0.°03, **h0**^{km}, **n11**, σ**0.^{s}85**/20, **Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.25	273	*e*PG	Pg	16 11 52.8	+1.1
OKC				*e*SG	Sg	16 11 56.4	+1.5
	comp=Z,21nm,0.4s						
MORC	Moravsky Berou	0.65	266	*e*PG	Pg	16 11 59.9	+0.7
MORC				*e*SG	Sg	16 12 08.1	+0.5
OJC	Ojcow	0.90	64	*e*Pg	Pg	16 12 03.8	-0.4
OJC				*e*Sg	Sg	16 12 15.8	-0.1
JAVC	Velka Javorina	1.12	211	*e*PG	Pg	16 12 09.0	+0.6
NIE	Niedzica	1.22	109	*e*Pg	Pg	16 12 10.6	+0.3
NIE				*e*Sg	Sb	16 12 28.0	+0.9
VYHS	Vyhne	1.35	171	*e*PG	Pg	16 12 11.6	-1.1
VYHS				*e*SG	Sg	16 12 31.2	+1.0
VRAC	Vranov	1.37	248	*e*PG	Pg	16 12 12.7	-0.4
VRAC				*e*SG	Sg	16 12 30.2	-0.6
DPC	Dobruska-Polom	1.52	291	*e*PG	Pn	16 12 15.2	-0.2
DPC				*e*SG	Sn	16 12 35.6	-0.3

	comp=Z,3.2nm,0.3s						
KRUC	**Moravsky**	1.59	242	*e*PG	**Pn**	**16 12 16.2**	**-0.1**
KRUC				*e*SG	**Sn**	**16 12 37.4**	**-0.2**
PRU	**Pruhonice**	2.59	275	*e*SG	**Sg**	**16 13 09.6**	**-0.3**
KHC	**Kasperske Hory**	3.31	260	*e*PG	**Pg**	**16 12 48.5**	**-1.7**
KHC				*e*SG	**Sg**	**16 13 32.3**	**-0.8**

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*IDC **29** 16:18:32.5±1.1, 1°.45N×126°.18E, h0^{km}, mb3.6/5, mb1 3.7/7, mb1mx3.5/41, mbtmp3.6/7, ML3.3/2, MS3.1/1, Ms1 3.1/1, ms1mx2.4/38, Error ellipse: s-maj=55.7km s-min=18.8km az=67.0*

*DJA **29** 16:18:36.1±0.4, 2°N±4°×12°6E±°, h10^{km}, M3.7/9, MLv3.7/9*

ISC 29 16:18:38.7±1.0**, 1°.60N**±0°.10×**126°.51E**±0°.06**, h47^{km}, n13, σ1^{s}.32**/16**, mb3.6**/5**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	1.19	134	P	**Pn**	**16 18 57.0**	**-2.0**
TNTI				S	**Sn**	**16 19 15.7**	**+1.7**
LBMI	**Labuha**	2.44	156	P	**Pn**	**16 19 15.9**	**-0.2**
LBMI				S	**Sn**	**16 19 46.3**	**+1.7**
KMSI	**Cibinong**	2.72	248	P	**Pn**	**16 19 19.6**	**-0.4**
KMSI				S	**Sn**	**16 19 53.1**	**+1.4**
SANI	**Sanana**	3.66	188	P	**Pn**	**16 19 32.0**	**-0.9**
LUWI	**Luwuk**	4.56	235	P	**Pn**	**16 19 44.8**	**-0.5**
MRSI	**Marisa**	4.70	256	P	**Pn**	**16 19 46.6**	**-0.5**
SIJI	**Sorong**	5.35	117	Pn	**Pn**	**16 19 58.0**	**+1.9**
	0.6nm,0.3s,baz=290,slow=20,SNR=2.4						
FITZ	**Fitzroy Crossi**	19.59	182	P	**P**	**16 23 02.0**	**-1.1**
	0.1nm,0.3s,baz=339,slow=14,SNR=2.0						
WRA	**Warramunga Arr**	22.75	161	P	**P**	**16 23 35.5**	**-1.6**
	1.7nm,0.4s,baz=340,slow=11,SNR=30						
ASAR	**Alice Springs**	26.13	164	P	**P**	**16 24 07.8**	**-0.8**
	0.8nm,0.4s,baz=348,slow=13,SNR=21						
ASAR				LR	LR	16 34 50.2	
	comp=Z,36nm,19.2s,baz=103,slow=38						
SONM	**Songino Array**	49.24	342	P	**P**	**16 27 23.9**	**+1.3**
	0.2nm,0.5s,baz=156,slow=7.3,SNR=2.3						
MKAR	**Makanchi Array**	59.18	326	P	**P**	**16 28 34.3**	**-0.6**
	0.4nm,0.4s,baz=118,slow=7.8,SNR=12						
VNDA	**Vanda**	81.36	173	P	**P**	**16 30 49.9**	**0.0**
	0.3nm,0.5s,baz=330,slow=5.5,SNR=1.6						

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*IDC **29** 16:24:43.8±0.4, 30°.87N×110°.74E, h0^{km}, mb4.7/31, mb1 4.8/35, mb1mx4.8/43, mbtmp4.7/35, ML4.4/4, MS3.7/18, Ms1 3.7/18, ms1mx3.5/40, Error ellipse: s-maj=12.8km s-min=9.3km az=65.0*

*BJI **29** 16:24:44.6±0.0, 30°.91N×110°.78E, h5^{km}, mB4.8/33, mb4.6/49, ML5.0/28, Ms4.6/67, Ms7 4.4/54*

*MOS **29** 16:24:45.0±1.0, 30°.87N×110°.77E, h19^{km}, mb5.1/42, MS4.0/6, Error ellipse: s-maj=6.3km s-min=3.9km az=113.3*

*NEIC **29** 16:24:46.9±1.3, 30°.84N±0°.06×110°.79E±0°.07, h20^{km}, mb5.1/98, Error ellipse: s-maj=9.2km s-min=7.4km az=136.0*

ISC 29 16:24:46.4±0.6**, 30°.92N**±0°.03×**110°.75E**±0°.03**, h15^{km}**±3^{km}**, n447, σ1^{s}.29**/447**, mb5.0**/147**, MS3.8**/23**, 61C-16D, Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENH	**Enshi**	1.26	240	Pn	**Pn**	**16 25 09.3**	**-0.2**
ENH				Sn	**Sb**	**16 25 25.4**	**-0.5**
WHN	**Wuhan**	3.13	96	⇓Pn	**Pn**	**16 25 34.0**	**-1.1**
WHN				Pg	**Pb**	**16 25 42.3**	**+0.6**
WHN				Sn	**Sn**	**16 26 13.0**	**+0.9**
WHN				Sg	**Sg**	**16 26 25.5**	**-1.4**
WHN				smax	smax		
	comp=N,16µm,1.2s						
WHN				smax	smax		
	comp=E,6µm,0.6s						
XAN	**Xi'an**	3.47	334	Pn	**Pn**	**16 25 41.0**	**+1.1**
XAN				Pg	**Pg**	**16 25 51.5**	**-1.5**
XAN				Sn	**Sb**	**16 26 26.0**	**-3.6**
XAN				Sg	**Sg**	**16 26 35.5**	**-2.5**
XAN				smax	smax		
	comp=N,4µm,0.8s						
XAN				smax	smax		
	comp=E,4µm,0.9s						
XAN				LR	LR		
	comp=N,11µm,6.9s						
XAN				LR	LR		
	comp=E,12µm,6.5s						
XAN				LR	LR		
	comp=Z,6µm,5.7s						
XAN	**Xi'an**	3.47	334	P	**Pn**	**16 25 40.8**	**+0.8**
XAN	**Xi'an**	3.47	334		**Pn**	**16 25 40.8**	**+0.8**
GYA	**Guiyang**	5.71	220	Pn	**Pn**	**16 26 12.0**	**+1.3**
GYA				Sn	**Sn**	**16 27 18.8**	**+2.7**
GYA				Sg	**Sg**	**16 27 47.5**	**-2.2**
GYA				smax	smax		
	comp=N,1µm,0.8s						
GYA				smax	smax		
	comp=E,730nm,0.9s						
CD2	**Chengdu**	6.00	272	Pn	**Pn**	**16 26 15.5**	**+0.8**
CD2				Sn	**Sn**	**16 27 24.0**	**+0.8**
CD2				Sg	**Sg**	**16 27 59.5**	**+0.4**
CD2				smax	smax		
	comp=N,2µm,1.0s						
CD2				smax	smax		
	comp=E,2µm,1.0s						
TIY	**Taiyuan**	6.92	11	*e*Pn	**Pn**	**16 26 30.5**	**+3.2**
TIY				LR	LR		
	comp=N,2µm,4.6s						
TIY				LR	LR		
	comp=E,2µm,5.7s						
TIY				LR	LR		
	comp=Z,1µm,7.7s						
NJ2	**Nanjing**	7.02	79	*e*Pn	**Pn**	**16 26 28.5**	**-0.1**
NJ2				Pg	**Pb**	**16 26 51.0**	**+3.0**
NJ2				Sg	Sb	16 28 21.5	+10
NJ2				LR	LR		
	comp=N,960nm,5.2s						
NJ2				LR	LR		
	comp=E,2µm,5.4s						
NJ2				LR	LR		
	comp=Z,1µm,7.1s						
TIA	**Tai'an**	7.50	44	Pn	**Pn**	**16 26 35.5**	**+0.3**
TIA				LR	LR		
	comp=N,2µm,7.3s						
TIA				LR	LR		
	comp=E,3µm,10.7s						
TIA				LR	LR		
	comp=Z,3µm,9.7s						
LZH	**Lanzhou**	7.73	314	*e*Pn	**Pn**	**16 26 39.3**	**+0.8**
LZH				Sn	**Sn**	**16 28 01.8**	**-4.1**
LZH				smax	smax		
	comp=N,2µm,1.3s						
LZH				smax	smax		
	comp=E,1µm,1.2s						
LZH				LR	LR		
	comp=N,4µm,6.5s						
LZH				LR	LR		
	comp=E,3µm,8.7s						
LZH				LR	LR		
	comp=Z,4µm,7.1s						
SSE	**Sheshan**	8.96	86	P	**Pn**	**16 26 55.8**	**+0.5**
SSE				S	**Sn**	**16 28 37.3**	**+1.3**
SSE				pmax	pmax		
	comp=Z,16nm,0.7s						
SSE				LR	LR		
	comp=N,1µm,12.4s						
SSE				LR	LR		
	comp=E,2µm,6.7s						
HKPS	**Hong Kong Po S**	9.12	160		**Pn**	**16 26 55.2**	**-2.3**
KMI	**Kunming**	9.13	233	P	**Pn**	**16 26 59.5**	**+1.7**
KMI				pP		16 27 03.3	
KMI				sP		16 27 05.5	
KMI				S	**Sn**	**16 28 43.5**	**+3.1**
KMI				pmax	pmax		
	comp=Z,180nm,0.8s						
KMI				pmax	pmax		
	comp=Z,170nm,3.1s						
KMI				LR	LR		
	comp=N,3µm,5.0s						
KMI				LR	LR		
	comp=E,970nm,5.6s						
KMI				LR	LR		
	comp=Z,1µm,5.5s						
QZH	**Quanzhou**	9.14	129	⇑*i*P	**Pn**	**16 26 57.0**	**-0.7**
QZH				S	**Sn**	**16 28 36.3**	**-4.0**
QZH				smax	smax		
	comp=N,300nm,1.0s						
QZH				smax	smax		
	comp=E,200nm,0.9s						
QZH				LR	LR		
	comp=N,1µm,5.9s						
QZH				LR	LR		
	comp=E,1µm,6.4s						
QZH				LR	LR		
	comp=Z,2µm,6.5s						
BTO	**Baotou**	9.69	357	*e*P	**Pn**	**16 27 09.5**	**+4.2**
HHC	**Hu-ho-hao-te**	9.93	4	*e*P	**Pn**	**16 27 12.5**	**+3.8**
HHC				pmax	pmax		
	comp=Z,1µm,3.7s						
HHC				LR	LR		
	comp=N,3µm,7.8s						
HHC				LR	LR		
	comp=E,1µm,8.3s						
HHC				LR	LR		
	comp=Z,2µm,7.3s						
BJI	**Beijing**	10.12	24	P	**Pn**	**16 27 13.0**	**+1.9**
BJI				S	Sn	16 29 13.5	+9.2
BJI				LR	LR		
	comp=N,1µm,10.3s						
BJI				LR	LR		
	comp=E,730nm,15.7s						
SLVN	**Son La**	11.35	214		**Pn**	**16 27 27.3**	**-0.8**
SSLB	**Suanglung**	11.52	126		**Pn**	**16 27 29.4**	**-0.9**
TPUB	**Ta-pu**	11.62	128		**Pn**	**16 27 31.2**	**-0.5**
QIZ	**Qiongzhong**	11.87	184	P	**Pn**	**16 27 34.5**	**-0.6**
QIZ				S	**Sn**	**16 29 50.5**	**+3.2**
QIZ				LR	LR		
	comp=N,1µm,7.4s						
QIZ				LR	LR		
	comp=E,2µm,8.8s						
QIZ				LR	LR		
	comp=Z,1µm,8.2s						
YULB	**Yu-li**	12.01	126		**Pn**	**16 27 37.4**	**+0.3**
TWG	**Pinlang**	12.24	129		**Pn**	**16 27 40.6**	**+0.4**
GTA	**Gaotai**	12.31	316	*e*P	**Pn**	**16 27 39.3**	**-1.9**
GTA				pP	P	16 27 43.5	-10
GTA				sP		16 27 46.8	
GTA				S	**Sn**	**16 29 56.8**	**-1.4**
GTA				SS	**SnSn**	**16 30 12.3**	**+1.9**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,31nm,5.8s						
GTA				LR	LR		
	comp=N,840nm,8.9s						
GTA				LR	LR		
	comp=E,700nm,10.7s						
GTA				LR	LR		
	comp=Z,980nm,12.0s						
TJN	**Taejon**	14.87	64	⇓*e*P	**Pn**	**16 28 16.1**	**+0.1**
SNY	**Shenyang**	14.99	40	⇑P	**P**	**16 28 24.3**	**+1.2**
SNY				S	**S**	**16 31 22.3**	**+1.3**
KS19	**Wonju Array Si**	15.60	61	P	**P**	**16 28 27.9**	**-2.0**
KSRS	**Korea Array**	15.63	61	Pn	**Pn**	**16 28 27.5**	**+1.4**
	3.3nm,0.3s,baz=244,slow=11,SNR=97						
KSRS				Lg	Lg	16 32 57.6	
	0.2nm,0.3s,baz=250,slow=28,SNR=4.7						
KSRS				LR	LR	16 34 55.5	
	comp=Z,249nm,21.0s,baz=256,slow=39						
CHTO	**Chiang Mai**	16.11	224	P	**Pn**	**16 28 33.4**	**+1.1**
CHTO				pmax	pmax		
	comp=Z,19nm,0.9s						
CHTO	**Chiang Mai**	16.11	224		**Pn**	**16 28 33.4**	**+1.1**
UBPT	**Khong Chiam**	16.30	198		**Pn**	**16 28 34.9**	**+0.1**
UBPT				IAmb	IAmb	16 28 39.8	
	comp=Z,100nm,1.0s						
CM31	**Chiang Mai Arr**	16.38	224	P	**P**	**16 28 38.5**	**-0.2**
CMAR	**Chiang Mai Arr**	16.38	224	Pn	**Pn**	**16 28 36.1**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=34,slow=9.6,SNR=43						
CMAR				LR	LR	16 35 51.0	
	comp=Z,196nm,18.1s,baz=42,slow=41						
CMAR	**Chiang Mai Arr**	16.38	224	P	**P**	**16 28 38.2**	**-0.5**
PBKT	**Sadao Pong**	16.84	214	P	**P**	**16 28 43.8**	**+0.1**
LSA	**Lhasa**	16.97	271	P	**Pn**	**16 28 42.5**	**-1.2**
LSA				S	**S**	**16 32 00.5**	**-1.9**
LSA				pmax	pmax		
	comp=Z,41nm,0.8s						
LSA				LR	LR		
	comp=Z,3µm,11.0s						
LSA				LR	LR		
	comp=Z,3µm,8.9s						
LSA				LR	LR		
	comp=Z,4µm,8.2s						
LSA	**Lhasa**	16.97	271	Pn	**Pn**	**16 28 43.1**	**-0.6**
LSA	**Lhasa**	16.97	271	P	**Pn**	**16 28 43.1**	**-0.6**
ULN	**Ulaanbaatar**	17.16	352	*ce*P	**Pn**	**16 28 45.1**	**-0.6**
ULN	**Ulaanbaatar**	17.16	352	P	**P**	**16 28 46.8**	**-0.5**
JNU	**Nakatsue**	17.22	77	P	**P**	**16 28 47.5**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=341,slow=17,SNR=2.9						
SONM	**Songino Array**	17.22	350	P	**Pn**	**16 28 46.0**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=166,slow=9.0,SNR=38						
SONM				Lg	Lg	16 33 47.2	
	comp=Z,0.3nm,0.3s,baz=171,slow=13,SNR=3.2						
SONM				LR	LR	16 36 09.4	
	comp=Z,333nm,20.4s,baz=169,slow=40						
SONM	**Songino Array**	17.22	350	P	**P**	**16 28 47.7**	**-0.2**
SONM				pmax	pmax		
	comp=Z,27nm,1.2s						
SONM	**Songino Array**	17.22	350	P	**P**	**16 28 47.7**	**-0.2**
CN2	**Changchun**	17.34	38	*e*P	**P**	**16 28 49.5**	**+0.4**
CN2				*e*S	**Sn**	**16 32 01.8**	**+1.3**
CN2				pmax	pmax		
	comp=Z,30nm,1.0s						
CN2				LR	LR		
	comp=Z,500nm,9.0s						
CN2				LR	LR		
	comp=Z,400nm,9.0s						
CN2				LR	LR		
	comp=Z,600nm,9.0s						
BRDH	**Bariadhala**	18.91	249	P	**P**	**16 29 06.5**	**0.0**
	comp=Z,38nm,0.3s,baz=267,slow=20,SNR=1.8						
BRDH				LR	LR	16 36 08.7	
	comp=Z,119nm,21.7s,baz=90,slow=36						
MSHR	**Mys Shultsa**	20.02	49	⇓*e*P	Pn	16 29 19.9	-0.4
MDJ	**Mudanjiang**	20.16	42	P	Pn	16 29 22.0	0.0
MDJ				pmax	pmax		
	comp=Z,15nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,170nm,3.9s						
ZAK	**Zakamensk**	20.23	346	*e*P	**P**	**16 29 21.7**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,46nm,1.2s						
TAPN	**Taplejung**	20.43	266	*e*P	Pn	16 29 24.5	-1.1
	comp=Z,486nm,1.3s						
VLA	**Vladivostok**	20.75	48	⇓*e*P	Pn	16 29 27.9	-1.0
ODAN	**Odare**	20.84	265	*e*P	**P**	**16 29 28.3**	**+0.5**
	comp=Z,116nm,0.4s						
CIT	**Chita**	21.19	5	*e*P	**P**	**16 29 33.1**	**+1.9**
CIT				*e*		16 29 48.8	
CIT				*e*		16 30 10.1	
CIT				pmax	pmax		
	comp=Z,27nm,1.4s						
USRK	**Ussuriysk Ar.**	21.36	46	P	**P**	**16 29 34.4**	**+1.4**
	comp=Z,11nm,0.8s,baz=243,slow=5.5,SNR=13						
USRK				Lg	Lg	16 35 58.5	
	comp=Z,0.7nm,0.5s,baz=170,slow=30,SNR=1.9						
TLY	**Talaya**	21.40	348	P	**P**	**16 29 35.0**	**+1.6**
	comp=Z,13nm,0.7s,baz=171,slow=4.9,SNR=17						
TLY				Lg	Lg	16 35 59.5	
	comp=Z,1.2nm,0.4s,baz=276,slow=21,SNR=3.4						
TLY	**Talaya**	21.40	348	*e*P	**P**	**16 29 35.7**	**+2.3**
TLY				*e*S	**S**	**16 33 34.1**	**+3.7**
TLY				*e*SSS	SSS	16 34 07.7	
TLY				pmax	pmax		
	comp=Z,107nm,1.5s						
TLY				MLR	MLR		
	comp=Z,664nm,10.0s						
RAMN	**Ramite**	21.49	265	*e*P	**P**	**16 29 34.8**	**0.0**
JIRN	**Jiri**	21.65	268	*e*P	**P**	**16 29 36.9**	**+0.2**
	comp=Z,118nm,0.5s						
IRK	**Irkutsk**	21.83	349	*e*P	**P**	**16 29 39.4**	**+1.3**
IRK				pmax	pmax		
	comp=Z,108nm,1.5s						
GUN	**Gumba**	21.86	268	*e*P	**P**	**16 29 39.1**	**+0.2**
	comp=Z,222nm,0.7s						
MOY	**Mondy**	21.95	344	*e*P	**P**	**16 29 40.6**	**+1.2**
MOY				pmax	pmax		
	comp=Z,35nm,1.4s						
WMQ	**Urumqi**	22.31	312	P	**P**	**16 29 44.8**	**+1.5**
WMQ				pP	sP	16 29 49.8	-0.1
WMQ				S	**S**	**16 33 45.5**	**-2.6**
WMQ				pmax	pmax		
	comp=Z,27nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,110nm,5.1s						
WMQ				LR	LR		
	comp=Z,580nm,15.7s						
WMQ				LR	LR		
	comp=Z,430nm,11.7s						
PKI	**Pulchoki**	22.34	268	*e*P	**P**	**16 29 43.6**	**-0.5**
	comp=Z,60nm,0.7s						
PKIN	**Phulchoki**	22.35	268	*e*P	**P**	**16 29 43.6**	**-0.6**
	comp=Z,51nm,0.5s						
KKN	**Kakani**	22.40	268	*e*P	**P**	**16 29 44.1**	**-0.5**
DMN	**Daman**	22.59	268	*e*P	**P**	**16 29 46.2**	**-0.5**
	comp=Z,61nm,0.7s						
GKN	**Gorkha**	22.90	269	*e*P	**P**	**16 29 49.1**	**-0.8**
	comp=Z,183nm,0.8s						
MAT	**Matsushiro**	23.48	69	P	**P**	**16 29 55.6**	**+0.1**
MAT				S	**S**	**16 34 07.6**	**-1.0**
MJAR	**Matsushiro Arr**	23.48	69	P	**P**	**16 29 55.8**	**+0.3**
	comp=Z,2.7nm,0.8s,baz=267,slow=11,SNR=14						
MJAR				PcP	**PcP**	**16 33 38.9**	**-2.3**
	comp=Z,0.3nm,0.5s,baz=152,slow=45,SNR=2.0						
MJAR	**Matsushiro Arr**	23.48	69	P	**P**	**16 29 55.7**	**+0.2**
MJAR					**PcP**	**16 33 38.2**	**-3.0**
DANN	**Dangsing**	23.58	271	*e*P	**P**	**16 29 56.4**	**-0.4**
	comp=Z,118nm,0.6s						
KLR	**Kul'dur**	24.21	35	P	**P**	**16 30 02.7**	**+0.3**
	comp=Z,40nm,0.9s,baz=244,slow=9.9,SNR=91						
KLR				PcP	**PcP**	**16 33 42.7**	**+0.2**
	comp=Z,1.9nm,0.6s,baz=219,slow=5.1,SNR=5.0						
KLR				LR	LR	16 40 27.1	
	comp=Z,210nm,18.4s,baz=230,slow=39						
KLR	**Kul'dur**	24.21	35	*c i*P	**P**	**16 30 02.6**	**+0.3**
KLR				pmax	pmax		
	comp=Z,57nm,1.0s						
TEY	**Ternei**	24.65	48	⇓*e*P	**P**	**16 30 05.2**	**-1.1**
TEY				pmax	pmax		
	comp=N,10.0nm,1.3s						
TEY				pmax	pmax		
	comp=Z,10.0nm,1.1s						
DGZ	**Jazzator, Alta**	25.67	324	*c i*P	**P**	**16 30 17.0**	**+1.3**
DGZ				pmax	pmax		
	comp=Z,30nm,1.0s						
ZEA	**Zeya**	25.74	23	*e*P	**P**	**16 30 17.3**	**+1.2**
ZEA				pmax	pmax		
	comp=N,35nm,1.0s						
ZEA				pmax	pmax		
	comp=E,30nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,44nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,15.0s						
ZEA				MLR	MLR		
	comp=N,500nm,16.0s						
BOD	**Bodaibo**	26.99	4	*e*P	**P**	**16 30 28.1**	**+0.7**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.6s						
MK31	**Makanchi Array**	27.05	314	*e*P	**P**	**16 30 28.6**	**+0.5**
MK31	**Makanchi Array**	27.05	314	P	**P**	**16 30 29.0**	**+0.9**
MKAR	**Makanchi Array**	27.05	314	P	**P**	**16 30 28.7**	**+0.6**
	comp=Z,8.6nm,0.6s,baz=111,slow=10,SNR=102						
MKAR				LR	LR	16 41 21.7	
	comp=Z,130nm,19.3s,baz=114,slow=37						
MAKZ	**Makanchi**	27.25	314	*i* P	**P**	**16 30 30.3**	**+0.4**
MAKZ				pmax	pmax		
	comp=Z,21nm,1.2s						
MAKZ	**Makanchi**	27.25	314	P	**P**	**16 30 30.6**	**+0.8**
DAV	**Davao City (W)**	27.49	147	LR	LR	16 42 42.7	
	comp=Z,148nm,19.7s,baz=4.5,slow=39						
GRNR	**Gornyy**	27.53	37	⇓*i*P	**P**	**16 30 32.9**	**+0.6**
GRNR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GRNR				MLR	MLR		
	comp=Z,200nm,15.0s						
PDGK	**Podgornoye**	27.66	305	*i* P	**P**	**16 30 33.9**	**+0.1**
PDGK				pmax	pmax		
	comp=Z,28nm,0.9s						
JCJ	**Chichijima**	27.71	90	LR	LR	16 41 20.8	
	comp=Z,94nm,21.9s,baz=137,slow=36						
ASAJ	**Asahikawa**	28.30	53	P	**P**	**16 30 40.8**	**+1.5**
	comp=Z,8.2nm,0.8s,baz=261,slow=8.0,SNR=8.9						
JKA	**Kamikawa-asahi**	28.30	53	P	**P**	**16 30 40.8**	**+1.5**
KSM	**Kuching**	29.29	181	P	**P**	**16 30 48.9**	**+0.7**
YSS	**Yuzh-Sakhalins**	29.34	48	*e*P	**P**	**16 30 48.8**	**+0.3**
YSS				*e*		16 33 56.0	
YSS				MLR	MLR		
	comp=Z,500nm,14.0s						
YSS				MLR	MLR		
	comp=E,400nm,11.0s						
KSH	**Kashi**	29.53	296	P	**P**	**16 30 54.8**	**+4.4**
KSH				sP	sP	16 31 01.8	+4.6
KSH				S	**S**	**16 35 49.3**	**+4.6**
KSH				sS	sS	16 35 56.3	+3.4
KSH				ScS	**ScS**	**16 41 32.5**	**+1.0**
KSH				pmax	pmax		
	comp=E,42nm,0.8s						
KSH				pmax	pmax		
	comp=E,140nm,5.5s						
KSH				LR	LR		
	comp=E,900nm,13.1s						
KSH				LR	LR		
	comp=E,530nm,15.3s						
KSH				LR	LR		
	comp=E,490nm,13.4s						
ZAA0	**Zalesovo Array**	29.63	328	P	**P**	**16 30 51.1**	**+0.2**
ZAA0				IAmb	IAmb	16 30 52.2	
	comp=Z,20nm,0.8s						
ZALV	**Zalesovo Beam**	29.63	328	P	**P**	**16 30 51.2**	**+0.3**
	comp=Z,16nm,0.6s,baz=125,slow=8.8,SNR=77						
ZALV	**Zalesovo Beam**	29.63	328	P	**P**	**16 30 51.5**	**+0.6**
ZALV	**Zalesovo Beam**	29.63	328	P	**P**	**16 30 51.5**	**+0.6**
ULHL	**Ulahol**	29.73	302	P	**P**	**16 30 53.9**	**+1.7**
	SNR=13						
PSI	**Prapat**	30.11	204	P	**P**	**16 30 55.6**	**-0.1**
	comp=Z,8.1nm,0.8s,baz=17,slow=4.5,SNR=7.0						
PSI				LR	LR	16 45 15.1	
	comp=Z,84nm,18.8s,baz=354,slow=41						
RPSI	**Rantau Prapat**	30.21	204	P	**P**	**16 30 55.6**	**-0.8**
TKM2	**Tokmak 2**	30.33	303	P	**P**	**16 30 59.2**	**+1.7**
	SNR=16						
KZA	**Kyzart**	30.43	301	P	**P**	**16 31 00.5**	**+1.9**
	SNR=9.7						
KBK	**Karagaybulak**	30.75	302	P	**P**	**16 31 03.2**	**+2.0**
	SNR=12						
KURK	**Kurchatov**	30.98	319	*c i*P	**P**	**16 31 03.2**	**+0.3**
KURK				pmax	pmax		
	comp=Z,11nm,1.3s						
KURK	**Kurchatov**	30.98	319	P	**P**	**16 31 03.1**	**+0.3**
KURBB	**Kurchatov Arra**	30.99	319	P	**P**	**16 31 03.1**	**+0.1**
UCH	**Uchtor**	30.99	302	P	**P**	**16 31 05.7**	**+2.0**
	SNR=21						
AAK	**Ala-Archa**	31.08	302	P	**P**	**16 31 05.8**	**+1.7**
	SNR=8.1						
AAK	**Ala-Archa**	31.08	302	*i* P	**P**	**16 31 05.5**	**+1.4**
	SNR=14						
AAK	**Ala-Archa**	31.08	302	*i* P	**P**	**16 31 05.5**	**+1.4**
	SNR=14						
AAK	**Ala-Archa**	31.08	302	*d i*P	**P**	**16 31 05.6**	**+1.5**
AAK				pmax	pmax		
	comp=Z,12nm,1.3s						
AAK	**Ala-Archa**	31.08	302	P	**P**	**16 31 05.7**	**+1.5**
USP	**Ospenovka**	31.19	303	P	**P**	**16 31 06.5**	**+1.5**
	SNR=9.5						
AML	**Almayashu**	31.58	301	P	**P**	**16 31 10.6**	**+1.8**
	SNR=34						
EKS2	**Erkin-Say**	31.60	302	P	**P**	**16 31 10.3**	**+1.6**
	SNR=11						
MPSI	**Mapaga**	31.63	162	P	**P**	**16 31 10.4**	**+1.5**
	comp=Z,8.4nm,1.2s						
NIL	**Nilore**	31.70	285	P	**P**	**16 31 10.0**	**+0.5**
NIL				pmax	pmax		
	comp=Z,15nm,0.8s						
NIL	**Nilore**	31.70	285	P	**P**	**16 31 10.0**	**+0.5**
NIL				IAmb	IAmb	16 31 10.9	
	comp=Z,15nm,0.8s						
GSI	**Gunungsitoli**	31.99	205	P	**P**	**16 31 11.2**	**-0.9**
	comp=Z,71nm,0.7s						
GSI	**Gunungsitoli**	31.99	205	P	**P**	**16 31 10.1**	**-2.0**
GSI				IAmb	IAmb	16 31 21.7	
	comp=Z,11nm,0.6s						
MRSI	**Marisa**	32.09	159	P	**P**	**16 31 17.4**	**+4.5**
KUR	**Kuril'sk**	32.22	53	P	**P**	**16 31 15.7**	**+1.8**
KUR				MLR	MLR		
	comp=E,176nm,16.0s						

KUR				MLR	MLR		
	comp=Z,193nm,16.0s						
PCI	**Palu**	32.81	163	P	P	16 31 27.5	+8.2
APSI	**Ampana**	33.31	160	P	P	16 31 26.0	+2.4
	comp=Z,418nmcomp=Z,45nm,1.2s						
YAK	**Yakutsk**	33.47	16	LR	LR	16 46 06.9	
	comp=Z,91nm,21.1s,baz=218,slow=38						
YAK	**Yakutsk**	33.47	16	eP	P	16 31 23.9	-0.7
YAK				e*PP	pP	16 31 27.3	-2.2
YAK				e		16 32 36.5	
YAK				e		16 34 03.7	
YAK				eS	S	16 36 43.7	-1.8
YAK				e*SS	pS	16 36 48.1	-2.6
YAK				eSS	SnSn	16 38 46.6	-1.0
YAK				e		16 41 53.5	
YAK				pmax	pmax		
	comp=Z,35nm,0.9s						
YAK				pmax	pmax		
	comp=N,11nm,1.2s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,63nm,4.3s						
YAK				pmax	pmax		
	comp=N,33nm,4.0s						
YAK				pmax	pmax		
	comp=E,22nm,3.7s						
YAK				smax	smax		
	comp=N,34nm,2.5s						
YAK				smax	smax		
	comp=E,26nm,3.0s						
YAK				MLR	MLR		
	comp=Z,279nm,14.0s						
YAK				MLR	MLR		
	comp=N,225nm,14.0s						
YAK				MLR	MLR		
	comp=E,120nm,13.0s						
YAK	**Yakutsk**	33.47	16	P	P	16 31 24.0	-0.7
LUWI	**Luwuk**	33.78	158	P	P	16 31 33.6	+5.9
GAR	**Garm**	33.88	295	P	P	16 31 29.6	+1.0
GAR				IAmb	IAmb	16 31 30.3	
	comp=Z,26nm,0.9s						
KK31	**Karatay Array**	34.04	302	eP	P	16 31 30.6	+0.7
KKAR	**Karatay Array**	34.04	302	P	P	16 31 30.4	+0.5
KKAR	**Karatay Array**	34.04	302	P	P	16 31 30.4	+0.5
KKAR	**Karatay Array**	34.04	302	IAmb	IAmb	16 31 32.4	
	comp=Z,8.8nm,0.8s						
KBL	**Kabul**	35.09	287	P	P	16 31 39.5	+0.2
KBL				pmax	pmax		
	comp=Z,43nm,1.3s						
KBL	**Kabul**	35.09	287	P	P	16 31 39.5	+0.2
KBL				IAmb	IAmb	16 31 42.4	
	comp=Z,43nm,1.3s						
LBMI	**Labuha**	35.19	150	P	P	16 31 42.7	+2.7
	comp=Z,32nm,1.3s						
SPSI	**Sidrap Palu**	35.74	164	P	P	16 31 45.5	+0.8
	comp=Z,28nm,1.0s						
MDSI	**Maura Dua**	35.76	191	P	P	16 31 44.8	0.0
	comp=Z,15nm,1.1s						
PALK	**Pallekele**	36.65	236	P	P	16 31 51.5	-1.1
PALK	**Pallekele**	36.65	236	P	P	16 31 51.5	-1.1
BRVK	**Borovoye**	36.65	319	c iP	P	16 31 52.8	+0.6
BRVK				pmax	pmax		
	comp=Z,20nm,1.3s						
BRVK	**Borovoye**	36.65	319	P	P	16 31 52.7	+0.6
BRVK				IAmb	IAmb	16 31 54.0	
	comp=Z,36nm,1.5s						
KAPI	**Kappang**	36.75	165	P	P	16 31 53.4	+0.1
	comp=Z,8.3nm,0.6s,baz=299,slow=9.1,SNR=5.3						
SIJI	**Sorong**	37.15	145	P	P	16 31 56.3	-0.5
	comp=Z,4.1nm,0.6s,baz=354,slow=2.5,SNR=5.9						
LEM	**Lembang**	37.65	185	P	P	16 31 59.5	-1.7
	comp=Z,11nm,0.6s,baz=40,slow=12,SNR=4.0						
LEM	**Lembang**	37.65	185	P	P	16 32 01.6	+0.5
	comp=Z,13nm,1.0s						
MA2	**Magadan**	39.19	31	deP	P	16 32 13.4	-0.1
MA2				pmax	pmax		
	comp=Z,12nm,1.0s						
PETK	**Petropavlovsk-**	40.40	43	LR	LR	16 48 44.4	
	comp=Z,164nm,18.2s,baz=241,slow=36						
NRIK	**Noril'sk**	40.68	348	P	P	16 32 26.6	+0.8
	comp=Z,38nm,0.9s,baz=139,slow=7.6,SNR=79						
NRIK	**Noril'sk**	40.68	348	i P	P	16 32 26.0	+0.3
NRIK				pmax	pmax		
	comp=Z,56nm,1.1s						
MMRI	**Maumere**	40.84	162	P	P	16 32 28.6	+1.0
	comp=Z,39nm,1.1s						
SEY	**Seymchan**	41.54	27	⇑eP	P	16 32 33.2	+0.3
TIXI	**Tiksi**	41.96	8	LR	LR	16 51 47.4	
	comp=Z,125nm,18.7s,baz=206,slow=39						
TIXI	**Tiksi**	41.96	8	ceP	P	16 32 34.9	-1.3
TIXI				pmax	pmax		
	comp=Z,18nm,1.3s						
TIXI	**Tiksi**	41.96	8	P	P	16 32 35.7	-0.4
ABKAR	**Akbulak array**	42.09	311	P	P	16 32 38.6	+1.0
SOEI	**Soe**	42.47	160	P	P	16 32 52.7	+12
SVE	**Sverdlovsk**	43.11	322	deP	P	16 32 46.8	+1.1
SVE				pmax	pmax		
	comp=Z,63nm,0.9s						
GEYT	**Alibeck**	43.49	294	P	P	16 32 50.1	+0.9
	comp=Z,14nm,1.0s,baz=86,slow=4.9,SNR=29						
GEYT				LR	LR	16 53 06.5	
	comp=Z,72nm,19.8s,baz=80,slow=39						
GYA0B	**ALIBECK ARRAY**	43.49	294	P	P	16 32 50.0	+0.8
ARU	**Arti**	44.12	321	c iP	P	16 32 54.4	+0.5
ARU						16 34 35.1	
ARU				S	S	16 39 31.1	+5.1
ARU				SS	ScS	16 42 49.0	-2.8
ARU				pmax	pmax		
	comp=Z,48nm,0.9s						
ARU	**Arti**	44.12	321	P	P	16 32 54.5	+0.5
WBK	**Wadi Bani Khal**	46.62	273	P	P	16 33 15.1	+0.8
WSAR	**Wadi Sarin**	46.68	274	P	P	16 33 15.6	+0.9
JMDO	**Jabal Madar**	47.45	273	P	P	16 33 21.7	+0.9
MTN	**Manton Dam**	47.72	153	P	P	16 33 22.0	-0.7
MTN				IAmb	IAmb	16 33 27.7	
	comp=Z,8.8nm,0.8s						
BANOM	**Banah**	47.75	278	P	P	16 33 24.1	+1.0
BANOM	**Banah**	47.75	278	P	P	16 33 24.1	+1.0
BANOM	**Banah**	47.75	278	P	P	16 33 25.0	+1.9
MSFE	**Esma-Masafi**	48.06	278	P	P	16 33 27.5	+2.0
MSFE	**Esma-Masafi**	48.06	278	P	P	16 33 27.5	+2.0
MHTO	**MHTO**	48.10	271	P	P	16 33 26.1	+0.4
	SNR=7.1						
MHTO				P	P	16 33 26.1	+0.4
	SNR=7.1						
UOSS	**Minazif**	48.16	277	P	P	16 33 26.3	+0.1
UOSS	**Minazif**	48.16	277	P	P	16 33 26.3	+0.1
HATD	**Hatta, Dubai**	48.26	277	P	P	16 33 28.6	+1.6
HATD	**Hatta, Dubai**	48.26	277	P	P	16 33 28.6	+1.6
ASHO	**Ashiyiah**	48.38	277	i P	P	16 33 29.3	+1.4
	SNR=9.7						
ASHO	**Ashiyiah**	48.38	277	i P	P	16 33 29.3	+1.4
	SNR=9.7						
BILL	**Bilibino**	48.95	24	⇑eP	P	16 33 31.0	-0.7
BILL				e		16 34 54.7	
BILL				e		16 35 24.1	
BILL				pmax	pmax		
	comp=Z,10.0nm,1.7s						
BILL				MLR	MLR		
	comp=Z,182nm,19.0s						
KIRV	**Kirov**	49.34	323	i P	P	16 33 35.1	+0.3
KNRA	**Kununurra**	49.46	157	P	P	16 33 35.4	-0.7
KNRA				IAmb	IAmb	16 33 40.0	
	comp=Z,20nm,0.8s						
FITZ	**Fitzroy Crossi**	50.80	162	P	P	16 33 45.1	-1.0
	comp=Z,3.8nm,0.9s,baz=352,slow=3.9,SNR=5.8						
FITZ	**Fitzroy Crossi**	50.80	162	P	P	16 33 44.8	-1.4
AKT	**Akhty**	50.92	300	eP	P	16 33 48.0	+0.8
AKT				e		16 35 46.0	
AKT				pmax	pmax		
	comp=Z,27nm,1.0s						
PRGR	**Permogore**	51.55	326	eP	P	16 33 50.6	-0.8
PRGR				pmax	pmax		
	comp=Z,37nm,0.8s						
LGD	**Lagodekhi**	51.96	301	P	P	16 33 56.2	+1.4
PSA00	**Pilbara Seismi**	52.92	169	P	P	16 33 58.7	-3.2
WHFO	**Wadi Hawf**	52.97	270	P	P	16 34 01.7	-0.9
	SNR=9.8						
GUDG	**Gudauri**	53.14	302	P	P	16 34 05.5	+1.7
KZRT	**Kazreti**	53.40	301	P	P	16 34 06.8	+1.2
ZEI	**Tsey**	53.50	303	eP	P	16 34 04.5	-1.9
ZEI				pmax	pmax		
	comp=Z,13nm,0.9s						
NCK	**Nalchik**	53.59	304	⇓eP	P	16 34 07.7	+0.8
NCK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ABTO	**Aybut**	53.62	269	P	P	16 34 06.3	-1.1
ABTO				P	P	16 34 06.3	-1.1
GOF	**Gofitskoye**	53.72	306	⇑iP	P	16 34 08.7	+1.0
GOF				pmax	pmax		
	comp=Z,73nm,0.9s						
VRH	**Novokhopyorsk**	53.77	313	eP	P	16 34 08.0	0.0
VRH				pmax	pmax		
	comp=Z,100nm,0.7s						
ONI	**Oni**	53.86	302	P	P	16 34 11.7	+2.8
BGD	**Bogdanovka**	54.02	301	P	P	16 34 13.1	+2.8
KBZ	**Khabaz**	54.05	304	P	P	16 34 10.2	+0.1
	comp=Z,11nm,0.8s,baz=118,slow=5.3,SNR=14						
AKH	**Akhalkalaki**	54.06	301	⇑P	P	16 34 12.0	+1.4
AKH	**Akhalkalaki**	54.06	301	P	P	16 34 12.7	+2.1
KIV	**Kislovodsk**	54.16	304	⇑P	P	16 34 13.0	+1.9
KIV	**Kislovodsk**	54.16	304	i P	P	16 34 12.8	+1.7
	SNR=7.2						
KIV	**Kislovodsk**	54.16	304	i P	P	16 34 12.8	+1.7
	SNR=7.2						
KIV	**Kislovodsk**	54.16	304	eP	P	16 34 11.6	+0.5
KIV				pmax	pmax		
	comp=Z,129nm,1.0s						
NEY	**Neytrino**	54.26	303	⇓eP	P	16 34 14.3	+2.3
NEY				pmax	pmax		
	comp=Z,4.0nm,0.7s						
COEN	**Coen**	54.43	140	P	P	16 34 12.7	-0.5
COEN				IAmb	IAmb	16 36 43.3	
	comp=Z,26nm,1.4s						
KLMR	**Klimovskoe**	54.46	325	eP	P	16 34 10.4	-2.4
KLMR				pmax	pmax		
	comp=Z,49nm,0.8s						
KLMR	**Klimovskoe**	54.46	325	eP	P	16 34 10.5	-2.4
KLMR				AMP		16 34 13.7	
	comp=Z,49nm,0.8s						
TMCR	**Tamitsa**	55.15	329	eP	P	16 34 16.1	-1.7
TMCR				pmax	pmax		
	comp=Z,25nm,0.6s						
WB0	**Warramunga Arr**	55.28	153	P	P	16 34 18.8	-0.5
WB0				IAmb	IAmb	16 34 22.5	
	comp=Z,35nm,1.4s						
LPSR	**Galich'ya Gora**	55.34	315	eP	P	16 34 19.5	+0.1
LPSR				pmax	pmax		
	comp=Z,40nm,0.7s						
VSR	**Storozhevoye**	55.37	314	eP	P	16 34 19.2	-0.4
VSR				pmax	pmax		
	comp=Z,60nm,1.1s						
SOCY	**Socotra**	55.40	263	P	P	16 34 18.1	-2.4
	SNR=9.6						
SOCY	**Socotra**	55.40	263	P	P	16 34 18.2	-2.3
SOCY				IAmb	IAmb	16 34 19.2	
	comp=Z,32nm,1.3s						
WRAB	**Tennant Creek**	55.41	153	ceP	P	16 34 19.8	-0.4
WRAB				pmax	pmax		
	comp=Z,28nm,1.0s						
WRA	**Warramunga Arr**	55.42	153	P	P	16 34 19.7	-0.6
	comp=Z,13nm,0.9s,baz=340,slow=7.8,SNR=41						
WRA				PcP	PcP	16 35 20.1	-0.4
	comp=Z,1.6nm,0.6s,baz=335,slow=4.2,SNR=0.9						
WRA	**Warramunga Arr**	55.42	153	P	P	16 34 19.0	-1.3
WB2	**Warramunga Arr**	55.42	153	P	P	16 34 20.0	-0.3
WB2				IAmb	IAmb	16 34 24.3	
	comp=Z,19nm,0.8s						
WR0	**Warramunga Arr**	55.51	153	P	P	16 34 20.1	-0.9
WR0				IAmb	IAmb	16 34 24.2	
	comp=Z,30nm,1.4s						
MOS	**Moscow**	55.75	319	eP	P	16 34 22.2	-0.1
MOS				pmax	pmax		
	comp=Z,57nm,0.6s						
OBN	**Obninsk**	56.42	318	ceP	P	16 34 27.0	0.0
OBN				e		16 35 22.1	
OBN				e		16 36 34.1	
OBN				ePPP	PPP	16 37 46.8	
OBN				pmax	pmax		
	comp=Z,43nm,1.3s						
OBN				MLR	MLR		
	comp=Z,89nm,18.0s						
LVZ	**Lovozero**	56.54	334	P	P	16 34 28.2	+0.4
LVZ				pmax	pmax		
	comp=Z,127nm,1.5s						
LVZ	**Lovozero**	56.54	334	P	P	16 34 28.2	+0.4
GAMB	**Gambell**	57.29	31	P	P	16 34 32.9	-0.2
GAMB				IAmb	IAmb	16 34 34.3	
	comp=Z,12nm,1.1s						
ANN	**Anapa**	57.67	306	eP	P	16 34 28.5	-7.6
ANN				e*PP	pP	16 34 33.6	-7.6
ANN				eSSS	SSS	16 48 48.5	
ANN				pmax	pmax		
	comp=Z,82nm,1.2s						
MALT	**Malatya**	58.60	299	P	P	16 34 44.4	+1.5
ASAR	**Alice Springs**	58.64	155	P	P	16 34 42.9	-0.2
	comp=Z,9.3nm,0.7s,baz=340,slow=6.5,SNR=127						
ASAR				PcP	PcP	16 35 32.5	-0.6
	comp=Z,3.5nm,0.8s,baz=340,slow=5.0,SNR=4.5						
ASAR	**Alice Springs**	58.64	155	P	P	16 34 43.0	-0.1
KEV	**Kevo**	59.21	336	P	P	16 34 46.0	-0.4
KEV				pmax	pmax		
	comp=Z,124nm,1.5s						
KEV	**Kevo**	59.21	336	P	P	16 34 46.0	-0.4
ARCES	**ARCESS Array B**	59.76	336	P	P	16 34 50.7	+0.4
	comp=Z,3.8nm,0.4s,baz=79,slow=8.6,SNR=36						
ARCES	**ARCESS Array B**	59.76	336	P	P	16 34 49.7	-0.5
ARE0	**ARCESS Array S**	59.76	336	P	P	16 34 50.4	+0.1
ANM	**Nome**	59.95	30	P	P	16 34 51.6	-0.1
ANM				pmax	pmax		
	comp=Z,11nm,1.1s						
ANM	**Nome**	59.95	30	P	P	16 34 51.6	-0.1
ANM				IAmb	IAmb	16 34 53.1	
	comp=Z,11nm,1.1s						
OUL	**Oulu**	60.28	331	P	P	16 34 55.2	+1.4
OUL				pmax	pmax		
	comp=Z,39nm,0.8s						
FIA1	**FINESS Array S**	60.87	327	P	P	16 34 57.4	-0.6
FIA1				IAmb	IAmb	16 34 58.8	
	comp=Z,12nm,0.8s						
FINES	**FINESS Array B**	60.87	327	P	P	16 34 57.9	0.0
	comp=Z,7.8nm,0.7s,baz=106,slow=9.6,SNR=37						
FINES				LR	LR	17 02 46.4	
	comp=Z,114nm,18.3s,baz=98,slow=38						
FINES	**FINESS Array B**	60.87	327	P	P	16 34 57.6	-0.3
CTA	**Charters Tower**	61.12	141	P	P	16 35 00.1	-0.1
	comp=Z,3.6nm,0.8s,baz=358,slow=6.6,SNR=5.3						
VSU	**Vasula**	61.18	323	d iP	P	16 35 00.2	+0.1
VSU				pmax	pmax		
	comp=Z,94nm,1.0s						
AKASG	**Malin Array Be**	61.63	314	P	P	16 35 03.1	-0.2
	comp=Z,6.9nm,0.5s,baz=63,slow=6.9,SNR=32						
AKASG				LR	LR	17 04 44.6	
	comp=Z,53nm,19.0s,baz=65,slow=39						
AKASG	**Malin Array Be**	61.63	314	i P	P	16 35 03.0	-0.2
AKASG				pmax	pmax		
	comp=Z,14nm,0.6s						
AKASG	**Malin Array Be**	61.63	314	P	P	16 35 02.8	-0.5
AKBB	**Malin Array Si**	61.63	314	P	P	16 35 02.5	-0.8
AKBB				pmax	pmax		
	comp=Z,13nm,0.6s						
AKBB	**Malin Array Si**	61.63	314	P	P	16 35 02.5	-0.8
AKBB				IAmb	IAmb	16 35 03.5	
	comp=Z,13nm,0.6s						
BR131	**Keskin Array S**	61.75	301	P	P	16 35 04.7	+0.3
BR131	**Keskin Array S**	61.75	301	P	P	16 35 04.5	0.0
BR131				pmax	pmax		
	comp=Z,15nm,1.0s						
BR131	**Keskin Array S**	61.75	301	P	P	16 35 04.5	0.0
BR131				IAmb	IAmb	16 35 05.8	
	comp=Z,15nm,0.9s						
BRTR	**Keskin Array B**	61.75	301	P	P	16 35 04.8	+0.2
	comp=Z,9.9nm,0.9s,baz=111,slow=7.4,SNR=31						
BRTR	**Keskin Array B**	61.75	301	P	P	16 35 03.1	-1.4
NACGM	**Naroch**	61.99	319	e	P	16 35 06.0	+0.3
VAF	**Ylistaro**	62.08	329	P	P	16 35 11.0	+4.9
VAF				pmax	pmax		
	comp=Z,14nm,1.4s						
SORM	**Soroca**	62.88	312	⇑P	P	16 35 10.8	-0.9
SORM	**Soroca**	62.88	312	⇑P	P	16 35 10.8	-0.9
TLCR		63.46	308	⇑P	P	16 35 15.7	+0.1
TLCR		63.46	308	⇑P	P	16 35 15.7	+0.1
TOPG	**Topolog**	63.85	308	⇑P	P	16 35 18.7	+0.5
CFR	**Carcaliu**	63.92	309	⇑P	P	16 35 16.1	-2.5
CFR	**Carcaliu**	63.92	309	⇑P	P	16 35 16.1	-2.5
TIRR	**Tirgusor**	63.96	308	⇑P	P	16 35 19.1	+0.2
TIRR	**Tirgusor**	63.96	308	⇑P	P	16 35 19.1	+0.2
HARR	**Harsova**	64.21	308	⇑P	P	16 35 20.9	+0.3
HARR	**Harsova**	64.21	308	⇑P	P	16 35 20.9	+0.3
IMAR	**Indian Mountai**	64.36	27	P	P	16 35 21.5	+0.3
TTA	**Tatalina**	64.38	30	P	P	16 35 22.0	+0.5
TTA	**Tatalina**	64.38	30	P	P	16 35 22.0	+0.5
TESR	**Tescani**	64.48	310	⇑P	P	16 35 22.1	-0.3
VRI	**Vrincioaia**	64.64	310	⇑P	P	16 35 24.5	+1.1
VRI	**Vrincioaia**	64.64	310	⇑P	P	16 35 24.5	+1.1
PLOR	**Plostina**	64.69	310	⇑P	P	16 35 25.4	+1.6
PLOR	**Plostina**	64.69	310	⇑P	P	16 35 25.4	+1.6
BIZ	**Bicaz**	64.70	311	⇑P	P	16 35 24.0	+0.2
BISRR	**Bisoca**	64.75	309	⇑P	P	16 35 25.6	+1.4
TOLK	**Toolik Lake Re**	64.99	23	P	P	16 35 25.4	+0.1
TOLK	**Toolik Lake Re**	64.99	23	P	P	16 35 25.3	-0.1
	baz=291						
BURAR	**Bucovina Array**	65.05	312	⇑P	P	16 35 25.7	-0.5
BURAR	**Bucovina Array**	65.05	312	⇑P	P	16 35 25.7	-0.5
BURAR	**Bucovina Array**	65.05	312	P	P	16 35 26.6	+0.4
BUR08	**Bucovina Ar. S**	65.05	312	P	P	16 35 26.7	+0.6
BUR08				IAmb	IAmb	16 35 27.6	
	comp=Z,11nm,0.8s						
LVV	**L'vov**	65.08	315	eP	P	16 35 26.1	0.0
SVW2	**Sparrevohn**	65.16	32	P	P	16 35 27.5	+1.0
OZUR		65.18	310	⇓P	P	16 35 27.7	+0.7
MLR	**Muntele Rosu**	65.28	310	⇑P	P	16 35 29.0	+1.2
MLR	**Muntele Rosu**	65.28	310	P	P	16 35 28.4	+0.7
MLR				pmax	pmax		
	comp=Z,13nm,0.6s						
MLR	**Muntele Rosu**	65.28	310	P	P	16 35 28.4	+0.7
DOPR	**Dopca**	65.49	310	⇑P	P	16 35 29.3	+0.4
KLNR	**Kaliningrad**	65.72	320	⇑eP	P	16 35 29.7	-0.5
KLNR				pmax	pmax		
	comp=Z,88nm,1.8s						
MLY	**Manley**	65.86	27	P	P	16 35 31.9	+0.8
VOIR		65.89	310	⇑P	P	16 35 31.6	0.0
VOIR		65.89	310	⇑P	P	16 35 31.6	0.0
KWP	**Kalwaria Pacla**	65.95	315	P	P	16 35 32.5	+0.7
PPLA	**Purkeypile**	66.04	30	P	P	16 35 33.3	+0.9
ARR	**Arges**	66.19	310	⇓P	P	16 35 34.2	+0.7
ELND	**Elena**	66.21	307	⇑P	P	16 35 34.2	+0.6
KTH	**Kantishna Hill**	66.33	29	IAmb	IAmb	16 35 37.1	
	comp=Z,23nm,1.1s						
UZH	**Uzhgorod**	66.55	314	eP	P	16 35 34.8	-0.8
UZH				e		16 35 38.7	
UZH				e		16 35 45.8	
TRPA	**Tarpa**	66.57	313	⇑P	P	16 35 36.0	+0.2
TRF	**Thorofare Moun**	66.64	29	IAmb	IAmb	16 35 39.1	
	comp=Z,19nm,1.4s						
MDM	**Murphy Dome**	66.88	27	P	P	16 35 38.4	+0.9
DRGR		66.94	312	⇑P	P	16 35 38.2	-0.1
DRGR		66.94	312	⇑P	P	16 35 38.2	-0.1
TCOL	**CIGO, UAF Yank**	67.06	27	P	P	16 35 39.0	+0.4
	baz=294						
COLA	**College**	67.06	27	P	P	16 35 39.0	+0.4
COLA				pmax	pmax		
	comp=Z,44nm,0.8s						
COLA	**College**	67.06	27	P	P	16 35 39.0	+0.4
MCK	**McKinley**	67.08	28	IAmb	IAmb	16 35 43.4	
	comp=Z,8.5nm,0.9s						
POKR	**Poker Plat Res**	67.12	27	P	P	16 35 39.6	+0.6
	baz=294						
WRH	**Wood River Hil**	67.13	27	P	P	16 35 38.9	-0.1
WRH				IAmb	IAmb	16 35 40.9	
	comp=Z,20nm,1.1s						
CCB	**Clear Creek Bu**	67.17	27	P	P	16 35 39.4	+0.1
CCB				IAmb	IAmb	16 35 40.3	
	comp=Z,10nm,0.7s						
BMAR	**Burnt Mountain**	67.19	24	P	P	16 35 40.4	+0.9
RND	**Reindeer**	67.25	29	IAmb	IAmb	16 35 40.5	
	comp=Z,18nm,1.0s						
PLD	**Plovdiv**	67.31	306	P	P	16 35 42.2	+1.6
PLD				pmax	pmax		
	comp=Z,57nm,1.5s						
FYU	**Fort Yukon**	67.34	25	IAmb	IAmb	16 35 42.1	
	comp=Z,19nm,1.1s						
GZR	**Gura Zlata**	67.40	310	⇑P	P	16 35 41.3	+0.1
GZR	**Gura Zlata**	67.40	310	⇑P	P	16 35 41.3	+0.1
IL31		67.48	27	IAmb	IAmb	16 35 43.3	
	comp=Z,8.2nm,0.9s						
ILAR	**Eielson Array**	67.48	27	P	P	16 35 40.6	-0.7
	comp=Z,6.3nm,0.9s,baz=280,slow=5.7,SNR=42						
ILAR				LR	LR	17 06 59.3	
	comp=Z,50nm,18.4s,baz=252,slow=38						
NIE	**Niedzica**	67.49	315	eP	P	16 35 42.6	+0.9
NIE	**Niedzica**	67.49	315	eP	P	16 35 42.6	+0.9
OJC	**Ojcow**	67.50	316	eP	P	16 35 42.0	+0.3
OJC	**Ojcow**	67.50	316	eP	P	16 35 42.0	+0.3
HDA	**Harding Lake**	67.61	27	IAmb	IAmb	16 35 42.6	
	comp=Z,18nm,1.1s						
HDA	**Harding Lake**	67.61	27	P	P	16 35 41.4	-0.7
	baz=295						
RC01	**Rabbit Creek A**	67.80	31	IAmb	IAmb	16 35 44.5	
	comp=Z,7.9nm,1.0s						
NORES	**NORESS Array B**	67.81	328	P	P	16 35 42.4	-1.0
NORES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRLK	**Bradley Lake**	67.81	33	IAmb	IAmb	16 35 45.0	
	comp=Z,23nm,1.2s						
HERR	**Herculane**	67.83	310	⇑P	P	16 35 44.5	+0.6
NB2	**NORSAR Subarra**	67.83	329	P	P	16 35 42.6	-1.0
	comp=Z,5.1nm,0.7s,baz=66,slow=6.5						
NOA	**NORSAR Array B**	67.83	329	P	P	16 35 42.5	-1.0
	comp=Z,3.5nm,0.6s,baz=66,slow=6.2,SNR=36						
NOA				LR	LR	17 06 01.2	
	comp=Z,81nm,18.5s,baz=80,slow=36						
PMR	**Palmer**	67.87	31	IAmb	IAmb	16 35 44.4	
	comp=Z,16nm,0.8s						
NC204	**NORSAR Array S**	67.93	329	IAmb	IAmb	16 35 53.7	
	comp=Z,18nm,1.1s						
BZS	**Buzias**	68.08	311	⇑P	P	16 35 44.5	-0.9
BZS	**Buzias**	68.08	311	⇑P	P	16 35 44.5	-0.9
VTS	**Vitosha**	68.13	307	⇑P	P	16 35 46.1	+0.1
VTS	**Vitosha**	68.13	307	⇑P	P	16 35 46.1	+0.1
DAG	**Danmarks Havn**	68.17	349	i P	P	16 35 44.0	-1.4
	comp=Z,3.3nm,0.7s						
DAG	**Danmarks Havn**	68.17	349	i P	P	16 35 44.0	-1.4
DAG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KNK	**Knik Glacier**	68.23	31	IAmb	IAmb	16 35 47.6	
	comp=Z,16nm,1.2s						
PSZ	**Piszkesteto**	68.30	314	⇑P	P	16 35 47.6	+0.7
PSZ	**Piszkesteto**	68.30	314	⇑P	P	16 35 47.6	+0.7
SCM	**Sheep Creek Mo**	68.55	30	IAmb	IAmb	16 35 50.7	
	comp=Z,23nm,1.2s						
OKC	**Ostrava-Krasne**	68.63	316	eP	P	16 35 49.2	+0.4
OKC	**Ostrava-Krasne**	68.63	316	eP	P	16 35 49.2	+0.4
VYHS	**Vyhne**	68.73	314	eP	P	16 35 50.1	+0.6
VYHS				pmax	pmax		
	comp=Z,15nm,1.2s						
VYHS	**Vyhne**	68.73	314	eP	P	16 35 50.1	+0.6
STKA	**Stephens Creek**	68.96	152	P	P	16 35 50.6	-0.2
	comp=Z,9.2nm,0.8s,baz=339,slow=7.0,SNR=15						
STKA	**Stephens Creek**	68.96	152	P	P	16 35 50.7	-0.2
SCRK	**Sand Creek**	68.96	27	P	P	16 35 50.3	-0.5
MORC	**Moravsky Berou**	69.01	316	⇑P	P	16 35 50.5	-0.8
MORC	**Moravsky Berou**	69.01	316	⇑P	P	16 35 50.5	-0.8
MORC	**Moravsky Berou**	69.01	316	eP	P	16 35 51.6	+0.4
JAVC	**Velka Javorina**	69.30	315	eP	P	16 35 54.6	+1.5
GRG	**Griva**	69.35	306	P	P	16 35 53.9	+0.4
FID	**Port Fidalgo**	69.39	31	IAmb	IAmb	16 35 54.3	
	comp=Z,19nm,1.0s						
FRGS	**Fruska Gora**	69.43	311	eP	P	16 35 47.3	-6.6
DPC	**Dobruska-Polom**	69.50	317	eP	P	16 35 55.1	+0.8
DPC	**Dobruska-Polom**	69.50	317	eP	P	16 35 55.1	+0.8
MENT	**Mentasta**	69.55	28	IAmb	IAmb	16 35 55.7	
	comp=Z,9.6nm,0.9s						
LIT	**Litokhoron**	69.63	305	IAmb	IAmb	16 35 59.9	
	comp=Z,8.9nm,1.0s						
EGAK	**Eagle**	69.66	26	IAmb	IAmb	16 35 56.6	
	comp=Z,11nm,1.0s						
DIVS	**Divibare**	69.73	310	⇑iP	P	16 35 55.6	-0.2
MODS	**Modra-Piesok**	69.73	315	eP	P	16 35 55.1	-0.6
MODS				pmax	pmax		
	comp=Z,13nm,1.2s						
MODS	**Modra-Piesok**	69.73	315	eP	P	16 35 55.1	-0.6
MORH	**Mrgy, Hungar**	69.75	312	⇑iP	P	16 35 55.8	0.0
VRAC	**Vranov**	69.77	316	⇓P	P	16 35 56.4	+0.5
VRAC	**Vranov**	69.77	316	⇓P	P	16 35 56.4	+0.5
VRAC	**Vranov**	69.77	316	eP	P	16 35 56.4	+0.5
KRUC	**Moravsky**	69.99	316	eP	P	16 35 57.7	+0.5
BBLS	**Lazići**	70.21	310	⇑iP	P	16 35 58.9	+0.1
GLB	**Gilahina Butte**	70.22	29	IAmb	IAmb	16 36 02.0	
	comp=Z,14nm,1.0s						
BCAR	**Beaver Creek A**	70.26	27	P	P	16 35 59.7	+0.9
RUDO	**Rudo**	70.34	310	eP	P	16 35 59.3	-0.2
A36M	**Sachs Harbour**	70.34	16	P	P	16 35 58.2	-0.8

	baz=311						
INK	Inuvik	70.37	21	P	P	16 35 58.9	-0.3
INK				pmax	pmax		
	comp=Z,25nm,0.8s						
INK	Inuvik	70.37	21	P	P	16 35 58.9	-0.3
HAPS	Han Pijesak,Bl	70.42	310	⇑*i*P	P	16 35 59.6	-0.5
SOP	Sopron	70.46	314	P	P	16 36 01.2	+1.1
SOP				pmax	pmax		
	comp=Z,13nm,1.0s						
VRDI	Verde Repeater	70.47	30	IAmb	IAmb	16 36 01.6	
	comp=Z,9.5nm,1.0s						
BRG	Berggiesshubel	70.67	318	*e*P	P	16 36 01.6	+0.3
	comp=Z,11nm,1.3s						
BRG	Berggiesshubel	70.67	318	*e*P	P	16 36 01.6	+0.3
BRG				pmax	pmax		
	comp=Z,11nm,1.3s						
DAWY	Dawson	70.68	26	IAmb	IAmb	16 36 02.6	
	comp=Z,26nm,1.2s						
PRU	Pruhonice	70.70	317	*e*P	P	16 36 01.8	+0.3
PRU	Pruhonice	70.70	317	*e*P	P	16 36 01.8	+0.3
CONA	Conrad Observa	70.78	315	*e*P	P	16 36 02.8	+0.6
	comp=Z,7.0nm,1.0s						
PDG	Podgorica	70.91	308	*e*P	P	16 36 02.9	0.0
CLL	Collm	71.02	319	*i* P	P	16 36 04.3	+0.9
	comp=Z,13nm,1.1s						
CLL				*i* (sP)	sP	16 36 15.2	+4.7
CLL				*e*PP	PP	16 38 40.0	-0.4
CLL	Collm	71.02	319	*i* P	P	16 36 04.3	+0.9
CLL				pmax	pmax		
	comp=Z,13nm,1.1s						
BALM	Baldy	71.04	30	IAmb	IAmb	16 36 07.0	
	comp=Z,9.9nm,1.0s						
DRME	Dracevica, Mon	71.05	308	⇑*i*P	P	16 36 04.1	+0.2
BRY	Bratogost	71.19	309	*e*P	P	16 36 05.0	+0.2
ARSA	Arzberg	71.28	314	*e*P	P	16 36 05.1	-0.1
	comp=Z,5.9nm,0.9s						
TREB	Trebinje	71.39	309	*e*P	P	16 36 05.6	-0.3
HCY	Herceg Novi	71.41	309	*e*P	P	16 36 04.8	-1.2
CTGM	Chitina Glacie	71.50	29	IAmb	IAmb	16 36 08.2	
	comp=Z,11nm,1.0s						
MGRS	Mrkonjic Grad	71.50	311	*e*P	P	16 36 07.4	+0.8
KHC	Kasperske Hory	71.63	317	*e*P	P	16 36 07.3	0.0
KHC	Kasperske Hory	71.63	317	*e*P	P	16 36 07.3	0.0
GERES	GERESS Array B	71.69	316	P	P	16 36 08.1	+0.4
	comp=Z,3.5nm,0.9s,baz=69,slow=4.9,SNR=22						
MOA	Molln	71.78	315	*e*P	P	16 36 08.6	+0.4
	comp=Z,7.2nm,0.9s						
PERS	Pernice	71.79	314	*i* P	P	16 36 08.2	-0.1
SOKA	Soboth	71.83	314	*e*P	P	16 36 08.6	0.0
	comp=Z,7.5nm,0.9s,SNR=6.4						
WET	Wettzell	72.04	317	P	P	16 36 12.6	+2.9
BOJS	Bojanci	72.20	313	*i* P	P	16 36 11.1	+0.4
C36M	Paulatuk	72.40	18	P	P	16 36 10.3	-1.1
	baz=312						
CEY	Cerknica	72.62	313	*e*P	P	16 36 13.1	-0.1
KBA	Koelnbreinsper	72.69	315	*e*P	P	16 36 13.8	0.0
	comp=Z,2.5nm,0.5s						
KBA	Koelnbreinsper	72.69	315	P	P	16 36 15.9	+2.1
KBA				pmax	pmax		
	comp=Z,11nm,0.9s						
GRF	Grafenberg Arr	72.76	318	*e*P	P	16 36 14.2	+0.3
	comp=Z,9.8nm,1.2s,baz=63,slow=5.6						
SKDS	Skadanscina	72.96	313	*i* P	P	16 36 14.9	-0.4
HYT	Haines Junctio	73.16	28	IAmb	IAmb	16 36 18.1	
	comp=Z,9.5nm,0.7s						
ABTA	Abfaltersbach	73.35	315	*e*P	P	16 36 16.7	-0.9
	comp=Z,3.0nm,0.7s						
SCO	Scoresbysund	73.40	345	*i* P	P	16 36 15.3	-2.0
SCO	Scoresbysund	73.40	345	*i* P	P	16 36 15.3	-2.0
WTTA	Wattenberg	73.64	316	*e*P	P	16 36 19.3	-0.1
	comp=Z,12nm,1.0s,SNR=5.9						
WATA	Walderalm	73.64	316	*e*P	P	16 36 19.2	-0.2
	comp=Z,13nm,1.4s						
SQTA	Sankt Quirin	73.92	316	*e*P	P	16 36 20.5	-0.5
	comp=Z,7.8nm,0.8s						
MOTA	Moosalm	73.92	316	*e*P	P	16 36 20.4	-0.7
	comp=Z,7.0nm,1.0s						
FETA	Feichten	74.30	316	*e*P	P	16 36 23.4	+0.1
	comp=Z,6.9nm,1.0s						
SUMG	Summit	74.63	351	*i* P	P	16 36 25.0	0.0
	comp=Z,56nm,0.8s						
SUMG	Summit	74.63	351	*i* P	P	16 36 25.0	0.0
SUMG				pmax	pmax		
	comp=Z,56nm,0.8s						
SUMG	Summit	74.63	351	P	P	16 36 24.2	-0.8
AQU	L'Aquila	74.83	310	P	P	16 36 28.3	+2.0
AQU				pmax	pmax		
	comp=Z,29nm,1.1s						
SLE	Schleitheim	75.27	317	P	P	16 36 30.6	+1.9
SLE				pmax	pmax		
	comp=Z,11nm,1.7s						
EKA	Eskdalemuir Ar	77.25	328	P	P	16 36 39.3	-0.5
YKA	Yellowknife Ar	80.07	20	P	P	16 36 54.4	-0.7
	comp=Z,7.3nm,0.7s,baz=326,slow=4.6,SNR=125						
YKA				LR	LR	17 17 22.8	
	comp=Z,35nm,19.3s,baz=0.0,slow=39						
KEST	Kesra	80.85	306	P	P	16 36 59.2	-0.7
	comp=Z,4.8nm,0.8s,baz=254,slow=7.8,SNR=4.2						
KEST	Kesra	80.85	306	IAmb	IAmb	16 39 53.7	
	comp=Z,22nm,1.4s						
SFJD	Kangerlussuaq	81.37	353	*i* P	P	16 37 01.0	-1.0
SFJD	Kangerlussuaq	81.37	353	*i* P	P	16 37 01.0	-1.0
PBRG	Braganca	87.54	318	*e*P	P	16 37 34.8	+1.0
MVO	Moncorvo	88.12	318	*e*P	P	16 37 37.8	+1.2
PVRL	Vila Real	88.44	318	*e*P	P	16 37 39.7	+1.6
PVIS	Viseu	88.91	318	*e*P	P	16 37 42.2	+1.8
MTE	Manteigas	88.91	318	*e*P	P	16 37 41.8	+1.4
PTOM	Tomar	89.92	318	*e*P	P	16 37 46.4	+1.3
FFC	Flin Flon	90.17	18	P	P	16 37 45.6	-0.3
FFC				pmax	pmax		
	comp=Z,15nm,1.0s						
FFC	Flin Flon	90.17	18	P	P	16 37 45.6	-0.3
FFC				IAmb	IAmb	16 37 46.3	
	comp=Z,15nm,0.9s						
NEW	Newport	90.28	30	P	P	16 37 47.4	+0.8
	baz=320						
MSO	Missoula	92.74	29	P	P	16 37 58.6	+0.4
	baz=323						
EGMT	Eagleton	93.43	26	P	P	16 38 01.3	+0.1
	baz=326						
SCHQ	Schefferville	94.58	359	P	P	16 38 05.3	-0.9
	comp=Z,3.1nm,0.9s,baz=65,slow=14,SNR=3.9						
SCHQ	Schefferville	94.58	359	IAmb	IAmb	16 38 11.7	
	comp=Z,12nm,1.3s						
ULM	Lac du Bonnet	95.81	17	P	P	16 38 10.4	-1.5
	comp=Z,1.8nm,0.8s,baz=45,slow=6.4,SNR=3.3						
PDAR	Pinedale Array	97.86	29	P	P	16 38 20.9	-0.8
	comp=Z,0.4nm,0.6s,baz=11,slow=3.0,SNR=4.1						
TXAR	Lajitas Array	111.71	32	PKiKP	PKiKP	16 43 20.0	-1.0
	comp=Z,0.3nm,0.6s,baz=356,slow=2.8,SNR=2.6						
ROSC	El Rosal	144.12	9	PKP	PKPbc	16 44 21.3	+0.6
	comp=Z,31nm,0.7s,baz=182,slow=16,SNR=5.5						
ROSC	El Rosal	144.12	9		PKPdf	16 44 22.4	-0.4
LPAZ	La Paz	165.40	356	PKP	PKPdf	16 44 51.7	0.0
	comp=Z,1.1nm,0.8s,baz=353,slow=1.7,SNR=4.7						

JMA ***29*** *16:30:22.2±0.1, 23°.73N×121°.58E, h29*^{km}*±2*^{km}*, M3.8*
TAP ***29*** *16:30:22.8, 23°.75N×121°.57E, h24*^{km}*, ML4.3, C*
IDC ***29*** *16:30:32.9±6.0, 23°.66N×121°.58E, h124*^{km}*±57*^{km}*,*
mb3.4/12, mb1 3.6/13, mb1mx3.4/34, mbtmp3.8/13, MS3.0/1,
Ms1 3.0/1, ms1mx2.4/31, Error ellipse: s-maj=28.5km
s-min=15.5km az=70.0
ISC 29 16:30:22.6±0.7**, 23°.74N**±0°.02×**121°.60E**±0°.02**, h25**^{km}±4^{km}**,**
n164, σ0^{s}**.91**/255**, mb3.8**/12**, 14C-18D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGFH	Guangfu	0.17	247	P	Pb	16 30 28.1	+0.1
	baz=245						
EGFH				*e*S	Sb	16 30 31.5	0.0
	baz=245						
ENLB	Shoufeng	0.17	2	⇑*i*P	Pb	16 30 27.2	-0.7
	baz=19						
ENLB				*e*S	Sb	16 30 31.6	+0.1
	baz=19						
ESL	Shilin	0.17	298	⇓*i*P	Pb	16 30 27.6	-0.3
	baz=288						
ESL				*e*S	Sb	16 30 31.1	-0.5
	baz=288						
HWA	Hwalien	0.24	2	*e*P	Pb	16 30 29.2	+0.4
	baz=16						
HWA				*e*S	Sb	16 30 34.3	+1.3
	baz=16						
HGSD	Ruisui	0.29	213	⇓*i*P	Pb	16 30 30.3	+0.9
	baz=203						
HGSD				*e*S	Sn	16 30 36.3	-0.4
	baz=203						
EHY	Hungye	0.34	228	⇑*i*P	Pb	16 30 29.9	-0.3
	baz=230						
EHY				*e*S	Sb	16 30 35.3	-0.2
	baz=230						
TWD	Chiawan	0.34	360	⇓*i*P	Pb	16 30 30.4	+0.2
	baz=355						
TWD				*e*S	Sb	16 30 35.7	+0.1
	baz=355						
VWDT	VWDT	0.42	273	⇓*i*P	Pb	16 30 31.5	0.0
	baz=270						
VWDT				*e*S	Sb	16 30 37.2	-0.3
	baz=270						
NACB	Ninganchiao	0.44	360	⇓*i*P	Pb	16 30 31.4	-0.3
	baz=354						
NACB				*e*S	Sb	16 30 38.3	+0.2
	baz=354						
YULB	Yu-li	0.44	219	*e*P	Pb	16 30 31.3	-0.5
	baz=224						
YULB				*e*S	Sb	16 30 37.0	-1.1
	baz=224						
OWD	Renai	0.44	300	⇓*i*P	Pb	16 30 31.5	-0.5
	baz=299						
OWD				*e*S	Sb	16 30 37.2	-1.1
	baz=299						
TWF1	Yuli	0.47	216	*e*P	Pb	16 30 32.0	-0.3
	baz=222						
TWF1				*e*S	Sb	16 30 39.0	+0.1
	baz=222						
ETLH	Xiulin Townshi	0.48	347	⇓*i*P	Pb	16 30 32.0	-0.5
	baz=350						
ETLH				*e*S	Sb	16 30 38.4	-1.0
	baz=350						
CHGB	Renai	0.50	310	⇓*i*P	Pb	16 30 32.7	-0.4
	baz=316						
CHGB				*e*S	Sb	16 30 39.4	-0.7
	baz=316						
WHF	Hehuan Shan	0.51	323	⇓*i*P	Pb	16 30 32.5	-0.7
	baz=325						
WHF				*e*S	Sb	16 30 39.4	-1.1
	baz=325						
SSLB	Suanglung	0.59	275	P	Pb	16 30 33.8	-0.6
	baz=274						
SSLB				*e*S	Sb	16 30 41.2	-1.1
	baz=274						
FULB	Fuli	0.60	208	P	Pb	16 30 34.9	+0.3
	baz=218						
FULB				*e*S	Sb	16 30 43.0	+0.4
	baz=218						
YUS	Yu-Shan	0.64	248	⇑*i*P	Pb	16 30 35.4	-0.1
	baz=245						
YUS				*e*S	Sb	16 30 43.9	-0.3
	baz=245						
TDCB	Techi	0.65	322	⇓*i*P	Pb	16 30 35.2	-0.3
	baz=323						
TDCB				*e*S	Sb	16 30 42.4	-1.9
	baz=323						
SMLT	Sun Moon Lake	0.65	283	⇓*i*P	Pb	16 30 35.2	-0.3
	baz=287						
SMLT				*e*S	Sb	16 30 43.6	-0.6
	baz=287						
CHKT	Chengkung	0.67	199	P	Pb	16 30 36.0	+0.4
	baz=207						
CHKT				*e*S	Sn	16 30 46.0	0.0
	baz=207						
DPDB	Guoxing	0.68	296	⇓*i*P	Pb	16 30 35.7	-0.2
	baz=300						
DPDB				*e*S	Sb	16 30 44.1	-0.8
	baz=300						
WHYT	Xinyi Township	0.68	267	⇑*i*P	Pb	16 30 35.9	+0.1
	baz=265						
WHYT				*e*S	Sb	16 30 44.7	-0.3
	baz=265						
TYC	Yuchr	0.70	284	*e*P	Pb	16 30 35.7	-0.4
	baz=288						
TYC				*e*S	Sb	16 30 43.8	-1.5
	baz=288						
ENA	Nanau	0.70	11	P	Pb	16 30 35.9	-0.3
	baz=1.0						
ENA				*e*S	Sb	16 30 45.5	0.0
	baz=1.0						
NNSB	Datong	0.72	344	⇓*i*P	Pb	16 30 35.9	-0.6
	baz=345						
NNSB				*e*S	Sb	16 30 44.9	-1.1
	baz=345						
NNSH	Datong	0.72	344	*e*P	Pb	16 30 36.1	-0.4
	baz=345						
NNSH				*e*S	Sb	16 30 44.7	-1.3
	baz=345						
NNS	Nan Shan	0.73	344	⇓*i*P	Pb	16 30 36.2	-0.5
	baz=346						
NNS				*e*S	Sb	16 30 45.4	-1.0
	baz=346						
ALS	Alishan	0.76	253	⇑*i*P	Pb	16 30 37.4	+0.1
	baz=251						
ALS				*e*S	Sb	16 30 47.4	0.0
	baz=251						
ELDTW	Lidau	0.76	224	⇑*i*P	Pb	16 30 36.2	-1.0
	baz=216						
ELDTW				*e*S	Sb	16 30 46.1	-1.2
	baz=216						
WJS	Zhushan	0.80	276	*e*P	Pn	16 30 38.5	+0.2
	baz=275						
WJS				*e*S	Sn	16 30 49.6	+0.3
	baz=275						
WHP	Taichung City	0.80	312	⇓*i*P	Pb	16 30 37.8	-0.2
	baz=312						
WHP				*e*S	Sb	16 30 48.4	-0.1
	baz=312						
WNT	Mingjian	0.85	280	⇑*i*P	Pn	16 30 39.2	+0.4
	baz=279						
WNT				*e*S	Sn	16 30 51.1	+0.6
	baz=279						
CHN5	Tsauling	0.85	261	⇑*i*P	Pn	16 30 39.2	+0.2
	baz=260						
CHN5				*e*S	Sn	16 30 50.6	-0.2
	baz=260						
NDT	Datong Townshi	0.87	355	*e*P	Pb	16 30 38.5	-0.5
	baz=356						
NDT				*e*S	Sb	16 30 49.4	-0.8
	baz=356						
TWC	Suao	0.90	15	*e*P	Pb	16 30 39.2	-0.4
	baz=27						
TWC				*e*S	Sb	16 30 50.9	-0.3
	baz=27						
ENTT	Nioudou	0.90	358	*e*P	Pb	16 30 39.0	-0.6
	baz=360						
TCU	Taichung	0.94	296	*e*P	Pn	16 30 40.8	+0.7
	baz=296						
TCU				*e*S	Sn	16 30 53.6	+0.9
	baz=296						
EOS1	EOS1	0.94	31	*e*P	Pn	16 30 41.3	+1.1
	baz=47						
WGK	Gukeng	0.95	267	*e*P	Pn	16 30 40.8	+0.6
	baz=267						
WGK				*e*S	Sn	16 30 53.9	+0.9
	baz=267						
YHNB	Yeheng	0.95	348	⇓*i*P	Pb	16 30 39.9	-0.6
	baz=360						
YHNB				*e*S	Sb	16 30 52.0	-0.8
	baz=360						
STYT	Tauyuan	0.96	234	*e*P	Pb	16 30 40.4	-0.1
	baz=232						
STYT				*e*S	Sb	16 30 52.4	-0.5
	baz=232						
NSK	Sanguang	0.96	347	⇓*i*P	Pb	16 30 40.1	-0.6
	baz=359						
NSK				*e*S	Sb	16 30 52.3	-0.7
	baz=359						
WDLH	Douliu	0.97	267	*e*P	Pn	16 30 41.1	+0.5
	baz=267						
WDLH				*e*S	Sn	16 30 55.0	+1.5
	baz=267						
TWE	Neicheng	0.98	4	*e*P	Pb	16 30 40.0	-1.0
	baz=6.0						
TPUB	Ta-pu	0.99	244	⇑*i*P	Pn	16 30 41.3	+0.5
	baz=243						
TPUB				*e*S	Sn	16 30 54.9	+0.9
	baz=243						
CHN4	Tsaushan	1.00	248	⇑*i*P	Pn	16 30 41.6	+0.7
	baz=246						
CHN4				*e*S	Sn	16 30 56.7	+2.5
	baz=246						
WCHH	Zhanghua	1.01	290	*e*P	Pn	16 30 41.8	+0.7
	baz=290						
WCHH				*e*S	Sn	16 30 56.3	+1.8
	baz=290						
SLBB	Yuanshan	1.01	2	*e*P	Pb	16 30 39.9	-1.6
	baz=3.0						
NSY	Sanyi	1.02	312	*e*P	Pn	16 30 42.5	+1.2
	baz=312						
NSY				*e*S	Sb	16 30 54.6	-0.1
	baz=312						
WTP	Ta-pu	1.02	242	⇑*i*P	Pn	16 30 41.8	+0.5
	baz=248						
WTP				*e*S	Sn	16 30 55.9	+1.0
	baz=248						
TWH	Lutao	1.03	186	⇓*i*P	Pn	16 30 40.6	-0.7
	baz=173						
TWH				*e*S	Sb	16 30 54.5	-0.2
	baz=173						
TWGBT	Beinan	1.03	208	⇑*i*P	Pn	16 30 39.6	-1.8
	baz=207						
TWG	Pinlang	1.03	208	⇑*i*P	Pn	16 30 39.7	-1.7
	baz=207						
ILA	Ilan	1.03	8	*e*P	Pb	16 30 43.0	+1.1
	baz=359						
NWLT	Wulai	1.04	355	*e*P	Pn	16 30 41.3	-0.3
	baz=356						
NSTT	Nanjuang	1.04	329	*e*P	Pb	16 30 42.2	+0.2
	baz=329						
NSTT				*e*S	Sb	16 30 55.0	-0.3
	baz=329						
CHN2	Minshiung	1.05	259	*e*P	Pb	16 30 42.4	+0.4
	baz=259						
CHN2				*e*S	Sn	16 30 57.1	+1.7
	baz=259						
LIOB	Emei	1.05	330	*e*P	Pb	16 30 42.6	+0.5
	baz=323						
LIOB				*e*S	Sn	16 30 55.7	+0.2
	baz=323						
TTN	Taitung	1.06	203	*e*P	Pn	16 30 41.0	-0.7
	baz=202						
WDJ	Dajia District	1.07	305	P	Pb	16 30 43.2	+0.8
	baz=306						
WDJ				*e*S	Sn	16 30 57.9	+2.1
	baz=306						
PTSB	Yuanli	1.08	311	*e*P	Pb	16 30 43.0	+0.4
	baz=312						
PTSB				*e*S	Sn	16 30 57.3	+1.1
	baz=312						
NMLH	Miaoli	1.09	318	*e*P	Pb	16 30 43.0	+0.3
	baz=318						
NMLH				*e*S	Sn	16 30 57.2	+0.8
	baz=318						
CHY	Chiayi	1.10	258	P	Pb	16 30 43.2	+0.3
	baz=257						
CHY				*e*S	Sn	16 30 58.1	+1.4
	baz=257						
TWK	Hsinying	1.12	246	*e*P	Pb	16 30 43.3	0.0
	baz=244						
TWK				*e*S	Sn	16 30 58.5	+1.2
	baz=244						
CHN1	Nanshi	1.12	241	*e*P	Pb	16 30 43.7	+0.4
	baz=252						
CHN1				*e*S	Sn	16 30 59.9	+2.5
	baz=252						
SNST	Tainan City	1.13	243	*e*P	Pb	16 30 43.6	+0.2
	baz=242						
SNST				*e*S	Sn	16 30 58.6	+1.1
	baz=242						
NTC	Toucheng	1.14	11	*e*P	Pb	16 30 44.2	+0.7
	baz=359						
SGST	Jiashian	1.14	235	*e*P	Pn	16 30 42.6	-0.3
	baz=223						
SGST				*e*S	Sn	16 30 58.2	+0.6
	baz=223						
RLNB	Erlin	1.14	278	*e*P	Pb	16 30 43.8	+0.1
	baz=267						
RLNB				*e*S	Sn	16 30 59.5	+1.7
	baz=267						
SLGT	Liugui	1.14	230	P	Pb	16 30 43.8	+0.1
	baz=220						
SLGT				*e*S	Sn	16 30 58.8	+1.0
	baz=220						
WLTB	Daxi	1.16	344	*e*P	Pb	16 30 44.5	+0.6
	baz=356						
WLTB				*e*S	Sn	16 31 00.1	+2.0
	baz=356						
SBCB	Hsinchu	1.19	332	*e*P	Pb	16 30 45.0	+0.5
	baz=318						
SBCB				*e*S	Sn	16 31 01.5	+2.5
	baz=318						
HSN	Hsinchu	1.21	332	*e*P	Pb	16 30 45.4	+0.7
	baz=320						
HSN				*e*S	Sb	16 31 02.1	+2.2
	baz=320						
WLGB	Puzi	1.22	258	*e*P	Pb	16 30 45.0	+0.1
	baz=258						
WLGB				*e*S	Sb	16 31 00.3	+0.1
	baz=258						
NHDH	Xindian Distri	1.22	357	*e*P	Pn	16 30 44.4	+0.3
	baz=356						
NHDH				*e*S	Sn	16 31 00.3	+0.5
	baz=356						
TATO	Taipei	1.24	355	*e*P	Pn	16 30 45.0	+0.7
	baz=7.0						
TWA	Mucha	1.24	359	*e*P	Pn	16 30 44.7	+0.4
	baz=10.0						
TIPB	Shuangxi	1.25	10	*e*P	Pn	16 30 44.5	0.0
	baz=357						
TIPB				*e*S	Sn	16 30 58.7	-1.7
	baz=357						
WMLT	Mailiao	1.26	273	*e*P	Pb	16 30 46.1	+0.5
	baz=264						
WMLT				*e*S	Sb	16 31 03.2	+1.8
	baz=264						
WSF	Szhu	1.26	266	*e*P	Pb	16 30 45.3	-0.4
	baz=266						
WSF				*e*S	Sb	16 31 01.8	+0.3
	baz=266						
ECL	Taimali	1.28	208	*e*P	Pn	16 30 43.1	-1.7
	baz=195						
NCUH	Zhongli	1.28	343	*e*P	Pb	16 30 46.0	-0.1
	baz=342						
NCUH				*e*S	Sb	16 31 03.8	+1.7
	baz=342						
NCU	National Centr	1.28	343	*e*P	Pb	16 30 46.2	+0.1
	baz=343						
NCU				*e*S	Sb	16 31 03.7	+1.5
	baz=343						
TAP	Taipei	1.30	356	*e*P	Pb	16 30 46.9	+0.5
	baz=356						
TAP				*e*S	Sn	16 31 02.3	+0.7
	baz=356						
CHN3	Shinhua	1.31	240	*e*P	Pb	16 30 47.1	+0.6
	baz=239						
TWB1	Santiao Chiao	1.32	16	*e*P	Pb	16 30 46.2	-0.4
	baz=2.0						
CHN8	Yiju	1.33	253	*e*P	Pb	16 30 46.3	-0.5
	baz=253						
CHN8				*e*S	Sb	16 31 04.6	+1.2
	baz=253						
NWF	Wu-fen Shan	1.34	7	*e*P	Pn	16 30 46.6	+0.8
	baz=7.0						
WFSB	Wu-fen Shan	1.34	7	*e*P	Pn	16 30 46.4	+0.7
	baz=7.0						
TWS1	Kuangyinshan	1.37	353	*e*P	Pb	16 30 47.4	-0.1
	baz=5.0						
TWS1				*e*S	Sb	16 31 05.0	+0.4
	baz=5.0						
SCLT	Jiali	1.40	247	*e*P	Pb	16 30 47.8	-0.3
	baz=247						
SCLT				*e*S	Sb	16 31 06.8	+1.3
	baz=247						
YM01	YM01	1.41	359	*e*P	Pn	16 30 47.4	+0.7
	baz=358						
YM01				*e*S	Sn	16 31 04.4	0.0
	baz=358						
TWM1	Shoushan	1.41	230	*e*P	Pb	16 30 49.7	+1.5
	baz=244						
YM04	YM04	1.41	358	*e*P	Pn	16 30 47.0	+0.3
	baz=358						
YM10	YM10	1.42	359	*e*P	Pn	16 30 47.1	+0.3
	baz=359						
YM05	YM05	1.42	359	*e*P	Pn	16 30 46.7	-0.2
	baz=359						
JYNG	Yonagunijimaku	1.42	60	P	Pn	16 30 47.4	+0.6
JYNG				*e*S	Sn	16 31 05.9	+1.2
YM11	YM11	1.42	359	*e*P	Pn	16 30 47.0	+0.1
	baz=359						
MASBT	Mashibuluo	1.43	219	P	Pn	16 30 46.9	+0.1
	baz=218						
NTST	Danshui	1.43	355	*e*P	Pb	16 30 48.5	0.0
	baz=355						

SGLT	Jiouru	1.43	226	eP	Pb	16 30 49.5	+1.0
	baz=215						
SGLT				eS	Sb	16 31 09.3	+2.9
	baz=215						
TAI1	Yung-k'ang	1.44	241	eP	Pn	16 30 47.7	+0.8
	baz=241						
YM08	YM08	1.45	360	eP	Pn	16 30 46.6	-0.5
	baz=360						
ANP	Anpu	1.45	357	eP	Pb	16 30 48.3	-0.6
	baz=357						
YOJ	Yonaguni jima	1.48	60	eP	Pn	16 30 48.2	+0.7
	baz=60						
YOJ				eS	Sn	16 31 07.0	+0.8
	baz=60						
YOJ	Yonaguni jima	1.48	60	P	Pn	16 30 48.3	+0.7
YOJ				eS	Sn	16 31 06.9	+0.8
EAST	Anshuo	1.51	207	eP	Pn	16 30 46.9	-1.2
	baz=197						
TAW	Tawu	1.52	205	eP	Pn	16 30 48.6	+0.6
	baz=193						
SNJT	Kaohsiung City	1.52	230	eP	Pb	16 30 50.6	+0.5
	baz=230						
TWY	Chenhua	1.53	0	eP	Pb	16 30 49.8	-0.5
SSPT	Xinbi	1.56	217	eP	Pb	16 30 50.8	0.0
	baz=217						
SCZT	Fangliau	1.63	214	eP	Pn	16 30 49.9	+0.3
	baz=213						
LAY	Lan-yu	1.69	181	eP	Pn	16 30 49.2	-1.3
	baz=172						
WLCH	Liuqiu	1.78	219	eP	Pb	16 30 54.1	-0.3
	baz=219						
TWP	Hsiaoliuchiu	1.79	220	eP	Pb	16 30 54.4	-0.3
	baz=219						
WDGT	Dungji	1.84	255	eP	Pn	16 30 52.8	+0.3
	baz=255						
PHUB	P'eng-hu	1.87	264	eP	Pn	16 30 53.3	+0.4
	baz=249						
PHUB				eS	Sn	16 31 16.5	+0.8
	baz=249						
PNG	Penghu	1.88	265	eP	Pn	16 30 53.6	+0.6
	baz=265						
HEN	Hengchun	1.90	205	eP	Pb	16 30 55.4	-1.1
	baz=194						
TWK1	Hengchun	1.93	202	eP	Pn	16 30 54.7	+1.0
	baz=192						
TWKBT	Hengchun	1.93	202	eP	Pn	16 30 53.8	0.0
	baz=192						
PCYT	Pengchaiyu	1.94	13	eP	Pn	16 30 55.5	+1.7
	baz=358						
TSEB	Hengchuen, Pin	1.94	200	eP	Pn	16 30 55.1	+1.2
	baz=191						
IRIF	Iriomote-Funau	2.04	73	P	Pn	16 30 56.5	+1.2
IRIF				eS	Sn	16 31 21.0	+1.1
HATJ	Hateruma jima	2.05	81	P	Pn	16 30 56.1	+0.7
HATJ				eS	Sn	16 31 20.4	+0.3
VCHM	Qimei	2.06	256	eP	Pn	16 30 55.3	-0.2
	baz=257						
VCHM				eS	Sn	16 31 21.5	+1.1
	baz=257						
JKRS	Kuro-shima	2.26	77	P	Pn	16 30 59.8	+1.5
JKRS				S	Sn	16 31 27.1	+1.7
VWUC	VWUC	2.32	303	eP	Pn	16 30 58.5	-0.6
	baz=302						
JIJ	Ishigaki jima	2.41	74	P	Pn	16 31 01.0	+0.6
JIJ				S	Sn	16 31 29.2	+0.1
PTTC	Pingtan	2.42	317	eP	Pn	16 31 00.4	-0.1
	baz=316						
PTMZ	Houxiangcun	2.60	300	eP	Pn	16 31 02.6	-0.4
	baz=300						
JISG	Ishigakijimahi	2.62	71	P	Pn	16 31 03.9	+0.6
JISG				S	Sn	16 31 35.0	+0.7
MATB	Ma-tsu	2.83	328	eP	Pn	16 31 06.0	-0.2
	baz=327						
KNM	Kinmen	2.97	284	eP	Pn	16 31 09.5	+1.4
	baz=282						
JTJ	Tarama	2.98	72	P	Pn	16 31 09.3	+1.2
JTJ				S	Sn	16 31 44.3	+1.3
QZH	Quanzhou	2.99	294	⇑iPn	Pn	16 31 08.3	-0.1
QZH				Sn	Sn	16 31 41.0	-2.4
KNMB	Chin-men Tao	3.02	285	eP	Pn	16 31 08.4	-0.3
	baz=284						
LYJJ	Jianjiangzhen	3.26	330	eP	Pn	16 31 12.0	-0.1
	baz=329						
MHZQ	Yeshan	3.31	316	eP	Pn	16 31 12.7	-0.1
	baz=315						
XPSS	Dashiqiu	3.43	338	eP	Pn	16 31 14.4	0.0
	baz=338						
JIRB	Irabujima	3.44	71	P	Pn	16 31 15.4	+0.9
JIRB				S	Sn	16 31 55.4	+0.9
AXDP	Jialang	3.50	290	eP	Pn	16 31 15.8	+0.3
	baz=290						
ZPLA	Ao Xicun	3.53	274	eP	Pn	16 31 15.6	-0.1
	baz=273						
JIKM	Ikemajima	3.54	70	P	Pn	16 31 17.0	+1.2
JIKM				eS	Sn	16 31 57.6	+0.8
JMJ	Miyako jima 2	3.54	72	eP	Pn	16 31 17.2	+1.3
	baz=70						
JMJ2	Miyako jima3	3.55	73	P	Pn	16 31 17.5	+1.4
JMJ2				eS	Sn	16 31 58.0	+0.8
ZZJH	Jiuhuzhen	3.70	282	eP	Pn	16 31 18.4	+0.3
	baz=282						
VDOS	Pratas Island	5.42	237	eP	Pn	16 31 43.8	+1.9
	baz=235						
KSRS	Korea Array	14.71	20	P	P	16 33 55.8	+0.9
	0.3nm,0.3s,baz=194,slow=11,SNR=4.5						
CMAR	Chiang Mai Arr	21.77	260	P	P	16 35 14.7	+2.1
	1.1nm,0.8s,baz=59,slow=8.7,SNR=3.6						
GUMO	Guam	24.21	110	LR	LR	16 44 33.8	
	comp=Z,36nm,19.6s,baz=304,slow=35						
WMQ	Urumqi	34.24	314	eP	P	16 37 07.3	+0.9
MKAR	Makanchi Array	38.92	316	P	P	16 37 46.6	+0.4
	0.8nm,0.8s,baz=111,slow=8.7,SNR=5.5						
ZALV	Zalesovo Beam	40.83	327	P	P	16 38 02.1	+0.2
	0.6nm,0.5s,baz=101,slow=7.7,SNR=3.6						
WRA	Warramunga Arr	45.16	163	P	P	16 38 36.5	-0.8
	0.8nm,0.5s,baz=344,slow=8.7,SNR=5.5						
ASAR	Alice Springs	48.61	165	P	P	16 39 04.3	0.0
	0.6nm,0.5s,baz=339,slow=7.0,SNR=5.6						
STKA	Stephens Creek	58.51	160	P	P	16 40 15.1	-1.7
	0.4nm,0.3s,baz=317,slow=18,SNR=3.0						
ILAR	Eielson Array	69.44	27	P	P	16 41 27.6	-0.6
	0.4nm,0.7s,baz=289,slow=6.9,SNR=5.5						
ARCES	ARCESS Array B	70.09	338	P	P	16 41 32.4	+0.2
	2.6nm,0.8s,baz=60,slow=15,SNR=1.1						
FINES	FINESS Array B	72.02	330	P	P	16 41 43.5	-0.5
	3.8nm,1.1s,baz=76,slow=12,SNR=1.8						
NOA	NORSAR Array B	78.80	332	P	P	16 42 22.1	-0.9
	0.6nm,0.9s,baz=56,slow=8.0,SNR=2.3						
YKA	Yellowknife Ar	83.23	23	P	P	16 42 45.7	-0.8
	0.6nm,0.7s,baz=313,slow=4.4,SNR=9.1						
GERES	GERESS Array B	83.43	321	P	P	16 42 46.6	-1.3
	0.2nm,0.4s,baz=51,slow=5.2,SNR=2.9						

IDC 29 16:39:32.2±3.2**,7°.86S**×**117°.25E,h0km,mb3.4**/3**,**
mb1 3.7/3**,mb1mx3.3**/39**,mbtmp3.5**/3**,Error ellipse:**
s-maj=255.4km s-min=28.0km az=51.0,Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	20.45	128	P	P	16 44 11.7	+0.2
	1.6nm,0.3s,baz=302,slow=12,SNR=34						
ASAR	Alice Springs	22.41	136	P	P	16 44 32.4	-0.2
	0.9nm,0.5s,baz=313,slow=9.2,SNR=35						
MKAR	Makanchi Array	62.66	334	P	P	16 49 58.7	0.0
	0.2nm,0.6s,baz=152,slow=6.5,SNR=2.2						

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*MOS **29** 16:42:22.5±1.1,48°.06N×154°.73E,h49km,mb4.2/9,Error ellipse: s-maj=10.5km s-min=3.7km az=69.4*
*SKHL **29** 16:42:22.3±0.5,47°.84N×155°.02E,h53km±3km,mb5.3/5, msh5.0/5*
*NEIC **29** 16:42:26.1±1.8,48°.1N±0°.1×154°.6E±0°.2,h62km±7km, mb4.4/30,Error ellipse: s-maj=19.1km s-min=11.3km az=141.0*
*IDC **29** 16:42:27.2±2.6,48°.11N×154°.47E,h75km±24km,mb3.6/19, mb1 3.8/25,mb1mx3.6/46,mbtmp3.9/25,MS3.1/9, Ms1 3.1/9,ms1mx2.8/37,Error ellipse: s-maj=19.6km s-min=11.0km az=146.0*
ISC 29 16:42:23.4±0.5**,47°.90N**±0°.06×**154°.90E**±0°.06**,h42km,n156,**
σ**1ˢ.50**/164**,mb4.2**/37**,MS3.1**/6**,4C-4D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.90	16	eP	Pn	16 43 06.6	-0.4
SKR				AMB	AMB	16 43 07.0	
	30nm,0.4s						
SKR				AMB	AMB	16 43 08.5	
	720nm,3.0s						
SKR				eS	Sn	16 43 39.5	-1.0
SKR				A	A	16 43 45.0	
	3µm,4.0s						
SKR				A	A	16 43 45.0	
	3µm,4.0s						
SKR				A	A	16 43 47.6	
	260nm,0.4s						
SKR				A	A	16 43 47.6	
	230nm,0.4s						
SKR	Severo-Kuril's	2.90	16	ePN	Pn	16 43 06.8	-0.2
SKR				eS	Sn	16 43 40.1	-0.4
SKR				pmax	pmax		
	comp=Z,24nm,0.4s						
SKR				smax	smax		
	comp=E,434nm,0.9s						
SKR				smax	smax		
	comp=N,244nm,0.8s						
ALID	Alaid	3.00	8	PN	Pn	16 43 10.2	+1.6
PAU	Pauzhetka	3.78	18	eP	Pn	16 43 18.6	-0.5
PAU				eS	Sn	16 44 01.2	-1.1
PAU	Pauzhetka	3.78	18	PN	Pn	16 43 18.2	-0.9
PAU				S	Sn	16 44 00.1	-2.2
KDTR	Khodutka, Kamc	4.42	27	PN	Pn	16 43 26.2	-1.7
MIPR	Malaya Ipel'ka	4.54	15	PN	Pn	16 43 28.8	-0.8
ASAK	Asacha	4.88	22	PN	Pn	16 43 33.9	-0.5
ASAK				S	Sn	16 44 27.1	-2.5
MTVR	Mutnovka	5.05	23	PN	Pn	16 43 35.6	-1.1
GRL	Gorelyy	5.08	22	PN	Pn	16 43 36.9	-0.2
GRL				S	Sn	16 44 32.0	-2.5
RUS	Russkaya	5.10	26	eP	Pn	16 43 35.2	-2.0
RUS	Russkaya	5.10	26	PN	Pn	16 43 35.2	-2.0
APC	Apacha	5.23	15	PN	Pn	16 43 38.9	-0.1
KRMR	Karymshinskiy	5.35	22	PN	Pn	16 43 39.9	-0.7
PEA0B	Petropavlovsk-	5.51	18	⇑iPN	Pn	16 43 43.8	+0.9
PEA0B	Petropavlovsk-	5.51	18		Pn	16 43 43.3	+0.4
PETK	Petropavlovsk-	5.51	18	P	Pn	16 43 43.4	+0.5
	comp=N,3.0nm,0.3s,baz=182,slow=14,SNR=73						
PETK	Petropavlovsk-	5.51	18		Pn	16 43 43.1	+0.3
KUR	Kuril'sk	5.54	244	eP	Pn	16 43 44.7	+1.6
KUR				AMB	AMB	16 43 46.6	
	comp=N,300nm,2.0s						
KUR				AMB	AMB	16 43 48.0	
	comp=N,80nm,0.5s						
KUR				i S	Sn	16 44 45.1	-0.4
KUR				A	A	16 44 47.9	
	comp=N,700nm,3.0s						
KUR				A	A	16 44 47.9	
	comp=N,700nm,3.0s						
KUR				A	A	16 44 51.0	
	comp=N,100nm,0.5s						
KUR				A	A	16 44 51.0	
	comp=N,110nm,0.5s						
KUR	Kuril'sk	5.54	244	ePN	Pn	16 43 44.8	+1.6
KUR				eS	Sn	16 44 45.9	+0.4
KUR				smax	smax		
	comp=N,71nm,0.3s						
KUR				smax	smax		
	comp=E,28nm,0.4s						
PET	Petropavlovsk	5.66	24	eP	Pn	16 43 45.7	+0.8
PET				AMB	AMB	16 43 51.3	
	comp=E,600nm,4.0s						
PET				AMB	AMB	16 43 53.8	
	comp=E,50nm,0.5s						
PET				eS	Sn	16 44 46.4	-2.2
PET				A	A	16 44 51.0	
	comp=E,800nm,3.0s						
PET				A	A	16 44 51.0	
	comp=E,800nm,3.0s						
PET				A	A	16 45 05.0	
	comp=E,90nm,0.5s						
PET				A	A	16 45 05.0	
	comp=E,100nm,0.5s						
PET	Petropavlovsk	5.66	24	ePN	Pn	16 43 43.6	-1.3
PET				eS	Sn	16 44 47.3	-1.3
PET				pmax	pmax		
	comp=Z,48nm,0.5s						
PET				smax	smax		
	comp=N,89nm,0.6s						
PET				smax	smax		
	comp=E,101nm,0.6s						
PET				MLR	MLR		
	comp=Z,100nm,14.0s						
DALK	Dalny	5.70	24	PN	Pn	16 43 43.7	-1.7
UGLR	Uglovaya	5.87	24	PN	Pn	16 43 47.5	-0.4
KOK	Koryaka	5.90	22	eP	Pn	16 43 48.1	-0.2
KOK	Koryaka	5.90	22	PN	Pn	16 43 48.1	-0.2
AVH	Avacha	5.90	23	PN	Pn	16 43 48.5	+0.2
SMAR	Somma	5.92	23	PN	Pn	16 43 48.7	+0.1
KRER	Koryakskii	5.94	23	PN	Pn	16 43 47.8	-1.1
SDLR	Sedlovina	5.95	24	PN	Pn	16 43 47.9	-1.1
KRX	Arik	5.96	22	PN	Pn	16 43 48.3	-0.9
SPN	Mys Shipunski	6.14	30	PN	Pn	16 43 49.7	-1.8
YUK	Yuzh-Kuril'sk	7.39	242	eP	Pn	16 44 09.6	+1.0
YUK				AMB	AMB	16 44 11.5	
	comp=Z,300nm,2.0s						
YUK				AMB	AMB	16 44 13.0	
	comp=Z,40nm,0.5s						
YUK				eS	Sn	16 45 28.9	-2.2
YUK				A	A	16 45 30.0	
	comp=Z,400nm,3.0s						
YUK				A	A	16 45 30.0	
	comp=Z,500nm,3.0s						
YUK	Yuzh-Kuril'sk	7.39	242	ePN	Pn	16 44 08.9	+0.3
YUK				pmax	pmax		
	comp=Z,40nm,0.2s						
GRPR	Tuman	7.46	242	eP	Pn	16 44 10.1	+0.4
GRPR				AMB	AMB	16 44 11.0	
	comp=Z,50nm,0.5s						
GRPR				eS	Sn	16 45 30.5	-2.5
GRPR	Tuman	7.46	242	ePN	Pn	16 44 09.9	+0.2
GRPR				pmax	pmax		
	comp=Z,50nm,0.4s						
GLVR	Golovnino	7.76	241	eP	Pn	16 44 13.3	-0.4
GLVR				eS	Sn	16 45 37.0	-3.2
GLVR	Golovnino	7.76	241	ePN	Pn	16 44 13.3	-0.4
NMR	Nemuro--Hokkai	7.86	238	eP	Pn	16 44 13.7	-1.4
NMR	Nemuro--Hokkai	7.86	238	ePN	Pn	16 44 13.7	-1.4
KZV	Kizimen	7.97	23	PN	Pn	16 44 16.3	-0.4
TUMR	Tumrok	8.08	22	PN	Pn	16 44 18.6	+0.4
YSS	Yuzh-Sakhalins	8.29	268	eP	Pn	16 44 22.4	+1.4
YSS				AMB	AMB	16 44 23.5	
	comp=Z,30nm,0.6s						
YSS				eS	Sn	16 45 51.3	-2.0
YSS	Yuzh-Sakhalins	8.29	268	ePN	Pn	16 44 22.4	+1.4
YSS				pmax	pmax		
	comp=Z,30nm,0.5s						
YSS	Yuzh-Sakhalins	8.29	268		Pn	16 44 22.4	+1.4
TYV	Tymovskoe	8.52	295	eP	Pn	16 44 26.1	+2.0
TYV				AMB	AMB	16 44 29.0	
	comp=Z,10.0nm,0.5s						
TYV				AMB	AMB	16 44 33.0	
	comp=Z,200nm,7.0s						
TYV				eS	Sn	16 45 57.5	-1.4
TYV				A	A	16 46 04.0	
	comp=Z,10.0nm,0.4s						
TYV				A	A	16 46 04.0	
	comp=Z,20nm,0.4s						
TYV				A	A	16 46 08.0	
	comp=Z,600nm,9.0s						
TYV	Tymovskoe	8.52	295	ePN	Pn	16 44 29.6	+5.5
TYV				eS	Sn	16 46 04.1	+5.2
TYV				pmax	pmax		
	comp=Z,11nm,0.6s						
TYV				pmax	pmax		
	comp=Z,200nm,7.1s						
TYV				smax	smax		
	comp=E,17nm,0.4s						
TYV				smax	smax		
	comp=N,600nm,8.8s						
KMNR	Kamenistaya	8.53	21	PN	Pn	16 44 23.2	-1.1
UGL	Uglegorsk	8.61	283	eP	Pn	16 44 25.1	-0.2
SRDR	Sredinnyy	8.93	18	PN	Pn	16 44 29.4	-0.4
JKA	Kamikawa-asahi	9.36	251	eP	Pn	16 44 37.7	+2.1
JKA	Kamikawa-asahi	9.36	251		Pn	16 44 37.7	+2.1
ASAJ	Asahikawa	9.36	251	P	Pn	16 44 37.7	+2.1
	comp=N,0.9nm,0.3s,baz=85,slow=17,SNR=20						
ASAJ				LR	LR	16 47 33.0	
	comp=N,84nm,19.9s,baz=290,slow=33						
ERM	Erimo	10.19	239	⇑ePN	Pn	16 44 47.0	0.0
EKMR	Ekimchan	14.88	299	eP	Pn	16 45 49.6	-1.1
EKMR				AMB	AMB	16 45 59.5	
	comp=N,10.0nm,0.8s						
SEY	Seymchan	15.13	356	P	Pn	16 45 55.0	+0.9
	comp=N,0.1nm,0.3s,baz=201,slow=14,SNR=4.0						
SEY	Seymchan	15.13	356	⇑eP	P	16 45 56.9	-1.6
KLR	Kul'dur	15.38	284	P	Pn	16 45 57.1	-0.2
	comp=N,0.1nm,0.3s,baz=119,slow=11,SNR=3.2						
KLR				LR	LR	16 51 28.6	
	comp=N,60nm,19.6s,baz=105,slow=36						
KLR	Kul'dur	15.38	284	⇓eP	P	16 45 59.5	-1.8
KLR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
USRK	Ussuriysk Ar.	16.32	265	P	Pn	16 46 08.1	-1.2
	baz=71,slow=12,SNR=6.2						
MJA0	Matsu Arr-Jizo	16.72	233	eP	P	16 46 16.7	+0.3
MAT	Matsushiro	16.74	233	P	Pn	16 46 11.4	-3.4
MJAR	Matsushiro Arr	16.74	233	P	Pn	16 46 11.4	-3.4
	comp=Z,0.0nm,0.3s,baz=144,slow=43,SNR=3.5						
MJAR				LR	LR	16 53 13.1	
	comp=Z,30nm,18.0s,baz=250,slow=39						
MJAR	Matsushiro Arr	16.74	233	eP	Pn	16 46 16.8	+2.0
MJAR	Matsushiro Arr	16.74	233		Pn	16 46 15.7	+0.9
BMKR	Bomnak	17.59	302	eP	Pn	16 46 24.0	-1.2
BMKR				AMB	AMB	16 46 29.6	
	comp=Z,6.0nm,0.9s						
ZEA	Zeya	18.35	299	eP	Pn	16 46 34.8	+0.3
ZEA				AMB	AMB	16 46 36.1	
	comp=Z,10.0nm,1.0s						
ZEA	Zeya	18.35	299	eP	Pn	16 46 34.8	+0.3
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
KROS	Kirovskiy	18.61	301	eP	Pn	16 46 39.2	+1.6
KROS				AMB	AMB	16 46 41.1	
	comp=Z,30nm,1.0s						
YAK	Yakutsk	20.05	324	P	P	16 46 51.0	-1.7
	comp=Z,0.0nm,0.3s,baz=264,slow=1.7,SNR=1.8						
YAK	Yakutsk	20.05	324	eP	Pn	16 46 55.3	+0.6
YAK	Yakutsk	20.05	324	eP	Pn	16 46 55.3	+0.6
YAK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.4s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.1s						
YAK	Yakutsk	20.05	324	P	P	16 46 51.0	-1.7
CN2	Changchun	20.86	270	eP	P	16 47 00.8	-0.7
BILL	Bilibino	21.00	12	eP	P	16 47 04.3	+1.4
BILL	Bilibino	21.00	12	eP	P	16 47 03.0	+0.1
BILL				e		16 47 24.3	
BILL				e		16 47 31.0	
BILL				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KSRS	Korea Array	22.30	252	P	P	16 47 16.8	-0.3
	comp=Z,5.5nm,0.8s,baz=48,slow=11,SNR=13						
KSRS				LR	LR	16 56 31.5	
	comp=Z,27nm,18.1s,baz=45,slow=38						
KSRS	Korea Array	22.30	252	eP	P	16 47 18.0	+0.9
KSRS	Korea Array	22.30	252	eP	P	16 47 18.0	+0.9
KSRS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GAMB	Gambell	24.17	37	P	P	16 47 36.4	+1.1
ANM	Nome	27.04	37	P	P	16 48 02.1	+0.8
ANM				pmax	pmax		
	comp=Z,13nm,1.5s						
ANM	Nome	27.04	37	P	P	16 48 02.1	+0.8
ANM				IAmb	IAmb	16 48 06.5	
	comp=Z,12nm,1.5s						
H11N2	WAKE ISLAND Hy	29.74	157	T	T	17 20 07.7	
	baz=344,slow=76,SNR=128						
H11N1	WAKE ISLAND Hy	29.75	157	T	T	17 19 55.5	
	baz=344,slow=76,SNR=237						
H11N3	WAKE ISLAND Hy	29.76	157	T	T	17 20 06.2	
	baz=344,slow=76,SNR=148						
H11S1	WAKE ISLAND Hy	30.86	158	T	T	17 21 30.1	
	baz=344,slow=76,SNR=1054						
H11S3	WAKE ISLAND Hy	30.87	158	T	T	17 21 22.2	
	baz=344,slow=76,SNR=1472						
H11S2	WAKE ISLAND Hy	30.88	158	T	T	17 21 22.0	
	baz=344,slow=76,SNR=755						
HHC	Hu-ho-hao-te	31.43	273	eP	P	16 48 41.8	+1.1
SONM	Songino Array	32.11	288	P	P	16 48 43.6	-3.0
	comp=Z,0.3nm,0.5s,baz=39,slow=12,SNR=1.8						
SONM				LR	LR	17 01 24.3	
	comp=Z,35nm,21.4s,baz=88,slow=36						
IMAR	Indian Mountai	32.12	37	P	P	16 48 44.9	-1.4
KDAK	Kodiak Island	32.44	52	P	P	16 48 50.0	+0.9
	comp=Z,3.9nm,0.9s,baz=232,slow=6.2,SNR=4.5						
KDAK	Kodiak Island	32.44	52	P	P	16 48 50.0	+0.9
TLY	Talaya	32.75	296	LR	LR	17 02 54.8	
	comp=Z,60nm,19.3s,baz=64,slow=38						
TLY	Talaya	32.75	296	eP	P	16 48 53.1	+1.1
TLY	Talaya	32.75	296	⇓eP	P	16 48 53.1	+1.1
TLY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KTH	Kantishna Hill	33.09	42	P	P	16 48 53.3	-1.7
KTH				IAmb	IAmb	16 48 57.3	
	comp=Z,5.8nm,1.1s						
SML	Sawmill	34.30	45	P	P	16 49 06.1	+0.7
ILAR	Eielson Array	34.89	40	P	P	16 49 10.6	+0.2
	comp=Z,1.1nm,0.8s,baz=250,slow=7.3,SNR=13						
GUMO	Guam	35.21	197	LR	LR	17 02 01.1	
	comp=Z,12nm,19.3s,baz=62,slow=33						
PRP	Porcupine Dome	35.47	38	P	P	16 49 15.9	+0.4
PRP				IAmb	IAmb	16 49 17.6	
	comp=Z,3.8nm,0.9s						
FYU	Fort Yukon	35.60	36	P	P	16 49 17.6	+1.2
BMAR	Burnt Mountain	35.88	35	P	P	16 49 20.1	+1.2
CRQM	Cirque	36.90	46	P	P	16 49 28.6	+0.8
BCAR	Beaver Creek A	37.23	42	P	P	16 49 32.3	+1.8
EGAK	Eagle	37.34	39	P	P	16 49 31.3	0.0
EGAK				IAmb	IAmb	16 49 32.5	
	comp=Z,6.9nm,0.9s						
CTGM	Chitina Glacie	37.74	46	P	P	16 49 36.4	+1.5
CTGM				IAmb	IAmb	16 49 37.3	
	comp=Z,5.3nm,0.7s						
HYT	Haines Junctio	39.60	45	P	P	16 49 52.1	+1.7
HYT				IAmb	IAmb	16 49 53.4	
	comp=Z,5.8nm,0.8s						
INK	Inuvik	40.02	33	P	P	16 49 55.2	+1.5
	comp=Z,1.6nm,0.5s,baz=291,slow=6.7,SNR=7.5						
INK	Inuvik	40.02	33	P	P	16 49 53.9	+0.2
INK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
INK	Inuvik	40.02	33	P	P	16 49 53.9	+0.2
ZALV	Zalesovo Beam	42.93	305	LR	LR	17 07 23.5	
	comp=Z,30nm,18.3s,baz=34,slow=35						
C36M	Paulatuk	43.21	31	P	P	16 50 19.4	-0.3
C36M				IAmb	IAmb	16 50 21.7	
	comp=Z,7.3nm,1.1s						
WMQ	Urumqi	45.65	291	eP	P	16 50 41.3	+1.6
MK31	Makanchi Array	47.49	297	P	P	16 50 52.6	-1.5
MK31				pmax	pmax		
	comp=Z,3.0nm,1.5s						
MK31	Makanchi Array	47.49	297	P	P	16 50 52.6	-1.5
MKAR	Makanchi Array	47.49	297	P	P	16 50 51.7	-2.4
	comp=Z,0.6nm,0.7s,baz=72,slow=7.9,SNR=8.0						
MKAR				LR	LR	17 12 35.0	
	comp=Z,38nm,18.0s,baz=20,slow=38						
MKAR	Makanchi Array	47.49	297	eP	P	16 50 54.7	+0.6
MKAR	Makanchi Array	47.49	297	eP	P	16 50 54.7	+0.6
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	Kurchatov	47.74	303	eP	P	16 50 57.0	+1.1
KURK	Kurchatov	47.74	303	⇓eP	P	16 50 57.0	+1.1
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YKA	Yellowknife Ar	49.27	38	P	P	16 51 07.7	+0.3
	comp=Z,0.9nm,0.8s,baz=294,slow=7.1,SNR=12						
YKA				PcP	PcP	16 52 29.9	+0.1
	comp=Z,0.3nm,0.7s,baz=298,slow=3.6,SNR=4.6						
BRVK	Borovoye	51.10	309	eP	P	16 51 20.5	-1.0
BRVK	Borovoye	51.10	309	⇑eP	P	16 51 20.5	-1.0
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CHTO	Chiang Mai	53.56	257	P	P	16 51 40.4	+0.3
CHTO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CHTO	Chiang Mai	53.56	257	P	P	16 51 40.4	+0.3
CHTO				IAmb	IAmb	16 51 45.7	
	comp=Z,4.4nm,1.0s						
CMAR	Chiang Mai Arr	53.82	257	P	P	16 51 40.7	-1.3
	comp=Z,0.8nm,0.9s,baz=39,slow=5.8,SNR=3.5						
AAK	Ala-Archa	54.41	297	eP	P	16 51 48.5	+2.3
AAK	Ala-Archa	54.41	297	⇓eP	P	16 51 48.5	+2.3
AAK				pmax	pmax		

	comp=Z,3.0nm,2.1s						
KSH	**Kashi**	**55.34**	**293**	P	**P**	**16 51 56.3**	**+3.4**
KSH				pP	sP	16 52 12.3	+2.7
KSH				PP	**PP**	**16 54 02.8**	**+6.2**
KSH				PcS	**PcS**	**16 56 54.5**	**+1.2**
KSH				S	**S**	**16 59 34.0**	**-0.1**
KVN	**Kaiserville**	**60.56**	**63**	P	**P**	**16 52 30.6**	**+1.0**
KVN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KVN	**Kaiserville**	**60.56**	**63**	P	**P**	**16 52 30.6**	**+1.0**
KVN				IAmb	IAmb	16 52 32.4	
	comp=Z,3.2nm,1.0s						
NVAR	**Mina Array Bea**	**60.83**	**64**	P	**P**	**16 52 33.1**	**+1.6**
	comp=Z,2.1nm,0.6s,baz=294,slow=6.7,SNR=8.1						
ELK	**Elko**	**61.17**	**60**	P	**P**	**16 52 35.3**	**+1.5**
	comp=Z,1.1nm,0.6s,baz=316,slow=4.6,SNR=5.9						
REDW	**Red Top Meadow**	**61.98**	**55**	P	**P**	**16 52 40.3**	**+1.0**
R11A	**Troy Canyon, C**	**62.51**	**62**	P	**P**	**16 52 44.5**	**+1.7**
R11A				IAmb	IAmb	16 52 45.1	
	comp=Z,3.0nm,0.8s						
PDAR	**Pinedale Array**	**63.09**	**55**	P	**P**	**16 52 47.8**	**+1.2**
	comp=Z,1.8nm,0.8s,baz=291,slow=2.4,SNR=16						
PDAR	**Pinedale Array**	**63.09**	**55**	P	**P**	**16 52 47.1**	**+0.4**
FINES	**FINESS Array B**	**63.51**	**335**	P	**P**	**16 52 46.5**	**-2.3**
	comp=Z,1.3nm,0.8s,baz=28,slow=8.6,SNR=6.2						
FINES	**FINESS Array B**	**63.51**	**335**	*e*P	**P**	**16 52 47.3**	**-1.5**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
LCMT	**Little Creek M**	**64.79**	**62**	P	**P**	**16 52 59.0**	**+1.2**
ULM	**Lac du Bonnet**	**64.85**	**42**	P	**P**	**16 52 57.2**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=283,slow=5.6,SNR=4.2						
ULM	**Lac du Bonnet**	**64.85**	**42**	*e*P	**P**	**16 52 58.3**	**+0.5**
ULM				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PV17	**East Wray Mesa**	**66.44**	**59**	P	**P**	**16 53 08.4**	**-0.1**
NOA	**NORSAR Array B**	**67.52**	**342**	P	**P**	**16 53 13.4**	**-1.4**
	comp=Z,0.6nm,0.9s,baz=25,slow=6.4,SNR=2.8						
WRA	**Warramunga Arr**	**70.01**	**201**	P	**P**	**16 53 30.2**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=16,slow=6.3,SNR=9.0						
WRA	**Warramunga Arr**	**70.01**	**201**	*e*P	**P**	**16 53 31.3**	**+0.7**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**70.01**	**201**	IAmb	IAmb	16 53 38.9	
	comp=Z,0.1nm,0.8s						
AKASG	**Malin Array Be**	**71.26**	**327**	P	**P**	**16 53 34.6**	**-3.3**
	comp=Z,0.6nm,0.5s,baz=38,slow=5.3,SNR=1.8						
AKASG	**Malin Array Be**	**71.26**	**327**	IAmb	IAmb	16 53 41.7	
	comp=Z,0.4nm,0.7s						
ASAR	**Alice Springs**	**73.70**	**200**	P	**P**	**16 53 53.6**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=17,slow=5.8,SNR=11						
TX31	**Lajitas Ar. Si**	**75.87**	**62**	P	**P**	**16 54 06.8**	**+1.2**
TX31				IAmb	IAmb	16 54 07.7	
	comp=Z,2.7nm,0.7s						
TX32	**Lajitas Array**	**75.87**	**62**	P	**P**	**16 54 06.2**	**+0.7**
TX32				IAmb	IAmb	16 54 07.7	
	comp=Z,2.8nm,0.7s						
TXAR	**Lajitas Array**	**75.87**	**62**	P	**P**	**16 54 07.0**	**+1.5**
	comp=Z,2.2nm,0.6s,baz=303,slow=4.6,SNR=26						
TXAR	**Lajitas Array**	**75.87**	**62**	P	**P**	**16 54 06.9**	**+1.4**
GERES	**GERESS Array B**	**77.94**	**335**	P	**P**	**16 54 15.3**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=264,slow=40,SNR=2.8						

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*JMA **29** 16:56:38.9±0.1, 42°.95N×145°.02E, h88^{km}±1^{km}, M3.4*

*SKHL **29** 16:56:39.0±0.2, 42°.92N×145°.13E, h98^{km}±2^{km}, mb4.2/3, msh5.2/4*

*MOS **29** 16:56:41.4±1.7, 43°.00N×144°.98E, h73^{km}, mb4.2/1, Error ellipse: s-maj=22.3km s-min=15.2km az=57.7*

*IDC **29** 16:56:45.4±2.9, 43°.60N×144°.86E, h120^{km}±17^{km}, mb3.3/4, mb1 3.3/6, mb1mx3.0/33, mbtmp3.6/6, MS3.6/2, Ms1 3.6/2, ms1mx2.5/23, Error ellipse: s-maj=32.9km s-min=28.7km az=168.0*

ISC 29 16:56:38.5±1.0,**42°.91N**±0°.06×**145°.03E**±0°.04,**h88**^{km}±6^{km}, **n38,σ0^{s}.63**/51,**mb3.4**/4,**Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKHN	**Kushirohamanak**	**0.20**	**29**	P	**Pn**	**16 56 51.8**	**+0.6**
JKHN				*e*S	**Sn**	**16 57 01.2**	**+0.5**
JAK	**Akkeshi**	**0.26**	**291**	P	**Pn**	**16 56 51.8**	**+0.4**
JAK				*e*S	**Sn**	**16 57 01.4**	**+0.4**
NMR	**Nemuro--Hokkai**	**0.69**	**48**	*e*P	**Pn**	**16 56 54.7**	**0.0**
NMR				*e*S	**Sn**	**16 57 06.2**	**-0.6**
NMR	**Nemuro--Hokkai**	**0.69**	**48**	*e*PN	**Pn**	**16 56 54.7**	**0.0**
NEM2	**Nemuro 2**	**0.70**	**49**	P	**Pn**	**16 56 54.8**	**+0.1**
NEM2				*e*S	**Sn**	**16 57 06.1**	**-0.8**
JNK	**Nakash**	**0.71**	**342**	P	**Pn**	**16 56 54.6**	**-0.3**
JNK				*e*S	**Sn**	**16 57 06.4**	**-0.8**
JOB	**Onbets**	**0.88**	**270**	P	**Pn**	**16 56 57.2**	**+0.6**
JOB				*e*S	**Sn**	**16 57 10.8**	**+0.7**
GLVR	**Golovnino**	**0.91**	**23**	*e*P	**Pn**	**16 56 57.3**	**+0.4**
GLVR				AMB	AMB	16 56 58.9	
	90nm,0.2s						
GLVR				*i* S	**Sn**	**16 57 11.2**	**+0.4**
GLVR				A	A	16 57 11.4	
	310nm,0.4s						
GLVR				A	A	16 57 11.4	
	900nm,0.4s						
GLVR	**Golovnino**	**0.91**	**23**	*e*PN	**Pn**	**16 56 57.3**	**+0.4**
GLVR				*i* S	**Sn**	**16 57 11.2**	**+0.4**
GLVR				pmax	pmax		
	comp=Z,258nm,0.1s						
GLVR				smax	smax		
	comp=N,3μm,0.2s						
GLVR				smax	smax		
	comp=E,900nm,0.2s						
JAR	**Ashorobuto**	**1.00**	**293**	P	**Pn**	**16 56 58.3**	**+0.3**
JAR				*e*S	**Sn**	**16 57 12.8**	**+0.2**
JRA	**Rausu**	**1.03**	**4**	P	**Pn**	**16 56 58.6**	**+0.2**
JRA				*e*S	**Sn**	**16 57 13.6**	**+0.3**
GRPR	**Tuman**	**1.22**	**26**	*e*P	**Pn**	**16 57 01.5**	**+1.0**
GRPR				*e*S	**Sn**	**16 57 17.0**	**-0.2**
GRPR				A	A	16 57 17.0	
	comp=E,100nm,0.3s						
GRPR				A	A	16 57 17.0	
	comp=E,500nm,0.3s						
GRPR	**Tuman**	**1.22**	**26**	*e*PN	**Pn**	**16 57 01.5**	**+1.0**
GRPR				*e*S	**Sn**	**16 57 16.7**	**-0.5**
GRPR				smax	smax		
	comp=N,976nm,0.3s						
GRPR				smax	smax		
	comp=E,537nm,0.3s						
JCH	**Churui**	**1.26**	**257**	P	**Pn**	**16 57 01.7**	**+0.6**
JCH				*e*S	**Sn**	**16 57 18.0**	**-0.1**
YUK	**Yuzh-Kuril'sk**	**1.28**	**28**	*e*P	**Pn**	**16 57 01.8**	**+0.4**
YUK				AMB	AMB	16 57 02.3	
	comp=E,50nm,0.2s						
YUK				*e*S	**Sn**	**16 57 18.8**	**+0.1**
YUK				A	A	16 57 19.9	
	comp=E,50nm,0.3s						
YUK				A	A	16 57 19.9	
	comp=E,750nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.28**	**28**	*e*PN	**Pn**	**16 57 01.7**	**+0.4**
YUK				*e*S	**Sn**	**16 57 18.7**	**+0.1**
YUK				pmax	pmax		
	comp=Z,108nm,0.1s						
YUK				smax	smax		
	comp=E,754nm,0.4s						
YUK				smax	smax		
	comp=N,798nm,0.3s						
JTKR	**Abashiri--Toko**	**1.34**	**323**	P	**Pn**	**16 57 02.5**	**+0.4**
JTKR				*e*S	**Sn**	**16 57 19.7**	**-0.2**
JMP	**Maruseppu**	**1.64**	**313**	P	**Pn**	**16 57 06.2**	**+0.3**
JMP				*e*S	**Sn**	**16 57 26.3**	**-0.4**
JEM	**Erimo**	**1.64**	**238**	P	**Pn**	**16 57 07.2**	**+1.3**
JNBK	**Urakawa-nobuka**	**1.79**	**250**	P	**Pn**	**16 57 07.7**	**-0.1**
JNBK				*e*S	**Sn**	**16 57 29.2**	**-1.0**
JFR	**Furan**	**1.80**	**279**	P	**Pn**	**16 57 08.1**	**+0.1**
JFR				*e*S	**Sn**	**16 57 30.3**	**-0.1**
JKA	**Kamikawa-asahi**	**2.14**	**305**	*e*P	**Pn**	**16 57 13.7**	**+1.3**
ASAJ	**Asahikawa**	**2.14**	**305**	P	**Pn**	**16 57 13.7**	**+1.2**
	comp=N,17nm,0.3s,baz=166,slow=12,SNR=256						
ASAJ				S	**Sn**	**16 57 38.6**	**+0.3**
	comp=N,7.3nm,0.3s,baz=60,slow=32,SNR=18						
KUR	**Kuril'sk**	**3.10**	**40**	*e*P	**Pn**	**16 57 26.1**	**+0.9**
KUR				AMB	AMB	16 57 30.3	
	comp=N,10.0nm,0.7s						
KUR				*e*S	**Sn**	**16 58 00.8**	**-0.5**
KUR				A	A	16 58 05.3	
	comp=N,20nm,0.5s						
KUR				A	A	16 58 05.3	
	comp=N,30nm,0.5s						
KUR	**Kuril'sk**	**3.10**	**40**	*e*PN	**Pn**	**16 57 27.1**	**+1.9**
KUR				pmax	pmax		
	comp=Z,16nm,0.4s						
MJAR	**Matsushiro Arr**	**8.24**	**222**	P	Pn	16 58 49.4	+14
	comp=Z,0.0nm,0.3s,baz=5.5,slow=14,SNR=2.0						
PETK	**Petropavlovsk-**	**13.25**	**35**	P	**Pn**	**16 59 42.8**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=284,slow=6.0,SNR=2.1						
JNU	**Nakatsue**	**14.80**	**233**	LR	LR	17 06 39.4	
	comp=Z,558nm,21.1s,baz=352,slow=39						
SONM	**Songino Array**	**27.38**	**294**	P	**P**	**17 02 15.5**	**0.0**
	comp=Z,0.3nm,0.6s,baz=81,slow=6.4,SNR=4.9						
H11N2	**WAKE ISLAND Hy**	**29.55**	**135**	T	T	17 33 47.4	
	baz=327,slow=76,SNR=48						
H11N1	**WAKE ISLAND Hy**	**29.56**	**135**	T	T	17 33 48.2	
	baz=327,slow=76,SNR=41						
H11N3	**WAKE ISLAND Hy**	**29.56**	**135**	T	T	17 33 48.5	
	baz=327,slow=76,SNR=36						
H11S1	**WAKE ISLAND Hy**	**30.46**	**136**	T	T	17 34 55.6	
	baz=329,slow=76,SNR=78						
H11S3	**WAKE ISLAND Hy**	**30.47**	**136**	T	T	17 34 56.8	
	baz=329,slow=76,SNR=46						
H11S2	**WAKE ISLAND Hy**	**30.48**	**136**	T	T	17 34 59.9	
	baz=329,slow=76,SNR=46						
MKAR	**Makanchi Array**	**43.60**	**298**	P	**P**	**17 04 33.5**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=84,slow=11,SNR=7.3						
MKAR				LR	LR	17 23 40.1	
	comp=Z,33nm,19.3s,baz=313,slow=37						
FINES	**FINESS Array B**	**64.91**	**332**	P	**P**	**17 07 07.3**	**-0.7**
	comp=Z,1.6nm,0.6s,baz=70,slow=8.3,SNR=8.1						
NOA	**NORSAR Array B**	**69.82**	**338**	P	**P**	**17 07 38.8**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=37,slow=6.2,SNR=2.0						

IDC 29 17:06:46.8±1.5,**47°.72N**×**155°.12E,h0**^{km}**,mb3.4**/2, **mb1 3.7**/4,**mb1mx3.2**/33,**mbtmp3.5**/4,**ML2.8**/2,**MS2.9**/2, **Ms1 2.9**/2,**ms1mx2.4**/33,**Error ellipse: s-maj=60.4km s-min=29.4km az=131.0,East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**5.64**	**16**	Pn	Pn	17 08 11.4	-0.5
	0.4nm,0.3s,baz=180,slow=12,SNR=14						
PETK				LR	LR	17 10 32.7	
	comp=Z,31nm,18.7s,baz=242,slow=40						
ASAJ	**Asahikawa**	**9.44**	**252**	Pn	Pn	17 09 05.6	+1.6
	0.2nm,0.3s,baz=63,slow=11,SNR=3.6						
H11N2	**WAKE ISLAND Hy**	**29.51**	**157**	T	T	17 44 31.6	
	baz=344,slow=76,SNR=22						
H11N1	**WAKE ISLAND Hy**	**29.53**	**157**	T	T	17 44 32.1	
	baz=344,slow=76,SNR=35						
H11N3	**WAKE ISLAND Hy**	**29.53**	**157**	T	T	17 44 32.8	
	baz=344,slow=76,SNR=15						
H11S1	**WAKE ISLAND Hy**	**30.63**	**158**	T	T	17 45 52.3	
	baz=344,slow=76,SNR=175						
H11S3	**WAKE ISLAND Hy**	**30.64**	**158**	T	T	17 45 53.1	
	baz=344,slow=76,SNR=185						
H11S2	**WAKE ISLAND Hy**	**30.65**	**158**	T	T	17 45 52.2	
	baz=344,slow=76,SNR=118						
WRA	**Warramunga Arr**	**69.89**	**201**	P	P	17 17 58.9	-0.6
	0.3nm,0.9s,baz=359,slow=8.2,SNR=2.0						
KVAR	**Kislovodsk Arr**	**71.08**	**315**	LR	LR	17 52 31.4	
	comp=Z,30nm,18.1s,baz=230,slow=39						
TXAR	**Lajitas Array**	**75.83**	**62**	P	P	17 18 35.3	+0.3
	0.3nm,0.6s,baz=337,slow=4.3,SNR=3.9						

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*PAS **29** 17:17:18.2±0.8, 33°.639N±0°.008×116°.758W±0°.006, h13^{km}±1^{km}, ML2.4/162, Error ellipse: s-maj=1.3km s-min=0.8km az=197.0*

NEIC 29 17:17:17.4±0.7,**33°.630N**±0°.004×**116°.77W**±0°.01, **h18**^{km}±1^{km},**Error ellipse: s-maj=1.3km s-min=0.5km az=83.0,Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRY	**Cary Ranch**	**0.07**	**160**		Pg	17 17 22.7	+1.8
GVDA	**Garner Valley**	**0.09**	**63**		Pg	17 17 22.4	+1.4
DNR	**Dunn Ranch,Anz**	**0.13**	**119**		Pg	17 17 21.6	+0.1
DNR					Sg	17 17 24.5	+0.3
SNDA	**J Saunders Pla**	**0.15**	**122**		Pb	17 17 21.9	+0.1
SNDA					Sb	17 17 24.7	0.0
BZNA	**Buzz No.'s Pla**	**0.16**	**149**		Pb	17 17 22.0	0.0
BZNA					Sg	17 17 24.7	-0.2
FRD	**Ford Ranch, An**	**0.19**	**135**		Pb	17 17 22.4	-0.1
FRD					Sg	17 17 25.5	-0.1
FRD	**Ford Ranch, An**	**0.19**	**135**		Pg	17 17 22.4	+0.1
FRD					Sg	17 17 25.4	-0.2
DGR	**Domenigoni Val**	**0.20**	**276**		Pg	17 17 22.5	+0.1
DGR					Sg	17 17 25.6	-0.2
HMTC	**Hemet**	**0.21**	**292**		Pg	17 17 22.6	0.0
HMTC					Sg	17 17 26.0	0.0
BACC	**Bachelor Mtn.**	**0.23**	**266**		Pg	17 17 22.9	+0.1
BACC					Sg	17 17 26.4	-0.1
PFO	**Pinyon Flats O**	**0.26**	**94**		Pg	17 17 23.1	-0.1
PFO				Sg	Sg	17 17 26.7	-0.6
PFO	**Pinyon Flats O**	**0.26**	**94**		Pg	17 17 23.1	-0.1
PFO					Sg	17 17 26.7	-0.6
XPFO	**Pion Flat**	**0.26**	**94**		Pg	17 17 23.1	-0.2
XPFO				Sg	Sg	17 17 26.8	-0.6
XPFO	**Pion Flat**	**0.26**	**94**		Pg	17 17 23.1	-0.2
XPFO					Sg	17 17 26.7	-0.7
PLM	**Palomar**	**0.29**	**196**		Pb	17 17 24.2	0.0
BBSC	**Beaumont Base**	**0.34**	**328**		Pg	17 17 24.8	+0.1
BBSC					Sg	17 17 29.8	+0.2
DEVC	**Devers**	**0.34**	**27**		Pg	17 17 24.8	+0.1
DEVC					Sg	17 17 29.7	+0.1
MURC	**Murrieta**	**0.36**	**265**		Pg	17 17 25.1	+0.2
MURC					Sg	17 17 30.2	0.0
PEC	**Perris**	**0.42**	**308**		Pg	17 17 26.0	-0.1
EW2	**E Wide Canyon**	**0.43**	**44**		Pg	17 17 26.2	0.0
EW2					Sg	17 17 32.0	-0.2
BORC	**Borrego Spring**	**0.46**	**141**		Pb	17 17 27.1	0.0
BORC					Sg	17 17 33.1	0.0
CFT	**Crafton Hills**	**0.50**	**325**		Pb	17 17 27.6	-0.1
SME	**Santa Rosa Min**	**0.53**	**292**		Pg	17 17 27.9	-0.1
BLAC	**Blackrock camp**	**0.54**	**35**		Pg	17 17 28.1	-0.1
SVD	**Seven Oaks Dam**	**0.55**	**330**		Pg	17 17 28.4	-0.1
SVD					Sb	17 17 36.4	+0.1
RSBC	**Riverside Bore**	**0.58**	**306**		Sg	17 17 36.3	-0.4
GORC	**Green Oak Ranc**	**0.61**	**219**		Pg	17 17 29.5	-0.1
GORC					Sg	17 17 37.5	-0.3
HWB	**Hans Werner Br**	**0.62**	**195**		Pg	17 17 29.6	-0.2
HWB					Sg	17 17 38.0	-0.1
RVR	**Riverside**	**0.62**	**306**		Pg	17 17 29.7	0.0
BBRC	**Big Bear Solar**	**0.64**	**348**		Pg	17 17 30.1	-0.1
BBRC					Sb	17 17 39.1	-0.1
CTCC	**Cactus City**	**0.65**	**88**		Pb	17 17 30.4	+0.1
CTCC					Sb	17 17 39.1	+0.2
DPP	**Dos Picos Cty**	**0.65**	**193**		Pg	17 17 30.0	-0.2
DPP					Sg	17 17 38.6	-0.2
BTL	**Butler Peak**	**0.66**	**343**		Pg	17 17 30.4	-0.1
SIL	**Silver Peak**	**0.72**	**356**		Pb	17 17 31.4	-0.2
BELC	**Belle Mtn. Jos**	**0.74**	**60**		Pb	17 17 31.8	-0.1
BELC					Sb	17 17 41.2	-0.5
EML	**El Monte Cty P**	**0.74**	**185**		Pb	17 17 31.6	-0.2
EML					Sb	17 17 41.5	-0.1
GTM	**Goat Mountain**	**0.74**	**27**		Pb	17 17 31.7	-0.3
MLSC	**Mira Loma**	**0.76**	**300**		Sb	17 17 42.0	-0.2
TPC	**Twentynine Pal**	**0.76**	**51**		Pb	17 17 32.0	-0.2
BATC	**Bat Cave Butte**	**0.79**	**102**		Pn	17 17 33.3	-0.4
MONP2	**Monument Peak**	**0.79**	**159**		Pg	17 17 32.9	0.0
MONP2					Sg	17 17 44.0	+0.6
109C	**Camp Elliot, M**	**0.79**	**201**		Pb	17 17 32.4	-0.3
109C				Sg	Sb	17 17 42.8	-0.3
CPE	**Camp Elliot**	**0.79**	**201**		Pb	17 17 32.4	-0.3
CPE					Sb	17 17 43.0	-0.1
CSP	**Cedar Springs**	**0.83**	**324**		Pb	17 17 33.4	-0.1
SS2	**San Sevaine**	**0.84**	**314**		Pb	17 17 33.4	-0.1
CBKC	**Canebrake**	**0.85**	**149**		Pg	17 17 33.9	0.0
SDRC	**San Diego Road**	**0.90**	**190**		Pb	17 17 34.2	-0.4
SDRC					Sb	17 17 46.2	-0.1
BAR	**Barrett**	**0.95**	**175**		Pb	17 17 35.2	-0.2
BAR					Sb	17 17 47.7	0.0
BFSC	**Mount Baldy Ra**	**0.96**	**310**		Pb	17 17 35.7	0.0
BFSC					Sb	17 17 48.2	+0.1
SSK	**Sunset Peak**	**0.96**	**307**		Pb	17 17 35.7	-0.1
PSRC	**Puddingstone R**	**0.98**	**298**		Pn	17 17 36.3	-0.1
PSRC					Sb	17 17 48.9	+0.3
CRR	**Carrizo Plain**	**1.00**	**138**		Pg	17 17 37.1	+0.4
OLP	**Otay Lakes Par**	**1.03**	**188**		Pb	17 17 36.5	-0.3
OLP					Sb	17 17 50.0	+0.1
SWSC	**Sam W. Stewart**	**1.06**	**130**		Sg	17 17 52.2	+0.4
PEM	**Pine Mountain**	**1.06**	**301**		Pb	17 17 37.2	-0.1
TKX	**Tecate**	**1.07**	**173**		Sb	17 17 51.1	0.0
IKP	**In-Ko-Pah, Jac**	**1.12**	**150**		Pg	17 17 38.9	-0.2
IKP					Sg	17 17 53.7	-0.2
XTL	**Crystal Lake,**	**1.13**	**306**		Pb	17 17 38.2	-0.4
RMX	**La Rumorosa**	**1.18**	**150**		Sg	17 17 57.4	+1.8
HOLC	**Holcomb Ridge**	**1.22**	**313**		Pb	17 17 39.9	-0.1
MWC	**Mount Wilson**	**1.23**	**299**		Pn	17 17 39.9	0.0
HEC	**Hector,Ludlow**	**1.25**	**16**		Pb	17 17 40.7	+0.2
RRX	**Edison Barstow**	**1.26**	**351**		Pg	17 17 41.3	-0.4
CHFC	**Chilao Flat St**	**1.26**	**304**		Pb	17 17 40.8	-0.1
PASC	**Pasadena Art C**	**1.30**	**295**	Pn	Pb	17 17 41.2	-0.1
PASC					Sb	17 17 58.2	+0.4
CBX	**Cerro Bola**	**1.32**	**176**		Sb	17 17 58.8	+0.5
SBB	**Saddle Back Bu**	**1.37**	**321**		Sb	17 18 00.9	+1.0
LRRC	**Littlerock Res**	**1.38**	**311**		Pg	17 17 44.0	0.0
HYS	**Haystack Butte**	**1.40**	**332**		Pb	17 17 43.6	+0.5
DSCC	**Desert Studies**	**1.60**	**20**		Sn	17 18 03.6	-1.7
GSC	**Goldstone, Bar**	**1.67**	**359**	Pn	Pb	17 17 46.9	-0.9
GLA	**Glamis**	**1.72**	**109**	Pn	Pn	17 17 46.9	+0.3
Y12C	**Blythe**	**1.87**	**86**	Pn	Pn	17 17 48.2	-0.4
ISA	**Isabella, Lake**	**2.47**	**326**	Pn	Pn	17 17 58.5	+1.6
W13A	**Hualapai Mount**	**2.80**	**58**	Pn	Pn	17 18 01.4	-0.2
SHPR	**Sheep Range**	**3.16**	**24**	Pn	Pn	17 18 06.9	+0.5
TPNV	**Topopah Spring**	**3.34**	**7**	Pn	Pn	17 18 09.8	+0.9
MDPB	**Devils Postpil**	**4.42**	**335**	Pn	Pn	17 18 25.0	+1.2
LCMT	**Little Creek M**	**4.43**	**39**	Pn	Pn	17 18 23.6	-0.4

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*IDC **29** 17:18:48.5±1.0, 35°.66N×141°.52E, h0^{km}, mb3.4/7, mb1 3.5/9, mb1mx3.4/33, mbtmp3.4/9, ML3.1/2, MS2.5/3, Ms1 2.5/3, ms1mx2.2/32, Error ellipse: s-maj=26.2km s-min=21.1km az=100.0*

*JMA **29** 17:18:51.4±0.2, 35°.78N×141°.43E, h26^{km}±2^{km}, M3.2*

ISC 29 17:18:52.2±0.8,**35°.77N**±0°.06×**141°.49E**±0°.06,**h26**^{km}**,n25,** **σ1^{s}.76**/22,**mb3.5**/7,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.52**	**262**	P	**Pb**	**17 19 01.0**	**-1.8**
CHOJ				S	**Sb**	**17 19 07.8**	**-2.1**
JIHU	**Itakohorinouch**	**0.80**	**284**	P	**Pb**	**17 19 06.4**	**-1.2**
JSMT	**Sammumatsuo**	**0.85**	**262**	P	**Pn**	**17 19 06.9**	**-1.7**
JHYU	**Hitachinakayam**	**0.92**	**308**	P	**Pn**	**17 19 08.2**	**-1.3**
JHYU				S	**Sb**	**17 19 20.4**	**-1.1**
JHO	**Hitachi**	**1.12**	**319**	P	**Pn**	**17 19 10.7**	**-1.5**
JYT	**Yasato**	**1.14**	**294**	P	**Pn**	**17 19 10.4**	**-2.1**
BSO1	**Boso 1**	**1.19**	**201**	P	**Pb**	**17 19 12.4**	**-1.4**
MJAR	**Matsushiro Arr**	**2.76**	**287**	Pn	**Pn**	**17 19 34.4**	**-0.5**
	0.6nm,0.3s,baz=92,slow=10,SNR=34						
MJAR				Sn	**Sn**	**17 20 11.3**	**+3.9**
	0.3nm,0.3s,baz=82,slow=21,SNR=6.7						
MJAR				LR	LR	17 21 00.4	
	comp=Z,67nm,21.7s,baz=100,slow=47						
MAT	**Matsushiro**	**2.76**	**287**	P	**Pn**	**17 19 36.0**	**+1.1**
MAT				*e*S	**Sn**	**17 20 08.6**	**+1.2**
ASAJ	**Asahikawa**	**8.38**	**5**	Pn	**Pn**	**17 20 50.7**	**-1.2**
	0.5nm,0.3s,baz=197,slow=12,SNR=6.9						
ASAJ				Sn	**Sn**	**17 22 22.7**	**-2.9**
	baz=119,slow=32,SNR=1.8						
JNU	**Nakatsue**	**9.15**	**256**	LR	LR	17 24 18.3	
	comp=Z,25nm,19.0s,baz=136,slow=36						
KSRS	**Korea Array**	**11.03**	**283**	LR	LR	17 25 47.2	
	comp=Z,29nm,18.8s,baz=90,slow=38						
H11N2	**WAKE ISLAND Hy**	**27.47**	**119**	T	T	17 53 34.1	
	baz=311,slow=75,SNR=41						
H11N1	**WAKE ISLAND Hy**	**27.48**	**119**	T	T	17 53 34.7	
	baz=311,slow=75,SNR=36						
H11N3	**WAKE ISLAND Hy**	**27.49**	**119**	T	T	17 53 37.1	
	baz=311,slow=75,SNR=32						
SEY	**Seymchan**	**28.02**	**11**	P	**P**	**17 24 42.0**	**+1.2**
	0.3nm,0.3s,baz=80,slow=23,SNR=4.7						
H11S1	**WAKE ISLAND Hy**	**28.14**	**121**	T	T	17 54 25.0	
	baz=313,slow=76,SNR=16						
H11S3	**WAKE ISLAND Hy**	**28.14**	**121**	T	T	17 54 26.1	
	baz=313,slow=76,SNR=17						
H11S2	**WAKE ISLAND Hy**	**28.16**	**121**	T	T	17 54 28.5	
	baz=313,slow=76,SNR=16						
MKAR	**Makanchi Array**	**44.85**	**303**	P	**P**	**17 27 05.3**	**+1.2**
	0.2nm,0.5s,baz=81,slow=8.9,SNR=2.2						
ILAR	**Eielson Array**	**50.53**	**32**	P	**P**	**17 27 49.4**	**+1.5**
	0.4nm,0.8s,baz=263,slow=6.1,SNR=3.1						
WRA	**Warramunga Arr**	**55.82**	**188**	P	**P**	**17 28 26.5**	**-0.8**
	0.6nm,0.8s,baz=0.7,slow=7.6,SNR=2.0						
ASAR	**Alice Springs**	**59.55**	**188**	P	**P**	**17 28 53.1**	**-0.4**
	0.2nm,0.8s,baz=6.9,slow=8.2,SNR=5.2						
YKA	**Yellowknife Ar**	**64.87**	**30**	P	**P**	**17 29 29.8**	**+1.1**
	0.2nm,0.7s,baz=303,slow=5.8,SNR=4.2						
AKASG	**Malin Array Be**	**75.33**	**323**	P	**P**	**17 30 33.6**	**+0.5**
	0.6nm,0.6s,baz=55,slow=5.8,SNR=4.2						

IDC 29 17:40:55.1±2.9,**7°.09S**×**129°.60E,h107**^{km}±41^{km}**,mb2.9**/1, **mb1 2.9**/5,**mb1mx2.8**/37,**mbtmp3.1**/5,**Error ellipse: s-maj=69.7km s-min=22.5km az=91.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.40**	**15**	P	Pn	17 42 27.0	+0.1
	0.4nm,0.3s,baz=198,slow=3.2,SNR=9.9						
SIJI				S	Sn	17 43 34.4	-4.3
	0.5nm,0.3s,baz=240,slow=23,SNR=6.1						
FITZ	**Fitzroy Crossi**	**11.60**	**199**	P	Pn	17 43 37.4	-0.1
	0.1nm,0.3s,baz=18,slow=13,SNR=7.4						
FITZ				S	Sn	17 45 38.0	-7.1
	0.2nm,0.3s,baz=215,slow=13,SNR=7.5						
WRA	**Warramunga Arr**	**13.57**	**161**	P	Pn	17 44 02.9	-0.5
	0.1nm,0.3s,baz=344,slow=13,SNR=7.5						
WRA				S	Sn	17 46 23.4	-10
	0.2nm,0.3s,baz=334,slow=22,SNR=6.4						
ASAR	**Alice Springs**	**16.99**	**166**	P	P	17 44 46.9	+0.3
	0.1nm,0.3s,baz=338,slow=9.1,SNR=6.6						
ASAR				S	Sn	17 47 44.4	-11
	baz=345,slow=33,SNR=1.6						
MKAR	**Makanchi Array**	**68.09**	**327**	P	P	17 51 43.4	0.0
	0.1nm,0.4s,baz=120,slow=8.0,SNR=2.1						

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*PAS **29** 17:41:18.0±1.9, 33°.904N±0°.010×117°.94W±0°.01, h3^{km}±5^{km}, ML2.1/134, Error ellipse: s-maj=1.5km s-min=1.4km az=139.0*

NEIC 29 17:41:17.6±1.2,**33°.916N**±0°.010×**117°.949W**±0°.009, **h17**^{km}±1^{km},**Error ellipse: s-maj=1.6km s-min=0.9km az=151.0,Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FULC	**Fullerton**	**0.05**	**153**		Pg	17 41 21.2	+0.5
BREC	**Barre Substati**	**0.11**	**194**		Pb	17 41 20.7	-0.5
BREC					Sg	17 41 23.9	+0.2
DLAC	**Del Amo**	**0.14**	**241**		Pg	17 41 21.6	0.0
GVRC	**Garvey Reservo**	**0.19**	**313**		Pg	17 41 22.5	+0.1
GVRC	**Garvey Reservo**	**0.19**	**313**		Sb	17 41 26.7	+0.6
PSRC	**Puddingstone R**	**0.21**	**34**		Pg	17 41 22.4	-0.2
PSRC					Sg	17 41 26.2	+0.2
CHNC	**Chino**	**0.24**	**70**		Pg	17 41 23.0	-0.1
CHNC					Sb	17 41 27.4	+0.1
PEM	**Pine Mountain**	**0.26**	**15**		Pg	17 41 23.3	-0.1
MWC	**Mount Wilson**	**0.32**	**344**	Pg	Pg	17 41 24.1	-0.4
PASC	**Pasadena Art C**	**0.32**	**322**	Pg	Pg	17 41 24.1	-0.4
PASC				Sg	Sg	17 41 29.1	-0.1
MLSC	**Mira Loma**	**0.33**	**75**		Pg	17 41 24.4	-0.2
MLSC					Sg	17 41 29.4	0.0
SSK	**Sunset Peak**	**0.36**	**36**		Pg	17 41 25.2	-0.1
XTL	**Crystal Lake,**	**0.39**	**11**		Pg	17 41 25.3	-0.3
BFSC	**Mount Baldy Ra**	**0.40**	**37**		Pg	17 41 25.7	-0.3
BFSC					Sb	17 41 32.0	-0.2
CHFC	**Chilao Flat St**	**0.42**	**351**		Pg	17 41 25.8	-0.5
CHFC					Sg	17 41 32.1	-0.1
DECC	**Green Verdugo**	**0.46**	**317**		Pg	17 41 26.8	-0.1
SS2	**San Sevaine**	**0.47**	**52**		Pg	17 41 27.1	+0.1
RVR	**Riverside**	**0.48**	**81**		Pg	17 41 27.0	-0.3
RVR					Sg	17 41 33.8	0.0
SME	**Santa Rosa Min**	**0.50**	**101**		Pg	17 41 27.3	-0.4
JNH	**Juniper Hills**	**0.53**	**360**		Pg	17 41 27.7	-0.5
JNH					Sg	17 41 35.5	+0.1
HOLC	**Holcomb Ridge**	**0.55**	**9**		Pg	17 41 28.2	-0.4
IR2C	**Iron Canyon**	**0.60**	**322**		Pg	17 41 29.1	-0.4
IR2C					Sb	17 41 37.9	0.0
LRRC	**Littlerock Res**	**0.61**	**354**		Pg	17 41 29.4	-0.3
CSP	**Cedar Springs**	**0.62**	**52**		Pg	17 41 29.7	-0.2
CJV	**Casa Juvan**	**0.63**	**345**		Pg	17 41 29.7	-0.4
CIAC	**Catalina I. Ai**	**0.64**	**217**		Sb	17 41 40.1	+1.1
PEC	**Perris**	**0.66**	**92**		Pg	17 41 30.1	-0.4
MURC	**Murrieta**	**0.70**	**116**		Pb	17 41 30.9	-0.4

MURC					Sb	17 41 40.9	+0.1
CFT	Crafton Hills	0.71	80		Pb	17 41 31.2	-0.2
SBB	Saddle Back Bu	0.78	8		Pb	17 41 32.3	-0.3
HMTC	Hemet	0.81	104		Pb	17 41 32.7	-0.5
HMTC					Sg	17 41 44.2	0.0
BACC	Bachelor Mtn.	0.82	112		Pb	17 41 32.7	-0.6
DGR	Domenigoni Val	0.83	108		Pb	17 41 33.0	-0.5
DGR					Sb	17 41 44.2	-0.1
BTL	Butler Peak	0.86	66		Pb	17 41 34.1	0.0
OSI	Osito Audit: C	0.95	318		Pb	17 41 35.0	-0.5
OSI					Pn	17 41 36.2	+0.1
OSI				Sg	Sn	17 41 49.0	-0.2
EDW2	Edwards Air Fo	0.96	358		Pb	17 41 35.6	-0.2
GORC	Green Oak Ranc	0.97	141		Pb	17 41 34.9	-0.9
TPO	Tropico Hills	0.99	347		Pb	17 41 36.1	-0.2
HYS	Haystack Butte	1.00	18		Pb	17 41 36.3	-0.1
PLM	Palomar	1.07	121		Pb	17 41 37.1	-0.5
CRY	Cary Ranch	1.07	109		Pb	17 41 37.3	-0.3
CRY					Sb	17 41 51.7	+0.4
BZNA	Buzz No.'s Pla	1.15	111		Pn	17 41 38.8	-0.1
DNR	Dunn Ranch,Anz	1.15	107		Pb	17 41 39.3	+0.3
SNDA	J Saunders Pla	1.17	108		Pb	17 41 39.4	0.0
SNDA					Sg	17 41 55.8	+0.2
FRD	Ford Ranch, An	1.20	110		Pb	17 41 39.7	-0.1
FRD					Sg	17 41 56.4	0.0
FRD	Ford Ranch, An	1.20	110		Pb	17 41 39.7	-0.1
FRD					Sn	17 41 55.8	+0.3
HWB	Hans Werner Br	1.21	137		Sn	17 41 55.8	+0.1
RRX	Edison Barstow	1.24	39		Sg	17 41 58.0	+0.3
DPP	Dos Picos Cty	1.24	137		Pn	17 41 39.6	-0.5
DPP					Sn	17 41 56.9	+0.4
109C	Camp Elliot, M	1.25	145	Pn	Pn	17 41 39.6	-0.5
PFO	Pinyon Flats O	1.28	103		Pn	17 41 40.9	+0.2
PFO				Sn	Sn	17 41 58.2	+0.7
PFO	Pinyon Flats O	1.28	103		Pb	17 41 41.2	0.0
PFO					Sg	17 41 58.4	-0.5
XPFO	Pion Flat	1.28	103		Pn	17 41 41.0	+0.2
XPFO	Pion Flat	1.28	103		Pb	17 41 41.2	-0.1
EW2	E Wide Canyon	1.28	88		Pb	17 41 41.4	+0.2
EW2					Sg	17 41 58.5	-0.6
BLAC	Blackrock camp	1.30	83		Pb	17 41 41.8	+0.1
DTP	Desert Tortois	1.35	4		Pg	17 41 43.7	+0.1
SNCC	San Nicolas Is	1.47	244	Pn	Pg	17 41 45.7	-0.3
TPC	Twentynine Pal	1.59	83		Pb	17 41 46.9	+0.4
BAR	Barrett	1.63	139	Pn	Pn	17 41 45.6	+0.1
GSC	Goldstone, Bar	1.67	34		Pb	17 41 47.4	-0.5
ISA	Isabella, Lake	1.79	346		Pn	17 41 48.5	+0.8
DPD	Davis Peak	2.68	300		Pn	17 42 00.5	+0.6
TPNV	Topopah Spring	3.33	24	Pn	Pn	17 42 11.4	+2.4
SHPR	Sheep Range	3.45	41	Pn	Pn	17 42 12.3	+1.7

UCR 29 18:08:01.2±2.0**, 9.°85N×84.°76W, h13**^{km}±758^{km}**, MD3.7, MW3.5, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRA1	San Ramn	0.36	50	*e*P	Pg	18 08 08.8	+0.2
SRA1				*e*S	Sb	18 08 14.4	-0.8
JTS	Las Juntas de	0.48	337	*e*P	Pg	18 08 09.9	-0.7
JTS				*e*S	Sg	18 08 16.9	-0.2
ARE1	Arenal 1	0.61	4	*e*P	Pg	18 08 13.4	+0.2
FORC	Fortuna	0.62	8	*i* P	Pg	18 08 13.4	+0.1
CEDE	Laguna Cedeo	0.64	5	*i* P	Pb	18 08 14.0	-0.3
HDC	Heredia	0.66	77	*e*S	Sb	18 08 23.3	-0.4
SJS	Escuela Geolog	0.70	83	*e*S	Sb	18 08 24.7	-0.3
LCR2	La Lucha 2	0.76	98	*e*P	Pg	18 08 15.1	-0.8
PLVR	Palo Verde	0.76	311	*e*P	Pg	18 08 15.1	-1.0
PLVR				*e*S	Sg	18 08 25.9	-0.3
ACAL	Aguas Claras	0.82	341	*i* P	Pg	18 08 16.6	-0.7
GUAI	GUAI	0.85	300	*i* P	Pg	18 08 16.3	-1.3
GUAI				*i* S	Sg	18 08 28.6	-0.1
CUI	Cuipilapa	0.90	334	*e*P	Pg	18 08 17.7	-0.9
CUI				*e*S	Sg	18 08 29.5	-0.8
HORNC	Hornillas	0.95	335	*i* P	Pb	18 08 18.4	-1.2
HORNC				*i* S	Sg	18 08 30.5	-1.6
NY14	Universidad de	1.10	316	*i* P	Pb	18 08 21.0	-1.1

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*NEIC **29** 18:12:31.6±1.4, 43.°82N±0.°05×105.°22W±0.°08, h0^{km}±1^{km}, ML3.5/69, Error ellipse: s-maj=10.2km s-min=8.5km az=103.0*

*IDC **29** 18:12:31.1±0.9, 43.°81N×105.°42W, h0^{km}, mb3.9/4, mb1 3.8/10, mb1mx3.5/45, mbtmp3.6/10, ML3.4/6, MS2.4/1, Ms1 2.4/1, ms1mx2.0/60, Error ellipse: s-maj=21.2km s-min=8.0km az=146.0*

ISC 29 18:12:30.9±0.7**, 43.°83N**±0.°05×**105.°21W**±0.°06**, h0**^{km}**, n101, σ0.**^{s}**84**/102**, mb3.9**/4**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.90	71		Pb	18 12 50.0	+0.4
K22A	Casper	1.52	220		Pn	18 12 58.2	-1.3
K22A				IAML		18 13 21.0	
	comp=E,437nm,0.5s						
K22A				IAML		18 13 24.1	
	comp=N,573nm,0.5s						
PHWY	Pilot Hill	2.53	184		Pn	18 13 13.8	+0.3
RWWY	Rawlins	2.60	215		Pn	18 13 14.7	+0.3
RWWY				IAML		18 13 52.3	
	comp=N,242nm,1.0s						
RWWY				IAML		18 13 54.6	
	comp=N,241nm,0.5s						
LAO	LASA Array	2.95	346		Pn	18 13 20.4	+1.3
N23A	Red Feather La	2.98	191		Pn	18 13 20.5	+0.7
N23A				IAML		18 14 07.1	
	comp=N,135nm,0.6s						
N23A				IAML		18 14 07.4	
	comp=E,105nm,0.6s						
RLMT	Red Lodge	3.18	295		Pn	18 13 23.3	+0.9
RLMT				IAML		18 14 18.9	
	comp=E,111nm,0.6s						
RLMT				IAML		18 14 25.1	
	comp=E,98nm,0.9s						
BW06	Boulder Array	3.34	253		Pn	18 13 25.8	+1.1
BW06				IAML		18 14 22.2	
	comp=E,69nm,0.7s						
PD31	Pinedale Array	3.34	253		Pn	18 13 25.7	+1.0
PDAR	Pinedale Array	3.34	253	Pn	Pn	18 13 26.1	+1.4
	comp=E,4.7nm,0.3s,baz=78,slow=17,SNR=34						
PDAR				Lg	Lg	18 14 10.3	
	comp=E,8.8nm,0.3s,baz=67,slow=28,SNR=2.1						
PDAR				LR	LR	18 14 21.7	
	comp=E,63nm,20.7s,baz=100,slow=35						
PDAR	Pinedale Array	3.34	253		Pn	18 13 25.6	+1.0
YNE	Yellowstone No	3.63	291		Pn	18 13 29.3	+0.6
YMP	Mirror Lake Pl	3.67	286		Pn	18 13 30.3	+1.1
OGNE	Ogallala	3.72	140		Pn	18 13 30.7	+1.0
LKWY	Lake	3.80	283		Pn	18 13 31.6	+0.6
LKWY				IAML		18 14 03.4	
	comp=E,80nm,0.6s						
H17A	Grant Village	3.90	280		Pn	18 13 33.9	+1.5
H17A				IAML		18 14 37.9	
	comp=N,44nm,0.5s						
FLWY	Flagg Ranch	3.97	276		Pn	18 13 34.2	+0.9
FLWY				IAML		18 14 46.5	
	comp=N,96nm,2.2s						
FLWY				IAML		18 14 46.5	
	comp=N,48nm,1.2s						
YNR	Norris Junctio	4.03	285		Pn	18 13 35.5	+1.5
ISCO	Idaho Springs	4.04	184		Pn	18 13 35.3	+1.0
SNOW	Snow King Moun	4.04	267		Pn	18 13 35.4	+1.1
SNOW				IAML		18 14 50.4	
	comp=N,66nm,1.0s						
SNOW				IAML		18 14 57.1	
	comp=N,58nm,0.9s						
YPP	Pitchstone Pla	4.06	278		Pn	18 13 35.0	+0.5
REDW	Red Top Meadow	4.12	265		Pn	18 13 35.7	+0.3
REDW				IAML		18 14 43.0	
	comp=N,70nm,0.8s						
REDW				IAML		18 14 52.8	
	comp=N,82nm,0.8s						
IMW	Indian Meadow	4.14	273		Pn	18 13 36.3	+0.6
IMW				IAML		18 14 09.7	
	comp=N,59nm,0.5s						
YHH	Holmes Hill	4.16	285		Pn	18 13 36.4	+0.5
TPAW	Teton Pass	4.18	267		Pn	18 13 37.4	+1.2
TPAW				IAML		18 15 01.8	
	comp=N,65nm,0.9s						
E28A	Huff	4.21	48		Pn	18 13 38.0	+1.6
FXWY	Fox Creek	4.22	269		Pn	18 13 37.8	+1.1
YMR	Madison River	4.22	283		Pn	18 13 37.3	+0.6
O20A	White River Ci	4.33	212		Pn	18 13 39.1	+1.0
O20A				IAML		18 15 01.2	
	comp=N,68nm,2.2s						
O20A				IAML		18 15 02.5	
	comp=E,64nm,0.8s						
YHB	Horse Butte	4.39	284		Pn	18 13 40.1	+1.0
YHL	Hebgen Lake	4.40	285		Pn	18 13 39.8	+0.5
AHID	Auburn Hatcher	4.43	258		Pn	18 13 40.6	+1.1
AHID				IAML		18 14 55.2	
	comp=N,68nm,0.9s						
AHID				IAML		18 15 02.7	
	comp=E,44nm,0.9s						
QLMT	Earthquake Lak	4.57	285		Pn	18 13 42.4	+0.8
RDMU	Red Mountain	4.59	226		Pn	18 13 42.5	+0.7
DGMT	Dagmar	4.70	8		Pn	18 13 45.5	+2.5
SMCO	Snowmass	4.83	196	Pn	Pn	18 13 44.4	-0.8
SMCO					Pb	18 13 57.6	+1.0
SMCO				IAML		18 15 07.4	
	comp=E,23nm,0.7s						
SMCO				IAML		18 15 08.0	
	comp=E,22nm,0.4s						
HWUT	Hardware Ranch	5.18	247		Pn	18 13 50.7	+0.9
HWUT				IAML		18 15 18.8	
	comp=E,45nm,1.0s						
HWUT				IAML		18 15 31.4	
	comp=E,40nm,1.0s						
KSCO	Kaye Shedlock'	5.19	157		Pn	18 13 50.5	+0.5
EGMT	Eagleton	5.26	325		Pn	18 13 51.7	+0.9
LRM	Limekiln Ridge	5.52	294		Pn	18 13 55.7	+1.1
MCMT	McKenzie Canyo	5.57	283		Pn	18 13 56.1	+0.9
MDND	Maddock	5.61	42	Pn	Pn	18 13 57.1	+1.4
JLU	Jordanelle	5.64	237	Pn	Pn	18 13 57.0	+0.7
CTU	Camp Tracy	5.78	239	Pn	Pn	18 13 57.0	-1.0
PV22	Blue Mesa, Par	5.94	208		Pn	18 14 00.4	+0.2
PV07	Paradox Valley	5.98	207		Pn	18 14 01.4	+0.5
PV21	Cone Mtn., Par	5.98	210		Pn	18 14 01.4	+0.6
P17A	Butcher Ranch,	6.01	225		Pn	18 14 00.9	-0.3
PV15	Paradox Valley	6.01	205		Pn	18 14 02.2	+0.9
SDCO	Great Sand Dun	6.08	182		Pn	18 14 02.5	+0.2
PV23	Carpenter Ridg	6.09	209		Pn	18 14 03.2	+0.8
PV09	Paradox Valley	6.09	210	Pn	Pn	18 14 03.5	+1.1
PV04	Paradox Valley	6.10	208		Pn	18 14 03.3	+0.8
MPU	Maple Canyon	6.12	234	Pn	Pn	18 14 02.3	-0.5
PV12	Saucer Basin,	6.14	207	Pn	Pn	18 14 03.0	0.0
PV14	Lion Creek, Pa	6.16	209	Pn	Pn	18 14 03.9	+0.5
PV10	Paradox Valley	6.17	209		Pn	18 14 04.1	+0.6
PV20	West Nyswonger	6.17	209		Pn	18 14 03.8	+0.3
SRU	San Rafael Swe	6.17	222		Pn	18 14 03.0	-0.5
PV11	David Mesa, Pa	6.18	208		Pn	18 14 04.2	+0.6
PV16	Nyswonger Mesa	6.18	208		Pn	18 14 04.1	+0.4
S22A	4UR Ranch, Cre	6.20	192		Pn	18 14 03.8	-0.1
PV03	Paradox Valley	6.21	207		Pn	18 14 04.4	+0.4
PV02	Paradox Valley	6.21	207		Pn	18 14 05.0	+0.9
ECSD	EROS Data Cent	6.23	88		Pn	18 14 04.7	+0.6
PV01	Paradox Valley	6.23	205		Pn	18 14 04.7	+0.4
PV18	Skein Mesa, Pa	6.24	208		Pn	18 14 04.2	-0.3
PV13	Radium Mtn., P	6.29	207		Pn	18 14 04.7	-0.4
TMUT	Trail Mountain	6.38	227		Pn	18 14 06.3	-0.2
NLU	North Lily Min	6.42	235		Pn	18 14 05.6	-1.3
BGU	Big Grassy Mou	6.47	246	Pn	Pn	18 14 07.2	-0.4
CBKS	Cedar Bluff	6.49	139		Pn	18 14 08.4	+0.8
Q16A	Castle Valley	6.64	224		Pn	18 14 10.2	+0.2
T25A	Trinidad	6.71	175		Pn	18 14 11.3	+0.4
DUG	Dugway, Tooele	6.72	240		Pn	18 14 11.3	+0.2
MSO	Missoula	6.84	299		Pn	18 14 13.2	+0.6
MVCO	Mesa Verde	7.07	202		Pn	18 14 15.4	-0.4
R32A	Long Quarter,	7.29	136		Pn	18 14 18.6	-0.2
MSU	Marysvale	7.47	227		Pn	18 14 19.8	-1.5
N35A	Tabor	7.68	109	Pn	Pn	18 14 23.6	-0.4
MTPU	Mount Pierson	7.83	225		Pn	18 14 26.7	+0.3
AGMN	Agassiz Nation	7.89	52		Pn	18 14 27.5	+0.7
WALA	Waterton Lakes	7.96	314		Pn	18 14 27.5	-0.5
ELK	Elko	8.05	251	Pn	Pn	18 14 30.1	+0.9
	comp=E,0.2nm,0.3s,baz=70,slow=15,SNR=3.4						
ELK				Lg	Lg	18 16 38.5	
	comp=E,0.1nm,0.3s,baz=157,slow=6.1,SNR=1.8						
ELK	Elko	8.05	251		Pn	18 14 29.5	+0.3
PSUT	Pine Spring	8.39	234		Pn	18 14 34.0	0.0
ULM	Lac du Bonnet	9.04	41	Pn	Pn	18 14 42.3	-0.4
	comp=E,1.5nm,0.3s,baz=229,slow=11,SNR=19						
ULM				Lg	Lg	18 17 12.2	
	comp=E,0.5nm,0.3s,baz=133,slow=18,SNR=3.6						
WUAZ	Wupatki	9.56	212		Pn	18 14 49.8	-0.1
WMOK	Wichita Mounta	10.35	149		Pn	18 14 59.0	-1.7
FFC	Flin Flon	11.11	10		Pn	18 15 10.1	-0.8
NVAR	Mina Array Bea	11.25	246	Pn	Pn	18 15 13.9	+0.9
	comp=E,0.2nm,0.3s,baz=65,slow=32,SNR=3.0						
TXAR	Lajitas Array	14.52	175	Pn	Pn	18 15 58.4	+0.7
	comp=E,0.0nm,0.3s,baz=355,slow=9.1,SNR=1.7						
TXAR				Pg	P	18 16 58.2	+54
	comp=E,0.1nm,0.3s,baz=6.1,slow=12,SNR=2.9						
TXAR				Lg	Lg	18 20 03.8	
	comp=E,0.0nm,0.3s,baz=16,slow=34,SNR=3.5						
TXAR	Lajitas Array	14.52	175		Pn	18 15 57.6	-0.1
YKA	Yellowknife Ar	19.49	347	P	P	18 16 59.7	+0.5
	comp=E,0.1nm,0.3s,baz=159,slow=12,SNR=8.0						
ILAR	Eielson Array	31.22	327	P	P	18 18 51.6	-0.1
	comp=E,0.2nm,0.5s,baz=119,slow=8.7,SNR=2.4						
ARCES	ARCESS Array B	61.32	18	P	P	18 22 48.0	+0.3
	comp=E,6.9nm,1.0s,baz=336,slow=7.9,SNR=4.0						
ARCES	ARCESS Array B	61.32	18	P	P	18 22 47.5	-0.2
ZALV	Zalesovo Beam	82.22	354	P	P	18 24 52.6	-1.0
	comp=E,0.4nm,0.5s,baz=17,slow=6.3,SNR=1.9						
ZALV	Zalesovo Beam	82.22	354	P	P	18 24 52.2	-1.4
MKAR	Makanchi Array	89.52	355	P	P	18 25 30.2	+0.3
	comp=E,0.6nm,0.7s,baz=23,slow=4.1,SNR=6.2						
MKAR	Makanchi Array	89.52	355	P	P	18 25 29.6	-0.4

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*IDC **29** 18:19:52.9±46.0, 24.°21S×176.°91W, h0^{km}, mb3.8/3, mb1 4.0/3, mb1mx3.5/36, mbtmp3.8/3, Error ellipse: s-maj=843.5km s-min=165.9km az=89.0*

*NEIC **29** 18:19:54.6±0.5, 24.°8S±0.°1×176.°9W±0.°1, h10^{km}±8^{km}, mb4.2/4, Error ellipse: s-maj=19.5km s-min=11.8km az=123.0*

ISC 29 18:20:02.9±1.4**, 24.°2S**±0.°2×**176.°8W**±0.°1**, h100**^{km}**, n11, σ1.**^{s}**00**/11**, mb4.0**/5**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.06	322	Pn	Pn	18 21 57.1	-0.3
NIUE	Niue	8.17	53	Pn	Pn	18 21 58.8	0.0
STKA	Stephens Creek	37.34	249	P	P	18 27 05.6	-0.2
	0.8nm,0.4s,baz=92,slow=13,SNR=6.2						
STKA	Stephens Creek	37.34	249	P	P	18 27 04.7	-1.1
BBOO	Buckleboo	42.03	247	P	P	18 27 43.5	-1.2
AS31	Alice Springs	44.88	260	P	P	18 28 08.5	+0.8
ASAR	Alice Springs	44.88	260	P	P	18 28 08.5	+0.8
	0.6nm,0.4s,baz=90,slow=8.3,SNR=31						
ASAR	Alice Springs	44.88	260	P	P	18 28 08.3	+0.6
WB2	Warramunga Arr	45.31	265	P	P	18 28 12.1	+0.9
WB2				IAmb	IAmb	18 28 13.2	
	comp=Z,4.1nm,1.1s						
WB0	Warramunga Arr	45.31	266	P	P	18 28 12.5	+1.3
WB0				IAmb	IAmb	18 28 16.9	
	comp=Z,3.6nm,1.1s						
WRA	Warramunga Arr	45.32	265	P	P	18 28 12.3	+1.1
	comp=Z,0.6nm,0.5s,baz=105,slow=7.8,SNR=8.3						

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*IDC **29** 18:32:15.9±1.3, 18.°66S×70.°82W, h0^{km}, mb3.6/3, mb1 4.0/6, mb1mx3.6/28, mbtmp3.8/6, ML4.0/3, MS3.0/2, Ms1 3.0/2, ms1mx2.6/23, Error ellipse: s-maj=37.2km s-min=22.4km az=56.0*

*GUC **29** 18:32:20.8±0.7, 18.°71S×70.°72W, h38^{km}±3^{km}, ML3.6*

ISC 29 18:32:19.5±0.7**, 18.°65S**±0.°04×**70.°72W**±0.°06**, h21**^{km}±5^{km}**, n26, σ1.**^{s}**10**/31**, 5C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB12	IPOC Station P	0.37	84	*e*P	Pn	18 32 29.3	-0.4
PB12				*e*S	Sn	18 32 35.3	-1.1
PB12				IAML		18 32 36.6	
	comp=N,8μm,0.3s						
AP01	Chacalluta	0.45	52⇑	*i*P	Pn	18 32 30.6	-0.1
AP01				*e*S	Sn	18 32 38.0	-0.3
PSGC	Pisagua	1.09	149⇑	*i*P	Pb	18 32 39.1	-0.7
PSGC				*e*S	Sb	18 32 53.0	-0.7
PSGC				IAML		18 32 53.6	
	comp=E,3μm,0.6s						
MNMC	Minye Minye	1.16	114⇓	*e*P	Pb	18 32 41.6	+0.5
MNMC				*e*S	Sn	18 32 57.2	+1.0
PB16	IPOC Station P	1.19	75⇓	*e*P	Pb	18 32 42.4	+0.7
PB16				*e*S	Sn	18 32 59.5	+2.2
PB16				IAML		18 33 00.4	
	comp=E,2μm,0.4s						
PB11	IPOC Station P	1.49	138	*e*P	Pb	18 32 45.8	-0.8
PB11				*e*S	Sb	18 33 04.8	-0.4
GO01	Chusmiza	1.76	125⇑	*i*P	Pb	18 32 51.3	-0.1
GO01				*e*S	Sb	18 33 14.2	+1.0
TA01	Diego Aracena	1.97	165⇑	*i*P	Pn	18 32 52.0	+0.4
TA01				*e*S	Sn	18 33 16.3	+0.6
TA01				IAML		18 33 22.9	
	comp=E,694nm,0.4s						
TA01				IAML		18 33 24.7	
	comp=N,684nm,0.8s						
PB08	IPOC Station P	2.09	135⇑	*i*P	Pb	18 32 55.5	-1.5
PB08				*e*S	Sb	18 33 21.6	-1.1
PB08				IAML		18 33 24.6	
	comp=E,1μm,0.1s						
PATCX	Punta Patache	2.22	166	*e*P	Pn	18 32 55.6	+0.4
PATCX				*e*S	Sn	18 33 22.9	+0.9
PATCX				IAML		18 33 42.5	
	comp=E,734nm,0.3s						
LPAZ	La Paz	3.41	47	Pn	Pb	18 33 19.0	-0.6
	comp=E,1.2nm,0.3s,baz=226,slow=2.4,SNR=11						
LVC	Limon Verde	4.29	157	Pn	Pn	18 33 25.3	+1.5
	comp=E,14nm,0.3s,baz=326,slow=9.3,SNR=30						
LVC				Sn	Sn	18 34 14.5	+1.1
	comp=E,8.9nm,0.3s,baz=33,slow=23,SNR=1.9						
LVC				Lg	Lg	18 34 26.5	
	comp=E,7.8nm,0.3s,baz=194,slow=16,SNR=12						
LVC				LR	LR	18 35 20.8	
	comp=E,137nm,21.6s,baz=328,slow=43						
NNA	Nana	8.88	317	Pn	Pn	18 34 26.9	+0.3
	comp=E,1.5nm,0.3s,baz=156,slow=14,SNR=1.7						
NNA				Sn	Sn	18 36 08.0	+1.9
	comp=E,1.8nm,0.3s,baz=218,slow=23,SNR=2.1						
SIV	San Ignacio	9.59	75	Pn	Pn	18 34 37.9	+1.5
	comp=E,1.1nm,0.3s,baz=266,slow=16,SNR=15						
CPUP	Villa Florida	14.54	124	LR	LR	18 42 19.7	
	comp=E,70nm,19.4s,baz=110,slow=41						
PTGA	Pitinga	20.70	32	P	P	18 36 57.6	-0.9
	comp=E,1.6nm,0.2s,baz=225,slow=19,SNR=2.5						
TXAR	Lajitas Array	57.33	326	P	P	18 42 05.3	-0.9
	comp=E,0.2nm,0.5s,baz=138,slow=11,SNR=2.1						
YKA	Yellowknife Ar	87.95	341	P	P	18 45 07.4	+0.1
	comp=E,0.4nm,0.7s,baz=134,slow=5.3,SNR=7.2						
H11S2	WAKE ISLAND Hy	125.78	280	T	T	21 09 55.0	
	baz=100,slow=75,SNR=17						
H11S1	WAKE ISLAND Hy	125.79	280	T	T	21 10 14.8	
	baz=100,slow=75,SNR=10						
H11N3	WAKE ISLAND Hy	125.79	281	T	T	21 10 21.8	
	baz=100						
H11S3	WAKE ISLAND Hy	125.80	280	T	T	21 10 02.6	
	baz=100,slow=75,SNR=13						
H11N2	WAKE ISLAND Hy	125.81	281	T	T	21 10 38.7	
	baz=100						
H11N1	WAKE ISLAND Hy	125.81	281	T	T	21 10 24.2	
	baz=100						
ASAR	Alice Springs	131.56	211	PKP	PKPdf	18 51 29.1	-2.3
	comp=E,0.2nm,0.8s,baz=150,slow=2.0,SNR=1.7						
MKAR	Makanchi Array	144.24	32	PKP	PKPdf	18 51 53.4	-0.5
	comp=E,0.1nm,0.5s,baz=325,slow=1.8,SNR=1.4						

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*IDC **29** 18:46:04.9±1.5, 62.°05S×161.°68E, h0^{km}, mb4.4/7, mb1 4.5/8, mb1mx4.2/24, mbtmp4.3/8, ML3.8/1, MS4.1/11, Ms1 4.1/11, ms1mx3.9/18, Error ellipse: s-maj=71.5km s-min=25.0km az=74.0*

*NEIC **29** 18:46:07.9±1.4, 61.°91S±0.°08×161.°7E±0.°3, h15^{km}±4^{km}, mb4.8/32, Error ellipse: s-maj=22.6km s-min=11.7km az=82.0*

*GCMT **29** 18:46:09.9±0.3, 61.°99S±0.°02×161.°59E±0.°05, h18^{km}±2^{km}, MW5.0/72, Moment Tensor Solution. s13,c13; s72,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.23±.15; M$_{\theta\theta}$2.45±.12; M$_{\phi\phi}$-2.22±.10; M$_{r\theta}$-1.44±.30; M$_{\theta\phi}$-0.24±.09; M$_{\phi r}$1.88±.40; Best double couple: M$_0$3.33800×10^{16} NP1:φ$_s$230.00000°, δ45.00000°, λ-176.00000°. NP2: φ$_s$137.00000°, δ87.00000°, λ-45.00000°. Principal axes: T 3.2720, Plg27.0000°, Azm193.0000°; N 0.1350, Plg45.0000°, Azm314.0000°; P -3.4040, Plg33.0000°, Azm83.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 18:46:07.0±0.5**, 61.°97S**±0.°07×**161.°8E**±0.°1**, h10**^{km}**, n77, σ1.**^{s}**58**/59**, mb4.8**/25**, MS4.0**/11**, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	Macquarie Isla	7.64	347		Pn	18 47 54.9	-3.4
VNDA	Vanda	15.63	180	Pn	Pn	18 49 43.9	-3.1
	0.3nm,0.3s,baz=343,slow=12,SNR=29						
VNDA				LR	LR	18 54 53.2	
	comp=Z,1μm,19.4s,baz=354,slow=34						
VNDA	Vanda	15.63	180		Pn	18 49 44.2	-2.7
DCZ	Deep Cove	16.82	13	P	Pn	18 50 04.0	+1.6
DCZ				IAmb	IAmb	18 50 10.7	
	comp=Z,186nm,1.6s						
MLZ	Mavora Lakes	17.03	15	P	P	18 50 08.2	+1.3
RPZ	Rata Peaks	19.08	21	LR	LR	18 57 15.6	
	comp=Z,918nm,18.5s,baz=187,slow=35						
TAU	Tasmania Unive	20.95	329	P	P	18 50 50.4	+0.7
TAU				IAmb	IAmb	18 50 56.2	
	comp=Z,38nm,1.2s						
URZ	Urewera	25.54	29	LR	LR	19 00 43.7	
	comp=Z,754nm,19.0s,baz=194,slow=34						
QSPA	South Pole Qui	28.12	180	P	P	18 51 59.4	+0.5
QSPA				IAmb	IAmb	18 52 05.4	
	comp=Z,32nm,1.8s						
LHI	Lord Howe Isla	30.51	355	P	P	18 52 19.8	-0.3
STKA	Stephens Creek	32.83	327	P	P	18 52 40.0	-0.5
	comp=Z,6.1nm,1.2s,baz=144,slow=7.3,SNR=5.5						
STKA				LR	LR	19 03 57.2	
	comp=Z,229nm,18.2s,baz=171,slow=33						
STKA	Stephens Creek	32.83	327	P	P	18 52 41.3	+0.8
BBOO	Buckleboo	33.54	318	P	P	18 52 47.2	+0.6
BBOO				IAmb	IAmb	18 52 49.8	
	comp=Z,21nm,1.2s						
EIDS	Eidsvold	37.30	344	P	P	18 53 20.1	+1.0
FORT	Forrest	38.12	309	P	P	18 53 25.8	-0.1
FORT				IAmb	IAmb	18 53 27.2	
	comp=Z,25nm,1.0s						
MAW	Mawson	38.20	218	LR	LR	19 09 15.7	
	comp=Z,385nm,20.6s,baz=80,slow=36						
DZM	Mont Dzumac	40.00	7	*e*LR	LR	19 04 22.2	
	comp=Z,278nm,28.5s						
H01W1	Cape Leeuwin H	40.24	290	T	T	19 36 32.3	
	baz=146,slow=75,SNR=40						
H01W2	Cape Leeuwin H	40.25	290	T	T	19 36 32.6	
	baz=146,slow=75,SNR=44						
H01W3	Cape Leeuwin H	40.26	290	T	T	19 36 33.1	
	baz=146,slow=75,SNR=38						
AS31	Alice Springs	42.74	321	P	P	18 54 03.8	-0.4
ASAR	Alice Springs	42.74	321	P	P	18 54 04.2	-0.1
	comp=Z,7.9nm,0.8s,baz=160,slow=8.5,SNR=76						
ASAR	Alice Springs	42.74	321	P	P	18 54 03.7	-0.6
CTA	Charters Tower	43.23	338	P	P	18 54 08.6	+0.4
	comp=Z,6.7nm,1.0s,baz=168,slow=8.7,SNR=4.9						
MORW	Morawa	44.41	296	P	P	18 54 16.4	-1.3
MORW				IAmb	IAmb	18 54 18.6	
	comp=Z,31nm,1.1s						
WR0	Warramunga Arr	46.05	323	P	P	18 54 29.7	-1.1
WR0				IAmb	IAmb	18 54 36.7	
	comp=Z,21nm,1.5s						
WB2	Warramunga Arr	46.12	323	P	P	18 54 30.3	-1.1
WB2				IAmb	IAmb	18 54 31.7	
	comp=Z,7.6nm,1.1s						
WRA	Warramunga Arr	46.13	323	P	P	18 54 30.4	-0.9
	comp=Z,3.0nm,1.0s,baz=164,slow=6.2,SNR=12						
WRA	Warramunga Arr	46.13	323	P	P	18 54 30.3	-1.1
WRAB	Tennant Creek	46.13	323	P	P	18 54 30.3	-1.1
WRAB				IAmb	IAmb	18 54 59.7	
	comp=Z,12nm,1.5s						
SNAA	Sanae	46.22	187	P	P	18 54 31.7	+0.1
SNAA				IAmb	IAmb	18 54 48.2	
	comp=Z,7.7nm,1.2s						
WB0	Warramunga Arr	46.28	323	P	P	18 54 31.3	-1.2
NIUE	Niue	47.16	38	P	P	18 54 39.8	+0.4
PSA00	Pilbara Seismi	49.53	305	P	P	18 54 57.4	-0.4
FITZ	Fitzroy Crossi	50.60	313	P	P	18 55 04.4	-1.4
	comp=Z,6.9nm,0.9s,baz=167,slow=11,SNR=13						
FITZ	Fitzroy Crossi	50.60	313	P	P	18 55 05.8	0.0
FITZ				IAmb	IAmb	18 55 07.1	
	comp=Z,13nm,1.1s						

TBI	**Tubuai**	**50.66**	**63**	*e*LQ	LQ	19 06 52.4	
	comp=Z,300nm,25.2s						
TBI				*e*LR	LR	19 09 25.8	
	comp=Z,107nm,23.5s						
TBI	**Tubuai**	**50.66**	**63**	*e*T	T	19 49 37.8	
	comp=Z,14nm,0.3s						
KNRA	**Kununurra**	**51.83**	**318**	P	**P**	**18 55 14.6**	**-0.5**
KNRA				IAmb	IAmb	18 55 16.1	
	comp=Z,17nm,1.0s						
PMG	**Port Moresby**	**53.56**	**342**	P	**P**	**18 55 25.8**	**-2.0**
PMG				IAmb	IAmb	18 55 46.0	
	comp=Z,22nm,1.1s						
MTN	**Manton Dam**	**53.79**	**322**	P	**P**	**18 55 28.9**	**-0.7**
MTN				IAmb	IAmb	18 55 31.0	
	comp=Z,7.6nm,0.9s						
FUNA	**Funafuti**	**54.84**	**21**	P	**P**	**18 55 37.0**	**-0.2**
PAE	**Paea**	**55.68**	**60**	*e*T	T	19 55 53.7	
	comp=Z,1.5nm,0.2s						
TVO	**Taravao**	**55.71**	**60**	*e*T	T	19 55 55.9	
	comp=Z,1.1nm,0.3s						
MEH	**Mehetia**	**56.12**	**62**	*e*T	T	19 56 26.7	
	comp=Z,11nm,0.2s						
VAH	**Vaihoa**	**58.66**	**61**	*e*T	T	19 59 37.2	
	comp=Z,40nm,0.3s						
SOEI	**Soe**	**58.84**	**315**	P	**P**	**18 56 06.1**	**+0.4**
	comp=Z,17nm,1.2s						
SOEI	**Soe**	**58.84**	**315**	P	**P**	**18 56 05.7**	**-0.1**
MMRI	**Maumere**	**60.57**	**314**	P	**P**	**18 56 17.0**	**-0.5**
	comp=Z,36nm,1.1s						
MMRI	**Maumere**	**60.57**	**314**	P	**P**	**18 56 16.2**	**-1.3**
EFI	**East Falkland**	**62.35**	**153**	P	**P**	**18 56 30.1**	**+0.9**
LEM	**Lembang**	**67.77**	**300**	P	**P**	**18 57 04.5**	**-0.5**
	comp=Z,486nmcomp=Z,17nm,1.5s						
DBJI	**Dramaga**	**68.38**	**299**	P	**P**	**18 57 09.6**	**+1.0**
	comp=Z,3μmcomp=Z,18nm,1.3s						
MPSI	**Mapaga**	**69.74**	**315**	P	**P**	**18 57 18.3**	**+1.3**
	comp=Z,12nm,1.6s						
DAV	**Davao City (W)**	**74.32**	**322**	LR	LR	19 29 27.2	
	comp=Z,99nm,22.0s,baz=128,slow=35						
SBUM	**Sibu**	**74.44**	**308**	P	**P**	**18 57 44.8**	**-0.4**
MYKOM	**Kota Tinggi**	**77.12**	**300**	P	**P**	**18 58 00.1**	**-0.4**
MYKOM				IAmb	IAmb	18 58 24.4	
	comp=Z,8.9nm,1.1s						
H08S2	**Diego Garcia H**	**83.00**	**267**	T	T	20 30 11.8	
	baz=152,slow=76,SNR=15						
H08S1	**Diego Carcia H**	**83.01**	**267**	T	T	20 30 10.8	
	baz=152,slow=76,SNR=7.6						
H08S3	**Diego Garcia H**	**83.02**	**267**	T	T	20 30 16.4	
	baz=152,slow=76,SNR=30						
BOSA	**Boshof**	**83.21**	**217**	P	**P**	**18 58 33.0**	**-0.4**
	comp=Z,2.3nm,0.7s,baz=218,slow=4.3,SNR=4.7						
BOSA				LR	LR	19 31 20.6	
	comp=Z,106nm,21.6s,baz=164,slow=33						
BOSA	**Boshof**	**83.21**	**217**	P	**P**	**18 58 34.8**	**+1.4**
BOSA				IAmb	IAmb	18 58 54.8	
	comp=Z,14nm,1.4s						
CPUP	**Villa Florida**	**86.55**	**145**	LR	LR	19 34 02.5	
	comp=Z,102nm,18.9s,baz=193,slow=33						
LPAZ	**La Paz**	**92.64**	**133**	LR	LR	19 31 53.9	
	comp=Z,52nm,20.3s,baz=130,slow=30						
CMAR	**Chiang Mai Arr**	**94.19**	**302**	P	**P**	**18 59 25.8**	**0.0**
	comp=Z,0.3nm,0.5s,baz=168,slow=4.9,SNR=4.8						
CMAR				LR	LR	19 39 26.6	
	comp=Z,37nm,19.1s,baz=204,slow=34						
CMAR	**Chiang Mai Arr**	**94.19**	**302**	P	**P**	**18 59 24.9**	**-0.9**
CHTO	**Chiang Mai**	**94.51**	**302**	P	**P**	**18 59 26.5**	**-0.8**
CHTO				IAmb	IAmb	18 59 28.4	
	comp=Z,3.6nm,1.1s						
JNU	**Nakatsue**	**98.01**	**334**	LR	LR	19 40 41.0	
	comp=Z,38nm,20.3s,baz=188,slow=33						
NJ2	**Nanjing**	**99.91**	**324**	*e*P	**Pdif**	**18 59 54.5**	**+3.2**
KSH	**Kashi**	**122.16**	**294**	PKP	**PKiKP**	**19 05 05.0**	**+3.7**
KSH				PP	**PP**	**19 06 43.8**	**+6.8**
KSH				PKS	**PKSdf**	**19 08 39.5**	**+1.7**
KSH				SKKS		19 13 36.5	
MKAR	**Makanchi Array**	**125.56**	**304**	PKP	**PKPdf**	**19 05 06.7**	**-0.7**
	comp=Z,0.2nm,0.7s,baz=122,slow=5.4,SNR=2.2						
KURBB	**Kurchatov Arra**	**130.12**	**304**	PKP	**PKPdf**	**19 05 15.3**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=161,slow=1.9,SNR=2.5						
ILAR	**Eielson Array**	**132.04**	**27**	PKP	**PKPdf**	**19 05 17.9**	**-1.1**
	comp=Z,0.3nm,0.8s,baz=224,slow=3.8,SNR=2.6						
ILAR	**Eielson Array**	**132.04**	**27**	PKPdf	**PKPdf**	**19 05 18.7**	**-0.3**
TIXI	**Tiksi**	**135.27**	**346**	PKP	**PKPdf**	**19 05 24.0**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=169,slow=3.9,SNR=1.4						
YKA	**Yellowknife Ar**	**139.11**	**45**	PKP	**PKPdf**	**19 05 31.4**	**-0.9**
	comp=Z,0.1nm,0.4s,baz=223,slow=3.4,SNR=1.7						
AKASG	**Malin Array Be**	**152.08**	**268**	PKPbc	**PKPbc**	**19 06 00.3**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=99,slow=2.5,SNR=1.3						

NNC 29 19:08:35.2±1.9**, 48°.14N×67°.30E, h0^{km}, mb3.6, mpv3.3, 5C-3D, Error ellipse: s-maj=20.4km s-min=13.1km az=179.0, Suspected Mining explosion., Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AB31	**Akbulak array**	**4.99**	**286**	Pn	Pn	19 09 51.3	0.0
	6.4nm,0.4s,baz=119,slow=8.7,SNR=7.5						
AB31				Pg	Pg	19 10 10.6	-0.3
	1.4nm,0.2s,baz=102,slow=15,SNR=9.2						
AB31				⇑Lg	Lg	19 11 13.0	
	4.7nm,0.3s,baz=97,slow=30,SNR=4.3						
BRVK	**Borovoye**	**5.28**	**20**	⇑Pn	Pn	19 09 55.9	+0.7
	1.3nm,0.5s						
BRVK				⇓Pg	Pg	19 10 12.5	-3.7
	1.8nm,0.7s						
BRVK				⇑Lg	Lg	19 11 21.5	
	3.2nm,0.6s						
KK31	**Karatay Array**	**5.52**	**155**	Pn	Pn	19 10 01.6	+3.0
	0.8nm,0.5s,baz=293,slow=7.5,SNR=4.4						
KK31				Lg	Lg	19 11 26.9	
	1.0nm,0.5s,baz=145,slow=61,SNR=4.1						
AKTO	**Aktyubinsk**	**6.49**	**294**	⇓Sn	Sn	19 11 26.3	-0.3
	1.4nm,0.8s						
AKTO				⇑Lg	Lg	19 11 57.0	
	1.1nm,0.6s						
KURBB	**Kurchatov Arra**	**7.74**	**67**	⇓Lg	Lg	19 12 42.4	
	3.5nm,0.6s						
KURK	**Kurchatov**	**7.82**	**67**	⇑Lg	Lg	19 12 38.8	
	1.6nm,1.0s						
MK31	**Makanchi Array**	**10.25**	**92**	Pn	Pn	19 10 59.4	-4.0
	0.1nm,0.2s,baz=268,slow=9.7,SNR=5.0						

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*MOS **29** 19:18:03.8±0.9, 45°.65N×26°.47E, h135^{km}, mb4.9/23, Error ellipse: s-maj=3.3km s-min=2.5km az=105.2*

*PDG **29** 19:18:04.7±1.2, 45°.58N×26°.39E, h33^{km}±8^{km}, ML4.4/12, Error ellipse: s-maj=1.5km s-min=2.2km az=0.0*

*IDC **29** 19:18:04.9±0.2, 45°.63N×26°.26E, h134^{km}±2^{km}, mb4.3/33, mb1 4.3/47, mb1mx4.2/65, mbtmp4.6/47, MS3.3/14, Ms1 3.3/14, ms1mx3.0/64, Error ellipse: s-maj=8.1km s-min=6.6km az=163.0*

*BUC **29** 19:18:05.1±0.2, 45°.61N×26°.47E, h134^{km}±2^{km}, ml5.0/68, Error ellipse: s-maj=1.5km s-min=1.4km az=2.0*

*MED_RC **29** 19:18:05.0±0.3, 45°.72N×26°.60E, h121^{km}±3^{km}, MW4.7/33, Moment Tensor Solution. Body waves: s2,c2;Mantle waves: s33,c47; Duration: 1^{s}1 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.41±.05; M$_{\theta\theta}$-0.22±.06; M$_{\phi\phi}$-1.19±.06; M$_{r\theta}$-0.01±.06; M$_{\theta\phi}$-0.60±.08; M$_{\phi r}$-0.46±.06; Best double couple: M$_0$1.52000×10^{16} NP1:φ$_s$33.00000°, δ37.00000°, λ102.00000°. NP2:φ$_s$198.00000°, δ53.00000°, λ81.00000°. Principal axes: T 1.4900, Plg79.0000°, Azm73.0000°; N 0.0400, Plg7.0000°, Azm204.0000°; P -1.5400, Plg8.0000°, Azm295.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*

*NEIC **29** 19:18:05.1±1.7, 45°.60N±0°.05×26°.45E±0°.06, h138^{km}±3^{km} Error ellipse: s-maj=7.0km s-min=6.3km az=216.0*

*SIGU **29** 19:18:05.0±0.1, 46°N±1°×2°6E±°, h135^{km}, mb4.5/14*

*SOF **29** 19:18:05.5, 45°.63N×26°.38E, h100^{km}, MD4.6*

*GCMT **29** 19:18:07.1±0.3, 45°.55N±0°.04×26°.57E±0°.04, h125^{km}±3^{km}, MW4.7/98, Moment Tensor Solution. s23,c23; s98,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.48±.06; M$_{\theta\theta}$-0.52±.12; M$_{\phi\phi}$-0.96±.11; M$_{r\theta}$-0.43±.08; M$_{\theta\phi}$-0.26±.10; M$_{\phi r}$-0.52±.06; Best double couple: M$_0$1.45000×10^{16} NP1:φ$_s$22.00000°, δ31.00000°, λ82.00000°. NP2: φ$_s$211.00000°, δ59.00000°, λ95.00000°. Principal axes: T 1.6530, Plg76.0000°, Azm134.0000°; N -0.4070, Plg4.0000°, Azm29.0000°; P -1.2470, Plg14.0000°, Azm298.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BEO **29** 19:18:11.1±1.2, 45°.49N×26°.08E, h93^{km}±9^{km}, ML4.5/14*

*BGR **29** 19:18:12.8±0.7, 46°.12N×25°.82E, h10^{km}, Error ellipse: s-maj=20.0km s-min=5.6km az=42.0*

*PRU **29** 19:18:38.9±0.0, 47°.32N×23°.77E, h103^{km}, M4.7*

ISC 29 19:18:05.1±0.3**, 45°.63N**±0°.02**×26°.44E**±0°.02**, h136^{km}**±2^{km}**, h136^{km}:pP-P, n919, σ1^{s}30**/1118**, mb4.7**/108**, 172C-167D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BISRR	**Bisoca**	**0.20**	**114**	⇑P	**Pn**	**19 18 24.2**	**+0.4**
BISRR				⇑S	**Sn**	**19 18 38.6**	**+0.7**
BISRR	**Bisoca**	**0.20**	**114**	⇑P	**Pn**	**19 18 24.2**	**+0.4**
BISRR				⇑S	**Sn**	**19 18 38.6**	**+0.7**
BISRR	**Bisoca**	**0.20**	**114**		**Pn**	**19 18 24.2**	**+0.4**
BISRR					**Sn**	**19 18 39.2**	**+1.3**
PLOR	**Plostina**	**0.26**	**33**	⇑P	**Pn**	**19 18 23.8**	**-0.2**
PLOR				⇓S	**Sn**	**19 18 38.2**	**0.0**
PLOR	**Plostina**	**0.26**	**33**	⇑P	**Pn**	**19 18 23.8**	**-0.2**
PLOR				⇓S	**Sn**	**19 18 38.2**	**0.0**
PLOR	**Plostina**	**0.26**	**33**	P	**Pn**	**19 18 23.7**	**-0.2**
PLOR				S	**Sn**	**19 18 38.2**	**0.0**
PLOR	**Plostina**	**0.26**	**33**		**Pn**	**19 18 23.7**	**-0.2**
PLOR					**Sn**	**19 18 38.2**	**0.0**
VRI	**Vrincioaia**	**0.31**	**40**	⇑P	**Pn**	**19 18 24.1**	**+0.1**
VRI				⇓S	**Sn**	**19 18 37.8**	**-0.6**
VRI	**Vrincioaia**	**0.31**	**40**	⇑P	**Pn**	**19 18 24.1**	**+0.1**
VRI				⇓S	**Sn**	**19 18 37.8**	**-0.6**
VRI	**Vrincioaia**	**0.31**	**40**	P	**Pn**	**19 18 24.1**	**+0.1**
VRI						19 18 37.8	
VRI	**Vrincioaia**	**0.31**	**40**		**Pn**	**19 18 24.1**	**+0.1**
VRI					**Sn**	**19 18 37.8**	**-0.6**
MLR	**Muntele Rosu**	**0.38**	**248**	⇑P	**Pn**	**19 18 24.7**	**+0.3**
MLR				⇓S	**Sn**	**19 18 39.6**	**+0.6**
MLR	**Muntele Rosu**	**0.38**	**248**	P	**Pn**	**19 18 24.5**	**+0.1**
	4μm,0.3s,baz=17,slow=3.5						
MLR				S	**Sn**	**19 18 39.1**	**0.0**
	6μm,0.3s,baz=225,slow=22,SNR=30						
MLR	**Muntele Rosu**	**0.38**	**248**	*e*Pg	**Pn**	**19 18 24.7**	**+0.3**
MLR	**Muntele Rosu**	**0.38**	**248**	⇑P	**Pn**	**19 18 24.7**	**+0.3**
MLR				⇓S	**Sn**	**19 18 39.6**	**+0.6**
MLR	**Muntele Rosu**	**0.38**	**248**	Pn	**Pn**	**19 18 24.1**	**-0.3**
MLR				Sn	**Sn**	**19 18 38.6**	**-0.4**
ODBI	**Odobesti**	**0.45**	**73**	⇑P	**Pn**	**19 18 25.5**	**+0.9**
ODBI				⇑S	**Sn**	**19 18 40.5**	**+1.1**
ODBI	**Odobesti**	**0.45**	**73**	⇑P	**Pn**	**19 18 25.5**	**+0.9**
ODBI				⇑S	**Sn**	**19 18 40.5**	**+1.1**
ODBI	**Odobesti**	**0.45**	**73**		**Pn**	**19 18 25.5**	**+0.9**
ODBI					**Sn**	**19 18 40.5**	**+1.1**
GRER		**0.45**	**124**	⇑P	**Pn**	**19 18 25.6**	**+1.0**
GRER		**0.45**	**124**	⇑P	**Pn**	**19 18 25.6**	**+1.0**
ISR	**Istrita**	**0.52**	**172**	⇑P	**Pn**	**19 18 25.2**	**+0.2**
ISR				⇓S	**Sn**	**19 18 41.5**	**+1.4**
ISR	**Istrita**	**0.52**	**172**	⇑P	**Pn**	**19 18 25.2**	**+0.2**
ISR				⇓S	**Sn**	**19 18 41.5**	**+1.4**
ISR	**Istrita**	**0.52**	**172**	P	**Pn**	**19 18 25.3**	**+0.2**
PETR	**Petresti**	**0.56**	**80**	⇑P	**Pn**	**19 18 25.7**	**+0.6**
PETR				⇓S	**Sn**	**19 18 40.6**	**+0.3**
PETR	**Petresti**	**0.56**	**80**	⇑P	**Pn**	**19 18 25.7**	**+0.6**
PETR				⇓S	**Sn**	**19 18 40.6**	**+0.3**
PETR	**Petresti**	**0.56**	**80**		**Pn**	**19 18 25.7**	**+0.6**
PETR					**Sn**	**19 18 40.6**	**+0.3**
OZUR		**0.65**	**315**	⇑P	**Pn**	**19 18 25.6**	**-0.2**
OZUR				⇑S	**Sn**	**19 18 40.6**	**-1.0**
OZUR		**0.65**	**315**	⇑P	**Pn**	**19 18 25.6**	**-0.2**
OZUR				⇑S	**Sn**	**19 18 40.6**	**-1.0**
SECR		**0.65**	**204**	⇑P	**Pn**	**19 18 26.4**	**+0.5**
SECR				⇓S	**Sn**	**19 18 42.6**	**+1.1**
SECR		**0.65**	**204**	⇑P	**Pn**	**19 18 26.4**	**+0.5**
SECR				⇓S	**Sn**	**19 18 42.6**	**+1.1**
PLAR	**PLOIESTI**	**0.78**	**202**	⇑P	**Pn**	**19 18 27.2**	**+0.6**
PLAR				⇓S	**Sn**	**19 18 44.4**	**+1.4**
PLAR	**PLOIESTI**	**0.78**	**202**	⇑P	**Pn**	**19 18 27.2**	**+0.6**
PLAR				⇓S	**Sn**	**19 18 44.4**	**+1.4**
GHRR		**0.80**	**57**	⇑P	**Pn**	**19 18 27.2**	**+0.4**
GHRR				⇓S	**Sn**	**19 18 43.5**	**+0.2**
GHRR		**0.80**	**57**	⇑P	**Pn**	**19 18 27.2**	**+0.4**
GHRR				⇓S	**Sn**	**19 18 43.5**	**+0.2**
DOPR	**Dopca**	**0.81**	**295**	⇑P	**Pn**	**19 18 27.1**	**+0.1**
DOPR				⇑S	**Sn**	**19 18 43.3**	**-0.3**
DOPR	**Dopca**	**0.81**	**295**	⇑P	**Pn**	**19 18 27.1**	**+0.1**
DOPR				⇑S	**Sn**	**19 18 43.3**	**-0.3**
DOPR	**Dopca**	**0.81**	**295**		**Pn**	**19 18 27.1**	**+0.1**
DOPR					**Sn**	**19 18 43.2**	**-0.3**
PGOR	**Pogoanele**	**0.82**	**152**	⇑P	**Pn**	**19 18 27.3**	**+0.3**
PGOR				⇓S	**Sn**	**19 18 44.0**	**+0.4**
PGOR	**Pogoanele**	**0.82**	**152**	⇑P	**Pn**	**19 18 27.3**	**+0.3**
PGOR				⇓S	**Sn**	**19 18 44.0**	**+0.4**
TUDR		**0.86**	**92**	⇑P	**Pn**	**19 18 26.9**	**-0.4**
TUDR				⇑S	**Sn**	**19 18 43.5**	**-0.7**
TUDR		**0.86**	**92**	⇑P	**Pn**	**19 18 26.9**	**-0.4**
TUDR				⇑S	**Sn**	**19 18 43.5**	**-0.7**
TESR	**Tescani**	**0.89**	**9**	⇑P	**Pn**	**19 18 27.4**	**-0.2**
TESR				⇑S	**Sn**	**19 18 43.2**	**-1.5**
TESR	**Tescani**	**0.89**	**9**	⇑P	**Pn**	**19 18 27.4**	**-0.2**
TESR				⇑S	**Sn**	**19 18 43.2**	**-1.5**
TESR	**Tescani**	**0.89**	**9**		**Pn**	**19 18 27.4**	**-0.2**
SULR		**0.96**	**188**	⇑P	**Pn**	**19 18 28.5**	**+0.3**
SULR				⇑S	**Sn**	**19 18 46.4**	**+0.7**
SULR		**0.96**	**188**	⇑P	**Pn**	**19 18 28.5**	**+0.3**
SULR				⇑S	**Sn**	**19 18 46.4**	**+0.7**
VOIR		**1.00**	**259**	⇑P	**Pn**	**19 18 28.6**	**-0.1**
VOIR				⇑S	**Sn**	**19 18 45.6**	**-0.9**
VOIR		**1.00**	**259**	⇑P	**Pn**	**19 18 28.6**	**-0.1**
VOIR				⇑S	**Sn**	**19 18 45.6**	**-0.9**
VOIR		**1.00**	**259**	P	**Pn**	**19 18 28.6**	**-0.1**
NEGR	**Negresti**	**1.00**	**95**	⇑P	**Pn**	**19 18 28.4**	**-0.1**
NEGR				⇓S	**Sn**	**19 18 45.5**	**-0.9**
NEGR	**Negresti**	**1.00**	**95**	⇑P	**Pn**	**19 18 28.4**	**-0.1**
NEGR				⇓S	**Sn**	**19 18 45.5**	**-0.9**
VARL	**Varlezi**	**1.02**	**74**	⇓P	**Pn**	**19 18 28.6**	**-0.1**
VARL				⇑S	**Sn**	**19 18 45.9**	**-0.7**
VARL	**Varlezi**	**1.02**	**74**	⇓P	**Pn**	**19 18 28.6**	**-0.1**
VARL				⇑S	**Sn**	**19 18 45.9**	**-0.7**
BIR	**Birlad**	**1.04**	**52**	⇓P	**Pn**	**19 18 29.0**	**+0.1**
BIR				⇑S	**Sn**	**19 18 46.4**	**-0.7**
BIR	**Birlad**	**1.04**	**52**	⇓P	**Pn**	**19 18 29.0**	**+0.1**
BIR				⇑S	**Sn**	**19 18 46.4**	**-0.7**
MTUR	**Matau**	**1.05**	**248**	⇑P	**Pn**	**19 18 29.6**	**+0.5**
MTUR	**Matau**	**1.05**	**248**	⇑P	**Pn**	**19 18 29.6**	**+0.5**
GISR	**Galati**	**1.15**	**99**	⇓P	**Pn**	**19 18 29.9**	**+0.1**
GISR				⇑S	**Sn**	**19 18 47.8**	**-1.0**
GISR	**Galati**	**1.15**	**99**	⇓P	**Pn**	**19 18 29.9**	**+0.1**
GISR				⇑S	**Sn**	**19 18 47.8**	**-1.0**
LEHL	**Lehliu**	**1.19**	**167**	⇑P	**Pn**	**19 18 30.5**	**+0.2**
LEHL				⇓S	**Sn**	**19 18 49.6**	**+0.1**
LEHL	**Lehliu**	**1.19**	**167**	⇑P	**Pn**	**19 18 30.5**	**+0.2**
LEHL				⇓S	**Sn**	**19 18 49.6**	**+0.1**
AMRR	**Amara**	**1.20**	**148**	⇑P	**Pn**	**19 18 30.5**	**+0.1**
AMRR				⇓S	**Sn**	**19 18 49.3**	**-0.4**
AMRR	**Amara**	**1.20**	**148**	⇑P	**Pn**	**19 18 30.5**	**+0.1**
AMRR				⇓S	**Sn**	**19 18 49.3**	**-0.4**
INCR	**INCERC-Sediu C**	**1.21**	**190**	⇑P	**Pn**	**19 18 30.5**	**0.0**
INCR				⇓S	**Sn**	**19 18 49.6**	**-0.3**
INCR	**INCERC-Sediu C**	**1.21**	**190**	⇑P	**Pn**	**19 18 30.5**	**0.0**
INCR				⇓S	**Sn**	**19 18 49.6**	**-0.3**
GIUM	**Giurgiulesti**	**1.25**	**96**	⇓P	**Pn**	**19 18 31.0**	**+0.1**
GIUM				⇓S	**Sn**	**19 18 49.9**	**-0.6**
GIUM	**Giurgiulesti**	**1.25**	**96**	⇓P	**Pn**	**19 18 31.0**	**+0.1**
GIUM				⇓S	**Sn**	**19 18 49.9**	**-0.6**
JOSR	**Joseni**	**1.25**	**329**	⇑P	**Pn**	**19 18 31.0**	**0.0**
JOSR	**Joseni**	**1.25**	**329**	⇑P	**Pn**	**19 18 31.0**	**0.0**
CFR	**Carcaliu**	**1.27**	**110**	⇓P	**Pn**	**19 18 30.5**	**-0.6**
CFR				⇑S	**Sn**	**19 18 49.9**	**-1.1**
CFR	**Carcaliu**	**1.27**	**110**	⇓P	**Pn**	**19 18 30.5**	**-0.6**
CFR				⇑S	**Sn**	**19 18 49.9**	**-1.1**
CFR	**Carcaliu**	**1.27**	**110**	P	**Pn**	**19 18 30.8**	**-0.4**
CFR						19 18 49.9	
CFR	**Carcaliu**	**1.27**	**110**		**Pn**	**19 18 30.8**	**-0.4**
CFR					**Sn**	**19 18 49.9**	**-1.1**
ARR	**Arges**	**1.30**	**259**	⇑P	**Pn**	**19 18 32.0**	**+0.4**
ARR				⇑S	**Sn**	**19 18 51.5**	**-0.2**
ARR	**Arges**	**1.30**	**259**	⇑P	**Pn**	**19 18 32.0**	**+0.4**
ARR				⇑S	**Sn**	**19 18 51.5**	**-0.2**
GOLR		**1.31**	**233**	⇑P	**Pn**	**19 18 32.0**	**+0.4**
GOLR				⇓S	**Sn**	**19 18 52.3**	**+0.5**
GOLR		**1.31**	**233**	⇑P	**Pn**	**19 18 32.0**	**+0.4**
GOLR				⇓S	**Sn**	**19 18 52.3**	**+0.5**
BUC1	**Bucharest**	**1.32**	**193**	⇑P	**Pn**	**19 18 31.7**	**+0.1**
BUC1				⇑S	**Sn**	**19 18 51.8**	**0.0**
BUC1	**Bucharest**	**1.32**	**193**	⇑P	**Pn**	**19 18 31.7**	**+0.1**
BUC1				⇑S	**Sn**	**19 18 51.8**	**0.0**
BUC1	**Bucharest**	**1.32**	**193**	P	**Pn**	**19 18 31.6**	**0.0**
BUC1				S	**Sn**	**19 18 51.7**	**-0.1**
GIRR	**Girov**	**1.32**	**2**	⇑P	**Pn**	**19 18 32.2**	**+0.5**
GIRR	**Girov**	**1.32**	**2**	⇑P	**Pn**	**19 18 32.2**	**+0.5**
BIZ	**Bicaz**	**1.33**	**350**	⇑P	**Pn**	**19 18 32.8**	**+1.1**
BIZ				⇓S	**Sn**	**19 18 53.3**	**+1.1**
BIZ	**Bicaz**	**1.33**	**350**	⇑P	**Pn**	**19 18 32.8**	**+1.1**
BIZ				⇓S	**Sn**	**19 18 53.3**	**+1.1**
HARR	**Harsova**	**1.41**	**131**	⇑P	**Pn**	**19 18 32.4**	**-0.3**
HARR	**Harsova**	**1.41**	**131**	⇑P	**Pn**	**19 18 32.4**	**-0.3**
SGRR	**Singureni**	**1.45**	**194**	⇑P	**Pn**	**19 18 32.9**	**-0.2**
SGRR				⇑S	**Sn**	**19 18 53.3**	**-1.0**
SGRR	**Singureni**	**1.45**	**194**	⇑P	**Pn**	**19 18 32.9**	**-0.2**
SGRR				⇑S	**Sn**	**19 18 53.3**	**-1.0**
RASA	**Rasa**	**1.50**	**160**	⇑P	**Pn**	**19 18 33.4**	**-0.2**
RASA				⇑S	**Sn**	**19 18 55.2**	**-0.2**
RASA	**Rasa**	**1.50**	**160**	⇑P	**Pn**	**19 18 33.4**	**-0.2**
RASA				⇑S	**Sn**	**19 18 55.2**	**-0.2**
LEOM	**Leova**	**1.51**	**56**	⇓P	**Pn**	**19 18 33.8**	**+0.1**
LEOM				⇓S	**Sn**	**19 18 54.8**	**-0.7**
LEOM	**Leova**	**1.51**	**56**	⇓P	**Pn**	**19 18 33.8**	**+0.1**
LEOM				⇓S	**Sn**	**19 18 54.8**	**-0.7**
HUMR	**Humele**	**1.52**	**224**	⇑P	**Pn**	**19 18 33.6**	**-0.2**
HUMR				⇓S	**Sn**	**19 18 55.1**	**-0.5**
HUMR	**Humele**	**1.52**	**224**	⇑P	**Pn**	**19 18 33.6**	**-0.2**
HUMR				⇓S	**Sn**	**19 18 55.1**	**-0.5**
MDB	**Medias**	**1.53**	**290**	⇓P	**Pn**	**19 18 34.8**	**+0.9**
MDB	**Medias**	**1.53**	**290**	⇓P	**Pn**	**19 18 34.8**	**+0.9**
TOPG	**Topolog**	**1.56**	**118**	⇓P	**Pn**	**19 18 33.6**	**-0.7**
TOPG				⇑S	**Sn**	**19 18 55.4**	**-1.1**
TOPG	**Topolog**	**1.56**	**118**	⇓P	**Pn**	**19 18 33.6**	**-0.7**
TOPG				⇑S	**Sn**	**19 18 55.4**	**-1.1**
CVDA	**Cernavoda**	**1.72**	**138**	⇓P	**Pn**	**19 18 36.0**	**-0.1**
CVDA				⇑S	**Sn**	**19 18 58.2**	**-1.6**
CVDA	**Cernavoda**	**1.72**	**138**	⇓P	**Pn**	**19 18 36.0**	**-0.1**
CVDA				⇑S	**Sn**	**19 18 58.2**	**-1.6**
TLCR		**1.73**	**104**	⇓P	**Pn**	**19 18 35.7**	**-0.4**
TLCR				⇓S	**Sn**	**19 18 58.9**	**-1.0**
TLCR		**1.73**	**104**	⇓P	**Pn**	**19 18 35.7**	**-0.4**
TLCR				⇓S	**Sn**	**19 18 58.9**	**-1.0**
COPA	**Copaceanca**	**1.73**	**211**	⇑P	**Pn**	**19 18 36.0**	**-0.2**
COPA				⇓S	**Sn**	**19 18 59.2**	**-0.8**
COPA	**Copaceanca**	**1.73**	**211**	⇑P	**Pn**	**19 18 36.0**	**-0.2**
COPA				⇓S	**Sn**	**19 18 59.2**	**-0.8**
IAS	**Iasi**	**1.74**	**26**	⇓P	**Pn**	**19 18 36.2**	**-0.1**
IAS				⇓S	**Sn**	**19 18 58.8**	**-1.4**
IAS	**Iasi**	**1.74**	**26**	⇓P	**Pn**	**19 18 36.2**	**-0.1**
IAS				⇓S	**Sn**	**19 18 58.8**	**-1.4**
IAS	**Iasi**	**1.74**	**26**	P	**Pn**	**19 18 36.1**	**-0.1**
IAS				S	**Sn**	**19 18 58.8**	**-1.4**
ICOR	**Ion Corvin**	**1.80**	**147**	⇑P	**Pn**	**19 18 37.0**	**+0.1**
ICOR				⇑S	**Sn**	**19 19 00.0**	**-1.3**
ICOR	**Ion Corvin**	**1.80**	**147**	⇑P	**Pn**	**19 18 37.0**	**+0.1**
ICOR				⇑S	**Sn**	**19 19 00.0**	**-1.3**
TIRR	**Tirgusor**	**1.82**	**129**	⇑P	**Pn**	**19 18 36.8**	**-0.5**
TIRR	**Tirgusor**	**1.82**	**129**	*e*Pg	Pn	19 18 59.3	+22
TIRR	**Tirgusor**	**1.82**	**129**	⇑P	**Pn**	**19 18 36.8**	**-0.5**
TIRR	**Tirgusor**	**1.82**	**129**	P	**Pn**	**19 18 36.7**	**-0.6**
TIRR				S	**Sn**	**19 18 59.4**	**-2.5**
TIRR	**Tirgusor**	**1.82**	**129**		**Pn**	**19 18 36.4**	**-0.9**
TIRR				Sn	**Sn**	**19 18 59.8**	**-2.1**
LOT	**Lotru**	**1.89**	**265**	⇓P	**Pn**	**19 18 38.8**	**+0.7**
LOT				⇓S	**Sn**	**19 19 04.4**	**+0.9**
LOT	**Lotru**	**1.89**	**265**	⇓P	**Pn**	**19 18 38.8**	**+0.7**
LOT				⇓S	**Sn**	**19 19 04.4**	**+0.9**
JURR	**Jurilovca**	**1.93**	**116**	⇑P	**Pn**	**19 18 38.2**	**-0.3**
JURR	**Jurilovca**	**1.93**	**116**	⇑P	**Pn**	**19 18 38.2**	**-0.3**
MFTR	**Murfatlar**	**2.02**	**135**	⇑P	**Pn**	**19 18 39.3**	**-0.3**
MFTR	**Murfatlar**	**2.02**	**135**	⇑P	**Pn**	**19 18 39.3**	**-0.3**
ARCR	**ARCALIA**	**2.05**	**316**	⇑P	**Pn**	**19 18 40.1**	**+0.1**
ARCR	**ARCALIA**	**2.05**	**316**	⇑P	**Pn**	**19 18 40.1**	**+0.1**
RAZG	**Razgrad**	**2.07**	**179**	⇓P	**Pn**	**19 18 40.1**	**-0.1**
RAZG				⇓S	**Sn**	**19 19 06.2**	**-0.9**
RAZG	**Razgrad**	**2.07**	**179**	⇓P	**Pn**	**19 18 40.1**	**-0.1**
RAZG				⇓S	**Sn**	**19 19 06.2**	**-0.9**
MILM	**Milestii Mici**	**2.09**	**51**	⇓P	**Pn**	**19 18 40.2**	**-0.2**
MILM	**Milestii Mici**	**2.09**	**51**	⇓P	**Pn**	**19 18 40.2**	**-0.2**
ZIMR		**2.12**	**202**	⇓P	**Pn**	**19 18 40.7**	**-0.1**
ZIMR				⇑S	**Sn**	**19 19 06.9**	**-1.3**
ZIMR		**2.12**	**202**	⇓P	**Pn**	**19 18 40.7**	**-0.1**
ZIMR				⇑S	**Sn**	**19 19 06.9**	**-1.3**
KIS	**Kishinev**	**2.14**	**49**	⇓*i*P	**Pn**	**19 18 42.0**	**+1.0**
	9μm,0.6s						
KIS				*i* S	**Sn**	**19 19 07.0**	**-1.6**
	47μm,0.6s						
KIS	**Kishinev**	**2.14**	**49**	⇓P	**Pn**	**19 18 40.9**	**-0.1**
KIS	**Kishinev**	**2.14**	**49**	P	**Pn**	**19 18 42.0**	**+1.0**
KIS				Pm		19 18 42.5	
KIS				S	**Sn**	**19 19 07.0**	**-1.6**
KIS				Sm		19 19 08.0	
KIS	**Kishinev**	**2.14**	**49**	⇓P	**Pn**	**19 18 40.9**	**-0.1**
KIS	**Kishinev**	**2.14**	**49**	⇓*i*P	**Pn**	**19 18 42.0**	**+1.0**
KIS				*i* S	**Sn**	**19 19 07.0**	**-1.6**
TSCT	**Constanta Port**	**2.15**	**132**	⇑P	**Pn**	**19 18 41.1**	**-0.1**
TSCT				⇑S	**Sn**	**19 19 07.3**	**-1.6**
TSCT	**Constanta Port**	**2.15**	**132**	⇑P	**Pn**	**19 18 41.1**	**-0.1**
TSCT				⇑S	**Sn**	**19 19 07.3**	**-1.6**
BURAR	**Bucovina Array**	**2.16**	**337**	⇑P	**Pn**	**19 18 43.0**	**+1.6**
BURAR	**Bucovina Array**	**2.16**	**337**	⇑P	**Pn**	**19 18 43.0**	**+1.6**
BURAR	**Bucovina Array**	**2.16**	**337**	P	**Pn**	**19 18 42.4**	**+1.0**
BURAR	**Bucovina Array**	**2.16**	**337**		**Pn**	**19 18 42.4**	**+1.0**
VLAD	**Vladila**	**2.19**	**222**	⇓P	**Pn**	**19 18 41.2**	**-0.5**
VLAD				⇑S	**Sn**	**19 19 08.1**	**-1.5**
VLAD	**Vladila**	**2.19**	**222**	⇓P	**Pn**	**19 18 41.2**	**-0.5**
VLAD				⇑S	**Sn**	**19 19 08.1**	**-1.5**
VLAD	**Vladila**	**2.19**	**222**		**Pn**	**19 18 41.3**	**-0.3**
VLAD					**Sn**	**19 19 08.1**	**-1.5**
BUR08	**Bucovina Ar. S**	**2.19**	**337**		**Pn**	**19 18 42.9**	**+1.2**
BUR08				Sn	**Sn**	**19 19 11.2**	**+1.3**
EFOR	**EFORIE**	**2.20**	**134**	⇓P	**Pn**	**19 18 41.7**	**-0.1**
EFOR				⇑S	**Sn**	**19 19 09.2**	**-0.7**
EFOR	**EFORIE**	**2.20**	**134**	⇓P	**Pn**	**19 18 41.7**	**-0.1**
EFOR				⇑S	**Sn**	**19 19 09.2**	**-0.7**
CJR	**Cluj-Napoca**	**2.25**	**300**	⇓P	**Pn**	**19 18 42.9**	**+0.4**
CJR	**Cluj-Napoca**	**2.25**	**300**	⇓P	**Pn**	**19 18 42.9**	**+0.4**
PSN	**Preselentsi**	**2.31**	**147**	*i* P	**Pn**	**19 18 43.5**	**+0.3**
TSSL	**Sulina**	**2.36**	**100**	⇑P	**Pn**	**19 18 43.7**	**-0.1**
TSSL				⇑S	**Sn**	**19 19 12.7**	**-0.7**
TSSL	**Sulina**	**2.36**	**100**	⇑P	**Pn**	**19 18 43.7**	**-0.1**
TSSL				⇑S	**Sn**	**19 19 12.7**	**-0.7**
MANR	**Mangalia**	**2.37**	**139**	⇓P	**Pn**	**19 18 43.7**	**-0.2**
MANR				⇓S	**Sn**	**19 19 13.2**	**-0.6**
MANR	**Mangalia**	**2.37**	**139**	⇓P	**Pn**	**19 18 43.7**	**-0.2**
MANR				⇓S	**Sn**	**19 19 13.2**	**-0.6**
TSMN	**Mangalia Port-**	**2.39**	**139**	⇑P	**Pn**	**19 18 44.0**	**-0.1**
TSMN	**Mangalia Port-**	**2.39**	**139**	⇑P	**Pn**	**19 18 44.0**	**-0.1**
SZH	**Strazhica**	**2.39**	**189**	*i* P	**Pn**	**19 18 43.9**	**-0.3**
DEV	**Deva**	**2.49**	**277**	⇓P	**Pn**	**19 18 46.3**	**+0.9**
DEV				⇑S	**Sn**	**19 19 16.3**	**-0.1**
DEV	**Deva**	**2.49**	**277**	⇓P	**Pn**	**19 18 46.3**	**+0.9**
DEV				⇑S	**Sn**	**19 19 16.3**	**-0.1**
PRD	**Provadia**	**2.53**	**164**	*i* P	**Pn**	**19 18 46.4**	**+0.5**
PRD	**Provadia**	**2.53**	**164**	P	**Pn**	**19 18 46.0**	**+0.1**
PRD				S	**Sn**	**19 19 16.0**	**-1.2**
PVL	**Pavlikeni**	**2.54**	**199**	*i* P	**Pn**	**19 18 47.5**	**+1.4**
GZR	**Gura Zlata**	**2.59**	**266**	⇓P	**Pn**	**19 18 46.9**	**+0.1**
GZR				⇑S	**Sn**	**19 19 18.5**	**-0.2**
GZR	**Gura Zlata**	**2.59**	**266**	⇓P	**Pn**	**19 18 46.9**	**+0.1**
GZR				⇑S	**Sn**	**19 19 18.5**	**-0.2**
PLVB	**Pleven**	**2.60**	**211**	⇓P	**Pn**	**19 18 46.5**	**-0.2**
PLVB	**Pleven**	**2.60**	**211**	⇓P	**Pn**	**19 18 46.5**	**-0.2**
ROIA	**ROIAK**	**2.62**	**165**	P	**Pn**	**19 18 47.3**	**+0.2**
AVR	**AVREN**	**2.66**	**160**	P	**Pn**	**19 18 47.5**	**-0.1**
CHRU	**Chernivtsi**	**2.69**	**353**	⇑*i*P	**Pn**	**19 18 48.2**	**+0.3**
CHRU				Pm		19 19 05.1	
CHRU				*i* S	**Sn**	**19 19 20.1**	**-0.8**
CHRU				Sm		19 19 22.8	
BAIL	**Bailesti**	**2.73**	**235**	⇓P	**Pn**	**19 18 48.0**	**-0.4**
BAIL				⇑S	**Sn**	**19 19 20.9**	**-1.0**
BAIL	**Bailesti**	**2.73**	**235**	⇓P	**Pn**	**19 18 48.0**	**-0.4**
BAIL				⇑S	**Sn**	**19 19 20.9**	**-1.0**
ELND	**Elena**	**2.73**	**189**	⇓P	**Pn**	**19 18 48.4**	**-0.1**
ELND				⇓S	**Sn**	**19 19 20.7**	**-1.3**
ELND	**Elena**	**2.73**	**189**	⇓P	**Pn**	**19 18 48.4**	**-0.1**
ELND				⇓S	**Sn**	**19 19 20.7**	**-1.3**

SORM	Soroca	2.83	27	⇓P	Pn	19 18 49.0	-0.6
SORM	Soroca	2.83	27	⇓P	Pn	19 18 49.0	-0.6
PUNG	Punghina	2.84	243	⇓P	Pn	19 18 49.1	-0.7
PUNG	Punghina	2.84	243	⇓P	Pn	19 18 49.1	-0.7
DRGR		2.84	295	ePn	Pn	19 18 49.7	-0.2
DRGR		2.84	295	⇓P	Pn	19 18 49.7	-0.2
DRGR		2.84	295	⇓P	Pn	19 18 49.7	-0.2
DRGR		2.84	295	P	Pn	19 18 49.5	-0.4
KSV	Kosov	2.84	341	⇓iP	Pn	19 18 50.9	+1.0
KSV				Pm		19 18 51.7	
KSV				eS	Sn	19 19 25.1	+0.6
KSV				Sm		19 19 30.4	
RAKU	Rahkiv	2.86	328	⇓iP	Pn	19 18 50.8	+0.7
RAKU				Pm		19 18 53.1	
RAKU				i S	Sn	19 19 25.5	+0.7
RAKU				Sm		19 19 44.6	
BMR	Baia Mare	2.88	316	⇓P	Pn	19 18 50.8	+0.5
BMR	Baia Mare	2.88	316	⇓P	Pn	19 18 50.8	+0.5
BMR	Baia Mare	2.88	316	P	Pn	19 18 50.9	+0.5
NSLU	Nyzhne Selyshc	2.91	333	⇑iP	Pn	19 18 56.3	+5.7
NSLU				Pm		19 18 58.1	
NSLU				eS	Sn	19 19 35.9	+10
NSLU				Sm		19 19 41.6	
KMPD	K-Podol'skiy	2.93	0	⇑iP	Pn	19 18 50.5	-0.5
KMPD				i S	Sn	19 19 24.0	-2.4
DJES	Djerdap	2.94	252	ePn	Pn	19 18 50.1	-1.0
HERR	Herculane	2.94	257	⇑P	Pn	19 18 50.8	-0.3
HERR	Herculane	2.94	257	⇑P	Pn	19 18 50.8	-0.3
NDNU	Novodnistrovsk	3.03	12	⇓iP	Pn	19 18 51.9	-0.3
NDNU				Pm		19 18 52.4	
NDNU				i S	Sn	19 19 26.1	-2.6
NDNU				Sm		19 19 27.5	
JMB	Yambol	3.17	178	i P	Pn	19 18 53.4	-0.7
JMB	Yambol	3.17	178	P	Pn	19 18 52.7	-1.4
JMB				S	Sn	19 19 30.1	-1.8
STNU	Starunia	3.35	337	⇑iP	Pn	19 18 57.5	+1.1
STNU				eS	Sn	19 19 37.3	+1.1
BZS	Buzias	3.39	271	ePn	Pn	19 18 56.7	-0.2
BZS				eSn	Sn	19 19 26.1	-11
BZS	Buzias	3.39	271	⇓P	Pn	19 18 56.8	-0.1
BZS	Buzias	3.39	271	⇓P	Pn	19 18 56.8	-0.1
BZS	Buzias	3.39	271	P	Pn	19 18 56.6	-0.3
KORU	Korolevo	3.40	319	⇑iP	Pn	19 18 57.4	+0.4
SIRR	Siria	3.40	282	⇓P	Pn	19 18 57.6	+0.5
SIRR	Siria	3.40	282	⇓P	Pn	19 18 57.6	+0.5
TRSU	Trosnyk	3.43	317	⇓iP	Pn	19 18 58.7	+1.2
TRSU				Pm		19 18 59.8	
TRSU				eS	Sn	19 19 38.8	+0.8
TRSU				Sm		19 19 40.5	
MDVR	Moldovita	3.45	257	⇓P	Pn	19 18 57.4	-0.4
MDVR	Moldovita	3.45	257	⇓P	Pn	19 18 57.4	-0.4
PGB	Panagyurishte	3.49	209	i P	Pn	19 18 58.4	+0.1
MEZ	Mezhgor'ye	3.51	326	⇓iP	Pn	19 18 59.8	+1.3
MEZ				Pm		19 19 02.2	
MEZ				i S	Sn	19 19 41.7	+1.8
MEZ				Sm		19 19 46.4	
ZAGS	Zajecar	3.51	240	ePn	Pn	19 18 56.8	-1.7
HORU	Horodok	3.58	360	⇑iP	Pn	19 18 59.4	0.0
HORU				Pm		19 19 00.0	
HORU				i S	Sn	19 19 40.8	-0.8
HORU				Sm		19 19 55.8	
ZAPS	Zavoj	3.61	231	ePn	Pn	19 18 58.4	-1.4
ZAPS				eSn	Sn	19 19 30.3	-12
TIM	Timisoara	3.66	273	⇓P	Pn	19 19 01.6	+1.1
TIM	Timisoara	3.66	273	⇓P	Pn	19 19 01.6	+1.1
TRPA	Tarpa	3.66	314	⇓P	Pn	19 19 00.4	0.0
TRPA	Tarpa	3.66	314	⇓P	Pn	19 19 00.4	0.0
BERU	Beregovo	3.68	316	⇓iP	Pn	19 19 00.4	-0.3
BERU				Pm		19 19 01.2	
BERU				eS	Sn	19 19 43.4	-0.4
BERU				Sm		19 19 59.0	
SOF	Sofiya	3.70	218	P	Pn	19 19 01.2	+0.2
BANR	Banloc	3.74	268	⇓P	Pn	19 19 02.1	+0.6
BANR	Banloc	3.74	268	⇓P	Pn	19 19 02.1	+0.6
PLD	Plovdiv	3.74	200	P	Pn	19 19 00.4	-1.2
PLD	Plovdiv	3.74	200	P	Pn	19 19 00.6	-1.0
VTS	Vitosha	3.80	219	ePn	Pn	19 19 02.7	+0.3
VTS				eSn	Sn	19 19 35.4	-11
VTS	Vitosha	3.80	219	⇓P	Pn	19 19 02.4	0.0
VTS	Vitosha	3.80	219	⇓P	Pn	19 19 02.4	0.0
VTS	Vitosha	3.80	219	i P	Pn	19 19 02.2	-0.2
VTS	Vitosha	3.80	219	P	Pn	19 19 02.2	-0.2
VTS	Vitosha	3.80	219		Pn	19 19 02.2	-0.2
MUKU	Mukachevo	3.82	319	i P	Pn	19 19 03.1	+0.6
MORS	Morshin	3.91	335	⇓iP	Pn	19 19 05.4	+1.7
BOVS	Bovan	3.93	241	ePn	Pn	19 19 03.3	-0.7
BOVS				eSn	Sn	19 19 36.4	-13
KDZ	Kurdzhali	4.05	191	i P	Pn	19 19 05.5	-0.2
KDZ	Kurdzhali	4.05	191	P	Pn	19 19 05.7	0.0
UZH	Uzhgorod	4.13	318	⇑iP	Pn	19 19 07.0	+0.5
UZH	Uzhgorod	4.13	318	⇑eP	Pn	19 19 05.0	-1.5
UZH				eS	Sn	19 19 52.0	-2.3
UZH				smax	smax		
	comp=N,60nm,1.0s						
UZH				smax	smax		
	comp=E,110nm,1.0s						
RZN	Rozhen	4.14	198	i P	Pn	19 19 06.7	-0.3
SHIU	Shidnytsya	4.16	331	i P	Pn	19 19 08.4	+1.4
BOSS	Bosilegrad	4.24	224	ePn	Pn	19 19 08.3	+0.1
BOSS				eSn	Sn	19 19 45.2	-12
STZU	Stuzhytsa	4.27	324	⇓iP	Pn	19 19 09.5	+1.1
BEO	Beograd	4.30	261	P	Pn	19 19 09.0	+0.1
BARS	Barje	4.36	231	ePn	Pn	19 18 55.9	-14
BARS	Barje	4.36	231	ePn	Pn	19 19 11.0	+1.3
BARS				eSn	Sn	19 19 45.3	-15
GRUS	Gruza	4.44	249	ePn	Pn	19 19 10.5	-0.2
KKB	Krupnik	4.48	214	i P	Pn	19 19 11.3	-0.1
KKB	Krupnik	4.48	214	P	Pn	19 19 10.8	-0.6
KKB				S	Sn	19 20 00.4	-2.5
LVV	L'vov	4.50	340	eP	Pn	19 19 12.2	+0.8
LVV	L'vov	4.50	340	c iP	Pn	19 19 12.4	+1.0
LVV				eS	Sn	19 20 04.5	+1.4
LVV				pmax	pmax		
	comp=Z,230nm,1.8s						
MMB	Musomiste	4.50	207	i P	Pn	19 19 11.8	+0.2
MMB	Musomiste	4.50	207	P	Pn	19 19 11.4	-0.2
SELS	Selova	4.51	240	ePn	Pn	19 19 11.0	-0.8
SELS				eSn	Sn	19 19 51.0	-13
TRUS	Trudelj	4.51	254	ePn	Pn	19 19 11.1	-0.6
TRUS				eSn	Sn	19 19 51.8	-12
RDO	Rodhopi	4.53	189	P	Pn	19 19 11.5	-0.5
NVR	Nevrokopi	4.67	205	P	Pn	19 19 13.6	-0.4
FRGS	Fruska Gora	4.70	267	ePn	Pn	19 19 15.5	+1.3
FRGS	Fruska Gora	4.70	267	⇓iPn	Pn	19 19 07.2	-7.0
KWP	Kalwaria Pacla	4.73	329	eP	Pn	19 19 15.8	+1.2
KWP	Kalwaria Pacla	4.73	329	eP	Pn	19 19 15.8	+1.2
KWP	Kalwaria Pacla	4.73	329		Pn	19 19 15.5	+0.9
ALN	Alexandroupoli	4.74	184	P	Pn	19 19 14.1	-0.7
ALN	Alexandroupoli	4.74	184	P	Pn	19 19 14.1	-0.7
ALN	Alexandroupoli	4.74	184		Pn	19 19 14.1	-0.7
DIVS	Divibare	4.84	254	ePn	Pn	19 19 15.2	-0.9
DIVS				eSn	Sn	19 19 58.1	-13
DIVS	Divibare	4.84	254	⇓iPn	Pn	19 19 15.2	-0.9
KAVA	Kavala	4.84	198	P	Pn	19 19 15.4	-0.7
IVAS	Ivanjica	4.94	248	ePn	Pn	19 19 16.5	-1.0
ISK	Istanbul-Kandi	4.95	156	P	Pn	19 19 17.0	-0.5
SRS	Serrai	4.97	206	P	Pn	19 19 17.5	-0.3
SRS	Serrai	4.97	206	P	Pn	19 19 17.7	-0.1
SRS				pmax	pmax		
	comp=Z,216nm,0.8s						
KECS	Kecovo	4.97	307	eP	Pn	19 19 18.3	+0.5
KECS	Kecovo	4.97	307	ePN	Pn	19 19 18.3	+0.5
TEKS	Tekeris	5.01	260	ePn	Pn	19 19 18.1	-0.3
TEKS	Tekeris	5.01	260	ePn	Pn	19 19 17.1	-1.3
PSZ	Piszkesteto	5.05	299	ePn	Pn	19 19 17.9	-1.0
PSZ	Piszkesteto	5.05	299	P	Pn	19 19 17.9	-1.0
PSZ	Piszkesteto	5.05	299		Pn	19 19 17.9	-1.0
SKO	Skopje	5.15	226	ePn	Pn	19 19 20.5	+0.3
SKO	Skopje	5.15	226	i Pn	Pn	19 19 20.5	+0.3
SKO	Skopje	5.15	226	P	Pn	19 19 21.3	+1.1
SKO				pmax	pmax		
	comp=Z,139nm,1.0s						
VAY	Valandovo	5.15	215	ePn	Pn	19 19 20.3	+0.1
VAY	Valandovo	5.15	215	i Pn	Pn	19 19 20.3	+0.1
VAY	Valandovo	5.15	215	P	Pn	19 19 19.9	-0.3
VAY				pmax	pmax		
	comp=Z,154nm,1.1s						
KNT	Kendrikon	5.16	211	P	Pn	19 19 20.1	-0.3
KNT	Kendrikon	5.16	211	P	Pn	19 19 20.4	0.0
KNT				pmax	pmax		
	comp=Z,156nm,1.1s						
THAS	Thassos island	5.18	195	P	Pn	19 19 19.5	-1.1
SJES	Sjenica	5.20	245	ePn	Pn	19 19 20.8	-0.3
SEV	Sevastopol'	5.23	99	P	Pn	19 19 20.8	-0.4
SEV				Pm		19 19 21.2	
SEV				S	Sn	19 20 19.3	-1.3
SEV				Sm		19 20 20.1	
SEV	Sevastopol'	5.23	99	⇓iP	Pn	19 19 20.8	-0.4
SEV				eS	Sn	19 20 19.3	-1.3
SOH	Sokhos	5.31	206	P	Pn	19 19 22.0	-0.5
SOH	Sokhos	5.31	206	P	Pn	19 19 22.5	0.0
SOH				pmax	pmax		
	comp=Z,126nm,0.9s						
BBLS	Lazići	5.32	253	ePn	Pn	19 19 22.2	-0.3
BBLS				eSn	Sn	19 20 11.6	-11
BBLS	Lazići	5.32	253	⇓iPn	Pn	19 19 21.9	-0.6
HRT	Hereke	5.35	153	P	Pn	19 19 23.0	0.0
EDC	Edincik	5.38	168	P	Pn	19 19 24.1	+0.7
AKASG	Malin Array Be	5.40	19	P	Pn	19 19 22.5	-1.0
	comp=Z,90nm,0.3s,baz=201,slow=11,SNR=204						
AKASG				S	Sn	19 20 20.8	-3.9
	comp=Z,61nm,0.3s,baz=200,slow=22,SNR=7.0						
AKASG	Malin Array Be	5.40	19	ceP	Pn	19 19 19.5	-4.0
AKASG				pmax	pmax		
	comp=Z,74nm,0.4s						
AKASG	Malin Array Be	5.40	19		Pn	19 19 21.1	-2.4
AKBB	Malin Array Si	5.40	19	P	Pn	19 19 22.5	-1.0
AKBB	Malin Array Si	5.40	19		Pn	19 19 22.5	-1.0
RUDO	Rudo	5.44	251	ePn	Pn	19 19 22.6	-1.5
BUD	Budapest	5.44	293	P	Pn	19 19 24.1	0.0
BUD				pmax	pmax		
	comp=Z,161nm,0.7s						
SIM	Simferopol'	5.46	94	P	Pn	19 19 23.3	-1.0
SIM	Simferopol'	5.46	94	d iP	Pn	19 19 23.2	-1.0
SIM				S	Sn	19 20 19.2	-6.9
SIM				pmax	pmax		
	comp=Z,710nm,0.3s						
SIM				smax	smax		
	comp=E,385nm,1.0s						
SIM				smax	smax		
	comp=N,576nm,0.8s						
MORH	Mrgy, Hungar	5.47	279	⇓iPn	Pn	19 19 24.9	+0.4
GRG	Griva	5.53	214	P	Pn	19 19 23.7	-1.6
GRG	Griva	5.53	214	P	Pn	19 19 24.8	-0.5
GRG				pmax	pmax		
	comp=Z,75nm,1.0s						
HAPS	Han Pijesak,BI	5.55	256	ePn	Pn	19 19 24.0	-1.6
PLE	Pljevlja	5.55	248	P	Pn	19 19 26.3	+0.6
YAL	Yalta	5.58	99	P	Pn	19 19 23.7	-2.2
YAL				S	Sn	19 20 26.4	-2.6
YAL	Yalta	5.58	99	⇓iP	Pn	19 19 23.7	-2.2
YAL				eS	Sn	19 20 26.4	-2.6
OUR	Ouranopolis	5.59	200	P	Pn	19 19 25.0	-1.2
HORT	Hortiatis	5.59	207	P	Pn	19 19 25.4	-0.9
THE	Thessaloniki	5.61	208	P	Pn	19 19 27.3	+0.9
NIE	Niedzica	5.63	315	eP	Pn	19 19 27.5	+0.9
NIE	Niedzica	5.63	315	eP	Pn	19 19 27.5	+0.9
ALU	Alushta	5.71	97	P	Pn	19 19 26.6	-1.0
ALU				Pm		19 19 27.0	
ALU				S	Sn	19 20 32.5	+0.4
ALU				Sm		19 20 33.8	
ALU	Alushta	5.71	97	⇓iP	Pn	19 19 26.6	-1.0
ALU				eS	Sn	19 20 32.5	+0.4
EZN	Ezine	5.80	181	P	Pn	19 19 28.9	-0.1
UPM	Unac-Piva	5.92	248	ePn	Pn	19 19 30.6	-0.1
VYHS	Vyhne	5.93	302	eP	Pn	19 19 31.1	+0.4
VYHS	Vyhne	5.93	302	ePN	Pn	19 19 31.1	+0.4
DOB	Doboj	5.97	264	ePn	Pn	19 19 31.9	+0.8
SRO	Srobarova	6.00	294	eP	Pn	19 19 32.2	+0.7
SRO	Srobarova	6.00	294	ePN	Pn	19 19 32.2	+0.7
PAIG	Paliouri	6.05	201	P	Pn	19 19 31.3	-1.0
PAIG	Paliouri	6.05	201	P	Pn	19 19 31.3	-1.0
PAIG				pmax	pmax		
	comp=Z,81nm,0.5s						
SUDU	Sudak	6.08	94	P	Pn	19 19 31.4	-1.3
SUDU				Pm		19 19 33.3	
SUDU				S	Sn	19 20 41.0	-0.1
SUDU				Sm		19 20 42.0	
SUDU	Sudak	6.08	94	⇓iP	Pn	19 19 31.4	-1.3
SUDU				eS	Sn	19 20 41.0	-0.1
PDG	Podgorica	6.09	241	ePn	Pn	19 19 33.6	+0.8
PDG	Podgorica	6.09	241	⇑iPn	Pn	19 19 33.5	+0.8
PDG	Podgorica	6.09	241		Pn	19 19 32.5	-0.3
FNA	Florina	6.10	219	P	Pn	19 19 33.0	0.0
FNA	Florina	6.10	219	P	Pn	19 19 32.7	-0.3
FNA	Florina	6.10	219		Pn	19 19 32.7	-0.3
OHR	Ohrid	6.11	224	i Pn	Pn	19 19 34.2	+1.0
OHR	Ohrid	6.11	224	P	Pn	19 19 34.2	+1.0
OHR				pmax	pmax		
	comp=Z,154nm,0.8s						
MDUB	Mudurnu	6.22	144		Pn	19 19 34.5	-0.3
LIT	Litokhoron	6.24	209	P	Pn	19 19 33.7	-1.2
LIT	Litokhoron	6.24	209	P	Pn	19 19 34.1	-0.8
LIT	Litokhoron	6.24	209		Pn	19 19 34.1	-0.8
DRME	Dracevica, Mon	6.27	239	ePn	Pn	19 19 36.9	+1.6
BRY	Bratogost	6.30	247	ePn	Pn	19 19 36.1	+0.4
KZN	Kozani	6.33	214	P	Pn	19 19 34.7	-1.4
FEO	Feodosiya	6.34	92	P	Pn	19 19 34.8	-1.3
FEO				Pm		19 19 35.5	
FEO				S	Sn	19 20 45.8	-1.4
FEO				Sm		19 20 46.3	
FEO	Feodosiya	6.34	92	i P	Pn	19 19 34.8	-1.3
FEO				eS	Sn	19 20 45.8	-1.4
OJC	Ojcow	6.40	318	eP	Pn	19 19 36.5	-0.5
OJC	Ojcow	6.40	318	eP	Pn	19 19 36.5	-0.5
OJC	Ojcow	6.40	318		Pn	19 19 36.3	-0.6
TIR	Tirane	6.42	230	P	Pn	19 19 37.4	+0.1
TIR	Tirane	6.42	230		Pn	19 19 37.4	+0.1
TREB	Trebinje	6.51	246	ePn	Pn	19 19 40.5	+2.1
NEST	Nestorio	6.54	219	P	Pn	19 19 34.9	-4.1
HCY	Herceg Novi	6.55	244	ePn	Pn	19 19 40.6	+1.6
BLY	Banja Luka	6.60	266	ePn	Pn	19 19 40.6	+0.9
BLY	Banja Luka	6.60	266	⇓iPn	Pn	19 19 40.7	+1.0
BLY	Banja Luka	6.60	266		Pn	19 19 40.1	+0.5
DBRK	Dubrovnik	6.66	247	ePn	Pn	19 19 42.2	+1.7
XOR	Xorichti	6.71	202	P	Pn	19 19 39.7	-1.4
MGRS	Mrkonjic Grad	6.74	263	⇑iPn	Pn	19 19 43.4	+1.8
BEHE	Becsehely	6.78	281	⇓iPn	Pn	19 19 43.1	+1.1
JAVC	Velka Javorina	6.79	302	⇓iPN	Pn	19 19 43.4	+1.2
MOSL	Moslavina	6.80	273	i Pn	Pn	19 19 43.6	+1.3
SMOL	Smolenice	6.80	298	eP	Pn	19 19 42.2	-0.1
SMOL	Smolenice	6.80	298	ePN	Pn	19 19 42.2	-0.1
MODS	Modra-Piesok	6.84	297	eP	Pn	19 19 42.0	-0.9
MODS	Modra-Piesok	6.84	297	ePN	Pn	19 19 42.0	-0.9
STON	Ston	6.86	249	ePn	Pn	19 19 44.3	+1.2
STON	Ston	6.86	249	i Pn	Pn	19 19 44.8	+1.7
STON	Ston	6.86	249	⇓iPn	Pn	19 19 44.0	+0.9
ZST	Bratislava	6.89	295	eP	Pn	19 19 42.7	-0.8
ZST	Bratislava	6.89	295	ePN	Pn	19 19 42.7	-0.8
RICI	Ricice	6.99	255	i Pn	Pn	19 19 46.2	+1.4
RICI				Sn	Sn	19 21 04.6	+1.7
OKC	Ostrava-Krasne	7.00	310	eP	Pn	19 19 44.3	-0.6
OKC	Ostrava-Krasne	7.00	310	eP	Pn	19 19 44.3	-0.6
ILGA	Ilgaz	7.00	128		Pn	19 19 44.2	-1.1
KERU	Kerch	7.05	89	P	Pn	19 19 46.0	+0.4
KERU	Kerch	7.05	89	eP	Pn	19 19 46.0	+0.4
SOP	Sopron	7.11	290	ePn	Pn	19 19 46.9	+0.5
SOP	Sopron	7.11	290	P	Pn	19 19 46.8	+0.5
SOP				pmax	pmax		
	comp=Z,135nm,1.1s						
MAKA	Makarska	7.14	254	i Pn	Pn	19 19 48.5	+1.7
MAKA				Sn	Sn	19 21 07.0	+0.5
KOGS	Kog	7.14	280	⇓iP	Pn	19 19 47.6	+0.7
KOGS				e		19 19 54.6	
BEL	Belsk	7.25	331	eP	Pn	19 19 48.8	+0.5
BEL	Belsk	7.25	331	P	Pn	19 19 49.3	+1.1
BEL				pmax	pmax		
	comp=Z,171nm,0.6s						
AGG	Agios Georgios	7.27	206	P	Pn	19 19 48.2	-0.6
AGG	Agios Georgios	7.27	206		Pn	19 19 48.2	-0.6
MORC	Moravsky Berou	7.30	308	⇓P	Pn	19 19 48.2	-0.8
MORC	Moravsky Berou	7.30	308	⇓P	Pn	19 19 48.2	-0.8
MORC	Moravsky Berou	7.30	308	P	Pn	19 19 48.2	-0.8
MORC	Moravsky Berou	7.30	308	⇓iPN	Pn	19 19 48.0	-1.0
MORC	Moravsky Berou	7.30	308		Pn	19 19 48.2	-0.8
MANT	Manisa	7.31	167		Pn	19 19 48.3	-1.1
ZAG	Zagreb	7.32	275	⇓iPn	Pn	19 19 50.4	+1.1
ZAG	Zagreb	7.32	275	P	Pn	19 19 51.3	+2.0
ZAG				pmax	pmax		
	comp=Z,324nm,0.8s						
ANTO	Ankara	7.41	139	P	Pn	19 19 49.8	-0.9
ANTO	Ankara	7.41	139		Pn	19 19 49.8	-0.9
BR231	Keskin MP Arra	7.43	139		Pn	19 19 50.3	-0.6
GCIS	Gornji Cirnik	7.57	276	eP	Pn	19 19 53.8	+1.1
IGT	Igoumenitsa	7.58	219	P	Pn	19 19 54.4	+1.6
IGT				pmax	pmax		
	comp=Z,70nm,1.0s						
CONA	Conrad Observa	7.62	291	ePn	Pn	19 19 53.5	+0.1
	comp=Z,14nm,0.6s,SNR=30						
VRAC	Vranov	7.62	302	⇓P	Pn	19 19 53.6	+0.3
VRAC	Vranov	7.62	302	P	Pn	19 19 52.1	-1.2
	comp=Z,1.2nm,0.3s,baz=111,slow=13,SNR=121						
VRAC				LR	LR	19 23 04.6	
	comp=Z,141nm,18.6s,baz=66,slow=40						
VRAC	Vranov	7.62	302	⇓P	Pn	19 19 53.6	+0.3
VRAC	Vranov	7.62	302	⇓iPN	Pn	19 19 53.5	+0.2
KRUC	Moravsky	7.64	300	P	Pn	19 19 53.7	+0.2
KRUC				pmax	pmax		
	comp=Z,68nm,1.1s						
KRUC	Moravsky	7.64	300	⇓iPN	Pn	19 19 53.6	+0.1
UDBI	Udbina	7.64	265	ePn	Pn	19 19 55.7	+2.0
GROS	Grobnik	7.66	280	eP	Pn	19 19 54.4	+0.5
CRES	Cresnjev	7.69	275	⇓iPn	Pn	19 19 55.3	+1.0
OZLJ	Ozalj	7.70	274	i Pn	Pn	19 19 55.4	+1.0
ARSA	Arzberg	7.72	286	ePn	Pn	19 19 55.6	+1.0
ARSA	Arzberg	7.72	286	ePn	Pn	19 19 55.7	+1.1
	comp=Z,25nm,0.8s,SNR=26						
ANN	Anapa	7.80	92	eP	Pn	19 19 51.5	-4.3
ANN				eS	Sn	19 21 16.1	-6.5
ANN				pmax	pmax		
	comp=Z,113nm,0.9s						
MORI	Morici	7.84	261	ePn	Pn	19 19 57.6	+1.2
BOJS	Bojanci	7.86	273	⇓iP	Pn	19 19 57.7	+1.2
BR131	Keskin Array S	7.93	136	P	Pn	19 19 56.9	-0.8
	SNR=8.0						
BR131	Keskin Array S	7.93	136	P	Pn	19 19 56.7	-1.0
BR131	Keskin Array S	7.93	136		Pn	19 19 56.7	-1.0
BRTR	Keskin Array B	7.93	136	P	Pn	19 19 56.9	-0.8
	comp=Z,4.0nm,0.3s,baz=321,slow=12,SNR=126						
BRTR				PcP	PcP	19 26 22.0	+0.5
	comp=Z,0.3nm,0.3s,baz=319,slow=1.4,SNR=6.6						
BRTR	Keskin Array B	7.93	136		Pn	19 19 56.6	-1.1
PERS	Pernice	7.93	281	⇓iP	Pn	19 19 58.4	+0.8
ZIRJ	Zirje	7.95	259	ePn	Pn	19 19 59.9	+2.1
ZIRJ				Sn	Sn	19 21 27.1	+0.9
SOKA	Soboth	7.99	282	i Pn	Pn	19 19 59.4	+0.9
	comp=Z,20nm,0.5s,SNR=55						
PDKS	Podkum	8.01	277	i P	Pn	19 19 59.7	+1.2
SCTE	Santa Cesarea	8.07	229	Pn	Pn	19 19 59.4	-0.1
VISS	Visnje	8.12	275	eP	Pn	19 20 01.1	+1.0
VNDS	Vrh nad Dolski	8.21	277	eP	Pn	19 20 02.2	+0.9
NVLJ	Novalja	8.26	267	ePn	Pn	19 20 04.6	+2.7
DUGI	Dugi Otok	8.26	263	ePn	Pn	19 20 04.6	+2.7
DPC	Dobruska-Polom	8.27	308	eP	Pn	19 20 01.5	-0.5
DPC	Dobruska-Polom	8.27	308	eP	Pn	19 20 01.5	-0.5
TREC	Trest	8.28	300	eP	Pn	19 20 02.7	+0.6
TREC	Trest	8.28	300	eP	Pn	19 20 02.7	+0.6
BAI	Bari	8.30	240	ePn	Pn	19 20 01.9	-0.6
OBKA	Obir	8.32	280	ePn	Pn	19 20 03.6	+0.8
OBKA	Obir	8.32	280	i Pn	Pn	19 20 03.7	+0.9
	comp=Z,18nm,0.8s,SNR=25						
LJU	Ljubljana	8.33	277	⇓iP	Pn	19 20 04.2	+1.3
LJU	Ljubljana	8.33	277	⇓iPn	Pn	19 20 04.2	+1.3
ISP	Isparta	8.38	157	P	Pn	19 20 02.7	-0.9
ISP	Isparta	8.38	157		Pn	19 20 02.7	-0.9
RIY	Rijeka	8.41	272	⇓iPn	Pn	19 20 04.9	+0.9
CEY	Cerknica	8.42	275	⇓iPn	Pn	19 20 04.9	+0.9
TAR1	Taranto	8.42	236	ePn	Pn	19 20 05.1	+1.0
UPC	Upice	8.52	309	eP	Pn	19 20 05.0	-0.3
UPC	Upice	8.52	309	eP	Pn	19 20 05.0	-0.3
KSP	Ksiaz	8.55	311	P	Pn	19 20 04.9	-0.8
KSP				pmax	pmax		
	comp=Z,35nm,1.2s						
SG1	Sgolgore (BA)	8.59	240	ePn	Pn	19 20 05.5	-0.8
SUW	Suwalki	8.65	347	eP	Pn	19 20 05.1	-1.9
SUW	Suwalki	8.65	347	P	Pn	19 20 05.1	-1.9
SUW	Suwalki	8.65	347		Pn	19 20 05.1	-1.9
MOA	Molln	8.65	289	ePn	Pn	19 20 08.1	+0.9
MOA	Molln	8.65	289	i Pn	Pn	19 20 08.4	+1.2
	comp=Z,13nm,0.8s,SNR=23						
SGRT	San Giovanni R	8.67	247		Pn	19 20 05.5	-2.0
CADS	Cadrg	8.88	278	eP	Pn	19 20 10.9	+0.6
TRI	Trieste	8.88	275	P	Pn	19 20 10.3	+0.1
TRI	Trieste	8.88	275		Pn	19 20 10.3	+0.1
MICGM	Minsk	8.93	5	eP	Pn	19 20 06.0	-4.8
MICGM				eS	Sn	19 21 41.0	-8.6
MICGM				esS		19 22 17.0	
MNK	Minsk	8.93	5	eP	Pn	19 20 06.0	-4.8
MNK				eS	Sn	19 21 41.0	-8.6
MYKA	Terra Mystica	8.95	281	i Pn	Pn	19 20 12.4	+1.2
	comp=Z,3.8nm,0.5s,SNR=15						
ACER	Acerenza	9.07	241		Pn	19 20 11.2	-1.7
ITM	Ithomi	9.10	203	Pn	Pn	19 20 13.8	+0.6
PRU	Pruhonice	9.12	303	eP	Pn	19 20 13.2	-0.1
PRU	Pruhonice	9.12	303	eP	Pn	19 20 13.2	-0.1
KBA	Koelnbreinsper	9.18	284	ePn	Pn	19 20 15.9	+1.6
KBA	Koelnbreinsper	9.18	284	ePn	Pn	19 20 15.9	+1.6
	comp=Z,24nm,0.7s,SNR=42						
KBA	Koelnbreinsper	9.18	284	P	Pn	19 20 16.0	+1.6
KBA				pmax	pmax		
	comp=Z,83nm,1.5s						
GEC2	GERESS Array S	9.24	295	ePn	Pn	19 20 15.8	+0.6
GEC2	GERESS Array S	9.24	295	P	Pn	19 20 16.1	+0.9
GEC2				pmax	pmax		
	comp=Z,48nm,1.4s						
GEC2	GERESS Array S	9.24	295		Pn	19 20 15.3	+0.1
GERES	GERESS Array B	9.24	295	P	Pn	19 20 14.5	-0.7
	comp=Z,0.6nm,0.3s,baz=106,slow=14,SNR=151						
GERES				LR	LR	19 24 13.4	
	comp=Z,198nm,19.3s,baz=106,slow=40						
GERES	GERESS Array B	9.24	295	P	Pn	19 20 14.9	-0.3
GERES	GERESS Array B	9.24	295		Pn	19 20 14.9	-0.3
ELL	Elmali	9.25	162	P	Pn	19 20 15.2	-0.2
ELL	Elmali	9.25	162		Pn	19 20 15.2	-0.2
NACGM	Naroch	9.29	1	eP	Pn	19 20 12.0	-3.5
NACGM				eS	Sn	19 21 50.0	-8.2
PVCC	Panska Ves	9.33	306	eP	Pn	19 20 16.0	-0.2
PVCC	Panska Ves	9.33	306	eP	Pn	19 20 16.0	-0.2
KHC	Kasperske Hory	9.40	296	eP	Pn	19 20 18.1	+0.9
KHC				ex	x	19 20 26.5	
KHC	Kasperske Hory	9.40	296	eP	Pn	19 20 18.1	+0.9
FVI	Forni Avoltri	9.54	281	P	Pn	19 20 20.7	+1.5
FVI				pmax	pmax		
	comp=Z,36nm,1.2s						
STAL	STALIGIAL	9.59	279		Pn	19 20 20.6	+0.8
RJOB	Jochberg	9.62	288	ePn	Pn	19 20 20.0	-0.1
TIP	Timpagrande	9.63	231		Pn	19 20 19.4	-1.0
SOC	Sochi	9.69	97	eP	Pn	19 20 18.8	-2.2
SOC				e		19 22 05.6	
SOC				pmax	pmax		
	comp=Z,135nm,1.3s						
SOC				smax	smax		
	comp=N,77nm,1.0s						
SOC				smax	smax		
	comp=E,32nm,0.7s						
GKP	Gorka Klasztor	9.71	325	eP	Pn	19 20 20.1	-1.1
GKP	Gorka Klasztor	9.71	325	eP	Pn	19 20 20.1	-1.1
ABTA	Abfaltersbach	9.73	282	ePn	Pn	19 20 23.0	+1.4
	comp=E,18nm,0.9s,SNR=27						
INTR	Introdacqua	9.76	253		Pn	19 20 21.6	-0.4
PAOL	Paolisi	9.80	246		Pn	19 20 22.8	+0.2
KLNR	Kaliningrad	9.83	338	ceP	Pn	19 20 21.3	-1.5
BRG	Berggiesshubel	9.85	307	eP	Pn	19 20 22.1	-1.0
	comp=E,74nm,2.0s						
BRG	Berggiesshubel	9.85	307	eP	Pn	19 20 22.1	-1.0
BRG				pmax	pmax		
	comp=Z,74nm,2.0s						
WET	Wettzell	9.85	296	ePn	Pn	19 20 23.4	+0.2
WET	Wettzell	9.85	296	P	Pn	19 20 23.7	+0.5
WET				pmax	pmax		
	comp=Z,39nm,1.7s						
AQU	L'Aquila	9.95	255	⇓iPn	Pn	19 20 23.7	-1.0
AQU	L'Aquila	9.95	255	P	Pn	19 20 24.5	-0.2
AQU	L'Aquila	9.95	255		Pn	19 20 24.5	-0.2
NRCA	Norcia	9.97	258		Pn	19 20 23.9	-0.9
VORD	Divnogorie	10.08	53	eP	Pn	19 20 24.1	-2.1
VORD				eS	Sn	19 22 10.2	-7.3
VORD				pmax	pmax		
	comp=Z,100nm,0.6s						
VORD				pmax	pmax		
	comp=Z,100nm,0.6s						
VORD				smax	smax		
	comp=N,710nm,0.8s						
VSR	Storozhevoye	10.13	52	eP	Pn	19 20 25.5	-1.4

VSR				eS	Sn	19 22 11.4	-7.2
VSR				pmax	pmax		
	comp=Z,100nm,0.8s						
VSR				pmax	pmax		
	comp=Z,150nm,0.4s						
VSR				smax	smax		
	comp=N,3µm,3.8s						
MURB	Monte Urbino	10.23	262		Pn	19 20 27.3	-1.1
CTI	Castel Tesino	10.34	278	P	Pn	19 20 29.1	-0.7
CTI	Castel Tesino	10.34	278		Pn	19 20 29.1	-0.7
WTTA	Wattenberg	10.35	284	ePn	Pn	19 20 32.2	+2.1
	comp=N,23nm,0.8s,SNR=21						
WTTA	Wattenberg	10.35	284	P	Pn	19 20 32.1	+2.0
WTTA				pmax	pmax		
	comp=Z,60nm,1.8s						
VORR	Voronezh	10.38	50	eP	Pn	19 20 31.0	+0.9
VORR				pmax	pmax		
	comp=Z,350nm,1.6s						
ROTZ	Rotzenmuhle	10.45	298	ePn	Pn	19 20 31.1	0.0
NKC	Novy Kostel	10.46	301	eP	Pn	19 20 32.5	+1.2
NKC	Novy Kostel	10.46	301	eP	Pn	19 20 32.5	+1.2
CLL	Collm	10.57	307	eP	Pn	19 20 32.0	-0.7
	comp=Z,10.0nm,0.9s						
CLL				e		19 22 06.0	
CLL				e		19 22 36.0	
CLL	Collm	10.57	307	eP	Pn	19 20 32.0	-0.7
CLL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CLL	Collm	10.57	307		Pn	19 20 32.1	-0.7
SQTA	Sankt Quirin	10.64	284	ePn	Pn	19 20 34.5	+0.7
	comp=Z,14nm,0.7s,SNR=19						
FUR	Furstenfeldbru	10.69	289	P	Pn	19 20 35.1	+0.8
FUR				pmax	pmax		
	comp=Z,74nm,1.6s						
MOTA	Moosalm	10.72	285	ePn	Pn	19 20 35.1	+0.2
	comp=Z,13nm,0.9s,SNR=17						
LPSR	Galich'ya Gora	10.74	45	eP	Pn	19 20 32.2	-2.8
LPSR				eS	Sn	19 22 23.3	-10
LPSR				pmax	pmax		
	comp=Z,60nm,1.0s						
LPSR				pmax	pmax		
	comp=Z,90nm,1.2s						
LPSR				smax	smax		
	comp=N,730nm,1.7s						
CEL	Celeste	10.76	231		Pn	19 20 34.0	-1.5
LATE	Laterza	10.95	259		Pn	19 20 36.5	-1.4
FETA	Feichten	10.96	283	ePn	Pn	19 20 37.8	-0.3
	comp=N,11nm,0.8s,SNR=9.3						
RETA	Reutte	10.96	285	ePn	Pn	19 20 38.4	+0.4
	comp=N,6.1nm,0.8s						
ZCCA	Zocca	11.03	269		Pn	19 20 38.0	-1.0
GRA1	Grafenberg Arr	11.04	297		Pn	19 20 38.1	-0.9
GRF	Grafenberg Arr	11.04	297	P	Pn	19 20 38.1	-0.9
OSSC	Osservatorio P	11.05	264		Pn	19 20 38.7	-0.4
MOX	Moxa	11.10	302	P	Pn	19 20 39.4	-0.4
MOX				pmax	pmax		
	comp=Z,21nm,1.4s						
PRMA	PARMA	11.42	271	Pn	Pn	19 20 44.7	+0.7
OBN	Obninsk	11.47	31	P	Pn	19 20 41.6	-3.0
	comp=Z,12nm,0.3s,baz=38,slow=1.5,SNR=26						
OBN	Obninsk	11.47	31	deP	Pn	19 20 40.6	-4.0
OBN				pmax	pmax		
	comp=Z,181nm,1.3s						
OBN	Obninsk	11.47	31		Pn	19 20 41.0	-3.6
DAVOX	Davos/Dischmat	11.54	282	P	Pn	19 20 44.7	-1.1
	comp=Z,0.2nm,0.3s,baz=118,slow=1.1,SNR=5.9						
DAVOX				LR	LR	19 25 44.3	
	comp=Z,68nm,21.8s,baz=92,slow=40						
DAVA	Damuels	11.55	284	ePn	Pn	19 20 45.5	-0.4
	comp=Z,17nm,0.7s,SNR=6.0						
VRH	Novokhopyorsk	11.57	56	eP	Pn	19 20 43.6	-2.4
VRH				eS	Sn	19 22 43.2	-10
VRH				pmax	pmax		
	comp=Z,150nm,0.9s						
VRH				pmax	pmax		
	comp=Z,270nm,0.6s						
VRH				smax	smax		
	comp=N,660nm,1.5s						
KIV	Kislovodsk	11.66	92	i Pn	Pn	19 20 46.2	-1.2
	SNR=10.0						
KIV	Kislovodsk	11.66	92	P	Pn	19 20 46.0	-1.4
KIV	Kislovodsk	11.66	92	eP	Pn	19 20 46.6	-0.8
KIV				pmax	pmax		
	comp=Z,135nm,1.1s						
KIV				MLR	MLR		
	comp=Z,52nm,10.0s						
KIV	Kislovodsk	11.66	92		Pn	19 20 45.8	-1.5
KVAR	Kislovodsk Arr	11.67	92	P	Pn	19 20 48.9	+1.4
	baz=278,slow=23,SNR=4.7						
GAZ	Gaziantep	11.69	133		Pn	19 20 48.3	+0.6
GOF	Gofitskoye	11.70	87	⇓iP	Pn	19 20 46.2	-1.5
GOF				pmax	pmax		
	comp=Z,226nm,0.7s						
KBZ	Khabaz	11.87	93	P	Pn	19 20 49.2	-0.7
	comp=Z,2.0nm,0.3s,baz=304,slow=2.7,SNR=37						
KBZ				LR	LR	19 26 34.3	
	comp=Z,90nm,20.6s,baz=280,slow=42						
NEY	Neytrino	11.88	96	deP	Pn	19 20 51.0	+0.7
TUE	Stuetta	11.91	280		Pn	19 20 51.3	+0.6
BSD	Bornholm Skovb	11.99	326	⇑iP	Pn	19 20 47.7	-3.7
	comp=Z,19nm,0.7s						
BSD	Bornholm Skovb	11.99	326	⇑iP	Pn	19 20 47.7	-3.7
BSD				pmax	pmax		
	comp=Z,19nm,0.7s						
MSSA	Maissana	12.06	270		Pn	19 20 52.8	+0.2
STU	Stuttgart	12.14	291	P	Pn	19 20 53.2	-0.3
STU	Stuttgart	12.14	291		Pn	19 20 53.2	-0.3
MOS	Moscow	12.34	31	eP	Pn	19 20 52.5	-3.4
MOS				eS	Sn	19 23 02.5	-9.3
MOS				pmax	pmax		
	comp=Z,67nm,0.7s						
NCK	Nalchik	12.42	94	⇑eP	Pn	19 20 59.3	+2.2
SLE	Schleitheim	12.51	286	P	Pn	19 20 57.7	-0.6
SLE				pmax	pmax		
	comp=Z,22nm,1.2s						
BFO	Black Forest	12.66	289	P	Pn	19 20 58.5	-1.7
BFO	Black Forest	12.66	289		Pn	19 20 58.5	-1.7
CLTB	Caltabellotta	12.74	235		Pn	19 21 01.2	-0.2
ZEI	Tsey	12.84	97	eP	Pn	19 20 58.6	-4.2
ZEI				pmax	pmax		
	comp=Z,18nm,0.7s						
VSU	Vasula	12.85	1	⇓iP	Pn	19 20 59.2	-3.3
VSU				pmax	pmax		
	comp=Z,52nm,0.7s						
TNS	Taunus Mts	12.91	297	P	Pn	19 21 05.0	+1.6
TNS				pmax	pmax		
	comp=Z,27nm,1.3s						
AKH	Akhalkalaki	13.07	103	P	Pn	19 21 05.1	-0.6
AKH	Akhalkalaki	13.07	103		Pn	19 21 05.1	-0.6
SENIN	Lac Senin/Sane	13.33	280		Pn	19 21 08.0	-1.1
COP	Copenhagen	13.40	324	i P	Pn	19 21 06.2	-3.4
	comp=Z,24nm,0.8s						
COP	Copenhagen	13.40	324	i P	Pn	19 21 06.2	-3.4
COP				pmax	pmax		
	comp=Z,24nm,0.8s						
ECH	Echery	13.43	288	P	Pn	19 21 10.1	-0.1
ECH	Echery	13.43	288		Pn	19 21 10.1	-0.1
TBLG	Delisi	13.80	100	P	Pn	19 21 14.7	-0.2
TBLG	Delisi	13.80	100		Pn	19 21 14.7	-0.2
BNI	Bardonecchia	13.92	275	P	Pn	19 21 16.6	+0.1
BNI	Bardonecchia	13.92	275		Pn	19 21 16.6	+0.1
BUG	Bochum--Univer	13.95	302	P	Pn	19 21 17.4	+0.7
BUG				pmax	pmax		
	comp=Z,18nm,0.8s						
GROC	Groznyy	14.04	93	eP	Pn	19 21 17.0	-0.9
GROC				eS	Sn	19 23 52.0	-1.1
GROC				pmax	pmax		
	comp=Z,131nm,1.3s						
MMAI	Mount Meron Ar	14.37	148	P	P	19 21 24.1	-1.2
	comp=Z,0.8nm,0.3s,baz=339,slow=11,SNR=6.3						
MMAI				PcP	PcP	19 26 28.5	+0.2
	comp=Z,0.4nm,0.3s,baz=318,slow=1.9,SNR=4.5						
GNI	Garni	14.48	106	P	P	19 21 25.5	-1.1
	comp=Z,0.5nm,0.3s,baz=340,slow=1.3,SNR=22						
GNI	Garni	14.48	106	i Pn	P	19 21 26.8	+0.3
	SNR=15						
GNI	Garni	14.48	106	P	P	19 21 26.4	-0.2
ORIF	Oris-en-Rattie	14.50	275	P	Pn	19 21 24.5	+0.7
ORIF				pmax	pmax		
	comp=Z,35nm,1.8s						
MEM	Membach	14.52	297	P	P	19 21 26.5	-0.1
MEM				pmax	pmax		
	comp=Z,39nm,1.1s						
SSB	Saint Sauveur	15.37	277	P	P	19 21 36.2	-0.1
SSB				pmax	pmax		
	comp=Z,16nm,1.5s						
LOR	Lormes	15.65	284	P	Pn	19 21 38.1	+0.1
LOR				pmax	pmax		
	comp=Z,30nm,1.2s						
ASF	Jabal al Asfar	15.69	145	P	P	19 21 40.7	+0.8
	comp=Z,0.1nm,0.3s,baz=246,slow=4.6,SNR=4.8						
FIA1	FINESS Array S	15.84	359		Pn	19 21 37.2	-3.0
FINES	FINESS Array B	15.84	359	P	Pn	19 21 37.1	-3.1
	comp=Z,0.9nm,0.3s,baz=175,slow=11,SNR=31						
FINES				LR	LR	19 28 36.8	
	comp=Z,87nm,22.0s,baz=170,slow=40						
FINES	FINESS Array B	15.84	359	i P	Pn	19 21 37.0	-3.2
FINES				pmax	pmax		
	comp=Z,12nm,0.7s						
FINES	FINESS Array B	15.84	359	P	Pn	19 21 36.8	-3.4
AKT	Akhty	15.97	97	eP	P	19 21 45.6	+2.6
AKT				pmax	pmax		
	comp=Z,23nm,0.7s						
KEST	Kesra	16.28	239	P	Pn	19 21 43.7	-2.2
	comp=Z,0.1nm,0.3s,baz=242,slow=20,SNR=3.9						
KEST	Kesra	16.28	239	P	Pn	19 21 45.7	-0.2
HFS	Hagfors	16.39	337	P	Pn	19 21 44.6	-2.4
	comp=Z,0.4nm,0.3s,baz=144,slow=16,SNR=24						
HFS				LR	LR	19 29 04.9	
	comp=Z,56nm,20.0s,baz=148,slow=40						
CLF	Chambon-Foret	16.71	287	P	P	19 21 49.0	-1.9
HOMB	Homborsund	16.73	326	eP	P	19 21 49.1	-1.9
KLMR	Klimovskoe	17.08	22	eP	P	19 21 49.8	-5.1
KLMR				pmax	pmax		
	comp=Z,50nm,0.8s						
KLMR	Klimovskoe	17.08	22	ePn	P	19 21 49.9	-5.0
KLMR				ePn	P	19 21 49.9	-5.0
KLMR				ePn	P	19 21 49.9	-5.0
KLMR				AMP		19 21 57.0	
	comp=Z,50nm,0.8s						
KLMR				eSn	S	19 24 47.7	-18
KLMR				eSn	S	19 24 47.7	-18
SUF	Sumiainen	17.12	360	P	Pn	19 21 55.7	-0.1
SUF				pmax	pmax		
	comp=Z,24nm,1.8s						
OSL	Oslo	17.12	332	eP	P	19 21 54.9	-0.4
EIL	Elat	17.28	154	P	Pn	19 21 59.0	+1.0
	comp=Z,0.7nm,0.3s,baz=340,slow=9.6,SNR=7.5						
KONO	Kongsberg	17.29	330	eP	P	19 21 55.0	-2.1
KONO	Kongsberg	17.29	330	P	P	19 21 54.8	-2.3
KONO				pmax	pmax		
	comp=Z,13nm,1.0s						
KONO	Kongsberg	17.29	330	P	P	19 21 54.8	-2.3
NC602	NORSAR Array S	17.50	335	eP	P	19 21 59.1	-0.4
NC602	NORSAR Array S	17.50	335	P	P	19 21 57.4	-2.1
NC602				IAmb	IAmb	19 22 01.8	
	comp=Z,36nm,0.9s						
NORES	NORESS Array B	17.50	335	P	P	19 21 59.7	+0.2
NORES				pmax	pmax		
	comp=Z,5.0nm,0.3s						
JOF	Joensuu	17.54	7	P	P	19 21 59.2	-0.7
JOF				pmax	pmax		
	comp=Z,28nm,0.7s						
VAF	Ylistaro	17.58	354	P	P	19 21 59.1	-1.2
VAF				pmax	pmax		
	comp=Z,48nm,1.0s						
NC405	NORSAR Array S	17.75	336	P	P	19 22 02.0	-0.3
NC405				IAmb	IAmb	19 22 32.1	
	comp=Z,97nm,1.8s						
NAO01	NORSAR Array S	17.78	335	P	P	19 22 01.9	-0.7
NB201	NORSAR Array S	17.82	335	P	P	19 22 01.7	-1.4
NB201				IAmb	IAmb	19 22 20.1	
	comp=Z,42nm,1.1s						
NB2	NORSAR Subarra	17.84	335	P	P	19 22 03.2	0.0
	comp=Z,0.4nm,0.5s,baz=149,slow=14						
NB2	NORSAR Subarra	17.84	335	P	P	19 22 03.2	0.0
	baz=149,slow=14						
NOA	NORSAR Array B	17.84	335	P	P	19 22 02.7	-0.6
	comp=Z,0.2nm,0.3s,baz=258,slow=20,SNR=46						
NOA				LR	LR	19 29 13.6	
	comp=Z,65nm,21.4s,baz=145,slow=38						
NC303	NORSAR Array S	17.94	336	P	P	19 22 03.4	-1.0
NBO00	NORSAR Array S	17.96	335	P	P	19 22 04.2	-0.3
NBO00				IAmb	IAmb	19 22 06.7	
	comp=Z,37nm,0.8s						
NC204	NORSAR Array S	18.16	335	P	P	19 22 07.5	+0.7
BLS5	Blasjo	18.29	326	eP	P	19 22 08.3	+0.1
SKAR	Skarslia	18.48	331	eP	P	19 22 10.3	-0.1
ODD1	Odda	18.55	328	eP	P	19 22 11.7	+0.7
KIRV	Kirov	19.03	39	P	P	19 22 16.6	+0.3
	comp=Z,12nm,0.3s,baz=244,slow=3.2,SNR=16						
KIRV	Kirov	19.03	39	i P	P	19 22 16.3	+0.1
DOMB	Dombas	19.27	335	eP	P	19 22 19.3	+0.5
BER	Bergen	19.35	327	P	P	19 22 18.9	-0.7
BER				pmax	pmax		
	comp=Z,20nm,0.9s						
ASK	Askoy	19.46	327	eP	Pn	19 22 22.2	-1.3
OUL	Oulu	19.50	359	P	Pn	19 22 22.7	-1.1
OUL				pmax	pmax		
	comp=Z,43nm,2.3s						
PRGR	Permogore	19.53	28	eP	P	19 22 20.7	-0.8
PRGR				e		19 25 49.5	
PRGR				pmax	pmax		
	comp=Z,61nm,0.6s						
HYA	Hoyanger	19.56	330	eP	Pn	19 22 23.6	-1.0
TMCR	Tamitsa	19.67	15	eP	P	19 22 22.3	-0.7
TMCR				e		19 25 56.7	
TMCR				pmax	pmax		
	comp=Z,98nm,1.3s						
MOL	Molde	20.13	334	eP	P	19 22 29.0	+1.0
FOO	Floro	20.26	330	eP	P	19 22 29.9	+0.6
MSF	Maaselka	20.38	3	P	P	19 22 31.4	+0.7
MSF				pmax	pmax		
	comp=Z,137nm,0.7s						
NSS	Namsos	20.57	342	eP	P	19 22 32.5	-0.2
EKA	Eskdalemuir Ar	21.04	308	P	P	19 22 36.6	-1.3
	comp=Z,2.8nm,0.5s,baz=111,slow=11,SNR=11						
AKTO	Aktyubinsk	21.55	66	P	P	19 22 44.1	+0.7
	comp=Z,15nm,0.7s,baz=269,slow=10,SNR=41						
AKTO	Aktyubinsk	21.55	66	i P	P	19 22 42.5	-0.9
AKTO				pmax	pmax		
	comp=Z,19nm,0.7s						
SGF	Sodankyl	21.87	0	P	P	19 22 47.1	+0.6
SGF				pmax	pmax		
	comp=Z,40nm,1.0s						
KONS	Konsvik	22.10	346	eP	P	19 22 49.5	+0.6
ARU	Arti	22.69	50	P	P	19 22 54.7	-0.1
	comp=Z,11nm,0.4s,baz=253,slow=6.9,SNR=76						
ARU	Arti	22.69	50	c iP	P	19 22 54.5	-0.3
ARU				*PP	pP	19 23 20.8	+0.4
ARU						19 23 32.2	
ARU				S	S	19 26 53.2	+0.6
ARU				SS	SnSn	19 27 50.2	+11
ARU				pmax	pmax		
	comp=Z,53nm,1.1s						
ARU	Arti	22.69	50	P	P	19 22 54.3	-0.5
LVZ	Lovozero	22.73	8	deP	P	19 22 55.4	+0.3
LVZ				pmax	pmax		
	comp=Z,62nm,0.8s						
LVZ	Lovozero	22.73	8	P	P	19 22 55.3	+0.2
GUD	Guadarrama	22.80	268	P	P	19 22 55.5	-0.7
GUD				pmax	pmax		
	comp=Z,18nm,0.9s						
ABKAR	Akbulak array	22.83	69	P	P	19 22 56.7	+0.4
PAB	San Pablo	23.38	266	P	P	19 23 00.5	-1.0
SVE	Sverdlovsk	23.90	50	eP	P	19 23 06.9	+1.0
SVE				pmax	pmax		
	comp=Z,32nm,0.9s						
ARCES	ARCESS Array B	23.97	359	P	P	19 23 06.3	-0.2
	comp=Z,12nm,0.9s,baz=178,slow=9.3,SNR=18						
ARCES				LR	LR	19 33 15.8	
	comp=Z,68nm,19.9s,baz=352,slow=38						
ARCES	ARCESS Array B	23.97	359	P	P	19 23 06.4	-0.1
PBRG	Braganca	24.19	273	eP	P	19 23 08.5	-0.3
MVO	Moncorvo	24.62	272	eP	P	19 23 12.1	-0.6
GEYT	Alibeck	24.72	97	P	P	19 23 15.7	+2.1
	comp=Z,26nm,0.7s,baz=301,slow=10.0,SNR=65						
GEYT				PcP	PcP	19 26 47.2	+0.4
	comp=Z,3.3nm,0.7s,baz=256,slow=3.0,SNR=4.2						
GEYT	Alibeck	24.72	97	P	P	19 23 15.2	+1.6
GEYT				pP	pP	19 23 41.6	-0.5
GYA0B	ALIBECK ARRAY	24.72	97	P	P	19 23 15.5	+1.8
GYA0B				IAmb	IAmb	19 23 17.0	
	comp=Z,32nm,0.8s						
PVRL	Vila Real	25.06	272	eP	P	19 23 16.0	-0.7
PGAV	Gavieira, Arco	25.20	274	eP	P	19 23 17.1	-0.9
MTE	Manteigas	25.27	270	eP	P	19 23 18.2	-0.4
PVIS	Viseu	25.39	271	eP	P	19 23 19.1	-0.6
PCBR	Castelo Branco	25.45	269	eP	P	19 23 19.3	-0.9
PMRV	Marv??o	25.56	268	eP	P	19 23 20.3	-0.9
MDT	Midelt	27.07	253	P	P	19 23 34.4	-0.5
	comp=Z,4.9nm,0.8s,baz=92,slow=9.1,SNR=5.0						
TAM	Tamanrasset	28.45	224	P	P	19 23 47.4	+0.2
TAM				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TAM	Tamanrasset	28.45	224	P	P	19 23 47.4	+0.2
BRVK	Borovoye	29.12	59	P	P	19 23 54.4	+1.6
BRVK	Borovoye	29.12	59	c iP	P	19 23 54.4	+1.6
BRVK				pmax	pmax		
	comp=Z,13nm,0.6s						
BRVK	Borovoye	29.12	59	P	P	19 23 54.0	+1.1
BRVK				IAmb	IAmb	19 23 55.2	
	comp=Z,16nm,0.7s						
BVAR	Borovoye Array	29.19	59	P	P	19 23 54.5	+1.1
	comp=Z,5.5nm,0.6s,baz=280,slow=8.8,SNR=45						
BVAR				pP	pP	19 24 23.1	+0.6
	comp=Z,3.0nm,0.6s,baz=273,slow=12,SNR=4.3						
HRA	Herat	29.40	100	P	P	19 23 57.3	+1.6
HRA					PcP	19 26 57.5	-0.8
SHME	Shamm	30.74	119	i P	P	19 24 07.6	+0.3
	SNR=5.9						
BANOM	Banah	30.93	119	i P	P	19 24 09.6	+0.6
	SNR=13						
NAZ	Nazwa, Dubai	31.23	121	P	P	19 24 12.4	+0.8
MSFE	Esma-Masafi	31.26	120	i P	P	19 24 12.4	+0.4
	SNR=11						
KK31	Karatay Array	31.31	79	i P	P	19 24 13.8	+1.6
KK31	Karatay Array	31.31	79	P	P	19 24 13.5	+1.3
KK31				IAmb	IAmb	19 24 15.0	
	comp=Z,15nm,0.7s						
KK31				pP	pP	19 24 42.8	+1.3
KKAR	Karatay Array	31.31	79	P	P	19 24 13.5	+1.3
KKAR	Karatay Array	31.31	79	P	P	19 24 13.5	+1.3
KKAR	Karatay Array	31.31	79	P	P	19 24 13.6	+1.3
KKAR				IAmb	IAmb	19 24 14.9	
	comp=Z,15nm,0.7s						
MDH	Madha	31.39	120	i P	P	19 24 13.7	+0.6
	SNR=7.6						
MDH	Madha	31.39	120	P	P	19 24 13.6	+0.6
UOSS	Minazif	31.59	121	i P	P	19 24 15.1	+0.3
	SNR=6.5						
UOSS	Minazif	31.59	121	P	P	19 24 15.2	+0.3
UOSS	Minazif	31.59	121	P	P	19 24 14.6	-0.2
UOSS				IAmb	IAmb	19 24 16.0	
	comp=Z,12nm,0.7s						
HATD	Hatta, Dubai	31.64	121	i P	P	19 24 15.8	+0.6
	SNR=6.8						
ASHO	Ashiyiah	31.70	121	i P	P	19 24 16.2	+0.4
	SNR=7.0						
ALNE	Al Ain	31.99	122	i P	P	19 24 19.2	+0.9
	SNR=6.7						
SOHO	SOHO	32.40	121	P	P	19 24 22.9	+1.0
	SNR=5.5						
SPITS	Spitsbergen Ar	32.90	356	P	P	19 24 26.2	+0.5
ARQ	Araqi	32.99	122	P	P	19 24 27.9	+0.9
HOQ	Hoqain	33.28	121	P	P	19 24 30.5	+0.9
EKS2	Erkin-Say	33.71	78	P	P	19 24 35.7	+2.4
	SNR=35						
AML	Almayashu	33.85	79	P	P	19 24 36.8	+2.0
	SNR=21						
USP	Ospenovka	33.98	76	P	P	19 24 37.2	+1.7
	SNR=12						
KBL	Kabul	34.05	94	P	P	19 24 37.2	+0.8
KBL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KBL	Kabul	34.05	94	P	P	19 24 37.2	+0.8
SMDO	Samad	34.12	121	P	P	19 24 37.3	+0.4
	SNR=6.8						
SCO	Scoresbysund	34.14	333	P	P	19 24 37.7	+1.2
SCO				pmax	pmax		
	comp=Z,13nm,1.1s						
SCO	Scoresbysund	34.14	333	P	P	19 24 37.7	+1.2
SCO				IAmb	IAmb	19 24 39.0	
	comp=Z,13nm,1.1s						
AAK	Ala-Archa	34.21	77	P	P	19 24 39.8	+2.2
	comp=Z,15nm,0.6s,baz=246,slow=3.1,SNR=118						
AAK				pP	pP	19 25 07.4	+0.3
	comp=Z,3.9nm,0.8s,baz=278,slow=7.7,SNR=1.8						
AAK	Ala-Archa	34.21	77	P	P	19 24 40.1	+2.4
	SNR=32						
AAK	Ala-Archa	34.21	77	i P	P	19 24 39.9	+2.3
	SNR=51						
AAK	Ala-Archa	34.21	77	c iP	P	19 24 39.9	+2.3
AAK				pmax	pmax		
	comp=Z,44nm,1.4s						
AAK	Ala-Archa	34.21	77	P	P	19 24 39.2	+1.6
FRU1	Bishkek	34.24	77	P	P	19 24 39.7	+1.9
FRU1				pmax	pmax		
	comp=Z,31nm,0.9s						
FRU1	Bishkek	34.24	77	P	P	19 24 39.7	+1.9
WSAR	Wadi Sarin	34.33	120	P	P	19 24 39.8	+1.1
UCH	Uchtor	34.38	78	P	P	19 24 41.6	+2.2
	SNR=12						
DAMY	Dhamar	34.47	148	P	P	19 24 41.5	+1.4
KURBB	Kurchatov Arra	34.52	62	P	P	19 24 41.0	+1.1
	comp=Z,12nm,0.6s,baz=287,slow=9.0,SNR=64						
KURBB				pP	pP	19 25 09.2	-0.3
	comp=Z,1.1nm,0.5s,baz=288,slow=10.0,SNR=2.4						
KURK	Kurchatov	34.56	62	P	P	19 24 41.3	+1.0
KURK	Kurchatov	34.56	62	c iP	P	19 24 41.3	+1.0
KURK				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KURK	Kurchatov	34.56	62	P	P	19 24 41.0	+0.7
KURK				IAmb	IAmb	19 24 41.8	
	comp=Z,11nm,0.5s						
JMDO	Jabal Madar	34.67	121	P	P	19 24 42.1	+0.5
	SNR=10.0						
TKM2	Tokmak 2	34.86	76	P	P	19 24 44.8	+1.6
	SNR=18						
KZA	Kyzart	34.94	78	P	P	19 24 47.0	+2.8
	SNR=15						
WBK	Wadi Bani Khal	35.01	120	P	P	19 24 45.5	+1.0
ULHL	Ulahol	35.55	77	P	P	19 24 51.5	+2.2
	SNR=7.3						
MHTO	MHTO	35.65	123	P	P	19 24 50.5	+0.6
WHFO	Wadi Hawf	35.77	132	P	P	19 24 51.8	+0.8
	SNR=7.0						
ABTO	Aybut	35.99	133	P	P	19 24 54.0	+1.1
	SNR=5.4						
DAG	Danmarks Havn	36.16	344	i P	P	19 24 54.0	+0.4
DAG	Danmarks Havn	36.16	344	i P	P	19 24 54.0	+0.4
RBK	Rabkut	36.34	131	P	P	19 24 56.8	+0.9
	SNR=7.4						
KSH	Kashi	36.50	82	P	P	19 24 58.8	+1.6
KSH				pP	pP	19 25 29.8	+2.8
KSH				PcP	PcP	19 27 20.5	+2.6
KSH				S	S	19 30 30.5	+1.3
KSH				PcS	PcS	19 31 10.0	+4.0
DMTO	DMTO	36.56	130	P	P	19 24 58.4	+0.7
	SNR=5.1						
SHAO	Shalim	36.67	129	i P	P	19 24 59.1	+0.4
	SNR=26						
PDGK	Podgornoye	37.35	74	i P	P	19 25 05.9	+1.6
PDGK				pmax	pmax		
	comp=Z,37nm,0.9s						
NIL	Nilore	37.48	92	P	P	19 25 07.8	+2.4
ZAA0	Zalesovo Array	37.61	56	P	P	19 25 07.1	+0.9
ZAA0				pP	pP	19 25 36.1	0.0
ZALV	Zalesovo Beam	37.61	56	P	P	19 25 07.4	+1.2
	comp=Z,31nm,0.6s,baz=280,slow=9.4,SNR=138						
ZALV				pP	pP	19 25 36.2	+0.1
	comp=Z,6.6nm,0.6s,baz=280,slow=10,SNR=3.2						
ZALV	Zalesovo Beam	37.61	56	P	P	19 25 06.7	+0.5
ZALV				pP	pP	19 25 36.0	-0.1
MAKZ	Makanchi	37.76	68	P	P	19 25 07.8	+0.2
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MAKZ	Makanchi	37.76	68	P	P	19 25 07.8	+0.2
MK31	Makanchi Array	37.97	68	eP	P	19 25 10.3	+0.9
MK31	Makanchi Array	37.97	68	P	P	19 25 10.1	+0.8
MK31				pP	pP	19 25 39.8	+0.5
MK31				PP	PP	19 26 35.7	-3.0
MKAR	Makanchi Array	37.97	68	P	P	19 25 10.7	+1.3
	comp=Z,10nm,0.7s,baz=282,slow=7.6,SNR=112						
MKAR				pP	pP	19 25 39.9	+0.5
	comp=Z,4.6nm,0.7s,baz=287,slow=7.4,SNR=6.4						
MKAR	Makanchi Array	37.97	68	i P	P	19 25 10.6	+1.3
MKAR				pmax	pmax		
	comp=Z,11nm,0.7s						
MKAR	Makanchi Array	37.97	68	P	P	19 25 10.0	+0.6
MKAR				pP	pP	19 25 39.8	+0.5
MKAR				PP	PP	19 26 35.1	-3.5
NRIK	Noril'sk	38.15	30	P	P	19 25 11.8	+1.3
	comp=Z,6.8nm,0.6s,baz=248,slow=5.9,SNR=16						

NRIK				LR	LR	19 43 31.5	
	comp=Z,45nm,18.7s,baz=214,slow=40						
NRIK	**Noril'sk**	**38.15**	**30**	iP	**P**	**19 25 12.2**	**+1.7**
DGZ	**Jazzator, Alta**	**40.28**	**61c**	iP	**P**	**19 25 30.5**	**+1.8**
DGZ				pmax	pmax		
	comp=Z,30nm,0.7s						
SOCY	**Socotra**	**40.73**	**136**	P	**P**	**19 25 30.3**	**-2.4**
WMQ	**Urumqi**	**42.62**	**70**	eP	**P**	**19 25 49.0**	**+1.3**
SFJD	**Kangerlussuaq**	**44.20**	**327**	P	**P**	**19 25 59.5**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=285,slow=5.7,SNR=2.6						
SFJD	**Kangerlussuaq**	**44.20**	**327**	P	**P**	**19 25 59.5**	**-0.4**
MBAR	**Mbarara**	**46.19**	**174**	P	**P**	**19 26 17.0**	**+0.6**
	comp=Z,12nm,0.9s,baz=360,slow=9.6,SNR=27						
MBAR	**Mbarara**	**46.19**	**174**	P	**P**	**19 26 16.5**	**+0.1**
MBAR				pmax	pmax		
	comp=Z,19nm,1.1s						
MBAR	**Mbarara**	**46.19**	**174**	P	**P**	**19 26 16.5**	**+0.1**
MBAR				IAmb	IAmb	19 26 18.0	
	comp=Z,19nm,1.1s						
DBIC	**Dimbokro**	**47.33**	**225**	P	**P**	**19 26 24.6**	**-0.6**
	comp=Z,16nm,0.4s,baz=9.3,slow=9.1,SNR=68						
DBIC	**Dimbokro**	**47.33**	**225**	P	**P**	**19 26 24.5**	**-0.6**
DBIC				IAmb	IAmb	19 26 25.6	
	comp=Z,14nm,0.6s						
TIC	**Toumodi**	**47.44**	**225**	eP	**P**	**19 26 25.2**	**-0.8**
	comp=Z,11nm,0.4s						
TIC	**Toumodi**	**47.44**	**225**	P	**P**	**19 26 25.2**	**-0.8**
TIC	**Toumodi**	**47.44**	**225**	P	**P**	**19 26 25.2**	**-0.8**
KIC	**Kosan Boka**	**47.54**	**224**	eP	**P**	**19 26 26.1**	**-0.7**
	comp=Z,30nm,0.6s						
KIC	**Kosan Boka**	**47.54**	**224**	P	**P**	**19 26 26.1**	**-0.7**
MOY	**Mondy**	**47.63**	**54**	eP	**P**	**19 26 29.3**	**+2.1**
LIC	**Lamto**	**47.80**	**224**	eP	**P**	**19 26 28.2**	**-0.6**
	comp=Z,36nm,0.4s						
LIC	**Lamto**	**47.80**	**224**	P	**P**	**19 26 28.2**	**-0.6**
TLY	**Talaya**	**49.13**	**53c**	iP	**P**	**19 26 40.7**	**+2.1**
TLY				pmax	pmax		
	comp=Z,13nm,0.6s						
TLY	**Talaya**	**49.13**	**53**	P	**P**	**19 26 39.5**	**+1.0**
ZAK	**Zakamensk**	**49.48**	**55**	eP	**P**	**19 26 42.5**	**+1.1**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TIXI	**Tiksi**	**51.10**	**23⇑**	eP	**P**	**19 26 54.1**	**+1.1**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TIXI	**Tiksi**	**51.10**	**23**	P	**P**	**19 26 53.4**	**+0.4**
BOD	**Bodaibo**	**51.84**	**43**	eP	**P**	**19 26 58.4**	**-0.4**
BOD				pmax	pmax		
	comp=Z,11nm,1.1s						
LSA	**Lhasa**	**52.26**	**84**	P	**P**	**19 27 04.8**	**+1.9**
LSA	**Lhasa**	**52.26**	**84**	iP	**P**	**19 27 04.7**	**+1.9**
	SNR=16						
LSA	**Lhasa**	**52.26**	**84**	P	**P**	**19 27 04.7**	**+1.9**
LSA	**Lhasa**	**52.26**	**84**	P	**P**	**19 27 04.0**	**+1.1**
LSA				pmax	pmax		
	comp=Z,28nm,0.7s						
LSA	**Lhasa**	**52.26**	**84**	P	**P**	**19 27 04.0**	**+1.1**
SONM	**Songino Array**	**52.48**	**57**	P	**P**	**19 27 05.6**	**+1.7**
	comp=Z,20nm,0.8s,baz=296,slow=8.4,SNR=116						
SONM				pP	**pP**	**19 27 35.0**	**-0.4**
	comp=Z,1.8nm,0.8s,baz=292,slow=8.6,SNR=1.8						
SONM				LR	LR	19 52 38.2	
	comp=Z,54nm,19.9s,baz=180,slow=39						
SONM	**Songino Array**	**52.48**	**57**	P	**P**	**19 27 05.0**	**+1.2**
SONM				pmax	pmax		
	comp=Z,13nm,0.7s						
SONM	**Songino Array**	**52.48**	**57**	P	**P**	**19 27 05.0**	**+1.2**
GTA	**Gaotai**	**52.69**	**69**	eP	**P**	**19 27 06.5**	**+1.0**
ULN	**Ulaanbaatar**	**52.85**	**56c**	iP	**P**	**19 27 07.9**	**+1.3**
ULN				pmax	pmax		
	comp=Z,12nm,1.2s						
ULN	**Ulaanbaatar**	**52.85**	**56**	P	**P**	**19 27 07.2**	**+0.6**
ULN				IAmb	IAmb	19 27 09.0	
	comp=Z,14nm,1.2s						
RES	**Resolute Bay**	**53.85**	**344**	P	**P**	**19 27 13.2**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=47,slow=9.0,SNR=8.1						
RES	**Resolute Bay**	**53.85**	**344**	P	**P**	**19 27 13.6**	**+0.3**
RES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
RES	**Resolute Bay**	**53.85**	**344**	P	**P**	**19 27 13.6**	**+0.3**
SCHQ	**Schefferville**	**56.09**	**316**	P	**P**	**19 27 28.4**	**-1.3**
	comp=Z,2.8nm,0.6s,baz=53,slow=7.9,SNR=8.7						
SCHQ	**Schefferville**	**56.09**	**316**	P	**P**	**19 27 28.4**	**-1.3**
SCHQ				IAmb	IAmb	19 28 07.7	
	comp=Z,20nm,1.6s						
YAK	**Yakutsk**	**56.45**	**33⇑**	eP	**P**	**19 27 32.0**	**-0.1**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YAK	**Yakutsk**	**56.45**	**33**	P	**P**	**19 27 31.9**	**-0.1**
YAK				IAmb	IAmb	19 27 32.9	
	comp=Z,11nm,0.8s						
LZH	**Lanzhou**	**57.19**	**70**	eP	**P**	**19 27 40.0**	**+2.1**
LZH				pP	pP	19 28 13.5	+3.5
LZH				sP	PcP	19 28 31.3	+0.4
HHC	**Hu-ho-hao-te**	**59.37**	**61**	eP	**P**	**19 27 52.5**	**-0.4**
PALK	**Pallekele**	**60.25**	**112**	P	**P**	**19 27 59.8**	**+0.7**
PALK	**Pallekele**	**60.25**	**112**	P	**P**	**19 27 59.4**	**+0.3**
PALK				pmax	pmax		
	comp=Z,33nm,0.8s						
PALK	**Pallekele**	**60.25**	**112**	P	**P**	**19 27 59.4**	**+0.3**
XAN	**Xi'an**	**61.75**	**69**	P	**P**	**19 28 10.5**	**+1.4**
XAN	**Xi'an**	**61.75**	**69**	P	**P**	**19 28 09.8**	**+0.7**
XAN				pmax	pmax		
	comp=Z,15nm,0.9s						
XAN	**Xi'an**	**61.75**	**69**	P	**P**	**19 28 09.8**	**+0.7**
BJI	**Beijing**	**62.67**	**60**	P	**P**	**19 28 16.0**	**+1.0**
BILL	**Bilibino**	**62.71**	**16c**	eP	**P**	**19 28 15.0**	**+0.2**
BILL				e		19 28 48.1	
BILL				e		19 30 34.0	
BILL				pmax	pmax		
	comp=Z,13nm,1.3s						
BILL	**Bilibino**	**62.71**	**16**	P	**P**	**19 28 15.1**	**+0.2**
BILL				IAmb	IAmb	19 28 16.3	
	comp=Z,16nm,1.3s						
C36M	**Paulatuk**	**63.29**	**349**	P	**P**	**19 28 18.8**	**+0.1**
SEY	**Seymchan**	**63.56**	**24**	P	**P**	**19 28 21.6**	**+1.0**
	comp=Z,6.1nm,0.7s,baz=298,slow=6.5,SNR=25						
SEY				pP	**pP**	**19 28 53.0**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=307,slow=10,SNR=1.9						
SEY	**Seymchan**	**63.56**	**24⇑**	eP	**P**	**19 28 21.7**	**+1.1**
ENH	**Enshi**	**64.47**	**72**	P	**P**	**19 28 27.5**	**+0.4**
CHTO	**Chiang Mai**	**64.64**	**89**	P	**P**	**19 28 28.8**	**+0.5**
CHTO	**Chiang Mai**	**64.64**	**89**	P	**P**	**19 28 28.5**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,32nm,0.9s						
CHTO	**Chiang Mai**	**64.64**	**89**	P	**P**	**19 28 28.5**	**+0.2**
CM31	**Chiang Mai Arr**	**64.88**	**89**	P	**P**	**19 28 30.6**	**+0.7**
	SNR=10						
CM31	**Chiang Mai Arr**	**64.88**	**89**	P	**P**	**19 28 30.6**	**+0.7**
CMAR	**Chiang Mai Arr**	**64.88**	**89**	P	**P**	**19 28 30.4**	**+0.5**
	comp=Z,21nm,0.9s,baz=304,slow=7.5,SNR=178						
CMAR				pP	**pP**	**19 29 02.6**	**0.0**
	comp=Z,2.8nm,0.6s,baz=298,slow=8.1,SNR=2.6						
CMAR	**Chiang Mai Arr**	**64.88**	**89**	iP	**P**	**19 28 30.3**	**+0.5**
CMAR				pmax	pmax		
	comp=Z,22nm,0.9s						
CMAR	**Chiang Mai Arr**	**64.88**	**89**	P	**P**	**19 28 29.9**	**+0.1**
GYA	**Guiyang**	**65.00**	**77⇑**	iP	**P**	**19 28 31.5**	**+0.8**
GYA				pP	PcP	19 29 01.5	-1.1
GYA				PP	**PP**	**19 30 54.0**	**-1.1**
GYA				S	**S**	**19 37 01.8**	**-0.1**
GYA				sS	sS	19 37 57.0	-1.6
GYA				SKS	**SKSac**	**19 38 10.8**	**-1.9**
TSUM	**Tsumeb**	**65.02**	**189**	P	**P**	**19 28 30.5**	**-0.2**
TSUM				IAmb	IAmb	19 30 12.1	
	comp=Z,16nm,1.6s						
TRQ	**Mont Tremblant**	**65.17**	**311**	P	**P**	**19 28 31.1**	**-0.4**
KLR	**Kul'dur**	**65.38**	**44**	P	**P**	**19 28 33.1**	**+0.5**
	comp=Z,5.8nm,0.8s,baz=323,slow=5.6,SNR=15						
KLR				pP	**pP**	**19 29 05.6**	**+0.1**
	comp=Z,4.0nm,1.0s,baz=308,slow=6.9,SNR=4.2						
KLR	**Kul'dur**	**65.38**	**44c**	iP	**P**	**19 28 32.9**	**+0.3**
KLR				pmax	pmax		
	comp=Z,12nm,1.2s						
INK	**Inuvik**	**65.40**	**352**	P	**P**	**19 28 32.3**	**-0.1**
	comp=Z,3.9nm,0.4s,baz=3.8,slow=5.7,SNR=28						
INK				LR	LR	20 00 00.4	
	comp=Z,32nm,19.5s,baz=46,slow=38						
INK	**Inuvik**	**65.40**	**352**	P	**P**	**19 28 32.1**	**-0.2**
INK				IAmb	IAmb	19 28 33.0	
	comp=Z,16nm,1.4s						
MA2	**Magadan**	**65.67**	**27**	P	**P**	**19 28 35.5**	**+1.2**
	comp=Z,4.2nm,0.5s,baz=346,slow=7.1,SNR=4.6						
MA2	**Magadan**	**65.67**	**27c**	eP	**P**	**19 28 35.3**	**+1.0**
MA2				pmax	pmax		
	comp=Z,19nm,1.2s						
MA2	**Magadan**	**65.67**	**27**	P	**P**	**19 28 35.2**	**+0.9**
CN2	**Changchun**	**65.67**	**52**	eP	**P**	**19 28 35.5**	**+0.9**
TOLK	**Toolik Lake Re**	**66.01**	**358**	P	**P**	**19 28 37.5**	**+1.1**
TOLK				IAmb	IAmb	19 28 37.8	
	comp=Z,13nm,1.6s						
SLVN	**Son La**	**66.44**	**83**	P	**P**	**19 28 39.9**	**0.0**
SLVN				IAmb	IAmb	19 28 41.8	
	comp=Z,7.1nm,0.8s						
BMAR	**Burnt Mountain**	**67.06**	**356**		**PcP**	**19 29 11.2**	**+0.9**
COLD	**Coldfoot**	**67.44**	**359**	P	**P**	**19 28 46.5**	**+1.1**
COLD				IAmb	IAmb	19 28 47.6	
	comp=Z,8.1nm,1.0s						
PBKT	**Sadao Pong**	**67.58**	**89**	P	**P**	**19 28 47.6**	**+0.7**
YKA	**Yellowknife Ar**	**67.81**	**342**	P	**P**	**19 28 47.6**	**-0.2**
	comp=Z,2.6nm,0.7s,baz=36,slow=5.8,SNR=67						
YKA				pP	**pP**	**19 29 21.0**	**-0.1**
	comp=Z,5.2nm,0.9s,baz=25,slow=6.2,SNR=9.4						
YKA				LR	LR	20 00 40.8	
	comp=Z,88nm,18.9s,baz=0.0,slow=38						
YKA	**Yellowknife Ar**	**67.81**	**342**	iP	**P**	**19 28 47.6**	**-0.2**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
IMAR	**Indian Mountai**	**68.72**	**0**	P	**P**	**19 28 54.2**	**+0.8**
USRK	**Ussuriysk Ar.**	**68.91**	**48**	P	**P**	**19 28 55.6**	**+0.7**
	comp=Z,2.8nm,0.5s,baz=287,slow=4.8,SNR=9.0						
USRK	**Ussuriysk Ar.**	**68.91**	**48**	P	**P**	**19 28 55.1**	**+0.1**
NJ2	**Nanjing**	**69.44**	**65**	eP	**P**	**19 28 57.8**	**-0.6**
EGAK	**Eagle**	**69.50**	**354**	P	**P**	**19 28 58.7**	**+0.5**
MLY	**Manley**	**69.66**	**359**	P	**P**	**19 29 00.2**	**+1.0**
MLY				IAmb	IAmb	19 29 01.8	
	comp=Z,16nm,1.3s						
ANM	**Nome**	**69.75**	**5**	P	**P**	**19 29 00.4**	**+0.6**
ANM				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ANM	**Nome**	**69.75**	**5**	P	**P**	**19 29 00.4**	**+0.6**
ANM				IAmb	IAmb	19 29 01.7	
	comp=Z,9.2nm,1.0s						
IL31		**69.81**	**357**	P	**P**	**19 29 00.9**	**+0.8**
IL31				IAmb	IAmb	19 29 02.7	
	comp=Z,16nm,1.6s						
ILAR	**Eielson Array**	**69.81**	**357**	P	**P**	**19 29 00.0**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=0.9,slow=5.1,SNR=20						
CCB	**Clear Creek Bu**	**69.97**	**357**	P	**P**	**19 29 01.8**	**+0.7**
CCB				IAmb	IAmb	19 29 02.6	
	comp=Z,26nm,2.0s						
E46A	**Sault Ste Mari**	**70.01**	**316**	P	**P**	**19 29 01.6**	**0.0**
E46A				IAmb	IAmb	19 29 02.4	
	comp=Z,9.6nm,0.7s						
DAWY	**Dawson**	**70.08**	**353**	P	**P**	**19 29 02.4**	**+0.6**
NEA	**Nenana**	**70.08**	**358**	P	**P**	**19 29 02.3**	**+0.5**
NEA				IAmb	IAmb	19 29 03.5	
	comp=Z,11nm,1.0s						
WRH	**Wood River Hil**	**70.16**	**357**	P	**P**	**19 29 02.4**	**+0.2**
WRH				IAmb	IAmb	19 29 03.9	
	comp=Z,9.3nm,0.9s						
HDA	**Harding Lake**	**70.18**	**357**	P	**P**	**19 29 02.5**	**+0.1**
HDA				IAmb	IAmb	19 29 03.7	
	comp=Z,10nm,0.9s						
LBTB	**Lobatse**	**70.31**	**181**	P	**P**	**19 29 04.5**	**+0.8**
LBTB				pmax	pmax		
	comp=Z,12nm,0.8s						
LBTB	**Lobatse**	**70.31**	**181**	P	**P**	**19 29 04.5**	**+0.8**
LBTB				IAmb	IAmb	19 29 05.1	
	comp=Z,12nm,0.8s						
SCRK	**Sand Creek**	**70.47**	**356**	P	**P**	**19 29 05.2**	**+0.8**
SCRK				IAmb	IAmb	19 29 07.5	
	comp=Z,22nm,1.6s						
BPAW	**Bear Paw Mtn.**	**70.59**	**359**	P	**P**	**19 29 05.5**	**+0.6**
BPAW				IAmb	IAmb	19 29 06.5	
	comp=Z,10nm,1.1s						
RIDG	**Independent Ri**	**70.75**	**356**	P	**P**	**19 29 06.9**	**+0.9**
RIDG				IAmb	IAmb	19 29 08.1	
	comp=Z,14nm,1.0s						
FFC	**Flin Flon**	**70.89**	**331**	P	**P**	**19 29 06.6**	**-0.3**
FFC				pmax	pmax		
	comp=Z,9.0nm,1.4s						
FFC	**Flin Flon**	**70.89**	**331**	P	**P**	**19 29 06.6**	**-0.3**
MCK	**McKinley**	**70.92**	**358**	P	**P**	**19 29 07.4**	**+0.5**
MCK				pmax	pmax		
	comp=Z,13nm,1.0s						
MCK	**McKinley**	**70.92**	**358**	P	**P**	**19 29 07.4**	**+0.5**
MCK				IAmb	IAmb	19 29 08.4	
	comp=Z,13nm,1.0s						
BCAR	**Beaver Creek A**	**71.24**	**354**	P	**P**	**19 29 09.9**	**+0.9**
RND	**Reindeer**	**71.24**	**358**	P	**P**	**19 29 08.7**	**-0.3**
RND				pmax	pmax		
	comp=Z,10.0nm,0.6s						
RND	**Reindeer**	**71.24**	**358**	P	**P**	**19 29 08.7**	**-0.3**
RND				IAmb	IAmb	19 30 52.7	
	comp=Z,10nm,0.6s						
E43A	**Lone Tree Farm**	**71.28**	**318**	P	**P**	**19 29 08.8**	**-0.6**
E43A				IAmb	IAmb	19 29 09.8	
	comp=Z,6.1nm,0.7s						
KSAR	**Wonju Array Be**	**71.30**	**55**	P	**P**	**19 29 09.5**	**-0.1**
KSAR	**Wonju Array Be**	**71.30**	**55**	P	**P**	**19 29 09.5**	**-0.1**
KSRS	**Korea Array**	**71.32**	**55**	P	**P**	**19 29 09.9**	**+0.3**
	comp=Z,5.1nm,0.8s,baz=322,slow=5.3,SNR=14						
KSRS				LR	LR	20 02 29.9	
	comp=Z,11nm,18.6s,baz=50,slow=37						
KSRS	**Korea Array**	**71.32**	**55**	P	**P**	**19 29 10.0**	**+0.3**
D41A	**Chassel**	**71.51**	**319**		pP	19 29 45.0	+0.7
UBPT	**Khong Chiam**	**71.61**	**87**	P	**P**	**19 29 11.4**	**-0.3**
UBPT				IAmb	IAmb	19 29 12.7	
	comp=Z,13nm,1.1s						
EYMN	**Ely**	**72.16**	**321**	P	**P**	**19 29 14.2**	**-0.4**
EYMN					**pP**	**19 29 48.4**	**+0.1**
YSS	**Yuzh-Sakhalins**	**72.18**	**40**	eP	**P**	**19 29 15.7**	**+1.0**
YSS				e		19 29 48.7	
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
YSS	**Yuzh-Sakhalins**	**72.18**	**40**	P	**P**	**19 29 15.3**	**+0.6**
YSS					**pP**	**19 29 48.4**	**+0.1**
ULM	**Lac du Bonnet**	**72.21**	**325**	P	**P**	**19 29 13.9**	**-0.9**
	comp=Z,3.7nm,0.6s,baz=34,slow=6.2,SNR=10						
ULM				pP	**pP**	**19 29 47.1**	**-1.4**
	comp=Z,4.5nm,1.0s,baz=19,slow=7.8,SNR=4.7						
ULM	**Lac du Bonnet**	**72.21**	**325**	P	**P**	**19 29 14.0**	**-0.9**
ULM					**pP**	**19 29 48.1**	**-0.4**
ULM				IAmb	IAmb	19 29 49.3	
	comp=Z,15nm,1.3s						
SKT	**Skwentna**	**72.73**	**359**	P	**P**	**19 29 17.6**	**-0.1**
SKT				IAmb	IAmb	19 29 19.9	
	comp=Z,8.2nm,0.7s						
SCM	**Sheep Creek Mo**	**72.77**	**357**	P	**P**	**19 29 18.9**	**+0.8**
SCM				pmax	pmax		
	comp=Z,30nm,0.8s						
SCM	**Sheep Creek Mo**	**72.77**	**357**	P	**P**	**19 29 18.9**	**+0.8**
GHO	**Glory Hole Cre**	**72.88**	**358**	P	**P**	**19 29 19.4**	**+0.6**
GHO				IAmb	IAmb	19 29 20.2	
	comp=Z,14nm,0.9s						
WHY	**Whitehorse**	**72.98**	**351**	P	**P**	**19 29 19.1**	**-0.3**
PMR	**Palmer**	**73.07**	**358**	P	**P**	**19 29 20.2**	**+0.5**
PMR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PMR	**Palmer**	**73.07**	**358**	P	**P**	**19 29 20.1**	**+0.5**
HYT	**Haines Junctio**	**73.10**	**352**	P	**P**	**19 29 21.0**	**+0.9**
HYT				IAmb	IAmb	19 29 23.9	
	comp=Z,15nm,0.9s						
KNK	**Knik Glacier**	**73.23**	**357**	P	**P**	**19 29 21.3**	**+0.6**
KNK				IAmb	IAmb	19 29 22.6	
	comp=Z,15nm,1.0s						
SUA	**Susitna One**	**73.23**	**359**	P	**P**	**19 29 21.6**	**+0.8**
SUA				IAmb	IAmb	19 29 22.5	
	comp=Z,17nm,0.9s						
CTGM	**Chitina Glacie**	**73.30**	**354**	P	**P**	**19 29 22.2**	**+0.9**
BALM	**Baldy**	**73.30**	**354**	P	**P**	**19 29 22.7**	**+1.5**
BALM				pmax	pmax		
	comp=Z,19nm,1.0s						
BALM	**Baldy**	**73.30**	**354**	P	**P**	**19 29 22.4**	**+1.1**
BALM				IAmb	IAmb	19 29 23.4	
	comp=Z,19nm,1.0s						
RC01	**Rabbit Creek A**	**73.59**	**358**	P	**P**	**19 29 23.7**	**+0.9**
TGL	**Tana Glacier**	**73.61**	**355**	P	**P**	**19 29 23.8**	**+0.7**
CRQM	**Cirque**	**73.63**	**355**	P	**P**	**19 29 24.0**	**+0.7**
BOSA	**Boshof**	**73.90**	**181**	P	**P**	**19 29 24.4**	**-0.6**
	comp=Z,5.3nm,0.8s,baz=357,slow=6.6,SNR=9.0						
BOSA	**Boshof**	**73.90**	**181**	P	**P**	**19 29 25.1**	**+0.1**
BOSA				pmax	pmax		
	comp=Z,40nm,1.8s						
BOSA	**Boshof**	**73.90**	**181**	P	**P**	**19 29 25.1**	**+0.1**
BOSA				IAmb	IAmb	19 30 27.6	
	comp=Z,40nm,1.8s						
ASAJ	**Asahikawa**	**74.25**	**42**	P	**P**	**19 29 26.6**	**-0.2**
	comp=Z,3.4nm,0.7s,baz=293,slow=7.2,SNR=7.0						
JKA	**Kamikawa-asahi**	**74.25**	**42**	P	**P**	**19 29 26.6**	**-0.3**
BRLK	**Bradley Lake**	**74.94**	**359**	P	**P**	**19 29 30.9**	**+0.2**
PSI	**Prapat**	**75.78**	**101**	P	**P**	**19 29 36.2**	**-0.1**
	comp=Z,17nm,0.8s,baz=309,slow=4.7,SNR=21						
RPSI	**Rantau Prapat**	**75.86**	**101**	P	**P**	**19 29 35.8**	**-0.8**
GSI	**Gunungsitoli**	**75.94**	**103**	P	**P**	**19 29 37.9**	**+0.9**
	comp=Z,94nm,1.0s						
GSI	**Gunungsitoli**	**75.94**	**103**	P	**P**	**19 29 37.0**	**0.0**
GSI				IAmb	IAmb	19 29 38.6	
	comp=Z,25nm,1.1s						
IPM	**Ipoh**	**76.04**	**98**	P	**P**	**19 29 37.0**	**-0.6**
ECSD	**EROS Data Cent**	**77.68**	**322**	P	**P**	**19 29 45.6**	**-0.8**
ECSD				IAmb	IAmb	19 29 46.4	
	comp=Z,7.9nm,0.5s						
ECSD					**pP**	**19 30 20.3**	**-0.2**
EGMT	**Eagleton**	**79.16**	**332**	P	**P**	**19 29 54.4**	**-0.1**
EGMT				IAmb	IAmb	19 29 55.7	
	comp=Z,15nm,0.8s						
PDSI	**Padang**	**79.52**	**102**	P	**P**	**19 29 56.0**	**-0.9**
KRJI	**Kerinci**	**81.06**	**102**	P	**P**	**19 30 05.5**	**+0.3**
	comp=Z,56nm,0.9s						
NEW	**Newport**	**81.20**	**336**	P	**P**	**19 30 05.9**	**+0.4**
	baz=45,slow=4.3						
NEW	**Newport**	**81.20**	**336**	P	**P**	**19 30 05.8**	**+0.4**
NEW				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NEW	**Newport**	**81.20**	**336**	P	**P**	**19 30 05.8**	**+0.3**
C09A	**Chrisman Ranch**	**81.95**	**337**	P	**P**	**19 30 09.7**	**+0.3**
C09A				IAmb	IAmb	19 30 10.7	
	comp=Z,30nm,1.7s						
FLWY	**Flagg Ranch**	**82.92**	**330**	P	**P**	**19 30 15.3**	**+0.6**
KSI	**Kapahiang**	**82.96**	**102**	P	**P**	**19 30 14.4**	**-0.7**
	comp=Z,3µmcomp=Z,27nm,0.7s						
T35A	**Sooner Cattle**	**83.10**	**317**	P	**P**	**19 30 14.4**	**-1.0**
T35A				IAmb	IAmb	19 30 51.6	
	comp=Z,11nm,1.0s						
FXWY	**Fox Creek**	**83.42**	**330**	P	**P**	**19 30 17.8**	**+0.5**
TPAW	**Teton Pass**	**83.53**	**330**	P	**P**	**19 30 18.4**	**+0.5**
TUL1	**Leonard**	**83.56**	**316**	P	**P**	**19 30 17.3**	**-0.5**
TUL1					**pP**	**19 30 52.3**	**0.0**
TUL1				IAmb	IAmb	19 30 53.3	
	comp=Z,16nm,1.0s						
PD31	**Pinedale Array**	**83.66**	**329**	P	**P**	**19 30 18.2**	**-0.3**
PDAR	**Pinedale Array**	**83.66**	**329**	P	**P**	**19 30 17.6**	**-0.9**
	comp=Z,2.9nm,0.9s,baz=73,slow=4.1,SNR=15						
PDAR				pP	**pP**	**19 30 52.8**	**-0.3**
	comp=Z,1.9nm,1.0s,baz=80,slow=3.6,SNR=3.9						
BMO	**Blue Mountains**	**84.36**	**335**	P	**P**	**19 30 21.1**	**-0.8**
BMO				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BMO	**Blue Mountains**	**84.36**	**335**	P	**P**	**19 30 21.1**	**-0.8**
BMO				IAmb	IAmb	19 30 22.1	
	comp=Z,8.2nm,0.7s						
LWLI	**Liwa**	**84.95**	**102**	P	**P**	**19 30 24.9**	**-0.3**
	comp=Z,6µmcomp=Z,21nm,0.9s						
MFID	**Camas Ranch**	**85.21**	**333**	P	**P**	**19 30 26.1**	**0.0**
MFID				IAmb	IAmb	19 30 28.2	
	comp=Z,8.1nm,0.8s						
SBUM	**Sibu**	**85.30**	**91**	P	**P**	**19 30 26.9**	**0.0**
HWUT	**Hardware Ranch**	**85.40**	**330**	P	**P**	**19 30 26.8**	**-0.4**
DUG	**Dugway, Tooele**	**87.09**	**330**	P	**P**	**19 30 35.8**	**+0.3**
DUG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
DUG	**Dugway, Tooele**	**87.09**	**330**	P	**P**	**19 30 35.8**	**+0.3**
DBJI	**Dramaga**	**87.90**	**101**	P	**P**	**19 30 39.3**	**-0.2**
SDV	**Santo Domingo**	**88.63**	**281**	P	**P**	**19 30 42.7**	**-0.5**
SDV				IAmb	IAmb	19 30 43.9	
	comp=Z,7.8nm,0.9s						
PSUT	**Pine Spring**	**88.93**	**330**	P	**P**	**19 30 44.7**	**+0.4**
BDFB	**Brasilia**	**90.56**	**248**	P	**P**	**19 30 51.4**	**-0.6**
	comp=Z,4.3nm,0.9s,baz=105,slow=6.4,SNR=5.6						
BDFB	**Brasilia**	**90.56**	**248**	P	**P**	**19 30 52.3**	**+0.3**
BDFB				IAmb	IAmb	19 30 55.4	
	comp=Z,5.4nm,1.0s						
MNTX	**Cornudas Mount**	**91.51**	**321**	P	**P**	**19 30 55.1**	**-1.1**
MNTX					**pP**	**19 31 30.6**	**-0.5**
TXAR	**Lajitas Array**	**92.72**	**318**	P	**P**	**19 31 01.0**	**-0.9**
	comp=Z,0.9nm,0.9s,baz=59,slow=3.6,SNR=7.6						
TXAR				pP	**pP**	**19 31 36.4**	**-0.5**
	comp=Z,0.8nm,0.9s,baz=64,slow=2.9,SNR=3.6						
TXAR				LR	LR	20 13 44.5	
	comp=Z,11nm,18.8s,baz=0.0,slow=36						
TXAR	**Lajitas Array**	**92.72**	**318**	P	**P**	**19 31 01.0**	**-0.9**
FITZ	**Fitzroy Crossi**	**109.07**	**97**	PKiKP	**PKiKP**	**19 36 17.8**	**-0.9**
	comp=Z,2.2nm,0.9s,baz=297,slow=4.5,SNR=3.7						
WRA	**Warramunga Arr**	**116.39**	**92**	PKP	**PKPdf**	**19 36 31.9**	**-0.7**
	comp=Z,1.7nm,0.8s,baz=304,slow=2.1,SNR=10						
WRA	**Warramunga Arr**	**116.39**	**92**	PKIKP	**PKPdf**	**19 36 31.8**	**-0.8**
ASAR	**Alice Springs**	**118.52**	**95**	PKP	**PKPdf**	**19 36 36.1**	**-0.6**
	comp=Z,1.8nm,0.6s,baz=328,slow=1.5,SNR=21						
ASAR				pPKP	**pPKPdf**	**19 37 12.1**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=325,slow=2.1,SNR=2.2						
ASAR	**Alice Springs**	**118.52**	**95**		**PKPdf**	**19 36 36.0**	**-0.7**
PLCA	**Paso Flores**	**121.88**	**243**	PKP	**PKPdf**	**19 36 42.5**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=338,slow=3.8,SNR=6.0						
PLCA	**Paso Flores**	**121.88**	**243**		**PKPdf**	**19 36 42.7**	**+0.1**
CTA	**Charters Tower**	**124.83**	**83**	PKP	**PKiKP**	**19 36 49.4**	**+0.2**
	comp=Z,4.7nm,0.8s,baz=179,slow=2.4,SNR=5.7						
CTA				pPKP	**pPKPdf**	**19 37 24.9**	**-0.5**
	comp=Z,1.1nm,0.4s,baz=301,slow=5.9,SNR=1.8						
STKA	**Stephens Creek**	**128.91**	**98**	PKP	**PKPdf**	**19 36 55.4**	**-0.9**
	comp=Z,2.9nm,0.6s,baz=7.9,slow=1.3,SNR=8.1						
STKA	**Stephens Creek**	**128.91**	**98**		**PKPdf**	**19 36 56.6**	**+0.3**

MAN ***29*** *19:26:57.2, 4°.80N×127°.09E, h1km, mb4.9, ML3.9, MS3.9*

NEIC ***29*** *19:27:02.8±1.4, 4°.68N±0°.07×127°.1E±0°.1, h83km±9km, mb4.1/20, Error ellipse: s-maj=18.0km s-min=7.8km az=66.0*

IDC ***29*** *19:27:03.0±1.4, 4°.72N×127°.17E, h88km±13km, mb3.7/9, mb1 3.8/11, mb1mx3.5/53, mbtmp4.0/11, MS3.1/1, Ms1 3.1/1, ms1mx2.3/46, Error ellipse: s-maj=40.8km s-min=8.7km az=64.0*

DJA ***29*** *19:27:04.0±0.8, 4°N±5°×12°7E±°, h130km±24km, M4.3/12, mb4.3/6, mB4.7/3, MLv4.3/12, Mw(mB)3.9/3*

ISC 29 19:27:02.8±0.5**, 4°.63N**±0°.05×**126°.94E**±0°.08**, h81**km**, n55,** σ**1**s**.76**/64**, mb4.1**/15**, 1C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.91**	**320**	eP	**Pn**	**19 27 30.4**	**-3.2**
DDMP				eS	**Sn**	**19 27 55.8**	**-1.2**
MATI	**Mati**	**2.40**	**344**	eP	**Pn**	**19 27 37.2**	**-3.0**
MATI				eS	**Sn**	**19 28 13.1**	**+4.3**
GSPH	**General Santos**	**2.46**	**306⇑**	iP	**Pn**	**19 27 37.3**	**-3.7**
DAV	**Davao City (W)**	**2.78**	**331**	P	**Pn**	**19 27 45.4**	**+0.2**
	18nm,0.3s,baz=116,slow=1.8,SNR=5.3						
DAV				S	**Sn**	**19 28 20.2**	**+2.4**
	44nm,0.3s,baz=289,slow=22,SNR=7.1						
DAV	**Davao City (W)**	**2.78**	**331**		**Pn**	**19 27 46.0**	**+0.7**
DAV				Sn	**Sn**	**19 28 19.1**	**+1.2**
SKMP	**Bagumbayan, Su**	**3.04**	**308**	eP	**Pn**	**19 27 48.2**	**-0.5**
SKMP				eS	Sn	19 28 33.9	+10
CTBH	**Cotabato--PC H**	**3.72**	**314⇓**	iP	**Pn**	**19 27 54.5**	**-3.4**
BUKP	**Musuan**	**3.73**	**330**	eP	**Pn**	**19 27 55.8**	**-2.4**
BUKP				eS	**Sn**	**19 28 41.5**	**+0.5**
TNTI	**Ternate**	**3.85**	**174**	P	**Pn**	**19 27 59.9**	**+0.1**
TNTI	**Ternate**	**3.85**	**174**		**Pn**	**19 27 59.9**	**+0.1**
TNTI				Sn	**Sn**	**19 28 46.7**	**+2.8**
BUTP	**Butuan**	**4.51**	**343**	eP	**Pn**	**19 28 09.2**	**+0.4**
BUTP				eS	**Sn**	**19 29 06.8**	**+6.9**
KMSI	**Cibinong**	**5.00**	**216**	P	**Pn**	**19 28 16.0**	**+0.6**
LBMI	**Labuha**	**5.26**	**174**	P	**Pn**	**19 28 18.2**	**-0.8**
	0.2nm677nm43nm,0.6s						
MRSI	**Marisa**	**6.48**	**231**	P	**Pn**	**19 28 35.3**	**-0.3**
	0.3nm1µm70nm,0.6s						
SANI	**Sanana**	**6.70**	**188**	P	**Pn**	**19 28 35.6**	**-3.0**
	0.2nm749nm27nm,1.2s						
SIJI	**Sorong**	**6.96**	**142**	P	**Pn**	**19 28 41.5**	**-0.7**
	2.8nm,0.3s,baz=325,slow=20,SNR=9.5						
SIJI				S	**Sn**	**19 29 58.7**	**-1.3**
	1.4nm,0.3s,baz=127,slow=22,SNR=2.5						
LUWI	**Luwuk**	**7.01**	**217**	P	**Pn**	**19 28 44.3**	**+1.5**
LUWI	**Luwuk**	**7.01**	**217**		**Pn**	**19 28 45.2**	**+2.4**
APSI	**Ampana**	**7.63**	**224**	P	**Pn**	**19 28 53.8**	**+2.4**
NLAI	**Namlea**	**7.82**	**179**	P	**Pn**	**19 28 53.4**	**-0.5**
FAKI	**Fak Fak**	**9.18**	**145**	Pn	**Pn**	**19 29 12.9**	**+0.3**
FAKI				Sn	**Sn**	**19 30 52.6**	**-1.6**
KAPI	**Kappang**	**11.97**	**217**	LR	LR	19 34 33.0	
	comp=Z,89nm,18.9s,baz=55,slow=37						

SOEI	**Soe**	**14.54**	**191**	Pn	**Pn**	**19 30 25.8**	**+1.2**
KSM	**Kuching**	**16.90**	**260**		**P**	**19 30 56.1**	**+0.9**
MTN	**Manton Dam**	**17.85**	**167**	P	**P**	**19 31 03.4**	**-2.2**
JAGI	**Jajag, Banyuwa**	**18.22**	**224**	P	**Pn**	**19 31 10.8**	**+0.3**
YULB	**Yu-li**	**19.44**	**344**	P	**P**	**19 31 21.3**	**-1.6**
YULB				IAmb	IAmb	19 31 24.5	
	comp=Z,12nm,1.2s						
TPUB	**Ta-pu**	**19.54**	**342**	P	**P**	**19 31 22.5**	**-1.5**
TPUB				IAmb	IAmb	19 31 30.7	
	comp=Z,17nm,1.1s						
KNRA	**Kununurra**	**20.25**	**175**	P	Pn	19 31 32.5	-1.9
KNRA				IAmb	IAmb	19 31 35.9	
	comp=Z,7.1nm,0.6s						
FITZ	**Fitzroy Crossi**	**22.62**	**183**	P	**P**	**19 31 57.1**	**0.0**
	comp=Z,5.3nm,0.8s,baz=2.4,slow=5.5,SNR=24						
FITZ	**Fitzroy Crossi**	**22.62**	**183**	P	**P**	**19 31 56.8**	**-0.3**
FITZ				IAmb	IAmb	19 31 59.1	
	comp=Z,11nm,1.2s						
WB0	**Warramunga Arr**	**25.32**	**163**	P	**P**	**19 32 21.7**	**-0.5**
WRAB	**Tennant Creek**	**25.47**	**164**	P	**P**	**19 32 23.1**	**-0.4**
WRAB				IAmb	IAmb	19 32 25.7	
	comp=Z,11nm,1.1s						
WRA	**Warramunga Arr**	**25.48**	**164**	P	**P**	**19 32 23.7**	**+0.1**
	comp=Z,6.2nm,1.0s,baz=341,slow=10,SNR=39						
WRA	**Warramunga Arr**	**25.48**	**164**	P	**P**	**19 32 23.0**	**-0.6**
WB2	**Warramunga Arr**	**25.48**	**164**	P	**P**	**19 32 23.3**	**-0.3**
WB2				IAmb	IAmb	19 32 25.9	
	comp=Z,8.6nm,0.9s						
WR0	**Warramunga Arr**	**25.55**	**163**	P	**P**	**19 32 24.1**	**-0.2**
WR0				IAmb	IAmb	19 32 26.5	
	comp=Z,4.9nm,0.9s						
AS31	**Alice Springs**	**28.93**	**167**	P	**P**	**19 32 54.6**	**0.0**
ASAR	**Alice Springs**	**28.93**	**167**	P	**P**	**19 32 54.5**	**0.0**
	comp=Z,0.6nm,0.5s,baz=349,slow=7.1,SNR=17						
ASAR				PcP	**PcP**	**19 36 02.0**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=347,slow=2.1,SNR=2.1						
EIDS	**Eidsvold**	**37.93**	**143**	P	**P**	**19 34 13.0**	**+0.4**
EIDS				IAmb	IAmb	19 34 14.6	
	comp=Z,1.5nm,0.7s						
BBOO	**Buckleboo**	**38.23**	**168**	P	**P**	**19 34 16.0**	**+1.0**
STKA	**Stephens Creek**	**38.89**	**160**	P	**P**	**19 34 20.5**	**0.0**
	comp=Z,2.6nm,0.4s,baz=342,slow=7.8,SNR=21						
STKA	**Stephens Creek**	**38.89**	**160**	P	**P**	**19 34 21.2**	**+0.6**
ARMA	**Armidale**	**42.10**	**147**	P	**P**	**19 34 48.5**	**+1.3**
ARMA				IAmb	IAmb	19 35 04.3	
	comp=Z,7.3nm,1.4s						
ULN	**Ulaanbaatar**	**46.34**	**342**	P	**P**	**19 35 20.3**	**-0.5**
ULN				IAmb	IAmb	19 35 34.5	
	comp=Z,2.1nm,1.0s						
SONM	**Songino Array**	**46.52**	**341**	P	**P**	**19 35 21.9**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=153,slow=8.2,SNR=4.3						
SONM				PcP	**PcP**	**19 36 54.4**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=157,slow=4.4,SNR=2.1						
SONM	**Songino Array**	**46.52**	**341**	P	**P**	**19 35 22.3**	**0.0**
MKAR	**Makanchi Array**	**56.95**	**325**	P	**P**	**19 36 39.0**	**-0.8**
	comp=Z,1.2nm,0.6s,baz=121,slow=8.5,SNR=16						
ZALV	**Zalesovo Beam**	**59.89**	**333**	P	**P**	**19 36 59.9**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=120,slow=8.5,SNR=3.2						
ZALV	**Zalesovo Beam**	**59.89**	**333**	P	**P**	**19 37 00.5**	**+0.5**
KURK	**Kurchatov**	**61.10**	**327**	P	**P**	**19 37 08.1**	**-0.3**
KKAR	**Karatay Array**	**62.73**	**317**	P	**P**	**19 37 21.2**	**+1.7**
BVAR	**Borovoye Array**	**66.69**	**327**	P	**P**	**19 37 45.0**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=98,slow=9.1,SNR=9.5						
ILAR	**Eielson Array**	**84.21**	**25**	P	**P**	**19 39 23.2**	**-1.8**
	comp=Z,0.4nm,0.6s,baz=246,slow=5.1,SNR=5.4						
ILAR	**Eielson Array**	**84.21**	**25**	P	**P**	**19 39 24.5**	**-0.6**

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*JMA **29** 19:27:31.1±0.3, 35°.20N×142°.05E, h70^{km}±5^{km}, M2.9*
*IDC **29** 19:27:35.2±2.7, 35°.02N×141°.42E, h0^{km}, mb3.3/2,*
mb1 3.3/4, mb1mx3.1/60, mbtmp3.2/4, ML2.4/2, MS1.7/1,
Ms1 1.7/1, ms1mx1.7/23, Error ellipse: s-maj=50.0km
s-min=34.2km az=68.0
ISC 29 19:27:34.9±1.7**, 35°.21N**±0°.06×**141°.9E**±0°.1**, h27^{km}, n10,**
σ2^s.19/13**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.93**	**234**	P	**Pn**	**19 27 50.0**	**-1.6**
BSO1				S	**Sn**	**19 28 04.5**	**+0.8**
CHOJ	**Chosi**	**0.97**	**301**	P	**Pn**	**19 27 51.4**	**-1.3**
CHOJ				S	**Sn**	**19 28 06.0**	**+0.4**
JOD2	**Odawara 2**	**2.29**	**272**	P	**Pn**	**19 28 09.4**	**-1.5**
JMKN	**Mikurajimanish**	**2.30**	**236**	P	**Pn**	**19 28 09.4**	**-1.6**
JFK	**Kawauchi**	**2.30**	**340**	P	**Pn**	**19 28 07.9**	**-3.2**
JAG	**Ashikaga**	**2.32**	**302**	P	**Pn**	**19 28 10.0**	**-1.3**
JHJ	**Hachijo jima 2**	**2.71**	**220**	Pn	**Pn**	**19 28 14.3**	**-2.4**
	5.9nm,0.3s,baz=61,slow=21,SNR=2.0						
JHJ				Sn	**Sn**	**19 28 46.0**	**-2.6**
	32nm,0.3s,baz=240,slow=22,SNR=8.5						
MJAR	**Matsushiro Arr**	**3.27**	**295**	Pn	**Pn**	**19 28 24.2**	**-0.1**
	0.2nm,0.3s,baz=99,slow=14,SNR=11						
MJAR				LR	LR	19 29 14.5	
	comp=Z,15nm,21.1s,baz=90,slow=33						
WRA	**Warramunga Arr**	**55.31**	**189**	P	**P**	**19 37 08.1**	**+1.9**
	0.1nm,0.3s,baz=0.2,slow=7.5,SNR=1.5						
ASAR	**Alice Springs**	**59.04**	**189**	P	**P**	**19 37 35.6**	**+3.2**
	0.2nm,0.5s,baz=356,slow=5.5,SNR=4.8						

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*JMA **29** 19:28:28.2±0.1, 36°.64N×140°.91E, h50^{km}±1^{km}, M3.7*
JMA Felt II J1.
*IDC **29** 19:28:29.8±2.9, 36°.56N×140°.93E, h64^{km}±29^{km}, mb3.3/7,*
mb1 3.6/9, mb1mx3.3/62, mbtmp3.7/9, ML3.2/2, Error
ellipse: s-maj=25.7km s-min=13.0km az=60.0
ISC 29 19:28:27.8±1.1**, 36°.65N**±0°.04×**141°.00E**±0°.08**, h43^{km}**±9^{km}**,**
n23, σ0^s.73/27**, mb3.7**/7**, Near east coast of eastern**
Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.35**	**264**	P	**Pn**	**19 28 37.1**	**+0.3**
JHO				S	**Sn**	**19 28 43.1**	**-0.1**
JHYU	**Hitachinakayam**	**0.45**	**228**	P	**Pn**	**19 28 38.2**	**+0.2**
JHYU				S	**Sn**	**19 28 45.2**	**0.0**
ONAJ	**Iwakimizuishiy**	**0.48**	**340**	P	**Pn**	**19 28 38.8**	**+0.3**
ONAJ				S	**Sn**	**19 28 46.1**	**0.0**
JFFD	**Fukushimafurud**	**0.57**	**322**	P	**Pn**	**19 28 39.8**	**+0.3**
JFFD				S	**Sn**	**19 28 47.4**	**-0.5**
JFK	**Kawauchi**	**0.73**	**352**	P	**Pn**	**19 28 41.7**	**0.0**
JFK				S	**Sn**	**19 28 51.4**	**-0.3**
JYT	**Yasato**	**0.77**	**238**	P	**Pn**	**19 28 41.9**	**-0.3**
JYT				S	**Sn**	**19 28 51.4**	**-1.3**
JFT	**Otama**	**1.02**	**329**	P	**Pn**	**19 28 46.3**	**+0.7**
JFT				S	**Sn**	**19 28 59.1**	**+0.3**
MJAR	**Matsushiro Arr**	**2.25**	**268**	P	**Pn**	**19 29 02.7**	**+0.2**
	4.2nm,0.3s,baz=81,slow=18,SNR=81						
MJAR				S	**Sn**	**19 29 30.2**	**+1.1**
	2.8nm,0.3s,baz=321,slow=32,SNR=6.4						
MAT	**Matsushiro**	**2.25**	**268**	P	**Pn**	**19 29 03.2**	**+0.7**
MAT				S	**Sn**	**19 29 29.5**	**+0.4**
JHJ	**Hachijo jima 2**	**3.66**	**196**	P	**Pn**	**19 29 23.1**	**+1.2**
	9.1nm,0.3s,baz=24,slow=20,SNR=1.3						
JHJ				S	**Sn**	**19 30 03.6**	**-0.1**
	11nm,0.3s,baz=76,slow=23,SNR=1.5						
SONM	**Songino Array**	**27.73**	**305**	P	**P**	**19 34 13.4**	**+1.2**
	0.4nm,0.6s,baz=111,slow=10,SNR=3.2						
H11N2	**WAKE ISLAND Hy**	**28.24**	**120**	T	T	20 04 17.6	
	baz=312,slow=75,SNR=22						
H11N1	**WAKE ISLAND Hy**	**28.25**	**120**	T	T	20 04 16.8	
	baz=312,slow=75,SNR=19						
H11N3	**WAKE ISLAND Hy**	**28.26**	**120**	T	T	20 04 19.1	
	baz=312,slow=75,SNR=20						
H11S1	**WAKE ISLAND Hy**	**28.93**	**122**	T	T	20 05 07.2	
	baz=314,slow=76,SNR=83						
H11S3	**WAKE ISLAND Hy**	**28.93**	**122**	T	T	20 05 08.2	
	baz=314,slow=76,SNR=58						
H11S2	**WAKE ISLAND Hy**	**28.95**	**122**	T	T	20 05 07.5	
	baz=314,slow=76,SNR=59						
ZALV	**Zalesovo Beam**	**41.93**	**313**	P	**P**	**19 36 13.1**	**-0.8**
	0.7nm,0.5s,baz=105,slow=4.9,SNR=4.1						
MKAR	**Makanchi Array**	**44.05**	**302**	P	**P**	**19 36 31.1**	**-0.1**
	0.2nm,0.6s,baz=90,slow=10.0,SNR=2.9						
ILAR	**Eielson Array**	**50.00**	**32**	P	**P**	**19 37 18.4**	**+1.0**
	0.7nm,0.8s,baz=270,slow=6.1,SNR=8.3						
INK	**Inuvik**	**54.88**	**27**	P	**P**	**19 37 54.0**	**+0.6**
	0.9nm,0.5s,baz=246,slow=7.3,SNR=2.4						
WRA	**Warramunga Arr**	**56.63**	**188**	P	**P**	**19 38 05.9**	**-0.6**
	0.6nm,0.6s,baz=3.4,slow=7.4,SNR=7.6						
NOA	**NORSAR Array B**	**74.42**	**337**	P	**P**	**19 39 59.5**	**-1.4**
	0.4nm,0.7s,baz=30,slow=4.2,SNR=3.4						

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*NEIC **29** 19:34:56.6±2.4, 21°.60S±0°.10×177°.77W±0°.10,*
h383^{km}±5^{km}, mb4.6/99, Error ellipse: s-maj=14.3km
s-min=13.2km az=154.0
*IDC **29** 19:34:56.4±1.6, 21°.68S×177°.94W, h373^{km}±15^{km},*
mb4.1/30, mb1 4.2/31, mb1mx4.0/50, mbtmp4.8/31, Error
ellipse: s-maj=11.9km s-min=10.3km az=136.0
ISC 29 19:34:57.9±0.3**, 21°.77S**±0°.06×**177°.75W**±0°.06**, h400^{km},**
n249, σ1^s.46/243**, mb4.5**/85**, 18C-12D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.64**	**315**		**Pn**	**19 36 25.1**	**-1.7**
GLKZ	**Green Lake**	**7.46**	**181**	P	**Pn**	**19 36 43.5**	**-3.1**
GLKZ				S	S	19 38 08.7	-6.9
NIUE	**Niue**	**7.81**	**71**	Pn	**Pn**	**19 36 49.2**	**-1.5**
NIUE				S	**S**	**19 38 19.8**	**-3.3**
AFI	**Afiamalu**	**9.67**	**37**	P	P	19 37 06.3	-5.6
	6.8nm,0.3s,baz=150,slow=6.8,SNR=7.4						
AFI				S	S	19 38 49.0	-13
	7.6nm,0.3s,baz=71,slow=21,SNR=7.6						
AFI	**Afiamalu**	**9.67**	**37**		P	19 37 06.7	-5.3
DZM	**Mont Dzumac**	**14.67**	**266**	P	**P**	**19 38 07.7**	**+0.8**
	1.0nm,0.3s,baz=78,slow=19,SNR=7.3						
DZM	**Mont Dzumac**	**14.67**	**266**	P	**P**	**19 38 08.1**	**+1.1**
OUZ	**Omahuta**	**15.40**	**208**	P	**P**	**19 38 15.9**	**+1.4**
MXZ	**Matakaoa Point**	**16.10**	**191**	P	**P**	**19 38 22.5**	**+0.5**
MXZ				IAmb	IAmb	19 38 24.5	
	comp=Z,33nm,1.1s						
URZ	**Urewera**	**17.02**	**194**	P	**P**	**19 38 30.3**	**-1.5**
	comp=Z,2.2nm,0.3s,baz=97,slow=3.5,SNR=11						
URZ				S	**S**	**19 41 28.3**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=48,slow=23,SNR=5.7						
BKZ	**Black Stump Fm**	**18.03**	**195**	P	**P**	**19 38 42.5**	**-0.1**
TUVZ	**Tukino**	**18.33**	**196**	P	**P**	**19 38 45.7**	**-0.3**
BHHZ	**Black Hill Sta**	**18.44**	**195**	P	**P**	**19 38 46.2**	**-0.8**
KRHZ	**Kereru**	**18.51**	**194**	P	**P**	**19 38 47.3**	**-0.4**
KRHZ				S	**S**	**19 41 50.0**	**-7.1**
PNHZ	**Pukenui**	**18.81**	**195**	P	**P**	**19 38 50.3**	**-0.5**
TSZ	**Takapari Road**	**19.00**	**195**	P	**P**	**19 38 53.0**	**+0.2**
DVHZ	**Dannevirke**	**19.18**	**194**	P	**P**	**19 38 53.9**	**-0.6**
BFZ	**Birch Farm**	**19.53**	**194**	P	**P**	**19 38 56.9**	**-0.9**
BFZ				S	**S**	**19 42 13.3**	**-0.9**
MRZ	**Mangatainoka R**	**19.66**	**195**	P	**P**	**19 38 57.5**	**-1.6**
MRZ				S	**S**	**19 42 13.4**	**-2.9**
HOWZ	**Holdsworth Sta**	**19.90**	**195**	P	**P**	**19 39 01.7**	**+0.4**
HOWZ				S	**S**	**19 42 15.4**	**-4.8**
DUWZ	**D'Urville Isla**	**20.24**	**199**	P	**P**	**19 39 04.0**	**-0.4**
TRWZ	**Traveller**	**20.34**	**194**	P	**P**	**19 39 05.7**	**+0.5**
MSWZ	**Moikau Station**	**20.46**	**195**	P	**P**	**19 39 06.2**	**-0.2**
SNZO	**South Karori**	**20.50**	**196**	P	**P**	**19 39 07.2**	**+0.5**
TCW	**Tory Channel**	**20.52**	**197**	P	**P**	**19 39 06.6**	**-0.3**
PLWZ	**Palliser**	**20.60**	**195**	P	**P**	**19 39 07.2**	**-0.5**
QRZ	**Quartz Range**	**20.71**	**201**	P	**P**	**19 39 09.1**	**+0.5**
NNZ	**Nelson**	**20.79**	**199**	P	**P**	**19 39 09.2**	**-0.1**
THZ	**Tophouse**	**21.43**	**199**	P	**P**	**19 39 16.2**	**+0.9**
THZ				IAmb	IAmb	19 39 21.5	
	comp=Z,13nm,0.7s						
THZ	**Tophouse**	**21.43**	**199**	P	**P**	**19 39 15.5**	**+0.3**
KHZ	**Kahutara**	**21.84**	**198**	P	**P**	**19 39 19.2**	**+0.3**
RPZ	**Rata Peaks**	**23.78**	**200**	P	**P**	**19 39 36.4**	**0.0**
	comp=Z,5.7nm,0.4s,baz=353,slow=2.7,SNR=7.3						
RPZ	**Rata Peaks**	**23.78**	**200**	P	**P**	**19 39 37.4**	**+0.9**
FOZ	**Fox Glacier**	**24.04**	**203**	P	**P**	**19 39 39.9**	**+1.2**
FOZ				IAmb	IAmb	19 39 43.2	
	comp=Z,18nm,1.0s						
ARMA	**Armidale**	**28.75**	**246**	P	**P**	**19 40 22.0**	**+1.2**
ARMA				IAmb	IAmb	19 40 22.5	
	comp=Z,26nm,0.8s						
EIDS	**Eidsvold**	**28.76**	**257**	P	**P**	**19 40 21.1**	**+0.2**
EIDS				IAmb	IAmb	19 40 21.6	
	comp=Z,22nm,0.7s						
CAN	**Canberra**	**32.02**	**238**	P	**P**	**19 40 49.4**	**+0.3**
CAN				IAmb	IAmb	19 40 50.7	
	comp=Z,18nm,0.8s						
CTA	**Charters Tower**	**33.62**	**266**	P	**P**	**19 41 02.6**	**-0.4**
	comp=Z,28nm,0.7s,baz=95,slow=11,SNR=51						
RABL	**Rabaul**	**34.01**	**297**	P	**P**	**19 41 04.9**	**-1.5**
RABL				IAmb	IAmb	19 41 23.0	
	comp=Z,21nm,0.6s						
KRVT	**Keravat (AS076**	**34.06**	**296**	P	**P**	**19 41 05.7**	**-1.2**
	comp=Z,15nm,0.4s,baz=52,slow=0.8,SNR=6.7						
TOO	**Toolangi**	**35.35**	**235**	P	**P**	**19 41 17.8**	**+0.3**
TOO				IAmb	IAmb	19 41 18.9	
	comp=Z,11nm,0.6s						
PMG	**Port Moresby**	**35.87**	**285**	P	**P**	**19 41 21.0**	**-1.1**
	comp=Z,33nm,0.7s,baz=83,slow=5.9,SNR=20						
PMG	**Port Moresby**	**35.87**	**285**	P	**P**	**19 41 21.2**	**-0.9**
TAU	**Tasmania Unive**	**35.90**	**226**	P	**P**	**19 41 21.9**	**-0.1**
PATS	**Pohnpei**	**36.87**	**318**	P	**P**	**19 41 30.5**	**+0.1**
PATS				IAmb	IAmb	19 41 48.7	
	comp=Z,46nm,1.1s						
STKA	**Stephens Creek**	**37.46**	**246**	P	**P**	**19 41 35.3**	**+0.1**
	comp=Z,25nm,0.7s,baz=91,slow=9.6,SNR=70						
STKA	**Stephens Creek**	**37.46**	**246**	P	**P**	**19 41 35.6**	**+0.4**
COEN	**Coen**	**37.91**	**275**	P	**P**	**19 41 39.1**	**0.0**
COEN				IAmb	IAmb	19 41 39.9	
	comp=Z,22nm,0.9s						
BBOO	**Buckleboo**	**42.21**	**245**	P	**P**	**19 42 13.1**	**-0.5**
BBOO				IAmb	IAmb	19 42 13.8	
	comp=Z,31nm,1.1s						
AS31	**Alice Springs**	**44.47**	**258**	P	**P**	**19 42 31.3**	**-0.4**
ASAR	**Alice Springs**	**44.47**	**258**	P	**P**	**19 42 30.8**	**-0.9**
	comp=Z,35nm,0.8s,baz=99,slow=8.1,SNR=423						
ASAR				PcP	**PcP**	**19 44 07.5**	**+0.2**
	comp=Z,3.0nm,0.7s,baz=105,slow=4.0,SNR=5.9						
ASAR				ScP	**ScP**	**19 47 23.8**	**+3.4**
	comp=Z,0.8nm,1.0s,baz=102,slow=4.7,SNR=2.9						
ASAR	**Alice Springs**	**44.47**	**258**	P	**P**	**19 42 30.9**	**-0.8**
WR0	**Warramunga Arr**	**44.48**	**263**	P	**P**	**19 42 30.7**	**-1.1**
WB0	**Warramunga Arr**	**44.66**	**264**	IAmb	IAmb	19 42 32.6	
	comp=Z,31nm,0.7s						
WB2	**Warramunga Arr**	**44.66**	**263**	P	**P**	**19 42 31.9**	**-1.3**
WB2				IAmb	IAmb	19 42 32.8	
	comp=Z,35nm,0.8s						
WRAB	**Tennant Creek**	**44.66**	**263**	P	**P**	**19 42 32.0**	**-1.2**
WRAB				IAmb	IAmb	19 42 32.7	
	comp=Z,30nm,0.8s						
WRA	**Warramunga Arr**	**44.67**	**263**	P	**P**	**19 42 31.6**	**-1.7**
	comp=Z,22nm,0.8s,baz=96,slow=6.0,SNR=116						
WRA	**Warramunga Arr**	**44.67**	**263**	P	**P**	**19 42 32.0**	**-1.3**
JAY	**Jayapura**	**44.68**	**290**	P	**P**	**19 42 32.8**	**-0.6**
	comp=Z,34nm,0.8s						
GENI	**Genyem**	**45.11**	**289**	P	**P**	**19 42 36.0**	**-0.7**
	comp=Z,27nm,0.6s						
FORT	**Forrest**	**49.02**	**248**	P	**P**	**19 43 05.6**	**-0.7**
BAKI	**Biak**	**49.34**	**288**	P	**P**	**19 43 09.0**	**0.0**
	comp=Z,48nm,1.1s						
MTN	**Manton Dam**	**49.42**	**272**	P	**P**	**19 43 08.5**	**-1.0**
MTN				IAmb	IAmb	19 43 08.8	
	comp=Z,22nm,0.7s						
KNRA	**Kununurra**	**50.82**	**267**	P	**P**	**19 43 19.4**	**-0.5**
FITZ	**Fitzroy Crossi**	**53.10**	**263**	P	**P**	**19 43 36.1**	**-0.4**
	comp=Z,17nm,0.9s,baz=73,slow=6.6,SNR=35						
FITZ	**Fitzroy Crossi**	**53.10**	**263**	P	**P**	**19 43 36.4**	**0.0**
FITZ				IAmb	IAmb	19 43 37.2	
	comp=Z,26nm,1.1s						
SIJI	**Sorong**	**53.80**	**286**	P	**P**	**19 43 40.9**	**-0.7**
	comp=Z,52nm,0.8s,baz=87,slow=5.9,SNR=25						
MSAI	**Masohi**	**54.85**	**282**	P	P	19 43 58.7	+10
AAI	**Ambon**	**55.38**	**281**	P	**P**	**19 43 53.4**	**+0.6**
	comp=Z,44nm,1.4s						
VNDA	**Vanda**	**56.67**	**185**	P	**P**	**19 44 03.8**	**+3.1**
	comp=Z,1.9nm,0.7s,baz=1.2,slow=7.3,SNR=11						
VNDA	**Vanda**	**56.67**	**185**	P	**P**	**19 44 03.9**	**+3.2**
SOEI	**Soe**	**56.78**	**272**	P	**P**	**19 44 03.3**	**+0.6**
	comp=Z,1μmcomp=Z,96nm,1.0s						
SOEI	**Soe**	**56.78**	**272**	P	**P**	**19 44 03.6**	**+0.9**
LBMI	**Labuha**	**57.28**	**284**	P	**P**	**19 44 05.5**	**-0.5**
	comp=Z,45nm,0.9s						
PSA00	**Pilbara Seismi**	**57.62**	**258**	P	**P**	**19 44 07.8**	**-0.5**
PSA00				IAmb	IAmb	19 44 08.3	
	comp=Z,31nm,0.8s						
TNTI	**Ternate**	**58.01**	**285**	P	**P**	**19 44 10.2**	**-0.8**
	comp=Z,41nm,1.0s						
TNTI	**Ternate**	**58.01**	**285**	P	**P**	**19 44 10.2**	**-0.8**
NWAO	**Narrogin (SRO)**	**58.02**	**244**	P	**P**	**19 44 10.4**	**-0.4**
	comp=Z,9.8nm,0.8s,baz=134,slow=8.2,SNR=5.8						
NWAO	**Narrogin (SRO)**	**58.02**	**244**	P	**P**	**19 44 10.3**	**-0.5**
NWAO				IAmb	IAmb	19 44 19.3	
	comp=Z,25nm,1.1s						
NWAO	**Narrogin (SRO)**	**58.02**	**244**	IAmb	IAmb	19 44 19.3	
	comp=Z,20nm,1.1s						
MMRI	**Maumere**	**59.04**	**273**	P	**P**	**19 44 17.1**	**-0.9**
	comp=Z,37nm,1.0s						
MMRI	**Maumere**	**59.04**	**273**	P	**P**	**19 44 17.2**	**-0.9**
MMRI				IAmb	IAmb	19 44 18.1	
	comp=Z,41nm,1.1s						
MORW	**Morawa**	**59.57**	**248**	P	**P**	**19 44 21.2**	**-0.2**
MORW				IAmb	IAmb	19 44 22.1	
	comp=Z,20nm,0.9s						
GIRL	**Giralia**	**62.45**	**255**	P	**P**	**19 44 41.3**	**+0.7**
CASY	**Casey**	**62.92**	**206**	P	**P**	**19 44 44.0**	**+1.1**
CASY				IAmb	IAmb	19 44 45.1	
	comp=Z,12nm,0.8s						
PLAI	**Plampang**	**63.12**	**271**	P	**P**	**19 44 44.5**	**-0.6**
	comp=Z,52nm,1.0s						
MPSI	**Mapaga**	**64.59**	**281**	P	**P**	**19 44 53.9**	**-0.6**
	comp=Z,18nm,1.0s						
JAGI	**Jajag, Banyuwa**	**66.61**	**270**	P	**P**	**19 45 06.9**	**-0.5**
	comp=Z,35nm,0.9s						
JAGI	**Jajag, Banyuwa**	**66.61**	**270**	P	**P**	**19 45 06.0**	**-1.4**
GMJI	**Gumukmas**	**67.34**	**270**	P	**P**	**19 45 15.0**	**+3.2**
QSPA	**South Pole Qui**	**68.30**	**180**	P	**P**	**19 45 19.6**	**+2.5**
QSPA				IAmb	IAmb	19 45 20.5	
	comp=Z,11nm,0.9s						
PCJI	**Pacitan**	**69.47**	**269**	P	**P**	**19 45 25.3**	**+0.4**
	comp=Z,71nm,1.0s						
WOJI	**Wonogiri, Jawa**	**69.83**	**269**	P	**P**	**19 45 28.1**	**+1.0**
	comp=Z,28nm,1.3s						
UGM	**Wanagama**	**70.18**	**269**	P	**P**	**19 45 28.9**	**-0.3**
KKM	**Kota Kinabalu**	**70.31**	**285**	P	**P**	**19 45 29.2**	**-0.8**
KKM				IAmb	IAmb	19 45 30.4	
	comp=Z,7.5nm,0.9s						
MJAR	**Matsushiro Arr**	**71.37**	**324**	P	**P**	**19 45 35.8**	**+0.1**
	comp=Z,4.8nm,0.6s,baz=142,slow=6.1,SNR=22						
MJAR	**Matsushiro Arr**	**71.37**	**324**	P	**P**	**19 45 35.4**	**-0.4**
MAT	**Matsushiro**	**71.37**	**324**	P	**P**	**19 45 35.8**	**0.0**
LEM	**Lembang**	**73.25**	**269**	P	**P**	**19 45 47.8**	**+0.3**
	comp=Z,31nm,0.8s,baz=15,slow=3.8,SNR=9.4						
ADK	**Adak**	**73.34**	**1**	P	**P**	**19 45 46.6**	**-0.3**
KSM	**Kuching**	**73.82**	**278**	P	**P**	**19 45 50.8**	**+0.2**
KSM				IAmb	IAmb	19 45 51.5	
	comp=Z,11nm,0.9s						
XMIS	**Christmas Isla**	**73.83**	**265**	P	**P**	**19 45 50.5**	**-0.1**
TPUB	**Ta-pu**	**74.86**	**303**	P	**P**	**19 45 55.9**	**-0.4**
SSLB	**Suanglung**	**74.87**	**304**	P	**P**	**19 45 55.5**	**-0.8**
SSLB				IAmb	IAmb	19 45 56.4	
	comp=Z,7.3nm,0.7s						
ASAJ	**Asahikawa**	**74.95**	**332**	P	**P**	**19 45 57.2**	**+1.0**
	comp=Z,8.5nm,0.9s,baz=240,slow=10,SNR=8.8						
PEA0B	**Petropavlovsk-**	**77.55**	**345**	P	**P**	**19 46 11.0**	**+0.4**
PETK	**Petropavlovsk-**	**77.55**	**345**	P	**P**	**19 46 11.1**	**+0.6**
	comp=Z,7.8nm,0.9s,baz=142,slow=10,SNR=5.0						
PETK	**Petropavlovsk-**	**77.55**	**345**	P	**P**	**19 46 11.4**	**+0.8**
KSRS	**Korea Array**	**77.99**	**319**	P	**P**	**19 46 13.8**	**+0.5**
	comp=Z,2.7nm,0.7s,baz=122,slow=5.5,SNR=9.1						
KSAR	**Wonju Array Be**	**78.01**	**319**	P	**P**	**19 46 13.8**	**+0.5**
PMPB	**Monarch Peak**	**78.87**	**44**	P	**P**	**19 46 19.9**	**+1.8**
PMPB				IAmb	IAmb	19 46 25.9	
	comp=Z,16nm,1.2s						
HOPS	**Hopland Field**	**79.18**	**40**	P	**P**	**19 46 21.4**	**+1.7**
KMRM	**Mail Ridge**	**79.59**	**39**	P	**P**	**19 46 23.8**	**+1.9**
KHMM	**Horse Mountain**	**79.99**	**39**	P	**P**	**19 46 25.9**	**+1.7**
KHMM				IAmb	IAmb	19 46 27.7	
	comp=Z,11nm,0.9s						
USRK	**Ussuriysk Ar.**	**80.14**	**326**	P	**P**	**19 46 25.4**	**+0.7**
	comp=Z,5.5nm,0.7s,baz=102,slow=4.1,SNR=13						
USRK	**Ussuriysk Ar.**	**80.14**	**326**	P	**P**	**19 46 25.5**	**+0.9**
MAW	**Mawson**	**80.45**	**200**	P	**P**	**19 46 27.4**	**+1.5**
	comp=Z,8.0nm,0.7s,baz=130,slow=6.7,SNR=18						
MAW	**Mawson**	**80.45**	**200**	P	**P**	**19 46 27.5**	**+1.6**
YBH	**Yreka Blue Hor**	**81.13**	**38**	P	**P**	**19 46 32.2**	**+2.2**
	comp=Z,6.3nm,0.7s,baz=178,slow=1.2,SNR=15						
YBH	**Yreka Blue Hor**	**81.13**	**38**	IAmb	IAmb	19 46 33.4	
	comp=Z,6.6nm,0.8s						
HUMO	**Hull Mountain**	**81.55**	**38**	P	**P**	**19 46 33.8**	**+1.7**
MDJ	**Mudanjiang**	**81.69**	**325**	P	**P**	**19 46 32.9**	**+0.1**
MDJ				IAmb	IAmb	19 46 36.6	
	comp=Z,9.4nm,1.0s						
NVAR	**Mina Array Bea**	**81.79**	**43**	P	**P**	**19 46 35.4**	**+1.7**
	comp=Z,2.9nm,0.7s,baz=217,slow=9.1,SNR=6.4						
KVN	**Kaiserville**	**82.28**	**43**	P	**P**	**19 46 37.5**	**+1.4**
KVN				IAmb	IAmb	19 46 38.9	
	comp=Z,6.4nm,0.9s						
H04A	**Detroit Lake**	**83.31**	**36**	P	**P**	**19 46 42.7**	**+1.7**
H04A				IAmb	IAmb	19 46 43.5	
	comp=Z,11nm,0.8s						
IPM	**Ipoh**	**83.53**	**277**	P	**P**	**19 46 42.6**	**-0.2**
IPM				IAmb	IAmb	19 46 43.8	
	comp=Z,11nm,0.8s						
TUC	**Tucson**	**83.58**	**52**	P	**P**	**19 46 44.3**	**+1.5**
KLR	**Kul'dur**	**83.74**	**329**	P	**P**	**19 46 44.2**	**+1.2**
	comp=Z,3.9nm,1.1s,baz=232,slow=18						
319A	**Douglas**	**84.22**	**53**	P	**P**	**19 46 48.4**	**+2.4**
319A				IAmb	IAmb	19 46 50.6	
	comp=Z,7.9nm,0.9s						
U15A	**North Rim**	**84.64**	**47**	IAmb	IAmb	19 46 51.8	
	comp=Z,6.7nm,0.8s						
ELK	**Elko**	**85.05**	**43**	P	**P**	**19 46 50.7**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=85,slow=8.1,SNR=4.3						
GAMB	**Gambell**	**85.39**	**3**	IAmb	IAmb	19 46 53.9	
	comp=Z,9.9nm,0.8s						
G08A	**Pilot Rock**	**85.48**	**37**	IAmb	IAmb	19 46 54.8	
	comp=Z,6.0nm,0.9s						
SUA	**Susitna One**	**85.74**	**13**	IAmb	IAmb	19 46 55.9	
	comp=Z,11nm,0.8s						
KNK	**Knik Glacier**	**86.18**	**14**	IAmb	IAmb	19 46 59.1	
	comp=Z,5.8nm,0.8s						
SNAA	**Sanae**	**86.74**	**178**	P	**P**	**19 46 58.3**	**+0.7**
VNA3	**Neumayer Olymp**	**86.86**	**176**	P	**P**	**19 46 59.2**	**+1.2**
ENH	**Enshi**	**86.94**	**304**	P	**P**	**19 46 59.2**	**0.0**
ENH				IAmb	IAmb	19 47 01.8	
	comp=Z,9.0nm,0.8s						
GLB	**Gilahina Butte**	**87.30**	**16**	IAmb	IAmb	19 47 03.1	
	comp=Z,3.6nm,0.6s						
VNA2	**Neumayer--Watz**	**87.31**	**177**	P	**P**	**19 47 01.6**	**+1.5**
	baz=182,slow=4.5						
VNA1	**Neumayer--Stat**	**87.53**	**177**	P	**P**	**19 47 02.6**	**+1.4**
TX32	**Lajitas Array**	**87.54**	**57**	P	**P**	**19 47 04.0**	**+1.9**
TXAR	**Lajitas Array**	**87.54**	**57**	P	**P**	**19 47 03.9**	**+1.8**
	comp=Z,1.7nm,0.8s,baz=215,slow=6.7,SNR=20						
TXAR	**Lajitas Array**	**87.54**	**57**	P	**P**	**19 47 04.5**	**+2.4**
KTH	**Kantishna Hill**	**87.61**	**12**	IAmb	IAmb	19 47 04.1	
	comp=Z,9.1nm,1.0s						
SEY	**Seymchan**	**87.66**	**347**	P	**P**	**19 47 01.5**	**-0.2**
	comp=Z,6.8nm,0.8s,baz=154,slow=4.7,SNR=27						
ANMO	**Albuquerque**	**88.01**	**51**	P	**P**	**19 47 06.2**	**+1.9**
	comp=Z,1.8nm,0.8s,baz=184,slow=3.5,SNR=5.3						
MCK	**McKinley**	**88.16**	**12**	IAmb	IAmb	19 47 07.4	
	comp=Z,8.0nm,0.7s						
NEA	**Nenana**	**88.89**	**12**	IAmb	IAmb	19 47 10.4	
	comp=Z,5.0nm,0.9s						
MLY	**Manley**	**88.99**	**11**	IAmb	IAmb	19 47 09.8	
	comp=Z,5.4nm,0.6s						
BCAR	**Beaver Creek A**	**89.18**	**16**	P	**P**	**19 47 09.2**	**+0.3**
REDW	**Red Top Meadow**	**89.21**	**42**	IAmb	IAmb	19 47 12.6	
	comp=Z,9.5nm,1.1s						
IMAR	**Indian Mountai**	**89.36**	**10**	P	**P**	**19 47 09.4**	**-0.2**
IL31		**89.50**	**13**	IAmb	IAmb	19 47 12.9	
	comp=Z,6.8nm,1.1s						
ILAR	**Eielson Array**	**89.50**	**13**	P	**P**	**19 47 10.1**	**-0.2**
	comp=Z,3.0nm,0.5s,baz=218,slow=4.7,SNR=33						
PDAR	**Pinedale Array**	**89.72**	**43**	P	**P**	**19 47 13.3**	**+1.2**
	comp=Z,2.0nm,0.8s,baz=190,slow=5.4,SNR=9.4						
PDAR	**Pinedale Array**	**89.72**	**43**	P	**P**	**19 47 13.1**	**+1.0**
CMIG	**Matias Romero**	**89.84**	**72**	P	**P**	**19 47 15.0**	**+2.0**
	comp=Z,2.3nm,0.8s,baz=323,slow=3.9,SNR=3.6						
DAWY	**Dawson**	**90.61**	**16**	IAmb	IAmb	19 47 18.9	
	comp=Z,5.0nm,0.7s						
CM31	**Chiang Mai Arr**	**90.76**	**289**	P	**P**	**19 47 18.5**	**+1.3**
CMAR	**Chiang Mai Arr**	**90.76**	**289**	P	**P**	**19 47 18.5**	**+1.3**
	comp=Z,3.0nm,0.8s,baz=132,slow=3.2,SNR=24						
CMAR	**Chiang Mai Arr**	**90.76**	**289**	P	**P**	**19 47 18.3**	**+1.1**
EGAK	**Eagle**	**90.77**	**15**	P	**P**	**19 47 16.7**	**+0.6**
EGAK				IAmb	IAmb	19 47 19.4	
	comp=Z,7.5nm,0.8s						
CHTO	**Chiang Mai**	**90.89**	**290**	P	**P**	**19 47 18.6**	**+0.8**
YKA	**Yellowknife Ar**	**97.56**	**25**	P	Pdif	19 47 47.5	+0.3
	comp=Z,0.5nm,1.0s,baz=237,slow=5.1,SNR=4.1						
ZALV	**Zalesovo Beam**	**111.62**	**321**	PKiKP	**PKiKP**	**19 52 44.0**	**-1.2**
	comp=Z,0.9nm,0.5s,baz=119,slow=1.8,SNR=5.5						
MKAR	**Makanchi Array**	**112.23**	**313**	PKiKP	**PKiKP**	**19 52 46.0**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=90,slow=0.3,SNR=9.7						
KSH	**Kashi**	**115.80**	**304**	PKP	**PKiKP**	**19 53 00.0**	**+6.1**
KSH				PP	PP	19 54 13.5	+9.1
KSH				sPKP		19 54 42.0	
KSH				PKS	**PKSdf**	**19 56 36.5**	**+5.8**
KSH				SKKS		20 00 35.0	
KKAR	**Karatay Array**	**120.21**	**308**		**PKiKP**	**19 53 01.7**	**-0.5**
BOSA	**Boshof**	**125.21**	**205**	PKP	**PKiKP**	**19 53 13.8**	**+1.0**
	comp=Z,2.0nm,0.7s,baz=164,slow=7.4,SNR=2.5						

BOSA	Boshof	125.21	205		PKiKP	19 53 13.5	+0.7
ARCES	ARCESS Array B	130.21	350	PKP	PKiKP	19 53 20.4	-0.9
	comp=Z,3.5nm,0.5s,baz=9.3,slow=1.7,SNR=19						
ARCES	ARCESS Array B	130.21	350		PKiKP	19 53 20.6	-0.7
FINES	FINESS Array B	137.05	343	PKhKP	PKPpre	19 53 23.3	
	comp=Z,0.7nm,0.5s,baz=48,slow=2.8,SNR=4.4						
FINES				PKP	PKiKP	19 53 34.4	-1.0
	comp=Z,2.8nm,0.7s,baz=58,slow=3.4,SNR=9.8						
FINES				SKPbc	SKiKP	19 56 30.8	-1.9
	comp=Z,1.1nm,0.7s,baz=42,slow=4.5,SNR=1.5						
FINES	FINESS Array B	137.05	343		PKiKP	19 53 35.3	-0.1
NB2	NORSAR Subarra	140.26	353	PKP	PKPdf	19 53 32.5	-6.9
	comp=Z,0.3nm,0.4s,baz=17,slow=2.6						
NOA	NORSAR Array B	140.26	353	PKhKP	PKPdf	19 53 32.1	-7.4
	comp=Z,0.6nm,0.7s,baz=21,slow=3.8,SNR=6.9						
NOA				PKP	PKiKP	19 53 41.7	-0.4
	comp=Z,1.0nm,0.5s,baz=14,slow=4.0,SNR=7.9						
NOA				SKPbc	SKiKP	19 56 39.6	+0.2
	comp=Z,0.5nm,0.9s,baz=14,slow=4.3,SNR=3.6						
SUW	Suwalki	144.10	339	*e*PKP	PKPdf	19 53 45.2	-1.2
SUW	Suwalki	144.10	339		PKPdf	19 53 45.1	-1.2
AKASG	Malin Array Be	144.23	330	PKP	PKPdf	19 53 45.0	-1.7
	comp=Z,2.6nm,0.5s,baz=42,slow=4.5,SNR=47						
AKASG	Malin Array Be	144.23	330		PKPdf	19 53 44.9	-1.7
AKBB	Malin Array Si	144.23	330		PKPdf	19 53 45.1	-1.6
MBAR	Mbarara	144.40	235		PKPdf	19 53 48.6	+0.3
SORM	Soroca	146.40	328	⇓P	PKPab	19 53 52.2	-2.2
MILM	Milestii Mici	146.97	326	⇓P	PKPbc	19 53 53.5	-0.6
BR131	Keskin Array S	147.85	311		PKiKP	19 53 56.7	-1.8
BRTR	Keskin Array B	147.85	311	PKPbc	PKiKP	19 53 56.8	-1.8
	comp=Z,2.4nm,0.7s,baz=145,slow=4.7,SNR=12						
BUR08	Bucovina Ar. S	148.26	330		PKiKP	19 53 57.9	-1.1
BURAR	Bucovina Array	148.28	330	⇑P	PKiKP	19 53 58.6	-0.4
BURAR	Bucovina Array	148.28	330		PKiKP	19 53 58.4	-0.7
BIZ	Bicaz	148.33	328	⇓P	PKiKP	19 53 58.6	-0.5
TESR	Tescani	148.36	327	⇓P	PKiKP	19 53 58.0	-1.1
TOPG	Topolog	148.50	323	⇑P	PKiKP	19 53 58.3	-1.2
TRPA	Tarpa	149.08	333	⇓P	PKiKP	19 53 59.8	-0.7
CLL	Collm	149.35	347	⇓*i*PKPbc	PKiKP	19 54 01.4	+0.4
	comp=Z,19nm,1.0s						
CLL				⇑*i*PKPbc(2)		19 54 03.7	
	comp=Z,14nm,0.8s						
CLL				*e*PKPab(2)		19 54 09.0	
CLL	Collm	149.35	347		PKiKP	19 54 01.0	+0.1
UPC	Upice	149.35	343	⇑*e*PKP	PKiKP	19 54 00.9	-0.1
DOPR	Dopca	149.37	327	⇓P	PKiKP	19 54 01.1	-0.1
DPC	Dobruska-Polom	149.40	342	⇑*e*PKP	PKiKP	19 54 01.3	+0.1
MLR	Muntele Rosu	149.41	326	⇑P	PKiKP	19 53 59.8	-1.7
MLR	Muntele Rosu	149.41	326		PKiKP	19 54 01.2	-0.3
BRG	Berggiesshubel	149.54	345	*i* PKP	PKiKP	19 54 01.9	+0.5
	comp=Z,18nm,1.3s						
MORC	Moravsky Berou	149.55	340	⇑P	PKiKP	19 54 01.2	-0.3
MORC	Moravsky Berou	149.55	340	*e*PKP	PKiKP	19 54 00.9	-0.6
MORC	Moravsky Berou	149.55	340		PKiKP	19 54 00.7	-0.8
CJR	Cluj-Napoca	149.69	330	⇓P	PKiKP	19 54 01.4	-0.5
PVCC	Panska Ves	149.71	344	⇑*e*PKP	PKiKP	19 54 01.9	+0.2
VOIR		149.91	327	⇑P	PKiKP	19 54 01.8	-0.6
PRU	Pruhonice	150.21	344	⇑*e*PKP	PKiKP	19 54 02.9	+0.1
PRU				*e*PKPAB	PKPab	19 54 10.3	+0.4
VYHS	Vyhne	150.22	338	*e*PKP	PKiKP	19 54 03.0	+0.1
VRAC	Vranov	150.25	341	⇓P	PKiKP	19 54 02.2	-0.7
VRAC	Vranov	150.25	341	*e*PKP	PKiKP	19 54 02.7	-0.2
JAVC	Velka Javorina	150.31	339	*e*PKP	PKiKP	19 54 04.1	+1.0
NKC	Novy Kostel	150.48	347	⇑*e*PKP	PKiKP	19 54 03.7	+0.3
KRUC	Moravsky	150.53	341	*e*PKP	PKiKP	19 54 03.1	-0.4
LOT	Lotru	150.53	328	⇑P	PKiKP	19 54 03.1	-0.6
HUMR	Humele	150.57	326	⇑P	PKiKP	19 54 02.5	-1.2
DEV	Deva	150.63	330	⇑P	PKiKP	19 54 03.7	0.0
MODS	Modra-Piesok	150.86	339	*e*PKP	PKiKP	19 54 04.0	-0.2
GZR	Gura Zlata	151.05	329	⇓P	PKiKP	19 54 04.2	-0.6
GRF	Grafenberg Arr	151.25	348	*e*PKP	PKiKP	19 54 05.3	+0.3
	baz=18,slow=1.6						
KHC	Kasperske Hory	151.25	344	⇑*e*PKP	PKiKP	19 54 05.2	+0.2
KHC				*e*PKPAB	PKPab	19 54 14.7	+0.4
BZS	Buzias	151.42	331	⇓P	PKiKP	19 54 05.0	-0.4
GEC2	GERESS Array S	151.48	344		PKiKP	19 54 04.9	-0.7
GERES	GERESS Array B	151.48	344	PKPbc	PKiKP	19 54 05.4	-0.2
	comp=Z,4.9nm,0.8s,baz=199,slow=2.4,SNR=3.7						
GERES	GERESS Array B	151.48	344		PKiKP	19 54 05.0	-0.6
PLVB	Pleven	151.53	324	⇑P	PKiKP	19 54 05.8	+0.1
HERR	Herculane	151.60	329	⇑P	PKiKP	19 54 05.6	-0.3
CONA	Conrad Observa	151.70	340	*e*PKiKP	PKiKP	19 54 06.5	+0.4
	comp=Z,7.6nm,0.7s						
WLF	Walferdange	151.99	355		PKiKP	19 54 06.8	+0.3
MDVR	Moldovita	152.01	330	⇑P	PKiKP	19 54 06.5	-0.2
MOA	Molln	152.24	342	*e*PKiKP	PKiKP	19 54 07.2	+0.1
	comp=Z,3.1nm,0.7s						
VTS	Vitosha	152.80	325	⇓P	PKiKP	19 54 08.5	-0.1
SOKA	Soboth	153.07	340	*e*PKiKP	PKiKP	19 54 08.6	-0.3
	comp=Z,4.4nm,1.0s						
KBA	Koelnbreinsper	153.20	343	*e*PKiKP	PKiKP	19 54 08.6	-0.7
	comp=Z,4.8nm,0.9s						
WATA	Walderalm	153.41	346	*e*PKiKP	PKiKP	19 54 09.8	+0.1
	comp=Z,2.2nm,0.6s						
RETA	Reutte	153.44	347	*e*PKiKP	PKiKP	19 54 09.8	+0.2
	comp=Z,2.5nm,1.0s						
WTTA	Wattenberg	153.46	346	*i* PKiKP	PKiKP	19 54 10.1	+0.3
	comp=Z,3.1nm,0.4s,SNR=4.9						
MOTA	Moosalm	153.50	346	*e*PKiKP	PKiKP	19 54 09.7	-0.2
	comp=Z,5.4nm,1.0s						
MYKA	Terra Mystica	153.53	342	*e*PKiKP	PKiKP	19 54 09.3	-0.6
	comp=Z,2.3nm,0.6s						
SQTA	Sankt Quirin	153.60	346	*e*PKiKP	PKiKP	19 54 10.3	+0.3
	comp=Z,3.8nm,0.7s						
VNDS	Vrh nad Dolski	153.69	340	*i* PKPbc	PKiKP	19 54 10.2	0.0
ABTA	Abfaltersbach	153.73	344	*e*PKiKP	PKiKP	19 54 10.0	-0.3
	comp=Z,5.8nm,0.7s,SNR=5.4						
LJU	Ljubljana	153.80	340	*i* PKPbc	PKiKP	19 54 10.5	+0.2
CRNS	Crni Vrh	153.84	341	*i* PKPbc	PKiKP	19 54 10.3	-0.2
FETA	Feichten	153.89	347	*e*PKiKP	PKiKP	19 54 11.2	+0.5
	comp=Z,3.8nm,0.9s						
LIT	Litokhoron	154.90	321		PKPab	19 54 29.8	-0.3
DBIC	Dimbokro	163.49	154	PKP	PKPdf	19 54 15.0	+0.6
	comp=Z,6.4nm,0.9s,baz=115,slow=4.7,SNR=5.2						
DBIC	Dimbokro	163.49	154		PKPdf	19 54 14.7	+0.3

MAN 29 19:43:02.8, 8°.00N×125°.15E, h33^{km}, mb3.5, ML2.1, MS1.5, 3C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGP	Cagayan de Oro	0.63	315	⇑*i*P	Pb	19 43 16.0	+0.5
CGP				*i* S	Sn	19 43 25.5	+1.1
CGP	Cagayan de Oro	0.63	315	⇑*i*P	Pb	19 43 16.0	+0.5
CGP				*i* S	Sn	19 43 25.5	+1.1
CTBH	Cotabato--PC H	1.18	229	⇑*i*P	Pn	19 43 22.8	-0.2
CTBH				*i* S	Sn	19 43 38.1	+0.1

IDC 29 19:45:24.5±53.0**, 15°.55S×172°.80W, h0^{km}, mb4.4**/3**, mb1 4.6**/3**, mb1mx3.6**/49**, mbtmp4.4**/3**, Error ellipse: s-maj=1028.0km s-min=170.3km az=79.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	44.47	240	P	P	19 53 37.6	-0.1
	2.5nm,0.4s,baz=87,slow=6.8,SNR=12						
WRA	Warramunga Arr	50.38	257	P	P	19 54 23.8	-0.2
	0.8nm,0.5s,baz=93,slow=7.1,SNR=30						
ASAR	Alice Springs	50.62	252	P	P	19 54 25.6	-0.1
	12nm,0.5s,baz=89,slow=7.8,SNR=352						

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*LDG **29** 19:46:16.1±0.3, 48°.74N×6°.30E, h2^{km}, Md2.5/1, Ml2.4/9, Error ellipse: s-maj=4.4km s-min=2.7km az=16.0*
*BGR **29** 19:46:29.3±0.9, 48°.70N×6°.45E, h1^{km}, ML1.7/4, Error ellipse: s-maj=12.2km s-min=3.3km az=67.0*
ISC 29 19:46:17.5±1.1**, 48°.68N**±0°.05×**6°.25E**±0°.03**, h0^{km}, n17, σ1^{s}.82**/25**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAGF	Fort de Pagny	0.37	250	*e*Pg	Pg	19 46 23.6	-0.9
	baz=62						
PAGF				*e*Sg	Sg	19 46 29.7	+0.4
	128nm,0.7s,baz=61						
HAU	Haudompre	0.68	174	*e*Pg	Pg	19 46 29.0	-1.5
HAU				*e*Sg	Sg	19 46 37.9	-1.4
HAU				*e*Sn	Sb	19 46 42.1	-0.1
	27nm,0.6s						
CDF	Champ du Feu	0.74	111	*e*Pg	Pg	19 46 30.5	-1.1
CDF				*e*Sg	Sg	19 46 39.4	-1.7
CDF				*e*Sn	Sb	19 46 43.2	-0.7
	16nm,0.6s						
ECH	Echery	0.77	127	*e*Pg	Pn	19 46 40.7	+5.1
ECH				*e*Sg	Sn	19 46 51.2	+3.4
MEZF	Maizieres J’vi	0.81	258	*e*Pn	Pb	19 46 33.6	-0.9
	baz=66						
MEZF				*e*Sn	Sb	19 46 45.2	-0.8
	11nm,0.5s,baz=71						
SFTF	Sexfontaines	0.94	240	*e*Pg	Pg	19 46 35.0	-0.4
SFTF				*e*Sn	Sg	19 46 48.6	+1.1
	20nm,0.6s,baz=66						
HINF	Hinteralfeld	0.96	155	*e*Pg	Pg	19 46 33.9	-1.9
HINF				*e*Sn	Sb	19 46 49.2	-1.0
	12nm,0.3s						
WLF	Walferdange	0.98	356	*e*Sg	Sn	19 47 01.1	+8.0
RIVT	Riveris	1.08	18	*e*Sg	Sn	19 47 01.9	+6.4
BFO	Black Forest	1.43	104	*e*Pg	Pb	19 46 54.2	+9.2
BFO				*e*Sg	Sn	19 47 10.3	+6.1
ABH	Alteburg	1.47	35	*e*Sg	Sn	19 47 13.4	+8.2
BERGE	Lenzkirch (DE)	1.52	121	*e*Sg	Sn	19 47 14.7	+8.1
BAIF	Baives	1.92	317	*e*Sg	Sb	19 47 15.5	-2.2
	6.6nm,0.6s						
CABF	La Chapelle	2.08	183	*e*Pg	Pb	19 46 55.6	-0.5
CABF				*e*Sg	Sg	19 47 24.0	-0.1
	47nm,0.8s						
LOR	Lormes	2.14	229	*e*Pg	Pb	19 46 57.3	+0.2
LOR				*e*Sg	Sb	19 47 23.8	-0.4
	4.5nm,0.4s,baz=48						
SSF	Saint Saulge	2.46	230	*e*Pg	Pg	19 47 03.5	-1.0
SSF				*e*Sg	Sg	19 47 36.2	-0.2
	1.8nm,0.2s						
SMF	Signal de Mont	2.61	219	*e*Pg	Pb	19 47 05.5	+0.4
SMF				*e*Sg	Sg	19 47 40.3	-0.9
	5.8nm,0.5s						

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*CNRM **29** 20:00:27.5±0.7, 36°.53N×6°.81W, h0^{km}, Error ellipse: s-maj=8.9km s-min=5.5km az=52.0*
*MDD **29** 20:00:33.0±0.7, 36°.52N×6°.98W, h46^{km}±26^{km}, mb3.9/5, Error ellipse: s-maj=8.8km s-min=3.9km az=15.0, PRXIMO*
*INMG **29** 20:00:33.0±1.5, 36°.48N×6°.99W, h31^{km}, ML1.8, Error ellipse: s-maj=5.0km s-min=3.0km az=20.0*
*IGIL **29** 20:00:33.9, 36°.48N×6°.99W, h31^{km}, ML1.9*
ISC 29 20:00:30.4±1.2**, 36°.51N**±0°.05×**6°.98W**±0°.03**, h32^{km}**±12^{km}**, n47, σ1^{s}.32**/83**, 2C, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESPR	Espera	0.97	68	P	Pb	20 00 49.7	+1.0
	2.4nm,0.1s,SNR=19						
ESPR				S	Sb	20 01 01.3	+0.1
	11nm,0.3s,SNR=8.6						
PBDV	Barranco-do-Ve	1.06	314	P	Pb	20 00 50.7	+0.5
PBDV				S	Sn	20 01 03.6	+0.9
	9.7nm,0.3s						
PBDV	Barranco-do-Ve	1.06	314	*e*P	Pb	20 00 50.7	+0.5
PBDV				*e*S	Sn	20 01 03.6	+0.9
PBDV				A	A	20 01 05.2	
	9.7nm,0.3s						
PVAQ	Vaqueiros	1.07	327	P	Pb	20 00 51.2	+0.8
PVAQ				S	Sn	20 01 03.5	+0.5
	20nm,0.2s						
PVAQ	Vaqueiros	1.07	327	P	Pb	20 00 50.7	+0.2
PVAQ				S	Sn	20 01 03.8	+0.8
PVAQ	Vaqueiros	1.07	327	*e*P	Pb	20 00 51.2	+0.8
PVAQ				*e*S	Sn	20 01 03.5	+0.5
PVAQ				A	A	20 01 05.1	
	20nm,0.2s						
EGRO	El Granado	1.10	339	⇑P	Pb	20 00 51.5	+0.6
	2.7nm,0.1s,SNR=18						
EGRO				S	Sn	20 01 05.2	+1.4
	7.3nm,0.1s,SNR=22						
EMIN	Mina Concepcio	1.28	11	P	Pb	20 00 53.9	-0.1
	0.2nm,0.0s,SNR=7.9						
EMIN				S	Sn	20 01 08.9	+0.8
	4.6nm,0.1s,SNR=15						
PCVE	Castro Verde	1.41	323	P	Pb	20 00 55.7	-0.4
PCVE				S	Sb	20 01 11.9	-1.8
	7.0nm,0.3s						
PCVE	Castro Verde	1.41	323	*e*P	Pb	20 00 55.7	-0.4
PCVE				*e*S	Sb	20 01 11.9	-1.8
PCVE				A	A	20 01 13.2	
	7.0nm,0.3s						
ECEU	Ceuta	1.43	115	S	Sb	20 01 14.4	+0.1
	5.3nm,0.1s,SNR=7.9						
MORF	Marmelete	1.56	301	*e*S	Sn	20 01 14.9	-0.2
MORF				AML	AML	20 01 16.7	
	comp=N,19nm,0.2s						
MORF	Marmelete	1.56	301	P	Pb	20 00 57.1	-1.6
MORF				S	Sn	20 01 15.2	+0.1
	comp=N,8.6nm,0.1s						
MORF	Marmelete	1.56	301	*e*P	Pb	20 00 57.1	-1.6
MORF				*e*S	Sn	20 01 15.2	+0.1
MORF				A	A	20 01 15.9	
	comp=N,8.6nm,0.1s						
PFVI	Vila Bisbo	1.61	293	P	Pb	20 00 57.9	-1.6
	comp=N,0.3nm,0.1s,SNR=7.9						
PFVI				S	Sn	20 01 16.2	0.0
	comp=N,7.2nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	1.61	293	*e*Sn	Sn	20 01 16.3	0.0
PFVI				A	A	20 01 18.5	
	comp=N,9.1nm,0.7s						
MESJ	Messejana	1.66	324	*e*P	Pb	20 00 59.0	-1.3
MESJ				*e*S	Sn	20 01 17.4	0.0
MESJ				AML	AML	20 01 19.8	
	comp=N,5.8nm,0.0s						
MESJ	Messejana	1.66	324	Pn	Pb	20 00 59.0	-1.3
MESJ				Sn	Sn	20 01 17.8	+0.3
	comp=N,5.3nm,0.3s						
MESJ	Messejana	1.66	324	*e*Pn	Pb	20 00 59.0	-1.3
MESJ				*e*Sn	Sn	20 01 17.8	+0.3
MESJ				A	A	20 01 21.1	
	comp=N,5.3nm,0.3s						
PBEJ	Beja	1.67	335	Sn	Sn	20 01 18.6	+0.7
	comp=N,1.8nm,0.2s						
PBEJ	Beja	1.67	335	*e*Sn	Sn	20 01 18.6	+0.7
PBEJ				A	A	20 01 19.1	
	comp=N,3.5nm,0.2s						
PTEO	Sao Teotonio	1.74	307	Pn	Pb	20 01 00.1	-1.6
PTEO				Sn	Sn	20 01 19.7	+0.2
	comp=N,2.6nm,0.3s						
PTEO	Sao Teotonio	1.74	307	*e*Pn	Pb	20 01 00.1	-1.6
PTEO				*e*Sn	Sn	20 01 19.7	+0.2
PTEO				A	A	20 01 20.8	
	comp=N,5.1nm,0.3s						
EMIJ	Mijas	1.78	87	P	Pn	20 01 00.3	+1.4
	comp=N,0.4nm,0.1s,SNR=7.9						
EMIJ				S	Sn	20 01 21.0	+0.6
	comp=N,0.7nm,0.2s,SNR=4.0						
HORN	Hornachuelos	1.92	45	P	Pn	20 01 01.5	+0.6
HORN				S	Sn	20 01 23.5	-0.3
ECAB	El Cabril	2.00	38	P	Pn	20 01 03.4	+1.4
	comp=N,0.2nm,0.1s,SNR=6.7						
ECAB				S	Sn	20 01 25.8	-0.1
	comp=N,0.9nm,0.2s,SNR=13						
PNCL	Nicolau / Gran	2.02	323	Pn	Pb	20 01 04.4	-2.1
PNCL				Sn	Sn	20 01 26.3	-0.2
	comp=N,4.1nm,0.1s						
PNCL	Nicolau / Gran	2.02	323	*e*Pn	Pb	20 01 04.4	-2.1
PNCL				*e*Sn	Sn	20 01 26.3	-0.2
PNCL				A	A	20 01 28.0	
	comp=N,4.1nm,0.1s						
EBAD	Badajoz	2.25	359	P	Pn	20 01 07.1	+1.8
	comp=N,1.1nm,0.1s,SNR=6.3						
EBAD				S	Sn	20 01 31.0	-0.9
	comp=N,2.2nm,0.1s						
PESTR	Estremoz	2.41	349	*e*Sn	Sn	20 01 36.0	+0.1
EADA	Adamuz	2.53	48	⇑P	Pn	20 01 11.1	+1.8
	comp=N,1.6nm,0.1s,SNR=18						
EADA				S	Sn	20 01 37.8	-1.2
	comp=N,3.5nm,0.1s						
ELGU	Los Guajares,	2.72	81	P	Pn	20 01 13.7	+1.8
	comp=N,0.0nm,0.1s,SNR=7.9						
ELGU				S	Sn	20 01 43.1	-0.6
	comp=N,2.0nm,0.3s,SNR=7.9						
PMTG	Montargil	2.74	339	Pn	Pn	20 01 14.0	+1.9
PMTG				Sn	Sn	20 01 45.0	+0.8
	comp=N,2.2nm,0.6s						
PMTG	Montargil	2.74	339	*e*Pn	Pn	20 01 14.0	+1.9
PMTG				*e*Sn	Sn	20 01 45.0	+0.8
PMTG				A	A	20 02 02.5	
	comp=N,2.2nm,0.6s						
PMRV	Marv??o	2.94	354	Pn	Pn	20 01 16.7	+1.9
PMRV				Sn	Sn	20 01 49.4	+0.4
	comp=N,2.5nm,0.2s						
PMRV	Marv??o	2.94	354	*e*Pn	Pn	20 01 16.7	+1.9
PMRV				*e*Sn	Sn	20 01 49.4	+0.4
PMRV				A	A	20 01 50.6	
	comp=N,2.5nm,0.2s						
EBER	Berja	3.31	82	P	Pn	20 01 21.8	+1.7
	comp=N,0.3nm,0.2s,SNR=7.9						
PSBE	So Bento	3.33	335	*e*Pn	Pn	20 01 22.7	+2.5
PSBE				*e*Sn	Sn	20 01 59.8	+1.1
EQES	Quesada	3.38	66	P	Pn	20 01 22.4	+1.4
	comp=N,0.2nm,0.1s,SNR=7.9						
EQES				S	Sn	20 01 58.7	-1.3
	comp=N,1.0nm,0.4s,SNR=7.9						
PAB	San Pablo	3.68	34	P	Pn	20 01 26.4	+1.4
	comp=N,0.1nm,0.1s,SNR=7.9						
PAB				S	Sn	20 02 05.4	-2.0
	comp=N,0.6nm,0.2s,SNR=7.9						
MD31	MD31	4.07	153	P	Pn	20 01 30.3	-0.2
MDT	Midelt	4.17	151	P	Pn	20 01 31.6	-0.3
MVO	Moncorvo	4.65	360	P	Pn	20 01 40.4	+1.9
	comp=N,0.4nm,0.1s,SNR=7.9						
MVO				S	Sn	20 02 30.1	-1.3
	comp=N,0.4nm,0.1s,SNR=7.9						
GUD	Guadarrama	4.69	27	S	Sn	20 02 30.4	-1.9
	comp=N,0.5nm,0.3s,SNR=7.9						
ECAL	Calabor	5.43	2	P	Pn	20 01 49.2	0.0
	comp=N,0.2nm,0.1s,SNR=7.9						
ECAL				S	Sn	20 02 46.4	-4.2
	comp=N,0.6nm,0.3s,SNR=7.9						
AFON	Font Roja	5.55	65	S	Sn	20 02 50.5	-3.0
	comp=N,1.7nm,0.1s,SNR=7.9						
ETOR	Torete	5.78	40	P	Pn	20 01 56.0	+2.0
	comp=N,1.2nm,0.1s,SNR=7.9						
ETOR				S	Sn	20 02 58.0	-1.2
	comp=N,2.6nm,0.1s,SNR=7.9						

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*IDC **29** 20:31:25.2±0.9, 0°.42S×132°.99E, h0^{km}, mb3.6/8, mb1 3.8/9, mb1mx3.6/37, mbtmp3.6/9, ML3.9/1, MS2.8/1, Ms1 2.8/1, ms1mx2.3/30, Error ellipse: s-maj=18.0km s-min=15.1km az=162.0*
*DJA **29** 20:31:28.5±0.7, 0°S±6°×13°3E±°, h10^{km}, M4.1/8, mB4.8/5, mb4.3/6, MLv4.0/8, Mw(mB)4.1/5*
ISC 29 20:31:30.4±0.8**, 0°.34S**±0°.08×**132°.87E**±0°.07**, h32^{km}, n19, σ1^{s}.39**/17**, mb3.5**/8**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	1.69	252	Pg	Pn	20 31 56.8	-0.9
	34nm,0.3s,baz=31,slow=16,SNR=90						
SIJI				Lg	Lg	20 32 22.5	
	55nm,0.3s,baz=108,slow=24,SNR=19						
RKPI	Ransiki, Papua	1.75	132	P	Pn	20 31 59.5	+1.0
RKPI				S	Sb	20 32 23.5	0.0
FAKI	Fak Fak	2.63	194	P	Pn	20 32 10.7	0.0
FAKI				S	Sn	20 32 43.7	+2.1
MSAI	Masohi	4.94	233	P	Pn	20 32 44.0	+1.5
LBMI	Labuha	5.38	267	P	Pn	20 32 49.0	+0.5
	0.1nm582nm21nm,0.9s						
AAI	Ambon	5.73	235	P	Pn	20 32 55.0	+1.6
	0.2nm767nm42nm,0.6s						
GUMO	Guam	18.25	40	LR	LR	20 41 43.3	
	comp=Z,29nm,19.1s,baz=187,slow=34						
WRA	Warramunga Arr	19.53	176	P	P	20 35 54.1	-1.3
	0.4nm,0.3s,baz=353,slow=12,SNR=14						
ASAR	Alice Springs	23.21	178	P	P	20 36 33.4	-1.5
	1.5nm,0.6s,baz=357,slow=10,SNR=19						
STKA	Stephens Creek	32.43	166	P	P	20 37 55.5	-2.2
	1.4nm,0.5s,baz=350,slow=12,SNR=4.7						
CMAR	Chiang Mai Arr	38.21	301	P	P	20 38 47.0	-0.6
	0.5nm,0.8s,baz=117,slow=7.1,SNR=5.9						
H11N1	WAKE ISLAND Hy	38.84	57	T	T	21 20 10.1	
	baz=243,slow=75,SNR=26						
H11N2	WAKE ISLAND Hy	38.86	57	T	T	21 20 10.8	
	baz=243,slow=75,SNR=22						
H11N3	WAKE ISLAND Hy	38.86	57	T	T	21 20 09.5	
	baz=243,slow=75,SNR=19						
SONM	Songino Array	53.22	338	P	P	20 40 46.7	+0.8
	0.4nm,1.0s,baz=156,slow=7.3,SNR=2.6						
MKAR	Makanchi Array	64.41	324	P	P	20 42 03.4	-0.2
	0.2nm,0.6s,baz=124,slow=6.8,SNR=4.5						
KURBB	Kurchatov Arra	68.48	326	P	P	20 42 31.8	+2.4
	0.5nm,0.9s,baz=124,slow=5.7,SNR=2.6						
BVAR	Borovoye Array	74.08	326	P	P	20 43 03.9	+0.6
	0.9nm,1.0s,baz=144,slow=10,SNR=2.6						
ILAR	Eielson Array	86.14	25	P	P	20 44 08.7	+0.6
	0.2nm,0.7s,baz=251,slow=5.6,SNR=2.6						

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*IDC **29** 20:31:36.8±1.4, 8°.99S×123°.72E, h0^{km}, mb3.9/2, mb1 3.8/5, mb1mx3.5/39, mbtmp3.7/5, ML3.5/3, Error ellipse: s-maj=119.2km s-min=24.3km az=64.0*
*DJA **29** 20:31:46.8±0.5, 9°S±7°×12°4E±°, h91^{km}±7^{km}, M3.7/7, mb4.0/4, MLv3.5/7*
ISC 29 20:31:46.7±0.9**, 9°.58S**±0°.09×**123°.58E**±0°.09**, h100^{km}, n10, σ2^{s}.43**/14**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.70	104	P	Pn	20 32 05.9	+1.6
SOEI				S	Sn	20 32 17.9	+0.4
MMRI	Maumere	1.62	305	P	Pn	20 32 13.5	-1.0
MMRI				S	Sn	20 32 34.3	-1.3
BASI	Baing, Sumba	3.02	258	P	Pn	20 32 34.5	+1.7
WBSI	Waikabubak, Su	4.13	269	P	Pn	20 32 48.9	+1.2
PLAI	Plampang	5.77	277	P	Pn	20 33 10.5	+0.5
	0.1nm13nm,0.8s						
FITZ	Fitzroy Crossi	8.70	167	Pn	Pn	20 33 51.3	+1.5
	0.3nm,0.3s,baz=355,slow=11,SNR=22						
FITZ				Sn	Sn	20 35 24.0	-2.2
	1.6nm,0.3s,baz=132,slow=6.6,SNR=19						
WRA	Warramunga Arr	14.64	136	Pn	Pn	20 35 08.6	-0.3
	0.2nm,0.3s,baz=314,slow=14,SNR=16						
WRA				Sn	Sn	20 37 41.0	-9.4
	0.3nm,0.3s,baz=320,slow=24,SNR=1.9						
ASAR	Alice Springs	17.14	146	P	P	20 35 43.8	+3.5
	0.2nm,0.3s,baz=320,slow=12,SNR=22						
ASAR				S	Sn	20 38 44.8	-5.9
	0.3nm,0.3s,baz=317,slow=22,SNR=5.6						
MKAR	Makanchi Array	67.10	331	P	P	20 42 29.3	-0.2
	0.5nm,0.5s,baz=135,slow=7.5,SNR=8.6						
ZALV	Zalesovo Beam	71.26	337	P	P	20 42 55.0	0.0
	0.7nm,0.4s,baz=139,slow=7.1,SNR=3.1						

JMA 29 20:34:48.1±0.4**, 31°.65N×141°.25E, h0^{km}, M3.5, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.50	303	S	Sb	20 35 36.5	0.0
JHCJ	Hachijojimakas	1.88	319	*e*S	Sb	20 35 47.1	-0.2
JHJ2	Mitsune	1.90	321	S	Sb	20 35 47.2	-0.6
JMKN	Mikurajimanish	2.64	328	*e*S	Sn	20 36 05.9	+1.3
BSO1	Boso 1	3.00	356	P	Pn	20 35 38.6	+2.1
BSO1				*e*S	Sn	20 36 13.9	+1.0
BSO3	Boso 3	3.20	349	P	Pn	20 35 41.5	+2.0
TK02	Tokai 2	3.73	309	P	Pn	20 35 48.8	+2.1
JHU	Hanno	4.50	339	P	Pn	20 36 00.0	+2.5
JHU				*e*S	Sn	20 36 53.1	+2.5
JRY	Ryogami san	4.77	336	P	Pn	20 36 03.4	+2.1
JRY				S	Sn	20 36 58.7	+1.3
JFK	Kawauchi	5.71	357	*e*S	Sn	20 37 19.0	-1.5

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*IDC **29** 20:42:39.5±1.1, 19°.67S×70°.40W, h0^{km}, mb3.7/3, mb1 4.0/6, mb1mx3.8/22, mbtmp3.8/6, ML4.0/3, MS2.9/3, Ms1 2.9/3, ms1mx2.6/27, Error ellipse: s-maj=35.2km s-min=16.8km az=75.0*
*NEIC **29** 20:42:40.6±2.0, 19°.76S±0°.03×70°.47W±0°.03, h13^{km}±3^{km}, mb4.0/3, Error ellipse: s-maj=5.0km s-min=2.1km az=140.0*
*GUC **29** 20:42:41.9±0.8, 19°.78S×70°.41W, h35^{km}±3^{km}, ML4.1*
ISC 29 20:42:40.0±1.3**, 19°.77S**±0°.02×**70°.45W**±0°.04**, h8^{km}**±9^{km}**, n59, σ1^{s}.12**/69**, 6C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.35	61	⇑*i*P	Pb	20 42 48.9	+0.3
PSGC				*e*S	Sb	20 42 54.1	-0.2
PSGCX	Pisagua	0.35	61	Pg	Pb	20 42 48.0	-0.5
PSGCX				Sg	Sb	20 42 53.9	-0.4
PB11	IPOC Station P	0.75	90	⇑*i*P	Pb	20 42 55.5	+0.1
PB11				*e*S	Sb	20 43 05.5	-0.3
PB11				IAML		20 43 05.8	

	comp=N,20µm,0.2s						
PB11	IPOC Station P	0.75	90	Pg	Pb	20 42 54.9	-0.5
PB11				Sg	Sb	20 43 05.3	-0.5
TA01	Diego Aracena	0.83	163	⇓eP	Pg	20 42 56.4	+0.3
TA01				eS	Sg	20 43 07.2	+0.3
MNMC	Minye Minye	1.02	52	⇑iP	Pn	20 43 00.6	-0.3
MNMC				eS	Sn	20 43 14.0	-1.6
MNMC				IAML		20 43 15.7	
	comp=E,13µm,0.4s						
MNMC	Minye Minye	1.02	52		Pb	20 42 60.0	-0.2
MNMC				Sg	Sn	20 43 14.3	-1.3
PATCX	Punta Patache	1.08	165	⇓eP	Pb	20 43 00.7	-0.4
PATCX				eS	Sb	20 43 14.8	-0.7
PATCX				IAML		20 43 20.3	
	comp=E,7µm,0.3s						
PATCX	Punta Patache	1.08	165		Pb	20 43 00.4	-0.8
PB12	IPOC Station P	1.15	6	⇓eP	Pb	20 43 02.0	-0.2
PB12				eS	Sg	20 43 17.4	+0.2
PB12	IPOC Station P	1.15	6		Pb	20 43 01.9	-0.4
PB12				Sg	Sb	20 43 17.0	-0.4
GO01	Chusmiza	1.19	86	⇑iP	Pn	20 43 03.1	-0.3
GO01				eS	Sn	20 43 18.7	-1.2
GO01	Chusmiza	1.19	86		Pn	20 43 02.9	-0.5
PB08	IPOC Station P	1.27	107	⇓eP	Pb	20 43 04.2	-0.3
PB08				eS	Sg	20 43 20.7	-0.4
PB08				IAML		20 43 22.0	
	comp=N,6µm,0.3s						
PB01	IPOC Station P	1.56	145	⇓eP	Pn	20 43 08.2	+0.1
PB01				eS	Sn	20 43 27.8	-0.8
PB01				IAML		20 43 29.3	
	comp=N,6µm,0.3s						
PB01	IPOC Station P	1.56	145		Pn	20 43 08.2	+0.1
PB01				Sn	Sn	20 43 27.6	-1.0
PB02	IPOC Station P	1.63	162	eP	Pn	20 43 09.1	0.0
PB02				eS	Sn	20 43 30.1	-0.3
PB02				IAML		20 43 30.9	
	comp=E,10µm,0.6s						
PB16	IPOC Station P	1.68	32	⇑iP	Pb	20 43 11.5	0.0
PB16				eS	Sg	20 43 33.8	-0.3
PB16				IAML		20 43 34.9	
	comp=N,3µm,0.2s						
PB16	IPOC Station P	1.68	32		Pb	20 43 11.6	0.0
PB07	IPOC Station P	2.02	165	eP	Pn	20 43 15.4	+0.8
PB07				eS	Sn	20 43 40.1	0.0
PB07				IAML		20 43 43.9	
	comp=E,2µm,0.5s						
PB07	IPOC Station P	2.02	165		Pn	20 43 15.4	+0.8
PB09	IPOC Station P	2.31	151	⇑iP	Pb	20 43 20.6	-1.5
PB09				eS	Sn	20 43 47.7	+0.3
PB09				IAML		20 43 55.5	
	comp=N,2µm,0.6s						
PB09	IPOC Station P	2.31	151		Pb	20 43 20.7	-1.5
PB04	IPOC Station P	2.57	174		Pn	20 43 22.4	+0.2
LVC	Limon Verde	3.17	153	Pn	Pn	20 43 33.2	+2.6
	comp=N,15nm,0.3s,baz=330,slow=11,SNR=52						
LVC				Sn	Sb	20 44 13.6	-2.3
	comp=N,53nm,0.3s,baz=218,slow=22,SNR=7.2						
LVC				Lg	Lg	20 44 20.6	
	comp=N,111nm,0.3s,baz=169,slow=16,SNR=5.9						
LVC				LR	LR	20 44 55.4	
	comp=N,170nm,19.4s,baz=328,slow=42						
LVC	Limon Verde	3.17	153		Pn	20 43 32.9	+2.3
PB15	IPOC Station P	3.54	165		Pn	20 43 36.7	+1.1
PB10	IPOC Station P	3.73	182		Pn	20 43 37.8	-0.2
LPAZ	La Paz	4.10	33	Pn	Pb	20 43 48.7	-4.2
	comp=N,1.7nm,0.3s,baz=278,slow=2.8,SNR=14						
LPAZ	La Paz	4.10	33		Pn	20 43 47.4	+3.8
PB14	IPOC Station P	4.84	180		Pn	20 43 52.5	-1.0
GO02	Mina Guanaco	5.43	172		Pn	20 44 01.5	-0.1
SIV	San Ignacio	9.68	69	Pn	Pn	20 44 59.7	-0.1
	comp=N,0.9nm,0.3s,baz=265,slow=11,SNR=13						
NNA	Nana	9.88	321	LR	LR	20 49 08.6	
	comp=N,68nm,18.6s,baz=137,slow=40						
GO04	Tololo Observa	10.37	182	Pn	Pn	20 45 09.8	+0.6
SAML	Samuel	12.85	34	Pn	Pn	20 45 43.9	+0.9
CPUP	Villa Florida	13.72	121	Pn	Pn	20 45 56.8	+1.8
	comp=N,0.3nm,0.3s,baz=80,slow=2.7,SNR=4.7						
CPUP	Villa Florida	13.72	121	Pn	Pn	20 45 55.6	+0.6
ATAH	Atahualpa	14.74	327	LR	LR	20 52 17.3	
	comp=N,64nm,21.7s,baz=57,slow=39						
GO06	Curarrehue	19.77	182	P	P	20 47 09.2	-1.5
GO06				IAmb	IAmb	20 47 23.0	
	comp=Z,13nm,1.5s						
PLCA	Paso Flores	20.90	180	P	Pn	20 47 24.6	-0.8
	comp=Z,2.8nm,0.6s,baz=279,slow=10.0,SNR=7.7						
PLCA	Paso Flores	20.90	180	P	P	20 47 23.3	+0.4
PLCA				IAmb	IAmb	20 47 28.6	
	comp=Z,15nm,1.4s						
PTGA	Pitinga	21.52	30	P	P	20 47 28.3	-1.4
	comp=Z,1.4nm,0.3s,baz=214,slow=16,SNR=4.5						
PTGA	Pitinga	21.52	30	P	P	20 47 28.9	-0.9
PTGA				IAmb	IAmb	20 47 43.1	
	comp=Z,3.4nm,1.1s						
SNAA	Sanae	64.38	161	P	P	20 53 16.6	+0.4
QSPA	South Pole Qui	70.42	180	P	P	20 53 55.5	+0.9
YKA	Yellowknife Ar	89.08	341	P	P	20 55 35.7	+0.4
	comp=Z,0.2nm,0.8s,baz=132,slow=5.4,SNR=4.4						
H11S2	WAKE ISLAND Hy	126.21	279	T	T	23 20 54.9	
	baz=101,slow=74,SNR=268						
H11S1	WAKE ISLAND Hy	126.22	279	T	T	23 20 53.9	
	baz=101,slow=74,SNR=191						
H11S3	WAKE ISLAND Hy	126.23	279	T	T	23 21 00.9	
	baz=101,slow=74,SNR=157						
H11N3	WAKE ISLAND Hy	126.25	280	T	T	23 21 01.5	
	baz=101,slow=74,SNR=48						
H11N2	WAKE ISLAND Hy	126.27	280	T	T	23 20 59.5	
	baz=101,slow=74,SNR=70						
H11N1	WAKE ISLAND Hy	126.27	280	T	T	23 20 55.8	
	baz=101,slow=74,SNR=34						
ASAR	Alice Springs	130.73	210	PKP	PKiKP	21 01 53.0	-0.5
	comp=Z,0.5nm,1.0s,baz=118,slow=1.6,SNR=1.7						
WRA	Warramunga Arr	133.66	213	PKP	PKiKP	21 01 58.8	-0.7
	comp=Z,0.2nm,0.4s,baz=154,slow=1.9,SNR=1.5						
MKAR	Makanchi Array	145.03	33	PKP	PKPdf	21 02 18.0	0.0
	comp=Z,1.7nm,0.8s,baz=326,slow=3.9,SNR=12						
MKAR	Makanchi Array	145.03	33		PKPdf	21 02 17.7	-0.3
SONM	Songino Array	151.88	5	PKPbc	PKiKP	21 02 36.8	+0.7
	comp=Z,0.2nm,0.5s,baz=359,slow=0.9,SNR=2.1						
SONM	Songino Array	151.88	5		PKiKP	21 02 36.6	+0.6

IDC ***29*** *20:47:03.6±0.6, 0°.36S×133°.00E, h0*^{km}*, mb4.3/14, mb1 4.5/17, mb1mx4.3/34, mbtmp4.3/17, ML4.5/2, MS4.1/30, Ms1 4.1/30, ms1mx4.0/44, Error ellipse: s-maj=13.8km s-min=12.5km az=76.0*

DJA ***29*** *20:47:06.5±0.8, 0°S±2°×13°3E±°, h12*^{km}*±6*^{km}*, M4.8/32, mb4.8/32, mB5.3/19, MLv5.1/13, Mw(mB)4.7/19, Mwp5.1/5*

GCMT ***29*** *20:47:08.1±0.2, 0°.34S±0°.01×133°.04E±0°.01, h14*^{km}*, MW5.1/118, Moment Tensor Solution. s80,c102; s118,c176; Duration: 0 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*3.52±.11;* $M_{\theta\theta}$*-2.59±.07;* $M_{\phi\phi}$*-0.93±.08;* $M_{r\theta}$*-2.43±.20;* $M_{\theta\phi}$*1.54±.05;* $M_{\phi r}$*2.67±.24; Best double couple:* M_0*5.03700×10*^{16} *NP1:*ϕ_s*110.00000°, δ23.00000°, λ69.00000°. NP2:*ϕ_s*313.00000°, δ68.00000°, λ99.00000°. Principal axes: T 5.1170, Plg66.0000°, Azm238.0000°; N -0.1630, Plg8.0000°, Azm129.0000°; P -4.9560, Plg23.0000°, Azm36.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***29*** *20:47:10.1±1.1, 0°.48S±0°.07×132°.83E±0°.08, h49*^{km}*±5*^{km}*, mb4.7/74 Error ellipse: s-maj=12.1km s-min=8.6km az=52.0*

ISC 29 20:47:08.4±0.3**, 0°.46S**±0°.04×**132°.96E**±0°.04**, h32**^{km}**, n192, σ1**^{s}**.69**/174**, mb4.7**/48**, MS4.1**/24**, 1C-1D, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKPI	Ransiki, Papua	1.60	131	P	Pn	20 47 36.0	+1.5
RKPI				S	Sb	20 47 57.4	+0.2
SIJI	Sorong	1.75	257	Pg	Pn	20 47 35.6	-0.9
	209nm,0.3s,baz=45,slow=15,SNR=171						
SIJI				Lg	Lg	20 48 02.7	
	433nm,0.3s,baz=224,slow=23,SNR=7.4						
SIJI				LR	LR	20 48 04.3	
	comp=Z,5µm,21.5s,baz=318,slow=34						
FAKI	Fak Fak	2.54	196	P	Pn	20 47 50.1	+2.6
FAKI				S	Sb	20 48 22.3	-2.0
FAKI	Fak Fak	2.54	196		Pn	20 47 49.3	+1.9
BAKI	Biak	3.23	103	P	Pn	20 47 56.7	-0.1
MSAI	Masohi	4.95	235	P	Pn	20 48 22.1	+1.6
	0.8nm3µm216nm,0.6s						
MSAI				S	Sn	20 49 21.3	+4.6
	0.8nm3µm216nm,0.6s						
BNDI	Bandanaira	5.06	217	P	Pn	20 48 23.8	+1.7
	9.6nm8µm17µm1µm,1.1s						
LBMI	Labuha	5.46	268	P	Pn	20 48 27.8	+0.1
	1.3nm3µm170nm,0.8s						
TNTI	Ternate	5.73	282	P	Pn	20 48 31.4	+0.1
	0.2nm2µm850nm38nm,1.0s						
TNTI	Ternate	5.73	282		Pn	20 48 32.0	+0.8
AAI	Ambon	5.74	236	P	Pn	20 48 33.1	+1.6
	2.1nm5µm6µm390nm,0.6s						
NLAI	Namlea	6.48	245	P	Pn	20 48 43.2	+1.6
	0.7nm2µm132nm,0.6s						
SANI	Sanana	7.15	257	P	Pn	20 48 51.7	+0.9
	0.2nm3µm871nm38nm,0.8s						
SAUI	Saumlaki	7.65	192	P	Pn	20 49 00.2	+2.5
	3.7nm6µm5µm325nm,1.1s						
SAUI	Saumlaki	7.65	192		Pn	20 48 59.3	+1.6
SAUI				Sn	Sn	20 50 25.3	+1.9
KMSI	Cibinong	9.04	277	P	Pn	20 49 28.6	+12
LUWI	Luwuk	10.21	267	P	Pn	20 49 31.9	-0.9
	1µm104nm,0.8s						
LUWI	Luwuk	10.21	267		Pn	20 49 31.9	-0.9
DAV	Davao City (W)	10.50	316	LR	LR	20 52 50.8	
	comp=Z,414nm,20.5s,baz=143,slow=33						
DAV	Davao City (W)	10.50	316	⇑eP	Pn	20 49 38.7	+1.9
MRSI	Marisa	11.06	275	P	Pn	20 49 53.8	+9.3
APSI	Ampana	11.32	268	P	Pn	20 49 52.6	+4.5
BBSI	Bau Bau	11.52	244	P	Pn	20 49 55.6	+4.9
MTN	Manton Dam	12.44	188		Pn	20 50 02.4	-0.9
MTN				Sn	Sn	20 52 18.7	-2.1
SOEI	Soe	12.65	223	P	Pn	20 50 09.9	+3.5
	3µm193nm,1.4s						
SOEI	Soe	12.65	223		Pn	20 50 07.4	+1.0
MPSI	Mapaga	13.09	273	P	P	20 50 18.8	-3.3
MMRI	Maumere	13.42	232	P	P	20 50 24.9	-0.8
MMRI	Maumere	13.42	232		Pn	20 50 17.2	+0.4
SPSI	Sidrap Palu	13.63	255	P	Pn	20 50 22.3	+2.6
	1µm33nm,1.0s						
BKSI	Bulukumba	13.70	249	P	P	20 50 30.1	+1.3
KAPI	Kappang	13.95	251	Pn	Pn	20 50 22.6	-1.4
	baz=182,slow=16,SNR=0.8						
KAPI				LR	LR	20 56 00.2	
	comp=Z,560nm,20.7s,baz=74,slow=38						
KAPI	Kappang	13.95	251		Pn	20 50 25.8	+1.8
KNRA	Kununurra	15.68	195		Pn	20 50 45.5	-1.6
PMG	Port Moresby	16.69	123	Pn	P	20 51 02.8	+0.7
	0.4nm,0.3s,baz=302,slow=6.6,SNR=4.2						
PMG				LR	LR	20 58 31.1	
	comp=Z,1µm,19.9s,baz=290,slow=41						
PMG	Port Moresby	16.69	123		Pn	20 51 00.8	+0.8
COEN	Coen	16.79	143	Pn	Pn	20 51 01.0	-0.3
PLAI	Plampang	17.26	241	P	P	20 51 14.7	+6.3
KKM	Kota Kinabalu	17.93	291		Pn	20 51 15.2	-0.3
GUMO	Guam	18.28	40	LR	LR	20 57 39.4	
	comp=Z,690nm,18.0s,baz=222,slow=35						
PGP	Puerto Galera	18.28	320	⇓eP	Pn	20 51 20.6	+0.8
TGY	Tagaytay City	18.74	321	LR	LR	21 00 58.4	
	comp=Z,198nm,18.4s,baz=131,slow=45						
FITZ	Fitzroy Crossi	18.95	202	P	P	20 51 25.9	-1.1
	0.8nm,0.3s,baz=32,slow=12,SNR=28						
FITZ				LR	LR	21 00 45.7	
	comp=Z,590nm,18.9s,baz=25,slow=43						
FITZ	Fitzroy Crossi	18.95	202	P	P	20 51 25.8	-1.1
WB0	Warramunga Arr	19.24	176	P	P	20 51 30.4	+0.2
WB0				IAmb	IAmb	20 51 37.9	
	comp=Z,74nm,1.1s						
SRBI	Singaraja	19.24	246	P	Pn	20 51 35.6	+4.2
WRAB	Tennant Creek	19.40	176	P	P	20 51 32.1	+0.1
WRA	Warramunga Arr	19.41	176	P	P	20 51 33.0	+0.9
	comp=Z,2.1nm,0.3s,baz=353,slow=11,SNR=56						
WRA				S	S	20 55 03.4	-6.5
	comp=Z,1.4nm,0.3s,baz=354,slow=22,SNR=5.5						
WRA				LR	LR	21 00 39.0	
	comp=Z,622nm,19.4s,baz=0.0,slow=42						
WRA	Warramunga Arr	19.41	176	P	P	20 51 31.6	-0.5
WB2	Warramunga Arr	19.41	176	P	P	20 51 31.8	-0.3
KRVT	Keravat (AS076	19.42	102	P	Pn	20 51 35.0	+1.4
	comp=Z,3.0nm,0.3s,baz=198,slow=13,SNR=6.7						
KRVT				LR	LR	20 58 04.8	
	comp=Z,1µm,18.9s,baz=261,slow=34						
WR0	Warramunga Arr	19.44	176	P	P	20 51 32.5	+0.1
WR0				IAmb	IAmb	20 51 47.0	
	comp=Z,73nm,1.1s						
RABL	Rabaul	19.54	101	P	Pn	20 51 34.7	-0.2
JAGI	Jajag, Banyuwa	20.36	246	P	Pn	20 51 51.5	+6.9
JAGI	Jajag, Banyuwa	20.36	246	P	P	20 51 41.6	-0.8
JAGI				IAmb	IAmb	20 51 57.9	
	comp=Z,50nm,1.2s						
SBUM	Sibu	20.94	278	P	P	20 51 47.6	-1.2
KSM	Kuching	22.73	275	P	P	20 52 07.2	-0.8
KSM				IAmb	IAmb	20 52 10.7	
	comp=Z,48nm,1.5s						
AS31	Alice Springs	23.09	178	P	P	20 52 11.4	-0.1
ASAR	Alice Springs	23.09	178	P	P	20 52 12.1	+0.5
	comp=Z,77nm,1.1s,baz=1.9,slow=6.6,SNR=87						
ASAR				S	S	20 56 25.1	+4.4
	comp=Z,20nm,1.0s,baz=0.0,slow=19,SNR=6.4						
ASAR				LR	LR	21 02 47.5	
	comp=Z,1µm,19.4s,baz=346,slow=41						
ASAR	Alice Springs	23.09	178	P	P	20 52 11.2	-0.4
SMRI	Semarang	23.40	253	P	P	20 52 14.0	-0.7
SMRI				IAmb	IAmb	20 52 31.8	
	comp=Z,51nm,1.1s						
CTA	Charters Tower	23.45	147	P	P	20 52 16.8	+1.7
	comp=Z,24nm,1.0s,baz=322,slow=13,SNR=13						
PSA00	Pilbara Seismi	24.58	211	P	P	20 52 24.1	-1.6
PSA00	Pilbara Seismi	24.58	211	P	P	20 52 24.4	-1.3
PSA00				IAmb	IAmb	20 52 32.2	
	comp=Z,33nm,1.1s						
CISI	Cisompet, Garu	26.04	254	P	P	20 52 45.5	+6.4
CISI	Cisompet, Garu	26.04	254	P	P	20 52 37.1	-2.0
LEM	Lembang	26.06	255	LR	LR	21 04 21.1	
	comp=Z,588nm,20.0s,baz=60,slow=40						
MDSI	Maura Dua	29.03	262	P	P	20 53 05.9	+0.1
	comp=Z,7.2nm,1.1s						
MYKOM	Kota Tinggi	29.20	274	P	P	20 53 06.0	-1.3
QIZ	Qiongzhong	29.84	312	P	P	20 53 12.0	-1.0
QIZ				S	S	20 58 08.0	0.0
EIDS	Eidsvold	30.32	146	P	P	20 53 17.4	+0.3
UBPT	Khong Chiam	31.35	301	P	P	20 53 25.5	-0.8
UBPT				IAmb	IAmb	20 53 26.4	
	comp=Z,11nm,1.1s						
STKA	Stephens Creek	32.30	166	P	P	20 53 34.4	-0.1
	comp=Z,30nm,1.0s,baz=348,slow=8.4,SNR=35						
STKA				LR	LR	21 08 09.3	
	comp=Z,1µm,18.8s,baz=339,slow=39						
STKA	Stephens Creek	32.30	166	P	P	20 53 34.2	-0.3
BBOO	Buckleboo	32.31	175	P	P	20 53 34.6	0.0
BBOO				IAmb	IAmb	20 53 51.3	
	comp=Z,13nm,0.9s						
MORW	Morawa	32.72	208	P	P	20 53 37.4	-0.8
MORW				IAmb	IAmb	20 53 48.0	
	comp=Z,28nm,1.3s						
RPSI	Rantau Prapat	34.17	275	P	P	20 53 49.6	-1.5
RPSI				IAmb	IAmb	20 53 51.4	
	comp=Z,17nm,1.2s						
ARMA	Armidale	34.67	151	P	P	20 53 55.8	+0.4
ARMA				IAmb	IAmb	20 53 57.9	
	comp=Z,20nm,1.1s						
PBKT	Sadao Pong	35.80	300	P	P	20 54 04.3	-0.8
PBKT				IAmb	IAmb	20 54 05.2	
	comp=Z,9.0nm,1.4s						
GYA	Guiyang	36.86	319	eP	P	20 54 16.0	+1.8
MJAR	Matsushiro Arr	37.14	7	LR	LR	21 06 21.7	
	comp=Z,683nm,21.6s,baz=190,slow=31						
ENH	Enshi	37.86	326	P	P	20 54 22.0	-0.6
ENH				IAmb	IAmb	20 54 39.2	
	comp=Z,13nm,1.3s						
KSRS	Korea Array	38.01	353	LR	LR	21 07 57.5	
	comp=Z,387nm,21.4s,baz=174,slow=33						
CM31	Chiang Mai Arr	38.35	301	P	P	20 54 26.2	-0.6
CM31				IAmb	IAmb	20 54 27.9	
	comp=Z,11nm,1.1s						
CMAR	Chiang Mai Arr	38.35	301	P	P	20 54 26.4	-0.4
	comp=Z,3.0nm,0.9s,baz=118,slow=6.5,SNR=26						
CMAR	Chiang Mai Arr	38.35	301	P	P	20 54 25.8	-1.0
CHTO	Chiang Mai	38.51	302	P	P	20 54 27.2	-0.9
CHTO				IAmb	IAmb	20 54 28.1	
	comp=Z,9.1nm,1.1s						
TOO	Toolangi	38.70	164	P	P	20 54 30.1	+0.7
TOO				IAmb	IAmb	20 54 34.7	
	comp=Z,24nm,1.2s						
H11N1	WAKE ISLAND Hy	38.83	57	T	T	21 35 47.3	
	baz=243,slow=75,SNR=259						
H11N2	WAKE ISLAND Hy	38.84	57	T	T	21 35 46.3	
	baz=243,slow=75,SNR=373						
H11N3	WAKE ISLAND Hy	38.85	57	T	T	21 35 47.0	
	baz=243,slow=75,SNR=185						
DZM	Mont Dzumac	39.05	126	eLR	LR	21 05 15.3	
	comp=Z,342nm,23.4s						
DZM	Mont Dzumac	39.05	126	LR	LR	21 11 52.0	
	comp=Z,228nm,19.3s,baz=34,slow=38						
XAN	Xi'an	41.07	329	P	P	20 54 48.8	-0.5
XAN				IAmb	IAmb	20 54 56.6	
	comp=Z,13nm,1.3s						
CD2	Chengdu	41.74	321	eP	P	20 54 54.5	-0.3
BJT	Baijiatuau	43.11	341	P	P	20 55 05.8	+0.1
BJT				IAmb	IAmb	20 55 13.4	
	comp=Z,23nm,1.1s						
BJI	Beijing	43.13	341	P	P	20 55 06.5	+0.7
USRK	Ussuriysk Ar.	44.47	359	LR	LR	21 12 31.0	
	comp=Z,162nm,19.1s,baz=164,slow=34						
USRK	Ussuriysk Ar.	44.47	359	P	P	20 55 16.9	+0.3
CN2	Changchun	44.58	352	eP	P	20 55 24.5	+7.1
CN2				eS	S	21 01 56.5	+5.4
CN2				SS	ScS	21 05 18.0	+5.0
LZH	Lanzhou	45.34	326	eP	P	20 55 31.3	+7.5
LZH				pP	sP	20 55 36.3	-0.7
LZH				sP	pwP	20 55 40.3	+7.0
LSA	Lhasa	49.87	311	P	P	20 55 59.3	-0.2
LSA	Lhasa	49.87	311	P	P	20 55 58.2	-1.3
GTA	Gaotai	49.94	326	eP	P	20 55 59.3	-0.2
GTA				pP	pP	20 56 03.5	-5.6
GTA				sP	pwP	20 56 07.0	-2.1
HIA	Hailar	50.83	349	P	P	20 56 05.0	-0.9
HIA				IAmb	IAmb	20 56 16.3	
	comp=Z,4.8nm,0.5s						
TAPN	Taplejung	51.50	306	eP	P	20 56 10.8	-0.9
	comp=Z,53nm,1.4s						
ODAN	Odare	51.56	305	eP	P	20 56 11.0	-1.0
	comp=Z,30nm,0.9s						
RAMN	Ramite	52.24	305	eP	P	20 56 16.5	-0.6
	comp=Z,22nm,0.7s						
PALK	Pallekele	52.69	279	LR	LR	21 23 02.2	
	comp=Z,106nm,18.0s,baz=78,slow=41						
JIRN	Jiri	52.86	306	eP	P	20 56 21.0	-0.9
ULN	Ulaanbaatar	53.15	338	P	P	20 56 23.3	-0.1
ULN				IAmb	IAmb	20 56 31.1	
	comp=Z,13nm,1.3s						
GUN	Gumba	53.21	306	eP	P	20 56 23.4	-1.0
	comp=Z,19nm,0.7s						
SONM	Songino Array	53.37	338	P	P	20 56 25.2	+0.2
	comp=Z,0.3nm,0.3s,baz=156,slow=7.4,SNR=5.4						
SONM				LR	LR	21 18 37.3	
	comp=Z,110nm,21.5s,baz=148,slow=36						
SONM	Songino Array	53.37	338	P	P	20 56 24.9	0.0
PKI	Pulchoki	53.46	305	eP	P	20 56 24.7	-1.5
	comp=Z,35nm,1.5s						
PKIN	Phulchoki	53.47	305	eP	P	20 56 24.7	-1.5
KKN	Kakani	53.65	306	eP	P	20 56 26.3	-1.2
	comp=Z,44nm,1.3s						
DMN	Daman	53.72	305	eP	P	20 56 27.0	-1.1
	comp=Z,26nm,1.0s						
GKN	Gorkha	54.26	306	eP	P	20 56 30.7	-1.1
LBZ	Lake Benmore	54.80	148	P	P	20 56 35.5	+0.3
RPZ	Rata Peaks	54.82	147	LR	LR	21 19 28.8	
	comp=Z,522nm,21.5s,baz=317,slow=35						
RPZ	Rata Peaks	54.82	147	P	P	20 56 35.4	0.0
DANN	Dangsing	55.10	306	eP	P	20 56 37.3	-0.9
	comp=Z,72nm,0.8s						
URZ	Urewera	55.27	138	LR	LR	21 20 28.1	
	comp=Z,268nm,20.1s,baz=358,slow=36						
PETK	Petropavlovsk-	57.24	17	LR	LR	21 19 06.6	
	comp=Z,76nm,21.8s,baz=239,slow=34						
TLY	Talaya	57.55	339	P	P	20 56 54.0	-0.8
TLY				IAmb	IAmb	20 57 02.6	
	comp=Z,4.1nm,0.7s						
WMQ	Urumqi	59.74	323	P	P	20 57 09.3	-1.0
YAK	Yakutsk	62.38	358	P	P	20 57 28.2	+0.5
MK31	Makanchi Array	64.56	324	P	P	20 57 42.0	-0.5
MKAR	Makanchi Array	64.56	324	P	P	20 57 42.3	-0.2
	comp=Z,1.1nm,0.6s,baz=110,slow=8.5,SNR=19						
MKAR	Makanchi Array	64.56	324	P	P	20 57 41.9	-0.6
MAKZ	Makanchi	64.75	324	P	P	20 57 43.1	-0.7
MAKZ				IAmb	IAmb	20 57 53.7	
	comp=Z,8.7nm,1.1s						
KSH	Kashi	65.40	314	P	P	20 57 49.5	+1.3
KSH				pP	pP	20 57 59.3	+1.3
KSH				PP	PP	21 00 15.8	+3.4
KSH				S	S	21 06 29.3	-1.4
KSH				ScS	SKSac	21 07 37.3	-4.2
NIL	Nilore	65.40	308	P	P	20 57 47.2	-1.0
NIL				IAmb	IAmb	20 57 56.6	
	comp=Z,8.1nm,0.7s						
ZAA0	Zalesovo Array	67.17	331	P	P	20 57 58.1	-1.0
ZAA0				IAmb	IAmb	20 58 14.4	
	comp=Z,11nm,1.4s						
ZALV	Zalesovo Beam	67.17	331	P	P	20 57 57.5	-1.6
	comp=Z,1.0nm,0.6s,baz=129,slow=7.7,SNR=5.2						
ZALV				LR	LR	21 29 19.4	
	comp=Z,59nm,19.6s,baz=105,slow=38						
AAK	Ala-Archa	67.64	317	P	P	20 58 03.2	+0.7
	comp=Z,0.3nm,0.5s,baz=101,slow=9.3,SNR=5.4						
AAK	Ala-Archa	67.64	317	P	P	20 58 01.7	-0.9
KURK	Kurchatov	68.63	326	P	P	20 58 07.6	-0.8
KURK				IAmb	IAmb	20 58 21.2	
	comp=Z,16nm,1.3s						
KURBB	Kurchatov Arra	68.63	326	P	P	20 58 07.9	-0.5
	comp=Z,2.3nm,0.9s,baz=130,slow=5.1,SNR=15						
KBL	Kabul	69.00	307	P	P	20 58 10.1	-1.2
GAR	Garm	69.33	312	P	P	20 58 12.7	-0.4
GAR				IAmb	IAmb	20 58 21.0	
	comp=Z,24nm,1.4s						
CHGR	Chuyangaron	70.08	312	P	P	20 58 17.0	-0.8
CHGR				IAmb	IAmb	20 58 27.6	
	comp=Z,13nm,1.4s						
KK31	Karatay Array	70.53	316	P	P	20 58 19.8	-0.5
KKAR	Karatay Array	70.53	316	P	P	20 58 19.5	-0.8
TIXI	Tiksi	72.04	359	P	P	20 58 28.3	-0.5
	comp=Z,1.3nm,0.8s,baz=206,slow=4.2,SNR=3.8						
TIXI	Tiksi	72.04	359	P	P	20 58 29.3	+0.5
BRVK	Borovoye	74.30	326	P	P	20 58 41.5	-1.1
BRVK				IAmb	IAmb	20 58 58.6	
	comp=Z,8.1nm,1.0s						
HRA	Herat	74.42	306	P	P	20 58 42.5	-1.4
NRIK	Noril'sk	76.01	345	P	P	20 58 51.9	-0.2
	comp=Z,2.1nm,0.5s,baz=139,slow=7.6,SNR=6.6						
NRIK				LR	LR	21 33 26.3	
	comp=Z,264nm,19.8s,baz=114,slow=37						
PPT	Papeete	77.91	108	LR	LR	21 32 05.8	
	comp=Z,57nm,18.5s,baz=288,slow=35						
PPT2	Papeete2	77.91	108	eS	S	21 08 51.4	-4.1
	comp=Z,65nm,27.5s						
PPT2	Papeete2	77.91	108	eLR	LR	21 23 18.6	
	comp=Z,86nm,22.0s						
GEYT	Alibeck	78.36	309	P	P	20 59 05.9	-0.1
	comp=Z,2.7nm,1.0s,baz=298,slow=3.2,SNR=6.1						
GEYT				LR	LR	21 38 18.0	
	comp=Z,47nm,18.9s,baz=30,slow=39						
TBI	Tubuai	78.41	114	eS	S	21 09 00.3	-0.3
	comp=Z,198nm,28.0s						
TBI	Tubuai	78.41	114	eLR	LR	21 23 30.8	
	comp=Z,97nm,25.2s						
VNDA	Vanda	78.56	174	P	P	20 59 07.0	+0.8
	comp=Z,3.2nm,1.0s,baz=322,slow=6.7,SNR=8.4						
VNDA				LR	LR	21 31 38.0	
	comp=Z,244nm,21.8s,baz=344,slow=34						
VNDA	Vanda	78.56	174	P	P	20 59 05.8	-0.5
VNDA				IAmb	IAmb	20 59 18.0	
	comp=Z,12nm,1.4s						
ANM	Nome	78.59	23	P	P	20 59 07.4	+0.8
ABKAR	Akbulak array	79.32	320	P	P	20 59 10.0	-1.0
ABKAR	Akbulak array	79.32	320	P	P	20 59 09.9	-1.0
ABKAR				IAmb	IAmb	20 59 25.9	
	comp=Z,9.3nm,1.2s						
RDOG	Red Dog Mine	80.99	20	P	P	20 59 20.9	+1.3
RDOG				IAmb	IAmb	20 59 29.6	
	comp=Z,8.5nm,1.2s						
ARU	Arti	81.79	327	P	P	20 59 24.1	+0.1
ARU				IAmb	IAmb	20 59 33.1	
	comp=Z,10nm,1.2s						
IMAR	Indian Mountai	83.66	23	P	P	20 59 34.0	+0.4
SUA	Susitna One	83.87	28	P	P	20 59 35.1	+0.2
SUA				IAmb	IAmb	20 59 46.4	
	comp=Z,10nm,1.2s						
KTH	Kantishna Hill	84.24	26	IAmb	IAmb	20 59 47.1	
	comp=Z,16nm,1.4s						
BPAW	Bear Paw Mtn.	84.33	25	P	P	20 59 36.9	-0.2
BPAW				IAmb	IAmb	20 59 48.9	
	comp=Z,5.5nm,1.1s						

MLY	Manley	84.65	24	IAmb	IAmb	20 59 45.7	
	comp=Z,7.3nm,1.2s						
SML	Sawmill	85.07	28	P	P	20 59 40.6	-0.2
RND	Reindeer	85.12	26	IAmb	IAmb	20 59 56.8	
	comp=Z,10nm,1.1s						
SCM	Sheep Creek Mo	85.54	28	P	P	20 59 43.6	+0.3
WRH	Wood River Hil	85.65	25	P	P	20 59 43.7	+0.1
CCB	Clear Creek Bu	85.80	25	P	P	20 59 43.5	-0.8
CCB				IAmb	IAmb	20 59 52.8	
	comp=Z,11nm,1.3s						
ILAR	Eielson Array	86.21	25	P	P	20 59 46.9	+0.5
	comp=Z,1.6nm,1.0s,baz=262,slow=6.0,SNR=8.6						
ILAR				LR	LR	21 32 28.8	
	comp=Z,75nm,21.9s,baz=284,slow=32						
GLB	Gilahina Butte	87.15	29	P	P	20 59 51.2	0.0
BMAR	Burnt Mountain	87.52	23	P	P	20 59 53.1	+0.3
BCAR	Beaver Creek A	88.25	27	P	P	20 59 57.6	+1.2
QSPA	South Pole Qui	89.47	180	P	P	21 00 01.9	-0.2
BBB	Bella Bella	95.84	38	LR	LR	21 36 05.8	
	comp=Z,207nm,20.4s,baz=213,slow=31						
ARCES	ARCESS Array B	96.49	340	LR	LR	21 47 17.4	
	comp=Z,109nm,22.0s,baz=48,slow=38						
FINES	FINESS Array B	98.43	332	LR	LR	21 48 23.9	
	comp=Z,112nm,20.8s,baz=46,slow=37						
AKASG	Malin Array Be	99.04	321	LR	LR	21 50 47.4	
	comp=Z,31nm,18.9s,baz=25,slow=39						
PB14	IPOC Station P	146.32	139		PKPab	21 06 48.4	+0.4
GO02	Mina Guanaco	146.46	141		PKPab	21 06 48.3	-0.1
PB01	IPOC Station P	149.37	136		PKPbc	21 06 55.6	+0.5
GO01	Chusmiza	150.47	134		PKiKP	21 06 59.1	0.0
MNMC	Minye Minye	150.51	133		PKPbc	21 06 58.4	+0.1
PB16	IPOC Station P	151.07	131		PKiKP	21 07 00.5	0.0
CPUP	Villa Florida	151.57	160	PKPbc	PKiKP	21 07 01.1	+0.5
	comp=Z,2.2nm,0.7s,baz=308,slow=3.0,SNR=4.4						
CPUP	Villa Florida	151.57	160		PKiKP	21 07 00.6	0.0
LPAZ	La Paz	153.35	130		PKiKP	21 07 05.9	+0.6
SAML	Samuel	161.40	121	PKPdf	PKPdf	21 07 04.2	-2.8
SAML					PKPab	21 07 50.9	-0.3

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*NEIC **29** 21:07:29.2±1.6, 20°.4S±0°.1×177°.5W±0°.1, h478^{km}±8^{km}, mb4.3/54, Error ellipse: s-maj=18.9km s-min=15.4km az=123.0*

*IDC **29** 21:07:29.3±1.9, 20°.28S×177°.65W, h458^{km}±23^{km}, mb3.4/10, mb1 3.7/12, mb1mx3.5/31, mbtmp4.3/12, Error ellipse: s-maj=21.3km s-min=12.9km az=129.0*

ISC 29 21:07:31.3±0.5, **20°.28S**±0°.08×**177°.54W**±0°.08, **h500**^{km}, **n99**, σ**1^{s}.66**/97, **mb4.2**/35, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.88	301	P	P	21 08 59.1	+1.7
AFI	Afiamalu	8.39	42	P	P	21 09 31.7	-0.3
	7.0nm,0.3s,baz=213,slow=3.3,SNR=14						
AFI				S	S	21 11 06.7	-4.2
	7.8nm,0.3s,baz=244,slow=21,SNR=7.3						
AFI	Afiamalu	8.39	42	P	P	21 09 29.9	-2.1
AFI				S	S	21 11 07.8	-3.2
HAZ	Te Kaha	17.88	192	P	P	21 11 10.6	+0.1
MKAZ	Moumakai	17.93	199	P	P	21 11 12.4	+1.5
PKGZ	Pakihiroa	17.95	191	P	P	21 11 13.2	+2.1
PUZ	Puketiti	18.10	191	P	P	21 11 13.8	+1.4
MWZ	Matawai	18.49	192	P	P	21 11 15.9	-0.2
URZ	Urewera	18.51	193	P	P	21 11 14.4	-1.7
	2.4nm,0.3s,baz=287,slow=2.3,SNR=16						
URZ	Urewera	18.51	193	IAmb	IAmb	21 11 16.1	
	comp=Z,9.6nm,0.8s						
URZ	Urewera	18.51	193	P	P	21 11 14.8	-1.3
RTZ	Ruatahuna	18.88	193	P	P	21 11 18.3	-1.3
MTHZ	Maungataniwha	19.13	193	P	P	21 11 23.0	+1.1
BKZ	Black Stump Fm	19.51	194	P	P	21 11 22.9	-2.5
BKZ				IAmb	IAmb	21 11 35.5	
	comp=Z,9.2nm,1.1s						
TUVZ	Tukino	19.81	196	P	P	21 11 27.3	-0.9
BHHZ	Black Hill Sta	19.92	195	P	P	21 11 27.2	-1.9
KRHZ	Kereru	20.00	194	P	P	21 11 28.2	-1.5
KAHZ	Kahuranaki	20.03	193	P	P	21 11 28.7	-1.4
BFZ	Birch Farm	21.02	193	P	P	21 11 35.8	-3.2
HOWZ	Holdsworth Sta	21.39	195	P	P	21 11 41.9	-0.4
MSWZ	Moikau Station	21.94	195	P	P	21 11 44.4	-3.0
TCW	Tory Channel	22.00	197	P	P	21 11 48.0	+0.2
BHW	Baring Head	22.03	195	P	P	21 11 44.5	-3.6
PLWZ	Palliser	22.09	194	P	P	21 11 45.0	-3.7
QRZ	Quartz Range	22.16	200	P	P	21 11 47.3	-2.0
NNZ	Nelson	22.25	198	P	P	21 11 48.4	-1.7
BSWZ	Blackbirch Sta	22.57	197	P	P	21 11 50.0	-3.0
THZ	Tophouse	22.90	199	P	P	21 11 53.3	-2.6
THZ				IAmb	IAmb	21 11 56.3	
	comp=Z,8.2nm,1.0s						
KHZ	Kahutara	23.32	197	P	P	21 11 57.4	-2.3
KHZ				IAmb	IAmb	21 12 02.3	
	comp=Z,9.3nm,1.1s						
LTZ	Lake Taylor	24.02	199	P	P	21 12 03.0	-3.0
MQZ	McQueen's Vall	24.76	197	P	P	21 12 10.9	-1.5
MQZ				IAmb	IAmb	21 12 28.7	
	comp=Z,8.7nm,1.1s						
FOZ	Fox Glacier	25.49	202	P	P	21 12 16.2	-2.7
FOZ				IAmb	IAmb	21 12 21.5	
	comp=Z,9.5nm,1.1s						
LBZ	Lake Benmore	26.12	200	P	P	21 12 22.0	-2.5
ODZ	Otahua Downs	26.56	199	P	P	21 12 26.1	-2.3
ODZ				IAmb	IAmb	21 12 32.7	
	comp=Z,11nm,1.2s						
WKZ	Wanaka	26.90	201	P	P	21 12 28.5	-2.9
MLZ	Mavora Lakes	27.68	202	P	P	21 12 37.0	-1.3
WHZ	Wether Hill Ro	28.20	202	P	P	21 12 41.2	-1.6
WHZ				IAmb	IAmb	21 12 49.2	
	comp=Z,12nm,1.0s						
EIDS	Eidsvold	29.32	254	P	P	21 12 52.6	-0.3
ARMA	Armidale	29.55	244	P	P	21 12 55.0	0.0
ARMA				IAmb	IAmb	21 12 56.3	
	comp=Z,5.1nm,0.5s						
PATS	Pohnpei	35.92	316	P	P	21 13 47.5	-1.5
TOO	Toolangi	36.37	234	P	P	21 13 51.9	-0.7
COEN	Coen	38.00	273	P	P	21 14 06.3	+0.1
COEN				IAmb	IAmb	21 14 15.3	
	comp=Z,10nm,1.1s						
STKA	Stephens Creek	38.27	244	P	P	21 14 08.7	+0.5
	comp=Z,3.8nm,0.5s,baz=94,slow=9.7,SNR=18						
STKA	Stephens Creek	38.27	244	P	P	21 14 08.8	+0.5
BBOO	Buckleboo	43.03	243	P	P	21 14 45.5	-0.8
BBOO				IAmb	IAmb	21 14 46.8	
	comp=Z,8.4nm,0.7s						
WR0	Warramunga Arr	44.87	262	P	P	21 15 00.5	-0.3
AS31	Alice Springs	44.99	256	P	P	21 15 01.7	0.0
AS31				IAmb	IAmb	21 15 02.4	
	comp=Z,4.8nm,0.5s						
ASAR	Alice Springs	44.99	256	P	P	21 15 01.8	+0.1
	comp=Z,16nm,0.5s,baz=92,slow=7.5,SNR=422						
ASAR				PcP	pP	21 16 33.0	-0.6
	comp=Z,0.8nm,0.5s,baz=102,slow=4.1,SNR=3.6						
ASAR				S	S	21 21 00.5	-3.0
	comp=Z,1.4nm,0.8s,baz=94,slow=16,SNR=13						
ASAR	Alice Springs	44.99	256	P	P	21 15 01.3	-0.4
WB0	Warramunga Arr	45.04	262	P	P	21 15 01.9	-0.2
WB2	Warramunga Arr	45.05	262	P	P	21 15 01.9	-0.3
WB2				IAmb	IAmb	21 15 02.6	
	comp=Z,6.7nm,0.7s						
WRAB	Tennant Creek	45.05	262	P	P	21 15 01.6	-0.6
WRA	Warramunga Arr	45.06	262	P	P	21 15 01.9	-0.4
	comp=Z,4.8nm,0.6s,baz=97,slow=7.1,SNR=14						
WRA	Warramunga Arr	45.06	262	P	P	21 15 01.9	-0.4
MTN	Manton Dam	49.59	270	P	P	21 15 36.1	-0.3
MTN				IAmb	IAmb	21 15 37.5	
	comp=Z,7.5nm,0.6s						
FORT	Forrest	49.78	246	P	P	21 15 37.2	-0.4
FAKI	Fak Fak	51.87	283	P	P	21 15 52.8	-0.3
FITZ	Fitzroy Crossi	53.48	262	P	P	21 16 05.3	+0.7
SOEI	Soe	56.93	271	P	P	21 16 29.2	+0.3
PSAD2	Pilbara Seismi	58.02	257	P	P	21 16 35.8	-0.4
PSAD2				IAmb	IAmb	21 16 36.8	
	comp=Z,8.6nm,0.8s						
PSAC2	Pilbara Seismi	58.09	257	P	P	21 16 36.0	-0.6
PSAB3	Pilbara Seismi	58.13	257	P	P	21 16 36.3	-0.6
PSAB3				IAmb	IAmb	21 16 37.3	
	comp=Z,8.4nm,0.7s						
PSAB2	Pilbara Seismi	58.13	257	P	P	21 16 36.3	-0.6
PSAB2				IAmb	IAmb	21 16 37.3	
	comp=Z,9.3nm,0.7s						
PSAA3	Pilbara Seismi	58.13	257	P	P	21 16 36.1	-0.8
PSAA3				IAmb	IAmb	21 16 37.5	
	comp=Z,8.9nm,0.7s						
PSA00	Pilbara Seismi	58.14	257	P	P	21 16 35.9	-1.0
PSAA2	Pilbara Seismi	58.14	257	P	P	21 16 36.1	-0.9
PSAA2				IAmb	IAmb	21 16 37.5	
	comp=Z,9.9nm,0.8s						
PSAC3	Pilbara Seismi	58.15	257	P	P	21 16 36.4	-0.6
PSAC3				IAmb	IAmb	21 16 37.4	
	comp=Z,9.1nm,0.6s						
PSAA1	Pilbara Seismi	58.15	257	P	P	21 16 36.4	-0.6
PSAA1				IAmb	IAmb	21 16 37.5	
	comp=Z,7.9nm,0.7s						
PSAB1	Pilbara Seismi	58.16	257	P	P	21 16 36.6	-0.5
PSAB1				IAmb	IAmb	21 16 37.6	
	comp=Z,9.6nm,0.8s						
VNDA	Vanda	58.17	185	P	P	21 16 38.2	+2.0
	comp=Z,0.6nm,0.6s,baz=3.7,slow=7.7,SNR=7.3						
PSAD1	Pilbara Seismi	58.17	257	P	P	21 16 36.5	-0.7
PSAC1	Pilbara Seismi	58.18	257	P	P	21 16 36.5	-0.8
PSAD3	Pilbara Seismi	58.19	257	P	P	21 16 37.1	-0.2
PSAD3				IAmb	IAmb	21 16 37.4	
	comp=Z,7.0nm,0.6s						
MORW	Morawa	60.31	247	P	P	21 16 50.9	-0.6
CASY	Casey	64.34	205	P	P	21 17 16.7	-0.2
CASY				IAmb	IAmb	21 17 27.0	
	comp=Z,9.4nm,1.1s						
JAGI	Jajag, Banyuwa	66.82	269	P	P	21 17 33.1	-0.3
QSPA	South Pole Qui	69.79	180	P	P	21 17 51.0	+0.4
MJAR	Matsushiro Arr	70.29	323	P	P	21 17 55.0	+1.0
	comp=Z,1.4nm,0.5s,baz=143,slow=5.9,SNR=12						
MJAR	Matsushiro Arr	70.29	323	IAmb	IAmb	21 17 55.6	
	comp=Z,1.3nm,0.5s						
UGM	Wanagama	70.40	269	P	P	21 17 55.0	-0.2
JKA	Kamikawa-asahi	73.74	331	P	P	21 18 16.7	+2.9
ASAJ	Asahikawa	73.74	331	P	P	21 18 16.7	+2.9
	comp=Z,3.9nm,0.9s,baz=198,slow=9.6,SNR=2.4						
KSM	Kuching	73.81	278	P	P	21 18 15.4	+0.5
KSM				IAmb	IAmb	21 18 16.8	
	comp=Z,6.0nm,0.6s						
TXAR	Lajitas Array	86.57	57	P	P	21 19 25.0	+3.6
	comp=Z,0.3nm,0.7s,baz=227,slow=4.8,SNR=1.7						
PV17	East Wray Mesa	86.72	47		pP	21 21 05.5	-6.3
PV02	Paradox Valley	86.84	47	P	P	21 19 19.9	-2.8
PV02				IAmb	IAmb	21 19 21.2	
	comp=Z,5.6nm,0.9s						
ILAR	Eielson Array	88.01	13	P	P	21 19 28.2	+1.0
	comp=Z,0.5nm,0.9s,baz=212,slow=4.3,SNR=2.3						
VNA3	Neumayer Olymp	88.33	176	P	P	21 19 29.3	+0.5
PDAR	Pinedale Array	88.51	43	P	P	21 19 32.9	+2.5
	comp=Z,0.2nm,0.5s,baz=132,slow=2.2,SNR=1.9						
VNA2	Neumayer--Watz	88.78	177	P	P	21 19 31.6	+0.7
	baz=189,slow=3.7						
BILL	Bilibino	88.86	354		pwP	21 21 21.5	-3.5
RLMT	Red Lodge	89.85	41		pwP	21 21 27.6	-2.7
CMAR	Chiang Mai Arr	90.45	289	P	P	21 19 41.3	+1.7
	comp=Z,0.8nm,0.6s,baz=114,slow=2.3,SNR=1.8						
CHTO	Chiang Mai	90.58	290	P	P	21 19 39.5	-0.7
CHTO				IAmb	IAmb	21 19 46.7	
	comp=Z,3.7nm,0.9s						
AKASG	Malin Array Be	143.03	332	PKhKP	PKPbc	21 26 05.5	0.0
	comp=Z,1.1nm,0.5s,baz=42,slow=4.4,SNR=10.0						
BRTR	Keskin Array B	147.01	313	PKPbc	PKPbc	21 26 18.4	+0.4
	comp=Z,0.9nm,0.6s,baz=121,slow=3.9,SNR=5.4						
CLL	Collm	147.94	348	*i* PKPbc	PKiKP	21 26 21.9	+0.8
	comp=Z,5.0nm,1.0s						
GERES	GERESS Array B	150.10	345	PKPbc	PKiKP	21 26 26.2	+0.4
	comp=Z,0.8nm,0.8s,baz=38,slow=2.4,SNR=6.8						
GERES	GERESS Array B	150.10	345		PKPbc	21 26 25.0	-0.2

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*IDC **29** 21:11:56.5±0.8, 8°.76S×67°.54E, h0^{km}, mb4.0/11, mb1 4.1/11, mb1mx3.8/52, mbtmp4.0/11, MS3.6/6, Ms1 3.6/6, ms1mx3.2/37, Error ellipse: s-maj=30.3km s-min=16.1km az=149.0*

*NEIC **29** 21:11:57.6±1.6, 8°.7S±0°.1×67°.62E±0°.09, h10^{km}±1^{km}, mb4.4/10, Error ellipse: s-maj=18.0km s-min=15.0km az=196.0*

ISC 29 21:11:57.9±0.7, **8°.7S**±0°.1×**67°.60E**±0°.09, **h10**^{km}, **n30**, σ**0^{s}.91**/23, **mb4.2**/14, **MS3.6**/6, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGAR	Diego Garcia	4.98	75	Pn	Pn	21 13 11.3	-1.5
KAAM	Kaadhehdhoo	10.61	31	Pn	Pn	21 14 28.9	-1.2
MSEY	Mahe Island	12.68	288		Pn	21 14 58.4	-0.2
ABPO	Ambohimpanom	22.25	240	P	P	21 16 55.9	+0.5
MBAR	Mbarara	37.58	280	P	P	21 19 13.7	+0.5
	1.9nm,0.2s,baz=169,slow=18,SNR=0.7						
LSZ	Lusaka	39.05	257	P	P	21 19 24.7	-0.8
	6.3nm,1.0s,baz=96,slow=5.8,SNR=5.5						
LSZ	Lusaka	39.05	257	P	P	21 19 24.4	-1.1
MATP	Matopo	39.48	248	P	P	21 19 29.5	+0.4
	1.7nm,0.7s,baz=168,slow=2.0,SNR=4.1						
CMAR	Chiang Mai Arr	41.05	49	P	P	21 19 44.1	+2.1
	1.5nm,0.6s,baz=245,slow=9.5,SNR=16						
CMAR				LR	LR	21 34 55.7	
	comp=Z,24nm,18.5s,baz=225,slow=34						
LBTB	Lobatse	43.13	243	P	P	21 19 58.2	-0.8
	3.0nm,0.9s,baz=68,slow=5.4,SNR=3.5						
LBTB	Lobatse	43.13	243	IAmb	IAmb	21 20 01.2	
	comp=Z,8.0nm,1.1s						
BOSA	Boshof	44.43	238	P	P	21 20 08.9	-0.6
	comp=Z,1.8nm,0.8s,baz=33,slow=8.2,SNR=3.5						
H01W3	Cape Leeuwin H	49.86	129	T	T	22 14 31.2	
	baz=290,slow=75,SNR=8.3						
H01W2	Cape Leeuwin H	49.86	129	T	T	22 14 25.7	
	baz=290,slow=75,SNR=10						
H01W1	Cape Leeuwin H	49.88	129	T	T	22 14 29.8	
	baz=290,slow=75,SNR=8.0						
AAK	Ala-Archa	51.48	7	P	P	21 21 03.4	-0.4
MK31	Makanchi Array	56.79	12	P	P	21 21 41.9	-0.4
MK31				IAmb	IAmb	21 21 42.9	
	comp=Z,6.8nm,1.9s						
MKAR	Makanchi Array	56.79	12	P	P	21 21 42.1	-0.2
	comp=Z,0.8nm,0.6s,baz=202,slow=8.1,SNR=14						
MKAR	Makanchi Array	56.79	12	P	P	21 21 41.7	-0.6
ABKAR	Akbulak array	58.11	354	P	P	21 21 51.2	-0.3
ABKAR	Akbulak array	58.11	354	P	P	21 21 50.3	-1.2
ABKAR				IAmb	IAmb	21 21 52.5	
	comp=Z,3.5nm,1.0s						
KURK	Kurchatov	59.95	8	P	P	21 22 04.6	+0.4
KURK				IAmb	IAmb	21 22 04.9	
	comp=Z,2.5nm,0.9s						
ZALV	Zalesovo Beam	64.10	11	P	P	21 22 31.8	-0.3
	comp=Z,1.1nm,0.7s,baz=211,slow=5.2,SNR=4.7						
ASAR	Alice Springs	64.90	112	P	P	21 22 37.9	-0.2
	comp=Z,0.4nm,0.8s,baz=271,slow=5.7,SNR=2.4						
ASAR				LR	LR	21 50 10.0	
	comp=Z,30nm,18.3s,baz=230,slow=35						
WRA	Warramunga Arr	65.28	108	P	P	21 22 40.9	+0.3
	comp=Z,0.4nm,0.9s,baz=276,slow=5.8,SNR=2.8						
SONM	Songino Array	65.92	28	P	P	21 22 45.2	+0.9
	comp=Z,2.5nm,0.8s,baz=222,slow=6.9,SNR=21						
SONM				LR	LR	21 51 11.2	
	comp=Z,44nm,18.7s,baz=216,slow=36						
SONM	Songino Array	65.92	28	P	P	21 22 45.5	+1.2
KSRS	Korea Array	72.64	46	LR	LR	21 53 26.7	
	comp=Z,31nm,21.7s,baz=188,slow=34						
GERES	GERESS Array B	74.22	326	LR	LR	21 56 41.2	
	comp=Z,71nm,19.8s,baz=74,slow=36						
DZM	Mont Dzumac	94.87	113	LR	LR	22 09 20.6	
	comp=Z,40nm,18.3s,baz=206,slow=36						

IDC 29 21:18:29.5±64.0, **18°.28S**×**169°.33E**, **h0**^{km}, **mb3.8**/3, **mb1 3.9**/3, **mb1mx3.5**/43, **mbtmp3.8**/3, **Error ellipse: s-maj=1090.0km s-min=121.8km az=73.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	28.44	236	P	P	21 24 26.2	+0.1
	2.1nm,0.7s,baz=71,slow=8.1,SNR=5.1						
WRA	Warramunga Arr	33.07	261	P	P	21 25 06.7	-0.4
	0.4nm,0.7s,baz=92,slow=8.9,SNR=5.0						
ASAR	Alice Springs	33.45	255	P	P	21 25 10.7	+0.2
	0.7nm,0.7s,baz=82,slow=9.0,SNR=11						

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*IDC **29** 21:21:36.2±1.2, 37°.56N×142°.20E, h0^{km}, mb3.5/5, mb1 3.7/7, mb1mx3.4/48, mbtmp3.4/7, ML2.8/2, MS3.2/2, Ms1 3.2/2, ms1mx2.5/36, Error ellipse: s-maj=28.9km s-min=23.4km az=82.0*

*JMA **29** 21:21:38.8±0.1, 37°.66N×142°.03E, h30^{km}±3^{km}, M3.6*

ISC 29 21:21:39.5±1.1, **37°.67N**±0°.05×**141°.95E**±0°.10, **h21**^{km}±6^{km}, **n30**, σ**1^{s}.21**/33, **mb3.2**/5, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.74	329	P	Pn	21 21 53.7	-1.0
JIKH				*e*S	Sb	21 22 04.3	+0.9
JMST	Minamisoumatoc	0.84	274	P	Pn	21 21 55.3	-0.7
JMST				S	Sn	21 22 07.3	-0.4
JFK	Kawauchi	0.91	251	P	Pn	21 21 56.1	-0.9
JFK				*e*S	Sn	21 22 09.0	-0.4
JIO	Ouri	0.91	329	P	Pn	21 21 56.2	-0.8
JIO				*e*S	Sn	21 22 08.3	-1.2
JMM	Marumori	0.93	282	P	Pn	21 21 56.9	-0.4
JMM				S	Sn	21 22 09.6	-0.4
ONAJ	Iwakimizuishiy	1.08	238	P	Pn	21 21 58.5	-0.9
ONAJ				*e*S	Sn	21 22 12.7	-1.0
JOU	Okura	1.23	305	P	Pb	21 22 02.1	+0.1
JOU				S	Sb	21 22 18.4	+1.0
JFT	Otama	1.29	264	P	Pb	21 22 02.9	-0.1
JFT				S	Sb	21 22 20.0	+0.9
JMK	Ichinoseki	1.40	336	P	Pn	21 22 03.6	-0.1
JYK	Kaneyama	1.76	315	P	Pb	21 22 10.0	-1.1
JFY	Yanaizu	1.80	262	P	Pb	21 22 10.8	-1.0
JFY				S	Sb	21 22 33.9	0.0
JOM	Ohasama	1.87	344	P	Pn	21 22 09.9	-0.3
JOM				S	Sn	21 22 33.3	+0.1
MJAR	Matsushiro Arr	3.19	250	Pn	Pn	21 22 30.8	+2.4
	0.2nm,0.3s,baz=91,slow=17,SNR=11						
MJAR				Sn	Sb	21 23 12.5	-1.5
	0.5nm,0.3s,baz=77,slow=28,SNR=5.1						
MAT	Matsushiro	3.19	250	P	Pn	21 22 31.1	+2.7
MAT				*e*S	Sn	21 23 06.8	+0.9
JHJ	Hachijo jima 2	4.87	202	LR	LR	21 24 55.1	
	comp=Z,237nm,20.4s,baz=280,slow=41						
ASAJ	Asahikawa	6.46	4	Pn	Pn	21 23 14.5	+1.2
	0.5nm,0.3s,baz=227,slow=14,SNR=5.9						
USRK	Ussuriysk Ar.	9.96	314	Pn	Pn	21 24 10.8	+10
	baz=106,slow=15,SNR=3.4						
SONM	Songino Array	27.79	303	P	P	21 27 28.8	+1.8
	0.2nm,0.6s,baz=101,slow=7.5,SNR=1.5						
H11N2	WAKE ISLAND Hy	28.12	123	T	T	21 56 59.6	
	baz=315,slow=75,SNR=87						
H11N1	WAKE ISLAND Hy	28.13	123	T	T	21 57 01.2	
	baz=315,slow=75,SNR=92						
H11N3	WAKE ISLAND Hy	28.14	123	T	T	21 57 01.0	
	baz=315,slow=75,SNR=80						
H11S1	WAKE ISLAND Hy	28.86	125	T	T	21 57 42.9	
	baz=317,slow=76,SNR=68						
H11S3	WAKE ISLAND Hy	28.86	125	T	T	21 57 48.9	
	baz=317,slow=76,SNR=76						
H11S2	WAKE ISLAND Hy	28.88	125	T	T	21 57 50.6	
	baz=317,slow=76,SNR=47						
TIXI	Tiksi	34.71	353	LR	LR	21 43 50.5	
	comp=Z,34nm,19.3s,baz=80,slow=38						
ZALV	Zalesovo Beam	41.80	312	PcP	PcP	21 31 20.2	-2.8
	0.4nm,0.3s,baz=90,slow=2.9,SNR=2.6						
MKAR	Makanchi Array	44.14	302	P	P	21 29 47.3	+0.9
	0.2nm,0.5s,baz=81,slow=8.7,SNR=2.4						
WRA	Warramunga Arr	57.75	188	P	P	21 31 28.2	-0.6
	1.0nm,0.6s,baz=3.9,slow=7.2,SNR=17						
ASAR	Alice Springs	61.48	188	P	P	21 31 54.0	-0.6
	0.8nm,0.7s,baz=13,slow=6.3,SNR=11						
TXAR	Lajitas Array	89.40	53	P	P	21 34 35.5	+0.6
	0.1nm,0.7s,baz=297,slow=4.0,SNR=1.5						

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*NEIC **29** 21:25:25.9±1.7, 43°.63S±0°.07×172°.88E±0°.09, h18^{km}±10^{km}, Error ellipse: s-maj=12.3km s-min=6.4km az=133.0*

*WEL **29** 21:25:25.3, 43°.6S±0°.7×172°.7E±0°.6, h7^{km}, M4.1/59, ML4.3/7, MLv4.1/59, Error ellipse: s-maj=0.0km s-min=0.0km az=33.8*

ISC 29 21:25:25.8±1.0, **43°.60S**±0°.03×**172°.78E**±0°.03, **h15**^{km}±9^{km}, **n114**, σ**1^{s}.05**/121, **South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MQZ	McQueen's Vall	0.14	221	Pg	Pb	21 25 29.9	-0.1
MQZ	McQueen's Vall	0.14	221	P	Pb	21 25 30.0	-0.1
MQZ				S	Sg	21 25 32.2	+0.3
OKCZ	Okains Bay	0.24	120	P	Pb	21 25 32.8	+1.0
OKCZ				S	Sg	21 25 37.1	+2.5
AKCZ	Akaroa Harbour	0.28	160	P	Pb	21 25 33.5	+0.8
AKCZ				S	Sb	21 25 38.1	+0.8
OXZ	Oxford	0.60	297		Pb	21 25 38.0	-0.1
OXZ	Oxford	0.60	297	P	Pb	21 25 38.0	-0.1
OXZ				S	Sg	21 25 45.9	+0.1
LTZ	Lake Taylor	0.90	336		Pb	21 25 43.7	+0.5
LTZ	Lake Taylor	0.90	336	P	Pb	21 25 43.7	+0.5
LTZ				S	Sb	21 25 56.0	+1.0
RPZ	Rata Peaks	1.25	264		Pn	21 25 49.0	+0.1
RPZ	Rata Peaks	1.25	264	P	Pn	21 25 48.9	+0.1
RPZ				S	Sb	21 26 05.0	-0.2
INZ	Inchbonnie	1.31	312	P	Pn	21 25 49.5	-0.1
KHZ	Kahutara	1.31	26		Pb	21 25 49.8	-0.3
KHZ	Kahutara	1.31	26	P	Pn	21 25 49.2	-0.3
WVZ	Waitaha Valley	1.58	289	P	Pn	21 25 53.7	+0.5
THZ	Tophouse	1.84	3		Pn	21 25 57.0	0.0
THZ	Tophouse	1.84	3	P	Pn	21 25 57.0	0.0
DSZ	Denniston Nort	1.99	339	P	Pn	21 25 59.7	+0.7
LBZ	Lake Benmore	2.03	246		Pn	21 26 00.2	+0.7
LBZ	Lake Benmore	2.03	246	P	Pn	21 26 00.0	+0.6
BSWZ	Blackbirch Sta	2.05	24		Pn	21 26 00.1	+0.3
BSWZ	Blackbirch Sta	2.05	24	P	Pn	21 26 00.1	+0.3
ODZ	Otahua Downs	2.10	226		Pn	21 26 00.7	+0.2
ODZ	Otahua Downs	2.10	226	P	Pn	21 26 00.6	+0.2
CMWZ	Cape Campbell	2.13	30		Pn	21 26 01.4	+0.4
FOZ	Fox Glacier	2.15	271		Pn	21 26 02.5	+1.4
FOZ	Fox Glacier	2.15	271	P	Pn	21 26 02.6	+1.4
TUWZ	Tuamarina	2.34	22		Pn	21 26 03.3	-0.3
TUWZ	Tuamarina	2.34	22	P	Pn	21 26 03.6	-0.1
NNZ	Nelson	2.43	11		Pn	21 26 05.7	+0.7
NNZ	Nelson	2.43	11	P	Pn	21 26 05.1	+0.2
TCW	Tory Channel	2.64	25	P	Pn	21 26 07.5	-0.3
BHW	Baring Head	2.69	36	Pn	Pn	21 26 08.1	-0.4
BHW	Baring Head	2.69	36	P	Pn	21 26 08.1	-0.4
SNZO	South Karori	2.70	33		Pn	21 26 07.6	-1.0
PLWZ	Palliser	2.74	43	Pn	Pn	21 26 08.7	-0.5
PLWZ	Palliser	2.74	43	P	Pn	21 26 08.4	-0.8
WEL	Wellington	2.75	33	P	Pn	21 26 09.3	0.0
HHSZ	Highcliff Hill	2.76	213	P	Pn	21 26 09.6	+0.1
QRZ	Quartz Range	2.78	356		Pn	21 26 09.8	0.0
QRZ	Quartz Range	2.78	356	P	Pn	21 26 10.3	+0.4
MSWZ	Moikau Station	2.85	41	Pn	Pn	21 26 10.1	-0.7
MSWZ	Moikau Station	2.85	41	P	Pn	21 26 10.0	-0.7
JCZ	Jackson Bay	2.92	259	P	Pn	21 26 12.7	+0.8
DUWZ	D'Urville Isla	2.93	17	P	Pn	21 26 12.4	+0.6
PAWZ	Paruwai Farm	2.96	42	P	Pn	21 26 11.9	-0.5
WKZ	Wanaka	2.97	244		Pn	21 26 12.4	0.0
WKZ	Wanaka	2.97	244	P	Pn	21 26 13.1	+0.7
EAZ	Earnscleugh	2.97	236	P	Pn	21 26 12.9	+0.5
CAW	Cannon Point	3.02	35	P	Pn	21 26 12.5	-0.5
TRWZ	Traveller	3.08	45	P	Pn	21 26 13.2	-0.7
MTW	Mount Morrison	3.17	40	P	Pn	21 26 14.1	-1.0
TUZ	Tuapeka	3.25	223	P	Pn	21 26 17.3	+1.2
OGWZ	Otaki Gorge	3.30	33	P	Pn	21 26 16.5	-0.4
MLZ	Mavora Lakes	3.77	241		Pn	21 26 23.8	+0.3
MLZ	Mavora Lakes	3.77	241	P	Pn	21 26 23.5	+0.1
BFZ	Birch Farm	3.90	43	Pn	Pn	21 26 24.1	-1.0
BFZ	Birch Farm	3.90	43	P	Pn	21 26 23.9	-1.2
SYZ	Scrubby Hill	3.90	220	P	Pn	21 26 26.9	+1.7
WHZ	Wether Hill Ro	4.13	235	Pn	Pn	21 26 28.2	-0.1
WHZ					Pg	21 26 42.5	-2.4
WHZ	Wether Hill Ro	4.13	235	P	Pn	21 26 27.8	-0.6
TSZ	Takapari Road	4.27	35	P	Pn	21 26 29.3	-0.9
NMEZ	Namu Road	4.27	12	P	Pn	21 26 32.7	+2.5
LREZ	Lake Rotokare	4.32	17	P	Pn	21 26 32.5	+1.7
PREZ	Palmer Road	4.38	14	P	Pn	21 26 33.7	+1.9
KHEZ	Kahui Hut	4.41	13	P	Pn	21 26 33.8	+1.6
PRHZ	Porangahau	4.41	42	P	Pn	21 26 30.8	-1.3
NBEZ	Newall Road No	4.41	11	P	Pn	21 26 33.7	+1.6
PNHZ	Pukenui	4.49	36	P	Pn	21 26 31.8	-1.5
PKE	Pukeiti	4.50	12	P	Pn	21 26 35.1	+1.6
DREZ	Durham Road	4.54	14	P	Pn	21 26 35.5	+1.6
APZ	The Paps	4.67	225	P	Pn	21 26 36.6	+0.7
MTVZ	Mangateitei	4.68	27	P	Pn	21 26 37.6	+1.7
VRZ	Vera Road	4.72	19	P	Pn	21 26 38.1	+1.7
PKVZ	Pokaka	4.72	25	P	Pn	21 26 37.9	+1.3
MOVZ	Moawhango	4.75	29	P	Pn	21 26 36.3	-0.6
TRVZ	Turoa	4.78	27	P	Pn	21 26 38.6	+1.2
KRHZ	Kereru	4.79	35	P	Pn	21 26 36.1	-1.3
BHHZ	Black Hill Sta	4.79	32	P	Pn	21 26 37.1	-0.4
WHVZ	Whangaehu Hut	4.81	27	P	Pn	21 26 39.2	+1.4
FWVZ	Far West T-bar	4.82	27	P	Pn	21 26 39.1	+1.1

TUVZ	**Tukino**	**4.84**	**28**	P	**Pn**	**21 26 39.1**	**+0.9**
KAHZ	**Kahuranaki**	**4.89**	**40**	P	**Pn**	**21 26 38.2**	**-0.6**
NGZ	**Ngauruhoe**	**4.91**	**27**	P	**Pn**	**21 26 39.9**	**+0.7**
TWVZ	**Taurewa**	**4.95**	**25**	P	**Pn**	**21 26 40.3**	**+0.6**
WTVZ	**West Tongariro**	**4.96**	**26**	P	**Pn**	**21 26 40.5**	**+0.7**
KRVZ	**Karewarewa**	**4.99**	**27**	P	**Pn**	**21 26 40.9**	**+0.6**
PYZ	**Puysegur Point**	**5.03**	**237**	Pn	**Pn**	**21 26 40.3**	**-0.4**
MCHZ	**McNeill Hill**	**5.09**	**37**	P	**Pn**	**21 26 41.5**	**-0.1**
KATZ	**Kakaramea**	**5.12**	**26**	P	**Pn**	**21 26 42.5**	**+0.4**
BKZ	**Black Stump Fm**	**5.24**	**33**	Pn	**Pn**	**21 26 42.4**	**-1.2**
BKZ	**Black Stump Fm**	**5.24**	**33**	P	**Pn**	**21 26 42.8**	**-0.9**
HIZ	**Hauiti**	**5.32**	**18**		**Pn**	**21 26 44.3**	**-0.4**
HIZ	**Hauiti**	**5.32**	**18**	P	**Pn**	**21 26 45.1**	**+0.4**
ARHZ	**Aropaoanui**	**5.37**	**38**	P	**Pn**	**21 26 48.0**	**+2.6**
NMHZ	**Naumai**	**5.43**	**35**	P	**Pn**	**21 26 45.5**	**-0.7**
MRHZ	**Matea Rd**	**5.50**	**31**	P	**Pn**	**21 26 45.3**	**-1.9**
MTHZ	**Maungataniwha**	**5.65**	**34**	P	**Pn**	**21 26 48.1**	**-1.2**
TLZ	**Tolley Road**	**5.67**	**23**	P	**Pn**	**21 26 49.1**	**-0.4**
RAHZ	**Arahi**	**5.70**	**36**	P	**Pn**	**21 26 49.7**	**-0.2**
MHGZ	**Mahia Peninsul**	**5.89**	**43**	P	**Pn**	**21 26 51.6**	**-0.9**
MUGZ	**Murupara**	**5.95**	**32**	P	**Pn**	**21 26 52.0**	**-1.3**
URZ	**Urewera**	**6.27**	**33**	Pn	**Pn**	**21 26 55.5**	**-2.1**
URZ	**Urewera**	**6.27**	**33**	P	**Pn**	**21 26 55.4**	**-2.3**
MWZ	**Matawai**	**6.37**	**36**	P	**Pn**	**21 26 57.2**	**-2.0**
AWAZ	**Awhitu Peninsu**	**6.69**	**13**	P	**Pn**	**21 27 04.2**	**+0.8**
MKAZ	**Moumakai**	**6.74**	**16**	P	**Pn**	**21 27 04.1**	**-0.1**
RUGZ	**Raukumara Rang**	**6.75**	**35**	P	**Pn**	**21 27 02.8**	**-1.6**
ETAZ	**East Tamaki Re**	**6.84**	**15**	P	**Pn**	**21 27 06.2**	**+0.6**
HAZ	**Te Kaha**	**6.97**	**35**	P	**Pn**	**21 27 05.2**	**-2.1**
WIAZ	**Waiheke Island**	**7.04**	**16**	P	**Pn**	**21 27 09.0**	**+0.8**
WMGZ	**Waiomatatini S**	**7.19**	**38**	P	**Pn**	**21 27 08.2**	**-2.2**
MXZ	**Matakaoa Point**	**7.36**	**37**	Pn	**Pn**	**21 27 12.6**	**0.0**
MXZ	**Matakaoa Point**	**7.36**	**37**	P	**Pn**	**21 27 11.4**	**-1.2**
OUZ	**Omahuta**	**8.40**	**5**	Pn	**Pn**	**21 27 27.4**	**+0.5**

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*THE **29** 21:30:49.5, 38.̊39N×20.̊46E, h4^{km}±2^{km}, ML2.5/13, Error ellipse: s-maj=2.7km s-min=0.3km az=136.0*

*ATH **29** 21:30:49.1, 38.̊38N×20.̊48E, h10^{km}±2^{km}, ML2.4/14, Error ellipse: s-maj=2.1km s-min=0.7km az=260.0*

ISC 29 21:30:48.3±0.8**, 38.̊38N**±0.̊02×**20.̊46E**±0.̊02**, h13**^{km}±4^{km}**, n64, **σ1^{s}.**00**/100**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VSK1	**VASILIKIADES**	**0.08**	**72**	P	**Pg**	**21 30 51.3**	**+0.2**
VSK1				S	**Sg**	**21 30 52.2**	**-0.9**
KONA	**Konidatara, Ke**	**0.09**	**64**	P	**Pg**	**21 30 51.5**	**+0.2**
KONA				AML	AML	21 30 53.5	
	comp=E,6871µm,0.4s						
KONA				AML	AML	21 30 53.6	
	comp=N,10491µm,0.2s						
KEF1	**Kardakata, Kep**	**0.11**	**177**	P	**Pg**	**21 30 51.5**	**+0.2**
KEF1				S	**Sg**	**21 30 53.2**	**-0.3**
FSK	**Fiskardo**	**0.11**	**46**	P	**Pg**	**21 30 51.6**	**+0.2**
FSK				S	**Sg**	**21 30 54.0**	**+0.4**
	comp=N,5µm,0.1s						
FSK	**Fiskardo**	**0.11**	**46**	P	**Pg**	**21 30 51.6**	**+0.2**
FSK				S	**Sg**	**21 30 53.7**	**+0.1**
FSK				AML	AML	21 30 54.0	
	comp=N,4439µm,0.2s						
FSK				AML	AML	21 30 54.1	
	comp=E,13094µm,0.2s						
KEF4	**Livadi, Kephal**	**0.13**	**194**	P	**Pg**	**21 30 52.0**	**+0.4**
KEF4				S	**Sg**	**21 30 54.6**	**+0.7**
AGT1	**Agia Thekli**	**0.15**	**205**	P	**Pg**	**21 30 52.2**	**+0.3**
AGT1				S	**Sg**	**21 30 55.0**	**+0.6**
LXR1	**Lixouri, Cepha**	**0.18**	**186**	P	**Pg**	**21 30 53.1**	**+0.7**
LXR1				S	**Sg**	**21 30 56.6**	**+1.3**
LXRA	**Lixouri, Kepha**	**0.18**	**186**	P	**Pg**	**21 30 53.1**	**+0.7**
LXRA				S	**Sg**	**21 30 56.5**	**+1.1**
KEF3	**Kipouria, Keph**	**0.20**	**207**	P	**Pg**	**21 30 53.3**	**+0.5**
KEF3				S	**Sg**	**21 30 56.9**	**+1.1**
ARG2	**Argostoli**	**0.21**	**175**	P	**Pg**	**21 30 53.3**	**+0.5**
ARG2				S	**Sg**	**21 30 56.8**	**+0.9**
ARGA	**Argostoli. Kep**	**0.21**	**177**	P	**Pg**	**21 30 53.2**	**+0.4**
ARGA				S	**Sg**	**21 30 56.9**	**+1.0**
CHV1	**Chavriata, Kef**	**0.21**	**198**	P	**Pg**	**21 30 53.4**	**+0.5**
CHV1				S	**Sg**	**21 30 57.3**	**+1.3**
KEF2	**Argostoli. Kep**	**0.22**	**175**	P	**Pg**	**21 30 53.5**	**+0.5**
KEF2				S	**Sg**	**21 30 57.3**	**+1.1**
VLS	**Valsamata**	**0.23**	**154**	P	**Pg**	**21 30 53.6**	**+0.4**
VLS				S	**Sg**	**21 30 57.5**	**+0.9**
	comp=E,3µm,0.1s						
VLS	**Valsamata**	**0.23**	**154**	P	**Pg**	**21 30 53.6**	**+0.4**
VLS				S	**Sg**	**21 30 57.5**	**+0.9**
VLS				AML	AML	21 30 59.5	
	comp=E,5774µm,0.1s						
VLS				AML	AML	21 31 01.0	
	comp=N,6154µm,0.2s						
EVGI	**Lefkada island**	**0.28**	**32**	P	**Pb**	**21 30 55.0**	**-0.2**
EVGI				S	**Sb**	**21 30 59.7**	**-0.1**
EVGI	**Lefkada island**	**0.28**	**32**	P	**Pb**	**21 30 55.0**	**-0.2**
EVGI				S	**Sb**	**21 30 59.6**	**-0.3**
KFL	**Anninata**	**0.37**	**137**	P	**Pb**	**21 30 56.4**	**-0.4**
KFL				S	**Sb**	**21 31 02.9**	**+0.4**
	comp=N,2µm,0.3s						
KFL	**Anninata**	**0.37**	**137**	P	**Pb**	**21 30 56.3**	**-0.4**
KFL				S	**Sb**	**21 31 02.4**	**-0.1**
KFL				AML	AML	21 31 05.1	
	comp=E,5035µm,0.3s						
KFL				AML	AML	21 31 06.6	
	comp=N,3199µm,0.4s						
MGNA	**Meganis**	**0.37**	**43**	P	**Pb**	**21 30 56.5**	**-0.2**
MGNA				S	**Sb**	**21 31 02.1**	**-0.4**
MGNA				AML	AML	21 31 03.2	
	comp=N,3317µm,0.3s						
MGNA				AML	AML	21 31 03.4	
	comp=E,2273µm,0.2s						
LKD2	**Lefkada island**	**0.43**	**21**	P	**Pb**	**21 30 57.7**	**-0.1**
LKD2				S	**Sb**	**21 31 04.4**	**+0.2**
	comp=E,450nm,0.3s						
LKD2	**Lefkada island**	**0.43**	**21**	P	**Pb**	**21 30 57.6**	**-0.2**
LKD2				S	**Sb**	**21 31 04.6**	**+0.3**
LKD2				AML	AML	21 31 08.0	
	comp=E,717µm,0.3s						
LKD2				AML	AML	21 31 09.5	
	comp=N,1074µm,0.4s						
TSLK	**Tsoukalades, L**	**0.47**	**19**	P	**Pb**	**21 30 58.3**	**0.0**
TSLK				S	**Sb**	**21 31 04.6**	**-0.5**
	comp=N,602nm,0.4s						
TSLK	**Tsoukalades, L**	**0.47**	**19**	P	**Pb**	**21 30 58.4**	**0.0**
TSLK				AML	AML	21 31 11.0	
	comp=E,1039µm,0.3s						
TSLK				AML	AML	21 31 11.9	
	comp=N,1308µm,0.4s						
AST1	**Astakos**	**0.52**	**72**	P	**Pb**	**21 30 59.2**	**0.0**
AST1				S	**Sn**	**21 31 07.1**	**-2.9**
	comp=N,2µm,0.2s						
VTN	**Vitineika**	**0.74**	**129**	P	**Pn**	**21 31 03.3**	**-1.0**
RLS	**Riolos of Patr**	**0.85**	**112**	P	**Pn**	**21 31 05.2**	**-0.8**
RLS				AML	AML	21 31 27.4	
	comp=N,281µm,0.5s						
RLS				AML	AML	21 31 30.2	
	comp=E,294µm,0.5s						
PVO	**Paravola**	**0.86**	**74**	P	**Pn**	**21 31 06.0**	**-0.2**
PVO				S	**Sn**	**21 31 18.9**	**+0.3**
	comp=E,375nm,0.5s						
PVO	**Paravola**	**0.86**	**74**	P	**Pn**	**21 31 06.0**	**-0.2**
PVO				AML	AML	21 31 22.5	
	comp=N,766µm,0.5s						
PVO				AML	AML	21 31 23.5	
	comp=E,670µm,0.6s						
DRO	**Drossia**	**1.07**	**113**	P	**Pg**	**21 31 09.0**	**0.0**
DRO				S	**Sg**	**21 31 24.9**	**+2.0**
	comp=E,388nm,0.3s						
DRO	**Drossia**	**1.07**	**113**	P	**Pg**	**21 31 08.8**	**-0.2**
EFP	**Efpalio**	**1.13**	**87**	P	**Pg**	**21 31 10.2**	**+0.1**
EFP				S	**Sg**	**21 31 27.4**	**+2.5**
	comp=E,282nm,0.6s						
EFP	**Efpalio**	**1.13**	**87**	P	**Pg**	**21 31 10.0**	**-0.1**
EFP				AML	AML	21 31 34.0	
	comp=E,635µm,0.6s						
EFP				AML	AML	21 31 36.4	
	comp=N,444µm,0.6s						
IGT	**Igoumenitsa**	**1.15**	**355**	P	**Pg**	**21 31 10.2**	**-0.3**
IGT				AML	AML	21 31 34.6	
	comp=E,205µm,0.4s						
IGT				AML	AML	21 31 35.9	
	comp=N,144µm,0.3s						
ANX	**Ano Chora**	**1.16**	**79**	P	**Pg**	**21 31 10.8**	**+0.1**
ANX				S	**Sg**	**21 31 28.8**	**+3.0**
	comp=N,258nm,0.6s						
ANX	**Ano Chora**	**1.16**	**79**	P	**Pg**	**21 31 10.7**	**+0.1**
ANX				AML	AML	21 31 35.1	
	comp=N,543µm,0.6s						
ANX				AML	AML	21 31 36.4	
	comp=E,523µm,0.7s						
EVR	**Evrytania**	**1.18**	**63**	P	**Pg**	**21 31 10.7**	**-0.3**
EVR				S	**Sg**	**21 31 30.5**	**+4.1**
	comp=E,78nm,0.7s						
EVR	**Evrytania**	**1.18**	**63**	P	**Pg**	**21 31 10.7**	**-0.3**
SERG	**Sergoula**	**1.25**	**88**	P	**Pg**	**21 31 12.0**	**-0.4**
TRIZ	**Trizonia**	**1.27**	**90**	P	**Pg**	**21 31 12.0**	**-0.6**
AMT	**Artemida-Makis**	**1.30**	**130**	P	**Pg**	**21 31 13.5**	**+0.2**
ALIK	**Aliki, Aigiali**	**1.30**	**95**	P	**Pg**	**21 31 13.2**	**-0.1**
ALIK				S	**Sg**	**21 31 33.0**	**+2.8**
KALE	**Kalithea**	**1.32**	**89**	P	**Pg**	**21 31 13.0**	**-0.7**
KALE				AML	AML	21 31 39.4	
	comp=N,328µm,0.7s						
KALE				AML	AML	21 31 41.3	
	comp=E,169µm,0.5s						
KEK	**Kerkira**	**1.43**	**339**	P	**Pg**	**21 31 15.6**	**0.0**
MAKR	**Makrakomi, Fth**	**1.45**	**64**	P	**Pg**	**21 31 15.9**	**-0.2**
MAKR				S	**Sg**	**21 31 36.0**	**+1.0**
	comp=E,160nm,0.4s						
MAKR	**Makrakomi, Fth**	**1.45**	**64**	P	**Pg**	**21 31 16.0**	**-0.2**
AGG	**Agios Georgios**	**1.59**	**66**	P	**Pg**	**21 31 18.3**	**-0.6**
DSF	**Desfina**	**1.62**	**88**	P	**Pg**	**21 31 19.1**	**-0.3**
ITM	**Ithomi**	**1.67**	**136**	P	**Pg**	**21 31 20.0**	**-0.4**
THL	**Klokotos Trika**	**1.69**	**45**	P	**Pg**	**21 31 21.1**	**+0.4**
THL				S	**Sn**	**21 31 36.3**	**-2.6**
	comp=E,58nm,0.7s						
THL	**Klokotos Trika**	**1.69**	**45**	P	**Pg**	**21 31 21.4**	**+0.8**
THL				AML	AML	21 31 52.4	
	comp=N,137µm,0.6s						
THL				AML	AML	21 31 54.7	
	comp=E,102µm,0.7s						
KPRO	**Kipourio**	**1.72**	**24**	P	**Pg**	**21 31 22.5**	**+1.2**
PYL	**PYLOS**	**1.80**	**145**	P	**Pb**	**21 31 21.2**	**+0.1**
PROD	**Prodromos**	**1.92**	**93**	P	**Pg**	**21 31 25.2**	**0.0**
DID	**Didima**	**2.36**	**111**	P	**Pb**	**21 31 30.6**	**-0.1**
DBRK	**Dubrovnik**	**4.63**	**338**	Sn	**Sn**	**21 32 51.5**	**0.0**
STON	**Ston**	**4.95**	**336**	*e*Pn	**Pn**	**21 32 02.5**	**+0.3**
STON				Sn	**Sn**	**21 32 57.6**	**-1.7**
RICI	**Ricice**	**5.69**	**335**	*e*Pn	**Pn**	**21 32 12.0**	**-0.6**
RICI				Sn	**Sn**	**21 33 17.1**	**-0.7**
ZIRJ	**Zirje**	**6.40**	**327**	*e*Pn	**Pn**	**21 32 22.1**	**-0.1**
MORI	**Morici**	**6.55**	**328**	*e*Pn	**Pn**	**21 32 25.2**	**+1.0**
MORI				Sn	**Sn**	**21 33 36.9**	**-1.8**
DUGI	**Dugi Otok**	**6.93**	**326**	*i* Pn	**Pn**	**21 32 30.1**	**+0.6**
DUGI				Sn	**Sn**	**21 33 46.2**	**-1.9**
UDBI	**Udbina**	**7.08**	**332**	*i* Pn	**Pn**	**21 32 33.0**	**+1.4**
NVLJ	**Novalja**	**7.46**	**328**	*i* Pn	**Pn**	**21 32 37.0**	**+0.2**

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*IDC **29** 21:32:44.6±1.0, 33.̊88N×117.̊84W, h0^{km}, mb4.0/7, mb1 4.0/13, mb1mx3.8/40, mbtmp3.8/13, ML3.7/6, MS3.6/4, Ms1 3.6/4, ms1mx3.0/40, Error ellipse: s-maj=13.9km s-min=7.6km az=46.0*

*ANF **29** 21:32:44.8±0.3, 33.̊95N×117.̊89W, h7^{km}±2^{km}, ML4.7/46, Error ellipse: s-maj=2.0km s-min=1.8km az=41.0*

*IASPEI **29** 21:32:45.4±0.8, 33.̊95N±0.̊02×117.̊89W±0.̊01, h17^{km}±5^{km}, mb4.4/19, Error ellipse: s-maj=2.4km s-min=2.0km az=31.2, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*SCEDC **29** 21:32:45.9, 33.̊96N×117.̊89W, h9^{km}*

*PAS **29** 21:32:45.9±2.2, 33.̊96N±0.̊04×117.̊89W±0.̊04, h9^{km}±2^{km}, Mwr4.1/6, mb4.4/40(NEIC), Error ellipse: s-maj=5.5km s-min=4.2km az=168.0*

*NEIC **29** 21:32:46.5±2.4, 33.̊87N±0.̊05×117.̊89W±0.̊05, h14^{km}±3^{km}, Error ellipse: s-maj=8.7km s-min=4.4km az=214.0*

ISC 29 21:32:46.7±0.6**, 33.̊94N**±0.̊01×**117.̊89W**±0.̊01**, h16**^{km}±4^{km}**, n324, **σ1^{s}.**47**/381**, mb4.4**/19**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FULC	**Fullerton**	**0.07**	**201**		**Pg**	**21 32 48.3**	**-1.6**
FULC					**Sg**	**21 32 51.4**	**-0.5**
RHC	**Rose Hills Cem**	**0.12**	**300**		**Pg**	**21 32 48.4**	**-2.0**
RHC					**Sg**	**21 32 50.8**	**-2.1**
BREC	**Barre Substati**	**0.15**	**209**		**Pg**	**21 32 50.1**	**-0.7**
BREC					**Sg**	**21 32 54.1**	**+0.6**
PSRC	**Puddingstone R**	**0.17**	**25**		**Pg**	**21 32 52.0**	**+1.0**
CHNC	**Chino**	**0.18**	**72**		**Pg**	**21 32 49.9**	**-1.4**
CHNC					**Sg**	**21 32 53.3**	**-0.9**
DLAC	**Del Amo**	**0.20**	**241**		**Pg**	**21 32 50.8**	**-0.6**
DLAC					**Sg**	**21 32 55.4**	**+0.9**
GVRC	**Garvey Reservo**	**0.22**	**299**		**Pg**	**21 32 50.4**	**-1.4**
SANC	**Santa Ana**	**0.24**	**179**		**Pg**	**21 32 51.5**	**-0.5**
SANC					**Sg**	**21 32 56.3**	**+0.7**
CACC	**Caltech Cellar**	**0.27**	**315**		**Pg**	**21 32 50.9**	**-1.7**
GSA	**Caltech--GSA**	**0.28**	**315**		**Pg**	**21 32 51.0**	**-1.7**
GSA					**Sg**	**21 32 55.4**	**-1.5**
GSA	**Caltech--GSA**	**0.28**	**315**		**Pg**	**21 32 51.0**	**-1.7**
GSA					**Sg**	**21 32 55.3**	**-1.5**
CBCC	**Caltech Broad**	**0.28**	**315**		**Pg**	**21 32 51.2**	**-1.6**
CBCC	**Caltech Broad**	**0.28**	**315**		**Sg**	**21 32 55.4**	**-1.5**
MLSC	**Mira Loma**	**0.28**	**77**		**Sg**	**21 32 55.5**	**-1.4**
CRNC	**Corona**	**0.28**	**104**		**Pg**	**21 32 51.5**	**-1.3**
MWC	**Mount Wilson**	**0.31**	**334**		**Pg**	**21 32 51.6**	**-1.9**
MWC				Sg	**Sg**	**21 32 56.0**	**-2.1**
PASC	**Pasadena Art C**	**0.34**	**313**		**Sg**	**21 32 56.5**	**-2.0**
PASC	**Pasadena Art C**	**0.34**	**313**		**Pg**	**21 32 51.9**	**-1.9**
USC	**University of**	**0.34**	**283**		**Pg**	**21 32 53.1**	**-0.6**
BFSC	**Mount Baldy Ra**	**0.35**	**33**		**Sg**	**21 32 57.6**	**-1.6**
BFSC	**Mount Baldy Ra**	**0.35**	**33**	P	**Pg**	**21 32 52.4**	**-1.7**
	baz=215,SNR=1000						
BFSC				S	**Sg**	**21 32 57.5**	**-1.6**
	baz=215						
XTL	**Crystal Lake,**	**0.35**	**4**		**Pg**	**21 32 52.3**	**-1.9**
CHFC	**Chilao Flat St**	**0.41**	**344**		**Pg**	**21 32 53.0**	**-2.1**
FMP	**Fort Macarthur**	**0.41**	**236**	P	**Pg**	**21 32 53.6**	**-1.4**
	baz=53,SNR=123						
FON	**Fontana**	**0.41**	**67**		**Pg**	**21 32 53.6**	**-1.4**
LCGC	**La Cienega, Cu**	**0.41**	**278**		**Pg**	**21 32 54.4**	**-0.6**
RVR	**Riverside**	**0.43**	**83**		**Pg**	**21 32 53.7**	**-1.7**
RVR					**Sg**	**21 32 59.9**	**-1.5**
HLLC	**North Hollywoo**	**0.45**	**301**		**Pg**	**21 32 54.1**	**-1.7**
RSBC	**Riverside Bore**	**0.47**	**86**		**Pg**	**21 32 54.6**	**-1.5**
RSBC					**Sg**	**21 33 01.1**	**-1.4**
DECC	**Green Verdugo**	**0.48**	**310**	P	**Pg**	**21 32 54.4**	**-2.0**
	baz=128,SNR=416						
DECC				S	**Sg**	**21 33 01.2**	**-1.7**
	baz=128						
DJJ	**Donna J Jenkin**	**0.50**	**289**		**Pg**	**21 32 54.8**	**-1.8**
DJJ	**Donna J Jenkin**	**0.50**	**289**		**Pg**	**21 32 54.8**	**-1.8**
JNH	**Juniper Hills**	**0.51**	**354**		**Pg**	**21 32 54.9**	**-2.0**
JNH					**Sg**	**21 33 02.0**	**-1.7**
CFSC	**Central Fire S**	**0.53**	**72**		**Pg**	**21 32 55.8**	**-1.5**
CSP	**Cedar Springs**	**0.57**	**51**		**Pg**	**21 32 56.4**	**-1.6**
HLNC	**Highland**	**0.58**	**72**		**Pg**	**21 32 56.8**	**-1.4**
LRRC	**Littlerock Res**	**0.59**	**349**		**Pg**	**21 32 56.4**	**-2.0**
PEC	**Perris**	**0.61**	**95**		**Pg**	**21 32 57.0**	**-1.8**
IR2C	**Iron Canyon**	**0.61**	**317**		**Pg**	**21 32 56.7**	**-2.2**
CJV	**Casa Juvan**	**0.62**	**340**		**Pg**	**21 32 56.9**	**-2.2**
CJV					**Sg**	**21 33 05.3**	**-2.1**
CFT	**Crafton Hills**	**0.65**	**82**		**Pg**	**21 32 57.9**	**-1.6**
MURC	**Murrieta**	**0.67**	**120**		**Pg**	**21 32 58.5**	**-1.3**
MURC					**Sg**	**21 33 08.0**	**-0.8**
MURC	**Murrieta**	**0.67**	**120**	P	**Pg**	**21 32 58.6**	**-1.3**
	baz=302,SNR=1000						
MURC				S	**Sg**	**21 33 08.0**	**-0.8**
	baz=302						
SVD	**Seven Oaks Dam**	**0.68**	**76**		**Pg**	**21 32 58.3**	**-1.7**
CIAC	**Catalina I. Ai**	**0.69**	**219**		**Pg**	**21 32 58.6**	**-1.7**
CIAC					**Sg**	**21 33 08.6**	**-0.9**
CIS	**Catalina Islan**	**0.69**	**219**	P	**Pg**	**21 32 58.5**	**-1.8**
	baz=38						
CIS				S	**Sg**	**21 33 09.3**	**-0.2**
	baz=38						
LEOC	**Leona Valley**	**0.77**	**334**		**Pg**	**21 32 59.3**	**-2.5**
HMTC	**Hemet**	**0.77**	**107**		**Pg**	**21 32 60.0**	**-1.8**
BACC	**Bachelor Mtn.**	**0.78**	**115**		**Sg**	**21 33 11.0**	**-1.2**
DGR	**Domenigoni Val**	**0.79**	**111**		**Sg**	**21 33 10.9**	**-1.7**
BTL	**Butler Peak**	**0.80**	**67**		**Pg**	**21 33 00.7**	**-1.7**
ALPC	**Antelope**	**0.82**	**336**		**Pg**	**21 33 00.3**	**-2.4**
ALPC					**Sg**	**21 33 13.5**	**+0.1**
FOXC	**Fox Airport**	**0.85**	**341**		**Pg**	**21 33 01.1**	**-2.2**
BBRC	**Big Bear Solar**	**0.87**	**68**	P	**Pg**	**21 33 01.8**	**-1.8**
	baz=250,SNR=467						
BTPC	**Burnt Peak**	**0.93**	**323**		**Pg**	**21 33 02.4**	**-2.4**
EDW2	**Edwards Air Fo**	**0.94**	**355**		**Pg**	**21 33 02.8**	**-2.1**
EDW2					**Sg**	**21 33 15.8**	**-1.6**
EDW2	**Edwards Air Fo**	**0.94**	**355**	P	**Pg**	**21 33 02.8**	**-2.1**
	baz=175,SNR=1000						
EDW2				S	**Sg**	**21 33 16.2**	**-1.2**
	baz=175						
PYR	**Pyramid**	**0.94**	**312**		**Pg**	**21 33 03.0**	**-2.0**
HYS	**Haystack Butte**	**0.96**	**16**		**Pg**	**21 33 03.3**	**-2.0**
GORC	**Green Oak Ranc**	**0.96**	**145**		**Pg**	**21 33 02.9**	**-2.4**
GORC					**Sg**	**21 33 16.5**	**-1.5**
OSI	**Osito Audit: C**	**0.96**	**314**		**Pg**	**21 33 03.3**	**-2.1**
OSI	**Osito Audit: C**	**0.96**	**314**	P	**Pg**	**21 33 03.2**	**-2.2**
	baz=133,SNR=363						
OSI				S	**Sg**	**21 33 16.4**	**-1.6**
	baz=133						
SIL	**Silver Peak**	**0.97**	**65**		**Pg**	**21 33 03.6**	**-2.0**
TPO	**Tropico Hills**	**0.97**	**343**		**Pg**	**21 33 03.3**	**-2.4**
TPO					**Sg**	**21 33 17.9**	**-0.5**
BLG	**Laguna Peak, P**	**0.99**	**280**		**Sg**	**21 33 17.3**	**-1.6**
BLG	**Laguna Peak, P**	**0.99**	**280**	P	**Pg**	**21 33 03.6**	**-2.3**
	baz=98,SNR=108						
BLG				S	**Sg**	**21 33 17.6**	**-1.3**
	baz=98						
CRY	**Cary Ranch**	**1.03**	**111**		**Pg**	**21 33 04.7**	**-2.0**
CRY					**Sg**	**21 33 18.2**	**-2.0**
PLM	**Palomar**	**1.04**	**124**		**Sg**	**21 33 19.5**	**-1.0**
GVDA	**Garner Valley**	**1.05**	**105**		**Sg**	**21 33 19.0**	**-1.7**
DEVC	**Devers**	**1.09**	**90**		**Pg**	**21 33 06.0**	**-1.8**
SCI2	**San Clemente I**	**1.11**	**210**		**Pb**	**21 33 05.6**	**-1.9**
SCI2	**San Clemente I**	**1.11**	**210**	P	**Pb**	**21 33 05.5**	**-1.9**
	baz=29,SNR=167						
BZNA	**Buzz No.'s Pla**	**1.11**	**113**		**Sg**	**21 33 21.0**	**-1.8**
DNR	**Dunn Ranch,Anz**	**1.11**	**109**		**Sg**	**21 33 21.5**	**-1.4**
RMR	**Rimrock**	**1.12**	**76**		**Pg**	**21 33 06.3**	**-2.2**
STCC	**Santa Clara**	**1.13**	**289**		**Pb**	**21 33 06.8**	**-1.1**
THC	**Tehachapi Micr**	**1.16**	**327**		**Pb**	**21 33 06.6**	**-1.8**
FRD	**Ford Ranch, An**	**1.16**	**112**		**Pb**	**21 33 07.1**	**-1.3**
RRX	**Edison Barstow**	**1.19**	**38**	P	**Pb**	**21 33 07.8**	**-1.1**
	baz=219,SNR=377						
RRX				S	**Sb**	**21 33 23.9**	**-0.1**
	baz=219						
PFO	**Pinyon Flats O**	**1.24**	**105**	Pg	**Pn**	**21 33 08.1**	**-1.3**
	188nm,0.3s,baz=285,slow=18,SNR=840						
PFO				Lg	Lg	21 33 24.7	
	485nm,0.3s,baz=188,slow=7.5,SNR=28						
PFO	**Pinyon Flats O**	**1.24**	**105**	Pn	**Pn**	**21 33 08.4**	**-1.0**
PFO	**Pinyon Flats O**	**1.24**	**105**	P	**Pn**	**21 33 08.1**	**-1.3**
	baz=287,SNR=1000						
PFO				S	**Sb**	**21 33 25.0**	**-0.5**
	baz=287						
109C	**Camp Elliot, M**	**1.24**	**148**	Pn	**Pn**	**21 33 07.8**	**-1.5**
109C					**Sb**	**21 33 24.4**	**-1.0**
109C	**Camp Elliot, M**	**1.24**	**148**	P	**Pn**	**21 33 07.6**	**-1.7**
	baz=329,SNR=400						
109C				S	**Sb**	**21 33 24.3**	**-1.0**
	baz=329						
CPE	**Camp Elliot**	**1.24**	**148**		**Pn**	**21 33 07.3**	**-1.9**
XPFO	**Pion Flat**	**1.24**	**105**	Pn	**Pn**	**21 33 08.4**	**-1.1**
XPFO					**Sb**	**21 33 24.9**	**-0.7**
XPFO	**Pion Flat**	**1.24**	**105**		**Pn**	**21 33 08.2**	**-1.3**
BLAC	**Blackrock camp**	**1.25**	**84**		**Pn**	**21 33 08.7**	**-0.9**
TJR	**Tejon Ranch**	**1.29**	**327**		**Pn**	**21 33 08.9**	**-1.2**
GTM	**Goat Mountain**	**1.32**	**74**		**Pn**	**21 33 09.7**	**-0.8**
DTP	**Desert Tortois**	**1.32**	**2**		**Pn**	**21 33 09.6**	**-0.9**
MPI	**Mount Pinos, F**	**1.35**	**310**		**Pn**	**21 33 10.0**	**-1.2**
ARVC	**Arvin**	**1.41**	**327**		**Pn**	**21 33 11.1**	**-0.7**
ARVC	**Arvin**	**1.41**	**327**	Pb	**Pn**	**21 33 11.0**	**-0.7**
	baz=146,SNR=386						
ARVC				Sb	**Sn**	**21 33 30.3**	**+0.3**
	baz=146						
SCZ2	**Santa Cruz Isl**	**1.45**	**273**	P	**Pn**	**21 33 10.3**	**-2.0**
	baz=91,SNR=132						
SCZ2				Sg	**Sb**	**21 33 32.5**	**+1.0**
	baz=91						
SNCC	**San Nicolas Is**	**1.53**	**244**		**Pn**	**21 33 11.3**	**-2.0**
SNCC	**San Nicolas Is**	**1.53**	**244**	P	**Pn**	**21 33 11.2**	**-2.1**
	baz=62,SNR=34						
LRMC	**Laurel Mtn Rad**	**1.54**	**6**	P	**Pn**	**21 33 12.9**	**-0.7**
	baz=187,SNR=781						
LRMC				S	**Sn**	**21 33 32.8**	**-0.6**
	baz=187						
HEC	**Hector,Ludlow**	**1.56**	**55**	Pb	**Pn**	**21 33 13.3**	**-0.6**
	baz=236,SNR=1000						
HEC				Sb	**Sb**	**21 33 35.4**	**+0.6**
	baz=236						
BELC	**Belle Mtn. Jos**	**1.57**	**87**	Pb	**Pn**	**21 33 13.6**	**-0.4**
	baz=269,SNR=1000						
BELC				Sb	**Sb**	**21 33 35.4**	**+0.2**
	baz=269						
SBC	**Santa Barbara**	**1.59**	**289**	Pb	**Pn**	**21 33 14.0**	**-0.2**
	baz=107,SNR=64						
SBC				Sb	**Sn**	**21 33 35.9**	**+1.5**
	baz=107						
MONP2	**Monument Peak**	**1.61**	**130**	Pb	**Pn**	**21 33 14.0**	**-0.6**
	baz=312,SNR=1000						
MONP2				Sb	**Sn**	**21 33 35.7**	**+0.5**
	baz=312						
BAR	**Barrett**	**1.62**	**141**	Pn	**Pn**	**21 33 14.1**	**-0.5**
GSC	**Goldstone, Bar**	**1.62**	**33**	Pn	**Pn**	**21 33 14.8**	**+0.1**
GSC	**Goldstone, Bar**	**1.62**	**33**	Pb	**Pn**	**21 33 14.5**	**-0.3**
	baz=214,SNR=1000						
GSC				Sb	**Sn**	**21 33 36.6**	**+1.3**
	baz=214						
ISA	**Isabella, Lake**	**1.78**	**345**	Pn	**Pn**	**21 33 16.5**	**-0.4**
ISA	**Isabella, Lake**	**1.78**	**345**	P	**Pn**	**21 33 16.1**	**-0.8**
	baz=164,SNR=818						
ISA				S	**Sn**	**21 33 38.8**	**-0.4**
	baz=164						
PKM	**Mcpherson Peak**	**1.85**	**301**	Pb	**Pn**	**21 33 17.9**	**0.0**
	baz=120,SNR=280						
IKP	**In-Ko-Pah, Jac**	**1.97**	**130**	Pb	**Pn**	**21 33 20.7**	**+1.3**
	baz=312,SNR=389						
IKP				Sb	**Sb**	**21 33 46.7**	**+0.1**
	baz=312						
SWSC	**Sam W. Stewart**	**2.01**	**119**	Pg	**Pb**	**21 33 22.5**	**-0.3**
	baz=301,SNR=237						
SWSC				Sb	**Sb**	**21 33 49.3**	**+1.7**
	baz=301						
GMRC	**Granite Mounta**	**2.03**	**65**	Pn	**Pn**	**21 33 19.4**	**-0.9**
	baz=247,SNR=1000						
GMRC				Pg	**Pb**	**21 33 22.7**	**-0.5**
	baz=247						
BC3	**Big Chuckawall**	**2.05**	**97**	Pn	**Pn**	**21 33 19.3**	**-1.3**
	baz=279,SNR=559						
BC3				Pg	**Pb**	**21 33 23.7**	**+0.1**
	baz=279						
BC3				Sb	**Sb**	**21 33 49.8**	**+0.9**
	baz=279						
VES	**Vestal, Richgr**	**2.13**	**333**	P	**Pn**	**21 33 21.5**	**-0.1**
	baz=152,SNR=93						
VES				S	**Sn**	**21 33 48.4**	**+0.7**
	baz=152						
MPMC	**Manual Prospec**	**2.14**	**9**	P	**Pn**	**21 33 21.2**	**-0.6**
	baz=189,SNR=654						
MPMC				Sg	**Sg**	**21 33 53.9**	**-1.6**
	baz=189						
TUQ	**Turquoise Moun**	**2.20**	**47**	P	**Pn**	**21 33 22.1**	**-0.6**
	baz=228,SNR=76						
TUQ				Sb	**Sb**	**21 33 54.8**	**+1.6**
	baz=228						
SMMC	**Simmler**	**2.21**	**309**	P	**Pn**	**21 33 22.3**	**-0.4**
	baz=127,SNR=92						
IRM	**Iron Mountain**	**2.29**	**84**	Pn	**Pn**	**21 33 22.8**	**-1.0**
	baz=266,SNR=530						
IRM				Pb	**Pb**	**21 33 27.3**	**-0.3**
	baz=266						
IRM				Sb	**Sb**	**21 33 57.1**	**+1.5**
	baz=266						
SHOC	**Shoshone, Teco**	**2.36**	**34**	Pn	**Pn**	**21 33 24.6**	**-0.2**
	baz=215,SNR=68						
SHOC				Pb	**Pb**	**21 33 29.2**	**+0.3**
	baz=215						
CWC	**Cottonwood Cre**	**2.50**	**356**	Sb	**Sb**	**21 34 04.3**	**+2.5**
	baz=176						
PAGB	**Antelope Grade**	**2.64**	**313**		**Pn**	**21 33 28.2**	**-0.4**
FURC	**Furnace Creek,**	**2.66**	**18**	Pg	**Pg**	**21 33 36.1**	**-1.5**
	baz=199,SNR=21						
FURC				Sg	**Sg**	**21 34 11.9**	**-0.1**
	baz=199						
VOG	**Valley Oaks Go**	**2.67**	**333**	P	**Pn**	**21 33 28.9**	**-0.1**
	baz=152,SNR=9.5						
GLA	**Glamis**	**2.71**	**108**	P	**Pn**	**21 33 30.1**	**+0.5**
	baz=290						
Y12C	**Blythe**	**2.81**	**93**		**Pn**	**21 33 29.9**	**-1.0**

Y12C	Blythe	2.81	93	Pn	Pn	21 33 30.0	-0.9
	baz=275,SNR=38						
Y12C				Pg	Pb	21 33 37.3	+0.9
	baz=275						
Y12C				Sb	Sb	21 34 13.7	+3.1
	baz=275						
NEE2	Needles Airpor	2.83	72	Pn	Pn	21 33 31.0	-0.2
	baz=254,SNR=14						
NEE2				Pg	Pb	21 33 38.7	+1.9
	baz=254						
GRAC	Grapevine Rang	3.08	8	P	Pn	21 33 35.4	+0.8
	baz=188,SNR=19						
GRAC				Sg	Sg	21 34 25.8	+0.3
	baz=188						
TIN	Tinemaha, Big	3.12	355	P	Pn	21 33 36.1	+0.8
	baz=175,SNR=13						
TIN				Sg	Sg	21 34 26.6	-0.3
	baz=175						
PDMCI	Parker Dam,Lak	3.13	82	Pg	Pb	21 33 43.6	+1.7
	baz=265,SNR=34						
TPNV	Topopah Spring	3.29	24	P	Pn	21 33 38.2	+0.6
	baz=205,SNR=107						
TPNV				Sg	Sg	21 34 29.7	-2.5
	baz=205						
PMPB	Monarch Peak	3.29	314		Pn	21 33 36.9	-0.7
W13A	Hualapai Mount	3.50	70		Pn	21 33 40.5	-0.2
113A	Mohawk Valley,	3.64	108	Pn	Pn	21 33 42.5	+0.1
MLAC	Mammoth, Mammo	3.76	348	Sg	Sg	21 34 45.7	-1.8
	baz=168						
OMMB	Old Mammoth Mi	3.77	346	Pn	Pn	21 33 45.4	+1.0
MDPB	Devils Postpil	3.81	346	Pn	Pn	21 33 45.6	+0.7
Y14A	Wickenburg	4.06	89		Pn	21 33 47.6	-0.6
NV11	Mina Array Sit	4.49	357	Pn	Pn	21 33 55.4	+1.3
NVAR	Mina Array Bea	4.49	356	Pn	Pn	21 33 56.1	+1.9
	2.4nm,0.3s,baz=178,slow=14,SNR=7.0						
NVAR				Sn	Sn	21 34 50.0	+3.8
	12nm,0.3s,baz=164,slow=18,SNR=4.0						
NVAR				Lg	Lg	21 35 09.7	
	17nm,0.3s,baz=223,slow=17,SNR=4.6						
NVAR				LR	LR	21 35 53.7	
	comp=Z,658nm,18.8s,baz=287,slow=42						
NVAR	Mina Array Bea	4.49	356	Pn	Pn	21 33 54.9	+0.7
RYN	Ryan	4.70	354	Pn	Pn	21 33 57.0	-0.1
214A	Organ Pipe Nat	4.71	113	Pn	Pn	21 33 57.5	+0.5
WAKR	Walker	4.72	345	Pn	Pn	21 33 57.2	-0.2
R11A	Troy Canyon, C	4.78	22		Pn	21 33 58.3	+0.2
R11A	Troy Canyon, C	4.78	22	P	Pn	21 33 59.0	+0.9
	baz=204,SNR=12						
R11A				Sb	Sg	21 35 14.0	-6.0
	baz=204						
LCMT	Little Creek M	4.87	50		Pn	21 34 00.3	+0.9
KVN	Kaiserville	5.10	358	Pn	Pn	21 34 03.3	+0.7
CCUT	Cedar City	5.15	44	Pn	Pn	21 34 04.7	+1.4
YERR	Yerington	5.15	348	Pn	Pn	21 34 03.7	+0.4
PNTR	Pine Nut	5.32	345	Pn	Pn	21 34 06.4	+0.8
SZCU	Shurtz Canyon	5.34	46	Pn	Pn	21 34 06.2	+0.3
X16A	Lo Mia Camp, P	5.37	83		Pn	21 34 06.3	0.0
RUBR	Rubicon Trail	5.42	341	Pn	Pn	21 34 09.3	+2.4
VCNR	Virginia City	5.53	346	Pg	Pb	21 34 26.4	+3.5
WUAZ	Wupatki	5.59	72	P	Pn	21 34 10.3	+1.0
	baz=256,SNR=42						
PSUT	Pine Spring	5.62	34	Pn	Pn	21 34 11.2	+1.4
PKCU	Pink Cliffs	5.73	51	Pn	Pn	21 34 12.9	+1.6
PAHR	Pah Rah Range	5.88	349	Pn	Pn	21 34 15.1	+1.9
MTPU	Mount Pierson	6.17	47	Pn	Pn	21 34 18.7	+1.2
TUC	Tucson	6.18	103	Pn	Pn	21 34 17.7	+0.4
BEKR	Beckworth	6.24	342	Pn	Pn	21 34 20.4	+2.2
GDXM	Geysers	6.26	322	Pn	Pn	21 34 18.7	+0.3
TCRU	Three Creeks R	6.40	42	Pn	Pn	21 34 21.9	+1.4
MSU	Marysvale	6.49	44	Pn	Pn	21 34 23.9	+2.2
W18A	Petrified Fore	6.83	78	Pn	Pn	21 34 27.6	+1.3
ELK	Elko	7.11	16	Pn	Pn	21 34 32.0	+1.8
	1.0nm,0.3s,baz=260,slow=6.4,SNR=26						
ELK				Sn	Sn	21 35 50.9	+0.1
	2.6nm,0.3s,baz=309,slow=12,SNR=3.2						
ELK				Lg	Lg	21 36 27.8	
	7.6nm,0.3s,baz=307,slow=21,SNR=8.9						
ELK	Elko	7.11	16	Pn	Pn	21 34 31.3	+1.1
Q16A	Castle Valley	7.35	46	Pn	Pn	21 34 35.3	+1.8
DUG	Dugway, Tooele	7.44	32	Pn	Pn	21 34 36.9	+2.2
DUG	Dugway, Tooele	7.44	32	P	Pn	21 34 38.9	+4.2
	baz=215,SNR=9.6						
TMUT	Trail Mountain	7.58	43	Pn	Pn	21 34 39.1	+2.4
WDC	Whiskeytown Da	7.59	332	Pn	Pn	21 34 38.4	+1.8
NLU	North Lily Min	7.59	36	Pn	Pn	21 34 37.7	+0.8
319A	Douglas	7.70	107	Pn	Pn	21 34 39.0	+0.8
KMRM	Mail Ridge	7.80	325	Pn	Pn	21 34 39.4	-0.2
SRU	San Rafael Swe	7.86	47	Pn	Pn	21 34 40.2	-0.2
MPU	Maple Canyon	7.86	38	Pn	Pn	21 34 40.7	+0.2
P17A	Butcher Ranch,	7.96	44	Pn	Pn	21 34 44.0	+2.2
BGU	Big Grassy Mou	7.97	28	Pn	Pn	21 34 41.8	-0.1
MOD	Modoc Plateau	8.17	347	Pn	Pn	21 34 46.6	+1.9
PV05	Paradox Valley	8.23	57	Pn	Pn	21 34 48.6	+3.0
MVCO	Mesa Verde	8.32	64	Pn	Pn	21 34 49.3	+2.5
MVCO	Mesa Verde	8.32	64	P	Pn	21 34 49.0	+2.2
	baz=250,SNR=5.4						
JLU	Jordanelle	8.40	36	Pn	Pn	21 34 51.3	+3.5
PV09	Paradox Valley	8.41	55	Pn	Pn	21 34 50.1	+1.9
PV10	Paradox Valley	8.41	56	Pn	Pn	21 34 49.3	+1.1
PV19	Morning Glory	8.42	56	Pn	Pn	21 34 49.0	+0.8
PV17	East Wray Mesa	8.42	57	Pn	Pn	21 34 50.0	+1.8
PV14	Lion Creek, Pa	8.42	56	Pn	Pn	21 34 50.0	+1.7
PV18	Skein Mesa, Pa	8.44	57	Pn	Pn	21 34 50.6	+2.1
PV13	Radium Mtn., P	8.46	58	Pn	Pn	21 34 51.0	+2.2
PV16	Nyswonger Mesa	8.47	56	Pn	Pn	21 34 51.1	+2.3
PV23	Carpenter Ridg	8.47	55	Pn	Pn	21 34 51.7	+2.8
PV03	Paradox Valley	8.49	57		Pn	21 34 50.7	+1.6
PV11	David Mesa, Pa	8.49	57	Pn	Pn	21 34 51.3	+2.2
WVOR	Wild Horse Val	8.50	356	Pn	Pn	21 34 49.6	+0.5
PV04	Paradox Valley	8.51	56	Pn	Pn	21 34 51.9	+2.4
SPUT	South Promonto	8.52	29	Pn	Pn	21 34 51.8	+2.3
PV02	Paradox Valley	8.54	58	Pn	Pn	21 34 51.9	+2.0
PV21	Cone Mtn., Par	8.55	55	Pn	Pn	21 34 52.0	+2.0
PV12	Saucer Basin,	8.55	57	Pn	Pn	21 34 51.1	+1.2
121A	Cookes Peak, D	8.58	97		Pn	21 34 51.2	+0.8
121A	Cookes Peak, D	8.58	97	P	Pn	21 34 51.4	+1.0
	baz=282						
PV01	Paradox Valley	8.63	58		Pn	21 34 52.4	+1.3
YBH	Yreka Blue Hor	8.66	335	Pn	Pn	21 34 53.2	+1.9
	0.3nm,0.3s,baz=183,slow=5.9,SNR=9.5						
YBH				Lg	Lg	21 37 18.4	
	0.2nm,0.3s,baz=237,slow=12,SNR=2.1						
YBH	Yreka Blue Hor	8.66	335	Pn	Pn	21 34 53.5	+2.2
PV22	Blue Mesa, Par	8.66	55		Pn	21 34 52.9	+1.3
PV15	Paradox Valley	8.78	57		Pn	21 34 55.6	+2.4
HVU	Hansel Valley	8.81	26	Pn	Pn	21 34 54.7	+1.3
TCUT	Toone Canyon	8.82	34	Pn	Pn	21 34 56.4	+2.8
HWUT	Hardware Ranch	9.14	31	Pn	Pn	21 34 59.7	+1.7
RDMU	Red Mountain	9.37	43	Pn	Pn	21 35 02.3	+1.1
ANMO	Albuquerque	9.50	81	Pn	Pn	21 35 04.5	+1.6
	0.1nm,0.3s,baz=263,slow=17,SNR=2.6						
ANMO				Lg	Lg	21 37 41.9	
	0.1nm,0.3s,baz=111,slow=16,SNR=1.9						
MFID	Camas Ranch	9.60	9	Pn	Pn	21 35 04.8	+0.6
S22A	4UR Ranch, Cre	9.75	64	Pn	Pn	21 35 08.9	+2.5
O20A	White River Ci	9.88	48	Pn	Pn	21 35 09.2	+1.0
PINE	Pine Mountain	10.12	347	Pn	Pn	21 35 12.0	+0.6
I07A	Izee	10.20	353	Pn	Pn	21 35 15.6	+3.1
SMCO	Snowmass	10.21	56		Pn	21 35 14.5	+1.6
AHID	Auburn Hatcher	10.29	29	Pn	Pn	21 35 15.4	+1.5
SDCO	Great Sand Dun	10.75	66	Pn	Pn	21 35 22.2	+2.1
MNTX	Cornudas Mount	10.76	99	P	Pn	21 35 21.5	+1.4
	baz=286						
REDW	Red Top Meadow	10.89	28	Pn	Pn	21 35 20.8	-1.3
BMO	Blue Mountains	10.90	2	Pn	Pn	21 35 23.0	+0.9
TPAW	Teton Pass	10.96	28	Pn	Pn	21 35 23.8	+0.8
BW06	Boulder Array	10.97	34	Pn	Pn	21 35 23.4	+0.3
BW06	Boulder Array	10.97	34	P	Pn	21 35 27.6	+4.5
	baz=219,SNR=5.5						
PD31	Pinedale Array	10.97	34	Pn	Pn	21 35 23.8	+0.7
PDAR	Pinedale Array	10.97	34	Pn	Pn	21 35 25.1	+2.0
	0.4nm,0.3s,baz=218,slow=12,SNR=30						
PDAR				Lg	Lg	21 38 30.4	
	0.1nm,0.3s,baz=74,slow=32,SNR=2.7						
PDAR	Pinedale Array	10.97	34		Pn	21 35 24.6	+1.5
SNOW	Snow King Moun	11.01	28	Pn	Pn	21 35 23.7	0.0
FXWY	Fox Creek	11.06	27	Pn	Pn	21 35 25.2	+0.8
H04A	Detroit Lake	11.23	344	Pn	Pn	21 35 27.0	+0.6
IMW	Indian Meadow	11.31	26	Pn	Pn	21 35 27.9	+0.1
G08A	Pilot Rock	11.36	356	Pn	Pn	21 35 27.9	-0.5
ISCO	Idaho Springs	11.43	56	Pn	Pn	21 35 30.1	+0.6
MCMT	McKenzie Canyo	11.55	18	Pn	Pn	21 35 31.8	+0.8
FLWY	Flagg Ranch	11.56	27	Pn	Pn	21 35 32.5	+1.3
YPP	Pitchstone Pla	11.68	26	Pn	Pn	21 35 33.7	+0.8
N23A	Red Feather La	11.76	50	Pn	Pn	21 35 34.0	0.0
H17A	Grant Village	11.88	26	Pn	Pn	21 35 35.6	+0.1
YHB	Horse Butte	11.97	24	Pn	Pn	21 35 35.1	-1.7
YMR	Madison River	11.97	25	Pn	Pn	21 35 36.1	-0.7
F10A	Beach Ranch, E	12.03	2	Pn	Pn	21 35 38.1	+0.7
F07A	Phinny Hill Vi	12.04	353	Pn	Pn	21 35 37.7	+0.2
YHL	Hebgen Lake	12.06	23	Pn	Pn	21 35 38.0	-0.1
LKWY	Lake	12.09	26	Pn	Pn	21 35 38.9	+0.5
YNR	Norris Junctio	12.11	25	Pn	Pn	21 35 36.4	-2.4
YHH	Holmes Hill	12.12	25	Pn	Pn	21 35 39.1	+0.2
PHWY	Pilot Hill	12.29	50	Pn	Pn	21 35 40.9	-0.3
K22A	Casper	12.45	42	Pn	Pn	21 35 43.7	+0.4
HAWA	Hanford	12.50	355	Pn	Pn	21 35 45.0	+1.2
MSTX	Muleshoe	12.55	86	Pn	Pn	21 35 45.9	+1.1
E09A	Wood Farm, Sta	12.56	359	Pn	Pn	21 35 46.2	+1.6
E08A	Dider Farm, El	12.57	356	Pn	Pn	21 35 45.0	+0.4
YNE	Yellowstone No	12.61	26	Pn	Pn	21 35 45.0	-0.6
HPIG		12.64	120		Pn	21 35 43.5	-2.5
E07A	Sunnyside	12.69	354	Pn	Pn	21 35 43.3	-3.1
TX31	Lajitas Ar. Si	12.96	107	Pn	Pn	21 35 51.2	+0.9
TX32	Lajitas Array	12.96	107	Pn	Pn	21 35 50.8	+0.5
TXAR	Lajitas Array	12.96	107	Pn	Pn	21 35 50.0	-0.2
	0.1nm,0.3s,baz=219,slow=16,SNR=2.6						
D08A	Wollman Farm,	13.12	357	Pn	Pn	21 35 51.9	-0.5
MSO	Missoula	13.22	12		Pn	21 35 53.7	0.0
KSCO	Kaye Shedlock'	13.28	63	Pn	Pn	21 35 55.2	+0.6
JTMT	Jette	14.06	10	Pn	Pn	21 36 03.5	-1.7
NEW	Newport	14.32	2	Pn	P	21 36 15.4	-0.4
	0.3nm,0.3s,baz=194,slow=14,SNR=3.3						
NEW	Newport	14.32	2		Pn	21 36 07.4	-1.3
OGNE	Ogallala	14.40	56		Pn	21 36 10.7	+0.9
RSSD	Black Hills	14.79	43		Pn	21 36 15.0	-0.3
ABTX	Abilene, Hawle	15.32	90	Pn	Pn	21 36 22.2	-0.1
ABTX				IAmb	IAmb	21 36 25.3	
	comp=Z,23nm,1.6s						
WALA	Waterton Lakes	15.39	10		Pn	21 36 23.6	+0.4
WALA				IAmb	IAmb	21 36 30.8	
	comp=Z,11nm,0.7s						
LAO	LASA Array	15.51	31		Pn	21 36 25.6	+0.9
LAO				IAmb	IAmb	21 36 32.6	
	comp=Z,24nm,0.8s						
JCT	Junction City	15.70	98	Pn	Pn	21 36 25.7	-1.5
WMOK	Wichita Mounta	15.81	82	Pn	Pn	21 36 28.3	-0.3
Z35A	Perchaven, San	17.20	86	P	P	21 36 48.0	+0.3
DGMT	Dagmar	17.76	31		Pn	21 36 54.0	+0.9
E28A	Huff	18.16	41	Pn	Pn	21 36 56.6	-1.4
E28A				IAmb	IAmb	21 37 01.2	
	comp=Z,25nm,0.8s						
TUL1	Leonard	18.23	78		Pn	21 36 58.2	-0.7
ECSD	EROS Data Cent	19.20	53	P	P	21 37 10.3	+0.6
MDND	Maddock	19.53	39	P	P	21 37 13.5	+0.2
MDND				IAmb	IAmb	21 37 16.6	
	comp=Z,43nm,1.1s						
BBB	Bella Bella	19.67	341	LR	LR	21 46 08.7	
	comp=Z,117nm,18.2s,baz=212,slow=41						
WLAR	White Oak Lake	20.58	84	P	P	21 37 26.1	+1.2
WLAR				IAmb	IAmb	21 37 30.1	
	comp=Z,30nm,1.3s						
U40A	Yellville	20.60	76	P	P	21 37 25.6	+0.5
N38A	Joes South For	20.72	64	P	P	21 37 27.0	+0.8
N38A				IAmb	IAmb	21 37 32.0	
	comp=Z,15nm,0.9s						
P40A	Paris	21.41	67	P	P	21 37 32.9	-0.9
P40A				IAmb	IAmb	21 37 36.4	
	comp=Z,24nm,1.4s						
I37A	Lemond, Waseca	21.46	55	P	P	21 37 34.9	+0.6
I37A				IAmb	IAmb	21 37 40.8	
	comp=Z,18nm,1.1s						
K38A	Parkersburg	21.49	59	P	P	21 37 35.2	+0.7
K38A				IAmb	IAmb	21 37 41.2	
	comp=Z,27nm,1.1s						
AGMN	Agassiz Nation	21.83	42	P	P	21 37 37.4	-0.7
AGMN				IAmb	IAmb	21 37 40.0	
	comp=Z,9.3nm,0.8s						
SPMN	Marine on St.	22.29	52	P	P	21 37 43.9	+0.8
SPMN				IAmb	IAmb	21 37 45.4	
	comp=Z,30nm,1.6s						
GNAR	Gosnell	22.91	77	P	P	21 37 50.1	+0.4
ULM	Lac du Bonnet	22.94	38	P	P	21 37 49.9	-0.1
	comp=Z,9.3nm,0.9s,baz=237,slow=9.5,SNR=18						
ULM	Lac du Bonnet	22.94	38	P	P	21 37 49.1	-0.9
ULM				IAmb	IAmb	21 37 51.0	
	comp=Z,10nm,0.9s						
PEBM	Pemiscott Bayo	23.02	77	P	P	21 37 49.0	-1.9
I40A	Norwalk	23.34	57	P	P	21 37 53.4	-0.7
Y45A	Yeager Farm, C	23.50	82	P	P	21 37 55.6	-0.2
FFC	Flin Flon	23.58	23	P	P	21 37 57.0	+0.6
FFC				IAmb	IAmb	21 37 57.6	
	comp=Z,9.2nm,0.8s						
E38A	The Farm, Brul	23.62	50	P	P	21 37 56.3	-0.5
EYMN	Ely	24.21	47	P	P	21 38 02.3	-0.1
EYMN				IAmb	IAmb	21 38 07.2	
	comp=Z,21nm,1.9s						
EYMN	Ely	24.21	47	P	P	21 38 02.5	+0.1
	baz=244						
COWI	Conover	25.00	52	P	P	21 38 10.3	+0.7
COWI				IAmb	IAmb	21 38 10.9	
	comp=Z,7.9nm,0.8s						
T47A	Sharon Grove	25.20	74	P	P	21 38 11.6	0.0
T47A				IAmb	IAmb	21 38 16.9	
	comp=Z,15nm,1.2s						
H43A	Windswept, Lux	25.46	57	P	P	21 38 13.8	-0.1
H43A				IAmb	IAmb	21 38 24.1	
	comp=Z,12nm,0.9s						
D41A	Chassel	25.69	51	P	P	21 38 15.7	-0.2
CMIG	Matias Romero	26.60	123	LR	LR	21 49 24.8	
	comp=Z,142nm,20.8s,baz=280,slow=38						
FPAL	Fort Paine	26.63	80	P	P	21 38 23.3	-1.3
BESE	Bessie Mountai	27.13	340	P	P	21 38 27.3	-1.5
BESE				IAmb	IAmb	21 38 35.9	
	comp=Z,17nm,1.1s						
YKA	Yellowknife Ar	28.65	3	P	P	21 38 43.3	+1.1
	comp=Z,0.7nm,0.7s,baz=180,slow=9.0,SNR=19						
RSO	Redoubt South	34.84	330	P	P	21 39 37.5	+0.6
IL31		35.53	339	P	P	21 39 43.4	+0.9
INK	Inuvik	35.55	350	P	P	21 39 44.3	+1.7
	comp=Z,2.5nm,1.1s,baz=133,slow=11,SNR=4.4						
INK	Inuvik	35.55	350	IAmb	IAmb	21 40 52.5	
	comp=Z,7.6nm,1.6s						
IMAR	Indian Mountai	38.48	337	P	P	21 40 08.2	+0.7
TOLK	Toolik Lake Re	39.08	342	P	P	21 40 14.0	+1.4
NOA	NORSAR Array B	76.69	23	P	P	21 44 37.4	+0.8
	comp=Z,0.5nm,0.7s,baz=317,slow=5.7,SNR=2.6						
USRK	Ussuriysk Ar.	79.61	317	P	P	21 44 53.9	+0.9
	comp=Z,1.0nm,0.7s,baz=87,slow=9.1,SNR=2.4						
FINES	FINESS Array B	80.54	17	P	P	21 44 58.6	+0.8
	comp=Z,1.3nm,0.5s,baz=0.0,slow=4.8,SNR=11						
SONM	Songino Array	89.44	332	P	P	21 45 44.5	+1.6
	comp=Z,0.4nm,0.6s,baz=64,slow=3.4,SNR=4.1						
SONM	Songino Array	89.44	332	IAmb	IAmb	21 45 45.2	
	comp=Z,0.7nm,1.0s						
TRI	Trieste	89.46	32	P	P	21 45 43.0	+0.2
ZAA0	Zalesovo Array	90.29	347		P	21 45 47.8	+1.3
ZAA0				IAmb	IAmb	21 46 11.8	
	comp=Z,3.2nm,1.2s						
ZALV	Zalesovo Beam	90.29	347	P	P	21 45 46.5	0.0
HHC	Hu-ho-hao-te	92.74	325	*e*P	P	21 45 57.5	-0.8
MKAR	Makanchi Array	97.60	346	LR	LR	22 35 30.9	
	comp=Z,21nm,18.0s,baz=356,slow=39						
WRA	Warramunga Arr	115.29	262	PKP	PKPdf	21 51 28.6	+0.8
	comp=Z,0.5nm,1.0s,baz=31,slow=3.7,SNR=2.5						

IDC ***29*** *21:50:42.6±1.7, 35°.65N×22°.84E, h0^{km}, mb3.9/13, mb1 3.9/18, mb1mx3.8/46, mbtmp3.8/18, ML3.6/5, Error ellipse: s-maj=37.9km s-min=12.2km az=26.0*

ATH ***29*** *21:50:44.8, 35°.63N×22°.91E, h4^{km}±2^{km}, ML3.3/15, Error ellipse: s-maj=3.2km s-min=1.1km az=48.0*

THE ***29*** *21:50:45.4, 35°.59N×22°.89E, h1^{km}±1^{km}, ML3.3/10, Error ellipse: s-maj=1.8km s-min=0.5km az=227.0*

NEIC ***29*** *21:50:48.0±2.3, 35°.60N±0°.09×22°.88E±0°.08, h43^{km}±10^{km}, mb4.1/9, Error ellipse: s-maj=14.1km s-min=7.7km az=210.0*

ISC 29 21:50:45.0±1.2, **35°.67N**±0°.04×**22°.96E**±0°.04, **h16**^{km}±7^{km}, **n111**, σ1^{s}.**92**/134, **mb4.0**/18, **Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTHR	Kythira	0.59	4	P	Pb	21 50 57.7	+0.7
KTHR				S	Sn	21 51 07.9	-0.2
	5μm,0.4s						
RODP	Rodopos	0.66	99	P	Pn	21 50 59.0	-0.7
RODP				S	Sn	21 51 08.8	-0.9
IMMV	Iera Moni Meta	0.86	104	P	Pn	21 51 01.7	-0.7
IMMV				S	Sn	21 51 15.1	+0.5
	3μm,0.5s						
IMMV	Iera Moni Meta	0.86	104	P	Pn	21 51 01.6	-0.7
IMMV				S	Sn	21 51 13.6	-1.0
IMMV				AML	AML	21 51 16.6	
	comp=E,3993μm,0.3s						
IMMV				AML	AML	21 51 16.7	
	comp=N,6531μm,0.7s						
CHAN	Chania	0.90	99	P	Pn	21 51 03.8	+0.9
CHAN				S	Sn	21 51 17.2	+1.7
	comp=N,768nm,0.7s						
MNVA	Monemvasia	1.02	4	P	Pn	21 51 05.7	+1.1
MNVA				AML	AML	21 51 30.2	
	comp=N,3399μm,0.8s						
MNVA				AML	AML	21 51 30.9	
	comp=E,3572μm,1.3s						
VAM	Vamos	1.05	104	P	Pn	21 51 05.4	+0.4
VAM				S	Sn	21 51 22.0	+2.8
	comp=E,2μm,0.8s						
VAM	Vamos	1.05	104	P	Pn	21 51 04.9	-0.1
VAM				AML	AML	21 51 30.4	
	comp=E,3596μm,0.6s						
VAM				AML	AML	21 51 31.4	
	comp=N,3814μm,0.6s						
VLI	Veliai	1.05	359	P	Pn	21 51 06.1	+1.1
VLI				S	Sn	21 51 22.4	+3.1
	comp=N,3μm,0.8s						
VLI	Veliai	1.05	359	P	Pn	21 51 05.8	+0.7
VLI				S	Sn	21 51 21.0	+1.7
VLI				AML	AML	21 51 30.5	
	comp=N,5836μm,1.0s						
VLI				AML	AML	21 51 30.6	
	comp=E,5005μm,0.6s						
DYR	Agios Nikonas	1.20	335	P	Pn	21 51 07.6	+0.4
DYR				AML	AML	21 51 34.7	
	comp=E,881μm,0.7s						
DYR				AML	AML	21 51 35.9	
	comp=N,740μm,0.7s						
GVDS	Gavdos	1.24	131	P	Pg	21 51 08.2	-0.7
GVDS				S	Sn	21 51 25.6	+1.6
	comp=N,462nm,0.8s						
GVD	Gavdhos	1.24	131	P	Pg	21 51 08.0	-1.0
GVD				S	Sn	21 51 26.0	+2.0
	comp=N,630nm,0.5s						
GVD	Gavdhos	1.24	131	P	Pg	21 51 08.4	-0.5
MHLO	Agia Marina, M	1.55	48	P	Pg	21 51 14.9	0.0
MHLO				S	Sg	21 51 36.3	+1.2
MHLO	Agia Marina, M	1.55	48	P	Pg	21 51 15.3	+0.5
MHLO				AML	AML	21 51 40.5	
	comp=N,5801μm,0.6s						
MHLO				AML	AML	21 51 44.4	
	comp=E,8556μm,0.8s						
PYL	PYLOS	1.57	322	P	Pn	21 51 13.2	+1.0
PYL				S	Sg	21 51 35.8	+0.2
	comp=E,568nm,0.6s						
MHLA	Plaka, Milos I	1.60	47	P	Pg	21 51 16.4	+0.6
IDI	Anoyia	1.62	103	Pn	Pg	21 51 15.6	-0.7
	comp=E,6.0nm,0.3s,baz=286,slow=16,SNR=32						
IDI				Lg	Lg	21 51 37.2	
	comp=E,18nm,0.3s,baz=303,slow=17,SNR=4.9						
IDI				LR	LR	21 52 11.9	
	comp=E,132nm,20.8s,baz=61,slow=52						
IDI	Anoyia	1.62	103	P	Pg	21 51 15.3	-1.0
IDI				AML	AML	21 51 45.8	
	comp=E,589μm,0.8s						
IDI				AML	AML	21 51 47.8	
	comp=N,879μm,0.8s						
SIVA	Sivas	1.65	113	P	Pg	21 51 17.7	+1.0
KRND	KRANIDI	1.72	5	P	Pb	21 51 16.8	+0.6
KRND	KRANIDI	1.72	5	P	Pg	21 51 17.9	-0.1
KRND				AML	AML	21 51 49.9	
	comp=N,1495μm,0.4s						
KRND				AML	AML	21 51 52.3	
	comp=E,1742μm,0.6s						
ITM	Ithomi	1.72	331	P	Pb	21 51 17.0	+0.7
ITM	Ithomi	1.72	331	P	Pb	21 51 16.8	+0.5
ITM				AML	AML	21 51 47.4	
	comp=N,953μm,0.3s						
ITM				AML	AML	21 51 56.2	
	comp=E,958μm,1.0s						
ITM	Ithomi	1.72	331		Pb	21 51 17.3	+1.0
VLX	Vlachokerasia	1.76	345	P	Pb	21 51 16.8	-0.2
VLX	Vlachokerasia	1.76	345	P	Pg	21 51 18.2	-0.7
VLX				AML	AML	21 51 58.1	
	comp=E,2097μm,0.8s						
VLX				AML	AML	21 52 00.2	
	comp=N,1614μm,0.7s						
DID	Didima	1.85	7	P	Pb	21 51 19.1	+0.7
DID				S	Sg	21 51 44.7	+0.1
	comp=N,588nm,0.4s						
DID	Didima	1.85	7	P	Pg	21 51 19.7	-0.8
DID				AML	AML	21 51 51.6	
	comp=E,1268μm,0.5s						
DID				AML	AML	21 51 54.2	
	comp=N,925μm,0.4s						
AMT	Artemida-Makis	2.11	332	P	Pb	21 51 24.2	+1.2
LAST	Lasithi	2.12	103	P	Pg	21 51 24.8	-1.0
SANT	Santorini	2.15	70	Pn	Pb	21 51 23.0	-0.5
IOSP	Ios island	2.16	60	P	Pg	21 51 23.9	-2.6
NPS	Neapolis	2.21	100	P	Pb	21 51 24.3	-0.2
VLY	Voula,Athens	2.28	17	P	Pb	21 51 24.9	-0.9
VLY				S	Sg	21 51 55.5	-2.9
	comp=N,605nm,0.6s						
VLY	Voula,Athens	2.28	17	P	Pb	21 51 25.4	-0.4
LOUT	Loutraki	2.32	0	P	Pb	21 51 27.0	+0.6
LTK	Loutraki	2.35	0	P	Pb	21 51 27.3	+0.3
LTK				AML	AML	21 52 10.5	
	comp=N,741μm,0.7s						
LTK				AML	AML	21 52 16.5	
	comp=E,1121μm,1.0s						
ATHU	Athens Univers	2.39	16	P	Pb	21 51 26.9	-0.7
ATHU				AML	AML	21 52 08.2	
	comp=E,160μm,0.7s						
ATHU				AML	AML	21 52 08.4	
	comp=N,220μm,0.7s						
PTL	Penteli	2.49	17	P	Pb	21 51 28.1	-1.1
PTL				AML	AML	21 52 03.9	
	comp=N,608μm,0.5s						
PTL				AML	AML	21 52 06.2	
	comp=E,417μm,0.5s						
DRO	Drossia	2.49	337	P	Pb	21 51 29.1	-0.2
APE	Apeiranthos	2.50	55	P	Pb	21 51 29.6	0.0
VILL	Villia	2.51	6	P	Pb	21 51 27.6	-2.1
VILL				S	Sb	21 52 00.9	+0.6
DION	Dionisos Attik	2.53	18	P	Pb	21 51 29.1	-0.9
VIL2	Platees	2.55	6	P	Pb	21 51 29.0	-1.4
VIL2				AML	AML	21 52 15.1	
	comp=N,384μm,0.9s						
VIL2				AML	AML	21 52 15.6	
	comp=E,868μm,0.5s						
PROD	Prodromos	2.59	359	P	Pb	21 51 30.3	-0.7
KARY	Karystos	2.64	26	P	Pb	21 51 31.5	-0.4
TRIZ	Trizonia	2.78	346	P	Pb	21 51 34.6	+0.3
KALE	Kalithea	2.80	347	P	Pb	21 51 33.2	-1.4
SERG	Sergoula	2.83	346	P	Pb	21 51 34.8	-0.4
EFP	Efpalio	2.88	343	P	Pb	21 51 35.2	-0.8
ANX	Ano Chora	3.04	344	P	Pb	21 51 37.6	-1.1
AGG	Agios Georgios	3.38	352		Pn	21 51 40.9	+3.7
KARP	Karpathos	3.43	91	Pn	Pb	21 51 41.2	-4.2
LIT	Litokhoron	4.44	355		Pn	21 51 55.0	+3.3
FNA	Florina	5.26	347		Pn	21 52 05.4	+2.5
SCTE	Santa Cesarea	5.65	322	Pn	Pn	21 52 09.6	+1.3
ELL	Elmali	5.72	77	Pn	Pn	21 52 10.9	+1.5
ALN	Alexandroupoli	5.76	24	Pn	Pn	21 52 12.0	+2.3
TIP	Timpagrande	6.05	307	Pn	Pn	21 52 14.0	+0.2
VTS	Vitosha	6.94	2	Pn	Pn	21 52 30.1	+3.9
PDG	Podgorica	7.34	338		Pn	21 52 33.9	+2.5
PDG					Sn	21 53 54.5	+0.2
ACER	Acerenza	7.52	315		Pn	21 52 33.9	-0.1
DBRK	Dubrovnik	7.92	333	*e*Pn	Pn	21 52 40.0	+0.5
DBRK				Sn	Sn	21 54 03.4	-5.4
CORL	Corleone	8.06	289	Pn	Pn	21 52 42.5	+1.2
STON	Ston	8.27	332	*e*Pn	Pn	21 52 42.6	-1.5
STON				Sn	Sn	21 54 11.1	-6.0
SGRT	San Giovanni R	8.29	319	Pn	Pn	21 52 45.3	+0.8
PAOL	Paolisi	8.49	312	Pn	Pn	21 52 48.7	+1.5
CSS	Mathiatis	8.51	92	Pn	Pn	21 52 49.8	+2.2
MAKA	Makarska	8.88	331	Sn	Sn	21 54 28.4	-3.9
RICI	Ricice	9.01	332	*e*Pn	Pn	21 52 53.0	-1.5
RICI				Sn	Sn	21 54 31.7	-3.9
BRTR	Keskin Array B	9.38	61	Pn	Pn	21 53 03.8	+4.2
	comp=E,0.1nm,0.3s,baz=239,slow=14,SNR=8.0						

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INTR  Introdacqua          9.48 315   Pn     Pn      21 53 02.9 +2.0
ZIRJ  Zirje                9.76 327  ePn     Pn      21 53 04.3 -0.4
ZIRJ                                  Sn     Sn      21 54 47.2 -6.7
MORI  Morici               9.90 328  ePn     Pn      21 53 06.2 -0.4
MORI                                  Sn     Sn      21 54 50.7 -6.7
DUGI  Dugi Otok           10.29 326  ePn     Pn      21 53 12.1 +0.2
DUGI                                  Sn     Sn      21 54 58.9 -8.0
UDBI  Udbina              10.42 330  i Pn    Pn      21 53 15.0 +1.3
UDBI                                  Sn     Sn      21 55 06.8 -3.3
NRCA  Norcia              10.46 316          Pn      21 53 18.3 +4.1
MMAI  Mount Meron Ar      10.62 101   Pn     Pn      21 53 15.4 -1.2
      comp=E,0.5nm,0.3s,baz=284,slow=10.0,SNR=4.8
NVLJ  Novalja             10.82 328  ePn     Pn      21 53 19.4 +0.3
NVLJ                                  Sn     Sn      21 55 12.8 -7.0
GERES GERESS Array B      14.83 335   Pn     Pn      21 54 13.6 -0.3
      comp=E,0.1nm,0.3s,baz=151,slow=14,SNR=2.7
KHC   Kasperske Hory      15.12 336  eP      P       21 54 23.5 +0.6
AKASG Malin Array Be      15.70  15   Pn     Pn      21 54 25.1 -0.2
      comp=E,0.5nm,0.3s,baz=206,slow=12,SNR=5.4
CLL   Collm               17.19 338  eP      Pn      21 54 44.0 -0.3
CLL                                  ePP     PnPn    21 54 55.0 +0.7
KBZ   Khabaz              17.30  56   Pn     P       21 54 49.9 +2.8
      comp=E,0.1nm,0.3s,baz=250,slow=15,SNR=2.1
HFS   Hagfors             25.21 349   P      P       21 56 09.6  0.0
      comp=E,1.5nm,0.6s,baz=156,slow=11,SNR=15
FINES FINESS Array B      25.87   3   P      P       21 56 15.7 +0.1
      comp=E,1.2nm,0.6s,baz=168,slow=11,SNR=7.2
FIA1  FINESS Array S      25.87   3   P      P       21 56 15.8 +0.2
FIA1                                  IAmb   IAmb    21 56 16.8
      comp=Z,6.3nm,1.1s
NC602 NORSAR Array S      26.13 347   P      P       21 56 18.0  0.0
NC602                                 IAmb   IAmb    21 56 31.5
      comp=Z,7.5nm,1.1s
NAO01 NORSAR Array S      26.36 347   P      P       21 56 20.1 +0.1
NAO01                                 IAmb   IAmb    21 56 33.6
      comp=Z,2.4nm,0.8s
NC405 NORSAR Array S      26.46 348   P      P       21 56 21.2 +0.2
NB201 NORSAR Array S      26.47 347   P      P       21 56 20.7 -0.4
NB201                                 IAmb   IAmb    21 56 32.1
      comp=Z,7.6nm,1.1s
NB2   NORSAR Subarra      26.48 347   P      P       21 56 21.3 +0.1
      comp=Z,0.3nm,0.6s,baz=159,slow=10
NOA   NORSAR Array B      26.48 347   P      P       21 56 21.2 +0.1
      comp=Z,0.2nm,0.5s,baz=154,slow=9.0,SNR=5.9
EKA   Eskdalemuir Ar      26.60 326   P      P       21 56 23.4 +1.1
      comp=Z,0.8nm,0.5s,baz=129,slow=9.5,SNR=4.2
KIRV  Kirov               28.80  29   P      P       21 56 41.4 -0.4
      comp=Z,6.7nm,0.6s,baz=254,slow=3.6,SNR=3.6
MK31  Makanchi Array      45.00  57   P      P       21 58 59.9 +0.3
MK31                                  IAmb   IAmb    21 59 00.3
      comp=Z,1.2nm,0.6s
MKAR  Makanchi Array      45.00  57   P      P       21 58 59.9 +0.3
      comp=Z,1.2nm,0.5s,baz=279,slow=7.2,SNR=25
ZALV  Zalesovo Beam       45.96  46   P      P       21 59 06.8 -0.1
      comp=Z,0.7nm,0.4s,baz=266,slow=8.7,SNR=5.5
ANGG  Ammassalik, Gr      46.05 330   P      P       21 59 06.3 -1.1
SONM  Songino Array       60.55  50   P      P       22 00 54.7 +0.2
      comp=Z,0.3nm,0.6s,baz=262,slow=6.6,SNR=2.7
SONM  Songino Array       60.55  50   IAmb   IAmb    22 00 59.2
      comp=Z,0.6nm,1.1s
CMAR  Chiang Mai Arr      68.30  82   P      P       22 01 46.3 +0.8
      comp=Z,0.7nm,0.3s,baz=297,slow=6.0,SNR=4.5
YKA   Yellowknife Ar      76.40 341   P      P       22 02 33.5 +0.3
      comp=Z,0.2nm,0.6s,baz=37,slow=5.4,SNR=5.5
USRK  Ussuriysk Ar.       77.74  44   P      P       22 02 41.2 +0.2
      comp=Z,1.7nm,0.6s,baz=266,slow=5.0,SNR=4.3
USRK  Ussuriysk Ar.       77.74  44   P      P       22 02 40.8 -0.3
IMAR  Indian Mountai      78.64 359   P      P       22 02 47.0 +1.3
ULM   Lac du Bonnet       78.87 325   P      P       22 02 47.7 +0.5
      comp=Z,0.6nm,0.4s,baz=36,slow=5.0,SNR=3.4
KSAR  Wonju Array Be      79.37  51   P      P       22 02 50.8 +0.6
KSRS  Korea Array         79.39  51   P      P       22 02 50.9 +0.7
      comp=Z,1.5nm,0.5s,baz=312,slow=4.6,SNR=7.0
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UCR ***29*** *22:31:18.6±1.0, 12°40N×87°71W, h28km±9km, ML3.7*
INET ***29*** *22:31:19.2, 12°42N×87°78W, h67km, ML3.9*
SNET ***29*** *22:31:19.0±0.7, 12°40N×87°71W, h38km±356km, ML3.7*
ISC 29 22:31:18.4±2.1**, 12°4N**±0°1×**87°7W**±0°1**, h67km, n21,**
σ**0s30**/25**, 2C-2D, Near coast of Nicaragua**

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Code  Station Name          Δ°  AZ°    Phase ID              Time       Res
                                     Op     ISC           h  m  s     ISC
CNCH  Conchagua            0.87 350⇓eP     Pn      22 31 35.4 +0.2
CNCH                                 eS     Sn      22 31 47.6  0.0
CNCH                                  IAML          22 31 50.8
      comp=Z,6µm,0.4s
CNCH  Conchagua            0.87 350⇓eP     Pn      22 31 35.4 +0.2
CNCH                                 eS     Sn      22 31 47.6  0.0
CNCH                                  IAML          22 31 50.8
      comp=Z,6µm,0.4s
LCND  La Caada             0.91 347  eP     Pn      22 31 35.9 +0.2
LCND                                 eS     Sn      22 31 48.0 -0.4
LCND                                  IAML          22 31 50.5
      comp=Z,2µm,0.3s
LCND  La Caada             0.91 347  eP     Pn      22 31 35.9 +0.2
LCND                                 eS     Sn      22 31 48.0 -0.4
LCND                                  IAML          22 31 50.5
      comp=Z,2µm,0.3s
JUCU  Jucuar¡n             1.00 327  eP     Pn      22 31 36.3 -0.6
JUCU                                  IAML          22 31 50.8
      comp=Z,2µm,0.2s
JUCU  Jucuar¡n             1.00 327  eP     Pn      22 31 36.3 -0.6
JUCU                                  IAML          22 31 50.8
      comp=Z,2µm,0.2s
COPN  Copaltepe            1.09 102  eP     Pn      22 31 38.1 +0.1
COPN  Copaltepe            1.09 102  eP     Pn      22 31 38.1 +0.1
MOMN  Momotombo            1.12  90  eP     Pn      22 31 38.4 +0.1
MOMN  Momotombo            1.12  90  eP     Pn      22 31 38.4 +0.1
BLLM  Bellamira            1.15 332⇑eP     Pn      22 31 39.0 +0.2
BLLM  Bellamira            1.15 332⇑eP     Pn      22 31 39.0 +0.2
LCY   Lacayo               1.16 329  eP     Pn      22 31 39.5 +0.5
LCY   Lacayo               1.16 329  eP     Pn      22 31 39.5 +0.5
PACA  Pacayal              1.22 329  eP     Pn      22 31 39.8 +0.1
PACA  Pacayal              1.22 329  eP     Pn      22 31 39.8 +0.1
TECA  Tecapa               1.33 323  eP     Pn      22 31 41.5 +0.1
TECA  Tecapa               1.33 323  eP     Pn      22 31 41.5 +0.1
COEB  Comit de Eme         1.35 323  eP     Pn      22 31 41.9 +0.3
COEB                                  IAML          22 32 01.4
      comp=Z,532nm,0.3s
COEB  Comit de Eme         1.35 323  eP     Pn      22 31 41.9 +0.3
COEB                                  IAML          22 32 01.4
      comp=Z,532nm,0.3s
LFRS  El Faro              1.80 312  eP     Pn      22 31 47.8 +0.3
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SJA ***29*** *22:52:22.9±1.3, 19°95S×70°86W, h22km±10km, ML3.2, MW3.3*
IDC ***29*** *22:52:24.7±3.0, 20°63S×66°25W, h0km, mb3.3/1, mb1 3.6/3, mb1mx3.4/19, mbtmp3.4/3, ML3.4/2, Error ellipse: s-maj=70.3km s-min=20.2km az=127.0*
GUC ***29*** *22:52:25.6±0.7, 19°90S×70°80W, h35km±4km, ML3.5*
ISC 29 22:52:21.5±1.7**, 19°89S**±0°03×**70°93W**±0°06**, h7km**±11km**,**
n34, σ**1s00**/48**, 8C-1D, Near coast of northern Chile**

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Code  Station Name          Δ°  AZ°    Phase ID              Time       Res
                                     Op     ISC           h  m  s     ISC
PSGC  Pisagua              0.82  69⇑iP     Pb      22 52 38.5 +0.3
PSGC                                 eS     Sb      22 52 48.8 -0.6
PSGCX Pisagua              0.82  69  i P    Pb      22 52 38.4 +0.3
PSGCX                                eS     Sb      22 52 49.4  0.0
TA01  Diego Aracena        0.97 134⇓eP     Pb      22 52 40.7 -0.1
TA01                                 eS     Sb      22 52 53.2 -0.6
TA01                                  IAML          22 52 57.2
      comp=E,6µm,0.3s
PATCX Punta Patache        1.18 142⇑iP     Pn      22 52 44.6 +0.1
PATCX                                eS     Sb      22 53 00.0 +0.2
PATCX                                 IAML          22 53 03.1
      comp=E,2µm,0.4s
PATCX Punta Patache        1.18 142  i P    Pn      22 52 44.6 +0.1
PATCX                                eS     Sb      22 52 59.4 -0.4
PB11  IPOC Station P       1.21  84⇑iP     Pn      22 52 44.9 -0.1
PB11                                 eS     Sg      22 52 59.7 -0.7
PB11                                  IAML          22 53 00.7
      comp=N,4µm,0.3s
PB11  IPOC Station P       1.21  84  i P    Pn      22 52 45.0 -0.1
PB12  IPOC Station P       1.39  24  eP     Pg      22 52 49.1 +0.9
PB12                                 eS     Sn      22 53 06.6 +0.3
PB12                                  IAML          22 53 11.8
      comp=E,1µm,0.6s
PB12  IPOC Station P       1.39  24  i P    Pg      22 52 49.1 +0.9
MNMC  Minye Minye          1.47  59⇑iP     Pg      22 52 49.6 -0.1
MNMC                                 eS     Sb      22 53 08.2 -0.2
MNMC                                  IAML          22 53 15.8
      comp=E,1µm,0.3s
MNMCX Minye Minye          1.47  59  i P    Pg      22 52 50.1 +0.3
GO01  Chusmiza             1.65  83⇑iP     Pb      22 52 52.4 -0.1
GO01                                 eS     Sn      22 53 13.3 +0.2
GO01                                  IAML          22 53 14.7
      comp=N,2µm,0.1s
PB08  IPOC Station P       1.69  99⇑iP     Pb      22 52 52.6 -0.5
PB08                                 eS     Sn      22 53 13.6 -0.4
PB08                                  IAML          22 53 14.4
      comp=N,668nm,0.2s
PB08  IPOC Station P       1.69  99  i P    Pb      22 52 52.9 -0.3
PB02  IPOC Station P       1.72 146⇑iP     Pb      22 52 53.1 -0.5
PB02                                 eS     Sb      22 53 15.1 -0.4
PB02                                  IAML          22 53 22.5
      comp=E,1µm,0.6s
PB02  IPOC Station P       1.72 146  i P    Pb      22 52 53.5  0.0
PB01  IPOC Station P       1.77 130⇑iP     Pb      22 52 53.8 -0.7
PB01                                 eS     Sn      22 53 15.7 +0.1
PB01                                  IAML          22 53 19.4
      comp=E,770nm,0.3s
PB16  IPOC Station P       2.05  41  eP     Pb      22 52 59.9 +0.5
PB16                                 eS     Sb      22 53 26.2 +0.7
PB16                                  IAML          22 53 33.7
      comp=N,316nm,0.5s
PB16  IPOC Station P       2.05  41  i P    Pb      22 52 59.9 +0.5
PB07  IPOC Station P       2.07 152  eP     Pn      22 52 58.1 +1.2
PB07                                 eS     Sb      22 53 24.9 -0.7
PB07  IPOC Station P       2.07 152  i P    Pn      22 52 58.1 +1.2
PB03  IPOC Station P       2.41 153  i P    Pn      22 53 03.0 +1.4
PB09  IPOC Station P       2.47 140  i P    Pb      22 53 05.1 -1.3
PB04  IPOC Station P       2.54 163  i P    Pn      22 53 04.0 +0.7
PB05  IPOC Station P       3.02 167  i P    Pn      22 53 10.2 +0.3
PB06  IPOC Station P       3.07 156  i P    Pn      22 53 11.6 +0.9
LVC   Limon Verde          3.30 145   Pn    Pn      22 53 16.7 +2.8
      comp=N,6.6nm,0.3s,baz=0.8,slow=10,SNR=63
LVC                                   Sn    Sn      22 53 56.0 +2.4
      comp=N,12nm,0.3s,baz=77,slow=17,SNR=7.7
LVC                                   Lg    Lg      22 54 04.9
      comp=N,11nm,0.3s,baz=318,slow=19,SNR=6.7
LVC   Limon Verde          3.30 145  i P    Pn      22 53 16.7 +2.8
LVC                                   IAML          22 54 08.9
      comp=Z,56nm,0.9s
PB15  IPOC Station P       3.57 158  i P    Pn      22 53 18.5 +0.9
PB10  IPOC Station P       3.62 174  i P    Pn      22 53 18.0 -0.1
LPAZ  La Paz               4.47  37   Pn    Pb      22 53 38.2 -2.5
      comp=Z,0.9nm,0.3s,baz=224,slow=5.4,SNR=14
PB14  IPOC Station P       4.74 174  i P    Pn      22 53 33.3 -0.4
YKA   Yellowknife Ar      89.06 341   P     P       23 05 29.9 +13
      comp=Z,0.1nm,0.6s,baz=132,slow=5.6,SNR=2.2
MKAR  Makanchi Array     145.39  33   PKP   PKiKP   23 12 02.9 -1.4
      comp=Z,0.4nm,0.7s,baz=323,slow=3.2,SNR=5.3
```

IDC ***29*** *23:12:11.1±2.4, 40°04N×21°40E, h0km, mb3.3/4, mb1 3.5/7, mb1mx3.3/34, mbtmp3.5/7, ML3.5/3, MS2.6/1, Ms1 2.6/1, ms1mx2.1/32, Error ellipse: s-maj=37.9km s-min=20.0km az=65.0*
THE ***29*** *23:12:13.7, 40°00N×21°52E, h18km±1km, ML3.5/14, Error ellipse: s-maj=1.2km s-min=0.5km az=336.0*
TIR ***29*** *23:12:13.9, 39°98N×21°55E, h25km, Md4.0/6*
SKO ***29*** *23:12:13.1, 39°91N×21°48E, h14km*
ATH ***29*** *23:12:13.2, 40°02N×21°59E, h23km±1km, ML3.4/34, Error ellipse: s-maj=1.4km s-min=0.8km az=321.0*
ISC 29 23:12:13.9±0.8**, 39°99N**±0°02×**21°54E**±0°02**, h17km**±5km**,**
n173, σ**1s23**/216**, mb3.4**/3**, 13C-6D, Greece**
PDG 29 23:12:13.7±0.5**, 40°00N×21°59E, h14km, ML3.3**/13**, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0, Greece**

```
Code  Station Name          Δ°  AZ°    Phase ID              Time       Res
                                     Op     ISC           h  m  s     ISC
KPRO  Kipourio             0.14 254   P     Pg      23 12 17.8 -0.2
KPRO                                  S     Sg      23 12 20.8  0.0
      24µm,0.3s
KPRO  Kipourio             0.14 254   P     Pg      23 12 18.0 -0.1
KPRO                                  S     Sg      23 12 21.1 +0.3
KPRO                                  AML   AML     23 12 21.1
      comp=E,39776µm,0.3s
KPRO                                  AML   AML     23 12 21.6
      comp=N,55101µm,0.4s
MEV   Metsovon             0.32 229   P     Pg      23 12 20.3 -0.5
MEV   Metsovon             0.32 229   P     Pg      23 12 20.8  0.0
KZN   Kozani               0.36  30   P     Pg      23 12 21.2 -0.3
KZN                                   S     Sg      23 12 26.8 +0.1
      comp=N,9µm,0.2s
KZN   Kozani               0.36  30   P     Pg      23 12 21.2 -0.3
KZN                                   S     Sg      23 12 25.7 -1.0
KZN                                   AML   AML     23 12 28.5
      comp=N,16814µm,0.3s
KZN                                   AML   AML     23 12 29.7
      comp=E,18529µm,0.2s
PENT  Pentalofos           0.36 304   P     Pg      23 12 21.0 -0.6
PENT                                  S     Sg      23 12 26.0 -0.8
      comp=E,6µm,0.3s
PENT  Pentalofos           0.36 304   P     Pg      23 12 21.1 -0.6
PENT                                  S     Sb      23 12 27.5  0.0
PENT                                  AML   AML     23 12 28.4
      comp=E,12307µm,0.3s
PENT                                  AML   AML     23 12 28.9
      comp=N,11665µm,0.3s
NEST  Nestorio             0.56 319   P     Pg      23 12 24.2 -1.0
NEST                                  S     Sb      23 12 33.4 +0.3
      comp=N,7µm,0.5s
NEST  Nestorio             0.56 319   P     Pg      23 12 24.5 -0.6
NEST                                  AML   AML     23 12 36.6
      comp=E,22637µm,0.6s
NEST                                  AML   AML     23 12 37.0
      comp=N,8132µm,0.4s
THL   Klokotos Trika       0.57 139   P     Pb      23 12 24.3 -1.1
THL                                   S     Sb      23 12 33.8 +0.7
      comp=N,7µm,0.3s
THL   Klokotos Trika       0.57 139   P     Pb      23 12 24.5 -0.8
THL                                   S     Sg      23 12 32.7 -0.1
THL                                   AML   AML     23 12 34.6
      comp=E,17685µm,0.2s
THL                                   AML   AML     23 12 37.0
      comp=N,10138µm,0.4s
JAN   Janina               0.63 238   P     Pb      23 12 25.4 -1.0
JAN                                   S     Sb      23 12 33.9 -1.0
      comp=N,3µm,0.3s
JAN   Janina               0.63 238   P     Pb      23 12 25.9 -0.5
JAN                                   S     Sg      23 12 35.6 +1.0
JAN                                   AML   AML     23 12 39.9
      comp=E,5199µm,0.3s
JAN                                   AML   AML     23 12 40.3
      comp=N,6009µm,0.4s
LRSO  Larissa Observ       0.73 116   P     Pb      23 12 27.5 -0.7
LRSO                                  S     Sg      23 12 38.7 +0.7
      comp=N,9µm,0.7s
LRSO  Larissa Observ       0.73 116   P     Pb      23 12 27.8 -0.4
LRSO                                  AML   AML     23 12 44.3
      comp=N,18542µm,0.5s
LRSO                                  AML   AML     23 12 45.5
      comp=E,17015µm,0.8s
LIT   Litokhoron           0.74  81   P     Pb      23 12 27.2 -1.2
LIT                                   S     Sg      23 12 38.6 +0.3
      comp=E,6µm,0.3s
LIT   Litokhoron           0.74  81   P     Pb      23 12 27.7 -0.7
LIT                                   AML   AML     23 12 42.9
      comp=E,13382µm,0.3s
LIT                                   AML   AML     23 12 43.9
      comp=N,11214µm,0.4s
FNA   Florina              0.80 351   P     Pb      23 12 28.7 -0.7
FNA                                   S     Sb      23 12 39.5 -0.4
      comp=N,5µm,0.4s
FNA   Florina              0.80 351   P     Pb      23 12 28.8 -0.7
FNA                                   S     Sb      23 12 39.2 -0.7
FNA                                   AML   AML     23 12 42.1
      comp=E,9820µm,0.4s
FNA                                   AML   AML     23 12 44.7
      comp=N,9012µm,0.4s
IGT   Igoumenitsa          1.04 244   P     Pb      23 12 33.0 -0.4
IGT                                   S     Sb      23 12 46.1 -0.6
      comp=N,2µm,0.4s
IGT   Igoumenitsa          1.04 244   P     Pn      23 12 33.5 -0.2
IGT                                   AML   AML     23 12 54.2
      comp=N,4693µm,0.4s
IGT                                   AML   AML     23 12 54.4
      comp=E,4502µm,0.4s
MAKR  Makrakomi, Fth       1.08 155   P     Pb      23 12 33.3 -0.9
MAKR                                  S     Sn      23 12 48.6 -0.3
MAKR  Makrakomi, Fth       1.08 155   P     Pn      23 12 34.3 -0.1
MAKR                                  AML   AML     23 12 53.7
      comp=N,10577µm,0.3s
MAKR                                  AML   AML     23 12 53.9
      comp=E,23209µm,0.3s
EVR   Evrytania            1.10 169   P     Pb      23 12 33.9 -0.6
EVR                                   S     Sb      23 12 48.3 -0.2
      comp=E,3µm,0.3s
EVR   Evrytania            1.10 169   P     Pb      23 12 34.3 -0.2
EVR                                   AML   AML     23 12 52.6
      comp=E,4162µm,0.3s
EVR                                   AML   AML     23 12 53.7
      comp=N,6140µm,0.3s
AGG   Agios Georgios       1.15 147   P     Pn      23 12 34.8 -0.4
AGG                                   S     Sb      23 12 49.4 -0.5
      comp=N,2µm,0.3s
AGG   Agios Georgios       1.15 147   P     Pb      23 12 35.5 +0.1
AGG                                   AML   AML     23 12 56.7
      comp=N,4128µm,0.3s
AGG                                   AML   AML     23 12 57.3
      comp=E,4545µm,0.3s
GRG   Griva                1.17  34   P     Pn      23 12 35.4 -0.1
GRG                                   AML   AML     23 12 56.7
      comp=E,1186µm,0.6s
GRG                                   AML   AML     23 13 00.1
      comp=N,1977µm,0.5s
SRN   Sarande              1.19 265  i PG   Pg      23 12 36.4 -0.5
SRN                                  i SG   Sg      23 12 53.9 +1.5
TPE   Tepelena             1.21 285  i PN   Pg      23 12 37.4 +0.1
TPE                                  i SN   Sg      23 12 54.8 +1.8
OHR   Ohrid                1.25 334  i Pg   Pb      23 12 36.8 -0.3
OHR                                  i Sg   Sg      23 12 55.9 +1.4
OHR                                  eLg    Lg      23 12 56.6
      comp=N,2µm,0.7s
OHR                                  eLg    Lg      23 12 56.8
      comp=E,2µm,0.6s
KASA  Kassiopi             1.26 259   P     Pg      23 12 37.9 -0.3
KASA                                  AML   AML     23 12 58.1
      comp=N,3401µm,0.4s
KASA                                  AML   AML     23 12 59.0
      comp=E,3590µm,0.5s
THE   Thessaloniki         1.27  59   P     Pb      23 12 37.0 -0.3
THE                                   AML   AML     23 12 58.8
      comp=N,779µm,0.4s
THE                                   AML   AML     23 13 03.1
      comp=E,646µm,0.6s
HORT  Hortiatis            1.34  63   P     Pn      23 12 37.4 -0.5
HORT                                  AML   AML     23 12 59.7
      comp=N,521µm,0.3s
HORT                                  AML   AML     23 13 01.7
      comp=E,693µm,0.6s
TSLK  Tsoukalades, L       1.35 211   P     Pg      23 12 39.5 -0.5
KEK   Kerkira              1.37 259   P     Pb      23 12 39.3 +0.2
KEK                                   AML   AML     23 13 06.8
      comp=N,2029µm,0.5s
KEK                                   AML   AML     23 13 07.8
      comp=E,1698µm,0.5s
PVO   Paravola             1.38 180   P     Pb      23 12 39.0 -0.2
PVO                                   AML   AML     23 13 06.9
      comp=E,1484µm,0.4s
PVO                                   AML   AML     23 13 06.9
      comp=N,1839µm,0.5s
LKD2  Lefkada island       1.38 210   P     Pg      23 12 40.1 -0.5
LKD2                                  AML   AML     23 13 03.6
      comp=N,1801µm,0.4s
LKD2                                  AML   AML     23 13 12.7
      comp=E,1096µm,0.5s
XOR   Xorichti             1.42 116   P     Pn      23 12 38.7 -0.3
XOR                                   S     Sn      23 12 57.0 -0.3
      comp=E,810nm,0.4s
XOR   Xorichti             1.42 116   P     Pn      23 12 39.2 +0.2
ANX   Ano Chora            1.43 168   P     Pn      23 12 38.4 -0.8
ANX                                   S     Sb      23 12 57.8 -0.3
      comp=E,2µm,0.4s
ANX   Ano Chora            1.43 168   P     Pb      23 12 40.2  0.0
ANX                                   AML   AML     23 13 06.3
      comp=E,3213µm,0.5s
ANX                                   AML   AML     23 13 08.5
      comp=N,3353µm,0.4s
MGNA  Meganis              1.46 204   P     Pg      23 12 41.3 -0.7
NEO   Neokhori             1.47 117   P     Pn      23 12 39.7 +0.1
NEO                                   AML   AML     23 13 08.4
      comp=E,2142µm,0.6s
NEO                                   AML   AML     23 13 12.5
      comp=N,2701µm,0.6s
AXAR  Agios Charalam       1.50 144   P     Pb      23 12 41.3 -0.1
AXAR                                  AML   AML     23 13 08.1
      comp=E,3538µm,0.4s
AXAR                                  AML   AML     23 13 14.5
      comp=N,3445µm,0.7s
EVGI  Lefkada island       1.53 207   P     Pb      23 12 42.3 +0.4
VAY   Valandovo            1.54  30  i Pn   Pn      23 12 41.1 +0.5
KNT   Kendrikon            1.56  41   P     Pb      23 12 41.6 -0.8
KNT                                   AML   AML     23 13 08.7
      comp=N,424µm,0.7s
KNT                                   AML   AML     23 13 14.2
      comp=E,397µm,0.6s
EFP   Efpalio              1.59 169   P     Pb      23 12 43.0 +0.2
EFP                                   AML   AML     23 13 11.1
      comp=N,2844µm,0.3s
EFP                                   AML   AML     23 13 11.3
      comp=E,3919µm,0.3s
SOH   Sokhos               1.61  59   P     Pn      23 12 42.2 +0.6
SERG  Sergoula             1.63 165   P     Pb      23 12 43.5 -0.1
SERG                                  AML   AML     23 13 10.9
      comp=E,3266µm,0.3s
SERG                                  AML   AML     23 13 14.3
      comp=N,2747µm,0.3s
PAIG  Paliouri             1.65  92   P     Pn      23 12 41.7 -0.4
KALE  Kalithea             1.67 163   P     Pn      23 12 43.0 +0.6
KALE                                  AML   AML     23 13 11.8
      comp=N,2644µm,0.5s
KALE                                  AML   AML     23 13 13.9
      comp=E,2761µm,0.3s
TRIZ  Trizonia             1.68 165   P     Pb      23 12 44.0 -0.3
DLFA  Delphi               1.69 153   P     Pb      23 12 43.9 -0.6
SKIA  Skiathos             1.71 118   P     Pn      23 12 42.9 +0.1
SKIA                                  AML   AML     23 13 15.9
      comp=E,1052µm,0.9s
SKIA                                  AML   AML     23 13 17.8
      comp=N,962µm,0.5s
FSK   Fiskardo             1.71 207   P     Pb      23 12 45.1 +0.3
FSK                                   AML   AML     23 13 14.2
      comp=N,610µm,0.5s
FSK                                   AML   AML     23 13 15.5
      comp=E,772µm,0.4s
KONA  Konidatara, Ke       1.74 206   P     Pb      23 12 45.5 +0.1
LKR   Lokris               1.76 139   P     Pn      23 12 44.0 +0.4
DSF   Desfina              1.76 154   P     Pn      23 12 44.5 +0.9
DSF                                   AML   AML     23 13 16.5
      comp=N,1348µm,0.2s
DSF                                   AML   AML     23 13 19.8
      comp=E,768µm,0.2s
LAKA  Lakka                1.79 169   P     Pb      23 12 45.9 -0.3
TIR   Tirane               1.86 317  i PN   Pg      23 12 48.6 -0.9
TIR                                  i SN   Sg      23 13 12.1 -1.6
TIR   Tirane               1.86 317 ⇓P      Pg      23 12 49.1 -0.5
PHP   Peshkopia            1.88 334  i PN   Pb      23 12 46.6 -1.3
PHP                                  i SN   Sg      23 13 14.9 +0.3
KEF1  Kardakata, Kep       1.90 206   P     Pn      23 12 46.2 +0.7
OUR   Ouranopolis          1.91  79   P     Pn      23 12 45.9 +0.3
SRS   Serrai               1.93  54   P     Pn      23 12 46.1 +0.2
RLS   Riolos of Patr       1.94 182   P     Pb      23 12 48.5 -0.2
RLS                                   AML   AML     23 13 26.4
      comp=N,498µm,0.4s
RLS                                   AML   AML     23 13 28.6
      comp=E,542µm,0.8s
KEF4  Livadi, Kephal       1.94 207   P     Pb      23 12 47.6 -1.1
VLS   Valsamata            1.96 202   P     Pb      23 12 47.6 -1.5
KFL   Anninata             1.97 197   P     Pb      23 12 48.9 -0.4
SKO   Skopje               1.98 358  ePn    Pb      23 12 50.5 +1.0
AOS   Alonnisos            1.99 114   P     Pn      23 12 46.4 -0.4
KEF2  Argostoli. Kep       2.00 204   P     Pb      23 12 48.7 -1.2
PROD  Prodromos            2.03 148   P     Pn      23 12 47.7 +0.4
PROD                                  AML   AML     23 13 18.9
      comp=E,728µm,0.7s
PROD                                  AML   AML     23 13 25.1
      comp=N,682µm,0.3s
DRO   Drossia              2.04 176   P     Pb      23 12 50.4 -0.2
DRO                                   AML   AML     23 13 30.7
      comp=N,946µm,0.6s
DRO                                   AML   AML     23 13 32.4
      comp=E,1119µm,0.5s
MRKA  Markates             2.05 128   P     Pn      23 12 47.9 +0.3
KKB   Krupnik              2.21  32   P     Pn      23 12 50.7 +0.9
NVR   Nevrokopi            2.23  52   P     Pn      23 12 50.5 +0.4
NVR                                   AML   AML     23 13 19.5
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	comp=E,284µm,0.3s						
NVR				AML	AML	23 13 20.5	
	comp=N,296µm,0.6s						
VIL2	Platees	2.23	142	P	Pn	23 12 51.5	+1.3
LTK	Loutraki	2.26	150	P	Pn	23 12 50.9	+0.4
LOUT	Loutraki	2.30	150	P	Pn	23 12 51.6	+0.6
MMB	Musomiste	2.30	46	P	Pn	23 12 51.7	+0.6
PUK	Puka	2.39	329	i PN	Pb	23 12 55.4	-1.2
PUK				i SN	Sb	23 13 25.5	-0.3
AMT	Artemida-Makis	2.46	177	P	Pb	23 12 55.9	-1.8
KAVA	Kavala	2.48	65	P	Pn	23 12 53.0	-0.5
BCI	Bajram Curri	2.62	335	i PN	Pb	23 12 59.7	-0.6
BCI				i SN	Sb	23 13 33.9	+1.7
ATH	Athens Observa	2.64	139	P	Pn	23 12 56.2	+0.6
PTL	Penteli	2.66	136	P	Pn	23 12 56.6	+0.6
DION	Dionisos Attik	2.67	135	P	Pn	23 12 56.6	+0.4
ATHU	Athens Univers	2.68	138	P	Pn	23 12 56.8	+0.6
VLY	Voula,Athens	2.77	140	P	Pn	23 12 58.1	+0.6
LIA	Limnos Island	2.81	91	P	Pn	23 12 57.9	0.0
DID	Didima	2.82	151	P	Pn	23 12 58.9	+0.7
DRME	Dracevica, Mon	2.82	322	ePn	Pn	23 13 00.2	+2.0
ITM	Ithomi	2.83	174	P	Pb	23 13 01.4	-2.5
KRND	KRANIDI	2.90	154	P	Pn	23 12 59.8	+0.6
VTS	Vitosha	2.92	25	⇑P	Pn	23 13 00.7	+1.1
VTS	Vitosha	2.92	25	P	Pn	23 13 00.7	+1.1
RZN	Rozhen	2.95	54	P	Pn	23 13 00.8	+0.7
PDG	Podgorica	2.98	325	⇑P	Pn	23 13 02.8	+2.4
PDG	Podgorica	2.98	325	ePn	Pn	23 13 01.7	+1.3
KARY	Karystos	2.99	130	P	Pn	23 13 01.1	+0.6
SMTH	Samothraki Isl	3.10	80	P	Pn	23 13 01.9	-0.1
PYL	PYLOS	3.10	177	P	Pn	23 13 03.9	+1.9
RDO	Rodhopi	3.26	68	P	Pn	23 13 04.3	+0.2
TAR1	Taranto	3.30	281	ePn	Pn	23 13 06.4	+1.7
HCY	Herceg Novi	3.36	318	ePn	Pn	23 13 07.1	+1.5
KDZ	Kurdzhali	3.38	59	P	Pn	23 13 05.6	-0.3
SIGR	SIGRI	3.43	102	P	Pn	23 13 08.0	+1.5
VLI	Veliai	3.45	161	P	Pn	23 13 08.3	+1.4
TREB	Trebinje	3.63	320	ePn	Pn	23 13 11.2	+1.9
BRY	Bratogost	3.68	323	ePn	Pn	23 13 12.4	+2.3
DBRK	Dubrovnik	3.69	317	ePn	Pn	23 13 10.9	+0.7
DBRK				Sn	Sn	23 13 53.7	+0.4
BAI	Bari	3.72	289	ePn	Pn	23 13 11.5	+1.0
BAI				Sn	Sn	23 13 54.9	+1.1
MATE	Matera	3.75	282	⇓P	Pn	23 13 12.3	+1.4
UPM	Unac-Piva	3.76	329	ePn	Pn	23 13 13.6	+2.3
TIP	Timpagrande	3.78	259	⇑P	Pn	23 13 12.6	+1.2
TIP				⇓S	Sn	23 13 57.3	+1.8
SG1	Sgolgore (BA)	3.80	284	ePn	Pn	23 13 12.8	+1.1
SG1				Sn	Sn	23 13 57.3	+1.3
CHOS	Chios island	3.86	113	P	Pn	23 13 13.6	+1.0
RUDO	Rudo	3.97	337	ePn	Pn	23 13 15.4	+1.5
STON	Ston	4.07	316	ePn	Pn	23 13 15.8	+0.5
STON	Ston	4.07	316	ePn	Pn	23 13 16.3	+1.0
PLVB	Pleven	4.10	33	⇓P	Pn	23 13 16.0	+0.2
BBLS	Lazići	4.18	338	ePn	Pn	23 13 19.0	+2.0
DIVS	Divibare	4.26	345	ePn	Pn	23 13 18.6	+0.6
ELND	Elena	4.38	47	⇑P	Pn	23 13 20.7	+1.0
ELND				⇓S	Sn	23 14 10.9	+0.6
HAPS	Han Pijesak,Bl	4.52	336	ePn	Pn	23 13 22.8	+1.2
MAKA	Makarska	4.72	316	ePn	Pn	23 13 24.3	+0.1
MAKA				Sn	Sn	23 14 17.7	-0.9
RICI	Ricice	4.80	318	ePn	Pn	23 13 25.5	0.0
RICI				Sn	Sn	23 14 20.3	-0.4
HERR	Herculane	4.93	7	⇓P	Pn	23 13 28.8	+1.7
FRGS	Fruska Gora	5.32	347	ePn	Pn	23 13 26.2	-6.3
IDI	Anoyia	5.40	149	Pn	Pn	23 13 35.7	+2.0
	comp=N,0.5nm,0.3s,baz=331,slow=13,SNR=6.1						
IDI				Sn	Sn	23 14 36.6	+1.1
	comp=N,1.6nm,0.3s,baz=340,slow=15,SNR=1.9						
GZR	Gura Zlata	5.47	9	⇑P	Pn	23 13 36.5	+1.8
MGRS	Mrkonjic Grad	5.52	325	ePn	Pn	23 13 36.3	+1.0
BZS	Buzias	5.62	1	⇑P	Pn	23 13 38.4	+1.8
ZIRJ	Zirje	5.72	312	ePn	Pn	23 13 38.2	+0.2
BLY	Banja Luka	5.74	327	⇑P	Pn	23 13 40.9	+2.6
BLY	Banja Luka	5.74	327	ePn	Pn	23 13 38.6	+0.3
MORI	Morici	5.82	314	ePn	Pn	23 13 40.0	+0.6
MORI				Sn	Sn	23 14 44.0	-1.6
VOIR		6.02	24	⇑P	Pn	23 13 42.7	+0.5
VAE	Valguarnera	6.11	248	Sn	Sn	23 14 52.6	-0.3
	comp=N,0.7nm,0.3s,baz=110,slow=8.0,SNR=2.0						
UDBI	Udbina	6.23	319	ePn	Pn	23 13 46.2	+1.1
UDBI				Sn	Sn	23 14 55.1	-0.9
DUGI	Dugi Otok	6.26	312	ePn	Pn	23 13 45.7	+0.2
DUGI				Sn	Sn	23 14 54.7	-1.9
MLR	Muntele Rosu	6.38	29	Pn	Pn	23 13 47.9	+0.7
	comp=N,1.1nm,0.3s,baz=225,slow=11,SNR=18						
MLR				Sn	Sn	23 15 03.7	+4.1
	baz=76,slow=12,SNR=1.3						
MLR	Muntele Rosu	6.38	29	⇑P	Pn	23 13 46.9	-0.3
MORH	Mrgy, Hungar	6.57	342	ePn	Pn	23 13 50.5	+0.9
DOPR	Dopca	6.60	24	⇑P	Pn	23 13 51.8	+1.6
NVLJ	Novalja	6.73	315	ePn	Pn	23 13 51.7	-0.2
NVLJ				Sn	Sn	23 15 06.5	-1.5
PLOR	Plostina	6.95	31	⇑P	Pn	23 13 56.3	+1.3
VRI	Vrincioaia	7.00	31	⇑P	Pn	23 13 56.4	+0.9
CRES	Cresnjev	7.34	325	ePn	Pn	23 13 58.9	-1.3
CEY	Cerknica	7.76	320	ePn	Pn	23 14 05.7	-0.3
PSZ	Piszkesteto	8.01	352	⇑P	Pn	23 14 11.6	+2.1
SOKA	Soboth	8.19	327	i Pn	Pn	23 14 14.0	+2.1
	comp=N,0.4nm,0.2s						
OBKA	Obir	8.27	324	ePn	Pn	23 14 18.0	+4.9
	comp=N,0.3nm,0.2s						
OBKA				eSn	Sn	23 15 46.9	+0.9
	comp=N,2.0nm,0.5s						
VYHS	Vyhne	8.71	348	ePN	Pn	23 14 22.3	+3.2
BRTR	Keskin Array B	9.31	88	Pn	Pn	23 14 29.1	+1.7
	comp=N,0.2nm,0.3s,baz=270,slow=12,SNR=12						
ABTA	Abfaltersbach	9.41	319	ePn	Pn	23 14 30.0	+1.2
	comp=N,0.4nm,0.2s						
ABTA				eSn	Sn	23 16 11.3	-2.9
	comp=N,1.3nm,0.4s						
MOA	Molln	9.44	329	ePn	Pn	23 14 32.5	+3.4
	comp=N,0.4nm,0.4s						
MOA				eSn	Sn	23 16 13.8	-0.9
	comp=N,0.3nm,0.2s						
WTTA	Wattenberg	10.21	319	Pn	Pn	23 14 43.4	+3.7
	comp=N,0.5nm,0.3s						
WTTA				eSn	Sn	23 16 30.2	-3.6
	comp=N,2.5nm,0.5s						
WATA	Walderalm	10.28	319	ePn	Pn	23 14 44.3	+3.5
	comp=N,0.3nm,0.2s						
WATA				eSn	Sn	23 16 32.8	-2.8
	comp=N,2.1nm,0.6s						
FETA	Feichten	10.53	315	ePn	Pn	23 14 50.5	+6.4
	comp=N,0.4nm,0.4s						
FETA				eSn	Sn	23 16 39.8	-1.8
	comp=N,1.6nm,0.7s						
MOTA	Moosalm	10.53	318	ePn	Pn	23 14 47.1	+3.0
	comp=N,0.5nm,0.4s						
MOTA				eSn	Sn	23 16 39.2	-2.6
	comp=N,4.4nm,0.9s						
RETA	Reutte	10.80	317	i Sn	Sn	23 16 44.2	-4.0
	comp=N,0.3nm,0.3s						
BRG	Berggiesshubel	12.11	336	SG	Sg	23 18 23.3	
	comp=N,0.6nm,0.5s						
OBN	Obninsk	18.15	29	LR	LR	23 24 08.7	
	comp=N,18nm,18.1s,baz=183,slow=40						
HFS	Hagfors	20.75	349	P	P	23 16 51.8	-1.7
	comp=N,1.1nm,0.6s,baz=164,slow=12,SNR=5.5						
FINES	FINESS Array B	21.66	6	P	P	23 17 02.7	-0.5
	comp=N,1.5nm,0.8s,baz=171,slow=11,SNR=1.4						
NB2	NORSAR Subarra	22.02	347	P	P	23 17 05.9	-1.3
	comp=Z,0.7nm,0.6s,baz=160,slow=11						
NOA	NORSAR Array B	22.02	347	P	P	23 17 06.1	-1.0
	comp=Z,0.4nm,0.6s,baz=157,slow=11,SNR=3.2						
MKAR	Makanchi Array	43.70	60	P	P	23 20 17.9	+0.1
	comp=Z,0.3nm,0.5s,baz=272,slow=7.2,SNR=9.7						

IDC 29 23:30:15.9±1.6**, 16°.70S**×**178°.07W, h0^{km}, mb4.0**/6**, mb1 4.3**/6**, mb1mx3.9**/32**, mbtmp4.0**/6**, MS3.8**/1**, Ms1 3.8**/1**, ms1mx2.6**/25**, Error ellipse: s-maj=114.5km s-min=23.1km az=149.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	12.50	179	LR	LR	23 37 36.4	
	comp=Z,372nm,18.6s,baz=154,slow=35						
STKA	Stephens Creek	39.50	240	P	P	23 37 48.3	-0.2
	2.2nm,0.5s,baz=90,slow=9.6,SNR=8.1						
WRA	Warramunga Arr	45.18	258	P	P	23 38 35.0	+0.1
	1.3nm,0.3s,baz=95,slow=7.5,SNR=36						
ASAR	Alice Springs	45.44	253	P	P	23 38 36.7	-0.3
	6.6nm,0.5s,baz=86,slow=8.8,SNR=126						
ILAR	Eielson Array	84.64	13	P	P	23 42 50.8	-0.2
	0.2nm,0.5s,baz=221,slow=5.6,SNR=2.5						
TXAR	Lajitas Array	85.08	58	P	P	23 42 54.1	-0.1
	0.3nm,0.7s,baz=232,slow=6.2,SNR=4.6						
PDAR	Pinedale Array	86.26	43	P	P	23 43 00.2	+0.2
	0.2nm,0.6s,baz=207,slow=3.8,SNR=2.2						

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*IDC **30** 00:02:10.1±2.1, 41°.43N×19°.37E, h0^{km}, mb3.5/6, mb1 3.5/10, mb1mx3.4/41, mbtmp3.4/10, ML3.0/4, MS2.6/3, Ms1 2.6/3, ms1mx2.3/40, Error ellipse: s-maj=32.7km s-min=17.5km az=1.0*

*PRU **30** 00:02:11.9±0.0, 41°.55N×20°.34E, h0^{km}*

*SKO **30** 00:02:12.4, 41°.53N×19°.34E, h3^{km}*

*THE **30** 00:02:13.0, 41°.62N×19°.35E, h7^{km}±1^{km}, ML3.3/11, Error ellipse: s-maj=3.0km s-min=1.2km az=288.0*

*PDG **30** 00:02:14.2±0.5, 41°.51N×19°.49E, h15^{km}, MD3.2/2, ML3.1/13, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*

*TIR **30** 00:02:14.2, 41°.49N×19°.50E, h8^{km}, Md3.4/7*

*RHSSO **30** 00:02:15.1±0.7, 41°.49N×19°.41E, h16^{km}±2^{km}, ML3.3/11*

ISC 30 00:02:14.1±1.0**, 41°.53N**±0°.02×**19°.46E**±0°.02**, h15**^{km}±7^{km}**, n78, σ1^{s}37**/122**, mb3.7**/4**, 3C-3D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.36	121	i PG	Pg	00 02 20.6	-0.9
TIR				i SG	Sg	00 02 26.0	-0.5
PUK	Puka	0.61	33	i PG	Pg	00 02 25.4	-0.6
PUK				i SG	Sb	00 02 36.0	+1.1
DRME	Dracevica, Mon	0.68	343	ePg	Pb	00 02 27.9	+0.1
DRME				eSg	Sn	00 02 39.9	+0.2
PHP	Peshkopia	0.76	78	i PG	Pg	00 02 27.9	-0.9
PHP				i SG	Sg	00 02 38.4	-0.4
PDG	Podgorica	0.91	351	ePg	Pn	00 02 33.0	+0.6
PDG				eSg	Sn	00 02 45.5	+0.3
BCI	Bajram Curri	0.95	29	i PG	Pb	00 02 31.3	-1.0
BCI				i SG	Sg	00 02 46.0	+1.1
VLO	Vlora	1.06	178	P	Pg	00 02 35.1	+0.5
VLO				S	Sn	00 02 50.9	+1.9
	3µm,0.5s						
VLO	Vlora	1.06	178	i PG	Pg	00 02 35.7	+1.1
VLO				i SG	Sn	00 02 51.4	+2.4
OHR	Ohrid	1.10	112	⇑iPg	Pb	00 02 33.1	-1.7
OHR				i Sg	Sb	00 02 50.0	+1.0
OHR				eLg	Lg	00 02 51.4	
	comp=N,914nm,0.7s						
OHR				eLg	Lg	00 02 52.7	
	comp=E,484nm,0.4s						
HCY	Herceg Novi	1.16	322	ePg	Pg	00 02 36.7	+0.2
HCY				eSg	Sn	00 02 52.6	+1.1
TPE	Tepelena	1.31	161	P	Pn	00 02 38.2	+0.4
TPE				S	Sg	00 02 58.0	+1.8
	comp=E,2µm,0.6s						
TPE	Tepelena	1.31	161	i PN	Pb	00 02 38.8	+0.4
TPE				i SN	Sg	00 02 57.7	+1.5
TREB	Trebinje	1.44	326	ePg	Pb	00 02 40.8	+0.1
TREB				eSg	Sg	00 03 01.1	+0.5
DBRK	Dubrovnik	1.50	320	ePn	Pb	00 02 41.5	-0.1
DBRK				Sn	Sg	00 03 02.0	-0.3
BRY	Bratogost	1.53	334	ePg	Pb	00 02 42.6	+0.4
BRY				eSg	Sg	00 03 04.0	+0.6
SKO	Skopje	1.55	73	i Pg	Pn	00 02 42.1	+0.9
SKO				i Sg	Sb	00 03 03.8	+1.9
SKO				eLg	Lg	00 03 04.1	
	comp=N,68nm,0.7s						
SKO				eLg	Lg	00 03 04.4	
	comp=E,49nm,0.7s						
FNA	Florina	1.63	117	P	Pn	00 02 42.8	+0.4
FNA				S	Sb	00 03 06.2	+1.8
	comp=E,1µm,0.4s						
NEST	Nestorio	1.64	132	P	Pn	00 02 43.7	+1.1
SRN	Sarande	1.70	166	P	Pn	00 02 43.4	+0.2
SRN	Sarande	1.70	166	i PN	Pn	00 02 43.0	-0.2
SRN				i SN	Sn	00 03 04.6	-0.1
UPM	Unac-Piva	1.72	346	ePn	Pn	00 02 44.6	+0.9
KEK	Kerkira	1.84	172	P	Pn	00 02 44.6	-0.5
KEK				S	Sb	00 03 11.4	+1.2
	comp=E,468nm,0.4s						
PENT	Pentalofos	1.85	136	P	Pn	00 02 46.8	+1.4
PENT				S	Sb	00 03 12.2	+1.6
	comp=E,292nm,0.4s						
STON	Ston	1.87	316	ePn	Pn	00 02 46.5	+1.0
STON				Sn	Sn	00 03 09.4	+0.5
STON	Ston	1.87	316	⇑iPn	Pn	00 02 46.4	+0.9
STON				eSn	Sb	00 03 10.7	-0.4
TAR1	Taranto	1.93	239	⇓iPn	Pn	00 02 45.8	-0.5
BAI	Bari	1.99	258	⇓iPn	Pn	00 02 47.2	+0.1
IGT	Igoumenitsa	2.11	161	P	Pn	00 02 49.0	+0.2
IGT				S	Sb	00 03 17.9	-0.1
	comp=E,280nm,0.5s						
KZN	Kozani	2.14	124	P	Pn	00 02 50.3	+0.9
KZN				S	Sb	00 03 18.9	-0.1
	comp=E,275nm,0.5s						
KPRO	Kipourio	2.14	137	P	Pn	00 02 50.8	+1.4
KPRO				S	Sb	00 03 19.6	+0.6
	comp=E,302nm,0.6s						
JAN	Janina	2.15	150	P	Pn	00 02 50.6	+1.1
JAN				S	Sb	00 03 19.1	-0.3
	comp=E,298nm,0.7s						
SG1	Sgolgore (BA)	2.21	253	⇓iPn	Pn	00 02 50.1	-0.1
GRG	Griva	2.29	104	P	Pn	00 02 51.8	+0.3
BBLS	Lazići	2.33	359	ePn	Pn	00 02 53.5	+1.5
BBLS				eSn	Sn	00 03 22.1	+1.6
VAY	Valandovo	2.35	94	i Pn	Pn	00 02 52.5	+0.3
MAKA	Makarska	2.52	315	i Pn	Pn	00 02 55.3	+0.9
MAKA				Sn	Sn	00 03 26.4	+1.6
HAPS	Han Pijesak,Bl	2.58	352	ePn	Pn	00 02 56.2	+0.8
HAPS				eSn	Sn	00 03 27.9	+1.3
DIVS	Divibare	2.59	9	ePn	Pn	00 02 58.0	+2.4
DIVS				eSn	Sn	00 03 29.1	+2.2
RICI	Ricice	2.61	320	ePn	Pn	00 02 56.5	+0.8
RICI				Sn	Sn	00 03 29.6	+2.4
KNT	Kendrikon	2.62	97	P	Pn	00 02 56.3	+0.4
KNT				S	Sn	00 03 30.2	+2.8
	comp=E,72nm,0.9s						
LIT	Litokhoron	2.71	121	P	Pn	00 02 57.2	0.0
LIT				S	Sn	00 03 32.3	+2.6
	comp=E,120nm,0.7s						
MGRS	Mrkonjic Grad	3.37	330	ePn	Pn	00 03 07.5	+1.3
MGRS				eSn	Sn	00 03 46.6	+0.7
ZIRJ	Zirje	3.52	308	i Pn	Pn	00 03 08.8	+0.5
ZIRJ				Sn	Sn	00 03 51.2	+1.5
MORI	Morici	3.62	311	i Pn	Pn	00 03 10.5	+1.0
MORI				Sn	Sn	00 03 53.8	+1.9
BLY	Banja Luka	3.62	333	ePn	Pn	00 03 10.7	+1.1
BLY				eSn	Sn	00 03 53.0	+0.9
UDBI	Udbina	4.04	319	ePn	Pn	00 03 17.4	+2.0
DUGI	Dugi Otok	4.06	309	i Pn	Pn	00 03 16.8	+1.0
DUGI				Sn	Sn	00 04 03.2	+0.1
NVLJ	Novalja	4.52	314	ePn	Pn	00 03 22.7	+0.7
NVLJ				Sn	Sn	00 04 13.2	-1.1
MORH	Mrgy, Hungar	4.72	353	ePn	Pn	00 03 25.3	+0.6
BOJS	Bojanci	5.01	324	⇑iPn	Pn	00 03 30.0	+1.3
CRES	Cresnjev	5.18	327	ePn	Pn	00 03 31.6	+0.5
CRES				eSn	Sn	00 04 29.5	-1.0
CEY	Cerknica	5.57	321	ePn	Pn	00 03 37.4	+1.0
CEY				eSn	Sn	00 04 38.4	-1.7
SOKA	Soboth	6.05	330	ePn	Pn	00 03 44.0	+0.9
	comp=E,1.1nm,0.5s						
SOKA				eSn	Sn	00 04 50.6	-1.4
	comp=E,2.3nm,0.6s						
OBKA	Obir	6.10	326	ePn	Pn	00 03 45.4	+1.6
	comp=E,0.5nm,0.3s						
MLR	Muntele Rosu	6.16	48	Pn	Pn	00 03 46.5	+1.9
	comp=E,0.5nm,0.3s,baz=270,slow=22,SNR=8.5						
MLR				Sn	Sn	00 04 57.1	+2.3
	comp=E,0.4nm,0.3s,baz=144,slow=14,SNR=1.8						
ARSA	Arzberg	6.37	335	ePn	Pn	00 03 47.9	+0.4
	comp=E,0.4nm,0.2s						
VYHS	Vyhne	6.97	357	eSN	Sn	00 05 17.9	+3.1
KBA	Koelnbreinsper	7.07	324	ePn	Pn	00 03 59.7	+2.6
	comp=E,0.4nm,0.3s						
ABTA	Abfaltersbach	7.22	319	ePn	Pn	00 03 59.2	+0.1
	comp=E,0.3nm,0.2s						
ABTA				eSn	Sn	00 05 22.5	+1.6
	comp=E,3.4nm,0.6s						
MOA	Molln	7.32	331	ePn	Pn	00 04 04.7	+4.3
	comp=E,0.1nm,0.1s						
WTTA	Wattenberg	8.01	318	ePn	Pn	00 04 12.6	+2.6
	comp=E,0.8nm,0.2s,SNR=4.3						
WTTA				Sn	Sn	00 05 39.8	-0.6
	comp=E,4.7nm,0.5s						
VRAC	Vranov	8.03	346	LR	LR	00 07 28.1	
	comp=E,48nm,18.7s,baz=262,slow=39						
WATA	Walderalm	8.09	318	ePn	Pn	00 04 13.4	+2.3
	comp=E,0.6nm,0.2s,SNR=4.2						
SQTA	Sankt Quirin	8.20	317	ePn	Pn	00 04 14.6	+2.1
	comp=E,0.7nm,0.2s						
SQTA				eSn	Sn	00 05 44.5	-0.4
	comp=E,2.2nm,0.5s						
MOTA	Moosalm	8.33	317	ePn	Pn	00 04 16.1	+1.7
	comp=E,0.8nm,0.4s						
MOTA				eSn	Sn	00 05 48.7	+0.4
	comp=E,2.9nm,0.6s						
GERES	GERESS Array B	8.36	333	Pn	Pn	00 04 14.6	-0.2
	comp=E,0.0nm,0.3s,baz=166,slow=14,SNR=1.7						
RETA	Reutte	8.60	317	eSn	Sn	00 05 55.3	+0.5
	comp=E,2.1nm,0.6s						
KHC	Kasperske Hory	8.65	333	ePN	Pn	00 04 23.0	+4.3
DAVOX	Davos/Dischmat	8.65	311	Pn	Pn	00 04 18.9	0.0
	comp=E,0.2nm,0.3s,baz=130,slow=16,SNR=2.4						
BRTR	Keskin Array B	10.93	95	LR	LR	00 10 05.1	
	comp=E,24nm,21.4s,baz=306,slow=43						
HFS	Hagfors	18.96	351	P	P	00 06 34.2	-0.4
	comp=E,0.0nm,0.3s,baz=188,slow=18,SNR=1.7						
GNI	Garni	19.17	86	LR	LR	00 14 27.2	
	comp=E,17nm,19.3s,baz=279,slow=38						
NOA	NORSAR Array B	20.17	348	P	P	00 06 46.6	-1.2
	comp=E,0.3nm,0.7s,baz=163,slow=10,SNR=3.0						
FINES	FINESS Array B	20.34	9	P	P	00 06 47.8	-1.8
	comp=E,1.5nm,0.7s,baz=187,slow=7.7,SNR=5.3						
ZALV	Zalesovo Beam	44.13	51	P	P	00 10 20.5	-1.2
	comp=E,1.0nm,0.4s,baz=284,slow=8.6,SNR=6.1						
MKAR	Makanchi Array	44.32	61	P	P	00 10 22.4	-0.9
	comp=E,1.1nm,0.5s,baz=280,slow=7.8,SNR=22						
SONM	Songino Array	58.99	52	P	P	00 12 12.0	-1.2
	comp=E,0.1nm,0.3s,baz=312,slow=9.5,SNR=2.7						
YKA	Yellowknife Ar	69.96	339	P	P	00 13 23.4	-1.0
	comp=E,0.2nm,0.8s,baz=44,slow=6.3,SNR=2.8						

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*IDC **30** 00:11:26.6±2.5, 6°.61S×129°.76E, h122^{km}±27^{km}, mb3.7/6, mb1 3.8/10, mb1mx3.6/34, mbtmp4.2/10, MS3.0/1, Ms1 3.0/1, ms1mx2.3/34, Error ellipse: s-maj=38.9km s-min=13.0km az=81.0*

*DJA **30** 00:11:29.5±0.3, 7°S±2°×13°0E±°, h215^{km}±6^{km}, M4.3/12, mB5.0/6, mb4.0/6, MLv4.5/12, Mw(mB)4.4/6*

ISC 30 00:11:30.8±0.7**, 6°.71S**±0°.05×**129°.98E**±0°.07**, h200**^{km}**, n18, σ3^{s}81**/23**, mb3.7**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.82	134	P	Pn	00 12 07.7	+0.2
SAUI				S	Sn	00 12 38.3	+2.2
BNDI	Bandanaira	2.18	358	P	Pn	00 12 10.6	-0.6
BNDI				S	Sn	00 12 42.4	-0.4
AAI	Ambon	3.49	329	P	Pn	00 12 25.0	-1.4
FAKI	Fak Fak	4.39	31	P	Pn	00 12 35.4	-2.2
SIJI	Sorong	5.94	12	P	Pn	00 12 53.4	-4.0
	5.8nm,0.3s,baz=111,slow=4.1,SNR=79						
SIJI				S	Sn	00 13 57.3	-8.7
	8.8nm,0.3s,baz=235,slow=23,SNR=14						
SANI	Sanana	6.11	319	P	Pn	00 12 58.1	-1.4
	0.1nm28nm,0.8s						
SOEI	Soe	6.41	241	P	Pn	00 13 03.4	-0.2
	0.4nm27nm,0.7s						
SOEI				S	Sn	00 14 17.1	0.0
	0.4nm27nm,0.7s						
RKPI	Ransiki, Papua	6.65	39	P	Pn	00 13 05.2	-1.3
FITZ	Fitzroy Crossi	12.08	200	P	Pn	00 14 15.1	-1.7
	0.9nm,0.3s,baz=19,slow=10,SNR=48						
FITZ				S	Sn	00 16 22.6	-9.0
	1.8nm,0.3s,baz=101,slow=19,SNR=8.4						
WRA	Warramunga Arr	13.81	163	P	Pn	00 14 37.6	-0.9
	1.4nm,0.3s,baz=346,slow=13,SNR=23						
WRA				S	S	00 17 06.4	-6.1
	3.1nm,0.3s,baz=344,slow=18,SNR=10						
ASAR	Alice Springs	17.27	168	P	Pn	00 15 22.6	+2.2
	0.9nm,0.3s,baz=348,slow=10,SNR=51						
ASAR				S	S	00 18 26.9	-1.4
	0.3nm,0.3s,baz=352,slow=25,SNR=5.0						
CTA	Charters Tower	20.64	132	P	Pn	00 16 00.4	-0.4
	2.9nm,0.5s,baz=290,slow=13,SNR=2.9						
LEM	Lembang	22.21	268	LR	LR	00 26 09.2	
	comp=Z,38nm,18.3s,baz=247,slow=40						
STKA	Stephens Creek	27.29	158	P	P	00 17 00.7	+3.8
	1.3nm,0.4s,baz=330,slow=7.4,SNR=3.9						
SONM	Songino Array	58.16	341	P	P	00 21 07.2	+3.4
	0.2nm,0.3s,baz=154,slow=6.6,SNR=2.8						
MKAR	Makanchi Array	67.98	327	P	P	00 22 11.7	+3.3
	5.0nm,0.4s,baz=115,slow=8.2,SNR=124						
ZALV	Zalesovo Beam	71.32	334	P	P	00 22 30.5	+2.0
	0.9nm,0.6s,baz=112,slow=6.6,SNR=4.8						
GEYT	Alibeck	80.02	310	P	P	00 23 21.9	+3.6
	0.6nm,0.4s,baz=134,slow=6.2,SNR=2.3						

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*NEIC **30** 00:20:29.2, 19°.71S×70°.83W, h26^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}4.68; $M_{\theta\theta}$0.64; $M_{\phi\phi}$-5.32; $M_{r\theta}$3.20; $M_{\theta\phi}$2.66; $M_{\phi r}$-3.69; Fault plane solution: $M_0$7.50000×10^{15} NP1:ϕ_s143.41000°, δ66.79000°, λ73.90000°. NP2:ϕ_s359.63000°, δ27.99000°, λ122.89000°. Principal axes: T 6.8184, Plg65.0000°, Azm26.0000°; N 1.2127, Plg15.0000°, Azm150.0000°; P -8.0311, Plg20.0000°, Azm245.0000°;*

*NEIC **30** 00:20:29.2±1.2, 19°.71S±0°.04×70°.83W±0°.06, h22^{km}±2^{km}, mb4.9/195, Mwr4.5/40 Error ellipse: s-maj=8.4km s-min=5.9km az=82.0*

*VAO **30** 00:20:31.7±0.6, 19°.60S×70°.62W, h36^{km}±3^{km}, mb4.7*

*GUC **30** 00:20:31.0±0.5, 19°.70S×70°.72W, h41^{km}±1^{km}, ML4.5*

*BJI **30** 00:20:31.5±0.0, 19°.70S×70°.80W, h31^{km}, mB5.3/6, Ms5.2/5, Ms7 5.0/5*

*IDC **30** 00:20:33.0±1.7, 19°.56S×70°.43W, h45^{km}±17^{km}, mb4.2/13, mb1 4.3/17, mb1mx4.3/30, mbtmp4.4/17, ML4.1/4, MS3.8/14, Ms1 3.8/14, ms1mx3.6/28, Error ellipse: s-maj=19.7km s-min=11.2km az=75.0*

ISC 30 00:20:29.4±0.8**, 19°.70S**±0°.03×**70°.78W**±0°.04**, h24**^{km}±5^{km}**, n347, σ1^{s}06**/340**, mb4.9**/95**, MS4.0**/14**, 2C-10D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.62	81	⇓iP	Pb	00 20 42.0	+0.3
PSGC				eS	Sn	00 20 50.8	-1.3
PSGCX	Pisagua	0.62	81	Pn	Pb	00 20 41.9	+0.1
TA01	Diego Aracena	1.03	147	⇑iP	Pb	00 20 48.7	+0.1
TA01				eS	Sn	00 21 02.7	+0.7
TA01				IAML		00 21 05.9	
	comp=E,25µm,0.4s						
PB11	IPOC Station P	1.06	94	⇓iP	Pb	00 20 49.2	+0.1
PB11				eS	Sb	00 21 02.3	-0.3
PB11				IAML		00 21 07.0	
	comp=E,22µm,0.3s						
PB11	IPOC Station P	1.06	94	Pn	Pb	00 20 49.8	+0.7
PB12	IPOC Station P	1.16	22	⇓iP	Pb	00 20 50.7	-0.1
PB12				eS	Sb	00 21 06.4	+0.9
PB12				IAML		00 21 08.5	
	comp=N,23µm,0.3s						
PB12	IPOC Station P	1.16	22		Pb	00 20 50.7	-0.1
MNMC	Minye Minye	1.25	63	⇓iP	Pb	00 20 52.6	+0.1
MNMC				eS	Sb	00 21 08.9	+0.7
MNMC				IAML		00 21 10.6	
	comp=E,38µm,0.3s						
MNMC	Minye Minye	1.25	63	Pn	Pb	00 20 52.8	+0.4
PATCX	Punta Patache	1.26	152	⇓iP	Pb	00 20 52.5	-0.1
PATCX				eS	Sb	00 21 08.8	+0.4
PATCX				IAML		00 21 25.7	
	comp=E,9µm,0.5s						
PATCX	Punta Patache	1.26	152	Pn	Pn	00 20 52.0	+0.5
AP01	Chacalluta	1.38	17	⇓iP	Pb	00 20 54.4	-0.1
AP01				eS	Sb	00 21 12.8	+1.0
GO01	Chusmiza	1.49	89	⇓iP	Pb	00 20 56.6	-0.1
GO01				eS	Sb	00 21 16.4	+0.9
GO01	Chusmiza	1.49	89	Pn	Pb	00 20 56.9	+0.1
PB08	IPOC Station P	1.59	106	⇓iP	Pb	00 20 57.9	-0.4
PB08				eS	Sb	00 21 18.4	+0.2
PB01	IPOC Station P	1.81	138	eP	Pb	00 21 00.6	-1.2
PB01				eS	Sb	00 21 23.0	-1.0
PB01				IAML		00 21 33.0	
	comp=N,6µm,0.4s						
PB01	IPOC Station P	1.81	138	Pn	Pn	00 21 00.2	+1.2
PB16	IPOC Station P	1.81	42	⇑iP	Pb	00 21 01.7	-0.5
PB16				eS	Sb	00 21 25.6	+0.9

PB16				IAML		00 21 32.8	
	comp=N,9µm,0.6s						
PB16	IPOC Station P	1.81	42		Pb	00 21 01.7	-0.5
PB02	IPOC Station P	1.81	153	⇓*i*P	Pn	00 21 00.4	+1.2
PB02				*e*S	Sb	00 21 23.9	-0.4
PB02				IAML		00 21 29.5	
	comp=E,13µm,0.5s						
PB07	IPOC Station P	2.19	158	⇓*i*P	Pn	00 21 05.2	+0.8
PB07				*e*S	Sb	00 21 37.9	+2.8
PB07				IAML		00 21 48.6	
	comp=N,4µm,0.6s						
PB07	IPOC Station P	2.19	158	Pn	Pn	00 21 04.8	+0.4
PB09	IPOC Station P	2.54	146		Pn	00 21 10.7	+1.5
PB04	IPOC Station P	2.69	167		Pn	00 21 10.8	-0.5
LVC	Limon Verde	3.38	149	P	Pn	00 21 23.2	+2.2
	comp=N,18nm,0.3s,baz=340,slow=9.2,SNR=138						
LVC				S	Sn	00 22 01.9	+1.3
	comp=N,59nm,0.3s,baz=27,slow=20,SNR=6.6						
LVC				LR	LR	00 22 58.1	
	comp=N,1µm,18.9s,baz=334,slow=43						
LVC	Limon Verde	3.38	149		Pn	00 21 22.6	+1.6
LVC	Limon Verde	3.38	149	*e*P	Pn	00 21 23.4	+2.4
PB15	IPOC Station P	3.70	161		Pn	00 21 24.7	-0.5
PB10	IPOC Station P	3.80	177		Pn	00 21 25.6	-0.8
LPAZ	La Paz	4.22	37	P	Pn	00 21 36.4	+3.6
	comp=N,9.1nm,0.3s,baz=234,slow=6.7,SNR=199						
LPAZ				LR	LR	00 22 47.5	
	comp=N,284nm,18.2s,baz=224,slow=34						
LPAZ	La Paz	4.22	37		Pn	00 21 35.7	+2.9
PB14	IPOC Station P	4.92	176		Pn	00 21 40.7	-1.4
GO02	Mina Guanaco	5.55	169		Pn	00 21 50.8	0.0
NNA	Nana	9.63	322	P	Pn	00 22 51.1	+4.5
	comp=N,2.2nm,0.3s,baz=130,slow=6.1,SNR=4.0						
NNA				S	Sn	00 24 28.0	-6.2
	comp=N,3.3nm,0.3s,baz=242,slow=19,SNR=2.0						
NNA	Nana	9.63	322		Pn	00 22 47.8	+1.2
SIV	San Ignacio	9.95	70	P	Pn	00 22 49.9	-1.0
	comp=N,3.0nm,0.3s,baz=268,slow=11,SNR=96						
SIV				LR	LR	00 27 17.5	
	comp=N,1µm,18.1s,baz=275,slow=42						
GO04	Tololo Observa	10.43	180		Pn	00 22 55.6	-2.0
SAML	Samuel	12.97	36		Pn	00 23 32.1	-0.1
SAML	Samuel	12.97	36	*e*P	Pn	00 23 31.4	-0.8
ROC1	El Roble	13.23	181	Pn	Pn	00 23 35.2	-0.7
CPUP	Villa Florida	14.03	121	P	Pn	00 23 46.9	+0.2
	comp=N,0.2nm,0.3s,baz=321,slow=11,SNR=5.1						
CPUP				LR	LR	00 29 49.1	
	comp=N,297nm,20.9s,baz=296,slow=40						
CPUP	Villa Florida	14.03	121	*e*P	Pn	00 23 44.8	-1.8
AQDB	Aquidauana	14.19	96	*e*P	Pn	00 23 48.2	-0.6
SALV	Santo Antonio	14.85	78	*e*P	Pn	00 23 56.9	-1.1
ITQB	Itaqui	16.23	130	*e*P	P	00 24 18.2	-0.5
CLDB	Colider	16.89	61	*e*P	Pn	00 24 23.8	-0.6
C2SB	Chapadao do Su	16.97	90	*e*P	Pn	00 24 25.0	-0.2
TRCB	Terra Rica	17.19	104	*e*P	Pn	00 24 27.9	-0.2
PTGB	Pitanga	18.03	109	*e*P	Pn	00 24 38.5	+0.1
PCMB	Pacaembu	18.36	99	*e*P	P	00 24 40.7	-1.7
ARAG	Araguaiana, MT	18.50	81	*e*P	P	00 24 42.6	-1.3
ITAB	Concordia	18.67	117	*e*P	P	00 24 45.7	0.0
CPSB	Cacapava Do Su	18.96	128	*e*P	P	00 24 49.2	+0.3
ITRB	Iturama	19.23	93	*e*P	P	00 24 52.2	+0.2
PLTB	Pedras Altas	19.56	131	*e*P	Pn	00 24 56.2	-0.6
GO06	Curarrehue	19.83	182	P	P	00 24 58.1	-0.4
FRTB	Fartura	20.06	104	*e*P	P	00 25 01.6	+0.6
OGAUY	Aigu	20.39	139	*e*P	P	00 25 05.5	+1.0
CNLB	Canela	20.48	122	*e*P	P	00 25 06.2	+0.6
BB19B	Bebedouro	20.90	98	*e*P	P	00 25 09.0	-1.2
PLCA	Paso Flores	20.97	180	P	Pn	00 25 13.1	-0.3
	comp=N,5.5nm,0.6s,baz=280,slow=12,SNR=11						
PLCA				LR	LR	00 33 49.6	
	comp=N,175nm,19.2s,baz=291,slow=38						
PLCA	Paso Flores	20.97	180	P	P	00 25 11.7	+0.9
PLCA	Paso Flores	20.97	180	*e*P	Pn	00 25 13.0	-0.4
IPMB	Ipameri, GO	21.43	89	*e*P	P	00 25 15.4	-0.4
PTGA	Pitinga	21.62	31	P	P	00 25 16.8	-1.0
	comp=N,70nm,0.4s,baz=214,slow=12,SNR=252						
PTGA	Pitinga	21.62	31	P	P	00 25 16.3	-1.6
PTGA	Pitinga	21.62	31	*e*P	P	00 25 16.7	-1.2
RCLB	Rio Claro- Sao	21.86	101	*e*P	P	00 25 19.3	-1.2
CRUC	La Cruz	21.98	343	*e*P	P	00 25 28.4	+6.3
SPB	Sao Paulo	22.04	104	*e*P	P	00 25 23.0	+0.7
BDFB	Brasilia	22.06	83	P	P	00 25 21.5	-1.2
	comp=N,3.4nm,0.5s,baz=246,slow=14,SNR=8.9						
BDFB				LR	LR	00 34 53.3	
	comp=N,443nm,18.8s,baz=281,slow=40						
BDFB	Brasilia	22.06	83	P	P	00 25 21.9	-0.9
GARC	Garzon, Huila	22.24	347	*e*P	P	00 25 25.5	+0.8
VAO	Valinhos	22.41	103	*e*P	P	00 25 24.9	-1.6
PARB	Paraibuna	23.67	103	*e*P	P	00 25 41.0	+1.7
ORTC	Ortega, Tolima	23.87	349	*e*P	P	00 25 40.8	-0.3
CHIC	Chingaza	24.35	353	*e*P	P	00 25 47.0	+1.0
BSCB	Bom Sucesso	24.41	98	*e*P	P	00 25 45.4	-0.9
ROSC	El Rosal	24.63	352	P	P	00 25 49.8	+1.2
	comp=N,24nm,0.5s,baz=155,slow=12,SNR=10						
ROSC				LR	LR	00 36 20.8	
	comp=N,385nm,19.7s,baz=212,slow=39						
ROSC	El Rosal	24.63	352	P	P	00 25 49.2	+0.6
ROSC				IAmb	IAmb	00 25 54.4	
	comp=Z,28nm,0.6s						
ESAR	Angra dos Reis	24.74	102	*e*P	P	00 25 48.6	-0.5
SMTB	Santa Maria do	24.89	68	*e*P	P	00 25 49.2	-1.3
PLMC	San Jos del P	25.04	347	*e*P	P	00 25 53.2	+1.3
GUY2C	Guyana, Caldas	25.17	349	*e*P	P	00 25 55.5	+1.9
SPBC	San Pablo de B	25.40	352	*e*P	P	00 25 55.7	+0.6
RUSC	La Rusia	25.53	355	*e*P	P	00 25 57.7	+0.9
RUSC	La Rusia	25.53	355	P	P	00 25 57.4	+0.6
JANB	Januaria	25.66	84	*e*P	P	00 25 56.4	-1.2
CBOC	Ciudad Bolivar	25.92	348	*e*P	P	00 26 01.3	+1.4
HELC	Santa Helena	26.15	349	*e*P	P	00 26 03.3	+1.0
BARC	Barichara	26.23	355	*e*P	P	00 26 03.0	+0.1
PTBC	PUERTO BERRIO,	26.32	352	*e*P	P	00 26 02.3	-1.2
DBBC	Dabeiba	27.08	348	*e*P	P	00 26 11.8	+1.4
ZARC	Zaragoza, Cauc	27.32	351	*e*P	P	00 26 12.3	-0.1
SJMB	Sao Joao De Ma	27.95	93	*e*P	P	00 26 17.8	-0.3
BSFB	Barra de Sao F	28.25	93	*e*P	P	00 26 19.8	-1.0
SDV	Santo Domingo	28.40	0	P	P	00 26 22.2	-0.2
	comp=Z,2.8nm,0.4s,baz=319,slow=23,SNR=7.2						
SDV	Santo Domingo	28.40	0	P	P	00 26 21.7	-0.7
SDV	Santo Domingo	28.40	0	*e*P	P	00 26 21.6	-0.7
SMLC	San Martn de	28.50	353	*e*P	P	00 26 21.1	-1.9
SJCC	San Jacinto, C	29.73	351	*e*P	P	00 26 33.2	-0.7
NBIT	Itapeh - BA	30.27	86	*e*P	P	00 26 37.0	-1.7
MDP	Montagnes des	30.43	38	P	P	00 26 37.3	-2.8
	comp=Z,24nm,0.9s,baz=211,slow=8.7,SNR=9.9						
NBPN	Ponto Novo - B	30.74	78	*e*P	P	00 26 42.2	-0.7
TOSP	Speyside	32.41	19	P	P	00 26 57.1	-0.4
NBLA	Lagarto - SE	32.92	80	*e*P	P	00 27 01.9	-0.1
NBMA	Muriti-CE	33.38	73	*e*P	P	00 27 05.8	-0.3
NBPB	Pedra_Branca-C	33.45	69	*e*P	P	00 27 06.2	-0.5
NBMO	Morrinhos-CE	34.13	65	*e*P	P	00 27 11.7	-1.0
NBAN	Anadia - AL	34.77	78	*e*P	P	00 27 17.4	-0.7
RPN	Rapa Nui	36.04	251	LR	LR	00 38 22.9	
	comp=Z,318nm,21.4s,baz=12,slow=29						
RCBR	Riachuelo	36.60	73	*e*P	P	00 27 34.1	+0.1
RCBR				*e*pP	sP	00 27 43.5	-0.2
PDPR	Patillas Dam,	37.77	7	P	P	00 27 42.6	-1.0
PDPR				IAmb	IAmb	00 27 54.4	
	comp=Z,16nm,0.8s						
GCPR	Guaynabo City	38.05	7	P	P	00 27 44.4	-1.6
CUPR	Culebra, Puert	38.15	8	P	P	00 27 45.4	-1.5
DR12	Loma Pena Alta	38.27	2	P	P	00 27 45.7	-2.2
SDDR	Presa de Saban	38.44	359	P	P	00 27 49.8	+0.4
ZAIG	Zacatecas	52.39	322	P	P	00 29 40.5	+0.2
Z50A	Ashland	54.60	344	IAmb	IAmb	00 29 56.6	
	comp=Z,8.9nm,0.6s						
LRAL	Lakeview Retre	54.68	343	P	P	00 29 56.6	+0.2
LRAL				IAmb	IAmb	00 30 14.8	
	comp=Z,12nm,1.4s						
SWET	Sewanee	56.48	345	P	P	00 30 09.7	+0.3
V52A	Sevierville	56.55	348	P	P	00 30 10.1	+0.2
V52A				IAmb	IAmb	00 30 11.0	
	comp=Z,14nm,0.8s						
V51A	Loudon	56.68	347	P	P	00 30 10.9	+0.2
V51A				IAmb	IAmb	00 30 15.7	
	comp=Z,8.3nm,0.8s						
T59A	Double "B" Far	56.72	354	P	P	00 30 11.6	+0.5
T59A				IAmb	IAmb	00 30 14.3	
	comp=Z,19nm,0.9s						
PLAL	Pickwick Lake	56.81	343	P	P	00 30 10.3	-1.4
PLAL				IAmb	IAmb	00 30 20.8	
	comp=Z,10nm,1.2s						
U54A	Nelsons Funny	56.88	349	P	P	00 30 12.9	+0.7
U54A				IAmb	IAmb	00 30 13.3	
	comp=Z,18nm,0.9s						
T57A	Hurt	56.95	352	P	P	00 30 13.8	+1.1
T57A				IAmb	IAmb	00 30 26.2	
	comp=Z,20nm,1.1s						
JCT	Junction City	57.17	330	P	P	00 30 14.8	+0.4
V48A	Smith Brothers	57.19	344	IAmb	IAmb	00 30 16.1	
	comp=Z,7.7nm,0.7s						
WLAR	White Oak Lake	57.20	338	P	P	00 30 14.9	+0.4
X43A	Marvell	57.21	340	P	P	00 30 14.8	+0.3
W45A	Hickory Valley	57.28	342	P	P	00 30 14.6	-0.4
WHTX	Lake Whitney,	57.40	333	P	P	00 30 16.4	+0.4
WHTX				IAmb	IAmb	00 30 34.1	
	comp=Z,9.3nm,0.9s						
CLTN	Cedars of Leba	57.41	345	P	P	00 30 16.3	+0.4
CLTN				IAmb	IAmb	00 30 18.5	
	comp=Z,9.7nm,1.1s						
S58A	Poland Farm, P	57.41	353	P	P	00 30 15.9	0.0
S58A				IAmb	IAmb	00 30 29.9	
	comp=Z,22nm,1.5s						
T52A	Hallie	57.66	348	P	P	00 30 17.2	-0.5
T52A				IAmb	IAmb	00 30 18.3	
	comp=Z,23nm,1.1s						
U49A	Red Boiling Sp	57.68	346	P	P	00 30 17.6	-0.2
U49A				IAmb	IAmb	00 30 18.5	
	comp=Z,8.9nm,0.6s						
R58B	Mineral	57.74	353	P	P	00 30 18.7	+0.5
R58B				IAmb	IAmb	00 30 19.9	
	comp=Z,10nm,0.9s						
WVT	Waverly	57.82	344	P	P	00 30 18.0	-0.8
WVT				IAmb	IAmb	00 30 19.1	
	comp=Z,11nm,0.7s						
S54A	Dingess, Beckl	58.04	350	P	P	00 30 20.4	0.0
S54A				IAmb	IAmb	00 30 38.8	
	comp=Z,12nm,0.9s						
MIAR	Mount Ida	58.14	338	IAmb	IAmb	00 30 22.4	
	comp=Z,7.1nm,0.7s						
TXAR	Lajitas Array	58.16	326	P	P	00 30 22.1	+0.6
	comp=Z,1.1nm,0.7s,baz=151,slow=10.0,SNR=10						
TXAR	Lajitas Array	58.16	326	P	P	00 30 22.5	+1.0
TX32	Lajitas Array	58.16	326	P	P	00 30 22.7	+1.2
T49A	Edmonton	58.19	346	P	P	00 30 21.6	+0.2
W41B	Gary Mavity, V	58.25	339	P	P	00 30 22.1	+0.3
R55A	Marlinton	58.34	351	P	P	00 30 23.9	+1.4
R55A				IAmb	IAmb	00 30 42.8	
	comp=Z,26nm,1.4s						
WHAR	Wooly Hollow	58.37	339	P	P	00 30 23.5	+0.8
WHAR				IAmb	IAmb	00 30 32.8	
	comp=Z,19nm,1.5s						
T47A	Sharon Grove	58.45	345	P	P	00 30 23.5	+0.3
T47A				IAmb	IAmb	00 30 24.1	
	comp=Z,11nm,0.7s						
LCAR	Lake Charles	58.72	341	P	P	00 30 24.7	-0.4
W39A	Magazine	58.80	338	P	P	00 30 25.9	+0.2
W39A				IAmb	IAmb	00 30 28.0	
	comp=Z,5.7nm,0.7s						
T45A	Paducah	58.88	343	P	P	00 30 26.1	-0.1
ABTX	Abilene, Hawle	58.90	332	P	P	00 30 26.7	+0.2
ABTX				IAmb	IAmb	00 30 28.5	
	comp=Z,7.2nm,0.8s						
Q56A	Snyder Ridge,	58.96	352	P	P	00 30 28.0	+1.2
WCI	Wyandotte Cave	59.43	346	P	P	00 30 29.6	-0.5
WCI				IAmb	IAmb	00 30 42.4	
	comp=Z,12nm,1.0s						
USIN	University of	59.51	345	P	P	00 30 30.4	-0.2
U40A	Yellville	59.53	339	P	P	00 30 29.8	-1.0
U40A				IAmb	IAmb	00 30 31.6	
	comp=Z,5.6nm,0.8s						
MVL	Millersville	59.61	355	P	P	00 30 31.4	+0.2
MCWV	Mont Chateau	59.65	352	P	P	00 30 31.1	-0.4
MCWV				IAmb	IAmb	00 30 32.5	
	comp=Z,18nm,1.4s						
S44A	Carbondale	59.68	343	P	P	00 30 32.3	+0.6
SIUC	Southern Illin	59.69	343	P	P	00 30 32.3	+0.6
HHAR	Hobbs	59.83	338	P	P	00 30 32.9	+0.1
HHAR				IAmb	IAmb	00 30 34.5	
	comp=Z,20nm,1.5s						
W35A	Tecumseh	59.91	335	P	P	00 30 33.2	-0.2
P51A	Williamsport	59.98	349	P	P	00 30 33.9	+0.1
P51A				IAmb	IAmb	00 30 44.4	
	comp=Z,18nm,1.4s						
MGMO	Mountain Grove	60.07	340	P	P	00 30 34.7	+0.2
MGMO				IAmb	IAmb	00 30 35.9	
	comp=Z,9.7nm,1.1s						
TUL1	Leonard	60.17	337	P	P	00 30 35.3	+0.2
TUL1				IAmb	IAmb	00 30 36.9	
	comp=Z,9.7nm,0.8s						
FNO	Franklin	60.21	335	P	P	00 30 35.2	-0.2
WMOK	Wichita Mounta	60.33	334	P	P	00 30 36.8	+0.6
O52A	Adamsville	60.39	350	P	P	00 30 35.5	-1.1
O52A				IAmb	IAmb	00 30 37.2	
	comp=Z,9.0nm,0.6s						
P48A	Milroy	60.42	347	P	P	00 30 36.0	-0.7
P48A				IAmb	IAmb	00 30 47.7	
	comp=Z,20nm,1.4s						
ODNJ	Ogdensburg	60.57	357	P	P	00 30 38.3	+0.5
CCM	Cathedral Cave	60.58	342	P	P	00 30 37.5	-0.4
CCM				IAmb	IAmb	00 30 48.2	
	comp=Z,5.4nm,0.8s						
S39A	Bolivar	60.90	340	IAmb	IAmb	00 30 41.4	
	comp=Z,6.4nm,0.8s						
MNTX	Cornudas Mount	60.93	326	IAmb	IAmb	00 30 42.1	
	comp=Z,9.5nm,1.5s						
R40A	Maddies Statio	61.11	341	P	P	00 30 40.8	-0.7
R40A				IAmb	IAmb	00 30 51.9	
	comp=Z,4.7nm,0.7s						
M56A	Emporium	61.26	354	P	P	00 30 43.0	+0.6
M55A	Ridgway	61.30	353	P	P	00 30 43.2	+0.4
BRYW	Bryant College	61.31	359	P	P	00 30 43.1	+0.3
T35A	Sooner Cattle	61.33	337	P	P	00 30 43.0	-0.1
T35A				IAmb	IAmb	00 30 45.5	
	comp=Z,15nm,1.1s						
MSTX	Muleshoe	61.46	330	IAmb	IAmb	00 30 46.4	
	comp=Z,17nm,1.2s						
P43A	Skaggs, Pawnee	61.57	344	P	P	00 30 44.8	+0.2
ALLY	Alegheny Colle	61.65	352	P	P	00 30 45.1	0.0
SFIN	Lafayette	61.67	346	P	P	00 30 44.5	-0.7
QUA2	Belchertown	61.68	359	P	P	00 30 46.0	+0.8
U32A	Winter Ranch,	61.83	334	P	P	00 30 46.4	0.0
U32A				IAmb	IAmb	00 30 47.7	
	comp=Z,14nm,0.9s						
M50A	Fremont	61.84	350	P	P	00 30 45.8	-0.6
ERPA	Erie	62.09	352	P	P	00 30 48.2	+0.1
P40A	Paris	62.18	342	P	P	00 30 48.5	-0.2
P40A				IAmb	IAmb	00 30 49.3	
	comp=Z,6.2nm,0.9s						
WVNY	West Valley, N	62.21	353	P	P	00 30 49.0	+0.1
VNA3	Neumayer Olymp	62.34	161	P	P	00 30 59.6	+10
HDIL	Hopedale	62.37	344	P	P	00 30 49.2	-0.7
HDIL				IAmb	IAmb	00 30 50.3	
	comp=Z,12nm,0.8s						
P38A	Dawn	62.73	340	P	P	00 30 52.5	+0.1
P38A				IAmb	IAmb	00 30 53.5	
	comp=Z,6.6nm,0.9s						
319A	Douglas	62.80	323	P	P	00 30 53.1	-0.1
319A				IAmb	IAmb	00 30 55.8	
	comp=Z,5.8nm,0.8s						
J58A	Remsen	62.88	356	P	P	00 30 53.9	+0.6
J58A				IAmb	IAmb	00 30 55.2	
	comp=Z,6.3nm,0.9s						
VNA2	Neumayer--Watz	62.92	161	P	P	00 30 54.8	+1.4
	baz=296,slow=7.0						
J59A	Piesco	62.94	357	P	P	00 30 54.7	+1.0
J59A				IAmb	IAmb	00 31 05.1	
	comp=Z,15nm,1.1s						
J57A	Williamstown	62.98	356	P	P	00 30 54.1	+0.2
K50A	Casco	63.11	350	P	P	00 30 55.0	+0.2
EMMW	East Machias	64.17	3	P	P	00 31 02.7	+1.0
DELO	Deloro Mine	64.21	355	P	P	00 31 02.2	+0.2
DELO				IAmb	IAmb	00 31 12.6	
	comp=Z,10nm,1.2s						
FRNY	Flat Rock	64.27	358	P	P	00 31 03.0	+0.5
FRNY				IAmb	IAmb	00 31 15.3	
	comp=Z,21nm,1.3s						
L40A	Anamosa	64.29	343	P	P	00 31 02.1	-0.5
L40A				IAmb	IAmb	00 31 03.6	
	comp=Z,8.1nm,0.9s						
TUC	Tucson	64.35	323	P	P	00 31 02.6	-0.7
HAL	Halifax	64.36	6	P	P	00 31 03.3	+0.3
N35A	Tabor	64.53	339	P	P	00 31 04.0	-0.3
SNAA	Sanae	64.55	161	P	P	00 31 06.0	+1.9
SNAA	Sanae	64.55	161	P	P	00 31 05.2	+1.1
	comp=Z,1.1nm,0.6s,baz=255,slow=9.4,SNR=8.0						
SNAA	Sanae	64.55	161	IAmb	IAmb	00 31 13.3	
	comp=Z,10nm,1.3s						
GGN	Saint George	64.60	3	P	P	00 31 04.5	-0.1
G62A	West of Eustis	64.60	0	P	P	00 31 05.7	+1.1
SADO	Sadowa	64.61	353	IAmb	IAmb	00 31 06.0	
	comp=Z,10nm,0.7s						
SCIA	State Center	64.72	342	P	P	00 31 04.6	-0.8
JFWS	Jewell Farm	64.83	344	IAmb	IAmb	00 31 18.6	
	comp=Z,9.2nm,0.7s						
GBN	Guysborough	65.34	7	P	P	00 31 09.8	+0.5
I42A	Draeger Farm,	65.42	346	P	P	00 31 09.9	-0.1
I42A				IAmb	IAmb	00 31 22.9	
	comp=Z,15nm,1.1s						
LMN	Caledonia Moun	65.46	5	P	P	00 31 10.5	+0.3
KSCO	Kaye Shedlock'	65.58	333	P	P	00 31 11.5	+0.3
KSCO				IAmb	IAmb	00 31 15.2	
	comp=Z,15nm,1.1s						
TRQ	Mont Tremblant	65.69	357	P	P	00 31 11.5	-0.3
H43A	Windswept, Lux	65.72	347	P	P	00 31 11.2	-0.7
H43A				IAmb	IAmb	00 31 19.8	
	comp=Z,12nm,0.9s						
SDCO	Great Sand Dun	65.82	330	P	P	00 31 11.4	-1.7
G45A	Suttons Bay	65.84	348	P	P	00 31 12.5	-0.1
G45A				IAmb	IAmb	00 31 23.4	
	comp=Z,8.6nm,0.8s						
E63A	Oxbow	65.84	2	P	P	00 31 13.2	+0.6
E63A				IAmb	IAmb	00 31 17.4	
	comp=Z,20nm,1.5s						
PQI	Presque Isle	66.10	2	P	P	00 31 14.7	+0.5
PQI				IAmb	IAmb	00 31 18.9	
	comp=Z,15nm,1.2s						
X16A	Lo Mia Camp, P	66.28	324	P	P	00 31 16.1	+0.1
D53A	Lac Vacive, Po	66.76	355	IAmb	IAmb	00 31 20.0	
	comp=Z,10.0nm,0.8s						
LATQ	La Tuque	66.79	359	P	P	00 31 19.8	+1.1
BATG	Bathurst New B	66.80	3	P	P	00 31 19.1	+0.4
BATG				IAmb	IAmb	00 31 20.2	
	comp=Z,8.7nm,0.6s						
E46A	Sault Ste Mari	66.88	350	P	P	00 31 19.0	-0.3
E46A				IAmb	IAmb	00 31 20.0	
	comp=Z,7.7nm,0.9s						
ECSD	EROS Data Cent	67.42	340	IAmb	IAmb	00 31 39.6	
	comp=Z,12nm,1.4s						
PV01	Paradox Valley	67.60	328	P	P	00 31 25.7	+1.4
SMCO	Snowmass	67.65	330	P	P	00 31 26.0	+1.1
PV13	Radium Mtn., P	67.74	328	P	P	00 31 25.9	+0.6
VLDQ	Val d'Or	67.76	355	P	P	00 31 25.6	+0.8
VLDQ				IAmb	IAmb	00 31 36.4	
	comp=Z,20nm,1.4s						
PV22	Blue Mesa, Par	68.02	329	P	P	00 31 27.3	+0.4
PV22				IAmb	IAmb	00 31 38.7	
	comp=Z,9.6nm,1.3s						
W13A	Hualapai Mount	68.14	323	P	P	00 31 27.9	+0.1
U15A	North Rim	68.23	325	P	P	00 31 28.9	+0.5
D41A	Chassel	68.36	347	P	P	00 31 28.7	+0.1
D41A				IAmb	IAmb	00 31 30.0	
	comp=Z,9.0nm,0.8s						
PFO	Pinyon Flats O	68.61	320	P	P	00 31 31.4	+0.8
KNB	Kanab	68.95	325	P	P	00 31 33.4	+0.6
O20A	White River Ci	69.01	330	P	P	00 31 32.4	-0.7
LCMT	Little Creek M	69.17	325	P	P	00 31 33.8	-0.3
SRU	San Rafael Swe	69.32	328	P	P	00 31 34.7	-0.3
Q16A	Castle Valley	69.50	327	P	P	00 31 36.2	+0.1
LIC	Lamto	69.60	75	*e*P	P	00 31 36.6	-0.4
	comp=Z,12nm,0.9s						
CCUT	Cedar City	69.63	325	P	P	00 31 37.5	+0.4
DRLN	Deer Lake	69.65	9	P	P	00 31 36.0	-0.6
DRLN				IAmb	IAmb	00 31 45.7	
	comp=Z,10.0nm,0.8s						
P17A	Butcher Ranch,	69.71	328	P	P	00 31 37.4	0.0
TIC	Toumodi	69.77	75	*e*P	P	00 31 37.1	-1.0
TMUT	Trail Mountain	69.81	328	P	P	00 31 38.1	-0.1
EYMN	Ely	69.85	345	P	P	00 31 37.2	-0.6
SHPR	Sheep Range	69.87	323	P	P	00 31 39.6	+1.1
KIC	Kosan Boka	69.91	75	*e*P	P	00 31 38.2	-0.8
	comp=Z,10nm,0.6s						
DBIC	Dimbokro	69.93	75	P	P	00 31 37.1	-2.0
	comp=Z,7.1nm,0.7s,baz=226,slow=5.8,SNR=12						
DBIC				LR	LR	01 00 25.8	
	comp=Z,82nm,21.6s,baz=255,slow=34						
DBIC	Dimbokro	69.93	75	IAmb	IAmb	00 31 51.5	
	comp=Z,14nm,1.1s						
RDMU	Red Mountain	69.98	329	P	P	00 31 39.4	+0.3
GSC	Goldstone, Bar	69.98	321	P	P	00 31 39.1	+0.1
PASC	Pasadena Art C	70.04	320	P	P	00 31 38.3	-1.1
PASC				IAmb	IAmb	00 31 50.1	
	comp=Z,18nm,1.4s						
K22A	Casper	70.25	333	P	P	00 31 40.8	+0.1
K22A				IAmb	IAmb	00 31 43.1	
	comp=Z,4.7nm,0.6s						
RSSD	Black Hills	70.43	335	P	P	00 31 42.1	+0.3
MPU	Maple Canyon	70.57	328	P	P	00 31 42.5	-0.2
PSUT	Pine Spring	70.62	325	P	P	00 31 42.8	-0.2
NLU	North Lily Min	70.74	327	P	P	00 31 43.6	-0.2
JLU	Jordanelle	70.92	328	P	P	00 31 45.9	+1.0
ISA	Isabella, Lake	71.22	320	P	P	00 31 47.0	+0.4
ISA				IAmb	IAmb	00 31 50.4	
	comp=Z,5.3nm,0.8s						
E28A	Huff	71.29	339	P	P	00 31 46.7	0.0
DUG	Dugway, Tooele	71.30	327	P	P	00 31 47.8	+0.7
DUG				IAmb	IAmb	00 31 50.5	
	comp=Z,9.6nm,1.3s						
AGMN	Agassiz Nation	71.31	343	P	P	00 31 47.2	+0.4
R11A	Troy Canyon, C	71.42	324	P	P	00 31 48.8	+0.9
PD31	Pinedale Array	71.69	331	P	P	00 31 49.1	-0.4
PDAR	Pinedale Array	71.69	331	P	P	00 31 50.7	+1.2
	comp=Z,0.9nm,0.5s,baz=132,slow=6.9,SNR=14						
PDAR				LR	LR	01 05 59.0	
	comp=Z,28nm,19.7s,baz=106,slow=38						
PDAR	Pinedale Array	71.69	331	P	P	00 31 50.3	+0.9
HWUT	Hardware Ranch	71.74	329	P	P	00 31 49.5	-0.2
BGU	Big Grassy Mou	71.95	328	P	P	00 31 51.3	+0.3
MDND	Maddock	72.04	340	P	P	00 31 51.3	+0.1
AHID	Auburn Hatcher	72.40	330	P	P	00 31 53.1	-0.6
AHID				IAmb	IAmb	00 31 56.2	
	comp=Z,5.5nm,0.7s						
TBI	Tubuai	72.42	251	*e*LR	LR	00 54 05.5	
	comp=Z,142nm,26.8s						
REDW	Red Top Meadow	72.75	331	P	P	00 31 55.6	-0.2
OMMB	Old Mammoth Mi	72.85	322	P	P	00 31 56.8	+0.2
TPAW	Teton Pass	72.89	331	P	P	00 31 56.2	-0.5
ELK	Elko	72.96	326	P	P	00 31 57.5	+0.4
NVAR	Mina Array Bea	73.00	323	P	P	00 31 59.3	+1.9
	comp=Z,1.3nm,0.7s,baz=152,slow=6.8,SNR=5.8						
NVAR	Mina Array Bea	73.00	323	P	P	00 31 58.1	+0.7
FXWY	Fox Creek	73.04	331	P	P	00 31 57.6	+0.1
ULM	Lac du Bonnet	73.09	343	P	P	00 31 57.2	-0.1
	comp=Z,1.4nm,0.5s,baz=161,slow=6.7,SNR=7.6						
ULM				LR	LR	01 08 07.7	
	comp=Z,41nm,18.5s,baz=93,slow=39						
IMW	Indian Meadow	73.20	331	P	P	00 31 59.1	+0.6
IMW				IAmb	IAmb	00 32 02.1	
	comp=Z,12nm,1.4s						
FLWY	Flagg Ranch	73.23	331	P	P	00 31 58.8	+0.2
FLWY				IAmb	IAmb	00 32 01.9	
	comp=Z,7.7nm,0.8s						
KVN	Kaiserville	73.32	323	P	P	00 31 59.4	+0.2
RLMT	Red Lodge	73.41	333	P	P	00 32 00.4	+0.7
LAO	LASA Array	73.42	335	P	P	00 31 59.6	+0.2
LAO				IAmb	IAmb	00 32 12.1	
	comp=Z,17nm,1.4s						
H17A	Grant Village	73.42	331	P	P	00 32 00.6	+0.8
LKWY	Lake	73.47	332	P	P	00 32 00.2	+0.1
YNE	Yellowstone No	73.64	332	P	P	00 32 01.9	+0.8
YNR	Norris Junctio	73.72	332	P	P	00 32 02.2	+0.7
YMR	Madison River	73.81	331	P	P	00 32 03.0	+1.0
YHH	Holmes Hill	73.85	331	P	P	00 32 02.7	+0.3
YHB	Horse Butte	73.98	331	P	P	00 32 03.0	0.0
PPT2	Papeete2	74.03	257	*e*S	S	00 41 36.2	+0.8
	comp=Z,54nm,25.5s						
PPT2	Papeete2	74.03	257	*e*LR	LR	00 54 51.0	
	comp=Z,107nm,24.0s						
PPT	Papeete	74.03	257	P	P	00 32 02.9	-0.8
YHL	Hebgen Lake	74.05	331	P	P	00 32 03.9	+0.4
DGMT	Dagmar	74.14	338	P	P	00 32 04.5	+0.9
DGMT				IAmb	IAmb	00 32 07.9	
	comp=Z,16nm,1.4s						
QLMT	Earthquake Lak	74.14	331	P	P	00 32 04.9	+1.0
SCHQ	Schefferville	74.30	2	P	P	00 32 04.0	-0.4
	comp=Z,3.8nm,0.7s,baz=215,slow=5.9,SNR=8.3						
SCHQ				LR	LR	01 06 40.3	
	comp=Z,34nm,18.9s,baz=342,slow=37						
SCHQ	Schefferville	74.30	2	IAmb	IAmb	00 32 15.1	
	comp=Z,7.3nm,0.9s						
MCMT	McKenzie Canyo	74.79	330	P	P	00 32 08.3	+0.5
BEKR	Beckworth	75.15	323	P	P	00 32 10.3	+0.4

BEKR				IAmb	IAmb	00 32 13.4	
	comp=Z,13nm,1.5s						
LRM	Limekiln Ridge	75.37	331	P	P	00 32 11.5	+0.4
ORV	Oroville	75.60	322	P	P	00 32 12.0	-0.2
ORV				IAmb	IAmb	00 32 15.9	
	comp=Z,11nm,1.2s						
EGMT	Eagleton	75.92	334	P	P	00 32 14.5	+0.5
EGMT				IAmb	IAmb	00 32 16.3	
	comp=Z,14nm,1.4s						
BMO	Blue Mountains	76.96	328	P	P	00 32 20.2	+0.2
WALA	Waterton Lakes	78.47	333	P	P	00 32 28.4	+0.1
WALA				IAmb	IAmb	00 32 31.1	
	comp=Z,8.6nm,0.9s						
D05A	Enumclaw	80.94	327	P	P	00 32 40.3	-1.2
D05A				IAmb	IAmb	00 32 44.4	
	comp=Z,17nm,1.0s						
TAM	Tamanrasset	85.59	64	P	P	00 33 07.5	+1.2
TAM				IAmb	IAmb	00 33 09.1	
	comp=Z,8.7nm,1.4s						
BOSA	Boshof	85.84	119	LR	LR	01 08 22.6	
	comp=Z,74nm,18.8s,baz=163,slow=34						
YKA	Yellowknife Ar	88.92	341	P	P	00 33 22.1	+0.8
	comp=Z,4.8nm,0.6s,baz=135,slow=5.2,SNR=109						
KEST	Kesra	93.63	53	LR	LR	01 16 06.0	
	comp=Z,51nm,19.8s,baz=228,slow=36						
H11S2	WAKE ISLAND Hy	125.89	279	T	T	02 58 47.6	
	baz=101,slow=75,SNR=263						
H11S1	WAKE ISLAND Hy	125.90	279	T	T	02 58 48.2	
	baz=101,slow=75,SNR=276						
H11S3	WAKE ISLAND Hy	125.91	279	T	T	02 58 48.9	
	baz=101,slow=75,SNR=210						
H11N3	WAKE ISLAND Hy	125.93	280	T	T	02 58 46.2	
	baz=100,slow=74,SNR=90						
H11N2	WAKE ISLAND Hy	125.95	280	T	T	02 58 49.3	
	baz=100,slow=74,SNR=70						
H11N1	WAKE ISLAND Hy	125.95	280	T	T	02 58 47.5	
	baz=100,slow=74,SNR=51						
ASAR	Alice Springs	130.63	210	PKP	PKiKP	00 39 40.2	+0.3
	comp=Z,0.5nm,0.4s,baz=117,slow=1.6,SNR=7.9						
ABKAR	Akbulak array	130.98	41		PKiKP	00 39 40.7	+1.0
GEYT	Alibeck	132.29	56	PKP	PKiKP	00 39 42.3	-0.5
	comp=Z,0.4nm,0.5s,baz=99,slow=4.8,SNR=2.2						
WRA	Warramunga Arr	133.55	213	PKP	PKiKP	00 39 46.4	+0.6
	comp=Z,0.6nm,0.7s,baz=152,slow=1.8,SNR=1.4						
ZALV	Zalesovo Beam	141.03	23	PKP	PKPdf	00 39 56.8	-0.5
	comp=Z,0.9nm,0.5s,baz=320,slow=3.9,SNR=4.6						
ZALV	Zalesovo Beam	141.03	23		PKiKP	00 39 58.9	-1.1
AAK	Ala-Archa	142.90	44		PKPdf	00 40 00.5	-0.8
MAKZ	Makanchi	144.97	33		PKPdf	00 40 04.6	+0.1
MK31	Makanchi Array	145.14	33		PKPdf	00 40 05.3	+0.4
MKAR	Makanchi Array	145.14	33	PKP	PKPdf	00 40 05.4	+0.5
	comp=Z,9.0nm,0.7s,baz=322,slow=4.1,SNR=116						
MKAR	Makanchi Array	145.14	33		PKPdf	00 40 05.1	+0.2
NIL	Nilore	145.17	59		PKPdf	00 40 05.8	+0.5
KSH	Kashi	145.27	48	PKPbc	PKPdf	00 40 06.8	+1.4
KSH				sPKP		00 40 21.5	
KSH				PP	PP	00 43 29.0	+4.2
KSH				PKS	PKSdf	00 43 44.3	+3.3
KSH				SKKS		00 50 18.8	
KSH				AMB	AMB		
	comp=Z,100nm,5.0s						
KSH				LR	LR		
	comp=Z,87nm,8.2s						
KSH				LR	LR		
	comp=Z,110nm,12.7s						
KSH				LR	LR		
	comp=Z,140nm,14.0s						
USRK	Ussuriysk Ar.	149.05	327	PKPbc	PKiKP	00 40 17.4	+0.6
	comp=Z,1.7nm,0.7s,baz=302,slow=3.2,SNR=3.0						
MJAR	Matsushiro Arr	149.58	310	PKPbc	PKiKP	00 40 17.7	-0.5
	comp=Z,2.2nm,0.9s,baz=45,slow=1.8,SNR=5.2						
MJAR	Matsushiro Arr	149.58	310		PKiKP	00 40 18.8	+0.6
WMQ	Urumqi	149.95	32	*e*PKPbc	PKPdf	00 40 12.8	-0.2
HYB	Hyderabad	150.86	89	*i* PKP	PKiKP	00 40 22.0	+0.6
SONM	Songino Array	151.84	4	PKPbc	PKiKP	00 40 22.8	+0.2
	comp=Z,1.2nm,0.6s,baz=294,slow=1.0,SNR=12						
SONM	Songino Array	151.84	4		PKiKP	00 40 23.4	+0.7
SONM					PKPab	00 40 31.2	-0.1
HHC	Hu-ho-hao-te	158.82	355	*e*PKP	PKPdf	00 40 24.0	-1.5
HHC				LR	LR		
	comp=Z,450nm,19.4s						
HHC				LR	LR		
	comp=Z,110nm,20.2s						
HHC				LR	LR		
	comp=Z,440nm,20.5s						
LZH	Lanzhou	163.00	15	*e*PKP	PKPdf	00 40 27.8	-2.4
LZH				LR	LR		
	comp=Z,110nm,18.3s						
LZH				LR	LR		
	comp=Z,110nm,18.1s						
LZH				LR	LR		
	comp=Z,140nm,20.0s						
NJ2	Nanjing	164.96	327	*e*PKP	PKPdf	00 40 31.5	-0.3
CD2	Chengdu	167.79	23	PKP	PKPdf	00 40 33.0	-1.2
CMAR	Chiang Mai Arr	170.20	96	PKP	PKPdf	00 40 35.8	-0.2
	comp=Z,0.3nm,0.5s,baz=20,slow=1.8,SNR=4.1						
CMAR				PKPab	PKPab	00 41 51.6	-0.3
	comp=Z,0.4nm,0.3s,baz=226,slow=4.9,SNR=4.0						

SNET ***30*** *00:27:16.2±1.4, 14°.02N×90°.86W, h90^{km}±36^{km}, ML3.2*
GCG ***30*** *00:27:18.4±0.3, 14°.75N×90°.35W, h77^{km}±98^{km}, MD3.6*
ISC 30 00:27:18.0±2.9**, 14°.0N**±0°.1×**90°.68W**±0°.08**, h108**^{km}±18^{km}**,**
n8, σ0^{s}83/15**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IXG	Ixpaco	0.27	59	*e*P	Pn	00 27 33.3	-0.4
IXG				*e*S	Sn	00 27 44.9	-0.4
FUG	Fuego 3	0.44	339	*e*P	Pn	00 27 34.5	-0.1
FUG				*e*S	Sn	00 27 46.9	0.0
RTR	El Retiro	1.01	98	*e*P	Pn	00 27 39.6	+0.2
RTR				*e*S	Sn	00 27 57.0	+1.5
SBLS	San Blas	1.04	101	*e*P	Pn	00 27 38.9	-0.9
SBLS				*e*S	Sn	00 27 57.5	+1.3
CEVE	Cerro Verde	1.04	101	*e*P	Pn	00 27 38.9	-0.9
CEVE				*e*S	Sn	00 27 56.7	+0.5
CEVE				IAML		00 28 05.5	
	comp=Z,356nm,0.4s						
SNJE	San Jose	1.05	99	*e*P	Pn	00 27 38.8	-1.0
STG3	Santiaguito 3,	1.09	308	*e*P	Pn	00 27 40.3	0.0
STG3				*e*S	Sn	00 27 57.4	+0.3
MRL	Marmol	1.42	43	*e*P	Pn	00 27 43.8	-0.2
MRL				*e*S	Sn	00 28 03.6	0.0

IDC ***30*** *00:28:27.2±6.6, 15°.64S×172°.51W, h0^{km}, mb4.4/3, mb1 4.6/3, mb1mx3.8/38, mbtmp4.4/3, Error ellipse: s-maj=237.8km s-min=27.2km az=128.0*
NEIC ***30*** *00:28:33.2±0.6, 15°.34S±0°.08×172°.7W±0°.1, h42^{km}±12^{km}, mb4.2/6, Error ellipse: s-maj=14.6km s-min=10.6km az=105.0*
ISC 30 00:28:32.7±0.9**, 15°.33S**±0°.08×**172°.7W**±0°.1**, h35**^{km}**, n15,**
σ0^{s}56/16**, mb4.2**/7**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	1.67	32	Pn	Pn	00 29 00.3	+0.7
	3.4nm,0.3s,baz=219,slow=4.8,SNR=6.4						
AFI				Sn	Sn	00 29 18.9	-0.9
	2.1nm,0.3s,baz=166,slow=16,SNR=1.4						
AFI	Afiamalu	1.67	32		Pn	00 29 00.1	+0.6
AFI					Sn	00 29 19.4	-0.5
NIUE	Niue	4.57	145	Pn	Pn	00 29 39.9	+0.5
MSVF	Nonsavu	9.19	254	Pn	Pn	00 30 42.8	-0.1
FUNA	Funafuti	10.42	310	Pn	Pn	00 31 00.1	+0.4
STKA	Stephens Creek	44.66	240	P	P	00 36 42.2	0.0
	2.0nm,0.5s,baz=92,slow=11,SNR=7.9						
STKA	Stephens Creek	44.66	240	IAmb	IAmb	00 36 45.6	
	comp=Z,0.3nm,0.9s						
BBOO	Buckleboo	49.43	240	P	P	00 37 19.1	-0.4
WR0	Warramunga Arr	50.33	257	P	P	00 37 26.6	+0.1
WR0				IAmb	IAmb	00 37 29.6	
	comp=Z,1.2nm,1.0s						
WB0	Warramunga Arr	50.48	257	P	P	00 37 27.5	-0.1
WB0				IAmb	IAmb	00 37 28.6	
	comp=Z,1.9nm,0.6s						
WB2	Warramunga Arr	50.51	257	P	P	00 37 27.7	-0.2
WB2				IAmb	IAmb	00 37 31.1	
	comp=Z,2.7nm,1.1s						
WRA	Warramunga Arr	50.52	257	P	P	00 37 28.2	+0.3
	comp=Z,1.4nm,0.5s,baz=95,slow=7.0,SNR=5.9						
AS31	Alice Springs	50.77	252	P	P	00 37 28.8	-1.1
AS31				IAmb	IAmb	00 37 30.4	
	comp=Z,3.8nm,0.8s						
ASAR	Alice Springs	50.77	252	P	P	00 37 29.9	0.0
	comp=Z,10nm,0.6s,baz=88,slow=8.4,SNR=128						
ASAR	Alice Springs	50.77	252	P	P	00 37 29.3	-0.5

UPP ***30*** *00:42:00.6±0.1, 67°.82N×20°.17E, h0^{km}, ML2.5, Explosion*
NAO ***30*** *00:42:01.6±0.9, 67°.82N×20°.42E, ML2.3*
HEL ***30*** *00:42:01.2±0.2, 67°.81N×20°.19E, h0^{km}, ML1.9, ML1.5(UPP), Explosion*
BER ***30*** *00:42:03.3±3.0, 67°.80N×20°.56E, h0^{km}, ML1.8, Suspected explosion*
ISC 30 00:42:00.3±0.7**, 67°.79N**±0°.02×**20°.16E**±0°.02**, h0**^{km}**, n47,**
σ1^{s}31/74**, 1D, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOVU	Salmi	0.44	360	P	Pg	00 42 08.5	-0.2
KOVU				S	Sg	00 42 14.0	-0.3
KOVU	Salmi	0.44	360	*i* P	Pg	00 42 08.5	-0.2
KOVU				*i* S	Sg	00 42 14.0	-0.3
DUNU	Dundret	0.69	167	P	Pg	00 42 14.0	+0.6
DUNU	Dundret	0.69	167	*i* P	Pg	00 42 14.0	+0.6
LANU	Lannavaara	0.74	68	P	Pg	00 42 14.2	-0.3
LANU	Lannavaara	0.74	68	*e*P	Pg	00 42 14.0	-0.4
LANU				*e*S	Sg	00 42 23.8	-0.2
MASU	Masugnsbyn	0.78	114	P	Pg	00 42 15.6	+0.4
MASU	Masugnsbyn	0.78	114	*i* P	Pg	00 42 15.6	+0.4
KIF	Kilpisjarvi	1.25	11	Pg	Pg	00 42 24.1	-0.1
KIF				Lg	Lg	00 42 40.2	
KIF	Kilpisjarvi	1.25	11	*e*P	Pg	00 42 24.1	-0.1
KIF				Sg	Sg	00 42 40.2	-0.1
KIF	Kilpisjarvi	1.25	11	*e*PB	Pg	00 42 24.0	-0.1
KIF				MSG		00 42 38.0	
	comp=Z,17nm,0.2s						
KIF				*e*S	Sg	00 42 40.0	-0.3
PAJU	Pajala	1.37	123	P	Pg	00 42 26.0	-0.6
PAJU	Pajala	1.37	123	*e*P	Pg	00 42 26.0	-0.6
HEF	Hetta	1.45	63	Pg	Pn	00 42 26.9	-0.9
HEF				Lg	Lg	00 42 45.4	
HEF	Hetta	1.45	63	Pg	Pn	00 42 26.9	-0.9
HEF				Sg	Sg	00 42 45.4	-1.5
HEF	Hetta	1.45	63	*e*P	Pn	00 42 26.8	-1.0
	baz=245						
HEF				MSG		00 42 44.8	
	comp=Z,9.7nm,0.2s						
HEF				*e*SN	Sn	00 42 50.1	+2.6
ERTU	Ertsjaerv	1.47	147	P	Pn	00 42 27.9	-0.1
ERTU	Ertsjaerv	1.47	147	*e*PG	Pn	00 42 27.8	-0.2
	baz=323						
ERTU				*e*SB	Sg	00 42 48.0	+0.6
HARU	Harads	1.66	169	P	Pn	00 42 31.4	+0.7
HARU	Harads	1.66	169	*e*P	Pn	00 42 31.4	+0.7
KTK1	Kautokeino	1.68	41	Pn	Pn	00 42 31.0	+0.1
KTK1				Sn	Sb	00 42 53.3	-0.4
KTK1	Kautokeino	1.68	41	*e*P	Pn	00 42 30.7	-0.1
KTK1				*e*S	Sn	00 42 53.0	-0.1
KTK1				IAML		00 42 57.5	
	comp=Z,11nm,0.3s						
STEI	Steigen	1.87	277	*e*P	Pb	00 42 35.5	+0.2
STEI			⇓	*e*S	Sg	00 43 00.5	+0.2
STEI				IAML		00 43 03.3	
	comp=Z,12nm,0.3s						
TRO	Tromso	1.91	347	Pn	Pb	00 42 35.1	-0.8
TRO				Sn	Sb	00 42 59.8	-0.5
TRO	Tromso	1.91	347	*e*P	Pb	00 42 35.1	-0.8
TRO				*e*S	Sb	00 42 59.5	-0.8
TRO				IAML		00 43 02.9	
	comp=Z,14nm,0.4s						
TOF	Tornio	2.37	134	*e*PB	Pn	00 42 42.3	+1.9
	baz=313						
TOF				MSG		00 43 11.4	
	comp=Z,6.0nm,0.2s						
TOF				*e*SB	Sb	00 43 13.7	+0.1
SGF	Sodankyl	2.46	95	*e*P	Pn	00 42 42.9	+1.3
	baz=281						
SGF				*e*SG	Sb	00 43 16.9	+0.7
LOF	Lofoten	2.52	281	Pn	Pb	00 42 46.4	0.0
LOF				Sn	Sb	00 43 18.3	+0.4
LOF	Lofoten	2.52	281	*e*P	Pb	00 42 46.3	0.0
LOF				IAML		00 43 22.4	
	comp=Z,10.0nm,0.4s						
RNF	Rovaniemi	2.57	115	*e*PB	Pb	00 42 45.4	-1.7
	baz=302						
RNF				*e*SB	Sb	00 43 19.0	-0.2
ARA0	ARCESS Array S	2.63	46	Pn	Pn	00 42 45.0	+1.0
	baz=236,slow=14						
ARA0				Sn	Sn	00 43 17.6	+1.1
	baz=233,slow=22						
ARA0	ARCESS Array S	2.63	46	Pn	Pn	00 42 45.0	+1.0
	baz=236,slow=14						
ARE0	ARCESS Array S	2.63	46	*e*P	Pn	00 42 45.0	+1.1
	baz=230						
ARE0				*e*S	Sn	00 43 17.6	+1.1
MOR8	Moi Rana	2.77	237	Pn	Pb	00 42 49.2	-1.5
MOR8				Sn	Sb	00 43 23.9	-1.3
MOR8	Moi Rana	2.77	237	*e*P	Pn	00 42 47.0	+1.1
MOR8				*e*S	Sn	00 43 20.2	+0.2
MOR8				IAML		00 43 24.9	
	comp=Z,16nm,0.4s						
KEV	Kevo	3.18	48	Pn	Pn	00 42 52.7	+1.2
KEV				Sn	Sn	00 43 30.3	+0.2
KEV	Kevo	3.18	48	Pn	Pn	00 42 52.7	+1.2
KEV	Kevo	3.18	48	*e*P	Pn	00 42 52.6	+1.2
KEV				*e*S	Sn	00 43 30.2	+0.2
KEV				MSG		00 43 34.0	
	comp=Z,3.3nm,0.2s						
BURU	Burvik	3.25	171	*e*SB	Sb	00 43 37.0	-1.9
OUL	Oulu	3.56	137	*e*PG	Pb	00 43 05.4	+1.4
	baz=323						
UMAU	Umeaa	3.93	177	*e*P	Pn	00 43 04.9	+3.1
	baz=353						
MSF	Maaselka	3.98	114	*e*P	Pn	00 43 04.1	+1.6
KU6	Riekki	4.22	110	*e*PG	Pb	00 43 16.3	+1.0
APA0	Apatity Array	4.89	86	Pn	Pn	00 43 14.5	-0.5
	baz=287,slow=6.9						
APA0				Sn	Sn	00 44 11.1	-1.1
	baz=268,slow=22						
APA0				Lg	Lg	00 44 29.1	
	baz=278,slow=28						
APA0	Apatity Array	4.89	86	Pn	Pn	00 43 14.5	-0.5
	baz=287,slow=6.9						
APA0				Sg	Sb	00 44 29.1	+3.0
	baz=278,slow=28						
FIA0	FINESS Array S	6.85	155	Pn	Pn	00 43 43.0	+1.1
	baz=340,slow=18						
FIA0				Sn	Sn	00 45 01.4	+0.9
	baz=345,slow=22						
FIA0				Lg	Lg	00 45 33.3	
	baz=344,slow=28						
FIA0	FINESS Array S	6.85	155	Pn	Pn	00 43 43.0	+1.1
	baz=340,slow=18						
FIA0				Sg	Sg	00 45 33.3	-6.9
	baz=344,slow=28						

IDC ***30*** *01:03:38.0±2.0, 8°.93S×122°.92E, h0^{km}, mb3.0/1, mb1 3.9/3, mb1mx3.6/21, mbtmp3.7/3, ML4.1/2, Error ellipse: s-maj=142.3km s-min=16.4km az=56.0*
DJA ***30*** *01:03:41.1±0.5, 9°S±5°×12°2E±°, h159^{km}±6^{km}, M3.5/6, mB4.6/1, mb3.9/1, MLv3.4/6, Mw(mB)3.8/1*
ISC 30 01:03:41.5±1.2**, 8°.61S**±0°.08×**122°.48E**±0°.05**, h150**^{km}**, n10,**
σ2^{s}65/15**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMRI	Maumere	0.24	263	P	Pn	01 04 03.5	+1.7
MMRI				S	Sn	01 04 20.5	+3.2
EDFI	Ende, Flores	0.79	259	P	Pn	01 04 05.6	+0.9
SOEI	Soe	2.10	123	P	Pn	01 04 18.4	+0.4
SOEI				S	Sn	01 04 48.4	+2.4
BASI	Baing, Sumba	2.47	229	P	Pn	01 04 22.2	0.0
BASI				S	Sn	01 04 54.4	+0.8
BBSI	Bau Bau	3.10	2	P	Pn	01 04 29.3	-0.8
WBSI	Waikabubak, Su	3.22	251	P	Pn	01 04 31.4	-0.2
WBSI				S	Sn	01 05 10.6	+0.1
PLAI	Plampang	4.65	267	P	Pn	01 04 49.8	-0.5
WRA	Warramunga Arr	16.09	136	Pn	Pn	01 07 18.3	-1.1
	1.0nm,0.3s,baz=316,slow=12,SNR=5.4						
WRA				Sn	S	01 10 11.3	-7.1
	0.2nm,0.3s,baz=311,slow=26,SNR=2.8						
ASAR	Alice Springs	18.55	145	P	Pn	01 07 48.3	-0.5
	0.4nm,0.3s,baz=330,slow=13,SNR=31						
ASAR				S	S	01 11 13.9	+3.2
	0.1nm,0.3s,baz=322,slow=26,SNR=5.7						
MKAR	Makanchi Array	65.73	331	P	P	01 14 28.1	+18
	0.1nm,0.6s,baz=145,slow=5.3,SNR=1.5						

RSNC 30 01:11:12.9±0.9**, 3°.87N**×**71°.59W, h1**^{km}±7^{km}**, ML3.3, Mw3.5,**
Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTGC	Puerto Gaitan,	0.63	301	*e*P	Pg	01 11 23.9	-1.1
PTGC				*e*S	Sg	01 11 33.3	0.0
GUVC	San Jose del G	1.68	218	*e*P	Pn	01 11 41.8	-1.6
GUVC				*e*S	Sn	01 12 04.3	-1.3
GUVC				*i*		01 12 09.0	
	comp=Z,456nm,0.1s						
VILC	Villavicencio,	2.11	276	*e*P	Pn	01 11 49.0	-0.5
VILC				*e*S	Sn	01 12 15.9	-0.5
VILC				*i*		01 12 21.5	
	comp=Z,332nm,0.4s						
CHIC	Chingaza	2.27	289	*e*P	Pn	01 11 50.7	-1.1
CHIC				*e*S	Sn	01 12 20.5	-0.1
CHIC				*i*		01 12 25.3	
	comp=Z,127nm,0.3s						
RUSC	La Rusia	2.50	323	*e*P	Pn	01 11 54.1	-1.0
RUSC				*e*S	Sn	01 12 25.6	-0.8
RUSC				*i*		01 12 42.7	
	comp=Z,64nm,0.4s						
TAMC	Tame, Arauca	2.55	355	*e*P	Pn	01 11 54.3	-1.2
TAMC				*i*		01 12 31.5	
	comp=Z,177nm,0.2s						
MACC	Macarena, Meta	2.83	233	*e*P	Pn	01 12 00.6	+1.2
MACC				*e*S	Sn	01 12 36.8	+2.6
MACC				*i*		01 12 49.1	
	comp=Z,136nm,0.7s						
ROSC	El Rosal	2.89	290	*e*P	Pn	01 11 59.3	-1.1
SPBC	San Pablo de B	3.04	306	*e*P	Pn	01 12 00.2	-2.1
SPBC				*e*S	Sn	01 12 39.5	+0.2
SPBC				*i*		01 12 51.7	
	comp=Z,49nm,0.5s						
BARC	Barichara	3.13	330	*e*P	Pb	01 12 08.7	-0.8
BARC				*e*S	Sn	01 12 39.5	-2.4
BARC				*i*		01 12 56.2	
	comp=Z,168nm,0.3s						
ORTC	Ortega, Tolima	3.65	271	*e*P	Pn	01 12 09.8	-0.8
ORTC				*e*S	Sb	01 13 05.6	+2.6
ORTC				*i*		01 13 20.4	
	comp=Z,59nm,0.6s						
NORC	Norcasia	3.67	297	*e*P	Pn	01 12 09.3	-1.6
ANIL	Santa Ana	3.85	279	*e*P	Pn	01 12 12.4	-1.2
ANIL				*e*S	Sb	01 13 06.9	-2.2
ANIL				*i*		01 13 22.5	
	comp=Z,88nm,0.4s						
RREF	El Recreo	3.88	285	*e*P	Pn	01 12 12.8	-1.6
RREF				*e*S	Sn	01 13 05.5	+4.6
GUY2C	Guyana, Caldas	4.00	290	*e*P	Pn	01 12 15.2	-0.5
GUY2C				*e*S	Sn	01 12 53.9	-10
FLOC	Florencia	4.65	241	*e*P	Pn	01 12 24.4	+0.1
FLOC				*e*S	Sb	01 13 30.2	-1.8
FLOC				*i*		01 13 42.1	
	comp=Z,48nm,1.1s						
SDV	Santo Domingo	5.07	11	*e*P	Pn	01 12 25.9	-4.4
SDV				*e*S	Sn	01 13 22.5	-7.0

VAO ***30*** *01:11:16.4±0.6, 13°.58S×76°.33W, h37^{km}±3^{km}, mb4.6*
IDC ***30*** *01:11:18.8±0.8, 13°.48S×76°.12W, h47^{km}±6^{km}, mb3.7/9, mb1 3.9/12, mb1mx3.8/27, mbtmp4.0/12, MS3.5/9, Ms1 3.5/9, ms1mx3.3/26, Error ellipse: s-maj=28.7km s-min=7.7km az=59.0*
NEIC ***30*** *01:11:23.1±1.7, 14°.06S±0°.08×75°.9W±0°.1, h10^{km}±3^{km}, mb4.6/17, Error ellipse: s-maj=19.9km s-min=11.2km az=72.0*
ISC 30 01:11:18.1±0.6**, 13°.67S**±0°.07×**76°.34W**±0°.08**, h49**^{km}±5^{km}**,**
h49^{km}**:pP-P, n86, σ1^{s}69**/79**, mb4.3**/14**, MS3.8**/9**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	1.74	344	P	Pn	01 11 45.0	-1.0
	64nm,0.3s,baz=168,slow=11,SNR=68						
NNA				S	Sn	01 12 05.6	-1.4
	340nm,0.3s,baz=211,slow=12,SNR=10						
NNA				LR	LR	01 12 33.6	
	comp=Z,264nm,20.9s,baz=142,slow=46						
NNA	Nana	1.74	344		Pn	01 11 44.8	-1.1
ATAH	Atahualpa	6.80	342	P	Pn	01 12 56.5	+0.9
	2.6nm,0.3s,baz=178,slow=3.2,SNR=21						
ATAH				S	Sn	01 14 20.3	+8.3
	2.8nm,0.3s,baz=13,slow=22,SNR=3.7						
ATAH				LR	LR	01 15 58.7	
	comp=Z,144nm,22.0s,baz=179,slow=42						
PB12	IPOC Station P	7.59	131		Pn	01 13 05.0	-1.2
PB16	IPOC Station P	8.04	126		Pn	01 13 13.5	+0.6
LPAZ	La Paz	8.35	109	P	Pn	01 13 19.2	+2.1
	2.6nm,0.3s,baz=278,slow=9.1,SNR=77						
LPAZ				S	Sn	01 14 56.9	+6.5
	0.3nm,0.3s,baz=178,slow=23,SNR=3.7						
LPAZ	La Paz	8.35	109		Pn	01 13 18.7	+1.6
PSGCX	Pisagua	8.38	136		Pn	01 13 16.1	-1.0
MNMC	Minye Minye	8.45	131		Pn	01 13 16.7	-1.4
PB11	IPOC Station P	8.81	134		Pn	01 13 21.9	-1.2
GO01	Chusmiza	9.08	132		Pn	01 13 26.4	-0.6
PATCX	Punta Patache	9.25	141		Pn	01 13 28.6	-0.4
PB01	IPOC Station P	9.83	139		Pn	01 13 36.3	-0.6
PB07	IPOC Station P	10.10	143		Pn	01 13 40.6	-0.1
PB04	IPOC Station P	10.44	147	Pn	Pn	01 13 45.7	+0.4
PB09	IPOC Station P	10.54	141		Pn	01 13 47.9	+1.2
PB10	IPOC Station P	11.22	152	Pn	Pn	01 13 55.8	-0.1
LVC	Limon Verde	11.35	143	P	Pn	01 13 59.3	+1.3
	1.1nm,0.3s,baz=338,slow=8.9,SNR=9.2						
LVC				S	Sn	01 16 06.0	+2.4
	4.2nm,0.3s,baz=92,slow=19,SNR=5.0						
LVC				LR	LR	01 18 24.3	
	comp=Z,72nm,18.8s,baz=310,slow=37						
LVC	Limon Verde	11.35	143		Pn	01 13 58.2	+0.2
LVC	Limon Verde	11.35	143	*e*P	Pn	01 13 58.6	+0.6
PB15	IPOC Station P	11.51	147		Pn	01 14 00.1	+0.1
PB14	IPOC Station P	12.26	154	Pn	Pn	01 14 09.8	-0.5
GO02	Mina Guanaco	13.08	152		Pn	01 14 21.1	-0.4
SAML	Samuel	13.72	71		Pn	01 14 28.6	-1.5
SIV	San Ignacio	14.94	101	P	Pn	01 14 44.0	-2.3
	0.6nm,0.3s,baz=303,slow=11,SNR=15						
GO04	Tololo Observa	17.21	164	Pn	P	01 15 15.9	-0.4
ROSC	El Rosal	18.50	6	LR	LR	01 23 24.3	
	comp=Z,152nm,21.3s,baz=215,slow=40						
SALV	Santo Antonio	20.09	99	*e*P	P	01 15 46.5	-1.2
CLDB	Colider	20.26	84	*e*P	P	01 15 47.6	-2.1
PTGA	Pitinga	20.68	53	P	P	01 15 52.5	-1.8
	19nm,0.8s,baz=224,slow=11,SNR=30						
PTGA	Pitinga	20.68	53	*e*P	P	01 15 53.1	-1.2
AQDB	Aquidauana	20.85	112	*e*P	P	01 15 55.4	-0.5
CPUP	Villa Florida	21.82	128	P	P	01 16 06.5	+0.1
	1.3nm,0.9s,baz=289,slow=16,SNR=2.6						
CPUP				LR	LR	01 26 35.5	
	comp=Z,140nm,18.1s,baz=4.5,slow=42						
CPUP	Villa Florida	21.82	128	*e*P	P	01 16 06.5	+0.1
SDV	Santo Domingo	23.11	14	*e*P	P	01 16 18.9	-1.3
C2SB	Chapadao do Su	23.12	106	*e*P	P	01 16 20.2	+0.1
ARAG	Araguaiana, MT	23.81	98	*e*P	P	01 16 24.8	-1.9
ITQB	Itaqui	24.21	134	*e*P	P	01 16 29.8	-0.5
TRCB	Terra Rica	24.25	115	*e*P	P	01 16 29.2	-1.5
PCMB	Pacaembu	25.14	112	*e*P	P	01 16 38.3	-0.5
PTGB	Pitanga	25.38	119	*e*P	P	01 16 41.0	-0.1
ITRB	Iturama	25.58	107	*e*P	P	01 16 42.7	-0.2
ITAB	Concordia	26.33	125	*e*P	P	01 16 49.7	+0.2
FRTB	Fartura	27.11	115	*e*P	P	01 16 55.7	-1.0
IPMB	Ipameri, GO	27.39	103	*e*P	P	01 16 57.4	-1.8
PLCA	Paso Flores	27.44	170	P	P	01 17 02.5	+3.1
	1.6nm,0.9s,baz=351,slow=19,SNR=2.0						
PLCA	Paso Flores	27.44	170	IAmb	IAmb	01 17 21.1	
	comp=Z,30nm,1.9s						
BDFB	Brasilia	27.47	98	P	P	01 17 00.4	+0.4
	comp=Z,0.6nm,0.4s,baz=250,slow=17,SNR=2.1						
BDFB				LR	LR	01 28 58.1	
	comp=Z,173nm,19.9s,baz=282,slow=39						
BDFB	Brasilia	27.47	98	IAmb	IAmb	01 17 41.9	
	comp=Z,6.0nm,1.1s						
SMTB	Santa Maria do	28.58	83	*e*P	P	01 17 08.5	-1.4
SMTB				*e*pP	pP	01 17 20.1	-2.6
RCLB	Rio Claro- Sao	28.70	112	*e*P	P	01 17 10.4	-0.5
VAO	Valinhos	29.34	113	*e*P	P	01 17 16.0	-0.6

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PARB  Paraibuna         30.62 113  eP     P        01 17 28.9 +1.0
BSCB  Bom Sucesso       30.96 108  eP     P        01 17 31.3 +0.4
SJMB  Sao Joao De Ma    34.09 103  eP     P        01 17 59.3 +1.0
BSFB  Barra de Sao F    34.42 103  eP     P        01 18 00.2 -1.0
TXAR  Lajitas Array     50.24 329   P     P        01 20 10.6 +1.0
      comp=Z,0.5nm,0.7s,baz=148,slow=8.4,SNR=5.2
TXAR                                pP    pP       01 20 24.0 +1.1
      comp=Z,1.3nm,0.7s,baz=145,slow=9.6,SNR=8.9
PMSA  Palmer Station    51.75 173  epP    pP       01 20 30.3  -3.4
MNTX  Cornudas Mount    53.01 329   P     pP       01 20 43.4  -0.2
MNTX                                IAmb  IAmb     01 20 45.6
      comp=Z,9.2nm,1.6s
X16A  Lo Mia Camp, P    58.31 326   P     pP       01 21 22.8 +0.9
X16A                                IAmb  IAmb     01 21 29.3
      comp=Z,2.3nm,0.8s
WUAZ  Wupatki           59.10 327   P     pP       01 21 28.8 +1.3
PV01  Paradox Valley    59.73 331   P     pP       01 21 32.5 +0.7
PFO   Pinyon Flats O    60.60 322   LR    LR       01 45 27.2
      comp=Z,56nm,19.4s,baz=69,slow=34
LCMT  Little Creek M    61.22 327   P     pP       01 21 41.2  -0.7
P17A  Butcher Ranch,    61.83 330   P     pP       01 21 46.9 +0.8
TAOE  Nuku Hiva Isla    62.62 267  eLR    LR       01 40 31.6
      comp=Z,168nm,26.1s
DUG   Dugway, Tooele    63.40 329   P     pP       01 21 57.1 +0.7
DUG                                 IAmb  IAmb     01 21 59.0
      comp=Z,4.5nm,0.9s
HWUT  Hardware Ranch    63.88 331   P     pP       01 21 59.7  -0.1
HWUT                                IAmb  IAmb     01 22 06.0
      comp=Z,4.1nm,0.8s
PDAR  Pinedale Array    63.90 333   P     P        01 21 46.6 +0.5
      comp=Z,0.3nm,0.5s,baz=124,slow=10,SNR=4.4
YNE   Yellowstone No    65.89 334   P     pP       01 22 13.7 +0.8
ULM   Lac du Bonnet     65.91 346   P     P        01 21 58.0  -0.8
      comp=Z,2.6nm,0.6s,baz=156,slow=6.6,SNR=8.7
YHL   Hebgen Lake       66.27 334   P     pP       01 22 16.4 +1.0
ORV   Oroville          67.61 324   P     pP       01 22 23.7 +0.1
ORV                                 IAmb  IAmb     01 22 30.8
      comp=Z,4.1nm,0.8s
TBI   Tubuai            69.40 250  eLR    LR       01 43 27.5
      comp=Z,123nm,29.5s
PPT2  Papeete2          70.25 256  eLR    LR       01 43 59.5
      comp=Z,77nm,29.5s
DBIC  Dimbokro          73.77  79   P     P        01 22 46.7  -1.2
      comp=Z,3.4nm,0.8s,baz=230,slow=7.9,SNR=4.7
DBIC                                LR    LR       01 53 47.7
      comp=Z,52nm,18.2s,baz=227,slow=35
YKA   Yellowknife Ar    81.58 343   P     P        01 23 30.2  -0.1
      comp=Z,0.5nm,0.7s,baz=141,slow=6.4,SNR=15
YKA                                 pP    pP       01 23 43.5  -1.0
      comp=Z,1.4nm,0.8s,baz=140,slow=6.0,SNR=13
VNDA  Vanda             83.24 191   LR    LR       01 53 02.9
      comp=Z,65nm,21.9s,baz=257,slow=30
SUMG  Summit            89.58  11  i P    P        01 24 10.0  -0.4
      comp=Z,10nm,0.8s
SUMG                               i               01 24 24.1
BOSA  Boshof            93.44 120   LR    LR       02 06 54.5
      comp=Z,33nm,18.0s,baz=204,slow=36
WRA   Warramunga Arr   134.98 223   PKP   PKPdf    01 30 33.2 +0.4
      comp=Z,0.3nm,0.7s,baz=129,slow=2.4,SNR=2.7
WRA                                 pPKP  pPKPdf   01 30 47.5  -0.1
      comp=Z,0.9nm,0.8s,baz=126,slow=1.9,SNR=6.6
ZALV  Zalesovo Beam    137.15  16   PKP   PKPdf    01 30 35.6  -0.1
      comp=Z,0.3nm,0.3s,baz=143,slow=5.0,SNR=1.9
KSH   Kashi            144.55  38   PKP   PKiKP    01 30 54.0 +0.6
KSH                                 PP    PP       01 34 15.5  +10
KSH                                 PKS   PKSdf    01 34 22.0  -3.4
KSH   Kashi            144.55  38   SKKS  SKKSac   01 40 56.8 +1.9
SONM  Songino Array    145.86 357   PKPbc PKPab    01 30 52.9 +0.2
      comp=Z,1.7nm,0.7s,baz=340,slow=2.5,SNR=13
SONM                                pPKPbc pPKPdf  01 31 06.3  -0.2
      comp=Z,3.3nm,0.9s,baz=315,slow=2.5,SNR=9.8
LZH   Lanzhou          157.67 360  ePKP   PKPdf    01 31 20.3  +11
LZH                                 pPKP  pPKPdf   01 31 23.5  -1.2
LZH                                 sPKP           01 31 25.0
LZH                                 PKP   pPKPab   01 31 56.5 +0.1
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JMA ***30*** *01:16:28.9, 23°.56N×121°.58E, h23km±2km, M2.8*
TAP ***30*** *01:16:29.2, 23°.56N×121°.55E, h29km, ML3.4, C*
ISC 30 01:16:29.4±0.9**, 23°.57N**±0°.02×**121°.56E**±0°.02**, h30**km±5km**,**
n96, σ0s.68/178**, Taiwan**

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Code  Station Name        Δ°   AZ°     Phase ID            Time     Res
                                       Op     ISC        h  m  s    ISC
HGSD  Ruisui             0.14 239  i P    Pn       01 16 35.6  0.0
      baz=240
HGSD                               i S    Sb       01 16 39.6 +0.7
      baz=240
EGFH  Guangfu            0.16 310  i P    Pn       01 16 35.5 -0.3
      baz=313
EGFH                                 S    Sb       01 16 40.0 +0.8
      baz=313
EHY   Hungye             0.23 254  i P    Pb       01 16 35.7 -0.2
      baz=254
EHY                                  S    Sb       01 16 40.2 -0.2
      baz=254
ESL   Shilin             0.27 335    P    Pb       01 16 36.3 -0.2
      baz=338
ESL                                  S    Sb       01 16 41.2 -0.1
      baz=338
YULB  Yu-li              0.30 234    P    Pb       01 16 36.5 -0.4
      baz=234
YULB                                eS    Sb       01 16 41.4 -0.5
      baz=234
TWF1  Yuli               0.32 228    P    Pb       01 16 36.8 -0.4
      baz=227
TWF1                                 S    Sb       01 16 42.0 -0.4
      baz=227
ENLB  Shoufeng           0.34   7    P    Pb       01 16 37.3 -0.1
      baz=7.0
ENLB                                 S    Sn       01 16 44.0 -0.2
      baz=7.0
HWA   Hwalien            0.41   6    P    Pn       01 16 39.4 +0.1
      baz=7.0
HWA                                 eS    Sn       01 16 46.8 +0.8
      baz=7.0
VWDT  VWDT               0.42 296    P    Pb       01 16 38.8 +0.1
      baz=297
VWDT                                eS    Sb       01 16 45.1 +0.1
      baz=297
FULB  Fuli               0.44 214    P    Pb       01 16 39.0  0.0
      baz=213
FULB                                 S    Sn       01 16 46.7  0.0
      baz=213
CHKT  Chengkung          0.50 201  i P    Pb       01 16 39.7 -0.1
      baz=199
CHKT                                 S    Sb       01 16 47.4 +0.5
      baz=199
TWD   Chiawan            0.51   4    P    Pn       01 16 40.4 -0.3
      baz=5.0
TWD                                  S    Sn       01 16 48.4  0.0
      baz=5.0
OWD   Renai              0.52 318    P    Pb       01 16 39.9 -0.4
      baz=318
OWD                                 eS    Sb       01 16 46.9 -0.9
      baz=318
YUS   Yu-Shan            0.56 262  i P    Pb       01 16 40.9 -0.2
      baz=262
YUS                                  S    Sb       01 16 48.5 -0.7
      baz=262
SSLB  Suanglung          0.60 292    P    Pb       01 16 40.8 -0.6
      baz=292
SSLB                                eS    Sb       01 16 49.5 -0.2
      baz=292
CHGB  Renai              0.60 324  i P    Pb       01 16 41.5 -0.2
      baz=325
CHGB                                eS    Sb       01 16 49.4 -0.7
      baz=325
NACB  Ninganchiao        0.60   3    P    Pb       01 16 41.6  0.0
      baz=3.0
NACB                                eS    Sn       01 16 50.7  0.0
      baz=3.0
ELDTW Lidau              0.62 233    P    Pb       01 16 40.7 -1.2
      baz=232
ELDTW                               eS    Sb       01 16 48.0 -2.5
      baz=232
WHF   Hehuan Shan        0.64 335    P    Pb       01 16 41.9 -0.4
      baz=336
WHF                                 eS    Sb       01 16 50.6 -0.6
      baz=336
ETLH  Xiulin Townshi     0.64 354    P    Pb       01 16 41.9 -0.3
      baz=354
ETLH                                eS    Sn       01 16 51.7  0.0
      baz=354
WHYT  Xinyi Township     0.66 281  i P    Pb       01 16 42.5  0.0
      baz=282
WHYT                                 S    Sb       01 16 51.6 +0.2
      baz=282
SMLT  Sun Moon Lake      0.68 298    P    Pb       01 16 42.6 -0.3
      baz=298
SMLT                                eS    Sn       01 16 52.9 +0.1
      baz=298
ALS   Alishan            0.69 265  i P    Pb       01 16 43.1 -0.1
      baz=265
ALS                                  S    Sb       01 16 52.9 +0.3
      baz=265
TYC   Yuchr              0.72 298    P    Pb       01 16 43.3 -0.3
      baz=298
TYC                                 eS    Sn       01 16 54.0 +0.3
      baz=298
DPDB  Guoxing            0.74 309    P    Pb       01 16 43.7 -0.2
      baz=309
DPDB                                eS    Sn       01 16 55.0 +0.8
      baz=309
TDCB  Techi              0.78 332    P    Pn       01 16 44.4  0.0
      baz=332
TDCB                                eS    Sb       01 16 53.8 -1.0
      baz=332
WJS   Zhushan            0.80 289   eP    Pb       01 16 45.4 +0.5
      baz=289
WJS                                 eS    Sn       01 16 56.9 +1.3
      baz=289
CHN5  Tsauling           0.81 272   eP    Pb       01 16 45.3 +0.3
      baz=272
CHN5                                eS    Sn       01 16 56.3 +0.4
      baz=272
STYT  Tauyuan            0.84 241    P    Pn       01 16 44.9 -0.4
      baz=241
STYT                                eS    Sb       01 16 55.4 -1.1
      baz=241
TWH   Lutao              0.86 185   eP    Pn       01 16 44.5 -0.9
      baz=184
TWH                                 eS    Sn       01 16 57.4 +0.5
      baz=184
WNT   Mingjian           0.86 291   eP    Pb       01 16 46.3 +0.5
      baz=291
WNT                                 eS    Sn       01 16 58.3 +1.3
      baz=291
TWGBT Beinan             0.87 211   eP    Pn       01 16 43.9 -1.7
      baz=210
TWGBT                               eS    Sb       01 16 57.3 +0.1
      baz=210
TWG   Pinlang            0.87 211   eP    Pn       01 16 45.4 -0.2
      baz=210
TWG                                 eS    Sn       01 16 57.5 +0.2
      baz=210
NNSB  Datong             0.87 349    P    Pn       01 16 45.6 -0.2
      baz=349
NNSB                                eS    Sb       01 16 56.2 -1.3
      baz=349
NNSH  Datong             0.87 349    P    Pb       01 16 45.9 -0.3
      baz=349
NNSH                                eS    Sb       01 16 56.3 -1.2
      baz=349
ENA   Nanau              0.87  11   eP    Pn       01 16 45.1 -0.6
      baz=11
ENA                                 eS    Sn       01 16 58.1 +0.7
      baz=11
NNS   Nan Shan           0.89 349   eP    Pn       01 16 45.7 -0.2
      baz=349
NNS                                 eS    Sn       01 16 58.1 +0.3
      baz=349
TPUB  Ta-pu              0.89 253    P    Pb       01 16 46.3 -0.1
      baz=253
WHP   Taichung City      0.90 322   eP    Pn       01 16 46.2  0.0
      baz=322
WHP                                 eS    Sn       01 16 58.0 -0.2
      baz=322
CHN4  Tsaushan           0.91 257    P    Pn       01 16 46.3 +0.1
      baz=256
CHN4                                eS    Sb       01 16 59.1 +0.6
      baz=256
WGK   Gukeng             0.92 278   eP    Pn       01 16 46.4 +0.1
      baz=277
WGK                                 eS    Sb       01 16 59.7 +1.0
      baz=277
WTP   Ta-pu              0.92 250    P    Pn       01 16 46.7 +0.3
      baz=249
WTP                                 eS    Sb       01 16 59.2 +0.3
      baz=249
WDLH  Douliu             0.94 278  i P    Pn       01 16 46.9 +0.3
      baz=277
WDLH                                eS    Sb       01 17 00.5 +1.1
      baz=277
TCU   Taichung           0.99 306   eP    Pn       01 16 47.4 +0.1
      baz=306
TCU                                 eS    Sb       01 17 00.9 +0.1
      baz=306
CHN2  Minshiung          0.99 268   eP    Pn       01 16 47.5 +0.2
      baz=268
CHN2                                eS    Sb       01 17 01.2 +0.4
      baz=268
SGST  Jiashian           1.02 242   eP    Pn       01 16 47.5 -0.2
      baz=241
SGST                                eS    Sb       01 17 01.5  0.0
      baz=241
CHN1  Nanshi             1.02 248   eP    Pb       01 16 48.4 -0.2
      baz=248
CHN1                                eS    Sb       01 17 01.7 +0.1
      baz=248
TWK   Hsinying           1.03 253    P    Pb       01 16 48.5 -0.2
      baz=253
TWK                                 eS    Sn       01 17 01.7 +0.5
      baz=253
NDT   Datong Townshi     1.03 358   eP    Pb       01 16 48.4 -0.3
      baz=358
CHY   Chiayi             1.04 266   eP    Pn       01 16 48.1 +0.1
      baz=266
CHY                                 eS    Sn       01 17 01.7 +0.1
      baz=266
WCHH  Zhanghua           1.05 299   eP    Pn       01 16 48.3 +0.3
      baz=299
WCHH                                eS    Sn       01 17 01.8 +0.2
      baz=299
ENTT  Nioudou            1.07   0    P    Pn       01 16 48.3 -0.1
      baz=1.0
ENTT                                eS    Sn       01 17 02.3 +0.1
      baz=1.0
TWC   Suao               1.07  14   eP    Pb       01 16 48.7 -0.7
      baz=15
TWC                                 eS    Sb       01 17 03.2 +0.1
      baz=15
EOS1  EOS1               1.11  28   eP    Pb       01 16 49.8 -0.2
      baz=28
EOS1                                eS    Sb       01 17 04.7 +0.6
      baz=28
YHNB  Yeheng             1.11 351    P    Pn       01 16 49.4 +0.4
      baz=351
YHNB                                eS    Sn       01 17 02.5 -0.9
      baz=351
ECL   Taimali            1.11 210   eP    Pn       01 16 49.2 +0.2
      baz=209
ECL                                 eS    Sn       01 17 03.0 -0.3
      baz=209
NSY   Sanyi              1.12 319   eP    Pb       01 16 50.4 +0.3
      baz=319
NSY                                 eS    Sb       01 17 06.3 +1.9
      baz=319
NSK   Sanguang           1.12 351    P    Pn       01 16 49.5 +0.4
      baz=351
NSK                                 eS    Sn       01 17 03.2 -0.4
      baz=351
WDJ   Dajia District     1.14 313   eP    Pn       01 16 49.9 +0.5
      baz=313
WDJ                                 eS    Sb       01 17 06.1 +1.0
      baz=313
RLNB  Erlin              1.15 287   eP    Pb       01 16 50.5 -0.1
      baz=286
RLNB                                eS    Sb       01 17 06.5 +1.4
      baz=286
TWE   Neicheng           1.15   5   eP    Pn       01 16 49.6 +0.1
      baz=5.0
TWE                                 eS    Sb       01 17 04.8 -0.6
      baz=5.0
PTSB  Yuanli             1.17 318   eP    Pb       01 16 51.2 +0.1
      baz=318
PTSB                                eS    Sb       01 17 05.7 -0.2
      baz=318
SSD   Sandimen           1.18 226   eP    Pn       01 16 50.0 +0.1
      baz=225
SSD                                 eS    Sn       01 17 05.4 +0.5
      baz=225
NMLH  Miaoli             1.19 324   eP    Pn       01 16 50.5 +0.5
      baz=324
NMLH                                eS    Sb       01 17 05.9 -0.7
      baz=324
NWLT  Wulai              1.21 358   eP    Pb       01 16 51.3 -0.4
      baz=357
NWLT                                eS    Sb       01 17 06.6 -0.3
      baz=357
WTCT  Ta-ch'eng          1.21 284   eP    Pn       01 16 50.6 +0.3
      baz=284
WTCT                                eS    Sb       01 17 07.9 +1.0
      baz=284
WSF   Szhu               1.23 274   eP    Pn       01 16 50.6 +0.1
      baz=273
WSF                                 eS    Sn       01 17 06.6 +0.5
      baz=273
MASBT Mashibuluo         1.28 222   eP    Pn       01 16 51.4 +0.2
      baz=221
MASBT                                S    Sn       01 17 07.8 +0.5
      baz=221
WLTB  Daxi               1.31 348   eS    Sb       01 17 10.6 +0.7
      baz=348
EAST  Anshuo             1.35 209   eP    Pn       01 16 52.7 +0.5
      baz=208
TATO  Taipei             1.40 357   eS    Sb       01 17 11.3 -1.2
      baz=357
TIPB  Shuangxi           1.42  10   eP    Pn       01 16 53.4 +0.2
      baz=10.0
TIPB                                eS    Sn       01 17 11.4 +0.4
      baz=10.0
SCZT  Fangliau           1.47 216   eP    Pn       01 16 54.1 +0.2
      baz=215
SCZT                                eS    Sn       01 17 12.6 +0.4
      baz=215
NWF   Wu-fen Shan        1.51   8   eP    Pn       01 16 55.5 +1.0
      baz=7.0
NWF                                 eS    Sn       01 17 14.0 +0.8
      baz=7.0
WFSB  Wu-fen Shan        1.51   8   eP    Pn       01 16 55.3 +0.8
      baz=7.0
WFSB                                eS    Sn       01 17 13.6 +0.5
      baz=7.0
YM01  YM01               1.57   0   eS    Sn       01 17 15.0 +0.3
YM04  YM04               1.58 359   eS    Sn       01 17 15.5 +0.6
      baz=359
YM11  YM11               1.59   1   eS    Sb       01 17 16.6 -1.4
YOJ   Yonaguni jima      1.60  56    P    Pn       01 16 56.5 +0.9
YOJ                                 eS    Sn       01 17 15.7 +0.4
WDGT  Dungji             1.77 260   eP    Pn       01 16 58.2 +0.2
      baz=260
PHUB  P'eng-hu           1.82 269   eP    Pn       01 16 59.1 +0.4
      baz=268
PHUB                                eS    Sn       01 17 20.8  0.0
      baz=268
PNG   Penghu             1.84 270   eP    Pn       01 16 59.2 +0.3
      baz=270
PNG                                 eS    Sn       01 17 21.2 +0.1
      baz=270
VCHM  Qimei              1.99 260   eP    Pn       01 17 01.0  0.0
      baz=259
VCHM                                eS    Sn       01 17 24.4 -0.5
      baz=259
IRIF  Iriomote-Funau     2.13  69    P    Pn       01 17 03.7 +0.8
IRIF                                eS    Sn       01 17 29.2 +0.8
JKRS  Kuro-shima         2.34  73    P    Pn       01 17 06.6 +0.8
JKRS                                 S    Sn       01 17 35.3 +1.7
JIJ   Ishigaki jima      2.49  71    P    Pn       01 17 08.1 +0.1
JIJ                                 eS    Sn       01 17 37.7 +0.3
PTTC  Pingtan            2.52 320   eS    Sn       01 17 36.6 -1.4
      baz=319
PTMZ  Houxiangcun        2.66 304   eS    Sn       01 17 40.4 -1.2
      baz=303
JISG  Ishigakijimahi     2.71  67    P    Pn       01 17 11.0  0.0
JISG                                 S    Sn       01 17 42.0 -0.8
MATB  Ma-tsu             2.96 331   eS    Sn       01 17 47.3 -1.6
      baz=330
KNM   Kinmen             2.98 287   eP    Pn       01 17 16.4 +1.7
      baz=285
KNM                                 eS    Sn       01 17 51.4 +2.0
      baz=285
KNMB  Chin-men Tao       3.03 288   eP    Pn       01 17 15.3  0.0
      baz=287
KNMB                                eS    Sn       01 17 48.8 -1.9
      baz=287
JTJ   Tarama             3.06  69    P    Pn       01 17 16.1 +0.3
JTJ                                 eS    Sn       01 17 51.2 -0.3
MHZQ  Yeshan             3.41 318   eS    Sn       01 17 59.2 -0.8
      baz=317
ZPLA  Ao Xicun           3.51 277   eS    Sn       01 18 01.8 -0.6
      baz=276
AXDP  Jialang            3.53 293   eP    Pn       01 17 22.5 +0.2
      baz=292
AXDP                                eS    Sn       01 18 01.1 -1.9
      baz=292
```

IDC 30 01:28:25.3±3.4**, 32°.36S×178°.84W, h0**km**, mb3.6**/2**,**
mb1 3.8/3**, mb1mx3.7**/35**, mbtmp3.6**/3**, ML3.4**/1**, Error**
ellipse: s-maj=74.2km s-min=47.9km az=111.0, South
of Kermadec Islands

```
Code  Station Name        Δ°   AZ°     Phase ID            Time     Res
                                       Op     ISC        h  m  s    ISC
URZ   Urewera            6.75 208   Pn    Pn       01 30 05.7  0.0
      0.8nm,0.3s,baz=219,slow=1.4,SNR=11
URZ                                 Sn    Sn       01 31 17.0 -6.4
      0.8nm,0.3s,baz=170,slow=21,SNR=7.1
ASAR  Alice Springs     42.33 269   P     P        01 36 21.1 -0.1
      0.5nm,0.6s,baz=103,slow=7.5,SNR=7.1
WRA   Warramunga Arr    43.49 275   P     P        01 36 30.4 -0.3
      0.5nm,0.4s,baz=117,slow=7.6,SNR=4.9
FINES FINESS Array B   146.71 338   PKPbc PKPbc    01 48 07.5 -0.8
      1.3nm,0.8s,baz=35,slow=5.1,SNR=1.4
```

IDC ***30*** *01:29:51.3±6.9, 2°.49N×128°.37E, h88km±81km, mb3.0/3,*
mb1 3.3/4, mb1mx3.1/33, mbtmp3.4/4, ML3.8/1, Error
ellipse: s-maj=137.2km s-min=25.6km az=69.0
ISC 30 01:29:49.5±1.2**, 2°.0N**±0°.2×**127°.8E**±0°.3**, h35**km**, n7, σ0s.39**/6**,**
mb3.4/3**, 1C, Northern Molucca Sea**

```
Code  Station Name        Δ°   AZ°     Phase ID            Time     Res
                                       Op     ISC        h  m  s    ISC
SIJI  Sorong             4.53 129   P     Pn       01 30 55.7  0.0
      4.6nm,0.3s,baz=194,slow=21,SNR=17
SIJI                                S     Sn       01 31 47.2  0.0
      1.1nm,0.3s,baz=262,slow=23,SNR=1.8
DDMP  Don Marcelino,     4.54 333  eP     Pn       01 30 49.6 -6.2
SKMP  Bagumbayan, Su     5.50 324  eP     Pn       01 31 04.8 -4.1
KCP   Kidapawan          5.62 332⇑iP     Pn       01 31 11.1 +0.4
KCP                                i S    Sn       01 32 13.6 -0.5
WRA   Warramunga Arr    22.77 164   P     P        01 34 48.9 -0.2
      0.7nm,0.6s,baz=346,slow=11,SNR=3.6
ASAR  Alice Springs     26.23 167   P     P        01 35 21.4  0.0
      0.2nm,0.7s,baz=359,slow=9.3,SNR=4.1
MKAR  Makanchi Array    59.53 325   P     P        01 39 45.3 -4.2
      0.2nm,0.5s,baz=113,slow=7.5,SNR=4.9
```

BGR ***30*** *01:32:49.2±0.0, 62°.12N×149°.51W, h33km, mb4.8*
MOS ***30*** *01:32:52.0±0.8, 62°.32N×151°.34W, h82km, mb5.0/54,*
Error ellipse: s-maj=9.8km s-min=4.3km az=95.1
NEIC ***30*** *01:32:53.7±1.7, 62°.24N±0°.04×151°.26W±0°.04, h85km±4km,*
Error ellipse: s-maj=5.2km s-min=2.2km az=193.0
NEIC ***30*** *01:32:54, 62°.22N×151°.14W, h84km, Moment Tensor*
Solution. Moment tensor: Scale 10^{16}*Nm;* M_{rr}*0.68;*
$M_{\theta\theta}$*-0.62;* $M_{\phi\phi}$*-0.06;* $M_{r\theta}$*-0.07;* $M_{\theta\phi}$*1.72;* $M_{\phi r}$*2.59; Fault*
plane solution: M_0*3.17000×*10^{16} *NP1:*ϕ_s*92.07000°,*
δ34.20000°, λ13.22000°. NP2:ϕ_s*351.07000°, δ82.61000°,*
λ123.49000°. Principal axes: T 3.2465, Plg43.0000°,
Azm293.0000°; N -0.1533, Plg33.0000°, Azm166.0000°;
P -3.0932, Plg30.0000°, Azm54.0000°;
AEIC ***30*** *01:32:54±1.6, 62°.22N±0°.03×151°.23W±0°.08, h83km±3km,*
ML4.7/149, mb5.1/384(NEIC), Mwr4.9/67(NEIC) Error
ellipse: s-maj=5.5km s-min=4.8km az=59.0
IDC ***30*** *01:32:54.1±0.6, 62°.37N×151°.26W, h87km±4km, mb4.4/33,*
mb1 4.5/37, mb1mx4.5/42, mbtmp4.7/37, MS3.6/30,
Ms1 3.6/30, ms1mx3.5/41, Error ellipse: s-maj=9.3km
s-min=6.9km az=24.0
GCMT ***30*** *01:32:56.0±0.2, 62°.43N±0°.02×151°.26W±0°.03,*
h102km±2km, MW5.0/119, Moment Tensor Solution.
s58,c66; s119,c187; Duration: 0 Moment tensor: Scale
10^{16}*Nm;* M_{rr}*0.56±.12;* $M_{\theta\theta}$*-1.52±.13;* $M_{\phi\phi}$*0.95±.14;*
$M_{r\theta}$*-0.36±.07;* $M_{\theta\phi}$*2.78±.11;* $M_{\phi r}$*2.92±.06; Best double*
couple: M_0*4.26000×*10^{16} *NP1:*ϕ_s*81.00000°, δ46.00000°,*
λ8.00000°. NP2:ϕ_s*346.00000°, δ84.00000°, λ136.00000°.*

Principal axes: T 4.3110, Plg34.0000°, Azm293.0000°; N -0.1050, Plg46.0000°, Azm160.0000°; P -4.2080, Plg25.0000°, Azm42.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 30 01:32:53.8±0.4**, 62°.26N**±0°.03×**151°.22W**±0°.03**, h86**^{km}±3^{km}**, h86**^{km}**:pP-P, n1010, σ1**^{s}**.02**/915**, mb5.0**/250**, 32C-20D, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKT	Skwentna	0.32	208		Sn	01 33 15.6	-1.0
SKT	Skwentna	0.32	208		Pn	01 33 06.1	-0.8
PPLA	Purkeypile	0.78	325		Pn	01 33 10.8	-0.1
PPLA	Purkeypile	0.78	325		Sn	01 33 23.8	+0.1
SUA	Susitna One	0.83	164		Pn	01 33 10.8	-0.7
SUA	Susitna One	0.83	164		Sn	01 33 24.0	-0.5
HUR	Hurricane	1.02	45		Pn	01 33 13.7	+0.2
HUR					Sn	01 33 28.9	+0.7
SPBG	Spurr Blockage	1.15	209		Pn	01 33 14.4	-0.6
SPCR	Spurr Chakacha	1.17	204		Pn	01 33 14.2	-1.1
GHO	Glory Hole Cre	1.19	113		Pn	01 33 15.2	-0.3
GHO					Sn	01 33 32.8	+1.0
PMR	Palmer	1.19	123	P	Pn	01 33 14.6	-0.8
PMR						01 33 32.5	
PMR	Palmer	1.19	123		Pn	01 33 14.6	-0.8
FIS	Fire Island	1.22	157		Pn	01 33 16.1	+0.4
CAST	Castle Rocks	1.23	341		Pn	01 33 16.1	+0.1
TRF	Thorofare Moun	1.27	19		Pn	01 33 16.9	+0.3
KTH	Kantishna Hill	1.30	6		Pn	01 33 17.5	+0.6
WAT1	Susitna Watana	1.36	64		Pn	01 33 17.6	+0.1
WAT1					Sn	01 33 36.8	+1.3
RC01	Rabbit Creek A	1.37	148		Pn	01 33 16.6	-1.1
WAT2	Susitna Watana	1.41	59		Pn	01 33 18.3	+0.1
SML	Sawmill	1.43	107	P	Pn	01 33 18.0	-0.5
SML	Sawmill	1.43	107		Pn	01 33 18.1	-0.5
SML					Sn	01 33 37.9	+0.7
CAPN	Captain Cook N	1.50	179		Pn	01 33 20.6	+1.4
KNK	Knik Glacier	1.56	122		Pn	01 33 19.3	-0.8
RND	Reindeer	1.58	42	P	Pn	01 33 20.9	+0.5
RND	Reindeer	1.58	42		Pn	01 33 20.9	+0.5
WAT6	Susitna Watana	1.65	77		Pn	01 33 21.2	-0.1
CHUM	Lake Minchumin	1.70	343		Pn	01 33 22.4	+0.5
MCK	McKinley	1.81	34	P	Pn	01 33 23.9	+0.6
MCK	McKinley	1.81	34		Pn	01 33 23.9	+0.6
DFR	Drift River	1.82	204		Pn	01 33 22.7	-0.9
SLKM	Skilak Lake	1.82	164		Pn	01 33 22.5	-1.0
RDJH	Redoubt Jeurge	1.84	205		Pn	01 33 23.2	-0.7
BPAW	Bear Paw Mtn.	1.85	3		Pn	01 33 23.9	0.0
SCM	Sheep Creek Mo	1.88	101	P	Pn	01 33 23.6	-0.7
SCM	Sheep Creek Mo	1.88	101		Pn	01 33 23.6	-0.7
RDN	Redoubt North	1.91	204		Pn	01 33 24.0	-0.7
RDWB	Redoubt West	1.94	204		Pn	01 33 24.6	-0.6
RSO	Redoubt South	1.95	203		Pn	01 33 24.8	-0.6
PWL	Port Wells	1.97	134		Pn	01 33 23.8	-1.6
RED	Redoubt Volcan	2.00	203		Pn	01 33 25.5	-0.4
BWN	Browne	2.08	22		Pn	01 33 27.6	+0.8
TT01	Tatalina	2.32	288		Pn	01 33 29.6	-0.4
TTA	Tatalina	2.32	289	P	Pn	01 33 29.6	-0.5
TTA	Tatalina	2.32	289		Pn	01 33 29.6	-0.5
SEW	Seward	2.33	158		Pn	01 33 28.9	-1.2
SVW2	Sparrevohn	2.39	243		Pn	01 33 30.4	-0.5
ILW	Iliamna West	2.40	204		Pn	01 33 30.7	-0.6
GLI	Glacier Island	2.41	123		Pn	01 33 29.6	-1.7
IVE	Iliamna Volcan	2.42	202		Pn	01 33 30.9	-0.5
ILS	Iliamna Low So	2.48	202		Pn	01 33 32.1	-0.2
BRLK	Bradley Lake	2.51	176		Pn	01 33 33.5	+0.8
JPK	Jack Peak	2.51	117		Pn	01 33 31.2	-1.5
NEA	Nenana	2.52	22		Pn	01 33 32.9	+0.2
BRSE	Bradley Lake S	2.54	175		Pn	01 33 32.8	-0.2
VMT	TAPS TI Valdez	2.60	115		Pn	01 33 32.4	-1.3
HOM	Homer	2.62	185		Pn	01 33 34.5	+0.4
WRH	Wood River Hil	2.63	31		Pn	01 33 34.3	+0.1
PS11	TAPS Pump St11	2.70	91		Pn	01 33 35.2	+0.1
FID	Port Fidalgo	2.73	122		Pn	01 33 33.5	-2.1
CNPM	China Poot	2.75	180		Pn	01 33 36.4	+0.6
PS10	TAPS Pump St10	2.76	63		Pn	01 33 37.2	+1.2
MLY	Manley	2.79	4		Pn	01 33 36.4	0.0
CCB	Clear Creek Bu	2.84	31		Pn	01 33 37.0	0.0
HDA	Harding Lake	2.89	40		Pn	01 33 37.9	+0.2
HDA	Harding Lake	2.89	40	P	Pn	01 33 37.9	+0.2
	baz=223,SNR=1000						
HDA				S	Sn	01 34 11.0	-0.4
	baz=223						
HDA				S	Sn	01 34 11.0	-0.4
	baz=223						
HIN	Hinchinbrook I	2.94	127		Pn	01 33 36.5	-1.9
PS12	TAPS Pump St12	2.98	103		Pn	01 33 37.7	-1.3
PS09	TAPS Pump Stn9	2.99	54		Pn	01 33 39.6	+0.5
MDM	Murphy Dome	3.02	25		Pn	01 33 39.8	+0.4
TCOL	CIGO, UAF Yank	3.02	28		Pn	01 33 39.8	+0.4
TCOL	CIGO, UAF Yank	3.02	28	P	Pn	01 33 39.7	+0.4
	baz=211,SNR=521						
TCOL				S	Sn	01 34 14.4	-0.2
	baz=211						
COLA	College	3.02	28	P	Pn	01 33 39.7	+0.3
COLA	College	3.02	28		Pn	01 33 39.7	+0.3
PS08	TAPS Pump Stn8	3.02	39		Pn	01 33 39.6	+0.2
AU22	Augustine Moun	3.08	201		Pn	01 33 40.0	-0.3
AUP	Augustine Pinn	3.10	201	P	Pn	01 33 40.5	-0.1
AUP	Augustine Pinn	3.10	201		Pn	01 33 40.5	-0.1
AUW	Augustine West	3.10	202		Pn	01 33 40.2	-0.4
AUH	Augustine H	3.10	202		Pn	01 33 40.2	-0.5
EYAK	Cordova Ski Ar	3.14	121		Pn	01 33 39.1	-1.9
ILAR	Eielson Array	3.18	36	P	Pn	01 33 41.4	-0.2
	239nm,0.3s,baz=222,slow=14,SNR=6187						
ILAR				S	Sn	01 34 17.4	-1.0
	223nm,0.3s,baz=223,slow=20,SNR=16						
ILAR	Eielson Array	3.18	36	P	Pn	01 33 40.6	-1.0
ILAR						01 34 17.4	
ILAR	Eielson Array	3.18	36		Pn	01 33 40.5	-1.0
RIDG	Independent Ri	3.26	60		Pn	01 33 43.5	+0.8
POKR	Poker Plat Res	3.33	29		Pn	01 33 43.9	+0.4
POKR	Poker Plat Res	3.33	29	P	Pn	01 33 43.9	+0.4
	baz=212,SNR=522						
PS07	TAPS Pump Stn7	3.33	22		Pn	01 33 44.0	+0.5
MENT	Mentasta	3.53	76		Pn	01 33 46.9	+0.5
GOAT	Goat Mountain	3.54	116		Pn	01 33 44.7	-1.8
GLB	Gilahina Butte	3.60	100		Pn	01 33 46.6	-0.8
PS06	TAPS Pump Stn6	3.67	10		Pn	01 33 48.5	+0.4
RAGM	Ragged Mountai	3.67	118		Pn	01 33 46.6	-1.7
FOSS	Fourpeaked Sta	3.68	201		Pn	01 33 48.2	-0.2
SCRK	Sand Creek	3.71	59		Pn	01 33 48.6	-0.3
MID	Middleton Isla	3.71	138	P	Pn	01 33 48.4	-0.4
MID	Middleton Isla	3.71	138		Pn	01 33 48.4	-0.4
VRDI	Verde Repeater	3.83	102		Pn	01 33 49.1	-1.5
IM03		3.90	345		Pn	01 33 51.6	+0.4
IMAR	Indian Mountai	3.90	345		Pn	01 33 51.5	+0.3
MCARA	McCarthy VSAT	3.98	99		Pn	01 33 51.5	-0.9
BERG	Berg Lake	4.08	114		Pn	01 33 51.8	-2.0
KAHC	Katmai Hardscr	4.08	209		Pn	01 33 53.6	-0.3
PRP	Porcupine Dome	4.12	35		Pn	01 33 55.0	+0.6
KAHG	Katmai Hook Gl	4.12	205		Pn	01 33 54.7	+0.3
CRQM	Cirque	4.15	108		Pn	01 33 53.9	-1.1
TGL	Tana Glacier	4.29	107		Pn	01 33 55.5	-1.3
PTPK	Patty Peak	4.30	101		Pn	01 33 55.8	-1.1
BALM	Baldy	4.41	102	P	Pn	01 33 56.9	-1.4
BALM	Baldy	4.41	102		Pn	01 33 56.7	-1.6
KCG	Knife Ck. Glac	4.42	208		Pn	01 33 58.3	-0.1
BC03		4.42	75		Pn	01 33 58.0	-0.4
BCAR	Beaver Creek A	4.42	75		Pn	01 33 57.2	-1.3
KIAG	Kiagna River	4.44	104		Pn	01 33 57.3	-1.5
KELA	Mount Kelaz	4.44	212		Pn	01 33 58.9	+0.1
KABU	Katmai Buttres	4.49	209		Pn	01 33 59.0	-0.4
KDAK	Kodiak Island	4.54	189	P	Pn	01 33 59.2	-0.9
	14nm,0.3s,baz=50,slow=7.0,SNR=391						
KDAK				S	Sn	01 34 50.7	-0.9
	28nm,0.3s,baz=359,slow=6.8,SNR=3.6						
PS05	TAPS Pump Stn5	4.58	3		Pn	01 34 01.3	+0.8
ANCK	Angle Creek	4.60	210		Pn	01 34 01.3	+0.4
BARN	Barnard Glacie	4.71	101		Pn	01 34 01.5	-1.0
GRNC	Granite Creek	4.79	104		Pn	01 34 02.0	-1.6
BVCY	Beaver Creek	4.83	84		Pn	01 34 03.8	-0.2
CTGM	Chitina Glacie	4.89	101		Pn	01 34 04.0	-0.9
YUK2	White River	4.91	91		Pn	01 34 04.5	-0.6
YUK1	Sand Pete Hill	5.00	87		Pn	01 34 06.5	0.0
COLD	Coldfoot	5.01	5		Pn	01 34 07.6	+1.3
FYU	Fort Yukon	5.04	28		Pn	01 34 07.5	+0.7
YUK3	Moose Creek	5.09	91		Pn	01 34 07.1	-0.6
EGAK	Eagle	5.16	56		Pn	01 34 08.3	-0.1
OHAK	Old Harbor	5.16	193		Pn	01 34 07.1	-1.4
PLK3	Peulik 3	5.24	211		Pn	01 34 10.7	+1.1
CHX	Chaix Hills	5.36	110		Pn	01 34 10.6	-0.7
DAWY	Dawson	5.65	66		Pn	01 34 14.8	-0.4
BM03	Burnt Mountain	5.89	26		Pn	01 34 18.7	+0.3
BMAR	Burnt Mountain	5.91	26		Pn	01 34 18.9	+0.2
YUK4	Talbot Arm	6.03	93		Pn	01 34 19.9	-0.5
YUK6	Outpost Mounta	6.27	96		Pn	01 34 22.5	-1.3
PNL	Peninsula	6.31	109		Pn	01 34 23.1	-1.0
TOLK	Toolik Lake Re	6.44	5		Pn	01 34 27.6	+1.7
TOLK	Toolik Lake Re	6.44	5	P	Pn	01 34 27.7	+1.8
	baz=187,SNR=268						
TOLK				S	Sn	01 35 39.0	+1.1
	baz=187						
YUK5	Granite Creek	6.45	94		Pn	01 34 25.3	-0.9
YUK7	Dusty Glacier	6.51	100		Pn	01 34 26.1	-1.0
HYT	Haines Junctio	6.71	96		Pn	01 34 28.7	-1.0
ANM	Nome	6.76	296	P	Pn	01 34 30.7	+0.5
ANM	Nome	6.76	296		Pn	01 34 30.7	+0.5
CHGN	Chignik	7.02	215		Pn	01 34 33.6	-0.2
DHAK	Deception Hill	7.13	111		Pn	01 34 34.2	-1.1
EPYK	Eagle Plains	7.52	50		Pn	01 34 40.2	-0.3
EPYK	Eagle Plains	7.52	50	P	Pn	01 34 39.7	-0.8
	baz=243,SNR=190						
RDOG	Red Dog Mine	7.61	325		Pn	01 34 42.8	+1.0
WHY	Whitehorse	7.99	94		Pn	01 34 46.0	-1.0
PS01	TAPS Pump Stn	8.10	6		Pn	01 34 49.9	+1.5
SKAG	Skagway	8.24	103		Pn	01 34 49.5	-0.9
SDPT	Sand Point	8.43	219		Pn	01 34 52.7	-0.2
CNBA	Chernabura Isl	8.64	214		Pn	01 34 54.4	-1.5
BESE	Bessie Mountai	8.89	107		Pn	01 34 57.9	-1.4
JIS	Juneau Island	9.26	108		Pn	01 35 02.8	-1.4
GAMB	Gambell	9.43	288		Pn	01 35 06.9	+0.5
INK	Inuvik	9.54	43	P	Pn	01 35 07.4	-0.6
	20nm,0.3s,baz=229,slow=16,SNR=418						
INK				S	Sn	01 36 49.9	-3.4
	6.6nm,0.3s,baz=326,slow=14,SNR=5.0						
INK				LR	LR	01 39 15.1	
	comp=Z,474nm,18.9s,baz=234,slow=40						
INK	Inuvik	9.54	43	P	Pn	01 35 07.7	-0.3
INK	Inuvik	9.54	43		Pn	01 35 07.7	-0.3
SIT	Sitka	9.57	116	P	Pn	01 35 06.6	-1.9
SIT	Sitka	9.57	116		Pn	01 35 06.6	-1.9
DLBC	Dease Lake	11.15	101	P	Pn	01 35 29.0	-1.1
	0.8nm,0.3s,baz=328,slow=9.4,SNR=11						
DLBC	Dease Lake	11.15	101		Pn	01 35 28.7	-1.4
WRAK	Wrangell Islan	11.24	113		Pn	01 35 31.0	-0.3
C36M	Paulatuk	13.09	46	P	Pn	01 35 52.2	-3.8
	baz=250,SNR=121						
DIB	Dawson Inlet,	13.46	124		Pn	01 36 00.6	-0.4
A36M	Sachs Harbour	13.88	35	P	Pn	01 36 04.0	-2.3
	baz=239,SNR=143						
A36M				S	Sn	01 38 40.2	+1.6
	baz=239						
ATKA	Atka Island	15.91	241	P	P	01 36 34.3	0.0
ATKA				IAmb	IAmb	01 36 55.5	
	comp=Z,67nm,0.9s						
BBB	Bella Bella	15.97	119	P	Pn	01 36 33.6	+0.5
	comp=Z,0.6nm,0.3s,baz=314,slow=8.4,SNR=9.1						
BBB				S	Sn	01 39 27.7	-1.7
	comp=Z,0.3nm,0.3s,baz=85,slow=18,SNR=6.1						
BBB				LR	LR	01 42 07.3	
	comp=Z,168nm,21.2s,baz=342,slow=34						
YKA	Yellowknife Ar	16.84	73	P	Pn	01 36 42.4	-1.3
	comp=Z,2.5nm,0.3s,baz=281,slow=10,SNR=133						
YKA				LR	LR	01 43 30.4	
	comp=Z,293nm,20.3s,baz=0.0,slow=38						
YKA				ScP	ScP	01 44 52.6	+0.1
	comp=Z,0.3nm,0.3s,baz=285,slow=1.8,SNR=11						
YKA	Yellowknife Ar	16.84	73	⇑eP	Pn	01 36 42.4	-1.3
YKA				pmax	pmax		
	comp=Z,15nm,0.8s						
ADK	Adak	17.18	244	P	P	01 36 48.3	-0.1
ADK				pmax	pmax		
	comp=Z,223nm,1.2s						
ADK	Adak	17.18	244	P	P	01 36 48.3	-0.1
ADK				IAmb	IAmb	01 36 50.6	
	comp=Z,223nm,1.1s						
BILL	Bilibino	18.45	307	ceP	P	01 37 02.1	-0.1
BILL				pmax	pmax		
	comp=Z,32nm,1.3s						
BILL				MLR	MLR		
	comp=Z,220nm,19.0s						
BILL	Bilibino	18.45	307	P	P	01 37 02.4	+0.3
LLLB	Lillooet	19.77	113		Pn	01 37 19.1	+0.1
PGC	Sidney	20.60	119	P	P	01 37 26.8	+1.2
PGC				IAmb	IAmb	01 37 28.5	
	comp=Z,52nm,0.8s						
A04D	Lummi Island	20.85	117	P	P	01 37 30.0	+1.6
	baz=321						
B05A	Bryant	21.46	117	P	P	01 37 37.0	+2.1
	baz=322,SNR=7.5						
B06A	Marblemount	21.52	116	P	P	01 37 36.4	+0.9
D03D	Eldon	21.63	120	P	P	01 37 39.0	+2.3
	baz=323						
E03A	Lebam	22.25	122	IAmb	IAmb	01 37 46.9	
	comp=Z,72nm,1.1s						
LON	Longmire	22.78	119	P	P	01 37 50.9	+1.9
LON				pmax	pmax		
	comp=Z,22nm,1.1s						
LON	Longmire	22.78	119	P	P	01 37 50.9	+1.9
RES	Resolute Bay	22.93	35	P	P	01 37 48.9	-1.2
	comp=Z,24nm,0.6s,baz=259,slow=13,SNR=74						
F04A	Amboy	23.20	121	IAmb	IAmb	01 37 56.8	
	comp=Z,47nm,1.1s						
NEW	Newport	23.59	111	P	P	01 37 57.4	+0.8
	comp=Z,23nm,1.0s,baz=320,slow=9.4,SNR=21						
NEW				LR	LR	01 47 15.4	
	comp=Z,249nm,18.5s,baz=318,slow=36						
NEW	Newport	23.59	111	P	P	01 37 57.3	+0.8
NEW				pmax	pmax		
	comp=Z,44nm,1.3s						
NEW	Newport	23.59	111	IAmb	IAmb	01 37 59.7	
	comp=Z,52nm,1.2s						
NEW	Newport	23.59	111	P	P	01 37 57.6	+1.1
	baz=319,SNR=29						
E07A	Sunnyside	23.74	117	P	P	01 37 58.8	+0.9
E07A				IAmb	IAmb	01 38 00.9	
	comp=Z,50nm,1.1s						
H04D	Lebanon	24.25	124	P	P	01 38 04.2	+1.9
	baz=327						
H04A	Detroit Lake	24.33	123	IAmb	IAmb	01 38 07.6	
	comp=Z,49nm,1.2s						
WALA	Waterton Lakes	24.43	105	IAmb	IAmb	01 38 08.4	
	comp=Z,64nm,1.1s						
I03D	Drain, OR	24.71	126	P	P	01 38 09.0	+2.4
	baz=328						
I05D	Terrebonne, OR	24.95	122	P	P	01 38 10.5	+1.6
	baz=326						
I04A	Tendick Farm,	24.99	124	P	P	01 38 11.1	+1.9
	baz=328						
G08A	Pilot Rock	25.14	118	P	P	01 38 11.8	+1.1
SEY	Seymchan	25.27	297	P	P	01 38 10.7	-0.8
	comp=Z,22nm,0.5s,baz=87,slow=4.5,SNR=104						
SEY	Seymchan	25.27	297	⇑eP	P	01 38 10.5	-1.0
K02D	Willamette Mer	25.45	127	P	P	01 38 16.1	+2.6
	baz=330,SNR=5.9						
J04D	Umpqua Nationa	25.57	125	P	P	01 38 17.1	+2.4
	baz=328,SNR=7.8						
J05D	Fort Rock, OR	25.88	123	P	P	01 38 19.8	+2.4
	baz=328,SNR=10.0						
MSO	Missoula	26.08	109	P	P	01 38 19.9	+0.7
	baz=320,SNR=7.7						
FFC	Flin Flon	26.22	84	P	P	01 38 20.4	+0.2
FFC				pmax	pmax		
	comp=Z,41nm,1.2s						
FFC	Flin Flon	26.22	84	P	P	01 38 20.4	+0.2
FFC				IAmb	IAmb	01 38 24.8	
	comp=Z,41nm,1.2s						
L04D	Klamath Falls	26.37	126	P	P	01 38 24.1	+2.2
	baz=329,SNR=5.7						
YBH	Yreka Blue Hor	26.64	127	P	P	01 38 24.8	+0.6
	comp=Z,19nm,0.9s,baz=337,slow=3.6,SNR=23						
YBH				LR	LR	01 47 01.8	
	comp=Z,223nm,20.9s,baz=342,slow=32						
M02C	Callahan	26.88	128	P	P	01 38 29.1	+2.8
	baz=331,SNR=6.5						
M04C	Macdoel	26.92	126	P	P	01 38 29.0	+2.2
	baz=330						
EGMT	Eagleton	27.07	102	IAmb	IAmb	01 38 29.8	
	comp=Z,46nm,0.9s						
EGMT	Eagleton	27.07	102	P	P	01 38 29.0	+1.0
	baz=317,SNR=31						
N02D	Trinity Center	27.30	128	P	P	01 38 32.9	+2.8
	baz=331,SNR=16						
MA2	Magadan	27.51	291	P	P	01 38 31.7	-0.1
	comp=Z,6.0nm,0.5s,baz=61,slow=10,SNR=7.6						
MA2	Magadan	27.51	291	ceP	P	01 38 31.1	-0.6
MA2				pmax	pmax		
	comp=Z,25nm,1.8s						
MA2	Magadan	27.51	291	P	P	01 38 31.6	-0.1
WVOR	Wild Horse Val	27.62	121	P	P	01 38 34.9	+1.9
WVOR				pmax	pmax		
	comp=Z,24nm,1.0s						
O02D	Mt. Diablo Mer	27.97	129	P	P	01 38 38.5	+2.4
	baz=332						
PETK	Petropavlovsk-	28.08	275	P	P	01 38 36.4	-0.4
	comp=Z,6.1nm,0.7s,baz=87,slow=9.6,SNR=5.4						
PETK				LR	LR	01 50 01.3	
	comp=Z,81nm,21.4s,baz=61,slow=37						
O03E	Paynes Creek	28.23	127	P	P	01 38 40.0	+1.6
	baz=331,SNR=11						
YHL	Hebgen Lake	28.83	108	P	P	01 38 45.2	+1.2
YNR	Norris Junctio	29.16	108	P	P	01 38 48.5	+1.7
DGMT	Dagmar	29.32	96	P	P	01 38 49.0	+1.1
	baz=316						
H17A	Grant Village	29.46	108	P	P	01 38 51.5	+2.0
H17A	Grant Village	29.46	108	P	P	01 38 52.6	+3.1
	baz=322,SNR=8.3						
RLMT	Red Lodge	29.48	106	IAmb	IAmb	01 38 52.6	
	comp=Z,34nm,0.8s						
RLMT	Red Lodge	29.48	106	P	P	01 38 51.7	+2.1
	baz=321,SNR=39						
LAO	LASA Array	29.68	101	IAmb	IAmb	01 38 53.7	
	comp=Z,33nm,0.9s						
LAO	LASA Array	29.68	101	P	P	01 38 52.7	+1.6
	baz=318,SNR=11						
AFDM	Forest Hills D	29.72	128	P	P	01 38 52.8	+1.3
VCNR	Virginia City	29.91	125	IAmb	IAmb	01 38 56.1	
	comp=Z,22nm,0.9s						
RUBR	Rubicon Trail	29.93	126	IAmb	IAmb	01 38 59.8	
	comp=Z,32nm,1.1s						
PNTR	Pine Nut	30.11	126	IAmb	IAmb	01 38 57.9	
	comp=Z,18nm,0.8s						
REDW	Red Top Meadow	30.16	110	IAmb	IAmb	01 39 30.0	
	comp=Z,54nm,1.9s						
TIXI	Tiksi	30.21	322	⇓iP	P	01 38 54.9	-0.5
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TIXI	Tiksi	30.21	322	P	P	01 38 54.7	-0.8
ELK	Elko	30.42	118	P	P	01 38 59.6	+1.6
	comp=Z,8.6nm,0.8s,baz=301,slow=10,SNR=5.3						
ELK	Elko	30.42	118	P	P	01 38 59.6	+1.6
ELK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ELK	Elko	30.42	118	IAmb	IAmb	01 39 02.2	
	comp=Z,7.5nm,0.8s						
WAKR	Walker	30.68	126	IAmb	IAmb	01 39 03.2	
	comp=Z,29nm,1.1s						
NVAR	Mina Array Bea	31.18	124	P	P	01 39 06.6	+1.9
	comp=Z,18nm,0.8s,baz=308,slow=8.7,SNR=37						
NVAR				pP	pP	01 39 25.3	+0.9
	comp=Z,3.3nm,0.7s,baz=303,slow=8.5,SNR=3.5						
NVAR				PcP	PcP	01 41 58.0	+0.5
	comp=Z,1.1nm,0.6s,baz=35,slow=3.3,SNR=2.2						
NVAR				LR	LR	01 51 06.3	
	comp=Z,102nm,18.2s,baz=32,slow=35						
NVAR	Mina Array Bea	31.18	124	P	P	01 39 06.3	+1.7
BW06	Boulder Array	31.20	109	P	P	01 39 06.3	+1.5
	baz=323,SNR=12						
PDAR	Pinedale Array	31.20	109	P	P	01 39 06.0	+1.2
	comp=Z,2.0nm,0.5s,baz=320,slow=4.0,SNR=35						
PDAR				pP	pP	01 39 25.2	+0.7
	comp=Z,1.0nm,0.4s,baz=314,slow=3.6,SNR=3.7						
PDAR				PcP	PcP	01 41 56.7	-0.7
	comp=Z,0.9nm,0.6s,baz=180,slow=0.3,SNR=4.2						
PDAR				ScP	ScP	01 45 31.6	-0.6
	comp=Z,0.4nm,0.5s,baz=243,slow=1.0,SNR=4.2						
PDAR				LR	LR	01 52 22.1	
	comp=Z,298nm,21.9s,baz=350,slow=37						
PDAR	Pinedale Array	31.20	109	P	P	01 39 05.5	+0.7
NV11	Mina Array Sit	31.23	124	IAmb	IAmb	01 39 07.9	
	comp=Z,20nm,0.9s						
OMMB	Old Mammoth Mi	31.63	126	IAmb	IAmb	01 39 11.9	
	comp=Z,22nm,1.0s						
DUG	Dugway, Tooele	31.89	116	P	P	01 39 12.0	+1.2
DUG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
DUG	Dugway, Tooele	31.89	116	P	P	01 39 12.0	+1.2
DUG	Dugway, Tooele	31.89	116	P	P	01 39 12.4	+1.6
	baz=327,SNR=10						
MDND	Maddock	31.90	93	IAmb	IAmb	01 39 12.9	
	comp=Z,47nm,0.8s						
MDND	Maddock	31.90	93	P	P	01 39 12.0	+1.4
	baz=316,SNR=7.3						
ULM	Lac du Bonnet	31.96	86	P	P	01 39 11.7	+0.6
	comp=Z,17nm,0.7s,baz=307,slow=8.8,SNR=43						
ULM				ScP	ScP	01 45 33.6	-0.7
	comp=Z,2.2nm,0.6s,baz=66,slow=2.7,SNR=4.2						
ULM				LR	LR	01 53 06.7	
	comp=Z,124nm,18.8s,baz=301,slow=38						
ULM	Lac du Bonnet	31.96	86	IAmb	IAmb	01 39 12.7	
	comp=Z,20nm,0.7s						
R11A	Troy Canyon, C	32.32	121	P	P	01 39 16.0	+1.4
	baz=329,SNR=20						
TIN	Tinemaha, Big	32.41	126	P	P	01 39 18.3	+3.0
	baz=332,SNR=5.5						
KULLO	Kullorsuaq	32.56	30	⇓iP	P	01 39 16.6	+0.5
	comp=Z,24nm,0.8s						
KULLO	Kullorsuaq	32.56	30	⇓iP	P	01 39 16.6	+0.5
KULLO				pmax	pmax		
	comp=Z,24nm,0.8s						
RSSD	Black Hills	32.63	102	P	P	01 39 18.4	+1.1
RSSD				pmax	pmax		
	comp=Z,35nm,0.6s						
RSSD	Black Hills	32.63	102	P	P	01 39 18.4	+1.1
RSSD				IAmb	IAmb	01 39 19.5	
	comp=Z,35nm,0.6s						
RSSD	Black Hills	32.63	102	P	P	01 39 18.9	+1.6
	baz=320						
K22A	Casper	32.65	106	IAmb	IAmb	01 39 19.4	
	comp=Z,26nm,0.9s						
K22A	Casper	32.65	106	P	P	01 39 18.6	+1.2
	baz=322,SNR=10						
GRAC	Grapevine Rang	32.79	125	P	P	01 39 20.9	+2.3
	baz=331						
PAGB	Antelope Grade	32.83	129	IAmb	IAmb	01 39 21.9	
	comp=Z,32nm,0.8s						
CWC	Cottonwood Cre	33.01	126	P	P	01 39 23.0	+2.4
	baz=332						
RWWY	Rawlins	33.11	108	IAmb	IAmb	01 39 23.4	
	comp=Z,34nm,1.2s						
VES	Vestal, Richgr	33.16	128	P	P	01 39 23.3	+1.6
	baz=333,SNR=6.9						
TPNV	Topopah Spring	33.27	123	P	P	01 39 24.6	+1.8
	baz=331						
SMMC	Simmler	33.30	129	P	P	01 39 25.4	+2.4
	baz=334,SNR=9.0						
AGMN	Agassiz Nation	33.33	89	P	P	01 39 23.7	+0.6
AGMN				IAmb	IAmb	01 39 24.8	
	comp=Z,62nm,1.5s						
AGMN	Agassiz Nation	33.33	89	P	P	01 39 24.0	+0.9
	baz=316,SNR=11						
ISA	Isabella, Lake	33.55	127	IAmb	IAmb	01 39 27.5	
	comp=Z,19nm,0.9s						
ISA	Isabella, Lake	33.55	127	P	P	01 39 26.9	+1.7
	baz=333,SNR=12						
MPMC	Manual Prospec	33.57	126	P	P	01 39 23.9	-1.6
	baz=332,SNR=30						
PKM	Mcpherson Peak	33.74	130	P	P	01 39 29.6	+2.6
	baz=334,SNR=19						
CCUT	Cedar City	33.90	119	P	P	01 39 29.6	+1.1
O20A	White River Ci	33.91	110	P	P	01 39 29.8	+1.3
	baz=325,SNR=6.5						
LRMC	Laurel Mtn Rad	34.01	126	P	P	01 39 31.2	+2.0
	baz=332,SNR=11						
N23A	Red Feather La	34.31	107	P	P	01 39 33.4	+1.5
	baz=324						
OSI	Osito Audit: C	34.39	128	IAmb	IAmb	01 39 35.1	
	comp=Z,20nm,1.0s						
EDW2	Edwards Air Fo	34.42	127	P	P	01 39 34.1	+1.4
	baz=333,SNR=5.4						
GSC	Goldstone, Bar	34.49	125	IAmb	IAmb	01 39 36.4	
	comp=Z,34nm,1.1s						
GSC	Goldstone, Bar	34.49	125	P	P	01 39 35.3	+1.9
	baz=332,SNR=16						
RRX	Edison Barstow	34.80	126	P	P	01 39 38.1	+2.1
	baz=333						
YAK	Yakutsk	34.80	306	eP	P	01 39 34.5	-1.1
YAK				pmax	pmax		
	comp=E,10.0nm,0.9s						
YAK				pmax	pmax		

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      comp=N,6.0nm,1.1s
YAK                                pmax   pmax
      comp=Z,49nm,0.8s
YAK   Yakutsk          34.80 306   P      P      01 39 35.1  -0.5
PV21  Cone Mtn., Par   34.89 113   IAmb   IAmb   01 39 38.5
      comp=Z,14nm,1.0s
PV23  Carpenter Ridg   34.97 113   IAmb   IAmb   01 39 39.9
      comp=Z,31nm,1.3s
MWC   Mount Wilson     34.98 128   IAmb   IAmb   01 39 40.6
      comp=Z,22nm,1.2s
HEC   Hector,Ludlow    35.09 125   P      P      01 39 40.8 +2.3
      baz=332
FRB   Frobisher Bay    35.10  50   P      P      01 39 38.8 +0.6
FRB                                pmax   pmax
      comp=Z,65nm,1.4s
BFSC  Mount Baldy Ra   35.12 127   P      P      01 39 41.0 +2.2
      baz=333,SNR=13
PV05  Paradox Valley   35.24 113   IAmb   IAmb   01 39 42.1
      comp=Z,22nm,1.0s
PV15  Paradox Valley   35.29 113   IAmb   IAmb   01 39 42.3
      comp=Z,12nm,0.8s
ISCO  Idaho Springs    35.35 108   IAmb   IAmb   01 39 43.6
      comp=Z,31nm,2.0s
ISCO  Idaho Springs    35.35 108   P      P      01 39 42.5 +1.5
      baz=325
GMRC  Granite Mounta   35.39 124   P      P      01 39 43.1 +1.9
      baz=332,SNR=12
PV01  Paradox Valley   35.42 113   IAmb   IAmb   01 39 43.8
      comp=Z,18nm,0.9s
EYMN  Ely              35.62  85   P      P      01 39 43.5 +0.6
      baz=316,SNR=44
NEE2  Needles Airpor   35.81 123   P      P      01 39 46.4 +1.8
      baz=332
W13A  Hualapai Mount   35.81 122   IAmb   IAmb   01 39 47.8
      comp=Z,17nm,1.2s
BELC  Belle Mtn. Jos   35.95 125   P      P      01 39 47.7 +1.7
      baz=333,SNR=5.7
PFO   Pinyon Flats O   36.12 126   P      P      01 39 48.1 +0.7
      comp=Z,10nm,0.9s,baz=335,slow=7.7,SNR=9.6
PFO   Pinyon Flats O   36.12 126deP   P      01 39 48.6 +1.1
PFO                                pmax   pmax
      comp=Z,29nm,1.0s
PFO   Pinyon Flats O   36.12 126   P      P      01 39 48.5 +1.1
PFO                                IAmb   IAmb   01 39 49.7
      comp=Z,18nm,1.1s
PFO   Pinyon Flats O   36.12 126   P      P      01 39 48.8 +1.4
      baz=333,SNR=9.1
XPFO  Pion Flat        36.12 126   P      P      01 39 48.5 +1.0
XPFO                               IAmb   IAmb   01 39 49.7
      comp=Z,20nm,1.1s
IRM   Iron Mountain    36.14 124   P      P      01 39 49.6 +2.1
      baz=332,SNR=14
MVCO  Mesa Verde       36.23 114   P      P      01 39 49.6 +1.1
      baz=328,SNR=8.5
ECSD  EROS Data Cent   36.36  95   IAmb   IAmb   01 39 50.5
      comp=Z,29nm,0.9s
ECSD  EROS Data Cent   36.36  95   P      P      01 39 49.7 +0.5
      baz=320,SNR=34
PDMCI Parker Dam,Lak   36.41 123   P      P      01 39 51.6 +1.9
      baz=332,SNR=6.2
WUAZ  Wupatki          36.47 118   IAmb   IAmb   01 39 53.2
      comp=Z,29nm,0.9s
WUAZ  Wupatki          36.47 118   P      P      01 39 52.5 +2.1
      baz=330,SNR=18
BC3   Big Chuckawall   36.47 125   P      P      01 39 52.0 +1.7
      baz=333,SNR=8.5
S22A  4UR Ranch, Cre   36.50 111   P      P      01 39 52.8 +1.9
      baz=327,SNR=13
TYV   Tymovskoe        36.52 283  eP      P      01 39 50.7 +0.3
TYV                               eS      S      01 45 28.0 +2.0
TYV                                pmax   pmax
      comp=Z,100nm,2.4s
TYV                                pmax   pmax
      comp=Z,22nm,0.8s
TYV                                smax   smax
      comp=N,800nm,9.4s
109C  Camp Elliot, M   36.53 128   IAmb   IAmb   01 39 53.6
      comp=Z,29nm,1.1s
109C  Camp Elliot, M   36.53 128   P      P      01 39 52.8 +2.1
      baz=334
E38A  The Farm, Brul   36.57  87   IAmb   IAmb   01 39 52.2
      comp=Z,33nm,0.8s
Y12C  Blythe           36.74 124   IAmb   IAmb   01 39 55.4
      comp=Z,26nm,0.9s
Y12C  Blythe           36.74 124   P      P      01 39 54.5 +2.0
      baz=332,SNR=9.4
MONP2 Monument Peak    36.78 127   P      P      01 39 55.2 +2.1
      baz=334,SNR=18
BAR   Barrett          36.87 127   IAmb   IAmb   01 39 56.4
      comp=Z,18nm,1.1s
SWSC  Sam W. Stewart   36.97 126   P      P      01 39 56.2 +1.8
      baz=333
SPMN  Marine on St.    37.01  90   P      P      01 39 55.6 +0.9
SPMN  Marine on St.    37.01  90   P      P      01 39 55.9 +1.2
      baz=319,SNR=24
SDCO  Great Sand Dun   37.09 110   P      P      01 39 57.6 +1.8
      baz=326,SNR=16
IKP   In-Ko-Pah, Jac   37.11 126   P      P      01 39 57.7 +2.0
      baz=334,SNR=11
GLA   Glamis           37.24 125   IAmb   IAmb   01 39 59.5
      comp=Z,22nm,0.8s
GLA   Glamis           37.24 125   P      P      01 39 58.8 +1.9
      baz=333,SNR=8.3
KSCO  Kaye Shedlock’   37.33 106   P      P      01 39 59.1 +1.5
      baz=325
BGNE  Belgrade         37.45  99   P      P      01 39 59.7 +1.2
      baz=322
D41A  Chassel          37.63  84   IAmb   IAmb   01 40 03.1
      comp=Z,45nm,1.2s
X18A  Snowflake        37.90 118   IAmb   IAmb   01 40 05.5
      comp=Z,18nm,0.9s
113A  Mohawk Valley,   37.91 124   IAmb   IAmb   01 40 04.9
      comp=Z,13nm,1.0s
SUMG  Summit           37.98  27⇓iP   P      01 40 03.3 +0.2
      comp=Z,102nm,0.6s
SUMG  Summit           37.98  27⇓iP   P      01 40 03.3 +0.2
SUMG                               pmax   pmax
      comp=Z,100nm,0.6s
SUMG  Summit           37.98  27   P      P      01 40 02.9  -0.1
T25A  Trinidad         38.07 109   P      P      01 40 05.5 +1.5
      baz=326
COWI  Conover          38.08  86   IAmb   IAmb   01 40 05.2
      comp=Z,17nm,0.6s
DAG   Danmarks Havn    38.08  16⇓iP   P      01 40 02.9  -0.4
      comp=Z,20nm,0.6s
DAG   Danmarks Havn    38.08  16⇓iP   P      01 40 02.9  -0.4
DAG                                pmax   pmax
      comp=Z,20nm,0.6s
F42A  Maple Grove Fa   38.80  85   IAmb   IAmb   01 40 11.8
      comp=Z,55nm,1.1s
CBKS  Cedar Bluff      38.80 103   P      P      01 40 11.4 +1.5
      baz=324,SNR=10
SFJD  Kangerlussuaq    38.84  38  i P     P      01 40 10.5 +0.7
SFJD  Kangerlussuaq    38.84  38  i P     P      01 40 10.5 +0.7
SFJD  Kangerlussuaq    38.84  38   P      P      01 40 10.8 +1.0
SFJD                               IAmb   IAmb   01 40 11.3
      comp=Z,33nm,0.7s
E43A  Lone Tree Farm   38.87  83   IAmb   IAmb   01 40 11.9
      comp=Z,33nm,0.9s
214A  Organ Pipe Nat   39.00 123   IAmb   IAmb   01 40 14.4
      comp=Z,19nm,1.1s
214A  Organ Pipe Nat   39.00 123   P      P      01 40 13.6 +2.0
      baz=332,SNR=8.7
ANMO  Albuquerque      39.02 113   P      P      01 40 13.3 +1.3
      comp=Z,2.9nm,0.8s,baz=346,slow=8.3,SNR=10
ANMO                               ScP    ScP    01 46 01.3 +0.8
      comp=Z,1.3nm,0.8s,baz=239,slow=3.0,SNR=4.8
ANMO  Albuquerque      39.02 113   P      P      01 40 13.3 +1.3
ANMO                               pmax   pmax
      comp=Z,6.0nm,1.1s
ANMO  Albuquerque      39.02 113   P      P      01 40 13.3 +1.3
ANMO  Albuquerque      39.02 113   P      P      01 40 13.5 +1.6
      baz=328
I40A  Norwalk          39.04  89   IAmb   IAmb   01 40 13.5
      comp=Z,54nm,1.1s
E44A  Grand Marais A   39.19  82   P      P      01 40 14.5 +1.6
      baz=318,SNR=13
YSS   Yuzh-Sakhalins   39.28 279  eP      P      01 40 12.9  -0.8
YSS                               e              01 40 36.9
YSS                               e              01 40 44.9
YSS                                pmax   pmax
      comp=Z,20nm,0.8s
YSS                                MLR    MLR
      comp=Z,200nm,14.0s
SCIA  State Center     39.36  93   IAmb   IAmb   01 40 16.2
      comp=Z,33nm,0.8s
SCIA  State Center     39.36  93   P      P      01 40 15.4 +1.0
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      baz=321
GRNR  Gornyy           39.40 288⇑iP   P      01 40 14.2  -0.5
GRNR                               pmax   pmax
      comp=Z,30nm,0.8s
GRNR                               MLR    MLR
      comp=Z,50nm,13.0s
TUC   Tucson           39.49 120   P      P      01 40 17.7 +1.9
TUC                                pmax   pmax
      comp=Z,9.0nm,1.0s
TUC   Tucson           39.49 120   P      P      01 40 17.7 +1.9
TUC   Tucson           39.49 120   P      P      01 40 17.9 +2.2
      baz=332
SPITS Spitsbergen Ar   39.59   4   P      P      01 40 15.5  -0.5
SPITS                              pmax   pmax
      comp=Z,7.0nm,0.3s
I42A  Draeger Farm,    39.84  88   IAmb   IAmb   01 40 19.7
      comp=Z,26nm,0.7s
D46A  Sault St. Mari   39.86  81   P      P      01 40 19.2 +0.7
      baz=318,SNR=26
JFWS  Jewell Farm      39.97  90   P      P      01 40 20.0 +0.5
      baz=320,SNR=24
KSU1  Kansas State U   40.00  99   P      P      01 40 20.6 +0.8
      baz=324,SNR=30
F45A  CMU Biological   40.07  83   P      P      01 40 21.0 +0.8
      baz=318,SNR=13
E46A  Sault Ste Mari   40.12  81   P      P      01 40 21.3 +0.6
E46A                               IAmb   IAmb   01 40 22.2
      comp=Z,43nm,0.8s
D47A  Chapleau         40.16  80   P      P      01 40 21.7 +0.6
      baz=318,SNR=22
G45A  Suttons Bay      40.49  84   IAmb   IAmb   01 40 25.4
      comp=Z,62nm,1.1s
G45A  Suttons Bay      40.49  84   P      P      01 40 24.7 +0.9
      baz=319,SNR=11
E47A  Iron Bridge      40.53  80   P      P      01 40 24.6 +0.6
      baz=318,SNR=16
121A  Cookes Peak, D   40.53 117   P      P      01 40 26.7 +2.3
      baz=330,SNR=7.6
H45A  Beulah           40.62  84   P      P      01 40 25.8 +1.0
      baz=319
G46A  Petoskey         40.65  83   P      P      01 40 26.2 +1.1
      baz=319,SNR=15
MATQ  Matagami         40.67  73   P      P      01 40 25.4 +0.3
      baz=316,SNR=10
D48A  Paudash Townsh   40.67  78   P      P      01 40 26.0 +0.7
      baz=318,SNR=16
D49A  Beulah Townshi   40.81  78   P      P      01 40 27.1 +0.7
      baz=318,SNR=9.0
319A  Douglas          40.92 119   IAmb   IAmb   01 40 30.7
      comp=Z,26nm,1.2s
L42A  Oliver, Polo     40.94  90   IAmb   IAmb   01 40 28.5
      comp=Z,58nm,0.9s
I45A  Fountain         40.98  85   P      P      01 40 28.9 +1.1
      baz=320,SNR=6.6
P38A  Dawn             41.01  96   IAmb   IAmb   01 40 29.3
      comp=Z,32nm,0.9s
E48A  Lockeyer         41.02  79   P      P      01 40 28.5 +0.3
      baz=318,SNR=13
U32A  Winter Ranch,    41.12 104   P      P      01 40 30.2 +1.1
U32A                               IAmb   IAmb   01 40 30.8
      comp=Z,37nm,0.8s
GLMI  Grayling         41.14  83   P      P      01 40 30.1 +1.0
      baz=319,SNR=9.1
AMTX  Amarillo         41.17 108   IAmb   IAmb   01 40 32.8
      comp=Z,13nm,0.7s
AMTX  Amarillo         41.17 108   P      P      01 40 30.8 +1.3
      baz=327
G47A  Hillman          41.23  82   P      P      01 40 30.3 +0.6
      baz=319,SNR=7.3
ZEA   Zeya             41.25 297  eP      P      01 40 29.0  -0.9
ZEA                                pmax   pmax
      comp=Z,28nm,0.8s
F48A  Evansville       41.30  80   P      P      01 40 31.1 +0.7
      baz=319,SNR=18
N41A  Harden Midland   41.40  92   IAmb   IAmb   01 40 33.0
      comp=Z,66nm,1.1s
I46A  Reed City        41.42  85   P      P      01 40 32.4 +1.0
      baz=320
MSTX  Muleshoe         41.45 110   IAmb   IAmb   01 40 34.0
      comp=Z,52nm,0.9s
MSTX  Muleshoe         41.45 110   P      P      01 40 33.3 +1.3
      baz=328,SNR=20
LSQQ  Lebel-sur-Quev   41.47  73   P      P      01 40 32.0 +0.2
      baz=317
H47A  Mio              41.50  83   P      P      01 40 33.2 +1.2
      baz=320
D50A  G1974 Best Tow   41.58  77   P      P      01 40 33.0 +0.3
      baz=318,SNR=14
F49A  Sandfield        41.62  80   P      P      01 40 33.5 +0.5
      baz=319,SNR=11
L44A  Lake County Fo   41.63  88   P      P      01 40 33.8 +0.7
      baz=321
SCHQ  Schefferville    41.64  60   P      P      01 40 33.2 +0.2
      comp=Z,16nm,0.8s,baz=312,slow=8.4,SNR=24
SCHQ                               LR     LR     01 57 57.4
      comp=Z,138nm,18.4s,baz=323,slow=36
SCHQ  Schefferville    41.64  60   P      P      01 40 33.2 +0.2
SCHQ                               IAmb   IAmb   01 40 34.4
      comp=Z,24nm,0.9s
I47A  Gladwin          41.80  84   IAmb   IAmb   01 40 36.4
      comp=Z,59nm,0.9s
I47A  Gladwin          41.80  84   P      P      01 40 35.7 +1.2
      baz=320,SNR=5.2
T35A  Sooner Cattle    41.82 101   IAmb   IAmb   01 40 36.0
      comp=Z,46nm,0.8s
H48A  Harrisville      41.83  82   P      P      01 40 35.8 +1.1
      baz=320,SNR=5.2
D51A  Lot 18 Range I   41.85  77   P      P      01 40 35.1 +0.2
      baz=318,SNR=8.1
VLDQ  Val d'Or         41.96  74   IAmb   IAmb   01 40 35.5
      comp=Z,37nm,1.0s
I48A  Sherman Twp      42.05  83   P      P      01 40 37.6 +1.1
      baz=320
E51A  G1948 Merrick    42.21  77   P      P      01 40 38.0 +0.2
      baz=319,SNR=5.6
K46A  Dorr             42.23  86   P      P      01 40 38.2 +0.2
      baz=321,SNR=6.6
HDIL  Hopedale         42.25  91   P      P      01 40 38.7 +0.5
      baz=322,SNR=14
J47A  Sunmer           42.25  85   IAmb   IAmb   01 40 40.0
      comp=Z,22nm,0.7s
J47A  Sunmer           42.25  85   P      P      01 40 39.0 +0.8
      baz=320
NRIK  Noril'sk         42.26 333   P      P      01 40 37.8  -0.1
      comp=Z,15nm,0.6s,baz=55,slow=6.0,SNR=27
NRIK                               LR     LR     01 59 33.4
      comp=Z,92nm,20.3s,baz=40,slow=38
NRIK  Noril'sk         42.26 333  i P     P      01 40 37.8  -0.1
NRIK                               pmax   pmax
      comp=Z,13nm,0.6s
MNTX  Cornudas Mount   42.27 115   P      P      01 40 40.2 +1.7
      baz=330,SNR=9.2
HSIG                   42.33 123   P      P      01 40 40.6 +1.6
HSIG                               IAmb   IAmb   01 40 41.6
      comp=Z,27nm,1.0s
F51A  Arnstein         42.47  78   P      P      01 40 40.0 +0.1
      baz=319
L46A  Eue Claire       42.51  87   P      P      01 40 41.2 +0.9
      baz=321,SNR=5.1
WMOK  Wichita Mounta   42.59 105   IAmb   IAmb   01 40 42.8
      comp=Z,34nm,0.9s
WMOK  Wichita Mounta   42.59 105   P      P      01 40 41.8 +0.7
      baz=327,SNR=36
KLR   Kul'dur          42.59 289c iP      P      01 40 39.9  -0.9
KLR                                pmax   pmax
      comp=Z,11nm,0.8s
K47A  Vermontville     42.61  86   P      P      01 40 41.8 +0.7
      baz=321,SNR=7.0
D53A  Lac Vacive, Po   42.62  75   IAmb   IAmb   01 40 42.4
      comp=Z,37nm,0.7s
D53A  Lac Vacive, Po   42.62  75   P      P      01 40 41.5 +0.4
      baz=318,SNR=33
OKCFA Oklahoma City    42.63 103   IAmb   IAmb   01 40 42.6
      comp=Z,46nm,0.9s
I49A  Point Hope       42.64  82   P      P      01 40 42.1 +0.8
      baz=320
S39A  Bolivar          42.66  97   IAmb   IAmb   01 40 41.6
      comp=Z,16nm,0.7s
R40A  Maddies Statio   42.67  96   IAmb   IAmb   01 40 42.4
      comp=Z,64nm,1.2s
J48A  Bridge Port      42.69  84   P      P      01 40 42.5 +0.8
      baz=320
E52A  Mattawa          42.78  77   P      P      01 40 42.3   0.0
      baz=319,SNR=7.9
ERM   Erimo            42.84 273⇓eP   P      01 40 45.2 +2.3
F52A  Sundridge        42.84  78   P      P      01 40 43.3 +0.4
      baz=319,SNR=5.7
P43A  Skaggs, Pawnee   42.87  92   IAmb   IAmb   01 40 44.0
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      comp=Z,58nm,1.1s
SCO   Scoresbysund     42.87  22  i P     P      01 40 43.0 +0.2
      comp=Z,3.6nm,0.7s
SCO   Scoresbysund     42.87  22  i P     P      01 40 43.0 +0.2
SCO                                pmax   pmax
      comp=Z,4.0nm,0.7s
K48A  Perry            42.91  85   P      P      01 40 44.5 +1.0
      baz=321,SNR=13
J49A  Marlette         42.94  83   P      P      01 40 44.9 +1.2
      baz=320,SNR=11
TUL1  Leonard          42.98 101   IAmb   IAmb   01 40 45.3
      comp=Z,30nm,1.0s
TUL1  Leonard          42.98 101   P      P      01 40 44.3 +0.2
      baz=326,SNR=6.3
D54A  Lac Fusel, La    43.03  75   P      P      01 40 44.6 +0.2
      baz=319,SNR=15
E53A  Dumoine, Ponti   43.16  76   P      P      01 40 45.7 +0.2
      baz=319,SNR=18
K49A  Clarkson         43.24  84   P      P      01 40 47.4 +1.2
      baz=321,SNR=8.0
ALGO  Algonquin Park   43.30  77   P      P      01 40 46.8 +0.2
      baz=319
CCM   Cathedral Cave   43.33  95   P      P      01 40 46.8  -0.2
CCM                                pmax   pmax
      comp=Z,21nm,0.9s
CCM   Cathedral Cave   43.33  95   P      P      01 40 46.8  -0.2
CCM                                IAmb   IAmb   01 40 47.4
      comp=Z,21nm,0.8s
CCM   Cathedral Cave   43.33  95   P      P      01 40 46.6  -0.3
      baz=324
E54A  Lac Daplat, Po   43.33  76   P      P      01 40 47.2 +0.3
      baz=319,SNR=22
M47A  Cromwell         43.34  87   P      P      01 40 47.4 +0.4
      baz=322
SLM   Saint Louis      43.34  94   IAmb   IAmb   01 40 48.1
      comp=Z,52nm,0.9s
SFIN  Lafayette        43.42  89   P      P      01 40 48.1 +0.5
      baz=322,SNR=9.2
L48A  N Adams          43.44  86   P      P      01 40 48.5 +0.7
      baz=321,SNR=24
H52A  Wyevale          43.46  79   P      P      01 40 48.3 +0.4
      baz=320,SNR=6.7
BOD   Bodaibo          43.47 309  eP      P      01 40 46.4  -1.4
BOD                               e              01 47 04.8
BOD                                pmax   pmax
      comp=Z,16nm,1.0s
AAM   Ann Arbor        43.52  85   P      P      01 40 49.6 +1.2
      baz=321,SNR=7.1
HHAR  Hobbs            43.52  99   IAmb   IAmb   01 40 48.6
      comp=Z,17nm,0.8s
I51A  Listowel         43.58  81   P      P      01 40 50.2 +1.3
      baz=320,SNR=17
L49A  Milan            43.62  85   P      P      01 40 50.5 +1.3
      baz=321,SNR=13
K50A  Casco            43.63  83   IAmb   IAmb   01 40 51.1
      comp=Z,59nm,1.1s
K50A  Casco            43.63  83   P      P      01 40 50.4 +1.1
      baz=321
M48A  Edgerton         43.66  86   IAmb   IAmb   01 40 50.8
      comp=Z,36nm,0.9s
M48A  Edgerton         43.66  86   P      P      01 40 49.8 +0.2
      baz=322,SNR=5.9
D55A  Sainte-Anne-du   43.67  74   P      P      01 40 49.8 +0.2
      baz=319,SNR=23
G53A  Haliburton       43.67  78   P      P      01 40 50.0 +0.4
      baz=320,SNR=9.2
N47A  Urbana           43.68  88   P      P      01 40 49.9 +0.2
      baz=322,SNR=11
SADO  Sadowa           43.71  79   P      P      01 40 50.2 +0.3
SADO                               IAmb   IAmb   01 40 50.8
      comp=Z,39nm,1.2s
G54A  Lake Saint Pet   43.71  77   P      P      01 40 50.0   0.0
      baz=320
I52A  Shelburne        43.77  80   P      P      01 40 51.3 +0.9
      baz=320
E55A  Montcerf-Lytto   43.83  75   P      P      01 40 51.1 +0.2
      baz=319
D56A  ZEC Mazanza, M   43.97  73   P      P      01 40 52.0 +0.1
      baz=319,SNR=18
U40A  Yellville        43.97  98   IAmb   IAmb   01 40 52.1
      comp=Z,33nm,1.3s
U40A  Yellville        43.97  98   P      P      01 40 51.4  -0.7
      baz=325,SNR=11
ABTX  Abilene, Hawle   43.98 108   IAmb   IAmb   01 40 54.4
      comp=Z,22nm,1.1s
ABTX  Abilene, Hawle   43.98 108   P      P      01 40 52.5 +0.3
      baz=328,SNR=5.6
N48A  Decatur          44.01  87   P      P      01 40 52.5 +0.2
      baz=322,SNR=14
M49A  Liberty Center   44.02  86   P      P      01 40 53.2 +0.8
      baz=322,SNR=12
H53A  Bobcaygeon       44.11  79   P      P      01 40 53.4 +0.2
      baz=320
L50A  Kingsville       44.12  84   P      P      01 40 54.1 +0.9
      baz=321,SNR=5.7
F55A  Otter Lake       44.17  76   P      P      01 40 53.7 +0.2
      baz=320,SNR=6.1
K51A  Iona Station     44.19  83   P      P      01 40 55.1 +1.3
      baz=321
E56A  St. Veronique    44.22  74   P      P      01 40 54.1 +0.1
      baz=319,SNR=7.1
I53A  Kortright Cn E   44.23  80   P      P      01 40 54.7 +0.6
      baz=320
T42A  Van Buren        44.23  96   IAmb   IAmb   01 40 54.3
      comp=Z,31nm,0.6s
J52A  Paris            44.27  81   P      P      01 40 55.0 +0.7
      baz=321,SNR=5.9
N49A  Columbus Grove   44.35  86   P      P      01 40 55.4 +0.3
      baz=322,SNR=16
D57A  Chemin Vers le   44.38  73   P      P      01 40 55.2   0.0
      baz=319,SNR=13
O48A  Farmland         44.42  88   P      P      01 40 55.4  -0.2
      baz=322,SNR=36
G55A  Calabogie        44.44  76   P      P      01 40 56.0 +0.2
      baz=320,SNR=9.9
Z35A  Perchaven, San   44.45 105   IAmb   IAmb   01 40 57.5
      comp=Z,27nm,0.8s
W39A  Magazine         44.49 100   IAmb   IAmb   01 40 57.1
      comp=Z,28nm,1.1s
W39A  Magazine         44.49 100   P      P      01 40 56.1  -0.1
      baz=326,SNR=6.7
K52A  Tillsonburg      44.52  82   P      P      01 40 57.3 +1.0
      baz=321,SNR=7.5
LATQ  La Tuque         44.59  71   P      P      01 40 56.9   0.0
      baz=319
BLO   Bloomington      44.65  90   IAmb   IAmb   01 40 58.3
      comp=Z,54nm,1.0s
FCAR  Ozark Folk Cen   44.69  98   IAmb   IAmb   01 40 57.8
      comp=Z,22nm,0.9s
E57A  Chemin Saint G   44.72  73   P      P      01 40 57.7  -0.3
      baz=320,SNR=10
D58A  Chemin du LacG   44.77  72   P      P      01 40 58.1  -0.2
      baz=319,SNR=14
H55A  Tweed            44.77  77   P      P      01 40 58.4 +0.1
      baz=320
O49A  Covington        44.86  87   IAmb   IAmb   01 40 59.9
      comp=Z,55nm,0.9s
O49A  Covington        44.86  87   P      P      01 40 59.0  -0.1
      baz=322,SNR=13
P48A  Milroy           44.93  89   IAmb   IAmb   01 40 59.9
      comp=Z,45nm,1.1s
P48A  Milroy           44.93  89   P      P      01 40 59.1  -0.6
      baz=323,SNR=12
N50A  Nevada           44.95  86   P      P      01 41 00.4 +0.6
      baz=322,SNR=12
M51A  Elyria           44.96  84   P      P      01 41 00.5 +0.6
      baz=322
LCAR  Lake Charles     44.99  97   IAmb   IAmb   01 41 00.4
      comp=Z,33nm,1.4s
TX31  Lajitas Ar. Si   45.05 114   IAmb   IAmb   01 41 03.6
      comp=Z,29nm,1.3s
TX32  Lajitas Array    45.05 114   IAmb   IAmb   01 41 03.6
      comp=Z,27nm,1.2s
TXAR  Lajitas Array    45.05 114   P      P      01 41 02.2 +1.3
      comp=Z,12nm,1.0s,baz=328,slow=6.1,SNR=63
TXAR                               PcP    PcP    01 42 40.4 +0.1
      comp=Z,0.7nm,0.4s,baz=23,slow=0.4,SNR=4.8
TXAR                               LR     LR     02 01 33.9
      comp=Z,119nm,21.8s,baz=0.0,slow=38
J54A  Appleton         45.09  80   P      P      01 41 01.5 +0.6
      baz=321
MIAR  Mount Ida        45.12 100   IAmb   IAmb   01 41 02.4
      comp=Z,26nm,0.9s
MIAR  Mount Ida        45.12 100   P      P      01 41 01.4 +0.1
      baz=326,SNR=13
E58A  La Victoria      45.14  73   P      P      01 41 00.7  -0.5
      baz=320
H56A  Elgin            45.16  77   P      P      01 41 01.3  -0.1
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       baz=320
M52A  Chesterland      45.19  83  P      P      01 41 02.7 +1.0
       baz=322,SNR=7.1
N51A  Ashland          45.20  85  P      P      01 41 02.3 +0.5
       baz=322,SNR=7.1
P49A  Miami Univ. Ec   45.20  88  P      P      01 41 01.0  -0.9
       baz=323
Q48A  North Vernon     45.21  89  P      P      01 41 01.7  -0.2
       baz=323,SNR=18
W41B  Gary Mavity, V   45.22  99  P      P      01 41 01.4  -0.6
       baz=326,SNR=5.5
O50A  Cable            45.23  87  P      P      01 41 02.3 +0.2
       baz=322,SNR=25
G57A  Newington        45.34  75  P      P      01 41 02.7  -0.2
       baz=320
ERPA  Erie             45.37  82  P      P      01 41 04.0 +0.9
       baz=322,SNR=18
L53A  Girard           45.37  82  P      P      01 41 04.2 +1.0
       baz=322,SNR=15
ACSO  Alum Creek Sta   45.46  86  P      P      01 41 04.1 +0.2
       baz=322,SNR=14
WHTX  Lake Whitney,    45.49 106  IAmb   IAmb   01 41 05.8
       comp=Z,25nm,0.9s
WHTX  Lake Whitney,    45.49 106  P      P      01 41 04.6 +0.4
       baz=328,SNR=7.1
UALR  University of    45.50  99  IAmb   IAmb   01 41 04.9
       comp=Z,26nm,0.9s
WCI   Wyandotte Cave   45.51  91  P      P      01 41 04.4 +0.1
WCI                               pmax   pmax
       comp=Z,50nm,0.9s
WCI   Wyandotte Cave   45.51  91  P      P      01 41 04.4 +0.1
WCI   Wyandotte Cave   45.51  91  P      P      01 41 04.4 +0.1
       baz=324
Q49A  Aurora           45.54  89  P      P      01 41 04.1  -0.4
       baz=323,SNR=5.5
P50A  Jamestown        45.57  87  P      P      01 41 05.0 +0.2
       baz=323,SNR=18
M53A  WI Miller and    45.58  83  P      P      01 41 05.9 +1.1
       baz=322,SNR=27
K54A  Basiliko Farm,   45.58  80  P      P      01 41 05.5 +0.7
       baz=321,SNR=7.0
L54A  Sinclairville    45.59  81  P      P      01 41 05.7 +0.8
       baz=322,SNR=31
N52A  McGinn's Farm,   45.60  84  P      P      01 41 05.4 +0.4
       baz=322,SNR=9.6
H57A  Richville        45.66  76  P      P      01 41 05.2  -0.1
       baz=321
O51A  Pataskala        45.70  86  P      P      01 41 06.2 +0.4
       baz=323,SNR=20
G58A  Ormstown         45.73  74  P      P      01 41 05.7  -0.2
       baz=320,SNR=8.8
JCT   Junction City    45.73 110  IAmb   IAmb   01 41 09.1
       comp=Z,47nm,0.9s
JCT   Junction City    45.73 110  P      P      01 41 07.4 +1.2
       baz=329,SNR=15
F59A  Saint Guilaume   45.76  73  P      P      01 41 06.0  -0.2
       baz=320
D60A  Saint Jean D'O   45.77  71  P      P      01 41 06.0  -0.2
       baz=320
K55A  Perry            45.78  80  P      P      01 41 06.6 +0.3
       baz=321
D61A  St Aubert, Com   45.88  70  P      P      01 41 07.3 +0.3
       baz=320
LONY  Lake Ozonia      45.90  75  P      P      01 41 06.8  -0.5
       baz=321
I57A  Carthage         45.94  77  P      P      01 41 07.7 +0.1
       baz=321
E60A  Ste Agathe de    45.96  71  P      P      01 41 07.9 +0.2
       baz=320
R49A  Shelbyville      45.98  89  IAmb   IAmb   01 41 08.5
       comp=Z,25nm,0.7s
R49A  Shelbyville      45.98  89  P      P      01 41 07.9  -0.1
       baz=324,SNR=7.4
M54A  Oil Creek Stat   46.00  82  P      P      01 41 08.8 +0.7
       baz=322,SNR=18
N53A  Lisbon           46.00  84  P      P      01 41 08.8 +0.7
       baz=322,SNR=28
P51A  Williamsport     46.02  87  IAmb   IAmb   01 41 09.1
       comp=Z,48nm,1.1s
P51A  Williamsport     46.02  87  P      P      01 41 08.2  -0.1
       baz=323
L55A  Hinsdale         46.03  81  P      P      01 41 09.1 +0.6
       baz=322,SNR=23
F60A  Warwick          46.04  72  P      P      01 41 08.3  -0.1
       baz=320
WLAR  White Oak Lake   46.05 100  IAmb   IAmb   01 41 10.1
       comp=Z,51nm,1.2s
O52A  Adamsville       46.09  85  P      P      01 41 09.2 +0.3
       baz=323,SNR=9.0
Q50A  Georgetown       46.10  88  P      P      01 41 09.0 +0.1
       baz=323
T47A  Sharon Grove     46.13  92  IAmb   IAmb   01 41 11.3
       comp=Z,39nm,1.0s
K56A  Middlesex        46.14  79  P      P      01 41 09.6 +0.3
       baz=322
G59A  Clarenceville    46.18  74  P      P      01 41 09.4   0.0
       baz=321
FRNY  Flat Rock        46.18  74  IAmb   IAmb   01 41 09.6
       comp=Z,19nm,0.9s
H58A  Gabriels         46.24  75  P      P      01 41 09.7  -0.3
       baz=321
Q51A  Peebles          46.25  87  P      P      01 41 10.4 +0.3
       baz=323,SNR=19
O53A  New Philadelph   46.27  84  P      P      01 41 10.5 +0.3
       baz=323,SNR=6.3
N54A  Moraine State    46.28  83  P      P      01 41 10.9 +0.6
       baz=322,SNR=20
H59A  Cadyville        46.28  75  P      P      01 41 10.1  -0.2
       baz=321,SNR=6.5
USRK  Ussuriysk Ar.    46.30 284  P      P      01 41 09.2  -1.3
       comp=Z,2.8nm,0.6s,baz=66,slow=5.9,SNR=9.2
USRK                              pP     pP     01 41 32.0 +0.7
       comp=Z,1.4nm,0.7s,baz=53,slow=4.1,SNR=2.1
USRK                              LR     LR     02 01 04.0
       comp=Z,56nm,18.7s,baz=30,slow=36
USRK  Ussuriysk Ar.    46.30 284  P      P      01 41 08.8  -1.6
HPIG                   46.31 118  IAmb   IAmb   01 41 13.5
       comp=Z,23nm,0.9s
P52A  Corning          46.33  86  P      P      01 41 10.6  -0.1
       baz=323,SNR=8.6
E61A  Lac Etchemin     46.33  71  P      P      01 41 10.8 +0.1
       baz=320
S49A  Springfield      46.34  90  P      P      01 41 11.0 +0.2
       baz=324,SNR=17
R50A  Paris            46.38  89  IAmb   IAmb   01 41 12.2
       comp=Z,49nm,1.2s
R50A  Paris            46.38  89  P      P      01 41 11.2 +0.1
       baz=324,SNR=8.6
X43A  Marvell          46.39  98  P      P      01 41 11.8 +0.6
       baz=326,SNR=8.2
M55A  Ridgway          46.44  81  P      P      01 41 12.5 +0.9
       baz=322,SNR=23
I58A  Old Forge        46.45  76  P      P      01 41 11.5  -0.1
       baz=321
435B  Jarrell          46.46 107  P      P      01 41 13.0 +1.2
       baz=329
F61A  St Evariste      46.46  71  P      P      01 41 11.7   0.0
       baz=320
D62A  Allapoint, All   46.47  69  IAmb   IAmb   01 41 12.9
       comp=Z,17nm,0.8s
D62A  Allapoint, All   46.47  69  P      P      01 41 12.2 +0.5
       baz=320,SNR=6.0
L56A  Greenwood        46.48  80  P      P      01 41 12.5 +0.6
       baz=322,SNR=12
K57A  Scipio Center    46.49  79  P      P      01 41 12.2 +0.2
       baz=322
WVT   Waverly          46.49  94  P      P      01 41 12.4 +0.4
WVT                               pmax   pmax
       comp=Z,28nm,0.8s
WVT   Waverly          46.49  94  P      P      01 41 12.4 +0.4
WVT                               IAmb   IAmb   01 41 13.3
       comp=Z,28nm,0.8s
WVT   Waverly          46.49  94  P      P      01 41 12.6 +0.6
       baz=325
G60A  Masonville       46.54  73  P      P      01 41 12.5 +0.1
       baz=321
Z41A  Richland Creek   46.55 101  P      P      01 41 13.3 +0.8
       baz=327,SNR=5.8
J58A  Remsen           46.56  77  P      P      01 41 12.6 +0.1
       baz=321
M56A  Emporium         46.70  81  P      P      01 41 14.3 +0.7
       baz=322,SNR=17
O54A  Avella           46.71  84  P      P      01 41 14.4 +0.7
       baz=323,SNR=22
R51A  Hillsboro        46.72  88  P      P      01 41 14.3 +0.5
       baz=324,SNR=22
T49A  Edmonton         46.77  91  P      P      01 41 14.6 +0.4
       baz=324,SNR=17
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P53A  Whipple          46.79  85  P      P      01 41 14.6 +0.2
       baz=323,SNR=12
H60A  Morristown       46.80  74  P      P      01 41 14.2  -0.1
       baz=321
Q52A  Bidwell          46.80  86  P      P      01 41 14.4   0.0
       baz=323,SNR=20
J59A  Piesco           46.83  76  P      P      01 41 14.5  -0.2
       baz=321
S50A  Richmond         46.84  89  P      P      01 41 14.8 +0.1
       baz=324,SNR=8.4
I59A  Olmsteadville    46.86  76  P      P      01 41 14.7  -0.2
       baz=321
N55A  Marion Center    46.88  82  P      P      01 41 15.9 +0.8
       baz=322,SNR=39
L57A  Andrews Acres    46.91  79  P      P      01 41 15.7 +0.5
       baz=322,SNR=8.5
D63A  Stockholm        46.91  68  P      P      01 41 15.5 +0.3
       baz=320,SNR=6.4
NATX  Nacogdoches      46.95 103  P      P      01 41 16.7 +1.0
NATX                              IAmb   IAmb   01 41 17.4
       comp=Z,38nm,1.1s
NATX  Nacogdoches      46.95 103  P      P      01 41 16.6 +1.0
       baz=328
OXF   Oxford           47.08  96  P      P      01 41 17.4 +0.8
       baz=326,SNR=20
N56A  West Decatur     47.10  81  P      P      01 41 17.4 +0.7
       baz=322,SNR=12
P54A  Burton           47.13  84  P      P      01 41 17.3 +0.3
       baz=323,SNR=12
BINY  Binghamton       47.15  79  IAmb   IAmb   01 41 18.1
       comp=Z,30nm,0.7s
BINY  Binghamton       47.15  79  P      P      01 41 17.4 +0.3
       baz=322,SNR=6.2
T50A  Nancy            47.16  90  P      P      01 41 17.9 +0.6
       baz=324,SNR=29
H61A  Lyndonville      47.16  73  P      P      01 41 17.4 +0.2
       baz=321
O55A  Ligonier         47.19  83  P      P      01 41 18.0 +0.5
       baz=323,SNR=11
Q53A  Leroy            47.23  86  P      P      01 41 18.2 +0.4
       baz=323,SNR=14
S51A  Beattyville      47.25  89  P      P      01 41 18.2 +0.3
       baz=324,SNR=11
E63A  Oxbow            47.25  69  IAmb   IAmb   01 41 18.3
       comp=Z,25nm,1.1s
E63A  Oxbow            47.25  69  P      P      01 41 17.3  -0.5
       baz=321
G62A  West of Eustis   47.25  72  IAmb   IAmb   01 41 18.6
       comp=Z,18nm,0.8s
G62A  West of Eustis   47.25  72  P      P      01 41 18.0 +0.1
       baz=321
V48A  Smith Brothers   47.28  93  IAmb   IAmb   01 41 19.6
       comp=Z,41nm,0.9s
M57A  Sunshine Farm,   47.30  80  IAmb   IAmb   01 41 19.5
       comp=Z,39nm,1.0s
M57A  Sunshine Farm,   47.30  80  P      P      01 41 18.8 +0.5
       baz=322,SNR=7.4
L58A  Harry Jones Me   47.33  79  P      P      01 41 19.1 +0.5
       baz=322,SNR=5.8
MCWV  Mont Chateau     47.38  84  P      P      01 41 19.1 +0.3
MCWV                              IAmb   IAmb   01 41 20.2
       comp=Z,26nm,0.8s
MCWV  Mont Chateau     47.38  84  P      P      01 41 19.6 +0.7
       baz=323,SNR=12
S52A  Salyersville     47.45  88  P      P      01 41 20.1 +0.6
       baz=324,SNR=5.9
Q54A  Coxs Mills       47.45  85  IAmb   IAmb   01 41 20.4
       comp=Z,38nm,0.8s
Q54A  Coxs Mills       47.45  85  P      P      01 41 19.7 +0.2
       baz=323,SNR=10
R53A  Hurricane        47.46  87  P      P      01 41 20.0 +0.5
       baz=324,SNR=11
H62A  Milan            47.48  73  P      P      01 41 19.9 +0.2
       baz=321
O56A  Blue Knob Stat   47.48  82  P      P      01 41 20.4 +0.6
       baz=323,SNR=18
J60A  Lant Hill Farm   47.50  76  P      P      01 41 20.0 +0.3
       baz=322,SNR=8.2
P55A  Reedsville       47.51  84  P      P      01 41 20.5 +0.6
       baz=323,SNR=17
I61A  Oroboro, Fairl   47.51  74  P      P      01 41 20.4 +0.5
       baz=322
SSPA  Standing Stone   47.51  81  P      P      01 41 20.1 +0.3
SSPA                              IAmb   IAmb   01 41 20.7
       comp=Z,30nm,0.7s
SSPA  Standing Stone   47.51  81  P      P      01 41 20.4 +0.5
       baz=323
F63A  Nahmakanta, Br   47.51  70  P      P      01 41 20.1 +0.2
       baz=321
E64A  Bridgewater      47.51  69  P      P      01 41 19.7  -0.1
       baz=321
N57A  Milroy           47.57  81  P      P      01 41 20.9 +0.5
       baz=323,SNR=8.4
M58A  Price's Panora   47.58  80  P      P      01 41 20.8 +0.3
       baz=322
T51A  Gray             47.63  89  P      P      01 41 21.2 +0.4
       baz=324,SNR=16
HIA   Hailar           47.71 298  IAmb   IAmb   01 41 21.5
       comp=Z,14nm,0.9s
F64A  Sherman          47.72  70  IAmb   IAmb   01 41 22.4
       comp=Z,32nm,0.8s
F64A  Sherman          47.72  70  P      P      01 41 21.7 +0.3
       baz=321,SNR=7.3
G63A  Kingsbury        47.74  71  P      P      01 41 21.9 +0.3
       baz=321
PKME  Peaks-Kenny Pk   47.77  71  IAmb   IAmb   01 41 22.9
       comp=Z,32nm,1.0s
PKME  Peaks-Kenny Pk   47.77  71  P      P      01 41 22.2 +0.4
       baz=321
Q55A  Buckhannon       47.80  85  P      P      01 41 22.7 +0.5
       baz=323
N58A  Sunbury          47.89  80  P      P      01 41 23.3 +0.5
       baz=323,SNR=9.6
S53A  Williamson       47.90  87  P      P      01 41 23.4 +0.4
       baz=324,SNR=8.9
MSHR  Mys Shultsa      47.95 284ceP      P      01 41 22.5  -0.7
HKT   Hockley          47.96 106  P      P      01 41 24.5 +1.1
HKT                               pmax   pmax
       comp=Z,68nm,1.7s
HKT   Hockley          47.96 106  P      P      01 41 24.5 +1.1
HKT                               IAmb   IAmb   01 41 25.8
       comp=Z,68nm,1.7s
T52A  Hallie           47.96  89  P      P      01 41 24.2 +0.7
       baz=324,SNR=6.9
O57A  Amberson         47.96  82  P      P      01 41 24.3 +0.9
       baz=323,SNR=14
P56A  Dayton Farm, R   47.97  83  P      P      01 41 24.2 +0.7
       baz=323,SNR=12
G64A  Maxfield         48.01  70  P      P      01 41 23.9 +0.2
       baz=321
R54A  Victor           48.03  86  P      P      01 41 24.3 +0.3
       baz=324,SNR=9.2
TZTN  Tazewell         48.15  89  P      P      01 41 25.7 +0.7
       baz=324,SNR=5.4
Q56A  Snyder Ridge,    48.18  84  P      P      01 41 25.5 +0.5
       baz=323,SNR=8.8
S54A  Dingess, Beckl   48.18  87  P      P      01 41 25.5 +0.3
       baz=324,SNR=9.2
X48A  Hartselle        48.23  94  IAmb   IAmb   01 41 26.5
       comp=Z,26nm,0.8s
J62A  Henniker         48.24  74  P      P      01 41 25.7 +0.3
       baz=322
N59A  State Game Lan   48.26  79  P      P      01 41 26.1 +0.4
       baz=323
L61A  Hillsdale 1, H   48.26  77  P      P      01 41 26.2 +0.5
       baz=322
T53A  Wise             48.27  88  P      P      01 41 26.6 +0.7
       baz=324,SNR=11
R55A  Marlinton        48.35  85  IAmb   IAmb   01 41 28.8
       comp=Z,22nm,0.7s
R55A  Marlinton        48.35  85  P      P      01 41 27.1 +0.6
       baz=324,SNR=5.2
O58A  Lewisberry       48.36  81  P      P      01 41 27.2 +0.7
       baz=323,SNR=15
P57A  Homestead Farm   48.37  82  P      P      01 41 27.4 +0.9
       baz=323,SNR=24
W50A  Signal Mountai   48.42  92  IAmb   IAmb   01 41 28.4
       comp=Z,28nm,1.1s
M60A  Port Jervis      48.46  78  P      P      01 41 27.3 +0.1
       baz=323
ARCES ARCESS Array B   48.47   2  P      P      01 41 26.2  -0.7
       comp=Z,4.6nm,0.6s,baz=3.1,slow=6.4,SNR=17
ARCES                             PcP    PcP    01 42 51.3  -0.3
       comp=Z,1.9nm,0.5s,baz=356,slow=3.6,SNR=4.5
VBMS  Vicksburg        48.47  99  P      P      01 41 28.5 +1.1
VBMS  Vicksburg        48.47  99  P      P      01 41 28.6 +1.2
       baz=327,SNR=5.6
K62A  Royalston        48.49  75  P      P      01 41 27.8 +0.3
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       baz=322
Q57A  Strasburg        48.54  83  P      P      01 41 28.6 +0.8
       baz=323,SNR=14
O59A  Robesonia        48.55  80  P      P      01 41 28.4 +0.4
       baz=323,SNR=9.7
G65A  Princeton        48.58  70  P      P      01 41 28.3 +0.3
       baz=322
S55A  Lewisburg        48.58  86  P      P      01 41 28.9 +0.6
       baz=324,SNR=8.0
R56A  Bull Pasture M   48.58  84  P      P      01 41 28.8 +0.5
       baz=324,SNR=5.1
CPCT  Cooper Cave      48.59  91  IAmb   IAmb   01 41 29.3
       comp=Z,18nm,0.6s
N60A  Cedar Hill Far   48.61  79  P      P      01 41 28.6 +0.3
       baz=323,SNR=5.5
T54A  Tazewell         48.66  87  P      P      01 41 29.3 +0.4
       baz=324
ODNJ  Ogdensburg       48.66  78  IAmb   IAmb   01 41 29.5
       comp=Z,50nm,1.2s
H65A  Eastbrook        48.67  70  P      P      01 41 29.0 +0.3
       baz=322
P58A  Pank, Wackersv   48.69  82  P      P      01 41 29.4 +0.4
       baz=323,SNR=5.9
MVL   Millersville     48.72  81  IAmb   IAmb   01 41 30.6
       comp=Z,43nm,1.3s
TKL   Tuckaleechee C   48.77  90  IAmb   IAmb   01 41 30.8
       comp=Z,31nm,0.8s
O60A  Telford          48.91  80  P      P      01 41 30.9 +0.3
       baz=323,SNR=6.0
Q58A  Fox Den Farm,    48.95  83  P      P      01 41 31.8 +0.7
       baz=324,SNR=22
GGN   Saint George     48.96  69  P      P      01 41 31.3 +0.4
SDMD  Soldier's Deli   48.97  82  IAmb   IAmb   01 41 32.3
       comp=Z,26nm,1.1s
U54A  Nelsons Funny    48.98  88  P      P      01 41 32.2 +0.9
       baz=325,SNR=9.7
T55A  Pulaski          48.98  87  P      P      01 41 31.9 +0.6
       baz=324
P59A  Jarrettsville    49.00  81  P      P      01 41 31.8 +0.5
       baz=323,SNR=5.3
Y49A  Blount Mountai   49.02  94  IAmb   IAmb   01 41 32.2
       comp=Z,26nm,0.9s
N61A  South Mountain   49.07  78  P      P      01 41 32.3 +0.4
       baz=323
BLA   Blacksburg       49.07  86  P      P      01 41 32.6 +0.6
       baz=324,SNR=7.1
R57A  Stanardsville    49.08  84  P      P      01 41 32.8 +0.8
       baz=324,SNR=5.9
S56A  Natural Bridge   49.10  85  P      P      01 41 32.9 +0.7
       baz=324
X51A  Calhoun          49.16  92  P      P      01 41 33.3 +0.7
       baz=326,SNR=7.0
P60A  Greenville       49.20  80  P      P      01 41 33.6 +0.7
       baz=323
V53A  Saluda           49.21  89  IAmb   IAmb   01 41 34.6
       comp=Z,30nm,0.9s
LMN   Caledonia Moun   49.27  67  IAmb   IAmb   01 41 34.2
       comp=Z,31nm,0.8s
R58A  Rapidan          49.32  83  P      P      01 41 34.4 +0.6
       baz=324,SNR=6.4
U55A  TA2, Sparta      49.36  87  P      P      01 41 35.1 +0.9
       baz=325,SNR=15
T56A  Rocky Mt         49.40  86  P      P      01 41 35.3 +0.8
       baz=324
LRAL  Lakeview Retre   49.42  95  IAmb   IAmb   01 41 35.3
       comp=Z,15nm,0.8s
LRAL  Lakeview Retre   49.42  95  P      P      01 41 34.6  -0.1
       baz=326
MAT   Matsushiro       49.52 273  P      P      01 41 34.8  -0.6
MJAR  Matsushiro Arr   49.52 273  P      P      01 41 35.0  -0.3
       comp=Z,4.4nm,0.9s,baz=7.2,slow=7.7,SNR=8.3
MJAR                              ScP    ScP    01 46 42.5  -0.7
       comp=Z,2.5nm,0.9s,baz=350,slow=3.8,SNR=4.1
MJAR                              LR     LR     02 03 27.0
       comp=Z,28nm,21.7s,baz=200,slow=37
MJAR  Matsushiro Arr   49.52 273  P      P      01 41 35.0  -0.3
MJAR                              pmax   pmax
       comp=Z,7.0nm,1.6s
V54A  Nebo             49.53  89  P      P      01 41 36.4 +0.9
       baz=325,SNR=7.0
CN2   Changchun        49.54 289 eP      P      01 41 34.0  -1.4
M63A  Gales Ferry      49.58  76  P      P      01 41 35.6  -0.1
       baz=323
DRLN  Deer Lake        49.62  59  P      P      01 41 36.3 +0.4
R58B  Mineral          49.65  83  P      P      01 41 37.7 +1.4
       baz=324,SNR=8.0
CBN   Corbin Frederi   49.69  83  P      P      01 41 37.5 +0.9
       baz=324,SNR=5.0
BG3   Lake Jocassee    49.71  90  IAmb   IAmb   01 41 38.3
       comp=Z,21nm,1.1s
Z50A  Ashland          49.74  94  P      P      01 41 37.6 +0.5
       baz=326,SNR=18
T57A  Hurt             49.79  85  P      P      01 41 37.6 +0.2
       baz=324
U56A  King             49.79  87  IAmb   IAmb   01 41 38.9
       comp=Z,37nm,0.9s
U56A  King             49.79  87  P      P      01 41 38.1 +0.7
       baz=325,SNR=5.0
V55A  Taylorsville     49.81  88  IAmb   IAmb   01 41 39.0
       comp=Z,32nm,1.0s
V55A  Taylorsville     49.81  88  P      P      01 41 38.2 +0.6
       baz=325,SNR=6.7
R59A  King George, V   49.81  83  P      P      01 41 38.6 +1.0
       baz=324,SNR=10
S58A  Poland Farm, P   49.85  84  IAmb   IAmb   01 41 39.5
       comp=Z,31nm,1.1s
S58A  Poland Farm, P   49.85  84  P      P      01 41 38.2 +0.4
       baz=324
X53A  Estanollee       49.94  91  P      P      01 41 39.3 +0.8
       baz=326,SNR=7.1
W54A  Cherokee Point   49.98  89  P      P      01 41 39.4 +0.6
       baz=325
S59A  Mechanicsville   50.09  83  P      P      01 41 40.5 +0.9
       baz=324,SNR=7.7
Y52A  Lilburn          50.11  92  P      P      01 41 40.8 +0.9
       baz=326,SNR=15
T58A  Grand View Acr   50.17  85  P      P      01 41 40.3   0.0
       baz=324
V56A  Mocksville       50.18  87  P      P      01 41 40.8 +0.5
       baz=325
U57A  Blanch           50.21  86  P      P      01 41 41.2 +0.6
       baz=325,SNR=5.7
KMSC  Kings Mountain   50.33  89  P      P      01 41 41.9 +0.4
       baz=325
X54A  Belton           50.33  90  P      P      01 41 42.0 +0.5
       baz=326,SNR=7.8
S60A  Water View       50.43  83  P      P      01 41 43.2 +1.0
       baz=324
T59A  Double "B" Far   50.60  84  IAmb   IAmb   01 41 44.8
       comp=Z,24nm,1.0s
T59A  Double "B" Far   50.60  84  P      P      01 41 44.3 +0.8
       baz=324
250A  Grady            50.64  95  IAmb   IAmb   01 41 44.6
       comp=Z,25nm,0.8s
X55A  Gracelyn & Ava   50.74  89  P      P      01 41 45.0 +0.4
       baz=326,SNR=7.0
GOGA  Godfrey          50.76  92  P      P      01 41 45.0 +0.3
       baz=326
152A  Waverly Hall     50.79  93  IAmb   IAmb   01 41 46.1
       comp=Z,23nm,1.0s
V58A  Windy Hill, Pi   50.84  86  P      P      01 41 45.7 +0.4
       baz=325
W57A  Gilead           50.95  87  P      P      01 41 46.3 +0.1
       baz=325
U59A  Littleton        51.00  85  P      P      01 41 47.3 +0.8
       baz=325
X56A  White Oak        51.01  89  P      P      01 41 47.1 +0.5
       baz=326,SNR=6.4
Y55A  Saluda           51.08  90  P      P      01 41 47.7 +0.6
       baz=326,SNR=7.0
BIRD  Birdtown, Kers   51.15  88  IAmb   IAmb   01 41 48.9
       comp=Z,28nm,1.0s
ZAIG  Zacatecas        51.29 117  P      P      01 41 50.4 +1.3
ZAIG                              IAmb   IAmb   01 41 51.5
       comp=Z,27nm,1.3s
W58A  Raeford          51.41  87  P      P      01 41 50.3 +0.7
       baz=325
X57A  Johnson Farm,    51.47  88  P      P      01 41 50.9 +0.8
       baz=326,SNR=5.1
Z56A  Williston        51.81  90  P      P      01 41 53.5 +0.9
       baz=326
TLY   Talaya           52.01 310 eP      P      01 41 54.0 +0.1
TLY                              eS      S      01 49 25.5  +15
TLY                               pmax   pmax
       comp=Z,7.0nm,0.5s
TLY                               MLR    MLR
       comp=Z,115nm,8.0s
TLY   Talaya           52.01 310  P      P      01 41 54.6 +0.7
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TLY				IAmb	IAmb	01 43 39.6	
	comp=Z,7.1nm,0.6s						
MOY	**Mondy**	**52.96**	**312**	*e*P	**P**	**01 42 02.0**	**+1.0**
MOY				pmax	pmax		
	comp=Z,30nm,2.1s						
ZAK	**Zakamensk**	**53.21**	**310**	*e*P	**P**	**01 42 02.0**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KSRS	**Korea Array**	**53.54**	**282**	P	**P**	**01 42 05.8**	**+0.6**
	comp=Z,13nm,0.6s,baz=29,slow=6.9,SNR=32						
KSRS				LR	LR	02 06 25.1	
	comp=Z,31nm,18.0s,baz=38,slow=38						
KSAR	**Wonju Array Be**	**53.56**	**282**	P	**P**	**01 42 04.8**	**-0.6**
KSAR	**Wonju Array Be**	**53.56**	**282**	P	**P**	**01 42 04.8**	**-0.6**
TMCR	**Tamitsa**	**53.70**	**355**	*e*P	**P**	**01 42 05.1**	**-0.9**
TMCR				pmax	pmax		
	comp=Z,28nm,1.3s						
ULN	**Ulaanbaatar**	**53.89**	**305**	*c i*P	**P**	**01 42 08.4**	**+0.4**
ULN				pmax	pmax		
	comp=Z,12nm,0.7s						
ULN	**Ulaanbaatar**	**53.89**	**305**	P	**P**	**01 42 08.3**	**+0.4**
ULN				IAmb	IAmb	01 42 09.2	
	comp=Z,12nm,0.6s						
SONM	**Songino Array**	**54.16**	**306**	P	**P**	**01 42 10.7**	**+0.8**
	comp=Z,11nm,0.7s,baz=42,slow=7.7,SNR=78						
SONM				LR	LR	02 05 31.2	
	comp=Z,113nm,21.6s,baz=34,slow=36						
SONM	**Songino Array**	**54.16**	**306**	P	**P**	**01 42 10.1**	**+0.2**
SONM				pmax	pmax		
	comp=Z,11nm,0.8s						
SONM	**Songino Array**	**54.16**	**306**	P	**P**	**01 42 10.1**	**+0.2**
PRGR	**Permogore**	**55.76**	**350**	*e*P	**P**	**01 42 20.7**	**-0.3**
PRGR				pmax	pmax		
	comp=Z,21nm,0.8s						
NC204	**NORSAR Array S**	**56.02**	**10**	IAmb	IAmb	01 43 23.1	
	comp=Z,71nm,2.0s						
ZAA0	**Zalesovo Array**	**56.06**	**324**	IAmb	IAmb	01 42 23.9	
	comp=Z,15nm,0.6s						
ZALV	**Zalesovo Beam**	**56.06**	**324**	P	**P**	**01 42 22.8**	**-0.5**
	comp=Z,19nm,0.5s,baz=27,slow=6.6,SNR=75						
ZALV				LR	LR	02 07 10.2	
	comp=Z,63nm,18.4s,baz=41,slow=37						
ZALV	**Zalesovo Beam**	**56.06**	**324**	P	**P**	**01 42 21.6**	**-1.6**
ZALV	**Zalesovo Beam**	**56.06**	**324**	P	**P**	**01 42 21.6**	**-1.6**
NB2	**NORSAR Subarra**	**56.29**	**10**	P	**P**	**01 42 23.6**	**-1.3**
	comp=Z,3.9nm,0.8s,baz=351,slow=7.4						
NOA	**NORSAR Array B**	**56.29**	**10**	P	**P**	**01 42 23.5**	**-1.3**
	comp=Z,1.9nm,0.7s,baz=351,slow=7.2,SNR=22						
NOA				LR	LR	02 07 53.5	
	comp=Z,27nm,20.9s,baz=265,slow=37						
FINES	**FINESS Array B**	**56.60**	**2**	P	**P**	**01 42 26.0**	**-0.9**
	comp=Z,6.4nm,0.7s,baz=5.4,slow=8.3,SNR=30						
FINES				ScP	**ScP**	**01 47 11.9**	**-1.6**
	comp=Z,2.9nm,0.9s,baz=66,slow=4.6,SNR=4.0						
NORES	**NORESS Array B**	**56.62**	**10**	P	**P**	**01 42 27.3**	**+0.2**
BJI	**Beijing**	**56.63**	**293**	P	**P**	**01 42 27.8**	**+0.3**
KLMR	**Klimovskoe**	**56.93**	**354**	*e*P	**P**	**01 42 28.3**	**-1.0**
KLMR				pmax	pmax		
	comp=Z,16nm,1.1s						
KLMR	**Klimovskoe**	**56.93**	**354**	*e*P	**P**	**01 42 28.3**	**-1.0**
KLMR				AMP		01 42 29.9	
	comp=Z,16nm,1.1s						
HHC	**Hu-ho-hao-te**	**57.91**	**297**	*e*P	**P**	**01 42 36.3**	**-0.4**
PUL	**Pulkovo**	**58.29**	**359**	⇓*e*P	**P**	**01 42 39.1**	**+0.3**
PUL				pmax	pmax		
	comp=Z,66nm,0.3s						
KIRV	**Kirov**	**58.43**	**347**	⇓*e*P	**P**	**01 42 40.4**	**+0.6**
SVE	**Sverdlovsk**	**58.68**	**340**	*e*P	**P**	**01 42 42.2**	**+0.6**
SVE				pmax	pmax		
	comp=Z,21nm,0.8s						
DGZ	**Jazzator, Alta**	**59.06**	**320**	*c i*P	**P**	**01 42 44.8**	**+0.2**
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ARU	**Arti**	**59.39**	**341**	LR	LR	02 09 24.6	
	comp=Z,38nm,20.5s,baz=5.5,slow=37						
ARU	**Arti**	**59.39**	**341**	*d i*P	**P**	**01 42 46.3**	**-0.2**
ARU				*PP	**pP**	**01 43 05.8**	**-2.6**
ARU						01 43 33.6	
ARU				S	**S**	**01 50 49.6**	**+1.4**
ARU				SS	**SS**	**01 54 37.7**	**-5.5**
ARU				pmax	pmax		
	comp=Z,18nm,0.6s						
ARU	**Arti**	**59.39**	**341**	P	**P**	**01 42 46.0**	**-0.5**
CMIG	**Matias Romero**	**59.59**	**113**	P	**P**	**01 42 48.0**	**-0.3**
	comp=Z,9.0nm,0.9s,baz=0.0,slow=7.1,SNR=5.4						
VSU	**Vasula**	**59.60**	**1**	⇓*i*P	**P**	**01 42 47.1**	**-0.8**
TEIG	**Tepich**	**59.76**	**105**	P	**P**	**01 42 48.6**	**-0.8**
	comp=Z,5.4nm,0.7s,baz=273,slow=0.0						
EKA	**Eskdalemuir Ar**	**60.10**	**20**	P	**P**	**01 42 50.9**	**-0.5**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	**Borovoye**	**60.45**	**333**	⇑*e*P	**P**	**01 42 53.0**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,21nm,1.7s						
BRVK	**Borovoye**	**60.45**	**333**	P	**P**	**01 42 53.4**	**-0.5**
BRVK				IAmb	IAmb	01 42 54.9	
	comp=Z,8.2nm,0.7s						
KURK	**Kurchatov**	**60.64**	**326**	*c i*P	**P**	**01 42 54.1**	**-1.0**
KURK				pmax	pmax		
	comp=Z,20nm,1.3s						
KURK	**Kurchatov**	**60.64**	**326**	P	**P**	**01 42 54.6**	**-0.5**
KURK				IAmb	IAmb	01 42 55.6	
	comp=Z,10nm,0.7s						
NJ2	**Nanjing**	**62.15**	**286**	*e*P	**P**	**01 43 07.3**	**+1.8**
BSD	**Bornholm Skovb**	**62.46**	**9**	*i* P	**P**	**01 43 06.7**	**-0.6**
	comp=Z,1.0nm,0.4s						
BSD	**Bornholm Skovb**	**62.46**	**9**	*i* P	**P**	**01 43 06.7**	**-0.6**
BSD				pmax	pmax		
	comp=Z,1.0nm,0.4s						
OBN	**Obninsk**	**62.80**	**355**	⇓*e*P	**P**	**01 43 09.9**	**+0.3**
OBN				*e*		01 45 28.5	
OBN				*e*S	**S**	**01 51 33.8**	**+2.3**
OBN				*e*SS	**SS**	**01 55 33.2**	**-3.4**
OBN				pmax	pmax		
	comp=Z,11nm,0.5s						
OBN	**Obninsk**	**62.80**	**355**	P	**P**	**01 43 09.5**	**0.0**
OBN				IAmb	IAmb	01 43 10.9	
	comp=Z,19nm,0.6s						
MK31	**Makanchi Array**	**63.20**	**322**	*i* P	**P**	**01 43 10.9**	**-1.5**
MK31	**Makanchi Array**	**63.20**	**322**	P	**P**	**01 43 11.3**	**-1.1**
MKAR	**Makanchi Array**	**63.20**	**322**	P	**P**	**01 43 11.1**	**-1.3**
	comp=Z,13nm,0.5s,baz=36,slow=6.7,SNR=255						
MKAR				LR	LR	02 14 21.1	
	comp=Z,30nm,18.8s,baz=14,slow=39						
MKAR	**Makanchi Array**	**63.20**	**322**	P	**P**	**01 43 10.9**	**-1.5**
MAKZ	**Makanchi**	**63.27**	**322**	P	**P**	**01 43 11.8**	**-1.1**
MAKZ				pmax	pmax		
	comp=Z,19nm,0.4s						
MAKZ	**Makanchi**	**63.27**	**322**	P	**P**	**01 43 11.8**	**-1.1**
KLNR	**Kaliningrad**	**63.28**	**6**	*de*P	**P**	**01 43 12.0**	**-0.7**
KLNR				pmax	pmax		
	comp=Z,77nm,1.7s						
GTA	**Gaotai**	**63.83**	**305**	*e*P	**P**	**01 43 17.0**	**+0.2**
GTA				pP	pP	01 43 36.5	-2.2
GTA				sP	sP	01 43 45.0	-3.2
SUW	**Suwalki**	**63.98**	**4**	IAmb	IAmb	01 43 19.1	
	comp=Z,23nm,1.1s						
WMQ	**Urumqi**	**64.22**	**316**	*e*P	**P**	**01 43 22.3**	**+3.1**
XAN	**Xi'an**	**64.79**	**295**	P	**P**	**01 43 24.0**	**+1.0**
LZH	**Lanzhou**	**65.13**	**300**	*e*P	**P**	**01 43 25.5**	**+0.2**
LZH				*e*PP	**PP**	**01 45 51.5**	**+2.4**
LPSR	**Galich'ya Gora**	**65.20**	**353**	*e*P	**P**	**01 43 23.8**	**-1.5**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
WHN	**Wuhan**	**65.44**	**289**	⇓P	**P**	**01 43 26.8**	**-0.4**
MEM	**Membach**	**66.03**	**16**	P	**P**	**01 43 30.7**	**+0.1**
CLL	**Collm**	**66.09**	**11**	*i* P	**P**	**01 43 31.0**	**0.0**
	comp=Z,4.0nm,0.7s						
CLL	**Collm**	**66.09**	**11**	*i* P	**P**	**01 43 31.0**	**0.0**
CLL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AB31	**Akbulak array**	**66.09**	**338**	*e*P	**P**	**01 43 30.1**	**-1.0**
ABKAR	**Akbulak array**	**66.09**	**338**	P	**P**	**01 43 30.7**	**-0.4**
ABKAR				IAmb	IAmb	01 43 31.7	
	comp=Z,9.5nm,0.6s						
VSR	**Storozhevoye**	**66.57**	**353**	⇑*e*P	**P**	**01 43 33.9**	**-0.2**
VSR				pmax	pmax		
	comp=Z,11nm,1.0s						
BRG	**Berggiesshubel**	**66.60**	**10**	*e*P	**P**	**01 43 34.0**	**-0.3**
	comp=Z,6.4nm,0.9s						
BRG	**Berggiesshubel**	**66.60**	**10**	*e*P	**P**	**01 43 34.0**	**-0.3**
BRG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VORD	**Divnogorie**	**66.81**	**353**	*e*P	**P**	**01 43 34.7**	**-0.9**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WLF	**Walferdange**	**66.97**	**16**	⇓P	**P**	**01 43 37.1**	**+0.4**
PVCC	**Panska Ves**	**66.99**	**10**	*e*P	**P**	**01 43 37.5**	**+0.7**
PVCC	**Panska Ves**	**66.99**	**10**	*e*P	**P**	**01 43 37.5**	**+0.7**
NKC	**Novy Kostel**	**67.10**	**11**	*e*P	**P**	**01 43 37.4**	**-0.2**
NKC	**Novy Kostel**	**67.10**	**11**	*e*P	**P**	**01 43 37.4**	**-0.2**
UPC	**Upice**	**67.12**	**9**	*e*P	**P**	**01 43 37.7**	**0.0**
UPC	**Upice**	**67.12**	**9**	*e*P	**P**	**01 43 37.7**	**0.0**
PDGK	**Podgornoye**	**67.17**	**322**	P	**P**	**01 43 37.4**	**-0.8**
DPC	**Dobruska-Polom**	**67.30**	**9**	*e*P	**P**	**01 43 39.3**	**+0.5**
DPC	**Dobruska-Polom**	**67.30**	**9**	*e*P	**P**	**01 43 39.3**	**+0.5**
AKASG	**Malin Array Be**	**67.39**	**360**	P	**P**	**01 43 38.4**	**-0.9**
	comp=Z,6.5nm,0.4s,baz=2.7,slow=6.4,SNR=40						
AKASG				pP	**pP**	**01 44 00.7**	**-0.8**
	comp=Z,3.9nm,0.5s,baz=360,slow=6.3,SNR=3.6						
AKASG	**Malin Array Be**	**67.39**	**360**	P	**P**	**01 43 38.3**	**-1.0**
AKBB	**Malin Array Si**	**67.39**	**360**	P	**P**	**01 43 38.7**	**-0.6**
AKBB				pmax	pmax		
	comp=Z,44nm,1.7s						
AKBB	**Malin Array Si**	**67.39**	**360**	P	**P**	**01 43 38.7**	**-0.6**
AKBB				IAmb	IAmb	01 43 40.3	
	comp=Z,44nm,1.6s						
GRF	**Grafenberg Arr**	**67.52**	**12**	*e*P	**P**	**01 43 40.1**	**-0.1**
	comp=Z,4.9nm,0.9s,baz=345,slow=5.9						
PRU	**Pruhonice**	**67.52**	**10**	*e*P	**P**	**01 43 40.0**	**-0.2**
PRU				*e*x	x	01 43 48.1	
PRU	**Pruhonice**	**67.52**	**10**	*e*P	**P**	**01 43 40.0**	**-0.2**
ENH	**Enshi**	**67.80**	**293**	IAmb	IAmb	01 43 44.0	
	comp=Z,14nm,0.7s						
OKC	**Ostrava-Krasne**	**67.93**	**7**	*e*P	**P**	**01 43 42.4**	**-0.3**
OKC	**Ostrava-Krasne**	**67.93**	**7**	*e*P	**P**	**01 43 42.4**	**-0.3**
MORC	**Moravsky Berou**	**67.95**	**8**	⇑P	**P**	**01 43 42.8**	**-0.2**
MORC	**Moravsky Berou**	**67.95**	**8**	P	**P**	**01 43 42.9**	**-0.1**
MORC				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MORC	**Moravsky Berou**	**67.95**	**8**	*e*P	**P**	**01 43 42.7**	**-0.2**
MORC	**Moravsky Berou**	**67.95**	**8**	P	**P**	**01 43 42.9**	**-0.1**
TREC	**Trest**	**68.29**	**9**	*e*P	**P**	**01 43 45.0**	**0.0**
TREC	**Trest**	**68.29**	**9**	*e*P	**P**	**01 43 45.0**	**0.0**
KHC	**Kasperske Hory**	**68.30**	**11**	*e*P	**P**	**01 43 45.2**	**+0.1**
KHC				*e*pP	**pP**	**01 44 08.5**	**+1.1**
KHC	**Kasperske Hory**	**68.30**	**11**	*e*P	**P**	**01 43 45.2**	**+0.1**
KHC				*e*		01 44 08.5	
KWP	**Kalwaria Pacla**	**68.35**	**4**	P	**P**	**01 43 45.5**	**+0.1**
KWP				pmax	pmax		
	comp=Z,13nm,1.2s						
KWP	**Kalwaria Pacla**	**68.35**	**4**	P	**P**	**01 43 45.5**	**+0.1**
VRAC	**Vranov**	**68.35**	**9**	LR	LR	02 14 27.4	
	comp=Z,25nm,19.9s,baz=352,slow=36						
VRAC	**Vranov**	**68.35**	**9**	⇑P	**P**	**01 43 45.6**	**+0.2**
VRAC	**Vranov**	**68.35**	**9**	⇑P	**P**	**01 43 45.6**	**+0.2**
VRAC	**Vranov**	**68.35**	**9**	*e*P	**P**	**01 43 45.6**	**+0.2**
KRUC	**Moravsky**	**68.59**	**9**	*e*P	**P**	**01 43 46.7**	**-0.2**
GEC2	**GERESS Array S**	**68.59**	**11**	P	**P**	**01 43 47.4**	**+0.4**
GERES	**GERESS Array B**	**68.59**	**11**	P	**P**	**01 43 47.0**	**0.0**
	comp=Z,1.7nm,0.6s,baz=358,slow=6.0,SNR=23						
GERES				pP	**pP**	**01 44 10.2**	**+0.8**
	comp=Z,1.3nm,0.7s,baz=2.6,slow=6.4,SNR=2.8						
GERES				LR	LR	02 14 22.5	
	comp=Z,40nm,20.4s,baz=323,slow=36						
GERES	**GERESS Array B**	**68.59**	**11**	P	**P**	**01 43 47.0**	**0.0**
USP	**Ospenovka**	**68.60**	**326**	P	**P**	**01 43 47.1**	**+0.1**
	SNR=9.1						
TKM2	**Tokmak 2**	**68.63**	**325**	P	**P**	**01 43 47.4**	**-0.1**
	SNR=14						
CHMS	**Chumysh**	**68.78**	**326**	P	**P**	**01 43 48.2**	**0.0**
	SNR=14						
JAVC	**Velka Javorina**	**68.87**	**8**	*e*P	**P**	**01 43 49.6**	**+0.9**
KBK	**Karagaybulak**	**69.05**	**325**	P	**P**	**01 43 50.3**	**+0.3**
	SNR=11						
AAK	**Ala-Archa**	**69.18**	**326**	P	**P**	**01 43 50.6**	**-0.3**
	SNR=13						
AAK	**Ala-Archa**	**69.18**	**326**	*ce*P	**P**	**01 43 50.5**	**-0.3**
AAK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
AAK	**Ala-Archa**	**69.18**	**326**	P	**P**	**01 43 50.5**	**-0.4**
VYHS	**Vyhne**	**69.31**	**7**	*e*P	**P**	**01 43 51.4**	**0.0**
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VYHS	**Vyhne**	**69.31**	**7**	*e*P	**P**	**01 43 51.4**	**0.0**
MODS	**Modra-Piesok**	**69.33**	**8**	*e*P	**P**	**01 43 51.1**	**-0.4**
MODS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MODS	**Modra-Piesok**	**69.33**	**8**	*e*P	**P**	**01 43 51.1**	**-0.4**
EKS2	**Erkin-Say**	**69.35**	**326**	P	**P**	**01 43 51.8**	**-0.1**
	SNR=24						
ZST	**Bratislava**	**69.50**	**8**	*e*P	**P**	**01 43 52.2**	**-0.3**
ZST	**Bratislava**	**69.50**	**8**	*e*P	**P**	**01 43 52.2**	**-0.3**
KZA	**Kyzart**	**69.50**	**325**	P	**P**	**01 43 53.0**	**-0.2**
	SNR=9.7						
CD2	**Chengdu**	**69.67**	**298**	*e*P	**P**	**01 43 52.5**	**-1.4**
CONA	**Conrad Observa**	**69.67**	**9**	*e*P	**P**	**01 43 54.1**	**+0.4**
	comp=Z,5.5nm,1.0s						
KK31	**Karatay Array**	**69.76**	**329**	*e*P	**P**	**01 43 52.9**	**-1.3**
KK31	**Karatay Array**	**69.76**	**329**	P	**P**	**01 43 53.3**	**-0.9**
KKAR	**Karatay Array**	**69.76**	**329**	P	**P**	**01 43 53.6**	**-0.6**
KKAR	**Karatay Array**	**69.76**	**329**	P	**P**	**01 43 53.6**	**-0.6**
MOTA	**Moosalm**	**69.83**	**13**	*e*P	**P**	**01 43 54.8**	**0.0**
	comp=Z,1.4nm,0.5s						
TRPA	**Tarpa**	**69.84**	**4**	⇑P	**P**	**01 43 53.9**	**-0.7**
AML	**Almayashu**	**69.87**	**326**	P	**P**	**01 43 55.9**	**+0.5**
	SNR=26						
WATA	**Walderalm**	**69.89**	**12**	*e*P	**P**	**01 43 55.3**	**+0.2**
	comp=Z,9.5nm,1.1s						
PSZ	**Piszkesteto**	**69.94**	**6**	⇑P	**P**	**01 43 53.2**	**-2.1**
PSZ	**Piszkesteto**	**69.94**	**6**	P	**P**	**01 43 56.3**	**+1.0**
PSZ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PSZ	**Piszkesteto**	**69.94**	**6**	P	**P**	**01 43 56.3**	**+1.0**
SORM	**Soroca**	**69.95**	**0**	⇑P	**P**	**01 43 54.4**	**-0.9**
SORM	**Soroca**	**69.95**	**0**	⇑P	**P**	**01 43 54.4**	**-0.9**
SQTA	**Sankt Quirin**	**69.96**	**13**	*e*P	**P**	**01 43 56.0**	**+0.5**
	comp=Z,5.9nm,0.8s,SNR=6.7						
WTTA	**Wattenberg**	**69.96**	**12**	*e*P	**P**	**01 43 55.9**	**+0.3**
	comp=Z,8.1nm,1.0s,SNR=12						
FETA	**Feichten**	**70.11**	**13**	*e*P	**P**	**01 43 56.8**	**+0.3**
	comp=Z,3.2nm,0.9s						
DAVOX	**Davos/Dischmat**	**70.26**	**14**	LR	LR	02 16 57.1	
	comp=Z,42nm,21.8s,baz=280,slow=38						
KBA	**Koelnbreinsper**	**70.31**	**11**	*e*P	**P**	**01 43 58.3**	**+0.6**
	comp=Z,10nm,0.8s,SNR=14						
ARSA	**Arzberg**	**70.32**	**10**	*e*P	**P**	**01 43 57.8**	**+0.2**
	comp=Z,1.5nm,0.7s						
BUR08	**Bucovina Ar. S**	**70.41**	**3**	P	**P**	**01 43 58.1**	**-0.1**
BURAR	**Bucovina Array**	**70.44**	**3**	⇑P	**P**	**01 43 58.2**	**-0.2**
BURAR	**Bucovina Array**	**70.44**	**3**	⇑P	**P**	**01 43 58.2**	**-0.2**
BURAR	**Bucovina Array**	**70.44**	**3**	P	**P**	**01 43 58.2**	**-0.2**
ABTA	**Abfaltersbach**	**70.56**	**12**	*e*P	**P**	**01 44 00.9**	**+1.7**
	comp=Z,1.6nm,0.6s						
SOKA	**Soboth**	**70.85**	**10**	*e*P	**P**	**01 44 02.5**	**+1.6**
	comp=Z,2.3nm,0.6s						
OBKA	**Obir**	**70.98**	**10**	*e*P	**P**	**01 44 01.8**	**+0.1**
	comp=Z,15nm,1.0s,SNR=36						
BIZ	**Bicaz**	**71.13**	**2**	⇓P	**P**	**01 44 02.4**	**-0.1**
MILM	**Milestii Mici**	**71.17**	**360**	⇑P	**P**	**01 44 01.1**	**-1.6**
KSH	**Kashi**	**71.69**	**323**	P	**P**	**01 44 09.0**	**+2.9**
KSH				pP	sP	01 44 34.3	-3.8
KSH				PP	**PP**	**01 46 51.8**	**+6.2**
KSH				S	**S**	**01 53 19.5**	**+0.6**
KSH				SKS	**SKSac**	**01 53 58.3**	**-3.4**
PGAV	**Gavieira, Arco**	**71.92**	**28**	*e*P	**P**	**01 44 08.2**	**+0.7**
MOSL	**Moslavina**	**72.04**	**9**	*i* P	**P**	**01 44 07.5**	**-0.5**
PCAB	**Cabril**	**72.22**	**28**	*e*P	**P**	**01 44 09.4**	**+0.3**
BZS	**Buzias**	**72.32**	**5**	⇑P	**P**	**01 44 09.3**	**-0.3**
BZS	**Buzias**	**72.32**	**5**	⇑P	**P**	**01 44 09.3**	**-0.3**
PBRG	**Braganca**	**72.41**	**27**	*e*P	**P**	**01 44 11.2**	**+0.9**
MLR	**Muntele Rosu**	**72.58**	**2**	LR	LR	02 18 23.7	
	comp=Z,38nm,20.8s,baz=303,slow=38						
MLR	**Muntele Rosu**	**72.58**	**2**	⇓P	**P**	**01 44 11.3**	**0.0**
MLR	**Muntele Rosu**	**72.58**	**2**	⇓P	**P**	**01 44 11.3**	**0.0**
GZR	**Gura Zlata**	**72.59**	**4**	⇑P	**P**	**01 44 11.2**	**-0.1**
GZR	**Gura Zlata**	**72.59**	**4**	⇑P	**P**	**01 44 11.2**	**-0.1**
PVRL	**Vila Real**	**72.70**	**28**	*e*P	**P**	**01 44 12.9**	**+0.9**
NVLJ	**Novalja**	**72.94**	**10**	*i* P	**P**	**01 44 12.0**	**-1.3**
MVO	**Moncorvo**	**72.96**	**28**	*e*P	**P**	**01 44 14.2**	**+0.6**
UDBI	**Udbina**	**73.05**	**10**	*i* P	**P**	**01 44 13.1**	**-0.9**
PVIS	**Viseu**	**73.20**	**28**	*e*P	**P**	**01 44 16.1**	**+1.1**
HARR	**Harsova**	**73.40**	**1**	⇑P	**P**	**01 44 16.4**	**+0.4**
HARR	**Harsova**	**73.40**	**1**	⇑P	**P**	**01 44 16.4**	**+0.4**
DUGI	**Dugi Otok**	**73.52**	**10**	*i* P	**P**	**01 44 15.7**	**-1.0**
KIV	**Kislovodsk**	**73.54**	**350**	*e*P	**P**	**01 44 17.6**	**+0.6**
KIV				pmax	pmax		
	comp=Z,29nm,1.1s						
MTE	**Manteigas**	**73.58**	**28**	P	**P**	**01 44 18.0**	**+0.8**
MTE				IAmb	IAmb	01 44 18.6	
	comp=Z,21nm,0.9s						
MTE	**Manteigas**	**73.58**	**28**	*e*P	**P**	**01 44 18.1**	**+0.8**
GAR	**Garm**	**73.68**	**327**	P	**P**	**01 44 17.7**	**-0.3**
GAR				IAmb	IAmb	01 44 19.3	
	comp=Z,34nm,1.2s						
PCAS	**Casmilo, Conde**	**73.70**	**29**	*e*P	**P**	**01 44 18.5**	**+0.6**
MORI	**Morici**	**73.70**	**10**	*i* P	**P**	**01 44 15.9**	**-1.9**
KBZ	**Khabaz**	**73.75**	**349**	P	**P**	**01 44 19.5**	**+1.4**
	comp=Z,3.3nm,0.9s,baz=183,slow=5.7,SNR=2.5						
KBZ				LR	LR	02 20 33.5	
	comp=Z,16nm,20.8s,baz=348,slow=39						
NCK	**Nalchik**	**73.92**	**349**	⇑*e*P	**P**	**01 44 20.2**	**+1.1**
NCK				pmax	pmax		
	comp=Z,19nm,1.0s						
PCBR	**Castelo Branco**	**74.13**	**28**	*e*P	**P**	**01 44 20.3**	**-0.1**
RICI	**Ricice**	**74.18**	**9**	P	**P**	**01 44 19.8**	**-0.8**
NEY	**Neytrino**	**74.24**	**349**	*i* P	**P**	**01 44 19.7**	**-1.5**
NEY				pmax	pmax		
	comp=Z,5.0nm,1.4s						
CHGR	**Chuyangaron**	**74.29**	**328**	P	**P**	**01 44 21.1**	**-0.4**
PMRV	**Marv??o**	**74.54**	**28**	*e*P	**P**	**01 44 22.9**	**+0.1**
PMAFR	**Mafra**	**74.56**	**30**	*e*P	**P**	**01 44 23.7**	**+0.8**
LATE	**Laterza**	**74.58**	**13**	P	**P**	**01 44 23.8**	**+0.8**
PMTG	**Montargil**	**74.70**	**29**	*e*P	**P**	**01 44 23.9**	**+0.2**
VTS	**Vitosha**	**75.38**	**4**	⇑P	**P**	**01 44 26.1**	**-1.6**
VTS	**Vitosha**	**75.38**	**4**	⇑P	**P**	**01 44 26.1**	**-1.6**
PDG	**Podgorica**	**75.38**	**7**	P	**P**	**01 44 27.4**	**0.0**
PNCL	**Nicolau / Gran**	**75.54**	**30**	*e*P	**P**	**01 44 29.4**	**+0.9**
PBEJ	**Beja**	**75.78**	**29**	*e*P	**P**	**01 44 30.1**	**+0.2**
MESJ	**Messejana**	**75.87**	**29**	*e*P	**P**	**01 44 30.4**	**-0.1**
MESJ				AMb	AMB	01 44 56.5	
	comp=Z,37nm,1.2s						
MESJ	**Messejana**	**75.87**	**29**	*e*P	**P**	**01 44 30.3**	**-0.1**
MESJ	**Messejana**	**75.87**	**29**	*e*P	**P**	**01 44 31.0**	**+0.6**
PCVE	**Castro Verde**	**76.11**	**29**	*e*P	**P**	**01 44 32.6**	**+0.8**
MORF	**Marmelete**	**76.28**	**30**	*e*P	**P**	**01 44 32.7**	**-0.1**
MORF				AMb	AMB	01 44 59.6	
	comp=Z,54nm,1.4s						
MORF	**Marmelete**	**76.28**	**30**	*e*P	**P**	**01 44 32.7**	**-0.1**
MORF	**Marmelete**	**76.28**	**30**	*e*P	**P**	**01 44 33.5**	**+0.7**
PVAQ	**Vaqueiros**	**76.41**	**29**	IAmb	IAmb	01 44 35.7	
	comp=Z,21nm,0.9s						
PVAQ	**Vaqueiros**	**76.41**	**29**	*e*P	**P**	**01 44 34.2**	**+0.8**
PFVI	**Vila Bisbo**	**76.41**	**30**	*e*P	**P**	**01 44 37.2**	**+3.7**
PAOL	**Paolisi**	**76.42**	**11**	P	**P**	**01 44 33.7**	**+0.1**
TIR	**Tirane**	**76.49**	**7**	P	**P**	**01 44 35.4**	**+1.5**
TIR				pmax	pmax		
	comp=Z,30nm,0.6s						
PBDV	**Barranco-do-Ve**	**76.51**	**29**	*e*P	**P**	**01 44 35.2**	**+1.1**
GNI	**Garni**	**77.13**	**348**	LR	LR	02 23 50.8	
	comp=Z,22nm,18.4s,baz=336,slow=40						
FNA	**Florina**	**77.13**	**6**	P	**P**	**01 44 37.4**	**-0.1**
FNA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GEYT	**Alibeck**	**77.38**	**337**	P	**P**	**01 44 38.9**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=5.0,slow=5.1,SNR=5.3						
GEYT				LR	LR	02 24 19.4	
	comp=Z,26nm,19.2s,baz=100,slow=40						
GEYT	**Alibeck**	**77.38**	**337**	P	**P**	**01 44 39.2**	**+0.2**
GYA0B	**ALIBECK ARRAY**	**77.38**	**337**	P	**P**	**01 44 38.3**	**-0.7**
SDV	**Santo Domingo**	**77.80**	**94**	P	**P**	**01 44 41.9**	**+0.2**
SDV				IAmb	IAmb	01 44 42.7	
	comp=Z,12nm,0.9s						
NIL	**Nilore**	**77.94**	**323**	P	**P**	**01 44 41.9**	**-0.3**
NIL				pmax	pmax		
	comp=Z,12nm,1.3s						
NIL	**Nilore**	**77.94**	**323**	P	**P**	**01 44 41.9**	**-0.3**
SLVN	**Son La**	**78.02**	**293**	P	**P**	**01 44 42.9**	**+0.1**
SLVN				IAmb	IAmb	01 44 45.9	
	comp=Z,10nm,0.7s						
BRTR	**Keskin Array B**	**78.29**	**356**	P	**P**	**01 44 44.5**	**+0.3**
	comp=Z,1.9nm,0.8s,baz=355,slow=2.4,SNR=11						
BRTR				LR	LR	02 21 44.8	
	comp=Z,15nm,21.9s,baz=333,slow=38						
BRTR	**Keskin Array B**	**78.29**	**356**	P	**P**	**01 44 44.3**	**+0.2**
TAPN	**Taplejung**	**79.10**	**309**	*e*P	**P**	**01 44 49.1**	**+0.1**
GUN	**Gumba**	**79.25**	**311**	*e*P	**P**	**01 44 49.4**	**-0.4**
	comp=Z,17nm,0.5s						
RUSC	**La Rusia**	**79.29**	**98**	P	**P**	**01 44 49.5**	**-0.8**
JIRN	**Jiri**	**79.36**	**311**	*e*P	**P**	**01 44 50.8**	**+0.3**
	comp=Z,98nm,0.7s						
KKN	**Kakani**	**79.57**	**311**	*e*P	**P**	**01 44 51.8**	**+0.4**
DANN	**Dangsing**	**79.58**	**313**	*e*P	**P**	**01 44 51.3**	**-0.3**
	comp=Z,120nm,0.8s						
GKN	**Gorkha**	**79.60**	**312**	*e*P	**P**	**01 44 51.7**	**+0.2**
ODAN	**Odare**	**79.66**	**309**	*e*P	**P**	**01 44 53.1**	**+1.2**
PKIN	**Phulchoki**	**79.72**	**311**	*e*P	**P**	**01 44 52.2**	**-0.1**
PKI	**Pulchoki**	**79.72**	**311**	*e*P	**P**	**01 44 52.9**	**+0.5**
	comp=Z,12nm,0.5s						
DMN	**Daman**	**79.80**	**311**	*e*P	**P**	**01 44 52.5**	**-0.2**
	comp=Z,34nm,0.6s						
RAMN	**Ramite**	**79.87**	**310**	*e*P	**P**	**01 44 52.9**	**-0.1**
	comp=Z,36nm,0.5s						
KEST	**Kesra**	**81.09**	**16**	P	**P**	**01 44 59.7**	**+0.4**
	comp=Z,9.6nm,0.9s,baz=192,slow=0.3,SNR=12						
KEST	**Kesra**	**81.09**	**16**	P	**P**	**01 45 00.1**	**+0.8**
KEST				IAmb	IAmb	01 45 00.4	
	comp=Z,15nm,1.0s						
FLOC	**Florencia**	**81.90**	**102**	P	**P**	**01 45 03.1**	**-0.6**
CHTO	**Chiang Mai**	**82.36**	**296**	P	**P**	**01 45 07.0**	**+0.9**
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.2s						
CHTO	**Chiang Mai**	**82.36**	**296**	P	**P**	**01 45 07.0**	**+0.9**
UBPT	**Khong Chiam**	**82.68**	**289**	P	**P**	**01 45 07.6**	**-0.1**
UBPT				IAmb	IAmb	01 45 08.1	
	comp=Z,27nm,1.6s						
CM31	**Chiang Mai Arr**	**82.68**	**296**	P	**P**	**01 45 07.1**	**-0.6**
CMAR	**Chiang Mai Arr**	**82.68**	**296**	P	**P**	**01 45 07.2**	**-0.6**
	comp=Z,4.9nm,0.8s,baz=8.3,slow=5.6,SNR=16						
CMAR				pP	**pP**	**01 45 29.7**	**-0.8**
	comp=Z,7.9nm,1.0s,baz=8.4,slow=6.2,SNR=5.2						
CMAR				LR	LR	02 23 24.5	
	comp=Z,22nm,18.6s,baz=67,slow=37						
CMAR	**Chiang Mai Arr**	**82.68**	**296**	P	**P**	**01 45 06.9**	**-0.8**
PBKT	**Sadao Pong**	**83.50**	**293**	P	**P**	**01 45 11.6**	**-0.3**
DZM	**Mont Dzumac**	**90.54**	**219**	LR	LR	02 21 00.5	
	comp=Z,36nm,20.0s,baz=46,slow=32						
PTGA	**Pitinga**	**91.23**	**89**	P	**P**	**01 45 49.3**	**+0.1**
PTGA				IAmb	IAmb	01 45 50.2	
	comp=Z,12nm,0.8s						
ASAR	**Alice Springs**	**103.94**	**246**	Pdiff	**Pdif**	**01 46 48.0**	**+1.6**
	comp=Z,0.4nm,0.8s,baz=63,slow=8.5,SNR=2.5						
ASAR	**Alice Springs**	**103.94**	**246**	P	**Pdif**	**01 46 48.0**	**+1.6**
VNDA	**Vanda**	**142.48**	**195**	PKP	**PKPdf**	**01 52 12.1**	**-2.3**
	comp=Z,0.5nm,0.5s,baz=42,slow=3.3,SNR=2.3						
BOSA	**Boshof**	**146.27**	**6**	PKPbc	**PKPdf**	**01 52 23.0**	**+0.3**
	comp=Z,16nm,0.9s,baz=326,slow=2.3,SNR=22						
BOSA	**Boshof**	**146.27**	**6**	PKP2	**PKPbc**	**01 52 24.1**	**+0.1**
BOSA	**Boshof**	**146.27**	**6**		**PKPbc**	**01 52 24.1**	**+0.1**
QSPA	**South Pole Qui**	**152.07**	**180**		**PKPbc**	**01 52 37.1**	**-0.3**

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*IDC **30** 01:57:11.1±2.3, 55.°48N×162.°29E, h0km, mb3.3/4, mb1 3.4/5, mb1mx3.2/53, mbtmp3.3/5, ML2.6/1, Error ellipse: s-maj=57.4km s-min=25.4km az=141.0*

*KRSC **30** 01:57:12.2±0.9, 54.°98N×162.°81E, h31km±26km, ML3.8*

ISC 30 01:57:07.1±1.3**, 54.°80N**±0.°03×**162.°81E**±0.°03**, h4**km±10km**, n39,** σ1.§**21**/64**, mb3.2**/4**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**1.41**	**0**	*e*P	**Pg**	**01 57 34.9**	**+0.7**
KBTR				*e*S	**Sn**	**01 57 51.7**	**-1.0**
TUMD	**Tumrok D**	**1.45**	**287**	*e*P	**Pg**	**01 57 36.4**	**+1.6**
TUMD				*e*S	**Sb**	**01 57 54.5**	**+1.1**
KBG	**Krutoberegovo**	**1.46**	**358**	*e*P	**Pb**	**01 57 35.6**	**+0.8**
KZV	**Kizimen**	**1.49**	**283**	*e*P	**Pg**	**01 57 37.2**	**+1.6**
KZV				*e*S	**Sb**	**01 57 54.9**	**+0.2**
TUMR	**Tumrok**	**1.61**	**289**	*e*P	**Pg**	**01 57 39.4**	**+1.5**
TUMR				*e*S	**Sb**	**01 57 58.8**	**+0.6**
BZGR	**Bezymyannyi-Gr**	**1.67**	**314**	*e*P	**Pb**	**01 57 38.9**	**+0.5**
BZGR				*e*S	**Sn**	**01 57 58.3**	**-0.7**
KMNR	**Kamenistaya**	**1.76**	**304**	*e*P	**Pb**	**01 57 40.6**	**+0.6**
KMNR				*e*S	**Sb**	**01 58 01.9**	**-0.5**
LGNR	**Loginova**	**1.77**	**318**	*e*P	**Pb**	**01 57 41.0**	**+0.8**
LGNR				*e*S	**Sb**	**01 58 02.1**	**-0.8**
CIRR	**Tsirk**	**1.77**	**319**	*e*P	**Pb**	**01 57 40.4**	**+0.2**
KIRR	**Kirishev**	**1.82**	**310**	*e*P	**Pb**	**01 57 41.4**	**+0.3**
KIRR				*e*S	**Sb**	**01 58 03.4**	**-1.0**
BKI	**Bering**	**1.86**	**76**	*e*P	**Pg**	**01 57 43.0**	**+0.2**

BKI				*e*S	Sb	01 58 05.5	+0.2
KRSR	Krestovskiy	1.91	319	*e*P	Pb	01 57 41.9	-0.7
KRSR				*e*S	Sn	01 58 03.8	-1.3
KLY	Klyuchi	1.95	322	*e*P	Pn	01 57 41.6	+0.6
KLY				*e*S	Sn	01 58 03.4	-2.5
BDR	Baidarnaya	1.99	334	*e*P	Pb	01 57 43.8	-0.2
SRKR	Sorokina	2.08	334	*e*P	Pb	01 57 44.9	-0.5
KOZ	Kozyrevsk	2.10	308	*e*P	Pb	01 57 46.3	+0.6
SRDR	Sredinnyy	2.33	312	*e*P	Pb	01 57 48.5	-1.1
SPN	Mys Shipunski	2.37	225	*e*P	Pg	01 57 52.5	0.0
SPN				*e*S	Sg	01 58 22.1	-1.1
NLC	Nalytchevo	2.62	233	*e*S	Sg	01 58 29.6	-1.5
SDLR	Sedlovina	2.77	238	*e*P	Pb	01 57 58.9	+1.6
SDLR				*e*S	Sb	01 58 33.0	+1.4
SMAR	Somma	2.82	239	*e*P	Pb	01 58 00.0	+1.8
SMAR				*e*S	Sb	01 58 35.2	+2.1
KRER	Koryakskii	2.83	240	*e*P	Pg	01 58 00.6	-0.6
KRER				*e*S	Sb	01 58 35.8	+2.6
UGLR	Uglovaya	2.84	238	*e*P	Pb	01 57 59.9	+1.5
UGLR				*e*S	Sb	01 58 35.1	+1.5
KRX	Arik	2.85	241	*e*P	Pb	01 58 00.7	+2.2
KRX				*e*S	Sb	01 58 35.9	+2.2
AVH	Avacha	2.85	239	*e*P	Pg	01 58 01.0	-0.7
AVH				*e*S	Sg	01 58 37.2	-1.4
KOK	Koryaka	2.89	240	*e*P	Pg	01 58 01.5	-0.9
KOK				*e*S	Sg	01 58 37.9	-1.9
DALK	Dalny	2.98	235	*e*P	Pb	01 58 02.0	+1.3
DALK				*e*S	Sb	01 58 37.6	+0.1
PET	Petropavlovsk	3.04	236	*e*P	Pb	01 58 03.0	+1.4
KRMR	Karymshinskiy	3.41	237	*e*P	Pb	01 58 08.0	+0.1
KRMR				*e*S	Sb	01 58 49.5	-0.2
PETK	Petropavlovsk-	3.46	243	Pn	Pb	01 58 07.6	-1.4
	2.3nm,0.3s,baz=66,slow=18,SNR=22						
PETK				Sn	Sb	01 58 52.6	+1.2
	2.6nm,0.3s,baz=81,slow=11,SNR=7.1						
RUS	Russkaya	3.49	229	*e*P	Pb	01 58 08.6	-0.8
MTVR	Mutnovka	3.60	232	*e*P	Pb	01 58 10.9	-0.5
MTVR				*e*S	Sb	01 58 54.5	-1.0
GRL	Gorelyy	3.61	233	*e*P	Pb	01 58 11.4	-0.1
GRL				*e*S	Sb	01 58 55.2	-0.4
ASAK	Asacha	3.80	232	*e*P	Pb	01 58 14.5	-0.2
ASAK				*e*S	Sb	01 59 00.8	-0.3
KDTR	Khodutka, Kamc	4.13	225	*e*P	Pb	01 58 20.0	-0.2
ILAR	Eielson Array	26.47	48	P	P	02 02 47.6	+2.7
	0.5nm,0.9s,baz=264,slow=8.0,SNR=2.5						
KURBB	Kurchatov Arra	48.30	302	P	P	02 05 49.6	+0.5
	0.1nm,0.4s,baz=53,slow=7.5,SNR=1.7						
MKAR	Makanchi Array	48.86	296	P	P	02 05 53.1	-0.4
	0.1nm,0.6s,baz=54,slow=7.3,SNR=1.7						
FINES	FINESS Array B	59.18	337	P	P	02 07 07.4	-1.1
	2.9nm,1.1s,baz=23,slow=11,SNR=8.8						

IDC 30 02:06:54.9±3.0**,33°.02S×178°.41W,h0^{km},mb3.7**/2**,**
mb1 3.9/3**,mb1mx3.7**/20**,mbtmp3.7**/3**,ML3.5**/1**,Error**
ellipse: s-maj=72.5km s-min=44.8km az=126.0,South
of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.37	214	Pn	Pn	02 08 29.2	-0.8
	1.1nm,0.3s,baz=247,slow=4.5,SNR=9.5						
URZ				Sn	Sn	02 09 39.4	-4.1
	1.1nm,0.3s,baz=145,slow=20,SNR=7.8						
ASAR	Alice Springs	42.69	270	P	P	02 14 54.0	+0.3
	1.0nm,0.6s,baz=106,slow=7.3,SNR=19						
WRA	Warramunga Arr	43.92	275	P	P	02 15 03.2	-0.5
	0.5nm,0.5s,baz=115,slow=7.8,SNR=5.9						
FINES	FINESS Array B	147.47	338	PKPbc	PKPbc	02 26 39.3	-0.7
	0.8nm,0.6s,baz=28,slow=4.5,SNR=7.9						

IDC ***30*** *02:09:30.9±8.0,32°.22S×179°.43E,h484^{km}±105^{km},*
mb2.3/2,mb1 2.7/3,mb1mx2.6/19,mbtmp3.5/3,Error
ellipse: s-maj=127.5km s-min=46.8km az=6.0
ISC 30 02:09:30.4±2.1**,32°.3S**±0°.1×**179°.8E**±0°.3**,h500^{km},n41,**
σ**1^{s}.39**/42**,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	Te Kaha	5.69	196	P	P	02 11 03.1	-0.4
RUGZ	Raukumara Rang	5.91	196	P	P	02 11 05.2	-0.6
OPRZ	Ohinepanea	6.13	204	P	P	02 11 09.8	+2.0
MWZ	Matawai	6.30	196	P	P	02 11 09.7	+0.3
MWZ	Matawai	6.30	196	P	S	02 12 31.2	+0.5
TKGZ	Te Karaka	6.33	194	P	P	02 11 10.5	+0.9
TKGZ	Te Karaka	6.33	194	P	S	02 12 29.9	-1.1
URZ	Urewera	6.33	199	P	P	02 11 09.9	+0.2
	6.5nm,0.3s,baz=276,slow=4.8,SNR=37						
URZ				S	S	02 12 30.4	-0.8
	8.7nm,0.3s,baz=20,slow=24,SNR=24						
URZ	Urewera	6.33	199	P	P	02 11 08.3	-1.5
RAGZ	Rawiri	6.48	197	P	P	02 11 10.8	-0.5
RAGZ	Rawiri	6.48	197	P	S	02 12 29.9	-4.0
RIGZ	Rimuhau	6.60	194	P	P	02 11 13.0	+0.6
RIGZ	Rimuhau	6.60	194	P	S	02 12 33.5	-2.7
MUGZ	Murupara	6.63	201	P	P	02 11 13.1	+0.3
RTZ	Ruatahuna	6.70	199	P	S	02 12 35.9	-2.2
SNGZ	Shannon Statio	6.77	196	P	P	02 11 14.1	0.0
SNGZ	Shannon Statio	6.77	196	P	S	02 12 40.4	+1.3
PRGZ	Paritu Road	6.79	192	P	P	02 11 15.1	+0.9
PRGZ	Paritu Road	6.79	192	P	S	02 12 39.9	+0.3
KNZ	Kokohu	6.92	194	P	S	02 12 42.0	+0.1
RAHZ	Arahi	6.96	197	P	S	02 12 43.8	+1.2
MTHZ	Maungataniwha	6.96	199	P	S	02 12 41.8	-1.0
MHGZ	Mahia Peninsul	7.01	192	P	S	02 12 42.2	-1.3
WHHZ	Waihua	7.07	196	P	S	02 12 45.7	+1.0
NMHZ	Naumai	7.20	199	P	P	02 11 19.7	+1.2
NMHZ	Naumai	7.20	199	P	S	02 12 49.2	+2.0
ARHZ	Aropaoanui	7.31	197	P	S	02 12 49.5	+0.5
BKZ	Black Stump Fm	7.35	200	P	S	02 12 51.3	+1.3
MCHZ	McNeill Hill	7.56	198	P	S	02 12 56.7	+3.0
KWHZ	Kaweka Forest	7.61	200	P	S	02 12 52.7	-2.2
CKHZ	Cape Kidnapper	7.66	196	P	S	02 12 56.8	+1.2
BHHZ	Black Hill Sta	7.78	202	P	S	02 12 57.7	-0.3
KRHZ	Kereru	7.83	200	P	S	02 12 59.5	+0.6
KAHZ	Kahuranaki	7.84	196	P	S	02 12 57.0	-2.1
PXZ	Pawanui	8.07	196	P	S	02 13 03.6	+0.3
PNHZ	Pukenui	8.13	200	P	S	02 13 04.1	-0.5
TSZ	Takapari Road	8.33	201	P	S	02 13 08.9	+0.5
PRHZ	Porangahau	8.35	197	P	S	02 13 08.5	-0.1
ASAR	Alice Springs	41.14	270	P	P	02 16 30.0	-0.6
	0.2nm,0.8s,baz=110,slow=8.0,SNR=1.2						
WRA	Warramunga Arr	42.31	275	P	P	02 16 39.1	-0.7
	0.2nm,0.5s,baz=111,slow=8.2,SNR=1.9						
FINES	FINESS Array B	146.21	337	PKPbc	PKPbc	02 28 14.5	+0.9
	1.6nm,0.8s,baz=39,slow=3.9,SNR=7.0						

NNC ***30*** *02:22:56.5±0.5,43°.16N×78°.26E,h0^{km},mb2.5,mpv2.7,*
Error ellipse: s-maj=8.0km s-min=2.4km az=176.0
SOME ***30*** *02:22:57.6,43°.17N×78°.25E,h10^{km}*
KRNET ***30*** *02:22:57.1±0.1,43°.23N×78°.24E,h30^{km},mb2.1*
ISC 30 02:22:56.6±1.0**,43°.15N**±0°.03×**78°.29E**±0°.02**,h11**^{km}±9^{km}**,**
n29,σ**0^{s}.60**/57**,8C-8D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURS	Kuram	0.35	345	*e*P	Pg	02 23 03.9	+0.3
	baz=48						
KURS				*e*S	Sg	02 23 08.6	+0.3
	baz=48						
KURS	Kuram	0.35	345	*e*P	Pg	02 23 03.9	+0.3
	1.5nm,0.1s						
KURS				*e*S	Sg	02 23 08.6	+0.3
	5.9nm,0.1s						
KPKS	Kokpek	0.42	42	*e*P	Pb	02 23 05.6	-0.6
	baz=56						
KPKS				*e*S	Sb	02 23 11.6	-1.1
	baz=56						
KPKS	Kokpek	0.42	42	*e*P	Pb	02 23 05.6	-0.6
	8.1nm,0.1s						
KPKS				*e*S	Sb	02 23 11.6	-1.1
	38nm,0.3s						
UZB	Uzynbulak	0.53	90	*e*P	Pb	02 23 07.8	-0.3
	6.7nm,0.1s						
UZB				*e*S	Sg	02 23 15.1	+0.9
	16nm,0.1s						
UZB	Uzynbulak	0.53	90	P	Pb	02 23 07.8	-0.3
	6.7nm,0.1s						
UZB				S	Sg	02 23 15.1	+0.9
	16nm,0.1s						
ANVS	Anan'yevo	0.59	231	⇑*i*P	Pb	02 23 08.6	-0.5
	baz=23						
ANVS				⇑*i*S	Sb	02 23 18.0	+0.5
	baz=23						
PRZ	Przheval'sk	0.67	173	⇑*i*P	Pn	02 23 11.8	-0.5
	baz=70						
PRZ				⇑*i*S	Sn	02 23 22.5	-0.5
	baz=70						
KOTS	Kotyrbulak	0.87	276	*e*P	Pg	02 23 13.1	-0.3
	baz=70						
KOTS				*e*S	Sg	02 23 24.3	-0.4
	baz=70						
KOTS	Kotyrbulak	0.87	276	*e*P	Pg	02 23 13.1	-0.3
	3.7nm,0.1s						
KOTS				*e*S	Sg	02 23 24.3	-0.4
	12nm,0.1s						
KOTS	Kotyrbulak	0.87	276	P	Pg	02 23 13.1	-0.3
	3.7nm,0.1s						
KOTS				S	Sg	02 23 24.3	-0.4
	12nm,0.1s						
PDGK	Podgornoye	0.89	78	P	Pb	02 23 14.1	-0.1
PDGK				S	Sg	02 23 25.8	+0.3
TNSS	Tian-Shan	0.99	264	*e*P	Pg	02 23 15.4	-0.4
	baz=59						
TNSS				*e*S	Sg	02 23 28.2	-0.6
	baz=59						
TNSS	Tian-Shan	0.99	264	*e*P	Pg	02 23 15.4	-0.4
	1.0nm,0.1s						
TNSS				*e*S	Sg	02 23 28.2	-0.6
	4.2nm,0.2s						
TNSS	Tian-Shan	0.99	264	P	Pg	02 23 15.4	-0.4
	1.0nm,0.1s						
TNSS				S	Sg	02 23 28.2	-0.6
	4.2nm,0.2s						
KTBS	Karatobe	1.30	296	*e*P	Pn	02 23 20.8	0.0
	1.3nm,0.2s						
KTBS				*e*S	Sb	02 23 37.6	-0.3
	5.9nm,0.3s						
KTBS	Karatobe	1.30	296	P	Pn	02 23 20.8	0.0
	1.3nm,0.2s						
KTBS				S	Sb	02 23 37.6	-0.3
	5.9nm,0.3s						
KDJ	Kajisay	1.31	219	⇓*i*P	Pb	02 23 21.3	-0.1
	baz=15						
KDJ				⇓*i*S	Sn	02 23 40.2	+1.5
	baz=15						
DJR	Jarkent	1.60	42	*e*P	Pg	02 23 27.2	-0.2
	0.7nm,0.1s						
DJR				*e*S	Sg	02 23 48.2	0.0
	1.8nm,0.1s						
DJR	Jarkent	1.60	42	P	Pg	02 23 27.2	-0.2
	0.7nm,0.1s						
DJR				S	Sg	02 23 48.2	0.0
	1.8nm,0.1s						
ULHL	Ulahol	1.76	240	⇓*e*P	Pn	02 23 27.8	+0.5
	baz=37						
ULHL				⇓*i*S	Sb	02 23 50.9	-0.5
	baz=37						
DGS	Degeres	1.85	274	*e*P	Pb	02 23 30.2	-0.3
	0.5nm,0.2s						
DGS				*e*S	Sb	02 23 54.4	+0.7
	3.6nm,0.2s						
DGS	Degeres	1.85	274	P	Pb	02 23 30.2	-0.3
	0.5nm,0.2s						
DGS				S	Sb	02 23 54.4	+0.7
	3.6nm,0.2s						
BOOM	Boomskoye usch	1.85	250	⇑*i*P	Pn	02 23 29.3	+0.8
	baz=47						
BOOM				⇑*i*S	Sn	02 23 52.9	+0.8
	baz=47						
TKM2	Tokmak 2	1.99	264	⇓*i*P	Pn	02 23 30.6	+0.1
	baz=62						
TKM2				⇓*i*S	Sn	02 23 55.5	0.0
	baz=62						
KAPS	Kapalarasan	2.27	19	*e*P	Pb	02 23 38.3	+0.7
	0.3nm,0.2s						
KAPS				*e*S	Sg	02 24 07.8	-1.6
	2.3nm,0.2s						
KAPS	Kapalarasan	2.27	19	Pg	Pb	02 23 38.3	+0.7
	0.3nm,0.2s						
KAPS				Lg	Lg	02 24 06.4	
	2.3nm,0.2s						
KZA	Kyzart	2.49	245	⇑*i*P	Pn	02 23 38.0	+0.5
	baz=43						
KZA				⇑*i*S	Sn	02 24 09.1	+1.0
	baz=43						
KBK	Karagaybulak	2.51	260	⇓*i*P	Pn	02 23 38.0	+0.5
	baz=58						
KBK				⇓*i*S	Sn	02 24 08.1	-0.1
	baz=58						

LDG ***30*** *02:33:40.9±0.1,43°.11N×0°.36W,h2^{km},Md2.5/3,Ml2.5/16,*
Error ellipse: s-maj=1.2km s-min=1.1km az=140.0
STR ***30*** *02:33:41.6±0.3,43°N±2°×°±°,h0^{km},MLv1.8/6*
MDD 30 02:33:40.8±0.3**,43°.11N×0°.36W,h7**^{km}±4^{km}**,mbLg2.1**/13**,**
Error ellipse: s-maj=3.5km s-min=2.4km az=161.0,
PRXIMO,Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYLO	Lourdes	0.23	92	Pg	Pg	02 33 45.5	+0.1
PYLO				Sg	Sg	02 33 49.0	+0.4
ETSF	Etsaut	0.25	215	*e*Pg	Pg	02 33 44.9	-1.0
ETSF				*e*Sg	Sg	02 33 48.2	-1.0
	48nm,0.2s						
ETSF	Etsaut	0.25	215	Pg	Pg	02 33 44.9	-1.0
ETSF				Lg	Lg	02 33 48.2	
	24nm,0.2s						
URDF	Urds	0.37	333	Pg	Pg	02 33 48.4	+0.3
URDF				Sg	Sg	02 33 53.4	+0.5
EPF	Esparros	0.52	98	*e*Pg	Pg	02 33 50.3	-0.6
EPF				*e*Sg	Sg	02 33 57.2	-0.5
	22nm,0.2s						
EPF	Esparros	0.52	98	Pg	Pg	02 33 50.3	-0.6
EPF				Lg	Lg	02 33 57.2	
	11nm,0.2s						
SJPF	Ste Jean	0.63	271	*e*Pg	Pg	02 33 52.2	-0.8
SJPF				*e*Sg	Sg	02 34 00.5	-0.7
	11nm,0.2s						
SJPF	Ste Jean	0.63	271	Pg	Pg	02 33 52.2	-0.8
SJPF				Lg	Lg	02 34 00.5	
	5.5nm,0.2s						
EORO	Oroz-Betelu	0.73	253	Pg	Pg	02 33 54.6	-0.2
	1.2nm,0.1s,SNR=5.9						
EORO				Lg	Lg	02 34 03.5	
	18nm,0.2s,SNR=10.0						
TERF	Tercis-les-Bai	0.79	317	Pg	Pg	02 33 56.4	+0.3
TERF				Sg	Sb	02 34 07.1	-0.7
EALK	Alkurruntz	0.84	278	P	Pg	02 33 55.8	-1.2
EALK				Pg	Pb	02 33 57.4	-0.5
EALK				S	Sg	02 34 08.0	0.0
EALK				Sg	Sb	02 34 09.1	-0.3
EALK	Alkurruntz	0.84	278	Pg	Pg	02 33 56.6	-0.5
	0.4nm,0.1s,SNR=10						
EALK				Lg	Lg	02 34 08.1	
	7.8nm,0.2s,SNR=5.0						
EARA	Aranguren	0.95	250	Pg	Pb	02 33 59.9	+0.2
EARA				Sg	Sn	02 34 13.6	-1.0
EARA	Aranguren	0.95	250	Pg	Pg	02 33 59.1	-0.1
	1.6nm,0.3s,SNR=7.9						
EARA				Lg	Lg	02 34 13.2	
	6.5nm,0.1s,SNR=7.9						
MLS	Moulis	1.08	97	Pg	Pg	02 34 01.2	-0.3
MLS				Sg	Sn	02 34 17.8	+0.2
CSOR	Sort	1.32	123	Pg	Pn	02 34 05.4	-0.4
	0.9nm,0.1s,SNR=18						
CSOR				Lg	Lg	02 34 24.0	
	22nm,0.3s,SNR=14						
ESAC	San Caprasio	1.39	183	Pg	Pb	02 34 07.0	-0.1
	7.0nm,0.1s,SNR=5.9						
ESAC				Lg	Lg	02 34 25.2	
	38nm,0.2s,SNR=10						
MONQ	Montcuq	1.69	41	Pg	Pb	02 34 12.6	+0.3
MONQ				Sg	Sg	02 34 34.6	-0.7
FNEB	Nbias	1.82	96	Pg	Pb	02 34 15.0	+0.5
FNEB				Sg	Sg	02 34 39.9	+0.4
CLLI	Llivia	1.83	109	Pg	Pg	02 34 15.7	-0.2
	3.1nm,0.2s,SNR=11						
CLLI				Lg	Lg	02 34 40.2	
	5.4nm,0.3s,SNR=8.7						
LRVF	chteau la Riv	1.84	1	Pn	Pn	02 34 11.6	-1.2
LRVF				Pg	Pb	02 34 15.2	+0.5
LRVF				Sg	Sg	02 34 39.6	-0.4
MTLF	Montolieu	1.90	82	*e*Pn	Pn	02 34 11.9	-1.8
MTLF	Montolieu	1.90	82	*e*Pg	Pb	02 34 15.7	-0.1
MTLF				*e*Sn	Sn	02 34 35.4	-2.5
MTLF				*e*Sg	Sb	02 34 40.2	+0.4
	5.3nm,0.3s						
MTLF	Montolieu	1.90	82	Pg	Pb	02 34 16.1	+0.3
MTLF				Sg	Sg	02 34 41.2	-0.7
MTLF	Montolieu	1.90	82	Pn	Pn	02 34 11.9	-1.8
MTLF				Pg	Pb	02 34 15.7	-0.1
MTLF				Sn	Sn	02 34 35.4	-2.5
MTLF				Lg	Lg	02 34 40.2	
	2.7nm,0.3s						
LFF	La Frestale	2.00	23	*e*Pn	Pn	02 34 13.4	-1.6
LFF	La Frestale	2.00	23	*e*Pg	Pb	02 34 17.8	+0.3
LFF				*e*Sn	Sn	02 34 37.8	-2.4
LFF				*e*Sg	Sb	02 34 43.5	+1.0
	13nm,0.2s						
LFF	La Frestale	2.00	23	Pn	Pn	02 34 13.4	-1.6
LFF				Pg	Pb	02 34 17.8	+0.3
LFF				Sn	Sn	02 34 37.8	-2.4
LFF				Lg	Lg	02 34 43.5	
	6.4nm,0.2s						
EPOB	Poblet	2.06	148	Pg	Pb	02 34 18.5	0.0
	7.0nm,0.4s,SNR=7.9						
EPOB				Lg	Lg	02 34 44.9	
	6.0nm,0.2s,SNR=5.0						
ERTA	Horta de San J	2.21	166	Pg	Pb	02 34 21.1	-0.1
	0.7nm,0.3s,SNR=13						
ERTA				Lg	Lg	02 34 49.7	
	3.8nm,0.1s,SNR=5.0						
ELAN	Lanestosa	2.25	274	Lg	Lg	02 34 50.6	
	0.5nm,0.2s,SNR=4.0						
SJAF	Saint Jean de	2.47	104	Pg	Pb	02 34 26.5	+1.0
	SNR=7.9						
SJAF				Lg	Lg	02 35 00.1	
	1.9nm,0.3s,SNR=7.9						
CFON	Fontmartina	2.47	122	Pg	Pg	02 34 28.5	+0.3
	1.1nm,0.0s,SNR=7.9						
CFON				Lg	Lg	02 34 58.6	
	14nm,0.2s,SNR=7.9						
EJON	La Jonquera	2.48	104	Lg	Lg	02 35 00.3	
	1.6nm,0.3s,SNR=7.9						
CAF	Calviac	2.52	43	*e*Pn	Pn	02 34 20.8	-1.5
CAF	Calviac	2.52	43	*e*Pg	Pb	02 34 27.7	+1.2
CAF				*e*Sn	Sn	02 34 50.6	-2.7
CAF				*e*Sg	Sb	02 34 59.7	+1.9
	6.7nm,0.2s						
CAF	Calviac	2.52	43	Pn	Pn	02 34 20.8	-1.5
CAF				Pg	Pb	02 34 27.7	+1.2
CAF				Sn	Sn	02 34 50.6	-2.7
CAF				Lg	Lg	02 34 59.7	
	3.3nm,0.2s						
RJF	Les Rejaudoux	2.58	31	*e*Pn	Pn	02 34 21.5	-1.5
RJF	Les Rejaudoux	2.58	31	*e*Pg	Pb	02 34 28.1	+0.7
RJF				*e*Sg	Sg	02 35 01.9	-1.8
	4.8nm,0.2s						
RJF	Les Rejaudoux	2.58	31	Pn	Pn	02 34 21.5	-1.5
RJF				Pg	Pb	02 34 28.1	+0.7
RJF				Lg	Lg	02 35 01.9	
	2.4nm,0.2s						
ETOR	Torete	2.61	209	Pn	Pn	02 34 23.2	-0.3
	2.4nm,0.1s,SNR=8.1						
ETOR				Sn	Sn	02 34 55.1	-0.4
	2.7nm,0.3s,SNR=5.0						
ETOR				Lg	Lg	02 35 01.8	
	9.1nm,0.2s,SNR=5.7						
EMOS	Mosqueruela	2.74	182	Pn	Pn	02 34 27.5	+2.1
	0.6nm,0.4s,SNR=4.0						
EMOS				Sn	Sn	02 34 59.2	+0.3
	0.3nm,0.2s,SNR=4.0						
EMOS				Lg	Lg	02 35 05.6	
	1.5nm,0.1s,SNR=7.9						
CHIF	Chize	3.02	359	Pn	Pn	02 34 30.2	+1.1
LASF	Ste Croix	3.22	71	*e*Pn	Pn	02 34 30.2	-1.6
LASF	Ste Croix	3.22	71	*e*Pg	Pb	02 34 40.0	+1.7
LASF				*e*Sn	Sn	02 35 06.7	-3.6
LASF				*e*Sg	Sg	02 35 21.4	-2.7
	1.6nm,0.2s						
LASF	Ste Croix	3.22	71	Pn	Pn	02 34 30.2	-1.6
LASF				Pg	Pb	02 34 40.0	+1.7
LASF				Sn	Sn	02 35 06.7	-3.6
LASF				Lg	Lg	02 35 21.4	
	0.8nm,0.2s						
MFF	Saint Martin d	3.50	2	*e*Pn	Pn	02 34 34.0	-1.6
MFF	Saint Martin d	3.50	2	*e*Pg	Pb	02 34 45.1	+2.0
MFF				*e*Sn	Sn	02 35 13.4	-3.8
MFF				*e*Sg	Sg	02 35 31.0	-2.1
	2.2nm,0.2s						
MFF	Saint Martin d	3.50	2	Pn	Pn	02 34 34.0	-1.6
MFF				Pg	Pb	02 34 45.1	+2.0
MFF				Sn	Sn	02 35 13.4	-3.8
MFF				Lg	Lg	02 35 31.0	
	1.1nm,0.2s						
TCF	Toulx Ste Croi	3.67	29	*e*Pn	Pn	02 34 36.2	-1.8
TCF	Toulx Ste Croi	3.67	29	*e*Pg	Pb	02 34 48.5	+2.5
TCF				*e*Sn	Sn	02 35 17.3	-4.3
TCF				*e*Sg	Sg	02 35 36.0	-2.7
	2.1nm,0.2s						
TCF	Toulx Ste Croi	3.67	29	Pn	Pn	02 34 36.2	-1.8
TCF				Pg	Pb	02 34 48.5	+2.5
TCF				Sn	Sn	02 35 17.3	-4.3
TCF				Lg	Lg	02 35 36.0	
	1.1nm,0.2s						
GUD	Guadarrama	3.75	230	Pn	Pn	02 34 39.0	-0.2
	0.2nm,0.2s,SNR=7.9						
GUD				Sn	Sn	02 35 21.3	-2.4
	0.3nm,0.3s,SNR=7.9						
VIVF	Saint-Julien-l	4.03	63	*e*Pn	Pn	02 34 41.1	-1.9
VIVF	Saint-Julien-l	4.03	63	*e*Pg	Pb	02 34 55.1	+2.9
VIVF				*e*Sn	Sn	02 35 26.2	-4.3
VIVF				*e*Sg	Sg	02 35 47.0	-3.3
	0.9nm,0.3s						
VIVF	Saint-Julien-l	4.03	63	Pn	Pn	02 34 41.1	-1.9
VIVF				Pg	Pb	02 34 55.1	+2.9
VIVF				Sn	Sn	02 35 26.2	-4.3
VIVF				Lg	Lg	02 35 47.0	
	0.4nm,0.3s						
BGF	Bois d'Agland	4.14	32	*e*Pn	Pn	02 34 42.9	-1.5
BGF	Bois d'Agland	4.14	32	*e*Pg	Pg	02 34 57.3	-2.8
BGF				*e*Sn	Sn	02 35 29.1	-3.9
BGF				*e*Sg	Sg	02 35 50.6	-3.0
	5.7nm,0.4s						
BGF	Bois d'Agland	4.14	32	Pn	Pn	02 34 42.9	-1.5
BGF				Pg	Pg	02 34 57.3	-2.8
BGF				Sn	Sn	02 35 29.1	-3.9
BGF				Lg	Lg	02 35 50.6	
	2.8nm,0.4s						
AVF	Avril sur Loir	4.53	34	*e*Pn	Pn	02 34 48.2	-1.6
AVF	Avril sur Loir	4.53	34	*e*Pg	Pg	02 35 04.5	-3.1
AVF				*e*Sn	Sn	02 35 38.4	-4.3
AVF				*e*Sg	Sg	02 36 02.6	-3.6
	0.7nm,0.2s						
AVF	Avril sur Loir	4.53	34	Pn	Pn	02 34 48.2	-1.6
AVF				Pg	Pg	02 35 04.5	-3.1
AVF				Sn	Sn	02 35 38.4	-4.3
AVF				Lg	Lg	02 36 02.6	
	0.3nm,0.2s						
SMF	Signal de Mont	4.63	39	*e*Pn	Pn	02 34 49.5	-1.7
SMF	Signal de Mont	4.63	39	*e*Pg	Pg	02 35 06.3	-3.2
SMF				*e*Sn	Sn	02 35 41.2	-4.0
SMF				*e*Sg	Sg	02 36 06.0	-3.5
	0.6nm,0.2s						
SMF	Signal de Mont	4.63	39	Pn	Pn	02 34 49.5	-1.7
SMF				Pg	Pg	02 35 06.3	-3.2
SMF				Sn	Sn	02 35 41.2	-4.0
SMF				Lg	Lg	02 36 06.0	
	0.3nm,0.2s						
PAB	San Pablo	4.65	221	Pn	Pn	02 34 51.2	-0.4
	0.1nm,0.1s,SNR=7.9						
PAB				Sn	Sn	02 35 41.8	-4.1
	0.2nm,0.2s,SNR=7.9						
PAB				Lg	Lg	02 36 04.2	
	0.4nm,0.4s,SNR=7.9						
HYF	Humbligny	4.67	26	*e*Pn	Pn	02 34 50.1	-1.6
HYF	Humbligny	4.67	26	*e*Pg	Pg	02 35 07.7	-2.6
HYF				*e*Sn	Sn	02 35 42.2	-4.0
HYF				*e*Sg	Sg	02 36 07.3	-3.5
HYF	Humbligny	4.67	26	Pn	Pn	02 34 50.1	-1.6
HYF				Pg	Pg	02 35 07.7	-2.6
HYF				Sn	Sn	02 35 42.2	-4.0
HYF				Lg	Lg	02 36 07.3	
SSF	Saint Saulge	4.81	33	*e*Pn	Pn	02 34 52.3	-1.4
SSF	Saint Saulge	4.81	33	*e*Pg	Pg	02 35 09.5	-3.4
SSF				*e*Sn	Sn	02 35 45.2	-4.4
SSF				*e*Sg	Sg	02 36 11.3	-3.9
	0.7nm,0.2s						
SSF	Saint Saulge	4.81	33	Pn	Pn	02 34 52.3	-1.4

SSF				Pg	Pg	02 35 09.5	-3.4
SSF				Sn	Sn	02 35 45.2	-4.4
SSF				Lg	Lg	02 36 11.3	
	0.3nm,0.2s						
LOR	**Lormes**	**5.12**	**34**	*e*Pn	Pn	02 34 56.3	-1.6
LOR	**Lormes**	**5.12**	**34**	*e*Pg	Pg	02 35 15.1	-3.8
LOR				*e*Sn	Sn	02 35 52.6	-4.7
LOR				*e*Sg	Sg	02 36 20.6	-4.6
	0.3nm,0.3s						
LOR	**Lormes**	**5.12**	**34**	Pn	Pn	02 34 56.3	-1.6
LOR				Pg	Pg	02 35 15.1	-3.8
LOR				Sn	Sn	02 35 52.6	-4.7
LOR				Lg	Lg	02 36 20.6	
	0.2nm,0.3s						

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*INMG **30** 02:35:12.3±2.0, 42°.44N×8°.11W, h6^{km}±9^{km}, ML1.8, Error ellipse: s-maj=6.4km s-min=3.9km az=84.0*

MDD 30 02:35:12.4±0.3**, 42°.43N**×**8°.10W, h11**^{km}**, mbLg2.1**/7**, 4C-2D, Error ellipse: s-maj=4.9km s-min=2.3km az=89.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EAGO	**Agolada(Pontev**	**0.37**	**1**	⇑Pg	Pg	02 35 19.6	-0.2
	24nm,0.0s,SNR=18						
EAGO				Lg	Lg	02 35 24.8	
	56nm,0.1s,SNR=7.9						
PGAV	**Gavieira, Arco**	**0.48**	**195**	Pg	Pg	02 35 21.4	-0.5
PGAV				Lg	Lg	02 35 28.1	
	21nm,0.5s						
PGAV	**Gavieira, Arco**	**0.48**	**195**	⇑*e*Pg	Pg	02 35 21.4	-0.5
PGAV				*e*Sg	Sg	02 35 28.1	-0.1
PGAV				A	A	02 35 30.9	
	21nm,0.5s						
ELOB	**Lobios**	**0.56**	**177**	⇑Pg	Pg	02 35 22.8	-0.5
	4.7nm,0.0s,SNR=18						
ELOB				Lg	Lg	02 35 30.2	
	19nm,0.1s,SNR=22						
PCAB	**Cabril**	**0.72**	**176**	Pg	Pg	02 35 25.7	-0.7
PCAB				Lg	Lg	02 35 35.3	
	22nm,0.1s						
PCAB	**Cabril**	**0.72**	**176**	⇑*e*P	Pg	02 35 25.7	-0.7
PCAB				*e*S	Sg	02 35 35.3	-0.5
PCAB				A	A	02 35 36.5	
	44nm,0.1s						
EMAZ	**Mazaricos**	**0.83**	**309**	⇓Pg	Pg	02 35 27.6	-0.8
	10nm,0.1s,SNR=18						
EMAZ				Lg	Lg	02 35 37.6	
	20nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**1.12**	**115**	⇓Pg	Pb	02 35 33.2	-0.7
	5.1nm,0.1s,SNR=18						
ECAL				Lg	Lg	02 35 47.6	
	11nm,0.1s,SNR=11						
EPON	**Pontenova**	**1.14**	**38**	Pg	Pb	02 35 31.6	-2.5
	0.4nm,0.1s,SNR=16						
EPON				Lg	Lg	02 35 47.7	
	8.9nm,0.1s,SNR=15						
PBRG	**Braganca**	**1.19**	**121**	Sn	Sb	02 35 49.5	-0.8
	3.9nm,0.2s						
PBRG	**Braganca**	**1.19**	**121**	Pg	Pb	02 35 34.2	-0.8
PBRG	**Braganca**	**1.19**	**121**	*e*P	Pb	02 35 34.2	-0.8
PBRG				*e*S	Sb	02 35 49.5	-0.8
PBRG				A	A	02 35 51.3	
	7.8nm,0.2s						
PVRL	**Vila Real**	**1.19**	**166**	Pg	Pb	02 35 34.0	-1.0
PVRL				Lg	Lg	02 35 49.7	
	17nm,0.1s						
PVRL	**Vila Real**	**1.19**	**166**	*e*P	Pb	02 35 34.0	-1.0
PVRL				*e*S	Sb	02 35 49.7	-0.6
PVRL				A	A	02 35 50.4	
	33nm,0.1s						
MVO	**Moncorvo**	**1.50**	**147**	Pg	Pb	02 35 40.1	-0.1
	0.8nm,0.1s,SNR=7.9						
MVO				Lg	Lg	02 35 58.3	
	13nm,0.1s,SNR=13						
MVO	**Moncorvo**	**1.50**	**147**	*e*Pg	Pb	02 35 40.5	+0.3
MVO				*e*Sn	Sn	02 35 58.6	-0.2
MVO				A	A	02 36 01.0	
	12nm,0.3s						
PVIS	**Viseu**	**1.72**	**175**	Pg	Pb	02 35 43.2	-0.8
PVIS				Sn	Sb	02 36 05.9	+0.3
	5.2nm,0.1s						
PVIS	**Viseu**	**1.72**	**175**	*e*Pg	Pb	02 35 43.2	-0.8
PVIS				*e*Sn	Sb	02 36 05.9	+0.3
PVIS				A	A	02 36 09.4	
	10nm,0.1s						
MTE	**Manteigas**	**2.07**	**168**	Pg	Pb	02 35 50.3	+0.3
MTE				Lg	Lg	02 36 15.6	
	3.7nm,0.4s						
MTE	**Manteigas**	**2.07**	**168**	*e*Pg	Pb	02 35 50.3	+0.3
MTE				*e*Sg	Sb	02 36 15.6	-0.2
MTE				A	A	02 36 18.1	
	7.4nm,0.4s						
EARI	**Arriondas**	**2.30**	**67**	Pg	Pb	02 35 53.6	-0.2
	0.2nm,0.2s,SNR=7.9						
EARI				Sn	Sn	02 36 16.2	-2.3
	0.3nm,0.4s,SNR=7.9						
EARI				Lg	Lg	02 36 23.6	
	1.8nm,0.2s,SNR=4.6						
PCAS	**Casmilo, Conde**	**2.39**	**187**	Pg	Pg	02 35 57.9	-0.4
PCAS				Lg	Lg	02 36 26.8	
	2.4nm,0.8s						
PCAS	**Casmilo, Conde**	**2.39**	**187**	*e*Pg	Pg	02 35 57.9	-0.4
PCAS				*e*Sg	Sb	02 36 26.8	+1.8
PCAS				A	A	02 36 32.5	
	2.4nm,0.8s						
PCBR	**Castelo Branco**	**2.63**	**169**	Lg	Lg	02 36 33.3	
	1.2nm,0.5s						
PCBR	**Castelo Branco**	**2.63**	**169**	*e*Sg	Sb	02 36 33.3	+1.5
PCBR				A	A	02 36 36.9	
	2.4nm,0.5s						
PSBE	**So Bento**	**2.96**	**190**	*e*Pn	Pn	02 35 58.5	-0.8
GUD	**Guadarrama**	**3.46**	**120**	Pn	Pn	02 36 05.5	-0.8
	0.1nm,0.2s,SNR=7.9						
GUD				Sn	Sn	02 36 43.9	-3.4
	0.6nm,0.6s,SNR=7.9						
GUD				Lg	Lg	02 37 01.2	
	0.6nm,0.3s,SNR=7.9						
ELAN	**Lanestosa**	**3.52**	**75**	Lg	Lg	02 37 03.0	
	0.5nm,0.2s,SNR=7.9						
PESTR	**Estremoz**	**3.58**	**174**	*e*Sn	Sn	02 36 46.3	-3.8
PESTR				*e*Sg	Sg	02 37 03.7	-3.7
EBAD	**Badajoz**	**3.76**	**167**	Pn	Pn	02 36 09.0	-1.3
	0.1nm,0.2s,SNR=7.9						
EBAD				Sn	Sn	02 36 50.7	-3.9
	0.5nm,0.2s,SNR=7.9						
EBAD				Lg	Lg	02 37 08.5	
	1.5nm,0.3s,SNR=7.9						
PAB	**San Pablo**	**4.04**	**134**	Sn	Sn	02 36 57.5	-4.2
	0.0nm,0.3s,SNR=7.9						
PAB				Lg	Lg	02 37 17.9	
	0.4nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**4.17**	**130**	Lg	Lg	02 37 21.7	
	3.0nm,1.3s,baz=313,slow=30,SNR=7.9						
EMIN	**Mina Concepcio**	**4.78**	**166**	Lg	Lg	02 37 41.8	
	0.3nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	**4.81**	**154**	Sn	Sn	02 37 16.1	-4.3
	0.2nm,0.3s,SNR=7.9						
ECAB				Lg	Lg	02 37 41.7	
	0.4nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**5.04**	**147**	Lg	Lg	02 37 49.4	
	0.4nm,0.3s,SNR=7.9						

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*IDC **30** 02:44:43.9±0.6, 19°.80S×70°.80W, h0^{km}, mb4.2/12, mb1 4.3/16, mb1mx4.2/29, mbtmp4.2/16, ML3.7/4, MS3.7/11, Ms1 3.7/11, ms1mx3.5/21, Error ellipse: s-maj=21.4km s-min=16.0km az=55.0*

*SJA **30** 02:44:44.4±1.0, 19°.92S×71°.06W, h19^{km}±6^{km}, ML4.6, MW4.6*

*NEIC **30** 02:44:45.8, 20°.01S×71°.08W, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.89; M$_{\theta\theta}$0.05; M$_{\phi\phi}$-0.93; M$_{r\theta}$0.00; M$_{\theta\phi}$0.38; M$_{\phi r}$-0.21; Fault plane solution: M$_0$1.01000×10^{16} NP1:φ$_s$336.06000°, δ39.54000°, λ82.45000°. NP2:φ$_s$165.81000°, δ50.87000°, λ96.19000°. Principal axes: T 0.9100, Plg83.0000°, Azm112.0000°; N 0.1716, Plg5.0000°, Azm342.0000°; P -1.0816, Plg6.0000°, Azm251.0000°;*

*NEIC **30** 02:44:45.3±2.5, 19°.99S±0°.04×71°.03W±0°.05, h11^{km}, mb4.6/34, Mwr4.6/32, ML4.8(GUC) Error ellipse: s-maj=7.1km s-min=6.0km az=108.0*

*GUC **30** 02:44:46.4±0.9, 19°.95S×71°.07W, h46^{km}±5^{km}, ML4.8*

*VAO **30** 02:44:49.6±0.7, 19°.83S×70°.79W, h35^{km}±4^{km}, mb4.5*

ISC 30 02:44:46.4±0.8**, 19°.93S**±0°.02×**71°.00W**±0°.04**, h19**^{km}±3^{km}**, n162, σ1^{s}.35**/177**, mb4.5**/20**, MS3.9**/6**, 6C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.89**	**68**	⇓*i*P	**Pb**	**02 45 03.1**	**-0.2**
PSGC				*i* S	**Sn**	**02 45 16.5**	**+0.1**
PSGCX	**Pisagua**	**0.89**	**68**		**Pg**	**02 45 03.4**	**-0.4**
PSGCX	**Pisagua**	**0.89**	**68**	*e*P	**Pg**	**02 45 03.5**	**-0.4**
PSGCX				*e*S	**Sn**	**02 45 16.3**	**0.0**
PSGCX				IAML		02 45 19.3	
	comp=Z,13μm,0.4s						
TA01	**Diego Aracena**	**0.99**	**129**	⇑*i*P	**Pb**	**02 45 05.0**	**0.0**
TA01				*i* S	**Sn**	**02 45 18.6**	**-0.1**
PATCX	**Punta Patache**	**1.19**	**138**		**Pn**	**02 45 07.7**	**-0.3**
PATCX	**Punta Patache**	**1.19**	**138**	*e*P	**Pn**	**02 45 07.8**	**-0.3**
PATCX				*e*S	**Sb**	**02 45 22.8**	**-0.6**
PATCX				IAML		02 45 45.0	
	comp=Z,5μm,0.9s						
PB11	**IPOC Station P**	**1.27**	**82**	*i* P	**Pb**	**02 45 09.6**	**-0.3**
PB11				*i* S	**Sg**	**02 45 27.7**	**-0.1**
PB11				IAML		02 45 29.4	
	comp=E,40μm,0.4s						
PB11	**IPOC Station P**	**1.27**	**82**		**Pb**	**02 45 09.7**	**-0.3**
PB11	**IPOC Station P**	**1.27**	**82**	*e*P	**Pb**	**02 45 09.7**	**-0.2**
PB11				*e*S	**Sg**	**02 45 27.8**	**-0.1**
PB11				IAML		02 45 28.6	
	comp=Z,22μm,0.5s						
PB12	**IPOC Station P**	**1.46**	**26**	⇑*i*P	**Pn**	**02 45 11.5**	**-0.3**
PB12				*i* S	**Sb**	**02 45 32.0**	**+0.9**
PB12	**IPOC Station P**	**1.46**	**26**		**Pn**	**02 45 11.6**	**-0.2**
PB12	**IPOC Station P**	**1.46**	**26**	*e*P	**Pn**	**02 45 11.6**	**-0.2**
PB12				*e*S	**Sg**	**02 45 33.3**	**-0.3**
PB12				IAML		02 45 39.4	
	comp=Z,5μm,0.7s						
MNMC	**Minye Minye**	**1.54**	**59**		**Pb**	**02 45 14.3**	**-0.3**
MNMCX	**Minye Minye**	**1.54**	**59**	*e*P	**Pb**	**02 45 13.8**	**-0.7**
MNMCX				*e*S	**Sg**	**02 45 35.9**	**-0.6**
MNMCX				IAML		02 45 40.9	
	comp=Z,11μm,0.4s						
GO01	**Chusmiza**	**1.72**	**81**	⇑*i*P	**Pn**	**02 45 16.4**	**+0.7**
GO01				*i* S	**Sb**	**02 45 40.1**	**+1.0**
GO01				IAML		02 45 42.7	
	comp=N,18μm,0.3s						
GO01	**Chusmiza**	**1.72**	**81**		**Pb**	**02 45 17.3**	**-0.3**
PB02	**IPOC Station P**	**1.72**	**143**	*e*P	**Pn**	**02 45 15.6**	**+0.2**
PB02				*e*S	**Sg**	**02 45 43.1**	**+1.1**
PB02				IAML		02 45 50.1	
	comp=Z,8μm,0.3s						
PB08	**IPOC Station P**	**1.75**	**97**	⇑*i*P	**Pn**	**02 45 16.5**	**+0.5**
PB08				*i* S	**Sb**	**02 45 40.4**	**+0.7**
PB08				IAML		02 45 47.9	
	comp=N,8μm,0.6s						
PB08	**IPOC Station P**	**1.75**	**97**	*e*P	**Pn**	**02 45 16.6**	**+0.6**
PB08				*e*S	**Sg**	**02 45 41.9**	**-1.0**
PB08				IAML		02 45 42.8	
	comp=Z,6μm,0.6s						
PB01	**IPOC Station P**	**1.80**	**128**	⇑*i*P	**Pn**	**02 45 16.9**	**+0.5**
PB01				*i* S	**Sb**	**02 45 39.8**	**-1.1**
PB01	**IPOC Station P**	**1.80**	**128**		**Pn**	**02 45 17.3**	**+0.8**
PB07	**IPOC Station P**	**2.06**	**150**		**Pn**	**02 45 20.0**	**-0.2**
PB07	**IPOC Station P**	**2.06**	**150**	*i* P	**Pn**	**02 45 20.1**	**-0.2**
PB07				*e*S	**Sg**	**02 45 54.2**	**+1.2**
PB07				IAML		02 46 00.6	
	comp=Z,3μm,0.6s						
PB16	**IPOC Station P**	**2.12**	**42**	*i* P	**Pn**	**02 45 21.9**	**+0.5**
PB16				*i* S	**Sb**	**02 45 51.8**	**+1.0**
PB16				IAML		02 46 01.9	
	comp=E,8μm,0.8s						
PB16	**IPOC Station P**	**2.12**	**42**		**Pb**	**02 45 23.8**	**-0.8**
PB16	**IPOC Station P**	**2.12**	**42**	*e*P	**Pn**	**02 45 22.2**	**+0.8**
PB16				*e*S	**Sb**	**02 45 51.8**	**+1.0**
PB16				IAML		02 45 55.0	
	comp=Z,8μm,0.4s						
PB03	**IPOC Station P**	**2.41**	**151**	*e*P	**Pn**	**02 45 24.2**	**-0.6**
PB03				*e*S	**Sg**	**02 46 07.0**	**+3.1**
PB03				IAML		02 46 08.8	
	comp=Z,2μm,0.8s						
PB09	**IPOC Station P**	**2.48**	**139**	⇑*i*P	**Pn**	**02 45 27.1**	**+1.2**
PB09				*i* S	**Sg**	**02 46 04.3**	**-1.9**
PB09				IAML		02 46 16.1	
	comp=N,4μm,0.5s						
PB09	**IPOC Station P**	**2.48**	**139**		**Pn**	**02 45 26.5**	**+0.6**
PB09	**IPOC Station P**	**2.48**	**139**	*i* P	**Pn**	**02 45 27.2**	**+1.3**
PB09				*e*S	**Sg**	**02 46 06.6**	**+0.4**
PB09				IAML		02 46 12.6	
	comp=Z,5μm,1.3s						
PB04	**IPOC Station P**	**2.52**	**162**		**Pn**	**02 45 25.3**	**-1.1**
PB04	**IPOC Station P**	**2.52**	**162**	*i* P	**Pn**	**02 45 25.6**	**-0.8**
PB05	**IPOC Station P**	**3.00**	**166**	*i* P	**Pn**	**02 45 31.7**	**-1.3**
PB05				*e*S	**Sg**	**02 46 22.2**	**-0.7**
PB05				IAML		02 46 29.2	
	comp=Z,960nm,1.1s						
PB06	**IPOC Station P**	**3.06**	**155**	*i* P	**Pn**	**02 45 33.3**	**-0.6**
PB06				*e*S	**Sg**	**02 46 24.6**	**-0.4**
PB06				IAML		02 46 32.0	
	comp=Z,2μm,1.0s						
LVC	**Limon Verde**	**3.30**	**144**	Pn	**Pn**	**02 45 38.7**	**+1.3**
	comp=Z,21nm,0.3s,baz=334,slow=7.3,SNR=156						
LVC				Sn	**Sn**	**02 46 17.6**	**+1.4**
	comp=Z,72nm,0.3s,baz=150,slow=20,SNR=6.7						
LVC				LR	LR	02 46 21.4	
	comp=Z,200nm,21.2s,baz=316,slow=30						
LVC	**Limon Verde**	**3.30**	**144**		**Pn**	**02 45 38.3**	**+0.9**
LVC	**Limon Verde**	**3.30**	**144**	*e*P	**Pn**	**02 45 38.9**	**+1.6**
LVC				*e*S	**Sn**	**02 46 17.0**	**+0.8**
LVC	**Limon Verde**	**3.30**	**144**	*i* P	**Pn**	**02 45 38.7**	**+1.3**
LVC				*e*S	**Sg**	**02 46 30.4**	**-2.1**
LVC				IAML		02 46 34.1	
	comp=Z,500nm,0.7s						
PB15	**IPOC Station P**	**3.56**	**157**		**Pn**	**02 45 40.0**	**-0.7**
PB15	**IPOC Station P**	**3.56**	**157**	*i* P	**Pn**	**02 45 40.2**	**-0.6**
PB15				*e*S	**Sg**	**02 46 40.3**	**-0.4**
PB15				IAML		02 46 60.0	
	comp=Z,2μm,0.8s						
PB10	**IPOC Station P**	**3.59**	**173**		**Pn**	**02 45 39.7**	**-1.2**
PB10	**IPOC Station P**	**3.59**	**173**	*i* P	**Pn**	**02 45 39.4**	**-1.6**
PB10				*e*S	**Sg**	**02 46 44.0**	**+2.3**
PB10				IAML		02 47 07.6	
	comp=Z,323nm,1.8s						
LPAZ	**La Paz**	**4.54**	**37**	Pn	Pb	02 46 00.3	-5.5
	comp=Z,3.9nm,0.3s,baz=310,slow=0.2,SNR=31						
LPAZ				LR	LR	02 47 50.8	
	comp=Z,1μm,19.6s,baz=237,slow=43						
LPAZ	**La Paz**	**4.54**	**37**		**Pn**	**02 45 56.6**	**+2.0**
LPAZ	**La Paz**	**4.54**	**37**	*e*P	**Pn**	**02 45 53.9**	**-0.7**
PB14	**IPOC Station P**	**4.70**	**173**		**Pn**	**02 45 54.9**	**-1.8**
PB14	**IPOC Station P**	**4.70**	**173**	*i* P	**Pn**	**02 45 54.7**	**-2.0**
PB14				IAML		02 47 33.1	
	comp=Z,300nm,1.1s						
GO02	**Mina Guanaco**	**5.37**	**166**		**Pn**	**02 46 05.2**	**-0.6**
YJA	**Yavi**	**5.59**	**115**	*i* P	**Pn**	**02 46 12.0**	**+3.1**
GO03	**Copiap**	**7.66**	**175**	Pn	**Pn**	**02 46 37.9**	**+0.9**
NNA	**Nana**	**9.69**	**324**	Pn	**Pn**	**02 47 06.9**	**+1.9**
	comp=Z,1.3nm,0.3s,baz=163,slow=18,SNR=2.3						
NNA				Sn	**Sn**	**02 48 49.6**	**-3.8**
	comp=Z,2.4nm,0.3s,baz=212,slow=15,SNR=2.5						
NNA				LR	LR	02 51 00.8	
	comp=Z,255nm,18.5s,baz=151,slow=39						
GO04	**Tololo Observa**	**10.20**	**179**	Pn	**Pn**	**02 47 10.1**	**-1.9**
SIV	**San Ignacio**	**10.23**	**69**	Pn	**Pn**	**02 47 10.8**	**-1.5**
	comp=Z,0.7nm,0.3s,baz=272,slow=9.3,SNR=14						
ROC1	**El Roble**	**12.99**	**180**	Pn	**Pn**	**02 47 48.6**	**-1.6**
SAML	**Samuel**	**13.28**	**36**		**Pn**	**02 47 52.5**	**-1.5**
CPUP	**Villa Florida**	**14.09**	**119**	Pn	**Pn**	**02 48 05.2**	**+0.2**
	comp=Z,0.0nm,0.3s,baz=297,slow=16,SNR=2.1						
CPUP				LR	LR	02 54 08.3	
	comp=Z,358nm,18.8s,baz=298,slow=40						
CPUP	**Villa Florida**	**14.09**	**119**	Pn	**Pn**	**02 48 05.9**	**+0.9**
CPUP	**Villa Florida**	**14.09**	**119**	*e*P	**Pn**	**02 48 05.7**	**+0.7**
AQDB	**Aquidauana**	**14.37**	**95**	*e*P	**Pn**	**02 48 08.4**	**-0.6**
ATAH	**Atahualpa**	**14.61**	**330**	LR	LR	02 53 29.6	
	comp=Z,144nm,19.8s,baz=80,slow=36						
SALV	**Santo Antonio**	**15.11**	**77**	*e*P	**Pn**	**02 48 18.1**	**-0.8**
C2SB	**Chapadao do Su**	**17.18**	**89**	*e*P	**Pn**	**02 48 44.8**	**-0.7**
CLDB	**Colider**	**17.19**	**61**	*e*P	**Pn**	**02 48 44.4**	**-1.2**
TRCB	**Terra Rica**	**17.34**	**103**	*e*P	**Pn**	**02 48 46.6**	**-0.9**
PTGB	**Pitanga**	**18.15**	**109**	*e*P	**P**	**02 48 58.1**	**+0.3**
PCMB	**Pacaembu**	**18.53**	**99**	*e*P	**P**	**02 49 00.9**	**-1.0**
ARAG	**Araguaiana, MT**	**18.74**	**80**	*e*P	**P**	**02 49 02.4**	**-1.8**
ITAB	**Concordia**	**18.75**	**116**	*e*P	**P**	**02 49 03.8**	**-0.4**
PLTB	**Pedras Altas**	**19.56**	**130**	*e*P	**P**	**02 49 13.3**	**+0.2**
FRTB	**Fartura**	**20.21**	**104**	*e*P	**P**	**02 49 20.6**	**+0.3**
CNLB	**Canela**	**20.53**	**121**	*e*P	**P**	**02 49 23.5**	**-0.2**
PLCA	**Paso Flores**	**20.74**	**179**	P	Pn	02 49 27.6	-0.8
	comp=Z,7.6nm,0.9s,baz=279,slow=14,SNR=7.3						
PLCA	**Paso Flores**	**20.74**	**179**	P	**P**	**02 49 23.4**	**-2.5**
PLCA	**Paso Flores**	**20.74**	**179**	*e*P	Pn	02 49 28.1	-0.2
BB19B	**Bebedouro**	**21.08**	**97**	*e*P	**P**	**02 49 28.7**	**-1.0**
IPMB	**Ipameri, GO**	**21.64**	**89**	*e*P	**P**	**02 49 34.6**	**-1.2**
FLOC	**Florencia**	**21.86**	**347**	*e*P	**P**	**02 49 40.1**	**+2.0**
FLOC	**Florencia**	**21.86**	**347**	P	**P**	**02 49 37.5**	**-0.6**
PTGA	**Pitinga**	**21.93**	**31**	P	**P**	**02 49 37.4**	**-1.4**
	comp=Z,19nm,0.5s,baz=202,slow=13,SNR=38						
PTGA	**Pitinga**	**21.93**	**31**	P	**P**	**02 49 37.3**	**-1.6**
PTGA	**Pitinga**	**21.93**	**31**	*e*P	**P**	**02 49 37.2**	**-1.6**
GCUF	**Volcan Galeras**	**21.93**	**343**	*e*P	**P**	**02 49 42.2**	**+2.9**
RCLB	**Rio Claro- Sao**	**22.02**	**101**	*e*P	**P**	**02 49 39.0**	**-0.9**
CRUC	**La Cruz**	**22.15**	**344**	*e*P	**P**	**02 49 46.0**	**+4.4**
BDFB	**Brasilia**	**22.29**	**83**	P	**P**	**02 49 40.4**	**-2.5**
	comp=Z,3.9nm,0.6s,baz=259,slow=10,SNR=9.1						
BDFB				LR	LR	02 59 53.5	
	comp=Z,386nm,18.3s,baz=284,slow=41						
BDFB	**Brasilia**	**22.29**	**83**	P	**P**	**02 49 42.2**	**-0.7**
VAO	**Valinhos**	**22.57**	**102**	*e*P	**P**	**02 49 46.0**	**+0.3**
SOTA	**Rioblanco**	**22.61**	**345**	*e*P	**P**	**02 49 47.5**	**+0.8**
PCON	**Cinco Dias**	**22.75**	**346**	*e*P	**P**	**02 49 51.0**	**+2.8**
POPC	**Popayan, Colom**	**23.02**	**345**	*e*P	**P**	**02 49 52.5**	**+1.9**
PARB	**Paraibuna**	**23.82**	**103**	*e*P	**P**	**02 49 57.9**	**-0.5**
ORTC	**Ortega, Tolima**	**24.06**	**350**	*e*P	**P**	**02 50 01.1**	**+0.5**
YOTC	**Yotoco, Valle**	**24.34**	**347**	*e*P	**P**	**02 50 06.4**	**+3.1**
CHIC	**Chingaza**	**24.56**	**353**	*e*P	**P**	**02 50 05.2**	**-0.4**
BSCB	**Bom Sucesso**	**24.59**	**97**	*e*P	**P**	**02 50 05.3**	**-0.2**
ROSC	**El Rosal**	**24.83**	**352**	LR	LR	03 00 22.3	
	comp=Z,391nm,20.7s,baz=226,slow=38						
ROSC	**El Rosal**	**24.83**	**352**	P	**P**	**02 50 08.2**	**+0.1**
ROSC				IAmb	IAmb	02 50 24.9	
	comp=Z,13nm,0.8s						
RREF	**El Recreo**	**25.05**	**350**	*e*P	**P**	**02 50 12.0**	**+1.7**
SMTB	**Santa Maria do**	**25.17**	**67**	*e*P	**P**	**02 50 09.9**	**-0.9**
GUY2C	**Guyana, Caldas**	**25.37**	**350**	*e*P	**P**	**02 50 14.3**	**+1.3**
NORC	**Norcasia**	**25.62**	**351**	*e*P	**P**	**02 50 15.2**	**+0.3**
RUSC	**La Rusia**	**25.75**	**355**	*e*P	**P**	**02 50 16.6**	**+0.1**
RUSC	**La Rusia**	**25.75**	**355**	P	**P**	**02 50 16.7**	**+0.3**
JANB	**Januaria**	**25.89**	**83**	*e*P	**P**	**02 50 15.5**	**-1.9**
CBOC	**Ciudad Bolivar**	**26.11**	**349**	*e*P	**P**	**02 50 20.0**	**+0.6**
PTBC	**PUERTO BERRIO,**	**26.53**	**352**	*e*P	**P**	**02 50 19.3**	**-3.7**
ZARC	**Zaragoza, Cauc**	**27.52**	**352**	*e*P	**P**	**02 50 29.9**	**-2.0**
SDV	**Santo Domingo**	**28.64**	**1**	P	**P**	**02 50 41.6**	**-0.6**
	comp=Z,1.0nm,0.4s,baz=30,slow=20,SNR=3.1						
SDV	**Santo Domingo**	**28.64**	**1**	*e*P	**P**	**02 50 42.3**	**+0.2**
MDP	**Montagnes des**	**30.74**	**38**	P	**P**	**02 50 59.4**	**-1.1**
	comp=Z,21nm,1.1s,baz=225,slow=13,SNR=4.3						
RCBR	**Riachuelo**	**36.87**	**72**	P	**P**	**02 51 54.1**	**+0.1**
RCBR	**Riachuelo**	**36.87**	**72**	*e*P	**P**	**02 51 53.6**	**-0.3**
RCBR				*e*pP	**pwP**	**02 52 02.4**	**+0.3**
TXAR	**Lajitas Array**	**58.24**	**326**	P	**P**	**02 54 39.8**	**0.0**
	comp=Z,0.7nm,0.8s,baz=141,slow=6.9,SNR=7.0						
G62A	**West of Eustis**	**64.84**	**0**	P	**P**	**02 55 25.9**	**+2.0**
X16A	**Lo Mia Camp, P**	**66.34**	**324**	P	**P**	**02 55 33.7**	**-0.4**
KNB	**Kanab**	**69.02**	**325**	P	**P**	**02 55 50.3**	**-0.7**
CCUT	**Cedar City**	**69.71**	**325**	P	**P**	**02 55 57.1**	**+1.9**
P17A	**Butcher Ranch,**	**69.80**	**328**	P	**P**	**02 55 55.3**	**-0.4**
DBIC	**Dimbokro**	**70.19**	**75**	P	**P**	**02 55 56.4**	**-2.0**
	comp=Z,7.9nm,1.0s,baz=239,slow=7.3,SNR=6.3						
DBIC				LR	LR	03 25 21.7	
	comp=Z,88nm,19.6s,baz=229,slow=35						
PDAR	**Pinedale Array**	**71.79**	**331**	P	**P**	**02 56 09.2**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=134,slow=3.9,SNR=2.3						
PDAR				LR	LR	03 30 08.9	
	comp=Z,34nm,18.1s,baz=104,slow=38						
NVAR	**Mina Array Bea**	**73.07**	**323**	P	**P**	**02 56 16.6**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=143,slow=3.8,SNR=4.1						
ULM	**Lac du Bonnet**	**73.26**	**344**	P	**P**	**02 56 15.4**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=134,slow=3.0,SNR=5.4						
ULM				LR	LR	03 30 41.6	
	comp=Z,36nm,19.2s,baz=82,slow=38						
FLWY	**Flagg Ranch**	**73.34**	**331**	IAmb	IAmb	02 56 29.4	
	comp=Z,7.5nm,0.9s						
RLMT	**Red Lodge**	**73.53**	**333**	IAmb	IAmb	02 56 31.5	
	comp=Z,7.1nm,1.3s						
YHH	**Holmes Hill**	**73.96**	**332**	P	**P**	**02 56 21.6**	**+0.9**
SCHQ	**Schefferville**	**74.55**	**2**	P	**P**	**02 56 22.6**	**-0.9**
	comp=Z,3.0nm,1.0s,baz=216,slow=7.4,SNR=4.1						
PAHR	**Pah Rah Range**	**74.55**	**323**	P	**P**	**02 56 25.5**	**+1.3**
PAHR				IAmb	IAmb	02 56 37.6	
	comp=Z,6.9nm,1.0s						
MCMT	**McKenzie Canyo**	**74.90**	**331**	P	**P**	**02 56 27.6**	**+1.5**
MFID	**Camas Ranch**	**75.28**	**328**	P	**P**	**02 56 29.5**	**+1.3**
MFID				IAmb	IAmb	02 56 40.8	
	comp=Z,7.0nm,1.2s						
LRM	**Limekiln Ridge**	**75.47**	**331**	P	**P**	**02 56 32.7**	**+3.3**
EGMT	**Eagleton**	**76.04**	**334**	P	**P**	**02 56 33.4**	**+1.0**
EGMT				IAmb	IAmb	02 56 44.3	
	comp=Z,9.6nm,1.1s						
BMO	**Blue Mountains**	**77.05**	**328**	IAmb	IAmb	02 56 50.8	
	comp=Z,5.3nm,1.1s						
WALA	**Waterton Lakes**	**78.58**	**333**	IAmb	IAmb	02 56 58.2	
	comp=Z,5.4nm,0.9s						
TAM	**Tamanrasset**	**85.88**	**64**	P	**P**	**02 57 26.6**	**+1.0**
TAM				IAmb	IAmb	02 57 28.3	
	comp=Z,6.4nm,1.0s						
BOSA	**Boshof**	**85.91**	**119**	LR	LR	03 32 36.0	
	comp=Z,68nm,20.1s,baz=204,slow=34						
YKA	**Yellowknife Ar**	**89.08**	**341**	P	**P**	**02 57 39.6**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=137,slow=5.0,SNR=24						
H11S2	**WAKE ISLAND Hy**	**125.72**	**279**	T	T	05 23 20.0	
	baz=101,slow=74,SNR=140						
H11S1	**WAKE ISLAND Hy**	**125.73**	**279**	T	T	05 23 12.5	
	baz=101,slow=74,SNR=99						
H11S3	**WAKE ISLAND Hy**	**125.74**	**279**	T	T	05 23 14.2	
	baz=101,slow=74,SNR=69						
H11N3	**WAKE ISLAND Hy**	**125.77**	**280**	T	T	05 23 22.1	
	baz=101,slow=74,SNR=24						
H11N2	**WAKE ISLAND Hy**	**125.79**	**280**	T	T	05 23 18.2	
	baz=101,slow=74,SNR=26						
H11N1	**WAKE ISLAND Hy**	**125.79**	**280**	T	T	05 23 18.4	
	baz=101,slow=74,SNR=13						
TIXI	**Tiksi**	**126.99**	**352**	PKP	**PKPdf**	**03 03 48.3**	**-0.1**
	comp=Z,1.1nm,0.3s,baz=152,slow=1.1,SNR=5.2						
SEY	**Seymchan**	**127.89**	**337**	PKP	**PKiKP**	**03 03 50.5**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=78,slow=5.7,SNR=7.2						
ASAR	**Alice Springs**	**130.33**	**210**	PKP	**PKPdf**	**03 03 56.4**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=121,slow=1.6,SNR=9.0						
ABKAR	**Akbulak array**	**131.30**	**41**		**PKiKP**	**03 03 58.9**	**+0.7**
WRA	**Warramunga Arr**	**133.24**	**214**	PKP	**PKPdf**	**03 04 02.2**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=152,slow=2.0,SNR=7.6						
ZALV	**Zalesovo Beam**	**141.32**	**23**	PKP	**PKPdf**	**03 04 15.7**	**+0.1**
	comp=Z,2.5nm,0.5s,baz=277,slow=2.5,SNR=11						
ZALV	**Zalesovo Beam**	**141.32**	**23**		PKPpre	03 04 10.1	
AAK	**Ala-Archa**	**143.21**	**44**	PKP	**PKPdf**	**03 04 20.3**	**+0.8**
	comp=Z,1.2nm,0.5s,baz=139,slow=3.8,SNR=5.0						
AAK	**Ala-Archa**	**143.21**	**44**		**PKiKP**	**03 04 24.7**	**+1.9**
MK31	**Makanchi Array**	**145.45**	**33**		**PKPab**	**03 04 23.6**	**+0.2**
MKAR	**Makanchi Array**	**145.45**	**33**	PKPbc	**PKPab**	**03 04 23.3**	**-0.1**
	comp=Z,3.4nm,0.9s,baz=327,slow=2.0,SNR=31						
MKAR	**Makanchi Array**	**145.45**	**33**		**PKPab**	**03 04 23.9**	**+0.5**
NIL	**Nilore**	**145.47**	**59**		**PKPab**	**03 04 24.1**	**+0.2**
KLR	**Kul'dur**	**145.56**	**333**	PKPbc	**PKPab**	**03 04 24.7**	**+1.0**
	comp=Z,1.8nm,0.7s,baz=34,slow=4.7,SNR=5.4						
KSH	**Kashi**	**145.58**	**48**	PKPbc	**PKPab**	**03 04 25.3**	**+1.1**
KSH				PP	**PP**	**03 07 50.5**	**+6.1**
KSH				PKS	**PKSdf**	**03 07 59.5**	**+0.2**
USRK	**Ussuriysk Ar.**	**149.14**	**327**	PKPbc	**PKiKP**	**03 04 34.5**	**-0.3**
	comp=Z,2.0nm,0.9s,baz=69,slow=6.3,SNR=4.1						
MJAR	**Matsushiro Arr**	**149.57**	**309**	PKPbc	**PKiKP**	**03 04 35.4**	**-0.6**
	comp=Z,1.7nm,0.7s,baz=174,slow=0.8,SNR=3.6						
SONM	**Songino Array**	**152.09**	**4**	PKPbc	**PKiKP**	**03 04 41.3**	**+0.4**
	comp=Z,2.8nm,0.6s,baz=325,slow=1.2,SNR=22						
SONM	**Songino Array**	**152.09**	**4**		**PKiKP**	**03 04 40.7**	**-0.3**
LZH	**Lanzhou**	**163.28**	**15**	*e*PKP	**PKPdf**	**03 04 47.0**	**-1.3**
LZH				pPKP	pPKPdf	03 04 51.8	-2.3
LZH				sPKP		03 04 53.3	
LZH				PKP	**PKPab**	**03 05 40.0**	**+1.4**

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*IDC **30** 02:44:47.5±2.0, 6°.78S×129°.53E, h141^{km}±19^{km}, mb3.5/5, mb1 3.6/9, mb1mx3.4/33, mbtmp3.9/9, MS2.6/1, Ms1 2.6/1, ms1mx2.1/28, Error ellipse: s-maj=40.8km s-min=14.8km az=74.0*

*NEIC **30** 02:44:48.4±1.4, 6°.72S±0°.08×129°.61E±0°.08, h152^{km}±8^{km}, mb4.0/3, Error ellipse: s-maj=12.4km s-min=10.7km az=118.0*

ISC 30 02:44:47.2±0.6**, 6°.87S**±0°.05×**129°.69E**±0°.08**, h150**^{km}**, n29,**

σ2ˢ73/31, mb3.8/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.95	125		Pn	02 45 26.2	+4.5
FAKI	Fak Fak	4.68	33	Pn	Pn	02 45 56.5	0.0
SOEI	Soe	6.08	241		Pn	02 46 16.4	+1.2
SOEI					Sn	02 47 26.2	+2.2
MTN	Manton Dam	6.11	167		Pn	02 46 17.9	+2.5
SIJI	Sorong	6.16	15	P	Pn	02 46 15.3	-0.8
	2.5nm,0.3s,baz=233,slow=22,SNR=12						
SIJI				S	Sn	02 47 20.6	-5.2
	2.5nm,0.3s,baz=241,slow=23,SNR=6.0						
KNRA	Kununurra	8.80	186		Pn	02 46 52.2	+0.9
FITZ	Fitzroy Crossi	11.84	199	P	Pn	02 47 31.3	-0.2
	0.6nm,0.3s,baz=18,slow=8.1,SNR=28						
FITZ				S	Sn	02 49 35.5	-7.0
	2.3nm,0.3s,baz=46,slow=22,SNR=9.2						
FITZ	Fitzroy Crossi	11.84	199		Pn	02 47 31.1	-0.4
WRA	Warramunga Arr	13.76	161	P	Pn	02 47 56.5	+0.3
	0.5nm,0.3s,baz=296,slow=4.2,SNR=13						
WRA				S	Sn	02 50 23.4	-5.3
	0.9nm,0.3s,baz=332,slow=23,SNR=8.1						
WRA	Warramunga Arr	13.76	161		Pn	02 47 59.8	+3.6
WRA					Sn	02 50 25.2	-3.5
WB2	Warramunga Arr	13.77	161	Pn	P	02 47 60.0	+0.2
WR0	Warramunga Arr	13.84	161	Pn	Pn	02 48 00.7	+3.5
AS31	Alice Springs	17.19	167		Pn	02 48 40.2	+1.7
AS31				IAmb	IAmb	02 48 42.6	
	comp=Z,1.6nm,0.6s						
ASAR	Alice Springs	17.19	167	P	Pn	02 48 40.8	+2.3
	comp=Z,0.3nm,0.3s,baz=349,slow=11,SNR=50						
ASAR				S	S	02 51 47.6	-1.8
	comp=Z,0.3nm,0.3s,baz=350,slow=26,SNR=6.3						
ASAR				ScP	ScP	02 56 34.4	-0.3
	comp=Z,0.0nm,0.3s,baz=344,slow=1.6,SNR=5.2						
ASAR	Alice Springs	17.19	167		Pn	02 48 40.4	+1.9
GUMO	Guam	25.30	37	LR	LR	03 02 20.9	
	comp=Z,11nm,18.2s,baz=123,slow=42						
STKA	Stephens Creek	27.25	157	P	P	02 50 19.9	+2.4
	comp=Z,2.0nm,0.7s,baz=338,slow=4.9,SNR=5.6						
STKA	Stephens Creek	27.25	157	IAmb	IAmb	02 51 14.8	
	comp=Z,4.4nm,1.9s						
CMAR	Chiang Mai Arr	39.41	310	P	P	02 52 02.5	-0.2
	comp=Z,0.9nm,0.4s,baz=129,slow=7.1,SNR=4.8						
ENH	Enshi	41.70	333	P	P	02 52 21.4	0.0
ENH				IAmb	IAmb	02 52 34.0	
	comp=Z,43nm,1.0s						
ODAN	Odare	52.94	311	*e*P	P	02 53 50.2	+1.6
	comp=Z,7.3nm,0.4s						
ODAN				*e*S	PcP	02 55 09.5	+14
	comp=Z,5.2nm,0.3s						
TAPN	Taplejung	52.97	312	*e*P	P	02 53 47.4	-1.5
	comp=Z,6.0nm,0.3s						
TAPN				*e*S	PcP	02 55 03.8	+8.0
RAMN	Ramite	53.58	311	*e*P	P	02 54 00.5	+7.2
	comp=Z,5.6nm,0.4s						
JIRN	Jiri	54.27	311	*e*P	P	02 54 07.1	+8.6
	comp=Z,7.5nm,0.3s						
GUN	Gumba	54.63	311	*e*P	P	02 54 10.8	+10
	comp=Z,6.4nm,0.3s						
MKAR	Makanchi Array	67.94	327	P	P	02 55 29.6	-0.4
	comp=Z,0.5nm,0.4s,baz=116,slow=8.0,SNR=11						
ZALV	Zalesovo Beam	71.33	334	P	P	02 55 51.5	+1.1
	comp=Z,0.5nm,0.4s,baz=108,slow=3.2,SNR=1.9						
VNDA	Vanda	72.62	173	P	P	02 56 00.0	+2.3
	comp=Z,0.5nm,0.7s,baz=342,slow=6.4,SNR=2.5						
CPUP	Villa Florida	146.31	169	PKPbc	PKPab	03 04 12.9	+0.9
	comp=Z,1.5nm,0.8s,baz=212,slow=5.3,SNR=3.5						

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*KRSC **30** 03:04:58.8±1.3, 51°.83N×159°.24E, h35km±16km, ML3.9*
*IDC **30** 03:04:59.9±6.8, 51°.77N×159°.40E, h45km±47km, mb3.3/6, mb1 3.5/6, mb1mx3.2/49, mbtmp3.6/6, MS3.1/2, Ms1 3.1/2, ms1mx2.4/34, Error ellipse: s-maj=53.0km s-min=46.5km az=90.0*
ISC 30 03:04:58.3±1.7, **51°.72N**±0°.05×**159°.16E**±0°.06, **h28**km±11km, **n47, σ1ˢ58**/51, **mb3.6**/6, **Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	0.68	278	*i* P	Pn	03 05 13.4	+1.4
KDTR				*e*S	Sn	03 05 23.8	+2.2
RUS	Russkaya	0.82	331	*e*P	Pn	03 05 13.5	-0.5
RUS				*e*S	Sb	03 05 24.2	-0.4
MTVR	Mutnovka	0.97	322	*i* P	Pb	03 05 16.7	+0.1
MTVR				*e*S	Sb	03 05 29.1	-0.1
ASAK	Asacha	1.02	311	*i* P	Pb	03 05 18.2	+0.8
ASAK				*e*S	Sn	03 05 31.5	+1.2
GRL	Gorelyy	1.07	322	*e*P	Pb	03 05 18.4	+0.1
GRL				*e*S	Sb	03 05 32.3	+0.4
KRMR	Karymshinskiy	1.28	331	*i* P	Pn	03 05 19.9	-0.4
KRMR				*e*S	Sn	03 05 35.1	-1.4
DALK	Dalny	1.34	350	*e*P	Pn	03 05 20.3	-0.8
DALK				*e*S	Sn	03 05 35.5	-2.4
NLC	Nalytchevo	1.46	4	*e*P	Pn	03 05 22.0	-0.8
SPN	Mys Shipunski	1.48	21	*e*P	Pn	03 05 22.5	-0.6
SPN				*e*S	Sn	03 05 39.4	-2.1
PAU	Pauzhetka	1.48	261	*e*P	Pb	03 05 24.7	-0.5
UGLR	Uglovaya	1.51	352	*e*P	Pn	03 05 22.9	-0.7
SMAR	Somma	1.56	352	*e*P	Pn	03 05 24.1	-0.3
AVH	Avacha	1.57	351	*e*P	Pn	03 05 23.7	-0.7
SDLR	Sedlovina	1.57	354	*e*P	Pn	03 05 23.3	-1.2
MIPR	Malaya Ipel'ka	1.58	292	*e*P	Pb	03 05 27.2	+0.3
KRER	Koryakskii	1.61	351	*e*P	Pn	03 05 25.2	+0.2
KOK	Koryaka	1.61	349	*e*P	Pn	03 05 24.5	-0.4
PETK	Petropavlovsk-	1.65	328	P	Pb	03 05 26.8	-1.3
	45nm,0.3s,baz=119,slow=19,SNR=324						
PETK				S	Sb	03 05 48.0	-0.6
	26nm,0.3s,baz=103,slow=37,SNR=4.3						
PETK				LR	LR	03 06 18.6	
	comp=Z,117nm,19.3s,baz=61,slow=46						
KRX	Arik	1.67	350	*e*P	Pn	03 05 26.0	+0.1
APC	Apacha	1.72	315	*e*P	Pb	03 05 28.7	-0.5
APC				*e*S	Sb	03 05 50.7	+0.3
SKR	Severo-Kuril's	2.17	243	*e*P	Pb	03 05 36.3	-0.6
SKR				*e*S	Sb	03 06 03.3	-0.1
ALID	Alaid	2.42	251	*e*P	Pb	03 05 38.5	-2.7
KZV	Kizimen	3.47	11	*e*P	Pn	03 05 53.5	+3.0
TUMD	Tumrok D	3.57	12	*e*P	Pn	03 05 54.5	+2.7
TUMR	Tumrok	3.62	9	*e*P	Pn	03 05 55.0	+2.4
KMNR	Kamenistaya	4.10	9	*e*P	Pn	03 06 01.8	+2.7
ESO	Esso	4.22	357	*e*P	Pn	03 06 02.5	+1.7
BZGR	Bezymyannyi-Gr	4.33	12	*e*P	Pn	03 06 05.6	+3.3
ZLN	Zelenaya	4.42	12	*e*P	Pn	03 06 07.7	+4.2
LGNR	Loginova	4.47	11	*e*P	Pn	03 06 07.5	+3.1
CIRR	Tsirk	4.50	11	*e*P	Pn	03 06 06.9	+2.1
SRDR	Sredinnyy	4.62	4	*e*P	Pn	03 06 10.4	+4.1
KBTR	Krutoberegovo	4.99	24	*e*P	Pn	03 06 11.8	+0.5
KBTR				*e*S	Sn	03 07 09.6	+1.6
SRKR	Sorokina	5.08	13	*e*P	Pn	03 06 16.3	+3.7
BKI	Bering	5.36	47	*e*P	Pn	03 06 20.8	+4.4
MA2	Magadan	9.18	332	LR	LR	03 11 25.2	
	comp=Z,35nm,19.1s,baz=130,slow=42						
TIXI	Tiksi	24.11	337	P	P	03 10 09.6	-1.6
	1.0nm,0.3s,baz=118,slow=6.9,SNR=4.2						
H11N2	WAKE ISLAND Hy	32.50	166	T	T	03 45 51.9	
	SNR=8.9						
H11N3	WAKE ISLAND Hy	32.51	166	T	T	03 46 10.2	
	baz=351,slow=74,SNR=7.6						
H11N1	WAKE ISLAND Hy	32.51	166	T	T	03 46 27.2	
	baz=162,slow=74,SNR=6.9						
SONM	Songino Array	33.67	285	P	P	03 11 38.4	+1.7
	0.2nm,0.5s,baz=75,slow=6.1,SNR=1.7						
MKAR	Makanchi Array	48.24	296	P	P	03 13 35.3	-1.0
	0.2nm,0.6s,baz=49,slow=5.7,SNR=2.8						
FINES	FINESS Array B	61.15	336	P	P	03 15 08.5	-1.1
	1.1nm,0.9s,baz=35,slow=12,SNR=1.0						
FINES				LR	LR	03 46 49.0	
	comp=Z,44nm,20.8s,baz=250,slow=41						
NB2	NORSAR Subarra	64.70	343	P	P	03 15 32.8	-0.5
	comp=Z,1.9nm,0.9s,baz=22,slow=6.9						
NOA	NORSAR Array B	64.70	343	P	P	03 15 33.2	-0.1
	comp=Z,0.6nm,0.7s,baz=21,slow=6.7,SNR=7.8						
GERES	GERESS Array B	75.56	337	P	P	03 16 40.6	+0.5
	comp=Z,0.2nm,0.5s,baz=21,slow=6.3,SNR=2.5						
TBI	Tubuai	87.23	134	*e*LR	LR	03 18 11.6	
	comp=Z,149nm,27.2s						

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*ANF **30** 03:08:30.0±0.3, 35°.48N×97°.25W, h0km, ML4.5/14, Error ellipse: s-maj=4.0km s-min=2.4km az=163.0*
*TUL **30** 03:08:30.8±0.8, 35°.49N±0°.02×97°.25W±0°.03, h7km±5km, ML3.9, Mwr3.4/34(NEIC), Error ellipse: s-maj=3.5km s-min=1.7km az=58.0*
*IDC **30** 03:08:30.5±1.2, 35°.55N×97°.15W, h0km, mb1 3.8/4, mb1mx3.4/43, mbtmp3.5/4, ML3.3/4, Error ellipse: s-maj=17.5km s-min=12.3km az=121.0*
*NEIC **30** 03:08:31.3, 35°.50N×97°.24W, h3km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.01; $M_{\theta\theta}$1.49; $M_{\phi\phi}$-1.48; $M_{r\theta}$0.18; $M_{\theta\phi}$-0.49; $M_{\phi r}$0.34; Fault plane solution: $M_0$1.61000×10^{14} NP1:ϕ_s143.49000°, δ77.90000°, λ-5.82000°. NP2:ϕ_s234.71000°, δ84.30000°, λ-167.84000°. Principal axes: T 1.5829, Plg4.0000°, Azm9.0000°; N 0.0584, Plg77.0000°, Azm259.0000°; P -1.6414, Plg13.0000°, Azm100.0000°;*
*NEIC **30** 03:08:31.1±1.0, 35°.51N±0°.03×97°.22W±0°.02, h3km±2km Error ellipse: s-maj=5.2km s-min=3.0km az=209.0*
ISC 30 03:08:30.8±0.8, **35°.52N**±0°.03×**97°.25W**±0°.03, **h11**km±5km, **n56, σ1ˢ22**/69, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK001	Jones High Sch	0.05	318	Pg	Pg	03 08 33.0	0.0
OK001				Sg	Sg	03 08 34.6	0.0
OK009	Oakdale Elemen	0.15	293		Pg	03 08 34.7	+0.3
OK009				Sg	Sg	03 08 37.5	+0.7
ADOK	Arcadia Dam	0.17	322		Pg	03 08 35.1	+0.5
OKCSW	OKLAHOMA CITY	0.19	233	Pg	Pg	03 08 34.8	-0.2
OKCSW				Sg	Sg	03 08 37.7	-0.2
OKCFA	Oklahoma City	0.20	238	Pg	Pg	03 08 34.9	-0.1
OKCFA				Sg	Sg	03 08 37.8	-0.1
FNO	Franklin	0.29	205	Pg	Pg	03 08 36.6	-0.2
FNO				Sg	Sg	03 08 40.8	+0.1
W35A	Tecumseh	0.48	140	Pg	Pg	03 08 39.9	-0.3
W35A				Sg	Sg	03 08 46.4	-0.1
TUL1	Leonard	1.25	71		Pn	03 08 54.1	-0.1
TUL1	Leonard	1.25	71	P	Pn	03 08 53.3	-0.9
	baz=251						
TUL1				S	Sn	03 09 10.7	-0.3
	baz=251						
WMOK	Wichita Mounta	1.48	239		Pn	03 08 57.2	-0.2
WMOK	Wichita Mounta	1.48	239	P	Pn	03 08 57.3	-0.2
	baz=59						
WMOK				S	Sn	03 09 17.0	+0.1
	baz=59						
T35A	Sooner Cattle	1.51	23		Pn	03 08 58.2	+0.3
U32A	Winter Ranch,	1.66	302		Pn	03 09 00.9	+1.0
Z35A	Perchaven, San	2.19	180		Pn	03 09 07.9	+0.7
U38A	Gravette	2.50	68		Pn	03 09 11.9	+0.5
HHAR	Hobbs	2.79	73		Pn	03 09 16.0	+0.5
W39A	Magazine	2.85	96		Pn	03 09 17.1	+0.8
W39A	Magazine	2.85	96	P	Pn	03 09 17.1	+0.8
	baz=277						
W39A				S	Sn	03 09 52.9	+2.3
	baz=277						
Z38A	Mt. Pleasant	2.93	140	Pn	Pn	03 09 18.2	+0.8
R32A	Long Quarter,	3.12	338		Pn	03 09 21.4	+1.3
MIAR	Mount Ida	3.17	107		Pn	03 09 22.0	+1.4
MIAR	Mount Ida	3.17	107	P	Pn	03 09 22.4	+1.8
	baz=289						
MIAR				S	Sn	03 10 00.9	+2.5
	baz=289						
ABTX	Abilene, Hawle	3.51	215	Pn	Pn	03 09 26.6	+1.2
WHTX	Lake Whitney,	3.53	183		Pn	03 09 26.7	+1.1
WHTX	Lake Whitney,	3.53	183	Pb	Pb	03 09 32.3	-1.0
	baz=3.1						
WHTX				Sb	Sb	03 10 18.4	+2.4
	baz=3.1						
KSU1	Kansas State U	3.61	8	P	Pn	03 09 27.7	+1.0
	baz=188						
U40A	Yellville	3.66	76		Pn	03 09 27.9	+0.5
U40A	Yellville	3.66	76	P	Pn	03 09 28.3	+0.9
	baz=258						
AMTX	Amarillo	3.69	261		Pn	03 09 29.0	+1.1
AMTX	Amarillo	3.69	261	P	Pn	03 09 29.7	+1.8
	baz=79						
237A	Washetta, Mont	3.71	161		Pn	03 09 28.3	+0.2
X40A	Basin Creek Fa	3.77	105		Pn	03 09 29.7	+0.8
S39A	Bolivar	3.83	54		Pn	03 09 32.1	+2.4
CBKS	Cedar Bluff	3.84	330	Pn	Pn	03 09 31.5	+1.5
CBKS	Cedar Bluff	3.84	330	Sb	Sg	03 10 31.8	-2.4
	baz=148						
WLAR	White Oak Lake	3.87	117		Pn	03 09 31.2	+0.9
WHAR	Wooly Hollow	4.06	92		Pn	03 09 33.9	+1.0
UALR	University of	4.09	99		Pn	03 09 33.9	+0.6
W41B	Gary Mavity, V	4.10	93	P	Pn	03 09 34.6	+1.1
	baz=276						
W41B				S	Sn	03 10 23.6	+2.1
	baz=276						
FCAR	Ozark Folk Cen	4.18	83		Pn	03 09 35.2	+0.6
Z41A	Richland Creek	4.31	120		Pn	03 09 36.8	+0.4
Z41A	Richland Creek	4.31	120	P	Pn	03 09 36.6	+0.2
	baz=303						
NATX	Nacogdoches	4.33	149	Pn	Pn	03 09 37.1	+0.5
NATX	Nacogdoches	4.33	149	S	Sn	03 10 26.9	-0.2
	baz=331						
MGMO	Mountain Grove	4.34	66	Pn	Pn	03 09 38.2	+1.5
435B	Jarrell	4.74	184	P	Pn	03 09 42.6	+0.4
	baz=3.6						
MSTX	Muleshoe	4.81	253	P	Pn	03 09 44.0	+0.7
	baz=70						
MSTX				S	Sn	03 10 40.0	+1.0
	baz=70						
OXF	Oxford	6.51	97	P	Pn	03 10 06.8	+0.3
	baz=281						
SDCO	Great Sand Dun	7.00	291	P	Pn	03 10 15.1	+1.6
	baz=106						
ISCO	Idaho Springs	7.89	305	P	Pn	03 10 26.9	+1.1
	baz=120						
TXAR	Lajitas Array	8.21	223	Pn	Pn	03 10 30.5	+0.4
	0.2nm,0.3s,baz=42,slow=14,SNR=13						
TXAR				Pg	Pb	03 10 58.5	+5.3
	1.5nm,0.3s,baz=42,slow=16,SNR=11						
TXAR				Lg	Lg	03 12 47.9	
	2.5nm,0.3s,baz=37,slow=38,SNR=5.7						
ECSD	EROS Data Cent	8.22	3	P	Pn	03 10 28.9	-1.0
	baz=184						
JFWS	Jewell Farm	9.16	34	P	Pn	03 10 43.8	+0.9
	baz=218						
TKL	Tuckaleechee C	10.97	85	Pn	Pn	03 11 06.1	-1.7
	0.1nm,0.3s,baz=262,slow=7.1,SNR=1.9						
PDAR	Pinedale Array	11.98	311	Pn	Pn	03 11 23.5	+1.8
	0.1nm,0.3s,baz=122,slow=15,SNR=2.7						
PDAR				Lg	Lg	03 14 45.5	
	0.5nm,0.3s,baz=113,slow=32,SNR=6.4						
ULM	Lac du Bonnet	14.75	3	Pn	Pn	03 11 55.3	-4.1
	0.3nm,0.3s,baz=179,slow=13,SNR=5.8						
ULM				Sn	Sn	03 14 31.0	-12
	0.3nm,0.3s,baz=282,slow=22,SNR=3.1						
ULM				Lg	Lg	03 16 10.7	
	0.3nm,0.3s,baz=99,slow=19,SNR=1.9						

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*IDC **30** 03:12:18.8±1.4, 7°.03S×115°.36E, h0km, mb3.6/6, mb1 3.6/8, mb1mx3.5/40, mbtmp3.6/8, ML3.1/2, Error ellipse: s-maj=55.5km s-min=19.7km az=55.0*
*DJA **30** 03:12:21.6±0.4, 7°S±3°×11°6E±°, h10km, M3.9/9, mb4.2/1, MLv3.8/9*
ISC 30 03:12:24.5±0.8, **6°.95S**±0°.07×**115°.67E**±0°.05, **h35**km, **n28, σ1ˢ76**/30, **mb3.7**/6, **Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRBI	Singaraja	1.22	202	P	Pn	03 12 43.9	-1.2
SRBI				S	Sn	03 13 01.5	+1.2
KMMI	Kalianget	1.69	266	P	Pn	03 12 52.0	+0.5
DNP	Denpasar	1.78	195	P	Pn	03 12 52.9	+0.1
DNP				S	Sn	03 13 15.6	+1.4
JAGI	Jajag, Banyuwa	2.13	225	P	Pn	03 12 56.8	-0.8
PLAI	Plampang	2.81	132	P	Pn	03 13 06.4	-0.5
PLAI				S	Sn	03 13 40.8	+1.2
GRJI	Gresik	3.16	270	P	Pn	03 13 11.9	+0.1
KAPI	Kappang	4.50	65	Pn	Pn	03 13 32.9	+2.7
	1.3nm,0.3s,baz=217,slow=6.2,SNR=4.1						
KAPI				Sn	Sn	03 14 37.3	+16
	2.0nm,0.3s,baz=80,slow=23,SNR=5.3						
PCJI	Pacitan	4.62	254	P	Pn	03 13 31.9	0.0
BKSI	Bulukumba	4.72	70	P	Pn	03 13 32.6	-0.6
BNSI	Bone	5.09	60	P	Pn	03 13 38.1	-0.3
EDFI	Ende, Flores	6.23	107	P	Pn	03 13 53.4	-0.8
FITZ	Fitzroy Crossi	14.74	140	Pn	Pn	03 15 50.3	-0.3
	0.0nm,0.3s,baz=322,slow=14,SNR=1.4						
WRA	Warramunga Arr	22.25	127	P	P	03 17 18.7	+0.1
	0.7nm,0.7s,baz=300,slow=12,SNR=0.7						
ASAR	Alice Springs	24.15	135	P	P	03 17 37.6	+0.1
	0.6nm,0.6s,baz=307,slow=9.0,SNR=11						
STKA	Stephens Creek	34.64	139	P	P	03 19 12.8	+2.2
	0.5nm,0.3s,baz=301,slow=9.4,SNR=3.0						
SONM	Songino Array	55.16	352	P	P	03 21 53.7	+0.1
	0.2nm,0.4s,baz=157,slow=7.8,SNR=1.7						
MKAR	Makanchi Array	61.16	334	P	P	03 22 34.6	-0.9
	0.5nm,0.6s,baz=146,slow=7.2,SNR=2.7						
KHZ	Kahutara	61.86	135	P	P	03 22 46.5	+6.2
KIW	Kapiti Island	62.40	133	P	P	03 22 47.3	+3.2
OGWZ	Otaki Gorge	62.58	133	P	P	03 22 44.4	-0.8
CAW	Cannon Point	62.58	133	P	P	03 22 46.2	+0.9
MRZ	Mangatainoka R	62.83	132	P	P	03 22 44.4	-2.5
HOWZ	Holdsworth Sta	62.85	133	P	P	03 22 42.4	-4.6
MTW	Mount Morrison	62.91	133	P	P	03 22 44.4	-3.0
TRWZ	Traveller	63.11	133	P	P	03 22 46.8	-2.0
TMWZ	Te Maipa	63.18	133	P	P	03 22 46.4	-2.9
BFZ	Birch Farm	63.33	132	P	P	03 22 50.0	-0.2
ZALV	Zalesovo Beam	65.99	341	P	P	03 23 06.5	-0.7
	0.6nm,0.4s,baz=101,slow=6.0,SNR=2.2						

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*NIED **30** 03:23:00, 35°.80N×140°.10E, h65km, Mw4.2 Best double couple: $M_0$2.21000×10^{15} NP1:ϕ_s14.00000°, δ68.00000°, λ120.00000°. NP2:ϕ_s137.00000°, δ37.00000°, λ39.00000°.*
*MOS **30** 03:23:32.4±1.1, 35°.77N×140°.25E, h53km, mb4.7/21, Error ellipse: s-maj=9.7km s-min=5.7km az=101.1*
*NEIC **30** 03:23:35.2±1.1, 35°.72N±0°.06×140°.12E±0°.09, h62km±6km, mb4.5/31, Error ellipse: s-maj=10.9km s-min=7.6km az=65.0*
*IDC **30** 03:23:35.8±1.6, 35°.70N×140°.04E, h65km±14km, mb3.8/25, mb1 4.0/29, mb1mx3.9/39, mbtmp4.2/29, MS3.1/5, Ms1 3.2/5, ms1mx2.8/57, Error ellipse: s-maj=14.9km s-min=11.1km az=79.0*
*JMA **30** 03:23:36.0±0.2, 35°.79N×140°.09E, h67km±2km, M3.9 Broadband fault plane solution: P waves. NP1: ϕ_s161.00000°, δ27.00000°, λ71.00000°. NP2:ϕ_s2.00000°, δ65.00000°, λ99.00000°. Principal axes: T Plg69.0000°, Azm291.0000°; N Plg9.0000°, Azm178.0000°; P Plg19.0000°, Azm85.0000°;*
JMA Felt II J1.
ISC 30 03:23:35.5±0.6, **35°.81N**±0°.04×**140°.19E**±0°.04, **h60**km±5km, **n149, σ1ˢ67**/164, **mb4.3**/44, **12C-12D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSMT	Sammumatsuo	0.27	128	⇑P	Pn	03 23 47.7	+2.4
JSMT				S	Sn	03 23 57.1	+4.7
JIHU	Itakohorinouch	0.32	59	⇑P	Pn	03 23 47.8	+2.1
JIHU				S	Sn	03 23 57.0	+3.9
TOK	Tokyo	0.37	252	⇓P	Pn	03 23 48.0	+1.9
TOK				S	Sn	03 23 57.3	+3.5
JAG	Ashikaga	0.86	316	⇓P	Pn	03 23 52.5	+0.8
JAG				S	Sn	03 24 05.1	+1.4
BSO3	Boso 3	1.03	165	⇑P	Pn	03 23 54.0	+0.3
BSO3				S	Sn	03 24 08.8	+1.6
JOD2	Odawara 2	1.05	239	⇓P	Pn	03 23 53.7	-0.5
JOD2				S	Sn	03 24 06.5	-1.5
JRY	Ryogami san	1.07	282	⇓P	Pn	03 23 55.3	+0.9
JIM2	Oshima 3	1.25	210	P	Pn	03 23 55.7	-1.1
JIM2				S	Sn	03 24 10.5	-2.3
JFNN	Fujinakano	1.37	244	⇓P	Pn	03 23 58.1	-0.3
JFNN				S	Sn	03 24 14.6	-1.0
JYN	Shimob	1.38	258	⇓P	Pn	03 23 58.5	0.0
JYN				S	Sn	03 24 14.9	-0.9
JIZS	Izushimoda	1.53	225	⇓P	Pn	03 23 59.8	-0.7
JIZS				S	Sn	03 24 17.3	-2.0
MJAR	Matsushiro Arr	1.76	295	P	Pn	03 24 03.5	-0.2
	15nm,0.3s,baz=99,slow=14,SNR=495						
MJAR				S	Sn	03 24 24.6	-0.6
	16nm,0.3s,baz=157,slow=13,SNR=6.7						
MJAR				LR	LR	03 24 44.2	
	comp=Z,264nm,18.6s,baz=95,slow=41						
MAJO	Matsushiro	1.77	295	P	Pn	03 24 04.3	+0.5
MAJO	Matsushiro	1.77	295		Pn	03 24 04.3	+0.5
MAT	Matsushiro	1.77	295	P	Pn	03 24 04.8	+1.0
MAT				S	Sn	03 24 26.9	+1.7
MJB9	Matsu-Tunnel	1.77	295		Pn	03 24 04.6	+0.8
INU	Inuyama	2.63	261		Pn	03 24 15.3	-0.2
JHJ	Hachijo jima 2	2.70	187	P	Pn	03 24 15.0	-1.4
	177nm,0.3s,baz=156,slow=23,SNR=16						
JHJ				S	Sn	03 24 44.5	-3.5
	280nm,0.3s,baz=199,slow=24,SNR=12						
JHJ2	Mitsune	2.70	187		Pn	03 24 15.7	-0.8
ERM	Erimo	6.62	20	⇓*e*P	Pn	03 25 09.7	-0.3
ERM	Erimo	6.62	20	Pn	Pn	03 25 09.8	-0.2
JNU	Nakatsue	8.14	253	LR	LR	03 29 00.4	
	comp=Z,128nm,20.1s,baz=348,slow=41						
ASAJ	Asahikawa	8.50	12	P	Pn	03 25 34.9	-1.0
	2.1nm,0.3s,baz=205,slow=12,SNR=17						
ASAJ				S	Sn	03 27 09.4	-0.9
	1.2nm,0.3s,baz=90,slow=30,SNR=6.3						
JKA	Kamikawa-asahi	8.50	12		Pn	03 25 34.9	-1.0
JKA					Sn	03 27 09.4	-0.9
NMR	Nemuro--Hokkai	8.68	28	*e*P	Pn	03 25 36.3	-1.9
NMR				*e*S	Sn	03 27 06.6	-7.9
JCJ	Chichijima	8.85	168	P	Pn	03 25 38.0	-2.6
	18nm,0.3s,baz=294,slow=22,SNR=11						
JCJ				S	Sn	03 27 08.9	-10
	10nm,0.3s,baz=133,slow=19,SNR=1.9						
GLVR	Golovnino	8.92	26	*e*P	Pn	03 25 41.1	-0.4
GLVR				*e*S	Sn	03 27 14.9	-5.5
GRPR	Tuman	9.23	26	*e*P	Pn	03 25 44.6	-1.2
GRPR				*e*S	Sn	03 27 21.3	-6.8
GRPR				pmax	pmax		
	comp=Z,43nm,0.3s						
YUK	Yuzh-Kuril'sk	9.30	26	*e*P	Pn	03 25 46.4	-0.3
YUK				*e*S	Sn	03 27 24.6	-5.1
YUK				pmax	pmax		
	comp=Z,55nm,0.3s						
KSRS	Korea Array	10.00	283	P	Pn	03 25 57.0	+0.7
	comp=Z,0.6nm,0.3s,baz=96,slow=14,SNR=12						
KSRS				LR	LR	03 29 40.6	
	comp=Z,98nm,18.8s,baz=102,slow=37						
USRK	Ussuriysk Ar.	10.48	326	P	Pn	03 26 03.7	+0.9
	baz=142,slow=14,SNR=4.3						
USRK	Ussuriysk Ar.	10.48	326		Pn	03 26 02.4	-0.4
KUR	Kuril'sk	11.08	29	P	Pn	03 26 15.9	+4.9
KUR				*e*S	Sn	03 28 07.3	-5.8
KUR				pmax	pmax		
	comp=Z,12nm,0.4s						
KUR				pmax	pmax		
	comp=N,11nm,0.6s						
KUR				smax	smax		
	comp=E,36nm,0.4s						
KUR				smax	smax		
	comp=N,25nm,0.3s						
YSS	Yuzh-Sakhalins	11.30	9	*e*P	Pn	03 26 12.2	-1.9
KLR	Kul'dur	14.78	338	P	Pn	03 26 59.2	-1.6
	comp=N,0.2nm,0.3s,baz=135,slow=13,SNR=3.3						
KLR	Kul'dur	14.78	338	⇑*e*P	Pn	03 26 59.2	-1.6
KLR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NJ2	Nanjing	18.09	264	*e*P	Pn	03 27 42.3	-0.2
ZEA	Zeya	20.09	337	*e*P	P	03 28 04.7	+0.8
ZEA				pmax	pmax		
	comp=Z,19nm,0.6s						
PETK	Petropavlovsk-	21.24	30	LR	LR	03 37 41.5	
	comp=Z,21nm,19.2s,baz=63,slow=40						
HHC	Hu-ho-hao-te	22.96	291	*e*P	P	03 28 34.8	-0.1
MA2	Magadan	24.76	13	P	P	03 28 52.1	+0.9
	comp=Z,8.6nm,0.5s,baz=195,slow=9.8,SNR=16						
MA2	Magadan	24.76	13	⇑*e*P	P	03 28 52.9	+1.7
MA2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MA2	Magadan	24.76	13	P	P	03 28 51.9	+0.7
MA2				IAmb	IAmb	03 28 54.1	
	comp=Z,9.8nm,0.6s						
ENH	Enshi	26.26	267	P	P	03 29 03.6	-1.5
YAK	Yakutsk	27.07	349	⇓*e*P	P	03 29 11.1	-0.9
YAK				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SONM	Songino Array	27.68	306	P	P	03 29 16.1	-1.7
	comp=Z,1.1nm,0.5s,baz=113,slow=9.3,SNR=9.0						
SONM				PcP	PcP	03 32 33.1	-0.3
	comp=Z,0.5nm,0.6s,baz=135,slow=3.5,SNR=3.9						
SONM	Songino Array	27.68	306	P	P	03 29 17.2	-0.6
SEY	Seymchan	28.19	12	⇓*e*P	P	03 29 25.5	+3.5
H11N2	WAKE ISLAND Hy	28.42	117	T	T	03 59 29.8	
	baz=308,slow=75,SNR=79						
H11N1	WAKE ISLAND Hy	28.42	117	T	T	03 59 31.1	

	baz=308,slow=75,SNR=58						
H11N3	WAKE ISLAND Hy	28.43	117	T	T	03 59 31.1	
	baz=308,slow=75,SNR=75						
H11S1	WAKE ISLAND Hy	29.07	119	T	T	03 59 47.2	
	baz=311,slow=76,SNR=34						
H11S3	WAKE ISLAND Hy	29.07	119	T	T	04 00 06.0	
	baz=311,slow=76,SNR=28						
H11S2	WAKE ISLAND Hy	29.09	119	T	T	04 00 02.5	
	baz=311,slow=76,SNR=23						
LZH	Lanzhou	29.32	281	eP	P	03 29 33.0	+0.4
LZH				pP	pP	03 29 48.3	+0.9
LZH				sP	sP	03 29 56.0	+1.5
LZH				ePP	PnPn	03 30 30.3	+1.9
CD2	Chengdu	30.70	271	eP	P	03 29 43.5	-1.2
KMI	Kunming	33.81	262	P	P	03 30 13.3	+1.2
BILL	Bilibino	35.48	17	⇑eP	P	03 30 26.3	+0.5
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TIXI	Tiksi	36.40	354	P	P	03 30 33.4	-0.2
	comp=Z,1.9nm,0.4s,baz=137,slow=4.7,SNR=5.6						
TIXI	Tiksi	36.40	354	⇑eP	P	03 30 33.5	-0.1
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TIXI	Tiksi	36.40	354	P	P	03 30 33.5	-0.1
CMAR	Chiang Mai Arr	40.23	256	P	P	03 31 05.5	-0.9
	comp=Z,0.8nm,0.3s,baz=36,slow=4.8,SNR=1.2						
CMAR				LR	LR	03 48 12.7	
	comp=Z,12nm,18.1s,baz=50,slow=37						
DGZ	Jazzator, Alta	40.33	307	ceP	P	03 31 07.7	+0.6
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WMQ	Urumqi	40.53	298	eP	P	03 31 10.3	+1.6
ZAA0	Zalesovo Array	42.03	313	P	P	03 31 20.2	-0.5
ZAA0				IAmb	IAmb	03 31 21.9	
	comp=Z,8.4nm,1.3s						
ZALV	Zalesovo Beam	42.03	313	P	P	03 31 20.6	-0.2
	comp=Z,2.7nm,0.3s,baz=102,slow=8.6,SNR=11						
ZALV				PcP	PcP	03 33 14.3	-0.4
	comp=Z,2.3nm,0.5s,baz=102,slow=2.8,SNR=7.6						
MK31	Makanchi Array	43.95	303	P	P	03 31 36.1	-0.3
MK31				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MK31	Makanchi Array	43.95	303	P	P	03 31 36.1	-0.3
MKAR	Makanchi Array	43.95	303	P	P	03 31 36.2	-0.2
	comp=Z,2.5nm,0.6s,baz=88,slow=10,SNR=36						
MKAR				PcP	PcP	03 33 21.1	-0.3
	comp=Z,0.6nm,0.6s,baz=97,slow=1.8,SNR=4.9						
MKAR	Makanchi Array	43.95	303	i P	P	03 31 36.2	-0.2
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MKAR	Makanchi Array	43.95	303	P	P	03 31 36.1	-0.3
NRIK	Noril'sk	43.98	336	P	P	03 31 36.1	-0.2
	comp=Z,2.7nm,0.4s,baz=108,slow=12,SNR=5.8						
NRIK				PcP	PcP	03 33 21.2	+0.2
	comp=Z,2.0nm,0.3s,baz=139,slow=6.5,SNR=4.1						
MAKZ	Makanchi	44.16	303	P	P	03 31 37.1	-1.0
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MAKZ	Makanchi	44.16	303	P	P	03 31 37.1	-1.0
MAKZ				IAmb	IAmb	03 31 39.5	
	comp=Z,8.6nm,1.2s						
TAPN	Taplejung	45.05	275	eP	P	03 31 44.7	-1.1
	comp=Z,5.0nm,0.4s						
ODAN	Odare	45.51	274	eP	P	03 31 48.4	-0.9
	comp=Z,6.2nm,0.3s						
KURK	Kurchatov	45.92	309	ceP	P	03 31 51.1	-0.9
KURK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KURK	Kurchatov	45.92	309	P	P	03 31 51.5	-0.5
KURK				IAmb	IAmb	03 31 54.4	
	comp=Z,7.9nm,0.8s						
RAMN	Ramite	46.11	275	eP	P	03 31 53.2	-0.9
	comp=Z,17nm,0.6s						
JIRN	Jiri	46.15	276	eP	P	03 31 54.2	-0.4
	comp=Z,10nm,0.3s						
GUN	Gumba	46.30	276	eP	P	03 31 54.8	-0.9
PKIN	Phulchoki	46.83	276	eP	P	03 31 59.6	-0.1
GKN	Gorkha	47.27	277	eP	P	03 32 02.2	-0.8
	comp=Z,10nm,0.3s						
DANN	Dangsing	47.83	278	eP	P	03 32 07.3	-0.3
	comp=Z,17nm,0.4s						
KDAK	Kodiak Island	48.67	41	P	P	03 32 14.3	+1.1
	comp=Z,6.6nm,0.9s,baz=297,slow=5.0,SNR=5.3						
KDAK	Kodiak Island	48.67	41	IAmb	IAmb	03 32 15.9	
	comp=Z,112nm,1.9s						
BOOM	Boomskoye usch	49.22	298	P	P	03 32 17.4	-0.5
BOOM				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BOOM	Boomskoye usch	49.22	298	P	P	03 32 17.4	-0.5
BOOM				IAmb	IAmb	03 32 19.0	
	comp=Z,4.2nm,1.1s						
KSH	Kashi	50.01	295	P	P	03 32 29.0	+5.1
KSH				pP	sP	03 32 45.0	-1.5
KSH				PcP	PcP	03 33 47.5	+4.4
KSH				PcS	PcS	03 37 42.5	+2.3
KSH				S	S	03 39 36.8	+6.3
AAK	Ala-Archa	50.21	299	⇑eP	P	03 32 25.1	-0.3
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AAK	Ala-Archa	50.21	299	P	P	03 32 24.9	-0.5
BRVK	Borovoye	50.73	313	⇓eP	P	03 32 30.8	+1.8
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BRVK	Borovoye	50.73	313	P	P	03 32 29.1	+0.1
BRVK				IAmb	IAmb	03 32 32.2	
	comp=Z,4.6nm,1.1s						
ILAR	Eielson Array	51.06	32	P	P	03 32 32.4	+1.1
	comp=Z,0.4nm,0.6s,baz=273,slow=5.8,SNR=9.1						
KNRA	Kununurra	52.33	194	P	P	03 32 39.6	-1.6
KK31	Karatay Array	52.89	301	IAmb	IAmb	03 32 48.8	
	comp=Z,5.6nm,1.2s						
KKAR	Karatay Array	52.89	301	P	P	03 32 44.8	-0.5
KKAR	Karatay Array	52.89	301	P	P	03 32 44.8	-0.5
CHGR	Chuyangaron	55.31	296	P	P	03 33 02.3	-0.7
WB0	Warramunga Arr	55.54	187	P	P	03 33 03.0	-1.6
WRAB	Tennant Creek	55.71	187	deP	P	03 33 04.8	-1.0
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WR0	Warramunga Arr	55.72	186	P	P	03 33 04.7	-1.2
WRA	Warramunga Arr	55.72	187	P	P	03 33 04.0	-1.8
	comp=Z,2.4nm,0.3s,baz=0.4,slow=7.6,SNR=16						
INK	Inuvik	55.92	27	P	P	03 33 07.9	+1.1
	comp=Z,0.5nm,0.5s,baz=323,slow=7.6,SNR=3.7						
INK	Inuvik	55.92	27	IAmb	IAmb	03 34 35.6	
	comp=Z,15nm,1.9s						
ARU	Arti	56.63	319	c iP	P	03 33 11.7	-0.3
ARU				S	S	03 41 03.9	+4.5
ARU				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ARU	Arti	56.63	319	P	P	03 33 11.6	-0.5
ABKAR	Akbulak array	57.98	310	P	P	03 33 21.1	-0.5
AS31	Alice Springs	59.45	187	P	P	03 33 31.4	-0.7
ASAR	Alice Springs	59.45	187	P	P	03 33 30.5	-1.5
	comp=Z,0.5nm,0.3s,baz=356,slow=4.8,SNR=30						
GEYT	Alibeck	63.57	299	P	P	03 33 59.0	-0.9
	comp=Z,1.3nm,0.7s,baz=51,slow=5.7,SNR=2.5						
ARCES	ARCESS Array B	64.80	339	P	P	03 34 07.1	-0.2
	comp=Z,8.3nm,1.1s,baz=49,slow=7.7,SNR=9.8						
YKA	Yellowknife Ar	65.36	30	P	P	03 34 11.4	+0.3
	comp=Z,0.4nm,0.7s,baz=303,slow=6.2,SNR=8.2						
STKA	Stephens Creek	67.34	179	P	P	03 34 24.9	+1.0
	comp=Z,0.5nm,0.4s,baz=347,slow=8.5,SNR=3.8						
STKA	Stephens Creek	67.34	179	P	P	03 34 25.0	+1.0
VSR	Storozhevoye	69.20	319	⇑iP	P	03 34 34.9	-0.7
VSR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
FINES	FINESS Array B	69.44	332	P	P	03 34 36.7	-0.1
	comp=Z,3.1nm,0.5s,baz=79,slow=5.5,SNR=43						
FINES	FINESS Array B	69.44	332	P	P	03 34 36.4	-0.4
AKASG	Malin Array Be	74.66	322	P	P	03 35 07.7	-0.5
	comp=Z,4.0nm,0.3s,baz=48,slow=6.0,SNR=32						
AKASG	Malin Array Be	74.66	322	i P	P	03 35 07.6	-0.6
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.3s						
AKASG	Malin Array Be	74.66	322	P	P	03 35 07.8	-0.5
AKBB	Malin Array Si	74.66	322	P	P	03 35 07.8	-0.5
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.5s						
AKBB	Malin Array Si	74.66	322	P	P	03 35 07.8	-0.5
NB2	NORSAR Subarra	74.93	337	P	P	03 35 09.2	-0.5
	comp=Z,1.2nm,0.7s,baz=40,slow=5.9						
NOA	NORSAR Array B	74.93	337	P	P	03 35 09.6	-0.2
	comp=Z,1.3nm,0.6s,baz=41,slow=5.8,SNR=16						
NORES	NORESS Array B	75.06	337	P	P	03 35 12.3	+1.9
NVAR	Mina Array Bea	76.52	52	P	P	03 35 21.2	+1.8
	comp=Z,0.6nm,0.7s,baz=309,slow=4.3,SNR=2.2						
KWP	Kalwaria Pacla	78.55	324	P	P	03 35 29.6	-0.7
KWP				pmax	pmax		
	comp=Z,18nm,1.2s						
KWP	Kalwaria Pacla	78.55	324	P	P	03 35 29.6	-0.7
BURAR	Bucovina Array	78.66	321	P	P	03 35 31.1	+0.1
BURAR	Bucovina Array	78.66	321	P	P	03 35 30.9	-0.1
BRTR	Keskin Array B	78.92	311	P	P	03 35 32.4	-0.3
	comp=Z,0.8nm,0.5s,baz=147,slow=3.9,SNR=8.0						
BRTR	Keskin Array B	78.92	311	i P	P	03 35 32.9	+0.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
PD31	Pinedale Array	79.23	45	P	P	03 35 34.0	-0.4
PD31				IAmb	IAmb	03 38 03.4	
	comp=Z,10nm,2.0s						
PDAR	Pinedale Array	79.23	45	P	P	03 35 35.4	+0.9
	comp=Z,0.6nm,0.5s,baz=268,slow=2.1,SNR=8.6						
PDAR	Pinedale Array	79.23	45	P	P	03 35 34.1	-0.4
OJC	Ojcow	79.50	326	P	P	03 35 35.1	-0.3
OJC				pmax	pmax		
	comp=Z,9.0nm,1.2s						
OJC	Ojcow	79.50	326	P	P	03 35 35.1	-0.3
OJC				IAmb	IAmb	03 35 36.5	
	comp=Z,9.1nm,1.2s						
RAR	Rarotonga	80.25	125	LR	LR	04 04 21.3	
	comp=Z,80nm,21.5s,baz=298,slow=30						
VYHS	Vyhne	81.17	325	eP	P	03 35 45.1	+0.6
VYHS	Vyhne	81.17	325	eP	P	03 35 45.1	+0.6
CLL	Collm	81.66	330	i P	P	03 35 47.6	+0.6
	comp=Z,6.0nm,1.0s						
CLL	Collm	81.66	330	i P	P	03 35 47.6	+0.6
CLL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VTS	Vitosha	83.05	318	P	P	03 35 57.7	+3.1
VTS				pmax	pmax		
	comp=Z,8.0nm,0.5s						
GERES	GERESS Array B	83.23	328	P	P	03 35 54.7	-0.6
	comp=Z,0.3nm,0.4s,baz=43,slow=6.9,SNR=5.9						
SCHQ	Schefferville	86.78	15	P	P	03 36 13.5	+0.6
	comp=Z,1.4nm,0.8s,baz=12,slow=6.5,SNR=4.1						
TXAR	Lajitas Array	91.65	52	P	P	03 36 36.6	+0.2
	comp=Z,0.4nm,0.7s,baz=308,slow=4.0,SNR=6.2						
TXAR				pP	pP	03 36 54.6	+1.1
	comp=Z,1.2nm,1.2s,baz=273,slow=2.1,SNR=4.8						
LCAR	Lake Charles	94.01	39	P	P	03 36 46.0	-1.0
LPAZ	La Paz	148.16	60	PKPbc	PKPbc	03 43 16.1	+0.3
	comp=Z,0.4nm,0.3s,baz=225,slow=5.7,SNR=2.4						

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*ATA **30** 03:35:53.9±1.7, 40.°03N×40.°15E, h74km±32km, ML2.2, MW3.2*

*DDA **30** 03:36:01.3, 39.°97N×39.°68E, h7km±4km, ML1.5*

ISC 30 03:36:01.2±0.9**, 39.°97N**±0.°04×**39.°57E**±0.°04**, h10km, n12, σ1.°79**/14**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EUZM	Uzumlu	0.28	159	eP	Pg	03 36 07.2	+0.4
EUZM				IAML		03 36 11.8	
	comp=Z,26nm,0.2s						
EUZM	Uzumlu	0.28	159	i P	Pg	03 36 07.3	+0.4
EUZM				i S	Sg	03 36 11.2	+0.5
KELT	Kelkit	0.30	308	eP	Pb	03 36 09.7	+0.8
KELT				IAML		03 36 15.2	
	comp=Z,48nm,0.3s						
KELT	Kelkit	0.30	308	i P	Pb	03 36 09.6	+0.8
KELT				i S	Sg	03 36 14.3	+2.8
KELT				IAML		03 36 15.0	
	comp=E,78nm,0.2s						
KELT				IAML		03 36 15.0	
	comp=N,108nm,0.2s						
BAYB	BAYBURT	0.61	61	eP	Pg	03 36 07.0	-6.1
BAYB				IAML		03 36 22.2	
	comp=E,40nm,0.4s						
BAYB	BAYBURT	0.61	61	i P	Pg	03 36 11.8	-1.2
BAYB				i S	Sg	03 36 19.1	-1.9
BAYB				IAML		03 36 20.0	
	comp=N,86nm,0.9s						
BAYB				IAML		03 36 22.0	
	comp=E,42nm,0.4s						
REFA	Refahiye_ERZN	0.84	228	eP	Pg	03 36 15.2	-2.2
REFA	Refahiye_ERZN	0.84	228	i P	Pg	03 36 14.4	-3.0
REFA				IAML		03 36 27.0	
	comp=N,15nm,0.4s						
TNCL	Tunceli-Merkez	0.85	181	eP	Pg	03 36 15.3	-2.3
TNCL				IAML		03 36 34.2	
	comp=Z,9.6nm,0.2s						
TNCL	Tunceli-Merkez	0.85	181	i P	Pn	03 36 20.4	+1.0
TNCL				IAML		03 36 31.0	
	comp=E,14nm,1.3s						
TNCL				IAML		03 36 32.0	
	comp=N,12nm,0.9s						
MACK	Trabzon	0.99	9	i P	Pn	03 36 21.3	0.0
MACK				i S	Sb	03 36 33.6	0.0
MACK				IAML		03 36 35.0	
	comp=N,33nm,0.2s						
MACK				IAML		03 36 35.0	
	comp=E,36nm,0.2s						
BNGL	BINGOL	1.59	129	eP	Pn	03 36 18.0	-12
BNGL				IAML		03 36 32.5	
	comp=N,141nm,0.2s						

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*PAS **30** 03:48:20.9±2.2, 33.°91N±0.°01×117.°93W±0.°04, h2km±6km, ML2.6/211, Error ellipse: s-maj=5.3km s-min=2.1km az=87.0*

NEIC 30 03:48:20.8±1.5**, 33.°92N**±0.°09×**117.°92W**±0.°08**, h13**km±7km**, Error ellipse: s-maj=16.0km s-min=1.5km az=215.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FULC	Fullerton	0.05	187		Pg	03 48 23.8	+0.4
RHC	Rose Hills Cem	0.11	314		Pg	03 48 23.4	-0.7
RHC					Sg	03 48 26.0	-0.4
BREC	Barre Substati	0.13	206		Pg	03 48 23.7	-0.5
BREC					Sg	03 48 26.9	+0.4
DLAC	Del Amo	0.17	244		Pg	03 48 24.6	-0.2
DLAC					Sb	03 48 28.7	-0.3
SANC	Santa Ana	0.22	174		Pg	03 48 25.4	-0.2
SANC					Sb	03 48 30.0	-0.4
WTT2	Watts, South G	0.28	276		Pg	03 48 27.1	+0.3
WTT2					Sb	03 48 32.8	+0.4
CRNC	Corona	0.30	99		Pg	03 48 26.9	-0.1
MWC	Mount Wilson	0.33	339		Pg	03 48 27.0	-0.6
MWC					Sg	03 48 32.3	+0.1
PASC	Pasadena Art C	0.34	318		Pg	03 48 27.0	-0.7
PASC					Sg	03 48 32.1	-0.3
SSK	Sunset Peak	0.34	32		Pg	03 48 27.9	0.0
GR2C	Griffith Obs.	0.38	302		Pg	03 48 28.0	-0.4
XTL	Crystal Lake,	0.38	7		Pg	03 48 28.1	-0.4
FMP	Fort Macarthur	0.38	237		Pg	03 48 27.5	-0.9
BFSC	Mount Baldy Ra	0.38	34		Sg	03 48 34.4	+0.6
CHFC	Chilao Flat St	0.42	347		Sg	03 48 34.9	-0.2
SS2	San Sevaine	0.45	50		Pg	03 48 29.8	0.0
RVR	Riverside	0.45	81		Sg	03 48 36.5	+0.6
DECC	Green Verdugo	0.48	314		Pg	03 48 29.7	-0.7
DECC					Sg	03 48 36.7	-0.1
DJJ	Donna J Jenkin	0.48	293		Pg	03 48 29.7	-0.7
JNH	Juniper Hills	0.53	356		Pg	03 48 30.6	-0.7
JNH					Sg	03 48 38.2	-0.1
HOLC	Holcomb Ridge	0.54	6		Pg	03 48 31.0	-0.5
CSP	Cedar Springs	0.59	51		Pg	03 48 32.3	-0.2
LRRC	Littlerock Res	0.61	351		Pg	03 48 32.1	-0.7
IR2C	Iron Canyon	0.61	319		Pg	03 48 31.9	-1.0
PEC	Perris	0.63	92		Pg	03 48 32.7	-0.4
CIAC	Catalina I. Ai	0.66	219		Pg	03 48 33.5	-0.3
CIAC					Sg	03 48 42.1	-0.5
CFT	Crafton Hills	0.68	80		Pg	03 48 33.8	-0.2
MURC	Murrieta	0.68	118		Pg	03 48 33.6	-0.5
MURC					Sg	03 48 43.3	+0.2
SBB	Saddle Back Bu	0.77	6		Pg	03 48 35.2	-0.6
BBSC	Beaumont Base	0.78	90		Pg	03 48 35.8	-0.2
LEOC	Leona Valley	0.78	336		Pg	03 48 34.8	-1.2
HMTC	Hemet	0.79	105		Pg	03 48 35.4	-0.7
HMTC					Sb	03 48 46.9	-0.1
BACC	Bachelor Mtn.	0.79	113		Pg	03 48 35.4	-0.8
BACC					Sg	03 48 46.4	-0.2
DGR	Domenigoni Val	0.80	109		Sg	03 48 46.8	-0.1
BTL	Butler Peak	0.83	66		Pg	03 48 36.5	-0.4
BBRC	Big Bear Solar	0.89	67		Pg	03 48 37.5	-0.6
EDW2	Edwards Air Fo	0.96	356		Pb	03 48 38.4	-0.9
EDW2					Sn	03 48 52.9	-0.7
OSI	Osito Audit: C	0.96	316		Pb	03 48 39.1	-0.3
HYS	Haystack Butte	0.98	17		Pb	03 48 39.3	-0.5
SIL	Silver Peak	1.00	64		Pb	03 48 39.6	-0.5
CRY	Cary Ranch	1.04	110		Pb	03 48 40.0	-0.8
CRY					Sb	03 48 54.1	-0.3
PLM	Palomar	1.04	123		Pb	03 48 39.5	-1.4
PLM					Sb	03 48 53.9	-0.6
BZNA	Buzz No.'s Pla	1.12	112		Pb	03 48 41.3	-0.9
DNR	Dunn Ranch,Anz	1.13	108		Pb	03 48 41.7	-0.5
SNDA	J Saunders Pla	1.15	108		Pb	03 48 42.0	-0.6
THC	Tehachapi Micr	1.16	328		Pb	03 48 42.1	-0.8
HWB	Hans Werner Br	1.20	138		Pn	03 48 41.4	-1.9
DPP	Dos Picos Cty	1.23	138		Pn	03 48 41.9	-1.8
PFO	Pinyon Flats O	1.25	104		Pn	03 48 43.6	-0.5
XPFO	Pion Flat	1.25	104		Pn	03 48 43.6	-0.5
GSC	Goldstone, Bar	1.65	33		Pn	03 48 50.3	+0.7
ISA	Isabella, Lake	1.80	345		Pb	03 48 54.1	+0.4
Y12C	Blythe	2.83	93		Pb	03 49 12.4	+1.2
W13A	Hualapai Mount	3.53	69		Pn	03 49 16.1	+0.6
Y14A	Wickenburg	4.08	88		Pb	03 49 35.0	+2.4

IDC 30 03:48:22.0±11.0**, 25.°65N**×**143.°86E, h0km, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.2**/75**, mbtmp3.3**/3**, Error ellipse: s-maj=417.3km s-min=36.0km az=72.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.25	192	P	P	03 56 49.5	+0.2
	0.3nm,0.5s,baz=14,slow=8.8,SNR=5.5						
ASAR	Alice Springs	49.96	192	P	P	03 57 17.5	-0.5
	0.2nm,0.5s,baz=9.7,slow=6.7,SNR=4.6						
MKAR	Makanchi Array	52.55	310	P	P	03 57 37.1	-0.2
	0.3nm,0.8s,baz=90,slow=5.8,SNR=2.0						

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*IDC **30** 03:53:49.5±1.0, 14.°66N×39.°91E, h0km, mb4.2/16, mb1 4.2/18, mb1mx4.0/59, mbtmp4.2/18, ML3.8/2, MS3.4/9, Ms1 3.4/9, ms1mx3.0/42, Error ellipse: s-maj=24.8km s-min=16.1km az=36.0*

*NEIC **30** 03:53:50.8±1.4, 14.°48N±0.°08×39.°7E±0.°1, h16km±5km, mb4.6/19, Error ellipse: s-maj=14.8km s-min=11.5km az=101.0*

*EAF **30** 03:54:57.1±5.0, 11.°12N×39.°65E, h0km±23km*

ISC 30 03:53:51.5±0.5**, 14.°52N**±0.°05×**39.°84E**±0.°08**, h18km, n71, σ1.°04**/66**, mb4.2**/31**, MS3.5**/7**, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DESE	Dese	3.38	183	eP	Pg	03 54 56.2	-0.2
DESE				eSn	Pg	03 54 56.3	-0.2
ATD	Arta Tunnel	4.17	135	Pn	Pn	03 54 54.6	+0.2
	4.1nm,0.3s,baz=280,slow=9.6,SNR=7.5						
ATD				Lg	Lg	03 56 03.9	
	25nm,0.3s,baz=287,slow=21,SNR=7.9						
ATD				LR	LR	03 56 31.9	
	comp=Z,264nm,19.9s,baz=40,slow=38						
DAMY	Dhamar	4.41	89		Pn	03 54 59.2	+1.4
I19DJ	I19DJ	4.44	133	i		04 21 30.0	
	baz=318,slow=321,SNR=1.4						
ANKE	Ethiopia-Afar	4.90	181	eSn	Sn	03 55 42.9	-18
AAE	Adis Abeba	5.55	191	eP	Pg	03 55 38.9	+1.0
AAE				eS	Sg	03 56 51.3	+1.4
AAE	Adis Abeba	5.55	191	EP	Pg	03 55 38.9	+1.0
AAE				ES	Sg	03 56 51.3	+1.4
FURI	Furi	5.70	192	eP	Pg	03 55 39.6	-1.2
FURI				eS	Sg	03 56 54.9	+0.3
FURI	Furi	5.70	192	ES	Sg	03 56 54.9	+0.3
FURI	Furi	5.70	192	EP	Pg	03 55 39.6	-1.2
FURI	Furi	5.70	192	Pn	Pn	03 55 14.2	-1.4
FURI					Pg	03 55 38.8	-1.9
FURI				Sg	Sg	03 56 54.3	-0.3
MBAR	Mbarara	17.51	212	LR	LR	04 03 51.4	
	comp=Z,81nm,21.4s,baz=30,slow=34						
UOSS	Minazif	18.55	54	P	Pn	03 58 07.7	0.0
WSAR	Wadi Sarin	19.77	61	P	P	03 58 19.9	-0.8
	0.3nm,0.3s,baz=266,slow=18,SNR=8.7						
IDI	Anoyia	24.67	330	P	P	03 59 11.3	-0.1
	25nm,0.5s,baz=292,slow=16,SNR=36						
SANT	Santorini	25.28	332	P	P	03 59 16.4	-0.5
BRTR	Keskin Array B	25.70	349	P	P	03 59 21.0	+0.2
	2.2nm,0.9s,baz=174,slow=12,SNR=7.0						
HRA	Herat	28.30	42	P	P	03 59 44.4	+0.1
HRA				IAmb	IAmb	03 59 48.8	
	comp=Z,11nm,1.3s						
GEYT	Alibeck	28.40	31	LR	LR	04 10 40.3	
	comp=Z,75nm,19.8s,baz=190,slow=36						
KBZ	Khabaz	29.23	5	P	P	03 59 53.4	+1.2
	comp=Z,3.2nm,1.0s,baz=67,slow=16,SNR=3.7						
KEST	Kesra	34.53	313	LR	LR	04 16 49.9	
	comp=Z,53nm,18.7s,baz=254,slow=40						
BURAR	Bucovina Array	35.17	343	P	P	04 00 45.3	+0.9
CHGR	Chuyangaron	35.31	42	P	P	04 00 45.5	-0.2
CHGR				IAmb	IAmb	04 00 49.1	
	comp=Z,16nm,1.3s						
NIL	Nilore	35.74	52	P	P	04 00 49.8	+0.4
NIL				IAmb	IAmb	04 01 06.1	
	comp=Z,5.1nm,0.9s						
GAR	Garm	36.25	42	P	P	04 00 54.5	+0.6
GAR				IAmb	IAmb	04 00 56.3	
	comp=Z,35nm,1.9s						
AKASG	Malin Array Be	37.10	349	P	P	04 01 00.4	-0.3
	comp=Z,2.2nm,0.8s,baz=166,slow=7.0,SNR=8.0						
AKASG	Malin Array Be	37.10	349	IAmb	IAmb	04 01 02.5	
	comp=Z,0.7nm,0.8s						
SOKA	Soboth	38.19	332	epP	P	04 01 11.7	+1.5
	comp=Z,3.1nm,1.1s						
OBKA	Obir	38.28	332	epP	P	04 01 12.8	+1.9
	comp=Z,4.3nm,1.5s						
ABKAR	Akbulak array	38.37	21	P	P	04 01 10.9	-0.6
KK31	Karatay Array	38.77	37	P	P	04 01 15.8	+0.8
KKAR	Karatay Array	38.77	37	P	P	04 01 15.9	+0.9
CONA	Conrad Observa	38.79	334	eP	P	04 01 16.6	+1.4
	comp=Z,3.1nm,1.0s						
MOA	Molln	39.42	333	eP	P	04 01 21.5	+1.2
	comp=Z,5.3nm,1.1s						
WTTA	Wattenberg	40.21	330	eP	P	04 01 28.2	+1.1
	comp=Z,2.5nm,0.8s						
KSH	Kashi	40.28	45	P	P	04 01 25.8	-2.0
KSH				pP	pP	04 01 29.5	-4.1
KSH				PP	PP	04 02 58.0	-2.6
KSH				S	S	04 07 23.5	-11
KSH				PcS	PcS	04 07 24.0	+2.1
GEC2	GERESS Array S	40.41	333	P	P	04 01 28.9	+0.1
GERES	GERESS Array B	40.41	333	P	P	04 01 29.2	+0.5
	comp=Z,3.1nm,1.0s,baz=126,slow=6.8,SNR=22						
GERES	GERESS Array B	40.41	333	P	P	04 01 28.8	+0.1
FETA	Feichten	40.48	329	epP	P	04 01 30.6	+1.2
	comp=Z,4.1nm,1.0s						
KHC	Kasperske Hory	40.68	334	eP	P	04 01 30.8	-0.1
KHC				ex	x	04 01 43.1	
DAVA	Damuels	41.09	329	eP	P	04 01 34.8	+0.4
	comp=Z,5.0nm,1.4s						
BRG	Berggiesshubel	41.86	336	eP	P	04 01 40.4	-0.1
	comp=Z,3.4nm,1.1s						
CLL	Collm	42.58	335	epP	pP	04 01 50.0	-2.3
DBIC	Dimbokro	44.55	265	P	P	04 02 05.5	+2.7
	comp=Z,3.2nm,0.7s,baz=61,slow=9.4,SNR=6.6						
DBIC				LR	LR	04 21 16.7	
	comp=Z,47nm,19.3s,baz=58,slow=37						
DBIC	Dimbokro	44.55	265	IAmb	IAmb	04 02 07.0	
	comp=Z,16nm,1.3s						
BOSA	Boshof	45.14	198	LR	LR	04 19 46.6	
	comp=Z,85nm,19.2s,baz=34,slow=34						
MAKZ	Makanchi	47.60	39	P	P	04 02 25.5	-0.8
MAKZ				IAmb	IAmb	04 02 27.4	
	comp=Z,6.7nm,0.8s						
KURK	Kurchatov	47.76	33	P	P	04 02 28.1	+0.6
KURK				IAmb	IAmb	04 02 28.7	
	comp=Z,5.1nm,1.0s						
MK31	Makanchi Array	47.78	39	P	P	04 02 27.6	-0.2
MK31				IAmb	IAmb	04 02 28.7	
	comp=Z,3.9nm,0.8s						
MKAR	Makanchi Array	47.78	39	P	P	04 02 27.9	+0.1
	comp=Z,3.2nm,0.7s,baz=232,slow=7.3,SNR=35						
MKAR	Makanchi Array	47.78	39	P	P	04 02 27.6	-0.2
FINES	FINESS Array B	47.90	351	P	P	04 02 27.3	-1.1
	comp=Z,2.2nm,0.8s,baz=157,slow=10,SNR=5.8						
NAO01	NORSAR Array S	50.79	342	P	P	04 02 50.4	-0.1
NB2	NORSAR Subarra	50.85	343	P	P	04 02 50.0	-1.0
	comp=Z,5.2nm,1.0s,baz=139,slow=7.9						
NOA	NORSAR Array B	50.85	343	P	P	04 02 50.6	-0.4
	comp=Z,2.1nm,0.8s,baz=140,slow=7.5,SNR=9.5						

ZAA0	Zalesovo Array	52.71	32	P	P	04 03 03.8	-1.2
ZALV	Zalesovo Beam	52.71	32	P	P	04 03 04.3	-0.6
	comp=Z,1.3nm,0.5s,baz=244,slow=8.4,SNR=9.4						
ZALV	Zalesovo Beam	52.71	32	P	P	04 03 03.8	-1.1
SONM	Songino Array	63.66	44	P	P	04 04 22.8	+0.9
	comp=Z,2.2nm,0.9s,baz=254,slow=7.0,SNR=15						
SONM	Songino Array	63.66	44	P	P	04 04 22.3	+0.4
TIXI	Tiksi	76.03	19	P	P	04 05 35.9	-1.5
	comp=Z,1.6nm,0.3s,baz=333,slow=4.3,SNR=3.7						
TIXI	Tiksi	76.03	19	IAmb	IAmb	04 07 20.1	
	comp=Z,11nm,1.8s						
SFJD	Kangerlussuaq	76.94	336	P	P	04 05 41.5	-1.0
	comp=Z,0.4nm,0.4s,baz=206,slow=21,SNR=11						
KSAR	Wonju Array Be	79.80	54	P	P	04 05 58.7	-0.3
KSRS	Korea Array	79.83	54	LR	LR	04 46 03.4	
	comp=Z,19nm,19.2s,baz=15,slow=39						
KLR	Kul'dur	80.39	42	P	P	04 06 01.7	-0.2
	comp=Z,1.8nm,0.7s,baz=294,slow=7.2,SNR=5.7						
FRB	Frobisher Bay	84.99	335	P	P	04 06 25.2	-0.3
	comp=Z,2.0nm,1.1s,baz=42,slow=9.1,SNR=3.6						
SEY	Seymchan	87.04	25	P	P	04 06 35.9	+0.1
	comp=Z,0.3nm,0.2s,baz=76,slow=0.9,SNR=4.6						
MJAR	Matsushiro Arr	88.05	53	LR	LR	04 49 39.6	
	comp=Z,24nm,19.1s,baz=190,slow=38						
ASAJ	Asahikawa	88.93	45	LR	LR	04 49 31.0	
	comp=Z,23nm,19.5s,baz=338,slow=38						

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*NEIC **30** 03:55:34.0±1.2, 36.°145N±0.°010×97.°62W±0.°04, h5^{km}±2^{km}, Error ellipse: s-maj=5.7km s-min=3.1km az=271.0*

*TUL **30** 03:55:33.5±1.2, 36.°13N±0.°02×97.°64W±0.°05, h5^{km}±2^{km}, ML3.2, Mwr3.5/43(NEIC), Error ellipse: s-maj=6.6km s-min=3.0km az=257.0*

*IDC **30** 03:55:33.2±1.1, 36.°27N×97.°70W, h0^{km}, mb1 3.7/4, mb1mx3.3/58, mbtmp3.4/4, ML3.2/4, Error ellipse: s-maj=17.6km s-min=12.4km az=151.0*

*NEIC **30** 03:55:34, 36.°15N×97.°63W, h6^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.67; M$_{\theta\theta}$2.01; M$_{\phi\phi}$-1.34; M$_{r\theta}$0.42; M$_{\theta\phi}$0.40; M$_{\phi r}$-0.93; Fault plane solution: M$_0$2.08000×10^{14} NP1:φ$_s$43.80000°, δ60.35000°, λ-158.46000°. NP2:φ$_s$302.75000°, δ71.39000°, λ-31.46000°. Principal axes: T 2.0955, Plg7.0000°, Azm355.0000°; N -0.0246, Plg54.0000°, Azm95.0000°; P -2.0709, Plg35.0000°, Azm260.0000°;*

*ANF **30** 03:55:34.8±1.6, 36.°12N×97.°62W, h9^{km}±11^{km}, ML4.4/13 Error ellipse: s-maj=5.2km s-min=3.8km az=166.0*

ISC 30 03:55:32.2±1.2, **36.°17N**±0.°03×**97.°64W**±0.°03, **h2**^{km}±11^{km}, **n54,** σ1^{s}**52**/60, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.56	157	Pg	Pg	03 55 43.8	+0.8
OKCFA	Oklahoma City	0.77	168		Pg	03 55 47.5	+0.5
OKCSW	OKLAHOMA CITY	0.78	168	Pg	Pg	03 55 47.7	+0.5
OKCSW				Sg	Sb	03 55 58.2	-1.4
FNO	Franklin	0.93	168		Pg	03 55 50.6	+0.5
U32A	Winter Ranch,	1.12	281		Pb	03 55 54.0	-0.2
T35A	Sooner Cattle	1.18	50		Pg	03 55 56.1	+1.3
T35A				Sg	Sn	03 56 12.0	-0.4
W35A	Tecumseh	1.19	148		Pb	03 55 54.8	-0.8
W35A				Sg	Sg	03 56 11.2	+0.6
TUL1	Leonard	1.52	99		Pb	03 56 00.8	-0.5
TUL1	Leonard	1.52	99	P	Pb	03 56 00.7	-0.5
	baz=280						
TUL1				S	Sg	03 56 21.6	+0.5
	baz=280						
WMOK	Wichita Mounta	1.71	213		Pn	03 56 03.3	+0.3
WMOK	Wichita Mounta	1.71	213	P	Pn	03 56 03.4	+0.3
	baz=33						
WMOK				S	Sb	03 56 26.0	-0.2
	baz=33						
R32A	Long Quarter,	2.40	340		Pb	03 56 15.7	-0.5
U38A	Gravette	2.65	83		Pn	03 56 17.4	+1.4
HHAR	Hobbs	3.00	87		Pn	03 56 22.0	+1.2
KSU1	Kansas State U	3.04	15	P	Pn	03 56 23.7	+2.3
	baz=196						
KSU1				Sb	Sg	03 57 09.9	+0.1
	baz=196						
CBKS	Cedar Bluff	3.12	328	Pn	Pn	03 56 24.8	+2.3
W39A	Magazine	3.29	106		Pn	03 56 26.1	+1.3
W39A	Magazine	3.29	106	P	Pn	03 56 26.1	+1.3
	baz=288						
AMTX	Amarillo	3.53	250		Pn	03 56 30.1	+1.8
AMTX	Amarillo	3.53	250	P	Pn	03 56 30.9	+2.7
	baz=68						
Z38A	Mt. Pleasant	3.64	142		Pn	03 56 30.0	+0.5
MIAR	Mount Ida	3.70	115		Pn	03 56 32.0	+1.6
MIAR	Mount Ida	3.70	115	P	Pn	03 56 31.8	+1.4
	baz=297						
MIAR				S	Sn	03 57 16.9	+2.3
	baz=297						
S39A	Bolivar	3.78	65		Pn	03 56 33.3	+1.7
U40A	Yellville	3.88	86		Pn	03 56 34.2	+1.4
ABTX	Abilene, Hawle	3.91	206	Pn	Pn	03 56 34.4	+1.1
WHTX	Lake Whitney,	4.17	178		Pn	03 56 37.8	+0.9
WHTX	Lake Whitney,	4.17	178	P	Pn	03 56 37.9	+0.9
	baz=358						
X40A	Basin Creek Fa	4.28	112		Pn	03 56 39.9	+1.5
X40A	Basin Creek Fa	4.28	112	P	Pn	03 56 40.3	+1.9
	baz=294						
237A	Washetta, Mont	4.43	159		Pn	03 56 40.7	+0.3
MGMO	Mountain Grove	4.43	76		Pn	03 56 42.0	+1.5
WHAR	Wooly Hollow	4.45	100		Pn	03 56 41.3	+0.6
WLAR	White Oak Lake	4.47	122		Pn	03 56 42.5	+1.5
FCAR	Ozark Folk Cen	4.48	92		Pn	03 56 42.1	+0.9
W41B	Gary Mavity, V	4.50	101		Pn	03 56 42.8	+1.3
W41B	Gary Mavity, V	4.50	101	S	Sn	03 57 36.2	+1.7
	baz=284						
UALR	University of	4.54	106		Pn	03 56 43.7	+1.7
P38A	Dawn	4.74	42	Pn	Pn	03 56 47.1	+2.4
MSTX	Muleshoe	4.74	244		Pn	03 56 45.9	+1.0
MSTX	Muleshoe	4.74	244	S	Sn	03 57 43.2	+2.7
	baz=61						
R40A	Maddies Statio	4.78	62		Pn	03 56 46.9	+1.5
KSCO	Kaye Shedlock'	4.87	307	Pn	Pn	03 56 48.7	+2.0
KSCO	Kaye Shedlock'	4.87	307	Sb	Sg	03 58 06.1	-2.4
	baz=124						
Z41A	Richland Creek	4.93	125	Pn	Pn	03 56 48.7	+1.3
Z41A	Richland Creek	4.93	125	S	Sn	03 57 44.5	-0.6
	baz=307						
N35A	Tabor	4.94	18		Pn	03 56 48.9	+1.5
BGNE	Belgrade	5.25	356	P	Pn	03 56 52.7	+1.0
	baz=175						
CCM	Cathedral Cave	5.45	68	P	Pn	03 56 57.0	+2.5
	baz=251						
ANMO	Albuquerque	7.29	263	Pg	Pg	03 57 46.7	-5.1
	1.0nm,0.3s,baz=87,slow=18,SNR=15						
ANMO				Lg	Lg	03 59 23.6	
	2.0nm,0.3s,baz=32,slow=12,SNR=6.8						
TXAR	Lajitas Array	8.49	218	Pn	Pn	03 57 36.6	+0.1
	0.1nm,0.3s,baz=35,slow=11,SNR=9.2						
TXAR				Pg	Pb	03 58 07.3	+7.2
	0.9nm,0.3s,baz=46,slow=15,SNR=9.1						
TXAR				Lg	Lg	03 59 59.9	
	1.2nm,0.3s,baz=58,slow=28,SNR=5.7						
TKL	Tuckaleechee C	11.26	89	Pn	Pn	03 58 14.5	+0.3
	0.1nm,0.3s,baz=286,slow=18,SNR=1.8						
TKL				Lg	Lg	04 01 24.4	
	1.6nm,0.3s,baz=168,slow=17,SNR=5.6						
PDAR	Pinedale Array	11.31	309	Pn	Pn	03 58 15.8	+0.6
	0.1nm,0.3s,baz=122,slow=17,SNR=2.5						
PDAR				Lg	Lg	04 01 27.4	
	0.6nm,0.3s,baz=126,slow=41,SNR=6.4						
ULM	Lac du Bonnet	14.13	5	Pn	Pn	03 58 48.9	-4.4
	0.3nm,0.3s,baz=177,slow=13,SNR=2.4						
ULM				Lg	Lg	04 02 54.5	
	0.2nm,0.3s,baz=274,slow=11,SNR=5.1						

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*NIED **30** 04:09:00, 29.°90N×131.°40E, h20^{km}, Mw4.2 Best double couple: M$_0$2.39000×10^{15} NP1:φ$_s$38.00000°, δ57.00000°, λ92.00000°. NP2:φ$_s$214.00000°, δ33.00000°, λ86.00000°.*

*IDC **30** 04:09:26.6±1.2, 30.°25N×130.°91E, h0^{km}, mb3.7/8, mb1 3.7/11, mb1mx3.6/48, mbtmp3.6/11, ML2.8/4, MS3.7/9, Ms1 3.7/9, ms1mx3.2/40, Error ellipse: s-maj=32.0km s-min=21.0km az=96.0*

*JMA **30** 04:09:27.2±0.1, 29.°95N×131.°39E, h28^{km}±1^{km}, M3.6*

ISC 30 04:09:25.7±1.8, **30.°02N**±0.°04×**131.°45E**±0.°07, **h14**^{km}±10^{km}, **n34,** σ1^{s}**30**/36, **mb3.6**/8, **MS3.8**/8, **Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMTN	Minamitane	0.60	308	P	Pn	04 09 39.1	-0.8
JMTN				S	Sb	04 09 47.6	+1.2
JTN	Tanegashima 3	0.75	327	P	Pn	04 09 42.1	+0.2
JTN				S	Sb	04 09 52.9	+2.3
JYAK	Yakushimahirau	0.84	285	P	Pb	04 09 42.4	+0.3
JYAK				S	Sg	04 09 53.1	+0.1
JKC	Kuchinoerabu	1.17	292	P	Pn	04 09 47.7	+0.1
JKC				S	Sg	04 10 03.3	-0.2
JTSR	Tashiro 2	1.23	338	P	Pg	04 09 49.8	+0.5
JNN	Nakanoshima	1.38	263	P	Pn	04 09 50.4	-0.1
JNAR	Kushima--Naru	1.51	354	P	Pg	04 09 54.2	-0.5
JNAR				S	Sb	04 10 13.2	+0.8
JNKG	Nichinankitago	1.64	358	P	Pg	04 09 56.0	-1.1
JNKG				*e*S	Sb	04 10 17.0	+0.9
JSU	Suzuyama	1.71	330	P	Pb	04 09 56.0	-0.9
JSU				*e*S	Sn	04 10 17.3	+0.5
JTAJ	Takarajima	2.14	247	P	Pn	04 10 01.1	+0.1
JAM	Amami Oshima	2.27	226	P	Pn	04 10 03.3	+0.5
JAM				*e*S	Sn	04 10 29.5	-1.2
JAMN	Amaminishikomi	2.67	229	P	Pn	04 10 08.3	+0.1
JAMN				S	Sn	04 10 39.1	-1.2
JTK	Tokunoshima	3.12	225	P	Pn	04 10 15.0	+0.4
JTK				S	Sn	04 10 50.2	-1.5
JNU	Nakatsue	3.13	351	Pn	Pn	04 10 15.3	+0.7
	3.8nm,0.3s,baz=14,slow=2.0,SNR=13						
JNU				Sn	Sn	04 10 47.4	-4.4
	3.2nm,0.3s,baz=159,slow=6.7,SNR=4.5						
JOW	Kunigami	4.23	222	Pn	Pn	04 10 30.0	+0.2
	0.6nm,0.3s,baz=100,slow=17,SNR=6.4						
JOW				Sn	Sn	04 11 16.3	-2.7
	2.5nm,0.3s,baz=101,slow=16,SNR=9.1						
MJAR	Matsushiro Arr	8.62	39	Pn	Pn	04 11 34.7	+4.7
	0.0nm,0.3s,baz=236,slow=13,SNR=2.4						
USRK	Ussuriysk Ar.	14.16	2	LR	LR	04 18 29.4	
	comp=Z,79nm,19.3s,baz=173,slow=39						
KLR	Kul'dur	19.18	1	P	Pn	04 13 50.3	+0.5
	0.1nm,0.3s,baz=164,slow=7.4,SNR=2.6						
SONM	Songino Array	26.20	320	P	P	04 14 58.9	-1.2
	1.0nm,0.9s,baz=124,slow=7.9,SNR=5.8						
TLY	Talaya	29.86	324	LR	LR	04 29 39.4	
	comp=Z,37nm,18.5s,baz=190,slow=41						
ZALV	Zalesovo Beam	41.10	319	P	P	04 17 08.4	-0.5
	0.5nm,0.3s,baz=116,slow=6.6,SNR=1.5						
MKAR	Makanchi Array	41.29	308	P	P	04 17 10.6	-0.1
	0.2nm,0.4s,baz=90,slow=12,SNR=5.9						
ASAR	Alice Springs	53.43	177	P	P	04 18 51.4	+6.1
	0.2nm,0.8s,baz=9.8,slow=13,SNR=4.5						
ARU	Arti	56.24	320	LR	LR	04 45 19.7	
	comp=Z,68nm,18.5s,baz=105,slow=39						
AKTO	Aktyubinsk	57.26	313	LR	LR	04 45 50.4	
	comp=Z,143nm,18.4s,baz=102,slow=38						
KIRV	Kirov	60.85	324	LR	LR	04 48 57.9	
	comp=Z,51nm,18.1s,baz=114,slow=39						
FINES	FINESS Array B	70.97	331	P	P	04 20 42.8	+0.3
	1.9nm,0.7s,baz=59,slow=5.3,SNR=12						
FINES				LR	LR	04 55 27.4	
	comp=Z,59nm,20.2s,baz=353,slow=39						
YKA	Yellowknife Ar	73.89	26	P	P	04 21 02.2	+2.3
	0.2nm,0.8s,baz=304,slow=5.3,SNR=4.3						
AKASG	Malin Array Be	74.49	320	LR	LR	04 54 30.6	
	comp=Z,28nm,19.9s,baz=265,slow=36						
BRTR	Keskin Array B	76.94	308	P	P	04 21 17.2	-0.8
	1.7nm,0.9s,baz=76,slow=5.2,SNR=5.3						
NB2	NORSAR Subarra	77.15	334	P	P	04 21 19.6	+0.9
	comp=Z,0.4nm,0.5s,baz=50,slow=5.9						
NOA	NORSAR Array B	77.15	334	P	P	04 21 19.6	+0.9
	comp=Z,0.5nm,0.5s,baz=50,slow=5.6,SNR=6.0						
RPZ	Rata Peaks	81.86	152	LR	LR	04 51 25.2	
	comp=Z,129nm,20.5s,baz=26,slow=31						
GERES	GERESS Array B	83.86	324	LR	LR	05 02 42.4	
	comp=Z,70nm,18.4s,baz=309,slow=38						

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*SJA **30** 04:35:09.8±0.9, 19.°92S×71.°37W, h40^{km}±999^{km}, ML4.2, MW4.3*

*IDC **30** 04:35:11.2±0.9, 19.°80S×70.°86W, h0^{km}, mb3.9/6, mb1 4.1/8, mb1mx3.8/33, mbtmp4.0/8, ML3.8/2, MS3.0/4, Ms1 3.0/4, ms1mx2.9/22, Error ellipse: s-maj=27.6km s-min=17.2km az=61.0*

*NEIC **30** 04:35:12.6±2.2, 19.°95S±0.°04×70.°96W±0.°03, h13^{km}±4^{km}, mb4.2/7, Mwr4.2/42, ML4.1(GUC), Error ellipse: s-maj=7.2km s-min=2.0km az=149.0*

*GUC **30** 04:35:13.2±0.7, 19.°92S×71.°04W, h43^{km}±3^{km}, ML4.1*

*NEIC **30** 04:35:13, 19.°91S×70.°99W, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.69; M$_{\theta\theta}$0.02; M$_{\phi\phi}$-1.71; M$_{r\theta}$0.54; M$_{\theta\phi}$0.46; M$_{\phi r}$-1.56; Fault plane solution: M$_0$2.41000×10^{15} NP1:φ$_s$350.03000°, δ23.55000°, λ97.04000°. NP2:φ$_s$162.36000°, δ66.64000°, λ86.94000°. Principal axes: T 2.3430, Plg68.0000°, Azm67.0000°; N 0.1331, Plg3.0000°, Azm164.0000°; P -2.4760, Plg22.0000°, Azm255.0000°;*

*VAO **30** 04:35:17.2±0.9, 19.°97S×70.°88W, h65^{km}±5^{km}, mb4.2*

ISC 30 04:35:14.2±1.4, **19.°90S**±0.°02×**70.°95W**±0.°06, **h27**^{km}±10^{km}, **n97,** σ1^{s}**79**/116, **mb4.0**/5, **8C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	0.83	69⇓	*i*P	Pn	04 35 29.3	-0.9
PSGC				*i* S	Sb	04 35 42.3	+1.3
PSGCX	Pisagua	0.83	69		Pn	04 35 29.2	-1.0
PSGCX	Pisagua	0.83	69	*e*P	Pb	04 35 29.4	-0.8
PSGCX				*e*S	Sb	04 35 41.8	+0.8
PSGCX				IAML		04 35 44.3	
	comp=Z,5μm,0.4s						
TA01	Diego Aracena	0.98	133⇑	*i*P	Pb	04 35 31.9	-0.6
TA01				*e*S	Sb	04 35 45.2	+0.1
PATCX	Punta Patache	1.18	141⇑	*i*P	Pn	04 35 34.7	-0.3
PATCX				*e*S	Sb	04 35 51.3	+0.2
PATCX	Punta Patache	1.18	141		Pn	04 35 34.7	-0.3
PATCX	Punta Patache	1.18	141	*e*P	Pn	04 35 34.8	-0.3
PATCX				*e*S	Sb	04 35 49.9	-1.1
PATCX				IAML		04 35 59.6	
	comp=Z,2μm,1.3s						
PB11	IPOC Station P	1.22	84⇑	*i*P	Pb	04 35 36.2	-0.7
PB11				*e*S	Sb	04 35 53.5	+1.2
PB11				IAML		04 35 54.9	
	comp=N,7μm,0.6s						
PB11	IPOC Station P	1.22	84		Pb	04 35 36.1	-0.7
PB11	IPOC Station P	1.22	84	*i* P	Pb	04 35 36.1	-0.7
PB11				*e*S	Sb	04 35 53.6	+1.3
PB11				IAML		04 35 54.9	
	comp=Z,4μm,1.3s						
PB12	IPOC Station P	1.41	25⇑	*i*P	Pn	04 35 37.9	-0.2
PB12				*e*S	Sb	04 35 57.8	+0.4
PB12				IAML		04 36 02.6	
	comp=N,3μm,0.7s						
PB12	IPOC Station P	1.41	25		Pn	04 35 38.0	-0.2
PB12	IPOC Station P	1.41	25	*e*P	Pn	04 35 37.9	-0.2
PB12				*e*S	Sb	04 35 57.8	+0.4
PB12				IAML		04 36 08.7	
	comp=Z,2μm,0.5s						
MNMC	Minye Minye	1.48	59⇑	*i*P	Pb	04 35 40.1	-1.2
MNMC				*e*S	Sb	04 36 01.2	+1.3
MNMC				IAML		04 36 07.8	
	comp=E,10μm,0.5s						
MNMC	Minye Minye	1.48	59		Pb	04 35 39.8	-1.5
MNMCX	Minye Minye	1.48	59	*e*P	Pb	04 35 40.1	-1.2
MNMCX				*e*S	Sb	04 36 05.3	+5.4
MNMCX				IAML		04 36 08.3	
	comp=Z,3μm,0.5s						
GO01	Chusmiza	1.67	82		Pb	04 35 43.0	-1.5
PB08	IPOC Station P	1.70	98⇑	*i*P	Pb	04 35 43.2	-1.9
PB08				*e*S	Sb	04 36 07.1	+0.8
PB08	IPOC Station P	1.70	98	*e*P	Pb	04 35 43.2	-1.9
PB08				*e*S	Sb	04 36 07.3	+1.0
PB08				IAML		04 36 08.8	
	comp=Z,2μm,1.1s						
PB02	IPOC Station P	1.72	145⇑	*i*P	Pn	04 35 42.4	-0.1
PB02				IAML		04 36 15.0	
	comp=E,3μm,0.6s						
PB02	IPOC Station P	1.72	145	*e*P	Pn	04 35 42.2	-0.3
PB02				*e*S	Sb	04 36 11.2	+4.6
PB02				IAML		04 36 15.2	
	comp=Z,3μm,0.6s						
PB01	IPOC Station P	1.78	130⇑	*i*P	Pn	04 35 43.7	+0.5
PB01				*e*S	Sb	04 36 06.7	-1.5
PB01				IAML		04 36 13.0	
	comp=E,2μm,0.3s						
PB01	IPOC Station P	1.78	130		Pn	04 35 43.8	+0.5
PB16	IPOC Station P	2.07	41		Pb	04 35 49.8	-1.6
PB16	IPOC Station P	2.07	41	*e*P	Pb	04 35 49.9	-1.5
PB16				*e*S	Sb	04 36 17.8	+0.9
PB16				IAML		04 36 24.3	
	comp=Z,3μm,0.4s						
PB07	IPOC Station P	2.07	152	*e*P	Pn	04 35 47.2	-0.2
PB07				IAML		04 36 33.0	
	comp=N,1μm,0.3s						
PB07	IPOC Station P	2.07	152		Pn	04 35 47.0	-0.4
PB07	IPOC Station P	2.07	152	*e*P	Pn	04 35 47.0	-0.4
PB07				*e*S	Sb	04 36 20.9	+4.2
PB07				IAML		04 36 26.1	
	comp=Z,1μm,0.8s						
PB03	IPOC Station P	2.41	153	*e*P	Pn	04 35 51.7	-0.4
PB03				*e*S	Sb	04 36 29.8	+3.3
PB03				IAML		04 36 35.7	
	comp=Z,709nm,0.7s						
PB09	IPOC Station P	2.47	140		Pn	04 35 53.6	+0.7
PB09	IPOC Station P	2.47	140	*i* P	Pn	04 35 54.0	+1.1
PB09				*e*S	Sb	04 36 30.6	+2.4
PB09				IAML		04 36 39.1	
	comp=Z,1μm,1.0s						
PB04	IPOC Station P	2.54	163		Pn	04 35 52.6	-1.2
PB04	IPOC Station P	2.54	163	*i* P	Pn	04 35 52.8	-1.0
PB04				*e*S	Sb	04 36 33.3	+3.3
PB05	IPOC Station P	3.02	167	*i* P	Pn	04 35 59.0	-1.3
PB05				*e*S	Sb	04 36 47.5	+3.5
PB05				IAML		04 37 06.7	
	comp=Z,334nm,0.9s						
PB06	IPOC Station P	3.07	156	*i* P	Pn	04 36 00.3	-0.8
PB06				*e*S	Sb	04 36 48.6	+3.1
PB06				IAML		04 36 58.5	
	comp=Z,537nm,0.9s						
LVC	Limon Verde	3.30	145	Pn	Pn	04 36 05.6	+1.2
	comp=Z,3.4nm,0.3s,baz=335,slow=6.7,SNR=67						
LVC				Sn	Sn	04 36 43.8	+0.8
	comp=Z,14nm,0.3s,baz=162,slow=21,SNR=7.8						
LVC				LR	LR	04 36 51.1	
	comp=Z,65nm,21.7s,baz=316,slow=30						
LVC				Lg	Lg	04 36 57.7	
	comp=Z,24nm,0.3s,baz=49,slow=20,SNR=5.2						
LVC	Limon Verde	3.30	145	*e*P	Pn	04 36 05.6	+1.2
LVC				*e*S	Sn	04 36 42.8	-0.2
LVC	Limon Verde	3.30	145	*i* P	Pn	04 36 05.7	+1.2
LVC				*e*S	Sb	04 36 59.4	+7.2
LVC				IAML		04 37 05.8	
	comp=Z,170nm,1.2s						
PB15	IPOC Station P	3.57	158		Pn	04 36 07.1	-0.9
PB15	IPOC Station P	3.57	158	*i* P	Pn	04 36 07.2	-0.9
PB15				IAML		04 37 16.8	
	comp=Z,517nm,0.5s						
PB10	IPOC Station P	3.62	174	Pn	Pn	04 36 06.2	-2.2
PB10	IPOC Station P	3.62	174	*i* P	Pn	04 36 06.6	-1.9
PB10				*e*S	Sn	04 36 45.2	-5.1
LPAZ	La Paz	4.48	37	Pn	Pn	04 36 24.4	+3.6
	comp=Z,3.5nm,0.3s,baz=184,slow=1.8,SNR=34						
LPAZ	La Paz	4.48	37		Pn	04 36 21.6	+0.7
LPAZ	La Paz	4.48	37	*e*P	Pn	04 36 24.5	+3.6
LPAZ	La Paz	4.48	37	*i* P	Pb	04 36 27.7	-4.8
LPAZ				*e*S	Sb	04 37 39.0	+13
PB14	IPOC Station P	4.73	174		Pn	04 36 22.3	-1.8
GO02	Mina Guanaco	5.39	167		Pn	04 36 32.2	-0.9
NNA	Nana	9.69	323	LR	LR	04 40 23.8	
	comp=Z,42nm,20.5s,baz=146,slow=32						
SIV	San Ignacio	10.17	69	Pn	Pn	04 37 37.6	-1.0
	comp=Z,2.4nm,0.3s,baz=261,slow=10,SNR=44						
SAML	Samuel	13.22	36	*e*P	Pn	04 38 22.8	+2.5
CPUP	Villa Florida	14.06	120	LR	LR	04 44 57.4	
	comp=Z,106nm,18.2s,baz=336,slow=42						
CPUP	Villa Florida	14.06	120	*e*P	Pn	04 38 32.0	+0.3
AQDB	Aquidauana	14.33	95	*e*P	Pn	04 38 35.3	0.0
SALV	Santo Antonio	15.05	77	*e*P	Pn	04 38 44.8	-0.3
ITQB	Itaqui	16.23	130	*e*P	Pn	04 39 00.1	-0.3
C2SB	Chapadao do Su	17.13	89	*e*P	P	04 39 12.0	-1.2
CLDB	Colider	17.13	61	*e*P	Pn	04 39 10.3	-1.6
TRCB	Terra Rica	17.30	103	*e*P	P	04 39 14.3	-0.9
PTGB	Pitanga	18.11	109	*e*P	P	04 39 24.1	-0.2
ITAB	Concordia	18.72	117	*e*P	P	04 39 29.0	-1.8
CPSB	Cacapava Do Su	18.96	127	*e*P	P	04 39 32.5	-0.9
FRTB	Fartura	20.17	104	*e*P	P	04 39 46.4	-0.3
PLCA	Paso Flores	20.77	179	P	P	04 39 52.9	-0.2
	comp=Z,2.1nm,1.0s,baz=20,slow=2.1,SNR=2.8						
PLCA	Paso Flores	20.77	179	IAmb	IAmb	04 40 02.7	
	comp=Z,31nm,1.8s						
PLCA	Paso Flores	20.77	179	*e*P	P	04 39 50.7	-2.4
IPMB	Ipameri, GO	21.59	89	*e*P	P	04 40 01.2	-0.8
FLOC	Florencia	21.84	347	P	P	04 40 05.2	+0.5
PTGA	Pitinga	21.87	31	P	P	04 40 03.0	-2.0
	comp=Z,6.1nm,0.4s,baz=197,slow=15,SNR=21						
PTGA	Pitinga	21.87	31	P	P	04 40 04.8	-0.3
PTGA	Pitinga	21.87	31	*e*P	P	04 40 03.7	-1.4
SPB	Sao Paulo	22.14	104	*e*P	P	04 40 06.6	-1.3
BDFB	Brasilia	22.24	83	P	P	04 40 08.4	-0.8
	comp=Z,1.7nm,0.5s,baz=231,slow=9.2,SNR=4.2						
BDFB				LR	LR	04 50 26.0	
	comp=Z,151nm,19.0s,baz=287,slow=41						
BDFB	Brasilia	22.24	83	IAmb	IAmb	04 40 14.3	
	comp=Z,5.3nm,0.9s						
BSCB	Bom Sucesso	24.54	97	*e*P	P	04 40 30.2	-1.7
SMTB	Santa Maria do	25.11	67	*e*P	P	04 40 36.0	-1.0
RUSC	La Rusia	25.71	355	P	P	04 40 42.9	0.0
JANB	Januaria	25.84	84	*e*P	P	04 40 42.1	-1.6
SJMB	Sao Joao De Ma	28.10	93	*e*P	P	04 41 02.8	-1.1
NBPN	Ponto Novo - B	30.94	78	*e*P	P	04 41 27.9	-1.3
NBTA	Tacaratu-PE	33.52	76	*e*P	P	04 41 50.3	-1.5
DBIC	Dimbokro	70.14	75	P	P	04 46 26.6	+1.8
	comp=Z,1.9nm,0.7s,baz=292,slow=2.3,SNR=3.9						
NVAR	Mina Array Bea	73.07	323	P	P	04 46 45.1	+2.9
	comp=Z,0.5nm,0.7s,baz=102,slow=3.8,SNR=2.1						
YNE	Yellowstone No	73.75	332	P	P	04 46 47.5	+1.4
YKA	Yellowknife Ar	89.06	341	P	P	04 48 06.3	0.0
	comp=Z,0.6nm,0.8s,baz=137,slow=4.9,SNR=8.4						
H11S2	WAKE ISLAND Hy	125.77	279	T	T	07 13 37.3	
	baz=101,slow=74,SNR=23						
H11S1	WAKE ISLAND Hy	125.78	279	T	T	07 13 37.9	
	baz=101,slow=74,SNR=11						
H11S3	WAKE ISLAND Hy	125.78	279	T	T	07 13 38.7	
	baz=101,slow=74,SNR=9.6						
SEY	Seymchan	127.88	337	PKP	PKiKP	04 54 18.3	+0.9
	comp=Z,0.4nm,0.5s,baz=198,slow=3.8,SNR=3.7						
ZALV	Zalesovo Beam	141.27	23	PKP	PKiKP	04 54 43.9	-1.0
	comp=Z,1.0nm,0.5s,baz=266,slow=1.9,SNR=4.8						
ZALV	Zalesovo Beam	141.27	23		PKiKP	04 54 43.3	-1.5
MK31	Makanchi Array	145.40	33		PKPab	04 54 50.2	+0.4
MKAR	Makanchi Array	145.40	33	PKPbc	PKiKP	04 54 50.8	-2.9
	comp=Z,0.9nm,0.8s,baz=331,slow=5.3,SNR=8.0						
MKAR	Makanchi Array	145.40	33		PKPab	04 54 50.4	+0.6
KLR	Kul'dur	145.55	333	PKPbc	PKPab	04 54 50.8	+0.6
	comp=Z,1.4nm,0.8s,baz=8.0,slow=7.3,SNR=4.6						
SONM	Songino Array	152.05	4	PKPbc	PKiKP	04 55 07.1	-0.4
	comp=Z,1.0nm,0.6s,baz=298,slow=0.4,SNR=7.2						
LZH	Lanzhou	163.23	15	*e*PKP	PKPdf	04 55 14.5	-0.3
LZH				pPKP	pPKPdf	04 55 19.5	-3.4
LZH				sPKP		04 55 21.3	
LZH				PKP	PKPab	04 56 07.3	+2.3

PPT 30 04:46:40.0±1.9, **9.°57S**×**145.°53W, h10**^{km}, **Ml3.5**/4, **Error ellipse: s-maj=72.5km s-min=15.0km az=140.0, South Pacific Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAOE	Nuku Hiva Isla	5.36	83	*e*Pn	Pn	04 47 54.9	-5.3
	29nm,0.1s,baz=299						
TAOE				*e*Sn	Sn	04 48 48.2	-14
	90nm,0.1s						
PMOR	Pomariorio Ree	5.87	203	*e*Sn	Sn	04 49 07.3	-7.3

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*IDC **30** 05:06:26.1±3.8, 35.°04N×23.°15E, h0^{km}, mb3.7/5, mb1 3.6/8, mb1mx3.5/28, mbtmp3.5/8, ML3.5/3, Error ellipse: s-maj=68.8km s-min=35.0km az=19.0*

*ATH **30** 05:06:29.0, 35.°21N×23.°14E, h9^{km}±4^{km}, ML3.2/3, Error ellipse: s-maj=5.7km s-min=1.5km az=45.0*

*THE **30** 05:06:29.6, 35.°23N×23.°19E, h2^{km}±1^{km}, ML3.0/9, Error ellipse: s-maj=1.3km s-min=0.6km az=61.0*

ISC 30 05:06:28.2±1.6, **35.°21N**±0.°05×**23.°13E**±0.°05, **h4**^{km}±10^{km}, **n31,** σ0^{s}**90**/41, **mb3.8**/5, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RODP	Rodopos	0.62	55	P	Pb	05 06 40.8	-0.8
IMMV	Iera Moni Meta	0.74	70	P	Pb	05 06 42.9	-0.7

IMMV				S	Sb	05 06 53.0	-1.0
	2µm,0.5s						
IMMV	Iera Moni Meta	0.74	70	P	Pb	05 06 42.8	-0.7
IMMV				AML	AML	05 06 55.8	
	comp=E,4282µm,0.6s						
IMMV				AML	AML	05 06 58.7	
	comp=N,3599µm,0.4s						
CHAN	Chania	0.80	67	P	Pb	05 06 44.0	-0.7
CHAN				S	Sb	05 06 55.3	-0.6
	comp=N,650nm,0.6s						
GVD	Gavdhos	0.87	115	P	Pg	05 06 44.8	0.0
GVD				S	Sb	05 06 57.8	+0.1
	comp=N,1µm,0.3s						
GVD	Gavdhos	0.87	115	P	Pb	05 06 44.9	-0.8
GVD				AML	AML	05 07 03.0	
	comp=E,2488µm,0.3s						
GVD				AML	AML	05 07 06.3	
	comp=N,3171µm,0.4s						
GVDS	Gavdos	0.87	115	P	Pg	05 06 44.5	-0.3
GVDS				S	Sb	05 06 57.2	-0.5
	comp=N,900nm,0.3s						
VAM	Vamos	0.89	77	P	Pb	05 06 45.6	-0.7
VAM				S	Sb	05 06 58.3	-0.2
	comp=N,2µm,0.5s						
VAM	Vamos	0.89	77	P	Pb	05 06 45.7	-0.5
VAM				AML	AML	05 07 04.3	
	comp=N,3317µm,0.5s						
VAM				AML	AML	05 07 04.4	
	comp=E,2842µm,0.4s						
KTHR	Kythira	1.05	354	P	Pn	05 06 49.0	-0.8
KTHR				S	Sb	05 07 03.4	+0.2
	comp=E,930nm,0.4s						
PRNS	Prines Rethymn	1.13	82	P	Pg	05 06 49.4	-0.4
PRNS				S	Sg	05 07 03.4	-1.1
SIVA	Sivas	1.39	97	P	Pg	05 06 54.6	-0.2
SIVA				S	Sg	05 07 13.9	+1.1
	comp=E,680nm,0.5s						
SIVA	Sivas	1.39	97	P	Pg	05 06 55.4	+0.6
IDI	Anoyia	1.44	86	P	Pb	05 06 55.0	-0.6
IDI				S	Sg	05 07 14.5	0.0
	comp=E,355nm,0.8s						
IDI	Anoyia	1.44	86	P	Pg	05 06 56.0	+0.2
VLI	Veliai	1.51	354	P	Pg	05 06 57.2	0.0
VLI				S	Sg	05 07 16.7	-0.1
	comp=E,402nm,0.8s						
VLI	Veliai	1.51	354	P	Pg	05 06 57.3	0.0
DYR	Agios Nikonas	1.68	338	P	Pb	05 06 59.0	-0.7
DYR	Agios Nikonas	1.68	338	P	Pg	05 07 00.7	+0.3
PYL	PYLOS	2.02	327	P	Pb	05 07 04.2	-1.3
PYL	PYLOS	2.02	327	P	Pg	05 07 07.0	0.0
KRND	KRANIDI	2.17	0	P	Pb	05 07 07.8	-0.2
DID	Didima	2.29	2	P	Pb	05 07 09.0	-1.1
BRTR	Keskin Array B	9.49	59	Pn	Pn	05 08 48.4	+2.7
	comp=E,0.1nm,0.3s,baz=245,slow=12,SNR=4.7						
GERES	GERESS Array B	15.30	336	Pn	Pn	05 10 06.6	+1.6
	comp=E,0.1nm,0.3s,baz=135,slow=13,SNR=2.2						
AKASG	Malin Array Be	16.10	14	Pn	Pn	05 10 16.1	+0.9
	comp=E,0.3nm,0.3s,baz=204,slow=9.8,SNR=4.4						
FINES	FINESS Array B	26.32	3	P	P	05 12 03.0	-1.7
	comp=E,2.1nm,1.0s,baz=186,slow=9.6,SNR=4.3						
ARCES	ARCESS Array B	34.41	1	P	P	05 13 15.6	-0.5
	comp=E,3.3nm,1.0s,baz=183,slow=9.0,SNR=3.6						
MKAR	Makanchi Array	45.13	56	P	P	05 14 44.4	-1.3
	comp=E,0.2nm,0.4s,baz=262,slow=7.4,SNR=4.8						
ZALV	Zalesovo Beam	46.17	46	P	P	05 14 53.0	-0.7
	comp=E,0.4nm,0.3s,baz=262,slow=10.0,SNR=2.3						
YKA	Yellowknife Ar	76.88	341	P	P	05 18 21.7	+0.6
	comp=E,0.1nm,0.6s,baz=46,slow=5.3,SNR=2.0						

BGR ***30*** *05:10:45.7±0.0, 17°72S×173°02W, h46^{km}±1^{km}*
IDC ***30*** *05:10:45.0±0.7, 14°95S×172°28W, h0^{km}, mb4.2/12, mb1 4.4/12, mb1mx4.2/30, mbtmp4.2/12, MS3.5/11, Ms1 3.6/11, ms1mx3.3/26, Error ellipse: s-maj=30.6km s-min=14.4km az=128.0*
NEIC ***30*** *05:10:50.1±1.7, 14°86S±0°07×172°2W±0°1, h33^{km}±5^{km}, mb4.7/21, Error ellipse: s-maj=19.5km s-min=6.1km az=113.0*
ISC 30 05:10:47.8±0.4**, 14°88S**±0°06×**172°23W**±0°10**, h18**^{km}**, n130,** σ1^{s}**96**/107**, mb4.7**/21**, MS3.5**/14**, 8C-5D, Samoa Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	1.06	24	LR	LR	05 11 06.7	
	comp=Z,130nm,20.4s,baz=218,slow=19						
AFI				Pn	Pb	05 11 07.0	-0.7
	559nm,0.3s,baz=186,slow=1.7,SNR=529						
AFI				Sn	Sb	05 11 20.6	-0.6
	2µm,0.3s,baz=34,slow=22,SNR=16						
AFI	Afiamalu	1.06	24		Pb	05 11 07.2	-0.5
AFI					Sb	05 11 21.4	+0.1
NIUE	Niue	4.72	152		Pn	05 11 50.3	-7.8
NIUE					Sn	05 12 36.0	-16
KNTN	Kanton	12.04	2	Pn	Pn	05 13 36.2	-2.5
RAR	Rarotonga	13.41	120	Pn	Pn	05 13 55.1	-2.3
DZM	Mont Dzumac	21.44	247	*e*LR	LR	05 20 44.1	
	comp=Z,340nm,25.2s						
PPT	Papeete	21.91	100	LR	LR	05 21 31.6	
	comp=Z,42nm,21.1s,baz=311,slow=30						
PPT2	Papeete2	21.91	100	*e*LR	LR	05 20 34.0	
	comp=Z,97nm,28.5s						
PPT2	Papeete2	21.91	100	*e*T	T	05 36 45.7	
	2.9nm,0.4s						
PAE	Paea	21.91	100	*e*T	T	05 36 43.5	
	2.7nm,0.3s						
TVO	Taravao	22.23	101	*e*T	T	05 37 09.3	
	0.9nm,0.4s						
TBI	Tubuai	23.08	115	*e*LR	LR	05 21 14.8	
	comp=Z,99nm,26.0s						
OUZ	Omahuta	23.93	210	P	P	05 16 01.2	+0.4
WMGZ	Waiomatatini S	24.31	198	P	P	05 16 08.1	+3.7
HAZ	Te Kaha	24.45	199	P	P	05 16 07.1	+1.5
WIAZ	Waiheke Island	24.56	205	P	P	05 16 07.7	+1.0
PUZ	Puketiti	24.59	198	P	P	05 16 10.9	+4.0
RUGZ	Raukumara Rang	24.67	199	P	P	05 16 09.7	+1.9
MWZ	Matawai	25.05	199	P	P	05 16 14.0	+2.8
URZ	Urewera	25.12	200	P	P	05 16 11.6	-0.1
	13nm,0.4s,baz=20,slow=4.3,SNR=20						
URZ	Urewera	25.12	200	P	P	05 16 12.5	+0.8
URZ				IAmb	IAmb	05 16 16.8	
	comp=Z,18nm,0.6s						
URZ	Urewera	25.12	200	P	P	05 16 13.0	+1.2
RAGZ	Rawiri	25.24	199	P	P	05 16 14.9	+2.0
RIGZ	Rimuhau	25.32	199	P	P	05 16 17.3	+3.7
RTZ	Ruatahuna	25.49	200	P	P	05 16 17.1	+1.9
RTZ				S	S	05 20 38.3	-3.4
SNGZ	Shannon Statio	25.52	199	P	P	05 16 18.8	+3.4
KAHZ	Kahuranaki	26.59	199	P	P	05 16 31.3	+6.2
KIW	Kapiti Island	28.20	201	P	S	05 21 25.6	+1.1
MTW	Mount Morrison	28.27	200	P	S	05 21 31.3	+5.8
CAW	Cannon Point	28.37	200	P	S	05 21 28.0	+1.0
PAWZ	Paruwai Farm	28.50	200	P	S	05 21 32.2	+3.2
DUWZ	D’Urville Isla	28.50	202	P	S	05 21 21.2	-8.0
PLWZ	Palliser	28.72	200	P	S	05 21 32.4	-0.2
TCW	Tory Channel	28.73	201	P	S	05 21 25.2	-7.5
QRZ	Quartz Range	29.06	204	P	S	05 21 25.0	-13
NNZ	Nelson	29.07	203	P	S	05 21 24.3	-14
H11S2	WAKE ISLAND Hy	39.12	327	T	T	06 00 46.7	
	baz=145,slow=76,SNR=3.6						
H11S3	WAKE ISLAND Hy	39.13	327	T	T	06 00 40.0	
	baz=145,slow=76,SNR=3.8						
H11S1	WAKE ISLAND Hy	39.14	327	T	T	06 00 46.3	
	baz=145,slow=76,SNR=35						
PMG	Port Moresby	40.03	273	P	P	05 18 21.7	-0.5
	comp=Z,18nm,0.9s,baz=16,slow=23,SNR=3.3						
PMG	Port Moresby	40.03	273	P	P	05 18 21.1	-1.1
H11N3	WAKE ISLAND Hy	40.04	329	T	T	06 01 51.0	
	baz=145,slow=76,SNR=23						
H11N1	WAKE ISLAND Hy	40.05	329	T	T	06 01 51.5	
	baz=145,slow=76,SNR=35						
H11N2	WAKE ISLAND Hy	40.06	329	T	T	06 01 52.3	
	baz=145,slow=76,SNR=26						
STKA	Stephens Creek	45.27	240	P	P	05 19 03.2	-1.5
	comp=Z,1.4nm,0.7s,baz=85,slow=12,SNR=3.7						
STKA				LR	LR	05 34 57.6	
	comp=Z,49nm,20.0s,baz=25,slow=32						
STKA	Stephens Creek	45.27	240	P	P	05 19 04.1	-0.6
BBOO	Buckleboo	50.05	240	P	P	05 19 40.9	-0.9
BBOO				IAmb	IAmb	05 19 42.8	
	comp=Z,12nm,1.2s						
WR0	Warramunga Arr	50.87	256	P	P	05 19 47.0	-1.1
WB0	Warramunga Arr	51.02	256	P	P	05 19 49.6	+0.3
WB0				IAmb	IAmb	05 19 50.1	
	comp=Z,8.1nm,0.8s						
WB2	Warramunga Arr	51.05	256	P	P	05 19 49.6	+0.1
WB2				IAmb	IAmb	05 19 50.4	
	comp=Z,5.3nm,0.8s						
WRA	Warramunga Arr	51.06	256	P	P	05 19 49.5	-0.1
	comp=Z,2.2nm,0.3s,baz=88,slow=8.0,SNR=16						
WRA				LR	LR	05 40 02.0	
	comp=Z,62nm,19.2s,baz=115,slow=34						
WRA	Warramunga Arr	51.06	256	P	P	05 19 49.8	+0.2
AS31	Alice Springs	51.34	251	P	P	05 19 52.4	+0.7
ASAR	Alice Springs	51.35	251	P	P	05 19 51.2	-0.5
	comp=Z,7.1nm,0.8s,baz=84,slow=8.6,SNR=54						
ASAR				LR	LR	05 39 50.4	
	comp=Z,119nm,19.9s,baz=106,slow=34						
ASAR	Alice Springs	51.35	251	P	P	05 19 51.6	-0.1
MTN	Manton Dam	54.90	265	P	P	05 20 18.8	+0.9
MTN				IAmb	IAmb	05 20 19.5	
	comp=Z,7.4nm,0.8s						
FORT	Forrest	56.66	243	P	P	05 20 30.2	-0.2
KNRA	Kununurra	56.76	261	P	P	05 20 31.8	+0.5
KNRA				IAmb	IAmb	05 20 32.7	
	comp=Z,7.2nm,0.8s						
VNDA	Vanda	64.01	186	P	P	05 21 18.6	-1.2
	comp=Z,2.1nm,0.9s,baz=12,slow=6.0,SNR=8.6						
VNDA	Vanda	64.01	186	P	P	05 21 19.9	0.0
VNDA				IAmb	IAmb	05 21 20.1	
	comp=Z,4.0nm,1.1s						
PETK	Petropavlovsk-	72.49	342	LR	LR	05 55 37.8	
	comp=Z,21nm,18.1s,baz=59,slow=37						
NVAR	Mina Array Bea	73.19	42	P	P	05 22 19.8	+1.8
	comp=Z,0.6nm,0.6s,baz=226,slow=10.0,SNR=5.8						
NVAR				LR	LR	05 46 07.1	
	comp=Z,76nm,20.5s,baz=251,slow=29						
NVAR	Mina Array Bea	73.19	42	P	P	05 22 19.3	+1.3
QSPA	South Pole Qui	75.16	180	P	P	05 22 28.0	-1.0
KSRS	Korea Array	76.59	315	LR	LR	05 50 53.8	
	comp=Z,8.3nm,21.6s,baz=165,slow=31						
TXAR	Lajitas Array	79.39	56	P	P	05 22 54.8	+1.6
	comp=Z,0.3nm,0.8s,baz=210,slow=8.3,SNR=2.7						
TXAR				LR	LR	05 51 46.3	
	comp=Z,20nm,19.1s,baz=0.0,slow=31						
PDAR	Pinedale Array	81.13	41	P	P	05 23 02.8	+0.2
	comp=Z,0.5nm,0.9s,baz=224,slow=3.7,SNR=4.0						
PDAR				LR	LR	05 53 08.0	
	comp=Z,72nm,20.8s,baz=241,slow=31						
YHL	Hebgen Lake	81.17	39	P	P	05 23 05.3	+2.5
WRH	Wood River Hil	81.24	10	P	P	05 23 02.8	+0.5
WRH				IAmb	IAmb	05 23 17.8	
	comp=Z,8.8nm,1.0s						
CCB	Clear Creek Bu	81.45	10	P	P	05 23 03.9	+0.5
CCB				IAmb	IAmb	05 23 18.1	
	comp=Z,8.3nm,1.2s						
ILAR	Eielson Array	81.72	11	P	P	05 23 05.2	+0.3
	comp=Z,0.4nm,0.7s,baz=191,slow=2.8,SNR=3.4						
ILAR				LR	LR	05 53 48.8	
	comp=Z,27nm,19.6s,baz=128,slow=32						
ILAR	Eielson Array	81.72	11	P	P	05 23 05.3	+0.4
DAWY	Dawson	82.64	14	P	P	05 23 10.0	+0.2
DAWY				IAmb	IAmb	05 23 25.3	
	comp=Z,6.8nm,0.8s						
PRP	Porcupine Dome	82.65	11	P	P	05 23 09.8	-0.1
PRP				IAmb	IAmb	05 23 25.3	
	comp=Z,6.9nm,1.1s						
BMAR	Burnt Mountain	84.54	10	P	P	05 23 20.8	+1.4
MAW	Mawson	88.64	198	P	P	05 23 38.4	-1.2
	comp=Z,5.2nm,0.9s,baz=85,slow=7.4,SNR=3.8						
YKA	Yellowknife Ar	89.18	23	P	P	05 23 42.7	+0.6
	comp=Z,0.4nm,0.8s,baz=230,slow=4.4,SNR=6.0						
S39A	Bolivar	90.45	51	P	P	05 23 48.0	-0.6
ULM	Lac du Bonnet	92.82	39	LR	LR	06 01 16.7	
	comp=Z,68nm,20.3s,baz=78,slow=33						
MKAR	Makanchi Array	111.27	315	PKiKP	PKiKP	05 29 19.4	-1.4
	comp=Z,0.3nm,0.8s,baz=88,slow=3.9,SNR=3.5						
CLL	Collm	143.42	354	*e*PKPdf	PKPdf	05 30 20.0	-1.2
HWTS	Hohenwarte Tal	144.26	356	*e*PKPbc	PKPbc	05 30 21.8	+0.8
	baz=7.6,slow=2.8						
BURAR	Bucovina Array	144.29	340	⇑P	PKPbc	05 30 22.1	+0.9
PLN	Plauen	144.31	355	*e*PKPbc	PKPbc	05 30 21.6	+0.4
	baz=7.6,slow=2.8						
MULD	Muldenberg	144.36	355	*e*PKPbc	PKPbc	05 30 22.1	+0.8
	baz=7.6,slow=2.8						
GUNZ	Gunzen	144.42	355	*e*PKPbc	PKPbc	05 30 22.3	+0.8
	baz=7.6,slow=2.8						
TRIB	Obertriebel	144.45	355	*e*PKPbc	PKPbc	05 30 22.3	+0.7
	baz=7.6,slow=2.8						
WERN	Wernitzgruen	144.49	355	*e*PKPbc	PKPdf	05 30 22.7	-0.5
	baz=7.6,slow=2.8						
NKC	Novy Kostel	144.54	355	*e*PKPbc	PKPdf	05 30 22.9	-0.4
	baz=7.6,slow=2.8						
ROHR	Rohrbach	144.55	355	*e*PKPbc	PKPdf	05 30 23.6	+0.3
	baz=7.6,slow=2.8						
BIZ	Bicaz	144.56	338	⇑P	PKPdf	05 30 23.3	-0.1
TRPA	Tarpa	144.67	343	⇑P	PKPdf	05 30 23.5	0.0
TLCR		144.94	334	⇓P	PKPdf	05 30 24.2	+0.1
ROTZ	Rotzenmuhle	145.02	355	*e*PKPbc	PKPdf	05 30 24.4	+0.3
	baz=7.6,slow=2.8						
GRA3	Grafenberg Arr	145.09	356	*e*PKPbc	PKPdf	05 30 24.5	+0.3
	baz=7.6,slow=2.8						
JAVC	Velka Javorina	145.15	349	*e*PKP	PKPdf	05 30 26.0	+1.6
GRF	Grafenberg Arr	145.17	356	*e*PKPbc	PKPdf	05 30 24.9	+0.5
	baz=7.6,slow=2.8						
KRUC	Moravsky	145.19	350	*e*PKP	PKPdf	05 30 24.7	+0.3
GRA4	Grafenberg Arr	145.28	356	*e*PKPbc	PKPdf	05 30 24.6	0.0
	baz=7.6,slow=2.8						
GRA4				*e*pPKPbc	sPKPdf	05 30 38.3	+6.6
GRB4	Grafenberg Arr	145.37	356	*e*PKPbc	PKPab	05 30 24.7	0.0
	baz=7.6,slow=2.8						
TOPG	Topolog	145.38	334	⇓P	PKPab	05 30 26.4	+1.5
GRB1	Grafenberg Arr	145.44	356	*e*PKPbc	PKPab	05 30 25.0	+0.1
	baz=7.6,slow=2.8						
GRB3	Grafenberg Arr	145.47	355	*e*PKPbc	PKPab	05 30 25.4	+0.3
	baz=7.6,slow=2.8						
KHC	Kasperske Hory	145.51	353	*e*PKP	PKPab	05 30 25.5	+0.2
KHC				*e*x	x	05 30 32.4	
KHC				*e*x	x	05 30 39.7	
GRB2	Grafenberg Arr	145.56	355	*e*PKPbc	PKPab	05 30 25.6	+0.2
	baz=7.6,slow=2.8						
WET	Wettzell	145.58	354	*e*PKPbc	PKPab	05 30 25.7	+0.2
	baz=7.6,slow=2.8						
WET				*e*pPKPbc	sPKPab	05 30 39.5	+7.0
DOPR	Dopca	145.65	338	⇓P	PKPab	05 30 27.5	+1.6
GRB5	Grafenberg Arr	145.71	355	*e*PKPbc	PKPab	05 30 26.1	+0.1
	baz=7.6,slow=2.8						
GRB5				*e*pPKPbc	sPKPab	05 30 40.2	+7.2
HARR	Harsova	145.72	334	⇑P	PKPab	05 30 26.5	+0.4
GRC4	Grafenberg Arr	145.75	356	*e*PKPbc	PKPab	05 30 26.2	+0.1
	baz=7.6,slow=2.8						
GRC4				*e*pPKPbc	sPKPab	05 30 40.2	+7.0
GEC2	GERESS Array S	145.78	353	*e*PKPbc	PKPbc	05 30 26.0	0.0
	baz=7.6,slow=2.8						
GEC2				*e*pPKPbc	sPKPab	05 30 40.3	+6.9
GEC2	GERESS Array S	145.78	353		PKPbc	05 30 26.2	+0.2
GERES	GERESS Array B	145.78	353	PKPbc	PKPab	05 30 26.4	+0.1
	comp=Z,1.2nm,0.7s,baz=29,slow=3.0,SNR=10						
GERES	GERESS Array B	145.78	353		PKPdf	05 30 25.8	+0.2
GRC1	Grafenberg Arr	145.84	356	*e*pPKPbc	pPKPbc	05 30 40.3	+8.8
MLR	Muntele Rosu	145.85	337	⇓P	PKPab	05 30 27.9	+1.1
GRC3	Grafenberg Arr	145.94	356	*e*pPKPbc	pPKPbc	05 30 40.9	+9.2
VOIR		146.23	338	⇑P	PKPab	05 30 28.9	+0.8
CONA	Conrad Observa	146.37	350	*e*PKiKP	PKPab	05 30 29.1	+0.5
	comp=Z,4.4nm,0.9s						
ARR	Arges	146.44	338	⇑P	PKPab	05 30 30.0	+1.1
BRTR	Keskin Array B	146.45	322	PKPbc	PKPbc	05 30 28.3	-0.1
	comp=Z,2.3nm,0.9s,baz=124,slow=1.5,SNR=6.0						
BRTR	Keskin Array B	146.45	322		PKPdf	05 30 26.5	-0.6
GZR	Gura Zlata	147.05	340	⇑P	PKPbc	05 30 29.2	-0.7
BZS	Buzias	147.21	342	⇓P	PKPbc	05 30 30.2	+0.1
RETA	Reutte	147.40	356	*e*PKPab	PKPbc	05 30 31.4	+0.7
	comp=Z,5.1nm,1.1s						
MOTA	Moosalm	147.51	356	*e*PKPab	PKPbc	05 30 31.9	+0.7
	comp=Z,4.1nm,0.9s						
HERR	Herculane	147.62	340	⇑P	PKPbc	05 30 30.3	-1.1
SOKA	Soboth	147.72	351	*e*PKPab	PKPbc	05 30 32.0	+0.3
	comp=Z,2.5nm,0.9s						
OBKA	Obir	147.96	351	*e*PKiKP	PKPbc	05 30 32.2	-0.1
	comp=Z,1.5nm,0.9s						
ABTA	Abfaltersbach	147.98	354	*e*PKiKP	PKPbc	05 30 32.4	+0.1
	comp=Z,4.7nm,0.8s						

GCMT 30 05:24:43.0±0.4**, 40°91S**±0°03×**92°28W**±0°05**, h30**^{km}±1^{km}**, MW4.9**/65**, Moment Tensor Solution. s25,c29; s65,c76; Duration: 0 Moment tensor: Scale** 10^{16}**Nm;** M_{rr}-2.66±.21; $M_{\theta\theta}$1.26±.16; $M_{\phi\phi}$1.39±.15; $M_{r\theta}$-0.07±.15; $M_{\theta\phi}$0.55±.08; $M_{\phi r}$2.19±.16; **Best double couple:** $M_0$3.08100×10^{16} **NP1:**ϕ_s42.00000°**,**δ26.00000°**,** λ-64.00000°. **NP2:**ϕ_s193.00000°**,**δ67.00000°**,** λ-102.00000°. **Principal axes:** T 2.5280**,** Plg21.0000°**,** Azm292.0000°**;** N 1.0970**,** Plg11.0000°**,** Azm198.0000°**;** P -3.6350**,** Plg66.0000°**,** Azm82.0000°**; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBI	Tubuai	50.61	272	*e*S	S	05 40 49.0	-3.1
	70nm,27.5s						
TBI				*e*LR	LR	05 48 03.7	
	comp=Z,449nm,27.8s,baz=130						
PPT2	Papeete2	54.09	278	*e*S	S	05 41 36.0	-4.0
	104nm,25.0s						
PPT2				*e*LR	LR	05 49 38.3	
	comp=Z,346nm,28.0s						
DZM	Mont Dzumac	83.90	246	*e*LR	LR	06 03 16.4	
	comp=Z,130nm,27.6s						

IASPEI ***30*** *05:51:22.6±0.8, 33°91N±0°02×117°94W±0°02, h14^{km}±4^{km} Error ellipse: s-maj=2.7km s-min=2.2km az=32.2, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
ANF ***30*** *05:51:22.3±0.2, 33°90N×117°94W, h10^{km}±2^{km}, ML3.4/20, Error ellipse: s-maj=2.2km s-min=1.9km az=88.0*
PAS ***30*** *05:51:22.8±1.8, 33°903N±0°007×117°950W±0°005, h2^{km}±5^{km}, ML3.3/247, Error ellipse: s-maj=1.0km s-min=0.7km az=180.0*
SCEDC ***30*** *05:51:22.9, 33°91N×117°95W, h2^{km}*
ISC 30 05:51:23.1±0.8**, 33°89N**±0°02×**117°96W**±0°02**, h14**^{km}±4^{km}**, n147,** σ1^{s}**26**/182**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FULC	Fullerton	0.04	123		Pg	05 51 24.1	-1.6
FULC					Sg	05 51 26.1	-1.3
BREC	Barre Substati	0.09	193		Pg	05 51 25.5	-0.6
BREC					Sg	05 51 28.8	+0.7
RHC	Rose Hills Cem	0.12	337		Pg	05 51 25.5	-1.0
DLAC	Del Amo	0.12	250		Pg	05 51 26.4	-0.1
SANC	Santa Ana	0.20	162		Pg	05 51 27.5	0.0
SANC					Sg	05 51 32.1	+1.6
GVRC	Garvey Reservo	0.21	320		Pg	05 51 27.5	-0.3
PSRC	Puddingstone R	0.24	32		Pg	05 51 27.4	-0.9
WTT2	Watts, South G	0.25	283		Sg	05 51 29.1	-3.2
CHNC	Chino	0.26	65		Pg	05 51 28.0	-0.5
CHNC					Sg	05 51 32.6	+0.3
CACC	Caltech Cellar	0.28	331		Pg	05 51 28.2	-0.9
PEM	Pine Mountain	0.28	15		Pg	05 51 28.2	-0.9
USC	University of	0.30	295		Pg	05 51 29.6	+0.2
CRNC	Corona	0.33	92		Pg	05 51 29.3	-0.6
CRNC					Sg	05 51 34.6	+0.1
FMP	Fort Macarthur	0.33	238		Pg	05 51 29.4	-0.5
FMP	Fort Macarthur	0.33	238	P	Pg	05 51 29.4	-0.5
	baz=55						
PASC	Pasadena Art C	0.34	326	Pg	Pg	05 51 28.9	-1.1
PASC				Sg	Sg	05 51 34.0	-0.8
MWC	Mount Wilson	0.34	346	Pg	Pg	05 51 29.1	-1.1
MWC				Sg	Sg	05 51 33.7	-1.3
MLSC	Mira Loma	0.35	71		Pg	05 51 29.4	-0.8
MLSC					Sg	05 51 34.5	-0.5
BHPC	Baldwin Hills	0.35	287		Pb	05 51 30.9	-0.2
GR2C	Griffith Obs.	0.36	309		Pg	05 51 29.8	-0.7
SSK	Sunset Peak	0.39	35		Pg	05 51 30.2	-0.8
RPV	Rancho Palos V	0.40	249		Pg	05 51 30.6	-0.5
XTL	Crystal Lake,	0.41	11		Pg	05 51 30.3	-1.2
BFSC	Mount Baldy Ra	0.43	36		Pg	05 51 30.7	-1.0
BFSC					Sg	05 51 36.8	-0.8
BFSC	Mount Baldy Ra	0.43	36	P	Pg	05 51 30.7	-1.0
	baz=216						
BFSC				S	Sg	05 51 36.8	-0.8
	baz=216						
CHFC	Chilao Flat St	0.45	353		Pg	05 51 30.7	-1.3
CHFC					Sg	05 51 36.9	-1.2
DJJ	Donna J Jenkin	0.47	298		Pg	05 51 31.5	-0.9
DJJ					Sg	05 51 38.9	+0.3
DECC	Green Verdugo	0.48	319		Pg	05 51 31.6	-1.0
DECC	Green Verdugo	0.48	319	P	Pg	05 51 31.6	-1.0
	baz=138						
RVR	Riverside	0.49	78		Pg	05 51 31.9	-1.0
RVR					Sg	05 51 38.9	-0.7
SS2	San Sevaine	0.49	50		Pg	05 51 32.1	-0.8
SME	Santa Rosa Min	0.51	98		Pg	05 51 32.2	-0.9
RSBC	Riverside Bore	0.53	81		Pg	05 51 32.8	-0.8
RSBC					Sg	05 51 40.3	-0.4
RSBC	Riverside Bore	0.53	81		Pg	05 51 32.7	-0.9
RSBC					Sg	05 51 40.1	-0.6
JNH	Juniper Hills	0.56	0		Pg	05 51 32.8	-1.3
JNH					Sg	05 51 40.6	-1.0
HOLC	Holcomb Ridge	0.57	9		Pg	05 51 33.1	-1.4
IR2C	Iron Canyon	0.62	324		Pg	05 51 34.0	-1.3
CIAC	Catalina I. Ai	0.62	218		Pg	05 51 35.5	+0.2
CIS	Catalina Islan	0.62	218	P	Pg	05 51 35.5	+0.2
	baz=37						
LRRC	Littlerock Res	0.64	355		Pg	05 51 34.2	-1.3
CSP	Cedar Springs	0.64	51		Pg	05 51 34.6	-1.1
CSP					Sg	05 51 43.9	-0.4
CJV	Casa Juvan	0.66	346		Pg	05 51 34.5	-1.4
HLNC	Highland	0.66	69		Pg	05 51 35.2	-0.7
PEC	Perris	0.66	90		Pg	05 51 35.0	-1.0
BLCC	Black Canyon	0.69	301		Pg	05 51 34.0	-2.6
MURC	Murrieta	0.70	114		Pg	05 51 35.7	-1.0
MURC	Murrieta	0.70	114	P	Pg	05 51 35.8	-0.9
	baz=296						
OAT	Oat Mountain	0.71	310		Pg	05 51 36.5	-0.5
CFT	Crafton Hills	0.72	78		Pg	05 51 36.2	-0.9
SVD	Seven Oaks Dam	0.75	73		Pg	05 51 37.0	-0.7
ADO	Adelanto Recei	0.79	33		Pg	05 51 37.5	-0.9
LEOC	Leona Valley	0.79	339		Pg	05 51 36.9	-1.7
LEOC					Sg	05 51 48.0	-1.0
SBB	Saddle Back Bu	0.80	8		Pg	05 51 37.1	-1.6
BACC	Bachelor Mtn.	0.81	110		Pg	05 51 37.5	-1.4
BBSC	Beaumont Base	0.81	88		Pg	05 51 38.1	-0.8
BBSC					Sg	05 51 49.8	+0.2
HMTC	Hemet	0.81	103		Pg	05 51 37.6	-1.3
DGR	Domenigoni Val	0.83	107		Pg	05 51 37.9	-1.2
DGR					Sg	05 51 49.2	-0.8
ALPC	Antelope	0.84	341		Pg	05 51 37.9	-1.6
BTL	Butler Peak	0.87	65		Pg	05 51 39.1	-1.0
BTL					Sg	05 51 51.4	-0.2
FOXC	Fox Airport	0.88	345		Pg	05 51 38.7	-1.5
BALC	Balcom Canyon	0.94	297		Pg	05 51 40.6	-0.6
BBRC	Big Bear Solar	0.94	66		Pg	05 51 39.9	-1.3
BBRC	Big Bear Solar	0.94	66	P	Pg	05 51 40.0	-1.3
	baz=248						
PYR	Pyramid	0.94	316		Pg	05 51 40.3	-0.9
BTPC	Burnt Peak	0.94	327		Pg	05 51 40.0	-1.3
GORC	Green Oak Ranc	0.95	140		Pg	05 51 39.3	-2.3
OSI	Osito Audit: C	0.96	319	Pg	Pg	05 51 40.5	-1.2
OSI	Osito Audit: C	0.96	319	P	Pg	05 51 40.5	-1.2
	baz=138						
EDW2	Edwards Air Fo	0.99	358		Pg	05 51 40.6	-1.7
EDW2	Edwards Air Fo	0.99	358	P	Pg	05 51 40.5	-1.7
	baz=178						
EDW2				S	Sb	05 51 55.9	+1.0
	baz=178						
TPO	Tropico Hills	1.01	347		Pg	05 51 40.9	-1.7
HYS	Haystack Butte	1.02	18		Pg	05 51 41.4	-1.5
SCI2	San Clemente I	1.03	209		Pg	05 51 42.8	-0.2
SCI2	San Clemente I	1.03	209	P	Pg	05 51 42.8	-0.2
	baz=28						
PLM	Palomar	1.06	120		Pg	05 51 41.5	-2.1
CRY	Cary Ranch	1.07	107		Pg	05 51 42.1	-1.7
CRY					Sg	05 51 57.4	-0.3
STCC	Santa Clara	1.10	292		Pg	05 51 43.9	-0.5
BZNA	Buzz No.’s Pla	1.15	110		Pg	05 51 43.5	-1.7
BZNA					Sg	05 51 59.3	-1.0
DNR	Dunn Ranch,Anz	1.15	106		Pg	05 51 43.9	-1.5
SNDA	J Saunders Pla	1.17	106		Pg	05 51 44.3	-1.4
THC	Tehachapi Micr	1.17	330		Pg	05 51 44.4	-1.3
FRD	Ford Ranch, An	1.20	109		Pg	05 51 44.4	-1.8
FRD					Sg	05 52 00.9	-0.9
FRD	Ford Ranch, An	1.20	109		Pg	05 51 44.4	-1.8

FRD					Sg	05 52 00.7	-1.1
HWB	Hans Werner Br	1.20	136		Pg	05 51 43.4	-2.9
109C	Camp Elliot, M	1.23	144		Pg	05 51 44.1	-2.7
109C	Camp Elliot, M	1.23	144	P	Pg	05 51 44.1	-2.7
	baz=325						
CPE	Camp Elliot	1.23	144		Pg	05 51 44.1	-2.7
CPE					Sg	05 52 01.8	-1.0
DPP	Dos Picos Cty	1.23	136		Pg	05 51 43.9	-2.9
DPP					Sg	05 52 02.5	-0.3
RRX	Edison Barstow	1.26	39		Pg	05 51 46.0	-1.5
RRX					Sg	05 52 03.2	-0.7
RRX	Edison Barstow	1.26	39	P	Pg	05 51 45.9	-1.5
	baz=220						
RRX				S	Sg	05 52 03.2	-0.7
	baz=220						
PFO	Pinyon Flats O	1.28	102		Pg	05 51 45.9	-1.9
PFO	Pinyon Flats O	1.28	102		Pg	05 51 46.8	-0.9
PFO	Pinyon Flats O	1.28	102	P	Pg	05 51 45.8	-1.9
	baz=284						
PFO				S	Sg	05 52 03.4	-1.0
	baz=284						
XPFO	Pion Flat	1.28	102		Pg	05 51 45.9	-1.9
XPFO	Pion Flat	1.28	102		Pg	05 51 46.1	-1.7
EW2	E Wide Canyon	1.29	87		Pg	05 51 46.4	-1.5
BLAC	Blackrock camp	1.32	82		Pg	05 51 46.8	-1.6
MPI	Mount Pinos, F	1.35	313		Sg	05 52 06.0	-0.6
EML	El Monte Cty P	1.36	137		Sg	05 52 05.9	-1.2
RYS	Reyes Peak	1.38	303		Pg	05 51 48.6	-1.0
DTP	Desert Tortois	1.38	4		Pg	05 51 47.5	-2.1
ARVC	Arvin	1.43	330		Pn	05 51 48.6	0.0
ARVC	Arvin	1.43	330	P	Pn	05 51 48.5	0.0
	baz=149						
BORC	Borrego Spring	1.43	115		Pn	05 51 49.0	+0.5
SDRC	San Diego Road	1.43	143		Pn	05 51 47.5	-1.1
SDRC					Sg	05 52 06.9	-2.3
SNCC	San Nicolas Is	1.46	244	Pn	Pn	05 51 47.8	-1.2
BCW	Bitter Crk WRg	1.59	311		Pn	05 51 51.7	+0.7
TPC	Twentynine Pal	1.60	82		Pn	05 51 51.8	+0.8
LRMC	Laurel Mtn Rad	1.60	8	S	Sn	05 52 11.3	-0.3
	baz=188						
BAR	Barrett	1.62	138		Pn	05 51 50.2	-1.0
MONP2	Monument Peak	1.63	127	P	Pn	05 51 51.0	-0.5
	baz=309						
MONP2				S	Sn	05 52 13.8	+1.5
	baz=309						
BELC	Belle Mtn. Jos	1.63	86		Pn	05 51 52.6	+1.0
BELC	Belle Mtn. Jos	1.63	86	Pb	Pn	05 51 52.5	+1.0
	baz=267						
HEC	Hector,Ludlow	1.64	55	S	Sn	05 52 14.2	+1.8
	baz=236						
WBSM	Bird Springs	1.65	355		Pn	05 51 51.7	-0.1
CTCC	Cactus City	1.66	98		Pn	05 51 52.8	+1.1
GSC	Goldstone, Bar	1.70	34		Pn	05 51 52.5	+0.1
GSC				Sn	Sn	05 52 15.2	+1.2
GSC	Goldstone, Bar	1.70	34	P	Pn	05 51 52.5	+0.1
	baz=214						
GSC				S	Sn	05 52 15.1	+1.2
	baz=214						
CBKC	Canebrake	1.74	124		Pn	05 51 53.3	+0.5
BATC	Bat Cave Butte	1.82	103		Pb	05 51 56.2	+0.1
ISA	Isabella, Lake	1.82	347		Pn	05 51 53.7	-0.3
ISA	Isabella, Lake	1.82	347	P	Pn	05 51 53.7	-0.3
	baz=166						
CRR	Carrizo Plain	1.94	120		Pb	05 51 58.0	-0.2
BCH	Branch Mountai	2.18	307		Pn	05 51 57.8	-1.2
IRM	Iron Mountain	2.35	83	Sb	Sb	05 52 36.1	+2.0
	baz=265						
SPG2	Springville 2	2.40	344		Pn	05 52 02.2	+0.2
PAGB	Antelope Grade	2.63	315		Pn	05 52 05.2	+0.1
CGO	Cerro Gordo	2.66	3		Pn	05 52 08.0	+2.2
GLA	Glamis	2.75	107		Pn	05 52 08.0	+1.3
Y12C	Blythe	2.86	92		Pn	05 52 09.6	+1.3
PMPB	Monarch Peak	3.29	316		Pn	05 52 14.4	+0.2
TPNV	Topopah Spring	3.35	24		Pn	05 52 16.1	+0.9
SHPR	Sheep Range	3.47	40		Pn	05 52 17.6	+0.8
W13A	Hualapai Mount	3.57	69		Pn	05 52 18.4	+0.1
OMMB	Old Mammoth Mi	3.81	347		Pn	05 52 22.9	+1.3
Y14A	Wickenburg	4.12	88		Pn	05 52 26.1	+0.5
NV11	Mina Array Sit	4.54	358		Pn	05 52 32.4	+0.9
CMB	Columbia Colle	4.58	335		Pn	05 52 32.5	+0.5
WAKR	Walker	4.76	346		Pn	05 52 36.6	+2.1
R11A	Troy Canyon, C	4.84	23		Pn	05 52 36.2	+0.4
LCMT	Little Creek M	4.95	50		Pn	05 52 38.8	+1.7
KVN	Kaiserville	5.15	359		Pn	05 52 41.7	+1.8
U15A	North Rim	5.29	60		Pn	05 52 43.6	+1.7
PNTR	Pine Nut	5.35	346		Pn	05 52 46.2	+3.5
X16A	Lo Mia Camp, P	5.43	83		Pn	05 52 44.5	+0.8
VCNR	Virginia City	5.56	346		Pn	05 52 46.9	+1.3
PSUT	Pine Spring	5.70	34		Pn	05 52 46.8	-0.7

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*INET **30** 05:58:48.1, 10°.54N×83°.01W, h15^{km}, ML4.7*

*UCR **30** 05:58:49.4±1.9, 10°.54N×83°.14W, h27^{km}±3^{km}, MD4.1, Fault plane solution: NP1:ϕ_s54.77000°, δ74.81000°, λ-48.24000°.*

*UPA **30** 05:58:50.1±1.3, 10°.48N×82°.86W, h19^{km}±39^{km}, MW4.2*

ISC 30 05:58:44.5±1.7, **10°.59N**±0°.05×**82°.98W**±0°.03, **h7**^{km}±11^{km}, **n51**, σ**1^s.16**/66, **8C-3D**, **North of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RGM0	Gandoca	1.05	160	eS	Sb	05 59 19.7	+0.5
RGM0	Gandoca	1.05	160	eP	Pn	05 59 08.1	+2.3
SJS	Escuela Geolog	1.24	239	eP	Pn	05 59 08.6	+0.1
HDC	Heredia	1.26	243	eP	Pb	05 59 08.9	+0.1
HDC				eS	Sg	05 59 23.6	-1.5
LCR2	La Lucha 2	1.31	230	eP	Pn	05 59 09.6	0.0
LCR2				⇓iP	Pn	05 59 09.6	0.0
EDLM	Las Mercedes	1.43	205	⇑iP	Pb	05 59 11.7	0.0
EDLM				eS	Sb	05 59 29.3	-0.9
EDBA	Buenos Aires	1.45	192	eP	Pb	05 59 11.7	-0.1
EDBA				eS	Sn	05 59 29.6	-0.9
SRA1	San Ramn	1.56	252	⇑iP	Pb	05 59 13.5	-0.4
SRA1				eS	Sn	05 59 31.8	-1.7
EDDO	Dominical	1.59	214	⇓eP	Pg	05 59 14.8	-0.3
EDDO				eS	Sb	05 59 34.8	+0.2
FORC	Fortuna	1.67	266	iP	Pn	05 59 14.8	+0.5
EDPN	Palmar Norte	1.68	196	⇑iP	Pg	05 59 16.8	0.0
EDPN				eS	Sg	05 59 38.5	-0.1
CEDE	Laguna Cedeo	1.70	267	iP	Pn	05 59 15.0	+0.2
ARE1	Arenal 1	1.72	266	⇑eP	Pn	05 59 15.6	+0.6
CASO	Castillo	1.73	265	iP	Pn	05 59 15.5	+0.3
CASO				iS	Sn	05 59 36.9	-0.8
EDSV	San Vito	1.75	180	eP	Pg	05 59 18.4	+0.2
BRU2	Volcan	1.80	171	eP	Pb	05 59 17.4	-0.6
BRU2				eS	Sn	05 59 38.9	-0.6
BRU2	Volcan	1.80	171	eP	Pb	05 59 17.5	-0.6
BCO2	Palmira	1.91	167	eP	Pb	05 59 18.9	-0.9
BCO2				eS	Sn	05 59 42.2	+0.1
JTS	Las Juntas de	1.97	262	⇑eP	Pn	05 59 18.9	+0.5
PTEN	Parque Tenorio	1.98	274	iP	Pn	05 59 18.8	+0.2
PSOM3	Paja de Sombre	2.00	161	eS	Sn	05 59 44.2	+0.1
ACAL	Aguas Claras	2.02	272	iP	Pn	05 59 19.3	0.0
PTJ1	Puerto Jimnez	2.06	189	eP	Pb	05 59 21.9	-0.5
PTJ1	Puerto Jimnez	2.06	189	⇑eP	Pb	05 59 21.8	-0.5
CUI	Cuipilapa	2.15	272	eP	Pn	05 59 21.6	+0.6
HORNC	Hornillas	2.17	274	iP	Pn	05 59 21.4	+0.1
PIRO	Carate, Puerto	2.20	189	eP	Pb	05 59 24.1	-0.6
PIRO				eS	Sn	05 59 50.1	+1.1
DVD	David	2.20	166	eP	Pb	05 59 24.7	0.0
DVD				eS	Sn	05 59 48.6	-0.5
CHIR3	Chiriqui UPA,	2.27	164	eP	Pb	05 59 25.8	-0.1
BUAI	Buenos Aires	2.33	277	iP	Pn	05 59 23.9	+0.4
PLVR	Palo Verde	2.35	264	⇑eP	Pn	05 59 24.6	+0.8
GB1A	Borinquen Arri	2.39	276	eP	Pn	05 59 25.8	+1.4
BUEV	Buena Vista	2.40	275	eP	Pn	05 59 25.6	+1.2
LAPC	Finca la Perla	2.42	274	iP	Pn	05 59 25.0	+0.4
GUAI	GUAI	2.51	263	iP	Pn	05 59 26.7	+0.8
NY14	Universidad de	2.52	272	iP	Pn	05 59 26.7	+0.7
ACON	Acoyapa	2.56	303	⇓eP	Pn	05 59 26.9	+0.4
PRVC	Isla de Provid	3.19	29	eP	Pn	05 59 36.9	+1.7
BCIP	Isla Barro Col	3.40	114	eP	Pn	05 59 39.4	+1.3
BCIP				eS	Sn	06 00 15.4	-3.3
BCIP	Isla Barro Col	3.40	114	eP	Pn	05 59 39.4	+1.3
BCIP				⇑iP	Pn	05 59 39.4	+1.3
ZANG	Zanguenga, Cho	3.47	118	eP	Pn	05 59 40.1	+1.1
ZANG				eS	Sn	06 00 17.5	-2.9
ZANG	Zanguenga, Cho	3.47	118	eP	Pn	05 59 40.3	+1.3
MATN	Matagalpa	3.71	309	eP	Pn	05 59 43.1	+0.6
UPA	Univ. de Panam	3.75	115	eP	Pn	05 59 44.4	+1.5
CACAO	El Cacao, Vera	3.84	147	eS	Sn	06 00 28.3	-1.3
AZU	Azuero	3.85	136	eS	Sn	06 00 27.6	-2.3
CRIN	San Cristobal	4.51	298	eP	Pn	05 59 53.9	+0.4
CBOC	Ciudad Bolivar	8.34	124	eP	Pn	06 00 47.0	+0.8
ZARC	Zaragoza, Cauc	8.59	110	eP	Pn	06 00 52.0	+2.6
SMLC	San Martn de	8.96	101	eP	Pn	06 00 56.8	+2.3
PTBC	PUERTO BERRIO,	9.34	115	eP	Pn	06 01 01.8	+2.1

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*IDC **30** 06:02:30.9±0.8, 40°.65S×92°.35W, h0^{km}, mb3.8/10, mb1 4.1/11, mb1mx3.9/40, mbtmp3.8/11, ML3.3/1, MS4.1/14, Ms1 4.1/14, ms1mx3.9/33, Error ellipse: s-maj=30.5km s-min=20.4km az=95.0*

*GCMT **30** 06:02:34.9±0.2, 40°.90S±0°.02×91°.81W±0°.02, h12^{km}±1^{km}, MW4.9/100, Moment Tensor Solution. s42,c52; s100,c136; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.76±.15; $M_{\theta\theta}$-0.06±.09; $M_{\phi\phi}$2.82±.10; $M_{r\theta}$0.75±.32; $M_{\theta\phi}$-0.35±.06; $M_{\phi r}$-0.42±.21; Best double couple: $M_0$2.93900×10^{16} NP1:ϕ_s186.00000°, δ41.00000°, λ-70.00000°. NP2:ϕ_s340.00000°, δ52.00000°, λ-107.00000°. Principal axes: T 2.9080, Plg5.0000°, Azm82.0000°; N 0.0680, Plg13.0000°, Azm351.0000°; P -2.9710, Plg76.0000°, Azm193.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **30** 06:02:35.9±1.9, 40°.9S±0°.1×91°.5W±0°.2, h10^{km}±1^{km}, mb4.6/46 Error ellipse: s-maj=20.1km s-min=17.2km az=263.0*

ISC 30 06:02:35.7±0.5, **40°.90S**±0°.08×**91°.29W**±0°.08, **h10**^{km}, **n83**, σ**1^s.56**/71, **mb4.5**/28, **MS4.1**/17, **West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO06	Curarrehue	15.20	92	P	P	06 06 16.2	+0.8
PLCA	Paso Flores	15.71	96	Pn	P	06 06 23.8	+2.7
	0.0nm,0.3s,baz=117,slow=7.5,SNR=2.3						
PLCA				LR	LR	06 11 03.7	
	comp=Z,2µm,19.8s,baz=204,slow=31						
PLCA	Paso Flores	15.71	96		P	06 06 21.1	+0.1
GO09	Cerro Castillo	16.70	135	Pn	P	06 06 32.0	+0.1
ROC1	El Roble	18.01	70	P	Pn	06 06 44.6	-1.8
GO04	Tololo Observa	19.77	64	P	Pn	06 07 07.6	0.0
RPN	Rapa Nui	20.25	307	LR	LR	06 12 41.4	
	comp=Z,882nm,19.4s,baz=48,slow=31						
GO03	Copiap	21.82	59	P	P	06 07 27.2	-0.9
GO03				IAmb	IAmb	06 07 35.1	
	comp=Z,36nm,1.4s						
PMSA	Palmer Station	28.58	156	LR	LR	06 16 44.6	
	comp=Z,330nm,21.2s,baz=338,slow=29						
PMSA	Palmer Station	28.58	156	P	P	06 08 32.5	+1.0
NNA	Nana	31.48	28	LR	LR	06 18 18.2	
	comp=Z,325nm,20.4s,baz=201,slow=30						
CPUP	Villa Florida	31.57	73	LR	LR	06 20 15.0	
	comp=Z,546nm,21.9s,baz=234,slow=33						
CPUP	Villa Florida	31.57	73	P	P	06 09 00.8	+2.4
LPAZ	La Paz	31.67	46	P	P	06 09 01.0	+1.1
	comp=Z,0.9nm,0.7s,baz=205,slow=6.8,SNR=4.8						
LPAZ				PcP	PcP	06 11 50.8	-1.1
	comp=Z,1.7nm,0.8s,baz=95,slow=2.8,SNR=5.2						
LPAZ				LR	LR	06 19 08.2	
	comp=Z,290nm,19.3s,baz=205,slow=31						
LPAZ	La Paz	31.67	46	P	P	06 09 01.1	+1.1
SIV	San Ignacio	36.05	55	P	P	06 09 39.0	+1.6
	comp=Z,0.7nm,0.7s,baz=249,slow=8.9,SNR=4.7						
SAML	Samuel	40.41	46	P	P	06 10 16.3	+2.2
BDFB	Brasilia	45.05	69	LR	LR	06 29 16.8	
	comp=Z,738nm,18.1s,baz=265,slow=35						
ROSC	El Rosal	48.10	23	LR	LR	06 29 17.8	
	comp=Z,53nm,19.6s,baz=179,slow=33						
ROSC	El Rosal	48.10	23	P	P	06 11 17.5	+1.4
PTGA	Pitinga	49.02	44	LR	LR	06 30 26.7	
	comp=Z,558nm,21.8s,baz=160,slow=34						
PTGA	Pitinga	49.02	44	P	P	06 11 24.2	+1.4
PTGA				IAmb	IAmb	06 11 36.1	
	comp=Z,8.0nm,1.2s						
QSPA	South Pole Qui	49.33	180	P	P	06 11 25.7	+0.9
QSPA				IAmb	IAmb	06 11 36.9	
	comp=Z,10nm,1.4s						
RUSC	La Rusia	49.48	24	P	P	06 11 28.0	+1.2
JTS	Las Juntas de	51.27	8	P	P	06 11 39.8	+0.1
SNAA	Sanae	51.30	156	P	P	06 11 40.0	+0.5
	comp=Z,1.7nm,0.9s,baz=186,slow=2.5,SNR=3.4						
SNAA	Sanae	51.30	156	P	P	06 11 39.9	+0.4
SNAA				IAmb	IAmb	06 11 46.9	
	comp=Z,18nm,1.4s						
TBI	Tubuai	51.36	271	eS	S	06 19 02.1	+2.2
	comp=Z,138nm,28.2s						
TBI				eLR	LR	06 26 12.8	
	comp=Z,1µm,27.8s,baz=125						
SDV	Santo Domingo	53.08	26	P	P	06 11 49.7	-3.7
	comp=Z,2.1nm,0.9s,baz=204,slow=23,SNR=1.8						
SDV	Santo Domingo	53.08	26	P	P	06 11 52.3	-1.1
SDV				IAmb	IAmb	06 12 00.2	
	comp=Z,10nm,1.4s						
TAOE	Nuku Hiva Isla	53.66	292	eLR	LR	06 27 22.4	
	comp=Z,557nm,24.7s,baz=145						
VNDA	Vanda	53.93	195	P	P	06 11 57.4	-1.3
	comp=Z,1.1nm,0.9s,baz=52,slow=8.1,SNR=3.2						
VNDA				LR	LR	06 29 59.7	
	comp=Z,88nm,19.9s,baz=138,slow=31						
VNDA	Vanda	53.93	195	P	P	06 11 59.0	+0.2
VNDA				IAmb	IAmb	06 12 05.0	
	comp=Z,5.4nm,1.1s						
PPTF	Pamatai, Papee	54.82	277	P	P	06 12 06.5	+0.4
PPT2	Papeete2	54.83	277	eS	S	06 19 51.2	+3.8
	comp=Z,234nm,25.5s						
PPT2				eLR	LR	06 27 44.6	
	comp=Z,818nm,27.8s,baz=146						
PPT	Papeete	54.84	277	LR	LR	06 29 40.8	
	comp=Z,75nm,18.8s,baz=137,slow=30						
SJG	San Juan	63.19	27	LR	LR	06 39 49.4	
	comp=Z,116nm,18.2s,baz=166,slow=35						
833A	Chaparral WMA,	69.28	352	P	P	06 13 40.6	-2.3
MAW	Mawson	70.06	170	P	P	06 13 45.6	-1.6
	comp=Z,2.9nm,0.8s,baz=198,slow=8.3,SNR=2.8						
MAW	Mawson	70.06	170	P	P	06 13 46.5	-0.7
MAW				IAmb	IAmb	06 13 53.2	
	comp=Z,5.4nm,1.3s						
TX31	Lajitas Ar. Si	70.82	349	P	P	06 13 52.1	-0.3
TX31				IAmb	IAmb	06 13 59.8	
	comp=Z,5.9nm,1.4s						
TX32	Lajitas Array	70.82	349	P	P	06 13 52.3	-0.1
TX32				IAmb	IAmb	06 13 59.8	
	comp=Z,6.7nm,1.4s						
TXAR	Lajitas Array	70.82	349	P	P	06 13 47.1	-5.3
	comp=Z,0.7nm,0.8s,baz=149,slow=2.9,SNR=3.5						
TXAR	Lajitas Array	70.82	349	P	P	06 13 48.2	-4.2
JCT	Junction City	71.46	352	P	P	06 13 55.9	-0.3
ABTX	Abilene, Hawle	73.57	353	P	P	06 14 09.8	+1.2
ABTX				IAmb	IAmb	06 14 25.0	
	comp=Z,9.3nm,1.1s						
TUC	Tucson	75.04	343	P	P	06 14 17.9	+0.5
TUC				IAmb	IAmb	06 14 35.2	
	comp=Z,11nm,1.4s						
MSTX	Muleshoe	75.25	350	P	P	06 14 18.8	+0.3
MSTX				IAmb	IAmb	06 14 25.7	
	comp=Z,6.9nm,0.9s						
ANMO	Albuquerque	76.76	347	P	P	06 14 22.4	-4.8
	comp=Z,0.7nm,0.8s,baz=151,slow=16,SNR=1.8						
ANMO	Albuquerque	76.76	347	P	P	06 14 27.2	-0.1
X16A	Lo Mia Camp, P	77.21	343	P	P	06 14 30.6	+0.8
X16A				IAmb	IAmb	06 14 47.4	
	comp=Z,9.4nm,1.4s						
S22A	4UR Ranch, Cre	79.55	348	P	P	06 14 42.9	+0.1
S22A				IAmb	IAmb	06 14 45.8	
	comp=Z,6.7nm,1.1s						
PV03	Paradox Valley	80.40	346	P	P	06 14 48.0	+0.8
PV03				IAmb	IAmb	06 14 54.6	
	comp=Z,8.4nm,1.3s						
PV11	David Mesa, Pa	80.45	346	P	P	06 14 47.6	+0.1
PV16	Nyswonger Mesa	80.47	346	P	P	06 14 47.4	-0.2
PV04	Paradox Valley	80.54	346	P	P	06 14 47.8	-0.2
PV04				IAmb	IAmb	06 14 55.6	
	comp=Z,9.4nm,1.1s						
N35A	Tabor	81.48	357	P	P	06 14 53.6	+0.9
Q16A	Castle Valley	81.49	344	P	P	06 14 53.4	+0.4
NVAR	Mina Array Bea	82.72	339	P	P	06 14 55.3	-4.2
	comp=Z,0.5nm,0.6s,baz=8.0,slow=22,SNR=2.1						
DUG	Dugway, Tooele	83.06	344	P	P	06 15 01.1	-0.1
DUG				IAmb	IAmb	06 15 10.7	
	comp=Z,4.8nm,0.9s						
AAM	Ann Arbor	83.11	6	P	P	06 15 01.1	-0.1
KVN	Kaiserville	83.25	339	P	P	06 15 02.7	+0.5
KVN				IAmb	IAmb	06 15 09.9	
	comp=Z,3.8nm,1.1s						
SUR	Sutherland	83.90	128	P	P	06 15 05.7	-0.4
DZM	Mont Dzumac	84.59	246	eLR	LR	06 41 47.0	
	comp=Z,347nm,27.6s						
PDAR	Pinedale Array	84.91	347	P	P	06 15 05.5	-5.2
	comp=Z,0.8nm,0.6s,baz=153,slow=6.4,SNR=10						
RSSD	Black Hills	85.41	351	P	P	06 15 12.4	-0.7
RSSD				IAmb	IAmb	06 15 21.0	
	comp=Z,5.6nm,1.0s						
REDW	Red Top Meadow	85.72	346	P	P	06 15 14.0	-0.7
SADO	Sadowa	85.98	9	LR	LR	06 49 43.2	
	comp=Z,66nm,18.1s,baz=247,slow=33						
FXWY	Fox Creek	86.02	346	P	P	06 15 15.5	-0.7
FXWY				IAmb	IAmb	06 15 23.2	
	comp=Z,4.3nm,1.1s						
FLWY	Flagg Ranch	86.39	346	P	P	06 15 18.0	0.0
LKWY	Lake	86.80	346	P	P	06 15 20.3	+0.3
LKWY				IAmb	IAmb	06 15 28.4	
	comp=Z,5.9nm,1.2s						
YHH	Holmes Hill	87.10	346	P	P	06 15 18.6	-2.9
RLMT	Red Lodge	87.14	347	P	P	06 15 22.7	+1.1
RLMT				IAmb	IAmb	06 15 29.1	
	comp=Z,5.7nm,1.1s						
YNE	Yellowstone No	87.16	347	P	P	06 15 22.4	+0.6
LAO	LASA Array	88.22	350	P	P	06 15 26.5	0.0
LRM	Limekiln Ridge	88.39	345	P	P	06 15 27.0	-0.6
STKA	Stephens Creek	92.66	223	LR	LR	06 48 58.1	
	comp=Z,56nm,20.1s,baz=199,slow=30						
PALK	Pallekele	145.76	166	PKPbc	PKPdf	06 22 13.7	-1.3
	comp=Z,2.8nm,0.6s,baz=225,slow=11,SNR=2.2						
KSRS	Korea Array	149.58	276	PKPbc	PKPdf	06 22 17.4	-3.1
	comp=Z,0.7nm,0.6s,baz=217,slow=44,SNR=3.0						
NRIK	Noril'sk	151.49	1	PKPbc	PKPdf	06 22 22.7	+0.2
	comp=Z,0.7nm,0.3s,baz=206,slow=6.4,SNR=1.3						
LZH	Lanzhou	167.21	253	ePKP	PKPdf	06 22 44.0	+2.2
LZH				pPKP	sPKPdf	06 22 47.3	+2.2
LZH				sPKP		06 22 48.5	
LZH				PKP	sPKPab	06 23 50.3	+0.6
KSH	Kashi	170.16	94	PKP	PKPdf	06 22 41.5	-2.1
KSH				PKS	PKSdf	06 26 13.0	-3.0
KSH				PP	PP	06 27 49.0	-1.2
KSH	Kashi	170.16	94	SKKS	SKKSac	06 34 36.5	-0.2

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*IDC **30** 06:09:11.3±1.0, 17°.31N×81°.66W, h0^{km}, mb3.7/8, mb1 4.0/11, mb1mx3.7/35, mbtmp3.8/11, ML2.8/3, MS3.0/5, Ms1 3.0/5, ms1mx2.7/40, Error ellipse: s-maj=35.7km s-min=18.3km az=57.0*

*NEIC **30** 06:09:12.8±2.4, 17°.80N±0°.05×81°.58W±0°.08, h24^{km}±8^{km}, mb4.3/7, Error ellipse: s-maj=10.9km s-min=7.2km az=83.0*

ISC 30 06:09:12.6±0.6, **17°.64N**±0°.07×**81°.63W**±0°.06, **h10**^{km}, **n55**, σ**2^s.51**/46, **mb3.9**/11, **North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSCY	Frank Sound, G	1.72	14		Pn	06 09 38.1	-4.6
CBCY	The Bluff, Cay	2.75	40	Pn	Pn	06 09 52.1	-4.6
MCJ	Malvern	3.77	85	iP	Pb	06 10 15.8	-3.5
MTDJ	Mount Denham	3.95	81	Pn	Pn	06 10 10.3	-3.0
BBJ	Bamboo Saint A	4.22	79	iP	Pn	06 10 14.2	-2.9
PRVC	Isla de Provid	4.24	176	eP	Pn	06 10 19.3	+2.0
PCJ	Portland Cotta	4.27	88	iP	Pn	06 10 15.2	-2.5
STH	Stony Hill	4.62	84	iP	Pn	06 10 20.0	-2.5
HOJ	Hope	4.67	85	iP	Pn	06 10 22.4	-0.8
GWJ	Greenwich	4.69	84	iP	Pn	06 10 23.5	-0.2
GTBY	Guantanamo Bay	6.58	69		Pn	06 10 46.4	-3.1
ACON	Acoyapa	6.59	212	Pn	Pn	06 10 51.1	+1.5
TEIG	Tepich	6.80	293	Pn	Pn	06 10 50.8	-1.6
	7.5nm,0.3s,SNR=8.8						
TEIG				Sn	Sn	06 12 01.0	-8.9
	0.3nm,0.3s,baz=339,slow=0.0,SNR=1.5						
TEIG				LR	LR	06 13 22.6	
	comp=Z,117nm,18.8s,baz=258,slow=36						
JTS	Las Juntas de	7.98	204	Pn	Pn	06 11 08.5	-0.3
	0.4nm,0.3s,baz=9.1,slow=22,SNR=5.5						
JTS				LR	LR	06 14 18.0	
	comp=Z,151nm,19.6s,baz=106,slow=40						
JTS	Las Juntas de	7.98	204		Pn	06 11 07.5	-1.3
061Z	Ochoppi	8.22	5	Pn	Pn	06 11 10.3	-1.6
SDDR	Presa de Saban	9.92	81		Pn	06 11 36.8	+1.4
SJCC	San Jacinto, C	9.92	140	eP	Pn	06 11 33.5	-2.0
SC01	Santiago de lo	10.50	79		Pn	06 11 44.7	+1.5
ARGC	Ariguani, Magd	10.54	136	eP	Pn	06 11 43.5	-0.5
URIC	Uribia, Colomb	11.03	121	Pn	Pn	06 11 49.8	-0.9
SDD	Santo Domingo	11.18	84	Pn	Pn	06 11 52.6	0.0
SMLC	San Martn de	11.45	139	eP	Pn	06 11 54.6	-1.8
DR12	Loma Pena Alta	11.70	82	Pn	Pn	06 12 02.5	+2.7
ZARC	Zaragoza, Cauc	12.05	146	eP	Pn	06 12 02.9	-1.7
OCAC	Ocana	12.36	138	eP	Pn	06 12 07.5	-1.4
CMIG	Matias Romero	12.66	270	LR	LR	06 17 07.5	
	comp=Z,36nm,19.1s,baz=54,slow=38						
CBOC	Ciudad Bolivar	12.92	154	eP	Pn	06 12 17.8	+1.1
PTBC	PUERTO BERRIO,	13.06	147	eP	Pn	06 12 14.6	-3.8
PAMC	Pamplona, Colo	13.44	138	eP	Pn	06 12 24.8	+0.9
GUY2C	Guyana, Caldas	13.78	153	eP	Pn	06 12 26.6	-1.9
SDV	Santo Domingo	13.79	128	Pn	Pn	06 12 24.6	-3.9
	0.4nm,0.3s,baz=333,slow=7.2,SNR=7.3						
SDV				LR	LR	06 18 19.0	
	comp=Z,53nm,20.2s,baz=268,slow=40						
SDV	Santo Domingo	13.79	128		Pn	06 12 26.6	-1.9
RUSC	La Rusia	14.35	143	eP	Pn	06 12 37.3	+0.8
RUSC	La Rusia	14.35	143	Pn	Pn	06 12 36.7	+0.2
ROSC	El Rosal	14.59	150	Pn	Pn	06 12 34.0	-5.7
	0.4nm,0.3s,baz=119,slow=20,SNR=1.6						
SJG	San Juan	14.75	86	LR	LR	06 18 01.3	
	comp=Z,70nm,19.0s,baz=261,slow=36						
HKT	Hockley	17.84	316	P	Pn	06 13 19.5	-1.5
TKL	Tuckaleechee C	18.05	354	P	P	06 13 26.5	+2.5
	0.2nm,0.3s,baz=268,slow=9.2,SNR=1.6						
TKL	Tuckaleechee C	18.05	354	IAmb	IAmb	06 13 33.2	
	comp=Z,20nm,1.3s						
U40A	Yellville	21.13	334	IAmb	IAmb	06 14 12.3	
	comp=Z,9.1nm,0.8s						
R40A	Maddies Statio	22.59	338	IAmb	IAmb	06 14 25.0	
	comp=Z,8.5nm,1.0s						
TXAR	Lajitas Array	23.28	304	P	P	06 14 21.1	+0.4
	comp=Z,1.9nm,0.9s,baz=122,slow=9.7,SNR=7.6						
ULM	Lac du Bonnet	34.49	344	P	P	06 16 04.2	+3.4
	comp=Z,1.1nm,0.7s,baz=124,slow=5.2,SNR=3.3						
NVAR	Mina Array Bea	38.09	310	P	P	06 16 33.6	+1.6
	comp=Z,0.1nm,0.3s,baz=335,slow=23,SNR=2.3						
SCHQ	Schefferville	38.83	14	P	P	06 16 40.2	+2.5
	comp=Z,1.5nm,0.7s,baz=198,slow=7.1,SNR=2.2						
SCHQ	Schefferville	38.83	14	IAmb	IAmb	06 16 54.5	
	comp=Z,8.1nm,1.2s						
GO01	Chusmiza	39.03	161	IAmb	IAmb	06 16 46.0	
	comp=Z,8.7nm,0.9s						
SIV	San Ignacio	39.08	148	P	P	06 16 37.8	-2.3
	comp=Z,2.8nm,0.8s,baz=345,slow=8.0,SNR=14						
YKA	Yellowknife Ar	50.35	341	P	P	06 18 10.8	+1.3
	comp=Z,0.2nm,0.6s,baz=170,slow=29,SNR=2.3						
GERES	GERESS Array B	80.36	42	P	P	06 21 26.0	+1.6
	comp=Z,0.5nm,0.9s,baz=276,slow=6.0,SNR=3.4						
GERES	GERESS Array B	80.36	42	P	P	06 21 24.2	-0.2
FINES	FINESS Array B	82.84	27	P	P	06 21 40.2	+3.1
	comp=Z,0.9nm,0.9s,baz=172,slow=15,SNR=0.5						
ASAR	Alice Springs	146.27	254	PKPbc	PKPab	06 28 55.5	+0.4
	comp=Z,0.8nm,0.9s,baz=107,slow=3.9,SNR=4.2						
ASAR	Alice Springs	146.27	254		PKPdf	06 28 53.1	0.0

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*MDD **30** 06:15:45.0±2.3, 37°.49N×15°.40W, h0^{km}, mb4.4/1, Error ellipse: s-maj=20.2km s-min=19.6km az=25.0, PRXIMO*

*INMG **30** 06:15:46.8±1.9, 37°.24N×15°.77W, h10^{km}, ML2.5, Error ellipse: s-maj=10.4km s-min=8.7km az=138.0*

ISC 30 06:15:40.8±2.4, **37°.49N**±0°.07×**15°.5W**±0°.1, **h10**^{km}, **n42**, σ**2^s.87**/73, **Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMPST	Porto Santo, M	4.45	189	ePn	Pn	06 16 45.3	-3.1
PMPS	Porto Santo	4.47	189	ePn	Pn	06 16 46.2	-2.4
PMAFR	Mafra	5.14	72	P	Pn	06 17 01.1	+3.3
	2.7nm,0.1s,SNR=7.9						
PMAFR				S	Sn	06 17 57.2	+0.1
	13nm,0.7s,SNR=7.9						
PMAFR	Mafra	5.14	72	ePn	Pn	06 17 01.6	+3.8
PMAFR				eSn	Sn	06 17 57.5	+0.4
PFVI	Vila Bisbo	5.36	92	P	Pn	06 17 02.9	+2.1
	0.8nm,0.1s,SNR=7.9						
PFVI				S	Sn	06 17 59.7	-3.0
	89nm,1.5s,SNR=7.9						
PFVI	Vila Bisbo	5.36	92	ePn	Pn	06 17 03.2	+2.3

PFVI				*e*Sn	Sn	06 18 00.1	-2.6
PTEO	**Sao Teotonio**	5.42	87	Pn	Pn	06 17 04.3	+2.7
PTEO				Sn	Sn	06 18 01.4	-2.6
PTEO	**Sao Teotonio**	5.42	87	*e*Pn	Pn	06 17 04.3	+2.7
PTEO				*e*Sn	Sn	06 18 01.4	-2.6
MORF	**Marmelete**	5.49	90	Pn	Pn	06 17 05.1	+2.5
MORF				Sn	Sn	06 18 03.2	-2.6
	3.5nm,0.6s						
MORF	**Marmelete**	5.49	90	*e*Pn	Pn	06 17 05.1	+2.5
MORF				*e*Sn	Sn	06 18 03.2	-2.6
MORF				A	A	06 18 10.8	
	3.5nm,0.6s						
PNCL	**Nicolau / Gran**	5.59	82	Pn	Pn	06 17 06.2	+2.3
PNCL				Sn	Sn	06 18 07.1	-1.0
	2.3nm,0.7s						
PNCL	**Nicolau / Gran**	5.59	82	*e*Pn	Pn	06 17 06.2	+2.3
PNCL				*e*Sn	Sn	06 18 07.1	-1.0
PNCL				A	A	06 18 21.8	
	2.3nm,0.7s						
PSBE	**So Bento**	5.66	67	*e*Sn	Sn	06 18 10.3	+0.2
PMTG	**Montargil**	5.96	72	Pn	Pn	06 17 12.2	+3.1
PMTG				Sn	Sn	06 18 16.9	-0.6
	2.1nm,0.7s						
PMTG	**Montargil**	5.96	72	*e*Pn	Pn	06 17 12.2	+3.1
PMTG				*e*Sn	Sn	06 18 16.9	-0.6
PMTG				A	A	06 18 19.6	
	2.1nm,0.7s						
PBDV	**Barranco-do-Ve**	6.07	90	Pn	Pn	06 17 13.1	+2.6
PBDV				Sn	Sn	06 18 19.0	-1.0
	3.9nm,0.8s						
PBDV	**Barranco-do-Ve**	6.07	90	*e*Pn	Pn	06 17 13.1	+2.6
PBDV				*e*Sn	Sn	06 18 19.0	-1.0
PBDV				A	A	06 18 27.1	
	3.9nm,0.8s						
PCAS	**Casmilo, Conde**	6.07	63	Pn	Pn	06 17 14.3	+3.8
PCAS	**Casmilo, Conde**	6.07	63	*e*Pn	Pn	06 17 14.3	+3.8
PVAQ	**Vaqueiros**	6.22	88	Pn	Pn	06 17 14.9	+2.2
PVAQ				Sn	Sn	06 18 22.4	-1.5
	2.3nm,0.8s						
PVAQ	**Vaqueiros**	6.22	88	*e*Pn	Pn	06 17 14.9	+2.2
PVAQ				*e*Sn	Sn	06 18 22.4	-1.5
PVAQ				A	A	06 18 32.5	
	2.3nm,0.8s						
EGRO	**El Granado**	6.40	87	P	Pn	06 17 19.3	+4.2
	0.3nm,0.1s,SNR=7.9						
EGRO				S	Sn	06 18 26.0	-2.3
	0.9nm,0.2s,SNR=7.9						
PESTR	**Estremoz**	6.41	75	*e*Sn	Sn	06 18 25.1	-3.4
PMRV	**Marv??o**	6.68	71	Pn	Pn	06 17 21.6	+2.6
PMRV				Sn	Sn	06 18 34.1	-1.0
	1.6nm,0.9s						
PMRV	**Marv??o**	6.68	71	*e*Pn	Pn	06 17 21.6	+2.6
PMRV				*e*Sn	Sn	06 18 34.1	-1.0
PMRV				A	A	06 18 34.4	
	1.6nm,0.9s						
PCBR	**Castelo Branco**	6.73	67	Pn	Pn	06 17 22.8	+3.2
PCBR				Sn	Sn	06 18 35.4	-0.9
PCBR	**Castelo Branco**	6.73	67	*e*Pn	Pn	06 17 22.8	+3.2
PCBR				*e*Sn	Sn	06 18 35.4	-0.9
EBAD	**Badajoz**	6.84	77	P	Pn	06 17 23.9	+2.7
	0.3nm,0.1s,SNR=7.9						
EBAD				S	Sn	06 18 36.1	-2.9
	0.6nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	7.04	85	P	Pn	06 17 27.0	+3.1
	0.1nm,0.1s,SNR=7.9						
EMIN				S	Sn	06 18 40.3	-3.7
	5.3nm,1.1s,SNR=7.9						
PGAV	**Gavieira, Arco**	7.16	49	Sn	Sn	06 18 46.0	-1.1
	2.4nm,0.2s						
PGAV	**Gavieira, Arco**	7.16	49	*e*Sn	Sn	06 18 46.0	-1.1
PGAV				A	A	06 18 48.8	
	2.4nm,0.2s						
ELOB	**Lobios**	7.23	51	S	Sn	06 18 45.0	-3.8
	3.9nm,0.7s,SNR=7.9						
EMAZ	**Mazaricos**	7.41	41	S	Sn	06 18 48.6	-4.5
	5.8nm,0.5s,SNR=7.9						
MVO	**Moncorvo**	7.54	58	P	Pn	06 17 33.4	+2.5
	0.3nm,0.1s,SNR=7.9						
MVO				S	Sn	06 18 51.3	-5.2
	28nm,1.4s,SNR=7.9						
EAGO	**Agolada(Pontev**	7.79	45	P	Pn	06 17 36.9	+2.7
	0.1nm,0.0s,SNR=7.9						
EAGO				S	Sn	06 18 57.2	-5.2
	9.2nm,0.7s,SNR=7.9						
ECAB	**El Cabril**	8.04	83	P	Pn	06 17 40.0	+2.4
	0.1nm,0.1s,SNR=7.9						
ECAB				S	Sn	06 19 05.0	-3.5
	7.4nm,1.7s,SNR=7.9						
PBRG	**Braganca**	8.04	55	Pn	Pn	06 17 41.5	+3.9
PBRG				Sn	Sn	06 19 07.1	-1.4
PBRG	**Braganca**	8.04	55	*e*Pn	Pn	06 17 41.5	+3.9
PBRG				*e*Sn	Sn	06 19 07.1	-1.4
ECAL	**Calabor**	8.11	54	P	Pn	06 17 41.1	+2.5
	0.5nm,0.2s,SNR=7.9						
ECAL				S	Sn	06 19 06.1	-4.2
	1.9nm,0.4s,SNR=7.9						
EPON	**Pontenova**	8.65	45	S	Sn	06 19 18.5	-5.1
	18nm,1.1s,SNR=7.9						
EADA	**Adamuz**	8.70	82	P	Pn	06 17 49.5	+2.8
	0.1nm,0.1s,SNR=4.0						
EADA				S	Sn	06 19 19.6	-5.3
	0.3nm,0.1s,SNR=7.9						
PAB	**San Pablo**	9.01	73	P	Pn	06 17 53.3	+2.3
	0.2nm,0.2s,SNR=7.9						
PAB				S	Sn	06 19 29.9	-2.6
	0.2nm,0.4s,SNR=4.0						

IASPEI ***30*** *06:17:31.2±0.8, 33°.90N±0°.02×117°.94W±0°.02, h14^{km}±5^{km}, Error ellipse: s-maj=2.6km s-min=2.1km az=22.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

ANF ***30*** *06:17:31.2±0.2, 33°.91N×117°.93W, h11^{km}±2^{km}, ML3.1/23, Error ellipse: s-maj=1.6km s-min=1.5km az=73.0*

SCEDC ***30*** *06:17:31.5, 33°.90N×117°.94W, h0^{km}*

PAS ***30*** *06:17:31.5±2.1, 33°.908N±0°.008×117°.948W±0°.009, h2^{km}±5^{km}, ML3.1/243, Error ellipse: s-maj=1.1km s-min=1.0km az=211.0*

ISC 30 06:17:31.7±0.8**, 33°.89N**±0°.02×**117°.94W**±0°.01**, h14**^{km}±4^{km}**, n130, σ1^{s}12**/170**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FULC	**Fullerton**	0.02	135		Pg	06 17 32.6	-1.5
BREC	**Barre Substati**	0.09	202		Pg	06 17 34.1	-0.5
RHC	**Rose Hills Cem**	0.13	332		Pg	06 17 34.1	-1.1
RHC					Sg	06 17 36.9	-0.7
DLAC	**Del Amo**	0.13	253		Pg	06 17 35.1	-0.1
SANC	**Santa Ana**	0.19	166		Pg	06 17 36.2	+0.1
GVRC	**Garvey Reservo**	0.22	318		Pg	06 17 36.1	-0.5
GVRC					Sg	06 17 40.6	+0.8
PSRC	**Puddingstone R**	0.23	29		Pg	06 17 36.0	-0.8
PSRC					Sg	06 17 39.9	-0.3
CHNC	**Chino**	0.24	63		Pg	06 17 36.6	-0.4
CHNC					Sg	06 17 40.9	+0.4
WTT2	**Watts, South G**	0.27	283		Pg	06 17 37.7	+0.3
PEM	**Pine Mountain**	0.28	12		Pg	06 17 36.8	-0.9
CACC	**Caltech Cellar**	0.29	329		Pg	06 17 36.8	-1.0
USC	**University of**	0.31	295		Pg	06 17 38.2	0.0
CRNC	**Corona**	0.32	92		Pg	06 17 37.9	-0.4
CRNC					Sg	06 17 43.1	+0.5
MLSC	**Mira Loma**	0.34	70		Pg	06 17 38.0	-0.7
MLSC					Sg	06 17 42.9	-0.4
FMP	**Fort Macarthur**	0.34	239		Pg	06 17 38.1	-0.6
FMP					Sg	06 17 43.4	0.0
FMP	**Fort Macarthur**	0.34	239	S	Sg	06 17 43.3	0.0
	baz=57						
PASC	**Pasadena Art C**	0.35	325	Pg	Pg	06 17 37.6	-1.2
PASC	**Pasadena Art C**	0.35	325		Sg	06 17 42.9	-0.7
MWC	**Mount Wilson**	0.35	344	Pg	Pg	06 17 37.7	-1.2
MWC				Sg	Sg	06 17 41.7	-2.1
BHPC	**Baldwin Hills**	0.36	286		Pb	06 17 39.8	-0.2
GR2C	**Griffith Obs.**	0.38	308		Pg	06 17 38.4	-0.9
SSK	**Sunset Peak**	0.38	33		Pg	06 17 38.7	-0.8
RPV	**Rancho Palos V**	0.41	249		Pg	06 17 39.2	-0.8
XTL	**Crystal Lake,**	0.41	9		Pg	06 17 38.9	-1.2
BFSC	**Mount Baldy Ra**	0.42	34		Pg	06 17 39.3	-1.0
BFSC	**Mount Baldy Ra**	0.42	34	P	Pg	06 17 39.3	-1.0
	baz=215						
BFSC				S	Sg	06 17 45.6	-0.3
	baz=215						
CHFC	**Chilao Flat St**	0.45	351		Pg	06 17 39.3	-1.4
DJJ	**Donna J Jenkin**	0.48	297		Pg	06 17 40.2	-1.0
DJJ					Sg	06 17 47.4	-0.2
RVR	**Riverside**	0.48	77		Pg	06 17 40.4	-0.9
RVR					Sg	06 17 47.4	-0.4
SS2	**San Sevaine**	0.49	49		Pg	06 17 40.7	-0.6
SS2					Sb	06 17 48.3	-0.8
DECC	**Green Verdugo**	0.49	318		Pg	06 17 40.2	-1.2
DECC	**Green Verdugo**	0.49	318	P	Pg	06 17 40.2	-1.2
	baz=137						
DECC				S	Sg	06 17 47.7	-0.2
	baz=137						
SME	**Santa Rosa Min**	0.49	97		Pg	06 17 40.8	-0.7
SME					Sg	06 17 48.1	0.0
RSBC	**Riverside Bore**	0.52	80		Pg	06 17 41.4	-0.6
RSBC					Sg	06 17 48.8	-0.1
JNH	**Juniper Hills**	0.56	359		Pg	06 17 41.4	-1.4
JNH					Sg	06 17 49.1	-1.1
HOLC	**Holcomb Ridge**	0.57	8		Pg	06 17 41.7	-1.4
CIAC	**Catalina I. Ai**	0.62	219		Pg	06 17 44.1	+0.1
CIAC					Sb	06 17 53.9	+0.7
CIS	**Catalina Islan**	0.62	219	P	Pg	06 17 44.1	+0.2
	baz=38						
CIS				S	Sb	06 17 53.6	+0.4
	baz=38						
IR2C	**Iron Canyon**	0.63	323		Pg	06 17 42.6	-1.4
IR2C					Sg	06 17 51.7	-0.6
CSP	**Cedar Springs**	0.63	50		Pg	06 17 43.3	-0.9
LRRC	**Littlerock Res**	0.64	354		Pg	06 17 42.8	-1.4
HLNC	**Highland**	0.64	69		Pg	06 17 43.7	-0.7
HLNC					Sg	06 17 51.6	-1.2
PEC	**Perris**	0.65	89		Pg	06 17 43.6	-0.8
CJV	**Casa Juvan**	0.66	345		Pg	06 17 43.2	-1.5
MURC	**Murrieta**	0.69	115		Pg	06 17 44.3	-0.8
MURC					Sg	06 17 54.5	+0.3
MURC	**Murrieta**	0.69	115	P	Pg	06 17 44.4	-0.8
	baz=296						
CFT	**Crafton Hills**	0.71	78		Pg	06 17 44.7	-0.8
OAT	**Oat Mountain**	0.72	309		Pg	06 17 45.2	-0.6
SVD	**Seven Oaks Dam**	0.73	73		Pg	06 17 45.4	-0.6
ADO	**Adelanto Recei**	0.78	32		Pg	06 17 46.3	-0.7
ADO					Sg	06 17 57.1	-0.2
LEOC	**Leona Valley**	0.80	338		Pg	06 17 45.5	-1.8
BACC	**Bachelor Mtn.**	0.80	110		Pg	06 17 46.3	-1.0
BACC					Sg	06 17 57.4	-0.4
BBSC	**Beaumont Base**	0.80	87		Pg	06 17 46.7	-0.6
BBSC					Sb	06 17 58.6	+0.4
HMTC	**Hemet**	0.80	103		Pg	06 17 46.2	-1.1
SBB	**Saddle Back Bu**	0.80	7		Pg	06 17 45.7	-1.7
DGR	**Domenigoni Val**	0.81	107		Pg	06 17 46.5	-1.0
DGR					Sg	06 17 58.0	-0.2
BTL	**Butler Peak**	0.86	64		Pg	06 17 47.6	-0.9
FOXC	**Fox Airport**	0.89	344		Pg	06 17 47.3	-1.6
BBRC	**Big Bear Solar**	0.93	66		Pg	06 17 48.4	-1.3
BBRC	**Big Bear Solar**	0.93	66	P	Pg	06 17 48.6	-1.1
	baz=247						
GORC	**Green Oak Ranc**	0.94	141		Pg	06 17 48.0	-2.0
GORC					Sb	06 18 03.4	+1.0
BALC	**Balcom Canyon**	0.95	296		Pg	06 17 49.3	-0.7
PYR	**Pyramid**	0.95	316		Pg	06 17 49.2	-0.9
OSI	**Osito Audit: C**	0.97	318	Pg	Pg	06 17 49.9	-0.6
OSI	**Osito Audit: C**	0.97	318	S	Sb	06 18 04.0	+0.9
	baz=137						
EDW2	**Edwards Air Fo**	0.99	358		Pg	06 17 49.2	-1.7
EDW2	**Edwards Air Fo**	0.99	358	P	Pg	06 17 49.2	-1.7
	baz=177						
EDW2				S	Sb	06 18 04.5	+0.7
	baz=177						
TPO	**Tropico Hills**	1.02	347		Pg	06 17 49.6	-1.8
HYS	**Haystack Butte**	1.02	18		Pg	06 17 51.1	-0.4
PLM	**Palomar**	1.05	120		Pg	06 17 51.3	-0.7
CRY	**Cary Ranch**	1.05	107		Pg	06 17 50.8	-1.4
CRY					Sg	06 18 05.5	-0.3
BZNA	**Buzz No.'s Pla**	1.14	110		Pg	06 17 52.2	-1.4
DNR	**Dunn Ranch,Anz**	1.14	106		Pg	06 17 52.6	-1.1
SNDA	**J Saunders Pla**	1.16	106		Pg	06 17 53.1	-1.0
THC	**Tehachapi Micr**	1.18	330		Pg	06 17 52.9	-1.6
FRD	**Ford Ranch, An**	1.18	109		Pg	06 17 53.1	-1.5
FRD					Sg	06 18 09.5	-0.5
FRD	**Ford Ranch, An**	1.18	109		Pg	06 17 53.0	-1.5
HWB	**Hans Werner Br**	1.19	136		Pg	06 17 52.3	-2.4
HWB					Sg	06 18 09.1	-1.0
109C	**Camp Elliot, M**	1.22	145		Pg	06 17 52.5	-2.7
109C	**Camp Elliot, M**	1.22	145	P	Pg	06 17 52.7	-2.5
	baz=326						
CPE	**Camp Elliot**	1.22	145		Pg	06 17 52.8	-2.4
DPP	**Dos Picos Cty**	1.22	136		Pg	06 17 52.5	-2.7
RRX	**Edison Barstow**	1.26	38		Pg	06 17 54.8	-1.2
RRX	**Edison Barstow**	1.26	38	P	Pg	06 17 54.8	-1.2
	baz=219						
RRX				S	Sb	06 18 11.8	+0.4
	baz=219						
PFO	**Pinyon Flats O**	1.27	102		Pg	06 17 54.5	-1.7
PFO	**Pinyon Flats O**	1.27	102	P	Pg	06 17 54.4	-1.7
	baz=284						
XPFO	**Pion Flat**	1.27	102		Pg	06 17 54.5	-1.7
XPFO	**Pion Flat**	1.27	102		Pg	06 17 54.8	-1.4
EW2	**E Wide Canyon**	1.28	87		Pg	06 17 55.2	-1.1
BLAC	**Blackrock camp**	1.30	82		Pg	06 17 55.4	-1.5
EML	**El Monte Cty P**	1.35	137		Pn	06 17 54.9	-1.4
EML					Sg	06 18 14.3	-1.0
BORC	**Borrego Spring**	1.42	115		Pn	06 17 57.4	+0.3
ARVC	**Arvin**	1.44	330		Pn	06 17 57.3	-0.1
ARVC					Sb	06 18 17.5	+1.0
ARVC	**Arvin**	1.44	330	P	Pn	06 17 57.5	+0.1
	baz=149						
ARVC				S	Sg	06 18 17.0	-1.1
	baz=149						
SNCC	**San Nicolas Is**	1.47	245	S	Sb	06 18 14.8	-2.6
	baz=63						
BCW	**Bitter Crk WRg**	1.61	311		Pn	06 18 00.3	+0.5
BAR	**Barrett**	1.61	138		Pn	06 17 58.8	-1.0
BAR	**Barrett**	1.61	138		Sn	06 18 20.8	+0.4
MONP2	**Monument Peak**	1.61	128	P	Pn	06 17 59.7	-0.4
	baz=309						
MONP2				S	Sn	06 18 22.2	+1.4
	baz=309						
BELC	**Belle Mtn. Jos**	1.62	86		Pn	06 18 01.1	+1.0
BELC	**Belle Mtn. Jos**	1.62	86	Pb	Pn	06 18 01.0	+0.9
	baz=267						
BELC				Sb	Sn	06 18 22.8	+2.0
	baz=267						
HEC	**Hector,Ludlow**	1.63	54	P	Pn	06 18 00.3	+0.2
	baz=235						
HEC				Sb	Sb	06 18 22.8	+0.8
	baz=235						
CTCC	**Cactus City**	1.64	98		Pn	06 18 01.6	+1.4
GSC	**Goldstone, Bar**	1.69	33		Pn	06 18 01.7	+0.6
GSC	**Goldstone, Bar**	1.69	33	Pb	Pn	06 18 01.6	+0.6
	baz=214						
GSC				Sb	Sn	06 18 24.2	+1.6
	baz=214						
CBKC	**Canebrake**	1.72	124		Pn	06 18 01.9	+0.5
BATC	**Bat Cave Butte**	1.80	103		Pb	06 18 04.8	+0.2
ISA	**Isabella, Lake**	1.82	346		Pn	06 18 02.5	-0.3
ISA				Sn	Sn	06 18 26.2	+0.4
ISA	**Isabella, Lake**	1.82	346	P	Pn	06 18 02.5	-0.3
	baz=166						
ISA				S	Sn	06 18 25.9	+0.1
	baz=166						
PKM	**Mcpherson Peak**	1.84	303	Sb	Sb	06 18 28.9	+0.6
	baz=122						
CRR	**Carrizo Plain**	1.93	121		Pb	06 18 06.7	0.0
SWSC	**Sam W. Stewart**	2.02	117	Sb	Sg	06 18 35.9	-0.9
	baz=299						
BC3	**Big Chuckawall**	2.09	96	Pb	Pb	06 18 09.3	-0.2
	baz=278						
GMRC	**Granite Mounta**	2.09	64	Pb	Pb	06 18 09.1	-0.4
	baz=246						
MPMC	**Manual Prospec**	2.20	10	Sb	Sg	06 18 41.4	-1.0
	baz=190						
PAGB	**Antelope Grade**	2.64	315		Pn	06 18 15.3	+1.3
Y12C	**Blythe**	2.85	92		Pn	06 18 16.9	0.0
PMPB	**Monarch Peak**	3.30	316	Pn	Pn	06 18 23.8	+0.7
SHPR	**Sheep Range**	3.46	40		Pn	06 18 26.9	+1.4
W13A	**Hualapai Mount**	3.56	69		Pn	06 18 27.1	+0.2
OMMB	**Old Mammoth Mi**	3.81	347		Pn	06 18 32.9	+2.5
SAO	**San Andreas Ge**	4.05	316	Pn	Pn	06 18 33.0	-0.4
Y14A	**Wickenburg**	4.11	88		Pn	06 18 34.4	+0.2
CMB	**Columbia Colle**	4.59	335	Pn	Pn	06 18 41.6	+0.9
214A	**Organ Pipe Nat**	4.73	113	Pn	Pn	06 18 45.1	+2.4
LCMT	**Little Creek M**	4.94	50		Pn	06 18 47.3	+1.6
KVN	**Kaiserville**	5.15	359	Pn	Pn	06 18 50.4	+1.7
KNB	**Kanab**	5.22	52		Pn	06 18 51.2	+1.7
U15A	**North Rim**	5.28	60		Pn	06 18 52.1	+1.6
X16A	**Lo Mia Camp, P**	5.42	83		Pn	06 18 52.8	+0.5

IDC ***30*** *06:32:27.9±1.4, 20°.34S×71°.35W, h0^{km}, mb3.8/3, mb1 4.1/5, mb1mx3.7/41, mbtmp3.9/5, ML3.6/2, MS3.3/4, Ms1 3.3/4, ms1mx2.9/28, Error ellipse: s-maj=36.6km s-min=24.8km az=66.0*

NEIC ***30*** *06:32:29.2±1.4, 20°.08S±0°.04×70°.91W±0°.05, h10^{km}±2^{km}, mb4.0/4, ML4.1(GUC), Error ellipse: s-maj=8.2km s-min=6.0km az=123.0*

GUC ***30*** *06:32:32.3±0.7, 20°.06S×70°.78W, h23^{km}±4^{km}, ML4.1*

ISC 30 06:32:28.5±1.6**, 20°.07S**±0°.03×**70°.92W**±0°.06**, h5**^{km}±10^{km}**, n42, σ1^{s}23**/52**, mb4.0**/4**, MS3.3**/3**, 6C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA01	**Diego Aracena**	0.85	126	⇓*i*P	Pb	06 32 45.8	0.0
TA01				*e*S	Sg	06 32 56.6	+0.6
PSGC	**Pisagua**	0.88	58	⇑*i*P	Pg	06 32 46.0	+0.6
PSGC				*e*S	Sg	06 32 56.8	-0.1
PSGCX	**Pisagua**	0.88	58		Pg	06 32 45.9	+0.5
PSGCX				Sg	Sg	06 32 57.2	+0.3
PATCX	**Punta Patache**	1.04	136	⇑*i*P	Pg	06 32 48.9	+0.4
PATCX				*e*S	Sb	06 33 02.6	-0.4
PATCX	**Punta Patache**	1.04	136		Pg	06 32 48.9	+0.4
PB11	**IPOC Station P**	1.23	76	⇑*i*P	Pb	06 32 51.6	-0.7
PB11				*e*S	Sb	06 33 06.7	-1.7
PB11				IAML		06 33 14.5	
	comp=N,5μm,0.3s						
PB11	**IPOC Station P**	1.23	76		Pb	06 32 51.6	-0.7
PB12	**IPOC Station P**	1.55	21	*e*P	Pb	06 32 58.0	+0.3
PB12				*e*S	Sb	06 33 17.7	+0.1
PB12				IAML		06 33 23.1	
	comp=N,2μm,0.6s						
PB12	**IPOC Station P**	1.55	21		Pb	06 32 57.9	+0.2
MNMC	**Minye Minye**	1.56	53	⇑*i*P	Pn	06 32 57.4	+0.3
MNMC				*e*S	Sn	06 33 17.3	-0.5
MNMC				IAML		06 33 22.9	
	comp=N,10μm,0.5s						
MNMC	**Minye Minye**	1.56	53		Pn	06 32 57.6	+0.5
MNMC				Sn	Sn	06 33 17.8	0.0
PB02	**IPOC Station P**	1.57	143	⇑*i*P	Pn	06 32 57.6	+0.4
PB02				*e*S	Sb	06 33 18.0	-0.4
PB02				IAML		06 33 21.4	
	comp=E,5μm,0.5s						
PB01	**IPOC Station P**	1.66	126	⇑*i*P	Pn	06 32 58.9	+0.5
PB01				*e*S	Sn	06 33 19.8	-0.2
PB01				IAML		06 33 22.1	
	comp=E,3μm,0.2s						
PB01	**IPOC Station P**	1.66	126		Pn	06 32 58.7	+0.4
PB08	**IPOC Station P**	1.66	93	⇓*i*P	Pn	06 32 58.9	+0.2
PB08				*e*S	Sn	06 33 19.4	-1.1
GO01	**Chusmiza**	1.67	77	⇓*i*P	Pn	06 32 59.4	+0.5
GO01				*e*S	Sn	06 33 20.3	-0.6
GO01	**Chusmiza**	1.67	77		Pn	06 32 59.4	+0.5
AP01	**Chacalluta**	1.77	18	*e*P	Pb	06 33 01.9	+0.4
AP01				*e*S	Sb	06 33 24.3	+0.3
AP01				IAML		06 33 31.0	
	comp=N,4μm,0.4s						
PB07	**IPOC Station P**	1.91	150		Pn	06 33 01.8	-0.1
PB16	**IPOC Station P**	2.18	38		Pb	06 33 07.9	-0.9
PB09	**IPOC Station P**	2.33	138		Pb	06 33 09.5	-1.6
PB04	**IPOC Station P**	2.37	163		Pn	06 33 08.0	-0.2
LVC	**Limon Verde**	3.15	144	Pn	Pn	06 33 21.2	+2.1
	comp=N,3.5nm,0.3s,baz=323,slow=7.7,SNR=68						
LVC				Sn	Sn	06 33 59.4	+2.1
	comp=N,38nm,0.3s,baz=171,slow=16,SNR=5.8						
LVC				Lg	Lg	06 34 05.8	
	comp=N,36nm,0.3s,baz=194,slow=18,SNR=10.0						
PB15	**IPOC Station P**	3.40	157		Pn	06 33 22.4	-0.1
PB10	**IPOC Station P**	3.45	174		Pn	06 33 22.1	-0.8
PB14	**IPOC Station P**	4.56	174	Pn	Pn	06 33 37.3	-1.2
LPAZ	**La Paz**	4.60	36	Pn	Pb	06 33 46.9	-3.2
	comp=N,1.7nm,0.3s,baz=270,slow=4.3,SNR=33						
LPAZ	**La Paz**	4.60	36		Pb	06 33 47.2	-2.8
GO02	**Mina Guanaco**	5.22	167		Pn	06 33 50.0	+2.5
NNA	**Nana**	9.85	324	LR	LR	06 38 26.5	
	comp=N,34nm,20.2s,baz=159,slow=36						
SIV	**San Ignacio**	10.20	68	Pn	Pn	06 34 56.1	+0.4
	comp=N,1.7nm,0.3s,baz=271,slow=10.0,SNR=39						
PLCA	**Paso Flores**	20.60	179	P	P	06 37 05.5	-3.1
	comp=N,7.0nm,1.3s,baz=287,slow=1.8,SNR=2.8						
PTGA	**Pitinga**	22.00	30	LR	LR	06 46 06.2	
	comp=N,96nm,19.6s,baz=356,slow=36						
PTGA	**Pitinga**	22.00	30	P	P	06 37 23.5	-0.3
PTGA				IAmb	IAmb	06 37 28.5	
	comp=Z,10.0nm,1.4s						
BDFB	**Brasilia**	22.23	82	P	P	06 37 29.7	+3.3
	comp=Z,1.9nm,0.8s,baz=342,slow=6.2,SNR=3.2						
ROSC	**El Rosal**	24.98	352	LR	LR	06 48 15.2	
	comp=Z,82nm,18.4s,baz=52,slow=38						
RUSC	**La Rusia**	25.88	355	P	P	06 38 01.4	-0.6
SDV	**Santo Domingo**	28.77	1	P	P	06 38 26.9	-0.7
SDV				IAmb	IAmb	06 38 44.6	
	comp=Z,2.9nm,1.0s						
LPIG	**La Paz**	58.30	317	LR	LR	07 02 24.4	
	comp=Z,57nm,19.1s,baz=43,slow=31						
YKA	**Yellowknife Ar**	89.22	341	P	P	06 45 25.0	0.0
	comp=Z,0.6nm,0.7s,baz=136,slow=5.3,SNR=9.7						
MKAR	**Makanchi Array**	145.52	33	PKPbc	PKPab	06 52 09.3	+1.1
	comp=Z,1.2nm,0.7s,baz=330,slow=3.9,SNR=3.6						
SONM	**Songino Array**	152.21	4	PKPbc	PKiKP	06 52 27.1	+1.4
	comp=Z,0.3nm,0.3s,baz=17,slow=2.0,SNR=2.5						

NEIC ***30*** *06:37:44.0±0.7, 36°.129N±0°.007×97°.64W±0°.03, h6^{km}±6^{km}, Error ellipse: s-maj=3.3km s-min=0.4km az=72.0*

TUL ***30*** *06:37:43.7±0.7, 36°.13N±0°.01×97°.64W±0°.01, h5^{km}±6^{km}, ML3.3, Error ellipse: s-maj=1.8km s-min=1.6km az=222.0*

IDC ***30*** *06:37:44.2±1.1, 36°.30N×97°.83W, h0^{km}, mb2.9/1, mb1 3.5/6, mb1mx3.3/46, mbtmp3.2/6, ML3.0/5, Error ellipse: s-maj=16.8km s-min=12.5km az=148.0*

ANF ***30*** *06:37:45.3±0.8, 36°.13N×97°.64W, h15^{km}±6^{km}, ML4.2/10, Error ellipse: s-maj=4.8km s-min=2.4km az=170.0*

ISC 30 06:37:43.7±0.7**, 36°.14N**±0°.04×**97°.67W**±0°.04**, h10**^{km}**, n89, σ1^{s}17**/92**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADOK	**Arcadia Dam**	0.54	153		Pg	06 37 54.3	0.0
OKCFA	**Oklahoma City**	0.74	166		Pg	06 37 57.8	-0.2
OKCSW	**OKLAHOMA CITY**	0.75	165		Pg	06 37 58.1	-0.1
FNO	**Franklin**	0.90	166		Pg	06 38 01.1	-0.1
U32A	**Winter Ranch,**	1.10	283		Pb	06 38 05.0	0.0
W35A	**Tecumseh**	1.18	146		Pb	06 38 05.2	-1.0
T35A	**Sooner Cattle**	1.22	50		Pb	06 38 06.4	-0.5
TUL1	**Leonard**	1.54	98		Pn	06 38 11.0	-0.2
TUL1				Sn	Sn	06 38 31.6	+0.3
TUL1	**Leonard**	1.54	98	P	Pn	06 38 11.2	-0.1
	baz=280						
TUL1				S	Sb	06 38 31.9	-0.1
	baz=280						
WMOK	**Wichita Mounta**	1.66	213		Pn	06 38 13.8	+0.8
WMOK	**Wichita Mounta**	1.66	213	P	Pn	06 38 13.7	+0.8
	baz=34						
WMOK				S	Sb	06 38 36.2	+0.7
	baz=34						
R32A	**Long Quarter,**	2.43	340		Pn	06 38 25.9	+2.3
U38A	**Gravette**	2.67	82		Pn	06 38 27.6	+0.7
Z35A	**Perchaven, San**	2.82	173		Pn	06 38 29.5	+0.6
HHAR	**Hobbs**	3.02	86		Pn	06 38 32.5	+0.8
KSU1	**Kansas State U**	3.08	16	P	Pn	06 38 33.9	+1.5
	baz=195						
CBKS	**Cedar Bluff**	3.14	329		Pn	06 38 35.8	+2.5
W39A	**Magazine**	3.30	105	P	Pn	06 38 36.5	+1.0
	baz=288						
AMTX	**Amarillo**	3.50	250	Pn	Pn	06 38 36.8	-1.5
Z38A	**Mt. Pleasant**	3.62	142		Pn	06 38 41.1	+1.3
MIAR	**Mount Ida**	3.70	114		Pn	06 38 42.4	+1.4
MIAR	**Mount Ida**	3.70	114	P	Pn	06 38 42.4	+1.4
	baz=297						
MIAR				S	Sn	06 39 26.7	+1.9
	baz=297						
S39A	**Bolivar**	3.81	65		Pn	06 38 43.0	+0.5
ABTX	**Abilene, Hawle**	3.86	206		Pn	06 38 45.2	+2.0
WHTX	**Lake Whitney,**	4.14	177		Pn	06 38 48.2	+1.3
WHTX	**Lake Whitney,**	4.14	177	P	Pn	06 38 48.2	+1.3

	baz=358						
X40A	Basin Creek Fa	4.28	111		Pn	06 38 49.9	+0.9
X40A	Basin Creek Fa	4.28	111	Pb	Pb	06 39 00.2	+1.1
	baz=294						
237A	Washetta, Mont	4.40	159		Pn	06 38 51.2	+0.6
WHAR	Wooly Hollow	4.46	99		Pn	06 38 52.1	+0.7
MGMO	Mountain Grove	4.46	75		Pn	06 38 50.5	-1.0
WLAR	White Oak Lake	4.47	122		Pn	06 38 52.5	+1.0
FCAR	Ozark Folk Cen	4.50	91		Pn	06 38 52.4	+0.4
W41B	Gary Mavity, V	4.52	101		Pn	06 38 53.5	+1.2
W41B	Gary Mavity, V	4.52	101	Pb	Pb	06 39 03.2	+0.1
	baz=284						
UALR	University of	4.56	106		Pn	06 38 54.4	+1.7
N33A	J Bar K, Exete	4.60	2		Pn	06 38 54.0	+0.7
MSTX	Muleshoe	4.71	244		Pn	06 38 55.6	+0.7
MSTX	Muleshoe	4.71	244	P	Pn	06 38 56.3	+1.4
	baz=61						
P38A	Dawn	4.78	42		Pn	06 38 57.1	+1.3
KSCO	Kaye Shedlock'	4.87	308		Pn	06 38 56.8	-0.4
Z41A	Richland Creek	4.93	124		Pn	06 38 57.5	-0.4
Z41A	Richland Creek	4.93	124	S	Sn	06 39 54.9	0.0
	baz=307						
N35A	Tabor	4.98	18		Pn	06 38 59.0	+0.5
CCM	Cathedral Cave	5.48	68		Pn	06 39 06.8	+1.3
T25A	Trinidad	5.51	282		Pn	06 39 07.2	+1.2
T25A	Trinidad	5.51	282	P	Pn	06 39 07.2	+1.2
	baz=98						
OGNE	Ogallala	5.89	326		Pn	06 39 13.0	+1.8
SDCO	Great Sand Dun	6.47	287		Pn	06 39 21.8	+2.5
S44A	Carbondale	6.92	75	Pn	Pn	06 39 24.3	-0.9
OXF	Oxford	6.95	101		Pn	06 39 25.0	-0.5
SIUC	Southern Illin	6.95	74	Pn	Pn	06 39 26.4	+0.8
W45A	Hickory Valley	6.98	96	Pn	Pn	06 39 25.7	-0.3
Y45A	Yeager Farm, C	7.04	106	Pn	Pn	06 39 27.0	+0.1
ANMO	Albuquerque	7.26	263	Pn	Pn	06 39 29.9	-0.2
	0.1nm,0.3s,baz=51,slow=14,SNR=1.6						
ANMO				Pg	Pg	06 39 58.1	-4.6
	0.9nm,0.3s,baz=99,slow=15,SNR=13						
ANMO				Lg	Lg	06 41 32.5	
	1.4nm,0.3s,baz=157,slow=23,SNR=3.8						
ISCO	Idaho Springs	7.26	303		Pn	06 39 30.9	+0.7
P43A	Skaggs, Pawnee	7.33	59		Pn	06 39 31.1	+0.3
Q44A	Meyer Farm, Va	7.41	66		Pn	06 39 32.0	+0.1
ECSD	EROS Data Cent	7.63	6	Pn	Pn	06 39 34.9	-0.1
L40A	Anamosa	7.76	38	Pn	Pn	06 39 35.2	-1.4
MNTX	Cornudas Mount	7.79	238	Pn	Pn	06 39 38.1	+1.0
HDIL	Hopedale	7.92	54		Pn	06 39 39.1	+0.2
WVT	Waverly	7.96	87	Pn	Pn	06 39 40.2	+0.7
PHWY	Pilot Hill	7.98	313	Pn	Pn	06 39 40.1	+0.1
OLIL	Olney	8.04	68	Pn	Pn	06 39 37.1	-3.5
O44A	Mansfield	8.29	58	Pn	Pn	06 39 42.7	-1.2
TXAR	Lajitas Array	8.45	218	Pn	Pn	06 39 47.0	+0.7
	0.1nm,0.3s,baz=12,slow=11,SNR=6.5						
TXAR				Lg	Lg	06 42 09.6	
	1.9nm,0.3s,baz=35,slow=27,SNR=6.9						
TXAR	Lajitas Array	8.45	218		Pn	06 39 46.3	0.0
T47A	Sharon Grove	8.54	81	Pn	Pn	06 39 48.2	+0.7
L42A	Oliver, Polo	8.55	44	Pn	Pn	06 39 47.3	-0.2
JFWS	Jewell Farm	8.87	38	Pn	Pn	06 39 53.3	+1.3
WCI	Wyandotte Cave	9.32	74	Pn	Pn	06 39 58.6	+0.5
LRAL	Lakeview Retre	9.33	106	Pn	Pn	06 39 58.6	+0.4
SFIN	Lafayette	9.33	60	Pn	Pn	06 39 59.1	+0.8
RSSD	Black Hills	9.35	331	Pn	Pn	06 39 59.9	+1.2
BLO	Bloomington	9.35	68		Pn	06 39 58.4	0.0
I40A	Norwalk	9.45	33	Pn	Pn	06 39 59.8	0.0
SPMN	Marine on St.	9.80	21	Pn	Pn	06 40 04.8	+0.1
Z50A	Ashland	10.09	103	Pn	Pn	06 40 09.7	+0.9
I42A	Draeger Farm,	10.25	38	Pn	Pn	06 40 11.2	+0.4
CPCT	Cooper Cave	10.70	90	Pn	Pn	06 40 17.4	+0.3
G40A	Rib Lake	10.74	30	Pn	Pn	06 40 16.6	-0.9
V51A	Loudon	10.80	88	Pn	Pn	06 40 19.1	+0.7
TKL	Tuckaleechee C	11.28	88	Pn	Pn	06 40 27.2	+2.1
	0.1nm,0.3s,baz=227,slow=19,SNR=1.4						
TKL				Lg	Lg	06 43 37.6	
	1.3nm,0.3s,baz=165,slow=18,SNR=5.0						
PDAR	Pinedale Array	11.32	309	Pn	Pn	06 40 25.6	-0.2
	0.0nm,0.3s,baz=128,slow=19,SNR=1.7						
PDAR				Lg	Lg	06 43 38.5	
	0.4nm,0.3s,baz=84,slow=18,SNR=1.5						
EYMN	Ely	12.66	19	Pn	Pn	06 40 40.6	-3.2
D41A	Chassel	12.86	29	Pn	Pn	06 40 43.0	-3.5
ULM	Lac du Bonnet	14.17	5	Pn	Pn	06 40 59.9	-4.5
	0.3nm,0.3s,baz=134,slow=11,SNR=2.3						
ULM				Lg	Lg	06 45 03.9	
	0.2nm,0.3s,baz=89,slow=21,SNR=1.8						
YKA	Yellowknife Ar	28.41	343	P	P	06 43 37.6	-0.5
	0.0nm,0.3s,baz=159,slow=7.2,SNR=4.1						

IDC ***30*** *06:51:55.8±0.5, 36°.22N×97°.64W, h0^{km}, mb4.2/15, mb1 4.2/25, mb1mx4.0/59, mbtmp4.1/25, ML4.0/9, MS3.5/27, Ms1 3.6/27, ms1mx3.4/58, Error ellipse: s-maj=10.5km s-min=8.1km az=158.0*

NEIC ***30*** *06:51:56.5±0.8, 36°.14N±0°.02×97°.61W±0°.05, h5^{km}±1^{km}, Error ellipse: s-maj=7.9km s-min=2.9km az=247.0*

NEIC ***30*** *06:51:56.5, 36°.14N×97°.62W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.32; M$_{\theta\theta}$2.57; M$_{\phi\phi}$-2.25; M$_{r\theta}$0.41; M$_{\theta\phi}$0.63; M$_{\phi r}$-0.67; Fault plane solution: M$_0$2.63000×10^{15} NP1:ϕ_s38.85000°, δ72.80000°, λ-171.53000°. NP2:ϕ_s306.33000°, δ81.91000°, λ-17.38000°. Principal axes: T 2.6878, Plg6.0000°, Azm354.0000°; N -0.1255, Plg71.0000°, Azm102.0000°; P -2.5623, Plg18.0000°, Azm262.0000°;*

TUL ***30*** *06:51:56.3±0.8, 36°.13N±0°.02×97°.63W±0°.03, h5^{km}±5^{km}, ML4.5, mb4.4/35(NEIC), Mwr4.2/23(NEIC) Error ellipse: s-maj=4.1km s-min=1.9km az=51.0*

ANF ***30*** *06:51:58.6±0.3, 36°.12N×97°.62W, h22^{km}±4^{km}, ML5.5/18, Error ellipse: s-maj=2.6km s-min=2.0km az=163.0*

ISC 30 06:51:56.3±1.1**, 36°.14N**±0°.02×**97°.45W**±0°.02**, h10**^{km}±7^{km}**, n462,** σ**2^{s}.01**/518**, mb4.1**/16**, MS3.6**/16**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADOK	Arcadia Dam	0.49	173		Pb	06 52 06.7	-0.3
ADOK				Sg	Sb	06 52 14.1	-0.2
OK005	Luther M Schoo	0.53	157		Pb	06 52 08.1	+0.4
OK009	Oakdale Elemen	0.56	178		Pb	06 52 07.6	-0.6
OK001	Jones High Sch	0.59	167	Pg	Pb	06 52 08.7	-0.1
OKCFA	Oklahoma City	0.72	180		Pb	06 52 10.4	-0.6
OKCFA				Sg	Sb	06 52 19.8	-1.1
OKCSW	OKLAHOMA CITY	0.73	179		Pb	06 52 10.6	-0.6
OKCSW				Sg	Sb	06 52 20.9	-0.4
FNO	Franklin	0.88	178		Pb	06 52 13.6	-0.1
T35A	Sooner Cattle	1.08	44		Pn	06 52 19.0	+1.5
W35A	Tecumseh	1.09	154		Pn	06 52 17.7	0.0
W35A					Pb	06 52 18.2	+1.0
W35A				Sg	Sn	06 52 33.6	+0.9
U32A	Winter Ranch,	1.28	281		Pg	06 52 17.5	-3.4
TUL1	Leonard	1.36	99		Pg	06 52 23.6	+1.2
TUL1	Leonard	1.36	99	P	Pg	06 52 23.6	+1.2
	baz=280						
TUL1				S	Sn	06 52 44.5	+5.0
	baz=280						
WMOK	Wichita Mounta	1.77	218		Pn	06 52 26.5	-0.6
WMOK	Wichita Mounta	1.77	218	P	Pn	06 52 26.2	-0.8
	baz=34						
WMOK				S	Sn	06 52 48.9	-0.8
	baz=34						
R32A	Long Quarter,	2.49	337		Pn	06 52 37.2	+0.3
U38A	Gravette	2.49	82		Pb	06 52 40.7	-0.5
Z35A	Perchaven, San	2.81	177		Pn	06 52 42.3	+1.0
HHAR	Hobbs	2.84	86		Pn	06 52 44.7	+3.0
KSU1	Kansas State U	3.03	12	Pn	Pn	06 52 46.1	+1.8
	baz=195						
KSU1				Pb	Pg	06 52 53.1	-1.2
	baz=195						
W39A	Magazine	3.13	106		Pn	06 52 48.6	+3.0
W39A	Magazine	3.13	106	Pn	Pn	06 52 48.5	+2.9
	baz=288						
W39A				Pb	Pg	06 52 56.1	-0.1
	baz=288						
W39A				Sn	Sb	06 53 28.4	-1.8
	baz=288						
W39A				Sb	Sg	06 53 39.9	+3.1
	baz=288						
CBKS	Cedar Bluff	3.23	326		Pn	06 52 47.3	+0.2
CBKS	Cedar Bluff	3.23	326	Pn	Pn	06 52 47.0	-0.1
	baz=147						
CBKS				Pb	Pb	06 52 54.8	+1.0
	baz=147						
CBKS				Sb	Sb	06 53 33.9	+0.7
	baz=147						
Z38A	Mt. Pleasant	3.52	144		Pn	06 52 52.8	+1.8
MIAR	Mount Ida	3.54	116		Pn	06 52 54.1	+2.8
MIAR	Mount Ida	3.54	116	P	Pn	06 52 54.4	+3.1
	baz=297						
MIAR				S	Sb	06 53 39.0	-3.1
	baz=297						
S39A	Bolivar	3.65	64		Pn	06 52 56.5	+3.7
AMTX	Amarillo	3.67	251		Pn	06 52 52.6	-0.7
AMTX	Amarillo	3.67	251	P	Pn	06 52 52.6	-0.7
	baz=68						
AMTX				Pb	Pb	06 53 01.1	-0.3
	baz=68						
AMTX				Sb	Sb	06 53 45.9	-0.1
	baz=68						
U40A	Yellville	3.72	85		Pn	06 52 56.0	+2.3
U40A	Yellville	3.72	85	Pn	Pn	06 52 55.9	+2.1
	baz=268						
U40A				Pb	Pg	06 53 05.8	-1.8
	baz=268						
U40A				S	Sn	06 53 42.1	+4.4
	baz=268						
ABTX	Abilene, Hawle	3.95	208		Pn	06 52 56.7	-0.3
ABTX	Abilene, Hawle	3.95	208	Pn	Pn	06 52 56.8	-0.2
	baz=25						
ABTX				Pb	Pb	06 53 07.4	+1.4
	baz=25						
ABTX				Sb	Sb	06 53 55.4	+1.6
	baz=25						
X40A	Basin Creek Fa	4.12	112		Pn	06 53 02.8	+3.6
X40A	Basin Creek Fa	4.12	112	Pn	Pn	06 53 01.7	+2.4
	baz=294						
X40A				Pb	Pg	06 53 12.7	-2.5
	baz=294						
X40A				Sb	Sg	06 54 09.0	+0.5
	baz=294						
WHTX	Lake Whitney,	4.14	180		Pn	06 53 00.3	+0.7
WHTX	Lake Whitney,	4.14	180	P	Pn	06 53 00.2	+0.7
	baz=358						
WHTX				Sb	Sb	06 54 02.3	+3.0
	baz=358						
WHAR	Wooly Hollow	4.28	100		Pn	06 53 04.3	+2.8
MGMO	Mountain Grove	4.29	75		Pn	06 53 04.5	+2.9
FCAR	Ozark Folk Cen	4.32	92		Pn	06 53 04.3	+2.2
WLAR	White Oak Lake	4.32	123		Pn	06 53 04.4	+2.3
W41B	Gary Mavity, V	4.34	101		Pn	06 53 04.8	+2.4
W41B	Gary Mavity, V	4.34	101	Pn	Pn	06 53 04.7	+2.4
	baz=284						
W41B				Pb	Pb	06 53 14.6	+1.9
	baz=284						
W41B				Sn	Sn	06 53 56.5	+3.5
	baz=284						
W41B				Sb	Sg	06 54 13.0	-2.7
	baz=284						
237A	Washetta, Mont	4.35	161		Pn	06 53 03.3	+0.9
UALR	University of	4.38	107		Pn	06 53 05.9	+3.0
N33A	J Bar K, Exete	4.59	360		Pn	06 53 05.7	0.0
P38A	Dawn	4.66	41		Pn	06 53 08.5	+1.8
R40A	Maddies Statio	4.66	61		Pn	06 53 09.2	+2.5
Z41A	Richland Creek	4.79	126		Pn	06 53 09.4	+1.0
Z41A	Richland Creek	4.79	126	P	Pn	06 53 10.6	+2.2
	baz=308						
Z41A				S	Sn	06 54 07.2	+3.3
	baz=308						
MSTX	Muleshoe	4.88	245		Pn	06 53 08.4	-1.4
MSTX	Muleshoe	4.88	245	P	Pn	06 53 08.4	-1.4
	baz=61						
MSTX				Sb	Sb	06 54 21.8	+1.2
	baz=61						
N35A	Tabor	4.92	16		Pn	06 53 11.8	+1.5
NATX	Nacogdoches	4.95	151	Pn	Pn	06 53 11.4	+0.8
NATX	Nacogdoches	4.95	151	P	Pn	06 53 13.2	+2.5
	baz=332						
NATX				S	Sn	06 54 08.9	+1.0
	baz=332						
KSCO	Kaye Shedlock'	5.01	306		Pn	06 53 13.9	+2.2
KSCO	Kaye Shedlock'	5.01	306	P	Pn	06 53 11.6	-0.1
	baz=124						
KSCO				Sb	Sb	06 54 28.4	+3.8
	baz=124						
LCAR	Lake Charles	5.10	89	Pn	Pn	06 53 16.9	+4.2
BGNE	Belgrade	5.29	354	Pn	Pn	06 53 15.8	+0.4
BGNE	Belgrade	5.29	354	P	Pn	06 53 15.5	+0.1
	baz=175						
CCM	Cathedral Cave	5.31	67	P	Pn	06 53 18.2	+2.5
	baz=251						
CCM				S	Sn	06 54 19.3	+2.4
	baz=251						
435B	Jarrell	5.34	181	Pn	Pn	06 53 16.9	+0.8
435B	Jarrell	5.34	181	P	Pn	06 53 16.6	+0.5
	baz=360						
X43A	Marvell	5.61	105	P	Pn	06 53 23.2	+3.5
	baz=288						
X43A				Pb	Pb	06 53 38.7	+4.5
	baz=288						
X43A				Sb	Sg	06 54 51.9	-4.4
	baz=288						
T25A	Trinidad	5.69	282	Pn	Pn	06 53 20.2	-0.8
T25A	Trinidad	5.69	282	P	Pn	06 53 19.4	-1.7
	baz=98						
T25A				Sb	Sb	06 54 47.1	+3.0
	baz=98						
LPAR	Lepanto	5.83	93	Pn	Pn	06 53 24.3	+1.6
JCT	Junction City	5.98	200	Pn	Pn	06 53 25.0	+0.1
JCT	Junction City	5.98	200	Pn	Pn	06 53 24.6	-0.3
	baz=18						
JCT				Pb	Pb	06 53 44.2	+3.6
	baz=18						
OGNE	Ogallala	5.99	325	Pn	Pn	06 53 25.7	+0.6
OGNE	Ogallala	5.99	325	P	Pn	06 53 25.3	+0.2
	baz=143						
OGNE				Pb	Pb	06 53 44.6	+3.7
	baz=143						
OGNE				Sn	Sn	06 54 31.7	-2.1
	baz=143						
OGNE				Sb	Sb	06 54 59.2	+6.5
	baz=143						
143A	Socs Landing,	6.06	123	Pn	Pn	06 53 28.5	+2.6
MET	Memphis--Engin	6.20	97	Pn	Pn	06 53 30.6	+2.7
SLM	Saint Louis	6.26	64	Pn	Pn	06 53 31.5	+2.8
HKT	Hockley	6.32	167	Pn	Pn	06 53 31.2	+1.7
441A	DeRidder	6.45	145	Pn	Pn	06 53 32.6	+1.3
HENM	Henderson Moun	6.46	83	Pn	Pn	06 53 34.3	+3.0
K31A	O'Neill	6.55	352	Pn	Pn	06 53 33.2	+0.5
HALT	Halls	6.58	90	Pn	Pn	06 53 35.5	+2.6
SCIA	State Center	6.63	28	Pn	Pn	06 53 36.5	+2.7
SCIA	State Center	6.63	28	P	Pn	06 53 35.8	+2.0
	baz=212						
HICK	Hickman	6.65	84	Pn	Pn	06 53 36.9	+3.0
SDCO	Great Sand Dun	6.65	286	P	Pn	06 53 33.6	-0.6
	baz=102						
SDCO				Sb	Sb	06 55 18.3	+6.6
	baz=102						
Q24A	Divide	6.74	297	P	Pn	06 53 33.9	-1.6
	baz=113						
Q24A				S	Sn	06 54 48.2	-4.3
	baz=113						
S44A	Carbondale	6.74	74	Pn	Pn	06 53 38.7	+3.3
OXF	Oxford	6.77	102	Pn	Pn	06 53 37.2	+1.5
OXF	Oxford	6.77	102	P	Pn	06 53 36.9	+1.3
	baz=286						
OXF				S	Sn	06 54 56.3	+3.5
	baz=286						
W45A	Hickory Valley	6.80	96	Pn	Pn	06 53 38.2	+2.1
Y45A	Yeager Farm, C	6.87	107	Pn	Pn	06 53 39.8	+2.7
N41A	Harden Midland	6.90	47	Pn	Pn	06 53 40.8	+3.4
VBMS	Vicksburg	6.95	122	Pn	Pn	06 53 40.0	+1.9
VBMS	Vicksburg	6.95	122	S	Sn	06 54 59.6	+2.4
	baz=306						
T45A	Paducah	7.14	80	Pn	Pn	06 53 43.8	+3.1
P43A	Skaggs, Pawnee	7.17	58	Pn	Pn	06 53 43.8	+2.6
Q44A	Meyer Farm, Va	7.24	65	Pn	Pn	06 53 45.2	+3.0
344A	Westbrook Farm	7.29	128	Pn	Pn	06 53 45.0	+2.2
ISCO	Idaho Springs	7.41	302	Pn	Pn	06 53 43.7	-1.1
ISCO	Idaho Springs	7.41	302	P	Pn	06 53 43.5	-1.3
	baz=118						
K38A	Parkersburg	7.44	28	Pn	Pn	06 53 46.2	+1.3
ANMO	Albuquerque	7.44	263	Pn	Pn	06 53 44.2	-0.9
	0.2nm,0.3s,baz=76,slow=11,SNR=11						
ANMO				Pg	Pb	06 54 08.4	+2.8
	3.8nm,0.3s,baz=90,slow=17,SNR=16						
ANMO				Lg	Lg	06 55 45.6	
	10nm,0.3s,baz=348,slow=14,SNR=5.2						
ANMO				LR	LR	06 56 53.3	
	comp=Z,841nm,21.2s,baz=76,slow=41						
ANMO	Albuquerque	7.44	263	P	Pn	06 53 44.8	-0.3
	baz=78						
ECSD	EROS Data Cent	7.61	5	Pn	Pn	06 53 47.0	-0.3
ECSD	EROS Data Cent	7.61	5	P	Pn	06 53 46.5	-0.7
	baz=186						
ECSD				S	Sn	06 55 11.1	-2.4
	baz=186						
L40A	Anamosa	7.64	37	Pn	Pn	06 53 49.4	+1.7
PLAL	Pickwick Lake	7.72	96	Pn	Pn	06 53 50.2	+1.4
146A	Union	7.76	114	Pn	Pn	06 53 51.5	+2.2
HDIL	Hopedale	7.78	53	Pn	Pn	06 53 51.8	+2.4
HDIL	Hopedale	7.78	53	P	Pn	06 53 50.9	+1.4
	baz=238						
HDIL				S	Sn	06 55 16.2	-1.4
	baz=238						
WVT	Waverly	7.78	87	Pn	Pn	06 53 52.3	+2.7
WVT	Waverly	7.78	87	P	Pn	06 53 51.3	+1.7
	baz=273						
WVT				S	Sn	06 55 19.5	+1.8
	baz=273						
OLIL	Olney	7.87	68	Pn	Pn	06 53 53.6	+2.7
MNTX	Cornudas Mount	7.94	238	Pn	Pn	06 53 50.5	-1.3
MNTX	Cornudas Mount	7.94	238	P	Pn	06 53 50.3	-1.6
	baz=53						
833A	Chaparral WMA,	7.97	192	Pn	Pn	06 53 52.1	0.0
833A	Chaparral WMA,	7.97	192	P	Pn	06 53 53.5	+1.3
	baz=11						
USIN	University of	8.03	74	Pn	Pn	06 53 55.2	+2.2
PHWY	Pilot Hill	8.11	312	Pn	Pn	06 53 54.2	-0.1
O44A	Mansfield	8.13	58	Pn	Pn	06 53 57.2	+2.9
346A	Big Creek Wild	8.16	123	Pn	Pn	06 53 57.4	+2.6
N23A	Red Feather La	8.18	308	Pn	Pn	06 53 55.9	+0.7
N23A	Red Feather La	8.18	308	P	Pn	06 53 55.8	+0.5
	baz=123						
Z47A	Carrollton	8.26	108	Pn	Pn	06 53 58.9	+2.7
T47A	Sharon Grove	8.37	81	Pn	Pn	06 54 00.7	+3.1
SUSD	Miller	8.37	353	Pn	Pn	06 53 57.1	-0.5
SUSD	Miller	8.37	353	P	Pn	06 53 57.2	-0.5
	baz=172						
SUSD				S	Sn	06 55 28.8	-3.4
	baz=172						
L42A	Oliver, Polo	8.42	44	Pn	Pn	06 54 00.0	+1.8
I37A	Lemond, Waseca	8.45	20	Pn	Pn	06 53 59.1	+0.3
TXAR	Lajitas Array	8.57	219	Pn	Pn	06 53 59.1	-1.4
	0.6nm,0.3s,baz=42,slow=11,SNR=47						
TXAR				Lg	Lg	06 56 24.2	
	12nm,0.3s,baz=40,slow=28,SNR=11						
TXAR				LR	LR	06 57 05.6	
	comp=Z,74nm,21.5s,baz=0.0,slow=36						
TXAR	Lajitas Array	8.57	219	Pn	Pn	06 54 00.5	0.0
TX31	Lajitas Ar. Si	8.57	219	Pn	Pn	06 54 00.8	+0.3
TX32	Lajitas Array	8.57	219	Pn	Pn	06 54 00.8	+0.3
V48A	Smith Brothers	8.63	90	Pn	Pn	06 54 05.4	+4.2
X48A	Hartselle	8.67	98	Pn	Pn	06 54 04.3	+2.5
JFWS	Jewell Farm	8.76	37	Pn	Pn	06 54 04.4	+1.5
JFWS	Jewell Farm	8.76	37	P	Pn	06 54 03.8	+0.9
	baz=222						
JFWS				S	Sn	06 55 39.3	-2.3
	baz=222						
P46A	Rosedale	8.81	64	Pn	Pn	06 54 06.6	+3.0
CLTN	Cedars of Leba	9.00	87	Pn	Pn	06 54 09.5	+3.2
M44A	Midewin, Midew	9.02	52	Pn	Pn	06 54 09.4	+2.9
WCI	Wyandotte Cave	9.14	74	Pn	Pn	06 54 11.3	+3.0
WCI	Wyandotte Cave	9.14	74	P	Pn	06 54 11.1	+2.8
	baz=260						
LRAL	Lakeview Retre	9.15	107	Pn	Pn	06 54 10.0	+1.6
LRAL	Lakeview Retre	9.15	107	P	Pn	06 54 10.7	+2.3
	baz=293						
SFIN	Lafayette	9.17	59	Pn	Pn	06 54 11.0	+2.3
SFIN	Lafayette	9.17	59	P	Pn	06 54 10.9	+2.3
	baz=246						
BLO	Bloomington	9.18	67	Pn	Pn	06 54 10.6	+1.9
121A	Cookes Peak, D	9.27	250	Pn	Pn	06 54 08.8	-1.5
Y49A	Blount Mountai	9.34	101	Pn	Pn	06 54 13.1	+2.2
I40A	Norwalk	9.34	32	Pn	Pn	06 54 11.8	+0.8
SWET	Sewanee	9.41	92	Pn	Pn	06 54 14.5	+2.5
U49A	Red Boiling Sp	9.42	84	Pn	Pn	06 54 15.1	+3.0
RSSD	Black Hills	9.43	330	Pn	Pn	06 54 12.2	-0.1
RSSD	Black Hills	9.43	330	P	Pn	06 54 11.5	-0.8
	baz=146						
L44A	Lake County Fo	9.54	48	Pn	Pn	06 54 16.0	+2.3
L44A	Lake County Fo	9.54	48	P	Pn	06 54 15.6	+1.8
	baz=234						
L44A				S	Sn	06 55 58.4	-2.6
	baz=234						
K22A	Casper	9.57	316	Pn	Pn	06 54 13.8	-0.4
K22A	Casper	9.57	316	P	Pn	06 54 13.4	-0.8
	baz=130						
T49A	Edmonton	9.63	81	P	Pn	06 54 18.3	+3.4
	baz=268						
Q48A	North Vernon	9.71	70	P	Pn	06 54 18.2	+2.1
	baz=257,SNR=7.3						
Q48A				S	Sn	06 56 06.5	+1.4
	baz=257						
SPMN	Marine on St.	9.73	20	Pn	Pn	06 54 16.3	0.0
SPMN	Marine on St.	9.73	20	P	Pn	06 54 15.9	-0.4
	baz=203						
SPMN				S	Sn	06 56 05.7	+0.1
	baz=203						
FPAL	Fort Paine	9.80	96	Pn	Pn	06 54 19.8	+2.5
S49A	Springfield	9.87	77	P	Pn	06 54 20.4	+2.2
	baz=264						
Z50A	Ashland	9.92	104	Pn	Pn	06 54 20.8	+1.9
Z50A	Ashland	9.92	104	P	Pn	06 54 21.3	+2.4
	baz=290						
Z50A				S	Sn	06 56 09.1	-1.2
	baz=290						
W50A	Signal Mountai	9.92	92	Pn	Pn	06 54 22.1	+3.2
R49A	Shelbyville	10.02	74	P	Pn	06 54 22.9	+2.6
	baz=262						
R49A				S	Sn	06 56 12.4	-0.4
	baz=262						
P48A	Milroy	10.07	67	Pn	Pn	06 54 21.9	+0.9
P48A	Milroy	10.07	67	P	Pn	06 54 22.8	+1.8
	baz=255,SNR=11						
P48A				S	Sn	06 56 12.0	-2.1
	baz=255						
I42A	Draeger Farm,	10.13	38	Pn	Pn	06 54 22.3	+0.5
250A	Grady	10.16	111	Pn	Pn	06 54 23.4	+1.3
T50A	Nancy	10.18	81	P	Pn	06 54 25.1	+2.6
	baz=269						
N47A	Urbana	10.35	59	Pn	Pn	06 54 25.2	+0.4
N47A	Urbana	10.35	59	P	Pn	06 54 24.9	+0.1
	baz=247						
Q49A	Aurora	10.37	70	P	Pn	06 54 26.2	+1.2
	baz=258,SNR=26						
L46A	Eue Claire	10.46	53	Pn	Pn	06 54 27.6	+1.3
L46A	Eue Claire	10.46	53	P	Pn	06 54 27.8	+1.5
	baz=240						
L46A				S	Sn	06 56 23.4	-0.1
	baz=240						
Z51A	Franklin	10.48	102	Pn	Pn	06 54 29.0	+2.3
O48A	Farmland	10.51	63	P	Pn	06 54 27.8	+0.9
	baz=251						
CPCT	Cooper Cave	10.52	90	Pn	Pn	06 54 29.8	+2.7
S50A	Richmond	10.56	78	P	Pn	06 54 30.0	+2.3
	baz=266						
M47A	Cromwell	10.60	57	P	Pn	06 54 29.9	+1.7
	baz=245,SNR=7.0						
V51A	Loudon	10.62	88	Pn	Pn	06 54 31.0	+2.5
P49A	Miami Univ. Ec	10.62	68	P	Pn	06 54 29.5	+1.0
	baz=256						
G40A	Rib Lake	10.64	29	Pn	Pn	06 54 29.1	+0.3
R50A	Paris	10.68	75	P	Pn	06 54 31.4	+2.1
	baz=263						
E28A	Huff	10.71	348	Pn	Pn	06 54 27.3	-2.3
T51A	Gray	10.89	82	P	Pn	06 54 34.7	+2.5
	baz=270						
Q50A	Georgetown	11.04	72	P	Pn	06 54 35.5	+1.3
	baz=260,SNR=27						
Q50A				S	Sn	06 56 35.7	-2.0
	baz=260						
W52A	Murphy	11.06	91	Pn	Pn	06 54 37.0	+2.5
O49A	Covington	11.08	65	Pn	Pn	06 54 35.9	+1.0
O49A	Covington	11.08	65	P	Pn	06 54 35.6	+0.8
	baz=253,SNR=5.6						
TKL	Tuckaleechee C	11.10	88	Pn	Pn	06 54 36.4	+1.3
	0.9nm,0.3s,baz=222,slow=8.8,SNR=13						
TKL				Sn	Sn	06 56 42.7	+3.4
	3.3nm,0.3s,baz=256,slow=19,SNR=1.7						
TKL				Lg	Lg	06 57 44.7	
	10nm,0.3s,baz=158,slow=17,SNR=7.8						
TKL				LR	LR	06 59 06.5	
	comp=Z,374nm,20.4s,baz=285,slow=38						
TKL	Tuckaleechee C	11.10	88		Pn	06 54 37.0	+1.8

H43A	Windswept, Lux	11.12	39	Pn	Pn	06 54 35.3	0.0
K46A	Dorr	11.14	51	P	Pn	06 54 35.7	+0.2
	baz=238						
J45A	Montague	11.19	46	Pn	Pn	06 54 37.2	+0.9
J45A	Montague	11.19	46	S	Sn	06 56 38.4	-3.1
	baz=233						
S51A	Beattyville	11.20	78	P	Pn	06 54 39.1	+2.7
	baz=267						
Y52A	Lilburn	11.21	98	Pn	Pn	06 54 38.4	+1.8
TZTN	Tazewell	11.22	84	Pn	Pn	06 54 40.3	+3.6
TZTN	Tazewell	11.22	84	P	Pn	06 54 41.5	+4.8
	baz=272						
V52A	Sevierville	11.23	87	Pn	Pn	06 54 39.6	+2.8
R51A	Hillsboro	11.26	75	P	Pn	06 54 39.4	+2.1
	baz=263						
M48A	Edgerton	11.27	58	Pn	Pn	06 54 38.2	+0.8
M48A	Edgerton	11.27	58	P	Pn	06 54 38.1	+0.8
	baz=246,SNR=8.0						
M48A				S	Sn	06 56 40.5	-2.8
	baz=246						
P50A	Jamestown	11.33	68	P	Pn	06 54 39.5	+1.3
	baz=257,SNR=6.9						
E38A	The Farm, Brul	11.35	21	Pn	Pn	06 54 37.3	-1.2
352A	Blakely	11.40	110	Pn	Pn	06 54 40.5	+1.3
N49A	Columbus Grove	11.43	61	Pn	Pn	06 54 39.5	-0.1
N49A	Columbus Grove	11.43	61	P	Pn	06 54 39.7	+0.2
	baz=250						
N49A				S	Sn	06 56 43.9	-3.4
	baz=250						
BW06	Boulder Array	11.46	309	Pn	Pn	06 54 39.0	-1.2
BW06	Boulder Array	11.46	309	P	Pn	06 54 38.6	-1.5
	baz=122						
PD31	Pinedale Array	11.46	309	Pn	Pn	06 54 39.1	-1.0
PDAR	Pinedale Array	11.46	309	Pn	Pn	06 54 38.6	-1.5
	0.9nm,0.3s,baz=125,slow=16,SNR=24						
PDAR				Lg	Lg	06 57 51.9	
	5.7nm,0.3s,baz=105,slow=32,SNR=10						
PDAR	Pinedale Array	11.46	309	Pn	Pn	06 54 39.1	-1.0
Q51A	Peebles	11.55	71	Pn	Pn	06 54 42.1	+0.8
Q51A	Peebles	11.55	71	P	Pn	06 54 42.6	+1.3
	baz=260						
O50A	Cable	11.60	66	P	Pn	06 54 42.8	+1.0
	baz=254						
S52A	Salyersville	11.61	78	P	Pn	06 54 44.2	+2.2
	baz=267						
K47A	Vermontville	11.62	52	P	Pn	06 54 43.6	+1.4
	baz=240,SNR=7.1						
I45A	Fountain	11.65	44	Pn	Pn	06 54 44.9	+2.3
I45A	Fountain	11.65	44	P	Pn	06 54 44.4	+1.9
	baz=232						
L48A	N Adams	11.66	56	P	Pn	06 54 43.6	+0.9
	baz=245,SNR=34						
T52A	Hallie	11.66	81	P	Pn	06 54 44.9	+2.1
	baz=270						
COWI	Conover	11.75	30	Pn	Pn	06 54 43.3	-0.7
GOGA	Godfrey	11.81	99	Pn	Pn	06 54 46.2	+1.4
P51A	Williamsport	11.86	69	Pn	Pn	06 54 47.1	+1.7
P51A	Williamsport	11.86	69	P	Pn	06 54 47.4	+2.0
	baz=258						
V53A	Saluda	11.88	88	Pn	Pn	06 54 48.3	+2.5
F42A	Maple Grove Fa	11.90	33	Pn	Pn	06 54 44.8	-1.2
R52A	Catlettsburg	12.00	75	P	Pn	06 54 49.7	+2.3
	baz=264						
T53A	Wise	12.02	82	P	Pn	06 54 49.7	+1.9
	baz=271						
J47A	Sunmer	12.03	50	Pn	Pn	06 54 47.7	0.0
J47A	Sunmer	12.03	50	P	Pn	06 54 48.4	+0.7
	baz=238						
I46A	Reed City	12.04	46	P	Pn	06 54 47.9	0.0
	baz=234						
ACSO	Alum Creek Sta	12.09	66	Pn	Pn	06 54 48.7	+0.1
ACSO	Alum Creek Sta	12.09	66	P	Pn	06 54 48.7	+0.1
	baz=255						
ACSO				S	Sn	06 57 00.5	-3.0
	baz=255						
N50A	Nevada	12.12	63	P	Pn	06 54 49.4	+0.4
	baz=252						
N50A				S	Sn	06 57 00.5	-3.7
	baz=252						
H45A	Beulah	12.13	42	P	Pn	06 54 48.1	-1.0
	baz=230						
L49A	Milan	12.18	57	P	Pn	06 54 50.9	+1.1
	baz=245						
AGMN	Agassiz Nation	12.21	5	Pn	Pn	06 54 46.9	-3.2
AGMN	Agassiz Nation	12.21	5	P	Pn	06 54 47.4	-2.7
	baz=187						
K48A	Perry	12.25	53	P	Pn	06 54 51.4	+0.6
	baz=242,SNR=8.8						
K48A				S	Sn	06 57 02.7	-4.7
	baz=242						
AAM	Ann Arbor	12.33	56	Pn	Pn	06 54 53.5	+1.6
AAM	Ann Arbor	12.33	56	P	Pn	06 54 53.1	+1.2
	baz=245						
O51A	Pataskala	12.35	67	P	Pn	06 54 52.3	+0.2
	baz=256						
O51A				S	Sn	06 57 06.4	-3.4
	baz=256						
Q52A	Bidwell	12.37	72	P	Pn	06 54 53.7	+1.2
	baz=262						
Q52A				S	Sn	06 57 10.3	-0.1
	baz=262						
M50A	Fremont	12.40	61	Pn	Pn	06 54 54.4	+1.6
M50A	Fremont	12.40	61	S	Sn	06 57 07.1	-4.0
	baz=250						
LAO	LASA Array	12.42	331	Pn	Pn	06 54 51.1	-2.0
LAO	LASA Array	12.42	331	P	Pn	06 54 50.5	-2.6
	baz=146						
R53A	Hurricane	12.54	75	Pn	Pn	06 54 56.5	+1.7
R53A	Hurricane	12.54	75	P	Pn	06 54 56.5	+1.7
	baz=265						
SNOW	Snow King Moun	12.57	310	Pn	Pn	06 54 54.5	-0.9
P52A	Corning	12.59	69	P	Pn	06 54 56.3	+0.8
	baz=259,SNR=13						
P52A				S	Sn	06 57 12.2	-3.5
	baz=259						
EYMN	Ely	12.59	19	Pn	Pn	06 54 53.2	-2.2
EYMN	Ely	12.59	19	P	Pn	06 54 53.0	-2.4
	baz=203						
G45A	Suttons Bay	12.61	42	Pn	Pn	06 54 54.4	-1.3
G45A	Suttons Bay	12.61	42	P	Pn	06 54 54.3	-1.4
	baz=230						
U54A	Nelsons Funny	12.61	84	P	Pn	06 54 58.5	+2.7
	baz=273						
I47A	Gladwin	12.64	48	Pn	Pn	06 54 56.3	+0.2
I47A	Gladwin	12.64	48	P	Pn	06 54 55.8	-0.3
	baz=236						
K49A	Clarkson	12.68	54	P	Pn	06 54 57.3	+0.7
	baz=243						
K49A				S	Sn	06 57 14.2	-3.6
	baz=243						
RLMT	Red Lodge	12.68	319	Pn	Pn	06 54 55.3	-1.6
RLMT	Red Lodge	12.68	319	P	Pn	06 54 54.9	-1.9
	baz=131						
TPAW	Teton Pass	12.70	309	Pn	Pn	06 54 56.3	-0.9
J48A	Bridge Port	12.71	52	Pn	Pn	06 54 57.2	+0.2
J48A	Bridge Port	12.71	52	P	Pn	06 54 56.9	-0.1
	baz=241,SNR=15						
J48A				S	Sn	06 57 13.7	-4.8
	baz=241						
N51A	Ashland	12.73	63	Pn	Pn	06 54 58.5	+1.2
N51A	Ashland	12.73	63	P	Pn	06 54 58.3	+1.0
	baz=253,SNR=9.0						
D41A	Chassel	12.77	29	Pn	Pn	06 54 55.7	-2.0
T54A	Tazewell	12.79	81	P	Pn	06 54 59.7	+1.4
	baz=271						
L50A	Kingsville	12.80	58	P	Pn	06 54 59.4	+1.1
	baz=248						
L50A				S	Sn	06 57 16.9	-3.9
	baz=248						
PAULI	Pauline	12.81	91	Pn	Pn	06 54 59.5	+1.0
FXWY	Fox Creek	12.83	310	Pn	Pn	06 54 57.2	-1.7
E43A	Lone Tree Farm	12.89	34	Pn	Pn	06 54 57.0	-2.4
O52A	Adamsville	12.91	67	Pn	Pn	06 55 01.2	+1.4
Q53A	Leroy	12.93	73	P	Pn	06 55 00.6	+0.5
	baz=263,SNR=20						
M51A	Elyria	12.99	62	P	Pn	06 55 00.7	-0.2
	baz=252						
M51A				S	Sn	06 57 23.1	-2.3
	baz=252						
YNE	Yellowstone No	13.01	317	Pn	Pn	06 54 59.6	-1.8
S54A	Dingess, Beckl	13.01	78	Pn	Pn	06 55 02.2	+1.0
S54A	Dingess, Beckl	13.01	78	P	Pn	06 55 02.0	+0.7
	baz=268						
S54A				S	Sn	06 57 22.2	-3.9
	baz=268						
GLMI	Grayling	13.05	44	Pn	Pn	06 55 00.9	-0.8
GLMI	Grayling	13.05	44	P	Pn	06 55 00.7	-1.0
	baz=233						
F45A	CMU Biological	13.11	40	P	Pn	06 55 00.4	-2.1
	baz=228						
F45A				S	Sn	06 57 20.0	-8.3
	baz=228						
P53A	Whipple	13.13	70	Pn	Pn	06 55 02.9	+0.2
P53A	Whipple	13.13	70	P	Pn	06 55 02.7	0.0
	baz=260,SNR=12						
J49A	Marlette	13.15	52	P	Pn	06 55 02.9	-0.2
	baz=242,SNR=5.8						
V55A	Taylorsville	13.15	86	Pn	Pn	06 55 04.0	+0.9
H47A	Mio	13.15	46	P	Pn	06 55 01.9	-1.2
	baz=235						
G46A	Petoskey	13.22	42	P	Pn	06 55 02.1	-1.9
	baz=231						
I48A	Sherman Twp	13.22	48	P	Pn	06 55 03.5	-0.5
	baz=238						
K50A	Casco	13.22	55	Pn	Pn	06 55 05.5	+1.5
R54A	Victor	13.29	76	P	Pn	06 55 06.2	+1.3
	baz=266						
DGMT	Dagmar	13.29	340	Pn	Pn	06 55 02.2	-2.7
DGMT	Dagmar	13.29	340	P	Pn	06 55 01.8	-3.1
	baz=156						
JSC	Jenkinsville	13.37	93	Pn	Pn	06 55 06.8	+0.8
O53A	New Philadelph	13.41	67	P	Pn	06 55 06.7	+0.1
	baz=258,SNR=9.3						
T55A	Pulaski	13.42	81	P	Pn	06 55 07.9	+1.1
	baz=271						
Q54A	Coxs Mills	13.48	73	Pn	Pn	06 55 07.9	+0.3
Q54A	Coxs Mills	13.48	73	P	Pn	06 55 09.1	+1.4
	baz=263						
E44A	Grand Marais A	13.57	36	Pn	Pn	06 55 06.6	-2.1
E44A	Grand Marais A	13.57	36	P	Pn	06 55 06.3	-2.4
	baz=224						
E44A				S	Sn	06 57 34.2	-5.3
	baz=224						
I49A	Point Hope	13.63	51	Pn	Pn	06 55 09.6	0.0
I49A	Point Hope	13.63	51	P	Pn	06 55 09.6	0.0
	baz=240						
M52A	Chesterland	13.65	62	Pn	Pn	06 55 09.3	-0.5
M52A	Chesterland	13.65	62	P	Pn	06 55 09.9	0.0
	baz=252						
M52A				S	Sn	06 57 37.4	-4.1
	baz=252						
S55A	Lewisburg	13.65	78	P	Pn	06 55 11.0	+1.1
	baz=268						
G47A	Hillman	13.69	45	P	Pn	06 55 08.5	-1.9
	baz=234						
BLA	Blacksburg	13.71	80	Pn	Pn	06 55 11.9	+1.1
BLA	Blacksburg	13.71	80	P	Pn	06 55 11.9	+1.1
	baz=271						
H48A	Harrisville	13.73	47	Pn	Pn	06 55 10.2	-0.7
H48A	Harrisville	13.73	47	P	Pn	06 55 09.8	-1.1
	baz=237						
N53A	Lisbon	13.82	65	Pn	Pn	06 55 11.2	-1.0
N53A	Lisbon	13.82	65	P	Pn	06 55 10.9	-1.3
	baz=256						
N53A				S	Sn	06 57 38.8	-6.9
	baz=256						
P54A	Burton	13.84	70	P	Pn	06 55 12.4	-0.1
	baz=261						
R55A	Marlinton	13.98	76	Pn	Pn	06 55 15.2	+0.8
R55A	Marlinton	13.98	76	P	Pn	06 55 14.8	+0.4
	baz=267						
O54A	Avella	14.02	68	Pn	Pn	06 55 16.1	+1.1
O54A	Avella	14.02	68	P	Pn	06 55 16.0	+1.1
	baz=259						
O54A				S	Sn	06 57 45.2	-5.5
	baz=259						
M53A	WI Miller and	14.11	63	P	Pn	06 55 15.9	-0.2
	baz=254						
ULM	Lac du Bonnet	14.15	4	Pn	Pn	06 55 11.3	-5.3
	3.3nm,0.3s,baz=181,slow=11,SNR=43						
ULM				Sn	Sn	06 57 43.1	-11
	3.6nm,0.3s,baz=279,slow=22,SNR=3.9						
ULM				Lg	Lg	06 59 17.9	
	6.9nm,0.3s,baz=268,slow=14,SNR=5.4						
ULM				LR	LR	07 00 56.0	
	comp=Z,506nm,19.0s,baz=150,slow=38						
ULM	Lac du Bonnet	14.15	4	Pn	Pn	06 55 11.9	-4.7
E46A	Sault Ste Mari	14.20	40	Pn	Pn	06 55 15.4	-1.9
W57A	Gilead	14.23	89	Pn	Pn	06 55 19.6	+1.7
656A	Willston	14.24	114	Pn	Pn	06 55 18.9	+0.8
P55A	Reedsville	14.33	71	P	Pn	06 55 18.8	-0.4
	baz=262,SNR=8.4						
MCWV	Mont Chateau	14.34	71	Pn	Pn	06 55 19.3	+0.1
S56A	Natural Bridge	14.39	79	P	Pn	06 55 22.5	+2.4
	baz=269						
N54A	Moraine State	14.48	65	Pn	Pn	06 55 20.1	-1.2
N54A	Moraine State	14.48	65	P	Pn	06 55 19.6	-1.7
	baz=256						
ALLY	Alegheny Colle	14.55	63	Pn	Pn	06 55 21.1	-1.1
R56A	Bull Pasture M	14.55	76	P	Pn	06 55 21.8	-0.4
	baz=267						
L53A	Girard	14.55	61	P	Pn	06 55 21.2	-1.1
	baz=252						
T57A	Hurt	14.65	81	Pn	Pn	06 55 24.6	+1.1
ELK	Elko	14.68	294	Lg	Lg	06 59 36.5	
	0.1nm,0.3s,baz=220,slow=6.9,SNR=3.6						
ELK				LR	LR	07 00 35.2	
	comp=Z,77nm,19.1s,baz=98,slow=36						
D46A	Sault St. Mari	14.68	39	P	Pn	06 55 20.8	-3.2
	baz=228						
I51A	Listowel	14.72	54	P	Pn	06 55 23.8	-0.7
	baz=244,SNR=14						
Q56A	Snyder Ridge,	14.77	73	Pn	Pn	06 55 23.4	-1.7
Q56A	Snyder Ridge,	14.77	73	P	Pn	06 55 27.1	+1.9
	baz=264						
F48A	Evansville	14.78	45	P	Pn	06 55 22.2	-3.1
	baz=234						
E47A	Iron Bridge	14.80	42	P	Pn	06 55 22.8	-2.7
	baz=231						
ERPA	Erie	14.80	61	Pn	Pn	06 55 25.7	+0.2
O55A	Ligonier	14.84	69	P	Pn	06 55 25.7	-0.4
	baz=260						
J52A	Paris	14.85	56	P	Pn	06 55 24.7	-1.6
	baz=247						
M54A	Oil Creek Stat	14.85	63	Pn	Pn	06 55 24.6	-1.7
M54A	Oil Creek Stat	14.85	63	P	Pn	06 55 24.8	-1.6
	baz=255						
EGMT	Eagleton	14.96	326	Pn	Pn	06 55 25.2	-2.6
EGMT	Eagleton	14.96	326	P	Pn	06 55 25.1	-2.7
	baz=138						
F49A	Sandfield	15.07	46	P	Pn	06 55 26.4	-2.8
	baz=236						
N55A	Marion Center	15.18	67	P	Pn	06 55 31.7	+0.9
	baz=258,SNR=11						
D47A	Chapleau	15.27	40	P	Pn	06 55 27.6	-4.3
	baz=230						
O56A	Blue Knob Stat	15.40	69	Pn	Pn	06 55 32.2	-1.4
O56A	Blue Knob Stat	15.40	69	P	Pn	06 55 33.5	-0.2
	baz=261						
E48A	Lockeyer	15.42	43	P	Pn	06 55 30.9	-2.9
	baz=234						
M55A	Ridgway	15.50	64	Pn	Pn	06 55 33.8	-1.1
M55A				IAmb	IAmb	06 56 31.9	
	comp=Z,17nm,0.7s						
M55A	Ridgway	15.50	64	P	Pn	06 55 33.8	-1.1
	baz=256						
N56A	West Decatur	15.72	67	P	Pn	06 55 37.8	0.0
	baz=259						
R58B	Mineral	15.73	78	Pn	Pn	06 55 38.6	+0.7
R58B				IAmb	IAmb	06 56 11.8	
	comp=Z,41nm,1.4s						
PFO	Pinyon Flats O	15.81	266	LR	LR	07 01 53.2	
	comp=Z,355nm,18.2s,baz=70,slow=38						
WVNY	West Valley, N	15.86	61	Pn	Pn	06 55 37.7	-1.9
WVNY				IAmb	IAmb	06 56 10.9	
	comp=Z,24nm,0.9s						
M56A	Emporium	15.93	65	Pn	Pn	06 55 39.0	-1.5
M56A				IAmb	IAmb	06 56 28.1	
	comp=Z,20nm,0.7s						
M56A	Emporium	15.93	65	P	Pn	06 55 38.5	-2.0
	baz=257						
SSPA	Standing Stone	15.97	68	Pn	Pn	06 55 39.6	-1.5
SSPA				IAmb	IAmb	06 55 58.0	
	comp=Z,80nm,1.9s						
SSPA	Standing Stone	15.97	68	P	Pn	06 55 40.2	-0.8
	baz=260						
T59A	Double "B" Far	16.01	81	Pn	Pn	06 55 42.2	+0.7
D48A	Paudash Townsh	16.03	42	P	Pn	06 55 38.4	-3.4
	baz=232						
O57A	Amberson	16.10	69	P	Pn	06 55 41.0	-1.7
	baz=262						
N57A	Milroy	16.25	68	P	Pn	06 55 43.0	-1.6
	baz=260						
N57A				S	Sn	06 58 36.9	-7.9
	baz=260						
SADO	Sadowa	16.36	53	Pn	Pn	06 55 45.4	-0.5
	comp=Z,0.4nm,0.3s,baz=268,slow=17,SNR=1.9						
SADO				Sn	Sn	06 58 40.4	-7.0
	comp=Z,3.0nm,0.3s,baz=270,slow=12,SNR=1.9						
SADO				Lg	Lg	07 00 24.4	
	comp=Z,4.1nm,0.3s,baz=292,slow=12,SNR=7.5						
SADO				LR	LR	07 02 17.3	
	comp=Z,205nm,19.9s,baz=304,slow=38						
SADO	Sadowa	16.36	53		Pn	06 55 45.9	0.0
F51A	Arnstein	16.42	48	P	Pn	06 55 45.1	-1.6
	baz=240						
L56A	Greenwood	16.54	63	Pn	Pn	06 55 46.7	-1.6
L56A				IAmb	IAmb	06 56 34.8	
	comp=Z,15nm,0.6s						
O58A	Lewisberry	16.63	70	P	Pn	06 55 48.2	-1.2
	baz=263						
H53A	Bobcaygeon	16.64	54	P	Pn	06 55 48.0	-1.5
	baz=246						
M57A	Sunshine Farm,	16.67	66	Pn	Pn	06 55 48.6	-1.3
M57A	Sunshine Farm,	16.67	66	P	Pn	06 55 50.7	+0.8
	baz=259						
F52A	Sundridge	16.71	49	P	Pn	06 55 49.7	-0.8
	baz=241						
NVAR	Mina Array Bea	16.75	284	Pn	Pn	06 55 49.6	-1.7
	comp=Z,0.1nm,0.3s,baz=162,slow=4.2,SNR=2.7						
NVAR				LR	LR	07 02 53.2	
	comp=Z,208nm,19.0s,baz=23,slow=40						
PAGS	Pennsylvania G	16.79	70	Pn	Pn	06 55 51.4	-0.1
N58A	Sunbury	16.89	68	Pn	Pn	06 55 51.7	-0.9
N58A				IAmb	IAmb	06 55 57.0	
	comp=Z,31nm,1.2s						
N58A	Sunbury	16.89	68	P	Pn	06 55 54.4	+1.7
	baz=261						
E51A	G1948 Merrick	16.98	47	P	Pn	06 55 51.6	-2.2
	baz=239						
MVL	Millersville	17.05	71		Pn	06 55 53.8	-0.9
MVL				IAmb	IAmb	06 55 55.9	
	comp=Z,63nm,1.6s						
D50A	G1974 Best Tow	17.12	45	P	Pn	06 55 53.6	-1.9
	baz=236						
M58A	Price’s Panora	17.17	66	P	P	06 55 58.1	+0.2
	baz=259						
DELO	Deloro Mine	17.25	55	P	Pn	06 55 56.1	-1.1
DELO				IAmb	IAmb	06 56 34.6	
	comp=Z,14nm,0.6s						
D51A	Lot 18 Range I	17.34	45	P	Pn	06 55 56.7	-1.6
	baz=238						
E52A	Mattawa	17.36	48	P	Pn	06 55 57.4	-1.1
	baz=241						
ALGO	Algonquin Park	17.57	50	P	Pn	06 56 00.2	-1.0
	baz=243						
N59A	State Game Lan	17.61	68	P	Pn	06 56 01.6	-0.1
N59A				IAmb	IAmb	06 56 59.0	
	comp=Z,70nm,1.6s						
BINY	Binghamton	17.69	63	P	Pn	06 56 03.0	+0.3
BINY				IAmb	IAmb	06 57 01.8	
	comp=Z,32nm,1.2s						
KSPA	Keystone Colle	17.72	66	P	Pn	06 56 02.2	-0.8
KSPA				IAmb	IAmb	06 56 57.9	
	comp=Z,66nm,1.5s						
L58A	Harry Jones Me	17.75	64	P	Pn	06 56 03.5	0.0
	baz=258						
TEIG	Tepich	17.78	151	P	P	06 56 06.8	+2.1
	comp=Z,1.1nm,0.3s,baz=136,slow=0.0,SNR=14						
TEIG				LR	LR	07 05 41.4	
	comp=Z,86nm,18.2s,baz=136,slow=46						
PLVO	Plevna	17.81	54	P	Pn	06 56 03.5	-0.6
J57A	Williamstown	17.99	60	P	Pn	06 56 06.3	-0.1
J57A				IAmb	IAmb	06 57 03.4	
	comp=Z,23nm,1.0s						
E53A	Dumoine, Ponti	18.00	49	P	Pn	06 56 06.2	-0.3
	baz=243						
K58A	Earlville	18.06	62	P	Pn	06 56 07.5	+0.2
K58A				IAmb	IAmb	06 56 25.2	
	comp=Z,34nm,1.1s						
K58A	Earlville	18.06	62	P	Pn	06 56 07.6	+0.2
	baz=256						
D53A	Lac Vacive, Po	18.32	47	P	Pn	06 56 08.9	-1.5
D53A	Lac Vacive, Po	18.32	47	P	Pn	06 56 09.0	-1.4
	baz=241						
E54A	Lac Daplat, Po	18.32	50	P	Pn	06 56 10.0	-0.5
	baz=243						
L59A	Walton	18.37	64	P	Pn	06 56 11.9	+0.8
J58A	Remsen	18.47	60	P	P	06 56 12.7	+0.5
J58A	Remsen	18.47	60	P	P	06 56 13.1	+0.8
	baz=255						
ODNJ	Ogdensburg	18.50	68	P	P	06 56 12.6	0.0
K59A	Cooperstown	18.64	62	P	P	06 56 13.9	-0.1
	baz=257						
FFC	Flin Flon	18.85	352	P	P	06 56 15.7	-0.6
NEW	Newport	18.89	316	P	P	06 56 16.5	-0.3
	comp=Z,0.2nm,0.3s,baz=110,slow=12,SNR=4.3						
NEW				Lg	Lg	07 01 44.6	
	comp=Z,0.1nm,0.3s,baz=72,slow=12,SNR=4.2						
NEW				LR	LR	07 03 51.6	
	comp=Z,141nm,18.1s,baz=120,slow=38						
VLDQ	Val d'Or	18.99	45	P	P	06 56 16.9	-0.9
VLDQ				IAmb	IAmb	06 57 14.1	
	comp=Z,58nm,1.9s						
J59A	Piesco	19.05	60	P	P	06 56 19.2	+0.6
J59A				IAmb	IAmb	06 56 23.1	
	comp=Z,50nm,1.6s						
CMIG	Matias Romero	19.11	172	P	Pn	06 56 20.8	+0.7
	comp=Z,0.4nm,0.3s,baz=336,slow=5.6,SNR=5.4						
CMIG				LR	LR	07 05 32.9	
	comp=Z,54nm,20.5s,baz=357,slow=42						
NCB	Newcomb	19.38	59	P	P	06 56 23.6	+1.4
NCB				IAmb	IAmb	06 56 54.0	
	comp=Z,42nm,1.5s						
KSCT	Kent School, K	19.43	66	P	Pn	06 56 25.5	+1.6
PINE	Pine Mountain	19.52	300	P	Pn	06 56 26.1	+0.9
H58A	Gabriels	19.54	58	P	Pn	06 56 26.4	+1.2
	baz=253						
E56A	St. Veronique	19.71	51	P	Pn	06 56 28.3	+1.0
	baz=246						
MATQ	Matagami	19.81	40	P	P	06 56 27.3	+0.5
	baz=234						
H59A	Cadyville	19.94	57	P	Pn	06 56 31.1	+1.1
	baz=253						
D56A	ZEC Mazanza, M	20.10	50	P	P	06 56 31.6	+1.6
	baz=246						
L61B	Northampton	20.14	64	P	Pn	06 56 33.3	+1.0
	baz=260						
YBH	Yreka Blue Hor	20.39	294	P	P	06 56 33.4	0.0
	comp=Z,4.5nm,0.8s,baz=60,slow=5.4,SNR=9.9						
YBH				LR	LR	07 04 25.2	
	comp=Z,145nm,19.1s,baz=100,slow=37						
D57A	Chemin Vers le	20.63	51	P	Pn	06 56 38.0	0.0
	baz=247						
E58A	La Victoria	20.77	53	P	Pn	06 56 41.0	+1.3
	baz=249						
APG	El Apazote	21.96	162	LR	LR	07 07 21.0	
	comp=Z,67nm,20.4s,baz=320,slow=42						
BBB	Bella Bella	26.95	316	LR	LR	07 09 06.0	
	comp=Z,266nm,18.4s,baz=91,slow=38						
SCHQ	Schefferville	28.12	39	P	P	06 57 49.5	+1.3
	comp=Z,2.7nm,0.5s,baz=240,slow=8.4,SNR=14						
JTS	Las Juntas de	28.12	153	LR	LR	07 11 27.8	
	comp=Z,51nm,19.2s,baz=14,slow=42						
YKA	Yellowknife Ar	28.46	343	P	P	06 57 51.0	-0.1
	comp=Z,1.9nm,0.7s,baz=144,slow=9.2,SNR=36						
YKA				LR	LR	07 09 41.6	
	comp=Z,185nm,20.1s,baz=0.0,slow=38						
DLBC	Dease Lake	30.89	327	P	P	06 58 14.1	+1.3
	comp=Z,1.6nm,0.7s,baz=133,slow=9.3,SNR=4.9						
FRB	Frobisher Bay	32.75	23	P	P	06 58 29.4	+0.5
	comp=Z,1.5nm,0.6s,baz=217,slow=9.7,SNR=8.7						
ROSC	El Rosal	37.72	140	LR	LR	07 18 25.7	
	comp=Z,78nm,18.3s,baz=132,slow=42						
INK	Inuvik	37.97	339	P	P	06 59 14.2	+0.4
	comp=Z,1.9nm,0.6s,baz=121,slow=9.5,SNR=8.0						
INK	Inuvik	37.97	339	P	P	06 59 14.1	+0.4
BCAR	Beaver Creek A	38.15	329	P	P	06 59 16.9	+1.5
A36M	Sachs Harbour	38.66	347	P	P	06 59 19.8	+0.2
	baz=143						
IL31		40.88	330	P	P	06 59 38.8	+0.7
IL31				IAmb	IAmb	06 59 40.0	
	comp=Z,4.2nm,0.8s						
ILAR	Eielson Array	40.88	330	P	P	06 59 39.0	+0.9
	comp=Z,3.8nm,0.8s,baz=109,slow=7.0,SNR=33						
ILAR				LR	LR	07 18 13.9	
	comp=Z,84nm,18.6s,baz=120,slow=39						
ILAR	Eielson Array	40.88	330	P	P	06 59 39.3	+1.2
BMAR	Burnt Mountain	41.04	334	P	P	06 59 40.2	+0.7
CCB	Clear Creek Bu	41.21	330	P	P	06 59 41.3	+0.5

CCB				IAmb	IAmb	06 59 42.5	
	comp=Z,4.4nm,0.8s						
TOLK	Toolik Lake Re	43.25	335	P	P	06 59 58.9	+1.5
	baz=111						
ARCES	ARCESS Array B	66.75	19	P	P	07 02 47.8	+0.5
	comp=Z,9.4nm,1.0s,baz=329,slow=4.5,SNR=6.4						
ARCES				PcP	PcP	07 03 17.7	+1.6
	comp=Z,3.4nm,0.8s,baz=320,slow=5.4,SNR=5.7						
ARCES				LR	LR	07 31 12.9	
	comp=Z,110nm,20.8s,baz=267,slow=35						
NOA	NORSAR Array B	67.24	30	LR	LR	07 30 52.1	
	comp=Z,25nm,20.2s,baz=285,slow=35						
TIXI	Tiksi	67.67	346	LR	LR	07 33 52.8	
	comp=Z,66nm,20.7s,baz=32,slow=37						
MA2	Magadan	69.36	330	LR	LR	07 36 50.6	
	comp=Z,52nm,20.4s,baz=66,slow=39						
PETK	Petropavlovsk-	69.92	322	LR	LR	07 35 10.5	
	comp=Z,34nm,18.4s,baz=61,slow=37						
FINES	FINESS Array B	72.53	25	P	P	07 03 23.7	+0.7
	comp=Z,2.0nm,0.8s,baz=298,slow=4.1,SNR=6.5						
YAK	Yakutsk	75.04	339	LR	LR	07 41 38.3	
	comp=Z,25nm,19.2s,baz=46,slow=40						
GERES	GERESS Array B	75.65	39	P	P	07 03 43.3	+1.7
	comp=Z,0.3nm,0.5s,baz=339,slow=5.2,SNR=3.0						
AKASG	Malin Array Be	81.62	31	P	P	07 04 14.6	+0.3
	comp=Z,0.7nm,0.5s,baz=310,slow=4.5,SNR=9.8						
ASAJ	Asahikawa	83.33	321	LR	LR	07 42 07.6	
	comp=Z,25nm,20.3s,baz=185,slow=36						
DBIC	Dimbokro	88.20	83	LR	LR	07 40 47.8	
	comp=Z,35nm,19.3s,baz=314,slow=33						
ZALV	Zalesovo Beam	90.26	359	P	P	07 04 56.9	-0.1
	comp=Z,1.1nm,0.6s,baz=337,slow=6.4,SNR=5.0						
BVAR	Borovoye Array	90.57	7	P	P	07 04 59.6	+1.1
	comp=Z,0.3nm,0.5s,baz=290,slow=35,SNR=1.7						
SONM	Songino Array	93.72	344	P	P	07 05 14.0	+0.7
	comp=Z,0.6nm,0.6s,baz=359,slow=5.9,SNR=5.2						
KSRS	Korea Array	95.56	325	LR	LR	07 52 24.5	
	comp=Z,18nm,18.7s,baz=55,slow=38						
MKAR	Makanchi Array	97.44	0	P	P	07 05 30.8	+0.6
	comp=Z,0.2nm,0.6s,baz=45,slow=2.4,SNR=3.0						
HHC	Hu-ho-hao-te	98.88	338	*e*P	P	07 05 33.0	-3.9
WRA	Warramunga Arr	132.08	275	PKP	PKPdf	07 11 11.7	+1.1
	comp=Z,0.1nm,0.5s,baz=51,slow=25,SNR=2.2						
ASAR	Alice Springs	134.26	271	PKP	PKiKP	07 11 16.2	+0.2
	comp=Z,0.2nm,0.5s,baz=309,slow=38,SNR=2.0						

KRNET ***30*** *06:51:58.5±0.1, 42°.18N×78°.78E, h30^{km}, mb2.1*
SOME ***30*** *06:51:58.2, 42°.67N×78°.60E, h10^{km}*
NNC ***30*** *06:51:58.4±1.6, 42°.69N×78°.65E, h0^{km}, mpv2.7, Error ellipse: s-maj=10.5km s-min=5.2km az=13.0*
ISC 30 06:51:60.0±1.1**, 42°.76N**±0°.03×**78°.58E**±0°.03**, h4^{km}**±10^{km}**, n16, σ2^{s}.01**/32**, 12C, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	0.30	206	⇑*i*P	Pg	06 52 07.3	+1.4
	baz=19						
PRZ				⇑*i*S	Sg	06 52 14.1	+4.2
	baz=19						
SATY	Saty	0.33	337	*e*P	Pg	06 52 06.4	+0.1
	1.2nm,0.2s						
SATY				*e*S	Sg	06 52 12.2	+1.5
	23nm,0.1s						
SATY	Saty	0.33	337	P	Pg	06 52 06.4	+0.1
	1.7nm,0.1s						
SATY				S	Sg	06 52 12.2	+1.5
	23nm,0.1s						
UZB	Uzynbulak	0.51	40	*e*P	Pg	06 52 08.9	-0.9
	2.8nm,0.1s						
UZB				*e*S	Sg	06 52 16.6	+0.3
	20nm,0.1s						
UZB	Uzynbulak	0.51	40	P	Pg	06 52 08.9	-0.9
	2.8nm,0.1s						
UZB				S	Sg	06 52 16.6	+0.3
	20nm,0.1s						
ANVS	Anan'yevo	0.67	273	⇑*i*P	Pn	06 52 17.7	+1.3
	baz=7.0						
ANVS				⇑*i*S	Sn	06 52 31.7	+4.3
	baz=7.0						
KPKS	Kokpek	0.71	6	*e*P	Pg	06 52 13.3	-0.4
	6.4nm,0.2s						
KPKS				*e*S	Sg	06 52 24.1	+1.1
	8.0nm,0.4s						
SHLS	Shalkode	0.76	58	*e*P	Pn	06 52 18.1	+0.5
	3.2nm,0.1s						
SHLS				*e*S	Sn	06 52 32.4	+2.8
	9.9nm,0.2s						
SHLS	Shalkode	0.76	58	P	Pn	06 52 18.0	+0.5
	3.2nm,0.1s						
SHLS				S	Sn	06 52 32.3	+2.8
	9.9nm,0.2s						
PDGK	Podgornoye	0.88	49	P	Pg	06 52 15.2	-1.6
	0.7nm,0.1s						
PDGK				S	Sg	06 52 27.4	-0.8
	1.3nm,0.1s						
KDJ	Kajisay	1.21	239	⇑*i*P	Pn	06 52 20.8	-3.0
	baz=68						
KDJ				⇑*i*S	Sb	06 52 36.0	-3.5
	baz=68						
ULHL	Ulahol	1.80	254	⇑*i*P	Pb	06 52 30.8	-2.8
	baz=73						
ULHL				⇑*i*S	Sb	06 52 54.4	-2.2
	baz=73						
DJR	Jarkent	1.80	29	*e*P	Pb	06 52 32.4	-1.2
	0.5nm,0.2s						
DJR				*e*S	Sb	06 52 57.3	+0.8
	5.5nm,0.3s						
DJR	Jarkent	1.80	29	P	Pb	06 52 32.4	-1.2
	0.5nm,0.2s						
DJR				S	Sb	06 52 57.3	+0.8
	5.5nm,0.3s						
BOOM	Boomskoye usch	1.97	263	⇑*i*P	Pb	06 52 34.3	-2.1
	baz=79						
BOOM				⇑*i*S	Sb	06 53 00.1	-1.2
	baz=79						
TKM2	Tokmak 2	2.20	275	⇑*e*P	Pb	06 52 38.8	-1.6
	baz=89						
TKM2				⇑*i*S	Sb	06 53 08.1	0.0
	baz=89						

KEA 30 06:56:01.0±0.0**, 38°.89N×122°.28E, h0^{km}, ML2.8**/3**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUJ	Sinuiju	2.10	54	Pg	Pn	06 56 37.7	+0.3
SUJ				Sg	Sn	06 57 02.7	-1.4
PYAG	Pyongyang	2.71	85	Pg	Pb	06 56 51.3	+0.9
PYAG				Sg	Sb	06 57 24.8	+0.6
PYS	Pyongsong	2.80	81	Pg	Pb	06 56 51.6	-0.3
PYS				Sg	Sb	06 57 26.7	-0.1
KGE	Kanggye	3.91	57	Pg	Pb	06 57 10.9	+0.1
KGE				Sg	Sb	06 57 59.7	+1.0
HHU	Hamhung	4.19	74	Sg	Sg	06 58 11.6	-4.1

ANF ***30*** *06:59:27.5±1.1, 36°.14N×97°.64W, h0^{km}, ML3.9/3, Error ellipse: s-maj=13.9km s-min=3.0km az=158.0*
TUL ***30*** *06:59:28.4±0.0, 36°.13N×97°.64W, h5^{km}, ML3.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 30 06:59:29.0±1.0**, 36°.12N**±0°.04×**97°.65W**±0°.04**, h10^{km}, n22, σ0^{s}.95**/26**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.52	154	Pg	Pg	06 59 38.7	-0.4
ADOK				Sg	Sg	06 59 45.8	-0.2
OKCFA	Oklahoma City	0.72	167	Pg	Pg	06 59 42.4	-0.6
OKCSW	OKLAHOMA CITY	0.74	166	Pg	Pg	06 59 42.5	-0.7
OKCSW				Sg	Sg	06 59 53.0	+0.2
FNO	Franklin	0.89	167	Pg	Pg	06 59 45.6	-0.5
U32A	Winter Ranch,	1.12	284	Pg	Pb	06 59 49.6	-0.9
W35A	Tecumseh	1.16	147	Pg	Pb	06 59 49.8	-1.3
T35A	Sooner Cattle	1.21	49	Pg	Pb	06 59 51.2	-0.8
TUL1	Leonard	1.52	97	Pn	Pn	06 59 55.7	-0.5
TUL1	Leonard	1.52	97	P	Pn	06 59 55.9	-0.4
	baz=279						
TUL1				S	Sg	07 00 16.9	-1.1
	baz=279						
WMOK	Wichita Mounta	1.66	214	Pn	Pn	06 59 58.5	+0.3
WMOK	Wichita Mounta	1.66	214	P	Pn	06 59 58.6	+0.4
	baz=34						
WMOK				S	Sb	07 00 21.0	+0.4
	baz=34						
R32A	Long Quarter,	2.45	340	Pn	Pn	07 00 10.1	+1.1
U38A	Gravette	2.66	82	Pn	Pn	07 00 12.5	+0.6
Z35A	Perchaven, San	2.80	173	Pn	Pn	07 00 15.4	+1.6
HHAR	Hobbs	3.01	86	Pn	Pn	07 00 17.5	+0.8
CBKS	Cedar Bluff	3.16	329	Pn	Pn	07 00 18.9	+0.1
Z38A	Mt. Pleasant	3.60	142	Pn	Pn	07 00 25.6	+0.7
MIAR	Mount Ida	3.68	114	S	Sn	07 01 11.8	+2.3
	baz=297						
S39A	Bolivar	3.81	64	Pn	Pn	07 00 28.8	+1.1
U40A	Yellville	3.88	85	Pn	Pn	07 00 29.9	+1.1
WHTX	Lake Whitney,	4.12	178	Pn	Pn	07 00 32.5	+0.5
X40A	Basin Creek Fa	4.26	111	Pn	Pn	07 00 35.1	+1.1

IDC ***30*** *07:19:16.5±3.4, 25°.93S×29°.52E, h0^{km}, mb1 3.4/5, mb1mx3.3/33, mbtmp3.4/5, ML2.6/4, Error ellipse: s-maj=32.3km s-min=23.1km az=112.0*
ISC 30 07:19:15.4±2.1**, 25°.95S**±0°.06×**29°.5E**±0°.1**, h10^{km}, n13, σ2^{s}.32**/18**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	Lobatse	3.68	284	*i* P	Pn	07 20 14.6	+2.1
LBTB				*i* S	Sn	07 20 55.8	-0.3
LBTB	Lobatse	3.68	284	Pn	Pn	07 20 16.6	+4.1
	0.4nm,0.3s,baz=109,slow=13,SNR=8.7						
LBTB				Pg	Pg	07 20 24.3	-1.7
	2.7nm,0.3s,baz=101,slow=17,SNR=11						
LBTB				Lg	Lg	07 21 12.2	
	5.2nm,0.3s,baz=177,slow=4.5,SNR=9.9						
LBTB	Lobatse	3.68	284	*i* P	Pn	07 20 14.6	+2.1
LBTB				*i* S	Sn	07 20 55.8	-0.3
BOSA	Boshof	4.65	234	*i* P	Pn	07 20 27.9	+2.1
BOSA				*i* S	Sn	07 21 17.5	-2.5
BOSA	Boshof	4.65	234	Pn	Pn	07 20 29.6	+3.8
	0.1nm,0.3s,baz=48,slow=12,SNR=1.9						
BOSA				Pg	Pg	07 20 42.5	-2.0
	1.0nm,0.3s,baz=55,slow=15,SNR=11						
BOSA				Lg	Lg	07 21 41.3	
	3.6nm,0.3s,baz=144,slow=16,SNR=8.7						
BOSA	Boshof	4.65	234	*i* P	Pn	07 20 27.9	+2.1
BOSA				*i* S	Sn	07 21 17.5	-2.5
I47ZA	BOSHOF INFRASO	4.67	234	*i*		07 48 40.0	
	baz=56,slow=334,SNR=2.5						
MATP	Matopo	5.58	350	*i* P	Pn	07 20 36.3	-2.3
MATP				*i* S	Sn	07 21 32.5	-10
MATP	Matopo	5.58	350	Pn	Pn	07 20 39.2	+0.6
	0.6nm,0.3s,baz=163,slow=13,SNR=10						
MATP				Sn	Sn	07 21 42.1	-0.7
	1.8nm,0.3s,baz=70,slow=12,SNR=7.1						
MATP				Lg	Lg	07 22 08.8	
	2.9nm,0.3s,baz=84,slow=20,SNR=7.7						
MATP	Matopo	5.58	350	*i* P	Pn	07 20 36.3	-2.3
MATP				*i* S	Sn	07 21 32.5	-10
SUR	Sutherland	9.96	228	Pn	Pn	07 21 39.6	+0.7
	0.1nm,0.3s,baz=76,slow=17,SNR=3.1						
TSUM	Tsumeb	12.92	299	Pn	Pn	07 22 20.5	+1.2
	0.1nm,0.3s,baz=77,slow=19,SNR=1.8						
I35NA	TSUMEB INFRASO	12.93	299	*i*		08 37 57.9	
	baz=124,slow=325,SNR=0.7						

HEL ***30*** *07:39:23.9±0.1, 67°.70N×33°.70E, h0^{km}, ML2.3, Explosion*
NAO ***30*** *07:39:23.7±1.0, 67°.69N×33°.67E, ML2.8*
KOLA ***30*** *07:39:23.4, 67°.68N×33°.77E, M2.1, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
IDC ***30*** *07:39:28.2±2.3, 67°.61N×32°.89E, h0^{km}, mb1 3.1/4, mb1mx2.9/47, mbtmp3.1/4, ML2.5/4, Error ellipse: s-maj=24.6km s-min=9.3km az=79.0*
ISC 30 07:39:22.6±0.9**, 67°.66N**±0°.04×**33°.77E**±0°.04**, h0^{km}, n40, σ1^{s}.71**/70**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA	Apatity	0.17	236	P	Pg	07 39 26.6	+0.9
APA				S	Sg	07 39 28.9	+1.1
APZ9	Apatity	0.17	236	Pg	Pg	07 39 26.6	+0.9
APZ9				Lg	Lg	07 39 28.9	
APZ9	Apatity	0.17	236	Pg	Pg	07 39 26.6	+0.9
APZ9				Sg	Sg	07 39 28.9	+1.1
APA0	Apatity Array	0.30	260	Pg	Pg	07 39 29.1	+0.7
	baz=84,slow=16						
APA0				Lg	Lg	07 39 33.1	
	baz=79,slow=37						
APA0				Rg	Rg	07 39 35.0	
	baz=78,slow=56						
APA0	Apatity Array	0.30	260	P	Pg	07 39 28.9	+0.6
APA0				S	Sg	07 39 32.9	+0.7
APA0	Apatity Array	0.30	260	Pg	Pg	07 39 29.1	+0.7
	baz=84,slow=16						
APA0				Sg	Sg	07 39 33.1	+0.9
	baz=79,slow=37						
APA0				Rg	Rg	07 39 35.0	
	baz=78,slow=56						
LVZ	Lovozero	0.41	54	*e*P	Pg	07 39 31.2	+0.7
LVZ				*e*S	Sg	07 39 36.7	+0.9
VRF	Varrio	1.59	275	*e*P	Pn	07 39 51.7	-0.2
VRF				MSG		07 40 10.8	
	comp=Z,29nm,0.2s						
VRF				*e*SB	Sn	07 40 12.1	-1.0
KU6	Riekki	2.25	225	*e*P	Pn	07 40 02.4	+1.4
KU6				*e*SB	Sb	07 40 32.0	-0.2
KU6				MSG		07 40 33.6	
	comp=Z,15nm,0.2s						
MSF	Maaselka	2.57	229	*e*P	Pn	07 40 07.5	+2.1
MSF				*e*SG	Sb	07 40 42.8	+1.3
SGF	Sodankyl	2.79	269	*e*P	Pn	07 40 09.2	+0.9
SGF				*e*SB	Sb	07 40 47.7	-0.1
RNF	Rovaniemi	3.21	254	*e*P	Pn	07 40 14.9	+0.8
KEV	Kevo	3.24	314	Pn	Pn	07 40 16.0	+1.4
KEV				Sn	Sn	07 40 54.4	+0.6
KEV				Lg	Lg	07 41 02.8	
KEV	Kevo	3.24	314	Pn	Pn	07 40 16.0	+1.4
KEV				Sg	Sb	07 41 02.8	+1.9
KEV	Kevo	3.24	314	*e*P	Pn	07 40 15.6	+1.0
KEV				MSG		07 40 54.8	
	comp=Z,11nm,0.2s						
ARA0	ARCESS Array S	3.56	306	Pn	Pn	07 40 19.8	+0.8
	baz=123,slow=16						
ARA0				Pg	Pb	07 40 28.1	+1.7
	baz=118,slow=16						
ARA0				Sn	Sn	07 41 01.3	-0.5
	baz=118,slow=28						
ARA0				Lg	Lg	07 41 11.0	
	baz=112,slow=37						
ARA0	ARCESS Array S	3.56	306	Pn	Pn	07 40 19.8	+0.8
	baz=123,slow=16						
ARA0				Pg	Pb	07 40 28.1	+1.7
	baz=118,slow=16						
ARA0				Sn	Sn	07 41 01.3	-0.5
	baz=118,slow=28						
ARCES	ARCESS Array B	3.56	306	Pn	Pn	07 40 19.8	+0.8
	comp=Z,3.6nm,0.3s,baz=123,slow=15,SNR=215						
ARCES				Pg	Pb	07 40 28.1	+1.6
	comp=Z,3.8nm,0.3s,baz=119,slow=15,SNR=17						
ARCES				Sn	Sn	07 41 01.3	-0.6
	comp=Z,2.6nm,0.3s,baz=116,slow=25,SNR=11						
ARCES				Lg	Lg	07 41 11.6	
	comp=Z,5.4nm,0.3s,baz=114,slow=32,SNR=13						
ARE0	ARCESS Array S	3.56	306	*e*P	Pn	07 40 19.8	+0.8
ARE0				*e*S	Sn	07 41 00.9	-0.9
ARE0				IAML		07 41 18.0	
	comp=Z,17nm,0.8s						
HEF	Hetta	3.87	286	Pn	Pn	07 40 23.5	+0.3
HEF				Sn	Sn	07 41 08.5	-0.9
HEF				Lg	Lg	07 41 22.0	
HEF	Hetta	3.87	286	Pn	Pn	07 40 23.5	+0.3
HEF				Sn	Sn	07 41 08.5	-0.9
HEF				Sg	Sb	07 41 22.0	+3.1
HEF	Hetta	3.87	286	*e*P	Pn	07 40 23.3	0.0
TOF	Tornio	4.05	251	*e*P	Pn	07 40 25.6	-0.1
KTK1	Kautokeino	4.13	294	Pn	Pn	07 40 26.9	+0.1
KTK1				Pg	Pb	07 40 36.9	+0.9
KTK1				Sn	Sn	07 41 14.6	-1.2
KTK1				Lg	Lg	07 41 30.4	
KTK1	Kautokeino	4.13	294	*e*P	Pn	07 40 26.9	+0.1
KTK1				*e*S	Sn	07 41 13.7	-2.1
KTK1				IAML		07 41 37.1	
	comp=Z,16nm,0.5s						
HAMF	Hammerfest	4.68	314	*e*P	Pn	07 40 35.0	+0.7
HAMF				*e*S	Sn	07 41 23.9	-5.3
HAMF				IAML		07 41 48.5	
	comp=Z,18nm,0.4s						
KIF	Kilpisjarvi	4.99	292	Pn	Pn	07 40 39.1	+0.6
KIF				Sn	Sn	07 41 33.9	-2.9
KIF				Lg	Lg	07 41 52.3	
KIF	Kilpisjarvi	4.99	292	Pn	Pn	07 40 39.1	+0.6
KIF				Sn	Sn	07 41 33.9	-2.9
STEI	Steigen	7.02	281	*e*P	Pn	07 41 04.9	-1.5
FIA0	FINESS Array S	7.06	212	Pn	Pn	07 41 05.5	-1.5
	baz=27,slow=14						
FIA0				Sn	Sn	07 42 25.6	-2.2
	baz=32,slow=22						
FIA0				Lg	Lg	07 42 58.9	
	baz=20,slow=28						
FIA0	FINESS Array S	7.06	212	Pn	Pn	07 41 05.5	-1.5
	baz=27,slow=14						
FIA0				Sn	Sn	07 42 25.6	-2.2
	baz=32,slow=22						
FINES	FINESS Array B	7.06	212	Pn	Pn	07 41 07.7	+0.7
	comp=Z,0.1nm,0.3s,baz=27,slow=13,SNR=4.1						
FINES				Sn	Sn	07 42 23.5	-4.3
	comp=Z,0.2nm,0.3s,baz=33,slow=15,SNR=2.2						
FINES				Lg	Lg	07 42 58.5	
	comp=Z,0.8nm,0.3s,baz=25,slow=27,SNR=10						
HFS	Hagfors	11.57	239	Pn	Pn	07 42 05.2	-3.4
	baz=39,slow=14						
HFS	Hagfors	11.57	239	Pn	Pn	07 42 06.2	-2.5
	comp=Z,0.1nm,0.3s,baz=184,slow=35,SNR=1.8						
HFS				Sn	Sn	07 44 07.6	-11
	comp=Z,0.1nm,0.3s,baz=182,slow=40,SNR=1.2						
HFS				Lg	Lg	07 45 14.4	
	comp=Z,0.1nm,0.3s,baz=55,slow=18,SNR=2.1						
HFS	Hagfors	11.57	239	Pn	Pn	07 42 05.2	-3.4
	baz=39,slow=14						
SPA0	Spitsbergen Ar	11.65	342	Pn	Pn	07 42 07.4	-2.3
	baz=144,slow=14						
SPA0	Spitsbergen Ar	11.65	342	Pn	Pn	07 42 07.4	-2.3
	baz=144,slow=14						
NOA	NORSAR Array B	11.75	246	Pn	Pn	07 42 08.4	-2.9
	comp=Z,0.0nm,0.3s,baz=54,slow=11,SNR=5.8						
NOA				Lg	Lg	07 45 24.2	
	comp=Z,0.0nm,0.3s,baz=101,slow=17,SNR=1.9						
NRA0	NORESS Array S	11.85	245	Pn	Pn	07 42 10.8	-1.8
	baz=51,slow=12						
NRA0	NORESS Array S	11.85	245	Pn	Pn	07 42 10.8	-1.8
	baz=51,slow=12						

IDC ***30*** *08:07:04.5±1.1, 36°.37N×97°.79W, h0^{km}, mb3.0/1, mb1 3.4/6, mb1mx3.2/63, mbtmp3.1/6, ML2.9/5, MS3.1/1, Ms1 3.0/1, ms1mx2.3/21, Error ellipse: s-maj=15.4km s-min=12.4km az=163.0*
TUL ***30*** *08:07:05.2±0.8, 36°.14N±0°.02×97°.62W±0°.06, h3^{km}±7^{km}, ML3.3, Mwr3.3/13(SLM), Error ellipse: s-maj=7.4km s-min=2.4km az=72.0, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}-2.06; $M_{\theta\theta}$9.64; $M_{\phi\phi}$-7.57; $M_{r\theta}$-1.27; $M_{\theta\phi}$0.47; $M_{\phi r}$4.06;*
ANF ***30*** *08:07:06.3±1.4, 36°.14N×97°.62W, h11^{km}±10^{km}, ML4.3/10 Error ellipse: s-maj=4.6km s-min=3.3km az=162.0*
ISC 30 08:07:05.9±0.7**, 36°.13N**±0°.04×**97°.57W**±0°.04**, h10^{km}, n86, σ1^{s}.18**/90**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.51	161		Pg	08 07 15.7	0.0
ADOK				Sg	Sg	08 07 23.2	+0.8
OK005	Luther M Schoo	0.57	147		Pg	08 07 17.1	+0.2
OKCFA	Oklahoma City	0.72	172		Pg	08 07 19.4	-0.4
OKCSW	OKLAHOMA CITY	0.73	171		Pg	08 07 19.7	-0.3
OKCSW				Sg	Sg	08 07 30.1	+0.5
FNO	Franklin	0.88	171		Pg	08 07 22.7	-0.2
W35A	Tecumseh	1.13	150		Pb	08 07 26.7	-0.8
T35A	Sooner Cattle	1.16	47		Pb	08 07 27.7	-0.3
U32A	Winter Ranch,	1.18	283		Pb	08 07 26.5	-1.9
TUL1	Leonard	1.46	98		Pn	08 07 32.6	+0.3
TUL1	Leonard	1.46	98	P	Pn	08 07 32.5	+0.3
	baz=280						
TUL1				S	Sb	08 07 53.4	+1.6
	baz=280						
WMOK	Wichita Mounta	1.70	216		Pn	08 07 35.5	-0.2
WMOK	Wichita Mounta	1.70	216	P	Pn	08 07 35.5	-0.2
	baz=34						
WMOK				S	Sb	08 07 58.1	-0.7
	baz=34						
R32A	Long Quarter,	2.46	339		Pn	08 07 47.2	+1.2
U38A	Gravette	2.59	82		Pn	08 07 49.1	+1.2
Z35A	Perchaven, San	2.81	174		Pn	08 07 52.1	+1.3
HHAR	Hobbs	2.94	86		Pn	08 07 53.5	+0.8
KSU1	Kansas State U	3.06	14	P	Pn	08 07 55.3	+1.0
	baz=195						
CBKS	Cedar Bluff	3.18	328		Pn	08 07 56.3	+0.2
W39A	Magazine	3.22	106		Pn	08 07 57.8	+1.3
W39A	Magazine	3.22	106	P	Pn	08 07 58.0	+1.4
	baz=288						
Z38A	Mt. Pleasant	3.57	143		Pn	08 08 02.4	+1.1
AMTX	Amarillo	3.57	251		Pn	08 08 01.2	-0.2
MIAR	Mount Ida	3.63	115		Pn	08 08 03.7	+1.6
MIAR	Mount Ida	3.63	115	P	Pn	08 08 03.6	+1.5
	baz=297						
MIAR				S	Sn	08 08 47.9	+2.9
	baz=297						
S39A	Bolivar	3.75	64		Pn	08 08 05.1	+1.4
U40A	Yellville	3.82	85		Pn	08 08 05.8	+1.0
ABTX	Abilene, Hawle	3.90	207		Pn	08 08 07.3	+1.5
WHTX	Lake Whitney,	4.13	179		Pn	08 08 09.6	+0.6
WHTX	Lake Whitney,	4.13	179	P	Pn	08 08 09.5	+0.4
	baz=358						
X40A	Basin Creek Fa	4.21	112		Pn	08 08 11.8	+1.7
237A	Washetta, Mont	4.37	160		Pn	08 08 12.3	0.0
WHAR	Wooly Hollow	4.38	99		Pn	08 08 13.6	+1.1
MGMO	Mountain Grove	4.39	75		Pn	08 08 13.7	+1.2
WLAR	White Oak Lake	4.40	122	Pn	Pn	08 08 13.7	+1.0
FCAR	Ozark Folk Cen	4.42	92		Pn	08 08 13.6	+0.6
W41B	Gary Mavity, V	4.44	101		Pn	08 08 14.7	+1.4
W41B	Gary Mavity, V	4.44	101	P	Pn	08 08 14.1	+0.9
	baz=284						
UALR	University of	4.48	106		Pn	08 08 13.7	-0.1
R40A	Maddies Statio	4.75	61		Pn	08 08 18.4	+0.9
MSTX	Muleshoe	4.78	245		Pn	08 08 17.9	-0.1
MSTX	Muleshoe	4.78	245	P	Pn	08 08 18.0	0.0
	baz=61						
Z41A	Richland Creek	4.87	125	Pn	Pn	08 08 20.0	+0.9
N35A	Tabor	4.96	17		Pn	08 08 20.6	+0.2
NATX	Nacogdoches	4.99	150		Pn	08 08 20.7	-0.1
LCAR	Lake Charles	5.20	89	Pn	Pn	08 08 24.3	+0.7
BGNE	Belgrade	5.29	355	Pn	Pn	08 08 24.8	-0.1
BGNE	Belgrade	5.29	355	P	Pn	08 08 24.6	-0.4
	baz=175						
T42A	Van Buren	5.29	78	Pn	Pn	08 08 25.8	+0.9
435B	Jarrell	5.33	180	Pn	Pn	08 08 26.1	+0.5
435B	Jarrell	5.33	180	P	Pn	08 08 25.9	+0.4
	baz=360						
T25A	Trinidad	5.59	282	Pn	Pn	08 08 28.4	-0.8
T25A	Trinidad	5.59	282	Sb	Sb	08 09 56.4	+5.6
	baz=98						
N38A	Joes South For	5.77	35	Pn	Pn	08 08 31.8	+0.3
JCT	Junction City	5.94	199	Pn	Pn	08 08 34.1	+0.2
OGNE	Ogallala	5.94	325		Pn	08 08 32.4	-1.6
SDCO	Great Sand Dun	6.55	287		Pn	08 08 41.9	-0.6
S44A	Carbondale	6.84	74		Pn	08 08 46.5	+0.2
OXF	Oxford	6.87	101		Pn	08 08 46.4	-0.2
SIUC	Southern Illin	6.88	74	Pn	Pn	08 08 46.8	0.0
W45A	Hickory Valley	6.90	96		Pn	08 08 47.1	+0.1
Y45A	Yeager Farm, C	6.97	107	Pn	Pn	08 08 48.9	+1.0
N41A	Harden Midland	6.98	47	Pn	Pn	08 08 48.6	+0.5
ISCO	Idaho Springs	7.33	302	Pn	Pn	08 08 52.8	-0.4
ANMO	Albuquerque	7.34	263	Pn	Pn	08 08 52.4	-0.8
	0.1nm,0.3s,baz=319,slow=21,SNR=1.6						
ANMO				Pg	Pb	08 09 15.6	+2.2
	0.3nm,0.3s,baz=74,slow=14,SNR=6.4						
ANMO				Lg	Lg	08 10 51.9	
	2.2nm,0.3s,baz=349,slow=22,SNR=6.8						
Q44A	Meyer Farm, Va	7.34	65	Pn	Pn	08 08 53.5	+0.4
ECSD	EROS Data Cent	7.63	5	P	Pn	08 08 55.7	-1.3
	baz=186						
L40A	Anamosa	7.71	38		Pn	08 08 58.4	+0.3
MNTX	Cornudas Mount	7.85	238	Pn	Pn	08 08 59.9	-0.2
HDIL	Hopedale	7.86	53		Pn	08 09 01.3	+1.0
WVT	Waverly	7.88	87	Pn	Pn	08 09 00.1	-0.5
PHWY	Pilot Hill	8.04	312	Pn	Pn	08 09 02.4	-0.5
N23A	Red Feather La	8.10	308		Pn	08 09 04.9	+1.1
O44A	Mansfield	8.22	58	Pn	Pn	08 09 05.9	+0.7
TXAR	Lajitas Array	8.50	219	Pn	Pn	08 09 08.5	-0.6
	0.1nm,0.3s,baz=33,slow=11,SNR=2.2						

TXAR				Pg	Pb	08 09 39.1	+6.0
	0.8nm,0.3s,baz=40,slow=14,SNR=8.9						
TXAR				Lg	Lg	08 11 32.3	
	1.8nm,0.3s,baz=48,slow=15,SNR=3.5						
JFWS	**Jewell Farm**	**8.82**	**38**	Pn	**Pn**	**08 09 13.5**	**0.0**
P46A	**Rosedale**	**8.90**	**64**	Pn	**Pn**	**08 09 15.2**	**+0.6**
LRAL	**Lakeview Retre**	**9.25**	**106**	Pn	**Pn**	**08 09 20.1**	**+0.8**
BLO	**Bloomington**	**9.28**	**68**	Pn	**Pn**	**08 09 19.8**	**+0.1**
RSSD	**Black Hills**	**9.39**	**330**	Pn	**Pn**	**08 09 21.2**	**-0.2**
P48A	**Milroy**	**10.17**	**67**	Pn	**Pn**	**08 09 31.3**	**-0.6**
I42A	**Draeger Farm,**	**10.20**	**38**	Pn	**Pn**	**08 09 31.1**	**-1.2**
TKL	**Tuckaleechee C**	**11.21**	**88**	Pn	**Pn**	**08 09 46.6**	**+0.5**
	0.1nm,0.3s,baz=12,slow=8.9,SNR=1.1						
TKL				Lg	Lg	08 12 57.1	
	1.0nm,0.3s,baz=169,slow=21,SNR=6.8						
PDAR	**Pinedale Array**	**11.38**	**309**	Pn	**Pn**	**08 09 44.5**	**-4.2**
	0.1nm,0.3s,baz=124,slow=20,SNR=1.4						
PDAR				Pg		08 10 32.5	
	0.2nm,0.3s,baz=120,slow=16,SNR=3.2						
PDAR				Lg	Lg	08 12 50.6	
	0.3nm,0.3s,baz=262,slow=40,SNR=2.0						
ULM	**Lac du Bonnet**	**14.17**	**4**	Pn	Pn	08 10 19.3	-7.1
	0.2nm,0.3s,baz=170,slow=19,SNR=2.0						
ULM				Lg	Lg	08 14 16.6	
	0.3nm,0.3s,baz=235,slow=18,SNR=1.4						
ULM				LR	LR	08 15 46.5	
	comp=Z,85nm,19.7s,baz=109,slow=37						
SADO	**Sadowa**	**16.44**	**53**	Lg	Lg	08 15 36.0	
	0.2nm,0.3s,baz=112,slow=6.2,SNR=1.8						
YKA	**Yellowknife Ar**	**28.44**	**343**	P	**P**	**08 12 59.1**	**-1.4**
	0.1nm,0.7s,baz=148,slow=8.2,SNR=2.0						

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*ANF **30** 08:10:31.8±1.3, 36°.10N×97°.63W, h4km±10km, ML4.1/5, Error ellipse: s-maj=13.6km s-min=2.5km az=152.0*

*TUL **30** 08:10:31.8±1.0, 36°.132N±0°.006×97°.63W±0°.02, h2km±7km, ML3.4, Mwr3.3/20(NEIC), Error ellipse: s-maj=2.7km s-min=0.9km az=85.0*

*NEIC **30** 08:10:32, 36°.13N×97°.64W, h3km, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}-3.46; $M_{\theta\theta}$10.07; $M_{\phi\phi}$-6.62; $M_{r\theta}$-0.42; $M_{\theta\phi}$1.75; $M_{\phi r}$-3.77; Fault plane solution: $M_0$9.80000×10^{13} NP1:ϕ_s44.22000°, δ70.07000°, λ-152.88000°. NP2:ϕ_s304.31000°, δ64.62000°, λ-22.17000°. Principal axes: T 10.3029, Plg4.0000°, Azm173.0000°; N -1.1000, Plg57.0000°, Azm78.0000°; P -9.2029, Plg33.0000°, Azm266.0000°;*

ISC 30 08:10:32.4±0.9, **36°.13N**±0°.04×**97°.65W**±0°.04, **h10km, n36,** σ**0^s.98**/40, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADOK	**Arcadia Dam**	**0.53**	**155**		**Pg**	**08 10 42.2**	**-0.5**
ADOK				Sg	**Sg**	**08 10 49.6**	**-0.1**
OKCFA	**Oklahoma City**	**0.73**	**167**		**Pg**	**08 10 45.9**	**-0.6**
OKCFA				Sg	**Sg**	**08 10 55.7**	**-0.5**
OKCSW	**OKLAHOMA CITY**	**0.75**	**167**		**Pg**	**08 10 46.2**	**-0.6**
FNO	**Franklin**	**0.90**	**167**	Pg	**Pg**	**08 10 49.2**	**-0.5**
U32A	**Winter Ranch,**	**1.12**	**283**	Pg	**Pb**	**08 10 53.0**	**-0.9**
W35A	**Tecumseh**	**1.17**	**147**	Pg	**Pb**	**08 10 53.2**	**-1.4**
T35A	**Sooner Cattle**	**1.20**	**49**	Pg	**Pb**	**08 10 54.3**	**-1.0**
TUL1	**Leonard**	**1.52**	**98**		**Pn**	**08 10 59.3**	**-0.4**
TUL1	**Leonard**	**1.52**	**98**	P	**Pn**	**08 10 59.3**	**-0.4**
	baz=279						
TUL1				S	**Sb**	**08 11 20.2**	**+0.1**
	baz=279						
WMOK	**Wichita Mounta**	**1.67**	**214**	Pn	**Pn**	**08 11 02.2**	**+0.4**
WMOK	**Wichita Mounta**	**1.67**	**214**	P	**Pn**	**08 11 02.3**	**+0.5**
	baz=33						
WMOK				S	**Sb**	**08 11 24.4**	**0.0**
	baz=33						
U38A	**Gravette**	**2.65**	**82**	Pn	**Pn**	**08 11 16.4**	**+1.1**
Z35A	**Perchaven, San**	**2.82**	**173**	Pn	**Pn**	**08 11 19.1**	**+1.6**
W39A	**Magazine**	**3.28**	**105**	S	**Sn**	**08 12 04.7**	**+1.8**
	baz=288						
AMTX	**Amarillo**	**3.52**	**250**	Pn	**Pn**	**08 11 27.3**	**+0.1**
Z38A	**Mt. Pleasant**	**3.61**	**142**	Pn	**Pn**	**08 11 29.0**	**+0.6**
MIAR	**Mount Ida**	**3.69**	**114**	Pn	**Pn**	**08 11 30.4**	**+1.0**
MIAR	**Mount Ida**	**3.69**	**114**	S	**Sn**	**08 12 14.5**	**+1.5**
	baz=297						
S39A	**Bolivar**	**3.80**	**65**	Pn	**Pn**	**08 11 32.0**	**+1.1**
ABTX	**Abilene, Hawle**	**3.87**	**206**	Pn	**Pn**	**08 11 31.8**	**-0.2**
ABTX	**Abilene, Hawle**	**3.87**	**206**	Sb	**Sb**	**08 12 30.4**	**+2.7**
	baz=25						
U40A	**Yellville**	**3.88**	**85**	Pn	**Pn**	**08 11 32.1**	**0.0**
WHTX	**Lake Whitney,**	**4.14**	**178**	Pn	**Pn**	**08 11 36.3**	**+0.7**
X40A	**Basin Creek Fa**	**4.27**	**111**	Pn	**Pn**	**08 11 37.1**	**-0.3**
237A	**Washetta, Mont**	**4.40**	**159**	Pn	**Pn**	**08 11 38.5**	**-0.7**
WLAR	**White Oak Lake**	**4.46**	**122**	Pn	**Pn**	**08 11 39.6**	**-0.4**
W41B	**Gary Mavity, V**	**4.50**	**101**	Pn	**Pn**	**08 11 41.7**	**+1.1**
UALR	**University of**	**4.54**	**106**	Pn	**Pn**	**08 11 42.6**	**+1.5**
MSTX	**Muleshoe**	**4.72**	**244**	Pn	**Pn**	**08 11 44.0**	**+0.1**
R40A	**Maddies Statio**	**4.80**	**62**	Pn	**Pn**	**08 11 45.0**	**+0.3**
Z41A	**Richland Creek**	**4.92**	**124**	Pn	**Pn**	**08 11 47.9**	**+1.6**
BGNE	**Belgrade**	**5.28**	**356**	Pn	**Pn**	**08 11 51.1**	**-0.3**
435B	**Jarrell**	**5.34**	**179**	Pn	**Pn**	**08 11 52.2**	**+0.1**
HBAR	**Harrisburg**	**5.71**	**94**		**Pn**	**08 11 56.0**	**-1.2**
OGNE	**Ogallala**	**5.91**	**326**	Pn	**Pn**	**08 12 01.1**	**+1.1**
CRY	**Cary Ranch**	**15.88**	**266**	P	**P**	**08 14 19.1**	**-0.7**

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*LDG **30** 08:12:44.2±0.1, 42°.75N×12°.47E, h6km, Ml2.3/8, Error ellipse: s-maj=3.3km s-min=2.4km az=8.0*

*ROM **30** 08:12:44.8±0.1, 42°.791N±0°.004×12°.543E±0°.006, h6km, ML2.8/41, Error ellipse: s-maj=0.5km s-min=0.3km az=241.0*

*IDC **30** 08:12:49.3±3.4, 43°.14N×12°.80E, h0km, mb3.1/1, mb1 3.3/5, mb1mx3.1/53, mbtmp3.2/5, ML2.7/4, MS2.9/1, Ms1 2.9/1, ms1mx2.1/22, Error ellipse: s-maj=50.3km s-min=20.3km az=59.0*

ISC 30 08:12:44.6±0.9, **42°.78N**±0°.02×**12°.43E**±0°.02, **h9km**±6km, **n94,** σ**2^s.16**/125, **17C-19D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOMA	**Monte Martano**	**0.11**	**74**	P	**Pg**	**08 12 46.1**	**-1.1**
MOMA				S	**Sg**	**08 12 46.8**	**-2.4**
MOMA				AML	AML		
MOMA				AML	AML		
MOMA				AML	AML		
MOMA				AML	AML		
CESX	**Cesi**	**0.20**	**146**	⇑P	**Pg**	**08 12 49.0**	**+0.3**
CESX				S	**Sg**	**08 12 52.5**	**+1.1**
CESX				AML	AML		
	comp=E,14750µm,0.8s						
CESX				AML	AML		
	comp=N,12550µm,0.6s						
MGAB	**Montegabbione**	**0.27**	**301**	P	**Pg**	**08 12 51.9**	**+1.8**
MGAB				S	**Sb**	**08 12 59.0**	**+2.6**
MGAB				AML	AML		
	comp=E,3270µm,0.4s						
MGAB				AML	AML		
	comp=E,3655µm,0.4s						
MGAB				AML	AML		
	comp=N,2275µm,1.6s						
MGAB				AML	AML		
	comp=N,2120µm,1.5s						
MGAB				AML	AML		
	comp=E,3275µm,0.4s						
ARRO	**Arrone**	**0.32**	**128**	P	**Pg**	**08 12 50.6**	**-0.2**
ARRO				S	**Sg**	**08 12 56.4**	**+1.4**
ARRO				AML	AML		
	comp=E,5460µm,1.5s						
ARRO				AML	AML		
	comp=N,4110µm,1.5s						
ARRO				AML	AML		
	comp=E,5455µm,1.5s						
ARRO				AML	AML		
	comp=N,4105µm,1.5s						
ASSB	**Assisi San Ben**	**0.32**	**32**	⇓P	**Pg**	**08 12 50.8**	**-0.1**
ASSB				S	**Sg**	**08 12 55.4**	**+0.3**
ASSB				AML	AML		
	comp=E,1720µm,0.7s						
ASSB				AML	AML		
	comp=N,2410µm,0.5s						
SACS	**San Casciano d**	**0.39**	**281**	⇓P	**Pg**	**08 12 54.5**	**+2.2**
SACS				AML	AML		
	comp=E,1240µm,0.6s						
SACS				AML	AML		
	comp=E,1118µm,0.6s						
SACS				AML	AML		
	comp=N,1580µm,0.8s						
SACS				AML	AML		
	comp=N,1545µm,0.8s						
SACS				AML	AML		
	comp=E,1118µm,0.6s						
SACS				AML	AML		
	comp=E,1238µm,0.6s						
CESI	**CESI - Serrava**	**0.42**	**56**	⇓P	**Pg**	**08 12 52.3**	**-0.5**
CESI				S	**Sg**	**08 12 58.2**	**-0.1**
CESI				AML	AML		
	comp=E,452µm,0.9s						
CESI				AML	AML		
	comp=N,1050µm,0.8s						
ATTE	**AVT- Monte Tez**	**0.43**	**352**	⇓P	**Pg**	**08 12 53.6**	**+0.6**
ATTE				AML	AML		
	comp=E,1155µm,1.2s						
ATTE				AML	AML		
	comp=N,1090µm,1.0s						
ATCC	**AVT- Casa Cast**	**0.44**	**20**	P	**Pg**	**08 12 53.3**	**+0.1**
ATCC				S	**Sb**	**08 13 00.3**	**-0.9**
ATCC				AML	AML		
	comp=E,2180µm,0.5s						
ATCC				AML	AML		
	comp=N,2325µm,0.5s						
ATCC				AML	AML		
	comp=N,2320µm,0.5s						
ATCC				AML	AML		
	comp=E,2185µm,0.5s						
LNSS	**Leonessa**	**0.48**	**111**	⇑P	**Pg**	**08 12 53.3**	**-0.7**
LNSS				S	**Sg**	**08 13 00.3**	**0.0**
LNSS				AML	AML		
	comp=E,3190µm,1.6s						
LNSS				AML	AML		
	comp=N,2420µm,0.6s						
LATE	**Laterza**	**0.49**	**251**	P	**Pg**	**08 12 56.6**	**+2.5**
LATE				AML	AML		
	comp=E,1730µm,1.0s						
LATE				AML	AML		
	comp=N,1825µm,1.0s						
MURB	**Monte Urbino**	**0.49**	**8**	⇓P	**Pg**	**08 12 54.5**	**+0.3**
MURB				S	**Sb**	**08 13 02.4**	**-0.4**
MURB				AML	AML		
	comp=E,6560µm,0.4s						
MURB				AML	AML		
	comp=N,4015µm,1.4s						
MURB				AML	AML		
	comp=N,4015µm,1.4s						
MURB				AML	AML		
	comp=E,6670µm,0.4s						
MURB				AML	AML		
	comp=E,6565µm,0.4s						
MURB				AML	AML		
	comp=N,4105µm,0.4s						
NRCA	**Norcia**	**0.51**	**83**	⇓P	**Pg**	**08 12 53.8**	**-0.6**
NRCA				S	**Sg**	**08 13 00.8**	**-0.3**
NRCA				AML	AML		
	comp=E,1262µm,1.0s						
NRCA				AML	AML		
	comp=N,1265µm,0.6s						
NRCA				AML	AML		
	comp=E,1280µm,1.0s						
NRCA				AML	AML		
	comp=N,1335µm,0.6s						
FDMO	**Fiordimonte**	**0.55**	**61**	⇓P	**Pg**	**08 12 54.4**	**-0.9**
FDMO				S	**Sb**	**08 13 02.5**	**-1.9**
FDMO				AML	AML		
	comp=N,959µm,1.1s						
FDMO				AML	AML		
	comp=E,1076µm,0.5s						
FDMO				AML	AML		
	comp=N,958µm,1.1s						
MCIV	**Monte Civitell**	**0.56**	**271**	⇑P	**Pg**	**08 12 57.6**	**+2.2**
MCIV				AML	AML		
	comp=E,496µm,0.8s						
MCIV				AML	AML		
	comp=N,364µm,1.4s						
ATMI	**Monte Miggiano**	**0.57**	**348**	⇓P	**Pg**	**08 12 56.4**	**+0.7**
ATMI				AML	AML		
	comp=N,3915µm,0.6s						
ATMI				AML	AML		
	comp=E,3325µm,0.5s						
FOSV	**Fossato di Vic**	**0.57**	**25**	⇑P	**Pg**	**08 12 55.8**	**+0.1**
FOSV				S	**Sb**	**08 13 04.5**	**-0.7**
FOSV				AML	AML		
	comp=E,746µm,1.5s						
FOSV				AML	AML		
	comp=N,760µm,0.8s						
ATFO	**Monte Foce - G**	**0.60**	**10**	P	**Pg**	**08 12 56.5**	**+0.2**
ATFO				S	**Sb**	**08 13 06.0**	**0.0**
ATFO				AML	AML		
	comp=E,1400µm,0.6s						
ATFO				AML	AML		
	comp=E,1395µm,0.6s						
ATFO				AML	AML		
	comp=N,1350µm,0.9s						
ATVO	**AVT- Monte Val**	**0.61**	**358**	⇓P	**Pg**	**08 12 56.5**	**+0.2**
ATVO				AML	AML		
	comp=E,1012µm,0.6s						
ATVO				AML	AML		
	comp=N,1405µm,0.9s						
SNTG	**Esanatoglia**	**0.61**	**38**	⇓P	**Pg**	**08 12 55.9**	**-0.5**
SNTG				S	**Sb**	**08 13 04.8**	**-1.3**
SNTG				AML	AML		
	comp=E,572µm,1.0s						
SNTG				AML	AML		
	comp=N,644µm,1.1s						
SNTG				AML	AML		
	comp=N,644µm,1.1s						
SNTG				AML	AML		
	comp=E,572µm,1.0s						
CAFI	**Castiglion Fio**	**0.65**	**329**	⇓P	**Pg**	**08 12 58.0**	**+0.8**
CAFI				S	**Sb**	**08 13 08.9**	**+1.6**
CAFI				AML	AML		
	comp=E,762µm,0.6s						
CAFI				AML	AML		
	comp=N,672µm,0.6s						
ATPI	**Pietralunga -**	**0.68**	**358**	⇑P	**Pg**	**08 12 58.1**	**+0.5**
ATPI				S	**Sb**	**08 13 08.3**	**+0.2**
ATPI				AML	AML		
	comp=N,1100µm,0.8s						
ATPI				AML	AML		
	comp=E,1195µm,0.8s						
ATPI				AML	AML		
	comp=N,1098µm,0.8s						
ATPI				AML	AML		
	comp=E,1194µm,0.8s						
ATPI				AML	AML		
	comp=N,1098µm,0.8s						
SMA1	**SAN MARTINO**	**0.68**	**102**	⇓P	**Pg**	**08 12 57.2**	**-0.6**
SMA1				AML	AML		
	comp=N,2200µm,0.5s						
SMA1				AML	AML		
	comp=N,2205µm,0.5s						
SMA1				AML	AML		
	comp=E,2050µm,0.5s						
FIAM	**Fiamignano**	**0.72**	**135**	⇑P	**Pg**	**08 12 57.6**	**-0.8**
FIAM				AML	AML		
	comp=E,1030µm,1.3s						
FIAM				AML	AML		
	comp=N,964µm,0.8s						
EL6	**Elcito**	**0.74**	**41**	⇓P	**Pg**	**08 12 58.3**	**-0.6**
EL6				AML	AML		
	comp=E,1520µm,0.9s						
EL6				AML	AML		
	comp=E,1525µm,0.9s						
EL6				AML	AML		
	comp=N,1515µm,1.3s						
BADI	**Badiali**	**0.75**	**350**	⇑P	**Pg**	**08 12 59.8**	**+0.8**
BADI				S	**Sb**	**08 13 11.8**	**+1.7**
BADI				AML	AML		
	comp=E,1280µm,1.1s						
BADI				AML	AML		
	comp=N,1050µm,0.9s						
BADI				AML	AML		
	comp=E,1275µm,1.1s						
BADI				AML	AML		
	comp=N,1052µm,0.9s						
BADI				AML	AML		
	comp=N,1053µm,0.9s						
CAMP	**Campotosto**	**0.76**	**108**	⇓P	**Pg**	**08 12 58.4**	**-0.9**
CAMP				S	**Sg**	**08 13 09.3**	**+0.1**
PIEI	**Pieia**	**0.77**	**6**	⇑P	**Pg**	**08 12 59.7**	**+0.3**
PIEI				AML	AML		
	comp=E,615µm,0.4s						
PIEI				AML	AML		
	comp=N,455µm,1.0s						
MTCE	**Montecelio**	**0.79**	**163**	⇑P	**Pg**	**08 12 59.6**	**-0.1**
MTCE				AML	AML		
	comp=E,530µm,1.1s						
MTCE				AML	AML		
	comp=N,464µm,0.4s						
ARVD	**Arcevia**	**0.81**	**27**	⇑P	**Pg**	**08 12 59.6**	**-0.7**
ARVD				AML	AML		
	comp=N,257µm,0.6s						
ARVD				AML	AML		
	comp=E,369µm,0.5s						
CING	**Cingoli**	**0.82**	**43**	P	**Pg**	**08 12 59.9**	**-0.5**
CING				AML	AML		
	comp=N,690µm,1.1s						
CING				AML	AML		
	comp=E,656µm,1.1s						
SSP9	**Sansepolcro**	**0.83**	**345**	⇓P	**Pb**	**08 13 02.1**	**+1.0**
SSP9				AML	AML		
	comp=N,768µm,1.5s						
SSP9				AML	AML		
	comp=E,809µm,1.2s						
PARC	**Parchiule**	**0.89**	**351**	⇑P	**Pb**	**08 13 02.5**	**+0.3**
PARC				AML	AML		
	comp=E,743µm,0.7s						
PARC				AML	AML		
	comp=N,915µm,0.5s						
MPAG	**Monte Paganucc**	**0.89**	**16**	P	**Pg**	**08 13 01.6**	**-0.1**
MPAG				AML	AML		
	comp=E,502µm,0.5s						
MPAG				AML	AML		
	comp=N,497µm,0.8s						
CRE	**Caprese Michel**	**0.92**	**338**	P	**Pg**	**08 13 03.0**	**+0.8**
CRE				AML	AML		
	comp=E,334µm,0.6s						
CRE				AML	AML		
	comp=N,404µm,0.4s						
CERT	**Cerreto**	**0.92**	**153**	⇓P	**Pg**	**08 13 01.8**	**-0.5**
CERT				AML	AML		
	comp=E,652µm,0.8s						
CERT				AML	AML		
	comp=N,449µm,0.7s						
PE3	**Peglio**	**0.92**	**3**	AML	AML		
	comp=N,1805µm,0.5s						
PE3				AML	AML		
	comp=E,1230µm,0.6s						
FSSB	**Fossombrone**	**0.95**	**15**	P	**Pg**	**08 13 02.7**	**-0.2**
FSSB				AML	AML		
	comp=E,847µm,0.4s						
FSSB				AML	AML		
	comp=N,944µm,0.5s						
VCEL	**Villa Celiera**	**1.11**	**110**	⇑P	**Pg**	**08 13 04.9**	**-0.9**
VCEL				AML	AML		
	comp=N,751µm,0.7s						
VCEL				AML	AML		
	comp=E,808µm,0.6s						
SFI	**Santa Sofia**	**1.21**	**340**	P	**Pb**	**08 13 08.1**	**+0.5**
SFI				AML	AML		
	comp=E,246µm,0.9s						
SFI				AML	AML		
	comp=N,224µm,1.5s						
INTR	**Introdacqua**	**1.33**	**124**	P	**Pn**	**08 13 09.7**	**+0.2**
INTR				AML	AML		
	comp=E,450µm,0.7s						
INTR				AML	AML		
	comp=N,716µm,0.8s						
POFI	**Posta Fibreno**	**1.42**	**138**	⇓P	**Pb**	**08 13 12.1**	**+0.8**
POFI				AML	AML		
	comp=N,176µm,1.5s						
POFI				AML	AML		
	comp=E,240µm,0.9s						
DUGI	**Dugi Otok**	**2.27**	**57**	*e*Pn	**Pn**	**08 13 23.3**	**+1.1**
DUGI				Sn	**Sn**	**08 13 51.1**	**+0.8**
ZIRJ	**Zirje**	**2.51**	**68**	*e*Pn	**Pn**	**08 13 26.6**	**+1.1**
ZIRJ				Sn	**Sn**	**08 13 56.6**	**+0.4**
NVLJ	**Novalja**	**2.52**	**44**	*e*Pn	**Pn**	**08 13 26.2**	**+0.6**
NVLJ				Sn	**Sn**	**08 13 57.9**	**+1.6**
PGF	**Pioggiola**	**2.54**	**266**	*e*P	**Pn**	**08 13 27.1**	**+1.0**
PGF				*e*Sn	**Sn**	**08 13 54.0**	**-3.2**
	comp=E,1.9nm,0.4s						
MORI	**Morici**	**2.63**	**64**	*e*Pn	**Pn**	**08 13 29.1**	**+2.0**
MORI				Sn	**Sb**	**08 14 01.1**	**-3.1**
UDBI	**Udbina**	**2.99**	**53**	*i* Pn	**Pn**	**08 13 33.3**	**+1.1**
UDBI				Sn	**Sn**	**08 14 10.4**	**+2.3**
VULT	**Monte Vulture**	**2.99**	**126**	S	**Sb**	**08 14 17.0**	**+2.2**
TRI	**Trieste**	**3.09**	**18**	⇓P	**Pn**	**08 13 34.0**	**+0.6**
TRI				AML	AML		
	comp=N,34µm,0.8s						
TRI				AML	AML		
	comp=E,33µm,0.9s						
KNDS	**Knezji Dol**	**3.09**	**26**	⇑*i*Pn	**Pn**	**08 13 34.3**	**+0.7**
LEOD	**Capriano del C**	**3.16**	**329**	S	**Sg**	**08 14 24.0**	**-1.9**
MAGA	**Magasa**	**3.27**	**337**	⇑P	**Pn**	**08 13 37.7**	**+1.6**
MAGA				AML	AML		
	comp=E,172µm,0.9s						
MAGA				AML	AML		
	comp=N,108µm,0.4s						
SLCN	**Sala Consilina**	**3.38**	**134**	⇓P	**Pg**	**08 13 48.5**	**-0.9**
MAKA	**Makarska**	**3.40**	**80**	*i* Pn	**Pn**	**08 13 40.3**	**+2.5**
RICI	**Ricice**	**3.52**	**77**	*e*Pn	**Pn**	**08 13 41.0**	**+1.7**
RICI				Sn	**Sn**	**08 14 19.3**	**-1.8**
MABI	**Malga Bissina**	**3.56**	**338**	⇑P	**Pn**	**08 13 42.0**	**+1.9**
GBOS	**Grotte di Boss**	**3.65**	**295**	P	**Pg**	**08 13 53.6**	**-0.8**
PTCC	**Patocco-Chiusa**	**3.69**	**10**	⇑P	**Pb**	**08 13 49.2**	**-0.7**
SBF	**Sospel**	**3.80**	**288**	*e*Pn	**Pn**	**08 13 41.3**	**-2.1**
STON	**Ston**	**3.88**	**87**	*e*Pn	**Pn**	**08 13 45.5**	**+1.1**
STON	**Ston**	**3.88**	**87**	P	**Pn**	**08 13 45.6**	**+1.3**
ABTA	**Abfaltersbach**	**3.97**	**1**	*e*Pn	**Pn**	**08 13 47.6**	**+1.9**
	comp=N,7.9nm,0.6s,SNR=12						
ZAG	**Zagreb**	**3.98**	**39**	S	**Sn**	**08 14 37.0**	**+4.6**
OBKA	**Obir**	**4.03**	**21**	*e*Pn	**Pn**	**08 13 48.2**	**+1.7**
	comp=N,1.1nm,0.4s						
FRF	**La Foret Royal**	**4.30**	**282**	*e*P	**Pn**	**08 13 51.8**	**+1.6**
FRF				*e*Sn	**Sn**	**08 14 35.6**	**-4.9**
	comp=N,1.1nm,0.3s						
SOKA	**Soboth**	**4.32**	**25**	*e*Pn	**Pn**	**08 13 52.2**	**+1.7**
	comp=N,0.6nm,0.3s						
KBA	**Koelnbreinsper**	**4.35**	**8**	*e*Pn	**Pn**	**08 13 53.0**	**+2.0**
	comp=N,2.7nm,0.5s,SNR=11						
LMR	**La Mourre**	**4.38**	**279**	*e*Pn	**Pn**	**08 13 49.4**	**-1.8**
LMR				*e*Sn	**Sn**	**08 14 37.9**	**-4.3**
	comp=N,0.6nm,0.3s						
DAVOX	**Davos/Dischmat**	**4.40**	**336**	Pn	**Pn**	**08 13 54.9**	**+3.2**
	comp=N,0.7nm,0.3s,baz=176,slow=23,SNR=11						
DAVOX				Sn	**Sn**	**08 14 45.6**	**+2.5**
	comp=N,0.4nm,0.3s,baz=133,slow=17,SNR=2.0						
FETA	**Feichten**	**4.42**	**345**	*e*Pn	**Pn**	**08 13 54.6**	**+2.7**
	comp=N,1.4nm,0.4s,SNR=5.7						
WTTA	**Wattenberg**	**4.52**	**353**	*e*Pn	**Pn**	**08 13 54.6**	**+1.3**
	comp=N,0.9nm,0.2s						
SQTA	**Sankt Quirin**	**4.53**	**349**	*e*Pn	**Pn**	**08 13 56.3**	**+2.9**
	comp=N,2.3nm,0.3s						
MBDF	**Montbardon**	**4.54**	**297**	*e*P	**Pn**	**08 13 55.9**	**+2.3**
MBDF				*e*Sn	**Sn**	**08 14 41.7**	**-4.9**
	comp=N,0.8nm,0.4s						
CELI	**Celico**	**4.56**	**136**	P	**Pb**	**08 14 06.3**	**+1.4**
KOGS	**Kog**	**4.57**	**35**	S	**Sn**	**08 14 44.0**	**-3.1**
WATA	**Walderalm**	**4.60**	**353**	*e*Pn	**Pn**	**08 13 57.9**	**+3.5**
	comp=N,3.4nm,0.5s						
MOTA	**Moosalm**	**4.67**	**349**	*e*Pn	**Pn**	**08 13 58.6**	**+3.3**
	comp=N,3.1nm,0.6s						
BNI	**Bardonecchia**	**4.74**	**301**	⇑P	**Pb**	**08 14 04.7**	**-3.2**
RETA	**Reutte**	**4.86**	**347**	*e*Pn	**Pn**	**08 14 01.4**	**+3.6**
	comp=N,2.6nm,0.5s						
ALJA	**Alia**	**5.12**	**168**	P	**Pn**	**08 14 05.9**	**+4.4**
SMRF	**Simiane la Rot**	**5.14**	**286**	*e*Pn	**Pn**	**08 13 59.2**	**-2.5**
SMRF				*e*Sn	**Sn**	**08 14 56.0**	**-5.2**
	comp=N,5.3nm,0.3s						
ORIF	**Oris-en-Rattie**	**5.20**	**297**	*e*P	**Pn**	**08 14 05.3**	**+2.7**
ORIF				*e*Sn	**Sn**	**08 14 57.5**	**-5.2**
	comp=N,0.4nm,0.2s						
MOA	**Molln**	**5.24**	**14**	*e*Pn	**Pn**	**08 14 05.0**	**+2.0**
	comp=N,1.2nm,0.3s						
VIVF	**Saint-Julien-l**	**5.99**	**293**	*e*Pn	**Pn**	**08 14 10.7**	**-2.6**
VIVF				*e*Sn	**Sn**	**08 15 15.8**	**-6.2**
GERES	**GERESS Array B**	**6.14**	**8**	Pn	**Pn**	**08 14 16.5**	**+1.0**
	comp=N,0.1nm,0.3s,baz=188,slow=15,SNR=3.0						
GERES				Sn	**Sn**	**08 15 21.5**	**-4.3**
	comp=N,0.1nm,0.3s,baz=168,slow=22,SNR=1.9						
LASF	**Ste Croix**	**6.38**	**285**	*e*Pn	**Pn**	**08 14 17.3**	**-1.4**
KHC	**Kasperske Hory**	**6.41**	**7**	*e*PN	**Pn**	**08 14 21.5**	**+2.4**
KHC				*e*SN	**Sn**	**08 15 30.5**	**-1.9**
LOR	**Lormes**	**7.55**	**309**	*e*Pn	**Pn**	**08 14 32.0**	**-2.8**
	baz=131						
LOR	**Lormes**	**7.55**	**309**	*e*Pg	Pg	08 15 04.5	-4.6
	baz=126						
LOR				*e*Sn	**Sn**	**08 15 53.5**	**-7.0**
	comp=N,0.9nm,0.4s						
BRTR	**Keskin Array B**	**16.23**	**94**	Pn	**P**	**08 16 37.3**	**+1.2**

	comp=N,0.0nm,0.3s,baz=287,slow=10,SNR=2.1						
FINES	FINESS Array B	20.41	19	Pn	Pn	08 17 26.1	+2.5
	comp=N,0.0nm,0.3s,baz=204,slow=4.2,SNR=3.3						
GNI	Garni	24.28	85	LR	LR	08 29 26.3	
	comp=N,28nm,18.6s,baz=228,slow=42						
MKAR	Makanchi Array	48.25	60	P	P	08 21 27.3	+1.7
	comp=N,0.2nm,0.7s,baz=298,slow=11,SNR=2.8						

IDC 30 08:35:49.4±27.0, 22°.66S×66°.53W, h280km±177km, mb1 2.8/3, mb1mx2.7/40, mbtmp3.4/3, Error ellipse: s-maj=369.4km s-min=39.4km az=13.0, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	6.51	346	P	Pn	08 37 24.9	-0.2
	0.2nm,0.3s,baz=166,slow=9.2,SNR=6.8						
SIV	San Ignacio	8.40	39	P	Pn	08 37 48.5	+0.6
	0.3nm,0.3s,baz=259,slow=11,SNR=8.1						
BDFB	Brasilia	18.83	71	P	P	08 39 48.9	-0.4
	0.2nm,0.3s,baz=267,slow=12,SNR=4.2						
MKAR	Makanchi Array	145.22	39	PKPbc	PKPdf	08 54 53.2	-0.5
	0.3nm,0.5s,baz=330,slow=2.9,SNR=4.8						

UPA ***30*** *08:36:55.6±1.9, 6°.90N×72°.93W, h132km±64km, MW4.5*
IDC ***30*** *08:36:57.6±0.4, 6°.75N×72°.98W, h154km±3km, mb3.8/17, mb1 4.0/26, mb1mx3.8/48, mbtmp4.4/26, MS3.2/3, Ms1 3.2/3, ms1mx2.7/39, Error ellipse: s-maj=8.6km s-min=6.1km az=113.0*
NEIC ***30*** *08:36:58.8±2.5, 6°.72N±0°.05×72°.95W±0°.04, h161km±5km, mb4.4/69, Error ellipse: s-maj=7.5km s-min=5.3km az=196.0*
RSNC ***30*** *08:36:59.6±1.1, 6°.80N×73°.16W, h142km±4km, ML4.7, Mw4.6, Fault plane solution: NP1:φs67.00000°, δ77.00000°, λ18.00000°.*
VAO ***30*** *08:37:00.5±0.7, 6°.66N×72°.74W, h154km±2km, mb4.5*
ISC 30 08:36:57.6±0.3, 6°.81N±0°.02×73°.11W±0°.03, h153km±3km, h154km:pP-P, n232, σ1s85/311, mb4.4/51, 16C-21D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.23	199	⇑iP	Pn	08 37 19.1	+0.4
BARC				eS	Sn	08 37 33.5	-1.3
BARC				i		08 37 35.1	
	comp=Z,25µm,0.3s						
PAMC	Pamplona, Colo	0.66	37	⇓iP	Pn	08 37 22.0	+1.2
PAMC				eS	Sn	08 37 38.7	+0.2
PAMC				i		08 37 40.9	
	comp=Z,12µm,0.4s						
RUSC	La Rusia	0.91	179	⇑iP	Pn	08 37 23.0	+0.4
RUSC				eS	Sn	08 37 41.0	-0.6
RUSC				i		08 37 42.4	
	comp=Z,6µm,0.9s						
RUSC	La Rusia	0.91	179		Pn	08 37 22.9	+0.4
RUSC				Sn	Sn	08 37 41.6	-0.1
TAMC	Tame, Arauca	1.36	106	⇑iP	Pn	08 37 27.5	+1.4
TAMC				eS	Sn	08 37 48.5	+0.7
TAMC				i		08 37 53.6	
	comp=Z,4µm,0.4s						
PTBC	PUERTO BERRIO,	1.37	259	⇓iP	Pn	08 37 25.7	-0.4
PTBC				eS	Sn	08 37 46.5	-1.4
PTBC				i		08 37 49.2	
	comp=Z,7µm,0.3s						
OCAC	Ocana	1.44	352	⇓iP	Pn	08 37 27.5	+0.5
OCAC				eS	Sn	08 37 49.0	-0.4
OCAC				i		08 37 52.5	
	comp=Z,8µm,0.4s						
SPBC	San Pablo de B	1.50	220	⇓iP	Pn	08 37 28.1	+0.6
SPBC				eS	Sn	08 37 49.9	-0.6
SPBC				i		08 37 55.6	
	comp=Z,5µm,0.2s						
ZARC	Zaragoza, Cauc	1.87	291	⇑iP	Pn	08 37 31.9	+0.4
ZARC				eS	Sn	08 37 57.4	0.0
ZARC				i		08 38 05.9	
	comp=Z,7µm,0.3s						
ZARC				i		08 38 06.0	
	comp=Z,6µm,0.3s						
NORC	Norcasia	2.15	235	⇓eP	Pn	08 37 35.0	+0.3
NORC				eS	Sn	08 38 02.9	-0.4
NORC				i		08 38 04.8	
	comp=Z,3µm,0.3s						
SMLC	San Martn de	2.20	334	⇓iP	Pn	08 37 35.2	-0.1
SMLC				eS	Sn	08 38 04.4	+0.1
SMLC				i		08 38 07.0	
	comp=Z,4µm,0.3s						
CHIC	Chingaza	2.25	196	⇓iP	Pn	08 37 37.2	+0.8
CHIC				eS	Sn	08 38 05.3	-0.9
CHIC				i		08 38 09.6	
	comp=Z,2µm,0.4s						
ROSC	El Rosal	2.30	212	P	Pn	08 37 39.1	+2.2
	comp=Z,411nm,0.3s,baz=39,slow=16,SNR=459						
ROSC				S	Sn	08 38 07.3	+0.2
	comp=Z,484nm,0.3s,baz=85,slow=17,SNR=13						
ROSC	El Rosal	2.30	212	⇓iP	Pn	08 37 39.1	+2.2
ROSC				eS	Sn	08 38 07.5	+0.4
ROSC				i		08 38 17.2	
	comp=Z,4µm,0.6s						
ROSC	El Rosal	2.30	212		Pn	08 37 38.8	+1.9
ROSC					Sn	08 38 08.1	+0.9
CVER	Cruz Verde, Cu	2.47	203	eP	Pn	08 37 42.6	+3.6
CVER				eS	Sn	08 38 13.0	+2.1
HELC	Santa Helena	2.48	256	⇑iP	Pn	08 37 39.1	+0.1
HELC				eS	Sn	08 38 09.7	-1.3
HELC				i		08 38 18.6	
	comp=Z,2µm,0.4s						
HELC	Santa Helena	2.48	256	eP	Pn	08 37 39.7	+0.7
HELC				eS	Sn	08 38 10.1	-0.9
UREC	San Jos de Ur	2.58	291	⇑iP	Pn	08 37 39.3	-0.6
UREC				eS	Sn	08 38 12.2	-0.4
UREC				i		08 38 21.2	
	comp=Z,3µm,0.3s						
SOCV	Socops	2.67	57	⇓iP	Pn	08 37 41.7	+0.7
VILC	Villavicencio,	2.74	192	eP	Pn	08 37 42.6	+0.6
VILC				eS	Sn	08 38 16.6	+0.1
VILC				i		08 38 26.8	
	comp=Z,3µm,0.4s						
GUY2C	Guyana, Caldas	2.75	235	⇓iP	Pn	08 37 43.3	+0.9
GUY2C				eS	Sn	08 38 16.0	-0.9
GUY2C				i		08 38 26.5	
	comp=Z,2µm,0.5s						
PTGC	Puerto Gaitan,	2.77	160	⇑iP	Pn	08 37 42.3	0.0
PTGC				eS	Sn	08 38 15.2	-1.6
PTGC				i		08 38 16.9	
	comp=Z,3µm,0.6s						
RREF	El Recreo	2.93	230	eP	Pn	08 37 45.5	+0.6
RREF				eS	Sn	08 38 24.1	+2.9
RREF				i		08 38 30.2	
	comp=Z,2µm,0.3s						
CBOC	Ciudad Bolivar	3.04	252	⇑iP	Pn	08 37 47.0	+1.2
CBOC				eS	Sn	08 38 23.2	+0.2
CBOC				i		08 38 27.6	
	comp=Z,1µm,0.5s						
DBBC	Dabeiba	3.09	274	⇑eP	Pn	08 37 46.9	+0.6
DBBC				eS	Sn	08 38 22.9	-1.1
TOLC	Tolima	3.12	225	eP	Pn	08 37 47.8	+0.8
TOLC				eS	Sn	08 38 26.5	+1.3
CODC	Agustn Codazz	3.12	354	⇓iP	Pn	08 37 46.8	+0.1
CODC				eS	Sn	08 38 25.8	+1.0
SDV	Santo Domingo	3.20	50	P	Pn	08 37 48.7	+0.9
	comp=Z,230nm,0.3s,baz=221,slow=3.7,SNR=1486						
SDV				S	Sn	08 38 25.4	-1.4
	comp=Z,481nm,0.3s,baz=89,slow=22,SNR=19						
SDV	Santo Domingo	3.20	50	⇓iP	Pn	08 37 48.8	+0.9
SDV				eS	Sn	08 38 24.5	-2.3
SDV				i		08 38 27.9	
	comp=Z,1µm,0.4s						
SDV	Santo Domingo	3.20	50		Pn	08 37 48.7	+0.9
SDV				Sn	Sn	08 38 27.0	+0.2
SDV	Santo Domingo	3.20	50	eP	Pn	08 37 49.0	+1.1
ARGC	Ariguani, Magd	3.23	340	⇓iP	Pn	08 37 49.5	+1.5
ARGC				eS	Sn	08 38 28.7	+1.5
ARGC				i		08 38 33.9	
	comp=Z,1µm,0.4s						
ANIL	Santa Ana	3.25	225	eP	Pn	08 37 49.8	+1.2
ANIL				eS	Sn	08 38 28.5	+0.6
ORTC	Ortega, Tolima	3.58	217	⇓iP	Pn	08 37 53.0	+0.3
ORTC				eS	Sn	08 38 35.3	-0.1
ORTC				i		08 38 41.8	
	comp=Z,1µm,0.4s						
PLMC	San Jos del P	3.68	239	⇑iP	Pn	08 37 55.3	+1.4
PLMC				eS	Sn	08 38 36.5	-1.2
PLMC				i		08 38 42.3	
	comp=Z,2µm,0.2s						
SJCC	San Jacinto, C	3.69	326	⇑iP	Pn	08 37 53.6	-0.4
SJCC				eS	Sn	08 38 35.0	-2.8
SJCC				i		08 38 39.4	
	comp=Z,3µm,0.5s						
LCBC	Los crdobas,	3.82	302	eP	Pn	08 37 55.6	0.0
LCBC				eS	Sn	08 38 40.7	0.0
LCBC				i		08 39 05.5	
	comp=Z,1µm,1.0s						
GUVC	San Jose del G	4.26	174	eP	Pn	08 38 01.2	-0.2
GUVC				eS	Sn	08 38 49.1	-2.1
YOTC	Yotoco, Valle	4.28	229	⇓iP	Pn	08 38 01.8	+0.1
YOTC				eS	Sn	08 38 47.1	-4.5
SOLC	Bahia Solano	4.32	263	eP	Pn	08 38 02.8	+0.7
SOLC				eS	Sn	08 38 48.4	-3.9
SMRC	Santa Marta, M	4.46	346	eP	Pn	08 38 03.9	-0.2
SMRC				eS	Sn	08 38 52.5	-3.4
SMRC				i		08 38 58.8	
	comp=Z,431nm,0.4s						
CAPC	Capurgana	4.58	294	eP	Pn	08 38 03.8	-1.8
CAPC				eS	Sn	08 38 50.8	-7.8
CAPC				i		08 39 01.6	
	comp=Z,346nm,0.5s						
CAP2	Capurgana	4.59	294	eP	Pn	08 38 03.5	-2.3
CAP2				eS	Sn	08 38 56.2	-2.7
PIZC	Pizarro, Choco	4.61	247	eP	Pn	08 38 08.2	+2.2
PIZC				eS	Sn	08 38 58.3	-0.9
PIZC				i		08 39 09.3	
	comp=Z,643nm,0.7s						
PTAC	Punta Ardita,	4.68	274	eP	Pn	08 38 06.7	-0.2
PTAC				eS	Sn	08 38 56.6	-4.3
PTAC				i		08 39 03.6	
	comp=Z,843nm,0.2s						
MACC	Macarena, Meta	4.69	189	⇓iP	Pn	08 38 06.1	-1.0
MACC				eS	Sn	08 38 55.2	-6.1
MACC				i		08 39 02.7	
	comp=Z,734nm,0.8s						
URIC	Uribia, Colomb	4.98	13	⇓iP	Pn	08 38 09.9	-0.9
URIC				eS	Sn	08 39 04.5	-3.6
URIC				i		08 39 07.5	
	comp=Z,401nm,0.7s						
URIC	Uribia, Colomb	4.98	13		Pn	08 38 10.0	-0.9
URIC				Sn	Sn	08 39 06.6	-1.5
UPD2	Meteti	5.16	290	eP	Pn	08 38 12.2	-1.1
UPD2				eS	Sn	08 39 10.6	-1.7
GARC	Garzon, Huila	5.17	207	eP	Pn	08 38 13.2	-0.5
GARC				eS	Sn	08 39 06.7	-6.3
GARC				i		08 39 18.3	
	comp=Z,394nm,0.2s						
GARC				i		08 39 19.7	
	comp=Z,453nm,0.3s						
PCON	Cinco Dias	5.53	217	eP	Pn	08 38 20.2	+1.5
PCON				i		08 39 42.5	
	comp=Z,196nm,0.7s						
FLOC	Florencia	5.78	206	⇓iP	Pn	08 38 21.4	-0.1
FLOC				eS	Sn	08 39 16.6	-11
FLOC				i		08 39 32.8	
	comp=Z,206nm,0.6s						
FLOC	Florencia	5.78	206		Pn	08 38 21.5	-0.1
SOTA	Rioblanco	5.81	217	eP	Pn	08 38 23.6	+1.2
SOTA				eS	Sn	08 39 24.0	-4.5
SOTA				i		08 39 39.7	
	comp=Z,331nm,0.5s						
CHPO	Chepo, Panama	6.40	292	eP	Pn	08 38 28.2	-1.4
CHPO				eS	Sn	08 39 36.0	-5.8
UPA	Univ. de Panam	6.72	289	eP	Pn	08 38 32.4	-1.6
UPA				eS	Sn	08 39 48.4	-1.2
CHOR3	La Chorrera	6.92	288	eP	Pn	08 38 35.2	-1.4
CHOR3				eS	Sn	08 39 48.0	-6.3
GCUF	Volcan Galeras	6.97	217	⇓eP	Pn	08 38 39.4	+1.5
GCUF				eS	Sn	08 39 56.8	+0.4
GCUF				i		08 39 59.2	
	comp=Z,98nm,0.6s						
ZANG	Zanguenga, Cho	7.03	288	eP	Pn	08 38 37.4	-0.7
BCIP	Isla Barro Col	7.07	290	eP	Pn	08 38 37.3	-1.3
BCIP				eS	Sn	08 39 55.9	-1.9
BCIP	Isla Barro Col	7.07	290		Pn	08 38 36.9	-1.7
AZU	Azuero	7.18	278	eP	Pn	08 38 39.6	-0.5
AZU				eS	Sn	08 39 56.7	-3.8
PCRV	Puerto La Cruz	9.02	68	P	Pn	08 39 03.4	-1.3
	comp=Z,7.1nm,0.3s,baz=237,slow=6.5,SNR=33						
PCRV				S	Sn	08 40 41.9	-3.0
	comp=Z,8.6nm,0.3s,baz=185,slow=20,SNR=1.8						
PLCV	Puerto La Cruz	9.06	68		Pn	08 39 03.4	-1.8
PLCV					Sn	08 40 41.9	-3.9
JAKH	Jacmel	11.37	3	Pn	Pn	08 39 39.2	+3.5
PCJ	Portland Cotta	11.56	340	⇑iP	Pn	08 39 41.2	+3.1
HOJ	Hope	11.68	343	i P	Pn	08 39 42.8	+3.1
HOJ				i S	Sn	08 41 38.6	-10
GWJ	Greenwich	11.74	343	⇑eP	Pn	08 39 43.5	+2.9
GWJ				i P	P	08 39 45.8	-1.8
STH	Stony Hill	11.77	342	⇑iP	Pn	08 39 44.2	+3.4
BANI	BANI	11.82	13	Pn	Pn	08 39 42.8	+1.2
MCJ	Malvern	11.92	338	⇑iP	Pn	08 39 46.2	+3.3
MCJ				i S	Sn	08 41 43.3	-11
MTDJ	Mount Denham	12.14	340		Pn	08 39 47.5	+1.7
BBJ	Bamboo Saint A	12.20	341	⇓iP	P	08 39 50.6	-1.9
BBJ				⇓iS	Sn	08 41 49.5	-12
JTS	Las Juntas de	12.21	287	P	Pn	08 39 48.6	+1.9
	comp=Z,1.6nm,0.3s,baz=106,slow=3.6,SNR=14						
JTS				LR	LR	08 46 10.9	
	comp=Z,62nm,19.2s,baz=164,slow=45						
JTS	Las Juntas de	12.21	287		P	08 39 50.3	-2.5
SDDR	Presa de Saban	12.23	8		Pn	08 39 48.2	+1.4
MPR	Mayaguez	12.74	27		Pn	08 39 52.2	-1.2
ACON	Acoyapa	12.96	294		Pn	08 39 56.7	+0.4
IGPR	InterUniversit	13.02	31		Pn	08 39 56.8	-0.1
PDPR	Patillas Dam,	13.11	31		Pn	08 39 57.3	-0.8
SJG	San Juan	13.12	30	P	Pn	08 39 54.0	-4.2
	comp=Z,7.9nm,0.3s,baz=352,slow=17,SNR=27						
SJG	San Juan	13.12	30	Pn	Pn	08 39 58.1	-0.2
GTBY	Guantanamo Bay	13.18	352	P	P	08 40 02.3	-1.2
SVB	Belmont	13.32	60	Pn	Pn	08 40 00.2	-0.6
GCPR	Guaynabo City	13.32	30		Pn	08 40 00.5	-0.4
CDVI	St. Croix	13.58	36		Pn	08 40 04.6	+0.5
CUPR	Culebra, Puert	13.74	33	Pn	Pn	08 40 07.1	+1.0
STVI	Saint Thomas	13.95	34		Pn	08 40 09.9	+1.1
ATAH	Atahualpa	14.82	201	P	Pn	08 40 20.9	+0.7
	comp=Z,2.3nm,0.3s,baz=5.7,slow=8.0,SNR=12						
ATAH				LR	LR	08 46 13.8	
	comp=Z,67nm,21.2s,baz=10,slow=38						
PTGA	Pitinga	15.10	119	P	Pn	08 40 21.5	-1.7
	comp=Z,1.4nm,0.3s,baz=298,slow=16,SNR=16						
PTGA	Pitinga	15.10	119	P	Pn	08 40 22.6	-0.7
PTGA	Pitinga	15.10	119	eP	Pn	08 40 22.1	-1.1
SAML	Samuel	18.52	148	P	P	08 41 02.5	+0.1
SAML	Samuel	18.52	148	eP	P	08 41 02.5	+0.1
PAYG	Puerto Ayora	18.69	247	P	Pn	08 41 07.6	+1.2
APG	El Apazote	18.88	297	P	P	08 41 07.3	+0.8
	comp=Z,1.0nm,0.3s,baz=147,slow=4.0,SNR=9.6						
NNA	Nana	19.04	191	P	P	08 41 07.1	-1.0
	comp=Z,1.2nm,0.3s,baz=350,slow=9.9,SNR=9.3						
NNA	Nana	19.04	191	P	Pn	08 41 09.5	-1.1
NNA				IAmb	IAmb	08 41 09.5	
	comp=Z,16nm,0.8s						
TEIG	Tepich	19.86	314	P	Pn	08 41 19.2	-0.9
TEIG	Tepich	19.86	314	P	Pn	08 41 19.6	-0.5
CCIG	Comitan	20.87	298	P	Pn	08 41 30.6	-1.8
LPAZ	La Paz	23.47	168	P	P	08 41 53.5	-0.7
	comp=Z,9.3nm,0.8s,baz=358,slow=9.5,SNR=29						
LPAZ	La Paz	23.47	168	P	P	08 41 54.3	+0.1
LPAZ				IAmb	IAmb	08 41 57.5	
	comp=Z,11nm,0.8s						
LPAZ	La Paz	23.47	168	eP	P	08 41 54.4	+0.2
CMIG	Matias Romero	23.60	298	P	P	08 41 52.9	-1.9
	comp=Z,1.4nm,0.4s,baz=112,slow=7.0,SNR=5.1						
656A	Willston	24.14	340	P	P	08 42 02.6	+3.2
CLDB	Colider	24.61	135	eP	P	08 42 02.5	-1.3
PB16	IPOC Station P	25.24	172	P	P	08 42 07.8	-2.4
PB16				IAmb	IAmb	08 42 11.7	
	comp=Z,7.1nm,0.7s						
PB12	IPOC Station P	25.41	174	P	P	08 42 10.5	-0.7
PB12				IAmb	IAmb	08 42 29.3	
	comp=Z,20nm,1.1s						
SIV	San Ignacio	25.60	152	P	P	08 42 11.6	-1.3
	comp=Z,6.0nm,0.9s,baz=338,slow=8.9,SNR=26						
SIV				pP	pP	08 42 45.0	-0.5
	comp=Z,3.3nm,0.6s,baz=332,slow=11,SNR=5.8						
MNMC	Minye Minye	26.01	172	P	P	08 42 15.1	-1.7
MNMC				IAmb	IAmb	08 42 27.3	
	comp=Z,8.1nm,0.9s						
PSGCX	Pisagua	26.41	174	P	P	08 42 18.6	-1.5
GO01	Chusmiza	26.59	172	P	P	08 42 20.7	-1.6
GO01				IAmb	IAmb	08 42 21.9	
	comp=Z,9.0nm,0.8s						
PB11	IPOC Station P	26.62	173	P	P	08 42 20.4	-1.7
250A	Grady	27.89	336	P	P	08 42 36.7	+3.5
152A	Waverly Hall	27.91	339	P	P	08 42 36.4	+3.0
PB01	IPOC Station P	27.91	173	P	P	08 42 31.9	-1.7
PB01				IAmb	IAmb	08 42 33.4	
	comp=Z,7.0nm,0.7s						
SALV	Santo Antonio	28.40	143	eP	P	08 42 37.6	-0.2
HODGE	Hodges	28.57	344	P	P	08 42 42.6	+3.4
Y52A	Lilburn	28.77	341	P	P	08 42 44.0	+3.0
Y52A				IAmb	IAmb	08 42 44.0	
	comp=Z,6.1nm,0.6s						
Z50A	Ashland	28.88	337	P	P	08 42 45.1	+3.2
LRAL	Lakeview Retre	29.11	336	P	P	08 42 47.0	+3.0
LRAL				IAmb	IAmb	08 42 47.6	
	comp=Z,15nm,1.2s						
LVC	Limon Verde	29.53	172	eP	P	08 42 48.8	+0.6
Y49A	Blount Mountai	29.60	337	P	P	08 42 51.2	+2.9
Z47A	Carrollton	29.71	334	P	P	08 42 52.4	+3.1
SMTB	Santa Maria do	29.82	121	eP	P	08 42 50.0	-0.5
FPAL	Fort Paine	29.91	339	P	P	08 42 53.8	+2.7
FPAL				IAmb	IAmb	08 43 06.7	
	comp=Z,11nm,1.3s						
W50A	Signal Mountai	30.41	340	P	P	08 42 58.7	+3.2
V51A	Loudon	30.64	342	P	P	08 43 00.5	+3.0
V51A				IAmb	IAmb	08 43 10.6	
	comp=Z,11nm,1.2s						
ARAG	Araguaiana, MT	30.75	137	eP	P	08 42 58.3	-0.3
TZTN	Tazewell	31.10	344	P	P	08 43 04.5	+3.0
V48A	Smith Brothers	31.42	338	P	P	08 43 07.3	+2.9
AQDB	Aquidauana	32.06	148	eP	P	08 43 09.9	-0.2
AQDB				epP	pP	08 43 44.4	+0.8
C2SB	Chapadao do Su	32.33	142	eP	P	08 43 13.1	+0.6
T47A	Sharon Grove	32.64	339	P	P	08 43 17.4	+2.5
T47A				IAmb	IAmb	08 43 18.0	
	comp=Z,11nm,0.8s						
X40A	Basin Creek Fa	33.02	329	P	P	08 43 20.1	+1.8
X40A				IAmb	IAmb	08 43 21.1	
	comp=Z,10.0nm,1.1s						
BDFB	Brasilia	33.40	132	P	P	08 43 21.3	-0.6
	comp=Z,5.7nm,0.6s,baz=294,slow=12,SNR=13						
BDFB	Brasilia	33.40	132	P	P	08 43 22.3	+0.3
BDFB				IAmb	IAmb	08 43 23.1	
	comp=Z,7.2nm,0.7s						
ITRB	Iturama	34.58	140	eP	P	08 43 31.9	-0.1
IPMB	Ipameri, GO	34.80	135	eP	P	08 43 32.5	-1.4
PCMB	Pacaembu	35.45	143	eP	P	08 43 38.8	-0.6
PCMB				epP	pP	08 44 13.3	+0.1
TRCB	Terra Rica	35.60	146	eP	P	08 43 40.1	-0.5
TRCB				epP	pP	08 44 11.6	-3.1
NBPB	Pedra_Branca-C	35.63	109	eP	P	08 43 40.4	-0.7
SFIN	Lafayette	35.70	342	P	P	08 43 43.5	+2.3
JANB	Januaria	35.87	127	eP	P	08 43 42.7	-0.5
JANB				epP	pP	08 44 13.3	-3.5
CPUP	Villa Florida	36.33	156	P	P	08 43 42.4	-4.4
	comp=Z,2.9nm,0.9s,baz=354,slow=8.5,SNR=5.8						
CPUP	Villa Florida	36.33	156	P	P	08 43 43.6	-3.1
TXAR	Lajitas Array	36.48	312	P	P	08 43 49.8	+1.6
	comp=Z,2.8nm,0.5s,baz=128,slow=9.3,SNR=49						
TXAR				pP	pP	08 44 22.6	+1.2
	comp=Z,1.0nm,0.8s,baz=133,slow=10,SNR=2.6						
TXAR	Lajitas Array	36.48	312	P	P	08 43 50.2	+2.0
TX31	Lajitas Ar. Si	36.48	312	P	P	08 43 50.3	+2.1
TX31				IAmb	IAmb	08 43 50.7	
	comp=Z,3.7nm,0.7s						
TX32	Lajitas Array	36.48	312	P	P	08 43 50.2	+2.0
TX32				IAmb	IAmb	08 43 50.7	
	comp=Z,3.8nm,0.7s						
BB19B	Bebedouro	36.74	140	eP	P	08 43 49.9	-0.5
HPIG		36.84	307	P	P	08 43 53.4	+2.0
HPIG				IAmb	IAmb	08 43 53.9	
	comp=Z,8.8nm,1.2s						
NBMA	Muriti-CE	37.04	112	eP	P	08 43 52.6	-0.5
NBPN	Ponto Novo - B	37.16	118	eP	P	08 43 53.4	-0.7
FRTB	Fartura	37.78	143	eP	P	08 43 58.8	-0.4
NBTA	Tacaratu-PE	38.34	114	eP	P	08 44 03.4	-0.6
MNTX	Cornudas Mount	38.99	314	P	P	08 44 11.3	+2.2
MNTX				IAmb	IAmb	08 44 12.5	
	comp=Z,8.7nm,0.8s						
JFWS	Jewell Farm	39.01	340	P	P	08 44 10.7	+1.6
VAO	Valinhos	39.13	140	eP	P	08 44 09.8	-0.7
BSCB	Bom Sucesso	39.22	135	eP	P	08 44 11.9	+0.6
SPB	Sao Paulo	39.27	141	eP	P	08 44 10.8	-0.7
NBAN	Anadia - AL	40.18	114	eP	P	08 44 18.6	-0.7
D62A	Allapoint, All	40.28	4	P	P	08 44 22.0	+2.5
D62A				IAmb	IAmb	08 44 23.7	
	comp=Z,19nm,1.5s						
D53A	Lac Vacive, Po	40.32	355	P	P	08 44 22.3	+2.4
D53A				IAmb	IAmb	08 44 29.7	
	comp=Z,12nm,1.4s						
GO05	Huala	41.61	179	P	P	08 44 29.3	-1.3
GO05				IAmb	IAmb	08 44 36.5	
	comp=Z,22nm,1.3s						
EYMN	Ely	43.88	342	P	P	08 44 50.1	+1.4
EYMN				IAmb	IAmb	08 44 50.5	
	comp=Z,10nm,0.7s						
PV13	Radium Mtn., P	44.92	319	P	P	08 45 00.2	+2.8
PV13				IAmb	IAmb	08 45 00.6	
	comp=Z,7.4nm,0.7s						
PV03	Paradox Valley	44.99	319	P	P	08 45 00.1	+2.1
Y14A	Wickenburg	45.67	312	P	P	08 45 05.5	+2.3
Y14A				IAmb	IAmb	08 45 06.1	
	comp=Z,6.4nm,0.7s						
U15A	North Rim	46.34	315	P	P	08 45 08.6	0.0
ULM	Lac du Bonnet	47.30	340	P	P	08 45 16.1	+0.6
	comp=Z,6.4nm,0.5s,baz=144,slow=7.1,SNR=22						
ULM				pP	pP	08 45 50.1	0.0
	comp=Z,4.4nm,0.4s,baz=182,slow=11,SNR=6.0						
ULM	Lac du Bonnet	47.30	340	P	P	08 45 16.5	+1.0
ULM				IAmb	IAmb	08 45 17.0	
	comp=Z,6.4nm,0.6s						
PLCA	Paso Flores	47.37	177	P	P	08 45 14.7	-1.6
	comp=Z,1.7nm,0.6s,baz=261,slow=9.5,SNR=8.7						
PLCA	Paso Flores	47.37	177	P	P	08 45 14.9	-1.3
PLCA				IAmb	IAmb	08 45 16.0	
	comp=Z,11nm,1.4s						
SCHQ	Schefferville	48.15	5	P	P	08 45 21.8	-0.2
	comp=Z,3.1nm,0.5s,baz=196,slow=7.0,SNR=16						
SCHQ				pP	pP	08 45 57.0	-0.4
	comp=Z,5.0nm,0.8s,baz=175,slow=6.4,SNR=4.5						
SCHQ	Schefferville	48.15	5	P	P	08 45 23.9	+1.8
SHPR	Sheep Range	48.41	314	P	P	08 45 26.3	+1.7
BGU	Big Grassy Mou	49.16	320	P	P	08 45 32.2	+2.0
ELK	Elko	50.50	319	P	P	08 45 41.6	+1.2
	comp=Z,0.9nm,0.6s,baz=68,slow=7.5,SNR=4.1						
ELK	Elko	50.50	319	IAmb	IAmb	08 45 42.6	
	comp=Z,1.2nm,0.7s						
MCMT	McKenzie Canyo	51.24	324	P	P	08 45 48.6	+2.7
NV11	Mina Array Sit	51.40	315	P	P	08 45 49.4	+2.4
NVAR	Mina Array Bea	51.50	315	P	P	08 45 49.2	+1.3
	comp=Z,1.1nm,0.6s,baz=124,slow=7.4,SNR=12						
NVAR				pP	pP	08 46 25.0	+2.0
	comp=Z,0.7nm,0.8s,baz=139,slow=8.1,SNR=2.9						
NVAR	Mina Array Bea	51.50	315	P	P	08 45 49.5	+1.6
LRM	Limekiln Ridge	51.59	326	P	P	08 45 50.6	+2.2
MFID	Camas Ranch	52.24	321	P	P	08 45 55.4	+2.2
MFID				IAmb	IAmb	08 45 56.6	
	comp=Z,4.3nm,0.7s						
YERR	Yerington	52.40	315	P	P	08 45 56.8	+2.3
YERR				IAmb	IAmb	08 45 59.8	
	comp=Z,4.2nm,0.8s						
WVOR	Wild Horse Val	53.55	319	P	P	08 46 04.9	+2.1
WVOR				IAmb	IAmb	08 46 06.8	
	comp=Z,6.9nm,1.0s						
JTMT	Jette	53.75	327	P	P	08 46 06.4	+2.3
JTMT				IAmb	IAmb	08 46 06.9	
	comp=Z,4.8nm,0.9s						
F10A	Beach Ranch, E	54.44	323	P	P	08 46 10.5	+1.3
G08A	Pilot Rock	55.13	322	P	P	08 46 16.0	+1.9
G08A				IAmb	IAmb	08 46 16.6	
	comp=Z,5.9nm,0.7s						
NEW	Newport	55.61	326	P	P	08 46 18.7	+1.3
NEW				IAmb	IAmb	08 46 19.4	
	comp=Z,5.7nm,1.4s						
YBH	Yreka Blue Hor	55.96	317	P	P	08 46 19.8	-0.3
	comp=Z,1.7nm,0.5s,baz=140,slow=4.5,SNR=11						
FRB	Frobisher Bay	56.92	2	P	P	08 46 26.1	-0.2
	comp=Z,1.5nm,0.4s,baz=179,slow=7.7,SNR=16						
FRB				pP	pP	08 47 01.4	-1.5
	comp=Z,2.4nm,0.7s,baz=188,slow=5.3,SNR=4.0						
YKA	Yellowknife Ar	63.28	340	P	P	08 47 10.0	+0.3
	comp=Z,3.8nm,0.7s,baz=132,slow=7.2,SNR=63						

YKA				pP	pP	08 47 46.3	+0.2
	comp=Z,3.2nm,0.7s,baz=131,slow=7.5,SNR=5.1						
DLBC	Dease Lake	67.34	331	P	P	08 47 36.7	+0.7
	comp=Z,0.7nm,0.4s,baz=107,slow=3.5,SNR=7.1						
DLBC				pP	pP	08 48 13.5	+0.6
	comp=Z,2.5nm,0.7s,baz=137,slow=6.7,SNR=2.8						
TIC	Toumodi	67.56	86	*e*P	P	08 47 37.0	-1.2
LIC	Lamto	67.59	86	*e*P	P	08 47 37.5	-0.8
	comp=Z,11nm,0.7s						
DBIC	Dimbokro	67.72	86	P	P	08 47 38.2	-0.9
	comp=Z,1.2nm,0.4s,baz=247,slow=5.8,SNR=4.9						
KIC	Kosan Boka	67.86	86	*e*P	P	08 47 39.4	-0.6
	comp=Z,4.2nm,0.5s						
SUMG	Summit	69.00	11	*i* P	P	08 47 47.0	+0.5
	comp=Z,7.9nm,0.7s						
SUMG				*i*		08 48 23.9	
SUMG	Summit	69.00	11	P	P	08 47 47.5	+1.0
SUMG				IAmb	IAmb	08 47 49.5	
	comp=Z,6.7nm,1.1s						
INK	Inuvik	73.05	340	P	P	08 48 11.1	+0.7
	comp=Z,0.9nm,0.4s,baz=125,slow=2.7,SNR=9.2						
INK				pP	pP	08 48 47.5	-0.4
	comp=Z,1.3nm,0.6s,baz=68,slow=8.5,SNR=3.1						
INK	Inuvik	73.05	340	P	P	08 48 12.1	+1.7
CTGM	Chitina Glacie	73.59	332	P	P	08 48 16.7	+2.8
BCAR	Beaver Creek A	74.38	334	P	P	08 48 20.9	+2.5
DAG	Danmarks Havn	75.67	11	*i* P	P	08 48 26.1	+0.7
BMAR	Burnt Mountain	76.68	338	P	P	08 48 33.3	+1.9
ILAR	Eielson Array	76.98	335	P	P	08 48 34.1	+1.1
	comp=Z,0.3nm,0.5s,baz=118,slow=4.3,SNR=5.1						
ILAR				pP	pP	08 49 10.8	-0.1
	comp=Z,1.2nm,0.8s,baz=106,slow=4.3,SNR=5.9						
RND	Reindeer	77.57	333	P	P	08 48 38.8	+2.3
SUA	Susitna One	78.15	331	P	P	08 48 41.6	+1.8
PPLA	Purkeypile	79.00	333	P	P	08 48 45.8	+1.4
PPLA				IAmb	IAmb	08 48 46.5	
	comp=Z,6.5nm,1.1s						
SVW2	Sparrevohn	80.44	331	P	P	08 48 53.0	+0.9
SVW2				IAmb	IAmb	08 49 11.4	
	comp=Z,7.8nm,1.4s						
NB2	NORSAR Subarra	81.33	29	P	pP	08 49 36.3	+0.3
	comp=Z,4.5nm,1.2s,baz=268,slow=5.6						
NOA	NORSAR Array B	81.33	29	P	P	08 48 56.7	-0.1
	comp=Z,0.2nm,0.6s,baz=331,slow=22,SNR=1.7						
NOA				pP	pP	08 49 36.5	+0.5
	comp=Z,1.0nm,0.8s,baz=269,slow=5.5,SNR=4.3						
NOA				LR	LR	09 24 35.9	
	comp=Z,27nm,19.3s,baz=265,slow=35						
VNA3	Neumayer Olymp	88.16	163	P	P	08 49 29.9	-0.7
VNA2	Neumayer--Watz	88.68	163	P	P	08 49 32.4	-0.7
SNAA	Sanae	90.33	163	P	P	08 49 40.1	-0.7
ZALV	Zalesovo Beam	116.67	14	PKP	PKPdf	08 55 23.6	0.0
	comp=Z,0.8nm,0.4s,baz=3.9,slow=0.8,SNR=4.1						
ZALV	Zalesovo Beam	116.67	14		PKiKP	08 55 24.4	+0.8
MKAR	Makanchi Array	122.33	20	PKP	PKPdf	08 55 34.0	-0.7
	comp=Z,0.4nm,0.4s,baz=306,slow=2.4,SNR=9.5						
MKAR	Makanchi Array	122.33	20		PKPdf	08 55 34.1	-0.6
SONM	Songino Array	125.59	0	PKP	PKPdf	08 55 40.6	-0.5
	comp=Z,0.3nm,0.4s,baz=314,slow=2.3,SNR=2.7						
KSH	Kashi	125.75	29	PKP	PKPdf	08 55 40.0	-1.6
KSH				sPKP		08 56 40.0	
KSH				PP	PP	08 57 37.3	+2.5
KSH				PKS	PKSdf	08 59 16.0	-2.4
KSH				SKKS		09 04 12.3	
LZH	Lanzhou	137.24	4	⇑PKP	PKPdf	08 56 02.0	-1.5
LZH				pPKP	pPKPdf	08 56 41.5	-2.9
ASAR	Alice Springs	149.12	234	PKP	PKPdf	08 56 24.6	+0.1
	comp=Z,7.5nm,0.7s,baz=112,slow=1.6,SNR=79						
ASAR				PKPbc	PKPbc	08 56 28.4	-0.3
	comp=Z,7.7nm,0.5s,baz=119,slow=3.6,SNR=52						
ASAR	Alice Springs	149.12	234		PKPdf	08 56 23.8	-0.6
ASAR				PKPbc	PKPbc	08 56 28.4	-0.4
ASAR				PKPab	PKPab	08 56 33.4	0.0
WRA	Warramunga Arr	150.34	241	PKP	PKPdf	08 56 26.9	+0.5
	comp=Z,6.1nm,0.5s,baz=108,slow=2.8,SNR=61						
WRA				PKPbc	PKPbc	08 56 31.6	-0.2
	comp=Z,6.0nm,0.4s,baz=109,slow=2.7,SNR=40						
WRA	Warramunga Arr	150.34	241		PKPbc	08 56 31.8	0.0
CMAR	Chiang Mai Arr	153.70	17	PKP	PKPdf	08 56 31.9	+0.4
	comp=Z,0.6nm,0.3s,baz=320,slow=47,SNR=1.4						
CMAR				PKPbc	PKiKP	08 56 39.7	+0.3
	comp=Z,1.3nm,0.5s,baz=319,slow=3.4,SNR=5.8						
CMAR				pPKPbc	pPKPbc	08 57 20.5	0.0
	comp=Z,1.1nm,0.4s,baz=315,slow=2.8,SNR=2.8						

IDC ***30*** *08:42:35.3±0.8, 36°.13N×97°.55W, h0^{km}, mb3.9/5, mb1 4.0/10, mb1mx3.7/57, mbtmp3.8/10, ML4.2/4, MS3.3/12, Ms1 3.3/12, ms1mx3.0/49, Error ellipse: s-maj=13.4km s-min=10.2km az=162.0*

TUL ***30*** *08:42:36.4±0.7, 36°.14N±0°.02×97°.63W±0°.06, h2^{km}±7^{km}, ML4.0, mb4.2/28(NEIC), Mwr3.9/67(NEIC), Error ellipse: s-maj=6.7km s-min=2.3km az=69.0*

NEIC ***30*** *08:42:36.4±0.7, 36°.14N±0°.02×97°.64W±0°.05, h3^{km}±6^{km}, Error ellipse: s-maj=6.3km s-min=2.4km az=68.0*

NEIC ***30*** *08:42:36.8, 36°.14N×97°.62W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-1.19; M$_{θθ}$9.10; M$_{φφ}$-7.91; M$_{rθ}$1.79; M$_{θφ}$1.48; M$_{φr}$-3.09; Fault plane solution: M$_0$9.40000×10^{14} NP1:φ$_s$41.87000°, δ68.31000°, λ-170.16000°. NP2:φ$_s$308.20000°, δ80.86000°, λ-21.98000°. Principal axes: T 9.4565, Plg9.0000°, Azm357.0000°; N -0.1161, Plg66.0000°, Azm107.0000°; P -9.3404, Plg22.0000°, Azm263.0000°;*

ANF ***30*** *08:42:38.3±0.9, 36°.12N×97°.62W, h17^{km}±6^{km}, ML5.2/17 Error ellipse: s-maj=3.6km s-min=2.2km az=161.0*

ISC 30 08:42:36.0±0.5, **36°.17N**±0°.04×**97°.61W**±0°.03, **h10**^{km}**, n349,** σ1.^{s}**39**/349, **mb3.9**/5, **MS3.2**/5, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.55	160		Pg	08 42 46.9	+0.2
ADOK				Sg	Sg	08 42 54.6	+0.6
OK009	Oakdale Elemen	0.60	166		Pg	08 42 48.1	+0.3
OK005	Luther M Schoo	0.61	146		Pg	08 42 48.4	+0.4
OK001	Jones High Sch	0.66	157	Pg	Pg	08 42 49.1	+0.3
OKCFA	Oklahoma City	0.76	170		Pg	08 42 50.6	-0.1
OKCSW	OKLAHOMA CITY	0.77	170		Pg	08 42 50.9	-0.1
FNO	Franklin	0.93	169		Pg	08 42 53.8	0.0
U32A	Winter Ranch,	1.15	281		Pb	08 42 57.7	-0.3
T35A	Sooner Cattle	1.16	49		Pn	08 42 59.0	+0.7
W35A	Tecumseh	1.18	149		Pb	08 42 57.9	-0.6
TUL1	Leonard	1.49	99		Pb	08 43 03.8	-0.1
TUL1	Leonard	1.49	99	P	Pb	08 43 03.8	-0.1
	baz=279						
TUL1				S	Sg	08 43 24.6	+0.6
	baz=279						
WMOK	Wichita Mounta	1.72	214		Pn	08 43 06.7	+0.6
WMOK	Wichita Mounta	1.72	214	P	Pn	08 43 06.8	+0.7
	baz=34						
WMOK				S	Sb	08 43 29.3	-0.2
	baz=34						
R32A	Long Quarter,	2.42	339		Pn	08 43 17.4	+1.7
U38A	Gravette	2.62	83		Pn	08 43 20.1	+1.7
Z35A	Perchaven, San	2.85	174		Pn	08 43 23.1	+1.6
HHAR	Hobbs	2.97	87		Pn	08 43 25.1	+1.9
KSU1	Kansas State U	3.03	15	P	Pn	08 43 26.4	+2.2
	baz=195						
CBKS	Cedar Bluff	3.14	328		Pn	08 43 27.4	+1.8
CBKS	Cedar Bluff	3.14	328	P	Pn	08 43 27.3	+1.8
	baz=147						
W39A	Magazine	3.26	106		Pn	08 43 28.7	+1.5
W39A	Magazine	3.26	106	P	Pn	08 43 28.8	+1.5
	baz=288						
W39A				Sb	Sg	08 44 19.8	-1.0
	baz=288						
AMTX	Amarillo	3.56	250		Pn	08 43 32.3	+0.8
AMTX	Amarillo	3.56	250	P	Pn	08 43 33.1	+1.6
	baz=68						
Z38A	Mt. Pleasant	3.62	143		Pn	08 43 33.5	+1.3
MIAR	Mount Ida	3.67	115		Pn	08 43 34.8	+2.0
MIAR	Mount Ida	3.67	115	P	Pn	08 43 34.7	+1.8
	baz=297						
MIAR				S	Sn	08 44 18.7	+2.5
	baz=297						
S39A	Bolivar	3.75	65		Pn	08 43 36.1	+2.1
U40A	Yellville	3.85	86	Pn	Pn	08 43 36.7	+1.4
U40A	Yellville	3.85	86	P	Pn	08 43 36.4	+1.1
	baz=268						
ABTX	Abilene, Hawle	3.92	206		Pn	08 43 37.0	+0.7
ABTX	Abilene, Hawle	3.92	206	P	Pn	08 43 37.0	+0.7
	baz=25						
WHTX	Lake Whitney,	4.17	178		Pn	08 43 40.0	+0.3
WHTX	Lake Whitney,	4.17	178	P	Pn	08 43 40.6	+0.9
	baz=358						
WHTX				S	Sn	08 44 29.5	+1.0
	baz=358						
X40A	Basin Creek Fa	4.25	112		Pn	08 43 42.1	+1.3
X40A	Basin Creek Fa	4.25	112	P	Pn	08 43 42.4	+1.6
	baz=294						
MGMO	Mountain Grove	4.40	76		Pn	08 43 44.9	+1.9
WHAR	Wooly Hollow	4.41	100		Pn	08 43 43.7	+0.6
237A	Washetta, Mont	4.42	160		Pn	08 43 43.8	+0.7
WLAR	White Oak Lake	4.45	123		Pn	08 43 45.1	+1.6
FCAR	Ozark Folk Cen	4.45	92		Pn	08 43 44.8	+1.2
W41B	Gary Mavity, V	4.47	101		Pn	08 43 45.5	+1.5
W41B	Gary Mavity, V	4.47	101	P	Pn	08 43 45.0	+1.1
	baz=284						
W41B				S	Sn	08 44 36.9	+0.9
	baz=284						
UALR	University of	4.51	106		Pn	08 43 46.3	+1.8
N33A	J Bar K, Exete	4.56	1		Pn	08 43 45.8	+0.6
P38A	Dawn	4.72	42		Pn	08 43 49.5	+2.2
R40A	Maddies Statio	4.76	62	Pn	Pn	08 43 48.9	+1.1
MSTX	Muleshoe	4.77	244		Pn	08 43 48.6	+0.5
MSTX	Muleshoe	4.77	244	P	Pn	08 43 48.7	+0.6
	baz=61						
KSCO	Kaye Shedlock'	4.89	307		Pn	08 43 50.4	+0.6
Z41A	Richland Creek	4.91	125		Pn	08 43 50.8	+0.9
Z41A	Richland Creek	4.91	125	P	Pn	08 43 51.0	+1.1
	baz=307						
Z41A				S	Sn	08 44 47.4	+0.7
	baz=307						
N35A	Tabor	4.93	18		Pn	08 43 52.0	+1.8
NATX	Nacogdoches	5.03	150		Pn	08 43 52.4	+0.8
NATX	Nacogdoches	5.03	150	S	Sn	08 44 49.4	-0.4
	baz=332						
LCAR	Lake Charles	5.22	89		Pn	08 43 55.4	+1.2
BGNE	Belgrade	5.25	356		Pn	08 43 55.5	+0.9
BGNE	Belgrade	5.25	356	P	Pn	08 43 55.8	+1.2
	baz=175						
BGNE				S	Sn	08 44 55.2	0.0
	baz=175						
T42A	Van Buren	5.31	79		Pn	08 43 57.1	+1.7
435B	Jarrell	5.37	180		Pn	08 43 56.8	+0.5
435B	Jarrell	5.37	180	P	Pn	08 43 57.1	+0.8
	baz=360						
CCM	Cathedral Cave	5.42	68	Pn	Pn	08 43 59.5	+2.6
CCM	Cathedral Cave	5.42	68	P	Pn	08 43 58.3	+1.4
	baz=251						
CCM				S	Sn	08 44 59.5	+0.1
	baz=251						
T25A	Trinidad	5.55	282		Pn	08 43 59.9	+0.8
T25A	Trinidad	5.55	282	P	Pn	08 43 59.8	+0.8
	baz=98						
N38A	Joes South For	5.75	35	Pn	Pn	08 44 03.2	+1.7
L34A	Svendsen Farm,	5.87	9	Pn	Pn	08 44 03.5	+0.4
OGNE	Ogallala	5.90	325		Pn	08 44 05.7	+2.2
OGNE	Ogallala	5.90	325	P	Pn	08 44 05.7	+2.2
	baz=143						
LPAR	Lepanto	5.96	93		Pn	08 44 04.7	+0.4
JCT	Junction City	5.96	199		Pn	08 44 04.8	+0.4
143A	Socs Landing,	6.18	122		Pn	08 44 08.2	+0.8
SLM	Saint Louis	6.36	65		Pn	08 44 11.3	+1.4
HKT	Hockley	6.38	166		Pn	08 44 10.2	+0.2
342A	Flagon Creek P	6.50	136		Pn	08 44 13.5	+1.8
K31A	O'Neill	6.51	353		Pn	08 44 13.4	+1.6
SDCO	Great Sand Dun	6.51	286		Pn	08 44 14.4	+2.2
SDCO	Great Sand Dun	6.51	286	P	Pn	08 44 14.2	+2.0
	baz=102						
HENM	Henderson Moun	6.58	83		Pn	08 44 14.4	+1.5
SCIA	State Center	6.67	29		Pn	08 44 14.2	+0.2
HICK	Hickman	6.77	84		Pn	08 44 16.8	+1.3
S44A	Carbondale	6.86	75		Pn	08 44 18.2	+1.5
SIUC	Southern Illin	6.89	75		Pn	08 44 18.2	+1.1
OXF	Oxford	6.90	101		Pn	08 44 17.4	+0.2
OXF	Oxford	6.90	101	P	Pn	08 44 17.2	0.0
	baz=286						
W45A	Hickory Valley	6.93	96		Pn	08 44 18.8	+1.2
N41A	Harden Midland	6.97	47		Pn	08 44 19.8	+1.6
Y45A	Yeager Farm, C	7.00	107		Pn	08 44 19.9	+1.2
VBMS	Vicksburg	7.07	122		Pn	08 44 20.2	+0.7
T45A	Paducah	7.26	81	Pn	Pn	08 44 23.5	+1.3
P43A	Skaggs, Pawnee	7.27	59		Pn	08 44 23.8	+1.5
ISCO	Idaho Springs	7.29	302		Pn	08 44 24.1	+1.3
ISCO	Idaho Springs	7.29	302	P	Pn	08 44 23.9	+1.1
	baz=118						
735A	Kenedy	7.29	181		Pn	08 44 23.4	+0.7
ANMO	Albuquerque	7.32	263	Pn	Pn	08 44 25.6	+2.4
	0.2nm,0.3s,baz=70,slow=11,SNR=8.8						
ANMO				Pg	Pg	08 44 50.2	-5.9
	3.3nm,0.3s,baz=93,slow=17,SNR=20						
ANMO				Lg	Lg	08 46 24.4	
	5.2nm,0.3s,baz=138,slow=22,SNR=2.1						
ANMO				LR	LR	08 47 33.4	
	comp=Z,290nm,21.4s,baz=57,slow=40						
ANMO	Albuquerque	7.32	263		Pn	08 44 24.1	+0.9
Q44A	Meyer Farm, Va	7.35	66		Pn	08 44 25.1	+1.7
344A	Westbrook Farm	7.41	127	Pn	Pn	08 44 24.6	+0.5
K38A	Parkersburg	7.47	29		Pn	08 44 26.0	+0.9
S22A	4UR Ranch, Cre	7.55	285		Pn	08 44 27.6	+1.2
ECSD	EROS Data Cent	7.59	5		Pn	08 44 27.2	+0.4
ECSD	EROS Data Cent	7.59	5	P	Pn	08 44 26.7	0.0
	baz=186						
L40A	Anamosa	7.70	38		Pn	08 44 29.1	+0.9
MNTX	Cornudas Mount	7.85	238	Pn	Pn	08 44 30.9	+0.6
PLAL	Pickwick Lake	7.86	96		Pn	08 44 30.5	+0.1
HDIL	Hopedale	7.86	54		Pn	08 44 31.8	+1.3
HDIL	Hopedale	7.86	54	P	Pn	08 44 31.5	+1.1
	baz=239						
146A	Union	7.89	114		Pn	08 44 31.6	+0.7
WVT	Waverly	7.91	87		Pn	08 44 32.0	+0.9
833A	Chaparral WMA,	7.97	191	Pn	Pn	08 44 31.6	-0.3
OLIL	Olney	7.98	68		Pn	08 44 33.0	+0.9
PHWY	Pilot Hill	7.99	312		Pn	08 44 33.9	+1.4
N23A	Red Feather La	8.06	308	Pn	Pn	08 44 36.7	+3.3
N23A	Red Feather La	8.06	308	P	Pn	08 44 36.3	+2.9
	baz=124						
USIN	University of	8.15	74		Pn	08 44 35.9	+1.5
O44A	Mansfield	8.22	58		Pn	08 44 36.9	+1.5
SUSD	Miller	8.33	353	Pn	Pn	08 44 37.8	+0.9
Z47A	Carrollton	8.39	108	Pn	Pn	08 44 38.7	+1.0
L42A	Oliver, Polo	8.49	44		Pn	08 44 40.4	+1.4
T47A	Sharon Grove	8.49	81	Pn	Pn	08 44 39.9	+0.9
TX31	Lajitas Ar. Si	8.51	219		Pn	08 44 39.7	+0.2
TX32	Lajitas Array	8.51	219	Pn	Pn	08 44 40.4	+0.9
TXAR	Lajitas Array	8.51	219	Pn	Pn	08 44 38.5	-0.9
	0.5nm,0.3s,baz=40,slow=11,SNR=17						
TXAR				Lg	Lg	08 46 55.9	
	5.2nm,0.3s,baz=56,slow=18,SNR=5.5						
TXAR	Lajitas Array	8.51	219		Pn	08 44 39.9	+0.5
JFWS	Jewell Farm	8.81	38		Pn	08 44 44.5	+1.1
JFWS	Jewell Farm	8.81	38	P	Pn	08 44 44.4	+1.0
	baz=222						
P46A	Rosedale	8.91	64	Pn	Pn	08 44 46.2	+1.3
PV15	Paradox Valley	8.94	287	Pn	Pn	08 44 46.2	+0.8
M44A	Midewin, Midew	9.10	52		Pn	08 44 49.1	+1.7
WCI	Wyandotte Cave	9.26	74		Pn	08 44 51.0	+1.4
WCI	Wyandotte Cave	9.26	74	P	Pn	08 44 51.2	+1.6
	baz=260						
SFIN	Lafayette	9.27	60		Pn	08 44 50.6	+0.9
SFIN	Lafayette	9.27	60	P	Pn	08 44 51.4	+1.7
	baz=246						
BLO	Bloomington	9.29	68		Pn	08 44 50.9	+1.0
LRAL	Lakeview Retre	9.29	107	Pn	Pn	08 44 50.2	+0.2
LRAL	Lakeview Retre	9.29	107	P	Pn	08 44 50.2	+0.2
	baz=292						
RSSD	Black Hills	9.34	330		Pn	08 44 52.3	+1.4
RSSD	Black Hills	9.34	330	P	Pn	08 44 52.6	+1.7
	baz=146						
I40A	Norwalk	9.39	33		Pn	08 44 51.8	+0.4
K22A	Casper	9.46	316		Pn	08 44 53.8	+1.3
K22A	Casper	9.46	316	P	Pn	08 44 53.7	+1.3
	baz=130						
Y49A	Blount Mountai	9.47	101	Pn	Pn	08 44 53.7	+1.2
SWET	Sewanee	9.54	92	Pn	Pn	08 44 54.8	+1.3
U49A	Red Boiling Sp	9.55	84		Pn	08 44 55.4	+1.8
L44A	Lake County Fo	9.62	48	Pn	Pn	08 44 56.2	+1.6
K43A	Burlington	9.70	45	Pn	Pn	08 44 57.4	+1.8
T49A	Edmonton	9.75	81		Pn	08 44 58.0	+1.6
T49A	Edmonton	9.75	81	P	Pn	08 44 58.2	+1.9
	baz=268						
SPMN	Marine on St.	9.75	20		Pn	08 44 56.2	-0.1
Q48A	North Vernon	9.82	70	P	Pn	08 44 58.7	+1.4
	baz=257						
FPAL	Fort Paine	9.93	96	Pn	Pn	08 44 59.9	+1.0
S49A	Springfield	9.99	77	P	Pn	08 45 00.3	+0.7
	baz=264						
Z50A	Ashland	10.05	103	Pn	Pn	08 45 00.8	+0.4
R49A	Shelbyville	10.14	74	P	Pn	08 45 02.1	+0.5
	baz=262						
P48A	Milroy	10.18	68		Pn	08 45 02.3	+0.1
P48A	Milroy	10.18	68	P	Pn	08 45 02.0	-0.3
	baz=255						
I42A	Draeger Farm,	10.19	38		Pn	08 45 02.5	+0.2
250A	Grady	10.29	111	Pn	Pn	08 45 04.3	+0.6
N47A	Urbana	10.45	60		Pn	08 45 05.2	-0.7
N47A	Urbana	10.45	60	P	Pn	08 45 05.2	-0.7
	baz=247						
Q49A	Aurora	10.48	71	P	Pn	08 45 06.4	+0.1
	baz=258						
L46A	Eue Claire	10.55	53		Pn	08 45 07.8	+0.6
L46A	Eue Claire	10.55	53	P	Pn	08 45 07.4	+0.2
	baz=240						
O48A	Farmland	10.61	64	P	Pn	08 45 07.2	-0.9
	baz=251						
Z51A	Franklin	10.62	102		Pn	08 45 08.4	+0.2
E28A	Huff	10.65	348		Pn	08 45 07.7	-1.0
CPCT	Cooper Cave	10.65	90		Pn	08 45 10.0	+1.3
S50A	Richmond	10.68	78	P	Pn	08 45 09.6	+0.5
	baz=266						
G40A	Rib Lake	10.68	29		Pn	08 45 09.4	+0.3
M47A	Cromwell	10.69	57	P	Pn	08 45 09.0	-0.2
	baz=245						
P49A	Miami Univ. Ec	10.73	68	P	Pn	08 45 09.2	-0.6
	baz=256						
V51A	Loudon	10.75	88		Pn	08 45 11.2	+1.2
R50A	Paris	10.80	75		Pn	08 45 12.7	+2.0
T51A	Gray	11.02	82	P	Pn	08 45 14.9	+1.2
	baz=270						
Q50A	Georgetown	11.15	72	P	Pn	08 45 15.7	+0.2
	baz=260						
H43A	Windswept, Lux	11.18	39		Pn	08 45 16.0	+0.2
W52A	Murphy	11.19	91	Pn	Pn	08 45 17.8	+1.7
O49A	Covington	11.19	65		Pn	08 45 16.0	0.0
O49A	Covington	11.19	65	P	Pn	08 45 15.8	-0.3
	baz=253						
152A	Waverly Hall	11.20	104	Pn	Pn	08 45 17.3	+1.1
K46A	Dorr	11.22	51	P	Pn	08 45 16.1	-0.3
	baz=238						
TKL	Tuckaleechee C	11.23	89	Pn	Pn	08 45 15.4	-1.2
	0.6nm,0.3s,baz=224,slow=9.3,SNR=8.5						
TKL				Sn	Sn	08 47 20.3	-1.9
	1.7nm,0.3s,baz=59,slow=23,SNR=1.8						
TKL				Lg	Lg	08 48 24.7	
	2.6nm,0.3s,baz=171,slow=20,SNR=3.3						
TKL	Tuckaleechee C	11.23	89		Pn	08 45 18.0	+1.4
S51A	Beattyville	11.32	78	P	Pn	08 45 18.7	+0.9
	baz=267						
BW06	Boulder Array	11.34	309		Pn	08 45 19.4	+1.1
PD31	Pinedale Array	11.34	309		Pn	08 45 19.5	+1.2
PDAR	Pinedale Array	11.34	309	Pn	Pn	08 45 19.7	+1.4
	0.5nm,0.3s,baz=121,slow=14,SNR=18						
PDAR				Lg	Lg	08 48 34.0	
	4.2nm,0.3s,baz=108,slow=32,SNR=8.5						
PDAR				LR	LR	08 49 21.9	
	comp=Z,85nm,18.2s,baz=113,slow=36						
PDAR	Pinedale Array	11.34	309		Pn	08 45 20.2	+1.9
TZTN	Tazewell	11.34	84	Pn	Pn	08 45 19.3	+1.1
V52A	Sevierville	11.36	88	Pn	Pn	08 45 19.2	+0.9
M48A	Edgerton	11.37	58		Pn	08 45 19.9	+1.5
E38A	The Farm, Brul	11.37	22		Pn	08 45 17.7	-0.8
R51A	Hillsboro	11.38	75	P	Pn	08 45 19.7	+1.0
	baz=263						
P50A	Jamestown	11.44	68	P	Pn	08 45 18.5	-0.9
	baz=257						
N49A	Columbus Grove	11.53	62		Pn	08 45 20.0	-0.7
N49A	Columbus Grove	11.53	62	P	Pn	08 45 19.8	-0.8
	baz=250						
352A	Blakely	11.53	110	Pn	Pn	08 45 20.8	+0.1
TUC	Tucson	11.56	254	P	Pn	08 45 21.3	0.0
	baz=67						
Q51A	Peebles	11.67	72		Pn	08 45 22.9	+0.3
Q51A	Peebles	11.67	72	P	Pn	08 45 22.2	-0.4
	baz=260						
O50A	Cable	11.70	66	P	Pn	08 45 22.5	-0.6
	baz=254						
K47A	Vermontville	11.71	52	P	Pn	08 45 23.1	0.0
	baz=240						
I45A	Fountain	11.72	44	Pn	Pn	08 45 23.7	+0.4
S52A	Salyersville	11.73	78	P	Pn	08 45 24.5	+1.1
	baz=267						
L48A	N Adams	11.75	57	P	Pn	08 45 23.3	-0.4
	baz=245						
T52A	Hallie	11.79	81	P	Pn	08 45 25.0	+0.8
	baz=270						
COWI	Conover	11.79	30		Pn	08 45 23.6	-0.7
GOGA	Godfrey	11.95	99	Pn	Pn	08 45 27.8	+1.4
F42A	Maple Grove Fa	11.95	34		Pn	08 45 25.7	-0.7
P51A	Williamsport	11.97	70		Pn	08 45 27.8	+1.1
P51A	Williamsport	11.97	70	P	Pn	08 45 27.7	+1.1
	baz=258						
V53A	Saluda	12.01	88	Pn	Pn	08 45 28.6	+1.3
J47A	Sunmer	12.11	50		Pn	08 45 28.9	+0.3
J47A	Sunmer	12.11	50	P	Pn	08 45 28.7	+0.1
	baz=238						
HWUT	Hardware Ranch	12.15	301	Pn	Pn	08 45 28.9	-0.5
AGMN	Agassiz Nation	12.19	6	Pn	Pn	08 45 27.2	-2.4
AGMN	Agassiz Nation	12.19	6	P	Pn	08 45 27.0	-2.7
	baz=187						
H45A	Beulah	12.20	43	P	Pn	08 45 29.0	-0.8
	baz=230						
ACSO	Alum Creek Sta	12.20	66		Pn	08 45 29.3	-0.5
ACSO	Alum Creek Sta	12.20	66	P	Pn	08 45 29.1	-0.7
	baz=255						
N50A	Nevada	12.23	64	P	Pn	08 45 29.4	-0.8
	baz=252						
L49A	Milan	12.27	57	P	Pn	08 45 30.6	-0.1
	baz=246						
LAO	LASA Array	12.33	331	Pn	Pn	08 45 32.7	+1.1
K48A	Perry	12.34	53	P	Pn	08 45 31.5	-0.3
	baz=242						
AAM	Ann Arbor	12.42	56		Pn	08 45 33.5	+0.6
SNOW	Snow King Moun	12.45	310		Pn	08 45 33.0	-0.5
O51A	Pataskala	12.46	67	P	Pn	08 45 32.5	-0.8
	baz=256						
REDW	Red Top Meadow	12.46	309		Pn	08 45 32.5	-1.1
Q52A	Bidwell	12.49	73	P	Pn	08 45 33.9	+0.1
	baz=262						
M50A	Fremont	12.50	61		Pn	08 45 34.8	+0.8
M50A	Fremont	12.50	61	P	Pn	08 45 33.5	-0.4
	baz=250						
RLMT	Red Lodge	12.57	319		Pn	08 45 33.8	-1.4
RLMT	Red Lodge	12.57	319	P	Pn	08 45 33.5	-1.7
	baz=132						
TPAW	Teton Pass	12.59	310		Pn	08 45 33.6	-1.8
EYMN	Ely	12.61	19	Pn	Pn	08 45 33.5	-1.9
EYMN	Ely	12.61	19	P	Pn	08 45 33.2	-2.2
	baz=203						
R53A	Hurricane	12.66	76	Pn	Pn	08 45 36.8	+0.6
G45A	Suttons Bay	12.68	42		Pn	08 45 36.3	-0.1
P52A	Corning	12.70	70	P	Pn	08 45 36.5	-0.3
	baz=259						
FXWY	Fox Creek	12.71	310		Pn	08 45 34.4	-2.6
I47A	Gladwin	12.72	48		Pn	08 45 37.8	+0.9
I47A	Gladwin	12.72	48	P	Pn	08 45 37.5	+0.6
	baz=236						
U54A	Nelsons Funny	12.74	84	Pn	Pn	08 45 38.0	+0.7
U54A	Nelsons Funny	12.74	84	P	Pn	08 45 38.2	+0.9
	baz=273						
K49A	Clarkson	12.77	55	P	Pn	08 45 37.0	-0.6
	baz=243						
J48A	Bridge Port	12.79	52		Pn	08 45 37.3	-0.6
J48A	Bridge Port	12.79	52	P	Pn	08 45 37.1	-0.8
	baz=241						
IMW	Indian Meadow	12.79	311		Pn	08 45 35.2	-3.0
D41A	Chassel	12.80	29		Pn	08 45 36.1	-1.9
YMP	Mirror Lake Pl	12.82	316		Pn	08 45 39.7	+1.1
N51A	Ashland	12.83	64		Pn	08 45 38.9	+0.4
N51A	Ashland	12.83	64	P	Pn	08 45 38.6	+0.1
	baz=253						
YNE	Yellowstone No	12.90	317		Pn	08 45 36.8	-2.9
E43A	Lone Tree Farm	12.94	35		Pn	08 45 37.4	-2.5
O52A	Adamsville	13.02	68	Pn	Pn	08 45 41.6	+0.4
Q53A	Leroy	13.05	73	P	Pn	08 45 40.7	-0.7
	baz=263						
GLMI	Grayling	13.12	45		Pn	08 45 41.4	-1.0
S54A	Dingess, Beckl	13.13	78		Pn	08 45 42.5	-0.2
DGMT	Dagmar	13.22	340	Pn	Pn	08 45 42.7	-1.1
H47A	Mio	13.22	46	P	Pn	08 45 42.4	-1.4
	baz=235						

GCMT	Greycliff	13.23	320		Pn	08 45 38.8	-5.2
J49A	Marlette	13.24	53	P	Pn	08 45 42.8	-1.2
	baz=242						
YMR	Madison River	13.24	314		Pn	08 45 40.0	-4.3
P53A	Whipple	13.24	71		Pn	08 45 43.1	-1.0
P53A	Whipple	13.24	71	P	Pn	08 45 42.9	-1.2
	baz=260						
YHH	Holmes Hill	13.24	315		Pn	08 45 40.1	-4.3
V55A	Taylorsville	13.28	87	Pn	Pn	08 45 45.4	+0.8
G46A	Petoskey	13.29	43	P	Pn	08 45 42.5	-2.1
	baz=231						
I48A	Sherman Twp	13.30	49	P	Pn	08 45 43.7	-1.1
	baz=238						
YHL	Hebgen Lake	13.47	314		Pn	08 45 41.9	-5.6
O53A	New Philadelph	13.52	68	P	Pn	08 45 46.6	-1.3
	baz=258						
Q54A	Coxs Mills	13.60	73	Pn	Pn	08 45 49.9	+1.0
I49A	Point Hope	13.71	51	Pn	Pn	08 45 49.5	-0.9
M52A	Chesterland	13.75	62	Pn	Pn	08 45 50.2	-0.8
G47A	Hillman	13.76	45	P	Pn	08 45 48.6	-2.5
	baz=234						
H48A	Harrisville	13.80	48	Pn	Pn	08 45 50.9	-0.8
BLA	Blacksburg	13.84	81	Pn	Pn	08 45 52.5	+0.2
N53A	Lisbon	13.92	66		Pn	08 45 51.5	-1.9
N53A	Lisbon	13.92	66	P	Pn	08 45 51.3	-2.1
	baz=256						
R55A	Marlinton	14.10	76	Pn	Pn	08 45 55.4	-0.5
ULM	Lac du Bonnet	14.13	5	Lg	Lg	08 49 57.3	
	1.9nm,0.3s,baz=270,slow=11,SNR=5.0						
ULM				LR	LR	08 51 34.6	
	comp=Z,142nm,18.4s,baz=124,slow=38						
ULM	Lac du Bonnet	14.13	5	Pn	Pn	08 45 52.1	-4.1
O54A	Avella	14.13	68	Pn	Pn	08 45 56.5	+0.2
E46A	Sault Ste Mari	14.26	40		Pn	08 45 55.0	-2.9
MCWV	Mont Chateau	14.45	71	Pn	Pn	08 45 59.3	-1.3
ELK	Elko	14.55	294	LR	LR	08 51 11.6	
	comp=Z,80nm,19.6s,baz=80,slow=35						
N54A	Moraine State	14.59	66	Pn	Pn	08 46 00.0	-2.4
N54A	Moraine State	14.59	66	P	Pn	08 45 59.8	-2.7
	baz=256						
ALLY	Alegheny Colle	14.65	63	Pn	Pn	08 46 03.8	+0.4
L53A	Girard	14.65	62	P	Pn	08 46 03.6	+0.2
	baz=252						
R56A	Bull Pasture M	14.66	76	P	Pn	08 46 02.1	-1.5
	baz=267						
T57A	Hurt	14.77	81	Pn	Pn	08 46 04.9	-0.1
I51A	Listowel	14.81	54	P	Pn	08 46 02.8	-2.7
	baz=244						
E47A	Iron Bridge	14.86	42	P	Pn	08 46 03.0	-3.1
	baz=231						
EGMT	Eagleton	14.87	327		Pn	08 46 06.5	+0.2
EGMT	Eagleton	14.87	327	P	Pn	08 46 05.7	-0.6
	baz=139						
Q56A	Snyder Ridge,	14.88	73	Pn	Pn	08 46 04.4	-2.1
M54A	Oil Creek Stat	14.96	64	Pn	Pn	08 46 05.4	-2.1
M54A	Oil Creek Stat	14.96	64	P	Pn	08 46 05.0	-2.5
	baz=255						
V58A	Windy Hill, Pi	14.98	86	Pn	Pn	08 46 09.7	+1.8
S57A	Dark Hollow, R	15.00	78	Pn	Pn	08 46 10.1	+2.0
N55A	Marion Center	15.29	67	P	Pn	08 46 10.1	-1.8
	baz=258						
D47A	Chapleau	15.33	40	P	Pn	08 46 08.6	-3.9
	baz=230						
R57A	Stanardsville	15.35	76	P	Pn	08 46 08.2	-4.6
	baz=268						
E48A	Lockeyer	15.49	44	P	Pn	08 46 10.9	-3.5
	baz=234						
O56A	Blue Knob Stat	15.51	69	Pn	Pn	08 46 13.5	-1.4
O56A				IAmb	IAmb	08 46 19.0	
	comp=Z,20nm,1.5s						
M55A	Ridgway	15.60	64	Pn	Pn	08 46 13.8	-2.2
PFO	Pinyon Flats O	15.68	266	LR	LR	08 52 33.7	
	comp=Z,134nm,19.4s,baz=140,slow=38						
S58A	Poland Farm, P	15.72	79	Pn	Pn	08 46 16.9	-0.6
S58A				IAmb	IAmb	08 46 31.0	
	comp=Z,25nm,1.4s						
P57A	Homestead Farm	15.83	72	Pn	Pn	08 46 18.7	-0.3
R58B	Mineral	15.85	78	Pn	Pn	08 46 19.7	+0.5
R58B				IAmb	IAmb	08 46 22.7	
	comp=Z,22nm,1.3s						
WVNY	West Valley, N	15.96	61	Pn	Pn	08 46 19.6	-1.1
M56A	Emporium	16.03	65	Pn	Pn	08 46 19.2	-2.3
M56A				IAmb	IAmb	08 46 20.2	
	comp=Z,27nm,1.2s						
SSPA	Standing Stone	16.08	68	Pn	Pn	08 46 19.9	-2.3
SSPA				IAmb	IAmb	08 46 27.4	
	comp=Z,32nm,1.4s						
T59A	Double "B" Far	16.13	81	Pn	Pn	08 46 22.3	-0.5
SADO	Sadowa	16.44	53	Pn	Pn	08 46 23.9	-2.9
	comp=Z,0.4nm,0.3s,baz=301,slow=1.5,SNR=3.5						
SADO				Lg	Lg	08 51 04.1	
	comp=Z,2.0nm,0.3s,baz=286,slow=13,SNR=9.3						
F51A	Arnstein	16.50	48	P	Pn	08 46 25.8	-1.7
	baz=240						
NVAR	Mina Array Bea	16.62	284	LR	LR	08 53 08.6	
	comp=Z,137nm,18.0s,baz=11,slow=38						
L56A	Greenwood	16.64	63	Pn	Pn	08 46 29.0	-0.4
L56A				IAmb	IAmb	08 46 29.1	
	comp=Z,13nm,1.0s						
SDMD	Soldier's Deli	16.73	73	Pn	Pn	08 46 29.0	-1.5
N58A	Sunbury	17.00	68	Pn	Pn	08 46 32.2	-1.6
N58A				IAmb	IAmb	08 46 50.8	
	comp=Z,23nm,1.2s						
DELO	Deloro Mine	17.34	55	Pn	Pn	08 46 38.4	+0.3
DELO				IAmb	IAmb	08 46 51.7	
	comp=Z,29nm,1.5s						
BINY	Binghamton	17.79	64		Pn	08 46 42.8	-0.9
BINY				IAmb	IAmb	08 46 53.5	
	comp=Z,19nm,1.4s						
KSPA	Keystone Colle	17.82	66	P	Pn	08 46 42.3	-1.8
PLVO	Plevna	17.89	54		Pn	08 46 43.2	-1.8
PLVO				IAmb	IAmb	08 46 51.6	
	comp=Z,24nm,1.4s						
J57A	Williamstown	18.09	60	P	Pn	08 46 46.9	-0.4
K58A	Earlville	18.16	62	P	Pn	08 46 47.6	-0.7
K58A				IAmb	IAmb	08 46 59.3	
	comp=Z,25nm,1.2s						
D53A	Lac Vacive, Po	18.39	48	P	Pn	08 46 50.1	-1.0
L59A	Walton	18.48	64	P	Pn	08 46 52.6	+0.5
L59A				IAmb	IAmb	08 47 10.4	
	comp=Z,12nm,1.0s						
J58A	Remsen	18.57	60	P	P	08 46 53.3	+0.2
ODNJ	Ogdensburg	18.61	68	P	P	08 46 52.3	-1.2
FFC	Flin Flon	18.80	352	P	Pn	08 46 57.3	+1.3
VLDQ	Val d'Or	19.06	45	P	P	08 46 57.1	-1.3
J59A	Piesco	19.15	61	P	Pn	08 47 00.7	+0.4
J59A				IAmb	IAmb	08 47 17.3	
	comp=Z,20nm,1.2s						
CMIG	Matias Romero	19.16	172	LR	LR	08 56 03.1	
	comp=Z,57nm,19.1s,baz=360,slow=42						
NCB	Newcomb	19.48	59	P	P	08 47 03.5	+0.5
NCB				IAmb	IAmb	08 47 08.8	
	comp=Z,11nm,1.1s						
KSCT	Kent School, K	19.54	66		Pn	08 47 05.9	+1.0
ACCN	Adirondack Com	19.72	61	P	Pn	08 47 06.9	-0.2
YBH	Yreka Blue Hor	20.27	294	LR	LR	08 55 07.8	
	comp=Z,68nm,21.2s,baz=118,slow=37						
APG	El Apazote	22.02	161	P	P	08 47 30.6	-0.3
	comp=Z,2.4nm,0.5s,baz=294,slow=13,SNR=2.4						
BBB	Bella Bella	26.84	316	LR	LR	08 58 33.9	
	comp=Z,80nm,18.7s,baz=150,slow=36						
JTS	Las Juntas de	28.20	153	LR	LR	09 00 32.0	
	comp=Z,30nm,21.6s,baz=38,slow=38						
YKA	Yellowknife Ar	28.40	343	P	P	08 48 31.5	+1.3
	comp=Z,0.2nm,0.3s,baz=337,slow=24,SNR=4.5						
YKA				LR	LR	09 00 21.3	
	comp=Z,60nm,19.7s,baz=0.0,slow=38						
DLBC	Dease Lake	30.80	327	P	P	08 48 54.9	+3.2
	comp=Z,1.4nm,0.7s,baz=108,slow=0.7,SNR=9.1						
INK	Inuvik	37.90	339	LR	LR	09 06 06.1	
	comp=Z,122nm,18.6s,baz=104,slow=37						
ILAR	Eielson Array	40.79	330	P	P	08 50 19.1	+2.0
	comp=Z,0.9nm,0.8s,baz=106,slow=6.7,SNR=6.5						
FINES	FINESS Array B	72.56	25	P	P	08 54 02.6	-0.3
	comp=Z,1.2nm,0.8s,baz=309,slow=8.8,SNR=1.7						
HHC	Hu-ho-hao-te	98.81	338	*e*P	P	08 56 14.5	-1.8

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*IDC **30** 08:42:59.6±1.8, 7°.84N×93°.76E, h0km, mb3.6/6, mb1 3.8/8, mb1mx3.6/43, mbtmp3.6/8, ML3.1/1, MS3.4/2, Ms1 3.4/2, ms1mx2.7/35, Error ellipse: s-maj=64.8km s-min=21.1km az=61.0*

ISC 30 08:43:02.6±1.4**, 7°.9N**±0°.1×**93°.8E**±0°.3**, h18km, n9,** σ**0ˢ.81**/8**,**
mb3.5/6**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	7.21	134	Pn	Pn	08 44 48.0	+0.7
	0.3nm,0.3s,baz=170,slow=13,SNR=2.0						
CMAR	Chiang Mai Arr	11.66	25	Pn	Pn	08 45 48.6	+0.3
	baz=208,slow=14,SNR=9.6						
CMAR				LR	LR	08 50 01.3	
	comp=Z,31nm,18.6s,baz=200,slow=36						
MKAR	Makanchi Array	40.00	348	P	P	08 50 36.7	+0.4
	0.4nm,0.7s,baz=162,slow=8.4,SNR=4.6						
SONM	Songino Array	41.24	13	P	P	08 50 46.1	-0.6
	0.4nm,0.7s,baz=184,slow=8.7,SNR=2.8						
ZALV	Zalesovo Beam	46.50	353	P	P	08 51 28.7	0.0
	0.7nm,0.4s,baz=149,slow=6.9,SNR=4.2						
WRA	Warramunga Arr	48.58	125	P	P	08 51 44.0	-1.4
	0.8nm,1.0s,baz=304,slow=9.1,SNR=2.0						
ASAR	Alice Springs	50.22	130	P	P	08 51 57.9	0.0
	0.1nm,0.4s,baz=295,slow=6.5,SNR=1.9						
ASAJ	Asahikawa	55.66	41	LR	LR	09 17 07.7	
	comp=Z,163nm,21.1s,baz=326,slow=37						
FINES	FINESS Array B	72.52	332	P	P	08 54 28.5	+0.3
	2.8nm,0.9s,baz=96,slow=5.0,SNR=1.7						

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*ISU **30** 09:09:18.0, 40°.30N×73°.20E, h5km*
*SOME **30** 09:09:20.1, 40°.42N×73°.57E, h5km*
*KRNET **30** 09:09:20.2±0.1, 40°.38N×73°.67E, h15km, mb3.0*
*NNC **30** 09:09:22.6±1.4, 40°.51N×73°.55E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=10.9km s-min=7.8km az=166.0*

ISC 30 09:09:21.6±1.1**, 40°.44N**±0°.05×**73°.55E**±0°.03**, h10km, n53,**
σ**1ˢ.72**/82**, 20C-16D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.98	334	⇑*i*P	Pn	09 09 41.0	-0.6
	baz=31						
ARSB				⇑*i*S	Sn	09 09 55.9	+0.3
	baz=31						
ARSB	Arslanbob	0.98	334	*e*P	Pg	09 09 38.9	-1.6
ARSB				*e*S	Sb	09 09 54.1	+0.2
ARLS	Aral	1.54	22	⇑*i*P	Pn	09 09 49.4	+0.2
	baz=18						
ARLS				⇑*i*S	Sg	09 10 11.0	0.0
	baz=18						
AML	Almayashu	1.69	4	⇓*i*P	Pb	09 09 52.8	-0.3
	baz=1.0						
AML				⇓*i*S	Sg	09 10 16.5	+0.4
	baz=1.0						
AML	Almayashu	1.69	4	P	Pb	09 09 52.8	-0.3
	SNR=152						
ARK	Arkit	1.81	319	⇓*i*P	Pg	09 09 55.5	-0.8
	baz=18						
ARK				⇓*i*S	Sg	09 10 21.4	+1.6
	baz=18						
ARK	Arkit	1.81	319	*e*P	Pb	09 09 54.1	-0.8
ARK				*e*S	Sg	09 10 19.0	-0.8
UCH	Uchtor	1.93	22	⇑*i*P	Pb	09 09 56.8	-0.3
	baz=19						
UCH				⇑*i*S	Sg	09 10 23.4	-0.2
	baz=19						
UCH	Uchtor	1.93	22	P	Pb	09 09 57.0	-0.1
	SNR=24						
KZA	Kyzart	2.08	38	⇑*i*P	Pb	09 09 58.7	-0.9
	baz=35						
KZA				⇑*e*S	Sb	09 10 26.6	+0.9
	baz=35						
KZA	Kyzart	2.08	38	P	Pb	09 09 60.0	+0.3
	SNR=15						
BTK	Batken	2.12	261	⇓*i*P	Pb	09 10 00.1	-0.1
	baz=62						
BTK				⇓*i*S	Sg	09 10 29.4	-0.4
	baz=62						
BTK	Batken	2.12	261	*i* P	Pn	09 09 57.5	+0.3
BTK				*i* S	Sb	09 10 25.2	-1.4
EKS2	Erkin-Say	2.23	4	⇑*i*P	Pb	09 10 00.9	-1.1
	baz=2.0						
EKS2				⇑*i*S	Sb	09 10 30.9	+1.2
	baz=2.0						
EKS2	Erkin-Say	2.23	4	P	Pb	09 10 02.0	0.0
	SNR=6.3						
AAK	Ala-Archa	2.31	18	⇑*i*P	Pb	09 10 02.0	-1.4
	baz=15						
AAK				⇑*i*S	Sb	09 10 32.5	+0.5
	baz=15						
AAK	Ala-Archa	2.31	18	P	Pb	09 10 03.1	-0.3
	SNR=16						
AAK	Ala-Archa	2.31	18	⇓Pn	Pb	09 10 02.8	-0.6
	5.8nm,0.3s						
AAK				⇓Lg	Lg	09 10 35.2	
	25nm,0.7s						
MRKS	Merke	2.32	354	*e*P	Pb	09 10 03.3	-0.2
	19nm,0.3s						
MRKS				*e*S	Sg	09 10 35.5	-0.5
	23nm,0.3s						
MRKS	Merke	2.32	354	Pg	Pb	09 10 03.5	0.0
	19nm,0.3s						
MRKS				Lg	Lg	09 10 35.9	
	23nm,0.3s						
KBK	Karagaybulak	2.45	25	⇑*i*P	Pb	09 10 03.8	-2.0
	baz=23						
KBK				⇑*i*S	Sb	09 10 35.7	-0.5
	baz=23						
KBK	Karagaybulak	2.45	25	P	Pb	09 10 06.8	+0.9
	SNR=16						
CHMS	Chumysh	2.71	19	⇑Pg	Pb	09 10 08.1	-2.0
	3.2nm,0.5s						
CHMS				⇓Lg	Lg	09 10 46.5	
	10nm,0.6s						
ULHL	Ulahol	2.71	47	⇑*i*P	Pn	09 10 07.1	+1.7
	baz=45						
ULHL				⇑*i*S	Sb	09 10 41.5	-2.3
	baz=45						
ULHL	Ulahol	2.71	47	P	Pb	09 10 11.2	+0.8
	SNR=5.2						
BOOM	Boomskoye usch	2.73	40	⇓*i*P	Pn	09 10 07.2	+1.6
	baz=38						
BOOM				⇓*i*S	Sb	09 10 41.8	-2.3
	baz=38						
USP	Ospenovka	2.91	14	⇑*e*P	Pn	09 10 10.4	+2.4
	baz=12						
USP				⇑*i*S	Sb	09 10 47.0	-2.3
	baz=12						
USP	Ospenovka	2.91	14	P	Pb	09 10 15.1	+1.4
	SNR=6.8						
TKM2	Tokmak 2	2.92	31	⇓*i*P	Pn	09 10 10.2	+2.0
	baz=29						
TKM2				⇓*i*S	Sn	09 10 46.6	+3.2
	baz=29						
TKM2	Tokmak 2	2.92	31	P	Pb	09 10 12.0	-1.8
	SNR=9.6						
SGDS	Sogindy	3.12	15	Pg	Pb	09 10 17.9	+0.8
	5.9nm,0.3s						
SGDS				Lg	Lg	09 10 59.9	
	8.7nm,0.6s						
KST	Kastek	3.17	34	*e*P	Pb	09 10 19.2	+1.2
	4.4nm,0.2s						
KST				*e*S	Sg	09 11 01.8	-1.5
	12nm,0.3s						
KST	Kastek	3.17	34	Pg	Pb	09 10 19.2	+1.2
	4.4nm,0.2s						
KST				Lg	Lg	09 11 01.8	
	12nm,0.3s						
KDJ	Kajisay	3.22	57	⇓*i*P	Pn	09 10 13.4	+1.1
	baz=56						
KDJ				⇓*i*S	Sn	09 10 52.7	+1.9
	baz=56						
DGS	Degeres	3.26	30	*e*P	Pb	09 10 20.4	+0.9
	4.2nm,0.2s						
DGS				*e*S	Sg	09 11 03.6	-2.5
	8.6nm,0.5s						
DGS	Degeres	3.26	30	Pg	Pb	09 10 20.4	+0.9
	4.2nm,0.2s						
DGS				Lg	Lg	09 11 03.6	
	8.6nm,0.5s						
IZV	Izvestkoviy	3.46	40	*e*P	Pb	09 10 24.9	+1.8
	6.8nm,0.5s						
IZV				*e*S	Sg	09 11 11.9	-0.9
	23nm,0.6s						
IZV	Izvestkoviy	3.46	40	Pg	Pb	09 10 24.9	+1.8
	6.8nm,0.5s						
IZV				Lg	Lg	09 11 11.9	
	23nm,0.6s						
KK31	Karatay Array	3.50	321	⇑Pg	Pb	09 10 25.1	+1.5
	0.4nm,0.3s,baz=142,slow=16,SNR=11						
KK31				⇓Lg	Lg	09 11 10.9	
	2.9nm,0.3s,baz=136,slow=28,SNR=6.8						
KRBS	Karabastau	3.62	25	*e*P	Pb	09 10 27.3	+1.7
	4.3nm,0.4s						
KRBS				*e*S	Sg	09 11 16.3	-1.5
	5.2nm,0.5s						
KRBS	Karabastau	3.62	25	Pg	Pb	09 10 27.3	+1.7
	4.3nm,0.4s						
KRBS				Lg	Lg	09 11 16.3	
	5.2nm,0.5s						
MDOK	Medeo	3.77	43	*e*P	Pb	09 10 30.5	+2.1
	3.1nm,0.3s						
MDOK				*e*S	Sg	09 11 20.6	-2.2
	8.5nm,0.6s						
MDOK	Medeo	3.77	43	Pg	Pg	09 10 31.1	-2.7
	3.6nm,0.7s						
MDOK				Lg	Lg	09 11 20.3	
	11nm,0.7s						
KTBS	Karatobe	4.02	34	*e*P	Pb	09 10 34.6	+2.1
	2.4nm,0.3s						
KTBS				*e*S	Sg	09 11 28.1	-2.4
	9.5nm,0.4s						
KTBS	Karatobe	4.02	34	Pg	Pb	09 10 34.6	+2.1
	2.4nm,0.3s						
KTBS				Lg	Lg	09 11 28.1	
	9.5nm,0.4s						
KUU	Kurty	4.03	30	*e*P	Pb	09 10 35.1	+2.5
	4.4nm,0.2s						
KUU				*e*S	Sg	09 11 29.1	-1.7
	11nm,0.6s						
KUU	Kurty	4.03	30	Pg	Pb	09 10 35.1	+2.5
	4.4nm,0.2s						
KUU				Lg	Lg	09 11 29.1	
	11nm,0.6s						
CHKK	Chushkaly	4.26	36	*e*P	Pb	09 10 39.4	+2.8
	1.8nm,0.2s						
CHKK				*e*S	Sg	09 11 36.5	-1.9
	7.1nm,0.3s						
CHKK	Chushkaly	4.26	36	Pg	Pb	09 10 39.4	+2.8
	1.8nm,0.2s						
CHKK				Lg	Lg	09 11 36.5	
	7.1nm,0.3s						
BTLS	Baital	4.61	4	*e*P	Pb	09 10 45.7	+3.1
	0.7nm,0.5s						
BTLS				*e*S	Sg	09 11 47.4	-2.3
	3.1nm,0.6s						
BTLS	Baital	4.61	4	Pg	Pb	09 10 45.7	+3.1
	0.7nm,0.5s						
BTLS				Lg	Lg	09 11 47.4	
	3.1nm,0.6s						
ARXS	Arharly	4.93	39	*e*P	Pb	09 10 51.0	+3.0
	1.7nm,0.7s						
ARXS				*e*S	Sg	09 11 56.1	-3.6
	5.3nm,0.5s						
ARXS	Arharly	4.93	39	Pg	Pb	09 10 51.0	+3.0
	1.7nm,0.7s						
ARXS				Lg	Lg	09 11 56.1	
	5.3nm,0.5s						

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*IDC **30** 09:21:43.3±2.5, 4°.19S×128°.45E, h301km±33km, mb3.0/4, mb1 3.3/6, mb1mx2.9/42, mbtmp3.9/6, Error ellipse: s-maj=45.5km s-min=13.0km az=66.0*

ISC 30 09:21:42.7±0.9**, 4°.23S**±0°.09×**128°.3E**±0°.1**, h300km, n7,**
σ**1ˢ.45**/9**, mb3.4**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.44	41	P	Pn	09 22 53.8	-0.2
	21nm,0.3s,baz=167,slow=22,SNR=35						
SIJI				S	S	09 23 49.7	-1.4
	5.9nm,0.3s,baz=187,slow=23,SNR=6.0						
FITZ	Fitzroy Crossi	14.03	191	P	P	09 24 46.6	-2.6
	0.2nm,0.3s,baz=23,slow=8.0,SNR=1.7						
WRA	Warramunga Arr	16.68	160	P	P	09 25 18.7	+0.5
	1.0nm,0.3s,baz=340,slow=11,SNR=77						
ASAR	Alice Springs	20.06	165	P	P	09 25 54.8	+0.4
	0.7nm,0.3s,baz=345,slow=11,SNR=34						
ASAR				S	S	09 29 23.4	+1.1
	0.6nm,0.6s,baz=350,slow=22,SNR=6.0						
STKA	Stephens Creek	30.19	157	P	P	09 27 27.0	+1.1
	0.4nm,0.3s,baz=313,slow=7.0,SNR=4.7						
CMAR	Chiang Mai Arr	36.70	309	P	P	09 28 22.4	+0.3
	0.7nm,0.3s,baz=130,slow=6.9,SNR=4.2						
MKAR	Makanchi Array	65.02	327	P	P	09 31 52.3	+1.0
	0.3nm,0.5s,baz=112,slow=8.2,SNR=4.5						

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*IDC **30** 09:22:16.2±3.0, 53°.58N×166°.95W, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.3/50, mbtmp3.5/5, ML3.2/1, Error ellipse: s-maj=52.0km s-min=43.4km az=55.0*
*NEIC **30** 09:22:29.9±1.7, 53°.72N±0°.09×165°.64W±0°.09, h60km±8km, Error ellipse: s-maj=14.4km s-min=4.3km az=150.0*
*AEIC **30** 09:22:29.8±2.6, 53°.75N±0°.09×165°.66W±0°.09, h56km±7km, ML3.6/36, mb3.5/8(NEIC), Error ellipse: s-maj=14.9km s-min=4.6km az=154.0*

ISC 30 09:22:28.0±1.4**, 53°.58N**±0°.07×**165°.40W**±0°.04**,**
h31km±11km**, n82,** σ**1ˢ.62**/84**, mb3.5**/4**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKSA	Akutan Strait	0.58	343		Pn	09 22 40.3	+0.3
AKSA	Akutan Strait	0.58	343		Pn	09 22 40.3	+0.3
AKSA					Sn	09 22 48.7	+0.3
AKUT	Akutan	0.59	339		Pn	09 22 40.8	+0.5
AKUT				Sn	Sn	09 22 48.9	+0.2
AKBBA	Akutan Broad B	0.60	329		Pn	09 22 40.6	+0.2
AKBBA					Sn	09 22 49.1	+0.1
AKMO	Akutan Morgan	0.62	325		Pn	09 22 40.9	+0.2
AKMO					Sn	09 22 49.4	-0.1
AKRB	Akutan Reef Bi	0.68	325		Pn	09 22 41.4	+0.1
AKRB					Sn	09 22 50.3	-0.5
UNV	Unalaska Valle	0.70	292		Pb	09 22 41.8	0.0
UNV	Unalaska Valle	0.70	292		Sn	09 22 51.0	-0.6
MNAT	Makushin Natee	0.82	292		Pb	09 22 43.2	-0.5
MNAT					Sn	09 22 53.4	-0.9
MREP	Makushin Rep't	0.83	286		Pb	09 22 43.8	-0.1
MSW	Makushin Switc	0.88	293		Pb	09 22 43.9	-0.9
MSW					Sn	09 22 55.1	-0.8
MGOD	Makushin Gods	0.90	284		Pb	09 22 44.6	-0.5
MGOD					Sb	09 22 55.7	-1.1
WESP	Westdahl Peak	1.00	24		Pn	09 22 47.2	+1.4
WESP					Sn	09 23 00.4	+1.6
WEBT	Westdahl Beart	1.08	21		Pn	09 22 48.2	+1.3
SSBA	Shishaldin	1.41	32		Pn	09 22 52.8	+1.3
SSBA					Sb	09 23 11.2	-0.1
SSLW	Shishaldin Wes	1.41	32		Pn	09 22 52.9	+1.5
OKFG	Magazine Ridge	1.51	264		Pn	09 22 54.2	+1.4
OKRE	Okmok R'deer P	1.65	269		Pn	09 22 55.5	+0.8
FALS	False Pass	1.73	42		Pn	09 22 57.9	+2.1
OKSP	Okmok Steeple	1.76	260		Pn	09 22 57.3	+1.0
NIKH	Nikolski High	2.16	255		Pn	09 23 02.9	+1.1
DT1	Dutton Round H	2.38	49		Pn	09 23 07.2	+2.4
DOL	Dolgoi Island	2.60	51		Pn	09 23 10.2	+2.5
SDPT	Sand Point	3.38	56	Pn	Pn	09 23 20.6	+2.1
CNBA	Chernabura Isl	3.63	68	Pn	Pn	09 23 26.2	+4.3
SPIA	Saint Paul Isl	4.54	324	Pn	Pn	09 23 34.0	-0.4
CHGN	Chignik	4.86	53	Pn	Pn	09 23 41.7	+2.9
OHAK	Old Harbor	7.80	57	Pn	Pn	09 24 20.5	+1.4
KDAK	Kodiak Island	8.37	55	Pn	Pn	09 24 27.5	+0.5
	1.3nm,0.3s,baz=228,slow=3.4,SNR=30						
KDAK				Sn	Sn	09 25 55.3	-5.0
	0.1nm,0.3s,baz=303,slow=20,SNR=0.8						
SVW2	Sparrevohn	9.21	31	Pn	Pn	09 24 41.0	+2.6
CNPM	China Poot	9.82	47	Pn	Pn	09 24 47.6	+0.8
BRLK	Bradley Lake	10.09	46	Pn	Pn	09 24 50.6	0.0
GAMB	Gambell	10.73	345		Pn	09 24 59.6	+0.5
SEW	Seward	10.89	47		Pn	09 25 01.6	+0.2
ANM	Nome	11.02	0	Pn	Pn	09 25 03.2	+0.1
SUA	Susitna One	11.13	39		Pn	09 25 05.7	+0.9
SKT	Skwentna	11.18	36	Pn	Pn	09 25 10.9	+5.4
RC01	Rabbit Creek A	11.30	42		Pn	09 25 08.2	+1.2
PPLA	Purkeypile	11.62	31	Pn	Pn	09 25 17.5	+5.9
GHO	Glory Hole Cre	12.01	40	Pn	Pn	09 25 17.7	+0.9
SML	Sawmill	12.26	41	Pn	Pn	09 25 22.5	+2.3
HIN	Hinchinbrook I	12.33	49		Pn	09 25 20.7	-0.4
FID	Port Fidalgo	12.49	47	Pn	Pn	09 25 21.6	-1.7
SCM	Sheep Creek Mo	12.68	42		Pn	09 25 25.0	-0.9
EYAK	Cordova Ski Ar	12.73	49	Pn	Pn	09 25 25.3	-1.2
BPAW	Bear Paw Mtn.	12.88	29	Pn	Pn	09 25 30.8	+2.2
RAGM	Ragged Mountai	13.16	51	Pn	Pn	09 25 35.1	+2.7
MLY	Manley	13.65	27	Pn	Pn	09 25 41.0	+1.8
IMAR	Indian Mountai	13.71	20	Pn	Pn	09 25 42.8	+2.9
GLB	Gilahina Butte	13.96	47		Pn	09 25 43.9	+0.5
CRQM	Cirque	14.00	50		Pn	09 25 43.5	-0.5
WRH	Wood River Hil	14.03	32	Pn	Pn	09 25 45.9	+1.6

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRDI	Verde Repeater	14.03	48		Pn	09 25 43.3	-1.2
TGL	Tana Glacier	14.14	50		Pn	09 25 46.8	+0.9
MCARA	McCarthy VSAT	14.29	48		Pn	09 25 49.6	+1.9
BALM	Baldy	14.46	50		Pn	09 25 50.5	+0.2
ILAR	Eielson Array	14.61	33	Pn	Pn	09 25 50.4	-1.9
	0.1nm,0.3s,baz=212,slow=14,SNR=2.8						
ILAR	Eielson Array	14.61	33	P	Pn	09 25 53.3	+1.1
RIDG	Independent Ri	14.68	38	Pn	Pn	09 25 53.7	+0.5
MENT	Mentasta	14.69	42	Pn	Pn	09 25 53.8	+0.5
BARN	Barnard Glacie	14.78	50		Pn	09 25 55.5	+0.8
CTGM	Chitina Glacie	14.90	51		Pn	09 25 56.7	+0.5
SCRK	Sand Creek	15.13	38		Pn	09 25 58.4	-0.9
EGAK	Eagle	16.60	38	Pn	Pn	09 26 17.2	-0.8
HYT	Haines Junctio	16.66	53	P	P	09 26 22.9	+1.8
HYT				IAmb	IAmb	09 26 23.3	
	comp=Z,3.5nm,1.0s						
DAWY	Dawson	16.93	41	P	Pn	09 26 23.0	+0.7
BMAR	Burnt Mountain	17.11	28	P	Pn	09 26 25.4	+0.9
SKAG	Skagway	17.50	58	P	P	09 26 33.0	+2.8
SKAG				IAmb	IAmb	09 26 35.9	
	comp=Z,3.2nm,0.8s						
WHY	Whitehorse	17.89	55	P	Pn	09 26 36.9	+2.7
WHY				IAmb	IAmb	09 26 42.6	
	comp=Z,4.3nm,1.1s						
EPYK	Eagle Plains	19.00	36	P	P	09 26 43.6	-3.0
INK	Inuvik	21.01	33	P	P	09 27 05.1	-3.3
	comp=Z,1.0nm,0.4s,baz=251,slow=11,SNR=11						
INK	Inuvik	21.01	33	P	P	09 27 05.3	-3.1
INK				IAmb	IAmb	09 27 07.2	
	comp=Z,2.0nm,0.8s						
YKA	Yellowknife Ar	27.62	51	P	P	09 28 10.2	-2.0
	comp=Z,0.4nm,0.4s,baz=275,slow=7.8,SNR=10						
H11N2	WAKE ISLAND Hy	39.94	223	T	T	10 12 21.4	
	baz=24,slow=74,SNR=80						
H11N3	WAKE ISLAND Hy	39.95	223	T	T	10 12 20.0	
	baz=250,slow=74,SNR=87						
H11N1	WAKE ISLAND Hy	39.96	223	T	T	10 12 20.5	
	SNR=33						
H11S1	WAKE ISLAND Hy	41.12	222	T	T	10 13 47.2	
	baz=25,slow=76,SNR=65						
H11S2	WAKE ISLAND Hy	41.13	222	T	T	10 13 47.2	
	baz=25,slow=76,SNR=69						
H11S3	WAKE ISLAND Hy	41.14	222	T	T	10 13 47.2	
	baz=25,slow=76,SNR=55						
TXAR	Lajitas Array	50.37	93	P	P	09 31 22.7	+0.6
	comp=Z,0.2nm,0.6s,baz=293,slow=6.7,SNR=4.8						
TXAR	Lajitas Array	50.37	93	P	P	09 31 21.8	-0.3
FINES	FINESS Array B	64.96	354	P	P	09 32 56.8	-7.2
	comp=Z,1.1nm,0.8s,baz=337,slow=6.0,SNR=4.5						

TAP 30 09:30:14.1, 24°.34N×121°.43E, h9km±1km, ML1.4, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNSB	Datong	0.10	333	P	Pg	09 30 17.7	+1.0
	baz=332						
NNSB				S	Sg	09 30 19.3	+0.7
	baz=332						
NNSH	Datong	0.10	333	P	Pg	09 30 17.7	+1.0
	baz=332						
NNSH				S	Sg	09 30 19.2	+0.6
	baz=332						
NNS	Nan Shan	0.11	331	P	Pg	09 30 18.0	+1.1
	baz=334						
NNS				S	Sg	09 30 19.7	+0.8
	baz=334						
ETLH	Xiulin Townshi	0.14	161	eP	Pg	09 30 18.8	+1.4
	baz=161						
ETLH				S	Sg	09 30 20.9	+1.3
	baz=161						
NACB	Ninganchiao	0.23	138	P	Pg	09 30 20.1	+1.4
	baz=138						
NACB				S	Sg	09 30 23.3	+1.4
	baz=138						
WHF	Hehuan Shan	0.25	218	eP	Pg	09 30 20.5	+1.2
	baz=216						
WHF				S	Sg	09 30 23.9	+1.0
	baz=216						
NDT	Datong Townshi	0.27	16	eP	Pg	09 30 20.2	+0.7
	baz=16						
NDT				eS	Sb	09 30 24.8	-1.0
	baz=16						
ENA	Nanau	0.29	73	eP	Pb	09 30 21.2	-0.3
	baz=74						
ENA				eS	Sb	09 30 26.1	-0.4
	baz=74						
ENTT	Nioudou	0.32	23	eP	Pb	09 30 21.8	-0.2
	baz=23						
ENTT				eS	Sb	09 30 26.5	-0.8
	baz=23						
YHNB	Yeheng	0.33	351	eP	Pb	09 30 21.7	-0.5
	baz=351						
YHNB				eS	Sg	09 30 26.3	+1.2
	baz=351						
NSK	Sanguang	0.34	349	eS	Sg	09 30 26.4	+1.0
	baz=349						
CHGB	Renai	0.37	220	eP	Pb	09 30 22.3	-0.6
	baz=219						
CHGB				eS	Sb	09 30 28.2	-0.6
	baz=219						
NWLT	Wulai	0.44	9	eP	Pb	09 30 24.2	+0.2
	baz=8.0						
NWLT				eS	Sb	09 30 30.0	-0.6
	baz=8.0						
WHP	Taichung City	0.45	262	eP	Pb	09 30 24.6	+0.5
	baz=261						
WHP				eS	Sb	09 30 30.9	-0.1
	baz=261						

JMA 30 09:30:36.8±0.3, 25°.39N×122°.88E, h228km±4km, M3.2, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	1.30	144	P	Pn	09 31 11.4	-0.1
JISG	Ishigakijimahi	1.52	121	P	Pn	09 31 13.1	-0.1
JISG				S	S	09 31 41.7	+0.1
JIJ	Ishigaki jima	1.54	131	P	Pn	09 31 13.2	-0.2
JIJ				S	S	09 31 41.5	-0.3
JKRS	Kuro-shima	1.54	138	P	Pn	09 31 13.8	+0.4
JKRS				eS	S	09 31 42.3	+0.4
HATJ	Hateruma jima	1.57	147	P	Pn	09 31 14.1	+0.4
JTJ	Tarama	1.81	114	P	Pn	09 31 16.1	+0.4
JTJ				S	S	09 31 46.1	+0.1
JIRB	Irabujima	2.15	105	P	Pn	09 31 18.7	-0.2
JIRB				eS	S	09 31 50.6	-1.2
JMJ2	Miyako jima3	2.31	106	P	Pn	09 31 20.8	+0.3
JMJ2				eS	S	09 31 53.7	-1.0

*IDC **30** 09:55:55.3±1.2, 5°.76N×126°.84E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.4/50, mbtmp3.5/6, Error ellipse: s-maj=71.2km s-min=22.6km az=77.0*
*MAN **30** 09:56:01.0, 5°.71N×126°.79E, h46km, mb4.5, ML3.4, MS3.2*
ISC 30 09:56:01.9±2.1, 5°.61N±0°.09×126°.6E±0°.1, h46km±24km, n12, σ1.44/17, mb3.5/6, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.01	299	eP	Pn	09 56 20.4	+0.7
DDMP				eS	Sn	09 56 30.6	-2.2
MATI	Mati	1.37	346	eP	Pn	09 56 24.9	+0.3
MATI				eS	Sn	09 56 40.6	-1.1
GSPH	General Santos	1.71	286	⇑iP	Pn	09 56 28.0	-1.3
GSPH				i S	Sn	09 56 48.3	-1.8
KCP	Kidapawan	2.05	313	⇑iP	Pn	09 56 34.7	+0.8
KCP				i S	Sn	09 57 07.5	+9.2
SKMP	Bagumbayan, Su	2.24	294	eP	Pn	09 56 38.7	+2.2
SKMP				eS	Sn	09 57 04.4	+1.5
BUKP	Musuan	2.72	326	eP	Pn	09 56 43.7	+0.4
BUKP				eS	Sn	09 57 16.5	+1.5
FITZ	Fitzroy Crossi	23.57	182	P	P	10 01 09.0	+0.5
	0.6nm,0.4s,baz=13,slow=10,SNR=6.5						
WRA	Warramunga Arr	26.51	164	P	P	10 01 36.8	+1.5
	0.5nm,0.4s,baz=344,slow=10,SNR=2.7						
ASAR	Alice Springs	29.96	166	P	P	10 02 05.6	-0.5
	0.4nm,0.6s,baz=338,slow=6.8,SNR=12						
STKA	Stephens Creek	39.92	160	P	P	10 03 32.0	+0.3
	0.4nm,0.4s,baz=342,slow=9.6,SNR=1.8						
MKAR	Makanchi Array	55.95	325	P	P	10 05 35.8	+0.2
	0.2nm,0.4s,baz=112,slow=6.9,SNR=4.4						
ILAR	Eielson Array	83.48	26	P	P	10 08 23.0	-1.5
	0.3nm,0.7s,baz=251,slow=5.4,SNR=2.4						

*THE **30** 10:00:06.9, 38°.33N×20°.49E, h11km, ML2.5/5, Error ellipse: s-maj=0.8km s-min=0.2km az=268.0*
*ATH **30** 10:00:06.6, 38°.32N×20°.49E, h13km±2km, ML2.5/7, Error ellipse: s-maj=2.6km s-min=0.8km az=228.0*
ISC 30 10:00:06.0±0.8, 38°.33N±0°.02×20°.45E±0°.03, h17km±4km, n40, σ0.91/72, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF1	Kardakata, Kep	0.06	159	P	Pg	10 00 08.9	-0.3
KEF4	Livadi, Kephal	0.07	192	P	Pg	10 00 09.3	+0.1
KEF4				S	Sg	10 00 11.7	+0.2
AGT1	Agia Thekli	0.09	211	P	Pg	10 00 09.6	+0.1
AGT1				S	Sg	10 00 12.0	+0.3
VSK1	VASILIKIADES	0.12	50	P	Pg	10 00 09.5	-0.3
VSK1				S	Sg	10 00 11.6	-0.8
LXR1	Lixouri, Cepha	0.13	182	P	Pg	10 00 10.0	+0.2
LXR1				S	Sg	10 00 13.0	+0.6
LXRA	Lixouri, Kepha	0.13	183	P	Pg	10 00 10.0	+0.2
LXRA				S	Sg	10 00 13.1	+0.7
KONA	Konidatara, Ke	0.14	47	P	Pg	10 00 09.8	-0.2
KONA				S	Sg	10 00 12.2	-0.4
KONA				AML	AML	10 00 12.4	
	comp=E,8777μm,0.2s						
KONA				AML	AML	10 00 13.0	
	comp=N,10823μm,0.2s						
KEF3	Kipouria, Keph	0.15	211	P	Pg	10 00 10.3	+0.2
KEF3				S	Sg	10 00 13.5	+0.7
CHV1	Chavriata, Kef	0.15	199	P	Pg	10 00 10.4	+0.2
CHV1				S	Sg	10 00 13.7	+0.7
ARG2	Argostoli	0.16	167	P	Pg	10 00 10.1	-0.1
ARG2				S	Sg	10 00 12.9	-0.1
ARGA	Argostoli. Kep	0.16	170	P	Pg	10 00 10.0	-0.2
ARGA				S	Sg	10 00 12.7	-0.2
FSK	Fiskardo	0.16	36	P	Pg	10 00 10.1	-0.1
FSK				S	Sg	10 00 12.7	-0.4
	comp=N,5μm,0.1s						
FSK	Fiskardo	0.16	36	P	Pg	10 00 10.1	-0.1
FSK				S	Sg	10 00 12.9	-0.2
FSK				AML	AML	10 00 13.2	
	comp=N,6066μm,0.2s						
FSK				AML	AML	10 00 13.5	
	comp=E,14712μm,0.2s						
KEF2	Argostoli. Kep	0.17	169	P	Pg	10 00 10.2	-0.2
KEF2				S	Sg	10 00 12.9	-0.4
VLS	Valsamata	0.19	143	P	Pg	10 00 10.3	-0.4
VLS				S	Sg	10 00 13.4	-0.5
	comp=E,5μm,0.3s						
VLS	Valsamata	0.19	143	P	Pg	10 00 10.3	-0.4
VLS				S	Sg	10 00 13.3	-0.6
VLS				AML	AML	10 00 13.4	
	comp=E,11558μm,0.3s						
VLS				AML	AML	10 00 14.4	
	comp=N,6819μm,0.3s						
EVGI	Lefkada island	0.33	30	P	Pg	10 00 13.1	0.0
EVGI				S	Sg	10 00 18.0	+0.1
EVGI	Lefkada island	0.33	30	P	Pg	10 00 13.1	0.0
EVGI				S	Sg	10 00 18.3	+0.5
KFL	Anninata	0.35	129	P	Pg	10 00 12.8	-0.5
KFL				S	Sg	10 00 18.2	-0.1
KFL	Anninata	0.35	129	P	Pg	10 00 12.8	-0.5
KFL				S	Sg	10 00 18.2	-0.1
KFL				AML	AML	10 00 18.7	
	comp=E,9302μm,0.4s						
KFL				AML	AML	10 00 18.8	
	comp=N,5765μm,0.5s						
MGNA	Meganis	0.42	40	P	Pg	10 00 14.4	-0.2
LKD2	Lefkada island	0.49	20	P	Pg	10 00 15.9	+0.1
LKD2				S	Sg	10 00 23.5	+1.1
LKD2	Lefkada island	0.49	20	P	Pg	10 00 15.8	+0.1
LKD2				AML	AML	10 00 27.6	
	comp=E,511μm,0.2s						
LKD2				AML	AML	10 00 29.0	
	comp=N,398μm,0.3s						
TSLK	Tsoukalades, L	0.52	18	P	Pg	10 00 16.6	+0.2
TSLK				S	Sb	10 00 24.9	+1.0
RLS	Riolos of Patr	0.85	108	P	Pg	10 00 22.6	0.0
RLS				S	Sb	10 00 34.3	+0.9
PVO	Paravola	0.90	71	P	Pg	10 00 23.1	-0.3
PVO				S	Sb	10 00 35.5	+0.8
	comp=N,312nm,0.3s						
PVO	Paravola	0.90	71	P	Pg	10 00 23.2	-0.2
PVO				AML	AML	10 00 41.7	
	comp=N,452μm,0.3s						
PVO				AML	AML	10 00 42.9	
	comp=E,789μm,0.3s						
DRO	Drossia	1.07	110	P	Pb	10 00 26.5	+0.5
DRO				S	Sn	10 00 41.0	+0.4
	comp=E,250nm,0.5s						
ANX	Ano Chora	1.19	77	P	Pb	10 00 28.5	+0.4
ANX				S	Sn	10 00 44.5	+0.8
	comp=E,155nm,0.8s						
IGT	Igoumenitsa	1.20	356	P	Pg	10 00 30.6	+1.3
IGT				AML	AML	10 00 49.2	
	comp=E,132μm,0.3s						
IGT				AML	AML	10 00 52.6	
	comp=N,139μm,0.3s						
EVR	Evrytania	1.22	61	P	Pn	10 00 28.9	+0.6
SERG	Sergoula	1.27	86	P	Pn	10 00 28.7	-0.3
KALE	Kalithea	1.33	87	P	Pn	10 00 29.7	-0.2
KALE				S	Sb	10 00 47.9	+0.5
STON	Ston	4.99	336	ePn	Pn	10 01 20.5	+0.4
STON				Sn	Sn	10 02 16.1	-1.3
MAKA	Makarska	5.59	333	ePn	Pn	10 01 28.7	+0.3
MAKA				Sn	Sn	10 02 30.8	-1.4
RICI	Ricice	5.74	335	i Pn	Pn	10 01 30.8	+0.4
RICI				Sn	Sn	10 02 33.9	-1.8
ZIRJ	Zirje	6.44	327	ePn	Pn	10 01 40.2	+0.2
ZIRJ				Sn	Sn	10 02 49.0	-4.0
MORI	Morici	6.58	329	ePn	Pn	10 01 42.5	+0.6
MORI				Sn	Sn	10 02 54.2	-2.5
DUGI	Dugi Otok	6.96	326	ePn	Pn	10 01 47.9	+0.7
DUGI				Sn	Sn	10 03 02.5	-3.5
NVLJ	Novalja	7.50	328	ePn	Pn	10 01 55.5	+1.0

GUC 30 10:03:54.2±0.8, 19°.99S×70°.83W, h44km±10km, ML2.7, 3C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.77	60	⇓iP	Pn	10 04 08.3	-0.5
PSGC				i S	Sn	10 04 19.4	0.0
TA01	Diego Aracena	0.83	133	⇑iP	Pn	10 04 09.1	-0.4
TA01				i S	Sn	10 04 21.2	+0.4
TA01				IAML		10 04 23.2	
	comp=N,481nm,0.6s						
PATCX	Punta Patache	1.04	143	⇑iP	Pn	10 04 12.7	+0.2
PATCX				i S	Sn	10 04 26.5	+0.6
PATCX				IAML		10 04 28.7	
	comp=N,205nm,0.3s						
PB11	IPOC Station P	1.13	78	⇓iP	Pn	10 04 14.4	+0.7
PB11				i S	Sn	10 04 29.7	+1.6
PB11				IAML		10 04 31.8	
	comp=N,380nm,0.2s						
PB12	IPOC Station P	1.45	19	⇑iP	Pn	10 04 19.4	+1.4
PB12				i S	Sn	10 04 37.4	+1.5
PB12				IAML		10 04 45.6	
	comp=N,99nm,0.5s						
GO01	Chusmiza	1.57	79	eP	Pn	10 04 19.6	-0.5
GO01				i S	Sn	10 04 43.1	+3.6
GO01				IAML		10 04 44.8	
	comp=N,436nm,0.3s						

IDC 30 10:12:16.8±2.5, 6°.74S×129°.54E, h0km, mb3.3/1, mb1 3.2/3, mb1mx3.2/27, mbtmp3.0/3, ML3.0/2, MS3.6/2, Ms1 3.6/2, ms1mx2.8/14, Error ellipse: s-maj=148.9km s-min=34.0km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.93	161	Pn	Pn	10 15 35.2	-0.4
	0.2nm,0.3s,baz=343,slow=13,SNR=8.8						
WRA				Sn	Sn	10 17 52.5	-19
	0.1nm,0.3s,baz=121,slow=21,SNR=1.3						
ASAR	Alice Springs	17.34	166	P	Pn	10 16 20.9	+0.4
	0.0nm,0.3s,baz=342,slow=9.0,SNR=1.2						
ASAR				S	Sn	10 19 19.0	-15
	0.1nm,0.3s,baz=349,slow=27,SNR=2.3						
URZ	Urewera	53.17	133	LR	LR	10 43 09.4	
	comp=Z,64nm,20.1s,baz=6.0,slow=35						
AFI	Afiamalu	58.06	102	LR	LR	10 46 24.8	
	comp=Z,53nm,21.9s,baz=187,slow=35						
MKAR	Makanchi Array	67.76	327	P	P	10 23 16.4	0.0
	0.1nm,0.4s,baz=108,slow=6.8,SNR=2.3						

*SJA **30** 10:33:59.9±0.8, 23°.11S×66°.79W, h229km±6km, ML4.0, MW3.8*
*IDC **30** 10:34:00.7±0.9, 22°.99S×66°.72W, h210km±11km, mb3.1/2, mb1 3.3/8, mb1mx3.1/43, mbtmp3.7/8, Error ellipse: s-maj=16.8km s-min=13.6km az=139.0*
*NEIC **30** 10:34:01.5±2.1, 23°.14S±0°.08×67°.1W±0°.2, h240km±20km, mb4.0/4, Error ellipse: s-maj=27.9km s-min=10.8km az=96.0*
ISC 30 10:34:00.5±0.7, 23°.10S±0°.04×66°.82W±0°.05, h221km±7km, n44, σ1.42/74, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	Yavi	1.51	53	i P	Pn	10 34 37.2	+0.4
YJA				i S	S	10 35 03.8	-1.0
AZAP	Zapla	1.96	125	i P	Pn	10 34 39.9	-0.5
AZAP				i S	S	10 35 11.4	-0.1
LVC	Limon Verde	1.99	284	P	Pn	10 34 41.9	+1.0
	30nm,0.3s,baz=85,slow=6.1,SNR=262						
LVC				S	S	10 35 12.3	+0.1
	35nm,0.3s,baz=318,slow=23,SNR=31						
LVC	Limon Verde	1.99	284	i P	Pn	10 34 42.0	+1.0
LVC				i S	S	10 35 12.6	+0.3
LVC				IAML		10 35 18.3	
	comp=Z,72nm,0.1s						
PB15	IPOC Station P	2.45	267		Pn	10 34 46.5	+1.1
PB15					S	10 35 20.2	0.0
PB15	IPOC Station P	2.45	267	i P	Pn	10 34 46.5	+1.1
PB15				eS	S	10 35 20.5	+0.2
PB06	IPOC Station P	2.57	278	i P	Pn	10 34 47.7	+1.0
PB06				i S	S	10 35 22.4	-0.2
PB06				IAML		10 35 26.7	
	comp=Z,408nm,0.3s						
PB09	IPOC Station P	2.59	300		Pn	10 34 48.3	+1.4
PB09				S	S	10 35 23.4	+0.4
PB09	IPOC Station P	2.59	300	i P	Pn	10 34 48.5	+1.5
PB09				i S	S	10 35 23.8	+0.8
PB09				IAML		10 35 27.0	
	comp=Z,279nm,0.3s						
PB03	IPOC Station P	2.91	291	i P	Pn	10 34 51.1	+0.7
PB03				i S	S	10 35 28.4	-0.9
PB03				IAML		10 35 31.1	
	comp=Z,762nm,0.1s						
PB05	IPOC Station P	3.13	274	i P	Pn	10 34 53.3	+0.5
PB05				i S	S	10 35 32.5	-1.2
PB05				IAML		10 35 34.9	
	comp=Z,167nm,0.1s						
PB07	IPOC Station P	3.15	295		Pn	10 34 53.8	+0.6
PB07				S	S	10 35 32.8	-1.5
PB07	IPOC Station P	3.15	295	i P	Pn	10 34 54.0	+0.8
PB07				i S	S	10 35 33.1	-1.3
PB07				IAML		10 35 34.4	
	comp=Z,763nm,0.2s						
PB04	IPOC Station P	3.17	283		Pn	10 34 53.7	+0.3
PB04				S	S	10 35 33.6	-1.1
PB04	IPOC Station P	3.17	283	i P	Pn	10 34 54.0	+0.6
PB04				i S	S	10 35 34.2	-0.5
PB01	IPOC Station P	3.21	309		Pn	10 34 54.6	+0.8
PB01				S	S	10 35 34.9	-0.6
GO02	Mina Guanaco	3.26	230		Pn	10 34 55.0	+0.5
GO02				S	S	10 35 36.4	-0.4
PB02	IPOC Station P	3.36	301	i P	Pn	10 34 56.2	+0.7
PB02				i S	S	10 35 37.5	-1.1
PB02				IAML		10 35 40.6	
	comp=Z,589nm,0.1s						
PB10	IPOC Station P	3.46	262		Pn	10 34 57.0	+0.4
PB10				S	S	10 35 38.4	-2.1
PB10	IPOC Station P	3.46	262	i P	Pn	10 34 57.2	+0.6
PB10				i S	S	10 35 38.8	-1.7
PB10				IAML		10 35 40.5	
	comp=Z,116nm,0.3s						
PB14	IPOC Station P	3.62	244		Pn	10 34 58.7	-0.1
PB14	IPOC Station P	3.62	244	i P	Pn	10 34 58.9	+0.2
PB14				i S	S	10 35 43.0	-1.4
PB14				IAML		10 35 46.9	
	comp=Z,105nm,0.1s						
PATCX	Punta Patache	3.84	306		Pn	10 35 01.5	+0.3
PATCX				S	S	10 35 47.0	-1.9
GO01	Chusmiza	4.07	327		Pn	10 35 05.6	+1.2
GO01				S	S	10 35 55.6	+1.0
PB11	IPOC Station P	4.25	321		Pn	10 35 06.2	-0.1
PB11				S	S	10 35 56.1	-1.8
PSGCX	Pisagua	4.65	318		Pn	10 35 10.7	-0.5
PSGCX				S	S	10 36 03.7	-3.2
MNMC	Minye Minye	4.72	326		Pn	10 35 12.9	+0.5
MNMC				S	S	10 36 07.3	-1.5
PB16	IPOC Station P	5.37	332		Pn	10 35 22.0	+1.3
PB16				S	S	10 36 23.2	-0.8
GO03	Copiap	5.44	214		Pn	10 35 19.4	-1.6
PB12	IPOC Station P	5.54	323	Pn	Pn	10 35 21.9	-0.5
LPAZ	La Paz	6.89	349	P	Pn	10 35 40.9	+0.8
	comp=Z,0.9nm,0.3s,baz=153,slow=6.7,SNR=21						
LPAZ				S	S	10 36 57.0	-2.3
	comp=Z,0.2nm,0.3s,baz=320,slow=19,SNR=6.2						
GO04	Tololo Observa	7.89	206		Pn	10 35 49.9	-2.6
GO04				S	S	10 37 16.8	-5.4
SIV	San Ignacio	8.90	38	P	Pn	10 36 03.6	-1.9
	comp=Z,0.8nm,0.3s,baz=228,slow=11,SNR=15						
SIV				S	S	10 37 41.3	-4.6
	comp=Z,0.2nm,0.3s,baz=205,slow=19,SNR=3.7						
CPUP	Villa Florida	9.20	112	P	Pn	10 36 10.7	+1.5
	comp=Z,0.1nm,0.3s,baz=74,slow=6.4,SNR=1.7						
ROC1	El Roble	10.51	200	Pn	Pn	10 36 25.6	-0.6
PLCA	Paso Flores	17.86	189	P	P	10 37 54.1	+0.8
	comp=Z,0.1nm,0.3s,baz=299,slow=11,SNR=5.6						
PLCA	Paso Flores	17.86	189		P	10 37 54.0	+0.6
PLCA				IAmb	IAmb	10 38 11.9	
	comp=Z,12nm,1.4s						
BDFB	Brasilia	19.21	71	P	P	10 38 07.9	-0.3
	comp=Z,0.3nm,0.3s,baz=238,slow=13,SNR=12						
BDFB	Brasilia	19.21	71	P	P	10 38 08.5	+0.3
PTGA	Pitinga	23.21	18	P	P	10 38 47.0	-1.0
	comp=Z,3.4nm,0.7s,baz=195,slow=4.3,SNR=6.0						
PTGA	Pitinga	23.21	18	P	P	10 38 48.5	+0.5
PTGA				IAmb	IAmb	10 38 56.1	
	comp=Z,5.2nm,1.4s						
QSPA	South Pole Qui	67.10	180	P	P	10 44 32.1	+2.1
PDAR	Pinedale Array	76.47	329	P	P	10 45 27.3	+1.3
	comp=Z,0.1nm,0.6s,baz=98,slow=4.6,SNR=1.8						
MKAR	Makanchi Array	145.72	39	PKPbc	PKPab	10 53 14.4	+0.3
	comp=Z,1.1nm,0.8s,baz=317,slow=3.6,SNR=9.7						

*IDC **30** 10:38:35.3±1.8, 33°.16S×178°.98W, h0km, mb3.8/2, mb1 4.1/3, mb1mx3.7/32, mbtmp3.9/3, ML3.9/1, Error ellipse: s-maj=61.5km s-min=35.9km az=141.0*
*NEIC **30** 10:38:45.6±2.4, 33°.5S±0°.1×179°.2W±0°.2, h76km±10km, mb4.1/6, Error ellipse: s-maj=19.7km s-min=15.0km az=122.0*
*WEL **30** 10:39:35.9, 37°S±34°×17°9E±°, h85km±20km, M2.9/25, ML3.1/19, MLv2.9/25, Error ellipse: s-maj=0.1km s-min=0.0km az=2.2*
ISC 30 10:38:41.8±1.3, 33°.37S±0°.09×179°.0W±0°.1, h48km, n57, σ1.44/60, mb3.8/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.75	207	Pn	Pn	10 39 53.4	+2.6
MXZ				Sn	Sn	10 40 45.8	+1.3
MXZ	Matakaoa Point	4.75	207	P	Pn	10 39 52.0	+1.2
WMGZ	Waiomatatini S	4.93	205	P	Pn	10 39 54.8	+1.5
HAZ	Te Kaha	5.12	210	P	Pn	10 39 57.4	+1.4
PUZ	Puketiti	5.21	205	P	Pn	10 39 57.6	+0.4
RUGZ	Raukumara Rang	5.34	210	P	Pn	10 40 00.2	+1.2
CNGZ	Carnagh Statio	5.60	204	P	Pn	10 40 04.9	+2.5
TKGZ	Te Karaka	5.69	206	P	Pn	10 40 05.6	+2.0
MWZ	Matawai	5.72	209	P	Pn	10 40 04.3	+0.1
OPRZ	Ohinepanea	5.77	218	P	Pn	10 40 07.6	+2.8
MARZ	Manawahe	5.82	217	P	Pn	10 40 08.4	+2.9
URZ	Urewera	5.83	212	Pn	Pn	10 40 05.3	-0.4
	3.0nm,0.3s,baz=260,slow=3.7,SNR=33						
URZ				Sn	Sn	10 41 10.3	-1.0
	7.2nm,0.3s,baz=190,slow=20,SNR=8.8						
URZ	Urewera	5.83	212		Pn	10 40 05.3	-0.4
URZ				Sn	Sn	10 41 11.4	+0.1

URZ	Urewera	5.83	212	P	Pn	10 40 05.4	-0.3
RAGZ	Rawiri	5.90	209	P	Pn	10 40 07.2	+0.5
RIGZ	Rimuhau	5.95	206	P	Pn	10 40 07.6	+0.2
PRGZ	Paritu Road	6.10	204	P	Pn	10 40 10.3	+0.9
MUGZ	Murupara	6.17	213	P	Pn	10 40 09.7	-0.6
SNGZ	Shannon Statio	6.18	208	P	Pn	10 40 11.2	+0.7
RTZ	Ruatahuna	6.19	211	P	Pn	10 40 10.1	-0.5
TOZ	Tahuroa Road	6.28	225	P	Pn	10 40 16.6	+4.9
MHGZ	Mahia Peninsul	6.30	203	P	Pn	10 40 12.1	0.0
RAHZ	Arahi	6.40	209	P	Pn	10 40 15.7	+2.2
OUZ	Omahuta	6.44	251		Pn	10 40 15.8	+1.8
OUZ				Sn	Sn	10 41 23.1	-3.1
MTHZ	Maungataniwha	6.45	211	P	Pn	10 40 15.5	+1.4
WHHZ	Waihua	6.48	207	P	Pn	10 40 17.4	+2.9
MRHZ	Matea Rd	6.62	213	P	Pn	10 40 17.4	+0.9
NMHZ	Naumai	6.67	210	P	Pn	10 40 17.8	+0.6
ARHZ	Aropaoanui	6.73	208	P	Pn	10 40 19.5	+1.5
BKZ	Black Stump Fm	6.86	211		Pn	10 40 19.1	-0.6
BKZ				Sn	Sn	10 41 36.0	-0.4
BKZ	Black Stump Fm	6.86	211	P	Pn	10 40 19.5	-0.2
MCHZ	McNeill Hill	7.00	209	P	Pn	10 40 22.2	+0.4
CKHZ	Cape Kidnapper	7.04	206	P	Pn	10 40 22.8	+0.6
KWHZ	Kaweka Forest	7.10	210	P	Pn	10 40 23.2	+0.1
HIZ	Hauiti	7.18	223	Pn	Pn	10 40 26.1	+2.0
HIZ	Hauiti	7.18	223	P	Pn	10 40 27.7	+3.5
KAHZ	Kahuranaki	7.24	206	P	Pn	10 40 23.8	-1.1
BHHZ	Black Hill Sta	7.31	212	P	Pn	10 40 26.1	+0.1
TSZ	Takapari Road	7.83	210	P	Pn	10 40 34.2	+1.2
BFZ	Birch Farm	8.25	206	Pn	Pn	10 40 35.0	-3.8
THZ	Tophouse	10.58	215	Pn	Pn	10 41 09.8	-0.9
KHZ	Kahutara	10.80	211		Pn	10 41 14.8	+1.1
WHZ	Wether Hill Ro	16.04	215	P	P	10 42 26.5	-0.2
WHZ				IAmb	IAmb	10 42 28.7	
	comp=Z,18nm,1.3s						
AS31	Alice Springs	42.24	271	P	P	10 46 30.6	+0.1
ASAR	Alice Springs	42.24	271	P	P	10 46 30.3	-0.2
	comp=Z,0.7nm,0.4s,baz=108,slow=7.6,SNR=37						
ASAR	Alice Springs	42.24	271	P	P	10 46 29.9	-0.6
WB2	Warramunga Arr	43.49	276	P	P	10 46 40.0	-0.6
WRAB	Tennant Creek	43.49	276	P	P	10 46 40.7	+0.1
WRAB				IAmb	IAmb	10 46 55.4	
	comp=Z,5.8nm,1.5s						
WRA	Warramunga Arr	43.50	276	P	P	10 46 39.8	-0.9
	comp=Z,1.0nm,0.5s,baz=130,slow=8.6,SNR=5.1						
WB0	Warramunga Arr	43.54	276	P	P	10 46 39.8	-1.2
WB0				IAmb	IAmb	10 46 47.5	
	comp=Z,2.1nm,1.1s						
FITZ	Fitzroy Crossi	51.62	273	P	P	10 47 43.6	-0.2
FITZ				IAmb	IAmb	10 47 44.7	
	comp=Z,3.3nm,1.2s						
R11A	Troy Canyon, C	92.48	45		pP	10 52 05.0	+4.3
FINES	FINESS Array B	147.62	338	PKPbc	PKPbc	10 58 20.0	0.0
	comp=Z,1.2nm,0.4s,baz=51,slow=4.3,SNR=14						
FINES	FINESS Array B	147.62	338		PKPbc	10 58 20.0	0.0
NB2	NORSAR Subarra	151.54	350	PKP	PKPbc	10 58 29.8	0.0
	comp=Z,0.6nm,0.6s,baz=19,slow=2.5						
NOA	NORSAR Array B	151.54	350	PKPbc	PKPbc	10 58 28.8	-1.0
	comp=Z,0.3nm,0.6s,baz=22,slow=4.6,SNR=7.5						
AKASG	Malin Array Be	153.08	318	PKPbc	PKiKP	10 58 34.9	+1.2
	comp=Z,0.4nm,0.4s,baz=84,slow=3.8,SNR=2.5						

TEH 30 10:51:58.9, 38°.39N×46°.82E, h5^{km}, ML3.7

THR 30 10:51:58.7±0.4, 38°.44N×46°.83E, h14^{km}±6^{km}, ML3.9

NSSP 30 10:51:59.0, 38°.37N×46°.78E, h10^{km}, Ms3.7

DDA 30 10:52:00.1, 38°.17N×46°.79E, h7^{km}±4^{km}, MW4.0

NNC 30 10:52:01.9±9.2, 38°.88N×47°.16E, h0^{km}, mb4.0, Error ellipse: s-maj=82.3km s-min=40.3km az=57.0

ISC 30 10:51:59.2±0.8**, 38°.45N**±0°.02×**46°.84E**±0°.02**, h15**^{km}±6^{km}**, n82,** σ1^{s}.**89**/105**, 7C-1D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TVRZ	Varzaqan	0.14	293	*e*Pg	Pg	10 52 02.5	-0.7
AHAR	Ahar	0.17	77	*e*Pg	Pg	10 52 03.6	0.0
AHAR				*e*Sg	Sg	10 52 07.0	+0.5
IHRS	Heris	0.21	129	*e*Pg	Pg	10 52 03.0	-1.1
IHRS				*e*Sg	Sg	10 52 06.1	-1.4
IHSH	Hashtrud	0.36	113	*e*Pg	Sn	10 52 20.3	+3.1
TABZ	Tabriz	0.56	226	*e*Pg	Pg	10 52 09.2	-1.1
ITBZ	Tabriz	0.58	248	*e*Pg	Pg	10 52 09.7	-1.0
ORD	Ordubad	0.81	306	*e*Pg	Pb	10 52 14.2	-0.8
GRMI	Germi	0.90	66	*e*Pg	Pb	10 52 15.9	-0.7
GRMI				IAML		10 52 30.6	
	comp=E,4µm,0.2s						
GRMI	Germi	0.90	66	*e*Pg	Pb	10 52 15.9	-0.7
ISRB	Sarab	0.90	133	*e*Pg	Pb	10 52 15.1	-1.5
YRD	Yardimli	1.19	67	*e*Pg	Pg	10 52 22.0	-0.2
LRK	Lerik	1.20	80	*e*Pg	Pb	10 52 21.5	-0.1
NAX	Nakhchivan	1.27	305	*e*Pg	Pb	10 52 22.6	-0.3
SBZ	Shahbuz	1.38	314	*e*Pg	Pb	10 52 24.4	-0.3
BLQ	Beylaqan	1.39	24	*e*Pn	Pg	10 52 26.0	+0.1
ASTR	Astara	1.54	85	*e*Pn	Pb	10 52 27.5	+0.2
LKRN	Lenkeran, Azer	1.54	80	*e*Pn	Pb	10 52 27.6	+0.2
BRDA	Brd	1.83	8	*e*Pn	Pg	10 52 34.2	-0.1
SAAT	Saatly	1.87	41	*e*Pn	Pb	10 52 33.0	0.0
MAHB	Mahabad	1.91	208	*e*Pn	Pb	10 52 33.1	-0.6
MAHB				*e*		10 53 09.9	
MAKU	Maku	1.91	299	*e*Pn	Pb	10 52 33.0	-0.8
MAKU				*e*Sg	Sb	10 52 58.8	+1.4
MAKU	Maku	1.91	299	*e*Pn	Pb	10 52 33.0	-0.8
ZRD	Zardab	1.94	20	*e*Pn	Pg	10 52 36.3	-0.1
HYR	Heyderabad	2.00	310	*e*Pn	Pb	10 52 34.4	-0.8
YOVA	Hakkari_Yksek	2.19	248	*i* P	Pb	10 52 39.4	+0.8
YOVA				*i* S	Sb	10 53 05.9	+0.4
YOVA				IAML		10 53 20.0	
	comp=E,321nm,0.0s						
YOVA				IAML		10 53 20.0	
	comp=N,220nm,0.1s						
GANJ	Ganja	2.23	350	*e*Pn	Pb	10 52 39.1	0.0
ALIB	Äli-Bayra	2.26	48	*e*Pn	Pg	10 52 41.3	-1.2
ZNJK	Zanjan	2.31	140	*e*Pn	Pn	10 52 38.4	+1.6
ZNJK	Zanjan	2.31	140	*e*Pn	Pn	10 52 38.4	+1.6
MNGR	Mingechevir, A	2.33	5	*e*Pn	Pb	10 52 41.8	+1.0
GNI	Garni	2.35	317	⇑*i*P	Pb	10 52 42.1	+0.8
GNI				⇑*i*S	Sg	10 53 13.5	-1.2
GNI	Garni	2.35	317	P	Pb	10 52 42.5	+1.2
GNI	Garni	2.35	317	*e*Pn	Pb	10 52 42.1	+0.8
CLDR	Caldiran	2.38	288	*e*P	Pb	10 52 42.4	+0.5
CLDR	Caldiran	2.38	288	*i* P	Pn	10 52 39.6	+1.8
CLDR				*i* S	Sg	10 53 18.4	+2.5
GDB	GEDABAY	2.42	340	*e*Pn	Pb	10 52 41.8	-0.6
KAPZ	Kaputan	2.50	319	*i* P	Pb	10 52 45.0	+1.2
KAPZ				*i* S	Sg	10 53 19.9	+0.5
IML	Ismayilli	2.56	24	*e*Pn	Pb	10 52 44.0	-0.8
IGDI	IGDIR	2.57	304	*i* P	Pb	10 52 44.8	-0.2
IGDI				*i* S	Sb	10 53 15.1	-1.3
IGDI				IAML		10 53 32.0	
	comp=E,83nm,0.7s						
IGDI				IAML		10 53 35.0	
	comp=N,77nm,0.9s						
QBL	Gabala	2.61	17	*e*Pn	Pb	10 52 44.6	-1.0
VMUR	Van-Muradiye	2.61	283	*i* P	Pb	10 52 43.5	-2.2
VMUR				*i* S	Sg	10 53 25.2	+2.2
GBS	Qobustan	2.65	37	*e*Pn	Pb	10 52 46.3	+0.1
DYDN	Diyadin	2.68	295	*i* P	Pb	10 52 48.1	+1.1
DYDN				*i* S	Sg	10 53 24.0	-1.5
DYDN				IAML		10 53 37.0	
	comp=E,72nm,0.9s						
DYDN				IAML		10 53 41.0	
	comp=N,114nm,0.8s						
TVAN	Van	2.69	273	*i* P	Pb	10 52 45.9	-1.3
TVAN				IAML		10 53 36.0	
	comp=N,83nm,1.0s						
TVAN				IAML		10 53 51.0	
	comp=E,99nm,1.0s						
PQL	Pirkuli	2.70	30	*e*Pn	Pb	10 52 46.5	-0.8
VANB	Van	2.71	274	*e*P	Pg	10 52 49.5	-1.6
METS	Metsamor	2.73	309	*i* P	Pb	10 52 46.1	-1.6
METS				*i* S	Sb	10 53 22.0	+1.0
SEKA	Sheki	2.77	6	*e*Pn	Pb	10 52 46.3	-2.1
ARUZ	Aruch	2.81	312	*i* P	Pb	10 52 48.4	-0.6
ARUZ				*i* S	Sb	10 53 24.7	+1.4
QZX	Qazax, Azerbai	2.84	337	*e*Pn	Pb	10 52 49.7	+0.2
VNNZ	Vanand	2.86	306	*i* P	Pb	10 52 51.0	+1.0
VNNZ				*i* S	Sg	10 53 31.4	+0.2
XNQ	Khinaliq	2.90	20	*e*Pn	Pn	10 52 47.6	+2.7
DDFL	Dedoflistskaro	3.04	350	P	Pb	10 52 55.0	+1.9
DDFL				S	Sg	10 53 39.6	+2.7
DDFL	Dedoflistskaro	3.04	350	*i* P	Pb	10 52 54.4	+1.4
DDFL				*i* S	Sn	10 53 25.5	+2.6
SIZA	Siyzn	3.07	31	*e*Pn	Pb	10 52 52.2	-1.3
QUB	Quba	3.15	21	*e*Pn	Pb	10 52 53.3	-1.6
AGRB	Hanur-Agry	3.20	292	*e*P	Pb	10 52 55.6	-0.2
ZKT	Zaqatala	3.20	358	*e*Pn	Pb	10 52 52.9	-2.8
QSAR	Qusar	3.25	19	*e*Pn	Pb	10 52 54.2	-2.4
EAK	Akyaka	3.35	313	*i* P	Pb	10 52 59.3	+1.0
EAK				*i* S	Sg	10 53 43.3	-3.4
EAK				IAML		10 54 01.0	
	comp=N,79nm,1.6s						
EAK				IAML		10 54 04.0	
	comp=E,70nm,1.0s						
HSRG	Sareghieh	3.40	160	*e*Pn	Pn	10 52 54.8	+2.9
LGD	Lagodekhi	3.41	353	P	Pb	10 52 56.9	-2.4
KZRT	Kazreti	3.48	328	P	Pb	10 53 01.1	+0.6
BTNK	Botanikuri	3.59	335	P	Pb	10 53 02.6	+0.3
BTNK				S	Sb	10 53 49.7	+4.1
SIRT	Sirnak	3.60	256	*e*P	Pb	10 53 04.2	+1.6
QALM	Alamut, Qazvin	3.64	122	*e*Pn	Pn	10 52 58.7	+3.5
QALM				*e*		10 53 53.3	
TBLG	Delisi	3.65	335	P	Pb	10 53 03.2	-0.2
TBLG				S	Sg	10 53 55.2	-1.2
TBLG	Delisi	3.65	335	*e*P	Pb	10 53 04.1	+0.7
BGD	Bogdanovka	3.76	319	P	Pg	10 53 08.4	-2.7
AKH	Akhalkalaki	3.92	320	P	Pg	10 53 11.2	-3.0
IRAZ	Razeghan	3.92	140	*e*Pn	Pn	10 53 01.6	+2.6
IRAZ				*e*		10 54 08.5	
BKRG	Bakuriani	4.17	324	P	Pb	10 53 14.3	+2.0
BKRG				S	Sg	10 54 10.2	-2.8
GUDG	Gudauri	4.40	337	P	Pb	10 53 15.4	-0.7
GUDG				S	Sb	10 54 13.1	+4.0
BTMN	Batman	4.42	264	*i* P	Pb	10 53 14.8	-1.8
SVAN	Silvan-Diyarba	4.45	268	*e*P	Pb	10 53 14.9	-2.0
DAGI	Agillar	4.61	306	*i* P	Pb	10 53 23.0	+3.2
ONI	Oni	4.87	329	P	Pb	10 53 24.8	+0.6
TKB	Tkibuli	4.88	324	P	Pb	10 53 26.4	+2.1
IPRN	Peran	4.91	115	*e*Pn	Pn	10 53 14.9	+2.5
IPRN				*e*		10 54 43.1	
GYA0B	ALIBECK ARRAY	8.90	90	⇑Pn	Pn	10 54 06.9	-0.3
GYA0B				⇓Sn	Sn	10 55 48.5	+1.4
AB31	Akbulak array	14.33	37	⇑Pn	Pn	10 55 22.2	+0.8
	comp=E,1.7nm,0.5s,baz=222,slow=12,SNR=14						
AB31				⇑Sn	Sn	10 57 54.5	-5.4
	comp=E,1.6nm,0.4s,baz=229,slow=24,SNR=4.2						
AKTO	Aktyubinsk	14.38	30	⇑Pn	Pn	10 55 20.2	-1.8
	comp=E,1.2nm,0.6s						
AKTO				⇑Sn	Sn	10 57 53.4	-7.7
	comp=E,3.0nm,0.8s						

STR 30 11:03:00.8±0.9, 50°N±3°×°±°, h19^{km}±5^{km}, MLv1.4/7

LDG 30 11:02:59.5±0.1**, 49°.59N×8°.37E, h22**^{km}**, Ml1.8**/7**, Error ellipse: s-maj=1.0km s-min=0.8km az=122.0, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KTD	Kalmit	0.32	215	Pg	Pb	11 03 06.8	+0.2
ABH	Alteburg	0.61	299	Pg	Pb	11 03 11.6	0.0
LANF	Langenberg	0.71	212	Pg	Pb	11 03 13.6	+0.4
LANF				Sg	Sn	11 03 23.6	-0.9
OPP	Oppenau	1.10	186	Pg	Pb	11 03 20.2	+0.4
WLS	Welschbruch	1.35	210	Pg	Pb	11 03 24.7	+0.6
CDF	Champ du Feu	1.38	212	*e*Pn	Pn	11 03 21.5	-2.0
CDF	Champ du Feu	1.38	212	*e*Pg	Pb	11 03 25.1	+0.5
CDF				*e*Sg	Sb	11 03 42.7	+0.9
	2.3nm,0.3s						
ECH	Echery	1.59	211	Pg	Pb	11 03 29.3	+1.2
ECH				Sg	Sb	11 03 49.1	+1.4
PAGF	Fort de Pagny	2.02	240	*e*Pn	Pn	11 03 30.3	-1.9
PAGF	Fort de Pagny	2.02	240	*e*Pg	Pb	11 03 37.3	+1.8
PAGF				*e*Sn	Sn	11 03 53.3	-3.5
PAGF				*e*Sg	Sb	11 04 03.6	+3.4
	0.5nm,0.2s						
HINF	Hinteralfeld	2.04	210	*e*Pn	Pn	11 03 30.7	-1.8
HINF	Hinteralfeld	2.04	210	*e*Pg	Pb	11 03 37.6	+1.8
HINF				*e*Sn	Sn	11 03 53.3	-3.9
HINF				*e*Sg	Sb	11 04 04.0	+3.4
	0.7nm,0.2s						
HAU	Haudompre	2.07	221	*e*Pn	Pn	11 03 30.7	-2.2
HAU	Haudompre	2.07	221	*e*Pg	Pb	11 03 38.1	+1.7
HAU				*e*Sn	Sn	11 03 54.3	-3.8
HAU				*e*Sg	Sb	11 04 05.1	+3.5
	2.1nm,0.2s						
MEZF	Maizieres J’vi	2.44	245	*e*Pn	Pn	11 03 35.9	-2.0
MEZF	Maizieres J’vi	2.44	245	*e*Pg	Pb	11 03 44.9	+2.3
MEZF				*e*Sn	Sn	11 04 03.2	-3.8
MEZF				*e*Sg	Sb	11 04 16.6	+4.5
	0.5nm,0.2s						
SFTF	Sexfontaines	2.60	239	*e*Pg	Pb	11 03 48.1	+2.8
SFTF				*e*Sg	Sb	11 04 21.6	+4.9
	0.9nm,0.2s						
BAIF	Baives	2.74	282	*e*Pn	Pn	11 03 39.8	-2.2
BAIF	Baives	2.74	282	*e*Pg	Pb	11 03 50.3	+2.6
BAIF				*e*Sn	Sn	11 04 10.8	-3.6
BAIF				*e*Sg	Sb	11 04 25.8	+5.1
	0.5nm,0.3s						

NIED 30 11:11:00, 37°.30N×142°.10E, h20^{km}, Mw4.6 Best double couple: $M_0$9.04000×10^{15} NP1:ϕ_s356.00000°, δ87.00000°, λ65.00000°. NP2:ϕ_s260.00000°, δ25.00000°, λ173.00000°.

IDC 30 11:11:54.5±0.4, 37°.19N×142°.21E, h0^{km}, mb4.5/33, mb1 4.6/40, mb1mx4.6/49, mbtmp4.5/40, ML3.9/4, MS3.9/28, Ms1 3.9/28, ms1mx3.7/42, Error ellipse: s-maj=12.9km s-min=9.8km az=105.0

JMA 30 11:11:57.3±0.2, 37°.27N×142°.14E, h33^{km}±4^{km}, M4.8

JMA Felt III J1.

MOS 30 11:11:57.9±1.1, 37°.32N×142°.17E, h30^{km}, mb5.0/63, Error ellipse: s-maj=6.2km s-min=4.0km az=101.3

BGR 30 11:11:57.7±0.0, 37°.18N×143°.21E, h24^{km}, mb4.8

BJI 30 11:11:58.0±0.0, 37°.24N×142°.21E, h47^{km}, mB4.9/49, mb4.9/73, Ms4.4/59, Ms7 4.2/56

NEIC 30 11:11:59.9±2.0, 37°.16N±0°.02×142°.19E±0°.09, h39^{km}±5^{km}, mb4.8/196, Error ellipse: s-maj=11.0km s-min=2.0km az=100.0

ISC 30 11:11:59.0±0.6**, 37°.22N**±0°.03×**142°.17E**±0°.03**, h29**^{km}±3^{km}**, h29**^{km}**:pP-P, n463,** σ1^{s}.**61**/437**, mb4.7**/182**, MS4.0**/41**, 24C-22D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JFK	Kawauchi	1.04	278	⇓P	Pn	11 12 15.5	-2.1
JFK				S	Sn	11 12 27.9	-3.3
ONAJ	Iwakimizuishiy	1.10	264	⇓P	Pn	11 12 16.2	-2.2
ONAJ				*e*S	Sn	11 12 30.1	-2.6
JMST	Minamisoumatoc	1.13	297	⇓P	Pn	11 12 16.6	-2.2
JMST				S	Sn	11 12 30.2	-3.2
JIKH	Ishinomakikobu	1.22	333	⇓P	Pn	11 12 17.5	-2.5
JIKH				S	Sn	11 12 32.1	-3.5
JMM	Marumori	1.27	301	⇓P	Pn	11 12 18.7	-2.0
JMM				S	Sn	11 12 33.8	-2.9
JIO	Ouri	1.39	333	⇓P	Pn	11 12 20.2	-2.2
JIO				S	Sn	11 12 36.8	-2.9
JFT	Otama	1.49	282	⇓P	Pn	11 12 22.9	-0.8
JFT				S	Sn	11 12 40.8	-1.4
JOU	Okura	1.65	314	⇓P	Pn	11 12 24.8	-1.2
JOU				S	Sn	11 12 45.1	-1.1
JMK	Ichinoseki	1.88	337	⇓P	Pn	11 12 27.6	-1.5
JYS	Shirataka	1.94	302	P	Pn	11 12 30.0	0.0
JYS				*e*S	Sn	11 12 53.9	+0.5
JFY	Yanaizu	1.97	276	P	Pn	11 12 29.9	-0.5
JFY				S	Sn	11 12 53.9	-0.2
JYK	Kaneyama	2.21	320	⇓P	Pn	11 12 32.7	-1.0
JYK				S	Sn	11 12 59.1	-1.0
JAG	Ashikaga	2.32	251	P	Pn	11 12 34.0	-1.1
JNS	Sasagawa	2.34	286	P	Pn	11 12 36.3	+0.8
JOM	Ohasama	2.35	343	⇓P	Pn	11 12 34.5	-1.1
MJAR	Matsushiro Arr	3.24	259	Pn	Pn	11 12 48.1	+0.2
	34nm,0.3s,baz=70,slow=11,SNR=503						
MJAR				Sn	Sb	11 13 30.3	-4.6
	17nm,0.3s,baz=93,slow=15,SNR=6.7						
MJAR				LR	LR	11 14 11.4	
	comp=Z,2µm,20.2s,baz=80,slow=42						
MJAR	Matsushiro Arr	3.24	259		Pn	11 12 47.8	-0.1
MAJO	Matsushiro	3.25	259	P	Pn	11 12 48.7	+0.8
MAJO	Matsushiro	3.25	259		Pn	11 12 48.7	+0.8
MAT	Matsushiro	3.25	259	P	Pn	11 12 48.2	+0.3
MAT				S	Sb	11 13 30.5	-4.4
MJB9	Matsu-Tunnel	3.25	259		Pn	11 12 48.4	+0.5
JHJ2	Mitsune	4.53	206		Pn	11 13 04.7	-0.8
JHJ	Hachijo jima 2	4.53	206	Pn	Pn	11 13 05.2	-0.5
	353nm,0.3s,baz=329,slow=18,SNR=33						
JHJ				Sn	Sn	11 13 54.9	-2.4
	502nm,0.3s,baz=92,slow=22,SNR=5.6						
INU	Inuyama	4.56	247		Pn	11 13 07.9	+2.0
ERM	Erimo	4.85	9	*i* P	Pn	11 13 09.2	-0.7
ERM	Erimo	4.85	9		Pn	11 13 09.0	-0.9
NMR	Nemuro--Hokkai	6.72	23	*e*P	Pn	11 13 32.2	-3.3
NMR				S	Sn	11 14 42.4	-8.6
ASAJ	Asahikawa	6.89	3	Pn	Pn	11 13 37.9	-0.1
	5.1nm,0.3s,baz=206,slow=13,SNR=36						
ASAJ				Sn	Sn	11 14 52.3	-3.1
	2.0nm,0.3s,baz=171,slow=28,SNR=1.8						
JKA	Kamikawa-asahi	6.89	3		Pn	11 13 37.9	-0.1
JKA					Sn	11 14 52.3	-3.1
GLVR	Golovnino	6.99	20	*e*P	Pn	11 13 37.0	-2.3
GLVR				*e*S	Sn	11 14 51.9	-5.9
GLVR				pmax	pmax		
	comp=N,91nm,0.5s						
GLVR				pmax	pmax		
	comp=Z,149nm,0.5s						
GLVR				pmax	pmax		
	comp=E,46nm,0.4s						
GRPR	Tuman	7.30	21	*e*P	Pn	11 13 41.4	-2.1
GRPR				*e*S	Sn	11 14 59.6	-5.8
GRPR				pmax	pmax		
	comp=Z,112nm,0.3s						
YUK	Yuzh-Kuril'sk	7.36	21	*e*P	Pn	11 13 41.7	-2.7
YUK				*e*S	Sn	11 15 00.7	-6.2
YUK				pmax	pmax		
	comp=Z,147nm,0.3s						
YUK				pmax	pmax		
	comp=E,23nm,0.2s						
YUK				MLR	MLR		
	comp=E,254nm,14.0s						
YUK				MLR	MLR		
	comp=Z,245nm,14.0s						
YUK				MLR	MLR		
	comp=N,329nm,12.0s						
TEY	Ternei	8.86	334	⇑*e*P	Pn	11 14 11.1	+6.2
TEY				pmax	pmax		
	comp=N,20nm,1.1s						
TEY				pmax	pmax		
	comp=Z,30nm,1.2s						
TEY				pmax	pmax		
	comp=E,20nm,1.1s						
KUR	Kuril'sk	9.08	26	*e*P	Pn	11 14 06.0	-2.0
KUR				*e*S	Sn	11 15 41.2	-7.9
KUR				pmax	pmax		
	comp=N,27nm,0.5s						
KUR				pmax	pmax		
	comp=Z,48nm,0.5s						
KUR				pmax	pmax		
	comp=E,25nm,0.4s						
KUR				pmax	pmax		
	comp=Z,342nm,4.0s						
KUR				smax	smax		
	comp=N,99nm,0.4s						
KUR				smax	smax		
	comp=E,73nm,0.3s						
KUR				MLR	MLR		
	comp=E,423nm,13.0s						
KUR				MLR	MLR		
	comp=Z,544nm,13.0s						
YSS	Yuzh-Sakhalins	9.73	2	⇑*i*P	Pn	11 14 18.4	+1.5
YSS				*e*S	Sn	11 16 03.2	-2.0
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
YSS				MLR	MLR		
	comp=E,300nm,14.0s						
YSS	Yuzh-Sakhalins	9.73	2		Pn	11 14 18.0	+1.1
VLA	Vladivostok	9.82	310	*i* P	Pn	11 14 20.1	+1.9
MSHR	Mys Shultsa	10.01	306	*i* P	Pn	11 14 21.1	+0.5
JCJ	Chichijima	10.10	180	Pn	Pn	11 14 19.2	-2.7
	comp=E,20nm,0.3s,baz=272,slow=22,SNR=13						
JCJ				Sn	Sn	11 16 03.9	-10
	comp=E,37nm,0.3s,baz=18,slow=22,SNR=3.6						
JNU	Nakatsue	10.10	249	Pn	Pn	11 14 24.3	+2.2
	comp=E,4.0nm,0.3s,baz=58,slow=3.5,SNR=27						
JNU				LR	LR	11 18 28.9	
	comp=E,589nm,20.1s,baz=78,slow=39						
JNU	Nakatsue	10.10	249		Pn	11 14 24.2	+2.1
USA0B	Ussuriysk Arra	10.40	315	*i* P	Pn	11 14 26.4	+0.4
USA0B	Ussuriysk Arra	10.40	315		Pn	11 14 27.0	+1.0
USRK	Ussuriysk Ar.	10.40	315	Pn	Pn	11 14 27.4	+1.4
	baz=122,slow=14,SNR=17						
USRK				LR	LR	11 18 11.3	
	comp=E,757nm,19.2s,baz=121,slow=36						
USRK	Ussuriysk Ar.	10.40	315	P	Pn	11 14 30.4	+4.3
USRK	Ussuriysk Ar.	10.40	315		Pn	11 14 30.4	+4.3
KSRS	Korea Array	11.34	275	Pn	Pn	11 14 41.7	+2.7
	comp=E,1.4nm,0.3s,baz=91,slow=13,SNR=32						
KSRS				LR	LR	11 18 53.3	
	comp=E,912nm,18.8s,baz=81,slow=37						
KSAR	Wonju Array Be	11.37	275	P	Pn	11 14 40.2	+0.8
KSAR	Wonju Array Be	11.37	275		Pn	11 14 40.2	+0.8
KS19	Wonju Array Si	11.38	276		Pn	11 14 42.4	+2.9
TJN	Taejon	11.90	270	*i* P	Pn	11 14 47.3	+0.7
MDJ	Mudanjiang	12.03	312	P	Pn	11 14 51.5	+3.1
MDJ				S	Sn	11 17 03.5	+2.0
MDJ				pmax	pmax		
	comp=E,18nm,0.9s						
MDJ				pmax	pmax		
	comp=E,57nm,4.2s						
MDJ				LR	LR		
	comp=E,560nm,17.1s						
MDJ				LR	LR		
	comp=E,500nm,16.0s						
MDJ				LR	LR		
	comp=E,820nm,21.4s						
MDJ	Mudanjiang	12.03	312		Pn	11 14 51.3	+2.9
TYV	Tymovskoe	13.64	1	*e*P	P	11 15 21.8	+3.0
TYV				pmax	pmax		
	comp=Z,10.0nm,1.3s						
TYV				pmax	pmax		
	comp=Z,100nm,3.5s						
GRNR	Gornyy	14.15	345	⇑*i*P	Pn	11 15 16.1	-1.2
GRNR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KLR	Kul'dur	14.18	331	Pn	Pn	11 15 17.0	-0.7
	comp=Z,0.4nm,0.3s,baz=158,slow=9.7,SNR=7.0						
KLR				LR	LR	11 20 43.1	
	comp=Z,551nm,18.2s,baz=147,slow=37						
KLR	Kul'dur	14.18	331	*i* P	Pn	11 15 18.1	+0.4
KLR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CN2	Changchun	14.30	303	*e*P	Pn	11 15 21.0	+1.6
JOW	Kunigami	15.67	233	Pn	P	11 15 40.8	-0.7
	comp=Z,0.5nm,0.3s,baz=91,slow=19,SNR=5.9						
JOW	Kunigami	15.67	233	P	P	11 15 40.9	-0.7
DL2	Dalian	16.26	282	P	Pn	11 15 44.8	-0.4
DL2				*e*S	Sn	11 18 44.5	-0.2
DL2				pmax	pmax		
	comp=Z,63nm,0.6s						
DL2				pmax	pmax		
	comp=Z,140nm,7.8s						
DL2				LR	LR		
	comp=Z,440nm,16.9s						
DL2				LR	LR		
	comp=Z,570nm,15.9s						
DL2				LR	LR		
	comp=Z,570nm,14.5s						
PEA0B	Petropavlovsk-	19.23	29	*i* P	P	11 16 19.9	-0.7
PETK	Petropavlovsk-	19.23	29	P	P	11 16 20.5	-0.1
	comp=Z,0.1nm,0.3s,baz=108,slow=27,SNR=3.0						
PETK				LR	LR	11 23 39.4	
	comp=Z,197nm,21.8s,baz=237,slow=37						
PETK	Petropavlovsk-	19.23	29	P	P	11 16 20.7	+0.1
PETK	Petropavlovsk-	19.23	29	P	P	11 16 20.7	+0.1
ZEA	Zeya	19.48	333	*e*P	P	11 16 21.8	-1.5
ZEA				pmax	pmax		
	comp=N,24nm,1.0s						
ZEA				pmax	pmax		
	comp=E,18nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,32nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,16.0s						
PET	Petropavlovsk	19.55	31	*e*P	Pn	11 16 29.5	+4.0
PET				*e*S	Sn	11 20 03.3	-0.5
PET				pmax	pmax		
	comp=Z,100nm,13.5s						
PET				MLR	MLR		
	comp=Z,300nm,17.0s						

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NJ2   Nanjing           19.84 262 eP     Pn     11 16 28.5 -0.7
NJ2                               pmax   pmax
      comp=Z,33nm,0.8s
NJ2                               LR     LR
      comp=Z,500nm,17.1s
NJ2                               LR     LR
      comp=Z,310nm,11.5s
NJ2                               LR     LR
      comp=Z,610nm,19.9s
TIA   Tai'an            20.09 275  P     P      11 16 28.5 -1.6
TIA                               pmax   pmax
      comp=Z,15nm,0.8s
TIA                               LR     LR
      comp=Z,350nm,12.8s
TIA                               LR     LR
      comp=Z,370nm,15.7s
TIA                               LR     LR
      comp=Z,650nm,16.4s
BJI   Beijing           20.48 286  P     P      11 16 32.5 -1.8
BJI                                S     S      11 20 18.0 -3.9
BJI                               pmax   pmax
      comp=Z,14nm,1.0s
BJI                               LR     LR
      comp=Z,250nm,13.3s
BJI                               LR     LR
      comp=Z,150nm,11.2s
BJT   Baijiatuau        20.48 286  P     P      11 16 32.1 -2.3
BJT                               pmax   pmax
      comp=Z,14nm,0.8s
BJT   Baijiatuau        20.48 286  P     P      11 16 32.1 -2.3
YHNB  Yeheng            21.73 241  P     P      11 16 46.6 -1.4
YHNB                              IAmb   IAmb   11 16 50.7
      comp=Z,40nm,1.2s
NACB  Ninganchiao       21.90 239  P     P      11 16 47.3 -2.4
NACB                              IAmb   IAmb   11 16 53.9
      comp=Z,21nm,0.7s
SSLB  Suanglung         22.59 240  P     P      11 16 54.6 -2.6
SSLB                              IAmb   IAmb   11 17 00.6
      comp=Z,19nm,0.8s
YULB  Yu-li             22.62 238  P     P      11 16 54.5 -3.0
MA2   Magadan           23.05  11ceP     P      11 17 01.7 +0.1
MA2                               pmax   pmax
      comp=Z,11nm,1.3s
MA2   Magadan           23.05  11  P     P      11 17 02.9 +1.2
TPUB  Ta-pu             23.14 239  P     P      11 16 59.9 -2.9
TPUB                              IAmb   IAmb   11 17 07.9
      comp=Z,53nm,1.1s
TWG   Pinlang           23.16 238  P     P      11 17 01.6 -1.4
QZH   Quanzhou          23.54 245⇓iP     P      11 17 04.3 -2.5
QZH                               eS     S      11 21 11.0 -7.9
QZH                               pmax   pmax
      comp=Z,48nm,0.7s
QZH                               LR     LR
      comp=Z,330nm,13.3s
GUMO  Guam              23.66 173 LR     LR     11 26 33.4
      comp=Z,34nm,20.4s,baz=14,slow=37
KNMB  Chin-men Tao      23.97 245  P     P      11 17 09.4 -1.5
WHN   Wuhan             23.98 262 ⇓P     P      11 17 10.3 -0.6
WHN                                S     S      11 21 23.5 -2.5
WHN                               LR     LR
      comp=Z,510nm,12.9s
WHN                               LR     LR
      comp=Z,1µm,13.5s
WHN                               LR     LR
      comp=Z,1µm,14.2s
HHC   Hu-ho-hao-te      23.98 288 eP     P      11 17 10.8 -0.2
HHC                               pmax   pmax
      comp=Z,80nm,0.7s
HHC                               pmax   pmax
      comp=Z,300nm,4.0s
HHC                               LR     LR
      comp=Z,850nm,12.6s
HHC                               LR     LR
      comp=Z,520nm,11.2s
HHC                               LR     LR
      comp=Z,860nm,12.6s
BTO   Baotou            25.16 288 eP     P      11 17 22.8 +1.0
YAK   Yakutsk           26.02 347  P     P      11 17 29.1 -0.1
      comp=Z,8.3nm,0.3s,baz=25,slow=1.0,SNR=13
YAK                               LR     LR     11 29 04.9
      comp=Z,160nm,18.2s,baz=164,slow=40
YAK   Yakutsk           26.02 347 eP     P      11 17 29.9 +0.7
YAK                               e             11 18 17.9
YAK                               eS     S      11 21 59.8 +1.9
YAK                               e             11 28 28.0
YAK                               pmax   pmax
      comp=Z,34nm,0.9s
YAK                               pmax   pmax
      comp=E,3.0nm,0.8s
YAK                               pmax   pmax
      comp=N,8.0nm,1.1s
YAK                               pmax   pmax
      comp=Z,10.0nm,0.6s
YAK                               pmax   pmax
      comp=E,7.0nm,0.6s
YAK                               smax   smax
      comp=E,25nm,1.7s
YAK                               smax   smax
      comp=N,18nm,1.3s
YAK                               MLR    MLR
      comp=Z,143nm,14.0s
YAK                               MLR    MLR
      comp=E,105nm,16.0s
YAK                               MLR    MLR
      comp=N,102nm,15.0s
YAK   Yakutsk           26.02 347  P     P      11 17 29.2 +0.1
SEY   Seymchan          26.49  10  P     P      11 17 34.0 +0.6
      comp=N,5.3nm,0.7s,baz=186,slow=6.4,SNR=21
XAN   Xi'an             27.13 273  P     P      11 17 39.0 -0.6
XAN                               pP     pP     11 17 46.8 -1.0
XAN                               pmax   pmax
      comp=N,21nm,1.0s
XAN                               pmax   pmax
      comp=N,120nm,5.7s
XAN                               LR     LR
      comp=N,210nm,13.5s
XAN                               LR     LR
      comp=N,300nm,15.0s
XAN                               LR     LR
      comp=N,380nm,14.7s
XAN   Xi'an             27.13 273  P     P      11 17 39.0 -0.6
XAN                               pmax   pmax
      comp=Z,19nm,0.6s
XAN   Xi'an             27.13 273  P     P      11 17 39.0 -0.6
XAN                               IAmb   IAmb   11 17 40.1
      comp=Z,19nm,0.6s
BOD   Bodaibo           27.69 327 eP     P      11 17 43.6 -0.7
BOD                               pmax   pmax
      comp=Z,19nm,0.8s
H11N2 WAKE ISLAND Hy    27.73 122  T     T      11 46 58.7
      baz=314,slow=75,SNR=901
H11N1 WAKE ISLAND Hy    27.74 122  T     T      11 46 58.7
      baz=314,slow=75,SNR=580
ULN   Ulaanbaatar       27.75 304 i P    P      11 17 44.4 -0.7
ULN                               pmax   pmax
      comp=Z,14nm,1.1s
ULN   Ulaanbaatar       27.75 304  P     P      11 17 46.1 +1.1
ULN                               IAmb   IAmb   11 17 51.4
      comp=Z,11nm,0.8s
H11N3 WAKE ISLAND Hy    27.75 122  T     T      11 46 59.1
      baz=314,slow=75,SNR=592
ENH   Enshi             27.95 265  P     P      11 17 46.2 -0.7
SONM  Songino Array     28.18 303  P     P      11 17 49.1 +0.2
      comp=Z,12nm,0.7s,baz=99,slow=9.0,SNR=75
SONM                              LR     LR     11 29 23.4
      comp=Z,188nm,18.1s,baz=94,slow=37
SONM  Songino Array     28.18 303  P     P      11 17 49.2 +0.2
SONM                              pmax   pmax
      comp=Z,12nm,1.0s
SONM  Songino Array     28.18 303  P     P      11 17 49.2 +0.2
H11S1 WAKE ISLAND Hy    28.46 124  T     T      11 47 51.3
      baz=316,slow=76,SNR=640
H11S3 WAKE ISLAND Hy    28.46 124  T     T      11 47 46.6
      baz=316,slow=76,SNR=638
H11S2 WAKE ISLAND Hy    28.48 124  T     T      11 47 48.9
      baz=316,slow=76,SNR=482
TGY   Tagaytay City     29.80 225  P     P      11 18 03.9 +0.4
      comp=Z,137nm,0.4s,baz=49,slow=18,SNR=3.6
ZAK   Zakamensk         30.63 308 eP     P      11 18 09.7 -0.8
ZAK                               pmax   pmax
      comp=Z,13nm,1.1s
LZH   Lanzhou           30.63 280 ⇓P     P      11 18 11.0 +0.2
LZH                               pP     sP     11 18 23.8 +1.5
LZH                               sP     pP     11 18 29.5  +10
LZH                               PP     PnPn   11 19 11.0 +0.4
LZH                               pmax   pmax
      comp=Z,29nm,1.1s
LZH                               pmax   pmax
      comp=Z,100nm,6.0s
LZH                               LR     LR
      comp=Z,380nm,15.2s
LZH                               LR     LR
      comp=Z,510nm,15.7s
LZH                               LR     LR
      comp=Z,580nm,17.3s
TLY   Talaya            30.66 311ceP     P      11 18 11.5 +0.8
TLY                               pmax   pmax
      comp=Z,13nm,0.8s
TLY   Talaya            30.66 311  P     P      11 18 10.8 +0.1
TLY                               IAmb   IAmb   11 18 14.1
      comp=Z,11nm,0.8s
GYA   Guiyang           31.84 261⇑iP     P      11 18 21.8 +0.3
GYA                               pP     sP     11 18 38.3 +5.2
GYA                               sP     pP     11 18 43.0  +13
GYA                               PP     PnPn   11 19 29.3 +2.8
GYA                                S     S      11 23 31.5 +1.1
GYA                               sS     sS     11 23 51.3 +7.0
GYA                               ScP    ScP    11 24 51.0 -2.2
GYA                               SS     SnSn   11 25 16.5 -2.8
GYA                               pmax   pmax
      comp=Z,40nm,1.0s
GYA                               pmax   pmax
      comp=Z,120nm,4.5s
GYA                               LR     LR
      comp=Z,380nm,16.6s
GYA                               LR     LR
      comp=Z,240nm,14.4s
GYA                               LR     LR
      comp=Z,310nm,16.3s
CD2   Chengdu           32.27 270 eP     P      11 18 24.5 -0.7
CD2                                S     S      11 23 34.8 -2.1
CD2                               pmax   pmax
      comp=Z,10.0nm,0.5s
CD2                               LR     LR
      comp=Z,480nm,12.7s
CD2                               LR     LR
      comp=Z,840nm,15.7s
CD2                               LR     LR
      comp=Z,1µm,14.7s
MOY   Mondy             32.28 310 eP     P      11 18 24.9 -0.2
MOY                               pmax   pmax
      comp=Z,19nm,2.5s
GTA   Gaotai            33.08 287 eP     P      11 18 31.8 -0.5
GTA                               pmax   pmax
      comp=Z,4.0nm,0.9s
QIZ   Qiongzhong        33.55 246  P     P      11 18 38.0 +1.6
QIZ                                S     S      11 23 57.8 +1.0
QIZ                               pmax   pmax
      comp=Z,18nm,0.8s
QIZ                               LR     LR
      comp=Z,220nm,17.6s
QIZ                               LR     LR
      comp=Z,190nm,16.7s
QIZ                               LR     LR
      comp=Z,160nm,18.1s
PATS  Pohnpei           33.63 150  P     P      11 18 38.0 +0.9
BILL  Bilibino          33.68  16ceP     P      11 18 38.0 +1.1
BILL                              i             11 18 44.4
BILL                              e             11 19 50.1
BILL                              eS     S      11 23 58.0 +0.2
BILL                              pmax   pmax
      comp=Z,6.0nm,1.3s
BILL                              MLR    MLR
      comp=Z,117nm,18.0s
BILL  Bilibino          33.68  16  P     P      11 18 36.4 -0.6
KCP   Kidapawan         33.85 212⇓iP     P      11 18 40.0 +0.9
TIXI  Tiksi             35.18 353  P     P      11 18 49.7 -0.1
      comp=Z,0.8nm,0.3s,baz=144,slow=4.9,SNR=4.8
TIXI  Tiksi             35.18 353 i P    P      11 18 50.3 +0.5
TIXI                              pmax   pmax
      comp=Z,3.0nm,0.7s
TIXI  Tiksi             35.18 353  P     P      11 18 49.2 -0.6
KMI   Kunming           35.58 262  P     P      11 18 55.0 +0.8
KMI                               pP     sP     11 19 08.5 +2.7
KMI                               pmax   pmax
      comp=Z,45nm,1.0s
KMI                               pmax   pmax
      comp=Z,100nm,3.1s
KMI                               LR     LR
      comp=Z,250nm,15.1s
KMI                               LR     LR
      comp=Z,270nm,23.3s
KMI                               LR     LR
      comp=Z,390nm,23.3s
KMI   Kunming           35.58 262  P     P      11 18 54.7 +0.6
KMI                               pmax   pmax
      comp=Z,42nm,1.0s
KMI   Kunming           35.58 262  P     P      11 18 54.7 +0.6
SLVN  Son La            36.66 255  P     P      11 19 03.9 +0.7
SLVN                              IAmb   IAmb   11 19 08.1
      comp=Z,12nm,1.2s
UBPT  Khong Chiam       39.15 246  P     P      11 19 25.0 +0.8
SIJI  Sorong            39.22 197  P     P      11 19 25.8 +1.0
      comp=Z,8.1nm,0.5s,baz=5.8,slow=17,SNR=5.9
DLV   T  Lat            39.29 239  P     P      11 19 27.2 +1.6
LBMI  Labuha            40.05 203  P     P      11 19 32.9 +1.3
      comp=Z,30nm,0.9s
DGZ   Jazzator, Alta    40.77 306 i P    P      11 19 38.3 +0.8
DGZ                               pmax   pmax
      comp=Z,56nm,0.9s
FAKI  Fak Fak           40.99 195  P     P      11 19 42.1 +2.7
      comp=Z,23nm,0.9s
FAKI  Fak Fak           40.99 195  P     P      11 19 40.1 +0.7
FAKI                              IAmb   IAmb   11 19 59.3
      comp=Z,12nm,0.8s
MRSI  Marisa            41.06 212  P     P      11 19 43.1 +3.1
      comp=Z,755nmcomp=Z,40nm,1.2s
ANM   Nome              41.12  31  P     P      11 19 41.2 +1.2
ANM                               pmax   pmax
      comp=Z,7.0nm,1.3s
ANM   Nome              41.12  31  P     P      11 19 41.2 +1.2
WMQ   Urumqi            41.29 297 eP     P      11 19 43.3 +1.5
WMQ                               pP     sP     11 19 56.8 +3.2
WMQ                               sP     pP     11 20 00.5  +10
WMQ                               pmax   pmax
      comp=Z,25nm,0.9s
WMQ                               pmax   pmax
      comp=Z,76nm,4.1s
WMQ                               LR     LR
      comp=Z,110nm,17.7s
WMQ                               LR     LR
      comp=Z,210nm,17.3s
WMQ                               LR     LR
      comp=Z,210nm,20.1s
WMQ   Urumqi            41.29 297  P     P      11 19 43.5 +1.8
WMQ                               pmax   pmax
      comp=Z,22nm,0.6s
WMQ   Urumqi            41.29 297  P     P      11 19 43.5 +1.8
PBKT  Sadao Pong        41.69 252  P     P      11 19 45.6 +0.4
PBKT                              IAmb   IAmb   11 19 53.2
      comp=Z,10nm,0.6s
CHTO  Chiang Mai        41.92 256  P     P      11 19 47.4 +0.3
CHTO                              pmax   pmax
      comp=Z,8.0nm,1.2s
CHTO  Chiang Mai        41.92 256  P     P      11 19 47.4 +0.3
CM31  Chiang Mai Arr    42.12 256  P     P      11 19 49.8 +1.0
CMAR  Chiang Mai Arr    42.12 256  P     P      11 19 49.0 +0.2
      comp=Z,3.5nm,0.9s,baz=46,slow=6.4,SNR=15
CMAR                              LR     LR     11 38 28.4
      comp=Z,147nm,18.9s,baz=52,slow=38
CMAR  Chiang Mai Arr    42.12 256ceP     P      11 19 49.7 +0.9
CMAR                              pmax   pmax
      comp=Z,4.0nm,0.9s
CMAR  Chiang Mai Arr    42.12 256  P     P      11 19 49.5 +0.7
ZAA0  Zalesovo Array    42.23 312  P     P      11 19 48.8 -0.5
ZAA0                              IAmb   IAmb   11 19 56.7
      comp=Z,35nm,1.3s
ZALV  Zalesovo Beam     42.23 312  P     P      11 19 49.3 +0.1
      comp=Z,6.8nm,0.4s,baz=88,slow=6.9,SNR=34
ZALV                              LR     LR     11 38 01.9
      comp=Z,223nm,18.6s,baz=88,slow=37
ZALV  Zalesovo Beam     42.23 312  P     P      11 19 48.2 -1.0
AAI   Ambon             42.73 201  P     P      11 19 59.2 +5.6
      comp=Z,2µmcomp=Z,40nm,0.6s
AAI   Ambon             42.73 201  P     P      11 19 55.2 +1.6
AAI                               pmax   pmax
      comp=Z,40nm,0.6s
BNDI  Bandanaira        43.07 198  P     P      11 20 01.4 +5.0
      comp=Z,3µmcomp=Z,76nm,1.2s
NRIK  Noril'sk          43.35 335  P     P      11 19 58.2 +0.2
      comp=Z,2.3nm,0.4s,baz=62,slow=7.5,SNR=2.3
NRIK                              LR     LR     11 39 07.8
      comp=Z,232nm,18.0s,baz=116,slow=38
NRIK  Noril'sk          43.35 335 i P    P      11 19 59.2 +1.1
NRIK                              pmax   pmax
      comp=Z,6.0nm,1.0s
SBUM  Sibu              44.22 226  P     P      11 20 06.3 +0.6
SBUM  Sibu              44.22 226  P     P      11 20 07.0 +1.3
MK31  Makanchi Array    44.53 302 i P    P      11 20 07.4 -0.5
MK31  Makanchi Array    44.53 302  P     P      11 20 07.6 -0.3
MK31                              IAmb   IAmb   11 20 14.6
      comp=Z,15nm,0.7s
MKAR  Makanchi Array    44.53 302  P     P      11 20 07.8 -0.1
      comp=Z,4.7nm,0.5s,baz=87,slow=10,SNR=39
MKAR                              LR     LR     11 40 05.4
      comp=Z,109nm,18.7s,baz=69,slow=38
MKAR  Makanchi Array    44.53 302  P     P      11 20 07.5 -0.4
MAKZ  Makanchi          44.74 302  P     P      11 20 09.3 -0.3
MAKZ  Makanchi          44.74 302  P     P      11 20 09.2 -0.4
MAKZ                              IAmb   IAmb   11 20 16.4
      comp=Z,16nm,0.8s
SVW2  Sparrevohn        45.01  37  P     P      11 20 13.0 +1.5
SVW2                              IAmb   IAmb   11 20 14.0
      comp=Z,7.8nm,0.8s
KSM   Kuching           46.12 227  P     P      11 20 20.8  0.0
KSM   Kuching           46.12 227  P     P      11 20 22.0 +1.2
KURK  Kurchatov         46.29 308ceP     P      11 20 21.7  0.0
KURK                              pmax   pmax
      comp=Z,41nm,0.8s
KURK  Kurchatov         46.29 308  P     P      11 20 21.5 -0.3
KURBB Kurchatov Arra    46.36 308  P     P      11 20 21.9 -0.4
TAPN  Taplejung         46.53 274 eP     P      11 20 24.5 +0.2
KDAK  Kodiak Island     46.56  42  P     P      11 20 21.9 -1.8
      comp=Z,10nm,0.7s,baz=297,slow=3.9,SNR=13
KDAK                              LR     LR     11 39 15.5
      comp=Z,174nm,21.1s,baz=245,slow=35
KDAK  Kodiak Island     46.56  42  P     P      11 20 23.5 -0.2
KDAK                              pmax   pmax
      comp=Z,14nm,0.9s
KDAK  Kodiak Island     46.56  42  P     P      11 20 23.5 -0.2
KDAK                              IAmb   IAmb   11 20 36.0
      comp=Z,14nm,0.8s
ODAN  Odare             47.00 274 eP     P      11 20 27.6 -0.3
KTH   Kantishna Hill    47.26  34 IAmb   IAmb   11 20 31.3
      comp=Z,9.7nm,0.9s
SUA   Susitna One       47.35  37 IAmb   IAmb   11 20 32.0
      comp=Z,8.5nm,0.8s
MLY   Manley            47.37  32  P     P      11 20 30.9 +0.8
MLY                               IAmb   IAmb   11 20 32.3
      comp=Z,6.6nm,0.8s
TRF   Thorofare Moun    47.54  34 IAmb   IAmb   11 20 34.2
      comp=Z,5.6nm,0.7s
RAMN  Ramite            47.59 274 eP     P      11 20 32.5  0.0
      comp=Z,71nm,0.8s
GUN   Gumba             47.73 276 eP     P      11 20 33.8 +0.1
RC01  Rabbit Creek A    47.85  37 IAmb   IAmb   11 20 34.8
      comp=Z,9.0nm,0.9s
NEA   Nenana            48.08  33 IAmb   IAmb   11 20 37.5
      comp=Z,6.8nm,0.9s
PMR   Palmer            48.12  37 IAmb   IAmb   11 20 36.7
      comp=Z,14nm,1.2s
MCK   McKinley          48.14  34  P     P      11 20 36.0  0.0
MCK                               pmax   pmax
      comp=Z,6.0nm,0.8s
MCK   McKinley          48.14  34  P     P      11 20 36.0  0.0
MCK                               IAmb   IAmb   11 20 37.3
      comp=Z,6.1nm,0.8s
RND   Reindeer          48.19  34 IAmb   IAmb   11 20 37.5
      comp=Z,8.2nm,0.8s
PKI   Pulchoki          48.26 276 eP     P      11 20 37.6 -0.2
KKN   Kakani            48.26 276 eP     P      11 20 37.8 +0.1
KNK   Knik Glacier      48.45  37 IAmb   IAmb   11 20 39.7
      comp=Z,8.3nm,0.8s
WRH   Wood River Hil    48.50  33 IAmb   IAmb   11 20 40.4
      comp=Z,4.7nm,0.8s
COLA  College           48.60  32  P     P      11 20 40.2 +0.8
COLA                              pmax   pmax
      comp=Z,5.0nm,0.7s
COLA  College           48.60  32  P     P      11 20 40.2 +0.8
COLA                              IAmb   IAmb   11 20 41.9
      comp=Z,5.4nm,0.7s
GKN   Gorkha            48.68 277 eP     P      11 20 40.8  0.0
HDA   Harding Lake      49.00  33 IAmb   IAmb   11 20 43.4
      comp=Z,8.2nm,0.8s
IL31                    49.01  32 IAmb   IAmb   11 20 43.7
      comp=Z,8.5nm,0.8s
ILAR  Eielson Array     49.01  32  P     P      11 20 42.5 -0.2
      comp=Z,7.2nm,0.7s,baz=263,slow=6.3,SNR=89
ILAR  Eielson Array     49.01  32  P     P      11 20 42.9 +0.2
ILAR  Eielson Array     49.01  32  P     P      11 20 42.9 +0.2
DANN  Dangsing          49.22 278 eP     P      11 20 45.5 +0.4
      comp=Z,183nm,0.6s
PRP   Porcupine Dome    49.56  31 IAmb   IAmb   11 20 48.9
      comp=Z,6.3nm,0.8s
FYU   Fort Yukon        49.65  30 IAmb   IAmb   11 20 50.1
      comp=Z,6.3nm,0.9s
SOEI  Soe               49.66 203  P     P      11 21 01.3  +13
IPM   Ipoh              49.75 239  P     P      11 20 48.1 -0.8
IPM                               IAmb   IAmb   11 20 59.3
      comp=Z,9.8nm,0.7s
IPM   Ipoh              49.75 239  P     P      11 20 50.0 +1.1
BMAR  Burnt Mountain    49.88  29  P     P      11 20 50.7 +1.4
SCRK  Sand Creek        50.32  33 IAmb   IAmb   11 20 54.0
      comp=Z,8.3nm,0.8s
MENT  Mentasta          50.54  35  P     P      11 20 55.5 +1.2
MENT                              IAmb   IAmb   11 21 10.8
      comp=Z,6.4nm,0.9s
VRDI  Verde Repeater    50.87  37 IAmb   IAmb   11 20 58.4
      comp=Z,5.4nm,0.7s
KSH   Kashi             50.88 294  P     P      11 21 02.0 +4.6
KSH                               sP     sP     11 21 19.8  +10
KSH                               PcP    PcP    11 22 13.8 +0.1
KSH                               PcS    PcS    11 26 10.5 -0.8
KSH                                S     S      11 28 16.0 +4.1
KSH                               pmax   pmax
      comp=Z,28nm,1.2s
KSH                               pmax   pmax
      comp=Z,180nm,4.5s
KSH                               LR     LR
      comp=Z,150nm,8.1s
KSH                               LR     LR
      comp=Z,140nm,8.5s
KSH                               LR     LR
      comp=Z,150nm,13.8s
AAK   Ala-Archa         50.93 298 LR     LR     11 43 56.6
      comp=Z,334nm,18.8s,baz=65,slow=38
AAK   Ala-Archa         50.93 298ceP     P      11 20 58.4 +0.7
AAK                               pmax   pmax
      comp=Z,6.0nm,1.0s
AAK   Ala-Archa         50.93 298  P     P      11 20 57.5 -0.3
AAK                               IAmb   IAmb   11 21 06.2
      comp=Z,6.1nm,0.6s
BRVK  Borovoye          50.95 312ceP     P      11 20 58.1 +0.6
BRVK                              pmax   pmax
      comp=Z,6.0nm,1.0s
BRVK  Borovoye          50.95 312  P     P      11 20 57.1 -0.4
BRVK                              IAmb   IAmb   11 21 05.8
      comp=Z,7.3nm,0.8s
MCARA McCarthy VSAT     51.05  37 IAmb   IAmb   11 21 00.3
      comp=Z,10nm,0.8s
TGL   Tana Glacier      51.23  37 IAmb   IAmb   11 21 01.6
      comp=Z,6.5nm,0.7s
BCAR  Beaver Creek A    51.40  34  P     P      11 21 01.5 +0.6
BALM  Baldy             51.43  37 IAmb   IAmb   11 21 02.8
      comp=Z,7.3nm,0.8s
EGAK  Eagle             51.46  32  P     P      11 21 01.0 -0.2
SRBI  Singaraja         51.65 215  P     P      11 21 15.3  +12
BARN  Barnard Glacie    51.75  37 IAmb   IAmb   11 21 05.1
      comp=Z,5.9nm,0.7s
CTGM  Chitina Glacie    51.92  37 IAmb   IAmb   11 21 06.3
      comp=Z,6.0nm,0.6s
PSI   Prapat            52.41 240  P     P      11 21 10.4 +1.4
PSI                               pmax   pmax
      comp=Z,13nm,0.7s
BKNI  Bangkinang        52.79 236  P     P      11 21 12.0 +0.3
PWJI  Pagerwojo         53.23 219  P     P      11 21 15.2 +0.4
SDSI  Sungai Dareh      53.48 234  P     P      11 21 23.5 +6.7
KK31  Karatay Array     53.55 300  P     P      11 21 16.8 -0.2
KK31  Karatay Array     53.55 300  P     P      11 21 16.6 -0.5
KK31                              IAmb   IAmb   11 21 21.7
      comp=Z,8.0nm,0.7s
KKAR  Karatay Array     53.55 300  P     P      11 21 16.5 -0.5
KKAR  Karatay Array     53.55 300  P     P      11 21 16.5 -0.5
KKAR  Karatay Array     53.55 300 IAmb   IAmb   11 21 21.7
      comp=Z,8.0nm,0.7s
INK   Inuvik            53.94  27  P     P      11 21 20.3 +0.8
      comp=Z,6.0nm,0.7s,baz=298,slow=6.1,SNR=30
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INK				LR	LR	11 44 27.1	
	comp=Z,50nm,21.8s,baz=260,slow=36						
INK	Inuvik	53.94	27	IAmb	IAmb	11 21 21.2	
	comp=Z,6.5nm,0.7s						
KNRA	Kununurra	54.11	196	P	P	11 21 22.0	+0.8
GSI	Gunungsitoli	54.41	240	P	P	11 21 25.5	+1.9
LEM	Lembang	54.43	224	P	P	11 21 24.6	+0.8
LEM				pmax	pmax		
	comp=Z,29nm,0.7s						
MDSI	Maura Dua	54.52	229	P	P	11 21 24.5	+0.2
WHY	Whitehorse	55.08	37	IAmb	IAmb	11 21 30.0	
	comp=Z,4.8nm,0.8s						
NIL	Nilore	55.13	288	P	P	11 21 29.5	+0.8
NIL				pmax	pmax		
	comp=Z,17nm,0.7s						
NIL	Nilore	55.13	288	P	P	11 21 29.5	+0.8
GAR	Garm	55.16	296	P	P	11 21 28.5	-0.5
SVE	Sverdlovsk	55.40	319	*e*P	P	11 21 30.4	+0.2
SVE				pmax	pmax		
	comp=Z,33nm,0.8s						
SVE				MLR	MLR		
	comp=Z,409nm,18.0s						
CHGR	Chuyangaron	56.13	296	P	P	11 21 35.5	-0.3
ARU	Arti	56.62	319	LR	LR	11 48 09.0	
	comp=Z,182nm,18.6s,baz=66,slow=38						
ARU	Arti	56.62	319	*c i*P	P	11 21 38.7	-0.2
ARU						11 22 33.4	
ARU						11 23 44.3	
ARU				S	S	11 29 31.1	+2.3
ARU				SS	SS	11 33 15.2	-0.8
ARU				pmax	pmax		
	comp=Z,34nm,1.8s						
ARU	Arti	56.62	319	P	P	11 21 38.6	-0.3
C36M	Paulatuk	57.01	25	IAmb	IAmb	11 21 43.0	
	comp=Z,9.9nm,0.8s						
CTA	Charters Tower	57.13	175	P	P	11 21 42.0	-0.9
	comp=Z,0.9nm,0.4s,baz=1.2,slow=14,SNR=2.0						
WB0	Warramunga Arr	57.15	189	P	P	11 21 42.6	-0.5
FITZ	Fitzroy Crossi	57.19	199	P	P	11 21 42.7	-0.5
FITZ				IAmb	IAmb	11 21 56.0	
	comp=Z,5.2nm,0.7s						
WRAB	Tennant Creek	57.32	189	*i* P	P	11 21 45.1	+0.9
WRAB				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WRAB	Tennant Creek	57.32	189	P	P	11 21 44.3	0.0
WB2	Warramunga Arr	57.33	189	P	P	11 21 40.6	-3.7
WRA	Warramunga Arr	57.33	189	P	P	11 21 44.0	-0.3
	comp=Z,3.1nm,0.6s,baz=5.8,slow=7.4,SNR=28						
WRA	Warramunga Arr	57.33	189	P	P	11 21 42.8	-1.6
KBL	Kabul	57.91	291	P	P	11 21 47.0	-1.6
KBL				pmax	pmax		
	comp=Z,18nm,1.3s						
KBL	Kabul	57.91	291	P	P	11 21 47.0	-1.6
DLBC	Dease Lake	58.11	38	IAmb	IAmb	11 21 54.0	
	comp=Z,8.0nm,0.9s						
ABKAR	Akbulak array	58.28	310	P	P	11 21 50.0	-0.8
AKTO	Aktyubinsk	58.99	312	LR	LR	11 48 08.8	
	comp=Z,64nm,21.4s,baz=69,slow=37						
KIRV	Kirov	60.46	323	*i* P	P	11 22 07.0	+1.4
PRGR	Permogore	60.94	327	*e*P	P	11 22 13.9	+5.1
PRGR				pmax	pmax		
	comp=Z,11nm,0.6s						
AS31	Alice Springs	61.06	189	P	P	11 22 09.4	-0.7
AS31				IAmb	IAmb	11 22 28.5	
	comp=Z,2.6nm,0.5s						
ASAR	Alice Springs	61.06	189	P	P	11 22 10.2	+0.2
	comp=Z,2.0nm,0.7s,baz=17,slow=10,SNR=42						
ASAR	Alice Springs	61.06	189	P	P	11 22 10.5	+0.4
ASAR	Alice Springs	61.06	189	P	P	11 22 10.5	+0.4
RES	Resolute Bay	62.27	15	P	P	11 22 18.0	+0.4
	comp=Z,3.6nm,0.8s,baz=314,slow=5.7,SNR=15						
RES	Resolute Bay	62.27	15	P	P	11 22 18.0	+0.4
RES	Resolute Bay	62.27	15	P	P	11 22 17.8	+0.2
RES				IAmb	IAmb	11 22 35.5	
	comp=Z,5.3nm,1.0s						
DZM	Mont Dzumac	63.26	155	P	P	11 22 23.6	-1.4
	comp=Z,9.1nm,1.1s,baz=91,slow=12,SNR=3.3						
DZM	Mont Dzumac	63.26	155	P	P	11 22 22.9	-2.0
YKA	Yellowknife Ar	63.34	30	P	P	11 22 25.1	+0.1
	comp=Z,2.3nm,0.7s,baz=302,slow=6.1,SNR=46						
KLMR	Klimovskoe	63.92	328	*e*P	P	11 22 36.5	+7.7
KLMR				pmax	pmax		
	comp=Z,14nm,0.9s						
KLMR	Klimovskoe	63.92	328	*e*P	P	11 22 36.5	+7.7
KLMR				AMP		11 22 39.6	
	comp=Z,14nm,0.9s						
ARCES	ARCESS Array B	64.03	340	P	P	11 22 30.2	+0.8
	comp=Z,5.4nm,0.8s,baz=51,slow=6.7,SNR=1.8						
ARCES				LR	LR	11 54 09.6	
	comp=Z,79nm,18.8s,baz=336,slow=40						
ARCES	ARCESS Array B	64.03	340	P	P	11 22 30.0	+0.6
GEYT	Alibeck	64.27	299	P	P	11 22 31.5	-0.1
	comp=Z,2.7nm,0.6s,baz=90,slow=3.0,SNR=5.2						
GEYT				LR	LR	11 51 39.2	
	comp=Z,66nm,19.6s,baz=65,slow=37						
GEYT	Alibeck	64.27	299	P	P	11 22 31.3	-0.2
DAG	Danmarks Havn	65.64	355	*i* P	P	11 22 40.0	+0.3
	comp=Z,4.3nm,0.9s						
DAG	Danmarks Havn	65.64	355	*i* P	P	11 22 40.0	+0.3
DAG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
VRH	Novokhopyorsk	67.84	318	*e*P	P	11 22 53.1	-1.1
VRH				pmax	pmax		
	comp=Z,20nm,1.8s						
SUF	Sumiainen	68.08	333	P	P	11 22 56.1	+0.6
SUF				pmax	pmax		
	comp=Z,15nm,0.8s						
OBN	Obninsk	68.30	323	*ce*P	P	11 22 58.2	+1.2
OBN				*e*		11 23 23.6	
OBN				*e*		11 25 25.6	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.4s						
OBN				MLR	MLR		
	comp=Z,72nm,17.0s						
STKA	Stephens Creek	68.74	181	P	P	11 22 59.1	-0.8
	comp=Z,0.7nm,0.4s,baz=325,slow=12,SNR=3.2						
STKA	Stephens Creek	68.74	181	P	P	11 22 58.5	-1.4
FORT	Forrest	68.92	193	P	P	11 23 01.8	+0.7
FIA1	FINESS Array S	68.92	332	P	P	11 23 01.0	+0.2
FINES	FINESS Array B	68.93	332	P	P	11 23 00.9	+0.1
	comp=Z,9.4nm,0.7s,baz=57,slow=7.0,SNR=26						
FINES				LR	LR	11 54 04.7	
	comp=Z,103nm,20.4s,baz=20,slow=37						
FINES	FINESS Array B	68.93	332	P	P	11 23 00.5	-0.3
VSR	Storozhevoye	69.19	319	*e*P	P	11 23 02.2	-0.4
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VORD	Divnogorie	69.26	319	*e*P	P	11 23 01.8	-1.2
VORD				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AKT	Akhty	69.45	307	*e*P	P	11 23 04.0	-0.5
AKT				*e*		11 23 26.0	
AKT				pmax	pmax		
	comp=Z,20nm,0.8s						
PINE	Pine Mountain	69.76	50	P	P	11 23 07.8	+1.3
PINE				IAmb	IAmb	11 23 09.0	
	comp=Z,12nm,0.8s						
GOF	Gofitskoye	70.41	312	⇑*e*P	P	11 23 22.8	+13
SUMG	Summit	70.50	0	*i* P	P	11 23 11.7	+0.9
	comp=Z,9.2nm,0.7s						
SUMG	Summit	70.50	0	*i* P	P	11 23 11.7	+0.9
SUMG				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SUMG	Summit	70.50	0	P	P	11 23 10.6	-0.2
SUMG				IAmb	IAmb	11 23 23.5	
	comp=Z,5.5nm,0.7s						
KBZ	Khabaz	71.23	311	P	P	11 23 15.8	+0.6
	comp=Z,6.3nm,0.9s,baz=75,slow=1.8,SNR=8.7						
KBZ				LR	LR	11 59 01.8	
	comp=Z,80nm,20.1s,baz=67,slow=40						
KIV	Kislovodsk	71.24	311	*e*P	P	11 23 16.5	+1.1
KIV				pmax	pmax		
	comp=Z,59nm,1.0s						
KIV	Kislovodsk	71.24	311	P	P	11 23 15.9	+0.5
JTMT	Jette	71.44	44	P	P	11 23 17.1	+0.5
BEKR	Beckworth	72.26	53	P	P	11 23 22.6	+0.8
FFC	Flin Flon	73.22	33	P	P	11 23 26.8	-0.2
FFC				pmax	pmax		
	comp=Z,12nm,0.9s						
FFC	Flin Flon	73.22	33	P	P	11 23 26.8	-0.2
FFC				IAmb	IAmb	11 23 39.6	
	comp=Z,12nm,0.8s						
CMB	Columbia Colle	73.27	55	P	P	11 23 26.6	-1.0
CMB				pmax	pmax		
	comp=Z,13nm,1.5s						
CMB	Columbia Colle	73.27	55	P	P	11 23 26.6	-1.0
CMB				IAmb	IAmb	11 23 29.4	
	comp=Z,13nm,1.4s						
DLMT	Dillon	73.78	45	P	P	11 23 31.5	+0.8
DLMT				IAmb	IAmb	11 23 32.4	
	comp=Z,6.8nm,0.8s						
NC405	NORSAR Array S	74.03	337	IAmb	IAmb	11 23 33.4	
	comp=Z,17nm,1.1s						
KVN	Kaiserville	74.17	53	P	P	11 23 33.6	+0.5
KVN				pmax	pmax		
	comp=Z,11nm,1.4s						
KVN	Kaiserville	74.17	53	P	P	11 23 33.5	+0.5
KVN				IAmb	IAmb	11 23 48.1	
	comp=Z,11nm,1.4s						
NB2	NORSAR Subarra	74.24	338	P	P	11 23 32.9	+0.1
	comp=Z,1.4nm,0.6s,baz=36,slow=6.2						
NOA	NORSAR Array B	74.24	338	P	P	11 23 33.0	+0.1
	comp=Z,2.3nm,0.7s,baz=39,slow=5.9,SNR=21						
NOA				LR	LR	11 59 59.4	
	comp=Z,117nm,19.4s,baz=35,slow=39						
NOA	NORSAR Array B	74.24	338	P	P	11 23 33.0	+0.1
NBO00	NORSAR Array S	74.38	338	IAmb	IAmb	11 23 46.1	
	comp=Z,5.8nm,0.7s						
NVAR	Mina Array Bea	74.39	54	P	P	11 23 35.7	+1.3
	comp=Z,3.0nm,0.7s,baz=292,slow=5.9,SNR=21						
NVAR	Mina Array Bea	74.39	54	P	P	11 23 35.0	+0.6
AKASG	Malin Array Be	74.51	323	P	P	11 23 34.4	-0.2
	comp=Z,4.0nm,0.5s,baz=45,slow=6.2,SNR=21						
AKASG				LR	LR	11 58 31.4	
	comp=Z,62nm,19.6s,baz=45,slow=38						
AKASG	Malin Array Be	74.51	323	P	P	11 23 34.3	-0.2
AKBB	Malin Array Si	74.51	323	IAmb	IAmb	11 23 47.2	
	comp=Z,7.3nm,0.6s						
YHL	Hebgen Lake	74.89	45	P	P	11 23 38.3	+1.0
ELK	Elko	74.97	50	P	P	11 23 38.4	+0.6
	comp=Z,1.4nm,0.7s,baz=292,slow=6.2,SNR=3.7						
ELK	Elko	74.97	50	P	P	11 23 37.9	+0.1
YNE	Yellowstone No	75.45	44	P	P	11 23 41.7	+1.2
H17A	Grant Village	75.51	45	IAmb	IAmb	11 23 44.4	
	comp=Z,8.9nm,0.8s						
YMP	Mirror Lake Pl	75.54	45	P	P	11 23 40.9	-0.1
SIM	Simferopol'	75.61	316	P	P	11 23 48.0	+7.0
SIM				pmax	pmax		
	comp=Z,13nm,0.8s						
IMW	Indian Meadow	75.61	46	IAmb	IAmb	11 23 44.0	
	comp=Z,5.7nm,0.8s						
TPAW	Teton Pass	75.86	46	P	P	11 23 44.0	+1.2
LAO	LASA Array	76.44	41	P	P	11 23 46.2	+0.4
LAO				IAmb	IAmb	11 23 59.4	
	comp=Z,12nm,1.1s						
SORM	Soroca	76.62	321	⇓P	P	11 23 46.6	-0.1
SORM	Soroca	76.62	321	P	P	11 23 46.6	-0.1
HWUT	Hardware Ranch	76.66	48	IAmb	IAmb	11 24 03.6	
	comp=Z,7.6nm,1.1s						
PDAR	Pinedale Array	77.11	46	P	P	11 23 50.1	+0.3
	comp=Z,2.2nm,0.6s,baz=275,slow=1.6,SNR=30						
SHPR	Sheep Range	77.55	54	P	P	11 23 53.3	+0.9
TMUT	Trail Mountain	78.31	49	P	P	11 23 56.5	-0.2
KWP	Kalwaria Pacla	78.33	325	P	P	11 23 57.5	+1.3
KWP				pmax	pmax		
	comp=Z,33nm,1.0s						
KWP	Kalwaria Pacla	78.33	325	P	P	11 23 57.5	+1.3
BUR08	Bucovina Ar. S	78.52	322	P	P	11 23 57.5	0.0
BUR08				IAmb	IAmb	11 24 10.7	
	comp=Z,7.3nm,0.8s						
BURAR	Bucovina Array	78.53	322	⇓P	P	11 23 58.3	+0.7
BURAR	Bucovina Array	78.53	322	P	P	11 23 58.2	+0.7
BURAR	Bucovina Array	78.53	322	P	P	11 23 57.4	-0.1
BIZ	Bicaz	78.56	321	⇓P	P	11 23 58.7	+1.1
TESR	Tescani	78.57	321	⇑P	P	11 23 57.9	+0.2
TOPG	Topolog	78.78	318	⇑P	P	11 23 58.9	+0.1
VRI	Vrincioaia	78.97	320	⇑P	P	11 24 01.1	+1.2
VRI	Vrincioaia	78.97	320	P	P	11 24 02.8	+2.9
VRI				pmax	pmax		
	comp=Z,11nm,1.6s						
ULM	Lac du Bonnet	79.02	34	P	P	11 23 59.9	-0.1
	comp=Z,2.3nm,0.7s,baz=316,slow=6.5,SNR=4.7						
ULM				LR	LR	12 00 15.4	
	comp=Z,34nm,19.8s,baz=82,slow=37						
ULM	Lac du Bonnet	79.02	34	IAmb	IAmb	11 24 12.2	
	comp=Z,6.5nm,0.9s						
BR131	Keskin Array S	79.17	312	IAmb	IAmb	11 24 19.8	
	comp=Z,11nm,1.2s						
BRTR	Keskin Array B	79.17	312	P	P	11 24 01.9	+0.7
	comp=Z,1.5nm,0.8s,baz=86,slow=4.0,SNR=5.9						
BRTR	Keskin Array B	79.17	312	*ce*P	P	11 24 02.0	+0.7
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRTR	Keskin Array B	79.17	312	P	P	11 24 01.8	+0.5
OJC	Ojcow	79.22	326	*e*P	P	11 24 01.7	+0.6
OJC	Ojcow	79.22	326	*e*P	P	11 24 01.7	+0.6
TRPA	Tarpa	79.47	324	⇓P	P	11 24 03.6	+1.2
NIE	Niedzica	79.58	326	P	P	11 24 04.6	+1.5
NIE				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DOPR	Dopca	79.58	321	⇑P	P	11 24 05.0	+1.8
MLR	Muntele Rosu	79.63	320	⇑P	P	11 24 05.5	+1.9
MLR	Muntele Rosu	79.63	320	P	P	11 24 04.9	+1.3
MLR				pmax	pmax		
	comp=Z,10.0nm,2.0s						
BSEG	Bad Segeberg	80.16	333	P	P	11 24 06.8	+0.7
BSEG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PV10	Paradox Valley	80.20	49	P	P	11 24 08.2	+1.2
PV20	West Nyswonger	80.26	49	IAmb	IAmb	11 24 09.2	
	comp=Z,8.1nm,0.8s						
PV19	Morning Glory	80.27	49	IAmb	IAmb	11 24 09.2	
	comp=Z,12nm,0.8s						
PV17	East Wray Mesa	80.31	49	IAmb	IAmb	11 24 09.4	
	comp=Z,13nm,0.9s						
PV16	Nyswonger Mesa	80.31	49	IAmb	IAmb	11 24 09.4	
	comp=Z,5.9nm,0.7s						
PV11	David Mesa, Pa	80.35	49	IAmb	IAmb	11 24 20.8	
	comp=Z,9.6nm,0.7s						
PV05	Paradox Valley	80.35	49	IAmb	IAmb	11 24 24.3	
	comp=Z,12nm,0.9s						
PV18	Skein Mesa, Pa	80.36	49	P	P	11 24 08.7	+0.8
PV18				IAmb	IAmb	11 24 20.7	
	comp=Z,7.5nm,0.9s						
N23A	Red Feather La	80.38	46	IAmb	IAmb	11 24 24.1	
	comp=Z,8.4nm,1.1s						
ARR	Arges	80.38	321	⇓P	P	11 24 09.5	+1.9
PV03	Paradox Valley	80.39	49	IAmb	IAmb	11 24 09.9	
	comp=Z,5.9nm,0.8s						
PV13	Radium Mtn., P	80.47	49	IAmb	IAmb	11 24 10.3	
	comp=Z,11nm,0.8s						
MORC	Moravsky Berou	80.53	327	⇓P	P	11 24 09.1	+0.8
MORC	Moravsky Berou	80.53	327	P	P	11 24 08.6	+0.3
MORC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MORC	Moravsky Berou	80.53	327	*e*P	P	11 24 08.9	+0.6
MORC	Moravsky Berou	80.53	327	P	P	11 24 08.6	+0.3
MORC				IAmb	IAmb	11 24 21.7	
	comp=Z,8.6nm,1.0s						
DPC	Dobruska-Polom	80.62	328	*e*P	P	11 24 09.4	+0.7
DPC				*e*pP	pP	11 24 17.7	0.0
DPC	Dobruska-Polom	80.62	328	*e*P	P	11 24 09.4	+0.7
DPC				*e*		11 24 17.7	
KRLC	Kraliky	80.63	328	*e*P	P	11 24 09.7	+0.9
KRLC	Kraliky	80.63	328	*e*P	P	11 24 09.7	+0.9
PSZ	Piszkesteto	80.85	325	P	P	11 24 11.6	+1.5
PSZ				pmax	pmax		
	comp=Z,11nm,0.9s						
SMCO	Snowmass	80.91	47	IAmb	IAmb	11 24 18.4	
	comp=Z,12nm,0.9s						
VYHS	Vyhne	80.91	326	*e*P	P	11 24 10.9	+0.6
VYHS	Vyhne	80.91	326	*e*P	P	11 24 10.9	+0.6
RAYN	Ar Rayn	81.14	293	P	P	11 24 11.6	-0.4
RAYN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
RAYN	Ar Rayn	81.14	293	P	P	11 24 11.6	-0.4
RAYN				IAmb	IAmb	11 24 21.0	
	comp=Z,8.8nm,1.1s						
JAVC	Velka Javorina	81.16	327	*e*P	P	11 24 13.1	+1.4
BRG	Berggiesshubel	81.19	330	*e*P	P	11 24 12.7	+0.9
	comp=Z,3.4nm,0.4s						
BRG	Berggiesshubel	81.19	330	*e*P	P	11 24 12.7	+0.9
BRG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
PVCC	Panska Ves	81.21	329	P	P	11 24 13.1	+1.3
PVCC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CLL	Collm	81.23	330	*i* P	P	11 24 13.1	+1.2
	comp=Z,7.0nm,0.8s						
CLL				*i* (PcP)	pP	11 24 20.7	-0.2
CLL				*i* pP	sP	11 24 23.8	-0.4
CLL				*e*sP	PcP	11 24 29.0	+11
CLL				*e*PP	PP	11 27 21.0	+4.2
CLL				*e*S	S	11 34 18.0	-2.1
CLL				*e*PPS	PPS	11 35 36.0	
CLL				*e*SSSS		11 45 42.0	
CLL				LmV		12 04 00.0	
	comp=Z,100nm,19.7s						
CLL	Collm	81.23	330	*i* P	P	11 24 13.1	+1.2
CLL				*i* *PP	sP	11 24 23.8	-0.4
CLL				*e*S	S	11 34 18.0	-2.1
CLL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CLL	Collm	81.23	330	IAmb	IAmb	11 24 25.6	
	comp=Z,8.1nm,0.9s						
VRAC	Vranov	81.29	327	⇓P	P	11 24 13.4	+1.2
VRAC	Vranov	81.29	327	P	P	11 24 13.5	+1.2
VRAC				pmax	pmax		
	comp=Z,11nm,0.9s						
VRAC	Vranov	81.29	327	*e*P	P	11 24 12.9	+0.6
GZR	Gura Zlata	81.29	322	⇑P	P	11 24 13.3	+0.8
GZR	Gura Zlata	81.29	322	P	P	11 24 13.3	+0.8
KRUC	Moravsky	81.56	327	P	P	11 24 14.7	+1.0
KRUC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KRUC	Moravsky	81.56	327	*e*P	P	11 24 13.8	+0.1
PRU	Pruhonice	81.63	329	*e*P	P	11 24 15.4	+1.3
PRU				*e*PCP	PcP	11 24 20.8	+0.9
PRU	Pruhonice	81.63	329	*e*P	P	11 24 15.4	+1.3
PRU				*e*		11 24 20.8	
BZS	Buzias	81.70	322	P	P	11 24 15.0	+0.5
BZS				pmax	pmax		
	comp=Z,7.0nm,1.3s						
TREC	Trest	81.77	328	*e*P	P	11 24 15.4	+0.5
TREC	Trest	81.77	328	*e*P	P	11 24 15.4	+0.5
MDVR	Moldovita	82.26	322	⇑P	P	11 24 17.7	+0.2
MOX	Moxa	82.30	331	P	P	11 24 19.2	+1.6
MOX				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CONA	Conrad Observa	82.65	327	*e*PcP	P	11 24 21.2	+1.6
	comp=Z,3.6nm,0.9s						
EYMN	Ely	82.65	33	IAmb	IAmb	11 24 31.7	
	comp=Z,6.9nm,0.8s						
KHC	Kasperske Hory	82.69	329	*e*P	P	11 24 20.2	+0.5
KHC				*e*pP	pP	11 24 27.9	-0.8
KHC	Kasperske Hory	82.69	329	*e*P	P	11 24 20.2	+0.5
KHC				*e*		11 24 27.9	
GEC2	GERESS Array S	82.87	329	P	P	11 24 21.2	+0.5
GEC2				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GERES	GERESS Array B	82.87	329	P	P	11 24 20.9	+0.2
	comp=Z,2.3nm,0.5s,baz=35,slow=6.0,SNR=22						
GERES				LR	LR	12 02 58.5	
	comp=Z,78nm,19.0s,baz=306,slow=37						
GERES	GERESS Array B	82.87	329	P	P	11 24 19.9	-0.8
WET	Wettzell	82.97	329	P	P	11 24 21.7	+0.5
WET				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VTS	Vitosha	83.03	319	⇑P	P	11 24 23.3	+1.5
VTS	Vitosha	83.03	319	P	P	11 24 23.1	+1.4
VTS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
VTS	Vitosha	83.03	319	IAmb	IAmb	11 24 32.7	
	comp=Z,8.1nm,1.1s						
GRA1	Grafenberg Arr	83.20	330	P	P	11 24 22.8	+0.5
GRF	Grafenberg Arr	83.20	330	*e*P	P	11 24 23.1	+0.7
	comp=Z,4.7nm,0.8s,baz=41,slow=4.5						
GRF	Grafenberg Arr	83.20	330	P	P	11 24 22.8	+0.5
GRF				pmax	pmax		
	comp=Z,15nm,1.0s						
ARSA	Arzberg	83.32	327	*e*PcP	P	11 24 23.5	+0.6
	comp=Z,2.9nm,1.1s						
ECSD	EROS Data Cent	83.40	39	P	P	11 24 23.3	-0.2
MOA	Molln	83.40	328	*e*PcP	P	11 24 26.3	+2.9
	comp=Z,5.1nm,1.3s						
PMOR	Pomariorio Ree	83.71	114	*e*T	T	12 56 28.3	
	comp=Z,8.9nm,0.2s						
T25A	Trinidad	83.77	48	IAmb	IAmb	11 24 27.5	
	comp=Z,5.0nm,0.9s						
SOKA	Soboth	83.97	326	*e*PcP	P	11 24 27.4	+0.9
	comp=Z,13nm,1.2s						
ANMO	Albuquerque	84.01	50	P	P	11 24 28.0	+1.1
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ANMO	Albuquerque	84.01	50	P	P	11 24 28.0	+1.1
PPT	Papeete	84.18	117	LR	LR	11 55 53.1	
	comp=Z,77nm,19.4s,baz=310,slow=31						
PPT2	Papeete2	84.20	117	*e*LR	LR	11 50 33.5	
	comp=Z,73nm,21.0s						
KBA	Koelnbreinsper	84.39	328	*e*PcP	P	11 24 31.6	+2.9
	comp=Z,2.3nm,0.6s						
KBA	Koelnbreinsper	84.39	328	P	P	11 24 31.3	+2.6
KBA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
319A	Douglas	84.56	55	IAmb	IAmb	11 24 43.6	
	comp=Z,6.4nm,1.1s						
MYKA	Terra Mystica	84.62	327	*e*PcP	P	11 24 31.2	+1.5
	comp=Z,3.2nm,0.8s						
HSIG		84.97	57	IAmb	IAmb	11 24 33.3	
	comp=Z,4.7nm,1.0s						
SCHQ	Schefferville	84.99	16	P	P	11 24 32.1	+0.8
	comp=Z,2.2nm,0.7s,baz=2.4,slow=9.4,SNR=3.7						
SCHQ	Schefferville	84.99	16	IAmb	IAmb	11 24 41.3	
	comp=Z,11nm,1.3s						
ABTA	Abfaltersbach	85.01	328	*e*PcP	P	11 24 31.5	-0.2
	comp=Z,3.0nm,1.3s						
MOTA	Moosalm	85.12	329	*e*PcP	P	11 24 32.9	+0.6
	comp=Z,4.2nm,1.3s						
RETA	Reutte	85.15	329	*e*PcP	P	11 24 32.6	+0.3
	comp=Z,4.7nm,0.9s						
PDG	Podgorica	85.19	321	⇑P	P	11 24 32.7	+0.2
STAL	STALIGIAL	85.31	327	IAmb	IAmb	11 24 43.8	
	comp=Z,5.8nm,0.7s						
DOU	Dourbes	85.34	334	P	P	11 24 33.8	+0.7
DOU				PcP	PcP	11 24 36.1	0.0
DOU				pP	sP	11 24 48.4	+3.0
BFO	Black Forest	85.43	331	P	P	11 24 33.5	-0.2
BFO				pmax	pmax		
	comp=Z,15nm,1.0s						
BFO	Black Forest	85.43	331	P	P	11 24 33.5	-0.2
FETA	Feichten	85.53	329	*e*PcP	P	11 24 35.1	+0.7
	comp=Z,5.3nm,1.0s						
TAOE	Nuku Hiva Isla	85.64	104	*e*LR	LR	11 51 39.4	
	comp=Z,121nm,22.7s						
DAVA	Damuels	85.67	330	*e*PcP	P	11 24 35.9	+0.9
	comp=Z,5.8nm,1.1s						
ECH	Echery	85.97	332	P	P	11 24 36.6	+0.2
ECH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ECH	Echery	85.97	332	IAmb	IAmb	11 24 48.7	
	comp=Z,5.0nm,0.8s						
TBI	Tubuai	88.11	121	*e*LR	LR	11 52 32.8	
	comp=Z,101nm,23.5s						
TBI	Tubuai	88.11	121	*e*T	T	13 01 58.3	
	comp=Z,34nm,0.3s						
TXAR	Lajitas Array	89.53	53	P	P	11 24 54.2	+0.4
	comp=Z,0.9nm,0.6s,baz=308,slow=2.8,SNR=15						
TXAR				LR	LR	11 58 29.7	
	comp=Z,42nm,21.8s,baz=0.0,slow=31						
TXAR	Lajitas Array	89.53	53	P	P	11 24 54.0	+0.1
SNAA	Sanae	141.10	197	PKPdf	PKiKP	11 31 28.1	0.0
VNA2	Neumayer--Watz	142.66	196	PKPdf	PKiKP	11 31 34.2	+2.9
	baz=135,slow=4.5						
VNA3	Neumayer Olymp	142.90	195	PKPdf	PKiKP	11 31 34.1	+2.4
PB12	IPOC Station P	146.06	66		PKPdf	11 31 35.2	-0.4
LPAZ	La Paz	146.08	60	PKPbc	PKPbc	11 31 37.3	0.0
	comp=Z,6.0nm,0.9s,baz=346,slow=3.9,SNR=22						
PB11	IPOC Station P	147.27	67		PKPdf	11 31 38.3	+0.5
GO04	Tololo Observa	151.79	85		PKPbc	11 31 51.2	0.0
ROC1	El Roble	152.61	91		PKPab	11 32 03.3	-0.4

IDC ***30*** *11:27:34.9±0.7, 44.°58N×114.°36W, h0km, mb1 3.4/6, mb1mx3.2/66, mbtmp3.0/6, ML3.3/6, Error ellipse: s-maj=9.5km s-min=7.4km az=62.0*

NEIC ***30*** *11:27:36.2±1.8, 44.°63N±0.°04×114.°29W±0.°04, h5km±2km, ML3.1/90, Error ellipse: s-maj=6.9km s-min=4.4km az=156.0*

ISC 30 11:27:35.5±1.6**, 44.°60N**±0.°04×**114.°30W**±0.°04**, h0**km±14km**,**
n66, σ1.s31/75**, Western Idaho**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCMT	McKenzie Canyo	1.06	77		Pg	11 27 55.1	-0.6

MCMT				Sg	Sg	11 28 09.7	+0.3
DLMT	Dillon	1.43	57		Pn	11 28 02.0	-0.8
DLMT				Sn	Sg	11 28 21.0	-0.4
MFID	Camas Ranch	1.62	224		Pn	11 28 04.4	-1.0
MFID				Sn	Sn	11 28 26.4	-0.6
LRM	Limekiln Ridge	1.79	46		Pn	11 28 06.8	-1.1
QLMT	Earthquake Lak	2.06	83		Pn	11 28 10.7	-0.8
BMO	Blue Mountains	2.16	278		Pn	11 28 11.7	-1.1
BMO				Sn	Sn	11 28 39.7	-0.6
BMO				IAML		11 28 45.8	
	99nm,0.5s						
BMO				IAML		11 28 46.2	
	116nm,0.3s						
YHB	Horse Butte	2.22	85		Pn	11 28 13.3	-0.4
YHL	Hebgen Lake	2.23	82		Pn	11 28 13.5	-0.5
MSO	Missoula	2.24	6		Pn	11 28 13.5	-0.5
MSO				Sn	Sn	11 28 41.8	-0.6
MSO				IAML		11 28 48.3	
	98nm,0.4s						
MSO				IAML		11 28 49.0	
	130nm,0.5s						
YMR	Madison River	2.38	87		Pn	11 28 15.4	-0.5
YHH	Holmes Hill	2.47	84		Pn	11 28 16.8	-0.4
F10A	Beach Ranch, E	2.48	305		Pn	11 28 17.4	+0.2
IMW	Indian Meadow	2.51	105		Pn	11 28 17.9	+0.1
YPP	Pitchstone Pla	2.52	96		Pn	11 28 17.9	0.0
FXWY	Fox Creek	2.54	111		Pn	11 28 18.4	+0.2
FLWY	Flagg Ranch	2.63	100		Pn	11 28 19.9	+0.5
FLWY				IAML		11 29 03.3	
	98nm,0.8s						
FLWY				IAML		11 29 10.0	
	73nm,0.8s						
TPAW	Teton Pass	2.66	114		Pn	11 28 20.3	+0.5
TPAW				IAML		11 29 03.7	
	102nm,0.6s						
REDW	Red Top Meadow	2.78	115		Pn	11 28 20.9	-0.5
REDW				IAML		11 29 09.3	
	71nm,0.6s						
REDW				IAML		11 29 11.3	
	56nm,0.7s						
SNOW	Snow King Moun	2.80	113		Pn	11 28 22.3	+0.6
AHID	Auburn Hatcher	2.96	127		Pn	11 28 25.3	+1.5
AHID				IAML		11 29 12.9	
	comp=E,60nm,0.8s						
AHID				IAML		11 29 16.4	
	comp=N,70nm,0.6s						
HVU	Hansel Valley	3.03	158		Pn	11 28 26.6	+1.8
YNE	Yellowstone No	3.08	81		Pn	11 28 25.9	+0.3
JTMT	Jette	3.15	0		Pn	11 28 26.5	+0.1
JTMT				IAML		11 29 16.6	
	comp=E,71nm,0.5s						
JTMT				IAML		11 29 27.5	
	comp=N,47nm,0.6s						
J08A	Circle Bar Ran	3.26	249		Pn	11 28 27.4	-0.6
J08A				IAML		11 29 07.8	
	comp=E,43nm,0.3s						
J08A				IAML		11 29 26.5	
	comp=N,40nm,1.0s						
E09A	Wood Farm, Sta	3.31	307		Pn	11 28 30.5	+2.0
E09A				IAML		11 29 27.6	
	comp=E,36nm,1.1s						
G08A	Pilot Rock	3.38	283		Pn	11 28 29.4	-0.2
GCMT	Greycliff	3.48	68		Pn	11 28 30.9	-0.2
HWUT	Hardware Ranch	3.60	145		Pn	11 28 35.4	+2.8
HWUT				IAML		11 29 34.2	
	comp=E,32nm,1.0s						
RLMT	Red Lodge	3.62	80		Pn	11 28 34.3	+1.4
I07A	Izee	3.77	264		Pn	11 28 35.1	+0.1
I07A				IAML		11 29 37.5	
	comp=N,26nm,0.9s						
I07A				IAML		11 29 38.7	
	comp=E,25nm,0.7s						
BGU	Big Grassy Mou	3.79	165		Pn	11 28 35.6	+0.3
WVOR	Wild Horse Val	3.83	237		Pn	11 28 35.8	+0.1
WVOR				IAML		11 29 47.6	
	comp=E,24nm,4.0s						
BW06	Boulder Array	3.90	116		Pn	11 28 40.2	+3.5
PD31	Pinedale Array	3.90	116		Pn	11 28 39.6	+2.8
PDAR	Pinedale Array	3.90	116	Pn	Pn	11 28 39.8	+3.0
	comp=E,0.7nm,0.3s,baz=292,slow=12,SNR=30						
PDAR				Pg	Pb	11 28 45.6	+0.4
	comp=E,2.5nm,0.3s,baz=314,slow=14,SNR=36						
PDAR				Lg	Lg	11 29 37.2	
	baz=304,slow=37,SNR=1.4						
PDAR	Pinedale Array	3.90	116		Pn	11 28 39.1	+2.3
ELK	Elko	3.92	191	Pn	Pn	11 28 37.4	+0.4
	comp=E,2.0nm,0.3s,baz=7.5,slow=14,SNR=21						
ELK				Pg	Pb	11 28 43.1	-2.4
	comp=E,2.9nm,0.3s,baz=1.7,slow=14,SNR=33						
ELK				Lg	Lg	11 29 33.3	
	comp=E,6.4nm,0.3s,baz=184,slow=15,SNR=9.4						
ELK	Elko	3.92	191		Pn	11 28 37.6	+0.5
D08A	Wollman Farm,	4.06	309		Pn	11 28 40.7	+1.9
D08A				IAML		11 29 49.0	
	comp=E,20nm,0.8s						
D08A				IAML		11 29 50.5	
	comp=N,22nm,1.7s						
HAWA	Hanford	4.09	298		Pn	11 28 40.4	+1.2
NEW	Newport	4.15	333	Pn	Pn	11 28 40.3	+0.2
	comp=N,1.0nm,0.3s,baz=143,slow=14,SNR=15						
NEW				Pg	Pb	11 28 51.1	+1.7
	comp=N,1.8nm,0.3s,baz=144,slow=16,SNR=13						
NEW				Lg	Lg	11 29 45.5	
	comp=N,6.0nm,0.3s,baz=85,slow=16,SNR=14						
NEW	Newport	4.15	333		Pn	11 28 40.7	+0.6
NEW				IAML		11 29 49.3	
	comp=N,29nm,1.4s						
C09A	Chrisman Ranch	4.23	321		Pn	11 28 42.7	+1.5
E07A	Sunnyside	4.37	299		Pn	11 28 44.5	+1.4
E07A				IAML		11 30 02.8	
	comp=N,23nm,0.9s						
E07A				IAML		11 30 05.3	
	comp=E,23nm,1.5s						
WALA	Waterton Lakes	4.47	3		Pn	11 28 44.4	-0.1
WALA				IAML		11 30 00.4	
	comp=E,27nm,0.6s						
WALA				IAML		11 30 10.4	
	comp=N,19nm,2.9s						
JLU	Jordanelle	4.51	151	Pn	Pn	11 28 46.0	+0.7
DUG	Dugway, Tooele	4.54	165		Pn	11 28 46.3	+0.8
DUG				IAML		11 30 02.2	
	comp=N,22nm,1.0s						
DUG				IAML		11 30 16.1	
	comp=N,23nm,1.7s						
G06A	Carlson Farm,	4.55	280	Pn	Pn	11 28 46.6	+1.0
G06A				IAML		11 29 46.0	
	comp=E,15nm,4.7s						
EGMT	Eagleton	4.65	41		Pn	11 28 46.0	-1.0
PINE	Pine Mountain	4.84	263		Pn	11 28 49.5	-0.3
PINE				IAML		11 31 12.7	
	comp=E,21nm,4.7s						
B08A	Colville Reser	5.12	319		Pn	11 28 53.3	-0.1
B08A				IAML		11 30 18.5	
	comp=N,15nm,0.8s						
MOD	Modoc Plateau	5.15	241		Pn	11 28 54.0	+0.1
MOD				IAML		11 30 53.8	
	comp=E,15nm,4.4s						
MOD				IAML		11 30 58.4	
	comp=N,11nm,4.9s						
LTY	Liberty	5.18	303		Pn	11 28 54.0	-0.2
LTY				IAML		11 30 19.1	
	comp=E,13nm,4.7s						
LTY				IAML		11 30 26.4	
	comp=N,16nm,4.8s						
RDMU	Red Mountain	5.33	137		Pn	11 28 58.3	+1.9
LON	Longmire	5.69	295	Pn	Pn	11 29 01.5	+0.3
D05A	Enumclaw	5.96	298	Pn	Pn	11 29 06.2	+1.3
LAO	LASA Array	6.03	67		Pn	11 29 05.4	-0.6
O20A	White River Ci	6.33	133		Pn	11 29 13.2	+3.1
PNTR	Pine Nut	6.78	218	Pn	Pn	11 29 18.2	+1.9
YBH	Yreka Blue Hor	6.79	248	Pn	Pn	11 29 16.3	-0.1
NVAR	Mina Array Bea	6.86	207	Pn	Pn	11 29 20.0	+2.5
	comp=N,0.2nm,0.3s,baz=31,slow=16,SNR=2.2						
NVAR				Pg	Pb	11 29 34.7	-0.9
	comp=N,0.4nm,0.3s,baz=23,slow=14,SNR=4.4						
NVAR				Lg	Lg	11 31 09.0	
	comp=N,0.2nm,0.3s,baz=136,slow=44,SNR=1.5						
NVAR	Mina Array Bea	6.86	207		Pn	11 29 18.5	+1.0
N23A	Red Feather La	7.18	118		Pn	11 29 23.8	+1.9
PV03	Paradox Valley	7.54	145	Pn	Pn	11 29 29.4	+2.5
TXAR	Lajitas Array	17.42	147	P	P	11 31 41.2	-0.1
	comp=N,0.0nm,0.3s,baz=331,slow=12,SNR=2.6						
YKA	Yellowknife Ar	17.93	360	P	Pn	11 31 45.0	-0.9
	comp=N,0.1nm,0.3s,baz=181,slow=12,SNR=5.2						

EAF 30 11:30:50.1±13.0,**13°.50N**×**41°.43E**,**h0**km±112km,**Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DESE	Dese	2.95	217	*e*P	Pn	11 31 30.3	-8.3
DESE				*e*S	Sn	11 32 17.3	+2.5
AAE	Adis Abeba	5.16	211	*e*P	Pn	11 32 06.1	-2.8
AAE				*e*S	Sn	11 33 16.0	+6.7
AAE				*i* Sg	Sb	11 33 25.4	+1.3
AAE	Adis Abeba	5.16	211	*e*P	Pn	11 32 06.1	-2.8
AAE				*e*S	Sn	11 33 16.0	+6.7
AAE				*i* Sg	Sb	11 33 25.4	+1.3
FURI	Furi	5.31	211	*e*P	Pn	11 32 14.2	+3.1
FURI				*e*S	Sb	11 33 22.3	-6.3
FURI				*i* Sg	Sg	11 33 30.5	-11
FURI	Furi	5.31	211	*e*P	Pn	11 32 14.2	+3.1

WEL 30 11:53:18.9±0.9,**33°S**±23°×**17°9E**±2°6,**h454**km±35km,**M3.7**/9,**mB4.2**/4,**MLv3.9**/9,**Mw(mB)3.3**/4,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	4.94	185	P	P	11 54 43.0	+0.3
WMGZ				S	S	11 55 52.0	+0.7
HAZ	Te Kaha	4.96	191	P	P	11 54 43.1	+0.3
HAZ				S	S	11 55 51.8	+0.4
PKGZ	Pakihiroa	5.04	188	P	P	11 54 43.3	-0.4
PKGZ				S	S	11 55 52.3	-0.9
RUGZ	Raukumara Rang	5.18	191	P	P	11 54 45.3	+0.2
RUGZ				S	S	11 55 55.1	-0.5
KMRZ	Kaimai	5.53	206	P	P	11 54 49.2	+0.7
MWZ	Matawai	5.56	192	P	P	11 54 49.1	+0.3
URZ	Urewera	5.57	195	P	P	11 54 48.3	-0.6
URZ				S	S	11 56 04.2	+1.8
TKGZ	Te Karaka	5.62	189	P	P	11 54 50.5	+1.2
MUGZ	Murupara	5.86	197	P	P	11 54 51.8	0.0
RIGZ	Rimuhau	5.89	189	P	P	11 54 53.1	+1.0
RTZ	Ruatahuna	5.94	195	P	P	11 54 50.1	-2.6
OHWZ	Ohakea	7.87	201	P	P	11 55 14.8	+2.0

IDC 30 12:03:30.0±2.4,**6°.21S**×**129°.60E**,**h0**km,**mb3.7**/1,**mb1 4.0**/3,**mb1mx3.6**/20,**mbtmp3.8**/3,**ML4.1**/2,**Error ellipse: s-maj=160.9km s-min=31.4km az=69.0**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.40	162	Pn	Pn	12 06 54.5	-0.9
	1.1nm,0.3s,baz=344,slow=13,SNR=36						
WRA				Sn	Sn	12 09 21.6	-14
	1.0nm,0.3s,baz=342,slow=22,SNR=9.4						
ASAR	Alice Springs	17.84	167	P	P	12 07 40.3	-0.4
	0.5nm,0.3s,baz=345,slow=10,SNR=63						
ASAR				S	Sn	12 10 46.0	-14
	0.2nm,0.3s,baz=356,slow=27,SNR=3.9						
MKAR	Makanchi Array	67.35	327	P	P	12 14 27.1	0.0
	0.4nm,0.5s,baz=122,slow=8.0,SNR=5.2						

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*ATA **30** 12:24:06.7±1.2,38°.22N×42°.94E,h13km±6km,ML3.2,MW3.4*

*DDA **30** 12:24:07.6,38°.21N×42°.94E,h8km±2km,ML3.1*

*ISK **30** 12:24:08.1,38°.28N×42°.90E,h5km,ML3.2/9*

ISC 30 12:24:07.5±0.8,**38°.24N**±0°.03×**42°.98E**±0°.02,**h17**km±5km,**n44**,σ**1s.48**/67,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKDM	Akdamar-Van	0.09	358	PG	Pg	12 24 11.1	0.0
GEVA	Gevas	0.09	39	*e*P	Pg	12 24 11.2	+0.1
GEVA				*e*S	Sg	12 24 13.8	+0.3
GEVA				IAML		12 24 14.3	
	comp=Z,9µm,0.4s						
GEVA	Gevas	0.09	39	*i* P	Pg	12 24 11.2	+0.1
GEVA				*i* S	Sg	12 24 12.7	-0.8
GEVA				IAML		12 24 14.0	
	comp=N,23µm,0.5s						
GEVA				IAML		12 24 14.0	
	comp=E,28µm,0.3s						
TVAN	Van	0.44	49	*e*P	Pb	12 24 17.0	0.0
TVAN				*e*S	Sb	12 24 24.2	+0.8
TVAN				IAML		12 24 26.0	
	comp=Z,887nm,0.4s						
VANB	Van	0.48	42	PG	Pg	12 24 17.0	-0.1
VANB				SG	Sb	12 24 24.3	-0.1
BLIS	Bitlis-Merkez	0.70	285	*e*P	Pg	12 24 20.9	-0.4
BLIS				*e*S	Sg	12 24 29.8	-1.0
BLIS				IAML		12 24 36.9	
	comp=Z,553nm,0.4s						
BLIS	Bitlis-Merkez	0.70	285	*i* P	Pg	12 24 20.9	-0.4
BLIS				*i* S	Sg	12 24 25.7	-5.1
BLIS				IAML		12 24 32.0	
	comp=E,763nm,0.4s						
BLIS				IAML		12 24 33.0	
	comp=N,1µm,0.4s						
GURO	Guroymak-BITLI	0.81	293	PG	Pg	12 24 22.6	-0.7
GURO				SG	Sg	12 24 33.3	-0.7
BASK	Baskale_VAN	0.83	103	*e*P	Pg	12 24 23.6	-0.1
BASK				*e*S	Sb	12 24 36.6	+2.1
BASK				IAML		12 24 41.6	
	comp=Z,328nm,0.5s						
BASK	Baskale_VAN	0.83	103	*i* P	Pg	12 24 23.8	+0.1
BASK				*i* S	Sg	12 24 33.0	-1.5
SIRT	Sirnak	0.85	210	PG	Pb	12 24 24.8	+0.9
SRTM	Siirt_Merkez	0.87	254	*i* P	Pb	12 24 24.8	+0.6
SRTM				*i* S	Sb	12 24 35.7	0.0
VMUR	Van-Muradiye	0.88	31	*i* P	Pb	12 24 25.4	+1.0
VMUR				*i* S	Sg	12 24 33.9	-2.4
VMUR				IAML		12 24 42.0	
	comp=E,498nm,0.8s						
CLDR	Caldiran	1.16	39	PN	Pn	12 24 30.4	+1.2
CLDR	Caldiran	1.16	39	*i* P	Pn	12 24 30.2	+1.0
CLDR				*i* S	Sg	12 24 41.7	-3.5
YOVA	Hakkari_Yksek	1.22	122	*i* P	Pn	12 24 31.2	+1.2
YOVA				*i* S	Sg	12 24 42.7	-4.4
MUSM	Mu-Merkez	1.25	293	*i* P	Pb	12 24 30.8	0.0
MUSM				*i* S	Sg	12 24 44.5	-3.5
AGRB	Hanur-Agry	1.33	0	PN	Pb	12 24 32.6	+0.4
BTMN	Batman	1.40	256	*i* P	Pg	12 24 34.3	-0.1
BTMN				*i* S	Sb	12 24 50.5	-0.3
BTMN				IAML		12 24 56.0	
	comp=E,449nm,1.0s						
BTMN				IAML		12 24 56.0	
	comp=N,465nm,0.5s						
SVAN	Silvan-Diyarba	1.41	267	PN	Pg	12 24 34.2	-0.4
SVAN	Silvan-Diyarba	1.41	267	*i* P	Pg	12 24 33.9	-0.8
SVAN				*i* S	Sb	12 24 50.9	-0.2
DYDN	Diyadin	1.41	23	*e*P	Pg	12 24 34.5	-0.2
VRTB	Varto-Mus	1.51	308	PN	Pg	12 24 35.9	-0.6
VRTB	Varto-Mus	1.51	308	*i* P	Pg	12 24 36.4	-0.1
VRTB				*i* S	Sn	12 24 53.8	+0.5
VRTB				IAML		12 25 10.0	
	comp=N,238nm,1.1s						
BNGL	BINGOL	1.60	297	*e*P	Pb	12 24 37.1	+0.3
BNGL				*e*S	Sg	12 25 00.6	+1.3
BNGL				IAML		12 25 13.8	
	comp=Z,341nm,0.7s						
BNGL	BINGOL	1.60	297	*i* P	Pg	12 24 39.0	+0.6
BNGL				*i* S	Sg	12 24 58.2	-1.1
IGDI	IGDIR	1.84	27	*e*P	Pg	12 24 42.0	-0.8
IGDI	IGDIR	1.84	27	*i* P	Pb	12 24 40.6	-0.1
BNGB	Bingl	1.96	293	PN	Pn	12 24 41.7	+1.7
KOPR	Koprukoy-ERZUR	1.96	334	PN	Pn	12 24 42.0	+1.9
MARD	Mardin	1.98	243	*i* P	Pb	12 24 42.2	-0.9
MARD				*i* S	Sn	12 25 05.4	+0.6
MARD				IAML		12 25 18.0	
	comp=N,305nm,0.6s						
MARD				IAML		12 25 18.0	
	comp=E,268nm,0.6s						
HOMI	Horasan	1.99	335	*e*P	Pn	12 24 42.0	+1.4
HANI	Diyarbakir_Han	2.04	276	*i* P	Pb	12 24 43.3	-0.8
HANI				*i* S	Sn	12 25 07.7	+1.4
HANI				IAML		12 25 13.0	
	comp=E,140nm,0.8s						
HANI				IAML		12 25 17.0	
	comp=N,119nm,0.8s						
MAZI	Mazidag	2.15	250	PN	Pb	12 24 45.1	-1.0
AKDA	Akdag	2.25	326	*i* P	Pb	12 24 48.8	+1.0
YEDI	Yedisu-Bingol	2.25	303	PN	Pn	12 24 45.8	+1.7
DYBB	Diyarbakir	2.26	264	PN	Pn	12 24 46.5	+2.3
DIYA	Diyarbakir	2.28	263	*i* P	Pn	12 24 46.2	+1.8
DIYA				*i* S	Sn	12 25 10.6	-1.7
DIYA				IAML		12 25 31.0	
	comp=N,99nm,0.4s						
DIYA				IAML		12 25 34.0	
	comp=E,96nm,0.7s						
GNI	Garni	2.35	35	PN	Pb	12 24 48.4	-1.0
SENK	Senkaya-Erzuru	2.37	348	PN	Pn	12 24 48.4	+2.6
EAK	Akyaka	2.49	11	*e*P	Pb	12 24 51.9	0.0
TNCL	Tunceli-Merkez	2.83	289	*i* P	Pb	12 24 58.3	+0.6
TNCL				*i* S	Sb	12 25 32.8	+0.7
TNCL				IAML		12 25 46.0	
	comp=E,63nm,0.7s						
DBAD	Bademkaya	2.95	341	*i* P	Pb	12 24 59.1	-0.5
DAGI	Agillar	2.95	344	*i* P	Pg	12 25 02.0	-2.1

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*NEIC **30** 12:34:39.1,44°.77N×110°.69W,h8km,Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.52; $M_{\theta\theta}$0.77; $M_{\phi\phi}$-0.25; $M_{r\theta}$-0.32; $M_{\theta\phi}$-1.59; $M_{\phi r}$-1.10; Fault plane solution: $M_0$2.08000×10^{16} NP1:ϕ_s86.41000°, δ58.46000°,λ-161.52000°. NP2:ϕ_s346.50000°, δ74.33000°,λ-32.90000°. Principal axes: T 2.0005, Plg10.0000°, Azm39.0000°; N 0.1432, Plg54.0000°, Azm144.0000°; P -2.1436, Plg34.0000°, Azm302.0000°;*

*UUSS **30** 12:34:39.1±2.9,44°.77N±0°.04×110°.69W±0°.07,h6km±3km, ML4.7/18,mb4.8/143(NEIC),Mwr4.8/88(NEIC) Error ellipse: s-maj=7.0km s-min=5.4km az=94.0*

*IDC **30** 12:34:41.1±0.4,44°.69N×110°.69W,h0km,mb4.3/27, mb1 4.5/38,mb1mx4.4/67,mbtmp4.4/38,ML3.6/9,MS4.3/44, Ms1 4.4/44,ms1mx4.3/57,Error ellipse: s-maj=7.8km s-min=6.5km az=106.0*

*ANF **30** 12:34:41.2±0.4,44°.79N×110°.66W,h5km,ML5.1/11,Error ellipse: s-maj=4.7km s-min=4.0km az=54.0*

*NEIC **30** 12:34:42.0±2.8,44°.78N±0°.04×110°.70W±0°.06,h5km±1km, Error ellipse: s-maj=7.3km s-min=6.0km az=112.0*

*GCMT **30** 12:34:44.1±0.2,44°.86N±0°.01×110°.55W±0°.02,h18km±1km, MW4.9/118,Moment Tensor Solution. s18,c20; s118,c162; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.33±.14; $M_{\theta\theta}$0.99±.11; $M_{\phi\phi}$0.33±.10; $M_{r\theta}$-0.31±.21; $M_{\theta\phi}$-2.88±.08; $M_{\phi r}$-0.47±.22; Best double couple: $M_0$3.03300×10^{16} NP1:ϕ_s90.00000°,δ71.00000°, λ-162.00000°. NP2:ϕ_s354.00000°,δ73.00000°, λ-19.00000°. Principal axes: T 3.5640, Plg1.0000°, Azm42.0000°; N -1.0640, Plg64.0000°, Azm134.0000°; P -2.5020, Plg26.0000°, Azm311.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 12:34:41.8±1.0,**44°.77N**±0°.02×**110°.66W**±0°.02,**h4**km±6km,**n552**,σ**1s.41**/531,**mb4.7**/90,**MS4.6**/45,**Yellowstone region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YNM	Yellowstone No	0.05	213		Pg	12 34 41.4	-1.8
YNR	Norris Junctio	0.06	191		Pg	12 34 41.8	-1.4
YUF	Upper Falls	0.12	118		Pg	12 34 43.5	-0.8
YHH	Holmes Hill	0.13	278		Pg	12 34 43.1	-1.4
YMR	Madison River	0.24	245		Pg	12 34 45.5	-1.0
YMP	Mirror Lake Pl	0.36	95		Pg	12 34 48.9	0.0
YHL	Hebgen Lake	0.38	283		Pg	12 34 47.9	-1.3
YHB	Horse Butte	0.38	267		Pg	12 34 48.0	-1.2
H17A	Grant Village	0.38	170		Pg	12 34 48.8	-0.4
H17A	Grant Village	0.38	170	P	Pg	12 34 48.4	-0.7
	baz=348						
H17A				S	Sg	12 34 53.7	-0.5
	baz=348						
YPP	Pitchstone Pla	0.51	191		Pg	12 34 51.1	-0.5
YNE	Yellowstone No	0.52	63		Pg	12 34 51.0	-0.9
QLMT	Earthquake Lak	0.55	277		Pg	12 34 50.7	-1.7
FLWY	Flagg Ranch	0.69	182		Pg	12 34 54.5	-0.5
IMW	Indian Meadow	0.90	193		Pg	12 34 57.8	-1.1
RLMT	Red Lodge	1.05	70		Pg	12 35 00.4	-1.6
RLMT	Red Lodge	1.05	70	P	Pg	12 35 00.4	-1.6
	baz=251						
RLMT				S	Sg	12 35 14.7	-0.9
	baz=251						
FXWY	Fox Creek	1.16	193		Pb	12 35 02.2	-2.4
GCMT	Greycliff	1.24	34		Pn	12 35 03.8	-2.4
TPAW	Teton Pass	1.30	189		Pn	12 35 04.6	-2.4
SNOW	Snow King Moun	1.31	183		Pn	12 35 04.9	-2.3
REDW	Red Top Meadow	1.41	186		Pn	12 35 06.8	-1.8
DLMT	Dillon	1.49	294		Pn	12 35 08.2	-1.4
MCMT	McKenzie Canyo	1.56	273		Pn	12 35 09.4	-1.1
AHID	Auburn Hatcher	2.03	189		Pn	12 35 16.2	-0.8
BW06	Boulder Array	2.16	158	Pn	Pn	12 35 19.7	+0.9
BW06	Boulder Array	2.16	158	Pn	Pn	12 35 19.1	+0.3
	baz=338						
BW06				Pb	Pb	12 35 20.4	-1.2
	baz=338						
PD31	Pinedale Array	2.16	158		Pn	12 35 19.3	+0.5
PDAR	Pinedale Array	2.16	158	Pn	Pn	12 35 19.0	+0.2
	416nm,0.3s,baz=350,slow=14,SNR=1915						
PDAR	Pinedale Array	2.16	158		Pn	12 35 18.9	+0.2
MSO	Missoula	3.08	313		Pn	12 35 30.5	-0.9
MSO	Missoula	3.08	313	Pn	Pn	12 35 30.7	-0.7
	baz=131						
MSO				Pb	Pb	12 35 37.5	+0.2
	baz=131						
MSO				Sb	Sb	12 36 17.3	+2.0
	baz=131						
HWUT	Hardware Ranch	3.23	192		Pn	12 35 34.1	+0.6
EGMT	Eagleton	3.31	11		Pn	12 35 35.1	+0.5
EGMT	Eagleton	3.31	11	Pn	Pn	12 35 34.6	0.0
	baz=192						
EGMT				Pb	Pb	12 35 39.8	-1.4
	baz=192						
EGMT				Sb	Sb	12 36 21.8	-0.1
	baz=192						
HVU	Hansel Valley	3.36	208		Pn	12 35 35.4	+0.1
LAO	LASA Array	3.65	57		Pn	12 35 39.1	-0.1
LAO	LASA Array	3.65	57	Pn	Pn	12 35 38.7	-0.5
	baz=240						
LAO				Pb	Pb	12 35 47.2	+0.2
	baz=240						
K22A	Casper	3.67	124		Pn	12 35 40.0	+0.4
K22A	Casper	3.67	124	P	Pn	12 35 40.5	+0.9
	baz=307						
JTMT	Jette	3.89	321		Pn	12 35 42.5	-0.1
MFID	Camas Ranch	3.96	252		Pn	12 35 43.6	+0.2
RWWY	Rawlins	3.98	139		Pn	12 35 44.7	+0.8
BGU	Big Grassy Mou	4.22	205		Pn	12 35 47.6	+0.5
RDMU	Red Mountain	4.27	169		Pn	12 35 48.8	+0.9
BMO	Blue Mountains	4.73	273		Pn	12 35 53.8	-0.2
F10A	Beach Ranch, E	4.78	287		Pn	12 35 54.6	-0.1
RSSD	Black Hills	4.79	95		Pn	12 35 55.8	+0.9
RSSD	Black Hills	4.79	95	P	Pn	12 35 54.8	-0.2
	baz=280						
RSSD				Sb	Sb	12 37 07.5	+3.0
	baz=280						
MPU	Maple Canyon	4.80	189		Pn	12 35 55.5	+0.3
WALA	Waterton Lakes	4.83	334		Pn	12 35 55.3	-0.2
DUG	Dugway, Tooele	4.84	200		Pn	12 35 56.1	+0.5
DUG	Dugway, Tooele	4.84	200	P	Pn	12 35 56.5	+0.9
	baz=18						
NLU	North Lily Min	4.92	193		Pn	12 35 57.9	+1.1
O20A	White River Ci	4.97	158		Pn	12 35 57.5	+0.1
O20A	White River Ci	4.97	158	P	Pn	12 35 58.1	+0.7
	baz=340						
PHWY	Pilot Hill	5.16	130		Pn	12 36 00.7	+0.7
N23A	Red Feather La	5.20	137		Pn	12 36 01.5	+0.8
N23A	Red Feather La	5.20	137	P	Pn	12 36 01.6	+0.9
	baz=320						
ELK	Elko	5.25	222	Pn	Pn	12 36 01.6	+0.4
	2.0nm,0.3s,baz=29,slow=12,SNR=49						
ELK				Pg	Pb	12 36 08.8	-5.4
	12nm,0.3s,baz=27,slow=14,SNR=62						
ELK				Lg	Lg	12 37 24.9	
	2.5nm,0.3s,baz=173,slow=18,SNR=1.2						
ELK				LR	LR	12 38 04.8	
	comp=Z,6µm,20.0s,baz=38,slow=39						
ELK	Elko	5.25	222		Pn	12 36 01.1	-0.1
P17A	Butcher Ranch,	5.29	181		Pn	12 36 02.8	+0.9
TMUT	Trail Mountain	5.49	184		Pn	12 36 05.3	+0.8
E09A	Wood Farm, Sta	5.53	291		Pn	12 36 04.4	-0.5
SRU	San Rafael Swe	5.66	179		Pn	12 36 08.3	+1.4
NEW	Newport	5.66	310	Pn	Pn	12 36 06.3	-0.5
	4.5nm,0.3s,baz=123,slow=11,SNR=52						
NEW				Pg	Pb	12 36 24.7	+3.5
	11nm,0.3s,baz=131,slow=15,SNR=20						

NEW				Lg	Lg	12 37 37.5	
	16nm,0.3s,baz=225,slow=19,SNR=6.4						
NEW				LR	LR	12 38 34.3	
	comp=Z,4µm,20.4s,baz=124,slow=41						
NEW	Newport	5.66	310		Pn	12 36 05.2	-1.6
NEW	Newport	5.66	310	P	Pn	12 36 05.9	-0.9
	baz=126						
NEW				Sb	Sb	12 37 33.7	+4.3
	baz=126						
DGMT	Dagmar	5.79	48		Pn	12 36 10.8	+2.2
DGMT	Dagmar	5.79	48	Pn	Pn	12 36 09.4	+0.8
	baz=233						
DGMT				Pb	Pb	12 36 23.7	+0.3
	baz=233						
J08A	Circle Bar Ran	5.80	259		Pn	12 36 09.5	+0.8
Q16A	Castle Valley	5.86	184		Pn	12 36 10.2	+0.5
G08A	Pilot Rock	5.90	278		Pn	12 36 10.1	-0.1
C09A	Chrisman Ranch	6.08	303		Pn	12 36 11.2	-1.3
E08A	Dider Farm, El	6.13	289		Pn	12 36 12.6	-0.6
D08A	Wollman Farm,	6.20	295		Pn	12 36 13.2	-0.9
ISCO	Idaho Springs	6.22	141		Pn	12 36 15.3	+0.6
ISCO	Idaho Springs	6.22	141	P	Pn	12 36 15.7	+1.0
	baz=325						
PV21	Cone Mtn., Par	6.33	168		Pn	12 36 17.1	+0.9
MSU	Marysvale	6.35	191		Pn	12 36 17.6	+1.1
I07A	Izee	6.37	267		Pn	12 36 17.3	+0.7
PV09	Paradox Valley	6.37	169		Pn	12 36 17.7	+0.9
PV22	Blue Mesa, Par	6.39	167		Pn	12 36 18.6	+1.7
HAWA	Hanford	6.43	288		Pn	12 36 17.2	-0.1
PV23	Carpenter Ridg	6.43	168		Pn	12 36 18.4	+0.9
PV07	Paradox Valley	6.50	166		Pn	12 36 20.1	+1.6
F07A	Phinny Hill Vi	6.63	283		Pn	12 36 21.4	+1.5
E07A	Sunnyside	6.68	289		Pn	12 36 21.0	+0.2
PV13	Radium Mtn., P	6.75	168		Pn	12 36 22.0	+0.1
B08A	Colville Reser	6.97	304		Pn	12 36 23.2	-1.5
G06A	Carlson Farm,	7.08	277		Pn	12 36 26.9	+0.5
E28A	Huff	7.21	72		Pn	12 36 27.2	-0.8
R11A	Troy Canyon, C	7.40	212	P	Pn	12 36 34.0	+3.2
	baz=28						
OGNE	Ogallala	7.40	118		Pn	12 36 30.4	-0.4
OGNE	Ogallala	7.40	118	P	Pn	12 36 30.5	-0.2
	baz=304						
G05D	Wamic, OR	7.57	277	P	Pn	12 36 34.4	+1.5
	baz=90						
S22A	4UR Ranch, Cre	7.59	156		Pn	12 36 34.3	+0.9
I05D	Terrebonne, OR	7.64	271	P	Pn	12 36 37.3	+3.4
	baz=83						
F05D	White Salmon	7.69	282	P	Pn	12 36 35.9	+1.3
	baz=94						
MVCO	Mesa Verde	7.73	167		Pn	12 36 35.1	-0.2
MVCO	Mesa Verde	7.73	167	P	Pn	12 36 35.8	+0.5
	baz=348						
C06D	Leavenworth	7.75	298	P	Pn	12 36 35.5	+0.1
	baz=110						
C06D				S	Sn	12 38 01.0	-2.6
	baz=110						
J05D	Fort Rock, OR	7.76	263	P	Pn	12 36 37.9	+2.2
	baz=75						
SDCO	Great Sand Dun	8.02	149		Pn	12 36 40.6	+1.2
SDCO	Great Sand Dun	8.02	149	P	Pn	12 36 40.9	+1.5
	baz=333						
LON	Longmire	8.04	288		Pn	12 36 39.3	-0.1
D05A	Enumclaw	8.25	291		Pn	12 36 41.9	-0.3
KSCO	Kaye Shedlock’	8.31	131		Pn	12 36 43.0	-0.1
B06A	Marblemount	8.33	301		Pn	12 36 42.6	-0.7
F04A	Amboy	8.36	282		Pn	12 36 45.3	+1.6
SUSD	Miller	8.36	88		Pn	12 36 43.8	0.0
SUSD	Miller	8.36	88	P	Pn	12 36 44.3	+0.4
	baz=276						
E04D	Cinebar	8.53	286	P	Pn	12 36 47.6	+1.6
	baz=98						
NVAR	Mina Array Bea	8.53	225	Pn	Pn	12 36 48.3	+1.9
	0.3nm,0.3s,baz=34,slow=12,SNR=20						
NVAR				Lg	Lg	12 39 11.2	
	0.3nm,0.3s,baz=245,slow=34,SNR=1.1						
NVAR				LR	LR	12 40 08.9	
	comp=Z,5µm,19.5s,baz=30,slow=39						
H04D	Lebanon	8.61	273	P	Pn	12 36 50.6	+3.3
	baz=84						
B05A	Bryant	8.62	298	P	Pn	12 36 47.2	-0.1
	baz=110						
TPNV	Topopah Spring	8.88	210	P	Pn	12 36 54.4	+3.3
	baz=26						
G03D	McMinnville, O	8.94	277	P	Pn	12 36 54.7	+2.9
	baz=88						
T25A	Trinidad	8.97	146	P	Pn	12 36 54.4	+2.0
	baz=330						
D03D	Eldon	9.06	292	P	Pn	12 36 55.2	+1.9
	baz=103						
I03D	Drain, OR	9.17	268	P	Pn	12 37 00.3	+5.5
	baz=79						
WUAZ	Wupatki	9.26	184	P	Pn	12 36 57.3	+1.1
	baz=3.0						
GRAC	Grapevine Rang	9.27	215	P	Pn	12 37 01.5	+5.2
	baz=31						
YBH	Yreka Blue Hor	9.30	255	Pn	Pn	12 36 58.4	+1.7
	0.1nm,0.3s,baz=55,slow=14,SNR=4.3						
YBH				Lg	Lg	12 39 34.0	
	0.1nm,0.3s,baz=311,slow=19,SNR=0.6						
YBH				LR	LR	12 40 21.1	
	comp=Z,1µm,20.4s,baz=60,slow=37						
YBH	Yreka Blue Hor	9.30	255		Pn	12 36 56.5	-0.3
O02D	Mt. Diablo Mer	10.06	247	P	Pn	12 37 12.1	+4.9
	baz=59						
MPMC	Manual Prospec	10.13	213	P	Pn	12 37 12.3	+4.0
	baz=29						
ECSD	EROS Data Cent	10.14	91	P	Pn	12 37 07.7	-0.4
	baz=281						
ANMO	Albuquerque	10.33	160	Pn	Pn	12 37 11.4	+0.4
	0.2nm,0.3s,baz=334,slow=13,SNR=21						
ANMO				Lg	Lg	12 40 06.3	
	0.1nm,0.3s,baz=58,slow=19,SNR=2.2						
ANMO	Albuquerque	10.33	160		Pn	12 37 11.5	+0.6
ANMO	Albuquerque	10.33	160	P	Pn	12 37 12.8	+1.9
	baz=343						
AGMN	Agassiz Nation	10.79	66	P	Pn	12 37 15.5	-1.6
	baz=256						
R32A	Long Quarter,	10.96	121		Pn	12 37 18.5	-1.0
ULM	Lac du Bonnet	11.40	56	Pn	Pn	12 37 22.2	-3.1
	3.3nm,0.3s,baz=252,slow=12,SNR=74						
ULM				Lg	Lg	12 40 31.8	
	3.6nm,0.3s,baz=323,slow=20,SNR=4.9						
ULM				LR	LR	12 42 21.1	
	comp=Z,2µm,18.3s,baz=248,slow=40						
ULM	Lac du Bonnet	11.40	56		Pn	12 37 21.4	-4.0
PFO	Pinyon Flats O	12.01	204	Pn	Pn	12 37 35.7	+1.8
	baz=33,slow=12,SNR=4.0						
PFO				LR	LR	12 42 30.6	
	comp=Z,1µm,20.8s,baz=16,slow=39						
AMTX	Amarillo	12.04	142		Pn	12 37 36.1	+1.8
I37A	Lemond, Waseca	12.38	87		Pn	12 37 36.5	-2.3
WMOK	Wichita Mounta	13.55	134	P	Pn	12 37 53.8	-1.0
	baz=321						
EYMN	Ely	13.61	70	P	Pn	12 37 51.2	-4.4
	baz=264						
MNTX	Cornudas Mount	13.69	161		Pn	12 37 59.0	+2.2
MNTX	Cornudas Mount	13.69	161	P	Pn	12 37 60.0	+3.2
	baz=344						
P38A	Dawn	13.70	106		Pn	12 37 56.3	-0.5
BBB	Bella Bella	13.72	309	Lg	Lg	12 41 51.9	
	0.2nm,0.3s,baz=252,slow=17,SNR=1.1						
BBB				LR	LR	12 43 55.4	
	comp=Z,3µm,18.4s,baz=141,slow=40						
OKCFA	Oklahoma City	13.75	128		Pn	12 37 57.6	0.0
FNO	Franklin	13.90	129		Pn	12 37 58.8	-0.7
TUL1	Leonard	14.37	123		Pn	12 38 03.0	-2.9
I40A	Norwalk	14.38	86		Pn	12 38 02.9	-3.2
S39A	Bolivar	14.83	112		Pn	12 38 09.0	-3.2
JFWS	Jewell Farm	14.85	90		Pn	12 38 09.7	-2.9
ABTX	Abilene, Hawle	14.85	141	P	Pn	12 38 14.3	+1.7
ABTX	Abilene, Hawle	14.85	141	P	Pn	12 38 14.8	+2.1
	baz=328						
R40A	Maddies Statio	15.21	109	P	Pn	12 38 17.5	+0.2
Z35A	Perchaven, San	15.44	133	P	Pn	12 38 21.4	+1.0
U40A	Yellville	15.91	116	P	P	12 38 30.9	+0.7
	baz=308						
CCM	Cathedral Cave	16.02	108		Pn	12 38 25.3	-2.7
CCM	Cathedral Cave	16.02	108	P	Pn	12 38 28.3	+0.3
	baz=301						
W39A	Magazine	16.06	121	P	Pn	12 38 26.9	-1.6
	baz=312						
TX31	Lajitas Ar. Si	16.38	158	P	Pn	12 38 33.3	+0.6
TX32	Lajitas Array	16.38	158	P	Pn	12 38 33.4	+0.8
TXAR	Lajitas Array	16.38	158	Pn	Pn	12 38 33.4	+0.8
	0.2nm,0.3s,baz=340,slow=6.6,SNR=58						
TXAR				Lg	Lg	12 43 24.6	
	0.0nm,0.3s,baz=14,slow=27,SNR=1.5						
TXAR				LR	LR	12 45 35.9	
	comp=Z,703nm,19.4s,baz=0.0,slow=40						
TXAR	Lajitas Array	16.38	158	P	Pn	12 38 32.9	+0.2
WHTX	Lake Whitney,	16.40	137	P	Pn	12 38 32.5	-0.4
WHTX	Lake Whitney,	16.40	137	P	Pn	12 38 33.0	+0.1
	baz=325						
MIAR	Mount Ida	16.62	122	P	Pn	12 38 34.8	-0.8
MIAR	Mount Ida	16.62	122	P	Pn	12 38 35.6	-0.1
	baz=313						
JCT	Junction City	16.64	145	P	Pn	12 38 34.1	-1.8
JCT	Junction City	16.64	145	P	Pn	12 38 36.5	+0.6
	baz=332						
Z38A	Mt. Pleasant	16.72	128	P	Pn	12 38 36.0	-0.9
WHAR	Wooly Hollow	16.93	118	P	Pn	12 38 39.9	+0.3
WHAR				IAmb	IAmb	12 38 47.0	
	comp=Z,104nm,1.4s						
O44A	Mansfield	17.00	98	P	Pn	12 38 39.6	-0.8
W41B	Gary Mavity, V	17.03	118	P	P	12 38 42.5	-0.1
	baz=310						
X40A	Basin Creek Fa	17.11	121	P	P	12 38 43.5	-0.2
	baz=312						
Q44A	Meyer Farm, Va	17.14	102	P	Pn	12 38 40.3	-1.9
LCAR	Lake Charles	17.18	114	P	Pn	12 38 41.6	-1.1
UALR	University of	17.23	119	P	P	12 38 45.2	+0.4
UALR				IAmb	IAmb	12 38 50.5	
	comp=Z,78nm,1.3s						
237A	Washetta, Mont	17.23	133	P	Pn	12 38 42.4	-1.0
237A				IAmb	IAmb	12 38 47.5	
	comp=Z,86nm,0.9s						
435B	Jarrell	17.34	139	P	Pn	12 38 43.2	-1.6
435B				IAmb	IAmb	12 38 49.3	
	comp=Z,66nm,0.9s						
E44A	Grand Marais A	17.37	75	P	Pn	12 38 43.7	-1.3
E44A				IAmb	IAmb	12 38 52.7	
	comp=Z,66nm,0.8s						
WLAR	White Oak Lake	17.49	123	P	Pn	12 38 44.0	-2.5
WLAR				IAmb	IAmb	12 38 48.3	
	comp=Z,116nm,1.4s						
G45A	Suttons Bay	17.70	80	P	Pn	12 38 47.9	-1.2
	baz=278						
F45A	CMU Biological	17.72	78	P	Pn	12 38 47.9	-1.4
	baz=276						
SFIN	Lafayette	17.88	96	P	Pn	12 38 50.8	-0.6
	baz=292						
YKA	Yellowknife Ar	17.90	354	Pn	Pn	12 38 47.4	-4.1
	comp=Z,0.2nm,0.3s,baz=172,slow=13,SNR=41						
YKA				Sn	Sn	12 41 58.8	-13
	comp=Z,0.2nm,0.3s,baz=151,slow=23,SNR=3.0						
YKA				Lg	Lg	12 43 55.2	
	comp=Z,0.2nm,0.3s,baz=160,slow=28,SNR=4.2						
YKA				LR	LR	12 46 32.2	
	comp=Z,2µm,18.5s,baz=0.0,slow=40						
DLBC	Dease Lake	18.12	326	P	Pn	12 38 54.1	-0.2
	comp=Z,0.1nm,0.3s,baz=130,slow=8.7,SNR=19						
DLBC				Lg	Lg	12 44 16.4	
	comp=Z,0.1nm,0.3s,baz=209,slow=19,SNR=3.4						
DLBC	Dease Lake	18.12	326	P	P	12 38 56.0	+1.4
HPIG		18.25	166	P	P	12 38 57.1	+0.7
E46A	Sault Ste Mari	18.50	76	P	P	12 38 56.4	-2.5
D46A	Sault St. Mari	18.65	74	P	P	12 38 58.7	-1.8
	baz=273						
I47A	Gladwin	18.68	83	P	P	12 38 58.2	-2.7
I47A				IAmb	IAmb	12 39 14.5	
	comp=Z,60nm,0.9s						
HKT	Hockley	18.87	137	P	Pn	12 39 03.8	+0.3
735A	Kenedy	18.89	143		Pn	12 39 05.0	+1.3
G47A	Hillman	18.95	79	P	Pn	12 39 09.0	+4.6
	baz=278						
E47A	Iron Bridge	19.20	75	P	P	12 39 04.6	-1.9
	baz=275						
OXF	Oxford	19.26	115	P	P	12 39 06.9	-0.3
OXF	Oxford	19.26	115	P	P	12 39 07.4	+0.2
	baz=309						
D47A	Chapleau	19.28	73	P	P	12 39 04.9	-2.5
	baz=273						
O48A	Farmland	19.31	95	P	Pn	12 39 08.7	0.0
	baz=292						
WCI	Wyandotte Cave	19.35	101	P	P	12 39 05.6	-2.6
WCI				IAmb	IAmb	12 39 16.8	
	comp=Z,38nm,0.9s						
WCI	Wyandotte Cave	19.35	101	P	Pn	12 39 09.4	+0.2
	baz=298						
J48A	Bridge Port	19.36	85	P	P	12 39 06.9	-1.4
J48A				IAmb	IAmb	12 39 24.1	
	comp=Z,60nm,0.9s						
J48A	Bridge Port	19.36	85	P	P	12 39 08.2	0.0
	baz=284						
WVT	Waverly	19.36	109	P	P	12 39 07.8	-0.5
WVT	Waverly	19.36	109	P	P	12 39 08.4	+0.1
	baz=304						
P48A	Milroy	19.43	97	P	Pn	12 39 09.9	-0.3
	baz=294						
Q48A	North Vernon	19.43	99	P	P	12 39 08.9	-0.2
	baz=296						
F48A	Evansville	19.72	77	P	P	12 39 12.4	+0.2
	baz=277						
N49A	Columbus Grove	19.76	92	P	P	12 39 13.5	+0.8
	baz=290						
J49A	Marlette	19.80	84	P	P	12 39 13.4	+0.3
	baz=284						
P49A	Miami Univ. Ec	19.90	96	P	Pn	12 39 15.7	-0.1
	baz=294						
O49A	Covington	19.91	94	P	P	12 39 15.0	+0.6
	baz=292						
KVTX	Kingsville	20.00	145	P	Pn	12 39 19.1	+2.1
VBMS	Vicksburg	20.08	122	P	Pn	12 39 19.5	+1.5
VBMS				IAmb	IAmb	12 39 24.2	
	comp=Z,68nm,1.2s						
R49A	Shelbyville	20.11	100	P	P	12 39 16.8	+0.3
	baz=297						
F49A	Sandfield	20.13	77	P	P	12 39 16.1	-0.6
	baz=278						
D48A	Paudash Townsh	20.15	73	P	P	12 39 16.4	-0.5
	baz=274						
S49A	Springfield	20.26	101	P	P	12 39 18.3	+0.1
	baz=298						
T49A	Edmonton	20.42	103	P	P	12 39 18.5	-1.4
P50A	Jamestown	20.52	95	P	P	12 39 21.1	+0.2
	baz=293						
U49A	Red Boiling Sp	20.55	105	P	P	12 39 21.8	+0.5
LPIG	La Paz	20.62	179	P	Pn	12 39 25.2	+0.9
	comp=Z,45nm,1.0s,baz=187,slow=5.4,SNR=7.5						
LPIG				LR	LR	12 47 07.9	
	comp=Z,436nm,19.6s,baz=3.5,slow=36						
146A	Union	20.69	118	P	P	12 39 22.5	-0.3
146A				IAmb	IAmb	12 39 28.5	
	comp=Z,60nm,1.1s						
R50A	Paris	20.70	99	P	P	12 39 23.0	0.0
R50A				IAmb	IAmb	12 39 28.3	
	comp=Z,54nm,0.9s						
R50A	Paris	20.70	99	P	P	12 39 24.0	+1.0
	baz=297						
ACSO	Alum Creek Sta	20.86	93	P	Pn	12 39 26.2	-1.0
ACSO				IAmb	IAmb	12 39 40.3	
	comp=Z,85nm,1.2s						
ACSO	Alum Creek Sta	20.86	93	P	Pn	12 39 28.0	+0.8
	baz=292						
S50A	Richmond	20.93	101	P	P	12 39 26.2	+0.7
	baz=298						
T50A	Nancy	20.94	103	P	P	12 39 25.7	+0.1
	baz=300						
Z47A	Carrollton	20.95	116	P	P	12 39 25.9	+0.2
N51A	Ashland	21.05	91	P	P	12 39 26.7	0.0
N51A				IAmb	IAmb	12 39 45.8	
	comp=Z,80nm,1.1s						
Q51A	Peebles	21.08	96	P	P	12 39 27.3	+0.2
Q51A				IAmb	IAmb	12 39 41.1	
	comp=Z,53nm,0.8s						
Q51A	Peebles	21.08	96	P	P	12 39 28.0	+1.0
	baz=295						
P51A	Williamsport	21.09	95	P	P	12 39 27.7	+0.5
P51A				IAmb	IAmb	12 39 33.8	
	comp=Z,52nm,1.1s						
P51A	Williamsport	21.09	95	P	P	12 39 31.1	+3.9
	baz=294						
SWET	Sewanee	21.15	108	P	P	12 39 28.7	+0.9
SWET				IAmb	IAmb	12 39 48.1	
	comp=Z,38nm,1.1s						
I51A	Listowel	21.19	82	P	P	12 39 30.2	+1.9
	baz=283						
R51A	Hillsboro	21.22	98	P	P	12 39 29.3	+0.7
	baz=296						
WHY	Whitehorse	21.44	326	P	P	12 39 30.9	0.0
D50A	G1974 Best Tow	21.49	73	P	P	12 39 31.2	-0.2
	baz=275						
S51A	Beattyville	21.51	100	P	P	12 39 32.4	+0.7
S51A				IAmb	IAmb	12 39 49.4	
	comp=Z,30nm,1.1s						
S51A	Beattyville	21.51	100	P	P	12 39 33.0	+1.2
	baz=298						
W50A	Signal Mountai	21.57	108	P	P	12 39 33.0	+0.6
F51A	Arnstein	21.58	76	P	P	12 39 33.7	+1.3
	baz=278						
T51A	Gray	21.59	102	P	P	12 39 34.0	+1.5
	baz=300						
P52A	Corning	21.69	94	P	P	12 39 34.6	+1.0
	baz=293						
O52A	Adamsville	21.72	92	P	P	12 39 33.8	-0.2
O52A	Adamsville	21.72	92	P	P	12 39 34.7	+0.8
	baz=292						
LRAL	Lakeview Retre	21.75	114	P	P	12 39 32.8	-1.4
LRAL				IAmb	IAmb	12 39 51.6	
	comp=Z,47nm,0.9s						
LRAL	Lakeview Retre	21.75	114	P	P	12 39 34.9	+0.6
	baz=310						
FPAL	Fort Paine	21.75	109	P	P	12 39 34.6	+0.3
FPAL				IAmb	IAmb	12 39 40.1	
	comp=Z,44nm,1.0s						
E51A	G1948 Merrick	21.79	74	P	P	12 39 36.6	+2.0
	baz=277						
D51A	Lot 18 Range I	21.82	73	P	P	12 39 35.2	+0.3
	baz=276						
S52A	Salyersville	21.86	99	P	P	12 39 36.3	+0.8
	baz=298						
V51A	Loudon	21.90	105	P	P	12 39 36.7	+0.8
V51A				IAmb	IAmb	12 39 53.7	
	comp=Z,47nm,1.1s						
F52A	Sundridge	22.01	76	P	P	12 39 38.9	+1.9
	baz=279						
O53A	New Philadelph	22.11	91	P	P	12 39 39.1	+0.9
	baz=292						
N53A	Lisbon	22.18	90	P	P	12 39 40.8	+1.9
T52A	Hallie	22.19	101	P	P	12 39 39.9	+0.9
T52A	Hallie	22.19	101	P	P	12 39 39.8	+0.8
	baz=299						
L53A	Girard	22.22	87	P	P	12 39 40.6	+1.2
	baz=288						
X51A	Calhoun	22.24	108	P	P	12 39 40.7	+1.2
P53A	Whipple	22.28	93	P	P	12 39 40.6	+0.6
P53A				IAmb	IAmb	12 39 52.4	
	comp=Z,48nm,1.1s						
P53A	Whipple	22.28	93	P	P	12 39 40.7	+0.8
	baz=293						
Z50A	Ashland	22.31	113	P	P	12 39 39.4	-0.9
Z50A	Ashland	22.31	113	P	P	12 39 41.2	+0.9
	baz=308						
SADO	Sadowa	22.31	79	P	P	12 39 40.4	+0.1
	comp=Z,18nm,0.8s,baz=281,slow=9.9,SNR=9.4						
SADO				Lg	Lg	12 46 17.0	
	comp=Z,24nm,1.1s,baz=266,slow=6.9,SNR=4.9						
SADO				LR	LR	12 48 27.4	
	comp=Z,2µm,18.3s,baz=332,slow=37						
SADO	Sadowa	22.31	79	P	P	12 39 40.4	+0.1
SADO				IAmb	IAmb	12 39 45.3	
	comp=Z,36nm,1.0s						
R53A	Hurricane	22.36	97	P	P	12 39 44.0	+3.2
	baz=296						
ERPA	Erie	22.37	86	P	P	12 39 41.1	+0.2
ERPA	Erie	22.37	86	P	P	12 39 42.1	+1.3
	baz=287						
TKL	Tuckaleechee C	22.38	105	P	P	12 39 39.5	-1.5
	comp=Z,8.0nm,0.8s,baz=280,slow=7.4,SNR=5.5						
TKL				Lg	Lg	12 46 24.2	
	comp=Z,14nm,1.0s,baz=31,slow=19,SNR=2.3						
TKL				LR	LR	12 49 35.2	
	comp=Z,507nm,18.1s,baz=304,slow=40						
TKL	Tuckaleechee C	22.38	105	P	P	12 39 40.0	-1.1
TKL				IAmb	IAmb	12 39 56.8	
	comp=Z,30nm,1.1s						
ALLY	Alegheny Colle	22.40	87	P	P	12 39 41.8	+0.6
ALLY				IAmb	IAmb	12 40 00.6	
	comp=Z,45nm,0.8s						
E52A	Mattawa	22.40	75	P	P	12 39 40.6	-0.5
	baz=278						
Q53A	Leroy	22.44	95	P	P	12 39 42.6	+0.9
	baz=295						
S53A	Williamson	22.53	98	P	P	12 39 43.7	+1.1
	baz=297						
T53A	Wise	22.57	100	P	P	12 39 44.5	+1.4
	baz=299						
HYT	Haines Junctio	22.59	325	P	P	12 39 44.2	+1.0
G53A	Haliburton	22.61	78	P	P	12 39 45.3	+1.9
	baz=281						
N54A	Moraine State	22.73	89	P	P	12 39 47.1	+2.3
N54A				IAmb	IAmb	12 39 58.9	
	comp=Z,49nm,1.1s						
H53A	Bobcaygeon	22.74	79	P	P	12 39 44.5	-0.4
	baz=282						
Z51A	Franklin	22.77	111	P	P	12 39 45.8	+0.6
M54A	Oil Creek Stat	22.78	87	P	P	12 39 46.1	+0.8
M54A	Oil Creek Stat	22.78	87	P	P	12 39 46.6	+1.3
	baz=289						
MATQ	Matagami	22.84	66	P	P	12 39 45.4	-0.4
	baz=270						
ALGO	Algonquin Park	22.86	75	P	P	12 39 46.8	+0.8
	baz=279						
Q54A	Coxs Mills	22.88	94	P	P	12 39 45.8	-0.5
Q54A	Coxs Mills	22.88	94	P	P	12 39 46.8	+0.5
	baz=294						
P54A	Burton	22.88	92	P	P	12 39 47.4	+1.1
	baz=293						
D53A	Lac Vacive, Po	22.95	72	P	P	12 39 47.1	0.0
D53A				IAmb	IAmb	12 40 00.6	
	comp=Z,46nm,0.9s						
D53A	Lac Vacive, Po	22.95	72	P	P	12 39 47.4	+0.3
	baz=276						
VLDQ	Val d'Or	23.03	70	P	P	12 39 46.6	-1.2
V53A	Saluda	23.04	104	P	P	12 39 47.1	-0.9
V53A				IAmb	IAmb	12 40 05.5	
	comp=Z,31nm,1.0s						
S54A	Dingess, Beckl	23.05	97	P	P	12 39 47.4	-0.8
S54A	Dingess, Beckl	23.05	97	P	P	12 39 48.5	+0.4
	baz=297						
E53A	Dumoine, Ponti	23.07	74	P	P	12 39 49.2	+1.0
	baz=278						
Y52A	Lilburn	23.18	109	P	P	12 39 50.3	+0.8
Y52A				IAmb	IAmb	12 39 54.7	
	comp=Z,37nm,1.2s						
Y52A	Lilburn	23.18	109	P	P	12 39 50.5	+1.0
	baz=306						
T54A	Tazewell	23.20	99	P	P	12 39 50.3	+0.5
	baz=299						
WVNY	West Valley, N	23.26	84	P	P	12 39 50.9	+0.6
WVNY				IAmb	IAmb	12 40 00.3	
	comp=Z,24nm,0.9s						
LSQQ	Lebel-sur-Quev	23.29	67	P	P	12 39 50.9	+0.5
	baz=272						
P55A	Reedsville	23.38	92	P	P	12 39 51.8	+0.3
	baz=293						
E54A	Lac Daplat, Po	23.39	74	P	P	12 39 52.3	+0.9
	baz=278						
Q55A	Buckhannon	23.41	94	P	P	12 39 53.1	+1.4
	baz=294						
L55A	Hinsdale	23.45	85	P	P	12 39 53.1	+1.0
	baz=287						
152A	Waverly Hall	23.47	112	P	P	12 39 51.2	-1.1
152A				IAmb	IAmb	12 40 05.1	
	comp=Z,48nm,1.1s						
O55A	Ligonier	23.49	90	P	P	12 39 52.9	+0.4
	baz=292						
N55A	Marion Center	23.51	89	P	P	12 39 52.9	+0.1
	baz=290						
V54A	Nebo	23.58	102	P	P	12 39 54.6	+1.1
	baz=301						
S55A	Lewisburg	23.63	97	P	P	12 39 54.7	+0.6
	baz=297						
D54A	Lac Fusel, La	23.65	72	P	P	12 39 54.5	+0.4
	baz=277						
R55A	Marlinton	23.68	95	P	P	12 39 54.9	+0.4
R55A				IAmb	IAmb	12 40 10.1	
	comp=Z,34nm,1.0s						
R55A	Marlinton	23.68	95	P	P	12 39 55.2	+0.7
	baz=296						
PLVO	Plevna	23.70	77	P	P	12 39 56.2	+1.6
PLVO				IAmb	IAmb	12 39 58.6	
	comp=Z,23nm,0.9s						
H55A	Tweed	23.73	79	P	P	12 39 54.6	-0.2
	baz=282						
T55A	Pulaski	23.73	98	P	P	12 39 56.1	+1.0
	baz=298						
U55A	TA2, Sparta	23.84	100	P	P	12 39 56.9	+0.8

	baz=300						
M56A	Emporium	23.85	86	P	P	12 39 56.3	+0.2
GOGA	Godfrey	23.85	109	P	P	12 39 56.8	+0.7
GOGA				IAmb	IAmb	12 39 59.5	
	comp=Z,36nm,1.2s						
GOGA	Godfrey	23.85	109	P	P	12 39 58.1	+2.0
	baz=306						
G55A	Calabogie	23.91	77	P	P	12 39 57.0	+0.4
	baz=281						
BLA	Blacksburg	23.95	98	P	P	12 39 57.9	+0.8
BLA	Blacksburg	23.95	98	P	P	12 39 58.9	+1.8
	baz=298						
N56A	West Decatur	23.95	88	P	P	12 39 58.6	+1.5
	baz=290						
V55A	Taylorsville	24.05	101	P	P	12 39 56.6	-1.5
V55A	Taylorsville	24.05	101	P	P	12 39 58.3	+0.2
	baz=301						
F55A	Otter Lake	24.05	75	P	P	12 39 59.0	+1.1
	baz=280						
352A	Blakely	24.09	115	P	P	12 39 57.0	-1.4
K56A	Middlesex	24.09	83	P	P	12 39 58.9	+0.6
	baz=286						
H56A	Elgin	24.36	78	P	P	12 40 01.8	+1.0
	baz=283						
U56A	King	24.39	100	P	P	12 40 01.3	+0.1
D55A	Sainte-Anne-du	24.47	72	P	P	12 40 02.2	+0.4
	baz=278						
N57A	Milroy	24.54	88	P	P	12 40 03.2	+0.7
	baz=290						
Q57A	Strasburg	24.58	92	P	P	12 40 04.9	+2.0
	baz=294						
V56A	Mocksville	24.58	101	P	P	12 40 03.5	+0.7
	baz=301						
L57A	Andrews Acres	24.63	84	P	P	12 40 04.4	+1.1
	baz=288						
M57A	Sunshine Farm,	24.64	86	P	P	12 40 03.9	+0.5
M57A				IAmb	IAmb	12 40 14.2	
	comp=Z,26nm,1.0s						
O57A	Amberson	24.68	89	P	P	12 40 05.2	+1.5
	baz=292						
P57A	Homestead Farm	24.68	91	P	P	12 40 04.5	+0.7
P57A				IAmb	IAmb	12 40 18.6	
	comp=Z,44nm,1.3s						
S57A	Dark Hollow, R	24.73	95	P	P	12 40 05.1	+0.9
S57A	Dark Hollow, R	24.73	95	P	P	12 40 06.0	+1.8
	baz=297						
E56A	St. Veronique	24.84	73	P	P	12 40 05.9	+0.8
	baz=279						
W56A	Indian Trail	24.87	102	P	P	12 40 05.7	+0.3
	baz=302						
T57A	Hurt	24.87	97	P	P	12 40 05.2	-0.2
T57A	Hurt	24.87	97	P	P	12 40 06.6	+1.2
	baz=298						
D56A	ZEC Mazanza, M	24.95	72	P	P	12 40 06.6	+0.4
	baz=278						
CRQM	Cirque	24.97	321	P	P	12 40 07.7	+1.3
CRQM				IAmb	IAmb	12 40 12.1	
	comp=Z,20nm,1.4s						
H57A	Richville	25.00	78	P	P	12 40 07.6	+1.1
	baz=283						
V57A	Coltrane Farms	25.04	100	P	P	12 40 07.8	+0.8
	baz=300						
U57A	Blanch	25.08	98	P	P	12 40 08.7	+1.3
	baz=299						
N58A	Sunbury	25.11	87	P	P	12 40 08.6	+1.0
	baz=290						
M58A	Price’s Panora	25.11	86	P	P	12 40 09.2	+1.6
	baz=289						
G57A	Newington	25.14	77	P	P	12 40 08.9	+1.1
	baz=282						
DAWY	Dawson	25.17	330	P	P	12 40 08.6	+0.6
R58A	Rapidan	25.17	93	P	P	12 40 09.9	+1.7
	baz=295						
BINY	Binghamton	25.18	84	P	P	12 40 08.8	+0.5
	baz=288						
P58A	Pank, Wackersv	25.19	90	P	P	12 40 10.3	+2.0
	baz=293						
MCARA	McCarthy VSAT	25.20	323	P	P	12 40 10.1	+1.8
BIRD	Birdtown, Kers	25.21	103	P	P	12 40 08.5	-0.1
O58A	Lewisberry	25.21	89	P	P	12 40 09.8	+1.2
	baz=292						
TRQ	Mont Tremblant	25.22	74	P	P	12 40 09.8	+1.2
K58A	Earlville	25.25	82	P	P	12 40 09.4	+0.5
	baz=287						
W57A	Gilead	25.27	102	P	P	12 40 08.2	-0.9
W57A	Gilead	25.27	102	P	P	12 40 09.8	+0.8
	baz=302						
L58A	Harry Jones Me	25.32	84	P	P	12 40 09.7	+0.1
	baz=288						
J58A	Remsen	25.34	81	P	P	12 40 10.9	+1.2
J58A				IAmb	IAmb	12 40 13.2	
	comp=Z,33nm,1.1s						
E57A	Chemin Saint G	25.47	73	P	P	12 40 11.6	+0.8
	baz=280						
I58A	Old Forge	25.48	80	P	P	12 40 12.2	+1.3
	baz=285						
BCAR	Beaver Creek A	25.50	327	P	P	12 40 11.4	+0.4
LONY	Lake Ozonia	25.52	77	P	P	12 40 13.8	+2.5
	baz=283						
D57A	Chemin Vers le	25.55	72	P	P	12 40 12.3	+0.7
	baz=279						
V58A	Windy Hill, Pi	25.55	100	P	P	12 40 11.3	-0.3
V58A	Windy Hill, Pi	25.55	100	P	P	12 40 11.6	-0.1
	baz=300						
C36M	Paulatuk	25.57	349	P	P	12 40 13.0	+1.5
O59A	Robesonia	25.67	88	P	P	12 40 13.5	+0.8
	baz=292						
N59A	State Game Lan	25.75	86	P	P	12 40 15.5	+2.0
	baz=290						
EPYK	Eagle Plains	25.81	336	P	P	12 40 12.4	-1.3
K59A	Cooperstown	25.81	82	P	P	12 40 16.9	+2.9
	baz=287						
J59A	Piesco	25.86	80	P	P	12 40 17.6	+3.1
	baz=286						
X58A	Rowland	26.04	102	P	P	12 40 15.6	-0.5
E58A	La Victoria	26.07	73	P	P	12 40 19.4	+3.2
	baz=280						
T59A	Double "B" Far	26.09	96	P	P	12 40 16.0	-0.5
T59A				IAmb	IAmb	12 40 18.4	
	comp=Z,23nm,1.1s						
T59A	Double "B" Far	26.09	96	P	P	12 40 17.2	+0.7
	baz=298						
V59A	Middlesex	26.18	99	P	P	12 40 18.8	+1.4
	baz=300						
EGAK	Eagle	26.21	331	P	P	12 40 18.3	+0.9
D58A	Chemin du LacG	26.21	71	P	P	12 40 18.2	+0.6
	baz=279						
INK	Inuvik	26.42	341	P	P	12 40 20.5	+1.3
	comp=Z,6.0nm,1.0s,baz=127,slow=9.8,SNR=9.0						
INK				LR	LR	12 52 31.9	
	comp=Z,761nm,18.0s,baz=130,slow=40						
M60A	Port Jervis	26.42	85	P	P	12 40 20.8	+1.2
	baz=290						
ODNJ	Ogdensburg	26.52	85	P	P	12 40 20.9	+0.5
ODNJ				IAmb	IAmb	12 40 23.2	
	comp=Z,22nm,0.9s						
SCRK	Sand Creek	26.82	328	P	P	12 40 23.4	+0.4
RIDG	Independent Ri	27.04	327	P	P	12 40 25.0	+0.1
RIDG				IAmb	IAmb	12 40 40.3	
	comp=Z,18nm,1.2s						
SML	Sawmill	27.69	321	P	P	12 40 31.6	+0.8
SML				IAmb	IAmb	12 40 34.3	
	comp=Z,25nm,1.2s						
PMR	Palmer	27.98	321	P	P	12 40 34.9	+1.6
RC01	Rabbit Creek A	28.10	319	P	P	12 40 35.7	+1.4
RC01				IAmb	IAmb	12 40 42.5	
	comp=Z,19nm,1.4s						
HDA	Harding Lake	28.16	327	P	P	12 40 35.7	+0.8
HDA				IAmb	IAmb	12 40 37.9	
	comp=Z,17nm,1.1s						
HDA	Harding Lake	28.16	327	P	P	12 40 36.7	+1.8
	baz=117						
PRP	Porcupine Dome	28.16	330	P	P	12 40 35.4	+0.4
A36M	Sachs Harbour	28.18	350	P	P	12 40 36.2	+1.3
	baz=158						
IL31		28.31	328	P	P	12 40 37.4	+1.3
IL31				IAmb	IAmb	12 40 39.1	
	comp=Z,12nm,1.0s						
ILAR	Eielson Array	28.31	328	P	P	12 40 37.1	+1.0
	comp=Z,7.9nm,1.0s,baz=125,slow=7.5,SNR=55						
ILAR				PcP	PcP	12 43 50.4	+1.5
	comp=Z,1.0nm,1.0s,baz=132,slow=2.7,SNR=4.2						
ILAR				LR	LR	12 52 59.3	
	comp=Z,2µm,18.3s,baz=120,slow=39						
ILAR	Eielson Array	28.31	328	P	P	12 40 37.4	+1.2
RND	Reindeer	28.51	324	P	P	12 40 40.2	+2.1
RND				IAmb	IAmb	12 40 47.2	
	comp=Z,12nm,0.8s						
CCB	Clear Creek Bu	28.60	327	P	P	12 40 39.6	+0.8
CCB				IAmb	IAmb	12 40 41.8	
	comp=Z,12nm,1.0s						
WRH	Wood River Hil	28.64	327	P	P	12 40 40.1	+0.9
WRH				IAmb	IAmb	12 40 42.3	
	comp=Z,17nm,1.2s						
MCK	McKinley	28.67	325	P	P	12 40 41.0	+1.6
MCK				IAmb	IAmb	12 40 43.5	
	comp=Z,14nm,1.0s						
SUA	Susitna One	28.67	320	P	P	12 40 41.2	+1.6
SUA				IAmb	IAmb	12 40 43.2	
	comp=Z,18nm,1.3s						
TCOL	CIGO, UAF Yank	28.73	328	P	P	12 40 42.5	+2.7
	baz=116						
KDAK	Kodiak Island	28.77	312	P	P	12 40 42.1	+1.8
	comp=Z,14nm,1.1s,baz=193,slow=7.4,SNR=3.6						
KDAK				LR	LR	12 51 25.2	
	comp=Z,574nm,19.6s,baz=119,slow=35						
MDM	Murphy Dome	28.90	328	P	P	12 40 43.0	+1.5
NEA	Nenana	29.07	326	P	P	12 40 44.2	+1.2
NEA				IAmb	IAmb	12 41 02.1	
	comp=Z,17nm,1.4s						
TRF	Thorofare Moun	29.12	324	P	P	12 40 45.1	+1.4
KTH	Kantishna Hill	29.43	324	P	P	12 40 47.8	+1.5
KTH				IAmb	IAmb	12 40 49.1	
	comp=Z,22nm,1.2s						
D63A	Stockholm	29.44	70	P	P	12 40 46.9	+0.5
	baz=282						
SCHQ	Schefferville	29.57	54	P	P	12 40 47.0	-0.5
	comp=Z,23nm,1.1s,baz=278,slow=8.9,SNR=10						
SCHQ				LR	LR	12 52 48.7	
	comp=Z,1µm,19.3s,baz=273,slow=37						
SCHQ	Schefferville	29.57	54	P	P	12 40 47.5	0.0
BPAW	Bear Paw Mtn.	29.65	325	P	P	12 40 49.3	+1.2
BPAW				IAmb	IAmb	12 40 51.0	
	comp=Z,27nm,1.5s						
PPLA	Purkeypile	29.75	322	P	P	12 40 50.6	+1.4
PPLA				IAmb	IAmb	12 40 51.8	
	comp=Z,26nm,1.3s						
E64A	Bridgewater	29.75	71	P	P	12 40 50.2	+1.1
	baz=283						
MLY	Manley	29.90	327	P	P	12 40 52.1	+1.7
MLY				IAmb	IAmb	12 40 53.9	
	comp=Z,16nm,1.1s						
FRB	Frobisher Bay	30.27	36	P	P	12 40 54.1	+0.5
	comp=Z,23nm,1.0s,baz=240,slow=10.0,SNR=39						
RES	Resolute Bay	30.82	8	P	P	12 40 58.7	+0.4
	comp=Z,1.0nm,0.7s,baz=190,slow=16,SNR=5.6						
SVW2	Sparrevohn	30.85	318	P	P	12 41 00.0	+1.3
SVW2				IAmb	IAmb	12 41 01.7	
	comp=Z,13nm,1.2s						
TOLK	Toolik Lake Re	31.11	334	P	P	12 41 01.9	+0.8
TOLK				IAmb	IAmb	12 41 18.4	
	comp=Z,10nm,0.9s						
TOLK	Toolik Lake Re	31.11	334	P	P	12 41 02.8	+1.7
	baz=120						
IMAR	Indian Mountai	31.43	328	P	P	12 41 04.6	+0.8
APG	El Apazote	34.25	144	LR	LR	12 59 15.1	
	comp=Z,232nm,18.1s,baz=314,slow=43						
ANM	Nome	35.83	323	P	P	12 41 44.2	+2.1
DRLN	Deer Lake	35.90	63	P	P	12 41 44.4	+1.6
DRLN				IAmb	IAmb	12 41 57.8	
	comp=Z,28nm,1.4s						
KULLO	Kullorsuaq	37.83	21	iP	P	12 42 00.2	+1.2
	comp=Z,25nm,1.0s						
SFJD	Kangerlussuaq	38.26	33	P	P	12 42 03.4	+0.7
	comp=Z,0.9nm,0.8s,baz=269,slow=9.5,SNR=5.7						
SFJD	Kangerlussuaq	38.26	33	iP	P	12 42 03.4	+0.7
	comp=Z,2.6nm,1.2s						
GAMB	Gambell	38.55	321	P	P	12 42 05.9	+0.8
SUMG	Summit	42.71	25	iP	P	12 42 40.8	+0.9
	comp=Z,121nm,1.3s						
SUMG	Summit	42.71	25	P	P	12 42 40.2	+0.4
SJG	San Juan	45.58	111	LR	LR	13 02 17.7	
	comp=Z,172nm,21.5s,baz=276,slow=36						
BILL	Bilibino	46.95	329	P	P	12 43 13.4	+0.1
BILL				IAmb	IAmb	12 43 15.4	
	comp=Z,14nm,1.2s						
DAG	Danmarks Havn	47.37	18	iP	P	12 43 16.1	-0.3
	comp=Z,12nm,1.3s						
SCO	Scoresbysund	48.21	27	iP	P	12 43 23.7	+0.7
	comp=Z,5.6nm,1.0s						
SCO	Scoresbysund	48.21	27	P	P	12 43 23.6	+0.6
SCO				IAmb	IAmb	12 43 38.3	
	comp=Z,9.7nm,1.2s						
ROSC	El Rosal	50.91	130	LR	LR	13 09 11.3	
	comp=Z,161nm,18.2s,baz=44,slow=41						
SEY	Seymchan	54.22	326	P	P	12 44 09.1	+0.9
	comp=Z,5.3nm,0.8s,baz=80,slow=9.3,SNR=17						
TIXI	Tiksi	56.54	341	P	P	12 44 25.3	+0.5
	comp=Z,8.1nm,0.9s,baz=18,slow=5.0,SNR=17						
TIXI	Tiksi	56.54	341	P	P	12 44 24.7	-0.1
TIXI				IAmb	IAmb	12 44 30.0	
	comp=Z,9.9nm,1.0s						
MA2	Magadan	56.62	323	P	P	12 44 28.0	+2.5
	comp=Z,4.8nm,0.7s,baz=85,slow=7.1,SNR=4.4						
PETK	Petropavlovsk-	56.79	314	P	P	12 44 26.6	-0.3
	comp=Z,4.8nm,0.7s,baz=80,slow=12,SNR=6.3						
PETK				LR	LR	13 08 24.7	
	comp=Z,217nm,19.8s,baz=61,slow=36						
PETK	Petropavlovsk-	56.79	314	P	P	12 44 23.4	-3.5
ARCES	ARCESS Array B	61.55	16	LR	LR	13 12 36.5	
	comp=Z,747nm,18.7s,baz=340,slow=37						
PTGA	Pitinga	63.75	120	P	P	12 45 16.0	+1.0
PTGA				IAmb	IAmb	12 45 19.4	
	comp=Z,7.5nm,0.8s						
PTGA	Pitinga	63.75	120	eP	P	12 45 15.9	+1.0
MDP	Montagnes des	64.04	110	LR	LR	13 17 41.0	
	comp=Z,73nm,18.2s,baz=352,slow=40						
NNA	Nana	64.27	143	LR	LR	13 15 10.3	
	comp=Z,66nm,18.1s,baz=346,slow=38						
NB2	NORSAR Subarra	64.53	27	P	P	12 45 20.5	+1.0
	comp=Z,7.2nm,1.1s,baz=313,slow=6.9						
NOA	NORSAR Array B	64.53	27	P	P	12 45 20.3	+0.8
	comp=Z,4.6nm,1.0s,baz=312,slow=6.6,SNR=13						
NOA				LR	LR	13 13 10.8	
	comp=Z,309nm,19.5s,baz=325,slow=36						
NC405	NORSAR Array S	64.64	27	P	P	12 45 20.6	+0.4
NC602	NORSAR Array S	64.86	27	P	P	12 45 21.9	+0.2
NRIK	Noril'sk	65.41	353	LR	LR	13 15 03.2	
	comp=Z,340nm,19.3s,baz=35,slow=37						
SAML	Samuel	68.46	128	P	P	12 45 44.2	-1.0
SAML				IAmb	IAmb	12 45 45.5	
	comp=Z,6.7nm,0.9s						
SAML	Samuel	68.46	128	eP	P	12 45 45.0	-0.1
FINES	FINESS Array B	68.51	21	P	P	12 45 45.8	+0.9
	comp=Z,3.6nm,0.9s,baz=344,slow=6.2,SNR=8.5						
FINES				LR	LR	13 16 36.1	
	comp=Z,355nm,18.4s,baz=350,slow=37						
FINES	FINESS Array B	68.51	21	P	P	12 45 44.1	-0.8
PPT	Papeete	71.45	219	LR	LR	13 12 20.8	
	comp=Z,297nm,18.1s,baz=327,slow=32						
KLMR	Klimovskoe	71.97	15	eP	P	12 45 59.2	-6.9
KLMR				AMP		12 46 09.5	
	comp=Z,15nm,1.5s						
KLMR				LR	LR	13 13 19.0	
KLMR				AMP		13 17 06.6	
	comp=Z,738nm,17.1s						
LPAZ	La Paz	72.03	137	P	P	12 46 08.0	+0.3
	comp=Z,2.1nm,0.5s,baz=325,slow=2.7,SNR=16						
LPAZ				LR	LR	13 22 00.4	
	comp=Z,110nm,18.2s,baz=325,slow=39						
LPAZ	La Paz	72.03	137	P	P	12 46 06.8	-1.0
LPAZ	La Paz	72.03	137	eP	P	12 46 08.1	+0.3
CLL	Collm	72.63	33	ePP	PP	12 48 36.0	-15
CLL				ePPS	PPS	12 56 09.0	
CLL				e(SS)		12 59 54.0	
PB16	IPOC Station P	73.14	139	P	P	12 46 15.5	+1.2
PB16				IAmb	IAmb	12 46 19.7	
	comp=Z,14nm,1.3s						
GRF	Grafenberg Arr	73.18	35	eP	P	12 46 14.2	+0.7
	comp=Z,5.6nm,1.1s,baz=321,slow=5.9						
NKC	Novy Kostel	73.25	34	AMS	AMS	13 18 00.0	
	comp=Z,600nm,19.7s						
MNMC	Minye Minye	73.80	140	P	P	12 46 16.5	-1.2
MNMC				IAmb	IAmb	12 46 28.2	
	comp=Z,17nm,1.2s						
PVCC	Panska Ves	73.86	33	AMS	AMS	13 19 40.0	
	comp=Z,500nm,23.5s						
PRA	Prague	74.17	33	AMS	AMS	13 19 40.0	
	comp=Z,400nm,17.0s						
CLDB	Colider	74.27	123	eP	P	12 46 19.5	-0.9
PRU	Pruhonice	74.28	33	AMS	AMS	13 19 50.0	
	comp=Z,400nm,17.2s						
UPC	Upice	74.42	32	AMS	AMS	13 19 30.0	
	comp=Z,400nm,14.2s						
OSTC	Ostas	74.46	32	AMS	AMS	13 19 30.0	
	comp=Z,500nm,18.7s						
KHC	Kasperske Hory	74.58	34	AMS	AMS	13 18 20.0	
	comp=Z,700nm,21.6s						
DPC	Dobruska-Polom	74.67	32	AMS	AMS	13 19 30.0	
	comp=Z,400nm,21.0s						
GERES	GERESS Array B	74.85	34	P	P	12 46 24.1	+0.6
	comp=Z,0.3nm,0.5s,baz=302,slow=7.7,SNR=3.7						
GERES				LR	LR	13 20 36.1	
	comp=Z,454nm,18.2s,baz=322,slow=37						
GERES	GERESS Array B	74.85	34	P	P	12 46 20.9	-2.6
KRLC	Kraliky	75.06	32	AMS	AMS	13 21 50.0	
	comp=Z,400nm,17.0s						
SQTA	Sankt Quirin	75.10	37	epP	P	12 46 26.9	+1.9
	comp=Z,2.3nm,0.7s						
WATA	Walderalm	75.16	37	PcP	P	12 46 28.8	+3.5
	comp=Z,4.0nm,0.9s						
WTTA	Wattenberg	75.25	37	epP	P	12 46 27.7	+1.9
	comp=Z,3.5nm,1.2s						
USRK	Ussuriysk Ar.	75.39	319	P	P	12 46 25.4	-1.1
	comp=Z,0.9nm,0.5s,baz=15,slow=6.0,SNR=2.3						
USRK				LR	LR	13 21 54.4	
	comp=Z,117nm,18.9s,baz=25,slow=38						
USRK	Ussuriysk Ar.	75.39	319	P	P	12 46 24.7	-1.7
SIV	San Ignacio	75.41	131	LR	LR	13 23 52.0	
	comp=Z,102nm,18.2s,baz=277,slow=39						
PB01	IPOC Station P	75.51	141	P	P	12 46 27.4	0.0
OKC	Ostrava-Krasne	75.77	31	AMS	AMS	13 21 30.0	
	comp=Z,500nm,17.4s						
KBA	Koelnbreinsper	76.11	36	ePcP	P	12 46 33.1	+2.3
	comp=Z,2.8nm,0.9s						
OBKA	Obir	77.06	35	ePcP	P	12 46 38.1	+2.0
	comp=Z,1.4nm,0.7s						
SOKA	Soboth	77.12	35	ePcP	P	12 46 38.2	+1.8
	comp=Z,4.2nm,0.9s						
LVC	Limon Verde	77.13	141	LR	LR	13 23 19.6	
	comp=Z,88nm,18.9s,baz=332,slow=38						
SMTB	Santa Maria do	77.80	116	eP	P	12 46 42.0	+1.6
AKASG	Malin Array Be	78.74	25	P	P	12 46 44.6	-0.5
	comp=Z,3.0nm,0.8s,baz=333,slow=5.3,SNR=12						
AKASG				LR	LR	13 23 20.7	
	comp=Z,324nm,19.1s,baz=345,slow=37						
AKASG	Malin Array Be	78.74	25	P	P	12 46 43.0	-2.2
NRCA	Norcia	79.39	38	P	P	12 46 49.2	+0.2
TLY	Talaya	79.46	339	P	P	12 46 50.8	+1.6
	comp=Z,1.4nm,0.7s,baz=18,slow=5.9,SNR=3.1						
TLY	Talaya	79.46	339	P	P	12 46 48.2	-1.0
BURAR	Bucovina Array	80.16	29	P	P	12 46 52.8	-0.3
ARAG	Araguaiana, MT	80.44	123	eP	P	12 46 55.3	+0.5
ZALV	Zalesovo Beam	80.77	351	P	P	12 46 57.5	+1.4
	comp=Z,1.0nm,0.5s,baz=7.4,slow=5.3,SNR=6.0						
ZALV				LR	LR	13 26 33.3	
	comp=Z,124nm,20.4s,baz=13,slow=38						
ZALV	Zalesovo Beam	80.77	351	P	P	12 46 54.7	-1.5
AQDB	Aquidauana	81.99	129	eP	P	12 47 03.6	+0.6
SONM	Songino Array	82.20	336	P	P	12 47 05.0	+0.9
	comp=Z,0.7nm,0.7s,baz=38,slow=4.4,SNR=5.2						
SONM				LR	LR	13 27 08.8	
	comp=Z,477nm,18.6s,baz=27,slow=38						
SONM	Songino Array	82.20	336	P	P	12 47 03.0	-1.0
NBPA	Parau_RN	82.48	106	eP	P	12 47 07.0	+1.2
KSRS	Korea Array	82.56	317	LR	LR	13 25 59.8	
	comp=Z,93nm,18.1s,baz=44,slow=37						
BVAR	Borovoye Array	82.58	359	P	P	12 47 07.5	+1.8
	comp=Z,1.3nm,0.7s,baz=15,slow=6.2,SNR=5.2						
BDFB	Brasilia	82.69	120	P	P	12 47 07.1	+0.2
	comp=Z,3.7nm,0.9s,baz=260,slow=5.8,SNR=5.6						
BDFB				LR	LR	13 30 01.5	
	comp=Z,77nm,18.2s,baz=299,slow=40						
BDFB	Brasilia	82.69	120	P	P	12 47 05.0	-1.9
BDFB				IAmb	IAmb	12 47 09.0	
	comp=Z,5.2nm,1.0s						
KEST	Kesra	83.21	45	LR	LR	13 23 03.3	
	comp=Z,210nm,18.7s,baz=238,slow=35						
IPMB	Ipameri, GO	84.37	122	eP	P	12 47 14.7	-0.7
KURK	Kurchatov	84.55	354	P	P	12 47 11.9	-4.0
KURK				IAmb	IAmb	12 47 22.8	
	comp=Z,4.7nm,1.1s						
JANB	Januaria	84.56	117	eP	P	12 47 15.3	-1.1
FNA	Florina	84.58	35	P	P	12 47 15.7	-0.6
FNA				IAmb	IAmb	12 47 19.1	
	comp=Z,7.1nm,0.8s						
KURBB	Kurchatov Arra	84.65	354	P	P	12 47 16.4	0.0
	comp=Z,0.5nm,0.6s,baz=6.8,slow=4.7,SNR=4.4						
PCMB	Pacaembu	85.39	127	eP	P	12 47 21.8	+1.4
CPUP	Villa Florida	85.87	134	P	P	12 47 22.4	-0.3
	comp=Z,2.4nm,0.7s,baz=280,slow=6.1,SNR=6.1						
CPUP				LR	LR	13 31 15.5	
	comp=Z,58nm,18.2s,baz=23,slow=40						
CPUP	Villa Florida	85.87	134	P	P	12 47 20.1	-2.5
CPUP				IAmb	IAmb	12 47 28.6	
	comp=Z,11nm,1.5s						
ABKAR	Akbulak array	86.00	6	P	P	12 47 23.1	0.0
HHC	Hu-ho-hao-te	86.72	329	eP	P	12 47 27.8	+0.7
PTGB	Pitanga	87.38	129	eP	P	12 47 30.7	+0.4
FRTB	Fartura	87.72	126	eP	P	12 47 32.4	+0.6
MK31	Makanchi Array	88.11	351	P	P	12 47 34.4	+0.9
MKAR	Makanchi Array	88.11	351	P	P	12 47 34.2	+0.7
	comp=Z,1.3nm,0.9s,baz=15,slow=5.0,SNR=8.2						
MKAR				LR	LR	13 31 29.8	
	comp=Z,220nm,20.4s,baz=360,slow=39						
MKAR	Makanchi Array	88.11	351	P	P	12 47 34.0	+0.5
MAKZ	Makanchi	88.13	351	P	P	12 47 33.5	-0.1
MAKZ				IAmb	IAmb	12 47 38.1	
	comp=Z,4.4nm,1.2s						
BSCB	Bom Sucesso	88.75	121	eP	P	12 47 37.3	+0.4
KBZ	Khabaz	88.79	19	P	P	12 47 37.6	+0.9
	comp=Z,5.7nm,0.9s,baz=281,slow=7.1,SNR=6.7						
KBZ				LR	LR	13 28 18.3	
	comp=Z,386nm,19.2s,baz=335,slow=36						
SJMB	Sao Joao De Ma	89.26	117	eP	P	12 47 39.8	+0.6
ITAB	Concordia	89.34	131	eP	P	12 47 39.1	-0.2
BRTR	Keskin Array B	89.96	27	LR	LR	13 30 06.5	
	comp=Z,167nm,19.2s,baz=334,slow=37						
PARB	Paraibuna	90.01	124	eP	P	12 47 40.9	-1.8
WMQ	Urumqi	90.29	347	eP	P	12 47 42.0	-1.9
NJ2	Nanjing	91.26	320	eP	P	12 47 48.0	-0.5
CNLB	Canela	91.67	131	eP	P	12 47 51.6	+1.4
LZH	Lanzhou	93.66	333	eP	P	12 47 54.8	-5.0
LZH				pP	PcP	12 47 56.0	-4.3
LZH				sP	pP	12 47 58.3	-3.4
LZH				ePP	PP	12 51 42.0	-1.6
KSH	Kashi	95.88	355	P	P	12 48 07.0	-2.8
KSH				pP	pP	12 48 13.0	+1.1
KSH				PP	PP	12 52 01.3	+0.7
KSH	Kashi	95.88	355	SKS	SKSac	12 58 40.5	-6.6
KSH	Kashi	95.88	355	S	S	12 59 16.8	-12
DBIC	Dimbokro	96.42	74	LR	LR	13 31 20.6	
	comp=Z,200nm,18.1s,baz=299,slow=35						
GEYT	Alibeck	97.06	9	LR	LR	13 36 10.8	
	comp=Z,238nm,18.4s,baz=355,slow=38						
CD2	Chengdu	98.41	331	eP	P	12 48 19.5	-1.8
QIZ	Qiongzhong	106.55	320	Pdif	Pdif	12 48 53.5	-4.1
QIZ				PP	PP	12 53 19.5	-2.2
QIZ	Qiongzhong	106.55	320	SS	SS	13 08 22.3	-3.3
WRAB	Tennant Creek	121.39	273	PKPdf	PKPdf	12 53 31.8	-4.8
WB2	Warramunga Arr	121.40	273	PKPdf	PKPdf	12 53 33.5	-3.1
WRA	Warramunga Arr	121.41	273		PKPdf	12 53 36.5	-0.1
ASAR	Alice Springs	124.10	269	PKP	PKiKP	12 53 42.8	+0.8
	comp=Z,2.2nm,1.0s,baz=68,slow=3.3,SNR=3.0						
ASAR	Alice Springs	124.10	269		PKPdf	12 53 41.5	-0.2
QSPA	South Pole Qui	134.60	180	PKPdf	PKiKP	12 54 01.3	-0.4

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*DJA **30** 12:46:04.2±0.5, 2°S±5°×14°0E±°, $h56^{km}\pm6^{km}$, M4.8/8, mb4.5/8, mB5.3/3, MLv5.0/6, Mw(mB)4.8/3*

*IDC **30** 12:46:08.2±2.9, 2.°24S×139.°32E, $h47^{km}\pm28^{km}$, mb3.9/18, mb1 4.0/21, mb1mx3.9/43, mbtmp4.2/21, ML3.9/2, MS3.6/12, Ms1 3.6/12, ms1mx3.4/40, Error ellipse: s-maj=24.0km s-min=13.5km az=74.0*

*NEIC **30** 12:46:08.8±2.2, 2.°22S±0.°08×139.°27E±0.°06, $h52^{km}\pm5^{km}$, mb4.6/43, Error ellipse: s-maj=12.1km s-min=8.5km az=165.0*

ISC 30 12:46:06.2±0.4, **2.°17S**±0.°05×**139.°47E**±0.°05, **$h27^{km}$, n112,** σ**1^{s}67**/108, **mb4.5**/34, **MS3.8**/6, **1D, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	0.81	121	P	Pn	12 46 19.6	-2.3
GENI				S	Sb	12 46 32.8	+0.4
JAY	Jayapura	1.28	106	P	Pn	12 46 26.1	-2.3

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WAMI  Wamena              1.86 204  P      Pb     12 46 40.4 +0.8
WAMI                                S      Sb     12 47 07.1 +4.6
BAKI  Biak                3.50 286  P      Pn     12 46 57.2 -1.7
BAKI                                S      Sn     12 47 39.6 +0.1
FAKI  Fak Fak             7.25 264  P      Pn     12 47 50.5 -0.1
      0.3nm566nm59nm,0.6s
FAKI  Fak Fak             7.25 264         Pn     12 47 50.3 -0.3
SIJI  Sorong              8.30 279  P      Pn     12 48 05.5 +0.5
      2.1nm,0.3s,baz=74,slow=7.2,SNR=3.8
SIJI                                LR     LR     12 51 50.0
      comp=Z,637nm,18.1s,baz=356,slow=42
BNDI  Bandanaira          9.83 256  P      Pn     12 48 26.2 +0.3
      18µm41nm,0.9s
PMG   Port Moresby       10.49 134  P      Pn     12 48 37.3 +2.3
      1.0nm,0.3s,baz=10.0,slow=8.4,SNR=3.5
PMG                                 LR     LR     12 54 18.3
      comp=Z,439nm,19.4s,baz=316,slow=46
PMG   Port Moresby       10.49 134  Pn     Pn     12 48 37.6 +2.6
MSAI  Masohi             10.60 263  P      Pn     12 48 35.9 -0.5
      470nm9.2nm,0.8s
COEN  Coen               12.27 163  Pn     Pn     12 49 00.1 +0.8
KRVT  Keravat (AS076     12.71 100  LR     LR     12 53 23.6
      comp=Z,190nm,20.1s,baz=277,slow=34
MTN   Manton Dam         13.44 217         Pn     12 49 12.9 -2.4
SANI  Sanana             13.47 270  P      Pn     12 49 16.6 +0.8
      10nm,0.6s
GUMO  Guam               16.55  19  LR     LR     12 56 00.3
      comp=Z,157nm,19.0s,baz=214,slow=36
DAV   Davao City (W)     16.63 304  LR     LR     12 56 22.0
      comp=Z,116nm,20.0s,baz=102,slow=37
SOEI  Soe                16.89 243  P      P      12 50 01.1 -1.7
KNRA  Kununurra          17.07 218         Pn     12 50 00.5 -2.7
KNRA                                IAmb   IAmb   12 50 10.5
      comp=Z,26nm,0.8s
WB0   Warramunga Arr     18.18 195  P      Pn     12 50 15.3 -1.6
WR0   Warramunga Arr     18.33 195  P      P      12 50 16.2 -2.4
WRAB  Tennant Creek      18.35 195  P      P      12 50 17.4 -1.5
WRAB                                IAmb   IAmb   12 50 19.8
      comp=Z,24nm,0.8s
WB2   Warramunga Arr     18.36 195  P      P      12 50 17.0 -2.0
WB2                                 IAmb   IAmb   12 50 20.0
      comp=Z,23nm,0.8s
WRA   Warramunga Arr     18.36 195  P      P      12 50 15.4 -3.6
      comp=Z,1.4nm,0.3s,baz=16,slow=13,SNR=72
WRA                                 S      Sn     12 53 29.5  -14
      comp=Z,0.1nm,0.3s,baz=9.4,slow=22,SNR=2.9
WRA   Warramunga Arr     18.36 195  P      P      12 50 16.6 -2.4
CTA   Charters Tower     19.00 160  P      P      12 50 26.3 +0.3
      comp=Z,0.2nm,0.3s,baz=350,slow=16,SNR=2.3
KAPI  Kappang            19.88 261  LR     LR     12 59 45.7
      comp=Z,62nm,19.4s,baz=79,slow=42
FITZ  Fitzroy Crossi     20.85 220  P      P      12 50 43.9 -2.3
      comp=Z,6.5nm,0.6s,baz=50,slow=13,SNR=40
FITZ                                LR     LR     13 00 05.6
      comp=Z,125nm,19.0s,baz=40,slow=40
FITZ  Fitzroy Crossi     20.85 220  P      P      12 50 43.7 -2.5
AS31  Alice Springs      22.04 194  P      P      12 50 56.4 -2.5
AS31                                IAmb   IAmb   12 51 01.3
      comp=Z,11nm,0.5s
ASAR  Alice Springs      22.04 194  P      P      12 50 56.9 -2.1
      comp=Z,11nm,0.5s,baz=18,slow=10,SNR=165
ASAR                                S      S      12 55 02.6 +1.8
      comp=Z,3.5nm,0.9s,baz=19,slow=26,SNR=6.3
EIDS  Eidsvold           25.64 155  P      P      12 51 35.0 +1.3
EIDS                                IAmb   IAmb   12 51 43.9
      comp=Z,11nm,0.7s
PSA00 Pilbara Seismi     27.15 223  P      P      12 51 46.1 -1.4
PSA00                               IAmb   IAmb   12 51 49.8
      comp=Z,16nm,0.8s
PSA00 Pilbara Seismi     27.15 223  P      P      12 51 45.1 -2.3
PSA00                               IAmb   IAmb   12 52 03.9
      comp=Z,6.6nm,0.7s
STKA  Stephens Creek     29.62 176  P      P      12 52 08.0 -1.4
      comp=Z,1.4nm,0.5s,baz=350,slow=9.7,SNR=4.9
STKA                                LR     LR     13 05 41.9
      comp=Z,180nm,18.3s,baz=355,slow=40
STKA  Stephens Creek     29.62 176  P      P      12 52 07.0 -2.3
FORT  Forrest            30.44 200  P      P      12 52 15.6 -1.0
BBOO  Buckleboo          30.65 186  P      P      12 52 16.7 -1.7
BBOO                                IAmb   IAmb   12 52 19.5
      comp=Z,9.7nm,0.8s
GIRL  Giralia            31.85 228  P      P      12 52 30.0 +0.9
H11S3 WAKE ISLAND Hy     33.75  51  T      T      13 28 21.6
      baz=236,slow=75,SNR=114
H11S2 WAKE ISLAND Hy     33.76  51  T      T      13 28 24.5
      baz=236,slow=75,SNR=52
H11S1 WAKE ISLAND Hy     33.77  51  T      T      13 28 23.3
      baz=236,slow=75,SNR=87
H11N1 WAKE ISLAND Hy     34.61  50  T      T      13 29 23.3
      baz=233,slow=75,SNR=55
H11N2 WAKE ISLAND Hy     34.62  50  T      T      13 29 24.9
      baz=233,slow=75,SNR=63
H11N3 WAKE ISLAND Hy     34.62  50  T      T      13 29 25.1
      baz=233,slow=75,SNR=32
MORW  Morawa             34.83 218  P      P      12 52 53.9 -1.2
TOO   Toolangi           35.66 172  P      P      12 53 04.7 +2.5
TOO                                 IAmb   IAmb   12 53 13.6
      comp=Z,6.7nm,1.2s
NWAO  Narrogin (SRO)     37.03 212  P      P      12 53 12.8 -1.1
      comp=Z,20nm,0.9s,baz=53,slow=7.6,SNR=6.5
NWAO                                LR     LR     13 10 23.7
      comp=Z,265nm,19.1s,baz=75,slow=40
NWAO  Narrogin (SRO)     37.03 212  P      P      12 53 12.9 -1.0
NWAO  Narrogin (SRO)     37.03 212  P      P      12 53 12.9 -1.0
NWAO                                IAmb   IAmb   12 53 24.7
      comp=Z,29nm,1.1s
NJ2   Nanjing            39.25 332 eP      P      12 53 34.3 +1.7
WHN   Wuhan              40.40 326 ⇓P      P      12 53 45.5 +3.3
RPSI  Rantau Prapat      40.82 277  P      P      12 53 45.6 -0.4
RPSI                                IAmb   IAmb   12 53 46.7
      comp=Z,8.4nm,0.9s
TAU   Tasmania Unive     41.16 171  P      P      12 53 51.9 +3.6
TAU                                 IAmb   IAmb   12 53 52.5
      comp=Z,20nm,1.4s
GSI   Gunungsitoli       42.03 274  P      P      12 53 55.7 -0.2
GSI                                 IAmb   IAmb   12 54 02.5
      comp=Z,13nm,0.8s
CM31  Chiang Mai Arr     44.84 299  P      P      12 54 18.1 -0.4
CMAR  Chiang Mai Arr     44.84 299  P      P      12 54 17.5 -1.0
      comp=Z,2.4nm,0.7s,baz=119,slow=6.6,SNR=15
CMAR                                LR     LR     13 11 08.6
      comp=Z,30nm,21.1s,baz=46,slow=34
USRK  Ussuriysk Ar.      46.65 353  P      P      12 54 32.5 +0.2
      comp=Z,1.4nm,0.6s,baz=194,slow=5.3,SNR=1.6
USRK  Ussuriysk Ar.      46.65 353  P      P      12 54 31.8 -0.5
CD2   Chengdu            47.30 317 eP      P      12 54 37.5 -0.3
AFI   Afiamalu           49.55 106  LR     LR     13 14 14.1
      comp=Z,139nm,18.5s,baz=66,slow=34
HHC   Hu-ho-hao-te       49.80 332 eP      P      12 54 59.5 +2.6
BKZ   Black Stump Fm     49.92 142  P      P      12 54 58.4 +0.6
BKZ                                 IAmb   IAmb   12 55 06.6
      comp=Z,7.9nm,1.5s
LZH   Lanzhou            50.52 322 eP      P      12 55 05.0 +2.5
LZH                                 pP     sP     12 55 17.0 +3.0
LZH                                 sP     pP     12 55 22.0  +11
LZH                                ePP     PP     12 57 02.3 +3.8
MQZ   McQueen's Vall     50.77 149  P      P      12 55 06.8 +2.8
KLR   Kul'dur            51.63 354  P      P      12 55 09.3 -1.1
      comp=Z,1.4nm,0.6s,baz=222,slow=4.5,SNR=5.2
SONM  Songino Array      57.56 334  P      P      12 55 52.9 -0.7
      comp=Z,0.3nm,0.5s,baz=142,slow=7.2,SNR=2.1
SONM  Songino Array      57.56 334  P      P      12 55 52.8 -0.9
YAK   Yakutsk            64.46 355  P      P      12 56 40.0  0.0
      comp=Z,2.3nm,0.3s,baz=45,slow=2.3,SNR=4.2
YAK   Yakutsk            64.46 355  P      P      12 56 39.5 -0.5
WMQ   Urumqi             65.07 321 eP      P      12 56 46.0 +1.5
MK31  Makanchi Array     69.83 322  P      P      12 57 13.3 -1.2
MKAR  Makanchi Array     69.83 322  P      P      12 57 14.2 -0.3
      comp=Z,3.2nm,0.9s,baz=115,slow=8.2,SNR=19
MKAR  Makanchi Array     69.83 322  P      P      12 57 13.8 -0.8
MAKZ  Makanchi           70.03 322  P      P      12 57 14.7 -1.0
MAKZ                                IAmb   IAmb   12 57 23.4
      comp=Z,5.6nm,0.9s
KSH   Kashi              71.27 313  P      P      12 57 25.0 +1.4
KSH                                 sP     pP     12 57 33.0 +0.8
KSH                                 PP     PP     13 00 05.8 +3.9
KSH                                 S      S      13 06 40.8 +1.1
KSH                                 ScS    ScS    13 07 25.5 -1.2
NIL   Nilore             71.62 306  P      P      12 57 24.1 -1.6
NIL                                 IAmb   IAmb   12 57 35.0
      comp=Z,8.1nm,0.9s
ZALV  Zalesovo Beam      71.86 330  P      P      12 57 25.3 -1.4
      comp=Z,0.3nm,0.3s,baz=125,slow=5.7,SNR=1.9
ZALV  Zalesovo Beam      71.86 330  P      P      12 57 24.3 -2.3
AAK   Ala-Archa          73.35 316  P      P      12 57 35.5 -0.5
      comp=Z,0.9nm,0.7s,baz=180,slow=5.7,SNR=3.8
AAK   Ala-Archa          73.35 316  P      P      12 57 35.5 -0.5
KURK  Kurchatov          73.72 325  P      P      12 57 36.4 -1.4
KURBB Kurchatov Arra     73.73 325  P      P      12 57 37.1 -0.7
      comp=Z,1.3nm,0.8s,baz=115,slow=5.9,SNR=8.8
GAR   Garm               75.31 311  P      P      12 57 47.1 -0.3
GAR                                 IAmb   IAmb   12 57 54.7
      comp=Z,7.6nm,0.8s
CHGR  Chuyangaron        76.10 311  P      P      12 57 51.4 -0.6
VNDA  Vanda              76.25 175  P      P      12 57 50.4 -1.5
      comp=Z,0.6nm,0.7s,baz=320,slow=7.6,SNR=3.5
KKAR  Karatay Array      76.28 315  P      P      12 57 51.6 -1.2
BVAR  Borovoye Array     79.31 325  P      P      12 58 08.8 -0.5
      comp=Z,2.3nm,0.6s,baz=100,slow=7.5,SNR=17
BRVK  Borovoye           79.38 325  P      P      12 58 08.4 -1.3
KDAK  Kodiak Island      80.26  30  LR     LR     13 30 34.5
      comp=Z,50nm,20.9s,baz=169,slow=33
RND   Reindeer           83.81  25  P      P      12 58 34.9 +1.8
RND                                 IAmb   IAmb   12 58 46.0
      comp=Z,3.6nm,0.8s
WRH   Wood River Hil     84.45  25  P      P      12 58 36.5 +0.3
WRH                                 IAmb   IAmb   12 58 47.7
      comp=Z,4.8nm,1.0s
GEYT  Alibeck            84.50 308  P      P      12 58 36.3 -0.9
      comp=Z,1.3nm,0.6s,baz=90,slow=7.2,SNR=2.1
GEYT  Alibeck            84.50 308  P      P      12 58 35.9 -1.2
CCB   Clear Creek Bu     84.62  24  P      P      12 58 37.7 +0.7
CCB                                 IAmb   IAmb   12 58 47.2
      comp=Z,5.9nm,1.1s
ABKAR Akbulak array      84.80 320  P      P      12 58 36.5 -1.8
IL31                     85.03  24  P      P      12 58 38.3 -0.8
IL31                                IAmb   IAmb   12 58 50.3
      comp=Z,3.4nm,0.9s
ILAR  Eielson Array      85.03  24  P      P      12 58 38.5 -0.6
      comp=Z,1.6nm,0.8s,baz=259,slow=4.6,SNR=20
ILAR  Eielson Array      85.03  24  P      P      12 58 39.1  0.0
BMAR  Burnt Mountain     86.62  22  P      P      12 58 47.8 +0.8
ARU   Arti               86.77 327  P      P      12 58 46.5 -1.3
      comp=Z,0.6nm,0.5s,baz=340,slow=5.6,SNR=3.5
ARU   Arti               86.77 327  P      P      12 58 45.9 -2.0
ARU                                 IAmb   IAmb   12 58 57.1
      comp=Z,9.8nm,1.5s
BCAR  Beaver Creek A     86.83  27  P      P      12 58 49.4 +1.3
DAWY  Dawson             88.06  26  P      P      12 58 55.7 +1.7
DAWY                                IAmb   IAmb   12 59 06.5
      comp=Z,5.9nm,1.1s
DBIC  Dimbokro          144.16 278  PKP    PKPab  13 05 37.2 -1.2
      comp=Z,1.8nm,0.6s,baz=47,slow=5.0,SNR=4.4
DBIC  Dimbokro          144.16 278         PKPab  13 05 37.0 -1.4
PB16  IPOC Station P    144.94 127         PKPab  13 05 42.3 +0.4
LPAZ  La Paz            147.14 125  PKPbc  PKPbc  13 05 49.1 +0.4
      comp=Z,2.5nm,0.8s,baz=272,slow=1.3,SNR=6.3
LPAZ  La Paz            147.14 125         PKPbc  13 05 47.8 -0.9
RUSC  La Rusia          147.32  83         PKPdf  13 05 47.6 +0.8
CPUP  Villa Florida     147.34 151  PKPbc  PKPbc  13 05 48.0 -0.2
      comp=Z,2.1nm,0.8s,baz=184,slow=5.9,SNR=4.0
CPUP  Villa Florida     147.34 151         PKPbc  13 05 47.8 -0.4
```

NEIC ***30*** *12:49:42.4±1.7, 36°.11N±0°.04×97°.63W±0°.06, h3^{km}±7^{km}, Error ellipse: s-maj=8.1km s-min=5.0km az=56.0*

TUL ***30*** *12:49:42±1.3, 36°.13N±0°.03×97°.64W±0°.05, h5^{km}±7^{km}, ML3.4, Error ellipse: s-maj=5.3km s-min=4.6km az=106.0*

ANF ***30*** *12:49:43.3±1.2, 36°.18N×97°.66W, h17^{km}±9^{km}, ML3.8/7, Error ellipse: s-maj=5.9km s-min=3.2km az=158.0*

ISC 30 12:49:43.1±0.8**, 36°.10N**±0°.04×**97°.62W**±0°.04**, h10^{km}, n61, σ1^{s}03**/65**, Oklahoma**

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Code  Station Name        Δ°   AZ°    Phase ID           Time      Res
                                    Op     ISC         h  m  s    ISC
ADOK  Arcadia Dam         0.49 156         Pg     12 49 52.4 -0.3
ADOK                                       Sg     12 49 59.8 +0.5
OK005 Luther M Schoo      0.57 142  Pg     Pg     12 49 53.6 -0.5
OKCFA Oklahoma City       0.70 169         Pg     12 49 56.1 -0.5
OKCSW OKLAHOMA CITY       0.71 168         Pg     12 49 56.4 -0.5
FNO   Franklin            0.86 168         Pg     12 49 59.3 -0.4
W35A  Tecumseh            1.13 147         Pb     12 50 03.3 -1.4
U32A  Winter Ranch,       1.15 284         Pb     12 50 03.2 -1.8
T35A  Sooner Cattle       1.21  48         Pb     12 50 04.8 -1.2
TUL1  Leonard             1.50  97         Pn     12 50 09.4 -0.7
TUL1  Leonard             1.50  97  P      Pn     12 50 09.3 -0.7
      baz=279
TUL1                                S      Sb     12 50 30.1 +0.1
      baz=279
WMOK  Wichita Mounta      1.66 215         Pn     12 50 12.3 -0.1
WMOK  Wichita Mounta      1.66 215  P      Pn     12 50 12.2 -0.1
      baz=34
WMOK                                S      Sb     12 50 34.8  0.0
      baz=34
R32A  Long Quarter,       2.47 340         Pn     12 50 24.8 +1.4
U38A  Gravette            2.64  82         Pn     12 50 26.8 +1.0
Z35A  Perchaven, San      2.78 174         Pn     12 50 27.9 +0.2
HHAR  Hobbs               2.98  86         Pn     12 50 30.6 +0.1
CBKS  Cedar Bluff         3.19 329         Pn     12 50 35.0 +1.7
W39A  Magazine            3.25 105         Pn     12 50 33.9 -0.2
W39A  Magazine            3.25 105  P      Pn     12 50 34.6 +0.5
      baz=288
Z38A  Mt. Pleasant        3.57 142         Pn     12 50 38.2 -0.3
MIAR  Mount Ida           3.66 114         Pn     12 50 40.3 +0.6
MIAR  Mount Ida           3.66 114  P      Pn     12 50 40.4 +0.7
      baz=297
MIAR                                S      Sn     12 51 24.6 +1.7
      baz=297
S39A  Bolivar             3.79  64         Pn     12 50 41.8 +0.1
ABTX  Abilene, Hawle      3.85 206         Pn     12 50 43.2 +0.8
U40A  Yellville           3.86  85         Pn     12 50 42.3 -0.3
WHTX  Lake Whitney,       4.11 178         Pn     12 50 46.0 +0.2
WHTX  Lake Whitney,       4.11 178  P      Pn     12 50 46.3 +0.4
      baz=358
X40A  Basin Creek Fa      4.24 111         Pn     12 50 48.2 +0.6
237A  Washetta, Mont      4.36 159         Pn     12 50 48.6 -0.8
WHAR  Wooly Hollow        4.42  99         Pn     12 50 49.8 -0.4
WLAR  White Oak Lake      4.42 122  Pn     Pn     12 50 48.3 -1.9
MGMO  Mountain Grove      4.43  75         Pn     12 50 51.2 +0.9
FCAR  Ozark Folk Cen      4.46  91  Pn     Pn     12 50 50.8  0.0
W41B  Gary Mavity, V      4.47 100  Pn     Pn     12 50 50.6 -0.3
W41B  Gary Mavity, V      4.47 100  P      Pn     12 50 50.8 -0.1
      baz=284
UALR  University of       4.51 106  Pn     Pn     12 50 52.2 +0.8
MSTX  Muleshoe            4.73 245  Pn     Pn     12 50 54.3 -0.3
R40A  Maddies Statio      4.80  61         Pn     12 50 54.8 -0.6
Z41A  Richland Creek      4.88 124  S      Sn     12 51 52.9 -0.2
      baz=307
LCAR  Lake Charles        5.24  88  Pn     Pn     12 51 01.5 +0.1
435B  Jarrell             5.31 180  Pn     Pn     12 51 01.9 -0.5
BGNE  Belgrade            5.31 356  Pn     Pn     12 51 01.2 -1.3
BGNE  Belgrade            5.31 356  P      Pn     12 51 01.3 -1.2
      baz=176
T42A  Van Buren           5.34  78  Pn     Pn     12 51 03.0 +0.2
T25A  Trinidad            5.56 283  Pn     Pn     12 51 06.1  0.0
P40A  Paris               5.58  51  Pn     Pn     12 51 07.7 +1.5
JCT   Junction City       5.90 199  Pn     Pn     12 51 08.9 -1.7
SDCO  Great Sand Dun      6.52 287  Pn     Pn     12 51 19.3  0.0
K31A  O'Neill             6.57 353  Pn     Pn     12 51 18.9 -0.9
S44A  Carbondale          6.89  74  Pn     Pn     12 51 24.3 +0.2
W45A  Hickory Valley      6.94  95  Pn     Pn     12 51 25.1 +0.3
ISCO  Idaho Springs       7.31 303  Pn     Pn     12 51 32.9 +2.6
P43A  Skaggs, Pawnee      7.32  59  Pn     Pn     12 51 28.8 -1.1
ECSD  EROS Data Cent      7.66   5  P      Pn     12 51 32.6 -2.1
      baz=186
HDIL  Hopedale            7.91  53  Pn     Pn     12 51 38.7 +0.6
N23A  Red Feather La      8.09 309  Pn     Pn     12 51 42.0 +1.2
TX32  Lajitas Array       8.45 219  Pn     Pn     12 51 46.3 +0.6
TXAR  Lajitas Array       8.45 219  Pn     Pn     12 51 49.1 +3.4
JFWS  Jewell Farm         8.87  38  Pn     Pn     12 51 51.2  0.0
WCI   Wyandotte Cave      9.29  73  Pn     Pn     12 51 58.1 +1.1
PV09  Paradox Valley      9.48 288  Pn     Pn     12 51 58.5 -1.5
```

IDC ***30*** *12:54:31.9±2.5, 5°.43N×72°.91W, h28^{km}±18^{km}, mb3.1/2, mb1 3.6/3, mb1mx3.2/29, mbtmp3.6/3, ML3.8/2, MS3.9/1, Ms1 3.9/1, ms1mx2.7/18, Error ellipse: s-maj=33.4km s-min=13.3km az=137.0*

RSNC ***30*** *12:54:32.0±1.1, 5°.32N×72°.93W, h2^{km}±5^{km}, ML3.7, Mw3.9*

ISC 30 12:54:30.2±1.2**, 5°.34N**±0°.02×**72°.86W**±0°.03**, h5^{km}**±9^{km}**, n33, σ1^{s}63**/59**, 4C-5D, Colombia**

```
Code  Station Name        Δ°   AZ°    Phase ID           Time      Res
                                    Op     ISC         h  m  s    ISC
RUSC  La Rusia            0.60 338⇑iP      Pg     12 54 42.8 +1.0
RUSC                               eS      Sb     12 54 51.5 -0.9
RUSC                               i              12 54 52.7
      comp=Z,3µm,0.3s
CHIC  Chingaza            1.12 231⇓iP      Pg     12 54 50.4 -1.3
CHIC                               eS      Sg     12 55 03.2 -3.1
CHIC                               i              12 55 15.8
      comp=Z,851nm,0.5s
SPBC  San Pablo de B      1.25 285⇓iP      Pg     12 54 53.5 -0.7
SPBC                               eS      Sg     12 55 09.0 -1.5
SPBC                               i              12 55 17.1
      comp=Z,904nm,0.4s
PTGC  Puerto Gaitan,      1.34 147⇑iP      Pn     12 54 55.9 +0.3
PTGC                               eS      Sb     12 55 14.0 +0.6
PTGC                               i              12 55 21.1
      comp=Z,2µm,0.3s
VILC  Villavicencio,      1.47 214⇓iP      Pn     12 54 57.3 -0.3
VILC                               eS      Sn     12 55 17.0 -0.3
VILC                               i              12 55 24.4
      comp=Z,2µm,0.4s
TAMC  Tame, Arauca        1.52  44⇑eP      Pg     12 54 59.9 +0.4
TAMC                               eS      Sg     12 55 22.2 +2.9
ROSC  El Rosal            1.54 251  Pg     Pn     12 55 00.1 +1.4
      comp=Z,134nm,0.3s,baz=98,slow=18,SNR=141
ROSC                                Lg     Lg     12 55 21.3
      comp=Z,260nm,0.3s,baz=197,slow=23,SNR=23
ROSC  El Rosal            1.54 251⇓iP      Pn     12 55 00.1 +1.4
ROSC                               eS      Sb     12 55 21.0 +1.6
ROSC                               i              12 55 26.6
      comp=Z,579nm,0.4s
BRRC  Barranca, Sant      1.95 334 eP      Pn     12 55 05.2 +1.1
BRRC                               eS      Sb     12 55 30.6 -0.5
BRRC                               i              12 55 35.7
      comp=Z,627nm,0.3s
PTBC  PUERTO BERRIO,      1.99 307 eP      Pn     12 55 04.2 -0.3
PTBC                               eS      Sn     12 55 30.1 +0.2
PTBC                               i              12 55 36.4
      comp=Z,521nm,0.3s
PAMC  Pamplona, Colo      2.00   5⇑eP      Pb     12 55 06.5 -0.9
PAMC                               eS      Sg     12 55 36.9 +2.4
PAMC                               i              12 55 40.4
      comp=Z,484nm,0.3s
NORC  Norcasia            2.02 277 eP      Pn     12 55 04.9  0.0
NORC                               eS      Sn     12 55 32.5 +1.9
GUY2C Guyana, Caldas      2.50 268⇓eP      Pn     12 55 12.7 +0.7
GUY2C                              eS      Sb     12 55 46.9 -0.3
RREF  El Recreo           2.52 260 eP      Pn     12 55 12.9 +0.6
RREF                               eS      Sb     12 55 47.5 -0.3
TOLC  Tolima              2.56 253 eP      Pn     12 55 13.6 +0.8
TOLC                               eS      Sn     12 55 45.9 +1.4
ANIL  Santa Ana           2.67 252 eP      Pn     12 55 15.6 +1.4
ANIL                               eS      Sb     12 55 53.4 +1.4
ANIL                               i              12 55 56.6
      comp=Z,241nm,0.4s
ORTC  Ortega, Tolima      2.77 239 eP      Pn     12 55 15.7 +0.3
ORTC                               eS      Sb     12 55 56.2 +1.6
ORTC                               i              12 56 00.1
      comp=Z,523nm,0.5s
GUVC  San Jose del G      2.78 175 eP      Pn     12 55 15.5  0.0
GUVC                               eS      Sn     12 55 49.8 +0.3
GUVC                               i              12 55 54.3
      comp=Z,405nm,0.3s
HELC  Santa Helena        2.79 288 eP      Pn     12 55 16.0 +0.1
HELC                               eS      Sn     12 55 51.2 +1.1
OCAC  Ocana               2.92 351 eP      Pn     12 55 18.6 +1.1
OCAC                               eS      Sb     12 55 56.0 -3.0
OCAC                               i              12 56 12.0
      comp=Z,370nm,0.3s
CBOC  Ciudad Bolivar      3.18 280 eP      Pn     12 55 22.4 +1.3
CBOC                               eS      Sb     12 56 07.3 +0.7
MACC  Macarena, Meta      3.32 197 eP      Pn     12 55 22.5 -0.4
MACC                               eS      Sb     12 56 11.5 +1.1
MACC                               i              12 56 15.8
      comp=Z,349nm,0.6s
GARC  Garzon, Huila       4.09 220 eP      Pn     12 55 33.4 -0.3
GARC                               eS      Sb     12 56 36.8 +4.1
GARC                               i              12 56 48.8
      comp=Z,108nm,0.3s
SDV   Santo Domingo       4.16  32  Pn     Pn     12 55 35.0 +0.4
      comp=Z,55nm,0.3s,baz=193,slow=3.7,SNR=158
SDV                                 Sn     Sn     12 56 22.4 -1.3
      comp=Z,20nm,0.3s,baz=261,slow=23,SNR=11
SDV                                 Lg     Lg     12 56 41.3
      comp=Z,54nm,0.3s,baz=267,slow=14,SNR=7.4
CODC  Agustn Codazz       4.61 353 eP      Pn     12 55 42.6 +2.1
CODC                               eS      Sn     12 56 36.9 +2.4
PCON  Cinco Dias          4.62 230 eP      Pn     12 55 41.9 +0.5
PCON                               eS      Sb     12 56 53.3 +4.8
PCON                               i              12 57 13.8
      comp=Z,67nm,0.6s
FLOC  Florencia           4.66 217 eP      Pn     12 55 41.4 +0.1
FLOC                               eS      Sb     12 56 51.4 +2.5
FLOC                               i              12 57 01.7
      comp=Z,80nm,0.6s
PCRV  Puerto La Cruz      9.46  59  Pn     Pn     12 56 46.8 -0.5
      comp=Z,1.0nm,0.3s,baz=254,slow=5.1,SNR=1.5
PCRV                                Sn     Sn     12 58 31.9 -2.3
      comp=Z,1.2nm,0.3s,baz=170,slow=19,SNR=2.4
LPAZ  La Paz             21.99 168  P      P      12 59 25.7 -0.3
      comp=Z,0.9nm,0.8s,baz=338,slow=11,SNR=1.9
RCBR  Riachuelo          38.53 106  LR     LR     13 19 26.8
      comp=Z,155nm,19.6s,baz=313,slow=39
YKA   Yellowknife Ar     64.74 340  P      P      13 05 06.5 -2.8
      comp=Z,0.1nm,0.5s,baz=131,slow=6.3,SNR=2.1
ASAR  Alice Springs     148.43 232  PKPbc  PKPdf  13 14 17.1 +1.7
      comp=Z,0.4nm,1.0s,baz=126,slow=3.8,SNR=2.8
WRA   Warramunga Arr    149.82 239  PKPbc  PKPdf  13 14 19.2 +1.5
      comp=Z,0.2nm,0.4s,baz=108,slow=2.9,SNR=4.7
```

UCR 30 13:12:17.1±1.1**, 9°.83N**×**85°.59W, h4^{km}**±6^{km}**, MD3.8, MW3.2, Off coast of Costa Rica**

```
Code  Station Name        Δ°   AZ°    Phase ID           Time      Res
                                    Op     ISC         h  m  s    ISC
GUAI  GUAI                0.45  10 i P     Pg     13 12 26.4 +0.7
GUAI                               i S     Sb     13 12 33.6 -1.0
PLVR  Palo Verde          0.57  24 eP      Pg     13 12 28.6 +0.5
PLVR                               eS      Sb     13 12 37.9 -0.4
JTS   Las Juntas de       0.78  54 eP      Pg     13 12 31.8 -0.3
JTS                                eS      Sb     13 12 43.6 -0.6
NY14  Universidad de      0.82   4 i P     Pg     13 12 33.0 +0.2
NY14                               i S     Sb     13 12 46.0 +0.8
CUI   Cuipilapa           0.93  27 eP      Pg     13 12 34.6 -0.3
CUI                                eS      Sb     13 12 48.0 -0.5
LIM1  Limonal             0.93  21 i P     Pg     13 12 34.5 -0.4
ACAL  Aguas Claras        0.97  34 i P     Pg     13 12 35.2 -0.5
BUEV  Buena Vista         0.98  11 i P     Pg     13 12 35.2 -0.8
BUEV                               eS      Sg     13 12 49.2 +0.5
ARE1  Arenal 1            1.06  54 eP      Pg     13 12 37.4 -0.1
ARE1                               eS      Sb     13 12 52.9 +0.4
CEDE  Laguna Cedeo        1.09  53 eP      Pg     13 12 38.0 -0.1
FORC  Fortuna             1.11  55 i P     Pg     13 12 37.7 -0.6
LCR2  La Lucha 2          1.57  93 eP      Pn     13 12 46.0 +0.1
LCR2                               eS      Sn     13 13 05.1 -1.7
```

NNC 30 13:27:01.5±1.7**, 54°.48N**×**86°.25E, h0^{km}, mb3.5, mpv3.0, 6C-6D, Error ellipse: s-maj=21.3km s-min=8.6km az=157.0, Southwestern Siberia**

```
Code  Station Name        Δ°   AZ°    Phase ID           Time      Res
                                    Op     ISC         h  m  s    ISC
ZAA0  Zalesovo Array      0.99 238 ⇓P      Pg     13 27 19.9 -0.5
      1.4nm,0.6s
ZAA0                               ⇑S      Sb     13 27 34.2 -0.8
      5.5nm,0.9s
KURK  Kurchatov           5.98 234 ⇓Pn     Pn     13 28 32.9 +1.8
      1.4nm,0.9s
KURK                               ⇑Lg     Lg     13 30 12.8
      7.2nm,0.8s
KURBB Kurchatov Arra      6.08 234 ⇓Pn     Pn     13 28 34.0 +1.4
      2.6nm,0.4s
KURBB                              ⇑Lg     Lg     13 30 14.5
      6.2nm,0.7s
MK31  Makanchi Array      8.09 200 ⇑Pn     Pn     13 29 02.1 +2.0
      0.3nm,0.6s,baz=25,slow=13,SNR=6.0
MK31                               ⇑Sn     Sn     13 30 32.7 +0.5
      0.8nm,0.7s,baz=189,slow=25,SNR=4.0
MK31                               ⇓Lg     Lg     13 31 19.5
      2.4nm,0.9s,baz=24,slow=30,SNR=3.7
MAKZ  Makanchi            8.14 201 ⇑Pn     Pn     13 29 01.0 +0.2
      1.7nm,1.2s
MAKZ                               ⇓Sn     Sn     13 30 32.5 -1.0
      1.1nm,1.1s
MAKZ                               ⇓Lg     Lg     13 31 23.1
      3.4nm,1.1s
```

*AUST **30** 13:30:30.7±0.2, 32°.52S×138°.35E, h10^{km}, Error ellipse: s-maj=2.6km s-min=2.4km az=160.0*
*IDC **30** 13:30:32.7±6.7, 31°.98S×138°.46E, h0^{km}, mb1 2.9/3, mb1mx2.9/36, mbtmp2.7/3, ML2.2/3, Error ellipse: s-maj=107.1km s-min=19.5km az=20.0*
ISC 30 13:30:28.9±0.8**, 32°.41S**±0°.06×**138°.29E**±0°.05**, h10**^{km}**, n12,** σ**2ˢ.50**/16**, Near coast of South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HTT	Hallett	1.15	153	P	Pg	13 30 50.4	-0.7
	baz=1.0						
BBOO	Buckleboo	1.92	257	P	Pb	13 31 04.3	+0.3
	baz=2.0						
BBOO				S	Sb	13 31 28.8	+0.8
	baz=2.0						
LCRK	Leigh Creek	1.95	358	P	Pb	13 31 06.1	+1.6
	baz=2.1						
STKA	Stephens Creek	2.86	80	P	Pn	13 31 16.2	+1.7
	baz=2.8						
STKA	Stephens Creek	2.86	80	Pn	Pn	13 31 16.9	+2.4
	0.1nm,0.3s,baz=280,slow=17,SNR=1.8						
STKA				Pg	Pg	13 31 21.9	-1.7
	0.6nm,0.3s,baz=258,slow=14,SNR=12						
STKA				Sn	Sn	13 31 49.1	+0.2
	0.7nm,0.3s,baz=232,slow=11,SNR=4.5						
STKA				Lg	Lg	13 31 57.5	
	1.8nm,0.3s,baz=354,slow=20,SNR=12						
MULG	Mulgathing	4.19	299	P	Pn	13 31 36.1	+3.2
	baz=4.3						
INKA	Innaminka	5.11	25	P	Pn	13 31 48.5	+3.0
	baz=5.2						
OOD	Oodnadatta	5.12	333	P	Pn	13 31 49.1	+3.5
	baz=5.3						
ARPS	Mount Arapiles	5.25	147	P	Pn	13 31 47.0	-0.4
	baz=5.1						
CMSA	Cobar Meteorol	6.35	84	P	Pn	13 32 03.3	+0.8
	baz=6.3						
ASAR	Alice Springs	9.53	335	Pn	Pn	13 32 47.4	+1.2
	0.0nm,0.3s,baz=150,slow=13,SNR=8.3						
ASAR				Sn	Sn	13 34 27.7	-5.7
	0.0nm,0.3s,baz=155,slow=22,SNR=2.7						
WRA	Warramunga Arr	12.90	343	Pn	Pn	13 33 32.0	-0.4
	0.0nm,0.3s,baz=168,slow=19,SNR=1.3						

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*NEIC **30** 13:30:53.0±1.7, 44°.74N±0°.03×110°.65W±0°.05, h7^{km}±5^{km}, Error ellipse: s-maj=6.3km s-min=1.2km az=128.0*
*UUSS **30** 13:30:52±1.9, 44°.77N±0°.01×110°.69W±0°.05, h4^{km}±5^{km}, ML3.6/6, Error ellipse: s-maj=4.8km s-min=1.9km az=97.0*
*ANF **30** 13:30:54.5±1.4, 44°.35N×110°.24W, h30^{km}±8^{km}, ML3.3/4, Error ellipse: s-maj=21.6km s-min=7.3km az=3.0*
ISC 30 13:30:52.2±0.8**, 44°.76N**±0°.02×**110°.66W**±0°.02**, h11**^{km}±5^{km}**, n40,** σ**1ˢ.05**/49**, Yellowstone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YNM	Yellowstone No	0.04	223	Pg	Pg	13 30 54.4	-0.2
YNM				Sg	Sg	13 30 55.1	-1.2
YNR	Norris Junctio	0.04	195	Pg	Pg	13 30 54.7	0.0
YNR				Sg	Sg	13 30 55.5	-0.9
YUF	Upper Falls	0.12	113	Pg	Pg	13 30 56.4	+1.0
YUF				Sg	Sg	13 30 58.5	+0.8
YHH	Holmes Hill	0.14	283	Pg	Pg	13 30 55.9	+0.1
YHH				Sg	Sg	13 30 57.5	-0.7
YMR	Madison River	0.23	248	Pg	Pg	13 30 58.3	+1.1
YMR				Sg	Sg	13 31 01.5	+0.9
YMP	Mirror Lake Pl	0.36	93	Pg	Pb	13 31 01.8	+0.9
H17A	Grant Village	0.37	170	Pg	Pb	13 31 01.1	+0.2
H17A	Grant Village	0.37	170	P	Pb	13 31 01.3	+0.3
	baz=348						
H17A				S	Sb	13 31 06.8	+0.1
	baz=348						
YHB	Horse Butte	0.38	269	Pg	Pb	13 31 00.7	-0.5
YHL	Hebgen Lake	0.38	284	Pg	Pg	13 31 00.6	+0.6
YPP	Pitchstone Pla	0.50	192	Pg	Pb	13 31 03.7	+0.5
YNE	Yellowstone No	0.53	62	Pg	Pb	13 31 03.6	-0.1
QLMT	Earthquake Lak	0.55	278	Pg	Pg	13 31 03.3	+0.3
FLWY	Flagg Ranch	0.68	182	Pg	Pb	13 31 06.4	+0.2
IMW	Indian Meadow	0.88	193	Pg	Pn	13 31 10.5	-0.4
RLMT	Red Lodge	1.06	69	Pg	Pn	13 31 13.2	0.0
RLMT	Red Lodge	1.06	69	P	Pn	13 31 13.2	0.0
	baz=251						
RLMT				S	Sn	13 31 27.6	-0.5
	baz=251						
FXWY	Fox Creek	1.15	193		Pn	13 31 14.9	+0.4
GCMT	Greycliff	1.25	34	Pg	Pg	13 31 16.5	+0.2
TPAW	Teton Pass	1.28	189		Pn	13 31 17.4	+1.0
SNOW	Snow King Moun	1.30	183		Pg	13 31 18.0	+0.8
REDW	Red Top Meadow	1.40	186		Pg	13 31 19.6	+0.4
DLMT	Dillon	1.50	294	Pn	Pb	13 31 20.7	+0.5
MCMT	McKenzie Canyo	1.56	273	Pn	Pg	13 31 22.0	-0.2
LRM	Limekiln Ridge	1.65	311	Pn	Pb	13 31 23.5	+0.7
AHID	Auburn Hatcher	2.02	189	Pn	Pn	13 31 26.5	+0.1
AHID				Pg	Pg	13 31 29.9	-1.0
BW06	Boulder Array	2.15	158	Pn	Pb	13 31 29.3	-2.0
PD31	Pinedale Array	2.15	158		Pg	13 31 32.0	-1.4
PDAR	Pinedale Array	2.15	158	Pn	Pn	13 31 28.9	+0.7
MSO	Missoula	3.09	313	Pn	Pn	13 31 41.6	+0.6
MSO	Missoula	3.09	313	P	Pg	13 31 50.2	-1.2
	baz=131						
MSO				S	Sg	13 32 29.1	-2.4
	baz=131						
HWUT	Hardware Ranch	3.22	192	Pn	Pn	13 31 43.0	+0.1
EGMT	Eagleton	3.33	11	P	Pb	13 31 48.7	-2.6
	baz=192						
EGMT				S	Sb	13 32 34.6	+2.8
	baz=192						
LAO	LASA Array	3.66	57	Pn	Pn	13 31 49.2	+0.4
MFID	Camas Ranch	3.96	252	Pn	Pn	13 31 53.5	+0.6
WALA	Waterton Lakes	4.84	334	Pn	Pn	13 32 07.8	+2.7
N23A	Red Feather La	5.19	136	Pn	Pn	13 32 10.6	+0.5
ELK	Elko	5.24	222	Pn	Pn	13 32 10.7	0.0
NEW	Newport	5.67	310		Pn	13 32 17.0	+0.5
DGMT	Dagmar	5.80	48	P	Pn	13 32 23.3	+5.1
	baz=233						

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*IDC **30** 13:35:00.6±0.8, 6°.30S×146°.90E, h0^{km}, mb4.0/7, mb1 4.2/11, mb1mx3.9/41, mbtmp4.1/11, ML3.8/3, MS3.3/6, Ms1 3.3/6, ms1mx2.9/32, Error ellipse: s-maj=28.9km s-min=10.2km az=118.0*
*NEIC **30** 13:35:01.3±1.3, 6°.25S±0°.07×146°.96E±0°.09, h10^{km}±1^{km}, mb4.6/22, Error ellipse: s-maj=17.8km s-min=5.9km az=308.0*
ISC 30 13:35:06.4±0.6**, 6°.34S**±0°.07×**146°.9E**±0°.1**, h49**^{km}**, n44,** σ**0ˢ.98**/43**, mb4.5**/14**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.06	176	Pn	Pn	13 35 51.8	-0.6
	20nm,0.3s,baz=48,slow=5.3,SNR=45						
PMG				Sn	Sn	13 36 29.9	+2.2
	35nm,0.3s,baz=189,slow=21,SNR=8.8						
PMG				LR	LR	13 37 20.4	
	comp=Z,430nm,18.2s,baz=348,slow=45						
PMG	Port Moresby	3.06	176		Pn	13 35 51.1	-1.2
KRVT	Keravat (AS076	5.45	69	Pn	Pn	13 36 25.1	-0.1
	4.5nm,0.3s,baz=180,slow=4.0,SNR=2.3						
KRVT				LR	LR	13 38 31.2	
	comp=Z,252nm,19.9s,baz=230,slow=38						
RABL	Rabaul	5.62	68	Pn	Pn	13 36 24.5	-3.0
COEN	Coen	8.43	206	Pn	Pn	13 37 05.3	-0.8
CTA	Charters Tower	13.69	183	Pn	Pn	13 38 18.1	+0.1
	0.2nm,0.3s,baz=340,slow=15,SNR=2.3						
SIJI	Sorong	16.55	289	LR	LR	13 46 38.7	
	comp=Z,91nm,19.0s,baz=106,slow=42						
WB0	Warramunga Arr	18.08	221	P	P	13 39 13.4	-0.8
WR0	Warramunga Arr	18.12	220	P	P	13 39 13.7	-0.9
WRAB	Tennant Creek	18.23	221	P	P	13 39 15.2	-0.5
WRAB				IAmb	IAmb	13 39 29.2	
	comp=Z,8.5nm,1.1s						
WB2	Warramunga Arr	18.23	221	P	Pn	13 39 15.6	-0.5
WRA	Warramunga Arr	18.24	221	P	P	13 39 15.1	-0.8
	comp=Z,0.3nm,0.3s,baz=40,slow=11,SNR=26						
WRA				S	S	13 42 41.6	-0.7
	comp=Z,0.0nm,0.3s,baz=38,slow=27,SNR=1.6						
EIDS	Eidsvold	19.34	169	P	P	13 39 28.2	+0.3
EIDS				IAmb	IAmb	13 39 52.7	
	comp=Z,37nm,2.0s						
GUMO	Guam	19.90	354	LR	LR	13 45 26.6	
	comp=Z,96nm,20.6s,baz=164,slow=32						
KNRA	Kununurra	20.10	241	P	P	13 39 35.5	-0.7
KNRA				IAmb	IAmb	13 39 41.1	
	comp=Z,9.7nm,0.8s						
AS31	Alice Springs	21.31	215	P	P	13 39 49.6	+0.3
ASAR	Alice Springs	21.31	215	P	P	13 39 48.8	-0.6
	comp=Z,2.0nm,0.4s,baz=48,slow=8.8,SNR=55						
ASAR				S	Sn	13 43 48.8	-4.2
	comp=Z,0.8nm,0.8s,baz=31,slow=22,SNR=6.0						
ASAR	Alice Springs	21.31	215	P	P	13 39 48.9	-0.4
FITZ	Fitzroy Crossi	23.84	239	P	P	13 40 14.3	-1.0
	comp=Z,3.5nm,0.8s,baz=50,slow=8.9,SNR=10						
FITZ	Fitzroy Crossi	23.84	239	P	P	13 40 15.3	0.0
FITZ				IAmb	IAmb	13 40 34.2	
	comp=Z,6.4nm,0.9s						
STKA	Stephens Creek	25.90	190	P	P	13 40 33.7	-0.2
	comp=Z,2.5nm,0.8s,baz=360,slow=12,SNR=6.3						
STKA				LR	LR	13 50 26.3	
	comp=Z,106nm,18.8s,baz=26,slow=36						
STKA	Stephens Creek	25.90	190	P	P	13 40 33.5	-0.4
BBOO	Buckleboo	28.22	200	P	P	13 40 54.2	-0.6
BBOO				IAmb	IAmb	13 41 52.0	
	comp=Z,45nm,1.9s						
CAN	Canberra	28.91	177	P	P	13 41 00.9	0.0
CAN				IAmb	IAmb	13 41 26.2	
	comp=Z,38nm,1.7s						
TAU	Tasmania Unive	36.42	180	P	P	13 42 07.6	+1.2
QRZ	Quartz Range	41.26	150	P	P	13 42 47.2	+0.3
BKZ	Black Stump Fm	42.17	145	P	P	13 42 55.0	+0.6
BKZ				IAmb	IAmb	13 42 58.6	
	comp=Z,31nm,1.7s						
TUWZ	Tuamarina	42.42	150	P	P	13 42 57.1	+0.8
BSWZ	Blackbirch Sta	42.60	150	P	P	13 42 58.5	+0.7
LTZ	Lake Taylor	42.64	152	P	P	13 42 59.2	+1.0
LTZ				IAmb	IAmb	13 44 23.9	
	comp=Z,27nm,1.3s						
RPZ	Rata Peaks	42.83	154	P	P	13 43 00.1	+0.4
LBZ	Lake Benmore	43.01	155	P	P	13 43 01.4	+0.3
MLZ	Mavora Lakes	43.02	158	P	P	13 43 01.8	+0.6
MSWZ	Moikau Station	43.08	149	P	P	13 43 01.8	+0.1
BFZ	Birch Farm	43.08	147	P	P	13 43 02.0	+0.2
BFZ				IAmb	IAmb	13 43 39.4	
	comp=Z,32nm,1.4s						
KSRS	Korea Array	47.04	339	P	P	13 43 34.5	+1.3
	comp=Z,3.9nm,1.1s,baz=152,slow=8.5,SNR=3.4						
KSAR	Wonju Array Be	47.05	339	P	P	13 43 32.5	-0.7
PETK	Petropavlovsk-	59.92	7	P	P	13 45 09.1	+1.8
	comp=Z,1.4nm,0.5s,baz=163,slow=6.7,SNR=12						
PPT	Papeete	62.86	106	LR	LR	14 09 05.9	
	comp=Z,28nm,20.5s,baz=310,slow=32						
SEY	Seymchan	69.20	3	P	P	13 46 08.9	+1.2
	comp=Z,1.0nm,0.7s,baz=141,slow=4.8,SNR=6.0						
VNDA	Vanda	71.58	177	P	P	13 46 20.8	-1.3
VNDA				IAmb	IAmb	13 48 44.5	
	comp=Z,15nm,1.9s						
IL31		85.81	23	P	P	13 47 39.2	-1.1
IL31				IAmb	IAmb	13 50 00.6	
	comp=Z,9.3nm,1.6s						
ILAR	Eielson Array	85.81	23	P	P	13 47 39.8	-0.6
	comp=Z,0.8nm,0.7s,baz=248,slow=5.0,SNR=12						
ILAR	Eielson Array	85.81	23	P	P	13 47 39.3	-1.1

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*UCR **30** 14:08:56.0±1.9, 8°.44N×83°.07W, h4^{km}, MD4.3*
*UPA **30** 14:08:56.1±1.6, 8°.43N×83°.03W, h6^{km}±3^{km}, MW4.5*
ISC 30 14:08:56.5±0.9**, 8°.44N**±0°.04×**83°.04W**±0°.03**, h13**^{km}±7^{km}**, n47,** σ**1ˢ.50**/75**, 5C-5D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBAR3	San Bartolo, C	0.20	128	eP	Pg	14 09 01.1	+0.2
SBAR3				eS	Sg	14 09 03.3	-0.6
LESP3	La Esperanza,	0.25	98	eP	Pg	14 09 01.7	0.0
PTJ1	Puerto Jimnez	0.28	290	eP	Pg	14 09 02.4	+0.1
PTJ1				eS	Sg	14 09 07.5	+1.3
PTJ1	Puerto Jimnez	0.28	290	eP	Pg	14 09 00.9	-1.4
PTJ1				eS	Sg	14 09 06.2	+0.1
PIRO	Carate, Puerto	0.30	263	eP	Pg	14 09 01.6	-1.0
EDSV	San Vito	0.38	10	⇓iP	Pb	14 09 04.5	-0.7
EDSV				eP	Pb	14 09 04.5	-0.7
EDSV				eS	Sb	14 09 12.2	+1.1
MLIR3	Monte Lirio, C	0.41	31	⇓eP	Pb	14 09 05.2	-0.4
MLIR3				eS	Sb	14 09 12.3	+0.5
BRU2	Volcan	0.49	44	⇓eP	Pb	14 09 06.4	-0.7
BRU2				eS	Sb	14 09 15.0	+0.7
BRU2	Volcan	0.49	44	eP	Pb	14 09 06.4	-0.7
BRU2				eS	Sb	14 09 14.7	+0.5
BCO2	Palmira	0.57	61	⇓eP	Pb	14 09 07.8	-0.7
BCO2				eS	Sn	14 09 17.4	-2.5
DVD	David	0.58	90	eP	Pb	14 09 07.7	-0.8
DVD				eS	Sb	14 09 17.0	+0.3
PEDE3	Pedregal, Chir	0.61	95	eP	Pb	14 09 08.1	-1.0
LOCO3	Loma Colorada,	0.61	93	eP	Pb	14 09 08.4	-0.7
LOMA3	Las Lomas, Chi	0.64	91	⇑eP	Pb	14 09 09.1	-0.5
LOMA3				eS	Sb	14 09 18.8	+0.4
EDPN	Palmar Norte	0.66	321	eP	Pg	14 09 07.6	-1.8
EDPN				eS	Sg	14 09 17.6	-0.5
LNBQ3	Los Naranjos,	0.69	60	eP	Pb	14 09 09.3	-1.0
LNBQ3				eS	Sn	14 09 30.0	+7.4
CHIR3	Chiriqui UPA,	0.70	94	⇑eP	Pb	14 09 10.1	-0.5
CHIR3				eS	Sn	14 09 21.1	-1.8
PSOM3	Paja de Sombre	0.75	71	eP	Pb	14 09 10.7	-0.7
PSOM3				eS	Sn	14 09 22.1	-2.0
EDBA	Buenos Aires	0.75	342	⇓eP	Pg	14 09 10.1	-1.0
EDBA				eS	Sb	14 09 22.8	+1.0
EDLM	Las Mercedes	0.99	327	eP	Pg	14 09 13.6	-2.2
EDLM				eS	Sb	14 09 29.5	+0.8
CNI2	El Empalme, Bo	1.13	30	⇑eP	Pg	14 09 16.5	-1.7
CNI2				eS	Sb	14 09 31.3	-1.1
EDDO	Dominical	1.15	315	eP	Pg	14 09 15.8	-2.8
EDDO				eS	Sb	14 09 34.0	+1.0
REME3	Remedios, Chir	1.21	100	eP	Pg	14 09 18.1	-1.8
REME3				eS	Sn	14 09 34.7	-0.7
PVID3	Puerto Vidal,	1.47	105	eP	Pn	14 09 21.1	-1.5
LCR2	La Lucha 2	1.60	324	eP	Pn	14 09 25.0	+0.3
LCR2				eS	Sb	14 09 46.8	+0.4
HDC	Heredia	1.88	326	⇑eP	Pn	14 09 29.3	+0.8
HDC				eS	Sb	14 09 55.1	+0.9
HDC	Heredia	1.88	326	eP	Pn	14 09 29.7	+1.3
HDC				eS	Sb	14 09 55.1	+0.9
SRA1	San Ramn	2.17	319	eP	Pn	14 09 33.1	+0.8
CACAO	El Cacao, Vera	2.42	117	⇑eP	Pn	14 09 36.4	+0.7
CACAO				eS	Sn	14 10 03.9	-1.2
ARE1	Arenal 1	2.60	321	eP	Pn	14 09 40.3	+2.0
CEDE	Laguna Cedeo	2.61	321	eP	Pn	14 09 40.4	+1.9
JTS	Las Juntas de	2.63	314	eP	Pn	14 09 39.7	+1.0
JTS				eS	Sn	14 10 11.6	+0.9
JTS	Las Juntas de	2.63	314	eP	Pn	14 09 39.9	+1.1
AZU	Azuero	2.81	103	eP	Pn	14 09 42.8	+1.6
AZU				eS	Sn	14 10 16.2	+1.2
AZU	Azuero	2.81	103	eP	Pn	14 09 42.8	+1.6
VTON	El Valle, Cocl	2.90	86	eP	Pb	14 09 48.0	-0.1
VTON				eS	Sn	14 10 19.3	+2.1
ACAL	Aguas Claras	2.94	318	i P	Pn	14 09 44.1	+1.2
PTEN	Parque Tenorio	2.97	320	i P	Pn	14 09 44.6	+1.2
CUI	Cuipilapa	3.04	317	i P	Pn	14 09 44.8	+0.4
GUAI	GUAI	3.04	307	i P	Pn	14 09 44.3	0.0
HORNC	Hornillas	3.09	317	i P	Pn	14 09 46.4	+1.3
ZANG	Zanguenga, Cho	3.18	80	eP	Pb	14 09 52.3	-0.6
ZANG				eS	Sg	14 10 38.5	-0.2
BCIP	Isla Barro Col	3.25	77	eP	Pn	14 09 49.4	+2.3
BCIP	Isla Barro Col	3.25	77	eP	Pn	14 09 49.5	+2.3
NY14	Universidad de	3.30	312	i P	Pn	14 09 47.3	-0.5
BUEV	Buena Vista	3.31	315	eP	Pn	14 09 49.6	+1.6
ACON	Acoyapa	4.09	329	eP	Pn	14 09 59.4	+0.7

ISC 30 14:09:04.9±2.2**, 51°.50N**±0°.10×**16°.12E**±0°.08**, h0**^{km}**, n8,** σ**0ˢ.45**/15**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OSTC	Ostas	0.95	176	ePG	Pg	14 09 23.1	+0.1
OSTC				eSG	Sg	14 09 36.1	+0.8
	comp=Z,6.5nm,0.6s						
UPC	Upice	1.00	184	ePG	Pg	14 09 24.2	+0.2
UPC				eSG	Sb	14 09 38.2	-0.5
	comp=Z,9.5nm,0.2s						
DPC	Dobruska-Polom	1.16	174	ePG	Pg	14 09 26.6	-0.5
DPC				eSG	Sg	14 09 41.9	-0.2
	comp=Z,3.7nm,0.6s						
KRLC	Kraliky	1.49	163	ePG	Pn	14 09 32.6	-0.3
KRLC				eSG	Sn	14 09 53.2	+0.1
	comp=Z,2.6nm,0.2s						
BRG	Berggiesshubel	1.51	246	PG	Pn	14 09 32.9	-0.2
BRG				SG	Sg	14 09 52.6	-0.8
	4.8nm,0.5s						
PRU	Pruhonice	1.82	214	ePG	Pb	14 09 39.4	+0.4
PRU				eSG	Sb	14 10 02.5	+0.2
	comp=Z,2.5nm,0.3s						
CLL	Collm	1.96	266	ePg	Pb	14 09 42.0	+0.5
CLL				eSg	Sg	14 10 08.0	+0.1
KHC	Kasperske Hory	2.88	215	eSG	Sg	14 10 37.4	0.0

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*IDC **30** 14:09:58.6±0.8, 36°.23N×97°.70W, h0^{km}, mb3.6/4, mb1 4.1/12, mb1mx3.7/46, mbtmp3.8/12, ML3.5/7, MS3.4/21, Ms1 3.4/21, ms1mx3.2/48, Error ellipse: s-maj=11.4km s-min=9.8km az=147.0*
*NEIC **30** 14:09:59.1±2.0, 36°.14N±0°.02×97°.61W±0°.05, h4^{km}±4^{km}, Error ellipse: s-maj=6.2km s-min=2.4km az=70.0*
*TUL **30** 14:09:59.4±2.1, 36°.13N±0°.02×97°.64W±0°.06, h4^{km}±5^{km}, ML4.2, mb4.5/19(NEIC), Mwr4.1/56(NEIC), Error ellipse: s-maj=6.8km s-min=2.4km az=71.0*
*NEIC **30** 14:09:59.5, 36°.13N×97°.64W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.21; $M_{\theta\theta}$1.55; $M_{\phi\phi}$-1.34; $M_{r\theta}$0.24; $M_{\theta\phi}$0.32; $M_{\phi r}$-0.79; Fault plane solution: $M_0$1.71000×10^{15} NP1:ϕ_s42.13000°, δ67.04000°, λ-163.86000°. NP2:ϕ_s305.69000°, δ75.17000°, λ-23.80000°. Principal axes: T 1.6002, Plg5.0000°, Azm355.0000°; N 0.1938, Plg62.0000°, Azm96.0000°; P -1.7940, Plg27.0000°, Azm262.0000°;*
*ANF **30** 14:10:01.1±1.0, 36°.15N×97°.66W, h17^{km}±7^{km}, ML5.2/15 Error ellipse: s-maj=3.8km s-min=2.3km az=164.0*
ISC 30 14:09:59.5±0.5**, 36°.16N**±0°.04×**97°.62W**±0°.04**, h10**^{km}**, n262,** σ**1ˢ.24**/252**, mb4.5**/9**, MS3.5**/9**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.54	158		Pg	14 10 09.8	-0.3
OK009	Oakdale Elemen	0.60	165		Pg	14 10 10.6	-0.5
OK005	Luther M Schoo	0.61	145		Pg	14 10 11.1	-0.2
OKCFA	Oklahoma City	0.75	170		Pg	14 10 13.4	-0.6
OKCSW	OKLAHOMA CITY	0.76	169		Pg	14 10 13.7	-0.6
FNO	Franklin	0.92	169		Pg	14 10 16.6	-0.6
U32A	Winter Ranch,	1.14	282	Pg	Pg	14 10 20.4	-1.0
T35A	Sooner Cattle	1.17	49		Pn	14 10 22.1	+0.1
W35A	Tecumseh	1.17	149		Pb	14 10 20.8	-1.1
TUL1	Leonard	1.50	99		Pn	14 10 26.8	+0.3
TUL1	Leonard	1.50	99	P	Pn	14 10 26.7	+0.3
	baz=279						
TUL1				S	Sn	14 10 47.8	+1.8
	baz=279						
WMOK	Wichita Mounta	1.71	214		Pn	14 10 29.1	-0.2
WMOK	Wichita Mounta	1.71	214	P	Pn	14 10 29.2	-0.2
	baz=34						
WMOK				S	Sn	14 10 51.9	+0.6
	baz=34						
X37A	Clayton	2.41	130		Pn	14 10 40.2	+1.2
R32A	Long Quarter,	2.42	339		Pn	14 10 40.4	+1.2
U38A	Gravette	2.62	83		Pn	14 10 43.0	+1.1
Z35A	Perchaven, San	2.83	174	Pn	Pn	14 10 45.6	+0.7
HHAR	Hobbs	2.98	87		Pn	14 10 47.7	+0.9
KSU1	Kansas State U	3.04	15	P	Pn	14 10 49.3	+1.6
	baz=196						
CBKS	Cedar Bluff	3.14	328		Pn	14 10 50.6	+1.4
CBKS	Cedar Bluff	3.14	328	P	Pn	14 10 50.8	+1.6
	baz=148						
CBKS				Sb	Sb	14 11 36.0	+2.1
	baz=148						
W39A	Magazine	3.26	106		Pn	14 10 51.7	+1.0
W39A	Magazine	3.26	106	P	Pn	14 10 51.9	+1.1
	baz=288						
W39A				Sb	Sb	14 11 42.9	+5.6
	baz=288						
AMTX	Amarillo	3.55	250		Pn	14 10 55.4	+0.6
Z38A	Mt. Pleasant	3.61	142		Pn	14 10 56.0	+0.5
MIAR	Mount Ida	3.67	115		Pn	14 10 57.7	+1.4
MIAR	Mount Ida	3.67	115	P	Pn	14 10 57.8	+1.4
	baz=297						
MIAR				S	Sn	14 11 41.9	+2.2
	baz=297						
S39A	Bolivar	3.77	65		Pn	14 10 59.0	+1.3
U40A	Yellville	3.85	86		Pn	14 10 59.5	+0.6
U40A	Yellville	3.85	86	P	Pn	14 10 59.6	+0.7
	baz=268						
ABTX	Abilene, Hawle	3.90	206		Pn	14 11 00.1	+0.5
ABTX	Abilene, Hawle	3.90	206	P	Pn	14 11 00.3	+0.8
	baz=25						
WHTX	Lake Whitney,	4.16	178		Pn	14 11 03.4	+0.3
WHTX	Lake Whitney,	4.16	178	P	Pn	14 11 03.8	+0.7
	baz=358						
X40A	Basin Creek Fa	4.25	112		Pn	14 11 05.6	+1.3
X40A	Basin Creek Fa	4.25	112	P	Pn	14 11 05.9	+1.6
	baz=294						
237A	Washetta, Mont	4.41	160		Pn	14 11 06.0	-0.5
MGMO	Mountain Grove	4.41	75		Pn	14 11 07.6	+1.1
WHAR	Wooly Hollow	4.42	100		Pn	14 11 07.2	+0.5
WLAR	White Oak Lake	4.45	122		Pn	14 11 07.5	+0.5
FCAR	Ozark Folk Cen	4.46	92		Pn	14 11 07.6	+0.4
W41B	Gary Mavity, V	4.48	101		Pn	14 11 08.2	+0.7
W41B	Gary Mavity, V	4.48	101	P	Pn	14 11 08.1	+0.7
	baz=284						
UALR	University of	4.52	106		Pn	14 11 09.0	+1.0
N33A	J Bar K, Exete	4.58	2	Pn	Pn	14 11 09.0	+0.2
P38A	Dawn	4.73	42		Pn	14 11 12.0	+1.0
MSTX	Muleshoe	4.76	244		Pn	14 11 11.2	-0.2
MSTX	Muleshoe	4.76	244	P	Pn	14 11 11.5	+0.1
	baz=61						
R40A	Maddies Statio	4.77	62		Pn	14 11 12.4	+1.0
KSCO	Kaye Shedlock'	4.89	307		Pn	14 11 14.2	+0.8
Z41A	Richland Creek	4.91	125		Pn	14 11 13.6	+0.3
Z41A	Richland Creek	4.91	125	P	Pn	14 11 14.0	+0.7
	baz=307						
Z41A				S	Sn	14 12 10.7	+0.6
	baz=307						
N35A	Tabor	4.95	18		Pn	14 11 14.8	+0.9
NATX	Nacogdoches	5.03	150	Pn	Pn	14 11 15.2	+0.2
LCAR	Lake Charles	5.23	89		Pn	14 11 17.7	-0.1
BGNE	Belgrade	5.26	356		Pn	14 11 18.5	+0.3
BGNE	Belgrade	5.26	356	P	Pn	14 11 18.9	+0.7
	baz=176						
T42A	Van Buren	5.32	79		Pn	14 11 19.8	+0.8
435B	Jarrell	5.36	180		Pn	14 11 19.5	0.0
435B	Jarrell	5.36	180	P	Pn	14 11 19.8	+0.2
	baz=360						
CCM	Cathedral Cave	5.43	68		Pn	14 11 21.8	+1.3
CCM	Cathedral Cave	5.43	68	P	Pn	14 11 22.7	+2.1
	baz=251						
P40A	Paris	5.54	51	Pn	Pn	14 11 22.8	+0.7
T25A	Trinidad	5.55	282		Pn	14 11 22.4	0.0
T25A	Trinidad	5.55	282	P	Pn	14 11 22.6	+0.2
	baz=98						
X43A	Marvell	5.74	105	Pn	Pn	14 11 25.9	+1.1
N38A	Joes South For	5.76	35	Pn	Pn	14 11 25.4	+0.2
PBMO	Poplar Bluff	5.82	82		Pn	14 11 27.0	+1.1
L34A	Svendsen Farm,	5.88	9	Pn	Pn	14 11 27.9	+1.2
OGNE	Ogallala	5.90	325		Pn	14 11 28.1	+1.0
OGNE	Ogallala	5.90	325	P	Pn	14 11 29.0	+1.9
	baz=143						
JCT	Junction City	5.95	199		Pn	14 11 27.4	-0.3
LPAR	Lepanto	5.96	93	Pn	Pn	14 11 28.7	+0.9
143A	Socs Landing,	6.18	122		Pn	14 11 31.0	+0.2
PEBM	Pemiscott Bayo	6.28	88	Pn	Pn	14 11 33.1	+0.9
PARMO	Parma	6.36	83	Pn	Pn	14 11 33.9	+0.6
HKT	Hockley	6.37	166	Pn	Pn	14 11 33.7	+0.3
SLM	Saint Louis	6.37	65		Pn	14 11 34.0	+0.5
342A	Flagon Creek P	6.49	136	Pn	Pn	14 11 36.2	+1.1
SDCO	Great Sand Dun	6.51	286		Pn	14 11 36.5	+0.8
SDCO	Great Sand Dun	6.51	286	P	Pn	14 11 36.9	+1.2
	baz=102						
K31A	O'Neill	6.52	353		Pn	14 11 36.1	+0.6
441A	DeRidder	6.54	144	Pn	Pn	14 11 36.6	+0.8
LNXT	Lenox	6.58	88	Pn	Pn	14 11 36.8	+0.6
HENM	Henderson Moun	6.59	83	Pn	Pn	14 11 37.8	+1.3
SCIA	State Center	6.68	29		Pn	14 11 39.1	+1.3
GLAT	Glass	6.73	87	Pn	Pn	14 11 39.0	+0.6
HICK	Hickman	6.78	84	Pn	Pn	14 11 40.1	+1.0
S44A	Carbondale	6.87	75		Pn	14 11 40.6	+0.3
SIUC	Southern Illin	6.90	74		Pn	14 11 40.9	+0.1
OXF	Oxford	6.91	101		Pn	14 11 40.1	-0.7
OXF	Oxford	6.91	101	P	Pn	14 11 40.6	-0.1
	baz=286						
W45A	Hickory Valley	6.94	96		Pn	14 11 40.4	-0.8
N41A	Harden Midland	6.98	47	Pn	Pn	14 11 42.7	+0.9

Y45A	Yeager Farm, C	7.01	107		Pn	14 11 43.0	+0.8
T45A	Paducah	7.27	81	Pn	Pn	14 11 46.5	+0.8
735A	Kenedy	7.28	181	Pn	Pn	14 11 46.0	0.0
P43A	Skaggs, Pawnee	7.28	59		Pn	14 11 46.3	+0.4
ISCO	Idaho Springs	7.29	302		Pn	14 11 46.3	0.0
ISCO	Idaho Springs	7.29	302	P	Pn	14 11 46.7	+0.4
	baz=118						
ANMO	Albuquerque	7.31	263	Pn	Pn	14 11 47.3	+0.8
	0.3nm,0.3s,baz=80,slow=11,SNR=6.7						
ANMO				Pg	Pb	14 12 09.9	+3.4
	3.0nm,0.3s,baz=89,slow=18,SNR=16						
ANMO				Lg	Lg	14 13 45.2	
	5.4nm,0.3s,baz=27,slow=4.5,SNR=2.2						
ANMO				LR	LR	14 14 56.6	
	comp=Z,514nm,21.5s,baz=71,slow=41						
ANMO	Albuquerque	7.31	263		Pn	14 11 47.0	+0.5
ANMO	Albuquerque	7.31	263	P	Pn	14 11 47.3	+0.8
	baz=78						
Q44A	Meyer Farm, Va	7.36	66		Pn	14 11 47.3	+0.3
K38A	Parkersburg	7.49	29	Pn	Pn	14 11 49.6	+0.9
ECSD	EROS Data Cent	7.61	5		Pn	14 11 49.8	-0.7
ECSD	EROS Data Cent	7.61	5	P	Pn	14 11 49.9	-0.5
	baz=186						
L40A	Anamosa	7.71	38		Pn	14 11 51.4	-0.4
MNTX	Cornudas Mount	7.84	238		Pn	14 11 52.7	-0.9
MNTX	Cornudas Mount	7.84	238	P	Pn	14 11 53.4	-0.2
	baz=53						
PLAL	Pickwick Lake	7.86	96		Pn	14 11 53.7	-0.2
HDIL	Hopedale	7.87	54		Pn	14 11 54.5	+0.5
HDIL	Hopedale	7.87	54	P	Pn	14 11 55.0	+0.9
	baz=239						
146A	Union	7.90	114		Pn	14 11 54.6	+0.2
WVT	Waverly	7.92	87		Pn	14 11 54.9	+0.2
833A	Chaparral WMA,	7.95	191	Pn	Pn	14 11 55.8	+0.6
OLIL	Olney	7.99	68		Pn	14 11 56.3	+0.5
PHWY	Pilot Hill	7.99	312		Pn	14 11 55.6	-0.4
N23A	Red Feather La	8.06	308		Pn	14 11 56.9	0.0
N23A	Red Feather La	8.06	308	P	Pn	14 11 57.7	+0.8
	baz=124						
USIN	University of	8.16	74		Pn	14 11 58.2	+0.3
O44A	Mansfield	8.24	58		Pn	14 11 59.3	+0.2
SUSD	Miller	8.34	353		Pn	14 12 00.3	-0.2
Z47A	Carrollton	8.40	108		Pn	14 12 01.4	+0.1
T47A	Sharon Grove	8.50	81		Pn	14 12 02.5	-0.1
TX31	Lajitas Ar. Si	8.50	219		Pn	14 12 01.9	-0.9
TX32	Lajitas Array	8.50	219		Pn	14 12 02.3	-0.5
TXAR	Lajitas Array	8.50	219	Pn	Pn	14 12 02.2	-0.6
	0.6nm,0.3s,baz=38,slow=11,SNR=31						
TXAR				Lg	Lg	14 14 21.6	
	12nm,0.3s,baz=68,slow=31,SNR=6.2						
TXAR				LR	LR	14 15 32.4	
	comp=Z,81nm,21.2s,baz=0.0,slow=39						
TXAR	Lajitas Array	8.50	219		Pn	14 12 02.3	-0.4
L42A	Oliver, Polo	8.50	44		Pn	14 12 02.5	-0.1
X48A	Hartselle	8.81	98	Pn	Pn	14 12 08.4	+1.5
JFWS	Jewell Farm	8.82	38		Pn	14 12 07.0	-0.1
JFWS	Jewell Farm	8.82	38	P	Pn	14 12 07.6	+0.5
	baz=222						
P46A	Rosedale	8.92	64		Pn	14 12 09.0	+0.6
M44A	Midewin, Midew	9.12	52		Pn	14 12 11.5	+0.4
CLTN	Cedars of Leba	9.13	87		Pn	14 12 12.3	+1.0
WCI	Wyandotte Cave	9.27	74		Pn	14 12 13.8	+0.6
WCI	Wyandotte Cave	9.27	74	P	Pn	14 12 14.6	+1.4
	baz=260						
SFIN	Lafayette	9.28	60		Pn	14 12 14.1	+0.7
LRAL	Lakeview Retre	9.29	107		Pn	14 12 13.0	-0.5
RWWY	Rawlins	9.29	309	Pn	Pn	14 12 14.4	+0.6
BLO	Bloomington	9.30	68		Pn	14 12 13.7	+0.1
RSSD	Black Hills	9.35	330		Pn	14 12 14.2	-0.3
RSSD	Black Hills	9.35	330	P	Pn	14 12 15.9	+1.4
	baz=146						
PV14	Lion Creek, Pa	9.36	287	Pn	Pn	14 12 13.3	-1.3
I40A	Norwalk	9.40	33		Pn	14 12 14.2	-0.8
K22A	Casper	9.46	316		Pn	14 12 15.4	-0.6
K22A	Casper	9.46	316	P	Pn	14 12 17.2	+1.2
	baz=131						
Y49A	Blount Mountai	9.47	101	Pn	Pn	14 12 16.6	+0.5
SWET	Sewanee	9.55	92	Pn	Pn	14 12 17.8	+0.6
U49A	Red Boiling Sp	9.56	84		Pn	14 12 17.9	+0.8
L44A	Lake County Fo	9.64	48		Pn	14 12 18.9	+0.7
K43A	Burlington	9.71	45		Pn	14 12 18.9	-0.3
T49A	Edmonton	9.76	81		Pn	14 12 20.7	+0.8
SPMN	Marine on St.	9.77	20		Pn	14 12 19.1	-0.9
Q48A	North Vernon	9.84	70	P	Pn	14 12 22.3	+1.4
	baz=257						
FPAL	Fort Paine	9.94	96	Pn	Pn	14 12 22.8	+0.4
Z50A	Ashland	10.05	103		Pn	14 12 24.4	+0.5
R49A	Shelbyville	10.15	74		Pn	14 12 25.3	0.0
P48A	Milroy	10.19	67		Pn	14 12 25.4	-0.5
I42A	Draeger Farm,	10.20	38		Pn	14 12 25.0	-1.0
250A	Grady	10.29	111	Pn	Pn	14 12 26.9	-0.4
N47A	Urbana	10.46	60		Pn	14 12 28.3	-1.3
L46A	Eue Claire	10.56	53		Pn	14 12 29.8	-1.1
CPCT	Cooper Cave	10.66	90		Pn	14 12 32.5	+0.2
E28A	Huff	10.66	348		Pn	14 12 29.9	-2.3
G40A	Rib Lake	10.70	29		Pn	14 12 31.9	-0.8
V51A	Loudon	10.76	88		Pn	14 12 34.2	+0.6
R50A	Paris	10.81	75		Pn	14 12 35.3	+1.0
H43A	Windswept, Lux	11.19	39		Pn	14 12 38.1	-1.4
TKL	Tuckaleechee C	11.24	88	Pn	Pn	14 12 40.8	+0.6
	0.6nm,0.3s,baz=229,slow=7.0,SNR=8.4						
TKL				Lg	Lg	14 15 48.4	
	8.9nm,0.3s,baz=209,slow=16,SNR=7.0						
TKL				LR	LR	14 17 10.0	
	comp=Z,180nm,21.3s,baz=272,slow=38						
TKL	Tuckaleechee C	11.24	88	Pn	Pn	14 12 40.5	+0.2
S51A	Beattyville	11.33	78		Pn	14 12 41.1	-0.3
PD31	Pinedale Array	11.34	309		Pn	14 12 41.0	-0.8
PDAR	Pinedale Array	11.34	309	Pn	Pn	14 12 41.1	-0.7
	0.8nm,0.3s,baz=122,slow=14,SNR=18						
PDAR				Lg	Lg	14 15 48.8	
	1.4nm,0.3s,baz=96,slow=24,SNR=2.0						
PDAR				LR	LR	14 17 10.3	
	comp=Z,85nm,20.3s,baz=124,slow=38						
PDAR	Pinedale Array	11.34	309		Pn	14 12 40.6	-1.2
BW06	Boulder Array	11.34	309		Pn	14 12 41.1	-0.8
V52A	Sevierville	11.36	87		Pn	14 12 42.2	+0.3
M48A	Edgerton	11.38	58		Pn	14 12 40.9	-1.2
E38A	The Farm, Brul	11.38	22		Pn	14 12 40.0	-2.1
N49A	Columbus Grove	11.54	62		Pn	14 12 43.0	-1.4
Q51A	Peebles	11.68	72		Pn	14 12 45.3	-0.9
T52A	Hallie	11.79	81	Pn	Pn	14 12 48.4	+0.6
COWI	Conover	11.80	30		Pn	14 12 46.1	-1.8
F42A	Maple Grove Fa	11.96	34		Pn	14 12 48.5	-1.6
P51A	Williamsport	11.98	70		Pn	14 12 49.2	-1.1
TCRU	Three Creeks R	12.05	286	Pn	Pn	14 12 51.3	-0.3
J47A	Sunmer	12.12	50		Pn	14 12 51.3	-0.9
AGMN	Agassiz Nation	12.20	6		Pn	14 12 50.4	-2.9
ACSO	Alum Creek Sta	12.21	66		Pn	14 12 51.5	-2.0
LAO	LASA Array	12.34	331	Pn	Pn	14 12 55.0	-0.2
AAM	Ann Arbor	12.44	56		Pn	14 12 55.5	-1.1
M50A	Fremont	12.52	61		Pn	14 12 55.9	-1.7
RLMT	Red Lodge	12.58	319		Pn	14 12 57.7	-1.0
EYMN	Ely	12.62	19		Pn	14 12 56.2	-2.8
G45A	Suttons Bay	12.69	42		Pn	14 12 57.6	-2.4
FXWY	Fox Creek	12.71	310	Pn	Pn	14 12 59.7	-0.9
I47A	Gladwin	12.73	48	Pn	Pn	14 12 59.2	-1.3
U54A	Nelsons Funny	12.74	84	Pn	Pn	14 13 01.1	+0.2
J48A	Bridge Port	12.80	52		Pn	14 13 00.3	-1.3
D41A	Chassel	12.82	29		Pn	14 12 58.9	-2.8
N51A	Ashland	12.84	64		Pn	14 13 00.3	-1.7
YNE	Yellowstone No	12.90	317		Pn	14 13 01.2	-2.0
E43A	Lone Tree Farm	12.95	35		Pn	14 12 59.3	-4.2
GLMI	Grayling	13.13	45		Pn	14 13 03.1	-2.9
S54A	Dingess, Beckl	13.14	78		Pn	14 13 04.6	-1.7
DGMT	Dagmar	13.22	341		Pn	14 13 04.6	-2.7
GCMT	Greycliff	13.23	320		Pn	14 13 06.2	-1.4
P53A	Whipple	13.25	71		Pn	14 13 06.6	-1.1
I49A	Point Hope	13.73	51	Pn	Pn	14 13 12.2	-2.0
M52A	Chesterland	13.76	62	Pn	Pn	14 13 11.4	-3.2
H48A	Harrisville	13.82	47		Pn	14 13 12.2	-3.1
N53A	Lisbon	13.94	65	Pn	Pn	14 13 14.3	-2.7
R55A	Marlinton	14.11	76	Pn	Pn	14 13 18.1	-1.3
O54A	Avella	14.14	68		Pn	14 13 19.8	-0.1
ULM	Lac du Bonnet	14.14	5	Pn	Pn	14 13 14.6	-5.2
	1.2nm,0.3s,baz=181,slow=12,SNR=15						
ULM				Sn	Sn	14 15 45.5	-11
	1.8nm,0.3s,baz=228,slow=19,SNR=3.6						
ULM				Lg	Lg	14 17 20.6	
	2.6nm,0.3s,baz=266,slow=19,SNR=2.4						
ULM				LR	LR	14 18 58.2	
	comp=Z,302nm,18.1s,baz=143,slow=38						
E46A	Sault Ste Mari	14.27	40		Pn	14 13 17.5	-4.1
R11A	Troy Canyon, C	14.48	284	Pn	Pn	14 13 23.6	-1.1
ELK	Elko	14.55	294	Lg	Lg	14 17 40.9	
	0.1nm,0.3s,baz=156,slow=18,SNR=2.5						
ELK				LR	LR	14 18 55.1	
	comp=Z,73nm,20.7s,baz=336,slow=37						
N54A	Moraine State	14.60	65		Pn	14 13 22.6	-3.5
T57A	Hurt	14.78	81		Pn	14 13 27.5	-1.1
EGMT	Eagleton	14.87	327		Pn	14 13 28.7	-1.2
M54A	Oil Creek Stat	14.97	64		Pn	14 13 27.6	-3.6
M54A				IAmb	IAmb	14 14 24.2	
	comp=Z,14nm,0.8s						
O56A	Blue Knob Stat	15.52	69	Pn	Pn	14 13 37.0	-1.5
O56A				IAmb	IAmb	14 14 23.6	
	comp=Z,57nm,1.8s						
M55A	Ridgway	15.61	64	Pn	Pn	14 13 37.0	-2.7
PFO	Pinyon Flats O	15.67	266	LR	LR	14 19 54.6	
	comp=Z,179nm,20.4s,baz=42,slow=38						
M56A	Emporium	16.04	65	Pn	Pn	14 13 41.7	-3.5
SADO	Sadowa	16.45	53	Pn	Pn	14 13 46.4	-4.0
	comp=Z,0.5nm,0.3s,baz=264,slow=11,SNR=5.2						
SADO				Sn	Sn	14 16 52.1	-0.9
	comp=Z,1.2nm,0.3s,baz=270,slow=20,SNR=2.2						
SADO				Lg	Lg	14 18 25.6	
	comp=Z,1.9nm,0.3s,baz=287,slow=20,SNR=3.4						
SADO				LR	LR	14 19 42.8	
	comp=Z,52nm,19.7s,baz=297,slow=36						
SADO	Sadowa	16.45	53	Pn	Pn	14 13 47.3	-3.1
SADO				IAmb	IAmb	14 14 37.5	
	comp=Z,34nm,1.5s						
NVAR	Mina Array Bea	16.62	284	Pn	Pn	14 13 52.2	-0.5
	comp=Z,0.1nm,0.3s,baz=88,slow=11,SNR=2.2						
NVAR				LR	LR	14 20 48.4	
	comp=Z,230nm,18.7s,baz=160,slow=40						
L56A	Greenwood	16.65	63	Pn	Pn	14 13 49.9	-3.0
L56A				IAmb	IAmb	14 14 27.2	
	comp=Z,45nm,1.4s						
N58A	Sunbury	17.01	68	Pn	Pn	14 13 55.1	-2.3
N58A				IAmb	IAmb	14 14 05.0	
	comp=Z,84nm,1.7s						
TEIG	Tepich	17.86	150	P	Pn	14 14 08.1	-0.1
	comp=Z,0.2nm,0.3s,baz=337,slow=0.0,SNR=3.1						
TEIG				LR	LR	14 23 53.2	
	comp=Z,56nm,18.1s,baz=233,slow=46						
TEIG	Tepich	17.86	150	IAmb	IAmb	14 14 09.5	
	comp=Z,131nm,1.9s						
NEW	Newport	18.78	316	Lg	Lg	14 19 44.0	
	comp=Z,0.1nm,0.3s,baz=73,slow=19,SNR=1.8						
NEW				LR	LR	14 22 23.4	
	comp=Z,82nm,19.6s,baz=122,slow=40						
FFC	Flin Flon	18.81	352	P	P	14 14 19.8	+0.7
CMIG	Matias Romero	19.14	172	LR	LR	14 24 19.1	
	comp=Z,34nm,19.5s,baz=14,slow=45						
YBH	Yreka Blue Hor	20.26	294	P	P	14 14 34.4	-0.7
	comp=Z,2.3nm,0.9s,baz=143,slow=3.0,SNR=2.7						
YBH	Yreka Blue Hor	20.26	294	IAmb	IAmb	14 14 40.6	
	comp=Z,14nm,1.1s						
BBB	Bella Bella	26.85	316	LR	LR	14 26 52.0	
	comp=Z,85nm,21.4s,baz=169,slow=38						
JTS	Las Juntas de	28.20	153	LR	LR	14 28 08.7	
	comp=Z,49nm,20.6s,baz=44,slow=38						
YKA	Yellowknife Ar	28.40	343	P	P	14 15 53.7	-0.2
	comp=Z,0.7nm,0.8s,baz=144,slow=9.4,SNR=9.1						
YKA				LR	LR	14 27 44.7	
	comp=Z,121nm,20.2s,baz=0.0,slow=38						
EPYK	Eagle Plains	37.75	335	P	P	14 17 16.1	+0.9
EPYK				IAmb	IAmb	14 18 00.5	
	comp=Z,14nm,1.6s						
INK	Inuvik	37.91	339	P	P	14 17 15.3	-1.1
	comp=Z,0.7nm,0.7s,baz=152,slow=14,SNR=3.0						
BCAR	Beaver Creek A	38.06	329	P	P	14 17 19.5	+1.6
VRDI	Verde Repeater	38.10	326	P	P	14 17 19.4	+0.9
VRDI				IAmb	IAmb	14 18 38.6	
	comp=Z,14nm,1.7s						
EGAK	Eagle	38.55	332	P	P	14 17 23.2	+1.3
EGAK				IAmb	IAmb	14 17 24.6	
	comp=Z,18nm,2.0s						
ILAR	Eielson Array	40.80	330	P	P	14 17 40.7	0.0
	comp=Z,0.9nm,0.7s,baz=108,slow=7.3,SNR=9.9						
ILAR				LR	LR	14 37 02.4	
	comp=Z,29nm,18.9s,baz=122,slow=40						
ILAR	Eielson Array	40.80	330	P	P	14 17 42.3	+1.7
MLY	Manley	42.44	330	P	P	14 17 55.9	+1.7
PPLA	Purkeypile	42.52	326	P	P	14 17 56.3	+1.3
PPLA				IAmb	IAmb	14 19 27.1	
	comp=Z,23nm,1.6s						
TOLK	Toolik Lake Re	43.17	335	P	P	14 18 01.3	+1.2
TOLK				IAmb	IAmb	14 18 34.0	
	comp=Z,20nm,2.0s						
SVW2	Sparrevohn	43.78	323	P	P	14 18 06.0	+0.9
IMAR	Indian Mountai	43.90	331	P	P	14 18 07.0	+1.1
SCO	Scoresbysund	51.64	25	P	P	14 19 06.8	+0.9
SCO				IAmb	IAmb	14 20 12.9	
	comp=Z,10nm,1.6s						
ARCES	ARCESS Array B	66.77	19	LR	LR	14 49 36.2	
	comp=Z,69nm,18.4s,baz=78,slow=36						
TIXI	Tiksi	67.62	346	LR	LR	14 52 26.3	
	comp=Z,37nm,19.4s,baz=86,slow=38						
BDFB	Brasilia	69.64	128	LR	LR	14 54 21.5	
	comp=Z,50nm,18.0s,baz=113,slow=38						
DBIC	Dimbokro	88.33	83	LR	LR	14 58 14.4	
	comp=Z,33nm,18.5s,baz=328,slow=33						
KSRS	Korea Array	95.47	325	LR	LR	15 07 54.7	
	comp=Z,15nm,21.9s,baz=346,slow=36						
HHC	Hu-ho-hao-te	98.82	338	*e*P	P	14 23 39.0	-0.8
ASAR	Alice Springs	134.12	271	PKP	PKPdf	14 29 18.2	+0.6
	comp=Z,0.1nm,0.6s,baz=81,slow=2.4,SNR=1.9						

NNC 30 14:15:53.2±3.0**, 37°.01N×71°.01E, h0^{km}, mb3.8, mpv3.5, 4C-2D, Error ellipse: s-maj=25.9km s-min=22.5km az=117.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KK31	Karatay Array	6.10	357	⇑P	Pn	14 17 24.8	+0.3
	1.8nm,0.3s,baz=177,slow=12,SNR=67						
KK31				⇓S	Sn	14 18 36.2	+1.1
	2.4nm,0.5s,baz=183,slow=24,SNR=13						
AAK	Ala-Archa	6.23	24	⇑P	Pn	14 17 26.9	+0.5
	1.3nm,0.4s						
AAK				⇓S	Sn	14 18 40.4	+2.0
	2.1nm,0.6s						
CHMS	Chumysh	6.63	24	⇑P	Pn	14 17 31.1	-0.8
	2.8nm,0.8s						
CHMS				⇑S	Sn	14 18 48.6	+0.3
	2.9nm,0.7s						

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*IDC **30** 14:46:57.6±0.8, 1°.88N×126°.10E, h0^{km}, mb4.0/7, mb1 4.0/9, mb1mx3.8/36, mbtmp3.9/9, ML3.6/2, MS2.8/3, Ms1 2.8/3, ms1mx2.4/40, Error ellipse: s-maj=57.7km s-min=13.8km az=70.0*

*DJA **30** 14:47:02.7±0.9, 2°N±5°×12°6E±°, h10^{km}±10^{km}, M4.2/11, mB4.7/2, mb4.4/3, MLv4.1/11, Mw(mB)3.9/2*

*NEIC **30** 14:47:03.2±1.2, 1°.9N±0°.1×126°.45E±0°.09, h43^{km}±9^{km}, mb4.3/16, Error ellipse: s-maj=16.3km s-min=11.0km az=217.0*

ISC 30 14:47:04.3±0.6**, 1°.91N**±0°.06×**126°.45E**±0°.06**, h47^{km}, n50, σ1^{s}89**/52**, mb4.2**/13**, 1C-1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TNTI	Ternate	1.46	141	P	Pn	14 47 27.5	-0.6
TNTI				S	Sn	14 47 47.4	+1.3
TNTI	Ternate	1.46	141		Pn	14 47 27.6	-0.6
LBMI	Labuha	2.74	157	P	Pn	14 47 45.4	-0.4
LBMI				S	Sn	14 48 17.1	-0.6
KMSI	Cibinong	2.80	242	P	Pn	14 47 46.7	+0.1
SANI	Sanana	3.96	187	P	Pn	14 48 01.1	-1.5
DDMP	Don Marcelino,	4.23	350	*e*P	Pn	14 48 13.0	+6.7
LUWI	Luwuk	4.70	231	P	Pn	14 48 12.4	-0.4
LUWI				S	Sn	14 49 06.5	+0.4
LUWI	Luwuk	4.70	231		Pn	14 48 13.2	+0.5
MRSI	Marisa	4.73	253	P	Pn	14 48 13.1	0.0
SKMP	Bagumbayan, Su	4.96	337	*e*P	Pn	14 48 17.3	+1.1
NLAI	Namlea	5.16	173	P	Pn	14 48 18.6	-0.4
	0.1nm651nm17nm,0.8s						
KCP	Kidapawan	5.24	345	⇓*i*P	Pn	14 48 25.2	+5.0
KCP				*i* S	Sn	14 49 27.6	+8.1
SIJI	Sorong	5.55	120	Pn	Pn	14 48 25.7	+1.3
	0.7nm,0.3s,baz=251,slow=4.3,SNR=2.7						
SIJI				LR	LR	14 50 50.9	
	comp=Z,98nm,19.7s,baz=170,slow=40						
APSI	Ampana	5.56	240	P	Pn	14 48 24.4	-0.1
CTBH	Cotabato--PC H	5.71	337	⇑*i*P	Pn	14 48 28.4	+1.8
BUKP	Musuan	6.09	347	*e*P	Pn	14 48 36.5	+4.7
PAGZ	Pagadian	6.64	333	*e*P	Pn	14 48 38.7	-0.7
KAPI	Kappang	9.60	224	LR	LR	14 52 55.7	
	comp=Z,36nm,21.8s,baz=80,slow=38						
KKM	Kota Kinabalu	11.00	292	Pn	Pn	14 49 39.5	+0.2
TGY	Tagaytay City	13.28	336	LR	LR	14 56 15.9	
	comp=Z,48nm,20.3s,baz=213,slow=42						
KNRA	Kununurra	17.62	173		Pn	14 51 05.8	-0.8
FITZ	Fitzroy Crossi	19.90	182	P	P	14 51 28.7	-3.3
	0.2nm,0.3s,baz=11,slow=9.7,SNR=8.1						
FITZ	Fitzroy Crossi	19.90	182	P	P	14 51 30.5	-1.5
FITZ				IAmb	IAmb	14 51 38.6	
	comp=Z,16nm,1.9s						
WB0	Warramunga Arr	22.91	160	P	P	14 52 03.0	-1.4
WB0				IAmb	IAmb	14 52 05.2	
	comp=Z,8.9nm,0.8s						
WRAB	Tennant Creek	23.05	161	P	P	14 52 04.5	-1.3
WRAB				IAmb	IAmb	14 52 06.3	
	comp=Z,13nm,1.2s						
WRA	Warramunga Arr	23.06	161	P	P	14 52 04.5	-1.4
	comp=Z,5.1nm,0.5s,baz=338,slow=11,SNR=68						
WRA	Warramunga Arr	23.06	161	P	P	14 52 04.2	-1.6
WB2	Warramunga Arr	23.06	161	P	P	14 52 04.6	-1.3
WB2				IAmb	IAmb	14 52 06.8	
	comp=Z,6.8nm,0.6s						
WR0	Warramunga Arr	23.14	160	P	P	14 52 05.7	-0.9
AS31	Alice Springs	26.44	165	P	P	14 52 36.3	-0.6
ASAR	Alice Springs	26.44	165	P	P	14 52 36.5	-0.4
	comp=Z,0.9nm,0.5s,baz=342,slow=8.1,SNR=68						
ASAR				PcP	PcP	14 56 02.3	+0.8
	comp=Z,0.3nm,0.7s,baz=350,slow=2.0,SNR=2.3						
ASAR				S	S	14 57 16.0	+8.4
	comp=Z,0.8nm,0.9s,baz=342,slow=18,SNR=4.5						
GIRL	Giralia	27.16	205	P	P	14 52 44.7	+1.3
BBOO	Buckleboo	35.71	166	P	P	14 53 57.5	-0.9
NWAO	Narrogin (SRO)	35.73	193	P	P	14 53 58.4	-0.1
STKA	Stephens Creek	36.55	158	P	P	14 54 05.1	-0.5
	comp=Z,1.4nm,0.7s,baz=320,slow=13,SNR=6.1						
STKA	Stephens Creek	36.55	158	P	P	14 54 05.2	-0.4
STKA				IAmb	IAmb	14 54 12.2	
	comp=Z,4.5nm,2.0s						
HHC	Hu-ho-hao-te	41.03	343	*e*P	P	14 54 42.5	-0.7
SONM	Songino Array	48.93	342	P	P	14 55 45.2	-0.6
	comp=Z,0.6nm,0.6s,baz=157,slow=7.8,SNR=4.2						
SONM	Songino Array	48.93	342	IAmb	IAmb	14 55 52.8	
	comp=Z,1.5nm,1.4s						
WMQ	Urumqi	54.05	326	*e*P	P	14 56 25.8	+1.6
MK31	Makanchi Array	58.89	326	P	P	14 56 58.0	-0.5
MK31				IAmb	IAmb	14 58 07.2	
	comp=Z,7.3nm,2.0s						
MKAR	Makanchi Array	58.89	326	P	P	14 56 57.7	-0.8
	comp=Z,0.9nm,0.5s,baz=120,slow=7.2,SNR=17						
MKAR	Makanchi Array	58.89	326	P	P	14 56 58.0	-0.5
MAKZ	Makanchi	59.07	326	P	P	14 56 58.9	-0.9
MAKZ				IAmb	IAmb	14 57 01.5	
	comp=Z,8.4nm,1.8s						
KSH	Kashi	59.14	316	P	P	14 57 04.3	+3.8
KSH				pP	sP	14 57 21.3	+2.8
KSH				PP	PP	14 59 16.0	+4.4
KSH				S	S	15 05 04.8	+0.1
KSH				ScS	ScS	15 06 42.5	-4.4
KURK	Kurchatov	63.12	328	P	P	14 57 26.1	-0.9
KURK				IAmb	IAmb	14 57 29.1	
	comp=Z,3.2nm,0.8s						
KKAR	Karatay Array	64.37	318	P	P	14 57 34.4	-1.1
NRIK	Noril'sk	72.12	346	P	P	14 58 23.0	-0.5
	comp=Z,1.1nm,0.4s,baz=128,slow=7.3,SNR=5.4						
ABKAR	Akbulak array	73.38	321	P	P	14 58 30.4	-0.9
VNDA	Vanda	81.67	173	P	P	14 59 17.3	+0.2
	comp=Z,0.6nm,0.6s,baz=340,slow=1.8,SNR=4.4						

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*GCG **30** 14:51:37.1±0.6, 14°.35N×92°.27W, h114^{km}±9^{km}, MD3.9*

*MEX **30** 14:51:42.3±0.3, 14°.14N×92°.22W, h10^{km}, MD3.9*

*NEIC **30** 14:51:42.7±2.0, 14°.48N±0°.09×91°.97W±0°.06, h94^{km}±7^{km}, mb4.4/15, Md4.0/9(MEX), Error ellipse: s-maj=13.4km s-min=7.0km az=200.0*

*IDC **30** 14:51:42.7±2.4, 14°.48N×91°.94W, h93^{km}±14^{km}, mb3.4/4, mb1 3.8/7, mb1mx3.4/35, mbtmp3.8/7, MS3.0/2, Ms1 3.0/2, ms1mx2.3/28, Error ellipse: s-maj=33.4km s-min=11.4km az=14.0*

*SNET **30** 14:51:43.4±0.7, 14°.42N×91°.88W, h74^{km}±3^{km}, ML3.8*

*UCR **30** 14:51:43.3±0.6, 14°.42N×91°.90W, h74^{km}±3^{km}, ML3.7, mb4.4(NEIC)*

ISC 30 14:51:42.4±0.9**, 14°.43N**±0°.07×**91°.98W**±0°.05**, h95^{km}**±8^{km}**, n54, σ1^{s}14**/68**, mb4.2**/11**, 3C-1D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ERG	Entre ros, C	0.39	89	⇑*i*P	Pn	14 51 56.2	-0.7
STG3	Santiaguito 3,	0.48	55	⇑*i*P	Pn	14 51 57.1	-0.6
FUG	Fuego 3	1.10	89	⇑*i*P	Pn	14 52 03.4	-0.4
PCG	Pacaya	1.32	92	*e*P	Pn	14 52 06.6	+0.1
IXG	Ixpaco	1.51	100	*e*P	Pn	14 52 07.5	-1.2
IXG	Ixpaco	1.51	100	*e*P	Pn	14 52 07.5	-1.2
IXG	Ixpaco	1.51	100	⇓*e*P	Pn	14 52 08.5	-0.2
APG	El Apazote	1.57	69	P	Pn	14 52 09.1	-0.4
	20nm,0.3s,baz=270,slow=10,SNR=103						
APG				S	Sn	14 52 29.0	-1.0
	80nm,0.3s,baz=229,slow=19,SNR=53						
APG				LR	LR	14 52 48.4	
	comp=Z,77nm,21.8s,baz=250,slow=43						
NBG	Las Nubes	1.58	84	*e*P	Pn	14 52 10.4	+0.7
NBG				*e*S	Sn	14 52 35.8	+5.3
PCIG		1.75	317	*i* P	Pn	14 52 10.8	-0.7
PCIG				*i* S	Sn	14 52 32.6	-1.0
PCIG		1.75	317		Pn	14 52 11.6	+0.1
PCIG					Sn	14 52 32.1	-1.5
MRL	Marmol	2.31	73	*e*P	Pn	14 52 18.8	-0.3
MRL				*e*S	Sn	14 52 46.1	-1.0
MRL	Marmol	2.31	73	*e*P	Pn	14 52 18.8	-0.3
MRL				*e*S	Sn	14 52 46.1	-1.0
MRL	Marmol	2.31	73	*e*P	Pn	14 52 19.4	+0.3
SBLS	San Blas	2.36	104	*e*P	Pn	14 52 20.0	+0.3
SBLS				*e*S	Sn	14 52 48.5	+0.3
SBLS	San Blas	2.36	104	*e*P	Pn	14 52 20.0	+0.3
SBLS				*e*S	Sn	14 52 48.5	+0.3
CEVE	Cerro Verde	2.36	104	*e*P	Pn	14 52 19.9	+0.1
CEVE				*e*S	Sn	14 52 48.3	0.0
CEVE				IAML		14 52 51.3	
	comp=Z,2µm,0.4s						
CEVE	Cerro Verde	2.36	104	*e*P	Pn	14 52 19.9	+0.1
CEVE				*e*S	Sn	14 52 48.3	0.0
CEVE				IAML		14 52 51.3	
	comp=Z,2µm,0.4s						
SNJE	San Jose	2.37	103	*e*P	Pn	14 52 19.8	0.0
SNJE				*e*S	Sn	14 52 47.9	-0.5
SNJE	San Jose	2.37	103	*e*P	Pn	14 52 19.8	0.0
SNJE				*e*S	Sn	14 52 47.9	-0.5
TGIG		2.58	335	*i* P	Pn	14 52 24.1	+1.5
TGIG				*i* S	Sn	14 52 56.6	+3.3
TGIG		2.58	335		Pn	14 52 22.3	-0.3
SNET	Serv Nac Est T	2.76	105	Pn	Pn	14 52 25.9	+1.0
LFRS	El Faro	2.94	106	*e*P	Pn	14 52 27.3	0.0
LFRS				*e*S	Sn	14 53 01.5	-0.4
CMIG	Matias Romero	3.85	314	P	Pn	14 52 40.1	+0.5
	comp=Z,2.2nm,0.3s,baz=147,slow=9.6,SNR=23						
CMIG				S	Sn	14 53 23.6	-0.1
	comp=Z,4.8nm,0.3s,baz=90,slow=20,SNR=2.1						
CMIG	Matias Romero	3.85	314	*e*P	Pn	14 52 40.0	+0.5
TEIG	Tepich	6.76	31	P	Pn	14 53 18.3	-0.7
	baz=209,slow=0.0						
TEIG				S	Sn	14 54 34.6	+0.1
	comp=Z,3.2nm,0.3s,baz=282,slow=0.0,SNR=5.2						
ACON	Acoyapa	7.06	110	Pn	Pn	14 53 24.1	+0.9
TX32	Lajitas Array	18.35	326	P	P	14 55 50.2	+0.5
TXAR	Lajitas Array	18.35	326	P	Pn	14 55 51.3	+0.5
	comp=Z,0.1nm,0.3s,baz=154,slow=12,SNR=16						
TXAR	Lajitas Array	18.35	326	P	P	14 55 50.0	+0.4
TX31	Lajitas Ar. Si	18.35	326	P	P	14 55 50.5	+0.9
Z47A	Carrollton	19.02	10	P	Pn	14 55 58.0	-0.6
Z47A				IAmb	IAmb	14 55 58.9	
	comp=Z,16nm,0.7s						
WLAR	White Oak Lake	19.20	357	P	P	14 55 59.5	+0.8
FLOC	Florencia	20.57	127	P	P	14 56 14.3	+0.4
MNTX	Cornudas Mount	21.12	327	P	P	14 56 20.3	+0.7
WVT	Waverly	21.92	9	P	P	14 56 26.9	-1.2
WVT				IAmb	IAmb	14 56 54.3	
	comp=Z,34nm,1.9s						
CPCT	Cooper Cave	21.98	16	P	P	14 56 28.7	0.0
T47A	Sharon Grove	22.88	10	P	P	14 56 36.6	-1.4

T47A				IAmb	IAmb	14 56 37.7	
	comp=Z,12nm,1.0s						
S39A	Bolivar	23.20	357	P	P	14 56 39.0	-2.0
S39A				IAmb	IAmb	14 57 35.9	
	comp=Z,9.8nm,1.6s						
S44A	Carbondale	23.29	5	P	P	14 56 40.5	-1.4
S44A				IAmb	IAmb	14 56 41.7	
	comp=Z,17nm,0.8s						
SIUC	Southern Illin	23.32	6	P	P	14 56 40.5	-1.7
SIUC				IAmb	IAmb	14 56 41.5	
	comp=Z,21nm,1.1s						
ANMO	Albuquerque	24.24	330	P	P	14 56 51.9	+1.2
	comp=Z,1.0nm,0.6s,baz=153,slow=12,SNR=3.6						
SJG	San Juan	25.05	78	LR	LR	15 06 55.8	
	comp=Z,31nm,21.1s,baz=136,slow=36						
NNA	Nana	30.23	150	LR	LR	15 07 56.7	
	comp=Z,38nm,19.6s,baz=38,slow=32						
REDW	Red Top Meadow	33.07	334	P	P	14 58 09.2	0.0
REDW				IAmb	IAmb	14 58 37.1	
	comp=Z,8.6nm,1.6s						
NVAR	Mina Array Bea	33.35	321	P	P	14 58 14.2	+2.4
	comp=Z,0.5nm,0.5s,baz=133,slow=10.0,SNR=1.4						
YKA	Yellowknife Ar	50.61	347	P	P	15 00 30.6	-0.7
	comp=Z,0.8nm,0.5s,baz=151,slow=7.8,SNR=14						
ILAR	Eielson Array	62.45	337	P	P	15 01 55.2	-0.1
	comp=Z,0.8nm,0.9s,baz=128,slow=5.9,SNR=8.0						
SUA	Susitna One	62.71	332	P	P	15 01 58.2	+0.9
MLY	Manley	64.06	336	P	P	15 02 05.9	-0.1
MLY				IAmb	IAmb	15 02 07.3	
	comp=Z,12nm,1.7s						
IMAR	Indian Mountai	65.57	337	P	P	15 02 14.8	-1.0
CMAR	Chiang Mai Arr	145.59	341	PKPbc	PKPbc	15 11 10.3	-0.5
	comp=Z,1.2nm,0.9s,baz=343,slow=5.0,SNR=7.1						
CMAR	Chiang Mai Arr	145.59	341		PKPdf	15 11 09.7	-0.8

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*IDC **30** 14:58:17.3±1.1, 1°.19N×126°.20E, h0^{km}, mb3.8/6, mb1 4.0/8, mb1mx3.6/48, mbtmp3.8/8, ML3.6/2, MS3.1/1, Ms1 3.1/1, ms1mx2.3/38, Error ellipse: s-maj=57.2km s-min=18.1km az=65.0*

*DJA **30** 14:58:22.1±1.5, 1°N±5°×12°6E±°, h29^{km}±17^{km}, M3.9/7, mb4.1/2, MLv3.8/7*

*NEIC **30** 14:58:23.9±1.3, 1°.32N±0°.08×126°.62E±0°.07, h58^{km}±10^{km}, mb4.2/16, Error ellipse: s-maj=12.2km s-min=10.2km az=190.0*

ISC 30 14:58:23.1±0.6**, 1°.25N**±0°.06×**126°.46E**±0°.05**, h39^{km}, n43, σ1^{s}.40**/43**, mb4.1**/12**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.03	118	P	Pn	14 58 41.9	+0.8
TNTI	Ternate	1.03	118		Pn	14 58 41.8	+0.8
LBMI	Labuha	2.15	151	P	Pn	14 58 57.4	+0.9
KMSI	Cibinong	2.56	255	P	Pn	14 59 01.4	-0.8
KMSI				S	Sn	14 59 31.1	-1.1
SANI	Sanana	3.31	188	P	Pn	14 59 12.6	+0.1
SANI				S	Sn	14 59 52.6	+2.0
LUWI	Luwuk	4.33	238	P	Pn	14 59 34.2	+7.7
LUWI	Luwuk	4.33	238		Pn	14 59 30.1	+3.6
SIJI	Sorong	5.25	114	Pn	Pn	14 59 39.6	+0.5
	0.5nm,0.3s,baz=221,slow=19,SNR=2.8						
SPSI	Sidrap Palu	8.46	232	P	Pn	15 00 22.5	-0.7
KKM	Kota Kinabalu	11.27	295	Pn	Pn	15 01 03.6	+1.7
TGY	Tagaytay City	13.89	337	LR	LR	15 07 26.2	
	comp=Z,88nm,21.1s,baz=246,slow=40						
SBUM	Sibu	14.28	275	P	P	15 01 50.6	+1.2
MTN	Manton Dam	14.75	162	Pn	Pn	15 01 49.8	+0.5
JAGI	Jajag, Banyuwa	15.61	232	Pn	Pn	15 01 59.3	-1.2
JAGI				IAmb	IAmb	15 02 04.3	
	comp=Z,18nm,1.1s						
KSM	Kuching	16.14	271	P	P	15 02 10.6	+0.4
KNRA	Kununurra	16.97	172	Pn	Pn	15 02 18.0	+0.2
FITZ	Fitzroy Crossi	19.24	182	P	P	15 02 41.7	-2.6
	comp=Z,0.3nm,0.3s,baz=2.4,slow=7.9,SNR=11						
FITZ	Fitzroy Crossi	19.24	182	P	P	15 02 43.2	-1.1
FITZ				IAmb	IAmb	15 03 17.9	
	comp=Z,13nm,1.6s						
WB0	Warramunga Arr	22.29	160	P	P	15 03 17.3	0.0
WB0				IAmb	IAmb	15 03 19.0	
	comp=Z,5.1nm,0.6s						
WRAB	Tennant Creek	22.43	160	P	P	15 03 18.7	-0.1
WRAB				IAmb	IAmb	15 03 22.6	
	comp=Z,13nm,1.3s						
WRA	Warramunga Arr	22.44	160	P	P	15 03 18.3	-0.5
	comp=Z,2.8nm,0.4s,baz=337,slow=11,SNR=41						
WRA	Warramunga Arr	22.44	160	P	P	15 03 16.6	-2.3
WB2	Warramunga Arr	22.44	160	P	P	15 03 18.0	-0.9
WB2				IAmb	IAmb	15 03 24.9	
	comp=Z,6.4nm,0.7s						
WR0	Warramunga Arr	22.52	160	P	P	15 03 19.3	-0.5
WR0				IAmb	IAmb	15 03 22.5	
	comp=Z,5.0nm,0.8s						
PSA00	Pilbara Seismi	23.59	196	P	P	15 03 29.1	-1.3
PSA00				IAmb	IAmb	15 04 26.1	
	comp=Z,12nm,1.1s						
AS31	Alice Springs	25.80	164	P	P	15 03 50.2	-0.6
ASAR	Alice Springs	25.80	164	P	P	15 03 50.7	-0.1
	comp=Z,1.3nm,0.5s,baz=346,slow=12,SNR=46						
ASAR	Alice Springs	25.80	164	P	P	15 03 50.2	-0.6
BBOO	Buckleboo	35.07	166	P	P	15 05 12.0	-0.5
NWAO	Narrogin (SRO)	35.09	194	P	P	15 05 12.2	-0.5
STKA	Stephens Creek	35.94	158	P	P	15 05 19.1	-0.8
	comp=Z,1.5nm,0.6s,baz=317,slow=14,SNR=6.1						
STKA	Stephens Creek	35.94	158	P	P	15 05 19.2	-0.8
STKA				IAmb	IAmb	15 05 29.1	
	comp=Z,7.3nm,2.0s						
LZH	Lanzhou	40.51	331	*e*P	P	15 05 58.3	-0.4
LZH				pP	pP	15 06 12.5	+3.1
LZH				sP	sP	15 06 19.8	+6.2
LZH				*e*PP	PP	15 07 36.5	+4.0
HHC	Hu-ho-hao-te	41.66	343	*e*P	P	15 06 07.5	-0.5
WMQ	Urumqi	54.60	326	*e*P	P	15 07 49.0	+1.1
MK31	Makanchi Array	59.44	326	P	P	15 08 20.5	-1.5
MK31				IAmb	IAmb	15 10 08.7	
	comp=Z,4.2nm,1.8s						
MKAR	Makanchi Array	59.44	326	P	P	15 08 20.3	-1.7
	comp=Z,0.4nm,0.3s,baz=117,slow=7.8,SNR=11						
MKAR	Makanchi Array	59.44	326	P	P	15 08 20.5	-1.5
ZALV	Zalesovo Beam	62.67	334	P	P	15 08 44.2	+0.5
	comp=Z,0.3nm,0.3s,baz=116,slow=6.6,SNR=2.0						
KURK	Kurchatov	63.68	328	P	P	15 08 48.7	-1.8
KKAR	Karatay Array	64.86	318	P	P	15 08 57.0	-1.4
ABKAR	Akbulak array	73.89	321	P	P	15 09 53.0	-1.1
VNDA	Vanda	81.02	173	P	P	15 10 35.1	+1.7
	comp=Z,0.3nm,0.5s,baz=323,slow=8.0,SNR=1.4						

IDC 30 14:59:43.3±5.1**, 4°.30S**×**105°.28E, h216^{km}**±34^{km}**, mb3.1**/5**, mb1 3.3**/5**, mb1mx2.9**/51**, mbtmp3.7**/5**, Error ellipse: s-maj=149.1km s-min=22.5km az=52.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEM	Lembang	3.42	137	S	S	15 01 22.2	-0.1
	2.1nm,0.3s,baz=307,slow=22,SNR=1.1						
FITZ	Fitzroy Crossi	24.18	126	P	P	15 04 40.0	-0.2
	1.3nm,1.0s,baz=333,slow=12,SNR=1.7						
WRA	Warramunga Arr	32.30	121	P	P	15 05 52.4	+0.1
	0.3nm,0.3s,baz=302,slow=9.0,SNR=7.4						
ASAR	Alice Springs	33.66	128	P	P	15 06 04.0	-0.1
	0.6nm,0.5s,baz=299,slow=8.2,SNR=12						
ASAR				PcP	PcP	15 08 39.3	+0.4
	0.5nm,1.1s,baz=316,slow=2.6,SNR=1.7						
ASAR				ScP	ScP	15 12 02.4	-0.8
	0.3nm,0.6s,baz=302,slow=3.1,SNR=5.6						
STKA	Stephens Creek	43.72	133	P	P	15 07 27.0	-0.4
	1.2nm,0.5s,baz=312,slow=9.3,SNR=7.3						
MKAR	Makanchi Array	54.78	341	P	P	15 08 50.5	-0.2
	0.2nm,0.5s,baz=164,slow=5.8,SNR=1.7						

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*UUSS **30** 15:12:24.3±1.8, 44°.78N±0°.02×110°.72W±0°.03, h4^{km}±6^{km}, ML3.7/6, Error ellipse: s-maj=3.7km s-min=2.0km az=111.0*

NEIC 30 15:12:25.8±2.3**, 44°.74N**±0°.04×**110°.65W**±0°.04**, h9^{km}**±6^{km}**, Error ellipse: s-maj=6.8km s-min=1.3km az=137.0, Yellowstone region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YNR	Norris Junctio	0.03	217	Pg	Pg	15 12 27.1	-0.7
YNM	Yellowstone No	0.04	251	Pg	Pg	15 12 26.7	-1.1
YUF	Upper Falls	0.10	105	Pg	Pg	15 12 29.3	+0.8
YHH	Holmes Hill	0.15	289	Pg	Pg	15 12 27.7	-1.5
YMR	Madison River	0.23	253	Pg	Pg	15 12 30.1	-0.4
LKWY	Lake	0.25	134	Pg	Pb	15 12 32.2	-0.5
H17A	Grant Village	0.35	171	Pg	Pb	15 12 33.6	-0.7
YMP	Mirror Lake Pl	0.35	90		Pb	15 12 34.5	0.0
YHB	Horse Butte	0.39	272	Pg	Pg	15 12 32.6	-0.8
YHL	Hebgen Lake	0.39	287	Pg	Pg	15 12 32.5	-1.1
YPP	Pitchstone Pla	0.48	193	Pg	Pb	15 12 36.0	-0.6
YNE	Yellowstone No	0.53	59		Pg	15 12 36.6	+0.5
QLMT	Earthquake Lak	0.56	280	Pg	Pg	15 12 35.5	-1.1
FLWY	Flagg Ranch	0.66	183	Pg	Pb	15 12 39.3	-0.2
IMW	Indian Meadow	0.87	194	Pg	Pg	15 12 42.7	+0.2
RLMT	Red Lodge	1.06	68	Pg	Pg	15 12 46.1	0.0
FXWY	Fox Creek	1.13	194	Pg	Pg	15 12 47.0	-0.5
GCMT	Greycliff	1.26	33		Pn	15 12 49.2	-0.5
TPAW	Teton Pass	1.27	190	Pn	Pn	15 12 48.9	-1.1
SNOW	Snow King Moun	1.28	183	Pn	Pb	15 12 50.2	0.0
REDW	Red Top Meadow	1.38	186	Pn	Pb	15 12 51.8	-0.1
DLMT	Dillon	1.51	295		Pn	15 12 52.7	-0.5
MCMT	McKenzie Canyo	1.57	274	Pn	Pn	15 12 54.1	+0.1
AHID	Auburn Hatcher	2.00	189	Pn	Pn	15 12 59.6	-0.3
BW06	Boulder Array	2.13	158		Pb	15 13 05.1	+0.5
PD31	Pinedale Array	2.13	158		Pb	15 13 05.1	+0.5
PDAR	Pinedale Array	2.13	158		Pn	15 13 01.2	-0.5
MSO	Missoula	3.11	313	Pn	Pn	15 13 15.5	+0.4
LAO	LASA Array	3.67	56	Pn	Pn	15 13 22.6	-0.1
JTMT	Jette	3.92	321		Pn	15 13 27.1	+0.8
WALA	Waterton Lakes	4.86	334	Pn	Pn	15 13 40.6	+1.3
NEW	Newport	5.69	311		Pn	15 13 48.8	-1.7
WVOR	Wild Horse Val	6.24	251	Pn	Pn	15 13 55.5	-2.6

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*IDC **30** 15:16:26.9±1.1, 40°.18N×29°.68W, h0^{km}, mb3.9/16, mb1 4.0/16, mb1mx3.8/43, mbtmp3.9/16, MS3.9/28, Ms1 3.9/28, ms1mx3.8/32, Error ellipse: s-maj=29.2km s-min=18.3km az=175.0*

*NEIC **30** 15:16:28.5±1.9, 39°.89N±0°.10×29°.56W±0°.06, h18^{km}±4^{km}, mb4.6/22, Error ellipse: s-maj=14.3km s-min=6.3km az=186.0*

*GCMT **30** 15:16:28.5±0.3, 40°.38N±0°.03×29°.66W±0°.02, h12^{km}, MW4.8/103, Moment Tensor Solution. s18,c20; s103,c137; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.67±.06; $M_{\theta\theta}$0.22±.07; $M_{\phi\phi}$1.45±.04; $M_{r\theta}$1.83±.29; $M_{\theta\phi}$0.22±.05; $M_{\phi r}$0.10±.19; Best double couple: $M_0$2.21100×10^{16} NP1:ϕ_s1.00000°, δ34.00000°, λ-137.00000°. NP2:ϕ_s233.00000°, δ68.00000°, λ-63.00000°. Principal axes: T 1.6360, Plg18.0000°, Azm304.0000°; N 1.1480, Plg24.0000°, Azm43.0000°; P -2.7850, Plg59.0000°, Azm181.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*SVSA **30** 15:16:29.5±0.8, 40°.06N×29°.65W, h10^{km}, MD3.8, ML3.8 Error ellipse: s-maj=6.1km s-min=3.9km az=71.0*

ISC 30 15:16:30.2±1.7**, 39°.89N**±0°.07×**29°.59W**±0°.05**, h30^{km}**±13^{km}**, n87, σ1^{s}.27**/81**, mb4.2**/26**, MS3.8**/29**, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H07N1	FLORES T-PHASE	1.20	261	*e*P	Pb	15 16 53.4	+1.1
H07N1	FLORES T-PHASE	1.20	261	Pn	Pb	15 16 51.9	-0.4
H07S1	FLORES T-PHASE	1.35	248	*e*P	Pn	15 16 50.0	-3.0
H07S1	FLORES T-PHASE	1.35	248	Pn	Pn	15 16 50.5	-2.5
H07S1				Sn	Sb	15 17 12.4	+0.7
	SNR=12						
PCED	Cedros	1.43	151	*e*P	Pn	15 16 53.5	-0.7
PCED				*e*S	Sn	15 17 10.9	-1.1
PCED				A	A	15 17 13.4	
	365nm,0.3s						
PGRA	Graciosa	1.51	124	*e*P	Pn	15 16 53.9	-1.4
PGRA				*e*S	Sn	15 17 11.7	-2.2
PGRA				A	A	15 17 13.8	
	297nm,0.4s						
HOR	Horta	1.55	151	*e*P	Pn	15 16 54.9	-0.9
HOR				*e*S	Sn	15 17 13.7	-1.2
HOR				A	A	15 17 14.9	
	440nm,0.4s						
ROSA	Rosais	1.57	138	*e*P	Pn	15 16 54.6	-1.4
ROSA				*e*S	Sn	15 17 13.6	-1.7
ROSA				A	A	15 17 17.2	
	147nm,0.4s						
ROSA	Rosais	1.57	138		Pn	15 16 54.3	-1.7
PICO	Pico	1.65	146	*e*P	Pn	15 16 56.4	-0.9
PICO				*e*S	Sn	15 17 16.4	-1.2
PICO				A	A	15 17 19.0	
	375nm,0.2s						
PCAN	Candelaria	1.66	149	*e*P	Pn	15 16 56.4	-0.9
PCAN				*e*S	Sn	15 17 16.5	-1.2
PCAN				A	A	15 17 18.3	
	429nm,0.2s						
PMAN	Manadas	1.71	137	*e*P	Pn	15 16 56.8	-1.2
PMAN				*e*S	Sn	15 17 17.2	-1.7
PMAN				A	A	15 17 18.7	
	231nm,0.2s						
ADH	Angra Heroismo	2.20	123	*e*P	Pn	15 17 03.1	-1.7
ADH				*e*S	Sn	15 17 28.8	-2.2
ADH				A	A	15 17 33.0	
	93nm,0.4s						
PSCM	Serra do Cume	2.25	121	*e*P	Pn	15 17 03.8	-1.7
PSCM				*e*S	Sn	15 17 30.3	-2.0
PSCM				A	A	15 17 33.0	
	109nm,0.3s						
PSET	Sete Cidades	3.66	123	*e*P	Pn	15 17 23.8	-1.0
PDA	Ponta Delgada	3.74	124	*e*S	Sn	15 18 06.2	-2.7
PDA				A	A	15 18 07.9	
	28nm,0.1s						
CMLA	Cha da Macela	3.82	122	*e*P	Pn	15 17 26.0	-1.0
CMLA				*e*S	Sn	15 18 08.4	-2.5
CMLA				A	A	15 18 14.9	
	218nm,0.4s						
CMLA	Cha da Macela	3.82	122		Pn	15 17 25.9	-1.1
BART	Pico Bartolome	4.04	120	*e*P	Pn	15 17 28.8	-1.4
PSMA	Santa Maria	4.54	128	*e*P	Pn	15 17 35.5	-1.4
PSMN	Pico do Norte,	4.57	128	*e*P	Pn	15 17 36.3	-1.1
MDT	Midelt	21.28	102	LR	LR	15 27 34.7	
	comp=Z,355nm,21.0s,baz=347,slow=31						
DRLN	Deer Lake	21.87	305	P	P	15 21 21.9	+1.5
ESK	Eskdalemuir	23.35	40	P	P	15 21 36.2	+0.3
ESK				IAmb	IAmb	15 21 42.4	
	comp=Z,32nm,1.2s						
EKA	Eskdalemuir Ar	23.38	40	P	P	15 21 34.8	-1.4
	comp=Z,2.8nm,0.9s,baz=236,slow=7.6,SNR=3.9						
BORG	Borgarnes	25.36	8	LR	LR	15 29 11.1	
	comp=Z,210nm,19.7s,baz=172,slow=30						
SCHQ	Schefferville	28.91	314	LR	LR	15 31 48.1	
	comp=Z,248nm,21.6s,baz=108,slow=32						
DAVOX	Davos/Dischmat	29.29	63	LR	LR	15 32 20.9	
	comp=Z,202nm,19.0s,baz=262,slow=33						
SFJD	Kangerlussuaq	29.59	343	LR	LR	15 31 32.8	
	comp=Z,11nm,20.3s,baz=158,slow=31						
KEST	Kesra	30.87	85	LR	LR	15 34 16.9	
	comp=Z,265nm,20.0s,baz=246,slow=35						
KBA	Koelnbreinsper	31.65	63	*e*pP	P	15 22 52.8	+2.0
	comp=Z,6.4nm,0.9s						
GERES	GERESS Array B	31.84	59	P	P	15 22 52.8	+0.4
	comp=Z,0.2nm,0.6s,baz=264,slow=8.8,SNR=2.2						
GERES				LR	LR	15 33 54.9	
	comp=Z,161nm,20.4s,baz=265,slow=33						
OBKA	Obir	32.51	63	*e*P	P	15 22 59.0	+0.7
	comp=Z,3.5nm,0.8s						
NOA	NORSAR Array B	32.71	36	P	P	15 22 59.4	-0.4
	comp=Z,0.4nm,0.8s,baz=244,slow=7.9,SNR=2.9						
NOA				LR	LR	15 34 01.2	
	comp=Z,151nm,21.7s,baz=250,slow=32						
FINES	FINESS Array B	39.76	38	P	P	15 23 59.2	-0.7
	comp=Z,2.4nm,0.7s,baz=290,slow=5.7,SNR=7.2						
FINES				LR	LR	15 38 51.9	
	comp=Z,250nm,19.5s,baz=256,slow=34						
DBIC	Dimbokro	39.84	140	P	P	15 24 04.5	+3.5
	comp=Z,3.9nm,1.0s,baz=307,slow=11,SNR=3.6						
DBIC				LR	LR	15 39 29.2	
	comp=Z,100nm,19.4s,baz=311,slow=34						
ARCES	ARCESS Array B	41.17	26	P	P	15 24 10.7	-0.8
	comp=Z,3.8nm,0.9s,baz=250,slow=5.4,SNR=3.8						
ARCES				LR	LR	15 39 23.6	
	comp=Z,24nm,21.0s,baz=308,slow=34						
AKASG	Malin Array Be	41.73	55	P	P	15 24 15.4	-0.8
	comp=Z,2.4nm,0.9s,baz=274,slow=8.8,SNR=6.9						
AKASG				LR	LR	15 41 07.4	
	comp=Z,227nm,18.3s,baz=260,slow=36						
ULM	Lac du Bonnet	46.50	306	LR	LR	15 43 27.2	
	comp=Z,317nm,18.5s,baz=75,slow=35						
KBZ	Khabaz	52.57	61	LR	LR	15 47 58.2	
	comp=Z,60nm,20.1s,baz=278,slow=36						
ROSC	El Rosal	53.26	241	LR	LR	15 46 27.4	
	comp=Z,233nm,20.0s,baz=46,slow=34						
YKA	Yellowknife Ar	53.36	325	P	P	15 25 45.2	-1.2
	comp=Z,0.5nm,0.9s,baz=70,slow=7.3,SNR=3.5						
YKA				LR	LR	15 45 10.0	
	comp=Z,83nm,21.4s,baz=0.0,slow=32						
N23A	Red Feather La	56.35	298	P	P	15 26 08.7	0.0
ARU	Arti	56.98	41	P	P	15 26 12.5	-0.1
ARU				IAmb	IAmb	15 26 13.1	
	comp=Z,3.8nm,0.9s						
MSTX	Muleshoe	57.30	289	P	P	15 26 15.6	+0.2
BDFB	Brasilia	57.85	201	LR	LR	15 48 32.1	
	comp=Z,124nm,18.4s,baz=57,slow=33						
PD31	Pinedale Array	57.94	301	P	P	15 26 20.5	+0.6
PD31				IAmb	IAmb	15 26 25.1	
	comp=Z,8.0nm,1.5s						
PDAR	Pinedale Array	57.94	301	P	P	15 26 19.7	-0.3
	comp=Z,1.3nm,0.9s,baz=90,slow=5.9,SNR=6.6						
PDAR				LR	LR	15 51 13.1	
	comp=Z,309nm,18.4s,baz=95,slow=36						
PDAR	Pinedale Array	57.94	301	P	P	15 26 19.4	-0.5
INK	Inuvik	58.40	335	P	P	15 26 20.9	-1.5
	comp=Z,1.2nm,0.9s,baz=100,slow=4.8,SNR=3.5						
INK	Inuvik	58.40	335	IAmb	IAmb	15 27 37.2	
	comp=Z,5.3nm,1.5s						
HWUT	Hardware Ranch	59.80	301	P	P	15 26 34.1	+1.3
MVCO	Mesa Verde	59.81	295	P	P	15 26 34.0	+0.9
MVCO				IAmb	IAmb	15 26 46.5	
	comp=Z,9.5nm,1.5s						
TX31	Lajitas Ar. Si	60.29	285	P	P	15 26 35.1	-1.1
TX31				IAmb	IAmb	15 26 42.7	
	comp=Z,6.8nm,1.1s						
TX32	Lajitas Array	60.29	285	P	P	15 26 34.9	-1.3
TX32				IAmb	IAmb	15 26 42.7	
	comp=Z,6.1nm,1.1s						
TXAR	Lajitas Array	60.29	285	P	P	15 26 36.3	+0.1
	comp=Z,2.7nm,0.8s,baz=73,slow=6.5,SNR=19						
TXAR				LR	LR	15 53 12.5	
	comp=Z,84nm,18.9s,baz=0.0,slow=37						
TXAR	Lajitas Array	60.29	285	P	P	15 26 35.4	-0.8
ABKAR	Akbulak array	60.88	49	P	P	15 26 40.2	+0.4
NRIK	Noril'sk	61.80	21	P	P	15 26 46.3	+0.6
	comp=Z,0.9nm,0.5s,baz=315,slow=3.8,SNR=4.6						
NRIK				LR	LR	15 53 30.2	
	comp=Z,44nm,19.2s,baz=286,slow=36						
ELK	Elko	62.64	301	P	P	15 26 53.1	+1.0
X16A	Lo Mia Camp, P	63.29	294	P	P	15 26 57.7	+1.3
X16A				IAmb	IAmb	15 27 00.7	
	comp=Z,4.4nm,1.2s						
J08A	Circle Bar Ran	63.39	305	P	P	15 26 58.4	+1.5
J08A				IAmb	IAmb	15 27 00.2	
	comp=Z,6.3nm,1.1s						
ILAR	Eielson Array	64.79	335	P	P	15 27 05.5	-0.1
	comp=Z,0.3nm,1.0s,baz=37,slow=4.1,SNR=4.1						
ILAR				LR	LR	15 52 37.0	
	comp=Z,45nm,19.8s,baz=97,slow=34						
NVAR	Mina Array Bea	65.86	301	LR	LR	15 56 16.3	
	comp=Z,208nm,18.6s,baz=356,slow=36						
IMAR	Indian Mountai	66.05	338	P	P	15 27 13.2	-0.5
LPAZ	La Paz	66.43	221	LR	LR	15 55 11.9	
	comp=Z,59nm,18.4s,baz=12,slow=35						
PMR	Palmer	67.69	333	P	P	15 27 25.1	+0.9
PMR				IAmb	IAmb	15 27 46.5	
	comp=Z,6.4nm,1.4s						
TIXI	Tiksi	67.72	7	P	P	15 27 24.8	+0.6
KK31	Karatay Array	70.36	50	P	P	15 27 41.6	+0.4
KKAR	Karatay Array	70.36	50	P	P	15 27 41.6	+0.4
KKAR	Karatay Array	70.36	50	P	P	15 27 41.4	+0.2
CPUP	Villa Florida	70.77	206	LR	LR	15 55 44.1	
	comp=Z,37nm,20.8s,baz=34,slow=33						
ZAA0	Zalesovo Array	70.90	35	P	P	15 27 43.8	-0.4
ZALV	Zalesovo Beam	70.90	35	P	P	15 27 44.9	+0.7
	comp=Z,0.4nm,0.4s,baz=266,slow=5.9,SNR=5.2						
ZALV				LR	LR	15 58 06.6	
	comp=Z,63nm,21.2s,baz=286,slow=35						
ZALV	Zalesovo Beam	70.90	35	P	P	15 27 43.6	-0.6
MK31	Makanchi Array	74.51	41	P	P	15 28 05.5	-0.3
MKAR	Makanchi Array	74.51	41	P	P	15 28 06.2	+0.4
	comp=Z,0.8nm,0.7s,baz=316,slow=5.3,SNR=10						
MKAR				LR	LR	16 00 53.9	
	comp=Z,137nm,20.4s,baz=310,slow=36						
MKAR	Makanchi Array	74.51	41	P	P	15 28 05.7	-0.2
SONM	Songino Array	84.31	28	P	P	15 28 59.6	+0.3
	comp=Z,1.2nm,1.0s,baz=300,slow=4.9,SNR=5.2						
SONM	Songino Array	84.31	28	P	P	15 28 59.1	-0.2
BOSA	Boshof	85.11	134	LR	LR	16 03 36.4	
	comp=Z,111nm,20.5s,baz=290,slow=33						
PETK	Petropavlovsk-	87.16	356	LR	LR	16 08 36.8	
	comp=Z,33nm,18.1s,baz=61,slow=36						
PLCA	Paso Flores	88.49	210	LR	LR	16 09 04.4	
	comp=Z,32nm,18.2s,baz=355,slow=36						
PSA00	Pilbara Seismi	148.23	64		PKPbc	15 36 13.5	0.0
WRA	Warramunga Arr	155.80	39	PKPab	PKPab	15 36 48.0	-0.2
	comp=Z,0.6nm,0.7s,baz=339,slow=4.2,SNR=5.7						
ASAR	Alice Springs	158.65	46	PKPab	PKPab	15 37 00.9	+0.5
	comp=Z,0.8nm,0.8s,baz=333,slow=3.9,SNR=8.5						
ASAR	Alice Springs	158.65	46		PKPab	15 37 00.5	0.0

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*THE **30** 15:26:22.2, 38°.18N×20°.36E, h9^{km}, ML2.5/10, Error ellipse: s-maj=0.8km s-min=0.4km az=241.0*

*ATH **30** 15:26:22.2, 38°.19N×20°.38E, h10^{km}±1^{km}, ML2.7/9, Error ellipse: s-maj=1.8km s-min=1.1km az=241.0*

ISC 30 15:26:21.5±1.1**, 38°.18N**±0°.04×**20°.33E**±0°.04**, h12^{km}**±4^{km}**, n47, σ0^{s}.69**/80**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF3	Kipouria, Keph	0.03	27	P	Pg	15 26 23.8	+0.1
KEF3				S	Sg	15 26 24.7	-0.5
CHV1	Chavriata, Kef	0.04	81	P	Pg	15 26 23.9	+0.2
CHV1				S	Sg	15 26 25.1	-0.2
AGT1	Agia Thekli	0.08	30	P	Pg	15 26 24.1	0.0
AGT1				S	Sg	15 26 25.6	-0.5
LXRA	Lixouri, Kepha	0.09	74	P	Pg	15 26 24.2	+0.1
LXRA				S	Sg	15 26 25.7	-0.4
LXR1	Lixouri, Cepha	0.09	74	P	Pg	15 26 24.0	-0.2
LXR1				S	Sg	15 26 25.8	-0.3
KEF4	Livadi, Kephal	0.11	42	P	Pg	15 26 24.3	-0.1
KEF4				S	Sg	15 26 26.0	-0.6
ARGA	Argostoli. Kep	0.12	90	P	Pg	15 26 24.7	+0.2
ARGA				S	Sg	15 26 26.6	-0.2
ARG2	Argostoli	0.12	89	P	Pg	15 26 24.9	+0.3
ARG2				S	Sg	15 26 26.8	-0.1
KEF2	Argostoli. Kep	0.12	95	P	Pg	15 26 24.9	+0.3
KEF2				S	Sg	15 26 26.5	-0.4
KEF1	Kardakata, Kep	0.15	48	P	Pg	15 26 24.9	-0.1
KEF1				S	Sg	15 26 26.9	-0.6
VLS	Valsamata	0.20	90	P	Pg	15 26 25.9	0.0
VLS				S	Sg	15 26 28.9	-0.1
	6μm,0.2s						
VLS	Valsamata	0.20	90	P	Pg	15 26 25.9	0.0
VLS				AML	AML	15 26 29.0	
	comp=N,15958μm,0.3s						
VLS				AML	AML	15 26 29.5	
	comp=E,9002μm,0.2s						
VSK1	VASILIKIADES	0.29	38	P	Pg	15 26 27.4	-0.1
KONA	Konidatara, Ke	0.31	37	P	Pg	15 26 27.8	-0.1
KONA				S	Sg	15 26 32.2	+0.1
KONA				AML	AML	15 26 32.7	
	comp=N,5697μm,0.3s						
KONA				AML	AML	15 26 35.4	
	comp=E,4332μm,0.4s						
FSK	Fiskardo	0.34	33	P	Pg	15 26 28.1	-0.2
FSK				S	Sg	15 26 33.0	+0.2
	comp=E,1μm,0.6s						
FSK	Fiskardo	0.34	33	P	Pg	15 26 28.1	-0.2
FSK				S	Sg	15 26 32.5	-0.3
FSK				AML	AML	15 26 34.0	
	comp=E,3103μm,0.3s						
FSK				AML	AML	15 26 39.0	
	comp=N,1868μm,0.8s						
KFL	Anninata	0.37	100	P	Pg	15 26 29.0	+0.2
KFL	Anninata	0.37	100	P	Pg	15 26 29.0	+0.2
KFL				S	Sg	15 26 33.7	-0.1
KFL				AML	AML	15 26 35.0	
	comp=E,9303μm,0.4s						
KFL				AML	AML	15 26 37.2	
	comp=N,3948μm,0.5s						
EVGI	Lefkada island	0.51	30	P	Pg	15 26 31.5	0.0
EVGI				S	Sg	15 26 38.9	+0.6

EVGI	Lefkada island	0.51	30	P	Pg	15 26 31.4	0.0
LKD2	Lefkada island	0.66	23	P	Pg	15 26 35.0	+0.6
LKD2				S	Sb	15 26 44.6	+0.4
	comp=N,242nm,0.6s						
LKD2	Lefkada island	0.66	23	P	Pg	15 26 34.7	+0.4
LKD2				AML	AML	15 26 50.8	
	comp=E,532µm,0.6s						
LKD2				AML	AML	15 26 56.1	
	comp=N,590µm,0.4s						
TSLK	Tsoukalades, L	0.69	21	P	Pg	15 26 34.8	-0.1
TSLK				S	Sb	15 26 45.2	+0.1
	comp=N,292nm,0.5s						
TSLK	Tsoukalades, L	0.69	21	P	Pg	15 26 34.9	-0.1
RLS	Riolos of Patr	0.90	97	P	Pg	15 26 38.6	-0.3
RLS				S	Sg	15 26 50.2	-0.5
RLS				AML	AML	15 26 55.7	
	comp=E,511µm,0.3s						
RLS				AML	AML	15 26 56.0	
	comp=N,606µm,0.3s						
PVO	Paravola	1.04	65	P	Pg	15 26 40.5	-0.9
PVO				S	Sb	15 26 55.5	+0.6
	comp=N,380nm,0.4s						
PVO	Paravola	1.04	65	P	Pg	15 26 41.0	-0.4
PVO				S	Sg	15 26 54.4	-0.6
PVO				AML	AML	15 27 02.3	
	comp=N,696µm,0.4s						
PVO				AML	AML	15 27 03.0	
	comp=E,848µm,0.5s						
DRO	Drossia	1.11	101	P	Pg	15 26 42.6	-0.3
DRO				S	Sg	15 26 56.5	-0.8
DRO				AML	AML	15 27 06.0	
	comp=N,1048µm,0.4s						
DRO				AML	AML	15 27 09.4	
	comp=E,900µm,0.4s						
EFP	Efpalio	1.26	78	P	Pn	15 26 44.7	-0.2
EFP				S	Sn	15 27 02.3	+0.5
	comp=E,200nm,0.5s						
ANX	Ano Chora	1.32	71	P	Pn	15 26 46.1	+0.3
ANX				S	Sn	15 27 04.2	+0.9
	comp=E,285nm,0.6s						
ANX	Ano Chora	1.32	71	P	Pn	15 26 46.1	+0.3
ANX				S	Sn	15 27 04.0	+0.7
ANX				AML	AML	15 27 11.6	
	comp=E,475µm,0.5s						
ANX				AML	AML	15 27 12.5	
	comp=N,686µm,0.6s						
SERG	Sergoula	1.38	80	P	Pn	15 26 47.1	+0.6
SERG				S	Sg	15 27 05.6	-0.3
	comp=N,170nm,0.5s						
SERG	Sergoula	1.38	80	P	Pn	15 26 46.8	+0.3
TRIZ	Trizonia	1.38	82	P	Pn	15 26 46.4	-0.2
TRIZ				S	Sg	15 27 06.0	0.0
	comp=N,248nm,0.5s						
ALIK	Aliki, Aigiali	1.41	86	P	Pn	15 26 46.4	-0.4
KALE	Kalithea	1.44	81	P	Pn	15 26 47.1	-0.3
KALE				S	Sb	15 27 07.0	+0.5
	comp=N,158nm,0.6s						
KALE	Kalithea	1.44	81	P	Pn	15 26 48.0	+0.6
DSF	Desfina	1.74	82	P	Pn	15 26 51.6	0.0
DSF				S	Sb	15 27 15.1	-0.2
DBRK	Dubrovnik	4.79	340	*e*Pn	Pn	15 27 34.5	+1.1
DBRK				Sn	Sn	15 28 27.7	-1.1
STON	Ston	5.10	338	*e*Pn	Pn	15 27 38.3	+0.7
STON				Sn	Sn	15 28 34.9	-1.5
MAKA	Makarska	5.69	335	*e*Pn	Pn	15 27 47.0	+1.2
MAKA				Sn	Sn	15 28 48.3	-2.6
RICI	Ricice	5.84	336	*e*Pn	Pn	15 27 47.3	-0.5
RICI				Sn	Sn	15 28 53.4	-1.3
ZIRJ	Zirje	6.52	329	*i* Pn	Pn	15 27 57.3	+0.2
MORI	Morici	6.67	330	*e*Pn	Pn	15 28 00.2	+1.0
DUGI	Dugi Otok	7.04	327	*i* Pn	Pn	15 28 04.9	+0.6
UDBI	Udbina	7.21	333	*e*Pn	Pn	15 28 09.7	+2.9
NVLJ	Novalja	7.59	329	*e*Pn	Pn	15 28 13.0	+1.2

*THE **30** 15:45:31.8, 38°.25N×20°.38E, h11^{km}, ML2.5/4, Error ellipse: s-maj=0.7km s-min=0.3km az=252.0*
*ATH **30** 15:45:31.5, 38°.23N×20°.37E, h13^{km}±1^{km}, ML2.4/6, Error ellipse: s-maj=2.3km s-min=1.1km az=239.0*
ISC 30 15:45:31.7±0.9, **38°.25N**±0°.03×**20°.39E**±0°.04, **h11**^{km}±4^{km}, **n37**, σ**0ˢ.60**/71, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGT1	Agia Thekli	0.01	339	P	Pg	15 45 33.7	0.0
AGT1				S	Sg	15 45 35.0	-0.1
KEF4	Livadi, Kephal	0.03	66	P	Pg	15 45 33.9	+0.1
KEF4				S	Sg	15 45 35.3	0.0
KEF3	Kipouria, Keph	0.05	216	P	Pg	15 45 34.3	+0.3
KEF3				S	Sg	15 45 36.0	+0.5
LXR1	Lixouri, Cepha	0.06	137	P	Pg	15 45 34.3	+0.3
LXR1				S	Sg	15 45 36.1	+0.5
LXRA	Lixouri, Kepha	0.06	138	P	Pg	15 45 34.3	+0.3
LXRA				S	Sg	15 45 36.0	+0.3
CHV1	Chavriata, Kef	0.06	184	P	Pg	15 45 34.4	+0.4
CHV1				S	Sg	15 45 36.1	+0.4
KEF1	Kardakata, Kep	0.07	63	P	Pg	15 45 34.2	0.0
KEF1				S	Sg	15 45 35.7	-0.2
ARG2	Argostoli	0.10	130	P	Pg	15 45 34.7	+0.2
ARG2				S	Sg	15 45 36.6	+0.1
KEF2	Argostoli. Kep	0.11	135	P	Pg	15 45 34.9	+0.3
KEF2				S	Sg	15 45 37.1	+0.4
VLS	Valsamata	0.17	113	P	Pg	15 45 35.6	+0.1
VLS				S	Sg	15 45 38.4	+0.1
	5µm,0.1s						
VLS	Valsamata	0.17	113	P	Pg	15 45 35.6	+0.1
VLS				S	Sg	15 45 38.4	+0.1
VLS				AML	AML	15 45 38.5	
	comp=N,10009µm,0.1s						
VLS				AML	AML	15 45 38.5	
	comp=E,11300µm,0.1s						
VSK1	VASILIKIADES	0.21	40	P	Pg	15 45 36.3	0.0
VSK1				S	Sg	15 45 39.9	+0.5
KONA	Konidatara, Ke	0.23	39	P	Pg	15 45 36.6	+0.1
KONA				S	Sg	15 45 40.5	+0.6
KONA				AML	AML	15 45 40.9	
	comp=E,2089µm,0.1s						
KONA				AML	AML	15 45 41.0	
	comp=N,2439µm,0.2s						
FSK	Fiskardo	0.26	33	P	Pg	15 45 37.0	0.0
FSK				S	Sg	15 45 41.2	+0.6
	comp=N,3µm,0.1s						
FSK	Fiskardo	0.26	33	P	Pg	15 45 37.0	0.0
FSK				S	Sg	15 45 41.1	+0.6
FSK				AML	AML	15 45 41.5	
	comp=E,8127µm,0.1s						
FSK				AML	AML	15 45 41.5	
	comp=N,2715µm,0.1s						
KFL	Anninata	0.34	113	P	Pg	15 45 38.6	+0.1
KFL				S	Sg	15 45 44.1	+0.9
	comp=N,1µm,0.2s						
KFL	Anninata	0.34	113	P	Pg	15 45 38.7	+0.1
KFL				S	Sg	15 45 44.3	+1.1
KFL				AML	AML	15 45 45.1	
	comp=N,2595µm,0.2s						
KFL				AML	AML	15 45 45.3	
	comp=E,2020µm,0.3s						
EVGI	Lefkada island	0.43	29	P	Pg	15 45 40.1	-0.1
EVGI				S	Sg	15 45 46.9	+1.0
EVGI	Lefkada island	0.43	29	P	Pg	15 45 40.2	0.0
EVGI				S	Sg	15 45 46.9	+1.0
MGNA	Meganis	0.52	38	P	Pg	15 45 41.8	0.0
MGNA				S	Sb	15 45 49.9	-0.4
MGNA				AML	AML	15 45 50.1	
	comp=E,594µm,0.1s						
MGNA				AML	AML	15 45 50.2	
	comp=N,455µm,0.2s						
LKD2	Lefkada island	0.58	21	P	Pg	15 45 42.4	-0.7
LKD2				S	Sg	15 45 51.6	+0.8
LKD2	Lefkada island	0.58	21	P	Pg	15 45 42.4	-0.7
LKD2				S	Sb	15 45 52.5	+0.3
LKD2				AML	AML	15 45 57.9	
	comp=E,160µm,0.2s						
LKD2				AML	AML	15 46 01.0	
	comp=N,191µm,0.5s						
TSLK	Tsoukalades, L	0.62	20	P	Pg	15 45 43.3	-0.4
TSLK				S	Sg	15 45 52.3	+0.5
TSLK	Tsoukalades, L	0.62	20	P	Pg	15 45 42.9	-0.8
TSLK				S	Sb	15 45 53.8	+0.7
RLS	Riolos of Patr	0.87	102	P	Pg	15 45 48.5	0.0
RLS				S	Sn	15 46 01.7	-0.8
PVO	Paravola	0.97	67	P	Pg	15 45 50.1	-0.2
PVO				S	Sn	15 46 04.5	-0.4
	comp=N,92nm,0.3s						
PVO	Paravola	0.97	67	P	Pg	15 45 50.3	-0.1
DRO	Drossia	1.08	105	P	Pb	15 45 52.5	+0.1
DRO				S	Sn	15 46 07.7	-0.1
DRO	Drossia	1.08	105	P	Pb	15 45 52.4	0.0
DRO				S	Sn	15 46 07.9	+0.1
EFP	Efpalio	1.21	81	P	Pn	15 45 53.3	-1.1
EFP				S	Sn	15 46 10.9	+0.1
EFP	Efpalio	1.21	81	P	Pn	15 45 53.3	-1.1
ANX	Ano Chora	1.25	73	P	Pn	15 45 54.9	-0.3
ANX				S	Sb	15 46 11.6	0.0
ANX	Ano Chora	1.25	73	P	Pn	15 45 54.7	-0.5
ANX				S	Sg	15 46 14.3	+2.2
IGT	Igoumenitsa	1.29	358	P	Pn	15 45 54.7	-0.9
IGT				S	Sb	15 46 12.2	-0.2
IGT	Igoumenitsa	1.29	358	P	Pg	15 45 57.2	+0.8
IGT				S	Sg	15 46 14.8	+1.7
SERG	Sergoula	1.32	82	P	Pn	15 45 55.3	-0.8
SERG				S	Sn	15 46 14.0	+0.3
SERG	Sergoula	1.32	82	P	Pn	15 45 55.9	-0.2

TAP 30 15:46:38.2, 23°.20N×120°.93E, h6^{km}, ML0.7, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDTW	Lidau	0.08	97	*e*P	Pg	15 46 40.8	+0.6
	baz=97						
ELDTW				*e*S	Sg	15 46 42.2	+0.7
	baz=97						
STYT	Tauyuan	0.17	258	P	Pg	15 46 42.1	+0.5
	baz=256						
STYT				*i* S	Sg	15 46 44.5	+0.6
	baz=256						
TPUB	Ta-pu	0.30	290	*e*P	Pb	15 46 46.1	+0.1
	baz=299						
TPUB				S	Sb	15 46 49.7	-1.5
	baz=299						
WTP	Ta-pu	0.30	279	P	Pg	15 46 45.0	+0.9
	baz=279						
WTP				S	Sb	15 46 49.9	-1.4
	baz=279						
FULB	Fuli	0.33	90	*e*P	Pb	15 46 46.9	+0.3
	baz=81						
FULB				*e*S	Sb	15 46 51.9	-0.2
	baz=81						
SLGT	Liugui	0.33	233	*e*P	Pg	15 46 45.6	+0.9
	baz=224						

TAP 30 15:46:38.4, 23°.60N×120°.85E, h11^{km}, ML0.8, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALS	Alishan	0.10	203	P	Pg	15 46 41.8	+0.4
	baz=197						
ALS				S	Sg	15 46 43.9	+0.3
	baz=197						
WHYT	Xinyi Township	0.10	4	P	Pg	15 46 42.0	+0.8
	baz=4.0						
WHYT				S	Sg	15 46 44.1	+0.9
	baz=4.0						
CHN5	Tsauling	0.15	269	P	Pg	15 46 42.7	+0.7
	baz=269						
CHN5				S	Sg	15 46 45.7	+1.2
	baz=269						
SSLB	Suanglung	0.21	28	P	Pb	15 46 43.8	-0.6
	baz=28						
SSLB				S	Sg	15 46 47.2	+1.1
	baz=28						
VWDT	VWDT	0.31	60	*e*P	Pb	15 46 45.8	-0.2
	baz=60						
CHN4	Tsaushan	0.34	223	*e*P	Pb	15 46 46.1	-0.3
	baz=296						
CHN4	Tsaushan	0.34	223	P	Pb	15 46 46.1	-0.4
	baz=223						
CHN4				*e*S	Sb	15 46 51.7	-0.2
	baz=223						

WEL 30 15:56:29.7, 40°.0S±0°.7×**176°.6E**±0°.7, **h14**^{km}±1^{km}, **M3.5**/15, **ML3.8**/15, **MLv3.5**/15, **Error ellipse: s-maj=0.0km s-min=0.0km az=140.1, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WPHZ	Waipukurau	0.14	222	P	Pb	15 56 34.4	+0.2
PXZ	Pawanui	0.24	108	P	Pb	15 56 35.4	-0.5
PXZ				S	Sb	15 56 40.0	+0.1
PNHZ	Pukenui	0.28	279	P	Pb	15 56 36.5	-0.1
PNHZ				S	Sb	15 56 41.5	+0.2
KAHZ	Kahuranaki	0.29	56	P	Pb	15 56 36.6	-0.1
PRHZ	Porangahau	0.31	170	P	Pb	15 56 37.1	0.0
KRHZ	Kereru	0.35	335	P	Pb	15 56 37.5	-0.2
KRHZ				S	Sb	15 56 42.4	-0.7
DVHZ	Dannevirke	0.46	222	P	Pb	15 56 39.5	-0.1
TSZ	Takapari Road	0.47	258	P	Pb	15 56 39.7	-0.1
TSZ				S	Sb	15 56 47.0	+0.3
CKHZ	Cape Kidnapper	0.50	53	P	Pb	15 56 40.7	+0.5
ANWZ	Angora Road	0.51	188	P	Pb	15 56 41.0	+0.6
MCHZ	McNeill Hill	0.52	11	P	Pb	15 56 41.2	+0.5
KWHZ	Kaweka Forest	0.55	348	P	Pb	15 56 41.0	-0.1
BHHZ	Black Hill Sta	0.61	320	P	Pb	15 56 41.9	-0.2
POWZ	Post Office Ro	0.75	234	P	Pb	15 56 44.7	+0.2
PRWZ	Pori Road	0.75	217	P	Pn	15 56 45.3	-0.6
BFZ	Birch Farm	0.76	198	P	Pb	15 56 45.2	+0.4
ARHZ	Aropaoanui	0.77	26	P	Pn	15 56 45.9	-0.3
BKZ	Black Stump Fm	0.79	356	P	Pb	15 56 45.5	+0.2
MOVZ	Moawhango	0.83	311	P	Pb	15 56 46.1	+0.1
NMHZ	Naumai	0.88	12	P	Pn	15 56 47.7	0.0
TIWZ	Tintock	0.97	212	P	Pb	15 56 48.3	0.0
TUVZ	Tukino	0.98	314	P	Pn	15 56 49.2	-0.1
OHWZ	Ohakea	0.99	255	P	Pn	15 56 49.5	+0.4
CPWZ	Castlepoint	0.99	196	P	Pb	15 56 48.7	+0.1
WHVZ	Whangaehu Hut	1.01	312	P	Pn	15 56 49.6	-0.1
MTVZ	Mangateitei	1.02	304	P	Pn	15 56 49.8	+0.1
WHHZ	Waihua	1.02	31	P	Pb	15 56 49.1	0.0
TRVZ	Turoa	1.02	310	P	Pn	15 56 49.9	0.0
MRZ	Mangatainoka R	1.03	227	P	Pb	15 56 49.1	-0.2
DRZ	Dome Shelter	1.03	311	P	Pn	15 56 50.9	+0.9
FWVZ	Far West T-bar	1.05	312	P	Pn	15 56 50.2	-0.1
NGZ	Ngauruhoe	1.08	316	P	Pn	15 56 50.8	+0.2
RAHZ	Arahi	1.12	21	P	Pb	15 56 50.5	-0.3
KRVZ	Karewarewa	1.12	320	P	Pg	15 56 51.4	+0.1
RITZ	Rihia Road	1.12	331	P	Pg	15 56 51.8	+0.5
MTHZ	Maungataniwha	1.12	11	P	Pb	15 56 50.7	-0.3
HATZ	Hinemaiaia	1.13	341	P	Pg	15 56 51.3	-0.1
MRHZ	Matea Rd	1.13	354	P	Pg	15 56 51.3	-0.1
WTVZ	West Tongariro	1.13	318	P	Pg	15 56 51.6	+0.1
PKVZ	Pokaka	1.15	305	P	Pg	15 56 52.1	+0.2
KATZ	Kakaramea	1.19	325	P	Pg	15 56 52.7	+0.1
WAZ	Wanganui	1.23	279	P	Pg	15 56 53.9	+0.5
HOWZ	Holdsworth Sta	1.23	220	P	Pn	15 56 51.6	-1.0
TWVZ	Taurewa	1.24	315	P	Pg	15 56 53.3	-0.3
RATZ	Rangitukua	1.25	330	P	Pg	15 56 54.1	+0.3
TMWZ	Te Maipa	1.26	204	P	Pn	15 56 51.5	-1.4
KNZ	Kokohu	1.27	43	P	Pn	15 56 51.6	-1.4
MHGZ	Mahia Peninsul	1.31	53	P	Pn	15 56 52.2	-1.5
SNGZ	Shannon Statio	1.32	27	P	Pn	15 56 52.9	-0.8
OGWZ	Otaki Gorge	1.37	231	P	Pn	15 56 46.4	-8.0
OGWZ				P	Pb	15 56 53.6	-1.4
WHTZ	Whakaora	1.37	340	P	Pb	15 56 55.5	+0.3
RTZ	Ruatahuna	1.38	14	P	Pn	15 56 54.1	-0.6
ALRZ	Allen Road	1.41	353	P	Pn	15 56 54.8	-0.2
WATZ	Wairara	1.41	332	P	Pb	15 56 55.4	-0.3
MTW	Mount Morrison	1.45	214	P	Pn	15 56 53.8	-1.7
PRGZ	Paritu Road	1.45	45	P	Pn	15 56 54.0	-1.6
PRRZ	Plateau Road	1.46	355	P	Pn	15 56 55.7	0.0
WPRZ	Whakapapatarin	1.47	348	P	Pg	15 56 57.8	-0.2
MUGZ	Murupara	1.49	6	P	Pn	15 56 55.6	-0.5
KIW	Kapiti Island	1.55	234	P	Pn	15 56 56.3	-0.7
RIGZ	Rimuhau	1.56	37	P	Pn	15 56 55.8	-1.3
KUTZ	Kaahu Road	1.58	338	P	Pn	15 56 57.7	+0.5
HRRZ	Handcock Road	1.58	352	P	Pn	15 56 57.4	+0.1
TRWZ	Traveller	1.58	205	P	Pn	15 56 55.6	-1.8
RAGZ	Rawiri	1.60	25	P	Pn	15 56 56.7	-1.0
RRRZ	Republican Roa	1.62	359	P	Pn	15 56 57.5	-0.4
CAW	Cannon Point	1.62	224	P	Pn	15 56 56.4	-1.4
VRZ	Vera Road	1.62	300	P	Pb	15 56 59.0	-0.5
GRRZ	Galatos Road	1.65	347	P	Pg	15 57 01.1	-0.2
HSRZ	Hossack Road	1.66	351	P	Pn	15 56 58.5	+0.1
PAWZ	Paruwai Farm	1.66	211	P	Pn	15 56 56.5	-2.0
HLRZ	Highlands Stat	1.71	354	P	Pn	15 57 00.0	+0.9
TARZ	Mount Tarawera	1.72	358	P	Pn	15 56 59.1	-0.2
LREZ	Lake Rotokare	1.74	286	P	Pb	15 57 01.7	+0.3
URZ	Urewera	1.75	14	P	Pn	15 56 58.5	-1.1
MSWZ	Moikau Station	1.77	214	P	Pn	15 56 57.6	-2.3
MWZ	Matawai	1.79	25	P	Pn	15 56 58.7	-1.5
TLZ	Tolley Road	1.81	334	P	Pn	15 57 01.0	+0.4
TKGZ	Te Karaka	1.82	34	P	Pn	15 56 59.0	-1.6
MKRZ	Makatiti	1.82	358	P	Pb	15 57 03.2	+0.4
OMRZ	Omania	1.86	355	P	Pg	15 57 06.2	+0.9
PLWZ	Palliser	1.89	211	P	Pn	15 56 59.1	-2.5
WEL	Wellington	1.90	225	P	Pn	15 57 00.2	-1.6
BHW	Baring Head	1.94	221	P	Pn	15 57 00.2	-2.0
MHEZ	Mangahewa	1.94	296	P	Pb	15 57 04.4	-0.5
PREZ	Palmer Road	1.96	288	P	Pb	15 57 04.6	-0.5
HIZ	Hauiti	1.96	317	P	Pn	15 57 02.8	+0.3
MARZ	Manawahe	1.97	3	P	Pn	15 57 02.6	-0.2
KHEZ	Kahui Hut	2.08	288	P	Pb	15 57 06.7	-0.5
OPRZ	Ohinepanea	2.11	360	P	Pn	15 57 04.6	0.0
WHRZ	Whale Island	2.12	9	P	Pn	15 57 04.0	-0.8
PKE	Pukeiti	2.13	290	P	Pb	15 57 07.4	-0.7
NMEZ	Namu Road	2.14	284	P	Pb	15 57 07.7	-0.5
TCW	Tory Channel	2.14	234	P	Pn	15 57 03.5	-1.6
RUGZ	Raukumara Rang	2.17	24	P	Pn	15 57 04.2	-1.4
DUWZ	D'Urville Isla	2.19	246	P	Pn	15 57 04.5	-1.2
NBEZ	Newall Road No	2.19	287	P	Pb	15 57 08.8	-0.3
PUZ	Puketiti	2.30	36	P	Pn	15 57 05.1	-2.1
TOZ	Tahuroa Road	2.37	339	P	Pn	15 57 08.2	0.0
PKGZ	Pakihiroa	2.38	30	P	Pn	15 57 07.0	-1.4
HAZ	Te Kaha	2.40	24	P	Pn	15 57 07.1	-1.4
TUWZ	Tuamarina	2.48	233	P	Pn	15 57 07.4	-2.2
WMGZ	Waiomatatini S	2.58	35	P	Pn	15 57 09.2	-1.8
BSWZ	Blackbirch Sta	2.69	228	P	Pn	15 57 10.3	-2.2
NNZ	Nelson	2.73	242	P	Pn	15 57 11.7	-1.4
MKAZ	Moumakai	3.06	338	P	Pn	15 57 18.1	+0.5
QRZ	Quartz Range	3.20	253	P	Pn	15 57 18.3	-1.3
AWAZ	Awhitu Peninsu	3.26	332	P	Pn	15 57 20.4	0.0
ETAZ	East Tamaki Re	3.26	336	P	Pn	15 57 20.9	+0.5
KUZ	Kuaotunu	3.28	348	P	Pn	15 57 20.6	0.0
THZ	Tophouse	3.31	236	P	Pn	15 57 18.9	-2.2
KHZ	Kahutara	3.35	222	P	Pn	15 57 18.4	-3.3
WIAZ	Waiheke Island	3.35	340	P	Pn	15 57 22.2	+0.5
MBAZ	Motutapu North	3.44	337	P	Pn	15 57 23.6	+0.7
GRZ	Great Barrier	3.80	346	P	Pn	15 57 28.1	+0.2
GVZ	Greta Valley S	4.01	220	P	Pn	15 57 28.8	-1.9
DSZ	Denniston Nort	4.03	242	P	Pn	15 57 29.0	-2.0
LTZ	Lake Taylor	4.29	227	P	Pn	15 57 31.0	-3.6
WCZ	Waipu Caves	4.38	336	P	Pn	15 57 37.0	+1.2
OKCZ	Okains Bay	4.58	214	P	Pn	15 57 35.3	-3.3
MQZ	McQueen's Vall	4.75	217	P	Pn	15 57 37.5	-3.4
AKCZ	Akaroa Harbour	4.77	214	P	Pn	15 57 38.7	-2.4
CTZ	Chatham Island	6.34	129	P	Pn	15 58 00.6	-2.0

*IASPEI **30** 15:57:59.1±0.8, 49°.82N±0°.02×8°.77E±0°.03, h13^{km}±5^{km}, Error ellipse: s-maj=3.9km s-min=2.7km az=85.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*BGR **30** 15:57:59.3±0.2, 49°.79N×8°.84E, h10^{km}, ML3.2/15, Error ellipse: s-maj=3.3km s-min=2.2km az=164.0*
*LDG **30** 15:57:59.5±0.1, 49°.79N×8°.76E, h6^{km}, Md3.5/2, Ml3.4/39, Error ellipse: s-maj=1.2km s-min=1.1km az=74.0*
*STR **30** 15:58:01.0±0.8, 50°N±7°×°±°, h25^{km}±3^{km}, MLv3.4/4*
*BUG **30** 15:58:00.7±0.0, 49°.85N×8°.70E, h18^{km}±4^{km}, ML3.1/6*
*BNS **30** 15:58:01.6±0.4, 49°.86N×8°.70E, h12^{km}±4^{km}, ML3.0*
*PRU **30** 15:58:05.1±0.0, 49°.85N×9°.16E, h0^{km}*
ISC 30 15:57:59.2±1.0, **49°.83N**±0°.01×**8°.74E**±0°.02, **h14**^{km}±4^{km}, **n184**, σ**2ˢ.30**/262, **3C-14D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBB	Darmstadt	0.05	283	⇑Pg	Pb	15 58 01.9	+0.1
WBB				Sg	Sb	15 58 03.3	-0.4
WBA	Furth	0.18	164	⇓*i*Pg	Pb	15 58 03.4	-1.0
TOD	Tromm	0.23	169	⇓*i*Pg	Pb	15 58 03.9	-1.2
TOD				Sg	Sb	15 58 07.1	-2.1
SWS	Schriesheim-Wi	0.35	184	⇓Pg	Pb	15 58 06.1	-1.1
SWS				Sg	Sb	15 58 10.9	-1.7
TNS	Taunus Mts	0.43	335	⇓Pg	Pb	15 58 08.7	0.0
TNS				P*	Pn	15 58 09.4	-1.7
TNS				Sg	Sb	15 58 15.7	+0.6
WBG	Bieber	0.52	49	⇑Pg	Pb	15 58 09.2	-0.9
WBG				Sg	Sb	15 58 16.7	-0.8
GWBC	Aumenau	0.64	332	Pg	Pn	15 58 12.6	-1.2
KTD	Kalmit	0.67	220	Pg	Pb	15 58 12.6	0.0
KTD				SmS		15 58 25.3	
FACH	Fachingen	0.71	318	⇓Pg	Pn	15 58 14.0	-0.8
FACH				PmP		15 58 15.2	
FACH				Sg	Sn	15 58 23.9	-1.7
FACH				SmS		15 58 26.6	
SIND	Sindeldorf	0.74	130	⇓Pg	Pb	15 58 13.6	-0.3
ABH	Alteburg	0.77	274	Pg	Pn	15 58 15.0	-0.7
BRET	Bretten	0.82	182	⇓Pg	Pb	15 58 15.2	0.0
BRET				PmP		15 58 16.1	
BRET				Sg	Sb	15 58 25.9	-0.2
BRET				SmS		15 58 27.8	
KOE	Koeppel	0.88	313	⇓*e*Pg	Pn	15 58 17.1	0.0
KOE				*e*Sg	Sn	15 58 28.6	-1.2
	589nm,0.2s						
BGG	Burgeitz	0.98	293	*e*Pg	Pn	15 58 18.7	+0.2
BGG				*e*Sg	Sn	15 58 31.7	-0.5
	508nm,0.2s						
PEB	Petersbachel	1.01	221	Pn	Pb	15 58 18.3	-0.2
PEB				Pg	Pn	15 58 19.1	+0.1
PEB				Sn	Sn	15 58 33.1	+0.1
LANF	Langenberg	1.05	216	Pn	Pb	15 58 18.6	-0.5
LANF				Sn	Sn	15 58 34.1	+0.2
LANF	Langenberg	1.05	216	Pn	Pb	15 58 18.5	-0.5
LANF				SmS		15 58 34.7	
BIW	Bindweide	1.07	328	⇓Pn	Pn	15 58 20.0	+0.2
BIW				PmP		15 58 20.8	
SUBF	Surbourg	1.09	213	Pn	Pn	15 58 19.3	-0.7
SUBF				Pg	Pb	15 58 20.6	+0.9
SUBF				Sn	Sn	15 58 34.4	-0.3
STU	Stuttgart	1.10	164	Pg	Pb	15 58 20.5	+0.5
STU				Sg	Sn	15 58 35.1	-0.1
BHE	Schloss Buerre	1.13	298	Pg	Pb	15 58 21.9	+1.4
HROE	Hohe Rhon--Fla	1.15	52	*e*Pn	Pb	15 58 20.4	-0.5
HROE				*e*Sg	Sn	15 58 36.2	-0.4
LBG	Lerchenberg	1.17	178	⇓Pn	Pn	15 58 20.7	-0.5
LBG				Pg	Pb	15 58 21.7	+0.5
LBG				Sg	Sn	15 58 37.1	+0.2
LAGB	Langenfeld Gru	1.18	297	Pn	Pb	15 58 21.9	+0.5
LAGB				Pg	Pn	15 58 22.9	+1.6
UBBA	Unterbreizbach	1.28	39	*e*Sg	Sb	15 58 39.4	+0.2
AHRW	Bad Neuenahr-A	1.28	304	Pn	Pb	15 58 23.1	+0.1
AHRW				Pg	Pn	15 58 24.3	+1.6
AHRW				Sg	Sb	15 58 40.0	+0.6
RIVT	Riveris	1.28	265	⇑Pn	Pb	15 58 22.9	-0.2
RIVT				PmP		15 58 24.7	
TUBL	Tuebingen-Lenn	1.33	170	Pg	Pb	15 58 24.5	+0.6
TUBL				Sg	Sb	15 58 41.7	+0.9
DUP	Duppenweiler	1.34	252	Pn	Pn	15 58 23.5	+0.1
DUP				Pg	Pb	15 58 25.6	+1.6
HILG	Hillesheim	1.40	290	*e*Pg	Pb	15 58 25.2	0.0
STB	Steinbach	1.44	303	*e*Pg	Pb	15 58 25.6	-0.2
BUCH	Bad Urach	1.44	163	⇓Pn	Pn	15 58 24.7	-0.3
BUCH				Pg	Pb	15 58 26.4	+0.5
BUCH				Sg	Sb	15 58 45.4	+1.3
HOBG	Hohbusch	1.46	323	*e*Pg	Pb	15 58 25.9	-0.2
LOH	Wallersheim-Lo	1.46	285	Pg	Pb	15 58 27.5	+1.3
BFO	Black Forest	1.53	190	⇓Pn	Pn	15 58 25.2	-0.9
BFO				Pg	Pb	15 58 28.3	+1.0
BFO				Sg	Sb	15 58 48.2	+1.7
HDH	Heidenheim-Cha	1.58	142	Pn	Pn	15 58 26.5	-0.3
HDH				Pg	Pb	15 58 28.7	+0.6
HDH				Sg	Sb	15 58 48.5	+0.6
GRF	Grafenberg Arr	1.62	94	Pg	Pb	15 58 28.8	0.0
GRF				Sg	Sb	15 58 50.0	+0.9
BLI	Bleialf	1.63	285	Pn	Pn	15 58 27.8	+0.4
LVIA	Vianden	1.64	275	P	Pn	15 58 27.6	0.0
LVIA				S	Sn	15 58 46.0	-2.6
	comp=N,125nm,0.3s						
NORI	Noerdlinger Ri	1.66	131	*e*Pg	Pb	15 58 29.9	+0.3
WLF	Walferdange	1.69	265	P	Pn	15 58 28.6	+0.4
WLF				S	Sn	15 58 48.4	-1.2
	comp=N,86nm,0.2s						

WLF	Walferdange	1.69	265	Pn	Pn	15 58 28.6	+0.4
WLF				Sg	Sb	15 58 54.9	+3.9
WLS	Welschbruch	1.69	213	Pn	Pn	15 58 27.2	-1.1
WLS	Welschbruch	1.69	213	Pn	Pn	15 58 26.8	-1.5
WLS				Pg	Pb	15 58 31.5	+1.5
CDF	Champ du Feu	1.71	215	ePn	Pn	15 58 27.4	-1.3
CDF	Champ du Feu	1.71	215	ePg	Pb	15 58 30.5	0.0
CDF				eSn	Sn	15 58 48.2	-2.3
CDF				eSg	Sb	15 58 51.8	-0.2
	comp=N,114nm,0.2s						
LKLB	Kalborn	1.72	280	P	Pn	15 58 29.3	+0.6
LKLB				S	Sn	15 58 47.1	-3.4
	comp=N,80nm,0.2s						
KLL	Kalltalsperre	1.76	299	ePg	Pn	15 58 29.9	+0.6
GRA4	Grafenberg Arr	1.77	98	ePg	Pb	15 58 31.6	+0.1
BHOU	Houvegnez	1.84	288	P	Pn	15 58 30.9	+0.6
BKLB	Ruhr-Universit	1.86	330	Pn	Pb	15 58 31.6	-1.4
BUG	Bochum--Univer	1.86	330	ePn	Pb	15 58 31.6	-1.4
BTEZ	Ruhr-Universit	1.87	331	Pn	Pb	15 58 31.7	-1.3
GRB4	Grafenberg Arr	1.87	100	ePg	Pb	15 58 32.8	-0.4
BULI	Ruhr-Universit	1.88	330	Pn	Pb	15 58 33.6	+0.4
MEM	Membach	1.92	295	P	Pb	15 58 32.6	-1.3
MEM				S	Sn	15 58 52.3	-3.1
	comp=E,122nm,0.3s						
ECH	Echery	1.92	213	Pn	Pn	15 58 30.1	-1.4
ECH				Sg	Sb	15 59 01.0	+3.1
ECH	Echery	1.92	213	Pn	Pn	15 58 29.8	-1.7
ECH				Pg	Pb	15 58 35.8	+1.8
HMES	Hamm, Michael-	1.94	341	Pn	Pb	15 58 35.8	+1.5
EMING	Emmingen-Lipti	1.94	178	⇓Pn	Pn	15 58 31.3	-0.5
EMING				Sg	Sb	15 59 00.9	+2.4
KIZ	Kirchzarten	1.95	196	Pn	Pn	15 58 30.7	-1.3
KIZ				Pg	Pb	15 58 38.0	+3.5
KIZ				Sn	Sn	15 58 54.4	-1.9
GRC4	Grafenberg Arr	1.97	111	ePg	Pb	15 58 34.4	-0.4
GRB2	Grafenberg Arr	1.99	105	Pg	Pb	15 58 35.8	+0.7
BERGE	Lenzkirch (DE)	2.00	191	Pn	Pn	15 58 31.5	-1.1
GRC1	Grafenberg Arr	2.00	114	Pn	Pn	15 58 32.5	-0.1
GRC1				Sg	Sb	15 59 00.5	+0.3
FELD	Feldberg im Sc	2.02	194	Pn	Pn	15 58 31.7	-1.2
FELD				Pg	Pb	15 58 39.5	+3.8
MOX	Moxa	2.02	65	ePn	Pn	15 58 32.2	-0.6
POSS	Possen	2.02	41	ePn	Pn	15 58 32.2	-0.7
HGN	Heimansgroeve	2.03	298	Pn	Pb	15 58 38.2	+2.4
SLE	Schleitheim	2.08	185	Pn	Pn	15 58 32.8	-0.8
SLE				Sg	Sb	15 59 05.5	+3.2
WALHA	Wallhausen, DE	2.10	173	Pn	Pn	15 58 33.5	-0.4
METMA	Mettma DE	2.15	189	Pn	Pn	15 58 33.5	-1.1
SISB	Singen-Schiene	2.15	176	Pn	Pn	15 58 34.3	-0.4
BSTI	Sart Tilman	2.17	291	P	Pn	15 58 35.3	+0.4
MANZ	Manzenberg	2.19	85	eSg	Sb	15 59 06.3	+0.9
CHRS	Christianenhau	2.22	36	ePn	Pn	15 58 34.9	-0.7
ENDD	Endenburg	2.22	198	Pn	Pn	15 58 34.1	-1.5
ENDD				Pg	Pb	15 58 41.9	+2.8
MOF	Molkenrain	2.25	209	Pn	Pn	15 58 34.8	-1.3
MOF				Pg	Pb	15 58 41.3	+1.7
MOF				Sg	Sb	15 59 11.2	+3.9
MOF	Molkenrain	2.25	209	Pn	Pn	15 58 34.7	-1.4
MOF				Pg	Pb	15 58 42.0	+2.4
ROTZ	Rotzenmuhle	2.25	90	eSg	Sb	15 59 07.5	+0.3
CLZ	Clausthal	2.26	27	ePn	Pn	15 58 35.7	-0.5
BCLA	Clavier	2.29	286	P	Pn	15 58 37.0	+0.5
BCLA				S	Sn	15 59 00.1	-4.4
	comp=E,47nm,0.4s						
RCHB	Rochefort	2.29	279	P	Pn	15 58 37.1	+0.6
RCHB				S	Sn	15 58 59.2	-5.3
UBR	Ueberruh	2.34	157	Pn	Pn	15 58 37.7	+0.4
UBR				Pg	Pb	15 58 44.9	+3.8
SULZ	Cheisacher	2.34	190	Pn	Pn	15 58 36.2	-1.1
SULZ				Sg	Sb	15 59 13.9	+3.9
PAGF	Fort de Pagny	2.35	238	ePn	Pn	15 58 36.8	-0.6
	baz=59						
PAGF	Fort de Pagny	2.35	238	ePg	Pb	15 58 42.0	+0.6
	baz=61						
PAGF				eSg	Sb	15 59 11.9	+1.6
	comp=E,28nm,0.2s						
HINF	Hinteralfeld	2.37	212	ePn	Pn	15 58 36.2	-1.5
HINF	Hinteralfeld	2.37	212	ePg	Pb	15 58 42.7	+1.0
HINF				eSn	Sn	15 59 03.9	-2.7
HINF				eSg	Sb	15 59 11.9	+1.1
	comp=E,101nm,0.2s						
HAU	Haudompre	2.41	222	ePn	Pn	15 58 36.6	-1.7
HAU	Haudompre	2.41	222	ePg	Pb	15 58 43.1	+0.7
HAU				eSn	Sn	15 59 05.0	-2.6
HAU				eSg	Sb	15 59 13.4	+1.4
	comp=E,253nm,0.3s						
BGES	Gesves	2.41	285	P	Pn	15 58 39.3	+1.0
THEF	They Montfort	2.42	229	Pn	Pn	15 58 37.2	-1.1
THEF				Sg	Sb	15 59 14.8	+2.6
NKC	Novy Kostel	2.43	79	ePN	Pn	15 58 38.4	0.0
NKC				ePG	Pb	15 58 43.8	+1.2
NKC				eSG	Sb	15 59 13.5	+1.1
	comp=E,104nm,0.2s						
WIMM	Wimmelburg	2.44	45	ePn	Pn	15 58 37.8	-0.8
WIMM				eSg	Sb	15 59 15.1	+2.4
GIVF	Givet	2.54	278	ePn	Pn	15 58 39.9	-0.1
GIVF	Givet	2.54	278	ePg	Pb	15 58 47.0	+2.4
GIVF				eSn	Sn	15 59 09.7	-1.0
GIVF				eSg	Sb	15 59 19.6	+3.9
	comp=E,139nm,0.4s						
IBBE	Ibbenbueren Ea	2.54	347	Pg	Pb	15 58 48.9	+4.4
IBBN	Ibbenburen	2.56	346	Pg	Pb	15 58 47.0	+2.2
LIENZ	Kamor/St.Gall	2.59	169	⇓Pn	Pn	15 58 41.0	+0.1
BALST	Balsthal	2.59	196	Pn	Pn	15 58 39.4	-1.4
ASSE	Asse, Remlinge	2.61	27	ePn	Pn	15 58 40.6	-0.2
BOURR	Bourrignon	2.64	203	Pn	Pn	15 58 40.5	-0.8
DAVA	Damuels	2.66	163	Pn	Pn	15 58 42.0	+0.3
DAVA	Damuels	2.66	163	ePn	Pn	15 58 42.0	+0.3
	comp=E,2.4nm,0.2s,SNR=11						
DAVA				Pg	Pb	15 58 50.9	+4.3
	comp=E,4.9nm,0.1s						
DAVA				Sg	Sb	15 59 25.1	+5.9
	comp=E,63nm,0.5s						
DOU	Dourbes	2.69	277	P	Pn	15 58 42.8	+0.8
RETA	Reutte	2.70	149	ePn	Pn	15 58 42.6	+0.3
	comp=E,5.4nm,0.1s,SNR=28						
RETA				eSn	Sn	15 59 12.1	-2.8
	comp=E,6.1nm,0.2s						
MEZF	Maizieres J'vi	2.76	243	ePn	Pn	15 58 42.3	-0.7
MEZF	Maizieres J'vi	2.76	243	ePg	Pb	15 58 50.5	+2.2
	baz=64						
MEZF				eSn	Sn	15 59 14.5	-1.6
MEZF				eSg	Sb	15 59 24.7	+2.7
	comp=E,36nm,0.3s,baz=48						
CHMF	Charmoille	2.93	209	Pn	Pn	15 58 44.2	-1.2
BAIF	Baives	2.94	276	ePn	Pn	15 58 46.0	+0.6
BAIF	Baives	2.94	276	ePg	Pb	15 58 54.2	+3.0
BAIF				eSn	Sn	15 59 19.3	-1.1
BAIF				eSg	Sb	15 59 31.5	+4.5
	comp=E,56nm,0.3s						
MOTA	Moosalm	2.94	147	ePn	Pn	15 58 45.9	+0.2
	comp=E,3.2nm,0.2s,SNR=10						
SQTA	Sankt Quirin	3.09	147	i Pn	Pn	15 58 48.3	+0.6
	comp=E,1.8nm,0.1s,SNR=13						
SQTA				eSn	Sn	15 59 21.6	-2.7
	comp=E,4.7nm,0.2s						
CLL	Collm	3.10	60	ePn	Pn	15 58 47.6	0.0
CLL	Collm	3.10	60	i Pn	Pn	15 58 47.8	+0.2
CLL				i Pn	Pb	15 58 48.3	-5.7
CLL				i Pg	Pg	15 58 57.4	-1.0
CLL				e		15 58 57.0	
CLL				eSg	Sb	15 59 38.0	+6.4
	comp=Z,42nm,0.6s						
FETA	Feichten	3.11	154	i Pn	Pn	15 58 48.7	+0.7
	comp=Z,2.8nm,0.1s,SNR=37						
FETA				eSn	Sn	15 59 22.5	-2.5
	comp=Z,0.9nm,0.1s						
WATA	Walderalm	3.13	142	i Pn	Pn	15 58 48.8	+0.6
	comp=Z,5.7nm,0.1s,SNR=24						
WATA				eSg	Sb	15 59 38.0	+5.3
	comp=Z,34nm,0.3s						
WTTA	Wattenberg	3.21	142	i Pn	Pn	15 58 50.1	+0.8
	comp=Z,1.3nm,0.1s,SNR=29						
WTTA				eSn	Sn	15 59 28.2	+0.7
	comp=Z,10nm,0.3s						
WTTA				Sg	Sb	15 59 41.2	+6.0
	comp=Z,22nm,0.3s						
KHC	Kasperske Hory	3.23	101	ePN	Pn	15 58 50.5	+0.9
KHC				ePG	Pb	15 58 59.1	+2.7
KHC				eSN	Sn	15 59 25.0	-2.9
KHC				eSG	Sb	15 59 39.5	+3.9
	comp=Z,35nm,0.3s						
PBCC	Pribram	3.41	90	ePN	Pn	15 58 52.6	+0.6
PBCC				eSG	Sb	15 59 44.4	+3.7
BRG	Berggiesshubel	3.49	71	PN	Pn	15 58 53.7	+0.6
BRG				PG	Pb	15 59 03.8	+3.1
BRG				SG	Sb	15 59 47.9	+4.9
	comp=Z,18nm,0.5s						
CABF	La Chapelle	3.68	210	ePn	Pn	15 58 54.3	-1.4
CABF	La Chapelle	3.68	210	ePg	Pb	15 59 06.1	+2.1
CABF				eSn	Sn	15 59 35.1	-3.8
CABF				eSg	Sb	15 59 52.8	+4.3
	comp=Z,39nm,0.5s						
PRA	Prague	3.69	84	eSG	Sb	15 59 54.3	+5.7
	comp=Z,32nm,0.8s						
PRU	Pruhonice	3.75	85	ePN	Pn	15 58 57.0	+0.3
PRU				ePG	Pb	15 59 08.0	+2.8
PRU				eSG	Sb	15 59 55.4	+4.8
	comp=Z,20nm,0.4s						
PVCC	Panska Ves	3.81	77	ePG	Pb	15 59 09.5	+3.3
PVCC				eSG	Sb	15 59 58.6	+6.4
	comp=Z,47nm,0.5s						
ABTA	Abfaltersbach	3.98	139	i Pn	Pn	15 59 02.0	+2.1
	comp=Z,1.0nm,0.1s,SNR=14						
ABTA				eSn	Sn	15 59 46.3	-0.2
	comp=Z,1.2nm,0.2s						
ABTA				Sg	Sb	16 00 04.1	+6.8
	comp=Z,5.1nm,0.2s						
KBA	Koelnbreinsper	4.12	130	ePn	Pn	15 59 02.9	+1.1
	comp=Z,0.9nm,0.1s						
KBA				Sg	Sb	16 00 08.5	+7.2
	comp=Z,10nm,0.4s						
LOR	Lormes	4.13	233	ePn	Pn	15 59 00.2	-1.7
	baz=56						
LOR				eSn	Sn	15 59 46.3	-3.7
LOR				eSg	Sb	16 00 07.3	+5.8
	comp=Z,32nm,0.3s,baz=47						
MOA	Molln	4.16	116	i Pn	Pn	15 59 03.6	+1.4
	comp=Z,0.4nm,0.1s,SNR=15						
MOA				eSn	Sn	15 59 48.8	-1.8
	comp=Z,3.0nm,0.1s						
MOA				Sg	Sb	16 00 10.0	+7.9
	comp=Z,17nm,0.3s						
TREC	Trest	4.43	94	eSG	Sb	16 00 17.6	+7.7
	comp=Z,33nm,0.7s						
SSF	Saint Saulge	4.45	233	ePn	Pn	15 59 05.1	-1.1
SSF	Saint Saulge	4.45	233	ePg	Pb	15 59 21.1	+4.0
SSF				eSn	Sn	15 59 53.6	-4.2
SSF				eSg	Sb	16 00 16.9	+6.3
	comp=Z,27nm,0.3s						
LPL	La Plagne	4.53	198	ePn	Pn	15 59 05.5	-2.0
LPL	La Plagne	4.53	198	ePg	Pb	15 59 23.2	+4.7
LPL				eSg	Sb	16 00 20.7	+7.7
	comp=Z,9.0nm,0.5s						
LPG	La Plagne	4.54	198	eSg	Sb	16 00 21.1	+7.7
	comp=Z,22nm,0.6s						
SMF	Signal de Mont	4.57	228	ePn	Pn	15 59 06.7	-1.2
SMF	Signal de Mont	4.57	228	ePg	Pb	15 59 23.5	+4.4
SMF				eSg	Sb	16 00 21.1	+7.1
	comp=Z,66nm,0.5s						
MYKA	Terra Mystica	4.58	132	ePn	Pn	15 59 11.0	+2.9
	comp=Z,0.5nm,0.2s						
MYKA				eSn	Sn	15 59 59.0	-2.1
	comp=Z,0.8nm,0.2s						
MYKA				Sg	Sb	16 00 23.8	+9.3
	comp=Z,5.8nm,0.3s						
AVF	Avril sur Loir	4.71	232	ePn	Pn	15 59 08.8	-1.0
AVF	Avril sur Loir	4.71	232	ePg	Pb	15 59 25.5	+4.0
AVF				eSn	Sn	16 00 00.3	-3.8
AVF				eSg	Sb	16 00 25.8	+7.8
	comp=Z,11nm,0.4s						
UPC	Upice	4.72	79	eSG	Sb	16 00 25.7	+7.2
	comp=Z,15nm,0.7s						
HYF	Humbligny	4.79	240	ePn	Pn	15 59 10.3	-0.7
HYF				eSg	Sb	16 00 29.0	+8.5
OSTC	Ostas	4.86	79	eSG	Sb	16 00 30.7	+8.4
	comp=Z,40nm,1.4s						
DPC	Dobruska-Polom	4.91	81	eSG	Sb	16 00 31.9	+8.1
	comp=Z,10nm,0.5s						
KRUC	Moravsky	5.05	96	ePN	Pn	15 59 14.8	+0.3
KRUC				eSG	Sb	16 00 34.9	+7.0
OBKA	Obir	5.12	128	ePn	Pn	15 59 14.5	-1.0
	comp=Z,0.2nm,0.2s						
OBKA				eSn	Sn	16 00 13.5	-0.8
	comp=Z,2.4nm,0.3s						
OBKA				Sg	Sb	16 00 42.2	+12
	comp=Z,6.7nm,0.7s						
BGF	Bois d'Agland	5.12	232	ePn	Pn	15 59 15.2	-0.3
BGF				eSn	Sn	16 00 10.9	-3.5
BGF				eSg	Sb	16 00 39.2	+9.3
	comp=Z,29nm,0.4s						
VRAC	Vranov	5.14	93	eSG	Sb	16 00 38.6	+8.2
ARSA	Arzberg	5.19	117	ePn	Pn	15 59 20.0	+3.5
	comp=Z,0.8nm,0.3s						
ARSA				eSn	Sn	16 00 13.1	-3.1
	comp=Z,2.1nm,0.3s						
ARSA				Sg	Sb	16 00 44.0	+12
	comp=Z,13nm,0.6s						
KRLC	Kraliky	5.20	84	eSG	Sb	16 00 42.6	+10
	comp=Z,13nm,0.9s						
MBDF	Montbardon	5.28	195	eP	Pn	15 59 19.7	+1.9
MBDF				eSn	Sn	16 00 13.9	-4.6
MBDF				eSg	Sb	16 00 44.0	+9.4
	comp=Z,9.2nm,0.6s						
ORIF	Oris-en-Rattie	5.29	203	ePn	Pn	15 59 16.4	-1.4
ORIF	Oris-en-Rattie	5.29	203	ePg	Pb	15 59 37.2	+5.8
ORIF				eSg	Sb	16 00 43.6	+8.9
	comp=Z,12nm,0.5s						
TCF	Toulx Ste Croi	5.63	233	ePn	Pn	15 59 21.3	-1.2
TCF	Toulx Ste Croi	5.63	233	ePg	Pb	15 59 42.5	+5.3
TCF				eSn	Sn	16 00 22.1	-4.8
TCF				eSg	Sb	16 00 54.1	+10
	comp=Z,6.3nm,0.2s						
VIVF	Saint-Julien-l	5.69	211	ePn	Pn	15 59 22.3	-1.0
VIVF	Saint-Julien-l	5.69	211	ePg	Pb	15 59 44.0	+5.7
VIVF				eSn	Sn	16 00 23.7	-4.8
VIVF				eSg	Sb	16 00 55.9	+10
	comp=Z,8.0nm,0.3s						
MORC	Moravsky Berou	5.70	87	eSG	Sb	16 00 59.3	+13
MODS	Modra-Piesok	5.80	101	eSG	Sb	16 01 00.6	+11
SMOL	Smolenice	5.85	100	eSG	Sb	16 01 02.2	+11
JAVC	Velka Javorina	5.92	96	eSG	Sb	16 01 10.2	+17
LDF	La Druitiere	5.94	261	ePn	Pn	15 59 25.8	-0.8
LDF				eSn	Sn	16 00 29.7	-4.7
LDF				eSg	Sb	16 01 04.5	+11
	comp=Z,6.0nm,0.3s						
SBF	Sospel	6.04	189	eP	Pn	15 59 31.0	+2.9
SBF				eSn	Sn	16 00 32.1	-4.9
	comp=Z,2.6nm,0.4s						
OKC	Ostrava-Krasne	6.09	86	eSG	Sb	16 01 09.1	+11
	comp=Z,8.1nm,0.6s						
FLN	La Foliniere	6.13	263	ePn	Pn	15 59 28.5	-0.7
	baz=84						
FLN				eSn	Sn	16 00 34.9	-4.1
FLN				eSg	Sb	16 01 11.1	+12
	comp=Z,9.5nm,0.4s,baz=81						
SMRF	Simiane la Rot	6.25	201	ePn	Pn	15 59 29.6	-1.3
SMRF				eSn	Sn	16 00 35.9	-6.2
	comp=Z,3.4nm,0.5s						
FRF	La Foret Royal	6.44	194	ePn	Pn	15 59 32.5	-1.0
FRF				eSn	Sn	16 00 41.8	-4.9
	comp=Z,1.9nm,0.4s						
GRR	Gorron	6.46	261	ePn	Pn	15 59 33.2	-0.7
GRR				eSn	Sn	16 00 41.3	-6.1
	comp=Z,10.0nm,0.3s						
LASF	Ste Croix	6.66	212	ePn	Pn	15 59 34.5	-2.0
LASF	Ste Croix	6.66	212	ePg	Pb	16 00 01.9	+7.2
LASF				eSn	Sn	16 00 47.3	-4.9
LASF				eSg	Sb	16 01 26.7	+13
	comp=Z,3.6nm,0.4s						
RJF	Les Rejaudoux	6.66	230	eSg	Sb	16 01 26.6	+12
	comp=Z,3.7nm,0.3s						
CAF	Calviac	6.68	225	eSg	Sb	16 01 28.1	+13
	comp=Z,5.1nm,0.5s						
LMR	La Mourre	6.68	194	ePn	Pn	15 59 35.0	-1.8
LMR				eSn	Sn	16 00 47.4	-5.3
	comp=Z,1.2nm,0.3s						
MFF	Saint Martin d	6.76	245	ePn	Pn	15 59 36.5	-1.4
MFF				eSn	Sn	16 00 49.6	-5.0
MFF				eSg	Sb	16 01 30.7	+14
	comp=Z,2.3nm,0.3s						
VYHS	Vyhne	6.76	98	eSN	Sn	16 00 48.3	-6.3
VYHS				eSG	Sb	16 01 29.9	+13
UDBI	Udbina	7.14	135	Sg	Sb	16 02 17.4	+49
PGF	Pioggiola	7.29	178	ePn	Pn	15 59 43.5	-1.8
LFF	La Frestale	7.31	231	eSg	Sb	16 01 46.8	+14
	comp=Z,13nm,0.5s						
SGMF	Saint Gilles	7.59	262	ePn	Pn	15 59 48.2	-1.1
SGMF				eSn	Sn	16 01 08.5	-6.6
	comp=Z,5.4nm,0.4s						
MTLF	Montolieu	7.89	217	eSg	Sb	16 02 05.2	+16
	comp=Z,1.7nm,0.5s						
ROSF	Rostrenen	8.03	264	ePn	Pn	15 59 54.1	-1.2
ROSF				eSn	Sn	16 01 19.8	-6.0
	comp=Z,3.4nm,0.3s						
QUIF	Quistinic	8.08	261	ePn	Pn	15 59 54.9	-1.1
QUIF				eSn	Sn	16 01 20.6	-6.5
	comp=Z,2.3nm,0.3s						

IDC 30 16:03:44.5±5.5, 4°.01S×128°.77E, h263^{km}±77^{km}, mb2.2/2, mb1 2.4/4, mb1mx2.4/35, mbtmp3.0/4, Error ellipse: s-maj=117.2km s-min=19.9km az=80.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.00	39	P	Pn	16 04 48.4	-0.5
	0.7nm,0.3s,baz=161,slow=23,SNR=11						
SIJI				S	S	16 05 41.0	+0.7
	0.5nm,0.3s,baz=177,slow=23,SNR=1.7						
WRA	Warramunga Arr	16.74	162	P	P	16 07 23.3	+0.6
	0.1nm,0.3s,baz=341,slow=11,SNR=8.9						
ASAR	Alice Springs	20.16	166	P	P	16 07 59.3	-0.2
	0.1nm,0.3s,baz=344,slow=11,SNR=4.6						
MKAR	Makanchi Array	65.07	327	P	P	16 13 57.1	0.0
	0.1nm,0.7s,baz=108,slow=4.7,SNR=1.4						

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*NNC **30** 16:15:19.6±5.9, 36°.71N×70°.35E, h111^{km}±118^{km}, mb3.2, mpv3.7, Error ellipse: s-maj=44.7km s-min=37.1km az=13.0*

ISC 30 16:15:19.8±3.1, 36°.7N±0°.2×70°.5E±0°.1, h150^{km}, n10, σ1^{s}.21/15, 5C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.97	23	P	Pn	16 16 47.4	+1.0
	SNR=92						
UCH	Uchtor	6.35	28	P	Pn	16 16 52.1	+0.6
	SNR=13						
KK31	Karatay Array	6.41	0	⇑P	Pn	16 16 52.8	+0.8
	2.1nm,0.3s,baz=181,slow=12,SNR=54						
KK31				⇓S	Sn	16 18 04.3	+0.1
	3.5nm,0.5s,baz=188,slow=23,SNR=8.3						
EKS2	Erkin-Say	6.48	22	P	Pn	16 16 55.5	+2.6
	SNR=6.1						
AAK	Ala-Archa	6.70	26	P	Pn	16 16 56.8	+1.0
	SNR=6.9						
AAK	Ala-Archa	6.70	26	⇓P	Pn	16 16 55.9	0.0
	1.7nm,0.3s						
AAK				⇑S	Sn	16 18 11.4	+0.3
	12nm,0.9s						
CHMS	Chumysh	7.10	26	⇑P	Pn	16 16 60.0	-1.2
	5.7nm,0.9s						
CHMS				⇓S	Sn	16 18 19.5	-1.2
	6.6nm,1.1s						
TKM2	Tokmak 2	7.36	31	P	Pn	16 17 05.2	+0.4
	SNR=6.3						
AB31	Akbulak array	14.73	332	⇓P	P	16 18 41.8	-1.0
	0.7nm,0.6s,baz=142,slow=13,SNR=11						
AB31				⇓S	Sn	16 21 22.8	-1.4
	2.0nm,0.9s,baz=152,slow=23,SNR=4.8						
AKTO	Aktyubinsk	16.43	331	⇑P	P	16 19 01.8	+0.3
	2.1nm,0.8s						
AKTO				⇑S	Sn	16 22 06.0	+1.4
	2.1nm,1.1s						

JMA 30 16:15:30.2±0.3, 24°.90N×123°.36E, h26^{km}, M1.2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.66	149	P	Pb	16 15 42.5	-0.6
IRIF				eS	Sb	16 15 52.2	+0.4
JKRS	Kuro-shima	0.89	138	P	Pb	16 15 46.7	-0.2
JKRS				S	Sb	16 15 58.2	-0.2
JIJ	Ishigaki jima	0.89	127	eS	Sb	16 15 57.3	-1.2
JISG	Ishigakijimahi	0.92	110	P	Pn	16 15 46.8	-0.6
JISG				eS	Sb	16 15 59.1	-0.2

TAP 30 16:16:19.0, 24°.09N×122°.29E, h12^{km}, ML2.0, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.48	342	P	Pg	16 16 28.2	-0.3
	baz=341						
EOS1				S	Sg	16 16 35.4	+0.4
	baz=341						
ENA	Nanau	0.61	304	eP	Pg	16 16 30.6	-0.3
	baz=304						
ENA				eS	Sg	16 16 38.9	-0.1
	baz=304						
TWD	Chiawan	0.64	270	eP	Pg	16 16 30.9	-0.5
	baz=269						
NACB	Ninganchiao	0.65	278	eP	Pg	16 16 31.2	-0.4
	baz=277						
NACB				eS	Sb	16 16 40.7	-0.5
	baz=277						
TWC	Suao	0.66	322	eP	Pg	16 16 31.2	-0.6
	baz=322						
ETLH	Xiulin Townshi	0.75	279	eP	Pg	16 16 32.9	-0.7
	baz=279						
ETLH				eS	Sg	16 16 43.5	0.0
	baz=279						
YOJ	Yonaguni jima	0.75	60	eS	Sg	16 16 43.5	0.0
	baz=59						
ESL	Shilin	0.83	251	eP	Pg	16 16 34.5	-0.6
	baz=250						
TWE	Neicheng	0.85	318	eP	Pg	16 16 35.0	-0.5
	baz=318						
TWE				eS	Sg	16 16 46.3	-0.3
	baz=318						
ENTT	Nioudou	0.86	310	P	Pg	16 16 34.9	-0.8
	baz=309						
NDT	Datong Townshi	0.88	306	P	Pg	16 16 35.4	-0.6
	baz=305						
NDT				eS	Sg	16 16 45.5	-2.0
	baz=305						
NNSB	Datong	0.90	292	eP	Pg	16 16 35.5	-0.8
	baz=292						
NNSB				eS	Sg	16 16 47.7	-0.5
	baz=292						
NNSH	Datong	0.90	292	eP	Pg	16 16 35.6	-0.8
	baz=292						
NNSH				eS	Sg	16 16 47.6	-0.6
	baz=292						
NNS	Nan Shan	0.91	293	eP	Pg	16 16 36.1	-0.5
	baz=292						
WHF	Hehuan Shan	0.94	274	P	Pg	16 16 36.2	-1.1
	baz=273						
TWB1	Santiao Chiao	0.96	343	eP	Pg	16 16 37.0	-0.5
	baz=343						
TIPB	Shuangxi	0.98	334	P	Pg	16 16 36.9	-1.0
	baz=334						
TIPB				eS	Sg	16 16 49.6	-1.1
	baz=334						
NWLT	Wulai	1.00	314	eP	Pg	16 16 37.4	-0.9
	baz=313						
NWLT				eS	Sg	16 16 50.6	-0.7
	baz=313						
YHNB	Yeheng	1.02	305	eP	Pb	16 16 37.4	-1.3
	baz=304						
CHGB	Renai	1.02	269	eP	Pg	16 16 37.2	-1.6
	baz=268						
CHGB				eS	Sg	16 16 50.7	-1.5
	baz=268						
OWD	Renai	1.03	263	eP	Pb	16 16 37.2	-1.7
	baz=262						
EHY	Hungye	1.06	237	eP	Pb	16 16 38.4	-1.0
	baz=236						
VWDT	VWDT	1.11	253	eP	Pb	16 16 39.1	-0.9
	baz=252						
YULB	Yu-li	1.15	233	eP	Pb	16 16 38.8	-1.9
	baz=232						

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*IDC **30** 16:20:43.1±0.9, 18°.74N×81°.48W, h0^{km}, mb3.8/7, mb1 4.0/7, mb1mx3.7/39, mbtmp3.9/7, MS3.3/2, Ms1 3.3/2, ms1mx2.7/29, Error ellipse: s-maj=37.4km s-min=23.0km az=65.0*

*NEIC **30** 16:20:45.9±1.1, 18°.73N±0°.06×81°.53W±0°.07, h20^{km}±5^{km}, mb4.4/5, Error ellipse: s-maj=10.0km s-min=7.6km*

az=122.0

*JSN **30** 16:20:47.6±0.8, 18°.55N×81°.60W, h50km±999km, MD4.4*

ISC 30 16:20:44.7±0.6**, 18°.67N**±0°.06×**81°.52W**±0°.06**, h14km, n31, σ1§11**/31**, mb4.0**/9**, 3C-1D, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSCY	Frank Sound, G	0.71	27		Pb	16 20 58.7	-0.2
FSCY					Sg	16 21 07.7	-0.3
CBCY	The Bluff, Cay	1.97	57		Pn	16 21 16.7	-1.0
MCJ	Malvern	3.72	101	⇓iP	Pn	16 21 42.4	+0.6
MCJ				⇑iS	Sn	16 22 23.4	-2.0
MTDJ	Mount Denham	3.81	96		Pn	16 21 42.8	-0.3
BBJ	Bamboo Saint A	4.05	93	⇑iP	Pn	16 21 46.8	+0.5
PCJ	Portland Cotta	4.25	102	iP	Pn	16 21 49.8	+0.8
STH	Stony Hill	4.51	97	⇑iP	Pn	16 21 53.8	+1.1
STH				iS	Sn	16 22 43.0	-2.1
GTBY	Guantanamo Bay	6.18	77	Pn	Pn	16 22 18.3	+2.7
TEIG	Tepich	6.56	285		Pn	16 22 18.4	-2.3
061Z	Ochoppi	7.18	4	Pn	Pn	16 22 29.5	+0.2
JTS	Las Juntas de	8.97	202	Pn	Pn	16 22 53.4	-0.6
SDDR	Presa de Saban	9.70	87	Pn	Pn	16 23 04.5	+0.6
URIC	Uribia, Colomb	11.51	126	Pn	Pn	16 23 31.1	+2.4
SDV	Santo Domingo	14.36	131	LR	LR	16 31 14.7	
	comp=Z,54nm,18.1s,baz=89,slow=44						
TXAR	Lajitas Array	22.80	302	P	P	16 25 48.0	+0.7
	1.8nm,0.9s,baz=114,slow=9.0,SNR=11						
TXAR	Lajitas Array	22.80	302	P	P	16 25 47.4	0.0
TX31	Lajitas Ar. Si	22.81	302	P	P	16 25 47.2	-0.1
TX32	Lajitas Array	22.81	302	P	P	16 25 47.2	-0.1
TX32				IAmb	IAmb	16 25 50.3	
	comp=Z,8.4nm,1.6s						
U32A	Winter Ranch,	23.41	322	P	P	16 25 53.9	+0.5
U32A				IAmb	IAmb	16 25 56.7	
	comp=Z,16nm,0.8s						
SCHQ	Schefferville	37.80	14	P	P	16 28 00.2	-0.3
	comp=Z,2.0nm,0.8s,baz=179,slow=4.7,SNR=5.6						
SIV	San Ignacio	39.90	148	P	P	16 28 19.2	+0.7
	comp=Z,2.3nm,0.8s,baz=333,slow=8.7,SNR=11						
YKA	Yellowknife Ar	49.41	341	P	P	16 29 33.3	-0.5
	comp=Z,0.1nm,0.4s,baz=134,slow=8.7,SNR=5.5						
CPUP	Villa Florida	50.53	152	LR	LR	16 53 35.6	
	comp=Z,56nm,18.1s,baz=40,slow=39						
ILAR	Eielson Array	62.81	334	P	P	16 31 10.5	+0.8
	comp=Z,0.8nm,0.9s,baz=113,slow=4.5,SNR=2.1						
ILAR	Eielson Array	62.81	334	P	P	16 31 09.7	+0.1
FINES	FINESS Array B	81.87	28	P	P	16 33 04.2	+0.8
	comp=Z,1.4nm,0.8s,baz=272,slow=9.3,SNR=2.3						
TIXI	Tiksi	87.55	351	P	P	16 33 32.4	+0.6
	comp=Z,0.8nm,0.7s,baz=355,slow=6.2,SNR=2.5						
TIXI	Tiksi	87.55	351	IAmb	IAmb	16 36 32.2	
	comp=Z,8.1nm,1.7s						
WRA	Warramunga Arr	146.17	262	PKPbc	PKPbc	16 40 25.6	+0.2
	comp=Z,0.2nm,0.4s,baz=88,slow=3.8,SNR=9.2						
ASAR	Alice Springs	146.65	255	PKPbc	PKPbc	16 40 26.5	-0.3
	comp=Z,1.3nm,1.0s,baz=104,slow=3.9,SNR=9.8						
ASAR	Alice Springs	146.65	255		PKPdf	16 40 25.4	+0.2

*IDC **30** 16:24:40.1±8.2, 31°.71S×69°.19W, h129km±70km, mb3.3/2, mb1 3.6/3, mb1mx3.3/29, mbtmp3.7/3, Error ellipse: s-maj=54.9km s-min=28.5km az=83.0*

ISC 30 16:24:36.6±1.1**, 31°.7S**±0°.2×**69°.3W**±0°.1**, h100km, n7, σ1§51**/8**, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPUP	Villa Florida	11.80	66	P	Pn	16 27 22.8	+1.1
	0.2nm,0.3s,baz=173,slow=11,SNR=3.7						
CPUP				S	Sn	16 29 30.5	-0.9
	0.2nm,0.3s,baz=38,slow=10,SNR=1.8						
SNAA	Sanae	52.83	159	P	P	16 33 42.2	+0.8
	1.8nm,0.7s,baz=327,slow=6.5,SNR=8.3						
TXAR	Lajitas Array	68.95	328	P	P	16 35 31.9	+0.8
	0.3nm,0.8s,baz=152,slow=5.9,SNR=2.7						
ASAR	Alice Springs	120.59	205	PKP	PKPdf	16 43 15.4	-1.9
	0.4nm,1.0s,baz=146,slow=2.2,SNR=2.2						
WRA	Warramunga Arr	123.82	207	PKP	PKPdf	16 43 22.3	-1.1
	0.1nm,0.3s,baz=156,slow=1.9,SNR=4.5						
ZALV	Zalesovo Beam	151.11	32	PKPbc	PKPbc	16 44 18.1	+0.6
	1.2nm,0.4s,baz=301,slow=2.7,SNR=7.7						
MKAR	Makanchi Array	153.56	47	PKPab	PKPab	16 44 34.5	-1.7
	0.2nm,0.5s,baz=301,slow=5.5,SNR=2.2						

*IDC **30** 16:31:54.8±6.7, 32°.21S×179°.97W, h388km±76km, mb2.9/4, mb1 3.0/5, mb1mx2.9/27, mbtmp3.7/5, Error ellipse: s-maj=85.3km s-min=33.1km az=9.0*

ISC 30 16:31:55.5±2.0**, 32°.3S**±0°.1×**179°.9W**±0°.3**, h400km, n7, σ1§38**/8**, mb3.1**/4**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.45	201	P	Pn	16 33 34.2	+1.3
	0.6nm,0.3s,baz=94,slow=12,SNR=2.2						
URZ				S	S	16 34 50.5	-1.9
	1.6nm,0.3s,baz=50,slow=21,SNR=17						
STKA	Stephens Creek	32.49	260	P	P	16 37 52.4	+1.6
	0.4nm,0.3s,baz=97,slow=18,SNR=1.6						
CTA	Charters Tower	32.55	284	P	P	16 37 50.9	-0.6
	1.1nm,0.4s,baz=90,slow=10,SNR=2.2						
ASAR	Alice Springs	41.41	270	P	P	16 39 04.8	-0.2
	0.2nm,0.4s,baz=108,slow=7.4,SNR=18						
WRA	Warramunga Arr	42.57	275	P	P	16 39 13.4	-0.9
	0.3nm,0.3s,baz=114,slow=7.9,SNR=10						
FINES	FINESS Array B	146.29	338	PKPbc	PKPbc	16 50 48.9	-0.2
	1.3nm,0.8s,baz=62,slow=3.3,SNR=5.7						
NOA	NORSAR Array B	150.31	349	PKPbc	PKiKP	16 50 59.4	-0.6
	0.2nm,0.5s,baz=17,slow=4.1,SNR=2.1						

*IDC **30** 16:35:30.7±5.2, 22°.66N×10°.19W, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.4/32, mbtmp3.8/4, ML3.2/1, Error ellipse: s-maj=207.3km s-min=29.8km az=89.0*

ISC 30 16:35:31.9±2.0**, 22°.69N**±0°.09×**10°.1W**±0°.4**, h10km, n12, σ1§14**/13**, mb3.6**/3**, Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTIG	Tnine Tigouga,	7.98	11	P	Pn	16 37 27.3	-0.7
TTIG				S	Sb	16 39 14.7	-11
ZGR	Zagora	8.44	28	P	Pn	16 37 33.8	-0.5
ZGR				S	Sn	16 39 26.4	+17
OUK	Oukaimeden	8.73	13	P	Pn	16 37 37.7	-0.8
OUZM	OUZ	8.73	20	P	Pn	16 37 35.8	-2.5
OUZM				S	Sn	16 39 29.2	+12
TZRR	Tazzarine	9.04	26	P	Pn	16 37 41.8	-0.8
MDT	Midelt	11.21	25	P	Pn	16 38 11.9	-0.4
DBIC	Dimbokro	16.72	161	Pn	Pn	16 39 25.8	-0.5
	0.1nm,0.3s,baz=267,slow=16,SNR=2.6						
DBIC				Sn	Sn	16 42 31.6	-0.6
	0.1nm,0.3s,baz=14,slow=4.2,SNR=1.9						
GERES	GERESS Array B	32.23	30	P	P	16 42 01.1	+0.7
	0.5nm,0.7s,baz=230,slow=8.2,SNR=4.3						
FINES	FINESS Array B	46.03	23	P	P	16 43 54.9	-0.4
	2.7nm,1.0s,baz=180,slow=3.8,SNR=5.2						
MKAR	Makanchi Array	75.42	45	P	P	16 47 17.8	+1.8
	0.3nm,0.5s,baz=309,slow=4.0,SNR=3.1						
WRA	Warramunga Arr	146.85	92	PKPbc	PKPbc	16 55 15.0	-0.2
	0.4nm,0.7s,baz=288,slow=2.6,SNR=4.6						
ASAR	Alice Springs	146.99	99	PKPbc	PKPbc	16 55 15.8	+0.2
	0.3nm,0.6s,baz=288,slow=2.0,SNR=10						

IDC 30 16:36:51.2±21.0**, 17°.42S**×**177°.84W, h471km**±183km**, mb3.5**/5**, mb1 3.6**/5**, mb1mx3.1**/30**, mbtmp4.3**/5**, Error ellipse: s-maj=189.8km s-min=38.6km az=41.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	21.23	191	P	P	16 41 02.3	-0.1
	9.9nm,1.1s,baz=5.5,slow=17,SNR=2.5						
CTA	Charters Tower	34.06	260	P	P	16 42 55.5	+0.1
	4.0nm,1.0s,baz=90,slow=11,SNR=3.9						
STKA	Stephens Creek	39.34	241	P	P	16 43 39.1	+0.3
	2.5nm,0.6s,baz=95,slow=10.0,SNR=8.7						
WRA	Warramunga Arr	45.26	259	P	P	16 44 25.3	-0.5
	1.1nm,0.5s,baz=96,slow=7.0,SNR=34						
ASAR	Alice Springs	45.45	254	P	P	16 44 26.9	-0.3
	9.7nm,0.6s,baz=88,slow=8.4,SNR=347						
ASAR				PcP	PcP	16 45 56.7	-0.1
	0.4nm,0.8s,baz=103,slow=3.8,SNR=3.5						

*NIED **30** 16:50:00, 36°.20N×142°.00E, h14km, Mw3.7 Best double couple: M$_0$4.27000×10^{14} NP1:ϕ_s352.00000°, δ73.00000°, λ57.00000°. NP2:ϕ_s239.00000°, δ37.00000°, λ152.00000°.*

*IDC **30** 16:50:54.5±0.9, 36°.16N×141°.94E, h0km, mb3.6/11, mb1 3.8/13, mb1mx3.6/59, mbtmp3.6/13, ML3.2/2, MS2.9/1, Ms1 2.9/1, ms1mx2.2/46, Error ellipse: s-maj=21.9km s-min=20.1km az=100.0*

*JMA **30** 16:50:56.0±0.2, 36°.25N×142°.00E, h20km, M3.6*

*NEIC **30** 16:50:58.7±0.5, 36°.2N±0°.1×142°.0E±0°.1, h31km±5km, mb4.4/7, Error ellipse: s-maj=16.4km s-min=11.6km az=144.0*

ISC 30 16:50:55.4±3.5**, 36°.24N**±0°.05×**141°.94E**±0°.07**, h7km**±21km**, n47, σ1§52**/51**, mb3.7**/14**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	1.03	239	P	Pb	16 51 16.0	+0.4
CHOJ				S	Sn	16 51 30.5	-0.5
JHYU	Hitachinakayam	1.10	275	P	Pn	16 51 16.7	-0.6
JHYU				S	Sb	16 51 32.0	+0.7
JHO	Hitachi	1.17	289	P	Pn	16 51 17.3	-0.9
JHO				eS	Sb	16 51 33.5	+0.2
JIHU	Itakohorinouch	1.18	257	P	Pn	16 51 18.4	0.0
JIHU				eS	Sb	16 51 34.1	+0.4
ONAJ	Iwakimizuishiy	1.26	313	P	Pn	16 51 19.6	+0.1
ONAJ				eS	Sn	16 51 36.5	-0.2
JFK	Kawauchi	1.41	323	P	Pn	16 51 21.7	+0.1
BSO1	Boso 1	1.77	207	S	Sn	16 51 48.6	+0.1
JFT	Otama	1.81	315	P	Pn	16 51 28.0	+0.9
BSO3	Boso 3	1.85	220	P	Pn	16 51 27.7	+0.3
BSO3				S	Sn	16 51 51.4	+0.5
JAG	Ashikaga	2.02	276	P	Pn	16 51 29.8	-0.1
JAG				S	Sn	16 51 55.5	+0.1
JRY	Ryogami san	2.47	266	P	Pn	16 51 35.9	-0.3
JRY				S	Sn	16 52 06.9	+0.2
MJAR	Matsushiro Arr	3.03	277	Pn	Pn	16 51 45.1	+1.3
	1.3nm,0.3s,baz=100,slow=9.2,SNR=109						
MJAR				Sn	Sn	16 52 20.9	+0.5
	0.5nm,0.3s,baz=111,slow=13,SNR=4.5						
MJAR	Matsushiro Arr	3.03	277		Pb	16 51 47.9	-1.8
MAJO	Matsushiro	3.03	277		Pn	16 51 45.0	+1.1
MAT	Matsushiro	3.03	277	P	Pn	16 51 45.1	+1.3
MAT	Matsushiro	3.03	277	P	Pn	16 51 45.2	+1.4
MAT				S	Sn	16 52 24.0	+3.6
MJB9	Matsu-Tunnel	3.03	277		Pn	16 51 45.1	+1.2
JHJ	Hachijo jima 2	3.59	210	Sn	Sn	16 52 27.4	-6.7
	23nm,0.3s,baz=13,slow=15,SNR=1.7						
INU	Inuyama	4.10	259		Pn	16 52 00.0	+1.5
ASAJ	Asahikawa	7.88	3	Pn	Pn	16 52 50.9	+0.5
	0.6nm,0.3s,baz=252,slow=26,SNR=6.3						
ASAJ				Sn	Sn	16 54 16.1	-3.7
	0.2nm,0.3s,baz=107,slow=19,SNR=1.9						
JKA	Kamikawa-asahi	7.88	3		Pn	16 52 50.9	+0.5
JKA					Sn	16 54 16.1	-3.7
KSRS	Korea Array	11.30	280	LR	LR	16 58 02.6	
	comp=Z,49nm,18.0s,baz=94,slow=38						
H11N2	WAKE ISLAND Hy	27.38	120	T	T	17 25 17.9	
	baz=312,slow=75,SNR=6.8						
H11N1	WAKE ISLAND Hy	27.39	120	T	T	17 25 16.2	
	baz=312,slow=75,SNR=4.8						
H11N3	WAKE ISLAND Hy	27.40	120	T	T	17 25 20.3	
	baz=312,slow=75,SNR=5.2						
ENH	Enshi	27.70	267	P	P	16 56 43.5	-0.9
ENH				IAmb	IAmb	16 56 44.5	
	comp=Z,7.8nm,0.7s						
H11S1	WAKE ISLAND Hy	28.07	122	T	T	17 26 08.1	
	baz=314,slow=75,SNR=8.0						
H11S3	WAKE ISLAND Hy	28.07	122	T	T	17 26 09.0	
	baz=314,slow=75,SNR=7.0						
H11S2	WAKE ISLAND Hy	28.09	122	T	T	17 26 07.5	
	baz=314,slow=75,SNR=5.2						
ULN	Ulaanbaatar	28.16	305	P	P	16 56 48.6	+0.2
SONM	Songino Array	28.58	305	P	P	16 56 52.6	+0.5
	comp=Z,1.0nm,0.7s,baz=103,slow=9.4,SNR=6.1						
SONM	Songino Array	28.58	305	IAmb	IAmb	16 56 54.5	
	comp=Z,1.1nm,0.9s						
CMAR	Chiang Mai Arr	41.72	257	P	P	16 58 44.8	-0.4
	comp=Z,0.3nm,0.4s,baz=39,slow=9.2,SNR=4.1						
ZALV	Zalesovo Beam	42.76	313	P	P	16 58 53.6	+0.4
	comp=Z,0.9nm,0.6s,baz=92,slow=8.9,SNR=3.8						
MK31	Makanchi Array	44.90	303	P	P	16 59 10.7	+0.1
MK31				IAmb	IAmb	16 59 20.1	
	comp=Z,3.4nm,0.7s						
MKAR	Makanchi Array	44.90	303	P	P	16 59 11.2	+0.5
	comp=Z,1.0nm,0.7s,baz=86,slow=9.0,SNR=11						
MKAR	Makanchi Array	44.90	303	P	P	16 59 10.7	0.0
MAKZ	Makanchi	45.11	303	P	P	16 59 12.6	+0.3
KURK	Kurchatov	46.76	309	P	P	16 59 25.1	0.0
KURK				IAmb	IAmb	16 59 56.9	
	comp=Z,3.4nm,1.1s						
KURBB	Kurchatov Arra	46.83	309	P	P	16 59 25.8	+0.1
	comp=Z,1.2nm,0.7s,baz=83,slow=7.8,SNR=12						
ILAR	Eielson Array	49.94	32	P	P	16 59 50.2	+0.7
	comp=Z,0.4nm,0.8s,baz=274,slow=6.8,SNR=5.3						
WRA	Warramunga Arr	56.34	189	P	P	17 00 36.5	-0.7
	comp=Z,0.4nm,0.8s,baz=6.6,slow=7.1,SNR=5.9						
ABKAR	Akbulak array	58.78	311	P	P	17 00 53.9	-0.2
ASAR	Alice Springs	60.07	189	P	P	17 01 02.8	-0.4
	comp=Z,0.6nm,1.1s,baz=15,slow=14,SNR=4.3						
YKA	Yellowknife Ar	64.28	30	P	P	17 01 32.4	+1.4
	comp=Z,0.1nm,0.6s,baz=308,slow=7.5,SNR=4.4						
NOA	NORSAR Array B	75.08	338	P	P	17 02 38.2	+0.6
	comp=Z,0.5nm,0.8s,baz=38,slow=5.9,SNR=3.4						
AKASG	Malin Array Be	75.18	323	P	P	17 02 38.2	-0.2
	comp=Z,0.4nm,0.4s,baz=47,slow=6.0,SNR=4.2						

*IDC **30** 16:53:34.3±1.7, 26°.41S×27°.39E, h0km, mb3.7/3, mb1 3.7/4, mb1mx3.4/37, mbtmp3.7/4, ML3.6/1, Error ellipse: s-maj=76.5km s-min=15.3km az=125.0*

*EAF **30** 16:53:34.2±1.5, 26°.50S×27°.82E, h10km, MD3.6*

ISC 30 16:53:34.2±1.1**, 26°.34S**±0°.06×**27°.6E**±0°.1**, h5km, n12, σ1§70**/16**, mb3.6**/3**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	Lobatse	2.21	306	iP	Pb	16 54 16.0	+1.3
LBTB	Lobatse	2.21	306	iP	Pb	16 54 16.0	+1.3
BOSA	Boshof	3.05	222	iP	Pn	16 54 22.7	-0.5
BOSA	Boshof	3.05	222	Pn	Pn	16 54 22.9	-0.3
	6.1nm,0.3s,baz=43,slow=13,SNR=115						
BOSA				Pg	Pb	16 54 29.1	+0.1
	12nm,0.3s,baz=40,slow=17,SNR=22						
BOSA				Sn	Sn	16 54 57.7	-2.4
	6.3nm,0.3s,baz=38,slow=14,SNR=3.7						
BOSA				Lg	Lg	16 55 04.4	
	17nm,0.3s,baz=137,slow=20,SNR=11						
BOSA	Boshof	3.05	222	iP	Pn	16 54 22.7	-0.5
MATP	Matopo	5.96	9	iP	Pn	16 55 02.8	-0.4
MATP				iS	Sn	16 56 08.6	-3.3
MATP	Matopo	5.96	9	iP	Pn	16 55 02.8	-0.4
MATP				iS	Sn	16 56 08.6	-3.3
TSUM	Tsumeb	11.62	306	iP	Pn	16 56 20.3	-0.7
TSUM				iS	Sn	16 58 20.7	-11
TSUM	Tsumeb	11.62	306	iP	Pn	16 56 20.3	-0.7
TSUM				iS	Sn	16 58 20.7	-11
AKASG	Malin Array Be	76.72	1	P	P	17 05 27.7	+1.6
	0.1nm,0.2s,baz=168,slow=4.7,SNR=2.1						
FINES	FINESS Array B	87.48	359	P	P	17 06 23.4	+1.1
	0.8nm,0.6s,baz=142,slow=5.3,SNR=6.5						
MKAR	Makanchi Array	87.98	34	P	P	17 06 26.0	+0.8
	0.2nm,0.6s,baz=232,slow=5.1,SNR=3.1						

*NEIC **30** 16:55:53.6±2.2, 26°.3S±0°.1×179°.7E±0°.1, h514km±9km, mb4.8/29, Error ellipse: s-maj=18.7km s-min=17.5km az=88.0*

*IDC **30** 16:55:56.9±1.6, 26°.40S×179°.28E, h530km±19km, mb3.3/4, mb1 3.5/7, mb1mx3.2/37, mbtmp4.3/7, Error ellipse: s-maj=29.5km s-min=19.4km az=169.0*

ISC 30 16:55:56.1±0.7**, 26°.35S**±0°.08×**179°.5E**±0°.1**, h550km, n55, σ1§29**/59**, 1C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	3.68	142	P	P	16 57 16.4	+0.9
	244nm,0.3s,baz=37,slow=9.2,SNR=18						
MSVF	Nonsavu	8.69	351	P	P	16 57 57.2	-3.7
OUZ	Omahuta	10.19	208	P	P	16 58 17.7	+1.9
MXZ	Matakaoa Point	11.22	185	P	P	16 58 28.0	+1.7
URZ	Urewera	12.04	189	P	P	16 58 33.8	-1.0
	4.3nm,0.3s,baz=5.5,slow=3.0,SNR=28						
URZ				S	S	17 00 43.4	-2.1
	0.2nm,0.3s,baz=30,slow=20,SNR=1.8						
URZ	Urewera	12.04	189	P	P	16 58 34.0	-0.8
DZM	Mont Dzumac	12.66	287	P	P	16 58 40.3	-1.4
	0.5nm,0.3s,baz=133,slow=19,SNR=2.0						
BKZ	Black Stump Fm	13.03	190	P	P	16 58 44.0	-1.1
BFZ	Birch Farm	14.54	190	P	P	16 58 58.6	-2.1
MSWZ	Moikau Station	15.43	192	P	P	16 59 08.0	-1.8
SNZO	South Karori	15.44	194	P	P	16 59 09.4	-0.4
SNZO				IAmb	IAmb	16 59 27.0	
	comp=Z,50nm,1.1s						
BHW	Baring Head	15.50	193	P	P	16 59 08.2	-2.2
QRZ	Quartz Range	15.55	200	P	P	16 59 12.0	+1.0
QRZ				IAmb	IAmb	16 59 13.1	
	comp=Z,22nm,0.5s						
PLWZ	Palliser	15.58	192	P	P	16 59 10.2	-1.2
NNZ	Nelson	15.67	197	P	P	16 59 10.5	-1.7
NNZ				IAmb	IAmb	16 59 44.7	
	comp=Z,68nm,1.8s						
TUWZ	Tuamarina	15.72	196	P	P	16 59 11.3	-1.4
BSWZ	Blackbirch Sta	16.01	195	P	P	16 59 16.1	+0.6
THZ	Tophouse	16.31	198	P	P	16 59 18.4	+0.1
THZ				IAmb	IAmb	16 59 19.9	
	comp=Z,25nm,1.3s						
KHZ	Kahutara	16.76	196	P	P	16 59 23.0	+0.7
LTZ	Lake Taylor	17.43	198	P	P	16 59 28.6	0.0
LTZ				IAmb	IAmb	16 59 32.4	
	comp=Z,79nm,1.8s						
OXZ	Oxford	18.00	198	P	P	16 59 33.8	+0.1
MQZ	McQueen’s Vall	18.19	196	P	P	16 59 36.0	+0.6
RPZ	Rata Peaks	18.64	199	P	P	16 59 40.4	+0.8
	comp=Z,1.4nm,0.3s,baz=355,slow=2.3,SNR=9.5						
RPZ	Rata Peaks	18.64	199	P	P	16 59 40.4	+0.8
RPZ				IAmb	IAmb	17 00 02.1	
	comp=Z,94nm,1.9s						
FOZ	Fox Glacier	18.87	202	P	P	16 59 43.3	+1.6
FOZ				IAmb	IAmb	17 00 32.1	
	comp=Z,41nm,1.4s						
LBZ	Lake Benmore	19.51	200	P	P	16 59 48.5	+0.9
LBZ				IAmb	IAmb	17 00 03.5	
	comp=Z,77nm,2.0s						
ODZ	Otahua Downs	19.97	199	P	P	16 59 51.8	+0.1
ODZ				IAmb	IAmb	16 59 52.0	
	comp=Z,32nm,1.6s						
WKZ	Wanaka	20.28	202	P	P	16 59 55.4	+0.9
WHZ	Wether Hill Ro	21.58	202	P	P	17 00 08.3	+2.1
WHZ				IAmb	IAmb	17 00 11.6	
	comp=Z,30nm,1.5s						
RABL	Rabaul	34.22	305	P	P	17 01 55.8	-0.8
RABL				IAmb	IAmb	17 01 56.8	
	comp=Z,23nm,0.5s						
COEN	Coen	36.14	283	P	P	17 02 11.8	-0.8
COEN				IAmb	IAmb	17 02 12.7	
	comp=Z,50nm,1.9s						
BBOO	Buckleboo	38.13	250	P	P	17 02 28.9	+0.2
PATS	Pohnpei	38.88	325	P	P	17 02 35.6	+0.7
AS31	Alice Springs	41.26	263	P	P	17 02 53.7	-0.3
ASAR	Alice Springs	41.26	263	P	P	17 02 54.5	+0.6
	comp=Z,2.1nm,0.5s,baz=92,slow=7.7,SNR=117						
ASAR				PcP	PP	17 04 41.5	-2.3
	comp=Z,0.2nm,0.7s,baz=81,slow=5.7,SNR=1.4						
ASAR				S	S	17 08 29.9	+1.2
	comp=Z,0.8nm,1.0s,baz=101,slow=16,SNR=5.1						
ASAR	Alice Springs	41.26	263	P	P	17 02 53.8	-0.1
WR0	Warramunga Arr	41.67	269	P	P	17 02 56.8	-0.4
WB2	Warramunga Arr	41.85	269	P	P	17 02 58.6	0.0
WRAB	Tennant Creek	41.85	269	P	P	17 02 58.4	-0.3
WRA	Warramunga Arr	41.86	269	P	P	17 02 58.4	-0.3
	comp=Z,2.0nm,0.4s,baz=104,slow=7.8,SNR=57						
WRA	Warramunga Arr	41.86	269	P	P	17 02 58.4	-0.3
WB0	Warramunga Arr	41.87	269	P	P	17 02 58.4	-0.3
FORT	Forrest	45.09	252	P	P	17 03 23.8	+0.3
PTCN	Pitcairn Islan	45.19	100	P	P	17 03 23.0	-1.4
MTN	Manton Dam	47.25	277	P	P	17 03 40.1	-0.1
MTN				IAmb	IAmb	17 03 44.3	
	comp=Z,14nm,1.2s						
KNRA	Kununurra	48.28	272	P	P	17 03 48.5	+0.6
KNRA				IAmb	IAmb	17 03 49.4	
	comp=Z,14nm,1.1s						
FITZ	Fitzroy Crossi	50.25	268	P	P	17 04 03.0	+0.6
	comp=Z,3.0nm,0.6s,baz=134,slow=9.1,SNR=15						
FITZ	Fitzroy Crossi	50.25	268	P	P	17 04 02.8	+0.5
KSRS	Korea Array	79.85	321	P	P	17 07 09.7	+2.0
	comp=Z,0.7nm,0.7s,baz=114,slow=4.4,SNR=2.6						
SYO	Syowa Base	80.53	194	⇑ePcP	PcP	17 07 16.0	+0.2
BVAR	Borovoye Array	121.97	318	PKP	PKiKP	17 13 50.0	+2.0
	comp=Z,0.3nm,0.4s,baz=138,slow=3.5,SNR=4.2						
NB2	NORSAR Subarra	144.42	350	PKP	PKPab	17 14 31.8	+1.9
	comp=Z,0.3nm,0.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	144.42	350	PKP	PKPab	17 14 31.2	+1.3
	comp=Z,0.8nm,0.8s,baz=17,slow=4.2,SNR=6.6						
AKASG	Malin Array Be	146.75	325	PKPbc	PKiKP	17 14 38.1	-0.2
	comp=Z,0.3nm,0.4s,baz=45,slow=4.3,SNR=5.3						
BRTR	Keskin Array B	148.63	304	PKPbc	PKiKP	17 14 44.0	+1.2
	comp=Z,0.6nm,0.6s,baz=147,slow=1.3,SNR=4.3						
BRTR				PKPab	PKPab	17 14 49.7	+2.1
	comp=Z,0.6nm,0.6s,baz=95,slow=3.2,SNR=3.3						

*BJI **30** 16:56:43.0±0.0, 35°.89N×82°.38E, h7km, ML3.5/7*

*NNC **30** 16:56:48.2±2.8, 36°.32N×82°.67E, h0km, mb4.1, mpv3.6, Error ellipse: s-maj=34.0km s-min=21.7km az=81.0*

*IDC **30** 16:56:50.1±4.7, 36°.59N×82°.62E, h0km, mb3.6/3, mb1 3.6/8, mb1mx3.3/52, mbtmp3.6/8, ML3.4/4, MS2.5/1, Ms1 2.5/1, ms1mx2.3/35, Error ellipse: s-maj=69.2km s-min=34.3km az=0.0*

ISC 30 16:56:49.4±2.1**, 36°.3N**±0°.1×**82°.6E**±0°.1**, h10km, n15, σ1§85**/19**, mb3.5**/3**, 2C-5D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDGK	Podgornoye	7.44	342	⇓Pn	Pn	16 58 38.4	+0.3
	1.7nm,0.5s						
PDGK				⇑Sn	Sn	17 00 03.6	+1.0
	16nm,0.6s						
PDGK				⇓Lg	Lg	17 00 43.2	
	34nm,1.0s						
MDOK	Medeo	8.09	330	Pn	Pn	16 58 47.4	+0.3
	1.5nm,0.7s						
MDOK				Pg	Pg	16 59 15.4	-8.8
	3.0nm,0.6s						
MDOK				Lg	Lg	17 01 06.2	
	19nm,1.2s						
WMQ	Urumqi	8.50	26	eP	Pn	16 58 54.5	+1.9
WMQ				smax	smax		
	comp=N,11nm,0.7s						
WMQ				smax	smax		
	comp=E,12nm,0.7s						
AAK	Ala-Archa	8.91	318	Pn	Pn	16 58 58.1	-0.2
	0.1nm,0.3s,baz=138,slow=11,SNR=4.1						
AAK				Pg	Pg	16 59 30.2	-10
	0.2nm,0.3s,baz=120,slow=14,SNR=5.5						
AAK				Lg	Lg	17 01 22.3	
	0.1nm,0.3s,baz=187,slow=16,SNR=1.6						
AAK				LR	LR	17 02 23.5	
	comp=Z,31nm,18.1s,baz=280,slow=38						
MK31	Makanchi Array	10.52	359	⇓Pn	Pn	16 59 18.9	-1.2
	2.7nm,0.6s,baz=181,slow=13,SNR=34						
MK31				⇓Sn	Sn	17 01 21.5	+3.5
	1.6nm,0.8s,baz=183,slow=23,SNR=4.6						
MK31	Makanchi Array	10.52	359	pP	Pn	16 59 19.4	-0.8
MKAR	Makanchi Array	10.52	359	Pn	Pn	16 59 19.6	-0.6
	0.9nm,0.3s,baz=182,slow=13,SNR=56						
MKAR				Sn	Sn	17 01 16.7	-1.3
	0.1nm,0.3s,baz=191,slow=25,SNR=4.4						
MKAR	Makanchi Array	10.52	359	pP	Pn	16 59 19.0	-1.1
MAKZ	Makanchi	10.54	358	⇑Pn	Pn	16 59 19.3	-1.1
	9.6nm,0.6s						
MAKZ				⇓Sn	Sn	17 01 17.5	-1.0
	3.1nm,1.2s						
KURBB	Kurchatov Arra	14.64	350	Pn	Pn	17 00 12.4	-4.1
	0.0nm,0.3s,baz=172,slow=12,SNR=4.8						
ZALV	Zalesovo Beam	17.75	4	P	Pn	17 00 53.0	-3.4
	0.2nm,0.3s,baz=194,slow=10,SNR=4.1						
BVAR	Borovoye Array	18.82	337	P	Pn	17 01 09.0	-0.5
	0.3nm,0.3s,baz=137,slow=8.8,SNR=7.8						
SONM	Songino Array	21.03	49	P	P	17 01 33.1	-0.3
	1.1nm,0.9s,baz=254,slow=10,SNR=7.1						
AKTO	Aktyubinsk	22.65	316	P	P	17 01 51.6	+1.1
	1.4nm,0.8s,baz=105,slow=11,SNR=3.8						
FINES	FINESS Array B	43.04	324	P	P	17 04 48.6	-0.3
	2.3nm,0.9s,baz=115,slow=9.8,SNR=2.4						

SOME ***30*** *17:07:06.4, 43.°00N×78.°40E, h15^{km}*

NNC 30 17:07:06.3±0.5**, 43.°04N×78.°44E, h7**^{km}±2^{km}**, mpv2.4, Error ellipse: s-maj=8.7km s-min=1.3km az=0.0, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	**Saty**	**0.03**	**298**	*e*P	Pg	17 07 08.1	+0.2
	4.3nm,0.1s						
SATY				*e*S	Sg	17 07 09.5	+0.6
	250nm,0.1s						
SATY	**Saty**	**0.03**	**298**	P	Pg	17 07 08.1	+0.2
	4.3nm,0.1s						
SATY				S	Sg	17 07 09.5	+0.6
	250nm,0.1s						
UZB	**Uzynbulak**	**0.44**	**76**	*e*P	Pb	17 07 15.6	-0.8
	1.0nm,0.1s						
UZB				*e*S	Sb	17 07 22.4	-0.9
	3.6nm,0.1s						
UZB	**Uzynbulak**	**0.44**	**76**	P	Pb	17 07 15.6	-0.8
	1.0nm,0.1s						
UZB				S	Sb	17 07 22.4	-0.9
	3.6nm,0.1s						
PDGK	**Podgornoye**	**0.82**	**69**	P	Pb	17 07 22.5	-0.4
	0.1nm,0.0s						
PDGK				S	Sb	17 07 33.9	-0.3
	0.4nm,0.1s						

KRNET 30 17:07:57.1±0.1**, 42.°27N×76.°00E, h22**^{km}**, mb1.1, 6C, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**0.18**	**98**	⇑*i*P	Pb	17 08 02.2	-0.7
	baz=98						
ULHL				⇑*i*S	Sb	17 08 04.9	-1.9
	baz=98						
BOOM	**Boomskoye usch**	**0.22**	**349**	⇑*i*P	Pb	17 08 02.6	-0.5
	baz=49						
BOOM				⇑*i*S	Sb	17 08 06.7	-0.6
	baz=49						
TKM2	**Tokmak 2**	**0.71**	**335**	*i* P	Pb	17 08 10.5	-0.5
	baz=35						
TKM2				*i* S	Sb	17 08 20.3	-0.2
	baz=35						
ANVS	**Anan'yevo**	**1.33**	**67**	⇑*i*P	Pb	17 08 21.9	+0.4
	baz=67						
ANVS				⇑*i*S	Sb	17 08 39.6	+1.4
	baz=67						

BJI ***30*** *17:10:12.0±0.0, 31.°34N×86.°51E, h10^{km}, mB5.4/82, mb5.3/80, Ms5.5/99, Ms7 5.5/89*

IDC ***30*** *17:10:12.6±0.4, 31.°36N×86.°56E, h0^{km}, mb5.0/30, mb1 5.1/33, mb1mx5.1/34, mbtmp5.0/33, ML4.6/3, MS4.8/40, Ms1 4.8/40, ms1mx4.7/49, Error ellipse: s-maj=12.2km s-min=10.1km az=45.0*

MOS ***30*** *17:10:13.2±1.3, 31.°45N×86.°62E, h11^{km}, mb5.4/64, MS5.1/30, Error ellipse: s-maj=5.3km s-min=2.8km az=120.8*

BGR ***30*** *17:10:13.7±0.0, 30.°72N×86.°61E, h33^{km}, mb5.5, Ms5.0*

DMN ***30*** *17:10:13.1±0.4, 31.°92N×86.°61E, h10^{km}, Ml5.1/3, Error ellipse: s-maj=8.7km s-min=7.8km az=19.0*

NEIC ***30*** *17:10:14.9±2.2, 31.°40N±0.°07×86.°46E±0.°08, h13^{km}±3^{km}, mb5.3/129, Error ellipse: s-maj=11.2km s-min=8.1km az=50.0*

GCMT ***30*** *17:10:16.9±0.1, 31.°25N±0.°01×86.°53E±0.°01, h14^{km}, MW5.3/141, Moment Tensor Solution. s103,c184; s141,c279; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.87±.02; M$_{\theta\theta}$-0.50±.02; M$_{\phi\phi}$1.37±.02; M$_{r\theta}$-0.10±.04; M$_{\theta\phi}$0.64±.01; M$_{\phi r}$0.44±.04; Best double couple: M$_0$1.35100×10^{17} NP1:ϕ_s48.00000°, δ45.00000°, λ-43.00000°. NP2:ϕ_s171.00000°, δ61.00000°, λ-126.00000°. Principal axes: T 1.6310, Plg9.0000°, Azm286.0000°; N -0.5630, Plg31.0000°, Azm191.0000°; P -1.0710, Plg58.0000°, Azm31.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NDI ***30*** *17:10:17.4±3.5, 31.°24N×86.°35E, h10^{km}, mb5.2, MS5.2, mb5.3(NEIC)*

ISC 30 17:10:14.7±0.4**, 31.°35N**±0.°02×**86.°47E**±0.°02**, h13**^{km}±2^{km}**, h13**^{km}**:pP-P, n813,** σ**2^{s}21**/976**, mb5.3**/247**, MS5.1**/94**, 44C-46D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUN	**Gumba**	**3.46**	**189**	*e*Pn	**Pb**	**17 11 13.4**	**-2.7**
JIRN	**Jiri**	**3.68**	**184**	*e*Pn	**Pb**	**17 11 16.8**	**-3.1**
KKN	**Kakani**	**3.69**	**197**	*e*Pn	**Pb**	**17 11 16.3**	**-3.7**
GKN	**Gorkha**	**3.69**	**206**	*e*Pn	**Pb**	**17 11 16.1**	**-3.9**
GKN				*e*Sn	**Sb**	**17 12 02.2**	**-2.5**
	504nm,0.2s						
DANN	**Dangsing**	**3.80**	**219**	*e*Pn	**Pn**	**17 11 16.9**	**+3.6**
DANN				*e*Sn	**Sb**	**17 12 05.4**	**-2.6**
	3µm,1.0s						
PKIN	**Phulchoki**	**3.87**	**194**	*e*Pn	**Pb**	**17 11 18.9**	**-4.1**
PKIN				*e*Sn	**Sb**	**17 12 07.7**	**-2.2**
	1µm,0.5s						
PKI	**Pulchoki**	**3.87**	**194**	*e*Pn	**Pb**	**17 11 19.0**	**-4.1**
PKI				*e*Sn	**Sb**	**17 12 08.3**	**-1.8**
DMN	**Daman**	**3.91**	**198**	*e*Pn	**Pb**	**17 11 19.4**	**-4.3**
TAPN	**Taplejung**	**4.12**	**165**	*e*Pn	**Pn**	**17 11 22.2**	**+4.4**
TAPN				*e*Sn	**Sb**	**17 12 11.7**	**-5.6**
LSA	**Lhasa**	**4.36**	**111**	Pg	**Pb**	**17 11 26.8**	**-4.6**
LSA				Sg	**Sb**	**17 12 24.8**	**+0.7**
LSA	**Lhasa**	**4.36**	**111**	P	Pb	17 11 26.3	-5.1
LSA	**Lhasa**	**4.36**	**111**		Pb	17 11 26.3	-5.2
RAMN	**Ramite**	**4.38**	**179**	*e*Pn	**Pn**	**17 11 24.7**	**+3.5**
RAMN				*e*Sn	**Sb**	**17 12 19.4**	**-5.2**
ODAN	**Odare**	**4.54**	**170**	*e*Pn	**Pn**	**17 11 27.2**	**+3.8**
ODAN				*e*Sn	**Sn**	**17 12 22.5**	**+6.3**
PTH	**Pithoragarh**	**5.69**	**253**	*e*P	**Pn**	**17 11 40.8**	**+1.6**
PTH				*e*x	**Sn**	**17 12 46.2**	**+1.7**
DDI	**Dehra Dun**	**7.31**	**264**	*e*P	**Pn**	**17 12 02.7**	**+1.4**
DDI				IAmb	IAmb	17 12 09.9	
	comp=Z,303nm,0.7s						
BOK	**Bokaro**	**7.54**	**184**	*e*P	**Pn**	**17 12 06.5**	**+2.1**
BOK				IAmb	IAmb	17 12 11.1	
	comp=Z,292nm,1.1s						
NDI	**New Delhi**	**8.45**	**254**	*e*P	**Pn**	**17 12 17.0**	**+0.1**
NDI				*e*x	**Sn**	**17 13 50.0**	**-2.2**
BHK	**Bhakra**	**8.60**	**273**	*e*P	**Pn**	**17 12 22.0**	**+3.1**
BHK				*e*P	**Sn**	**17 14 04.8**	**+8.9**
THN	**Thein Dam**	**9.21**	**280**	*e*x	**Pn**	**17 12 27.5**	**+0.2**
THN				*e*x	**Sn**	**17 14 12.5**	**+1.7**
BRDH	**Bariadhala**	**9.79**	**151**	Pn	**Pn**	**17 12 32.4**	**-2.9**
	comp=Z,22nm,0.3s,baz=270,slow=20,SNR=1.2						
BRDH				Sn	**Sn**	**17 14 26.2**	**+1.2**
	comp=Z,36nm,0.3s,baz=264,slow=19,SNR=1.4						
BRDH				LR	LR	17 17 52.9	
	comp=Z,4µm,20.9s,baz=342,slow=47						
JMU	**Jammu**	**9.92**	**281**	*e*x	**Pn**	**17 12 39.0**	**+2.0**
JMU				*e*x	**Sn**	**17 14 29.5**	**+1.3**
JBP	**Jabalpur**	**9.98**	**217**	⇑*e*x	**Pn**	**17 12 42.0**	**+4.1**
JBP				*e*x	**Sn**	**17 14 25.6**	**-4.2**
JBP				AMS	AMS	17 16 38.7	
	comp=Z,16µm,12.4s						
CHCP	**Chirah Chowk**	**11.39**	**285**	P	**Pn**	**17 12 57.3**	**+0.1**
BHPL	**Bhopal**	**11.39**	**227**	*e*P	**Pn**	**17 12 55.7**	**-1.6**
BHPL				IAMs_20	IAMs_20	17 17 33.2	
	comp=Z,27µm,11.1s						
NIL	**Nilore**	**11.40**	**285**	P	**Pn**	**17 12 57.5**	**+0.2**
NIL	**Nilore**	**11.40**	**285**		**Pn**	**17 12 56.1**	**-1.2**
AJM	**Ajmer**	**11.44**	**248**	*i* P	**Pn**	**17 12 57.0**	**-0.9**
AJM				*i* x	**Sn**	**17 15 04.0**	**-1.7**
SARP	**Sargodha**	**11.78**	**276**	P	**Pn**	**17 13 01.0**	**-1.5**
KSH	**Kashi**	**11.82**	**316**	P	**Pn**	**17 13 02.5**	**-0.6**
KSH				sP		17 13 09.5	
KSH				PP	**PnPn**	**17 13 17.0**	**+6.1**
KSH				S	**Sn**	**17 15 12.0**	**-2.9**
KSH				sS		17 15 24.0	
KSH				pmax	pmax		
	comp=Z,55nm,1.4s						
KSH				pmax	pmax		
	comp=Z,440nm,7.2s						
KSH				LR	LR		
	comp=Z,12µm,13.0s						
KSH				LR	LR		
	comp=Z,3µm,10.8s						
KSH				LR	LR		
	comp=Z,7µm,13.6s						
NGP	**Nagpur**	**12.14**	**215**	*e*P	**Pn**	**17 13 07.4**	**-0.1**
NGP				*e*S	Sn	17 15 13.1	-10
WMQ	**Urumqi**	**12.49**	**4**	*e*P	**Pn**	**17 13 12.3**	**0.0**
WMQ				sP	P	17 13 22.5	-1.6
WMQ				PP	**PnPn**	**17 13 28.3**	**+8.1**
WMQ				S	**Sn**	**17 15 37.8**	**+6.5**
WMQ				pmax	pmax		
	comp=Z,44nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,520nm,7.3s						
WMQ				LR	LR		
	comp=Z,7µm,11.1s						
WMQ				LR	LR		
	comp=Z,5µm,12.3s						
WMQ				LR	LR		
	comp=Z,6µm,13.7s						
WMQ	**Urumqi**	**12.49**	**4**	P	**Pn**	**17 13 10.3**	**-2.0**
WMQ	**Urumqi**	**12.49**	**4**		**Pn**	**17 13 10.2**	**-2.0**
SIMRM	**Sittwe**	**12.57**	**151**		**Pn**	**17 13 11.8**	**-1.5**
SIMRM					**Sn**	**17 15 33.5**	**+0.3**
THW	**Thamme Wali**	**12.58**	**280**	P	**Pn**	**17 13 12.3**	**-1.2**
CHLP	**Challavanipeta**	**12.97**	**190**	*e*P	**Pn**	**17 13 18.2**	**-0.6**
CHLP				IAmb	IAmb	17 13 21.1	
	comp=Z,58nm,1.6s						
CHLP				*e*S	**Sn**	**17 15 36.0**	**-7.1**
CHLP				IVMs_BB	IVMs_BB	17 18 42.9	
	comp=Z,6µm,8.2s						
SHLS	**Shalkode**	**13.04**	**337**	⇑*i*P	**Pn**	**17 13 17.5**	**-2.3**
	comp=Z,30nm,1.3s						
SHLS				*e*LR	LR	17 19 20.8	
SHLS	**Shalkode**	**13.04**	**337**	*c i*P	**Pn**	**17 13 17.5**	**-2.3**
SHLS				pmax	pmax		
	comp=Z,30nm,1.3s						
UZB	**Uzynbulak**	**13.18**	**335**	⇑*i*P	**Pn**	**17 13 21.3**	**-0.5**
	comp=Z,46nm,2.5s						
UZB				*e*LR	LR	17 20 40.5	
UZB	**Uzynbulak**	**13.18**	**335**	*c i*P	**Pn**	**17 13 21.2**	**-0.5**
UZB				pmax	pmax		
	comp=Z,46nm,2.5s						
SATY	**Saty**	**13.33**	**334**	⇑*i*P	**Pn**	**17 13 23.4**	**-0.4**
	comp=Z,48nm,1.9s						
SATY				*e*S	**Sn**	**17 15 59.1**	**+7.0**
	comp=Z,41nm,1.6s						
SATY				*e*LR	LR	17 20 31.4	
SATY	**Saty**	**13.33**	**334**	*c i*P	**Pn**	**17 13 23.4**	**-0.4**
SATY				*e*S	**Sn**	**17 15 59.0**	**+7.0**
SATY				pmax	pmax		
	comp=Z,48nm,1.9s						
SATY				smax	smax		
	comp=E,41nm,1.6s						
GTA	**Gaotai**	**13.53**	**50**	*e*P	**Pn**	**17 13 25.5**	**-1.0**
GTA				pP	P	17 13 30.5	-5.2
GTA				sP		17 13 35.0	
GTA				S	**Sn**	**17 15 54.5**	**-2.2**
GTA				sS	S	17 16 03.5	-17
GTA				SS	**SnSn**	**17 16 10.5**	**+1.4**
GTA				pmax	pmax		
	comp=E,21nm,1.2s						
GTA				pmax	pmax		
	comp=E,690nm,8.9s						
GTA				LR	LR		
	comp=E,17µm,15.5s						
GTA				LR	LR		
	comp=E,20µm,12.4s						
KPKS	**Kokpek**	**13.58**	**335**	*e*P	**Pn**	**17 13 26.6**	**-0.5**
	comp=E,46nm,1.6s						
KPKS				*e*S	**Sn**	**17 15 56.5**	**-1.5**
	comp=E,72nm,3.9s						
KPKS				*e*LR	LR	17 20 26.2	
KPKS	**Kokpek**	**13.58**	**335**	*e*P	**Pn**	**17 13 26.6**	**-0.5**
KPKS				*e*S	**Sn**	**17 15 56.5**	**-1.5**
KPKS				pmax	pmax		
	comp=Z,46nm,1.6s						
KPKS				smax	smax		
	comp=E,72nm,3.9s						
ULHL	**Ulahol**	**13.61**	**326**	P	**Pn**	**17 13 29.5**	**+1.8**
	SNR=12						
TNSS	**Tian-Shan**	**13.91**	**330**	*e*P	**Pn**	**17 13 31.0**	**-0.9**
TNSS	**Tian-Shan**	**13.91**	**330**	*e*P	**Pn**	**17 13 31.0**	**-0.9**
BOOM	**Boomskoye usch**	**13.94**	**326**	P	**Pn**	**17 13 33.7**	**+1.6**
BOOM	**Boomskoye usch**	**13.94**	**326**		**Pn**	**17 13 33.7**	**+1.6**
MDOK	**Medeo**	**13.97**	**330**	*e*P	**Pn**	**17 13 30.8**	**-1.7**
MDOK				*e*S	**Sn**	**17 16 02.3**	**-5.3**
MDOK				*e*LR	LR	17 19 12.9	
MDOK	**Medeo**	**13.97**	**330**	*e*P	**Pn**	**17 13 30.8**	**-1.7**
MDOK				*e*S	**Sn**	**17 16 02.2**	**-5.3**
KZA	**Kyzart**	**13.98**	**323**	P	**P**	**17 13 37.1**	**-3.8**
	SNR=10						
RPR	**Rampur**	**14.02**	**209**	*e*P	**Pn**	**17 13 30.5**	**-2.7**
RPR				IAmb	IAmb	17 13 36.1	
	comp=Z,14nm,0.7s						
RPR				*e*S	Sn	17 15 57.6	-11
RPR				IVMsBB		17 19 12.0	
	comp=Z,5µm,11.0s						
KNDC	**Almaty**	**14.05**	**330**	P	**P**	**17 13 42.4**	**+1.0**
AAA	**Alma-Ata**	**14.06**	**330**	*e*LR	LR	17 19 16.9	
AAA	**Alma-Ata**	**14.06**	**330**	*e*P	**Pn**	**17 13 36.9**	**+3.2**
SRSP	**Sriramsagar**	**14.38**	**213**	*e*P	**Pn**	**17 13 35.1**	**-3.0**
SRSP				IAmb	IAmb	17 13 39.4	
	comp=Z,26nm,0.8s						
SRSP				*e*S	Sn	17 16 05.4	-12
SRSP				IVMs_BB	IVMs_BB	17 19 14.2	
	comp=Z,5µm,12.5s						
TKM2	**Tokmak 2**	**14.43**	**326**	P	**Pn**	**17 13 38.9**	**0.0**
	SNR=11						
UCH	**Uchtor**	**14.47**	**322**	P	**Pn**	**17 13 40.2**	**+0.6**
	SNR=18						
KBK	**Karagaybulak**	**14.55**	**324**	P	**Pn**	**17 13 43.1**	**+2.6**
	SNR=14						
PVM	**Polavaram**	**14.71**	**199**	*e*P	**Pn**	**17 13 39.4**	**-3.2**
PVM				IAmb	IAmb	17 13 43.7	
	comp=Z,59nm,0.9s						
PVM				*e*S	Sn	17 16 14.4	-11
PVM				IVMs_BB	IVMs_BB	17 19 25.3	
	comp=Z,5µm,12.5s						
ARSB	**Arslanbob**	**14.73**	**316**	P	**Pn**	**17 13 40.6**	**-2.3**
ARSB	**Arslanbob**	**14.73**	**316**		**Pn**	**17 13 40.6**	**-2.3**
AAK	**Ala-Archa**	**14.77**	**323**	Pn	**Pn**	**17 13 44.1**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=150,slow=11,SNR=5.0						
AAK				LR	LR	17 18 54.1	
	comp=Z,370nm,21.8s,baz=124,slow=35						
AAK	**Ala-Archa**	**14.77**	**323**	*i* P	**P**	**17 13 46.9**	**-2.6**
	SNR=5.9						
AAK	**Ala-Archa**	**14.77**	**323**	*ce*P	**Pn**	**17 13 44.7**	**+1.2**
AAK				pmax	pmax		
	comp=Z,12nm,1.7s						
AAK	**Ala-Archa**	**14.77**	**323**		**Pn**	**17 13 44.5**	**+1.1**
CD2	**Chengdu**	**14.81**	**87**	P	**Pn**	**17 13 43.3**	**-0.7**
CD2				S	**Sn**	**17 16 30.5**	**+2.4**
CD2				pmax	pmax		
	comp=Z,30nm,0.8s						
CD2				pmax	pmax		
	comp=Z,2µm,6.7s						
CD2				LR	LR		
	comp=Z,15µm,9.2s						
CD2				LR	LR		
	comp=Z,14µm,7.1s						
CD2				LR	LR		
	comp=Z,15µm,9.4s						
AML	**Almayashu**	**14.84**	**320**	P	**Pn**	**17 13 44.9**	**+0.2**
	SNR=21						
KUU	**Kurty**	**14.86**	**330**	*e*P	**Pn**	**17 13 45.8**	**+1.1**
KUU				*e*LR	LR	17 20 51.0	
KUU	**Kurty**	**14.86**	**330**	*e*P	**Pn**	**17 13 45.7**	**+1.1**
CHMS	**Chumysh**	**14.90**	**325**	*i* P	**Pn**	**17 13 46.5**	**+1.4**
CHMS				pmax	pmax		
	comp=Z,25nm,1.1s						
KBL	**Kabul**	**14.98**	**287**	P	**Pn**	**17 13 44.1**	**-2.3**
KBL	**Kabul**	**14.98**	**287**		**Pn**	**17 13 44.1**	**-2.3**
TDK	**Taldyqorghan**	**15.03**	**337**	*e*P	**Pn**	**17 13 47.8**	**+0.9**
TDK				*e*LR	LR	17 21 50.5	
TDK	**Taldyqorghan**	**15.03**	**337**	*e*P	**Pn**	**17 13 47.7**	**+0.9**
EKS2	**Erkin-Say**	**15.16**	**322**	P	**P**	**17 13 51.3**	**-2.5**
	SNR=14						
LZH	**Lanzhou**	**15.21**	**67**	⇑P	**Pn**	**17 13 49.0**	**-0.4**
LZH				pP	P	17 13 54.8	+0.4
LZH				sP	pP	17 13 58.5	-1.0
LZH				S	**Sn**	**17 16 38.5**	**+0.7**
LZH				sS	S	17 16 47.3	-7.4
LZH				SS	**SnSn**	**17 16 59.0**	**+8.6**
LZH				pmax	pmax		
	comp=Z,87nm,1.0s						
LZH				pmax	pmax		
	comp=Z,850nm,4.6s						
LZH				LR	LR		
	comp=Z,29µm,13.0s						
LZH				LR	LR		
	comp=Z,26µm,14.6s						
GAR	**Garm**	**15.25**	**304**		**Pn**	**17 13 46.7**	**-3.2**
GAR				IAmb	IAmb	17 14 00.1	
	comp=Z,152nm,0.8s						
SGDS	**Sogindy**	**15.30**	**325**	*e*P	**Pn**	**17 13 51.4**	**+0.9**
SGDS				*e*S	**S**	**17 16 54.8**	**-1.6**
SGDS				*e*LR	LR	17 20 10.5	
MYLAV	**Mylavaram**	**15.47**	**201**	*e*P	**Pn**	**17 13 49.1**	**-3.7**
MYLAV				IAmb	IAmb	17 13 52.9	
	comp=Z,23nm,0.9s						
MYLAV				*e*S	**Sn**	**17 16 36.5**	**-7.6**
MYLAV				IVMs_BB	IVMs_BB	17 19 56.3	
	comp=Z,4µm,11.9s						
KMI	**Kunming**	**15.61**	**109**	P	**Pn**	**17 13 56.8**	**+2.0**
KMI				pP	P	17 14 01.0	+2.0
KMI				sP	pP	17 14 04.5	+0.4
KMI				S	**Sn**	**17 16 50.3**	**+2.5**
KMI				pmax	pmax		
	comp=Z,130nm,1.0s						
KMI				pmax	pmax		
	comp=Z,2µm,4.9s						
KMI				LR	LR		
	comp=Z,3µm,8.5s						
KMI				LR	LR		
	comp=Z,6µm,12.6s						
KMI				LR	LR		
	comp=Z,7µm,11.2s						
HYBB	**Hyderabad (bro**	**15.62**	**209**	*e*P	**Pn**	**17 13 53.7**	**-1.1**
HYBB				IAmb	IAmb	17 13 57.6	
	comp=Z,16nm,0.7s						
HYBB				*e*S	Sn	17 16 34.1	-14
HYBB				IVMs_BB	IVMs_BB	17 20 08.9	
	comp=Z,7µm,10.2s						
HYB	**Hyderabad**	**15.62**	**209**	*i* P	**Pn**	**17 13 51.0**	**-3.8**
HYB	**Hyderabad**	**15.62**	**209**	*e*x	**Pn**	**17 13 52.3**	**-2.4**
MK31	**Makanchi Array**	**15.76**	**349**	*i* P	**Pn**	**17 13 54.3**	**-2.1**
MK31	**Makanchi Array**	**15.76**	**349**	P	**Pn**	**17 13 56.5**	**+0.1**
MKAR	**Makanchi Array**	**15.76**	**349**	Pn	**Pn**	**17 13 55.2**	**-1.2**
	comp=Z,0.6nm,0.3s,baz=161,slow=12,SNR=72						
MKAR				LR	LR	17 21 10.0	
	comp=Z,1µm,19.0s,baz=160,slow=42						
MKAR	**Makanchi Array**	**15.76**	**349**	*i* P	**Pn**	**17 13 54.7**	**-1.7**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MKAR	**Makanchi Array**	**15.76**	**349**		**Pn**	**17 13 55.7**	**-0.7**
MAKZ	**Makanchi**	**15.83**	**349**	P	**Pn**	**17 13 56.1**	**-1.2**
MAKZ				pmax	pmax		
	comp=Z,81nm,1.1s						
MAKZ	**Makanchi**	**15.83**	**349**	P	**Pn**	**17 13 56.1**	**-1.2**
CHGR	**Chuyangaron**	**15.94**	**302**		**Pn**	**17 13 55.8**	**-3.1**
KLRI	**Killari**	**15.96**	**216**	*e*P	**Pn**	**17 13 55.4**	**-3.7**
KLRI				IAmb	IAmb	17 14 00.0	
	comp=Z,42nm,0.8s						
KLRI				*e*S	Sn	17 16 41.2	-15
KLRI				IVMsBB		17 20 06.2	
	comp=Z,3µm,10.5s						
NJS	**Nagarjunasagar**	**16.11**	**206**	*e*P	**Pn**	**17 13 57.4**	**-3.6**
NJS				IAmb	IAmb	17 14 00.7	
	comp=Z,19nm,0.9s						
NJS				*e*S	Sn	17 16 45.2	-14
NJS				IVMs_BB	IVMs_BB	17 20 30.6	
	comp=Z,7µm,9.6s						
ZSN	**Zaisan**	**16.13**	**356**	*e*P	**Pn**	**17 13 58.7**	**-2.5**
	comp=Z,207nm,3.4s						
ZSN				*e*S	**S**	**17 17 08.3**	**-4.9**
ZSN				*e*LR	LR	17 21 10.6	
ZSN	**Zaisan**	**16.13**	**356**	*e*P	**Pn**	**17 13 58.7**	**-2.5**
ZSN				*e*S	**S**	**17 17 08.3**	**-4.9**
ZSN				pmax	pmax		
	comp=Z,207nm,3.4s						
ADKI	**Addanki**	**16.53**	**203**	*e*P	**Pn**	**17 14 02.7**	**-3.7**
ADKI				IAmb	IAmb	17 14 06.8	
	comp=Z,30nm,1.0s						
ADKI				*e*S	Sn	17 16 56.6	-13
ADKI				IVMs_BB	IVMs_BB	17 20 38.0	
	comp=Z,4µm,12.1s						
SRLM	**Srisailam**	**16.68**	**206**	*e*P	**Pn**	**17 14 05.1**	**-3.2**
SRLM				IAmb	IAmb	17 14 13.6	
	comp=Z,40nm,0.9s						
SRLM				*e*S	**Sn**	**17 17 03.3**	**-10**
SRLM				IVMs_BB	IVMs_BB	17 20 49.0	
	comp=Z,6µm,9.9s						
BTLS	**Baital**	**16.77**	**328**	*e*P	**Pn**	**17 14 09.5**	**+0.1**
BTLS				*e*S	**Sn**	**17 17 11.8**	**-3.7**
BTLS				*e*LR	LR	17 21 00.2	
BTLS	**Baital**	**16.77**	**328**	*e*P	**Pn**	**17 14 09.4**	**+0.1**
BTLS				*e*S	**Sn**	**17 17 11.8**	**-3.7**
CHTO	**Chiang Mai**	**16.81**	**135**	P	**Pn**	**17 14 08.7**	**-1.3**
CHTO				pmax	pmax		
	comp=Z,98nm,1.3s						
CHTO	**Chiang Mai**	**16.81**	**135**	P	**Pn**	**17 14 08.7**	**-1.3**
JBG	**Jabagly**	**16.84**	**315**	*e*P	**Pn**	**17 14 09.1**	**-1.3**
JBG				*e*S	**Sn**	**17 17 16.0**	**-1.4**
JBG				pmax	pmax		
	comp=Z,52nm,1.2s						
BHUJ	**Bhuj**	**16.97**	**246**	*e*P	**Pn**	**17 14 11.6**	**-0.3**
BHUJ				IAmb	IAmb	17 14 22.3	
	comp=Z,379nm,1.3s						
TAS	**Tashkent**	**17.02**	**311**	P	**P**	**17 14 17.3**	**+2.9**
TAS				pmax	pmax		
	comp=Z,303nm,1.0s						
CM31	**Chiang Mai Arr**	**17.09**	**136**	P	**Pn**	**17 14 13.5**	**0.0**
	SNR=60						
CM31	**Chiang Mai Arr**	**17.09**	**136**	P	**P**	**17 14 15.2**	**0.0**
CMAR	**Chiang Mai Arr**	**17.09**	**136**	P	**Pn**	**17 14 11.8**	**-1.6**
	comp=Z,0.8nm,0.3s,baz=316,slow=12,SNR=27						
CMAR				PcP	**PcP**	**17 19 00.1**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=294,slow=2.4,SNR=5.2						
CMAR				LR	LR	17 21 46.5	
	comp=Z,3µm,18.2s,baz=330,slow=41						
CMAR				ScP	**ScP**	**17 22 33.4**	**+0.3**
	baz=301,slow=3.7,SNR=5.8						
CMAR	**Chiang Mai Arr**	**17.09**	**136**	*ce*P	**Pn**	**17 14 14.1**	**+0.7**
CMAR				pmax	pmax		
	comp=Z,26nm,0.7s						
CMAR	**Chiang Mai Arr**	**17.09**	**136**	P	**P**	**17 14 17.0**	**+1.9**
CMAR					**PcP**	**17 19 01.9**	**+3.6**
POO	**Poona**	**17.12**	**225**	*e*P	**Pn**	**17 14 12.0**	**-1.9**
	comp=Z,180nm,1.2s						
POO				*i* x	x	17 17 12.0	
KK31	**Karatay Array**	**17.27**	**317**	*e*P	**Pn**	**17 14 14.2**	**-1.4**
KK31	**Karatay Array**	**17.27**	**317**	P	**Pn**	**17 14 15.8**	**+0.2**
KKAR	**Karatay Array**	**17.27**	**317**	P	**P**	**17 14 16.3**	**-0.7**
KKAR				pmax	pmax		
	comp=Z,22nm,1.0s						
KKAR	**Karatay Array**	**17.27**	**317**	P	**P**	**17 14 16.3**	**-0.7**
KKAR	**Karatay Array**	**17.27**	**317**	P	**Pn**	**17 14 15.6**	**0.0**
CHM	**Chimkent**	**17.36**	**314**	*e*P	**Pn**	**17 14 17.2**	**+0.5**
CHM				*e*S	**S**	**17 17 38.7**	**+0.4**
CHM				*e*LR	LR	17 21 31.6	
CHM	**Chimkent**	**17.36**	**314**	*e*P	**Pn**	**17 14 17.1**	**+0.5**
CHM				*e*S	**S**	**17 17 38.6**	**+0.4**
BOM	**Bombay**	**17.49**	**228**	AMb	AMB	17 21 06.7	
	comp=Z,2µm,9.5s						
BRLS	**Borolday**	**17.62**	**316**	*e*S	**Sn**	**17 17 33.2**	**-2.9**
KAD	**Karad**	**17.89**	**221**	*i* P	**P**	**17 14 26.2**	**+2.2**
KAD				*i* x	x	17 17 19.0	
GYA	**Guiyang**	**18.33**	**100**	⇑*i*P	**Pn**	**17 14 28.3**	**-0.6**
GYA				pP	sP	17 14 36.8	+0.5
GYA				S	**Sn**	**17 17 51.0**	**-2.6**
GYA				sS	S	17 18 00.5	+2.0
GYA				SS	**SnSn**	**17 18 11.3**	**+4.0**
GYA				pmax	pmax		
	comp=Z,30nm,1.1s						
GYA				pmax	pmax		
	comp=Z,3µm,6.3s						
GYA				LR	LR		
	comp=Z,8µm,11.1s						
GYA				LR	LR		
	comp=Z,13µm,10.7s						
DGZ	**Jazzator, Alta**	**18.35**	**2**	*d i*P	**Pn**	**17 14 27.4**	**-1.6**
DGZ				pmax	pmax		
	comp=Z,64nm,1.4s						
URV	**Uravakonda**	**18.37**	**209**	*e*P	**Pn**	**17 14 28.1**	**-1.3**
URV				IAmb	IAmb	17 14 35.4	
	comp=Z,116nm,0.8s						
URV				*e*S	Sn	17 17 39.0	-16
URV				IVMs_BB	IVMs_BB	17 21 42.8	
	comp=Z,11µm,11.4s						
SKHT	**Srikalahasti**	**18.59**	**201**	*e*P	**Pn**	**17 14 32.7**	**+0.7**
SKHT				IAmb	IAmb	17 14 35.4	

	comp=Z,13nm,0.8s						
SKHT				eS	Sn	17 17 47.9	-12
SKHT				IVMs_BB	IVMs_BB	17 21 44.3	
	comp=Z,2µm,13.3s						
DGPR	DIGLIPUR	19.03	160	eP	Pn	17 14 38.4	+1.1
DGPR				IAmb	IAmb	17 14 44.9	
	comp=Z,81nm,0.7s						
MDRS	Chennai	19.07	199	eP	Pn	17 14 39.4	+1.6
XAN	Xi'an	19.08	76	P	P	17 14 35.0	-2.1
XAN				pP	pP	17 14 42.8	+0.6
XAN				PP	sP	17 14 57.5	+13
XAN				pmax	pmax		
	comp=Z,3µm,7.9s						
XAN				LR	LR		
	comp=Z,5µm,10.8s						
XAN				LR	LR		
	comp=Z,12µm,16.5s						
XAN				LR	LR		
	comp=Z,11µm,15.8s						
SEM	Semipalatinsk	19.60	348	eP	P	17 14 41.3	-1.7
	comp=Z,91nm,1.6s						
SEM				eS	S	17 18 20.2	-3.8
SEM				eLR	LR	17 23 06.4	
SEM	Semipalatinsk	19.60	348	eP	P	17 14 41.2	-1.7
SEM				eS	S	17 18 20.2	-3.8
SEM				pmax	pmax		
	comp=Z,91nm,1.6s						
PBKT	Sadao Pong	19.76	135	P	Pn	17 14 45.9	-0.2
ENH	Enshi	19.80	87	P	Pn	17 14 46.8	+0.3
ENH				IAmb	IAmb	17 14 53.2	
	comp=Z,144nm,1.1s						
KURBB	Kurchatov Arra	20.15	345	P	P	17 14 48.0	-0.5
	comp=Z,168nm,1.0s,baz=161,slow=9.9,SNR=330						
KURBB				ScP	ScP	17 22 39.3	+0.1
	comp=Z,1.9nm,1.1s,baz=178,slow=1.7,SNR=4.8						
KURBB	Kurchatov Arra	20.15	345	P	P	17 14 47.6	-1.0
KURK	Kurchatov	20.22	345	P	P	17 14 48.8	-0.5
KURK	Kurchatov	20.22	345	deP	P	17 14 48.5	-0.8
KURK				pmax	pmax		
	comp=Z,380nm,1.3s						
KURK	Kurchatov	20.22	345	P	P	17 14 49.2	-0.1
PBA	Port Blair	20.43	162	eP	Pn	17 14 53.6	-0.4
PBA				IAmb	IAmb	17 15 02.9	
	comp=Z,179nm,0.9s						
BTO	Baotou	21.13	58	eP	P	17 14 58.0	-1.4
BTO				S	S	17 18 48.8	-5.5
BRZS	Berezniki	21.29	335	eP	P	17 15 00.7	-0.3
	comp=Z,50nm,1.0s						
BRZS				eLR	LR	17 23 58.4	
BRZS	Berezniki	21.29	335	eP	P	17 15 00.7	-0.3
BRZS				pmax	pmax		
	comp=Z,50nm,1.0s						
TIY	Taiyuan	22.27	66	eP	P	17 15 10.5	-1.2
TIY				pP	sP	17 15 20.5	+1.4
TIY				sP	pP	17 15 23.0	+6.1
TIY				PP	PnPn	17 15 40.8	+6.6
TIY				S	S	17 19 17.3	+0.7
TIY				sS	pS	17 19 22.8	-0.7
TIY				pmax	pmax		
	comp=Z,45nm,0.7s						
TIY				pmax	pmax		
	comp=Z,1µm,4.8s						
TIY				LR	LR		
	comp=Z,8µm,9.3s						
TIY				LR	LR		
	comp=Z,13µm,13.1s						
HHC	Hu-ho-hao-te	22.32	58	eP	P	17 15 12.0	-0.2
HHC				pP	sP	17 15 19.0	-0.6
HHC				PP	pP	17 15 35.5	+18
HHC				S	S	17 19 15.0	-2.5
HHC				pmax	pmax		
	comp=Z,470nm,0.7s						
HHC				pmax	pmax		
	comp=Z,1µm,3.8s						
HHC				LR	LR		
	comp=Z,3µm,11.7s						
HHC				LR	LR		
	comp=Z,4µm,11.1s						
HHC				LR	LR		
	comp=Z,5µm,11.6s						
SONM	Songino Array	22.41	37	P	P	17 15 13.2	0.0
	comp=Z,31nm,1.0s,baz=229,slow=10,SNR=129						
SONM				PcP	PcP	17 19 09.0	+1.4
	comp=Z,1.5nm,0.6s,baz=180,slow=4.6,SNR=4.5						
SONM				LR	LR	17 24 45.6	
	comp=Z,5µm,20.5s,baz=230,slow=39						
SONM				P3KPbc		17 48 55.3	
	comp=Z,0.9nm,0.8s,baz=77,slow=4.5,SNR=7.2						
SONM	Songino Array	22.41	37	P	P	17 15 13.9	+0.7
SONM					PcP	17 19 11.1	+3.4
ZAA0	Zalesovo Array	22.62	357	P	P	17 15 14.3	-0.8
ZAA0				IAmb	IAmb	17 15 16.9	
	comp=Z,106nm,1.1s						
ZALV	Zalesovo Beam	22.62	357	P	P	17 15 15.1	-0.1
	comp=Z,80nm,1.0s,baz=178,slow=10,SNR=150						
ZALV				LR	LR	17 24 11.5	
	comp=Z,2µm,21.1s,baz=184,slow=37						
ZALV	Zalesovo Beam	22.62	357	iP	P	17 15 14.1	-1.1
ZALV				pmax	pmax		
	comp=Z,80nm,1.0s						
ZALV	Zalesovo Beam	22.62	357	P	P	17 15 15.6	+0.5
ULN	Ulaanbaatar	22.77	38	P	P	17 15 16.9	-0.1
ULN				P	P	17 15 16.9	-0.1
ULN	Ulaanbaatar	22.77	38	d iP	P	17 15 16.2	-0.8
ULN				pmax	pmax		
	comp=Z,170nm,1.1s						
ULN	Ulaanbaatar	22.77	38	P	P	17 15 17.8	+0.7
ULN				IAmb	IAmb	17 15 19.3	
	comp=Z,163nm,1.1s						
ZAK	Zakamensk	22.78	29	eP	P	17 15 16.3	-0.7
ZAK				pmax	pmax		
	comp=Z,49nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,13nm,1.3s						
MOY	Mondy	22.95	24	eP	P	17 15 19.5	+0.7
MOY				pmax	pmax		
	comp=Z,276nm,2.3s						
UBPT	Khong Chiam	23.61	128	P	P	17 15 25.3	-0.2
UBPT				IAmb	IAmb	17 15 31.0	
	comp=Z,77nm,1.0s						
WHN	Wuhan	23.90	85	⇑P	P	17 15 28.8	+0.5
WHN				S	S	17 19 37.8	-6.5
WHN				LR	LR		
	comp=Z,10µm,10.8s						
WHN				LR	LR		
	comp=Z,4µm,8.7s						
WHN				LR	LR		
	comp=Z,12µm,21.4s						
TLY	Talaya	23.93	27	P	P	17 15 27.3	-1.1
	comp=Z,1.5nm,0.5s,baz=242,slow=12,SNR=3.2						
TLY				LR	LR	17 25 34.2	
	comp=Z,3µm,20.6s,baz=216,slow=39						
TLY	Talaya	23.93	27	P	P	17 15 29.3	+0.9
TLY	Talaya	23.93	27	d iP	P	17 15 29.2	+0.8
TLY				eS	S	17 19 44.5	0.0
TLY				pmax	pmax		
	comp=Z,119nm,1.5s						
TLY				MLR	MLR		
	comp=Z,14µm,11.0s						
GEYT	Alibeck	24.18	294	P	P	17 15 31.1	+0.2
	comp=Z,20nm,0.8s,baz=123,slow=11,SNR=15						
GEYT				LR	LR	17 27 17.7	
	comp=Z,2µm,19.2s,baz=80,slow=42						
GEYT	Alibeck	24.18	294	P	P	17 15 31.4	+0.5
GYA0B	ALIBECK ARRAY	24.18	294	P	P	17 15 32.6	+1.7
GYA0B				PcP	PcP	17 19 10.4	-1.1
QIZ	Qiongzhong	24.39	115	P	P	17 15 32.8	-0.1
QIZ				S	S	17 19 53.5	+1.2
QIZ				pmax	pmax		
	comp=Z,40nm,0.8s						
QIZ				pmax	pmax		
	comp=Z,2µm,5.1s						
QIZ				LR	LR		
	comp=Z,2µm,21.1s						
QIZ				LR	LR		
	comp=Z,2µm,17.6s						
QIZ				LR	LR		
	comp=Z,3µm,11.2s						
QIZ	Qiongzhong	24.39	115	P	P	17 15 32.5	-0.4
QIZ				IAmb	IAmb	17 15 38.4	
	comp=Z,57nm,0.9s						
PALK	Pallekele	24.55	194	P	P	17 15 35.0	+0.6
	comp=Z,132nm,0.9s,baz=7.8,slow=9.9,SNR=20						
PALK				LR	LR	17 25 12.6	
	comp=Z,2µm,20.4s,baz=7.7,slow=37						
PALK	Pallekele	24.55	194	iP	P	17 15 36.9	+2.5
	SNR=9.5						
PALK	Pallekele	24.55	194	P	P	17 15 36.5	+2.1
PALK				P	P	17 15 36.5	+2.1
PALK	Pallekele	24.55	194	d iP	P	17 15 36.1	+1.7
PALK				pmax	pmax		
	comp=Z,161nm,0.9s						
PALK	Pallekele	24.55	194	P	P	17 15 36.5	+2.1
IRK	Irkutsk	24.61	27	eP	P	17 15 35.8	+1.1
IRK				pmax	pmax		
	comp=Z,154nm,1.5s						
BVAR	Borovoye Array	24.62	336	P	P	17 15 34.6	-0.1
	comp=Z,22nm,0.8s,baz=148,slow=8.9,SNR=74						
BVAR				PcP	PcP	17 19 13.0	+1.0
	comp=Z,2.1nm,0.7s,baz=151,slow=3.4,SNR=3.7						
BVAR				ScP	ScP	17 22 51.0	+0.4
	comp=Z,0.9nm,0.9s,baz=130,slow=4.5,SNR=2.8						
BRVK	Borovoye	24.68	336	P	P	17 15 35.2	-0.1
BRVK	Borovoye	24.68	336	deP	P	17 15 35.1	-0.1
BRVK				pmax	pmax		
	comp=Z,75nm,1.3s						
BRVK	Borovoye	24.68	336	P	P	17 15 35.5	+0.3
BRVK				IAmb	IAmb	17 15 38.8	
	comp=Z,58nm,1.1s						
GZH	Guangzhou	25.23	102	P	P	17 15 41.0	+0.6
BJT	Baijiatuau	25.54	62	P	P	17 15 40.5	-2.6
BJT				pmax	pmax		
	comp=Z,152nm,1.3s						
BJT	Baijiatuau	25.54	62	P	P	17 15 40.5	-2.6
BJT				IAmb	IAmb	17 15 46.8	
	comp=Z,152nm,1.3s						
BJI	Beijing	25.55	62	P	P	17 15 44.0	+0.8
BJI				S	S	17 20 10.0	-0.5
BJI				pmax	pmax		
	comp=Z,81nm,1.3s						
BJI				LR	LR		
	comp=Z,12µm,18.6s						
BJI				LR	LR		
	comp=Z,3µm,17.3s						
BJI				LR	LR		
	comp=Z,3µm,18.6s						
TIA	Tai'an	25.88	71	P	P	17 15 46.0	-0.3
TIA				pmax	pmax		
	comp=Z,16nm,1.2s						
TIA				pmax	pmax		
	comp=Z,1µm,4.9s						
TIA				LR	LR		
	comp=Z,5µm,9.3s						
TIA				LR	LR		
	comp=Z,7µm,10.0s						
WBK	Wadi Bani Khal	25.95	257	P	P	17 15 48.1	+1.0
	SNR=12						
WBK				S	S	17 20 21.5	+4.2
WSAR	Wadi Sarin	25.98	259	P	P	17 15 49.3	+2.0
	comp=Z,105nm,1.1s,baz=98,slow=9.5,SNR=36						
WSAR				LR	LR	17 27 10.7	
	comp=Z,1µm,20.1s,baz=104,slow=39						
WSAR	Wadi Sarin	25.98	259	P	P	17 15 48.8	+1.5
	SNR=24						
WSAR				S	S	17 20 24.4	+6.8
BIDO	Bidbid	26.29	260	P	P	17 15 52.0	+1.9
	SNR=8.8						
BIDO				P	P	17 15 52.0	+1.9
	SNR=8.8						
SMDO	Samad	26.54	259	P	P	17 15 54.5	+2.0
	SNR=22						
SMDO				P	P	17 15 54.5	+2.0
	SNR=22						
SMDO				S	S	17 20 31.2	+4.4
SMDO				S	S	17 20 31.2	+4.4
JMDO	Jabal Madar	26.78	257	P	P	17 15 55.7	+1.1
	SNR=15						
JMDO				P	P	17 15 55.7	+1.1
	SNR=15						
AB31	Akbulak array	26.80	320	iP	P	17 15 55.3	+0.9
ABKAR	Akbulak array	26.80	320	P	P	17 15 55.4	+0.9
HOQ	Hoqain	26.95	261	P	P	17 15 59.0	+2.9
	SNR=10						
HOQ				P	P	17 15 59.0	+2.9
	SNR=10						
BANOM	Banah	26.98	266	iP	P	17 16 00.1	+3.7
	SNR=21						
BANOM	Banah	26.98	266	P	P	17 15 60.0	+3.7
	SNR=17						
SHME	Shamm	27.07	266	iP	P	17 16 01.4	+4.2
	SNR=12						
MDH	Madha	27.18	265	iP	P	17 16 01.0	+2.8
	SNR=7.0						
MDH	Madha	27.18	265	P	P	17 16 01.3	+3.1
	SNR=7.6						
MDH				P	P	17 16 01.3	+3.1
	SNR=7.6						
MDH				P	P	17 16 01.3	+3.1
	SNR=7.6						
MDH				S	S	17 20 39.7	+3.0
MDH				S	S	17 20 39.7	+3.0
MDH				S	S	17 20 39.7	+3.0
MSFE	Esma-Masafi	27.28	265	iP	P	17 16 03.7	+4.6
	SNR=10						
BSY	Bisya	27.38	259	P	P	17 16 01.5	+1.5
	SNR=16						
BSY				S	S	17 20 46.6	+6.7
UOSS	Minazif	27.39	264	iP	P	17 16 04.0	+3.9
	SNR=8.4						
UOSS	Minazif	27.39	264	P	P	17 16 04.5	+4.5
UOSS				P	P	17 16 04.5	+4.5
UOSS				S	S	17 20 43.9	+4.0
UOSS				S	S	17 20 43.9	+4.0
SOHO	SOHO	27.40	262	P	P	17 16 03.5	+3.4
	SNR=6.0						
SOHO				P	P	17 16 03.5	+3.4
	SNR=6.0						
SOHO				P	P	17 16 03.5	+3.4
	SNR=6.0						
SOHO				S	S	17 20 47.1	+7.1
SOHO				S	S	17 20 47.1	+7.1
SOHO				S	S	17 20 47.1	+7.1
HATD	Hatta, Dubai	27.49	264	P	P	17 16 05.4	+4.5
	SNR=10						
HATD				P	P	17 16 05.4	+4.5
	SNR=10						
NJ2	Nanjing	27.51	80	eP	P	17 16 01.5	+0.5
NJ2				pP	pP	17 16 06.0	-0.5
NJ2				sP	sP	17 16 09.0	+0.2
NJ2				S	S	17 20 45.3	+3.6
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,820nm,5.3s						
NJ2				LR	LR		
	comp=Z,2µm,10.2s						
NJ2				LR	LR		
	comp=Z,5µm,12.7s						
NJ2				LR	LR		
	comp=Z,8µm,18.8s						
MHTO	MHTO	27.51	255	P	P	17 16 02.1	+0.9
	SNR=12						
MHTO				P	P	17 16 02.1	+0.9
	SNR=12						
MHTO				P	P	17 16 02.1	+0.9
	SNR=12						
MHTO				S	S	17 20 43.8	+1.9
MHTO				S	S	17 20 43.8	+1.9
MHTO				S	S	17 20 43.8	+1.9
ASHO	Ashiyiah	27.60	264	iP	P	17 16 03.8	+1.8
	SNR=26						
ASHO	Ashiyiah	27.60	264	P	P	17 16 05.3	+3.4
	SNR=30						
ASHO				P	P	17 16 05.3	+3.4
	SNR=30						
ASHO				S	S	17 20 47.7	+4.3
ASHO				S	S	17 20 47.7	+4.3
ARQ	Araqi	27.71	261	P	P	17 16 04.6	+1.7
	SNR=12						
ARQ				P	P	17 16 04.6	+1.7
	SNR=12						
ARQ				S	S	17 20 48.0	+2.9
ARQ				S	S	17 20 48.0	+2.9
LHMI	Lhok Sumawe	27.78	157	P	P	17 16 05.4	+1.9
	comp=Z,2µmcomp=Z,154nm,0.7s						
NAZ	Nazwa, Dubai	27.83	265	iP	P	17 16 08.4	+4.4
	SNR=7.9						
ALNE	Al Ain	28.09	263	iP	P	17 16 09.9	+3.6
	SNR=5.8						
AKTO	Aktyubinsk	28.48	320	P	P	17 16 09.7	+0.2
	comp=Z,6.8nm,0.6s,baz=123,slow=11,SNR=18						
AKTO				LR	LR	17 28 21.2	
	comp=Z,2µm,20.4s,baz=125,slow=38						
QZH	Quanzhou	28.96	95	⇓iP	P	17 16 13.0	-1.0
QZH				S	S	17 21 09.5	+4.8
QZH				pmax	pmax		
	comp=Z,440nm,7.6s						
QZH				LR	LR		
	comp=Z,5µm,11.4s						
QZH				LR	LR		
	comp=Z,1µm,11.8s						
QZH				LR	LR		
	comp=Z,6µm,11.8s						
DL2	Dalian	29.59	65	P	P	17 16 18.0	-1.5
DL2				S	S	17 21 12.3	-2.0
DL2				pmax	pmax		
	comp=Z,27nm,1.0s						
DL2				pmax	pmax		
	comp=Z,420nm,9.5s						
DL2				LR	LR		
	comp=Z,3µm,12.0s						
DL2				LR	LR		
	comp=Z,12µm,12.8s						
DL2				LR	LR		
	comp=Z,13µm,12.3s						
SSE	Sheshan	29.62	81	P	P	17 16 19.3	-0.5
SSE				S	S	17 21 15.0	+0.1
SSE				pmax	pmax		
	comp=Z,33nm,1.1s						
SSE				pmax	pmax		
	comp=Z,360nm,5.7s						
SSE				LR	LR		
	comp=Z,2µm,12.5s						
SSE				LR	LR		
	comp=Z,2µm,12.5s						
IPM	Ipoh	30.02	150	P	P	17 16 23.6	+0.1
IPM	Ipoh	30.02	150	P	P	17 16 24.0	+0.5
PSI	Prapat	30.73	155	P	P	17 16 30.0	+0.2
PSI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SHAO	Shalim	30.89	252	P	P	17 16 33.2	+2.0
SVE	Sverdlovsk	31.16	332	ceP	P	17 16 33.7	+0.6
SVE				eS	S	17 21 39.8	+1.3
SVE				pmax	pmax		
	comp=Z,60nm,1.3s						
SVE				MLR	MLR		
	comp=Z,2µm,12.0s						
SNY	Shenyang	31.36	60	⇓P	P	17 16 35.3	+0.2
SNY				S	S	17 21 44.3	+2.3
SNY				sS	sS	17 21 50.5	-0.6
SNY				pmax	pmax		
	comp=Z,85nm,1.2s						
SNY				pmax	pmax		
	comp=Z,1µm,5.2s						
SNY				LR	LR		
	comp=Z,7µm,18.4s						
SNY				LR	LR		
	comp=Z,2µm,19.4s						
SNY				LR	LR		
	comp=Z,5µm,14.7s						
LKRN	Lenkeran, Azer	31.56	294	P	P	17 16 40.8	+3.9
GSI	Gunungsitoli	31.67	158	P	P	17 16 39.6	+1.6
	comp=Z,4µmcomp=Z,201nm,1.0s						
GSI	Gunungsitoli	31.67	158	P	P	17 16 39.9	+1.9
ARU	Arti	31.74	330	d iP	P	17 16 38.3	0.0
ARU						17 17 40.8	
ARU				PPP	PPP	17 17 53.6	
ARU						17 19 29.0	
ARU				S	S	17 21 47.7	+0.1
ARU				SS	SnSn	17 23 35.0	+0.6
ARU				pmax	pmax		
	comp=Z,36nm,1.4s						
ARU	Arti	31.74	330	P	P	17 16 39.1	+0.8
WHFO	Wadi Hawf	32.46	253	P	P	17 16 44.9	-0.1
	SNR=6.1						
WHFO				P	P	17 16 44.9	-0.1
	SNR=6.1						
WHFO				S	S	17 21 58.7	-1.0
WHFO				S	S	17 21 58.7	-1.0
BOD	Bodaibo	32.51	27	⇓iP	P	17 16 44.9	-0.1
BOD				pmax	pmax		
	comp=Z,61nm,1.2s						
AKT	Akhty	32.54	299	eP	P	17 16 48.6	+3.0
AKT				e		17 17 55.0	
AKT				pmax	pmax		
	comp=Z,24nm,0.9s						
MAK	Makhachkala	32.88	302	eP	P	17 16 42.3	-6.1
MAK				pmax	pmax		
	comp=Z,152nm,1.1s						
MAK				MLR	MLR		
	comp=Z,6µm,15.0s						
SEKA	Sheki	32.92	298	P	P	17 16 52.4	+3.5
MNGR	Mingechevir, A	32.97	298	P	P	17 16 53.5	+4.3
CN2	Changchun	33.00	57	eP	P	17 16 48.8	-0.7
CN2				ePP	PnPn	17 17 57.5	-1.2
CN2				eS	S	17 22 02.8	-4.8
CN2				pmax	pmax		
	comp=Z,130nm,1.0s						
CN2				pmax	pmax		
	comp=Z,560nm,5.0s						
CN2				LR	LR		
	comp=Z,3µm,17.0s						
CN2				LR	LR		
	comp=Z,5µm,17.0s						
CN2				LR	LR		
	comp=Z,6µm,15.0s						
ABTO	Aybut	33.13	253	P	P	17 16 50.9	-0.1
ABTO				P	P	17 16 50.9	-0.1
INCN	Inchon	33.51	68	P	P	17 16 54.4	+0.4
INCN				pmax	pmax		
	comp=Z,60nm,0.9s						
INCN	Inchon	33.51	68	P	P	17 16 54.4	+0.4
INCN				IAmb	IAmb	17 16 54.8	
	comp=Z,60nm,0.8s						
MYKOM	Kota Tinggi	33.67	147	P	P	17 16 56.5	+1.0
MYKOM				IAmb	IAmb	17 16 58.9	
	comp=Z,30nm,1.0s						
MYKOM	Kota Tinggi	33.67	147	P	P	17 16 54.0	-1.6
BKNI	Bangkinang	33.80	153	P	P	17 16 57.0	+0.4
	comp=Z,153nm,0.5s						
NAX	Nakhchivan	34.13	295	P	P	17 17 03.3	+3.8
GROC	Groznyy	34.15	302	eP	P	17 17 00.5	+1.0
GROC				e		17 18 17.0	
GROC				e		17 19 35.5	
GROC				pmax	pmax		
	comp=Z,33nm,1.2s						
APYP	Conner	34.19	105	eP	P	17 16 59.7	-0.3
KS19	Wonju Array Si	34.49	68	P	P	17 17 02.0	-0.5
KSAR	Wonju Array Be	34.50	68	P	P	17 17 02.5	-0.1
KSAR						17 19 38.3	
KSAR	Wonju Array Be	34.50	68	P	P	17 17 02.5	-0.1
KSAR				PcP	PcP	17 19 38.3	+0.7
KSRS	Korea Array	34.53	68	P	P	17 17 02.1	-0.7
	comp=Z,13nm,0.9s,baz=272,slow=9.0,SNR=33						
KSRS				LR	LR	17 30 54.9	
	comp=Z,800nm,19.8s,baz=272,slow=36						
SISI	Saibi	34.63	157	P	P	17 17 05.1	+1.2
	comp=Z,671nmcomp=Z,48nm,1.2s						
PDSI	Padang	34.72	155	P	P	17 17 04.2	-0.5
	comp=Z,28nm,1.0s						
GNI	Garni	34.73	296	P	P	17 17 08.4	+3.6
	comp=Z,7.9nm,0.9s,baz=122,slow=2.7,SNR=4.1						
GNI	Garni	34.73	296	P	P	17 17 09.1	+4.3
GNI	Garni	34.73	296	P	P	17 17 08.4	+3.6
GNI				pmax	pmax		
	comp=Z,22nm,1.0s						
KZRT	Kazreti	35.03	299	P	P	17 17 11.2	+4.0
GUDG	Gudauri	35.04	300	P	P	17 17 12.4	+4.9
SOCY	Socotra	35.49	245	P	P	17 17 10.8	-0.6
	SNR=5.4						
SOCY	Socotra	35.49	245	P	P	17 17 10.6	-0.8
SOCY				IAmb	IAmb	17 17 15.5	
	comp=Z,53nm,1.0s						
ZEI	Tsey	35.49	301	eP	P	17 17 12.1	+0.7
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LUBP	Lubang	35.59	112	eP	P	17 17 12.2	0.0
AKH	Akhalkalaki	35.72	299	P	P	17 17 18.3	+5.0
NCK	Nalchik	35.77	302	iP	P	17 17 15.1	+1.5
NCK				pmax	pmax		
	comp=Z,11nm,0.9s						
ONI	Oni	35.81	301	P	P	17 17 19.4	+5.5
TGY	Tagaytay City	35.93	111	LR	LR	17 32 16.7	
	comp=Z,583nm,19.8s,baz=310,slow=37						
MDJ	Mudanjiang	36.06	56	P	P	17 17 16.0	0.0
MDJ				pP	sP	17 17 23.5	-0.3

MDJ				sP	pP	17 17 26.5	+5.0
MDJ				PP	**PP**	**17 18 35.8**	**-2.1**
MDJ				S	**S**	**17 22 51.0**	**-3.8**
MDJ				sS	sS	17 23 03.8	-0.1
MDJ				SS	SS	17 25 13.5	-18
MDJ				ScS	**ScS**	**17 27 33.0**	**-0.6**
MDJ				pmax	pmax		
	comp=Z,51nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,740nm,7.4s						
MDJ				LR	LR		
	comp=Z,5µm,13.2s						
MDJ				LR	LR		
	comp=Z,5µm,12.3s						
MDJ				LR	LR		
	comp=Z,7µm,13.5s						
MDJ	**Mudanjiang**	**36.06**	**56**	P	**P**	**17 17 16.1**	**+0.1**
MDJ				IAmb	IAmb	17 17 17.2	
	comp=Z,46nm,1.0s						
KBZ	**Khabaz**	**36.30**	**302**	P	**P**	**17 17 18.5**	**+0.5**
	comp=Z,4.1nm,0.8s,baz=90,slow=3.2,SNR=3.2						
KBZ				LR	LR	17 34 29.4	
	comp=Z,3µm,19.2s,baz=87,slow=40						
KBZ	**Khabaz**	**36.30**	**302**	*i* P	**P**	**17 17 17.5**	**-0.5**
ENPP	**El Nido**	**36.45**	**116**	*e*P	**P**	**17 17 17.6**	**-1.9**
KIV	**Kislovodsk**	**36.47**	**303**	*e*P	**P**	**17 17 22.8**	**+3.2**
KIV				*e*S	**S**	**17 23 03.2**	**+1.9**
KIV				pmax	pmax		
	comp=Z,27nm,1.0s						
KIV				MLR	MLR		
	comp=Z,5µm,16.0s						
SHA1	**Shidzhatmaz**	**36.48**	**302**	*i* P	**P**	**17 17 20.1**	**+0.3**
JOW	**Kunigami**	**36.65**	**86**	P	**P**	**17 17 21.2**	**0.0**
ZEA	**Zeya**	**36.75**	**40**	*e*P	**P**	**17 17 22.0**	**+0.3**
ZEA				*e*		17 18 52.0	
ZEA				pmax	pmax		
	comp=N,24nm,1.0s						
ZEA				pmax	pmax		
	comp=E,24nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,43nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,600nm,6.0s						
ZEA				MLR	MLR		
	comp=N,2µm,11.0s						
ZEA				MLR	MLR		
	comp=E,5µm,11.0s						
ZEA				MLR	MLR		
	comp=Z,8µm,11.0s						
BATP	**Bataraza**	**36.77**	**121**	*e*P	**P**	**17 17 21.1**	**-1.2**
KIRV	**Kirov**	**37.00**	**328**	*i* P	**P**	**17 17 24.2**	**+0.4**
RAYN	**Ar Rayn**	**37.02**	**268**	P	**P**	**17 17 24.4**	**-0.1**
RAYN				pmax	pmax		
	comp=Z,13nm,1.1s						
RAYN	**Ar Rayn**	**37.02**	**268**	P	**P**	**17 17 24.4**	**-0.1**
MSHR	**Mys Shultsa**	**37.03**	**60**	*i* P	**P**	**17 17 24.4**	**+0.1**
KSM	**Kuching**	**37.29**	**138**	P	**P**	**17 17 26.8**	**+0.1**
KSM	**Kuching**	**37.29**	**138**	P	**P**	**17 17 26.0**	**-0.7**
JNU	**Nakatsue**	**37.40**	**75**	LR	LR	17 33 58.3	
	comp=Z,3µm,18.1s,baz=284,slow=38						
KKM	**Kota Kinabalu**	**37.54**	**126**	P	**P**	**17 17 29.7**	**+0.8**
VLA	**Vladivostok**	**37.59**	**59**	*d i*P	**P**	**17 17 28.4**	**-0.6**
VLA				pmax	pmax		
	comp=Z,160nm,1.2s						
SBUM	**Sibu**	**37.63**	**135**	P	**P**	**17 17 30.4**	**+0.8**
SBUM	**Sibu**	**37.63**	**135**	P	**P**	**17 17 29.0**	**-0.6**
USA0B	**Ussuriysk Arra**	**37.74**	**57**	*d i*P	**P**	**17 17 29.9**	**-0.3**
USA0B	**Ussuriysk Arra**	**37.74**	**57**	P	**P**	**17 17 29.3**	**-0.9**
USA0B				IAmb	IAmb	17 17 32.1	
	comp=Z,107nm,1.1s						
USRK	**Ussuriysk Ar.**	**37.74**	**57**	P	**P**	**17 17 30.6**	**+0.4**
	comp=Z,60nm,1.0s,baz=261,slow=6.7,SNR=66						
USRK				LR	LR	17 34 22.4	
	comp=Z,4µm,19.2s,baz=258,slow=38						
USRK	**Ussuriysk Ar.**	**37.74**	**57**	P	**P**	**17 17 30.5**	**+0.3**
KSI	**Kapahiang**	**38.04**	**153**	P	**P**	**17 17 33.6**	**+0.5**
	comp=Z,61nm,0.8s						
NRIK	**Noril'sk**	**38.04**	**1**	P	**P**	**17 17 32.3**	**-0.2**
	comp=Z,34nm,0.8s,baz=171,slow=6.3,SNR=40						
NRIK				LR	LR	17 35 20.5	
	comp=Z,2µm,19.4s,baz=188,slow=40						
NRIK	**Noril'sk**	**38.04**	**1**	*i* P	**P**	**17 17 32.3**	**-0.2**
NRIK				pmax	pmax		
	comp=Z,49nm,1.0s						
KLR	**Kul'dur**	**38.23**	**49**	LR	LR	17 34 34.9	
	comp=Z,2µm,20.3s,baz=260,slow=38						
KLR	**Kul'dur**	**38.23**	**49**	*d i*P	**P**	**17 17 34.0**	**-0.3**
KLR				pmax	pmax		
	comp=Z,64nm,1.4s						
PMBI	**Palembang**	**38.28**	**150**	P	**P**	**17 17 35.7**	**+0.7**
	comp=Z,214nm,0.4s						
VRH	**Novokhopyorsk**	**38.31**	**314**	*e*P	**P**	**17 17 36.4**	**+1.4**
VRH				*e*S	**S**	**17 23 26.8**	**-2.0**
VRH				*e*SS	**SnSn**	**17 26 06.6**	**-7.1**
VRH				pmax	pmax		
	comp=Z,30nm,0.7s						
VRH				smax	smax		
	comp=N,900nm,7.2s						
VRH				MLR	MLR		
	comp=Z,3µm,18.0s						
SOC	**Sochi**	**38.59**	**302**	*e*P	**P**	**17 17 39.0**	**+1.5**
SOC				*e*		17 19 04.8	
SOC				*e*S	**S**	**17 23 35.5**	**+2.2**
SOC				pmax	pmax		
	comp=Z,18nm,0.9s						
SOC				MLR	MLR		
	comp=Z,2µm,17.0s						
MDSI	**Maura Dua**	**39.43**	**151**	P	**P**	**17 17 42.5**	**-2.2**
	comp=Z,11nm,1.2s						
VORD	**Divnogorie**	**39.76**	**314**	*e*P	**P**	**17 17 48.6**	**+1.5**
VORD				pmax	pmax		
	comp=Z,20nm,1.0s						
LWLI	**Liwa**	**39.87**	**152**	P	**P**	**17 17 47.5**	**-0.9**
	comp=Z,5µmcomp=Z,21nm,0.7s						
VSR	**Storozhevoye**	**39.88**	**314**	*e*P	**P**	**17 17 49.5**	**+1.4**
VSR				*e*S	**S**	**17 23 48.6**	**-3.9**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR				smax	smax		
	comp=N,510nm,5.5s						
VSR				MLR	MLR		
	comp=Z,3µm,16.0s						
PRGR	**Permogore**	**40.19**	**331**	*e*P	**P**	**17 17 49.8**	**-0.7**
PRGR				pmax	pmax		
	comp=Z,58nm,1.0s						
ANN	**Anapa**	**40.29**	**304**	*e*P	**P**	**17 17 50.0**	**-1.5**
ANN				*e*S	**S**	**17 23 55.8**	**-2.9**
ANN				*e*SS	**SS**	**17 26 56.5**	**-0.4**
ANN				pmax	pmax		
	comp=Z,20nm,0.7s						
ANN				MLR	MLR		
	comp=Z,2µm,16.0s						
LPSR	**Galich'ya Gora**	**40.32**	**316**	*e*P	**P**	**17 17 53.0**	**+1.3**
LPSR				*e*S	**S**	**17 23 55.3**	**-3.6**
LPSR				pmax	pmax		
	comp=Z,20nm,0.6s						
LPSR				smax	smax		
	comp=N,570nm,7.3s						
LPSR				MLR	MLR		
	comp=Z,2µm,14.0s						
TEY	**Ternei**	**41.07**	**56**	⇓*e*P	**P**	**17 17 57.9**	**-0.1**
TEY				pmax	pmax		
	comp=E,10.0nm,1.4s						
TEY				pmax	pmax		
	comp=N,10.0nm,1.1s						
TEY				pmax	pmax		
	comp=Z,30nm,1.4s						
TEY				pmax	pmax		
	comp=Z,200nm,3.7s						
YAK	**Yakutsk**	**41.37**	**29**	*d i*P	**P**	**17 17 59.9**	**-0.3**
YAK				*e*		17 19 41.1	
YAK				*e*		17 19 57.4	
YAK				*e*PPP	PPP	17 20 03.4	
YAK				*e*S	**S**	**17 24 09.6**	**-4.7**
YAK				*e*SS	**SS**	**17 27 15.4**	**-2.5**
YAK				*e*SSS	SSS	17 27 43.1	
YAK				*e*		17 28 01.4	
YAK				pmax	pmax		
	comp=Z,46nm,0.8s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,37nm,1.4s						
YAK				pmax	pmax		
	comp=Z,56nm,2.6s						
YAK				pmax	pmax		
	comp=E,38nm,1.6s						
YAK				pmax	pmax		
	comp=N,27nm,2.1s						
YAK				smax	smax		
	comp=E,115nm,4.3s						
YAK				smax	smax		
	comp=N,167nm,3.8s						
YAK				MLR	MLR		
	comp=Z,1µm,20.0s						
YAK				MLR	MLR		
	comp=E,382nm,16.0s						
YAK				MLR	MLR		
	comp=N,423nm,16.0s						
YAK	**Yakutsk**	**41.37**	**29**	P	**P**	**17 18 00.2**	**+0.1**
YAK				IAmb	IAmb	17 18 01.1	
	comp=Z,51nm,0.8s						
GRNR	**Gornyy**	**41.45**	**47**	⇓*i*P	**P**	**17 18 01.0**	**-0.1**
GRNR				*e*		17 19 38.6	
GRNR				*e*S	**S**	**17 24 16.3**	**+0.3**
GRNR				pmax	pmax		
	comp=Z,30nm,1.3s						
GRNR				smax	smax		
	comp=E,2.0nm,1.0s						
GRNR				MLR	MLR		
	comp=N,2µm,15.0s						
GRNR				MLR	MLR		
	comp=Z,5µm,14.0s						
MOS	**Moscow**	**41.81**	**320**	*e*P	**P**	**17 18 03.3**	**-0.6**
MOS				*e*S	**S**	**17 24 21.3**	**+0.2**
MOS				pmax	pmax		
	comp=Z,151nm,1.5s						
MOS				MLR	MLR		
	comp=Z,1µm,16.0s						
MOS				MLR	MLR		
	comp=E,1µm,17.0s						
OBN	**Obninsk**	**42.24**	**319**	⇑*i*P	**P**	**17 18 08.0**	**+0.5**
OBN				*i*		17 19 49.6	
OBN				*i* S	**S**	**17 24 33.9**	**+6.5**
OBN				*i* SS	**SS**	**17 27 37.3**	**+1.9**
OBN				pmax	pmax		
	comp=Z,88nm,1.3s						
OBN				MLR	MLR		
	comp=Z,925nm,16.0s						
DBJI	**Dramaga**	**42.38**	**149**	P	P	17 18 03.2	-5.8
KLMR	**Klimovskoe**	**42.50**	**328**	*e*P	**P**	**17 18 07.1**	**-2.4**
KLMR				S	**S**	**17 24 25.8**	**-5.3**
KLMR				SS	**SS**	**17 27 38.4**	**-1.9**
KLMR				pmax	pmax		
	comp=Z,129nm,1.2s						
KLMR				MLR	MLR		
	comp=Z,908nm,13.0s						
KLMR	**Klimovskoe**	**42.50**	**328**	*e*P	**P**	**17 18 07.1**	**-2.4**
KLMR				*e*P	**P**	**17 18 07.1**	**-2.4**
KLMR				*e*P	**P**	**17 18 07.1**	**-2.4**
KLMR				AMP		17 18 13.9	
	comp=Z,129nm,1.2s						
KLMR				S	**S**	**17 24 25.9**	**-5.2**
KLMR				S	**S**	**17 24 25.9**	**-5.2**
KLMR				SS	**SS**	**17 27 38.5**	**-1.9**
KLMR				SS	**SS**	**17 27 38.5**	**-1.9**
KLMR				LQ	LQ	17 32 50.3	
KLMR				LQ	LQ	17 32 50.3	
KLMR				LR	LR	17 34 36.8	
KLMR				AMP		17 38 19.3	
	comp=Z,908nm,12.5s						
SIM	**Simferopol'**	**42.65**	**304**	*d i*P	**P**	**17 18 15.1**	**+4.2**
SIM				*i* S	**S**	**17 24 39.1**	**+5.4**
SIM				pmax	pmax		
	comp=Z,37nm,1.7s						
MAT	**Matsushiro**	**42.81**	**68**	P	**P**	**17 18 11.0**	**-1.4**
MAT				S	**S**	**17 24 37.6**	**+1.2**
MJAR	**Matsushiro Arr**	**42.81**	**69**	P	**P**	**17 18 11.4**	**-1.0**
	comp=Z,26nm,1.1s,baz=283,slow=9.7,SNR=21						
MJAR				LR	LR	17 37 24.5	
	comp=Z,1µm,19.3s,baz=270,slow=38						
MJAR	**Matsushiro Arr**	**42.81**	**69**	P	**P**	**17 18 10.2**	**-2.3**
LEM	**Lembang**	**43.01**	**148**	LR	LR	17 41 17.5	
	comp=Z,1µm,18.8s,baz=312,slow=43						
BR131	**Keskin Array S**	**43.27**	**296**	*i* P	**P**	**17 18 16.6**	**+0.4**
BR131	**Keskin Array S**	**43.27**	**296**	P	**P**	**17 18 15.3**	**-1.0**
BRTR	**Keskin Array B**	**43.27**	**296**	P	**P**	**17 18 16.9**	**+0.6**
	comp=Z,2.4nm,0.6s,baz=96,slow=8.0,SNR=12						
BRTR				LR	LR	17 39 38.2	
	comp=Z,674nm,18.6s,baz=74,slow=41						
BRTR	**Keskin Array B**	**43.27**	**296**	P	**P**	**17 18 16.6**	**+0.4**
BRTR	**Keskin Array B**	**43.27**	**296**	P	**P**	**17 18 16.6**	**+0.4**
KCP	**Kidapawan**	**43.42**	**116**	⇓*i*P	**P**	**17 18 18.1**	**+0.5**
DAV	**Davao City (W)**	**43.76**	**115**	LR	LR	17 36 58.7	
	comp=Z,591nm,20.9s,baz=293,slow=37						
DAV	**Davao City (W)**	**43.76**	**115**	⇓*e*P	**P**	**17 18 23.1**	**+2.8**
MPSI	**Mapaga**	**44.18**	**128**	P	**P**	**17 18 25.3**	**+1.7**
	comp=Z,666nmcomp=Z,27nm,1.2s						
UWJI	**Ujung Watu**	**44.24**	**144**	P	**P**	**17 18 25.1**	**+1.1**
	comp=Z,1µmcomp=Z,129nm,0.9s						
NKL	**Nikolayevsk**	**44.39**	**44**	*e*P	**P**	**17 18 22.8**	**-2.0**
NKL				*e*		17 20 07.2	
NKL				pmax	pmax		
	comp=Z,19nm,1.1s						
NKL				pmax	pmax		
	comp=N,8.0nm,0.7s						
NKL				pmax	pmax		
	comp=E,1.0nm,1.1s						
NKL				pmax	pmax		
	comp=Z,32nm,3.2s						
TMCR	**Tamitsa**	**44.44**	**332**	*e*P	**P**	**17 18 25.1**	**+0.1**
TMCR				pmax	pmax		
	comp=Z,52nm,0.8s						
SMRI	**Semarang**	**44.53**	**145**	P	**P**	**17 18 27.1**	**+0.7**
	comp=Z,4µmcomp=Z,195nm,0.8s						
JHJ	**Hachijo jima 2**	**44.73**	**73**	LR	LR	17 38 17.9	
	comp=Z,2µm,19.3s,baz=90,slow=38						
UGM	**Wanagama**	**45.32**	**145**	P	**P**	**17 18 30.4**	**-2.3**
UGM				IAmb	IAmb	17 18 40.4	
	comp=Z,44nm,0.9s						
YSS	**Yuzh-Sakhalins**	**45.38**	**53**	⇑*e*P	**P**	**17 18 31.8**	**-1.0**
YSS				*e*PPP	PPP	17 20 18.4	
YSS				*e*S	**S**	**17 25 09.5**	**-3.9**
YSS				pmax	pmax		
	comp=Z,30nm,1.3s						
YSS				pmax	pmax		
	comp=Z,800nm,5.5s						
YSS				MLR	MLR		
	comp=Z,4µm,14.0s						
YSS				MLR	MLR		
	comp=E,4µm,13.0s						
TYV	**Tymovskoe**	**45.40**	**48**	*e*P	**P**	**17 18 33.7**	**+0.8**
TYV				*e*S	**S**	**17 25 14.7**	**+1.1**
TYV				pmax	pmax		
	comp=Z,35nm,1.3s						
TYV				pmax	pmax		
	comp=Z,300nm,4.4s						
TYV				smax	smax		
	comp=N,700nm,8.5s						
TYV				MLR	MLR		
	comp=Z,6µm,14.0s						
MRSI	**Marisa**	**45.48**	**126**	P	**P**	**17 18 35.0**	**+1.0**
	comp=Z,1µmcomp=Z,63nm,1.3s						
ERM	**Erimo**	**45.94**	**60**	*ce*P	**P**	**17 18 38.5**	**+1.2**
ERM				pmax	pmax		
	comp=Z,77nm,1.0s						
AKASG	**Malin Array Be**	**46.06**	**312**	P	**P**	**17 18 37.4**	**-0.8**
	comp=Z,1.4nm,0.4s,baz=79,slow=7.1,SNR=18						
AKASG				PP	**PP**	**17 20 27.4**	**+1.4**
	comp=Z,2.1nm,0.8s,baz=79,slow=8.9,SNR=5.1						
AKASG				LR	LR	17 40 24.0	
	comp=Z,2µm,19.8s,baz=100,slow=39						
AKASG	**Malin Array Be**	**46.06**	**312**	*ce*P	**P**	**17 18 39.5**	**+1.3**
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.7s						
AKASG	**Malin Array Be**	**46.06**	**312**	P	**P**	**17 18 38.9**	**+0.7**
AKBB	**Malin Array Si**	**46.06**	**312**	*i* P	**P**	**17 18 38.2**	**0.0**
AKBB	**Malin Array Si**	**46.06**	**312**	P	**P**	**17 18 38.1**	**0.0**
TIXI	**Tiksi**	**46.28**	**17**	*ce*P	**P**	**17 18 38.6**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,38nm,1.3s						
TIXI	**Tiksi**	**46.28**	**17**	P	**P**	**17 18 39.2**	**-0.3**
TIXI				IAmb	IAmb	17 18 44.0	
	comp=Z,53nm,1.4s						
APSI	**Ampana**	**46.28**	**127**	P	P	17 18 49.1	+8.8
PUL	**Pulkovo**	**46.56**	**325**	*ce*P	**P**	**17 18 42.5**	**+0.6**
PUL				pmax	pmax		
	comp=Z,86nm,0.9s						
ELL	**Elmali**	**46.60**	**293**	P	**P**	**17 18 45.5**	**+2.7**
SORM	**Soroca**	**46.60**	**308**	⇑P	**P**	**17 18 43.7**	**+1.2**
SORM	**Soroca**	**46.60**	**308**	P	**P**	**17 18 43.6**	**+1.2**
LEOM	**Leova**	**46.73**	**306**	P	**P**	**17 18 48.1**	**+4.7**
KMSI	**Cibinong**	**46.86**	**123**	P	**P**	**17 18 45.7**	**+0.9**
	comp=Z,2µmcomp=Z,217nm,1.0s						
HARR	**Harsova**	**47.05**	**304**	⇑P	**P**	**17 18 48.8**	**+2.8**
HARR	**Harsova**	**47.05**	**304**	P	**P**	**17 18 48.8**	**+2.8**
MICGM	**Minsk**	**47.11**	**317**	*e*P	**P**	**17 18 47.0**	**+0.7**
MNK	**Minsk**	**47.11**	**317**	*e*P	**P**	**17 18 47.0**	**+0.7**
LUWI	**Luwuk**	**47.15**	**126**	P	**P**	**17 18 48.6**	**+1.5**
	comp=Z,1µmcomp=Z,87nm,1.2s						
ICOR	**Ion Corvin**	**47.20**	**303**	⇓P	**P**	**17 18 48.9**	**+1.8**
LVZ	**Lovozero**	**47.21**	**336**	*ce*P	**P**	**17 18 47.4**	**+0.4**
LVZ				pmax	pmax		
	comp=Z,49nm,1.2s						
SPSI	**Sidrap Palu**	**47.32**	**132**	P	**P**	**17 18 50.0**	**+1.6**
	comp=Z,1µmcomp=Z,48nm,1.0s						
GHRR		**47.33**	**306**	⇑P	**P**	**17 18 49.1**	**+1.0**
APA	**Apatity**	**47.52**	**335**	⇑*i*P	**P**	**17 18 45.9**	**-3.4**
APA				pmax	pmax		
	comp=Z,14nm,1.2s						
APA				MLR	MLR		
	comp=Z,2µm,13.0s						
NEF	**NEVSHA**	**47.66**	**302**	*e*P	**P**	**17 18 54.0**	**+3.2**
YUK	**Yuzh-Kuril'sk**	**47.72**	**57**	*d i*P	**P**	**17 18 51.1**	**-0.1**
YUK				*e*		17 20 44.1	
YUK				*e*S	**S**	**17 25 46.2**	**-0.8**
YUK				pmax	pmax		
	comp=Z,516nm,1.1s						
YUK				pmax	pmax		
	comp=E,114nm,0.8s						
YUK				pmax	pmax		
	comp=N,55nm,0.7s						
YUK				MLR	MLR		
	comp=Z,2µm,19.0s						
YUK				MLR	MLR		
	comp=E,1µm,20.0s						
YUK				MLR	MLR		
	comp=N,2µm,15.0s						
NACGM	**Naroch**	**47.78**	**318**	*e*P	**P**	**17 18 51.0**	**-0.5**
NACGM				*e*P	**pP**	**17 18 52.0**	**-5.2**
NACGM				PM		17 18 55.0	
	comp=Z,0.3nm,1.0s						
NACGM				*e*PP	**PP**	**17 20 42.0**	**-1.1**
NACGM				*e*S	**S**	**17 25 48.0**	**+0.4**
NACGM				*e*SS	**ScS**	**17 28 40.0**	**-4.6**
NACGM				*e*LQ	LQ	17 35 44.0	
NACGM				*e*LR	LR	17 39 15.0	
NACGM				LRM	MLR	17 41 54.0	
	comp=Z,17nm,14.0s						
VRI	**Vrincioaia**	**47.81**	**305**	P	**P**	**17 18 54.7**	**+2.7**
TESR	**Tescani**	**47.83**	**306**	⇑P	**P**	**17 18 53.8**	**+1.8**
PLOR	**Plostina**	**47.87**	**305**	⇓P	**P**	**17 18 54.1**	**+1.7**
PLOR	**Plostina**	**47.87**	**305**	P	**P**	**17 18 54.1**	**+1.7**
SRBI	**Singaraja**	**47.89**	**140**	P	**P**	**17 18 53.9**	**+1.1**
	comp=Z,1µmcomp=Z,74nm,1.5s						
KAPI	**Kappang**	**48.12**	**133**	LR	LR	17 43 51.4	
	comp=Z,375nm,18.4s,baz=295,slow=42						
IZAR	**Zarasai**	**48.15**	**319**	*e*P	**P**	**17 18 55.2**	**+0.8**
VSU	**Vasula**	**48.16**	**322**	*e*P	**P**	**17 18 55.0**	**+0.6**
VSU	**Vasula**	**48.16**	**322**	*ce*P	**P**	**17 18 54.9**	**+0.5**
VSU				pmax	pmax		
	comp=Z,511nm,1.3s						
BIZ	**Bicaz**	**48.17**	**307**	⇓P	**P**	**17 18 56.6**	**+1.9**
RAZG	**Razgrad**	**48.18**	**302**	⇑P	**P**	**17 18 56.8**	**+2.0**
ISAL	**Salakas**	**48.20**	**319**	*e*P	**P**	**17 18 55.3**	**+0.5**
MLR	**Muntele Rosu**	**48.39**	**305**	⇑P	**P**	**17 18 58.3**	**+1.7**
MLR	**Muntele Rosu**	**48.39**	**305**	P	**P**	**17 18 57.3**	**+0.7**
MLR				pmax	pmax		
	comp=Z,74nm,0.8s						
MLR	**Muntele Rosu**	**48.39**	**305**	P	**P**	**17 18 57.3**	**+0.7**
BKSI	**Bulukumba**	**48.59**	**133**	P	**P**	**17 19 02.1**	**+3.9**
	comp=Z,24nm,0.9s						
SZH	**Strazhica**	**48.63**	**302**	*e*P	**P**	**17 19 00.9**	**+2.6**
BURAR	**Bucovina Array**	**48.73**	**308**	⇓P	**P**	**17 19 01.6**	**+2.4**
BURAR	**Bucovina Array**	**48.73**	**308**	P	**P**	**17 19 01.6**	**+2.4**
BURAR	**Bucovina Array**	**48.73**	**308**	P	**P**	**17 18 59.6**	**+0.4**
DOPR	**Dopca**	**48.74**	**306**	⇓P	**P**	**17 19 00.5**	**+1.4**
BUR08	**Bucovina Ar. S**	**48.74**	**308**	P	**P**	**17 19 00.6**	**+1.4**
EZN	**Ezine**	**48.84**	**297**	P	**P**	**17 19 03.3**	**+3.4**
FIA1	**FINESS Array S**	**48.92**	**326**	P	**P**	**17 19 00.5**	**+0.2**
FIA1				IAmb	IAmb	17 19 04.4	
	comp=Z,33nm,0.8s						
FINES	**FINESS Array B**	**48.92**	**326**	P	**P**	**17 19 00.6**	**+0.4**
	comp=Z,25nm,0.7s,baz=104,slow=8.1,SNR=48						
FINES				LR	LR	17 40 38.5	
	comp=Z,1µm,19.2s,baz=100,slow=37						
FINES	**FINESS Array B**	**48.92**	**326**	*ce*P	**P**	**17 19 00.6**	**+0.4**
FINES				pmax	pmax		
	comp=Z,26nm,0.7s						
FINES	**FINESS Array B**	**48.92**	**326**	P	**P**	**17 19 00.4**	**+0.2**
KUR	**Kuril'sk**	**49.02**	**55**	*e*P	**P**	**17 19 01.0**	**-0.2**
KUR				*i*		17 20 58.6	
KUR				*e*PPP	PPP	17 21 43.6	
KUR				pmax	pmax		
	comp=Z,1µm,4.8s						
KUR				pmax	pmax		
	comp=Z,159nm,1.6s						
KUR				MLR	MLR		
	comp=Z,1µm,13.0s						
KUR				MLR	MLR		
	comp=E,1µm,14.0s						
KUR				MLR	MLR		
	comp=N,1µm,13.0s						
COPA	**Copaceanca**	**49.04**	**303**	⇓P	**P**	**17 19 03.3**	**+1.9**
HUMR	**Humele**	**49.17**	**304**	⇓P	**P**	**17 19 04.7**	**+2.3**
TNTI	**Ternate**	**49.18**	**120**	P	**P**	**17 19 02.7**	**-0.1**
	comp=N,757nmcomp=N,34nm,1.3s						
ARCR	**ARCALIA**	**49.36**	**307**	⇓P	**P**	**17 19 06.1**	**+2.2**
LVV	**L'vov**	**49.40**	**311**	*e*P	**P**	**17 19 04.0**	**-0.1**
LVV				*e*		17 20 24.7	
LVV				*e*		17 21 07.0	
LVV				*e*S	**S**	**17 26 07.0**	**-3.7**
LVV				MLR	MLR		
	comp=E,1µm,17.0s						
LVV				MLR	MLR		
	comp=N,500nm,14.0s						
LVV				MLR	MLR		
	comp=Z,2µm,17.0s						
PABE	**Paberze**	**49.43**	**318**	*e*P	**P**	**17 19 04.9**	**+0.7**
PLD	**Plovdiv**	**49.69**	**301**	*e*P	**P**	**17 19 09.1**	**+2.7**
SUW	**Suwalki**	**49.85**	**316**	*e*P	**P**	**17 19 07.2**	**-0.2**
SUW				*e*pP	**pP**	**17 19 10.0**	**-3.1**
SUW				*e*L	L	17 41 49.9	
	comp=Z,1µm,22.8s						
SUW	**Suwalki**	**49.85**	**316**	*e*P	**P**	**17 19 07.2**	**-0.2**
SUW				*e**PP	**pP**	**17 19 10.0**	**-3.1**
SUW				MLR	MLR		
	comp=Z,2µm,22.8s						
BMR	**Baia Mare**	**49.89**	**308**	⇑P	**P**	**17 19 09.1**	**+1.3**
CJR	**Cluj-Napoca**	**49.91**	**307**	⇑P	**P**	**17 19 09.5**	**+1.4**
CJR	**Cluj-Napoca**	**49.91**	**307**	P	**P**	**17 19 09.4**	**+1.4**
LOT	**Lotru**	**49.92**	**305**	⇓P	**P**	**17 19 09.9**	**+1.6**
PGB	**Panagyurishte**	**50.01**	**301**	*e*P	**P**	**17 19 12.5**	**+3.5**
SANI	**Sanana**	**50.12**	**124**	P	**P**	**17 19 09.4**	**-0.5**
	comp=Z,1µmcomp=Z,34nm,1.6s						
LBMI	**Labuha**	**50.23**	**121**	P	**P**	**17 19 11.6**	**+0.8**
	comp=Z,2µmcomp=Z,84nm,1.6s						
BBSI	**Bau Bau**	**50.28**	**130**	P	P	17 19 19.4	+8.2
SLIT	**Slitere, Latvi**	**50.45**	**321**	*e*P	**P**	**17 19 13.6**	**+1.7**
DEV	**Deva**	**50.47**	**306**	⇑P	**P**	**17 19 14.1**	**+1.7**
DEV	**Deva**	**50.47**	**306**	P	**P**	**17 19 14.0**	**+1.7**
MMB	**Musomiste**	**50.49**	**300**	*e*P	**P**	**17 19 12.3**	**-0.2**
TRPA	**Tarpa**	**50.49**	**309**	⇑P	**P**	**17 19 14.4**	**+2.0**
DRGR		**50.51**	**307**	⇑P	**P**	**17 19 14.9**	**+2.3**
DRGR		**50.51**	**307**	*e*P	**P**	**17 19 15.6**	**+3.0**
DRGR		**50.51**	**307**	P	**P**	**17 19 16.4**	**+3.8**
DRGR				pmax	pmax		
	comp=Z,49nm,1.0s						
PBUR	**Paburge**	**50.59**	**319**	*e*P	**P**	**17 19 13.6**	**+0.6**
UZH	**Uzhgorod**	**50.61**	**309**	*e*P	**P**	**17 19 13.9**	**+0.6**
UZH				*e*S	**S**	**17 26 24.9**	**-2.7**
UZH				MLR	MLR		
	comp=N,300nm,14.0s						
UZH				MLR	MLR		
	comp=E,180nm,14.0s						
UZH				MLR	MLR		
	comp=Z,110nm,14.0s						
GZR	**Gura Zlata**	**50.62**	**305**	⇓P	**P**	**17 19 15.9**	**+2.4**
MA2	**Magadan**	**50.62**	**36**	*ce*P	**P**	**17 19 13.7**	**+0.5**
MA2				pmax	pmax		
	comp=Z,114nm,1.7s						
MA2	**Magadan**	**50.62**	**36**	P	**P**	**17 19 12.0**	**-1.2**
PUNG	**Punghina**	**50.66**	**304**	⇓P	**P**	**17 19 16.0**	**+2.3**
SRS	**Serrai**	**50.67**	**300**	P	**P**	**17 19 17.3**	**+3.4**

SRS				pmax	pmax		
	comp=Z,13nm,2.1s						
VTS	Vitosha	50.68	302	eP	P	17 19 17.0	+2.9
VTS	Vitosha	50.68	302	P	P	17 19 15.9	+1.8
VTS				pmax	pmax		
	comp=Z,21nm,1.8s						
PAIG	Paliouri	50.82	298	P	P	17 19 17.9	+2.9
ARCES	ARCESS Array B	50.91	337	P	P	17 19 15.6	+0.4
	comp=Z,14nm,0.9s,baz=106,slow=8.1,SNR=15						
ARCES				PcP	PcP	17 20 31.2	-0.3
	comp=Z,9.2nm,0.9s,baz=111,slow=3.0,SNR=5.2						
ARCES				LR	LR	17 42 38.7	
	comp=Z,2µm,18.8s,baz=112,slow=38						
ARCES	ARCESS Array B	50.91	337	P	P	17 19 15.7	+0.5
ARCES	ARCESS Array B	50.91	337	P	P	17 19 15.7	+0.5
ARE0	ARCESS Array S	50.91	337	eP	P	17 19 16.4	+1.2
ARE0	ARCESS Array S	50.91	337	P	P	17 19 15.8	+0.5
KKB	Krupnik	50.92	301	eP	P	17 19 17.9	+2.2
HERR	Herculane	50.94	305	⇑P	P	17 19 17.5	+1.7
SIRR	Siria	51.29	306	⇓P	P	17 19 19.2	+0.8
VAY	Valandovo	51.39	300	i P	P	17 19 21.8	+2.5
BZS	Buzias	51.40	306	⇓P	P	17 19 21.0	+1.7
BZS	Buzias	51.40	306	P	P	17 19 22.2	+2.9
BZS				pmax	pmax		
	comp=Z,18nm,2.1s						
MDVR	Moldovita	51.45	305	⇓P	P	17 19 21.0	+1.3
WBSI	Waikabubak, Su	51.53	137	P	P	17 19 19.2	-1.4
	comp=Z,58nm,1.2s						
KTK1	Kautokeino	51.56	336	eP	P	17 19 20.6	+0.5
GRG	Griva	51.59	300	P	P	17 19 21.9	+1.1
LIT	Litokhoron	51.68	299	P	P	17 19 24.9	+3.4
NLAI	Namlea	51.74	124	P	P	17 19 22.6	+0.5
	comp=Z,738nmcomp=Z,23nm,0.7s						
HAMF	Hammerfest	51.80	338	eP	P	17 19 22.1	+0.3
KECS	Kecovo	51.82	309	eP	P	17 19 26.0	+3.6
KECS	Kecovo	51.82	309	eP	P	17 19 26.0	+3.6
NIE	Niedzica	51.85	311	eP	P	17 19 23.5	+0.8
NIE				epP	pP	17 19 26.4	-2.0
NIE				eL	L	17 44 09.2	
	comp=Z,2µm,20.9s						
NIE	Niedzica	51.85	311	eP	P	17 19 23.5	+0.8
NIE				e*PP	pP	17 19 26.4	-2.0
NIE				MLR	MLR		
	comp=Z,2µm,20.9s						
AGG	Agios Georgios	52.03	297	P	P	17 19 23.2	-0.9
AGG				pmax	pmax		
	comp=Z,48nm,1.1s						
AGG	Agios Georgios	52.03	297	P	P	17 19 23.2	-0.9
AGG				IAmb	IAmb	17 19 26.6	
	comp=Z,48nm,1.1s						
OJC	Ojcow	52.10	312	eP	P	17 19 24.4	0.0
OJC				eL	L	17 43 09.7	
	comp=Z,2µm,19.4s						
OJC	Ojcow	52.10	312	eP	P	17 19 24.4	0.0
OJC				MLR	MLR		
	comp=Z,2µm,19.4s						
SKO	Skopje	52.11	301	i P	P	17 19 27.3	+2.7
PSZ	Piszkesteto	52.28	309	⇑P	P	17 19 27.4	+1.4
PSZ	Piszkesteto	52.28	309	P	P	17 19 28.0	+2.1
PSZ				pmax	pmax		
	comp=Z,21nm,1.3s						
FNA	Florina	52.38	300	P	P	17 19 29.1	+2.3
MMRI	Maumere	52.46	133	P	P	17 19 25.9	-1.6
	comp=Z,34nm,1.3s						
DIVS	Divibare	52.77	304	eP	P	17 19 30.5	+0.8
AAI	Ambon	52.83	124	P	P	17 19 32.5	+2.3
	comp=Z,1µmcomp=Z,55nm,1.6s						
VYHS	Vyhne	52.91	310	eP	P	17 19 31.5	+1.0
VYHS				pmax	pmax		
	comp=Z,87nm,2.3s						
VYHS	Vyhne	52.91	310	eP	P	17 19 31.5	+1.0
OKC	Ostrava-Krasne	53.20	311	eP	P	17 19 33.3	+0.8
OKC				ex	x	17 19 35.6	
OKC				eS	S	17 27 04.2	+1.1
OKC				AMS	AMS	17 44 20.0	
	comp=Z,1µm,14.4s						
OKC	Ostrava-Krasne	53.20	311	eP	P	17 19 33.3	+0.8
OKC				e		17 19 35.6	
OKC				eS	S	17 27 04.2	+1.1
OKC				MLR	MLR		
	comp=Z,1µm,14.4s						
BBLS	Lazići	53.23	304	eP	P	17 19 33.0	0.0
MORH	Mrgy, Hungar	53.37	307	eP	P	17 19 33.5	-0.3
GKP	Gorka Klasztor	53.41	316	P	P	17 19 34.8	+0.7
IGT	Igoumenitsa	53.43	298	P	P	17 19 35.1	+0.7
IGT				pmax	pmax		
	comp=Z,24nm,0.8s						
HAPS	Han Pijesak,BI	53.51	304	eP	P	17 19 37.8	+2.7
MORC	Moravsky Berou	53.59	311	⇓P	P	17 19 36.4	+0.9
MORC	Moravsky Berou	53.59	311	P	P	17 19 36.1	+0.5
MORC				pmax	pmax		
	comp=Z,36nm,0.9s						
MORC	Moravsky Berou	53.59	311	eP	P	17 19 35.7	+0.2
MORC	Moravsky Berou	53.59	311	P	P	17 19 36.1	+0.5
MORC				IAmb	IAmb	17 19 40.0	
	comp=Z,36nm,0.9s						
PDG	Podgorica	53.61	302	eP	P	17 19 36.3	+0.6
PDG	Podgorica	53.61	302	P	P	17 19 35.5	-0.2
JAVC	Velka Javorina	53.63	310	eP	P	17 19 37.1	+1.3
DRME	Dracevica, Mon	53.71	302	eP	P	17 19 35.7	-0.8
UPM	Unac-Piva	53.71	303	eP	P	17 19 36.6	-0.1
SMOL	Smolenice	53.84	310	eP	P	17 19 40.3	+3.0
SMOL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SMOL	Smolenice	53.84	310	eP	P	17 19 40.2	+3.0
SKR	Severo-Kuril's	53.93	48	eP	P	17 19 36.0	-1.9
SKR				e		17 21 46.6	
SKR				eS	S	17 27 10.1	-2.9
SKR				MLR	MLR		
	comp=Z,2µm,16.0s						
SKR				MLR	MLR		
	comp=Z,3µm,16.0s						
MODS	Modra-Piesok	53.96	310	eP	P	17 19 38.5	+0.3
MODS				pmax	pmax		
	comp=Z,23nm,1.5s						
MODS	Modra-Piesok	53.96	310	eP	P	17 19 38.5	+0.3
BRY	Bratogost	54.03	303	eP	P	17 19 38.6	-0.4
KRLC	Kraliky	54.04	312	eP	P	17 19 38.9	+0.1
KRLC				epP	pP	17 19 42.1	-2.5
KRLC				eS	S	17 27 09.5	-5.1
KRLC				AMS	AMS	17 44 50.0	
	comp=Z,2µm,14.1s						
KRLC	Kraliky	54.04	312	eP	P	17 19 38.9	+0.1
KRLC				e		17 19 42.1	
KRLC				eS	S	17 27 09.5	-5.1
KRLC				MLR	MLR		
	comp=Z,2µm,14.1s						
HCY	Herceg Novi	54.16	302	eP	P	17 19 37.0	-2.8
TREB	Trebinje	54.21	303	eP	P	17 19 42.4	+2.3
VRAC	Vranov	54.27	311	eP	P	17 19 41.1	+0.7
DPC	Dobruska-Polom	54.30	312	eP	P	17 19 41.5	+0.8
DPC				epP	pP	17 19 43.8	-2.7
DPC				ex	x	17 19 54.3	
DPC				eS	S	17 27 12.9	-5.2
DPC				AMS	AMS	17 44 50.0	
	comp=Z,2µm,16.0s						
DPC	Dobruska-Polom	54.30	312	eP	P	17 19 41.5	+0.8
DPC				e		17 19 43.8	
DPC				eS	S	17 27 12.9	-5.2
DPC				MLR	MLR		
	comp=Z,2µm,16.0s						
OSTC	Ostas	54.34	312	eP	P	17 19 41.6	+0.7
OSTC				epP	pP	17 19 44.0	-2.7
OSTC				ex	x	17 19 54.6	
OSTC				eS	S	17 27 20.2	+1.6
OSTC				AMS	AMS	17 44 50.0	
	comp=Z,1µm,14.5s						
DBRK	Dubrovnik	54.37	303	i P	P	17 19 40.8	-0.4
KRUC	Moravsky	54.43	311	eP	P	17 19 42.0	+0.4
UPC	Upice	54.47	312	eP	P	17 19 42.5	+0.6
UPC				epP	pP	17 19 45.4	-2.3
UPC				eS	S	17 27 18.1	-2.3
UPC				AMS	AMS	17 45 00.0	
	comp=Z,2µm,15.9s						
UPC	Upice	54.47	312	eP	P	17 19 42.5	+0.6
UPC				e		17 19 45.4	
UPC				eS	S	17 27 18.1	-2.3
UPC				MLR	MLR		
	comp=Z,2µm,15.9s						
MOR8	Moi Rana	54.53	332	eP	P	17 19 41.4	-0.7
SOP	Sopron	54.54	309	P	P	17 19 44.2	+1.8
SOP				pmax	pmax		
	comp=Z,41nm,0.9s						
SOEI	Soe	54.60	132	P	P	17 19 42.7	-0.6
	comp=Z,1µmcomp=Z,94nm,0.9s						
SOEI	Soe	54.60	132	P	P	17 19 43.2	-0.1
BEHE	Becsehely	54.60	307	eP	P	17 19 46.0	+3.1
BSD	Bornholm Skovb	54.61	318	⇑iP	P	17 19 44.6	+1.9
	comp=Z,34nm,0.9s						
BSD	Bornholm Skovb	54.61	318	⇑iP	P	17 19 44.6	+1.9
BSD				pmax	pmax		
	comp=Z,34nm,0.9s						
PETK	Petropavlovsk-	54.62	44	P	P	17 19 42.2	-0.7
	comp=Z,8.0nm,0.8s,baz=172,slow=1.0,SNR=8.8						
PETK				LR	LR	17 44 58.4	
	comp=Z,2µm,18.2s,baz=275,slow=38						
PETK	Petropavlovsk-	54.62	44	P	P	17 19 42.7	-0.3
BNDI	Bandanaira	54.63	123	P	P	17 19 44.6	+1.2
	comp=Z,78nm,1.2s						
BLY	Banja Luka	54.63	305	⇓P	P	17 19 44.0	+0.9
BLY	Banja Luka	54.63	305	eP	P	17 19 43.3	+0.1
BLY	Banja Luka	54.63	305	P	P	17 19 42.6	-0.6
BLY				IAmb	IAmb	17 19 46.7	
	comp=Z,24nm,1.1s						
STON	Ston	54.64	303	i P	P	17 19 42.7	-0.5
STON	Ston	54.64	303	eP	P	17 19 42.9	-0.3
MGRS	Mrkonjic Grad	54.77	305	eP	P	17 19 47.3	+3.1
MOSL	Moslavina	54.77	306	i P	P	17 19 43.4	-0.8
CONA	Conrad Observa	54.96	309	esP	P	17 19 48.9	+3.3
	comp=Z,11nm,0.9s						
LOF	Lofoten	54.97	334	eP	P	17 19 45.5	+0.3
TREC	Trest	54.98	311	eP	P	17 19 46.3	+0.6
TREC				epP	pP	17 19 48.9	-2.6
TREC				AMS	AMS	17 45 30.0	
	comp=Z,2µm,16.2s						
TREC	Trest	54.98	311	eP	P	17 19 46.3	+0.6
TREC				e		17 19 48.9	
TREC				MLR	MLR		
	comp=Z,2µm,16.2s						
MAKA	Makarska	55.04	303	i P	P	17 19 46.5	+0.4
KONS	Konsvik	55.08	332	eP	P	17 19 45.8	-0.2
PET	Petropavlovsk	55.20	44	eP	P	17 19 45.8	-1.3
PET				eS	S	17 27 23.4	-6.6
PET				pmax	pmax		
	comp=Z,100nm,13.0s						
PET				MLR	MLR		
	comp=Z,4µm,18.0s						
FAKI	Fak Fak	55.26	119	P	P	17 19 47.6	-0.5
	comp=Z,1µmcomp=Z,1µmcomp=Z,65nm,1.2s						
FAKI	Fak Fak	55.26	119	P	P	17 19 47.8	-0.2
FAKI				IAmb	IAmb	17 19 48.5	
	comp=Z,56nm,1.0s						
ARSA	Arzberg	55.31	308	epP	P	17 19 48.2	+0.1
	comp=Z,11nm,0.8s,SNR=8.7						
PVCC	Panska Ves	55.38	313	eP	P	17 19 49.0	+0.5
PVCC				epP	pP	17 19 52.0	-2.2
PVCC				eS	S	17 27 30.6	-1.9
PVCC				AMS	AMS	17 45 30.0	
	comp=Z,2µm,14.3s						
PVCC	Panska Ves	55.38	313	eP	P	17 19 49.0	+0.5
PVCC				e		17 19 52.0	
PVCC				eS	S	17 27 30.6	-1.9
PVCC				MLR	MLR		
	comp=Z,2µm,14.3s						
LODK	Lodwar	55.47	251	P	P	17 19 51.0	+1.4
	SNR=26						
PRU	Pruhonice	55.48	312	eP	P	17 19 49.9	+0.7
PRU				epP	pP	17 19 52.5	-2.5
PRU				ex	x	17 20 01.9	
PRU				eS	S	17 27 34.8	+0.9
PRU				AMS	AMS	17 44 10.0	
	comp=Z,1µm,20.4s						
PRU	Pruhonice	55.48	312	eP	P	17 19 49.9	+0.7
PRU				e		17 19 52.5	
PRU				eS	S	17 27 34.8	+0.9
PRU				MLR	MLR		
	comp=Z,1µm,20.4s						
PRA	Prague	55.54	312	eS	S	17 27 31.8	-2.8
PRA				AMS	AMS	17 45 50.0	
	comp=Z,1µm,14.8s						
NSS	Namsos	55.56	330	eP	P	17 19 49.5	0.0
RUE	Ruedersdorf	55.58	315	eP	P	17 19 51.6	+1.8
RUE	Ruedersdorf	55.58	315	eP	P	17 19 49.4	-0.5
	comp=Z,64nm,0.8s,baz=80,slow=7.0						
RGN	Rugen	55.58	317	eP	P	17 19 52.0	+2.2
RGN	Rugen	55.58	317	eP	P	17 19 50.0	+0.2
	comp=Z,118nm,1.1s,baz=80,slow=7.0						
CRES	Cresnjev	55.62	307	eP	P	17 19 50.2	-0.1
PERS	Pernice	55.69	308	eP	P	17 19 50.8	-0.1
PERS				i pP	pP	17 19 53.8	-2.8
BRG	Berggiesshubel	55.72	313	eP	P	17 19 51.2	+0.3
	comp=Z,18nm,1.2s						
BRG				i		17 19 54.0	
	comp=Z,56nm,0.9s						
BRG				S	S	17 27 36.0	-1.1
BRG				SS	SS	17 31 22.0	0.0
BRG	Berggiesshubel	55.72	313	eP	P	17 19 50.7	-0.2
	comp=Z,56nm,0.9s,baz=80,slow=7.0						
BRG	Berggiesshubel	55.72	313	eP	P	17 19 51.2	+0.3
BRG				i		17 19 54.0	
BRG				S	S	17 27 36.0	-1.1
BRG				SS	SS	17 31 22.0	0.0
BRG				pmax	pmax		
	comp=Z,18nm,1.2s						
BRG				pmax	pmax		
	comp=Z,56nm,0.9s						
BRG				MLR	MLR		
	comp=N,1µm,12.4s						
BRG				MLR	MLR		
	comp=E,1µm,15.5s						
BRG				MLR	MLR		
	comp=Z,1µm,12.4s						
SOKA	Soboth	55.74	308	epP	P	17 19 51.4	+0.1
	comp=Z,23nm,0.8s,SNR=35						
NC405	NORSAR Array S	55.82	326	P	P	17 19 51.7	+0.2
MORI	Morici	55.85	304	i P	P	17 19 50.5	-1.4
PBCC	Pribram	55.88	312	eP	P	17 19 55.2	+3.1
NC602	NORSAR Array S	55.94	325	eP	P	17 19 51.9	-0.4
NORES	NORESS Array B	55.94	325	P	P	17 19 52.0	-0.3
NORES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZIRJ	Zirje	55.94	304	i P	P	17 19 52.2	-0.4
COP	Copenhagen	55.95	319	⇑iP	P	17 19 55.6	+3.2
	comp=Z,49nm,0.9s						
COP	Copenhagen	55.95	319	⇑iP	P	17 19 55.6	+3.2
COP				pmax	pmax		
	comp=Z,49nm,0.9s						
NB201	NORSAR Array S	56.03	325	IAmb	IAmb	17 19 56.2	
	comp=Z,38nm,0.8s						
MOA	Molln	56.03	309	eP	P	17 19 53.1	-0.2
	comp=Z,20nm,0.9s,SNR=9.5						
NB2	NORSAR Subarra	56.07	325	P	P	17 19 52.5	-0.8
	comp=Z,37nm,0.8s,baz=86,slow=7.4						
NB2	NORSAR Subarra	56.07	325	P	P	17 19 52.5	-0.8
	baz=86,slow=7.4						
NOA	NORSAR Array B	56.07	325	P	P	17 19 52.6	-0.7
	comp=Z,19nm,0.7s,baz=86,slow=7.2,SNR=53						
NOA				LR	LR	17 44 58.4	
	comp=Z,1µm,19.7s,baz=75,slow=37						
FBE	Freiberg	56.08	313	eP	P	17 19 53.5	0.0
	comp=Z,61nm,1.0s,baz=80,slow=7.0						
OBKA	Obir	56.10	308	epP	P	17 19 54.3	+0.5
	comp=Z,9.3nm,0.9s,SNR=10.0						
GUMO	Guam	56.16	94	LR	LR	17 44 30.5	
	comp=Z,352nm,20.9s,baz=292,slow=37						
TIP	Timpagrande	56.20	299	⇑P	P	17 19 56.6	+2.0
LJU	Ljubljana	56.21	307	i P	P	17 19 54.8	+0.2
LJU				i pP	pP	17 19 57.5	-2.8
LJU	Ljubljana	56.21	307	eP	P	17 19 56.0	+1.5
GEC2	GERESS Array S	56.22	311	eP	P	17 19 54.3	-0.3
	comp=Z,50nm,0.9s,baz=80,slow=7.0						
GEC2	GERESS Array S	56.22	311	IAmb	IAmb	17 19 58.9	
	comp=Z,36nm,0.8s						
GERES	GERESS Array B	56.22	311	P	P	17 19 55.1	+0.4
	comp=Z,23nm,0.7s,baz=78,slow=7.0,SNR=43						
GERES				LR	LR	17 46 43.1	
	comp=Z,2µm,19.5s,baz=82,slow=39						
CLL	Collm	56.24	314	⇓iP	P	17 19 55.3	+0.7
	comp=Z,11nm,1.1s						
CLL				i pP	pP	17 19 58.2	-2.2
	comp=Z,33nm,1.0s						
CLL				eS	S	17 27 41.0	-2.9
CLL				eSS	SS	17 31 30.0	-0.1
CLL				e		17 32 42.0	
CLL				LmV		17 45 00.0	
	comp=Z,1µm,21.8s						
CLL	Collm	56.24	314	eP	P	17 19 54.9	+0.3
	comp=Z,33nm,1.0s,baz=80,slow=7.0						
CLL	Collm	56.24	314	⇓iP	P	17 19 55.3	+0.7
CLL				eS	S	17 27 41.0	-2.9
CLL				pmax	pmax		
	comp=Z,33nm,1.0s						
CLL				MLR	MLR		
	comp=Z,1µm,21.8s						
CLL	Collm	56.24	314	IAmb	IAmb	17 19 59.1	
	comp=Z,26nm,1.0s						
KHC	Kasperske Hory	56.25	311	eP	P	17 19 55.2	+0.4
KHC				epP	pP	17 19 57.5	-3.1
KHC				ex	x	17 20 04.8	
KHC				eS	S	17 27 43.4	-0.8
KHC				AMS	AMS	17 46 00.0	
	comp=Z,2µm,14.9s						
KHC	Kasperske Hory	56.25	311	eP	P	17 19 55.2	+0.4
KHC				e		17 19 57.5	
KHC				e		17 20 04.8	
KHC				eS	S	17 27 43.4	-0.8
KHC				MLR	MLR		
	comp=Z,2µm,14.9s						
NC204	NORSAR Array S	56.27	326	P	P	17 19 54.7	-0.1
DUGI	Dugi Otok	56.28	305	i P	P	17 19 52.9	-2.1
NBO00	NORSAR Array S	56.28	325	IAmb	IAmb	17 19 58.4	
	comp=Z,42nm,0.9s						
NVLJ	Novalja	56.29	305	i P	P	17 19 52.8	-2.2
GBAS	Gorenja Brezov	56.29	307	i P	P	17 19 55.0	-0.1
CEY	Cerknica	56.34	307	eP	P	17 19 55.1	-0.4
RIY	Rijeka	56.39	306	eP	P	17 19 57.8	+2.0
OSL	Oslo	56.41	324	eP	P	17 19 53.9	-1.7
KBS	Kingsbay	56.50	347	eP	P	17 19 58.7	+2.7
SKDS	Skadanscina	56.67	307	epP	P	17 19 59.9	+2.1
MYKA	Terra Mystica	56.69	308	epP	P	17 20 00.3	+2.3
	comp=Z,6.0nm,1.0s						
WET	Wettzell	56.70	311	eP	P	17 19 57.7	-0.2
	comp=Z,34nm,0.9s,baz=80,slow=7.0						
KMBO	Kilima Mbogo	56.73	245	i P	P	17 19 59.3	+0.5
	SNR=74						
KMBO	Kilima Mbogo	56.73	245	P	P	17 19 58.8	-0.1
KMBO				pmax	pmax		
	comp=Z,84nm,1.1s						
KMBO	Kilima Mbogo	56.73	245	P	P	17 19 58.8	-0.1
TANN	Tannenbergstha	56.73	313	eP	P	17 19 57.8	-0.4
	comp=Z,532nm,2.4s,baz=80,slow=7.0						
NKC	Novy Kostel	56.77	312	eP	P	17 19 58.8	+0.4
NKC				epP	pP	17 20 01.3	-2.9
NKC				eS	S	17 27 48.0	-3.1
NKC				AMS	AMS	17 46 20.0	
	comp=Z,2µm,16.2s						
NKC	Novy Kostel	56.77	312	eP	P	17 19 58.8	+0.4
NKC				e		17 20 01.3	
NKC				eS	S	17 27 48.0	-3.1
NKC				MLR	MLR		
	comp=Z,2µm,16.2s						
KBA	Koelnbreinsper	56.80	309	eP	P	17 19 58.5	-0.4
	comp=Z,8.3nm,0.9s,SNR=8.4						
KBA	Koelnbreinsper	56.80	309	P	P	17 20 01.1	+2.2
TRI	Trieste	56.80	307	P	P	17 19 59.1	+0.4
TRI				pmax	pmax		
	comp=Z,63nm,0.9s						
WERN	Wernitzgruen	56.80	313	eP	P	17 19 58.5	-0.2
	comp=Z,190nm,2.3s,baz=80,slow=7.0						
GUNZ	Gunzen	56.82	313	eP	P	17 19 58.6	-0.2
	comp=Z,48nm,0.9s,baz=80,slow=7.0						
KIBK	Kibwezi	56.89	243	P	P	17 20 00.5	+0.7
	SNR=14						
PLN	Plauen	56.91	313	eP	P	17 19 59.0	-0.4
	comp=Z,33nm,0.9s,baz=80,slow=7.0						
KONO	Kongsberg	57.00	324	eP	P	17 19 59.5	-0.4
KONO	Kongsberg	57.00	324	P	P	17 19 58.6	-1.3
KONO				pmax	pmax		
	comp=Z,53nm,1.4s						
KONO	Kongsberg	57.00	324	P	P	17 19 58.6	-1.3
KONO				IAmb	IAmb	17 20 03.9	
	comp=Z,53nm,1.4s						
ROTZ	Rotzenmuhle	57.01	312	eP	P	17 20 00.3	+0.2
	comp=Z,61nm,1.1s,baz=80,slow=7.0						
DOMB	Dombas	57.01	327	eP	P	17 19 59.8	-0.2
NEUB	Neuenburg	57.01	314	eP	P	17 19 59.7	-0.4
	comp=Z,70nm,0.8s,baz=80,slow=7.0						
RJOB	Jochberg	57.03	309	eP	P	17 19 59.7	-0.7
	comp=Z,15nm,1.1s,baz=80,slow=7.0						
MANZ	Manzenberg	57.03	312	eP	P	17 20 00.4	+0.1
	comp=Z,42nm,1.1s,baz=80,slow=7.0						
MOX	Moxa	57.22	313	eP	P	17 20 01.3	-0.3
	comp=Z,46nm,1.0s,baz=80,slow=7.0						
FVI	Forni Avoltri	57.28	308	P	P	17 20 04.0	+1.8
FVI				pmax	pmax		
	comp=Z,9.0nm,1.7s						
BSEG	Bad Segeberg	57.42	317	eP	P	17 20 03.1	+0.2
	comp=Z,56nm,0.9s,baz=80,slow=7.0						
ABTA	Abfaltersbach	57.43	308	epP	P	17 20 04.7	+1.5
	comp=Z,8.2nm,1.2s						
ASSE	Asse, Remlinge	57.52	315	eP	P	17 20 03.1	-0.5
	comp=Z,15nm,1.1s,baz=80,slow=7.0						
SKAR	Skarslia	57.52	325	eP	P	17 20 04.0	+0.4
GOET	G??ttrup	57.54	321	i P	P	17 20 04.4	+0.7
	comp=Z,82nm,1.0s						
BILL	Bilibino	57.55	26	⇓iP	P	17 20 04.5	+0.9
BILL				e		17 20 57.2	
BILL				e		17 22 10.6	
BILL				i S	S	17 28 09.2	+8.5
BILL				pmax	pmax		
	comp=Z,67nm,1.7s						
BILL				MLR	MLR		
	comp=Z,2µm,15.0s						
BILL	Bilibino	57.55	26	P	P	17 20 03.2	-0.4
BILL				IAmb	IAmb	17 20 05.6	
	comp=Z,41nm,1.1s						
GRF	Grafenberg Arr	57.65	312	eP	P	17 20 05.0	+0.3
	comp=Z,72nm,1.2s,baz=80,slow=7.0						
GRF				eL	L	17 45 49.0	
	comp=Z,1µm,21.8s						
GRF	Grafenberg Arr	57.65	312	P	P	17 20 06.0	+1.3
MOL	Molde	57.66	327	eP	P	17 20 04.7	+0.3
HOMB	Homborsund	57.74	322	eP	P	17 20 05.0	-0.1
CLZ	Clausthal	57.76	315	eP	P	17 20 05.3	-0.2
	comp=Z,71nm,1.0s,baz=80,slow=7.0						
NRDL	Niedersach Rie	57.80	315	eP	P	17 20 05.8	+0.3
	comp=Z,116nm,0.9s,baz=80,slow=7.0						
AQU	L'Aquila	57.85	303	eP	P	17 20 08.4	+2.2
AQU	L'Aquila	57.85	303	P	P	17 20 09.5	+3.3
AQU				pmax	pmax		
	comp=Z,43nm,1.1s						
WTTA	Wattenberg	57.90	309	eP	P	17 20 05.7	-1.0
	comp=Z,26nm,0.8s,SNR=9.9						
WTTA	Wattenberg	57.90	309	P	P	17 20 08.6	+2.0
WATA	Walderalm	57.92	309	eP	P	17 20 05.6	-1.2
	comp=Z,19nm,1.0s,SNR=12						
NRCA	Norcia	57.93	304	IAmb	IAmb	17 20 11.2	
	comp=Z,27nm,1.0s						
FUR	Furstenfeldbru	57.94	310	eP	P	17 20 06.5	-0.2
	comp=Z,98nm,1.1s,baz=80,slow=7.0						
GTTG	Gottingen	58.06	314	eP	P	17 20 07.4	-0.1
	comp=Z,94nm,1.7s,baz=80,slow=7.0						
CTI	Castel Tesino	58.17	308	P	P	17 20 09.9	+1.4
CTI				pmax	pmax		
	comp=Z,20nm,1.5s						
UBBA	Unterbreizbach	58.19	313	eP	P	17 20 08.1	-0.1
	comp=Z,24nm,1.1s,baz=80,slow=7.0						
SQTA	Sankt Quirin	58.19	309	eP	P	17 20 07.5	-1.1
	comp=Z,21nm,0.9s,SNR=11						
MOTA	Moosalm	58.23	309	eP	P	17 20 08.0	-0.9
	comp=Z,31nm,0.8s,SNR=12						
SNART	Snartemo	58.41	323	eP	P	17 20 10.2	+0.4
RETA	Reutte	58.42	310	eP	P	17 20 09.6	-0.6
	comp=Z,16nm,0.8s,SNR=9.4						
ODD1	Odda	58.46	324	eP	P	17 20 11.8	+1.6
HYA	Hoyanger	58.48	326	i P	P	17 20 10.3	0.0
FETA	Feichten	58.55	309	eP	P	17 20 10.5	-0.8
	comp=Z,18nm,0.7s,SNR=12						
BLS5	Blasjo	58.62	324	eP	P	17 20 11.4	+0.1
UBR	Ueberruh	58.81	310	eP	P	17 20 12.0	-0.9
	comp=Z,18nm,1.1s,baz=80,slow=7.0						
BER	Bergen	59.02	325	eP	P	17 20 13.9	0.0
DAVA	Damuels	59.05	309	eP	P	17 20 13.8	-0.9
	comp=Z,45nm,0.9s,SNR=18						
ASK	Askoy	59.07	325	eP	P	17 20 15.3	+1.0
STU	Stuttgart	59.15	311	eP	P	17 20 14.7	-0.4
	comp=Z,59nm,0.9s,baz=80,slow=7.0						
STU	Stuttgart	59.15	311	P	P	17 20 17.5	+2.4
TOD	Tromm	59.20	312	P	P	17 20 18.5	+3.0
IBBN	Ibbenburen	59.24	316	eP	P	17 20 15.4	-0.3
	comp=Z,52nm,1.1s,baz=80,slow=7.0						
KMY	Karmoy	59.27	324	eP	P	17 20 16.2	+0.5
TNS	Taunus Mts	59.29	313	eP	P	17 20 15.7	-0.4

	comp=Z,43nm,0.9s,baz=80,slow=7.0						
TNS	Taunus Mts	59.29	313	P	P	17 20 16.9	+0.8
KTD	Kalmit	59.73	312	P	P	17 20 19.6	+0.4
BUG	Bochum--Univer	59.73	315	*e*P	P	17 20 18.8	-0.3
	comp=Z,47nm,1.1s,baz=80,slow=7.0						
BFO	Black Forest	59.81	311	*e*P	P	17 20 18.9	-0.9
	comp=Z,27nm,1.5s,baz=80,slow=7.0						
BFO	Black Forest	59.81	311	P	P	17 20 19.5	-0.3
BFO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BFO	Black Forest	59.81	311	P	P	17 20 19.5	-0.3
SLE	Schleitheim	59.85	310	P	P	17 20 20.4	+0.4
LANF	Langenberg	59.99	312	P	P	17 20 22.2	+1.3
AHRW	Bad Neuenahr-A	60.06	314	*e*P	P	17 20 21.2	-0.2
	comp=Z,32nm,0.9s,baz=80,slow=7.0						
MSSA	Maissana	60.06	306	P	P	17 20 21.3	-0.3
MSSA				IAmb	IAmb	17 20 24.3	
	comp=Z,20nm,0.8s						
HKB	Herkenbosch	60.46	315	P	P	17 20 25.1	+1.0
HKB				x	x	17 20 27.4	
MEM	Membach	60.71	314	P	P	17 20 27.3	+1.5
MEM				x	x	17 20 30.3	
MEM	Membach	60.71	314	P	P	17 20 28.9	+3.1
LVIA	Vianden	60.76	313	P	P	17 20 22.5	-3.6
LVIA				x	x	17 20 27.5	
LVIA				x	x	17 20 30.8	
BHOU	Houvegnez	60.77	314	P	P	17 20 26.8	+0.5
BHOU				x	x	17 20 29.0	
BHOU				x	x	17 20 31.4	
BHOU				PcP	PcP	17 21 08.9	-1.2
WLF	Walferdange	60.86	313	P	P	17 20 26.4	-0.5
WLF				x	x	17 20 29.4	
WLF				x	x	17 20 31.8	
WLF				pP	sP	17 20 34.8	-0.1
WLF				PcP	PcP	17 21 06.4	-4.1
WLF	Walferdange	60.86	313	*e*P	P	17 20 26.9	+0.1
	comp=Z,57nm,1.1s,baz=80,slow=7.0						
WLF	Walferdange	60.86	313	P	P	17 20 28.7	+1.8
WLF				pmax	pmax		
	comp=Z,48nm,1.1s						
WLF	Walferdange	60.86	313	P	P	17 20 28.7	+1.8
WLF				IAmb	IAmb	17 20 31.1	
	comp=Z,48nm,1.1s						
BEBN	Eben Emael	60.86	314	P	P	17 20 29.8	+3.0
BSTI	Sart Tilman	60.99	314	P	P	17 20 27.0	-0.7
BSTI				x	x	17 20 30.4	
LOMF	Lomont	61.05	310	P	P	17 20 31.0	+2.7
BMOL	Mol	61.12	315	x	P	17 20 31.8	+3.3
GENI	Genyem	61.13	113	P	P	17 20 30.7	+1.6
	comp=Z,2µmcomp=Z,165nm,1.3s						
BCLA	Clavier	61.19	314	P	P	17 20 28.5	-0.6
	comp=Z,23nm,1.4s						
BCLA				x	x	17 20 31.3	
BCLA				x	x	17 20 34.3	
BCLA				pP	sP	17 20 36.4	-0.7
BCLA				sP	pP	17 20 39.6	+4.7
RCHB	Rochefort	61.31	314	P	P	17 20 29.4	-0.4
RCHB				x	x	17 20 32.9	
RCHB				x	x	17 20 34.3	
RCHB				PcP	PcP	17 21 13.8	+1.6
BGES	Gesves	61.33	314	P	P	17 20 27.9	-2.1
BGES				x	x	17 20 32.7	
BGES				PcP	PcP	17 21 12.1	-0.2
MTN	Manton Dam	61.37	129	P	P	17 20 30.6	-0.1
MTN				IAmb	IAmb	17 20 32.0	
	comp=Z,28nm,1.4s						
JAY	Jayapura	61.51	113	P	P	17 20 33.3	+1.6
	comp=Z,21nm,1.2s						
BMRD	Maredsous	61.55	314	P	P	17 20 30.6	-0.9
BMRD				x	x	17 20 33.0	
BMRD				x	x	17 20 34.8	
BMRD				pP	pP	17 20 37.4	+0.1
BMRD				PcP	PcP	17 21 16.0	+2.8
MBAR	Mbarara	61.56	250	P	P	17 20 33.3	+1.0
MBAR				pmax	pmax		
	comp=Z,80nm,0.9s						
MBAR	Mbarara	61.56	250	P	P	17 20 33.3	+1.0
DOI	San Damiano	61.57	307	P	P	17 20 33.9	+2.0
DOI				pmax	pmax		
	comp=Z,18nm,1.1s						
PSA00	Pilbara Seismi	61.59	144	P	P	17 20 32.9	+0.8
PSA00	Pilbara Seismi	61.59	144	P	P	17 20 31.5	-0.5
PSA00				IAmb	IAmb	17 20 37.2	
	comp=Z,23nm,0.8s						
DOU	Dourbes	61.72	314	P	P	17 20 32.9	+0.2
DOU				x	x	17 20 35.0	
DOU				x	x	17 20 37.8	
DOU				pP	sP	17 20 40.1	-0.6
SNF	Seneffe	61.80	314	P	P	17 20 33.1	-0.1
SNF				x	x	17 20 35.8	
BNI	Bardonecchia	61.80	308	P	P	17 20 33.6	+0.2
BNI				pmax	pmax		
	comp=Z,30nm,1.1s						
BNI	Bardonecchia	61.80	308	P	P	17 20 33.6	+0.2
BNI				IAmb	IAmb	17 20 41.6	
	comp=Z,30nm,1.1s						
BRQR	Ronquire	61.80	314	x	P	17 20 35.2	+2.0
BRQR				x	x	17 20 37.5	
FITZ	Fitzroy Crossi	61.89	137	LR	LR	17 52 05.4	
	comp=Z,310nm,19.0s,baz=314,slow=41						
FITZ	Fitzroy Crossi	61.89	137	P	P	17 20 34.4	+0.3
FITZ				IAmb	IAmb	17 20 36.1	
	comp=Z,25nm,1.4s						
KNRA	Kununurra	61.92	133	IAmb	IAmb	17 20 36.1	
	comp=Z,21nm,0.9s						
BBOU	Bougnies	62.04	314	⇓P	P	17 20 34.0	-0.8
BBOU				x	x	17 20 37.5	
BBOU				x	x	17 20 39.4	
ABPO	Ambohimpanom	62.66	222	P	P	17 20 40.2	+0.7
ABPO	Ambohimpanom	62.66	222	P	P	17 20 40.2	+0.7
KEST	Kesra	62.87	297	P	P	17 20 41.4	+0.6
	comp=Z,17nm,1.0s,baz=82,slow=16,SNR=8.0						
DAG	Danmarks Havn	63.11	346	⇓*i*P	P	17 20 40.6	-0.9
	comp=Z,18nm,1.2s						
DAG	Danmarks Havn	63.11	346	⇓*i*P	P	17 20 40.6	-0.9
DAG				pmax	pmax		
	comp=Z,19nm,1.2s						
CLF	Chambon-Foret	63.79	312	P	P	17 20 47.2	+0.7
CLF				IAmb	IAmb	17 20 49.8	
	comp=Z,51nm,1.4s						
EKA	Eskdalemuir Ar	64.66	321	P	P	17 20 54.0	+1.9
EKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MORW	Morawa	66.34	152	P	P	17 21 03.2	0.0
MORW				IAmb	IAmb	17 21 08.4	
	comp=Z,28nm,0.8s						
SCO	Scoresbysund	66.63	340	*i* P	P	17 21 05.0	+0.5
	comp=Z,14nm,1.1s						
SCO	Scoresbysund	66.63	340	*i* P	P	17 21 05.0	+0.5
SCO				pmax	pmax		
	comp=Z,14nm,1.1s						
RDOG	Red Dog Mine	68.50	22	IAmb	IAmb	17 21 23.1	
	comp=Z,22nm,1.3s						
WRA	Warramunga Arr	68.62	131	P	P	17 21 17.6	-0.2
	comp=Z,28nm,1.1s,baz=325,slow=6.2,SNR=58						
WRA				PKPPKP	P'P'df	17 49 36.7	+7.6
	comp=Z,1.1nm,1.1s,baz=164,slow=1.7,SNR=6.7						
WRA				LR	LR	17 57 32.0	
	comp=Z,252nm,18.4s,baz=320,slow=41						
WRA	Warramunga Arr	68.62	131	P	P	17 21 17.4	-0.4
WRA				pmax	pmax		
	comp=Z,3.0nm,1.5s						
WRA	Warramunga Arr	68.62	131	P	P	17 21 17.4	-0.4
WRAB	Tennant Creek	68.62	131	P	P	17 21 17.8	0.0
WRAB				pmax	pmax		
	comp=Z,102nm,1.5s						
WRAB	Tennant Creek	68.62	131	P	P	17 21 17.8	0.0
SUMG	Summit	69.76	345	*i* P	P	17 21 24.7	+0.1
	comp=Z,183nm,1.1s						
SUMG	Summit	69.76	345	*i* P	P	17 21 24.7	+0.1
SUMG				pmax	pmax		
	comp=Z,180nm,1.1s						
SUMG	Summit	69.76	345	P	P	17 21 24.4	-0.2
NWAO	Narrogin (SRO)	70.23	153	P	P	17 21 26.2	-1.2
NWAO				pmax	pmax		
	comp=Z,44nm,1.2s						
NWAO	Narrogin (SRO)	70.23	153	P	P	17 21 26.2	-1.2
NWAO	Narrogin (SRO)	70.23	153	P	P	17 21 26.2	-1.2
NWAO				IAmb	IAmb	17 21 29.0	
	comp=Z,44nm,1.1s						
PMG	Port Moresby	70.78	114	*ce*P	P	17 21 31.5	+0.3
PMG				pmax	pmax		
	comp=Z,325nm,1.3s						
PMG	Port Moresby	70.78	114	P	P	17 21 31.5	+0.3
ASAR	Alice Springs	71.09	134	P	P	17 21 33.0	0.0
	comp=Z,41nm,1.1s,baz=322,slow=6.0,SNR=251						
ASAR				LR	LR	17 57 20.1	
	comp=Z,226nm,19.0s,baz=312,slow=40						
ASAR	Alice Springs	71.09	134	P	P	17 21 33.0	0.0
ASAR	Alice Springs	71.09	134	P	P	17 21 33.2	+0.2
KULLO	Kullorsuaq	71.68	350	⇓*i*P	P	17 21 35.0	-0.8
	comp=Z,48nm,1.1s						
KULLO	Kullorsuaq	71.68	350	⇓*i*P	P	17 21 35.0	-0.8
KULLO				pmax	pmax		
	comp=Z,48nm,1.1s						
PBRG	Braganca	72.07	308	*e*P	P	17 21 35.6	-3.2
TOLK	Toolik Lake Re	72.15	19	IAmb	IAmb	17 21 44.0	
	comp=Z,29nm,0.8s						
TOLK	Toolik Lake Re	72.15	19	P	P	17 21 38.5	-0.3
	baz=312						
MVO	Moncorvo	72.54	308	*e*P	P	17 21 45.6	+3.9
IMAR	Indian Mountai	72.64	22	P	P	17 21 41.9	+0.2
MTE	Manteigas	73.24	307	*e*P	P	17 21 45.4	-0.4
	comp=Z,81nm,1.6s						
MLY	Manley	74.22	22	IAmb	IAmb	17 21 53.2	
	comp=Z,30nm,1.4s						
ANGG	Ammassalik, Gr	74.23	339	IAmb	IAmb	17 21 55.0	
	comp=Z,40nm,1.0s						
BMAR	Burnt Mountain	74.34	18	P	P	17 21 52.7	+1.0
PSBE	So Bento	74.50	307	*e*P	P	17 21 56.2	+3.1
	comp=Z,85nm,1.6s						
A36M	Sachs Harbour	74.60	10	P	P	17 21 52.7	-0.4
	baz=332						
FYU	Fort Yukon	74.79	19	IAmb	IAmb	17 21 56.4	
	comp=Z,59nm,1.3s						
NEA	Nenana	75.05	22	IAmb	IAmb	17 21 56.8	
	comp=Z,35nm,1.1s						
POKR	Poker Plat Res	75.18	21	P	P	17 21 56.4	-0.2
	baz=314						
TCOL	CIGO, UAF Yank	75.22	21	P	P	17 21 56.5	-0.3
	baz=314						
ILAR	Eielson Array	75.59	21	P	P	17 21 58.1	-0.8
	comp=Z,9.2nm,1.1s,baz=304,slow=4.6,SNR=48						
ILAR				PP	PP	17 24 45.4	-2.4
	comp=Z,6.3nm,1.2s,baz=309,slow=6.8,SNR=10.0						
ILAR				LR	LR	17 58 28.9	
	comp=Z,788nm,20.5s,baz=314,slow=38						
ILAR	Eielson Array	75.59	21	P	P	17 21 58.7	-0.3
HDA	Harding Lake	75.83	21	P	P	17 21 58.8	-1.5
	baz=315						
RND	Reindeer	75.93	22	IAmb	IAmb	17 22 01.3	
	comp=Z,28nm,1.4s						
SKT	Skwentna	75.98	24	IAmb	IAmb	17 22 02.3	
	comp=Z,55nm,1.2s						
INK	Inuvik	76.30	14	IAmb	IAmb	17 22 04.0	
	comp=Z,37nm,1.3s						
SUA	Susitna One	76.61	25	IAmb	IAmb	17 22 06.1	
	comp=Z,43nm,1.4s						
SFJD	Kangerlussuaq	76.72	344	*i* P	P	17 22 03.0	-2.3
	comp=Z,2.2nm,0.9s						
SFJD	Kangerlussuaq	76.72	344	*i* P	P	17 22 03.0	-2.3
SFJD				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SFJD	Kangerlussuaq	76.72	344	P	P	17 22 04.3	-1.0
SFJD				IAmb	IAmb	17 22 05.7	
	comp=Z,45nm,1.0s						
RIDG	Independent Ri	76.95	21	IAmb	IAmb	17 22 07.1	
	comp=Z,30nm,1.2s						
GHO	Glory Hole Cre	77.03	24	IAmb	IAmb	17 22 08.6	
	comp=Z,37nm,1.4s						
SCRK	Sand Creek	77.04	20	IAmb	IAmb	17 22 08.2	
	comp=Z,36nm,1.2s						
C36M	Paulatuk	77.14	11	P	P	17 22 06.6	-1.0
	baz=334						
EPYK	Eagle Plains	77.16	16	IAmb	IAmb	17 22 08.4	
	comp=Z,51nm,1.5s						
EPYK	Eagle Plains	77.16	16	P	P	17 22 07.2	-0.7
	baz=323						
KNK	Knik Glacier	77.44	24	IAmb	IAmb	17 22 10.9	
	comp=Z,46nm,1.3s						
SCM	Sheep Creek Mo	77.53	23	IAmb	IAmb	17 22 11.3	
	comp=Z,36nm,1.2s						
DAWY	Dawson	78.29	19	IAmb	IAmb	17 22 15.2	
	comp=Z,29nm,1.3s						
BCAR	Beaver Creek A	78.38	20	P	P	17 22 15.7	+1.0
BBOO	Buckleboo	79.17	139	IAmb	IAmb	17 22 20.0	
	comp=Z,47nm,1.1s						
RAGM	Ragged Mountai	79.47	23	IAmb	IAmb	17 22 22.7	
	comp=Z,51nm,1.2s						
TGL	Tana Glacier	79.81	22	IAmb	IAmb	17 22 24.9	
	comp=Z,53nm,1.2s						
BARN	Barnard Glacie	79.95	22	IAmb	IAmb	17 22 26.2	
	comp=Z,65nm,1.3s						
CTGM	Chitina Glacie	80.12	22	IAmb	IAmb	17 22 26.4	
	comp=Z,45nm,1.2s						
LBTB	Lobatse	80.78	233	P	P	17 22 29.0	+0.6
LBTB				pmax	pmax		
	comp=Z,89nm,0.8s						
LBTB	Lobatse	80.78	233	P	P	17 22 28.9	+0.6
STKA	Stephens Creek	81.71	135	P	P	17 22 32.2	-0.8
	comp=Z,35nm,1.2s,baz=315,slow=6.0,SNR=22						
STKA				LR	LR	18 02 39.8	
	comp=Z,254nm,21.1s,baz=312,slow=38						
WHY	Whitehorse	82.29	19	IAmb	IAmb	17 22 37.0	
	comp=Z,23nm,1.2s						
BOSA	Boshof	83.36	231	P	P	17 22 41.4	-0.5
	comp=Z,74nm,1.0s,baz=40,slow=3.6,SNR=18						
BOSA				LR	LR	17 57 18.3	
	comp=Z,798nm,20.8s,baz=50,slow=34						
YKA	Yellowknife Ar	84.96	10	P	P	17 22 48.8	-0.7
	comp=Z,4.9nm,0.8s,baz=342,slow=4.4,SNR=75						
YKA				PKKPbc	PKKPbc	17 40 57.3	-0.2
	comp=Z,0.3nm,0.7s,baz=147,slow=2.9,SNR=4.2						
YKA				LR	LR	18 03 31.6	
	comp=Z,348nm,19.7s,baz=0.0,slow=38						
DBIC	Dimbokro	87.71	276	P	P	17 23 03.5	-0.2
	comp=Z,64nm,0.8s,baz=39,slow=5.4,SNR=16						
DBIC				LR	LR	18 06 10.6	
	comp=Z,1µm,20.4s,baz=44,slow=38						
DBIC	Dimbokro	87.71	276	P	P	17 23 03.6	-0.2
KIC	Kosan Boka	87.77	276	*e*P	P	17 23 03.9	-0.2
	comp=Z,143nm,0.9s						
TIC	Toumodi	87.86	276	*e*P	P	17 23 03.5	-1.0
	comp=Z,136nm,1.0s						
LIC	Lamto	88.08	276	*e*P	P	17 23 05.1	-0.5
	comp=Z,151nm,0.8s						
SCHQ	Schefferville	91.15	345	P	P	17 23 18.1	-1.2
	comp=Z,6.9nm,0.8s,baz=26,slow=4.6,SNR=7.3						
SCHQ				PKKPbc	PKKPbc	17 40 42.5	0.0
	comp=Z,2.2nm,0.8s,baz=92,slow=5.9,SNR=3.5						
SCHQ				LR	LR	18 09 01.1	
	comp=Z,320nm,20.4s,baz=13,slow=39						
SCHQ	Schefferville	91.15	345	P	P	17 23 17.0	-2.2
SCHQ				IAmb	IAmb	17 23 19.5	
	comp=Z,11nm,1.1s						
DZM	Mont Dzumac	93.16	114	*e*PS	PS	17 35 47.6	-2.5
	comp=Z,213nm,28.2s						
DZM	Mont Dzumac	93.16	114	*e*LR	LR	17 53 29.8	
	comp=Z,552nm,39.2s						
ULM	Lac du Bonnet	98.74	2	P	P	17 23 52.4	-1.6
	comp=Z,1.1nm,0.5s,baz=1.7,slow=9.0,SNR=3.4						
ULM				LR	LR	18 13 10.9	
	comp=Z,304nm,19.1s,baz=8.0,slow=38						
LONY	Lake Ozonia	102.45	346	P	Pdif	17 24 09.8	-0.9
	baz=16						
PDAR	Pinedale Array	104.79	12	PP	PKiKP	17 28 39.7	+3.0
	comp=Z,0.5nm,0.7s,baz=39,slow=5.9,SNR=3.9						
SYO	Syowa Base	105.79	196	⇓*e*Pdiff	Pdif	17 24 26.8	+2.2
SYO	Syowa Base	105.79	196	⇑*i*PKiKP	PKiKP	17 28 36.0	-1.1
SYO	Syowa Base	105.79	196	⇓*i*pPKiKP	PKiKP	17 28 44.0	+6.9
VNDA	Vanda	117.28	166	PKP	PKPdf	17 28 58.5	-0.3
	comp=Z,0.7nm,0.8s,baz=319,slow=6.5,SNR=3.6						
VNDA				PKKPbc	PKKPab	17 39 24.0	0.0
	comp=Z,0.6nm,0.6s,baz=294,slow=22,SNR=10						
TXAR	Lajitas Array	118.89	10	PKP	PKPdf	17 29 02.4	-1.2
	comp=Z,0.6nm,0.6s,baz=96,slow=1.1,SNR=5.6						
TXAR				PKKPbc	PKKPbc	17 39 18.1	-0.1
	comp=Z,1.4nm,0.8s,baz=174,slow=6.3,SNR=9.6						
TXAR	Lajitas Array	118.89	10		PKPdf	17 29 03.3	-0.2
NBPA	Parau_RN	121.50	284	*e*P	PKiKP	17 29 09.6	+0.7
NBMA	Muriti-CE	123.75	283	*e*P	PKiKP	17 29 14.5	+1.2
PPT2	Papeete2	127.68	89	*e*LR	LR	18 09 19.6	
	comp=Z,845nm,33.8s						
TBI	Tubuai	130.13	95	*e*SS	SS	17 49 05.4	+1.1
	comp=Z,296nm,33.2s						
TBI	Tubuai	130.13	95	*e*LR	LR	18 10 45.3	
	comp=Z,365nm,30.0s						
BSFB	Barra de Sao F	131.10	272	*e*P	PKiKP	17 29 27.5	-0.3
SMTB	Santa Maria do	131.85	288	*e*P	PKiKP	17 29 29.3	-0.2
PRPB	Parauapebas	132.08	292	*e*P	PKPdf	17 29 29.1	+0.2
JANB	Januaria	132.34	278	*e*P	PKiKP	17 29 30.0	-0.5
SDV	Santo Domingo	134.38	327	*e*P	PKPdf	17 29 33.4	-0.2
BSCB	Bom Sucesso	135.36	271	*e*P	PKPdf	17 29 34.0	-1.0
BDFB	Brasilia	135.75	280	PKP	PKPdf	17 29 35.9	0.0
	comp=Z,4.3nm,1.1s,baz=130,slow=17,SNR=2.2						
IPMB	Ipameri, GO	137.01	277	*e*P	PKPdf	17 29 38.2	+0.1
ROSC	El Rosal	139.62	330	PKP	PKPdf	17 29 43.0	-0.5
	comp=Z,15nm,1.0s,baz=325,slow=12,SNR=6.3						
PCMB	Pacaembu	141.14	274	*e*P	PKPdf	17 29 45.8	+0.3
SALV	Santo Antonio	142.29	285	*e*P	PKPdf	17 29 47.8	+0.1
TRCB	Terra Rica	142.78	273	*e*P	PKPdf	17 29 48.5	0.0
PTGB	Pitanga	142.97	270	*e*P	PKPdf	17 29 48.7	-0.1
CNLB	Canela	143.28	262	*e*P	PKPdf	17 29 48.8	-0.4
ITAB	Concordia	143.81	266	*e*P	PKPdf	17 29 49.9	-0.2
SAML	Samuel	144.05	302	PKIKP	PKPbc	17 29 48.7	-0.1
SAML	Samuel	144.05	302		PKPbc	17 29 48.7	-0.1
SAML	Samuel	144.05	302	*e*P	PKPdf	17 29 50.7	-0.1
AQDB	Aquidauana	144.45	278	*e*P	PKPab	17 29 49.5	-0.1
CPSB	Cacapava Do Su	145.71	261	*e*P	PKPdf	17 29 53.1	-0.1
OGAUY	Aigu	147.38	254	*e*P	PKPdf	17 29 55.7	-0.3
CPUP	Villa Florida	147.99	270	PKPbc	PKPbc	17 29 59.3	-1.0
	comp=Z,27nm,0.8s,baz=73,slow=3.2,SNR=20						
CPUP	Villa Florida	147.99	270	PKPab	PKPab	17 30 02.8	-0.2
CPUP	Villa Florida	147.99	270	*e*P	PKPdf	17 29 57.5	+0.3
ITQB	Itaqui	148.25	263	*e*P	PKPdf	17 29 57.2	-0.4
LPAZ	La Paz	152.44	297	PKP	PKPdf	17 30 03.5	-1.7
	comp=Z,3.2nm,1.1s,baz=357,slow=5.3,SNR=6.1						
LPAZ				PKPbc	PKPbc	17 30 12.9	+0.8
	comp=Z,9.9nm,1.0s,baz=9.4,slow=1.9,SNR=14						
LPAZ	La Paz	152.44	297	*e*P	PKPdf	17 30 04.2	-1.1
TRQA	Tornquist	153.30	247	*e*P	PKPdf	17 30 05.3	+0.1
LVC	Limon Verde	156.44	286	*e*P	PKPdf	17 30 09.9	-0.5
PLCA	Paso Flores	159.24	237	PKPab	PKPab	17 30 50.1	0.0
	comp=Z,6.6nm,0.9s,baz=56,slow=5.4,SNR=6.1						
PLCA	Paso Flores	159.24	237	*e*P	PKPdf	17 30 12.4	-0.5

IDC 30 17:17:23.8±3.2**, 31°.52N**×**86°.59E, h0**^{km}**, mb3.4**/4**, mb1 3.6**/5**, mb1mx3.3**/37**, mbtmp3.4**/5**, ML3.7**/1**, MS4.3**/1**, Ms1 4.3**/1**, ms1mx3.3**/33**, Error ellipse: s-maj=240.4km s-min=23.7km az=59.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	17.14	136	P	P	17 21 26.9	+0.3
	0.1nm,0.3s,baz=321,slow=11,SNR=1.3						
KURBB	Kurchatov Arra	20.01	345	P	P	17 21 58.6	+0.8
	1.2nm,0.9s,baz=158,slow=10,SNR=4.9						
BVAR	Borovoye Array	24.50	336	P	P	17 22 44.4	-0.2
	0.3nm,0.5s,baz=140,slow=9.2,SNR=1.7						
ASAJ	Asahikawa	45.19	57	LR	LR	17 45 00.1	
	comp=Z,354nm,19.7s,baz=208,slow=37						
WRA	Warramunga Arr	68.67	132	P	P	17 28 29.0	-0.2
	0.2nm,0.4s,baz=327,slow=6.5,SNR=6.0						
ASAR	Alice Springs	71.14	135	P	P	17 28 44.2	-0.2
	0.3nm,0.4s,baz=319,slow=6.0,SNR=9.6						

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*IDC **30** 17:29:18.1±0.7, 28°.77N×139°.58E, h414^{km}±9^{km}, mb2.9/11, mb1 3.1/15, mb1mx2.9/48, mbtmp3.7/15, Error ellipse: s-maj=19.1km s-min=11.0km az=77.0*

ISC 30 17:29:18.5±0.7**, 28°.7N**±0°.1×**139°.6E**±0°.1**, h423**^{km}**, n15, σ0^{s}.84**/17**, mb3.3**/11**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	2.81	125	P	P	17 30 20.9	-1.1
	13nm,0.3s,baz=306,slow=19,SNR=2.1						
JCJ				S	S	17 31 12.5	-1.0
	58nm,0.3s,baz=299,slow=23,SNR=18						
MJAR	Matsushiro Arr	7.88	352	P	P	17 31 10.8	-1.5
	0.1nm,0.3s,baz=176,slow=11,SNR=1.8						
KSRS	Korea Array	13.08	315	P	P	17 32 09.3	0.0
	0.1nm,0.3s,baz=112,slow=10,SNR=1.8						
USRK	Ussuriysk Ar.	16.59	341	P	P	17 32 47.1	0.0
	baz=145,slow=9.6,SNR=4.9						
KLR	Kul'dur	21.34	346	P	P	17 33 33.9	+0.5
	0.6nm,0.5s,baz=197,slow=11,SNR=4.7						
SONM	Songino Array	31.95	316	P	P	17 35 07.8	+0.3
	0.7nm,0.6s,baz=134,slow=6.7,SNR=4.5						
ZALV	Zalesovo Beam	46.75	318	P	P	17 37 07.4	-0.1
	0.3nm,0.4s,baz=106,slow=11,SNR=3.6						
MKAR	Makanchi Array	47.67	309	P	P	17 37 14.3	-0.3
	0.4nm,0.3s,baz=90,slow=10,SNR=14						
MKAR				ScP	ScP	17 41 48.9	-0.5
	0.2nm,0.6s,baz=82,slow=3.1,SNR=2.1						
WRA	Warramunga Arr	48.65	187	P	P	17 37 22.9	+0.6
	0.5nm,0.3s,baz=6.5,slow=7.7,SNR=26						
ASAR	Alice Springs	52.38	187	P	P	17 37 50.2	+0.5
	0.1nm,0.3s,baz=3.4,slow=5.9,SNR=23						
ILAR	Eielson Array	57.40	29	P	P	17 38 24.1	-0.4
	0.6nm,0.8s,baz=243,slow=5.5,SNR=7.6						
YKA	Yellowknife Ar	71.79	28	P	P	17 39 56.4	+0.1
	0.3nm,0.6s,baz=296,slow=5.7,SNR=5.8						
FINES	FINESS Array B	75.46	333	P	P	17 40 16.8	-0.5
	0.9nm,0.8s,baz=64,slow=4.4,SNR=6.7						
NVAR	Mina Array Bea	81.29	51	P	P	17 40 51.0	+1.4
	0.9nm,0.6s,baz=297,slow=4.0,SNR=2.5						
TXAR	Lajitas Array	96.43	52	P	P	17 42 02.7	+1.3
	0.2nm,0.8s,baz=289,slow=5.6,SNR=2.2						

IDC 30 17:35:52.1±9.7**, 4°.59N**×**128°.00E, h162**^{km}±57^{km}**, mb3.0**/4**, mb1 3.2**/5**, mb1mx2.7**/52**, mbtmp3.5**/5**, Error ellipse: s-maj=107.3km s-min=75.0km az=40.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.33	149	P	Pn	17 37 23.7	+0.3
	3.5nm,0.3s,baz=329,slow=19,SNR=30						
SIJI				S	Sn	17 38 35.4	+0.3
	0.6nm,0.3s,baz=230,slow=6.5,SNR=6.0						
FITZ	Fitzroy Crossi	22.66	186	P	P	17 40 38.5	-1.4
	0.4nm,0.4s,baz=16,slow=11,SNR=1.9						
WRA	Warramunga Arr	25.17	166	P	P	17 41 02.7	+0.1
	0.4nm,0.8s,baz=350,slow=9.2,SNR=8.0						
ASAR	Alice Springs	28.67	169	P	P	17 41 34.2	+0.3
	0.4nm,1.0s,baz=354,slow=8.0,SNR=9.5						
STKA	Stephens Creek	38.51	161	P	P	17 42 59.1	+0.3
	0.6nm,0.4s,baz=356,slow=7.6,SNR=4.5						

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*IDC **30** 17:40:30.0±1.8, 31°.26N×86°.32E, h0^{km}, mb3.2/6, mb1 3.3/7, mb1mx3.2/54, mbtmp3.2/7, ML2.6/1, Error ellipse: s-maj=62.9km s-min=22.7km az=67.0*

ISC 30 17:40:31.4±1.8**, 31°.3N**±0°.2×**86°.3E**±0°.3**, h10**^{km}**, n7, σ0^{s}.52**/7**, mb3.2**/5**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	15.78	350	Pn	Pn	17 44 13.1	-0.6
	0.0nm,0.3s,baz=166,slow=12,SNR=2.1						
KURBB	Kurchatov Arra	20.15	346	P	P	17 45 05.7	0.0
	1.1nm,0.7s,baz=161,slow=10,SNR=7.2						
SONM	Songino Array	22.56	37	P	P	17 45 32.1	+0.4
	0.4nm,0.8s,baz=236,slow=10,SNR=3.8						
ZALV	Zalesovo Beam	22.67	358	P	P	17 45 32.7	+0.1
	0.3nm,0.3s,baz=177,slow=10,SNR=1.8						
BVAR	Borovoye Array	24.59	337	P	P	17 45 52.3	+0.7
	0.2nm,0.4s,baz=141,slow=9.3,SNR=2.3						
WRA	Warramunga Arr	68.72	131	P	P	17 51 35.5	-0.1
	0.6nm,1.1s,baz=328,slow=6.5,SNR=2.8						
ASAR	Alice Springs	71.18	134	P	P	17 51 50.4	-0.2
	0.3nm,1.0s,baz=322,slow=6.0,SNR=1.9						

IDC 30 17:44:08.3±1.9**, 0°.67S**×**125°.38E, h0**^{km}**, mb3.0**/3**, mb1 3.3**/3**, mb1mx3.0**/51**, mbtmp3.1**/3**, Error ellipse: s-maj=186.2km s-min=27.1km az=64.0, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.06	156	P	P	17 48 53.5	-0.7
	0.2nm,0.4s,baz=334,slow=11,SNR=6.0						
ASAR	Alice Springs	24.31	161	P	P	17 49 28.2	+0.4
	0.4nm,0.7s,baz=345,slow=10,SNR=12						
MKAR	Makanchi Array	60.45	327	P	P	17 54 19.8	-0.1
	0.1nm,0.3s,baz=115,slow=8.0,SNR=4.3						

IDC 30 17:48:47.4±3.9**, 18°.00S**×**174°.65W, h0**^{km}**, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.6**/36**, mbtmp3.9**/4**, Error ellipse: s-maj=154.6km s-min=80.0km az=157.0, Tonga Islands**

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
STKA	Stephens Creek	41.74	242	P	P	17 56 38.8	+0.3
	0.6nm,0.3s,baz=93,slow=11,SNR=5.6						
WRA	Warramunga Arr	48.13	259	P	P	17 57 29.4	-0.2
	0.5nm,0.3s,baz=98,slow=7.5,SNR=24						
WRA				PcP	PcP	17 58 57.1	-0.2
	0.1nm,0.3s,baz=103,slow=3.4,SNR=1.5						
ASAR	Alice Springs	48.21	254	P	P	17 57 29.9	-0.3
	1.6nm,0.7s,baz=87,slow=8.1,SNR=60						
ASAR				PcP	PcP	17 58 57.2	-0.4
	0.6nm,1.1s,baz=108,slow=4.2,SNR=4.2						
FITZ	Fitzroy Crossi	56.54	260	P	P	17 58 31.9	-0.2
	1.6nm,1.0s,baz=90,slow=12,SNR=10						

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*IDC **30** 17:58:06.9±0.6, 31°.43N×86°.60E, h0km, mb4.0/19, mb1 4.0/21, mb1mx3.9/44, mbtmp3.9/21, ML3.4/2, MS4.0/1, Ms1 4.0/1, ms1mx2.9/42, Error ellipse: s-maj=18.2km s-min=13.4km az=70.0*

*NEIC **30** 17:58:10.3±2.0, 31°.4N±0°.1×86°.5E±0°.1, h26km±2km, mb4.2/16, Error ellipse: s-maj=15.8km s-min=11.0km az=215.0*

*BJI **30** 17:58:10.4±0.0, 31°.41N×86°.63E, h10km, mb4.1/12, Ms3.9/6, Ms7 3.9/4*

ISC 30 17:58:08.4±0.5**, 31°.48N**±0°.07×**86°.48E**±0°.06**, h10km, n51, σ1ˢ.70**/48**, mb4.1**/21**, 1D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	Lhasa	4.40	113	Pn	Pn	17 59 20.5	+4.8
LSA				Sn	Sb	18 00 16.5	-3.0
LSA	Lhasa	4.40	113		Pn	17 59 20.1	+4.4
BOK	Bokaro	7.68	184	eP	Pn	18 00 02.2	+1.9
NIL	Nilore	11.37	284		Pn	18 00 50.9	0.0
WMQ	Urumqi	12.36	4	eP	Pn	18 01 12.0	+7.6
GTA	Gaotai	13.44	50	eP	Pn	18 01 15.5	-3.7
GTA				pP	P	18 01 20.0	-8.7
GTA				sP		18 01 23.0	
KBL	Kabul	14.94	286		Pn	18 01 36.8	-3.1
GAR	Garm	15.17	304		Pn	18 01 39.8	-3.1
GAR				IAmb	IAmb	18 01 41.1	
	comp=Z,7.9nm,0.9s						
MK31	Makanchi Array	15.63	349		Pn	18 01 49.7	+1.0
MKAR	Makanchi Array	15.63	349	Pn	Pn	18 01 48.8	+0.1
	comp=Z,0.1nm,0.3s,baz=177,slow=13,SNR=14						
MKAR	Makanchi Array	15.63	349		Pn	18 01 48.2	-0.5
MAKZ	Makanchi	15.69	349		Pn	18 01 51.2	+1.7
CHGR	Chuyangaron	15.87	302		Pn	18 01 51.5	-0.4
CHGR				IAmb	IAmb	18 01 58.0	
	comp=Z,17nm,0.9s						
CMAR	Chiang Mai Arr	17.18	136	P	Pn	18 02 08.1	-0.6
	comp=Z,0.1nm,0.3s,baz=313,slow=11,SNR=10						
PBKT	Sadao Pong	19.86	135	P	P	18 02 39.7	+0.1
KURBB	Kurchatov Arra	20.02	345	P	P	18 02 42.2	+1.0
	comp=Z,5.9nm,0.9s,baz=162,slow=10,SNR=36						
KURK	Kurchatov	20.08	345	P	P	18 02 41.8	-0.1
KURK				IAmb	IAmb	18 02 44.4	
	comp=Z,14nm,1.1s						
SONM	Songino Array	22.30	37	P	P	18 03 06.9	+0.9
	comp=Z,3.7nm,1.0s,baz=224,slow=12,SNR=12						
ZALV	Zalesovo Beam	22.48	357	P	P	18 03 08.7	+0.9
	comp=Z,4.5nm,0.9s,baz=188,slow=9.0,SNR=16						
UBPT	Khong Chiam	23.69	129	P	P	18 03 18.6	-1.8
UBPT				IAmb	IAmb	18 03 24.5	
	comp=Z,6.4nm,1.1s						
WHN	Wuhan	23.89	85	⇓P	P	18 03 24.8	+2.6
BVAR	Borovoye Array	24.49	336	P	P	18 03 28.4	+0.8
	comp=Z,1.3nm,0.8s,baz=149,slow=11,SNR=9.2						
BRVK	Borovoye	24.55	336	P	P	18 03 27.9	-0.2
BRVK				IAmb	IAmb	18 03 32.1	
	comp=Z,2.4nm,0.8s						
PALK	Pallekele	24.68	194	P	P	18 03 30.0	+0.3
	comp=Z,5.4nm,0.8s,baz=16,slow=12,SNR=4.3						
PALK	Pallekele	24.68	194	P	P	18 03 28.0	-1.7
PALK				IAmb	IAmb	18 03 33.4	
	comp=Z,8.1nm,0.9s						
WSAR	Wadi Sarin	26.01	258	P	P	18 03 44.5	+2.8
	comp=Z,3.0nm,0.9s,baz=98,slow=7.1,SNR=2.4						
ABKAR	Akbulak array	26.70	319	P	P	18 03 47.3	-0.2
CN2	Changchun	32.92	57	eP	P	18 04 42.5	-0.4
CN2				LR	LR		
	comp=Z,270nm,14.0s						
CN2				LR	LR		
	comp=Z,510nm,14.0s						
CN2				LR	LR		
	comp=Z,410nm,15.0s						
KSRS	Korea Array	34.48	69	P	P	18 04 56.2	-0.3
	comp=Z,1.2nm,0.9s,baz=275,slow=8.8,SNR=4.3						
USRK	Ussuriysk Ar.	37.66	57	P	P	18 05 23.0	-0.6
	comp=Z,3.8nm,0.9s,baz=246,slow=8.1,SNR=6.2						
NRIK	Noril'sk	37.91	1	P	P	18 05 26.3	+1.0
	comp=Z,2.5nm,0.4s,baz=170,slow=5.3,SNR=4.8						
YAK	Yakutsk	41.24	29	P	P	18 05 52.5	-0.8
	comp=Z,2.1nm,0.4s,baz=326,slow=0.9,SNR=4.7						
YAK	Yakutsk	41.24	29	IAmb	IAmb	18 05 54.7	
	comp=Z,4.6nm,0.6s						
FINES	FINESS Array B	48.81	326	P	P	18 06 54.0	+0.6
	comp=Z,1.7nm,0.8s,baz=104,slow=12,SNR=5.2						
NB2	NORSAR Subarra	55.96	325	P	P	18 07 46.4	-0.1
	comp=Z,0.5nm,0.6s,baz=85,slow=7.4						
NOA	NORSAR Array B	55.96	325	P	P	18 07 46.5	-0.1
	comp=Z,0.8nm,0.7s,baz=86,slow=7.0,SNR=6.5						
GERES	GERESS Array B	56.13	311	P	P	18 07 48.8	+0.7
	comp=Z,0.5nm,0.6s,baz=79,slow=6.9,SNR=5.2						
GERES				LR	LR	18 35 23.6	
	comp=Z,128nm,19.2s,baz=22,slow=40						
FITZ	Fitzroy Crossi	61.99	137	P	P	18 08 27.9	-1.0
	comp=Z,2.2nm,1.1s,baz=346,slow=8.3,SNR=2.8						
FITZ	Fitzroy Crossi	61.99	137	IAmb	IAmb	18 08 30.1	
	comp=Z,5.9nm,1.4s						
WB0	Warramunga Arr	68.62	131	P	P	18 09 10.6	-1.2
WRA	Warramunga Arr	68.71	132	P	P	18 09 11.8	-0.7
	comp=Z,0.9nm,0.5s,baz=325,slow=6.4,SNR=16						
WB2	Warramunga Arr	68.72	132	P	P	18 09 11.9	-0.6
ASAR	Alice Springs	71.19	134	P	P	18 09 27.1	-0.6
	comp=Z,1.5nm,0.9s,baz=324,slow=5.9,SNR=28						
ASAR	Alice Springs	71.19	134	P	P	18 09 25.4	-2.2
TOLK	Toolik Lake Re	72.02	19	P	P	18 09 33.0	+0.9
TOLK				IAmb	IAmb	18 09 33.5	
	comp=Z,3.8nm,0.9s						
BMAR	Burnt Mountain	74.21	18	P	P	18 09 46.5	+1.5
ILAR	Eielson Array	75.46	21	P	P	18 09 52.1	-0.1
	comp=Z,0.5nm,0.7s,baz=308,slow=4.5,SNR=6.9						
BOSA	Boshof	83.45	231	P	P	18 10 36.2	-0.2
	comp=Z,2.3nm,0.7s,baz=21,slow=6.1,SNR=4.8						
BOSA	Boshof	83.45	231	IAmb	IAmb	18 10 42.1	
	comp=Z,4.4nm,1.1s						
YKA	Yellowknife Ar	84.83	10	P	P	18 10 42.3	-0.5
	comp=Z,0.6nm,0.8s,baz=336,slow=4.6,SNR=6.9						
VNDA	Vanda	117.41	166	PKPdf	PKPdf	18 16 52.8	-0.3

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*IDC **30** 18:23:31.5±4.6, 3°.83S×102°.20E, h90km±34km, mb3.6/12, mb1 3.7/12, mb1mx3.4/59, mbtmp3.9/12, Error ellipse: s-maj=83.2km s-min=12.3km az=54.0*

*NEIC **30** 18:23:33.0±1.8, 3°.6S±0°.2×102°.4E±0°.2, h105km±3km, mb4.1/15, Error ellipse: s-maj=31.4km s-min=8.6km az=48.0*

*DJA **30** 18:23:33.8±0.4, 4°S±6°×10°3E±°, h100km±5km, M4.0/11, mB4.6/1, mb4.2/4, MLv3.9/11, Mw(mB)3.8/1*

ISC 30 18:23:33.6±0.8**, 3°.62S**±0°.10×**102°.50E**±0°.10**, h105**km±6km**, n50, σ1ˢ.14**/55**, mb4.0**/18**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSI	Kapahiang	0.10	108	P	Pn	18 23 48.4	+0.2
KSI				S	Sn	18 23 59.0	-0.2
MNAI	Manna	0.86	148	P	Pn	18 23 52.9	-0.1
MNAI				S	Sn	18 24 07.0	-0.7
MNAI	Manna	0.86	148		Pn	18 23 53.1	0.0
MNAI				Sn	Sn	18 24 07.7	0.0
KRJI	Kerinci	1.84	326	P	Pn	18 24 06.3	+1.8
MDSI	Maura Dua	1.88	117	P	Pn	18 24 04.6	-0.3
MDSI				S	Sn	18 24 28.1	-0.6
LWLI	Liwa	2.08	132	P	Pn	18 24 08.2	+0.6
PPSI	Pulau Pagai	2.63	289	P	Pn	18 24 15.6	+1.0
PDSI	Padang	3.38	323	P	Pn	18 24 26.1	+1.6
PDSI				S	Sn	18 25 05.8	+1.9
SISI	Saibi	4.10	304	P	Pn	18 24 34.8	+0.6
PBSI	Pulau Batu	5.51	310	P	Pn	18 24 53.6	+0.3
	0.4nm69nm,1.3s						
CNJI	Cibinong	5.89	129	P	Pn	18 24 57.1	-1.3
	0.1nm21nm,1.1s						
CISI	Cisompet, Garu	6.58	127	P	Pn	18 25 06.6	-1.2
	0.1nm633nm18nm,1.1s						
CISI	Cisompet, Garu	6.58	127	Pn	Pn	18 25 06.4	-1.4
GSI	Gunungsitoli	6.94	315	P	Pn	18 25 12.1	-0.6
GSI	Gunungsitoli	6.94	315	Pn	Pn	18 25 12.0	-0.8
GSI					Sn	18 26 26.0	-4.2
UGM	Wanagama	9.05	118	Pn	Pn	18 25 42.4	+0.9
JAGI	Jajag, Banyuwa	12.55	113	Pn	Pn	18 26 26.9	-1.6
BKB	Balikpapan	14.57	81		P	18 26 58.5	+0.2
UBPT	Khong Chiam	19.01	9	P	P	18 27 48.7	+1.5
CMAR	Chiang Mai Arr	22.22	351	P	P	18 28 22.8	+1.1
	0.5nm,0.4s,baz=184,slow=8.9,SNR=7.3						
CMAR	Chiang Mai Arr	22.22	351	P	P	18 28 20.6	-1.1
SOEI	Soe	22.45	107	P	P	18 28 23.3	-1.0
SOEI				IAmb	IAmb	18 28 36.0	
	comp=Z,5.8nm,0.8s						
FITZ	Fitzroy Crossi	26.84	124	P	P	18 29 05.8	+1.4
	comp=Z,1.4nm,0.8s,baz=310,slow=7.1,SNR=8.2						
FITZ	Fitzroy Crossi	26.84	124	P	P	18 29 06.2	+1.8
FITZ				IAmb	IAmb	18 29 17.9	
	comp=Z,5.2nm,1.4s						
KNRA	Kununurra	28.48	117	P	P	18 29 17.7	-1.4
YHNB	Yeheng	33.58	32	P	P	18 30 03.3	-0.6
WB0	Warramunga Arr	35.00	120	P	P	18 30 16.1	-0.1
WB0				IAmb	IAmb	18 30 17.6	
	comp=Z,4.4nm,1.2s						
WRA	Warramunga Arr	35.02	120	P	P	18 30 16.2	-0.2
	comp=Z,1.0nm,0.4s,baz=308,slow=8.6,SNR=36						
WRA	Warramunga Arr	35.02	120	P	P	18 30 16.0	-0.5
WB2	Warramunga Arr	35.03	120	P	P	18 30 16.6	0.0
WB2				IAmb	IAmb	18 30 28.7	
	comp=Z,3.3nm,0.9s						
WR0	Warramunga Arr	35.20	120	P	P	18 30 18.0	0.0
WR0				IAmb	IAmb	18 30 19.7	
	comp=Z,2.4nm,1.1s						
AS31	Alice Springs	36.29	126	P	P	18 30 27.4	+0.1
ASAR	Alice Springs	36.29	126	P	P	18 30 27.6	+0.4
	comp=Z,0.6nm,0.4s,baz=301,slow=7.8,SNR=31						
ASAR				ScP	ScP	18 36 28.6	+1.4
	comp=Z,0.2nm,0.6s,baz=306,slow=3.4,SNR=4.1						
ASAR	Alice Springs	36.29	126	P	P	18 30 28.0	+0.8
STKA	Stephens Creek	46.22	132	P	P	18 31 48.9	+0.6
	comp=Z,0.9nm,0.6s,baz=299,slow=11,SNR=3.8						
STKA	Stephens Creek	46.22	132	P	P	18 31 48.6	+0.3
SONM	Songino Array	51.35	3	P	P	18 32 29.2	+1.8
	comp=Z,0.6nm,0.6s,baz=191,slow=8.4,SNR=5.9						
SONM	Songino Array	51.35	3	P	P	18 32 26.5	-0.9
MKAR	Makanchi Array	53.28	343	P	P	18 32 42.1	+0.6
	comp=Z,0.6nm,0.4s,baz=151,slow=9.3,SNR=14						
KURBB	Kurchatov Arra	57.82	342	P	P	18 33 14.1	+0.1
	comp=Z,0.4nm,0.3s,baz=159,slow=6.8,SNR=4.2						
KURK	Kurchatov	57.88	342	P	P	18 33 14.1	-0.2
KURK	Kurchatov	57.88	342	IAmb	IAmb	18 33 19.9	
	comp=Z,3.5nm,1.2s						
ZAA0	Zalesovo Array	59.24	348	P	P	18 33 21.8	-2.0
ZAA0				IAmb	IAmb	18 33 25.3	
	comp=Z,2.1nm,1.0s						
ZALV	Zalesovo Beam	59.24	348	P	P	18 33 23.6	-0.1
	comp=Z,1.7nm,0.4s,baz=167,slow=6.4,SNR=8.9						
ZALV	Zalesovo Beam	59.24	348	P	P	18 33 22.6	-1.2
BVAR	Borovoye Array	62.57	339	P	P	18 33 46.5	+0.2
	comp=Z,1.4nm,0.5s,baz=142,slow=9.5,SNR=14						
ARU	Arti	69.69	336	P	P	18 34 32.0	+0.2
	comp=Z,0.7nm,0.4s,baz=107,slow=3.4,SNR=4.3						
ARU	Arti	69.69	336	IAmb	IAmb	18 34 32.7	
	comp=Z,8.9nm,1.4s						
FINES	FINESS Array B	86.70	332	P	P	18 36 05.7	+0.3
	comp=Z,2.3nm,1.0s,baz=151,slow=3.2,SNR=2.2						
TXAR	Lajitas Array	144.36	41	PKP	PKPdf	18 42 58.0	-0.3
	comp=Z,0.2nm,0.4s,baz=316,slow=0.3,SNR=6.7						

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*IDC **30** 18:27:49.5±4.0, 36°.15N×71°.20E, h75km±32km, mb3.3/6, mb1 3.4/10, mb1mx3.1/51, mbtmp3.6/10, MS3.1/1, Ms1 3.1/1, ms1mx2.4/27, Error ellipse: s-maj=37.4km s-min=28.1km az=180.0*

*NNC **30** 18:27:58.7±7.9, 36°.94N×70°.61E, h72km±182km, mb3.9, mpv4.1, Error ellipse: s-maj=59.9km s-min=50.5km az=162.0*

ISC 30 18:27:51.7±0.7**, 36°.45N**±0°.06×**70°.95E**±0°.07**, h100km, n27, σ2ˢ.83**/34**, mb3.3**/5**, 2C-8D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	5.62	134	eP	Pn	18 29 13.0	+0.2
THN				eS	Sn	18 30 12.0	-4.0
THN				eS	Sn	18 30 12.0	-4.0
AML	Almayashu	6.06	20	P	Pn	18 29 21.0	+1.9
	SNR=57						
UCH	Uchtor	6.39	24	P	Pn	18 29 25.5	+1.7
	SNR=25						
KZA	Kyzart	6.53	29	P	Pn	18 29 27.2	+1.6
	SNR=15						
EKS2	Erkin-Say	6.58	19	P	Pn	18 29 27.9	+2.0
	SNR=12						
KK31	Karatay Array	6.65	357	⇓P	Pn	18 29 28.9	+2.1
	2.7nm,0.3s,baz=176,slow=12,SNR=254						
KK31				⇓S	Sn	18 30 38.8	-2.4
	3.5nm,0.3s,baz=186,slow=26,SNR=11						
AAK	Ala-Archa	6.76	23	P	Pn	18 29 30.6	+2.2
	7.7nm,0.3s,baz=150,slow=4.5,SNR=128						
AAK				S	Sn	18 30 42.8	-1.1
	1.1nm,0.3s,baz=115,slow=24,SNR=7.3						
AAK	Ala-Archa	6.76	23	P	Pn	18 29 30.6	+2.2
	SNR=32						
AAK	Ala-Archa	6.76	23	⇓P	Pn	18 29 30.0	+1.6
	9.8nm,0.5s						
AAK				⇓S	Sn	18 30 42.5	-1.4
	15nm,1.1s						
KBK	Karagaybulak	6.92	25	P	Pn	18 29 33.0	+2.3
	SNR=9.4						
CHMS	Chumysh	7.16	23	P	Pn	18 29 35.6	+1.8
	SNR=16						
CHMS	Chumysh	7.16	23	⇓P	Pn	18 29 35.0	+1.2
	14nm,0.8s						
CHMS				⇓S	Sn	18 30 51.7	-1.9
	5.4nm,0.6s						
USP	Ospenovka	7.33	21	P	Pn	18 29 38.3	+2.2
	SNR=7.8						
TKM2	Tokmak 2	7.39	28	P	Pn	18 29 21.3	-16
	SNR=5.3						
GEYT	Alibeck	10.35	282	P	Pn	18 30 17.4	+0.2
	0.3nm,0.3s,baz=97,slow=12,SNR=2.0						
GEYT				S	Sn	18 32 08.3	-2.9
	0.5nm,0.3s,baz=136,slow=19,SNR=2.8						
MKAR	Makanchi Array	13.35	36	P	Pn	18 30 56.9	-0.2
	0.1nm,0.3s,baz=209,slow=12,SNR=4.1						
AB31	Akbulak array	15.11	331	⇓P	P	18 31 22.7	+0.2
	1.5nm,0.3s,baz=245,slow=35,SNR=18						
AB31				⇑S	Sn	18 33 57.7	-8.6
	0.9nm,0.3s,baz=153,slow=21,SNR=25						
KURBB	Kurchatov Arra	15.18	19	P	P	18 31 22.6	-0.7
	0.1nm,0.3s,baz=209,slow=10,SNR=6.7						
BVAR	Borovoye Array	16.58	359	P	Pn	18 31 38.3	+0.3
	0.2nm,0.3s,baz=162,slow=11,SNR=5.5						
AKTO	Aktyubinsk	16.80	330	⇑P	P	18 31 42.9	+1.7
	2.9nm,1.1s						
AKTO				⇓S	Sn	18 34 41.3	-5.9
	2.8nm,1.4s						
ZALV	Zalesovo Beam	19.98	25	P	P	18 32 16.4	+0.5
	1.6nm,0.5s,baz=221,slow=10,SNR=8.4						
TLY	Talaya	27.70	46	LR	LR	18 46 38.1	
	comp=Z,40nm,19.2s,baz=316,slow=41						
FINES	FINESS Array B	37.50	326	P	P	18 34 59.2	+3.8
	1.1nm,0.8s,baz=125,slow=12,SNR=1.8						
ARCES	ARCESS Array B	41.17	338	P	P	18 35 29.3	+3.4
	2.2nm,0.9s,baz=127,slow=8.1,SNR=5.3						
NOA	NORSAR Array B	44.40	323	P	P	18 35 55.4	+3.3
	0.3nm,0.6s,baz=96,slow=7.6,SNR=2.6						
YKA	Yellowknife Ar	81.30	3	P	P	18 39 58.1	+1.5
	0.1nm,0.5s,baz=354,slow=5.3,SNR=3.6						
ASAR	Alice Springs	84.26	125	P	P	18 40 11.8	-0.7
	0.3nm,1.1s,baz=316,slow=4.8,SNR=1.6						

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*UPA **30** 18:42:22.6±1.2, 9°.73N×84°.23W, h12km±7km, MW3.7*

*UCR **30** 18:42:22.3±1.2, 9°.69N×84°.17W, h14km±3km, MD3.6*

ISC 30 18:42:21.5±1.0**, 9°.68N**±0°.04×**84°.23W**±0°.03**, h11**km±8km**, n27, σ0ˢ.71**/42**, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCR2	La Lucha 2	0.23	74	eP	Pg	18 42 26.9	+0.6
LCR2				eS	Sg	18 42 30.4	+0.7
SJS	Escuela Geolog	0.31	34	eP	Pb	18 42 28.6	-0.5
HDC	Heredia	0.34	19	eP	Pb	18 42 29.2	-0.4
HDC				eS	Sb	18 42 34.7	-0.4
HDC	Heredia	0.34	19	eP	Pb	18 42 29.1	-0.5
SRA1	San Ramn	0.47	328	eP	Pb	18 42 31.8	-0.1
EDDO	Dominical	0.56	140	eP	Pg	18 42 32.3	0.0
EDDO				eS	Sg	18 42 40.1	+0.5
EDLM	Las Mercedes	0.74	122	eP	Pg	18 42 35.6	-0.3
EDLM				eS	Sg	18 42 46.0	+0.3
FORC	Fortuna	0.90	331	i P	Pb	18 42 39.4	+0.4
FORC				i S	Sb	18 42 51.6	+0.6
ARE1	Arenal 1	0.92	328	eP	Pb	18 42 39.6	+0.2
ARE1				eS	Sn	18 42 53.3	-0.2
CEDE	Laguna Cedeo	0.93	330	eP	Pb	18 42 40.0	+0.3
JTS	Las Juntas de	0.94	310	eP	Pb	18 42 39.6	-0.2
JTS				eS	Sb	18 42 52.5	+0.3
JTS	Las Juntas de	0.94	310	eP	Pb	18 42 39.5	-0.3
JTS				eS	Sb	18 42 52.5	+0.3
EDPN	Palmar Norte	1.04	133	eP	Pg	18 42 40.8	-0.8
EDPN				eS	Sg	18 42 54.8	-0.3
EDBA	Buenos Aires	1.07	119	eP	Pg	18 42 40.2	-1.9
EDBA				eS	Sg	18 42 53.9	-2.1
ACAL	Aguas Claras	1.24	320	i P	Pg	18 42 44.9	-0.4
ACAL				i S	Sn	18 43 01.4	-0.1
PTEN	Parque Tenorio	1.27	324	i P	Pb	18 42 45.1	-0.4
CUI	Cuipilapa	1.34	317	eP	Pn	18 42 46.3	+0.1
GUAI	GUAI	1.39	295	i P	Pn	18 42 47.0	+0.1
GUAI				i S	Sb	18 43 05.0	-0.3
LIM1	Limonal	1.43	315	i P	Pb	18 42 47.9	-0.3
PTJ1	Puerto Jimnez	1.46	141	eP	Pn	18 42 48.3	+0.6
PTJ1				eS	Sn	18 43 08.4	+1.6
NY14	Universidad de	1.61	307	i P	Pb	18 42 50.6	-0.5
BUAI	Buenos Aires	1.61	318	i P	Pb	18 42 50.9	-0.3
CNI2	El Empalme, Bo	1.75	98	eS	Sn	18 43 13.8	-0.3
BRU2	Volcan	1.75	120	eP	Pn	18 42 52.5	+0.6
BRU2				eS	Sn	18 43 15.5	+1.1
BRU2	Volcan	1.75	120	eP	Pn	18 42 51.7	-0.3
BCO2	Palmira	1.93	120	eP	Pn	18 42 54.9	+0.5
BCO2				eS	Sn	18 43 20.0	+1.2
ACON	Acoyapa	2.46	338	eP	Pn	18 43 02.0	+0.5

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*IDC **30** 18:42:21.9±2.7, 3°.35S×130°.51E, h0km, mb3.4/2, mb1 3.6/4, mb1mx3.4/28, mbtmp3.4/4, ML3.3/2, Error ellipse: s-maj=136.4km s-min=29.3km az=74.0*

*DJA **30** 18:42:24.9±0.3, 3°S±3°×13°1E±°, h10km, M3.2/7, MLv3.2/7*

ISC 30 18:42:26.3±1.0**, 3°.32S**±0°.07×**130°.95E**±0°.06**, h35km, n12, σ4ˢ.25**/12**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	1.35	73	P	Pn	18 42 50.3	+1.6
FAKI				S	Sn	18 43 10.0	+4.5
BNDI	Bandanaira	1.58	221	P	Pn	18 42 53.2	+1.3
BNDI				S	Sn	18 43 18.3	+7.1
MSAI	Masohi	2.02	269	P	Pn	18 43 00.4	+2.5
AAI	Ambon	2.78	262	P	Pn	18 43 08.4	+0.1
RKPI	Ransiki, Papua	3.69	61	P	Pn	18 43 12.3	-8.5
NLAI	Namlea	3.85	271	P	Pn	18 43 24.1	+1.1
LBMI	Labuha	4.36	308	P	Pn	18 43 27.7	-2.4
SAUI	Saumlaki	4.64	176	P	Pn	18 43 23.0	-11
FITZ	Fitzroy Crossi	15.58	199	Pn	Pn	18 46 00.1	-3.2
	0.1nm,0.3s,baz=29,slow=13,SNR=1.9						
WRA	Warramunga Arr	16.84	169	Pn	Pn	18 46 18.4	-1.1
	0.1nm,0.3s,baz=349,slow=11,SNR=6.8						
WRA				Sn	Sn	18 49 17.9	-7.8
	0.1nm,0.3s,baz=0.0,slow=23,SNR=5.2						
ASAR	Alice Springs	20.42	172	P	Pn	18 47 02.2	-0.7
	1.0nm,0.4s,baz=350,slow=11,SNR=48						
MKAR	Makanchi Array	65.72	326	P	P	18 53 07.0	-0.5
	0.3nm,0.8s,baz=108,slow=6.4,SNR=2.7						

IDC 30 18:45:43.1±2.8**, 31°.06N**×**85°.24E, h0km, mb3.3**/4**, mb1 3.4**/5**, mb1mx3.2**/37**, mbtmp3.3**/5**, ML2.9**/1**, Error ellipse: s-maj=91.8km s-min=26.3km az=78.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	15.88	353	Pn	Pn	18 49 28.2	+0.3
	0.1nm,0.3s,baz=178,slow=14,SNR=6.7						
ZALV	Zalesovo Beam	22.88	359	P	P	18 50 47.4	-0.7
	0.8nm,0.5s,baz=165,slow=14,SNR=5.7						
SONM	Songino Array	23.28	38	P	P	18 50 52.6	+0.2
	0.6nm,0.7s,baz=218,slow=9.1,SNR=4.5						
WRA	Warramunga Arr	69.23	130	P	P	18 56 51.8	-0.3
	0.2nm,0.5s,baz=323,slow=6.3,SNR=1.6						
ASAR	Alice Springs	71.65	134	P	P	18 57 07.1	+0.3
	0.4nm,0.8s,baz=322,slow=6.0,SNR=4.4						

NNC 30 18:46:53.0±13.0**, 37°.65N**×**71°.84E, h16**km±409km**, mb3.7, mpv3.3, 5C-1D, Error ellipse: s-maj=443.5km s-min=49.7km az=2.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.39	21	⇑P	Pn	18 48 13.0	+0.1
	1.8nm,0.3s						
AAK				⇑S	Sn	18 49 16.5	+1.8
	3.5nm,0.9s						
KK31	Karatay Array	5.55	350	⇓P	Pn	18 48 15.4	+0.5
	0.9nm,0.3s,baz=161,slow=11,SNR=74						
KK31				⇑S	Sn	18 49 19.1	+0.7
	3.0nm,0.5s,baz=172,slow=20,SNR=15						
CHMS	Chumysh	5.79	22	⇑P	Pn	18 48 17.7	-0.7
	2.9nm,0.8s						
CHMS				⇑S	Sn	18 49 24.6	+0.1
	1.9nm,0.7s						

IDC 30 18:54:15.1±4.0**, 31°.19N**×**86°.35E, h0km, mb3.1**/2**, mb1 3.2**/3**, mb1mx3.0**/35**, mbtmp3.0**/3**, ML2.6**/1**, Error ellipse: s-maj=109.2km s-min=38.6km az=84.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	15.89	350	Pn	Pn	18 57 58.5	-1.6
	0.0nm,0.3s,baz=173,slow=12,SNR=1.6						
SONM	Songino Array	22.60	37	P	P	18 59 17.3	0.0
	0.3nm,0.4s,baz=219,slow=11,SNR=4.7						
WRA	Warramunga Arr	68.60	131	P	P	19 05 20.2	0.0
	0.1nm,0.5s,baz=317,slow=7.0,SNR=1.0						

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*IDC **30** 19:02:01.5±3.6, 11°.06S×164°.18E, h67km±32km, mb3.4/7, mb1 3.6/9, mb1mx3.4/36, mbtmp3.8/9, ML4.3/2, MS3.5/7, Ms1 3.5/7, ms1mx3.2/21, Error ellipse: s-maj=34.6km s-min=25.2km az=105.0*

ISC 30 19:01:58.0±1.0**, 10°.9S**±0°.1×**163°.9E**±0°.1**, h29km, n17, σ1ˢ.66**/10**, mb3.6**/7**, MS3.5**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.14	290	P	Pb	19 03 07.6	-2.6
	28nm,0.3s,baz=198,slow=6.8,SNR=5.2						
HNR				S	Sb	19 04 00.9	+1.1
	18nm,0.3s,baz=169,slow=16,SNR=2.2						
HNR				LR	LR	19 05 04.3	
	comp=Z,402nm,18.6s,baz=134,slow=41						
DZM	Mont Dzumac	11.38	168	P	Pn	19 04 37.1	-1.6
	1.0nm,0.3s,baz=296,slow=12,SNR=23						
DZM				LR	LR	19 08 47.8	
	comp=Z,178nm,18.3s,baz=214,slow=36						
PMG	Port Moresby	16.53	274	LR	LR	19 12 13.4	
	comp=Z,192nm,18.1s,baz=113,slow=36						
STKA	Stephens Creek	29.32	221	P	P	19 07 59.9	+1.6
	1.3nm,0.9s,baz=17,slow=9.8,SNR=3.4						
STKA				LR	LR	19 19 31.0	
	comp=Z,135nm,18.0s,baz=28,slow=36						
H11S2	WAKE ISLAND Hy	29.33	5	T	T	19 38 09.1	
	baz=184,slow=76,SNR=48						
H11S3	WAKE ISLAND Hy	29.34	5	T	T	19 38 11.4	
	baz=184,slow=76,SNR=39						
H11S1	WAKE ISLAND Hy	29.35	5	T	T	19 38 08.6	
	baz=184,slow=76,SNR=36						
WRA	Warramunga Arr	29.83	249	P	P	19 08 04.4	+1.6
	0.3nm,0.4s,baz=79,slow=9.3,SNR=5.3						
WRA				LR	LR	19 20 45.4	
	comp=Z,77nm,18.6s,baz=80,slow=37						
H11N1	WAKE ISLAND Hy	30.56	6	T	T	19 39 48.0	
	baz=184,slow=76,SNR=16						
H11N3	WAKE ISLAND Hy	30.57	6	T	T	19 39 43.5	
	baz=184,slow=76,SNR=12						

H11N2	**WAKE ISLAND Hy**	**30.58**	**6**	T	T	19 39 49.2	
	baz=184,slow=76,SNR=16						
ASAR	**Alice Springs**	**31.24**	**242**	P	**P**	**19 08 16.3**	**+0.9**
	0.3nm,0.7s,baz=62,slow=9.9,SNR=12						
ASAR				LR	LR	19 20 14.6	
	comp=Z,58nm,18.8s,baz=76,slow=35						
RPZ	**Rata Peaks**	**33.28**	**171**	LR	LR	19 22 04.7	
	comp=Z,132nm,18.5s,baz=59,slow=36						
KLR	**Kul'dur**	**66.21**	**338**	P	**P**	**19 12 43.7**	**+0.7**
	0.6nm,0.3s,baz=119,slow=12,SNR=2.4						
SONM	**Songino Array**	**77.48**	**324**	P	**P**	**19 13 51.4**	**+0.5**
	0.4nm,0.8s,baz=115,slow=6.5,SNR=2.3						
ILAR	**Eielson Array**	**83.96**	**19**	P	**P**	**19 14 25.5**	**+0.4**
	0.3nm,0.7s,baz=250,slow=6.0,SNR=4.9						
MKAR	**Makanchi Array**	**92.17**	**317**	P	**P**	**19 15 03.7**	**-1.2**
	0.3nm,0.7s,baz=88,slow=6.6,SNR=4.7						

*NEIC **30** 19:10:41.0±2.3, 24°.19S±0°.04×68°.62W±0°.09, h110^{km}±8^{km}, Error ellipse: s-maj=11.9km s-min=5.0km az=86.0*

*SJA **30** 19:10:42.2±0.8, 24°.17S×68°.81W, h100^{km}±13^{km}, ML3.3, MW3.3*

*GUC **30** 19:10:42.6±0.8, 24°.15S×68°.80W, h102^{km}±8^{km}, ML3.6*

ISC 30 19:10:41.4±0.8**, 24°.17S**±0°.04×**68°.79W**±0°.06**, h112**^{km}±8^{km}**, n54, σ1^{s}68**/69**, mb3.9**/3**, 5C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**1.14**	**327**	⇑*i*P	**Pn**	**19 11 05.1**	**+0.6**
PB15				*e*S	**Sn**	**19 11 22.7**	**+0.9**
PB15	**IPOC Station P**	**1.14**	**327**		**Pn**	**19 11 05.0**	**+0.6**
PB15					Pn	19 11 05.6	+1.2
PB15				Sn	**Sn**	**19 11 22.7**	**+0.9**
PB15	**IPOC Station P**	**1.14**	**327**	*i* P	**Pn**	**19 11 05.2**	**+0.6**
PB15				*e*S	**Sn**	**19 11 22.7**	**+0.9**
GO02	**Mina Guanaco**	**1.23**	**216**	⇓*e*P	**Pn**	**19 11 06.9**	**+1.4**
GO02				*e*S	**Sn**	**19 11 25.0**	**+1.2**
GO02	**Mina Guanaco**	**1.23**	**216**		**Pn**	**19 11 06.6**	**+1.1**
PB14	**IPOC Station P**	**1.54**	**252**	Pn	**Pn**	**19 11 10.1**	**+0.9**
PB14	**IPOC Station P**	**1.54**	**252**	*i* P	**Pn**	**19 11 10.2**	**+1.1**
PB14				*e*S	**Sn**	**19 11 30.3**	**+0.1**
PB14				IAML		19 11 34.4	
	comp=Z,302nm,0.2s						
LVC	**Limon Verde**	**1.55**	**356**	*i* P	**Pn**	**19 11 10.6**	**+1.2**
LVC				*e*S	**Sn**	**19 11 31.4**	**+0.9**
LVC	**Limon Verde**	**1.55**	**356**		**Pn**	**19 11 10.4**	**+1.0**
LVC				Sn	**Sn**	**19 11 31.6**	**+1.0**
LVC	**Limon Verde**	**1.55**	**356**	*i* P	**Pn**	**19 11 10.4**	**+1.0**
LVC				*e*S	**Sn**	**19 11 31.4**	**+0.9**
LVC				IAML		19 11 32.1	
	comp=Z,227nm,0.3s						
PB06	**IPOC Station P**	**1.62**	**334**	⇑*i*P	**Pn**	**19 11 10.9**	**+0.9**
PB06				*e*S	**Sn**	**19 11 32.6**	**+0.9**
PB06				IAML		19 11 35.8	
	comp=N,913nm,0.2s						
PB10	**IPOC Station P**	**1.74**	**292**	*e*P	**Pn**	**19 11 12.7**	**+1.4**
PB10				*e*S	**Sn**	**19 11 35.4**	**+1.4**
PB10				IAML		19 11 40.8	
	comp=N,473nm,0.5s						
PB10	**IPOC Station P**	**1.74**	**292**		**Pn**	**19 11 12.3**	**+1.1**
PB10	**IPOC Station P**	**1.74**	**292**	*i* P	**Pn**	**19 11 12.5**	**+1.3**
PB10				*e*S	**Sn**	**19 11 38.5**	**+4.6**
PB10				IAML		19 11 43.2	
	comp=Z,260nm,0.2s						
PB05	**IPOC Station P**	**1.84**	**315**	⇑*i*P	**Pn**	**19 11 13.7**	**+1.0**
PB05				*e*S	**Sn**	**19 11 37.2**	**+0.8**
PB05				IAML		19 11 43.8	
	comp=N,580nm,0.3s						
PB05	**IPOC Station P**	**1.84**	**315**	*i* P	**Pn**	**19 11 13.5**	**+0.9**
PB05				*e*S	**Sn**	**19 11 37.4**	**+1.0**
PB05				IAML		19 11 40.2	
	comp=Z,389nm,0.6s						
PB04	**IPOC Station P**	**2.21**	**325**		**Pn**	**19 11 18.3**	**+0.9**
PB04	**IPOC Station P**	**2.21**	**325**	*i* P	**Pn**	**19 11 18.2**	**+0.9**
PB03	**IPOC Station P**	**2.29**	**337**	⇑*i*P	**Pn**	**19 11 19.5**	**+1.1**
PB03				*e*S	**Sn**	**19 11 47.7**	**+1.1**
PB09	**IPOC Station P**	**2.39**	**350**	*i* P	**Pn**	**19 11 21.6**	**+1.9**
PB09				*e*S	**Sn**	**19 11 51.3**	**+2.2**
PB09				IAML		19 11 56.0	
	comp=N,279nm,0.6s						
PB09				IAML		19 11 57.0	
	comp=E,290nm,0.6s						
PB09	**IPOC Station P**	**2.39**	**350**		**Pn**	**19 11 21.7**	**+1.9**
PB09	**IPOC Station P**	**2.39**	**350**	*i* P	**Pn**	**19 11 21.6**	**+1.9**
PB09				IAML		19 12 02.9	
	comp=Z,205nm,0.6s						
PB07	**IPOC Station P**	**2.63**	**337**	⇑*i*P	**Pn**	**19 11 23.6**	**+0.8**
PB07				*e*S	**Sn**	**19 11 56.1**	**+1.6**
PB07				IAML		19 12 02.4	
	comp=N,462nm,0.3s						
PB07	**IPOC Station P**	**2.63**	**337**		**Pn**	**19 11 23.5**	**+0.8**
PB01	**IPOC Station P**	**3.17**	**348**		**Pn**	**19 11 30.3**	**+0.4**
AZAP	**Zapla**	**3.41**	**92**	*i* P	**Pn**	**19 11 35.3**	**+2.2**
PATCX	**Punta Patache**	**3.56**	**339**		**Pn**	**19 11 35.6**	**+0.6**
YJA	**Yavi**	**3.61**	**57**	*i* P	**Pn**	**19 11 39.6**	**+3.5**
YJA				IAML		19 12 45.2	
	comp=Z,1.8nm,2.4s						
GO03	**Copiap**	**3.65**	**201**		**Pn**	**19 11 36.5**	**+0.3**
PB11	**IPOC Station P**	**4.46**	**349**		**Pn**	**19 11 46.4**	**-0.8**
GO01	**Chusmiza**	**4.49**	**355**		**Pn**	**19 11 47.9**	**0.0**
VCA	**Vinchina**	**4.58**	**174**	*i* P	**Pn**	**19 11 52.9**	**+4.0**
VCA				IAML		19 13 09.5	
	comp=Z,10nm,1.1s						
PSGCX	**Pisagua**	**4.71**	**345**		**Pn**	**19 11 49.7**	**-0.8**
MNMC	**Minye Minye**	**5.07**	**351**		**Pn**	**19 11 54.6**	**-0.9**
ACLC	**CERRO LA CRUZ**	**5.49**	**163**	*i* P	**Pn**	**19 12 02.6**	**+1.5**
ACLC				IAML		19 13 08.3	
	comp=Z,166nm,3.4s						
PB12	**IPOC Station P**	**5.71**	**345**		**Pn**	**19 12 02.2**	**-1.8**
PB16	**IPOC Station P**	**5.84**	**353**		**Pn**	**19 12 06.5**	**+0.3**
GO04	**Tololo Observa**	**6.24**	**196**	Pn	**Pn**	**19 12 10.2**	**-1.2**
ACCO	**Cerro Coronel**	**6.40**	**182**	*i* P	**Pn**	**19 12 15.7**	**+2.2**
ACCO				IAML		19 13 45.4	
	comp=Z,11nm,4.1s						
APLL	**PUNTA DE LOS L**	**6.52**	**163**	*i* P	**Pn**	**19 12 16.8**	**+1.9**
APLL				IAML		19 13 56.9	
	comp=Z,4.8nm,2.9s						
RTLS	**Leoncito**	**7.62**	**183**	*i* P	**Pn**	**19 12 32.5**	**+2.5**
RTLS				IAML		19 14 44.2	
	comp=Z,11nm,3.1s						
LPAZ	**La Paz**	**7.86**	**5**		**Pn**	**19 12 35.0**	**+1.4**
LPAZ	**La Paz**	**7.86**	**5**	Pn	**Pn**	**19 12 34.9**	**+1.2**
ROC1	**El Roble**	**8.99**	**192**	Pn	Pn	19 12 44.7	-3.9
CPUP	**Villa Florida**	**10.60**	**104**	Pn	**Pn**	**19 13 07.5**	**-2.6**
GO05	**Huala**	**11.14**	**193**	Pn	**Pn**	**19 13 17.5**	**0.0**
NNA	**Nana**	**14.32**	**326**	Pn	**Pn**	**19 14 00.8**	**+1.7**
SAML	**Samuel**	**16.05**	**20**	Pn	**Pn**	**19 14 17.2**	**-3.7**
PLCA	**Paso Flores**	**16.59**	**185**	Pn	**Pn**	**19 14 24.2**	**-3.1**
RUSC	**La Rusia**	**30.17**	**351**	P	**P**	**19 16 39.6**	**-2.1**
PAYG	**Puerto Ayora**	**31.29**	**315**	P	**P**	**19 16 53.9**	**+2.8**
QSPA	**South Pole Qui**	**66.04**	**180**	P	**P**	**19 21 17.7**	**+1.6**
QSPA				IAmb	IAmb	19 21 22.4	
	comp=Z,4.8nm,1.3s						
VNDA	**Vanda**	**74.25**	**190**	P	**P**	**19 22 04.9**	**-0.9**
VNDA				IAmb	IAmb	19 22 08.2	
	comp=Z,3.4nm,1.5s						
EYMN	**Ely**	**74.62**	**344**	P	**P**	**19 22 09.3**	**+1.1**
EYMN				IAmb	IAmb	19 22 26.2	
	comp=Z,2.6nm,1.2s						

*IDC **30** 19:14:02.5±7.8, 12°.57S×167°.05E, h155^{km}±67^{km}, mb3.7/15, mb1 3.9/15, mb1mx3.8/29, mbtmp4.0/15, Error ellipse: s-maj=27.9km s-min=18.6km az=104.0*

*NEIC **30** 19:14:10.6±1.2, 12°.5S±0°.1×166°.94E±0°.06, h226^{km}±7^{km}, mb4.1/15, Error ellipse: s-maj=20.9km s-min=3.9km az=203.0*

ISC 30 19:14:09.8±0.6**, 12°.6S**±0°.1×**167°.0E**±0°.1**, h220**^{km}**, n40, σ0^{s}80**/43**, mb3.9**/20**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.56**	**293**	Pn	**Pn**	**19 15 58.0**	**+0.6**
EIDS	**Eidsvold**	**19.68**	**227**	P	**P**	**19 18 22.1**	**-0.4**
EIDS				IAmb	IAmb	19 18 24.2	
	comp=Z,5.1nm,0.7s						
ARMA	**Armidale**	**22.75**	**216**	P	**P**	**19 18 55.0**	**+1.6**
ARMA				IAmb	IAmb	19 18 56.5	
	comp=Z,7.9nm,0.7s						
COEN	**Coen**	**23.20**	**264**	P	**P**	**19 18 58.2**	**+0.7**
COEN				IAmb	IAmb	19 19 08.2	
	comp=Z,7.7nm,1.1s						
STKA	**Stephens Creek**	**30.23**	**226**	P	**P**	**19 19 58.6**	**-1.5**
	comp=Z,2.9nm,0.8s,baz=51,slow=7.2,SNR=7.1						
STKA				PcP	**PcP**	**19 22 55.1**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=336,slow=3.5,SNR=3.9						
STKA	**Stephens Creek**	**30.23**	**226**	P	**P**	**19 20 00.6**	**+0.5**
WB0	**Warramunga Arr**	**32.06**	**253**	P	**P**	**19 20 15.4**	**-1.0**
WB0				IAmb	IAmb	19 20 16.1	
	comp=Z,3.1nm,1.1s						
WB2	**Warramunga Arr**	**32.12**	**252**	P	**P**	**19 20 15.9**	**-1.0**
WRAB	**Tennant Creek**	**32.12**	**253**		P	19 20 08.6	-8.3
WRA	**Warramunga Arr**	**32.13**	**252**	P	**P**	**19 20 15.4**	**-1.6**
	comp=Z,0.9nm,0.7s,baz=84,slow=9.0,SNR=7.7						
WRA				PcP	**PcP**	**19 23 00.7**	**0.0**
	comp=Z,0.3nm,0.7s,baz=87,slow=3.4,SNR=1.7						
WRA	**Warramunga Arr**	**32.13**	**252**	P	**P**	**19 20 14.4**	**-2.6**
AS31	**Alice Springs**	**33.23**	**246**	P	**P**	**19 20 26.0**	**-0.5**
ASAR	**Alice Springs**	**33.23**	**246**	P	**P**	**19 20 25.8**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=72,slow=9.4,SNR=22						
ASAR				PcP	**PcP**	**19 23 03.2**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=75,slow=2.7,SNR=7.2						
ASAR	**Alice Springs**	**33.23**	**246**	P	**P**	**19 20 26.7**	**+0.2**
ASAR					**PcP**	**19 23 03.5**	**-0.3**
BBOO	**Buckleboo**	**34.72**	**229**	P	**P**	**19 20 39.6**	**+0.4**
KNRA	**Kununurra**	**37.15**	**261**	P	**P**	**19 20 59.6**	**-0.3**
KNRA				IAmb	IAmb	19 21 00.2	
	comp=Z,7.9nm,0.9s						
FITZ	**Fitzroy Crossi**	**40.18**	**257**	P	**P**	**19 21 25.4**	**+0.3**
FITZ				IAmb	IAmb	19 21 26.3	
	comp=Z,2.2nm,0.6s						
FORT	**Forrest**	**40.20**	**237**	P	**P**	**19 21 25.3**	**+0.3**
PSA00	**Pilbara Seismi**	**45.79**	**252**	P	**P**	**19 22 09.5**	**-0.5**
MJAR	**Matsushiro Arr**	**55.85**	**332**	P	**P**	**19 23 23.9**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=167,slow=8.7,SNR=4.4						
KSRS	**Korea Array**	**61.79**	**325**	P	**P**	**19 24 05.5**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=280,slow=12,SNR=2.0						
VNDA	**Vanda**	**65.02**	**181**	P	**P**	**19 24 26.5**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=332,slow=5.0,SNR=2.7						
PETK	**Petropavlovsk-**	**65.87**	**354**	P	**P**	**19 24 32.2**	**+0.6**
	comp=Z,3.2nm,0.9s,baz=148,slow=7.4,SNR=1.9						
CMAR	**Chiang Mai Arr**	**73.81**	**294**	P	**P**	**19 25 22.1**	**+1.3**
	comp=Z,2.0nm,0.8s,baz=125,slow=4.8,SNR=14						
SONM	**Songino Array**	**80.58**	**323**	P	**P**	**19 25 58.3**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=144,slow=5.0,SNR=4.7						
SONM	**Songino Array**	**80.58**	**323**	P	**P**	**19 25 57.6**	**-0.3**
ILAR	**Eielson Array**	**84.56**	**18**	P	**P**	**19 26 17.4**	**-0.5**
	comp=Z,2.7nm,0.6s,baz=244,slow=5.0,SNR=52						
ILAR	**Eielson Array**	**84.56**	**18**	P	**P**	**19 26 17.8**	**0.0**
NVAR	**Mina Array Bea**	**86.08**	**49**	P	**P**	**19 26 26.6**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=280,slow=8.1,SNR=1.6						
MKAR	**Makanchi Array**	**95.43**	**317**	P	**P**	**19 27 09.1**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=93,slow=6.3,SNR=20						
MKAR	**Makanchi Array**	**95.43**	**317**	P	**P**	**19 27 08.9**	**-0.5**
ZALV	**Zalesovo Beam**	**95.47**	**324**	P	**P**	**19 27 08.6**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=104,slow=4.7,SNR=3.6						
TXAR	**Lajitas Array**	**95.50**	**61**	P	**P**	**19 27 10.5**	**+0.3**
	comp=Z,0.6nm,1.1s,baz=224,slow=6.3,SNR=2.5						
YKA	**Yellowknife Ar**	**95.75**	**27**	P	**P**	**19 27 09.6**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=258,slow=4.5,SNR=5.1						
ARCES	**ARCESS Array B**	**118.08**	**346**	PKP	**PKPdf**	**19 32 29.8**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=85,slow=2.3,SNR=14						
CPUP	**Villa Florida**	**122.14**	**132**	PKP	**PKiKP**	**19 32 38.9**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=315,slow=4.3,SNR=1.3						
FINES	**FINESS Array B**	**123.60**	**339**	PKP	**PKPdf**	**19 32 40.5**	**-0.2**
	comp=Z,1.8nm,1.0s,baz=120,slow=2.6,SNR=4.4						
BRTR	**Keskin Array B**	**130.85**	**312**	PKP	**PKiKP**	**19 32 57.4**	**+1.1**
	comp=Z,0.9nm,0.9s,baz=0.0,slow=2.9,SNR=2.7						
KEST	**Kesra**	**149.33**	**323**	PKPbc	**PKPbc**	**19 33 33.1**	**0.0**
	comp=Z,2.6nm,0.6s,baz=67,slow=4.0,SNR=4.4						
KEST	**Kesra**	**149.33**	**323**		**PKiKP**	**19 33 34.1**	**-0.1**

IDC 30 19:17:41.1±2.5**, 28°.40S**×**62°.58E, h0**^{km}**, mb3.6**/4**, mb1 3.9**/4**, mb1mx3.5**/25**, mbtmp3.6**/4**, Error ellipse: s-maj=93.8km s-min=32.6km az=40.0, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**58.37**	**41**	P	P	19 27 38.1	-0.4
	0.3nm,0.5s,baz=240,slow=7.2,SNR=2.4						
ASAR	**Alice Springs**	**63.42**	**104**	P	P	19 28 13.1	+0.1
	0.8nm,0.6s,baz=246,slow=6.1,SNR=24						
WRA	**Warramunga Arr**	**65.18**	**100**	P	P	19 28 24.6	0.0
	0.6nm,0.8s,baz=248,slow=6.0,SNR=8.4						
BRTR	**Keskin Array B**	**72.94**	**337**	P	P	19 29 12.8	+0.5
	0.4nm,0.6s,baz=135,slow=6.9,SNR=2.3						
YKA	**Yellowknife Ar**	**145.85**	**358**	PKPbc	PKPdf	19 37 20.5	-0.6
	0.4nm,0.6s,baz=353,slow=3.0,SNR=9.6						

IDC 30 19:39:48.2±2.4**, 10°.97N**×**95°.09E, h0**^{km}**, mb3.3**/3**, mb1 3.4**/4**, mb1mx3.2**/31**, mbtmp3.2**/4**, ML2.9**/1**, Error ellipse: s-maj=81.1km s-min=28.1km az=67.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.32**	**26**	Pn	Pn	19 41 50.3	0.0
	0.0nm,0.3s,baz=215,slow=15,SNR=2.9						
MKAR	**Makanchi Array**	**37.32**	**345**	P	P	19 47 02.0	-0.2
	0.7nm,0.9s,baz=164,slow=8.5,SNR=3.4						
WRA	**Warramunga Arr**	**49.36**	**128**	P	P	19 48 39.5	-0.3
	0.5nm,0.8s,baz=307,slow=8.6,SNR=2.9						
ASAR	**Alice Springs**	**51.24**	**133**	P	P	19 48 54.2	+0.1
	0.3nm,0.9s,baz=303,slow=6.9,SNR=4.8						

*NEIC **30** 20:09:42.9±2.2, 26°.23S±0°.07×177°.7W±0°.1, h165^{km}±3^{km}, mb4.7/25, Error ellipse: s-maj=16.0km s-min=9.6km az=113.0*

*GCMT **30** 20:09:44.9±0.3, 26°.35S±0°.02×177°.45W±0°.02, h197^{km}±3^{km}, MW5.0/95, Moment Tensor Solution. s33,c37; s95,c128; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.60±.12; $M_{\theta\theta}$-1.61±.15; $M_{\phi\phi}$0.00±.14; $M_{r\theta}$-2.43±.10; $M_{\theta\phi}$-2.52±.10; $M_{\phi r}$0.58±.09; Best double couple: $M_0$3.89200×10^{16} NP1:ϕ_s17.00000°, δ44.00000°, λ24.00000°. NP2:ϕ_s269.00000°, δ74.00000°, λ131.00000°. Principal axes: T 3.8050, Plg45.0000°, Azm221.0000°; N 0.1720, Plg39.0000°, Azm75.0000°; P -3.9780, Plg18.0000°, Azm330.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **30** 20:09:44.7±0.6, 26°.27S×177°.75W, h176^{km}±5^{km}, mb4.1/14, mb1 4.3/16, mb1mx4.3/20, mbtmp4.6/16, MS3.4/6, Ms1 3.3/6, ms1mx3.0/44 Error ellipse: s-maj=16.7km s-min=12.3km az=107.0*

ISC 30 20:09:44.3±0.4**, 26°.35S**±0°.05×**177°.70W**±0°.08**, h176**^{km}**, n120, σ1^{s}76**/111**, mb4.5**/26**, 2C-1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**2.89**	**184**	P	**Pn**	**20 10 31.1**	**-0.4**
RIZ				S	**Sn**	**20 11 10.4**	**+2.2**
RAO	**Raoul Island**	**2.90**	**184**	P	**Pn**	**20 10 31.5**	**0.0**
	354nm,0.3s,baz=71,slow=8.1,SNR=20						
RAO				S	**Sn**	**20 11 08.5**	**+0.1**
	588nm,0.3s,baz=60,slow=24,SNR=13						
RAO				LR	LR	20 11 23.3	
	comp=Z,1μm,18.0s,baz=126,slow=33						
RAO	**Raoul Island**	**2.90**	**184**	Pn	**Pn**	**20 10 31.9**	**+0.3**
RAO				Sn	**Sn**	**20 11 10.7**	**+2.3**
GLKZ	**Green Lake**	**2.91**	**184**	P	**Pn**	**20 10 30.2**	**-1.4**
GLKZ				S	**Sn**	**20 11 10.4**	**+1.8**
MSVF	**Nonsavu**	**9.43**	**334**		**Pn**	**20 11 58.8**	**+2.2**
NIUE	**Niue**	**10.19**	**46**	Pn	**Pn**	**20 12 02.6**	**-3.9**
NIUE				Sn	Sn	20 13 49.4	-10
HAZ	**Te Kaha**	**12.00**	**197**	S	Sn	20 14 33.0	-10
PKGZ	**Pakihiroa**	**12.05**	**196**	P	P	20 12 42.5	+6.5
PKGZ				S	Sn	20 14 31.3	-13
PUZ	**Puketiti**	**12.18**	**195**	P	Pn	20 12 25.8	-6.3
PUZ				S	Sn	20 14 36.3	-11
RUGZ	**Raukumara Rang**	**12.22**	**198**	P	Pn	20 12 17.4	-15
RUGZ				S	Sn	20 14 36.3	-12
MWZ	**Matawai**	**12.61**	**197**	P	Pn	20 12 32.5	-5.2
MWZ				S	Sn	20 14 43.9	-14
TKGZ	**Te Karaka**	**12.63**	**196**	P	**Pn**	**20 12 35.0**	**-2.8**
TKGZ				S	Sn	20 14 43.0	-15
URZ	**Urewera**	**12.66**	**199**	P	**Pn**	**20 12 34.8**	**-3.3**
	1.1nm,0.3s,baz=273,slow=6.2,SNR=7.8						
URZ				S	Sn	20 14 45.4	-13
	11nm,0.3s,baz=19,slow=16,SNR=4.3						
URZ				LR	LR	20 16 26.4	
	comp=Z,67nm,20.4s,baz=6.0,slow=32						
URZ	**Urewera**	**12.66**	**199**	P	Pn	20 12 31.6	-6.5
URZ				S	Sn	20 14 43.9	-15
RAGZ	**Rawiri**	**12.79**	**198**	P	Pn	20 12 31.6	-8.4
RIGZ	**Rimuhau**	**12.90**	**196**	P	Pn	20 12 36.6	-4.7
RTZ	**Ruatahuna**	**13.03**	**199**	P	Pn	20 12 35.0	-8.0
KNZ	**Kokohu**	**13.22**	**196**	P	Pn	20 12 40.0	-5.3
MHGZ	**Mahia Peninsul**	**13.29**	**195**	P	Pn	20 12 42.5	-3.7
MHGZ				S	Sn	20 14 55.6	-18
AFI	**Afiamalu**	**13.56**	**25**	P	Pn	20 12 43.6	-6.3
	15nm,0.3s,baz=36,slow=12,SNR=12						
AFI				S	Sn	20 14 59.4	-21
	23nm,0.3s,baz=53,slow=20,SNR=5.0						
AFI	**Afiamalu**	**13.56**	**25**		Pn	20 12 44.1	-5.8
DZM	**Mont Dzumac**	**15.08**	**283**	*e*P	P	20 13 17.4	+7.6
	46nm,0.8s						
DZM				*e*LR	LR	20 16 34.5	
	comp=Z,150nm,25.4s						
DZM	**Mont Dzumac**	**15.08**	**283**	LR	LR	20 17 00.4	
	comp=Z,137nm,20.6s,baz=34,slow=29						
RPZ	**Rata Peaks**	**19.59**	**205**	P	**P**	**20 14 01.4**	**+2.6**
	1.3nm,0.3s,baz=325,slow=3.4,SNR=6.7						
RPZ				S	S	20 17 16.8	-14
	2.0nm,0.3s,baz=342,slow=17,SNR=8.6						
RPZ				LR	LR	20 21 23.8	
	comp=Z,68nm,18.3s,baz=2.5,slow=36						
RPZ	**Rata Peaks**	**19.59**	**205**	IAmb	IAmb	20 14 07.2	
	comp=Z,11nm,1.0s						
LHI	**Lord Howe Isla**	**20.96**	**250**	P	**P**	**20 14 10.7**	**-3.0**
KNTN	**Kanton**	**24.13**	**15**	P	**P**	**20 14 42.4**	**-1.8**
TBI	**Tubuai**	**25.78**	**90**	*e*LR	LR	20 20 06.5	
	comp=Z,601nm,29.0s						
TBI	**Tubuai**	**25.78**	**90**	*e*T	T	20 40 37.5	
	comp=Z,11nm,0.3s						
PAE	**Paea**	**27.42**	**77**	*e*T	T	20 41 48.8	
	comp=Z,7.8nm,0.3s						
PPT2	**Papeete2**	**27.45**	**77**	*e*LR	LR	20 21 10.5	
	comp=Z,104nm,25.2s						
PPT2	**Papeete2**	**27.45**	**77**	*e*T	T	20 41 59.8	
	comp=Z,6.8nm,0.4s						
EIDS	**Eidsvold**	**28.08**	**265**	P	**P**	**20 15 20.6**	**+1.0**
EIDS				IAmb	IAmb	20 15 23.8	
	comp=Z,6.8nm,0.7s						
STKA	**Stephens Creek**	**35.83**	**251**	P	**P**	**20 16 27.8**	**+0.7**
	comp=Z,3.4nm,1.0s,baz=97,slow=12,SNR=8.3						
STKA				PcP	**PcP**	**20 18 51.4**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=54,slow=8.6,SNR=2.9						
STKA				LR	LR	20 31 21.5	
	comp=Z,63nm,18.1s,baz=43,slow=36						
STKA	**Stephens Creek**	**35.83**	**251**	IAmb	IAmb	20 16 29.0	
	comp=Z,3.2nm,1.4s						
BBOO	**Buckleboo**	**40.48**	**250**	P	**P**	**20 17 05.2**	**-0.7**
BBOO				IAmb	IAmb	20 17 06.1	
	comp=Z,12nm,0.9s						
AS31	**Alice Springs**	**43.74**	**263**	P	**P**	**20 17 32.8**	**+0.3**
ASAR	**Alice Springs**	**43.74**	**263**	P	**P**	**20 17 32.2**	**-0.3**
	comp=Z,14nm,0.9s,baz=113,slow=8.1,SNR=78						
ASAR				S	**S**	**20 23 47.0**	**-2.6**
	comp=Z,1.9nm,1.0s,baz=103,slow=16,SNR=7.8						
ASAR	**Alice Springs**	**43.74**	**263**	P	**P**	**20 17 32.0**	**-0.5**
WR0	**Warramunga Arr**	**44.17**	**268**	P	**P**	**20 17 34.9**	**-1.1**
WB2	**Warramunga Arr**	**44.35**	**268**	P	**P**	**20 17 37.3**	**-0.1**
WRAB	**Tennant Creek**	**44.35**	**268**	P	**P**	**20 17 37.4**	**0.0**
WRAB				IAmb	IAmb	20 17 37.9	
	comp=Z,13nm,1.1s						
WRA	**Warramunga Arr**	**44.36**	**268**	P	**P**	**20 17 36.8**	**-0.7**
	comp=Z,5.9nm,0.7s,baz=106,slow=7.5,SNR=36						
WRA				PcP	**PcP**	**20 19 18.2**	**-0.2**
	comp=Z,2.5nm,0.9s,baz=103,slow=4.0,SNR=6.3						
WRA				S	**S**	**20 23 53.8**	**-4.9**
	comp=Z,0.9nm,1.0s,baz=110,slow=14,SNR=6.0						
WRA	**Warramunga Arr**	**44.36**	**268**	P	**P**	**20 17 37.0**	**-0.4**
WRA					**PcP**	**20 19 17.2**	**-1.1**
WB0	**Warramunga Arr**	**44.37**	**268**	P	**P**	**20 17 37.3**	**-0.2**
WB0				IAmb	IAmb	20 17 38.0	
	comp=Z,15nm,1.0s						
FORT	**Forrest**	**47.46**	**251**	P	**P**	**20 18 00.2**	**-1.3**
KNRA	**Kununurra**	**50.78**	**271**	P	**P**	**20 18 26.2**	**-0.7**
KNRA				IAmb	IAmb	20 18 27.9	
	comp=Z,27nm,1.0s						
VNDA	**Vanda**	**52.14**	**186**	P	**P**	**20 18 37.7**	**+1.6**
	comp=Z,5.0nm,0.5s,baz=4.0,slow=8.0,SNR=40						
VNDA	**Vanda**	**52.14**	**186**	P	**P**	**20 18 38.6**	**+2.5**
VNDA				IAmb	IAmb	20 18 52.6	
	comp=Z,9.5nm,1.1s						
FITZ	**Fitzroy Crossi**	**52.74**	**267**	P	**P**	**20 18 41.5**	**0.0**
FITZ				IAmb	IAmb	20 18 42.3	
	comp=Z,20nm,1.1s						
SOEI	**Soe**	**57.14**	**275**	P	**P**	**20 19 13.9**	**+0.8**
	comp=Z,23nm,0.9s						
MORW	**Morawa**	**58.02**	**251**	P	**P**	**20 19 17.8**	**-1.2**
MORW				IAmb	IAmb	20 19 18.3	
	comp=Z,30nm,1.3s						
CASY	**Casey**	**58.85**	**207**	P	**P**	**20 19 22.6**	**-1.5**
CASY				IAmb	IAmb	20 19 24.7	
	comp=Z,18nm,0.9s						
QSPA	**South Pole Qui**	**63.75**	**180**	P	**P**	**20 19 58.1**	**+0.9**
DBJI	**Dramaga**	**74.19**	**270**	P	**P**	**20 21 03.2**	**+1.0**
MJAR	**Matsushiro Arr**	**75.09**	**325**	P	**P**	**20 21 06.9**	**0.0**
	comp=Z,7.0nm,0.8s,baz=157,slow=6.0,SNR=10						
MJAR	**Matsushiro Arr**	**75.09**	**325**	P	**P**	**20 21 04.9**	**-2.0**
MAT	**Matsushiro**	**75.09**	**325**	P	**P**	**20 21 06.9**	**0.0**
MAW	**Mawson**	**76.19**	**200**	P	**P**	**20 21 13.3**	**+0.6**
	comp=Z,28nm,0.6s,baz=138,slow=6.4,SNR=39						
MAW	**Mawson**	**76.19**	**200**	P	**P**	**20 21 13.4**	**+0.8**
MAW				IAmb	IAmb	20 21 14.4	
	comp=Z,8.0nm,0.8s						
MDSI	**Maura Dua**	**77.38**	**271**	P	**P**	**20 21 19.3**	**-1.0**
SYO	**Syowa Base**	**81.11**	**193**	⇑*e*P	**P**	**20 21 38.0**	**-1.5**
SYO	**Syowa Base**	**81.11**	**193**	⇓*i*PcP	**P**	**20 21 41.0**	**+1.5**
KSRS	**Korea Array**	**81.45**	**319**	P	**P**	**20 21 42.9**	**+1.1**
	comp=Z,2.9nm,0.7s,baz=134,slow=5.8,SNR=12						
PETK	**Petropavlovsk-**	**81.97**	**345**	P	**P**	**20 21 44.4**	**+0.3**
	comp=Z,11nm,0.9s,baz=114,slow=6.9,SNR=9.5						
SNAA	**Sanae**	**82.18**	**178**	P	**P**	**20 21 45.0**	**-0.2**
SNAA	**Sanae**	**82.18**	**178**	P	**P**	**20 21 44.6**	**-0.6**
LPIG	**La Paz**	**82.19**	**58**	LR	LR	20 54 15.5	
	comp=Z,16nm,18.3s,baz=204,slow=32						
VNA3	**Neumayer Olymp**	**82.32**	**176**	P	**P**	**20 21 45.6**	**-0.2**
VNA2	**Neumayer--Watz**	**82.76**	**177**	P	**P**	**20 21 48.4**	**+0.3**
	baz=166,slow=3.1						
NJ2	**Nanjing**	**83.83**	**310**	*e*P	**P**	**20 21 55.3**	**+1.2**
USRK	**Ussuriysk Ar.**	**83.94**	**326**	P	**P**	**20 21 55.6**	**+1.2**
	comp=Z,6.9nm,0.8s,baz=180,slow=2.6,SNR=8.7						
PLCA	**Paso Flores**	**85.08**	**133**	P	**P**	**20 22 01.4**	**+0.9**
	comp=Z,5.8nm,1.1s,baz=181,slow=9.1,SNR=3.3						
PLCA	**Paso Flores**	**85.08**	**133**	IAmb	IAmb	20 22 04.8	
	comp=Z,11nm,1.2s						
NVAR	**Mina Array Bea**	**85.09**	**43**	P	**P**	**20 22 01.6**	**+0.9**
	comp=Z,1.7nm,0.7s,baz=218,slow=7.0,SNR=8.4						
NVAR				pP	**pP**	**20 22 45.0**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=202,slow=7.5,SNR=2.2						
NVAR	**Mina Array Bea**	**85.09**	**43**	P	**P**	**20 22 00.2**	**-0.5**
TXAR	**Lajitas Array**	**89.98**	**57**	P	**P**	**20 22 24.8**	**+0.7**
	comp=Z,0.6nm,1.0s,baz=205,slow=5.0,SNR=3.6						
GHO	**Glory Hole Cre**	**90.83**	**13**	P	**P**	**20 22 27.4**	**+0.2**
GHO				IAmb	IAmb	20 22 28.0	
	comp=Z,18nm,1.5s						
TRF	**Thorofare Moun**	**92.08**	**12**	P	**P**	**20 22 31.9**	**-1.2**
TRF				IAmb	IAmb	20 22 37.0	
	comp=Z,4.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**92.31**	**289**	pP	pP	20 23 21.8	+3.7
	comp=Z,1.4nm,1.0s,baz=127,slow=2.4,SNR=2.9						
PDAR	**Pinedale Array**	**93.02**	**43**	P	**P**	**20 22 37.0**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=199,slow=3.1,SNR=8.6						
HHC	**Hu-ho-hao-te**	**93.61**	**314**	*e*P	**P**	**20 22 40.0**	**-0.6**
ILAR	**Eielson Array**	**93.93**	**13**	P	**P**	**20 22 40.4**	**-1.0**
	comp=Z,0.5nm,0.8s,baz=230,slow=4.5,SNR=6.5						
ILAR				pP	**pwP**	**20 23 26.8**	**+1.8**
	comp=Z,0.9nm,1.0s,baz=220,slow=5.5,SNR=2.6						
ILAR				PP	**PP**	**20 26 28.8**	**-1.3**
	comp=Z,0.8nm,0.9s,baz=226,slow=7.3,SNR=4.6						
LZH	**Lanzhou**	**96.51**	**307**	⇑P	**P**	**20 22 53.0**	**-1.0**
LZH				pP	pP	20 23 36.0	-1.3
LZH				sP	sP	20 23 54.0	-1.3
LZH				PP	**PP**	**20 26 52.5**	**+1.6**
MKAR	**Makanchi Array**	**115.33**	**312**	PKP	**PKPdf**	**20 28 02.6**	**-2.2**
	comp=Z,0.3nm,0.8s,baz=218,slow=1.7,SNR=2.6						
MKAR				pPKP	**pPKiKP**	**20 28 50.2**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=48,slow=1.8,SNR=5.5						
KSH	**Kashi**	**118.35**	**302**	PKP	**PKiKP**	**20 28 12.0**	**+1.0**
KSH				sPKP		20 29 11.0	
KSH				PP	**PP**	**20 29 36.3**	**+6.1**
KSH				PKS		20 31 46.8	
KSH				SKKS		20 36 11.5	

BOSA	**Boshof**	**121.07**	**204**	PKP	**PKPdf**	**20 28 16.3**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=132,slow=2.8,SNR=6.5						
ARCES	**ARCESS Array B**	**134.69**	**349**	PKP	**PKPdf**	**20 28 40.8**	**-0.3**
	comp=Z,4.8nm,1.0s,baz=46,slow=1.5,SNR=6.1						
FINES	**FINESS Array B**	**141.41**	**342**	PKhKP	PKPpre	20 28 47.8	
	comp=Z,1.0nm,0.5s,baz=53,slow=4.6,SNR=10.0						
NC303	**NORSAR Array S**	**144.59**	**352**		**PKPab**	**20 28 58.3**	**0.0**
NC204	**NORSAR Array S**	**144.61**	**353**		**PKPab**	**20 28 58.4**	**-0.1**
NC405	**NORSAR Array S**	**144.66**	**352**		PKPbc	20 28 58.8	+0.2
NB201	**NORSAR Array S**	**144.77**	**352**		PKPbc	20 28 59.2	+0.1
NB2	**NORSAR Subarra**	**144.79**	**352**	PKP	**PKPab**	**20 28 58.4**	**-0.7**
	comp=Z,4.9nm,1.0s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**144.79**	**352**	PKP	**PKPab**	**20 28 58.5**	**-0.6**
	comp=Z,6.5nm,0.8s,baz=17,slow=2.5,SNR=41						
NOA				pPKP	**pPKPdf**	**20 29 45.1**	**0.0**
	comp=Z,6.0nm,1.0s,baz=12,slow=2.4,SNR=6.7						
NAO01	**NORSAR Array S**	**145.02**	**353**		**PKPdf**	**20 29 00.5**	**+0.5**
AKASG	**Malin Array Be**	**148.15**	**327**	PKPbc	**PKPbc**	**20 29 07.5**	**-1.5**
	comp=Z,2.9nm,0.8s,baz=43,slow=4.1,SNR=10						
AKASG				pPKPbc	**pPKPbc**	**20 29 53.5**	**-0.3**
	comp=Z,2.4nm,0.9s,baz=46,slow=3.2,SNR=1.8						
BRTR	**Keskin Array B**	**150.70**	**305**	PKPbc	**PKPbc**	**20 29 14.2**	**-1.7**
	comp=Z,1.1nm,1.0s,baz=197,slow=3.9,SNR=4.8						
BRTR				pPKPbc	**pPKPbc**	**20 30 01.4**	**+0.4**
	comp=Z,3.8nm,1.0s,baz=82,slow=2.6,SNR=5.8						
DPC	**Dobruska-Polom**	**153.72**	**339**	*e*PKPAB	**PKPab**	**20 29 41.7**	**+6.0**
CLL	**Collm**	**153.77**	**345**	*e*PKPbc	**PKiKP**	**20 29 24.0**	**+1.8**
CLL				*e*PKPab	**PKPab**	**20 29 37.0**	**+1.3**
	comp=Z,6.0nm,0.6s						
KRLC	**Kraliky**	**153.81**	**339**	*e*PKPAB	**PKPab**	**20 29 38.3**	**+2.2**
KRLC				*e*x	x	20 29 41.4	
BRG	**Berggiesshubel**	**153.94**	**343**	*e*PKP	**PKPab**	**20 29 42.0**	**+5.5**
	comp=Z,6.9nm,1.2s						
PVCC	**Panska Ves**	**154.08**	**342**	*e*PKPAB	**PKPab**	**20 29 43.3**	**+6.2**
VYHS	**Vyhne**	**154.39**	**334**	*e*PKP	**PKPab**	**20 29 38.9**	**+0.4**
VRAC	**Vranov**	**154.53**	**338**	*e*PKP	**PKPab**	**20 29 39.9**	**+0.8**
VRAC				*e*		20 29 44.7	
JAVC	**Velka Javorina**	**154.54**	**336**	*e*PKP	**PKPab**	**20 29 40.7**	**+1.5**
JAVC				*e*		20 29 45.3	
PRU	**Pruhonice**	**154.58**	**341**	*e*PKPAB	**PKPab**	**20 29 38.9**	**-0.3**
PRU				*e*x	x	20 29 45.0	
KRUC	**Moravsky**	**154.81**	**338**	*e*PKP	**PKPab**	**20 29 41.0**	**+0.7**
KRUC				*e*		20 29 45.7	
KHC	**Kasperske Hory**	**155.62**	**342**	*e*PKPAB	**PKPab**	**20 29 44.5**	**+0.7**
KHC				*e*x	x	20 29 49.7	
KHC				*e*x	x	20 29 54.4	
GERES	**GERESS Array B**	**155.85**	**341**	PKPab	**PKPab**	**20 29 45.2**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=42,slow=6.0,SNR=3.2						
MOA	**Molln**	**156.56**	**339**	*e*PKPab	**PKPab**	**20 29 48.5**	**+0.6**
	comp=Z,4.8nm,1.4s						
SOKA	**Soboth**	**157.33**	**337**	PKPab	**PKPab**	**20 29 52.4**	**+1.1**
	comp=Z,4.2nm,1.2s						
WATA	**Walderalm**	**157.81**	**343**	*e*PKPab	**PKPab**	**20 29 54.7**	**+1.3**
	comp=Z,7.2nm,1.6s						
WTTA	**Wattenberg**	**157.86**	**343**	*e*PKPab	**PKPab**	**20 29 54.1**	**+0.4**
	comp=Z,3.2nm,0.6s						
MOTA	**Moosalm**	**157.92**	**344**	*e*PKPab	**PKPab**	**20 29 54.4**	**+0.6**
	comp=Z,2.0nm,0.6s						
SQTA	**Sankt Quirin**	**158.01**	**344**	*e*PKPab	**PKPab**	**20 29 55.6**	**+1.4**
	comp=Z,6.2nm,1.2s						
ABTA	**Abfaltersbach**	**158.09**	**341**	*e*PKPab	**PKPab**	**20 29 54.3**	**-0.2**
	comp=Z,1.1nm,0.6s						
LIC	**Lamto**	**158.80**	**159**	*e*PKP2	**PKPab**	**20 29 58.4**	**+0.1**
	comp=Z,18nm,0.8s						
KIC	**Kosan Boka**	**159.02**	**160**	*e*PKP2	**PKPab**	**20 29 59.4**	**+0.1**
	comp=Z,30nm,1.1s						
TIC	**Toumodi**	**159.20**	**159**	*e*PKP2	**PKPab**	**20 30 00.2**	**+0.1**

SJA ***30*** *20:23:06.5±0.8, 32°.12S×71°.72W, h55^{km}±24^{km}, ML3.4, MW3.6*

GUC ***30*** *20:23:08.3±0.7, 31°.98S×71°.07W, h20^{km}±12^{km}, ML3.3*

ISC 30 20:23:04.5±1.8**, 32°.02S**±0°.03×**71°.53W**±0°.08**, h2**^{km}±12^{km}**, n30,** σ**1^{s}.23**/37**, 4C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO02	**Combarbal**	**0.93**	**29**	⇓*i*P	**Pb**	**20 23 23.9**	**+0.5**
CO02				*i* S	**Sb**	**20 23 35.7**	**-0.5**
ROCH	**El Roble**	**1.05**	**155**	IAML		20 23 44.0	
	comp=N,2µm,0.5s						
ROC1	**El Roble**	**1.05**	**156**	*i* P	**Pn**	**20 23 26.6**	**0.0**
ROC1				*e*S	**Sn**	**20 23 40.9**	**-1.0**
PEL	**Peldehue**	**1.33**	**148**	*i* P	**Pg**	**20 23 30.6**	**+0.5**
PEL				*e*S	**Sn**	**20 23 48.1**	**-0.4**
MT05	**Renca**	**1.53**	**154**	*e*P	**Pg**	**20 23 34.1**	**+0.3**
MT05				*i* S	**Sg**	**20 23 54.1**	**+0.4**
MT05				IAML		20 23 56.0	
	comp=N,811nm,0.3s						
RCDM	**Rinconada Maip**	**1.59**	**158**	⇑*i*P	**Pg**	**20 23 36.0**	**+0.9**
CLCH	**Cerro Calan**	**1.61**	**149**	⇑*i*P	**Pg**	**20 23 35.6**	**+0.2**
CLCH				*i* S	**Sg**	**20 23 55.9**	**-0.5**
CLCH				IAML		20 24 08.4	
	comp=E,758nm,0.5s						
FCH	**Farellones**	**1.68**	**142**	⇓*i*P	**Pb**	**20 23 36.4**	**0.0**
FCH				IAML		20 24 00.7	
	comp=E,344nm,0.4s						
MT03	**Universidad Ad**	**1.71**	**150**	⇓*i*P	**Pb**	**20 23 37.0**	**+0.3**
MT03				*i* S	**Sg**	**20 23 59.0**	**-0.5**
MT03				IAML		20 24 00.8	
	comp=E,1µm,0.6s						
RTLS	**Leoncito**	**1.91**	**84**	*i* P	**Pg**	**20 23 41.2**	**0.0**
GO04	**Tololo Observa**	**1.94**	**19**	⇑*i*P	**Pn**	**20 23 39.0**	**+0.3**
GO04				*i* S	**Sn**	**20 24 03.5**	**-0.3**
GO04	**Tololo Observa**	**1.94**	**19**	*i* P	**Pn**	**20 23 39.1**	**+0.3**
LMEL	**Las Melosas**	**2.14**	**149**	⇑*i*P	**Pb**	**20 23 43.5**	**-0.6**
LMEL				*i* S	**Sb**	**20 24 10.7**	**-0.6**
LMEL				IAML		20 24 17.5	
	comp=N,547nm,0.2s						
ARCO	**CERRO ARCO**	**2.35**	**111**	*i* P	**Pg**	**20 23 48.8**	**-0.8**
ARCO				IAML		20 24 28.0	
	comp=Z,109nm,1.0s						
ASAL	**Salagasta**	**2.36**	**105**	*i* P	**Pg**	**20 23 49.7**	**0.0**
ASAL				IAML		20 24 29.5	
	comp=Z,141nm,0.4s						
ZON	**Zonda**	**2.48**	**80**	*i* P	**Pb**	**20 23 49.5**	**-0.3**
ZON				IAML		20 24 28.3	
	comp=Z,101nm,0.6s						
AAGR	**Agrelo**	**2.52**	**116**	*i* P	**Pb**	**20 23 51.0**	**+0.4**
AAGR				IAML		20 24 32.7	
	comp=Z,128nm,2.0s						
ACCO	**Cerro Coronel**	**2.55**	**57**	*i* P	**Pb**	**20 23 50.6**	**-0.5**
ACCO				IAML		20 24 29.1	
	comp=Z,241nm,0.5s						
RTCV	**Cerro Valdivia**	**2.55**	**87**	*i* P	**Pb**	**20 23 50.3**	**-0.7**
RTCV				IAML		20 24 31.0	
	comp=Z,98nm,1.1s						
AROD	**Rodeo**	**2.55**	**44**	*i* P	**Pb**	**20 23 50.5**	**-0.7**
RTLL	**Cerro Villicun**	**2.70**	**76**	*i* P	**Pb**	**20 23 51.7**	**-1.8**
ACDV	**Cuesta del Vie**	**2.77**	**49**	*i* P	**Pn**	**20 23 51.9**	**+1.9**
ACDV				IAML		20 24 36.0	
	comp=Z,103nm,0.4s						
AMOG	**MOGNA**	**2.81**	**68**	*i* P	**Pb**	**20 23 53.8**	**-1.7**
AMOG				IAML		20 24 37.0	
	comp=Z,187nm,0.3s						
GO05	**Huala**	**3.00**	**186**	*i* P	**Pn**	**20 23 53.2**	**+0.1**
AGUA	**GUANDACOL**	**3.63**	**47**	*i* P	**Pb**	**20 24 06.6**	**-3.0**
AGUA				IAML		20 25 02.8	
	comp=Z,25nm,0.3s						
VCA	**Vinchina**	**4.35**	**42**	*i* P	**Pn**	**20 24 15.2**	**+3.4**
VCA				IAML		20 25 21.4	
	comp=Z,142nm,0.7s						
APLL	**PUNTA DE LOS L**	**4.58**	**71**	*i* P	**Pn**	**20 24 17.2**	**+2.3**
APLL				IAML		20 25 19.1	
	comp=Z,15nm,0.4s						
ACLC	**CERRO LA CRUZ**	**4.71**	**58**	*i* P	**Pn**	**20 24 19.3**	**+2.5**
MRA	**San Martin**	**4.95**	**96**	*i* P	**Pn**	**20 24 21.4**	**+1.5**
MRA				IAML		20 25 44.5	
	comp=Z,9.9nm,0.5s						
CYA	**Choya**	**6.11**	**56**	*i* P	**Pn**	**20 24 36.5**	**+0.7**
CYA				IAML		20 25 52.4	
	comp=Z,23nm,1.0s						

DDA ***30*** *20:30:13.5, 35°.82N×31°.95E, h59^{km}±1^{km}, ML2.5*

ISK ***30*** *20:30:13.7, 35°.91N×31°.89E, h58^{km}±2^{km}, ML2.8/17*

NIC ***30*** *20:30:16.8±0.0, 35°.99N×32°.35E, h14^{km}±3^{km}, Ml2.3/4*

ISC 30 20:30:15.0±1.4**, 35°.98N**±0°.03×**31°.98E**±0°.04**, h62**^{km}±10^{km}**, n35,** σ**1^{s}.37**/48**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZI	**Gazipasa**	**0.37**	**47**	PG	**Pn**	**20 30 25.9**	**-0.1**
GAZI				SG	**Sn**	**20 30 34.1**	**+0.1**
GAZI	**Gazipasa**	**0.37**	**47**	*i* P	**Pn**	**20 30 25.5**	**-0.5**
GAZI				*i* S	**Sn**	**20 30 33.9**	**-0.1**
ALAN	**Alanya-ANTALYA**	**0.58**	**4**	PG	**Pn**	**20 30 27.6**	**-0.4**
ALAN				SG	**Sn**	**20 30 38.2**	**+0.7**
TEKE	**Tekeli-Mersin**	**0.94**	**80**	PG	**Pn**	**20 30 32.7**	**+0.4**
TEKE				SG	**Sn**	**20 30 46.9**	**+1.8**
ALFC	**Alefka**	**0.97**	**148**	P	**Pn**	**20 30 32.9**	**+0.1**
ALFC				S	**Sn**	**20 30 46.2**	**+0.3**
ALFC				AML	AML	20 30 46.8	
	0.5nm,0.4s						
ALFC				AML	AML	20 30 46.8	
	0.5nm,0.4s						
ALFC				AML	AML	20 30 47.8	
	0.4nm,0.2s						
ALFC				AML	AML	20 30 47.8	
	0.4nm,0.2s						
KEPZ	**Antalya-Kepez**	**0.97**	**342**	*i* P	**Pn**	**20 30 32.6**	**-0.2**
KEPZ				*i* S	**Sn**	**20 30 44.2**	**-1.7**
AKMS	**Akamas**	**1.00**	**163**	P	Pn	20 30 34.9	+1.6
AKMS				AML	AML	20 30 47.7	
	0.4nm,0.5s						
AKMS				AML	AML	20 30 47.7	
	0.4nm,0.5s						
AKMS				S	**Sn**	**20 30 48.3**	**+1.6**
ERMK	**Ermenek**	**1.00**	**49**	*i* P	**Pn**	**20 30 32.7**	**-0.7**
ERMK				*i* S	**Sn**	**20 30 47.7**	**+0.7**
BERE	**Bereket-Mersin**	**1.07**	**70**	PN	**Pn**	**20 30 34.2**	**-0.1**
BERE				SN	**Sn**	**20 30 49.7**	**+1.2**
TEVE	**Tevekalti-Mers**	**1.27**	**69**	PN	**Pn**	**20 30 37.5**	**+0.7**
AKKU	**Akkuyu-Mersin**	**1.29**	**82**	PN	**Pn**	**20 30 37.5**	**+0.6**
NATA	**Nata**	**1.29**	**158**	P	Pn	20 30 39.3	+2.2
AKUM	**Antalya-Kumluc**	**1.37**	**285**	*i* P	**Pn**	**20 30 40.1**	**+2.1**
TISA	**Tisan-Mersin**	**1.39**	**82**	PN	**Pn**	**20 30 38.9**	**+0.6**
KARG	**Kargicak-Mersi**	**1.42**	**80**	PN	**Pn**	**20 30 39.5**	**+0.8**
SEYD	**Seydisehir-KON**	**1.43**	**356**	PN	**Pn**	**20 30 39.3**	**+0.4**
ATHAL	**Athalassa**	**1.43**	**125**	S	**Sn**	**20 30 56.8**	**+0.1**
SZAC	**Souni**	**1.43**	**149**	P	Pn	20 30 41.0	+2.1
KEBE	**Keben-Mersin**	**1.48**	**71**	PN	**Pn**	**20 30 40.7**	**+1.1**
CSS	**Mathiatis**	**1.50**	**132**	PN	**Pn**	**20 30 39.6**	**-0.2**
CSS				SN	**Sn**	**20 30 57.9**	**-0.5**
CSS	**Mathiatis**	**1.50**	**132**	*i* P	**Pn**	**20 30 39.5**	**-0.3**
CSS				*i* S	**Sn**	**20 30 54.2**	**-4.2**
CSS	**Mathiatis**	**1.50**	**132**	P	**Pn**	**20 30 39.9**	**0.0**
CSS				S	**Sn**	**20 30 57.5**	**-0.9**
KRMN	**Karaman**	**1.58**	**41**	PN	**Pn**	**20 30 41.5**	**+0.6**
ASGA	**Asgata**	**1.58**	**139**	P	**Pn**	**20 30 42.0**	**+1.1**
ASGA				S	**Sn**	**20 31 00.5**	**+0.2**
ASGA				AML	AML	20 31 02.6	
	0.1nm,0.5s						
ASGA				AML	AML	20 31 02.6	
	0.1nm,0.5s						
MVOU	**Mavrovouni**	**1.66**	**125**	P	**Pn**	**20 30 41.7**	**-0.2**
MVOU				S	**Sn**	**20 31 01.4**	**-0.8**
MVOU				AML	AML	20 31 02.0	
	0.1nm,0.4s						
MVOU				AML	AML	20 31 02.0	
	0.1nm,0.4s						
MVOU				AML	AML	20 31 02.0	
	0.2nm,0.2s						
MVOU				AML	AML	20 31 02.0	
	0.2nm,0.2s						
KORT	**Korkueli**	**1.66**	**308**	PN	**Pn**	**20 30 41.4**	**-0.7**
KORT	**Korkueli**	**1.66**	**308**	*i* P	**Pn**	**20 30 40.8**	**-1.2**
KMER	**Konya-Meram**	**1.81**	**10**	*i* P	**Pn**	**20 30 47.6**	**+3.5**
KIZK	**Mersin**	**1.82**	**73**	*i* P	**Pn**	**20 30 45.3**	**+1.2**
KIZK				*i* S	**Sn**	**20 31 03.2**	**-2.9**
KIZK				IAML		20 31 30.0	
	comp=E,45nm,1.8s						
AKAS	**Kas**	**1.94**	**278**	PN	**Pn**	**20 30 44.6**	**-1.2**
AKAS	**Kas**	**1.94**	**278**	*i* P	**Pn**	**20 30 47.2**	**+1.4**
KONT	**Konya--Tatoy**	**1.99**	**9**	PN	**Pn**	**20 30 47.2**	**+0.8**
MERS	**Mersin**	**2.23**	**66**	PN	**Pn**	**20 30 50.1**	**+0.3**
KERG	**Konya-Eregli**	**2.24**	**50**	*i* P	**Pn**	**20 30 50.7**	**+0.7**
KERG				*i* S	**Sn**	**20 31 13.3**	**-3.3**
CMRD	**Camardi-Nigde**	**2.94**	**54**	PN	**Pn**	**20 31 00.5**	**+1.0**

IDC ***30*** *20:47:49.3±2.3, 36°.19N×142°.27E, h0^{km}, mb3.4/3, mb1 3.6/7, mb1mx3.4/45, mbtmp3.6/7, ML3.0/4, Error ellipse: s-maj=48.1km s-min=25.7km az=81.0*

JMA ***30*** *20:47:53.6±0.2, 36°.21N×141°.94E, h66^{km}, M3.2*

ISC 30 20:47:53.9±1.5**, 36°.21N**±0°.08×**141°.9E**±0°.1**, h23**^{km}**, n14,** σ**1^{s}.07**/17**, mb3.4**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.01**	**241**	P	**Pb**	**20 48 12.6**	**-0.2**
CHOJ				S	**Sn**	**20 48 26.3**	**0.0**
JHYU	**Hitachinakayam**	**1.10**	**277**	P	**Pn**	**20 48 13.4**	**-0.6**
JHYU				S	**Sn**	**20 48 28.8**	**+0.3**
JHO	**Hitachi**	**1.18**	**290**	P	**Pn**	**20 48 14.1**	**-0.9**
JFK	**Kawauchi**	**1.44**	**324**	P	**Pn**	**20 48 18.4**	**-0.3**
JFT	**Otama**	**1.84**	**316**	P	**Pn**	**20 48 24.8**	**+0.7**
JAG	**Ashikaga**	**2.02**	**277**	P	**Pn**	**20 48 26.5**	**-0.1**
MJAR	**Matsushiro Arr**	**3.03**	**277**	Pn	**Pn**	**20 48 41.9**	**+1.3**
	1.1nm,0.3s,baz=91,slow=10.0,SNR=83						
MAT	**Matsushiro**	**3.03**	**277**	P	**Pn**	**20 48 41.5**	**+0.9**
MAT				*e*S	**Sn**	**20 49 13.6**	**-2.6**
JHJ	**Hachijo jima 2**	**3.56**	**211**	Pn	**Pn**	**20 48 48.4**	**+0.6**
	20nm,0.3s,baz=72,slow=20,SNR=1.4						
ASAJ	**Asahikawa**	**7.92**	**3**	Pn	**Pn**	**20 49 46.8**	**-0.8**
	0.2nm,0.3s,baz=193,slow=18,SNR=2.4						
USRK	**Ussuriysk Ar.**	**11.02**	**319**	Pn	**Pn**	**20 50 31.1**	**+1.0**
	baz=108,slow=14,SNR=2.5						
SONM	**Songino Array**	**28.60**	**305**	P	**P**	**20 53 49.6**	**+1.2**
	0.2nm,0.5s,baz=108,slow=9.3,SNR=2.5						
MKAR	**Makanchi Array**	**44.92**	**303**	P	**P**	**20 56 06.7**	**-0.2**
	0.3nm,0.6s,baz=89,slow=10,SNR=5.1						
WRA	**Warramunga Arr**	**56.31**	**189**	P	**P**	**20 57 31.7**	**-1.2**
	0.3nm,0.5s,baz=7.3,slow=7.3,SNR=1.6						

JSN ***30*** *20:54:32.8±0.8, 19°.56N×75°.54W, h15^{km}±999^{km}, MD4.0*

SSNC ***30*** *20:54:33.3±0.8, 19°.57N×75°.53W, h32^{km}±5^{km}, MD3.3, ML3.2, MW3.5*

ISC 30 20:54:32.5±1.3**, 19°.66N**±0°.06×**75°.54W**±0°.05**, h46**^{km}±16^{km}**, n11,** σ**0^{s}.71**/18**, 1C-4D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCC	**Rio Carpintero**	**0.36**	**337**	*e*P	**Pn**	**20 54 42.2**	**+0.3**
RCC				*e*S	**Sn**	**20 54 48.4**	**-0.1**
RCC				IAML		20 54 48.6	
	comp=E,2µm,0.2s						
RCC				IAML		20 54 49.1	
	comp=N,2µm,0.2s						
GTMO	**Guantanamo**	**0.56**	**42**	*e*P	**Pn**	**20 54 44.3**	**0.0**
GTMO				*e*S	**Sn**	**20 54 52.2**	**-0.5**
GTMO				IAML		20 54 53.4	
	comp=E,21µm,0.2s						
GTMO				IAML		20 54 53.6	
	comp=N,23µm,0.3s						
MOAC	**Moa**	**1.13**	**29**	*e*P	**Pn**	**20 54 52.6**	**+0.7**
MOAC				*e*S	**Sn**	**20 55 07.6**	**+1.2**
MOAC				IAML		20 55 09.3	
	comp=N,404nm,0.5s						
MOAC				IAML		20 55 09.5	
	comp=E,444nm,0.5s						
MASC	**Masc**	**1.34**	**67**	*e*P	**Pn**	**20 54 54.6**	**-0.1**
MASC				*e*S	**Sn**	**20 55 10.4**	**-0.9**
MASC				IAML		20 55 11.7	
	comp=E,129nm,0.4s						
MASC				IAML		20 55 12.1	
	comp=N,76nm,0.1s						
LMGC	**Las Mercedes**	**1.43**	**286**	*e*P	**Pn**	**20 54 56.5**	**+0.5**
LMGC				*e*S	**Sn**	**20 55 13.1**	**-0.5**
LMGC				IAML		20 55 13.6	
	comp=N,741nm,0.1s						
LMGC				IAML		20 55 13.9	
	comp=E,398nm,0.1s						
GWJ	**Greenwich**	**1.94**	**216**	⇑*i*P	**Pn**	**20 55 02.9**	**-0.2**
STH	**Stony Hill**	**1.98**	**217**	⇓*i*P	**Pn**	**20 55 03.4**	**-0.2**
BBJ	**Bamboo Saint A**	**2.07**	**232**	*i* P	**Pn**	**20 55 04.8**	**0.0**
PCJ	**Portland Cotta**	**2.45**	**219**	⇓*i*P	**Pn**	**20 55 10.8**	**+0.8**
CCCC	**Cccc**	**2.58**	**307**	*e*P	**Pn**	**20 55 11.8**	**0.0**
CCCC				*e*S	**Sn**	**20 55 40.6**	**-1.4**
CCCC				IAML		20 55 43.3	
	comp=E,19nm,0.3s						
CCCC				IAML		20 55 43.5	
	comp=N,12nm,0.3s						
MCJ	**Malvern**	**2.67**	**230**	⇓*i*P	**Pn**	**20 55 14.0**	**+0.9**
MCJ				⇓*i*S	**Sn**	**20 55 44.3**	**+0.1**

IDC 30 20:58:49.4±3.8**, 28°.01S**×**73°.82E, h0**^{km}**, mb3.5**/4**, mb1 3.8**/4**, mb1mx3.4**/34**, mbtmp3.5**/4**, Error ellipse: s-maj=112.4km s-min=36.8km az=47.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**20.30**	**356**	T	T	21 24 15.6	
	baz=177,slow=76,SNR=8.6						
H08S1	**Diego Carcia H**	**20.30**	**356**	T	T	21 24 17.5	
	baz=177,slow=76,SNR=7.5						
H08S3	**Diego Garcia H**	**20.31**	**356**	T	T	21 24 13.9	
	baz=177,slow=76,SNR=12						
CMAR	**Chiang Mai Arr**	**52.20**	**31**	P	P	21 08 02.7	+0.5
	0.1nm,0.4s,baz=211,slow=10,SNR=1.0						
ASAR	**Alice Springs**	**53.78**	**100**	P	P	21 08 14.2	+0.2
	1.0nm,0.7s,baz=250,slow=6.4,SNR=14						
WRA	**Warramunga Arr**	**55.40**	**96**	P	P	21 08 25.2	-0.6
	0.9nm,0.8s,baz=251,slow=7.2,SNR=7.7						
MKAR	**Makanchi Array**	**74.85**	**6**	P	P	21 10 30.4	-1.1
	0.1nm,0.5s,baz=193,slow=5.8,SNR=1.9						
YKA	**Yellowknife Ar**	**145.07**	**7**	PKPbc	PKPab	21 18 27.6	+0.1
	0.4nm,0.8s,baz=335,slow=2.8,SNR=4.7						

IDC ***30*** *21:15:41.5±4.4, 30°.49N×131°.63E, h0^{km}, mb3.3/3, mb1 3.4/4, mb1mx3.2/29, mbtmp3.3/4, ML2.8/1, MS2.9/3, Ms1 2.9/3, ms1mx2.7/16, Error ellipse: s-maj=99.3km s-min=48.8km az=9.0*

JMA ***30*** *21:15:52.6±0.1, 31°.77N×131°.91E, h25^{km}±1^{km}, M3.4*

ISC 30 21:15:52.5±2.1**, 31°.79N**±0°.05×**131°.9E**±0°.1**, h28**^{km}±12^{km}**, n13,** σ**0^{s}.65**/19**, mb3.1**/3**, 2C-4D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNKG	**Nichinankitago**	**0.46**	**254**	⇓P	**Pb**	**21 16 01.7**	**-0.5**
JNKG				*e*S	**Sb**	**21 16 08.6**	**-0.2**
JTSN	**Tsuno**	**0.56**	**324**	⇓P	**Pb**	**21 16 04.0**	**+0.1**
JTSN				S	**Sb**	**21 16 11.9**	**+0.3**
JNAR	**Kushima--Naru**	**0.60**	**244**	⇓P	**Pb**	**21 16 04.3**	**-0.1**
JNAR				*e*S	**Sb**	**21 16 12.8**	**+0.3**
JHHC	**Hyugahichiya**	**0.69**	**341**	⇓P	**Pn**	**21 16 06.1**	**-0.2**
JHHC				*e*S	**Sn**	**21 16 15.5**	**-0.5**
JTZ	**Takazaki**	**0.70**	**279**	⇑P	**Pb**	**21 16 06.1**	**0.0**
JTZ				*e*S	**Sb**	**21 16 15.5**	**+0.1**
JZO	**Okuchi**	**1.16**	**288**	P	**Pn**	**21 16 13.3**	**+0.5**
JZO				*e*S	**Sb**	**21 16 29.3**	**+0.8**
JIU3	**Izumi3**	**1.19**	**310**	⇑P	**Pb**	**21 16 14.3**	**-0.1**
JIU3				*e*S	**Sb**	**21 16 30.2**	**+0.8**
JTN	**Tanegashima 3**	**1.38**	**215**	P	**Pn**	**21 16 16.0**	**+0.1**
JTN				*e*S	**Sn**	**21 16 33.7**	**+0.5**
KSRS	**Korea Array**	**6.53**	**331**	Pn	Pn	21 17 34.4	+7.9
	0.1nm,0.3s,baz=148,slow=16,SNR=2.0						
KSRS				LR	LR	21 20 18.1	
	comp=Z,72nm,18.3s,baz=96,slow=36						
USRK	**Ussuriysk Ar.**	**12.39**	**0**	LR	LR	21 23 19.7	
	comp=Z,55nm,20.6s,baz=200,slow=34						
SONM	**Songino Array**	**25.14**	**317**	P	**P**	**21 21 14.7**	**-0.5**
	0.8nm,0.7s,baz=132,slow=9.3,SNR=7.0						
SONM				LR	LR	21 32 32.8	
	comp=Z,31nm,20.6s,baz=72,slow=39						
MKAR	**Makanchi Array**	**40.53**	**306**	P	**P**	**21 23 27.7**	**-1.4**
	0.2nm,0.5s,baz=91,slow=9.2,SNR=5.4						
YKA	**Yellowknife Ar**	**72.14**	**27**	P	**P**	**21 27 15.3**	**+1.3**
	0.1nm,0.6s,baz=303,slow=5.6,SNR=1.6						

ARE ***30*** *21:48:55±2.1, 15°.3S±0°.1×74°.54W±0°.09, h36^{km}±9^{km}, Error ellipse: s-maj=19.5km s-min=3.7km az=217.0*

NEIC 30 21:48:54.4±1.7**, 15°.3S**±0°.1×**74°.5W**±0°.2**, h66**^{km}±33^{km}**, mb3.8**/1**, ML4.2**(ARE)**, Error ellipse: s-maj=28.2km s-min=8.4km az=54.0, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**3.97**	**325**	Pn	Pn	21 49 52.2	-0.7
NNA				Sn	Sn	21 50 39.5	+1.2
PB12	**IPOC Station P**	**5.21**	**130**		Pn	21 50 10.7	+0.9
PB16	**IPOC Station P**	**5.68**	**123**		Pn	21 50 17.1	+0.3
PSGCX	**Pisagua**	**6.01**	**136**	Pn	Pn	21 50 20.3	-0.5
MNMC	**Minye Minye**	**6.07**	**130**	Pn	Pn	21 50 21.3	-0.5
LPAZ	**La Paz**	**6.23**	**100**	Pn	Pn	21 50 24.2	-0.1
PB11	**IPOC Station P**	**6.44**	**135**	Pn	Pn	21 50 27.3	+0.6
GO01	**Chusmiza**	**6.70**	**131**	Pn	Pn	21 50 31.8	+1.2
PATCX	**Punta Patache**	**6.90**	**144**	Pn	Pn	21 50 33.3	+0.3
PB01	**IPOC Station P**	**7.47**	**141**	Pn	Pn	21 50 41.9	+1.2
PB01					Sn	21 52 03.2	-0.8
PB07	**IPOC Station P**	**7.78**	**146**	Pn	Pn	21 50 45.0	0.0
PB07				Sn	Sn	21 52 10.5	-1.2
PB09	**IPOC Station P**	**8.19**	**143**	Pn	Pn	21 50 50.7	0.0
PB09					Sn	21 52 21.4	-0.6
LVC	**Limon Verde**	**9.02**	**145**	Pn	Pn	21 51 02.6	+0.4
LVC				Sn	Sn	21 52 41.9	-0.6
ROSC	**El Rosal**	**19.99**	**1**	P	P	21 53 22.3	+0.3
ROSC				IAmb	IAmb	21 53 31.9	
	comp=Z,4.9nm,0.9s						

IDC ***30*** *21:50:26.1±1.0, 23°.08N×80°.71W, h0^{km}, mb3.6/6, mb1 4.0/10, mb1mx3.7/34, mbtmp3.8/10, ML3.5/4, MS3.2/3, Ms1 3.2/3, ms1mx2.6/43, Error ellipse: s-maj=28.6km s-min=19.9km az=90.0*

NEIC ***30*** *21:50:27.8±1.2, 23°.11N±0°.04×80°.70W±0°.09, h16^{km}±5^{km}, mb4.2/11, Error ellipse: s-maj=11.5km s-min=6.5km az=81.0*

SSNC ***30*** *21:50:28.9±2.3, 23°.26N×80°.64W, h7^{km}±18^{km}, MD3.6, ML3.2, MW3.7*

ISC 30 21:50:27.2±0.5**, 23°.10N**±0°.04×**80°.64W**±0°.05**, h10**^{km}**, n42,** σ**1^{s}.86**/48**, mb4.1**/11**, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGV	**Manicaragua**	**1.16**	**148**	*e*Pg	**Pb**	**21 50 50.3**	**+0.9**
MGV				*e*Sg	**Sb**	**21 51 06.8**	**+2.3**
MGV				IAML		21 51 10.5	
	comp=E,902nm,0.4s						
MGV				IAML		21 51 10.7	
	comp=N,478nm,0.2s						
SOR	**Soroa**	**2.20**	**262**	*e*P	**Pn**	**21 51 03.8**	**-0.1**
SOR				*e*S	**Sn**	**21 51 30.0**	**-1.2**
SOR				IAML		21 51 34.6	
	comp=E,112nm,0.5s						
SOR				IAML		21 51 35.4	
	comp=N,99nm,0.5s						
061Z	**Ochoppi**	**2.76**	**355**		**Pn**	**21 51 11.5**	**-0.1**
061Z				Sn	**Sn**	**21 51 45.0**	**0.0**
CCCC	**Cccc**	**3.27**	**125**	*e*P	**Pn**	**21 51 23.2**	**+4.7**
CCCC				*e*S	**Sb**	**21 52 05.2**	**0.0**
CBCY	**The Bluff, Cay**	**3.45**	**166**	Pn	**Pn**	**21 51 21.5**	**+0.5**
CBCY				Sn	**Sn**	**21 52 00.7**	**-1.2**
FSCY	**Frank Sound, G**	**3.81**	**188**	Pn	**Pn**	**21 51 25.8**	**-0.1**
060A	**Indiantown**	**3.92**	**4**	Pn	**Pn**	**21 51 27.6**	**+0.1**
LMGC	**Las Mercedes**	**4.54**	**131**	*e*P	**Pn**	**21 51 35.8**	**-0.2**
LMGC				*e*S	**Sn**	**21 52 28.3**	**-0.5**
DWPF	**Disney Wildern**	**5.04**	**352**	Pn	**Pn**	**21 51 41.7**	**-1.1**
RCC	**Rio Carpintero**	**5.55**	**123**	*e*P	**Pn**	**21 51 50.4**	**+0.5**
RCC				*e*S	**Sn**	**21 52 49.1**	**-4.6**
RCC				IAML		21 52 56.8	
	comp=N,16nm,0.4s						
RCC				IAML		21 52 57.1	
	comp=E,11nm,0.4s						
MTDJ	**Mount Denham**	**5.66**	**149**	Pn	**Pn**	**21 51 52.3**	**+0.8**
MOAC	**Moa**	**5.81**	**114**	*e*P	**Pn**	**21 51 54.8**	**+1.4**
MOAC				*e*S	**Sn**	**21 52 54.6**	**-5.6**
MOAC				IAML		21 52 59.3	
	comp=E,44nm,0.3s						
MOAC				IAML		21 52 59.9	
	comp=N,30nm,0.2s						
656A	**Willston**	**6.47**	**345**	Pn	**Pn**	**21 52 00.9**	**-1.5**
MASC	**Masc**	**6.64**	**115**	*e*P	**Pn**	**21 52 06.3**	**+1.5**
MASC				*e*S	**Sn**	**21 53 16.3**	**-4.3**
TEIG	**Tepich**	**7.66**	**249**	Pn	**Pn**	**21 52 17.1**	**-1.7**
	comp=N,1.9nm,0.3s,baz=167,slow=0.0,SNR=9.1						
TEIG	**Tepich**	**7.66**	**249**		**Pn**	**21 52 17.6**	**-1.2**
TEIG					**Sn**	**21 53 44.6**	**-1.1**
APG	**El Apazote**	**12.29**	**231**	Pn	**Pn**	**21 53 23.1**	**+0.5**
	comp=N,0.4nm,0.3s,baz=63,slow=14,SNR=2.0						
TKL	**Tuckaleechee C**	**12.80**	**348**	Pn	Pn	21 53 26.3	-3.1
	comp=N,0.4nm,0.3s,baz=161,slow=6.5,SNR=5.1						
TKL				LR	LR	21 58 40.5	
	comp=N,63nm,18.1s,baz=162,slow=39						

TKL	Tuckaleechee C	12.80	348		Pn	21 53 25.8	-3.5
SDV	Santo Domingo	17.09	144	P	Pn	21 54 28.5	+2.0
	comp=N,0.5nm,0.3s,baz=72,slow=19,SNR=10						
P46A	Rosedale	17.38	343	P	Pn	21 54 29.4	-0.4
P46A				IAmb	IAmb	21 54 38.3	
	comp=Z,19nm,1.0s						
JFWS	Jewell Farm	21.31	340	P	P	21 55 13.3	-0.8
JFWS				IAmb	IAmb	21 55 17.7	
	comp=Z,8.7nm,0.6s						
TXAR	Lajitas Array	21.55	292	P	P	21 55 16.9	-0.1
	comp=Z,0.6nm,0.6s,baz=115,slow=9.2,SNR=9.9						
TXAR	Lajitas Array	21.55	292	P	P	21 55 16.6	-0.4
TX31	Lajitas Ar. Si	21.55	292	P	P	21 55 13.7	-3.2
TX32	Lajitas Array	21.55	292	P	P	21 55 16.0	-1.0
SADO	Sadowa	21.65	3	P	P	21 55 18.2	+0.5
	comp=Z,9.6nm,1.0s,baz=248,slow=8.3,SNR=5.8						
SADO				LR	LR	22 03 29.6	
	comp=Z,58nm,18.0s,baz=58,slow=36						
SADO	Sadowa	21.65	3	P	P	21 55 17.7	0.0
SADO				IAmb	IAmb	21 55 21.6	
	comp=Z,13nm,1.0s						
G40A	Rib Lake	23.45	343	P	P	21 55 36.6	-0.1
G40A				IAmb	IAmb	21 55 41.5	
	comp=Z,5.1nm,0.9s						
ECSD	EROS Data Cent	24.43	331	P	P	21 55 45.9	-0.2
ECSD				IAmb	IAmb	21 55 47.9	
	comp=Z,2.6nm,0.7s						
EYMN	Ely	26.26	343	P	P	21 56 02.5	-0.1
EYMN				IAmb	IAmb	21 56 07.5	
	comp=Z,6.2nm,1.1s						
GO01	Chusmiza	43.96	164	P	P	21 58 34.3	-0.9
GO01				IAmb	IAmb	21 58 39.5	
	comp=Z,4.1nm,0.8s						
YKA	Yellowknife Ar	45.56	339	P	P	21 58 46.5	-0.5
	comp=Z,0.4nm,0.7s,baz=128,slow=8.7,SNR=8.2						
ILULI	Ilulissat	49.42	13	P	P	21 59 14.3	-2.7
ILAR	Eielson Array	59.24	333	P	P	22 00 29.2	+0.8
	comp=Z,0.4nm,0.8s,baz=114,slow=4.9,SNR=4.8						
ILAR	Eielson Array	59.24	333	P	P	22 00 28.1	-0.4
JMIC	Jan Mayen	62.53	21	LR	LR	22 28 26.5	
	comp=Z,28nm,19.1s,baz=192,slow=36						
PLCA	Paso Flores	64.20	171	P	P	22 01 01.5	-0.7
	comp=Z,4.1nm,1.1s,baz=273,slow=6.7,SNR=3.0						
PLCA	Paso Flores	64.20	171	P	P	22 01 01.4	-0.7
NOA	NORSAR Array B	70.95	31	P	P	22 01 45.8	+1.1
	comp=Z,0.3nm,0.7s,baz=283,slow=6.0,SNR=1.9						
WRA	Warramunga Arr	147.35	269	PKPbc	PKPdf	22 10 12.0	+2.5
	comp=Z,1.3nm,0.6s,baz=77,slow=3.8,SNR=20						
ASAR	Alice Springs	148.33	262	PKPbc	PKPdf	22 10 14.6	+3.5
	comp=Z,1.3nm,0.6s,baz=79,slow=2.3,SNR=19						

*IDC **30** 22:11:00.0±2.8, 47°.89N×158°.47E, h0^{km}, mb3.2/3, mb1 3.5/4, mb1mx3.1/44, mbtmp3.3/4, ML2.3/1, Error ellipse: s-maj=52.3km s-min=38.4km az=167.0*

*KRSC **30** 22:11:06.8±0.9, 48°.40N×157°.00E, h30^{km}±28^{km}, ML4.0*

ISC 30 22:10:59.7±2.6**, 47°.8N**±0°.1×**156°.6E**±0°.3**, h35^{km}, n19, σ3^{s}.03**/19**, mb3.4**/3**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.86	354	eS	Sn	22 12 14.9	-1.1
PAU	Pauzhetka	3.63	2	eP	Pn	22 11 55.5	+2.1
PAU				eS	Sn	22 12 32.8	-2.2
ASAK	Asacha	4.63	10	eP	Pn	22 12 10.4	+3.2
MTVR	Mutnovka	4.76	12	eP	Pn	22 12 12.3	+3.2
MTVR				eS	Sn	22 13 01.9	-1.2
RUS	Russkaya	4.76	14	eP	Pn	22 12 12.1	+3.2
RUS				eS	Sn	22 13 01.7	-1.2
GRL	Gorelyy	4.81	11	eP	Pn	22 12 13.2	+3.4
GRL				eS	Sn	22 13 03.4	-0.9
PETK	Petropavlovsk-	5.32	7	Pn	Pn	22 12 17.9	+1.2
	0.6nm,0.3s,baz=201,slow=13,SNR=11						
PETK				Sn	Sn	22 13 24.9	+8.2
	0.2nm,0.3s,baz=177,slow=28,SNR=1.7						
UGLR	Uglovaya	5.56	14	eP	Pn	22 12 24.8	+4.8
AVH	Avacha	5.60	13	eP	Pn	22 12 24.8	+4.2
SMAR	Somma	5.61	14	eP	Pn	22 12 24.2	+3.4
NLC	Nalytchevo	5.62	17	eS	Sn	22 13 21.6	-2.4
SDLR	Sedlovina	5.64	14	eP	Pn	22 12 24.4	+3.3
KRX	Arik	5.68	13	eP	Pn	22 12 25.5	+3.8
H11S1	WAKE ISLAND Hy	30.40	161	T	T	22 50 53.7	
	baz=344,slow=76,SNR=8.9						
H11S3	WAKE ISLAND Hy	30.41	161	T	T	22 51 01.6	
	baz=344,slow=76,SNR=7.1						
H11S2	WAKE ISLAND Hy	30.42	161	T	T	22 50 50.6	
	baz=344,slow=76,SNR=6.6						
ILAR	Eielson Array	34.22	39	P	P	22 17 40.3	-1.3
	0.3nm,0.6s,baz=263,slow=6.3,SNR=5.0						
MKAR	Makanchi Array	48.52	298	P	P	22 19 53.1	+14
	0.3nm,0.8s,baz=65,slow=7.8,SNR=3.5						
YKA	Yellowknife Ar	48.62	38	P	P	22 19 37.6	-1.9
	0.1nm,0.5s,baz=294,slow=6.2,SNR=2.4						

IDC 30 22:23:59.7±2.1**, 7°.74S**×**126°.34E, h0^{km}, mb3.1**/1**, mb1 3.6**/3**, mb1mx3.4**/22**, mbtmp3.4**/3**, ML3.4**/2**, Error ellipse: s-maj=231.9km s-min=33.3km az=62.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.40	148	Pn	Pn	22 27 24.3	-0.7
	0.1nm,0.3s,baz=321,slow=13,SNR=0.7						
WRA				Sn	Sn	22 29 47.5	-18
	0.2nm,0.3s,baz=323,slow=25,SNR=5.6						
ASAR	Alice Springs	17.42	156	P	Pn	22 28 04.8	+0.4
	0.4nm,0.3s,baz=339,slow=11,SNR=22						
MKAR	Makanchi Array	66.91	329	P	P	22 34 54.0	0.0
	0.1nm,0.7s,baz=122,slow=7.6,SNR=1.5						

*SJA **30** 22:55:12.4±1.0, 23°.98S×66°.69W, h229^{km}±24^{km}, ML3.8, MW3.6*

*IDC **30** 22:55:13.6±1.3, 23°.89S×66°.56W, h197^{km}±12^{km}, mb3.7/2, mb1 3.6/7, mb1mx3.3/24, mbtmp3.9/7, MS3.3/2, Ms1 3.3/2, ms1mx2.6/25, Error ellipse: s-maj=20.4km s-min=18.0km az=16.0*

*GUC **30** 22:55:16.0±0.4, 23°.75S×67°.25W, h244^{km}±6^{km}, ML4.5*

ISC 30 22:55:13.0±0.7**, 23°.99S**±0°.06×**66°.68W**±0°.06**, h200^{km}, n38, σ1^{s}.46**/47**, 6C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AZAP	Zapla	1.50	99	i P	Pn	22 55 49.2	+2.3
AZAP				IAML		22 56 18.8	
	comp=Z,74nm,1.0s						
YJA	Yavi	2.10	31	i P	Pn	22 55 55.6	+2.5
LVC	Limon Verde	2.46	303	P	Pn	22 55 58.7	+1.9
	comp=Z,36nm,0.3s,baz=117,slow=6.7,SNR=355						
LVC				S	Sn	22 56 32.0	+1.0
	comp=Z,59nm,0.3s,baz=261,slow=21,SNR=50						
LVC	Limon Verde	2.46	303	⇓eP	Pn	22 55 58.9	+2.0
LVC				eS	Sn	22 56 31.9	+1.0
LVC	Limon Verde	2.46	303	i P	Pn	22 55 58.8	+1.9
LVC				IAML		22 56 36.0	
	comp=Z,123nm,0.9s						
PB15	IPOC Station P	2.67	286	⇑iP	Pn	22 56 00.8	+1.7
PB15				eS	Sn	22 56 35.0	+0.1
PB15	IPOC Station P	2.67	286	i P	Pn	22 56 00.8	+1.7
PB06	IPOC Station P	2.94	295	⇑iP	Pn	22 56 03.7	+1.6
PB06				eS	Sn	22 56 39.9	-0.7
PB06				IAML		22 56 42.1	
	comp=E,804nm,0.2s						
PB09	IPOC Station P	3.21	312	eP	Pn	22 56 07.4	+2.0
PB09				eS	Sn	22 56 45.6	-0.6
PB09	IPOC Station P	3.21	312	i P	Pn	22 56 07.3	+2.0
PB09				IAML		22 56 49.7	
	comp=Z,228nm,0.3s						
PB03	IPOC Station P	3.42	304	⇑iP	Pn	22 56 09.0	+1.1
PB03				eS	Sn	22 56 49.0	-1.8
PB03				IAML		22 56 50.7	
	comp=N,524nm,0.3s						
PB05	IPOC Station P	3.42	289	⇑iP	Pn	22 56 09.0	+1.2
PB05				eS	Sn	22 56 48.9	-1.8
PB05	IPOC Station P	3.42	289	i P	Pn	22 56 08.6	+0.8
PB05				IAML		22 56 52.8	
	comp=Z,175nm,0.4s						
PB14	IPOC Station P	3.45	259	i P	Pn	22 56 09.6	+1.2
PB14				IAML		22 56 55.5	
	comp=Z,213nm,0.7s						
PB10	IPOC Station P	3.58	277	⇑iP	Pn	22 56 10.7	+1.1
PB10				eS	Sn	22 56 52.5	-1.4
PB10				IAML		22 56 55.0	
	comp=E,278nm,0.2s						
PB10	IPOC Station P	3.58	277	i P	Pn	22 56 10.6	+1.1
PB10				IAML		22 56 57.0	
	comp=Z,159nm,0.3s						
PB04	IPOC Station P	3.59	297	i P	Pn	22 56 10.8	+0.9
PB07	IPOC Station P	3.71	307	⇑iP	Pn	22 56 12.4	+1.0
PB07				eS	Sn	22 56 55.4	-1.8
PB07				IAML		22 56 57.8	
	comp=E,461nm,0.4s						
PB08	IPOC Station P	4.46	329	eP	Pn	22 56 22.6	+1.6
PB08				eS	Sn	22 57 14.3	0.0
PB08				IAML		22 57 20.2	
	comp=E,195nm,0.7s						
CYA	Choya	4.51	170	i P	Pn	22 56 23.3	+2.2
ACLC	CERRO LA CRUZ	5.42	182	i P	Pn	22 56 34.2	+1.2
APLL	PUNTA DE LOS L	6.38	179	i P	Pn	22 56 45.4	+0.2
APLL				IAML		22 57 57.9	
	comp=Z,34nm,0.9s						
ACCO	Cerro Coronel	6.91	197	i P	Pn	22 56 53.1	+0.8
ACCO				IAML		22 58 11.2	
	comp=Z,16nm,3.4s						
AMOG	MOGNA	7.11	193	i P	Pn	22 56 54.3	-0.4
AMOG				IAML		22 58 14.6	
	comp=Z,21nm,0.3s						
LPAZ	La Paz	7.78	350	P	Pn	22 57 05.0	+1.0
	comp=Z,1.1nm,0.3s,baz=164,slow=6.9,SNR=27						
LPAZ				S	Sn	22 58 30.8	-1.5
	comp=Z,0.2nm,0.3s,baz=323,slow=24,SNR=6.1						
ACAN	Cantantal	8.27	183	i P	Pn	22 57 09.6	-0.2
CPUP	Villa Florida	8.79	107	P	Pn	22 57 16.1	-0.3
	comp=Z,0.3nm,0.3s,baz=280,slow=11,SNR=11						
SIV	San Ignacio	9.54	35	P	Pn	22 57 24.9	-1.5
	comp=Z,0.4nm,0.3s,baz=226,slow=15,SNR=8.1						
PLCA	Paso Flores	17.01	190	P	Pn	22 59 00.1	+0.7
	comp=Z,0.1nm,0.3s,baz=279,slow=9.9,SNR=3.7						
PTGA	Pitinga	24.02	17	LR	LR	23 10 14.3	
	comp=Z,49nm,19.7s,baz=50,slow=38						
JTS	Las Juntas de	38.46	330	LR	LR	23 18 41.3	
	comp=Z,66nm,18.0s,baz=128,slow=37						
DBIC	Dimbokro	67.52	71	P	P	23 05 47.6	-0.5
	comp=Z,2.0nm,0.8s,baz=241,slow=10,SNR=1.8						
YKA	Yellowknife Ar	94.21	340	P	P	23 08 09.4	+0.8
	comp=Z,0.4nm,0.6s,baz=132,slow=4.8,SNR=7.2						
ASAR	Alice Springs	128.59	204	PKP	PKiKP	23 13 57.7	+0.1
	comp=Z,0.6nm,0.7s,baz=144,slow=2.8,SNR=5.1						
WRA	Warramunga Arr	131.77	207	PKP	PKiKP	23 14 04.0	-0.1
	comp=Z,0.3nm,0.3s,baz=158,slow=1.7,SNR=3.0						
ZALV	Zalesovo Beam	143.25	28	PKP	PKPbc	23 14 21.4	+0.9
	comp=Z,0.7nm,0.6s,baz=316,slow=4.0,SNR=2.9						
KSH	Kashi	144.95	55	PKPbc	PKPbc	23 14 24.3	-2.0
KSH				pPKP	pPKPdf	23 15 21.0	+1.2
KSH				PP	PP	23 17 48.0	+1.2
KSH				PKS	PKSdf	23 17 58.5	-3.6
KSH				SKKS		23 24 14.5	
MKAR	Makanchi Array	146.33	40	PKPbc	PKPbc	23 14 30.2	+0.1
	comp=Z,1.3nm,0.7s,baz=308,slow=3.1,SNR=18						

*NNC **30** 23:04:57.8±0.3, 43°.11N×78°.34E, h0^{km}, mb2.9, mpv2.8, Error ellipse: s-maj=4.9km s-min=1.7km az=176.0*

*IASPEI **30** 23:04:58.3±0.8, 43°.08N±0°.03×78°.35E±0°.02, h11^{km}±5^{km}, Error ellipse: s-maj=4.4km s-min=2.7km az=159.8, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*KRNET **30** 23:04:58.5±0.1, 43°.08N×78°.35E, h18^{km}, mb2.6*

*SOME **30** 23:04:58.9, 43°.08N×78°.35E, h15^{km}*

ISC 30 23:04:58.6±0.9**, 43°.10N**±0°.02×**78°.31E**±0°.01**, h5^{km}**±7^{km}**, n66, σ1^{s}.37**/125**, 18C-12D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	Saty	0.08	119	eP	Pg	23 05 00.7	+0.2
	146nm,0.1s						
SATY				eS	Sg	23 05 02.1	+0.3
	3μm,0.2s						
SATY	Saty	0.08	119	P	Pg	23 05 01.0	+0.6
	157nm,0.1s						
SATY				S	Sg	23 05 01.6	-0.2
	3μm,0.2s						
KPKS	Kokpek	0.46	36	eP	Pg	23 05 07.5	+0.1
	baz=33						
KPKS				eS	Sg	23 05 13.6	+0.2
	baz=33						
KPKS	Kokpek	0.46	36	eP	Pg	23 05 07.5	+0.1
	10nm,0.1s						
KPKS				eS	Sg	23 05 13.7	+0.2
	34nm,0.3s						
UZB	Uzynbulak	0.52	84	eP	Pg	23 05 08.1	-0.5
	baz=82						
UZB				eS	Sg	23 05 14.6	-0.9
	baz=82						
UZB	Uzynbulak	0.52	84	eP	Pg	23 05 08.1	-0.5
	18nm,0.1s						
UZB				eS	Sg	23 05 14.6	-0.9
	50nm,0.2s						
UZB	Uzynbulak	0.52	84	P	Pg	23 05 08.1	-0.5
	18nm,0.1s						
UZB				S	Sg	23 05 13.6	-1.8
	50nm,0.2s						
ANVS	Anan'yevo	0.57	237	⇑eP	Pg	23 05 10.0	+0.4
	baz=40						
ANVS				⇑iS	Sg	23 05 17.6	+0.6
	baz=40						
PRZ	Przheval'sk	0.62	174	⇑iP	Pg	23 05 10.2	-0.3
	baz=75						
PRZ				⇑iS	Sg	23 05 18.0	-0.5
	baz=75						
SHLS	Shalkode	0.84	86	eP	Pn	23 05 19.8	+2.6
	baz=85						
SHLS				eS	Sn	23 05 34.7	+4.7
	baz=85						
SHLS	Shalkode	0.84	86	eP	Pn	23 05 19.8	+2.6
	2.9nm,0.2s						
SHLS				eS	Sn	23 05 34.8	+4.7
	20nm,0.3s						
SHLS	Shalkode	0.84	86	P	Pn	23 05 20.9	+3.7
	3.7nm,0.2s						
SHLS				S	Sn	23 05 35.6	+5.6
	23nm,0.3s						
KOTS	Kotyrbulak	0.89	279	eP	Pb	23 05 16.2	-0.4
	baz=80						
KOTS				eS	Sg	23 05 28.6	+1.4
	baz=80						
KOTS	Kotyrbulak	0.89	279	eP	Pb	23 05 16.1	-0.4
	8.5nm,0.3s						
KOTS				eS	Sg	23 05 28.5	+1.4
	7.5nm,0.2s						
KOTS	Kotyrbulak	0.89	279	P	Pb	23 05 16.1	-0.4
	8.5nm,0.3s						
KOTS				S	Sb	23 05 27.5	-1.3
	5.4nm,0.3s						
PDGK	Podgornoye	0.89	75	P	Pb	23 05 14.8	-1.8
	1.0nm,0.1s						
PDGK				S	Sg	23 05 25.1	-2.1
	4.9nm,0.6s						
PDGK	Podgornoye	0.89	75	⇑P	Pb	23 05 13.7	-2.9
	2.1nm,0.5s						
PDGK				⇑S	Sg	23 05 25.8	-1.4
	3.8nm,0.4s						
MDOK	Medeo	0.93	274	eP	Pb	23 05 16.3	-1.0
	baz=76						
MDOK				eS	Sb	23 05 29.0	-1.0
	baz=76						
MDOK	Medeo	0.93	274	eP	Pb	23 05 16.3	-1.0
	2.4nm,0.2s						
MDOK				eS	Sb	23 05 28.9	-1.0
	3.1nm,0.2s						
MDOK	Medeo	0.93	274	P	Pb	23 05 16.2	-1.1
	3.0nm,0.5s						
MDOK				S	Sb	23 05 28.9	-1.0
	3.2nm,0.4s						
MDOK	Medeo	0.93	274	Pg	Pb	23 05 16.4	-0.8
	2.1nm,0.2s						
MDOK				Lg	Lg	23 05 28.0	
	2.7nm,0.6s						
TNSS	Tian-Shan	1.00	267	eP	Pb	23 05 18.0	-0.6
	baz=68						
TNSS				eS	Sb	23 05 31.7	-0.6
	baz=68						
TNSS	Tian-Shan	1.00	267	eP	Pb	23 05 18.0	-0.6
	7.3nm,0.6s						
TNSS				eS	Sb	23 05 31.7	-0.6
	8.2nm,0.4s						
TNSS	Tian-Shan	1.00	267	P	Pb	23 05 18.0	-0.6
	7.3nm,0.6s						
TNSS				S	Sb	23 05 30.7	-1.6
	8.2nm,0.4s						
ARXS	Arharly	1.17	343	eP	Pn	23 05 20.6	-1.0
	0.7nm,0.4s						
ARXS				eS	Sn	23 05 36.8	-1.2
	8.1nm,0.2s						
ARXS	Arharly	1.17	343	P	Pg	23 05 21.6	+0.6
	1.2nm,0.1s						
ARXS				S	Sn	23 05 36.8	-1.2
	8.1nm,0.2s						
CHKK	Chushkaly	1.23	309	eP	Pb	23 05 22.2	0.0
	baz=9.0						
CHKK				eS	Sn	23 05 38.2	-1.1
	baz=9.0						
CHKK	Chushkaly	1.23	309	eP	Pb	23 05 22.2	0.0
	2.1nm,0.2s						
CHKK				eS	Sn	23 05 38.2	-1.1
	12nm,0.2s						
CHKK	Chushkaly	1.23	309	P	Pb	23 05 22.2	0.0
	2.1nm,0.2s						
CHKK				S	Sn	23 05 38.2	-1.1
	12nm,0.2s						
IZV	Izvestkoviy	1.25	268	eP	Pb	23 05 22.3	-0.4
	baz=69						
IZV				eS	Sg	23 05 39.6	+0.9
	baz=69						
IZV	Izvestkoviy	1.25	268	eP	Pb	23 05 22.3	-0.4
	8.6nm,0.2s						
IZV				eS	Sg	23 05 39.6	+0.9
	10nm,0.5s						
IZV	Izvestkoviy	1.25	268	P	Pb	23 05 22.4	-0.2
	8.6nm,0.2s						
IZV				S	Sb	23 05 38.2	-0.9
	10nm,0.5s						
KDJ	Kajisay	1.28	221	⇑iP	Pb	23 05 22.3	-0.9
	baz=22						
KDJ				⇑iS	Sn	23 05 39.1	-1.7
	baz=22						
KTBS	Karatobe	1.34	298	eP	Pb	23 05 24.1	0.0
	9.9nm,0.2s						
KTBS				eS	Sg	23 05 42.7	+1.1
	14nm,0.4s						
KTBS	Karatobe	1.34	298	P	Pb	23 05 24.3	+0.2
	9.9nm,0.2s						
KTBS				S	Sb	23 05 41.2	-0.4
	14nm,0.4s						
MTBS	Maitube	1.38	272	eP	Pb	23 05 24.7	-0.2
	baz=73						
MTBS				eS	Sb	23 05 43.0	+0.1
	baz=73						
MTBS	Maitube	1.38	272	eP	Pb	23 05 24.7	-0.2
	4.5nm,0.1s						
MTBS				eS	Sb	23 05 42.9	+0.1
	8.2nm,0.3s						
MTBS	Maitube	1.38	272	P	Pb	23 05 24.1	-0.8
	4.2nm,0.2s						
MTBS				S	Sn	23 05 41.1	-2.1
	6.2nm,0.5s						
KTMS	Ketmen	1.53	76	eP	Pb	23 05 26.2	-1.3
	baz=75						
KTMS				eS	Sb	23 05 45.6	-1.6
	baz=75						
KTMS	Ketmen	1.53	76	eP	Pb	23 05 26.2	-1.3
	3.3nm,0.1s						
KTMS				eS	Sb	23 05 45.5	-1.6
	5.9nm,0.3s						
KTMS	Ketmen	1.53	76	P	Pb	23 05 26.7	-0.8
	3.3nm,0.1s						
KTMS				S	Sb	23 05 45.5	-1.6
	5.9nm,0.3s						
DJR	Jarkent	1.63	40	eP	Pb	23 05 28.5	-0.8
	1.7nm,0.5s						
DJR				eS	Sg	23 05 50.0	-1.1
	6.2nm,0.3s						
DJR	Jarkent	1.63	40	P	Pg	23 05 29.1	-0.8
	1.7nm,0.5s						
DJR				S	Sg	23 05 50.0	-1.1
	6.2nm,0.3s						
KUU	Kurty	1.64	300	eP	Pb	23 05 29.3	0.0
	baz=0.0						
KUU				eS	Sb	23 05 50.8	+0.5
	baz=0.0						
KUU	Kurty	1.64	300	eP	Pb	23 05 29.3	0.0
	4.2nm,0.2s						
KUU				eS	Sb	23 05 50.8	+0.5
	5.1nm,0.3s						
KUU	Kurty	1.64	300	P	Pb	23 05 29.3	0.0
	4.2nm,0.2s						
KUU				S	Sb	23 05 50.2	-0.1
	5.1nm,0.3s						
KST	Kastek	1.72	269	eP	Pb	23 05 30.8	0.0
	baz=70						
KST				eS	Sg	23 05 53.9	-0.1
	baz=70						
KST	Kastek	1.72	269	eP	Pb	23 05 30.8	0.0
	2.2nm,0.2s						
KST				eS	Sg	23 05 53.9	-0.1
	2.5nm,0.3s						
KST	Kastek	1.72	269	P	Pb	23 05 30.8	0.0
	2.6nm,0.3s						
KST				S	Sb	23 05 52.5	-0.2
	2.6nm,0.5s						
ULHL	Ulahol	1.75	242	⇑iP	Pb	23 05 30.7	-0.6
	baz=43						
ULHL				⇑iS	Sb	23 05 54.0	+0.4
	baz=43						
BOOM	Boomskoye usch	1.85	252	⇑iP	Pb	23 05 33.0	+0.1
	baz=53						
BOOM				⇑iS	Sg	23 05 57.3	-0.7
	baz=53						
DGS	Degeres	1.86	275	eP	Pb	23 05 33.2	0.0
	baz=76						
DGS				eS	Sg	23 05 58.1	-0.4
	baz=76						
DGS	Degeres	1.86	275	eP	Pb	23 05 33.2	0.0
	5.7nm,0.3s						
DGS				eS	Sg	23 05 58.1	-0.4
	4.5nm,0.4s						
DGS	Degeres	1.86	275	P	Pb	23 05 33.2	0.0
	5.7nm,0.3s						
DGS				S	Sb	23 05 56.7	-0.1
	4.5nm,0.4s						
TKM2	Tokmak 2	2.00	266	⇓iP	Pb	23 05 35.1	-0.4
	baz=67						
TKM2				⇓iS	Sb	23 06 01.1	+0.3
	baz=67						
KAPS	Kapalarasan	2.31	19	eP	Pb	23 05 40.6	-0.2
	2.4nm,0.5s						
KAPS				eS	Sb	23 06 10.6	+0.9
	1.7nm,0.3s						
KAPS	Kapalarasan	2.31	19	Pg	Pb	23 05 40.6	-0.2
	2.4nm,0.5s						
KAPS				Lg	Lg	23 06 09.5	
	1.7nm,0.3s						
KZA	Kyzart	2.48	247	⇓iP	Pb	23 05 41.7	-2.2
	baz=47						
KZA				⇓iS	Sb	23 06 13.0	-1.8
	baz=47						
KBK	Karagaybulak	2.51	261	⇓iP	Pb	23 05 41.9	-2.4
	baz=62						
KBK				⇓iS	Sb	23 06 13.5	-2.0
	baz=62						
SGDS	Sogindy	2.71	279	Pg	Pg	23 05 49.5	-1.1
	1.9nm,0.5s						
SGDS				Lg	Lg	23 06 24.5	
	1.4nm,0.4s						
AAK	Ala-Archa	2.84	262	⇓eP	Pn	23 05 46.4	+1.6
	baz=63						
AAK				⇓iS	Sb	23 06 21.6	-3.5
	baz=63						
AAK	Ala-Archa	2.84	262	⇑Pg	Pb	23 05 47.3	-2.6
	1.4nm,0.6s						
AAK				⇑Lg	Lg	23 06 29.2	
	1.8nm,0.6s						
UCH	Uchtor	2.93	254	⇑iP	Pn	23 05 47.6	+1.4
	baz=55						
UCH				⇑iS	Sn	23 06 23.5	+1.4
	baz=55						
AML	Almayashu	3.54	256	⇑iP	Pn	23 05 56.1	+1.5
	baz=56						
AML				⇑iS	Sn	23 06 38.2	+1.2
	baz=56						
MAKZ	Makanchi	4.53	34	⇓Pn	Pn	23 06 10.0	+2.2
	0.8nm,0.8s						
MAKZ				⇓Lg	Lg	23 07 25.4	
	0.4nm,0.6s						

MK31	Makanchi Array	4.65	36	⇓Pn	Pn	23 06 10.7	+1.2
	0.1nm,0.3s,baz=214,slow=12,SNR=5.9						
MK31				⇓Lg	Lg	23 07 25.5	
	0.5nm,0.6s,baz=212,slow=28,SNR=4.6						

RSNC 30 23:40:43.4±0.9, 3°.57N×76°.37W, h122km±4km, ML3.1, Mw3.6, 4C-6D, Fault plane solution: NP1:φs128.00000°, δ66.00000°, λ106.00000°., Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOTC	Yotoco, Valle	0.41	4	⇑*i*P	Pn	23 41 00.4	-0.9
YOTC				*e*S	Sn	23 41 14.1	-0.7
YOTC				*i*		23 41 17.9	
	comp=Z,374nm,0.4s						
MALC	Bahia Malaga	1.06	295	⇑*i*P	Pn	23 41 06.2	+0.1
MALC				*e*S	Sn	23 41 22.7	-0.7
MALC				*i*		23 41 27.1	
	comp=Z,298nm,0.7s						
POPC	Popayan, Colom	1.07	196	⇑*i*P	Pn	23 41 05.3	-1.3
POPC				*e*S	Sn	23 41 21.9	-2.1
ORTC	Ortega, Tolima	1.17	73	⇓*i*P	Pn	23 41 07.5	+0.1
ORTC				*e*S	Sn	23 41 25.9	+0.3
ORTC				*i*		23 41 26.9	
	comp=Z,505nm,0.3s						
PCON	Cinco Dias	1.24	181	*e*P	Pn	23 41 09.0	+0.3
PCON				*e*S	Sn	23 41 27.6	-0.1
PCON				*i*		23 41 34.3	
	comp=Z,477nm,0.4s						
PLMC	San Jos del P	1.33	4	*e*P	Pn	23 41 08.4	-0.7
PLMC				*e*S	Sn	23 41 28.4	-0.2
ANIL	Santa Ana	1.33	47	⇓*i*P	Pn	23 41 08.8	-0.6
ANIL				*e*S	Sn	23 41 28.6	-0.5
SOTA	Rioblanco	1.45	189	*e*P	Pn	23 41 10.6	-0.3
SOTA				*e*S	Sn	23 41 31.5	-0.2
TOLC	Tolima	1.45	46	⇑*i*P	Pn	23 41 10.4	-0.4
TOLC				*e*S	Sn	23 41 31.5	-0.1
TOLC				*i*		23 41 34.2	
	comp=Z,100nm,0.2s						
PRAC	Prado	1.49	85	⇓*i*P	Pn	23 41 11.1	+0.2
PRAC				*e*S	Sn	23 41 31.4	-0.4
GARC	Garzon, Huila	1.63	147	*e*P	Pn	23 41 12.3	-0.5
GARC				*e*S	Sn	23 41 34.3	-0.9
GARC				*i*		23 41 36.0	
	comp=Z,226nm,0.3s						
RREF	El Recreo	1.67	38	⇓*i*P	Pn	23 41 13.1	-0.5
RREF				*e*S	Sn	23 41 37.2	+0.7
RREF				*i*		23 41 50.4	
	comp=Z,90nm,0.4s						
PIZC	Pizarro, Choco	1.70	325	*e*P	Pn	23 41 12.5	-0.8
PIZC				*e*S	Sn	23 41 36.1	0.0
PIZC				*i*		23 41 44.3	
	comp=Z,136nm,0.9s						
GR1C	Gorgona, Isla	1.88	253	*e*P	Pn	23 41 13.7	-1.7
GR1C				*e*S	Sn	23 41 37.4	-2.6
GR1C				*i*		23 41 44.4	
	comp=Z,75nm,0.7s						
GUY2C	Guyana, Caldas	1.92	31	⇓*i*P	Pn	23 41 15.7	-0.8
GUY2C				*e*S	Sn	23 41 40.8	-0.9
GUY2C				*i*		23 41 43.2	
	comp=Z,111nm,0.6s						
CRUC	La Cruz	2.07	196	*e*P	Pn	23 41 17.9	-0.4
CRUC				*e*S	Sn	23 41 44.8	-0.1
CRUC				*i*		23 41 45.8	
	comp=Z,277nm,0.3s						
FLOC	Florencia	2.10	160	⇓*i*P	Pn	23 41 17.9	-0.4
FLOC				*e*S	Sn	23 41 43.8	-1.2
CBOC	Ciudad Bolivar	2.31	9	*e*P	Pn	23 41 20.2	-0.8
CBOC				*e*S	Sn	23 41 46.5	-3.2
CBOC				*i*		23 41 58.2	
	comp=Z,94nm,0.8s						
ROSC	El Rosal	2.40	58	*i* P	Pn	23 41 23.9	+1.5
ROSC				*e*S	Sn	23 41 51.6	-0.7
ROSC				*i*		23 41 55.9	
	comp=Z,48nm,0.4s						
NORC	Norcasia	2.48	37	*i* P	Pn	23 41 22.8	-0.3
NORC				*e*S	Sn	23 41 51.6	-2.0
CPAS2	Pasto	2.50	201	*e*P	Pn	23 41 23.7	+0.2
CPAS2				*e*S	Sn	23 41 53.7	-0.7
GCUF	Volcan Galeras	2.52	203	*e*P	Pn	23 41 23.1	-1.0
GCUF				*e*S	Sn	23 41 52.9	-2.4
VILC	Villavicencio,	2.73	79	*e*P	Pn	23 41 27.8	+1.4
VILC				*e*S	Sn	23 41 58.8	-0.6
VILC				*i*		23 42 05.6	
	comp=Z,62nm,0.7s						
HELC	Santa Helena	2.73	18	*e*P	Pn	23 41 26.1	-0.6
HELC				*e*S	Sn	23 41 59.3	-0.6
CHIC	Chingaza	2.83	68	*e*P	Pn	23 41 28.4	+0.4
CHIC				*e*S	Sn	23 42 01.8	-0.5
PTBC	PUERTO BERRIO,	3.51	33	*e*P	Pn	23 41 36.0	-0.6
PTBC				*e*S	Sn	23 42 16.6	-1.1
PTBC				*i*		23 42 20.5	
	comp=Z,22nm,0.4s						
PTAC	Punta Ardita,	3.83	338	*e*P	Pn	23 41 39.8	-0.9
PTAC				*e*S	Sn	23 42 21.6	-3.5
RUSC	La Rusia	4.01	55	*e*P	Pn	23 41 43.9	+0.4
RUSC				*i*		23 42 37.5	
	comp=Z,16nm,0.8s						
ZARC	Zaragoza, Cauc	4.18	21	*e*P	Pn	23 41 44.7	-0.7
ZARC				*e*S	Sn	23 42 32.0	-1.5
ZARC				*i*		23 42 38.0	
	comp=Z,29nm,0.4s						
UREC	San Jos de Ur	4.24	11	*e*P	Pn	23 41 45.5	-0.7
BRRC	Barranca, Sant	4.40	37	*e*P	Pn	23 41 47.4	-1.0
BRRC				*e*S	Sn	23 42 37.7	-1.1
BRRC				*i*		23 42 39.7	
	comp=Z,13nm,1.8s						
PAMC	Pamplona, Colo	5.23	44	*e*P	Pn	23 41 59.6	-0.3
SMLC	San Martn de	5.68	24	*e*P	Pn	23 42 03.9	-1.6
SMLC				*e*S	Sn	23 43 05.8	-3.8
SMLC				*i*		23 43 09.8	
	comp=Z,7.4nm,1.0s						
SJCC	San Jacinto, C	6.39	11	*e*S	Pn	23 42 14.2	-1.0
CODC	Agustn Codazz	6.96	25	*e*S	Pn	23 42 21.9	-1.0

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*IDC **30** 23:45:58.4±4.2, 16°.70S×70°.57W, h149km±31km, mb3.8/3, mb1 3.7/6, mb1mx3.3/28, mbtmp4.1/6, Error ellipse: s-maj=47.5km s-min=27.3km az=84.0*

ISC 30 23:45:58.5±1.4, 16°.7S±0°.2×70°.6W±0°.1, h150km, n6, σ0ˢ.86/7, mb3.9/3, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	2.36	80	P	Pn	23 46 38.7	+0.1
	18nm,0.3s,baz=262,slow=11,SNR=298						
LPAZ				S	Sn	23 47 10.1	+0.8
	5.1nm,0.3s,baz=166,slow=22,SNR=7.4						
SIV	San Ignacio	9.13	87	P	Pn	23 48 05.7	-1.4
	1.6nm,0.3s,baz=274,slow=9.5,SNR=24						
PTGA	Pitinga	19.00	34	P	P	23 50 09.0	+0.1
	1.3nm,0.3s,baz=208,slow=16,SNR=12						
SNAA	Sanae	67.28	161	P	P	23 56 37.0	+0.3
	1.3nm,0.6s,baz=270,slow=10,SNR=5.6						
DBIC	Dimbokro	68.97	76	P	P	23 56 48.5	+0.3
	5.5nm,1.2s,baz=275,slow=3.3,SNR=2.0						
ULM	Lac du Bonnet	70.31	343	P	P	23 56 55.2	-0.3
	0.5nm,0.3s,baz=169,slow=5.7,SNR=2.0						

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*CNRM **31** 00:01:58.2±0.8, 33°.34N×4°.98W, h1km±5km, Error ellipse: s-maj=5.7km s-min=4.0km az=73.0*

*MDD **31** 00:01:58.2±3.0, 33°.39N×5°.03W, h0km, mb3.3/5, Error ellipse: s-maj=27.8km s-min=24.0km az=158.0, PRXIMO*

*INMG **31** 00:01:59.2±1.1, 33°.33N×4°.89W, h31km, ML2.0, Error ellipse: s-maj=5.0km s-min=2.4km az=73.0*

ISC 31 00:01:56.6±1.2, 33°.44N±0°.02×4°.89W±0°.04, h8km±10km, n41, σ1ˢ.75/68, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CZD	Col de Zad	0.43	198	P	Pg	00 02 05.1	+0.1
CZD				S	Sg	00 02 09.6	-1.0
MD31	MD31	0.58	170	P	Pg	00 02 08.0	+0.2
MD31				S	Sg	00 02 14.2	-1.2
MDT	Midelt	0.67	159	P	Pg	00 02 09.7	+0.3
MDT				S	Sg	00 02 16.8	-1.3
RSA	Sarsar	1.64	332	P	Pb	00 02 27.2	+0.2
RSA				S	Sg	00 02 52.0	+2.8
ARF	Arif	2.08	164	P	Pn	00 02 32.8	+0.9
ARF				S	Sb	00 03 01.2	+0.5
AVE	Averroes	2.12	267	P	Pn	00 02 33.2	+0.9
AVE				S	Sn	00 02 60.0	+1.1
TDRA	Tendrara	2.43	99	P	Pb	00 02 39.9	-0.6
SRHM	Skhour des Reh	2.71	250	P	Pb	00 02 45.8	+0.4
SRHM				S	Sb	00 03 19.4	+0.6
TZRR	Tazzarine	2.71	193	P	Pn	00 02 42.2	+1.7
TZRR				S	Sn	00 03 14.8	+1.2
OUZM	OUZ	2.98	213	P	Pb	00 02 47.5	-2.6
OUZM				S	Sb	00 03 23.9	-2.8
OUK	Oukaimeden	3.37	229	P	Pn	00 02 52.1	+2.3
OUK				S	Sn	00 03 29.1	-0.9
ZGR	Zagora	3.37	191	P	Pn	00 02 50.3	+0.7
ZGR				S	Sn	00 03 31.7	+1.9
TTIG	Tnine Tigouga,	4.18	227	P	Pn	00 03 02.8	+2.1
TTIG				S	Sn	00 03 51.6	+1.8
PBDV	Barranco-do-Ve	4.54	328	Pn	Pn	00 03 07.0	+1.4
PBDV				Sn	Sn	00 03 57.4	-1.1
PBDV	Barranco-do-Ve	4.54	328	*e*Pn	Pn	00 03 07.0	+1.4
PBDV				*e*Sn	Sn	00 03 57.4	-1.1
EMIN	Mina Concepcio	4.56	342	P	Pn	00 03 08.2	+2.4
	0.2nm,0.2s,SNR=7.9						
EMIN				S	Sn	00 03 53.6	-5.3
	0.2nm,0.2s,SNR=7.9						
PVAQ	Vaqueiros	4.58	330	Pn	Pn	00 03 07.3	+1.2
PVAQ				Sn	Sn	00 03 57.8	-1.7
	2.6nm,0.6s						
PVAQ	Vaqueiros	4.58	330	*e*Pn	Pn	00 03 07.3	+1.2
PVAQ				*e*Sn	Sn	00 03 57.8	-1.7
PVAQ				A	A	00 04 08.8	
	2.6nm,0.6s						
EQES	Quesada	4.60	18	S	Sn	00 04 01.3	+1.2
	0.1nm,0.2s,SNR=7.9						
EGRO	El Granado	4.60	333	P	Pn	00 03 06.6	+0.2
	0.8nm,0.1s,SNR=7.9						
EGRO				S	Sn	00 03 55.1	-4.9
	0.5nm,0.2s,SNR=7.9						
ECAB	El Cabril	4.64	355	P	Pn	00 03 10.5	+3.5
	0.1nm,0.2s,SNR=7.9						
ECAB				S	Sn	00 04 00.9	-0.2
	0.3nm,0.2s,SNR=6.7						
EADA	Adamuz	4.72	3	P	Pn	00 03 11.0	+2.9
	0.1nm,0.2s,SNR=7.9						
EADA				S	Sn	00 04 01.7	-1.4
	0.3nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	4.89	320	*e*Pn	Pn	00 03 10.8	+0.4
PCVE	Castro Verde	4.91	329	Pn	Pn	00 03 11.9	+1.3
PCVE				Sn	Sn	00 04 06.5	-1.1
PCVE	Castro Verde	4.91	329	*e*Pn	Pn	00 03 11.9	+1.3
PCVE				*e*Sn	Sn	00 04 06.5	-1.1
MORF	Marmelete	4.93	322	Pn	Pn	00 03 11.8	+0.8
MORF				Sn	Sn	00 04 07.5	-0.8
MORF	Marmelete	4.93	322	*e*Pn	Pn	00 03 11.8	+0.8
MORF				*e*Sn	Sn	00 04 07.5	-0.8
PTEO	Sao Teotonio	5.16	324	Pn	Pn	00 03 15.0	+1.0
PTEO	Sao Teotonio	5.16	324	*e*Pn	Pn	00 03 15.0	+1.0
MESJ	Messejana	5.16	329	Pn	Pn	00 03 15.0	+0.9
MESJ				Sn	Sn	00 04 12.2	-1.6
	1.9nm,0.5s						
MESJ	Messejana	5.16	329	*e*Pn	Pn	00 03 15.0	+0.9
MESJ				*e*Sn	Sn	00 04 12.2	-1.6
MESJ				A	A	00 04 13.5	
	1.9nm,0.5s						
PNCL	Nicolau / Gran	5.52	329	Pn	Pn	00 03 20.2	+1.2
PNCL	Nicolau / Gran	5.52	329	*e*Pn	Pn	00 03 20.2	+1.2
EBAD	Badajoz	5.58	343	P	Pn	00 03 20.7	+0.9
	0.8nm,0.1s,SNR=7.6						
EBAD				S	Sn	00 04 19.8	-4.3
	0.3nm,0.2s,SNR=7.9						
PESTR	Estremoz	5.84	339	*e*Pn	Pn	00 03 24.2	+0.8
PMTG	Montargil	6.23	335	Pn	Pn	00 03 30.0	+1.2
PMTG	Montargil	6.23	335	*e*Pn	Pn	00 03 30.0	+1.2
PMRV	Marv??o	6.31	342	Pn	Pn	00 03 30.6	+0.7
PMRV	Marv??o	6.31	342	*e*Pn	Pn	00 03 30.6	+0.7
PCBR	Castelo Branco	6.72	343	Pn	Pn	00 03 36.5	+1.0
PCBR	Castelo Branco	6.72	343	*e*Pn	Pn	00 03 36.5	+1.0

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*IDC **31** 00:54:41.6±1.6, 32°.55S×178°.87W, h0km, mb4.6/2, mb1 4.8/3, mb1mx4.1/23, mbtmp4.5/3, ML4.0/1, Error ellipse: s-maj=56.9km s-min=33.7km az=143.0*

*WEL **31** 00:54:47.0±0.3, 33°S±3°×17°9W±°, h33km, M4.3/15, mB4.8/7, ML4.5/15, MLv4.4/15, Mw(mB)4.1/7*

ISC 31 00:54:46.1±0.9, 32°.91S±0°.06×178°.5W±0°.1, h35km, n37, σ1ˢ.51/46, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.68	8	P	Pn	00 55 41.5	+1.0
GLKZ				S	Sn	00 56 22.7	+0.1
RAO	Raoul Island	3.69	8	Sn	Sn	00 56 21.7	-1.2
	34nm,0.3s,baz=270,slow=20,SNR=1.6						
RIZ	Raoul Island	3.69	8	S	Sn	00 56 24.8	+1.8
MXZ	Matakaoa Point	5.31	208	P	Pn	00 56 03.3	+0.5
MXZ				S	Sn	00 57 03.7	+0.9
WMGZ	Waiomatatini S	5.49	206	P	Pn	00 56 06.1	+0.7
WMGZ				S	Sn	00 57 09.5	+2.2
HAZ	Te Kaha	5.69	211	P	Pn	00 56 08.1	0.0
HAZ				S	Sn	00 57 14.4	+2.2
PUZ	Puketiti	5.77	206	P	Pn	00 56 11.7	+2.4
PUZ				S	Sn	00 57 12.9	-1.4
RUGZ	Raukumara Rang	5.91	210	P	Pn	00 56 12.1	+0.8
RUGZ				S	Sn	00 57 17.6	-0.3
GRZ	Great Barrier	5.97	234	P	Pn	00 56 13.4	+1.4
KUZ	Kuaotunu	6.07	229	P	Pn	00 56 14.9	+1.5
WHRZ	Whale Island	6.14	215	P	Pn	00 56 17.4	+3.0
CNGZ	Carnagh Statio	6.16	205	P	Pn	00 56 14.9	+0.4
MWZ	Matawai	6.29	210	P	Pn	00 56 16.9	+0.6
MWZ				S	Sn	00 57 27.1	+0.1
OPRZ	Ohinepanea	6.34	218	P	Pn	00 56 20.1	+3.0
URZ	Urewera	6.40	212	Pn	Pn	00 56 19.1	+1.2
	3.0nm,0.3s,baz=29,slow=10,SNR=17						
URZ				Sn	Sn	00 57 25.5	-4.2
	2.3nm,0.3s,baz=352,slow=16,SNR=1.3						
URZ	Urewera	6.40	212	P	Pn	00 56 19.1	+1.2
RAGZ	Rawiri	6.47	209	P	Pn	00 56 18.5	-0.4
RIGZ	Rimuhau	6.51	206	P	Pn	00 56 20.1	+0.6
MUGZ	Murupara	6.74	213	P	Pn	00 56 23.6	+1.1
SNGZ	Shannon Statio	6.74	209	P	Pn	00 56 24.2	+1.6
RTZ	Ruatahuna	6.75	211	P	Pn	00 56 21.5	-1.3
OUZ	Omahuta	6.92	248	P	Pn	00 56 26.5	+1.5
OUZ				S	Sn	00 57 41.3	-1.2
RAHZ	Arahi	6.96	209	P	Pn	00 56 26.9	+1.3
MTHZ	Maungataniwha	7.01	211	P	Pn	00 56 27.3	+1.0
ARHZ	Aropaoanui	7.29	208	P	Pn	00 56 30.9	+0.8
BKZ	Black Stump Fm	7.42	211	P	Pn	00 56 32.3	+0.3
KWHZ	Kaweka Forest	7.67	211	P	Pn	00 56 36.7	+1.3
KAHZ	Kahuranaki	7.80	207	P	Pn	00 56 35.4	-1.7
NGZ	Ngauruhoe	7.84	216	P	Pn	00 56 37.8	0.0
BHHZ	Black Hill Sta	7.88	212	P	Pn	00 56 37.8	-0.4
ASAR	Alice Springs	42.58	270	P	P	01 02 37.1	-1.8
	5.1nm,0.3s,baz=110,slow=7.5,SNR=23						
WRA	Warramunga Arr	43.80	275	P	P	01 02 47.0	-1.7
	2.1nm,0.3s,baz=114,slow=8.1,SNR=15						
FINES	FINESS Array B	147.32	338	PKPbc	PKPdf	01 14 24.7	+2.0
	1.5nm,0.5s,baz=43,slow=4.2,SNR=15						
NB2	NORSAR Subarra	151.15	350	PKP	PKPbc	01 14 35.3	+0.4
	comp=Z,0.4nm,0.5s,baz=15,slow=2.6						
NOA	NORSAR Array B	151.15	350	PKPbc	PKPbc	01 14 35.3	+0.4
	comp=Z,0.5nm,0.8s,baz=14,slow=4.1,SNR=7.6						
HFS	Hagfors	151.60	347	PKPbc	PKPbc	01 14 35.9	0.0
	comp=Z,1.2nm,0.5s,baz=250,slow=2.9,SNR=3.3						
BRTR	Keskin Array B	153.29	294	PKPbc	PKPbc	01 14 39.8	-0.8
	comp=Z,0.4nm,0.5s,baz=114,slow=2.4,SNR=6.1						

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*IASPEI **31** 00:58:00.9±0.8, 33°.90N±0°.02×117°.96W±0°.02, h14km±6km, Error ellipse: s-maj=3.7km s-min=2.5km az=35.3, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ANF **31** 00:58:00.5±0.2, 33°.89N×117°.95W, h12km±1km, ML2.4/20, Error ellipse: s-maj=1.4km s-min=1.1km az=34.0*

*SCEDC **31** 00:58:01.6, 33°.90N×117°.96W, h4km*

*PAS **31** 00:58:01.6±2.7, 33°.90N±0°.01×117°.958W±0°.010, h4km±3km, ML2.3/149, Error ellipse: s-maj=1.7km s-min=1.1km az=200.0*

*NEIC **31** 00:58:01.5±1.4, 33°.912N±0°.010×117°.91W±0°.01, h14km±3km, Error ellipse: s-maj=1.6km s-min=1.4km az=136.0*

ISC 31 00:58:01.7±0.8, 33°.91N±0°.02×117°.95W±0°.02, h16km±5km, n71, σ0ˢ.92/98, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FULC	Fullerton	0.04	152		Pg	00 58 02.8	-1.8
BREC	Barre Substati	0.10	197		Pg	00 58 07.2	+2.1
RHC	Rose Hills Cem	0.11	329		Pg	00 58 04.1	-1.2
GVRC	Garvey Reservo	0.20	315		Pg	00 58 06.0	-0.6
SANC	Santa Ana	0.21	166		Sg	00 58 10.8	+1.0
PSRC	Puddingstone R	0.22	32		Pg	00 58 06.0	-0.7
PSRC					Sg	00 58 09.5	-0.7
CHNC	Chino	0.24	67		Pg	00 58 06.6	-0.5
PEM	Pine Mountain	0.27	13		Sg	00 58 11.5	0.0
CACC	Caltech Cellar	0.27	327		Pg	00 58 06.9	-0.7
MWC	Mount Wilson	0.33	344		Pg	00 58 07.7	-1.0
PASC	Pasadena Art C	0.33	323		Pg	00 58 07.8	-0.9
PASC					Sg	00 58 12.9	-0.5
MLSC	Mira Loma	0.33	73		Sg	00 58 13.1	-0.3
FMP	Fort Macarthur	0.35	237	S	Sg	00 58 12.4	-1.4
	baz=56						
SSK	Sunset Peak	0.37	34		Pg	00 58 08.8	-0.6
XTL	Crystal Lake,	0.40	10		Pg	00 58 09.0	-0.8
BFSC	Mount Baldy Ra	0.41	36		Pg	00 58 09.6	-0.5
BFSC					Sg	00 58 15.3	-0.4
BFSC	Mount Baldy Ra	0.41	36	P	Pg	00 58 09.3	-0.8
	baz=216,SNR=12						
BFSC				S	Sg	00 58 15.2	-0.5
	baz=216						
CHFC	Chilao Flat St	0.43	351		Sg	00 58 15.5	-0.9
DJJ	Donna J Jenkin	0.47	295		Pg	00 58 10.2	-0.9
DECC	Green Verdugo	0.47	317		Sg	00 58 17.3	-0.4
DECC	Green Verdugo	0.47	317	P	Pg	00 58 09.7	-1.5
	baz=138						
DECC				S	Sg	00 58 16.4	-1.3
	baz=138						
SS2	San Sevaine	0.48	51		Pg	00 58 10.7	-0.5
RVR	Riverside	0.48	79		Pg	00 58 10.5	-0.8
RVR					Sg	00 58 17.5	-0.4
SME	Santa Rosa Min	0.50	99		Pg	00 58 10.8	-0.8
RSBC	Riverside Bore	0.52	82		Pg	00 58 11.2	-0.8
JNH	Juniper Hills	0.54	359		Pg	00 58 11.3	-1.1
JNH					Sg	00 58 19.0	-0.8
IR2C	Iron Canyon	0.61	322		Pg	00 58 12.5	-1.2
LRRC	Littlerock Res	0.62	354		Pg	00 58 13.0	-1.0
CSP	Cedar Springs	0.62	51		Pg	00 58 13.3	-0.8
CSP					Sg	00 58 22.4	0.0
CIS	Catalina Islan	0.64	218	Sb	Sb	00 58 23.1	0.0
	baz=37						
CJV	Casa Juvan	0.64	345		Pg	00 58 13.1	-1.3
CJV					Sg	00 58 22.2	-0.8
PEC	Perris	0.65	91		Pg	00 58 13.6	-0.9
PEC					Sg	00 58 22.9	-0.3
MURC	Murrieta	0.69	116		Pg	00 58 14.6	-0.7
MURC					Sg	00 58 23.9	-0.6
MURC	Murrieta	0.69	116	P	Pg	00 58 14.5	-0.8
	baz=296,SNR=12						
MURC				S	Sg	00 58 24.0	-0.6
	baz=296						
CFT	Crafton Hills	0.70	79		Pg	00 58 14.8	-0.7
BACC	Bachelor Mtn.	0.81	111		Pg	00 58 16.1	-1.3
HMTC	Hemet	0.81	104		Pg	00 58 16.3	-1.1
HMTC					Sg	00 58 27.9	-0.2
DGR	Domenigoni Val	0.82	108		Pg	00 58 16.5	-1.1
DGR					Sg	00 58 27.7	-0.8
BTL	Butler Peak	0.86	66		Pg	00 58 17.6	-0.8
BBRC	Big Bear Solar	0.92	67	P	Pg	00 58 18.6	-1.0
	baz=248						
BBRC				S	Sg	00 58 31.6	-0.2
	baz=248						
BLG	Laguna Peak, P	0.95	283	S	Sg	00 58 32.4	-0.3
	baz=102						
OSI	Osito Audit: C	0.96	318	S	Sg	00 58 32.7	-0.1
	baz=138						
GORC	Green Oak Ranc	0.96	141		Sg	00 58 32.4	-0.5
EDW2	Edwards Air Fo	0.97	358		Pg	00 58 19.3	-1.3
EDW2	Edwards Air Fo	0.97	358	P	Pg	00 58 19.2	-1.4
	baz=178,SNR=6.6						
EDW2				S	Sb	00 58 33.4	+0.6
	baz=178						
TPO	Tropico Hills	1.00	347		Pg	00 58 19.6	-1.4
HYS	Haystack Butte	1.00	18		Pg	00 58 20.0	-1.2
PLM	Palomar	1.06	121		Pg	00 58 20.9	-1.3
CRY	Cary Ranch	1.06	108		Pb	00 58 20.8	-0.9
CRY					Sg	00 58 35.4	-0.8
BZNA	Buzz No.'s Pla	1.14	111		Pb	00 58 22.4	-0.7
109C	Camp Elliot, M	1.23	145		Pg	00 58 25.6	+0.1
109C	Camp Elliot, M	1.23	145	P	Pn	00 58 23.1	-1.1
	baz=325						
109C				S	Sb	00 58 39.7	-0.5
	baz=325						
RRX	Edison Barstow	1.25	39	P	Pn	00 58 24.3	-0.1
	baz=219						
RRX				S	Sn	00 58 41.8	+0.9
	baz=219						
PFO	Pinyon Flats O	1.27	103		Pn	00 58 24.6	-0.3
PFO	Pinyon Flats O	1.27	103	P	Pn	00 58 24.3	-0.5
	baz=284,SNR=11						
PFO				S	Sb	00 58 41.7	+0.2
	baz=284						
XPFO	Pion Flat	1.27	103		Pn	00 58 24.6	-0.3
ARVC	Arvin	1.42	329	Pb	Pn	00 58 27.5	+0.7
	baz=149						
ARVC				S	Sb	00 58 46.2	+0.6
	baz=149						
HEC	Hector,Ludlow	1.62	55	Pb	Pn	00 58 30.3	+0.6
	baz=236,SNR=9.1						
HEC				S	Sn	00 58 51.2	+1.0
	baz=236						
BELC	Belle Mtn. Jos	1.62	86	Pb	Pn	00 58 30.7	+1.0
	baz=267,SNR=22						
BELC				S	Sn	00 58 51.0	+0.7
	baz=267						
MONP2	Monument Peak	1.63	128	P	Pn	00 58 29.6	-0.2
	baz=309						
MONP2				Sb	Sb	00 58 51.9	+0.2
	baz=309						
GSC	Goldstone, Bar	1.68	34		Pn	00 58 31.4	+0.9
GSC	Goldstone, Bar	1.68	34	Pb	Pn	00 58 31.3	+0.9
	baz=214,SNR=16						
GSC				Sb	Sb	00 58 54.2	+1.0
	baz=214						
ISA	Isabella, Lake	1.81	346	S	Sn	00 58 55.9	+1.1
	baz=166						
PKM	Mcpherson Peak	1.83	303	Sb	Sb	00 58 59.2	+1.6
	baz=122						
IKP	In-Ko-Pah, Jac	1.98	129	Sb	Sb	00 59 03.2	+1.3
	baz=310						
GMRC	Granite Mounta	2.08	64	Pb	Pb	00 58 39.1	0.0
	baz=246						
GMRC				Sb	Sg	00 59 07.2	-1.6
	baz=246						
BC3	Big Chuckawall	2.09	96	Pb	Pb	00 58 38.7	-0.5
	baz=277,SNR=9.6						
MPMC	Manual Prospec	2.18	10	Pb	Pb	00 58 41.4	+0.6
	baz=190						
MPMC				Sb	Sg	00 59 10.4	-1.4
	baz=190						
TUQ	Turquoise Moun	2.26	47	Sb	Sb	00 59 12.0	+2.1
	baz=228						
IRM	Iron Mountain	2.34	83	Pb	Pb	00 58 43.4	0.0
	baz=264,SNR=8.9						
Y12C	Blythe	2.85	92		Pb	00 58 53.2	+1.1

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*PAS **31** 00:59:50.7±1.4, 33°.90N±0°.01×117°.96W±0°.02, h4km±6km, ML2.3/154, Error ellipse: s-maj=2.6km s-min=1.2km az=56.0*

NEIC 31 00:59:50.2±0.8, 33°.91N±0°.01×117°.94W±0°.02, h17km±2km, Error ellipse: s-maj=2.1km s-min=1.6km az=221.0, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FULC	Fullerton	0.04	155		Pg	00 59 52.0	-1.3
RHC	Rose Hills Cem	0.11	327		Pg	00 59 53.3	-0.6
BREC	Barre Substati	0.11	197		Pg	00 59 53.4	-0.5
DLAC	Del Amo	0.14	244		Pg	00 59 54.2	0.0
GVRC	Garvey Reservo	0.20	313		Pg	00 59 55.1	0.0
SANC	Santa Ana	0.21	167		Pg	00 59 55.4	+0.2
PSRC	Puddingstone R	0.21	32		Pg	00 59 55.2	-0.1
PSRC					Sg	00 59 58.6	-0.1
CHNC	Chino	0.24	68		Pg	00 59 55.8	+0.1
PEM	Pine Mountain	0.26	14		Pg	00 59 56.0	-0.1

PEM					Sb	01 00 00.7	-0.1
CRNC	Corona	0.32	96		Pg	00 59 57.0	0.0
MWC	Mount Wilson	0.33	343		Pg	00 59 56.9	-0.4
PASC	Pasadena Art C	0.33	322		Pg	00 59 56.9	-0.3
PASC	Pasadena Art C	0.33	322		Sg	01 00 02.0	+0.1
SSK	Sunset Peak	0.36	35		Pg	00 59 58.0	0.0
XTL	Crystal Lake,	0.39	10		Pg	00 59 58.1	-0.3
BFSC	Mount Baldy Ra	0.40	36		Pg	00 59 58.5	-0.1
BFSC					Sb	01 00 04.8	-0.2
CHFC	Chilao Flat St	0.43	351		Pg	00 59 58.5	-0.5
CHFC					Sg	01 00 04.7	-0.3
DJJ	Donna J Jenkin	0.47	295		Pg	00 59 59.4	-0.2
SS2	San Sevaine	0.47	51		Pg	00 59 59.9	+0.1
SS2					Sb	01 00 07.3	+0.5
RVR	Riverside	0.48	80		Pg	00 59 59.7	-0.2
RVR					Sg	01 00 06.7	+0.2
SME	Santa Rosa Min	0.50	100		Pg	01 00 00.0	-0.2
RSBC	Riverside Bore	0.52	83		Pg	01 00 00.4	-0.2
JNH	Juniper Hills	0.54	359		Pg	01 00 00.5	-0.5
JNH					Sg	01 00 07.4	-0.8
HOLC	Holcomb Ridge	0.55	9		Pg	01 00 01.0	-0.3
IR2C	Iron Canyon	0.61	322		Pg	01 00 01.8	-0.5
LRRC	Littlerock Res	0.62	354		Pg	01 00 02.1	-0.3
CSP	Cedar Springs	0.62	51		Pg	01 00 02.4	-0.2
CJV	Casa Juvan	0.64	345		Sg	01 00 11.4	-0.1
PEC	Perris	0.65	91		Pg	01 00 02.8	-0.3
MURC	Murrieta	0.70	116		Pg	01 00 03.5	-0.4
MURC					Sg	01 00 13.1	-0.1
CFT	Crafton Hills	0.70	80		Pg	01 00 03.9	-0.2
BBSC	Beaumont Base	0.80	89		Pg	01 00 05.9	0.0
HMTC	Hemet	0.81	104		Pb	01 00 05.5	-0.4
BACC	Bachelor Mtn.	0.81	111		Pb	01 00 05.4	-0.5
DGR	Domenigoni Val	0.82	108		Pb	01 00 05.7	-0.4
DGR					Sb	01 00 16.9	0.0
BTL	Butler Peak	0.85	66		Pb	01 00 06.8	-0.1
BTPC	Burnt Peak	0.93	326		Sg	01 00 20.5	-0.2
GORC	Green Oak Ranc	0.96	141		Pb	01 00 07.5	-1.0
EDW2	Edwards Air Fo	0.97	358		Pb	01 00 08.4	-0.2
PLM	Palomar	1.06	121		Pb	01 00 09.7	-0.6
CRY	Cary Ranch	1.06	109		Pb	01 00 10.1	-0.2
CRY					Sb	01 00 24.3	+0.4
BZNA	Buzz No.'s Pla	1.14	111		Pn	01 00 11.6	0.0
BZNA					Sn	01 00 26.9	-0.1
DNR	Dunn Ranch,Anz	1.15	107		Pb	01 00 12.0	+0.2
SNDA	J Saunders Pla	1.17	108		Pb	01 00 12.2	+0.2
FRD	Ford Ranch, An	1.19	110		Pb	01 00 12.5	0.0
FRD					Sg	01 00 28.6	-0.4
HWB	Hans Werner Br	1.21	137		Pn	01 00 11.4	-0.9
HWB					Sb	01 00 27.4	-0.6
PFO	Pinyon Flats O	1.27	103		Pb	01 00 14.0	+0.1
XPFO	Pion Flat	1.28	103		Pb	01 00 14.0	+0.1
GSC	Goldstone, Bar	1.68	34		Pb	01 00 20.4	-0.3
SPX	San Pedro Mart	3.55	143		Pn	01 00 47.5	+2.6

BJI ***31*** *01:01:18.9±0.0, 40°.51S×175°.94E, h21^{km}, mB5.8/13, mb5.4/15, Ms5.2/9, Ms7 4.9/7*

WEL ***31*** *01:01:19.5, 40°.0S±0°.8×17°7E±°, h17^{km}±2^{km}, M5.2/142, ML5.8/20, MLv5.2/142, Error ellipse: s-maj=0.0km s-min=0.0km az=73.3*

IDC ***31*** *01:01:20.8±2.6, 39°.74S×176°.61E, h28^{km}±17^{km}, mb4.6/12, mb1 4.7/12, mb1mx4.6/20, mbtmp4.7/12, MS4.5/18, Ms1 4.5/18, ms1mx4.4/22, Error ellipse: s-maj=18.6km s-min=15.3km az=85.0*

NEIC ***31*** *01:01:21.6±2.7, 39°.87S±0°.06×176°.2E±0°.1, h35^{km}±3^{km}, Error ellipse: s-maj=12.6km s-min=6.5km az=117.0*

GCMT ***31*** *01:01:21.5±0.2, 40°.04S±0°.01×176°.66E±0°.01, h21^{km}, MW5.2/119, Moment Tensor Solution. s92,c127; s119,c185; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.49±.17; $M_{\theta\theta}$-0.27±.12; $M_{\phi\phi}$-5.23±.11; $M_{r\theta}$-0.98±.24; $M_{\theta\phi}$-2.40±.08; $M_{\phi r}$2.83±.20; Best double couple: $M_0$6.59500×10^{16} NP1:ϕ_s220.00000°, δ37.00000°, λ120.00000°. NP2:ϕ_s4.00000°, δ58.00000°, λ69.00000°. Principal axes: T 6.5510, Plg69.0000°, Azm230.0000°; N 0.0830, Plg17.0000°, Azm16.0000°; P -6.6400, Plg11.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 01:01:19.8±0.7**, 39°.98S**±0°.02×**176°.61E**±0°.02**, h24**^{km}±4^{km}**, n342,** σ**1**^{s}**.44**/366**, mb5.1**/34**, MS4.5**/23**, 2C-1D, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WPHZ	Waipukurau	0.16	235	P	Pb	01 01 24.0	-0.9
WPHZ				S	Sb	01 01 28.2	-0.2
PXZ	Pawanui	0.20	106	P	Pb	01 01 25.1	-0.3
PXZ				S	Sb	01 01 31.1	+1.8
KAHZ	Kahuranaki	0.28	49	P	Pb	01 01 26.3	-0.1
KAHZ				S	Sn	01 01 32.9	-1.0
PRHZ	Porangahau	0.29	176	P	Pb	01 01 26.7	+0.1
PRHZ				S	Sn	01 01 33.4	-0.9
PNHZ	Pukenui	0.32	281	P	Pb	01 01 26.1	-1.0
PNHZ				S	Sb	01 01 32.2	+0.1
KRHZ	Kereru	0.38	331	P	Pb	01 01 27.1	-0.9
KRHZ				S	Sb	01 01 33.8	+0.2
DVHZ	Dannevirke	0.47	226	P	Pb	01 01 29.1	-0.4
DVHZ				S	Sb	01 01 36.8	+0.7
CKHZ	Cape Kidnapper	0.48	49	P	Pb	01 01 30.4	+0.7
ANWZ	Angora Road	0.49	192	P	Pb	01 01 30.6	+0.7
TSZ	Takapari Road	0.50	260	P	Pb	01 01 29.4	-0.7
TSZ				S	Sb	01 01 37.6	+0.5
MCHZ	McNeill Hill	0.54	7	P	Pb	01 01 30.9	+0.3
MCHZ				S	Sn	01 01 40.2	0.0
KWHZ	Kaweka Forest	0.57	345	P	Pb	01 01 30.6	-0.6
KWHZ				S	Sn	01 01 40.0	-1.2
BHHZ	Black Hill Sta	0.64	319	P	Pb	01 01 31.6	-0.9
BHHZ				S	Sb	01 01 40.7	-0.4
PRWZ	Pori Road	0.76	220	P	Pn	01 01 34.8	-0.3
PRWZ				S	Sn	01 01 48.6	+2.9
BFZ	Birch Farm	0.76	201	P	Pb	01 01 34.7	+0.4
BFZ				S	Sn	01 01 47.5	+1.8
POWZ	Post Office Ro	0.77	237	P	Pb	01 01 34.4	-0.1
POWZ				S	Sn	01 01 48.1	+2.2
ARHZ	Aropaoanui	0.77	23	P	Pn	01 01 35.6	+0.3
BKZ	Black Stump Fm	0.81	354	P	Pb	01 01 35.1	-0.2
MOVZ	Moawhango	0.87	310	P	Pb	01 01 35.7	-0.6
NMHZ	Naumai	0.89	10	P	Pn	01 01 37.5	+0.6
TIWZ	Tintock	0.97	214	P	Pn	01 01 37.8	-0.2
CPWZ	Castlepoint	0.98	198	P	Pn	01 01 38.2	0.0
OHWZ	Ohakea	1.02	257	P	Pb	01 01 39.1	+0.4
TUVZ	Tukino	1.02	314	P	Pb	01 01 38.8	-0.1
WHHZ	Waihua	1.02	29	P	Pb	01 01 39.1	+0.3
MRZ	Mangatainoka R	1.04	229	P	Pn	01 01 38.7	-0.2
WHVZ	Whangaehu Hut	1.05	311	P	Pn	01 01 39.2	0.0
MTVZ	Mangateitei	1.06	304	P	Pb	01 01 39.4	-0.1
TRVZ	Turoa	1.06	309	P	Pn	01 01 39.4	0.0
DRZ	Dome Shelter	1.07	311	P	Pb	01 01 39.7	-0.1
FWVZ	Far West T-bar	1.09	311	P	Pn	01 01 39.8	0.0
NGZ	Ngauruhoe	1.11	315	P	Pb	01 01 40.4	-0.2
RAHZ	Arahi	1.12	19	P	Pb	01 01 40.5	0.0
MTHZ	Maungataniwha	1.14	9	P	Pb	01 01 40.5	-0.3
MRHZ	Matea Rd	1.15	353	P	Pb	01 01 41.1	0.0
RITZ	Rihia Road	1.15	330	P	Pb	01 01 41.3	+0.2
HATZ	Hinemaiaia	1.15	340	P	Pb	01 01 41.0	-0.1
KRVZ	Karewarewa	1.15	319	P	Pb	01 01 41.0	-0.2
WTVZ	West Tongariro	1.17	317	P	Pb	01 01 41.2	-0.2
PKVZ	Pokaka	1.19	305	P	Pb	01 01 41.6	-0.2
KATZ	Kakaramea	1.22	324	P	Pb	01 01 42.3	-0.1
HOWZ	Holdsworth Sta	1.24	222	P	Pn	01 01 41.2	-0.5
TMWZ	Te Maipa	1.26	206	P	Pn	01 01 41.1	-0.8
KNZ	Kokohu	1.26	41	P	Pn	01 01 41.2	-0.7
WAZ	Wanganui	1.27	279	P	Pb	01 01 43.6	+0.5
TWVZ	Taurewa	1.28	315	P	Pb	01 01 42.9	-0.4
RATZ	Rangitukua	1.28	329	P	Pb	01 01 43.6	+0.3
MHGZ	Mahia Peninsul	1.30	51	P	Pn	01 01 41.8	-0.7
SNGZ	Shannon Statio	1.32	26	P	Pn	01 01 43.0	+0.2
OGWZ	Otaki Gorge	1.38	232	P	Pn	01 01 43.2	-0.4
RTZ	Ruatahuna	1.39	12	P	Pn	01 01 43.9	+0.1
WHTZ	Whakaora	1.40	339	P	Pb	01 01 45.7	+0.4
ALRZ	Allen Road	1.43	352	P	Pb	01 01 45.1	-0.6
WATZ	Wairara	1.44	332	P	Pb	01 01 45.5	-0.4
PRGZ	Paritu Road	1.44	44	P	Pn	01 01 43.8	-0.7
MTW	Mount Morrison	1.45	215	P	Pn	01 01 43.4	-1.2
PRRZ	Plateau Road	1.48	353	P	Pn	01 01 45.6	+0.6
WPRZ	Whakapapatarin	1.49	346	P	Pb	01 01 46.3	-0.6
MUGZ	Murupara	1.50	5	P	Pn	01 01 45.5	+0.3
RIGZ	Rimuhau	1.55	36	P	Pn	01 01 45.7	-0.3
KIW	Kapiti Island	1.57	235	P	Pn	01 01 45.8	-0.5
TRWZ	Traveller	1.58	206	P	Pn	01 01 45.1	-1.4
HRRZ	Handcock Road	1.60	351	P	Pb	01 01 48.2	-0.6
KUTZ	Kaahu Road	1.60	337	P	Pb	01 01 48.1	-0.7
RAGZ	Rawiri	1.60	23	P	Pn	01 01 46.7	-0.1
CAW	Cannon Point	1.63	226	P	Pn	01 01 46.1	-1.0
RRRZ	Republican Roa	1.64	357	P	Pn	01 01 47.9	+0.7
VRZ	Vera Road	1.66	300	P	Pb	01 01 49.2	-0.6
PAWZ	Paruwai Farm	1.67	212	P	Pn	01 01 46.2	-1.4
GRRZ	Galatos Road	1.67	346	P	Pb	01 01 48.8	-1.1
HSRZ	Hossack Road	1.69	350	P	Pb	01 01 49.0	-1.1
HLRZ	Highlands Stat	1.73	353	P	Pb	01 01 50.6	-0.4
TARZ	Mount Tarawera	1.74	357	P	Pn	01 01 49.1	+0.5
URZ	Urewera	1.76	13	Pg	Pn	01 01 48.9	+0.1
	393nm,0.3s,baz=212,slow=5.6,SNR=733						
URZ				Lg	Lg	01 02 10.0	
	429nm,0.3s,baz=284,slow=12,SNR=5.7						
URZ	Urewera	1.76	13	P	Pn	01 01 48.3	-0.4
MSWZ	Moikau Station	1.77	215	Pn	Pn	01 01 47.8	-1.2
MSWZ	Moikau Station	1.77	215	P	Pn	01 01 47.2	-1.8
LREZ	Lake Rotokare	1.78	286	P	Pb	01 01 51.3	-0.4
MWZ	Matawai	1.79	24	P	Pn	01 01 48.7	-0.6
TKGZ	Te Karaka	1.81	33	P	Pn	01 01 48.9	-0.6
UTU	Utuhina	1.82	350	P	Pn	01 01 51.0	+1.3
MKRZ	Makatiti	1.84	357	P	Pn	01 01 51.1	+1.1
TLZ	Tolley Road	1.84	333	P	Pn	01 01 51.0	+1.0
EDRZ	Edgecumbe	1.87	3	P	Pn	01 01 51.0	+0.6
OMRZ	Omania	1.88	354	P	Pn	01 01 51.1	+0.7
PLWZ	Palliser	1.90	212	Pn	Pn	01 01 49.4	-1.3
PLWZ	Palliser	1.90	212	P	Pn	01 01 48.7	-2.0
NGRZ	Ngongotaha	1.90	350	P	Pn	01 01 52.2	+1.4
WEL	Wellington	1.92	226	P	Pn	01 01 49.7	-1.2
CNGZ	Carnagh Statio	1.94	40	P	Pn	01 01 50.6	-0.6
BHW	Baring Head	1.95	222	P	Pn	01 01 49.8	-1.6
SNZO	South Karori	1.97	227		Pn	01 01 50.1	-1.6
SNZO					Sn	01 02 13.6	-2.0
KARZ	Kaharoa	1.97	352	P	Pn	01 01 52.7	+1.0
LIRZ	Lichensteins R	1.98	355	P	Pb	01 01 53.8	-1.3
MHEZ	Mangahewa	1.98	296	P	Pb	01 01 54.8	-0.4
MARZ	Manawahe	1.99	2	P	Pn	01 01 53.3	+1.3
PREZ	Palmer Road	1.99	288	P	Pb	01 01 55.0	-0.4
HIZ	Hauiti	2.00	316	P	Pn	01 01 52.8	+0.8
DREZ	Durham Road	2.02	292	P	Pb	01 01 54.8	-1.0
KHEZ	Kahui Hut	2.12	288	P	Pb	01 01 56.4	-1.1
OPRZ	Ohinepanea	2.13	359	P	Pn	01 01 54.2	+0.3
WHRZ	Whale Island	2.14	8	P	Pn	01 01 54.0	0.0
TCW	Tory Channel	2.16	234	P	Pn	01 01 53.1	-1.3
PKE	Pukeiti	2.17	290	P	Pb	01 01 57.0	-1.4
RUGZ	Raukumara Rang	2.17	23	P	Pn	01 01 54.3	-0.3
NMEZ	Namu Road	2.18	284	P	Pb	01 01 57.4	-1.1
KMRZ	Kaimai	2.19	346	P	Pn	01 01 55.5	+0.8
DUWZ	D'Urville Isla	2.21	247	P	Pn	01 01 54.1	-0.9
NBEZ	Newall Road No	2.23	288	P	Pb	01 01 58.0	-1.5
TGRZ	Tauranga	2.26	353	P	Pn	01 01 57.5	+1.8
PUZ	Puketiti	2.29	35	P	Pn	01 01 55.2	-1.0
HAZ	Te Kaha	2.40	23	P	Pn	01 01 56.9	-0.6
TOZ	Tahuroa Road	2.40	339	P	Pn	01 01 58.5	+0.9
WIZ	White Island	2.49	11	P	Pn	01 01 58.8	0.0
TUWZ	Tuamarina	2.49	233	P	Pn	01 01 57.0	-1.9
CMWZ	Cape Campbell	2.54	225	P	Pn	01 01 58.4	-1.1
WMGZ	Waiomatatini S	2.57	34	P	Pn	01 01 58.9	-1.1
BSWZ	Blackbirch Sta	2.71	229	P	Pn	01 01 59.9	-1.9
MXZ	Matakaoa Point	2.75	29	P	Pn	01 02 02.8	+0.4
NNZ	Nelson	2.75	242	P	Pn	01 02 01.4	-1.1
KBAZ	Karaka Road Bo	3.18	334	P	Pn	01 02 10.6	+2.3
QRZ	Quartz Range	3.23	253	Pn	Pn	01 02 04.0	-5.0
QRZ	Quartz Range	3.23	253	P	Pn	01 02 07.7	-1.3
AWAZ	Awhitu Peninsu	3.29	331	P	Pn	01 02 11.9	+2.0
ETAZ	East Tamaki Re	3.29	336	P	Pn	01 02 11.6	+1.7
KUZ	Kuaotunu	3.30	348	P	Pn	01 02 11.0	+1.0
THZ	Tophouse	3.33	236	P	Pn	01 02 08.5	-1.9
KHZ	Kahutara	3.36	223	P	Pn	01 02 08.0	-2.8
WIAZ	Waiheke Island	3.38	340	P	Pn	01 02 12.1	+1.0
EPAZ	Eden Park BICE	3.42	334	P	Pn	01 02 14.5	+2.8
WTAZ	Waiatarua	3.43	332	P	Pn	01 02 14.2	+2.4
HBAZ	Herne Bay Bore	3.45	334	P	Pn	01 02 14.4	+2.3
MBAZ	Motutapu North	3.47	337	P	Pn	01 02 13.6	+1.2
RVAZ	Riverhead Bore	3.58	333	P	Pn	01 02 16.1	+2.4
ABAZ	Army Bay	3.65	337	P	Pn	01 02 16.7	+2.0
GRZ	Great Barrier	3.83	346	P	Pn	01 02 18.3	+1.0
GVZ	Greta Valley S	4.02	221	P	Pn	01 02 17.7	-2.2
DSZ	Denniston Nort	4.05	243	P	Pn	01 02 18.6	-1.7
LTZ	Lake Taylor	4.30	228	P	Pn	01 02 20.5	-3.2
AMCZ	Amberley	4.36	222	P	Pn	01 02 22.5	-2.0
WCZ	Waipu Caves	4.41	335	P	Pn	01 02 27.1	+1.8
OKCZ	Okains Bay	4.59	214	P	Pn	01 02 24.2	-3.5
MQZ	McQueen's Vall	4.76	217	Pn	Pn	01 02 27.2	-2.8
MQZ	McQueen's Vall	4.76	217	P	Pn	01 02 27.0	-2.9
INZ	Inchbonnie	4.76	233	P	Pn	01 02 26.9	-3.1
AKCZ	Akaroa Harbour	4.77	214	P	Pn	01 02 26.9	-3.4
OXZ	Oxford	4.79	224	Pn	Pn	01 02 26.7	-3.8
OUZ	Omahuta	5.32	332	P	Pn	01 02 40.1	+2.4
WVZ	Waitaha Valley	5.38	233	P	Pn	01 02 35.5	-3.1
RPZ	Rata Peaks	5.58	226	Pn	Pn	01 02 37.6	-3.7
	14nm,0.3s,baz=95,slow=2.8,SNR=55						
RPZ				Sn	Sn	01 03 39.8	-4.9
	125nm,0.3s,baz=143,slow=23,SNR=24						
RPZ				LR	LR	01 05 33.2	
	comp=Z,13μm,18.1s,baz=43,slow=44						
RPZ	Rata Peaks	5.58	226	P	Pn	01 02 38.3	-3.0
FOZ	Fox Glacier	6.20	233	Pn	Pn	01 02 47.7	-2.1
FOZ	Fox Glacier	6.20	233	P	Pn	01 02 46.5	-3.3
CTZ	Chatham Island	6.30	129	P	Pn	01 02 50.5	-0.7
I36NZ	CHATHAM INFRAS	6.48	130	*i*		01 41 10.0	
	baz=304,slow=334,SNR=0.5						
LBZ	Lake Benmore	6.49	225	Pn	Pn	01 02 52.0	-1.9
ODZ	Otahua Downs	6.71	219	P	Pn	01 02 53.6	-3.2
HHSZ	Highcliff Hill	7.37	215	P	Pn	01 03 04.0	-1.8
TUZ	Tuapeka	7.86	218	P	Pn	01 03 10.5	-2.1
MLZ	Mavora Lakes	8.25	226	P	Pn	01 03 14.9	-3.1
SYZ	Scrubby Hill	8.52	217	P	Pn	01 03 19.7	-1.9
WHZ	Wether Hill Ro	8.68	224	P	Pn	01 03 21.0	-2.8
APZ	The Paps	9.29	220	P	Pn	01 03 28.6	-3.6
PYZ	Puysegur Point	9.54	226	P	Pn	01 03 34.3	-1.2
DZM	Mont Dzumac	19.83	331	*e*P	Pn	01 05 51.7	+1.1
	40nm,0.7s						
DZM				*e*LR	LR	01 10 24.6	
	comp=Z,4μm,21.9s						
DZM	Mont Dzumac	19.83	331	P	Pn	01 05 52.3	+1.7
	5.3nm,0.3s,baz=174,slow=10,SNR=18						
DZM				LR	LR	01 13 13.8	
	comp=Z,3μm,19.4s,baz=164,slow=36						
DZM	Mont Dzumac	19.83	331	P	P	01 05 49.2	+0.2
MILA	Mila	21.65	269	P	P	01 06 10.7	+2.2
	baz=23,SNR=5.6						
CNB	Canberra Magne	22.03	274	P	P	01 06 15.4	+2.8
	baz=23,SNR=4.6						
TAU	Tasmania Unive	22.10	253	P	P	01 06 13.8	+0.6
MSVF	Nonsavu	22.20	4	P	P	01 06 14.5	0.0
MSVF				IAmb	IAmb	01 07 09.2	
	comp=Z,106nm,1.9s						
MOO	Moorlands	22.22	254	P	P	01 06 15.6	+1.1
	baz=23,SNR=6.3						
CAN	Canberra	22.31	273	P	P	01 06 18.0	+2.4
	baz=23						
CAN	Canberra	22.31	273	P	P	01 06 15.0	-0.6
ARMA	Armidale	22.47	287	P	P	01 06 20.4	+3.0
	baz=24,SNR=4.5						
ARMA	Armidale	22.47	287	P	P	01 06 17.7	+0.3
TOO	Toolangi	24.32	266	P	P	01 06 36.9	+1.3
	baz=25,SNR=13						
TOO	Toolangi	24.32	266	P	P	01 06 33.3	-2.3
EIDS	Eidsvold	25.84	297	P	P	01 06 51.0	+1.6
	baz=27,SNR=6.6						
EIDS	Eidsvold	25.84	297	P	P	01 06 47.2	-2.2
EIDS				IAmb	IAmb	01 06 54.4	
	comp=Z,56nm,1.7s						
CMSA	Cobar Meteorol	26.36	279	P	P	01 06 55.0	+0.8
	baz=27,SNR=13						
RAR	Rarotonga	27.48	54	LR	LR	01 17 34.7	
	comp=Z,743nm,18.6s,baz=221,slow=36						
STKA	Stephens Creek	29.34	275	P	P	01 07 21.8	+1.1
	baz=30,SNR=33						
STKA	Stephens Creek	29.34	275	P	P	01 07 21.7	+1.0
	comp=Z,18nm,0.7s,baz=113,slow=9.8,SNR=39						
STKA				LR	LR	01 18 53.9	
	comp=Z,2μm,18.3s,baz=107,slow=36						
STKA	Stephens Creek	29.34	275	P	P	01 07 21.0	+0.3
QLP	Quilpie	30.00	286	P	P	01 07 28.1	+1.4
	baz=31,SNR=6.9						
HTT	Hallett	30.75	270	P	P	01 07 34.1	+0.8
	baz=32,SNR=4.1						
TBI	Tubuai	33.05	70	*e*S	S	01 13 24.4	+13
	comp=Z,228nm,24.5s						
TBI				*e*LQ	LQ	01 15 33.1	
	comp=Z,792nm,29.5s						
TBI				*e*LR	LR	01 16 57.9	
	comp=Z,949nm,25.5s						
TBI	Tubuai	33.05	70	*e*T	T	01 42 06.4	
	comp=Z,34nm,0.4s						
BBOO	Buckleboo	33.19	269	P	P	01 07 54.8	+0.1
	baz=34,SNR=20						
BBOO	Buckleboo	33.19	269	P	P	01 07 54.0	-0.7
BBOO				IAmb	IAmb	01 08 01.4	
	comp=Z,20nm,0.7s						
MTSU	Mount Surprise	35.34	299	P	P	01 08 14.5	+1.0
	baz=36,SNR=17						
PAE	Paea	36.70	63	*e*T	T	01 46 39.1	
	comp=Z,11nm,0.4s						
PPT2	Papeete2	36.76	63	*e*S	S	01 14 18.9	+11
	comp=Z,178nm,24.0s						
PPT2				*e*LR	LR	01 18 37.5	
	comp=Z,978nm,24.0s						
PPT2	Papeete2	36.76	63	*e*T	T	01 46 43.6	
	comp=Z,5.9nm,0.3s						
PPT	Papeete	36.77	62	LR	LR	01 21 20.8	
	comp=Z,572nm,19.1s,baz=217,slow=33						
TVO	Taravao	36.85	63	*e*T	T	01 46 49.7	
	comp=Z,3.4nm,0.4s						
QIS	Mount Isa	37.02	290	P	P	01 08 28.2	+0.4
	baz=38,SNR=6.9						
VNDA	Vanda	38.16	185	P	P	01 08 39.0	+2.2
	comp=Z,1.9nm,0.8s,baz=10,slow=8.1,SNR=10						
VNDA				LR	LR	01 21 51.3	
	comp=Z,388nm,18.4s,baz=26,slow=32						
COEN	Coen	39.11	302	P	P	01 08 46.0	+0.6
	baz=40,SNR=31						
COEN	Coen	39.11	302	P	P	01 08 45.5	+0.1
COEN				IAmb	IAmb	01 08 46.9	
	comp=Z,29nm,0.7s						
AS31	Alice Springs	39.36	281	P	P	01 08 46.2	-1.3
ASAR	Alice Springs	39.36	281	P	P	01 08 47.2	-0.3
	comp=Z,14nm,0.6s,baz=134,slow=9.5,SNR=205						
ASAR				PKiKP	PKiKP	01 18 07.1	-0.8
	comp=Z,0.3nm,0.6s,baz=77,slow=1.2,SNR=6.0						
PMG	Port Moresby	40.17	311	P	P	01 08 53.5	-0.7
PMG				IAmb	IAmb	01 08 58.0	
	comp=Z,31nm,0.7s						
FORT	Forrest	40.21	268	P	P	01 08 53.8	-0.6
	baz=41,SNR=15						
FORT	Forrest	40.21	268	P	P	01 08 52.9	-1.6
FORT				IAmb	IAmb	01 09 06.0	
	comp=Z,29nm,0.6s						
WR0	Warramunga Arr	41.08	286	P	P	01 09 01.0	-0.8
WB2	Warramunga Arr	41.23	286	P	P	01 09 02.3	-0.7
WB2				IAmb	IAmb	01 09 04.6	
	comp=Z,37nm,0.8s						
WRA	Warramunga Arr	41.24	286	P	P	01 09 02.6	-0.5
	comp=Z,22nm,0.7s,baz=126,slow=8.1,SNR=222						
WRA				PKiKP	PKiKP	01 18 08.1	-1.5
	comp=Z,0.5nm,0.7s,baz=111,slow=0.6,SNR=5.5						
WRA				LR	LR	01 26 20.1	
	comp=Z,2μm,19.5s,baz=135,slow=36						
WRA	Warramunga Arr	41.24	286	P	P	01 09 02.1	-0.9
RABL	Rabaul	41.91	322	P	P	01 09 05.9	-2.6
WRKA	Warakurna	42.87	275	P	P	01 09 14.6	-1.8
	baz=44,SNR=64						
CASY	Casey	44.66	212	P	P	01 09 29.7	-0.4
CASY				IAmb	IAmb	01 09 31.7	
	comp=Z,34nm,1.2s						
KDU	Kakadu	47.32	292	P	P	01 09 51.3	-0.4
	baz=48,SNR=8.6						
KLBR	Kellerberrin	47.72	261	P	P	01 09 53.8	-0.9
	baz=48,SNR=5.1						
KNRA	Kununurra	48.04	286	P	P	01 09 57.1	-0.2
	baz=49,SNR=7.6						
KNRA	Kununurra	48.04	286	IAmb	IAmb	01 09 59.6	
	comp=Z,13nm,0.7s						
MTN	Manton Dam	48.17	291	P	P	01 09 58.2	-0.2
	baz=49,SNR=3.9						
MTN	Manton Dam	48.17	291	P	P	01 09 57.6	-0.8
MTN				IAmb	IAmb	01 10 04.9	
	comp=Z,12nm,0.7s						
FITZ	Fitzroy Crossi	48.86	281	P	P	01 10 03.2	-0.5
	baz=50,SNR=47						
BLDU	Ballidu	48.97	261	P	P	01 10 03.9	-0.4
	baz=50,SNR=5.7						
TAOE	Nuku Hiva Isla	49.38	63	*e*S	S	01 17 22.4	+9.1
	comp=Z,231nm,26.0s						
TAOE				*e*LR	LR	01 24 33.3	
	comp=Z,695nm,24.5s						
MEEK	Meekatharra	49.47	267	P	P	01 10 06.9	-1.3
	baz=50,SNR=34						
QSPA	South Pole Qui	50.15	180	P	P	01 10 15.7	+2.6
	comp=Z,23nm,0.7s,baz=33,slow=4.6						
QSPA	South Pole Qui	50.15	180	P	P	01 10 14.3	+1.2
QSPA				PcP	PcP	01 11 34.4	+2.2
MORW	Morawa	50.22	263	P	P	01 10 13.5	-0.3
	baz=51,SNR=4.8						
PSA00	Pilbara Seismi	51.25	273	P	P	01 10 19.1	-2.7
PSA00	Pilbara Seismi	51.25	273	P	P	01 10 20.0	-1.7
PSA00				IAmb	IAmb	01 10 30.8	
	comp=Z,27nm,1.4s						
FAKI	Fak Fak	54.47	301	P	P	01 10 43.9	-1.7
	comp=Z,14nm,0.7s						
FAKI	Fak Fak	54.47	301	P	P	01 10 43.4	-2.2
FAKI				IAmb	IAmb	01 10 44.5	
	comp=Z,10.0nm,0.7s						
GIRL	Giralia	54.96	269	P	P	01 10 48.8	-0.2
	baz=56,SNR=3.8						
NLAI	Namlea	57.72	296	P	P	01 11 07.8	-1.0
	comp=Z,997nmcomp=Z,18nm,0.7s						
SANI	Sanana	59.34	296	P	P	01 11 19.0	-1.1
	comp=Z,19nm,0.6s						
PLAI	Plampang	60.62	284	P	P	01 11 27.8	-1.1
MAW	Mawson	61.80	203	P	P	01 11 36.6	+0.5
	comp=Z,4.6nm,0.9s,baz=165,slow=12,SNR=3.0						
MAW				LR	LR	01 39 10.8	
	comp=Z,614nm,18.1s,baz=94,slow=37						
PMSA	Palmer Station	65.37	156	LR	LR	01 34 15.1	
	comp=Z,300nm,21.7s,baz=176,slow=30						
SYO	Syowa Base	66.77	196	⇑*e*P	P	01 12 06.6	-2.1
SYO	Syowa Base	66.77	196	⇓*e*pP	pP	01 12 13.2	-3.2
SYO	Syowa Base	66.77	196	⇑*i*sP	sP	01 12 16.0	-3.3
SNAA	Sanae	68.66	180	P	P	01 12 21.6	+0.9
SNAA	Sanae	68.66	180	LR	LR	01 40 32.3	
	comp=Z,360nm,18.4s,baz=164,slow=34						
SNAA	Sanae	68.66	180	P	P	01 12 21.9	+1.2
CISI	Cisompet, Garu	68.95	278	P	P	01 12 22.7	-0.6
VNA3	Neumayer Olymp	69.00	178	P	P	01 12 23.9	+1.2
VNA2	Neumayer--Watz	69.37	179	P	P	01 12 26.6	+1.6
	baz=181,slow=5.1						
KKM	Kota Kinabalu	71.90	295	P	P	01 12 40.9	-0.4
KKM				IAmb	IAmb	01 12 41.5	
	comp=Z,13nm,0.6s						
PLCA	Paso Flores	79.09	135	P	P	01 13 24.3	+2.0
	comp=Z,4.4nm,0.7s,baz=139,slow=6.9,SNR=8.6						
PLCA				LR	LR	01 41 46.5	
	comp=Z,177nm,18.7s,baz=156,slow=31						
PLCA	Paso Flores	79.09	135	IAmb	IAmb	01 13 30.6	
	comp=Z,66nm,1.9s						
MJAR	Matsushiro Arr	83.94	330	P	P	01 13 46.2	-1.4
	comp=Z,3.3nm,0.6s,baz=151,slow=6.4,SNR=7.2						
MJAR				LR	LR	01 48 34.2	
	comp=Z,89nm,20.9s,baz=140,slow=34						
KSRS	Korea Array	89.07	323	P	P	01 14 13.8	+1.1
	comp=Z,6.6nm,0.6s,baz=144,slow=5.4,SNR=35						
KSRS				LR	LR	01 52 28.6	
	comp=Z,103nm,19.6s,baz=155,slow=34						
KSAR	Wonju Array Be	89.08	323	P	P	01 14 13.6	+0.9
KS19	Wonju Array Si	89.14	323	P	P	01 14 13.7	+0.7
NJ2	Nanjing	89.42	314	*e*P	P	01 14 17.5	+3.1
NJ2				pmax	pmax		
	comp=Z,16nm,0.6s						
CMAR	Chiang Mai Arr	92.61	292	P	P	01 14 30.2	+0.7
	comp=Z,2.0nm,0.3s,baz=148,slow=3.6,SNR=15						
CMAR				LR	LR	02 00 28.4	
	comp=Z,298nm,18.9s,baz=172,slow=38						
CMAR	Chiang Mai Arr	92.61	292	P	P	01 14 29.1	-0.5
GYA	Guiyang	92.71	303	*e*P	P	01 14 29.3	-0.7
GYA				pP	sP	01 14 44.3	+3.5
GYA				S	S	01 25 34.5	+0.8
GYA				SS	SS	01 31 48.5	+1.2
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.1s						
GYA				LR	LR		
	comp=Z,330nm,18.8s						

GYA				LR	LR		
	comp=Z,350nm,17.0s						
GYA				LR	LR		
	comp=Z,380nm,18.6s						
PB07	IPOC Station P	92.83	121	P	P	01 14 29.8	-1.2
PB07				IAmb	IAmb	01 14 35.5	
	comp=Z,7.7nm,0.9s						
USRK	Ussuriysk Ar.	92.93	330	P	P	01 14 30.8	+0.4
	comp=Z,1.4nm,0.7s,baz=125,slow=7.6,SNR=3.3						
USRK				LR	LR	01 53 46.2	
	comp=Z,102nm,19.4s,baz=187,slow=34						
PB01	IPOC Station P	93.58	121	P	P	01 14 34.8	+0.5
PB01				IAmb	IAmb	01 14 44.6	
	comp=Z,6.7nm,0.9s						
PETK	Petropavlovsk-	94.14	349	LR	LR	01 51 32.6	
	comp=Z,172nm,20.1s,baz=136,slow=32						
CPUP	Villa Florida	97.10	133	LR	LR	01 53 21.2	
	comp=Z,149nm,18.1s,baz=220,slow=32						
CD2	Chengdu	97.61	304	P	Pdif	01 14 53.5	+1.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LPAZ	La Paz	97.85	119	LR	LR	01 50 58.9	
	comp=Z,142nm,18.8s,baz=216,slow=30						
LPAZ	La Paz	97.85	119	P	P	01 14 53.2	-1.2
LPAZ				IAmb	IAmb	01 15 10.9	
	comp=Z,3.6nm,0.6s						
NVAR	Mina Array Bea	98.16	46	P	P	01 14 54.3	-0.4
	comp=Z,0.2nm,0.4s,baz=226,slow=8.3,SNR=2.6						
HHC	Hu-ho-hao-te	99.84	316	*e*P	Pdif	01 15 06.5	+4.4
HHC				pmax	pmax		
	comp=Z,79nm,1.3s						
HHC				pmax	pmax		
	comp=Z,310nm,7.2s						
HHC				LR	LR		
	comp=Z,650nm,18.4s						
HHC				LR	LR		
	comp=Z,340nm,17.3s						
HHC				LR	LR		
	comp=Z,670nm,17.3s						
LZH	Lanzhou	101.00	308	*e*P	Pdif	01 15 08.0	+0.6
LZH				pP		01 15 19.5	
LZH				sP	sPdif	01 15 24.0	+5.8
LZH				*e*PP	PP	01 19 19.5	+3.1
LZH				pmax	pmax		
	comp=Z,21nm,1.4s						
LZH				pmax	pmax		
	comp=Z,96nm,5.3s						
LZH				LR	LR		
	comp=Z,250nm,17.0s						
LZH				LR	LR		
	comp=Z,260nm,17.1s						
LZH				LR	LR		
	comp=Z,350nm,19.6s						
TXAR	Lajitas Array	101.08	61	P	Pdif	01 15 07.9	+0.1
	comp=Z,0.4nm,1.0s,baz=201,slow=4.8,SNR=2.2						
TXAR				PKKPbc	PKKPbc	01 31 20.4	+2.3
	comp=Z,0.2nm,0.5s,baz=66,slow=4.9,SNR=4.3						
SONM	Songino Array	107.31	318	PKiKP	PKiKP	01 19 44.3	+0.6
	comp=Z,0.2nm,0.4s,baz=20,slow=4.6,SNR=2.2						
ILAR	Eielson Array	108.27	16	PKiKP	PKiKP	01 19 44.6	-0.2
	comp=Z,0.9nm,0.6s,baz=295,slow=2.7,SNR=16						
WMQ	Urumqi	115.53	307	*e*PKP	PKiKP	01 20 01.0	+1.6
YKA	Yellowknife Ar	115.95	29	PKP	PKPdf	01 19 59.1	-0.4
	comp=Z,1.1nm,0.7s,baz=238,slow=1.3,SNR=18						
YKA				PP	PP	01 21 06.2	+1.6
	comp=Z,0.4nm,0.9s,baz=224,slow=7.4,SNR=4.6						
YKA				PKKPbc	PKKPbc	01 30 31.6	+0.1
	comp=Z,0.3nm,0.6s,baz=54,slow=4.3,SNR=8.0						
ULM	Lac du Bonnet	117.99	47	PKP	PKPdf	01 20 03.2	-0.6
	comp=Z,1.8nm,0.6s,baz=279,slow=1.2,SNR=6.1						
MKAR	Makanchi Array	120.31	307	PKP	PKPdf	01 20 07.3	-1.1
	comp=Z,1.0nm,0.7s,baz=105,slow=1.4,SNR=11						
MKAR	Makanchi Array	120.31	307		PKPdf	01 20 06.9	-1.5
KSH	Kashi	121.01	297	PKP	PKiKP	01 20 12.3	+2.0
KSH				PP	PP	01 21 46.8	+6.4
KSH				SKS	SKSdf	01 27 20.0	-0.6
KSH				SKKS	SKKSac	01 28 34.8	-3.0
KSH				AMB	AMB		
	comp=Z,300nm,4.9s						
KSH				LR	LR		
	comp=Z,180nm,12.8s						
KSH				LR	LR		
	comp=Z,92nm,10.3s						
KSH				LR	LR		
	comp=Z,110nm,13.6s						
ZALV	Zalesovo Beam	122.03	316	PKP	PKPdf	01 20 09.2	-2.2
	comp=Z,1.2nm,0.8s,baz=159,slow=3.3,SNR=4.1						
AAK	Ala-Archa	123.43	300		PKPdf	01 20 13.8	-0.9
KURK	Kurchatov	124.18	310		PKPdf	01 20 14.3	-1.3
KKAR	Karatay Array	126.28	299		PKPdf	01 20 19.2	-0.7
NRIK	Noril'sk	126.42	334	PKP	PKPdf	01 20 19.1	-0.3
	comp=Z,2.7nm,0.6s,baz=90,slow=2.3,SNR=5.5						
RES	Resolute Bay	127.70	20		PKPdf	01 20 21.7	0.0
GEYT	Alibeck	132.97	288	PKP	PKiKP	01 20 35.1	+1.1
	comp=Z,1.3nm,0.7s,baz=90,slow=5.8,SNR=2.5						
AKTO	Aktyubinsk	136.65	305	PKP	PKPdf	01 20 38.5	-0.8
	comp=Z,1.4nm,0.6s,baz=52,slow=4.2,SNR=5.1						
ARU	Arti	137.12	314	PKP	PKPdf	01 20 38.1	-1.9
	comp=Z,0.7nm,0.3s,baz=2.5,slow=1.9,SNR=8.3						
ARU	Arti	137.12	314		PKPdf	01 20 38.7	-1.2
SPITS	Spitsbergen Ar	140.83	354	PKP	PKPdf	01 20 45.7	-0.6
	comp=Z,3.5nm,0.7s,baz=56,slow=11,SNR=2.1						
KIRV	Kirov	142.04	317	PKP	PKPdf	01 20 47.8	-1.0
	comp=Z,7.0nm,0.7s,baz=45,slow=2.9,SNR=2.4						
SFJD	Kangerlussuaq	142.51	28	PKhKP	PKPpre	01 20 45.8	
	comp=Z,0.2nm,0.6s,baz=346,slow=12,SNR=1.7						
SUMG	Summit	143.10	17	*i* P	PKiKP	01 20 55.9	+1.8
KBZ	Khabaz	145.66	292	PKPbc	PKPdf	01 20 55.2	-0.5
	comp=Z,7.6nm,0.7s,baz=111,slow=4.7,SNR=26						
KVAR	Kislovodsk Arr	145.84	292	PKPbc	PKiKP	01 21 00.4	+0.2
	comp=Z,3.1nm,0.7s,baz=82,slow=20,SNR=3.6						
LIC	Lamto	146.37	177	*e*PKP1	PKPab	01 21 00.7	+0.9
	comp=Z,47nm,0.7s						
KLMR	Klimovskoe	146.46	323	*e*PKPdf	PKPdf	01 20 54.7	-1.8
KLMR				AMP		01 20 58.8	
	comp=Z,22nm,1.0s						
KIC	Kosan Boka	146.51	178	*e*PKP1	PKPab	01 21 00.1	-0.3
	comp=Z,64nm,0.8s						
KIC	Kosan Boka	146.51	178		PKPab	01 21 00.1	-0.3
ARCES	ARCESS Array B	146.68	342	PKPbc	PKPbc	01 20 57.9	-0.5
	comp=Z,23nm,0.6s,baz=48,slow=2.0,SNR=53						
ARE0	ARCESS Array S	146.68	342		PKPbc	01 20 57.7	-0.6
TIC	Toumodi	146.78	177	*e*PKP1	PKPbc	01 21 00.8	+0.5
	comp=Z,5.0nm,0.3s						
TIC	Toumodi	146.78	177		PKPbc	01 21 00.8	+0.5
DBIC	Dimbokro	146.81	177	PKPbc	PKPbc	01 21 00.4	+0.1
	comp=Z,18nm,0.8s,baz=150,slow=3.9,SNR=21						
DBIC	Dimbokro	146.81	177		PKPdf	01 20 59.0	+0.4
SCO	Scoresbysund	147.94	12	*i* P	PKPbc	01 21 02.0	+0.2
	comp=Z,4.9nm,0.9s						
SCO	Scoresbysund	147.94	12		PKPdf	01 21 00.1	+1.4
OBN	Obninsk	149.56	313	PKPbc	PKPbc	01 21 05.4	-0.9
	comp=Z,2.1nm,0.4s,baz=52,slow=12,SNR=2.3						
BRTR	Keskin Array B	151.70	282	PKPbc	PKPbc	01 21 11.4	-0.7
	comp=Z,6.1nm,0.6s,baz=137,slow=4.9,SNR=35						
BRTR	Keskin Array B	151.70	282		PKPbc	01 21 10.5	-1.6
FINES	FINESS Array B	151.97	330	PKPbc	PKPbc	01 21 11.3	-0.5
	comp=Z,8.5nm,0.8s,baz=14,slow=4.9,SNR=21						
FINES	FINESS Array B	151.97	330		PKPdf	01 21 05.2	-0.1
FINES				PKPbc	PKPbc	01 21 10.7	-1.1
BORG	Borgarnes	153.08	17	PKPbc	PKiKP	01 21 14.7	+0.3
	comp=Z,27nm,1.0s,baz=200,slow=2.3,SNR=5.9						
AKASG	Malin Array Be	154.89	306	PKP	PKPdf	01 21 10.9	+1.0
	comp=Z,0.2nm,0.3s,baz=53,slow=1.8,SNR=2.8						
AKASG				PKPbc	PKPbc	01 21 17.9	-0.6
	comp=Z,1.3nm,0.6s,baz=69,slow=2.4,SNR=7.8						
AKASG				PKPab	PKPab	01 21 32.5	-1.4
	comp=Z,1.2nm,0.5s,baz=63,slow=4.8,SNR=6.5						
AKASG	Malin Array Be	154.89	306		PKPdf	01 21 09.9	+0.1
AKASG				PKPab	PKPab	01 21 32.2	-1.7
NB2	NORSAR Subarra	157.06	342	PKPdf	PKPdf	01 21 11.5	-1.0
	comp=Z,1.1nm,1.1s,baz=30,slow=1.4						
NOA	NORSAR Array B	157.06	342	PKP	PKPdf	01 21 11.8	-0.7
	comp=Z,0.3nm,0.8s,baz=19,slow=1.6,SNR=3.2						
NOA				PKPab	PKPab	01 21 41.9	-1.1
	comp=Z,0.8nm,0.7s,baz=27,slow=4.0,SNR=8.0						
IDI	Anoyia	157.16	267	PKPab	PKPab	01 21 47.0	+2.7
	comp=Z,13nm,1.0s,baz=101,slow=16,SNR=2.7						
HFS	Hagfors	157.16	338	PKPab	PKPab	01 21 42.3	-1.1
	comp=Z,2.4nm,0.7s,baz=148,slow=1.4,SNR=6.9						
MLR	Muntele Rosu	157.83	294	PKPab	PKPab	01 21 46.6	-0.4
	comp=Z,2.9nm,0.7s,baz=119,slow=6.7,SNR=4.5						
BURAR	Bucovina Array	158.07	300	PKPdf	PKPdf	01 21 13.3	-1.0
BURAR					PKPab	01 21 47.4	-0.5
VYHS	Vyhne	161.99	306	*e*PKP	PKPab	01 22 05.2	+0.4
PDG	Podgorica	162.79	286	PKPdf	PKPdf	01 21 18.5	-1.0
PDG					PKPab	01 22 06.7	-1.8
VRAC	Vranov	163.03	310	PKPab	PKPab	01 22 09.7	+0.3
	comp=Z,1.0nm,0.6s,baz=33,slow=7.2,SNR=4.0						
TIP	Timpagrande	164.44	274		PKPdf	01 21 20.3	-0.9
EKA	Eskdalemuir Ar	164.63	359	PKPab	PKPab	01 22 14.9	-1.2
	comp=Z,0.6nm,0.6s,baz=1.9,slow=2.5,SNR=4.2						
KHC	Kasperske Hory	164.86	313	*e*PKPAB	PKPab	01 22 15.0	-2.4
GERES	GERESS Array B	164.93	312	PKP	PKPdf	01 21 20.6	-0.7
	comp=Z,0.3nm,0.5s,baz=100,slow=1.5,SNR=5.6						
GERES				PKPab	PKPab	01 22 17.0	-0.8
	comp=Z,1.0nm,0.6s,baz=50,slow=4.4,SNR=10						
GERES	GERESS Array B	164.93	312	PKPdf	PKPdf	01 21 19.6	-1.7
GERES					PKPab	01 22 16.9	-1.0
SOKA	Soboth	165.03	303	*i* PKPab	PKPab	01 22 16.9	-1.5
	comp=Z,4.8nm,1.6s						
MOA	Molln	165.06	308	*i* PKPab	PKPab	01 22 16.9	-1.5
	comp=Z,3.6nm,0.7s						
OBKA	Obir	165.40	302	*i* PKPab	PKPab	01 22 19.6	-0.4
	comp=Z,1.3nm,0.8s						
GRF	Grafenberg Arr	165.81	318	*e*PKP	PKPdf	01 21 22.0	+0.1
	baz=54,slow=0.7						
KBA	Koelnbreinsper	165.95	306	*i* PKPab	PKPab	01 22 20.9	-1.7
	comp=Z,5.7nm,1.6s						
ABTA	Abfaltersbach	166.61	306	*i* PKPdf	PKPdf	01 21 23.1	+0.3
	comp=Z,2.2nm,0.8s						
ABTA				*i* PKPab	PKPab	01 22 23.8	-1.5
	comp=Z,2.7nm,0.9s						
STAL	STALIGIAL	166.68	303	PKPdf	PKPdf	01 21 20.6	-2.2
STAL					PKPab	01 22 23.4	-2.2
WTTA	Wattenberg	166.91	309	*i* PKPdf	PKPdf	01 21 23.3	+0.2
	comp=Z,7.4nm,1.4s						
WTTA				*i* PKPab	PKPab	01 22 25.6	-1.2
	comp=Z,5.2nm,0.8s						
WATA	Walderalm	166.91	309	*i* PKPdf	PKPdf	01 21 23.1	0.0
	comp=Z,5.6nm,1.4s						
WATA				*i* PKPab	PKPab	01 22 25.7	-1.1
	comp=Z,3.5nm,0.8s						
SQTA	Sankt Quirin	167.19	309	*i* PKPdf	PKPdf	01 21 23.0	-0.2
	comp=Z,4.4nm,1.2s						
SQTA				*i* PKPab	PKPab	01 22 26.4	-1.5
	comp=Z,3.9nm,0.8s						
MOTA	Moosalm	167.19	310	*i* PKPdf	PKPdf	01 21 22.9	-0.4
	comp=Z,7.0nm,1.2s						
MOTA				*i* PKPab	PKPab	01 22 27.4	-0.5
	comp=Z,2.3nm,0.9s						
RETA	Reutte	167.32	311	*i* PKPdf	PKPdf	01 21 23.2	0.0
	comp=Z,5.4nm,1.4s						
RETA				*i* PKPab	PKPab	01 22 30.0	+1.6
	comp=Z,5.9nm,1.9s						
FETA	Feichten	167.57	309	*i* PKPdf	PKPdf	01 21 23.9	+0.3
	comp=Z,5.7nm,1.1s						
FETA				*i* PKPab	PKPab	01 22 28.7	-1.0
	comp=Z,3.8nm,1.0s						
DAVA	Damuels	167.93	312	*i* PKPdf	PKPdf	01 21 23.6	-0.2
	comp=Z,4.3nm,0.9s						
DAVOX	Davos/Dischmat	168.20	310	PKP	PKPdf	01 21 23.3	-0.7
	comp=Z,2.0nm,0.8s,baz=28,slow=4.0,SNR=5.0						
DAVOX				PKPab	PKPab	01 22 31.4	-1.0
	comp=Z,1.9nm,0.6s,baz=71,slow=4.3,SNR=7.9						
LATE	Laterza	168.27	288		PKPdf	01 21 22.5	-1.6

WEL 31 01:05:50.7, 40°0S±0°6×176°6E±0°8, h11^{km}±1^{km}, M4.0/100, ML4.5/14, MLv4.0/100, Error ellipse: s-maj=0.0km s-min=0.0km az=63.6, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WPHZ	Waipukurau	0.13	231	P	Pb	01 05 54.9	-0.3
WPHZ				S	Sg	01 05 58.8	+2.6
PXZ	Pawanui	0.23	102	P	Pb	01 05 56.2	-0.7
PXZ				S	Sg	01 06 02.2	+3.4
PRHZ	Porangahau	0.29	170	P	Pb	01 05 57.5	-0.4
PRHZ				S	Sb	01 06 02.8	+0.1
PNHZ	Pukenui	0.29	284	P	Pg	01 05 57.3	+0.5
PNHZ				S	Sb	01 06 03.0	0.0
KAHZ	Kahuranaki	0.30	51	P	Pb	01 05 57.9	-0.3
KAHZ				S	Sb	01 06 03.6	+0.4
KRHZ	Kereru	0.37	336	P	Pg	01 05 58.6	+0.4
KRHZ				S	Sb	01 06 05.0	-0.2
DVHZ	Dannevirke	0.44	224	P	Pg	01 05 59.9	+0.5
DVHZ				S	Sb	01 06 07.3	+0.1
TSZ	Takapari Road	0.47	261	P	Pg	01 06 00.0	0.0
TSZ				S	Sb	01 06 07.8	-0.4
ANWZ	Angora Road	0.48	189	P	Pb	01 06 01.5	+0.3
CKHZ	Cape Kidnapper	0.51	50	P	Pb	01 06 01.9	+0.3
MCHZ	McNeill Hill	0.55	10	P	Pb	01 06 02.5	+0.2
MCHZ				S	Sb	01 06 11.8	+1.6
BHHZ	Black Hill Sta	0.63	321	P	Pg	01 06 03.0	+0.1
BHHZ				S	Sg	01 06 11.8	+0.5
PRWZ	Pori Road	0.73	219	P	Pn	01 06 06.3	-0.7
POWZ	Post Office Ro	0.74	236	P	Pn	01 06 06.4	-0.7
BFZ	Birch Farm	0.74	199	P	Pb	01 06 05.8	+0.2
ARHZ	Aropaoanui	0.79	25	P	Pn	01 06 07.2	-0.6
BKZ	Black Stump Fm	0.82	356	P	Pb	01 06 06.9	-0.1
MOVZ	Moawhango	0.85	312	P	Pg	01 06 07.1	-0.1
NMHZ	Naumai	0.90	12	P	Pn	01 06 09.1	-0.3
TIWZ	Tintock	0.95	213	P	Pg	01 06 09.1	+0.1
CPWZ	Castlepoint	0.97	197	P	Pg	01 06 09.4	0.0
OHWZ	Ohakea	0.99	257	P	Pn	01 06 10.3	-0.2
TUVZ	Tukino	1.01	315	P	Pb	01 06 10.4	+0.1
MRZ	Mangatainoka R	1.02	228	P	Pg	01 06 09.9	-0.4
MTVZ	Mangateitei	1.04	305	P	Pb	01 06 10.9	+0.1
WHHZ	Waihua	1.04	30	P	Pn	01 06 11.6	+0.4
TRVZ	Turoa	1.04	311	P	Pb	01 06 11.0	0.0
DRZ	Dome Shelter	1.05	312	P	Pb	01 06 11.1	0.0
FWVZ	Far West T-bar	1.07	312	P	Pg	01 06 11.3	-0.1
NGZ	Ngauruhoe	1.10	317	P	Pg	01 06 12.0	0.0
RAHZ	Arahi	1.14	21	P	Pb	01 06 12.2	-0.2
KRVZ	Karewarewa	1.14	321	P	Pb	01 06 12.5	0.0
RITZ	Rihia Road	1.15	331	P	Pg	01 06 13.0	+0.3
MTHZ	Maungataniwha	1.15	11	P	Pb	01 06 12.2	-0.4
WTVZ	West Tongariro	1.15	319	P	Pb	01 06 12.8	+0.1
HATZ	Hinemaiaia	1.15	341	P	Pb	01 06 12.6	-0.1
MRHZ	Matea Rd	1.16	354	P	Pg	01 06 12.9	0.0
PKVZ	Pokaka	1.17	306	P	Pn	01 06 13.1	0.0
KATZ	Kakaramea	1.21	326	P	Pb	01 06 13.9	+0.1
HOWZ	Holdsworth Sta	1.22	221	P	Pn	01 06 12.3	-1.4
TMWZ	Te Maipa	1.23	205	P	Pn	01 06 12.2	-1.8
WAZ	Wanganui	1.24	280	P	Pg	01 06 15.0	+0.4
TWVZ	Taurewa	1.27	316	P	Pn	01 06 14.4	0.0
RATZ	Rangitukua	1.28	331	P	Pg	01 06 15.2	0.0
KNZ	Kokohu	1.28	42	P	Pn	01 06 12.8	-1.8
MHGZ	Mahia Peninsul	1.32	52	P	Pn	01 06 13.5	-1.6
SNGZ	Shannon Statio	1.34	27	P	Pn	01 06 14.6	-0.8
OGWZ	Otaki Gorge	1.35	232	P	Pn	01 06 14.3	-1.2
WHTZ	Whakaora	1.40	340	P	Pg	01 06 19.0	+1.4
RTZ	Ruatahuna	1.40	13	P	Pn	01 06 16.1	-0.2
MTW	Mount Morrison	1.43	214	P	Pn	01 06 14.5	-2.1
WATZ	Wairara	1.43	333	P	Pn	01 06 15.9	-0.8
ALRZ	Allen Road	1.43	353	P	Pb	01 06 17.5	+0.1
PRGZ	Paritu Road	1.47	44	P	Pn	01 06 15.6	-1.6
PRRZ	Plateau Road	1.49	355	P	Pb	01 06 18.7	+0.3
WPRZ	Whakapapatarin	1.50	348	P	Pg	01 06 19.9	+0.4
MUGZ	Murupara	1.51	6	P	Pn	01 06 16.9	-0.8
KIW	Kapiti Island	1.54	235	P	Pn	01 06 17.1	-1.1
TRWZ	Traveller	1.56	205	P	Pn	01 06 16.1	-2.3
KUTZ	Kaahu Road	1.60	339	P	Pn	01 06 19.2	+0.3
CAW	Cannon Point	1.60	225	P	Pn	01 06 17.4	-1.6
HRRZ	Handcock Road	1.61	352	P	Pg	01 06 21.1	-0.5
RAGZ	Rawiri	1.62	24	P	Pn	01 06 18.6	-0.7
RRRZ	Republican Roa	1.64	358	P	Pn	01 06 19.8	+0.2
VRZ	Vera Road	1.64	301	P	Pg	01 06 21.7	-0.6
PAWZ	Paruwai Farm	1.65	212	P	Pn	01 06 17.3	-2.3
GRRZ	Galatos Road	1.67	347	P	Pg	01 06 23.3	+0.5
HLRZ	Highlands Stat	1.74	354	P	Pg	01 06 27.1	+3.0
TARZ	Mount Tarawera	1.75	358	P	Pn	01 06 21.4	+0.3
MSWZ	Moikau Station	1.75	215	P	Pn	01 06 18.3	-2.7
LREZ	Lake Rotokare	1.75	287	P	Pn	01 06 21.7	+0.7
URZ	Urewera	1.77	14	P	Pn	01 06 20.0	-1.3
MWZ	Matawai	1.81	25	P	Pn	01 06 20.4	-1.4
TLZ	Tolley Road	1.84	334	P	Pb	01 06 23.9	-0.5
MKRZ	Makatiti	1.84	357	P	Pg	01 06 26.5	+0.4
PLWZ	Palliser	1.87	212	P	Pn	01 06 19.8	-2.9
OMRZ	Omania	1.88	355	P	Pg	01 06 26.6	-0.2
WEL	Wellington	1.89	226	P	Pn	01 06 21.0	-1.9
NGRZ	Ngongotaha	1.90	351	P	Pg	01 06 29.4	+2.1
BHW	Baring Head	1.92	222	P	Pn	01 06 20.9	-2.5
CNGZ	Carnagh Statio	1.96	41	P	Pn	01 06 21.8	-2.1
PREZ	Palmer Road	1.97	288	P	Pb	01 06 26.3	-0.3
HIZ	Hauiti	1.98	317	P	Pb	01 06 27.5	+0.7
DREZ	Durham Road	2.00	293	P	Pb	01 06 26.6	-0.4
MARZ	Manawahe	2.00	2	P	Pg	01 06 30.5	+1.4
KHEZ	Kahui Hut	2.09	288	P	Pb	01 06 28.5	-0.2
TCW	Tory Channel	2.13	234	P	Pn	01 06 24.3	-1.9
OPRZ	Ohinepanea	2.14	360	P	Pn	01 06 26.4	+0.1
PKE	Pukeiti	2.15	291	P	Pb	01 06 29.1	-0.5
WHRZ	Whale Island	2.15	9	P	Pn	01 06 25.4	-1.1
NMEZ	Namu Road	2.15	284	P	Pb	01 06 28.6	-1.1
DUWZ	D'Urville Isla	2.18	247	P	Pg	01 06 31.6	-1.0
KMRZ	Kaimai	2.19	347	P	Pg	01 06 33.4	+0.6
RUGZ	Raukumara Rang	2.19	24	P	Pn	01 06 26.0	-1.2
NBEZ	Newall Road No	2.21	288	P	Pb	01 06 30.1	-0.5
PUZ	Puketiti	2.32	35	P	Pn	01 06 26.2	-2.6
TOZ	Tahuroa Road	2.40	339	P	Pn	01 06 30.2	+0.3
HAZ	Te Kaha	2.42	23	P	Pn	01 06 29.2	-0.9
TUWZ	Tuamarina	2.46	233	P	Pn	01 06 28.1	-2.7
WMGZ	Waiomatatini S	2.60	34	P	Pn	01 06 30.2	-2.4
BSWZ	Blackbirch Sta	2.68	229	P	Pn	01 06 31.1	-2.6
LTZ	Lake Taylor	4.28	228	P	Pn	01 06 52.8	-2.9
OKCZ	Okains Bay	4.56	214	P	Pn	01 06 55.7	-4.0
AKCZ	Akaroa Harbour	4.75	214	P	Pn	01 06 58.2	-4.0
CTZ	Chatham Island	6.32	129	P	Pn	01 07 21.4	-2.3

WEL 31 01:09:43.6, 40°0S±0°7×176°5E±0°9, h14^{km}±2^{km}, M3.4/87, ML3.9/12, MLv3.4/87, Error ellipse: s-maj=0.0km s-min=0.0km az=68.1, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WPHZ	Waipukurau	0.11	219	P	Pb	01 09 47.8	+0.2
WPHZ				S	Sb	01 09 50.6	+0.3
PXZ	Pawanui	0.26	102	P	Pg	01 09 49.4	+0.3
PNHZ	Pukenui	0.26	284	P	Pb	01 09 50.2	-0.1
PNHZ				S	Sb	01 09 54.3	-0.3
PRHZ	Porangahau	0.30	165	P	Pb	01 09 50.7	-0.2
KAHZ	Kahuranaki	0.32	55	P	Pb	01 09 50.9	-0.3
KRHZ	Kereru	0.36	340	P	Pb	01 09 51.6	-0.3
KRHZ				S	Sb	01 09 57.6	+0.3
DVHZ	Dannevirke	0.42	221	P	Pb	01 09 52.9	-0.1
TSZ	Takapari Road	0.45	260	P	Pb	01 09 53.2	-0.1
TSZ				S	Sb	01 10 00.3	+0.4
ANWZ	Angora Road	0.48	185	P	Pb	01 09 54.6	+0.6
CKHZ	Cape Kidnapper	0.53	53	P	Pb	01 09 55.0	+0.3
MCHZ	McNeill Hill	0.55	13	P	Pb	01 09 55.6	+0.5
KWHZ	Kaweka Forest	0.56	351	P	Pb	01 09 55.3	0.0
BHHZ	Black Hill Sta	0.61	323	P	Pb	01 09 55.9	-0.2
POWZ	Post Office Ro	0.72	235	P	Pb	01 09 58.2	+0.3
PRWZ	Pori Road	0.72	217	P	Pb	01 09 58.7	+0.7
BFZ	Birch Farm	0.74	197	P	Pb	01 09 58.7	+0.4
ARHZ	Aropaoanui	0.80	27	P	Pn	01 10 00.2	-0.3
BKZ	Black Stump Fm	0.81	358	P	Pb	01 09 59.8	+0.2
MOVZ	Moawhango	0.83	313	P	Pb	01 10 00.0	+0.1
NMHZ	Naumai	0.91	14	P	Pn	01 10 02.1	0.0
TIWZ	Tintock	0.94	212	P	Pg	01 10 02.0	+0.3
OHWZ	Ohakea	0.96	256	P	Pn	01 10 03.1	+0.4
CPWZ	Castlepoint	0.96	195	P	Pb	01 10 02.2	0.0
TUVZ	Tukino	0.98	316	P	Pn	01 10 03.1	0.0
MRZ	Mangatainoka R	1.00	227	P	Pg	01 10 02.8	-0.1
WHVZ	Whangaehu Hut	1.01	313	P	Pn	01 10 03.5	0.0
MTVZ	Mangateitei	1.01	306	P	Pn	01 10 03.7	+0.2
TRVZ	Turoa	1.02	311	P	Pn	01 10 03.7	0.0
DRZ	Dome Shelter	1.03	313	P	Pn	01 10 04.0	+0.1
FWVZ	Far West T-bar	1.05	313	P	Pn	01 10 04.1	0.0
NGZ	Ngauruhoe	1.08	318	P	Pn	01 10 04.8	+0.3
KRVZ	Karewarewa	1.12	322	P	Pg	01 10 05.3	+0.1
RITZ	Rihia Road	1.13	332	P	Pg	01 10 05.8	+0.4
WTVZ	West Tongariro	1.13	320	P	Pg	01 10 05.6	+0.2
HATZ	Hinemaiaia	1.14	342	P	Pg	01 10 05.4	-0.1
RAHZ	Arahi	1.14	22	P	Pb	01 10 04.8	-0.4
PKVZ	Pokaka	1.15	307	P	Pg	01 10 05.9	+0.2
MRHZ	Matea Rd	1.15	356	P	Pn	01 10 05.5	+0.2
MTHZ	Maungataniwha	1.15	12	P	Pb	01 10 05.0	-0.4
KATZ	Kakaramea	1.19	327	P	Pg	01 10 06.8	+0.1
HOWZ	Holdsworth Sta	1.20	220	P	Pn	01 10 05.2	-0.9
WAZ	Wanganui	1.21	280	P	Pg	01 10 07.9	+0.9
TMWZ	Te Maipa	1.23	203	P	Pn	01 10 05.1	-1.4
TWVZ	Taurewa	1.24	317	P	Pb	01 10 07.2	+0.3
RATZ	Rangitukua	1.26	332	P	Pg	01 10 08.3	+0.4
KNZ	Kokohu	1.30	43	P	Pn	01 10 05.8	-1.6
OGWZ	Otaki Gorge	1.33	231	P	Pn	01 10 07.3	-0.6
MHGZ	Mahia Peninsul	1.34	53	P	Pn	01 10 06.4	-1.6
SNGZ	Shannon Statio	1.35	28	P	Pn	01 10 07.2	-0.9
WHTZ	Whakaora	1.39	341	P	Pg	01 10 11.0	+0.7
RTZ	Ruatahuna	1.41	14	P	Pn	01 10 08.3	-0.6
WATZ	Wairara	1.41	334	P	Pb	01 10 09.8	0.0
MTW	Mount Morrison	1.42	213	P	Pn	01 10 07.4	-1.6
ALRZ	Allen Road	1.42	354	P	Pb	01 10 09.6	-0.4
PRRZ	Plateau Road	1.48	356	P	Pn	01 10 10.0	+0.1
PRGZ	Paritu Road	1.48	45	P	Pn	01 10 08.3	-1.7
WPRZ	Whakapapatarin	1.48	349	P	Pg	01 10 13.4	+1.2
MUGZ	Murupara	1.51	7	P	Pn	01 10 09.8	-0.5
KIW	Kapiti Island	1.52	234	P	Pn	01 10 10.0	-0.5
TRWZ	Traveller	1.56	204	P	Pn	01 10 09.1	-1.9
CAW	Cannon Point	1.59	224	P	Pn	01 10 10.2	-1.1
RIGZ	Rimuhau	1.59	37	P	Pn	01 10 10.1	-1.3
VRZ	Vera Road	1.61	301	P	Pb	01 10 13.6	+0.3
RAGZ	Rawiri	1.63	25	P	Pn	01 10 11.0	-1.1
PAWZ	Paruwai Farm	1.63	211	P	Pn	01 10 10.3	-1.7
LREZ	Lake Rotokare	1.72	287	P	Pb	01 10 15.5	+0.5
MSWZ	Moikau Station	1.74	214	P	Pn	01 10 11.5	-1.9
TARZ	Mount Tarawera	1.74	359	P	Pn	01 10 13.5	-0.1
URZ	Urewera	1.77	15	P	Pn	01 10 12.8	-1.1
MWZ	Matawai	1.82	26	P	Pn	01 10 13.0	-1.5
TLZ	Tolley Road	1.82	335	P	Pb	01 10 15.8	-0.9
TKGZ	Te Karaka	1.85	34	P	Pn	01 10 13.3	-1.6
PLWZ	Palliser	1.86	211	P	Pn	01 10 12.7	-2.4
BHW	Baring Head	1.91	221	P	Pn	01 10 13.9	-1.8
PREZ	Palmer Road	1.94	288	P	Pb	01 10 19.0	+0.3
HIZ	Hauiti	1.96	318	P	Pb	01 10 18.1	-1.0
DREZ	Durham Road	1.97	293	P	Pb	01 10 19.2	-0.1
CNGZ	Carnagh Statio	1.98	42	P	Pn	01 10 14.9	-1.9
MARZ	Manawahe	1.99	3	P	Pb	01 10 20.6	+0.9
KHEZ	Kahui Hut	2.06	289	P	Pb	01 10 21.2	+0.3
TCW	Tory Channel	2.11	234	P	Pn	01 10 17.8	-0.8
PKE	Pukeiti	2.12	291	P	Pb	01 10 21.4	-0.4
NMEZ	Namu Road	2.12	285	P	Pb	01 10 21.4	-0.5
WHRZ	Whale Island	2.15	9	P	Pn	01 10 18.3	-0.8
DUWZ	D'Urville Isla	2.16	247	P	Pb	01 10 22.4	-0.1
NBEZ	Newall Road No	2.18	288	P	Pb	01 10 22.5	-0.3
RUGZ	Raukumara Rang	2.20	24	P	Pn	01 10 18.6	-1.3
TOZ	Tahuroa Road	2.38	340	P	Pg	01 10 28.1	-1.3
HAZ	Te Kaha	2.42	24	P	Pn	01 10 22.0	-0.8
TUWZ	Tuamarina	2.44	233	P	Pn	01 10 21.3	-1.8
BSWZ	Blackbirch Sta	2.66	228	P	Pb	01 10 32.6	+1.6
MXZ	Matakaoa Point	2.78	30	P	Pn	01 10 26.3	-1.5
CTZ	Chatham Island	6.34	129	P	Pn	01 11 14.8	-1.9

WEL 31 01:26:31.8, 40°0S±0°7×176°5E±0°8, h16^{km}±1^{km}, M3.2/82, ML3.6/12, MLv3.2/82, Error ellipse: s-maj=0.0km s-min=0.0km az=84.9, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WPHZ	Waipukurau	0.11	220	P	Pb	01 26 36.0	+0.3
WPHZ				S	Sb	01 26 39.1	+0.8
PXZ	Pawanui	0.26	102	P	Pg	01 26 37.5	0.0
PXZ				S	Sb	01 26 43.0	+0.7
PNHZ	Pukenui	0.27	284	P	Pb	01 26 38.4	+0.1
PNHZ				S	Sb	01 26 43.7	+1.1
PRHZ	Porangahau	0.30	165	P	Pb	01 26 38.7	-0.1
PRHZ				S	Sb	01 26 44.0	+0.4
KAHZ	Kahuranaki	0.32	55	P	Pb	01 26 39.1	-0.2
KAHZ				S	Sb	01 26 44.9	+0.6
KRHZ	Kereru	0.36	339	P	Pb	01 26 39.7	-0.1
KRHZ				S	Sb	01 26 45.3	0.0
DVHZ	Dannevirke	0.43	221	P	Pb	01 26 41.1	0.0
DVHZ				S	Sb	01 26 48.1	+0.8
TSZ	Takapari Road	0.45	259	P	Pb	01 26 41.4	0.0
TSZ				S	Sb	01 26 48.3	+0.4
ANWZ	Angora Road	0.48	185	P	Pb	01 26 42.8	+0.8
CKHZ	Cape Kidnapper	0.53	53	P	Pb	01 26 43.2	+0.5
MCHZ	McNeill Hill	0.55	13	P	Pb	01 26 43.9	+0.8
KWHZ	Kaweka Forest	0.56	351	P	Pb	01 26 43.5	+0.1
BHHZ	Black Hill Sta	0.61	323	P	Pb	01 26 44.1	0.0
BHHZ				S	Sb	01 26 52.2	-0.3
POWZ	Post Office Ro	0.72	235	P	Pb	01 26 46.3	+0.3
PRWZ	Pori Road	0.72	217	P	Pb	01 26 46.7	+0.7
BFZ	Birch Farm	0.74	197	P	Pb	01 26 46.8	+0.5
ARHZ	Aropaoanui	0.80	27	P	Pn	01 26 48.5	0.0

BKZ	Black Stump Fm	0.81	358	P	Pg	01 26 47.9	+0.2
MOVZ	Moawhango	0.83	313	P	Pg	01 26 48.3	+0.3
NMHZ	Naumai	0.91	14	P	Pn	01 26 49.9	-0.1
TIWZ	Tintock	0.94	212	P	Pg	01 26 50.2	+0.2
OHWZ	Ohakea	0.96	256	P	Pn	01 26 51.4	+0.7
CPWZ	Castlepoint	0.96	195	P	Pg	01 26 50.6	+0.1
TUVZ	Tukino	0.98	316	P	Pn	01 26 51.5	+0.3
MRZ	Mangatainoka R	1.00	227	P	Pg	01 26 51.0	-0.2
WHVZ	Whangaehu Hut	1.01	313	P	Pn	01 26 51.9	+0.3
MTVZ	Mangateitei	1.01	306	P	Pn	01 26 52.0	+0.5
TRVZ	Turoa	1.02	311	P	Pn	01 26 52.1	+0.3
DRZ	Dome Shelter	1.03	313	P	Pn	01 26 53.4	+1.4
FWVZ	Far West T-bar	1.05	313	P	Pg	01 26 52.4	+0.3
WHHZ	Waihua	1.05	31	P	Pg	01 26 52.9	+0.8
NGZ	Ngauruhoe	1.08	318	P	Pg	01 26 53.0	+0.3
KRVZ	Karewarewa	1.12	322	P	Pg	01 26 53.8	+0.3
RITZ	Rihia Road	1.13	332	P	Pg	01 26 54.0	+0.4
WTVZ	West Tongariro	1.13	319	P	Pg	01 26 53.8	+0.2
HATZ	Hinemaiaia	1.14	342	P	Pg	01 26 54.3	+0.4
RAHZ	Arahi	1.14	22	P	Pn	01 26 53.1	-0.2
PKVZ	Pokaka	1.15	307	P	Pg	01 26 54.2	+0.2
MRHZ	Matea Rd	1.15	355	P	Pg	01 26 53.8	-0.2
MTHZ	Maungataniwha	1.15	12	P	Pn	01 26 53.2	-0.1
KATZ	Kakaramea	1.19	327	P	Pg	01 26 55.1	+0.2
HOWZ	Holdsworth Sta	1.20	220	P	Pn	01 26 53.4	-0.6
WAZ	Wanganui	1.21	280	P	Pg	01 26 56.1	+0.9
TMWZ	Te Maipa	1.23	203	P	Pn	01 26 53.3	-1.1
TWVZ	Taurewa	1.24	317	P	Pg	01 26 55.6	-0.2
RATZ	Rangitukua	1.26	332	P	Pg	01 26 56.4	+0.3
KNZ	Kokohu	1.30	43	P	Pn	01 26 54.0	-1.4
OGWZ	Otaki Gorge	1.34	231	P	Pn	01 26 55.4	-0.4
MHGZ	Mahia Peninsul	1.34	53	P	Pn	01 26 54.8	-1.2
SNGZ	Shannon Statio	1.35	28	P	Pn	01 26 55.7	-0.3
WHTZ	Whakaora	1.39	341	P	Pg	01 26 59.4	+0.9
RTZ	Ruatahuna	1.40	14	P	Pn	01 26 56.8	-0.1
WATZ	Wairara	1.41	334	P	Pg	01 26 59.6	+0.6
MTW	Mount Morrison	1.42	213	P	Pn	01 26 55.6	-1.4
ALRZ	Allen Road	1.42	354	P	Pb	01 26 57.7	-0.3
PRRZ	Plateau Road	1.48	356	P	Pn	01 26 58.2	+0.3
MUGZ	Murupara	1.51	7	P	Pn	01 26 58.1	-0.2
KIW	Kapiti Island	1.52	234	P	Pn	01 26 58.1	-0.3
TRWZ	Traveller	1.56	204	P	Pn	01 26 57.3	-1.7
CAW	Cannon Point	1.59	224	P	Pn	01 26 58.5	-0.8
RIGZ	Rimuhau	1.59	37	P	Pn	01 26 58.4	-1.0
VRZ	Vera Road	1.62	301	P	Pg	01 27 02.6	-0.3
RAGZ	Rawiri	1.63	25	P	Pn	01 26 59.4	-0.6
PAWZ	Paruwai Farm	1.64	211	P	Pn	01 26 58.5	-1.5
LREZ	Lake Rotokare	1.72	287	P	Pg	01 27 04.6	-0.4
MSWZ	Moikau Station	1.74	214	P	Pn	01 26 59.4	-2.0
TARZ	Mount Tarawera	1.74	359	P	Pn	01 27 01.6	+0.1
URZ	Urewera	1.77	15	P	Pn	01 27 01.0	-0.9
MWZ	Matawai	1.81	26	P	Pn	01 27 01.2	-1.3
TLZ	Tolley Road	1.82	335	P	Pb	01 27 04.3	-0.5
PLWZ	Palliser	1.86	211	P	Pn	01 27 00.9	-2.2
BHW	Baring Head	1.91	221	P	Pn	01 27 02.0	-1.8
HIZ	Hauiti	1.96	318	P	Pb	01 27 07.6	+0.4
KHEZ	Kahui Hut	2.06	289	P	Pb	01 27 09.6	+0.6
TCW	Tory Channel	2.11	234	P	Pn	01 27 05.8	-0.7
PKE	Pukeiti	2.12	291	P	Pb	01 27 10.3	+0.4
WHRZ	Whale Island	2.15	9	P	Pn	01 27 06.5	-0.6
DUWZ	D'Urville Isla	2.16	247	P	Pg	01 27 12.2	-1.1
RUGZ	Raukumara Rang	2.20	24	P	Pn	01 27 07.1	-0.8
TOZ	Tahuroa Road	2.38	340	P	Pn	01 27 11.3	+1.0
HAZ	Te Kaha	2.42	24	P	Pn	01 27 10.1	-0.7
TUWZ	Tuamarina	2.44	233	P	Pn	01 27 09.3	-1.8
NNZ	Nelson	2.70	242	P	Pn	01 27 14.0	-0.7
QRZ	Quartz Range	3.17	253	P	Pb	01 27 26.8	-1.0
CTZ	Chatham Island	6.34	129	P	Pn	01 28 03.0	-1.7

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*IDC **31** 01:28:17.2±0.9,23°.71S×67°.59W,h137km±9km,mb4.0/12, mb1 4.0/16,mb1mx3.9/26,mbtmp4.4/16,MS3.9/2, Ms1 3.9/2,ms1mx3.0/25,Error ellipse: s-maj=14.7km s-min=12.2km az=79.0*

*VAO **31** 01:28:17.7±0.7,23°.60S×67°.83W,h161km±7km,mb4.1*

*NEIC **31** 01:28:17.0±3.1,23°.76S±0°.06×67°.94W±0°.06,h157km±6km, Error ellipse: s-maj=10.3km s-min=5.7km az=217.0*

*GUC **31** 01:28:17.2±0.7,23°.78S×68°.23W,h179km±11km,ML4.7*

ISC 31 01:28:16.6±0.7,**23°.76S**±0°.04×**67°.80W**±0°.06,**h145**km±7km, **n80,**σ**1s.57**/93,**1C-7D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.53	318	P	Pn	01 28 47.5	+1.0
	190nm,0.3s,baz=145,slow=5.7,SNR=592						
LVC				S	Sn	01 29 10.8	+1.4
	344nm,0.3s,baz=285,slow=20,SNR=13						
LVC	Limon Verde	1.53	318	*e*P	Pn	01 28 47.7	+1.1
PB15	IPOC Station P	1.63	289	⇓*i*P	Pn	01 28 48.4	+0.9
PB15				*i* S	Sn	01 29 11.5	+0.5
PB15	IPOC Station P	1.63	289		Pn	01 28 45.3	-2.1
PB15					Sn	01 29 11.3	+0.4
PB06	IPOC Station P	1.94	302	⇓*i*P	Pn	01 28 51.9	+1.0
PB06				*i* S	Sn	01 29 17.9	+0.8
PB06				IAML		01 29 20.1	
	comp=N,4µm,0.4s						
GO02	Mina Guanaco	2.15	229	⇑*i*P	Pn	01 28 53.7	+0.2
GO02				*i* S	Sn	01 29 22.4	+0.6
PB09	IPOC Station P	2.36	326	⇓*i*P	Pn	01 28 57.6	+1.6
PB09				*i* S	Sn	01 29 28.4	+2.2
PB09	IPOC Station P	2.36	326		Pn	01 28 57.3	+1.3
PB09					Sn	01 29 27.7	+1.4
PB14	IPOC Station P	2.53	250		Pn	01 28 56.5	-1.7
PB14				Sn	Sn	01 29 27.3	-2.8
PB10	IPOC Station P	2.54	275		Pn	01 28 57.0	-0.9
PB10				Sn	Sn	01 29 27.6	-2.1
PB04	IPOC Station P	2.59	303	⇓*i*P	Pn	01 28 59.2	+0.4
PB04				*i* S	Sn	01 29 30.5	-0.7
PB04				IAML		01 29 32.8	
	comp=E,2µm,0.3s						
PB04	IPOC Station P	2.59	303		Pn	01 28 59.1	+0.4
PB04					Sn	01 29 30.3	-0.9
PB07	IPOC Station P	2.79	316	⇓*i*P	Pn	01 29 02.0	+0.7
PB07				*i* S	Sn	01 29 35.7	-0.1
PB07				IAML		01 29 39.4	
	comp=E,2µm,0.6s						
PB07	IPOC Station P	2.79	316		Pn	01 29 01.9	+0.5
PB07					Sn	01 29 35.3	-0.5
PB02	IPOC Station P	3.10	321	⇓*i*P	Pn	01 29 05.6	+0.3
PB02				*i* S	Sn	01 29 42.4	-0.5
PB02				IAML		01 29 47.4	
	comp=E,2µm,0.4s						
PB01	IPOC Station P	3.12	330	⇓*i*P	Pn	01 29 05.8	+0.4
PB01				*i* S	Sn	01 29 42.6	-0.6
PB01	IPOC Station P	3.12	330		Pn	01 29 05.7	+0.2
PATCX	Punta Patache	3.65	323		Pn	01 29 11.4	-0.8
PB11	IPOC Station P	4.34	336		Pn	01 29 19.9	-1.4
PSGCX	Pisagua	4.67	332		Pn	01 29 24.1	-1.6
LPAZ	La Paz	7.44	358	P	Pn	01 30 04.5	+1.4
	comp=E,2.2nm,0.3s,baz=157,slow=6.5,SNR=46						
LPAZ				S	Sn	01 31 22.1	-4.5
	baz=202,slow=18,SNR=1.1						
LPAZ	La Paz	7.44	358		Pn	01 30 04.4	+1.3
CPUP	Villa Florida	9.84	107	P	Pn	01 30 33.0	-1.5
	comp=E,0.1nm,0.3s,baz=325,slow=16,SNR=4.7						
CPUP	Villa Florida	9.84	107	Pn	Pn	01 30 35.2	+0.8
CPUP	Villa Florida	9.84	107	*e*P	Pn	01 30 35.9	+1.4
SIV	San Ignacio	9.99	41	P	Pn	01 30 33.5	-3.1
	comp=E,14nm,0.3s,baz=249,slow=10,SNR=208						
SIV				S	Sn	01 32 16.2	-11
	baz=294,slow=20,SNR=0.7						
AQDB	Aquidauana	11.68	76	*e*P	Pn	01 30 58.0	-1.0
SALV	Santo Antonio	13.81	58	*e*P	Pn	01 31 25.7	-0.6
PTGB	Pitanga	14.39	97	*e*P	P	01 31 36.2	-0.2
CPSB	Cacapava Do Su	14.40	120	*e*P	Pn	01 31 34.0	+0.3
ITAB	Concordia	14.57	107	*e*P	P	01 31 38.1	-0.2
SAML	Samuel	15.38	17	Pn	Pn	01 31 44.9	-1.0
PCMB	Pacaembu	15.42	85	*e*P	P	01 31 48.3	+0.5
CNLB	Canela	16.14	114	*e*P	P	01 31 55.6	-0.2
ITRB	Iturama	16.70	79	*e*P	Pn	01 32 02.6	+0.4
FRTB	Fartura	16.73	92	*e*P	Pn	01 32 03.5	+0.9
ARAG	Araguaiana, MT	17.04	65	*e*P	P	01 32 05.9	+0.2
PLCA	Paso Flores	17.08	187	P	Pn	01 32 07.1	+0.4
	comp=E,0.1nm,0.3s,baz=115,slow=19,SNR=1.9						
CLDB	Colider	17.18	44	*e*P	P	01 32 05.4	-1.8
BB19B	Bebedouro	18.02	85	*e*P	P	01 32 17.0	+0.5
SPB	Sao Paulo	18.66	94	*e*P	Pn	01 32 24.8	-0.7
VAO	Valinhos	19.14	92	*e*P	P	01 32 28.0	-0.8
IPMB	Ipameri, GO	19.18	76	*e*P	P	01 32 29.3	+0.2
BDFB	Brasilia	20.29	70	P	P	01 32 41.0	-0.2
	comp=E,22nm,0.6s,baz=244,slow=12,SNR=44						
BDFB	Brasilia	20.29	70	P	P	01 32 41.2	0.0
BDFB				IAmb	IAmb	01 32 41.8	
	comp=Z,24nm,0.7s						
JANB	Januaria	23.76	73	*e*P	P	01 33 15.4	-0.5
PTGA	Pitinga	24.12	19	P	P	01 33 19.0	0.0
	comp=Z,3.2nm,0.3s,baz=202,slow=20,SNR=17						
PTGA	Pitinga	24.12	19	P	P	01 33 18.8	-0.3
PTGA				IAmb	IAmb	01 33 25.7	
	comp=Z,9.7nm,1.2s						
SJMB	Sao Joao De Ma	25.30	84	*e*P	P	01 33 29.2	-0.5
EFI	East Falkland	28.86	167	P	P	01 33 58.5	-2.7
EFI				IAmb	IAmb	01 33 59.3	
	comp=Z,13nm,0.9s						
MDP	Montagnes des	32.27	29	P	P	01 34 32.1	+0.5
	comp=Z,15nm,1.0s,baz=197,slow=10.0,SNR=5.8						
MDP				LR	LR	01 47 27.4	
	comp=Z,86nm,18.8s,baz=296,slow=36						
VNA3	Neumayer Olymp	57.62	161	P	P	01 37 52.2	+1.3
VNA2	Neumayer--Watz	58.19	160	P	P	01 37 56.3	+1.4
	baz=289,slow=7.3						
SNAA	Sanae	59.82	161	P	P	01 38 07.5	+1.2
SNAA	Sanae	59.82	161	P	P	01 38 07.2	+1.0
	comp=Z,3.7nm,0.6s,baz=289,slow=9.7,SNR=20						
SNAA	Sanae	59.82	161	P	P	01 38 07.4	+1.2
SNAA				IAmb	IAmb	01 38 08.2	
	comp=Z,5.2nm,0.8s						
TXAR	Lajitas Array	63.06	325	P	P	01 38 30.3	+1.8
	comp=Z,0.1nm,0.4s,baz=142,slow=10,SNR=2.0						
TXAR	Lajitas Array	63.06	325	P	P	01 38 28.7	+0.1
QSPA	South Pole Qui	66.44	180	P	P	01 38 52.2	+2.1
	comp=Z,11nm,0.5s,baz=324,slow=1.0,SNR=66						
DBIC	Dimbokro	68.42	72	P	P	01 39 03.8	+0.6
	comp=Z,2.5nm,1.0s,baz=202,slow=11,SNR=2.4						
DBIC	Dimbokro	68.42	72	IAmb	IAmb	01 39 06.9	
	comp=Z,5.1nm,1.1s						
PV13	Radium Mtn., P	72.64	327	P	P	01 39 22.8	-5.6
VNDA	Vanda	74.81	190	P	P	01 39 43.1	+2.7
	comp=Z,1.4nm,0.8s,baz=263,slow=4.4,SNR=6.7						
PDAR	Pinedale Array	76.57	330	P	P	01 39 52.2	+1.1
	comp=Z,0.1nm,0.5s,baz=134,slow=3.9,SNR=1.5						
PDAR	Pinedale Array	76.57	330	P	P	01 39 46.8	-4.2
ULM	Lac du Bonnet	77.77	342	P	P	01 39 59.0	+1.8
	comp=Z,0.7nm,0.5s,baz=129,slow=6.0,SNR=6.4						
NVAR	Mina Array Bea	77.89	322	P	P	01 40 02.0	+3.5
	comp=Z,0.2nm,0.5s,baz=134,slow=7.7,SNR=2.4						
SCHQ	Schefferville	78.27	1	LR	LR	02 18 38.1	
	comp=Z,177nm,18.1s,baz=320,slow=39						
BOSA	Boshof	81.50	117	P	P	01 40 19.4	+1.1
	comp=Z,1.6nm,0.5s,baz=238,slow=3.1,SNR=11						
BOSA	Boshof	81.50	117	IAmb	IAmb	01 40 27.3	
	comp=Z,4.0nm,1.1s						
MAW	Mawson	81.88	163	P	P	01 40 21.1	+1.9
	comp=Z,4.6nm,0.6s,baz=194,slow=6.1,SNR=12						
MAW	Mawson	81.88	163	IAmb	IAmb	01 40 21.6	
	comp=Z,1.0nm,0.6s						
YKA	Yellowknife Ar	93.65	340	P	P	01 41 17.8	+1.9
	comp=Z,0.5nm,0.6s,baz=134,slow=4.8,SNR=10						
ASAR	Alice Springs	128.36	206	PKP	PKiKP	01 47 07.8	+0.5
	comp=Z,1.1nm,0.7s,baz=146,slow=2.2,SNR=12						
WRA	Warramunga Arr	131.50	208	PKP	PKiKP	01 47 13.9	+0.3
	comp=Z,1.3nm,0.4s,baz=155,slow=1.7,SNR=4.6						
ZALV	Zalesovo Beam	143.52	27	PKP	PKPdf	01 47 32.7	-0.9
	comp=Z,0.9nm,0.4s,baz=305,slow=3.4,SNR=4.7						
KSH	Kashi	145.65	54	PKPbc	PKPdf	01 47 34.5	-3.5
KSH				pPKP	pPKPbc	01 48 16.5	-1.6
KSH				PP	PP	01 51 00.0	-0.5
KSH				PKS	PKSdf	01 51 08.8	-4.7
KSH				SKKS		01 57 33.3	
MKAR	Makanchi Array	146.80	39	PKPbc	PKPbc	01 47 41.6	+0.1
	comp=Z,2.1nm,0.8s,baz=322,slow=1.2,SNR=16						
MKAR	Makanchi Array	146.80	39		PKPbc	01 47 41.4	-0.2
CD2	Chengdu	169.66	45	PKP	PKPdf	01 48 03.3	-3.8

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*IDC **31** 01:29:31.9±0.9,39°.91S×176°.52E,h0km,mb4.4/5, mb1 4.5/6,mb1mx4.2/23,mbtmp4.4/6,ML4.3/1,Error ellipse: s-maj=26.7km s-min=12.6km az=111.0*

*NEIC **31** 01:29:32.8±2.8,39°.88S±0°.02×176°.4E±0°.1,h10km±1km, mb4.4/11,Error ellipse: s-maj=15.1km s-min=2.9km az=98.0*

*WEL **31** 01:29:35.2,40°.0S±0°.7×176°.5E±1°.0,h16km±2km,M4.4/134, ML4.9/14,MLv4.4/134,Error ellipse: s-maj=0.0km s-min=0.0km az=65.9*

ISC 31 01:29:34.0±0.5,**40°.02S**±0°.02×**176°.68E**±0°.03,**h21**km±1km, **n188,**σ**1s.12**/197,**mb4.4**/10,**North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PXZ	Pawanui	0.14	96	P	Pb	01 29 40.7	+0.8
WPHZ	Waipukurau	0.19	255	P	Pb	01 29 39.6	-0.2
WPHZ				S	Sb	01 29 43.4	-0.4
PRHZ	Porangahau	0.25	187	P	Pn	01 29 42.3	-0.2
PRHZ				S	Sn	01 29 48.0	+0.1
KAHZ	Kahuranaki	0.27	35	P	Pn	01 29 42.1	-0.8
KAHZ				S	Sn	01 29 48.1	-0.3
PNHZ	Pukenui	0.38	286	P	Pb	01 29 41.8	-0.1
PNHZ				S	Sb	01 29 47.6	+0.3
KRHZ	Kereru	0.44	328	P	Pb	01 29 42.9	-0.1
KRHZ				S	Sb	01 29 49.1	0.0
ANWZ	Angora Road	0.47	199	P	Pn	01 29 46.3	+0.8
ANWZ				S	Sn	01 29 55.1	+1.9
CKHZ	Cape Kidnapper	0.47	41	P	Pn	01 29 46.2	+0.6
DVHZ	Dannevirke	0.48	234	P	Pn	01 29 44.8	-0.9
DVHZ				S	Sn	01 29 52.5	-1.1
TSZ	Takapari Road	0.55	265	P	Pb	01 29 45.0	0.0
TSZ				S	Sb	01 29 51.8	-0.7
MCHZ	McNeill Hill	0.57	2	P	Pn	01 29 46.7	-0.3
MCHZ				S	Sn	01 29 56.3	+0.5
KWHZ	Kaweka Forest	0.62	342	P	Pn	01 29 46.5	-1.2
BHHZ	Black Hill Sta	0.71	318	P	Pb	01 29 47.3	-0.3
BFZ	Birch Farm	0.74	206	P	Pn	01 29 50.5	+1.2
PRWZ	Pori Road	0.76	225	P	Pn	01 29 50.6	+1.0
POWZ	Post Office Ro	0.79	241	P	Pn	01 29 50.0	+0.1
ARHZ	Aropaoanui	0.79	18	P	Pn	01 29 51.3	+1.3
BKZ	Black Stump Fm	0.86	351		Pb	01 29 44.7	-5.6
BKZ					Sb	01 29 56.5	-4.9
BKZ	Black Stump Fm	0.86	351	P	Pn	01 29 51.1	+0.1
NMHZ	Naumai	0.92	6	P	Pn	01 29 53.4	+1.5
MOVZ	Moawhango	0.94	310	P	Pn	01 29 51.5	-0.5
CPWZ	Castlepoint	0.96	202	P	Pn	01 29 54.0	+1.7
TIWZ	Tintock	0.97	218	P	Pn	01 29 53.6	+1.1
WHHZ	Waihua	1.03	25	P	Pn	01 29 54.8	+1.5
MRZ	Mangatainoka R	1.06	232	P	Pn	01 29 54.5	+0.9
OHWZ	Ohakea	1.06	259	P	Pn	01 29 55.0	+1.3
TUVZ	Tukino	1.09	313	P	Pn	01 29 54.7	+0.5
WHVZ	Whangaehu Hut	1.11	311	P	Pn	01 29 55.1	+0.4
MTVZ	Mangateitei	1.12	304	P	Pn	01 29 55.3	+0.7
TRVZ	Turoa	1.13	309	P	Pn	01 29 55.3	+0.5
DRZ	Dome Shelter	1.13	310	P	Pn	01 29 55.5	+0.5
RAHZ	Arahi	1.14	16	P	Pb	01 29 56.2	+1.1
FWVZ	Far West T-bar	1.15	311	P	Pb	01 29 55.6	+0.2
MTHZ	Maungataniwha	1.17	6	P	Pb	01 29 56.3	+0.8
NGZ	Ngauruhoe	1.18	315	P	Pb	01 29 56.2	+0.4
MRHZ	Matea Rd	1.20	350	P	Pb	01 29 56.9	+0.9
HATZ	Hinemaiaia	1.21	338	P	Pb	01 29 56.9	+0.7
RITZ	Rihia Road	1.22	328	P	Pb	01 29 57.1	+0.8
KRVZ	Karewarewa	1.22	319	P	Pb	01 29 56.8	+0.4
WTVZ	West Tongariro	1.23	317	P	Pb	01 29 57.0	+0.4
TMWZ	Te Maipa	1.24	209	P	Pb	01 29 56.9	+0.1
HOWZ	Holdsworth Sta	1.25	225	P	Pb	01 29 57.0	+0.1
PKVZ	Pokaka	1.26	305	P	Pb	01 29 57.4	+0.4
KNZ	Kokohu	1.26	38	P	Pb	01 29 57.2	+0.2
MHGZ	Mahia Peninsul	1.28	48	P	Pb	01 29 57.6	+0.2
KATZ	Kakaramea	1.29	324	P	Pb	01 29 58.2	+0.6
WAZ	Wanganui	1.33	281	P	Pb	01 29 59.4	+1.2
SNGZ	Shannon Statio	1.34	23	P	Pb	01 29 58.7	+0.3
TWVZ	Taurewa	1.34	314	P	Pb	01 29 58.8	+0.2
RATZ	Rangitukua	1.34	328	P	Pb	01 29 59.3	+0.8
OGWZ	Otaki Gorge	1.40	235	P	Pb	01 29 59.0	-0.4
RTZ	Ruatahuna	1.42	10	P	Pb	01 29 59.7	-0.1
PRGZ	Paritu Road	1.44	41	P	Pn	01 29 59.7	+0.8
MTW	Mount Morrison	1.45	218	P	Pn	01 29 59.2	+0.1
WHTZ	Whakaora	1.46	337	P	Pb	01 30 01.5	+1.0
ALRZ	Allen Road	1.48	350	P	Pb	01 30 00.4	-0.3
WATZ	Wairara	1.50	331	P	Pb	01 30 01.2	+0.1
PRRZ	Plateau Road	1.53	352	P	Pn	01 30 00.1	-0.1
MUGZ	Murupara	1.54	3	P	Pb	01 30 01.3	-0.6
WPRZ	Whakapapatarin	1.55	345	P	Pb	01 30 03.3	+1.3
RIGZ	Rimuhau	1.56	33	P	Pb	01 30 01.5	-0.7
TRWZ	Traveller	1.57	208	P	Pn	01 30 00.8	+0.1
KIW	Kapiti Island	1.59	237	P	Pb	01 30 01.7	-1.0
RAGZ	Rawiri	1.62	21	P	Pn	01 30 02.3	+0.8
CAW	Cannon Point	1.64	228	P	Pn	01 30 01.9	+0.3
HRRZ	Handcock Road	1.65	349	P	Pb	01 30 03.4	-0.4
PAWZ	Paruwai Farm	1.66	214	P	Pn	01 30 01.9	-0.1
KUTZ	Kaahu Road	1.66	336	P	Pb	01 30 03.8	-0.1
RRRZ	Republican Roa	1.68	356	P	Pb	01 30 03.2	-1.0
GRRZ	Galatos Road	1.72	345	P	Pb	01 30 04.2	-0.8
VRZ	Vera Road	1.73	300	P	Pb	01 30 04.5	-0.5
HSRZ	Hossack Road	1.74	349	P	Pb	01 30 04.2	-0.9
MSWZ	Moikau Station	1.77	217	Pn	Pn	01 30 02.9	-0.5
MSWZ	Moikau Station	1.77	217	P	Pn	01 30 03.1	-0.3
HLRZ	Highlands Stat	1.78	352	P	Pb	01 30 05.7	-0.2
TARZ	Mount Tarawera	1.78	356	P	Pb	01 30 04.9	-1.2
URZ	Urewera	1.79	11	Pg	Pn	01 30 04.0	+0.4
	57nm,0.3s,baz=224,slow=5.4,SNR=48						
URZ				Lg	Lg	01 30 26.5	
	87nm,0.3s,baz=55,slow=24,SNR=8.6						
URZ	Urewera	1.79	11	P	Pn	01 30 04.2	+0.5
MWZ	Matawai	1.81	22	P	Pn	01 30 04.4	+0.4
TKGZ	Te Karaka	1.82	30	P	Pn	01 30 04.6	+0.5
LREZ	Lake Rotokare	1.84	287	P	Pb	01 30 06.7	-0.2
UTU	Utuhina	1.88	348	P	Pb	01 30 06.2	-1.3
MKRZ	Makatiti	1.88	355	P	Pb	01 30 06.6	-1.1
PLWZ	Palliser	1.89	214	Pn	Pn	01 30 04.5	-0.6
PLWZ	Palliser	1.89	214	P	Pn	01 30 04.5	-0.6
TLZ	Tolley Road	1.90	332	P	Pb	01 30 06.7	-1.4
EDRZ	Edgecumbe	1.91	2	P	Pb	01 30 06.7	-1.4
OMRZ	Omania	1.92	353	P	Pb	01 30 06.8	-1.6
WEL	Wellington	1.93	228	P	Pn	01 30 05.6	0.0
CNGZ	Carnagh Statio	1.94	38	P	Pn	01 30 06.3	+0.6
NGRZ	Ngongotaha	1.95	349	P	Pb	01 30 11.9	+3.1
BHW	Baring Head	1.95	224	P	Pn	01 30 05.5	-0.4
SNZO	South Karori	1.98	229		Pn	01 30 05.9	-0.4
KARZ	Kaharoa	2.02	350	P	Pb	01 30 11.0	+0.9
MARZ	Manawahe	2.03	360	P	Pb	01 30 08.2	-2.0
MHEZ	Mangahewa	2.05	297	P	Pb	01 30 10.3	-0.2
PREZ	Palmer Road	2.06	288	P	Pb	01 30 10.3	-0.4
HIZ	Hauiti	2.06	316	P	Pb	01 30 08.6	-2.1
DREZ	Durham Road	2.08	293	P	Pb	01 30 10.5	-0.6
OPRZ	Ohinepanea	2.17	357	P	Pn	01 30 09.4	+0.4
WHRZ	Whale Island	2.17	6	P	Pn	01 30 09.6	+0.7
KHEZ	Kahui Hut	2.18	289	P	Pb	01 30 12.5	-0.2
TCW	Tory Channel	2.18	236	P	Pn	01 30 08.9	-0.2
RUGZ	Raukumara Rang	2.19	21	P	Pn	01 30 09.9	+0.5
PKE	Pukeiti	2.23	291	P	Pb	01 30 13.0	-0.6
NMEZ	Namu Road	2.24	285	P	Pb	01 30 13.1	-0.6
KMRZ	Kaimai	2.24	345	P	Pb	01 30 13.8	-0.1
DUWZ	D'Urville Isla	2.24	249	P	Pn	01 30 10.0	0.0
NBEZ	Newall Road No	2.29	288	P	Pb	01 30 13.9	-0.7
PUZ	Puketiti	2.30	33	P	Pn	01 30 10.6	-0.1
HAZ	Te Kaha	2.42	21	P	Pn	01 30 13.2	+0.9
TOZ	Tahuroa Road	2.46	338	P	Pn	01 30 14.5	+1.6
TUWZ	Tuamarina	2.51	235	Pn	Pn	01 30 12.7	-0.9
TUWZ	Tuamarina	2.51	235	P	Pn	01 30 12.9	-0.7
CMWZ	Cape Campbell	2.54	226	P	Pn	01 30 14.1	0.0
WMGZ	Waiomatatini S	2.58	32	P	Pn	01 30 14.6	+0.1
BSWZ	Blackbirch Sta	2.72	230	P	Pn	01 30 15.7	-0.8
MXZ	Matakaoa Point	2.76	28	P	Pn	01 30 17.7	+0.7
NNZ	Nelson	2.78	243	P	Pn	01 30 17.3	0.0
QRZ	Quartz Range	3.27	254	Pn	Pn	01 30 23.2	-0.8
QRZ	Quartz Range	3.27	254	P	Pn	01 30 23.9	-0.1
THZ	Tophouse	3.35	237	Pn	Pn	01 30 24.2	-1.0
THZ	Tophouse	3.35	237	P	Pn	01 30 24.3	-1.0
AWAZ	Awhitu Peninsu	3.35	331	P	Pn	01 30 27.9	+2.7
ETAZ	East Tamaki Re	3.35	335	P	Pn	01 30 26.9	+1.7
KHZ	Kahutara	3.37	224	P	Pn	01 30 23.7	-1.6
WIAZ	Waiheke Island	3.44	339	P	Pn	01 30 27.9	+1.5
WTAZ	Waiatarua	3.49	331	P	Pn	01 30 29.7	+2.6
ABAZ	Army Bay	3.71	336	P	Pn	01 30 32.0	+1.9
GRZ	Great Barrier	3.88	345	P	Pn	01 30 33.7	+1.3
GVZ	Greta Valley S	4.02	222	P	Pn	01 30 32.8	-1.6
DSZ	Denniston Nort	4.08	243	P	Pn	01 30 34.3	-0.9
LTZ	Lake Taylor	4.31	229	P	Pn	01 30 36.4	-2.0
AMCZ	Amberley	4.37	222	P	Pn	01 30 38.7	-0.5
WCZ	Waipu Caves	4.47	335	P	Pn	01 30 43.0	+2.5
OKCZ	Okains Bay	4.58	215	P	Pn	01 30 40.3	-1.8
MQZ	McQueen's Vall	4.75	218	P	Pn	01 30 42.4	-2.0
AKCZ	Akaroa Harbour	4.77	215	P	Pn	01 30 42.7	-1.9
INZ	Inchbonnie	4.78	234	P	Pn	01 30 42.8	-1.9
OXZ	Oxford	4.79	225	Pn	Pn	01 30 44.1	-0.9
OXZ	Oxford	4.79	225	P	Pn	01 30 43.1	-1.9
OUZ	Omahuta	5.38	332	P	Pn	01 30 57.5	+4.5
WVZ	Waitaha Valley	5.40	234	P	Pn	01 30 52.1	-1.3
RPZ	Rata Peaks	5.59	227	Pn	Pn	01 30 54.7	-1.2
	8.7nm,0.3s,baz=28,slow=1.6,SNR=23						
RPZ				Sn	Sn	01 31 55.6	-4.0
	24nm,0.3s,baz=15,slow=21,SNR=17						
RPZ	Rata Peaks	5.59	227	P	Pn	01 30 54.7	-1.2
FOZ	Fox Glacier	6.21	233	Pn	Pn	01 31 02.7	-1.7
FOZ	Fox Glacier	6.21	233	P	Pn	01 31 03.4	-1.1
CTZ	Chatham Island	6.23	129	P	Pn	01 31 06.0	+1.2
I36NZ	CHATHAM INFRAS	6.42	130	*i*		02 08 10.0	
	baz=306,slow=327,SNR=0.5						
LBZ	Lake Benmore	6.50	226	Pn	Pn	01 31 06.5	-2.0
LBZ	Lake Benmore	6.50	226	P	Pn	01 31 06.9	-1.5
ODZ	Otahua Downs	6.71	220	P	Pn	01 31 09.7	-1.7
HHSZ	Highcliff Hill	7.36	215	P	Pn	01 31 19.5	-0.8
TUZ	Tuapeka	7.86	219	P	Pn	01 31 26.1	-1.0
SYZ	Scrubby Hill	8.52	218	P	Pn	01 31 35.7	-0.4
WHZ	Wether Hill Ro	8.68	225	P	Pn	01 31 36.6	-1.8
PYZ	Puysegur Point	9.55	227	P	Pn	01 31 49.8	-0.4
STKA	Stephens Creek	29.39	275	P	P	01 35 37.6	+1.8
	3.0nm,0.6s,baz=118,slow=11,SNR=8.2						
STKA	Stephens Creek	29.39	275	P	P	01 35 37.4	+1.5
BBOO	Buckleboo	33.25	270	P	P	01 36 09.6	-0.2
BBOO				IAmb	IAmb	01 36 16.4	
	comp=Z,6.1nm,0.8s						
COEN	Coen	39.17	302	P	P	01 37 00.3	-0.2
COEN				IAmb	IAmb	01 37 12.7	
	comp=Z,18nm,1.4s						
AS31	Alice Springs	39.42	281	P	P	01 37 02.6	0.0
ASAR	Alice Springs	39.42	281	P	P	01 37 02.4	-0.2
	comp=Z,3.5nm,0.7s,baz=134,slow=9.3,SNR=44						
ASAR	Alice Springs	39.42	281	P	P	01 37 01.9	-0.7
FORT	Forrest	40.26	268	P	P	01 37 08.1	-1.4
WR0	Warramunga Arr	41.14	286	P	P	01 37 16.6	-0.3
WR0				IAmb	IAmb	01 37 17.6	
	comp=Z,5.7nm,1.0s						
WB2	Warramunga Arr	41.29	286		P	01 37 18.1	-0.1
WRA	Warramunga Arr	41.30	286	P	P	01 37 17.9	-0.3
	comp=Z,4.3nm,0.6s,baz=127,slow=7.9,SNR=30						
WRA	Warramunga Arr	41.30	286	P	P	01 37 16.8	-1.4
WB0	Warramunga Arr	41.37	287	P	P	01 37 18.6	-0.2
WB0					P	01 37 18.8	0.0
WB0				IAmb	IAmb	01 37 19.4	
	comp=Z,7.1nm,0.8s						
FITZ	Fitzroy Crossi	48.92	281	P	P	01 38 18.8	+0.1
FITZ				IAmb	IAmb	01 38 33.0	
	comp=Z,3.4nm,1.1s						
QSPA	South Pole Qui	50.11	180	P	P	01 38 30.8	+3.4
	comp=Z,3.0nm,0.6s,baz=333,slow=0.8,SNR=23						
QSPA	South Pole Qui	50.11	180	IAmb	IAmb	01 38 32.1	
	comp=Z,3.2nm,0.8s						
KSRS	Korea Array	89.13	323	P	P	01 42 29.2	+1.6
	comp=Z,1.2nm,0.5s,baz=143,slow=5.1,SNR=4.9						
YKA	Yellowknife Ar	115.97	29	PKP	PKiKP	01 48 14.7	+0.5
	comp=Z,0.2nm,0.6s,baz=213,slow=1.1,SNR=4.0						
MKAR	Makanchi Array	120.38	307	PKP	PKPdf	01 48 22.9	-0.3
	comp=Z,0.6nm,0.7s,baz=18,slow=0.3,SNR=3.7						
LIC	Lamto	146.32	177	*e*PKP1	PKiKP	01 49 16.1	-0.6
	comp=Z,16nm,0.9s						
KIC	Kosan Boka	146.47	177	*e*PKP1	PKiKP	01 49 16.6	-0.5
	comp=Z,19nm,0.9s						
TIC	Toumodi	146.74	177	*e*PKP1	PKiKP	01 49 17.5	-0.1
ARCES	ARCESS Array B	146.74	342	PKPbc	PKPbc	01 49 13.2	0.0
	comp=Z,4.3nm,0.8s,baz=4.3,slow=2.7,SNR=21						
DBIC	Dimbokro	146.77	177	PKPbc	PKPab	01 49 16.2	+0.2
	comp=Z,2.6nm,0.7s,baz=204,slow=5.4,SNR=4.2						
DBIC	Dimbokro	146.77	177		PKPdf	01 49 13.7	+0.5
BRTR	Keskin Array B	151.76	281	PKPbc	PKPbc	01 49 26.6	-0.4
	comp=Z,0.6nm,0.5s,baz=145,slow=5.0,SNR=6.6						
BRTR	Keskin Array B	151.76	281	PKPdf	PKPdf	01 49 19.6	-1.0
FINES	FINESS Array B	152.03	330	PKPbc	PKPbc	01 49 25.9	-0.8
	comp=Z,2.3nm,0.9s,baz=101,slow=4.4,SNR=2.8						
FINES	FINESS Array B	152.03	330	PKPdf	PKPdf	01 49 20.2	+0.1
FINES					PKPbc	01 49 26.4	-0.2
AKASG	Malin Array Be	154.95	306	PKPab	PKPab	01 49 48.2	-0.7
	comp=Z,0.1nm,0.3s,baz=63,slow=4.5,SNR=2.1						
GERES	GERESS Array B	165.00	312	PKPab	PKPab	01 50 31.9	-0.9
	comp=Z,0.2nm,0.5s,baz=350,slow=1.6,SNR=3.5						

NNC 31 01:30:44.5±13.0**, 37°.32N×70°.83E, h81**^{km}±440^{km}**, mb3.4, mpv3.8, 2C-4D, Error ellipse: s-maj=110.4km s-min=87.9km az=155.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.78**	**358**	⇓P	Pn	01 32 09.7	+2.1
	2.9nm,0.4s,baz=183,slow=13,SNR=44						
KK31				⇑S	Sn	01 33 15.4	+2.8
	0.4nm,0.2s,baz=187,slow=23,SNR=6.4						
AAK	**Ala-Archa**	**6.01**	**27**	⇓P	Pn	01 32 10.6	-0.3
	3.7nm,0.4s						
AAK				⇑S	Sn	01 33 17.4	-0.9
	4.6nm,1.1s						
CHMS	**Chumysh**	**6.42**	**27**	⇓P	Pn	01 32 15.3	-1.0
	6.3nm,0.6s						
CHMS				⇓S	Sn	01 33 26.7	-1.4
	2.0nm,0.5s						
AB31	**Akbulak array**	**14.30**	**330**	P	Pn	01 34 03.9	+1.0
	0.4nm,0.9s,baz=171,slow=2.9,SNR=5.6						

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*SKO **31** 01:36:55.2, 42°.60N×20°.30E, h15^{km}*

*TIR **31** 01:37:04.8, 41°.98N×20°.66E, h7^{km}, Md2.5/3*

*BEO **31** 01:37:06.5±0.3, 41°.98N×20°.73E, h0^{km}, ML1.7/9*

ISC 31 01:37:05.1±1.2**, 42°.00N**±0°.02×**20°.69E**±0°.02**, h0**^{km}±11^{km}**, n28, σ1^s.03**/47**, 1C-1D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.37**	**211**	*i* PG	**Pg**	**01 37 12.0**	**-0.1**
PHP				*i* SG	**Sg**	**01 37 17.1**	**+0.2**
SKO	**Skopje**	**0.56**	**93**	*e*Pg	**Pg**	**01 37 15.8**	**0.0**
SKO				*e*Sg	**Sg**	**01 37 23.8**	**+0.7**
SKO	**Skopje**	**0.56**	**93**	⇑*i*Pg	**Pg**	**01 37 15.9**	**0.0**
SKO				*i* Sg	**Sg**	**01 37 24.2**	**+1.1**
SKO				*e*Lg	Lg	01 37 25.2	
	comp=N,8.7nm,0.3s						
BCI	**Bajram Curri**	**0.59**	**308**	*i* PG	**Pg**	**01 37 16.8**	**+0.4**
BCI				*i* SG	**Sb**	**01 37 25.6**	**-1.7**
PUK	**Puka**	**0.60**	**274**	*i* PG	**Pg**	**01 37 16.4**	**-0.1**
PUK				*i* SG	**Sb**	**01 37 25.4**	**-2.1**
OHR	**Ohrid**	**0.89**	**175**	*i* Pg	**Pg**	**01 37 22.2**	**0.0**
OHR				*i* Sg	**Sb**	**01 37 35.4**	**-0.5**
OHR				*e*Lg	Lg	01 37 37.1	
	comp=E,91nm,0.7s						
TIR	**Tirane**	**0.90**	**224**	*e*Pg	**Pg**	**01 37 22.3**	**0.0**
TIR				*e*Sg	**Sb**	**01 37 35.4**	**-0.7**
PDG	**Podgorica**	**1.15**	**292**	*e*Pg	**Pg**	**01 37 26.4**	**-0.7**
PDG				*e*Sg	**Sn**	**01 37 44.9**	**0.0**
BARS	**Barje**	**1.17**	**45**	*e*Pg	**Pg**	**01 37 27.3**	**-0.1**
BARS				*e*Sg	**Sg**	**01 37 42.5**	**0.0**
SELS	**Selova**	**1.26**	**14**	*e*Pg	**Pg**	**01 37 28.6**	**-0.6**
SELS				*e*Sg	**Sb**	**01 37 46.4**	**-0.1**
SJES	**Sjenica**	**1.37**	**337**	*e*Pg	**Pn**	**01 37 31.0**	**-0.6**
SJES				*e*Sg	**Sn**	**01 37 52.0**	**+1.6**
BOSS	**Bosilegrad**	**1.42**	**69**	*e*Pg	**Pn**	**01 37 31.6**	**-0.6**
BOSS				*e*Sg	**Sn**	**01 37 51.7**	**+0.2**
VAY	**Valandovo**	**1.56**	**115**	⇓*i*Pg	**Pn**	**01 37 34.1**	**-0.1**
VAY				*i* Sg	**Sg**	**01 37 55.8**	**+0.5**
VAY				*e*Lg	Lg	01 37 57.8	
	comp=N,10nm,0.7s						
BOVS	**Bovan**	**1.79**	**24**	*e*Pn	**Pb**	**01 37 38.2**	**-0.7**
BOVS				*e*Sg	**Sg**	**01 38 04.5**	**+1.7**
TREB	**Trebinje**	**1.88**	**293**	*e*Pn	**Pg**	**01 37 41.2**	**+0.1**
TREB				*e*Sg	**Sg**	**01 38 06.6**	**+1.2**
GRUS	**Gruza**	**1.89**	**1**	*e*Pn	**Pg**	**01 37 41.1**	**-0.2**
GRUS				*e*Sg	**Sg**	**01 38 06.4**	**+0.7**
ZAPS	**Zavoj**	**1.92**	**48**	*e*Pn	**Pn**	**01 37 39.4**	**+0.4**
DBRK	**Dubrovnik**	**2.00**	**290**	*i* Pn	**Pb**	**01 37 42.5**	**+0.2**
ZAGS	**Zajecar**	**2.13**	**32**	*e*Pn	**Pn**	**01 37 42.7**	**+0.7**
DIVS	**Divibare**	**2.16**	**346**	*e*Pn	**Pb**	**01 37 45.4**	**+0.3**
TRUS	**Trudelj**	**2.23**	**355**	*e*Pn	**Pb**	**01 37 44.6**	**-1.7**
STON	**Ston**	**2.38**	**292**	*e*Pn	**Pb**	**01 37 47.7**	**-1.1**
STON	**Ston**	**2.38**	**292**	*i* Pn	**Pb**	**01 37 48.2**	**-0.6**
STON				Sn	**Sg**	**01 38 20.3**	**-1.2**
MAKA	**Makarska**	**3.00**	**297**	*e*Pn	**Pn**	**01 37 56.0**	**+2.2**
MAKA				Sn	**Sb**	**01 38 34.5**	**-2.0**
RICI	**Ricice**	**3.02**	**301**	*i* Pn	**Pn**	**01 37 55.5**	**+1.3**
RICI				Sn	**Sb**	**01 38 36.1**	**-0.9**
ZIRJ	**Zirje**	**4.06**	**296**	*e*Pn	**Pn**	**01 38 10.1**	**+1.6**
DUGI	**Dugi Otok**	**4.58**	**298**	*e*Pn	**Pn**	**01 38 17.0**	**+1.3**
NVLJ	**Novalja**	**4.96**	**303**	*i* Pn	**Pn**	**01 38 22.8**	**+2.0**

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*IDC **31** 01:53:16.5±0.9, 39°.87S×176°.40E, h0^{km}, mb4.6/6, mb1 4.7/8, mb1mx4.3/27, mbtmp4.5/8, ML3.8/2, MS3.7/5, Ms1 3.7/5, ms1mx3.3/27, Error ellipse: s-maj=25.2km s-min=12.6km az=113.0*

*WEL **31** 01:53:19.7, 40°.0S±0°.6×176°.5E±0°.7, h13^{km}±1^{km}, M4.5/127, ML5.0/16, MLv4.5/127, Error ellipse: s-maj=0.0km s-min=0.0km az=72.2*

*NEIC **31** 01:53:19.7±2.5, 39°.96S±0°.07×176°.4E±0°.1, h24^{km}±4^{km}, Error ellipse: s-maj=16.2km s-min=7.1km az=116.0*

ISC 31 01:53:19.7±0.8**, 40°.02S**±0°.02×**176°.60E**±0°.03**, h30**^{km}±5^{km}**, n193, σ1^s.39**/208**, mb4.6**/11**, MS3.7**/4**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WPHZ	**Waipukurau**	**0.13**	**248**	P	**Pb**	**01 53 24.1**	**-1.2**
WPHZ				S	**Sb**	**01 53 28.4**	**-0.8**
PXZ	**Pawanui**	**0.20**	**94**	P	**Pn**	**01 53 25.6**	**-1.1**
PRHZ	**Porangahau**	**0.25**	**173**	P	**Pn**	**01 53 27.0**	**-0.4**
KAHZ	**Kahuranaki**	**0.31**	**44**	P	**Pb**	**01 53 27.0**	**-0.4**
KAHZ				S	**Sn**	**01 53 32.8**	**-1.0**
PNHZ	**Pukenui**	**0.32**	**289**	P	**Pb**	**01 53 26.3**	**-1.3**
KRHZ	**Kereru**	**0.41**	**335**	P	**Pb**	**01 53 27.4**	**-1.4**
KRHZ				S	**Sb**	**01 53 33.2**	**-1.8**
DVHZ	**Dannevirke**	**0.43**	**229**	P	**Pb**	**01 53 29.2**	**+0.1**
DVHZ				S	**Sn**	**01 53 36.5**	**-0.3**
ANWZ	**Angora Road**	**0.45**	**192**	P	**Pn**	**01 53 30.9**	**+0.7**
TSZ	**Takapari Road**	**0.49**	**265**	P	**Pb**	**01 53 29.4**	**-0.6**
TSZ				S	**Sb**	**01 53 36.6**	**-0.4**
CKHZ	**Cape Kidnapper**	**0.52**	**46**	P	**Pn**	**01 53 31.0**	**0.0**
MCHZ	**McNeill Hill**	**0.58**	**8**	P	**Pb**	**01 53 31.4**	**0.0**
MCHZ				S	**Sn**	**01 53 40.5**	**+0.2**
KWHZ	**Kaweka Forest**	**0.61**	**347**	P	**Pb**	**01 53 31.1**	**-0.9**
KWHZ				S	**Sb**	**01 53 39.7**	**-0.6**
BHHZ	**Black Hill Sta**	**0.67**	**322**	P	**Pb**	**01 53 31.9**	**-1.1**
BHHZ				S	**Sb**	**01 53 40.8**	**-1.2**
BFZ	**Birch Farm**	**0.72**	**202**	P	**Pb**	**01 53 35.0**	**+1.3**
PRWZ	**Pori Road**	**0.72**	**221**	P	**Pb**	**01 53 34.9**	**+1.1**
POWZ	**Post Office Ro**	**0.74**	**239**	P	**Pb**	**01 53 34.4**	**+0.4**
ARHZ	**Aropaoanui**	**0.81**	**22**	P	**Pb**	**01 53 36.1**	**+0.7**
BKZ	**Black Stump Fm**	**0.85**	**355**	P	**Pn**	**01 53 35.6**	**-0.1**
MOVZ	**Moawhango**	**0.89**	**313**	P	**Pn**	**01 53 36.0**	**-0.2**
TIWZ	**Tintock**	**0.93**	**215**	P	**Pb**	**01 53 38.1**	**+0.7**
NMHZ	**Naumai**	**0.93**	**10**	P	**Pb**	**01 53 37.9**	**+0.6**
CPWZ	**Castlepoint**	**0.94**	**198**	P	**Pb**	**01 53 38.5**	**+1.0**
OHWZ	**Ohakea**	**1.00**	**259**	P	**Pb**	**01 53 38.9**	**+0.4**
MRZ	**Mangatainoka R**	**1.01**	**230**	P	**Pb**	**01 53 38.9**	**+0.3**
TUVZ	**Tukino**	**1.04**	**316**	P	**Pb**	**01 53 39.1**	**-0.2**
WHHZ	**Waihua**	**1.06**	**28**	P	**Pb**	**01 53 39.3**	**-0.2**
WHVZ	**Whangaehu Hut**	**1.07**	**313**	P	**Pb**	**01 53 39.5**	**-0.2**
MTVZ	**Mangateitei**	**1.07**	**306**	P	**Pb**	**01 53 39.7**	**-0.1**
TRVZ	**Turoa**	**1.08**	**311**	P	**Pb**	**01 53 39.7**	**-0.2**
DRZ	**Dome Shelter**	**1.09**	**313**	P	**Pb**	**01 53 39.9**	**-0.2**
FWVZ	**Far West T-bar**	**1.11**	**313**	P	**Pb**	**01 53 40.1**	**-0.3**
NGZ	**Ngauruhoe**	**1.14**	**317**	P	**Pb**	**01 53 40.7**	**-0.2**
RAHZ	**Arahi**	**1.16**	**19**	P	**Pb**	**01 53 40.6**	**-0.6**
MTHZ	**Maungataniwha**	**1.18**	**9**	P	**Pb**	**01 53 40.8**	**-0.7**
KRVZ	**Karewarewa**	**1.18**	**321**	P	**Pb**	**01 53 41.3**	**-0.3**
RITZ	**Rihia Road**	**1.19**	**331**	P	**Pb**	**01 53 41.6**	**0.0**
HATZ	**Hinemaiaia**	**1.19**	**341**	P	**Pb**	**01 53 41.3**	**-0.4**
MRHZ	**Matea Rd**	**1.19**	**353**	P	**Pb**	**01 53 41.5**	**-0.2**
WTVZ	**West Tongariro**	**1.19**	**319**	P	**Pb**	**01 53 41.5**	**-0.2**
HOWZ	**Holdsworth Sta**	**1.21**	**223**	P	**Pb**	**01 53 41.4**	**-0.5**
PKVZ	**Pokaka**	**1.21**	**307**	P	**Pb**	**01 53 41.8**	**-0.1**
TMWZ	**Te Maipa**	**1.21**	**206**	P	**Pb**	**01 53 41.4**	**-0.7**
KATZ	**Kakaramea**	**1.25**	**326**	P	**Pb**	**01 53 42.6**	**-0.2**
WAZ	**Wanganui**	**1.27**	**281**	P	**Pb**	**01 53 43.8**	**+0.8**
KNZ	**Kokohu**	**1.30**	**40**	P	**Pn**	**01 53 41.7**	**0.0**
TWVZ	**Taurewa**	**1.30**	**316**	P	**Pb**	**01 53 43.1**	**-0.5**
RATZ	**Rangitukua**	**1.31**	**331**	P	**Pb**	**01 53 43.9**	**+0.1**
MHGZ	**Mahia Peninsul**	**1.33**	**50**	P	**Pn**	**01 53 42.2**	**0.0**
OGWZ	**Otaki Gorge**	**1.35**	**233**	P	**Pb**	**01 53 43.4**	**-1.0**
SNGZ	**Shannon Statio**	**1.36**	**25**	P	**Pn**	**01 53 43.1**	**+0.5**
MTW	**Mount Morrison**	**1.41**	**216**	P	**Pn**	**01 53 43.6**	**+0.3**
RTZ	**Ruatahuna**	**1.43**	**12**	P	**Pn**	**01 53 44.2**	**+0.5**
WHTZ	**Whakaora**	**1.44**	**340**	P	**Pb**	**01 53 45.1**	**-0.8**
ALRZ	**Allen Road**	**1.47**	**352**	P	**Pn**	**01 53 44.9**	**+0.8**
WATZ	**Wairara**	**1.47**	**333**	P	**Pb**	**01 53 45.3**	**-1.1**
PRGZ	**Paritu Road**	**1.48**	**43**	P	**Pn**	**01 53 44.2**	**-0.1**
PRRZ	**Plateau Road**	**1.52**	**354**	P	**Pn**	**01 53 45.7**	**+0.8**
WPRZ	**Whakapapatarin**	**1.53**	**347**	P	**Pn**	**01 53 45.9**	**+0.9**
KIW	**Kapiti Island**	**1.54**	**236**	P	**Pn**	**01 53 45.9**	**+0.9**
TRWZ	**Traveller**	**1.54**	**206**	P	**Pn**	**01 53 45.3**	**+0.2**
MUGZ	**Murupara**	**1.54**	**5**	P	**Pn**	**01 53 45.7**	**+0.5**
RIGZ	**Rimuhau**	**1.59**	**35**	P	**Pn**	**01 53 46.0**	**+0.2**
CAW	**Cannon Point**	**1.59**	**226**	P	**Pn**	**01 53 46.3**	**+0.5**
PAWZ	**Paruwai Farm**	**1.63**	**213**	P	**Pn**	**01 53 46.4**	**+0.1**
KUTZ	**Kaahu Road**	**1.64**	**338**	P	**Pn**	**01 53 47.3**	**+0.8**
HRRZ	**Handcock Road**	**1.64**	**351**	P	**Pn**	**01 53 47.7**	**+1.2**
RAGZ	**Rawiri**	**1.65**	**23**	P	**Pn**	**01 53 46.8**	**+0.1**
VRZ	**Vera Road**	**1.68**	**302**	P	**Pb**	**01 53 48.8**	**-1.1**
RRRZ	**Republican Roa**	**1.68**	**358**	P	**Pn**	**01 53 47.6**	**+0.6**
GRRZ	**Galatos Road**	**1.71**	**347**	P	**Pn**	**01 53 48.4**	**+1.0**
HSRZ	**Hossack Road**	**1.73**	**351**	P	**Pn**	**01 53 48.5**	**+0.9**
MSWZ	**Moikau Station**	**1.73**	**216**	P	**Pn**	**01 53 47.4**	**-0.3**
HLRZ	**Highlands Stat**	**1.77**	**354**	P	**Pb**	**01 53 50.2**	**-1.4**
LREZ	**Lake Rotokare**	**1.78**	**288**	P	**Pb**	**01 53 51.1**	**-0.6**
TARZ	**Mount Tarawera**	**1.78**	**358**	P	**Pn**	**01 53 49.2**	**+0.7**
URZ	**Urewera**	**1.80**	**13**	Pg	**Pn**	**01 53 48.9**	**+0.2**
	104nm,0.3s,baz=227,slow=7.7,SNR=234						
URZ				Lg	Lg	01 54 11.3	
	143nm,0.3s,baz=90,slow=20,SNR=4.7						
URZ	**Urewera**	**1.80**	**13**	P	**Pn**	**01 53 48.6**	**-0.1**
MWZ	**Matawai**	**1.83**	**24**	P	**Pn**	**01 53 48.9**	**-0.2**
TKGZ	**Te Karaka**	**1.85**	**32**	P	**Pn**	**01 53 49.2**	**-0.1**
PLWZ	**Palliser**	**1.85**	**213**	Pn	**Pn**	**01 53 49.2**	**-0.3**
PLWZ				Sn	**Sn**	**01 54 13.6**	**+1.6**
PLWZ	**Palliser**	**1.85**	**213**	P	**Pn**	**01 53 49.0**	**-0.5**
UTU	**Utuhina**	**1.86**	**350**	P	**Pn**	**01 53 50.5**	**+1.0**
TLZ	**Tolley Road**	**1.88**	**334**	P	**Pn**	**01 53 50.7**	**+0.9**
MKRZ	**Makatiti**	**1.88**	**357**	P	**Pn**	**01 53 51.1**	**+1.3**
WEL	**Wellington**	**1.88**	**227**	P	**Pn**	**01 53 47.9**	**-1.9**
BHW	**Baring Head**	**1.91**	**223**	P	**Pn**	**01 53 50.0**	**-0.2**
EDRZ	**Edgecumbe**	**1.91**	**3**	P	**Pn**	**01 53 50.8**	**+0.5**
OMRZ	**Omania**	**1.92**	**355**	P	**Pn**	**01 53 50.8**	**+0.5**
SNZO	**South Karori**	**1.93**	**227**		**Pn**	**01 53 50.5**	**0.0**
NGRZ	**Ngongotaha**	**1.94**	**350**	P	**Pn**	**01 53 51.3**	**+0.7**
PREZ	**Palmer Road**	**2.00**	**289**	P	**Pb**	**01 53 54.7**	**-0.7**
KARZ	**Kaharoa**	**2.01**	**352**	P	**Pn**	**01 53 52.4**	**+0.8**
HIZ	**Hauiti**	**2.02**	**317**	P	**Pn**	**01 53 52.7**	**+1.0**
DREZ	**Durham Road**	**2.03**	**293**	P	**Pb**	**01 53 54.7**	**-1.2**
MARZ	**Manawahe**	**2.03**	**2**	P	**Pn**	**01 53 52.2**	**+0.4**
KHEZ	**Kahui Hut**	**2.12**	**289**	P	**Pb**	**01 53 56.3**	**-1.1**
TCW	**Tory Channel**	**2.13**	**235**	P	**Pn**	**01 53 53.2**	**0.0**
OPRZ	**Ohinepanea**	**2.17**	**359**	P	**Pn**	**01 53 53.8**	**+0.1**
PKE	**Pukeiti**	**2.18**	**291**	P	**Pb**	**01 53 57.0**	**-1.4**
WHRZ	**Whale Island**	**2.18**	**8**	P	**Pn**	**01 53 54.1**	**+0.3**
NMEZ	**Namu Road**	**2.18**	**285**	P	**Pb**	**01 53 57.3**	**-1.1**
DUWZ	**D'Urville Isla**	**2.19**	**248**	P	**Pn**	**01 53 54.2**	**+0.2**
RUGZ	**Raukumara Rang**	**2.22**	**23**	P	**Pn**	**01 53 54.2**	**-0.3**
KMRZ	**Kaimai**	**2.23**	**347**	P	**Pn**	**01 53 55.2**	**+0.6**
NBEZ	**Newall Road No**	**2.23**	**289**	P	**Pb**	**01 53 57.4**	**-2.0**
TGRZ	**Tauranga**	**2.30**	**353**	P	**Pn**	**01 53 56.1**	**+0.6**
TGRZ				P	**Pn**	**01 53 56.1**	**+0.6**
PUZ	**Puketiti**	**2.33**	**34**	P	**Pn**	**01 53 55.4**	**-0.6**
TOZ	**Tahuroa Road**	**2.44**	**339**	P	**Pn**	**01 53 58.3**	**+0.9**
HAZ	**Te Kaha**	**2.44**	**23**	P	**Pn**	**01 53 56.7**	**-0.8**
TUWZ	**Tuamarina**	**2.46**	**234**	Pn	**Pn**	**01 53 57.3**	**-0.5**
TUWZ	**Tuamarina**	**2.46**	**234**	P	**Pn**	**01 53 57.2**	**-0.5**
CMWZ	**Cape Campbell**	**2.50**	**225**	Pn	**Pn**	**01 53 58.4**	**+0.2**
CMWZ	**Cape Campbell**	**2.50**	**225**	P	**Pn**	**01 53 58.5**	**+0.2**
WMGZ	**Waiomatatini S**	**2.61**	**33**	P	**Pn**	**01 53 59.2**	**-0.6**
BSWZ	**Blackbirch Sta**	**2.67**	**230**	Pn	**Pn**	**01 54 00.3**	**-0.4**
BSWZ	**Blackbirch Sta**	**2.67**	**230**	P	**Pn**	**01 54 00.1**	**-0.5**
NNZ	**Nelson**	**2.73**	**243**	P	**Pn**	**01 54 01.6**	**+0.2**
MXZ	**Matakaoa Point**	**2.79**	**29**	P	**Pn**	**01 54 01.8**	**-0.5**
QRZ	**Quartz Range**	**3.21**	**254**	Pn	**Pn**	**01 54 07.9**	**-0.1**
QRZ	**Quartz Range**	**3.21**	**254**	P	**Pn**	**01 54 07.9**	**-0.1**
THZ	**Tophouse**	**3.30**	**237**	Pn	**Pn**	**01 54 08.8**	**-0.5**
THZ	**Tophouse**	**3.30**	**237**	P	**Pn**	**01 54 08.4**	**-0.9**
AWAZ	**Awhitu Peninsu**	**3.32**	**332**	P	**Pn**	**01 54 11.4**	**+1.8**
KHZ	**Kahutara**	**3.33**	**223**	P	**Pn**	**01 54 08.0**	**-1.6**
ETAZ	**East Tamaki Re**	**3.33**	**336**	P	**Pn**	**01 54 11.3**	**+1.6**
KUZ	**Kuaotunu**	**3.34**	**348**	P	**Pn**	**01 54 10.7**	**+0.9**
WIAZ	**Waiheke Island**	**3.42**	**340**	P	**Pn**	**01 54 12.2**	**+1.3**
WTAZ	**Waiatarua**	**3.46**	**332**	P	**Pn**	**01 54 13.7**	**+2.1**
MBAZ	**Motutapu North**	**3.51**	**337**	P	**Pn**	**01 54 13.8**	**+1.7**
ABAZ	**Army Bay**	**3.68**	**337**	P	**Pn**	**01 54 16.2**	**+1.7**
GRZ	**Great Barrier**	**3.87**	**346**	P	**Pn**	**01 54 18.1**	**+1.1**
GVZ	**Greta Valley S**	**3.98**	**221**	P	**Pn**	**01 54 16.8**	**-1.8**
DSZ	**Denniston Nort**	**4.02**	**243**	P	**Pn**	**01 54 18.9**	**-0.4**
LTZ	**Lake Taylor**	**4.27**	**228**	P	**Pn**	**01 54 20.7**	**-1.9**
AMCZ	**Amberley**	**4.33**	**222**	P	**Pn**	**01 54 22.8**	**-0.6**
WCZ	**Waipu Caves**	**4.44**	**336**	P	**Pn**	**01 54 26.7**	**+1.7**
OKCZ	**Okains Bay**	**4.55**	**214**	P	**Pn**	**01 54 24.4**	**-2.1**
MQZ	**McQueen's Vall**	**4.72**	**217**	Pn	**Pn**	**01 54 27.1**	**-1.6**
MQZ				Sn	**Sn**	**01 55 20.0**	**-2.4**
MQZ	**McQueen's Vall**	**4.72**	**217**	P	**Pn**	**01 54 26.7**	**-2.0**
INZ	**Inchbonnie**	**4.73**	**233**	P	**Pn**	**01 54 27.1**	**-1.8**
AKCZ	**Akaroa Harbour**	**4.73**	**214**	P	**Pn**	**01 54 27.2**	**-1.8**
OXZ	**Oxford**	**4.75**	**224**	Pn	**Pn**	**01 54 27.4**	**-1.9**
OXZ				Sn	**Sn**	**01 55 19.0**	**-4.2**
OXZ	**Oxford**	**4.75**	**224**	P	**Pn**	**01 54 27.3**	**-1.9**
RPZ	**Rata Peaks**	**5.55**	**226**	Pn	**Pn**	**01 54 38.7**	**-1.4**
	2.8nm,0.3s,baz=313,slow=0.9,SNR=26						
RPZ				Sn	**Sn**	**01 55 38.5**	**-4.3**
	21nm,0.3s,baz=133,slow=23,SNR=23						
FOZ	**Fox Glacier**	**6.17**	**233**	Pn	**Pn**	**01 54 47.4**	**-1.2**
LBZ	**Lake Benmore**	**6.46**	**225**	Pn	**Pn**	**01 54 51.4**	**-1.2**
LBZ				Sn	**Sn**	**01 56 02.4**	**-2.9**
I36NZ	**CHATHAM INFRAS**	**6.46**	**129**	*i*		02 33 30.0	
	baz=307,slow=317,SNR=0.7						
WKZ	**Wanaka**	**7.38**	**227**	Pn	**Pn**	**01 55 01.9**	**-3.5**
WKZ					**Sn**	**01 56 29.1**	**+1.0**
WHZ	**Wether Hill Ro**	**8.64**	**224**	Pn	**Pn**	**01 55 21.8**	**-0.7**
DZM	**Mont Dzumac**	**19.86**	**331**	P	**P**	**01 57 47.1**	**-1.3**
	0.4nm,0.3s,baz=122,slow=12,SNR=12						
DZM				LR	LR	02 05 14.1	
	comp=Z,276nm,20.2s,baz=216,slow=36						
TOO	**Toolangi**	**24.31**	**266**	P	**P**	**01 58 34.7**	**+0.2**
TOO				IAmb	IAmb	01 58 37.2	
	comp=Z,11nm,0.8s						
STKA	**Stephens Creek**	**29.33**	**275**	P	**P**	**01 59 21.3**	**+1.6**
	comp=Z,5.9nm,0.6s,baz=115,slow=11,SNR=17						
STKA				LR	LR	02 10 04.5	
	comp=Z,100nm,18.8s,baz=116,slow=35						
STKA	**Stephens Creek**	**29.33**	**275**	P	**P**	**01 59 21.7**	**+2.0**
BBOO	**Buckleboo**	**33.19**	**270**	P	**P**	**01 59 54.4**	**+0.7**
BBOO				IAmb	IAmb	01 59 55.0	
	comp=Z,5.7nm,0.7s						
PPT	**Papeete**	**36.80**	**62**	LR	LR	02 13 06.3	
	comp=Z,95nm,18.9s,baz=302,slow=32						
COEN	**Coen**	**39.12**	**302**	P	**P**	**02 00 44.6**	**+0.1**
COEN				IAmb	IAmb	02 00 46.3	
	comp=Z,13nm,0.8s						
AS31	**Alice Springs**	**39.36**	**281**	P	**P**	**02 00 47.0**	**+0.5**
ASAR	**Alice Springs**	**39.36**	**281**	P	**P**	**02 00 46.8**	**+0.3**
	comp=Z,8.3nm,0.8s,baz=125,slow=7.8,SNR=94						
PMG	**Port Moresby**	**40.19**	**311**	LR	LR	02 18 03.3	
	comp=Z,112nm,18.1s,baz=87,slow=37						
WR0	**Warramunga Arr**	**41.09**	**287**	P	**P**	**02 01 01.0**	**+0.2**
WR0				IAmb	IAmb	02 01 02.0	
	comp=Z,12nm,1.0s						
WRA	**Warramunga Arr**	**41.24**	**286**	P	**P**	**02 01 02.2**	**+0.1**
	comp=Z,11nm,0.7s,baz=128,slow=7.6,SNR=113						
WRA				LR	LR	02 17 50.7	
	comp=Z,132nm,19.8s,baz=145,slow=36						
WRA	**Warramunga Arr**	**41.24**	**286**	P	**P**	**02 01 01.6**	**-0.5**
WB0	**Warramunga Arr**	**41.31**	**287**	P	**P**	**02 01 02.9**	**+0.2**
WB0				IAmb	IAmb	02 01 03.7	
	comp=Z,12nm,0.8s						
FITZ	**Fitzroy Crossi**	**48.86**	**281**	P	**P**	**02 02 03.3**	**+0.7**
QSPA	**South Pole Qui**	**50.11**	**180**	P	**P**	**02 02 15.6**	**+3.9**
	comp=Z,3.9nm,0.8s,baz=18,slow=0.8,SNR=18						
QSPA	**South Pole Qui**	**50.11**	**180**	P	**P**	**02 02 14.6**	**+2.8**
QSPA				IAmb	IAmb	02 02 16.1	
	comp=Z,6.1nm,0.9s						
CISI	**Cisompet, Garu**	**68.95**	**278**	P	**P**	**02 04 22.4**	**+0.1**
KSRS	**Korea Array**	**89.10**	**323**	P	**P**	**02 06 13.5**	**+1.8**
	comp=Z,2.8nm,0.8s,baz=144,slow=6.1,SNR=9.1						
KSAR	**Wonju Array Be**	**89.11**	**323**	P	**P**	**02 06 13.2**	**+1.4**
NJ2	**Nanjing**	**89.44**	**314**	*e*P	**P**	**02 06 17.0**	**+3.6**
CMAR	**Chiang Mai Arr**	**92.62**	**292**	P	**P**	**02 06 28.2**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=146,slow=3.2,SNR=8.3						
CD2	**Chengdu**	**97.62**	**304**	P	Pdif	02 06 53.8	+2.5
HHC	**Hu-ho-hao-te**	**99.87**	**316**	*e*P	**Pdif**	**02 07 04.3**	**+3.2**
YKA	**Yellowknife Ar**	**116.00**	**29**	PKP	**PKiKP**	**02 11 58.5**	**0.0**
	comp=Z,0.2nm,0.7s,baz=239,slow=1.7,SNR=3.0						
KSH	**Kashi**	**121.03**	**297**	PKP	**PKPdf**	**02 12 06.3**	**-2.8**
KSH				sPKP		02 12 21.5	
KSH				PP	**PP**	**02 13 43.0**	**+3.6**
KSH				SKS	**SKSdf**	**02 19 11.0**	**-7.8**
KSH				SKKS	**SKKSac**	**02 20 29.5**	**-6.7**
KKAR	**Karatay Array**	**126.29**	**299**		**PKiKP**	**02 12 19.2**	**-0.1**
PLVO	**Plevna**	**127.21**	**59**		**PKiKP**	**02 12 21.4**	**+0.3**
KBZ	**Khabaz**	**145.67**	**292**	PKPbc	**PKPab**	**02 12 55.1**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=217,slow=2.5,SNR=4.4						
LIC	**Lamto**	**146.32**	**177**	*e*PKP2	**PKiKP**	**02 13 00.5**	**-0.5**
	comp=Z,17nm,0.8s						
LIC	**Lamto**	**146.32**	**177**		**PKiKP**	**02 13 00.5**	**-0.5**
KIC	**Kosan Boka**	**146.47**	**178**	*e*PKP2	**PKiKP**	**02 13 01.2**	**-0.1**
	comp=Z,9.9nm,0.6s						
KIC	**Kosan Boka**	**146.47**	**178**		**PKiKP**	**02 13 01.2**	**-0.1**
ARCES	**ARCESS Array B**	**146.72**	**342**	PKPbc	**PKPbc**	**02 12 57.5**	**+0.1**
	comp=Z,8.8nm,0.9s,baz=69,slow=2.3,SNR=34						
TIC	**Toumodi**	**146.74**	**177**	*e*PKP2	**PKiKP**	**02 13 02.1**	**+0.3**
	comp=Z,3.6nm,0.2s						
TIC	**Toumodi**	**146.74**	**177**		**PKiKP**	**02 13 02.1**	**+0.3**
DBIC	**Dimbokro**	**146.77**	**177**	PKPbc	**PKiKP**	**02 13 02.3**	**+0.4**
	comp=Z,3.7nm,0.7s,baz=151,slow=4.5,SNR=6.0						
BR131	**Keskin Array S**	**151.70**	**282**		**PKPdf**	**02 13 06.8**	**+2.1**
BRTR	**Keskin Array B**	**151.70**	**282**	PKPbc	**PKiKP**	**02 13 11.3**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=136,slow=4.8,SNR=10						
BRTR	**Keskin Array B**	**151.70**	**282**	PKPbc	**PKiKP**	**02 13 11.7**	**+0.2**
FINES	**FINESS Array B**	**152.00**	**330**	PKPbc	**PKPbc**	**02 13 10.2**	**-0.6**
	comp=Z,3.8nm,0.8s,baz=42,slow=3.1,SNR=7.8						
FINES	**FINESS Array B**	**152.00**	**330**		**PKiKP**	**02 13 10.8**	**-0.4**
FINES				PKPab	**PKPab**	**02 13 19.7**	**-0.6**
AKASG	**Malin Array Be**	**154.90**	**306**	PKPab	**PKPab**	**02 13 31.3**	**-1.7**
	comp=Z,0.2nm,0.4s,baz=64,slow=4.0,SNR=4.7						
GERES	**GERESS Array B**	**164.95**	**312**	PKPab	**PKPab**	**02 14 16.0**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=46,slow=3.9,SNR=4.6						

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*IDC **31** 01:54:43.6±6.7, 25°.70N×127°.64E, h0^{km}, mb3.6/3, mb1 3.7/4, mb1mx3.3/35, mbtmp3.6/4, ML3.3/1, MS3.5/2, Ms1 3.5/2, ms1mx2.7/42, Error ellipse: s-maj=129.4km s-min=76.1km az=124.0*

*JMA **31** 01:55:09.1±0.2, 27°.38N×127°.37E, h111^{km}±3^{km}, M3.9*

ISC 31 01:55:08.6±0.9**, 27°.35N**±0°.10×**127°.39E**±0°.10**, h120**^{km}±12^{km}**, n19, σ0^s.85**/25**, mb3.5**/3**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIH	**Iheya**	**0.60**	**121**	P	**Pn**	**01 55 27.5**	**+0.3**
JIH				S	**Sn**	**01 55 40.9**	**-0.3**
JAGN	**Aguni-jima**	**0.77**	**190**	P	**Pn**	**01 55 28.6**	**+0.1**
JAGN				S	**Sn**	**01 55 43.0**	**-0.6**
JOW	**Kunigami**	**0.94**	**123**	P	**Pn**	**01 55 30.3**	**+0.2**
JYRO	**Yoronjima**	**1.00**	**109**	P	**Pn**	**01 55 30.8**	**+0.2**
JYRO				*e*S	**Sn**	**01 55 46.4**	**-0.8**
JNTH	**Nagotoyohara**	**1.00**	**146**	P	**Pn**	**01 55 31.1**	**+0.4**
JNTH				S	**Sn**	**01 55 46.9**	**-0.4**
JOKE	**Okinoerabujima**	**1.05**	**89**	P	**Pn**	**01 55 31.2**	**+0.1**
JOKE				S	**Sn**	**01 55 47.0**	**-1.2**
JKE	**Kume jima 2**	**1.16**	**208**	P	**Pn**	**01 55 32.2**	**0.0**
JJT3	**Tamagusuku3**	**1.25**	**164**	P	**Pn**	**01 55 34.3**	**+1.0**
JJT3				S	**Sn**	**01 55 52.5**	**+0.5**
JTK	**Tokunoshima**	**1.45**	**72**	P	**Pn**	**01 55 35.5**	**0.0**
JAMN	**Amaminishikomi**	**1.81**	**60**	P	**Pn**	**01 55 39.7**	**0.0**
JAM	**Amami Oshima**	**2.23**	**61**	P	**Pn**	**01 55 44.9**	**0.0**
JAM				S	**Sn**	**01 56 11.8**	**-0.9**
JTAJ	**Takarajima**	**2.41**	**41**	P	**Pn**	**01 55 47.7**	**+0.6**
JZK	**Kikaishima**	**2.48**	**67**	P	**Pn**	**01 55 49.0**	**+0.9**
JZK				S	**Sn**	**01 56 19.0**	**+0.5**
KSRS	**Korea Array**	**10.09**	**2**	Pn	**Pn**	**01 57 31.9**	**+1.7**
	0.2nm,0.3s,baz=189,slow=14,SNR=4.7						
SONM	**Songino Array**	**26.21**	**327**	P	**P**	**02 00 33.9**	**+1.7**
	0.6nm,0.4s,baz=142,slow=11,SNR=7.6						
KAPI	**Kappang**	**33.01**	**194**	LR	LR	02 14 17.1	
	comp=Z,34nm,18.1s,baz=69,slow=37						
MKAR	**Makanchi Array**	**40.23**	**311**	P	**P**	**02 02 32.3**	**-1.2**
	0.5nm,0.5s,baz=92,slow=10,SNR=8.1						
AKTO	**Aktyubinsk**	**56.52**	**314**	LR	LR	02 29 11.4	
	comp=Z,87nm,19.5s,baz=132,slow=36						
NOA	**NORSAR Array B**	**77.98**	**333**	P	**P**	**02 06 52.3**	**-1.1**
	0.3nm,0.7s,baz=52,slow=5.1,SNR=1.7						

IDC 31 02:02:09.8±3.9**, 7°.16S×124°.84E, h548**^{km}±53^{km}**, mb2.8**/2**, mb1 2.9**/4**, mb1mx2.6**/33**, mbtmp3.8**/4**, Error ellipse: s-maj=181.2km s-min=14.9km az=61.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.69**	**145**	P	P	02 05 25.4	-1.0
	0.6nm,0.3s,baz=323,slow=11,SNR=29						
WRA				S	S	02 08 06.4	-1.0
	0.1nm,0.3s,baz=313,slow=18,SNR=7.2						
ASAR	**Alice Springs**	**18.57**	**153**	P	P	02 05 53.0	0.0
	0.6nm,0.3s,baz=346,slow=14,SNR=26						
ASAR				S	S	02 08 55.0	+0.4
	0.1nm,0.3s,baz=343,slow=19,SNR=4.7						
STKA	**Stephens Creek**	**29.13**	**150**	P	P	02 07 27.4	+0.5
	0.3nm,0.3s,baz=331,slow=13,SNR=1.2						
MKAR	**Makanchi Array**	**65.65**	**329**	P	P	02 11 60.0	-0.1
	0.7nm,0.6s,baz=129,slow=7.6,SNR=11						

IDC 31 02:11:33.8±7.3**, 7°.09S×127°.72E, h198**^{km}±67^{km}**, mb3.2**/2**, mb1 3.6**/5**, mb1mx3.2**/30**, mbtmp4.0**/5**, Error ellipse: s-maj=100.1km s-min=27.3km az=55.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.13**	**190**	P	Pn	02 14 07.8	+0.1
	0.3nm,0.3s,baz=27,slow=12,SNR=13						
FITZ				S	Sn	02 16 05.2	-6.6
	0.9nm,0.3s,baz=326,slow=16,SNR=6.8						
WRA	**Warramunga Arr**	**14.30**	**154**	P	Pn	02 14 46.5	-1.2
	1.1nm,0.3s,baz=330,slow=12,SNR=44						
WRA				S	S	02 17 15.6	-11
	0.2nm,0.3s,baz=334,slow=21,SNR=3.4						
ASAR	**Alice Springs**	**17.52**	**161**	P	Pn	02 15 25.8	-0.7
	1.2nm,0.3s,baz=334,slow=11,SNR=77						
ASAR				S	S	02 18 32.0	-4.5
	0.1nm,0.3s,baz=341,slow=23,SNR=13						
STKA	**Stephens Creek**	**27.86**	**154**	P	P	02 17 04.8	-0.2
	1.0nm,0.4s,baz=335,slow=7.6,SNR=4.9						
MKAR	**Makanchi Array**	**67.08**	**328**	P	P	02 22 05.9	+0.1
	0.2nm,0.6s,baz=111,slow=8.4,SNR=3.8						
LPAZ	**La Paz**	**151.97**	**146**	PKPbc	PKPbc	02 31 06.6	-0.6
	0.4nm,0.5s,baz=117,slow=2.3,SNR=2.0						
LPAZ				PKPab	PKPab	02 31 17.1	0.0
	0.9nm,0.9s,baz=243,slow=3.4,SNR=3.6						

WEL 31 02:14:35.9, 40°.0S±0°.6×**176°.5E**±0°.8**, h14**^{km}±1^{km}**, M3.7**/107**, ML4.1**/14**, MLv3.7**/107**, Error ellipse: s-maj=0.0km s-min=0.0km az=74.1, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WPHZ	**Waipukurau**	**0.12**	**222**	P	Pb	02 14 40.1	+0.1
PXZ	**Pawanui**	**0.25**	**102**	P	Pg	02 14 41.4	0.0
PXZ				S	Sb	02 14 47.0	+0.5
PNHZ	**Pukenui**	**0.27**	**284**	P	Pb	02 14 42.5	-0.1
PRHZ	**Porangahau**	**0.30**	**166**	P	Pb	02 14 42.8	-0.3
KAHZ	**Kahuranaki**	**0.32**	**55**	P	Pg	02 14 42.9	+0.4
KAHZ				S	Sb	02 14 49.0	+0.6
KRHZ	**Kereru**	**0.36**	**339**	P	Pb	02 14 43.8	-0.3
KRHZ				S	Sb	02 14 49.9	+0.3
DVHZ	**Dannevirke**	**0.43**	**222**	P	Pb	02 14 45.3	0.0
TSZ	**Takapari Road**	**0.45**	**260**	P	Pb	02 14 45.6	0.0
TSZ				S	Sb	02 14 53.0	+0.7
ANWZ	**Angora Road**	**0.48**	**186**	P	Pb	02 14 46.6	+0.4
CKHZ	**Cape Kidnapper**	**0.52**	**52**	P	Pb	02 14 47.1	+0.2
MCHZ	**McNeill Hill**	**0.55**	**13**	P	Pb	02 14 47.6	+0.3
KWHZ	**Kaweka Forest**	**0.56**	**351**	P	Pb	02 14 47.4	-0.1
BHHZ	**Black Hill Sta**	**0.61**	**323**	P	Pb	02 14 48.2	-0.2
BHHZ				S	Sb	02 14 57.2	+0.3
POWZ	**Post Office Ro**	**0.72**	**235**	P	Pb	02 14 50.6	+0.3
PRWZ	**Pori Road**	**0.72**	**217**	P	Pb	02 14 50.9	+0.7
BFZ	**Birch Farm**	**0.74**	**198**	P	Pb	02 14 50.9	+0.4
ARHZ	**Aropaoanui**	**0.80**	**26**	P	Pn	02 14 52.3	-0.4
BKZ	**Black Stump Fm**	**0.81**	**357**	P	Pb	02 14 51.9	+0.1
BKZ				S	Sn	02 15 03.9	-1.0
MOVZ	**Moawhango**	**0.83**	**313**	P	Pb	02 14 52.4	+0.1
NMHZ	**Naumai**	**0.90**	**13**	P	Pn	02 14 54.2	-0.1
TIWZ	**Tintock**	**0.94**	**212**	P	Pb	02 14 54.1	0.0
CPWZ	**Castlepoint**	**0.97**	**195**	P	Pb	02 14 54.5	0.0
OHWZ	**Ohakea**	**0.97**	**256**	P	Pn	02 14 55.5	+0.4

TUVZ	Tukino	0.99	316	P	Pn	02 14 55.5	0.0
MRZ	Mangatainoka R	1.00	227	P	Pb	02 14 55.0	0.0
WHVZ	Whangaehu Hut	1.01	313	P	Pn	02 14 55.9	0.0
MTVZ	Mangateitei	1.02	305	P	Pn	02 14 56.0	+0.2
TRVZ	Turoa	1.02	311	P	Pn	02 14 56.1	0.0
DRZ	Dome Shelter	1.03	313	P	Pn	02 14 56.3	+0.1
WHHZ	Waihua	1.05	31	P	Pb	02 14 55.7	-0.2
FWVZ	Far West T-bar	1.05	313	P	Pn	02 14 56.4	0.0
NGZ	Ngauruhoe	1.08	318	P	Pg	02 14 57.0	+0.2
KRVZ	Karewarewa	1.12	321	P	Pg	02 14 57.7	+0.1
RITZ	Rihia Road	1.13	332	P	Pg	02 14 58.0	+0.3
WTVZ	West Tongariro	1.13	319	P	Pg	02 14 57.8	+0.1
HATZ	Hinemaiaia	1.14	342	P	Pg	02 14 57.8	-0.1
RAHZ	Arahi	1.14	22	P	Pb	02 14 57.0	-0.4
MRHZ	Matea Rd	1.15	355	P	Pn	02 14 57.8	+0.2
MTHZ	Maungataniwha	1.15	12	P	Pb	02 14 57.2	-0.4
PKVZ	Pokaka	1.15	306	P	Pg	02 14 58.2	+0.1
KATZ	Kakaramea	1.20	327	P	Pg	02 14 59.0	0.0
HOWZ	Holdsworth Sta	1.21	220	P	Pn	02 14 57.5	-0.9
WAZ	Wanganui	1.22	280	P	Pg	02 15 00.1	+0.8
TMWZ	Te Maipa	1.23	204	P	Pn	02 14 57.4	-1.3
TWVZ	Taurewa	1.25	316	P	Pb	02 14 59.5	+0.3
RATZ	Rangitukua	1.26	332	P	Pg	02 15 00.3	+0.2
KNZ	Kokohu	1.30	43	P	Pn	02 14 57.9	-1.7
MHGZ	Mahia Peninsul	1.34	52	P	Pn	02 14 58.4	-1.8
OGWZ	Otaki Gorge	1.34	231	P	Pn	02 14 59.5	-0.7
SNGZ	Shannon Statio	1.35	28	P	Pn	02 14 59.6	-0.7
WHTZ	Whakaora	1.39	341	P	Pg	02 15 03.3	+0.7
RTZ	Ruatahuna	1.40	14	P	Pn	02 15 00.5	-0.6
WATZ	Wairara	1.42	333	P	Pb	02 15 02.3	+0.2
MTW	Mount Morrison	1.42	214	P	Pn	02 14 59.6	-1.7
ALRZ	Allen Road	1.42	354	P	Pn	02 15 01.7	+0.4
PRGZ	Paritu Road	1.48	45	P	Pn	02 15 00.7	-1.5
PRRZ	Plateau Road	1.48	356	P	Pn	02 15 02.2	+0.1
WPRZ	Whakapapatarin	1.49	348	P	Pg	02 15 04.6	+0.2
MUGZ	Murupara	1.51	7	P	Pn	02 15 02.1	-0.4
KIW	Kapiti Island	1.52	234	P	Pn	02 15 02.1	-0.6
TRWZ	Traveller	1.56	204	P	Pn	02 15 01.3	-1.9
RIGZ	Rimuhau	1.58	37	P	Pn	02 15 02.3	-1.3
KUTZ	Kaahu Road	1.59	339	P	Pb	02 15 04.7	-0.4
CAW	Cannon Point	1.59	224	P	Pn	02 15 02.4	-1.3
HRRZ	Handcock Road	1.60	353	P	Pg	02 15 06.2	-0.5
VRZ	Vera Road	1.62	301	P	Pb	02 15 05.1	-0.5
RAGZ	Rawiri	1.63	25	P	Pn	02 15 03.2	-1.0
PAWZ	Paruwai Farm	1.64	211	P	Pn	02 15 02.3	-2.0
GRRZ	Galatos Road	1.66	348	P	Pg	02 15 07.5	-0.3
LREZ	Lake Rotokare	1.73	287	P	Pb	02 15 07.8	+0.4
MSWZ	Moikau Station	1.74	214	P	Pn	02 15 03.5	-2.2
TARZ	Mount Tarawera	1.74	359	P	Pn	02 15 05.6	-0.2
URZ	Urewera	1.77	15	P	Pn	02 15 05.0	-1.1
MWZ	Matawai	1.81	25	P	Pn	02 15 05.2	-1.5
TLZ	Tolley Road	1.82	334	P	Pb	02 15 08.0	-1.0
MKRZ	Makatiti	1.84	358	P	Pb	02 15 08.6	-0.7
TKGZ	Te Karaka	1.84	34	P	Pn	02 15 05.4	-1.7
PLWZ	Palliser	1.86	211	P	Pn	02 15 05.0	-2.5
OMRZ	Omania	1.87	356	P	Pg	02 15 11.7	-0.2
WEL	Wellington	1.88	225	P	Pn	02 15 06.0	-1.5
BHW	Baring Head	1.91	221	P	Pn	02 15 06.0	-2.0
PREZ	Palmer Road	1.94	288	P	Pb	02 15 10.7	-0.4
HIZ	Hauiti	1.96	318	P	Pg	02 15 12.7	-0.9
CNGZ	Carnagh Statio	1.98	41	P	Pn	02 15 07.0	-1.9
MARZ	Manawahe	1.99	3	P	Pn	02 15 09.3	+0.1
KHEZ	Kahui Hut	2.07	289	P	Pb	02 15 13.0	-0.3
TCW	Tory Channel	2.12	234	P	Pn	02 15 09.4	-1.5
PKE	Pukeiti	2.12	291	P	Pb	02 15 13.9	-0.2
NMEZ	Namu Road	2.13	285	P	Pb	02 15 13.9	-0.4
OPRZ	Ohinepanea	2.13	0	P	Pn	02 15 11.5	+0.4
WHRZ	Whale Island	2.15	9	P	Pn	02 15 10.5	-0.8
DUWZ	D'Urville Isla	2.16	247	P	Pn	02 15 10.5	-1.0
NBEZ	Newall Road No	2.18	288	P	Pb	02 15 15.3	+0.2
RUGZ	Raukumara Rang	2.20	24	P	Pn	02 15 10.9	-1.2
HAZ	Te Kaha	2.42	24	P	Pn	02 15 14.1	-0.9
TUWZ	Tuamarina	2.45	233	P	Pn	02 15 13.1	-2.3
BSWZ	Blackbirch Sta	2.66	229	P	Pn	02 15 16.3	-2.1
NNZ	Nelson	2.71	242	P	Pn	02 15 17.8	-1.1
MXZ	Matakaoa Point	2.78	30	P	Pn	02 15 18.7	-1.3
QRZ	Quartz Range	3.18	253	P	Pn	02 15 24.3	-1.2
THZ	Tophouse	3.28	236	P	Pn	02 15 24.6	-2.4
KHZ	Kahutara	3.33	222	P	Pn	02 15 24.2	-3.3
GVZ	Greta Valley S	3.98	220	P	Pn	02 15 34.4	-2.1
DSZ	Denniston Nort	4.00	242	P	Pn	02 15 34.8	-2.0
LTZ	Lake Taylor	4.26	228	P	Pn	02 15 37.4	-3.0
OKCZ	Okains Bay	4.56	214	P	Pn	02 15 40.3	-4.1
INZ	Inchbonnie	4.71	233	P	Pn	02 15 43.2	-3.4
MQZ	McQueen's Vall	4.72	217	P	Pn	02 15 42.7	-4.0
AKCZ	Akaroa Harbour	4.74	214	P	Pn	02 15 43.2	-3.7
WVZ	Waitaha Valley	5.34	233	P	Pn	02 15 52.8	-2.4
RPZ	Rata Peaks	5.54	226	P	Pn	02 15 55.0	-3.0
FOZ	Fox Glacier	6.16	233	P	Pn	02 16 03.4	-2.9
CTZ	Chatham Island	6.34	129	P	Pn	02 16 06.5	-2.4
ODZ	Otahua Downs	6.68	219	P	Pn	02 16 09.9	-3.7

NSSP ***31*** *02:24:47.0, 39°.05N×44°.43E, h10^{km}, Ms3.2*

ATA ***31*** *02:24:49.7±0.6, 39°.15N×44°.40E, h12^{km}±12^{km}, ML2.8, MW3.2*

ISK ***31*** *02:24:50.6, 39°.17N×44°.32E, h5^{km}, ML3.2/17*

TEH ***31*** *02:24:52.0, 39°.15N×44°.55E, h10^{km}, ML3.0*

ISC 31 02:24:50.7±1.1**, 39°.14N**±0°.02×**44°.42E**±0°.02**, h7**^{km}±10^{km}**, n69, σ1^{s}23**/85**, 5C-3D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLDR	Caldiran	0.40	271	PG	Pg	02 24 57.3	-1.2
CLDR				SG	Sg	02 25 03.7	0.0
HYR	Heyderabad	0.67	29	*e*Pg	Pg	02 25 03.7	0.0
DYDN	Diyadin	0.70	306	*e*P	Pg	02 25 03.1	-1.1
DYDN				*e*S	Sb	02 25 14.4	-1.1
DYDN				IAML		02 25 39.1	
	comp=Z,475nm,1.3s						
IGDI	IGDIR	0.78	340	*e*P	Pg	02 25 04.7	-1.0
IGDI				*e*S	Sb	02 25 16.1	-1.5
IGDI				IAML		02 25 18.8	
	comp=Z,95nm,0.7s						
NAX	Nakhchivan	0.83	87	*e*Pg	Pg	02 25 06.5	-0.2
TASB	TASBURUN-IGDIR	0.86	350	PG	Pb	02 25 07.4	-0.7
TASB				SG	Sb	02 25 19.9	0.0
TASB	TASBURUN-IGDIR	0.86	350	*e*Pg	Pb	02 25 07.8	-0.3
SBZ	Shahbuz	0.91	73	*e*Pg	Pg	02 25 08.1	-0.2
VANB	Van	0.97	237	PG	Pb	02 25 10.1	+0.1
VANB	Van	0.97	237	*e*Pg	Pn	02 25 12.1	+1.1
TVAN	Van	1.00	233	*e*P	Pg	02 25 09.4	-0.5
TVAN				*e*S	Sb	02 25 24.3	+0.3
TVAN				IAML		02 25 33.5	
	comp=Z,255nm,0.6s						
GNI	Garni	1.04	13	*e*P	Pg	02 25 10.3	-0.4
GNI				*e*S	Sn	02 25 26.4	-0.5
GNI	Garni	1.04	13	PG	Pb	02 25 10.6	-0.6
GNI				SG	Sn	02 25 26.9	0.0
METS	Metsamor	1.05	345	⇑*i*P	Pg	02 25 09.7	-1.2
METS				⇓*i*S	Sn	02 25 25.9	-1.1
VNNZ	Vanand	1.07	335	⇑*i*P	Pb	02 25 11.2	-0.5
VNNZ				⇑*i*S	Sn	02 25 28.4	+0.8
ARUZ	Aruch	1.17	347	⇓*i*P	Pb	02 25 12.2	-1.3
ARUZ				⇑*i*S	Sn	02 25 29.9	-0.2
AGRB	Hanur-Agry	1.19	292	PN	Pb	02 25 11.9	-2.0
KAPZ	Kaputan	1.20	10	⇑*i*P	Pb	02 25 12.9	-1.1
KAPZ				⇓*i*S	Sn	02 25 30.9	0.0
ORD	Ordubad	1.24	99	*e*Pg	Pn	02 25 13.2	-1.4
AKDM	Akdamar-Van	1.39	235	PN	Pn	02 25 16.5	-0.2
ITBZ	Tabriz	1.62	123	*e*Pn	Pn	02 25 19.4	-0.6
ITBZ				*e*		02 25 23.5	
EAK	Akyaka	1.67	338	*e*P	Pg	02 25 22.4	-0.4
KARS	Kars	1.81	326	PN	Pb	02 25 23.3	-1.1
TVRZ	Varzaqan	1.86	109	*e*Pn	Pb	02 25 24.8	-0.4
TVRZ				*e*Sg	Sg	02 25 49.7	-0.9
TVRZ				*e*		02 25 58.4	
STE	Stepanavan	1.86	359	*i* P	Pg	02 25 25.4	-1.1
STE				*i* S	Sg	02 25 55.1	+4.5
GDB	GEDABAY	1.89	32	*e*Pn	Pb	02 25 25.3	-0.3
BLIS	Bitlis-Merkez	1.94	249	*e*P	Pn	02 25 25.1	+0.7
GURO	Guroymak-BITLI	1.96	253	PN	Pn	02 25 25.3	+0.8
GURO	Guroymak-BITLI	1.96	253	*e*Pn	Pb	02 25 25.8	-1.0
CUKT	Cukurca	1.99	199	PN	Pb	02 25 27.2	-0.2
CUKT				SN	Sb	02 25 53.7	+1.2
CUKT	Cukurca	1.99	199	*e*Pn	Pb	02 25 27.5	+0.1
QZX	Qazax, Azerbai	2.05	20	*e*Pn	Pb	02 25 27.9	-0.5
SENK	Senkaya-Erzuru	2.14	312	PN	Pb	02 25 28.2	-1.8
SENK	Senkaya-Erzuru	2.14	312	*e*Pn	Pg	02 25 30.7	-1.1
HOMI	Horasan	2.15	296	*e*P	Pb	02 25 28.4	-1.7
AHAR	Ahar	2.15	107	*e*Pn	Pb	02 25 28.5	-1.6
AHAR				*e*		02 25 33.1	
KOPR	Koprukoy-ERZUR	2.16	294	PN	Pn	02 25 28.2	+0.8
BGD	Bogdanovka	2.22	344	P	Pb	02 25 31.4	0.0
BGD	Bogdanovka	2.22	344	*e*Pn	Pg	02 25 34.3	+1.0
KZRT	Kazreti	2.25	360	P	Pb	02 25 31.6	-0.1
SIRT	Sirnak	2.26	224	PN	Pb	02 25 30.4	-1.5
SIRT	Sirnak	2.26	224	*e*Pn	Pg	02 25 33.7	-0.3
QRD	Qoradiz	2.27	81	*e*Pn	Pb	02 25 32.2	+0.1
VRTB	Varto-Mus	2.31	272	PN	Pn	02 25 30.4	+1.0
VRTB	Varto-Mus	2.31	272	*e*Pn	Pb	02 25 33.1	+0.3
MUSM	Mu-Merkez	2.31	261	*e*P	Pb	02 25 31.2	-1.6
IHSH	Hashtrud	2.37	110	*e*Pn	Pg	02 25 39.3	+3.1
IHSH				*e*		02 26 39.0	
AKH	Akhalkalaki	2.38	343	*e*Pn	Pg	02 25 36.0	-0.4
BRDA	Brd	2.41	61	*e*Pn	Pg	02 25 35.1	-1.7
DGRG	David-gareji	2.42	17	P	Pb	02 25 34.8	+0.1
DGRG				S	Sg	02 26 12.0	+3.4
BLQ	Beylaqan	2.50	75	*e*Pn	Pb	02 25 36.1	+0.2
AKDA	Akdag	2.55	293	*e*P	Pb	02 25 37.6	+0.5
BTNK	Botanikuri	2.56	6	P	Pg	02 25 38.3	-1.5
MAHB	Mahabad	2.57	156	*e*Pn	Pb	02 25 35.9	-1.4
MAHB				*e*		02 26 25.6	
TBLG	Delisi	2.60	5	P	Pg	02 25 40.8	+0.2
TBLG				S	Sg	02 26 13.5	-0.8
KARO	Karliova-Bingo	2.63	275	PN	Pn	02 25 34.9	+1.1
DDFL	Dedoflistskaro	2.65	29	P	Pg	02 25 41.1	-0.3
BKRG	Bakuriani	2.71	346	P	Pb	02 25 40.4	+0.8
SVAN	Silvan-Diyarba	2.71	250	PN	Pn	02 25 36.7	+1.9
ZRD	Zardab	2.76	65	*e*Pn	Pb	02 25 40.4	0.0
BNGB	Bingl	2.92	268	PN	Pn	02 25 38.9	+1.2
SEKA	Sheki	2.97	45	*e*Pn	Pb	02 25 44.0	0.0
YRD	Yardimli	2.98	93	*e*Pn	Pb	02 25 43.0	-1.3
YEDI	Yedisu-Bingol	3.03	277	PN	Pn	02 25 40.1	+0.8
LGD	Lagodekhi	3.03	27	P	Pg	02 25 46.8	-2.1
GLBA	Clilabad	3.09	87	*e*Pn	Pb	02 25 44.8	-1.2
LRK	Lerik	3.10	98	*e*Pn	Pb	02 25 43.5	-2.7
GUDG	Gudauri	3.33	1	P	Pb	02 25 49.5	-0.7
ONI	Oni	3.53	348	P	Pb	02 25 54.6	+1.0

IDC ***31*** *02:28:55.1±2.8, 36°.49N×71°.32E, h196^{km}±24^{km}, mb3.2/9, mb1 3.3/16, mb1mx3.2/45, mbtmp3.8/16, MS3.4/1, Ms1 3.4/1, ms1mx2.6/21, Error ellipse: s-maj=23.2km s-min=15.5km az=6.0*

NNC ***31*** *02:28:59.8±1.9, 36°.98N×71°.04E, h192^{km}±24^{km}, mb3.1, mpv4.0, Error ellipse: s-maj=17.5km s-min=12.5km az=38.0*

ISC 31 02:28:55.9±0.6**, 36°.67N**±0°.05×**71°.18E**±0°.06**, h200**^{km}**, n56, σ1^{s}41**/64**, mb3.5**/9**, 3C-7D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	3.45	150	P	Pn	02 29 53.0	+2.0
THW	Thamme Wali	3.89	173	P	Pn	02 29 57.8	+1.4
SARP	Sargodha	4.89	165	P	Pn	02 30 09.6	+0.7
THN	Thein Dam	5.64	137	*e*P	Pn	02 30 18.5	0.0
THN				*e*x	Sn	02 31 21.0	-2.8
AML	Almayashu	5.79	19	P	Pn	02 30 21.7	+0.9
	SNR=182						
UCH	Uchtor	6.12	24	P	Pn	02 30 26.0	+0.9
	SNR=96						
KZA	Kyzart	6.26	29	P	Pn	02 30 26.9	+0.1
	SNR=8.1						
MRKS	Merke	6.27	14	Lg	Lg	02 31 24.3	
	46nm,0.6s						
EKS2	Erkin-Say	6.31	18	P	Pn	02 30 28.5	+1.3
	SNR=14						
KK31	Karatay Array	6.45	356	P	Pn	02 30 29.8	+0.9
	1.7nm,0.2s,baz=167,slow=11,SNR=150						
KK31				S	Sn	02 31 37.9	-4.8
	35nm,0.6s,baz=166,slow=15,SNR=13						
AAK	Ala-Archa	6.49	22	P	Pn	02 30 31.0	+1.4
	3.5nm,0.3s,baz=196,slow=8.3,SNR=36						
AAK				S	Sn	02 31 43.0	-0.8
	3.3nm,0.3s,baz=314,slow=22,SNR=23						
AAK	Ala-Archa	6.49	22	P	Pn	02 30 30.7	+1.1
	SNR=18						
AAK	Ala-Archa	6.49	22	⇓P	Pn	02 30 30.4	+0.8
	10.0nm,0.5s						
AAK				⇑S	Sn	02 31 42.8	-1.0
	57nm,0.8s						
KBK	Karagaybulak	6.65	25	P	Pn	02 30 33.1	+1.4
	SNR=14						
BHK	Bhakra	6.80	139	*e*x	Sn	02 31 40.2	-11
ULHL	Ulahol	6.81	34	P	Pn	02 30 34.5	+0.7
	SNR=6.3						
CHMS	Chumysh	6.90	22	P	Pn	02 30 36.2	+1.5
	SNR=6.8						
CHMS	Chumysh	6.90	22	⇑P	Pn	02 30 35.2	+0.5
	12nm,0.8s						
CHMS				⇓S	Sn	02 31 52.0	-1.1
	14nm,0.7s						
USP	Ospenovka	7.07	20	P	Pn	02 30 38.3	+1.4
	SNR=7.8						
TKM2	Tokmak 2	7.11	27	P	Pn	02 30 38.5	+0.8
	SNR=17						
TKM2	Tokmak 2	7.11	27	⇑P	Pn	02 30 38.4	+0.7
	14nm,0.5s						
TKM2				⇓S	Sn	02 31 57.5	-1.0
	10.0nm,0.6s						
SGDS	Sogindy	7.28	20	P	Pn	02 30 39.5	-0.1
	5.3nm,0.6s						
DGS	Degeres	7.45	27	P	Pn	02 30 42.5	+0.4
KRBS	Karabastau	7.82	25	P	Pn	02 30 47.2	+0.5
	2.1nm,0.4s						
NDI	New Delhi	9.44	146	*e*P	Pn	02 31 05.0	-3.0
GEYT	Alibeck	10.48	281	P	Pn	02 31 20.8	-0.6
	0.6nm,0.3s,baz=109,slow=8.2,SNR=6.4						
GEYT				S	Sn	02 33 15.2	-3.2
	0.3nm,0.3s,baz=60,slow=20,SNR=1.7						
MK31	Makanchi Array	13.07	36	⇓P	Pn	02 31 55.0	+0.9
	2.0nm,0.7s						
MKAR	Makanchi Array	13.07	36	P	Pn	02 31 54.8	+0.7
	0.2nm,0.3s,baz=207,slow=7.9,SNR=20						
DANN	Dangsing	13.46	124	*e*P	Pn	02 31 57.4	-2.0
	21nm,0.4s						
GKN	Gorkha	14.27	123	*e*P	Pn	02 32 08.8	-0.6
	44nm,0.3s						
DMN	Daman	14.84	124	*e*P	Pn	02 32 15.7	-0.8
	30nm,0.4s						
KKN	Kakani	14.84	123	*e*P	Pn	02 32 15.4	-1.0
	25nm,0.5s						
KURBB	Kurchatov Arra	14.92	18	P	Pn	02 32 16.3	-0.6
	0.1nm,0.3s,baz=206,slow=11,SNR=8.5						
AB31	Akbulak array	15.01	330	P	Pn	02 32 17.9	-0.2
	1.7nm,0.5s,baz=142,slow=13,SNR=46						
AB31				⇓S	S	02 35 02.7	-1.9
	0.9nm,0.4s						
PKIN	Phulchoki	15.06	123	*e*P	Pn	02 32 18.2	-0.9
	26nm,0.4s						
PKI	Pulchoki	15.07	123	*e*P	Pn	02 32 18.4	-0.9
	27nm,0.4s						
GUN	Gumba	15.18	121	*e*P	Pn	02 32 20.2	-0.4
	24nm,0.4s						
JIRN	Jiri	15.55	121	*e*P	Pn	02 32 24.9	-0.3
	93nm,0.5s						
RAMN	Ramite	16.28	122	*e*P	P	02 32 32.8	-0.4
	20nm,0.5s						
BVAR	Borovoye Array	16.37	358	P	Pn	02 32 35.3	+0.9
	0.4nm,0.3s,baz=158,slow=10,SNR=6.4						
AKTO	Aktyubinsk	16.71	330	P	Pn	02 32 39.5	+1.0
	0.2nm,0.3s,baz=132,slow=10,SNR=16						
AKTO				S	S	02 35 39.0	-2.6
	0.1nm,0.3s,baz=229,slow=20,SNR=1.4						
AKTO	Aktyubinsk	16.71	330	⇓P	Pn	02 32 38.9	+0.4
	4.5nm,0.8s						
AKTO				⇓S	S	02 35 40.4	-1.2
	2.6nm,0.7s						
TAPN	Taplejung	16.80	119	*e*P	Pn	02 32 40.2	+0.1
	14nm,0.3s						
ODAN	Odare	16.88	121	*e*P	Pn	02 32 40.5	-0.5
	17nm,0.5s						
ZALV	Zalesovo Beam	19.70	24	P	P	02 33 10.1	+0.2
	0.5nm,0.3s,baz=223,slow=11,SNR=11						
SONM	Songino Array	28.12	56	P	P	02 34 30.2	+0.9
	0.3nm,0.5s,baz=262,slow=10.0,SNR=2.2						
BRTR	Keskin Array B	29.52	288	P	P	02 34 44.2	+2.5
	0.7nm,0.7s,baz=96,slow=8.2,SNR=4.4						
AKASG	Malin Array Be	32.95	309	P	P	02 35 12.8	+1.4
	0.7nm,0.6s,baz=82,slow=6.9,SNR=4.3						
FINES	FINESS Array B	37.43	326	P	P	02 35 50.8	+1.4
	1.0nm,0.7s,baz=128,slow=11,SNR=1.5						
NB2	NORSAR Subarra	44.34	323	P	P	02 36 46.5	+0.6
	comp=Z,1.3nm,0.6s,baz=95,slow=7.9						
NOA	NORSAR Array B	44.34	323	P	P	02 36 46.4	+0.5
	comp=Z,0.9nm,0.6s,baz=96,slow=7.7,SNR=8.0						
MJAR	Matsushiro Arr	52.76	69	LR	LR	03 01 41.5	
	comp=Z,36nm,18.0s,baz=270,slow=37						
ILAR	Eielson Array	74.58	16	P	P	02 40 12.2	-0.2
	comp=Z,0.6nm,0.9s,baz=313,slow=3.7,SNR=5.8						
YKA	Yellowknife Ar	81.07	3	P	P	02 40 48.8	+0.5
	comp=Z,1.3nm,0.7s,baz=351,slow=5.0,SNR=23						
YKA				pP	pP	02 41 39.9	+2.1
	comp=Z,0.5nm,0.7s,baz=352,slow=4.9,SNR=6.4						
WRA	Warramunga Arr	81.95	122	P	P	02 40 52.0	-1.5
	comp=Z,0.9nm,0.8s,baz=324,slow=5.5,SNR=5.6						
ASAR	Alice Springs	84.23	125	P	P	02 41 03.5	-1.5
	comp=Z,0.6nm,0.8s,baz=316,slow=5.3,SNR=7.1						

IDC 31 02:29:07.1±61.0**, 16°.78S**×**177°.83W, h0**^{km}**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.5**/23**, mbtmp3.7**/3**, Error ellipse: s-maj=1133.0km s-min=172.4km az=78.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.66	240	P	P	02 36 41.5	+0.6
	0.8nm,0.5s,baz=77,slow=14,SNR=3.7						
WRA	Warramunga Arr	45.39	258	P	P	02 37 27.1	-0.7
	0.1nm,0.3s,baz=95,slow=8.2,SNR=6.4						
ASAR	Alice Springs	45.64	253	P	P	02 37 29.6	-0.1
	1.1nm,0.4s,baz=89,slow=8.0,SNR=19						

IDC 31 02:36:39.6±3.3**, 12°.99N**×**123°.34E, h0**^{km}**, mb3.3**/3**, mb1 3.4**/3**, mb1mx3.2**/36**, mbtmp3.3**/3**, Error ellipse: s-maj=293.3km s-min=28.4km az=63.0, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	34.47	162	P	P	02 43 28.9	-0.4
	0.2nm,0.4s,baz=341,slow=11,SNR=4.9						
ASAR	Alice Springs	37.87	164	P	P	02 43 58.8	+0.4
	0.2nm,0.7s,baz=348,slow=7.9,SNR=2.2						
MKAR	Makanchi Array	48.14	323	P	P	02 45 21.3	-0.2
	0.2nm,0.4s,baz=118,slow=7.5,SNR=5.0						

DJA 31 02:44:39.3±0.9**, 5°S**±3°×**10°4E**±°**, h11**^{km}±7^{km}**, M2.9**/4**, MLv2.9**/4**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LWLI	Liwa	0.13	176	P	Pg	02 44 43.0	+0.5
LWLI				S	Sg	02 44 46.7	+1.9
MDSI	Maura Dua	0.42	18	P	Pb	02 44 48.3	-0.5
MDSI				S	Sb	02 44 55.3	+0.1
MNAI	Manna	1.21	296	P	Pn	02 45 01.8	-0.4
MNAI				S	Sb	02 45 18.1	+0.2
KSI	Kapahiang	1.90	310	P	Pn	02 45 11.9	+0.1

JMA ***31*** *02:59:15.2±0.1, 38°.93N×141°.92E, h51^{km}±1^{km}, M3.8*

JMA Felt II J1.

NEIC ***31*** *02:59:15.5±1.5, 38°.93N±0°.09×142°.2E±0°.2, h64^{km}±15^{km}, mb4.1/2, Error ellipse: s-maj=27.7km s-min=3.4km az=117.0*

IDC ***31*** *02:59:16.5±3.2, 38°.90N×142°.15E, h72^{km}±23^{km}, mb3.6/7, mb1 3.6/11, mb1mx3.4/47, mbtmp3.8/11, Error ellipse: s-maj=39.4km s-min=21.1km az=86.0*

ISC 31 02:59:14.9±1.2**, 38°.91N**±0°.05×**141°.95E**±0°.09**, h47**^{km}±8^{km}**, n41, σ1^{s}61**/44**, mb4.0**/9**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.28	308	P	Pn	02 59 24.2	+0.6
OFUJ				S	Sn	02 59 30.2	+0.4
JKMT	Kesennumamotoy	0.39	255	P	Pn	02 59 25.1	+0.4
JKMT				S	Sn	02 59 31.8	+0.2
JMK	Ichinoseki	0.57	274	P	Pn	02 59 27.1	+0.2
JMK				S	Sn	02 59 35.5	0.0
JIO	Ouri	0.66	226	P	Pn	02 59 28.1	+0.1
JIO				S	Sn	02 59 36.8	-0.6
JOM	Ohasama	0.76	318	P	Pn	02 59 29.5	+0.1
JOM				S	Sn	02 59 40.0	+0.1
JRG	Rokugo	1.14	296	P	Pn	02 59 34.4	0.0
JRG				S	Sn	02 59 48.7	-0.2
JOU	Okura	1.15	242	P	Pn	02 59 34.6	0.0
JOU				S	Sn	02 59 48.9	-0.3
JYK	Kaneyama	1.24	271	P	Pn	02 59 36.0	+0.1
JMM	Marumori	1.39	222	P	Pn	02 59 37.4	-0.4
JMM				S	Sn	02 59 54.3	-0.7
JANG	Nango	1.50	347	P	Pn	02 59 39.2	-0.2
ERM	Erimo	3.23	16	Pn	Pn	03 00 04.0	+0.9
MAJO	Matsushiro	3.79	233		Pn	03 00 13.4	+2.5
MAT	Matsushiro	3.79	233	P	Pn	03 00 12.9	+2.0
MAT				*e*S	Sn	03 01 00.4	+6.1
MJAR	Matsushiro Arr	3.79	233	P	Pn	03 00 13.2	+2.2
	0.6nm,0.3s,baz=40,slow=13,SNR=18						
MJAR	Matsushiro Arr	3.79	233		Pn	03 00 16.2	+5.3
MJB9	Matsu-Tunnel	3.79	233		Pn	03 00 13.2	+2.2
JKA	Kamikawa-asahi	5.22	5		Pn	03 00 32.1	+1.7
JKA					Sn	03 01 27.8	-1.6
ASAJ	Asahikawa	5.22	5	P	Pn	03 00 32.1	+1.6
	0.8nm,0.3s,baz=212,slow=18,SNR=1.9						
ASAJ				S	Sn	03 01 27.8	-1.6
	0.7nm,0.3s,baz=315,slow=3.4,SNR=4.2						
JHJ	Hachijo jima 2	6.04	198	S	Sn	03 01 47.0	-2.5
	9.7nm,0.3s,baz=228,slow=19,SNR=1.4						
USRK	Ussuriysk Ar.	9.15	308	P	Pn	03 01 27.6	+3.4
	baz=125,slow=13,SNR=9.4						
USRK	Ussuriysk Ar.	9.15	308		Pn	03 01 27.2	+3.0
KSRS	Korea Array	11.14	267	P	Pn	03 01 56.3	+4.7
	0.2nm,0.3s,baz=84,slow=11,SNR=2.3						
SONM	Songino Array	27.14	301	P	P	03 04 54.7	+1.0
	0.3nm,0.5s,baz=109,slow=8.9,SNR=2.3						
H11N2	WAKE ISLAND Hy	28.80	124	T	T	03 35 34.7	
	baz=317,slow=75,SNR=263						
H11N1	WAKE ISLAND Hy	28.81	124	T	T	03 35 35.6	
	baz=317,slow=75,SNR=270						
H11N3	WAKE ISLAND Hy	28.82	124	T	T	03 35 36.2	
	baz=317,slow=75,SNR=218						
H11S1	WAKE ISLAND Hy	29.57	126	T	T	03 36 31.5	
	baz=318,slow=76,SNR=118						
H11S3	WAKE ISLAND Hy	29.57	126	T	T	03 36 32.1	
	baz=318,slow=76,SNR=225						
H11S2	WAKE ISLAND Hy	29.59	126	T	T	03 36 32.8	
	baz=318,slow=76,SNR=147						
ZALV	Zalesovo Beam	40.99	311	P	P	03 06 53.0	0.0
	1.7nm,0.5s,baz=91,slow=6.1,SNR=6.8						
ZALV	Zalesovo Beam	40.99	311	P	P	03 06 52.5	-0.5
MK31	Makanchi Array	43.51	301	P	P	03 07 12.9	-0.7
MK31				IAmb	IAmb	03 07 14.4	
	comp=Z,2.2nm,0.8s						
MKAR	Makanchi Array	43.51	301	P	P	03 07 13.4	-0.3
	comp=Z,2.2nm,0.7s,baz=86,slow=10,SNR=26						
MKAR	Makanchi Array	43.51	301	P	P	03 07 13.1	-0.6
KURK	Kurchatov	45.13	307	P	P	03 07 25.8	-0.7
KURK				IAmb	IAmb	03 07 27.0	
	comp=Z,3.3nm,0.8s						
WRA	Warramunga Arr	58.98	188	P	P	03 09 08.8	-0.8
	comp=Z,0.8nm,0.4s,baz=1.0,slow=7.4,SNR=7.2						
FINES	FINESS Array B	67.36	332	P	P	03 10 04.0	-0.7
	comp=Z,1.9nm,0.8s,baz=30,slow=12,SNR=4.4						
FINES	FINESS Array B	67.36	332	P	P	03 10 03.8	-1.0
AKASG	Malin Array Be	73.08	322	P	P	03 10 39.1	-0.8
	comp=Z,0.2nm,0.4s,baz=49,slow=5.7,SNR=4.0						
BRTR	Keskin Array B	77.93	312	P	P	03 11 07.8	-0.4
	comp=Z,0.2nm,0.3s,baz=108,slow=3.9,SNR=6.8						
BRTR	Keskin Array B	77.93	312	P	P	03 11 07.6	-0.5

KRNET ***31*** *03:15:02.3±0.1, 40°.22N×70°.41E, mb2.5*

ISC 31 03:15:01.9±3.1**, 40°.1N**±0°.1×**70°.3E**±0°.1**, h16**^{km}**, n7, σ2^{s}23**/13**, 11C-4D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	0.41	99	⇑*i*P	Pg	03 15 09.3	-1.0
	baz=17						
BTK				⇑*i*S	Sg	03 15 14.3	-1.7
	baz=17						
ARSB	Arslanbob	2.37	59	⇑*i*P	Pb	03 15 42.4	-1.9

	baz=60						
ARSB				⇑*i*S	**Sb**	**03 16 11.9**	**-1.5**
	baz=60						
KK31	**Karatay Array**	**2.98**	**3**	⇓Pn	**Pg**	**03 15 57.1**	**-1.9**
	0.1nm,0.2s,baz=0.0,slow=0.1,SNR=9.5						
KK31				⇓Pg	Pb	03 16 05.0	+10
	0.6nm,0.4s,baz=177,slow=18,SNR=8.1						
KK31				⇑Lg	Lg	03 16 49.2	
	0.9nm,0.3s,baz=165,slow=29,SNR=9.2						
AML	**Almayashu**	**3.26**	**51**	⇑*e*P	**Pn**	**03 15 54.8**	**+2.1**
	baz=51						
AML				⇑*i*S	**Sn**	**03 16 33.3**	**+1.9**
	baz=51						
ARLS	**Aral**	**3.51**	**59**	⇓*i*P	**Pn**	**03 15 58.5**	**+2.5**
	baz=60						
ARLS				⇓*i*S	**Sn**	**03 16 39.2**	**+1.9**
	baz=60						
EKS2	**Erkin-Say**	**3.65**	**45**	⇑*i*P	**Pn**	**03 16 00.2**	**+2.4**
	baz=45						
EKS2				⇑*i*S	**Sn**	**03 16 42.5**	**+1.9**
	baz=45						
UCH	**Uchtor**	**3.82**	**55**	⇑*i*P	**Pn**	**03 16 02.9**	**+2.4**
	baz=56						
UCH				⇑*i*S	**Sn**	**03 16 47.0**	**+1.7**
	baz=56						

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*IDC **31** 03:15:08.8±7.7, 17°.49S×178°.73W, h575^{km}±85^{km}, mb3.0/5, mb1 3.4/5, mb1mx3.0/29, mbtmp3.9/5, Error ellipse: s-maj=99.8km s-min=31.7km az=149.0*

ISC 31 03:15:06.2±1.7**, 17°.4S**±0°.7×**178°.8W**±0°.4**, h547**^{km}**, n7, σ0**^{s}**.88**/8**, mb3.3**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.41**	**259**	P	**P**	**03 22 29.2**	**+0.3**
	1.5nm,0.3s,baz=96,slow=7.2,SNR=7.1						
ASAR	**Alice Springs**	**44.62**	**254**	P	**P**	**03 22 31.2**	**+0.6**
	3.9nm,0.6s,baz=87,slow=8.5,SNR=62						
ASAR				PcP	**PcP**	**03 24 00.2**	**-1.3**
	0.5nm,0.7s,baz=104,slow=3.2,SNR=4.3						
ILAR	**Eielson Array**	**85.46**	**13**	P	**P**	**03 26 46.0**	**+0.2**
	0.3nm,0.4s,baz=222,slow=5.1,SNR=11						
TXAR	**Lajitas Array**	**85.99**	**58**	P	**P**	**03 26 50.3**	**+1.0**
	0.3nm,0.7s,baz=213,slow=6.0,SNR=3.9						
PDAR	**Pinedale Array**	**87.20**	**44**	P	**P**	**03 26 54.2**	**-0.7**
	0.3nm,0.7s,baz=226,slow=2.4,SNR=2.3						
BRTR	**Keskin Array B**	**144.19**	**315**	PKP	**PKPdf**	**03 33 40.1**	**-0.3**
	0.8nm,0.8s,baz=115,slow=2.6,SNR=6.2						
GERES	**GERESS Array B**	**147.03**	**345**	PKPbc	**PKPbc**	**03 33 47.8**	**-0.1**
	0.8nm,0.6s,baz=18,slow=3.8,SNR=8.8						

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*UCR **31** 03:33:21.7±2.6, 12°.55N×88°.14W, h35^{km}±999^{km}, MD4.2, ML3.8*

*INET **31** 03:33:21.5, 12°.56N×88°.10W, h61^{km}, ML3.9*

*SNET **31** 03:33:22.1±0.8, 12°.60N×88°.16W, h31^{km}±6^{km}, ML3.8*

ISC 31 03:33:21.0±1.9**, 12°.54N**±0°.06×**88°.16W**±0°.05**, h28**^{km}±16^{km}**, n35, σ0**^{s}**.53**/55**, 3C, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.80**	**23**	*e*P	**Pn**	**03 33 36.4**	**-0.2**
CNCH				*e*S	**Sn**	**03 33 47.8**	**+0.2**
CNCH				IAML		03 33 52.6	
	comp=Z,10µm,0.3s						
CNCH	**Conchagua**	**0.80**	**23**	*e*P	**Pn**	**03 33 36.4**	**-0.2**
CNCH				*e*S	**Sn**	**03 33 47.8**	**+0.2**
CNCH				IAML		03 33 52.6	
	comp=Z,10µm,0.3s						
LCND	**La Caada**	**0.81**	**19**	*e*P	**Pn**	**03 33 36.4**	**-0.2**
LCND				*e*S	**Sn**	**03 33 47.8**	**+0.1**
LCND				IAML		03 33 51.9	
	comp=Z,2µm,0.2s						
LCND	**La Caada**	**0.81**	**19**	*e*P	**Pn**	**03 33 36.4**	**-0.2**
LCND				*e*S	**Sn**	**03 33 47.8**	**+0.1**
LCND				IAML		03 33 51.9	
	comp=Z,2µm,0.2s						
ALJI	**Alcalda de J**	**0.88**	**333**	⇑*i*P	**Pn**	**03 33 37.8**	**+0.2**
ALJI				*e*S	**Sb**	**03 33 50.0**	**+0.8**
ALJI				IAML		03 33 53.3	
	comp=Z,3µm,0.2s						
ALJI	**Alcalda de J**	**0.88**	**333**	⇑*i*P	**Pn**	**03 33 37.8**	**+0.2**
ALJI				*e*S	**Sb**	**03 33 50.0**	**+0.8**
ALJI				IAML		03 33 53.3	
	comp=Z,3µm,0.2s						
LCY	**Lacayo**	**0.89**	**351**	*e*P	**Pn**	**03 33 37.9**	**+0.1**
LCY	**Lacayo**	**0.89**	**351**	*e*P	**Pn**	**03 33 37.9**	**+0.1**
BLLM	**Bellamira**	**0.91**	**355**	*e*P	**Pn**	**03 33 37.9**	**0.0**
BLLM	**Bellamira**	**0.91**	**355**	*e*P	**Pn**	**03 33 37.9**	**0.0**
PACA	**Pacayal**	**0.94**	**350**	*i* P	**Pn**	**03 33 38.5**	**0.0**
PACA				*e*S	**Sb**	**03 33 51.6**	**+0.5**
PACA	**Pacayal**	**0.94**	**350**	*i* P	**Pn**	**03 33 38.5**	**0.0**
PACA				*e*S	**Sb**	**03 33 51.6**	**+0.5**
TECA	**Tecapa**	**1.01**	**341**	*e*P	**Pn**	**03 33 39.5**	**0.0**
TECA	**Tecapa**	**1.01**	**341**	*e*P	**Pn**	**03 33 39.5**	**0.0**
COEB	**Comit de Eme**	**1.02**	**339**	*e*P	**Pn**	**03 33 39.6**	**0.0**
COEB				*e*S	**Sb**	**03 33 53.5**	**+0.2**
COEB	**Comit de Eme**	**1.02**	**339**	*e*P	**Pn**	**03 33 39.6**	**0.0**
COEB				*e*S	**Sb**	**03 33 53.5**	**+0.2**
COEG	**Centro de Oper**	**1.29**	**327**	*e*P	**Pn**	**03 33 43.3**	**+0.1**
COEG				*e*S	**Sb**	**03 33 59.9**	**-0.9**
COEG	**Centro de Oper**	**1.29**	**327**	*e*P	**Pn**	**03 33 43.3**	**+0.1**
COEG				*e*S	**Sb**	**03 33 59.9**	**-0.9**
LFRS	**El Faro**	**1.40**	**321**	⇑*i*P	**Pn**	**03 33 45.0**	**+0.3**
LBRS	**Las Brisas**	**1.48**	**324**	*e*P	**Pn**	**03 33 46.5**	**+0.7**
LALI	**Alcalda de L**	**1.48**	**310**	*e*P	**Pn**	**03 33 46.0**	**+0.2**
LALI				*e*S	**Sn**	**03 34 04.1**	**-0.1**
LALI	**Alcalda de L**	**1.48**	**310**	*e*P	**Pn**	**03 33 46.0**	**+0.2**
LALI				*e*S	**Sn**	**03 34 04.1**	**-0.1**
LOMA	**Loma Larga**	**1.48**	**318**	*e*P	**Pn**	**03 33 46.2**	**+0.3**
LOMA				*e*S	**Sb**	**03 34 05.6**	**-0.8**
LOMA				IAML		03 34 07.4	
	comp=Z,2µm,0.3s						
LOMA	**Loma Larga**	**1.48**	**318**	*e*P	**Pn**	**03 33 46.2**	**+0.3**
LOMA				*e*S	**Sb**	**03 34 05.6**	**-0.8**
LOMA				IAML		03 34 07.4	
	comp=Z,2µm,0.3s						
OPAM	**Oficina de Pla**	**1.55**	**319**	*e*P	**Pn**	**03 33 47.4**	**+0.6**
OPAM				*e*S	**Sb**	**03 34 06.9**	**-1.4**
OPAM	**Oficina de Pla**	**1.55**	**319**	*e*P	**Pn**	**03 33 47.4**	**+0.6**
OPAM				*e*S	**Sb**	**03 34 06.9**	**-1.4**
SNET	**Serv Nac Est T**	**1.55**	**318**	*e*P	**Pn**	**03 33 47.2**	**+0.4**
SNET				*e*S	**Sn**	**03 34 06.0**	**-0.1**
SNET				IAML		03 34 11.0	
	comp=Z,792nm,0.3s						
SNET	**Serv Nac Est T**	**1.55**	**318**	*e*P	**Pn**	**03 33 47.2**	**+0.4**
SNET				*e*S	**Sn**	**03 34 06.0**	**-0.1**
SNET				IAML		03 34 11.0	
	comp=Z,792nm,0.3s						
UEES	**Universidad Ev**	**1.58**	**318**	*e*P	**Pn**	**03 33 47.7**	**+0.4**
UEES	**Universidad Ev**	**1.58**	**318**	*e*P	**Pn**	**03 33 47.7**	**+0.4**
SBLS	**San Blas**	**1.93**	**312**	*e*P	**Pn**	**03 33 53.2**	**+1.0**
SBLS	**San Blas**	**1.93**	**312**	*e*P	**Pn**	**03 33 53.2**	**+1.0**
LAPC	**Finca la Perla**	**3.19**	**123**	*i* P	**Pn**	**03 34 10.3**	**+0.9**
GUAI	**GUAI**	**3.44**	**131**	*i* P	**Pn**	**03 34 12.3**	**-0.4**
CUI	**Cuipilapa**	**3.48**	**122**	*i* P	**Pn**	**03 34 13.3**	**0.0**

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*DJA **31** 03:34:14.7±0.7, 11°S±7°×11°8E±°, h10^{km}, M4.2/7, mb4.4/3, mB5.1/3, MLv4.1/7, Mw(mB)4.4/3*

*IDC **31** 03:34:24.8±3.8, 10°.92S×119°.04E, h104^{km}±37^{km}, mb3.6/4, mb1 3.5/6, mb1mx3.3/37, mbtmp3.9/6, MS3.0/2, Ms1 3.0/2, ms1mx2.5/25, Error ellipse: s-maj=60.9km s-min=16.9km az=77.0*

ISC 31 03:34:13.8±0.9**, 11°.22S**±0°.07×**118°.44E**±0°.07**, h10**^{km}**, n17, σ2**^{s}**.30**/19**, mb4.1**/4**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**1.83**	**31**	P	**Pn**	**03 34 46.9**	**+1.6**
WBSI				S	**Sn**	**03 35 08.1**	**-0.4**
BASI	**Baing, Sumba**	**2.32**	**65**	P	**Pn**	**03 34 52.0**	**-0.1**
BASI				S	**Sn**	**03 35 21.2**	**+0.4**
PLAI	**Plampang**	**2.46**	**345**	P	**Pn**	**03 34 55.3**	**+1.2**
SRBI	**Singaraja**	**4.45**	**314**	P	**Pn**	**03 35 22.4**	**+1.0**
JAGI	**Jajag, Banyuwa**	**5.03**	**303**	P	**Pn**	**03 35 30.2**	**+0.8**
GMJI	**Gumukmas**	**5.73**	**300**	P	**Pn**	**03 35 38.0**	**-0.9**
	0.2nm1µm16nm,0.7s						
SOEI	**Soe**	**5.91**	**76**	P	**Pn**	**03 35 42.6**	**+1.0**
	0.1nm34nm,0.8s						
BKSI	**Bulukumba**	**6.09**	**16**	P	**Pn**	**03 35 46.6**	**+2.7**
KAPI	**Kappang**	**6.30**	**12**	P	**Pn**	**03 35 50.5**	**+3.7**
	2.7nm,0.3s,baz=197,slow=3.3,SNR=6.9						
KAPI				S	**Sn**	**03 36 56.4**	**-2.5**
	5.0nm,0.3s,baz=78,slow=22,SNR=8.6						
FITZ	**Fitzroy Crossi**	**9.76**	**135**	P	**Pn**	**03 36 32.0**	**-2.3**
	0.8nm,0.3s,baz=318,slow=9.1,SNR=32						
FITZ				S	Sn	03 38 13.2	-11
	1.4nm,0.3s,baz=170,slow=24,SNR=12						
WRA	**Warramunga Arr**	**17.59**	**121**	P	**Pn**	**03 38 16.7**	**-2.5**
	0.1nm,0.3s,baz=292,slow=13,SNR=11						
WRA				S	Sn	03 41 16.7	-19
	0.2nm,0.3s,baz=295,slow=18,SNR=5.9						
WRA				LR	LR	03 45 19.9	
	comp=Z,26nm,18.2s,baz=180,slow=38						
ASAR	**Alice Springs**	**19.23**	**132**	P	**P**	**03 38 38.7**	**+0.3**
	0.2nm,0.3s,baz=302,slow=11,SNR=16						
ASAR				S	Sn	03 42 00.4	-15
	0.1nm,0.3s,baz=309,slow=24,SNR=5.6						
NWAO	**Narrogin (SRO)**	**21.63**	**183**	P	**P**	**03 39 10.1**	**+5.8**
	3.2nm,0.4s,baz=4.9,slow=15,SNR=2.3						
TGY	**Tagaytay City**	**25.28**	**6**	LR	LR	03 49 47.9	
	comp=Z,58nm,20.9s,baz=356,slow=37						
SONM	**Songino Array**	**59.76**	**351**	P	**P**	**03 44 17.7**	**-1.4**
	0.3nm,0.7s,baz=197,slow=4.5,SNR=1.6						
MKAR	**Makanchi Array**	**66.18**	**334**	P	**P**	**03 45 01.6**	**0.0**
	0.8nm,0.4s,baz=156,slow=6.6,SNR=14						
ZALV	**Zalesovo Beam**	**70.91**	**340**	P	**P**	**03 45 29.2**	**-1.8**
	0.8nm,0.5s,baz=155,slow=5.7,SNR=2.5						

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*THE **31** 03:51:34.8, 38°.18N×20°.39E, h13^{km}, ML3.1/5, Error ellipse: s-maj=0.8km s-min=0.4km az=258.0*

*ATH **31** 03:51:34.8, 38°.18N×20°.40E, h13^{km}, ML2.7/10, Error ellipse: s-maj=1.7km s-min=1.0km az=244.0*

ISC 31 03:51:34.3±0.9**, 38°.18N**±0°.03×**20°.37E**±0°.04**, h15**^{km}±4^{km}**, n45, σ0**^{s}**.79**/71**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.01**	**65**	P	**Pg**	**03 51 37.1**	**+0.2**
CHV1				S	**Sg**	**03 51 38.9**	**+0.2**
KEF3	**Kipouria, Keph**	**0.03**	**329**	P	**Pg**	**03 51 37.4**	**+0.4**
KEF3				S	**Sg**	**03 51 39.1**	**+0.3**
LXRA	**Lixouri, Kepha**	**0.06**	**68**	P	**Pg**	**03 51 37.3**	**+0.1**
LXRA				S	**Sg**	**03 51 38.9**	**-0.1**
LXR1	**Lixouri, Cepha**	**0.06**	**68**	P	**Pg**	**03 51 37.3**	**+0.1**
LXR1				S	**Sg**	**03 51 39.0**	**0.0**
	108µm,0.4s						
AGT1	**Agia Thekli**	**0.07**	**10**	P	**Pg**	**03 51 37.4**	**+0.1**
AGT1				S	**Sg**	**03 51 39.4**	**+0.1**
ARGA	**Argostoli. Kep**	**0.09**	**91**	P	**Pg**	**03 51 37.4**	**0.0**
ARGA				S	**Sg**	**03 51 38.9**	**-0.5**
ARG2	**Argostoli**	**0.10**	**90**	P	**Pg**	**03 51 37.4**	**-0.1**
KEF2	**Argostoli. Kep**	**0.10**	**97**	P	**Pg**	**03 51 37.4**	**-0.1**
KEF2				S	**Sg**	**03 51 39.1**	**-0.5**
KEF1	**Kardakata, Kep**	**0.13**	**39**	P	**Pg**	**03 51 37.8**	**-0.1**
KEF1				S	**Sg**	**03 51 39.7**	**-0.6**
VLS	**Valsamata**	**0.18**	**90**	P	**Pg**	**03 51 38.4**	**-0.2**
VLS				S	**Sg**	**03 51 41.0**	**-0.4**
	11µm,0.1s						
VLS	**Valsamata**	**0.18**	**90**	P	**Pg**	**03 51 38.3**	**-0.3**
VLS				S	**Sg**	**03 51 40.8**	**-0.6**
VLS				AML	AML	03 51 41.0	
	comp=N,25721µm,0.1s						
VLS				AML	AML	03 51 41.1	
	comp=E,17285µm,0.1s						
VSK1	**VASILIKIADES**	**0.28**	**34**	P	**Pg**	**03 51 40.3**	**+0.1**
VSK1				S	**Sg**	**03 51 44.5**	**+0.2**
KONA	**Konidatara, Ke**	**0.29**	**33**	P	**Pg**	**03 51 40.6**	**+0.1**
KONA				S	**Sg**	**03 51 44.8**	**0.0**
KONA				AML	AML	03 51 45.1	
	comp=E,5836µm,0.2s						
KONA				AML	AML	03 51 45.1	
	comp=N,8726µm,0.2s						
FSK	**Fiskardo**	**0.32**	**29**	P	**Pg**	**03 51 40.9**	**0.0**
FSK				S	**Sg**	**03 51 46.0**	**+0.5**
	comp=N,5µm,0.3s						
FSK	**Fiskardo**	**0.32**	**29**	P	**Pg**	**03 51 41.0**	**+0.1**
FSK				S	**Sg**	**03 51 45.5**	**0.0**
FSK				AML	AML	03 51 46.0	
	comp=N,8387µm,0.4s						
FSK				AML	AML	03 51 46.1	
	comp=E,10029µm,0.2s						
KFL	**Anninata**	**0.34**	**101**	P	**Pg**	**03 51 41.2**	**-0.1**
KFL				S	**Sg**	**03 51 46.5**	**+0.5**
	comp=E,4µm,0.3s						
KFL	**Anninata**	**0.34**	**101**	P	**Pg**	**03 51 41.3**	**0.0**
KFL				S	**Sg**	**03 51 46.1**	**+0.1**
KFL				AML	AML	03 51 46.7	
	comp=E,11954µm,0.3s						
KFL				AML	AML	03 51 48.2	
	comp=N,4328µm,0.3s						
EVGI	**Lefkada island**	**0.50**	**27**	P	**Pg**	**03 51 44.0**	**-0.2**
EVGI				S	**Sg**	**03 51 51.9**	**+1.0**
EVGI	**Lefkada island**	**0.50**	**27**	P	**Pg**	**03 51 43.9**	**-0.2**
EVGI				S	**Sg**	**03 51 51.5**	**+0.7**
MGNA	**Meganis**	**0.58**	**35**	P	**Pg**	**03 51 45.3**	**-0.5**
MGNA				S	**Sg**	**03 51 53.5**	**0.0**
KRI1	**kERI**	**0.63**	**145**	P	**Pg**	**03 51 46.6**	**0.0**
KRI1				S	**Sg**	**03 51 55.8**	**+0.9**
LKD2	**Lefkada island**	**0.65**	**20**	P	**Pg**	**03 51 47.2**	**+0.1**
LKD2	**Lefkada island**	**0.65**	**20**	P	**Pg**	**03 51 46.5**	**-0.5**
LKD2				AML	AML	03 52 03.4	
	comp=N,621µm,0.5s						
LKD2				AML	AML	03 52 04.2	
	comp=E,726µm,0.3s						
AST1	**Astakos**	**0.67**	**57**	P	**Pg**	**03 51 47.2**	**-0.3**
AST1				S	**Sg**	**03 51 57.3**	**+0.9**
TSLK	**Tsoukalades, L**	**0.68**	**19**	P	**Pg**	**03 51 47.6**	**-0.1**
TSLK				S	**Sg**	**03 51 57.9**	**+1.2**
	comp=E,450nm,0.6s						
TSLK	**Tsoukalades, L**	**0.68**	**19**	P	**Pg**	**03 51 47.4**	**-0.3**
TSLK				AML	AML	03 52 03.9	
	comp=E,916µm,0.6s						
TSLK				AML	AML	03 52 05.1	
	comp=N,837µm,0.5s						
VTN	**Vitineika**	**0.70**	**112**	P	**Pg**	**03 51 48.1**	**+0.3**
RLS	**Riolos of Patr**	**0.88**	**98**	P	**Pb**	**03 51 50.6**	**-0.5**
RLS				AML	AML	03 52 11.1	
	comp=E,308µm,0.3s						
RLS				AML	AML	03 52 12.3	
	comp=N,285µm,0.7s						
PVO	**Paravola**	**1.01**	**64**	P	**Pb**	**03 51 53.6**	**+0.2**
PVO				AML	AML	03 52 09.9	
	comp=E,2558µm,0.3s						
PVO				AML	AML	03 52 10.0	
	comp=N,1167µm,0.3s						
DRO	**Drossia**	**1.08**	**102**	P	**Pb**	**03 51 54.7**	**-0.1**
EFP	**Efpalio**	**1.24**	**78**	P	**Pn**	**03 51 57.2**	**+0.2**
EFP				AML	AML	03 52 21.6	
	comp=E,338µm,0.4s						
EFP				AML	AML	03 52 22.2	
	comp=N,322µm,0.5s						
LAKA	**Lakka**	**1.27**	**87**	P	**Pn**	**03 51 57.6**	**+0.1**
ANX	**Ano Chora**	**1.29**	**71**	P	**Pn**	**03 51 58.5**	**+0.6**
SERG	**Sergoula**	**1.35**	**79**	P	**Pn**	**03 51 58.9**	**+0.3**
SERG				AML	AML	03 52 29.3	
	comp=N,274µm,0.4s						
SERG				AML	AML	03 52 30.8	
	comp=E,293µm,0.4s						
TRIZ	**Trizonia**	**1.36**	**82**	P	**Pn**	**03 51 58.7**	**0.0**
DSF	**Desfina**	**1.72**	**82**	P	**Pn**	**03 52 06.1**	**+2.4**
AGG	**Agios Georgios**	**1.75**	**61**	P	**Pb**	**03 52 07.7**	**+1.5**
DBRK	**Dubrovnik**	**4.79**	**340**	Sn	**Sn**	**03 53 40.0**	**-1.2**
STON	**Ston**	**5.11**	**337**	*e*Pn	**Pn**	**03 52 50.6**	**+0.4**
STON				Sn	**Sn**	**03 53 46.9**	**-2.1**
RICI	**Ricice**	**5.85**	**336**	*e*Pn	**Pn**	**03 53 00.7**	**+0.2**
RICI				Sn	**Sn**	**03 54 05.9**	**-1.4**
ZIRJ	**Zirje**	**6.54**	**328**	*e*Pn	**Pn**	**03 53 10.1**	**+0.3**
ZIRJ				Sn	**Sn**	**03 54 21.7**	**-2.4**
MORI	**Morici**	**6.69**	**330**	*i* Pn	**Pn**	**03 53 13.0**	**+1.1**
DUGI	**Dugi Otok**	**7.06**	**327**	*e*Pn	**Pn**	**03 53 17.9**	**+1.0**
DUGI				Sn	**Sn**	**03 54 35.1**	**-1.8**
UDBI	**Udbina**	**7.23**	**333**	*i* Pn	**Pn**	**03 53 21.6**	**+2.2**
NVLJ	**Novalja**	**7.60**	**329**	*e*Pn	**Pn**	**03 53 25.2**	**+0.8**

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*GCG **31** 04:02:07.2±0.6, 13°.63N×92°.49W, h155^{km}±49^{km}, MD4.0*

*IDC **31** 04:02:11.0±5.7, 13°.36N×92°.07W, h0^{km}, mb3.5/2, mb1 3.8/6, mb1mx3.6/34, mbtmp3.5/6, ML3.4/4, MS2.9/3, Ms1 2.9/3, ms1mx2.5/30, Error ellipse: s-maj=90.2km s-min=28.3km az=166.0*

*MEX **31** 04:02:12.5±0.9, 13°.39N×92°.36W, h75^{km}±44^{km}, MD3.8*

ISC 31 04:02:17.7±1.7**, 13°.7N**±0°.1×**92°.28W**±0°.05**, h32**^{km}**, n17, σ2**^{s}**.42**/23**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**1.04**	**41**	*e*P	**Pn**	**04 02 34.5**	**-1.5**
THIG		**1.24**	**1**	*i* P	**Pn**	**04 02 36.2**	**-2.6**
THIG				*i* S	**Sn**	**04 02 55.3**	**+0.7**
STG3	**Santiaguito 3,**	**1.25**	**33**	*e*P	**Pn**	**04 02 36.9**	**-2.2**
FUG	**Fuego 3**	**1.60**	**60**	*e*P	**Pn**	**04 02 42.1**	**-1.8**
PCG	**Pacaya**	**1.78**	**66**	*e*S	**Sb**	**04 03 12.2**	**+0.3**
IXG	**Ixpaco**	**1.86**	**74**	*e*P	**Pn**	**04 02 44.3**	**-3.2**
APG	**El Apazote**	**2.21**	**53**	Pn	**Pn**	**04 02 50.4**	**-2.0**
	5.5nm,0.3s,baz=219,slow=8.2,SNR=39						
APG				LR	LR	04 03 12.2	
	comp=Z,40nm,18.4s,baz=82,slow=27						
APG				Sn	**Sn**	**04 03 19.9**	**+1.1**
	11nm,0.3s,baz=163,slow=21,SNR=8.9						
PCIG		**2.23**	**336**	*e*P	**Pn**	**04 02 49.7**	**-2.7**
PCIG				*i* S	**Sn**	**04 03 16.7**	**-2.1**
CCIG	**Comitan**	**2.61**	**3**	*i* P	**Pn**	**04 02 56.1**	**-1.8**
CCIG				*i* S	**Sn**	**04 03 28.5**	**-0.1**
TGIG		**3.21**	**345**	*e*P	**Pn**	**04 03 03.9**	**-2.0**
TGIG				*i* S	**Sn**	**04 03 43.1**	**0.0**
CMIG	**Matias Romero**	**4.24**	**324**	Pn	**Pn**	**04 03 19.9**	**-0.2**
	0.9nm,0.3s,baz=155,slow=12,SNR=13						
CMIG				Sn	**Sn**	**04 04 13.6**	**+5.1**
	1.9nm,0.3s,baz=96,slow=18,SNR=2.0						
CMIG	**Matias Romero**	**4.24**	**324**	*i* P	**Pn**	**04 03 16.2**	**-3.9**
CMIG				*i* S	**Sn**	**04 04 05.1**	**-3.4**
TEIG	**Tepich**	**7.57**	**30**	Pn	**Pn**	**04 04 05.3**	**-0.6**
	1.9nm,0.3s,baz=148,slow=0.0,SNR=12						
TEIG				LR	LR	04 07 22.0	
	comp=Z,126nm,18.7s,baz=256,slow=40						
TXAR	**Lajitas Array**	**18.84**	**328**	P	**Pn**	**04 06 37.6**	**+1.9**
	0.0nm,0.3s,baz=147,slow=8.5,SNR=5.2						
NVAR	**Mina Array Bea**	**33.77**	**322**	P	**P**	**04 08 59.5**	**+2.7**
	0.3nm,0.6s,baz=142,slow=9.1,SNR=3.7						
YKA	**Yellowknife Ar**	**51.30**	**347**	P	**P**	**04 11 17.6**	**-0.9**
	0.4nm,0.5s,baz=146,slow=7.7,SNR=8.7						
KDAK	**Kodiak Island**	**62.87**	**328**	LR	LR	04 42 22.0	
	comp=Z,35nm,18.2s,baz=134,slow=38						

DJA 31 04:03:18.6±0.5**, 8°S**±3°×**10°6E**±°**, h10**^{km}**, M3.8**/7**, mb4.0**/2**, MLv3.6**/7**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.99**	**41**	P	Pg	04 03 37.1	-0.5
SKJI				S	Sg	04 03 49.8	-0.7
CNJI	**Cibinong**	**1.29**	**70**	P	Pn	04 03 42.6	-0.1
CNJI				S	Sb	04 03 58.5	-1.1
CBJI	**Citeko**	**1.63**	**35**	P	Pn	04 03 46.0	-1.3
CBJI				S	Sn	04 04 01.1	-7.2
CISI	**Cisompet, Garu**	**1.90**	**84**	P	Pb	04 03 52.3	-1.1
LEM	**Lembang**	**1.93**	**61**	P	Pb	04 03 53.4	-0.6
MDSI	**Maura Dua**	**3.68**	**332**	P	Pn	04 04 16.3	+0.7
PCJI	**Pacitan**	**5.24**	**95**	P	Pn	04 04 38.8	+1.8
	0.1nm29nm,1.1s						
PWJI	**Pagerwojo**	**5.84**	**93**	P	Pn	04 04 48.4	+3.0

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*KLM **31** 04:11:58.0, 2°.08S×100°.20E, h50^{km}, mb4.6*

*MOS **31** 04:11:58.7±0.8, 1°.84S×100°.39E, h57^{km}, mb5.0/34, Error ellipse: s-maj=11.3km s-min=5.6km az=112.1*

*NEIC **31** 04:11:59.3±1.0, 2°.01S±0°.05×100°.34E±0°.08, h53^{km}±7^{km}, mb4.7/47, Error ellipse: s-maj=13.5km s-min=5.4km az=62.0*

*DJA **31** 04:12:00.3±1.1, 2°S±3°×10°0E±°, h28^{km}±12^{km}, M4.7/13, mB4.8/2, mb4.7/2, MLv4.7/13, MLv4.7/13, Mw(mB)4.0/2*

*IDC **31** 04:12:00.7±3.3, 1°.88S×100°.44E, h59^{km}±28^{km}, mb4.3/35, mb1 4.3/37, mb1mx4.2/55, mbtmp4.6/37, ML3.7/2, MS4.3/2, Ms1 4.3/2, ms1mx3.3/44, Error ellipse: s-maj=20.7km s-min=10.6km az=47.0*

ISC 31 04:12:00.1±0.9**, 1°.99S**±0°.04×**100°.35E**±0°.04**, h56**^{km}±7^{km}**, n221, σ1**^{s}**.51**/222**, mb4.7**/73**, MS4.8**/7**, 8C-1D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.84**	**204**	P	**Pn**	**04 12 18.2**	**+2.2**
PDSI	**Padang**	**1.07**	**6**	P	**Pn**	**04 12 17.4**	**-1.6**
PDSI				S	**Sn**	**04 12 30.6**	**-2.4**
KRJI	**Kerinci**	**1.11**	**95**	P	**Pn**	**04 12 20.8**	**+1.2**
KRJI				S	**Sn**	**04 12 36.3**	**+2.2**
SISI	**Saibi**	**1.42**	**297**	P	**Pn**	**04 12 24.9**	**+1.2**
SISI				S	**Sn**	**04 12 41.7**	**+0.3**
SDSI	**Sungai Dareh**	**1.50**	**46**	P	**Pn**	**04 12 24.5**	**-0.2**
SDSI				S	**Sn**	**04 12 42.8**	**-0.4**
BKNI	**Bangkinang**	**2.40**	**17**	P	**Pn**	**04 12 37.5**	**+0.5**
BKNI	**Bangkinang**	**2.40**	**17**		**Pn**	**04 12 36.6**	**-0.4**
RGRI	**Rengat**	**2.56**	**51**	P	**Pn**	**04 12 39.5**	**+0.3**
RGRI				S	**Sn**	**04 13 09.5**	**+0.3**
KSI	**Kapahiang**	**2.78**	**127**	P	**Pn**	**04 12 44.3**	**+2.0**
KSI	**Kapahiang**	**2.78**	**127**	P	**Pn**	**04 12 44.3**	**+2.0**
PBSI	**Pulau Batu**	**2.82**	**313**	P	**Pn**	**04 12 42.6**	**-0.2**
MNAI	**Manna**	**3.51**	**132**	P	**Pn**	**04 12 50.9**	**-1.3**
MNAI	**Manna**	**3.51**	**132**		**Pn**	**04 12 51.0**	**-1.3**
GSI	**Gunungsitoli**	**4.29**	**320**	P	**Pn**	**04 13 02.6**	**-0.3**
GSI	**Gunungsitoli**	**4.29**	**320**		**Pn**	**04 13 02.2**	**-0.7**
RPSI	**Rantau Prapat**	**4.86**	**343**		**Pn**	**04 13 10.6**	**-0.2**
RPSI	**Rantau Prapat**	**4.86**	**343**		**Pn**	**04 13 10.6**	**-0.2**
RPSI					**Sn**	**04 14 11.7**	**+5.9**
PSI	**Prapat**	**4.96**	**343**	P	**Pn**	**04 13 10.6**	**-1.7**
	2.3nm,0.3s,baz=155,slow=10,SNR=20						
PSI				S	**Sn**	**04 14 11.7**	**+3.2**
	1.5nm,0.3s,baz=135,slow=17,SNR=1.2						
MYKOM	**Kota Tinggi**	**5.13**	**43**		**Pn**	**04 13 14.5**	**+0.1**
MYKOM	**Kota Tinggi**	**5.13**	**43**	P	**Pn**	**04 13 15.0**	**+0.6**
TPTI		**6.10**	**329**	P	Pn	04 13 37.4	+10
IPM	**Ipoh**	**6.46**	**6**		**Pn**	**04 13 33.6**	**+1.0**
IPM	**Ipoh**	**6.46**	**6**	P	**Pn**	**04 13 35.0**	**+2.3**
LHMI	**Lhok Sumawe**	**7.93**	**335**	Pn	**Pn**	**04 13 51.0**	**-1.8**
KSM	**Kuching**	**10.53**	**71**	Pn	**Pn**	**04 14 27.9**	**-0.5**
SBUM	**Sibu**	**12.66**	**70**		**Pn**	**04 14 56.8**	**-0.7**
DLV	**T Lat**	**16.03**	**30**	Pn	**Pn**	**04 15 41.9**	**-0.3**
KKM	**Kota Kinabalu**	**17.73**	**63**	P	**Pn**	**04 16 01.8**	**-1.6**
PBKT	**Sadao Pong**	**18.45**	**2**	P	**P**	**04 16 09.3**	**-1.9**
KAPI	**Kappang**	**19.59**	**99**	P	**P**	**04 16 24.2**	**+0.3**
	0.2nm,0.3s,baz=298,slow=8.2,SNR=4.1						
KAPI	**Kappang**	**19.59**	**99**	P	**P**	**04 16 24.2**	**+0.3**
KAPI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CM31	**Chiang Mai Arr**	**20.36**	**356**	P	**P**	**04 16 31.0**	**-1.2**
CMAR	**Chiang Mai Arr**	**20.36**	**356**	P	**P**	**04 16 30.9**	**-1.2**
	comp=Z,9.6nm,0.9s,baz=186,slow=10.0,SNR=28						
CMAR	**Chiang Mai Arr**	**20.36**	**356**	*ce*P	**P**	**04 16 32.2**	**0.0**
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**20.36**	**356**	P	**P**	**04 16 31.8**	**-0.3**
CHTO	**Chiang Mai**	**20.72**	**356**	P	**P**	**04 16 35.1**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CHTO	**Chiang Mai**	**20.72**	**356**	P	**P**	**04 16 35.1**	**-0.9**
PALK	**Pallekele**	**21.66**	**295**	P	**P**	**04 16 45.0**	**-1.2**
PALK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PALK	**Pallekele**	**21.66**	**295**	P	**P**	**04 16 45.0**	**-1.2**
SIMRM	**Sittwe**	**23.17**	**342**	P	**P**	**04 17 02.0**	**0.0**
SIMRM				IAmb	IAmb	04 17 04.2	
	comp=Z,22nm,0.9s						
SLVN	**Son La**	**23.44**	**8**	P	**P**	**04 17 03.3**	**-1.3**
KCP	**Kidapawan**	**26.25**	**70**	⇓*e*P	**P**	**04 17 31.3**	**+0.8**
KMI	**Kunming**	**27.05**	**5**	P	**P**	**04 17 38.3**	**+0.7**
H08S2	**Diego Garcia H**	**28.31**	**258**	T	T	04 47 05.2	
	baz=81,slow=75,SNR=19						
H08S3	**Diego Garcia H**	**28.32**	**258**	T	T	04 46 56.1	
	baz=81,slow=75,SNR=51						
H08S1	**Diego Carcia H**	**28.33**	**258**	T	T	04 46 56.9	
	baz=81,slow=75,SNR=23						
GYA	**Guiyang**	**28.93**	**12**	*e*P	**P**	**04 17 53.8**	**-0.4**
GYA				pP	pP	04 18 09.3	+1.0
GYA				PP	**PnPn**	**04 18 53.0**	**+4.7**
GYA				S	**S**	**04 22 45.5**	**+4.3**
GYA				sS	sS	04 23 06.3	+1.8
GYA				SS	**SnSn**	**04 24 17.8**	**+9.2**
GYA				ScP	**ScP**	**04 24 40.0**	**+0.7**
FITZ	**Fitzroy Crossi**	**29.53**	**124**	P	**P**	**04 17 59.4**	**-0.1**
	comp=Z,3.4nm,0.7s,baz=303,slow=5.5,SNR=13						
ODAN	**Odare**	**31.29**	**337**	*e*P	**P**	**04 18 15.6**	**+0.4**
TAPN	**Taplejung**	**31.61**	**338**	*e*P	**P**	**04 18 19.0**	**+0.9**
	comp=Z,51nm,1.0s						
RAMN	**Ramite**	**31.68**	**336**	*e*P	**P**	**04 18 19.4**	**+0.7**

JIRN Jiri 32.48 336 *e*P P 04 18 26.5 +0.7
comp=Z,58nm,0.8s
LSA Lhasa 32.71 345 P P 04 18 28.0 0.0
LSA pmax pmax
comp=Z,15nm,0.8s
LSA Lhasa 32.71 345 P P 04 18 28.0 0.0
LSA IAmb IAmb 04 18 30.0
comp=Z,15nm,0.8s
PKI Pulchoki 32.72 335 *e*P P 04 18 28.2 +0.3
GUN Gumba 32.82 336 *e*P P 04 18 29.6 +0.8
comp=Z,50nm,0.6s
CD2 Chengdu 32.87 5 P P 04 18 29.8 +0.9
GKN Gorkha 33.43 334 *e*P P 04 18 34.4 +0.5
DANN Dangsing 34.11 333 *e*P P 04 18 40.5 +0.5
comp=Z,43nm,0.8s
XAN Xi'an 36.73 12 P P 04 19 00.3 -1.8
XAN pP pP 04 19 05.5 -11
XAN Xi'an 36.73 12 P P 04 18 59.2 -2.9
XAN PcP 04 21 22.3 -1.4
WB0 Warramunga Arr 37.67 120 P P 04 19 08.7 -1.6
WB0 IAmb IAmb 04 19 10.3
comp=Z,5.1nm,0.7s
WRA Warramunga Arr 37.70 121 P P 04 19 09.8 -0.7
comp=Z,4.2nm,0.6s,baz=300,slow=9.4,SNR=13
WRA Warramunga Arr 37.70 121 IAmb IAmb 04 19 10.7
comp=Z,0.3nm,0.8s
WR0 Warramunga Arr 37.88 121 P P 04 19 11.6 -0.5
WR0 IAmb IAmb 04 19 12.2
comp=Z,7.6nm,0.7s
LZH Lanzhou 38.02 5 *e*P P 04 19 15.3 +2.2
LZH pP pP 04 19 28.5 +1.3
LZH sP sP 04 19 34.3 +0.6
LZH *e*PP PP 04 20 47.3 +6.3
NJ2 Nanjing 38.13 26 *e*P P 04 19 16.5 +2.6
ASAR Alice Springs 38.98 126 P P 04 19 21.7 +0.4
comp=Z,9.7nm,0.8s,baz=304,slow=8.1,SNR=102
ASAR Alice Springs 38.98 126 P P 04 19 21.1 -0.1
ASAR Alice Springs 38.98 126 P P 04 19 21.1 -0.1
NIL Nilore 43.69 327 P P 04 19 59.8 +0.1
NIL pmax pmax
comp=Z,25nm,0.8s
NIL Nilore 43.69 327 P P 04 19 59.8 +0.1
HHC Hu-ho-hao-te 43.84 12 *e*P P 04 20 02.5 +1.6
BJI Beijing 44.26 17 P P 04 20 03.5 -0.6
BJI PcP PcP 04 21 41.5 -6.3
JNU Nakatsue 45.27 37 P P 04 20 12.3 -0.1
comp=Z,6.1nm,0.8s,baz=158,slow=3.1,SNR=4.6
JNU Nakatsue 45.27 37 IAmb IAmb 04 20 13.1
comp=Z,13nm,1.0s
KBL Kabul 46.73 324 P P 04 20 22.6 -1.5
KBL pmax pmax
comp=Z,6.0nm,0.5s
KBL Kabul 46.73 324 P P 04 20 22.6 -1.5
KBL IAmb IAmb 04 20 24.4
comp=Z,5.7nm,0.5s
GUMO Guam 46.77 69 P P 04 20 23.2 -1.2
GUMO pmax pmax
comp=Z,82nm,1.1s
KSAR Wonju Array Be 46.80 30 P P 04 20 23.7 -0.6
KSAR Wonju Array Be 46.80 30 P P 04 20 23.7 -0.6
KSRS Korea Array 46.83 30 P P 04 20 23.8 -0.7
comp=Z,2.2nm,0.7s,baz=224,slow=8.8,SNR=12
KSH Kashi 46.98 334 P P 04 20 27.5 +1.7
KSH pP pP 04 20 39.5 -0.6
KSH PcP PcP 04 21 59.5 +2.0
KSH S S 04 27 14.3 +1.0
KSH sS sS 04 27 35.8 -1.7
WMQ Urumqi 46.99 347 P P 04 20 27.3 +1.5
WMQ pP pP 04 20 36.8 -3.4
PDGK Podgornoye 48.86 340 *i* P P 04 20 40.4 +0.1
PDGK pmax pmax
comp=Z,41nm,0.9s
STKA Stephens Creek 48.90 132 P P 04 20 41.0 +0.4
comp=Z,3.2nm,0.6s,baz=306,slow=8.4,SNR=8.3
STKA Stephens Creek 48.90 132 P P 04 20 42.2 +1.6
STKA pmax pmax
comp=Z,1.0nm,0.9s
STKA Stephens Creek 48.90 132 P P 04 20 42.2 +1.6
ULHL Ulahol 49.14 336 P P 04 20 43.3 +0.8
SNR=18
KZA Kyzart 49.40 335 P P 04 20 45.8 +1.0
SNR=11
JCJ Chichijima 49.59 51 LR LR 04 41 56.8
comp=Z,181nm,20.3s,baz=184,slow=36
UCH Uchtor 49.83 335 P P 04 20 49.2 +1.0
SNR=18
SONM Songino Array 49.90 5 P P 04 20 47.8 -0.3
comp=Z,7.3nm,0.8s,baz=187,slow=8.9,SNR=38
SONM PcP PcP 04 22 07.9 +0.1
comp=Z,1.9nm,0.7s,baz=177,slow=4.4,SNR=4.5
SONM Songino Array 49.90 5 P P 04 20 47.8 -0.3
TKM2 Tokmak 2 49.96 336 P P 04 20 49.7 +0.9
SNR=13
TKM2 Tokmak 2 49.96 336 *i* P P 04 20 48.4 -0.4
TKM2 pmax pmax
comp=Z,23nm,0.6s
ULN Ulaanbaatar 49.99 6 *i* P P 04 20 48.4 -0.5
ULN pmax pmax
comp=Z,8.0nm,1.1s
ULN Ulaanbaatar 49.99 6 P P 04 20 48.1 -0.8
ULN IAmb IAmb 04 20 49.4
comp=Z,8.1nm,1.1s
KBK Karagaybulak 50.01 336 P P 04 20 50.7 +1.6
SNR=10
AML Almayashu 50.11 334 P P 04 20 51.1 +1.0
SNR=24
AAK Ala-Archa 50.18 335 P P 04 20 51.6 +1.2
comp=Z,5.6nm,0.7s,baz=134,slow=5.3,SNR=17
AAK Ala-Archa 50.18 335 P P 04 20 51.6 +1.2
SNR=6.1
AAK Ala-Archa 50.18 335 *e*P P 04 20 51.2 +0.8
AAK pmax pmax
comp=Z,22nm,2.5s
AAK Ala-Archa 50.18 335 P P 04 20 51.5 +1.2
AAK IAmb IAmb 04 20 52.5
comp=Z,6.2nm,0.8s
CHMS Chumysh 50.37 336 P P 04 20 52.1 +0.4
SNR=6.4
EKS2 Erkin-Say 50.50 335 P P 04 20 53.8 +1.0
SNR=32
USP Ospenovka 50.70 336 P P 04 20 54.9 +0.7
SNR=24
MK31 Makanchi Array 51.11 344 *i* P P 04 20 56.7 -0.5
MKAR Makanchi Array 51.11 344 P P 04 20 57.1 -0.1
comp=Z,19nm,0.6s,baz=147,slow=8.0,SNR=223
MKAR Makanchi Array 51.11 344*ce*P P 04 20 57.0 -0.2
MKAR pmax pmax
comp=Z,20nm,0.6s
MKAR Makanchi Array 51.11 344 P P 04 20 56.9 -0.2
MAKZ Makanchi 51.21 344 P P 04 20 57.7 -0.2
MAKZ pmax pmax
comp=Z,12nm,0.9s
MAKZ Makanchi 51.21 344 P P 04 20 57.7 -0.2
MJAR Matsushiro Arr 52.04 39 P P 04 21 03.6 -0.7
comp=Z,2.6nm,0.8s,baz=219,slow=9.1,SNR=4.2
KK31 Karatay Array 52.30 333 *i* P P 04 21 05.8 -0.3
KK31 Karatay Array 52.30 333 P P 04 21 05.7 -0.5
KK31 IAmb IAmb 04 21 07.2
comp=Z,4.7nm,1.1s
KKAR Karatay Array 52.30 333 P P 04 21 05.9 -0.3
KKAR Karatay Array 52.30 333 P P 04 21 05.8 -0.3
KKAR Karatay Array 52.30 333 IAmb IAmb 04 21 07.1
comp=Z,4.7nm,1.1s
DGZ Jazzator, Alta 52.68 349 *i* P P 04 21 09.0 +0.1
DGZ pmax pmax
comp=Z,24nm,0.8s
TLY Talaya 53.54 3 P P 04 21 15.6 +0.6
comp=Z,2.5nm,0.8s,baz=97,slow=6.3,SNR=5.7
TLY Talaya 53.54 3 *i* P P 04 21 15.0 -0.1
TLY pmax pmax
comp=Z,3.0nm,0.8s
TLY Talaya 53.54 3 P P 04 21 15.0 -0.1
TLY IAmb IAmb 04 21 16.1
comp=Z,2.8nm,0.8s
USA0B Ussuriysk Arra 53.98 28 *i* P P 04 21 17.8 -0.6
USA0B Ussuriysk Arra 53.98 28 P P 04 21 17.4 -1.0
USRK Ussuriysk Ar. 53.98 28 P P 04 21 18.1 -0.2
comp=Z,11nm,0.7s,baz=226,slow=6.5,SNR=8.8
KURBB Kurchatov Arra 55.64 343 P P 04 21 30.1 -0.1
comp=Z,13nm,0.9s,baz=162,slow=7.0,SNR=90
KURBB Kurchatov Arra 55.64 343 P P 04 21 28.7 -1.5
GEYT Alibeck 55.66 320 P P 04 21 31.2 +0.5
comp=Z,4.5nm,0.9s,baz=157,slow=8.0,SNR=7.0
GEYT Alibeck 55.66 320 P P 04 21 30.6 -0.1
GYA0B ALIBECK ARRAY 55.66 320 P P 04 21 30.1 -0.7
GYA0B IAmb IAmb 04 21 32.1
comp=Z,9.0nm,1.1s
KURK Kurchatov 55.69 343*ce*P P 04 21 30.3 -0.3
KURK pmax pmax
comp=Z,22nm,0.8s
KURK Kurchatov 55.69 343 P P 04 21 30.5 -0.2
ZALV Zalesovo Beam 57.22 349 P P 04 21 40.9 -0.5
comp=Z,38nm,0.8s,baz=173,slow=5.6,SNR=99
ZALV Zalesovo Beam 57.22 349 P P 04 21 40.6 -0.8
ZALV Zalesovo Beam 57.22 349 P P 04 21 40.6 -0.8
KLR Kul'dur 57.78 24 P P 04 21 45.1 -0.4
comp=Z,3.7nm,0.7s,baz=245,slow=6.5,SNR=15
KLR Kul'dur 57.78 24 *i* P P 04 21 45.0 -0.4
KLR pmax pmax
comp=Z,14nm,2.0s
BVAR Borovoye Array 60.29 340 P P 04 22 02.3 -0.5
comp=Z,5.4nm,0.8s,baz=141,slow=7.6,SNR=25
BRVK Borovoye 60.36 340*ce*P P 04 22 02.7 -0.6
BRVK pmax pmax
comp=Z,6.0nm,0.8s
BRVK Borovoye 60.36 340 P P 04 22 02.9 -0.4
BRVK IAmb IAmb 04 22 03.5
comp=Z,7.4nm,1.1s
BOD Bodaibo 60.62 8 *e*P P 04 22 03.3 -1.6
BOD pmax pmax
comp=Z,7.0nm,1.0s
YSS Yuzh-Sakhalins 61.28 32 *e*P P 04 22 09.5 -0.2
YSS pmax pmax
comp=Z,10.0nm,1.1s
ABKAR Akbulak array 61.80 331 P P 04 22 12.6 -0.5
AKTO Aktyubinsk 63.51 331 P P 04 22 23.4 -1.1
comp=Z,1.5nm,0.3s,baz=128,slow=8.7,SNR=7.7
GROC Groznyy 66.40 319 P P 04 22 41.2 -2.2
GROC *e* 04 25 10.2
GROC pmax pmax
comp=Z,14nm,0.5s
DZM Mont Dzumac 67.13 113 *e*LR LR 04 43 11.6
comp=Z,593nm,25.5s
ARU Arti 67.34 336 P P 04 22 48.3 -0.8
comp=Z,0.9nm,0.3s,baz=20,slow=4.0,SNR=7.7
ARU Arti 67.34 336*c i*P P 04 22 48.5 -0.6
ARU 04 25 16.9
ARU S S 04 31 44.1 +3.9
ARU SS SS 04 36 04.9 +3.9
ARU pmax pmax
comp=Z,11nm,1.2s
ARU Arti 67.34 336 P P 04 22 48.9 -0.2
ARU IAmb IAmb 04 22 49.6
comp=Z,10.0nm,1.1s
ZEI Tsey 67.46 318 *e*P P 04 22 50.2 -0.3
ZEI pmax pmax
comp=Z,9.0nm,0.6s
YAK Yakutsk 67.64 14 P P 04 22 49.3 -1.6
comp=Z,11nm,0.4s,baz=185,slow=1.1,SNR=1.5
YAK Yakutsk 67.64 14 *e*P P 04 22 49.9 -1.0
YAK pmax pmax
comp=Z,21nm,0.9s
YAK pmax pmax
comp=N,7.0nm,0.9s
YAK pmax pmax
comp=E,6.0nm,0.9s
YAK MLR MLR
comp=Z,337nm,17.0s
YAK MLR MLR
comp=N,452nm,16.0s
YAK MLR MLR
comp=E,263nm,15.0s
NEY Neytrino 68.44 318 *i* P P 04 22 56.3 -0.3
NEY pmax pmax
comp=Z,2.0nm,1.0s
KBZ Khabaz 68.53 319 P P 04 22 57.5 +0.7
comp=Z,7.8nm,0.8s,baz=133,slow=7.4,SNR=12
KBZ Khabaz 68.53 319 *i* P P 04 22 57.2 +0.4
KBZ pmax pmax
comp=Z,9.0nm,0.9s
SHA1 Shidzhatmaz 68.69 319 *i* P P 04 22 57.3 -0.9
KIV Kislovodsk 68.76 319 *e*P P 04 22 57.8 -0.6
KIV pmax pmax
comp=Z,27nm,1.1s
KIV Kislovodsk 68.76 319 P P 04 22 57.2 -1.2
KIV IAmb IAmb 04 23 00.1
comp=Z,7.7nm,0.9s
NRIK Noril'sk 71.72 355 P P 04 23 14.9 -0.9
comp=Z,9.2nm,1.0s,baz=167,slow=5.4,SNR=10
NRIK Noril'sk 71.72 355 *i* P P 04 23 14.6 -1.3
NRIK pmax pmax
comp=Z,11nm,1.0s
KIRV Kirov 72.51 335 P P 04 23 19.6 -1.1
comp=Z,6.5nm,0.5s,baz=181,slow=2.0,SNR=4.9
VRH Novokhopyorsk 72.51 326 *e*P P 04 23 20.0 -0.9
VRH pmax pmax
comp=Z,30nm,0.6s
ANN Anapa 72.56 318 *e*P P 04 23 27.6 +6.2
ANN pmax pmax
comp=Z,37nm,0.7s
ANN pmax pmax
comp=Z,498nm,25.4s
PETK Petropavlovsk- 72.68 32 P P 04 23 22.5 +0.5
comp=Z,2.4nm,0.8s,baz=224,slow=8.1,SNR=2.1
PETK Petropavlovsk- 72.68 32 P P 04 23 20.8 -1.2
PETK Petropavlovsk- 72.68 32 P P 04 23 20.8 -1.2
MA2 Magadan 72.87 24 P P 04 23 20.8 -2.1
comp=Z,3.5nm,0.3s,baz=205,slow=10,SNR=4.9
MA2 Magadan 72.87 24*ce*P P 04 23 23.0 +0.1
MA2 pmax pmax
comp=Z,10.0nm,1.3s
MA2 Magadan 72.87 24 P P 04 23 22.7 -0.2
MA2 IAmb IAmb 04 23 24.0
comp=Z,13nm,1.1s
BR131 Keskin Array S 73.57 312 IAmb IAmb 04 23 28.4
comp=Z,3.4nm,0.8s
BRTR Keskin Array B 73.57 312 P P 04 23 27.4 -0.3
comp=Z,2.2nm,0.7s,baz=135,slow=7.7,SNR=19
BRTR Keskin Array B 73.57 312 P P 04 23 27.3 -0.4
VORD Divnogorie 73.79 325 *e*P P 04 23 27.6 -0.9
VORD pmax pmax
comp=Z,10.0nm,1.2s
VSR Storozhevoye 73.97 325 *i* P P 04 23 29.1 -0.4
VSR pmax pmax
comp=Z,22nm,0.8s
LPSR Galich'ya Gora 74.67 326 *e*P P 04 23 33.2 -0.4
LPSR pmax pmax
comp=Z,10.0nm,0.8s
SEY Seymchan 75.48 22 P P 04 23 37.5 -0.6
comp=Z,2.8nm,0.5s,baz=241,slow=5.5,SNR=9.7
SEY Seymchan 75.48 22 *i* P P 04 23 38.3 +0.2
MDUB Mudurnu 75.58 313 P P 04 23 38.6 -0.7
TIXI Tiksi 75.79 9 P P 04 23 38.4 -1.1
comp=Z,9.6nm,0.6s,baz=200,slow=2.4,SNR=22
TIXI Tiksi 75.79 9 *i* P P 04 23 38.5 -1.1
TIXI pmax pmax
comp=Z,26nm,1.3s
TIXI Tiksi 75.79 9 P P 04 23 38.5 -1.1
TIXI IAmb IAmb 04 23 40.0
comp=Z,12nm,0.8s
PRGR Permogore 75.80 336 *e*P P 04 23 36.4 -3.5
PRGR pmax pmax
comp=Z,12nm,0.3s
OBN Obninsk 76.97 328*ce*P P 04 23 47.0 +0.4
OBN *i* 04 23 59.2
OBN pmax pmax
comp=Z,14nm,1.3s
KLMR Klimovskoe 77.97 334 *e*P P 04 23 44.7 -7.4
KLMR pmax pmax
comp=Z,27nm,1.9s
KLMR Klimovskoe 77.97 334 *e*P P 04 23 44.7 -7.4
KLMR AMP 04 23 53.3
comp=Z,27nm,1.9s
AKASG Malin Array Be 79.69 322 P P 04 24 01.8 0.0
comp=Z,0.1nm,0.3s,baz=82,slow=4.4,SNR=4.4
AKASG Malin Array Be 79.69 322*ce*P P 04 24 02.2 +0.4
AKASG Malin Array Be 79.69 322 IAmb IAmb 04 24 02.1
comp=Z,1.2nm,0.9s
MLR Muntele Rosu 80.53 317 P P 04 24 06.4 -0.3
MLR pmax pmax
comp=Z,6.0nm,0.9s
MLR Muntele Rosu 80.53 317 P P 04 24 06.4 -0.3
MLR IAmb IAmb 04 24 08.8
comp=Z,5.8nm,0.9s
BURAR Bucovina Array 81.48 319 P P 04 24 12.1 +0.5
BURAR Bucovina Array 81.48 319 P P 04 24 12.1 +0.5
BUR08 Bucovina Ar. S 81.50 319 P P 04 24 12.1 +0.4
BUR08 IAmb IAmb 04 24 30.4
comp=Z,7.4nm,1.2s
BILL Bilibino 83.02 20 *i* P P 04 24 21.3 +2.2
BILL pmax pmax
comp=Z,2.0nm,0.9s
FINES FINESS Array B 84.26 332 P P 04 24 26.2 +0.7
comp=Z,2.5nm,0.6s,baz=104,slow=8.0,SNR=13
PDG Podgorica 84.76 313 IAmb IAmb 04 24 29.7
comp=Z,3.6nm,0.7s
ARCES ARCESS Array B 86.58 340 P P 04 24 37.1 +0.2
comp=Z,3.5nm,0.9s,baz=56,slow=7.5,SNR=6.0
ACER Acerenza 87.05 311 P P 04 24 39.2 -0.7
BRG Berggiesshubel 89.25 321 *e*P P 04 24 51.5 +1.4
comp=Z,2.6nm,0.8s
BRG Berggiesshubel 89.25 321 *e*P P 04 24 51.5 +1.4
BRG pmax pmax
comp=Z,3.0nm,0.8s
BRG MLR MLR
comp=N,156nm,13.5s
GERES GERESS Array B 89.27 319 P P 04 24 51.4 +1.0
comp=N,1.0nm,0.8s,baz=86,slow=5.5,SNR=9.1
GERES GERESS Array B 89.27 319 P P 04 24 49.7 -0.7
GERES GERESS Array B 89.27 319 P P 04 24 49.7 -0.7
LATE Laterza 90.26 312 P P 04 24 53.5 -1.5
CTI Castel Tesino 90.51 316 P P 04 24 54.5 -1.8
CTI pmax pmax
comp=Z,4.0nm,0.8s
CTI Castel Tesino 90.51 316 P P 04 24 54.5 -1.8
CTI IAmb IAmb 04 24 58.5
comp=Z,4.3nm,0.8s
SPITS Spitsbergen Ar 90.69 348 P P 04 24 56.4 +0.1
comp=Z,3.8nm,0.8s,baz=336,slow=6.6,SNR=1.4
NB2 NORSAR Subarra 91.30 331 P P 04 24 59.6 +0.1
comp=Z,0.6nm,0.6s,baz=95,slow=4.4
NOA NORSAR Array B 91.30 331 P P 04 24 59.9 +0.4
comp=Z,0.9nm,0.7s,baz=94,slow=4.6,SNR=5.0
KEST Kesra 91.97 306 P P 04 25 04.2 +1.0
comp=Z,6.8nm,0.9s,baz=344,slow=6.5,SNR=5.5
KEST LR LR 05 10 47.5
comp=Z,276nm,20.4s,baz=4.0,slow=38
TBI Tubuai 107.66 115 *e*LR LR 05 01 55.4
comp=Z,403nm,24.2s
PPT2 Papeete2 108.47 109 *e*LR LR 05 02 21.6
comp=Z,352nm,24.8s
YKA Yellowknife Ar 114.25 17 PKP PKiKP 04 30 32.7 -0.4
comp=Z,0.2nm,0.8s,baz=270,slow=6.2,SNR=1.9
ULM Lac du Bonnet 129.97 14 PKP PKPdf 04 31 03.3 -0.3
comp=Z,0.4nm,0.3s,baz=38,slow=3.1,SNR=3.8
TXAR Lajitas Array 144.48 38 PKP PKPdf 04 31 30.6 -0.5
comp=Z,8.0nm,0.8s,baz=263,slow=1.1,SNR=73
TXAR Lajitas Array 144.48 38 PKIKP PKPbc 04 31 30.2 +0.5
CPUP Villa Florida 144.54 216 PKP PKPdf 04 31 32.2 +1.1
comp=Z,3.2nm,0.7s,baz=201,slow=2.5,SNR=8.5
MIAR Mount Ida 145.10 20 PKIKP PKPab 04 31 31.5 +0.1
WVT Waverly 145.19 12 PKIKP PKPbc 04 31 31.5 -0.1
JCT Junction City 145.82 32 PKP2 PKPab 04 31 34.3 0.0

IDC ***31*** *04:13:38.0±0.5, 4°.77S×103°.97E, h0km, mb4.2/23, mb1 4.3/23, mb1mx4.1/52, mbtmp4.2/23, MS3.9/1, Ms1 3.9/1, ms1mx3.4/17, Error ellipse: s-maj=20.2km s-min=12.8km az=55.0*

NEIC ***31*** *04:13:43.6±2.0, 4°.78S±0°.06×103°.99E±0°.03, h45km±8km, mb4.2/28, Error ellipse: s-maj=8.8km s-min=4.6km az=170.0*

ISC 31 04:13:41.8±0.4, **4°.83S**±0°.06×**104°.01E**±0°.05, **h25**km, **n81**, σ**1s.55**/80, **mb4.2**/35, **Southern Sumatera**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MNAI Manna 1.15 294 Pn Pn 04 14 02.5 +0.2
MNAI Sn Sn 04 14 15.9 -1.3
PMBI Palembang 2.04 22 Pn Pn 04 14 14.8 +0.2
DBJI Dramaga 3.22 122 P Pn 04 14 30.2 -0.7
DBJI Dramaga 3.22 122 P Pb 04 14 36.9 -1.5
SKJI Sukabumi 3.33 131 P Pn 04 14 35.2 +2.8
KRJI Kerinci 3.72 317 P Pb 04 14 45.4 -1.5
CNJI Cibinong 3.96 129 P Pn 04 14 43.6 +2.5
LEM Lembang 4.10 119 Pn Pn 04 14 46.0 +2.9
5.8nm,0.3s,baz=228,slow=8.5,SNR=16
LEM Lembang 4.10 119 P Pb 04 14 49.9 -3.6
CISI Cisompet, Garu 4.66 126 P Pn 04 14 53.3 +2.7
CISI Cisompet, Garu 4.66 126 Pn Pn 04 14 48.7 -1.9
MYKOM Kota Tinggi 6.58 359 Pn Pn 04 15 20.5 +3.6
UGM Wanagama 7.16 116 Pn Pn 04 15 28.7 +3.6
JAGI Jajag, Banyuwa 10.71 110 Pn Pn 04 16 15.5 +1.8
KAPI Kappang 15.69 91 Pn P 04 17 25.3 +0.1
baz=205,slow=19,SNR=0.9
KKM Kota Kinabalu 16.28 49 Pn Pn 04 17 29.9 +0.8
MMRI Maumere 18.49 103 P P 04 17 55.4 -0.9
SOEI Soe 20.68 105 P P 04 18 18.6 -1.7
PBKT Sadao Pong 21.47 352 P P 04 18 28.6 -0.1
PBKT IAmb IAmb 04 18 36.0
comp=Z,8.5nm,1.0s
PSAD1 Pilbara Seismi 22.56 139 P P 04 18 40.7 +0.4
PSAD1 IAmb IAmb 04 18 41.8
comp=Z,8.5nm,0.9s
PSAB1 Pilbara Seismi 22.63 139 P P 04 18 41.3 +0.2
PSAB1 IAmb IAmb 04 18 43.5
comp=Z,11nm,0.9s
PSA00 Pilbara Seismi 22.65 139 P P 04 18 42.1 +0.8
PSA00 IAmb IAmb 04 18 48.6
comp=Z,16nm,1.1s
PSA00 Pilbara Seismi 22.65 139 P P 04 18 42.0 +0.8
PSA00 IAmb IAmb 04 18 43.3
comp=Z,5.6nm,1.0s
CM31 Chiang Mai Arr 23.67 348 P P 04 18 50.1 -1.6
CM31 IAmb IAmb 04 18 57.7
comp=Z,10nm,1.1s
CMAR Chiang Mai Arr 23.67 348 P P 04 18 51.4 -0.2
comp=Z,3.2nm,0.8s,baz=181,slow=9.1,SNR=6.6
CMAR Chiang Mai Arr 23.67 348 P P 04 18 50.8 -0.8
TNTI Ternate 23.99 77 P P 04 18 52.9 -1.9
TNTI IAmb IAmb 04 18 58.3
comp=Z,7.9nm,0.8s
CHTO Chiang Mai 24.02 348 P P 04 18 51.6 -3.3
FITZ Fitzroy Crossi 24.92 124 P P 04 19 03.4 +0.1
comp=Z,9.0nm,0.8s,baz=302,slow=6.8,SNR=13
PALK Pallekele 26.18 297 P P 04 19 14.6 -0.1
comp=Z,2.1nm,0.7s,baz=192,slow=9.4,SNR=1.8
PALK Pallekele 26.18 297 P P 04 19 12.4 -2.3
KNRA Kununurra 26.60 116 P P 04 19 16.4 -2.1
MTN Manton Dam 27.94 108 P P 04 19 31.0 +0.5
MTN IAmb IAmb 04 19 35.9
comp=Z,4.1nm,0.8s
FAKI Fak Fak 28.24 87 P P 04 19 33.6 +0.4
FAKI IAmb IAmb 04 19 37.5
comp=Z,4.2nm,0.9s
WB0 Warramunga Arr 33.10 119 P P 04 20 15.6 -0.5
WRA Warramunga Arr 33.12 120 P P 04 20 16.1 -0.1
comp=Z,7.2nm,0.7s,baz=294,slow=9.7,SNR=13
WRA Warramunga Arr 33.12 120 P P 04 20 16.3 0.0
WRAB Tennant Creek 33.13 120 P P 04 20 15.8 -0.5
WB2 Warramunga Arr 33.13 120 P P 04 20 15.4 -1.0
WR0 Warramunga Arr 33.30 120 P P 04 20 16.6 -1.3
AS31 Alice Springs 34.37 126 P P 04 20 25.6 -1.4
AS31 IAmb IAmb 04 20 28.0
comp=Z,1.3nm,0.6s
ASAR Alice Springs 34.37 126 P P 04 20 27.2 +0.2
comp=Z,2.9nm,0.6s,baz=298,slow=8.5,SNR=4.4
STKA Stephens Creek 44.30 132 P P 04 21 50.8 +1.0
comp=Z,8.0nm,0.7s,baz=300,slow=8.8,SNR=8.3
STKA Stephens Creek 44.30 132 P P 04 21 49.5 -0.3
KSRS Korea Array 47.60 26 P P 04 22 16.2 +0.6
comp=Z,0.6nm,0.5s,baz=217,slow=3.8,SNR=1.4
KRVT Keravat (AS076 47.86 91 LR LR 04 44 10.1
comp=Z,127nm,21.2s,baz=235,slow=38
WSAR Wadi Sarin 52.33 304 P P 04 22 52.8 +0.8
comp=Z,0.8nm,0.3s,baz=146,slow=11,SNR=1.3
SONM Songino Array 52.48 2 P P 04 22 53.8 +1.0
comp=Z,1.0nm,0.7s,baz=186,slow=8.1,SNR=2.2
MKAR Makanchi Array 54.88 342 P P 04 23 09.8 -0.4
comp=Z,2.1nm,0.7s,baz=148,slow=8.6,SNR=4.3
MKAR Makanchi Array 54.88 342 P P 04 23 08.7 -1.5
OPO Ambohidratompo 57.06 251 P P 04 23 27.4 +0.9
comp=Z,5.1nm,1.1s,baz=329,slow=18,SNR=2.0
KURBB Kurchatov Arra 59.43 341 P P 04 23 41.2 -1.1
comp=Z,0.6nm,0.7s,baz=155,slow=6.8,SNR=2.4
KURK Kurchatov 59.48 342 P P 04 23 40.4 -2.3
KURK IAmb IAmb 04 23 47.4
comp=Z,2.6nm,1.0s
GEYT Alibeck 60.18 319 P P 04 23 47.1 -0.7
comp=Z,1.2nm,0.5s,baz=152,slow=6.5,SNR=2.1
ZALV Zalesovo Beam 60.73 347 P P 04 23 50.2 -1.0
comp=Z,1.7nm,0.4s,baz=157,slow=4.7,SNR=3.2
BVAR Borovoye Array 64.24 338 P P 04 24 12.9 -1.7
comp=Z,0.8nm,0.5s,baz=134,slow=8.3,SNR=3.4

ABKAR	Akbulak array	66.05	330	P	P	04 24 24.7	-1.8
MAW	Mawson	68.61	196	P	P	04 24 41.8	-0.6
	comp=Z,4.1nm,0.8s,baz=0.0,slow=10,SNR=2.7						
MAW	Mawson	68.61	196	P	P	04 24 41.5	-0.9
KBZ	Khabaz	73.06	318	P	P	04 25 08.2	-1.7
	comp=Z,1.9nm,0.8s,baz=236,slow=3.6,SNR=2.6						
PETK	Petropavlovsk-	73.20	30	P	P	04 25 10.8	+0.3
	comp=Z,0.8nm,0.4s,baz=247,slow=3.0,SNR=1.8						
MA2	Magadan	74.01	23	P	P	04 25 16.5	+1.3
	comp=Z,2.3nm,0.3s,baz=141,slow=18,SNR=1.6						
LSZ	Lusaka	75.08	256	P	P	04 25 25.5	+3.0
	comp=Z,0.9nm,0.5s,baz=80,slow=6.1,SNR=1.5						
LSZ	Lusaka	75.08	256	P	P	04 25 22.0	-0.4
BOSA	Boshof	77.84	242	P	P	04 25 39.3	+1.5
	comp=Z,2.9nm,1.0s,baz=109,slow=10,SNR=3.2						
BR131	Keskin Array S	78.17	312	P	P	04 25 38.7	-0.7
BR131				IAmb	IAmb	04 25 47.5	
	comp=Z,1.4nm,0.8s						
BRTR	Keskin Array B	78.17	312	P	P	04 25 38.2	-1.2
	comp=Z,1.2nm,0.8s,baz=136,slow=7.0,SNR=6.5						
VNDA	Vanda	78.64	169	P	P	04 25 42.8	+1.6
	comp=Z,2.7nm,1.1s,baz=269,slow=7.9,SNR=4.9						
VNDA	Vanda	78.64	169	P	P	04 25 42.7	+1.6
AKASG	Malin Array Be	84.16	322	P	P	04 26 10.1	-0.7
	comp=Z,0.2nm,0.4s,baz=84,slow=4.6,SNR=2.5						
AKASG	Malin Array Be	84.16	322	IAmb	IAmb	04 26 15.7	
	comp=Z,0.8nm,0.8s						
BURAR	Bucovina Array	86.02	318	P	P	04 26 21.0	+0.6
BUR08	Bucovina Ar. S	86.03	318	P	P	04 26 20.8	+0.4
FINES	FINESS Array B	88.46	332	P	P	04 26 35.0	+3.2
	comp=Z,2.5nm,0.9s,baz=85,slow=4.8,SNR=3.9						
YKA	Yellowknife Ar	115.82	19	PKP	PKiKP	04 32 21.7	-0.2
	comp=Z,0.2nm,0.7s,baz=340,slow=1.8,SNR=1.9						
NVAR	Mina Array Bea	129.09	43	PKP	PKiKP	04 32 49.1	0.0
	comp=Z,0.4nm,0.7s,baz=306,slow=3.0,SNR=2.4						
PDAR	Pinedale Array	131.91	33	PKP	PKPdf	04 32 52.0	-1.7
	comp=Z,0.1nm,0.4s,baz=270,slow=2.7,SNR=2.3						
CPUP	Villa Florida	144.13	209	PKP	PKPdf	04 33 15.9	-0.3
	comp=Z,6.3nm,1.0s,baz=163,slow=11,SNR=5.2						
TXAR	Lajitas Array	144.22	44	PKP	PKPdf	04 33 17.6	+1.2
	comp=Z,0.4nm,0.5s,baz=242,slow=1.7,SNR=2.5						
BDFB	Brasilia	145.64	233	PKPbc	PKPab	04 33 20.9	+1.1
	comp=Z,5.4nm,0.8s,baz=149,slow=3.6,SNR=7.7						
LPAZ	La Paz	157.63	200	PKPab	PKPab	04 34 07.8	-1.9
	comp=Z,2.2nm,1.1s,baz=76,slow=4.2,SNR=3.3						

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*DJA **31** 04:13:56.6±0.3, 5°S±5°×10°4E±°, h10^{km}, M5.3/12, mB5.2/2, mb5.3/4, MLv5.3/12, Mw(mB)4.6/2*

*IDC **31** 04:13:57.9±2.4, 4°.66S×104°.17E, h35^{km}±18^{km}, mb4.4/25, mb1 4.5/26, mb1mx4.3/50, mbtmp4.6/26, ML4.6/1, Error ellipse: s-maj=17.4km s-min=8.8km az=48.0*

*GCMT **31** 04:13:57.3±0.1, 4°.88S±0°.01×103°.99E±0°.01, h20^{km}±1^{km}, MW5.2/139, Moment Tensor Solution. s75,c98; s139,c238; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.04±.01; $M_{\theta\theta}$-0.70±.01; $M_{\phi\phi}$0.74±.01; $M_{r\theta}$-0.24±.03; $M_{\theta\phi}$-0.12±.01; $M_{\phi r}$-0.17±.03; Best double couple: $M_0$0.78600×10^{17} NP1:ϕ_s132.00000°, δ68.00000°, λ-174.00000°. NP2:ϕ_s39.00000°, δ85.00000°, λ-22.00000°. Principal axes: T 0.7800, Plg11.0000°, Azm87.0000°; N 0.0120, Plg68.0000°, Azm206.0000°; P -0.7930, Plg19.0000°, Azm353.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **31** 04:14:00.3±2.7, 4°.67S±0°.05×104°.23E±0°.04, h53^{km}±5^{km}, mb4.8/29 Error ellipse: s-maj=8.3km s-min=5.3km az=158.0*

ISC 31 04:13:56.1±1.1**, 4°.91S**±0°.05×**103°.94E**±0°.05**, h17**^{km}±7^{km}**, n133, σ1^{s}.79**/118**, mb4.7**/39**, 10C-2D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LWLI	Liwa	0.17	132	P	Pg	04 13 58.5	-2.1
MDSI	Maura Dua	0.48	30	P	Pg	04 14 06.7	+0.9
MNAI	Manna	1.12	299	P	Pb	04 14 17.0	0.0
KSI	Kapahiang	1.83	313	P	Pn	04 14 28.9	+2.0
PMBI	Palembang	2.14	23	P	Pn	04 14 34.0	+3.0
PMBI	Palembang	2.14	23	Pn	Pn	04 14 31.9	+0.9
PMBI				Sn	Sn	04 14 49.6	-7.6
SKJI	Sukabumi	3.34	129	P	Pn	04 14 47.9	+0.3
CNJI	Cibinong	3.97	127	P	Pn	04 14 56.7	+0.4
LEM	Lembang	4.13	118	Pn	Pn	04 14 58.1	-0.5
	39nm,0.3s,baz=308,slow=19,SNR=9.6						
LEM				Pg	Pb	04 15 11.5	+3.0
	68nm,0.3s,baz=50,slow=5.1,SNR=12						
LEM				Lg	Lg	04 16 09.0	
	45nm,0.3s,baz=305,slow=17,SNR=1.8						
LEM	Lembang	4.13	118	P	Pn	04 14 58.4	-0.2
CISI	Cisompet, Garu	4.67	125	P	Pn	04 15 06.3	+0.4
SDSI	Sungai Dareh	4.67	328	P	Pn	04 15 06.7	+0.7
PDSI	Padang	5.27	319	P	Pn	04 15 16.6	+2.4
	1.0nm2μm201nm,0.9s						
BKNI	Bangkinang	5.95	331	P	Pn	04 15 27.3	+3.8
	2.3nm704nm,0.9s						
BKNI	Bangkinang	5.95	331	Pn	Pn	04 15 27.3	+3.8
SISI	Saibi	6.00	306	P	Pn	04 15 26.1	+1.8
	0.8nm208nm,0.9s						
SMRI	Semarang	6.81	109	Pn	Pn	04 15 39.4	+4.0
YOGI	Yogyakarta	6.95	115	P	Pn	04 15 41.5	+4.2
SBUM	Sibu	11.04	49		Pn	04 16 32.6	-0.8
KKM	Kota Kinabalu	16.39	49		Pn	04 17 44.5	-1.2
MMRI	Maumere	18.55	103	P	P	04 18 09.1	-3.1
MMRI				IAmb	IAmb	04 18 13.3	
	comp=Z,75nm,0.9s						
GIRL	Giralia	20.25	152	P	P	04 18 29.6	-1.2
	baz=20,SNR=7.5						
SOEI	Soe	20.73	105	P	P	04 18 34.6	-1.6
SOEI				IAmb	IAmb	04 18 39.3	
	comp=Z,49nm,0.8s						
PSAD1	Pilbara Seismi	22.54	138	P	P	04 18 55.0	-0.5
PSAD1				IAmb	IAmb	04 19 01.9	
	comp=Z,61nm,1.0s						
CM31	Chiang Mai Arr	23.73	348	P	P	04 19 06.7	-0.9
CM31				IAmb	IAmb	04 19 11.8	
	comp=Z,21nm,1.1s						
CMAR	Chiang Mai Arr	23.73	348	P	P	04 19 07.2	-0.5
	comp=Z,7.0nm,0.9s,baz=181,slow=9.2,SNR=11						
CMAR	Chiang Mai Arr	23.73	348	P	P	04 19 05.8	-1.8
CHTO	Chiang Mai	24.08	348	P	P	04 19 11.0	+0.1
FITZ	Fitzroy Crossi	24.94	123	P	P	04 19 18.1	-0.6
	comp=Z,19nm,0.8s,baz=322,slow=15,SNR=3.2						
FITZ	Fitzroy Crossi	24.94	123	P	P	04 19 20.0	+1.3
FITZ				IAmb	IAmb	04 19 23.1	
	comp=Z,36nm,0.9s						
MEEK	Meekatharra	25.76	149	P	P	04 19 26.5	+0.3
	baz=26,SNR=3.9						
PALK	Pallekele	26.15	297	P	P	04 19 31.4	+1.5
	comp=Z,7.4nm,0.7s,baz=158,slow=11,SNR=4.2						
PALK	Pallekele	26.15	297	P	P	04 19 30.9	+1.0
KNRA	Kununurra	26.63	116	P	P	04 19 34.9	+0.8
	baz=27,SNR=5.0						
KNRA	Kununurra	26.63	116	P	P	04 19 31.2	-2.9
MTN	Manton Dam	27.98	108	P	P	04 19 49.0	+2.7
	baz=28,SNR=5.6						
MTN	Manton Dam	27.98	108	P	P	04 19 46.9	+0.7
MTN				IAmb	IAmb	04 19 52.0	
	comp=Z,29nm,1.1s						
WRKA	Warakurna	30.78	133	P	P	04 20 12.2	+1.1
	baz=31,SNR=4.1						
H01W3	Cape Leeuwin H	31.29	164	T	T	04 53 11.8	
	baz=340,slow=76,SNR=24						
H01W1	Cape Leeuwin H	31.30	164	T	T	04 53 14.1	
	baz=340,slow=76,SNR=20						
H01W2	Cape Leeuwin H	31.30	164	T	T	04 53 20.7	
	baz=340,slow=76,SNR=23						
H08S2	Diego Garcia H	31.37	263	T	T	04 52 28.6	
	baz=87,slow=76,SNR=20						
H08S3	Diego Garcia H	31.38	263	T	T	04 52 31.2	
	baz=87,slow=76,SNR=15						
H08S1	Diego Carcia H	31.39	263	T	T	04 52 33.4	
	baz=87,slow=76,SNR=13						
WB0	Warramunga Arr	33.13	119	P	P	04 20 28.8	-3.0
WB0				IAmb	IAmb	04 20 34.4	
	comp=Z,19nm,0.8s						
WRA	Warramunga Arr	33.15	119	P	P	04 20 29.5	-2.4
	comp=Z,23nm,0.8s,baz=293,slow=10,SNR=11						
WRA	Warramunga Arr	33.15	119	P	P	04 20 30.1	-1.8
WRAB	Tennant Creek	33.15	119	P	P	04 20 30.2	-1.7
WR0	Warramunga Arr	33.33	119	P	P	04 20 31.7	-1.8
ASAR	Alice Springs	34.38	126	P	P	04 20 41.2	-1.4
	comp=Z,8.0nm,0.7s,baz=307,slow=8.6,SNR=5.7						
ASAR				PcP	PcP	04 23 16.6	-1.8
	comp=Z,2.6nm,0.5s,baz=306,slow=2.4,SNR=8.0						
ASAR				S	S	04 26 06.7	-3.2
	comp=Z,4.9nm,1.1s,baz=291,slow=14,SNR=7.8						
ASAR	Alice Springs	34.38	126		PcP	04 23 17.3	-1.1
QIS	Mount Isa	37.98	117	P	P	04 21 15.5	+2.0
	baz=38,SNR=6.0						
BBOO	Buckleboo	40.85	137	P	P	04 21 36.6	-0.7
	baz=41,SNR=5.6						
MTSU	Mount Surprise	41.58	112	P	P	04 21 44.8	+1.4
	baz=42,SNR=4.1						
HTT	Hallett	43.18	136	P	P	04 21 56.6	+0.3
	baz=43,SNR=4.9						
STKA	Stephens Creek	44.30	132	P	P	04 22 04.7	-0.6
	baz=44,SNR=3.8						
STKA	Stephens Creek	44.30	132	P	P	04 22 04.5	-0.7
	comp=Z,32nm,0.7s,baz=310,slow=8.4,SNR=16						
STKA	Stephens Creek	44.30	132	IAmb	IAmb	04 22 09.3	
	comp=Z,7.4nm,0.8s						
CMSA	Cobar Meteorol	47.24	129	P	P	04 22 30.9	+2.4
	baz=47,SNR=7.3						
KSAR	Wonju Array Be	47.67	26	P	P	04 22 31.5	-0.2
KSRS	Korea Array	47.70	26	P	P	04 22 32.5	+0.5
	comp=Z,2.2nm,0.7s,baz=223,slow=7.6,SNR=4.9						
NIL	Nilore	48.09	325	P	P	04 22 34.9	-0.2
YNG	Young	50.48	131	P	P	04 22 53.4	0.0
	baz=50,SNR=5.9						
ARMA	Armidale	51.53	125	P	P	04 23 02.5	+1.0
	baz=52,SNR=4.8						
WSAR	Wadi Sarin	52.32	304	P	P	04 23 09.3	+2.0
	comp=Z,3.6nm,0.7s,baz=184,slow=6.5,SNR=2.8						
SONM	Songino Array	52.56	2	P	P	04 23 10.5	+1.6
	comp=Z,2.6nm,0.6s,baz=177,slow=8.9,SNR=6.8						
SONM	Songino Array	52.56	2	P	P	04 23 07.0	-1.8
AAK	Ala-Archa	54.34	333	P	P	04 23 21.3	-0.8
	comp=Z,1.7nm,0.5s,baz=129,slow=6.5,SNR=3.4						
AAK	Ala-Archa	54.34	333	P	P	04 23 20.3	-1.7
MKAR	Makanchi Array	54.93	342	P	P	04 23 23.2	-2.9
	comp=Z,5.4nm,0.6s,baz=146,slow=7.0,SNR=12						
USRK	Ussuriysk Ar.	55.01	24	P	P	04 23 24.8	-1.9
	comp=Z,2.0nm,0.6s,baz=218,slow=9.1,SNR=3.0						
TLY	Talaya	56.37	360	P	P	04 23 36.6	+0.3
	comp=Z,1.7nm,0.5s,baz=188,slow=14,SNR=2.7						
TLY	Talaya	56.37	360	P	P	04 23 36.2	-0.1
OPO	Ambohidratompo	56.97	251	P	P	04 23 44.3	+2.9
	comp=Z,6.2nm,0.8s,baz=64,slow=4.5,SNR=4.5						
KLR	Kul'dur	59.10	21	P	P	04 23 53.5	-2.1
	comp=Z,1.6nm,0.5s,baz=194,slow=7.5,SNR=2.9						
KURBB	Kurchatov Arra	59.48	342	P	P	04 23 56.4	-1.8
	comp=Z,3.9nm,0.9s,baz=160,slow=6.3,SNR=5.9						
KURK	Kurchatov	59.53	342	P	P	04 23 56.8	-1.7
KURK				IAmb	IAmb	04 24 02.8	
	comp=Z,8.6nm,1.0s						
GEYT	Alibeck	60.19	319	P	P	04 24 01.0	-2.4
	comp=Z,4.8nm,0.7s,baz=173,slow=13,SNR=6.4						
ZALV	Zalesovo Beam	60.79	347	P	P	04 24 04.4	-2.7
	comp=Z,7.9nm,0.6s,baz=162,slow=5.5,SNR=7.6						
BVAR	Borovoye Array	64.28	338	P	P	04 24 28.0	-2.4
	comp=Z,2.7nm,0.6s,baz=144,slow=9.1,SNR=9.4						
AKTO	Aktyubinsk	67.79	330	P	P	04 24 51.0	-2.1
	comp=Z,2.6nm,0.9s,baz=145,slow=7.1,SNR=3.6						
MAW	Mawson	68.51	196	P	P	04 24 59.6	+2.3
	baz=68,SNR=4.9						
MAW	Mawson	68.51	196	P	P	04 24 57.5	+0.3
	comp=Z,11nm,0.8s,baz=67,slow=6.4,SNR=8.0						
MAW	Mawson	68.51	196	P	P	04 24 58.6	+1.3
ARU	Arti	71.45	335	P	P	04 25 13.4	-2.1
	comp=Z,1.3nm,0.4s,baz=170,slow=6.9,SNR=1.4						
AKH	Akhalkalaki	71.72	316	⇑P	P	04 25 19.7	+2.0
KBZ	Khabaz	73.07	318	P	P	04 25 23.2	-2.2
	comp=Z,17nm,0.9s,baz=164,slow=5.0,SNR=13						
KIV	Kislovodsk	73.30	319	P	P	04 25 25.6	-1.3
KIV				IAmb	IAmb	04 25 30.8	
	comp=Z,9.0nm,0.6s						
LSZ	Lusaka	74.99	256	P	P	04 25 39.4	+2.0
	comp=Z,2.6nm,0.8s,baz=44,slow=4.7,SNR=5.2						
BOSA	Boshof	77.73	242	P	P	04 25 52.9	+0.1
	comp=Z,5.5nm,0.8s,baz=86,slow=5.0,SNR=6.8						
BOSA	Boshof	77.73	242	P	P	04 25 52.7	-0.1
BOSA				IAmb	IAmb	04 25 57.4	
	comp=Z,8.1nm,0.9s						
BRTR	Keskin Array B	78.17	312	P	P	04 25 52.4	-2.6
	comp=Z,9.2nm,0.8s,baz=128,slow=6.2,SNR=18						
BRTR	Keskin Array B	78.17	312	P	P	04 25 51.5	-3.5
VNDA	Vanda	78.58	169	P	P	04 25 57.8	+1.4
	comp=Z,4.9nm,0.9s,baz=308,slow=5.4,SNR=7.4						
VNDA	Vanda	78.58	169	P	P	04 25 57.5	+1.2
VNDA				IAmb	IAmb	04 26 04.3	
	comp=Z,7.2nm,0.9s						
KARP	Karpathos	82.14	307	P	P	04 26 17.4	+1.1
SORM	Soroca	84.08	319	⇓P	P	04 26 19.2	-6.9
AKASG	Malin Array Be	84.17	322	P	P	04 26 25.4	-1.1
	comp=Z,3.8nm,0.8s,baz=83,slow=5.0,SNR=12						
AKASG	Malin Array Be	84.17	322	P	P	04 26 25.6	-0.8
AKBB	Malin Array Si	84.17	322	IAmb	IAmb	04 26 27.6	
	comp=Z,7.6nm,0.9s						
ELND	Elena	84.62	314	⇑P	P	04 26 27.5	-1.5
VRI	Vrincioaia	84.64	317	⇑P	P	04 26 23.7	-5.3
PLOR	Plostina	84.69	317	⇑P	P	04 26 28.3	-1.0
TESR	Tescani	84.84	317	⇑P	P	04 26 24.6	-5.4
QSPA	South Pole Qui	85.07	180	P	P	04 26 31.8	+0.9
QSPA				IAmb	IAmb	04 26 35.7	
	comp=Z,5.1nm,0.8s						
MLR	Muntele Rosu	85.10	316	⇓P	P	04 26 26.6	-4.9
BIZ	Bicaz	85.30	318	⇑P	P	04 26 30.3	-1.9
VOIR		85.70	316	⇑P	P	04 26 27.2	-7.2
GZR	Gura Zlata	87.27	316	⇑P	P	04 26 39.3	-2.8
KWP	Kalwaria Pacla	88.04	320	IAmb	IAmb	04 26 48.1	
	comp=Z,8.7nm,1.0s						
FINES	FINESS Array B	88.50	332	P	P	04 26 47.4	-0.1
	comp=Z,2.7nm,0.5s,baz=93,slow=3.8,SNR=6.3						
SUW	Suwalki	88.52	324	P	P	04 26 47.0	-0.7
PDG	Podgorica	89.35	313	⇑P	P	04 26 45.8	-6.1
BLY	Banja Luka	91.11	315	⇑P	P	04 26 58.0	-2.1
GERES	GERESS Array B	93.81	319	P	P	04 27 13.6	+1.0
	comp=Z,0.8nm,0.6s,baz=116,slow=3.1,SNR=4.6						
CLL	Collm	94.38	321	*e*P	P	04 27 17.0	+2.0
CLL				LmH		05 09 00.0	
	comp=N,200nm,21.4s						
CLL				LmH		05 09 00.0	
	comp=E,100nm,20.9s						
CLL				LmV		05 18 00.0	
	comp=Z,100nm,20.2s						
YKA	Yellowknife Ar	115.92	19	PKP	PKiKP	04 32 35.0	-2.7
	comp=Z,0.3nm,0.6s,baz=329,slow=1.6,SNR=3.3						
YKA				PKKPbc	PKKPab	04 43 15.8	+1.7
	comp=Z,0.5nm,0.8s,baz=130,slow=4.7,SNR=7.5						
NVAR	Mina Array Bea	129.19	43	PKP	PKPdf	04 33 04.4	+0.1
	comp=Z,0.6nm,0.5s,baz=297,slow=0.8,SNR=4.2						
ULM	Lac du Bonnet	131.83	17	PKP	PKPdf	04 33 07.8	-0.8
	comp=Z,1.9nm,0.6s,baz=294,slow=2.2,SNR=4.2						
PDAR	Pinedale Array	132.02	33	PKP	PKPdf	04 33 07.8	-1.7
	comp=Z,0.5nm,0.6s,baz=78,slow=1.6,SNR=3.5						
CPUP	Villa Florida	144.03	209	PKP	PKPab	04 33 29.8	+0.8
	comp=Z,13nm,1.0s,baz=165,slow=5.8,SNR=7.7						
TX31	Lajitas Ar. Si	144.33	44		PKPbc	04 33 32.6	+2.1
TX32	Lajitas Array	144.33	44		PKPab	04 33 31.7	+1.5
TXAR	Lajitas Array	144.33	44	PKP	PKPab	04 33 31.4	+1.2
	comp=Z,1.3nm,0.6s,baz=271,slow=0.9,SNR=7.1						
BDFB	Brasilia	145.53	233	PKPbc	PKPdf	04 33 35.1	+0.4
	comp=Z,20nm,0.8s,baz=159,slow=3.9,SNR=19						
WCI	Wyandotte Cave	145.55	14		PKPdf	04 33 32.2	-1.7
PBMO	Poplar Bluff	145.65	21		PKPdf	04 33 32.1	-2.1
WVT	Waverly	147.09	18		PKPdf	04 33 36.8	+0.2
V48A	Smith Brothers	147.75	17		PKPdf	04 33 38.5	+0.7
HKT	Hockley	148.87	35		PKPdf	04 33 42.6	+2.9
LVC	Limon Verde	151.77	194		PKPbc	04 33 53.0	+1.7
PB07	IPOC Station P	152.85	193		PKPbc	04 33 55.0	+1.5
LPAZ	La Paz	157.53	200	PKPab	PKPab	04 34 25.4	+0.6
	comp=Z,2.6nm,0.7s,baz=176,slow=5.0,SNR=4.0						

IDC 31 04:22:54.8±2.0**, 5°.47S**×**103°.35E, h0**^{km}**, mb3.5**/4**, mb1 3.8**/5**, mb1mx3.4**/57**, mbtmp3.6**/5**, ML3.2**/1**, Error ellipse: s-maj=76.9km s-min=23.2km az=36.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEM	Lembang	4.45	108	Pn	Pn	04 24 04.8	+1.1
	1.1nm,0.3s,baz=163,slow=19,SNR=2.1						
LEM				Lg	Lg	04 25 16.8	
	3.4nm,0.3s,baz=43,slow=17,SNR=3.7						
FITZ	Fitzroy Crossi	25.13	122	P	P	04 28 22.7	+1.0
	2.5nm,0.8s,baz=292,slow=7.7,SNR=4.8						
WRA	Warramunga Arr	33.39	118	P	P	04 29 33.9	-1.4
	0.2nm,0.5s,baz=295,slow=10.0,SNR=1.2						
ASAR	Alice Springs	34.53	125	P	P	04 29 44.7	-0.5
	0.5nm,0.8s,baz=313,slow=9.9,SNR=4.1						
MKAR	Makanchi Array	55.28	343	P	P	04 32 30.2	+0.2
	0.3nm,0.8s,baz=146,slow=10,SNR=2.6						

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*IDC **31** 04:29:04.9±5.1, 14°.61S×167°.36E, h126^{km}±45^{km}, mb3.6/6, mb1 3.8/7, mb1mx3.4/41, mbtmp4.0/7, Error ellipse: s-maj=33.5km s-min=30.5km az=150.0*

ISC 31 04:29:07.2±1.3**, 14°.8S**±0°.1×**167°.4E**±0°.2**, h150**^{km}**, n8, σ1^{s}.65**/9**, mb3.8**/6**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	7.26	187	P	Pn	04 30 50.9	+0.1
	4.5nm,0.3s,baz=353,slow=16,SNR=12						
DZM				S	Sn	04 32 10.1	-2.1
	1.1nm,0.3s,baz=117,slow=24,SNR=1.5						
STKA	Stephens Creek	29.05	230	P	P	04 34 55.5	+2.2
	1.8nm,0.5s,baz=28,slow=7.5,SNR=5.4						
WRA	Warramunga Arr	31.95	256	P	P	04 35 18.7	-0.4
	0.2nm,0.3s,baz=82,slow=6.3,SNR=5.3						
ASAR	Alice Springs	32.78	249	P	P	04 35 26.1	-0.3
	0.3nm,0.4s,baz=76,slow=9.3,SNR=9.6						
VNDA	Vanda	62.77	181	P	P	04 39 17.3	+1.3
	1.0nm,0.5s,baz=2.4,slow=5.7,SNR=7.6						
ILAR	Eielson Array	86.57	18	P	P	04 41 33.4	+0.4
	0.6nm,0.8s,baz=238,slow=4.9,SNR=6.6						
MKAR	Makanchi Array	97.38	316	P	P	04 42 21.4	-2.2
	0.5nm,0.8s,baz=90,slow=6.3,SNR=3.1						
KURBB	Kurchatov Arra	100.62	320	P	Pdif	04 42 37.2	-0.6
	0.2nm,0.4s,baz=76,slow=5.8,SNR=2.5						

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*IDC **31** 04:36:31.2±0.7, 12°.53N×95°.06E, h0^{km}, mb4.0/14, mb1 4.1/16, mb1mx3.9/45, mbtmp4.0/16, ML3.7/2, Error ellipse: s-maj=25.7km s-min=17.0km az=68.0*

*NEIC **31** 04:36:32.4±2.1, 12°.61N±0°.02×95°.2E±0°.2, h10^{km}±1^{km}, mb4.1/11, Error ellipse: s-maj=25.8km s-min=3.1km az=91.0*

ISC 31 04:36:33.9±0.5**, 12°.61N**±0°.07×**95°.19E**±0°.06**, h19**^{km}**, n49, σ1^{s}.23**/49**, mb4.2**/16**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGPR	DIGLIPUR	2.27	285	*e*P	Pn	04 37 11.1	+0.7
DGPR				*e*S	Sn	04 37 34.1	-3.8
PBA	Port Blair	2.57	249	*e*P	Pb	04 37 15.9	-3.5
PBA				*e*S	Sb	04 37 51.4	+0.7
PBKT	Sadao Pong	6.84	54		Pn	04 38 13.4	+0.1
CMAR	Chiang Mai Arr	6.85	31	Pn	Pn	04 38 15.0	+1.5
	0.5nm,0.3s,baz=222,slow=14,SNR=4.2						
CMAR	Chiang Mai Arr	6.85	31		Pn	04 38 11.7	-1.8
CHTO	Chiang Mai	7.15	30	Pn	Pn	04 38 16.8	-0.8
IPM	Ipoh	9.92	144	Pn	Pn	04 38 53.4	-2.3
PSI	Prapat	10.42	159	Pn	Pn	04 39 04.3	+1.7
	0.4nm,0.3s,baz=335,slow=10,SNR=4.6						
RPSI	Rantau Prapat	10.52	159		Pn	04 39 04.3	+0.5
TAPN	Taplejung	16.26	336	*e*P	P	04 40 25.7	+1.1
RAMN	Ramite	16.39	332	*e*P	P	04 40 28.5	+2.5
	17nm,0.6s						
JIRN	Jiri	17.18	332	*e*P	P	04 40 37.2	+2.2
LSA	Lhasa	17.42	348	P	Pn	04 40 36.2	-0.2
LSA				IAmb	IAmb	04 40 39.5	
	comp=Z,6.7nm,0.7s						
PKI	Pulchoki	17.48	330	*e*P	P	04 40 38.9	+0.7
	comp=Z,24nm,1.0s						
PKIN	Phulchoki	17.49	330	*e*P	P	04 40 38.6	+0.4
	comp=Z,7.8nm,0.5s						
GUN	Gumba	17.54	332	*e*P	P	04 40 40.7	+1.8
DMN	Daman	17.66	329	*e*P	P	04 40 41.3	+1.2
	comp=Z,18nm,0.7s						
DANN	Dangsing	18.95	327	*e*P	Pn	04 40 55.2	+0.1
	comp=Z,26nm,0.8s						
SBUM	Sibu	19.65	120	P	P	04 41 00.8	-1.0
SBUM				IAmb	IAmb	04 41 07.3	
	comp=Z,5.5nm,1.0s						
AAK	Ala-Archa	34.89	333	P	P	04 43 26.0	+1.6
AAK				IAmb	IAmb	04 43 27.1	
	comp=Z,4.4nm,1.1s						
MK31	Makanchi Array	35.77	345	P	P	04 43 32.7	+0.9
MKAR	Makanchi Array	35.77	345	P	P	04 43 32.9	+1.1
	comp=Z,3.3nm,0.9s,baz=157,slow=9.8,SNR=24						
MKAR	Makanchi Array	35.77	345	P	P	04 43 31.9	+0.1
SONM	Songino Array	36.35	13	P	P	04 43 38.1	+1.2
	comp=Z,2.2nm,0.9s,baz=196,slow=9.4,SNR=12						
SONM	Songino Array	36.35	13	P	P	04 43 37.8	+0.9
KK31	Karatay Array	37.12	330	P	P	04 43 42.8	-0.6
KKAR	Karatay Array	37.12	330	P	P	04 43 43.5	+0.2
KKAR	Karatay Array	37.12	330	P	P	04 43 42.8	-0.6
KKAR				IAmb	IAmb	04 43 50.7	
	comp=Z,0.5nm,0.8s						
TLY	Talaya	39.57	8	P	P	04 44 05.7	+1.9
	comp=Z,2.2nm,0.6s,baz=224,slow=7.8,SNR=4.6						
TLY	Talaya	39.57	8	P	P	04 44 05.2	+1.3
TLY				IAmb	IAmb	04 44 06.9	
	comp=Z,5.3nm,1.0s						
KURBB	Kurchatov Arra	40.28	344	P	P	04 44 10.6	+0.9
	comp=Z,4.3nm,0.9s,baz=161,slow=7.7,SNR=31						
KURK	Kurchatov	40.34	344	P	P	04 44 10.2	0.0
GEYT	Alibeck	41.52	314	P	P	04 44 20.9	+0.6
	comp=Z,4.6nm,0.6s,baz=139,slow=9.2,SNR=7.5						
GEYT	Alibeck	41.52	314	P	P	04 44 21.2	+1.0
ZAA0	Zalesovo Array	42.05	351	P	P	04 44 23.9	-0.3
ZAA0				IAmb	IAmb	04 44 25.9	
	comp=Z,6.5nm,1.1s						
ZALV	Zalesovo Beam	42.05	351	P	P	04 44 24.9	+0.7
	comp=Z,2.0nm,0.6s,baz=178,slow=8.9,SNR=9.4						
ABKAR	Akbulak array	46.67	329	P	P	04 45 00.7	-0.6
WRA	Warramunga Arr	50.31	129	P	P	04 45 30.1	+0.4
	comp=Z,0.9nm,0.3s,baz=312,slow=8.1,SNR=2.3						
ASAR	Alice Springs	52.28	134	P	P	04 45 45.1	+0.6
	comp=Z,1.2nm,1.0s,baz=312,slow=7.1,SNR=3.1						
BRTR	Keskin Array B	60.22	309	P	P	04 46 40.2	-0.9
	comp=Z,0.2nm,0.4s,baz=229,slow=11,SNR=2.9						
AKASG	Malin Array Be	65.15	320	P	P	04 47 12.8	-0.9
	comp=Z,0.1nm,0.3s,baz=75,slow=5.1,SNR=4.3						
FINES	FINESS Array B	69.06	331	P	P	04 47 38.5	+0.2
	comp=Z,1.9nm,0.8s,baz=162,slow=34,SNR=2.2						
GERES	GERESS Array B	75.03	317	P	P	04 48 14.2	-0.3
	comp=Z,1.5nm,0.7s,baz=77,slow=5.8,SNR=12						
BOSA	Boshof	78.98	237	P	P	04 48 37.8	+0.7
	comp=Z,2.0nm,0.8s,baz=73,slow=11,SNR=2.5						
ILAR	Eielson Array	90.00	22	P	P	04 49 31.2	-0.8
	comp=Z,0.6nm,0.8s,baz=287,slow=3.4,SNR=7.0						
NVAR	Mina Array Bea	120.34	30	PKP	PKiKP	04 55 25.7	+0.9
	comp=Z,0.6nm,0.8s,baz=0.0,slow=1.3,SNR=4.0						
PDAR	Pinedale Array	120.41	21	PKP	PKiKP	04 55 24.6	-0.3
	comp=Z,0.1nm,0.3s,baz=308,slow=4.4,SNR=1.8						
TXAR	Lajitas Array	134.51	23	PKP	PKiKP	04 55 52.2	-1.0
	comp=Z,0.3nm,0.9s,baz=195,slow=2.8,SNR=1.7						
LPAZ	La Paz	163.44	255	PKPab	PKPab	04 57 27.9	-0.4
	comp=Z,0.6nm,0.8s,baz=211,slow=5.9,SNR=1.3						

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*IDC **31** 04:36:28.4±2.3, 32°.21S×178°.44W, h0^{km}, mb4.0/2, mb1 4.1/3, mb1mx3.7/35, mbtmp3.9/3, ML3.3/1, Error ellipse: s-maj=65.4km s-min=40.9km az=137.0*

ISC 31 04:36:35.3±2.0**, 32°.2S**±0°.1×**178°.8W**±0°.3**, h45**^{km}**, n18, σ1^{s}.82**/18**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	6.10	202	P	Pn	04 38 04.3	+1.4
HAZ	Te Kaha	6.26	206	P	Pn	04 38 05.8	+0.7
PUZ	Puketiti	6.38	202	P	Pn	04 38 07.6	+0.8
RUGZ	Raukumara Rang	6.48	206	P	Pn	04 38 09.0	+0.7
CNGZ	Carnagh Statio	6.78	201	P	Pn	04 38 13.2	+1.0
MWZ	Matawai	6.87	205	P	Pn	04 38 15.5	+2.0
MARZ	Manawahe	6.91	212	P	Pn	04 38 21.6	+7.6
URZ	Urewera	6.96	208	Pn	Pn	04 38 11.6	-3.1
	0.6nm,0.3s,baz=145,slow=17,SNR=2.4						
URZ				Sn	Sn	04 39 30.6	-1.9
	2.0nm,0.3s,baz=122,slow=14,SNR=7.7						
URZ	Urewera	6.96	208	P	Pn	04 38 12.8	-1.8
RIGZ	Rimuhau	7.12	203	P	Pn	04 38 18.8	+1.9
MUGZ	Murupara	7.28	209	P	Pn	04 38 20.8	+1.7
RTZ	Ruatahuna	7.32	207	P	Pn	04 38 19.0	-0.7
MTHZ	Maungataniwha	7.58	207	P	Pn	04 38 25.0	+1.8
ARHZ	Aropaoanui	7.88	205	P	Pn	04 38 28.4	+1.1
ASAR	Alice Springs	42.41	269	P	P	04 44 26.6	+0.9
	0.5nm,0.5s,baz=108,slow=8.8,SNR=6.2						
WRA	Warramunga Arr	43.56	274	P	P	04 44 36.7	+1.6
	1.6nm,0.3s,baz=113,slow=8.0,SNR=17						
FINES	FINESS Array B	146.56	339	PKPbc	PKiKP	04 56 11.0	-2.8
	1.2nm,0.7s,baz=66,slow=2.3,SNR=4.5						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
NOA	NORSAR Array B	150.39	350	PKPbc	PKiKP	04 56 20.7	-1.1
	0.3nm,0.5s,baz=16,slow=4.1,SNR=2.5						

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*IDC **31** 04:37:15.9±0.8, 4°.76S×104°.16E, h0km, mb4.1/13, mb1 4.3/13, mb1mx4.0/42, mbtmp4.1/13, MS3.6/4, Ms1 3.6/4, ms1mx3.2/32, Error ellipse: s-maj=44.9km s-min=13.9km az=49.0*

*DJA **31** 04:37:17.2±0.3, 5°S±2°×10°4E±°, h10km, M4.5/7, mB5.2/1, mb4.5/1, MLv4.5/7, MLv4.5/4, Mw(mB)4.6/1*

*NEIC **31** 04:37:20.2±2.2, 4°.97S±0°.07×103°.85E±0°.05, h38km±3km, mb4.4/10, Error ellipse: s-maj=10.4km s-min=6.3km az=203.0*

ISC 31 04:37:17.2±0.9**, 4°.89S**±0°.04×**104°.00E**±0°.04**, h11**km±6km**, n61, σ1s.60**/56**, mb4.2**/16**, MS3.5**/3**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LWLI	Liwa	0.14	155	P	Pg	04 37 20.4	-0.2
LWLI				S	Sg	04 37 24.5	+1.5
MDSI	Maura Dua	0.44	24	P	Pg	04 37 24.6	-1.2
MDSI				S	Sg	04 37 31.4	-0.1
MNAI	Manna	1.16	297	P	Pb	04 37 37.8	-1.5
MNAI	Manna	1.16	297		Pb	04 37 38.4	-0.9
MNAI				Sn	Sb	04 37 53.9	-0.5
KSI	Kapahiang	1.86	311	P	Pn	04 37 49.7	+0.6
PMBI	Palembang	2.09	22	Pn	Pb	04 37 53.7	-1.5
PMBI				Sn	Sb	04 38 22.0	+0.8
SKJI	Sukabumi	3.30	130	P	Pn	04 38 10.1	+1.2
KRJI	Kerinci	3.76	318	P	Pn	04 38 18.7	+3.5
CNJI	Cibinong	3.94	128	P	Pn	04 38 20.4	+2.8
CNJI				S	Sn	04 39 07.1	+3.3
LEM	Lembang	4.08	118	Pn	Pb	04 38 25.1	-4.1
	4.9nm,0.3s,baz=233,slow=4.9,SNR=8.0						
LEM				Lg	Lg	04 39 26.6	
	5.9nm,0.3s,baz=299,slow=19,SNR=2.5						
CISI	Cisompet, Garu	4.63	125	P	Pn	04 38 29.6	+2.4
CISI	Cisompet, Garu	4.63	125		Pn	04 38 31.3	+4.2
XMIS	Christmas Isla	5.80	164	Pn	Pn	04 38 41.2	-2.0
BKNI	Bangkinang	5.96	330	P	Pn	04 38 50.3	+4.9
BKNI	Bangkinang	5.96	330		Pn	04 38 49.5	+4.1
SISI	Saibi	6.04	306	P	Pn	04 38 47.4	+0.9
MYKOM	Kota Tinggi	6.63	359	Pn	Pn	04 38 55.9	+1.3
KAPI	Kappang	15.70	91	LR	LR	04 46 42.9	
	comp=Z,194nm,20.9s,baz=284,slow=36						
MMRI	Maumere	18.49	103	P	P	04 41 33.4	-0.1
MMRI				IAmb	IAmb	04 41 41.6	
	comp=Z,20nm,0.6s						
CMAR	Chiang Mai Arr	23.73	348	P	P	04 42 30.1	+0.6
	comp=Z,1.0nm,0.3s,baz=186,slow=7.5,SNR=1.6						
CMAR				LR	LR	04 52 28.1	
	comp=Z,122nm,18.4s,baz=170,slow=39						
CMAR	Chiang Mai Arr	23.73	348	P	P	04 42 28.7	-0.8
FITZ	Fitzroy Crossi	24.90	124	P	P	04 42 40.9	+0.5
	comp=Z,7.5nm,0.9s,baz=244,slow=3.7,SNR=13						
FITZ	Fitzroy Crossi	24.90	124	P	P	04 42 41.0	+0.5
FITZ				IAmb	IAmb	04 42 45.6	
	comp=Z,7.6nm,0.9s						
PALK	Pallekele	26.20	297	LR	LR	04 52 13.2	
	comp=Z,122nm,19.6s,baz=81,slow=34						
H01W3	Cape Leeuwin H	31.29	164	T	T	05 16 33.3	
	baz=340,slow=76,SNR=5.0						
H01W2	Cape Leeuwin H	31.30	164	T	T	05 16 42.4	
	baz=340,slow=76,SNR=5.0						
H01W1	Cape Leeuwin H	31.30	164	T	T	05 16 37.1	
	baz=340,slow=76,SNR=5.5						
H08S2	Diego Garcia H	31.43	263	T	T	05 16 01.6	
	baz=86,slow=74,SNR=5.5						
H08S3	Diego Garcia H	31.44	263	T	T	05 16 02.3	
	baz=86,slow=74,SNR=4.6						
H08S1	Diego Carcia H	31.45	263	T	T	05 16 00.6	
	baz=86						
WB0	Warramunga Arr	33.08	119	P	P	04 43 53.5	+0.2
WB0				IAmb	IAmb	04 43 56.5	
	comp=Z,5.0nm,1.0s						
WRA	Warramunga Arr	33.10	120	P	P	04 43 52.6	-0.9
	comp=Z,4.7nm,0.9s,baz=292,slow=10,SNR=16						
WRA	Warramunga Arr	33.10	120	P	P	04 43 53.5	0.0
WB2	Warramunga Arr	33.11	120	P	P	04 43 53.4	-0.2
WB2				IAmb	IAmb	04 43 57.6	
	comp=Z,6.5nm,1.0s						
ASAR	Alice Springs	34.34	126	P	P	04 44 04.3	0.0
	comp=Z,2.4nm,0.9s,baz=304,slow=8.1,SNR=21						
ASAR	Alice Springs	34.34	126	P	P	04 44 04.8	+0.5
STKA	Stephens Creek	44.27	132	P	P	04 45 26.8	-0.2
	comp=Z,4.3nm,0.7s,baz=292,slow=8.7,SNR=8.7						
STKA	Stephens Creek	44.27	132	P	P	04 45 27.8	+0.7
MSEY	Mahe Island	48.34	268	P	P	04 45 56.8	-2.6
KSH	Kashi	51.19	332	P	P	04 46 22.0	+1.2
KSH				pP	sP	04 46 26.0	+0.2
KSH				PcP	PcP	04 47 37.0	+0.9
KSH				PcS	PcS	04 51 33.8	-0.1
KSH				S	S	04 53 37.8	-1.4
SONM	Songino Array	52.54	2	P	P	04 46 30.4	-0.2
	comp=Z,0.8nm,0.6s,baz=174,slow=5.8,SNR=4.0						
SONM	Songino Array	52.54	2	IAmb	IAmb	04 46 35.7	
	comp=Z,0.9nm,0.8s						
MKAR	Makanchi Array	54.93	342	P	P	04 46 47.6	-0.4
	comp=Z,0.8nm,0.6s,baz=159,slow=6.8,SNR=6.9						
KURBB	Kurchatov Arra	59.48	341	P	P	04 47 20.3	+0.1
	comp=Z,0.7nm,0.8s,baz=161,slow=6.8,SNR=4.3						
KURK	Kurchatov	59.53	342	P	P	04 47 20.3	-0.2
KURK	Kurchatov	59.53	342	IAmb	IAmb	04 47 27.9	
	comp=Z,1.4nm,0.9s						
GEYT	Alibeck	60.22	319	P	P	04 47 26.2	+0.6
	comp=Z,0.9nm,0.4s,baz=198,slow=27,SNR=1.7						
GEYT	Alibeck	60.22	319	P	P	04 47 24.4	-1.2
ZALV	Zalesovo Beam	60.79	347	P	P	04 47 28.8	-0.2
	comp=Z,1.1nm,0.4s,baz=161,slow=5.8,SNR=7.3						
ZALV	Zalesovo Beam	60.79	347	P	P	04 47 28.6	-0.5
DZM	Mont Dzumac	62.67	112	LR	LR	05 15 17.5	
	comp=Z,40nm,18.5s,baz=206,slow=36						
ABKAR	Akbulak array	66.09	330	P	P	04 48 03.4	-0.9
KBZ	Khabaz	73.09	318	P	P	04 48 48.5	+0.9
	comp=Z,3.8nm,0.9s,baz=162,slow=6.7,SNR=5.0						
BRTR	Keskin Array B	78.20	312	P	P	04 49 16.9	-0.3
	comp=Z,2.1nm,0.9s,baz=136,slow=7.0,SNR=9.8						
BRTR	Keskin Array B	78.20	312	P	P	04 49 16.7	-0.5
AKASG	Malin Array Be	84.20	322	P	P	04 49 49.4	+0.7
	comp=Z,0.8nm,0.7s,baz=84,slow=4.4,SNR=4.8						
BURAR	Bucovina Array	86.05	318	P	P	04 49 59.4	+1.2
TXAR	Lajitas Array	144.27	44	PKP	PKPab	04 56 52.3	+0.3
	comp=Z,0.1nm,0.4s,baz=348,slow=3.0,SNR=2.1						
TXAR	Lajitas Array	144.27	44		PKPbc	04 56 52.9	+0.5
BDFB	Brasilia	145.59	233	PKPbc	PKPab	04 56 58.7	+1.4
	comp=Z,2.7nm,0.7s,baz=90,slow=4.5,SNR=6.2						
BDFB	Brasilia	145.59	233		PKPdf	04 56 54.6	-2.2

UCR 31 04:38:40.7±1.5**, 9°.97N**×**85°.76W, h0**km±6km**, MD3.7, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUAI	GUAI	0.38	39	*i* P	Pb	04 38 49.5	-0.9
GUAI				*i* S	Sb	04 38 55.8	-1.1
PLVR	Palo Verde	0.55	47	*e*P	Pb	04 38 52.4	-0.9
PLVR				*e*S	Sb	04 39 01.0	-0.7
NY14	Universidad de	0.71	18	*i* P	Pb	04 38 55.9	0.0
JTS	Las Juntas de	0.85	68	*e*P	Pg	04 38 57.3	+0.3
GBS3	Finca Las Img	0.86	20	*i* P	Pg	04 38 57.7	+0.6
GPS3	Bodega del ICE	0.87	26	*i* P	Pg	04 38 58.0	+0.7
COLC	Colonia	0.88	38	*i* P	Pg	04 38 57.9	+0.4
BUEV	Buena Vista	0.89	23	*i* P	Pg	04 38 58.1	+0.4
BUEV				*e*S	Sb	04 39 10.7	-0.9
GPS1	Guardaparques	0.89	27	*i* P	Pg	04 38 58.2	+0.4
CUI	Cuipilapa	0.90	40	*e*P	Pb	04 38 58.6	-0.6
CUI				*e*S	Sb	04 39 11.5	-0.2
ACAL	Aguas Claras	0.97	47	*i* P	Pg	04 38 59.6	+0.4
BUAI	Buenos Aires	0.99	25	*i* P	Pg	04 39 00.2	+0.4
PTEN	Parque Tenorio	1.06	46	*i* P	Pg	04 39 00.9	-0.1
ARE1	Arenal 1	1.13	64	*e*P	Pg	04 39 02.3	-0.1
ARE1				*e*S	Sn	04 39 20.4	+0.3
CEDE	Laguna Cedeo	1.16	64	*e*P	Pg	04 39 03.1	+0.2
CEDE				*e*S	Sn	04 39 20.6	-0.2
FORC	Fortuna	1.18	65	*i* P	Pg	04 39 03.4	+0.1
FORC				*i* S	Sb	04 39 20.0	+0.2
LCR2	La Lucha 2	1.74	97	*e*P	Pn	04 39 10.6	-1.8
ACON	Acoyapa	2.06	16	*e*P	Pn	04 39 17.2	+0.5

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*IDC **31** 04:58:35.5±1.1, 80°.45N×3°.09W, h0km, mb3.3/6, mb1 3.6/7, mb1mx3.3/47, mbtmp3.4/7, ML2.8/1, Error ellipse: s-maj=41.3km s-min=19.7km az=21.0*

*DNK **31** 04:58:38.4±1.5, 79°.35N×0°.98W, h0km±24km, ML3.0, Hypocentre not reviewed by the ISC*

*BER **31** 04:58:38.9±3.5, 80°.05N×1°.76W, h8km±44km, ML2.2, ML3.0(DNK), Confirmed Earthquake*

*IEPN **31** 04:58:39.0, 80°.38N×0°.89W, h15km*

ISC 31 04:58:33.7±0.8**, 80°.35N**±0°.08×**2°.21W**±0°.05**, h10**km**, n20, σ3s.13**/27**, mb3.2**/5**, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	2.93	112	*e*P	Pn	04 59 20.3	+0.2
KBS				*e*S	Sn	04 59 51.0	-4.3
KBS				IAML		04 59 53.0	
	comp=Z,9.7nm,0.6s						
KBS	Kingsbay	2.93	112	*e*P	Pn	04 59 20.1	-0.1
KBS				*e*S	Sn	04 59 50.8	-4.4
KBS	Kingsbay	2.93	112	*i* P		04 59 20.4	
KBS				IAML		04 59 28.7	
	comp=Z,32nm,0.3s						
BRBB	Barentsburg B	3.81	118	*e*P	Pn	04 59 33.9	+1.6
HSPB	Hornsund (broa	4.83	125	*e*P	Pn	04 59 47.9	+1.7
HSPB				*e*S	Sn	05 00 38.3	-3.7
HSPB				IAML		05 00 50.7	
	comp=Z,5.3nm,0.7s						
HSPB	Hornsund (broa	4.83	125	*e*P	Pn	04 59 47.7	+1.5
HSPB				*e*S	Sn	05 00 40.5	-1.5
DAG	Danmarks Havn	4.84	231	*i* P	Pn	04 59 47.2	+0.9
DAG				*i* S	Sn	05 00 37.8	-4.5
DAG	Danmarks Havn	4.84	231	*e*	Pn	04 59 46.4	0.0
	baz=44,slow=14						
DAG				*i* P	Pn	04 59 47.2	+0.9
DAG				*i* S	Sn	05 00 37.8	-4.5
DAG				IAML		05 00 46.1	
	comp=Z,8.8nm,0.4s						
DAG	Danmarks Havn	4.84	231	*e*		04 59 46.4	
	baz=44,slow=14						
DAG				*i* P		04 59 47.2	
DAG				*i* S		05 00 37.8	
DAG				IAML		05 00 46.1	
	comp=Z,8.8nm,0.4s						
HOPEN	Hopen	6.62	111	*e*P	Pn	05 00 11.1	+0.4
HOPEN	Hopen	6.62	111	*e*P	Pn	05 00 10.5	-0.2
HOPEN				*e*S	Sn	05 01 20.0	-6.1
ZFI2	Zemlya Franca-	7.98	62	*e*P	Pn	05 00 29.6	+0.2
ZFI2				*e*S	Sn	05 01 52.6	-6.8
	comp=Z,7.2nm,0.4s						
SUMG	Summit	11.23	246	*i* P	Pn	05 01 14.2	0.0
SUMG				*e*S	Sn	05 03 10.0	-10
SUMG	Summit	11.23	246	*i* P	Pn	05 01 14.3	0.0
SUMG				*e*S	Sn	05 03 10.1	-10
SUMG				IAML		05 03 24.1	
	comp=Z,5.4nm,0.4s						
SUMG	Summit	11.23	246	*i* P		05 01 14.3	
SUMG				*e*S		05 03 10.1	
SUMG				IAML		05 03 24.1	
	comp=Z,5.4nm,0.4s						
ARCES	ARCESS Array B	12.78	132	Pn	Pn	05 01 37.8	+2.7
	comp=Z,0.1nm,0.3s,baz=336,slow=11,SNR=1.3						
RES	Resolute Bay	18.54	303	P	P	05 02 47.0	-2.9
	comp=Z,0.1nm,0.3s,baz=26,slow=7.5,SNR=4.5						
HFS	Hagfors	20.85	157	P	Pn	05 03 20.6	+3.0
	comp=Z,0.6nm,0.6s,baz=0.0,slow=7.2,SNR=1.6						
FRB	Frobisher Bay	24.09	267	P	P	05 03 50.8	+2.1
	comp=Z,2.2nm,0.9s,baz=338,slow=19,SNR=2.7						
YKA	Yellowknife Ar	32.53	307	P	P	05 05 04.3	+0.3
	comp=Z,0.1nm,0.3s,baz=11,slow=8.3,SNR=3.0						
KURBB	Kurchatov Arra	39.00	87	P	P	05 06 04.0	+4.3
	comp=Z,0.2nm,0.3s,baz=332,slow=7.6,SNR=2.0						
MKAR	Makanchi Array	43.34	85	P	P	05 06 41.0	+5.6
	comp=Z,0.2nm,0.7s,baz=350,slow=7.4,SNR=1.4						
TXAR	Lajitas Array	63.18	286	P	P	05 09 04.6	+3.0
	comp=Z,0.2nm,0.5s,baz=34,slow=6.6,SNR=2.7						

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*AUST **31** 05:40:19.0±0.8, 32°.71S×138°.31E, h9km±5km, Error ellipse: s-maj=6.9km s-min=3.8km az=19.0*

*IDC **31** 05:40:23.6±5.9, 32°.00S×138°.56E, h0km, mb1 3.1/3, mb1mx3.0/18, mbtmp2.9/3, ML2.9/3, Error ellipse: s-maj=85.3km s-min=19.8km az=22.0*

ISC 31 05:40:17.5±0.8**, 32°.57S**±0°.06×**138°.48E**±0°.05**, h10**km**, n9, σ1s.25**/14**, Near coast of South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HTT	Hallett	0.93	157	P	Pg	05 40 35.7	+0.2
	baz=0.9,SNR=188						
HTT				S	Sb	05 40 47.9	-0.5
	baz=0.9						
BBOO	Buckleboo	2.06	263	P	Pn	05 40 51.8	-0.4
	baz=1.9,SNR=177						
BBOO				S	Sn	05 41 17.4	-0.6
	baz=1.9						
LCRK	Leigh Creek	2.13	354	P	Pb	05 40 57.6	+1.4
	baz=2.3,SNR=21						
STKA	Stephens Creek	2.73	76	P	Pb	05 41 06.5	+0.1
	baz=2.9,SNR=39						
STKA	Stephens Creek	2.73	76	Pn	Pb	05 41 06.8	+0.4
	3.1nm,0.3s,baz=260,slow=18,SNR=40						
STKA				Sn	Sn	05 41 34.1	-0.3
	6.0nm,0.3s,baz=299,slow=22,SNR=7.0						
STKA				Lg	Lg	05 41 45.6	
	3.5nm,0.3s,baz=345,slow=20,SNR=4.3						
MULG	Mulgathing	4.42	300	P	Pn	05 41 25.8	+1.2
	baz=4.4,SNR=12						
MULG				S	Sn	05 42 15.8	-0.3
	baz=4.4						
ARPS	Mount Arapiles	5.02	148	P	Pn	05 41 33.5	+0.6
	baz=5.0,SNR=24						
ASAR	Alice Springs	9.75	334	Pn	Pn	05 42 37.9	0.0
	0.1nm,0.3s,baz=154,slow=12,SNR=1.8						
ASAR				Sn	Sn	05 44 24.1	-3.4
	0.1nm,0.3s,baz=156,slow=22,SNR=4.0						
WRA	Warramunga Arr	13.11	343	Pn	Pn	05 43 24.9	+1.0
	0.0nm,0.3s,baz=160,slow=12,SNR=1.0						

MAN 31 05:48:05.2, 9°.80N×124°.07E, h8km, mb4.1, ML2.9, MS2.6, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.53	349	⇓*e*P	Pg	05 48 15.4	0.0
LLP				*i* S	Sg	05 48 22.0	-0.3

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*IDC **31** 06:32:08.0±1.8, 31°.35N×86°.29E, h0km, mb3.4/6, mb1 3.7/8, mb1mx3.4/44, mbtmp3.5/8, ML4.6/1, MS3.2/1, Ms1 3.2/1, ms1mx2.4/35, Error ellipse: s-maj=64.1km s-min=20.1km az=66.0*

ISC 31 06:32:09.5±1.7**, 31°.4N**±0°.2×**86°.3E**±0°.3**, h10**km**, n9, σ0s.56**/8**, mb3.5**/5**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	15.68	350	Pn	Pn	06 35 49.9	-0.6
	baz=172,slow=11,SNR=4.3						
CMAR	Chiang Mai Arr	17.23	135	P	Pn	06 36 10.6	+0.2
	0.7nm,0.3s,baz=322,slow=12,SNR=4.6						
KURBB	Kurchatov Arra	20.06	345	P	P	06 36 43.2	+0.5
	1.7nm,0.9s,baz=160,slow=10,SNR=6.4						
SONM	Songino Array	22.47	37	P	P	06 37 09.3	+0.4
	0.5nm,0.5s,baz=218,slow=9.1,SNR=3.0						
ZALV	Zalesovo Beam	22.57	358	P	P	06 37 09.5	-0.2
	0.4nm,0.3s,baz=166,slow=7.4,SNR=1.6						
BVAR	Borovoye Array	24.51	336	P	P	06 37 29.5	+0.6
	0.4nm,0.4s,baz=142,slow=7.3,SNR=2.4						
MA2	Magadan	50.67	36	LR	LR	07 02 11.4	
	comp=Z,25nm,18.4s,baz=69,slow=36						
WRA	Warramunga Arr	68.78	131	P	P	06 43 13.4	-0.6
	0.3nm,0.7s,baz=326,slow=6.3,SNR=0.5						
ASAR	Alice Springs	71.24	134	P	P	06 43 29.1	0.0
	0.3nm,0.5s,baz=312,slow=6.2,SNR=6.2						

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*JMA **31** 06:46:00.5±0.3, 32°.84N×138°.08E, h368km, M2.9*

*IDC **31** 06:46:03.3±1.7, 32°.72N×137°.38E, h312km±30km, mb2.7/5, mb1 2.8/8, mb1mx2.7/43, mbtmp3.4/8, Error ellipse: s-maj=67.7km s-min=17.2km az=59.0*

ISC 31 06:46:04.0±0.9**, 33°.07N**±0°.09×**137°.97E**±0°.09**, h341**km**, n27, σ1s.56**/28**, mb2.7**/5**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTO4	TONANKAI O.B.S	1.00	339	P	Pn	06 46 49.6	+1.2
TTO2	TONANKAI O.B.S	1.03	310	P	Pn	06 46 49.8	+1.3
TTO1	TONANKAI O.B.S	1.14	299	P	Pn	06 46 50.0	+1.1
TTO5	TONANKAI O.B.S	1.20	350	P	Pn	06 46 50.6	+1.2
TK04	Tokai 4	1.31	356	P	Pn	06 46 51.5	+1.5
JHJ	Hachijo jima 2	1.52	88	P	Pn	06 46 51.8	+0.5
	5.1nm,0.3s,baz=251,slow=22,SNR=1.1						
JHJ				S	S	06 47 27.1	-2.1
	5.0nm,0.3s,baz=253,slow=23,SNR=1.1						
JMMH	Miemihama	1.79	295	P	Pn	06 46 53.3	+0.3
JKN2	Miekihoku	1.83	310	P	Pn	06 46 53.8	+0.6
TSUJ	Tsu 2	2.08	322	P	Pn	06 46 56.1	+1.1
JTNC	Tanabenakahech	2.11	291	P	Pn	06 46 55.6	+0.4
JAO	Obara	2.27	345	P	Pn	06 46 57.5	+1.1
JNY	Yasuok	2.28	358	P	Pn	06 46 57.6	+1.0
JWY	Kouya	2.29	301	P	Pn	06 46 57.6	+0.9
JWM	Minabe	2.32	290	P	Pn	06 46 57.3	+0.5
JHE	Heguri	2.47	310	P	Pn	06 46 58.9	+0.9
BSO3	Boso 3	2.73	50	S	S	06 47 43.0	-1.7
BSO4	Boso 4	2.74	45	S	S	06 47 45.2	-0.1
JHU	Hanno	2.98	21	S	S	06 47 48.1	-1.2
JAG	Ashikaga	3.56	20	P	Pn	06 47 08.5	+0.6
JHO	Hitachi	4.13	30	S	S	06 48 05.5	-4.4
KSRS	Korea Array	9.31	301	P	Pn	06 48 10.1	-3.4
	0.3nm,0.3s,baz=112,slow=12,SNR=2.2						
USRK	Ussuriysk Ar.	12.05	339	P	P	06 48 47.4	+1.0
	baz=150,slow=11,SNR=2.8						
SONM	Songino Array	27.96	311	P	P	06 51 26.2	+2.0
	0.3nm,0.5s,baz=99,slow=8.9,SNR=2.6						
MKAR	Makanchi Array	43.96	305	P	P	06 53 37.8	-0.5
	0.2nm,0.4s,baz=92,slow=9.8,SNR=4.5						
KURBB	Kurchatov Arra	46.32	311	P	P	06 53 57.0	+0.4
	0.4nm,0.4s,baz=91,slow=6.9,SNR=5.4						
WRA	Warramunga Arr	52.83	184	P	P	06 54 44.9	-0.7
	0.1nm,0.3s,baz=0.7,slow=7.5,SNR=1.5						
ASAR	Alice Springs	56.55	184	P	P	06 55 11.2	-0.8
	0.2nm,0.7s,baz=14,slow=8.6,SNR=4.9						

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*IDC **31** 07:04:20.9±1.1, 8°.30S×147°.30E, h0km, mb3.9/7, mb1 4.1/10, mb1mx3.8/39, mbtmp3.9/10, ML3.9/3, MS3.2/7, Ms1 3.3/7, ms1mx2.9/34, Error ellipse: s-maj=36.4km s-min=10.5km az=92.0*

ISC 31 07:04:26.0±1.0**, 8°.40S**±0°.10×**147°.3E**±0°.2**, h35**km**, n16, σ1s.01**/12**, mb3.9**/7**, MS3.4**/4**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	1.01	186	Pg	Pn	07 04 42.7	-1.0
	232nm,0.3s,baz=354,slow=9.7,SNR=27						
PMG				Lg	Lg	07 04 57.2	
	147nm,0.3s,baz=40,slow=10,SNR=25						
PMG				LR	LR	07 05 07.5	
	comp=Z,531nm,20.3s,baz=97,slow=42						
CTA	Charters Tower	11.66	185	Pn	Pn	07 07 10.5	+0.4
	0.4nm,0.3s,baz=358,slow=14,SNR=1.8						
HNR	Honiara	12.58	96	LR	LR	07 11 48.1	
	comp=Z,39nm,18.4s,baz=292,slow=36						
WRA	Warramunga Arr	16.98	226	P	Pn	07 08 20.4	-0.5
	0.5nm,0.3s,baz=52,slow=12,SNR=12						
WRA				LR	LR	07 14 35.1	
	comp=Z,52nm,20.1s,baz=80,slow=36						
ASAR	Alice Springs	19.86	219	P	P	07 08 55.2	+1.0
	0.4nm,0.3s,baz=51,slow=9.2,SNR=22						
ASAR				LR	LR	07 16 59.9	
	comp=Z,51nm,18.6s,baz=37,slow=38						
FITZ	Fitzroy Crossi	23.12	243	P	P	07 09 27.6	-1.6
	2.0nm,0.8s,baz=163,slow=4.5,SNR=4.3						
STKA	Stephens Creek	23.95	192	P	P	07 09 38.6	+1.6
	1.5nm,0.7s,baz=13,slow=14,SNR=4.3						
STKA				LR	LR	07 18 44.0	
	comp=Z,66nm,18.1s,baz=21,slow=36						
KSRS	Korea Array	49.07	340	LR	LR	07 32 39.2	
	comp=Z,24nm,19.4s,baz=252,slow=35						
CMAR	Chiang Mai Arr	54.63	300	P	P	07 13 52.5	+0.8
	1.1nm,0.3s,baz=128,slow=5.6,SNR=9.8						
SONM	Songino Array	66.61	331	P	P	07 15 12.7	-0.3
	0.4nm,0.4s,baz=147,slow=8.2,SNR=5.6						
VNDA	Vanda	69.52	177	LR	LR	07 44 18.6	
	comp=Z,62nm,18.1s,baz=277,slow=34						
MKAR	Makanchi Array	79.50	321	P	P	07 16 29.8	+0.6
	1.6nm,0.9s,baz=98,slow=7.5,SNR=11						
ZALV	Zalesovo Beam	81.17	328	P	P	07 16 37.8	-0.1
	1.0nm,0.4s,baz=112,slow=4.4,SNR=3.7						
ILAR	Eielson Array	87.57	23	P	P	07 17 09.5	-0.7
	0.3nm,0.8s,baz=273,slow=3.7,SNR=4.4						
GEYT	Alibeck	94.42	308	LR	LR	08 03 46.3	
	comp=Z,23nm,19.9s,baz=25,slow=38						
BDFB	Brasilia	151.73	148	PKPbc	PKPbc	07 24 18.0	-0.1
	1.4nm,0.7s,baz=200,slow=8.7,SNR=2.1						

IDC 31 07:11:00.6±5.0**, 0°.64S**×**12°.98W, h0**km**, mb3.8**/3**, mb1 3.8**/4**, mb1mx3.5**/34**, mbtmp3.7**/4**, ML3.4**/1**, MS3.4**/4**, Ms1 3.4**/4**, ms1mx2.9**/39**, Error ellipse: s-maj=154.6km s-min=88.9km az=146.0, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	7.30	192	T	T	07 20 03.4	
	baz=10,slow=74,SNR=92						
H10N1	ASCENSION HYDR	7.31	192	T	T	07 20 02.7	
	baz=10,slow=74,SNR=151						
H10N3	ASCENSION HYDR	7.31	192	T	T	07 20 02.7	
	baz=10,slow=74,SNR=86						
LIC	Lamto	10.47	49	*e*PKIKP	Pn	07 13 36.6	+4.6
	3.8nm,0.6s						
TIC	Toumodi	10.75	48	*e*PKIKP	Pn	07 13 37.3	+1.4
KIC	Kosan Boka	10.77	50	*e*PKIKP	Pn	07 13 36.8	+0.6
	15nm,1.1s						
DBIC	Dimbokro	10.89	48	Pn	Pn	07 13 37.0	-0.8
	0.2nm,0.3s,baz=229,slow=15,SNR=4.9						
DBIC				Sn	Sn	07 15 29.4	-11
	0.2nm,0.3s,baz=342,slow=19,SNR=1.2						
DBIC				LR	LR	07 17 19.3	
	comp=Z,121nm,20.1s,baz=210,slow=35						
CPUP	Villa Florida	49.71	235	LR	LR	07 38 07.4	
	comp=Z,22nm,20.3s,baz=34,slow=33						
GERES	GERESS Array B	54.42	21	P	P	07 20 29.4	-0.2
	0.8nm,0.7s,baz=221,slow=7.3,SNR=6.2						
EIL	Elat	54.72	52	LR	LR	07 43 49.9	
	comp=Z,54nm,19.1s,baz=278,slow=36						
BRTR	Keskin Array B	58.49	41	P	P	07 20 59.9	+1.0
	0.5nm,0.6s,baz=249,slow=6.0,SNR=2.3						
MKAR	Makanchi Array	94.08	43	P	P	07 24 20.3	-0.9
	0.3nm,0.7s,baz=282,slow=2.5,SNR=2.4						
ZALV	Zalesovo Beam	95.12	36	LR	LR	08 12 41.4	
	comp=Z,44nm,18.1s,baz=168,slow=39						

GCMT 31 07:14:27.0±0.4**, 41°.35S**±0°.03×**84°.83E**±0°.03**, h26**km±1km**, MW4.9**/66**, Moment Tensor Solution. s20,c22; s66,c88; Duration: 0 Moment tensor: Scale** 10^16^**Nm;** M_{rr}-0.27±.14; $M_{\theta\theta}$2.42±.13; $M_{\phi\phi}$-2.15±.12; $M_{r\theta}$1.08±.25; $M_{\theta\phi}$-0.50±.10; $M_{\phi r}$-0.94±.24; **Best double couple:** $M_0$2.73000×10^16^ **NP1:**ϕ_s50.00000°**,**δ59.00000°**,** λ-179.00000°. **NP2:**ϕ_s320.00000°**,**δ89.00000°**,** λ-31.00000°. **Principal axes:** T 2.9240**,** Plg21.0000°**,** Azm10.0000°**;** N -0.3830**,** Plg59.0000°**,** Azm139.0000°**;** P -2.5360**,** Plg22.0000°**,** Azm271.0000°**; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southeast Indian Ridge**

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*IDC **31** 07:23:06.8±1.1, 3°.62N×126°.56E, h0km, mb3.5/7, mb1 3.7/7, mb1mx3.5/47, mbtmp3.5/7, MS3.6/6, Ms1 3.6/6, ms1mx2.9/37 Error ellipse: s-maj=94.8km s-min=17.4km az=70.0*

ISC 31 07:23:08.3±0.9**, 3°.52N**±0°.10×**126°.3E**±0°.2**, h10**km**, n15, σ2s.20**/14**, mb3.6**/7**, MS3.7**/6**, 1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	2.62	348	*e*P	Pb	07 23 52.7	-2.7
DDMP				*e*S	Sb	07 24 24.9	-2.9
SKMP	Bagumbayan, Su	3.43	330	*e*P	Pb	07 24 06.0	-3.2
SKMP				*e*S	Sb	07 24 50.0	-1.0
KCP	Kidapawan	3.65	342	⇓*i*P	Pb	07 24 13.7	+0.6
KCP				*i* S	Sg	07 25 10.7	+4.9
FITZ	Fitzroy Crossi	21.49	182	P	P	07 27 58.4	+1.1
	0.8nm,0.6s,baz=7.1,slow=8.1,SNR=1.2						
FITZ				LR	LR	07 37 20.7	
	comp=Z,140nm,19.1s,baz=239,slow=40						

WRA	**Warramunga Arr**	**24.63**	**161**	P	**P**	**07 28 29.7**	**+0.4**
	1.2nm,0.6s,baz=343,slow=10,SNR=16						
ASAR	**Alice Springs**	**28.03**	**165**	P	**P**	**07 28 59.8**	**-0.2**
	0.1nm,0.4s,baz=336,slow=11,SNR=1.5						
STKA	**Stephens Creek**	**38.11**	**159**	P	**P**	**07 30 27.3**	**-0.3**
	1.3nm,0.6s,baz=322,slow=8.5,SNR=5.3						
BRDH	**Bariadhala**	**38.54**	**303**	LR	LR	07 48 37.1	
	comp=Z,157nm,20.2s,baz=170,slow=40						
SONM	**Songino Array**	**47.34**	**342**	P	**P**	**07 31 43.2**	**+0.6**
	0.3nm,0.6s,baz=163,slow=10,SNR=2.4						
SONM				PcP	**PcP**	**07 33 13.6**	**+0.2**
	0.3nm,0.5s,baz=129,slow=2.0,SNR=2.6						
MKAR	**Makanchi Array**	**57.45**	**326**	P	**P**	**07 32 57.7**	**+0.2**
	0.4nm,0.4s,baz=122,slow=7.0,SNR=9.2						
AAK	**Ala-Archa**	**60.19**	**318**	LR	LR	08 00 02.1	
	comp=Z,74nm,21.3s,baz=168,slow=37						
KURBB	**Kurchatov Arra**	**61.66**	**328**	P	**P**	**07 33 27.1**	**+0.7**
	0.2nm,0.4s,baz=125,slow=6.7,SNR=1.6						
RPZ	**Rata Peaks**	**61.87**	**145**	LR	LR	08 03 30.4	
	comp=Z,16nm,18.8s,baz=206,slow=39						
AKTO	**Aktyubinsk**	**73.52**	**322**	LR	LR	08 09 43.0	
	comp=Z,42nm,18.4s,baz=186,slow=38						
NOA	**NORSAR Array B**	**98.76**	**334**	LR	LR	08 26 24.6	
	comp=Z,16nm,18.3s,baz=295,slow=38						

DJA 31 07:36:30.3±0.4,**7°S**±5°×**12°5E**±°,**h428**^{km}±5^{km},**M4.0**/7, **mb4.0**/7,**mB4.5**/2,**MLv4.1**/6,**Mw(mB)3.7**/2,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**2.49**	**204**	P	P	07 37 33.7	+1.6
SOEI				S	S	07 38 22.8	+0.7
BASI	**Baing, Sumba**	**5.41**	**239**	P	P	07 37 57.7	+0.1
	0.3nm1μm57nm,0.4s						
BASI				S	S	07 39 06.6	-2.4
	0.3nm1μm57nm,0.4s						
SANI	**Sanana**	**5.43**	**7**	P	P	07 37 58.6	+0.7
	0.0nm14nm,0.7s						
BKSI	**Bulukumba**	**5.57**	**292**	P	P	07 38 00.3	+1.0
	0.0nm11nm,0.6s						
WBSI	**Waikabubak, Su**	**6.23**	**249**	P	P	07 38 05.4	-0.8
	0.2nm31nm,0.4s						
PLAI	**Plampang**	**7.57**	**259**	P	P	07 38 20.0	-1.0
	0.1nm20nm,0.6s						
FAKI	**Fak Fak**	**8.27**	**57**	P	P	07 38 27.8	-0.7
	35nm,0.9s						

*SOME **31** 07:51:10.9,41°.52N×71°.32E,h5^{km}*

*KRNET **31** 07:51:12.8±0.1,41°.58N×71°.36E,h15^{km},mb2.2*

*NNC **31** 07:51:15.8±1.7,41°.85N×71°.39E,h0^{km},mb2.6,mpv2.7, Error ellipse: s-maj=13.9km s-min=5.7km az=12.0*

ISC 31 07:51:12.4±1.4,**41°.57N**±0°.04×**71°.37E**±0°.03,**h5**^{km}±11^{km}, **n21**,σ**1**^{s}**99**/39,**21C-1D**,**Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARK	**Arkit**	**0.50**	**63**	⇑*i*P	**Pg**	**07 51 22.7**	**+0.7**
	baz=66						
ARK				⇑*i*S	**Sg**	**07 51 29.5**	**+1.0**
	baz=66						
JBG	**Jabagly**	**1.05**	**324**	P	**Pn**	**07 51 37.8**	**+3.8**
	9.7nm,0.2s						
JBG				S	**Sn**	**07 51 54.8**	**+5.8**
	17nm,0.2s						
ARSB	**Arslanbob**	**1.24**	**101**	⇑*i*P	**Pn**	**07 51 36.1**	**-0.4**
	baz=1.0						
ARSB				⇑*i*S	**Sn**	**07 51 53.1**	**-0.5**
	baz=1.0						
BTK	**Batken**	**1.57**	**196**	⇑*i*P	**Pb**	**07 51 42.1**	**+0.2**
	baz=95						
BTK				⇑*i*S	**Sg**	**07 52 02.8**	**0.0**
	baz=95						
KK31	**Karatay Array**	**1.66**	**338**	⇑P	**Pn**	**07 51 41.7**	**-0.5**
	1.2nm,0.3s,baz=149,slow=15,SNR=12						
KK31				⇓S	**Sn**	**07 52 01.6**	**-2.3**
	4.6nm,0.3s,baz=148,slow=27,SNR=9.5						
MRKS	**Merke**	**1.81**	**49**	*e*P	**Pb**	**07 51 45.7**	**-0.4**
	1.7nm,0.1s						
MRKS				*e*S	**Sb**	**07 52 09.5**	**+0.4**
	5.1nm,0.2s						
MRKS	**Merke**	**1.81**	**49**	P	**Pb**	**07 51 45.6**	**-0.4**
	1.5nm,0.1s						
MRKS				S	**Sb**	**07 52 09.4**	**+0.4**
	4.3nm,0.2s						
AML	**Almayashu**	**1.82**	**71**	⇑*i*P	**Pb**	**07 51 46.1**	**-0.4**
	baz=72						
AML				⇑*i*S	**Sg**	**07 52 10.8**	**-0.2**
	baz=72						
BRLS	**Borolday**	**1.85**	**323**	*e*P	**Pn**	**07 51 43.4**	**-1.4**
	3.0nm,0.3s						
BRLS				*e*S	**Sn**	**07 52 05.4**	**-3.2**
	4.0nm,0.2s						
BRLS	**Borolday**	**1.85**	**323**	P	**Pn**	**07 51 43.4**	**-1.4**
	3.0nm,0.3s						
BRLS				S	**Sn**	**07 52 05.4**	**-3.2**
	4.0nm,0.2s						
EKS2	**Erkin-Say**	**2.10**	**58**	⇑*i*P	**Pb**	**07 51 50.2**	**-0.8**
	baz=58						
EKS2				⇑*i*S	**Sb**	**07 52 16.8**	**-0.5**
	baz=58						
ARLS	**Aral**	**2.23**	**82**	⇑*i*P	**Pb**	**07 51 52.2**	**-1.0**
	baz=81						
ARLS				⇑*i*S	**Sb**	**07 52 20.7**	**-0.5**
	baz=81						
UCH	**Uchtor**	**2.44**	**73**	⇑*i*P	**Pb**	**07 51 55.2**	**-1.8**
	baz=73						
UCH				⇑*i*S	**Sb**	**07 52 25.6**	**-1.8**
	baz=73						
AAK	**Ala-Archa**	**2.56**	**64**	⇑*i*P	**Pb**	**07 51 56.8**	**-2.0**
	baz=64						
AAK				⇑*i*S	**Sb**	**07 52 28.2**	**-2.4**
	baz=64						
AAK	**Ala-Archa**	**2.56**	**64**	⇑Pg	**Pg**	**07 52 00.5**	**-0.8**
	0.7nm,0.3s						
AAK				⇑Lg	Lg	07 52 32.1	
	2.0nm,0.6s						
KZA	**Kyzart**	**2.94**	**79**	⇑*i*P	**Pn**	**07 52 02.3**	**+2.1**
	baz=79						
KZA				⇑*i*S	**Sn**	**07 52 38.1**	**+2.0**
	baz=79						
DGS	**Degeres**	**3.66**	**61**	*e*P	**Pb**	**07 52 18.4**	**+0.8**
	0.8nm,0.5s						
DGS				*e*S	**Sb**	**07 53 05.5**	**+3.1**
	2.2nm,0.4s						
DGS	**Degeres**	**3.66**	**61**	Pg	**Pb**	**07 52 18.5**	**+0.8**
	0.8nm,0.5s						
DGS				Lg	Lg	07 53 05.5	
	2.2nm,0.4s						
KST	**Kastek**	**3.71**	**65**	*e*P	**Pb**	**07 52 20.0**	**+1.5**
	0.8nm,0.2s						
KST				*e*S	**Sg**	**07 53 09.3**	**-2.2**
	2.7nm,0.5s						
KRBS	**Karabastau**	**3.82**	**55**	*e*P	**Pb**	**07 52 22.6**	**+2.3**
	0.8nm,0.3s						
KRBS				*e*S	**Sg**	**07 53 14.0**	**-1.0**
	1.4nm,0.1s						
KRBS	**Karabastau**	**3.82**	**55**	Pg	**Pb**	**07 52 22.7**	**+2.3**
	0.8nm,0.3s						
KRBS				Lg	Lg	07 53 14.0	
	1.4nm,0.1s						

*NDI **31** 07:51:35.1±3.7,29°.67N×82°.38E,h10^{km},ML3.8*

*IDC **31** 07:51:37.0±1.1,29°.71N×81°.93E,h0^{km},mb3.8/10, mb1 3.9/12,mb1mx3.7/55,mbtmp3.7/12,ML3.8/2,Error ellipse: s-maj=37.3km s-min=18.3km az=54.0*

ISC 31 07:51:37.7±0.8,**29°.55N**±0°.07×**82°.05E**±0°.06,**h10**^{km},**n21**, σ**2**^{s}**15**/24,**mb3.7**/10,**Nepal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTH	**Pithoragarh**	**1.60**	**270**	*e*P	**Pg**	**07 52 08.7**	**+0.4**
PTH				*e*S	**Sb**	**07 52 28.5**	**+0.8**
DDI	**Dehra Dun**	**3.55**	**284**	*e*S	**Sn**	**07 53 19.4**	**+4.4**
DDI				IAML		07 53 21.2	
	comp=N,821nm,0.4s						
DDI				IAML		07 53 21.2	
	comp=E,832nm,0.5s						
NDI	**New Delhi**	**4.32**	**260**	*e*P	**Pn**	**07 52 43.0**	**-0.4**
NDI				*e*S	**Sn**	**07 53 37.0**	**+3.2**
THN	**Thein Dam**	**6.15**	**299**	*e*P	**Pn**	**07 53 09.0**	**+0.4**
THN				*e*S	**Sn**	**07 54 16.5**	**-2.5**
BHPL	**Bhopal**	**7.53**	**214**	*e*S	**Sn**	**07 54 51.4**	**-1.7**
BHPL				IAML		07 55 03.3	
	comp=E,36nm,0.1s						
BHPL				IAML		07 55 04.9	
	comp=N,24nm,0.3s						
CHCP	**Chirah Chowk**	**8.54**	**301**	P	**Pn**	**07 53 42.0**	**+0.6**
THW	**Thamme Wali**	**9.40**	**293**	P	**Pn**	**07 53 54.2**	**+0.9**
POO	**Poona**	**13.28**	**216**	*e*P	**Sn**	**07 57 09.5**	**-4.7**
AAK	**Ala-Archa**	**14.41**	**337**	Pn	**Pn**	**07 55 01.4**	**-0.4**
	comp=N,0.2nm,0.3s,baz=9.5,slow=11,SNR=1.6						
MKAR	**Makanchi Array**	**17.22**	**1**	Pn	**Pn**	**07 55 35.0**	**-3.2**
	comp=N,0.3nm,0.3s,baz=184,slow=13,SNR=11						
CMAR	**Chiang Mai Arr**	**18.95**	**122**	P	**Pn**	**07 56 02.5**	**+2.8**
	comp=N,0.2nm,0.3s,baz=310,slow=10,SNR=12						
KURBB	**Kurchatov Arra**	**21.21**	**354**	P	**P**	**07 56 21.6**	**-1.9**
	comp=N,2.9nm,0.7s,baz=178,slow=10,SNR=19						
ZALV	**Zalesovo Beam**	**24.46**	**4**	P	**P**	**07 56 56.8**	**+0.1**
	comp=N,0.6nm,0.3s,baz=238,slow=42,SNR=2.4						
BVAR	**Borovoye Array**	**24.97**	**343**	P	**P**	**07 57 00.1**	**-1.1**
	comp=N,0.4nm,0.3s,baz=130,slow=7.8,SNR=3.8						
SONM	**Songino Array**	**26.18**	**39**	P	**P**	**07 57 13.4**	**+1.0**
	comp=N,1.1nm,0.7s,baz=225,slow=10,SNR=6.4						
BRTR	**Keskin Array B**	**40.67**	**298**	P	**P**	**07 59 18.7**	**+0.2**
	comp=N,0.4nm,0.5s,baz=98,slow=10,SNR=2.4						
FINES	**FINESS Array B**	**48.35**	**328**	P	**P**	**08 00 18.7**	**-0.5**
	comp=N,1.1nm,0.7s,baz=88,slow=9.9,SNR=1.8						
ARCES	**ARCESS Array B**	**51.08**	**338**	P	**P**	**08 00 39.4**	**-0.5**
	comp=N,9.8nm,1.2s,baz=101,slow=7.5,SNR=6.6						
WRA	**Warramunga Arr**	**70.43**	**128**	P	**P**	**08 02 54.2**	**+1.8**
	comp=N,1.5nm,0.3s,baz=323,slow=6.2,SNR=4.9						
ASAR	**Alice Springs**	**72.69**	**131**	P	**P**	**08 03 07.9**	**+1.9**
	comp=N,0.2nm,0.6s,baz=330,slow=5.4,SNR=1.6						
YKA	**Yellowknife Ar**	**87.31**	**8**	P	**P**	**08 04 22.8**	**-1.6**
	comp=N,0.1nm,0.6s,baz=346,slow=4.4,SNR=2.0						

*VLA **31** 07:59:59.0,52°.28N×35°.42E,M2.3,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

IDC 31 07:59:59.1±3.5,**52°.23N**×**35°.55E**,**h0**^{km},**mb1 3.8**/2, **mb1mx3.1**/48,**mbtmp3.7**/2,**ML2.8**/3,**Error ellipse: s-maj=36.7km s-min=15.2km az=119.0**,**Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKASG	**Malin Array Be**	**4.24**	**251**	Pn	Pn	08 01 03.9	-1.0
	0.3nm,0.3s,baz=61,slow=16,SNR=1.5						
AKASG				Sn	Sn	08 01 53.4	-1.7
	1.7nm,0.3s,baz=62,slow=23,SNR=2.2						
AKASG				Lg	Lg	08 02 11.9	
	2.5nm,0.3s,baz=67,slow=31,SNR=4.6						
I43RU	**DUBNA INFRASON**	**4.60**	**12**	*i*		08 26 50.0	
	baz=193,slow=322,SNR=1.5						
FINES	**FINESS Array B**	**10.58**	**334**	Pn	Pn	08 02 27.1	-4.7
	0.1nm,0.3s,baz=186,slow=36,SNR=2.0						
FINES				Sn	Sn	08 04 21.9	-8.9
	0.3nm,0.3s,baz=163,slow=25,SNR=1.8						
ARCES	**ARCESS Array B**	**17.99**	**349**	P	Pn	08 04 08.2	-2.0
	0.2nm,0.3s,baz=165,slow=11,SNR=4.7						

*IDC **31** 08:04:15.2±10.0,12°.28S×166°.77E,h246^{km}±116^{km}, mb3.2/5,mb1 3.4/6,mb1mx3.1/43,mbtmp3.7/6,Error ellipse: s-maj=109.5km s-min=28.6km az=158.0*

ISC 31 08:04:11.2±1.0,**12°.6S**±0°.2×**167°.1E**±0°.2,**h220**^{km},**n7**, σ**0**^{s}**86**/7,**mb3.4**/5,**Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.44**	**184**	P	**P**	**08 06 31.0**	**-0.1**
	0.3nm,0.3s,baz=78,slow=19,SNR=0.8						
WRA	**Warramunga Arr**	**32.21**	**253**	P	**P**	**08 10 17.8**	**-1.3**
	0.3nm,0.4s,baz=86,slow=9.1,SNR=2.3						
ASAR	**Alice Springs**	**33.30**	**246**	P	**P**	**08 10 29.4**	**+0.9**
	0.3nm,0.5s,baz=69,slow=9.5,SNR=6.2						
ILAR	**Eielson Array**	**84.57**	**18**	P	**P**	**08 16 19.4**	**+0.1**
	1.0nm,0.6s,baz=219,slow=7.0,SNR=26						
MKAR	**Makanchi Array**	**95.53**	**317**	P	**P**	**08 17 11.9**	**+0.6**
	0.8nm,0.9s,baz=104,slow=6.1,SNR=3.2						
YKA	**Yellowknife Ar**	**95.75**	**27**	P	**P**	**08 17 11.4**	**-0.4**
	0.1nm,0.5s,baz=257,slow=5.0,SNR=2.1						
ARCES	**ARCESS Array B**	**118.15**	**346**	PKP	**PKiKP**	**08 22 31.5**	**0.0**
	2.9nm,1.0s,baz=62,slow=2.5,SNR=9.1						

IDC 31 08:11:46.6±8.5,**1°.28S**×**97°.83E**,**h72**^{km}±66^{km},**mb3.5**/4, **mb1 3.5**/5,**mb1mx3.2**/53,**mbtmp3.7**/5,**ML3.1**/1,**MS3.3**/1, **Ms1 3.3**/1,**ms1mx2.4**/25,**Error ellipse: s-maj=82.6km s-min=19.9km az=60.0**,**Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**4.20**	**15**	P	Pn	08 12 45.7	-2.6
	1.2nm,0.3s,baz=155,slow=18,SNR=2.6						
PSI				S	Sn	08 13 35.2	-1.1
	0.9nm,0.3s,baz=298,slow=22,SNR=4.6						
WRA	**Warramunga Arr**	**40.22**	**120**	P	P	08 19 16.4	-0.1
	0.5nm,0.3s,baz=308,slow=8.8,SNR=5.7						
ASAR	**Alice Springs**	**41.43**	**125**	P	P	08 19 25.9	-0.6
	0.3nm,0.7s,baz=300,slow=7.9,SNR=5.2						
SONM	**Songino Array**	**49.48**	**8**	LR	LR	08 42 53.5	
	comp=Z,30nm,18.4s,baz=108,slow=38						
MKAR	**Makanchi Array**	**49.79**	**346**	P	P	08 20 32.0	+0.1
	0.9nm,0.6s,baz=156,slow=8.5,SNR=11						
ZALV	**Zalesovo Beam**	**56.09**	**351**	P	P	08 21 17.2	-1.0
	1.3nm,0.4s,baz=176,slow=8.4,SNR=6.8						
TXAR	**Lajitas Array**	**145.39**	**34**	PKPbc	PKPab	08 31 17.7	+0.4
	0.2nm,0.6s,baz=298,slow=2.7,SNR=3.8						

*IDC **31** 08:23:06.3±2.7,34°.36N×23°.68E,h0^{km},mb4.0/10, mb1 4.0/14,mb1mx3.8/51,mbtmp3.9/14,ML3.6/4,MS3.2/2, Ms1 3.2/2,ms1mx2.6/40,Error ellipse: s-maj=49.2km s-min=24.7km az=16.0*

*NEIC **31** 08:23:10.5±2.4,34°.4N±0°.1×23°.82E±0°.06,h17^{km}±6^{km}, Error ellipse: s-maj=16.4km s-min=7.2km az=174.0*

*THE **31** 08:23:13.5,34°.51N×23°.84E,h6^{km}±1^{km},ML3.7/8,Error ellipse: s-maj=1.2km s-min=0.7km az=311.0*

*ATH **31** 08:23:13.5,34°.61N×23°.87E,h31^{km}±1^{km},ML3.4/13,Error ellipse: s-maj=2.3km s-min=1.1km az=20.0*

ISC 31 08:23:09.9±1.8,**34°.42N**±0°.07×**23°.80E**±0°.05,**h14**^{km}±9^{km}, **n80**,σ**1**^{s}**30**/101,**mb4.0**/15,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.48**	**29**	P	**Pb**	**08 23 21.1**	**+1.0**
GVD				S	**Sb**	**08 23 26.8**	**-0.2**
	37μm,0.4s						
GVD	**Gavdhos**	**0.48**	**29**	P	**Pb**	**08 23 20.9**	**+0.8**
GVD				S	**Sb**	**08 23 26.5**	**-0.5**
GVD				AML	AML	08 23 27.1	
	comp=E,48628μm,0.3s						
GVD				AML	AML	08 23 27.1	
GVDS	**Gavdos**	**0.48**	**29**	P	**Pb**	**08 23 21.0**	**+0.8**
GVDS				S	**Sb**	**08 23 26.9**	**-0.2**
	comp=E,20μm,0.4s						
SIVA	**Sivas**	**1.02**	**54**	P	**Pn**	**08 23 31.2**	**+1.4**
SIVA				S	**Sn**	**08 23 45.4**	**+1.5**
	comp=E,13μm,0.6s						
SIVA	**Sivas**	**1.02**	**54**	P	**Pn**	**08 23 30.6**	**+0.8**
SIVA				S	**Sb**	**08 23 42.9**	**+0.3**
SIVA				AML	AML	08 23 47.9	
	comp=N,28656μm,0.7s						
SIVA				AML	AML	08 23 51.2	
	comp=E,23808μm,0.5s						
VAM	**Vamos**	**1.03**	**18**	P	**Pn**	**08 23 31.3**	**+1.3**
VAM				S	**Sn**	**08 23 45.2**	**+0.9**
	comp=E,3μm,0.5s						
VAM	**Vamos**	**1.03**	**18**	P	**Pg**	**08 23 29.8**	**-0.1**
VAM				S	**Sb**	**08 23 42.3**	**-0.7**
VAM				AML	AML	08 23 47.1	
	comp=E,7542μm,0.4s						
VAM				AML	AML	08 23 47.1	
	comp=N,6510μm,0.6s						
IMMV	**Iera Moni Meta**	**1.04**	**8**	P	**Pn**	**08 23 31.5**	**+1.3**
IMMV				S	**Sn**	**08 23 45.3**	**+0.7**
	comp=N,7μm,0.7s						
IMMV	**Iera Moni Meta**	**1.04**	**8**	P	**Pn**	**08 23 30.4**	**+0.3**
IMMV				S	**Sb**	**08 23 43.1**	**-0.3**
IMMV				AML	AML	08 23 47.5	
	comp=E,11022μm,0.7s						
IMMV				AML	AML	08 23 47.8	
	comp=N,14770μm,0.5s						
PRNS	**Prines Rethymn**	**1.10**	**31**	P	**Pn**	**08 23 31.5**	**+0.6**
PRNS				S	**Sn**	**08 23 45.5**	**-0.4**
CHAN	**Chania**	**1.11**	**10**	P	**Pn**	**08 23 32.7**	**+1.7**
CHAN				S	**Sn**	**08 23 47.6**	**+1.5**
	comp=N,2μm,0.6s						
RODP	**Rodopos**	**1.14**	**358**	P	**Pn**	**08 23 33.3**	**+1.9**
RODP				S	**Sn**	**08 23 48.0**	**+1.2**
	comp=N,900nm,0.5s						
IDI	**Anoyia**	**1.24**	**46**	P	**Pg**	**08 23 34.7**	**+0.8**
IDI	**Anoyia**	**1.24**	**46**	Pn	**Pg**	**08 23 33.8**	**-0.1**
	comp=N,42nm,0.3s,baz=228,slow=15,SNR=100						
IDI				Sn	**Sn**	**08 23 49.7**	**+0.2**
	comp=N,114nm,0.3s,baz=328,slow=18,SNR=17						
IDI				LR	LR	08 24 07.3	
	comp=N,335nm,18.1s,baz=285,slow=45						
IDI	**Anoyia**	**1.24**	**46**	P	**Pg**	**08 23 33.8**	**-0.1**
IDI				S	**Sg**	**08 23 49.0**	**-1.1**
IDI				AML	AML	08 23 53.1	
	comp=E,4683μm,0.8s						
IDI				AML	AML	08 23 55.1	
	comp=N,4309μm,0.5s						
LAST	**Lasithi**	**1.56**	**61**	P	**Pb**	**08 23 39.6**	**+1.0**
LAST				S	**Sg**	**08 24 00.1**	**-0.2**
	comp=N,1μm,0.7s						
LAST	**Lasithi**	**1.56**	**61**	P	**Pb**	**08 23 39.7**	**+1.0**
LAST				S	**Sb**	**08 23 58.3**	**0.0**
LAST				AML	AML	08 24 08.4	
	comp=N,2450μm,0.6s						
LAST				AML	AML	08 24 11.5	
	comp=E,2688μm,0.8s						
NPS	**Neapolis**	**1.71**	**60**	P	**Pb**	**08 23 41.7**	**+0.6**
NPS				S	**Sn**	**08 24 01.4**	**+0.5**
NPS				AML	AML	08 24 17.6	
	comp=E,2856μm,0.9s						
NPS				AML	AML	08 24 18.2	
	comp=N,1756μm,1.1s						
ZKR	**Zakros**	**2.10**	**70**	P	**Pb**	**08 23 47.6**	**-0.3**
ZKR				S	**Sn**	**08 24 12.1**	**+1.4**
ZKR				AML	AML	08 24 38.4	
	comp=N,420μm,0.7s						
ZKR				AML	AML	08 24 39.6	
	comp=E,1212μm,0.8s						
THR9	**Santorini-Faro**	**2.31**	**33**	P	**Pn**	**08 23 48.7**	**+1.1**
MHLO	**Agia Marina, M**	**2.31**	**12**	P	**Pn**	**08 23 48.4**	**+0.8**
THR6	**Thira Island,**	**2.33**	**34**	P	**Pn**	**08 23 49.2**	**+1.4**
THR5	**Thira Island,**	**2.36**	**32**	P	**Pn**	**08 23 49.1**	**+0.9**
SANT	**Santorini**	**2.37**	**34**		**Pn**	**08 23 44.8**	**-3.6**
SAP3	**Santorini-Thir**	**2.37**	**32**	P	**Pn**	**08 23 49.0**	**+0.6**
THR3	**Thira Island,**	**2.37**	**33**	P	**Pn**	**08 23 49.3**	**+0.9**
VLI	**Veliai**	**2.40**	**343**	P	**Pn**	**08 23 50.9**	**+2.2**
VLI				S	**Sn**	**08 24 18.0**	**+0.1**
VLI				AML	AML	08 24 39.0	
	comp=E,405μm,0.6s						
VLI				AML	AML	08 24 43.4	
	comp=N,346μm,0.8s						
CMBO	**Columbo, Santo**	**2.43**	**32**	P	**Pn**	**08 23 49.7**	**+0.5**
IOSP	**Ios island**	**2.59**	**27**	P	**Pn**	**08 23 51.8**	**+0.3**
DYR	**Agios Nikonas**	**2.62**	**333**	P	**Pn**	**08 23 54.6**	**+2.7**
DYR				S	**Sn**	**08 24 23.8**	**+0.3**
DYR				AML	AML	08 24 53.7	
	comp=N,78μm,0.9s						
DYR				AML	AML	08 24 55.9	
	comp=E,112μm,1.4s						
AMGA	**Amorgos Island**	**2.94**	**35**	P	**Pn**	**08 23 56.7**	**+0.4**
KARP	**Karpathos**	**2.98**	**67**	P	**Pn**	**08 23 59.2**	**+2.4**
KARP				S	**Sn**	**08 24 32.5**	**+0.2**
KARP				AML	AML	08 24 33.9	
	comp=E,791μm,0.5s						
KARP				AML	AML	08 24 37.5	
	comp=N,552μm,0.6s						
KARP	**Karpathos**	**2.98**	**67**		**Pn**	**08 23 57.3**	**+0.6**
PYL	**PYLOS**	**2.98**	**326**	P	**Pn**	**08 23 59.3**	**+2.5**
PYL				AML	AML	08 25 14.3	
	comp=N,168μm,0.9s						
PYL				AML	AML	08 25 17.6	
	comp=E,191μm,0.9s						
APE	**Apeiranthos**	**2.99**	**28**	P	**Pn**	**08 23 56.8**	**-0.1**
KRND	**KRANIDI**	**3.00**	**350**	P	**Pn**	**08 23 58.7**	**+1.7**
KRND				S	**Sn**	**08 24 31.7**	**-1.1**
KRND				AML	AML	08 24 38.2	
	comp=N,305μm,0.4s						
KRND				AML	AML	08 24 54.9	
	comp=E,336μm,1.0s						
ELL	**Elmali**	**5.49**	**63**		**Pn**	**08 24 31.6**	**+0.2**
TIP	**Timpagrande**	**7.38**	**312**	Pn	**Pn**	**08 24 58.8**	**+1.6**
ACER	**Acerenza**	**8.90**	**318**	Pn	**Pn**	**08 25 18.8**	**+0.7**
DBRK	**Dubrovnik**	**9.35**	**333**	*e*Pn	**Pn**	**08 25 22.4**	**-1.7**
DBRK				Sn	Sn	08 26 57.7	-11
BR131	**Keskin Array S**	**9.47**	**53**		**Pn**	**08 25 28.3**	**+2.2**
BRTR	**Keskin Array B**	**9.47**	**53**	Pn	**Pn**	**08 25 27.9**	**+1.9**
	comp=E,0.1nm,0.3s,baz=229,slow=14,SNR=14						
BRTR				LR	LR	08 30 01.5	
	comp=E,48nm,19.8s,baz=164,slow=43						
BRTR	**Keskin Array B**	**9.47**	**53**		**Pn**	**08 25 27.6**	**+1.5**
STON	**Ston**	**9.69**	**332**	*e*Pn	**Pn**	**08 25 27.1**	**-1.7**
STON				Sn	Sn	08 27 06.7	-11
MMAI	**Mount Meron Ar**	**9.77**	**95**	Pn	**Pn**	**08 25 29.0**	**-1.0**
	comp=E,1.5nm,0.3s,baz=278,slow=12,SNR=3.0						
MMAI				Sn	Sn	08 27 10.2	-9.3
	comp=E,2.5nm,0.3s,baz=274,slow=19,SNR=3.0						
MAKA	**Makarska**	**10.31**	**331**	*e*Pn	**Pn**	**08 25 34.8**	**-2.5**
MAKA				Sn	Sn	08 27 21.5	-11
RICI	**Ricice**	**10.44**	**332**	*e*Pn	**Pn**	**08 25 37.5**	**-1.6**
RICI				Sn	Sn	08 27 25.1	-11
ZIRJ	**Zirje**	**11.18**	**328**	*e*Pn	**Pn**	**08 25 47.5**	**-1.8**
MORI	**Morici**	**11.32**	**329**	*e*Pn	**Pn**	**08 25 48.2**	**-3.0**
DUGI	**Dugi Otok**	**11.71**	**327**	*i* Pn	**Pn**	**08 25 55.2**	**-1.3**
NVLJ	**Novalja**	**12.24**	**328**	*e*Pn	**Pn**	**08 26 03.9**	**+0.2**
GERES	**GERESS Array B**	**16.25**	**336**	Pn	**P**	**08 27 02.0**	**+1.2**
	comp=E,0.2nm,0.3s,baz=154,slow=10,SNR=8.2						
GERES	**GERESS Array B**	**16.25**	**336**		**P**	**08 27 01.6**	**+0.8**
KHC	**Kasperske Hory**	**16.53**	**336**	*e*P	**P**	**08 27 05.0**	**+1.1**
AKASG	**Malin Array Be**	**16.74**	**12**	Pn	**Pn**	**08 27 04.2**	**+0.4**
	comp=E,1.4nm,0.3s,baz=206,slow=10,SNR=5.7						
KBZ	**Khabaz**	**17.46**	**52**	P	**Pn**	**08 27 13.2**	**+0.3**
	comp=E,0.1nm,0.3s,baz=246,slow=17,SNR=4.2						
HFS	**Hagfors**	**26.56**	**349**	P	**P**	**08 28 46.4**	**-0.7**
	comp=E,1.4nm,0.4s,baz=160,slow=11,SNR=16						
FINES	**FINESS Array B**	**27.08**	**2**	P	**P**	**08 28 49.2**	**-2.5**
	comp=E,0.4nm,0.3s,baz=182,slow=9.0,SNR=4.8						
FINES	**FINESS Array B**	**27.08**	**2**	P	**P**	**08 28 49.8**	**-2.0**
FIA1	**FINESS Array S**	**27.08**	**2**	P	**P**	**08 28 49.7**	**-2.1**
FIA1				IAmb	IAmb	08 28 54.3	
	comp=Z,5.1nm,1.1s						
NBO00	**NORSAR Array S**	**27.92**	**346**	P	**P**	**08 28 59.7**	**+0.3**
AKTO	**Aktyubinsk**	**29.57**	**47**	P	**P**	**08 29 12.9**	**-1.2**
	comp=Z,1.6nm,0.5s,baz=246,slow=9.0,SNR=5.3						
ABKAR	**Akbulak array**	**30.40**	**50**	P	**P**	**08 29 21.0**	**-0.5**
ARU	**Arti**	**32.31**	**36**	P	**P**	**08 29 38.1**	**-0.1**
	comp=Z,1.7nm,0.2s,baz=258,slow=19,SNR=3.5						
ARCES	**ARCESS Array B**	**35.18**	**1**	P	**P**	**08 30 01.4**	**-1.6**
	comp=Z,0.7nm,0.4s,baz=188,slow=9.2,SNR=10						
KK31	**Karatay Array**	**37.03**	**62**	P	**P**	**08 30 18.5**	**-0.7**
KK31				IAmb	IAmb	08 30 20.6	
	comp=Z,1.5nm,0.7s						
KKAR	**Karatay Array**	**37.03**	**62**	P	**P**	**08 30 19.5**	**+0.2**
KKAR				IAmb	IAmb	08 30 20.6	
	comp=Z,1.5nm,0.7s						
BVAR	**Borovoye Array**	**37.66**	**46**	P	**P**	**08 30 22.4**	**-2.0**
	comp=Z,1.0nm,0.7s,baz=255,slow=8.6,SNR=4.4						
KURK	**Kurchatov**	**42.51**	**50**	P	**P**	**08 31 03.5**	**-1.2**
MAKZ	**Makanchi**	**44.90**	**56**	P	**P**	**08 31 23.1**	**-0.9**
MK31	**Makanchi Array**	**45.11**	**56**	P	**P**	**08 31 25.7**	**0.0**
MK31				IAmb	IAmb	08 31 26.5	
	comp=Z,2.3nm,0.7s						
MKAR	**Makanchi Array**	**45.11**	**56**	P	**P**	**08 31 25.7**	**0.0**
	comp=Z,2.6nm,0.6s,baz=280,slow=6.5,SNR=25						
ZAA0	**Zalesovo Array**	**46.32**	**46**	P	**P**	**08 31 34.6**	**-0.5**
ZAA0				IAmb	IAmb	08 31 36.3	
	comp=Z,1.4nm,0.5s						
ZALV	**Zalesovo Beam**	**46.32**	**46**	P	**P**	**08 31 33.7**	**-1.4**
	comp=Z,1.4nm,0.4s,baz=264,slow=8.5,SNR=7.8						
SONM	**Songino Array**	**60.81**	**50**	P	**P**	**08 33 22.1**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=289,slow=8.9,SNR=5.1						
SONM	**Songino Array**	**60.81**	**50**	P	**P**	**08 33 21.9**	**+0.2**
YKA	**Yellowknife Ar**	**77.80**	**342**	P	**P**	**08 35 06.7**	**+0.4**
	comp=Z,0.1nm,0.5s,baz=37,slow=4.8,SNR=2.1						
IMAR	**Indian Mountai**	**79.90**	**359**	P	**P**	**08 35 20.2**	**+2.4**
PRP	**Porcupine Dome**	**80.04**	**356**	P	**P**	**08 35 17.2**	**-1.6**
BDFB	**Brasilia**	**84.39**	**247**	LR	LR	09 11 29.0	
	comp=Z,44nm,19.4s,baz=252,slow=34						

*IDC **31** 08:31:32.7±0.7,6°.76N×72°.97W,h156^{km}±10^{km},mb3.1/4, mb1 3.5/7,mb1mx3.2/25,mbtmp3.7/7,Error ellipse: s-maj=29.9km s-min=7.2km az=134.0*

*RSNC **31** 08:31:34.2±1.0,6°.85N×73°.17W,h145^{km}±4^{km},ML3.5,* *Mw3.6*

ISC 31 08:31:33.1±0.7**, 6°.86N**±0°.03×**73°.12W**±0°.04**, h154**^{km}±5^{km}**,**
n43, σ1^{s}.67/78**, mb3.3**/4**, 3C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.27	193	⇑iP	Pn	08 31 54.1	-0.2
BARC				eS	Sn	08 32 08.7	-1.8
BARC				i		08 32 10.1	
	comp=Z,1µm,0.2s						
PAMC	Pamplona, Colo	0.64	41	⇓iP	Pn	08 31 56.8	+0.6
PAMC				eS	Sn	08 32 13.9	+0.1
PAMC				i		08 32 15.9	
	comp=Z,1µm,0.5s						
RUSC	La Rusia	0.96	178	⇓eP	Pn	08 31 58.2	-0.3
RUSC				eS	Sn	08 32 17.1	-0.8
RUSC				i		08 32 18.7	
	comp=Z,382nm,0.4s						
PTBC	PUERTO BERRIO,	1.36	257	⇑iP	Pn	08 32 00.6	-0.9
PTBC				eS	Sn	08 32 21.6	-1.8
PTBC				i		08 32 25.0	
	comp=Z,295nm,0.1s						
TAMC	Tame, Arauca	1.39	107	⇓iP	Pn	08 32 02.5	+0.7
TAMC				eS	Sn	08 32 23.7	-0.1
OCAC	Ocana	1.39	352	eP	Pn	08 32 02.1	+0.1
OCAC				eS	Sn	08 32 23.6	-0.5
OCAC				i		08 32 28.9	
	comp=Z,476nm,0.3s						
SPBC	San Pablo de B	1.52	218	eP	Pn	08 32 02.8	-0.5
SPBC				eS	Sn	08 32 25.7	-0.8
SPBC				i		08 32 31.3	
	comp=Z,377nm,0.2s						
ZARC	Zaragoza, Cauc	1.83	290	eP	Pn	08 32 06.2	-0.3
ZARC				eS	Sn	08 32 31.5	-0.8
ZARC				i		08 32 37.8	
	comp=Z,573nm,0.3s						
SMLC	San Martn de	2.15	334	eP	Pn	08 32 09.9	-0.3
SMLC				eS	Sn	08 32 38.4	-0.4
SMLC				i		08 32 41.2	
	comp=Z,491nm,0.1s						
NORC	Norcasia	2.16	234	eP	Pn	08 32 09.9	-0.4
NORC				eS	Sn	08 32 37.4	-1.6
NORC				i		08 32 44.1	
	comp=Z,225nm,0.2s						
CHIC	Chingaza	2.29	195	eP	Pn	08 32 12.4	+0.1
CHIC				eS	Sn	08 32 42.2	-0.3
CHIC				i		08 32 46.0	
	comp=Z,262nm,0.9s						
ROSC	El Rosal	2.33	211	P	Pn	08 32 14.2	+1.5
	comp=Z,18nm,0.3s,baz=342,slow=1.5,SNR=41						
ROSC				S	Sn	08 32 43.2	-0.1
	comp=Z,49nm,0.3s,baz=165,slow=20,SNR=12						
ROSC	El Rosal	2.33	211	eP	Pn	08 32 14.4	+1.7
ROSC				eS	Sn	08 32 45.1	+1.8
HELC	Santa Helena	2.48	255	eP	Pn	08 32 14.3	-0.2
HELC				eS	Sn	08 32 45.5	-0.8
HELC				i		08 32 54.0	
	comp=Z,192nm,0.5s						
CVER	Cruz Verde, Cu	2.50	202	⇑eP	Pn	08 32 15.9	+0.9
UREC	San Jos de Ur	2.55	291	eP	Pn	08 32 14.0	-1.0
UREC				eS	Sn	08 32 45.1	-2.3
GUY2C	Guyana, Caldas	2.76	234	eP	Pn	08 32 18.5	+0.5
GUY2C				eS	Sn	08 32 52.0	-0.7
GUY2C				i		08 33 00.3	
	comp=Z,131nm,0.5s						
VILC	Villavicencio,	2.79	192	eP	Pn	08 32 18.2	+0.1
VILC				eS	Sn	08 32 52.6	-0.2
VILC				i		08 32 55.6	
	comp=Z,120nm,0.4s						
PTGC	Puerto Gaitan,	2.82	160	eP	Pn	08 32 17.4	-0.9
PTGC				eS	Sn	08 32 50.9	-2.5
PTGC				i		08 32 53.4	
	comp=Z,122nm,0.5s						
RREF	El Recreo	2.94	229	eP	Pn	08 32 21.2	+0.7
RREF				eS	Sn	08 32 59.5	+2.4
RREF				i		08 33 06.3	
	comp=Z,188nm,0.3s						
CBOC	Ciudad Bolivar	3.04	251	eP	Pn	08 32 21.9	+0.6
CBOC				eS	Sn	08 32 56.3	-2.2
CODC	Agustn Codazz	3.08	354	eP	Pn	08 32 21.4	-0.1
CODC				eS	Sn	08 32 58.9	-0.3
ARGC	Ariguani, Magd	3.18	340	eP	Pn	08 32 24.0	+1.0
ARGC				eS	Sn	08 33 01.1	-0.6
ARGC				i		08 33 07.4	
	comp=Z,62nm,0.2s						
SDV	Santo Domingo	3.19	51	P	Pn	08 32 23.4	+0.3
	comp=Z,18nm,0.3s,baz=216,slow=7.1,SNR=296						
SDV				S	Sn	08 33 00.2	-1.7
	comp=Z,34nm,0.3s,baz=43,slow=20,SNR=41						
SDV	Santo Domingo	3.19	51	eP	Pn	08 32 23.3	+0.2
SDV				eS	Sn	08 33 00.5	-1.5
ANIL	Santa Ana	3.27	224	eP	Pn	08 32 25.1	+0.8
ANIL				eS	Sn	08 33 04.0	+0.1
PRAC	Prado	3.58	209	eP	Pn	08 32 27.7	-0.4
PRAC				eS	Sn	08 33 10.0	-0.8
PRAC				i		08 33 14.1	
	comp=Z,101nm,0.2s						
ORTC	Ortega, Tolima	3.61	216	eP	Pn	08 32 28.3	-0.1
ORTC				eS	Sn	08 33 10.5	-0.9
ORTC				i		08 33 18.9	
	comp=Z,84nm,0.8s						
SJCC	San Jacinto, C	3.64	326	eP	Pn	08 32 27.8	-1.1
SJCC				eS	Sn	08 33 08.2	-4.0
PLMC	San Jos del P	3.69	239	eP	Pn	08 32 30.1	+0.6
PLMC				eS	Sn	08 33 11.2	-2.2
YOTC	Yotoco, Valle	4.29	229	eP	Pn	08 32 37.2	-0.2
YOTC				eS	Sn	08 33 20.3	-7.2
SOLC	Bahia Solano	4.30	262	eP	Pn	08 32 37.5	+0.1
SOLC				eS	Sn	08 33 26.5	-1.0
SMRC	Santa Marta, M	4.42	346	eP	Pn	08 32 39.2	+0.3
SMRC				eS	Sn	08 33 27.0	-3.2
MACC	Macarena, Meta	4.74	189	eP	Pn	08 32 41.4	-1.7
MACC				eS	Sn	08 33 32.5	-5.3
GARC	Garzon, Huila	5.21	207	eP	Pn	08 32 48.6	-1.0
GARC				eS	Sn	08 33 45.3	-4.0
GARC				i		08 33 50.7	
	comp=Z,24nm,0.4s						
PCRV	Puerto La Cruz	9.02	68	P	Pn	08 33 40.5	+0.4
	comp=Z,0.5nm,0.3s,baz=33,slow=12,SNR=1.9						
PCRV				S	Sn	08 35 18.8	-1.6
	comp=Z,0.6nm,0.3s,baz=339,slow=23,SNR=2.0						
TXAR	Lajitas Array	36.44	312	P	P	08 38 24.0	+0.7
	comp=Z,0.2nm,0.7s,baz=121,slow=9.9,SNR=2.0						
SCHQ	Schefferville	48.11	5	P	P	08 39 57.7	+0.6
	comp=Z,1.4nm,0.6s,baz=215,slow=9.5,SNR=4.7						
NVAR	Mina Array Bea	51.46	315	P	P	08 40 23.9	+0.9
	comp=Z,0.2nm,0.5s,baz=115,slow=8.0,SNR=2.0						
YKA	Yellowknife Ar	63.23	340	P	P	08 41 44.6	-0.1
	comp=Z,0.3nm,0.5s,baz=132,slow=7.0,SNR=9.3						
MKAR	Makanchi Array	122.29	20	PKP	PKPdf	08 50 09.0	-1.1
	comp=Z,0.1nm,0.3s,baz=298,slow=1.7,SNR=2.2						
ASAR	Alice Springs	149.13	234	PKPbc	PKPdf	08 51 02.7	+2.9
	comp=Z,0.2nm,0.6s,baz=119,slow=3.7,SNR=5.4						
WRA	Warramunga Arr	150.35	241	PKPbc	PKPbc	08 51 06.1	-1.1
	comp=Z,0.2nm,0.4s,baz=107,slow=2.5,SNR=5.1						

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*SOME **31** 08:42:01.7, 41°.23N×71°.70E, h15^{km}*
*ISU **31** 08:42:03.0, 41°.40N×71°.60E, h5^{km}*
*KRNET **31** 08:42:03.1±0.1, 41°.40N×71°.78E, h11^{km}, mb2.6*
*NNC **31** 08:42:03.2±1.6, 41°.34N×71°.78E, h0^{km}, mb3.3, mpv3.0, Error ellipse: s-maj=14.4km s-min=6.2km az=6.0*

ISC 31 08:42:03.2±1.2**, 41°.39N**±0°.03×**71°.83E**±0°.03**, h7**^{km}±12^{km}**,**
n36, σ1^{s}.77/61**, 27C-9D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NAM	Namangan	0.42	198	eP	Pn	08 42 18.4	+2.7
ARK	Arkit	0.42	14	⇓iP	Pg	08 42 11.4	0.0
	baz=21						
ARK				⇓iS	Sg	08 42 16.9	-0.1
	baz=21						
ARK	Arkit	0.42	14	i P	Pg	08 42 11.1	-0.3
ARK				i S	Sg	08 42 17.2	+0.2
FRG	Fergana	0.66	183	i P	Pn	08 42 25.3	+6.3
FRG				S	Sn	08 42 43.2	+14
ARSB	Arslanbob	0.87	94	⇑iP	Pg	08 42 20.5	+0.5
	baz=94						
ARSB				⇑iS	Sb	08 42 33.4	+0.7
	baz=94						
BTK	Batken	1.54	210	⇑iP	Pg	08 42 31.9	-0.7
	baz=9.0						
BTK				⇑iS	Sg	08 42 53.1	+0.5
	baz=9.0						
AML	Almayashu	1.58	61	⇑iP	Pb	08 42 33.3	+0.3
	baz=62						
AML				⇑iS	Sg	08 42 55.9	+1.8
	baz=62						
MRKS	Merke	1.71	37	eP	Pg	08 42 37.1	+1.1
	30nm,0.4s						
MRKS				eS	Sg	08 43 01.9	+3.7
	86nm,0.3s						
MRKS	Merke	1.71	37	P	Pg	08 42 37.1	+1.1
	27nm,0.4s						
MRKS				S	Sg	08 43 00.9	+2.8
	86nm,0.3s						
ARLS	Aral	1.93	75	⇓iP	Pb	08 42 39.8	+1.0
	baz=75						
ARLS				⇓iS	Sg	08 43 06.7	+1.5
	baz=75						
EKS2	Erkin-Say	1.93	48	⇓iP	Pb	08 42 39.2	+0.4
	baz=49						
EKS2				⇓iS	Sg	08 43 06.0	+0.8
	baz=49						
KK31	Karatay Array	1.97	331	P	Pb	08 42 38.8	-0.7
	10.0nm,0.4s,baz=150,slow=15,SNR=152						
KK31				S	Sb	08 43 04.2	0.0
	51nm,0.3s,baz=139,slow=31,SNR=18						
UCH	Uchtor	2.17	66	⇑iP	Pb	08 42 43.1	-0.1
	baz=67						
UCH				⇑iS	Sg	08 43 12.7	-0.4
	baz=67						
BRLS	Borolday	2.21	319	eP	Pb	08 42 41.7	-1.8
	0.9nm,0.3s						
BRLS				eS	Sb	08 43 09.2	-1.9
	17nm,0.4s						
BRLS	Borolday	2.21	319	Pg	Pb	08 42 41.7	-1.8
	0.9nm,0.3s						
BRLS				Lg	Lg	08 43 09.2	
	17nm,0.4s						
AAK	Ala-Archa	2.35	57	⇑iP	Pb	08 42 45.1	-0.8
	baz=58						
AAK				⇑iS	Sb	08 43 16.4	+1.2
	baz=58						
AAK	Ala-Archa	2.35	57	⇓Pn	Pb	08 42 44.5	-1.4
	3.1nm,0.4s						
AAK				⇑Lg	Lg	08 43 18.7	
	20nm,0.6s						
KBK	Karagaybulak	2.65	60	⇑iP	Pb	08 42 49.4	-1.7
	baz=61						
KBK				⇑iS	Sb	08 43 23.3	-0.5
	baz=61						
KZA	Kyzart	2.65	74	⇑iP	Pb	08 42 49.9	-1.4
	baz=74						
KZA				⇑iS	Sb	08 43 24.3	+0.1
	baz=74						
CHMS	Chumysh	2.70	53	⇑iP	Pb	08 42 50.1	-1.8
	baz=53						
CHMS				⇑iS	Sb	08 43 24.7	-0.6
	baz=53						
CHMS	Chumysh	2.70	53	⇑Pn	Pn	08 42 47.1	-0.1
	1.0nm,0.5s						
CHMS				⇑Pg	Pb	08 42 53.2	+1.3
	2.7nm,0.5s						
CHMS				⇓Lg	Lg	08 43 29.7	
	12nm,0.5s						
USP	Ospenovka	2.73	46	⇑iP	Pb	08 42 50.4	-2.0
	baz=46						
USP				⇑iS	Sb	08 43 25.3	-0.8
	baz=46						
SGDS	Sogindy	2.92	44	Pg	Pb	08 42 57.5	+1.8
	5.5nm,0.1s						
SGDS				Lg	Lg	08 43 35.7	
	10nm,0.4s						
TKM2	Tokmak 2	3.19	60	⇓Pn	Pn	08 42 55.4	+1.4
	0.7nm,0.5s						
TKM2				⇑Pg	Pg	08 43 03.8	-0.5
	1.1nm,0.3s						
TKM2				⇑Lg	Lg	08 43 44.2	
	12nm,0.7s						
BOOM	Boomskoye usch	3.26	69	⇑iP	Pb	08 42 58.2	-3.3
	baz=69						
BOOM				⇑iS	Sb	08 43 38.3	-3.1
	baz=69						
ULHL	Ulahol	3.41	74	⇑iP	Pn	08 43 00.3	+3.3
	baz=74						
ULHL				⇑iS	Sb	08 43 42.1	-3.7
	baz=74						
DGS	Degeres	3.46	56	eP	Pg	08 43 07.5	-2.0
	1.6nm,0.3s						
DGS				eS	Sg	08 43 53.3	-1.0
	16nm,0.6s						
DGS	Degeres	3.46	56	Pg	Pg	08 43 07.5	-2.0
	1.6nm,0.3s						
DGS				Lg	Lg	08 43 53.3	
	16nm,0.5s						
KST	Kastek	3.49	60	eP	Pg	08 43 08.4	-1.6
	1.2nm,0.3s						
KST				eS	Sg	08 43 54.2	-1.0
	8.5nm,0.5s						
KST	Kastek	3.49	60	Pg	Pg	08 43 08.4	-1.6
	1.2nm,0.3s						
KST				Lg	Lg	08 43 54.4	
	8.7nm,0.5s						
KRBS	Karabastau	3.66	50	eP	Pb	08 43 10.3	+2.1
	1.5nm,0.4s						
KRBS				eS	Sg	08 43 57.9	-2.8
	3.3nm,0.4s						
KRBS	Karabastau	3.66	50	Pg	Pb	08 43 10.4	+2.1
	1.4nm,0.3s						
KRBS				Lg	Lg	08 43 57.9	
	2.6nm,0.6s						
BTLS	Baital	3.99	23	eP	Pg	08 43 19.5	-0.2
	1.9nm,0.2s						
BTLS				eS	Sg	08 44 13.6	+2.2
	16nm,0.4s						
BTLS	Baital	3.99	23	Pg	Pg	08 43 19.7	0.0
	0.9nm,0.2s						
BTLS				Lg	Lg	08 44 13.6	
	16nm,0.4s						
KTBS	Karatobe	4.27	55	eP	Pg	08 43 22.2	-2.8
	1.7nm,0.4s						
KTBS				eS	Sg	08 44 17.9	-2.4
	15nm,0.6s						
KTBS	Karatobe	4.27	55	Pg	Pg	08 43 22.2	-2.8
	0.6nm,0.2s						
KTBS				Lg	Lg	08 44 18.1	
	15nm,0.6s						

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*IDC **31** 09:22:42.2±1.9, 22°.69S×170°.95E, h0^{km}, mb4.0/7, mb1 4.2/8, mb1mx3.9/28, mbtmp4.0/8, ML3.9/1, MS3.3/6, Ms1 3.3/6, ms1mx2.9/41, Error ellipse: s-maj=76.6km s-min=23.8km az=164.0*

ISC 31 09:22:48.6±1.5**, 22°.7S**±0°.4×**170°.9E**±0°.1**, h42**^{km}**, n14,**
σ0^{s}.74/11**, mb4.0**/7**, MS3.3**/4**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.12	277	Pn	Pn	09 23 48.6	-0.5
	6.2nm,0.3s,baz=119,slow=13,SNR=184						
DZM				Sn	Sn	09 24 36.1	0.0
	8.6nm,0.3s,baz=120,slow=22,SNR=9.4						
DZM				LR	LR	09 25 18.5	
	comp=Z,198nm,19.6s,baz=32,slow=37						
URZ	Urewera	16.44	162	LR	LR	09 31 47.2	
	comp=Z,101nm,19.2s,baz=358,slow=33						
CTA	Charters Tower	23.04	272	P	P	09 27 50.1	-0.2
	4.5nm,1.0s,baz=115,slow=14,SNR=2.1						
STKA	Stephens Creek	27.50	244	LR	LR	09 37 32.8	
	comp=Z,54nm,21.8s,baz=31,slow=32						
ASAR	Alice Springs	33.92	261	P	P	09 29 28.5	+0.6
	1.5nm,0.7s,baz=86,slow=9.1,SNR=21						
WRA	Warramunga Arr	34.07	268	P	P	09 29 28.5	-0.7
	0.3nm,0.3s,baz=96,slow=8.5,SNR=7.3						
WRA				LR	LR	09 43 28.5	
	comp=Z,73nm,18.0s,baz=100,slow=36						
VNDA	Vanda	55.07	182	LR	LR	09 53 05.5	
	comp=Z,89nm,18.1s,baz=343,slow=33						
PETK	Petropavlovsk-	76.32	352	P	P	09 34 33.0	+0.2
	4.0nm,0.9s,baz=128,slow=9.3,SNR=2.7						
KLR	Kul'dur	79.60	335	LR	LR	10 08 50.0	
	comp=Z,11nm,18.2s,baz=33,slow=35						
CMAR	Chiang Mai Arr	81.27	294	P	P	09 35 02.3	+1.5
	1.0nm,0.4s,baz=140,slow=3.8,SNR=4.3						
NVAR	Mina Array Bea	89.96	48	P	P	09 35 43.3	-0.5
	0.4nm,0.7s,baz=224,slow=5.7,SNR=3.0						
SONM	Songino Array	90.85	323	P	P	09 35 47.8	+0.2
	1.1nm,0.8s,baz=108,slow=3.2,SNR=4.8						
ARCES	ARCESS Array B	128.75	345	PKP	PKPdf	09 41 50.0	-0.7
	3.3nm,1.0s,baz=326,slow=3.5,SNR=4.9						
GERES	GERESS Array B	148.21	331	PKPbc	PKPbc	09 42 29.6	-0.4
	1.3nm,0.6s,baz=46,slow=3.9,SNR=9.4						

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*EAF **31** 09:34:52.5±2.9, 25°.61S×28°.41E, h10^{km}, MD3.7*

ISC 31 09:34:50.5±2.0**, 25°.58S**±0°.08×**28°.4E**±0°.2**, h10**^{km}**, n6,**
σ3^{s}.78/10**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	Lobatse	2.62	282	i P	Pn	09 35 35.9	+2.8
LBTB	Lobatse	2.62	282	i P	Pn	09 35 35.9	+2.8
BOSA	Boshof	4.14	222	i P	Pn	09 35 56.6	+2.7
BOSA				i S	Sn	09 36 38.3	-4.1
BOSA	Boshof	4.14	222	i P	Pn	09 35 56.6	+2.7
BOSA				i S	Sn	09 36 38.3	-4.1
MATP	Matopo	5.13	1	i P	Pn	09 36 09.9	+2.3
MATP				i S	Sn	09 37 03.5	-3.5
MATP	Matopo	5.13	1	i P	Pn	09 36 09.9	+2.3
MATP				i S	Sn	09 37 03.5	-3.5

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*ATH **31** 09:38:12.9, 38°.45N×20°.52E, h6^{km}±1^{km}, ML2.6/5, Error ellipse: s-maj=2.2km s-min=0.7km az=112.0*
*THE **31** 09:38:13.2, 38°.44N×20°.54E, h7^{km}, ML2.7/6, Error ellipse: s-maj=0.7km s-min=0.2km az=99.0*

ISC 31 09:38:12.4±0.9**, 38°.45N**±0°.02×**20°.52E**±0°.03**, h9**^{km}±4^{km}**,**
n35, σ1^{s}.00/54**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.03	77	P	Pg	09 38 14.3	+0.3
FSK				S	Sg	09 38 15.4	+0.2
	27µm,0.5s						
FSK	Fiskardo	0.03	77	P	Pg	09 38 14.1	0.0
FSK				S	Sg	09 38 15.2	0.0
FSK				AML	AML	09 38 15.7	
	comp=N,39828µm,0.2s						
FSK				AML	AML	09 38 16.6	
	comp=E,71162µm,0.2s						
KONA	Konidatara, Ke	0.05	123	P	Pg	09 38 14.3	+0.1
KONA				S	Sg	09 38 15.7	+0.2
KONA				AML	AML	09 38 16.4	
	comp=N,38077µm,0.4s						
KONA				AML	AML	09 38 17.5	
	comp=E,29820µm,0.4s						
VSK1	VASILIKIADES	0.06	141	P	Pg	09 38 14.3	+0.1
VSK1				S	Sg	09 38 15.8	+0.2
	comp=E,28µm,0.4s						
KEF1	Kardakata, Kep	0.18	192	P	Pg	09 38 16.3	+0.3
KEF1				S	Sg	09 38 19.5	+1.0
EVGI	Lefkada island	0.20	32	P	Pg	09 38 17.2	+0.7
EVGI				S	Sg	09 38 20.4	+1.1
EVGI	Lefkada island	0.20	32	P	Pg	09 38 17.2	+0.7
KEF4	Livadi, Kephal	0.21	201	P	Pg	09 38 16.9	+0.3
KEF4				S	Sg	09 38 20.2	+0.7
LXRA	Lixouri, Kepha	0.26	194	P	Pg	09 38 18.4	+0.8
ARG2	Argostoli	0.27	185	P	Pg	09 38 18.3	+0.5
ARGA	Argostoli. Kep	0.28	187	P	Pg	09 38 18.4	+0.5
ARGA				S	Sg	09 38 23.1	+1.5
VLS	Valsamata	0.28	169	P	Pg	09 38 18.2	+0.3
VLS				S	Sg	09 38 22.3	+0.6
	comp=E,2µm,0.4s						
VLS	Valsamata	0.28	169	P	Pg	09 38 18.3	+0.3
VLS				S	Sg	09 38 22.8	+1.1
VLS				AML	AML	09 38 24.3	
	comp=E,3531µm,0.2s						
VLS				AML	AML	09 38 25.2	
	comp=N,4658µm,0.6s						
KEF3	Kipouria, Keph	0.28	209	P	Pg	09 38 18.2	+0.2
KEF3				S	Sg	09 38 23.2	+1.5
KEF2	Argostoli. Kep	0.29	185	P	Pg	09 38 18.2	+0.2
KEF2				S	Sg	09 38 23.4	+1.5
CHV1	Chavriata, Kef	0.29	202	P	Pg	09 38 18.6	+0.5
CHV1				S	Sg	09 38 23.1	+1.2
MGNA	Meganis	0.29	46	P	Pg	09 38 19.0	+0.7
LKD2	Lefkada island	0.35	18	P	Pg	09 38 20.2	+0.8
LKD2				S	Sg	09 38 25.5	+1.4
	comp=N,775nm,0.9s						
LKD2	Lefkada island	0.35	18	P	Pg	09 38 19.9	+0.5
LKD2				AML	AML	09 38 33.0	
	comp=E,1130µm,0.4s						
LKD2				AML	AML	09 38 33.5	
	comp=N,1230µm,0.6s						
TSLK	Tsoukalades, L	0.39	16	P	Pg	09 38 20.9	+0.9
TSLK				S	Sg	09 38 26.7	+1.6
	comp=N,692nm,0.4s						
TSLK	Tsoukalades, L	0.39	16	P	Pg	09 38 20.7	+0.7
KFL	Anninata	0.40	148	P	Pg	09 38 20.5	+0.3
KFL				S	Sg	09 38 26.3	+0.8
	comp=N,3µm,0.4s						
AST1	Astakos	0.46	78	P	Pg	09 38 21.6	+0.4
PVO	Paravola	0.81	78	P	Pb	09 38 29.0	+0.4
PVO				AML	AML	09 38 50.3	
	comp=E,709µm,0.5s						
PVO				AML	AML	09 38 50.9	
	comp=N,829µm,0.4s						
RLS	Riolos of Patr	0.84	118	P	Pg	09 38 29.3	+0.7
ANX	Ano Chora	1.11	82	P	Pg	09 38 34.2	+0.5
LAKA	Lakka	1.17	100	P	Pg	09 38 34.8	0.0
SERG	Sergoula	1.21	91	P	Pg	09 38 35.4	-0.2
TRIZ	Trizonia	1.22	94	P	Pg	09 38 35.4	-0.5
KALE	Kalithea	1.27	92	P	Pn	09 38 36.3	-0.1
VTS	Vitosha	4.65	26	i Pg	Pg	09 39 46.6	+5.2
RICI	Ricice	5.65	334	ePn	Pn	09 39 36.1	-0.5
RICI				Sn	Sn	09 40 41.5	-0.1
ZIRJ	Zirje	6.37	326	ePn	Pn	09 39 45.7	-0.7
ZIRJ				Sn	Sn	09 40 55.7	-3.5
MORI	Morici	6.51	328	ePn	Pn	09 39 48.4	+0.1
MORI				Sn	Sn	09 41 02.5	-0.2
DUGI	Dugi Otok	6.90	325	ePn	Pn	09 39 53.6	0.0
DUGI				Sn	Sn	09 41 08.8	-3.4

IDC 31 09:39:29.0±2.2**, 6°.28S**×**129°.11E, h334**^{km}±30^{km}**, mb2.8**/1**, mb1 3.1**/5**, mb1mx2.9**/36**, mbtmp3.8**/5**, Error ellipse: s-maj=49.1km s-min=14.1km az=78.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.79	22	P	Pn	09 40 56.0	-0.9
	1.8nm,0.3s,baz=242,slow=23,SNR=9.8						
SIJI				S	S	09 42 03.8	-4.2
	11nm,0.3s,baz=73,slow=23,SNR=27						
FITZ	Fitzroy Crossi	12.23	196	P	Pn	09 42 11.6	-2.1
	0.9nm,0.3s,baz=29,slow=12,SNR=18						
FITZ				S	S	09 44 30.2	+0.5
	0.5nm,0.3s,baz=108,slow=16,SNR=2.1						
WRA	Warramunga Arr	14.50	160	P	P	09 42 39.3	+0.3
	0.3nm,0.3s,baz=338,slow=9.9,SNR=6.2						
WRA				S	S	09 45 25.7	+9.0
	0.1nm,0.3s,baz=340,slow=23,SNR=1.6						
ASAR	Alice Springs	17.89	166	P	P	09 43 16.4	+0.6
	0.6nm,0.3s,baz=346,slow=12,SNR=54						
ASAR				S	S	09 46 24.3	+0.5
	0.1nm,0.3s,baz=342,slow=20,SNR=18						
MKAR	Makanchi Array	67.14	327	P	P	09 49 48.0	+0.4
	0.2nm,0.4s,baz=118,slow=6.7,SNR=4.6						

IDC 31 09:49:07.0±6.9**, 16°.38S**×**174°.30W, h102**^{km}±45^{km}**, mb3.6**/3**, mb1 3.9**/4**, mb1mx3.3**/43**, mbtmp3.9**/4**, Error ellipse: s-maj=213.6km s-min=23.6km az=148.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.46	45	P	Pn	09 50 01.1	+2.0
	9.7nm,0.3s,baz=0.0,slow=1.0,SNR=28						
AFI				S	Sn	09 50 39.3	-0.1
	59nm,0.3s,baz=38,slow=22,SNR=22						
WRA	Warramunga Arr	48.78	258	P	P	09 57 42.4	+0.3
	1.5nm,0.3s,baz=100,slow=7.6,SNR=7.0						
ASAR	Alice Springs	48.99	253	P	P	09 57 43.0	-0.7
	0.5nm,0.5s,baz=89,slow=8.4,SNR=21						
NVAR	Mina Array Bea	75.64	42	P	P	10 00 41.7	+0.3
	0.9nm,1.0s,baz=225,slow=8.5,SNR=4.1						

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*BJI **31** 09:53:10.0±0.0, 12°.27S×167°.33E, h218^{km}, mB5.0/45, mb5.1/60*
*IDC **31** 09:53:11.9±1.3, 12°.63S×167°.08E, h225^{km}±12^{km}, mb4.6/38, mb1 4.6/42, mb1mx4.6/51, mbtmp5.1/42, Error ellipse: s-maj=8.5km s-min=7.8km az=92.0*

GCMT **31** *09:53:12.2±0.2, 12°.60S±0°.02×167°.01E±0°.02, h222km±1km, MW5.0/103, Moment Tensor Solution. s53,c64; s103,c139; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.23±.11; $M_{\theta\theta}$-0.37±.12; $M_{\phi\phi}$-3.86±.12; $M_{r\theta}$1.15±.12; $M_{\theta\phi}$0.53±.14; $M_{\phi r}$-1.42±.12; Best double couple: $M_0$4.46400×10^{16} NP1:ϕ_s1.00000°,δ35.00000°, λ107.00000°. NP2:ϕ_s161.00000°,δ57.00000°,λ78.00000°. Principal axes: T 4.6900, Plg75.0000°, Azm36.0000°; N -0.4530, Plg10.0000°, Azm167.0000°; P -4.2380, Plg11.0000°, Azm259.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **31** *09:53:13.2±1.5, 12°.58S±0°.08×167°.01E±0°.06, h240km±4km, mb5.1/207 Error ellipse: s-maj=12.3km s-min=7.4km az=209.0*

MOS **31** *09:53:13.5±0.8, 12°.58S×166°.95E, h250km, mb5.1/27, Error ellipse: s-maj=8.3km s-min=7.1km az=123.3*

ISC 31 09:53:13.3±0.7**, 12°.64S**±0°.04×**167°.11E**±0°.05**, h243**km±5km**, n535, σ1ˢ.33**/490**, mb5.0**/175**, 19C-6D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.72**	**294**	P	**Pn**	**09 55 02.4**	**-0.6**
	8.8nm,0.3s,baz=277,slow=1.7,SNR=7.2						
HNR	**Honiara**	**7.72**	**294**	*e*P	**Pn**	**09 55 02.0**	**-1.0**
HNR	**Honiara**	**7.72**	**294**		**Pn**	**09 55 00.1**	**-2.9**
DZM	**Mont Dzumac**	**9.40**	**184**	*e*Pn	**Pn**	**09 55 27.5**	**+3.1**
	12nm,0.3s						
DZM				*e*Sn	**S**	**09 57 08.7**	**-1.7**
	3.5nm,0.3s						
DZM	**Mont Dzumac**	**9.40**	**184**	P	**Pn**	**09 55 24.3**	**-0.1**
	3.8nm,0.3s,baz=22,slow=22,SNR=34						
DZM				S	**S**	**09 57 12.0**	**+1.5**
	0.8nm,0.3s,baz=114,slow=20,SNR=1.3						
DZM	**Mont Dzumac**	**9.40**	**184**	Pn	**Pn**	**09 55 25.5**	**+1.1**
MSVF	**Nonsavu**	**11.71**	**117**	P	**P**	**09 55 56.5**	**-0.7**
MSVF	**Nonsavu**	**11.71**	**117**	Pn	**P**	**09 55 56.5**	**-0.7**
RABL	**Rabaul**	**16.99**	**298**	P	**P**	**09 56 54.4**	**-1.1**
KRVT	**Keravat (AS076**	**17.05**	**298**	P	**P**	**09 56 54.3**	**-1.9**
	4.4nm,0.3s,baz=162,slow=3.2,SNR=2.0						
EIDS	**Eidsvold**	**19.71**	**228**	P	**P**	**09 57 25.8**	**+1.0**
PMG	**Port Moresby**	**19.84**	**277**	P	**P**	**09 57 25.9**	**-0.3**
	2.2nm,0.3s,baz=257,slow=8.6,SNR=4.0						
PMG	**Port Moresby**	**19.84**	**277**	⇑*i*P	**P**	**09 57 24.6**	**-1.6**
PMG				pmax	pmax		
	comp=Z,138nm,1.1s						
AFI	**Afiamalu**	**20.59**	**96**	P	**P**	**09 57 34.3**	**0.0**
	comp=Z,73nm,1.0s,baz=283,slow=21,SNR=7.1						
AFI	**Afiamalu**	**20.59**	**96**	P	**P**	**09 57 35.1**	**+0.8**
AFI				pmax	pmax		
	comp=Z,90nm,1.1s						
AFI	**Afiamalu**	**20.59**	**96**	P	**P**	**09 57 35.1**	**+0.8**
AFI				IAmb	IAmb	09 57 36.4	
	comp=Z,90nm,1.1s						
PATS	**Pohnpei**	**21.23**	**335**	P	**P**	**09 57 39.6**	**-1.2**
PATS				IAmb	IAmb	09 57 41.7	
	comp=Z,92nm,1.0s						
CTA	**Charters Tower**	**21.32**	**247**	P	**P**	**09 57 41.5**	**-0.2**
	comp=Z,30nm,0.7s,baz=78,slow=12,SNR=41						
CTAO	**Charters Tower**	**21.32**	**247**	P	**P**	**09 57 41.7**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,46nm,0.8s						
ARMA	**Armidale**	**22.76**	**217**	P	**P**	**09 57 55.7**	**+0.8**
COEN	**Coen**	**23.32**	**264**	P	**P**	**09 58 00.8**	**+0.6**
URZ	**Urewera**	**27.02**	**162**	P	**P**	**09 58 34.1**	**+0.9**
	comp=Z,4.1nm,0.5s,baz=329,slow=2.5,SNR=7.7						
CAN	**Canberra**	**27.89**	**213**	P	**P**	**09 58 41.6**	**+0.6**
CAN				pmax	pmax		
	comp=Z,26nm,1.5s						
CAN	**Canberra**	**27.89**	**213**	P	**P**	**09 58 41.6**	**+0.6**
QRZ	**Quartz Range**	**28.48**	**171**	P	**P**	**09 58 47.9**	**+1.9**
QRZ				IAmb	IAmb	09 58 48.9	
	comp=Z,29nm,1.0s						
TUWZ	**Tuamarina**	**29.29**	**169**	P	**P**	**09 58 54.0**	**+0.8**
SNZO	**South Karori**	**29.32**	**168**	P	**P**	**09 58 54.2**	**+0.8**
SNZO				IAmb	IAmb	09 59 21.4	
	comp=Z,38nm,1.1s						
THZ	**Tophouse**	**29.45**	**171**	P	**P**	**09 58 55.4**	**+0.8**
THZ				IAmb	IAmb	09 58 56.1	
	comp=Z,21nm,0.7s						
MSWZ	**Moikau Station**	**29.54**	**168**	P	**P**	**09 58 55.4**	**0.0**
PLWZ	**Palliser**	**29.68**	**168**	P	**P**	**09 58 56.4**	**-0.3**
STKA	**Stephens Creek**	**30.26**	**227**	P	**P**	**09 59 02.3**	**+0.5**
	comp=Z,8.9nm,0.8s,baz=56,slow=8.8,SNR=24						
STKA				PcP	**PcP**	**10 01 56.4**	**+0.2**
	comp=Z,11nm,0.7s,baz=46,slow=3.3,SNR=11						
STKA				ScP	**ScP**	**10 05 19.2**	**+3.9**
	comp=Z,2.1nm,0.6s,baz=23,slow=5.0,SNR=5.6						
STKA	**Stephens Creek**	**30.26**	**227**	P	**P**	**09 59 01.3**	**-0.6**
FOZ	**Fox Glacier**	**30.87**	**176**	P	**P**	**09 59 08.0**	**+1.0**
FOZ				IAmb	IAmb	09 59 09.0	
	comp=Z,26nm,0.8s						
OXZ	**Oxford**	**30.87**	**173**	P	**P**	**09 59 07.3**	**+0.3**
OXZ				IAmb	IAmb	09 59 08.2	
	comp=Z,27nm,0.8s						
H11S2	**WAKE ISLAND Hy**	**30.94**	**359**	T	T	10 30 35.9	
	baz=188,SNR=4.4						
H11S3	**WAKE ISLAND Hy**	**30.94**	**359**	T	T	10 30 27.6	
	baz=188						
H11S1	**WAKE ISLAND Hy**	**30.96**	**359**	T	T	10 30 31.7	
	baz=188						
RPZ	**Rata Peaks**	**31.15**	**174**	P	**P**	**09 59 10.5**	**+1.0**
	comp=Z,27nm,0.9s,baz=318,slow=1.0,SNR=15						
TOO	**Toolangi**	**31.45**	**214**	P	**P**	**09 59 12.6**	**+0.3**
TOO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TOO	**Toolangi**	**31.45**	**214**	P	**P**	**09 59 12.6**	**+0.3**
LBZ	**Lake Benmore**	**31.74**	**176**	P	**P**	**09 59 15.3**	**+0.7**
WR0	**Warramunga Arr**	**32.05**	**253**	P	**P**	**09 59 16.5**	**-1.2**
H11N1	**WAKE ISLAND Hy**	**32.15**	**360**	T	T	10 32 05.3	
	baz=181						
H11N3	**WAKE ISLAND Hy**	**32.16**	**360**	T	T	10 32 02.3	
	baz=181						
WB0	**Warramunga Arr**	**32.16**	**253**	P	**P**	**09 59 17.5**	**-1.2**
H11N2	**WAKE ISLAND Hy**	**32.17**	**360**	T	T	10 32 04.8	
	baz=181						
WB2	**Warramunga Arr**	**32.22**	**253**	P	**P**	**09 59 18.4**	**-0.8**
WRA	**Warramunga Arr**	**32.23**	**253**	P	**P**	**09 59 18.4**	**-0.9**
	comp=Z,4.5nm,0.8s,baz=84,slow=9.0,SNR=12						
WRA				PcP	**PcP**	**10 02 01.3**	**-0.5**
	comp=Z,2.2nm,0.3s,baz=79,slow=3.6,SNR=6.3						
WRA				ScP	**ScP**	**10 05 25.4**	**+3.2**
	comp=Z,2.1nm,1.0s,baz=86,slow=3.8,SNR=1.8						
WRA				PKiKP	**PKiKP**	**10 09 28.0**	**-1.3**
	comp=Z,1.0nm,0.6s,baz=0.4,slow=0.6,SNR=1.4						
AS31	**Alice Springs**	**33.31**	**246**	P	**P**	**09 59 27.8**	**-0.8**
ASAR	**Alice Springs**	**33.32**	**246**	P	**P**	**09 59 27.4**	**-1.2**
	comp=Z,3.4nm,0.6s,baz=72,slow=9.2,SNR=55						
ASAR				PcP	**PcP**	**10 02 04.5**	**-0.3**
	comp=Z,3.8nm,0.6s,baz=67,slow=1.9,SNR=13						
ASAR				S	**S**	**10 04 29.4**	**-1.7**
	comp=Z,3.1nm,1.1s,baz=78,slow=16,SNR=8.4						
ASAR				ScP	**ScP**	**10 05 29.5**	**+3.5**
	comp=Z,3.5nm,0.9s,baz=88,slow=3.5,SNR=12						
ASAR				PKiKP	**PKiKP**	**10 09 29.1**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=88,slow=1.5,SNR=11						
ASAR				P3KPbc		10 30 38.3	
	comp=Z,0.3nm,0.6s,baz=232,slow=4.1,SNR=7.7						
BBOO	**Buckleboo**	**34.77**	**230**	P	**P**	**09 59 41.0**	**+0.1**
KNRA	**Kununurra**	**37.27**	**261**	P	**P**	**10 00 01.6**	**-0.7**
KNRA				IAmb	IAmb	10 00 02.7	
	comp=Z,80nm,1.2s						
FORT	**Forrest**	**40.26**	**237**	P	**P**	**10 00 26.9**	**+0.1**
FORT				IAmb	IAmb	10 00 28.4	
	comp=Z,80nm,0.8s						
FITZ	**Fitzroy Crossi**	**40.29**	**257**	P	**P**	**10 00 27.2**	**0.0**
LBMI	**Labuha**	**41.03**	**284**	P	**P**	**10 00 34.3**	**+0.9**
	comp=Z,28nm,1.1s						
PPT2	**Papeete2**	**42.04**	**102**	*e*LR	LR	10 12 42.7	
	comp=Z,108nm,26.2s						
SANI	**Sanana**	**42.05**	**281**	P	**P**	**10 00 41.9**	**+0.2**
TBI	**Tubuai**	**42.51**	**111**	*e*LR	LR	10 13 03.7	
	comp=Z,81nm,31.0s						
PSA00	**Pilbara Seismi**	**45.89**	**252**	P	**P**	**10 01 11.2**	**-0.8**
KCP	**Kidapawan**	**46.09**	**293**	⇓*i*P	**P**	**10 01 14.0**	**+0.2**
JCJ	**Chichijima**	**46.32**	**329**	P	**P**	**10 01 14.5**	**-0.7**
	comp=Z,54nm,0.6s,baz=198,slow=20,SNR=1.6						
WBSI	**Waikabubak, Su**	**46.86**	**269**	P	**P**	**10 01 19.3**	**-0.4**
	comp=Z,976nmcomp=Z,36nm,1.2s						
BNSI	**Bone**	**47.13**	**276**	P	**P**	**10 01 21.9**	**+0.2**
	comp=Z,62nm,1.0s						
KAPI	**Kappang**	**47.34**	**275**	P	**P**	**10 01 23.4**	**0.0**
	comp=Z,16nm,0.7s,baz=99,slow=4.9,SNR=8.5						
SPSI	**Sidrap Palu**	**47.56**	**276**	P	**P**	**10 01 23.3**	**-1.7**
PLAI	**Plampang**	**48.56**	**269**	P	**P**	**10 01 31.9**	**-0.8**
	comp=Z,54nm,0.7s						
MPSI	**Mapaga**	**48.56**	**282**	P	**P**	**10 01 31.9**	**-0.8**
	comp=Z,38nm,0.9s						
AIN	**Ainahou**	**48.70**	**50**	P	**P**	**10 01 34.1**	**+0.2**
HMH	**Humu‘ula Sheep**	**48.83**	**50**	P	**P**	**10 01 35.2**	**+0.3**
NWAO	**Narrogin (SRO)**	**49.70**	**237**	P	**P**	**10 01 40.4**	**-0.7**
NWAO				pmax	pmax		
	comp=Z,42nm,1.3s						
NWAO	**Narrogin (SRO)**	**49.70**	**237**	P	**P**	**10 01 41.1**	**0.0**
NWAO	**Narrogin (SRO)**	**49.70**	**237**	P	**P**	**10 01 40.4**	**-0.7**
NWAO				IAmb	IAmb	10 01 41.9	
	comp=Z,42nm,1.2s						
MORW	**Morawa**	**50.05**	**243**	P	**P**	**10 01 43.4**	**-0.3**
KKM	**Kota Kinabalu**	**53.87**	**287**		**P**	**10 02 12.3**	**+0.1**
KKM				IAmb	IAmb	10 02 13.2	
	comp=Z,110nm,1.4s						
JOW	**Kunigami**	**54.42**	**316**	P	**P**	**10 02 16.3**	**+0.6**
	comp=Z,4.1nm,0.6s,baz=158,slow=13,SNR=15						
JOW	**Kunigami**	**54.42**	**316**	P	**P**	**10 02 16.4**	**+0.6**
JOW				IAmb	IAmb	10 02 17.4	
	comp=Z,30nm,0.7s						
PCJI	**Pacitan**	**55.10**	**269**	P	**P**	**10 02 20.7**	**-0.2**
	comp=Z,76nm,1.2s						
INU	**Inuyama**	**55.59**	**330**	IAmb	IAmb	10 02 25.1	
	comp=Z,115nm,1.7s						
UGM	**Wanagama**	**55.79**	**269**	P	**P**	**10 02 25.6**	**-0.2**
UGM				IAmb	IAmb	10 02 26.0	
	comp=Z,45nm,0.6s						
MJAR	**Matsushiro Arr**	**56.00**	**332**	P	**P**	**10 02 26.1**	**-0.7**
	comp=Z,39nm,0.7s,baz=156,slow=8.4,SNR=72						
MAJO	**Matsushiro**	**56.00**	**332**	P	**P**	**10 02 26.5**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,57nm,0.9s						
MAJO	**Matsushiro**	**56.00**	**332**	P	**P**	**10 02 26.5**	**-0.3**
MAJO					**P**	**10 02 26.8**	**0.0**
MAJO				IAmb	IAmb	10 02 27.2	
	comp=Z,57nm,0.9s						
MAT	**Matsushiro**	**56.00**	**332**	P	**P**	**10 02 26.4**	**-0.4**
MAT				*e*S	**S**	**10 09 54.2**	**-1.6**
MJB9	**Matsu-Tunnel**	**56.00**	**332**	P	**P**	**10 02 26.4**	**-0.4**
MJB9				IAmb	IAmb	10 02 27.2	
	comp=Z,56nm,0.9s						
SBUM	**Sibu**	**56.52**	**282**	P	**P**	**10 02 31.0**	**+0.1**
YULB	**Yu-li**	**57.37**	**309**	P	**P**	**10 02 36.2**	**-0.4**
YULB				IAmb	IAmb	10 02 37.9	
	comp=Z,82nm,1.8s						
TPUB	**Ta-pu**	**57.83**	**308**	P	**P**	**10 02 39.7**	**-0.2**
KSM	**Kuching**	**58.08**	**280**	P	**P**	**10 02 42.0**	**+0.2**
CISI	**Cisompet, Garu**	**58.49**	**269**	P	**P**	**10 02 43.8**	**-1.0**
	comp=Z,2μmcomp=Z,55nm,0.9s						
ERM	**Erimo**	**58.69**	**339**	P	**P**	**10 02 44.1**	**-1.3**
ERM				pmax	pmax		
	comp=Z,242nm,1.6s						
ERM	**Erimo**	**58.69**	**339**	P	**P**	**10 02 44.1**	**-1.3**
LEM	**Lembang**	**58.82**	**270**	P	**P**	**10 02 47.2**	**+0.1**
	comp=Z,57nm,0.6s,baz=53,slow=5.9,SNR=10						
ASAJ	**Asahikawa**	**60.74**	**340**	P	**P**	**10 03 00.1**	**+0.8**
	comp=Z,58nm,0.5s,baz=211,slow=6.9,SNR=85						
TJN	**Taejon**	**61.49**	**324**	⇑*i*P	**P**	**10 03 03.9**	**-0.6**
KSRS	**Korea Array**	**61.94**	**325**	P	**P**	**10 03 08.0**	**+0.5**
	comp=Z,12nm,0.8s,baz=140,slow=7.1,SNR=49						
KSRS				PcP	**PcP**	**10 03 47.0**	**+1.2**
	comp=Z,1.2nm,0.9s,baz=137,slow=5.2,SNR=5.4						
KSAR	**Wonju Array Be**	**61.95**	**325**	P	**P**	**10 03 07.8**	**+0.2**
KSAR	**Wonju Array Be**	**61.95**	**325**	P	**P**	**10 03 07.8**	**+0.2**
MDSI	**Maura Dua**	**62.63**	**271**	P	**P**	**10 03 11.4**	**-1.2**
YSS	**Yuzh-Sakhalins**	**63.21**	**342**	⇑*i*P	**P**	**10 03 16.7**	**+1.0**
YSS				*e*		10 03 51.7	
YSS				pmax	pmax		
	comp=Z,100nm,0.9s						
YSS	**Yuzh-Sakhalins**	**63.21**	**342**	P	**P**	**10 03 16.8**	**+1.2**
NJ2	**Nanjing**	**64.08**	**315**	*e*P	**P**	**10 03 22.5**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,45nm,0.7s						
VNDA	**Vanda**	**64.93**	**181**	P	**P**	**10 03 27.8**	**+1.4**
	comp=Z,7.7nm,0.8s,baz=345,slow=5.8,SNR=27						
VNDA	**Vanda**	**64.93**	**181**	P	**P**	**10 03 27.6**	**+1.2**
VNDA				IAmb	IAmb	10 03 28.8	
	comp=Z,50nm,1.7s						
USRK	**Ussuriysk Ar.**	**64.97**	**333**	P	**P**	**10 03 28.4**	**+1.2**
	comp=Z,33nm,1.0s,baz=142,slow=5.9,SNR=41						
USRK				PcP	**PcP**	**10 03 59.2**	**+1.1**
	comp=Z,7.6nm,0.8s,baz=114,slow=4.3,SNR=5.3						
USRK	**Ussuriysk Ar.**	**64.97**	**333**	P	**P**	**10 03 27.9**	**+0.7**
USRK						10 03 59.2	
USRK	**Ussuriysk Ar.**	**64.97**	**333**	P	**P**	**10 03 27.9**	**+0.7**
USA0B	**Ussuriysk Arra**	**64.97**	**333**	*c i*P	**P**	**10 03 28.0**	**+0.9**
RGRI	**Rengat**	**65.33**	**275**	P	P	10 03 45.4	+15
CASY	**Casey**	**65.39**	**202**	P	**P**	**10 03 29.8**	**+0.2**
CASY				IAmb	IAmb	10 03 30.4	
	comp=Z,17nm,0.5s						
KRJI	**Kerinci**	**65.78**	**273**	P	**P**	**10 03 28.9**	**-4.3**
PET	**Petropavlovsk**	**65.80**	**354**	⇑*i*P	**P**	**10 03 33.4**	**+1.1**
PET				pmax	pmax		
	comp=Z,24nm,1.2s						
PEA0B	**Petropavlovsk-**	**65.98**	**354**	⇓*i*P	**P**	**10 03 34.7**	**+1.2**
PEA0B	**Petropavlovsk-**	**65.98**	**354**	IAmb	IAmb	10 03 35.2	
	comp=Z,38nm,0.8s						
PETK	**Petropavlovsk-**	**65.98**	**354**	P	**P**	**10 03 34.1**	**+0.6**
	comp=Z,25nm,0.7s,baz=169,slow=6.8,SNR=58						
PETK	**Petropavlovsk-**	**65.98**	**354**	P	**P**	**10 03 34.2**	**+0.7**
MDJ	**Mudanjiang**	**66.38**	**332**	P	**P**	**10 03 37.3**	**+1.1**
MDJ				pmax	pmax		
	comp=Z,50nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,83nm,3.9s						
WHN	**Wuhan**	**66.44**	**311**	P	**PcP**	**10 04 05.0**	**+0.5**
ATKA	**Atka Island**	**66.57**	**12**	P	**P**	**10 03 37.2**	**0.0**
TYV	**Tymovskoe**	**66.74**	**343**	*e*P	**P**	**10 03 39.6**	**+1.3**
TYV				pmax	pmax		
	comp=Z,23nm,0.6s						
PDSI	**Padang**	**67.02**	**274**	P	**P**	**10 03 41.7**	**+0.8**
CN2	**Changchun**	**67.79**	**329**	*e*P	**P**	**10 03 45.3**	**+0.3**
CN2				PcP	**PcP**	**10 04 16.0**	**+6.1**
CN2				pmax	pmax		
	comp=Z,40nm,0.8s						
IPM	**Ipoh**	**67.81**	**280**	P	**P**	**10 03 46.0**	**+0.2**
GRNR	**Gornyy**	**68.59**	**340**	⇑*i*P	**P**	**10 03 51.5**	**+1.6**
GRNR				pmax	pmax		
	comp=Z,50nm,0.9s						
GRNR				MLR	MLR		
	comp=Z,50nm,13.0s						
KLR	**Kul'dur**	**69.05**	**336**	P	**P**	**10 03 53.9**	**+1.2**
	comp=Z,15nm,0.6s,baz=148,slow=3.7,SNR=84						
KLR	**Kul'dur**	**69.05**	**336**	*c i*P	**P**	**10 03 53.7**	**+1.0**
KLR				pmax	pmax		
	comp=Z,39nm,1.5s						
RPSI	**Rantau Prapat**	**69.38**	**278**	P	**P**	**10 03 55.0**	**-0.5**
RPSI				IAmb	IAmb	10 03 55.8	
	comp=Z,36nm,0.9s						
RPSI	**Rantau Prapat**	**69.38**	**278**	P	**P**	**10 03 54.9**	**-0.5**
PSI	**Prapat**	**69.40**	**278**	P	**P**	**10 03 54.9**	**-0.8**
	comp=Z,30nm,0.9s,baz=141,slow=2.2,SNR=12						
PSI	**Prapat**	**69.40**	**278**	P	**P**	**10 03 55.0**	**-0.8**
PSI				pmax	pmax		
	comp=Z,36nm,0.9s						
GSI	**Gunungsitoli**	**70.35**	**276**	P	**P**	**10 04 01.7**	**+0.3**
	comp=Z,320nm,0.7s						
GSI	**Gunungsitoli**	**70.35**	**276**	P	**P**	**10 04 01.5**	**+0.1**
GYA	**Guiyang**	**70.41**	**304**	⇓*i*P	**P**	**10 04 02.5**	**+0.8**
GYA				PcP	**PcP**	**10 04 22.0**	**+0.5**
GYA				S	**S**	**10 12 57.0**	**+2.3**
GYA				SKS	**SKSac**	**10 13 36.5**	**-3.6**
GYA				sS	sS	10 14 31.3	-1.0
GYA				SS	**SS**	**10 17 36.0**	**+4.8**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,130nm,5.9s						
BJI	**Beijing**	**70.55**	**321**	P	**P**	**10 04 02.5**	**+0.5**
BJI				pmax	pmax		
	comp=Z,26nm,1.2s						
TIY	**Taiyuan**	**71.63**	**317**	*e*P	**P**	**10 04 10.0**	**+1.3**
TIY				pmax	pmax		
	comp=Z,82nm,1.2s						
TIY				pmax	pmax		
	comp=Z,140nm,5.3s						
XAN	**Xi'an**	**72.17**	**312**	P	**P**	**10 04 12.5**	**+0.5**
XAN				pmax	pmax		
	comp=Z,35nm,0.8s						
XAN	**Xi'an**	**72.17**	**312**	IAmb	IAmb	10 04 13.3	
	comp=Z,30nm,0.7s						
MLSI	**Meulaboh, Aceh**	**72.20**	**279**	P	**P**	**10 04 12.5**	**0.0**
	comp=Z,139nm,1.0s						
SDPT	**Sand Point**	**73.02**	**19**	P	**P**	**10 04 16.1**	**-0.2**
KMI	**Kunming**	**73.08**	**301**	P	**P**	**10 04 19.5**	**+1.8**
KMI				sP	sP	10 05 35.0	-3.6
KMI				pmax	pmax		
	comp=Z,50nm,0.9s						
KMI				pmax	pmax		
	comp=Z,130nm,4.1s						
MA2	**Magadan**	**73.17**	**351**	⇑*i*P	**P**	**10 04 17.1**	**-0.1**
MA2				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC	**Hu-ho-hao-te**	**73.90**	**319**	*e*P	**P**	**10 04 22.8**	**+0.8**
HHC				pmax	pmax		
	comp=Z,75nm,1.1s						
HHC				pmax	pmax		
	comp=Z,290nm,6.6s						
CMAR	**Chiang Mai Arr**	**73.97**	**294**	P	**P**	**10 04 24.1**	**+1.4**
	comp=Z,20nm,0.9s,baz=120,slow=4.3,SNR=86						
CMAR	**Chiang Mai Arr**	**73.97**	**294**	P	**P**	**10 04 23.3**	**+0.6**
CMAR	**Chiang Mai Arr**	**73.97**	**294**	P	**P**	**10 04 23.3**	**+0.6**
CHTO	**Chiang Mai**	**74.08**	**294**	P	**P**	**10 04 24.2**	**+0.8**
CHTO				pmax	pmax		
	comp=Z,39nm,1.2s						
ZEA	**Zeya**	**74.33**	**337**	*e*P	**P**	**10 04 25.2**	**+1.2**
ZEA				pmax	pmax		
	comp=Z,31nm,0.8s						
CD2	**Chengdu**	**74.62**	**307**	⇑*i*P	**P**	**10 04 27.0**	**+0.7**
CD2				pmax	pmax		
	comp=Z,70nm,0.7s						
SEY	**Seymchan**	**76.20**	**353**	*ce*P	**P**	**10 04 35.0**	**+0.6**
LZH	**Lanzhou**	**76.81**	**312**	⇑P	**P**	**10 04 40.3**	**+1.6**
LZH				pP	pP	10 05 34.8	-0.6
LZH				sP	sP	10 05 59.0	-2.0
LZH				PP	**PP**	**10 07 38.5**	**+3.2**
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,93nm,5.0s						
QSPA	**South Pole Qui**	**77.37**	**180**	P	**P**	**10 04 41.9**	**+0.7**
QSPA				IAmb	IAmb	10 04 43.2	
	comp=Z,76nm,1.7s						
KDAK	**Kodiak Island**	**77.58**	**21**	P	**P**	**10 04 42.6**	**+0.4**
	comp=Z,28nm,0.9s,baz=234,slow=3.5,SNR=18						
KDAK	**Kodiak Island**	**77.58**	**21**	P	**P**	**10 04 42.9**	**+0.7**
KDAK				pmax	pmax		
	comp=Z,25nm,0.9s						
KDAK	**Kodiak Island**	**77.58**	**21**	P	**P**	**10 04 42.9**	**+0.7**
KDAK				IAmb	IAmb	10 04 43.7	
	comp=Z,25nm,0.8s						
GAMB	**Gambell**	**77.91**	**9**	IAmb	IAmb	10 04 45.6	
	comp=Z,35nm,1.0s						
SVW2	**Sparrevohn**	**79.22**	**17**	IAmb	IAmb	10 04 53.2	
	comp=Z,63nm,1.7s						
ANM	**Nome**	**79.77**	**12**	IAmb	IAmb	10 04 56.3	
	comp=Z,69nm,1.6s						
YAK	**Yakutsk**	**80.00**	**343**	*e*P	**P**	**10 04 55.6**	**+0.4**
YAK				*e**PP	**pP**	**10 05 57.5**	**+4.8**
YAK				*e*S	**S**	**10 14 37.1**	**-1.2**
YAK				*e*		10 14 57.5	
YAK				*e*SS	**SS**	**10 19 56.3**	**+1.8**
YAK				*e*SSS	SSS	10 23 12.8	
YAK				pmax	pmax		
	comp=Z,51nm,0.7s						
YAK				pmax	pmax		
	comp=N,27nm,1.1s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.0s						
YAK				smax	smax		
	comp=E,53nm,3.2s						
YAK				smax	smax		
	comp=N,43nm,3.2s						
ULN	**Ulaanbaatar**	**80.37**	**324**	*c i*P	**P**	**10 04 58.6**	**+0.8**
ULN				pmax	pmax		
	comp=Z,28nm,1.1s						
ULN	**Ulaanbaatar**	**80.37**	**324**	P	**P**	**10 04 58.6**	**+0.8**
ULN				IAmb	IAmb	10 04 59.7	
	comp=Z,45nm,1.2s						
BILL	**Bilibino**	**80.47**	**360**	*c i*P	**P**	**10 04 58.1**	**+0.5**
BILL				pmax	pmax		
	comp=Z,52nm,0.9s						
BILL	**Bilibino**	**80.47**	**360**	P	**P**	**10 04 58.2**	**+0.5**
SONM	**Songino Array**	**80.73**	**323**	P	**P**	**10 05 00.3**	**+0.6**
	comp=Z,7.6nm,0.7s,baz=142,slow=4.8,SNR=49						
SONM	**Songino Array**	**80.73**	**323**	P	**P**	**10 05 00.0**	**+0.3**
SONM				pmax	pmax		
	comp=Z,13nm,1.0s						
SONM	**Songino Array**	**80.73**	**323**	P	**P**	**10 05 00.0**	**+0.3**
SUA	**Susitna One**	**80.98**	**19**	IAmb	IAmb	10 05 01.7	
	comp=Z,20nm,0.8s						
MID	**Middleton Isla**	**81.02**	**22**	P	**P**	**10 05 00.9**	**+0.2**
MID				pmax	pmax		
	comp=Z,75nm,0.7s						
MID	**Middleton Isla**	**81.02**	**22**	P	**P**	**10 05 00.8**	**+0.2**
GTA	**Gaotai**	**81.12**	**314**	*e*P	**P**	**10 05 03.0**	**+1.1**
GTA				pmax	pmax		
	comp=Z,24nm,1.0s						
PMR	**Palmer**	**81.60**	**20**	IAmb	IAmb	10 05 05.0	
	comp=Z,47nm,1.0s						
GHO	**Glory Hole Cre**	**81.80**	**19**	IAmb	IAmb	10 05 06.5	
	comp=Z,49nm,1.1s						
EYAK	**Cordova Ski Ar**	**82.01**	**21**	IAmb	IAmb	10 05 07.5	
	comp=Z,62nm,1.3s						
RAGM	**Ragged Mountai**	**82.29**	**22**	IAmb	IAmb	10 05 09.2	
	comp=Z,39nm,1.1s						
KTH	**Kantishna Hill**	**82.50**	**18**	IAmb	IAmb	10 05 08.9	
	comp=Z,25nm,0.8s						
BOD	**Bodaibo**	**82.54**	**334**	*e*P	**P**	**10 05 08.7**	**0.0**
BOD				pmax	pmax		
	comp=Z,25nm,1.6s						
TRF	**Thorofare Moun**	**82.61**	**18**	P	**P**	**10 05 09.0**	**-0.2**
TRF				IAmb	IAmb	10 05 10.4	
	comp=Z,39nm,1.0s						
HOPS	**Hopland Field**	**82.76**	**48**	P	**P**	**10 05 11.1**	**+0.8**
TGL	**Tana Glacier**	**83.21**	**22**	IAmb	IAmb	10 05 13.8	
	comp=Z,52nm,0.9s						
MCK	**McKinley**	**83.23**	**18**	IAmb	IAmb	10 05 13.3	
	comp=Z,40nm,0.8s						
DHY	**Denali Highway**	**83.24**	**19**	IAmb	IAmb	10 05 13.4	
	comp=Z,30nm,0.6s						
VRDI	**Verde Repeater**	**83.30**	**22**	IAmb	IAmb	10 05 14.1	
	comp=Z,28nm,0.8s						
GLB	**Gilahina Butte**	**83.31**	**21**	IAmb	IAmb	10 05 14.1	
	comp=Z,41nm,0.8s						
RDOG	**Red Dog Mine**	**83.32**	**11**	IAmb	IAmb	10 05 14.7	
	comp=Z,38nm,0.7s						
DIB	**Dawson Inlet,**	**83.33**	**32**	IAmb	IAmb	10 05 14.5	
	comp=Z,45nm,0.8s						
O02D	**Mt. Diablo Mer**	**83.41**	**46**	P	**P**	**10 05 14.8**	**+1.1**
	baz=248,SNR=5.7						
MCARA	**McCarthy VSAT**	**83.56**	**22**	IAmb	IAmb	10 05 15.5	
	comp=Z,36nm,1.0s						
MOBC	**Moresby Island**	**83.56**	**32**	P	**P**	**10 05 14.0**	**-0.1**
MOBC				IAmb	IAmb	10 05 16.0	
	comp=Z,45nm,0.8s						
BALM	**Baldy**	**83.58**	**22**	IAmb	IAmb	10 05 15.5	
	comp=Z,45nm,0.9s						
IMAR	**Indian Mountai**	**83.61**	**15**	P	**P**	**10 05 14.8**	**+0.8**
MLY	**Manley**	**83.67**	**17**	P	**P**	**10 05 14.6**	**+0.2**
MLY				IAmb	IAmb	10 05 15.8	
	comp=Z,51nm,1.3s						
MAW	**Mawson**	**83.75**	**202**	P	**P**	**10 05 15.5**	**+0.7**
	comp=Z,7.1nm,0.7s,baz=108,slow=6.4,SNR=12						
MAW	**Mawson**	**83.75**	**202**	P	**P**	**10 05 16.0**	**+1.2**
PCA	**Pinnacle**	**83.77**	**24**	P	**P**	**10 05 15.3**	**+0.3**
ZAK	**Zakamensk**	**83.77**	**325**	*e*P	**P**	**10 05 14.9**	**-0.4**
N02D	**Trinity Center**	**83.78**	**46**	P	**P**	**10 05 16.8**	**+1.3**
	baz=248,SNR=5.2						
K02D	**Willamette Mer**	**83.79**	**44**	P	**P**	**10 05 16.5**	**+0.9**
	baz=247						
J01E	**Myrtle Point**	**83.79**	**43**	P	**P**	**10 05 16.6**	**+1.1**
	baz=246						
M02C	**Callahan**	**83.83**	**45**	P	**P**	**10 05 16.8**	**+1.0**
	baz=247						
BARN	**Barnard Glacie**	**83.84**	**22**	P	**P**	**10 05 15.8**	**+0.2**
SIT	**Sitka**	**84.04**	**28**	IAmb	IAmb	10 05 17.9	
	comp=Z,16nm,0.8s						
YBH	**Yreka Blue Hor**	**84.06**	**45**	P	**P**	**10 05 18.2**	**+1.2**
	comp=Z,13nm,0.8s,baz=107,slow=0.5,SNR=19						
YBH	**Yreka Blue Hor**	**84.06**	**45**	IAmb	IAmb	10 05 19.3	
	comp=Z,17nm,0.9s						
O03E	**Paynes Creek**	**84.16**	**47**	P	**P**	**10 05 18.0**	**+0.6**
	baz=248,SNR=7.2						
TLY	**Talaya**	**84.18**	**326**	P	**P**	**10 05 17.8**	**+0.6**
	comp=Z,22nm,0.6s,baz=186,slow=3.0,SNR=21						
TLY	**Talaya**	**84.18**	**326**	*c i*P	**P**	**10 05 17.6**	**+0.3**
TLY				pmax	pmax		
	comp=Z,34nm,1.0s						

TLY	Talaya	84.18	326	P	P	10 05 17.9	+0.6
TLY				IAmb	IAmb	10 05 18.7	
	comp=Z,35nm,0.7s						
HUMO	Hull Mountain	84.23	44	IAmb	IAmb	10 05 20.1	
	comp=Z,24nm,1.0s						
AFDM	Forest Hills D	84.26	48	IAmb	IAmb	10 05 19.7	
	comp=Z,33nm,1.3s						
HDA	Harding Lake	84.33	18	P	P	10 05 18.1	+0.4
	baz=225						
MENT	Mentasta	84.35	20	IAmb	IAmb	10 05 19.6	
	comp=Z,22nm,0.8s						
TCOL	CIGO, UAF Yank	84.39	18	P	P	10 05 17.9	0.0
	baz=224						
COLA	College	84.39	18	P	P	10 05 17.3	-0.6
COLA				pmax	pmax		
	comp=Z,102nm,0.9s						
COLA	College	84.39	18	P	P	10 05 17.3	-0.6
I03D	Drain, OR	84.39	43	P	P	10 05 19.5	+1.0
	baz=247						
L04D	Klamath Falls	84.53	45	P	P	10 05 20.2	+0.9
	baz=248						
ARVC	Arvin	84.54	52	P	P	10 05 20.0	+0.6
	baz=251						
VES	Vestal, Richgr	84.59	52	P	P	10 05 20.2	+0.7
	baz=250						
ILAR	Eielson Array	84.60	18	P	P	10 05 18.8	-0.3
	comp=Z,56nm,0.7s,baz=247,slow=5.0,SNR=522						
ILAR				PKKP	PKKPdf	10 23 25.5	+2.5
	comp=Z,0.3nm,0.5s,baz=333,slow=1.9,SNR=6.3						
ILAR	Eielson Array	84.60	18	P	P	10 05 19.0	0.0
ILAR	Eielson Array	84.60	18	P	P	10 05 19.0	0.0
M04C	Macdoel	84.69	45	P	P	10 05 21.0	+0.8
	baz=248,SNR=6.1						
POKR	Poker Plat Res	84.69	18	P	P	10 05 19.0	-0.4
	baz=224						
COR	Corvallis	84.78	42	P	P	10 05 21.4	+1.1
COR				pmax	pmax		
	comp=Z,173nm,1.5s						
COR	Corvallis	84.78	42	P	P	10 05 21.4	+1.1
ISA	Isabella, Lake	85.00	52	P	P	10 05 22.4	+0.6
	baz=251,SNR=7.4						
G03D	McMinnville, O	85.05	42	P	P	10 05 22.6	+0.9
	baz=247						
J04D	Umpqua Nationa	85.05	44	P	P	10 05 22.6	+0.6
	baz=248						
I04A	Tendick Farm,	85.06	43	P	P	10 05 22.5	+0.6
	baz=248						
K04D	Chiloquin, OR	85.06	45	P	P	10 05 22.7	+0.7
	baz=248						
WRAK	Wrangell Islan	85.07	29	IAmb	IAmb	10 05 23.1	
	comp=Z,21nm,0.7s						
BCAR	Beaver Creek A	85.10	21	P	P	10 05 21.7	+0.1
BESE	Bessie Mountai	85.10	26	P	P	10 05 22.4	+0.7
BESE				IAmb	IAmb	10 05 24.3	
	comp=Z,25nm,1.1s						
EDW2	Edwards Air Fo	85.11	53	P	P	10 05 23.3	+0.9
	baz=251,SNR=10						
H04D	Lebanon	85.12	42	P	P	10 05 23.1	+1.0
	baz=247						
JIS	Juneau Island	85.14	27	IAmb	IAmb	10 05 23.5	
	comp=Z,12nm,0.6s						
BFSC	Mount Baldy Ra	85.17	54	P	P	10 05 23.3	+0.6
	baz=251,SNR=5.9						
109C	Camp Elliot, M	85.18	55	P	P	10 05 23.3	+0.7
	baz=252						
MDPB	Devils Postpil	85.19	50	IAmb	IAmb	10 05 24.8	
	comp=Z,20nm,1.1s						
WAKR	Walker	85.23	49	P	P	10 05 22.9	-0.1
WAKR				IAmb	IAmb	10 05 25.3	
	comp=Z,31nm,1.2s						
PNTR	Pine Nut	85.31	48	P	P	10 05 23.2	-0.2
PNTR				IAmb	IAmb	10 05 25.5	
	comp=Z,22nm,1.1s						
MURC	Murrieta	85.33	54	P	P	10 05 24.1	+0.7
	baz=252						
MLAC	Mammoth, Mammo	85.38	50	P	P	10 05 24.6	+0.7
	baz=250						
SKAG	Skagway	85.39	26	IAmb	IAmb	10 05 25.6	
	comp=Z,37nm,1.5s						
COLD	Coldfoot	85.47	15	IAmb	IAmb	10 05 30.5	
	comp=Z,38nm,1.5s						
LRMC	Laurel Mtn Rad	85.55	52	P	P	10 05 25.3	+0.7
	baz=251						
H04A	Detroit Lake	85.55	42	IAmb	IAmb	10 05 25.8	
	comp=Z,34nm,1.2s						
CWC	Cottonwood Cre	85.55	51	P	P	10 05 25.5	+0.9
	baz=251						
F04D	Rainier, OR	85.56	41	P	P	10 05 25.2	+1.1
	baz=247						
TIN	Tinemaha, Big	85.64	51	P	P	10 05 26.0	+1.0
	baz=251						
MOY	Mondy	85.64	325	*e*P	P	10 05 25.1	+0.5
MOY				pmax	pmax		
	comp=Z,42nm,2.6s						
J05D	Fort Rock, OR	85.66	44	P	P	10 05 26.1	+1.1
	baz=248						
PAHR	Pah Rah Range	85.68	48	IAmb	IAmb	10 05 27.2	
	comp=Z,24nm,1.1s						
MONP2	Monument Peak	85.72	55	P	P	10 05 26.6	+1.0
	baz=252,SNR=6.9						
MOD	Modoc Plateau	85.80	46	IAmb	IAmb	10 05 27.5	
	comp=Z,35nm,1.4s						
F04A	Amboy	85.88	41	IAmb	IAmb	10 05 27.5	
	comp=Z,25nm,1.0s						
MPMC	Manual Prospec	85.88	52	P	P	10 05 27.1	+0.8
	baz=251,SNR=11						
IKP	In-Ko-Pah, Jac	85.90	55	P	P	10 05 27.3	+1.0
	baz=252						
PFO	Pinyon Flats O	85.92	54	P	P	10 05 27.3	+0.9
	comp=Z,5.8nm,0.8s,baz=288,slow=5.7,SNR=5.5						
PFO	Pinyon Flats O	85.92	54	⇓*i*P	P	10 05 27.4	+1.0
PFO				pmax	pmax		
	comp=Z,16nm,1.0s						
PFO	Pinyon Flats O	85.92	54	P	P	10 05 27.5	+1.0
PFO	Pinyon Flats O	85.92	54	P	P	10 05 27.2	+0.8
	baz=252						
XPFO	Pion Flat	85.92	54	P	P	10 05 27.5	+1.0
I05D	Terrebonne, OR	85.98	43	P	P	10 05 27.0	+0.7
	baz=248						
E04D	Cinebar	86.02	41	P	P	10 05 27.6	+1.2
	baz=247						
NVAR	Mina Array Bea	86.04	49	P	P	10 05 27.9	+0.8
	comp=Z,8.7nm,0.8s,baz=233,slow=8.4,SNR=46						
NVAR				PKKPbc	PKKPbc	10 23 27.0	0.0
	comp=Z,0.4nm,0.6s,baz=78,slow=3.0,SNR=5.2						
NVAR	Mina Array Bea	86.04	49	P	P	10 05 27.5	+0.5
PINE	Pine Mountain	86.04	44	IAmb	IAmb	10 05 29.1	
	comp=Z,25nm,0.9s						
D03D	Eldon	86.08	40	P	P	10 05 27.9	+1.2
	baz=247						
D04E	Lakebay	86.14	40	P	P	10 05 27.8	+0.9
	baz=247						
NV11	Mina Array Sit	86.15	49	IAmb	IAmb	10 05 29.4	
	comp=Z,18nm,1.1s						
GSC	Goldstone, Bar	86.17	53	P	P	10 05 28.5	+0.9
	baz=252,SNR=5.4						
SWSC	Sam W. Stewart	86.24	55	P	P	10 05 28.6	+0.8
	baz=252						
GRAC	Grapevine Rang	86.28	51	P	P	10 05 28.9	+0.9
	baz=251						
G05D	Wamic, OR	86.33	42	P	P	10 05 28.6	+0.6
	baz=248						
HEC	Hector,Ludlow	86.39	53	P	P	10 05 29.1	+0.5
	baz=252						
BELC	Belle Mtn. Jos	86.40	54	P	P	10 05 29.7	+0.9
	baz=252,SNR=12						
F05D	White Salmon	86.48	42	P	P	10 05 29.5	+0.8
	baz=248						
FURC	Furnace Creek,	86.49	52	P	P	10 05 29.9	+1.0
	baz=252,SNR=14						
ODAN	Odare	86.68	298	*e*P	P	10 05 30.7	+0.3
	comp=Z,124nm,0.7s						
TOLK	Toolik Lake Re	86.69	15	P	P	10 05 30.5	+1.2
	baz=222						
BC3	Big Chuckawall	86.73	55	P	P	10 05 31.4	+1.1
	baz=253,SNR=9.5						
SHOC	Shoshone, Teco	86.77	52	P	P	10 05 31.1	+0.7
	baz=252,SNR=7.4						
A04D	Lummi Island	86.78	39	P	P	10 05 31.5	+1.5
	baz=247						
TUQ	Turquoise Moun	86.89	53	P	P	10 05 31.9	+0.8
	baz=252,SNR=6.3						
GMRC	Granite Mounta	86.90	54	P	P	10 05 31.8	+0.6
	baz=252,SNR=10						
B05A	Bryant	86.98	39	P	P	10 05 32.1	+1.1
	baz=247						
GLA	Glamis	87.05	55	IAmb	IAmb	10 05 34.4	
	comp=Z,42nm,0.9s						
GLA	Glamis	87.05	55	P	P	10 05 33.2	+1.4
	baz=253,SNR=12						
TPNV	Topopah Spring	87.11	51	P	P	10 05 32.8	+0.7
	baz=252,SNR=10						
I07A	Izee	87.12	44	IAmb	IAmb	10 05 34.1	
	comp=Z,21nm,0.9s						
IRM	Iron Mountain	87.12	54	P	P	10 05 33.1	+0.9
	baz=253,SNR=20						
BMAR	Burnt Mountain	87.14	17	P	P	10 05 32.4	+1.0
WVOR	Wild Horse Val	87.14	46	IAmb	IAmb	10 05 34.3	
	comp=Z,26nm,1.2s						
DLBC	Dease Lake	87.18	28	P	P	10 05 31.9	0.0
	comp=Z,9.0nm,1.1s,baz=231,slow=9.5,SNR=9.7						
RAMN	Ramite	87.38	298	*e*P	P	10 05 34.0	+0.2
	comp=Z,45nm,0.6s						
LTY	Liberty	87.49	40	IAmb	IAmb	10 05 35.2	
	comp=Z,21nm,1.1s						
Y12C	Blythe	87.50	55	P	P	10 05 35.0	+1.2
	baz=253,SNR=13						
J08A	Circle Bar Ran	87.57	45	IAmb	IAmb	10 05 36.1	
	comp=Z,19nm,0.7s						
C06D	Leavenworth	87.60	40	P	P	10 05 35.5	+1.5
	baz=248						
NEE2	Needles Airpor	87.72	54	P	P	10 05 35.8	+0.9
	baz=253						
E07A	Sunnyside	87.76	41	IAmb	IAmb	10 05 36.8	
	comp=Z,23nm,0.8s						
SHPR	Sheep Range	87.81	52	IAmb	IAmb	10 05 37.9	
	comp=Z,23nm,1.1s						
113A	Mohawk Valley,	87.83	56	IAmb	IAmb	10 05 37.7	
	comp=Z,17nm,0.8s						
G08A	Pilot Rock	87.90	43	IAmb	IAmb	10 05 37.6	
	comp=Z,19nm,1.0s						
TIXI	Tiksi	87.91	349*c*	*i*P	P	10 05 34.7	-0.2
TIXI				pmax	pmax		
	comp=Z,11nm,1.0s						
TIXI	Tiksi	87.91	349	P	P	10 05 34.9	0.0
HAWA	Hanford	87.91	42	IAmb	IAmb	10 05 37.6	
	comp=Z,19nm,0.8s						
JIRN	Jiri	87.92	299	*e*P	P	10 05 36.7	+0.2
	comp=Z,65nm,0.7s						
PDMCI	Parker Dam,Lak	87.96	54	P	P	10 05 37.1	+1.1
	baz=253,SNR=20						
R11A	Troy Canyon, C	88.04	50	P	P	10 05 37.3	+0.7
	baz=252,SNR=19						
PALK	Pallekele	88.09	278	P	P	10 05 37.8	+0.7
	comp=Z,4.7nm,0.5s,baz=108,slow=2.5,SNR=6.0						
GUN	Gumba	88.25	299	*e*P	P	10 05 38.1	+0.1
	comp=Z,65nm,0.7s						
214A	Organ Pipe Nat	88.38	57	P	P	10 05 39.6	+1.5
	baz=254,SNR=25						
PKI	Pulchoki	88.57	299	*e*P	P	10 05 39.3	-0.2
	comp=Z,73nm,0.7s						
PKIN	Phulchoki	88.58	299	*e*P	P	10 05 39.3	-0.1
	comp=Z,47nm,0.5s						
B08A	Colville Reser	88.73	40	IAmb	IAmb	10 05 41.0	
	comp=Z,24nm,1.2s						
KKN	Kakani	88.73	299	*e*P	P	10 05 40.2	+0.1
	comp=Z,63nm,0.7s						
DMN	Daman	88.84	298	*e*P	P	10 05 40.9	+0.3
	comp=Z,116nm,0.7s						
EPYK	Eagle Plains	88.86	20	P	P	10 05 40.4	+0.9
	baz=234						
BMO	Blue Mountains	88.86	44	IAmb	IAmb	10 05 41.9	
	comp=Z,22nm,1.1s						
ELK	Elko	89.02	48	P	P	10 05 42.2	+1.0
	comp=Z,19nm,0.9s,baz=267,slow=5.5,SNR=68						
ELK	Elko	89.02	48	IAmb	IAmb	10 05 43.2	
	comp=Z,22nm,0.9s						
F10A	Beach Ranch, E	89.28	43	IAmb	IAmb	10 05 43.7	
	comp=Z,33nm,1.0s						
GKN	Gorkha	89.34	299	*e*P	P	10 05 42.5	-0.3
NEW	Newport	90.09	40	P	P	10 05 46.3	+0.6
	comp=Z,16nm,0.9s,baz=239,slow=4.2,SNR=30						
NEW	Newport	90.09	40	IAmb	IAmb	10 05 47.3	
	comp=Z,19nm,0.9s						
NEW	Newport	90.09	40	P	P	10 05 46.5	+0.8
	baz=251						
TUC	Tucson	90.13	57	P	P	10 05 48.0	+1.7
TUC				pmax	pmax		
	comp=Z,21nm,0.9s						
TUC	Tucson	90.13	57	P	P	10 05 48.0	+1.7
TUC				IAmb	IAmb	10 05 48.9	
	comp=Z,22nm,0.8s						
TUC	Tucson	90.13	57	P	P	10 05 47.6	+1.3
	baz=255						
X16A	Lo Mia Camp, P	90.14	55	IAmb	IAmb	10 05 49.5	
	comp=Z,23nm,0.9s						
DANN	Dangsing	90.17	299	*e*P	P	10 05 46.1	-0.8
	comp=Z,48nm,0.9s						
WUAZ	Wupatki	90.48	54	IAmb	IAmb	10 05 50.4	
	comp=Z,24nm,0.8s						
WUAZ	Wupatki	90.48	54	P	P	10 05 49.2	+1.2
	baz=255						
DUG	Dugway, Tooele	90.63	49	P	P	10 05 49.4	+0.8
	baz=254						
SYO	Syowa Base	90.65	197	⇑*e*P	P	10 05 45.6	-2.3
SYO	Syowa Base	90.65	197	⇓*i*PcP	P	10 05 46.7	-1.2
INK	Inuvik	90.97	19	P	P	10 05 48.7	-0.6
	comp=Z,2.1nm,0.5s,baz=254,slow=5.1,SNR=11						
INK				PKKPbc	PKKPdf	10 23 12.0	+0.1
	comp=Z,0.5nm,0.7s,baz=105,slow=1.4,SNR=6.2						
WMQ	Urumqi	91.16	315	*e*P	P	10 05 51.8	+1.0
WMQ				pmax	pmax		
	comp=Z,22nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,160nm,5.1s						
X18A	Snowflake	91.36	55	IAmb	IAmb	10 05 54.5	
	comp=Z,22nm,0.9s						
W18A	Petrified Fore	91.67	55	P	P	10 05 54.3	+0.7
	baz=256						
MSO	Missoula	91.70	42	P	P	10 05 53.6	+0.2
	baz=254						
DLMT	Dillon	92.19	44	IAmb	IAmb	10 05 57.7	
	comp=Z,14nm,0.9s						
121A	Cookes Peak, D	92.64	57	P	P	10 05 59.2	+1.1
	baz=257						
PV05	Paradox Valley	92.88	52	IAmb	IAmb	10 06 01.2	
	comp=Z,10.0nm,0.8s						
DGZ	Jazzator, Alta	92.97	320*c*	*i*P	P	10 05 59.2	+0.1
DGZ				pmax	pmax		
	comp=Z,20nm,0.9s						
PV14	Lion Creek, Pa	93.01	51	IAmb	IAmb	10 06 01.4	
	comp=Z,13nm,0.9s						
PV19	Morning Glory	93.03	52	IAmb	IAmb	10 06 01.5	
	comp=Z,16nm,1.1s						
PV17	East Wray Mesa	93.04	52	IAmb	IAmb	10 06 02.3	
	comp=Z,10nm,0.7s						
PV20	West Nyswonger	93.05	52	IAmb	IAmb	10 06 01.5	
	comp=Z,10nm,0.8s						
PV18	Skein Mesa, Pa	93.07	52	IAmb	IAmb	10 06 01.5	
	comp=Z,9.9nm,1.0s						
PV21	Cone Mtn., Par	93.09	51	IAmb	IAmb	10 06 01.9	
	comp=Z,16nm,0.7s						
PV04	Paradox Valley	93.11	52	IAmb	IAmb	10 06 01.9	
	comp=Z,16nm,0.9s						
MVCO	Mesa Verde	93.14	53	P	P	10 06 01.1	+0.8
	baz=257						
PV12	Saucer Basin,	93.17	52	IAmb	IAmb	10 06 02.1	
	comp=Z,18nm,0.9s						
PV22	Blue Mesa, Par	93.23	51	IAmb	IAmb	10 06 02.3	
	comp=Z,16nm,0.7s						
PV01	Paradox Valley	93.30	52	IAmb	IAmb	10 06 02.6	
	comp=Z,10nm,0.9s						
PV07	Paradox Valley	93.31	52	IAmb	IAmb	10 06 02.7	
	comp=Z,14nm,0.7s						
H17A	Grant Village	93.33	45	P	P	10 06 03.4	+2.3
	baz=256						
PV15	Paradox Valley	93.42	52	IAmb	IAmb	10 06 04.2	
	comp=Z,18nm,1.3s						
BW06	Boulder Array	93.65	47	P	P	10 06 03.7	+1.1
	baz=256						
PDAR	Pinedale Array	93.65	47	P	P	10 06 02.4	-0.2
	comp=Z,1.1nm,0.6s,baz=185,slow=3.4,SNR=14						
PDAR				PKKPbc	PKKPdf	10 23 06.2	-0.5
	comp=Z,0.7nm,0.7s,baz=99,slow=4.2,SNR=8.5						
O20A	White River Ci	94.01	50	P	P	10 06 04.8	+0.6
	baz=257						
ANMO	Albuquerque	94.25	55	P	P	10 06 05.9	+0.5
ANMO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ANMO	Albuquerque	94.25	55	P	P	10 06 05.9	+0.5
ANMO	Albuquerque	94.25	55	P	P	10 06 06.1	+0.6
	baz=258						
MNTX	Cornudas Mount	94.45	59	P	P	10 06 06.6	+0.4
	baz=258						
C36M	Paulatuk	94.49	19	IAmb	IAmb	10 06 05.2	
	comp=Z,10nm,0.8s						
C36M	Paulatuk	94.49	19	P	P	10 06 04.9	-0.5
	baz=246						
S22A	4UR Ranch, Cre	94.56	52	P	P	10 06 07.8	+0.9
	baz=258						
EGMT	Eagleton	94.76	42	P	P	10 06 08.8	+1.5
	baz=257						
NVL	N'lazarevskaya	95.08	188	*e*P	P	10 06 07.9	-0.4
NVL				pmax	pmax		
	comp=Z,11nm,0.9s						
A36M	Sachs Harbour	95.23	17	P	P	10 06 09.1	+0.3
	baz=245						
TXAR	Lajitas Array	95.42	61	P	P	10 06 11.6	+0.8
	comp=Z,3.5nm,0.7s,baz=224,slow=5.4,SNR=37						
TXAR				PKKPbc	PKKPbc	10 23 02.8	+0.1
	comp=Z,0.1nm,0.4s,baz=104,slow=5.3,SNR=4.2						
TXAR	Lajitas Array	95.42	61	P	P	10 06 11.3	+0.5
TXAR	Lajitas Array	95.42	61	P	P	10 06 11.2	+0.5
SDCO	Great Sand Dun	95.59	53	P	P	10 06 12.1	+0.5
	baz=258						
MKAR	Makanchi Array	95.59	317	P	P	10 06 11.4	+0.3
	comp=Z,14nm,0.5s,baz=90,slow=6.3,SNR=175						
MKAR				PP	PP	10 10 03.2	-2.7
	comp=Z,1.3nm,0.9s,baz=98,slow=8.8,SNR=5.9						
MKAR				PKKPbc	PKKPbc	10 23 00.4	-2.5
	comp=Z,1.3nm,0.6s,baz=270,slow=1.2,SNR=10.0						
MKAR	Makanchi Array	95.59	317	P	P	10 06 10.6	-0.5
SNAA	Sanae	95.61	183	P	P	10 06 10.6	-0.2
SNAA	Sanae	95.61	183	⇓*i*P	P	10 06 10.9	+0.1
SNAA	Sanae	95.61	183	P	P	10 06 10.6	-0.2
SNAA				IAmb	IAmb	10 06 12.3	
	comp=Z,16nm,1.2s						
ZAA0	Zalesovo Array	95.62	324	IAmb	IAmb	10 06 11.2	
	comp=Z,12nm,0.8s						
ZALV	Zalesovo Beam	95.62	324	P	P	10 06 10.5	-0.4
	comp=Z,11nm,0.7s,baz=119,slow=4.2,SNR=40						
ZALV	Zalesovo Beam	95.62	324	P	P	10 06 09.9	-1.1
YKA	Yellowknife Ar	95.78	27	P	P	10 06 10.7	-0.7
	comp=Z,5.8nm,0.6s,baz=252,slow=4.5,SNR=84						
YKA				PP	PP	10 10 00.6	-6.2
	comp=Z,0.4nm,0.9s,baz=244,slow=8.0,SNR=4.0						
YKA				PKKPbc	PKKPbc	10 22 59.9	-3.1
	comp=Z,0.5nm,0.6s,baz=85,slow=3.0,SNR=7.8						
MAKZ	Makanchi	95.80	317	P	P	10 06 12.5	+0.5
MAKZ				pmax	pmax		
	comp=Z,24nm,1.0s						
MAKZ	Makanchi	95.80	317	P	P	10 06 12.5	+0.5
N23A	Red Feather La	95.88	50	P	P	10 06 13.6	+0.8
	baz=258						
ISCO	Idaho Springs	95.91	51	P	P	10 06 13.9	+0.8
	baz=259						
Q24A	Divide	96.10	52	P	P	10 06 15.0	+1.1
	baz=259						
VNA3	Neumayer Olymp	96.28	181	P	P	10 06 13.5	-0.3
VNA2	Neumayer--Watz	96.55	182	P	P	10 06 15.3	+0.3
	baz=185,slow=5.0						
MSTX	Muleshoe	97.05	57	P	Pdif	10 06 18.1	0.0
	baz=260						
RSSD	Black Hills	97.87	47	P	Pdif	10 06 22.3	+0.7
	baz=260						
KSCO	Kaye Shedlock’	98.04	52	P	Pdif	10 06 23.0	+0.6
	baz=260						
NRIK	Noril'sk	98.08	339	P	P	10 06 21.6	-0.1
	comp=Z,12nm,0.7s,baz=107,slow=4.0,SNR=16						
NRIK	Noril'sk	98.08	339	*i* P	P	10 06 21.4	-0.3
AMTX	Amarillo	98.09	56	P	Pdif	10 06 23.1	+0.4
	baz=260						
KURK	Kurchatov	98.71	320	⇑*i*P	Pdif	10 06 24.2	-0.7
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KURK	Kurchatov	98.71	320		PP	10 10 24.4	-5.1
KURK	Kurchatov	98.71	320	P	Pdif	10 06 24.2	-0.8
KURK				IAmb	IAmb	10 06 24.7	
	comp=Z,3.3nm,0.7s						
KURBB	Kurchatov Arra	98.75	320	P	Pdif	10 06 24.4	-0.8
	comp=Z,2.3nm,0.6s,baz=98,slow=4.3,SNR=38						
KURBB				PP	PP	10 10 24.4	-5.5
	comp=Z,0.9nm,0.9s,baz=100,slow=8.0,SNR=3.5						
KSH	Kashi	98.79	309	P	P	10 06 29.0	+3.2
KSH				SKS	SKSac	10 16 41.8	+1.4
KSH				S	ScS	10 17 32.5	-1.7
KSH				sS	sS	10 19 09.5	-6.4
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,230nm,4.3s						
KSH				LR	LR		
	comp=Z,89nm,11.1s						
KSH				LR	LR		
	comp=Z,190nm,14.1s						
KSH				LR	LR		
	comp=Z,70nm,12.4s						
833A	Chaparral WMA,	98.93	63	P	P	10 06 26.6	+0.1
	baz=260						
JCT	Junction City	98.93	61	P	Pdif	10 06 26.2	-0.2
	baz=261						
BVAR	Borovoye Array	104.02	322	Pdiff	Pdif	10 06 48.0	-0.5
	comp=Z,2.0nm,0.9s,baz=97,slow=6.0,SNR=7.8						
BVAR				PP	PKiKP	10 11 03.1	-1.4
	comp=Z,0.9nm,0.6s,baz=84,slow=5.9,SNR=4.4						
ULM	Lac du Bonnet	104.08	41	Pdiff	Pdif	10 06 47.6	-1.2
	comp=Z,1.1nm,0.7s,baz=247,slow=3.4,SNR=3.0						
RES	Resolute Bay	104.23	16	PKKPbc	PKKPbc	10 22 36.0	-3.2
	comp=Z,0.9nm,0.7s,baz=176,slow=5.9,SNR=5.3						
AKTO	Aktyubinsk	111.80	319	PKiKP	PKiKP	10 11 19.3	+0.1
	comp=Z,1.3nm,0.6s,baz=120,slow=5.8,SNR=3.7						
AKTO				PKKPbc	PKKPbc	10 22 12.6	-2.0
	comp=Z,0.3nm,0.3s,baz=250,slow=5.1,SNR=5.7						
OPO	Ambohidratompo	113.14	243	PKiKP	PKiKP	10 11 23.2	+0.3
	comp=Z,2.6nm,0.6s,baz=281,slow=16,SNR=2.3						
ARCES	ARCESS Array B	118.20	346	PKP	PKPdf	10 11 30.9	0.0
	comp=Z,12nm,0.6s,baz=68,slow=1.3,SNR=62						
ARCES				PKKPbc	PKKPbc	10 21 49.8	-3.4
	comp=Z,2.4nm,0.9s,baz=256,slow=3.6,SNR=5.5						
ARE0	ARCESS Array S	118.20	346	*e*PKPdf	PKiKP	10 11 31.0	+0.1
LPAZ	La Paz	118.29	116	PKP	PKPdf	10 11 33.4	0.0
	comp=Z,2.4nm,0.6s,baz=0.8,slow=0.9,SNR=12						
KLMR	Klimovskoe	118.76	334	*e*PKIKP	PKPdf	10 11 29.3	-2.9
KLMR				pmax	pmax		
	comp=Z,20nm,1.8s						
KLMR	Klimovskoe	118.76	334	*e*PKPdf	PKPdf	10 11 29.3	-2.9
KLMR				AMP		10 11 35.2	
	comp=Z,20nm,1.8s						
KTK1	Kautokeino	119.14	346	*e*PKPdf	PKiKP	10 11 32.8	0.0
TRO	Tromso	119.61	348	*e*PKPdf	PKPdf	10 11 33.5	0.0
SCHQ	Schefferville	120.65	33	PKP	PKPdf	10 11 35.5	-0.5
	comp=Z,3.2nm,0.9s,baz=225,slow=7.1,SNR=2.4						
VRH	Novokhopyorsk	121.64	323	*e*PKIKP	PKPdf	10 11 37.3	-0.7
VRH				pmax	pmax		
	comp=Z,20nm,0.9s						
STEI	Steigen	121.78	348	*e*PKPdf	PKPdf	10 11 37.5	-0.3
SCO	Scoresbysund	121.92	4	PKIKP	PKPdf	10 11 37.1	-0.9
SCO	Scoresbysund	121.92	4		PKPdf	10 11 37.1	-0.9
CPUP	Villa Florida	121.97	132	PKP	PKPdf	10 11 39.2	-0.2
	comp=Z,3.6nm,0.7s,baz=346,slow=2.6,SNR=6.8						
GNI	Garni	122.69	310	PKP	PKiKP	10 11 40.8	-0.1
	comp=Z,7.1nm,0.7s,baz=268,slow=3.6,SNR=4.1						
LPSR	Galich'ya Gora	122.71	325	*e*PKIKP	PKPdf	10 11 40.1	+0.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEI	Tsey	122.73	313	*i* PKIKP	PKPdf	10 11 40.8	+0.1
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
OBN	Obninsk	122.85	329	*i* PKIKP	PKPdf	10 11 39.0	-1.2
OBN				*i*		10 13 21.8	
OBN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
VSR	Storozhevoye	123.13	324	*e*PKIKP	PKPdf	10 11 39.1	-1.8
VSR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KBZ	Khabaz	123.20	314	PKP	PKPdf	10 11 41.3	+0.1
	comp=Z,2.4nm,0.8s,baz=351,slow=13,SNR=4.5						
SDV	Santo Domingo	123.24	88		PKPdf	10 11 41.5	-0.9
KONS	Konsvik	123.44	348	*e*PKPdf	PKiKP	10 11 41.4	+0.1
MOR8	Moi Rana	123.44	347	*e*PKPdf	PKPdf	10 11 40.6	-0.4
FINES	FINESS Array B	123.74	339	PKP	PKiKP	10 11 41.9	-0.1
	comp=Z,7.6nm,0.8s,baz=90,slow=3.8,SNR=18						
FINES				PKKPbc	PKKPbc	10 21 31.0	-1.3
	comp=Z,2.0nm,0.7s,baz=186,slow=7.7,SNR=4.5						
FINES	FINESS Array B	123.74	339	PKIKP	PKPdf	10 11 41.6	-0.1
FINES	FINESS Array B	123.74	339		PKPdf	10 11 41.6	-0.1
SUR	Sutherland	124.83	215	PKP	PKiKP	10 11 45.9	+0.4
	comp=Z,8.5nm,0.7s,baz=94,slow=2.9,SNR=11						
BOSA	Boshof	124.84	221	PKP	PKiKP	10 11 45.4	-0.1
	comp=Z,9.6nm,0.7s,baz=134,slow=1.7,SNR=19						
BOSA				PKKPbc	PKKPbc	10 21 24.8	-2.6
	comp=Z,1.5nm,0.6s,baz=318,slow=3.8,SNR=5.3						

NSS	Namsos	125.38	347	ePKPdf	PKiKP	10 11 45.1	0.0
VSU	Vasula	125.46	336	⇑iPKIKP	PKiKP	10 11 45.6	+0.1
SAML	Samuel	125.63	111	PKIKP	PKPdf	10 11 46.4	-0.4
SAML	Samuel	125.63	111		PKPdf	10 11 46.4	-0.4
LBTB	Lobatse	126.99	225	PKP	PKPdf	10 11 49.3	0.0
	comp=Z,6.3nm,0.7s,baz=168,slow=3.7,SNR=9.0						
MATP	Matopo	127.68	232	PKhKP	PKPdf	10 11 47.5	-3.2
	comp=Z,8.4nm,1.0s,baz=148,slow=1.4,SNR=13						
MOL	Molde	128.05	348	ePKPdf	PKiKP	10 11 50.6	0.0
NB2	NORSAR Subarra	128.58	345	PKPdf	PKPdf	10 11 51.1	0.0
	comp=Z,5.8nm,1.0s,baz=31,slow=1.9						
NB2	NORSAR Subarra	128.58	345	PKPdf	PKPdf	10 11 51.1	0.0
	baz=31,slow=1.9						
NOA	NORSAR Array B	128.58	345	PKP	PKiKP	10 11 51.7	0.0
	comp=Z,3.8nm,0.6s,baz=31,slow=2.0,SNR=20						
HFS	Hagfors	128.69	343	PKP	PKPdf	10 11 50.8	-0.4
	comp=Z,4.3nm,0.6s,baz=111,slow=3.2,SNR=6.2						
NC602	NORSAR Array S	128.76	345	ePKPdf	PKPdf	10 11 51.7	+0.3
AKASG	Malin Array Be	128.92	327	PKP	PKPdf	10 11 52.0	+0.1
	comp=Z,0.7nm,0.4s,baz=44,slow=2.1,SNR=10.0						
SKAR	Skarslia	129.58	347	ePKPdf	PKPdf	10 11 53.3	+0.3
LSZ	Lusaka	130.78	237	PKP	PKiKP	10 11 57.3	-0.3
	comp=Z,4.8nm,0.6s,baz=78,slow=2.8,SNR=12						
BRTR	Keskin Array B	131.02	312	PKP	PKPdf	10 11 56.5	0.0
	comp=Z,1.2nm,0.7s,baz=129,slow=3.8,SNR=6.4						
BRTR				PP	PP	10 14 15.0	-1.4
	comp=Z,0.4nm,0.5s,baz=120,slow=4.4,SNR=4.5						
BRTR	Keskin Array B	131.02	312	PKIKP	PKPdf	10 11 55.8	-0.7
BRTR	Keskin Array B	131.02	312		PKPdf	10 11 55.8	-0.7
MMAI	Mount Meron Ar	131.57	303	PKP	PKiKP	10 11 58.7	+0.1
	comp=Z,0.6nm,0.3s,baz=94,slow=12,SNR=2.4						
EIL	Elat	132.63	299	PKP	PKPdf	10 12 00.2	+0.6
	comp=Z,6.1nm,0.8s,baz=62,slow=4.2,SNR=4.3						
BURAR	Bucovina Array	132.82	325		PKiKP	10 12 01.6	+0.7
MLR	Muntele Rosu	133.58	322	PKP	PKiKP	10 12 02.0	-0.4
	comp=Z,2.5nm,0.6s,baz=228,slow=5.1,SNR=4.2						
MLR	Muntele Rosu	133.58	322	PKIKP	PKiKP	10 12 02.0	-0.4
BDFB	Brasilia	135.31	128	PKP	PKPdf	10 12 05.3	+0.1
	comp=Z,5.1nm,0.6s,baz=162,slow=4.3,SNR=7.9						
BDFB	Brasilia	135.31	128		PKPdf	10 12 05.6	+0.4
BRG	Berggiesshubel	136.06	336	ePKP	PKPdf	10 12 05.9	+0.5
	comp=Z,6.7nm,0.9s						
BRG	Berggiesshubel	136.06	336	ePKIKP	PKPdf	10 12 05.9	+0.5
BRG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CLL	Collm	136.09	337	i PKPdf	PKiKP	10 12 07.3	+0.1
	comp=Z,8.0nm,0.8s						
CLL	Collm	136.09	337	i PKIKP	PKiKP	10 12 07.3	+0.1
CLL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TSUM	Tsumeb	136.37	224	PKP	PKPdf	10 12 07.7	+0.6
	comp=Z,4.3nm,0.7s,baz=101,slow=4.6,SNR=6.6						
TSUM	Tsumeb	136.37	224		PKPdf	10 12 07.8	+0.7
MODS	Modra-Piesok	136.45	331	ePKIKP	PKPdf	10 12 06.1	-0.2
MODS	Modra-Piesok	136.45	331	ePKP	PKPdf	10 12 06.1	-0.2
KHC	Kasperske Hory	137.55	334	ePKP	PKPdf	10 12 07.5	-0.8
KHC	Kasperske Hory	137.55	334	ePKIKP	PKPdf	10 12 07.5	-0.8
GERES	GERESS Array B	137.72	334	PKhKP	PKPpre	10 11 59.7	
	comp=Z,0.7nm,0.5s,baz=346,slow=1.7,SNR=6.2						
GERES				PKP	PKPdf	10 12 09.5	+0.8
	comp=Z,2.4nm,0.7s,baz=96,slow=1.3,SNR=14						
GRF	Grafenberg Arr	138.07	337	ePKP	PKiKP	10 12 11.9	+0.6
	baz=37,slow=1.3						
ARSA	Arzberg	138.08	331	i PKPdf	PKPdf	10 12 08.2	-1.2
	comp=Z,1.7nm,0.5s						
MOA	Molln	138.22	333	i PKiKP	PKPdf	10 12 10.0	+0.4
	comp=Z,3.3nm,0.7s						
SOKA	Soboth	138.72	331	i PKPdf	PKPdf	10 12 10.3	-0.3
	comp=Z,5.1nm,1.0s						
OBKA	Obir	139.07	331	i PKiKP	PKPdf	10 12 12.1	+0.8
	comp=Z,2.1nm,0.7s						
MEM	Membach	139.11	342	PKPdf	PKPdf	10 12 11.9	+0.8
MEM				PKiKP	PKiKP	10 12 14.2	+0.9
KBA	Koelnbreinsper	139.21	332	i PKPdf	PKPdf	10 12 08.3	-3.3
	comp=Z,2.2nm,0.6s						
MYKA	Terra Mystica	139.41	332	i PKPdf	PKPdf	10 12 12.1	+0.3
	comp=Z,3.1nm,0.9s						
BMRD	Maredsous	139.76	342	PKPdf	PKPdf	10 12 13.0	+0.7
BMRD				PKiKP	PKiKP	10 12 15.0	+0.3
WATA	Walderalm	139.79	334	i PKPdf	PKPdf	10 12 10.4	-2.2
	comp=Z,8.6nm,1.3s						
WTTA	Wattenberg	139.82	334	i PKPdf	PKPdf	10 12 10.0	-2.7
	comp=Z,4.4nm,0.5s						
ABTA	Abfaltersbach	139.83	333	i PKPdf	PKPdf	10 12 11.7	-0.9
	comp=Z,7.1nm,0.7s						
WLF	Walferdange	139.89	341	PKiKP	PKiKP	10 12 16.4	+1.4
MOTA	Moosalm	139.98	335	i PKPdf	PKPdf	10 12 09.0	-4.0
	comp=Z,3.0nm,0.6s						
DOU	Dourbes	139.99	342	PKPdf	PKPdf	10 12 13.4	+0.7
DOU				PKiKP	PKiKP	10 12 16.0	+0.8
DOU				pPKP	pPKPdf	10 13 11.9	-2.2
RETA	Reutte	140.01	335	i PKPdf	PKPdf	10 12 10.1	-2.8
	comp=Z,2.2nm,0.5s						
SQTA	Sankt Quirin	140.04	334	i PKPdf	PKPdf	10 12 09.1	-3.9
	comp=Z,4.0nm,0.6s						
FETA	Feichten	140.40	335	i PKPdf	PKPdf	10 12 10.3	-3.4
	comp=Z,4.8nm,1.0s						
DAVA	Damuels	140.53	336	i PKPdf	PKPdf	10 12 09.7	-4.3
	comp=Z,6.8nm,0.8s						
DAVOX	Davos/Dischmat	140.94	335	PKhKP	PKPdf	10 12 08.2	-6.6
	comp=Z,4.0nm,0.5s,baz=145,slow=4.0,SNR=7.7						
BNI	Bardonecchia	143.64	336	PKIKP	PKPbc	10 12 17.8	+0.1
BNI	Bardonecchia	143.64	336		PKPbc	10 12 17.8	+0.1
CEL	Celeste	143.86	320		PKPbc	10 12 18.1	-0.3
KEST	Kesra	149.49	323	PKPbc	PKiKP	10 12 35.3	0.0
	comp=Z,27nm,0.9s,baz=309,slow=4.2,SNR=17						
PBRG	Braganca	150.46	351	ePKPbc	PKiKP	10 12 37.2	+0.2
PGAV	Gavieira, Arco	150.51	353	ePKPbc	PKiKP	10 12 37.5	+0.3
RCBR	Riachuelo	150.68	127	PKPbc	PKPbc	10 12 37.2	-0.5
	baz=80,slow=11						
PCAB	Cabril	150.73	353	ePKPbc	PKiKP	10 12 37.9	+0.3
PVRL	Vila Real	151.12	352	ePKPdf	PKPdf	10 12 30.6	-1.3
PVRL	Vila Real	151.12	352	ePKPbc	PKiKP	10 12 39.2	+0.8
PVRL	Vila Real	151.12	352	ePKPab	PKPab	10 12 48.6	+2.2
MVO	Moncorvo	151.13	351	ePKPbc	PKiKP	10 12 39.1	+0.6
PVIS	Viseu	151.69	352	ePKPbc	PKiKP	10 12 40.3	+0.7
PVIS	Viseu	151.69	352	ePKPab	PKPab	10 12 51.1	+2.2
MTE	Manteigas	151.95	351	ePKPbc	PKiKP	10 12 41.0	+0.8
PAB	San Pablo	152.16	346	PKIKP	PKiKP	10 12 41.4	+0.7
PAB	San Pablo	152.16	346		PKiKP	10 12 41.4	+0.7
COI	Coimbra	152.26	353	ePKPbc	PKiKP	10 12 41.3	+0.6
PCAS	Casmilo, Conde	152.42	353	ePKPbc	PKiKP	10 12 41.6	+0.5
PCAS	Casmilo, Conde	152.42	353	ePKPab	PKPab	10 12 54.2	+2.3
PCBR	Castelo Branco	152.49	351	ePKPbc	PKiKP	10 12 41.9	+0.7
PCBR	Castelo Branco	152.49	351	ePKPab	PKPab	10 12 54.1	+1.9
PTOM	Tomar	152.84	352	ePKPbc	PKiKP	10 12 42.9	+1.0
PTOM	Tomar	152.84	352	ePKPab	PKPab	10 12 56.1	+2.5
PMRV	Marv??o	152.88	351	ePKPbc	PKiKP	10 12 42.9	+0.8
PSBE	So Bento	152.99	353	ePKPab	PKPab	10 12 56.8	+2.5
PMTG	Montargil	153.36	352	ePKPbc	PKiKP	10 12 43.6	+0.6
PMTG	Montargil	153.36	352	ePKPab	PKPab	10 12 58.4	+2.6
PBEJ	Beja	154.33	351	ePKPab	PKPab	10 13 01.8	+1.8
PNCL	Nicolau / Gran	154.34	352	ePKPab	PKPab	10 13 02.5	+2.5
MESJ	Messejana	154.56	351	ePKPab	PKPab	10 13 03.0	+2.0
PCVE	Castro Verde	154.74	351	ePKPab	PKPab	10 13 03.6	+1.8
PVAQ	Vaqueiros	154.91	350	ePKPab	PKPab	10 13 04.4	+1.9
PBDV	Barranco-do-Ve	155.10	351	ePKPdf	PKPdf	10 12 35.8	-1.9
PBDV	Barranco-do-Ve	155.10	351	ePKPab	PKPab	10 13 01.6	-1.8
MORF	Marmelete	155.15	352	ePKPab	PKPab	10 13 05.6	+2.0
MDT	Midelt	158.54	341	PKPab	PKPab	10 13 19.7	+1.3
	comp=Z,5.6nm,0.7s,baz=19,slow=4.2,SNR=10						
KIC	Kosan Boka	169.82	233	ePKIKP	PKPdf	10 12 52.0	-0.8
	comp=Z,16nm,0.9s						
KIC	Kosan Boka	169.82	233		PKPdf	10 12 52.0	-0.8
LIC	Lamto	169.96	231	ePKIKP	PKPdf	10 12 51.6	-1.3
	comp=Z,26nm,1.0s						
DBIC	Dimbokro	170.10	234	PKP	PKPdf	10 12 51.4	-1.5
	comp=Z,2.9nm,0.7s,baz=242,slow=3.2,SNR=5.3						
DBIC				PKPab	PKPab	10 14 09.1	-0.6
	comp=Z,1.6nm,0.5s,baz=118,slow=5.1,SNR=4.4						
TIC	Toumodi	170.21	233	ePKIKP	PKPdf	10 12 52.2	-0.8

ROM 31 09:55:06.8±0.1, 43°.500N±0°.002×12°.398E±0°.003, h7^{km}, ML0.4/2, Error ellipse: s-maj=0.2km s-min=0.1km az=337.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATPI	Pietralunga -	0.05	177	P	Pg	09 55 08.5	+0.2
ATPI				S	Sg	09 55 09.7	+0.3
ATPI				AML	AML		
	comp=E,76µm,0.5s						
ATPI				AML	AML		
	comp=N,83µm,0.3s						
ATPI				AML	AML		
	comp=E,76µm,0.5s						
ATPI				AML	AML		
	comp=N,83µm,0.3s						
PIEI	Pieia	0.11	70	P	Pg	09 55 09.4	+0.3
PIEI				S	Sg	09 55 11.6	+0.8
PIEI				AML	AML		
	comp=N,18µm,0.8s						
PIEI				AML	AML		
	comp=E,37µm,0.1s						
PIEI				AML	AML		
	comp=N,18µm,0.8s						
BADI	Badiali	0.11	275	P	Pg	09 55 09.6	+0.4
BADI				S	Sg	09 55 11.7	+0.8
ATVO	AVT- Monte Val	0.12	177	P	Pg	09 55 09.8	+0.4
ATVO				S	Sg	09 55 11.9	+0.8
ATVO				AML	AML		
	comp=E,40µm,0.1s						
ATVO				AML	AML		
	comp=N,28µm,0.3s						

MAN 31 10:05:14.6, 5°.66N×126°.36E, h109^{km}, mb4.4, ML3.3, MS3.1, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	0.78	304	eP	Pn	10 05 34.1	+0.4
DDMP				eS	Sn	10 05 50.6	+2.7
MATI	Mati	1.28	355	eP	Pn	10 05 39.4	+0.6
MATI				eS	Sn	10 05 58.1	+1.0
KCP	Kidapawan	1.84	317	⇓eP	Pn	10 05 47.2	+1.6
KCP				i S	Sn	10 06 11.6	+2.3
SKMP	Bagumbayan, Su	2.00	295	eP	Pn	10 05 48.2	+0.6
SKMP				eS	Sn	10 06 12.7	0.0

NEIC 31 10:05:19.6±1.0, 52°.84N±0°.07×162°.90W±0°.09, h29^{km}±9^{km}, Error ellipse: s-maj=12.1km s-min=5.7km az=149.0

AEIC 31 10:05:20±1.0, 52°.84N±0°.03×162°.92W±0°.07, h20^{km}±2^{km}, ML3.3, Error ellipse: s-maj=8.6km s-min=3.7km az=239.0

IDC 31 10:05:22.3±6.5, 52°.66N×161°.61W, h0^{km}, mb3.8/2, mb1 3.9/4, mb1mx3.3/74, mbtmp3.5/4, ML2.7/2, Error ellipse: s-maj=114.9km s-min=34.9km az=92.0

ISC 31 10:05:20.1±1.1, 52°.81N±0°.09×162°.83W±0°.05, h35^{km}, n32, σ1^{s}.59/41, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WESP	Westdahl Peak	2.03	327		Pn	10 05 51.4	-0.5
WESP					Sn	10 06 15.2	-0.9
FALS	False Pass	2.08	351		Pn	10 05 52.0	-0.5
FALS					Sn	10 06 17.5	+0.3
AKSA	Akutan Strait	2.17	309		Pn	10 05 53.0	-0.7
AKSA					Sn	10 06 18.6	-0.9
AKSA	Akutan Strait	2.17	309		Pn	10 05 52.9	-0.9
AKSA					Sn	10 06 17.8	-1.7
AKUT	Akutan	2.21	308	Pn	Pn	10 05 51.5	-2.7
AHB	Akutan Harbor	2.22	307		Pn	10 05 53.7	-0.7
AKBBA	Akutan Broad B	2.26	306		Pn	10 05 54.5	-0.5
AKBBA					Sn	10 06 21.5	-0.2
ZRO	Akutan Zero	2.28	306		Pn	10 05 54.8	-0.5
AKMO	Akutan Morgan	2.30	305		Pn	10 05 54.9	-0.6
AKMO					Sn	10 06 21.8	-0.7
HSB	Akutan Spr's B	2.31	308		Pn	10 05 54.9	-0.7
DT1	Dutton Round H	2.33	8		Pn	10 05 55.0	-0.9
DT1					Sn	10 06 23.2	-0.1
UNV	Unalaska Valle	2.44	297		Pn	10 05 56.1	-1.3
UNV					Sn	10 06 23.2	-2.7
MNAT	Makushin Natee	2.55	297		Pn	10 05 57.9	-1.1
MNAT					Sn	10 06 27.1	-1.7
MTBL	Makushin Table	2.58	298		Pn	10 06 00.5	+1.0
MSW	Makushin Switc	2.62	297		Pn	10 05 59.0	-0.9
MGOD	Makushin Gods	2.62	294		Pn	10 05 58.9	-1.1
MGOD					Sn	10 06 28.4	-2.2
CNBA	Chernabura Isl	2.78	42	Pn	Pn	10 06 01.7	-0.5
SDPT	Sand Point	2.90	28		Pn	10 06 03.6	-0.1
SDPT					Sn	10 06 37.5	+0.2
NIKH	Nikolski High	3.66	275		Pn	10 06 13.9	-0.2
CHGN	Chignik	4.34	34	Pn	Pn	10 06 24.2	+0.7
CAHL	Cahill	6.78	36		Pn	10 06 57.2	+0.2
OHAK	Old Harbor	7.04	47	Pn	Pn	10 06 59.8	-0.8
KDAK	Kodiak Island	7.68	45	Pn	Pn	10 07 08.1	-1.2
	0.2nm,0.3s,baz=215,slow=5.8,SNR=11						
KDAK				Sn	Sn	10 08 28.3	-6.7
	0.3nm,0.3s,baz=303,slow=23,SNR=9.3						
SVW2	Sparrevohn	9.20	23	Pn	Pn	10 07 31.7	+1.5
SUA	Susitna One	10.86	32	Pn	Pn	10 07 53.4	+0.4
HIN	Hinchinbrook I	11.75	43	Pn	Pn	10 08 04.2	-0.9
ILAR	Eielson Array	14.50	28	Pn	Pn	10 08 44.6	+2.0
	0.0nm,0.3s,baz=224,slow=12,SNR=1.2						
NVAR	Mina Array Bea	33.71	97	P	P	10 11 58.6	+0.5
	0.5nm,0.7s,baz=297,slow=7.9,SNR=4.7						
H11S1	WAKE ISLAND Hy	41.65	226	T	T	10 59 30.5	
	baz=25,slow=76,SNR=7.6						
H11S2	WAKE ISLAND Hy	41.66	226	T	T	10 59 18.4	
	baz=25,slow=76,SNR=5.6						
H11S3	WAKE ISLAND Hy	41.67	226	T	T	10 59 25.5	
	baz=25,slow=76,SNR=3.2						
TXAR	Lajitas Array	48.77	95	P	P	10 14 03.0	+1.5
	1.2nm,0.6s,baz=304,slow=5.8,SNR=17						

NNC 31 10:06:27.8±4.6, 37°.73N×71°.87E, h229^{km}±64^{km}, mb2.5, mpv3.6, Error ellipse: s-maj=48.7km s-min=28.5km az=14.0

ISC 31 10:06:26.1±3.4, 37°.6N±0°.2×71°.8E±0°.1, h200^{km}, n8, σ1^{s}.24/11, 2C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	4.76	18	P	Pn	10 07 37.5	-0.3
	SNR=33						
UCH	Uchtor	5.08	24	P	Pn	10 07 41.3	-0.5
	SNR=21						
KZA	Kyzart	5.21	30	P	Pn	10 07 42.0	-1.6
	SNR=5.1						
EKS2	Erkin-Say	5.28	16	P	Pn	10 07 45.2	+1.1
	SNR=8.7						
AAK	Ala-Archa	5.44	22	P	Pn	10 07 46.4	+0.2
	SNR=9.4						
AAK	Ala-Archa	5.44	22	⇑P	Pn	10 07 46.3	0.0
	2.8nm,0.4s						
AAK				⇑S	Sn	10 08 50.6	+0.9
	22nm,0.9s						
KK31	Karatay Array	5.58	351	⇓P	Pn	10 07 48.1	+0.4
	4.0nm,0.4s,baz=164,slow=13,SNR=50						
KK31				S	Sn	10 08 53.2	+0.8
	25nm,0.6s,baz=168,slow=22,SNR=30						
AB31	Akbulak array	14.45	327	P	P	10 09 43.4	+0.8
	0.9nm,0.4s,baz=143,slow=11,SNR=37						
AB31				S	S	10 12 19.3	-2.5
	0.5nm,0.3s,baz=149,slow=23,SNR=8.8						

IDC 31 10:27:54.6±1.9, 35°.81N×141°.74E, h0^{km}, mb3.3/3, mb1 3.4/5, mb1mx3.2/39, mbtmp3.3/5, ML2.9/2, MS3.1/2, Ms1 3.1/2, ms1mx2.4/26, Error ellipse: s-maj=43.7km s-min=25.9km az=59.0

JMA 31 10:27:59.0±0.3, 35°.79N×141°.42E, h24^{km}±3^{km}, M3.0

ISC 31 10:27:57.5±1.3, 35°.84N±0°.05×141°.52E±0°.08, h26^{km}, n23, σ1^{s}.26/17, mb3.4/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	0.56	256	P	Pb	10 28 08.4	-0.3
CHOJ				S	Sb	10 28 15.3	-1.1
JIHU	Itakohorinouch	0.82	279	P	Pb	10 28 13.8	+0.7
JSMT	Sammumatsuo	0.90	257	P	Pb	10 28 14.8	+0.4
JHYU	Hitachinakayam	0.91	303	P	Pb	10 28 15.8	+1.2
JHO	Hitachi	1.09	315	P	Pb	10 28 18.4	+0.7
JYT	Yasato	1.14	290	P	Pb	10 28 18.0	-0.6
BSO1	Boso 1	1.27	201	P	Pb	10 28 19.7	-0.7
BSO4	Boso 4	1.29	229	P	Pb	10 28 21.1	+0.1
BSO3	Boso 3	1.33	219	P	Pb	10 28 21.4	-0.2
MJAR	Matsushiro Arr	2.77	286	Pn	Pn	10 28 42.1	+1.9
	0.7nm,0.3s,baz=92,slow=9.4,SNR=18						
MJAR				Sn	Sb	10 29 17.6	-2.3
	0.2nm,0.3s,baz=93,slow=35,SNR=5.1						
MAT	Matsushiro	2.77	286	P	Pb	10 28 44.0	-2.4
MAT				S	Sn	10 29 13.3	+0.4
ASAJ	Asahikawa	8.30	5	Pn	Pn	10 29 55.2	-1.0
	0.3nm,0.3s,baz=66,slow=20,SNR=1.5						
KSRS	Korea Array	11.04	282	LR	LR	10 34 42.1	
	comp=Z,23nm,20.2s,baz=185,slow=36						
H11N2	WAKE ISLAND Hy	27.48	119	T	T	11 02 51.8	
	baz=311,slow=75,SNR=6.1						
H11N1	WAKE ISLAND Hy	27.49	119	T	T	11 02 46.0	
	baz=311,slow=75,SNR=7.4						
H11N3	WAKE ISLAND Hy	27.50	119	T	T	11 02 47.0	
	baz=311,slow=75,SNR=6.0						
H11S1	WAKE ISLAND Hy	28.15	121	T	T	11 03 34.5	
	baz=312,slow=75,SNR=12						
H11S3	WAKE ISLAND Hy	28.15	121	T	T	11 03 33.0	
	baz=312,slow=75,SNR=9.9						
H11S2	WAKE ISLAND Hy	28.17	121	T	T	11 03 34.7	
	baz=312,slow=75,SNR=9.9						
MKAR	Makanchi Array	44.83	303	P	P	10 36 12.8	+3.5
	0.4nm,0.8s,baz=84,slow=12,SNR=3.4						
WRA	Warramunga Arr	55.90	188	P	P	10 37 34.4	+1.3
	0.1nm,0.3s,baz=1.3,slow=7.5,SNR=1.8						
ASAR	Alice Springs	59.62	188	P	P	10 37 59.6	+0.3
	0.2nm,0.7s,baz=8.8,slow=6.7,SNR=2.4						
KIRV	Kirov	61.25	323	LR	LR	11 08 57.2	
	comp=Z,48nm,18.5s,baz=358,slow=40						

WEL 31 10:28:39.9, 36°S±15°×17°9E±1°1, h33^{km}, M4.2/29, ML4.5/29, MLv4.2/29, Error ellipse: s-maj=0.0km s-min=0.0km az=4.2

IDC 31 10:28:41.7±6.1, 36°.90S×179°.83E, h130^{km}±53^{km}, mb3.2/2, mb1 3.5/4, mb1mx3.2/31, mbtmp3.8/4, Error ellipse: s-maj=93.4km s-min=51.6km az=176.0

ISC 31 10:28:42.3±2.3, 36°.4S±0°.1×179°.4E±0°.1, h113^{km}±16^{km}, n96, σ1^{s}.30/106, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	1.47	214	P	Pn	10 29 07.7	-1.2
MXZ				S	Sn	10 29 29.2	+0.1
WMGZ	Waiomatatini S	1.65	207	P	Pn	10 29 12.2	+1.2
PKGZ	Pakihiroa	1.84	213	P	Pn	10 29 13.8	+0.4
HAZ	Te Kaha	1.88	221	P	Pn	10 29 12.4	-1.4
PUZ	Puketiti	1.93	207	P	Pn	10 29 15.4	+0.9
PUZ				S	Sn	10 29 40.6	+1.5
WIZ	White Island	2.09	235	P	Pn	10 29 14.7	-1.8
WIZ				S	Sn	10 29 39.8	-2.9
RUGZ	Raukumara Rang	2.09	219	P	Pn	10 29 16.4	-0.3
CNGZ	Carnagh Statio	2.31	203	P	Pn	10 29 20.6	+1.2
TKGZ	Te Karaka	2.40	209	P	Pn	10 29 20.9	+0.4
WHRZ	Whale Island	2.42	231	P	Pn	10 29 19.6	-1.2
WHRZ				S	Sn	10 29 50.7	+0.4
MWZ	Matawai	2.46	216	P	Pn	10 29 21.5	+0.3
MWZ				S	Sn	10 29 53.3	+2.1
URZ	Urewera	2.61	222	P	Pn	10 29 22.4	-0.8
	29nm,0.3s,baz=270,slow=3.2,SNR=238						
URZ				S	Sn	10 29 54.5	-0.2
	55nm,0.3s,baz=140,slow=23,SNR=17						
URZ	Urewera	2.61	222	S	Sn	10 29 55.0	+0.3
RAGZ	Rawiri	2.64	215	P	Pn	10 29 23.8	+0.1
RIGZ	Rimuhau	2.67	208	P	Pn	10 29 24.2	+0.1
RIGZ				S	Sn	10 29 58.6	+2.5
OPRZ	Ohinepanea	2.69	235	P	Pn	10 29 22.6	-1.6
OPRZ				S	Sn	10 29 54.8	-1.7
MARZ	Manawahe	2.69	232	P	Pn	10 29 23.4	-0.9
EDRZ	Edgecumbe	2.72	229	P	Pn	10 29 24.4	-0.3
PRGZ	Paritu Road	2.82	204	P	Pn	10 29 26.2	+0.2
TGRZ	Tauranga	2.83	240	P	Pn	10 29 24.5	-1.6
TGRZ				S	Sn	10 29 57.4	-2.3
SNGZ	Shannon Statio	2.90	213	P	Pn	10 29 27.4	+0.3
SNGZ				S	Sn	10 30 03.2	+1.5
MKRZ	Makatiti	2.91	231	P	Pn	10 29 27.9	+0.7
RTZ	Ruatahuna	2.94	219	P	Pn	10 29 27.1	-0.6
TARZ	Mount Tarawera	2.95	229	P	Pn	10 29 27.9	+0.2
OMRZ	Omania	2.95	233	P	Pn	10 29 27.2	-0.6
MUGZ	Murupara	2.95	223	P	Pn	10 29 27.0	-0.7
MUGZ				S	Sn	10 30 02.3	-0.5
KNZ	Kokohu	2.98	206	P	Pn	10 29 27.6	-0.4
KARZ	Kaharoa	2.99	235	P	Pn	10 29 27.3	-0.9
RRRZ	Republican Roa	3.01	228	P	Pn	10 29 29.9	+1.5
MHGZ	Mahia Peninsul	3.02	202	P	Pn	10 29 28.7	+0.1
HLRZ	Highlands Stat	3.05	231	P	Pn	10 29 29.0	0.0
UTU	Utuhina	3.11	233	P	Pn	10 29 30.8	+1.0
RAHZ	Arahi	3.13	214	P	Pn	10 29 30.1	0.0
HSRZ	Hossack Road	3.15	231	P	Pn	10 29 32.0	+1.6
HRRZ	Handcock Road	3.18	229	P	Pn	10 29 31.1	+0.4
PRRZ	Plateau Road	3.18	227	P	Pn	10 29 30.3	-0.4
MTHZ	Maungataniwha	3.19	218	P	Pn	10 29 30.3	-0.6
WHHZ	Waihua	3.20	211	P	Pn	10 29 31.0	+0.1
ALRZ	Allen Road	3.25	226	P	Pn	10 29 31.8	+0.1
GRRZ	Galatos Road	3.26	231	P	Pn	10 29 32.4	+0.5
WPRZ	Whakapapatarin	3.33	229	P	Pn	10 29 33.7	+0.9
MRHZ	Matea Rd	3.40	222	P	Pn	10 29 33.1	-0.6
NMHZ	Naumai	3.40	216	P	Pn	10 29 33.3	-0.4
ARHZ	Aropaoanui	3.45	212	P	Pn	10 29 34.0	-0.3
KUTZ	Kaahu Road	3.52	232	P	Pn	10 29 35.9	+0.6
WHTZ	Whakaora	3.55	228	P	Pn	10 29 37.4	+1.7
BKZ	Black Stump Fm	3.61	218	P	Pn	10 29 35.2	-1.2
HATZ	Hinemaiaia	3.62	225	P	Pn	10 29 35.9	-0.7
TLZ	Tolley Road	3.62	236	P	Pn	10 29 36.6	0.0
WATZ	Wairara	3.71	230	P	Pn	10 29 37.9	+0.1
MCHZ	McNeill Hill	3.73	213	P	Pn	10 29 37.1	-1.0
CKHZ	Cape Kidnapper	3.76	208	P	Pn	10 29 37.8	-0.6
RATZ	Rangitukua	3.79	227	P	Pn	10 29 39.0	+0.1
RITZ	Rihia Road	3.81	225	P	Pn	10 29 40.1	+0.9
KWHZ	Kaweka Forest	3.84	216	P	Pn	10 29 38.1	-1.5
KATZ	Kakaramea	3.91	227	P	Pn	10 29 41.2	+0.7
KAHZ	Kahuranaki	3.95	209	P	Pn	10 29 39.9	-1.1
KRVZ	Karewarewa	4.02	226	P	Pn	10 29 41.8	-0.2
KRHZ	Kereru	4.04	215	P	Pn	10 29 40.4	-1.9
WTVZ	West Tongariro	4.06	226	P	Pn	10 29 42.4	-0.1
BHHZ	Black Hill Sta	4.07	219	P	Pn	10 29 41.3	-1.3
NGZ	Ngauruhoe	4.09	225	P	Pn	10 29 42.3	-0.8
TWVZ	Taurewa	4.12	228	P	Pn	10 29 43.0	-0.4
TUVZ	Tukino	4.13	224	P	Pn	10 29 43.5	0.0
PXZ	Pawanui	4.16	207	P	Pn	10 29 41.9	-1.9
MOVZ	Moawhango	4.17	222	P	Pn	10 29 42.7	-1.3
WHVZ	Whangaehu Hut	4.17	224	P	Pn	10 29 44.7	+0.5
FWVZ	Far West T-bar	4.18	225	P	Pn	10 29 45.2	+1.0
HIZ	Hauiti	4.18	238	P	Pn	10 29 43.9	-0.1
TRVZ	Turoa	4.21	224	P	Pn	10 29 46.4	+1.7
MTVZ	Mangateitei	4.31	224	P	Pn	10 29 45.6	-0.2
PKVZ	Pokaka	4.32	226	P	Pn	10 29 46.8	+0.8
PNHZ	Pukenui	4.34	214	P	Pn	10 29 44.2	-2.1
WPHZ	Waipukurau	4.36	211	P	Pn	10 29 45.7	-0.8
PRHZ	Porangahau	4.45	208	P	Pn	10 29 45.8	-2.0
TSZ	Takapari Road	4.56	215	P	Pn	10 29 46.8	-2.4
VRZ	Vera Road	4.57	231	P	Pn	10 29 50.5	+1.2
DVHZ	Dannevirke	4.67	211	P	Pn	10 29 48.4	-2.2
ANWZ	Angora Road	4.68	208	P	Pn	10 29 48.8	-2.0
WAZ	Wanganui	4.84	224	P	Pn	10 29 53.1	+0.2
POWZ	Post Office Ro	4.92	214	P	Pn	10 29 52.8	-1.2
PRWZ	Pori Road	4.96	211	P	Pn	10 29 52.7	-1.9
DREZ	Durham Road	4.96	234	P	Pn	10 29 57.1	+2.5
LREZ	Lake Rotokare	4.99	230	P	Pn	10 29 54.9	-0.1
PKE	Pukeiti	5.11	235	P	Pn	10 29 58.6	+2.0
KHEZ	Kahui Hut	5.14	234	P	Pn	10 29 60.0	+2.9
CPWZ	Castlepoint	5.18	207	P	Pn	10 29 56.0	-1.5
TIWZ	Tintock	5.18	210	P	Pn	10 29 55.4	-2.2
NBEZ	Newall Road No	5.23	234	P	Pn	10 30 01.3	+3.2
MSWZ	Moikau Station	5.98	211	P	Pn	10 30 06.2	-2.2
BHW	Baring Head	6.14	213	P	Pn	10 30 08.9	-1.6
DUWZ	D'Urville Isla	6.15	222	P	Pn	10 30 08.6	-2.1
RPZ	Rata Peaks	9.72	218	P	Pn	10 30 53.9	-5.1
	0.5nm,0.3s,baz=82,slow=17,SNR=1.4						
RPZ				S	Sn	10 32 36.4	-10
	2.0nm,0.3s,baz=14,slow=20,SNR=7.7						
ASAR	Alice Springs	40.98	275	P	P	10 36 16.1	+1.8
	0.7nm,0.5s,baz=118,slow=8.0,SNR=4.6						
WRA	Warramunga Arr	42.52	280	P	P	10 36 27.3	+0.6
	0.4nm,0.5s,baz=121,slow=7.3,SNR=7.7						
FINES	FINESS Array B	149.77	335	PKPbc	PKiKP	10 48 17.4	-1.5
	0.8nm,0.5s,baz=78,slow=9.0,SNR=2.1						

ZUR 31 10:42:29.2, 46°.34N×7°.39E, h4^{km}±1^{km}, MLh1.1/8, 1C-1D, Error ellipse: s-maj=3.6km s-min=0.7km az=318.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SENIN	Lac Senin/Sane	0.07	294	⇓Pg	Pg	10 42 31.0	+0.2
	0.5nm,SNR=12						
SENIN				Sg	Sg	10 42 32.3	+0.4
SIOV	Sion-Valere	0.10	189	⇑Pg	Pg	10 42 31.5	+0.2

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              0.3nm,SNR=3.4
SIOV                                   Sg      Sg       10 42 33.0 +0.4
SIEB    Ecole de Borzu     0.11 112    Pg      Pg       10 42 31.7 +0.3
              0.3nm,SNR=3.1
LKBD    Leukerbad          0.17  73    Pg      Pg       10 42 32.9 +0.3
              0.2nm,SNR=4.3
LKBD                                   Pg      Pg       10 42 32.9 +0.3
LKBD                                   Sg      Sg       10 42 35.4 +0.5
GRYON   Gryon              0.21 246    Pg      Pg       10 42 33.3  0.0
              0.2nm,SNR=4.8
GRYON                                  Pg      Pg       10 42 33.3  0.0
GRYON                                  Sg      Sg       10 42 36.5 +0.4
LAUCH   Lauchernalp        0.28  73    Pg      Pg       10 42 34.9 +0.3
              0.1nm,SNR=2.3
LAUCH                                  Pg      Pg       10 42 34.9 +0.3
LAUCH                                  Sg      Sg       10 42 38.8 +0.5
EMBD    Embd, Matterta     0.33 111    Pg      Pg       10 42 35.8 +0.3
EMBD                                   Pg      Pg       10 42 35.8 +0.3
              0.1nm,SNR=2.0
EMBD                                   Sg      Sg       10 42 40.2 +0.2
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ROM 31 10:43:13.9±0.1**,43°.483N**±0°.004×**12°.397E**±0°.006**,**
h9^{km},ML1.1/10**,1C,Error ellipse: s-maj=0.5km**
s-min=0.3km az=271.0,Central Italy

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Code    Station Name        Δ°   AZ°     Phase ID             Time     Res
                                       Op      ISC          h  m  s    ISC
ATPI    Pietralunga -      0.03 173    P       Pg       10 43 15.8 +0.2
ATPI                                   S       Sg       10 43 16.7 -0.2
ATPI                                   AML     AML
              comp=E,564µm,0.5s
ATPI                                   AML     AML
              comp=N,560µm,0.1s
ATVO    AVT- Monte Val     0.10 176   ⇑P       Pg       10 43 17.1 +0.7
ATVO                                   S       Sg       10 43 19.3 +1.1
ATVO                                   AML     AML
              comp=N,196µm,0.7s
ATVO                                   AML     AML
              comp=E,312µm,1.3s
BADI    Badiali            0.11 284    P       Pg       10 43 17.0 +0.4
BADI                                   S       Sg       10 43 19.1 +0.6
BADI                                   AML     AML
              comp=E,210µm,0.1s
BADI                                   AML     AML
              comp=N,224µm,0.6s
PIEI    Pieia              0.11  62    P       Pg       10 43 17.1 +0.5
PIEI                                   S       Sg       10 43 19.5 +1.0
PIEI                                   AML     AML
              comp=E,323µm,0.2s
PIEI                                   AML     AML
              comp=N,264µm,0.3s
ATFO    Monte Foce - G     0.17 132    P       Pg       10 43 17.8 +0.2
ATFO                                   AML     AML
              comp=E,90µm,0.6s
ATFO                                   AML     AML
              comp=E,90µm,0.6s
ATFO                                   AML     AML
              comp=N,77µm,0.2s
NARO    Abbazia di Nar     0.18  46    P       Pg       10 43 18.2 +0.4
NARO                                   S       Sg       10 43 21.6 +1.2
NARO                                   AML     AML
              comp=E,75µm,0.4s
NARO                                   AML     AML
              comp=N,72µm,1.2s
NARO                                   AML     AML
              comp=E,75µm,0.4s
NARO                                   AML     AML
              comp=N,72µm,1.2s
PARC    Parchiule          0.20 325    P       Pg       10 43 18.7 +0.7
PARC                                   S       Sg       10 43 22.4 +1.5
PARC                                   AML     AML
              comp=E,75µm,0.1s
PARC                                   AML     AML
              comp=E,75µm,0.1s
PARC                                   AML     AML
              comp=N,61µm,0.2s
MURB    Monte Urbino       0.24 157    P       Pg       10 43 19.7 +0.9
MURB                                   S       Sg       10 43 23.9 +1.9
MURB                                   AML     AML
              comp=E,188µm,0.4s
MURB                                   AML     AML
              comp=N,146µm,1.0s
ATTE    AVT- Monte Tez     0.29 186    P       Pg       10 43 20.4 +0.7
ATTE                                   S       Sb       10 43 25.1 -1.0
ATTE                                   AML     AML
              comp=N,40µm,0.2s
ATTE                                   AML     AML
              comp=E,31µm,1.6s
MPAG    Monte Paganucc     0.30  61    P       Pg       10 43 20.4 +0.5
MPAG                                   S       Sb       10 43 25.8 -0.8
MPAG                                   AML     AML
              comp=E,18µm,0.9s
MPAG                                   AML     AML
              comp=N,21µm,1.4s
CPGN    Carpegna, Ital     0.32 350    P       Pb       10 43 21.3 -0.6
FSSB    Fossombrone        0.35  53    P       Pg       10 43 21.2 +0.4
FSSB                                   S       Sb       10 43 27.5 -0.4
FSSB                                   AML     AML
              comp=N,61µm,0.3s
FSSB                                   AML     AML
              comp=E,44µm,0.3s
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*GII **31** 10:55:44.7±0.0, 35°.62N×26°.83E, h10^{km}*
*ISK **31** 10:56:05.9, 35°.38N×27°.55E, h18^{km}, ML3.6/15*
*NIC **31** 10:56:06.4±0.0, 35°.39N×27°.70E, h9^{km}±2^{km}, Ml3.9/3*
*THE **31** 10:56:08.1, 35°.58N×27°.61E, h0^{km}±1^{km}, ML3.3/8, Error ellipse: s-maj=2.3km s-min=0.7km az=141.0*
*ATH **31** 10:56:08.9, 35°.61N×27°.49E, h33^{km}±1^{km}, ML3.4/7, Error ellipse: s-maj=4.4km s-min=0.9km az=144.0*
ISC 31 10:56:07.5±1.1**,35°.44N**±0°.03×**27°.69E**±0°.03**,h24**^{km}±12^{km}**,**
n72,σ1^{s}**62**/94**,5C,Dodecanese Islands**

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Code    Station Name        Δ°   AZ°     Phase ID             Time     Res
                                       Op      ISC          h  m  s    ISC
KARP    Karpathos          0.44 284    P       Pb       10 56 16.3 -0.4
KARP                                   S       Sb       10 56 22.4 -0.7
              17µm,0.8s
KARP    Karpathos          0.44 284    P       Pb       10 56 16.4 -0.4
KARP                                   S       Sb       10 56 22.1 -1.0
KARP                                   AML     AML      10 56 24.6
              comp=N,51308µm,0.8s
KARP                                   AML     AML      10 56 26.8
              comp=E,18535µm,0.4s
KARP    Karpathos          0.44 284   ⇑P       Pb       10 56 16.4 -0.4
KARP                                   AML     AML      10 56 22.7
              comp=E,19nm,0.9s
KARP                                   AML     AML      10 56 22.7
              comp=E,19nm,0.9s
KARP                                   S       Sb       10 56 22.8 -0.3
KARP                                   AML     AML      10 56 23.9
              comp=E,52nm,0.8s
KARP                                   AML     AML      10 56 23.9
              comp=E,52nm,0.8s
ARG     Arkhangelos        0.85  25    P       Pn       10 56 24.8 +0.8
ARG                                    S       Sn       10 56 35.9 +0.2
              comp=E,5µm,0.7s
ARG     Arkhangelos        0.85  25    P       Pn       10 56 24.7 +0.6
ARG                                    S       Sn       10 56 36.1 +0.4
ARG                                    AML     AML      10 56 38.1
              comp=E,11554µm,0.5s
ARG                                    AML     AML      10 56 38.6
              comp=N,8709µm,0.8s
ARG     Arkhangelos        0.85  25    PG      Pn       10 56 25.0 +1.0
ARG     Arkhangelos        0.85  25   ⇑P       Pn       10 56 24.6 +0.6
ARG                                    S       Sn       10 56 36.6 +0.9
ZKR     Zakros             1.25 255    P       Pn       10 56 29.6 +0.2
ZKR                                    S       Sb       10 56 49.4 +3.4
              comp=N,1µm,0.8s
ZKR     Zakros             1.25 255    P       Pn       10 56 29.8 +0.4
ZKR                                    AML     AML      10 56 53.5
              comp=E,2966µm,0.5s
ZKR                                    AML     AML      10 56 54.6
              comp=N,1376µm,1.1s
ZKR     Zakros             1.25 255   ⇑P       Pn       10 56 29.8 +0.4
ZKR                                    S       Sb       10 56 48.1 +2.1
ZKR                                    AML     AML      10 56 53.2
              comp=N,3.0nm,0.6s
ZKR                                    AML     AML      10 56 53.2
              comp=N,3.0nm,0.6s
NISR    Nisiros            1.25 339    P       Pn       10 56 28.8 -0.6
DAT     Datca              1.29 356    P       Pn       10 56 29.8 -0.3
DAT                                    S       Sn       10 56 46.0 -0.6
DAT     Datca              1.29 356    PN      Pn       10 56 30.1  0.0
DAT                                    SN      Sb       10 56 48.6 +1.3
DATC    Datca-Mugla        1.31 359    PN      Pn       10 56 30.9 +0.5
DATC                                   SN      Sb       10 56 49.2 +1.3
STIA    Sitia Lasithi      1.33 260    P       Pn       10 56 31.3 +0.8
STIA                                   S       Sb       10 56 50.6 +2.3
MRSB    Marmaris-Mugla     1.34  18    PN      Pb       10 56 31.9  0.0
MRSB                                   SN      Sb       10 56 50.3 +1.7
KOSK    Kos Island         1.43 336    P       Pn       10 56 31.8 -0.1
KOSK                                   S       Sn       10 56 49.6 -0.3
              comp=N,678nm,0.5s
DALY    Dalyan (Mula)      1.58  29    PN      Pn       10 56 35.2 +1.2
TURN    Turunc             1.61  27    PN      Pn       10 56 32.9 -1.5
TURN                                   SN      Sn       10 56 52.3 -2.1
FETY    Fethiye            1.64  43    P       Pn       10 56 35.9 +1.0
FETY                                   S       Sb       10 56 56.9 -0.5
FETY    Fethiye            1.64  43    PN      Pb       10 56 36.8 -0.4
BODT    Bodrum             1.64 349    P       Pn       10 56 34.5 -0.4
FRMA    Ierapetra Chan     1.66 256    P       Pn       10 56 36.0 +1.0
FRMA                                   S       Sb       10 56 57.3 -0.5
              comp=N,368nm,0.6s
KSL     Kastellorizon      1.70  65    P       Pn       10 56 37.1 +1.5
KSL     Kastellorizon      1.70  65   ⇑P       Pn       10 56 36.6 +1.0
NPS     Neapolis           1.71 265    P       Pn       10 56 37.1 +1.3
NPS                                    S       Sb       10 56 58.8 -0.4
              comp=N,930nm,0.6s
NPS     Neapolis           1.71 265    P       Pn       10 56 37.1 +1.3
NPS                                    AML     AML      10 57 07.2
              comp=E,2059µm,0.6s
NPS                                    AML     AML      10 57 17.0
              comp=N,1739µm,0.8s
AKAS    Kas                1.75  63    PN      Pn       10 56 37.8 +1.4
YER     Yerkesik           1.75  16    P       Pn       10 56 36.5  0.0
YER     Yerkesik           1.75  16    PN      Pn       10 56 37.6 +1.1
LAST    Lasithi            1.83 262    P       Pn       10 56 39.1 +1.6
LAST                                   S       Sb       10 57 03.5 +0.7
              comp=N,615nm,0.8s
LAST    Lasithi            1.83 262    P       Pn       10 56 38.9 +1.4
LAST                                   AML     AML      10 57 14.2
              comp=N,1156µm,0.7s
LAST                                   AML     AML      10 57 16.0
              comp=E,1340µm,0.8s
AMGA    Amorgos Island     2.01 314    P       Pn       10 56 39.1 -0.8
AMGA                                   AML     AML      10 57 13.8
              comp=E,1463µm,0.5s
AMGA                                   AML     AML      10 57 14.3
              comp=N,1972µm,0.6s
SANT    Santorini          2.03 298    P       Pn       10 56 40.2 -0.1
THR8    Santorini-Mono     2.03 299    P       Pn       10 56 39.6 -0.6
THR6    Thira Island,      2.07 297    P       Pn       10 56 40.4 -0.3
THR3    Thira Island,      2.09 298    P       Pn       10 56 40.2 -0.8
THR5    Thira Island,      2.13 298    P       Pn       10 56 41.2 -0.4
ELL     Elmali             2.22  53    PN      Pn       10 56 44.9 +1.9
IDI     Anoyia             2.29 267    P       Pn       10 56 44.6 +0.7
IDI                                    S       Sn       10 57 13.4 +2.1
              comp=N,268nm,0.8s
IDI     Anoyia             2.29 267    P       Pn       10 56 44.8 +1.0
IDI                                    AML     AML      10 57 20.6
              comp=E,421µm,0.8s
IDI                                    AML     AML      10 57 28.4
              comp=N,658µm,0.7s
IOSP    Ios island         2.32 304    P       Pn       10 56 43.8 -0.5
IOSP    Ios island         2.32 304    P       Pn       10 56 43.7 -0.5
SMG     Samos              2.36 343    P       Pn       10 56 44.3 -0.5
SMG     Samos              2.36 343    P       Pn       10 56 44.6 -0.2
APE     Apeiranthos        2.38 314    P       Pn       10 56 44.5 -0.6
APE     Apeiranthos        2.38 314    P       Pn       10 56 44.4 -0.6
AYDB    Zeytinkoy-Aydi     2.50   4    PN      Pn       10 56 47.8 +0.9
KORT    Korkueli           2.66  53    PN      Pn       10 56 51.0 +2.0
IMMV    Iera Moni Meta     3.02 271    P       Pn       10 56 55.2 +1.3
KULA    Kula-Manisa        3.16  14    PN      Pn       10 56 56.9 +1.0
OSC1    CSNet OBS 1        3.54 122    P       Pn       10 57 00.7 -0.3
OSC1                                   S       Sn       10 57 44.2 +2.1
AKMS    Akamas             3.83  95    P       Pn       10 57 06.1 +1.1
AKMS                                   AML     AML      10 57 51.5
              comp=N,0.9nm,0.3s
AKMS                                   AML     AML      10 57 54.4
              comp=N,0.6nm,0.3s
SEYD    Seydisehir-KON     3.88  58    PN      Pn       10 57 08.3 +2.6
ALFC    Alefka             4.03  93   ⇑P       Pn       10 57 08.3 +0.5
NATA    Nata               4.06  98    P       Pn       10 57 08.4 +0.3
SZAC    Souni              4.32  98    P       Pn       10 57 12.2 +0.5
OSC2    CSNet OBS 4        4.47 121    P       Pn       10 57 14.3 +0.5
OSC2                                   S       Sn       10 58 07.3 +2.3
KONT    Konya--Tatoy       4.51  55    PN      Pn       10 57 17.2 +2.9
ASGA    Asgata             4.61  97    P       Pn       10 57 16.6 +1.0
CSS     Mathiatis          4.65  94    Pn      Pn       10 57 04.7  -12
CSS                                    Sn      Sn       10 58 07.1 -2.3
LADK    Ladik-KONYA        4.65  52    PN      Pn       10 57 18.9 +2.5
KSDI    Kefar Szold        6.97 107    Sn      Sn       10 59 04.3 -2.2
NATI    Neve Ativ          7.00 106    Sn      Sn       10 59 05.1 -2.3
YTIR    Yattir             7.42 121    Sn      Sn       10 59 15.5 -2.5
DSI     Dead Sea           7.50 119    Sn      Sn       10 59 17.7 -1.9
KRMI    Paran Flat         7.96 130    Sn      Sn       10 59 27.8 -3.1
ZFRI    Zfri               7.96 126    Sn      Sn       10 59 27.3 -3.6
PRNI    Paran              7.98 127    Pn      Pn       10 57 50.6  -11
PRNI                                   Sn      Sn       10 59 26.1 -5.3
HRFI    Mount Harif        8.21 129    Pn      Pn       10 57 52.7  -12
HRFI                                   Sn      Sn       10 59 33.0 -4.1
MBRI    Mt Berech          8.30 131    Sn      Sn       10 59 36.2 -3.2
EIL     Elat               8.41 131    Pn      Pn       10 57 56.0  -12
EIL                                    Sn      Sn       10 59 37.9 -4.1
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*IDC **31** 10:56:10.8±0.7, 7°.44S×126°.11E, h0^{km}, mb4.3/14, mb1 4.4/17, mb1mx4.2/43, mbtmp4.3/17, ML4.3/3, MS3.2/4, Ms1 3.2/4, ms1mx2.8/36, Error ellipse: s-maj=24.6km s-min=15.1km az=67.0*
*DJA **31** 10:56:14.5±1.0, 7°S±2°×12°6E±°, h13^{km}±8^{km}, M4.6/13, mb4.8/13, mB5.0/4, MLv4.5/11, Mw(mB)4.3/4*
*NEIC **31** 10:56:17.2±2.7, 7°.57S±0°.06×126°.10E±0°.05, h51^{km}±8^{km}, mb4.3/16, Error ellipse: s-maj=10.3km s-min=4.3km az=223.0*
ISC 31 10:56:15.5±0.4**,7°.55S**±0°.05×**126°.13E**±0°.05**,h35**^{km}**,n63,**
σ**2**^{s}**16**/72**,mb4.3**/19**,Banda Sea**

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Code    Station Name        Δ°   AZ°     Phase ID             Time     Res
                                       Op      ISC          h  m  s    ISC
SOEI    Soe                2.86 220    P       Pn       10 57 00.3 +1.5
SOEI                                   S       Sn       10 57 37.0 +4.9
SOEI    Soe                2.86 220            Pn       10 57 02.0 +3.1
MMRI    Maumere            4.00 254    P       Pn       10 57 14.9 +0.5
MMRI                                   S       Sn       10 58 03.4 +3.2
MMRI    Maumere            4.00 254            Pn       10 57 14.8 +0.3
BBSI    Bau Bau            4.09 300    P       Pn       10 57 14.6 -1.0
BBSI                                   S       Sn       10 58 02.5 +0.2
SANI    Sanana             5.47 358    P       Pn       10 57 33.8 -0.8
        0.2nm71nm,0.6s
BASI    Baing, Sumba       6.09 244    P       Pn       10 57 44.8 +1.6
        0.4nm1µm125nm,0.6s
BKSI    Bulukumba          6.37 290    P       Pn       10 57 45.8 -1.2
        0.3nm960nm76nm,1.0s
BNSI    Bone               6.76 297    P       Pn       10 57 52.0 -0.3
        0.3nm69nm,0.7s
BNSI                                   S       Sn       10 59 09.9 +1.7
        0.3nm69nm,0.7s
KAPI    Kappang            6.83 291    Pn      Pn       10 57 53.2  0.0
        2.2nm,0.3s,baz=141,slow=8.8,SNR=6.4
KAPI                                   Sn      Sn       10 59 07.7 -2.0
        0.6nm,0.3s,baz=322,slow=21,SNR=1.4
KAPI    Kappang            6.83 291            Pn       10 57 54.0 +0.8
WBSI    Waikabubak, Su     6.98 252    P       Pn       10 57 57.4 +2.0
        0.2nm59nm,0.8s
LBMI    Labuha             7.00  11    P       Pn       10 57 57.8 +2.1
        0.1nm28nm,1.5s
MTN     Manton Dam         7.20 137            Pn       10 58 01.3 +3.0
MTN                                    Sn      Sn       10 59 20.9 +1.9
SPSI    Sidrap Palu        7.26 299    P       Pn       10 57 59.1 -0.2
        0.2nm42nm,0.6s
FAKI    Fak Fak            7.63  53    Pn      Pn       10 58 06.1 +1.8
PLAI    Plampang           8.37 261    P       Pn       10 58 15.1 +0.7
        43nm,0.9s
KNRA    Kununurra          8.47 163            Pn       10 58 17.3 +1.4
MPSI    Mapaga            10.00 321    P       Pn       10 58 36.8  0.0
        783nm49nm,0.6s
FITZ    Fitzroy Crossi    10.49 183    Pn      Pn       10 58 43.3 -0.2
        4.4nm,0.3s,baz=17,slow=10,SNR=59
FITZ                                   Sn      Sn       11 00 34.5 -5.4
        3.0nm,0.3s,baz=265,slow=19,SNR=6.5
FITZ    Fitzroy Crossi    10.49 183            Pn       10 58 43.0 -0.5
WB0     Warramunga Arr    14.55 147            Pn       10 59 36.8 -2.2
WRAB    Tennant Creek     14.66 148            Pn       10 59 37.9 -2.6
WRA     Warramunga Arr    14.66 148    Pn      Pn       10 59 37.6 -2.9
        1.6nm,0.3s,baz=322,slow=14,SNR=58
WRA                                    Sn      Sn       11 02 14.0 -7.9
        1.7nm,0.3s,baz=325,slow=22,SNR=8.4
WRA                                    LR      LR       11 06 02.8
        comp=Z,72nm,20.1s,baz=235,slow=40
WRA     Warramunga Arr    14.66 148            Pn       10 59 39.6 -0.9
WB2     Warramunga Arr    14.67 148            Pn       10 59 38.7 -2.0
WR0     Warramunga Arr    14.78 147            Pn       10 59 40.0 -2.2
PSA00   Pilbara Seismi    15.20 203    Pn      Pn       10 59 48.5 +0.8
PSA00                                  IAmb    IAmb     11 00 05.2
        comp=Z,9.1nm,0.8s
AS31    Alice Springs     17.67 156    P       Pn       11 00 18.4 -0.7
ASAR    Alice Springs     17.67 156    P       Pn       11 00 18.5 -0.6
        comp=Z,1.0nm,0.3s,baz=326,slow=10,SNR=82
ASAR                                   S       Sn       11 03 26.4 -8.7
        comp=Z,0.4nm,0.3s,baz=316,slow=18,SNR=4.3
ASAR                                   LR      LR       11 08 18.6
        comp=Z,122nm,20.4s,baz=332,slow=41
ASAR    Alice Springs     17.67 156    P       Pn       11 00 18.8 -0.3
COEN    Coen              17.90 112    P       P        11 00 22.6 +0.3
COEN                                   IAmb    IAmb     11 00 30.1
        comp=Z,7.7nm,0.7s
PMG     Port Moresby      20.88  97    LR      LR       11 09 25.2
        comp=Z,65nm,21.1s,baz=137,slow=38
CTA     Charters Tower    23.14 125    P       P        11 01 20.8 +2.0
        comp=Z,2.6nm,0.6s,baz=260,slow=17,SNR=1.8
FORT    Forrest           23.18 176    P       P        11 01 20.2 +1.1
MORW    Morawa            23.42 203    P       P        11 01 21.9 +0.4
MORW                                   IAmb    IAmb     11 01 31.3
        comp=Z,21nm,1.5s
NWAO    Narrogin (SRO)    26.57 197    P       P        11 01 51.8 +1.5
        comp=Z,14nm,1.0s,baz=54,slow=2.5,SNR=3.5
NWAO    Narrogin (SRO)    26.57 197    P       P        11 01 51.2 +0.9
NWAO                                   IAmb    IAmb     11 01 53.5
        comp=Z,19nm,1.1s
NWAO    Narrogin (SRO)    26.57 197    P       P        11 01 51.2 +0.9
NWAO                                   IAmb    IAmb     11 01 53.5
        comp=Z,23nm,1.1s
BBOO    Buckleboo         26.77 161    P       P        11 01 53.9 +1.7
BBOO                                   IAmb    IAmb     11 02 05.5
        comp=Z,23nm,1.4s
STKA    Stephens Creek    28.17 151    P       P        11 02 05.8 +1.0
        comp=Z,1.2nm,0.5s,baz=12,slow=3.3,SNR=4.5
STKA                                   LR      LR       11 14 26.4
        comp=Z,73nm,21.2s,baz=7.2,slow=39
RPSI    Rantau Prapat     28.99 290    P       P        11 02 13.0 +0.7
PSI     Prapat            29.03 290    P       P        11 02 13.0 +0.3
        comp=Z,5.9nm,0.8s,baz=118,slow=7.1,SNR=5.1
CMAR    Chiang Mai Arr    37.25 314    P       P        11 03 22.9 -1.2
        comp=Z,2.4nm,0.3s,baz=140,slow=7.0,SNR=23
KSRS    Korea Array       44.80   2    P       P        11 04 25.9 -0.1
        comp=Z,0.4nm,0.5s,baz=174,slow=12,SNR=4.2
MJAR    Matsushiro Arr    45.30  14    P       P        11 04 28.7 -1.3
        comp=Z,2.9nm,0.9s,baz=198,slow=11,SNR=4.9
QRZ     Quartz Range      52.85 136    P       P        11 05 26.3 -1.5
THZ     Tophouse          53.51 137    P       P        11 05 33.5 +0.7
SONM    Songino Array     57.84 344    P       P        11 06 03.6 -0.1
        comp=Z,1.9nm,0.9s,baz=160,slow=8.2,SNR=9.2
KSH     Kashi             65.89 319    P       P        11 07 00.0 +2.0
KSH                                    sP      PcP      11 07 24.0 -4.8
KSH                                    PcP     pwP      11 07 29.5  +16
KSH                                    PcS              11 11 32.0
KSH                                    S       S        11 15 40.0 -3.0
PETK    Petropavlovsk-    66.10  20    P       P        11 06 59.4 +0.4
        comp=Z,2.7nm,0.6s,baz=186,slow=3.9,SNR=11
MK31    Makanchi Array    66.64 329    P       P        11 07 02.5 -0.1
MK31                                   IAmb    IAmb     11 07 19.0
        comp=Z,2.8nm,0.9s
MKAR    Makanchi Array    66.64 329    P       P        11 07 02.7  0.0
        comp=Z,1.6nm,0.6s,baz=126,slow=7.3,SNR=22
MKAR    Makanchi Array    66.64 329    P       P        11 07 02.1 -0.5
ZALV    Zalesovo Beam     70.44 336    P       P        11 07 25.5 -0.6
        comp=Z,1.1nm,0.4s,baz=116,slow=3.4,SNR=7.5
KURK    Kurchatov         71.04 330    P       P        11 07 30.0 +0.2
KURK                                   IAmb    IAmb     11 07 43.9
        comp=Z,4.9nm,1.0s
VNDA    Vanda             72.39 172    P       P        11 07 38.1 +0.5
MAW     Mawson            73.05 201    P       P        11 07 40.5 -1.1
GEYT    Alibeck           77.67 311    P       P        11 08 08.3 -0.5
        comp=Z,2.6nm,0.8s,baz=156,slow=7.5,SNR=3.7
ABKAR   Akbulak array     80.58 323    P       P        11 08 24.2 -0.2
NRIK    Noril'sk          81.20 347    P       P        11 08 28.1 +0.8
        comp=Z,1.1nm,0.4s,baz=150,slow=2.8,SNR=4.0
AKTO    Aktyubinsk        82.19 323    P       P        11 08 33.5 +0.5
        comp=Z,4.3nm,0.7s,baz=101,slow=6.9,SNR=15
QSPA    South Pole Qui    82.43 180    P       P        11 08 35.0 +0.9
QSPA                                   IAmb    IAmb     11 08 46.4
        comp=Z,3.9nm,0.9s
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*UPA **31** 10:58:55.7±1.2, 3°.39N×77°.07W, h43^{km}±63^{km}, MW4.3*
*IDC **31** 10:58:57.0±4.0, 3°.42N×76°.88W, h121^{km}±33^{km}, mb3.4/4, mb1 3.6/7, mb1mx3.3/42, mbtmp3.9/7, Error ellipse: s-maj=38.0km s-min=21.3km az=47.0*
*RSNC **31** 10:58:57.2±1.1, 3°.61N×76°.92W, h105^{km}±6^{km}, ML3.5, Mw3.9*
ISC 31 10:58:56.0±0.8**,3°.59N**±0°.03×**76°.95W**±0°.03**,h106**^{km}±6^{km}**,**
n62,σ1^{s}**30**/93**,2C-9D,Colombia**

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Code    Station Name        Δ°   AZ°     Phase ID             Time     Res
                                       Op      ISC          h  m  s    ISC
MALC    Bahia Malaga       0.57 318  ⇑iP       Pn       10 59 14.1 +1.2
MALC                                  eS       Sn       10 59 26.9 +1.3
MALC                                  i                 10 59 29.8
        comp=Z,2µm,0.2s
YOTC    Yotoco, Valle      0.72  57   eP       Pn       10 59 13.5 -0.8
YOTC                                  eS       Sn       10 59 27.4 -0.6
YOTC                                  i                 10 59 28.5
        comp=Z,2µm,0.6s
PCON    Cinco Dias         1.37 156   eP       Pn       10 59 22.9 +1.3
PCON                                  eS       Sn       10 59 42.7 +1.8
PCON                                  i                 10 59 45.0
        comp=Z,434nm,0.5s
PIZC    Pizarro, Choco     1.42 343   eP       Pn       10 59 22.5 +0.9
PIZC                                  eS       Sn       10 59 42.1 +1.0
PIZC                                  i                 10 59 46.1
        comp=Z,883nm,0.3s
PLMC    San Jos del P      1.47  27   eP       Pn       10 59 21.4 -0.9
PLMC                                  eS       Sn       10 59 40.4 -1.8
SOTA    Rioblanco          1.49 167  ⇓iP       Pn       10 59 23.6 +0.6
SOTA                                  eS       Sn       10 59 43.9 +0.6
SOTA                                  i                 10 59 50.4
        comp=Z,744nm,0.7s
ORTC    Ortega, Tolima     1.73  79  ⇓iP       Pn       10 59 25.9 +0.5
ORTC                                  eS       Sn       10 59 48.4 +0.5
ORTC                                  i                 10 59 50.3
        comp=Z,750nm,0.4s
ANIL    Santa Ana          1.79  60  ⇓eP       Pn       10 59 26.1 -0.2
ANIL                                  eS       Sn       10 59 50.2 +0.8
TOLC    Tolima             1.90  59   eP       Pn       10 59 27.7 -0.1
TOLC                                  eS       Sn       10 59 53.1 +1.0
TOLC                                  i                 10 59 55.6
        comp=Z,153nm,0.2s
CRUC    La Cruz            2.01 180  ⇓eP       Pn       10 59 29.9 +0.6
CRUC                                  eS       Sn       10 59 54.7  0.0
CRUC                                  i                 11 00 01.7
        comp=Z,240nm,0.4s
GARC    Garzon, Huila      2.02 134  ⇑eP       Pn       10 59 29.9 +0.6
GARC                                  eS       Sn       10 59 55.5 +0.8
GARC                                  i                 10 59 57.6
        comp=Z,420nm,0.3s
RREF    El Recreo          2.06  51   i        Sn       10 59 58.6 +2.4
        comp=Z,217nm,0.3s
PRAC    Prado              2.07  87   eP       Pn       10 59 29.4 -0.2
PRAC                                  eS       Sn       10 59 55.1 -0.3
PRAC                                  i                 10 59 58.0
        comp=Z,535nm,0.3s
GUY2C   Guyana, Caldas     2.27  44  ⇓eP       Pn       10 59 32.9 +0.3
GUY2C                                 eS       Sn       11 00 00.5 -0.2
GUY2C                                 i                 11 00 03.5
        comp=Z,247nm,0.5s
FLOC    Florencia          2.38 147  ⇓eP       Pn       10 59 34.8 +1.0
FLOC                                  eS       Sn       11 00 02.3 -0.5
FLOC                                  i                 11 00 06.0
        comp=Z,70nm,0.6s
GCUF    Volcan Galeras     2.38 189   eP       Pn       10 59 34.7 +0.5
CBOC    Ciudad Bolivar     2.44  23  ⇓eP       Pn       10 59 34.6 -0.1
CBOC                                  eS       Sn       11 00 03.3 -1.1
CBOC                                  i                 11 00 18.9
        comp=Z,141nm,0.6s
SOLC    Bahia Solano       2.66 350   eP       Pn       10 59 37.4 +0.1
SOLC                                  eS       Sn       11 00 07.8 -1.3
SOLC                                  i                 11 00 09.8
        comp=Z,130nm,0.2s
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NORC	Norcasia	2.85	47	⇓iP	Pn	10 59 40.4	+0.4
ROSC	El Rosal	2.90	65	P	Pn	10 59 43.0	+2.0
	comp=Z,51nm,0.3s,baz=252,slow=13,SNR=36						
ROSC				S	Sn	11 00 18.4	+2.9
	comp=Z,44nm,0.3s,baz=62,slow=21,SNR=6.1						
ROSC	El Rosal	2.90	65	eP	Pn	10 59 42.9	+2.0
ROSC				eS	Sn	11 00 17.8	+2.2
ROSC				i		11 00 21.4	
	comp=Z,164nm,0.6s						
HELC	Santa Helena	2.94	29	eP	Pn	10 59 41.7	+0.2
HELC	Santa Helena	2.94	29	eP	Pn	10 59 42.8	+1.3
HELC				eS	Sn	11 00 20.2	+3.7
CVER	Cruz Verde, Cu	3.02	72	eP	Pn	10 59 44.0	+1.4
VILC	Villavicencio,	3.29	81	eP	Pn	10 59 48.6	+2.7
VILC				eS	Sn	11 00 26.4	+2.0
CHIC	Chingaza	3.37	72	⇓iP	Pn	10 59 48.5	+1.2
CHIC				eP		10 59 48.5	
CHIC				eS	Sn	11 00 26.9	+0.2
CHIC				i		11 00 30.6	
	comp=Z,194nm,0.4s						
MACC	Macarena, Meta	3.42	115	eP	Pn	10 59 47.6	+0.1
SPBC	San Pablo de B	3.52	54	eP	Pn	10 59 49.7	+0.7
CUSE	Cuicocha Este	3.57	204	eP	Pn	10 59 50.3	+0.4
PTAC	Punta Ardita,	3.63	346	eP	Pn	10 59 50.6	+0.3
PAC1	Pacto, Paraso	3.78	209	eP	Pn	10 59 51.2	-1.3
PTBC	PUERTO BERRIO,	3.84	40	eP	Pn	10 59 53.5	+0.4
UREC	San Jos de Ur	4.37	19	eP	Pn	11 00 00.8	+0.6
ZARC	Zaragoza, Cauc	4.40	28	eP	Pn	11 00 01.2	+0.6
ZARC				eS	Sn	11 00 50.2	-0.8
ZARC				i		11 00 55.6	
	comp=Z,38nm,0.4s						
RUSC	La Rusia	4.48	59	eP	Pn	11 00 03.2	+1.0
BARC	Barichara	4.79	51	eP	Pn	11 00 07.4	+1.2
UPD2	Meteti	5.03	348	eP	Pn	11 00 11.0	+1.8
UPD2				eS	Sn	11 01 08.1	+1.8
AZU	Azuero	5.32	322	eP	Pn	11 00 14.1	+0.9
AZU				eS	Sn	11 01 13.3	0.0
CACAO	El Cacao, Vera	5.39	314	eP	Pn	11 00 14.1	+0.1
CACAO				eS	Sn	11 01 13.6	-1.2
PAMC	Pamplona, Colo	5.64	48	eP	Pn	11 00 18.3	+0.5
OCAC	Ocana	5.86	38	eP	Pn	11 00 21.0	+0.4
FLAM	Flamenco Islan	5.88	334	eS	Sn	11 01 27.1	+0.4
VTON	El Valle, Cocl	5.89	328	eS	Sn	11 01 29.3	+2.1
SMLC	San Martn de	5.91	29	eP	Pn	11 00 21.4	+0.3
UPA	Univ. de Panam	5.94	335	eP	Pn	11 00 22.5	+1.1
UPA				eS	Sn	11 01 28.7	+0.6
CHOR3	La Chorrera	5.97	332	eP	Pn	11 00 23.7	+1.8
CHOR3				eS	Sn	11 01 30.2	+1.3
ZANG	Zanguenga, Cho	6.06	332	eP	Pn	11 00 24.9	+1.7
ZANG				eS	Sn	11 01 31.4	+0.1
FRIJ	El Hiral	6.23	334	eP	Pn	11 00 26.0	+0.5
FRIJ				eS	Sn	11 01 36.2	+0.8
BCIP	Isla Barro Col	6.24	333	eP	Pn	11 00 26.7	+1.2
BCIP	Isla Barro Col	6.24	333	eP	Pn	11 00 27.2	+1.7
BCIP				eS	Sn	11 01 35.2	-0.2
SDV	Santo Domingo	8.19	50	P	Pn	11 00 52.0	-0.3
	comp=Z,1.3nm,0.3s,baz=249,slow=14,SNR=12						
SDV				S	Sn	11 02 19.2	-4.1
	comp=Z,1.0nm,0.3s,baz=56,slow=23,SNR=6.2						
SDV	Santo Domingo	8.19	50	eP	Pn	11 00 52.3	0.0
PTGA	Pitinga	17.51	104	P	Pn	11 02 53.8	+0.2
	comp=Z,0.9nm,0.3s,baz=292,slow=13,SNR=11						
SIV	San Ignacio	25.01	141	P	P	11 04 06.7	-3.5
	comp=Z,0.4nm,0.5s,baz=340,slow=12,SNR=3.8						
NVAR	Mina Array Bea	51.17	318	P	P	11 07 50.5	+1.8
	comp=Z,0.3nm,0.7s,baz=101,slow=8.3,SNR=2.4						
YKA	Yellowknife Ar	65.04	342	P	P	11 09 24.5	-0.2
	comp=Z,0.5nm,0.5s,baz=137,slow=6.4,SNR=12						
TIC	Toumodi	71.66	84	eP	P	11 10 05.8	-1.1
LIC	Lamto	71.67	85	eP	P	11 10 06.0	-0.9
	comp=Z,8.2nm,0.4s						
DBIC	Dimbokro	71.82	84	P	P	11 10 07.2	-0.7
	comp=Z,2.6nm,0.4s,baz=261,slow=9.5,SNR=9.9						
KIC	Kosan Boka	71.95	85	eP	P	11 10 07.8	-0.8
	comp=Z,5.4nm,0.4s						
ASAR	Alice Springs	144.14	233	PKP	PKPab	11 18 18.1	+0.1
	comp=Z,0.7nm,0.5s,baz=120,slow=3.8,SNR=14						
WRA	Warramunga Arr	145.43	239	PKPbc	PKPdf	11 18 22.2	-0.3
	comp=Z,2.1nm,0.3s,baz=107,slow=3.1,SNR=5.9						

THR ***31*** *11:02:07.3±0.4, 37°.15N×53°.96E, h18^{km}±6^{km}, ML3.5*
TEH ***31*** *11:02:09.6, 37°.31N×54°.13E, h16^{km}, ML3.6*
ISC 31 11:02:09.9±1.1**, 37°.21N**±0°.05×**54°.13E**±0°.04**, h10**^{km}**, n26,**
σ1^{s}**84**/26**, Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGLO	Ghaloghah	0.75	199	ePg	Pg	11 02 25.5	+1.2
IGLO				e		11 02 40.3	
IMND	Minoodasht	1.02	87	ePg	Pg	11 02 29.1	-0.4
IMND				e		11 02 44.7	
IALA	Alasht	1.55	224	ePn	Pb	11 02 39.6	+0.8
IALA				e		11 03 02.7	
ISHM	Shahmirzad	1.56	206	ePn	Pb	11 02 39.8	+0.9
ISHM				e		11 03 03.4	
IPRN	Peran	1.73	237	ePn	Pb	11 02 41.8	-0.1
IPRN				e		11 03 08.7	
IANJ	Anjilo	1.75	186	ePn	Pn	11 02 42.5	+2.0
IANJ				e		11 03 08.2	
SHRO	Shahrood	1.94	128	ePg	Pn	11 02 43.9	+0.8
SHRO	Shahrood	1.94	128	ePn	Pn	11 02 43.9	+0.8
ILAS	Lasjerd	2.06	208	ePn	Pb	11 02 47.6	+0.2
ILAS				e		11 03 21.5	
IDMV	Damavand	2.35	227	ePn	Pb	11 02 52.7	+0.2
IDMV				e		11 03 28.2	
BJRD	Bojnurd	2.65	78	ePg	Pb	11 02 58.0	+0.4
BJRD	Bojnurd	2.65	78	ePn	Pb	11 02 58.0	+0.4
QALM	Alamut, Qazvin	2.90	255	ePn	Pn	11 02 57.9	+1.6
IVRN	Varamin	2.94	222	ePn	Pn	11 02 59.7	+2.9
IVRN				e		11 03 45.9	
GHVR	GHOM	3.57	221	ePn	Pn	11 03 02.4	-3.0
GHVR				IAML		11 04 13.2	
	comp=E,32nm,0.4s						
GHVR	GHOM	3.57	221	ePn	Pn	11 03 02.4	-3.0
ANAR	Anarak	4.03	185	ePn	Pn	11 03 13.9	+2.2
TKDS	Koohdasht(Taba	4.34	145	ePn	Pn	11 03 18.4	+2.3
ASTR	Astara	4.43	289	ePn	Pn	11 03 17.4	+0.3
TPRV	Parvadeh(Tabas	4.67	153	ePn	Pn	11 03 22.9	+2.4
TPRV				e		11 04 53.5	
LRK	Lerik	4.79	289	ePn	Pn	11 03 22.0	-0.3
YZKH	Yazd	4.83	175	ePn	Pn	11 03 21.0	-1.7
YZKH				Sn	Sn	11 04 14.4	-4.2
YZKH	Yazd	4.83	175	ePn	Pn	11 03 21.0	-1.7
YRD	Yardimli	4.95	292	ePn	Pn	11 03 24.4	0.0
GDB	GEDABAY	7.41	301	ePn	Pn	11 03 59.1	+0.9
MAKU	Maku	7.73	289	IAML		11 04 49.0	
	comp=E,9.4nm,0.5s						

IDC ***31*** *11:07:27.2±0.6, 28°.09N×103°.53E, h0^{km}, mb3.9/15,*
mb1 4.0/17, mb1mx3.8/63, mbtmp3.9/17, ML3.7/2, MS3.0/7,
Ms1 3.1/7, ms1mx2.8/42, Error ellipse: s-maj=22.3km
s-min=14.5km az=66.0
NEIC ***31*** *11:07:28.6±0.9, 28°.10N±0°.07×103°.62E±0°.07, h10^{km}±1^{km},*
mb4.2/12, Error ellipse: s-maj=12.7km s-min=8.8km
az=151.0
BJI ***31*** *11:07:29.4±0.0, 28°.08N×103°.51E, h12^{km}, mb3.9/2,*
ML3.9/18
ISC 31 11:07:28.8±0.4**, 28°.21N**±0°.03×**103°.62E**±0°.05**, h10**^{km}**, n55,**
σ1^{s}**53**/64**, mb4.1**/22**, MS3.0**/5**, 1C, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	Chengdu	2.69	3	⇑iPn	Pb	11 08 15.8	-1.4
CD2				Pg	Pg	11 08 20.5	0.0
CD2				Sn	Sn	11 08 48.0	+3.0
CD2				Sg	Sg	11 08 56.3	+0.9
CD2				smax	smax		
	comp=N,2µm,0.7s						
CD2				smax	smax		
	comp=E,3µm,0.7s						
KMI	Kunming	3.17	195	Pn	Pb	11 08 24.5	-1.0
KMI				Pg	Pg	11 08 30.3	+0.6
KMI				Sg	Sg	11 09 15.0	+4.1
KMI	Kunming	3.17	195	Pn	Pn	11 08 15.9	-3.2
GYA	Guiyang	3.22	122	Pn	Pn	11 08 21.5	+1.9
GYA				Pg	Pg	11 08 30.0	-0.6
GYA				Sn	Sn	11 09 00.5	+2.3
GYA				Sg	Sb	11 09 09.0	+3.4
GYA				smax	smax		
	comp=N,430nm,1.0s						
GYA				smax	smax		
	comp=E,410nm,0.7s						
ENH	Enshi	5.52	67		Pn	11 08 50.6	-0.5
ENH				Sn	Sn	11 09 56.1	+1.3
SLVN	Son La	6.85	178		Pn	11 09 07.5	-2.0
XAN	Xi'an	7.37	37	Pn	Pn	11 09 18.0	+1.4
XAN				Pg	Pg	11 09 47.0	-3.1
XAN				Sn	Sn	11 10 41.0	+0.6
XAN				Sg	Sg	11 11 23.0	-2.5
XAN				smax	smax		
	comp=N,210nm,0.9s						
XAN				smax	smax		
	comp=E,180nm,1.0s						
XAN	Xi'an	7.37	37		Pn	11 09 17.5	+0.8
XAN				Sn	Sn	11 10 40.0	-0.4
WHN	Wuhan	9.64	73	P	Pn	11 09 50.5	+2.8
CHTO	Chiang Mai	10.29	206	Pn	Pn	11 09 55.7	-0.9
CMAR	Chiang Mai Arr	10.62	205	Pn	Pn	11 10 00.7	-0.4
	0.3nm,0.3s,baz=17,slow=13,SNR=11						
CMAR				Lg	Lg	11 13 07.7	
	0.2nm,0.3s,baz=38,slow=28,SNR=1.7						
CMAR				LR	LR	11 13 25.5	
	comp=Z,23nm,20.5s,baz=36,slow=34						
CMAR	Chiang Mai Arr	10.62	205		Pn	11 09 59.6	-1.4
QIZ	Qiongzhong	10.77	147	P	Pn	11 10 01.0	-2.2
QIZ				S	Sn	11 11 59.8	-4.1
SONM	Songino Array	19.71	6	P	Pn	11 12 01.5	+1.6
	0.1nm,0.3s,baz=185,slow=11,SNR=4.3						
SONM				LR	LR	11 21 00.5	
	comp=Z,38nm,20.9s,baz=163,slow=41						
SONM	Songino Array	19.71	6	P	P	11 11 59.7	+1.2
WMQ	Urumqi	20.16	325	eP	P	11 12 03.8	+0.5
KSAR	Wonju Array Be	22.32	59	P	P	11 12 27.8	+1.2
KS19	Wonju Array Si	22.33	59	P	P	11 12 27.9	+1.2
KSRS	Korea Array	22.35	59	P	P	11 12 27.9	+0.9
	4.3nm,0.8s,baz=244,slow=10,SNR=17						
JNU	Nakatsue	23.92	71	LR	LR	11 21 47.5	
	comp=Z,41nm,18.9s,baz=186,slow=36						
JNU	Nakatsue	23.92	71	P	P	11 12 43.0	-0.1
JNU				IAmb	IAmb	11 12 50.0	
	comp=Z,16nm,1.2s						
MK31	Makanchi Array	24.97	324	P	P	11 12 52.9	+0.4
MK31				IAmb	IAmb	11 12 56.6	
	comp=Z,5.5nm,1.2s						
MKAR	Makanchi Array	24.97	324	P	P	11 12 53.3	+0.7
	comp=Z,2.5nm,0.6s,baz=125,slow=12,SNR=18						
MAKZ	Makanchi	25.15	323	P	P	11 12 54.7	+0.6
MAKZ				IAmb	IAmb	11 13 05.0	
	comp=Z,4.4nm,1.0s						
PSI	Prapat	25.66	191	P	P	11 12 59.3	+0.2
	comp=Z,5.0nm,0.7s,baz=201,slow=19,SNR=3.1						
RPSI	Rantau Prapat	25.77	191	P	P	11 12 59.3	-0.6
BOOM	Boomskoye usch	26.55	310	P	P	11 13 07.6	+0.5
BOOM				IAmb	IAmb	11 13 11.3	
	comp=Z,3.4nm,0.8s						
NIL	Nilore	26.55	289	P	P	11 13 06.5	-0.5
NIL				IAmb	IAmb	11 13 09.3	
	comp=Z,13nm,1.2s						
USRK	Ussuriysk Ar.	27.72	47	P	P	11 13 18.6	+1.3
	comp=Z,2.1nm,0.6s,baz=250,slow=6.9,SNR=2.9						
USRK	Ussuriysk Ar.	27.72	47	P	P	11 13 18.1	+0.8
ZALV	Zalesovo Beam	29.17	337	LR	LR	11 26 10.4	
	comp=Z,37nm,21.5s,baz=144,slow=38						
KURBB	Kurchatov Arra	29.35	327	P	P	11 13 32.7	+0.9
	comp=Z,0.7nm,0.7s,baz=131,slow=10,SNR=6.6						
KURK	Kurchatov	29.37	327	P	P	11 13 32.4	+0.5
KLR	Kul'dur	30.08	38	LR	LR	11 26 11.5	
	comp=Z,31nm,19.4s,baz=232,slow=37						
GEYT	Alibeck	39.02	296	LR	LR	11 31 57.9	
	comp=Z,46nm,20.3s,baz=225,slow=38						
ABKAR	Akbulak array	39.33	314	P	P	11 14 58.8	+0.7
TIXI	Tiksi	45.66	11	LR	LR	11 36 37.1	
	comp=Z,42nm,18.0s,baz=224,slow=38						
WRAB	Tennant Creek	56.34	145	P	P	11 17 09.2	-1.0
WRAB				IAmb	IAmb	11 17 14.8	
	comp=Z,5.5nm,1.4s						
WRA	Warramunga Arr	56.34	145	P	P	11 17 09.5	-0.7
	comp=Z,0.6nm,0.6s,baz=335,slow=8.3,SNR=8.7						
WB2	Warramunga Arr	56.34	145	P	P	11 17 09.3	-0.9
AKASG	Malin Array Be	59.08	314	P	P	11 17 29.0	-0.2
	comp=Z,1.1nm,0.4s,baz=69,slow=7.7,SNR=4.3						
AS31	Alice Springs	59.27	147	P	P	11 17 30.1	-0.6
AS31				IAmb	IAmb	11 17 30.8	
	comp=Z,0.6nm,0.4s						
ASAR	Alice Springs	59.27	147	P	P	11 17 30.3	-0.5
	comp=Z,0.8nm,0.4s,baz=325,slow=6.8,SNR=55						
ASAR	Alice Springs	59.27	147	P	P	11 17 29.9	-0.8
HFS	Hagfors	65.94	327	P	P	11 18 14.7	-0.2
	comp=Z,1.6nm,0.7s,baz=138,slow=5.2,SNR=2.4						
NOA	NORSAR Array B	66.87	328	P	P	11 18 20.5	-0.4
	comp=Z,0.3nm,0.5s,baz=81,slow=4.4,SNR=3.7						
GERES	GERESS Array B	69.28	315	P	P	11 18 36.8	+0.5
	comp=Z,0.5nm,0.5s,baz=63,slow=9.0,SNR=2.7						
GERES	GERESS Array B	69.28	315	P	P	11 18 36.5	+0.2
IMAR	Indian Mountai	69.51	25	P	P	11 18 37.0	-0.2
STKA	Stephens Creek	69.83	146	P	P	11 18 38.8	-0.9
	comp=Z,1.0nm,0.6s,baz=333,slow=6.0,SNR=3.3						
STKA	Stephens Creek	69.83	146	P	P	11 18 38.6	-1.1
DAVOX	Davos/Dischmat	72.42	314	P	P	11 18 55.2	-0.3
	comp=Z,1.7nm,0.4s,baz=354,slow=3.6,SNR=2.8						
ILAR	Eielson Array	72.62	25	P	P	11 18 57.8	+1.6
	comp=Z,1.5nm,1.3s,baz=285,slow=4.1,SNR=4.2						
YKA	Yellowknife Ar	84.57	17	P	P	11 20 01.7	-0.3
	comp=Z,0.2nm,0.6s,baz=331,slow=5.3,SNR=2.3						
TXAR	Lajitas Array	117.11	27	PKP	PKiKP	11 26 15.8	+1.0
	comp=Z,0.1nm,0.4s,baz=318,slow=2.6,SNR=4.2						

THR ***31*** *11:10:12.9±57.0, 30°.87N×50°.95E, h15^{km}±999^{km}, ML4.9*
IDC ***31*** *11:10:23.3±1.4, 37°.25N×54°.02E, h0^{km}, mb3.8/10,*
mb1 3.9/16, mb1mx3.7/61, mbtmp3.9/16, ML3.3/6, Error
ellipse: s-maj=24.4km s-min=12.0km az=5.0
TEH ***31*** *11:10:24.5, 37°.27N×54°.12E, h13^{km}, ML4.3*
NNC ***31*** *11:10:26.8±12.0, 37°.55N×54°.05E, h0^{km}, mb3.7, Error*
ellipse: s-maj=117.6km s-min=72.9km az=52.0
NEIC ***31*** *11:10:27.2±1.8, 37°.28N±0°.06×54°.15E±0°.06, h31^{km}±7^{km},*
Error ellipse: s-maj=8.4km s-min=6.5km az=170.0
ISC 31 11:10:24.4±0.5**, 37°.32N**±0°.04×**54°.13E**±0°.03**, h10**^{km}**, n141,**
σ1^{s}**74**/143**, mb3.9**/15**, 8C-2D, Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGLO	Ghaloghah	0.85	197	ePg	Pg	11 10 39.9	-0.8
IGLO				e		11 10 55.9	
IGLO	Ghaloghah	0.85	197	Pg	Pg	11 10 39.9	-0.8
IMND	Minoodasht	1.02	93	ePg	Pg	11 10 43.5	-0.5
IMND				e		11 10 59.3	
IMND	Minoodasht	1.02	93	Pg	Pg	11 10 43.5	-0.5
IALA	Alasht	1.62	221	ePn	Pb	11 10 54.0	-0.7
IALA	Alasht	1.62	221	Pn	Pb	11 10 53.9	-0.7
ISHM	Shahmirzad	1.65	204	ePn	Pb	11 10 54.3	-0.7
ISHM	Shahmirzad	1.65	204	Pn	Pb	11 10 54.3	-0.7
IPRN	Peran	1.79	234	ePn	Pb	11 10 56.2	-1.2
IPRN	Peran	1.79	234	Pn	Pb	11 10 56.2	-1.2
IANJ	Anjilo	1.85	185	ePn	Pb	11 10 57.1	-1.4
IANJ				e		11 11 22.8	
IANJ	Anjilo	1.85	185	Pn	Pb	11 10 57.0	-1.4
SHRO	Shahrood	2.01	131	ePg	Pb	11 11 00.2	-0.8
SHRO	Shahrood	2.01	131	ePn	Pb	11 11 00.2	-0.8
SHRO	Shahrood	2.01	131	Pn	Pb	11 11 00.1	-0.9
ILAS	Lasjerd	2.15	206	ePn	Pb	11 11 01.7	-1.8
ILAS				e		11 11 36.0	
ILAS	Lasjerd	2.15	206	Pn	Pb	11 11 01.6	-1.9
IDMV	Damavand	2.42	225	ePn	Pb	11 11 06.8	-1.4
QALM	Alamut, Qazvin	2.93	254	ePn	Pn	11 11 12.4	+1.2
QALM				e		11 12 04.1	
QALM	Alamut, Qazvin	2.93	254	Pn	Pn	11 11 12.3	+1.1
IHSB	Hasanabad	2.97	232	ePn	Pb	11 11 14.7	-2.7
IHSB				e		11 12 03.3	
ISFR	Sfrayin	3.10	94	ePn	Pn	11 11 15.3	+1.6
ISFR				e		11 12 15.1	
ISFR	Sfrayin	3.10	94	Pn	Pn	11 11 15.2	+1.6
GEYT	Alibeck	3.22	78	Pn	Pn	11 11 16.4	+1.4
	6.6nm,0.3s,baz=266,slow=13,SNR=18						
GEYT				Lg	Lg	11 12 07.9	
	15nm,0.3s,baz=260,slow=23,SNR=2.2						
GEYT	Alibeck	3.22	78	Pn	Pn	11 11 16.1	+1.0
GYA0B	ALIBECK ARRAY	3.22	78	⇑Pn	Pb	11 11 19.9	-1.8
	baz=254,slow=13						
GYA0B				⇑Lg	Lg	11 12 09.8	
GYA0B	ALIBECK ARRAY	3.22	78	Pn	Pn	11 11 15.0	-0.1
IGZV	Ghazvin	3.27	255	ePn	Pn	11 11 17.7	+1.8
IGZV				e		11 12 16.5	
IGZV	Ghazvin	3.27	255	Pn	Pn	11 11 17.7	+1.8
ASHT	Ashkhabad	3.44	78	Pn	Pn	11 11 18.3	+0.4
IQOM	Qom	3.50	226	ePn	Pn	11 11 20.6	+1.6
IKRD	Kardeh	3.55	97	ePn	Pg	11 11 32.6	+0.2
IEMG	Emamgholi	3.60	87	ePn	Pn	11 11 21.6	+1.0
IEMG	Emamgholi	3.60	87	Pn	Pn	11 11 21.5	+1.0
GHVR	GHOM	3.65	220	eP	Pn	11 11 20.5	-0.4
GHVR				eSg	Sb	11 12 15.8	+2.6
GHVR	GHOM	3.65	220	ePn	Pn	11 11 20.5	-0.4
GHVR	GHOM	3.65	220	Pn	Pn	11 11 20.5	-0.4
KRSH	Karshahi	3.71	207	ePn	Pn	11 11 23.1	+1.2
KRSH				e		11 12 26.6	
TNSJ	Nastanj	3.91	148	ePn	Pn	11 11 26.1	+1.6
IPAY	Payeh	4.00	101	ePn	Pn	11 11 27.3	+1.4
ANAR	Anarak	4.13	185	ePn	Pn	11 11 28.3	+0.7
QAM	Ghamsar	4.17	213	ePn	Pn	11 11 29.6	+1.3
TABS	Tabas	4.39	145	eP	Pn	11 11 32.1	+0.8
TABS	Tabas	4.39	145	ePn	Pn	11 11 32.1	+0.8
ASTR	Astara	4.40	288	ePn	Pn	11 11 31.9	+0.7
ZNJK	Zanjan	4.41	263	ePn	Pn	11 11 29.8	-1.7
ZNJK	Zanjan	4.41	263	ePn	Pn	11 11 29.8	-1.7
TKDS	Koohdasht(Taba	4.43	146	ePn	Pn	11 11 32.3	+0.6
TKDS				e		11 12 49.5	
LKRN	Lenkeran, Azer	4.45	290	ePn	Pn	11 11 32.9	+1.0
IKLH	Kolahrood	4.50	208	ePn	Pn	11 11 33.9	+1.1
IZEF	Zefreh	4.65	199	ePn	Pn	11 11 35.6	+0.7
TPRV	Parvadeh(Tabas	4.76	153	ePn	Pn	11 11 37.4	+1.1
TPRV				e		11 12 57.2	
LRK	Lerik	4.76	288	ePn	Pn	11 11 37.0	+0.6
ALIB	Äli-Bayra	4.80	305	ePn	Pn	11 11 40.9	+4.2
IMYA	Miami	4.89	100	ePn	Pn	11 11 39.7	+1.6
GLBA	Clilabad	4.91	295	ePn	Pn	11 11 39.4	+1.2
YRD	Yardimli	4.91	291	ePn	Pn	11 11 39.0	+0.6
YZKH	Yazd	4.93	175	ePn	Pn	11 11 39.0	+0.4
YZKH	Yazd	4.93	175	ePn	Pn	11 11 39.0	+0.4
ICHK	Chekchek	5.06	177	ePn	Pn	11 11 41.6	+1.0
ISRB	Sarab	5.16	278	ePn	Pn	11 11 43.6	+1.7
GBS	Qobustan	5.17	310	ePn	Pn	11 11 44.1	+2.3
IPIR	Pirpir	5.33	211	ePn	Pn	11 11 46.7	+2.4
ATGJ	Altiaghaj	5.37	313	ePn	Pn	11 11 47.9	+3.2
ISAD	Sadrabad	5.40	184	ePn	Pn	11 11 45.8	+0.6
IHSH	Hashtrud	5.53	282	ePn	Pn	11 11 48.4	+1.4
PQL	Pirkuli	5.53	311	ePn	Pn	11 11 49.9	+3.0
SIZA	Siyzn	5.53	314	ePn	Pn	11 11 50.0	+3.1
BLQ	Beylaqan	5.69	297	ePn	Pn	11 11 50.3	+1.4
IHRS	Heris	5.70	282	ePn	Pn	11 11 51.0	+1.7
QRD	Qoradiz	5.76	294	ePn	Pn	11 11 51.9	+2.0
IML	Ismayilli	5.79	309	ePn	Pn	11 11 51.9	+1.6
ITEG	Tejag	5.81	138	ePn	Pn	11 11 51.7	+0.9
IBAF	Bafgh	5.83	168	ePn	Pn	11 11 52.2	+1.1
ZRD	Zardab	5.84	302	ePn	Pn	11 11 52.9	+1.9
XNQ	Khinaliq	6.04	311	ePn	Pn	11 11 56.2	+2.3
QSAR	Qusar	6.18	315	ePn	Pn	11 11 58.1	+2.4
ORD	Ordubad	6.61	287	ePn	Pn	11 12 03.8	+2.1
SEKA	Sheki	6.64	308	ePn	Pn	11 12 03.8	+1.8
IMRD	Marand	6.80	284	ePn	Pn	11 12 07.4	+3.1
GANJ	Ganja	6.93	301	ePn	Pn	11 12 06.4	+0.4
SBZ	Shahbuz	7.05	290	ePn	Pn	11 12 10.1	+2.3
HRA	Herat	7.21	112	Pn	Pn	11 12 09.7	-0.3
ZKT	Zaqatala	7.22	309	ePn	Pn	11 12 12.6	+2.7
GDB	GEDABAY	7.36	300	ePn	Pn	11 12 14.0	+2.1
DDFL	Dedoflistskaro	7.45	306	P	Pn	11 12 16.2	+3.0
DDFL				S	Sn	11 13 41.0	+3.2
LGD	Lagodekhi	7.58	309	P	Pn	11 12 17.0	+2.1
LGD				S	Sn	11 13 39.0	-1.9
NHDN	Nehbandan	7.67	139	ePn	Pn	11 12 17.0	+0.7
MAKU	Maku	7.70	288	IAML		11 13 04.4	
	comp=N,20nm,0.5s						
QZX	Qazax, Azerbai	7.76	301	ePn	Pn	11 12 19.5	+2.1
GNI	Garni	7.87	294	Pn	Pn	11 12 22.0	+3.1
	comp=N,3.7nm,0.3s,baz=3.8,slow=2.5,SNR=8.5						
GNI	Garni	7.87	294	Pn	Pn	11 12 19.1	+0.1
KBZ	Khabaz	10.68	310	Pn	Pn	11 12 57.1	-0.2
	comp=N,0.7nm,0.3s,baz=137,slow=6.5,SNR=14						
KBZ				Sn	Sn	11 14 53.6	-3.3
	comp=N,0.4nm,0.3s,baz=280,slow=19,SNR=1.8						
KIV	Kislovodsk	10.93	311	Pn	Pn	11 13 01.2	+0.3
UOSS	Minazif	12.46	171	Pn	Pn	11 13 20.8	-1.0
AB31	Akbulak array	12.66	18	Pn	Pn	11 13 25.0	+0.6
	comp=N,0.4nm,0.3s,baz=198,slow=13,SNR=17						
AB31				⇓Sn	Sn	11 15 41.2	-4.2
	comp=N,0.9nm,0.3s,baz=190,slow=23						
ABKAR	Akbulak array	12.66	18		Pn	11 13 24.6	+0.3
AKTO	Aktyubinsk	13.41	11	Pn	Pn	11 13 33.2	-1.4
	comp=N,0.5nm,0.3s,baz=178,slow=13,SNR=7.3						
AKTO				Sn	Sn	11 15 56.5	-7.2
	comp=N,0.7nm,0.3s,baz=260,slow=23,SNR=5.0						
KK31	Karatay Array	13.78	60	Pn	Pn	11 13 42.2	+2.5
	comp=N,0.7nm,0.5s,baz=106,slow=8.5,SNR=6.6						
KK31	Karatay Array	13.78	60	Pn	Pn	11 13 40.0	+0.2
KKAR	Karatay Array	13.78	60	Pn	Pn	11 13 39.9	+0.1
KKAR	Karatay Array	13.78	60	Pn	Pn	11 13 39.8	+0.1
RAYN	Ar Rayn	15.62	211	Pn	Pn	11 14 03.7	-1.0
NIL	Nilore	16.00	98	Pn	Pn	11 14 10.3	+0.8
BRTR	Keskin Array B	16.22	285	Pn	P	11 14 17.4	+1.8
	comp=N,0.1nm,0.3s,baz=93,slow=8.9,SNR=3.8						
BRTR	Keskin Array B	16.22	285		Pn	11 14 13.7	+1.3
AAK	Ala-Archa	16.48	65		Pn	11 14 17.1	+1.4
ARU	Arti	19.35	7	P	P	11 14 49.7	-0.1
	comp=N,0.0nm,0.3s,baz=292,slow=19,SNR=1.2						
ARU	Arti	19.35	7	P	P	11 14 49.1	-0.7
ARU				IAmb	IAmb	11 15 08.3	
	comp=Z,5.0nm,1.0s						
BVAR	Borovoye Array	19.37	31	P	Pn	11 14 52.1	+0.9
	comp=Z,0.3nm,0.3s,baz=229,slow=8.8,SNR=3.8						
KIRV	Kirov	21.51	353	P	P	11 15 13.6	+0.5
	comp=Z,8.3nm,0.4s,baz=281,slow=12,SNR=1.7						
KURBB	Kurchatov Arra	21.91	45	P	P	11 15 19.3	+1.8
	comp=Z,0.9nm,0.9s,baz=244,slow=11,SNR=3.4						
VRI	Vrincioaia	22.12	301	⇑P	P	11 15 28.1	+8.2
PLOR	Plostina	22.17	301	⇑P	P	11 15 23.2	+2.7
AKASG	Malin Array Be	22.23	315	P	P	11 15 21.9	+0.9
	comp=Z,1.2nm,0.4s,baz=121,slow=9.4,SNR=5.1						
AKASG	Malin Array Be	22.23	315	P	P	11 15 21.0	+0.1
AKBB	Malin Array Si	22.23	315	P	P	11 15 21.4	+0.4
AKBB				IAmb	IAmb	11 15 32.2	
	comp=Z,16nm,1.3s						
TESR	Tescani	22.33	303	⇓P	P	11 15 31.6	+9.5
MLR	Muntele Rosu	22.58	300	P	P	11 15 25.9	+1.0
	comp=Z,3.1nm,0.7s,baz=82,slow=14,SNR=4.3						
MLR	Muntele Rosu	22.58	300	⇑P	P	11 15 27.7	+2.8
MLR	Muntele Rosu	22.58	300	P	P	11 15 25.6	+0.7
MLR				IAmb	IAmb	11 15 39.8	
	comp=Z,9.1nm,1.1s						
MAKZ	Makanchi	22.64	56	P	P	11 15 25.6	+0.1
MAKZ				IAmb	IAmb	11 15 29.4	
	comp=Z,2.4nm,0.6s						
MKAR	Makanchi Array	22.85	57	P	P	11 15 30.8	+3.1
	comp=Z,2.0nm,1.0s,baz=255,slow=5.5,SNR=5.0						
MKAR	Makanchi Array	22.85	57	P	P	11 15 28.1	+0.4
DOPR	Dopca	23.06	301	⇑P	P	11 15 32.7	+2.9
VOIR		23.19	300	⇑P	P	11 15 39.9	+8.7
BURAR	Bucovina Array	23.56	305	⇑P	P	11 15 36.5	+1.6
BURAR	Bucovina Array	23.56	305	P	P	11 15 35.4	+0.5
BUR08	Bucovina Ar. S	23.58	305	P	P	11 15 35.7	+0.6
BUR08				IAmb	IAmb	11 15 47.4	
	comp=Z,8.8nm,1.4s						
SOCY	Socotra	25.02	180	P	P	11 15 44.4	-4.3
ZAA0	Zalesovo Array	26.86	42	P	P	11 16 05.1	+0.2
ZAA0				IAmb	IAmb	11 16 24.2	
	comp=Z,3.3nm,1.1s						
ZALV	Zalesovo Beam	26.86	42	P	P	11 16 07.3	+2.3
	comp=Z,0.5nm,0.4s,baz=230,slow=15,SNR=1.8						
ZALV	Zalesovo Beam	26.86	42	P	P	11 16 05.3	+0.4
OJC	Ojcow	27.68	309	P	P	11 16 12.5	+0.1
FIA1	FINESS Array S	29.84	333	P	P	11 16 32.3	+0.9
FINES	FINESS Array B	29.84	333	P	P	11 16 32.7	+1.3
	comp=Z,0.5nm,0.3s,baz=125,slow=8.7,SNR=4.1						
FINES	FINESS Array B	29.84	333	P	P	11 16 32.2	+0.9
HFS	Hagfors	34.28	325	P	P	11 17 11.4	+1.0
	comp=Z,0.6nm,0.3s,baz=100,slow=8.3,SNR=6.8						
NC602	NORSAR Array S	35.50	325	P	P	11 17 21.8	+0.8
NC602				IAmb	IAmb	11 17 39.8	
	comp=Z,3.8nm,0.9s						
NOA	NORSAR Array B	35.76	325	P	P	11 17 23.9	+0.7
	comp=Z,0.3nm,0.5s,baz=108,slow=7.5,SNR=2.0						
CMAR	Chiang Mai Arr	43.38	103	P	P	11 18 26.6	-0.6
	comp=Z,0.7nm,0.4s,baz=299,slow=7.8,SNR=4.6						

IDC ***31*** *11:16:31.0±1.3, 34°.42N×23°.71E, h0^{km}, mb4.2/17, mb1 4.2/22, mb1mx4.0/67, mbtmp4.2/22, ML4.0/5, MS3.0/3, Ms1 3.0/3, ms1mx2.6/40, Error ellipse: s-maj=24.4km s-min=14.8km az=175.0*
MOS ***31*** *11:16:33.7±1.0, 34°.43N×23°.84E, h26^{km}, mb4.3/11, Error ellipse: s-maj=9.1km s-min=4.9km az=78.0*
THE ***31*** *11:16:36.6, 34°.54N×23°.83E, h2^{km}±7^{km}, ML3.9/7, Error ellipse: s-maj=7.4km s-min=1.8km az=206.0*
NEIC ***31*** *11:16:36.7±1.8, 34°.6N±0°.1×23°.86E±0°.08, h30^{km}±8^{km}, mb4.2/18, ML3.8(ATH), Error ellipse: s-maj=15.6km s-min=9.3km az=194.0*
HLW ***31*** *11:16:37.5, 34°.73N×24°.12E, h21^{km}±24^{km}, Md4.6, Ml4.4*
ATH ***31*** *11:16:38.8, 34°.73N×23°.93E, h35^{km}±1^{km}, ML3.8/12, Error ellipse: s-maj=6.7km s-min=1.7km az=215.0*
GII ***31*** *11:16:43.1±0.4, 34°.46N×24°.52E, h40^{km}, mb4.1/2, MD3.8/3, Mm3.9/3*
ISC 31 11:16:36.3±0.9**, 34°.57N**±0°.05×**23°.87E**±0°.04**, h29**^{km}±6^{km}**, n199, σ2^{s}.12**/221**, mb4.2**/27**, 17C-11D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.33	34	P	Pb	11 16 43.9	-0.2
GVD				S	Sb	11 16 49.3	0.0
	70µm,0.4s						
GVD	Gavdhos	0.33	34	P	Pn	11 16 45.1	-0.1
GVD				S	Sn	11 16 50.6	-0.4
GVD				AML	AML	11 16 52.3	
GVD				AML	AML	11 16 52.9	
GVDS	Gavdos	0.33	34	P	Pb	11 16 44.8	+0.7
GVDS				S	Sb	11 16 49.2	-0.3
	64µm,0.2s						
VAM	Vamos	0.88	18	P	Pn	11 16 53.3	+0.6
VAM	Vamos	0.88	18	P	Pn	11 16 53.4	+0.6
VAM				AML	AML	11 17 09.8	
	comp=E,20949µm,0.5s						
VAM				AML	AML	11 17 10.2	
	comp=N,18178µm,0.4s						
VAM	Vamos	0.88	18	P	Pn	11 16 53.7	+0.9
TMBK	Timbaki Herakl	0.90	55	P	Pn	11 16 54.6	+1.7
TMBK				S	Sn	11 17 08.9	+3.9
	comp=N,5µm,0.4s						
IMMV	Iera Moni Meta	0.90	6	P	Pn	11 16 53.9	+0.9
IMMV				S	Sn	11 17 08.4	+3.4
	comp=N,14µm,0.4s						
IMMV	Iera Moni Meta	0.90	6	P	Pn	11 16 53.8	+0.9
IMMV				AML	AML	11 17 10.0	
	comp=E,27533µm,0.5s						
IMMV				AML	AML	11 17 10.4	
	comp=N,27724µm,0.4s						
SIVA	Sivas	0.90	60	P	Pn	11 16 54.3	+1.3
SIVA				S	Sn	11 17 08.6	+3.6
SIVA	Sivas	0.90	60	P	Pn	11 16 54.2	+1.3
SIVA				AML	AML	11 17 11.5	
	comp=N,37330µm,0.7s						
SIVA				AML	AML	11 17 13.5	
	comp=E,36224µm,0.5s						
PRNS	Prines Rethymn	0.95	33	P	Pb	11 16 54.0	-0.2
PRNS				S	Sn	11 17 07.8	+1.4
CHAN	Chania	0.96	9	P	Pn	11 16 55.1	+1.2
CHAN				S	Sn	11 17 10.7	+4.1
	comp=E,5µm,0.6s						
RODP	Rodopos	1.00	355	P	Pn	11 16 56.3	+1.9
RODP				S	Sn	11 17 11.1	+3.6
	comp=E,2µm,0.5s						
IDI	Anoyia	1.11	49	P	Pn	11 16 56.9	+0.9
IDI	Anoyia	1.11	49	Pg	Pn	11 16 56.8	+0.8
	comp=E,148nm,0.3s,baz=222,slow=12,SNR=401						
IDI				Lg	Lg	11 17 14.5	
	comp=E,299nm,0.3s,baz=322,slow=23,SNR=13						
IDI				LR	LR	11 17 41.0	
	comp=E,387nm,20.5s,baz=235,slow=54						
IDI	Anoyia	1.11	49	P	Pn	11 16 56.8	+0.9
IDI				AML	AML	11 17 18.8	
	comp=N,7623µm,0.5s						
IDI				AML	AML	11 17 22.0	
	comp=E,7715µm,0.6s						
HRKL	Herakleio	1.26	53	P	Pb	11 17 01.7	+2.3
LAST	Lasithi	1.45	65	P	Pb	11 17 03.1	+0.4
LAST	Lasithi	1.45	65	P	Pb	11 17 03.6	+0.9
LAST				AML	AML	11 17 32.0	
	comp=N,2916µm,0.6s						
LAST				AML	AML	11 17 35.2	
	comp=E,2913µm,0.7s						
NPS	Neapolis	1.60	64	P	Pb	11 17 05.9	+0.8
NPS	Neapolis	1.60	64	P	Pb	11 17 05.5	+0.4
NPS				AML	AML	11 17 36.4	
	comp=N,3129µm,0.8s						
NPS				AML	AML	11 17 41.3	
	comp=E,3712µm,0.9s						
NPS	Neapolis	1.60	64	P	Pb	11 17 05.6	+0.4
FRMA	Ierapetra Chan	1.60	73	P	Pb	11 17 06.9	+1.7
KTHR	Kythira	1.83	338	P	Pb	11 17 09.5	+0.4
STIA	Sitia Lasithi	1.94	70	P	Pb	11 17 11.1	+0.2
ZKR	Zakros	2.01	73	P	Pb	11 17 11.3	-0.9
ZKR	Zakros	2.01	73	P	Pb	11 17 11.2	-0.9
ZKR				AML	AML	11 17 55.1	
	comp=N,696µm,0.5s						
ZKR				AML	AML	11 18 03.3	
	comp=E,1314µm,0.9s						
MHLO	Agia Marina, M	2.17	11	P	Pn	11 17 11.7	+1.3
MHLO				AML	AML	11 17 54.5	
	comp=N,8330µm,0.6s						
MHLO				AML	AML	11 17 59.1	
	comp=E,7541µm,0.6s						
MHLA	Plaka, Milos I	2.22	12	P	Pn	11 17 12.5	+1.3
MHLA				AML	AML	11 18 00.1	
	comp=E,2433µm,1.3s						
MHLA				AML	AML	11 18 02.2	
	comp=N,3791µm,0.9s						
SANT	Santorini	2.22	35	P	Pn	11 17 13.0	+1.8
SANT	Santorini	2.22	35	⇑P	Pn	11 17 12.3	+1.1
SANT				⇑S	Sn	11 17 33.7	-4.1
SANT	Santorini	2.22	35		Pn	11 17 13.0	+1.8
SANT				Sn	Sn	11 17 39.0	+1.2
VLI	Veliai	2.28	341	P	Pb	11 17 14.7	-2.0
VLI				AML	AML	11 18 02.3	
	comp=N,758µm,0.6s						
VLI				AML	AML	11 18 08.5	
	comp=E,938µm,1.2s						
CMBO	Columbo, Santo	2.28	33	P	Pn	11 17 14.0	+2.0
IOSP	Ios island	2.45	28	P	Pn	11 17 15.5	+1.2
DYR	Agios Nikonas	2.52	331	P	Pb	11 17 18.5	-2.4
DYR				AML	AML	11 18 18.3	
	comp=E,221µm,0.9s						
DYR				AML	AML	11 18 20.9	
	comp=N,167µm,0.7s						
SERI	Serifos	2.64	11	P	Pn	11 17 18.2	+1.2
AMGA	Amorgos Island	2.80	36	P	Pn	11 17 20.1	+0.9
APE	Apeiranthos	2.84	28	P	Pn	11 17 20.5	+0.8
APE	Apeiranthos	2.84	28	⇑P	Pn	11 17 20.6	+0.8
APE				⇓S	Sn	11 17 49.7	-3.4
APE	Apeiranthos	2.84	28	⇑P	Pn	11 17 20.6	+0.8
KARP	Karpathos	2.88	69	P	Pn	11 17 22.8	+2.5
KARP	Karpathos	2.88	69	P	Pn	11 17 22.7	+2.5
KARP	Karpathos	2.88	69		Pn	11 17 22.7	+2.5
KARP				Sn	Sn	11 17 55.7	+1.8
DID	Didima	2.98	350	P	Pn	11 17 23.6	+2.0
SLUM	Salum	3.27	159	P	Pn	11 17 28.2	+2.6
	baz=163						
SLUM				AMP		11 18 00.0	
	baz=163						
SLUM				S	Sn	11 18 04.1	+0.7
	baz=163						
MATC	Matruh	4.28	138	P	Pn	11 17 39.8	+0.4
	baz=141						
AOS	Alonnisos	4.60	0	P	Pn	11 17 44.9	+1.1
PAIG	Paliouri	5.36	358	P	Pn	11 17 55.6	+1.4
PAIG				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ELL	Elmali	5.38	64	P	Pn	11 17 56.8	+2.1
ELL	Elmali	5.38	64		Pn	11 17 56.3	+1.6
ELL				Sn	Sn	11 18 54.0	-1.7
MANT	Manisa	5.44	43		Pn	11 17 56.6	+0.9
SWA2		5.47	165	P	Pn	11 17 57.8	+1.9
	baz=167						
SWA2				S	Sn	11 18 57.3	-0.6
	baz=167						
SWA2				AMP		11 19 00.0	
	baz=167						
LIT	Litokhoron	5.63	349	P	Pn	11 17 59.6	+1.5
LIT				pmax	pmax		
	comp=Z,18nm,0.6s						
IGT	Igoumenitsa	5.71	331	P	Pn	11 18 04.3	+5.2
IGT				pmax	pmax		
	comp=Z,12nm,1.2s						
HBRG	Burj al `Arab	6.42	127	P	Pn	11 18 08.0	-0.9
	baz=129						
HBRG				AMP		11 19 00.0	
	baz=129						
GRG	Griva	6.49	350	P	Pn	11 18 12.5	+2.7
GRG				pmax	pmax		
	comp=Z,7.0nm,0.6s						
FNA	Florina	6.51	343	P	Pn	11 18 11.2	+1.0
FNA				pmax	pmax		
	comp=Z,16nm,0.6s						
KNT	Kendrikon	6.63	354	P	Pn	11 18 13.9	+2.1
KNT				pmax	pmax		
	comp=Z,9.0nm,0.5s						
SCTE	Santa Cesarea	6.98	324	Pn	Pn	11 18 17.2	+0.7
TIP	Timpagrande	7.32	311	⇓P	Pn	11 18 20.3	-1.0
TIP				⇑S	Sn	11 19 38.6	-4.9
TIP	Timpagrande	7.32	311		Pn	11 18 22.8	+1.5
LEF	Lefka	7.44	83	⇑P	Pn	11 18 21.0	-1.9
LEF				⇓S	Sn	11 19 40.8	-5.5
HNAT	Natroun	7.55	129	P	Pn	11 18 24.4	0.0
	baz=130						
CSS	Mathiatis	7.80	84	Pn	Pn	11 18 26.9	-1.0
CSS				Sn	Sn	11 19 50.1	-5.1
CSS	Mathiatis	7.80	84	Pn	Pn	11 18 26.8	-1.0
VTS	Vitosha	8.06	357	⇑P	Pn	11 18 27.9	-3.5
VTS	Vitosha	8.06	357	P	Pn	11 18 32.9	+1.4
VTS	Vitosha	8.06	357	Pn	Pn	11 18 32.9	+1.4
HSAF	As Saff	8.18	125	P	Pn	11 18 33.5	+0.5
	baz=126						
KOT	Kottamia	8.18	122	P	Pn	11 18 33.9	+0.8
	baz=124						
ULC	Ulcinj	8.23	335	P	Pn	11 18 35.5	+1.8
GLL	Jalalah	8.31	125	P	Pn	11 18 35.1	+0.3
	baz=126						
MATE	Matera	8.31	319	⇑P	Pn	11 18 34.0	-0.9
MATE				⇑S	Sn	11 20 04.0	-3.7
HFRF	Wahat Farafira	8.32	151	P	Pn	11 18 36.1	+1.1
	baz=153						
HHAG	Hagoal	8.35	121	P	Pn	11 18 35.2	-0.2
	baz=123						
PDG	Podgorica	8.64	337	⇓P	Pn	11 18 38.3	-1.1
PDG				⇑S	Sn	11 20 10.9	-4.9
PDG	Podgorica	8.64	337		Pn	11 18 39.2	-0.1
NBNS	Bani Suef	8.67	131	P	Pn	11 18 40.9	+1.1
	baz=133						
NBNS				S	Sn	11 20 09.6	-7.1
	baz=133						
ACER	Acerenza	8.83	317	Pn	Pn	11 18 43.1	+1.2
SUZ	Suez	8.94	119	P	Pn	11 18 43.5	+0.1
	baz=121						
TAMRE	El Minia	9.14	137	P	Pn	11 18 47.9	+1.7
	baz=138						
BR131	Keskin Array S	9.35	54	⇑*i*P	Pn	11 18 51.0	+1.8
BR131	Keskin Array S	9.35	54		Pn	11 18 49.9	+0.7
BRTR	Keskin Array B	9.35	54	Pn	Pn	11 18 50.8	+1.6
	comp=Z,0.4nm,0.3s,baz=229,slow=13,SNR=21						
BRTR				Sn	Sn	11 20 30.5	-2.8
	comp=Z,0.1nm,0.3s,baz=209,slow=26,SNR=1.6						
BRTR				LR	LR	11 23 25.4	
	comp=Z,60nm,18.8s,baz=232,slow=43						
BRTR	Keskin Array B	9.35	54		Pn	11 18 50.1	+1.0
OFRI	`Ofer	9.48	99	Pn	Pn	11 18 49.7	-1.2
HNTI	Hanita	9.52	96	Pn	Pn	11 18 51.4	-0.1
HNTI				Sn	Sn	11 20 26.1	-11
KZIT	Kziot	9.59	109	Sn	Sn	11 20 32.4	-6.8
SGRT	San Giovanni R	9.61	321	Pn	Pn	11 18 52.9	+0.2
SLTI	Sal'it	9.63	101	Pn	Pn	11 18 52.1	-0.8
MMA0B	Mount Meron ar	9.73	96	Pn	Pn	11 18 52.8	-1.5
MMA0B				Sn	Sn	11 20 35.9	-6.7
MMAI	Mount Meron Ar	9.73	96	Pn	Pn	11 18 54.2	-0.2
	comp=Z,4.2nm,0.3s,baz=307,slow=13,SNR=8.8						
MMAI				Sn	Sn	11 20 35.9	-6.7
	comp=Z,6.0nm,0.3s,baz=297,slow=19,SNR=5.3						
GRB	Gharib	9.87	127	P	Pn	11 18 55.8	-0.4
	baz=128						
MMLI	Mount Malkishu	9.88	99	Pn	Pn	11 18 56.0	-0.4
MMLI				Sn	Sn	11 20 38.9	-7.5
KSDI	Kefar Szold	9.90	95	Pn	Pn	11 18 56.7	+0.1
KSDI				Sn	Sn	11 20 38.9	-7.9
NATI	Neve Ativ	9.95	94	Pn	Pn	11 18 56.5	-0.8
NATI				Sn	Sn	11 20 41.5	-6.5
YTIR	Yattir	9.98	106	Sn	Sn	11 20 42.4	-6.4
HMDT	Nahal Hemdat	10.02	100	Pn	Pn	11 18 57.3	-0.9
HMDT				Sn	Sn	11 20 43.4	-6.2
DSI	Dead Sea	10.11	104	Sn	Sn	11 20 44.7	-7.3
HDK1	Dakhla	10.19	150	P	Pn	11 19 01.9	+1.3
	baz=152						
MAKA	Makarska	10.21	331	*e*Pn	Pn	11 18 59.8	-1.0
MAKA				Sn	Sn	11 20 46.8	-7.4
PRNI	Paran	10.30	111	Sn	Sn	11 20 50.3	-6.4
RICI	Ricice	10.34	332	*e*Pn	Pn	11 19 01.6	-0.9
RICI				Sn	Sn	11 20 49.2	-8.2
MDVR	Moldovita	10.34	351	⇑P	Pn	11 18 58.0	-4.6
ZFRI	Zfri	10.35	110	Sn	Sn	11 20 50.2	-7.6
HERR	Herculane	10.36	354	⇑P	Pn	11 19 01.0	-1.9
EIL	Elat	10.59	114	Sn	Sn	11 20 57.4	-6.3
MLR	Muntele Rosu	11.03	8	LR	LR	11 23 45.7	
	comp=Z,82nm,20.1s,baz=114,slow=39						
MLR	Muntele Rosu	11.03	8	⇓P	Pn	11 19 10.0	-2.2
MLR	Muntele Rosu	11.03	8	⇓P	Pn	11 19 10.0	-2.2
ZIRJ	Zirje	11.09	327	*e*Pn	Pn	11 19 11.3	-1.5
ZIRJ				Sn	Sn	11 21 07.3	-8.5
DUGI	Dugi Otok	11.62	327	*e*Pn	Pn	11 19 19.9	-0.2
NVLJ	Novalja	12.15	328	*e*Pn	Pn	11 19 27.8	+0.4
BUR08	Bucovina Ar. S	13.11	4	Pn	Pn	11 19 41.1	+0.6
KMPD	K-Podol'skiy	14.12	7	P	Pn	11 19 58.0	+3.8
STAL	STALIGIAL	14.43	327	Pn	Pn	11 19 57.8	-0.7
KBA	Koelnbreinsper	14.80	331	*i* Pn	Pn	11 20 04.2	+0.5
	comp=Z,2.5nm,0.5s						
ABTA	Abfaltersbach	14.89	328	*i* Pn	P	11 20 13.1	+2.9
	comp=Z,5.0nm,0.7s						
MOA	Molln	15.09	334	*i* P	P	11 20 14.0	+1.7
	comp=Z,5.7nm,1.0s						
WTTA	Wattenberg	15.67	328	*i* P	P	11 20 19.6	+0.7
	comp=Z,6.3nm,0.9s						
WTTA	Wattenberg	15.67	328	P	P	11 20 22.4	+3.4
WTTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
VRAC	Vranov	15.68	342	LR	LR	11 28 20.6	
	comp=Z,68nm,20.2s,baz=170,slow=45						
WATA	Walderalm	15.75	328	*i* Pn	P	11 20 18.5	-1.4
	comp=Z,5.0nm,0.7s						
SQTA	Sankt Quirin	15.83	327	*i* Pn	P	11 20 20.0	-0.6
	comp=Z,5.2nm,0.7s						
FETA	Feichten	15.90	325	*i* Pn	Pn	11 20 18.6	+0.6
	comp=Z,4.8nm,1.4s						
MOTA	Moosalm	15.97	327	*i* Pn	Pn	11 20 20.5	+1.6
	comp=Z,1.7nm,0.5s						
GEC2	GERESS Array S	16.14	335	P	P	11 20 26.9	+2.9
GEC2				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GEC2	GERESS Array S	16.14	335	P	P	11 20 23.3	-0.8
GERES	GERESS Array B	16.14	335	Pn	Pn	11 20 21.1	+0.1
	comp=Z,0.1nm,0.3s,baz=160,slow=12,SNR=2.2						
GERES	GERESS Array B	16.14	335	P	Pn	11 20 21.6	+0.6
GERES	GERESS Array B	16.14	335		Pn	11 20 21.6	+0.6
KHC	Kasperske Hory	16.43	335	⇓*i*P	P	11 20 29.2	+2.0
KHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KHC	Kasperske Hory	16.43	335	P	P	11 20 28.0	+0.8
DAVA	Damuels	16.50	325	*i* Pn	Pn	11 20 26.7	+1.1
	comp=Z,1.2nm,0.4s						
KIEV	Kiev	16.59	12	P	P	11 20 32.0	+3.2
AKASG	Malin Array Be	16.59	12	Pn	Pn	11 20 25.5	-1.2
	comp=Z,2.0nm,0.3s,baz=206,slow=10,SNR=3.6						
AKASG	Malin Array Be	16.59	12	*ce*P	P	11 20 31.8	+2.9
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.5s						
AKASG	Malin Array Be	16.59	12		Pn	11 20 26.8	+0.1
AKBB	Malin Array Si	16.59	12	⇑*i*P	P	11 20 31.8	+2.9
AKBB	Malin Array Si	16.59	12	P	Pn	11 20 28.1	+1.4
AKBB				IAmb	IAmb	11 20 32.5	
	comp=Z,6.5nm,0.7s						
WET	Wettzell	16.68	334	P	P	11 20 32.3	+2.3
WET				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KIV	Kislovodsk	17.30	52	*e*P	Pn	11 20 34.8	-0.9
KIV				pmax	pmax		
	comp=Z,26nm,1.0s						
KBZ	Khabaz	17.34	52	P	Pn	11 20 36.5	+0.5
	comp=Z,0.2nm,0.3s,baz=267,slow=11,SNR=5.5						
GNI	Garni	17.50	65	P	Pn	11 20 37.5	-0.7
GNI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GNI	Garni	17.50	65	Pn	Pn	11 20 37.5	-0.7
GNI				IAmb	IAmb	11 20 56.0	
	comp=Z,9.7nm,1.0s						
CLL	Collm	18.49	338	*e*P	Pn	11 20 52.0	+1.8
	comp=Z,5.0nm,0.7s						
CLL				*e*pP	pwP	11 21 00.0	-0.6
CLL	Collm	18.49	338	*e*P	Pn	11 20 53.0	+2.8
CLL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HFS	Hagfors	26.43	349	P	P	11 22 10.3	0.0
	comp=Z,4.6nm,0.5s,baz=156,slow=11,SNR=32						
FINES	FINESS Array B	26.93	2	P	P	11 22 13.8	-1.0
	comp=Z,1.4nm,0.4s,baz=170,slow=10,SNR=9.9						
FIA1	FINESS Array S	26.93	2	P	P	11 22 13.7	-1.1
FIA1				IAmb	IAmb	11 22 23.7	
	comp=Z,19nm,1.4s						
NC602	NORSAR Array S	27.37	347	P	P	11 22 18.4	-0.4
NORES	NORESS Array B	27.37	347	P	P	11 22 20.2	+1.4
NORES				pmax	pmax		
	comp=Z,2.0nm,0.3s						
NB2	NORSAR Subarra	27.72	347	P	P	11 22 21.7	-0.2
	comp=Z,0.8nm,0.4s,baz=156,slow=9.3						
NOA	NORSAR Array B	27.72	347	P	P	11 22 21.6	-0.2
	comp=Z,0.4nm,0.6s,baz=152,slow=8.6,SNR=8.1						
EKA	Eskdalemuir Ar	27.93	326	P	P	11 22 24.8	+1.0
	comp=Z,0.7nm,0.6s,baz=134,slow=7.2,SNR=2.7						
AKTO	Aktyubinsk	29.43	47	P	P	11 22 37.0	-0.2
	comp=Z,5.1nm,0.6s,baz=248,slow=8.8,SNR=21						
ABKAR	Akbulak array	30.27	50	P	P	11 22 44.7	+0.1
ARU	Arti	32.16	36	P	P	11 23 01.0	-0.2
	comp=Z,1.5nm,0.3s,baz=236,slow=9.7,SNR=9.0						
ARU	Arti	32.16	36	⇓*i*P	P	11 23 02.2	+1.0
ARU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARU	Arti	32.16	36	P	P	11 23 01.0	-0.2
ARCES	ARCESS Array B	35.03	1	P	P	11 23 25.4	-0.6
	comp=Z,2.1nm,0.5s,baz=178,slow=8.5,SNR=23						
ARCES	ARCESS Array B	35.03	1	P	P	11 23 25.0	-1.1
ARE0	ARCESS Array S	35.03	1	P	P	11 23 25.1	-1.0
KK31	Karatay Array	36.92	62	P	P	11 23 42.6	0.0
KK31				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KK31	Karatay Array	36.92	62	P	P	11 23 42.6	0.0
KK31				IAmb	IAmb	11 23 44.7	
	comp=Z,2.7nm,0.7s						
KKAR	Karatay Array	36.92	62	P	P	11 23 42.9	+0.3
KKAR	Karatay Array	36.92	62	P	P	11 23 42.9	+0.3
BRVK	Borovoye	37.47	46	⇓*i*P	P	11 23 46.5	-0.6
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRVK	Borovoye	37.47	46	P	P	11 23 47.4	+0.3
BRVK				IAmb	IAmb	11 23 52.0	
	comp=Z,7.1nm,1.2s						
AAK	Ala-Archa	39.88	63	⇓*i*P	P	11 24 07.6	0.0
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
AAK	Ala-Archa	39.88	63	P	P	11 24 08.1	+0.5
KURBB	Kurchatov Arra	42.32	51	P	P	11 24 27.7	+0.3
	comp=Z,3.4nm,0.4s,baz=278,slow=8.6,SNR=24						
KURK	Kurchatov	42.38	50	⇓*i*P	P	11 24 28.2	+0.4
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURK	Kurchatov	42.38	50	P	P	11 24 28.0	+0.2
KURK				IAmb	IAmb	11 24 28.7	
	comp=Z,3.8nm,0.8s						
SPITS	Spitsbergen Ar	43.84	358	P	P	11 24 39.7	+0.4
	comp=Z,1.1nm,0.3s,baz=145,slow=10,SNR=2.4						
MAKZ	Makanchi	44.77	56	P	P	11 24 47.9	+0.6
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MAKZ	Makanchi	44.77	56	P	P	11 24 47.9	+0.6
MAKZ				IAmb	IAmb	11 24 48.9	
	comp=Z,2.1nm,0.6s						
MK31	Makanchi Array	44.99	56	P	P	11 24 49.7	+0.8
MK31				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MK31	Makanchi Array	44.99	56	P	P	11 24 49.7	+0.8
MK31				IAmb	IAmb	11 24 50.3	
	comp=Z,4.7nm,0.6s						
MKAR	Makanchi Array	44.99	56	P	P	11 24 49.5	+0.6
	comp=Z,6.2nm,0.6s,baz=278,slow=6.9,SNR=87						
MKAR	Makanchi Array	44.99	56	P	P	11 24 49.7	+0.8
MKAR	Makanchi Array	44.99	56	P	P	11 24 49.7	+0.8
ZAA0	Zalesovo Array	46.18	46	P	P	11 24 58.0	-0.2
ZALV	Zalesovo Beam	46.18	46	P	P	11 24 57.9	-0.3
	comp=Z,6.9nm,0.4s,baz=267,slow=9.4,SNR=26						
ZALV	Zalesovo Beam	46.18	46	P	P	11 24 58.0	-0.3
DGZ	Jazzator, Alta	48.08	51	⇑*i*P	P	11 25 13.8	+0.5
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SONM	Songino Array	60.68	50	P	P	11 26 45.9	+1.0
	comp=Z,2.0nm,0.5s,baz=289,slow=7.2,SNR=24						
SONM	Songino Array	60.68	50	P	P	11 26 45.6	+0.7
ULN	Ulaanbaatar	61.09	50	⇑*i*P	P	11 26 47.8	+0.1
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ULN	Ulaanbaatar	61.09	50	P	P	11 26 48.5	+0.8
TIXI	Tiksi	62.09	20	P	P	11 26 53.9	+0.1
	comp=Z,1.0nm,0.3s,baz=258,slow=1.8,SNR=5.2						
RES	Resolute Bay	63.97	345	P	P	11 27 07.4	+1.1
	comp=Z,0.3nm,0.4s,baz=38,slow=15,SNR=1.7						
RES	Resolute Bay	63.97	345	P	P	11 27 07.3	+1.0
CMAR	Chiang Mai Arr	67.70	82	P	P	11 27 31.8	+0.6
	comp=Z,0.4nm,0.4s,baz=288,slow=9.1,SNR=1.7						
KLR	Kul'dur	74.91	40	P	P	11 28 14.5	+0.2
	comp=Z,1.1nm,0.7s,baz=280,slow=5.5,SNR=4.2						
YKA	Yellowknife Ar	77.68	342	P	P	11 28 30.7	+1.0
	comp=Z,0.4nm,0.5s,baz=32,slow=5.1,SNR=6.5						
YKA	Yellowknife Ar	77.68	342	*i* P	P	11 28 31.0	+1.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						

IDC ***31*** *11:27:56.2±2.7, 5°.42S×103°.14E, h0^{km}, mb3.5/6, mb1 3.7/7, mb1mx3.5/37, mbtmp3.5/7, ML3.2/1, Error ellipse: s-maj=104.2km s-min=20.3km az=54.0*
DJA ***31*** *11:27:59.9±0.3, 5°S±2°×10°4E±°, h10^{km}, M3.9/6, MLv3.9/6*
ISC 31 11:27:58.9±1.3**, 4°.85S**±0°.06×**103°.98E**±0°.06**, h2**^{km}±10^{km}**, n15, σ1^{s}.72**/18**, mb3.4**/6**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LWLI	Liwa	0.18	155	P	Pg	11 28 03.6	+1.1
LWLI				S	Sg	11 28 05.6	+0.7
MDSI	Maura Dua	0.41	29	P	Pb	11 28 08.3	-0.6
MDSI				S	Sb	11 28 14.2	-1.4
KASI	Kota Agung	0.84	143	P	Pg	11 28 15.5	+0.4
KASI				S	Sg	11 28 26.8	+0.7
MNAI	Manna	1.13	295	P	Pn	11 28 21.1	-0.7
MNAI				S	Sn	11 28 36.7	-1.2
KSI	Kapahiang	1.82	311	P	Pg	11 28 33.5	-0.4
KSI				S	Sg	11 28 58.7	+1.1
LEM	Lembang	4.12	119	Pn	Pb	11 29 08.2	-4.1
	1.0nm,0.3s,baz=201,slow=11,SNR=4.3						
LEM				Sn	Sg	11 30 12.1	+0.8
	baz=330,slow=23,SNR=1.1						
CMAR	Chiang Mai Arr	23.69	348	P	P	11 33 13.7	+1.5
	0.3nm,0.3s,baz=183,slow=7.7,SNR=4.1						
H08S2	Diego Garcia H	31.42	263	T	T	12 06 40.8	
	baz=87,slow=76,SNR=4.0						
H08S3	Diego Garcia H	31.43	263	T	T	12 06 49.1	
	baz=87,slow=76,SNR=4.3						
H08S1	Diego Carcia H	31.44	263	T	T	12 06 27.8	
	baz=87,slow=76,SNR=28						
WRA	Warramunga Arr	33.14	120	P	P	11 34 36.9	-0.1
	0.7nm,0.8s,baz=307,slow=8.6,SNR=3.4						
ASAR	Alice Springs	34.37	126	P	P	11 34 47.9	+0.3
	0.3nm,0.6s,baz=292,slow=8.0,SNR=6.7						
STKA	Stephens Creek	44.30	132	P	P	11 36 11.6	+1.2
	1.4nm,0.7s,baz=308,slow=7.6,SNR=3.5						
SONM	Songino Array	52.50	2	P	P	11 37 16.7	+3.1
	0.1nm,0.4s,baz=191,slow=6.9,SNR=2.1						
MKAR	Makanchi Array	54.89	342	P	P	11 37 29.3	-1.7
	0.3nm,0.7s,baz=165,slow=6.0,SNR=2.5						

PRE ***31*** *11:39:49.6±0.8, 26°.01S×27°.16E, h2^{km}, ML2.5*
ISC 31 11:39:50.8±1.0**, 26°.07S**±0°.08×**27°.18E**±0°.08**, h10**^{km}**, n10, σ1^{s}.54**/14**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLR	Silverton	1.05	72	*e*P	Pg	11 40 10.4	-0.6

SLR				*e*S	**Sg**	**11 40 24.0**	**-0.6**
SLR				AML	AML	11 40 28.3	
	comp=Z,131nm,0.2s						
LBTB	**Lobatse**	**1.78**	**306**	*i* P	Pg	11 40 30.6	+5.7
LBTB	**Lobatse**	**1.78**	**306**	*i* P	Pg	11 40 30.6	+5.7
BOSA	**Boshof**	**3.06**	**214**	*i* P	**Pn**	**11 40 39.7**	**+0.4**
BOSA	**Boshof**	**3.06**	**214**	*e*P	**Pn**	**11 40 39.8**	**+0.4**
BOSA				*e*S	**Sn**	**11 41 17.7**	**+1.7**
BOSA				AML	AML	11 41 23.4	
	comp=Z,19nm,0.2s						
BOSA	**Boshof**	**3.06**	**214**	*i* P	**Pn**	**11 40 39.7**	**+0.4**
MATP	**Matopo**	**5.75**	**12**	*i* P	**Pn**	**11 41 18.6**	**+2.3**
MATP				*i* S	**Sn**	**11 42 22.6**	**+0.1**
MATP	**Matopo**	**5.75**	**12**	*i* P	**Pn**	**11 41 18.6**	**+2.3**
MATP				*i* S	**Sn**	**11 42 22.6**	**+0.1**
UPI	**Upington**	**5.75**	**245**	*e*P	**Pn**	**11 41 17.3**	**+0.9**
UPI				*e*S	**Sn**	**11 42 20.9**	**-1.6**
UPI				AML	AML	11 42 35.2	
	comp=Z,4.3nm,0.3s						
CVNA	**Calvinia**	**8.45**	**229**	*e*P	**Pn**	**11 41 54.7**	**+1.3**
CVNA				*e*S	**Sn**	**11 43 26.3**	**-2.6**
CVNA				AML	AML	11 44 27.7	
	comp=Z,11nm,0.5s						

IDC 31 11:48:56.1±7.8**, 36°.16N×82°.00E, h0^{km}, mb3.1**/1**, mb1 3.3**/3**, mb1mx3.1**/35**, mbtmp3.3**/3**, ML2.9**/1**, Error ellipse: s-maj=114.3km s-min=43.7km az=64.0, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**10.62**	**1**	Pn	Pn	11 51 29.0	-0.6
	0.1nm,0.3s,baz=178,slow=12,SNR=4.6						
MKAR				Sn	Sn	11 53 27.7	-1.5
	0.1nm,0.3s,baz=184,slow=21,SNR=3.0						
MKAR				Lg	Lg	11 54 34.1	
	0.1nm,0.3s,baz=180,slow=27,SNR=1.8						
ZALV	**Zalesovo Beam**	**17.89**	**5**	P	P	11 53 07.7	+0.7
	baz=193,slow=9.9,SNR=1.6						
SONM	**Songino Array**	**21.46**	**50**	P	P	11 53 46.1	0.0
	0.7nm,0.8s,baz=248,slow=11,SNR=4.9						

IDC ***31*** *12:00:17.4±3.7, 24°.33N×125°.21E, h0^{km}, mb3.5/4, mb1 3.6/4, mb1mx3.4/37, mbtmp3.5/4, Error ellipse: s-maj=249.4km s-min=23.9km az=64.0*

JMA ***31*** *12:00:21.9±0.3, 24°.27N×125°.22E, h38^{km}, M3.3*

ISC 31 12:00:21.6±1.7**, 24°.30N**±0°.08×**125°.20E**±0°.06**, h27**^{km}±12^{km}**, n14, σ0^{s}59**/22**, mb3.5**/4**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMJ2	**Miyako jima3**	**0.46**	**15**	P	**Pn**	**12 00 32.1**	**-0.2**
JMJ2				S	**Sn**	**12 00 39.8**	**+0.2**
JOGS	**Gusukube**	**0.50**	**22**	P	**Pn**	**12 00 32.8**	**-0.1**
JOGS				S	**Sn**	**12 00 41.2**	**+0.6**
JIRB	**Irabujima**	**0.53**	**357**	P	**Pb**	**12 00 32.7**	**+0.3**
JIRB				S	**Sn**	**12 00 40.8**	**-0.6**
JTJ	**Tarama**	**0.57**	**307**	P	**Pn**	**12 00 33.6**	**-0.3**
JTJ				S	**Sn**	**12 00 42.8**	**+0.4**
JIKM	**Ikemajima**	**0.62**	**4**	P	**Pn**	**12 00 34.5**	**-0.2**
JIKM				S	**Sn**	**12 00 44.8**	**+1.0**
JISG	**Ishigakijimahi**	**0.86**	**290**	P	**Pn**	**12 00 37.7**	**-0.2**
JISG				*e*S	**Sn**	**12 00 50.2**	**+0.6**
JIJ	**Ishigaki jima**	**0.97**	**274**	P	**Pb**	**12 00 39.8**	**+0.1**
JIJ				S	**Sn**	**12 00 53.4**	**+1.2**
JKRS	**Kuro-shima**	**1.09**	**267**	P	**Pb**	**12 00 42.3**	**+0.5**
HATJ	**Hateruma jima**	**1.30**	**260**	P	**Pb**	**12 00 45.2**	**-0.1**
HATJ				S	**Sb**	**12 01 01.4**	**-0.2**
IRIF	**Iriomote-Funau**	**1.34**	**272**	P	**Pb**	**12 00 45.5**	**-0.6**
MKAR	**Makanchi Array**	**40.84**	**314**	P	**P**	**12 08 01.4**	**+0.4**
	0.4nm,0.4s,baz=101,slow=11,SNR=3.2						
ZALV	**Zalesovo Beam**	**42.19**	**325**	P	**P**	**12 08 10.7**	**-1.1**
	0.4nm,0.4s,baz=134,slow=10,SNR=1.6						
WRA	**Warramunga Arr**	**44.87**	**168**	P	**P**	**12 08 33.9**	**+0.1**
	0.5nm,0.5s,baz=349,slow=9.7,SNR=7.8						
ASAR	**Alice Springs**	**48.42**	**169**	P	**P**	**12 09 01.8**	**+0.2**
	0.3nm,0.7s,baz=354,slow=7.0,SNR=6.9						

IDC ***31*** *12:20:28.8±1.5, 8°.31S×117°.16E, h0^{km}, mb3.6/4, mb1 3.8/6, mb1mx3.6/32, mbtmp3.6/6, ML3.4/2, Error ellipse: s-maj=31.2km s-min=20.4km az=75.0*

DJA ***31*** *12:20:30.8±0.3, 8°S±5°×11°7E±°, h10^{km}, M3.8/10, MLv3.8/10*

ISC 31 12:20:33.1±0.9**, 8°.30S**±0°.06×**117°.24E**±0°.05**, h35**^{km}**, n14, σ1^{s}32**/17**, mb3.7**/3**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.75**	**134**	P	**Pn**	**12 20 46.1**	**-1.1**
PLAI				S	**Sn**	**12 20 56.5**	**-0.8**
SRBI	**Singaraja**	**2.01**	**276**	P	**Pn**	**12 21 03.7**	**-0.9**
DNP	**Denpasar**	**2.04**	**259**	P	**Pn**	**12 21 04.9**	**0.0**
WBSI	**Waikabubak, Su**	**2.51**	**122**	P	**Pn**	**12 21 13.3**	**+1.8**
JAGI	**Jajag, Banyuwa**	**3.06**	**267**	P	**Pn**	**12 21 18.1**	**-0.8**
GMJI	**Gumukmas**	**3.75**	**270**	P	**Pn**	**12 21 29.0**	**+0.5**
BASI	**Baing, Sumba**	**3.81**	**120**	P	**Pn**	**12 21 30.4**	**+1.1**
KAPI	**Kappang**	**4.11**	**38**	Pn	**Pn**	**12 21 33.1**	**-0.3**
	2.1nm,0.3s,baz=156,slow=19,SNR=2.0						
KAPI				Sn	**Sn**	**12 22 20.5**	**+0.1**
	4.2nm,0.3s,baz=38,slow=19,SNR=5.9						
KAPI				Lg	Lg	12 22 40.8	
	7.9nm,0.3s,baz=49,slow=19,SNR=4.2						
BKSI	**Bulukumba**	**4.12**	**44**	P	**Pn**	**12 21 31.9**	**-1.7**
FITZ	**Fitzroy Crossi**	**12.71**	**141**	Pn	**Pn**	**12 23 30.7**	**-0.8**
	0.2nm,0.3s,baz=328,slow=8.3,SNR=6.6						
FITZ				Sn	**Sn**	**12 25 49.1**	**-2.7**
	0.1nm,0.3s,baz=195,slow=18,SNR=3.1						
WRA	**Warramunga Arr**	**20.20**	**127**	P	**P**	**12 25 06.2**	**+1.2**
	2.3nm,0.5s,baz=301,slow=12,SNR=41						
ASAR	**Alice Springs**	**22.10**	**136**	P	**P**	**12 25 26.5**	**+1.0**
	1.0nm,0.5s,baz=312,slow=9.4,SNR=28						
SONM	**Songino Array**	**56.71**	**351**	P	**P**	**12 30 15.0**	**+1.7**
	0.7nm,0.7s,baz=173,slow=8.2,SNR=4.5						
MKAR	**Makanchi Array**	**63.05**	**334**	P	**P**	**12 30 56.9**	**0.0**
	0.5nm,0.7s,baz=152,slow=6.5,SNR=2.9						

IDC ***31*** *12:24:06.5±0.9, 8°.35S×117°.04E, h0^{km}, mb4.0/9, mb1 4.1/11, mb1mx3.9/32, mbtmp4.0/11, ML3.8/2, Error ellipse: s-maj=33.7km s-min=12.1km az=58.0*

DJA ***31*** *12:24:09.2±0.3, 8°S±5°×11°7E±°, h10^{km}, M4.3/12, mb4.5/3, MLv4.2/12*

NEIC ***31*** *12:24:11.6±2.4, 8°.38S±0°.07×117°.25E±0°.06, h38^{km}±9^{km}, mb4.2/13, Error ellipse: s-maj=10.5km s-min=8.2km az=176.0*

ISC 31 12:24:11.2±0.5**, 8°.36S**±0°.05×**117°.27E**±0°.04**, h35**^{km}**, n56, σ1^{s}34**/63**, mb4.1**/11**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.68**	**133**	P	**Pn**	**12 24 24.0**	**-0.4**
PLAI				S	**Sn**	**12 24 32.3**	**-1.5**
SRBI	**Singaraja**	**2.06**	**278**	P	**Pn**	**12 24 41.6**	**-1.7**
DNP	**Denpasar**	**2.06**	**261**	P	**Pn**	**12 24 44.2**	**+0.9**
WBSI	**Waikabubak, Su**	**2.45**	**121**	P	**Pn**	**12 24 50.1**	**+1.3**
JAGI	**Jajag, Banyuwa**	**3.09**	**268**	P	**Pn**	**12 24 55.8**	**-1.7**
JAGI	**Jajag, Banyuwa**	**3.09**	**268**		**Pn**	**12 24 56.1**	**-1.4**
JAGI				Sn	**Sn**	**12 25 31.7**	**-1.5**
BASI	**Baing, Sumba**	**3.75**	**120**	P	**Pn**	**12 25 08.9**	**+2.3**
GMJI	**Gumukmas**	**3.79**	**271**	P	**Pn**	**12 25 06.8**	**-0.3**
KAPI	**Kappang**	**4.14**	**37**	Pn	**Pn**	**12 25 12.0**	**0.0**
	7.1nm,0.3s,baz=190,slow=4.1,SNR=20						
KAPI				Sn	**Sn**	**12 25 58.4**	**-0.8**
	9.9nm,0.3s,baz=28,slow=23,SNR=8.9						
KAPI				Lg	Lg	12 26 18.2	
	6.8nm,0.3s,baz=232,slow=23,SNR=3.6						
KAPI	**Kappang**	**4.14**	**37**		**Pn**	**12 25 12.0**	**0.0**
KAPI				Sn	**Sn**	**12 25 59.0**	**-0.2**
BKSI	**Bulukumba**	**4.14**	**43**	P	**Pn**	**12 25 12.0**	**0.0**
MMRI	**Maumere**	**4.92**	**94**	P	**Pn**	**12 25 24.3**	**+1.6**
MMRI	**Maumere**	**4.92**	**94**		**Pn**	**12 25 23.8**	**+1.0**
PWJI	**Pagerwojo**	**5.42**	**273**	P	**Pn**	**12 25 30.1**	**+0.5**
	0.2nm28nm,0.5s						
PCJI	**Pacitan**	**6.03**	**271**	P	**Pn**	**12 25 39.4**	**+1.4**
	0.2nm20nm,0.9s						
WOJI	**Wonogiri, Jawa**	**6.31**	**274**	P	**Pn**	**12 25 45.1**	**+3.4**
UGM	**Wanagama**	**6.70**	**273**	Pn	**Pn**	**12 25 48.2**	**+1.1**
UGM				Sn	**Sn**	**12 27 03.9**	**+1.6**
SOEI	**Soe**	**7.05**	**102**	P	**Pn**	**12 25 53.4**	**+1.3**
SOEI	**Soe**	**7.05**	**102**	Pn	**Pn**	**12 25 52.4**	**+0.3**
PCI	**Palu**	**7.84**	**19**	P	**Pn**	**12 26 02.2**	**-0.6**
SANI	**Sanana**	**10.71**	**55**	P	Pn	12 26 48.0	+5.9
FITZ	**Fitzroy Crossi**	**12.65**	**141**	Pn	**Pn**	**12 27 09.7**	**+1.0**
	0.3nm,0.3s,baz=321,slow=10,SNR=2.8						
FITZ				Sn	**Sn**	**12 29 26.1**	**-2.2**
	0.2nm,0.3s,baz=197,slow=18,SNR=3.4						
FITZ	**Fitzroy Crossi**	**12.65**	**141**		**Pn**	**12 27 09.9**	**+1.3**
FITZ				Sn	**Sn**	**12 29 27.0**	**-1.4**
PSA00	**Pilbara Seismi**	**13.37**	**170**	Pn	**Pn**	**12 27 18.1**	**-0.5**
KNRA	**Kununurra**	**13.38**	**124**	Pn	**Pn**	**12 27 20.0**	**+1.3**
MTN	**Manton Dam**	**14.33**	**109**	Pn	**Pn**	**12 27 31.9**	**+0.1**
GIRL	**Giralia**	**14.50**	**191**	Pn	**Pn**	**12 27 32.2**	**-1.8**
FAKI	**Fak Fak**	**15.85**	**71**	Pn	**Pn**	**12 27 52.1**	**+0.2**
FAKI				IAmb	IAmb	12 28 05.3	
	comp=Z,15nm,0.9s						
WRA	**Warramunga Arr**	**20.14**	**127**	P	**P**	**12 28 43.7**	**+1.3**
	comp=Z,4.3nm,0.6s,baz=302,slow=12,SNR=66						
WRA				S	**S**	**12 32 21.9**	**-5.0**
	comp=Z,0.5nm,1.0s,baz=293,slow=22,SNR=2.6						
WRA	**Warramunga Arr**	**20.14**	**127**	P	**P**	**12 28 43.4**	**+0.9**
WRAB	**Tennant Creek**	**20.14**	**127**	P	**P**	**12 28 43.3**	**+0.8**
WRAB				IAmb	IAmb	12 28 48.7	
	comp=Z,5.4nm,0.6s						
WR0	**Warramunga Arr**	**20.31**	**126**	P	**P**	**12 28 45.4**	**+1.1**
WR0				IAmb	IAmb	12 28 46.4	
	comp=Z,6.5nm,0.6s						
AS31	**Alice Springs**	**22.03**	**136**	P	**P**	**12 29 04.1**	**+1.1**
ASAR	**Alice Springs**	**22.03**	**136**	P	**P**	**12 29 04.0**	**+1.1**
	comp=Z,2.6nm,0.5s,baz=312,slow=9.3,SNR=47						
ASAR				S	Sn	12 33 12.0	-3.8
	comp=Z,0.4nm,0.8s,baz=314,slow=24,SNR=4.1						
ASAR	**Alice Springs**	**22.03**	**136**	P	**P**	**12 29 03.6**	**+0.7**
NWAO	**Narrogin (SRO)**	**24.45**	**180**	P	**P**	**12 29 27.8**	**+1.0**
	comp=Z,3.7nm,0.5s,baz=8.4,slow=8.9,SNR=1.4						
NWAO	**Narrogin (SRO)**	**24.45**	**180**	P	**P**	**12 29 26.6**	**-0.2**
NWAO				IAmb	IAmb	12 29 38.5	
	comp=Z,21nm,1.4s						
COEN	**Coen**	**26.00**	**105**	P	**P**	**12 29 41.6**	**+0.5**
BBOO	**Buckleboo**	**29.91**	**147**	P	**P**	**12 30 16.4**	**+0.5**
CM31	**Chiang Mai Arr**	**32.21**	**326**	P	**P**	**12 30 35.3**	**-1.0**
CM31				IAmb	IAmb	12 30 39.8	
	comp=Z,3.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**32.21**	**326**	P	**P**	**12 30 34.8**	**-1.5**
	comp=Z,0.4nm,0.5s,baz=148,slow=5.2,SNR=1.7						
CMAR	**Chiang Mai Arr**	**32.21**	**326**	P	**P**	**12 30 35.1**	**-1.2**
STKA	**Stephens Creek**	**32.54**	**139**	P	**P**	**12 30 40.2**	**+1.1**
	comp=Z,1.5nm,0.6s,baz=313,slow=11,SNR=5.5						
STKA	**Stephens Creek**	**32.54**	**139**	P	**P**	**12 30 39.9**	**+0.9**
KSRS	**Korea Array**	**46.65**	**12**	P	**P**	**12 32 38.2**	**+1.9**
	comp=Z,1.4nm,0.9s,baz=202,slow=6.9,SNR=5.6						
SONM	**Songino Array**	**56.77**	**351**	P	**P**	**12 33 52.7**	**+0.9**
	comp=Z,2.6nm,0.8s,baz=172,slow=8.0,SNR=11						
SONM	**Songino Array**	**56.77**	**351**	P	**P**	**12 33 52.1**	**+0.2**
MK31	**Makanchi Array**	**63.12**	**334**	P	**P**	**12 34 35.2**	**-0.2**
MK31				IAmb	IAmb	12 34 37.0	
	comp=Z,1.1nm,0.8s						
MKAR	**Makanchi Array**	**63.12**	**334**	P	**P**	**12 34 34.9**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=146,slow=8.1,SNR=13						
MKAR	**Makanchi Array**	**63.12**	**334**	P	**P**	**12 34 35.3**	**-0.1**
ZAA0	**Zalesovo Array**	**67.85**	**340**	P	**P**	**12 35 06.2**	**+0.5**
ZAA0				IAmb	IAmb	12 35 14.1	
	comp=Z,3.1nm,1.4s						
ZALV	**Zalesovo Beam**	**67.85**	**340**	P	**P**	**12 35 04.3**	**-1.4**
	comp=Z,0.7nm,0.6s,baz=169,slow=2.7,SNR=2.3						
ZALV	**Zalesovo Beam**	**67.85**	**340**	P	**P**	**12 35 04.8**	**-0.9**
ABKAR	**Akbulak array**	**76.06**	**325**	P	**P**	**12 35 54.2**	**-0.9**
QSPA	**South Pole Qui**	**81.63**	**180**	P	**P**	**12 36 26.0**	**+0.4**
CPUP	**Villa Florida**	**145.12**	**188**	PKPbc	**PKPdf**	**12 43 46.2**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=164,slow=4.5,SNR=4.5						

SJA ***31*** *12:33:03.8±0.7, 24°.04S×67°.18W, h190^{km}±7^{km}, ML3.4, MW3.1*

NEIC ***31*** *12:33:04.5±2.4, 23°.97S±0°.07×67°.2W±0°.1, h183^{km}±7^{km}, mb4.0/5, Md3.4(SJA), Error ellipse: s-maj=14.3km s-min=9.6km az=104.0*

IDC ***31*** *12:33:05.1±1.7, 23°.88S×67°.03W, h177^{km}±15^{km}, mb3.4/3, mb1 3.7/8, mb1mx3.4/36, mbtmp4.0/8, Error ellipse: s-maj=24.9km s-min=19.2km az=164.0*

GUC ***31*** *12:33:05.9±0.5, 23°.99S×68°.28W, h257^{km}±11^{km}, ML4.5*

ISC 31 12:33:04.0±0.7**, 23°.99S**±0°.05×**67°.22W**±0°.05**, h196**^{km}±7^{km}**, n57, σ1^{s}49**/79**, mb4.1**/5**, 5C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AZAP	**Zapla**	**1.98**	**97**	*i* P	**Pn**	**12 33 42.0**	**-0.3**
AZAP				IAML		12 33 42.4	
	comp=Z,213nm,0.4s						
AZAP				*e*S	**S**	**12 34 10.6**	**-1.3**
LVC	**Limon Verde**	**2.08**	**311**	P	**Pn**	**12 33 44.6**	**+1.2**
	comp=Z,15nm,0.3s,baz=119,slow=8.0,SNR=269						
LVC				S	**S**	**12 34 13.9**	**-0.1**
	comp=Z,67nm,0.3s,baz=46,slow=6.0,SNR=84						
LVC	**Limon Verde**	**2.08**	**311**	*i* P	**Pn**	**12 33 44.5**	**+1.0**
LVC				*e*S	**S**	**12 34 13.7**	**-0.3**
LVC				IAML		12 34 16.7	
	comp=Z,135nm,0.2s						
PB15	**IPOC Station P**	**2.21**	**290**	⇑*i*P	**Pn**	**12 33 45.8**	**+1.1**
PB15				*e*S	**S**	**12 34 15.6**	**-0.7**
PB15	**IPOC Station P**	**2.21**	**290**		**Pn**	**12 33 45.7**	**+1.1**
PB15				Sn	**S**	**12 34 15.8**	**-0.5**
PB15	**IPOC Station P**	**2.21**	**290**	*i* P	**Pn**	**12 33 45.7**	**+1.1**
PB15				*e*S	**S**	**12 34 15.5**	**-0.7**
YJA	**Yavi**	**2.39**	**41**	*i* P	**Pn**	**12 33 47.4**	**+0.5**
YJA				IAML		12 33 49.4	
	comp=Z,29nm,0.4s						
GO02	**Mina Guanaco**	**2.46**	**241**	⇑*i*P	**Pn**	**12 33 48.1**	**+0.6**
GO02				*e*S	**S**	**12 34 20.6**	**-0.7**
GO02				IAML		12 34 22.6	
	comp=N,2μm,0.2s						
PB06	**IPOC Station P**	**2.51**	**300**	⇑*i*P	**Pn**	**12 33 48.7**	**+0.7**
PB06				*e*S	**S**	**12 34 21.1**	**-1.1**
PB06				IAML		12 34 23.7	
	comp=E,1μm,0.3s						
PB06	**IPOC Station P**	**2.51**	**300**	*i* P	**Pn**	**12 33 49.0**	**+1.0**
PB06				*e*S	**S**	**12 34 21.6**	**-0.6**
ASTB	**Santa Barbara**	**2.53**	**90**	*i* P	**Pn**	**12 33 47.9**	**-0.3**
PB09	**IPOC Station P**	**2.87**	**319**		**Pn**	**12 33 53.9**	**+1.7**
PB09				Sn	**S**	**12 34 29.8**	**+0.1**
PB09	**IPOC Station P**	**2.87**	**319**	*i* P	**Pn**	**12 33 54.0**	**+1.8**
PB05	**IPOC Station P**	**2.97**	**292**	*i* P	**Pn**	**12 33 54.0**	**+0.9**
PB14	**IPOC Station P**	**2.98**	**257**		**Pn**	**12 33 53.7**	**+0.3**
PB14				Sn	**S**	**12 34 29.7**	**-2.3**
PB14	**IPOC Station P**	**2.98**	**257**	*i* P	**Pn**	**12 33 54.0**	**+0.5**
PB10	**IPOC Station P**	**3.09**	**278**		**Pn**	**12 33 55.5**	**+0.9**
PB10				Sn	**S**	**12 34 33.3**	**-0.7**
PB10	**IPOC Station P**	**3.09**	**278**	*i* P	**Pn**	**12 33 55.5**	**+0.9**
PB04	**IPOC Station P**	**3.16**	**301**		**Pn**	**12 33 56.4**	**+0.9**
PB04				Sn	**S**	**12 34 34.1**	**-1.7**
PB04	**IPOC Station P**	**3.16**	**301**	*i* P	**Pn**	**12 33 56.4**	**+0.9**
PB07	**IPOC Station P**	**3.34**	**312**	⇓*e*P	**Pn**	**12 33 58.4**	**+0.8**
PB07				*e*S	**S**	**12 34 37.9**	**-1.8**
PB07				IAML		12 34 40.0	
	comp=N,714nm,0.4s						
PB07	**IPOC Station P**	**3.34**	**312**		**Pn**	**12 33 58.1**	**+0.4**
PB07				Sn	**S**	**12 34 37.8**	**-1.8**
PB01	**IPOC Station P**	**3.61**	**324**	⇑*i*P	**Pn**	**12 34 01.5**	**+0.6**
PB01				*e*S	**S**	**12 34 44.6**	**-0.9**
PB01				IAML		12 34 45.1	
	comp=E,318nm,0.2s						
PB01	**IPOC Station P**	**3.61**	**324**		**Pn**	**12 34 01.4**	**+0.5**
PB01				Sn	**S**	**12 34 44.3**	**-1.1**
PB02	**IPOC Station P**	**3.63**	**317**	⇑*i*P	**Pn**	**12 34 01.5**	**+0.3**
PB02				⇓*e*S	**S**	**12 34 44.4**	**-1.5**
PB02				IAML		12 34 49.8	
	comp=E,422nm,0.2s						
PATCX	**Punta Patache**	**4.16**	**319**		**Pn**	**12 34 08.0**	**+0.2**
PATCX				Sn	**S**	**12 34 56.2**	**-1.6**
CYA	**Choya**	**4.61**	**164**	*i* P	**Pn**	**12 34 13.3**	**-0.1**
PB11	**IPOC Station P**	**4.78**	**331**		**Pn**	**12 34 15.3**	**-0.3**
PB11				Sn	**S**	**12 35 09.8**	**-2.3**
VCA	**Vinchina**	**4.81**	**190**	*i* P	**Pn**	**12 34 15.8**	**-0.2**
VCA				IAML		12 35 21.4	
	comp=Z,17nm,0.3s						
PSGCX	**Pisagua**	**5.14**	**328**	Pn	**Pn**	**12 34 19.1**	**-1.1**
MNMC	**Minye Minye**	**5.32**	**335**		**Pn**	**12 34 22.9**	**+0.2**
ACLC	**CERRO LA CRUZ**	**5.42**	**178**	*i* P	**Pn**	**12 34 23.7**	**-0.1**
PB16	**IPOC Station P**	**6.02**	**339**		**Pn**	**12 34 32.8**	**+0.7**
PB12	**IPOC Station P**	**6.08**	**331**		**Pn**	**12 34 32.1**	**-0.3**
APLL	**PUNTA DE LOS L**	**6.41**	**175**	*i* P	**Pn**	**12 34 35.6**	**-0.9**
APLL				IAML		12 34 36.2	
	comp=Z,25nm,0.2s						
ACCO	**Cerro Coronel**	**6.77**	**194**	*i* P	**Pn**	**12 34 42.1**	**+0.6**
AMOG	**MOGNA**	**7.01**	**189**	*i* P	**Pn**	**12 34 44.1**	**-0.3**
LPAZ	**La Paz**	**7.71**	**353**	P	**Pn**	**12 34 54.4**	**+0.3**
	comp=Z,4.0nm,0.3s,baz=172,slow=7.8,SNR=65						
LPAZ				S	**S**	**12 36 21.7**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=335,slow=18,SNR=4.2						
LPAZ	**La Paz**	**7.71**	**353**		**Pn**	**12 34 55.5**	**+1.4**
ACAN	**Cantantal**	**8.25**	**180**	*i* P	**Pn**	**12 34 58.9**	**-1.6**
CPUP	**Villa Florida**	**9.26**	**107**	Pn	**Pn**	**12 35 15.2**	**+1.6**
SIV	**San Ignacio**	**9.83**	**37**	P	**Pn**	**12 35 19.5**	**-1.7**
	comp=Z,1.1nm,0.3s,baz=248,slow=10,SNR=14						
SAML	**Samuel**	**15.45**	**15**		**P**	**12 36 32.3**	**+0.2**
SAML				IAmb	IAmb	12 36 34.1	
	comp=Z,2.0nm,0.7s						
PLCA	**Paso Flores**	**16.93**	**189**	P	**Pn**	**12 36 53.0**	**+3.4**
	comp=Z,0.2nm,0.3s,baz=328,slow=16,SNR=3.6						
PLCA	**Paso Flores**	**16.93**	**189**		**Pn**	**12 36 49.5**	**-0.1**
BDFB	**Brasilia**	**19.87**	**69**	P	**P**	**12 37 21.0**	**+0.5**
	comp=Z,1.6nm,0.3s,baz=242,slow=11,SNR=22						
BDFB	**Brasilia**	**19.87**	**69**	P	**P**	**12 37 21.0**	**+0.5**
PTGA	**Pitinga**	**24.17**	**18**	P	**P**	**12 38 03.0**	**+0.5**
PTGA				IAmb	IAmb	12 38 10.2	
	comp=Z,9.5nm,1.4s						
RCBR	**Riachuelo**	**35.10**	**64**	P	**P**	**12 39 40.4**	**+1.5**
	comp=Z,11nm,1.1s,baz=239,slow=12,SNR=2.0						
QSPA	**South Pole Qui**	**66.21**	**180**	P	**P**	**12 43 32.6**	**+2.0**
QSPA				IAmb	IAmb	12 43 48.3	
	comp=Z,4.2nm,1.1s						
PDAR	**Pinedale Array**	**77.04**	**329**	P	P	12 44 39.6	+4.1
	comp=Z,0.1nm,0.5s,baz=127,slow=8.2,SNR=1.7						
YKA	**Yellowknife Ar**	**94.05**	**340**	P	**P**	**12 46 02.6**	**+3.3**
	comp=Z,0.2nm,0.5s,baz=124,slow=4.3,SNR=3.1						
ZALV	**Zalesovo Beam**	**143.48**	**28**	PKP	**PKPdf**	**12 52 15.1**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=293,slow=5.3,SNR=5.3						
ZALV	**Zalesovo Beam**	**143.48**	**28**		**PKPdf**	**12 52 15.3**	**+0.5**
KSH	**Kashi**	**145.35**	**55**	PKPbc	**PKPdf**	**12 52 14.3**	**-4.4**
KSH				pPKP	pPKPdf	12 53 12.0	+0.9
KSH				PP	**PP**	**12 55 39.5**	**-1.1**
KSH				PKS	**PKSdf**	**12 55 47.3**	**-6.9**
KSH				SKKS		13 02 03.0	
MKAR	**Makanchi Array**	**146.64**	**39**	PKPbc	**PKiKP**	**12 52 23.8**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=294,slow=3.2,SNR=16						
MKAR	**Makanchi Array**	**146.64**	**39**		**PKiKP**	**12 52 25.7**	**+0.7**

SJA ***31*** *12:52:57.3±0.5, 19°.03S×69°.48W, h180^{km}±4^{km}, ML5.5, MW5.3*

MOS ***31*** *12:53:03.9±1.1, 19°.31S×68°.95W, h96^{km}, mb5.5/22, Error ellipse: s-maj=10.3km s-min=5.9km az=105.9*

VAO ***31*** *12:53:05.9±0.5, 19°.39S×68°.94W, h118^{km}±4^{km}, mb5.5*

NEIC ***31*** *12:53:05.8±1.3, 19°.50S±0°.04×69°.06W±0°.06, h109^{km}±3^{km}, Error ellipse: s-maj=7.9km s-min=5.7km az=80.0*

BJI ***31*** *12:53:06.0±0.0, 19°.50S×69°.10W, h104^{km}, mB5.4/33*

IDC ***31*** *12:53:06.9±0.3, 19°.37S×68°.86W, h115^{km}±2^{km}, mb4.9/35, mb1 5.0/38, mb1mx5.0/42, mbtmp5.3/38, MS4.4/12, Ms1 4.4/12, ms1mx4.2/28, Error ellipse: s-maj=10.9km s-min=7.4km az=72.0*

GUC ***31*** *12:53:06.0±0.7, 19°.51S×69°.17W, h114^{km}±2^{km}, ML5.6*

NEIC ***31*** *12:53:06, 19°.52S×69°.20W, h108^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.01; M$_{\theta\theta}$1.36; M$_{\phi\phi}$-0.35; M$_{r\theta}$-0.38; M$_{\theta\phi}$0.91; M$_{\phi r}$-1.94; Fault plane solution: M$_0$2.49000×10^{17} NP1:φ$_s$277.21000°, δ34.86000°, λ-24.87000°. NP2:φ$_s$28.03000°, δ76.09000°, λ-122.30000°. Principal axes: T 2.2747, Plg24.0000°, Azm143.0000°; N 0.3920, Plg31.0000°, Azm37.0000°; P -2.6667, Plg49.0000°, Azm263.0000°;*

NEIC ***31*** *12:53:09, 19°.42S×68°.96W, h130^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-2.08; M$_{\theta\theta}$1.56; M$_{\phi\phi}$0.52; M$_{r\theta}$0.07; M$_{\theta\phi}$0.50; M$_{\phi r}$-1.89; Fault plane solution: M$_0$2.71000×10^{17} NP1:φ$_s$32.00000°, δ65.00000°, λ-115.00000°. NP2:φ$_s$259.00000°, δ35.00000°, λ-47.00000°. Principal axes: T 1.9578, Plg16.0000°, Azm140.0000°; N 1.1345, Plg23.0000°, Azm43.0000°; P -3.0923, Plg62.0000°, Azm262.0000°;*

NEIC ***31*** *12:53:11, 19°.58S×69°.27W, h129^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.50; M$_{\theta\theta}$1.67; M$_{\phi\phi}$-0.16; M$_{r\theta}$0.29; M$_{\theta\phi}$1.46; M$_{\phi r}$-1.95; Fault plane solution: M$_0$2.92000×10^{17} NP1:φ$_s$26.00000°, δ67.00000°, λ-132.00000°. NP2:φ$_s$272.00000°, δ47.00000°, λ-32.00000°. Principal axes: T 2.6230, Plg12.0000°, Azm145.0000°; N 0.5307, Plg38.0000°, Azm45.0000°; P -3.1538, Plg49.0000°, Azm249.0000°;*

GCMT ***31*** *12:53:11.0±0.1, 19°.54S±0°.01×69°.27W±0°.01, h130^{km}, MW5.5/146, Moment Tensor Solution. s144,c242; s146,c279; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-1.54±.03; M$_{\theta\theta}$1.76±.03; M$_{\phi\phi}$-0.21±.04; M$_{r\theta}$0.27±.02; M$_{\theta\phi}$1.19±.03; M$_{\phi r}$-1.79±.03; Best double couple: M$_0$2.68600×10^{17} NP1:φ$_s$275.00000°, δ48.00000°, λ-36.00000°. NP2:φ$_s$31.00000°, δ64.00000°, λ-132.00000°. Principal axes: T 2.4070, Plg10.0000°, Azm150.0000°; N 0.5590, Plg37.0000°, Azm52.0000°; P -2.9650, Plg51.0000°, Azm252.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 12:53:05.8±0.2**, 19°.47S**±0°.02×**69°.03W**±0°.03**, h112**^{km}±1^{km}**, h112**^{km}**:pP-P, n1069, σ1^{s}15**/1054**, mb5.5**/217**, 32C-12D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO01	**Chusmiza**	**0.25**	**218**	⇑*i*P	**Pn**	**12 53 21.9**	**-0.3**
GO01				*i* S	**Sn**	**12 53 34.6**	**+0.1**
MNMC	**Minye Minye**	**0.63**	**303**	⇑*i*P	**Pn**	**12 53 23.8**	**-0.3**
MNMC				*e*S	**Sn**	**12 53 37.2**	**-0.6**
MNMC	**Minye Minye**	**0.63**	**303**		**Pn**	**12 53 23.5**	**-0.6**
MNMC				Sn	**Sn**	**12 53 37.1**	**-0.8**
MNMCX	**Minye Minye**	**0.63**	**303**	*i* P	**Pn**	**12 53 22.1**	**-2.0**
MNMCX				*i* S	**Sn**	**12 53 39.7**	**+1.8**
PB11	**IPOC Station P**	**0.65**	**244**	⇑*i*P	**Pn**	**12 53 23.3**	**-0.9**
PB11				*e*S	**Sn**	**12 53 36.9**	**-1.0**
PB11	**IPOC Station P**	**0.65**	**244**		**Pn**	**12 53 22.2**	**-1.9**
PB11				Sn	**Sn**	**12 53 36.6**	**-1.3**
PB08	**IPOC Station P**	**0.67**	**190**	⇑*i*P	**Pn**	**12 53 24.5**	**0.0**
PB08				*e*S	**Sn**	**12 53 38.7**	**0.0**
PB08				IAML		12 53 40.4	
	comp=N,261μm,0.5s						
PSGC	**Pisagua**	**1.03**	**263**	⇑*i*P	**Pn**	**12 53 26.1**	**-1.4**
PSGC				*e*S	**Sn**	**12 53 41.7**	**-2.4**
PSGCX	**Pisagua**	**1.03**	**263**		**Pn**	**12 53 25.7**	**-1.9**
PSGCX				Sn	**Sn**	**12 53 41.5**	**-2.5**
PB16	**IPOC Station P**	**1.22**	**338**	⇓*e*P	**Pn**	**12 53 31.1**	**+1.0**
PB16				*e*S	**Sn**	**12 53 49.7**	**+1.3**
PB16				IAML		12 53 51.8	
	comp=N,97μm,0.6s						
PB16	**IPOC Station P**	**1.22**	**338**		**Pn**	**12 53 30.7**	**+0.6**
PB16				Sn	**Sn**	**12 53 49.4**	**+1.0**
PB12	**IPOC Station P**	**1.49**	**305**	⇑*i*P	**Pn**	**12 53 31.7**	**-1.0**
PB12				*e*S	**Sn**	**12 53 51.3**	**-1.9**
PB12				IAML		12 53 52.5	
	comp=E,89μm,0.7s						
PB12	**IPOC Station P**	**1.49**	**305**		**Pn**	**12 53 31.4**	**-1.4**
PB12				Sn	**Sn**	**12 53 51.1**	**-2.0**
TA01	**Diego Aracena**	**1.53**	**225**	⇑*i*P	**Pn**	**12 53 31.7**	**-1.3**
TA01				*e*S	**Sn**	**12 53 51.4**	**-2.5**
TA01				IAML		12 53 56.8	
	comp=N,66μm,0.4s						
PB01	**IPOC Station P**	**1.62**	**195**	⇑*i*P	**Pn**	**12 53 33.8**	**-0.5**
PB01				*e*S	**Sn**	**12 53 54.8**	**-1.1**
PB01	**IPOC Station P**	**1.62**	**195**		**Pn**	**12 53 33.2**	**-1.0**
PB01				Sn	**Sn**	**12 53 54.9**	**-1.1**
AP01	**Chacalluta**	**1.65**	**311**	⇑*i*P	**Pn**	**12 53 34.0**	**-0.5**
AP01				*e*S	**Sn**	**12 53 55.0**	**-1.5**
PATCX	**Punta Patache**	**1.70**	**218**	⇑*i*P	**Pn**	**12 53 33.9**	**-1.3**
PATCX				*e*S	**Sn**	**12 53 55.3**	**-2.4**
PATCX				IAML		12 54 05.8	
	comp=E,62μm,0.5s						
PATCX	**Punta Patache**	**1.70**	**218**		**Pn**	**12 53 33.6**	**-1.6**
PATCX				Sn	**Sn**	**12 53 55.2**	**-2.5**
PB02	**IPOC Station P**	**2.01**	**204**	⇑*i*P	**Pn**	**12 53 37.9**	**-1.1**
PB02				*e*S	**Sn**	**12 54 02.6**	**-1.9**
PB02				IAML		12 54 13.2	
	comp=E,87μm,0.4s						
PB09	**IPOC Station P**	**2.32**	**185**	⇑*i*P	**Pn**	**12 53 43.4**	**+0.3**
PB09				IAML		12 54 17.4	

	comp=N,30µm,0.6s						
PB09	IPOC Station P	2.32	185		Pn	12 53 43.3	+0.1
PB07	IPOC Station P	2.38	199	⇑iP	Pn	12 53 43.5	-0.4
PB07				eS	Sn	12 54 11.9	-1.2
PB07				IAML		12 54 19.8	
	comp=E,48µm,0.6s						
PB07	IPOC Station P	2.38	199		Pn	12 53 42.9	-1.0
PB03	IPOC Station P	2.65	195	⇑iP	Pn	12 53 46.6	-0.8
PB03				IAML		12 54 23.9	
	comp=E,27µm,0.6s						
PB04	IPOC Station P	3.03	200		Pn	12 53 50.7	-1.8
PB04	IPOC Station P	3.03	200	iP	Pn	12 53 51.1	-1.3
LVC	Limon Verde	3.12	178	P	Pn	12 53 54.4	+0.5
	comp=E,1µm,0.3s,baz=17,slow=8.8,SNR=798						
LVC				S	Sn	12 54 31.0	+0.2
	comp=E,2µm,0.3s,baz=160,slow=23,SNR=15						
LVC	Limon Verde	3.12	178	P	Pn	12 53 54.1	+0.3
LVC	Limon Verde	3.12	178		Pn	12 53 54.1	+0.3
LVC	Limon Verde	3.12	178	eP	Pn	12 53 54.5	+0.6
PB06	IPOC Station P	3.26	189	iP	Pn	12 53 55.2	-0.2
PB06				iS	Sn	12 54 38.1	+4.4
LPAZ	La Paz	3.28	15	P	Pn	12 53 59.2	+3.0
	comp=E,312nm,0.3s,baz=197,slow=6.1,SNR=4033						
LPAZ				S	Sn	12 54 32.3	-2.7
	baz=194,slow=9.0						
LPAZ	La Paz	3.28	15	P	Pn	12 53 58.9	+2.7
LPAZ	La Paz	3.28	15		Pn	12 53 58.9	+2.7
I08BO	LAS PENAS INFR	3.29	10	P	Pn	12 54 00.0	+3.8
	baz=208,slow=22,SNR=6.6						
PB05	IPOC Station P	3.54	198	iP	Pn	12 53 57.6	-1.5
PB15	IPOC Station P	3.74	186		Pn	12 54 01.0	-0.9
PB15	IPOC Station P	3.74	186	iP	Pn	12 54 01.2	-0.7
YJA	Yavi	4.25	130	iP	Pn	12 54 11.6	+2.6
YJA				IAML		12 54 17.3	
	comp=Z,1µm,0.6s						
PB10	IPOC Station P	4.26	199		Pn	12 54 06.2	-2.5
PB10	IPOC Station P	4.26	199	iP	Pn	12 54 06.6	-2.1
PB14	IPOC Station P	5.28	194		Pn	12 54 20.4	-2.4
AZAP	Zapla	5.99	143	iP	Pn	12 54 33.2	+0.9
AZAP				IAML		12 54 35.8	
	comp=Z,2µm,0.6s						
SIV	San Ignacio	8.34	67	P	Pn	12 55 02.5	-1.5
	comp=Z,132nm,0.3s,baz=265,slow=11,SNR=2005						
SIV				LR	LR	12 58 52.4	
	comp=Z,4µm,18.6s,baz=275,slow=42						
NNA	Nana	10.57	314	P	Pn	12 55 31.4	-2.9
	comp=Z,16nm,0.3s,baz=158,slow=11,SNR=38						
NNA				S	Sn	12 57 26.3	-4.6
	comp=Z,17nm,0.3s,baz=205,slow=16,SNR=1.7						
NNA	Nana	10.57	314	⇑iP	Pn	12 55 31.7	-2.6
SAML	Samuel	11.90	29	P	Pn	12 55 49.0	-2.9
SAML	Samuel	11.90	29		Pn	12 55 49.0	-2.9
SAML	Samuel	11.90	29	eP	Pn	12 55 49.3	-2.7
AQDB	Aquidauana	12.58	97	eP	Pn	12 55 58.3	-2.6
CPUP	Villa Florida	12.76	124	P	Pn	12 56 01.4	-1.7
	comp=Z,14nm,0.3s,baz=305,slow=11,SNR=120						
CPUP	Villa Florida	12.76	124	P	Pn	12 56 01.6	-1.6
CPUP	Villa Florida	12.76	124		Pn	12 56 01.6	-1.6
CPUP	Villa Florida	12.76	124	eP	Pn	12 56 01.7	-1.6
SALV	Santo Antonio	13.20	76	eP	Pn	12 56 06.3	-2.6
ITQB	Itaqui	15.17	134	eP	Pn	12 56 33.0	-1.2
ATAH	Atahualpa	15.27	322	P	Pn	12 56 35.2	-0.7
	comp=Z,1.3nm,0.3s,baz=125,slow=9.4,SNR=23						
ATAH				S	Sn	12 59 23.9	-1.0
	comp=Z,0.6nm,0.3s,baz=294,slow=19,SNR=2.4						
C2SB	Chapadao do Su	15.32	90	eP	Pn	12 56 35.6	-0.5
CLDB	Colider	15.36	58	eP	Pn	12 56 34.4	-2.3
TRCB	Terra Rica	15.65	105	eP	Pn	12 56 40.0	-0.3
PTGB	Pitanga	16.57	111	eP	Pn	12 56 51.7	+0.1
PCMB	Pacaembu	16.78	100	eP	Pn	12 56 54.0	-0.2
ARAG	Araguaiana, MT	16.84	80	eP	Pn	12 56 53.5	-1.4
ARAG				eS	Sn	13 00 00.4	-1.8
ITAB	Concordia	17.32	120	eP	P	12 56 59.7	-0.7
ITAB				eS	Sn	13 00 12.5	-1.3
ITRB	Iturama	17.60	94	eP	P	12 57 03.6	0.0
CPSB	Cacapava Do Su	17.82	131	eP	P	12 57 04.7	-1.2
LPA	La Plata	18.25	150	S	S	13 00 32.0	-1.7
LPA				sS	sS	13 01 02.2	-6.8
LPA				PCP	PcP	13 01 42.0	+3.8
LPA				SKIKS		13 16 18.2	
PLTB	Pedras Altas	18.50	134	eP	P	12 57 12.9	-0.5
FRTB	Fartura	18.53	105	eP	P	12 57 13.4	-0.4
CNLB	Canela	19.22	124	eP	P	12 57 21.0	-0.2
BB19B	Bebedouro	19.30	98	eP	P	12 57 21.4	-0.8
OGAUY	Aigu	19.52	142	eP	P	12 57 24.4	0.0
IPMB	Ipameri, GO	19.78	89	eP	P	12 57 26.7	-0.7
RCLB	Rio Claro- Sao	20.29	102	eP	P	12 57 32.2	-0.7
BDFB	Brasilia	20.40	83	P	P	12 57 33.3	-0.8
	comp=Z,105nm,0.5s,baz=264,slow=10.0,SNR=31						
BDFB				LR	LR	13 06 06.5	
	comp=Z,2µm,18.1s,baz=250,slow=39						
BDFB	Brasilia	20.40	83	P	P	12 57 32.9	-1.2
BDFB				IAmb	IAmb	12 57 38.8	
	comp=Z,305nm,1.4s						
SPB	Sao Paulo	20.50	105	IAmb	IAmb	12 57 39.7	
	comp=Z,398nm,1.4s						
SPB	Sao Paulo	20.50	105	eP	P	12 57 34.3	-0.8
PTGA	Pitinga	20.64	27	P	P	12 57 35.0	-1.6
	comp=Z,42nm,0.4s,baz=202,slow=17,SNR=109						
PTGA	Pitinga	20.64	27	P	P	12 57 34.7	-1.9
PTGA	Pitinga	20.64	27	eP	P	12 57 34.6	-2.0
VAO	Valinhos	20.86	104	eP	P	12 57 37.6	-1.5
CASC	Dorado de Casc	21.12	336	eP	P	12 57 43.4	+1.5
PLCA	Paso Flores	21.23	183	P	P	12 57 43.1	+0.3
	comp=Z,104nm,0.9s,baz=90,slow=24,SNR=42						
PLCA				S	S	13 01 33.5	+0.9
	comp=Z,15nm,1.0s,baz=270,slow=20,SNR=2.3						
PLCA	Paso Flores	21.23	183	P	P	12 57 42.4	-0.4
PLCA				IAmb	IAmb	12 58 20.2	
	comp=Z,358nm,1.1s						
PLCA	Paso Flores	21.23	183	eP	P	12 57 43.2	+0.3
CUSE	Cuicocha Este	21.70	334	eP	P	12 57 51.8	+3.4
PAC1	Pacto, Paraso	21.83	333	eP	P	12 57 52.6	+3.1
FLOC	Florencia	21.91	342	eP	P	12 57 47.2	-3.0
MACC	Macarena, Meta	22.00	347	eP	P	12 57 52.0	+0.8
PARB	Paraibuna	22.13	104	eP	P	12 57 50.9	-1.6
PARB				eS	S	13 01 46.4	-2.8
GCUF	Volcan Galeras	22.13	337	eP	P	12 57 54.2	+1.2
GARC	Garzon, Huila	22.44	343	eP	P	12 57 53.9	-2.1
SOTA	Rioblanco	22.73	340	eP	P	12 57 58.6	-0.5
BSCB	Bom Sucesso	22.81	98	eP	P	12 57 57.3	-2.1
PCON	Cinco Dias	22.84	341	eP	P	12 58 00.5	+0.2
SMTB	Santa Maria do	23.29	66	eP	P	12 58 02.5	-1.4
JANB	Januaria	24.00	83	eP	P	12 58 08.6	-1.8
ORTC	Ortega, Tolima	24.02	345	eP	P	12 58 09.1	-1.5
CHIC	Chingaza	24.39	349	eP	P	12 58 14.2	-0.1
YOTC	Yotoco, Valle	24.39	342	eP	P	12 58 13.2	-0.8
ANIL	Santa Ana	24.62	345	eP	P	12 58 15.8	-0.4
TOLC	Tolima	24.69	345	eP	P	12 58 17.4	+0.4
ROSC	El Rosal	24.71	347	P	P	12 58 17.5	+0.3
	comp=Z,20nm,0.5s,baz=143,slow=6.4,SNR=12						
ROSC				LR	LR	13 09 25.8	
	comp=Z,2µm,18.1s,baz=192,slow=40						
ROSC	El Rosal	24.71	347	eP	P	12 58 18.8	+1.6
ROSC	El Rosal	24.71	347	P	P	12 58 16.1	-1.1
MALC	Bahia Malaga	24.73	340	eP	P	12 58 19.7	+2.8
RREF	El Recreo	25.00	345	eP	P	12 58 22.7	+2.6
PLMC	San Jos del P	25.25	343	eP	P	12 58 22.4	+0.6
GUY2C	Guyana, Caldas	25.32	345	eP	P	12 58 22.9	+0.1
SPBC	San Pablo de B	25.45	348	eP	P	12 58 22.1	-1.5
RUSC	La Rusia	25.52	351	eP	P	12 58 24.4	-0.2
NORC	Norcasia	25.53	346	eP	P	12 58 23.0	-1.3
TAMC	Tame, Arauca	25.89	354	eP	P	12 58 27.9	+0.5
CBOC	Ciudad Bolivar	26.10	344	eP	P	12 58 29.5	0.0
SJMB	Sao Joao De Ma	26.32	93	eP	P	12 58 30.3	-1.0
BSFB	Barra de Sao F	26.62	93	eP	P	12 58 33.4	-0.7
BSFB				eS	S	13 02 57.9	-3.1
PAMC	Pamplona, Colo	26.89	352	eP	P	12 58 37.3	+0.4
UREC	San Jos de Ur	27.80	346	eP	P	12 58 43.7	-0.9
PAYG	Puerto Ayora	27.98	309	P	P	12 58 45.5	-0.7
SDV	Santo Domingo	28.22	357	P	P	12 58 47.2	-1.4
	comp=Z,38nm,0.8s,baz=239,slow=2.9,SNR=36						
SDV	Santo Domingo	28.22	357	eP	P	12 58 48.1	-0.4
SDV	Santo Domingo	28.22	357	P	P	12 58 47.1	-1.4
SDV				IAmb	IAmb	12 59 36.3	
	comp=Z,109nm,1.2s						
SDV	Santo Domingo	28.22	357	eP	P	12 58 47.1	-1.4
SMLC	San Martn de	28.53	350	eP	P	12 58 48.0	-3.0
NBIT	Itapeh - BA	28.61	86	eP	P	12 58 51.8	-0.1
NBPN	Ponto Novo - B	29.09	77	eP	P	12 58 54.3	-1.8
MDP	Montagnes des	29.27	35	P	P	12 58 56.3	-1.4
	comp=Z,13nm,0.5s,baz=210,slow=7.9,SNR=7.8						
PCRV	Puerto La Cruz	29.78	9	P	P	12 59 02.3	+0.2
	comp=Z,18nm,0.6s,baz=206,slow=6.2,SNR=11						
NBPS	Pedro II - PI	30.79	64	eP	P	12 59 09.6	-1.6
NBLA	Lagarto - SE	31.26	79	eP	P	12 59 13.9	-1.3
NBTA	Tacaratu-PE	31.67	75	eP	P	12 59 17.3	-1.6
NBMA	Muriti-CE	31.74	72	eP	P	12 59 18.0	-1.6
NBPB	Pedra_Branca-C	31.83	68	eP	P	12 59 18.3	-2.0
GRGR	Grenville	32.24	14	P	P	12 59 22.8	-1.0
NBMO	Morrinhos-CE	32.55	64	eP	P	12 59 25.1	-1.4
NBAN	Anadia - AL	33.11	78	eP	P	12 59 30.1	-1.4
EFI	East Falkland	33.27	168	⇑iP	P	12 59 32.9	+0.5
EFI				pmax	pmax		
	comp=Z,174nm,1.4s						
EFI	East Falkland	33.27	168	P	P	12 59 32.7	+0.3
EFI				IAmb	IAmb	13 00 03.5	
	comp=Z,107nm,1.0s						
NBLI	Livramento-PB	33.38	73	eP	P	12 59 32.3	-1.6
JTS	Las Juntas de	33.48	331	LR	LR	13 14 55.0	
	comp=Z,1µm,19.8s,baz=216,slow=39						
JTS	Las Juntas de	33.48	331	⇓iP	P	12 59 36.5	+1.9
JTS				pmax	pmax		
	comp=Z,56nm,1.6s						
JTS	Las Juntas de	33.48	331	P	P	12 59 34.9	+0.3
JTS				IAmb	IAmb	13 00 17.9	
	comp=Z,302nm,1.9s						
NBCL	Cascavel-CE	33.59	67	eP	P	12 59 34.3	-1.3
NBRF	Rio Formoso -	34.52	77	eP	P	12 59 43.2	-0.5
FDF	Fort de France	34.87	13	P	P	12 59 45.0	-1.6
FDF				pmax	pmax		
	comp=Z,133nm,0.7s						
FDF	Fort de France	34.87	13	IAmb	IAmb	12 59 47.5	
	comp=Z,93nm,0.8s						
RCBR	Riachuelo	34.97	72	P	P	12 59 47.2	-0.4
RCBR				pmax	pmax		
	comp=Z,83nm,1.0s						
RCBR	Riachuelo	34.97	72	P	P	12 59 47.2	-0.4
RCBR				IAmb	IAmb	13 00 16.1	
	comp=Z,83nm,1.0s						
RCBR	Riachuelo	34.97	72	eP	P	12 59 46.7	-0.8
ACON	Acoyapa	35.06	332	P	P	12 59 47.8	-0.3
ACON				IAmb	IAmb	13 00 30.4	
	comp=Z,203nm,1.8s						
NBPV	Pedro Velho	35.26	73	eP	P	12 59 49.1	-1.0
ICMP	Isla Caja de M	37.21	4	P	P	13 00 06.6	+0.1
MLPR	Magueyes Islan	37.26	3	IAmb	IAmb	13 00 50.8	
	comp=Z,95nm,0.9s						
CRPR	Cabo Rojo, PR	37.29	3	IAmb	IAmb	13 00 51.4	
	comp=Z,106nm,0.9s						
SJG	San Juan	37.46	5	P	P	13 00 07.7	-0.8
SJG				pmax	pmax		
	comp=Z,113nm,1.1s						
SJG	San Juan	37.46	5	P	P	13 00 07.7	-0.8
SJG				IAmb	IAmb	13 00 08.4	
	comp=Z,113nm,1.1s						
MPR	Mayaguez	37.50	3	IAmb	IAmb	13 00 48.6	
	comp=Z,115nm,1.0s						
JAKH	Jacmel	37.63	355	P	P	13 00 09.2	-0.8
JAKH				IAmb	IAmb	13 00 49.2	
	comp=Z,56nm,0.7s						
AOPR	Arecibo Observ	37.65	4	IAmb	IAmb	13 00 49.8	
	comp=Z,59nm,0.8s						
BANI	BANI	37.65	358	P	P	13 00 10.1	-0.2
GCPR	Guaynabo City	37.66	5	IAmb	IAmb	13 00 50.6	
	comp=Z,54nm,0.8s						
RPN	Rapa Nui	37.66	251	P	P	13 00 12.2	+1.8
	comp=Z,54nm,0.8s,baz=333,slow=2.3,SNR=2.1						
SMRT	St. Maarten	37.75	9	IAmb	IAmb	13 00 09.0	
	comp=Z,95nm,1.1s						
MTDJ	Mount Denham	38.38	347	P	P	13 00 15.9	-0.5
MTDJ				IAmb	IAmb	13 00 18.5	
	comp=Z,67nm,0.9s						
CCIG	Comitan	42.17	326	P	P	13 00 47.1	-0.7
CCIG				IAmb	IAmb	13 01 29.2	
	comp=Z,81nm,1.1s						
HOPE	Hope Point	42.71	152	P	P	13 00 52.8	+1.2
HOPE				pmax	pmax		
	comp=Z,135nm,1.0s						
HOPE	Hope Point	42.71	152	P	P	13 00 52.8	+1.2
HOPE				IAmb	IAmb	13 01 22.5	
	comp=Z,135nm,0.9s						
TEIG	Tepich	43.73	333	P	P	13 01 00.3	+0.2
	comp=Z,28nm,0.6s,baz=46,slow=0.0,SNR=4.5						
TEIG				pP	pP	13 01 26.8	-0.3
	comp=Z,65nm,0.9s,baz=13,slow=0.0,SNR=5.4						
TEIG				sP	sP	13 01 40.1	0.0
	comp=Z,119nm,0.9s,baz=273,slow=0.0,SNR=7.8						
TEIG	Tepich	43.73	333	P	P	13 00 60.0	-0.2
TEIG				pP	pP	13 01 26.6	-0.5
TEIG				sP	sP	13 01 40.4	+0.4
TEIG				IAmb	IAmb	13 01 41.7	
	comp=Z,144nm,0.9s						
CMIG	Matias Romero	44.34	323	P	P	13 01 05.9	+0.9
	comp=Z,30nm,0.9s,baz=135,slow=5.6,SNR=7.6						
CMIG				pP	pP	13 01 31.5	-0.4
	comp=Z,21nm,0.7s,baz=128,slow=6.6,SNR=4.3						
DWPF	Disney Wildern	48.80	345	P	P	13 01 39.6	-0.1
DWPF	Disney Wildern	48.80	345	P	P	13 01 40.0	+0.4
	baz=165						
MOIG	Morelia	50.08	319	P	P	13 01 50.5	+0.7
BBSR	BB Station	51.72	5	P	P	13 02 00.5	-1.1
451A	Vernon	52.33	342	P	P	13 02 06.7	+0.5
451A					pP	13 02 34.5	+0.4
451A				sP	sP	13 02 47.4	+0.3
TIGA	Tifton	52.51	344	P	P	13 02 07.7	+0.1
	baz=163,SNR=5.7						
352A	Blakely	52.91	343		pP	13 02 38.2	-0.2
158A	Hollywood	53.00	348	P	P	13 02 11.2	+0.2
	baz=167						
157A	Early Branch	53.10	347	P	P	13 02 12.4	+0.6
	baz=166						
ZAIG	Zacatecas	53.24	320	IAmb	IAmb	13 02 16.3	
	comp=Z,50nm,0.8s						
NHSC	New Hope	53.36	348	P	P	13 02 14.4	+0.7
	baz=167						
Z58A	St. Stephen	53.51	349	P	P	13 02 15.2	+0.4
	baz=168						
Z57A	Bowman	53.64	348	P	P	13 02 16.1	+0.3
	baz=166,SNR=12						
Z56A	Williston	53.81	347	P	P	13 02 17.2	+0.2
	baz=166						
Y60A	Bolivia	53.89	351	P	P	13 02 17.5	-0.1
	baz=170						
152A	Waverly Hall	53.98	344	IAmb	IAmb	13 02 47.4	
	comp=Z,73nm,0.9s						
Y59A	Loris	53.98	350	P	P	13 02 18.3	+0.1
	baz=169						
Y58A	Scranton	54.04	349	P	P	13 02 18.8	+0.1
	baz=168						
346A	Big Creek Wild	54.24	338	P	P	13 02 20.3	+0.1
346A					pP	13 02 47.7	-0.3
346A				sP	sP	13 03 02.0	+1.1
Y56A	Pelion	54.24	347	P	P	13 02 20.4	+0.3
	baz=166						
Y57A	Sumter	54.28	348	P	P	13 02 20.6	+0.2
	baz=167						
GOGA	Godfrey	54.36	345	P	P	13 02 20.8	-0.2
GOGA				pmax	pmax		
	comp=Z,57nm,1.4s						
GOGA	Godfrey	54.36	345	IAmb	IAmb	13 03 02.0	
	comp=Z,117nm,1.6s						
GOGA	Godfrey	54.36	345	P	P	13 02 20.7	-0.3
	baz=163,SNR=6.5						
X60A	Albert Glenn T	54.42	351	P	P	13 02 21.6	+0.2
	baz=170						
Y55A	Saluda	54.50	347	P	P	13 02 22.2	+0.2
	baz=165,SNR=15						
X59A	McDuffie Farm,	54.51	350	P	P	13 02 22.0	0.0
	baz=169						
X58A	Rowland	54.62	350	P	P	13 02 22.6	-0.2
	baz=168						
X57A	Johnson Farm,	54.66	349	P	P	13 02 23.3	+0.2
	baz=167						
Z51A	Franklin	54.71	343		pP	13 02 51.1	-0.5
Z51A				IAmb	IAmb	13 02 51.7	
	comp=Z,49nm,1.0s						
Z51A				sP	sP	13 03 03.8	-0.7
344A	Westbrook Farm	54.75	337		pP	13 02 51.8	0.0
344A				IAmb	IAmb	13 02 53.0	
	comp=Z,74nm,0.9s						
W60A	Pink Hill	54.85	351	P	P	13 02 24.2	-0.3
	baz=170						
Z50A	Ashland	54.86	343	P	P	13 02 24.3	-0.4
	baz=161,SNR=42						
X56A	White Oak	54.87	348	P	P	13 02 25.0	+0.4
	baz=166,SNR=20						
HODGE	Hodges	54.87	347		pP	13 02 52.7	-0.1
HODGE				sP	sP	13 03 05.4	-0.2
HODGE				IAmb	IAmb	13 03 06.8	
	comp=Z,48nm,1.0s						
W61A	Ground Anchor	54.87	352	P	P	13 02 24.5	-0.1
	baz=171						
Y52A	Lilburn	54.94	345	P	P	13 02 24.8	-0.4
	baz=163,SNR=8.4						
LRAL	Lakeview Retre	54.96	342	IAmb	IAmb	13 03 07.6	
	comp=Z,77nm,1.2s						
LRAL	Lakeview Retre	54.96	342	P	P	13 02 24.9	-0.5
	baz=159,SNR=9.6						
X55A	Gracelyn & Ava	54.97	347	P	P	13 02 25.6	+0.3
	baz=166,SNR=19						
W58A	Raeford	55.05	350	P	P	13 02 26.0	0.0
	baz=168,SNR=10						
W59A	Clinton	55.07	351	P	P	13 02 26.1	+0.1
	baz=169						
X54A	Belton	55.20	347	P	P	13 02 27.3	+0.2
	baz=165,SNR=14						
342A	Flagon Creek P	55.28	336		pP	13 02 56.3	+0.6
W57A	Gilead	55.31	349	P	P	13 02 27.9	+0.1
	baz=168,SNR=8.4						
PAULI	Pauline	55.34	347	IAmb	IAmb	13 03 10.5	
	comp=Z,71nm,0.9s						
VBMS	Vicksburg	55.37	338	P	P	13 02 28.1	-0.1
	baz=155						
X53A	Estanollee	55.37	346	P	P	13 02 28.1	-0.1
	baz=164,SNR=7.9						
W56A	Indian Trail	55.40	349	P	P	13 02 28.6	+0.1
	baz=167,SNR=14						
V60A	Jim Taylor Roa	55.49	352	P	P	13 02 28.9	-0.1
	baz=171						
HKT	Hockley	55.51	332	P	P	13 02 29.9	+0.7
HKT				pmax	pmax		
	comp=Z,115nm,1.2s						
HKT	Hockley	55.51	332	P	P	13 02 29.7	+0.4
HKT				pP	pP	13 02 57.8	+0.5
HKT				sP	sP	13 03 10.2	+0.1
HKT				IAmb	IAmb	13 03 11.9	
	comp=Z,115nm,1.2s						
KMSC	Kings Mountain	55.56	348	P	P	13 02 29.8	+0.2
	baz=166,SNR=24						
Y49A	Blount Mountai	55.56	342	IAmb	IAmb	13 02 58.0	
	comp=Z,52nm,0.9s						
V59A	Middlesex	55.62	351	P	P	13 02 29.9	-0.1
	baz=170,SNR=6.5						
W54A	Cherokee Point	55.68	347	P	P	13 02 31.0	+0.5
	baz=165,SNR=18						
V58A	Windy Hill, Pi	55.79	350	P	P	13 02 31.0	-0.2
	baz=169						
X51A	Calhoun	55.81	344	P	P	13 02 31.0	-0.4
	baz=162,SNR=9.0						
833A	Chaparral WMA,	55.85	327	P	P	13 02 32.4	+0.5
	baz=145,SNR=25						
U61A	Possum Corner	55.94	353	P	P	13 02 31.8	-0.5
	baz=172						
FPAL	Fort Paine	55.98	343	IAmb	IAmb	13 03 16.3	
	comp=Z,51nm,1.1s						
V57A	Coltrane Farms	55.99	349	P	P	13 02 32.4	-0.3
	baz=168,SNR=7.1						
V56A	Mocksville	56.04	349	P	P	13 02 33.5	+0.5
	baz=167,SNR=26						
W52A	Murphy	56.08	345	IAmb	IAmb	13 03 17.6	
	comp=Z,129nm,1.4s						
143A	Socs Landing,	56.12	337	IAmb	IAmb	13 03 14.0	
	comp=Z,39nm,0.9s						
U59A	Littleton	56.14	351	P	P	13 02 33.2	-0.5
	baz=170						
U60A	Pendleton	56.17	352	P	P	13 02 33.7	-0.2
	baz=171						
V55A	Taylorsville	56.22	348	P	P	13 02 34.8	+0.4
	baz=166,SNR=26						
U58A	Oxford	56.29	351	P	P	13 02 34.7	0.0
	baz=169						
V54A	Nebo	56.29	347	P	P	13 02 35.1	+0.2
	baz=166,SNR=20						
X48A	Hartselle	56.30	342	IAmb	IAmb	13 03 03.5	
	comp=Z,84nm,0.8s						
V53A	Saluda	56.38	347	IAmb	IAmb	13 02 36.4	
	comp=Z,39nm,0.8s						
U57A	Blanch	56.45	350	P	P	13 02 35.8	-0.1
	baz=168,SNR=7.1						
W50A	Signal Mountai	56.53	344	IAmb	IAmb	13 02 37.3	
	comp=Z,61nm,0.8s						
Y45A	Yeager Farm, C	56.53	340	IAmb	IAmb	13 02 36.9	
	comp=Z,75nm,0.9s						
U56A	King	56.55	349	P	P	13 02 37.1	+0.5
	baz=167,SNR=6.1						
NATX	Nacogdoches	56.56	334		pP	13 03 05.6	+0.7
NATX				sP	sP	13 03 19.0	+1.3
NATX	Nacogdoches	56.56	334	P	P	13 02 38.0	+1.2
	baz=151,SNR=10.0						
CPCT	Cooper Cave	56.56	345	IAmb	IAmb	13 02 37.5	
	comp=Z,42nm,0.9s						
TKL	Tuckaleechee C	56.58	346	P	P	13 02 36.4	-0.5
	comp=Z,64nm,0.8s,baz=160,slow=9.0,SNR=55						
TKL	Tuckaleechee C	56.58	346	IAmb	IAmb	13 02 37.5	
	comp=Z,70nm,0.8s						
SWET	Sewanee	56.70	343	IAmb	IAmb	13 03 19.8	
	comp=Z,78nm,0.8s						
T59A	Double "B" Far	56.71	352	P	P	13 02 37.5	-0.2
	baz=171,SNR=7.6						
U55A	TA2, Sparta	56.82	348	P	P	13 02 39.0	+0.4
	baz=167,SNR=15						
T58A	Grand View Acr	56.83	351	P	P	13 02 38.6	0.0
	baz=170,SNR=5.1						
V51A	Loudon	56.86	345	IAmb	IAmb	13 02 39.4	
	comp=Z,39nm,0.8s						
U54A	Nelsons Funny	56.99	348	P	P	13 02 40.0	+0.2
	baz=166,SNR=20						
T57A	Hurt	56.99	350	P	P	13 02 39.8	+0.1
	baz=169,SNR=5.3						
435B	Jarrell	57.01	331	P	P	13 02 40.5	+0.5
	baz=148						
OXF	Oxford	57.08	340	P	P	13 02 39.3	-1.1
	baz=157,SNR=11						
PLAL	Pickwick Lake	57.10	341	IAmb	IAmb	13 03 08.7	
	comp=Z,50nm,0.9s						
Z41A	Richland Creek	57.14	336	P	P	13 02 41.0	+0.2
	baz=153						
T56A	Rocky Mt	57.15	350	P	P	13 02 41.6	+0.7
	baz=168,SNR=11						
237A	Washetta, Mont	57.25	333	P	P	13 02 42.6	+0.9
237A					pP	13 03 11.0	+1.1
237A				sP	sP	13 03 24.5	+1.9
T55A	Pulaski	57.37	349	P	P	13 02 43.1	+0.7
	baz=167,SNR=18						
TZTN	Tazewell	57.38	346	P	P	13 02 42.2	-0.3
	baz=164,SNR=5.8						
BLA	Blacksburg	57.39	349	P	P	13 02 43.2	+0.6
	baz=167,SNR=6.9						
S58A	Poland Farm, P	57.41	352	P	P	13 02 42.4	-0.3
	baz=170						
V48A	Smith Brothers	57.44	343	IAmb	IAmb	13 03 11.2	
	comp=Z,86nm,0.9s						
T54A	Tazewell	57.46	348	P	P	13 02 43.2	0.0
	baz=166,SNR=12						
X43A	Marvell	57.58	339	P	P	13 02 43.9	0.0
	baz=156						
T53A	Wise	57.58	347	P	P	13 02 43.9	-0.1
	baz=165,SNR=22						
CLTN	Cedars of Leba	57.64	343	IAmb	IAmb	13 02 44.9	
	comp=Z,75nm,0.8s						
S57A	Dark Hollow, R	57.69	351	IAmb	IAmb	13 03 36.8	
	comp=Z,48nm,1.1s						
S57A	Dark Hollow, R	57.69	351	P	P	13 02 44.7	+0.1
	baz=169						
S56A	Natural Bridge	57.70	350	P	P	13 02 44.9	+0.1
	baz=168						
R58B	Mineral	57.73	352	P	P	13 02 45.0	+0.1
	baz=170,SNR=5.4						
T52A	Hallie	57.79	347	P	P	13 02 45.1	-0.3
	baz=165,SNR=13						
JCT	Junction City	57.82	329	IAmb	IAmb	13 03 27.6	
	comp=Z,65nm,1.1s						
JCT	Junction City	57.82	329	P	P	13 02 45.9	+0.1
	baz=146,SNR=15						
R59A	King George, V	57.87	352	P	P	13 02 46.0	+0.2
	baz=171						
R60A	Leonardtown, M	57.87	353	P	P	13 02 45.8	0.0
	baz=172						
T51A	Gray	57.87	346	P	P	13 02 45.6	-0.3
	baz=164,SNR=12						
U49A	Red Boiling Sp	57.89	344	IAmb	IAmb	13 02 46.4	
	comp=Z,41nm,0.7s						
S55A	Lewisburg	57.95	349	P	P	13 02 47.3	+0.7
	baz=167,SNR=23						
WHTX	Lake Whitney,	57.97	332	P	P	13 02 47.1	+0.4

	baz=148,SNR=17						
Z38A	Mt. Pleasant	58.00	334	P	P	13 02 47.5	+0.6
Z38A					pP	13 03 15.5	+0.4
R58A	Rapidan	58.08	352	P	P	13 02 47.3	0.0
	baz=170						
WVT	Waverly	58.09	342	P	P	13 02 46.2	-1.3
WVT				pmax	pmax		
	comp=Z,89nm,0.7s						
WVT	Waverly	58.09	342	P	P	13 02 46.5	-1.0
WVT				pP	pP	13 03 15.1	-0.7
WVT				sP	sP	13 03 27.9	-0.7
WVT	Waverly	58.09	342	P	P	13 02 46.6	-0.8
	baz=159						
S54A	Dingess, Beckl	58.13	349	P	P	13 02 47.8	+0.1
	baz=167,SNR=15						
T50A	Nancy	58.13	345	P	P	13 02 47.1	-0.6
	baz=163,SNR=22						
R57A	Stanardsville	58.15	351	P	P	13 02 48.2	+0.4
	baz=170,SNR=5.2						
S53A	Williamson	58.17	348	P	P	13 02 47.9	-0.1
	baz=166						
HPIG		58.22	321	IAmb	IAmb	13 03 31.1	
	comp=Z,70nm,1.2s						
X40A	Basin Creek Fa	58.24	337	P	P	13 02 48.1	-0.5
	baz=154						
UALR	University of	58.32	337	IAmb	IAmb	13 03 18.6	
	comp=Z,51nm,0.9s						
S52A	Salyersville	58.36	347	P	P	13 02 48.9	-0.5
	baz=165						
R55A	Marlinton	58.38	350	P	P	13 02 50.4	+0.8
	baz=168,SNR=8.1						
T49A	Edmonton	58.39	345	P	P	13 02 49.0	-0.5
	baz=162,SNR=26						
R56A	Bull Pasture M	58.39	350	P	P	13 02 49.8	+0.2
	baz=169						
R54A	Victor	58.44	349	P	P	13 02 50.1	+0.2
	baz=167,SNR=14						
S51A	Beattyville	58.44	346	IAmb	IAmb	13 02 50.4	
	comp=Z,36nm,0.8s						
S51A	Beattyville	58.44	346	P	P	13 02 49.4	-0.5
	baz=164,SNR=9.7						
MIAR	Mount Ida	58.57	336	P	P	13 02 51.0	+0.1
MIAR				pmax	pmax		
	comp=Z,89nm,0.8s						
MIAR	Mount Ida	58.57	336	IAmb	IAmb	13 03 20.6	
	comp=Z,62nm,0.9s						
MIAR	Mount Ida	58.57	336	P	P	13 02 50.8	0.0
	baz=153,SNR=28						
W41B	Gary Mavity, V	58.65	338	P	P	13 02 51.0	-0.4
	baz=154,SNR=7.3						
S50A	Richmond	58.66	346	P	P	13 02 51.1	-0.3
	baz=163,SNR=22						
Q58A	Fox Den Farm,	58.67	352	P	P	13 02 51.5	0.0
	baz=171						
R53A	Hurricane	58.76	348	IAmb	IAmb	13 02 53.1	
	comp=Z,69nm,0.8s						
R53A	Hurricane	58.76	348	P	P	13 02 52.0	-0.1
	baz=166,SNR=11						
WHAR	Wooly Hollow	58.77	338	IAmb	IAmb	13 03 21.1	
	comp=Z,43nm,1.0s						
Q57A	Strasburg	58.86	351	P	P	13 02 53.3	+0.6
	baz=170,SNR=6.9						
R52A	Catlettsburg	58.91	348	P	P	13 02 52.6	-0.5
	baz=165						
TXAR	Lajitas Array	58.91	325	P	P	13 02 53.5	+0.1
	comp=Z,6.8nm,0.8s,baz=148,slow=8.5,SNR=79						
TXAR				pP	pP	13 03 22.7	+0.9
	comp=Z,8.2nm,1.0s,baz=132,slow=6.9,SNR=4.7						
TXAR				PKP2bc		13 32 30.7	
	comp=Z,0.8nm,1.1s,baz=305,slow=3.2,SNR=3.3						
TX31	Lajitas Ar. Si	58.91	325	P	P	13 02 53.5	0.0
S49A	Springfield	58.97	345	P	P	13 02 52.7	-0.8
	baz=162,SNR=15						
Q56A	Snyder Ridge,	58.98	351	IAmb	IAmb	13 03 36.9	
	comp=Z,70nm,1.1s						
Q56A	Snyder Ridge,	58.98	351	P	P	13 02 54.4	+0.9
	baz=169,SNR=8.8						
R51A	Hillsboro	59.07	347	P	P	13 02 53.9	-0.3
	baz=164,SNR=18						
Q55A	Buckhannon	59.07	350	P	P	13 02 55.2	+0.9
	baz=168,SNR=9.0						
P61A	Hammonton	59.08	355	P	P	13 02 53.9	-0.3
	baz=174						
LPIG	La Paz	59.11	315	P	P	13 02 55.8	+1.1
	comp=Z,26nm,0.3s,baz=327,slow=4.7,SNR=5.1						
P58A	Pank, Wackersv	59.16	353	P	P	13 02 54.7	-0.1
	baz=171						
P59A	Jarrettsville	59.18	353	P	P	13 02 55.4	+0.4
	baz=172						
Q54A	Coxs Mills	59.19	349	P	P	13 02 55.1	0.0
	baz=167,SNR=14						
Q53A	Leroy	59.19	349	P	P	13 02 55.3	+0.3
	baz=166,SNR=29						
R50A	Paris	59.22	346	IAmb	IAmb	13 02 55.9	
	comp=Z,50nm,0.8s						
R50A	Paris	59.22	346	P	P	13 02 54.8	-0.4
	baz=163,SNR=16						
W39A	Magazine	59.23	336	IAmb	IAmb	13 02 57.1	
	comp=Z,62nm,0.9s						
W39A	Magazine	59.23	336	P	P	13 02 55.8	+0.4
	baz=153,SNR=24						
FCAR	Ozark Folk Cen	59.25	338	IAmb	IAmb	13 02 55.8	
	comp=Z,27nm,0.7s						
P60A	Greenville	59.30	354	P	P	13 02 55.5	-0.2
	baz=173						
P56A	Dayton Farm, R	59.38	351	P	P	13 02 57.0	+0.7
	baz=169,SNR=5.6						
R49A	Shelbyville	59.42	345	P	P	13 02 56.0	-0.6
	baz=162,SNR=9.4						
Q52A	Bidwell	59.44	348	P	P	13 02 56.6	-0.1
	baz=166,SNR=14						
ABTX	Abilene, Hawle	59.51	330	P	P	13 02 57.6	+0.2
	baz=146,SNR=14						
P55A	Reedsville	59.53	350	P	P	13 02 58.0	+0.6
	baz=168,SNR=6.0						
WCI	Wyandotte Cave	59.64	344	P	P	13 02 57.4	-0.7
WCI				pmax	pmax		
	comp=Z,89nm,1.1s						
WCI	Wyandotte Cave	59.64	344	P	P	13 02 57.4	-0.7
WCI				IAmb	IAmb	13 03 42.0	
	comp=Z,89nm,1.1s						
WCI	Wyandotte Cave	59.64	344	P	P	13 02 57.2	-1.0
	baz=161						
Q50A	Georgetown	59.68	347	P	P	13 02 57.8	-0.5
	baz=164,SNR=36						
MCWV	Mont Chateau	59.68	350	IAmb	IAmb	13 02 59.6	
	comp=Z,29nm,0.8s						
MCWV	Mont Chateau	59.68	350	P	P	13 02 59.1	+0.7
	baz=168,SNR=6.9						
Q51A	Peebles	59.72	347	IAmb	IAmb	13 02 59.3	
	comp=Z,52nm,0.9s						
Q51A	Peebles	59.72	347	P	P	13 02 58.2	-0.4
	baz=165,SNR=11						
P54A	Burton	59.73	350	P	P	13 02 59.1	+0.3
	baz=168,SNR=20						
O58A	Lewisberry	59.74	353	P	P	13 02 58.7	-0.1
	baz=172						
USIN	University of	59.76	343	IAmb	IAmb	13 03 27.6	
	comp=Z,64nm,0.8s						
P53A	Whipple	59.78	349	P	P	13 02 59.4	+0.3
	baz=167,SNR=30						
O59A	Robesonia	59.85	354	P	P	13 02 59.4	-0.2
	baz=172						
U40A	Yellville	59.92	338	IAmb	IAmb	13 03 00.8	
	comp=Z,43nm,0.8s						
U40A	Yellville	59.92	338	P	P	13 02 59.8	-0.4
	baz=154,SNR=30						
T42A	Van Buren	59.93	340	IAmb	IAmb	13 03 28.5	
	comp=Z,28nm,0.8s						
Q49A	Aurora	60.04	346	P	P	13 03 00.2	-0.6
	baz=163,SNR=7.4						
P52A	Corning	60.06	348	P	P	13 03 00.7	-0.3
	baz=166,SNR=14						
O56A	Blue Knob Stat	60.09	352	P	P	13 03 01.1	-0.2
	baz=170						
P51A	Williamsport	60.09	348	P	P	13 03 00.7	-0.5
	baz=165,SNR=8.3						
O55A	Ligonier	60.14	351	P	P	13 03 02.0	+0.4
	baz=169,SNR=9.4						
Q48A	North Vernon	60.16	345	P	P	13 03 01.0	-0.7
	baz=162,SNR=17						
HHAR	Hobbs	60.25	337	P	P	13 03 02.1	-0.3
HHAR				pP	pP	13 03 30.5	-0.3
HHAR				IAmb	IAmb	13 03 32.1	
	comp=Z,49nm,0.9s						
O54A	Avella	60.28	350	P	P	13 03 02.6	+0.1
	baz=168,SNR=13						
SSPA	Standing Stone	60.36	352	P	P	13 03 03.1	+0.1
	baz=171						
P50A	Jamestown	60.37	347	P	P	13 03 02.6	-0.5
	baz=164,SNR=16						
N59A	State Game Lan	60.40	354	P	P	13 03 03.3	0.0
	baz=173						
W35A	Tecumseh	60.41	334	P	P	13 03 03.2	-0.3
W35A				pP	pP	13 03 31.2	-0.8
N58A	Sunbury	60.43	353	P	P	13 03 03.3	-0.1
	baz=172						
N57A	Milroy	60.44	353	P	P	13 03 03.3	-0.3
	baz=171						
O52A	Adamsville	60.47	349	P	P	13 03 03.7	-0.1
	baz=166,SNR=17						
O53A	New Philadelph	60.49	349	P	P	13 03 04.0	+0.1
	baz=167,SNR=17						
P49A	Miami Univ. Ec	60.50	346	P	P	13 03 03.1	-0.9
	baz=163,SNR=16						
U38A	Gravette	60.55	337	IAmb	IAmb	13 03 49.7	
	comp=Z,98nm,1.5s						
BLO	Bloomington	60.59	344	IAmb	IAmb	13 03 04.9	
	comp=Z,67nm,0.8s						
P48A	Milroy	60.60	345	P	P	13 03 03.4	-1.3
	baz=162,SNR=13						
OLIL	Olney	60.60	343	IAmb	IAmb	13 03 05.7	
	comp=Z,41nm,0.8s						
TUL1	Leonard	60.63	335	P	P	13 03 05.0	0.0
	baz=151,SNR=16						
O51A	Pataskala	60.65	348	P	P	13 03 04.6	-0.4
	baz=166,SNR=21						
N55A	Marion Center	60.65	351	P	P	13 03 05.5	+0.4
	baz=169,SNR=17						
N56A	West Decatur	60.69	352	P	P	13 03 05.8	+0.4
	baz=170						
M62A	Hamden	60.71	357	P	P	13 03 05.9	+0.6
	baz=176						
M60A	Port Jervis	60.71	355	P	P	13 03 05.2	-0.2
	baz=174						
FNO	Franklin	60.73	334	P	P	13 03 05.8	+0.2
ACSO	Alum Creek Sta	60.80	348	P	P	13 03 05.7	-0.4
	baz=165,SNR=24						
O50A	Cable	60.85	347	P	P	13 03 06.0	-0.4
	baz=164,SNR=20						
WMOK	Wichita Mounta	60.88	332	P	P	13 03 06.1	-0.7
	baz=148,SNR=15						
CCM	Cathedral Cave	60.91	340	P	P	13 03 06.3	-0.5
CCM				pmax	pmax		
	comp=Z,68nm,0.9s						
CCM	Cathedral Cave	60.91	340	P	P	13 03 06.3	-0.5
CCM				IAmb	IAmb	13 03 50.5	
	comp=Z,68nm,0.9s						
M58A	Price’s Panora	60.92	354	P	P	13 03 07.2	+0.3
	baz=172						
M57A	Sunshine Farm,	60.96	353	P	P	13 03 07.6	+0.5
	baz=171						
N53A	Lisbon	60.97	350	P	P	13 03 07.3	+0.2
	baz=167,SNR=13						
N54A	Moraine State	60.98	351	P	P	13 03 07.9	+0.7
	baz=168,SNR=14						
M59A	Waymart	60.99	355	P	P	13 03 07.3	0.0
	baz=173						
O49A	Covington	61.04	347	IAmb	IAmb	13 03 08.1	
	comp=Z,85nm,0.9s						
O49A	Covington	61.04	347	P	P	13 03 07.0	-0.7
	baz=164,SNR=20						
L63A	North Scituate	61.07	358	P	P	13 03 07.8	+0.1
	baz=177						
N52A	McGinn’s Farm,	61.12	349	P	P	13 03 08.0	-0.2
	baz=167,SNR=5.5						
P46A	Rosedale	61.19	344	IAmb	IAmb	13 03 09.7	
	comp=Z,54nm,0.7s						
M56A	Emporium	61.24	352	IAmb	IAmb	13 03 52.0	
	comp=Z,79nm,1.0s						
M56A	Emporium	61.24	352	P	P	13 03 09.1	+0.2
	baz=170,SNR=6.3						
S39A	Bolivar	61.28	338	IAmb	IAmb	13 03 10.1	
	comp=Z,60nm,0.8s						
O48A	Farmland	61.29	346	P	P	13 03 08.6	-0.8
	baz=163,SNR=30						
M55A	Ridgway	61.30	352	P	P	13 03 09.6	+0.2
	baz=170,SNR=6.7						
L60A	Shokan	61.34	356	P	P	13 03 09.8	+0.1
	baz=175						
N51A	Ashland	61.35	349	P	P	13 03 09.3	-0.4
	baz=166,SNR=16						
N50A	Nevada	61.35	348	P	P	13 03 09.2	-0.5
	baz=165,SNR=11						
M54A	Oil Creek Stat	61.47	351	P	P	13 03 10.8	+0.3
	baz=169,SNR=17						
L61A	Hillsdale 1, H	61.50	356	P	P	13 03 10.7	0.0
	baz=175						
L58A	Harry Jones Me	61.53	354	P	P	13 03 11.1	+0.2
	baz=173						
M53A	WI Miller and	61.56	350	P	P	13 03 11.2	+0.1
	baz=168,SNR=26						
L57A	Andrews Acres	61.59	353	P	P	13 03 11.6	+0.2
	baz=172						
L59A	Walton	61.60	355	P	P	13 03 12.1	+0.7
	baz=174						
MNTX	Cornudas Mount	61.67	325	P	P	13 03 11.6	-0.5
	baz=141,SNR=46						
BINY	Binghamton	61.70	354	IAmb	IAmb	13 03 43.5	
	comp=Z,57nm,0.9s						
BINY	Binghamton	61.70	354	P	P	13 03 12.2	+0.2
	baz=173						
L61B	Northampton	61.70	357	P	P	13 03 12.1	0.0
	baz=176						
HRV	Adam Dziewonsk	61.71	358	P	P	13 03 12.6	+0.5
	baz=178						
M51A	Elyria	61.71	349	P	P	13 03 11.9	-0.3
	baz=166,SNR=9.9						
N49A	Columbus Grove	61.71	347	P	P	13 03 11.8	-0.4
	baz=164,SNR=69						
M52A	Chesterland	61.77	350	P	P	13 03 12.6	+0.1
	baz=167,SNR=24						
L56A	Greenwood	61.80	353	P	P	13 03 12.9	+0.1
	baz=171						
N48A	Decatur	61.84	346	P	P	13 03 12.2	-0.7
	baz=163,SNR=26						
SFIN	Lafayette	61.88	344	P	P	13 03 12.0	-1.2
	baz=161,SNR=36						
M50A	Fremont	61.94	348	P	P	13 03 13.4	-0.3
	baz=165,SNR=18						
L55A	Hinsdale	61.96	352	P	P	13 03 14.1	+0.2
	baz=170,SNR=6.2						
L53A	Girard	61.99	351	P	P	13 03 14.2	+0.1
	baz=168,SNR=34						
N47A	Urbana	62.01	346	P	P	13 03 13.3	-0.9
	baz=162,SNR=21						
VNA3	Neumayer Olymp	62.02	162	P	P	13 03 16.0	+2.0
ERPA	Erie	62.11	351	P	P	13 03 15.1	+0.3
	baz=168,SNR=33						
MSTX	Muleshoe	62.11	329	P	P	13 03 14.9	-0.2
	baz=144,SNR=36						
L54A	Sinclairville	62.13	351	P	P	13 03 15.3	+0.4
	baz=169,SNR=21						
K59A	Cooperstown	62.17	355	P	P	13 03 15.7	+0.5
	baz=174,SNR=5.8						
WVNY	West Valley, N	62.20	352	IAmb	IAmb	13 03 16.4	
	comp=Z,63nm,0.9s						
M49A	Liberty Center	62.20	347	P	P	13 03 14.8	-0.6
	baz=164,SNR=43						
K58A	Earlville	62.22	354	P	P	13 03 15.8	+0.3
	baz=173,SNR=5.8						
VNA1	Neumayer--Stat	62.23	161	P	P	13 03 16.9	+1.6
K57A	Scipio Center	62.28	354	P	P	13 03 15.7	-0.2
	baz=172						
AMTX	Amarillo	62.33	330	IAmb	IAmb	13 03 57.3	
	comp=Z,54nm,0.9s						
AMTX	Amarillo	62.33	330	P	P	13 03 15.9	-0.6
	baz=145						
K56A	Middlesex	62.33	353	P	P	13 03 16.3	0.0
	baz=171						
U32A	Winter Ranch,	62.36	333	IAmb	IAmb	13 03 17.9	
	comp=Z,69nm,0.9s						
M48A	Edgerton	62.37	347	P	P	13 03 15.8	-0.7
	baz=164,SNR=11						
K54A	Basiliko Farm,	62.41	352	P	P	13 03 17.1	+0.3
	baz=170,SNR=8.7						
J62A	Henniker	62.44	358	P	P	13 03 17.4	+0.5
	baz=177						
K55A	Perry	62.45	352	P	P	13 03 17.2	+0.1
	baz=171						
M47A	Cromwell	62.45	346	P	P	13 03 16.4	-0.6
	baz=162,SNR=35						
P40A	Paris	62.51	340	IAmb	IAmb	13 03 18.2	
	comp=Z,80nm,0.9s						
L50A	Kingsville	62.52	348	P	P	13 03 16.9	-0.6
	baz=166,SNR=9.3						
J60A	Lant Hill Farm	62.53	356	P	P	13 03 18.0	+0.4
	baz=176						
SRIG	Santa Rosalia	62.58	317	P	P	13 03 18.6	+0.4
SRIG				IAmb	IAmb	13 03 20.7	
	comp=Z,178nm,1.7s						
J61A	Chester	62.59	357	P	P	13 03 18.0	0.0
	baz=176						
VNA2	Neumayer--Watz	62.59	161	P	P	13 03 19.0	+1.3
	baz=292,slow=6.9						
HDIL	Hopedale	62.63	343	P	P	13 03 17.2	-1.0
	baz=159,SNR=13						
L48A	N Adams	62.75	347	P	P	13 03 18.4	-0.6
	baz=164,SNR=46						
L49A	Milan	62.77	348	P	P	13 03 18.8	-0.3
	baz=165,SNR=16						
J58A	Remsen	62.78	355	P	P	13 03 19.1	-0.1
	baz=174						
J59A	Piesco	62.83	356	P	P	13 03 19.9	+0.3
	baz=174,SNR=6.1						
J56A	Wolcott	62.85	354	P	P	13 03 19.2	-0.5
J56A				IAmb	IAmb	13 03 50.5	
	comp=Z,53nm,0.9s						
J56A	Wolcott	62.85	354	P	P	13 03 19.4	-0.2
	baz=172,SNR=7.3						
K52A	Tillsonburg	62.87	350	P	P	13 03 19.7	-0.1
	baz=168,SNR=6.4						
J57A	Williamstown	62.90	354	P	P	13 03 20.0	+0.1
	baz=173						
AAM	Ann Arbor	62.93	348	IAmb	IAmb	13 03 20.7	
	comp=Z,51nm,0.9s						
AAM	Ann Arbor	62.93	348	P	P	13 03 19.8	-0.5
	baz=165						
HSIG		62.94	319	IAmb	IAmb	13 03 23.1	
	comp=Z,145nm,1.7s						
K51A	Iona Station	62.94	350	P	P	13 03 20.0	-0.3
	baz=167,SNR=13						
J55A	Hilton	62.95	353	P	P	13 03 20.0	-0.3
	baz=171,SNR=6.5						
J54A	Appleton	63.06	352	P	P	13 03 21.2	+0.2
	baz=170						
M44A	Midewin, Midew	63.07	344	IAmb	IAmb	13 03 20.9	
	comp=Z,46nm,0.8s						
I58A	Old Forge	63.09	355	P	P	13 03 21.5	+0.2
	baz=174,SNR=7.0						
P38A	Dawn	63.09	339	IAmb	IAmb	13 03 22.1	
	comp=Z,53nm,0.8s						
I59A	Olmsteadville	63.11	356	P	P	13 03 21.7	+0.2
	baz=175,SNR=7.0						
I60A	Shoreham	63.12	357	P	P	13 03 22.0	+0.6
	baz=176						
I61A	Oroboro, Fairl	63.16	357	P	P	13 03 22.3	+0.5
	baz=177						
K50A	Casco	63.19	349	P	P	13 03 21.4	-0.5
	baz=166,SNR=20						
L46A	Eue Claire	63.23	346	P	P	13 03 21.2	-1.0
	baz=162,SNR=6.8						
I63A	Otisfield	63.23	359	P	P	13 03 22.6	+0.4
	baz=178						
J52A	Paris	63.28	351	P	P	13 03 22.6	0.0
	baz=168,SNR=69						
NCB	Newcomb	63.31	356	IAmb	IAmb	13 04 17.0	
	comp=Z,129nm,1.6s						
K49A	Clarkson	63.36	348	P	P	13 03 22.3	-0.8
	baz=165,SNR=7.3						
I57A	Carthage	63.39	355	P	P	13 03 23.4	+0.1
	baz=173						
LBNH	Lisbon	63.45	358	P	P	13 03 24.5	+0.8
	baz=177						
K48A	Perry	63.51	348	P	P	13 03 23.5	-0.6
	baz=164,SNR=47						
K47A	Vermontville	63.56	347	P	P	13 03 23.6	-0.8
	baz=163,SNR=16						
319A	Douglas	63.62	322	IAmb	IAmb	13 03 27.5	
	comp=Z,54nm,0.8s						
121A	Cookes Peak, D	63.63	324	P	P	13 03 26.6	+1.3
	baz=139,SNR=29						
I53A	Kortright Cn E	63.73	351	P	P	13 03 25.3	-0.1
	baz=169						
KSU1	Kansas State U	63.73	336	P	P	13 03 25.2	-0.4
	baz=151,SNR=8.7						
K46A	Dorr	63.75	346	P	P	13 03 24.3	-1.4
	baz=163						
H61A	Lyndonville	63.75	358	P	P	13 03 26.2	+0.6
	baz=177						
H58A	Gabriels	63.75	356	P	P	13 03 25.8	+0.1
	baz=175,SNR=6.5						
H62A	Milan	63.76	358	P	P	13 03 25.9	+0.2
	baz=178						
L44A	Lake County Fo	63.77	344	P	P	13 03 24.8	-1.0
	baz=160						
H64A	Troy	63.80	360	P	P	13 03 26.5	+0.6
	baz=180						
H63A	New Sharon	63.83	359	P	P	13 03 26.9	+0.9
	baz=179						
J49A	Marlette	63.85	349	P	P	13 03 25.5	-0.8
	baz=165,SNR=25						
I55A	Frankford	63.87	353	P	P	13 03 26.4	+0.1
	baz=171,SNR=14						
H57A	Richville	63.89	355	P	P	13 03 26.7	+0.2
	baz=174,SNR=11						
J48A	Bridge Port	63.92	348	P	P	13 03 26.2	-0.5
	baz=165,SNR=25						
I51A	Listowel	63.92	350	P	P	13 03 26.5	-0.2
	baz=168,SNR=51						
H59A	Cadyville	63.95	356	P	P	13 03 27.2	+0.3
	baz=175						
LONY	Lake Ozonia	63.98	356	P	P	13 03 27.3	+0.2
	baz=174,SNR=8.4						
N38A	Joes South For	64.04	340	IAmb	IAmb	13 03 28.1	
	comp=Z,73nm,0.8s						
I52A	Shelburne	64.05	351	P	P	13 03 27.6	0.0
	baz=168						
J47A	Sunmer	64.07	347	P	P	13 03 27.2	-0.5
	baz=164,SNR=18						
L42A	Oliver, Polo	64.08	343	IAmb	IAmb	13 03 28.6	
	comp=Z,52nm,0.7s						
H56A	Elgin	64.09	354	P	P	13 03 28.0	+0.1
	baz=173,SNR=8.0						
FRNY	Flat Rock	64.13	356	IAmb	IAmb	13 03 29.1	
	comp=Z,55nm,1.1s						
H55A	Tweed	64.14	354	P	P	13 03 28.3	+0.2
	baz=172,SNR=6.8						
SNAA	Sanae	64.22	161	P	P	13 03 30.0	+1.4
SNAA	Sanae	64.22	161	⇑*i*P	P	13 03 29.7	+1.2
SNAA	Sanae	64.22	161	P	P	13 03 29.1	+0.6
SNAA				IAmb	IAmb	13 03 59.2	
	comp=Z,107nm,1.1s						
G63A	Kingsbury	64.28	360	P	P	13 03 29.1	+0.1
	baz=180						
G60A	Masonville	64.33	357	P	P	13 03 30.3	+0.9
	baz=177						
H53A	Bobcaygeon	64.33	352	P	P	13 03 29.3	-0.1
	baz=170,SNR=12						
G59A	Clarenceville	64.35	357	P	P	13 03 30.0	+0.5
	baz=176						
I49A	Point Hope	64.36	349	P	P	13 03 29.0	-0.5
	baz=166,SNR=36						
G65A	Princeton	64.37	1	P	P	13 03 29.8	+0.2
	baz=182						
G62A	West of Eustis	64.39	359	P	P	13 03 30.5	+0.7
	baz=179,SNR=5.0						
PKME	Peaks-Kenny Pk	64.42	360	P	P	13 03 30.2	+0.3
	baz=180						
G58A	Ormstown	64.47	356	P	P	13 03 30.5	+0.2
	baz=175,SNR=6.4						
G61A	St-Isidore-de-	64.48	358	P	P	13 03 31.1	+0.7
	baz=178						
G57A	Newington	64.49	355	P	P	13 03 30.8	+0.4
	baz=174,SNR=12						
H52A	Wyevale	64.57	351	P	P	13 03 30.8	-0.1
	baz=169,SNR=5.9						
L40A	Anamosa	64.57	342	IAmb	IAmb	13 03 31.6	
	comp=Z,84nm,1.1s						
SADO	Sadowa	64.59	352	P	P	13 03 30.7	-0.4
	comp=Z,40nm,0.8s,baz=205,slow=1.9,SNR=39						
SADO	Sadowa	64.59	352	IAmb	IAmb	13 03 31.8	
	comp=Z,52nm,0.8s						
J45A	Montague	64.60	346	P	P	13 03 30.1	-1.0
	baz=162						
PLVO	Plevna	64.62	354	IAmb	IAmb	13 04 05.8	
	comp=Z,48nm,0.9s						
CBKS	Cedar Bluff	64.73	334	P	P	13 03 32.7	+0.5
	baz=148,SNR=15						
ANMO	Albuquerque	64.75	326	P	P	13 03 33.1	+0.5
	comp=Z,11nm,0.8s,baz=134,slow=7.7,SNR=36						
ANMO				pP	pP	13 04 01.7	+0.3
	comp=Z,16nm,0.9s,baz=126,slow=7.5,SNR=3.6						
ANMO	Albuquerque	64.75	326	*e*P	P	13 03 33.2	+0.6

ANMO	Albuquerque	64.75	326	P	P	13 03 33.2	+0.6
ANMO	Albuquerque	64.75	326	P	P	13 03 33.2	+0.6
	baz=141						
I47A	Gladwin	64.75	348	P	P	13 03 31.5	-0.6
	baz=164,SNR=13						
I48A	Sherman Twp	64.76	348	P	P	13 03 31.7	-0.5
	baz=165,SNR=55						
G55A	Calabogie	64.79	354	P	P	13 03 32.6	+0.2
	baz=172,SNR=11						
I46A	Reed City	64.87	347	P	P	13 03 32.0	-1.0
	baz=163,SNR=18						
G53A	Haliburton	64.87	353	P	P	13 03 33.0	0.0
	baz=170,SNR=22						
F64A	Sherman	65.03	1	P	P	13 03 34.1	+0.2
	baz=181						
SCIA	State Center	65.04	340	P	P	13 03 33.9	-0.2
	baz=155,SNR=14						
JFWS	Jewell Farm	65.08	343	P	P	13 03 34.0	-0.3
	baz=158,SNR=32						
G54A	Lake Saint Pet	65.08	353	P	P	13 03 34.2	0.0
	baz=171,SNR=15						
I45A	Fountain	65.13	346	P	P	13 03 33.3	-1.4
	baz=162						
F61A	St Evariste	65.16	358	P	P	13 03 35.0	+0.2
	baz=178						
TUC	Tucson	65.18	322	P	P	13 03 35.9	+0.6
TUC				pmax	pmax		
	comp=Z,48nm,1.4s						
TUC	Tucson	65.18	322	P	P	13 03 35.9	+0.6
TUC	Tucson	65.18	322	P	P	13 03 36.2	+0.9
	baz=136						
H48A	Harrisville	65.18	349	P	P	13 03 34.4	-0.5
	baz=165,SNR=25						
F60A	Warwick	65.18	358	P	P	13 03 34.9	0.0
	baz=177						
H47A	Mio	65.25	348	P	P	13 03 34.7	-0.6
	baz=164,SNR=6.0						
H46A	Fife Lake	65.39	347	P	P	13 03 35.5	-0.8
	baz=163,SNR=7.1						
T25A	Trinidad	65.45	329	P	P	13 03 37.9	+0.8
	baz=143,SNR=14						
GLMI	Grayling	65.55	348	P	P	13 03 36.7	-0.6
	baz=164						
E60A	Ste Agathe de	65.56	358	P	P	13 03 37.4	+0.1
	baz=178						
E63A	Oxbow	65.58	0	P	P	13 03 37.6	+0.1
	baz=181						
E64A	Bridgewater	65.59	1	P	P	13 03 37.8	+0.3
	baz=181						
F52A	Sundridge	65.62	352	P	P	13 03 37.6	-0.2
	baz=170,SNR=19						
ALGO	Algonquin Park	65.63	353	P	P	13 03 37.5	-0.2
	baz=171,SNR=14						
I42A	Draeger Farm,	65.64	344	IAmb	IAmb	13 03 38.6	
	comp=Z,84nm,0.8s						
E58A	La Victoria	65.64	357	P	P	13 03 37.7	-0.1
	baz=176						
H45A	Beulah	65.65	347	P	P	13 03 37.2	-0.7
	baz=163,SNR=5.2						
E57A	Chemin Saint G	65.73	356	P	P	13 03 38.6	+0.1
	baz=175,SNR=6.4						
G47A	Hillman	65.74	349	P	P	13 03 38.0	-0.5
	baz=165,SNR=13						
F51A	Arnstein	65.83	352	P	P	13 03 38.7	-0.3
	baz=169,SNR=21						
E55A	Montcerf-Lytto	65.92	355	P	P	13 03 39.6	0.0
	baz=173,SNR=7.3						
E56A	St. Veronique	65.93	355	P	P	13 03 39.7	0.0
	baz=174,SNR=13						
G45A	Suttons Bay	65.97	347	P	P	13 03 39.3	-0.7
	baz=163,SNR=16						
F49A	Sandfield	65.99	350	P	P	13 03 39.4	-0.7
	baz=167,SNR=37						
E53A	Dumoine, Ponti	66.00	353	P	P	13 03 40.0	-0.2
	baz=171,SNR=16						
E54A	Lac Daplat, Po	66.01	354	P	P	13 03 40.0	-0.2
	baz=172,SNR=21						
E52A	Mattawa	66.02	353	P	P	13 03 39.9	-0.4
	baz=170,SNR=8.6						
G46A	Petoskey	66.07	348	P	P	13 03 40.0	-0.6
	baz=164,SNR=21						
I40A	Norwalk	66.09	343	IAmb	IAmb	13 03 41.4	
	comp=Z,50nm,0.8s						
D60A	Saint Jean D'O	66.10	359	P	P	13 03 41.0	+0.3
	baz=178						
KSCO	Kaye Shedlock'	66.14	332	P	P	13 03 42.1	+0.7
	baz=145,SNR=9.4						
214A	Organ Pipe Nat	66.14	320	P	P	13 03 43.0	+1.6
	baz=135,SNR=34						
F48A	Evansville	66.15	350	P	P	13 03 40.5	-0.6
	baz=166,SNR=26						
D63A	Stockholm	66.20	1	P	P	13 03 41.7	+0.3
	baz=181						
BGNE	Belgrade	66.32	336	P	P	13 03 42.6	+0.3
	baz=150,SNR=29						
X18A	Snowflake	66.32	324	IAmb	IAmb	13 04 14.6	
	comp=Z,122nm,1.8s						
D57A	Chemin Vers le	66.32	356	P	P	13 03 42.7	+0.5
	baz=175,SNR=10						
D58A	Chemin du LacG	66.35	357	P	P	13 03 42.7	+0.3
	baz=176,SNR=9.4						
E51A	G1948 Merrick	66.37	352	P	P	13 03 42.6	+0.1
	baz=169,SNR=17						
D56A	ZEC Mazanza, M	66.41	356	P	P	13 03 42.6	-0.2
	baz=174,SNR=7.1						
D55A	Sainte-Anne-du	66.43	355	P	P	13 03 42.8	-0.1
	baz=174,SNR=15						
SDCO	Great Sand Dun	66.45	329	IAmb	IAmb	13 04 28.7	
	comp=Z,66nm,1.1s						
SDCO	Great Sand Dun	66.45	329	P	P	13 03 44.6	+1.0
	baz=143,SNR=64						
F45A	CMU Biological	66.55	347	P	P	13 03 43.2	-0.5
	baz=163,SNR=16						
LATQ	La Tuque	66.63	357	P	P	13 03 44.2	+0.1
	baz=176						
W18A	Petrified Fore	66.63	324	P	P	13 03 45.9	+1.2
	baz=138						
D54A	Lac Fusel, La	66.67	354	P	P	13 03 44.0	-0.4
	baz=172,SNR=11						
D53A	Lac Vacive, Po	66.70	354	IAmb	IAmb	13 03 45.6	
	comp=Z,72nm,0.8s						
D53A	Lac Vacive, Po	66.70	354	P	P	13 03 44.7	+0.1
	baz=171,SNR=28						
E48A	Lockeyer	66.71	350	P	P	13 03 44.5	-0.1
	baz=167,SNR=37						
E47A	Iron Bridge	66.87	349	P	P	13 03 45.3	-0.4
	baz=166,SNR=27						
D51A	Lot 18 Range I	66.90	352	P	P	13 03 45.7	-0.2
	baz=170,SNR=11						
D50A	G1974 Best Tow	67.04	352	P	P	13 03 46.6	-0.2
	baz=169,SNR=16						
S22A	4UR Ranch, Cre	67.11	328	P	P	13 03 48.6	+0.8
	baz=141,SNR=22						
F42A	Maple Grove Fa	67.20	346	IAmb	IAmb	13 04 20.1	
	comp=Z,194nm,1.8s						
Q24A	Divide	67.25	330	P	P	13 03 49.5	+0.8
	baz=143,SNR=44						
D48A	Paudash Townsh	67.33	351	P	P	13 03 48.0	-0.5
	baz=167,SNR=18						
D49A	Beulah Townshi	67.36	351	P	P	13 03 48.6	-0.2
	baz=168,SNR=22						
D47A	Chapleau	67.42	350	P	P	13 03 48.6	-0.6
	baz=166,SNR=16						
D46A	Sault St. Mari	67.43	349	P	P	13 03 48.4	-0.8
	baz=165,SNR=20						
OGNE	Ogallala	67.47	333	P	P	13 03 50.5	+0.8
	baz=146						
E43A	Lone Tree Farm	67.53	347	IAmb	IAmb	13 03 50.3	
	comp=Z,47nm,0.8s						
E44A	Grand Marais A	67.53	347	P	P	13 03 50.0	+0.1
	baz=163						
MVCO	Mesa Verde	67.54	327	P	P	13 03 51.4	+0.9
	baz=140,SNR=28						
VLDQ	Val d'Or	67.70	354	IAmb	IAmb	13 03 52.2	
	comp=Z,55nm,0.8s						
COWI	Conover	67.76	345	IAmb	IAmb	13 04 24.0	
	comp=Z,75nm,1.4s						
ECSD	EROS Data Cent	67.80	339	IAmb	IAmb	13 04 33.4	
	comp=Z,158nm,1.5s						
ECSD	EROS Data Cent	67.80	339	P	P	13 03 51.5	-0.1
	baz=152,SNR=21						
WUAZ	Wupatki	67.83	324	IAmb	IAmb	13 03 55.1	
	comp=Z,55nm,1.0s						
WUAZ	Wupatki	67.83	324	P	P	13 03 53.8	+1.5
	baz=137,SNR=39						
SPMN	Marine on St.	67.93	342	P	P	13 03 51.9	-0.5
	baz=156,SNR=13						
LIC	Lamto	67.95	75	⇑iP	P	13 03 52.2	-1.0
	comp=Z,114nm,0.6s						
GLA	Glamis	68.12	320	P	P	13 03 54.4	+0.5
GLA				pmax	pmax		
	comp=Z,210nm,2.0s						
GLA	Glamis	68.12	320	P	P	13 03 54.4	+0.5
GLA				IAmb	IAmb	13 03 57.0	
	comp=Z,210nm,2.0s						
GLA	Glamis	68.12	320	P	P	13 03 55.5	+1.6
	baz=134,SNR=12						
TIC	Toumodi	68.13	74	⇑iP	P	13 03 53.4	-0.9
	comp=Z,41nm,0.6s						
ISCO	Idaho Springs	68.14	330	P	P	13 03 55.2	+1.0
ISCO				pmax	pmax		
	comp=Z,71nm,1.1s						
ISCO	Idaho Springs	68.14	330	P	P	13 03 55.3	+1.0
	baz=143,SNR=34						
KIC	Kosan Boka	68.27	75	⇑iP	P	13 03 54.5	-0.7
	comp=Z,182nm,0.6s						
DBIC	Dimbokro	68.28	74	P	P	13 03 54.6	-0.7
	comp=Z,93nm,0.6s,baz=228,slow=7.0,SNR=264						
DBIC				pP	pP	13 04 23.7	-0.5
	comp=Z,38nm,0.9s,baz=229,slow=5.8,SNR=3.3						
DBIC				LR	LR	13 32 22.1	
	comp=Z,358nm,21.6s,baz=214,slow=35						
DBIC	Dimbokro	68.28	74	P	P	13 03 54.5	-0.7
Y12C	Blythe	68.42	320	P	P	13 03 57.3	+1.6
	baz=134,SNR=16						
D41A	Chassel	68.53	346	IAmb	IAmb	13 03 57.2	
	comp=Z,79nm,0.8s						
PDMCI	Parker Dam,Lak	68.57	321	P	P	13 03 58.0	+1.3
	baz=134,SNR=8.5						
IKP	In-Ko-Pah, Jac	68.64	318	P	P	13 03 59.0	+1.8
	baz=132,SNR=11						
SWSC	Sam W. Stewart	68.65	319	P	P	13 03 59.0	+1.9
	baz=133						
NVL	N'lazarevskaya	68.76	159	eP	P	13 03 55.3	-2.0
NVL				e*PP	pP	13 04 26.6	+0.1
NVL				e		13 06 30.5	
NVL				ePPP	PPP	13 08 16.6	
NVL				eS	S	13 12 54.4	+2.9
NVL				eSS	SS	13 17 29.4	+11
NVL				pmax	pmax		
	comp=Z,51nm,1.2s						
E38A	The Farm, Brul	68.85	344	IAmb	IAmb	13 04 30.8	
	comp=Z,104nm,1.4s						
BC3	Big Chuckawall	68.92	320	P	P	13 04 00.5	+1.6
	baz=133,SNR=28						
W13A	Hualapai Mount	68.97	322	IAmb	IAmb	13 04 02.9	
	comp=Z,168nm,2.0s						
MONP2	Monument Peak	69.00	318	P	P	13 04 01.4	+1.8
	baz=132,SNR=12						
U15A	North Rim	69.01	324	IAmb	IAmb	13 04 02.9	
	comp=Z,218nm,1.8s						
BAR	Barrett	69.02	318	IAmb	IAmb	13 04 02.4	
	comp=Z,211nm,1.8s						
IRM	Iron Mountain	69.07	320	P	P	13 04 01.6	+1.7
	baz=134,SNR=38						
N23A	Red Feather La	69.16	331	P	P	13 04 01.5	+1.0
	baz=143,SNR=32						
NEE2	Needles Airpor	69.18	321	P	P	13 04 01.8	+1.4
	baz=134						
DRLN	Deer Lake	69.18	8	IAmb	IAmb	13 04 00.6	
	comp=Z,55nm,0.8s						
SUSD	Miller	69.24	338	P	P	13 04 00.7	+0.1
	baz=150						
MATQ	Matagami	69.34	354	P	P	13 04 00.6	-0.5
	baz=172,SNR=13						
TAOE	Nuku Hiva Isla	69.36	268	eS	S	13 13 00.2	-0.4
	comp=Z,176nm,32.1s						
TAOE	Nuku Hiva Isla	69.36	268	eLR	LR	13 25 10.7	
	comp=Z,466nm,37.7s						
TAOE	Nuku Hiva Isla	69.36	268	eT	T	14 18 17.9	
	comp=Z,30nm,0.3s						
109C	Camp Elliot, M	69.43	318	IAmb	IAmb	13 04 47.5	
	comp=Z,108nm,1.6s						
109C	Camp Elliot, M	69.43	318	P	P	13 04 03.4	+1.4
	baz=132						
BELC	Belle Mtn. Jos	69.48	320	P	P	13 04 04.1	+1.6
	baz=133,SNR=18						
XPFO	Pion Flat	69.50	319	P	P	13 04 03.3	+0.7
PFO	Pinyon Flats O	69.51	319	P	P	13 04 04.3	+1.7
	comp=Z,19nm,0.8s,baz=128,slow=5.7,SNR=20						
PFO				pP	pP	13 04 32.8	+1.1
	comp=Z,19nm,1.0s,baz=106,slow=4.2,SNR=3.8						
PFO	Pinyon Flats O	69.51	319	diP	P	13 04 04.2	+1.6
PFO				pmax	pmax		
	comp=Z,42nm,1.0s						
PFO	Pinyon Flats O	69.51	319	P	P	13 04 03.4	+0.8
PFO	Pinyon Flats O	69.51	319	P	P	13 04 04.3	+1.7
	baz=132,SNR=12						
O20A	White River Ci	69.65	329	P	P	13 04 04.7	+1.2
	baz=141,SNR=41						
GMRC	Granite Mounta	69.81	320	P	P	13 04 06.4	+1.9
	baz=133,SNR=40						
MURC	Murrieta	69.96	319	P	P	13 04 07.0	+1.8
	baz=132,SNR=5.3						
EYMN	Ely	70.07	344	P	P	13 04 05.0	-0.5
EYMN	Ely	70.07	344	P	P	13 04 05.1	-0.5
	baz=158,SNR=27						
BBRC	Big Bear Solar	70.23	319	P	P	13 04 08.9	+1.7
	baz=132						
HEC	Hector,Ludlow	70.25	320	P	P	13 04 09.1	+2.0
	baz=133,SNR=26						
SCI2	San Clemente I	70.41	317	P	P	13 04 09.8	+1.8
	baz=131						
TUQ	Turquoise Moun	70.41	321	P	P	13 04 09.7	+1.5
	baz=133,SNR=10.0						
CIS	Catalina Islan	70.59	318	P	P	13 04 10.6	+1.5
	baz=131						
BFSC	Mount Baldy Ra	70.67	319	P	P	13 04 11.1	+1.4
	baz=132,SNR=9.0						
RRX	Edison Barstow	70.68	320	P	P	13 04 11.5	+1.9
	baz=132						
QSPA	South Pole Qui	70.71	180	P	P	13 04 11.1	+1.6
	comp=Z,59nm,0.9s,baz=148,slow=6.7,SNR=9.5						
QSPA	South Pole Qui	70.71	180	P	P	13 04 10.6	+1.1
QSPA				IAmb	IAmb	13 04 12.3	
	comp=Z,164nm,1.3s						
FMP	Fort Macarthur	70.72	318	P	P	13 04 11.5	+1.7
	baz=131						
K22A	Casper	70.82	332	P	P	13 04 11.4	+1.0
	baz=143,SNR=30						
GSC	Goldstone, Bar	70.85	320	IAmb	IAmb	13 04 14.0	
	comp=Z,164nm,1.8s						
GSC	Goldstone, Bar	70.85	320	P	P	13 04 12.6	+1.8
	baz=133,SNR=18						
MWC	Mount Wilson	70.91	319	IAmb	IAmb	13 04 14.2	
	comp=Z,246nm,1.8s						
RSSD	Black Hills	70.93	334	P	P	13 04 11.6	+0.4
RSSD				pmax	pmax		
	comp=Z,64nm,0.8s						
RSSD	Black Hills	70.93	334	P	P	13 04 11.6	+0.4
RSSD				IAmb	IAmb	13 04 13.2	
	comp=Z,64nm,0.8s						
RSSD	Black Hills	70.93	334	P	P	13 04 12.2	+1.0
	baz=145						
SHOC	Shoshone, Teco	70.94	321	P	P	13 04 12.7	+1.6
	baz=133						
DECC	Green Verdugo	71.10	318	P	P	13 04 14.0	+1.9
	baz=131						
EDW2	Edwards Air Fo	71.30	319	P	P	13 04 14.7	+1.3
	baz=132,SNR=16						
BLG	Laguna Peak, P	71.46	318	P	P	13 04 15.7	+1.3
	baz=131						
LRMC	Laurel Mtn Rad	71.50	320	P	P	13 04 16.4	+1.6
	baz=132						
OSI	Osito Audit: C	71.58	318	P	P	13 04 15.6	+0.5
OSI				IAmb	IAmb	13 04 17.7	
	comp=Z,210nm,1.9s						
OSI	Osito Audit: C	71.58	318	P	P	13 04 16.6	+1.5
	baz=131						
AGMN	Agassiz Nation	71.61	341	IAmb	IAmb	13 04 15.8	
	comp=Z,50nm,0.8s						
AGMN	Agassiz Nation	71.61	341	P	P	13 04 14.7	-0.1
	baz=154,SNR=19						
TPNV	Topopah Spring	71.64	322	P	P	13 04 17.5	+2.0
	baz=133,SNR=39						
FURC	Furnace Creek,	71.67	321	P	P	13 04 17.5	+2.1
	baz=133,SNR=29						
E28A	Huff	71.69	338	IAmb	IAmb	13 04 17.3	
	comp=Z,116nm,0.8s						
SCZ2	Santa Cruz Isl	71.75	317	P	P	13 04 17.3	+1.1
	baz=130						
MPMC	Manual Prospec	71.77	320	P	P	13 04 17.7	+1.3
	baz=132,SNR=20						
ARVC	Arvin	71.98	319	P	P	13 04 19.0	+1.6
	baz=131,SNR=5.5						
DUG	Dugway, Tooele	72.02	326	P	P	13 04 19.3	+1.6
DUG				pmax	pmax		
	comp=Z,89nm,1.5s						
DUG	Dugway, Tooele	72.02	326	P	P	13 04 19.3	+1.6
	baz=137,SNR=42						
ISA	Isabella, Lake	72.11	319	P	P	13 04 20.1	+1.9
ISA				pmax	pmax		
	comp=Z,42nm,1.0s						
ISA	Isabella, Lake	72.11	319	P	P	13 04 20.2	+1.9
	baz=131,SNR=26						
R11A	Troy Canyon, C	72.22	323	P	P	13 04 20.9	+2.0
	baz=134,SNR=46						
BW06	Boulder Array	72.31	330	P	P	13 04 19.9	+0.4
	baz=140,SNR=31						
PDAR	Pinedale Array	72.31	330	P	P	13 04 19.6	+0.2
	comp=Z,12nm,0.8s,baz=122,slow=9.0,SNR=59						
PDAR				pP	pP	13 04 49.0	+0.2
	comp=Z,4.9nm,0.6s,baz=121,slow=11,SNR=2.1						
PDAR				LR	LR	13 40 11.8	
	comp=Z,86nm,18.4s,baz=122,slow=39						
GRAC	Grapevine Rang	72.32	321	P	P	13 04 21.4	+1.9
	baz=133,SNR=8.6						
CWC	Cottonwood Cre	72.38	320	P	P	13 04 21.7	+1.7
	baz=132						
MDND	Maddock	72.41	339	P	P	13 04 20.5	+0.8
	baz=150,SNR=14						
PKM	Mcpherson Peak	72.44	318	P	P	13 04 22.2	+1.8
	baz=130,SNR=19						
VES	Vestal, Richgr	72.60	319	P	P	13 04 22.9	+1.8
	baz=131						
SMMC	Simmler	72.83	318	P	P	13 04 24.5	+2.0
	baz=130,SNR=13						
TIN	Tinemaha, Big	72.88	321	P	P	13 04 24.7	+1.8
	baz=132,SNR=14						
AHID	Auburn Hatcher	73.05	329	IAmb	IAmb	13 04 25.8	
	comp=Z,65nm,0.8s						
VOG	Valley Oaks Go	73.09	319	P	P	13 04 24.3	+0.3
	baz=131						
PAGB	Antelope Grade	73.25	319	IAmb	IAmb	13 04 28.0	
	comp=Z,190nm,1.7s						
ULM	Lac du Bonnet	73.36	342	P	P	13 04 24.9	-0.3
	comp=Z,36nm,0.7s,baz=152,slow=5.9,SNR=105						
ULM				pP	pP	13 04 54.5	-0.2
	comp=Z,28nm,0.6s,baz=129,slow=6.1,SNR=5.4						
ULM				LR	LR	13 38 46.5	
	comp=Z,172nm,20.5s,baz=137,slow=37						
ULM	Lac du Bonnet	73.36	342	diP	P	13 04 24.6	-0.6
REDW	Red Top Meadow	73.38	330	IAmb	IAmb	13 04 28.1	
	comp=Z,228nm,1.9s						
MLAC	Mammoth, Mammo	73.62	321	P	P	13 04 29.2	+1.9
	baz=132,SNR=13						
ELK	Elko	73.70	325	P	P	13 04 28.9	+1.1
	comp=Z,18nm,0.9s,baz=127,slow=4.2,SNR=75						
ELK				pP	pP	13 04 57.7	+0.5
	comp=Z,10nm,0.9s,baz=111,slow=3.1,SNR=4.2						
NV11	Mina Array Sit	73.75	322	P	P	13 04 28.8	+0.8
NVAR	Mina Array Bea	73.83	322	P	P	13 04 30.0	+1.4
	comp=Z,19nm,0.9s,baz=149,slow=6.6,SNR=104						
NVAR				pP	pP	13 04 59.0	+1.0
	comp=Z,9.2nm,0.9s,baz=149,slow=5.6,SNR=4.1						
NVAR	Mina Array Bea	73.83	322	P	P	13 04 29.8	+1.2
FLWY	Flagg Ranch	73.85	330	IAmb	IAmb	13 04 31.2	
	comp=Z,118nm,0.8s						
LAO	LASA Array	73.92	334	P	P	13 04 29.5	+0.9
	baz=144,SNR=9.2						
RLMT	Red Lodge	73.98	332	IAmb	IAmb	13 04 31.6	
	comp=Z,55nm,0.8s						
RLMT	Red Lodge	73.98	332	P	P	13 04 30.5	+1.2
	baz=141,SNR=64						
H17A	Grant Village	74.03	330	P	P	13 04 31.4	+1.8
	baz=140,SNR=54						
SCHQ	Schefferville	74.03	1	P	P	13 04 28.9	-0.1
	comp=Z,41nm,0.8s,baz=190,slow=4.1,SNR=37						
SCHQ				pP	pP	13 04 58.4	-0.3
	comp=Z,50nm,1.1s,baz=164,slow=5.9,SNR=6.0						
SCHQ	Schefferville	74.03	1	P	P	13 04 28.9	-0.1
SCHQ				IAmb	IAmb	13 05 00.7	
	comp=Z,83nm,1.2s						
TBI	Tubuai	74.05	250	eP	P	13 04 32.0	+2.0
	comp=Z,206nm,1.1s						
TBI				eS	S	13 13 53.4	-0.6
	comp=Z,149nm,28.0s						
TBI	Tubuai	74.05	250	eLQ	LQ	13 24 12.5	
	comp=Z,160nm,31.8s						
TBI				eLR	LR	13 27 18.2	
	comp=Z,830nm,36.8s						
LKWY	Lake	74.07	331	IAmb	IAmb	13 04 33.3	
	comp=Z,75nm,0.8s						
MEH	Mehetia	74.21	256	eP	P	13 04 33.0	+2.0
	comp=Z,56nm,1.3s						
VAH	Vaihoa	74.53	259	eP	P	13 04 35.0	+2.1
DGMT	Dagmar	74.57	337	IAmb	IAmb	13 04 34.7	
	comp=Z,105nm,0.8s						
DGMT	Dagmar	74.57	337	P	P	13 04 33.6	+1.2
	baz=146,SNR=23						
YERR	Yerington	74.75	322	IAmb	IAmb	13 04 37.0	
	comp=Z,92nm,1.4s						
CMB	Columbia Colle	74.81	320	P	P	13 04 34.1	+0.1
PMOR	Pomariorio Ree	74.85	259	eP	P	13 04 36.7	+2.0
	comp=Z,219nm,1.3s						
PNTR	Pine Nut	75.03	322	IAmb	IAmb	13 04 38.7	
	comp=Z,178nm,1.8s						
PAHR	Pah Rah Range	75.31	322	IAmb	IAmb	13 04 40.1	
	comp=Z,78nm,0.9s						
TIAR	Tiarei	75.47	256	eT	T	14 26 15.9	
	comp=Z,2.9nm,0.3s						
PPT2	Papeete2	75.68	256	eP	P	13 04 40.9	+1.4
	comp=Z,116nm,1.3s						
PPT2				eS	S	13 14 12.0	-0.4
	comp=Z,293nm,26.8s						
PPT2	Papeete2	75.68	256	eLQ	LQ	13 24 53.8	
	comp=Z,522nm,24.5s						
PPT2				eLR	LR	13 28 05.0	
	comp=Z,598nm,28.0s						
PPT	Papeete	75.68	256	P	P	13 04 40.5	+1.0
	comp=Z,53nm,0.8s,baz=104,slow=21,SNR=5.8						
DLMT	Dillon	75.70	330	IAmb	IAmb	13 04 41.9	
	comp=Z,134nm,1.6s						
MFID	Camas Ranch	75.89	327	IAmb	IAmb	13 04 43.2	
	comp=Z,115nm,1.2s						
EGMT	Eagleton	76.44	333	IAmb	IAmb	13 04 45.0	
	comp=Z,76nm,0.8s						
EGMT	Eagleton	76.44	333	P	P	13 04 43.9	+0.8
	baz=141,SNR=31						
ORV	Oroville	76.45	321	IAmb	IAmb	13 04 46.4	
	comp=Z,168nm,1.4s						
WVOR	Wild Horse Val	76.71	325	P	P	13 04 45.8	+1.0
WVOR				pmax	pmax		
	comp=Z,18nm,1.9s						
O03E	Paynes Creek	77.11	321	P	P	13 04 47.4	+0.3
	baz=130,SNR=9.3						
MOD	Modoc Plateau	77.28	323	IAmb	IAmb	13 04 51.1	
	comp=Z,181nm,1.9s						
MSO	Missoula	77.41	330	IAmb	IAmb	13 04 51.6	
	comp=Z,96nm,1.4s						
MSO	Missoula	77.41	330	P	P	13 04 50.1	+1.5
	baz=137,SNR=29						
O02D	Mt. Diablo Mer	77.62	321	P	P	13 04 50.4	+0.5
	baz=129						
N02D	Trinity Center	78.07	321	P	P	13 04 52.6	+0.2
	baz=129						
M04C	Macdoel	78.08	322	P	P	13 04 53.6	+1.2
	baz=130,SNR=10						
M02C	Callahan	78.42	322	P	P	13 04 55.0	+0.7
	baz=129,SNR=5.7						
SYO	Syowa Base	78.43	160	⇓eP	P	13 04 51.2	-2.7
SYO	Syowa Base	78.43	160	⇑ePcP	PcP	13 05 01.2	-1.5
YBH	Yreka Blue Hor	78.55	322	P	P	13 04 54.8	-0.2
	comp=Z,12nm,1.0s,baz=105,slow=5.1,SNR=11						
K04D	Chiloquin, OR	78.57	323	P	P	13 04 56.5	+1.3
	baz=130,SNR=5.2						
L04D	Klamath Falls	78.62	323	P	P	13 04 56.2	+0.7
	baz=130						
J05D	Fort Rock, OR	78.70	324	P	P	13 04 57.5	+1.5
	baz=131,SNR=13						
VNDA	Vanda	78.82	190	P	P	13 04 57.6	+1.7
	comp=Z,9.9nm,0.6s,baz=133,slow=5.2,SNR=64						
VNDA				pP	pP	13 05 26.8	+1.4
	comp=Z,6.9nm,1.0s,baz=88,slow=3.7,SNR=3.0						
WALA	Waterton Lakes	79.04	332	IAmb	IAmb	13 04 59.7	
	comp=Z,60nm,0.8s						
FFC	Flin Flon	79.08	341	ceP	P	13 04 57.6	+0.1
FFC				pmax	pmax		
	comp=Z,145nm,1.7s						
FFC	Flin Flon	79.08	341	P	P	13 04 57.5	+0.1
KRMB	Red Mountain	79.12	321	IAmb	IAmb	13 05 01.0	
	comp=Z,119nm,1.4s						
J04D	Umpqua Nationa	79.16	324	P	P	13 04 59.8	+1.3

	baz=130						
E09A	**Wood Farm, Sta**	**79.23**	**328**	IAmb	IAmb	13 05 00.8	
	comp=Z,91nm,1.4s						
L02E	**Cave Junction**	**79.33**	**322**	P	**P**	**13 05 00.7**	**+1.5**
	baz=129						
I05D	**Terrebonne, OR**	**79.45**	**325**	P	**P**	**13 05 01.6**	**+1.8**
	baz=131,SNR=14						
I04A	**Tendick Farm,**	**79.69**	**324**	P	**P**	**13 05 01.8**	**+0.7**
	baz=130						
K02D	**Willamette Mer**	**79.70**	**322**	P	**P**	**13 05 02.7**	**+1.4**
	baz=129,SNR=5.3						
F07A	**Phinny Hill Vi**	**79.72**	**327**	IAmb	IAmb	13 05 04.7	
	comp=Z,123nm,1.5s						
NEW	**Newport**	**79.95**	**330**	P	**P**	**13 05 02.9**	**+0.4**
	comp=Z,13nm,0.8s,baz=142,slow=5.6,SNR=18						
NEW	**Newport**	**79.95**	**330**	P	**P**	**13 05 03.0**	**+0.6**
	baz=135,SNR=16						
D08A	**Wollman Farm,**	**79.99**	**328**	IAmb	IAmb	13 05 05.6	
	comp=Z,112nm,1.5s						
G05D	**Wamic, OR**	**80.02**	**325**	P	**P**	**13 05 04.9**	**+2.1**
	baz=131,SNR=13						
MORF	**Marmelete**	**80.11**	**45**	*e*P	**P**	**13 05 04.1**	**+0.6**
MORF				AMb	AMB	13 05 16.3	
	comp=Z,98nm,1.7s						
MORF	**Marmelete**	**80.11**	**45**	*e*P	**P**	**13 05 04.1**	**+0.6**
MORF	**Marmelete**	**80.11**	**45**	*e*P	**P**	**13 05 05.5**	**+2.0**
E07A	**Sunnyside**	**80.13**	**327**	IAmb	IAmb	13 05 06.5	
	comp=Z,94nm,1.4s						
J01E	**Myrtle Point**	**80.15**	**323**	P	**P**	**13 05 05.4**	**+1.8**
	baz=129						
I03D	**Drain, OR**	**80.15**	**323**	P	**P**	**13 05 04.5**	**+0.9**
	baz=129						
C09A	**Chrisman Ranch**	**80.18**	**329**	IAmb	IAmb	13 05 06.2	
	comp=Z,94nm,0.8s						
PTEO	**Sao Teotonio**	**80.19**	**44**	*e*P	**P**	**13 05 05.5**	**+1.6**
	comp=Z,166nm,1.6s						
PTEO				*e*pP	**pP**	**13 05 35.3**	**+1.5**
H04D	**Lebanon**	**80.33**	**324**	P	**P**	**13 05 05.1**	**+0.6**
	baz=130						
F05D	**White Salmon**	**80.52**	**326**	P	**P**	**13 05 07.2**	**+1.6**
	baz=131,SNR=5.8						
PBDV	**Barranco-do-Ve**	**80.55**	**45**	*e*pP	pP	13 05 34.9	-0.9
PNCL	**Nicolau / Gran**	**80.63**	**44**	*e*P	**P**	**13 05 07.0**	**+0.7**
PNCL				*e*pP	**pP**	**13 05 38.5**	**+2.3**
COR	**Corvallis**	**80.68**	**324**	P	**P**	**13 05 04.4**	**-2.0**
COR				pmax	pmax		
	comp=Z,824nm,1.4s						
I02D	**Swisshome**	**80.69**	**323**	P	**P**	**13 05 07.3**	**+0.9**
	baz=129						
MESJ	**Messejana**	**80.69**	**44**	*e*P	**P**	**13 05 07.2**	**+0.6**
MESJ				AMb	AMB	13 05 28.7	
	comp=Z,69nm,1.7s						
MESJ	**Messejana**	**80.69**	**44**	*e*P	**P**	**13 05 07.1**	**+0.6**
MESJ	**Messejana**	**80.69**	**44**	*e*P	**P**	**13 05 08.0**	**+1.4**
	comp=Z,102nm,2.0s						
MESJ				*e*pP	**pP**	**13 05 38.9**	**+2.4**
PCVE	**Castro Verde**	**80.69**	**45**	*e*P	**P**	**13 05 08.1**	**+1.5**
PCVE				*e*pP	**pP**	**13 05 39.1**	**+2.6**
TSUM	**Tsumeb**	**80.74**	**107**	P	**P**	**13 05 07.9**	**+0.4**
TSUM				IAmb	IAmb	13 05 39.9	
	comp=Z,91nm,1.1s						
LTY	**Liberty**	**81.01**	**327**	IAmb	IAmb	13 05 10.7	
	comp=Z,124nm,1.3s						
PBEJ	**Beja**	**81.02**	**44**	*e*P	**P**	**13 05 09.8**	**+1.4**
	comp=Z,70nm,1.9s						
PBEJ				*e*pP	**pP**	**13 05 40.6**	**+2.3**
G03D	**McMinnville, O**	**81.06**	**325**	P	**P**	**13 05 10.6**	**+2.2**
	baz=129						
F04A	**Amboy**	**81.06**	**325**	IAmb	IAmb	13 05 10.7	
	comp=Z,108nm,0.9s						
PMTG	**Montargil**	**81.36**	**43**	*e*P	**P**	**13 05 10.9**	**+0.8**
	comp=Z,84nm,1.6s						
F04D	**Rainier, OR**	**81.47**	**325**	P	**P**	**13 05 10.9**	**+0.4**
	baz=130						
E04D	**Cinebar**	**81.54**	**326**	P	**P**	**13 05 11.9**	**+1.0**
	baz=130						
PTOM	**Tomar**	**81.55**	**43**	*e*P	**P**	**13 05 11.9**	**+0.8**
C06D	**Leavenworth**	**81.56**	**328**	P	**P**	**13 05 11.6**	**+0.6**
	baz=132						
E03A	**Lebam**	**82.06**	**325**	IAmb	IAmb	13 05 16.2	
	comp=Z,75nm,1.0s						
IVI	**Ivigtut**	**82.13**	**10**	P	**P**	**13 05 14.1**	**+0.5**
IVI				IAmb	IAmb	13 05 15.3	
	comp=Z,61nm,0.8s						
B06A	**Marblemount**	**82.25**	**328**	IAmb	IAmb	13 05 16.1	
	comp=Z,108nm,0.8s						
B05A	**Bryant**	**82.40**	**327**	P	**P**	**13 05 15.9**	**+0.6**
	baz=131,SNR=29						
D03D	**Eldon**	**82.44**	**326**	P	**P**	**13 05 17.0**	**+1.4**
	baz=130,SNR=10						
MTE	**Manteigas**	**82.53**	**43**	*e*P	**P**	**13 05 17.1**	**+0.8**
MTE				*e*pP	**pP**	**13 05 47.9**	**+1.5**
PGAV	**Gavieira, Arco**	**82.94**	**41**	*e*pP	pP	13 05 50.0	+1.5
FRB	**Frobisher Bay**	**82.95**	**0**	P	**P**	**13 05 17.7**	**-0.1**
FRB				pmax	pmax		
	comp=Z,37nm,1.1s						
A04D	**Lummi Island**	**83.00**	**327**	P	**P**	**13 05 19.7**	**+1.3**
	baz=130						
MVO	**Moncorvo**	**83.28**	**42**	*e*P	**P**	**13 05 20.9**	**+0.8**
	comp=Z,43nm,1.5s						
MVO				*e*pP	**pP**	**13 05 51.6**	**+1.3**
PGC	**Sidney**	**83.34**	**327**	IAmb	IAmb	13 05 22.6	
	comp=Z,95nm,0.8s						
PBRG	**Braganca**	**83.81**	**42**	*e*P	**P**	**13 05 23.4**	**+0.6**
	comp=Z,68nm,1.7s						
PBRG				*e*pP	**pP**	**13 05 55.4**	**+2.4**
RAR	**Rarotonga**	**83.81**	**250**	LR	LR	13 34 20.8	
	comp=Z,230nm,19.6s,baz=112,slow=30						
LLLB	**Lillooet**	**83.82**	**329**	IAmb	IAmb	13 05 24.5	
	comp=Z,104nm,1.2s						
TAM	**Tamanrasset**	**84.02**	**63**	P	**P**	**13 05 24.5**	**+0.1**
TAM				pmax	pmax		
	comp=Z,12nm,1.1s						
TAM	**Tamanrasset**	**84.02**	**63**	IAmb	IAmb	13 05 56.8	
	comp=Z,83nm,1.3s						
PAB	**San Pablo**	**84.16**	**45**	P	**P**	**13 05 25.0**	**+0.3**
PAB				pmax	pmax		
	comp=Z,54nm,1.2s						
PAB	**San Pablo**	**84.16**	**45**	P	**P**	**13 05 25.0**	**+0.3**
BOSA	**Boshof**	**84.50**	**118**	P	**P**	**13 05 27.0**	**+0.1**
	comp=Z,7.0nm,0.8s,baz=253,slow=3.6,SNR=12						
BOSA				pP	**pP**	**13 05 57.0**	**-0.1**
	comp=Z,33nm,1.1s,baz=248,slow=6.5,SNR=8.3						
BOSA				LR	LR	13 41 45.7	
	comp=Z,278nm,18.5s,baz=242,slow=35						
BOSA	**Boshof**	**84.50**	**118**	P	**P**	**13 05 27.0**	**+0.1**
BOSA				*PP	**pP**	**13 05 57.0**	**-0.1**
BOSA	**Boshof**	**84.50**	**118**	P	**P**	**13 05 26.9**	**+0.1**
BOSA				IAmb	IAmb	13 05 58.6	
	comp=Z,121nm,1.4s						
GUD	**Guadarrama**	**84.85**	**44**	P	**P**	**13 05 31.3**	**+3.1**
GUD				pmax	pmax		
	comp=Z,20nm,2.7s						
LBTB	**Lobatse**	**85.97**	**115**	P	**P**	**13 05 33.9**	**-0.4**
LBTB				pmax	pmax		
	comp=Z,141nm,1.6s						
LBTB	**Lobatse**	**85.97**	**115**	P	**P**	**13 05 33.9**	**-0.4**
LBTB				IAmb	IAmb	13 06 06.3	
	comp=Z,140nm,1.6s						
MAW	**Mawson**	**86.30**	**163**	P	**P**	**13 05 35.7**	**+0.9**
	comp=Z,13nm,0.7s,baz=208,slow=7.5,SNR=21						
MAW				PKKPbc	**PKKPbc**	**13 23 32.0**	**-2.0**
	comp=Z,2.3nm,0.7s,baz=102,slow=4.6,SNR=2.2						
MAW	**Mawson**	**86.30**	**163**	P	**P**	**13 05 35.6**	**+0.9**
SFJD	**Kangerlussuaq**	**87.30**	**7**	P	**P**	**13 05 39.0**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=142,slow=15,SNR=5.0						
SFJD	**Kangerlussuaq**	**87.30**	**7**	*i* P	**P**	**13 05 38.5**	**-0.9**
SFJD	**Kangerlussuaq**	**87.30**	**7**	P	**P**	**13 05 39.0**	**-0.4**
SFJD	**Kangerlussuaq**	**87.30**	**7**	P	**P**	**13 05 39.0**	**-0.4**
BBB	**Bella Bella**	**87.86**	**328**	P	**P**	**13 05 43.2**	**+0.8**
	comp=Z,23nm,0.8s,baz=85,slow=4.0,SNR=10.0						
BBB				pP	**pP**	**13 06 12.9**	**+0.2**
	comp=Z,38nm,1.1s,baz=118,slow=2.1,SNR=3.5						
BBB	**Bella Bella**	**87.86**	**328**	IAmb	IAmb	13 06 23.0	
	comp=Z,66nm,1.2s						
YKA	**Yellowknife Ar**	**89.25**	**341**	P	**P**	**13 05 49.2**	**+0.5**
	comp=Z,120nm,0.7s,baz=134,slow=5.1,SNR=1387						
YKA				pP	**pP**	**13 06 19.6**	**+0.3**
	comp=Z,138nm,1.1s,baz=136,slow=5.3,SNR=6.2						
YKA				PKKP	**PKKPdf**	**13 23 25.0**	**+1.7**
	comp=Z,0.8nm,0.9s,baz=314,slow=2.3,SNR=5.1						
YKA				LR	LR	13 49 04.7	
	comp=Z,150nm,19.2s,baz=0.0,slow=38						
ILULI	**Ilulissat**	**89.37**	**6**	P	**P**	**13 05 49.3**	**+0.1**
ILULI				pmax	pmax		
	comp=Z,22nm,0.9s						
ILULI	**Ilulissat**	**89.37**	**6**	P	**P**	**13 05 49.2**	**+0.1**
KEST	**Kesra**	**92.18**	**53**	P	**P**	**13 06 02.7**	**-0.4**
	comp=Z,4.0nm,0.6s,baz=248,slow=5.7,SNR=3.8						
KEST				PKKPbc	**PKKPbc**	**13 23 20.1**	**+0.8**
	comp=Z,2.7nm,0.7s,baz=180,slow=5.1,SNR=2.7						
KEST				LR	LR	13 49 08.2	
	comp=Z,215nm,18.6s,baz=200,slow=36						
WRAK	**Wrangell Islan**	**92.29**	**330**	IAmb	IAmb	13 06 04.8	
	comp=Z,33nm,0.9s						
DLBC	**Dease Lake**	**92.36**	**333**	IAmb	IAmb	13 06 05.7	
	comp=Z,50nm,1.0s						
SUMG	**Summit**	**94.09**	**9**	*i* P	**P**	**13 06 11.8**	**+0.3**
	comp=Z,76nm,1.0s						
SUMG	**Summit**	**94.09**	**9**	*i* P	**P**	**13 06 11.8**	**+0.3**
SUMG				pmax	pmax		
	comp=Z,76nm,1.0s						
SUMG	**Summit**	**94.09**	**9**	P	**P**	**13 06 11.6**	**+0.1**
SUMG				IAmb	IAmb	13 06 49.2	
	comp=Z,33nm,1.0s						
KULLO	**Kullorsuaq**	**94.14**	**3⇓**	*i*P	**P**	**13 06 11.3**	**+0.1**
	comp=Z,12nm,0.8s						
KULLO	**Kullorsuaq**	**94.14**	**3⇓**	*i*P	**P**	**13 06 11.3**	**+0.1**
KULLO				pmax	pmax		
	comp=Z,13nm,0.8s						
CASY	**Casey**	**94.51**	**180**	P	**P**	**13 06 14.2**	**+0.9**
CASY				IAmb	IAmb	13 06 16.0	
	comp=Z,36nm,1.0s						
BESE	**Bessie Mountai**	**94.58**	**331**	IAmb	IAmb	13 06 15.6	
	comp=Z,18nm,0.9s						
SKAG	**Skagway**	**95.23**	**332**	IAmb	IAmb	13 06 18.4	
	comp=Z,47nm,1.7s						
RES	**Resolute Bay**	**95.39**	**353**	P	**P**	**13 06 17.0**	**+0.1**
	comp=Z,4.2nm,0.9s,baz=186,slow=8.2,SNR=17						
RES				PKKPbc	**PKKPbc**	**13 23 10.1**	**-2.2**
	comp=Z,1.1nm,0.6s,baz=309,slow=3.8,SNR=7.5						
RES	**Resolute Bay**	**95.39**	**353**	P	**P**	**13 06 17.0**	**+0.1**
URZ	**Urewera**	**95.51**	**226**	P	**P**	**13 06 21.1**	**+2.7**
	comp=Z,2.0nm,0.7s,baz=292,slow=8.6,SNR=3.3						
SCO	**Scoresbysund**	**95.52**	**14**	*i* P	**P**	**13 06 18.8**	**+1.3**
	comp=Z,3.9nm,0.8s						
SCO	**Scoresbysund**	**95.52**	**14**	*i* P	**P**	**13 06 18.8**	**+1.3**
SCO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TULEG	**Thule**	**95.80**	**0**	IAmb	IAmb	13 06 20.2	
	comp=Z,16nm,0.8s						
LATE	**Laterza**	**96.47**	**47**	P	**P**	**13 06 22.6**	**0.0**
RPZ	**Rata Peaks**	**96.49**	**219**	P	**P**	**13 06 24.8**	**+2.0**
	comp=Z,10nm,0.9s,baz=184,slow=0.9,SNR=5.6						
RPZ				LR	LR	13 43 33.2	
	comp=Z,61nm,18.7s,baz=30,slow=31						
C36M	**Paulatuk**	**96.78**	**343**	P	**P**	**13 06 22.8**	**-0.5**
	baz=129						
GRF	**Grafenberg Arr**	**98.53**	**40**	*e*Pdiff	pP	13 06 58.9	-3.4
A36M	**Sachs Harbour**	**98.72**	**345**	P	**P**	**13 06 31.9**	**-0.1**
	baz=128						
INK	**Inuvik**	**99.01**	**340**	P	**Pdif**	**13 06 33.7**	**+0.4**
INK				pmax	pmax		
	comp=Z,13nm,1.6s						
INK	**Inuvik**	**99.01**	**340**	IAmb	IAmb	13 06 34.0	
	comp=Z,10nm,1.0s						
CRQM	**Cirque**	**99.31**	**331**	IAmb	IAmb	13 06 35.5	
	comp=Z,12nm,1.0s						
MCARA	**McCarthy VSAT**	**99.51**	**332**	IAmb	IAmb	13 06 37.0	
	comp=Z,8.6nm,0.8s						
BCAR	**Beaver Creek A**	**99.65**	**334**		**Pdif**	**13 06 36.6**	**+0.2**
GERES	**GERESS Array B**	**99.79**	**42**	P	**Pdif**	**13 06 36.9**	**-0.5**
	comp=Z,0.3nm,0.2s,baz=282,slow=2.6,SNR=4.1						
GERES				pP	**pP**	**13 07 07.2**	**-0.9**
	comp=Z,0.3nm,0.2s,baz=222,slow=3.6,SNR=2.0						
GERES				PP	**PP**	**13 10 39.2**	**-4.3**
	comp=Z,0.4nm,0.2s,baz=206,slow=8.9,SNR=3.5						
GERES				PKKPbc	**PKKPbc**	**13 22 58.9**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=74,slow=1.9,SNR=6.6						
CLL	**Collm**	**100.13**	**39**	*e*SKSac	**SKSac**	**13 17 08.0**	**+1.0**
CLL				*e*Sdif	**Sdif**	**13 18 12.0**	**+7.8**
CLL				*e*SP	SP	13 19 40.0	+6.6
CLL				*e*sSS		13 25 48.0	
CLL				*e*		13 30 24.0	
DAG	**Danmarks Havn**	**100.60**	**10**	*i* P	**Pdif**	**13 06 41.8**	**+1.6**
	comp=Z,2.0nm,0.7s						
DAG	**Danmarks Havn**	**100.60**	**10**	*i* P	**Pdif**	**13 06 41.8**	**+1.6**
DAG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NB2	**NORSAR Subarra**	**102.22**	**29**	PKKP	**PKKPbc**	**13 22 49.7**	**-2.9**
	comp=Z,0.8nm,0.8s,baz=72,slow=3.0						
NOA	**NORSAR Array B**	**102.22**	**29**	PKKPbc	PKKPbc	13 22 50.4	-2.2
	comp=Z,1.1nm,0.7s,baz=262,slow=3.0,SNR=3.9						
HDA	**Harding Lake**	**102.28**	**334**	P	**Pdif**	**13 06 47.1**	**-0.9**
	baz=109						
ILAR	**Eielson Array**	**102.38**	**335**	P	**Pdif**	**13 06 48.1**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=159,slow=2.5,SNR=12						
ILAR				PP	**PP**	**13 11 03.0**	**+0.6**
	comp=Z,1.7nm,0.9s,baz=139,slow=4.7,SNR=4.9						
BMAR	**Burnt Mountain**	**102.40**	**337**		**Pdif**	**13 06 49.1**	**+0.6**
POKR	**Poker Plat Res**	**102.71**	**335**	P	**Pdif**	**13 06 50.0**	**+0.1**
	baz=109						
COLA	**College**	**102.80**	**335**	P	**Pdif**	**13 06 50.3**	**+0.1**
COLA				pmax	pmax		
	comp=Z,8.0nm,1.4s						
TCOL	**CIGO, UAF Yank**	**102.80**	**335**	P	**Pdif**	**13 06 50.6**	**+0.3**
	baz=108						
MLR	**Muntele Rosu**	**107.05**	**47**	PKKPbc	PKKPbc	13 22 37.0	-0.4
	comp=Z,2.5nm,0.6s,baz=165,slow=9.7,SNR=4.9						
FINES	**FINESS Array B**	**109.33**	**30**	PKKPbc	PKKPbc	13 22 28.1	-2.5
	comp=Z,2.4nm,0.6s,baz=102,slow=4.7,SNR=7.7						
ARCES	**ARCESS Array B**	**109.66**	**22**	PKKPbc	PKKPbc	13 22 28.0	-1.8
	comp=Z,2.3nm,0.6s,baz=93,slow=3.8,SNR=9.6						
AKASG	**Malin Array Be**	**109.99**	**42**	PP	**PP**	**13 11 56.0**	**-2.9**
	comp=Z,2.4nm,0.6s,baz=266,slow=5.5,SNR=6.1						
AKASG				PKKPbc	**PKKPbc**	**13 22 27.1**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=68,slow=4.0,SNR=7.6						
BRTR	**Keskin Array B**	**111.75**	**54**	PKiKP	**PKiKP**	**13 11 27.9**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=150,slow=2.0,SNR=9.7						
BRTR				PKKP	**PKKPab**	**13 22 31.4**	**+1.7**
	comp=Z,2.2nm,0.8s,baz=104,slow=3.1,SNR=8.9						
DZM	**Mont Dzumac**	**111.85**	**235**	*e*SP	SP	13 21 32.4	-1.5
	comp=Z,237nm,41.9s						
DZM	**Mont Dzumac**	**111.85**	**235**	*e*LR	LR	13 44 53.9	
	comp=Z,704nm,24.3s						
OBN	**Obninsk**	**114.65**	**38**	*i* PKIKP	PKPdf	13 11 32.6	0.0
OBN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KLMR	**Klimovskoe**	**115.84**	**31**	*e*PKIKP	**PKPdf**	**13 11 33.9**	**-0.8**
KLMR				pmax	pmax		
	comp=Z,16nm,1.8s						
KLMR	**Klimovskoe**	**115.84**	**31**	*e*PKPdf	**PKPdf**	**13 11 34.0**	**-0.8**
KLMR				AMP		13 11 38.1	
	comp=Z,16nm,1.8s						
LPSR	**Galich'ya Gora**	**116.11**	**40**	*e*PKIKP	**PKPdf**	**13 11 35.4**	**-0.1**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR	**Storozhevoye**	**116.29**	**42**	*e*PKIKP	**PKPdf**	**13 11 35.9**	**0.0**
VSR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
VRH	**Novokhopyorsk**	**117.90**	**42**	*e*PKIKP	**PKPdf**	**13 11 38.2**	**-0.8**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PRGR	**Permogore**	**118.63**	**30**	*e*PKIKP	**PKPdf**	**13 11 39.3**	**-0.8**
PRGR				pmax	pmax		
	comp=Z,12nm,0.9s						
KIV	**Kislovodsk**	**118.78**	**50**	*e*PKIKP	**PKiKP**	**13 11 41.8**	**+0.6**
KIV				pmax	pmax		
	comp=Z,18nm,1.1s						
KBZ	**Khabaz**	**118.93**	**50**	PKP	**PKiKP**	**13 11 42.0**	**+0.7**
	comp=Z,10nm,0.9s,baz=231,slow=4.9,SNR=20						
KBZ	**Khabaz**	**118.93**	**50⇑**	*i*PKIKP	**PKiKP**	**13 11 42.3**	**+1.0**
ZEI	**Tsey**	**119.67**	**51**	*i* PKIKP	**PKiKP**	**13 11 43.1**	**0.0**
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BILL	**Bilibino**	**120.60**	**339**	*i* PKIKP	**PKPdf**	**13 11 42.4**	**-1.4**
BILL				*i*		13 12 13.4	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BILL	**Bilibino**	**120.60**	**339**		**PKiKP**	**13 11 44.1**	**+0.2**
STKA	**Stephens Creek**	**121.10**	**210**	PKP	**PKiKP**	**13 11 46.4**	**+0.3**
	comp=Z,8.2nm,0.7s,baz=99,slow=2.6,SNR=29						
STKA				pPKP	**pPKPdf**	**13 12 18.0**	**+0.4**
	comp=Z,4.6nm,1.0s,baz=332,slow=2.6,SNR=3.0						
MAK	**Makhachkala**	**122.31**	**51**	*e*P	**Pdif**	**13 08 18.0**	**+0.5**
MAK				*i*		13 11 49.9	
MAK				*e*		13 12 16.7	
MAK				*e*		13 13 30.3	
MAK				*e*		13 18 40.4	
MAK				*e*SS	SS	13 30 02.8	+6.1
MAK				pmax	pmax		
	comp=Z,1µm,1.7s						
BBOO	**Buckleboo**	**122.74**	**205**		**PKPdf**	**13 11 49.1**	**+0.1**
ARU	**Arti**	**126.53**	**33**	*i* PKIKP	**PKiKP**	**13 11 56.2**	**+0.3**
ARU						13 13 50.6	
ARU						13 18 57.0	
ARU	**Arti**	**126.53**	**33**		**PKiKP**	**13 11 56.0**	**+0.1**
TIXI	**Tiksi**	**126.78**	**353*c***	*i*PKIKP	**PKPdf**	**13 11 55.7**	**+0.2**
TIXI	**Tiksi**	**126.78**	**353**		**PKPdf**	**13 11 55.1**	**-0.4**
FORT	**Forrest**	**127.40**	**199**		**PKPdf**	**13 11 57.8**	**-0.2**
H11S2	**WAKE ISLAND Hy**	**127.48**	**279**	T	T	15 31 36.9	
	baz=100,slow=74,SNR=140						
H11S1	**WAKE ISLAND Hy**	**127.49**	**279**	T	T	15 31 37.5	
	baz=100,slow=74,SNR=162						
H11S3	**WAKE ISLAND Hy**	**127.50**	**279**	T	T	15 31 38.3	
	baz=100,slow=74,SNR=106						
H11N3	**WAKE ISLAND Hy**	**127.51**	**280**	T	T	15 31 34.4	
	baz=100,slow=74,SNR=80						
H11N2	**WAKE ISLAND Hy**	**127.53**	**280**	T	T	15 31 35.5	
	baz=100,slow=74,SNR=79						
H11N1	**WAKE ISLAND Hy**	**127.53**	**280**	T	T	15 31 35.8	
	baz=100,slow=74,SNR=89						
CTA	**Charters Tower**	**127.64**	**223**	PKP	**PKiKP**	**13 11 59.5**	**+0.1**
	comp=Z,11nm,0.7s,baz=104,slow=2.7,SNR=18						
NRIK	**Noril'sk**	**128.10**	**10**	PKP	**PKiKP**	**13 11 58.9**	**+0.2**
	comp=Z,7.8nm,0.9s,baz=54,slow=2.0,SNR=8.9						
NRIK	**Noril'sk**	**128.10**	**10**	*i* PKIKP	**PKiKP**	**13 11 58.6**	**-0.1**
SEY	**Seymchan**	**128.20**	**337**	PKP	**PKiKP**	**13 11 59.6**	**+0.6**
	comp=Z,28nm,0.8s,baz=119,slow=3.3,SNR=26						
SEY				pPKP	**pPKPdf**	**13 12 30.6**	**+0.5**
	comp=Z,12nm,0.9s,baz=102,slow=2.1,SNR=5.6						
SEY	**Seymchan**	**128.20**	**337⇑**	*i*PKIKP	**PKiKP**	**13 12 00.0**	**+0.9**
ABKAR	**Akbulak array**	**129.73**	**41**		**PKiKP**	**13 12 02.6**	**+0.1**
PET	**Petropavlovsk**	**130.37**	**324⇓**	*i*PKIKP	**PKiKP**	**13 12 04.2**	**+0.5**
GEYT	**Alibeck**	**130.80**	**56**	PKP	**PKPdf**	**13 12 04.7**	**+0.4**
	comp=Z,5.4nm,0.9s,baz=328,slow=5.3,SNR=6.4						
GEYT				pPKP	**pPKPdf**	**13 12 36.1**	**-0.1**
	comp=Z,2.8nm,0.7s,baz=185,slow=7.2,SNR=2.7						
MA2	**Magadan**	**130.86**	**334**	PKP	**PKPdf**	**13 12 04.0**	**+0.4**
	comp=Z,2.0nm,0.3s,baz=95,slow=1.4,SNR=8.6						
MA2	**Magadan**	**130.86**	**334*d***	*i*PKIKP	**PKPdf**	**13 12 03.9**	**+0.3**
MA2	**Magadan**	**130.86**	**334**		**PKPdf**	**13 12 03.6**	**0.0**
PEA0B	**Petropavlovsk-**	**130.86**	**325⇑**	*i*PKIKP	**PKiKP**	**13 12 05.1**	**+0.4**
PEA0B	**Petropavlovsk-**	**130.86**	**325**		**PKiKP**	**13 12 04.4**	**-0.4**
PETK	**Petropavlovsk-**	**130.86**	**325**	PKP	**PKPdf**	**13 12 04.1**	**+0.3**
	comp=Z,15nm,0.9s,baz=110,slow=8.1,SNR=12						
PETK	**Petropavlovsk-**	**130.86**	**325**	PKIKP	**PKiKP**	**13 12 04.4**	**-0.3**
PETK	**Petropavlovsk-**	**130.86**	**325**		**PKiKP**	**13 12 04.4**	**-0.3**
AS31	**Alice Springs**	**131.64**	**209**		**PKPdf**	**13 12 06.4**	**0.0**
ASAR	**Alice Springs**	**131.64**	**209**	PKhKP	PKPpre	13 11 47.5	
	comp=Z,0.6nm,0.6s,baz=136,slow=2.7,SNR=16						
ASAR				PKP	**PKPdf**	**13 12 06.3**	**0.0**
	comp=Z,13nm,0.6s,baz=131,slow=1.6,SNR=12						
ASAR				pPKP	pPKPdf	13 12 37.7	-0.3
	comp=Z,5.1nm,0.8s,baz=126,slow=1.5,SNR=3.5						
ASAR				PP	**PP**	**13 14 24.3**	**-1.5**
	comp=Z,8.4nm,1.2s,baz=144,slow=5.8,SNR=9.5						
ASAR				SKPbc	**SKPbc**	**13 15 21.7**	**-0.2**
	comp=Z,7.4nm,1.0s,baz=139,slow=4.3,SNR=9.5						
SKR	**Severo-Kuril's**	**132.76**	**322**	*i* PKIKP	PKiKP	13 12 22.1	+14
COEN	**Coen**	**134.08**	**226**		**PKPdf**	**13 12 11.7**	**+0.6**
BRVK	**Borovoye**	**134.11**	**33⇑**	*i*PKIKP	**PKiKP**	**13 12 10.7**	**-0.6**
BVAR	**Borovoye Array**	**134.18**	**33**	SKPbc	**SKPab**	**13 15 31.9**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=321,slow=6.1,SNR=2.2						
PMG	**Port Moresby**	**134.23**	**234**	PKP	**PKPdf**	**13 12 11.3**	**-0.1**
	comp=Z,11nm,0.8s,baz=35,slow=12,SNR=4.6						
PMG	**Port Moresby**	**134.23**	**234*c***	*i*PKIKP	**PKPdf**	**13 12 11.8**	**+0.4**
PMG	**Port Moresby**	**134.23**	**234**		**PKPdf**	**13 12 11.8**	**+0.4**
WR0	**Warramunga Arr**	**134.51**	**212**		**PKPdf**	**13 12 11.9**	**+0.1**
HRA	**Herat**	**134.51**	**61**		**PKPdf**	**13 12 12.1**	**+0.5**
WB2	**Warramunga Arr**	**134.62**	**212**		**PKPdf**	**13 12 12.2**	**+0.3**
WRA	**Warramunga Arr**	**134.62**	**212**	PKhKP	PKPpre	13 11 59.8	
	comp=Z,2.7nm,0.9s,baz=119,slow=2.2,SNR=9.2						
WRA				PKP	**PKPdf**	**13 12 12.5**	**+0.5**
	comp=Z,19nm,0.7s,baz=155,slow=1.7,SNR=54						
WRA				pPKP	pPKPdf	13 12 42.6	-1.1
	comp=Z,3.6nm,0.7s,baz=136,slow=1.0,SNR=2.0						
WRA				PP	**PP**	**13 14 41.8**	**-3.1**
	comp=Z,3.4nm,1.0s,baz=144,slow=5.5,SNR=7.8						
WRA				SKPbc	**SKPbc**	**13 15 32.1**	**0.0**
	comp=Z,3.7nm,0.8s,baz=151,slow=2.9,SNR=5.1						
WRA	**Warramunga Arr**	**134.62**	**212**		**PKPdf**	**13 12 12.4**	**+0.4**
WB0	**Warramunga Arr**	**134.74**	**212**		**PKPdf**	**13 12 12.6**	**+0.4**
YAK	**Yakutsk**	**135.52**	**348**	PKP	**PKPdf**	**13 12 11.9**	**-0.4**
	comp=Z,18nm,0.8s,baz=148,slow=0.6,SNR=10						
YAK				PP	**PP**	**13 14 47.6**	**-2.6**
	comp=Z,2.6nm,0.3s,baz=80,slow=0.6,SNR=4.8						
YAK	**Yakutsk**	**135.52**	**348**	*i* PKIKP	**PKPdf**	**13 12 12.5**	**+0.2**
YAK	**Yakutsk**	**135.52**	**348**		**PKPdf**	**13 12 12.2**	**-0.1**
PSA00	**Pilbara Seismi**	**138.29**	**192**		**PKPdf**	**13 12 18.8**	**+0.1**
KKAR	**Karatay Array**	**138.72**	**46**	PKIKP	**PKPdf**	**13 12 19.3**	**+0.4**
KKAR	**Karatay Array**	**138.72**	**46**		**PKPdf**	**13 12 19.3**	**+0.4**
KURK	**Kurchatov**	**139.69**	**32⇑**	*i*PKIKP	**PKiKP**	**13 12 21.7**	**-1.0**
KURK	**Kurchatov**	**139.69**	**32**	PKPdf	**PKPdf**	**13 12 21.1**	**+0.8**
KURBB	**Kurchatov Arra**	**139.70**	**32**	SKKPbc	SKKPbc	13 24 09.9	-13
	comp=Z,1.5nm,1.1s,baz=138,slow=5.0,SNR=4.5						
FITZ	**Fitzroy Crossi**	**139.98**	**202**	PKhKP	PKPpre	13 12 12.3	
	comp=Z,6.9nm,0.6s,baz=179,slow=6.7,SNR=20						
FITZ				PKP	**PKPdf**	**13 12 23.0**	**+1.1**
	comp=Z,20nm,0.8s,baz=209,slow=2.8,SNR=17						
FITZ				pPKP	pPKPdf	13 12 53.7	+0.1
	comp=Z,7.5nm,0.8s,baz=214,slow=2.1,SNR=2.1						
FITZ	**Fitzroy Crossi**	**139.98**	**202**		**PKPdf**	**13 12 22.2**	**+0.3**
ZAA0	**Zalesovo Array**	**140.17**	**24**	PKPdf	**PKPdf**	**13 12 21.3**	**+0.2**
ZALV	**Zalesovo Beam**	**140.17**	**24**	PKhKP	PKPpre	13 12 13.8	
	comp=Z,6.1nm,0.6s,baz=332,slow=2.5,SNR=7.1						
ZALV				PKP	**PKPdf**	**13 12 22.0**	**+0.9**
	comp=Z,27nm,0.7s,baz=283,slow=1.6,SNR=31						
ZALV				pPKP	pPKPdf	13 12 52.7	-0.3
	comp=Z,15nm,0.8s,baz=298,slow=3.2,SNR=3.1						
ZALV				SKPbc	**SKPbc**	**13 15 46.8**	**-0.2**
	comp=Z,3.1nm,0.8s,baz=305,slow=5.1,SNR=3.1						
ZALV				SKKPbc	**SKKPbc**	**13 24 12.5**	**-8.3**
	comp=Z,0.6nm,0.5s,baz=145,slow=3.6,SNR=3.6						
ZALV	**Zalesovo Beam**	**140.17**	**24**		**PKPdf**	**13 12 21.5**	**+0.4**
AAK	**Ala-Archa**	**141.58**	**45⇓**	*i*PKIKP	**PKiKP**	**13 12 26.1**	**-1.0**
BOD	**Bodaibo**	**141.64**	**357⇑**	*i*PKHKP	PKPpre	13 12 17.0	
BOD				pmax	pmax		
	comp=Z,40nm,0.8s						
YSS	**Yuzh-Sakhalins**	**142.26**	**324**	*e*PKHKP	PKPpre	13 12 20.0	
YSS				*e*		13 12 26.5	
YSS				*e*		13 12 57.3	
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BOOM	**Boomskoye usch**	**142.61**	**44**	PKIKP	**PKPdf**	**13 12 26.2**	**+0.1**
BOOM	**Boomskoye usch**	**142.61**	**44**		**PKPdf**	**13 12 26.2**	**+0.1**
ZEA	**Zeya**	**143.57**	**344**	*e*PKIKP	PKPbc	13 12 25.2	+0.4
ZEA				pmax	pmax		
	comp=Z,83nm,1.4s						
NIL	**Nilore**	**143.64**	**59**	PKIKP	PKPbc	13 12 25.9	+0.1
NIL	**Nilore**	**143.64**	**59**		PKPbc	13 12 25.9	+0.1
MAKZ	**Makanchi**	**143.87**	**34**	PKIKP	PKPbc	13 12 25.8	-0.2
MAKZ	**Makanchi**	**143.87**	**34**		PKPbc	13 12 25.8	-0.2
KSH	**Kashi**	**143.89**	**49**	PKP	PKPbc	13 12 27.3	+0.9
KSH				pPKP	pPKPdf	13 12 53.0	-7.3
KSH				PP	**PP**	**13 15 44.3**	**+1.4**
KSH				PKS	**PKSdf**	**13 15 58.8**	**-5.3**
KSH				SKKS		13 22 20.8	
KSH				AMB	AMB		
	comp=Z,330nm,6.2s						
KSH				LR	LR		
	comp=Z,160nm,12.5s						
KSH				LR	LR		
	comp=Z,250nm,10.6s						
KSH				LR	LR		
	comp=Z,240nm,11.1s						
ASAJ	**Asahikawa**	**143.95**	**320**	PKP	PKPbc	13 12 26.8	+0.5
	comp=Z,25nm,1.0s,baz=356,slow=3.9,SNR=12						
MK31	**Makanchi Array**	**144.05**	**34**	PKIKP	PKPbc	13 12 26.3	-0.2
MK31	**Makanchi Array**	**144.05**	**34**		PKPbc	13 12 26.3	-0.3
MKAR	**Makanchi Array**	**144.05**	**34**	PKP	PKPbc	13 12 26.4	-0.2
	comp=Z,8.3nm,0.7s,baz=359,slow=1.7,SNR=61						
MKAR				pPKP	pPKPdf	13 12 58.9	-1.3
	comp=Z,6.7nm,0.7s,baz=264,slow=3.0,SNR=3.5						
MKAR				SKPbc	**SKPbc**	**13 15 57.2**	**+0.1**
	comp=Z,2.8nm,0.7s,baz=360,slow=3.7,SNR=4.2						
MKAR				SKKPbc	SKKPbc	13 23 45.9	-19
	comp=Z,2.9nm,1.0s,baz=126,slow=6.2,SNR=3.6						
DGZ	**Jazzator, Alta**	**144.46**	**26*d***	*i*PKIKP	**PKPdf**	**13 12 28.5**	**-0.6**
ERM	**Erimo**	**144.69**	**317**	PKIKP	**PKPdf**	**13 12 30.1**	**+0.6**
ERM	**Erimo**	**144.69**	**317**		**PKPdf**	**13 12 30.1**	**+0.6**
KLR	**Kul'dur**	**145.94**	**335**	PKPbc	**PKPbc**	**13 12 32.4**	**+0.1**
	comp=Z,31nm,0.4s,baz=55,slow=3.1,SNR=102						
KLR				pPKPbc	**pPKPdf**	**13 13 03.2**	**0.0**
	comp=Z,45nm,1.1s,baz=38,slow=3.7,SNR=5.2						
TEY	**Ternei**	**146.80**	**326⇓**	*i*PKP2	**PKPab**	**13 12 35.8**	**-0.6**
TEY				pmax	pmax		

	comp=Z,90nm,0.8s						
TEY				pmax	pmax		
	comp=E,20nm,0.8s						
TEY				pmax	pmax		
	comp=N,20nm,0.8s						
TEY				pmax	pmax		
	comp=Z,200nm,3.7s						
IRK	Irkutsk	146.88	8	ePKP2	PKPbc	13 12 34.0	-1.0
IRK				pmax	pmax		
	comp=Z,161nm,2.4s						
MOY	Mondy	146.93	11	ePKP2	PKPbc	13 12 34.9	-0.4
MOY				pmax	pmax		
	comp=Z,126nm,1.6s						
GUMO	Guam	147.02	265	PKPbc	PKPdf	13 12 34.8	+0.5
	comp=Z,804nm,1.0s,baz=175,slow=7.1,SNR=19						
GUMO	Guam	147.02	265		PKPdf	13 12 34.5	+0.3
TLY	Talaya	147.35	8	PKPbc	PKPbc	13 12 37.1	+0.8
	comp=Z,30nm,0.8s,baz=228,slow=1.3,SNR=3.3						
TLY				pPKPbc	pPKPdf	13 13 06.6	+1.0
	comp=Z,30nm,0.9s,baz=297,slow=3.3,SNR=2.1						
TLY	Talaya	147.35	8	ePKP2	PKPbc	13 12 35.8	-0.5
TLY				pmax	pmax		
	comp=Z,96nm,0.7s						
TLY	Talaya	147.35	8		PKPdf	13 12 34.9	+1.2
CIT	Chita	147.46	357	ePKP2	PKPbc	13 12 36.2	-0.4
KLRI	Killari	147.46	87	ePKPbc	PKPdf	13 12 35.7	+0.7
URV	Uravakonda	147.52	93	ePKPdf	PKPdf	13 12 33.5	-1.6
URV				ePKiKP	PKPbc	13 12 38.2	+0.3
SOEI	Soe	148.14	205	PKPbc	PKPbc	13 12 38.3	-1.3
PALK	Pallekele	148.22	108	PKPbc	PKPdf	13 12 37.3	+0.9
	comp=Z,11nm,0.8s,baz=237,slow=2.4,SNR=8.7						
PALK				pPKPbc	pPKPdf	13 13 08.5	+0.3
	comp=Z,33nm,1.2s,baz=297,slow=24,SNR=4.3						
PALK	Pallekele	148.22	108	PKIKP	PKPdf	13 12 36.8	+0.4
PALK	Pallekele	148.22	108		PKPdf	13 12 36.8	+0.4
ZAK	Zakamensk	148.56	9	ePKIKP	PKPdf	13 12 36.5	+0.6
ZAK				pmax	pmax		
	comp=Z,43nm,1.1s						
WMQ	Urumqi	148.87	34	ePKPbc	PKPdf	13 12 37.8	+1.2
WMQ				LR	LR		
	comp=Z,560nm,19.7s						
WMQ				LR	LR		
	comp=Z,470nm,21.7s						
WMQ				LR	LR		
	comp=Z,780nm,22.1s						
WMQ	Urumqi	148.87	34	PKIKP	PKPdf	13 12 37.5	+0.9
WMQ	Urumqi	148.87	34		PKPdf	13 12 37.5	+0.9
HYB	Hyderabad	149.21	88	i PKP	PKPdf	13 12 37.0	-0.8
HYB				e		13 12 42.5	
HYB				e		13 12 46.5	
HYB				epPKP	pPKPdf	13 13 08.5	-1.2
HYB				e		13 13 26.0	
HYBB	Hyderabad (bro	149.21	88	ePKPdf	PKPdf	13 12 37.6	-0.2
HYBB				ePKiKP	PKPbc	13 12 42.2	0.0
SRSP	Sriramsagar	149.21	86	ePKPdf	PKPdf	13 12 37.2	-0.6
SRSP				ePKiKP	PKPbc	13 12 42.6	+0.5
SRLM	Srisailam	149.30	91	ePKPdf	PKPdf	13 12 38.3	+0.3
SRLM				ePKiKP	PKPbc	13 12 42.3	-0.1
HIA	Hailar	149.45	349		PKPdf	13 12 37.7	+0.5
HIA				PKPbc	PKiKP	13 12 42.4	-0.5
FAKI	Fak Fak	149.46	226		PKPdf	13 12 38.7	+0.4
FAKI				PKPbc	PKiKP	13 12 44.1	+0.1
CUPL	Choutuppal	149.53	89	ePKPdf	PKPdf	13 12 37.3	-1.0
CUPL				ePKiKP	PKPbc	13 12 43.1	+0.2
SKHT	Srikalahasti	149.54	96	ePKPdf	PKPdf	13 12 37.4	-0.9
SKHT				ePKiKP	PKPbc	13 12 43.3	+0.3
USA0B	Ussuriysk Arra	149.73	329	PKP2	PKiKP	13 12 43.3	-0.3
USA0B	Ussuriysk Arra	149.73	329		PKiKP	13 12 43.3	-0.3
USRK	Ussuriysk Ar.	149.73	329	PKPbc	PKiKP	13 12 43.7	+0.1
	comp=Z,90nm,0.8s,baz=336,slow=4.2,SNR=8.9						
USRK				pPKPbc	pPKPbc	13 13 14.4	+0.2
	comp=Z,35nm,1.0s,baz=44,slow=0.9,SNR=3.5						
USRK	Ussuriysk Ar.	149.73	329		PKPdf	13 12 38.2	+0.3
USRK				PKPbc	PKiKP	13 12 43.8	+0.3
USRK				PKPab	PKPab	13 12 49.6	+1.4
NJS	Nagarjunasagar	149.77	90	ePKPdf	PKPdf	13 12 38.8	+0.1
NJS				ePKiKP	PKPbc	13 12 43.6	+0.1
MMRI	Maumere	149.94	203		PKPdf	13 12 38.6	-0.4
MMRI				PKPbc	PKiKP	13 12 44.6	-0.3
RPR	Rampur	150.10	86	ePKiKP	PKPbc	13 12 44.3	+0.1
ADKI	Addanki	150.26	92	ePKiKP	PKPbc	13 12 44.9	+0.2
JCJ	Chichijima	150.40	291	PKPbc	PKPbc	13 12 45.1	+0.3
	comp=Z,41nm,0.4s,baz=264,slow=5.3,SNR=4.8						
MDJ	Mudanjiang	150.51	332		PKPdf	13 12 39.4	+0.4
MDJ				PKPbc	PKiKP	13 12 45.0	-0.2
MJAR	Matsushiro Arr	150.69	311	PKPbc	PKiKP	13 12 46.3	+0.4
	comp=Z,62nm,0.7s,baz=100,slow=1.3,SNR=74						
MJAR				pPKPbc	pPKPbc	13 13 16.7	0.0
	comp=Z,14nm,0.7s,baz=317,slow=0.8,SNR=2.4						
MJAR	Matsushiro Arr	150.69	311	PKIKP	PKiKP	13 12 45.8	-0.1
MJAR	Matsushiro Arr	150.69	311		PKiKP	13 12 45.8	-0.1
JHJ	Hachijo jima 2	150.92	304	PKPbc	PKPbc	13 12 46.0	+0.2
	comp=Z,226nm,0.8s,baz=58,slow=23,SNR=5.7						
MYLAV	Mylavaram	151.06	90	ePKPdf	PKPdf	13 12 41.2	+0.6
MYLAV				ePKiKP	PKPbc	13 12 46.8	+0.3
SONM	Songino Array	151.47	6	PKP	PKPdf	13 12 41.7	+1.1
	comp=Z,11nm,0.8s,baz=314,slow=1.2,SNR=74						
SONM				PKPbc	PKiKP	13 12 47.8	+0.6
	comp=Z,69nm,0.7s,baz=310,slow=1.1,SNR=149						
SONM				pPKPbc	pPKPbc	13 13 18.7	+0.2
	comp=Z,34nm,0.8s,baz=352,slow=1.3,SNR=5.8						
SONM	Songino Array	151.47	6		PKPdf	13 12 41.2	+0.6
SONM				PKPbc	PKiKP	13 12 47.5	+0.3
ULN	Ulaanbaatar	151.50	6	PKIKP	PKPdf	13 12 41.7	+1.0
ULN	Ulaanbaatar	151.50	6		PKPdf	13 12 41.7	+1.0
ULN				PKPbc	PKiKP	13 12 47.8	+0.4
ULN				PKPab	PKPab	13 12 56.8	+1.2
JAGI	Jajag, Banyuwa	152.06	187		PKPdf	13 12 41.2	-1.1
JAGI				PKPbc	PKPbc	13 12 49.0	0.0
PVM	Polavaram	152.08	90	ePKPdf	PKPdf	13 12 42.6	+0.5
PVM				ePKiKP	PKiKP	13 12 49.3	+0.1
INU	Inuyama	152.10	310		PKiKP	13 12 48.7	-0.1
CN2	Changchun	152.87	337	eP	PKPab	13 13 01.3	0.0
CISI	Cisompet, Garu	152.96	173		PKPdf	13 12 43.8	+0.1
CISI				PKPbc	PKiKP	13 12 51.5	+0.3
LEM	Lembang	153.66	172	PKP	PKPdf	13 12 45.9	+1.0
	comp=Z,24nm,0.8s,baz=99,slow=4.6,SNR=6.6						
LEM				PKPbc	PKiKP	13 12 54.0	+1.2
	comp=Z,114nm,0.7s,baz=339,slow=0.5,SNR=25						
LEM				PKPab	PKPab	13 13 06.5	+1.0
	comp=Z,45nm,0.7s,baz=175,slow=16,SNR=7.9						
KAPI	Kappang	154.18	200	PKP	PKPdf	13 12 46.7	+1.3
	comp=Z,4.3nm,0.3s,baz=309,slow=2.0,SNR=3.9						
KAPI				PKPbc	PKiKP	13 12 54.4	+0.7
	comp=Z,22nm,0.6s,baz=201,slow=2.2,SNR=13						
KAPI				PKPab	PKPab	13 13 09.1	+1.6
	comp=Z,87nm,0.8s,baz=179,slow=2.6,SNR=20						
KAPI	Kappang	154.18	200		PKPdf	13 12 46.1	+0.7
KAPI					PKiKP	13 12 54.5	+0.8
KAPI					PKPab	13 13 08.9	+1.3
CHLP	Challavanipeta	154.54	88	ePKPdf	PKPdf	13 12 45.9	+0.2
CHLP				ePKiKP	PKiKP	13 12 54.4	+0.1
KS19	Wonju Array Si	156.76	324		PKPdf	13 12 49.4	+1.2
KS19					PKPab	13 13 18.9	+0.8
KSRS	Korea Array	156.76	324	PKP	PKPdf	13 12 49.0	+0.9
	comp=Z,6.0nm,0.9s,baz=27,slow=0.5,SNR=27						
KSRS				PKPbc	PKPbc	13 12 59.4	
	comp=Z,6.3nm,0.8s,baz=7.2,slow=1.2,SNR=13						
KSRS				PKPab	PKPab	13 13 19.1	+1.0
	comp=Z,17nm,0.9s,baz=58,slow=3.9,SNR=6.4						
KSAR	Wonju Array Be	156.79	324	PKP2	PKPab	13 13 18.9	+0.7
KSAR						14 12 48.9	
KSAR	Wonju Array Be	156.79	324		PKPdf	13 12 48.9	+0.7
KSAR				PKPab	PKPab	13 13 18.9	+0.7
JNU	Nakatsue	157.62	311	PKPab	PKPab	13 13 22.0	0.0
	comp=Z,11nm,0.8s,baz=81,slow=6.8,SNR=5.9						
GTA	Gaotai	157.92	23	ePKP	PKPdf	13 12 50.8	+1.0
GTA				LR	LR		
	comp=Z,680nm,19.9s						
GTA				LR	LR		
	comp=Z,670nm,18.2s						
GTA				LR	LR		
	comp=Z,880nm,24.7s						
DL2	Dalian	158.55	337	⇑iP	PKPab	13 13 25.8	+0.1
HHC	Hu-ho-hao-te	158.69	359	ePKP	PKPdf	13 12 52.0	+1.4
HHC				pPKP	pPKPdf	13 13 23.3	+0.7
HHC				sPKP		13 13 35.3	
HHC				PP	PP	13 17 07.0	+0.9
HHC				SS	SS	13 37 06.5	+7.8
HHC				AMB	AMB		
	comp=Z,920nm,9.1s						
BJI	Beijing	159.02	349	PKP	PKPdf	13 12 52.0	+1.2
LSA	Lhasa	159.33	57	PKIKP	PKPdf	13 12 53.1	+0.9
LSA	Lhasa	159.33	57		PKPdf	13 12 53.0	+0.9
RPSI	Rantau Prapat	159.59	143		PKPdf	13 12 52.5	+0.2
PSI	Prapat	159.67	143	PKIKP	PKPdf	13 12 52.5	-0.1
MYKOM	Kota Tinggi	161.10	158		PKPdf	13 12 53.9	-0.1
MYKOM				PKPab	PKPab	13 13 38.1	+0.7
KSM	Kuching	162.10	178		PKPdf	13 12 55.4	+0.3
IPM	Ipoh	162.22	146		PKPdf	13 12 54.6	-0.5
IPM				PKPab	PKPab	13 13 42.5	0.0
LZH	Lanzhou	162.30	19	⇑PKP	PKPdf	13 12 53.5	-1.3
LZH				pPKP	pPKPdf	13 13 24.8	-1.9
LZH				sPKP		13 13 37.3	
LZH				SS	SS	13 37 39.8	+2.6
TIA	Tai'an	162.47	343	PKP	PKPdf	13 12 55.5	+0.8
SBUM	Sibu	163.04	184		PKPdf	13 12 56.6	+0.7
SBUM					PKPab	13 13 46.0	+0.1
XAN	Xi'an	165.38	7	PKP	PKPdf	13 12 58.3	+0.8
XAN				pPKP	pPKPdf	13 13 30.0	+0.5
XAN	Xi'an	165.38	7	PKIKP	PKPdf	13 12 58.3	+0.8
XAN	Xi'an	165.38	7		PKPdf	13 12 58.3	+0.8
NJ2	Nanjing	165.61	332	ePKP	PKPdf	13 12 57.8	+0.1
KKM	Kota Kinabalu	165.71	202		PKPdf	13 12 58.7	+0.3
CD2	Chengdu	166.88	28	PKP	PKPdf	13 13 00.0	+1.2
CD2				SKS	SKSdf	13 19 47.3	-5.5
CD2				SS	SS	13 38 23.5	-0.8
CD2				AMB	AMB		
	comp=Z,430nm,5.4s						
WHN	Wuhan	168.56	345	PKP	PKPdf	13 13 00.5	+0.6
CMAR	Chiang Mai Arr	168.58	93	PKP	PKPdf	13 13 00.7	+0.4
	comp=Z,4.8nm,0.9s,baz=270,slow=1.7,SNR=34						
CMAR				pPKP	pPKPdf	13 13 32.1	-0.2
	comp=Z,19nm,1.3s,baz=282,slow=2.3,SNR=5.2						
CMAR				PKPab	PKPab	13 14 10.8	+0.2
	comp=Z,2.5nm,0.7s,baz=256,slow=6.4,SNR=6.2						
CMAR				pPKPab	pPKPab	13 14 41.3	+0.1
	comp=Z,9.9nm,1.1s,baz=262,slow=5.1,SNR=5.7						
CMAR	Chiang Mai Arr	168.58	93		PKPdf	13 13 00.4	+0.1
CMAR					PKPab	13 14 10.7	+0.1
CHTO	Chiang Mai	168.62	91	PKIKP	PKPdf	13 13 00.2	-0.1
CHTO	Chiang Mai	168.62	91		PKPdf	13 13 00.2	-0.1
ENH	Enshi	169.16	7		PKPdf	13 13 00.9	+0.5
ENH					PKPab	13 14 12.4	-0.1
PBKT	Sadao Pong	170.06	105		PKPdf	13 13 01.2	+0.1
KMI	Kunming	170.53	52	PKP	PKPdf	13 13 02.3	+0.7
GYA	Guiyang	172.00	29	i PKP	PKPdf	13 13 03.0	+0.9
GYA				pPKP	pPKPdf	13 13 34.3	+0.2
GYA				sPKP		13 13 44.0	
GYA				PKPab	PKPab	13 14 31.3	+5.9
GYA				PKS	PKSdf	13 16 31.8	-2.9
GYA				PP	PP	13 18 19.5	+3.8
GYA				SKKS		13 24 51.0	
GYA				SS	SS	13 39 13.0	-2.3
GYA				AMB	AMB		
	comp=Z,150nm,7.7s						
SLVN	Son La	173.12	73		PKPdf	13 13 03.4	+0.8
QIZ	Qiongzhong	178.85	112	PKP	PKPdf	13 13 01.3	-2.6
QIZ				PP	PP	13 18 51.5	+1.6
QIZ				SKKS		13 25 27.0	
QIZ				SS	SS	13 40 20.3	-2.9
QIZ				LR	LR		
	comp=Z,1μm,18.6s						
QIZ				LR	LR		
	comp=Z,1μm,16.2s						
QIZ				LR	LR		
	comp=Z,2μm,16.7s						

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*NEIC **31** 13:15:38.8±1.7, 56°.38N±0°.04×152°.36W±0°.09, h11^{km}±5^{km}, mb3.6/2, ML3.6/90(AEIC), Error ellipse: s-maj=7.6km s-min=5.5km az=53.0*

*AEIC **31** 13:15:41.9±1.8, 56°.24N±0°.07×152°.4W±0°.1, h6^{km}±5^{km}, Error ellipse: s-maj=11.0km s-min=8.2km az=178.0*

*IDC **31** 13:15:43.8±5.3, 56°.55N×152°.47W, h33^{km}±38^{km}, mb3.7/15, mb1 3.8/18, mb1mx3.6/72, mbtmp3.8/18, ML3.5/3, MS3.4/3, Ms1 3.4/3, ms1mx3.0/43, Error ellipse: s-maj=31.3km s-min=15.0km az=24.0*

ISC 31 13:15:38.9±0.6**, 56°.37N**±0°.06×**152°.42W**±0°.05**, h10**^{km}**, n143,** σ1^{s}**40**/145**, mb4.2**/15**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHAK	Old Harbor	0.98	331		Pg	13 15 57.8	+0.1
OHAK					Sg	13 16 10.8	+0.3
KDAK	Kodiak Island	1.42	357	Pn	Pn	13 16 04.4	-0.3
	18nm,0.3s,baz=185,slow=8.5,SNR=807						
KDAK				Sn	Sn	13 16 22.4	-1.1
	39nm,0.3s,baz=197,slow=7.2,SNR=21						
KDAK				LR	LR	13 16 27.9	
	comp=Z,122nm,20.6s,baz=79,slow=36						
CAHL	Cahill	2.30	318		Pn	13 16 16.8	-0.1
KAHG	Katmai Hook Gl	2.42	333		Pn	13 16 19.9	+1.4
KABU	Katmai Buttres	2.46	322		Pn	13 16 20.0	+0.9
PLK3	Peulik 3	2.48	304		Pn	13 16 19.3	0.0
PLK3					Sn	13 16 49.6	-0.1
FOSS	Fourpeaked Sta	2.53	345		Pn	13 16 21.2	+1.1
KAHC	Katmai Hardscr	2.68	330		Pn	13 16 23.2	+1.0
AUQ	Augustine Qik’	3.04	350		Pn	13 16 28.9	+1.9
AUP	Augustine Pinn	3.05	350		Pn	13 16 28.8	+1.6
AU22	Augustine Moun	3.05	351		Pn	13 16 28.7	+1.6
AUH	Augustine H	3.05	350		Pn	13 16 28.9	+1.6
AUW	Augustine West	3.06	350		Pn	13 16 28.9	+1.6
CNPM	China Poot	3.23	11		Pn	13 16 29.6	-0.1
CNPM					Sn	13 17 07.6	-0.5
HOM	Homer	3.33	7		Pn	13 16 31.5	+0.6
HOM					Sn	13 17 09.8	-0.7
CHGN	Chignik	3.34	271	Pn	Pn	13 16 29.8	-1.3
BRSE	Bradley Lake S	3.50	14		Pn	13 16 32.6	-0.7
BRLK	Bradley Lake	3.50	13	Pn	Pn	13 16 32.5	-0.9
ILS	Iliamna Low So	3.62	355		Pn	13 16 35.9	+1.0
IVE	Iliamna Volcan	3.67	355		Pn	13 16 36.6	+0.8
ILW	Iliamna West	3.72	354		Pn	13 16 37.4	+0.8
SEW	Seward	4.06	21	Pn	Pn	13 16 39.3	-1.7
RED	Redoubt Volcan	4.07	358		Pn	13 16 41.5	+0.4
RED					Sn	13 17 26.8	-2.0
RSO	Redoubt South	4.11	358		Pn	13 16 42.5	+0.6
RDWB	Redoubt West	4.14	357		Pn	13 16 42.8	+0.6
RDWB					Sn	13 17 28.8	-1.8
DFR	Drift River	4.24	358		Pn	13 16 43.9	+0.3
RDJH	Redoubt Jeurge	4.24	357		Pn	13 16 44.3	+0.7
SLKM	Skilak Lake	4.31	15		Pn	13 16 43.2	-1.3
CNBA	Chernabura Isl	4.35	252		Pn	13 16 43.2	-1.8
CNBA					Sn	13 17 28.7	-6.9
CAPN	Captain Cook N	4.46	8		Pn	13 16 47.3	+0.8
MID	Middleton Isla	4.46	44	Pn	Pn	13 16 44.6	-1.9
SDPT	Sand Point	4.65	261	Pn	Pn	13 16 48.4	-0.7
RC01	Rabbit Creek A	4.94	15	Pn	Pn	13 16 52.0	-1.1
PWL	Port Wells	4.99	24		Pn	13 16 52.5	-1.2
SVW2	Sparrevohn	5.02	342		Pn	13 16 54.8	+0.6
HIN	Hinchinbrook I	5.10	35		Pn	13 16 54.0	-1.3
SUA	Susitna One	5.18	9		Pn	13 16 55.8	-0.7
GLI	Glacier Island	5.31	29		Pn	13 16 56.5	-1.7
FID	Port Fidalgo	5.38	33		Pn	13 16 57.3	-1.9
EYAK	Cordova Ski Ar	5.46	37		Pn	13 16 59.1	-1.1
KNK	Knik Glacier	5.46	20		Pn	13 16 59.0	-1.3
PMR	Palmer	5.51	17		Pn	13 16 59.4	-1.4
JPK	Jack Peak	5.59	30		Pn	13 17 00.9	-1.2
SKT	Skwentna	5.65	4		Pn	13 17 02.1	-0.7
GHO	Glory Hole Cre	5.71	17		Pn	13 17 02.9	-0.8
RAGM	Ragged Mountai	5.73	42		Pn	13 17 02.9	-1.1
GOAT	Goat Mountain	5.84	41		Pn	13 17 04.8	-0.7
SML	Sawmill	5.85	19		Pn	13 17 04.3	-1.3
SCM	Sheep Creek Mo	6.08	23		Pn	13 17 08.2	-0.6
PPLA	Purkeypile	6.55	1		Pn	13 17 14.8	-0.5
CRQM	Cirque	6.55	44	Pn	Pn	13 17 15.0	-0.3
TGL	Tana Glacier	6.67	45	Pn	Pn	13 17 16.1	-0.9
WAT6	Susitna Watana	6.67	19		Pn	13 17 16.1	-0.9
VRDI	Verde Repeater	6.74	40		Pn	13 17 16.9	-1.0
GLB	Gilahina Butte	6.76	38	Pn	Pn	13 17 17.2	-1.0
WAT1	Susitna Watana	6.77	15		Pn	13 17 17.7	-0.5
TT01	Tatalina	6.81	346		Pn	13 17 18.8	+0.1
TTA	Tatalina	6.83	346		Pn	13 17 19.0	0.0
WAT2	Susitna Watana	6.89	15		Pn	13 17 19.8	-0.2
KIAG	Kiagna River	6.96	45		Pn	13 17 19.9	-1.0
MCARA	McCarthy VSAT	7.00	40	Pn	Pn	13 17 20.3	-1.0
BALM	Baldy	7.03	44		Pn	13 17 21.1	-0.7
PTPK	Patty Peak	7.08	43		Pn	13 17 22.1	-0.4
GRNC	Granite Creek	7.09	47		Pn	13 17 22.0	-0.7
TRF	Thorofare Moun	7.18	8		Pn	13 17 23.3	-0.8
DHY	Denali Highway	7.19	19		Pn	13 17 23.4	-0.7
KTH	Kantishna Hill	7.25	5		Pn	13 17 24.4	-0.4
RND	Reindeer	7.28	13		Pn	13 17 25.0	-0.3
BARN	Barnard Glacie	7.31	46		Pn	13 17 25.3	-0.5
CTGM	Chitina Glacie	7.39	47	Pn	Pn	13 17 25.6	-1.2
PCA	Pinnacle	7.43	55	Pn	Pn	13 17 26.9	-0.4
MCK	McKinley	7.59	12		Pn	13 17 29.2	-0.3
PNL	Peninsula	7.67	59		Pn	13 17 30.6	+0.1
BPAW	Bear Paw Mtn.	7.79	5	Pn	Pn	13 17 30.9	-1.3
MENT	Mentasta	7.92	30		Pn	13 17 34.2	+0.3
YUK2	White River	8.06	43		Pn	13 17 36.3	+0.3
DHAK	Deception Hill	8.08	64	Pn	Pn	13 17 35.8	-0.3
YUK3	Moose Creek	8.20	44		Pn	13 17 38.3	+0.4
RIDG	Independent Ri	8.30	24	Pn	Pn	13 17 38.4	-0.8
YUK1	Sand Pete Hill	8.40	41		Pn	13 17 41.1	+0.4
WRH	Wood River Hil	8.40	13		Pn	13 17 39.6	-1.0
HDA	Harding Lake	8.51	16		Pn	13 17 42.8	+0.9
YUK7	Dusty Glacier	8.57	55		Pn	13 17 43.3	+0.3
BCAR	Beaver Creek A	8.59	34	Pn	Pn	13 17 42.2	-1.0
CCB	Clear Creek Bu	8.61	13	Pn	Pn	13 17 42.2	-1.1
YUK6	Outpost Mounta	8.64	52		Pn	13 17 44.6	+0.6
YUK4	Talbot Arm	8.70	49		Pn	13 17 46.5	+1.7
SCRK	Sand Creek	8.71	25	Pn	Pn	13 17 43.7	-1.1
MLY	Manley	8.73	5	Pn	Pn	13 17 43.5	-1.6
COLA	College	8.82	13	Pn	Pn	13 17 45.4	-0.9
IL31		8.86	16		Pn	13 17 46.5	-0.2
ILAR	Eielson Array	8.86	16	Pn	Pn	13 17 46.6	-0.1
	1.3nm,0.3s,baz=198,slow=14,SNR=56						
ILAR				Sn	Sn	13 19 17.6	-8.9
	0.2nm,0.3s,baz=211,slow=19,SNR=2.2						
ILAR				LR	LR	13 21 44.6	
	comp=Z,146nm,18.5s,baz=262,slow=42						
MDM	Murphy Dome	8.86	12	Pn	Pn	13 17 46.3	-0.5
YUK5	Granite Creek	8.94	52		Pn	13 17 49.1	+1.0
HYT	Haines Junctio	8.97	54		Pn	13 17 48.6	+0.1
SIT	Sitka	9.43	79	Pn	Pn	13 17 52.1	-2.4
SKAG	Skagway	9.60	64		Pn	13 17 58.3	+1.3
IM03		9.67	357		Pn	13 17 57.5	-0.4
IMAR	Indian Mountai	9.67	357		Pn	13 17 57.4	-0.5
BESE	Bessie Mountai	9.72	70	Pn	Pn	13 17 58.9	+0.3
PRP	Porcupine Dome	9.77	17	Pn	Pn	13 18 00.3	+1.0
DAWY	Dawson	10.06	35	Pn	Pn	13 18 02.7	-0.6
EGAK	Eagle	10.07	29	Pn	Pn	13 18 03.1	-0.3
WHY	Whitehorse	10.12	58		Pn	13 18 04.4	+0.2
ANM	Nome	10.39	328		Pn	13 18 09.3	+1.5
FYU	Fort Yukon	10.78	16		Pn	13 18 12.9	-0.2
COLD	Coldfoot	10.95	5	Pn	Pn	13 18 15.4	+0.1
BM03	Burnt Mountain	11.67	15		Pn	13 18 25.5	+0.2
BMAR	Burnt Mountain	11.68	15		Pn	13 18 25.1	-0.4
H02S1	DAWSON INLET T	11.93	97	T	T	13 30 36.6	
	SNR=28						
DLBC	Dease Lake	12.24	71	Pn	Pn	13 18 35.6	+2.4
	0.2nm,0.3s,baz=250,slow=3.0,SNR=3.5						
DLBC				Sn	Sn	13 20 46.3	-3.2
	0.4nm,0.3s,baz=167,slow=22,SNR=6.9						
DLBC	Dease Lake	12.24	71		Pn	13 18 31.2	-1.9
INK	Inuvik	14.75	28	Pn	Pn	13 19 07.7	+0.6
	0.1nm,0.3s,baz=227,slow=10,SNR=3.0						
BBB	Bella Bella	14.77	96	LR	LR	13 23 51.6	
	comp=Z,65nm,20.1s,baz=326,slow=33						
C36M	Paulatuk	18.09	33		Pn	13 19 48.6	-1.2
C36M				IAmb	IAmb	13 19 52.1	
	comp=Z,5.1nm,1.0s						
YKA	Yellowknife Ar	19.95	57	P	Pn	13 20 11.5	-0.8
	comp=Z,0.1nm,0.3s,baz=268,slow=10,SNR=20						
SEY	Seymchan	27.85	306	P	P	13 21 28.0	-0.2
	comp=Z,0.2nm,0.3s,baz=83,slow=8.1,SNR=1.7						
NVAR	Mina Array Bea	28.82	114	P	P	13 21 39.8	+2.5
	comp=Z,0.1nm,0.5s,baz=309,slow=9.2,SNR=3.1						
PDAR	Pinedale Array	30.40	98	P	P	13 21 53.3	+2.0
	comp=Z,0.1nm,0.4s,baz=308,slow=4.4,SNR=1.8						
PDAR	Pinedale Array	30.40	98	P	P	13 21 50.9	-0.3
TXAR	Lajitas Array	43.51	108	P	P	13 23 45.3	+2.9
	comp=Z,0.1nm,0.3s,baz=308,slow=7.8,SNR=2.2						
KLR	Kul'dur	44.21	294	P	P	13 23 47.8	+0.1
	comp=Z,3.4nm,0.9s,baz=36,slow=7.7,SNR=7.4						
NRIK	Noril'sk	47.31	335	P	P	13 24 12.4	+0.4
	comp=Z,2.4nm,0.5s,baz=48,slow=5.4,SNR=4.1						
H11N2	WAKE ISLAND Hy	47.44	236	T	T	14 15 15.4	
	baz=29,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	47.45	236	T	T	14 15 13.8	
	baz=29,slow=76,SNR=10						
H11N1	WAKE ISLAND Hy	47.46	236	T	T	14 15 16.2	
	baz=29,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	48.59	236	T	T	14 16 39.3	
	baz=29,slow=76,SNR=23						
H11S2	WAKE ISLAND Hy	48.61	236	T	T	14 16 41.1	
	baz=29,slow=76,SNR=29						
H11S3	WAKE ISLAND Hy	48.61	236	T	T	14 16 41.6	
	baz=29,slow=76,SNR=25						
ARCES	ARCESS Array B	54.39	1	P	P	13 25 05.0	-0.2
	comp=Z,5.5nm,1.1s,baz=20,slow=6.7,SNR=7.1						
SONM	Songino Array	57.23	308	P	P	13 25 27.0	+0.9
	comp=Z,2.2nm,0.7s,baz=44,slow=6.0,SNR=9.4						
SONM	Songino Array	57.23	308	P	P	13 25 26.7	+0.6
ZALV	Zalesovo Beam	60.51	325	P	P	13 25 49.2	+0.6
	comp=Z,1.4nm,0.7s,baz=35,slow=5.4,SNR=4.7						
ZALV	Zalesovo Beam	60.51	325	P	P	13 25 48.9	+0.3
NB2	NORSAR Subarra	62.23	9	P	P	13 26 00.6	+0.5
	comp=Z,0.8nm,0.5s,baz=350,slow=6.9						
NOA	NORSAR Array B	62.23	9	P	P	13 26 00.5	+0.3
	comp=Z,1.1nm,0.8s,baz=350,slow=6.6,SNR=4.5						
FINES	FINESS Array B	62.52	1	P	P	13 26 02.5	+0.5
	comp=Z,1.0nm,0.8s,baz=3.2,slow=10,SNR=3.3						
FINES				LR	LR	13 54 19.8	
	comp=Z,108nm,21.0s,baz=246,slow=37						
HFS	Hagfors	63.32	8	P	P	13 26 08.1	+0.7
	comp=Z,2.5nm,0.9s,baz=341,slow=3.6,SNR=5.5						
BVAR	Borovoye Array	65.44	333	P	P	13 26 21.4	0.0
	comp=Z,1.1nm,0.6s,baz=30,slow=7.4,SNR=5.8						
MKAR	Makanchi Array	67.49	323	P	P	13 26 34.8	+0.1
	comp=Z,0.6nm,0.7s,baz=20,slow=5.2,SNR=5.3						
ABKAR	Akbulak array	71.35	338	P	P	13 26 58.4	0.0
KKAR	Karatay Array	74.49	329	P	P	13 27 17.4	+0.3
BRTR	Keskin Array B	84.14	355	P	P	13 28 09.7	-0.3
	comp=Z,0.2nm,0.3s,baz=337,slow=6.3,SNR=2.2						

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*IDC **31** 13:19:26.3±0.6, 8°.35S×146°.95E, h0^{km}, mb4.1/14, mb1 4.3/19, mb1mx4.1/42, mbtmp4.2/19, ML4.2/5, MS3.8/9, Ms1 3.8/9, ms1mx3.5/35, Error ellipse: s-maj=20.4km s-min=8.6km az=82.0*

*NEIC **31** 13:19:27.0±2.3, 8°.48S±0°.05×146°.76E±0°.09, h10^{km}±1^{km}, mb4.5/21, Error ellipse: s-maj=15.8km s-min=7.3km az=71.0*

*DJA **31** 13:19:29.8±1.1, 8°S±3°×14°7E±°, h29^{km}±9^{km}, M4.7/23, mb4.5/23, mB5.2/4, MLv4.9/3, Mw(mB)4.5/4*

ISC 31 13:19:27.7±0.4**, 8°.48S**±0°.04×**146°.80E**±0°.06**, h10**^{km}**, n76,** σ1^{s}**90**/74**, mb4.4**/25**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	0.99	159	Pg	Pb	13 19 46.5	-0.5
	564nm,0.3s,baz=4.4,slow=7.8,SNR=860						
PMG				Lg	Lg	13 20 00.9	
	3μm,0.3s,baz=332,slow=23,SNR=21						
PMG				LR	LR	13 20 10.3	
	comp=Z,2μm,18.7s,baz=316,slow=41						
PMG	Port Moresby	0.99	159		Pg	13 19 46.0	-0.8
PMG				Sn	Sn	13 20 01.1	-0.6
COEN	Coen	6.50	213		Pn	13 21 04.8	+1.3
KRVT	Keravat (AS076	6.64	52	Pn	Pn	13 21 03.5	-2.0
	4.3nm,0.3s,baz=13,slow=18,SNR=2.3						
KRVT				Sn	Sn	13 22 20.5	-0.9
	1.7nm,0.3s,baz=205,slow=23,SNR=1.9						
KRVT				LR	LR	13 23 38.1	
	comp=Z,335nm,19.6s,baz=270,slow=39						
JAY	Jayapura	8.48	314	P	Pn	13 21 35.1	+4.4
	8.9nm,1.1s						
GENI	Genyem	8.81	311	P	Pn	13 21 40.3	+5.0
	16nm,0.9s						
CTA	Charters Tower	11.55	183	Pn	Pn	13 22 14.7	+1.9
	1.5nm,0.3s,baz=355,slow=13,SNR=12						
HNR	Honiara	13.02	95	Pn	Pn	13 22 35.4	+2.4
	2.1nm,0.3s,baz=230,slow=14,SNR=1.8						
HNR				LR	LR	13 27 34.5	
	comp=Z,235nm,18.4s,baz=281,slow=38						
FAKI	Fak Fak	15.49	290	P	P	13 23 11.6	+0.7
FAKI				IAmb	IAmb	13 23 13.5	
	comp=Z,79nm,1.7s						
MTN	Manton Dam	15.99	253		P	13 23 15.0	-1.4
WRA	Warramunga Arr	16.59	225	Pn	P	13 23 22.8	-0.3
	comp=Z,0.9nm,0.3s,baz=49,slow=12,SNR=27						
WRA				Sn	Sn	13 26 22.2	-2.9
	comp=Z,0.2nm,0.3s,baz=42,slow=21,SNR=5.7						
WRA				LR	LR	13 30 24.6	
	comp=Z,224nm,21.1s,baz=45,slow=39						

SIJI	Sorong	17.22	295	P	P	13 23 30.0	-0.1
	comp=Z,0.3nm,0.3s,baz=101,slow=10,SNR=6.8						
SIJI				LR	LR	13 32 43.7	
	comp=Z,381nm,18.0s,baz=338,slow=46						
EIDS	Eidsvold	17.29	167	P	P	13 23 32.0	+1.3
KNRA	Kununurra	19.02	246	P	P	13 23 48.4	-1.6
AS31	Alice Springs	19.51	218	P	P	13 23 53.6	-1.6
ASAR	Alice Springs	19.51	218	P	Pn	13 23 58.7	+2.2
	comp=Z,0.8nm,0.3s,baz=51,slow=10,SNR=46						
ASAR				S	Sn	13 27 31.6	-4.1
	comp=Z,0.1nm,0.3s,baz=41,slow=25,SNR=5.1						
ASAR				LR	LR	13 31 19.8	
	comp=Z,249nm,18.6s,baz=45,slow=36						
ASAR	Alice Springs	19.51	218	P	P	13 23 53.7	-1.6
LBMI	Labuha	20.74	291	P	Pn	13 24 13.7	+2.6
	comp=Z,780nmcomp=Z,40nm,1.1s						
SANI	Sanana	21.67	286	P	P	13 24 25.6	+6.8
SOEI	Soe	22.28	265	P	P	13 24 28.9	+3.4
	comp=Z,28nm,0.8s						
SOEI	Soe	22.28	265	P	P	13 24 25.7	+0.2
ARMA	Armidale	22.29	169	P	P	13 24 26.0	+0.6
ARMA				IAmb	IAmb	13 24 40.1	
	comp=Z,19nm,1.2s						
FITZ	Fitzroy Crossi	22.68	243	P	P	13 24 30.9	+1.4
	comp=Z,5.4nm,0.7s,baz=55,slow=12,SNR=13						
FITZ				LR	LR	13 33 40.2	
	comp=Z,138nm,18.6s,baz=68,slow=37						
FITZ	Fitzroy Crossi	22.68	243	P	P	13 24 29.2	-0.4
FITZ				IAmb	IAmb	13 24 42.6	
	comp=Z,16nm,0.9s						
STKA	Stephens Creek	23.78	191	P	P	13 24 40.5	-0.1
	comp=Z,5.9nm,1.0s,baz=16,slow=10,SNR=9.6						
STKA				LR	LR	13 33 59.2	
	comp=Z,151nm,18.9s,baz=6.7,slow=36						
STKA	Stephens Creek	23.78	191	P	P	13 24 39.1	-1.4
MMRI	Maumere	24.29	268	P	P	13 24 49.9	+4.4
	comp=Z,37nm,0.9s						
URZ	Urewera	40.31	142	LR	LR	13 43 04.0	
	comp=Z,355nm,18.2s,baz=188,slow=35						
AFI	Afiamalu	40.95	101	LR	LR	13 40 52.0	
	comp=Z,320nm,19.5s,baz=121,slow=32						
MJAR	Matsushiro Arr	45.50	350	P	P	13 27 49.8	+2.4
	comp=Z,5.7nm,1.1s,baz=161,slow=7.7,SNR=5.2						
NJ2	Nanjing	48.34	328	*e*P	P	13 28 09.5	-0.1
KSRS	Korea Array	48.99	340	P	P	13 28 13.6	-1.0
	comp=Z,0.8nm,0.7s,baz=159,slow=9.4,SNR=6.6						
KSAR	Wonju Array Be	48.99	340	P	P	13 28 13.2	-1.3
WHN	Wuhan	49.75	323	P	P	13 28 30.3	+10
USRK	Ussuriysk Ar.	54.12	347	P	P	13 28 51.0	-1.8
	comp=Z,1.5nm,0.6s,baz=133,slow=14,SNR=1.7						
CMAR	Chiang Mai Arr	54.27	300	P	P	13 28 55.8	+1.3
	comp=Z,1.9nm,0.6s,baz=129,slow=5.9,SNR=15						
CMAR				PcP	PcP	13 30 01.2	+2.5
	comp=Z,0.4nm,0.3s,baz=123,slow=3.3,SNR=1.5						
CMAR	Chiang Mai Arr	54.27	300	P	P	13 28 54.7	+0.3
CHTO	Chiang Mai	54.42	300	P	P	13 28 55.4	-0.1
CHTO				IAmb	IAmb	13 29 00.6	
	comp=Z,4.0nm,1.0s						
XAN	Xi'an	55.47	322	P	P	13 29 02.5	-0.4
XAN				pP	sP	13 29 07.8	+0.1
BJI	Beijing	55.97	332	P	P	13 29 05.3	-1.0
BJI				S	S	13 36 58.0	+3.6
CD2	Chengdu	56.87	316	P	P	13 29 13.3	+0.3
HHC	Hu-ho-hao-te	58.83	329	*e*P	P	13 29 26.3	-0.4
KLR	Kul'dur	58.96	349	P	P	13 29 28.1	+0.9
	comp=Z,0.8nm,0.6s,baz=112,slow=5.4,SNR=2.8						
LZH	Lanzhou	59.96	320	*e*P	P	13 29 35.5	+0.9
LZH				pP	sP	13 29 39.0	-0.5
LZH				sP	pP	13 29 40.3	+2.2
LZH				*e*PP	PP	13 31 40.5	-6.6
PETK	Petropavlovsk-	62.05	7	P	P	13 29 46.4	-1.8
	comp=Z,4.1nm,1.1s,baz=224,slow=6.0,SNR=1.6						
ULN	Ulaanbaatar	66.18	332	P	P	13 30 15.3	-0.4
ULN				IAmb	IAmb	13 30 21.6	
	comp=Z,3.8nm,0.9s						
SONM	Songino Array	66.47	332	P	P	13 30 17.3	-0.2
	comp=Z,2.4nm,1.0s,baz=141,slow=6.0,SNR=12						
SONM	Songino Array	66.47	332	P	P	13 30 17.0	-0.6
MA2	Magadan	67.90	2	P	P	13 30 28.0	+1.8
	comp=Z,1.5nm,0.3s,baz=200,slow=8.3,SNR=3.0						
MA2	Magadan	67.90	2	IAmb	IAmb	13 30 33.1	
	comp=Z,6.7nm,1.1s						
VNDA	Vanda	69.47	177	P	P	13 30 38.0	+2.2
	comp=Z,1.0nm,0.9s,baz=358,slow=7.0,SNR=3.9						
SEY	Seymchan	71.33	3	P	P	13 30 48.3	+1.0
	comp=Z,1.4nm,0.8s,baz=17,slow=24,SNR=4.4						
WMQ	Urumqi	74.54	320	*e*P	P	13 31 08.0	+1.1
MK31	Makanchi Array	79.28	321	P	P	13 31 32.6	-0.8
MKAR	Makanchi Array	79.28	321	P	P	13 31 33.1	-0.4
	comp=Z,1.4nm,0.7s,baz=108,slow=6.8,SNR=12						
MKAR	Makanchi Array	79.28	321	P	P	13 31 32.4	-1.0
MAKZ	Makanchi	79.48	321	P	P	13 31 33.7	-0.8
MAKZ				IAmb	IAmb	13 31 35.0	
	comp=Z,4.6nm,1.1s						
TIXI	Tiksi	80.84	354	P	P	13 31 39.4	-1.9
	comp=Z,0.8nm,0.3s,baz=112,slow=3.0,SNR=2.2						
TIXI	Tiksi	80.84	354	IAmb	IAmb	13 32 34.8	
	comp=Z,9.4nm,1.8s						
KSH	Kashi	80.88	312	P	P	13 31 44.3	+1.9
KSH				pP	PcP	13 31 48.3	-0.7
KSH				PP	PP	13 34 51.3	+4.3
KSH	Kashi	80.88	312	S	S	13 41 52.0	+0.7
KSH	Kashi	80.88	312	sS	sS	13 42 00.0	+2.7
ZAA0	Zalesovo Array	80.99	328	P	P	13 31 40.1	-2.3
ZAA0				IAmb	IAmb	13 31 48.3	
	comp=Z,2.6nm,0.7s						
ZALV	Zalesovo Beam	80.99	328	P	P	13 31 41.1	-1.4
	comp=Z,1.8nm,0.5s,baz=101,slow=6.2,SNR=6.7						
ZALV	Zalesovo Beam	80.99	328	P	P	13 31 40.4	-2.1
NIL	Nilore	81.20	306	P	P	13 31 43.4	-0.8
QSPA	South Pole Qui	81.51	180	P	P	13 31 44.6	-0.7
BOOM	Boomskoye usch	81.87	315	P	P	13 31 47.4	-0.3
BOOM				IAmb	IAmb	13 31 52.6	
	comp=Z,5.1nm,0.9s						
KURK	Kurchatov	83.07	324	P	P	13 31 52.7	-0.8
KURK				IAmb	IAmb	13 32 01.1	
	comp=Z,6.2nm,1.2s						
KKAR	Karatay Array	85.87	314	P	P	13 32 05.5	-2.4
ILAR	Eielson Array	87.82	23	P	P	13 32 15.3	-1.6
	comp=Z,0.6nm,0.6s,baz=259,slow=4.3,SNR=9.3						
BMAR	Burnt Mountain	89.77	21	P	P	13 32 25.9	-0.2
VYHS	Vyhne	120.94	322	*e*PKP	PKPdf	13 38 19.2	-1.4
DBIC	Dimbokro	151.85	268	PKPbc	PKiKP	13 39 26.9	+2.5
	comp=Z,2.0nm,0.7s,baz=76,slow=4.2,SNR=4.5						
BDFB	Brasilia	151.90	148	PKPbc	PKiKP	13 39 25.8	+1.3
	comp=Z,5.4nm,0.5s,baz=182,slow=2.7,SNR=8.5						
BDFB	Brasilia	151.90	148		PKPbc	13 39 21.3	-2.9

MAN 31 13:20:22.7, 18.°29N×120.°80E, h13^{km}, mb4.5, ML3.4, MS3.2, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIPP	Brgy, Tapao	0.49	222	⇑*e*P	Pb	13 20 32.9	-0.3
APYP	Conner	0.60	135	*e*P	Pg	13 20 34.8	+0.3
APYP				*e*S	Sn	13 20 47.2	+0.6
ABRA	Dolores	0.65	187	*e*P	Pg	13 20 35.0	-0.3
ABRA				*e*S	Sn	13 20 48.1	+0.4
SMPP	San Manuel, Pa	2.13	183	*e*P	Pn	13 20 58.4	+0.3
SMPP				*e*S	Sn	13 21 25.6	+1.1

IDC 31 13:27:44.1±2.6, 12.°14S×167.°44E, h0^{km}, mb3.9/4, mb1 4.0/4, mb1mx3.6/36, mbtmp3.8/4, Error ellipse: s-maj=111.0km s-min=40.1km az=144.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	33.82	246	P	P	13 34 28.4	+0.1
	0.3nm,0.6s,baz=70,slow=9.5,SNR=6.4						
CMAR	Chiang Mai Arr	74.07	293	P	P	13 39 23.1	+0.6
	0.5nm,0.3s,baz=110,slow=5.3,SNR=2.1						
YKA	Yellowknife Ar	95.18	27	P	P	13 41 10.1	+1.0
	0.1nm,0.4s,baz=252,slow=5.0,SNR=3.9						
MKAR	Makanchi Array	95.45	317	P	P	13 41 10.1	-0.7
	0.5nm,0.6s,baz=85,slow=7.1,SNR=6.2						
ARCES	ARCESS Array B	117.80	346	PKP	PKPdf	13 46 30.8	-1.1
	1.4nm,0.6s,baz=72,slow=2.9,SNR=9.8						

IDC 31 13:28:01.9±4.3, 19.°00N×145.°14E, h218^{km}±33^{km}, mb3.2/4, mb1 3.4/5, mb1mx3.0/46, mbtmp3.9/5, Error ellipse: s-maj=139.4km s-min=26.1km az=83.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	5.39	183	P	Pn	13 29 21.7	0.0
	6.5nm,0.3s,baz=201,slow=17,SNR=8.4						
GUMO				S	S	13 30 15.6	-9.1
	9.8nm,0.3s,baz=67,slow=21,SNR=2.6						
WRA	Warramunga Arr	40.12	196	P	P	13 35 16.1	-0.6
	0.8nm,0.3s,baz=16,slow=8.8,SNR=18						
FITZ	Fitzroy Crossi	41.55	209	P	P	13 35 28.6	+0.3
	1.2nm,0.7s,baz=13,slow=8.2,SNR=16						
ASAR	Alice Springs	43.80	195	P	P	13 35 46.4	-0.1
	0.3nm,0.4s,baz=15,slow=6.9,SNR=11						
ZALV	Zalesovo Beam	57.45	322	P	P	13 37 27.8	-0.1
	1.2nm,0.8s,baz=101,slow=7.6,SNR=2.6						

BJI ***31*** *13:40:55.1±0.0, 8.°33S×147.°60E, h5^{km}, mB5.7/64, mb5.5/88, Ms5.4/91, Ms7 5.3/84*

NEIC ***31*** *13:40:58.4, 8.°30S×146.°98E, h9^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.19; $M_{\theta\theta}$1.18; $M_{\phi\phi}$0.01; $M_{r\theta}$0.01; $M_{\theta\phi}$-2.14; $M_{\phi r}$-1.45; Fault plane solution: $M_0$2.84000×10^{17} NP1:ϕ_s88.84000°, δ51.55000°, λ-156.72000°. NP2:ϕ_s343.86000°, δ71.97000°, λ-40.84000°. Principal axes: T 3.0145, Plg13.0000°, Azm41.0000°; N -0.3772, Plg46.0000°, Azm144.0000°; P -2.6373, Plg41.0000°, Azm299.0000°;*

NEIC ***31*** *13:40:58.4±1.8, 8.°30S±0.°06×146.°98E±0.°07, h4^{km}±1^{km}, mb5.6/156, Ms_20 5.4/444, Mwb5.6/40, Mww5.6, Mwc5.6(GCMT) Error ellipse: s-maj=11.6km s-min=9.8km az=115.0*

IDC ***31*** *13:40:59.1±0.3, 8.°31S×146.°96E, h0^{km}, mb5.5/25, mb1 5.5/30, mb1mx5.5/32, mbtmp5.5/30, ML5.0/5, MS5.1/29, Ms1 5.1/29, ms1mx5.0/38, Error ellipse: s-maj=13.5km s-min=8.6km az=73.0*

MOS ***31*** *13:40:59.0±0.9, 8.°32S×147.°05E, h15^{km}, mb5.8/58, MS5.3/27, Error ellipse: s-maj=6.9km s-min=4.6km az=101.8*

NEIC ***31*** *13:41:02, 8.°36S×147.°15E, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.93; $M_{\theta\theta}$1.10; $M_{\phi\phi}$-0.17; $M_{r\theta}$-0.16; $M_{\theta\phi}$-2.99; $M_{\phi r}$-0.66; Fault plane solution: $M_0$3.23000×10^{17} NP1:ϕ_s352.00000°, δ80.00000°, λ-16.00000°. NP2:ϕ_s85.00000°, δ74.00000°, λ-169.00000°. Principal axes: T 3.5417, Plg4.0000°, Azm39.0000°; N -0.7487, Plg71.0000°, Azm140.0000°; P -2.7930, Plg18.0000°, Azm308.0000°;*

GCMT ***31*** *13:41:03.4±0.1, 8.°38S±0.°01×147.°17E±0.°01, h15^{km}, MW5.6/153, Moment Tensor Solution. s127, c220; s153, c314; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.95±.03; $M_{\theta\theta}$1.06±.03; $M_{\phi\phi}$-0.11±.03; $M_{r\theta}$-0.46±.06; $M_{\theta\phi}$-3.02±.03; $M_{\phi r}$-0.50±.07; Best double couple: $M_0$3.19800×10^{17} NP1:ϕ_s353.00000°, δ76.00000°, λ-14.00000°. NP2:ϕ_s86.00000°, δ77.00000°, λ-165.00000°. Principal axes: T 3.5490, Plg0.0000°, Azm219.0000°; N -0.7060, Plg70.0000°, Azm128.0000°; P -2.8470, Plg20.0000°, Azm310.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***31*** *13:41:03.5±0.9, 8°S±2°×14°7E±°, h21^{km}±6^{km}, M5.6/97, mb5.6/97, mB6.0/84, MLv5.9/3, Mw(mB)5.6/84, Mwp5.6/22*

NEIC ***31*** *13:41:06, 8.°32S×147.°10E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.81; $M_{\theta\theta}$1.39; $M_{\phi\phi}$0.42; $M_{r\theta}$-0.40; $M_{\theta\phi}$-2.35; $M_{\phi r}$-1.79; Fault plane solution: $M_0$3.40000×10^{17} NP1:ϕ_s343.00000°, δ66.00000°, λ-45.00000°. NP2:ϕ_s95.00000°, δ49.00000°, λ-147.00000°. Principal axes: T 3.4478, Plg10.0000°, Azm42.0000°; N -0.0880, Plg40.0000°, Azm141.0000°; P -3.3598, Plg48.0000°, Azm301.0000°;*

ISC 31 13:41:01.0±0.4, 8.°40S±0.°03×147.°03E±0.°03, h17^{km}±2^{km}, h17^{km}:pP-P, n1191, σ1^{s}65/1099, mb5.6/201, MS5.3/292, 31C-29D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	1.01	173	Pg	Pb	13 41 19.4	-0.6
	4μm,0.3s,baz=348,slow=8.8,SNR=7162						
PMG	Port Moresby	1.01	173	*c i*P	Pb	13 41 19.8	-0.2
KRVT	Keravat (AS076	6.42	51	Pn	Pn	13 42 34.0	-0.8
	53nm,0.3s,baz=156,slow=1.1,SNR=39						
KRVT				Sn	Sn	13 43 49.8	+2.0
	baz=181,slow=23,SNR=0.8						
KRVT				LR	LR	13 45 12.5	
	comp=Z,22μm,19.7s,baz=250,slow=40						
RABL	Rabaul	6.60	51		Pn	13 42 35.6	-1.7
COEN	Coen	6.69	214	P	Pn	13 42 38.3	-0.3
	baz=6.8,SNR=181						
COEN	Coen	6.69	214		Pn	13 42 38.1	-0.5
JAY	Jayapura	8.59	313	P	Pn	13 43 06.9	+2.2
JAY				pmax	pmax		
	comp=Z,218nm,1.1s						
GENI	Genyem	8.94	310	P	Pn	13 43 13.2	+3.8
	comp=Z,15μmcomp=Z,10μmcomp=Z,830nm,1.0s						
MTSU	Mount Surprise	10.03	195	P	Pn	13 43 25.8	+1.4
	baz=10,SNR=81						
CTA	Charters Tower	11.64	184	Pn	Pn	13 43 48.2	+1.7
	comp=Z,9.2nm,0.3s,baz=354,slow=14,SNR=84						
CTA				Sn	Sn	13 45 57.7	+1.5
	comp=Z,3.6nm,0.3s,baz=300,slow=18,SNR=1.5						
CTA				LR	LR	13 47 58.0	
	comp=Z,19μm,18.8s,baz=6.5,slow=36						
CTAO	Charters Tower	11.64	184	P	Pn	13 43 46.9	+0.4
CTAO				pmax	pmax		
	comp=Z,209nm,1.3s						
HNR	Honiara	12.80	96	Pn	Pn	13 44 04.6	+2.2
	comp=Z,3.1nm,0.3s,baz=260,slow=3.2,SNR=15						
HNR				LR	LR	13 48 31.0	
	comp=Z,13μm,20.9s,baz=273,slow=35						
HNR	Honiara	12.80	96	P	Pn	13 44 05.0	+2.6
HNR	Honiara	12.80	96		Pn	13 44 03.4	+1.0
QIS	Mount Isa	14.05	210	P	Pn	13 44 19.8	+0.3
	baz=14,SNR=64						
RKPI	Ransiki, Papua	14.51	297	P	P	13 44 33.7	+1.4
KDU	Kakadu	14.93	252	P	Pn	13 44 31.9	+0.5
	baz=15,SNR=100						
SAUI	Saumlaki	15.57	270	P	P	13 44 42.0	-2.2
	comp=Z,17μmcomp=Z,31μmcomp=Z,2μm,1.3s						
SAUI	Saumlaki	15.57	270	P	P	13 44 42.0	-2.2
FAKI	Fak Fak	15.68	289	P	Pn	13 44 41.1	-0.2
	comp=Z,5μmcomp=Z,6μmcomp=Z,328nm,0.9s						
FAKI	Fak Fak	15.68	289		Pn	13 44 38.8	-2.5
FAKI				IAmb	IAmb	13 44 50.3	
	comp=Z,273nm,0.9s						
MTN	Manton Dam	16.23	253	P	Pn	13 44 47.9	-0.6
	baz=16,SNR=9.5						
MTN	Manton Dam	16.23	253	Pn	Pn	13 44 47.2	-1.2
WB0	Warramunga Arr	16.66	226		Pn	13 44 53.5	-0.3
WR0	Warramunga Arr	16.68	225		Pn	13 44 54.2	+0.1
WR0				IAmb	IAmb	13 45 15.9	
	comp=Z,358nm,0.9s						
WB2	Warramunga Arr	16.80	226		Pn	13 44 55.8	+0.1
WRA	Warramunga Arr	16.81	226	Pn	Pn	13 44 56.1	+0.3
	comp=Z,6.8nm,0.3s,baz=60,slow=11,SNR=192						
WRA				Sn	Sn	13 47 55.7	-6.6
	comp=Z,3.3nm,0.3s,baz=104,slow=39,SNR=5.4						
WRA				LR	LR	13 51 49.0	
	comp=Z,10μm,19.3s,baz=50,slow=39						
WRA	Warramunga Arr	16.81	226	*i* P	Pn	13 44 55.2	-0.6
WRA				pmax	pmax		
	comp=Z,110nm,0.7s						
WRA	Warramunga Arr	16.81	226		Pn	13 44 55.1	-0.6
I07AU	WARRAMUNGA INF	6.81	226	*i*		15 28 10.0	
	baz=48,slow=310,SNR=0.7						
EIDS	Eidsvold	17.31	168	P	P	13 45 06.7	+3.4
	baz=18,SNR=143						
EIDS	Eidsvold	17.31	168	P	P	13 45 03.8	+0.4
EIDS				IAmb	IAmb	13 45 10.6	
	comp=Z,385nm,0.8s						
SIJI	Sorong	17.39	295	P	P	13 45 04.8	+0.4
	comp=Z,3.8nm,0.3s,baz=99,slow=9.3,SNR=54						
SIJI				LR	LR	13 54 09.0	
	comp=Z,16μm,18.8s,baz=86,slow=46						
BNDI	Bandanaira	17.44	282	P	P	13 45 05.9	+1.0
	comp=Z,8μmcomp=Z,14μmcomp=Z,714nm,1.4s						
RMQ	Roma	18.06	175	P	P	13 45 14.6	+2.9
	baz=18,SNR=50						
QLP	Quilpie	18.28	188	P	P	13 45 15.8	+1.8
	baz=18,SNR=231						
MSAI	Masohi	18.69	285	P	Pn	13 45 21.9	+2.9
	comp=Z,984nmcomp=Z,56nm,1.0s						
PATS	Pohnpei	18.86	37	P	Pn	13 45 20.9	-0.2
	baz=19,SNR=8.6						
PATS	Pohnpei	18.86	37	P	P	13 45 19.5	-1.0
PATS				IAmb	IAmb	13 45 25.3	
	comp=Z,444nm,1.0s						
KNRA	Kununurra	19.26	246	P	Pn	13 45 25.2	-0.7
	baz=19,SNR=687						
KNRA	Kununurra	19.26	246	Pn	Pn	13 45 25.5	-0.4
AAI	Ambon	19.30	283	P	Pn	13 45 28.0	+1.6
	comp=Z,3μmcomp=Z,210nm,1.2s						
AS31	Alice Springs	19.71	218	P	Pn	13 45 31.7	+0.4
ASAR	Alice Springs	19.71	218	P	Pn	13 45 32.1	+0.8
	comp=Z,4.6nm,0.3s,baz=55,slow=9.8,SNR=305						
ASAR				S	S	13 49 05.7	-5.9
	comp=Z,1.8nm,0.3s,baz=47,slow=22,SNR=8.2						
ASAR				LR	LR	13 52 54.4	
	comp=Z,12μm,18.9s,baz=46,slow=36						
ASAR				P3KPbc		14 19 52.4	
	baz=216,slow=4.3,SNR=6.1						
ASAR				P3KP		14 20 35.1	
	comp=Z,0.0nm,0.3s,baz=294,slow=3.5,SNR=4.6						
ASAR	Alice Springs	19.71	218		Pn	13 45 31.6	+0.2
NLAI	Namlea	20.47	283	P	Pn	13 45 41.6	+1.3
	comp=Z,2μmcomp=Z,113nm,2.2s						
LBMI	Labuha	20.93	291	P	Pn	13 45 48.4	+2.8
	comp=Z,15μmcomp=Z,650nm,1.1s						
TNTI	Ternate	21.61	294	P	P	13 45 58.7	+8.3
SANI	Sanana	21.87	286	P	P	13 45 51.7	-1.5
	comp=Z,5μmcomp=Z,4μmcomp=Z,153nm,0.9s						
GUMO	Guam	21.95	354	P	P	13 45 53.2	-0.8
	comp=Z,401nm,1.0s,baz=193,slow=11,SNR=6.4						
GUMO				LR	LR	13 52 50.8	
	comp=Z,4μm,21.8s,baz=176,slow=33						
GUMO	Guam	21.95	354	P	P	13 45 52.8	-1.2
ARMA	Armidale	22.32	169	P	P	13 46 01.1	+3.0
	baz=22,SNR=71						
ARMA	Armidale	22.32	169	P	P	13 45 58.5	+0.4
ARMA				IAmb	IAmb	13 46 07.2	
	comp=Z,193nm,1.1s						
ARMA				IAMs_20	IAMs_20	13 54 03.8	
	comp=Z,10μm,18.0s						
SOEI	Soe	22.52	265	P	P	13 45 49.7	-11
SOEI	Soe	22.52	265	P	P	13 46 02.8	+2.5
FITZ	Fitzroy Crossi	22.92	243	P	P	13 46 04.0	-0.4
	baz=23,SNR=251						
FITZ	Fitzroy Crossi	22.92	243	P	P	13 46 04.5	+0.1
	comp=Z,31nm,0.6s,baz=72,slow=10.0,SNR=92						
FITZ				LR	LR	13 54 41.9	
	comp=Z,6μm,19.4s,baz=68,slow=36						
FITZ	Fitzroy Crossi	22.92	243	P	P	13 46 03.6	-0.7
CMSA	Cobar Meteorol	23.05	183	P	P	13 46 06.9	+1.3
	baz=23,SNR=55						
DZM	Mont Dzumac	23.10	128	*e*P	P	13 46 08.0	+1.7
	comp=Z,421nm,1.3s						
DZM				*e*S	S	13 50 13.0	-4.1
	comp=Z,3μm,23.3s						
DZM				*e*LR	LR	13 51 44.2	
	comp=Z,12μm,21.6s						
DZM	Mont Dzumac	23.10	128	P	P	13 46 09.6	+3.3
	comp=Z,58nm,0.9s,baz=259,slow=10,SNR=12						
DZM				LR	LR	13 54 56.5	
	comp=Z,17μm,18.5s,baz=328,slow=36						
DZM	Mont Dzumac	23.10	128	P	P	13 46 07.2	+0.8
DZM				IAmb	IAmb	13 46 22.8	
	comp=Z,168nm,1.1s						
STKA	Stephens Creek	23.90	191	P	P	13 46 14.2	+0.2
	baz=24,SNR=110						
STKA	Stephens Creek	23.90	191	P	P	13 46 14.2	+0.2
	comp=Z,85nm,0.9s,baz=355,slow=9.3,SNR=72						
STKA				LR	LR	13 55 33.4	
	comp=Z,7μm,18.1s,baz=7.2,slow=36						
STKA	Stephens Creek	23.90	191	P	P	13 46 13.6	-0.4
MNI	Manado	24.19	293	P	P	13 46 17.1	+0.2
MNI				pmax	pmax		
	comp=Z,159nm,1.1s						
WRKA	Warakurna	24.35	225	P	P	13 46 18.9	+0.6
	baz=24,SNR=501						
BBSI	Bau Bau	24.45	275	P	P	13 46 23.0	+3.8
	comp=Z,1μmcomp=Z,70nm,1.2s						
MMRI	Maumere	24.52	268	P	P	13 46 19.5	-0.4
	comp=Z,7μmcomp=Z,17μmcomp=Z,970nm,1.0s						
MMRI	Maumere	24.52	268	P	P	13 46 19.2	-0.7
KMSI	Cibinong	24.64	290	P	P	13 46 29.6	+8.6
MGCD	Mangrove Creek	24.98	172	P	P	13 46 26.8	+3.0
	baz=25,SNR=22						
LUWI	Luwuk	25.24	286	P	P	13 46 29.0	+2.6
	comp=Z,6μmcomp=Z,260nm,2.0s						
LUWI	Luwuk	25.24	286	P	P	13 46 26.4	0.0
LHI	Lord Howe Isla	25.59	156	P	P	13 46 32.4	+3.0
	baz=26,SNR=3.1						
RIV	Riverview	25.59	172	P	P	13 46 32.7	+3.4
	baz=26,SNR=5.8						
DDMP	Don Marcelino,	25.68	303	*e*P	P	13 46 27.2	-3.2
YNG	Young	25.80	177	P	P	13 46 33.6	+2.3
	baz=26,SNR=147						
HTT	Hallett	26.01	196	P	P	13 46 35.3	+2.1
	baz=26,SNR=74						
BASI	Baing, Sumba	26.16	264	P	P	13 46 37.9	+3.1
	comp=Z,9μmcomp=Z,664nm,1.6s						
BBOO	Buckleboo	26.33	201	P	P	13 46 37.0	+0.9
	baz=26,SNR=53						
BBOO	Buckleboo	26.33	201	P	P	13 46 36.5	+0.4
BBOO				IAmb	IAmb	13 46 43.5	
	comp=Z,146nm,1.1s						
DAV	Davao City (W)	26.33	305	P	P	13 46 36.3	0.0
	comp=Z,292nm,0.4s,baz=249,slow=9.1,SNR=2.1						
DAV	Davao City (W)	26.33	305	⇓*i*P	P	13 46 35.0	-1.3
DAV	Davao City (W)	26.33	305	IAmb	IAmb	13 46 42.5	
	comp=Z,364nm,0.4s						
MRSI	Marisa	26.51	288	P	P	13 46 42.8	+4.9
	comp=Z,1μmcomp=Z,42nm,0.7s						
KWAJ	Kwajalein Atol	26.70	51	P	P	13 46 39.0	-0.6
KWAJ				pmax	pmax		
	comp=Z,825nm,1.0s						
KWAJ	Kwajalein Atol	26.70	51	P	P	13 46 39.0	-0.6
CAN	Canberra	26.86	176	P	P	13 46 42.3	+1.4
CAN				pmax	pmax		
	comp=Z,155nm,1.2s						
CAN				MLR	MLR		
	comp=Z,10μm,19.0s						
CAN	Canberra	26.86	176	P	P	13 46 42.3	+1.4
CAN				IAmb	IAmb	13 46 49.3	
	comp=Z,155nm,1.2s						
CAN				IAMs_20	IAMs_20	13 57 01.2	
	comp=Z,10μm,19.0s						
CNB	Canberra Magne	26.87	176	P	P	13 46 43.9	+2.8
	baz=27,SNR=23						
SKMP	Bagumbayan, Su	26.88	303	*e*P	P	13 46 39.8	-1.4
BKSI	Bulukumba	26.88	275	P	P	13 46 41.7	+0.4
	comp=Z,2μmcomp=Z,47nm,1.0s						
BNSI	Bone	27.04	277	P	P	13 46 46.1	+3.4
	comp=Z,2μmcomp=Z,70nm,1.0s						
KAPI	Kappang	27.29	275	P	P	13 46 45.7	+0.8
	comp=Z,73nm,0.9s,baz=114,slow=7.3,SNR=25						
KAPI				LR	LR	14 00 00.6	
	comp=Z,5μm,21.5s,baz=100,slow=42						
KAPI	Kappang	27.29	275	P	P	13 46 44.2	-0.8
KAPI				IAmb	IAmb	13 46 52.7	
	comp=Z,97nm,0.8s						
WBSI	Waikabubak, Su	27.32	265	P	P	13 46 45.6	+0.3
	comp=Z,5μmcomp=Z,331nm,0.9s						
SPSI	Sidrap Palu	27.45	278	P	P	13 46 47.6	+1.2
	comp=Z,1μmcomp=Z,47nm,1.5s						
CTBH	Cotabato--PC H	27.51	304	⇑*i*P	P	13 46 46.7	-0.2
TARA	Tarawa	27.57	71	P	P	13 46 46.7	-0.8
CGP	Cagayan de Oro	27.85	306	⇓*e*P	P	13 46 54.5	+4.5
MPSI	Mapaga	28.40	286	P	P	13 46 58.5	+3.6
	comp=Z,1μmcomp=Z,29nm,0.9s						
FORT	Forrest	28.45	216	P	P	13 46 56.0	+0.8
	baz=29,SNR=28						
FORT	Forrest	28.45	216	P	P	13 46 55.3	+0.1
FORT				IAMs_20	IAMs_20	13 57 58.9	
	comp=Z,10μm,22.0s						
PAGZ	Pagadian	28.57	304	*e*P	P	13 46 55.5	-0.9
MILA	Mila	28.59	176	P	P	13 46 59.6	+3.2
	baz=29,SNR=10						
ARPS	Mount Arapiles	28.63	189	P	P	13 46 58.7	+2.0
	baz=29,SNR=37						
MSLP	Maasin	28.74	309	*e*P	P	13 46 56.6	-1.2
PLAI	Plampang	28.92	267	P	P	13 46 58.5	-1.1
	comp=Z,3μmcomp=Z,3μmcomp=Z,224nm,1.6s						
TOO	Toolangi	29.07	183	P	P	13 47 03.0	+2.3
	baz=29,SNR=9.9						
TOO	Toolangi	29.07	183	P	P	13 47 02.2	+1.5
TOO				pmax	pmax		
	comp=Z,126nm,1.2s						
TOO				MLR	MLR		

	comp=Z,14µm,19.0s					
TOO	**Toolangi**	**29.07 183**	P	**P**	**13 47 02.2**	**+1.5**
TOO			IAmb	IAmb	13 47 08.6	
	comp=Z,126nm,1.2s					
PSAD1	**Pilbara Seismi**	**29.25 241**	IAMs_20	IAMs_20	13 57 59.0	
	comp=Z,7µm,20.0s					
PSAB2	**Pilbara Seismi**	**29.26 240**	IAMs_20	IAMs_20	13 58 13.3	
	comp=Z,7µm,22.0s					
PSA00	**Pilbara Seismi**	**29.28 240**	P	**P**	**13 47 02.0**	**-0.6**
PSA00	**Pilbara Seismi**	**29.28 240**	P	**P**	**13 47 02.2**	**-0.5**
PSA00			IAmb	IAmb	13 47 40.7	
	comp=Z,19nm,0.9s					
PSAC3	**Pilbara Seismi**	**29.31 240**	IAMs_20	IAMs_20	13 58 14.7	
	comp=Z,6µm,18.0s					
PSAD3	**Pilbara Seismi**	**29.36 240**	IAMs_20	IAMs_20	13 58 03.1	
	comp=Z,9µm,21.0s					
OCLP	**Ormoc**	**29.51 311**	*e*P	**P**	**13 47 03.2**	**-1.5**
BKB	**Balikpapan**	**30.83 282**	IAMs_20	IAMs_20	13 55 18.5	
	comp=Z,7µm,20.0s					
KBKI	**Kotabaru**	**31.10 278**	P	**P**	**13 47 22.2**	**+3.3**
	comp=Z,17nm,0.8s					
DNP	**Denpasar**	**31.46 267**	P	P	13 47 31.3	+9.3
DNP	**Denpasar**	**31.46 267**	P	**P**	**13 47 22.8**	**+0.8**
DNP			pmax	pmax		
	comp=Z,240nm,1.2s					
SRBI	**Singaraja**	**31.48 268**	P	P	13 47 34.4	+12
PVCP	**Virac**	**31.52 314**	*e*P	**P**	**13 47 20.4**	**-2.0**
MSVF	**Nonsavu**	**31.57 110**	⇓*i*P	**P**	**13 47 24.0**	**+1.0**
MSVF			pmax	pmax		
	comp=Z,42nm,1.0s					
MSVF	**Nonsavu**	**31.57 110**	P	**P**	**13 47 22.8**	**-0.2**
MSVF			IAmb	IAmb	13 47 29.9	
	comp=Z,69nm,1.0s					
FUNA	**Funafuti**	**31.81 93**	P	**P**	**13 47 25.0**	**-0.1**
OTRP	**Odiongan**	**32.30 309**	*e*P	**P**	**13 47 27.9**	**-1.5**
MEEK	**Meekatharra**	**32.48 232**	P	**P**	**13 47 31.2**	**+0.4**
	baz=32,SNR=35					
JAGI	**Jajag, Banyuwa**	**32.52 267**	P	**P**	**13 47 28.6**	**-2.7**
	comp=Z,3µmcomp=Z,266nm,0.9s					
JAGI	**Jajag, Banyuwa**	**32.52 267**	P	**P**	**13 47 29.6**	**-1.7**
GMJI	**Gumukmas**	**33.22 268**	P	P	13 47 42.4	+4.9
	comp=Z,1µmcomp=Z,50nm,0.9s					
ENPP	**El Nido**	**33.67 305**	*e*P	**P**	**13 47 39.0**	**-2.3**
PGP	**Puerto Galera**	**33.82 310**	⇓*e*P	**P**	**13 47 41.1**	**-1.5**
MOO	**Moorlands**	**33.91 180**	P	**P**	**13 47 45.8**	**+2.7**
	baz=34,SNR=5.3					
KKM	**Kota Kinabalu**	**33.91 294**	P	**P**	**13 47 42.5**	**-1.0**
TAU	**Tasmania Unive**	**34.37 180**	P	**P**	**13 47 46.6**	**-0.5**
TAU			pmax	pmax		
	comp=Z,99nm,1.3s					
TAU			MLR	MLR		
	comp=Z,5µm,18.0s					
TAU	**Tasmania Unive**	**34.37 180**	P	**P**	**13 47 46.6**	**-0.5**
TAU			IAmb	IAmb	13 48 06.5	
	comp=Z,99nm,1.2s					
TAU	**Tasmania Unive**	**34.37 180**	IAMs_20	IAMs_20	14 02 42.2	
	comp=Z,5µm,18.0s					
LUBP	**Lubang**	**34.50 309**	*e*P	P	13 47 42.0	-6.6
GIRL	**Giralia**	**34.52 242**	P	**P**	**13 47 48.0**	**-0.7**
PWJI	**Pagerwojo**	**34.86 268**	P	**P**	**13 47 53.4**	**+1.7**
	comp=Z,2µmcomp=Z,85nm,0.7s					
PCJI	**Pacitan**	**35.47 268**	P	**P**	**13 47 58.6**	**+1.6**
	comp=Z,3µmcomp=Z,300nm,0.9s					
JCJ	**Chichijima**	**35.60 353**	P	**P**	**13 47 57.9**	**+0.1**
	comp=Z,126nm,0.5s,baz=257,slow=8.5,SNR=3.5					
MORW	**Morawa**	**35.64 231**	P	**P**	**13 47 58.9**	**+0.7**
	baz=36,SNR=16					
MORW	**Morawa**	**35.64 231**	P	**P**	**13 47 58.5**	**+0.2**
KLBR	**Kellerberrin**	**35.69 226**	P	**P**	**13 47 59.4**	**+0.7**
	baz=36,SNR=25					
SMPP	**San Manuel, Pa**	**35.71 313**	*e*P	**P**	**13 47 58.0**	**-1.0**
WOJI	**Wonogiri, Jawa**	**35.74 268**	P	**P**	**13 47 59.5**	**+0.2**
	comp=Z,2µmcomp=Z,189nm,0.9s					
BLDU	**Ballidu**	**35.92 228**	P	**P**	**13 47 59.9**	**-0.7**
	baz=36,SNR=12					
UGM	**Wanagama**	**36.13 268**	P	**P**	**13 48 06.3**	**+3.6**
	comp=Z,4µmcomp=Z,234nm,1.1s					
UGM	**Wanagama**	**36.13 268**	P	**P**	**13 48 02.0**	**-0.7**
SGCP	**Mt. Cagua**	**36.18 317**	*e*P	**P**	**13 48 03.7**	**+0.7**
SMRI	**Semarang**	**36.27 270**	P	**P**	**13 48 05.5**	**+1.6**
SMRI	**Semarang**	**36.27 270**	P	**P**	**13 48 01.7**	**-2.2**
SBUM	**Sibu**	**36.34 286**	P	**P**	**13 48 04.1**	**-0.3**
SBUM	**Sibu**	**36.34 286**	P	**P**	**13 48 05.0**	**+0.5**
YOGI	**Yogyakarta**	**36.36 268**	P	P	13 48 12.3	+7.7
NWAO	**Narrogin (SRO)**	**36.81 224**	P	**P**	**13 48 09.2**	**+1.0**
	baz=37,SNR=9.2					
NWAO	**Narrogin (SRO)**	**36.81 224**	P	**P**	**13 48 08.1**	**-0.1**
NWAO			pmax	pmax		
	comp=Z,87nm,1.0s					
NWAO			MLR	MLR		
	comp=Z,8µm,18.0s					
NWAO	**Narrogin (SRO)**	**36.81 224**	P	**P**	**13 48 08.1**	**-0.1**
NWAO			IAmb	IAmb	13 48 12.8	
	comp=Z,87nm,1.0s					
MUN	**Mundaring**	**37.01 226**	P	**P**	**13 48 10.8**	**+0.9**
	baz=37,SNR=15					
KSM	**Kuching**	**37.90 283**	P	**P**	**13 48 16.9**	**-0.8**
KSM	**Kuching**	**37.90 283**	P	**P**	**13 48 18.0**	**+0.3**
RKGY	**Rocky Gully**	**37.96 222**	P	**P**	**13 48 18.3**	**+0.3**
	baz=38,SNR=9.1					
CISI	**Cisompet, Garu**	**38.83 268**	P	**P**	**13 48 25.2**	**-0.4**
	comp=Z,7µmcomp=Z,504nm,1.2s					
CISI	**Cisompet, Garu**	**38.83 268**	P	**P**	**13 48 24.4**	**-1.2**
LEM	**Lembang**	**39.08 270**	P	**P**	**13 48 28.6**	**+0.7**
LEM			pmax	pmax		
	comp=Z,185nm,1.1s					
CNJI	**Cibinong**	**39.53 269**	P	**P**	**13 48 31.3**	**-0.1**
	comp=Z,8µmcomp=Z,654nm,1.2s					
CBJI	**Citeko**	**39.88 270**	P	P	13 48 40.0	+5.7
TWG	**Pinlang**	**40.11 321**	P	**P**	**13 48 33.9**	**-2.1**
TWG			IAmb	IAmb	13 49 17.3	
	comp=Z,149nm,0.9s					
SKJI	**Sukabumi**	**40.12 269**	P	**P**	**13 48 36.6**	**+0.3**
	comp=Z,5µmcomp=Z,542nm,1.0s					
YOJ	**Yonaguni jima**	**40.20 325**	P	**P**	**13 48 36.6**	**-0.1**
YOJ			pmax	pmax		
	comp=Z,164nm,0.9s					
YOJ			MLR	MLR		
	comp=Z,4µm,20.0s					
YOJ	**Yonaguni jima**	**40.20 325**	P	**P**	**13 48 36.6**	**-0.1**
YOJ			IAmb	IAmb	13 48 51.6	
	comp=Z,164nm,0.9s					
YOJ			IAMs_20	IAMs_20	14 04 43.5	
	comp=Z,4µm,20.0s					
URZ	**Urewera**	**40.23 142**	P	**P**	**13 48 39.2**	**+2.4**
	comp=Z,8.5nm,0.7s,baz=290,slow=1.8,SNR=6.6					
URZ			PcP	**PcP**	**13 50 42.0**	**+1.2**
	comp=Z,16nm,0.8s,baz=300,slow=1.7,SNR=5.2					
YULB	**Yu-li**	**40.39 322**	P	**P**	**13 48 37.5**	**-0.9**
YULB			IAMs_20	IAMs_20	14 04 41.6	
	comp=Z,4µm,20.0s					
TPUB	**Ta-pu**	**40.74 321**	P	**P**	**13 48 40.0**	**-1.2**
TPUB			IAmb	IAmb	13 48 54.2	
	comp=Z,98nm,0.9s					
AFI	**Afiamalu**	**40.74 102**	P	**P**	**13 48 42.7**	**+1.1**
	comp=Z,139nm,0.8s,baz=315,slow=5.7,SNR=15					
AFI	**Afiamalu**	**40.74 102**	P	**P**	**13 48 40.7**	**-0.9**
AFI			IAmb	IAmb	13 48 49.8	
	comp=Z,130nm,0.8s					
AFI	**Afiamalu**	**40.74 102**	IAMs_20	IAMs_20	14 02 39.4	
	comp=Z,6µm,20.0s					
NACB	**Ninganchiao**	**40.80 323**	P	**P**	**13 48 40.9**	**-0.8**
NACB			IAmb	IAmb	13 48 55.0	
	comp=Z,233nm,1.2s					
NACB			IAMs_20	IAMs_20	14 02 37.4	
	comp=Z,4µm,20.0s					
SSLB	**Suanglung**	**40.90 322**	P	**P**	**13 48 40.9**	**-1.7**
SSLB			IAMs_20	IAMs_20	14 03 46.9	
	comp=Z,4µm,20.0s					
SNZO	**South Karori**	**40.93 148**	P	**P**	**13 48 43.0**	**+0.4**
RPZ	**Rata Peaks**	**40.96 153**	P	**P**	**13 48 45.0**	**+2.1**
	comp=Z,28nm,0.7s,baz=308,slow=1.2,SNR=21					
YHNB	**Yeheng**	**41.31 323**	P	**P**	**13 48 44.8**	**-1.2**
YHNB			IAmb	IAmb	13 48 58.4	
	comp=Z,191nm,0.8s					
YHNB			IAMs_20	IAMs_20	14 03 50.8	
	comp=Z,5µm,20.0s					
KNTN	**Kanton**	**41.41 85**	P	**P**	**13 48 46.3**	**-0.7**
KNTN			IAmb	IAmb	13 48 54.9	
	comp=Z,251nm,1.1s					
TATO	**Taipei**	**41.47 324**	P	**P**	**13 48 45.3**	**-2.0**
TATO	**Taipei**	**41.47 324**	IAMs_20	IAMs_20	14 04 09.0	
	comp=Z,4µm,20.0s					
JHJ2	**Mitsune**	**41.85 351**	P	**P**	**13 48 47.2**	**-3.0**
JHJ	**Hachijo jima 2**	**41.86 351**	LR	LR	14 05 45.4	
	comp=Z,3µm,18.9s,baz=170,slow=36					
KASI	**Kota Agung**	**42.30 271**	P	**P**	**13 48 53.8**	**-0.4**
	comp=Z,2µmcomp=Z,173nm,0.9s					
MDSI	**Maura Dua**	**42.74 272**	P	**P**	**13 48 57.1**	**-0.7**
	comp=Z,2µmcomp=Z,77nm,1.6s					
LWLI	**Liwa**	**42.79 272**	P	**P**	**13 48 58.2**	**-0.2**
	comp=Z,3µmcomp=Z,410nm,0.9s					
QZH	**Quanzhou**	**43.20 321**	⇓*i*P	**P**	**13 49 02.5**	**+1.2**
QZH			S	**S**	**13 55 29.0**	**+1.4**
QZH			pmax	pmax		
	comp=Z,43nm,0.9s					
QZH			pmax	pmax		
	comp=Z,770nm,2.9s					
QZH			LR	LR		
	comp=Z,970nm,17.1s					
QZH			LR	LR		
	comp=Z,860nm,21.3s					
QZH			LR	LR		
	comp=Z,1µm,18.0s					
TPRI	**Tanjung Pinang**	**43.36 280**	P	**P**	**13 49 04.8**	**+1.9**
	comp=Z,13µmcomp=Z,107nm,0.9s					
JNU	**Nakatsue**	**44.06 340**	P	**P**	**13 49 07.7**	**-0.5**
	comp=Z,50nm,0.9s,baz=141,slow=5.2,SNR=21					
JNU			LR	LR	14 06 03.7	
	comp=Z,2µm,19.8s,baz=155,slow=34					
JNU	**Nakatsue**	**44.06 340**	P	**P**	**13 49 06.9**	**-1.3**
JNU			IAmb	IAmb	13 49 15.2	
	comp=Z,135nm,1.0s					
MYKOM	**Kota Tinggi**	**44.22 281**	P	**P**	**13 49 08.8**	**-1.0**
MYKOM	**Kota Tinggi**	**44.22 281**	P	**P**	**13 49 11.0**	**+1.2**
KSI	**Kapahiang**	**44.42 273**	P	P	13 49 21.1	+10
KSI	**Kapahiang**	**44.42 273**	P	**P**	**13 49 13.0**	**+1.5**
GZH	**Guangzhou**	**45.45 314**	P	**P**	**13 49 22.0**	**+2.6**
GZH			S	**S**	**13 56 06.5**	**+6.1**
GZH			LR	LR		
	comp=Z,1µm,18.5s					
GZH			LR	LR		
	comp=Z,1µm,18.5s					
MJAR	**Matsushiro Arr**	**45.47 350**	P	**P**	**13 49 18.5**	**-0.8**
	comp=Z,50nm,0.9s,baz=170,slow=8.4,SNR=70					
MJAR			PcP	**PcP**	**13 50 58.9**	**+0.7**
	comp=Z,16nm,0.9s,baz=182,slow=3.1,SNR=3.7					
MJAR	**Matsushiro Arr**	**45.47 350**	P	**P**	**13 49 16.5**	**-2.8**
MAJO	**Matsushiro**	**45.47 350**	P	**P**	**13 49 17.7**	**-1.6**
MAJO			pmax	pmax		
	comp=Z,99nm,0.9s					
MAJO	**Matsushiro**	**45.47 350**	P	**P**	**13 49 17.7**	**-1.6**
MAJO			IAmb	IAmb	13 49 23.7	
	comp=Z,99nm,0.8s					
MAT	**Matsushiro**	**45.47 350**	P	**P**	**13 49 18.2**	**-1.1**
MAT			S	**S**	**13 56 07.0**	**+6.7**
MJB9	**Matsu-Tunnel**	**45.47 350**	P	**P**	**13 49 17.8**	**-1.6**
QIZ	**Qiongzhong**	**45.68 307**	P	**P**	**13 49 20.5**	**-0.8**
QIZ			S	**S**	**13 56 01.0**	**-2.9**
QIZ			pmax	pmax		
	comp=Z,15nm,1.1s					
QIZ			pmax	pmax		
	comp=Z,630nm,6.3s					
QIZ			LR	LR		
	comp=Z,1µm,21.0s					
QIZ			LR	LR		
	comp=Z,1µm,15.7s					
QIZ			LR	LR		
	comp=Z,2µm,20.1s					
KRJI	**Kerinci**	**45.77 275**	P	**P**	**13 49 25.9**	**+3.6**
	comp=Z,3µmcomp=Z,160nm,1.0s					
SDSI	**Sungai Dareh**	**46.01 277**	P	**P**	**13 49 25.8**	**+1.8**
	comp=Z,2µmcomp=Z,80nm,1.2s					
SSE	**Sheshan**	**46.43 329**	P	**P**	**13 49 27.5**	**+0.6**
SSE			sP	**sP**	**13 49 35.3**	**+0.2**
SSE			PP	**PP**	**13 51 14.5**	**-1.8**
SSE			S	**S**	**13 56 15.3**	**+1.1**
SSE			sS	**sS**	**13 56 27.3**	**+3.4**
SSE			pmax	pmax		
	comp=Z,100nm,1.2s					
SSE			pmax	pmax		
	comp=Z,180nm,3.5s					
SSE	**Sheshan**	**46.43 329**	IAMs_20	IAMs_20	14 06 45.0	
	comp=Z,4µm,20.0s					
BKNI	**Bangkinang**	**46.64 278**	P	P	13 49 33.5	+4.5
	comp=Z,2µmcomp=Z,187nm,0.9s					
BKNI	**Bangkinang**	**46.64 278**	P	**P**	**13 49 28.1**	**-0.8**
MCQ	**Macquarie Isla**	**46.96 171**	P	**P**	**13 49 31.0**	**+0.2**
MCQ			pmax	pmax		
	comp=Z,177nm,1.4s					
MCQ	**Macquarie Isla**	**46.96 171**	P	**P**	**13 49 31.0**	**+0.2**
UBPT	**Khong Chiam**	**47.43 300**	P	**P**	**13 49 35.0**	**-0.1**
UBPT			IAmb	IAmb	13 49 42.5	
	comp=Z,42nm,1.0s					
IPM	**Ipoh**	**47.63 284**	P	**P**	**13 49 36.2**	**-0.5**
IPM			IAmb	IAmb	13 49 46.6	
	comp=Z,75nm,0.8s					
IPM	**Ipoh**	**47.63 284**	P	**P**	**13 49 37.0**	**+0.3**
TJN	**Taejon**	**48.23 339**	⇓*i*P	**P**	**13 49 42.7**	**+1.8**
NJ2	**Nanjing**	**48.40 328**	⇓*i*P	**P**	**13 49 43.5**	**+1.2**
NJ2			pP	**pP**	**13 49 47.3**	**-0.7**
NJ2			sP	**sP**	**13 49 51.0**	**+0.6**
NJ2			PP	**PP**	**13 51 33.5**	**-1.6**
NJ2			S	**S**	**13 56 43.8**	**+1.6**
NJ2			pmax	pmax		
	comp=Z,97nm,1.0s					
NJ2			pmax	pmax		
	comp=Z,1µm,3.5s					
NJ2			LR	LR		
	comp=Z,3µm,21.8s					
NJ2			LR	LR		
	comp=Z,2µm,22.3s					
NJ2			LR	LR		
	comp=Z,3µm,20.4s					
KSRS	**Korea Array**	**48.99 340**	P	**P**	**13 49 46.8**	**0.0**
	comp=Z,38nm,0.9s,baz=159,slow=9.0,SNR=138					
KSRS			PcP	**PcP**	**13 51 12.0**	**+1.4**
	comp=Z,12nm,0.9s,baz=181,slow=2.8,SNR=6.3					
KSRS			LR	LR	14 08 55.8	
	comp=Z,4µm,20.8s,baz=154,slow=34					
KSAR	**Wonju Array Be**	**49.00 340**	P	**P**	**13 49 46.1**	**-0.7**
KSAR	**Wonju Array Be**	**49.00 340**	P	**P**	**13 49 46.0**	**-0.7**
KS19	**Wonju Array Si**	**49.06 340**	P	**P**	**13 49 46.4**	**-0.9**
RPSI	**Rantau Prapat**	**49.22 281**	P	**P**	**13 49 47.4**	**-1.6**
RPSI			IAmb	IAmb	13 49 54.7	
	comp=Z,85nm,1.3s					
PSI	**Prapat**	**49.24 281**	P	**P**	**13 49 47.4**	**-1.9**
PSI			pmax	pmax		
	comp=Z,85nm,1.3s					
PSI			MLR	MLR		
	comp=Z,1µm,22.0s					
INCN	**Inchon**	**49.47 339**	P	**P**	**13 49 49.5**	**-1.0**
INCN			pmax	pmax		
	comp=Z,43nm,0.8s					
INCN			MLR	MLR		
	comp=Z,2µm,19.0s					
INCN	**Inchon**	**49.47 339**	P	**P**	**13 49 49.5**	**-1.0**
INCN			IAmb	IAmb	13 49 58.1	
	comp=Z,43nm,0.8s					
WHN	**Wuhan**	**49.83 322**	P	**P**	**13 49 55.0**	**+1.7**
WHN			S	**S**	**13 57 04.0**	**+1.6**
WHN			pmax	pmax		
	comp=Z,150nm,1.0s					
WHN			pmax	pmax		
	comp=Z,2µm,7.9s					
WHN			LR	LR		
	comp=Z,3µm,13.6s					
WHN			LR	LR		
	comp=Z,1µm,17.4s					
WHN			LR	LR		
	comp=Z,4µm,20.6s					
GSI	**Gunungsitoli**	**50.23 279**	P	**P**	**13 50 00.0**	**+3.3**
	comp=Z,7µmcomp=Z,342nm,0.8s					
GSI	**Gunungsitoli**	**50.23 279**	P	**P**	**13 49 55.6**	**-1.1**
GSI			IAmb	IAmb	13 50 01.9	
	comp=Z,93nm,1.0s					
GSI			IAMs_20	IAMs_20	14 15 09.0	
	comp=Z,3µm,22.0s					
KCSI	**Kotacane, Aceh**	**50.53 282**	P	**P**	**13 49 59.0**	**0.0**
	comp=Z,1µmcomp=Z,67nm,1.7s					
TPTI		**51.04 281**	P	**P**	**13 50 04.3**	**+1.5**
	comp=Z,570nmcomp=Z,26nm,1.0s					
SLVN	**Son La**	**51.63 306**	P	**P**	**13 50 05.8**	**-1.3**
SNSI	**Sinabang, Aceh**	**51.68 280**	P	P	13 50 14.4	+6.8
PBKT	**Sadao Pong**	**51.88 299**	P	**P**	**13 50 07.7**	**-1.3**
MLSI	**Meulaboh, Aceh**	**52.03 282**	P	P	13 50 17.4	+7.2
YUK	**Yuzh-Kuril'sk**	**52.20 359**	P	**P**	**13 50 07.7**	**-3.1**
YUK			S	**S**	**13 57 30.0**	**-4.8**
GYA	**Guiyang**	**52.30 313**	⇓*i*P	**P**	**13 50 13.5**	**+1.3**
GYA			PP	**PP**	**13 52 12.0**	**+1.1**
GYA			ScP	**ScP**	**13 55 20.3**	**+0.3**
GYA			S	**S**	**13 57 40.8**	**+3.7**
GYA			pmax	pmax		
	comp=Z,50nm,0.9s					
GYA			pmax	pmax		
	comp=Z,610nm,3.5s					
GYA			LR	LR		
	comp=Z,1µm,17.3s					
GYA			LR	LR		
	comp=Z,1µm,19.1s					
GYA			LR	LR		
	comp=Z,2µm,20.4s					
ASAJ	**Asahikawa**	**52.42 356**	LR	LR	14 11 35.7	
	comp=Z,334nm,20.3s,baz=179,slow=35					
TIA	**Tai'an**	**52.54 329**	P	**P**	**13 50 13.3**	**-0.3**
TIA			S	**S**	**13 57 40.0**	**+0.2**
TIA			pmax	pmax		
	comp=Z,100nm,0.8s					
TIA			pmax	pmax		
	comp=Z,680nm,4.1s					
TIA			LR	LR		
	comp=Z,1µm,23.0s					
TIA			LR	LR		
	comp=Z,2µm,21.1s					
TIA			LR	LR		
	comp=Z,3µm,19.1s					
DL2	**Dalian**	**52.66 335**	⇓*i*P	**P**	**13 50 14.3**	**-0.1**
DL2			S	**S**	**13 57 40.3**	**-1.0**
DL2			ScS	**ScS**	**14 00 05.8**	**+2.2**
DL2			pmax	pmax		
	comp=Z,50nm,0.8s					
DL2			pmax	pmax		
	comp=Z,600nm,5.1s					
DL2			LR	LR		
	comp=Z,2µm,21.2s					
DL2			LR	LR		
	comp=Z,1µm,21.6s					
DL2			LR	LR		
	comp=Z,3µm,22.0s					
RAR	**Rarotonga**	**52.75 110**	P	**P**	**13 50 17.4**	**+1.9**
	comp=Z,18nm,0.7s,baz=178,slow=21,SNR=2.7					
VLA	**Vladivostok**	**53.10 346**	*d i*P	**P**	**13 50 17.4**	**-0.1**
VLA			pmax	pmax		
	comp=Z,52nm,1.1s					
TEY	**Ternei**	**54.01 351**	⇓*e*P	**P**	**13 50 23.8**	**-0.4**
TEY			*e*		13 50 32.2	
TEY			pmax	pmax		
	comp=Z,20nm,1.2s					
USA0B	**Ussuriysk Arra**	**54.10 347**	*d i*P	**P**	**13 50 24.7**	**-0.1**
USA0B	**Ussuriysk Arra**	**54.10 347**	P	**P**	**13 50 24.4**	**-0.5**
USRK	**Ussuriysk Ar.**	**54.10 347**	P	**P**	**13 50 24.8**	**0.0**
	comp=Z,74nm,1.0s,baz=171,slow=7.7,SNR=75					
USRK	**Ussuriysk Ar.**	**54.10 347**	P	**P**	**13 50 24.6**	**-0.2**
SNY	**Shenyang**	**54.41 339**	⇓P	**P**	**13 50 26.8**	**-0.4**
SNY			S	**S**	**13 58 05.5**	**+0.5**
SNY			pmax	pmax		
	comp=Z,36nm,1.5s					
SNY			pmax	pmax		
	comp=Z,900nm,7.4s					
SNY			LR	LR		
	comp=Z,3µm,19.1s					
SNY			LR	LR		
	comp=Z,5µm,20.0s					
CM31	**Chiang Mai Arr**	**54.43 300**	P	**P**	**13 50 28.6**	**+0.8**
CMAR	**Chiang Mai Arr**	**54.43 300**	P	**P**	**13 50 29.1**	**+1.3**
	comp=Z,99nm,0.9s,baz=125,slow=5.7,SNR=255					
CMAR			LR	LR	14 16 52.5	
	comp=Z,736nm,18.3s,baz=126,slow=40					
CMAR			PKPPKP	**P'P'df**	**14 20 43.5**	**+1.8**
	comp=Z,0.9nm,0.8s,baz=289,slow=5.5,SNR=4.3					
CMAR	**Chiang Mai Arr**	**54.43 300**	P	**P**	**13 50 28.5**	**+0.7**
CMAR	**Chiang Mai Arr**	**54.43 300**	P	**P**	**13 50 28.5**	**+0.7**
KMI	**Kunming**	**54.50 309**	P	**P**	**13 50 29.8**	**+1.4**
KMI			pP	pP	13 50 33.0	-1.2
KMI			sP	sP	13 50 36.5	0.0
KMI			PP	**PP**	**13 52 33.8**	**+2.9**
KMI			S	**S**	**13 58 05.3**	**-1.9**
KMI			pmax	pmax		
	comp=Z,46nm,0.9s					
KMI			pmax	pmax		
	comp=Z,500nm,3.8s					
KMI			LR	LR		
	comp=Z,1µm,20.0s					
KMI			LR	LR		
	comp=Z,960nm,18.5s					
KMI			LR	LR		
	comp=Z,1µm,23.8s					
CHTO	**Chiang Mai**	**54.58 300**	P	**P**	**13 50 29.5**	**+0.6**
CHTO			pmax	pmax		
	comp=Z,97nm,1.0s					
CHTO	**Chiang Mai**	**54.58 300**	P	**P**	**13 50 29.5**	**+0.6**
CHTO			IAmb	IAmb	13 50 34.6	
	comp=Z,97nm,1.0s					
MDJ	**Mudanjiang**	**55.07 345**	P	**P**	**13 50 31.3**	**-0.6**
MDJ			pP	pP	13 50 34.3	-3.6
MDJ			sP	sP	13 50 36.0	-4.1
MDJ			PcS	**PcS**	**13 55 33.5**	**+0.5**
MDJ			S	**S**	**13 58 14.0**	**+0.2**
MDJ			sS	pS	13 58 18.0	-2.9
MDJ			SS	**SS**	**14 01 58.3**	**+0.3**
MDJ			pmax	pmax		
	comp=Z,27nm,1.1s					
MDJ			pmax	pmax		
	comp=Z,650nm,5.5s					
MDJ			LR	LR		
	comp=Z,2µm,23.4s					
MDJ			LR	LR		
	comp=Z,2µm,24.9s					
MDJ			LR	LR		
	comp=Z,2µm,20.3s					
YSS	**Yuzh-Sakhalins**	**55.24 356**	⇓*e*P	**P**	**13 50 32.9**	**-0.2**
YSS			*e*S	**S**	**13 58 14.7**	**-1.2**
YSS			pmax	pmax		
	comp=Z,40nm,0.8s					
YSS			pmax	pmax		
	comp=Z,800nm,6.7s					
YSS			smax	smax		
	comp=N,600nm,7.7s					
YSS			smax	smax		
	comp=E,600nm,7.7s					
YSS			MLR	MLR		
	comp=N,500nm,14.0s					
YSS			MLR	MLR		
	comp=E,500nm,15.0s					
YSS	**Yuzh-Sakhalins**	**55.24 356**	P	**P**	**13 50 32.7**	**-0.3**
YSS			IAmb	IAmb	13 50 42.2	
	comp=Z,104nm,1.1s					
CN2	**Changchun**	**55.52 341**	*e*P	**P**	**13 50 34.5**	**-0.7**
CN2			PcP	**PcP**	**13 51 32.8**	**-2.3**
CN2			S	**S**	**13 58 13.0**	**-6.9**
CN2			pmax	pmax		
	comp=Z,20nm,1.0s					
XAN	**Xi'an**	**55.55 322**	P	**P**	**13 50 35.8**	**+0.1**
XAN			pP	sP	13 50 44.5	+0.5
XAN			S	**S**	**13 58 27.8**	**+7.0**
XAN			pmax	pmax		
	comp=Z,98nm,1.1s					
XAN			pmax	pmax		
	comp=Z,760nm,3.5s					
XAN			LR	LR		
	comp=Z,880nm,19.6s					
XAN			LR	LR		
	comp=Z,1µm,17.6s					
XAN			LR	LR		
	comp=Z,2µm,18.8s					
BJT	**Baijiatuau**	**55.99 332**	IAMs_20	IAMs_20	14 13 04.3	
	comp=Z,3µm,22.0s					
BJI	**Beijing**	**56.01 332**	⇓*i*P	**P**	**13 50 38.5**	**-0.2**
BJI			pP	**pP**	**13 50 42.8**	**-1.7**
BJI			S	**S**	**13 58 25.0**	**-1.4**
BJI			sS	**sS**	**13 58 35.3**	**-1.0**
BJI			ScS	**ScS**	**14 00 29.3**	**+1.9**
BJI			pmax	pmax		
	comp=Z,52nm,1.1s					
BJI			LR	LR		
	comp=Z,2µm,22.1s					
BJI			LR	LR		
	comp=Z,1µm,22.1s					
BJI			LR	LR		
	comp=Z,3µm,22.8s					
TIY	**Taiyuan**	**56.12 327**	*e*P	**P**	**13 50 40.0**	**+0.3**
TIY			PP	**PP**	**13 52 46.5**	**+1.5**
TIY			S	**S**	**13 58 27.5**	**-0.6**
TIY			pmax	pmax		
	comp=Z,42nm,0.5s					
TIY			LR	LR		
	comp=Z,3µm,24.0s					

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TIY                                   LR       LR
       comp=Z,1µm,15.4s
TIY                                   LR       LR
       comp=Z,3µm,19.9s
XMAS   Kiritimati         56.32  82   P        P        13 50 41.7 +0.2
CD2    Chengdu            56.98 315 ⇓iP        P        13 50 45.0 -0.9
CD2                                   S        S        13 58 32.0 -7.7
CD2                                   SS       SS       14 02 29.0 +0.4
CD2                                   pmax     pmax
       comp=Z,180nm,0.9s
CD2                                   pmax     pmax
       comp=Z,2µm,5.8s
CD2                                   LR       LR
       comp=Z,3µm,23.1s
CD2                                   LR       LR
       comp=Z,5µm,18.2s
CD2                                   LR       LR
       comp=Z,5µm,19.4s
HHC    Hu-ho-hao-te       58.88 329  eP        P        13 50 59.8 +0.6
HHC                                   pP       pP       13 51 03.5 -1.5
HHC                                   sP       sP       13 51 09.0 +1.5
HHC                                   S        S        13 59 05.5 +1.0
HHC                                   LR       LR
       comp=Z,6µm,17.0s
HHC                                   LR       LR
       comp=Z,3µm,17.3s
HHC                                   LR       LR
       comp=Z,6µm,17.1s
KLR    Kul'dur            58.93 348d iP        P        13 50 59.2  0.0
KLR                                   pmax     pmax
       comp=Z,24nm,0.9s
TYV    Tymovskoe          59.14 357  eP        P        13 51 01.4 +0.8
TYV                                  e                  14 00 42.2
TYV                                   pmax     pmax
       comp=Z,30nm,1.1s
TYV                                   MLR      MLR
       comp=N,2µm,19.0s
TYV                                   MLR      MLR
       comp=Z,1µm,19.0s
SKR    Severo-Kuril’s     59.37   7  eP        P        13 51 03.0 +0.9
SKR                                  eS        S        13 59 12.4 +2.3
SKR                                  e                  14 00 52.1
SKR                                   pmax     pmax
       comp=Z,84nm,1.1s
SKR                                   pmax     pmax
       comp=Z,300nm,3.0s
SKR                                   MLR      MLR
       comp=Z,400nm,18.0s
BTO    Baotou             59.51 328   P        P        13 51 04.3 +0.8
BTO                                   S        S        13 59 12.8 +0.2
GRNR   Gornyy             59.64 352 ⇓iP        P        13 51 04.1  0.0
GRNR                                 eS        S        13 59 17.1 +3.4
GRNR                                  pmax     pmax
       comp=Z,20nm,1.2s
GRNR                                  smax     smax
       comp=N,2.0nm,1.1s
LZH    Lanzhou            60.05 320  ⇓P        P        13 51 09.0 +1.6
LZH                                   pP       pP       13 51 12.3 -0.9
LZH                                   S        S        13 59 21.8 +1.9
LZH                                   sS       sS       13 59 29.0 -0.4
LZH                                   SS       SS       14 03 15.0 -2.0
LZH                                   pmax     pmax
       comp=N,210nm,1.3s
LZH                                   pmax     pmax
       comp=N,1µm,6.5s
LZH                                   LR       LR
       comp=N,1µm,15.3s
LZH                                   LR       LR
       comp=N,1µm,15.4s
LZH                                   LR       LR
       comp=N,2µm,18.0s
KIP    Kipapa             61.53  60   P        P        13 51 18.8 +1.2
KIP                                   pmax     pmax
       comp=Z,109nm,0.9s
KIP    Kipapa             61.53  60   P        P        13 51 18.8 +1.2
NKL    Nikolayevsk        61.55 356  eP        P        13 51 17.2 +0.2
NKL                                  e                  13 51 58.7
NKL                                   pmax     pmax
       comp=N,4.0nm,1.2s
NKL                                   pmax     pmax
       comp=E,2.0nm,1.2s
NKL                                   pmax     pmax
       comp=Z,76nm,1.2s
NKL                                   pmax     pmax
       comp=Z,163nm,3.3s
PEA0B  Petropavlovsk-     61.94   7d iP        P        13 51 20.9 +1.2
PEA0B  Petropavlovsk-     61.94   7   P        P        13 51 19.2 -0.5
PETK   Petropavlovsk-     61.94   7   P        P        13 51 20.2 +0.5
       comp=Z,161nm,1.0s,baz=178,slow=6.8,SNR=41
PETK                                  LR       LR       14 14 45.7
       comp=Z,1µm,21.5s,baz=195,slow=33
PETK                                  PKP2bc            14 20 39.2
       comp=Z,3.7nm,0.8s,baz=270,slow=8.9,SNR=3.8
PETK   Petropavlovsk-     61.94   7   P        P        13 51 19.5 -0.2
PET    Petropavlovsk      61.98   8 ⇓iP        P        13 51 20.6 +0.7
PET                                   pmax     pmax
       comp=Z,63nm,1.0s
PET    Petropavlovsk      61.98   8   P        P        13 51 19.3 -0.7
HIA    Hailar             62.20 340   IAMs_20  IAMs_20  14 19 22.6
       comp=Z,2µm,18.0s
PPT2   Papeete2           62.21 105  eP        P        13 51 24.3 +2.0
       comp=Z,47nm,0.9s
PPT2                                 eS        S        13 59 46.9 -1.0
       comp=Z,1µm,24.8s
PPT2                                 eLQ       LQ       14 07 14.0
       comp=Z,14µm,34.5s
PPT2                                 eLR       LR       14 09 54.7
       comp=Z,7µm,24.0s,baz=267
PPT    Papeete            62.21 105   LR       LR       14 13 21.0
       comp=Z,2µm,21.8s,baz=272,slow=31
BRDH   Bariadhala         62.39 301   LR       LR       14 20 31.8
       comp=Z,260nm,19.8s,baz=140,slow=38
TIAR   Tiarei             62.43 105  eP        P        13 51 25.9 +2.1
       comp=Z,26nm,0.8s
TBI    Tubuai             62.43 112  eP        P        13 51 25.7 +2.1
       comp=Z,251nm,1.2s
TBI                                  eS        S        13 59 50.0 -0.3
       comp=Z,1µm,31.2s
TBI                                  eLQ       LQ       14 07 21.6
       comp=Z,6µm,29.0s
TBI                                  eLR       LR       14 10 01.0
       comp=Z,4µm,25.2s,baz=277
TVO    Taravao            62.52 106  eP        P        13 51 26.5 +2.1
       comp=Z,18nm,0.7s
HUH    Hualalai           62.79  63   P        P        13 51 25.9 -0.5
KHU    Kahuku             62.83  63   P        P        13 51 26.1 -0.5
KHU    Kahuku             62.83  63   P        P        13 51 26.1 -0.5
CASY   Casey              62.97 196   P        P        13 51 27.2 +0.8
CASY                                  IAmb     IAmb     13 51 33.4
       comp=Z,42nm,0.8s
HPAH   Hawaii Prepara     63.03  63   P        P        13 51 26.8 -1.0
HMH    Humu‘ula Sheep     63.07  63   P        P        13 51 28.0 -0.3
POHA   Pohakuloa          63.08  63   P        P        13 51 27.8 -0.5
MEH    Mehetia            63.65 106  eP        P        13 51 33.6 +1.8
       comp=Z,19nm,0.8s
PMOR   Pomariorio Ree     63.88 103  eP        P        13 51 35.4 +2.0
       comp=Z,115nm,0.9s
ZEA    Zeya               64.13 347  eP        P        13 51 34.8 +0.6
ZEA                                  eS        S        14 00 12.0 +1.7
ZEA                                   pmax     pmax
       comp=N,180nm,1.0s
ZEA                                   pmax     pmax
       comp=E,24nm,1.0s
ZEA                                   pmax     pmax
       comp=Z,250nm,1.2s
ZEA                                   pmax     pmax
       comp=Z,700nm,7.0s
ZEA                                   smax     smax
       comp=E,700nm,14.0s
GTA    Gaotai             64.60 321   P        P        13 51 38.5 +0.7
GTA                                   pP       pP       13 51 43.0 -0.7
GTA                                   sP       sP       13 51 45.8 -0.3
GTA                                   S        S        14 00 15.8 -1.3
GTA                                   SS       SS       14 04 29.8 +1.6
GTA                                   pmax     pmax
       comp=E,43nm,1.1s
GTA                                   pmax     pmax
       comp=E,780nm,6.2s
GTA                                   LR       LR
       comp=E,700nm,20.6s
GTA                                   LR       LR
       comp=E,540nm,19.2s
GTA                                   LR       LR
       comp=E,880nm,23.4s
LSA    Lhasa              65.71 308   P        P        13 51 47.0 +1.4
ULN    Ulaanbaatar        66.22 332d iP        P        13 51 48.8 +0.6
ULN                                   pmax     pmax
       comp=Z,55nm,1.0s
ULN    Ulaanbaatar        66.22 332   P        P        13 51 48.7 +0.5
ULN    Ulaanbaatar        66.22 332   IAMs_20  IAMs_20  14 19 25.9
       comp=Z,2µm,21.0s
SONM   Songino Array      66.51 331   P        P        13 51 50.6 +0.6
       comp=Z,50nm,1.0s,baz=150,slow=7.2,SNR=137
SONM                                  PKPPKP            14 20 23.6
       comp=Z,2.6nm,0.8s,baz=291,slow=2.3,SNR=7.8
SONM                                  LR       LR       14 22 58.2
       comp=Z,2µm,18.6s,baz=134,slow=38
SONM   Songino Array      66.51 331   P        P        13 51 49.5 -0.5
SONM                                  pmax     pmax
       comp=Z,85nm,1.2s
SONM   Songino Array      66.51 331   P        P        13 51 49.5 -0.5
CIT    Chita              66.68 338  eP        P        13 51 51.6 +0.7
CIT                                  e                  13 52 01.1
CIT                                  e                  13 52 19.2
CIT                                   pmax     pmax
       comp=Z,167nm,2.0s
TAPN   Taplejung          67.50 304  eP        P        13 51 57.7 +0.8
       comp=Z,438nm,1.1s
ODAN   Odare              67.57 303  eP        P        13 51 57.9 +0.6
       comp=Z,348nm,1.0s
CHLP   Challavanipeta     67.61 294  eP        P        13 51 57.1 -0.3
CHLP                                  IAmb     IAmb     13 52 03.2
       comp=Z,66nm,1.0s
CHLP                                 eS        S        14 00 54.3 +0.1
MA2    Magadan            67.82   2   LR       LR       14 17 52.0
       comp=Z,549nm,21.6s,baz=177,slow=33
MA2    Magadan            67.82   2d iP        P        13 51 57.5 -0.4
MA2                                   pmax     pmax
       comp=Z,53nm,0.9s
MA2    Magadan            67.82   2   P        P        13 51 56.9 -0.9
PALK   Pallekele          67.92 281d iP        P        13 52 00.1 +0.6
PALK                                  pmax     pmax
       comp=Z,51nm,1.0s
PALK   Pallekele          67.92 281   P        P        13 51 59.1 -0.4
PALK                                  IAmb     IAmb     13 52 02.4
       comp=Z,47nm,0.9s
RAMN   Ramite             68.26 303  eP        P        13 52 02.4 +0.8
       comp=Z,185nm,1.0s
JIRN   Jiri               68.86 304  eP        P        13 52 06.0 +0.4
       comp=Z,153nm,0.8s
GUN    Gumba              69.21 304  eP        P        13 52 08.5 +0.8
       comp=Z,402nm,0.8s
PVM    Polavaram          69.47 292  eP        P        13 52 08.8 -0.2
PVM                                   IAmb     IAmb     13 52 11.2
       comp=Z,20nm,0.8s
PVM                                  eS        S        14 01 17.3 +1.1
PKI    Pulchoki           69.47 303  eP        P        13 52 09.7 +0.4
       comp=Z,219nm,1.0s
PKIN   Phulchoki          69.48 303  eP        P        13 52 09.7 +0.4
       comp=Z,132nm,0.9s
VNDA   Vanda              69.53 177   P        P        13 52 09.5 +1.1
       comp=Z,13nm,0.9s,baz=324,slow=7.2,SNR=24
VNDA                                  PKPPKP   P'P'df   14 20 18.5 +0.7
       comp=Z,0.9nm,1.1s,baz=117,slow=2.3,SNR=2.5
VNDA                                  LR       LR       14 20 23.2
       comp=Z,2µm,19.3s,baz=352,slow=34
VNDA   Vanda              69.53 177   P        P        13 52 09.0 +0.7
KKN    Kakani             69.66 304  eP        P        13 52 10.9 +0.6
       comp=Z,256nm,0.9s
DMN    Daman              69.74 303  eP        P        13 52 11.6 +0.8
       comp=Z,442nm,1.0s
ZAK    Zakamensk          69.75 332  eP        P        13 52 10.9 +0.7
ZAK                                   pmax     pmax
       comp=Z,123nm,1.2s
MYLAV  Mylavaram          70.24 291  eP        P        13 52 13.5 -0.3
MYLAV                                 IAmb     IAmb     13 52 18.8
       comp=Z,28nm,1.0s
MYLAV                                eS        S        14 01 26.8 +1.4
GKN    Gorkha             70.27 304  eP        P        13 52 14.6 +0.6
       comp=Z,325nm,0.8s
SKHT   Srikalahasti       70.34 288  eP        P        13 52 14.2 -0.2
SKHT                                  IAmb     IAmb     13 52 21.5
       comp=Z,15nm,0.9s
SKHT                                 eS        S        14 01 28.5 +2.0
TLY    Talaya             70.48 333d iP        P        13 52 15.1 +0.5
TLY                                  eS        S        14 01 30.7 +3.7
TLY                                  e                  14 02 14.6
TLY                                   pmax     pmax
       comp=Z,155nm,1.5s
TLY                                   MLR      MLR
       comp=Z,3µm,17.0s
TLY    Talaya             70.48 333   P        P        13 52 14.1 -0.5
TLY                                   IAMs_20  IAMs_20  14 23 04.6
       comp=Z,2µm,21.0s
IRK    Irkutsk            70.60 334  eP        P        13 52 14.7 -0.6
IRK                                   pmax     pmax
       comp=Z,115nm,2.8s
ADKI   Addanki            70.62 290  eP        P        13 52 15.6 -0.5
ADKI                                  IAmb     IAmb     13 52 18.5
       comp=Z,42nm,1.4s
ADKI                                 eS        S        14 01 28.2 -1.6
DANN   Dangsing           71.11 304  eP        P        13 52 19.6 +0.3
       comp=Z,362nm,0.9s
SEY    Seymchan           71.24   3   PKPPKP   P'P'df   14 20 17.1 +6.3
       comp=Z,2.2nm,1.0s,baz=322,slow=1.3,SNR=3.8
SEY    Seymchan           71.24   3 ⇑iP        P        13 52 19.3 +0.4
BOD    Bodaibo            71.26 342  eP        P        13 52 18.0 -1.1
BOD                                   pmax     pmax
       comp=Z,48nm,1.2s
NJS    Nagarjunasagar     71.42 291  eP        P        13 52 20.7 -0.3
NJS                                   IAmb     IAmb     13 52 27.6
       comp=Z,31nm,1.2s
NJS                                  eS        S        14 01 40.0 +0.9
YAK    Yakutsk            71.50 351   LR       LR       14 22 17.5
       comp=Z,294nm,21.1s,baz=152,slow=35
YAK    Yakutsk            71.50 351  eP        P        13 52 20.0 -0.5
YAK                                  e*PP      PcP      13 52 35.0 -4.9
YAK                                  e                  13 55 02.3
YAK                                  eS        S        14 01 37.9 -0.4
YAK                                  e*SS      SKiKP    14 01 59.9 +0.4
YAK                                  e                  14 02 10.4
YAK                                  eSS       SS       14 06 09.8 -3.9
YAK                                   pmax     pmax
       comp=Z,65nm,1.0s
YAK                                   pmax     pmax
       comp=N,28nm,1.0s
YAK                                   pmax     pmax
       comp=E,7.0nm,0.9s
YAK                                   pmax     pmax
       comp=Z,70nm,2.6s
YAK                                   pmax     pmax
       comp=N,106nm,3.3s
YAK                                   pmax     pmax
       comp=E,52nm,2.2s
YAK                                   smax     smax
       comp=E,472nm,4.9s
YAK                                   smax     smax
       comp=N,254nm,4.6s
YAK                                   MLR      MLR
       comp=E,441nm,19.0s
YAK    Yakutsk            71.50 351   P        P        13 52 19.9 -0.6
YAK                                   IAmb     IAmb     13 52 33.8
       comp=Z,69nm,1.0s
MOY    Mondy              71.69 332  eP        P        13 52 22.7 +0.7
MOY                                   pmax     pmax
       comp=Z,213nm,3.0s
SRLM   Srisailam          71.69 290  eP        P        13 52 22.3 -0.4
SRLM                                  IAmb     IAmb     13 52 24.5
       comp=Z,42nm,1.3s
SRLM                                 eS        S        14 01 42.8 +0.6
TAOE   Nuku Hiva Isla     71.88  97  eLR       LR       14 14 19.0
       comp=Z,2µm,24.4s,baz=268
RPR    Rampur             72.04 293  eP        P        13 52 24.4 -0.2
RPR                                   IAmb     IAmb     13 52 26.6
       comp=Z,28nm,0.9s
HYB    Hyderabad          72.34 291  i P       P        13 52 25.0 -1.5
       comp=Z,70nm,1.0s
HYBB   Hyderabad (bro     72.34 291  eP        P        13 52 25.9 -0.6
HYBB                                  IAmb     IAmb     13 52 28.1
       comp=Z,29nm,1.1s
HYBB                                 eS        S        14 01 49.3 -0.5
SRSP   Sriramsagar        72.92 293  eP        P        13 52 29.4 -0.5
SRSP                                  IAmb     IAmb     13 52 31.6
       comp=Z,32nm,1.0s
SRSP                                 eS        S        14 01 56.2 -0.1
URV    Uravakonda         72.93 288  eP        P        13 52 29.8 -0.3
URV                                   IAmb     IAmb     13 52 34.6
       comp=Z,30nm,1.0s
URV                                  eS        S        14 01 55.2 -1.4
KLRI   Killari            74.31 291  eP        P        13 52 37.5 -0.7
KLRI                                  IAmb     IAmb     13 52 39.2
       comp=Z,18nm,0.9s
KLRI                                 eS        S        14 02 11.9 -0.2
WMQ    Urumqi             74.62 320   P        P        13 52 40.0 +0.5
WMQ                                   pP       pP       13 52 44.8 -0.7
WMQ                                   PcP      PcP      13 52 52.5 -1.3
WMQ                                   S        S        14 02 14.5 -0.3
WMQ                                   pmax     pmax
       comp=Z,87nm,1.3s
WMQ                                   pmax     pmax
       comp=Z,620nm,4.1s
WMQ                                   LR       LR
       comp=Z,590nm,19.1s
WMQ                                   LR       LR
       comp=Z,340nm,21.1s
WMQ                                   LR       LR
       comp=Z,780nm,20.9s
BILL   Bilibino           77.47   7c iP        P        13 52 54.3 -0.8
BILL                                 i                  13 53 10.1
BILL                                 i                  13 55 48.9
BILL                                 i SS      SS       14 07 42.6 -1.8
BILL                                  pmax     pmax
       comp=Z,64nm,1.1s
BILL                                  MLR      MLR
       comp=Z,548nm,19.0s
BILL   Bilibino           77.47   7   P        P        13 52 54.6 -0.6
BILL                                  IAmb     IAmb     13 53 00.6
       comp=Z,96nm,1.0s
DGZ    Jazzator, Alta     77.60 325d iP        P        13 52 56.8 +0.4
DGZ                                   pmax     pmax
       comp=Z,109nm,0.9s
GAMB   Gambell            78.44  17   P        P        13 52 59.9 -0.6
GAMB                                  IAMs_20  IAMs_20  14 26 54.2
       comp=Z,2µm,19.0s
MK31   Makanchi Array     79.36 321  i P       P        13 53 06.3 +0.2
MK31   Makanchi Array     79.36 321   P        P        13 53 06.1  0.0
MKAR   Makanchi Array     79.36 321   P        P        13 53 06.5 +0.4
       comp=Z,47nm,0.8s,baz=108,slow=6.0,SNR=318
MKAR                                  PKKPbc   PKKPbc   14 11 57.5 -0.6
       comp=Z,1.1nm,0.7s,baz=298,slow=2.6,SNR=12
MKAR                                  PKPPKP            14 20 02.2
       comp=Z,1.0nm,0.8s,baz=263,slow=2.1,SNR=7.7
MKAR   Makanchi Array     79.36 321   P        P        13 53 05.9 -0.2
MAKZ   Makanchi           79.56 321  i P       P        13 53 07.5 +0.3
MAKZ                                  pmax     pmax
       comp=Z,99nm,1.0s
MAKZ   Makanchi           79.56 321   P        P        13 53 06.9 -0.3
MAKZ                                  IAmb     IAmb     13 53 13.1
       comp=Z,124nm,1.1s
PDGK   Podgornoye         79.83 317  i P       P        13 53 09.2 +0.4
PDGK                                  pmax     pmax
       comp=Z,75nm,0.8s
MAW    Mawson             80.06 203   P        P        13 53 10.6 +1.2
       baz=80,SNR=30
MAW    Mawson             80.06 203   P        P        13 53 10.5 +1.1
       comp=Z,37nm,0.7s,baz=91,slow=8.5,SNR=15
MAW                                   LR       LR       14 28 33.2
       comp=Z,1µm,19.0s,baz=83,slow=36
MAW    Mawson             80.06 203   P        P        13 53 10.4 +1.0
MAW                                   pmax     pmax
       comp=Z,10.0nm,0.8s
MAW    Mawson             80.06 203   P        P        13 53 10.4 +1.0
TIXI   Tiksi              80.79 354   PKKPbc   PKKPbc   14 11 55.7 -0.1
       comp=Z,0.8nm,0.3s,baz=6.2,slow=3.0,SNR=4.0
TIXI                                  PKPPKP   P'P'df   14 19 56.3 +2.3
       comp=Z,1.0nm,0.4s,baz=333,slow=1.2,SNR=4.5
TIXI   Tiksi              80.79 354 ⇑iP        P        13 53 12.1 -1.1
TIXI                                  pmax     pmax
       comp=Z,23nm,1.0s
TIXI   Tiksi              80.79 354   P        P        13 53 11.1 -2.1
ANM    Nome               80.95  19   P        P        13 53 13.8 -0.4
ANM                                   pmax     pmax
       comp=Z,47nm,1.2s
ANM    Nome               80.95  19   P        P        13 53 13.8 -0.4
ANM                                   IAMs_20  IAMs_20  14 27 45.4
       comp=Z,1µm,21.0s
KSH    Kashi              81.00 312   P        P        13 53 17.0 +1.8
KSH                                   pP       PcP      13 53 21.5 -0.1
KSH                                   PP       PP       13 56 24.3 +4.1
KSH                                   S        S        14 03 25.8 +1.9
KSH                                   sS       SKSac    14 03 33.5 -0.2
KSH                                   pmax     pmax
       comp=Z,84nm,1.0s
KSH                                   pmax     pmax
       comp=Z,2µm,7.0s
KSH                                   LR       LR
       comp=Z,2µm,18.9s
KSH                                   LR       LR
       comp=Z,1µm,16.4s
KSH                                   LR       LR
       comp=Z,880nm,14.6s
ZAA0   Zalesovo Array     81.05 328   P        P        13 53 13.7 -1.2
ZAA0                                  IAMs_20  IAMs_20  14 28 27.8
       comp=Z,2µm,21.0s
ZALV   Zalesovo Beam      81.05 328   P        P        13 53 14.2 -0.7
       comp=Z,75nm,0.8s,baz=112,slow=5.0,SNR=188
ZALV                                  PP       PP       13 56 19.8 -0.3
       comp=Z,4.4nm,0.8s,baz=112,slow=9.8,SNR=3.3
ZALV                                  PKKPbc   PKKPbc   14 11 52.9 -1.6
       comp=Z,2.4nm,0.7s,baz=289,slow=4.5,SNR=8.8
ZALV                                  PKPPKP   P'P'df   14 19 54.2 -0.5
       comp=Z,0.7nm,0.6s,baz=318,slow=1.9,SNR=3.6
ZALV                                  LR       LR       14 28 49.1
       comp=Z,2µm,20.1s,baz=118,slow=36
ZALV   Zalesovo Beam      81.05 328   P        P        13 53 13.8 -1.1
NIL    Nilore             81.34 306   P        P        13 53 17.3 +0.2
NIL                                   pmax     pmax
       comp=Z,258nm,0.8s
NIL                                   MLR      MLR
       comp=Z,600nm,19.0s
NIL    Nilore             81.34 306   P        P        13 53 17.2 +0.2
OHAK   Old Harbor         81.38  28   P        P        13 53 16.3 -0.3
ULHL   Ulahol             81.69 315   P        P        13 53 19.7 +0.7
       SNR=64
KDAK   Kodiak Island      81.99  28   P        P        13 53 18.1 -1.7
KDAK                                  pmax     pmax
       comp=Z,57nm,1.3s
KDAK   Kodiak Island      81.99  28   P        P        13 53 18.1 -1.7
KDAK                                  IAmb     IAmb     13 53 32.1
       comp=Z,57nm,1.3s
KZA    Kyzart             82.33 314   P        P        13 53 23.9 +1.3
       SNR=105
TKM2   Tokmak 2           82.36 315   P        P        13 53 22.8 +0.4
       SNR=26
TKM2   Tokmak 2           82.36 315  i P       P        13 53 21.5 -0.9
TKM2                                  pmax     pmax
       comp=Z,32nm,0.9s
SVW2   Sparrevohn         82.40  24   P        P        13 53 21.9 -0.1
SVW2                                  IAmb     IAmb     13 53 51.5
       comp=Z,43nm,1.0s
SVW2                                  IAMs_20  IAMs_20  14 27 50.8
       comp=Z,1µm,19.0s
KBK    Karagaybulak       82.73 315   P        P        13 53 25.0 +0.7
       SNR=15
UCH    Uchtor             82.90 314   P        P        13 53 26.6 +1.0
       SNR=76
CHMS   Chumysh            82.97 315   P        P        13 53 25.8 +0.4
       SNR=19
CHMS   Chumysh            82.97 315  i P       P        13 53 24.3 -1.1
CHMS                                  pmax     pmax
       comp=Z,85nm,1.1s
FRU1   Bishkek            83.00 315   P        P        13 53 25.9 +0.3
FRU1                                  pmax     pmax
       comp=Z,53nm,1.0s
FRU1   Bishkek            83.00 315   P        P        13 53 25.9 +0.3
FRU1                                  IAmb     IAmb     13 53 31.6
       comp=Z,53nm,0.9s
AAK    Ala-Archa          83.04 315   P        P        13 53 26.5 +0.6
       SNR=29
AAK    Ala-Archa          83.04 315   P        P        13 53 25.4 -0.5
AAK    Ala-Archa          83.04 315   P        P        13 53 25.5 -0.5
AAK                                   IAmb     IAmb     13 53 34.4
       comp=Z,50nm,0.8s
KURK   Kurchatov          83.14 323d iP        P        13 53 26.2 +0.2
KURK                                  pmax     pmax
       comp=Z,65nm,1.2s
KURK   Kurchatov          83.14 323   P        P        13 53 25.7 -0.3
KURK   Kurchatov          83.14 323            PKKPbc   14 11 50.2 +0.7
KURBB  Kurchatov Arra     83.16 323   PKKPbc   PKKPbc   14 11 50.2 +0.7
       comp=Z,1.5nm,0.9s,baz=300,slow=2.7,SNR=9.6
KURBB  Kurchatov Arra     83.16 323   P        P        13 53 24.8 -1.3
USP    Ospenovka          83.23 315   P        P        13 53 27.3 +0.6
       SNR=32
RSO    Redoubt South      83.25  26   P        P        13 53 26.1 -0.5
AML    Almayashu          83.45 314   P        P        13 53 28.9 +0.5
       SNR=116
CNPM   China Poot         83.46  27   P        P        13 53 26.8 -0.7
CNPM                                  IAMs_20  IAMs_20  14 28 13.1
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	comp=Z,1µm,20.0s						
EKS2	Erkin-Say	83.55	315	P	P	13 53 29.0	+0.5
	SNR=57						
BRLK	Bradley Lake	83.73	27	P	P	13 53 28.9	0.0
BRLK				IAmb	IAmb	13 53 56.8	
	comp=Z,36nm,1.0s						
RDOG	Red Dog Mine	84.02	17	P	P	13 53 29.4	-0.7
RDOG				IAmb	IAmb	13 53 35.5	
	comp=Z,52nm,1.0s						
RDOG				IAMs_20	IAMs_20	14 30 07.1	
	comp=Z,1µm,20.0s						
SKT	Skwentna	84.52	25	P	P	13 53 29.7	-3.2
SEW	Seward	84.53	27	P	P	13 53 30.7	-2.1
SUA	Susitna One	84.60	25	P	P	13 53 31.6	-1.8
PPLA	Purkeypile	84.71	24	P	P	13 53 32.7	-1.2
PPLA				IAMs_20	IAMs_20	14 26 44.0	
	comp=Z,1µm,21.0s						
RC01	Rabbit Creek A	84.86	26	P	P	13 53 33.3	-1.3
RC01				IAmb	IAmb	13 54 03.4	
	comp=Z,48nm,1.1s						
KBL	Kabul	84.94	306	P	P	13 53 34.8	-1.1
KBL				pmax	pmax		
	comp=Z,24nm,0.9s						
KBL	Kabul	84.94	306	P	P	13 53 34.8	-1.1
PMR	Palmer	85.35	26	P	P	13 53 35.8	-1.2
PMR	Palmer	85.35	26	P	P	13 53 35.8	-1.2
GHO	Glory Hole Cre	85.52	25	P	P	13 53 36.5	-1.5
GHO				IAmb	IAmb	13 54 21.6	
	comp=Z,60nm,1.3s						
KTH	Kantishna Hill	85.53	23	P	P	13 53 36.3	-1.7
KTH				IAMs_20	IAMs_20	14 27 21.7	
	comp=Z,2µm,21.0s						
KNK	Knik Glacier	85.55	26	P	P	13 53 37.1	-1.0
KNK				IAmb	IAmb	13 53 44.7	
	comp=Z,41nm,1.1s						
IMAR	Indian Mountai	85.71	21	P	P	13 53 37.0	-1.7
TRF	Thorofare Moun	85.73	24	P	P	13 53 37.4	-1.7
BPAW	Bear Paw Mtn.	85.77	23	P	P	13 53 37.4	-1.7
SML	Sawmill	85.78	25	P	P	13 53 38.2	-1.0
SML				pmax	pmax		
	comp=Z,52nm,1.0s						
SML	Sawmill	85.78	25	P	P	13 53 38.2	-1.0
SML				IAmb	IAmb	13 54 13.1	
	comp=Z,52nm,1.0s						
GLI	Glacier Island	85.92	27	P	P	13 53 39.2	-0.7
GLI				IAmb	IAmb	13 53 44.4	
	comp=Z,43nm,1.0s						
HIN	Hinchinbrook I	85.98	27	P	P	13 53 39.9	-0.3
HIN				IAmb	IAmb	13 53 44.9	
	comp=Z,37nm,1.1s						
KK31	Karatay Array	85.98	314	*i* P	P	13 53 40.7	+0.1
KK31	Karatay Array	85.98	314	P	P	13 53 40.2	-0.3
KKAR	Karatay Array	85.98	314	P	P	13 53 39.9	-0.7
KKAR	Karatay Array	85.98	314	P	P	13 53 40.1	-0.5
KKAR				IAmb	IAmb	13 53 46.0	
	comp=Z,52nm,0.9s						
KKAR	Karatay Array	85.98	314	P	P	13 53 39.9	-0.7
FID	Port Fidalgo	86.14	27	P	P	13 53 40.0	-0.9
FID				IAmb	IAmb	13 54 13.1	
	comp=Z,54nm,1.2s						
SCM	Sheep Creek Mo	86.22	26	P	P	13 53 40.5	-1.0
SCM				pmax	pmax		
	comp=Z,65nm,1.0s						
SCM	Sheep Creek Mo	86.22	26	P	P	13 53 40.5	-1.0
SCM				IAmb	IAmb	13 54 10.3	
	comp=Z,65nm,1.0s						
RND	Reindeer	86.29	24	P	P	13 53 40.1	-1.6
RND				pmax	pmax		
	comp=Z,42nm,0.9s						
RND				MLR	MLR		
	comp=Z,2µm,20.0s						
RND	Reindeer	86.29	24	P	P	13 53 40.1	-1.6
RND				IAmb	IAmb	13 54 09.0	
	comp=Z,42nm,0.9s						
RND				IAMs_20	IAMs_20	14 32 07.6	
	comp=Z,1µm,20.0s						
MLY	Manley	86.32	22	P	P	13 53 40.6	-1.2
MLY				IAMs_20	IAMs_20	14 27 18.3	
	comp=Z,1µm,22.0s						
BWN	Browne	86.39	23	IAMs_20	IAMs_20	14 27 59.2	
	comp=Z,1µm,20.0s						
TAS	Tashkent	86.40	312	P	P	13 53 43.1	+0.4
TAS				pmax	pmax		
	comp=Z,85nm,0.4s						
MCK	McKinley	86.40	24	P	P	13 53 40.6	-1.6
MCK				pmax	pmax		
	comp=Z,65nm,1.0s						
MCK				MLR	MLR		
	comp=Z,2µm,20.0s						
MCK	McKinley	86.40	24	P	P	13 53 40.5	-1.6
MCK				IAmb	IAmb	13 54 09.6	
	comp=Z,65nm,1.0s						
MCK				IAMs_20	IAMs_20	14 36 00.6	
	comp=Z,1µm,20.0s						
NEA	Nenana	86.73	23	P	P	13 53 41.5	-2.2
NEA				IAmb	IAmb	13 53 49.6	
	comp=Z,92nm,1.9s						
DHY	Denali Highway	86.74	25	P	P	13 53 43.1	-1.0
DHY				IAMs_20	IAMs_20	14 29 55.8	
	comp=Z,1µm,20.0s						
RAGM	Ragged Mountai	86.80	28	P	P	13 53 43.6	-0.6
RAGM				IAmb	IAmb	13 54 14.2	
	comp=Z,50nm,1.2s						
RAGM				IAMs_20	IAMs_20	14 27 08.7	
	comp=Z,1µm,21.0s						
WRH	Wood River Hil	87.06	23	P	P	13 53 43.9	-1.5
WRH				IAmb	IAmb	13 54 10.8	
	comp=Z,28nm,1.0s						
MDM	Murphy Dome	87.23	23	P	P	13 53 43.9	-2.4
MDM				IAmb	IAmb	13 53 51.8	
	comp=Z,41nm,1.5s						
CCB	Clear Creek Bu	87.25	23	P	P	13 53 44.1	-2.2
CCB				IAmb	IAmb	13 53 50.5	
	comp=Z,36nm,1.0s						
TCOL	CIGO, UAF Yank	87.33	23	P	P	13 53 44.7	-2.0
	baz=244						
COLA	College	87.34	23	P	P	13 53 44.6	-2.1
COLA				pmax	pmax		
	comp=Z,45nm,1.0s						
COLA				MLR	MLR		
	comp=Z,1µm,20.0s						
COLA	College	87.34	23	P	P	13 53 44.5	-2.1
COLA				IAmb	IAmb	13 53 50.2	
	comp=Z,46nm,1.0s						
COLA	College	87.34	23	IAMs_20	IAMs_20	14 33 04.2	
	comp=Z,971nm,20.0s						
HARP	HAARP	87.39	26	IAMs_20	IAMs_20	14 28 29.0	
	comp=Z,1µm,20.0s						
HDA	Harding Lake	87.48	23	P	P	13 53 45.3	-2.1
HDA				IAmb	IAmb	13 53 53.3	
	comp=Z,37nm,1.1s						
HDA				IAMs_20	IAMs_20	14 29 33.4	
	comp=Z,1µm,20.0s						
HDA	Harding Lake	87.48	23	P	P	13 53 45.8	-1.6
	baz=245						
NRIK	Noril'sk	87.55	342	P	P	13 53 47.5	-0.2
	comp=Z,38nm,0.8s,baz=119,slow=4.6,SNR=34						
NRIK				PP	PP	13 57 12.4	-0.4
	comp=Z,3.9nm,0.6s,baz=99,slow=3.7,SNR=1.9						
NRIK				LR	LR	14 33 36.7	
	comp=Z,2µm,19.5s,baz=122,slow=36						
NRIK	Noril'sk	87.55	342	⇑*i*P	P	13 53 47.1	-0.6
COLD	Coldfoot	87.56	20	P	P	13 53 46.9	-0.8
GLB	Gilahina Butte	87.60	27	P	P	13 53 47.4	-0.8
GLB				IAmb	IAmb	13 53 53.0	
	comp=Z,34nm,1.0s						
POKR	Poker Plat Res	87.60	23	P	P	13 53 47.1	-0.9
	baz=244						
CRQM	Cirque	87.65	27	P	P	13 53 47.8	-0.8
CRQM				IAmb	IAmb	13 53 53.6	
	comp=Z,38nm,0.9s						
IL31		87.66	23	P	P	13 53 45.7	-2.5
ILAR	Eielson Array	87.66	23	P	P	13 53 46.4	-1.9
	comp=Z,24nm,0.5s,baz=259,slow=4.6,SNR=124						
ILAR				PKKPbc	PKKPbc	14 11 39.1	-0.2
	comp=Z,0.6nm,0.6s,baz=321,slow=0.2,SNR=6.0						
ILAR				LR	LR	14 29 29.7	
	comp=Z,664nm,20.6s,baz=265,slow=33						
VRDI	Verde Repeater	87.68	27	P	P	13 53 48.0	-0.7
VRDI				IAmb	IAmb	13 53 55.8	
	comp=Z,38nm,1.2s						
TGL	Tana Glacier	87.79	28	P	P	13 53 48.5	-0.6
TGL				IAmb	IAmb	13 53 56.4	
	comp=Z,65nm,1.4s						
MCARA	McCarthy VSAT	87.93	27	P	P	13 53 49.0	-0.7
MCARA				IAmb	IAmb	13 54 22.0	
	comp=Z,51nm,1.1s						
RIDG	Independent Ri	88.05	24	P	P	13 53 49.5	-0.8
RIDG				IAMs_20	IAMs_20	14 36 54.5	
	comp=Z,1µm,20.0s						
BALM	Baldy	88.11	27	P	P	13 53 49.9	-0.8
BALM				pmax	pmax		
	comp=Z,61nm,1.3s						
BALM	Baldy	88.11	27	P	P	13 53 49.9	-0.8
BALM				IAmb	IAmb	13 53 58.6	
	comp=Z,61nm,1.3s						
MENT	Mentasta	88.21	25	P	P	13 53 50.6	-0.4
SYO	Syowa Base	88.36	200	⇓*i*P	P	13 53 49.0	-2.6
SYO	Syowa Base	88.36	200	⇑*i*pP	P	13 53 50.6	-1.0
SYO	Syowa Base	88.36	200	⇑*i*PP	PP	13 57 22.2	+3.3
BARN	Barnard Glacie	88.43	27	P	P	13 53 51.4	-0.9
BARN				IAmb	IAmb	13 54 01.0	
	comp=Z,35nm,0.8s						
TOLK	Toolik Lake Re	88.44	19	P	P	13 53 50.7	-1.3
	baz=242						
SCRK	Sand Creek	88.50	24	P	P	13 53 51.4	-1.1
SCRK				IAMs_20	IAMs_20	14 29 03.1	
	comp=Z,1µm,22.0s						
PRP	Porcupine Dome	88.50	23	P	P	13 53 50.8	-1.7
CTGM	Chitina Glacie	88.55	28	P	P	13 53 51.6	-1.1
CTGM				IAmb	IAmb	13 53 58.0	
	comp=Z,38nm,0.9s						
BVAR	Borovoye Array	88.71	324	PKKPbc	PKKPbc	14 11 36.6	+0.3
	comp=Z,0.6nm,0.8s,baz=316,slow=4.0,SNR=4.0						
BRVK	Borovoye	88.78	324	P	P	13 53 53.4	-0.5
BRVK	Borovoye	88.78	324	P	P	13 53 52.8	-1.1
BRVK	Borovoye	88.78	324	IAMs_20	IAMs_20	14 34 49.0	
	comp=Z,1µm,21.0s						
FYU	Fort Yukon	89.03	22	IAMs_20	IAMs_20	14 29 01.4	
	comp=Z,1µm,22.0s						
BCAR	Beaver Creek A	89.08	26	P	P	13 53 54.4	-0.7
BMAR	Burnt Mountain	89.61	21	P	P	13 53 57.1	-0.4
EGAK	Eagle	89.93	24	P	P	13 53 58.0	-1.0
EGAK				IAMs_20	IAMs_20	14 29 57.1	
	comp=Z,1µm,22.0s						
HYT	Haines Junctio	90.28	28	P	P	13 54 00.2	-0.7
SIT	Sitka	90.34	32	IAMs_20	IAMs_20	14 30 31.6	
	comp=Z,1µm,20.0s						
HRA	Herat	90.41	305	P	P	13 54 01.2	-1.0
HRA				IAmb	IAmb	13 54 07.6	
	comp=Z,48nm,1.1s						
DAWY	Dawson	90.42	25	P	P	13 54 00.7	-0.7
DAWY				IAmb	IAmb	13 54 06.6	
	comp=Z,34nm,1.2s						
DAWY				IAMs_20	IAMs_20	14 28 07.1	
	comp=Z,2µm,22.0s						
SKAG	Skagway	90.95	30	P	P	13 54 03.5	-0.4
BESE	Bessie Mountai	90.97	31	P	P	13 54 03.7	-0.4
BESE				IAMs_20	IAMs_20	14 27 14.1	
	comp=Z,1µm,22.0s						
DIB	Dawson Inlet,	91.01	36	IAMs_20	IAMs_20	14 29 48.7	
	comp=Z,1µm,22.0s						
JIS	Juneau Island	91.13	31	P	P	13 54 04.8	+0.2
JIS				IAmb	IAmb	13 54 12.3	
	comp=Z,46nm,1.7s						
MOBC	Moresby Island	91.30	37	IAMs_20	IAMs_20	14 25 55.3	
	comp=Z,1µm,22.0s						
WHY	Whitehorse	91.48	29	P	P	13 54 05.9	-0.5
WRAK	Wrangell Islan	91.78	33	P	P	13 54 07.7	0.0
WRAK				IAmb	IAmb	13 54 13.9	
	comp=Z,37nm,1.4s						
WRAK	Wrangell Islan	91.78	33	IAMs_20	IAMs_20	14 29 47.8	
	comp=Z,1µm,21.0s						
EPYK	Eagle Plains	92.18	23	P	P	13 54 08.6	-0.9
EPYK				IAmb	IAmb	13 54 14.1	
	comp=Z,30nm,1.0s						
EPYK				IAMs_20	IAMs_20	14 34 22.5	
	comp=Z,1µm,22.0s						
EPYK	Eagle Plains	92.18	23	P	P	13 54 08.6	-0.9
	baz=254,SNR=23						
DLBC	Dease Lake	93.41	32	P	P	13 54 15.2	-0.1
BBB	Bella Bella	93.43	38	IAMs_20	IAMs_20	14 26 22.8	
	comp=Z,1µm,20.0s						
INK	Inuvik	93.86	21	PKKPbc	PKKPbc	14 11 24.0	+0.4
	comp=Z,0.8nm,0.5s,baz=34,slow=4.7,SNR=6.8						
INK	Inuvik	93.86	21	P	P	13 54 15.6	-1.5
INK				pmax	pmax		
	comp=Z,11nm,1.0s						
INK	Inuvik	93.86	21	P	P	13 54 15.6	-1.5
INK	Inuvik	93.86	21	IAMs_20	IAMs_20	14 31 52.8	
	comp=Z,1µm,21.0s						
GEYT	Alibeck	94.24	308	P	P	13 54 19.7	+0.1
	comp=Z,24nm,0.9s,baz=132,slow=2.2,SNR=23						
GEYT				LR	LR	14 40 33.6	
	comp=Z,424nm,21.2s,baz=30,slow=38						
GEYT	Alibeck	94.24	308	P	P	13 54 18.5	-1.2
GYA0B	ALIBECK ARRAY	94.24	308	P	P	13 54 19.0	-0.7
ABKAR	Akbulak array	94.40	319	P	P	13 54 18.0	-2.0
J01E	Myrtle Point	94.98	47	P	P	13 54 21.5	-1.3
	baz=263						
SVE	Sverdlovsk	94.99	327	*e*P	P	13 54 21.5	-1.0
SVE				pmax	pmax		
	comp=Z,23nm,1.8s						
SVE				MLR	MLR		
	comp=Z,944nm,20.0s						
L02E	Cave Junction	95.10	48	P	P	13 54 21.7	-1.7
	baz=263						
K02D	Willamette Mer	95.12	48	P	P	13 54 22.6	-1.0
	baz=263,SNR=11						
HOPS	Hopland Field	95.14	51	IAMs_20	IAMs_20	14 39 20.6	
	comp=Z,1µm,19.0s						
I02D	Swisshome	95.15	46	P	P	13 54 22.6	-0.9
	baz=263						
GDXM	Geysers	95.33	52	IAMs_20	IAMs_20	14 42 43.8	
	comp=Z,1µm,18.0s						
I03D	Drain, OR	95.46	47	P	P	13 54 24.5	-0.5
	baz=264						
O02D	Mt. Diablo Mer	95.49	50	P	P	13 54 24.1	-1.3
	baz=264,SNR=12						
NVL	N'lazarevskaya	95.49	194	*e*P	P	13 54 34.8	+10
NVL				*e*PPP	PPP	14 00 26.7	
NVL				*e*SS	SS	14 12 14.1	+6.9
NVL				*e*SSS	SSS	14 15 49.5	
NVL				pmax	pmax		
	comp=Z,9.0nm,0.6s						
NLWA	Neilton Lookou	95.51	43	IAMs_20	IAMs_20	14 29 08.4	
	comp=Z,941nm,22.0s						
M02C	Callahan	95.57	49	P	P	13 54 25.4	-0.3
	baz=264,SNR=22						
E03A	Lebam	95.62	44	IAMs_20	IAMs_20	14 29 39.5	
	comp=Z,1µm,21.0s						
HUMO	Hull Mountain	95.63	48	P	P	13 54 26.1	+0.2
HUMO				IAMs_20	IAMs_20	14 33 17.1	
	comp=Z,2µm,20.0s						
N02D	Trinity Center	95.64	50	P	P	13 54 26.1	+0.1
	baz=264,SNR=14						
YBH	Yreka Blue Hor	95.72	49	P	P	13 54 26.8	+0.4
YBH				pmax	pmax		
	comp=Z,54nm,1.1s						
YBH	Yreka Blue Hor	95.72	49	P	P	13 54 26.8	+0.4
WDC	Whiskeytown Da	95.72	50	IAMs_20	IAMs_20	14 33 38.8	
	comp=Z,1µm,20.0s						
D03D	Eldon	96.05	43	P	P	13 54 26.9	-0.7
	baz=264						
L04D	Klamath Falls	96.07	48	P	P	13 54 26.8	-1.2
	baz=264,SNR=5.9						
ARU	Arti	96.08	326	PKKPbc	PKKPbc	14 11 18.7	+1.5
	comp=Z,0.8nm,0.5s,baz=281,slow=5.2,SNR=5.3						
ARU	Arti	96.08	326	P	P	13 54 26.2	-1.3
ARU						13 58 18.9	
ARU				S	SKSac	14 05 02.6	-0.6
ARU				SP	SP	14 07 06.9	+2.6
ARU				SS	SS	14 12 16.7	-0.4
ARU	Arti	96.08	326	P	P	13 54 24.5	-3.1
ARU				IAmb	IAmb	13 54 31.1	
	comp=Z,19nm,1.1s						
ARU	Arti	96.08	326	IAMs_20	IAMs_20	14 42 32.0	
	comp=Z,935nm,19.0s						
I04A	Tendick Farm,	96.15	47	P	P	13 54 27.5	-0.7
	baz=264						
SAO	San Andreas Ge	96.18	54	IAMs_20	IAMs_20	14 31 36.3	
	comp=Z,2µm,20.0s						
O03E	Paynes Creek	96.25	50	P	P	13 54 28.1	-0.7
	baz=264,SNR=11						
J04D	Umpqua Nationa	96.31	47	P	P	13 54 28.8	-0.4
	baz=265						
F04A	Amboy	96.35	45	IAMs_20	IAMs_20	14 29 04.9	
	comp=Z,1µm,21.0s						
M04C	Macdoel	96.37	49	P	P	13 54 28.9	-0.5
	baz=265,SNR=16						
H04A	Detroit Lake	96.39	46	IAMs_20	IAMs_20	14 30 33.2	
	comp=Z,1µm,20.0s						
ORV	Oroville	96.41	51	P	P	13 54 28.4	-1.1
ORV				pmax	pmax		
	comp=Z,46nm,1.7s						
ORV	Oroville	96.41	51	P	P	13 54 28.4	-1.1
ORV				IAmb	IAmb	13 54 35.5	
	comp=Z,46nm,1.6s						
K04D	Chiloquin, OR	96.51	48	P	P	13 54 29.4	-0.7
	baz=265						
PMPB	Monarch Peak	96.64	54	P	P	13 54 30.2	-0.5
D05A	Enumclaw	96.76	43	IAMs_20	IAMs_20	14 30 17.6	
	comp=Z,1µm,21.0s						
AFDM	Forest Hills D	96.76	52	P	P	13 54 30.8	-0.3
AFDM				IAMs_20	IAMs_20	14 42 41.7	
	comp=Z,798nm,18.0s						
B05A	Bryant	96.78	42	P	P	13 54 30.9	0.0
	baz=265						
LON	Longmire	96.84	44	IAMs_20	IAMs_20	14 29 56.9	
	comp=Z,1µm,22.0s						
J05D	Fort Rock, OR	96.95	47	P	P	13 54 31.8	-0.2
	baz=265						
I05D	Terrebonne, OR	96.97	46	P	P	13 54 31.7	-0.2
	baz=265						
PAGB	Antelope Grade	97.04	55	P	Pdif	13 54 32.4	-0.2
PAGB				IAMs_20	IAMs_20	14 34 02.3	
	comp=Z,1µm,20.0s						
G05D	Wamic, OR	97.06	45	P	P	13 54 29.4	-2.9
	baz=265						
LLLB	Lillooet	97.11	40	P	P	13 54 32.2	-0.2
LLLB				IAmb	IAmb	13 54 37.5	
	comp=Z,22nm,1.1s						
LLLB				IAMs_20	IAMs_20	14 32 23.6	
	comp=Z,1µm,20.0s						
CMB	Columbia Colle	97.14	53	P	P	13 54 32.6	-0.3
CMB				pmax	pmax		
	comp=Z,11nm,1.1s						
CMB				MLR	MLR		
	comp=Z,800nm,18.0s						
CMB	Columbia Colle	97.14	53	P	P	13 54 32.6	-0.3
CMB				IAMs_20	IAMs_20	14 39 47.7	
	comp=Z,809nm,18.0s						
B06A	Marblemount	97.21	42	IAMs_20	IAMs_20	14 45 39.3	
	comp=Z,861nm,19.0s						
PINE	Pine Mountain	97.21	47	P	P	13 54 32.3	-0.9
PINE				IAMs_20	IAMs_20	14 29 49.8	
	comp=Z,1µm,21.0s						
SMMC	Simmler	97.21	55	P	Pdif	13 54 33.1	-0.3
	baz=265						
A36M	Sachs Harbour	97.22	18	P	P	13 54 31.5	-0.8
	baz=265						
BEKR	Beckworth	97.32	51	P	P	13 54 32.2	-1.6
BEKR				IAMs_20	IAMs_20	14 34 06.2	
	comp=Z,810nm,19.0s						
RUBR	Rubicon Trail	97.41	52	IAMs_20	IAMs_20	14 38 51.6	
	comp=Z,869nm,19.0s						
C36M	Paulatuk	97.41	21	P	P	13 54 32.4	-0.9
C36M	Paulatuk	97.41	21	P	P	13 54 32.2	-1.0
	baz=266						
MOD	Modoc Plateau	97.53	49	IAMs_20	IAMs_20	14 34 18.4	
	comp=Z,2µm,20.0s						
SNAA	Sanae	97.65	189	P	Pdif	13 54 34.5	-0.1
SNAA	Sanae	97.65	189	P	P	13 54 32.5	-2.0
SNAA				pmax	pmax		
	comp=Z,36nm,1.9s						
SNAA				MLR	MLR		
	comp=Z,2µm,18.0s						
SNAA	Sanae	97.65	189	P	P	13 54 32.5	-2.0
SNAA				IAmb	IAmb	13 54 43.5	
	comp=Z,36nm,1.9s						
LTY	Liberty	97.66	43	IAMs_20	IAMs_20	14 30 22.5	
	comp=Z,1µm,22.0s						
VCNR	Virginia City	97.82	51	IAMs_20	IAMs_20	14 43 43.5	
	comp=Z,893nm,18.0s						
PNTR	Pine Nut	97.84	52	P	P	13 54 33.8	-2.5
PNTR				IAMs_20	IAMs_20	14 39 17.1	
	comp=Z,892nm,18.0s						
VES	Vestal, Richgr	98.00	55	P	Pdif	13 54 36.6	-0.2
	baz=266						
F07A	Phinny Hill Vi	98.08	45	IAMs_20	IAMs_20	14 31 37.7	
	comp=Z,964nm,20.0s						
YERR	Yerington	98.11	52	IAMs_20	IAMs_20	14 39 43.3	
	comp=Z,1µm,18.0s						
MDPB	Devils Postpil	98.14	53	P	P	13 54 36.8	-0.9
ARVC	Arvin	98.15	56	P	Pdif	13 54 37.3	-0.1
	baz=266						
E07A	Sunnyside	98.17	44	P	P	13 54 36.4	-0.9
E07A				IAMs_20	IAMs_20	14 30 59.1	
	comp=Z,999nm,21.0s						
I07A	Izee	98.26	47	P	P	13 54 37.4	-0.4
I07A				IAMs_20	IAMs_20	14 32 07.8	
	comp=Z,1µm,22.0s						
HAWA	Hanford	98.39	44	P	Pdif	13 54 38.0	-0.3
HAWA				IAMs_20	IAMs_20	14 31 13.7	
	comp=Z,1µm,21.0s						
ISA	Isabella, Lake	98.48	55	P	Pdif	13 54 39.2	+0.2
ISA				MLR	MLR		
	comp=Z,2µm,19.0s						
ISA	Isabella, Lake	98.48	55	P	Pdif	13 54 39.1	+0.2
ISA	Isabella, Lake	98.48	55	P	Pdif	13 54 39.6	+0.6
	baz=266						
PNT	Penticton	98.49	41	P	P	13 54 33.8	-4.8
PNT				MLR	MLR		
	comp=Z,900nm,18.0s						
B08A	Colville Reser	98.63	42	P	P	13 54 38.6	-0.7
RYN	Ryan	98.65	52	IAMs_20	IAMs_20	14 30 47.5	
	comp=Z,928nm,22.0s						
E08A	Dider Farm, El	98.72	44	P	Pdif	13 54 39.8	+0.1
E08A				IAMs_20	IAMs_20	14 31 03.5	
	comp=Z,1µm,21.0s						
G08A	Pilot Rock	98.72	45	P	P	13 54 39.2	-0.7
G08A				IAMs_20	IAMs_20	14 29 56.8	
	comp=Z,1µm,22.0s						
TIN	Tinemaha, Big	98.77	54	P	Pdif	13 54 40.3	0.0
	baz=266						
WVOR	Wild Horse Val	98.80	48	P	P	13 54 39.5	-0.8
WVOR				pmax	pmax		
	comp=Z,12nm,1.0s						
WVOR	Wild Horse Val	98.80	48	P	P	13 54 39.5	-0.8
WVOR				IAmb	IAmb	13 54 50.9	
	comp=Z,12nm,0.9s						
WVOR				IAMs_20	IAMs_20	14 35 21.0	
	comp=Z,2µm,19.0s						
NVAR	Mina Array Bea	98.81	52	P	Pdif	13 54 41.4	+0.8
	comp=Z,15nm,1.0s,baz=258,slow=5.5,SNR=28						
NVAR				PP	PP	13 58 41.6	-0.6
	comp=Z,1.0nm,0.9s,baz=243,slow=6.0,SNR=2.2						
NVAR				LR	LR	14 31 28.3	
	comp=Z,631nm,21.0s,baz=259,slow=31						
NVAR	Mina Array Bea	98.81	52	P	P	13 54 39.7	-0.8
EDW2	Edwards Air Fo	98.81	56	P	Pdif	13 54 40.5	0.0
	baz=266						
D08A	Wollman Farm,	98.84	44	P	P	13 54 39.9	-0.4
D08A				IAMs_20	IAMs_20	14 31 32.7	
	comp=Z,1µm,22.0s						
CWC	Cottonwood Cre	98.85	54	P	Pdif	13 54 40.8	0.0
	baz=266						
NV11	Mina Array Sit	98.92	52	IAMs_20	IAMs_20	14 42 05.8	
	comp=Z,904nm,19.0s						
J08A	Circle Bar Ran	98.97	47	P	P	13 54 40.2	-0.8
J08A				IAMs_20	IAMs_20	14 29 34.5	
	comp=Z,1µm,22.0s						
VNA2	Neumayer--Watz	99.00	188	P	Pdif	13 54 40.6	+0.1
	baz=149,slow=3.6						
KVN	Kaiserville	99.00	52	P	Pdif	13 54 40.3	-1.1
KVN				MLR	MLR		
	comp=Z,1µm,19.0s						
KVN	Kaiserville	99.00	52	P	Pdif	13 54 40.3	-1.1
KVN				IAMs_20	IAMs_20	14 39 43.9	
	comp=Z,1µm,19.0s						
VNA3	Neumayer Olymp	99.01	187	P	Pdif	13 54 40.4	-0.2
BFSC	Mount Baldy Ra	99.04	57	P	Pdif	13 54 41.8	+0.2
	baz=266						
LRMC	Laurel Mtn Rad	99.11	55	P	Pdif	13 54 42.3	+0.4
	baz=266						
MPMC	Manual Prospec	99.30	55	P	Pdif	13 54 43.0	+0.2
	baz=266,SNR=8.0						
C09A	Chrisman Ranch	99.31	43	IAMs_20	IAMs_20	14 31 26.1	
	comp=Z,1µm,21.0s						
E09A	Wood Farm, Sta	99.35	44	P	Pdif	13 54 40.4	-2.1
E09A				IAMs_20	IAMs_20	14 30 50.2	
	comp=Z,1µm,21.0s						
GRAC	Grapevine Rang	99.46	54	P	Pdif	13 54 43.6	+0.3
	baz=267						
GSC	Goldstone, Bar	99.81	56	P	Pdif	13 54 45.2	+0.2
	baz=267						
FURC	Furnace Creek,	99.83	54	P	Pdif	13 54 45.3	+0.4
	baz=267						

BMO	Blue Mountains	99.87	46	P	Pdif	13 54 43.2	-1.8
BMO				pmax	pmax		
	comp=Z,23nm,1.0s						
BMO	Blue Mountains	99.87	46		Pdif	13 54 43.2	-1.8
BMO				IAmb	IAmb	13 54 49.9	
	comp=Z,22nm,1.0s						
BMO				IAMs_20	IAMs_20	14 30 34.3	
	comp=Z,888nm,22.0s						
F10A	Beach Ranch, E	99.97	45		Pdif	13 54 44.7	-0.7
F10A				IAMs_20	IAMs_20	14 30 36.6	
	comp=Z,974nm,20.0s						
MONP2	Monument Peak	99.98	58	P	Pdif	13 54 46.0	0.0
	baz=266						
PFO	Pinyon Flats O	100.00	57	P	Pdif	13 54 45.9	0.0
	baz=267						
NEW	Newport	100.10	42	P	Pdif	13 54 45.1	-0.7
NEW	Newport	100.10	42		Pdif	13 54 45.1	-0.7
NEW	Newport	100.10	42	IAMs_20	IAMs_20	14 32 14.8	
	comp=Z,816nm,21.0s						
NEW	Newport	100.10	42	P	Pdif	13 54 46.3	+0.4
	baz=269						
HEC	Hector,Ludlow	100.17	56	P	Pdif	13 54 46.9	+0.3
	baz=267						
IKP	In-Ko-Pah, Jac	100.23	58	P	Pdif	13 54 47.2	+0.3
	baz=267						
TPNV	Topopah Spring	100.35	54	P	Pdif	13 54 47.3	-0.1
	baz=267						
BELC	Belle Mtn. Jos	100.40	57	P	Pdif	13 54 47.5	-0.2
	baz=267						
SWSC	Sam W. Stewart	100.51	58	P	Pdif	13 54 47.6	-0.4
	baz=267						
GMRC	Granite Mounta	100.72	56	P	Pdif	13 54 48.9	-0.2
	baz=267						
BC3	Big Chuckawall	100.84	57	P	Pdif	13 54 48.6	-1.0
	baz=267,SNR=5.8						
MFID	Camas Ranch	100.90	47	IAMs_20	IAMs_20	14 32 19.5	
	comp=Z,907nm,22.0s						
R11A	Troy Canyon, C	100.93	53	P	Pdif	13 54 49.8	-0.2
	baz=268						
IRM	Iron Mountain	101.12	57	P	Pdif	13 54 50.4	-0.3
	baz=268,SNR=5.9						
SHPR	Sheep Range	101.20	54	IAMs_20	IAMs_20	14 36 36.5	
	comp=Z,1µm,20.0s						
YKA	Yellowknife Ar	101.27	28	P	Pdif	13 54 50.4	-0.3
	comp=Z,5.7nm,1.0s,baz=269,slow=4.5,SNR=32						
YKA				PP	PP	13 58 56.4	-3.4
	comp=Z,1.4nm,0.8s,baz=267,slow=7.3,SNR=5.5						
YKA				PKKPbc	PKKPbc	14 11 00.2	-2.6
	comp=Z,1.8nm,0.6s,baz=94,slow=3.2,SNR=21						
ELK	Elko	101.27	50	P	Pdif	13 54 50.9	-0.6
ELK				MLR	MLR		
	comp=Z,800nm,20.0s						
ELK	Elko	101.27	50		Pdif	13 54 50.9	-0.6
ELK				IAMs_20	IAMs_20	14 38 18.8	
	comp=Z,809nm,20.0s						
GLA	Glamis	101.33	58	IAMs_20	IAMs_20	14 35 20.2	
	comp=Z,2µm,20.0s						
Y12C	Blythe	101.62	57	IAMs_20	IAMs_20	14 32 34.4	
	comp=Z,990nm,20.0s						
Y12C	Blythe	101.62	57	P	Pdif	13 54 52.7	-0.2
	baz=268						
PDMCI	Parker Dam,Lak	101.95	57	P	Pdif	13 54 54.5	+0.1
	baz=268						
JTMT	Jette	102.00	43	IAMs_20	IAMs_20	14 33 31.3	
	comp=Z,939nm,21.0s						
W13A	Hualapai Mount	102.19	56	IAMs_20	IAMs_20	14 34 52.5	
	comp=Z,1µm,20.0s						
113A	Mohawk Valley,	102.21	58	IAMs_20	IAMs_20	14 35 57.3	
	comp=Z,1µm,20.0s						
WALA	Waterton Lakes	102.23	42	IAMs_20	IAMs_20	14 33 26.0	
	comp=Z,1µm,21.0s						
MSO	Missoula	102.25	44	IAMs_20	IAMs_20	14 32 39.9	
	comp=Z,1µm,22.0s						
MAK	Makhachkala	102.63	312	*e*P	Pdif	13 54 50.7	-6.5
MAK				*i*		13 59 12.9	
MAK				*e*SS	SS	14 13 42.7	-6.8
MAK				pmax	pmax		
	comp=Z,982nm,1.4s						
PRGR	Permogore	102.76	331	*e*P	Pdif	13 54 55.3	-2.0
PRGR				*e*		13 59 09.8	
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
Y14A	Wickenburg	102.89	57	IAMs_20	IAMs_20	14 39 17.0	
	comp=Z,1µm,18.0s						
DUG	Dugway, Tooele	103.12	51	IAMs_20	IAMs_20	14 42 55.5	
	comp=Z,848nm,19.0s						
DLMT	Dillon	103.21	45	IAMs_20	IAMs_20	14 34 59.4	
	comp=Z,794nm,21.0s						
X16A	Lo Mia Camp, P	104.19	57	IAMs_20	IAMs_20	14 37 13.5	
	comp=Z,1µm,20.0s						
WUAZ	Wupatki	104.25	56	IAMs_20	IAMs_20	14 36 31.6	
	comp=Z,1µm,20.0s						
WUAZ	Wupatki	104.25	56	P	Pdif	13 55 05.8	+1.0
	baz=270						
AHID	Auburn Hatcher	104.36	48	IAMs_20	IAMs_20	14 38 58.2	
	comp=Z,1µm,19.0s						
FXWY	Fox Creek	104.39	47	IAMs_20	IAMs_20	14 32 49.7	
	comp=Z,1µm,22.0s						
IMW	Indian Meadow	104.44	47	IAMs_20	IAMs_20	14 39 09.1	
	comp=Z,802nm,19.0s						
TPAW	Teton Pass	104.45	47	IAMs_20	IAMs_20	14 39 52.3	
	comp=Z,949nm,20.0s						
REDW	Red Top Meadow	104.53	47	IAMs_20	IAMs_20	14 39 26.4	
	comp=Z,1µm,19.0s						
SNOW	Snow King Moun	104.59	47	IAMs_20	IAMs_20	14 39 58.1	
	comp=Z,1µm,19.0s						
FLWY	Flagg Ranch	104.61	47	IAMs_20	IAMs_20	14 35 51.5	
	comp=Z,874nm,21.0s						
H17A	Grant Village	104.68	46	P	Pdif	13 55 07.8	+1.2
	baz=273						
TUC	Tucson	104.72	59	IAMs_20	IAMs_20	14 37 50.7	
	comp=Z,1µm,18.0s						
ZEI	Tsey	105.29	312	*e*P	Pdif	13 55 09.5	+0.2
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
X18A	Snowflake	105.42	57	IAMs_20	IAMs_20	14 37 41.1	
	comp=Z,891nm,20.0s						
BW06	Boulder Array	105.50	48		Pdif	13 55 09.8	-0.5
BW06				IAMs_20	IAMs_20	14 34 48.2	
	comp=Z,1µm,22.0s						
PDAR	Pinedale Array	105.50	48	Pdiff	Pdif	13 55 10.2	-0.1
	comp=Z,8.1nm,1.0s,baz=259,slow=2.4,SNR=20						
PDAR				PKiKP	PKiKP	13 59 27.0	+3.2
	comp=Z,0.8nm,0.7s,baz=64,slow=3.4,SNR=2.2						
PDAR				PKKPbc	PKKPbc	14 10 49.2	-0.6
	comp=Z,0.9nm,0.8s,baz=101,slow=4.7,SNR=7.5						
PDAR	Pinedale Array	105.50	48		Pdif	13 55 09.5	-0.8
RLMT	Red Lodge	105.57	46	IAMs_20	IAMs_20	14 36 03.9	
	comp=Z,793nm,19.0s						
TMCR	Tamitsa	105.76	335	*e*P	Pdif	13 55 11.1	+0.6
TMCR				pmax	pmax		
	comp=Z,48nm,0.6s						
KLMR	Klimovskoe	105.80	331	*e*P	Pdif	13 55 08.9	-1.9
KLMR				*e*		13 59 33.5	
KLMR				pmax	pmax		
	comp=Z,25nm,1.2s						
KLMR				MLR	MLR		
	comp=Z,1µm,20.0s						
KLMR	Klimovskoe	105.80	331	*e*Pdif	Pdif	13 55 09.0	-1.9
KLMR				AMP		13 55 14.7	
	comp=Z,25nm,1.2s						
KLMR				*e*PP	PP	13 59 33.5	-0.1
KLMR				LR	LR	14 35 01.3	
KLMR				AMP		14 45 01.3	
	comp=Z,1µm,20.2s						
PV20	West Nyswonger	106.14	53	IAMs_20	IAMs_20	14 39 04.6	
	comp=Z,1µm,20.0s						
PV18	Skein Mesa, Pa	106.19	53	IAMs_20	IAMs_20	14 39 27.9	
	comp=Z,1µm,22.0s						
PV13	Radium Mtn., P	106.26	53	IAMs_20	IAMs_20	14 43 46.9	
	comp=Z,1µm,20.0s						
PV22	Blue Mesa, Par	106.27	52	IAMs_20	IAMs_20	14 39 24.1	
	comp=Z,1µm,21.0s						
PV01	Paradox Valley	106.46	53	IAMs_20	IAMs_20	14 44 19.1	
	comp=Z,1µm,22.0s						
PV15	Paradox Valley	106.52	53	IAMs_20	IAMs_20	14 44 38.3	
	comp=Z,1µm,21.0s						
MVCO	Mesa Verde	106.55	54	IAMs_20	IAMs_20	14 37 19.6	
	comp=Z,903nm,20.0s						
APA	Apatity	106.63	338	⇓*i*P	Pdif	13 55 20.7	+6.3
APA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
RWWY	Rawlins	107.31	49	IAMs_20	IAMs_20	14 41 19.1	
	comp=Z,849nm,21.0s						
LAO	LASA Array	107.55	44	IAMs_20	IAMs_20	14 35 06.0	
	comp=Z,804nm,20.0s						
Y22D	IRIS PASSCAL I	107.94	57	IAMs_20	IAMs_20	14 36 34.8	
	comp=Z,1µm,21.0s						
OBN	Obninsk	108.51	325	IAMs_20	IAMs_20	14 48 42.7	
	comp=Z,1µm,19.0s						
ARCES	ARCESS Array B	108.53	342	Pdiff	Pdif	13 55 22.4	-0.4
	comp=Z,11nm,0.9s,baz=43,slow=5.5,SNR=8.7						
ARCES				PKiKP	PKiKP	13 59 28.3	-0.1
	comp=Z,2.9nm,0.8s,baz=55,slow=2.1,SNR=5.9						
ARCES				PP	PP	13 59 54.2	+0.9
	comp=Z,5.5nm,0.9s,baz=48,slow=7.3,SNR=2.4						
ARCES				PKKPbc	PKKPbc	14 10 38.5	-2.4
	comp=Z,3.1nm,0.7s,baz=270,slow=1.0,SNR=9.5						
PHWY	Pilot Hill	108.65	49	IAMs_20	IAMs_20	14 41 44.2	
	comp=Z,783nm,20.0s						
ISCO	Idaho Springs	108.66	51	IAMs_20	IAMs_20	14 42 33.2	
	comp=Z,766nm,20.0s						
FFC	Flin Flon	108.89	35	IAMs_20	IAMs_20	14 43 02.8	
	comp=Z,1µm,19.0s						
SDCO	Great Sand Dun	108.90	53	IAMs_20	IAMs_20	14 38 52.8	
	comp=Z,1µm,20.0s						
MNTX	Cornudas Mount	109.31	59	P	PKiKP	13 59 30.0	-0.9
	baz=272						
RSSD	Black Hills	109.39	46	IAMs_20	IAMs_20	14 42 27.9	
	comp=Z,809nm,20.0s						
TXAR	Lajitas Array	110.88	62	Pdiff	Pdif	13 55 47.0	+13
	comp=Z,0.1nm,0.3s,baz=140,slow=28,SNR=2.8						
TXAR				PKiKP	PKiKP	13 59 33.6	-0.5
	comp=Z,2.0nm,0.9s,baz=226,slow=2.4,SNR=8.8						
TXAR				PP	PP	14 00 15.2	+3.3
	comp=Z,0.8nm,0.8s,baz=201,slow=1.1,SNR=3.8						
TXAR				PKKPbc	PKKPbc	14 10 32.7	+0.4
	comp=Z,0.6nm,0.8s,baz=88,slow=4.8,SNR=5.0						
TXAR	Lajitas Array	110.88	62	*i* PKIKP	PKiKP	13 59 32.1	-2.0
TXAR	Lajitas Array	110.88	62		PKiKP	13 59 32.1	-2.0
DAG	Danmarks Havn	111.22	356	*i* P	PKiKP	13 59 31.7	-1.5
DAG	Danmarks Havn	111.22	356	*e*PKIKP	PKiKP	13 59 31.7	-1.5
FINES	FINESS Array B	111.83	334	Pdiff	Pdif	13 55 37.0	-0.6
	comp=Z,2.7nm,0.8s,baz=134,slow=5.5,SNR=6.0						
FINES				PKiKP	PKiKP	13 59 34.6	-0.1
	comp=Z,3.1nm,0.8s,baz=108,slow=6.2,SNR=4.9						
FINES				PP	PP	14 00 18.4	+1.1
	comp=Z,4.4nm,0.9s,baz=64,slow=8.7,SNR=4.2						
FINES				PKKPab	PKKPab	14 10 41.1	+4.5
	comp=Z,2.8nm,0.9s,baz=349,slow=8.0,SNR=4.8						
AMTX	Amarillo	112.21	56	IAMs_20	IAMs_20	14 42 43.8	
	comp=Z,1µm,20.0s						
BOSA	Boshof	112.89	234	PKiKP	PKiKP	13 59 40.9	+2.9
	comp=Z,2.7nm,0.8s,baz=159,slow=5.6,SNR=5.1						
BRTR	Keskin Array B	113.28	310	Pdiff	Pdif	13 55 45.0	+0.1
	comp=Z,0.8nm,0.7s,baz=125,slow=6.2,SNR=4.4						
BRTR				PKiKP	PKiKP	13 59 38.4	0.0
	comp=Z,1.8nm,0.8s,baz=108,slow=4.0,SNR=5.6						
BRTR				PP	PP	14 00 30.6	+1.8
	comp=Z,0.4nm,0.5s,baz=105,slow=8.0,SNR=2.1						
BRTR				PKKPbc	PKKPbc	14 10 26.1	+1.5
	comp=Z,1.5nm,0.8s,baz=228,slow=2.8,SNR=5.6						
BRTR	Keskin Array B	113.28	310	*i* PKIKP	PKiKP	13 59 37.0	-1.4
BRTR	Keskin Array B	113.28	310		PKiKP	13 59 37.0	-1.4
CBKS	Cedar Bluff	113.30	51	IAMs_20	IAMs_20	14 39 08.5	
	comp=Z,1µm,22.0s						
K31A	O'Neill	113.42	47	IAMs_20	IAMs_20	14 48 12.8	
	comp=Z,1µm,21.0s						
ULM	Lac du Bonnet	113.62	39	PKiKP	PKiKP	13 59 38.2	-0.3
	comp=Z,3.8nm,0.7s,baz=307,slow=5.1,SNR=7.9						
ULM				PP	PP	14 00 31.2	+0.7
	comp=Z,3.6nm,0.9s,baz=293,slow=7.9,SNR=3.1						
ULM				PKKPab	PKKPab	14 10 26.9	-2.1
	comp=Z,0.8nm,0.4s,baz=96,slow=4.8,SNR=3.1						
ULM	Lac du Bonnet	113.62	39	IAMs_20	IAMs_20	14 43 21.8	
	comp=Z,933nm,20.0s						
AKASG	Malin Array Be	113.92	322	PKiKP	PKiKP	13 59 38.6	-0.4
	comp=Z,1.0nm,0.6s,baz=61,slow=2.7,SNR=4.5						
AKASG				PP	PP	14 00 33.0	+0.4
	comp=Z,7.2nm,0.8s,baz=60,slow=6.9,SNR=9.7						
AKASG	Malin Array Be	113.92	322	*i* PKIKP	PKiKP	13 59 37.8	-1.3
AKASG						14 00 33.0	
AKASG	Malin Array Be	113.92	322		PKiKP	13 59 37.8	-1.3
AKBB	Malin Array Si	113.92	322	IAMs_20	IAMs_20	14 54 38.3	
	comp=Z,852nm,19.0s						
AGMN	Agassiz Nation	114.15	41	IAMs_20	IAMs_20	14 49 51.2	
	comp=Z,794nm,20.0s						
R32A	Long Quarter,	114.15	52	IAMs_20	IAMs_20	14 42 15.7	
	comp=Z,1µm,20.0s						
JCT	Junction City	114.16	60	P	PKPdf	13 59 39.7	-0.5
	baz=275						
U32A	Winter Ranch,	114.21	54	IAMs_20	IAMs_20	14 43 21.5	
	comp=Z,841nm,18.0s						
WMOK	Wichita Mounta	114.60	56	IAMs_20	IAMs_20	14 43 28.0	
	comp=Z,987nm,20.0s						
WMOK	Wichita Mounta	114.60	56	P	PKPdf	13 59 40.2	-0.7
	baz=277						
N33A	J Bar K, Exete	114.72	49	IAMs_20	IAMs_20	14 41 30.5	
	comp=Z,972nm,20.0s						
ECSD	EROS Data Cent	114.73	46	P	PKiKP	13 59 40.2	-0.7
	baz=283						
OKCFA	Oklahoma City	115.59	55	IAMs_20	IAMs_20	14 43 17.1	
	comp=Z,1µm,21.0s						
KSU1	Kansas State U	115.66	51	IAMs_20	IAMs_20	14 49 18.5	
	comp=Z,896nm,18.0s						
SUMG	Summit	115.79	2	*i* P	PKPdf	13 59 43.3	+0.7
SUMG	Summit	115.79	2	*e*PKIKP	PKPdf	13 59 43.3	+0.7
735A	Kenedy	116.02	62	IAMs_20	IAMs_20	14 45 18.4	
	comp=Z,1µm,20.0s						
Z35A	Perchaven, San	116.03	57	IAMs_20	IAMs_20	14 45 14.0	
	comp=Z,1µm,20.0s						
KVTX	Kingsville	116.05	64	IAMs_20	IAMs_20	14 43 09.3	
	comp=Z,553nm,18.0s						
T35A	Sooner Cattle	116.11	53	IAMs_20	IAMs_20	14 43 48.7	
	comp=Z,1µm,20.0s						
HARR	Harsova	116.42	316	⇑P	PKPdf	13 59 39.0	-5.0
HARR	Harsova	116.42	316	⇑PKIKP	PKPdf	13 59 39.0	-5.0
ELL	Elmali	116.66	307	IAMs_20	IAMs_20	14 47 58.7	
	comp=Z,907nm,21.0s						
VRI	Vrincioaia	116.91	317	⇑P	PKPdf	13 59 42.0	-3.0
VRI	Vrincioaia	116.91	317	⇑PKIKP	PKPdf	13 59 42.0	-3.0
SPMN	Marine on St.	117.00	43	P	PKPdf	13 59 43.9	-1.3
	baz=286						
EYMN	Ely	117.05	40		PKPdf	13 59 43.6	-1.6
EYMN	Ely	117.05	40	IAMs_20	IAMs_20	14 43 46.9	
	comp=Z,911nm,21.0s						
EYMN	Ely	117.05	40	P	PKPdf	13 59 44.0	-1.2
	baz=289						
BURAR	Bucovina Array	117.37	320	PKIKP	PKPdf	13 59 44.8	-1.2
BURAR	Bucovina Array	117.37	320		PKPdf	13 59 44.8	-1.2
BUR08	Bucovina Ar. S	117.37	320		PKPdf	13 59 44.5	-1.5
E38A	The Farm, Brul	117.43	42		PKPdf	13 59 45.0	-0.9
MLR	Muntele Rosu	117.55	317	⇑P	PKPdf	13 59 45.7	-0.7
MLR	Muntele Rosu	117.55	317	PKIKP	PKPdf	13 59 45.2	-1.2
MLR	Muntele Rosu	117.55	317		PKPdf	13 59 45.2	-1.2
MLR				IAMs_20	IAMs_20	14 53 19.8	
	comp=Z,832nm,22.0s						
SCIA	State Center	117.59	47	P	PKPdf	13 59 45.5	-0.9
	baz=284						
N38A	Joes South For	117.84	48	IAMs_20	IAMs_20	14 44 15.9	
	comp=Z,1µm,21.0s						
U38A	Gravette	117.88	53		PKPdf	13 59 45.7	-1.5
P38A	Dawn	117.89	50	IAMs_20	IAMs_20	14 44 30.3	
	comp=Z,1µm,20.0s						
Z38A	Mt. Pleasant	117.92	57	IAMs_20	IAMs_20	14 46 14.1	
	comp=Z,1µm,20.0s						
VOIR		118.16	317	⇑P	PKiKP	13 59 48.2	+0.6
VOIR		118.16	317	⇑PKIKP	PKiKP	13 59 48.2	+0.6
NB2	NORSAR Subarra	118.17	337	PKPdf	PKiKP	13 59 46.9	-0.1
	comp=Z,4.3nm,1.1s,baz=241,slow=1.9						
NB2	NORSAR Subarra	118.17	337	PKKP	PKKPab	14 10 08.8	+0.1
	comp=Z,4.4nm,1.1s,baz=231,slow=3.6						
NOA	NORSAR Array B	118.17	337	PKP	PKPdf	13 59 46.3	-0.7
	comp=Z,2.7nm,0.9s,baz=54,slow=1.9,SNR=7.4						
NOA				PP	PP	14 01 02.5	+0.5
	comp=Z,2.7nm,1.0s,baz=53,slow=6.5,SNR=3.8						
NOA				PKKPab	PKKPab	14 10 09.2	+0.5
	comp=Z,1.1nm,0.7s,baz=230,slow=3.9,SNR=6.0						
KWP	Kalwaria Pacla	118.23	322	IAMs_20	IAMs_20	14 53 52.2	
	comp=Z,862nm,20.0s						
HHAR	Hobbs	118.26	53	IAMs_20	IAMs_20	14 49 23.6	
	comp=Z,1µm,20.0s						
NBO00	NORSAR Array S	118.34	338		PKPdf	13 59 46.4	-1.0
ARR	Arges	118.46	317	⇑P	PKiKP	13 59 48.9	+0.8
S39A	Bolivar	118.47	52		PKPdf	13 59 46.7	-1.5
W39A	Magazine	118.58	55	P	PKPdf	13 59 47.7	-0.9
	baz=280						
G40A	Rib Lake	118.75	43		PKPdf	13 59 46.7	-1.9
G40A				IAMs_20	IAMs_20	14 52 09.1	
	comp=Z,901nm,19.0s						
MIAR	Mount Ida	118.87	55	P	PKPdf	13 59 48.4	-0.7
	baz=280						
TRPA	Tarpa	118.89	321	⇑P	PKPdf	13 59 48.0	-0.7
U40A	Yellville	119.11	53		PKPdf	13 59 48.0	-1.6
U40A				IAMs_20	IAMs_20	14 42 47.0	
	comp=Z,1µm,22.0s						
U40A	Yellville	119.11	53	P	PKPdf	13 59 48.4	-1.1
	baz=282						
COWI	Conover	119.18	41		PKPdf	13 59 47.7	-1.6
COWI				IAMs_20	IAMs_20	14 46 03.4	
	comp=Z,926nm,20.0s						
D41A	Chassel	119.22	40	IAMs_20	IAMs_20	14 55 54.8	
	comp=Z,1µm,21.0s						
DRGR		119.26	319	⇑P	PKiKP	13 59 49.7	+0.1
DRGR		119.26	319	⇑PKIKP	PKiKP	13 59 49.7	+0.1
WLAR	White Oak Lake	119.40	56	IAMs_20	IAMs_20	14 53 20.1	
	comp=Z,923nm,20.0s						
MGMO	Mountain Grove	119.40	52	IAMs_20	IAMs_20	14 45 04.6	
	comp=Z,1µm,20.0s						
JFWS	Jewell Farm	119.43	45	PKIKP	PKPdf	13 59 48.2	-1.7
JFWS				MLR	MLR		
	comp=Z,1µm,20.0s						
JFWS	Jewell Farm	119.43	45		PKPdf	13 59 48.2	-1.7
JFWS	Jewell Farm	119.43	45	IAMs_20	IAMs_20	14 48 01.6	
	comp=Z,1µm,20.0s						
JFWS	Jewell Farm	119.43	45	P	PKPdf	13 59 48.8	-1.2
	baz=287						
X40A	Basin Creek Fa	119.48	55	IAMs_20	IAMs_20	14 47 54.2	
	comp=Z,1µm,20.0s						
N41A	Harden Midland	119.61	48	IAMs_20	IAMs_20	14 42 22.8	
	comp=Z,965nm,19.0s						
GZR	Gura Zlata	119.69	318	⇑P	PKiKP	13 59 50.6	+0.1
GZR	Gura Zlata	119.69	318	⇑PKIKP	PKiKP	13 59 50.6	+0.1
WHAR	Wooly Hollow	119.77	54	IAMs_20	IAMs_20	14 46 38.7	
	comp=Z,1µm,21.0s						
FCAR	Ozark Folk Cen	119.78	53	IAMs_20	IAMs_20	14 46 57.8	
	comp=Z,979nm,21.0s						
W41B	Gary Mavity, V	119.82	54	P	PKPdf	13 59 49.9	-1.0
	baz=282						
F42A	Maple Grove Fa	119.95	42	IAMs_20	IAMs_20	14 44 02.9	
	comp=Z,1µm,22.0s						
CCM	Cathedral Cave	119.99	51	P	PKPdf	13 59 50.1	-1.0
	baz=284						
PLCA	Paso Flores	120.10	148	PKP	PKiKP	13 59 52.9	+1.3
	comp=Z,7.7nm,0.9s,baz=148,slow=2.5,SNR=11						
PLCA				PKKPbc	PKKPab	14 10 08.4	+6.1
	comp=Z,3.7nm,1.0s,baz=32,slow=5.6,SNR=3.7						
PLCA	Paso Flores	120.10	148	PKIKP	PKPdf	13 59 50.1	-1.4
PLCA	Paso Flores	120.10	148		PKPdf	13 59 50.1	-1.4
SIRR	Siria	120.12	319	⇑P	PKPdf	13 59 49.9	-1.3
SFJD	Kangerlussuaq	120.27	8	*i* P	PKPdf	13 59 49.7	-1.1
SFJD	Kangerlussuaq	120.27	8	*e*PKIKP	PKPdf	13 59 49.7	-1.1
VTS	Vitosha	120.27	315	⇑P	PKiKP	13 59 51.8	0.0
VTS	Vitosha	120.27	315	PKIKP	PKPdf	13 59 50.8	-0.9
VTS	Vitosha	120.27	315		PKPdf	13 59 50.8	-0.9
VTS				IAMs_20	IAMs_20	14 56 51.3	
	comp=Z,650nm,21.0s						
T42A	Van Buren	120.34	52		PKPdf	13 59 50.6	-1.2
T42A				IAMs_20	IAMs_20	14 43 40.6	
	comp=Z,1µm,22.0s						
BZS	Buzias	120.38	318	⇑P	PKPdf	13 59 51.1	-0.5
BZS	Buzias	120.38	318	⇑PKIKP	PKPdf	13 59 51.1	-0.5
E43A	Lone Tree Farm	120.47	41		PKPdf	13 59 51.1	-0.7
E43A				IAMs_20	IAMs_20	14 46 14.5	
	comp=Z,688nm,19.0s						
LAST	Lasithi	120.49	306	P	PKiKP	13 59 52.2	-0.2
LCAR	Lake Charles	120.51	53		PKPdf	13 59 50.8	-1.4
LCAR				IAMs_20	IAMs_20	14 50 57.1	
	comp=Z,1000nm,19.0s						
PSZ	Piszkesteto	120.61	321	PKIKP	PKPdf	13 59 51.1	-1.0
PSZ	Piszkesteto	120.61	321		PKPdf	13 59 51.1	-1.0
PSZ				IAMs_20	IAMs_20	14 57 06.3	
	comp=Z,800nm,19.0s						
HDIL	Hopedale	120.80	48	IAMs_20	IAMs_20	14 53 15.1	
	comp=Z,1µm,20.0s						
K43A	Burlington	120.84	45	IAMs_20	IAMs_20	14 49 44.8	
	comp=Z,1µm,20.0s						
OKC	Ostrava-Krasne	120.85	324	AMS	AMS	14 59 50.0	
	comp=Z,700nm,16.9s						
P43A	Skaggs, Pawnee	120.89	49	IAMs_20	IAMs_20	14 50 16.5	
	comp=Z,1µm,20.0s						
PBMO	Poplar Bluff	120.92	52	IAMs_20	IAMs_20	14 44 07.9	
	comp=Z,1µm,22.0s						
VYHS	Vyhne	121.02	322	*e*PKIKP	PKiKP	13 59 53.1	+0.2
VYHS	Vyhne	121.02	322	*e*PKP	PKiKP	13 59 53.1	+0.2
E44A	Grand Marais A	121.07	40	P	PKPdf	13 59 51.0	-2.0
	baz=293						
MORC	Moravsky Berou	121.22	324	⇑P	PKPdf	13 59 52.8	-0.4
MORC	Moravsky Berou	121.22	324	⇑PKIKP	PKPdf	13 59 52.8	-0.4
MORC	Moravsky Berou	121.22	324	*e*PKP	PKiKP	13 59 53.2	-0.2
MORC	Moravsky Berou	121.22	324		PKPdf	13 59 52.6	-0.6
MORC				IAMs_20	IAMs_20	14 56 25.2	
	comp=Z,884nm,20.0s						
XOR	Xorichti	121.25	311	P	PKPdf	13 59 52.3	-1.3
LPAR	Lepanto	121.29	53	IAMs_20	IAMs_20	14 50 46.8	
	comp=Z,938nm,20.0s						
PEBM	Pemiscott Bayo	121.52	53	IAMs_20	IAMs_20	14 47 05.8	
	comp=Z,976nm,20.0s						
KRLC	Kraliky	121.52	325	*e*PKPDF	PKiKP	13 59 54.0	+0.1
KRLC				AMS	AMS	14 54 20.0	
	comp=Z,900nm,21.0s						
KRLC	Kraliky	121.52	325	*e*PKIKP	PKiKP	13 59 54.0	+0.1
KRLC				MLR	MLR		
	comp=Z,900nm,21.0s						
JAVC	Velka Javorina	121.56	323	*e*PKP	PKiKP	13 59 54.8	+0.7
LIT	Litokhoron	121.56	312	P	PKPdf	13 59 53.0	-1.1
LKR	Lokris	121.59	310	P	PKPdf	13 59 52.5	-1.7
OSTC	Ostas	121.62	325	AMS	AMS	14 54 40.0	
	comp=Z,1µm,19.1s						
SIUC	Southern Illin	121.63	51	IAMs_20	IAMs_20	14 59 41.0	
	comp=Z,1µm,19.0s						
DPC	Dobruska-Polom	121.66	325	*e*PKPDF	PKPdf	13 59 53.7	-0.3
DPC				AMS	AMS	14 54 50.0	
	comp=Z,1µm,20.1s						
DPC	Dobruska-Polom	121.66	325	*e*PKIKP	PKPdf	13 59 53.7	-0.3
DPC				MLR	MLR		
	comp=Z,1µm,20.1s						
F45A	CMU Biological	121.69	41	P	PKPdf	13 59 53.2	-1.0
	baz=293						
CHVC	Chvalec	121.69	326	AMS	AMS	14 54 50.0	
	comp=Z,1µm,21.6s						
UPC	Upice	121.76	325	AMS	AMS	14 54 40.0	
	comp=Z,1µm,20.7s						
LTK	Loutraki	121.78	310	P	PKPdf	13 59 53.9	-0.7
LOUT	Loutraki	121.78	310	P	PKPdf	13 59 53.1	-1.5
G45A	Suttons Bay	121.84	42	P	PKPdf	13 59 54.1	-0.4
	baz=292						
HALT	Halls	121.98	53	IAMs_20	IAMs_20	14 55 14.0	
	comp=Z,796nm,20.0s						
AGG	Agios Georgios	121.99	311	P	PKPdf	13 59 54.0	-1.0
MODS	Modra-Piesok	122.01	323	*e*PKIKP	PKiKP	13 59 54.8	-0.1
MODS	Modra-Piesok	122.01	323	*e*PKP	PKiKP	13 59 54.8	-0.1
THL	Klokotos Trika	122.07	312	P	PKPdf	13 59 53.7	-1.4
MAKR	Makrakomi, Fth	122.14	311	P	PKPdf	13 59 54.5	-0.8
D46A	Sault St. Mari	122.14	39	P	PKPdf	13 59 53.5	-1.6
	baz=295						
FNA	Florina	122.16	313	P	PKPdf	13 59 54.2	-1.1
E46A	Sault Ste Mari	122.19	40		PKPdf	13 59 53.6	-1.5
KRUC	Moravsky	122.22	324	*e*PKP	PKPdf	13 59 54.9	-0.2
OXF	Oxford	122.25	54	IAMs_20	IAMs_20	14 48 32.3	
	comp=Z,1µm,20.0s						
W45A	Hickory Valley	122.28	54	IAMs_20	IAMs_20	14 51 23.0	
	comp=Z,950nm,19.0s						
KALE	Kalithea	122.31	310	P	PKPdf	13 59 55.0	-0.7
SERG	Sergoula	122.36	310	P	PKPdf	13 59 55.2	-0.5
TRIZ	Trizonia	122.37	310	P	PKiKP	13 59 58.1	+2.2
EVR	Evrytania	122.41	311	P	PKiKP	13 59 57.7	+1.6
ANX	Ano Chora	122.42	311	P	PKPdf	13 59 55.5	-0.4
L46A	Eue Claire	122.49	45	IAMs_20	IAMs_20	14 47 31.6	
	comp=Z,1µm,22.0s						
PVCC	Panska Ves	122.55	326	AMS	AMS	14 55 10.0	
	comp=Z,1µm,20.7s						
P46A	Rosedale	122.61	48		PKPdf	13 59 55.1	-1.0
TREC	Trest	122.63	324	AMS	AMS	14 55 00.0	
	comp=Z,1µm,21.8s						
D47A	Chapleau	122.65	39	P	PKPdf	13 59 55.1	-0.9
	baz=296						
PVO	Paravola	122.71	311	P	PKiKP	13 59 56.3	-0.2
BRG	Berggiesshubel	122.72	327	*e*PKP	PKPdf	13 59 55.8	-0.2
	comp=Z,6.4nm,0.9s						
BRG	Berggiesshubel	122.72	327	*e*PKIKP	PKPdf	13 59 55.8	-0.2
BRG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
DRO	Drossia	122.76	310	P	PKiKP	14 00 01.4	+4.7
E47A	Iron Bridge	122.80	39	P	PKPdf	13 59 55.3	-1.0
	baz=295						
ITM	Ithomi	122.80	309	P	PKiKP	13 59 56.8	0.0
PRU	Pruhonice	122.83	325	*e*PKPDF	PKPdf	13 59 55.3	-0.9
PRU				*e*pPKP	pPKPdf	13 59 59.2	-3.4

PRU				AMS	AMS	14 55 30.0	
	comp=Z,1µm,21.5s						
PRU	**Pruhonice**	**122.83**	**325**	*e*PKIKP	**PKPdf**	**13 59 55.3**	**-0.9**
PRU				*e*		13 59 59.2	
PRU				MLR	MLR		
	comp=Z,1µm,21.5s						
PRA	**Prague**	**122.85**	**326**	AMS	AMS	14 55 00.0	
	comp=Z,1µm,18.0s						
G47A	**Hillman**	**122.97**	**41**	P	**PKPdf**	**13 59 55.6**	**-1.0**
	baz=294						
CLL	**Collm**	**123.00**	**327**	*i* PKPdf	**PKiKP**	**13 59 57.6**	**+0.9**
	comp=Z,7.0nm,0.8s						
CLL				*i* pPKPdf	**pPKPdf**	**13 59 59.7**	**-3.2**
	comp=Z,13nm,1.0s						
CLL				*i*		14 00 03.9	
CLL				*e*PP	**PP**	**14 01 35.0**	**-0.2**
CLL				*e*		14 11 06.0	
CLL				*e*PS	**PS**	**14 11 30.0**	**-1.8**
CLL				*e*		14 12 24.0	
CLL				*e*(PPS)		14 12 36.0	
CLL				*e*SS	SS	14 18 18.0	-0.3
CLL				*e*(SSSS)		14 25 36.0	
CLL				*e*		14 31 06.0	
CLL				Lm	MLR	14 54 00.0	
	comp=N,900nm,21.6s						
CLL				Lm	MLR	14 54 00.0	
	comp=E,800nm,21.8s						
CLL				Lm	MLR	14 54 00.0	
	comp=Z,1µm,21.2s						
CLL	**Collm**	**123.00**	**327**	PKIKP	**PKiKP**	**13 59 56.4**	**-0.3**
CLL				MLR	MLR		
	comp=Z,1µm,21.0s						
CLL	**Collm**	**123.00**	**327**		**PKiKP**	**13 59 56.4**	**-0.3**
PYL	**PYLOS**	**123.02**	**309**	P	**PKPdf**	**13 59 55.4**	**-1.6**
CONA	**Conrad Observa**	**123.05**	**323**	*e*pPKPdf	**PKPdf**	**13 59 56.3**	**-0.5**
	comp=Z,9.6nm,1.2s						
TIR	**Tirane**	**123.06**	**314**	IAMs_20	IAMs_20	14 59 07.2	
	comp=Z,917nm,21.0s						
J47A	**Sunmer**	**123.07**	**43**		**PKPdf**	**13 59 55.3**	**-1.6**
J47A	**Sunmer**	**123.07**	**43**	P	**PKPdf**	**13 59 55.7**	**-1.2**
	baz=292						
PDG	**Podgorica**	**123.11**	**316**	⇑P	**PKPdf**	**13 59 56.3**	**-0.6**
WVT	**Waverly**	**123.11**	**52**	IAMs_20	IAMs_20	14 45 57.9	
	comp=Z,1µm,22.0s						
WVT	**Waverly**	**123.11**	**52**	P	**PKPdf**	**13 59 55.9**	**-1.3**
	baz=285						
K47A	**Vermontville**	**123.16**	**44**	P	**PKPdf**	**13 59 55.9**	**-1.2**
	baz=292						
M47A	**Cromwell**	**123.19**	**46**	P	**PKPdf**	**13 59 56.0**	**-1.2**
	baz=290						
PLAL	**Pickwick Lake**	**123.20**	**54**	IAMs_20	IAMs_20	14 49 03.5	
	comp=Z,982nm,20.0s						
BLO	**Bloomington**	**123.25**	**48**	IAMs_20	IAMs_20	14 50 29.9	
	comp=Z,1µm,19.0s						
N47A	**Urbana**	**123.30**	**46**	P	**PKPdf**	**13 59 56.4**	**-1.0**
	baz=290						
LKD2	**Lefkada island**	**123.30**	**311**	P	**PKPdf**	**13 59 57.4**	**-0.1**
D48A	**Paudash Townsh**	**123.39**	**38**	P	**PKPdf**	**13 59 56.0**	**-1.4**
	baz=297						
T47A	**Sharon Grove**	**123.44**	**51**		**PKPdf**	**13 59 56.4**	**-1.5**
I48A	**Sherman Twp**	**123.46**	**42**	P	**PKPdf**	**13 59 56.5**	**-1.1**
	baz=294						
F48A	**Evansville**	**123.48**	**40**	P	**PKPdf**	**13 59 56.5**	**-1.1**
	baz=296						
E48A	**Lockeyer**	**123.48**	**39**	P	**PKPdf**	**13 59 56.5**	**-1.2**
	baz=296						
H48A	**Harrisville**	**123.50**	**41**	P	**PKPdf**	**13 59 56.5**	**-1.2**
	baz=294						
ARSA	**Arzberg**	**123.57**	**322**	*e*pPKPdf	**PKPdf**	**13 59 57.2**	**-0.6**
	comp=Z,5.8nm,0.8s						
BLY	**Banja Luka**	**123.61**	**319**	⇑P	**PKiKP**	**13 59 58.2**	**0.0**
BLY	**Banja Luka**	**123.61**	**319**	IAMs_20	IAMs_20	14 56 03.0	
	comp=Z,590nm,21.0s						
D49A	**Beulah Townshi**	**123.62**	**38**	P	**PKPdf**	**13 59 56.6**	**-1.3**
	baz=298						
WCI	**Wyandotte Cave**	**123.70**	**49**	P	**PKPdf**	**13 59 56.7**	**-1.6**
	baz=288						
K48A	**Perry**	**123.71**	**44**	P	**PKPdf**	**13 59 56.4**	**-1.8**
	baz=292						
J48A	**Bridge Port**	**123.75**	**43**	P	**PKPdf**	**13 59 56.3**	**-1.9**
	baz=293						
N48A	**Decatur**	**123.78**	**46**	P	**PKPdf**	**13 59 56.8**	**-1.5**
	baz=290						
KHC	**Kasperske Hory**	**123.81**	**325**	*e*PKPDF	**PKiKP**	**13 59 58.1**	**-0.4**
KHC				*e*x	x	14 00 01.6	
KHC				AMS	AMS	14 55 50.0	
	comp=Z,2µm,21.5s						
KHC	**Kasperske Hory**	**123.81**	**325**	PKIKP	**PKPdf**	**13 59 57.1**	**-1.1**
KHC				MLR	MLR		
	comp=Z,500nm,20.0s						
KHC	**Kasperske Hory**	**123.81**	**325**		**PKPdf**	**13 59 57.1**	**-1.1**
L48A	**N Adams**	**123.82**	**45**	P	**PKPdf**	**13 59 57.2**	**-1.2**
	baz=292						
NKC	**Novy Kostel**	**123.87**	**327**	*e*PKPDF	**PKiKP**	**13 59 58.4**	**-0.1**
NKC				AMS	AMS	14 55 30.0	
	comp=Z,1µm,23.0s						
NKC	**Novy Kostel**	**123.87**	**327**	*e*PKIKP	**PKiKP**	**13 59 58.4**	**-0.1**
NKC				MLR	MLR		
	comp=Z,1µm,23.0s						
F49A	**Sandfield**	**123.88**	**40**	P	**PKPdf**	**13 59 57.2**	**-1.2**
	baz=296						
GEC2	**GERESS Array S**	**123.88**	**325**		**PKPdf**	**13 59 57.1**	**-1.3**
GERES	**GERESS Array B**	**123.88**	**325**	PKP	**PKPdf**	**13 59 58.0**	**-0.4**
	comp=Z,4.3nm,0.8s,baz=48,slow=2.0,SNR=20						
GERES				PP	PP	14 01 50.7	+9.2
	comp=Z,0.3nm,0.3s,baz=47,slow=4.3,SNR=1.8						
GERES				PKKPbc	**PKKPbc**	**14 09 47.3**	**+1.0**
	comp=Z,0.4nm,0.4s,baz=228,slow=3.4,SNR=3.8						
GERES	**GERESS Array B**	**123.88**	**325**	PKIKP	**PKPdf**	**13 59 57.4**	**-1.0**
GERES	**GERESS Array B**	**123.88**	**325**		**PKPdf**	**13 59 57.4**	**-1.0**
O48A	**Farmland**	**123.89**	**47**	P	**PKPdf**	**13 59 57.3**	**-1.3**
	baz=290						
Q48A	**North Vernon**	**123.91**	**48**	P	**PKPdf**	**13 59 57.4**	**-1.2**
	baz=289						
GROS	**Grobnik**	**123.94**	**321**	*i* PKPdf	**PKPdf**	**13 59 57.9**	**-0.7**
P48A	**Milroy**	**123.96**	**48**	P	**PKPdf**	**13 59 57.8**	**-1.0**
	baz=289						
V48A	**Smith Brothers**	**124.00**	**52**		**PKPdf**	**13 59 57.8**	**-1.2**
MOA	**Molln**	**124.04**	**323**	*e*PKiKP	**PKPdf**	**13 59 57.8**	**-0.9**
	comp=Z,5.1nm,0.8s						
SOKA	**Soboth**	**124.13**	**322**	*e*pPKPdf	**PKPdf**	**13 59 58.2**	**-0.7**
	comp=Z,6.8nm,0.8s,SNR=5.9						
I49A	**Point Hope**	**124.14**	**42**		**PKPdf**	**13 59 58.1**	**-0.9**
I49A	**Point Hope**	**124.14**	**42**	P	**PKPdf**	**13 59 57.7**	**-1.2**
	baz=294						
X48A	**Hartselle**	**124.16**	**54**	IAMs_20	IAMs_20	14 49 31.8	
	comp=Z,906nm,20.0s						
J49A	**Marlette**	**124.16**	**43**	P	**PKPdf**	**13 59 57.5**	**-1.5**
	baz=294						
L49A	**Milan**	**124.22**	**44**	P	**PKPdf**	**13 59 58.1**	**-1.0**
	baz=292						
CLTN	**Cedars of Leba**	**124.29**	**52**		**PKPdf**	**13 59 58.3**	**-1.2**
M49A	**Liberty Center**	**124.31**	**45**	P	**PKPdf**	**13 59 58.3**	**-1.0**
	baz=292						
N49A	**Columbus Grove**	**124.36**	**46**		**PKPdf**	**13 59 58.3**	**-1.1**
N49A	**Columbus Grove**	**124.36**	**46**	P	**PKPdf**	**13 59 58.2**	**-1.3**
	baz=291						
P49A	**Miami Univ. Ec**	**124.46**	**47**	P	**PKPdf**	**13 59 58.2**	**-1.4**
	baz=290						
OBKA	**Obir**	**124.50**	**322**	*e*PKiKP	**PKPdf**	**13 59 58.8**	**-0.9**
	comp=Z,7.8nm,1.1s						
O49A	**Covington**	**124.51**	**47**		**PKPdf**	**13 59 58.6**	**-1.2**
O49A	**Covington**	**124.51**	**47**	P	**PKPdf**	**13 59 58.7**	**-1.1**
	baz=290						
BOJS	**Bojanci**	**124.52**	**320**	*i* PKPdf	**PKiKP**	**13 59 59.6**	**-0.3**
R49A	**Shelbyville**	**124.52**	**49**	P	**PKPdf**	**13 59 58.7**	**-1.1**
	baz=289						
MATQ	**Matagami**	**124.53**	**34**	P	**PKPdf**	**13 59 58.3**	**-1.2**
	baz=303						
LRAL	**Lakeview Retre**	**124.54**	**56**		**PKPdf**	**13 59 58.8**	**-1.3**
LRAL	**Lakeview Retre**	**124.54**	**56**	P	**PKPdf**	**13 59 58.3**	**-1.7**
	baz=284						
D50A	**G1974 Best Tow**	**124.59**	**37**	P	**PKPdf**	**13 59 58.6**	**-1.1**
	baz=299						
S49A	**Springfield**	**124.59**	**50**	P	**PKPdf**	**13 59 58.3**	**-1.7**
	baz=288						
U49A	**Red Boiling Sp**	**124.60**	**51**		**PKPdf**	**13 59 58.7**	**-1.3**
T49A	**Edmonton**	**124.61**	**50**	P	**PKPdf**	**13 59 58.7**	**-1.4**
	baz=288						
SNET	**Serv Nac Est T**	**124.63**	**79**	IAMs_20	IAMs_20	14 44 39.0	
	comp=Z,829nm,19.0s						
GRA1	**Grafenberg Arr**	**124.82**	**327**	IAMs_20	IAMs_20	14 56 18.1	
	comp=Z,929nm,20.0s						
GRF	**Grafenberg Arr**	**124.82**	**327**	*e*PKP	**PKPdf**	**13 59 58.9**	**-1.2**
	baz=57,slow=1.1						
GRF				*e*PP	**PP**	**14 01 48.6**	**+1.0**
	baz=60,slow=5.9						
L50A	**Kingsville**	**124.90**	**44**	P	**PKPdf**	**13 59 59.3**	**-1.2**
	baz=293						
D51A	**Lot 18 Range I**	**124.90**	**37**	P	**PKPdf**	**13 59 58.9**	**-1.4**
	baz=299						
CEY	**Cerknica**	**124.93**	**321**	*i* PKPdf	**PKPdf**	**14 00 00.1**	**-0.4**
KBA	**Koelnbreinsper**	**124.96**	**323**	*e*PKiKP	**PKPdf**	**13 59 59.5**	**-1.2**
	comp=Z,8.6nm,1.1s,SNR=5.0						
M50A	**Fremont**	**124.98**	**45**	P	**PKPdf**	**13 59 59.6**	**-1.1**
	baz=292						
MYKA	**Terra Mystica**	**125.00**	**322**	*e*pPKPdf	**PKPdf**	**14 00 00.4**	**-0.2**
	comp=Z,8.1nm,0.9s						
O50A	**Cable**	**125.04**	**46**	P	**PKPdf**	**13 59 59.5**	**-1.4**
	baz=291						
P50A	**Jamestown**	**125.10**	**47**	P	**PKPdf**	**13 59 59.2**	**-1.7**
	baz=291						
E51A	**G1948 Merrick**	**125.10**	**38**	P	**PKPdf**	**13 59 59.2**	**-1.5**
	baz=299						
F51A	**Arnstein**	**125.13**	**39**	P	**PKPdf**	**13 59 59.3**	**-1.4**
	baz=298						
N50A	**Nevada**	**125.14**	**46**	P	**PKPdf**	**13 59 59.5**	**-1.4**
	baz=292						
R50A	**Paris**	**125.16**	**49**	IAMs_20	IAMs_20	14 48 22.6	
	comp=Z,1µm,21.0s						
R50A	**Paris**	**125.16**	**49**	P	**PKPdf**	**13 59 59.2**	**-1.8**
	baz=289						
T50A	**Nancy**	**125.17**	**50**	P	**PKPdf**	**13 59 60.0**	**-1.2**
	baz=288						
Q50A	**Georgetown**	**125.23**	**48**	P	**PKPdf**	**14 00 00.4**	**-0.8**
	baz=290						
S50A	**Richmond**	**125.30**	**49**	P	**PKPdf**	**14 00 00.3**	**-1.1**
	baz=289						
W50A	**Signal Mountai**	**125.33**	**53**		**PKPdf**	**14 00 00.1**	**-1.5**
W50A				IAMs_20	IAMs_20	14 53 10.8	
	comp=Z,1µm,19.0s						
TRI	**Trieste**	**125.36**	**321**	IAMs_20	IAMs_20	14 58 24.0	
	comp=Z,702nm,19.0s						
Z50A	**Ashland**	**125.36**	**55**	P	**PKPdf**	**14 00 00.3**	**-1.3**
	baz=285						
I51A	**Listowel**	**125.38**	**41**	P	**PKPdf**	**14 00 00.4**	**-0.9**
	baz=296						
ACSO	**Alum Creek Sta**	**125.46**	**46**		**PKPdf**	**14 00 00.8**	**-0.8**
ACSO	**Alum Creek Sta**	**125.46**	**46**	P	**PKPdf**	**14 00 00.1**	**-1.5**
	baz=292						
VLDQ	**Val d'Or**	**125.51**	**35**		**PKPdf**	**13 59 59.5**	**-1.9**
MATE	**Matera**	**125.54**	**315**	⇑P	**PKiKP**	**14 00 02.4**	**+0.3**
F52A	**Sundridge**	**125.56**	**38**	P	**PKPdf**	**14 00 00.7**	**-0.9**
	baz=299						
ABTA	**Abfaltersbach**	**125.62**	**323**	*e*PKiKP	**PKPdf**	**14 00 00.8**	**-1.0**
	comp=Z,16nm,0.9s,SNR=9.3						
Q51A	**Peebles**	**125.63**	**48**	P	**PKPdf**	**14 00 00.7**	**-1.3**
	baz=291						
N51A	**Ashland**	**125.63**	**45**	P	**PKPdf**	**14 00 01.1**	**-0.8**
	baz=293						
R51A	**Hillsboro**	**125.70**	**48**	P	**PKPdf**	**14 00 01.0**	**-1.2**
	baz=290						
E52A	**Mattawa**	**125.73**	**38**	P	**PKPdf**	**14 00 00.6**	**-1.3**
	baz=300						
H52A	**Wyevale**	**125.74**	**40**	P	**PKPdf**	**14 00 00.7**	**-1.2**
	baz=297						
STAL	**STALIGIAL**	**125.74**	**322**		**PKPdf**	**14 00 01.2**	**-0.7**
STAL				IAMs_20	IAMs_20	14 57 08.0	
	comp=Z,972nm,19.0s						
O51A	**Pataskala**	**125.76**	**46**	P	**PKPdf**	**14 00 00.8**	**-1.4**
	baz=292						
SGRT	**San Giovanni R**	**125.78**	**316**		**PKPdf**	**14 00 01.8**	**-0.5**
T51A	**Gray**	**125.87**	**50**	P	**PKPdf**	**14 00 01.2**	**-1.3**
	baz=289						
X51A	**Calhoun**	**125.87**	**53**	P	**PKPdf**	**14 00 01.0**	**-1.6**
	baz=286						
WATA	**Walderalm**	**125.87**	**324**	*i* pPKPdf	**PKPdf**	**14 00 02.0**	**-0.4**
	comp=Z,16nm,1.1s						
WTTA	**Wattenberg**	**125.88**	**324**	*e*pPKPdf	**PKPdf**	**14 00 01.8**	**-0.6**
	comp=Z,21nm,1.0s						
D53A	**Lac Vacive, Po**	**125.90**	**36**		**PKPdf**	**14 00 01.1**	**-1.1**
D53A	**Lac Vacive, Po**	**125.90**	**36**	P	**PKPdf**	**14 00 01.1**	**-1.1**
	baz=301						
S51A	**Beattyville**	**125.91**	**49**		**PKPdf**	**14 00 01.4**	**-1.2**
S51A	**Beattyville**	**125.91**	**49**	P	**PKPdf**	**14 00 01.2**	**-1.3**
	baz=289						
Z51A	**Franklin**	**125.95**	**55**		**PKPdf**	**14 00 01.9**	**-0.9**
J52A	**Paris**	**125.98**	**42**	P	**PKPdf**	**14 00 01.0**	**-1.5**
	baz=296						
TIP	**Timpagrande**	**126.04**	**313**	P	**PKiKP**	**14 00 02.9**	**-0.4**
TIP	**Timpagrande**	**126.04**	**313**	⇑P	**PKiKP**	**14 00 03.8**	**+0.5**
TIP	**Timpagrande**	**126.04**	**313**		**PKPdf**	**14 00 02.3**	**-0.6**
TIP				IAMs_20	IAMs_20	14 58 43.3	
	comp=Z,715nm,22.0s						
M52A	**Chesterland**	**126.10**	**44**		**PKPdf**	**14 00 02.2**	**-0.6**
M52A	**Chesterland**	**126.10**	**44**	P	**PKPdf**	**14 00 01.3**	**-1.5**
	baz=294						
MOTA	**Moosalm**	**126.14**	**324**	*e*pPKPdf	**PKPdf**	**14 00 02.1**	**-0.7**
	comp=Z,22nm,1.0s,SNR=8.3						
SQTA	**Sankt Quirin**	**126.15**	**324**	*e*pPKPdf	**PKPdf**	**14 00 02.4**	**-0.4**
	comp=Z,19nm,1.2s						
SADO	**Sadowa**	**126.15**	**40**		**PKPdf**	**14 00 01.8**	**-1.0**
N52A	**McGinn’s Farm,**	**126.16**	**45**	P	**PKPdf**	**14 00 01.3**	**-1.6**
	baz=293						
ALGO	**Algonquin Park**	**126.25**	**38**	P	**PKPdf**	**14 00 01.6**	**-1.3**
	baz=300						
RETA	**Reutte**	**126.27**	**324**	*e*pPKPdf	**PKPdf**	**14 00 02.4**	**-0.7**
	comp=Z,5.8nm,1.0s						
E53A	**Dumoine, Ponti**	**126.28**	**37**	P	**PKPdf**	**14 00 01.9**	**-1.1**
	baz=300						
P52A	**Corning**	**126.29**	**46**	P	**PKPdf**	**14 00 02.1**	**-1.1**
	baz=292						
G53A	**Haliburton**	**126.31**	**39**	P	**PKPdf**	**14 00 01.9**	**-1.1**
	baz=299						
O52A	**Adamsville**	**126.32**	**46**	P	**PKPdf**	**14 00 02.1**	**-1.1**
	baz=293						
SCHQ	**Schefferville**	**126.42**	**24**	PKP	**PKPdf**	**14 00 02.8**	**-0.2**
	comp=Z,4.5nm,0.8s,baz=250,slow=3.2,SNR=5.4						
Q52A	**Bidwell**	**126.44**	**47**	P	**PKPdf**	**14 00 02.0**	**-1.5**
	baz=291						
D54A	**Lac Fusel, La**	**126.47**	**36**	P	**PKPdf**	**14 00 02.3**	**-1.0**
	baz=302						
G54A	**Lake Saint Pet**	**126.51**	**38**	P	**PKPdf**	**14 00 02.2**	**-1.3**
	baz=300						
FETA	**Feichten**	**126.53**	**324**	*i* sPKPdf	**PKPdf**	**14 00 03.5**	**-0.2**
	comp=Z,17nm,1.0s,SNR=8.0						
E54A	**Lac Daplat, Po**	**126.53**	**37**	P	**PKPdf**	**14 00 02.2**	**-1.2**
	baz=301						
H53A	**Bobcaygeon**	**126.60**	**40**	P	**PKPdf**	**14 00 02.6**	**-1.0**
	baz=298						
M53A	**WI Miller and**	**126.61**	**44**	P	**PKPdf**	**14 00 03.4**	**-0.3**
	baz=294						
L53A	**Girard**	**126.67**	**43**	P	**PKPdf**	**14 00 03.0**	**-0.9**
	baz=295						
Y52A	**Lilburn**	**126.70**	**54**	P	**PKPdf**	**14 00 03.1**	**-1.1**
	baz=286						
O53A	**New Philadelph**	**126.71**	**45**	P	**PKPdf**	**14 00 02.8**	**-1.1**
	baz=293						
N53A	**Lisbon**	**126.75**	**45**	P	**PKPdf**	**14 00 03.5**	**-0.6**
	baz=294						
P53A	**Whipple**	**126.88**	**46**		**PKPdf**	**14 00 03.3**	**-1.0**
P53A	**Whipple**	**126.88**	**46**	P	**PKPdf**	**14 00 03.7**	**-0.6**
	baz=292						
DAVA	**Damuels**	**126.88**	**325**	*e*pPKPdf	**PKPdf**	**14 00 03.7**	**-0.6**
	comp=Z,12nm,0.7s						
PAOL	**Paolisi**	**126.89**	**316**	IAMs_20	IAMs_20	15 04 48.2	
	comp=Z,596nm,22.0s						
INTR	**Introdacqua**	**126.93**	**317**		**PKPdf**	**14 00 02.7**	**-1.8**
CEL	**Celeste**	**127.00**	**312**	IAMs_20	IAMs_20	15 01 32.8	
	comp=Z,681nm,21.0s						
Q53A	**Leroy**	**127.01**	**47**	P	**PKPdf**	**14 00 03.4**	**-1.2**
	baz=292						
NRCA	**Norcia**	**127.09**	**318**		**PKPdf**	**14 00 03.6**	**-1.2**
AQU	**L'Aquila**	**127.12**	**318**	IAMs_20	IAMs_20	14 57 32.9	
	comp=Z,974nm,22.0s						
X53A	**Estanollee**	**127.12**	**53**	P	**PKPdf**	**14 00 04.3**	**-0.6**
	baz=287						
L54A	**Sinclairville**	**127.19**	**42**	P	**PKPdf**	**14 00 03.4**	**-1.5**
	baz=296						
E55A	**Montcerf-Lytto**	**127.19**	**36**	P	**PKPdf**	**14 00 03.3**	**-1.3**
	baz=302						
D55A	**Sainte-Anne-du**	**127.22**	**35**	P	**PKPdf**	**14 00 03.4**	**-1.3**
	baz=303						
BG3	**Lake Jocassee**	**127.26**	**52**	IAMs_20	IAMs_20	14 51 53.8	
	comp=Z,998nm,20.0s						
M54A	**Oil Creek Stat**	**127.27**	**43**	P	**PKPdf**	**14 00 04.0**	**-1.0**
	baz=295						
N54A	**Moraine State**	**127.27**	**44**	P	**PKPdf**	**14 00 03.9**	**-1.2**
	baz=295						
GOGA	**Godfrey**	**127.30**	**54**	P	**PKPdf**	**14 00 04.6**	**-0.7**
	baz=286						
PLVO	**Plevna**	**127.31**	**38**		**PKPdf**	**14 00 04.4**	**-0.5**
O54A	**Avella**	**127.32**	**45**	P	**PKPdf**	**14 00 03.9**	**-1.3**
	baz=294						
I55A	**Frankford**	**127.33**	**40**	P	**PKPdf**	**14 00 03.5**	**-1.5**
	baz=299						
F55A	**Otter Lake**	**127.34**	**37**	P	**PKPdf**	**14 00 03.6**	**-1.4**
	baz=302						
SALO	**Salr**	**127.38**	**323**	IAMs_20	IAMs_20	14 58 53.4	
	comp=Z,855nm,20.0s						
G55A	**Calabogie**	**127.42**	**38**	P	**PKPdf**	**14 00 03.7**	**-1.5**
	baz=301						
Q54A	**Coxs Mills**	**127.47**	**47**	P	**PKPdf**	**14 00 03.8**	**-1.6**
	baz=293						
P54A	**Burton**	**127.48**	**46**	P	**PKPdf**	**14 00 04.4**	**-1.1**
	baz=293						
H55A	**Tweed**	**127.48**	**39**	P	**PKPdf**	**14 00 03.9**	**-1.4**
	baz=300						
S54A	**Dingess, Beckl**	**127.56**	**48**	P	**PKPdf**	**14 00 04.8**	**-0.9**
	baz=291						
D56A	**ZEC Mazanza, M**	**127.62**	**35**	P	**PKPdf**	**14 00 04.6**	**-0.9**
	baz=304						
T54A	**Tazewell**	**127.62**	**49**	P	**PKPdf**	**14 00 04.6**	**-1.3**
	baz=291						
U54A	**Nelsons Funny**	**127.62**	**50**	P	**PKPdf**	**14 00 04.6**	**-1.3**
	baz=290						
TUE	**Stuetta**	**127.63**	**324**		**PKPdf**	**14 00 05.0**	**-0.8**
J55A	**Hilton**	**127.70**	**41**	P	**PKPdf**	**14 00 04.6**	**-1.2**
	baz=298						
E56A	**St. Veronique**	**127.74**	**36**	P	**PKPdf**	**14 00 04.5**	**-1.3**
	baz=303						
V54A	**Nebo**	**127.77**	**51**	P	**PKPdf**	**14 00 04.7**	**-1.5**
	baz=289						
K55A	**Perry**	**127.79**	**41**	P	**PKPdf**	**14 00 04.7**	**-1.3**
	baz=298						
L55A	**Hinsdale**	**127.80**	**42**	P	**PKPdf**	**14 00 04.8**	**-1.3**
	baz=297						
W54A	**Cherokee Point**	**127.81**	**52**	P	**PKPdf**	**14 00 04.9**	**-1.4**
	baz=289						
X54A	**Belton**	**127.83**	**53**	P	**PKPdf**	**14 00 05.4**	**-0.9**
	baz=288						
M55A	**Ridgway**	**127.89**	**43**	P	**PKPdf**	**14 00 05.3**	**-1.0**
	baz=296						
MCWV	**Mont Chateau**	**127.91**	**46**	P	**PKPdf**	**14 00 05.5**	**-0.8**
	baz=294						
OSSC	**Osservatorio P**	**127.98**	**320**	IAMs_20	IAMs_20	15 01 40.6	
	comp=Z,694nm,20.0s						
P55A	**Reedsville**	**127.98**	**46**	P	**PKPdf**	**14 00 05.9**	**-0.6**
	baz=294						
Q55A	**Buckhannon**	**128.00**	**46**	P	**PKPdf**	**14 00 05.5**	**-1.0**
	baz=293						
HODGE	**Hodges**	**128.02**	**53**	IAMs_20	IAMs_20	14 52 06.5	
	comp=Z,968nm,19.0s						
H56A	**Elgin**	**128.03**	**38**	P	**PKPdf**	**14 00 05.6**	**-0.7**
	baz=301						
N55A	**Marion Center**	**128.04**	**44**	P	**PKPdf**	**14 00 05.9**	**-0.6**
	baz=296						
O55A	**Ligonier**	**128.06**	**45**	P	**PKPdf**	**14 00 06.2**	**-0.4**
	baz=295						
D57A	**Chemin Vers le**	**128.13**	**35**	P	**PKPdf**	**14 00 05.7**	**-0.8**
	baz=305						
T55A	**Pulaski**	**128.19**	**49**	P	**PKPdf**	**14 00 06.5**	**-0.5**
	baz=291						
R55A	**Marlinton**	**128.25**	**47**		**PKPdf**	**14 00 06.6**	**-0.4**
R55A	**Marlinton**	**128.25**	**47**	P	**PKPdf**	**14 00 06.1**	**-1.0**
	baz=293						
M56A	**Emporium**	**128.28**	**43**	P	**PKPdf**	**14 00 06.0**	**-1.0**
	baz=297						
V55A	**Taylorsville**	**128.31**	**51**	P	**PKPdf**	**14 00 06.4**	**-0.8**
	baz=290						
J56A	**Wolcott**	**128.31**	**40**	P	**PKPdf**	**14 00 05.7**	**-1.2**
	baz=299						
E57A	**Chemin Saint G**	**128.32**	**35**	P	**PKPdf**	**14 00 05.8**	**-1.1**
	baz=304						
F57A	**Harrington**	**128.33**	**36**	P	**PKPdf**	**14 00 06.2**	**-0.7**
	baz=303						
L56A	**Greenwood**	**128.40**	**42**	P	**PKPdf**	**14 00 06.3**	**-0.9**
	baz=298						
Y55A	**Saluda**	**128.43**	**53**	P	**PKPdf**	**14 00 06.1**	**-1.3**
	baz=288						
BLA	**Blacksburg**	**128.43**	**49**	P	**PKPdf**	**14 00 06.2**	**-1.2**
	baz=292						
X55A	**Gracelyn & Ava**	**128.44**	**52**	P	**PKPdf**	**14 00 05.9**	**-1.5**
	baz=289						
N56A	**West Decatur**	**128.45**	**43**	P	**PKPdf**	**14 00 06.1**	**-1.2**
	baz=296						
KMSC	**Kings Mountain**	**128.46**	**51**	P	**PKPdf**	**14 00 06.3**	**-1.2**
	baz=289						
G57A	**Newington**	**128.54**	**37**	P	**PKPdf**	**14 00 05.9**	**-1.4**
	baz=302						
O56A	**Blue Knob Stat**	**128.55**	**44**	P	**PKPdf**	**14 00 05.6**	**-1.9**
	baz=296						
Q56A	**Snyder Ridge,**	**128.62**	**46**	IAMs_20	IAMs_20	15 04 35.4	
	comp=Z,885nm,19.0s						
Q56A	**Snyder Ridge,**	**128.62**	**46**	P	**PKPdf**	**14 00 05.9**	**-1.8**
	baz=294						
H57A	**Richville**	**128.63**	**38**	P	**PKPdf**	**14 00 05.5**	**-2.0**
	baz=302						
D58A	**Chemin du LacG**	**128.65**	**34**	P	**PKPdf**	**14 00 05.7**	**-1.7**
	baz=306						
MSSA	**Maissana**	**128.67**	**322**	IAMs_20	IAMs_20	14 59 05.5	
	comp=Z,608nm,19.0s						
P56A	**Dayton Farm, R**	**128.68**	**45**	P	**PKPdf**	**14 00 06.7**	**-1.1**
	baz=295						
JTS	**Las Juntas de**	**128.72**	**84**	IAMs_20	IAMs_20	14 44 42.5	
	comp=Z,704nm,20.0s						
R56A	**Bull Pasture M**	**128.72**	**47**	P	**PKPdf**	**14 00 07.5**	**-0.5**
	baz=294						
I57A	**Carthage**	**128.74**	**39**	P	**PKPdf**	**14 00 06.3**	**-1.5**
	baz=301						
J57A	**Williamstown**	**128.79**	**40**	P	**PKPdf**	**14 00 07.1**	**-0.8**
	baz=300						
K57A	**Scipio Center**	**128.79**	**41**	P	**PKPdf**	**14 00 07.0**	**-0.9**
	baz=299						
SSPA	**Standing Stone**	**128.85**	**44**	P	**PKPdf**	**14 00 07.0**	**-1.1**
	baz=296						
V56A	**Mocksville**	**128.87**	**50**	P	**PKPdf**	**14 00 07.1**	**-1.2**
	baz=291						
X56A	**White Oak**	**128.90**	**52**	P	**PKPdf**	**14 00 07.1**	**-1.2**
	baz=289						
L57A	**Andrews Acres**	**128.93**	**42**	P	**PKPdf**	**14 00 07.0**	**-1.2**
	baz=298						
N57A	**Milroy**	**129.03**	**43**	P	**PKPdf**	**14 00 07.1**	**-1.3**
	baz=297						
W56A	**Indian Trail**	**129.04**	**51**	P	**PKPdf**	**14 00 08.1**	**-0.5**
	baz=290						
LONY	**Lake Ozonia**	**129.04**	**38**	P	**PKPdf**	**14 00 07.5**	**-0.8**
	baz=302						
M57A	**Sunshine Farm,**	**129.05**	**42**	P	**PKPdf**	**14 00 07.5**	**-0.9**
	baz=298						
G58A	**Ormstown**	**129.07**	**37**	P	**PKPdf**	**14 00 07.1**	**-1.2**
	baz=303						
Q57A	**Strasburg**	**129.18**	**46**	P	**PKPdf**	**14 00 08.0**	**-0.8**
	baz=295						
O57A	**Amberson**	**129.22**	**44**	P	**PKPdf**	**14 00 08.1**	**-0.6**
	baz=296						
CLTB	**Caltabellotta**	**129.22**	**312**	IAMs_20	IAMs_20	15 09 15.5	
	comp=Z,639nm,20.0s						
J58A	**Remsen**	**129.26**	**39**	P	**PKPdf**	**14 00 08.5**	**-0.2**
	baz=301						
I58A	**Old Forge**	**129.29**	**39**	P	**PKPdf**	**14 00 08.1**	**-0.7**
	baz=301						
T57A	**Hurt**	**129.38**	**48**	P	**PKPdf**	**14 00 08.2**	**-0.9**
	baz=292						
H58A	**Gabriels**	**129.39**	**38**	P	**PKPdf**	**14 00 07.5**	**-1.5**
	baz=303						
V57A	**Coltrane Farms**	**129.39**	**50**	P	**PKPdf**	**14 00 08.9**	**-0.4**
	baz=291						
BINY	**Binghamton**	**129.40**	**41**	P	**PKPdf**	**14 00 08.6**	**-0.5**
	baz=299						
M58A	**Price’s Panora**	**129.48**	**42**	P	**PKPdf**	**14 00 08.2**	**-1.1**
	baz=298						
W57A	**Gilead**	**129.49**	**51**	P	**PKPdf**	**14 00 08.2**	**-1.2**
	baz=290						
Z57A	**Bowman**	**129.54**	**53**	P	**PKPdf**	**14 00 07.8**	**-1.8**
	baz=288						
N58A	**Sunbury**	**129.56**	**43**	P	**PKPdf**	**14 00 07.5**	**-1.9**
	baz=298						
L58A	**Harry Jones Me**	**129.56**	**41**	P	**PKPdf**	**14 00 07.6**	**-1.8**
	baz=299						
J59A	**Piesco**	**129.70**	**39**	P	**PKPdf**	**14 00 08.0**	**-1.6**
	baz=302						
Q58A	**Fox Den Farm,**	**129.73**	**46**	P	**PKPdf**	**14 00 08.1**	**-1.7**
	baz=295						
O58A	**Lewisberry**	**129.74**	**44**	P	**PKPdf**	**14 00 08.8**	**-1.0**
	baz=297						
I59A	**Olmsteadville**	**129.91**	**38**	P	**PKPdf**	**14 00 09.5**	**-0.5**
	baz=303						
BNI	**Bardonecchia**	**129.97**	**324**	PKIKP	**PKPdf**	**14 00 08.3**	**-1.9**
BNI				MLR	MLR		
	comp=Z,1µm,21.0s						

BNI	Bardonecchia	129.97	324		PKPdf	14 00 08.3	-1.9
L59A	Walton	130.01	41	P	PKPdf	14 00 09.7	-0.6
	baz=300						
M59A	Waymart	130.08	41	P	PKPdf	14 00 10.1	-0.3
	baz=299						
U58A	Oxford	130.13	49	P	PKPdf	14 00 10.1	-0.5
	baz=293						
N59A	State Game Lan	130.16	42	P	PKPdf	14 00 10.1	-0.4
	baz=299						
I60A	Shoreham	130.24	38	P	PKPdf	14 00 09.8	-0.8
	baz=303						
P59A	Jarrettsville	130.31	44	P	PKPdf	14 00 09.5	-1.3
	baz=297						
E61A	Lac Etchemin	130.36	34	P	PKPdf	14 00 09.3	-1.5
	baz=308						
F61A	St Evariste	130.36	34	P	PKPdf	14 00 09.5	-1.2
	baz=307						
T59A	Double "B" Far	130.64	48	P	PKPdf	14 00 11.1	-0.5
	baz=294						
LBNH	Lisbon	130.84	37	P	PKPdf	14 00 11.0	-0.7
	baz=305						
J61A	Chester	130.96	38	P	PKPdf	14 00 11.7	-0.3
	baz=304						
M61A	Granite Spring	131.28	41	P	PKPdf	14 00 12.0	-0.6
	baz=301						
L61B	Northampton	131.37	39	P	PKPdf	14 00 12.7	-0.1
	baz=303						
NNA	Nana	131.91	114	IAMs_20	IAMs_20	14 45 19.4	
	comp=Z,987nm,22.0s						
L63A	North Scituate	132.36	39	P	PKiKP	14 00 15.8	+0.1
	baz=304						
KEST	Kesra	132.81	312	PKP	PKiKP	14 00 16.4	-0.6
	comp=Z,14nm,0.9s,baz=331,slow=4.2,SNR=8.5						
KEST	Kesra	132.81	312		PKPdf	14 00 14.2	-1.6
SOTA	Rioblanco	136.13	96	*e*P	PKiKP	14 00 24.8	-0.1
PCON	Cinco Dias	136.37	95	*e*P	PKiKP	14 00 25.3	-0.1
YOTC	Yotoco, Valle	136.68	93	*e*P	PKPdf	14 00 21.5	-2.3
FLOC	Florencia	136.98	97	*e*P	PKiKP	14 00 25.1	-0.9
CBOC	Ciudad Bolivar	137.23	90	*e*P	PKiKP	14 00 29.2	+2.6
LPAZ	La Paz	137.43	125	PKhKP	PKPpre	14 00 17.6	
	comp=Z,3.3nm,0.7s,baz=160,slow=2.9,SNR=9.6						
LPAZ				PKP	PKiKP	14 00 27.4	-0.1
	comp=Z,10nm,1.0s,baz=203,slow=3.5,SNR=13						
HELC	Santa Helena	137.75	90	*e*P	PKPdf	14 00 26.6	+0.6
ORTC	Ortega, Tolima	137.75	93	*e*P	PKPdf	14 00 25.9	+0.3
RREF	El Recreo	137.78	92	*e*P	PKPdf	14 00 26.9	+0.5
GUY2C	Guyana, Caldas	137.80	91	*e*P	PKPdf	14 00 25.5	-0.7
PRAC	Prado	138.08	94	*e*P	PKPdf	14 00 26.4	+0.2
CPUP	Villa Florida	138.15	146	PKhKP	PKPpre	14 00 18.3	
	comp=Z,3.3nm,0.7s,baz=264,slow=2.3,SNR=5.6						
CPUP				PKP	PKiKP	14 00 28.4	+0.4
	comp=Z,11nm,0.9s,baz=258,slow=2.5,SNR=11						
CPUP	Villa Florida	138.15	146	PKIKP	PKPdf	14 00 22.8	-3.2
CPUP	Villa Florida	138.15	146	PKPdf	PKPdf	14 00 22.8	-3.2
SJCC	San Jacinto, C	138.32	85	*e*P	PKPdf	14 00 23.1	-3.5
NORC	Norcasia	138.33	91	*e*P	PKPdf	14 00 20.5	-6.2
ROSC	El Rosal	138.79	92	PKhKP	PKPdf	14 00 25.4	-2.5
	comp=Z,44nm,0.8s,baz=220,slow=9.1,SNR=5.2						
ROSC	El Rosal	138.79	92	*e*P	PKPdf	14 00 25.6	-2.4
ROSC	El Rosal	138.79	92		PKPdf	14 00 25.1	-2.8
PTBC	PUERTO BERRIO,	138.84	90	*e*P	PKPdf	14 00 21.6	-6.0
MACC	Macarena, Meta	138.85	96	*e*P	PKPdf	14 00 24.5	-3.1
SPBC	San Pablo de B	139.13	91	*e*P	PKPdf	14 00 21.0	-7.2
CHIC	Chingaza	139.35	93	*e*P	PKPdf	14 00 21.8	-7.2
SMLC	San Martn de	139.38	86	*e*P	PKPdf	14 00 24.5	-4.0
MVO	Moncorvo	140.08	329	*e*PKPdf	PKiKP	14 00 32.6	+1.0
MVO	Moncorvo	140.08	329	*e*LR	LR	15 01 41.5	
	comp=Z,1µm,22.0s						
BARC	Barichara	140.10	90	*e*P	PKPdf	14 00 23.3	-6.9
RUSC	La Rusia	140.13	91	*e*P	PKPdf	14 00 22.9	-7.7
MTE	Manteigas	140.91	329	*e*PKPdf	PKiKP	14 00 37.9	+4.6
MTE	Manteigas	140.91	329	*e*LR	LR	15 02 09.7	
	comp=Z,966nm,20.0s						
PCBR	Castelo Branco	141.28	328	*e*PKPdf	PKiKP	14 00 32.8	-1.2
SDDR	Presa de Saban	141.40	70		PKPdf	14 00 30.1	-2.0
SDDR				IAMs_20	IAMs_20	14 58 10.3	
	comp=Z,602nm,19.0s						
PMRV	Marv??o	141.54	327	*e*PKPdf	PKPdf	14 00 27.9	-3.8
PCAS	Casmilo, Conde	141.65	329	*e*PKPdf	PKiKP	14 00 38.0	+3.2
SDV	Santo Domingo	142.77	86	*e*P	PKPdf	14 00 31.4	-3.5
SDV	Santo Domingo	142.77	86	IAMs_20	IAMs_20	15 12 28.2	
	comp=Z,431nm,19.0s						
PNCL	Nicolau / Gran	143.10	327	*e*PKPdf	PKiKP	14 00 36.0	-1.8
MESJ	Messejana	143.13	326	*e*PKPdf	PKiKP	14 00 37.4	-0.4
PCVE	Castro Verde	143.18	326	*e*PKPdf	PKiKP	14 00 40.5	+2.5
CZD	Col de Zad	144.40	317	P	PKiKP	14 00 39.0	-2.0
	SNR=8.1						
ZHG	ZHG	145.19	319	P	PKPdf	14 00 39.0	+0.5
	SNR=13						
SAML	Samuel	145.32	119	IAMs_20	IAMs_20	14 54 35.3	
	comp=Z,503nm,20.0s						
CRPR	Cabo Rojo, PR	145.48	70		PKPdf	14 00 36.8	-2.4
MLPR	Magueyes Islan	145.55	70		PKPdf	14 00 37.2	-2.1
AOPR	Arecibo Observ	145.74	70		PKPdf	14 00 37.1	-2.6
OBIP	Obispado Ponce	145.94	70		PKPdf	14 00 37.2	-2.8
ICMP	Isla Caja de M	146.04	70		PKPdf	14 00 38.4	-1.8
TZRR	Tazzarine	146.08	315	P	PKPab	14 00 42.0	+0.5
	SNR=23						
SJG	San Juan	146.35	70	PKIKP	PKPdf	14 00 39.2	-1.4
SJG	San Juan	146.35	70		PKPdf	14 00 39.2	-1.4
GCPR	Guaynabo City	146.37	70		PKPdf	14 00 39.7	-1.0
PDPR	Patillas Dam,	146.49	70		PKPdf	14 00 39.9	-1.0
ZGR	Zagora	146.50	314	P	PKPab	14 00 43.0	-0.2
	SNR=23						
OUZM	OUZ	146.84	316	P	PKPab	14 00 44.0	-0.5
	SNR=13						
CUPR	Culebra, Puert	147.11	69		PKPdf	14 00 42.6	+0.7
STVI	Saint Thomas	147.41	69		PKPdf	14 00 42.3	-0.1
CDVI	St. Croix	147.71	70	PKPdf	PKPdf	14 00 41.7	-1.2
SMRT	St. Maarten	149.21	69	IAMs_20	IAMs_20	15 04 09.1	
	comp=Z,666nm,20.0s						
SKI	Saint Kitts	149.69	70	PKIKP	PKPdf	14 00 44.6	-1.6
SKI	Saint Kitts	149.69	70	PKPdf	PKPdf	14 00 44.6	-1.6
SVB	Belmont	151.82	78	IAMs_20	IAMs_20	14 58 55.2	
	comp=Z,633nm,20.0s						
BDFB	Brasilia	151.85	148	PKP	PKPdf	14 00 51.2	+1.4
	comp=Z,17nm,0.9s,baz=164,slow=3.4,SNR=8.7						
BDFB				PKPbc	PKPbc	14 00 56.9	+0.8
	comp=Z,56nm,0.9s,baz=252,slow=1.5,SNR=9.5						
KIC	Kosan Boka	151.93	268	*e*PKIKP	PKPbc	14 00 56.1	-0.2
	comp=Z,152nm,1.2s						
DBIC	Dimbokro	152.08	268	PKP	PKPdf	14 00 50.5	+0.5
	comp=Z,2.3nm,0.8s,baz=129,slow=4.8,SNR=3.0						
DBIC				PKPbc	PKiKP	14 00 56.8	-0.1
	comp=Z,38nm,0.8s,baz=74,slow=1.8,SNR=41						
LIC	Lamto	152.20	267	*e*PKIKP	PKPbc	14 00 56.4	-0.5
	comp=Z,214nm,1.3s						
TIC	Toumodi	152.24	268	*e*PKIKP	PKPbc	14 00 56.8	-0.2
	comp=Z,81nm,0.9s						

JMA ***31*** *14:03:38.7, 36°.77N×140°.96E, h57km±1km, M3.3*
JMA Felt I J1.
IDC ***31*** *14:03:40.6±3.3, 36°.66N×141°.01E, h76km±30km, mb3.2/6, mb1 3.3/8, mb1mx3.1/51, mbtmp3.5/8, Error ellipse: s-maj=30.0km s-min=13.5km az=58.0*
ISC 31 14:03:38.6±1.0, **36°.77N**±0°.04×**141°.03E**±0°.07, **h51**km±7km, **n25**, σ**0s.81**/32, **mb3.5**/6, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.38	331	P	Pn	14 03 48.8	+0.1
ONAJ				S	Sn	14 03 56.1	+0.2
JHO	Hitachi	0.40	247	P	Pn	14 03 49.0	+0.2
JHO				S	Sn	14 03 56.3	+0.1
JFFD	Fukushimafurud	0.49	310	P	Pn	14 03 50.0	+0.1
JFFD				S	Sn	14 03 57.8	-0.2
JHYU	Hitachinakayam	0.56	220	P	Pn	14 03 50.7	+0.1
JHYU				S	Sn	14 03 59.2	0.0
JFK	Kawauchi	0.61	348	P	Pn	14 03 51.2	-0.1
JFK				S	Sn	14 04 00.3	-0.1
JFT	Otama	0.93	324	P	Pn	14 03 55.7	+0.3
JFT				S	Sn	14 04 08.0	+0.2
JMM	Marumori	1.11	350	P	Pn	14 03 58.0	+0.2
JMM				*e*S	Sn	14 04 12.3	+0.3
JFY	Yanaizu	1.23	301	P	Pn	14 03 59.6	+0.1
JFY				*e*S	Sn	14 04 14.7	-0.5
JAG	Ashikaga	1.32	255	P	Pn	14 04 00.2	-0.4
JAG				S	Sn	14 04 15.9	-1.2
JKT	Katashina	1.43	270	P	Pn	14 04 02.2	0.0
JKT				S	Sn	14 04 19.6	-0.4
MJAR	Matsushiro Arr	2.28	265	P	Pn	14 04 14.1	+0.3
	0.7nm,0.3s,baz=86,slow=16,SNR=30						
MJAR				S	Sn	14 04 43.2	+2.5
	1.2nm,0.3s,baz=95,slow=30,SNR=6.4						
MAT	Matsushiro	2.28	265	P	Pn	14 04 14.5	+0.7
MAT				S	Sn	14 04 41.5	+0.8
JHJ	Hachijo jima 2	3.79	196	P	Pn	14 04 35.5	+1.1
	3.7nm,0.3s,baz=69,slow=22,SNR=1.9						
JHJ				S	Sn	14 05 17.1	-0.6
	11nm,0.3s,baz=257,slow=21,SNR=1.3						
SONM	Songino Array	27.68	304	P	P	14 09 23.1	+1.4
	0.5nm,0.5s,baz=96,slow=9.1,SNR=4.0						
H11N2	WAKE ISLAND Hy	28.28	120	T	T	14 39 23.6	
	baz=313,slow=75,SNR=4.6						
H11N1	WAKE ISLAND Hy	28.29	120	T	T	14 39 29.1	
	baz=313,slow=75,SNR=6.8						
H11N3	WAKE ISLAND Hy	28.30	120	T	T	14 39 33.1	
	baz=313,slow=75,SNR=7.2						
H11S1	WAKE ISLAND Hy	28.98	122	T	T	14 40 19.9	
	baz=314,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	28.98	122	T	T	14 40 22.4	
	baz=314,slow=76,SNR=12						
H11S2	WAKE ISLAND Hy	28.99	122	T	T	14 40 20.9	
	baz=314,slow=76,SNR=15						
ZALV	Zalesovo Beam	41.87	313	P	P	14 11 22.4	-1.0
	0.6nm,0.5s,baz=108,slow=9.3,SNR=3.6						
MKAR	Makanchi Array	44.00	302	P	P	14 11 40.4	-0.5
	0.2nm,0.6s,baz=83,slow=9.7,SNR=3.2						
KURBB	Kurchatov Arra	45.92	308	P	P	14 11 54.4	-1.6
	0.5nm,0.6s,baz=79,slow=6.9,SNR=4.8						
ILAR	Eielson Array	49.88	32	P	P	14 12 27.4	+0.9
	0.3nm,0.6s,baz=264,slow=6.3,SNR=5.1						
WRA	Warramunga Arr	56.76	188	P	P	14 13 16.5	-0.9
	0.3nm,0.6s,baz=360,slow=7.3,SNR=5.1						

IDC 31 14:05:35.0±2.7, **8°.26S**×**147°.12E**, **h0**km, **mb3.4**/1, **mb1 3.4**/3, **mb1mx3.2**/33, **mbtmp3.3**/3, **ML3.1**/2, **Error ellipse: s-maj=63.3km s-min=15.5km az=79.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	1.14	178	Pg	Pg	14 05 56.3	-0.5
	84nm,0.3s,baz=353,slow=7.4,SNR=318						
PMG				Lg	Lg	14 06 12.7	
	140nm,0.3s,baz=89,slow=23,SNR=20						
WRA	Warramunga Arr	16.97	225	Pn	Pn	14 09 33.1	-0.8
	0.1nm,0.3s,baz=51,slow=12,SNR=3.2						
ASAR	Alice Springs	19.87	218	P	Pn	14 10 08.8	-0.7
	0.0nm,0.3s,baz=30,slow=12,SNR=7.5						
MKAR	Makanchi Array	79.31	321	P	P	14 17 42.6	+0.1
	0.3nm,0.7s,baz=103,slow=6.0,SNR=2.6						

WEL 31 14:26:10.3±0.3, **32°S**±5°×**17°9W**±1°2, **h425**km±5km, **M3.8**/53, **mB4.5**/43, **MLv4.9**/53, **Mw(mB)3.7**/43, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.28	21	P	P	14 27 16.8	-0.9
GLKZ				S	S	14 28 09.6	-2.8
MXZ	Matakaoa Point	5.58	200	P	P	14 27 39.7	+0.6
MXZ				S	S	14 28 53.1	+1.3
PKGZ	Pakihiroa	5.95	201	P	P	14 27 46.3	+3.3
PUZ	Puketiti	6.07	199	P	P	14 27 47.4	+3.2
PUZ				S	S	14 29 01.7	+0.5
RUGZ	Raukumara Rang	6.14	203	P	P	14 27 46.9	+1.8
RUGZ				S	S	14 29 02.5	-0.4
WHRZ	Whale Island	6.30	208	P	P	14 27 50.3	+3.6
WHRZ				S	S	14 29 07.9	+2.1
CNGZ	Carnagh Statio	6.47	198	P	P	14 27 51.8	+3.4
OPRZ	Ohinepanea	6.47	211	P	P	14 27 50.4	+2.0
TKGZ	Te Karaka	6.52	200	P	P	14 27 50.2	+0.8
TKGZ				S	S	14 29 09.5	-0.5
MWZ	Matawai	6.53	203	P	P	14 27 50.8	+1.3
MWZ				S	S	14 29 09.4	-0.8
MARZ	Manawahe	6.54	209	P	P	14 27 51.4	+1.9
URZ	Urewera	6.60	206	P	P	14 27 49.9	-0.4
URZ				S	S	14 29 08.3	-3.3
RAGZ	Rawiri	6.71	203	P	P	14 27 51.9	+0.4
RAGZ				S	S	14 29 12.1	-1.8
KARZ	Kaharoa	6.75	212	P	P	14 27 53.2	+1.4
MKRZ	Makatiti	6.75	210	P	P	14 27 54.5	+2.5
TARZ	Mount Tarawera	6.82	209	P	P	14 27 54.4	+1.7
TARZ				S	S	14 29 17.6	+1.5
TOZ	Tahuroa Road	6.87	217	P	P	14 27 54.6	+1.4
HLRZ	Highlands Stat	6.90	210	P	P	14 27 55.2	+1.7
RRRZ	Republican Roa	6.90	209	P	P	14 27 55.3	+1.8
MUGZ	Murupara	6.92	207	P	P	14 27 52.7	-1.1
MUGZ				S	S	14 29 13.5	-4.5
PRGZ	Paritu Road	6.96	199	P	P	14 27 58.1	+3.9
RTZ	Ruatahuna	6.97	205	P	P	14 27 53.6	-0.7
HSRZ	Hossack Road	6.99	210	P	P	14 27 56.6	+2.1
SNGZ	Shannon Statio	6.99	202	P	P	14 27 56.3	+1.8
HRRZ	Handcock Road	7.04	210	P	P	14 27 56.6	+1.5
GRRZ	Galatos Road	7.08	211	P	P	14 27 57.1	+1.6
KNZ	Kokohu	7.12	200	P	P	14 27 58.0	+2.2
ALRZ	Allen Road	7.16	209	P	P	14 27 57.1	+0.8
MHGZ	Mahia Peninsul	7.17	198	P	P	14 27 59.3	+2.9
RAHZ	Arahi	7.20	203	P	P	14 27 57.1	+0.3
MTHZ	Maungataniwha	7.23	205	P	P	14 27 57.2	+0.1
WHHZ	Waihua	7.30	202	P	P	14 27 59.7	+1.9
MRHZ	Matea Rd	7.37	207	P	P	14 27 57.0	-1.6
NMHZ	Naumai	7.46	204	P	P	14 28 01.0	+1.3
ARHZ	Aropaoanui	7.54	203	P	P	14 28 01.5	+1.0
WATZ	Wairara	7.54	211	P	P	14 28 00.9	+0.4
HATZ	Hinemaiaia	7.54	209	P	P	14 27 59.4	-1.1
BKZ	Black Stump Fm	7.63	206	P	P	14 27 59.2	-2.2
RATZ	Rangitukua	7.66	210	P	P	14 28 01.8	0.0
KATZ	Kakaramea	7.78	210	P	P	14 28 03.3	+0.1
HIZ	Hauiti	7.80	216	P	P	14 28 04.1	+0.9
MCHZ	McNeill Hill	7.81	204	P	P	14 28 02.2	-1.1
CKHZ	Cape Kidnapper	7.88	201	P	P	14 28 05.2	+1.1
KWHZ	Kaweka Forest	7.88	205	P	P	14 28 02.3	-1.9
KRVZ	Karewarewa	7.91	210	P	P	14 28 04.3	-0.2
WTVZ	West Tongariro	7.94	210	P	P	14 28 04.3	-0.7
TWVZ	Taurewa	7.97	211	P	P	14 28 04.6	-0.7
NGZ	Ngauruhoe	7.99	210	P	P	14 28 05.4	-0.1
TUVZ	Tukino	8.04	209	P	P	14 28 05.2	-0.8
KAHZ	Kahuranaki	8.06	202	P	P	14 28 06.0	-0.1
BHHZ	Black Hill Sta	8.07	207	P	P	14 28 04.1	-2.1
FWVZ	Far West T-bar	8.08	210	P	P	14 28 05.8	-0.6
WHVZ	Whangaehu Hut	8.09	210	P	P	14 28 06.0	-0.5
KRHZ	Kereru	8.10	205	P	P	14 28 04.3	-2.1
TRVZ	Turoa	8.12	210	P	P	14 28 05.7	-1.2
MOVZ	Moawhango	8.12	208	P	P	14 28 05.8	-0.9
PKVZ	Pokaka	8.19	211	P	P	14 28 06.1	-1.4
MTVZ	Mangateitei	8.22	210	P	P	14 28 07.3	-0.6
PXZ	Pawanui	8.29	201	P	P	14 28 08.0	-0.5
VRZ	Vera Road	8.32	214	P	P	14 28 08.8	-0.1
PNHZ	Pukenui	8.40	205	P	P	14 28 07.5	-2.2
WPHZ	Waipukurau	8.45	203	P	P	14 28 10.2	-0.1
PRHZ	Porangahau	8.57	201	P	P	14 28 12.2	+0.6
TSZ	Takapari Road	8.61	205	P	P	14 28 10.8	-1.3
WAZ	Wanganui	8.73	210	P	P	14 28 12.6	-0.8
DVHZ	Dannevirke	8.75	204	P	P	14 28 13.1	-0.6
PKE	Pukeiti	8.76	217	P	P	14 28 14.2	+0.5
LREZ	Lake Rotokare	8.76	214	P	P	14 28 13.7	0.0
ANWZ	Angora Road	8.80	202	P	P	14 28 14.8	+0.7
KHEZ	Kahui Hut	8.82	216	P	P	14 28 15.0	+0.6
POWZ	Post Office Ro	8.97	205	P	P	14 28 15.3	-0.7
PRWZ	Pori Road	9.05	204	P	P	14 28 16.8	0.0
BFZ	Birch Farm	9.07	202	P	P	14 28 15.6	-1.5
TIWZ	Tintock	9.27	203	P	P	14 28 18.6	-0.8
MRZ	Mangatainoka R	9.28	205	P	P	14 28 17.2	-2.2
HOWZ	Holdsworth Sta	9.51	205	P	P	14 28 20.5	-1.5
TMWZ	Te Maipa	9.57	202	P	P	14 28 22.7	0.0
MTW	Mount Morrison	9.74	204	P	P	14 28 23.4	-1.2
TRWZ	Traveller	9.90	203	P	P	14 28 25.7	-0.5
PAWZ	Paruwai Farm	9.97	204	P	P	14 28 26.6	-0.5

IDC ***31*** *14:26:53.5±0.8, 7°.05S×130°.79E, h0km, mb4.2/7, mb1 4.3/11, mb1mx4.1/36, mbtmp4.2/11, ML4.1/4, Error ellipse: s-maj=39.9km s-min=17.1km az=81.0*
NEIC ***31*** *14:27:00.9±1.1, 6°.94S±0°.06×130°.80E±0°.09, h57km±7km, mb4.5/29, Error ellipse: s-maj=13.0km s-min=8.2km az=82.0*
DJA ***31*** *14:27:00.6±0.3, 7°S±3°×13°1E±°, h106km±11km, M4.6/13, mb4.5/13, mB5.2/6, MLv4.6/11, Mw(mB)4.6/6*
ISC 31 14:27:02.6±0.4, **7°.23S**±0°.05×**131°.06E**±0°.06, **h100**km, **n87**, σ**2s.19**/79, **mb4.3**/19, **Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	0.78	163	P	Pn	14 27 20.9	+0.1
SAUI	Saumlaki	0.78	163		Pn	14 27 21.1	+0.2
BNDI	Bandanaira	2.93	337	P	Pn	14 27 43.6	-3.8
MSAI	Masohi	4.41	331	P	Pn	14 28 03.6	-3.7
FAKI	Fak Fak	4.44	15	P	Pn	14 28 03.5	-4.3
FAKI	Fak Fak	4.44	15		Pn	14 28 03.3	-4.5
AAI	Ambon	4.53	321	P	Pn	14 28 05.4	-3.7
MTN	Manton Dam	5.58	179		Pn	14 28 23.6	+0.4
NLAI	Namlea	5.60	315	P	Pn	14 28 22.6	-0.8
	0.2nm7µm80nm,1.0s						
SIJI	Sorong	6.32	2	Pn	Pn	14 28 27.8	-5.6
	4.5nm,0.3s,baz=226,slow=22,SNR=19						
SIJI				Sn	Sn	14 29 31.2	-13
	20nm,0.3s,baz=57,slow=22,SNR=17						
RKPI	Ransiki, Papua	6.47	29	P	Pn	14 28 33.5	-1.9
	2.1nm10µm290nm,0.8s						
SOEI	Soe	7.17	249	P	Pn	14 28 41.6	-3.4
	0.7nm66nm,0.6s						
SOEI	Soe	7.17	249		Pn	14 28 41.9	-3.1
SANI	Sanana	7.22	315	P	Pn	14 28 43.6	-1.9
	0.1nm27nm,0.7s						
LBMI	Labuha	7.45	331	P	Pn	14 28 46.9	-1.8
	0.1nm780nm20nm,0.8s						
KNRA	Kununurra	8.69	195		Pn	14 29 04.5	-1.1
MMRI	Maumere	8.85	260	P	Pn	14 29 05.5	-2.3
	38nm,1.0s						
MMRI	Maumere	8.85	260	Pn	Pn	14 29 04.0	-3.8
EDFI	Ende, Flores	9.40	260	P	Pn	14 29 13.1	-2.3
FITZ	Fitzroy Crossi	12.03	206	Pn	Pn	14 29 46.1	-4.6
	5.2nm,0.3s,baz=35,slow=12,SNR=98						
FITZ				Sn	Sn	14 31 52.5	-10
	3.4nm,0.3s,baz=131,slow=17,SNR=10						
FITZ	Fitzroy Crossi	12.03	206		Pn	14 29 46.5	-4.1
WRA	Warramunga Arr	13.03	166	Pn	Pn	14 30 01.8	-2.1
	0.5nm,0.3s,baz=350,slow=13,SNR=22						
WRA				Sn	Sn	14 32 19.7	-7.7
	2.5nm,0.3s,baz=360,slow=20,SNR=6.6						
WRA	Warramunga Arr	13.03	166	Pn	Pn	14 30 02.3	-1.7
WB2	Warramunga Arr	13.03	166		Pn	14 30 02.2	-1.8
WR0	Warramunga Arr	13.10	165		Pn	14 30 03.9	-0.9
MPSI	Mapaga	13.44	304	P	P	14 30 18.2	+3.1
COEN	Coen	13.65	120	Pn	Pn	14 30 12.1	0.0
AS31	Alice Springs	16.57	171	Pn	P	14 30 49.5	-0.3
ASAR	Alice Springs	16.57	171	Pn	P	14 30 49.5	-0.3
	0.5nm,0.3s,baz=1.7,slow=11,SNR=36						
ASAR				Sn	Sn	14 33 45.6	-7.3
	0.6nm,0.3s,baz=356,slow=27,SNR=7.7						
ASAR	Alice Springs	16.57	171	Pn	P	14 30 49.9	+0.1
JAGI	Jajag, Banyuwa	16.80	265	Pn	P	14 30 50.0	-2.4
JAGI				IAmb	IAmb	14 31 34.5	
	comp=Z,91nm,1.7s						
PSA00	Pilbara Seismi	17.91	216	P	Pn	14 31 04.0	-1.3
PSA00	Pilbara Seismi	17.91	216	P	Pn	14 31 07.9	+2.6
PSA00				IAmb	IAmb	14 32 06.1	
	comp=Z,7.2nm,0.7s						
KKM	Kota Kinabalu	19.84	311	P	P	14 31 23.5	-2.2
KKM				IAmb	IAmb	14 31 25.6	
	comp=Z,13nm,0.7s						
SBUM	Sibu	21.12	296	P	P	14 31 39.2	-0.3
KSM	Kuching	22.44	292	P	P	14 31 50.8	-2.8
FORT	Forrest	23.59	186	P	P	14 32 09.2	+4.8
FORT				IAmb	IAmb	14 32 42.4	
	comp=Z,17nm,0.8s						
BBOO	Buckleboo	25.87	170	P	P	14 32 29.0	+3.9
BBOO				IAmb	IAmb	14 33 26.4	
	comp=Z,19nm,1.4s						
STKA	Stephens Creek	26.41	160	P	P	14 32 37.5	+7.5
	comp=Z,0.4nm,0.4s,baz=5.2,slow=11,SNR=1.4						
TPUB	Ta-pu	32.01	342	P	P	14 33 18.7	-1.0
RPSI	Rantau Prapat	33.56	286	P	P	14 33 33.1	-0.1
RPSI				IAmb	IAmb	14 34 38.6	
	comp=Z,5.2nm,0.8s						
UBPT	Khong Chiam	33.82	311	P	P	14 33 34.8	-0.7
CMAR	Chiang Mai Arr	40.69	309	P	P	14 34 33.8	+0.1
	comp=Z,1.5nm,0.6s,baz=136,slow=7.3,SNR=12						
CMAR	Chiang Mai Arr	40.69	309	P	P	14 34 33.2	-0.4
NJ2	Nanjing	40.76	344	*e*P	P	14 34 36.3	+2.3
CHTO	Chiang Mai	40.90	310	P	P	14 34 34.7	-0.6
MJAR	Matsushiro Arr	44.05	8	P	P	14 35 00.6	-0.1
	comp=Z,2.4nm,0.7s,baz=178,slow=7.5,SNR=6.4						
MAJO	Matsushiro	44.06	8	P	P	14 35 01.2	+0.6
MJB9	Matsu-Tunnel	44.06	8	P	P	14 35 01.3	+0.6
CD2	Chengdu	46.07	327	P	P	14 35 16.0	-0.7
LZH	Lanzhou	50.11	331	*e*P	P	14 35 47.3	-0.6
LZH				pP	pP	14 36 05.8	-4.8
LZH				sP	pwP	14 36 14.5	-1.3
LZH				*e*PP	PP	14 37 45.3	+1.2
HHC	Hu-ho-hao-te	51.10	341	*e*P	P	14 35 57.8	+2.6
ODAN	Odare	54.21	310	*e*P	P	14 36 18.6	+0.1
	comp=Z,7.6nm,0.5s						
TAPN	Taplejung	54.23	311	*e*P	P	14 36 18.9	+0.2
	comp=Z,7.0nm,0.4s						
RAMN	Ramite	54.85	310	*e*P	P	14 36 23.7	+0.5
	comp=Z,13nm,0.4s						
JIRN	Jiri	55.53	311	*e*P	P	14 36 28.5	+0.3
	comp=Z,6.1nm,0.3s						
GUN	Gumba	55.90	311	*e*P	P	14 36 31.1	+0.3
	comp=Z,15nm,0.4s						
PKIN	Phulchoki	56.09	310	*e*P	P	14 36 32.1	0.0
	comp=Z,4.4nm,0.5s						
KKN	Kakani	56.29	310	*e*P	P	14 36 33.6	+0.2
DMN	Daman	56.33	310	*e*P	P	14 36 33.9	+0.1
GKN	Gorkha	56.89	310	*e*P	P	14 36 37.8	+0.2
	comp=Z,9.7nm,0.3s						
DANN	Dangsing	57.73	310	*e*P	P	14 36 43.8	+0.1
ULN	Ulaanbaatar	58.81	341	P	P	14 36 50.5	-0.2
ULN				IAmb	IAmb	14 36 53.9	
	comp=Z,4.3nm,0.7s						
SONM	Songino Array	59.00	341	P	P	14 36 53.2	+1.3
	comp=Z,1.7nm,0.7s,baz=151,slow=7.0,SNR=9.1						
SONM	Songino Array	59.00	341	P	P	14 36 51.9	-0.1
WMQ	Urumqi	64.17	326	*e*P	P	14 37 29.3	+2.6
KSH	Kashi	68.90	317	P	P	14 38 00.0	+3.0
KSH				sP	sP	14 38 29.0	-2.5
KSH				PP	PP	14 40 35.8	+5.2
KSH				PcS		14 42 28.8	
KSH				S	S	14 46 56.5	+2.8
MK31	Makanchi Array	69.00	326	P	P	14 37 58.4	+1.1
MK31				IAmb	IAmb	14 37 59.9	
	comp=Z,6.0nm,0.9s						
MKAR	Makanchi Array	69.00	326	P	P	14 37 59.0	+1.7
	comp=Z,5.0nm,0.5s,baz=114,slow=8.2,SNR=104						
MKAR	Makanchi Array	69.00	326	P	P	14 37 58.4	+1.1
YAK	Yakutsk	69.06	359	P	P	14 37 58.5	+1.2
YAK				IAmb	IAmb	14 38 00.3	
	comp=Z,7.0nm,0.7s						
MAKZ	Makanchi	69.18	326	P	P	14 37 59.6	+1.1
MAKZ				IAmb	IAmb	14 38 00.9	
	comp=Z,7.6nm,1.0s						
AAK	Ala-Archa	71.40	319	P	P	14 38 12.6	+0.3
AAK				IAmb	IAmb	14 38 15.9	
	comp=Z,3.0nm,0.9s						
KBL	Kabul	71.72	310	P	P	14 38 14.6	+0.2
SEY	Seymchan	71.84	10	P	P	14 38 17.0	+2.8
	comp=Z,0.3nm,0.3s,baz=156,slow=10.0,SNR=6.5						
ZAA0	Zalesovo Array	72.26	333	P	P	14 38 17.4	+0.5
ZAA0				IAmb	IAmb	14 38 18.6	
	comp=Z,4.6nm,0.9s						
ZALV	Zalesovo Beam	72.26	333	P	P	14 38 18.0	+1.1
	comp=Z,3.3nm,0.7s,baz=124,slow=4.5,SNR=13						
ZALV	Zalesovo Beam	72.26	333	P	P	14 38 17.1	+0.2
KURK	Kurchatov	73.27	328	P	P	14 38 23.7	+0.8
KURK				IAmb	IAmb	14 38 25.3	
	comp=Z,4.5nm,0.8s						
KKAR	Karatay Array	74.21	318	P	P	14 38 29.4	+0.7
BRVK	Borovoye	78.89	328	P	P	14 38 55.8	+0.9
BRVK				IAmb	IAmb	14 38 57.2	
	comp=Z,4.0nm,0.8s						
SOCY	Socotra	79.00	284	P	P	14 38 57.4	+1.1
QSPA	South Pole Qui	82.75	180	P	P	14 39 20.1	+4.8
	comp=Z,1.0nm,0.8s,baz=328,slow=1.3,SNR=6.4						
QSPA	South Pole Qui	82.75	180	IAmb	IAmb	14 39 44.5	
	comp=Z,17nm,1.7s						
ABKAR	Akbulak array	83.35	321	P	P	14 39 19.5	+1.0
CPUP	Villa Florida	145.66	167	PKPbc	PKiKP	14 46 36.2	+2.0
	comp=Z,1.1nm,0.8s,baz=180,slow=5.1,SNR=1.7						
LPAZ	La Paz	149.88	141	PKPbc	PKPab	14 46 49.0	+0.3
	comp=Z,2.4nm,0.9s,baz=222,slow=5.0,SNR=5.3						

NEIC ***31*** *14:28:39.0±0.8, 52°.65N±0°.07×166°.72W±0°.07, h4km±9km,* *Error ellipse: s-maj=10.6km s-min=4.9km az=159.0*

AEIC 31 14:28:39.7±1.2,**52°.62N**±0°.07×**166°.63W**±0°.06,**h9**^{km}±7^{km}, **ML3.2**/20,**mb3.9**/9(NEIC),**Error ellipse: s-maj=10.5km s-min=4.7km az=172.0,Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKFG	Magazine Ridge	1.11	316		Pg	14 29 00.4	-0.5
MGOD	Makushin Gods	1.18	353		Pb	14 29 01.4	-1.0
MGOD					Sb	14 29 18.0	+0.3
OKSP	Okmok Steeple	1.19	303		Pb	14 29 01.5	-0.9
MREP	Makushin Rep't	1.19	357		Pb	14 29 01.6	-0.8
UNV	Unalaska Valle	1.23	3		Pn	14 29 01.8	-1.2
MNAT	Makushin Natee	1.26	359		Pn	14 29 02.7	-0.9
MNAT					Sn	14 29 20.7	0.0
MSW	Makushin Switc	1.30	356		Pn	14 29 03.2	-0.8
MSW					Sb	14 29 21.2	+0.2
MTBL	Makushin Table	1.35	359		Pn	14 29 04.4	-0.4
NIKH	Nikolski High	1.40	285		Pn	14 29 04.9	-0.5
AKMO	Akutan Morgan	1.52	14		Pn	14 29 06.7	-0.3
AKMO					Sn	14 29 26.8	-0.1
AKBBA	Akutan Broad B	1.54	16		Pn	14 29 07.5	+0.2
AKRB	Akutan Reef Bi	1.55	12		Pn	14 29 07.3	-0.1
AKLV	Akutan Long Va	1.59	14		Pn	14 29 08.1	0.0
AKUT	Akutan	1.60	18		Pn	14 29 08.2	0.0
AKSA	Akutan Strait	1.61	20		Pn	14 29 08.1	-0.3
CNBA	Chernabura Isl	4.72	59	Pn	Pn	14 29 51.4	+0.3
OHAK	Old Harbor	8.95	54	Pn	Pn	14 30 49.7	+0.7
KDAK	Kodiak Island	9.54	52	Pn	Pn	14 30 57.6	+0.5
HOM	Homer	10.92	44	Pn	Pn	14 31 15.9	+0.1
CNPM	China Poot	11.02	45	Pn	Pn	14 31 17.4	0.0
SEW	Seward	12.09	45	Pn	Pn	14 31 31.7	-0.2
SUA	Susitna One	12.34	38	Pn	Pn	14 31 35.6	+0.1
HIN	Hinchinbrook I	13.52	47	Pn	Pn	14 31 50.4	-1.1
FID	Port Fidalgo	13.69	46	Pn	Pn	14 31 52.3	-1.5
SCM	Sheep Creek Mo	13.88	41	Pn	Pn	14 31 55.6	-0.9
BPAW	Bear Paw Mtn.	14.08	29	P	P	14 32 06.7	-0.2
IMAR	Indian Mountai	14.88	21	P	P	14 32 16.2	+0.5
HARP	HAARP	15.05	41	P	P	14 32 16.9	-0.8
GLB	Gilahina Butte	15.16	45	Pn	Pn	14 32 13.7	-0.1
GLB				P	P	14 32 19.2	+0.2
GLB				IAmb	IAmb	14 33 12.3	
	comp=Z,10nm,1.5s						
CRQM	Cirque	15.19	48	Pn	Pn	14 32 14.1	-0.2
VRDI	Verde Repeater	15.23	46	Pn	Pn	14 32 14.0	-0.9
VRDI				IAmb	IAmb	14 32 38.7	
	comp=Z,7.1nm,1.3s						
BALM	Baldy	15.65	48	Pn	Pn	14 32 20.5	+0.1
BALM				IAmb	IAmb	14 32 47.3	
	comp=Z,13nm,1.7s						
RIDG	Independent Ri	15.90	37	Pn	Pn	14 32 23.2	-0.2
RIDG				IAmb	IAmb	14 32 54.2	
	comp=Z,14nm,1.7s						
SCRK	Sand Creek	16.34	37	P	P	14 32 31.5	-0.7
INK	Inuvik	22.22	32	P	P	14 33 36.6	+0.5
INK				IAmb	IAmb	14 34 16.2	
	comp=Z,19nm,2.0s						

IDC 31 14:34:56.6±1.2,53°.74N×163°.65W,h0^{km},mb3.7/14, mb1 3.8/16,mb1mx3.7/47,mbtmp3.7/16,ML3.3/2,MS3.6/1, Ms1 3.6/1,ms1mx2.8/52,Error ellipse: s-maj=31.2km s-min=15.3km az=172.0

NEIC 31 14:34:57.6±1.6,53°.45N±0°.04×163°.40W±0°.07,h22^{km}±5^{km}, mb4.1/14,ML3.4/29(AEIC),Error ellipse: s-maj=6.8km s-min=4.7km az=46.0

AEIC 31 14:34:58.6±1.8,53°.44N±0°.05×163°.47W±0°.05,h30^{km}±5^{km}, Error ellipse: s-maj=6.9km s-min=3.9km az=201.0

ISC 31 14:34:59.7±0.6,**53°.57N**±0°.07×**163°.50W**±0°.04,**h29**^{km}, **n119,**σ**1^{s}29**/119,**mb3.9**/17,**Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WESP	Westdahl Peak	1.18	323		Pb	14 35 20.6	-0.9
WESP					Sb	14 35 37.1	+0.8
SSLW	Shishaldin Wes	1.26	343		Pb	14 35 22.2	-0.6
SSBA	Shishaldin	1.27	343		Pb	14 35 22.1	-0.9
FALS	False Pass	1.29	2		Pb	14 35 22.0	-1.3
FALS	False Pass	1.29	2		Sb	14 35 41.8	+2.2
AKSA	Akutan Strait	1.42	295		Pn	14 35 23.5	-0.1
AKSA					Sb	14 35 43.5	+0.2
AKSA	Akutan Strait	1.42	295		Pb	14 35 23.6	-1.9
AKUT	Akutan	1.47	294		Pn	14 35 24.0	-0.1
AKUT	Akutan	1.47	294		Sb	14 35 43.1	-1.4
AKBBA	Akutan Broad B	1.54	291		Pn	14 35 25.3	+0.1
AKLV	Akutan Long Va	1.57	293		Pn	14 35 25.7	0.0
AKLV					Sb	14 35 46.1	-1.6
AKMO	Akutan Morgan	1.58	290		Pn	14 35 25.9	+0.2
AKRB	Akutan Reef Bi	1.63	291		Pn	14 35 26.5	+0.2
DT1	Dutton Round H	1.70	24		Pn	14 35 27.6	+0.2
UNV	Unalaska Valle	1.81	280		Pn	14 35 28.0	-0.8
UNV	Unalaska Valle	1.81	280		Sn	14 35 51.0	+0.2
MNAT	Makushin Natee	1.92	281		Pn	14 35 30.2	-0.2
MREP	Makushin Rep't	1.95	279		Pn	14 35 30.8	-0.1
MSW	Makushin Switc	1.98	281		Pn	14 35 31.1	-0.2
MSW					Sb	14 35 57.2	-2.2
HAG	Hague Volcano	1.98	27		Pn	14 35 32.4	+1.1
MGOD	Makushin Gods	2.02	278		Pn	14 35 31.8	0.0
PVV	Pavlof Volcano	2.07	28		Pn	14 35 33.5	+1.1
SDPT	Sand Point	2.51	43		Pn	14 35 38.7	+0.3
CNBA	Chernabura Isl	2.62	60	Pn	Pn	14 35 39.1	-0.9
OKSP	Okmok Steeple	2.89	266		Pn	14 35 42.8	-0.9
NIKH	Nikolski High	3.27	262	Pn	Pn	14 35 48.5	-0.5
CHGN	Chignik	4.01	45		Pn	14 35 59.6	+0.5
OHAK	Old Harbor	6.87	54	Pn	Pn	14 36 36.6	-1.7
KDAK	Kodiak Island	7.47	51	Pn	Pn	14 36 45.4	-1.2
	1.1nm,0.3s,baz=234,slow=4.9,SNR=22						
KDAK				Sn	Sn	14 38 05.5	-4.7
	0.8nm,0.3s,baz=164,slow=22,SNR=7.1						
KDAK	Kodiak Island	7.47	51	Pn	Pn	14 36 45.1	-1.5
ADK	Adak	8.18	263	Pn	Pn	14 36 56.4	+0.1
SVW2	Sparrevohn	8.67	26	Pn	Pn	14 37 03.1	+0.1
CNPM	China Poot	9.02	44	Pn	Pn	14 37 07.9	+0.1
RSO	Redoubt South	9.05	36	Pn	Pn	14 37 09.9	+1.5
BRLK	Bradley Lake	9.30	43	Pn	Pn	14 37 11.2	-0.5
SPU	Mount Spurr	9.81	34	Pn	Pn	14 37 18.0	-0.6
SEW	Seward	10.09	44	Pn	Pn	14 37 21.5	-0.9
TTA	Tatalina	10.18	20	Pn	Pn	14 37 24.3	+0.7
SUA	Susitna One	10.45	36		Pn	14 37 27.2	-0.3
SKT	Skwentna	10.56	32	Pn	Pn	14 37 28.8	-0.1
RC01	Rabbit Creek A	10.57	39	Pn	Pn	14 37 27.5	-1.5
PPLA	Purkeypile	11.07	28	Pn	Pn	14 37 35.8	-0.2
GAMB	Gambell	11.08	341	Pn	Pn	14 37 38.5	+2.5
KNK	Knik Glacier	11.26	40	Pn	Pn	14 37 36.7	-1.7
GHO	Glory Hole Cre	11.31	38	Pn	Pn	14 37 38.8	-0.4
HIN	Hinchinbrook I	11.50	47	Pn	Pn	14 37 40.2	-1.5
FID	Port Fidalgo	11.68	45	Pn	Pn	14 37 41.9	-2.3
EYAK	Cordova Ski Ar	11.90	47	Pn	Pn	14 37 45.2	-1.9
SCM	Sheep Creek Mo	11.94	40	Pn	Pn	14 37 45.9	-1.9
KTH	Kantishna Hill	11.94	28	Pn	Pn	14 37 47.9	0.0
TRF	Thorofare Moun	12.05	29	Pn	Pn	14 37 46.6	-2.7
BPAW	Bear Paw Mtn.	12.36	26	Pn	Pn	14 37 52.3	-1.2
RND	Reindeer	12.45	32	Pn	Pn	14 37 53.7	-1.1
MCK	McKinley	12.66	31	Pn	Pn	14 37 58.6	+1.1
DHY	Denali Highway	12.71	35	Pn	Pn	14 37 55.7	-2.6
CRQM	Cirque	13.14	49	Pn	Pn	14 38 02.9	-1.4
GLB	Gilahina Butte	13.15	45	Pn	Pn	14 38 02.7	-1.6
MLY	Manley	13.18	24		Pn	14 38 05.5	+0.8
VRDI	Verde Repeater	13.21	47	Pn	Pn	14 38 03.5	-1.7
TGL	Tana Glacier	13.28	49	Pn	Pn	14 38 04.8	-1.4
IMAR	Indian Mountai	13.36	17	Pn	Pn	14 38 09.1	+2.0
MCARA	McCarthy VSAT	13.46	46	Pn	Pn	14 38 07.7	-0.8
BALM	Baldy	13.61	48	Pn	Pn	14 38 08.5	-2.2
CCB	Clear Creek Bu	13.67	30	Pn	Pn	14 38 09.4	-1.9
HDA	Harding Lake	13.76	31	Pn	Pn	14 38 09.4	-3.1
BARN	Barnard Glacie	13.93	49	Pn	Pn	14 38 14.2	-0.8
RIDG	Independent Ri	14.01	36		Pn	14 38 14.3	-1.8
IL31		14.03	30	Pn	Pn	14 38 14.7	-1.6
ILAR	Eielson Array	14.03	30	Pn	Pn	14 38 13.9	-2.3
	0.1nm,0.3s,baz=225,slow=12,SNR=1.9						
CTGM	Chitina Glacie	14.04	49	Pn	Pn	14 38 15.2	-1.3
SCRK	Sand Creek	14.46	36	Pn	Pn	14 38 20.4	-1.8
BCAR	Beaver Creek A	14.77	41	Pn	Pn	14 38 24.8	-1.6
HYT	Haines Junctio	15.77	52	Pn	Pn	14 38 38.6	-0.9
HYT				IAmb	IAmb	14 38 50.4	
	comp=Z,17nm,1.7s						
EGAK	Eagle	15.93	36	P	P	14 38 43.5	-1.2
EGAK				IAmb	IAmb	14 39 21.7	
	comp=Z,18nm,1.7s						
DAWY	Dawson	16.20	40	Pn	Pn	14 38 43.6	-1.4
BMAR	Burnt Mountain	16.62	26	Pn	Pn	14 38 49.5	-0.7
BILL	Bilibino	20.36	327	P	P	14 39 33.0	-0.4
INK	Inuvik	20.41	32	P	P	14 39 33.1	-0.9
	comp=Z,1.1nm,0.6s,baz=246,slow=9.7,SNR=2.5						
INK	Inuvik	20.41	32	P	P	14 39 32.8	-1.2
INK				IAmb	IAmb	14 39 39.7	
	comp=Z,7.4nm,1.4s						
PEA0B	Petropavlovsk-	22.99	285	P	P	14 40 02.0	+0.3
PETK	Petropavlovsk-	22.99	285	P	P	14 40 01.9	+0.2
	comp=Z,1.9nm,0.4s,baz=88,slow=12,SNR=16						
PETK	Petropavlovsk-	22.99	285	P	P	14 40 02.1	+0.4
SEY	Seymchan	24.55	310	P	P	14 40 16.0	-0.5
	comp=Z,0.6nm,0.7s,baz=87,slow=14,SNR=2.3						
SEY	Seymchan	24.55	310	P	P	14 40 16.0	-0.5
YKA	Yellowknife Ar	26.75	51	P	P	14 40 37.6	+1.2
	comp=Z,0.6nm,0.6s,baz=267,slow=8.3,SNR=11						
NVAR	Mina Array Bea	34.21	98	P	P	14 41 45.6	+2.9
	comp=Z,0.2nm,0.5s,baz=312,slow=7.2,SNR=2.1						
KLR	Kul'dur	39.39	291	LR	LR	14 58 52.3	
	comp=Z,74nm,18.2s,baz=190,slow=37						
H11N2	WAKE ISLAND Hy	40.72	226	T	T	15 26 15.5	
	baz=26,slow=76,SNR=18						
H11N3	WAKE ISLAND Hy	40.73	225	T	T	15 26 16.0	
	baz=26,slow=76,SNR=17						
H11N1	WAKE ISLAND Hy	40.74	226	T	T	15 26 16.7	
	baz=26,slow=76,SNR=17						
H11S1	WAKE ISLAND Hy	41.89	225	T	T	15 27 55.0	
	baz=25						
H11S2	WAKE ISLAND Hy	41.91	225	T	T	15 27 46.0	
	baz=25						
H11S3	WAKE ISLAND Hy	41.91	225	T	T	15 27 46.2	
	baz=25						
KSRS	Korea Array	48.75	280	P	P	14 43 42.0	+0.5
	comp=Z,0.7nm,0.6s,baz=60,slow=7.4,SNR=5.2						
TXAR	Lajitas Array	49.23	95	P	P	14 43 46.7	+1.2
	comp=Z,0.1nm,0.4s,baz=318,slow=7.4,SNR=2.2						
ULN	Ulaanbaatar	53.33	303	P	P	14 44 15.7	-0.3
ULN				IAmb	IAmb	14 44 16.8	
	comp=Z,2.6nm,0.9s						
SONM	Songino Array	53.68	303	P	P	14 44 18.3	-0.2
	comp=Z,1.2nm,0.8s,baz=50,slow=7.3,SNR=7.4						
SONM	Songino Array	53.68	303	P	P	14 44 17.9	-0.6
U49A	Red Boiling Sp	54.71	75	P	P	14 44 25.5	-0.5
HHC	Hu-ho-hao-te	55.75	294	*e*P	P	14 44 33.3	-0.3
ARCES	ARCESS Array B	57.03	356	P	P	14 44 41.7	-0.5
	comp=Z,2.4nm,0.8s,baz=9.0,slow=9.5,SNR=5.3						
ZALV	Zalesovo Beam	58.86	320	P	P	14 44 55.7	+0.5
	comp=Z,0.4nm,0.4s,baz=15,slow=6.0,SNR=1.8						
ZALV				PcP	PcP	14 45 45.3	+0.9
	comp=Z,0.6nm,0.6s,baz=42,slow=2.3,SNR=2.3						
ZALV	Zalesovo Beam	58.86	320	P	P	14 44 55.1	-0.1
LZH	Lanzhou	63.37	295	*e*P	P	14 45 26.0	-0.3
LZH				pP	pP	14 45 32.5	-2.0
LZH				sP	sP	14 45 35.5	-2.2
LZH				*e*PP	PP	14 47 47.3	+1.9
BRVK	Borovoye	64.71	327	P	P	14 45 34.9	+0.3
BRVK				IAmb	IAmb	14 45 36.0	
	comp=Z,2.8nm,0.8s						
MK31	Makanchi Array	65.47	316	P	P	14 45 39.1	-0.6
MK31				IAmb	IAmb	14 45 44.4	
	comp=Z,3.6nm,1.6s						
MKAR	Makanchi Array	65.47	316	P	P	14 45 39.5	-0.3
	comp=Z,0.9nm,0.9s,baz=46,slow=6.9,SNR=7.0						
MKAR	Makanchi Array	65.47	316	P	P	14 45 39.0	-0.8
WMQ	Urumqi	65.51	311	*e*P	P	14 45 42.3	+2.3
NOA	NORSAR Array B	65.66	3	P	P	14 45 41.3	+0.6
	comp=Z,0.5nm,0.7s,baz=358,slow=6.6,SNR=3.8						
ABKAR	Akbulak array	71.18	332	P	P	14 46 15.3	0.0
KKAR	Karatay Array	73.16	322	P	P	14 46 26.9	-0.4
KKAR	Karatay Array	73.16	322	P	P	14 46 26.9	-0.4
KKAR				IAmb	IAmb	14 47 35.8	
	comp=Z,4.8nm,1.6s						
AKASG	Malin Array Be	75.56	352	P	P	14 46 41.0	-0.1
	comp=Z,1.5nm,0.5s,baz=10,slow=5.8,SNR=4.7						
AKASG	Malin Array Be	75.56	352	P	P	14 46 40.0	-1.0
AKBB	Malin Array Si	75.56	352	P	P	14 46 40.5	-0.6
BURAR	Bucovina Array	78.92	354	P	P	14 47 00.2	+0.1
CMAR	Chiang Mai Arr	79.74	287	P	P	14 47 05.4	+0.5
	comp=Z,0.7nm,0.7s,baz=31,slow=6.0,SNR=4.8						
CMAR	Chiang Mai Arr	79.74	287	P	P	14 47 04.5	-0.4

IDC 31 14:45:24.0±6.2,**2°.37S**×**102°.14E,h0**^{km}**,mb3.3**/4, **mb1 3.5**/4,**mb1mx3.2**/42,**mbtmp3.3**/4,**MS3.3**/1,**Ms1 3.3**/1, **ms1mx2.8**/25,**Error ellipse: s-maj=325.8km s-min=24.9km az=53.0,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	6.06	328	LR	LR	14 49 15.9	
	comp=Z,241nm,18.5s,baz=36,slow=39						
WRA	Warramunga Arr	35.97	121	P	P	14 52 27.0	+0.1
	0.1nm,0.3s,baz=300,slow=8.7,SNR=2.0						
ASAR	Alice Springs	37.32	127	P	P	14 52 38.1	-0.3
	0.1nm,0.3s,baz=298,slow=7.7,SNR=11						
MKAR	Makanchi Array	51.99	343	P	P	14 54 35.0	-0.1
	0.2nm,0.5s,baz=147,slow=8.0,SNR=3.8						
ZALV	Zalesovo Beam	57.95	348	P	P	14 55 18.0	-0.1
	0.4nm,0.4s,baz=159,slow=4.3,SNR=2.2						

IDC 31 14:55:58.5±2.8,**4°.31S**×**134°.15E,h0**^{km}**,mb3.1**/1, **mb1 3.7**/5,**mb1mx3.4**/38,**mbtmp3.5**/5,**ML3.3**/4,**Error ellipse: s-maj=84.2km s-min=23.9km az=73.0,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.47	320	Pn	Pn	14 57 05.9	-1.7
	1.4nm,0.3s,baz=141,slow=12,SNR=6.0						
SIJI				Sn	Sn	14 58 02.8	+2.4
	0.6nm,0.3s,baz=120,slow=20,SNR=3.6						
WRA	Warramunga Arr	15.54	179	Pn	Pn	14 59 40.9	+1.8
	0.1nm,0.3s,baz=359,slow=11,SNR=8.3						
FITZ	Fitzroy Crossi	16.04	211	Pn	Pn	14 59 45.2	-0.4
	0.1nm,0.3s,baz=32,slow=13,SNR=2.5						
ASAR	Alice Springs	19.25	181	P	P	15 00 23.9	-0.7
	0.2nm,0.3s,baz=7.4,slow=12,SNR=44						
MKAR	Makanchi Array	68.35	324	P	P	15 07 02.4	+0.6
	0.2nm,0.8s,baz=107,slow=9.2,SNR=2.2						

GUC 31 14:58:41.1±0.7,35°.00S×71°.52W,h46^{km}±25^{km},ML4.3

SJA 31 14:58:41.5±0.4,34°.67S×71°.76W,h24^{km}±2^{km},ML3.7, MW3.9

NEIC 31 14:58:42.5±1.1,34°.71S±0°.08×71°.6W±0°.2,h44^{km}±7^{km}, mb4.8/13,ML4.3(GUC),Error ellipse: s-maj=26.7km s-min=11.6km az=88.0

IDC 31 14:58:43.4±3.5,34°.77S×71°.64W,h53^{km}±32^{km},mb3.8/6, mb1 3.9/9,mb1mx3.7/30,mbtmp4.0/9,ML4.1/3,MS3.9/1, Ms1 3.9/1,ms1mx3.2/32,Error ellipse: s-maj=38.0km s-min=18.0km az=95.0

ISC 31 14:58:41.3±0.9,**34°.81S**±0°.03×**71°.60W**±0°.05,**h33**^{km}±3^{km}, **n50,**σ**1^{s}96**/45,**mb4.5**/10,**2C-2D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO05	Huala	0.34	234	⇓*i*P	Pb	14 58 50.1	+0.4
GO05				*i* S	Sb	14 58 56.2	+0.8
GO05	Huala	0.34	234	*i* P	Pb	14 58 49.8	+0.2
ANTU	Antumapu	1.47	33	IAML		14 59 33.6	
	comp=E,8μm,0.2s						
LMEL	Las Melosas	1.50	51	IAML		14 59 35.9	
	comp=N,5μm,0.3s						
MT05	Renca	1.58	27	*e*P	Pb	14 59 09.5	-0.5
MT05				*i* S	Sb	14 59 32.2	+2.5
MT05				IAML		14 59 35.0	
	comp=N,6μm,0.4s						
CLCH	Cerro Calan	1.66	32	⇑*i*P	Pb	14 59 11.1	-0.3
CLCH				*i* S	Sb	14 59 33.6	+1.7
PEL	Peldehue	1.82	25	⇓*i*P	Pb	14 59 13.2	-0.9
PEL				*i* S	Sb	14 59 38.4	+1.8
PEL				IAML		14 59 40.9	
	comp=E,4μm,0.4s						
PEL	Peldehue	1.82	25	*i* P	Pb	14 59 13.0	-1.1
PEL				*i* Sg	Sb	14 59 39.3	+2.7
FCH	Farellones	1.83	37	⇑*i*P	Pb	14 59 13.7	-0.7
FCH				IAML		14 59 45.7	
	comp=N,2μm,0.6s						
ROC1	El Roble	1.89	15	*i* P	Pb	14 59 13.7	-1.7
ROCH	El Roble	1.90	15	IAML		14 59 43.4	
	comp=N,4μm,0.3s						
LAMA	Las Malvinas	1.96	94	*i* P	Pb	14 59 17.8	+1.3
EDS3	Malargue	2.04	119	*i* P	Pb	14 59 19.7	+1.9
AAGR	Agrelo	2.87	54	*i* P	Pb	14 59 29.1	-2.8
ARCO	CERRO ARCO	2.96	49	*i* P	Pb	14 59 30.0	-3.5
ARCO				IAML		15 00 21.1	
	comp=Z,240nm,0.4s						
CANA	Caviahue	3.10	172	*i* P	Pb	14 59 34.3	-1.6
CANA				IAML		15 00 31.8	
	comp=Z,158nm,0.9s						
ASAL	Salagasta	3.19	47	*i* P	Pb	14 59 33.5	-3.9
ASAL				*i* Sg	Sb	15 00 23.7	+7.9
ASAL				IAML		15 00 25.7	
	comp=Z,175nm,0.7s						
PLCA	Paso Flores	5.97	172	P	Pn	15 00 10.2	+2.8
	comp=Z,1.8nm,0.3s,baz=250,slow=11,SNR=43						
PLCA				S	Sb	15 01 30.4	-5.3
	baz=267,slow=19,SNR=1.1						
PLCA	Paso Flores	5.97	172		Pn	15 00 10.6	+3.2
APLL	PUNTA DE LOS L	6.13	46	*i* P	Pn	15 00 14.4	+4.7
ACLC	CERRO LA CRUZ	6.66	38	*i* P	Pn	15 00 20.6	+3.6
VCA	Vinchina	6.71	26	*i* P	Pn	15 00 21.0	+3.4
PB15	IPOC Station P	11.71	10	Pn	Pn	15 01 25.7	-0.5
PB01	IPOC Station P	13.84	8	P	P	15 02 03.5	+0.3
CPUP	Villa Florida	14.90	59	P	P	15 02 12.6	-2.3
	comp=Z,0.1nm,0.3s,baz=26,slow=4.8,SNR=2.7						
MNMC	Minye Minye	15.72	7	Pn	Pn	15 02 20.5	0.0
PB16	IPOC Station P	16.51	7	Pn	Pn	15 02 30.4	-0.6
LPAZ	La Paz	18.70	10	P	Pn	15 02 57.5	-0.6
	comp=Z,0.2nm,0.3s,baz=173,slow=6.7,SNR=6.8						
LPAZ	La Paz	18.70	10	P	P	15 02 56.0	-1.6
SIV	San Ignacio	20.98	29	P	P	15 03 21.4	-0.4
	comp=Z,6.3nm,0.8s,baz=218,slow=8.4,SNR=24						
SIV				LR	LR	15 12 05.2	
	comp=Z,376nm,21.7s,baz=165,slow=38						
PTGA	Pitinga	35.60	20	P	P	15 05 34.7	-1.2
PTGA				IAmb	IAmb	15 05 35.5	
	comp=Z,5.2nm,0.8s						
SNAA	Sanae	50.70	158	P	P	15 07 37.2	-0.1
	comp=Z,1.4nm,0.8s,baz=325,slow=8.5,SNR=4.0						
SNAA	Sanae	50.70	158	IAmb	IAmb	15 09 02.0	
	comp=Z,20nm,1.9s						
QSPA	South Pole Qui	55.43	180	P	P	15 08 12.4	+0.2
	comp=Z,1.9nm,0.8s,baz=18,slow=2.0,SNR=10						
QSPA	South Pole Qui	55.43	180	IAmb	IAmb	15 08 27.8	
	comp=Z,27nm,2.0s						
TXAR	Lajitas Array	70.62	331	P	P	15 09 53.1	-0.3
	comp=Z,0.2nm,0.4s,baz=156,slow=10,SNR=4.7						
TXAR				pP	pP	15 10 05.6	+1.7
	comp=Z,0.8nm,0.5s,baz=157,slow=8.6,SNR=11						
W50A	Signal Mountai	70.82	348	P	P	15 09 53.4	-1.1
W50A				IAmb	IAmb	15 10 17.2	
	comp=Z,21nm,1.4s						
V48A	Smith Brothers	71.61	347	P	P	15 09 58.2	-1.0
V48A				IAmb	IAmb	15 09 59.5	
	comp=Z,8.5nm,0.6s						
WVT	Waverly	72.18	346	P	P	15 10 01.9	-0.7
WVT				IAmb	IAmb	15 12 04.4	
	comp=Z,27nm,1.8s						
LCAR	Lake Charles	72.84	344	P	P	15 10 05.2	-1.2
LCAR				IAmb	IAmb	15 11 36.7	
	comp=Z,10.0nm,1.5s						
CCM	Cathedral Cave	74.76	344	P	P	15 10 17.1	-0.6
DBIC	Dimbokro	75.09	71	P	P	15 10 20.2	0.0
	comp=Z,3.2nm,0.8s,baz=212,slow=6.8,SNR=6.1						
BOSA	Boshof	79.37	117	P	P	15 10 44.2	-0.1
	comp=Z,2.1nm,0.5s,baz=232,slow=3.5,SNR=5.4						
H11S2	WAKE ISLAND Hy	126.12	268	T	T	17 36 17.8	
	baz=119,slow=75,SNR=4.4						
H11S1	WAKE ISLAND Hy	126.13	268	T	T	17 36 15.0	
	baz=119,slow=75,SNR=6.6						
H11S3	WAKE ISLAND Hy	126.14	268	T	T	17 36 11.7	
	baz=119,slow=75,SNR=3.9						
H11N3	WAKE ISLAND Hy	126.55	270	T	T	17 36 44.6	
	baz=122						
H11N1	WAKE ISLAND Hy	126.57	270	T	T	17 36 46.0	
	baz=122						
H11N2	WAKE ISLAND Hy	126.57	270	T	T	17 36 45.5	
	baz=122						
MKAR	Makanchi Array	157.00	51	PKPab	PKPab	15 19 03.5	+0.1
	comp=Z,0.3nm,0.7s,baz=254,slow=4.5,SNR=4.1						

IDC 31 15:07:59.6±1.4,5°.17S×103°.41E,h0^{km},mb3.8/9, mb1 3.9/10,mb1mx3.8/46,mbtmp3.8/10,ML3.6/1,MS3.4/3, Ms1 3.4/3,ms1mx2.9/53,Error ellipse: s-maj=65.3km s-min=15.6km az=52.0

DJA 31 15:08:01.6±0.3,5°S±2°×10°4E±°,h10^{km},M4.2/8,MLv4.2/8

NEIC 31 15:08:05.1±1.9,5°.00S±0°.08×103°.69E±0°.09,h38^{km}±4^{km}, mb4.4/7,Error ellipse: s-maj=14.6km s-min=8.4km az=53.0

ISC 31 15:08:02.0±0.6,**4°.88S**±0°.04×**104°.03E**±0°.06,**h10**^{km}**,n38,** σ**1^{s}49**/36,**mb4.1**/11,**MS3.3**/3,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LWLI	Liwa	0.14	170	P	Pg	15 08 05.5	+0.3
MDSI	Maura Dua	0.42	20	P	Pb	15 08 10.5	-1.0
MDSI				S	Sb	15 08 16.5	-1.4
KASI	Kota Agung	0.79	144	P	Pb	15 08 17.3	-0.5
KASI				S	Sb	15 08 27.2	-1.3
MNAI	Manna	1.19	296	P	Pn	15 08 23.5	-1.2
MNAI	Manna	1.19	296		Pn	15 08 23.6	-1.2
KSI	Kapahiang	1.89	310	P	Pn	15 08 34.7	+0.3
PMBI	Palembang	2.08	21	P	Pn	15 08 37.6	+0.7
PMBI	Palembang	2.08	21	Pn	Pg	15 08 41.2	-0.6
DBJI	Dramaga	3.17	122	Pg	Pg	15 09 01.6	-1.2
KRJI	Kerinci	3.78	317	P	Pn	15 09 00.4	0.0
LEM	Lembang	4.05	119	Pn	Pb	15 09 11.2	-2.4
	3.1nm,0.3s,baz=286,slow=8.2,SNR=6.5						
LEM				Lg	Lg	15 10 16.5	
	5.4nm,0.3s,baz=330,slow=20,SNR=2.4						
LEM	Lembang	4.05	119	P	Pn	15 09 03.5	-0.8
PPSI	Pulau Pagai	4.53	298	P	Pn	15 09 10.1	-0.6
CISI	Cisompet, Garu	4.60	125		Pn	15 09 15.4	+3.6
XMIS	Christmas Isla	5.79	164	Pn	Pn	15 09 26.9	-1.1
MYKOM	Kota Tinggi	6.63	358		Pn	15 09 40.9	+1.3
CMAR	Chiang Mai Arr	23.73	348	P	P	15 13 15.8	+1.3
	1.0nm,0.8s,baz=179,slow=9.3,SNR=8.5						
CMAR				LR	LR	15 22 45.8	
	comp=Z,66nm,20.0s,baz=131,slow=37						
CMAR	Chiang Mai Arr	23.73	348	P	P	15 13 13.8	-0.7
FITZ	Fitzroy Crossi	24.87	124	P	P	15 13 27.5	+2.4
	3.0nm,0.7s,baz=295,slow=5.3,SNR=8.7						
PALK	Pallekele	26.23	297	LR	LR	15 22 25.4	
	comp=Z,82nm,20.4s,baz=88,slow=34						
KNRA	Kununurra	26.55	116	P	P	15 13 41.3	+1.0
KNRA				IAmb	IAmb	15 14 01.7	
	comp=Z,23nm,1.6s						
H08S2	Diego Garcia H	31.47	263	T	T	15 46 51.1	
	baz=87						
H08S3	Diego Garcia H	31.48	263	T	T	15 46 54.0	
	baz=87						
H08S1	Diego Carcia H	31.49	263	T	T	15 46 55.8	
	baz=87						
WRA	Warramunga Arr	33.07	120	P	P	15 14 39.5	+1.3
	comp=Z,2.7nm,0.7s,baz=295,slow=9.0,SNR=11						
WRAB	Tennant Creek	33.08	120	P	P	15 14 39.3	+1.0
WRAB				IAmb	IAmb	15 14 45.8	
	comp=Z,4.6nm,0.8s						
WB2	Warramunga Arr	33.08	120	P	P	15 14 39.8	+1.5
AS31	Alice Springs	34.31	126	P	P	15 14 50.0	+1.0
ASAR	Alice Springs	34.31	126	P	P	15 14 50.6	+1.6
	comp=Z,1.1nm,0.6s,baz=295,slow=7.7,SNR=19						
ASAR				PcP	PcP	15 17 26.4	+1.2
	comp=Z,0.4nm,0.6s,baz=326,slow=2.8,SNR=4.6						
ASAR	Alice Springs	34.31	126	P	P	15 14 49.7	+0.7
STKA	Stephens Creek	44.24	132	P	P	15 16 13.7	+1.9
	comp=Z,4.6nm,0.7s,baz=306,slow=7.5,SNR=15						
STKA	Stephens Creek	44.24	132	P	P	15 16 13.5	+1.7
SONM	Songino Array	52.53	2	P	P	15 17 16.7	+1.1
	comp=Z,0.1nm,0.5s,baz=186,slow=8.8,SNR=1.3						
MKAR	Makanchi Array	54.94	342	P	P	15 17 31.7	-1.5
	comp=Z,0.2nm,0.7s,baz=139,slow=9.4,SNR=3.2						
KLR	Kul'dur	59.04	21	LR	LR	15 46 17.3	
	comp=Z,31nm,18.5s,baz=322,slow=39						
ZALV	Zalesovo Beam	60.79	347	P	P	15 18 14.8	+0.7
	comp=Z,0.4nm,0.3s,baz=190,slow=5.9,SNR=2.1						
BR131	Keskin Array S	78.23	312	P	P	15 20 00.0	-2.3
BR131				IAmb	IAmb	15 21 11.7	
	comp=Z,10nm,1.9s						
BRTR	Keskin Array B	78.23	312	P	P	15 20 00.1	-2.3
	comp=Z,0.2nm,0.4s,baz=130,slow=7.3,SNR=2.7						

NEIC 31 15:09:05.5±1.2,25°.2S±0°.1×179°.8E±0°.1,h506^{km}±8^{km},

mb4.5/18, Error ellipse: s-maj=20.4km s-min=17.2km az=167.0

*IDC **31** 15:09:08.3±2.3, 25°.06S×179°.66E, h521^{km}±25^{km}, mb3.4/11, mb1 3.6/12, mb1mx3.3/33, mbtmp4.3/12, Error ellipse: s-maj=44.0km s-min=14.4km az=158.0*

ISC 31 15:09:05.6±0.6**, 25°.2S**±0°.1×**179°.78E**±0°.09**, h501^{km}, n44, σ0^{s}.96**/46**, mb4.2**/20**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	12.61	282	P	P	15 11 50.7	-0.1
	0.2nm,0.3s,baz=80,slow=12,SNR=1.8						
QRZ	Quartz Range	16.71	199	P	P	15 12 34.0	+0.6
TUWZ	Tuamarina	16.90	195	P	P	15 12 35.3	0.0
THZ	Tophouse	17.47	197	P	P	15 12 40.3	-0.6
RAR	Rarotonga	19.21	82	P	P	15 12 56.6	-0.4
LBZ	Lake Benmore	20.67	200	P	P	15 13 07.4	-2.6
CAN	Canberra	28.33	242	P	P	15 14 20.2	+1.8
CAN				IAmb	IAmb	15 14 44.8	
	comp=Z,35nm,1.8s						
CTA	Charters Tower	31.30	272	P	P	15 14 45.5	+1.2
	comp=Z,7.8nm,0.3s,baz=95,slow=11,SNR=16						
TOO	Toolangi	31.59	239	P	P	15 14 47.9	+1.4
TOO				IAmb	IAmb	15 15 49.4	
	comp=Z,14nm,1.5s						
STKA	Stephens Creek	34.07	250	P	P	15 15 08.6	+1.0
	comp=Z,1.4nm,0.4s,baz=92,slow=12,SNR=13						
STKA	Stephens Creek	34.07	250	IAmb	IAmb	15 16 17.9	
	comp=Z,1.1nm,0.7s						
COEN	Coen	36.14	281	P	P	15 15 26.4	+1.3
BBOO	Buckleboo	38.76	248	P	P	15 15 46.2	-0.2
BBOO	Buckleboo	38.76	248	P	P	15 15 46.2	-0.2
BBOO				IAmb	IAmb	15 16 23.9	
	comp=Z,46nm,1.9s						
AS31	Alice Springs	41.64	262	P	P	15 16 09.6	-0.1
ASAR	Alice Springs	41.64	262	P	P	15 16 10.1	+0.4
	comp=Z,1.9nm,0.3s,baz=95,slow=7.2,SNR=109						
ASAR				S	S	15 21 49.3	-0.3
	comp=Z,0.3nm,0.9s,baz=96,slow=12,SNR=4.8						
ASAR	Alice Springs	41.64	262	P	P	15 16 09.2	-0.5
WR0	Warramunga Arr	41.95	268	P	P	15 16 11.8	-0.3
WR0				IAmb	IAmb	15 16 12.6	
	comp=Z,10nm,1.4s						
WB2	Warramunga Arr	42.12	268	P	P	15 16 13.2	-0.3
WB2				IAmb	IAmb	15 16 13.8	
	comp=Z,9.3nm,0.5s						
WRAB	Tennant Creek	42.12	268	P	P	15 16 13.1	-0.5
WRAB				IAmb	IAmb	15 16 13.6	
	comp=Z,7.8nm,0.5s						
WB0	Warramunga Arr	42.13	268	P	P	15 16 13.1	-0.5
WRA	Warramunga Arr	42.13	268	P	P	15 16 13.4	-0.2
	comp=Z,6.7nm,0.4s,baz=101,slow=7.5,SNR=78						
WRA				S	S	15 21 54.8	-2.0
	comp=Z,0.8nm,0.9s,baz=96,slow=15,SNR=3.8						
WRA	Warramunga Arr	42.13	268	P	P	15 16 13.0	-0.6
FORT	Forrest	45.68	251	P	P	15 16 40.1	-0.9
FORT				IAmb	IAmb	15 18 00.1	
	comp=Z,14nm,0.8s						
KNRA	Kununurra	48.49	271	P	P	15 17 02.5	+0.1
FITZ	Fitzroy Crossi	50.54	267	P	P	15 17 18.4	+0.9
	comp=Z,4.0nm,0.5s,baz=96,slow=6.4,SNR=21						
FITZ	Fitzroy Crossi	50.54	267	P	P	15 17 17.1	-0.5
SIJI	Sorong	52.66	290	P	P	15 17 32.9	-0.1
	comp=Z,12nm,0.7s,baz=98,slow=4.3,SNR=9.8						
MORW	Morawa	56.25	251	P	P	15 17 57.8	-0.3
MORW				IAmb	IAmb	15 18 18.4	
	comp=Z,51nm,1.8s						
TNTI	Ternate	56.84	289	P	P	15 18 00.9	-1.5
TNTI				IAmb	IAmb	15 18 02.3	
	comp=Z,9.8nm,0.9s						
JAGI	Jajag, Banyuwa	64.42	273	P	P	15 18 51.3	-1.2
QSPA	South Pole Qui	64.89	180	P	P	15 18 55.0	+0.3
KSRS	Korea Array	79.11	320	P	P	15 20 18.1	+0.4
	comp=Z,0.6nm,0.6s,baz=136,slow=6.5,SNR=4.1						
PETK	Petropavlovsk-	80.31	347	P	P	15 20 23.6	0.0
	comp=Z,2.6nm,0.9s,baz=147,slow=7.5,SNR=4.3						
NVAR	Mina Array Bea	85.83	44	P	P	15 20 52.1	+0.2
	comp=Z,0.2nm,0.5s,baz=219,slow=7.0,SNR=2.4						
NVAR	Mina Array Bea	85.83	44	P	P	15 20 50.8	-1.1
CMAR	Chiang Mai Arr	89.78	290	P	P	15 21 12.4	+1.8
	comp=Z,0.7nm,0.7s,baz=139,slow=3.5,SNR=6.3						
CMAR	Chiang Mai Arr	89.78	290	P	P	15 21 10.5	-0.2
TXAR	Lajitas Array	91.29	58	P	P	15 21 17.9	+0.4
	comp=Z,0.2nm,0.8s,baz=224,slow=7.5,SNR=4.0						
TXAR	Lajitas Array	91.29	58	P	P	15 21 17.0	-0.5
FINES	FINESS Array B	139.60	341	SKPbc	SKPbc	15 30 23.5	+0.1
	comp=Z,2.4nm,1.0s,baz=62,slow=5.2,SNR=3.9						
AKASG	Malin Array Be	145.94	326	PKPbc	PKPbc	15 27 48.4	-0.1
	comp=Z,0.9nm,0.5s,baz=43,slow=4.5,SNR=6.6						
BRTR	Keskin Array B	148.18	305	PKPbc	PKPbc	15 27 54.1	-0.9
	comp=Z,0.4nm,0.5s,baz=138,slow=3.5,SNR=2.9						
BRTR				PKPab	PKPab	15 27 59.4	-0.5
	comp=Z,0.7nm,0.8s,baz=83,slow=4.5,SNR=3.7						
CLL	Collm	152.03	342	*e*PKPbc	PKiKP	15 28 06.0	+2.4

*IDC **31** 15:10:47.3±2.5, 24°.42S×179°.73E, h504^{km}±27^{km}, mb3.4/8, mb1 3.6/8, mb1mx3.2/33, mbtmp4.2/8, Error ellipse: s-maj=33.6km s-min=17.2km az=173.0*

*NEIC **31** 15:10:48.0±1.2, 24°.6S±0°.1×179°.80E±0°.10, h531^{km}±11^{km}, mb4.4/20, Error ellipse: s-maj=20.1km s-min=13.1km az=182.0*

ISC 31 15:10:48.0±0.6**, 24°.6S**±0°.1×**179°.76E**±0°.08**, h517^{km}, n39, σ1^{s}.09**/40**, mb4.2**/16**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	5.12	157	P	P	15 12 17.9	+1.0
MSVF	Nonsavu	6.97	346	P	P	15 12 34.1	-0.7
NIUE	Niue	11.02	62	P	P	15 13 17.5	+1.2
DZM	Mont Dzumac	12.48	279	P	P	15 13 33.8	+2.0
	0.6nm,0.3s,baz=107,slow=18,SNR=7.2						
DZM	Mont Dzumac	12.48	279	P	P	15 13 33.6	+1.8
MSWZ	Moikau Station	17.23	192	P	P	15 14 18.4	-1.9
SNZO	South Karori	17.23	193	P	P	15 14 19.0	-1.3
QRZ	Quartz Range	17.32	199	P	P	15 14 20.4	-0.6
PLWZ	Palliser	17.38	191	P	P	15 14 19.6	-2.2
TUWZ	Tuamarina	17.51	195	P	P	15 14 22.1	-0.8
THZ	Tophouse	18.08	197	P	P	15 14 27.2	-1.0
THZ				IAmb	IAmb	15 14 46.6	
	comp=Z,27nm,1.6s						
OXZ	Oxford	19.77	197	P	P	15 14 43.0	-0.5
OXZ				IAmb	IAmb	15 14 48.6	
	comp=Z,9.1nm,0.6s						
MQZ	McQueen’s Vall	19.97	195	P	P	15 14 44.8	-0.4
EIDS	Eidsvold	25.99	262	P	P	15 15 40.2	+0.7
EIDS				IAmb	IAmb	15 16 37.0	
	comp=Z,16nm,1.2s						
CTA	Charters Tower	31.27	271	P	P	15 16 26.1	+0.6
	comp=Z,5.5nm,0.3s,baz=93,slow=11,SNR=12						
STKA	Stephens Creek	34.28	249	P	P	15 16 51.2	+0.4
BBOO	Buckleboo	38.99	248	P	P	15 17 29.0	-0.7
BBOO				IAmb	IAmb	15 17 39.4	
	comp=Z,22nm,1.6s						
AS31	Alice Springs	41.72	261	P	P	15 17 51.4	-0.3
ASAR	Alice Springs	41.72	261	P	P	15 17 51.4	-0.3
	comp=Z,1.4nm,0.7s,baz=90,slow=8.0,SNR=8.7						
ASAR				S	S	15 23 31.4	+0.1
	comp=Z,0.3nm,0.9s,baz=99,slow=16,SNR=2.7						
ASAR	Alice Springs	41.72	261	P	P	15 17 51.2	-0.5
WR0	Warramunga Arr	41.96	267	P	P	15 17 53.0	-0.7
WB2	Warramunga Arr	42.14	267	P	P	15 17 54.2	-0.8
WB2				IAmb	IAmb	15 17 54.9	
	comp=Z,3.7nm,0.6s						
WRAB	Tennant Creek	42.14	267	P	P	15 17 54.1	-0.9
WRAB				IAmb	IAmb	15 18 02.3	
	comp=Z,24nm,1.9s						
WB0	Warramunga Arr	42.14	267	P	P	15 17 54.2	-0.9
WB0				IAmb	IAmb	15 17 55.0	
	comp=Z,4.4nm,0.6s						
WRA	Warramunga Arr	42.15	267	P	P	15 17 54.6	-0.5
	comp=Z,2.5nm,0.4s,baz=100,slow=8.0,SNR=15						
WRA				ScP	ScP	15 22 41.3	+2.4
	comp=Z,1.2nm,0.8s,baz=92,slow=4.2,SNR=7.2						
WRA	Warramunga Arr	42.15	267	P	P	15 17 54.3	-0.8
FORT	Forrest	45.88	250	P	P	15 18 22.6	-1.3
FORT				IAmb	IAmb	15 20 00.5	
	comp=Z,29nm,1.3s						
MTN	Manton Dam	47.29	275	P	P	15 18 33.2	-1.6
KNRA	Kununurra	48.47	270	P	P	15 18 42.4	-1.1
KNRA				IAmb	IAmb	15 19 36.8	
	comp=Z,21nm,1.5s						
FITZ	Fitzroy Crossi	50.56	266	P	P	15 18 59.2	+0.3
	comp=Z,4.2nm,0.9s,baz=130,slow=7.9,SNR=5.4						
FITZ	Fitzroy Crossi	50.56	266	IAmb	IAmb	15 18 59.8	
	comp=Z,5.5nm,1.2s						
SIJI	Sorong	52.44	289	P	P	15 19 12.1	-0.6
	comp=Z,5.5nm,0.5s,baz=124,slow=6.5,SNR=6.5						
MORW	Morawa	56.45	250	P	P	15 19 40.2	-0.5
MORW				IAmb	IAmb	15 19 46.5	
	comp=Z,28nm,1.6s						
QSPA	South Pole Qui	65.53	180	P	P	15 20 40.7	+0.8
	comp=Z,1.3nm,0.7s,baz=11,slow=1.5,SNR=3.9						
QSPA	South Pole Qui	65.53	180	P	P	15 20 40.3	+0.5
QSPA				IAmb	IAmb	15 21 39.9	
	comp=Z,17nm,1.8s						
NVAR	Mina Array Bea	85.37	44	P	P	15 22 30.6	-0.2
	comp=Z,0.2nm,0.4s,baz=224,slow=7.6,SNR=3.5						
NVAR	Mina Array Bea	85.37	44	P	P	15 22 29.0	-1.8
TXAR	Lajitas Array	90.96	58	P	P	15 22 57.1	+0.1
	comp=Z,0.9nm,0.8s,baz=210,slow=7.2,SNR=8.2						
TXAR	Lajitas Array	90.96	58	P	P	15 22 56.2	-0.8

*NEIC **31** 15:24:37.2±2.2, 8°.16S±0°.07×118°.12E±0°.07, h206^{km}±5^{km}, mb4.5/34, Error ellipse: s-maj=10.0km s-min=9.4km az=178.0*

*DJA **31** 15:24:37.7±0.1, 8°S±2°×11°8E±°, h204^{km}±2^{km}, M4.5/41, mb4.5/41, mB5.1/12, MLv4.8/22, Mw(mB)4.4/12*

*KLM **31** 15:24:38.0, 8°.60S×118°.05E, h217^{km}, mb4.7*

*IDC **31** 15:24:38.9±1.0, 8°.08S×118°.17E, h214^{km}±9^{km}, mb4.1/16, mb1 4.1/21, mb1mx3.8/51, mbtmp4.6/21, Error ellipse: s-maj=12.6km s-min=7.1km az=59.0*

ISC 31 15:24:37.0±0.3**, 8°.25S**±0°.04×**118°.15E**±0°.04**, h200^{km}, n139, σ1^{s}.64**/152**, mb4.4**/30**, 1C, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	0.68	212	P	Pn	15 25 06.6	+1.6
PLAI				S	Sn	15 25 27.6	+0.9
WBSI	Waikabubak, Su	1.85	138	P	Pn	15 25 14.4	+0.3
WBSI				S	Sn	15 25 42.2	-0.9
SRBI	Singaraja	2.91	273	P	Pn	15 25 27.5	+1.9
DNP	Denpasar	2.94	261	P	Pn	15 25 27.1	+1.2
BASI	Baing, Sumba	3.10	129	P	Pn	15 25 28.8	+0.9
BKSI	Bulukumba	3.51	34	P	Pn	15 25 34.7	+1.9
EDFI	Ende, Flores	3.54	98	P	Pn	15 25 33.9	+0.6
KAPI	Kappang	3.58	27	P	Pn	15 25 35.4	+1.6
	5.6nm,0.3s,baz=204,slow=6.7,SNR=21						
KAPI				S	Sn	15 26 18.5	+0.2
	2.5nm,0.3s,baz=89,slow=23,SNR=5.4						
KAPI	Kappang	3.58	27		Pn	15 25 35.0	+1.2
JAGI	Jajag, Banyuwa	3.96	266	P	Pn	15 25 38.2	-0.1
JAGI	Jajag, Banyuwa	3.96	266		Pn	15 25 38.0	-0.3
MMRI	Maumere	4.07	96	P	Pn	15 25 39.9	+0.2
MMRI	Maumere	4.07	96		Pn	15 25 39.4	-0.3
BNSI	Bone	4.29	27	P	Pn	15 25 45.3	+2.8
KMMI	Kalianget	4.31	286	P	Pn	15 25 46.0	+3.3
SPSI	Sidrap Palu	4.55	21	P	Pn	15 25 48.3	+2.5
GMJI	Gumukmas	4.65	269	P	Pn	15 25 46.7	-0.3
BBSI	Bau Bau	5.18	58	P	Pn	15 25 55.9	+2.1
	0.1nm23nm,0.9s						
KBKI	Kotabaru	5.29	338	P	Pn	15 25 57.2	+2.0
	0.1nm31nm,0.7s						
GRJI	Gresik	5.77	283	P	Pn	15 26 02.9	+1.5
	1.2nm3µm320nm,0.8s						
SOEI	Soe	6.23	104	P	Pn	15 26 07.6	+0.2
	2.8nm6µm571nm,1.0s						
SOEI	Soe	6.23	104		Pn	15 26 07.5	0.0
PWJI	Pagerwojo	6.28	272	P	Pn	15 26 08.4	+0.4
	0.5nm2µm82nm,0.6s						
PCJI	Pacitan	6.90	270	P	Pn	15 26 16.4	+0.4
	0.9nm3µm147nm,0.6s						
WOJI	Wonogiri, Jawa	7.16	273	P	Pn	15 26 20.4	+1.0
	0.3nm56nm,0.7s						
UGM	Wanagama	7.55	272	P	Pn	15 26 25.3	+0.7
	0.7nm71nm,0.7s						
UGM	Wanagama	7.55	272		Pn	15 26 24.5	-0.1
SMRI	Semarang	7.73	278	P	Pn	15 26 28.3	+1.5
	0.6nm188nm,0.9s						
SMRI	Semarang	7.73	278		Pn	15 26 28.3	+1.5
SANI	Sanana	9.94	52	P	Pn	15 26 57.8	+2.2
	52nm,1.2s						
NLAI	Namlea	10.20	61	P	Pn	15 27 00.2	+1.2
	26nm,0.7s						
CISI	Cisompet, Garu	10.26	273	P	Pn	15 26 57.7	-2.0
	2µm109nm,0.6s						
CISI	Cisompet, Garu	10.26	273		Pn	15 26 57.7	-2.0
LEM	Lembang	10.53	277	P	Pn	15 27 04.6	+1.2
	3.7nm,0.3s,baz=21,slow=10,SNR=12						
LEM				S	S	15 29 05.4	+3.9
	3.1nm,0.3s,baz=319,slow=20,SNR=1.6						
CNJI	Cibinong	10.96	274	P	Pn	15 27 07.9	-0.8
	2µm149nm,1.1s						
AAI	Ambon	10.97	66	P	Pn	15 27 10.5	+1.6
	850nm66nm,1.1s						
CBJI	Citeko	11.35	278	P	P	15 27 20.3	+0.8
DBJI	Dramaga	11.43	278	P	Pn	15 27 15.6	+0.9
	3µm50nm,1.2s						
SKJI	Sukabumi	11.55	275	P	P	15 27 22.9	+1.1
LBMI	Labuha	12.00	51	P	P	15 27 31.1	+4.4
SBUM	Sibu	12.16	331	P	Pn	15 27 26.1	+2.1
SBUM	Sibu	12.16	331	P	P	15 27 31.0	+2.5
FITZ	Fitzroy Crossi	12.21	144	P	Pn	15 27 26.3	+1.7
	2.7nm,0.3s,baz=340,slow=9.3,SNR=109						
FITZ				S	Sn	15 29 37.6	-3.3
	1.8nm,0.3s,baz=185,slow=22,SNR=6.6						
FITZ	Fitzroy Crossi	12.21	144		Pn	15 27 25.7	+1.1
BNDI	Bandanaira	12.26	73	P	P	15 27 29.0	-0.6
	120nm,0.9s						
KSM	Kuching	12.42	321	P	Pn	15 27 29.7	+2.3
KSM	Kuching	12.42	321	P	P	15 27 33.0	+1.6
XMIS	Christmas Isla	12.53	259	Pn	Pn	15 27 27.9	-0.8
KNRA	Kununurra	12.74	126		Pn	15 27 30.8	-0.5
SAUI	Saumlaki	13.03	90	Pn	Pn	15 27 34.5	-0.5
PSA00	Pilbara Seismi	13.35	173		Pn	15 27 40.1	+1.1
PSA00	Pilbara Seismi	13.35	173	Pn	Pn	15 27 39.0	+0.1
MTN	Manton Dam	13.56	111		Pn	15 27 41.2	-0.4
KASI	Kota Agung	13.82	280	P	Pn	15 27 45.8	+1.0
	2µm110nm,0.5s						
KKM	Kota Kinabalu	14.32	352	P	Pn	15 27 51.6	+0.4
GIRL	Giralia	14.80	194	P	Pn	15 27 58.3	+1.5
SIJI	Sorong	14.98	61	P	Pn	15 27 59.5	+0.2
	1.2nm,0.3s,baz=279,slow=6.3,SNR=11						
SIJI				S	S	15 30 45.0	-0.8
	0.4nm,0.3s,baz=84,slow=20,SNR=7.5						
FAKI	Fak Fak	15.00	70	P	Pn	15 27 57.3	-2.1
	36nm,0.8s						
FAKI	Fak Fak	15.00	70	Pn	Pn	15 27 57.6	-1.7
MNAI	Manna	15.58	283	P	Pn	15 28 06.2	-0.3
MYKOM	Kota Tinggi	17.39	304	P	P	15 28 28.0	+1.6
WRA	Warramunga Arr	19.52	128	P	P	15 28 50.5	+1.0
	3.2nm,0.3s,baz=296,slow=12,SNR=290						
WRA				S	S	15 32 16.0	-3.1
	baz=297,slow=20,SNR=8.5						
WRA				ScP	ScP	15 36 16.4	-2.1
	0.2nm,0.3s,baz=310,slow=1.8,SNR=6.1						
WRA	Warramunga Arr	19.52	128	P	P	15 28 50.0	+0.6
WB2	Warramunga Arr	19.53	128	P	P	15 28 50.2	+0.6
WR0	Warramunga Arr	19.69	128	P	P	15 28 51.8	+0.6
MORW	Morawa	20.81	185	P	P	15 29 04.2	+1.1
MORW				IAmb	IAmb	15 29 06.8	
	comp=Z,26nm,0.8s						
IPM	Ipoh	21.25	306	P	P	15 29 06.2	-1.6
AS31	Alice Springs	21.52	137	P	P	15 29 11.4	+0.8
AS31				IAmb	IAmb	15 29 13.7	
	comp=Z,10nm,0.5s						
ASAR	Alice Springs	21.52	137	P	P	15 29 11.7	+1.1
	comp=Z,21nm,0.5s,baz=313,slow=9.0,SNR=857						
ASAR				S	S	15 32 58.9	+2.8
	comp=Z,3.7nm,1.0s,baz=326,slow=25,SNR=7.8						
ASAR				ScP	ScP	15 36 21.6	-1.7
	comp=Z,1.3nm,0.8s,baz=332,slow=2.0,SNR=4.1						
ASAR	Alice Springs	21.52	137	P	P	15 29 11.3	+0.6
RPSI	Rantau Prapat	22.04	299	P	P	15 29 13.8	-2.0
RPSI				IAmb	IAmb	15 29 15.6	
	comp=Z,7.2nm,0.8s						
RPSI	Rantau Prapat	22.04	299	P	P	15 29 15.2	-0.5
PSI	Prapat	22.09	299	P	P	15 29 15.2	-1.2
	comp=Z,4.0nm,0.4s,baz=151,slow=6.3,SNR=4.3						
FORT	Forrest	24.26	159	P	P	15 29 36.5	+0.7
NWAO	Narrogin (SRO)	24.57	182	P	P	15 29 41.1	+2.4
	comp=Z,30nm,0.5s,baz=12,slow=8.6,SNR=49						
NWAO	Narrogin (SRO)	24.57	182	P	P	15 29 39.8	+1.1
NWAO	Narrogin (SRO)	24.57	182	P	P	15 29 39.8	+1.1
NWAO				IAmb	IAmb	15 29 42.5	
	comp=Z,32nm,0.6s						
COEN	Coen	25.20	105	P	P	15 29 44.9	+0.4
COEN				IAmb	IAmb	15 29 46.4	
	comp=Z,13nm,0.8s						
BBOO	Buckleboo	29.55	148	P	P	15 30 24.2	+1.1
BBOO				IAmb	IAmb	15 30 25.3	
	comp=Z,14nm,0.8s						
CTA	Charters Tower	29.63	116	P	P	15 30 24.4	+0.4
	comp=Z,2.2nm,0.8s,baz=282,slow=11,SNR=4.2						
PBKT	Sadao Pong	29.95	325	P	P	15 30 26.7	0.0
STKA	Stephens Creek	32.07	140	P	P	15 30 46.9	+1.6
	comp=Z,13nm,0.8s,baz=312,slow=9.3,SNR=36						
STKA	Stephens Creek	32.07	140	P	P	15 30 46.5	+1.3
CM31	Chiang Mai Arr	32.60	325	P	P	15 30 50.0	-0.1
CM31				IAmb	IAmb	15 30 51.4	
	comp=Z,8.5nm,1.2s						
CMAR	Chiang Mai Arr	32.60	325	P	P	15 30 50.1	+0.1
	comp=Z,2.2nm,0.5s,baz=157,slow=6.9,SNR=26						
CMAR				ScP	ScP	15 36 54.8	-1.8
	comp=Z,1.5nm,0.9s,baz=178,slow=3.1,SNR=8.3						
CMAR	Chiang Mai Arr	32.60	325	P	P	15 30 49.5	-0.5
CHTO	Chiang Mai	32.89	325	P	P	15 30 51.4	-1.1
TOO	Toolangi	38.27	144	P	P	15 31 40.8	+2.7
TOO				IAmb	IAmb	15 31 42.1	
	comp=Z,10nm,0.9s						
CAN	Canberra	39.03	138	P	P	15 31 46.6	+2.2
CAN				IAmb	IAmb	15 32 31.6	
	comp=Z,30nm,1.5s						
NJ2	Nanjing	40.08	1	*e*P	P	15 31 54.5	+1.5
CD2	Chengdu	41.30	341	P	P	15 32 02.5	-0.7
HNR	Honiara	41.31	95	P	P	15 32 03.7	+0.2
	comp=Z,34nm,0.8s,baz=180,slow=4.0,SNR=3.8						
HNR	Honiara	41.31	95	P	P	15 32 03.0	-0.4
ODAN	Odare	45.91	321	*e*P	P	15 32 38.1	-2.1
	comp=Z,9.4nm,0.7s						
TAPN	Taplejung	46.05	321	*e*P	P	15 32 40.6	-0.8
LZH	Lanzhou	46.10	344	⇑P	P	15 32 44.0	+2.5
LZH				pP	pP	15 33 27.3	+2.4
LZH				sP	sP	15 33 49.5	+2.3
LZH				PP	PP	15 34 35.3	+2.3
KSRS	Korea Array	46.37	11	P	P	15 32 43.4	+0.1
	comp=Z,0.7nm,0.8s,baz=181,slow=8.1,SNR=4.4						
RAMN	Ramite	46.47	320	*e*P	P	15 32 43.7	-0.9
JIRN	Jiri	47.23	320	*e*P	P	15 32 49.0	-1.6
	comp=Z,16nm,0.5s						
GUN	Gumba	47.60	320	*e*P	P	15 32 51.9	-1.5
	comp=Z,13nm,0.5s						
PKI	Pulchoki	47.66	320	*e*P	P	15 32 51.8	-2.1
DMN	Daman	47.88	319	*e*P	P	15 32 53.7	-1.8
	comp=Z,7.5nm,0.5s						
GKN	Gorkha	48.45	319	*e*P	P	15 32 58.0	-1.8
	comp=Z,6.6nm,0.3s						
HHC	Hu-ho-hao-te	49.23	353	*e*P	P	15 33 05.5	+0.2
DANN	Dangsing	49.26	319	*e*P	P	15 33 04.1	-1.9
	comp=Z,22nm,0.6s						
GTA	Gaotai	50.37	342	*e*P	P	15 33 12.8	-1.2
USRK	Ussuriysk Ar.	53.68	12	P	P	15 33 37.4	-0.7
	comp=Z,1.5nm,0.5s,baz=198,slow=8.2,SNR=5.1						
USRK	Ussuriysk Ar.	53.68	12	P	P	15 33 37.0	-1.1
SONM	Songino Array	56.80	351	P	P	15 34 00.1	-0.4
	comp=Z,2.7nm,0.4s,baz=169,slow=8.4,SNR=19						
SONM	Songino Array	56.80	351	P	P	15 33 59.6	-0.9
RPZ	Rata Peaks	57.93	137	P	P	15 34 10.0	+1.5
	comp=Z,11nm,0.7s,baz=273,slow=3.9,SNR=11						
CASY	Casey	58.18	184	P	P	15 34 11.0	+1.2
CASY				IAmb	IAmb	15 35 18.7	
	comp=Z,46nm,1.8s						
WMQ	Urumqi	58.71	335	*e*P	P	15 34 14.3	+0.4
SNZO	South Karori	59.70	133	P	P	15 34 21.1	+0.5
URZ	Urewera	60.69	129	P	P	15 34 28.9	+1.5
	comp=Z,3.9nm,0.9s,baz=236,slow=3.6,SNR=3.5						
KSH	Kashi	61.50	324	P	P	15 34 33.8	+0.9
KSH				PcP	PcP	15 35 12.5	-0.4
KSH				sP	sP	15 35 42.5	+1.8
KSH				PcS	PcS	15 39 11.5	-4.6
KSH				S	S	15 42 33.8	-4.8
KBL	Kabul	62.97	316	P	P	15 34 40.1	-2.8
KBL				IAmb	IAmb	15 34 40.9	
	comp=Z,5.6nm,0.7s						
MK31	Makanchi Array	63.41	333	P	P	15 34 43.8	-1.5
MK31				IAmb	IAmb	15 34 44.9	
	comp=Z,4.4nm,0.7s						
MKAR	Makanchi Array	63.41	333	P	P	15 34 44.4	-0.9
	comp=Z,5.7nm,0.6s,baz=147,slow=7.5,SNR=90						
MKAR	Makanchi Array	63.41	333	P	P	15 34 43.7	-1.6
MAKZ	Makanchi	63.56	333	P	P	15 34 44.7	-1.6
MAKZ				IAmb	IAmb	15 34 45.6	
	comp=Z,3.0nm,0.6s						
SOCY	Socotra	66.92	287	P	P	15 35 06.0	-2.6
SOCY				IAmb	IAmb	15 35 07.1	
	comp=Z,10nm,0.9s						
KKAR	Karatay Array	66.95	324	P	P	15 35 06.4	-1.7
KKAR	Karatay Array	66.95	324	P	P	15 35 06.6	-1.6
KKAR				IAmb	IAmb	15 35 08.3	
	comp=Z,4.6nm,1.6s						
KURK	Kurchatov	67.95	334	P	P	15 35 12.0	-2.2
ZAA0	Zalesovo Array	68.04	340	P	P	15 35 12.4	-2.3
ZAA0				IAmb	IAmb	15 35 13.5	
	comp=Z,4.8nm,0.8s						
ZALV	Zalesovo Beam	68.04	340	P	P	15 35 13.0	-1.7
	comp=Z,4.5nm,0.6s,baz=149,slow=4.4,SNR=20						
ZALV	Zalesovo Beam	68.04	340	P	P	15 35 12.4	-2.3
VNDA	Vanda	72.86	171	P	P	15 35 45.3	+1.7
	comp=Z,1.3nm,0.5s,baz=319,slow=6.7,SNR=17						
VNDA	Vanda	72.86	171	P	P	15 35 45.2	+1.7
VNDA				IAmb	IAmb	15 35 53.4	
	comp=Z,18nm,1.9s						
BRVK	Borovoye	73.31	332	P	P	15 35 45.4	-1.1
ABKAR	Akbulak array	76.46	325	P	P	15 36 02.5	-2.2
TIXI	Tiksi	80.04	3	P	P	15 36 22.4	-1.4
QSPA	South Pole Qui	81.74	180	P	P	15 36 34.6	+1.4
	comp=Z,2.0nm,0.7s,baz=303,slow=1.2,SNR=12						
QSPA	South Pole Qui	81.74	180	IAmb	IAmb	15 36 35.6	
	comp=Z,29nm,1.6s						
KBZ	Khabaz	85.15	315	P	P	15 36 50.0	-0.7
	comp=Z,2.4nm,0.8s,baz=65,slow=6.7,SNR=4.8						
ULM	Lac du Bonnet	129.49	28	SKPbc	SKPab	15 46 22.5	-2.2
	comp=Z,1.6nm,0.6s,baz=290,slow=4.3,SNR=4.2						
TXAR	Lajitas Array	135.53	56	SKPbc	SKPbc	15 46 44.2	-2.5
	comp=Z,0.7nm,0.8s,baz=263,slow=2.1,SNR=6.1						
CPUP	Villa Florida	145.35	187	PKPbc	PKPbc	15 43 53.0	+1.0
	comp=Z,1.6nm,0.5s,baz=345,slow=2.5,SNR=7.9						

*IDC **31** 15:45:27.8±4.8, 3°.17S×103°.41E, h0^{km}, mb3.6/3, mb1 3.9/4, mb1mx3.3/49, mbtmp3.7/4, ML3.8/1, MS3.3/1, Ms1 3.3/1, ms1mx2.7/46, Error ellipse: s-maj=228.3km s-min=68.4km az=44.0*

*NEIC **31** 15:45:38.1±1.3, 3°.4S±0°.1×104°.04E±0°.08, h35^{km}±2^{km}, mb4.1/3, Error ellipse: s-maj=24.5km s-min=5.8km az=330.0*

*DJA **31** 15:45:40.3±0.4, 5°S±3°×10°4E±°, h10^{km}, M3.8/5, MLv3.8/5*

ISC 31 15:45:40.5±1.0**, 4°.84S**±0°.05×**103°.96E**±0°.08**, h10^{km}, n16, σ2^{s}.56**/16**, mb3.7**/5**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LWLI	Liwa	0.20	152	P	Pg	15 45 43.9	-0.9
MDSI	Maura Dua	0.41	31	P	Pg	15 45 48.3	-0.3
MDSI				S	Sb	15 45 54.8	-1.3
KASI	Kota Agung	0.86	142	P	Pb	15 45 56.3	-1.3
MNAI	Manna	1.11	295	P	Pn	15 46 02.1	0.0
MNAI	Manna	1.11	295		Pn	15 46 02.1	0.0
KSI	Kapahiang	1.81	311	P	Pn	15 46 13.9	+2.2
LEM	Lembang	4.14	119	Pn	Pb	15 46 50.5	-3.0
	2.9nm,0.3s,baz=261,slow=18,SNR=4.0						
LEM				Sn	Sg	15 47 59.0	+5.5
	3.6nm,0.3s,baz=156,slow=24,SNR=4.1						
LEM	Lembang	4.14	119	P	Pb	15 46 49.8	-3.7
CISI	Cisompet, Garu	4.69	125	Pn	Pb	15 46 58.5	-4.4
DAV	Davao City (W)	24.60	61	LR	LR	16 01 42.4	
	comp=Z,76nm,19.7s,baz=170,slow=40						
WRA	Warramunga Arr	33.16	120	P	P	15 52 18.4	+0.9
	0.4nm,0.4s,baz=301,slow=9.6,SNR=7.9						
WB2	Warramunga Arr	33.17	120	P	P	15 52 17.9	+0.3
WB2				IAmb	IAmb	15 52 53.0	
	comp=Z,16nm,1.9s						
AS31	Alice Springs	34.39	126	P	P	15 52 29.3	+1.1
AS31				IAmb	IAmb	15 53 23.3	
	comp=Z,0.8nm,1.1s						
ASAR	Alice Springs	34.39	126	P	P	15 52 29.2	+1.0
	comp=Z,0.4nm,0.8s,baz=299,slow=8.3,SNR=12						
STKA	Stephens Creek	44.32	132	P	P	15 53 51.6	+0.7
	comp=Z,1.1nm,0.8s,baz=280,slow=6.1,SNR=3.4						
STKA	Stephens Creek	44.32	132	IAmb	IAmb	15 55 21.5	
	comp=Z,5.4nm,1.9s						

*BEO **31** 15:48:44.9±2.6, 45°.74N×26°.74E, h59^{km}, ML2.6/4*
*BUC **31** 15:48:47.1±0.3, 45°.58N×26°.47E, h140^{km}±2^{km}, ml3.7/39, Error ellipse: s-maj=2.1km s-min=1.6km az=164.0*
ISC 31 15:48:45.0±1.3, **45°.59N**±0°.03×**26°.46E**±0°.03, **h157**^{km}±6^{km}, **n108,** σ**1^{s}06**/167, **122C-30D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BISRR	**Bisoca**	0.18	105	⇑P	Pn	15 49 06.9	+0.8
BISRR				⇑S	Sn	15 49 22.2	0.0
BISRR	**Bisoca**	0.18	105	⇑P	Pn	15 49 06.9	+0.8
BISRR				⇑S	Sn	15 49 22.2	0.0
PLOR	**Plostina**	0.29	27	⇑P	Pn	15 49 06.5	+0.2
PLOR				⇑S	Sn	15 49 21.3	-1.4
PLOR	**Plostina**	0.29	27	⇑P	Pn	15 49 06.5	+0.2
PLOR				⇑S	Sn	15 49 21.3	-1.4
VRI	**Vrincioaia**	0.33	34	⇑P	Pn	15 49 06.8	+0.3
VRI				⇑S	Sn	15 49 21.0	-1.9
VRI	**Vrincioaia**	0.33	34	⇑P	Pn	15 49 06.8	+0.3
VRI				⇑S	Sn	15 49 21.0	-1.9
MLR	**Muntele Rosu**	0.38	254	⇑P	Pn	15 49 07.5	+0.7
MLR				⇑S	Sn	15 49 22.4	-0.9
MLR	**Muntele Rosu**	0.38	254	⇑P	Pn	15 49 07.5	+0.7
MLR				⇑S	Sn	15 49 22.4	-0.9
GRER		0.42	120	⇓P	Pn	15 49 07.7	+0.9
GRER		0.42	120	⇓P	Pn	15 49 07.7	+0.9
ODBI	**Odobesti**	0.45	68	⇓P	Pn	15 49 08.2	+1.4
ODBI	**Odobesti**	0.45	68	⇓P	Pn	15 49 08.2	+1.4
ISR	**Istrita**	0.48	173	⇓S	Sn	15 49 21.7	-2.2
ISR	**Istrita**	0.48	173	⇓S	Sn	15 49 21.7	-2.2
SECR		0.62	207	⇑P	Pn	15 49 08.8	+1.0
SECR				⇑S	Sn	15 49 25.2	0.0
SECR		0.62	207	⇑P	Pn	15 49 08.8	+1.0
SECR				⇑S	Sn	15 49 25.2	0.0
PLAR	**PLOIESTI**	0.74	204	⇑P	Pn	15 49 09.7	+1.2
PLAR				⇑S	Sn	15 49 26.5	+0.1
PLAR	**PLOIESTI**	0.74	204	⇑P	Pn	15 49 09.7	+1.2
PLAR				⇑S	Sn	15 49 26.5	+0.1
GHRR		0.81	55	⇑P	Pn	15 49 09.8	+0.9
GHRR				⇑S	Sn	15 49 26.8	-0.5
GHRR		0.81	55	⇑P	Pn	15 49 09.8	+0.9
GHRR				⇑S	Sn	15 49 26.8	-0.5
DOPR	**Dopca**	0.84	297	⇓P	Pn	15 49 09.5	+0.4
DOPR				⇑S	Sn	15 49 26.5	-1.2
DOPR	**Dopca**	0.84	297	⇓P	Pn	15 49 09.5	+0.4
DOPR				⇑S	Sn	15 49 26.5	-1.2
TUDR		0.85	90	⇑P	Pn	15 49 09.5	+0.3
TUDR				⇓S	Sn	15 49 27.3	-0.4
TUDR		0.85	90	⇑P	Pn	15 49 09.5	+0.3
TUDR				⇓S	Sn	15 49 27.3	-0.4
TESR	**Tescani**	0.93	8	⇑P	Pn	15 49 10.0	+0.2
TESR				⇑S	Sn	15 49 27.2	-1.7
TESR	**Tescani**	0.93	8	⇑P	Pn	15 49 10.0	+0.2
TESR				⇑S	Sn	15 49 27.2	-1.7
NEGR	**Negresti**	0.99	93	⇑P	Pn	15 49 11.1	+0.8
NEGR				⇑S	Sn	15 49 29.6	-0.1
NEGR	**Negresti**	0.99	93	⇑P	Pn	15 49 11.1	+0.8
NEGR				⇑S	Sn	15 49 29.6	-0.1
VOIR		1.00	262	⇓P	Pn	15 49 10.8	+0.3
VOIR				⇑S	Sn	15 49 28.5	-1.5
VOIR		1.00	262	⇓P	Pn	15 49 10.8	+0.3
VOIR				⇑S	Sn	15 49 28.5	-1.5
VARL	**Varlezi**	1.02	72	⇑S	Sn	15 49 29.2	-0.8
VARL	**Varlezi**	1.02	72	⇑S	Sn	15 49 29.2	-0.8
MTUR	**Matau**	1.05	250	⇑P	Pn	15 49 11.7	+0.8
MTUR	**Matau**	1.05	250	⇑P	Pn	15 49 11.7	+0.8
BIR	**Birlad**	1.06	50	⇑P	Pn	15 49 11.7	+0.8
BIR				⇑S	Sn	15 49 29.8	-0.9
BIR	**Birlad**	1.06	50	⇑P	Pn	15 49 11.7	+0.8
BIR				⇑S	Sn	15 49 29.8	-0.9
GISR	**Galati**	1.13	97	⇑S	Sn	15 49 31.3	-0.5
GISR	**Galati**	1.13	97	⇑S	Sn	15 49 31.3	-0.5
LEHL	**Lehliu**	1.15	167	⇑S	Sn	15 49 32.1	0.0
LEHL	**Lehliu**	1.15	167	⇑S	Sn	15 49 32.1	0.0
AMRR	**Amara**	1.16	147	⇑P	Pn	15 49 12.8	+1.0
AMRR				⇑S	Sn	15 49 31.9	-0.4
AMRR	**Amara**	1.16	147	⇑P	Pn	15 49 12.8	+1.0
AMRR				⇑S	Sn	15 49 31.9	-0.4
GIUM	**Giurgiulesti**	1.23	94	⇑P	Pn	15 49 13.3	+0.9
GIUM				⇑S	Sn	15 49 33.1	-0.3
GIUM	**Giurgiulesti**	1.23	94	⇑P	Pn	15 49 13.3	+0.9
GIUM				⇑S	Sn	15 49 33.1	-0.3
CFR	**Carcaliu**	1.25	109	⇑P	Pn	15 49 13.2	+0.6
CFR				⇑S	Sn	15 49 32.2	-1.5
CFR	**Carcaliu**	1.25	109	⇑P	Pn	15 49 13.2	+0.6
CFR				⇑S	Sn	15 49 32.2	-1.5
BUC1	**Bucharest**	1.28	194	⇑S	Sn	15 49 34.0	-0.2
BUC1	**Bucharest**	1.28	194	⇑S	Sn	15 49 34.0	-0.2
GOLR		1.30	235	⇓S	Sn	15 49 34.6	0.0
GOLR		1.30	235	⇓S	Sn	15 49 34.6	0.0
ARR	**Arges**	1.30	261	⇓P	Pn	15 49 14.7	+1.5
ARR				⇑S	Sn	15 49 34.7	-0.1
ARR	**Arges**	1.30	261	⇓P	Pn	15 49 14.7	+1.5
ARR				⇑S	Sn	15 49 34.7	-0.1
GIRR	**Girov**	1.36	1	⇑P	Pn	15 49 14.8	+1.2
GIRR	**Girov**	1.36	1	⇑P	Pn	15 49 14.8	+1.2
BIZ	**Bicaz**	1.37	350	⇑P	Pn	15 49 15.4	+1.7
BIZ				⇑S	Sn	15 49 35.9	0.0
BIZ	**Bicaz**	1.37	350	⇑P	Pn	15 49 15.4	+1.7
BIZ				⇑S	Sn	15 49 35.9	0.0
HARR	**Harsova**	1.38	130	⇑P	Pn	15 49 14.7	+0.9
HARR	**Harsova**	1.38	130	⇑P	Pn	15 49 14.7	+0.9
SGRR	**Singureni**	1.41	194	⇑S	Sn	15 49 35.6	-1.0
SGRR	**Singureni**	1.41	194	⇑S	Sn	15 49 35.6	-1.0
HUMR	**Humele**	1.50	225	⇓P	Pn	15 49 15.7	+0.7
HUMR				⇓S	Sn	15 49 37.2	-0.8
HUMR	**Humele**	1.50	225	⇓P	Pn	15 49 15.7	+0.7
HUMR				⇓S	Sn	15 49 37.2	-0.8
LEOM	**Leova**	1.52	54	⇑P	Pn	15 49 16.0	+0.7
LEOM				⇓S	Sn	15 49 38.0	-0.5
LEOM	**Leova**	1.52	54	⇑P	Pn	15 49 16.0	+0.7
LEOM				⇓S	Sn	15 49 38.0	-0.5
TOPG	**Topolog**	1.53	117	⇑P	Pn	15 49 16.1	+0.6
TOPG				⇑S	Sn	15 49 37.2	-1.5
TOPG	**Topolog**	1.53	117	⇑P	Pn	15 49 16.1	+0.6
TOPG				⇑S	Sn	15 49 37.2	-1.5
COPA	**Copaceanca**	1.71	212	⇓P	Pn	15 49 18.1	+0.8
COPA				⇓S	Sn	15 49 41.0	-1.0
COPA	**Copaceanca**	1.71	212	⇓P	Pn	15 49 18.1	+0.8
COPA				⇓S	Sn	15 49 41.0	-1.0
TLCR		1.71	103	⇑P	Pn	15 49 18.2	+0.9
TLCR				⇑S	Sn	15 49 41.8	-0.2
TLCR		1.71	103	⇑P	Pn	15 49 18.2	+0.9
TLCR				⇑S	Sn	15 49 41.8	-0.2
ICOR	**Ion Corvin**	1.76	147	⇑P	Pn	15 49 19.1	+1.3
ICOR				⇑S	Sn	15 49 42.4	-0.6
ICOR	**Ion Corvin**	1.76	147	⇑P	Pn	15 49 19.1	+1.3
ICOR				⇑S	Sn	15 49 42.4	-0.6
TIRR	**Tirgusor**	1.79	129	⇑P	Pn	15 49 19.2	+1.0
TIRR				⇑S	Sn	15 49 42.3	-1.3
TIRR	**Tirgusor**	1.79	129	⇑P	Pn	15 49 19.2	+1.0
TIRR				⇑S	Sn	15 49 42.3	-1.3
TIRR	**Tirgusor**	1.79	129	*i* P	Pn	15 49 18.7	+0.5
TIRR				S	Sn	15 49 41.6	-2.0
TIRR				S		15 50 05.4	
LOT	**Lotru**	1.90	267	⇑P	Pn	15 49 21.2	+1.8
LOT				⇑S	Sn	15 49 47.5	+1.5
LOT	**Lotru**	1.90	267	⇑P	Pn	15 49 21.2	+1.8
LOT				⇑S	Sn	15 49 47.5	+1.5
JURR	**Jurilovca**	1.90	115	⇑P	Pn	15 49 20.8	+1.4
JURR	**Jurilovca**	1.90	115	⇑P	Pn	15 49 20.8	+1.4
MFTR	**Murfatlar**	1.99	135	⇑S	Sn	15 49 46.7	-0.8
MFTR	**Murfatlar**	1.99	135	⇑S	Sn	15 49 46.7	-0.8
RAZG	**Razgrad**	2.03	179	⇑S	Sn	15 49 48.2	-0.2
RAZG	**Razgrad**	2.03	179	⇑S	Sn	15 49 48.2	-0.2
MILM	**Milestii Mici**	2.10	50	⇑P	Pn	15 49 22.7	+1.0
MILM	**Milestii Mici**	2.10	50	⇑P	Pn	15 49 22.7	+1.0
SRE	**Strehaia**	2.48	249	⇓P	Pn	15 49 27.1	+0.9
SRE				⇑S	Sn	15 49 58.5	+0.4
SRE	**Strehaia**	2.48	249	⇓P	Pn	15 49 27.1	+0.9
SRE				⇑S	Sn	15 49 58.5	+0.4
PRD	**Provadia**	2.49	164	S	Sn	15 49 55.1	-3.0
PLVB	**Pleven**	2.57	211	⇓P	Pn	15 49 28.4	+1.1
PLVB	**Pleven**	2.57	211	⇓P	Pn	15 49 28.4	+1.1
GZR	**Gura Zlata**	2.60	267	⇑P	Pn	15 49 29.1	+1.4
GZR	**Gura Zlata**	2.60	267	⇑P	Pn	15 49 29.1	+1.4
SORM	**Soroca**	2.85	26	⇑P	Pn	15 49 31.4	+0.7
SORM	**Soroca**	2.85	26	⇑P	Pn	15 49 31.4	+0.7
DRGR		2.87	296	*e*Pn	Pn	15 49 29.2	-1.8
DRGR		2.87	296	⇑P	Pn	15 49 31.5	+0.5
DRGR		2.87	296	⇑P	Pn	15 49 31.5	+0.5
HERR	**Herculane**	2.94	257	⇑P	Pn	15 49 32.5	+0.6
HERR	**Herculane**	2.94	257	⇑P	Pn	15 49 32.5	+0.6
MDVR	**Moldovita**	3.45	258	⇑P	Pn	15 49 39.3	+0.9
MDVR	**Moldovita**	3.45	258	⇑P	Pn	15 49 39.3	+0.9
ZAGS	**Zajecar**	3.50	241	*e*Pn	Pn	15 49 38.7	-0.3
ZAGS				*e*Sn	Sn	15 50 19.4	-1.4
ZAPS	**Zavoj**	3.59	231	*e*Pn	Pn	15 49 41.4	+1.2
ZAPS				*e*Sn	Sn	15 50 20.0	-3.0
BOVS	**Bovan**	3.92	242	*e*Pn	Pn	15 49 45.3	+0.9
BOVS				*e*Sn	Sn	15 50 27.8	-2.7
BOSS	**Bosilegrad**	4.22	224	*e*Pn	Pn	15 49 49.2	+0.9
SELS	**Selova**	4.50	240	*e*Pn	Pn	15 49 52.8	+0.8
TRUS	**Trudelj**	4.51	254	*e*Pn	Pn	15 49 52.8	+0.7
TRUS				*e*Sn	Sn	15 50 42.2	-2.2
IVAS	**Ivanjica**	4.94	248	*e*Pn	Pn	15 49 58.4	+0.7

*NEIC **31** 15:52:29.8±1.4, 12°.58S±0°.10×166°.9E±0°.1, h249^{km}±6^{km}, mb4.6/25, Error ellipse: s-maj=20.8km s-min=13.7km az=93.0*
*IDC **31** 15:52:29.7±3.4, 12°.60S×166°.95E, h244^{km}±33^{km}, mb3.6/18, mb1 3.7/19, mb1mx3.5/41, mbtmp4.1/19, Error ellipse: s-maj=17.9km s-min=15.9km az=94.0*
ISC 31 15:52:29.9±0.6, **12°.59S**±0°.07×**167°.0E**±0°.1, **h250**^{km}, **n53,** σ**0^{s}71**/54, **mb4.2**/29, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	9.44	183	P	Pn	15 54 42.2	+0.7
	0.6nm,0.3s,baz=73,slow=8.5,SNR=16						
DZM				S	S	15 56 26.9	-1.2
	0.2nm,0.3s,baz=151,slow=19,SNR=2.6						
EIDS	**Eidsvold**	19.66	227	P	P	15 56 41.2	+0.8
EIDS				IAmb	IAmb	15 56 44.9	
	comp=Z,14nm,1.2s						
ARMA	**Armidale**	22.73	216	P	P	15 57 11.5	+0.8
ARMA				IAmb	IAmb	15 57 41.2	
	comp=Z,48nm,2.0s						
URZ	**Urewera**	27.11	162	P	P	15 57 50.9	+1.1
	comp=Z,1.2nm,0.3s,baz=238,slow=3.5,SNR=1.5						
SNZO	**South Karori**	29.39	168	P	P	15 58 09.2	-0.9
SNZO				IAmb	IAmb	15 58 27.8	
	comp=Z,27nm,1.2s						
STKA	**Stephens Creek**	30.21	226	P	P	15 58 18.2	+0.8
	comp=Z,0.8nm,0.3s,baz=48,slow=7.6,SNR=5.8						
RPZ	**Rata Peaks**	31.21	174	P	P	15 58 26.0	0.0
	comp=Z,4.7nm,0.8s,baz=346,slow=3.7,SNR=3.3						
TOO	**Toolangi**	31.43	214	P	P	15 58 28.7	+0.6
WRAB	**Tennant Creek**	32.13	253	P	P	15 58 33.4	-1.0
WRAB				IAmb	IAmb	15 59 12.9	
	comp=Z,20nm,2.0s						
WB2	**Warramunga Arr**	32.13	253	P	P	15 58 33.2	-1.2
WRA	**Warramunga Arr**	32.14	253	P	P	15 58 33.6	-0.9
	comp=Z,0.4nm,0.6s,baz=79,slow=8.8,SNR=7.7						
AS31	**Alice Springs**	33.23	246	P	P	15 58 42.8	-1.1
ASAR	**Alice Springs**	33.23	246	P	P	15 58 43.1	-0.8
	comp=Z,0.4nm,0.5s,baz=69,slow=9.8,SNR=23						
ASAR				PcP	PcP	16 01 20.1	-0.2
	comp=Z,0.4nm,0.6s,baz=69,slow=2.3,SNR=6.3						
BBOO	**Buckleboo**	34.71	229	P	P	15 58 56.5	+0.1
BBOO				IAmb	IAmb	16 00 14.0	
	comp=Z,28nm,1.5s						
KNRA	**Kununurra**	37.16	261	P	P	15 59 17.4	0.0
KNRA				IAmb	IAmb	15 59 17.7	
	comp=Z,5.1nm,0.6s						
FITZ	**Fitzroy Crossi**	40.19	257	P	P	15 59 42.0	-0.5
	comp=Z,0.7nm,0.5s,baz=47,slow=8.5,SNR=6.8						
FITZ	**Fitzroy Crossi**	40.19	257	P	P	15 59 42.5	0.0
FORT	**Forrest**	40.19	237	P	P	15 59 42.5	+0.2
FORT				IAmb	IAmb	16 00 14.6	
	comp=Z,34nm,1.3s						
KKM	**Kota Kinabalu**	53.75	287	P	P	16 01 26.6	-0.6
KKM				IAmb	IAmb	16 03 05.8	
	comp=Z,15nm,1.3s						
UGM	**Wanagama**	55.68	269	P	P	16 01 40.8	-0.2
MJAR	**Matsushiro Arr**	55.90	332	P	P	16 01 41.6	-0.4
	comp=Z,3.4nm,0.7s,baz=160,slow=8.1,SNR=7.1						
MJAR	**Matsushiro Arr**	55.90	332	IAmb	IAmb	16 01 49.9	
	comp=Z,6.0nm,1.5s						
MAJO	**Matsushiro**	55.90	332	P	P	16 01 41.4	-0.7
MAJO				IAmb	IAmb	16 02 22.7	
	comp=Z,55nm,1.9s						
MJB9	**Matsu-Tunnel**	55.91	332	P	P	16 01 41.4	-0.7
MJB9				IAmb	IAmb	16 02 22.7	
	comp=Z,56nm,1.9s						
JNU	**Nakatsue**	57.04	324	P	P	16 01 50.0	-0.2
	comp=Z,5.8nm,0.8s,baz=61,slow=5.9,SNR=4.2						
SSLB	**Suanglung**	57.73	309	P	P	16 01 55.0	-0.2
JKA	**Kamikawa-asahi**	60.65	340	P	P	16 02 15.9	+1.2
ASAJ	**Asahikawa**	60.65	340	P	P	16 02 15.9	+1.2
	comp=Z,4.6nm,0.5s,baz=205,slow=8.5,SNR=11						
KSRS	**Korea Array**	61.84	325	P	P	16 02 22.6	-0.1
	comp=Z,1.1nm,0.8s,baz=136,slow=6.3,SNR=4.7						
KSAR	**Wonju Array Be**	61.85	325	P	P	16 02 23.3	+0.5
CASY	**Casey**	65.39	202	P	P	16 02 45.4	-0.1
CASY				IAmb	IAmb	16 03 15.4	
	comp=Z,36nm,1.8s						
PETK	**Petropavlovsk-**	65.92	354	P	P	16 02 49.2	+0.2
	comp=Z,2.7nm,0.9s,baz=161,slow=7.4,SNR=4.1						
CMAR	**Chiang Mai Arr**	73.84	294	P	P	16 03 39.2	+1.3
	comp=Z,1.2nm,0.8s,baz=127,slow=4.8,SNR=9.1						
CMAR	**Chiang Mai Arr**	73.84	294	P	P	16 03 38.3	+0.5
QSPA	**South Pole Qui**	77.42	180	P	P	16 03 57.4	+0.1
QSPA				IAmb	IAmb	16 04 34.7	
	comp=Z,18nm,1.8s						
CNPM	**China Poot**	79.36	20	P	P	16 04 08.3	+0.5
RSO	**Redoubt South**	79.57	19	P	P	16 04 09.0	-0.1
BRLK	**Bradley Lake**	79.65	20	P	P	16 04 09.8	+0.4
SONM	**Songino Array**	80.63	323	P	P	16 04 16.6	+1.7
	comp=Z,0.7nm,0.8s,baz=110,slow=4.6,SNR=4.4						
SONM	**Songino Array**	80.63	323	P	P	16 04 13.9	-1.1
ILAR	**Eielson Array**	84.59	18	P	P	16 04 34.5	-0.3
	comp=Z,3.3nm,0.5s,baz=244,slow=5.1,SNR=44						
ILAR	**Eielson Array**	84.59	18	P	P	16 04 34.0	-0.8
NVAR	**Mina Array Bea**	86.09	49	P	P	16 04 43.7	+0.5
	comp=Z,0.6nm,0.8s,baz=230,slow=8.7,SNR=4.2						
NVAR	**Mina Array Bea**	86.09	49	P	P	16 04 43.0	-0.1
MKAR	**Makanchi Array**	95.48	317	P	P	16 05 27.1	+0.7
	comp=Z,1.1nm,0.5s,baz=83,slow=6.3,SNR=23						
MKAR	**Makanchi Array**	95.48	317	P	P	16 05 26.5	+0.1
ZALV	**Zalesovo Beam**	95.52	324	P	P	16 05 26.3	0.0
	comp=Z,0.6nm,0.4s,baz=98,slow=11,SNR=3.9						
ZALV	**Zalesovo Beam**	95.52	324	P	P	16 05 25.9	-0.4
YKA	**Yellowknife Ar**	95.78	27	P	P	16 05 26.3	-1.0
	comp=Z,0.4nm,0.6s,baz=256,slow=4.5,SNR=5.7						
ARCES	**ARCESS Array B**	118.13	346	PKP	PKiKP	16 10 46.5	-0.1
	comp=Z,3.5nm,0.9s,baz=78,slow=2.5,SNR=9.1						
ARCES	**ARCESS Array B**	118.13	346		PKPdf	16 10 46.2	-0.4
FINES	**FINESS Array B**	123.65	339	PKP	PKiKP	16 10 57.6	0.0
	comp=Z,1.9nm,0.9s,baz=80,slow=2.3,SNR=3.7						
KEST	**Kesra**	149.38	323	PKPbc	PKiKP	16 11 50.9	0.0
	comp=Z,2.7nm,0.7s,baz=90,slow=3.0,SNR=3.0						

*IDC **31** 16:05:14.7±2.1, 37°.23N×142°.12E, h0^{km}, mb3.2/2, mb1 3.4/5, mb1mx3.2/37, mbtmp3.4/5, ML2.9/2, MS3.8/1, Ms1 3.8/1, ms1mx2.6/21, Error ellipse: s-maj=38.9km s-min=27.7km az=97.0*
*JMA **31** 16:05:19.3±0.2, 37°.31N×141°.81E, h43^{km}±4^{km}, M3.3*
ISC 31 16:05:15.9±1.9, **37°.30N**±0°.04×**141°.90E**±0°.07, **h9**^{km}±11^{km}, **n24,** σ**1^{s}09**/29, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	0.82	275	P	Pn	16 05 33.6	-0.1
JFK				S	Sb	16 05 43.2	-0.3
ONAJ	**Iwakimizuishiy**	0.91	257	P	Pn	16 05 34.8	0.0
ONAJ				*e*S	Sb	16 05 45.3	-0.6
JMST	**Minamisoumatoc**	0.91	298	P	Pn	16 05 34.9	+0.1
JMST				S	Sb	16 05 45.5	-0.5
JMM	**Marumori**	1.04	303	P	Pn	16 05 36.9	+0.2
JMM				S	Sb	16 05 49.4	-0.5
JIKH	**Ishinomakikobu**	1.06	341	P	Pn	16 05 37.3	+0.4
JIKH				S	Sg	16 05 49.7	-0.5
JFFD	**Fukushimafurud**	1.09	259	P	Pn	16 05 37.5	+0.1
JFFD				S	Sg	16 05 50.2	-0.9
JIO	**Ouri**	1.23	339	P	Pg	16 05 39.8	+0.3
JIO				*e*S	Sb	16 05 53.5	-1.7
JFT	**Otama**	1.27	280	P	Pg	16 05 40.9	+0.7
JFT				*e*S	Sb	16 05 55.6	-0.7
JHO	**Hitachi**	1.27	237	P	Pb	16 05 39.8	-0.2
JOU	**Okura**	1.44	318	P	Pg	16 05 43.7	+0.1
JOU				*e*S	Sn	16 06 01.1	-0.2
JMK	**Ichinoseki**	1.73	342	P	Pb	16 05 47.6	-0.2
MJAR	**Matsushiro Arr**	3.06	257	Pn	Pn	16 06 06.3	+1.9
	0.2nm,0.3s,baz=79,slow=16,SNR=10						
MJAR				Sn	Sb	16 06 46.0	-1.8
	0.4nm,0.3s,baz=252,slow=24,SNR=3.0						
MAT	**Matsushiro**	3.06	257	P	Pn	16 06 06.6	+2.2
MAT				S	Sn	16 06 42.2	+1.1
JHJ	**Hachijo jima 2**	4.52	203	Pn	Pn	16 06 25.9	+1.5
	10nm,0.3s,baz=39,slow=14,SNR=2.3						
JHJ				Sn	Sn	16 07 15.4	-1.7
	10nm,0.3s,baz=50,slow=14,SNR=1.0						
ASAJ	**Asahikawa**	6.83	4	Pn	Pn	16 06 58.2	+2.1
	baz=201,slow=14						
JNU	**Nakatsue**	9.94	248	LR	LR	16 11 14.1	
	comp=Z,522nm,21.7s,baz=82,slow=36						
H11N2	**WAKE ISLAND Hy**	27.95	122	T	T	16 40 44.9	
	baz=314,slow=75,SNR=5.3						
H11N1	**WAKE ISLAND Hy**	27.96	122	T	T	16 40 43.3	
	baz=314,slow=75,SNR=4.1						
H11N3	**WAKE ISLAND Hy**	27.97	122	T	T	16 40 45.1	
	baz=314,slow=75,SNR=4.6						
H11S1	**WAKE ISLAND Hy**	28.68	124	T	T	16 41 35.9	
	baz=316,SNR=2.9						
H11S3	**WAKE ISLAND Hy**	28.68	124	T	T	16 41 36.7	
	baz=316						
H11S2	**WAKE ISLAND Hy**	28.70	124	T	T	16 41 42.2	
	baz=316						
MKAR	**Makanchi Array**	44.31	302	P	P	16 13 26.6	+0.6
	0.2nm,0.7s,baz=99,slow=7.4,SNR=2.4						
WRA	**Warramunga Arr**	57.38	188	P	P	16 15 04.2	-0.4
	0.2nm,0.7s,baz=8.2,slow=7.5,SNR=1.8						

*IDC **31** 16:10:54.4±1.0, 52°.84N×160°.62E, h0^{km}, mb3.6/7, mb1 3.8/8, mb1mx3.4/48, mbtmp3.6/8, ML3.5/1, MS3.0/2, Ms1 3.0/2, ms1mx2.6/52, Error ellipse: s-maj=26.2km s-min=22.9km az=13.0*
*KRSC **31** 16:10:57.0±1.3, 52°.72N×160°.56E, h24^{km}±17^{km}, ML4.1*
ISC 31 16:10:55.8±1.7, **52°.80N**±0°.04×**160°.59E**±0°.05, **h10**^{km}±9^{km}, **n55,** σ**1^{s}52**/67, **mb3.5**/7, **Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	0.45	311	*e*P	Pn	16 11 07.9	-0.5
SPN				*e*S	Sb	16 11 14.6	+1.9
NLC	**Nalytchevo**	0.84	297	*e*P	Pn	16 11 13.5	-0.1
NLC				*e*S	Sn	16 11 24.9	-1.1
DALK	**Dalny**	1.14	282	*e*P	Pg	16 11 18.0	+0.4
DALK				*e*S	Sg	16 11 32.4	0.0
SDLR	**Sedlovina**	1.14	295	*e*P	Pg	16 11 18.3	+0.7
SDLR				*e*S	Sn	16 11 34.5	+1.0
UGLR	**Uglovaya**	1.14	292	*e*P	Pg	16 11 18.5	+0.7
SMAR	**Somma**	1.18	294	*e*P	Pg	16 11 18.8	+0.4
PET	**Petropavlovsk**	1.20	281	*e*P	Pg	16 11 18.8	+0.1
PET				*e*S	Sn	16 11 34.4	-0.4
AVH	**Avacha**	1.21	293	*e*P	Pg	16 11 19.7	+0.6
KRER	**Koryakskii**	1.22	295	*e*P	Pg	16 11 20.1	+0.8
KRER				*e*S	Sn	16 11 36.7	+1.0
KOK	**Koryaka**	1.28	293	*e*P	Pg	16 11 21.2	+0.9
KRX	**Arik**	1.30	296	*e*P	Pg	16 11 20.9	+0.2
KRX				*e*S	Sg	16 11 37.8	+0.2
RUS	**Russkaya**	1.32	254	*e*P	Pb	16 11 20.5	-0.1
RUS				*e*S	Sb	16 11 37.0	-0.6
KRMR	**Karymshinskiy**	1.49	272	*e*P	Pn	16 11 22.1	-0.5
KRMR				*e*S	Sn	16 11 40.1	-2.1
MTVR	**Mutnovka**	1.50	259	*e*P	Pb	16 11 23.7	-0.1
MTVR				*e*S	Sb	16 11 42.5	-0.5
GRL	**Gorelyy**	1.55	262	*e*P	Pb	16 11 24.6	-0.1
GRL				*e*S	Sb	16 11 44.4	-0.1
ASAK	**Asacha**	1.69	257	*e*P	Pb	16 11 26.7	-0.4
ASAK				*e*S	Sb	16 11 48.2	-0.3
PETK	**Petropavlovsk-**	1.78	281	Pn	Pb	16 11 27.8	-0.6
	35nm,0.3s,baz=100,slow=18,SNR=279						
PETK				Sn	Sb	16 11 50.4	-0.3
	50nm,0.3s,baz=3.0,slow=20,SNR=6.4						
KDTR	**Khodutka, Kamc**	1.84	238	*e*P	Pb	16 11 28.3	-1.1
KDTR				*e*S	Sb	16 11 50.9	-1.6
APC	**Apacha**	2.08	275	*e*P	Pb	16 11 32.9	-0.8
APC				*e*S	Sb	16 11 58.8	-0.8
KZV	**Kizimen**	2.32	356	*e*P	Pb	16 11 37.3	-0.5
KZV				*e*S	Sb	16 12 06.0	-0.5
MIPR	**Malaya Ipel'ka**	2.40	259	*e*P	Pb	16 11 37.3	-1.8
TUMD	**Tumrok D**	2.41	357	*e*P	Pn	16 11 37.3	+2.1
TUMD				*e*S	Sn	16 12 06.4	+1.7
TUMR	**Tumrok**	2.50	354	*e*P	Pb	16 11 39.5	-1.3
PAU	**Pauzhetka**	2.69	242	*e*P	Pb	16 11 41.3	-2.6
KMNR	**Kamenistaya**	2.97	356	*e*P	Pb	16 11 47.1	-1.6
BZGR	**Bezymyannyi-Gr**	3.14	1	*e*P	Pb	16 11 49.9	-1.9
BZGR				*e*S	Sb	16 12 28.4	-1.8
KIRR	**Kirishev**	3.16	357	*e*P	Pb	16 11 50.3	-1.8
KIRR				*e*S	Sb	16 12 28.5	-2.2
KPT	**Kopyto**	3.18	356	*e*P	Pb	16 11 50.1	-2.2
ZLN	**Zelenaya**	3.22	2	*e*P	Pb	16 11 50.8	-2.3
LGNR	**Loginova**	3.29	1	*e*P	Pb	16 11 52.1	-2.2
KOZ	**Kozyrevsk**	3.29	353	*e*P	Pb	16 11 51.2	-3.0
ESO	**Esso**	3.32	341	*e*P	Pn	16 11 51.2	+3.5
CIRR	**Tsirk**	3.32	2	*e*P	Pb	16 11 52.9	-1.9
KRSR	**Krestovskiy**	3.42	360	*e*P	Pb	16 11 53.1	-3.4
SKR	**Severo-Kuril’s**	3.50	234	*e*P	Pn	16 11 51.3	+1.1
KBTR	**Krutoberegovo**	3.65	20	*e*P	Pn	16 11 55.5	+3.2
KBG	**Krutoberegovo**	3.67	19	*e*P	Pb	16 11 58.3	-2.4
BDR	**Baidarnaya**	3.79	5	*e*P	Pb	16 12 00.1	-2.7
SRKR	**Sorokina**	3.87	5	*e*P	Pb	16 12 01.2	-3.0
ASAJ	**Asahikawa**	14.73	241	Pn	Pn	16 14 25.1	+1.1
	0.3nm,0.3s,baz=70,slow=12,SNR=1.5						
MJAR	**Matsushiro Arr**	22.61	233	LR	LR	16 26 00.2	
	comp=Z,34nm,22.0s,baz=355,slow=40						
TIXI	**Tiksi**	23.47	335	P	P	16 16 04.5	-0.6
	0.5nm,0.6s,baz=129,slow=10,SNR=1.8						
TIXI				PcP	PcP	16 19 50.5	+0.1
	0.8nm,0.3s,baz=163,slow=1.9,SNR=3.7						
JHJ	**Hachijo jima 2**	24.72	225	LR	LR	16 26 29.1	
	comp=Z,40nm,18.7s,baz=39,slow=38						
H11N2	**WAKE ISLAND Hy**	33.37	169	T	T	16 52 51.8	
	baz=354,SNR=22						
H11N3	**WAKE ISLAND Hy**	33.39	169	T	T	16 53 04.2	
	baz=354,slow=74						
H11N1	**WAKE ISLAND Hy**	33.39	169	T	T	16 52 59.3	
	baz=354,slow=74						
H11S1	**WAKE ISLAND Hy**	34.56	170	T	T	16 54 25.7	
	baz=352,slow=74,SNR=5.4						
H11S3	**WAKE ISLAND Hy**	34.57	170	T	T	16 54 29.3	
	baz=352,slow=74,SNR=5.1						
H11S2	**WAKE ISLAND Hy**	34.58	170	T	T	16 54 26.3	
	baz=352						
MKAR	**Makanchi Array**	48.55	296	P	P	16 19 38.2	-0.6
	0.1nm,0.5s,baz=43,slow=6.3,SNR=2.4						
FINES	**FINESS Array B**	60.51	337	P	P	16 21 05.4	+0.1
	2.2nm,0.8s,baz=48,slow=8.8,SNR=4.7						
AKASG	**Malin Array Be**	69.02	329	P	P	16 22 00.7	-0.4
	0.6nm,0.4s,baz=28,slow=6.6,SNR=3.1						
TXAR	**Lajitas Array**	70.47	67	P	P	16 22 11.2	+0.7
	0.4nm,0.5s,baz=296,slow=4.7,SNR=4.1						
WRA	**Warramunga Arr**	75.95	205	P	P	16 22 42.5	-0.1
	0.4nm,0.9s,baz=25,slow=6.4,SNR=2.2						
ASAR	**Alice Springs**	79.62	205	P	P	16 23 03.5	+0.4
	0.2nm,0.6s,baz=13,slow=5.2,SNR=6.5						

*IDC **31** 16:15:08.8±1.4, 36°.75N×140°.72E, h0^{km}, mb3.8/5, mb1 3.8/6, mb1mx3.4/45, mbtmp3.7/6, ML3.1/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/45, Error ellipse: s-maj=30.4km s-min=23.7km az=75.0*
*JMA **31** 16:15:10.6, 36°.68N×140°.66E, h10^{km}±1^{km}, M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s125.00000°, δ24.00000°, λ-118.00000°. NP2: ϕ_s335.00000°, δ69.00000°, λ-78.00000°. Principal axes: T Plg23.0000°, Azm56.0000°; N Plg11.0000°, Azm151.0000°; P Plg64.0000°, Azm264.0000°;*
JMA Felt II J1.
*NEIC **31** 16:15:14.4±1.7, 36°.74N±0°.07×140°.7E±0°.1, h50^{km}±8^{km}, mb4.7/7 Error ellipse: s-maj=13.9km s-min=10.7km az=101.0*
ISC 31 16:15:10.0±0.9, **36°.73N**±0°.04×**140°.62E**±0°.04, **h11**^{km}±6^{km}, **n39,** σ**0^{s}93**/45, **mb4.3**/9, **7C, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.12	200	P	Pg	16 15 13.1	+0.1
JHO				S	Sg	16 15 15.0	-0.2
JFFD	Fukushimafurud	0.37	352	⇑P	Pb	16 15 18.8	+0.3
JFFD				S	Sb	16 15 24.5	+0.2
JHYU	Hitachinakayam	0.39	184	⇑P	Pg	16 15 17.4	-0.2
JHYU				S	Sg	16 15 22.5	-0.3
ONAJ	Iwakimizuishiy	0.40	21	⇑P	Pb	16 15 19.0	-0.1
ONAJ				S	Sb	16 15 25.4	+0.1
JYT	Yasato	0.60	215	⇑P	Pg	16 15 21.7	0.0
JYT				S	Sg	16 15 29.5	-0.2
JSB	Shiboa	0.61	293	P	Pn	16 15 23.9	-0.8
JSB				S	Sb	16 15 32.9	+1.5
JFK	Kawauchi	0.67	18	⇑P	Pb	16 15 23.6	-0.1
JFK				S	Sb	16 15 33.5	+0.4
JFT	Otama	0.82	344	⇑P	Pn	16 15 27.2	-0.3
JFT				S	Sn	16 15 38.6	-1.1
JAG	Ashikaga	0.99	253	⇑P	Pg	16 15 28.7	-0.3
JAG				S	Sg	16 15 41.6	-0.2
JFY	Yanaizu	1.00	313	P	Pn	16 15 30.5	+0.5
JFY				S	Sn	16 15 44.1	0.0
MJAR	Matsushiro Arr	1.95	265	Pn	Pn	16 15 44.3	+1.3
	1.8nm,0.3s,baz=83,slow=17,SNR=56						
MJAR				Sn	Sb	16 16 10.1	+0.2
	7.8nm,0.3s,baz=50,slow=18,SNR=12						
MJAR	Matsushiro Arr	1.95	265		Pg	16 15 47.3	-0.1
MAJO	Matsushiro	1.95	265		Pb	16 15 44.6	-1.0
MAT	Matsushiro	1.95	265	P	Pn	16 15 44.5	+1.5
MAT				S	Sb	16 16 09.8	-0.1
MJB9	Matsu-Tunnel	1.95	265		Pb	16 15 44.7	-0.9
INU	Inuyama	3.23	246		Pn	16 16 02.4	+1.9
JHJ2	Mitsune	3.67	191	Pn	Pn	16 16 08.7	+2.1
ASAJ	Asahikawa	7.53	11	Pn	Pn	16 17 01.1	+1.4
	0.3nm,0.3s,baz=184,slow=15,SNR=1.3						
JKA	Kamikawa-asahi	7.53	11		Pn	16 17 01.1	+1.4
SONM	Songino Array	27.43	305	P	P	16 20 57.2	+1.4
	0.3nm,0.4s,baz=115,slow=9.7,SNR=2.6						
SONM	Songino Array	27.43	305	P	P	16 20 55.3	-0.5
H11N2	WAKE ISLAND Hy	28.54	119	T	T	16 50 48.3	
	baz=312,slow=75,SNR=94						
H11N1	WAKE ISLAND Hy	28.55	119	T	T	16 50 48.9	
	baz=312,slow=75,SNR=88						
H11N3	WAKE ISLAND Hy	28.56	119	T	T	16 50 49.7	
	baz=312,slow=75,SNR=74						
H11S1	WAKE ISLAND Hy	29.23	121	T	T	16 51 38.3	
	baz=314,slow=76,SNR=296						
H11S3	WAKE ISLAND Hy	29.23	121	T	T	16 51 41.4	
	baz=314,slow=76,SNR=301						
H11S2	WAKE ISLAND Hy	29.25	121	T	T	16 51 41.8	
	baz=314,slow=76,SNR=354						
KKM	Kota Kinabalu	37.83	222	P	P	16 22 26.8	0.0
KKM				IAmb	IAmb	16 22 27.8	
	comp=Z,12nm,1.1s						
ZAA0	Zalesovo Array	41.65	313	P	P	16 22 58.4	+0.2
ZALV	Zalesovo Beam	41.65	313	P	P	16 22 59.1	+1.0
	comp=Z,1.2nm,0.5s,baz=86,slow=7.6,SNR=5.0						
ZALV				LR	LR	16 41 55.4	
	comp=Z,32nm,18.7s,baz=346,slow=38						
ZALV	Zalesovo Beam	41.65	313	P	P	16 22 58.5	+0.3
KURK	Kurchatov	45.62	308	P	P	16 23 29.9	-0.2
KURK				IAmb	IAmb	16 24 55.7	
	comp=Z,14nm,1.9s						
WB0	Warramunga Arr	56.49	187	P	P	16 24 50.6	-1.5
WB0				IAmb	IAmb	16 25 13.4	
	comp=Z,19nm,1.9s						
WR0	Warramunga Arr	56.67	187	P	P	16 24 52.1	-1.2
WR0				IAmb	IAmb	16 26 46.4	
	comp=Z,9.1nm,1.4s						
WB2	Warramunga Arr	56.67	187	P	P	16 24 51.9	-1.5
WRA	Warramunga Arr	56.67	187	P	P	16 24 55.0	+1.6
	comp=Z,1.4nm,1.2s,baz=7.8,slow=7.1,SNR=3.4						
ABKAR	Akbulak array	57.65	310	P	P	16 24 59.8	-0.3
ASAR	Alice Springs	60.40	187	P	P	16 25 19.6	+0.2
	comp=Z,0.3nm,0.8s,baz=3.3,slow=7.8,SNR=4.4						
FINES	FINESS Array B	68.79	332	P	P	16 26 13.1	-0.6
	comp=Z,2.1nm,1.0s,baz=34,slow=10,SNR=2.9						

PGC ***31*** *16:30:27.4±0.0, 62°.29N×124°.52W, h1^{km}, ML4.7/10, Mw4.3, 180km west of Fort Simpson, Nt Nw Territories - Nunavut, Canada*

NEIC ***31*** *16:30:27.4, 62°.32N×124°.49W, h6^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.35; $M_{\theta\theta}$-0.10; $M_{\phi\phi}$-0.30; $M_{r\theta}$-0.01; $M_{\theta\phi}$0.18; $M_{\phi r}$0.04; Fault plane solution: $M_0$3.80000×10^{15} NP1:ϕ_s147.00000°, δ42.00000°, λ87.00000°. NP2:ϕ_s332.00000°, δ48.00000°, λ93.00000°. Principal axes: T 0.3699, Plg86.0000°, Azm279.0000°; N 0.0204, Plg2.0000°, Azm150.0000°; P -0.3903, Plg3.0000°, Azm60.0000°;*

NEIC ***31*** *16:30:27.4, 62°.32N×124°.49W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.79; $M_{\theta\theta}$-0.26; $M_{\phi\phi}$-1.53; $M_{r\theta}$0.43; $M_{\theta\phi}$1.08; $M_{\phi r}$-1.55; Fault plane solution: $M_0$2.56000×10^{15} NP1:ϕ_s160.30000°, δ64.90000°, λ100.01000°. NP2:ϕ_s317.71000°, δ26.90000°, λ69.64000°. Principal axes: T 2.4039, Plg69.0000°, Azm90.0000°; N 0.2919, Plg9.0000°, Azm336.0000°; P -2.6958, Plg19.0000°, Azm243.0000°;*

NEIC ***31*** *16:30:27.5±2.1, 62°.32N±0°.05×124°.5W±0°.1, h10^{km}±1^{km} Error ellipse: s-maj=9.8km s-min=8.9km az=85.0*

IDC ***31*** *16:30:27.2±0.5, 62°.36N×124°.49W, h0^{km}, mb3.9/18, mb1 4.2/23, mb1mx4.1/46, mbtmp4.0/23, ML4.3/5, MS3.3/17, Ms1 3.3/17, ms1mx3.1/50, Error ellipse: s-maj=8.8km s-min=8.3km az=158.0*

ISC 31 16:30:26.6±0.3, **62°.29N**±0°.03×**124°.45W**±0°.03, **h8**^{km}, **n245**, σ**2^s.24**/280, **mb4.3**/52, **MS3.2**/11, **Northwest Territories**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NBC1	NorthernBC 1	2.66	173	Pn	Pn	16 31 11.0	+1.3
NBC1				Sn	Sn	16 31 43.9	+1.8
NBC1				Sg	Sg	16 31 49.7	-2.2
NBC2	NorthernBC 2	2.69	158	Pn	Pn	16 31 11.8	+1.6
NBC2				Sn	Sn	16 31 43.9	+0.9
NBC2				Sg	Sg	16 31 50.4	-2.6
NBC3	NorthernBC 3	3.24	144	Pn	Pn	16 31 18.9	+1.3
NBC3				Sn	Sn	16 31 57.6	+1.2
NBC3				Sg	Sg	16 32 08.9	-1.5
FNBB	Fort Nelson	3.48	168	Pn	Pn	16 31 22.5	+1.5
FNBB				Sn	Sn	16 32 04.1	+1.7
NBC6	NorthernBC 6	4.03	156	Pn	Pn	16 31 29.2	+0.7
NBC6				Sn	Sn	16 32 16.1	+0.3
YKW3	Yellowknife Ar	4.58	82	Pn	Pn	16 31 37.1	+1.1
YKW3				Sn	Sn	16 32 29.3	-0.1
YKA	Yellowknife Ar	4.59	83	Pn	Pn	16 31 37.2	+1.0
	6.2nm,0.3s,baz=269,slow=13,SNR=120						
YKA				Pg	Pg	16 31 53.6	-0.8
	52nm,0.3s,baz=269,slow=17,SNR=39						
YKA				Lg	Lg	16 32 49.1	
	55nm,0.3s,baz=88,slow=12,SNR=6.9						
YKA				LR	LR	16 33 45.1	
	comp=Z,472nm,18.4s,baz=0.0,slow=43						
YKW1	Yellowknife Ar	4.63	83	Pn	Pn	16 31 37.9	+1.1
YKW1				Sn	Sn	16 32 31.1	+0.4
DLBC	Dease Lake	4.75	218	Pn	Pn	16 31 39.9	+1.3
	24nm,0.3s,baz=42,slow=8.9,SNR=57						
DLBC				Sn	Sn	16 32 37.4	+3.7
	27nm,0.3s,baz=229,slow=24,SNR=6.2						
DLBC				Lg	Lg	16 32 54.5	
	65nm,0.3s,baz=260,slow=24,SNR=10						
DLBC	Dease Lake	4.75	218	Pn	Pn	16 31 38.8	+0.3
DLBC				Sg	Sb	16 32 53.4	+6.0
DLBC	Dease Lake	4.75	218		Pn	16 31 38.4	-0.1
NBC5	NorthernBC 5	4.86	169	Pn	Pn	16 31 39.6	-0.4
NBC5				Sn	Sn	16 32 35.1	-1.5
DHRN	Dharma Camp	5.21	22	Pn	Pn	16 31 45.3	+0.5
DHRN				Sn	Sn	16 32 43.5	-1.5
HILA	High Level	5.25	132	Pn	Pn	16 31 46.2	+0.9
HILA				Sn	Sn	16 32 44.3	-1.6
WHY	Whitehorse	5.26	257	Pn	Pn	16 31 44.8	-0.7
WHY				Sg	Sb	16 33 09.4	+7.4
WHY	Whitehorse	5.26	257		Pn	16 31 44.1	-1.4
SKAG	Skagway	6.02	247		Pn	16 31 54.9	-0.9
BESE	Bessie Mountai	6.35	239	Pn	Pn	16 32 00.7	+0.2
BESE				Sn	Sn	16 33 09.5	-3.6
BESE	Bessie Mountai	6.35	239		Pn	16 32 00.3	-0.1
JIS	Juneau Island	6.37	235		Pn	16 32 00.2	-0.3
BMBC	Bull Mountain	6.38	168	Pn	Pn	16 32 00.1	-0.7
BMBC				Sn	Sn	16 33 11.4	-2.4
BMBC				Sg	Sg	16 33 46.5	-4.6
HYT	Haines Junctio	6.41	263	Pn	Pn	16 32 01.4	+0.1
HYT				Sg	Sg	16 33 45.2	-6.9
HYT	Haines Junctio	6.41	263		Pn	16 32 00.8	-0.5
YUK5	Granite Creek	6.48	266	Pn	Pn	16 32 02.2	-0.1
YUK5				Sn	Sn	16 33 12.8	-3.6
YUK5				Sg	Sb	16 33 45.9	+8.8
EPYK	Eagle Plains	6.71	313		Pn	16 32 04.4	-1.0
EPYK	Eagle Plains	6.71	313	P	Pn	16 32 05.2	-0.2
	baz=122,SNR=56						
EPYK				S	Sn	16 33 19.9	-2.1
	baz=122						
YUK6	Outpost Mounta	6.77	265	Pn	Pn	16 32 06.3	0.0
YUK6				Sg	Sg	16 33 56.6	-7.1
YUK4	Talbot Arm	6.79	268	Pn	Pn	16 32 05.4	-1.2
YUK4				Sg	Sb	16 33 52.3	+6.2
YUK7	Dusty Glacier	6.80	261	Pn	Pn	16 32 07.2	+0.4
YUK7				Sg	Sg	16 33 59.9	-4.8
KUKN	Kugluktuk,NWT	6.82	31	Pn	Pn	16 32 07.8	+1.1
KUKN				Sn	Sn	16 33 21.5	-2.9
NBC4	NorthernBC 4	6.90	162	Pn	Pn	16 32 07.8	-0.2
NBC4				Sn	Sn	16 33 22.5	-4.2
DAWY	Dawson	6.99	291	Pn	Pn	16 32 09.3	+0.1
DAWY				Sn	Sn	16 33 24.5	-4.3
DAWY	Dawson	6.99	291		Pn	16 32 08.6	-0.6
C36M	Paulatuk	7.09	1		Pn	16 32 09.5	-0.9
C36M	Paulatuk	7.09	1	P	Pn	16 32 09.8	-0.7
	baz=182,SNR=18						
C36M				S	Sn	16 33 25.7	-5.4
	baz=182						
INK	Inuvik	7.13	332	Pn	Pn	16 32 10.9	-0.1
	8.1nm,0.3s,baz=147,slow=8.7,SNR=80						
INK				Sn	Sn	16 33 30.0	-2.1
	17nm,0.3s,baz=40,slow=15,SNR=7.1						
INK	Inuvik	7.13	332	Pn	Pn	16 32 10.4	-0.6
INK				Sn	Sn	16 33 28.2	-3.9
INK	Inuvik	7.13	332		Pn	16 32 10.2	-0.8
WRAK	Wrangell Islan	7.13	218		Pn	16 32 11.3	+0.2
DHAK	Deception Hill	7.47	251		Pn	16 32 15.6	-0.2
YUK1	Sand Pete Hill	7.51	276	Pn	Pn	16 32 16.1	-0.4
YUK1				Sg	Sg	16 34 19.1	-8.4
YUK3	Moose Creek	7.54	273	Pn	Pn	16 32 16.3	-0.6
YUK3				Sg	Sg	16 34 19.8	-8.7
SIT	Sitka	7.60	231		Pn	16 32 17.2	-0.2
BVCY	Beaver Creek	7.63	278	Pn	Pn	16 32 17.8	-0.3
BVCY				Sg	Sg	16 34 22.6	-8.8
YUK2	White River	7.72	274	Pn	Pn	16 32 18.8	-0.5
YUK2				Sg	Sg	16 34 25.4	-8.7
PNL	Peninsula	7.72	257	Pn	Pn	16 32 20.1	+0.9
PNL				Sg	Sg	16 34 25.2	-9.1
EGAK	Eagle	7.86	296		Pn	16 32 20.5	-0.6
BCAR	Beaver Creek A	8.01	283		Pn	16 32 22.6	-0.6
CTGM	Chitina Glacie	8.15	268	Pn	Pn	16 32 25.5	+0.3
CTGM				Sg	Sg	16 34 41.0	-6.8
CTGM	Chitina Glacie	8.15	268		Pn	16 32 25.4	+0.2
CRAG	Craig	8.17	217	Pn	Pn	16 32 26.5	+1.1
BARN	Barnard Glacie	8.27	269		Pn	16 32 27.8	+0.9
GRNC	Granite Creek	8.41	267	Pn	Pn	16 32 29.6	+0.8
RUBB	Prince Rupert	8.54	203	Pn	Pn	16 32 32.6	+2.1
BALM	Baldy	8.60	270	Pn	Pn	16 32 32.4	+1.0
BALM				Sg	Sg	16 34 55.0	-7.3
BALM	Baldy	8.60	270		Pn	16 32 32.3	+1.0
PTPK	Patty Peak	8.62	271	Pn	Pn	16 32 32.4	+0.8
KIAG	Kiagna River	8.64	269	Pn	Pn	16 32 32.7	+0.8
KIAG				Sg	Sg	16 34 54.6	-9.0
MCARA	McCarthy VSAT	8.83	272		Pn	16 32 36.0	+1.7
TGL	Tana Glacier	8.91	268		Pn	16 32 36.8	+1.2
SCRK	Sand Creek	9.00	289		Pn	16 32 36.5	-0.3
CRQM	Cirque	9.05	269		Pn	16 32 38.6	+1.0
VRDI	Verde Repeater	9.07	272		Pn	16 32 39.6	+1.8
GLB	Gilahina Butte	9.18	273		Pn	16 32 40.3	+1.1
RIDG	Independent Ri	9.38	288		Pn	16 32 42.1	+0.3
BNAB	Bonilla	9.41	203	Pn	Pn	16 32 43.5	+1.3
BNAB				Sg	Sn	16 35 17.9	+50
UBRB	Upper Baezaeko	9.43	179	Pn	Pn	16 32 42.9	+0.3
NDB	Naden	9.48	212	Pn	Pn	16 32 44.3	+1.0
ATHA	Athabasca	9.56	138	Pn	Pn	16 32 44.8	+0.4
ATHA				Sn	Sn	16 34 25.6	-6.3
HARP	HAARP	9.62	280	Pn	Pn	16 32 44.1	-1.0
A36M	Sachs Harbour	9.75	359	P	Pn	16 32 43.2	-3.6
	baz=178						
A36M				S	Sn	16 34 29.3	-7.1
	baz=178						
PRP	Porcupine Dome	9.81	298		Pn	16 32 48.0	+0.1
RAGM	Ragged Mountai	9.89	268	Pn	Pn	16 32 50.0	+1.1
BMAR	Burnt Mountain	9.96	310		Pn	16 32 49.0	-0.9
MOBC	Moresby Island	10.00	207	Pn	Pn	16 32 51.5	+1.1
MOBC	Moresby Island	10.00	207	Pn	Pn	16 32 52.6	+2.1
DIB	Dawson Inlet,	10.06	209	Pn	Pn	16 32 52.0	+0.9
DIB	Dawson Inlet,	10.06	209	Pn	Pn	16 32 52.7	+1.6
IL31		10.30	294		Pn	16 32 54.2	-0.1
ILAR	Eielson Array	10.30	294	Pn	Pn	16 32 54.9	+0.5
	0.5nm,0.3s,baz=98,slow=11,SNR=23						
ILAR				Lg	Lg	16 35 50.2	
	0.5nm,0.3s,baz=96,slow=26,SNR=8.3						
ILAR				LR	LR	16 37 02.0	
	comp=Z,128nm,19.2s,baz=105,slow=38						
ILAR	Eielson Array	10.30	294	Pn	Pn	16 32 54.5	0.0
HDA	Harding Lake	10.31	292	Pn	Pn	16 32 54.7	+0.2
BBB	Bella Bella	10.32	193	Pn	Pn	16 32 58.1	+3.4
	0.3nm,0.3s,baz=1.6,slow=14,SNR=2.5						
BBB				Lg	Lg	16 35 44.9	
	1.3nm,0.3s,baz=320,slow=23,SNR=3.7						
BBB				LR	LR	16 37 34.1	
	comp=Z,34nm,21.0s,baz=146,slow=41						
BNB	Barry Inlet	10.49	205	Pn	Pn	16 32 59.4	+2.2
FID	Port Fidalgo	10.62	271	Pn	Pn	16 33 00.1	+1.3
MNB	Mounoet Dainar	10.63	159	Pn	Pn	16 32 58.7	-0.6
BLBC	Blue River	10.65	162	Pn	Pn	16 32 59.0	-0.5
CCB	Clear Creek Bu	10.69	293		Pn	16 32 58.5	-1.2
SCM	Sheep Creek Mo	10.73	278	Pn	Pn	16 33 00.2	-0.1
WRH	Wood River Hil	10.80	292		Pn	16 33 01.0	-0.4
GLI	Glacier Island	10.87	273	Pn	Pn	16 33 02.4	+0.2
RND	Reindeer	11.18	287		Pn	16 33 07.2	+0.6
MCK	McKinley	11.19	288		Pn	16 33 07.0	+0.3
NEA	Nenana	11.23	293	Pn	Pn	16 33 08.2	+1.0
GHO	Glory Hole Cre	11.48	278		Pn	16 33 12.7	+2.0
SLEB	Sale Mountain	11.67	160	Pn	Pn	16 33 11.5	-1.9
LLLB	Lillooet	11.79	172	Pn	Pn	16 33 15.4	+0.4
LLLB	Lillooet	11.79	172		Pn	16 33 15.0	+0.1
TRF	Thorofare Moun	11.82	287		Pn	16 33 16.4	+1.0
MLY	Manley	11.95	295	Pn	Pn	16 33 16.9	-0.2
COLD	Coldfoot	11.99	306	Pn	Pn	16 33 16.9	-0.6
COLD	Coldfoot	11.99	306		Pn	16 33 17.6	0.0
BPAW	Bear Paw Mtn.	12.08	290	Pn	Pn	16 33 18.2	-0.5
TOLK	Toolik Lake Re	12.15	312	P	Pn	16 33 19.0	-0.7
	baz=110,SNR=14						
TOLK				S	Sn	16 35 30.7	-4.5
	baz=110						
PPLA	Purkeypile	12.75	285	Pn	Pn	16 33 30.1	+2.1
IMAR	Indian Mountai	13.24	299	Pn	Pn	16 33 34.3	-0.2
FFC	Flin Flon	13.92	113		Pn	16 33 39.9	-4.0
B08A	Colville Reser	14.25	166		Pn	16 33 48.6	0.0
WALA	Waterton Lakes	14.50	151	P	Pn	16 33 49.8	-2.2
WALA				S	Sn	16 36 23.5	-9.3
WALA	Waterton Lakes	14.50	151		Pn	16 33 49.6	-2.4
NEW	Newport	14.65	160	Pn	Pn	16 33 53.8	-0.1
	0.4nm,0.3s,baz=351,slow=15,SNR=2.5						
NEW				Lg	Lg	16 37 55.9	
	0.3nm,0.3s,baz=257,slow=7.3,SNR=3.5						
NEW				LR	LR	16 39 58.5	
	comp=Z,117nm,21.6s,baz=338,slow=39						
NEW	Newport	14.65	160		Pn	16 33 53.5	-0.4
NEW	Newport	14.65	160	P	Pn	16 33 54.5	+0.5
	baz=346						
KDAK	Kodiak Island	14.69	265	Pn	Pn	16 33 56.4	+2.0
	0.3nm,0.3s,baz=43,slow=5.3,SNR=4.5						
KDAK				LR	LR	16 39 19.8	
	comp=Z,322nm,18.9s,baz=69,slow=36						
SVW2	Sparrevohn	14.74	279	Pn	Pn	16 33 56.1	+0.9
JTMT	Jette	15.66	154		Pn	16 34 04.8	-2.8
E07A	Sunnyside	15.98	168	P	P	16 34 14.1	-1.0
RES	Resolute Bay	16.20	28	Pn	Pn	16 34 11.8	-2.4
	3.0nm,0.3s,baz=226,slow=13,SNR=67						
RES				Sn	Sn	16 37 02.5	-11
	2.9nm,0.3s,baz=219,slow=16,SNR=8.3						
RES				Lg	Lg	16 38 54.8	
	0.5nm,0.3s,baz=138,slow=15,SNR=5.8						
RES	Resolute Bay	16.20	28		Pn	16 34 11.1	-3.1
RES				IAmb	IAmb	16 34 16.1	
	comp=Z,27nm,0.7s						
EGMT	Eagleton	16.51	143		Pn	16 34 15.5	-2.9
EGMT	Eagleton	16.51	143	P	Pn	16 34 16.2	-2.2
	baz=335,SNR=27						
EGMT				S	Sn	16 37 12.5	-9.1
	baz=335						
MSO	Missoula	16.61	154		Pn	16 34 16.7	-2.9
MSO	Missoula	16.61	154	P	Pn	16 34 17.6	-2.0
	baz=343						
RDOG	Red Dog Mine	16.91	306	Pn	Pn	16 34 23.5	+0.3
DGMT	Dagmar	17.88	131	Pn	Pn	16 34 33.1	-2.4
DGMT	Dagmar	17.88	131	P	Pn	16 34 33.9	-1.6
	baz=328						
DGMT				S	Sn	16 37 45.2	-10
	baz=328						
DLMT	Dillon	18.29	153	Pn	Pn	16 34 39.5	-1.1
GCMT	Greycliff	18.59	146	P	P	16 34 43.2	-0.8
MCMT	McKenzie Canyo	18.75	154	P	Pn	16 34 46.4	+0.1
LAO	LASA Array	18.76	138	P	Pn	16 34 46.0	-0.3
LAO				IAmb	IAmb	16 35 19.5	
	comp=Z,44nm,1.4s						
LAO	LASA Array	18.76	138	P	P	16 34 44.7	-1.2
	baz=333						
QLMT	Earthquake Lak	19.05	151	P	Pn	16 34 49.6	-0.4
J05D	Fort Rock, OR	19.13	173	P	Pn	16 34 52.7	+1.9
	baz=355						
J08A	Circle Bar Ran	19.29	167		Pn	16 34 54.0	+1.3
RLMT	Red Lodge	19.31	146	P	P	16 34 51.5	-0.6
RLMT	Red Lodge	19.31	146	P	P	16 34 52.3	+0.2
	baz=338						
MFID	Camas Ranch	19.58	161	P	Pn	16 34 55.6	-0.5
ULM	Lac du Bonnet	19.72	114	P	P	16 34 56.1	-0.2
	comp=Z,0.9nm,0.3s,baz=319,slow=13,SNR=20						
ULM				S	S	16 38 22.9	-16
	comp=Z,2.4nm,0.3s,baz=212,slow=11,SNR=7.8						
ULM				Lg	Lg	16 40 37.9	
	comp=Z,1.1nm,0.3s,baz=54,slow=20,SNR=4.6						
ULM				LR	LR	16 43 27.9	
	comp=Z,53nm,19.3s,baz=55,slow=40						
ULM	Lac du Bonnet	19.72	114	P	P	16 34 55.8	-0.5
ULM	Lac du Bonnet	19.72	114	P	P	16 34 55.6	-0.7
ULM				IAmb	IAmb	16 35 05.3	
	comp=Z,12nm,0.6s						
FXWY	Fox Creek	20.28	151	P	Pn	16 35 03.9	-0.7
TPAW	Teton Pass	20.43	151	P	Pn	16 35 07.2	+0.7
MOD	Modoc Plateau	20.57	171	P	Pn	16 35 07.4	-0.5
REDW	Red Top Meadow	20.58	151	P	Pn	16 35 07.5	-0.6
REDW				IAmb	IAmb	16 35 23.3	
	comp=Z,28nm,1.6s						
YBH	Yreka Blue Hor	20.61	176	P	Pn	16 35 08.7	+0.4
	comp=Z,1.2nm,0.6s,baz=6.5,slow=6.1,SNR=1.7						
YBH				LR	LR	16 42 43.6	
	comp=Z,114nm,20.2s,baz=342,slow=36						
YBH	Yreka Blue Hor	20.61	176	IAmb	IAmb	16 35 56.6	
	comp=Z,47nm,1.9s						
BW06	Boulder Array	21.45	149	P	P	16 35 16.5	+1.3
BW06				IAmb	IAmb	16 35 32.5	
	comp=Z,12nm,1.2s						
BW06	Boulder Array	21.45	149	P	P	16 35 16.7	+1.4
	baz=341,SNR=5.4						
PD31	Pinedale Array	21.45	149	P	P	16 35 16.3	+1.0
PDAR	Pinedale Array	21.45	149	P	P	16 35 17.7	+2.4
	comp=Z,4.3nm,0.6s,baz=358,slow=10,SNR=19						
PDAR				LR	LR	16 44 21.0	
	comp=Z,64nm,18.1s,baz=39,slow=39						
PDAR	Pinedale Array	21.45	149	P	P	16 35 16.6	+1.3
RSSD	Black Hills	21.75	137	P	P	16 35 19.0	+0.6
RSSD	Black Hills	21.75	137	P	P	16 35 20.1	+1.7
	baz=334						
HWUT	Hardware Ranch	22.10	154	P	P	16 35 21.6	-0.7
HWUT				IAmb	IAmb	16 35 30.8	
	comp=Z,11nm,1.0s						
ELK	Elko	22.28	161	P	P	16 35 27.5	+3.3
	comp=Z,1.2nm,0.6s,baz=346,slow=12,SNR=3.7						
ELK				LR	LR	16 44 07.5	
	comp=Z,82nm,20.6s,baz=344,slow=37						
K22A	Casper	22.35	143	P	P	16 35 25.1	+0.2
	baz=338,SNR=11						
DUG	Dugway, Tooele	23.22	157	P	P	16 35 35.1	+1.1
	baz=346						
EYMN	Ely	23.35	113	P	P	16 35 35.6	+0.5
EYMN				IAmb	IAmb	16 35 47.5	
	comp=Z,15nm,0.9s						
EYMN	Ely	23.35	113	P	P	16 35 35.0	0.0
	baz=320						
KVN	Kaiserville	23.59	168	P	P	16 35 38.4	+0.6
RYN	Ryan	23.97	169	P	P	16 35 43.4	+2.0
RYN				IAmb	IAmb	16 35 45.8	
	comp=Z,6.9nm,1.0s						
N23A	Red Feather La	24.14	144	P	P	16 35 43.4	+0.3
	baz=339,SNR=6.8						
NVAR	Mina Array Bea	24.18	168	P	P	16 35 46.2	+2.7
	comp=Z,4.3nm,0.6s,baz=344,slow=8.1,SNR=22						
NVAR	Mina Array Bea	24.18	168	P	P	16 35 44.9	+1.4
NV11	Mina Array Sit	24.20	168	P	P	16 35 46.0	+2.5
NV11				IAmb	IAmb	16 35 51.7	
	comp=Z,6.4nm,1.1s						
ECSD	EROS Data Cent	24.68	126	P	P	16 35 48.6	+0.9
ECSD				IAmb	IAmb	16 36 31.2	
	comp=Z,8.9nm,0.8s						
ECSD	EROS Data Cent	24.68	126	P	P	16 35 47.7	0.0
	baz=329						
SRU	San Rafael Swe	24.71	153	P	P	16 35 50.2	+2.0
FRB	Frobisher Bay	24.73	62	P	P	16 35 49.9	+2.0
	comp=Z,2.6nm,0.4s,baz=298,slow=14,SNR=4.3						
FRB				LR	LR	16 46 30.9	
	comp=Z,28nm,20.3s,baz=232,slow=39						
PV21	Cone Mtn., Par	25.58	151	P	P	16 35 58.2	+2.1
PV21				IAmb	IAmb	16 36 05.5	
	comp=Z,14nm,1.0s						
PV09	Paradox Valley	25.60	151	P	P	16 35 58.2	+1.8
PV22	Blue Mesa, Par	25.65	151	P	P	16 35 57.8	+1.1
PV22				IAmb	IAmb	16 36 04.8	
	comp=Z,5.8nm,0.9s						
PV23	Carpenter Ridg	25.68	151	P	P	16 35 58.0	+1.0
PV23				IAmb	IAmb	16 36 37.1	
	comp=Z,9.4nm,0.8s						
PV14	Lion Creek, Pa	25.75	151	P	P	16 35 58.2	+0.5
PV14				IAmb	IAmb	16 36 12.5	
	comp=Z,14nm,1.0s						
PV07	Paradox Valley	25.77	151	P	P	16 35 59.2	+1.3
PV07				IAmb	IAmb	16 36 42.5	
	comp=Z,5.1nm,0.7s						
PV17	East Wray Mesa	25.85	151	P	P	16 35 59.8	+1.2
PV17				IAmb	IAmb	16 36 43.6	
	comp=Z,7.1nm,1.0s						
PV03	Paradox Valley	25.90	151	P	P	16 36 00.6	+1.6
PV03				IAmb	IAmb	16 36 44.5	
	comp=Z,4.4nm,0.9s						
PV15	Paradox Valley	25.90	150	P	P	16 35 59.5	+0.4
PV15				IAmb	IAmb	16 36 55.3	
	comp=Z,8.5nm,0.9s						
PV13	Radium Mtn., P	26.00	151	P	P	16 36 00.6	+0.6
PV13				IAmb	IAmb	16 36 06.6	
	comp=Z,7.9nm,1.0s						
PV01	Paradox Valley	26.08	151	P	P	16 36 01.4	+0.7
PV01				IAmb	IAmb	16 36 03.6	
	comp=Z,5.9nm,1.0s						
BILL	Bilibino	28.20	312	P	P	16 36 20.3	+1.2
BILL				IAmb	IAmb	16 36 20.9	
	comp=Z,17nm,1.8s						
GSTR	Great Sitkin T	28.97	273	P	P	16 36 25.6	-0.6
PFO	Pinyon Flats O	29.14	166	LR	LR	16 47 54.8	
	comp=Z,101nm,20.0s,baz=273,slow=36						
ANMO	Albuquerque	29.62	149	P	P	16 36 35.5	+3.2
	comp=Z,3.6nm,0.9s,baz=342,slow=9.9,SNR=7.8						
ANMO	Albuquerque	29.62	149	P	P	16 36 34.6	+2.3
ANMO				IAmb	IAmb	16 36 35.9	
	comp=Z,3.7nm,0.9s						
SCHQ	Schefferville	30.02	78	LR	LR	16 47 59.7	
	comp=Z,83nm,18.6s,baz=16,slow=35						
S39A	Bolivar	31.17	128	P	P	16 36 46.2	+0.5
U38A	Gravette	31.89	130	P	P	16 36 52.4	+0.2
WMOK	Wichita Mounta	31.96	138	P	P	16 36 54.2	+1.5
WMOK				IAmb	IAmb	16 36 56.0	
	comp=Z,7.6nm,1.4s						
MGMO	Mountain Grove	32.03	127	P	P	16 36 54.1	+0.7
U40A	Yellville	32.52	128	P	P	16 36 58.1	+0.5
MNTX	Cornudas Mount	32.98	149	P	P	16 37 03.8	+2.1
MNTX				IAmb	IAmb	16 37 06.5	
	comp=Z,7.3nm,1.2s						
MIAR	Mount Ida	33.88	131	P	P	16 37 10.2	+0.7
PLAL	Pickwick Lake	35.55	123	P	P	16 37 24.4	+0.5
JCT	Junction City	35.62	142	P	P	16 37 25.4	+0.9
JCT				IAmb	IAmb	16 37 29.1	
	comp=Z,6.1nm,0.8s						
TX31	Lajitas Ar. Si	35.66	148	P	P	16 37 27.0	+2.0
TX31				IAmb	IAmb	16 37 28.1	

	comp=Z,3.4nm,1.0s						
TX32	Lajitas Array	35.66	148	P	P	16 37 27.0	+2.0
TX32				IAmb	IAmb	16 37 28.1	
	comp=Z,3.5nm,1.0s						
TXAR	Lajitas Array	35.66	148	P	P	16 37 27.3	+2.3
	comp=Z,1.7nm,0.8s,baz=348,slow=7.3,SNR=14						
TXAR				LR	LR	16 51 30.3	
	comp=Z,32nm,21.9s,baz=0.0,slow=35						
TXAR	Lajitas Array	35.66	148	P	P	16 37 26.0	+1.0
TKL	Tuckaleechee C	36.70	117	P	P	16 37 34.4	+0.6
TIXI	Tiksi	37.25	330	P	P	16 37 39.6	+1.6
GOGA	Godfrey	38.77	119	P	P	16 37 52.2	+1.0
PETK	Petropavlovsk-	40.13	294	P	P	16 38 04.0	+1.6
	comp=Z,3.8nm,0.9s,baz=70,slow=11,SNR=4.6						
ARCES	ARCESS Array B	46.75	14	P	P	16 38 56.1	+0.5
	comp=Z,1.2nm,0.6s,baz=354,slow=7.3,SNR=1.1						
ARCES				LR	LR	16 58 31.8	
	comp=Z,42nm,21.0s,baz=173,slow=36						
NC204	NORSAR Array S	52.14	26	P	P	16 39 38.1	+1.2
NB2	NORSAR Subarra	52.45	25	P	P	16 39 40.2	+1.1
	comp=Z,5.6nm,1.0s,baz=334,slow=7.9						
NOA	NORSAR Array B	52.45	25	P	P	16 39 40.6	+1.5
	comp=Z,1.3nm,0.7s,baz=334,slow=7.6,SNR=3.5						
NOA				LR	LR	17 03 18.6	
	comp=Z,43nm,18.5s,baz=340,slow=38						
FINES	FINESS Array B	54.57	17	P	P	16 39 55.4	+0.8
	comp=Z,1.8nm,0.6s,baz=349,slow=8.5,SNR=16						
FINES				LR	LR	17 04 19.1	
	comp=Z,49nm,18.7s,baz=328,slow=37						
ARU	Arti	61.60	358	P	P	16 40 45.0	+1.2
ZAA0	Zalesovo Array	61.84	341	P	P	16 40 46.4	+0.9
ZAA0				IAmb	IAmb	16 40 47.3	
	comp=Z,5.2nm,1.4s						
ZALV	Zalesovo Beam	61.84	341	P	P	16 40 46.8	+1.2
	comp=Z,0.8nm,0.6s,baz=19,slow=6.9,SNR=4.7						
ZALV	Zalesovo Beam	61.84	341	P	P	16 40 46.1	+0.6
CLL	Collm	61.84	29	eP	P	16 40 49.0	+3.4
BRG	Berggiesshubel	62.45	28	eP	P	16 40 50.6	+0.9
	comp=Z,2.0nm,0.7s						
SONM	Songino Array	62.98	324	P	P	16 40 55.4	+2.0
	comp=Z,0.3nm,0.6s,baz=32,slow=6.3,SNR=2.9						
GERES	GERESS Array B	64.30	29	P	P	16 41 04.0	+1.8
	comp=Z,0.7nm,0.6s,baz=340,slow=5.5,SNR=6.1						
GERES	GERESS Array B	64.30	29	P	P	16 41 02.8	+0.7
BRVK	Borovoye	64.41	350	P	P	16 41 03.7	+1.1
BRVK				IAmb	IAmb	16 41 05.4	
	comp=Z,6.2nm,1.4s						
RETA	Reutte	64.88	32	eP	P	16 41 05.5	-0.3
	comp=Z,5.5nm,1.3s						
KS19	Wonju Array Si	64.98	303	P	P	16 41 05.8	-0.8
KSAR	Wonju Array Be	65.02	303	P	P	16 41 05.3	-1.5
MOTA	Moosalm	65.09	32	epP	P	16 41 07.8	+0.5
	comp=Z,2.9nm,0.9s						
SQTA	Sankt Quirin	65.23	32	epP	P	16 41 10.5	+2.2
	comp=Z,2.6nm,0.7s						
WTTA	Wattenberg	65.30	31	i pP	P	16 41 11.8	+3.1
	comp=Z,10nm,1.4s						
FETA	Feichten	65.30	32	epP	P	16 41 12.1	+3.3
	comp=Z,5.0nm,0.9s						
AKASG	Malin Array Be	65.43	18	P	P	16 41 10.2	+0.9
	comp=Z,1.3nm,0.6s,baz=346,slow=6.6,SNR=8.1						
CONA	Conrad Observa	65.65	28	epP	P	16 41 12.9	+2.0
	comp=Z,4.9nm,1.4s						
KBA	Koelnbreinsper	65.88	30	epP	P	16 41 15.4	+2.9
	comp=Z,3.6nm,0.8s						
ARSA	Arzberg	66.22	29	epP	P	16 41 16.4	+1.9
	comp=Z,3.0nm,0.8s						
SOKA	Soboth	66.65	29	epP	P	16 41 19.1	+1.8
	comp=Z,2.7nm,0.9s						
OBKA	Obir	66.70	30	epP	P	16 41 19.2	+1.6
	comp=Z,6.7nm,1.1s						
HHC	Hu-ho-hao-te	67.81	317	eP	P	16 41 22.8	-2.0
ABKAR	Akbulak array	68.75	357	P	P	16 41 31.0	+0.6
MKAR	Makanchi Array	69.18	341	P	P	16 41 34.7	+1.5
	comp=Z,0.4nm,0.6s,baz=9.2,slow=4.8,SNR=7.2						
MKAR	Makanchi Array	69.18	341	P	P	16 41 34.4	+1.2
WMQ	Urumqi	71.13	336	eP	P	16 41 47.5	+2.3
LZH	Lanzhou	74.55	321	eP	P	16 42 04.0	-1.7
LZH				pP	pP	16 42 07.3	-1.3
LZH				sP	sP	16 42 08.8	-0.9
LZH				ePP	PP	16 44 51.5	-0.1
BRTR	Keskin Array B	76.81	17	P	P	16 42 20.1	+1.5
	comp=Z,1.5nm,0.8s,baz=356,slow=5.0,SNR=7.1						
BRTR				LR	LR	17 16 59.7	
	comp=Z,12nm,20.4s,baz=333,slow=36						
BRTR	Keskin Array B	76.81	17	P	P	16 42 19.5	+0.9
KSH	Kashi	77.21	344	P	P	16 42 22.0	+1.2
KSH				pP	sP	16 42 26.8	+2.0
KSH				PP	PP	16 45 17.0	+3.1
KSH				S	S	16 52 08.5	-1.8
KSH	Kashi	77.21	344	SKS	SKSac	16 52 28.0	-5.7
CMAR	Chiang Mai Arr	92.53	319	P	P	16 43 39.9	+1.6
	comp=Z,1.3nm,1.0s,baz=5.3,slow=4.7,SNR=8.4						
CMAR	Chiang Mai Arr	92.53	319	P	P	16 43 38.9	+0.6
ASAR	Alice Springs	116.06	269	PKP	PKPdf	16 49 09.7	0.0
	comp=Z,0.5nm,0.9s,baz=70,slow=1.6,SNR=8.7						
VNDA	Vanda	146.54	202	PKPbc	PKPab	16 50 08.2	+0.6
	comp=Z,0.7nm,0.8s,baz=341,slow=2.6,SNR=4.4						

DJA ***31*** *16:33:27.7±0.3, 10˚S±3˚×10˚7E±˚, h10^{km}, M4.6/15, mB5.2/6, mb4.8/10, MLv4.5/15, MLv4.5/7, Mw(mB)4.6/6*

NEIC ***31*** *16:33:28.2±1.7, 9˚.91S±0˚.06×106˚.67E±0˚.06, h9^{km}±4^{km}, mb4.4/13, Error ellipse: s-maj=10.1km s-min=6.1km az=130.0*

IDC ***31*** *16:33:28.1±1.6, 9˚.83S×106˚.74E, h0^{km}, mb3.9/7, mb1 4.0/8, mb1mx3.7/41, mbtmp3.9/8, ML4.1/1, MS3.4/2, Ms1 3.4/2, ms1mx2.7/41, Error ellipse: s-maj=49.7km s-min=15.8km az=59.0*

ISC 31 16:33:28.6±0.5**, 9˚.88S**±0˚.06×**106˚.71E**±0˚.07**, h10^{km}, n52, σ1^{s}.82**/53**, mb4.2**/12**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XMIS	Christmas Isla	1.20	240		Pb	16 33 50.2	-1.3
CISI	Cisompet, Garu	2.56	25	P	Pn	16 34 08.5	-1.7
CISI				S	Sn	16 34 36.4	-5.0
CISI	Cisompet, Garu	2.56	25		Pn	16 34 08.8	-1.4
CNJI	Cibinong	2.59	9	P	Pn	16 34 09.0	-1.6
CNJI				S	Sn	16 34 37.4	-4.7
SKJI	Sukabumi	2.86	357	P	Pg	16 34 29.1	+5.6
LEM	Lembang	3.17	16	Pn	Pn	16 34 19.1	+0.4
	23nm,0.3s,baz=34,slow=11,SNR=34						
LEM				Sn	Sn	16 34 58.0	+1.4
	23nm,0.3s,baz=28,slow=21,SNR=6.2						
LEM				LR	LR	16 35 54.7	
	comp=Z,170nm,21.4s,baz=216,slow=47						
LEM	Lembang	3.17	16	P	Pn	16 34 18.8	+0.1
DBJI	Dramaga	3.31	1	P	Pn	16 34 19.0	-1.5
UGM	Wanagama	4.24	63	P	Pn	16 34 32.6	-0.7
UGM	Wanagama	4.24	63	Pn	Pn	16 34 32.7	-0.7
WOJI	Wonogiri, Jawa	4.63	64	P	Pn	16 34 38.9	+0.2
PCJI	Pacitan	4.72	70	P	Pn	16 34 40.0	+0.2
PWJI	Pagerwojo	5.36	70	P	Pn	16 34 48.7	0.0
	0.5nm0.5nm2µm53nm,0.7s						
LWLI	Liwa	5.50	331	P	Pn	16 34 49.0	-1.8
	5.1nm5.1nm2µm79nm,0.6s						
MDSI	Maura Dua	5.92	335	P	Pn	16 34 54.2	-2.2
	0.1nm840nm12nm,0.9s						
GRJI	Gresik	6.42	63	P	Pn	16 35 03.5	+0.2
	0.1nm33nm,0.9s						
MNAI	Manna	6.63	326	P	Pn	16 35 03.1	-3.1
	0.6nm133nm,0.8s						
MNAI	Manna	6.63	326	Pn	Pn	16 35 03.8	-2.5
KSI	Kapahiang	7.42	326	P	Pn	16 35 14.7	-2.4
	2.1nm130nm,0.7s						
JAGI	Jajag, Banyuwa	7.48	80	P	Pn	16 35 17.0	-0.8
	0.3nm1µm39nm,0.6s						
JAGI	Jajag, Banyuwa	7.48	80		Pn	16 35 17.3	-0.6
DNP	Denpasar	8.47	83	P	Pn	16 35 31.3	-0.2
SRBI	Singaraja	8.58	79	P	Pn	16 35 32.7	-0.3
	28nm,0.7s						
GSI	Gunungsitoli	14.36	320	Pn	Pn	16 36 48.6	-3.5
GIRL	Giralia	14.59	151	Pn	Pn	16 36 52.8	-2.5
PSA00	Pilbara Seismi	17.16	134	Pn	Pn	16 37 26.1	-2.5
PSA00				IAmb	IAmb	16 37 58.0	
	comp=Z,15nm,1.3s						
PSA00	Pilbara Seismi	17.16	134	Pn	Pn	16 37 25.9	-2.7
PSA00				IAmb	IAmb	16 37 43.5	
	comp=Z,3.6nm,0.6s						
FITZ	Fitzroy Crossi	20.08	116	P	Pn	16 38 04.2	0.0
	comp=Z,2.9nm,0.8s,baz=299,slow=9.8,SNR=7.2						
FITZ	Fitzroy Crossi	20.08	116	Pn	Pn	16 38 04.3	+0.1
KNRA	Kununurra	22.25	107	P	P	16 38 26.6	+0.8
KNRA				IAmb	IAmb	16 38 39.5	
	comp=Z,12nm,1.3s						
MTN	Manton Dam	24.12	99	P	P	16 38 45.3	+0.4
MTN				IAmb	IAmb	16 39 42.3	
	comp=Z,15nm,1.3s						
NWAO	Narrogin (SRO)	24.90	159	P	P	16 38 51.3	-0.5
WRA	Warramunga Arr	28.46	114	P	P	16 39 24.7	+0.6
	comp=Z,1.0nm,0.7s,baz=287,slow=11,SNR=12						
WRAB	Tennant Creek	28.47	114	P	P	16 39 24.1	-0.1
WRAB				IAmb	IAmb	16 39 34.2	
	comp=Z,17nm,1.8s						
WB2	Warramunga Arr	28.47	114	P	P	16 39 24.2	+0.1
WB2				IAmb	IAmb	16 39 41.0	
	comp=Z,18nm,1.9s						
WR0	Warramunga Arr	28.65	114	P	P	16 39 25.8	0.0
WR0				IAmb	IAmb	16 40 19.6	
	comp=Z,9.2nm,1.5s						
CMAR	Chiang Mai Arr	29.19	345	P	P	16 39 31.4	+1.0
	comp=Z,0.6nm,0.6s,baz=175,slow=9.2,SNR=8.5						
ASAR	Alice Springs	29.34	121	P	P	16 39 32.4	+0.4
	comp=Z,0.4nm,0.7s,baz=303,slow=8.1,SNR=8.6						
STKA	Stephens Creek	38.98	129	P	P	16 40 56.8	+1.4
	comp=Z,4.1nm,0.7s,baz=296,slow=8.7,SNR=14						
STKA	Stephens Creek	38.98	129	P	P	16 40 56.1	+0.8
CTA	Charters Tower	39.43	110	LR	LR	16 57 45.9	
	comp=Z,186nm,20.7s,baz=1.5,slow=37						
GTA	Gaotai	49.46	353	eP	P	16 42 21.5	+2.3
GTA				pP	pwP	16 42 25.5	-2.7
GTA				sP	sP	16 42 28.8	+7.8
CASY	Casey	56.38	178	P	P	16 43 10.0	+0.3
KSH	Kashi	56.84	332	P	P	16 43 15.8	+2.2
KSH				sP	pwP	16 43 22.5	-0.1
KSH				PP	PP	16 45 24.8	+4.7
KSH				PcS	PcS	16 48 10.3	+0.2
KSH				S	S	16 51 08.5	+1.3
SONM	Songino Array	57.46	360	P	P	16 43 19.0	+1.2
	comp=Z,1.1nm,0.5s,baz=179,slow=7.6,SNR=11						
SONM	Songino Array	57.46	360	IAmb	IAmb	16 43 19.7	
	comp=Z,1.2nm,0.6s						
MKAR	Makanchi Array	60.49	341	P	P	16 43 39.2	+0.4
	comp=Z,1.4nm,0.6s,baz=142,slow=7.6,SNR=7.2						
MKAR	Makanchi Array	60.49	341	P	P	16 43 38.7	0.0
KLR	Kul'dur	62.84	18	P	P	16 43 54.4	-0.1
	baz=220,slow=8.2						
BRVK	Borovoye	69.97	338	P	P	16 44 40.3	+0.2
BRVK				IAmb	IAmb	16 47 06.0	
	comp=Z,14nm,1.9s						
ABKAR	Akbulak array	71.74	330	P	P	16 44 51.0	+0.1
TXAR	Lajitas Array	145.62	51	PKPbc	PKPab	16 53 09.0	+0.4
	comp=Z,0.3nm,0.7s,baz=340,slow=6.7,SNR=2.6						

DRS ***31*** *16:38:36.8±0.0, 42˚.73N×46˚.43E, h14^{km}*

NORS ***31*** *16:38:37.1±0.0, 42˚.77N×46˚.70E, h10^{km}, MPVA3.6*

ISC 31 16:38:38.8±0.9**, 42˚.76N**±0˚.02×**46˚.62E**±0˚.02**, h6^{km}**±9^{km}**, n26, σ1^{s}.32**/53**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UNCR	Uncukul	0.14	108	ePg	Pg	16 38 42.0	+0.3
UNCR				eSg	Sg	16 38 45.5	+1.9
KRNR	Karanay	0.23	72	ePg	Pg	16 38 42.5	-0.8
KRNR				eSg	Sg	16 38 47.5	+1.2
XNZR	Khunzakh	0.23	163	ePg	Pg	16 38 42.0	-1.3
XNZR				eSg	Sg	16 38 46.6	+0.3
BTLR	Botlikh	0.30	252	i Pg	Pg	16 38 43.5	-1.3
BTLR				eSg	Sg	16 38 50.3	+1.5
DBC	Dubki	0.31	31	i Pg	Pg	16 38 43.4	-1.4
DBC				i Pg	Pb	16 38 44.6	-2.2
DBC				eSg	Sg	16 38 49.5	+0.6
DBC				eSg	Sb	16 38 50.9	-1.2
DLMR	Dylym	0.31	2	ePg	Pg	16 38 44.0	-0.9
DLMR				i Sg	Sg	16 38 50.5	+1.4
ARKR	Arakani	0.32	119	i Pg	Pg	16 38 44.5	-0.5
ARKR				i Sg	Sg	16 38 50.0	+0.8
BUJR	Buynaksk	0.37	79	ePg	Pg	16 38 44.9	-1.1
BUJR				eSg	Sg	16 38 51.6	+0.8
KMKR	Kumukh	0.72	150	ePg	Pg	16 38 51.5	-1.2
KMKR				eSg	Sb	16 39 03.5	-0.6
GROC	Groznyy	0.75	307	ePg	Pg	16 38 53.1	-0.1
GROC				eSg	Sb	16 39 04.7	-0.1
URKR	Urkarakh	0.96	128	ePg	Pg	16 38 56.2	-0.9
URKR				eSg	Sb	16 39 10.8	-0.1
LGD	Lagodekhi	0.96	197	P	Pg	16 38 56.0	-1.3
LGD				S	Sg	16 39 09.7	0.0
LGD	Lagodekhi	0.96	197	ePg	Pg	16 38 56.0	-1.3
LGD				eSg	Sb	16 39 10.7	-0.2
KMGR	Komgaron	1.32	284	ePg	Pn	16 39 03.4	-0.5
KMGR				eSg	Sg	16 39 23.2	+1.9
DDFL	Dedoflistskaro	1.36	196	P	Pg	16 39 05.4	+0.5
DDFL				S	Sg	16 39 33.2	+11
VLKR	Vladikavkaz	1.45	282	ePg	Pb	16 39 06.3	0.0
VLKR				eSg	Sg	16 39 28.3	+2.7
DRN	Derbent	1.46	119	ePg	Pg	16 39 08.4	+1.6
DRN				eSg	Sg	16 39 30.0	+4.2
AKT	Akhty	1.52	147	ePg	Pn	16 39 06.1	-0.6
AKT				eSg	Sg	16 39 28.7	+1.0
GUDG	Gudauri	1.61	260	P	Pn	16 39 07.4	-0.6
GUDG				S	Sg	16 39 31.7	+1.3
GUDG	Gudauri	1.61	260	ePg	Pb	16 39 08.4	-0.7
GUDG				eSg	Sg	16 39 31.7	+1.3
BTKR	Batakoyurt	1.64	293	ePg	Pb	16 39 09.7	+0.2
BTKR				eSg	Sg	16 39 33.8	+2.3
LACR	Lac	1.71	273	ePg	Pn	16 39 09.2	-0.1
LACR				eSg	Sg	16 39 34.9	+1.2
ZEI	Tsey	2.00	272	ePg	Pb	16 39 14.3	-1.5
ZEI				eSg	Sg	16 39 42.1	-0.9
DIGR	Digorskoe uzhe	2.24	275	ePn	Pn	16 39 17.9	+1.3
DIGR				eSn	Sb	16 39 47.5	-0.3
ONI	Oni	2.34	267	P	Pb	16 39 20.5	-0.9
ONI				S	Sg	16 39 52.7	-1.2
SHA1	Shidzhatmaz	3.05	290	ePn	Pn	16 39 28.6	+0.7
SHA1				eSn	Sn	16 40 06.5	+1.6

IDC 31 16:46:14.2±2.6**, 4˚.92S**×**150˚.81E, h102^{km}**±53^{km}**, mb3.3**/5**, mb1 3.5**/5**, mb1mx3.2**/32**, mbtmp3.6**/5**, Error ellipse: s-maj=91.4km s-min=20.9km az=117.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.35	63	P	Pn	16 46 39.0	+0.2
	22nm,0.3s,baz=247,slow=1.3,SNR=73						
KRVT				S	Sn	16 46 57.5	-0.1
	73nm,0.3s,baz=51,slow=21,SNR=31						
WRA	Warramunga Arr	21.91	226	P	P	16 50 59.3	-0.1
	1.1nm,0.5s,baz=50,slow=10,SNR=19						
ASAR	Alice Springs	24.76	220	P	P	16 51 26.2	-0.4
	0.9nm,0.4s,baz=55,slow=9.1,SNR=43						
FITZ	Fitzroy Crossi	27.87	240	P	P	16 51 55.0	+0.4
	0.6nm,0.3s,baz=58,slow=9.9,SNR=6.1						
SONM	Songino Array	65.38	329	P	P	16 56 46.6	+0.6
	0.4nm,0.5s,baz=141,slow=7.1,SNR=2.1						
MKAR	Makanchi Array	79.12	319	P	P	16 58 07.1	-0.5
	0.1nm,0.4s,baz=107,slow=9.2,SNR=1.8						

IDC ***31*** *16:59:53.5±1.5, 36˚.12N×138˚.99E, h89^{km}±11^{km}, mb2.9/2, mb1 3.2/3, mb1mx2.9/45, mbtmp3.5/3, MS3.1/1, Ms1 3.1/1, ms1mx2.3/13, Error ellipse: s-maj=40.7km s-min=11.8km az=67.0*

JMA ***31*** *16:59:53.0±0.1, 36˚.21N×139˚.21E, h78^{km}±1^{km}, M2.7*

ISC 31 16:59:52.5±1.1**, 36˚.21N**±0˚.04×**139˚.17E**±0˚.07**, h81^{km}**±8^{km}**, n14, σ0^{s}.82**/22**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JRY	Ryogami san	0.29	228	P	Pn	17 00 05.3	+0.4
JRY				S	Sn	17 00 14.3	+0.2
JAG	Ashikaga	0.31	48	P	Pn	17 00 05.1	+0.1
JAG				S	Sn	17 00 14.0	-0.3
JKT	Katashina	0.56	7	P	Pn	17 00 07.2	+0.2
JKT				S	Sn	17 00 17.9	+0.2
MJAR	Matsushiro Arr	0.84	293	P	Pn	17 00 10.3	+0.5
	0.9nm,0.3s,baz=116,slow=11,SNR=17						
MJAR				S	Sn	17 00 24.2	+1.5
	0.7nm,0.3s,baz=62,slow=43,SNR=3.7						
MAT	Matsushiro	0.84	293	P	Pn	17 00 10.0	+0.1
MAT	Matsushiro	0.84	293	P	Pn	17 00 09.9	+0.1
MAT				S	Sn	17 00 20.4	-2.3
JYN	Shimob	0.87	215	P	Pn	17 00 10.7	+0.4
JYN				S	Sn	17 00 24.0	+0.5
JOD2	Odawara 2	0.95	184	P	Pn	17 00 10.8	-0.3
JOD2				eS	Sn	17 00 24.3	-0.6
JHK	Hiroka	1.04	353	P	Pn	17 00 12.7	+0.6
JHK				S	Sn	17 00 27.5	+0.7
JFNN	Fujinakano	1.09	201	P	Pn	17 00 13.5	+0.8
JHJ	Hachijo jima 2	3.13	170	P	Pn	17 00 40.5	+0.8
	20nm,0.3s,baz=329,slow=21,SNR=20						
JHJ				S	Sn	17 01 16.1	+0.2
	28nm,0.3s,baz=293,slow=23,SNR=6.5						
DAV	Davao City (W)	31.56	206	LR	LR	17 19 25.5	
	comp=Z,29nm,18.2s,baz=141,slow=37						
WRA	Warramunga Arr	56.04	185	P	P	17 09 22.1	-0.9
	0.2nm,0.5s,baz=5.6,slow=7.7,SNR=4.6						
ASAR	Alice Springs	59.76	186	P	P	17 09 48.8	-0.1
	0.2nm,0.8s,baz=0.2,slow=7.2,SNR=4.3						

MAN 31 17:03:36.3, 15˚.44N×121˚.66E, h5^{km}, mb4.5, ML3.3, MS3.1, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALP	Baler	0.31	345	eP	Pg	17 03 42.8	+0.5
BALP				eS	Sb	17 03 48.8	-0.9
POLP	Polilio Island	0.76	159	eP	Pg	17 03 51.3	+0.3
SMPP	San Manuel, Pa	1.18	307	eP	Pg	17 03 58.2	-0.7
SMPP				eS	Sn	17 04 16.0	0.0
CAUP	Cauayan	1.50	6	eP	Pn	17 04 02.1	-1.8
CAUP				eS	Sn	17 04 23.1	-0.8
ABRA	Dolores	2.38	338	eP	Pn	17 04 17.4	+1.4
ABRA				eS	Sg	17 04 51.5	-1.2
APYP	Conner	2.44	351	eP	Pn	17 04 17.0	+0.1
APYP				eS	Sn	17 04 48.7	+1.6

NIED ***31*** *17:03:00, 36˚.20N×142˚.00E, h14^{km}, Mw3.8 Best double couple: M$_0$4.78000×10^{14} NP1:φ$_s$43.00000°, δ67.00000°, λ103.00000°. NP2:φ$_s$192.00000°, δ26.00000°, λ61.00000°.*

JMA ***31*** *17:03:48.4±0.2, 36˚.24N×141˚.97E, h33^{km}, M3.8*

IDC ***31*** *17:03:50.0±1.1, 36˚.72N×141˚.69E, h0^{km}, mb3.8/11, mb1 3.8/13, mb1mx3.7/50, mbtmp3.8/13, ML2.6/2, MS3.1/2, Ms1 3.1/2, ms1mx2.5/39, Error ellipse: s-maj=30.6km s-min=20.5km az=76.0*

NEIC ***31*** *17:03:51.2±0.7, 36˚.25N±0˚.08×141˚.9E±0˚.1, h35^{km}±8^{km}, mb4.4/10, Error ellipse: s-maj=17.0km s-min=3.8km az=129.0*

ISC 31 17:03:46.6±3.3**, 36˚.19N**±0˚.05×**142˚.03E**±0˚.06**, h9^{km}**±20^{km}**, n57, σ1^{s}.32**/59**, mb4.0**/15**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	1.06	243	P	Pb	17 04 07.2	0.0
CHOJ				eS	Sb	17 04 21.7	+0.5
JHYU	Hitachinakayam	1.17	278	P	Pb	17 04 08.1	-1.0
JHYU				eS	Sb	17 04 23.6	-0.8
JIHU	Itakohorinouch	1.23	260	P	Pn	17 04 09.8	-0.3
JIHU				eS	Sb	17 04 25.7	-0.5
JHO	Hitachi	1.25	290	P	Pn	17 04 08.7	-1.6
ONAJ	Iwakimizuishiy	1.35	313	P	Pn	17 04 10.4	-1.3
JFK	Kawauchi	1.50	322	P	Pn	17 04 13.3	-0.5
BSO1	Boso 1	1.75	210	P	Pn	17 04 17.9	+1.2
BSO1				eS	Sb	17 04 40.3	-0.2
BSO3	Boso 3	1.85	222	P	Pn	17 04 18.9	+0.5
JFT	Otama	1.90	315	P	Pn	17 04 19.4	+0.1
JMM	Marumori	1.95	330	P	Pn	17 04 20.5	+0.6
JAG	Ashikaga	2.09	277	P	Pn	17 04 21.2	-0.7
JAG				eS	Sn	17 04 45.6	-2.5
JRY	Ryogami san	2.54	267	P	Pn	17 04 27.5	-0.5
JRY				eS	Sn	17 04 56.9	-2.2
JOD2	Odawara 2	2.56	250	P	Pn	17 04 29.2	+0.8
MJAR	Matsushiro Arr	3.10	278	Pn	Pn	17 04 36.5	+0.7
	3.1nm,0.3s,baz=103,slow=8.8,SNR=152						
MJAR				Sn	Sn	17 05 14.2	+1.2
	1.1nm,0.3s,baz=97,slow=10,SNR=6.3						
MJAR	Matsushiro Arr	3.10	278		Pn	17 04 35.7	-0.1
MAJO	Matsushiro	3.10	278		Pn	17 04 36.6	+0.8
MAT	Matsushiro	3.10	278	P	Pn	17 04 35.7	-0.1
MAT				S	Sn	17 05 12.7	-0.3
MJB9	Matsu-Tunnel	3.10	278		Pn	17 04 36.5	+0.7
JHJ2	Mitsune	3.57	211	Pn	Pn	17 04 44.1	+1.9
JHJ	Hachijo jima 2	3.57	212	Pn	Pn	17 04 41.8	-0.5
	27nm,0.3s,baz=149,slow=23,SNR=8.6						
JHJ				Sn	Sn	17 05 20.7	-3.9
	71nm,0.3s,baz=97,slow=22,SNR=11						
INU	Inuyama	4.16	260		Pn	17 04 51.2	+1.0
ERM	Erimo	5.89	8	Pn	Pn	17 05 15.0	+1.0
ASAJ	Asahikawa	7.93	3	Pn	Pn	17 05 42.0	-0.1
	0.8nm,0.3s,baz=211,slow=14,SNR=8.6						
ASAJ				Sn	Sn	17 07 09.3	-2.7
	0.3nm,0.3s,baz=66,slow=20,SNR=2.3						
JKA	Kamikawa-asahi	7.93	3		Pn	17 05 42.0	-0.1
JKA					Sn	17 07 09.3	-2.6
USRK	Ussuriysk Ar.	11.08	319	Pn	Pn	17 06 22.8	-2.5
	baz=103,slow=12,SNR=1.9						
KSRS	Korea Array	11.38	281	Pn	Pn	17 06 32.3	+3.0
	0.1nm,0.3s,baz=93,slow=14,SNR=9.7						
KSRS				LR	LR	17 10 46.4	
	comp=Z,52nm,18.4s,baz=90,slow=38						
YAK	Yakutsk	27.00	347	P	P	17 09 29.1	+0.5
	3.0nm,0.5s,baz=144,slow=4.2,SNR=3.9						
YAK	Yakutsk	27.00	347	P	P	17 09 29.2	+0.5
YAK				IAmb	IAmb	17 09 32.9	
	comp=Z,7.8nm,0.8s						
H11N2	WAKE ISLAND Hy	27.29	120	T	T	17 38 08.9	
	baz=312,slow=75,SNR=7.7						
H11N1	WAKE ISLAND Hy	27.30	120	T	T	17 38 05.8	
	baz=312,slow=75,SNR=8.1						
H11N3	WAKE ISLAND Hy	27.31	120	T	T	17 38 10.3	
	baz=312,slow=75,SNR=8.6						
ENH	Enshi	27.77	267	P	P	17 09 35.0	-0.9
ENH				IAmb	IAmb	17 09 36.5	
	comp=Z,8.5nm,0.7s						
H11S1	WAKE ISLAND Hy	27.99	122	T	T	17 38 54.9	
	baz=314,slow=75,SNR=9.8						
H11S3	WAKE ISLAND Hy	27.99	122	T	T	17 39 02.5	
	baz=314,slow=75,SNR=7.8						
H11S2	WAKE ISLAND Hy	28.00	122	T	T	17 39 03.8	
	baz=314,slow=75,SNR=8.0						
SONM	Songino Array	28.67	305	P	P	17 09 44.3	+0.5
	comp=Z,1.7nm,0.8s,baz=98,slow=9.0,SNR=8.1						
SONM	Songino Array	28.67	305	P	P	17 09 44.2	+0.3
ZALV	Zalesovo Beam	42.85	313	P	P	17 11 45.4	+0.5
	comp=Z,0.9nm,0.4s,baz=86,slow=5.2,SNR=4.9						
ZALV	Zalesovo Beam	42.85	313	P	P	17 11 45.3	+0.4
MK31	Makanchi Array	44.99	303	P	P	17 12 02.3	0.0
MKAR	Makanchi Array	44.99	303	P	P	17 12 02.6	+0.4
	comp=Z,1.7nm,0.6s,baz=88,slow=9.0,SNR=24						
MKAR	Makanchi Array	44.99	303	P	P	17 12 02.2	0.0
KURK	Kurchatov	46.84	309	P	P	17 12 16.8	0.0
KURK				IAmb	IAmb	17 12 29.2	
	comp=Z,3.8nm,0.9s						
BRVK	Borovoye	51.56	313	P	P	17 12 53.2	+0.3
KK31	Karatay Array	53.98	301	P	P	17 13 11.3	+0.4
KK31				IAmb	IAmb	17 13 49.0	
	comp=Z,8.3nm,1.9s						
KKAR	Karatay Array	53.98	301	P	P	17 13 11.3	+0.4
KKAR				IAmb	IAmb	17 13 49.0	
	comp=Z,8.3nm,1.9s						
WRA	Warramunga Arr	56.29	189	P	P	17 13 36.1	+8.4
	comp=Z,0.5nm,0.4s,baz=1.7,slow=7.5,SNR=4.7						
CHGR	Chuyangaron	56.48	296	P	P	17 13 29.4	+0.3
ABKAR	Akbulak array	58.86	311	P	P	17 13 45.5	-0.1
ASAR	Alice Springs	60.02	189	P	P	17 14 02.0	+8.2
	comp=Z,0.6nm,1.0s,baz=18,slow=10,SNR=5.0						
BBB	Bella Bella	62.33	44	LR	LR	17 36 35.8	
	comp=Z,21nm,20.0s,baz=52,slow=32						
YKA	Yellowknife Ar	64.29	30	P	P	17 14 25.4	+3.4
	comp=Z,0.1nm,0.5s,baz=299,slow=7.6,SNR=2.3						
FINES	FINESS Array B	69.79	333	P	P	17 14 57.7	+0.8
	comp=Z,0.9nm,0.7s,baz=2.9,slow=5.6,SNR=1.9						
NOA	NORSAR Array B	75.16	338	P	P	17 15 29.8	+0.7
	comp=Z,0.7nm,0.9s,baz=43,slow=5.4,SNR=1.7						
AKASG	Malin Array Be	75.27	323	P	P	17 15 30.1	+0.3
	comp=Z,0.6nm,0.4s,baz=46,slow=6.0,SNR=4.6						
REDW	Red Top Meadow	76.79	46	P	P	17 15 37.0	-1.9
BRTR	Keskin Array B	79.78	312	P	P	17 15 56.5	+1.1
	comp=Z,0.3nm,0.4s,baz=88,slow=4.4,SNR=2.3						

DJA ***31*** *17:06:13.4±0.8, 9˚S±3˚×11˚5E±˚, h31^{km}±12^{km}, M4.5/16, mB5.2/1, mb4.4/8, MLv4.5/16, Mw(mB)4.6/1*

IDC ***31*** *17:06:14.3±3.8, 9˚.27S×115˚.21E, h75^{km}±31^{km}, mb3.5/6,* *mb1 3.7/8, mb1mx3.4/40, mbtmp3.9/8, MS2.7/2, Ms1 2.7/2, ms1mx2.4/26, Error ellipse: s-maj=29.5km s-min=14.4km az=49.0*

ISC 31 17:06:14.2±0.6, **9°.38S**±0°.07×**115°.23E**±0°.06, **h75^{km}, n39, σ1^{s}.41**/44, **mb3.8**/6, **South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DNP	Denpasar	0.70	358	P	Pn	17 06 28.6	-0.9
DNP				S	Sn	17 06 40.0	-0.8
SRBI	Singaraja	1.29	359	P	Pn	17 06 36.5	-0.1
JAGI	Jajag, Banyuwa	1.40	310	P	Pn	17 06 36.6	-1.4
PLAI	Plampang	2.57	78	P	Pn	17 06 54.5	+0.8
KMMI	Kalianget	2.63	332	P	Pn	17 06 54.7	+0.2
GRJI	Gresik	3.67	312	P	Pn	17 07 08.3	-0.2
WBSI	Waikabubak, Su	4.11	94	P	Pn	17 07 15.3	+0.6
PCJI	Pacitan	4.18	286	P	Pn	17 07 15.1	-0.4
WOJI	Wonogiri, Jawa	4.53	289	P	Pn	17 07 20.1	-0.2
UGM	Wanagama	4.88	287	P	Pn	17 07 25.7	+0.6
BASI	Baing, Sumba	5.33	99	P	Pn	17 07 32.1	+0.8
	0.3nm33nm,0.8s						
KAPI	Kappang	6.24	46	P	Pn	17 07 44.2	+0.5
	2.9nm,0.3s,baz=205,slow=7.6,SNR=2.9						
KAPI				S	Sn	17 08 52.4	-1.3
	4.3nm,0.3s,baz=31,slow=21,SNR=13						
KAPI				LR	LR	17 10 22.7	
	comp=Z,62nm,20.6s,baz=252,slow=40						
BKSI	Bulukumba	6.31	51	P	Pn	17 07 45.2	+0.6
	0.1nm22nm,0.5s						
EDFI	Ende, Flores	6.41	85	P	Pn	17 07 46.8	+0.7
BNSI	Bone	6.92	45	P	Pn	17 07 53.7	+0.7
	0.2nm20nm,1.5s						
MMRI	Maumere	6.96	84	P	Pn	17 07 54.4	+0.8
	0.2nm57nm,0.7s						
CISI	Cisompet, Garu	7.56	283	P	Pn	17 08 01.1	-0.7
	0.2nm2μm34nm,0.6s						
LEM	Lembang	7.96	288	S	Sn	17 09 23.6	-12
	3.5nm,0.3s,baz=156,slow=18,SNR=4.9						
CNJI	Cibinong	8.28	284	P	Pn	17 08 11.1	-0.4
	30nm,1.2s						
SOEI	Soe	8.92	93	P	Pn	17 08 20.7	+0.3
	16nm,0.9s						
FITZ	Fitzroy Crossi	13.31	132	P	Pn	17 09 16.9	-3.1
	1.1nm,0.3s,baz=302,slow=8.2,SNR=29						
FITZ				S	Sn	17 11 37.2	-9.1
	0.5nm,0.3s,baz=185,slow=21,SNR=8.3						
SIJI	Sorong	18.06	63	P	Pn	17 10 20.3	+0.1
	0.9nm,0.3s,baz=283,slow=6.8,SNR=9.9						
WRA	Warramunga Arr	21.23	122	P	P	17 10 54.6	+0.4
	1.0nm,0.7s,baz=294,slow=12,SNR=17						
WRA				S	S	17 14 43.6	-2.7
	1.1nm,0.9s,baz=289,slow=21,SNR=4.1						
ASAR	Alice Springs	22.81	131	P	P	17 11 11.7	+0.6
	2.2nm,0.6s,baz=304,slow=8.9,SNR=72						
ASAR				PcP	PcP	17 15 00.8	+0.8
	0.3nm,0.4s,baz=308,slow=1.8,SNR=4.7						
ASAR				S	S	17 15 17.4	+2.7
	0.1nm,0.4s,baz=294,slow=22,SNR=1.9						
CMAR	Chiang Mai Arr	32.00	330	P	P	17 12 33.0	-0.5
	0.9nm,0.8s,baz=158,slow=8.7,SNR=7.9						
STKA	Stephens Creek	33.14	136	P	P	17 12 44.4	+1.0
	1.4nm,0.6s,baz=306,slow=8.4,SNR=4.9						
ODAN	Odare	45.03	324	*e*P	P	17 14 21.5	-1.4
	8.5nm,0.6s						
TAPN	Taplejung	45.22	325	*e*P	P	17 14 24.0	-0.5
JIRN	Jiri	46.34	323	*e*P	P	17 14 32.8	-0.5
	22nm,0.5s						
GUN	Gumba	46.70	323	*e*P	P	17 14 35.5	-0.7
	10nm,0.5s						
PKI	Pulchoki	46.73	323	*e*P	P	17 14 35.1	-1.3
	3.3nm,0.4s						
PKIN	Phulchoki	46.74	323	*e*P	P	17 14 35.2	-1.2
	3.6nm,0.5s						
GKN	Gorkha	47.51	322	*e*P	P	17 14 41.3	-1.0
	16nm,0.3s						
KSRS	Korea Array	48.09	14	LR	LR	17 37 32.7	
	comp=Z,8.7nm,19.8s,baz=40,slow=39						
DANN	Dangsing	48.30	322	*e*P	P	17 14 47.4	-1.1
	22nm,0.5s						
SONM	Songino Array	57.50	353	PcP	PcP	17 16 48.5	0.0
	0.4nm,0.4s,baz=207,slow=3.9,SNR=5.3						
KSH	Kashi	60.77	326	P	P	17 16 23.0	+4.6
KSH				sP	pP	17 16 40.8	+3.7
KSH				PcP	PcP	17 17 05.5	+3.8
KSH				PcS	PcS	17 21 04.8	+0.3
KSH				S	S	17 24 34.5	+4.4
MKAR	Makanchi Array	63.17	335	P	P	17 16 33.1	-1.1
	0.3nm,0.2s,baz=142,slow=7.4,SNR=9.4						
PETK	Petropavlovsk-	71.96	25	P	P	17 17 28.7	-0.8
	1.9nm,0.9s,baz=182,slow=4.5,SNR=4.2						

DJA 31 17:08:18.7±0.3, **1°N**±4°×**12°6E**±°, **h10^{km}, M3.0**/6, **MLv3.0**/6, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.22	79	P	Pb	17 08 41.9	0.0
TNTI				S	Sb	17 08 57.3	-0.4
LBMI	Labuha	1.77	131	P	Pn	17 08 49.4	0.0
KMSI	Cibinong	2.19	271	P	Pn	17 08 55.6	+0.4
KMSI	Cibinong	2.19	271	P	Pn	17 08 55.6	+0.4
SANI	Sanana	2.58	184	P	Pn	17 09 00.4	-0.1

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*IDC **31** 17:38:57.9±1.3, 3°.25N×84°.31W, h0^{km}, mb3.8/6, mb1 4.1/8, mb1mx3.9/30, mbtmp4.0/8, ML3.7/2, MS3.8/24, Ms1 3.8/24, ms1mx3.8/34, Error ellipse: s-maj=38.6km s-min=22.1km az=56.0*

*NEIC **31** 17:38:59.9±2.5, 3°.16N±0°.08×84°.2W±0°.1, h10^{km}±1^{km}, mb4.4/5, Error ellipse: s-maj=17.9km s-min=13.6km az=112.0*

*GCMT **31** 17:39:01.9±0.3, 3°.10N±0°.01×84°.33W±0°.02, h22^{km}±1^{km}, MW4.9/103, Moment Tensor Solution. s38,c42; s103,c129; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.22±.12; $M_{\theta\theta}$1.04±.10; $M_{\phi\phi}$-0.81±.12; $M_{r\theta}$0.10±.16; $M_{\theta\phi}$2.80±.09; $M_{\phi r}$0.37±.18; Best double couple: $M_0$2.97400×10^{16} NP1:ϕ_s99.00000°, δ83.00000°, λ0.00000°. NP2:ϕ_s9.00000°, δ90.00000°, λ173.00000°. Principal axes: T 3.0900, Plg5.0000°, Azm324.0000°; N -0.2280, Plg83.0000°, Azm189.0000°; P -2.8590, Plg5.0000°, Azm54.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 17:39:02.1±0.7, **3°.25N**±0°.08×**84°.28W**±0°.08, **h28^{km}, n50, σ1^{s}.38**/29, **mb3.9**/6, **MS3.9**/21, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GR1C	Gorgona, Isla	6.10	92	*e*P	Pn	17 40 30.6	0.0
JTS	Las Juntas de	7.03	355	Pn	Pn	17 40 43.2	-0.1
	10nm,0.3s,baz=159,slow=7.8,SNR=17						
JTS				Sn	Sn	17 42 02.9	+0.4
	baz=354,slow=19,SNR=1.0						
PAYG	Puerto Ayora	7.16	237	Pn	Pn	17 40 45.1	+0.1
SOTA	Rioblanco	7.74	98	*e*P	Pn	17 40 53.8	+0.3
PCON	Cinco Dias	7.92	96	*e*P	Pn	17 40 57.3	+1.3
YOTC	Yotoco, Valle	7.95	84	*e*P	Pn	17 40 55.2	-0.8
ORTC	Ortega, Tolima	9.04	86	*e*P	Pn	17 41 12.4	+1.5
RREF	El Recreo	9.06	79	*e*P	Pn	17 41 13.3	+1.6
GUY2C	Guyana, Caldas	9.10	77	*e*P	Pn	17 41 14.4	+2.2
NORC	Norcasia	9.66	76	*e*P	Pn	17 41 24.2	+4.8
ROSC	El Rosal	10.06	81	LR	LR	17 45 18.1	
	comp=Z,826nm,18.1s,baz=258,slow=38						
CSGN	Cosiguina Volc	10.20	342	Pn	Pn	17 41 29.7	+2.8
ATAH	Atahualpa	11.86	150	LR	LR	17 46 11.6	
	comp=Z,1μm,18.6s,baz=332,slow=36						
APG	El Apazote	13.18	333	Pn	P	17 42 13.8	-3.7
	0.3nm,0.3s,baz=180,slow=13,SNR=7.8						
SDV	Santo Domingo	14.67	67	Pn	Pn	17 42 27.9	-0.3
	0.4nm,0.3s,baz=197,slow=4.9,SNR=3.3						
SDV				LR	LR	17 47 50.5	
	comp=Z,523nm,19.8s,baz=264,slow=36						
SDV	Santo Domingo	14.67	67	Pn	Pn	17 42 27.3	-0.9
NNA	Nana	16.84	154	LR	LR	17 48 52.9	
	comp=Z,199nm,21.6s,baz=311,slow=35						
CMIG	Matias Romero	17.26	324	P	P	17 43 05.8	+3.2
	0.1nm,0.3s,baz=148,slow=10,SNR=2.4						
CMIG				LR	LR	17 48 25.2	
	comp=Z,549nm,20.9s,baz=159,slow=33						
TEIG	Tepich	17.32	347	LR	LR	17 49 14.3	
	comp=Z,561nm,19.5s,baz=82,slow=36						
PCRV	Puerto La Cruz	20.67	70	P	P	17 43 40.6	+0.4
	14nm,1.0s,baz=248,slow=6.2,SNR=3.2						
PLCV	Puerto La Cruz	20.71	70	P	P	17 43 40.6	0.0
SJG	San Juan	23.10	49	LR	LR	17 53 32.2	
	comp=Z,86nm,18.0s,baz=272,slow=38						
SAML	Samuel	24.27	120	P	P	17 44 16.5	-0.7
LPAZ	La Paz	25.13	141	P	P	17 44 25.6	0.0
	0.8nm,0.5s,baz=293,slow=7.7,SNR=5.1						
LPAZ	La Paz	25.13	141	P	P	17 44 25.5	-0.1
LPAZ				IAmb	IAmb	17 44 52.3	
	comp=Z,6.9nm,1.2s						
LVC	Limon Verde	29.76	150	LR	LR	17 55 43.9	
	comp=Z,170nm,21.7s,baz=312,slow=34						
SIV	San Ignacio	29.86	130	LR	LR	17 57 11.6	
	comp=Z,767nm,20.9s,baz=296,slow=37						
TXAR	Lajitas Array	31.82	327	LR	LR	17 58 24.9	
	comp=Z,42nm,21.6s,baz=0.0,slow=37						
M44A	Midewin, Midew	38.12	355	P	P	17 46 17.2	-1.6
CPUP	Villa Florida	39.29	140	LR	LR	18 04 27.3	
	comp=Z,272nm,19.8s,baz=340,slow=39						
BDFB	Brasilia	40.49	119	LR	LR	18 03 31.8	
	comp=Z,246nm,18.6s,baz=301,slow=36						
PDAR	Pinedale Array	45.34	334	LR	LR	18 07 27.5	
	comp=Z,277nm,19.4s,baz=160,slow=38						
HWUT	Hardware Ranch	45.36	331	P	P	17 47 19.2	+0.9
HWUT				IAmb	IAmb	17 47 22.4	
	comp=Z,3.1nm,1.0s						
PLCA	Paso Flores	45.53	165	LR	LR	18 02 06.1	
	comp=Z,127nm,20.1s,baz=258,slow=30						
NVAR	Mina Array Bea	46.79	323	P	P	17 47 29.7	+0.1
	comp=Z,1.0nm,0.7s,baz=139,slow=8.4,SNR=6.4						
NVAR				LR	LR	18 05 41.4	
	comp=Z,152nm,20.6s,baz=172,slow=34						
ULM	Lac du Bonnet	47.86	350	P	P	17 47 37.1	-0.4
	comp=Z,4.6nm,0.9s,baz=175,slow=6.9,SNR=8.2						
ULM				LR	LR	18 08 47.1	
	comp=Z,69nm,18.5s,baz=114,slow=37						
ULM	Lac du Bonnet	47.86	350	P	P	17 47 36.8	-0.6
ULM				IAmb	IAmb	17 47 43.5	
	comp=Z,7.6nm,1.1s						
SCHQ	Schefferville	53.35	12	LR	LR	18 12 00.7	
	comp=Z,41nm,18.1s,baz=350,slow=37						
YKA	Yellowknife Ar	63.26	345	P	P	17 49 27.6	-0.4
	comp=Z,0.2nm,0.5s,baz=141,slow=7.0,SNR=5.4						
YKA				LR	LR	18 20 21.2	
	comp=Z,67nm,18.2s,baz=0.0,slow=39						
PPT2	Papeete2	67.60	250	*e*LR	LR	18 10 29.0	
	comp=Z,291nm,26.8s,baz=51						
TBI	Tubuai	68.72	244	*e*LR	LR	18 11 01.9	
	comp=Z,266nm,26.0s,baz=54						
ILAR	Eielson Array	75.66	337	P	P	17 50 44.7	+0.2
	comp=Z,0.5nm,1.0s,baz=136,slow=5.7,SNR=2.4						
ILAR				LR	LR	18 26 02.8	
	comp=Z,118nm,19.9s,baz=134,slow=37						
RAR	Rarotonga	77.70	248	LR	LR	18 18 07.2	
	comp=Z,98nm,21.7s,baz=196,slow=30						
DBIC	Dimbokro	79.13	84	LR	LR	18 23 11.9	
	comp=Z,21nm,20.1s,baz=242,slow=34						
NOA	NORSAR Array B	89.85	29	LR	LR	18 27 20.8	
	comp=Z,16nm,21.6s,baz=270,slow=32						
FINES	FINESS Array B	96.75	27	LR	LR	18 36 35.6	
	comp=Z,26nm,18.9s,baz=300,slow=36						
URZ	Urewera	98.77	232	LR	LR	18 28 20.2	
	comp=Z,46nm,19.0s,baz=73,slow=30						
DZM	Mont Dzumac	109.08	248	*e*LR	LR	18 29 37.4	
	comp=Z,100nm,30.4s						
ASAR	Alice Springs	137.91	238	PKP	PKPdf	17 58 25.0	0.0
	comp=Z,0.2nm,0.8s,baz=84,slow=2.3,SNR=1.7						
WRA	Warramunga Arr	138.85	243	PKP	PKPdf	17 58 27.3	+0.4
	comp=Z,0.4nm,0.8s,baz=104,slow=1.7,SNR=2.8						

IDC 31 17:45:37.5±7.7, **19°.51N**×**145°.07E, h126**^{km}±64^{km}, **mb3.1**/3, **mb1 3.5**/4, **mb1mx3.0**/39, **mbtmp3.7**/4, **Error ellipse: s-maj=172.1km s-min=27.6km az=111.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.89	182	P	Pn	17 47 02.5	0.0
	7.2nm,0.3s,baz=351,slow=19,SNR=9.2						
GUMO				S	Sn	17 48 09.5	+0.6
	4.7nm,0.3s,baz=346,slow=12,SNR=1.4						
H11S3	WAKE ISLAND Hy	20.47	89	T	T	18 10 49.7	
	baz=275,slow=75,SNR=7.0						
H11S1	WAKE ISLAND Hy	20.48	89	T	T	18 11 02.4	
	baz=275,slow=75,SNR=6.4						
H11S2	WAKE ISLAND Hy	20.49	89	T	T	18 11 03.8	
	baz=275,slow=75,SNR=9.6						
WRA	Warramunga Arr	40.59	196	P	P	17 53 04.9	-0.1
	0.7nm,0.5s,baz=19,slow=8.7,SNR=11						
ASAR	Alice Springs	44.27	195	P	P	17 53 34.5	-0.2
	0.1nm,0.4s,baz=13,slow=8.0,SNR=12						
YKA	Yellowknife Ar	77.55	28	P	P	17 57 19.2	0.0
	0.2nm,0.6s,baz=290,slow=5.2,SNR=4.2						

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*TEH **31** 18:00:07.6, 37°.15N×44°.86E, h10^{km}, ML2.8*

*ISK **31** 18:00:08.6, 36°.79N×44°.60E, h5^{km}, ML3.2/6*

*ATA **31** 18:00:24.7±1.5, 37°.82N×43°.91E, h12^{km}±28^{km}, ML2.5, MW3.4*

ISC 31 18:00:09.0±1.1, **37°.04N**±0°.06×**44°.81E**±0°.03, **h12^{km}, n23, σ1^{s}.60**/26, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAHB	Mahabad	0.77	110	*e*Pg	Pg	18 00 23.2	-0.6
MAHB				*e*		18 00 39.5	
CUKT	Cukurca	0.98	283	PG	Pg	18 00 27.0	-1.0
CUKT				SG	Sg	18 00 41.1	+0.3
CUKT	Cukurca	0.98	283	*e*Pg	Pg	18 00 27.0	-1.0
ITBZ	Tabriz	1.60	41	*e*Pg	Pn	18 00 36.6	-0.6
ITBZ				*e*		18 01 02.6	
TVAN	Van	1.86	324	*e*P	Pn	18 00 39.8	-1.1
TVAN				IAML		18 01 14.8	
	comp=Z,43nm,1.0s						
GEVA	Gevas	1.89	313	*e*P	Pn	18 00 41.2	+0.1
GEVA				IAML		18 01 12.0	
	comp=Z,38nm,0.7s						
VANB	Van	1.92	325	PN	Pb	18 00 44.1	+0.1
AKDM	Akdamar-Van	1.94	312	PN	Pb	18 00 44.9	+0.5
AKDM				SN	Sg	18 01 11.6	+0.1
SIRT	Sirnak	1.95	285	PN	Pn	18 00 43.2	+1.2
SIRT				SN	Sb	18 01 08.3	-0.4
IHRS	Heris	2.19	53	*e*Pn	Pn	18 00 47.7	+2.3
IHRS				*e*		18 00 59.5	
ISRB	Sarab	2.41	70	*e*Pg	Pb	18 00 51.5	-0.8
ISRB				*e*		18 01 27.3	
BLIS	Bitlis-Merkez	2.54	304	*e*P	Pb	18 00 54.7	+0.1
DYDN	Diyadin	2.66	341	*e*P	Pg	18 00 58.9	-1.0
DYDN				*e*S	Sn	18 01 23.8	-0.2
DYDN				IAML		18 02 08.1	
	comp=Z,15nm,0.9s						
GURO	Guroymak-BITLI	2.67	305	PN	Pn	18 00 54.7	+2.8
IGDI	IGDIR	2.89	349	*e*P	Pb	18 01 00.9	+0.5
IGDI				IAML		18 01 43.9	
	comp=Z,8.1nm,0.4s						
EATA	Eleskirt	3.36	328	*e*P	Pb	18 01 09.1	+0.5
EATA				IAML		18 02 07.7	
	comp=N,12nm,0.2s						
BNGL	BINGOL	3.47	305	*e*P	Pb	18 01 08.2	-2.2
MAZI	Mazidag	3.51	278	PN	Pn	18 01 04.3	+0.9
EAK	Akyaka	3.76	346	*e*P	Pb	18 01 13.8	-1.6
HOMI	Horasan	3.77	324	*e*P	Pb	18 01 13.2	-2.4
HOMI				IAML		18 02 09.7	
	comp=Z,17nm,1.3s						
AKDA	Akdag	4.08	320	*e*P	Pg	18 01 46.5	+19
SVRC	Sivrice-ELAZID	4.56	289	PN	Pn	18 01 20.3	+2.3
EPOS	Posof	4.75	341	*e*P	Pn	18 01 24.7	+4.3

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*ISK **31** 18:01:04.9, 41°.04N×43°.92E, h9^{km}, ML2.6/8*

*TIF **31** 18:01:05.2, 41°.03N×43°.91E, h15^{km}±1^{km}*

*NORS **31** 18:01:08.2±0.0, 41°.30N×44°.00E, h0^{km}, MPVA3.6*

ISC 31 18:01:06.0±1.0, **41°.04N**±0°.03×**43°.90E**±0°.02, **h13**^{km}±10^{km}, **n39, σ0^{s}.97**/66, **Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BGD	Bogdanovka	0.32	314	P	Pg	18 01 12.8	+0.2
BGD				S	Sb	18 01 18.2	-0.7
AKH	Akhalkalaki	0.48	320	P	Pg	18 01 15.5	-0.1
AKH				S	Sg	18 01 22.4	+0.5
AKH	Akhalkalaki	0.48	320	PG	Pg	18 01 15.4	-0.1
AKH				SG	Sg	18 01 22.2	+0.2
KZRT	Kazreti	0.51	47	P	Pg	18 01 15.7	-0.3
KZRT				S	Sg	18 01 22.8	0.0
KZRT	Kazreti	0.51	47	*e*Pg	Pg	18 01 15.7	-0.3
KZRT				*e*Sg	Sg	18 01 22.8	0.0
KARS	Kars	0.75	237	PG	Pg	18 01 20.1	-0.4
KARS				SG	Sg	18 01 30.8	+0.4
BKRG	Bakuriani	0.77	338	P	Pb	18 01 21.0	-0.4
BTNK	Botanikuri	0.93	46	P	Pb	18 01 23.1	-0.9
BTNK				S	Sg	18 01 36.4	+0.3
BTNK	Botanikuri	0.93	46	*e*Pg	Pb	18 01 23.1	-0.9
BTNK				*e*Sg	Sg	18 01 36.0	-0.1
TBLG	Delisi	0.93	42	P	Pb	18 01 23.1	-0.9
TBLG				S	Sg	18 01 35.9	-0.3
TBLG	Delisi	0.93	42	PG	Pb	18 01 23.1	-0.9
TBLG				SG	Sg	18 01 36.3	+0.1
TBLG	Delisi	0.93	42	*e*Pg	Pb	18 01 23.1	-0.9
TBLG				*e*Sg	Sg	18 01 35.9	-0.3
TASB	TASBURUN-IGDIR	1.09	166	PN	Pb	18 01 26.0	-0.7
GNI	Garni	1.10	144	PN	Pb	18 01 26.4	-0.5
SENK	Senkaya-Erzuru	1.27	248	PN	Pn	18 01 29.5	-0.1
TKB	Tkibuli	1.47	333	P	Pb	18 01 33.6	+0.3
TKB				S	Sg	18 01 53.4	0.0
GUDG	Gudauri	1.48	17	P	Pb	18 01 33.5	-0.1
GUDG				S	Sg	18 01 53.8	-0.1
GUDG	Gudauri	1.48	17	*e*Pg	Pb	18 01 33.5	-0.1
GUDG				*e*Sg	Sg	18 01 53.8	-0.1
ONI	Oni	1.58	348	P	Pn	18 01 34.1	+0.3
ONI	Oni	1.58	348	PN	Pn	18 01 34.1	+0.3
ONI	Oni	1.58	348	*e*Pg	Pg	18 01 36.1	-0.3
DDFL	Dedoflistskaro	1.72	76	P	Pg	18 01 38.7	-0.3
DDFL				S	Sg	18 02 07.3	+5.9
DDFL	Dedoflistskaro	1.72	76	*e*Pg	Pg	18 01 38.7	-0.3
ZEI	Tsey	1.75	0	*e*Pg	Pb	18 01 38.5	+0.5
ZEI				*e*Sg	Sg	18 02 02.2	+0.1
BATM	Batumi	1.75	289	P	Pb	18 01 38.2	+0.1
BATM				S	Sg	18 02 01.1	-1.4
BATM	Batumi	1.75	289	PN	Pn	18 01 36.5	+0.4
BCA	Borcka	1.77	284	PN	Pn	18 01 36.8	+0.5
LACR	Lac	1.81	9	*i* Pg	Pb	18 01 39.3	+0.3
LACR				*e*Sg	Sg	18 02 03.5	-0.7
DIGR	Digorskoe uzhe	1.87	353	*e*Pg	Pb	18 01 40.6	+0.5
DIGR				*e*Sg	Sg	18 02 06.4	+0.2
KOPR	Koprukoy-ERZUR	1.88	237	PN	Pn	18 01 38.6	+0.6
LGD	Lagodekhi	1.93	65	P	Pb	18 01 40.6	-0.5
LGD				S	Sg	18 02 07.6	-0.4
LGD	Lagodekhi	1.93	65	*e*Pg	Pb	18 01 40.6	-0.5
LGD				*e*Sg	Sg	18 02 07.6	-0.4
KMGR	Komgaron	2.14	19	*e*Pg	Pb	18 01 45.1	+0.5
KMGR				*e*Sg	Sg	18 02 13.6	-1.1
LSNR	Lesken	2.23	359	*e*Pg	Pb	18 01 46.7	+0.5
LSNR				*e*Sg	Sg	18 02 16.4	-1.4
BTLR	Botlikh	2.37	46	*e*Pg	Pb	18 01 48.3	-0.3
BTLR				*e*Sg	Sb	18 02 18.6	+0.8
NEY	Neytrino	2.37	339	*e*Pg	Pb	18 01 49.2	+0.5
NEY				*e*Sg	Sg	18 02 20.8	-1.5
CHOM	Cayeli-Rize	2.38	272	PN	Pn	18 01 45.5	+0.9
XNZR	Khunzakh	2.58	54	*e*Pn	Pb	18 01 51.5	-0.7
XNZR				*e*Sn	Sb	18 02 24.4	+0.6
AKT	Akhty	2.92	80	*i* Pn	Pb	18 01 56.5	-1.4
AKT				*e*Sn	Sb	18 02 33.7	+0.1

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*SJA **31** 18:05:13.8±0.9, 26°.11S×69°.85W, h50^{km}, ML3.5, MW3.4*

*GUC **31** 18:05:14.7±0.7, 26°.17S×70°.03W, h68^{km}±27^{km}, ML3.6*

ISC 31 18:05:16.3±1.4, **26°.15S**±0°.04×**70°.2W**±0°.1, **h61^{km}, n17, σ0^{s}.98**/20, **4C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO02	Mina Guanaco	1.12	28	⇑*i*P	Pn	18 05 36.3	+0.1
GO02				*i* S	Sn	18 05 51.8	+0.8
GO02				IAML		18 05 53.0	
	comp=N,4μm,0.2s						
GO03	Copiap	1.44	182	⇑*i*P	Pn	18 05 40.2	0.0
GO03				*i* S	Sn	18 05 59.0	+0.8
GO03				IAML		18 06 00.0	
	comp=N,836nm,0.3s						
GO03	Copiap	1.44	182	*i* P	Pn	18 05 40.3	0.0
GO03				*e*S	Sn	18 05 59.5	+1.3
PB14	IPOC Station P	1.53	352	*e*P	Pn	18 05 42.6	+0.9
PB10	IPOC Station P	2.65	352	⇑*i*P	Pn	18 05 56.0	-0.7
PB10	IPOC Station P	2.65	352	*i* P	Pn	18 05 56.3	-0.3
PB10				IAML		18 06 32.3	
	comp=Z,64nm,0.5s						
PB15	IPOC Station P	3.00	13	⇑*i*P	Pn	18 06 01.5	-0.1
PB15	IPOC Station P	3.00	13	*i* P	Pn	18 06 01.6	-0.1
PB15				IAML		18 07 02.2	
	comp=Z,833nm,0.4s						
VCA	Vinchina	3.11	146	*i* P	Pn	18 06 04.1	+1.0
VCA				IAML		18 06 49.0	
	comp=Z,39nm,0.5s						
PB05	IPOC Station P	3.28	360	*i* P	Pn	18 06 04.2	-1.2
PB05				IAML		18 07 01.6	
	comp=Z,56nm,0.4s						
PB06	IPOC Station P	3.48	9	*i* P	Pn	18 06 06.9	-1.1
PB06				IAML		18 07 10.2	
	comp=Z,163nm,0.4s						
LVC	Limon Verde	3.71	18	*i* P	Pn	18 06 10.7	-0.8
LVC				IAML		18 07 16.8	
	comp=Z,76nm,0.6s						
GO04	Tololo Observa	4.04	188	⇓*e*P	Pn	18 06 14.3	-1.5
PB09	IPOC Station P	4.42	11	*i* P	Pn	18 06 20.3	-0.7
PB09				IAML		18 07 48.8	
	comp=Z,89nm,0.7s						
ACCO	Cerro Coronel	4.53	168	*i* P	Pn	18 06 22.9	+0.3
AMOG	MOGNA	4.99	163	*i* P	Pn	18 06 28.0	-0.8
AMOG				IAML		18 07 28.9	
	comp=Z,20nm,0.4s						
APLL	PUNTA DE LOS L	5.31	144	*i* P	Pn	18 06 31.0	-2.1

IDC 31 18:17:22.0±62.0, **21°.31S**×**176°.72W, h0**^{km}, **mb4.0**/3, **mb1 4.2**/3, **mb1mx3.7**/28, **mbtmp4.0**/3, **Error ellipse: s-maj=1145.0km s-min=175.0km az=85.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.53	245	P	P	18 24 45.3	-1.1
	0.9nm,0.5s,baz=60,slow=8.1,SNR=3.6						
ASAR	Alice Springs	45.51	257	P	P	18 25 43.3	-0.3
	1.0nm,0.4s,baz=99,slow=7.3,SNR=20						
WRA	Warramunga Arr	45.68	263	P	P	18 25 45.6	+0.6
	1.0nm,0.3s,baz=93,slow=8.3,SNR=57						

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*IASPEI **31** 18:17:28.4±0.8, 33°.93N±0°.02×117°.93W±0°.02, h15^{km}±5^{km}, Error ellipse: s-maj=2.9km s-min=2.2km az=29.8, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ANF **31** 18:17:28.1±0.1, 33°.93N×117°.93W, h24^{km}±2^{km}, ML2.6/27, Error ellipse: s-maj=1.4km s-min=1.3km az=32.0*

*PAS **31** 18:17:28.9±1.8, 33°.917N±0°.010×117°.94W±0°.01, h4^{km}±5^{km}, ML2.7/215, Error ellipse: s-maj=1.7km s-min=1.4km az=59.0*

*NEIC **31** 18:17:28.5±1.4, 33°.921N±0°.008×117°.93W±0°.01, h17^{km}±1^{km}, Error ellipse: s-maj=1.9km s-min=0.8km az=60.0*

*SCEDC **31** 18:17:29.2, 33°.93N×117°.92W, h1^{km}*

ISC 31 18:17:28.5±0.8, **33°.92N**±0°.02×**117°.93W**±0°.01, **h14**^{km}±5^{km}, **n92, σ0^{s}.63**/128, **Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FULC	Fullerton	0.05	172		Pg	18 17 30.6	-0.5
FULC					Sg	18 17 33.0	+0.1
RHC	Rose Hills Cem	0.10	319		Pb	18 17 31.5	-0.9
BREC	Barre Substati	0.12	200		Pg	18 17 32.2	+0.4
BREC					Sb	18 17 35.6	+0.3
PSRC	Puddingstone R	0.20	31		Pg	18 17 33.0	0.0
GVRC	Garvey Reservo	0.20	309		Sb	18 17 37.7	0.0
GVRC	Garvey Reservo	0.20	309		Pg	18 17 33.4	+0.3
PEM	Pine Mountain	0.25	12		Pg	18 17 33.9	0.0
WTT2	Watts, South G	0.27	276		Pb	18 17 35.4	+0.2
MLSC	Mira Loma	0.32	75		Sg	18 17 39.8	+0.3
MWC	Mount Wilson	0.32	341		Pg	18 17 34.8	-0.4
PASC	Pasadena Art C	0.33	320	Pg	Pg	18 17 34.8	-0.4

PASC	Pasadena Art C	0.33	320		Sg	18 17 39.7	-0.1
SSK	Sunset Peak	0.35	34		Pg	18 17 35.9	+0.1
FMP	Fort Macarthur	0.37	235	P	Pb	18 17 37.1	+0.3
	baz=55						
FMP				S	Sg	18 17 41.2	+0.2
	baz=55						
XTL	Crystal Lake,	0.38	9		Pg	18 17 36.0	-0.2
BFSC	Mount Baldy Ra	0.39	36		Pg	18 17 36.4	-0.1
BFSC					Sg	18 17 42.3	+0.5
BFSC	Mount Baldy Ra	0.39	36	P	Pg	18 17 36.3	-0.1
	baz=215,SNR=30						
BFSC				S	Sg	18 17 42.1	+0.4
	baz=215						
CHFC	Chilao Flat St	0.42	349		Pg	18 17 36.5	-0.5
SS2	San Sevaine	0.46	51		Pg	18 17 37.7	+0.1
RVR	Riverside	0.47	81		Pg	18 17 37.6	-0.2
RVR					Sg	18 17 44.0	-0.1
DECC	Green Verdugo	0.47	315		Pg	18 17 38.1	+0.2
DECC					Sg	18 17 44.8	+0.6
DECC	Green Verdugo	0.47	315	P	Pg	18 17 37.5	-0.4
	baz=133						
DECC				S	Sg	18 17 44.6	+0.4
	baz=133						
SME	Santa Rosa Min	0.49	102		Pg	18 17 38.1	-0.1
JNH	Juniper Hills	0.53	358		Pg	18 17 38.5	-0.4
HOLC	Holcomb Ridge	0.54	8		Pg	18 17 39.3	+0.1
CSP	Cedar Springs	0.60	52		Pg	18 17 40.3	-0.2
IR2C	Iron Canyon	0.61	320		Pg	18 17 40.0	-0.5
LRRC	Littlerock Res	0.61	352		Pg	18 17 40.1	-0.3
CJV	Casa Juvan	0.63	344		Pg	18 17 40.4	-0.6
PEC	Perris	0.64	92		Pg	18 17 40.9	-0.2
CIAC	Catalina I. Ai	0.66	218		Pg	18 17 41.6	+0.3
CIAC					Sb	18 17 51.3	+0.5
CIS	Catalina Islan	0.66	218	P	Pg	18 17 41.5	+0.2
	baz=38,SNR=5.0						
CIS				S	Sg	18 17 50.8	+0.7
	baz=38						
CFT	Crafton Hills	0.69	80		Pg	18 17 42.4	+0.4
MURC	Murrieta	0.69	117		Pb	18 17 41.8	-0.7
MURC					Sg	18 17 51.4	+0.3
MURC	Murrieta	0.69	117	P	Pb	18 17 41.7	-0.7
	baz=299,SNR=13						
MURC				S	Sg	18 17 51.4	+0.3
	baz=299						
SBB	Saddle Back Bu	0.77	7		Pn	18 17 44.6	-0.5
LEOC	Leona Valley	0.77	337		Pb	18 17 42.8	-1.0
HMTC	Hemet	0.80	105		Pb	18 17 43.5	-0.7
BACC	Bachelor Mtn.	0.80	112		Pb	18 17 43.7	-0.6
DGR	Domenigoni Val	0.81	109		Pb	18 17 43.7	-0.8
DGR					Sb	18 17 54.9	-0.5
BBRC	Big Bear Solar	0.91	68	P	Pb	18 17 45.8	-0.4
	baz=248						
BBRC				S	Sb	18 17 56.6	-1.6
	baz=248						
OSI	Osito Audit: C	0.95	317	S	Sb	18 17 58.9	-0.5
	baz=136						
EDW2	Edwards Air Fo	0.96	357	P	Pb	18 17 46.2	-0.8
	baz=176,SNR=12						
BLG	Laguna Peak, P	0.96	281	P	Pb	18 17 46.4	-0.5
	baz=100						
BLG				S	Sb	18 17 59.3	-0.3
	baz=100						
GORC	Green Oak Ranc	0.96	142		Sb	18 17 58.9	-0.7
HYS	Haystack Butte	0.99	18		Pb	18 17 47.3	-0.2
CRY	Cary Ranch	1.06	109		Pb	18 17 48.2	-0.5
CRY					Sb	18 18 01.9	-0.5
PLM	Palomar	1.06	122		Pb	18 17 48.0	-0.8
PLM					Sb	18 18 02.3	-0.2
BZNA	Buzz No.'s Pla	1.14	112		Pn	18 17 49.7	-0.5
BZNA					Sn	18 18 05.2	-0.5
THC	Tehachapi Micr	1.16	329		Pn	18 17 50.0	-0.5
SNDA	J Saunders Pla	1.16	108		Sn	18 18 06.1	-0.1
FRD	Ford Ranch, An	1.19	111		Pb	18 17 51.0	+0.1
FRD					Sb	18 18 06.2	0.0
FRD	Ford Ranch, An	1.19	111		Pn	18 17 50.6	-0.3
FRD					Sg	18 18 07.1	+0.2
HWB	Hans Werner Br	1.21	137		Pn	18 17 50.0	-1.1
HWB					Sb	18 18 05.9	-0.8
RRX	Edison Barstow	1.23	39	Pb	Pn	18 17 51.2	-0.2
	baz=219						
RRX				S	Sb	18 18 06.4	-0.8
	baz=219						
109C	Camp Elliot, M	1.24	146		Pn	18 17 51.2	-0.3
109C	Camp Elliot, M	1.24	146	Pb	Pn	18 17 51.1	-0.3
	baz=327						
109C				S	Sb	18 18 06.6	-1.0
	baz=327						
CPE	Camp Elliot	1.24	146		Pn	18 17 51.3	-0.2
CPE					Sb	18 18 07.1	-0.5
PFO	Pinyon Flats O	1.26	104	Pb	Pn	18 17 51.9	-0.1
	baz=285						
PFO				Sb	Sn	18 18 08.5	-0.4
	baz=285						
EW2	E Wide Canyon	1.27	89		Pb	18 17 52.4	+0.2
EW2					Sn	18 18 08.8	+0.1
XPFO	Pion Flat	1.27	104		Sn	18 18 09.2	+0.3
BLAC	Blackrock camp	1.29	83		Pg	18 17 53.6	+0.3
GTM	Goat Mountain	1.36	74		Pg	18 17 54.5	-0.2
EML	El Monte Cty P	1.37	138		Pn	18 17 52.8	-0.5
ARVC	Arvin	1.41	329	Pb	Pn	18 17 54.0	+0.1
	baz=148						
ARVC				Sb	Sb	18 18 12.8	+0.2
	baz=148						
SCZ2	Santa Cruz Isl	1.42	273	Sb	Sb	18 18 13.2	+0.5
	baz=92						
HDB	Hidalgo Marine	1.44	70		Pg	18 17 56.1	-0.2
OLP	Otay Lakes Par	1.56	147		Sb	18 18 17.1	+0.4
LRMC	Laurel Mtn Rad	1.57	7	Sb	Sb	18 18 16.6	-0.5
	baz=187						
TPC	Twentynine Pal	1.57	83		Pb	18 17 58.0	+0.6
HEC	Hector,Ludlow	1.60	55	Pb	Pn	18 17 57.0	+0.5
	baz=236,SNR=24						
HEC				Sb	Sb	18 18 18.6	+0.5
	baz=236						
BELC	Belle Mtn. Jos	1.61	87	Pb	Pn	18 17 56.9	+0.2
	baz=268,SNR=28						
BELC				Sb	Sb	18 18 19.0	+0.6
	baz=268						
BAR	Barrett	1.63	139		Sn	18 18 17.8	+0.2
BAR	Barrett	1.63	139		Pn	18 17 56.8	-0.1
MONP2	Monument Peak	1.63	129	Pb	Pn	18 17 57.1	+0.1
	baz=310,SNR=11						
MONP2				Sb	Sb	18 18 18.5	-0.5
	baz=310						
GSC	Goldstone, Bar	1.66	34		Pb	18 17 58.2	-0.8
GSC	Goldstone, Bar	1.66	34	Pb	Pn	18 17 58.1	+0.7
	baz=214,SNR=22						
GSC				Sb	Sb	18 18 20.0	+0.2
	baz=214						
ISA	Isabella, Lake	1.79	346		Pn	18 17 60.0	+0.8
ISA	Isabella, Lake	1.79	346	Sb	Sb	18 18 22.5	-1.1
	baz=165						
PKM	Mcpherson Peak	1.83	302	Pb	Pb	18 18 01.2	-0.7
	baz=121						
PKM				Sb	Sb	18 18 25.4	+0.6
	baz=121						
IKP	In-Ko-Pah, Jac	1.98	129	Pb	Pb	18 18 03.5	-1.0
	baz=311						
IKP				Sb	Sb	18 18 29.2	+0.1
	baz=311						
SWSC	Sam W. Stewart	2.03	118	Pb	Pb	18 18 04.9	-0.3
	baz=300						
SWSC				Sb	Sb	18 18 31.2	+0.8
	baz=300						
GMRC	Granite Mounta	2.07	65	Pb	Pb	18 18 05.5	-0.4
	baz=246,SNR=13						
GMRC				Sb	Sb	18 18 33.1	+1.5
	baz=246						
BC3	Big Chuckawall	2.08	97	P	Pn	18 18 01.1	-2.0
	baz=278						
SMMC	Simmler	2.20	310	Sb	Sb	18 18 34.3	-0.9
	baz=128						
IRM	Iron Mountain	2.33	83	Pb	Pb	18 18 10.3	0.0
	baz=265						
IRM				Sb	Sb	18 18 40.6	+1.7
	baz=265						
GLA	Glamis	2.73	108	Pn	Pn	18 18 12.1	0.0
Y12C	Blythe	2.84	93	Pn	Pn	18 18 13.4	-0.1
TPNV	Topopah Spring	3.32	24	Pn	Pn	18 18 21.5	+1.3
SHPR	Sheep Range	3.43	41	Pn	Pn	18 18 23.4	+1.6
W13A	Hualapai Mount	3.54	70	Pn	Pn	18 18 23.8	+0.5
LCMT	Little Creek M	4.91	50	Pn	Pn	18 18 44.6	+2.4

IDC 31 18:26:16.3±18.0**, 19°.22S**×**177°.59W, h576**^{km}±226^{km}**, mb3.1**/5**, mb1 3.3**/5**, mb1mx2.9**/25**, mbtmp4.1**/5**, Error ellipse: s-maj=231.4km s-min=62.5km az=157.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	34.02	262	P	P	18 32 14.2	+0.5
	6.9nm,1.1s,baz=76,slow=14,SNR=2.2						
WRA	Warramunga Arr	45.18	261	P	P	18 33 42.1	-0.8
	0.9nm,0.4s,baz=98,slow=8.1,SNR=31						
ASAR	Alice Springs	45.20	255	P	P	18 33 43.1	0.0
	1.7nm,0.4s,baz=88,slow=8.0,SNR=42						
FITZ	Fitzroy Crossi	53.59	261	P	P	18 34 44.9	+0.2
	0.7nm,0.4s,baz=105,slow=9.2,SNR=7.1						
TXAR	Lajitas Array	86.04	57	P	P	18 37 57.0	-0.1
	0.6nm,0.9s,baz=224,slow=3.5,SNR=4.1						

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*IDC **31** 18:54:29.2±1.6, 59°.82N×152°.71W, h78^{km}±25^{km}, mb3.3/4, mb1 3.5/8, mb1mx3.2/40, mbtmp3.7/8, MS3.1/1, Ms1 3.1/1, ms1mx2.3/24, Error ellipse: s-maj=31.5km s-min=10.5km az=111.0*

*NEIC **31** 18:54:30.6±1.1, 59°.80N±0°.03×152°.62W±0°.07, h93^{km}±5^{km}, Error ellipse: s-maj=5.0km s-min=4.6km az=116.0*

*AEIC **31** 18:54:32.1±1.4, 59°.80N±0°.02×152°.60W±0°.04, h82^{km}±4^{km}, ML3.0/105, Error ellipse: s-maj=4.5km s-min=1.3km az=219.0*

ISC 31 18:54:30.6±0.8**, 59°.79N**±0°.04×**152°.59W**±0°.05**, h94**^{km}±6^{km}**, n118, σ0**^{s}.**66**/127**, mb3.5**/4**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILS	Iliamna Low So	0.29	306		Pn	18 54 44.1	-0.4
ILS					Sn	18 54 53.4	-1.5
IVE	Iliamna Volcan	0.31	317		Pn	18 54 44.2	-0.4
ILW	Iliamna West	0.39	315		Pn	18 54 44.8	-0.3
HOM	Homer	0.50	105		Pn	18 54 45.6	-0.1
AU22	Augustine Moun	0.57	223		Pn	18 54 46.2	0.0
AU22					Sn	18 54 57.9	0.0
AUL	Augustine Lava	0.59	227		Pn	18 54 46.5	0.0
AUL					Sn	18 54 58.0	-0.2
AUP	Augustine Pinn	0.60	225		Pn	18 54 46.7	+0.1
AUH	Augustine H	0.61	226		Pn	18 54 46.8	+0.1
AUW	Augustine West	0.61	227		Pn	18 54 46.7	+0.1
RED	Redoubt Volcan	0.64	352		Pn	18 54 46.6	-0.4
RED					Sn	18 54 58.6	-0.6
RSO	Redoubt South	0.68	353		Pn	18 54 47.4	-0.1
RDWB	Redoubt West	0.71	350		Pn	18 54 47.4	-0.3
CNPM	China Poot	0.74	110		Pn	18 54 48.0	+0.2
CNPM				Sn	Sn	18 55 00.6	0.0
DFR	Drift River	0.81	357		Pn	18 54 48.4	-0.2
DFR					Sn	18 55 01.6	-0.4
RDJH	Redoubt Jeurge	0.81	353		Pn	18 54 48.5	-0.2
BRLK	Bradley Lake	0.86	91		Pn	18 54 49.0	-0.1
BRSE	Bradley Lake S	0.94	92		Pn	18 54 49.8	0.0
BRSE					Sn	18 55 04.2	-0.2
CAPN	Captain Cook N	1.22	35		Pn	18 54 54.9	+1.9
SLKM	Skilak Lake	1.39	58		Pn	18 54 54.8	-0.3
SPCR	Spurr Chakacha	1.43	7		Pn	18 54 55.8	+0.1
SPCR					Sn	18 55 14.3	-0.3
SPBG	Spurr Blockage	1.48	4		Pn	18 54 56.7	+0.4
SEW	Seward	1.61	77		Pn	18 54 57.8	-0.1
KAHG	Katmai Hook Gl	1.64	219		Pn	18 54 58.8	+0.5
KAHC	Katmai Hardscr	1.69	228		Pn	18 54 59.2	+0.2
FIS	Fire Island	1.80	40		Pn	18 55 01.7	+1.5
SUA	Susitna One	1.91	28		Pn	18 55 02.4	+0.6
SVW2	Sparrevohn	1.98	313		Pn	18 55 02.4	-0.2
KDAK	Kodiak Island	2.01	180	P	Pn	18 55 02.5	-0.5
	11nm,0.3s,baz=45,slow=11,SNR=171						
KDAK				S	Sn	18 55 26.6	-1.1
	23nm,0.3s,baz=164,slow=21,SNR=25						
KABU	Katmai Buttres	2.06	224		Pn	18 55 04.5	+0.7
KELA	Mount Kelaz	2.11	232		Pn	18 55 04.8	+0.4
ANCK	Angle Creek	2.19	225		Pn	18 55 06.1	+0.7
SKT	Skwentna	2.26	13		Pn	18 55 06.5	+0.2
PWL	Port Wells	2.38	61		Pn	18 55 07.3	-0.4
PMR	Palmer	2.48	42		Pn	18 55 08.9	-0.3
OHAK	Old Harbor	2.60	188		Pn	18 55 10.0	-0.8
GHO	Glory Hole Cre	2.68	41		Pn	18 55 12.1	+0.2
PLK3	Peulik 3	2.85	224		Pn	18 55 15.3	+1.2
SML	Sawmill	2.91	44		Pn	18 55 14.7	-0.2
HIN	Hinchinbrook I	3.11	76	Pn	Pn	18 55 17.5	-0.2
FID	Port Fidalgo	3.19	70		Pn	18 55 19.1	+0.4
MID	Middleton Isla	3.20	94	Pn	Pn	18 55 18.1	-0.7
SCM	Sheep Creek Mo	3.30	49	Pn	Pn	18 55 19.9	-0.2
EYAK	Cordova Ski Ar	3.50	74	Pn	Pn	18 55 22.0	-0.9
HUR	Hurricane	3.50	23		Pn	18 55 23.8	+0.9
TT01	Tatalina	3.54	334		Pn	18 55 23.4	+0.1
WAT1	Susitna Watana	3.62	31		Pn	18 55 24.6	+0.1
WAT6	Susitna Watana	3.66	38		Pn	18 55 25.0	-0.1
WAT2	Susitna Watana	3.72	29		Pn	18 55 26.0	+0.1
TRF	Thorofare Moun	3.84	16		Pn	18 55 27.9	+0.4
KTH	Kantishna Hill	3.86	11	Pn	Pn	18 55 27.8	+0.1
GOAT	Goat Mountain	4.01	75		Pn	18 55 29.1	-0.6
RAGM	Ragged Mountai	4.01	78	Pn	Pn	18 55 29.0	-0.8
RND	Reindeer	4.05	25		Pn	18 55 30.6	+0.3
DHY	Denali Highway	4.14	35		Pn	18 55 31.9	+0.3
MCK	McKinley	4.32	22	Pn	Pn	18 55 34.0	+0.1
BPAW	Bear Paw Mtn.	4.39	9		Pn	18 55 35.4	+0.5
GLB	Gilahina Butte	4.63	65		Pn	18 55 37.8	-0.4
BWN	Browne	4.64	17		Pn	18 55 39.3	+1.1
CHGN	Chignik	4.67	224	Pn	Pn	18 55 39.3	+0.7
VRDI	Verde Repeater	4.74	68		Pn	18 55 39.6	-0.2
CRQM	Cirque	4.81	74		Pn	18 55 41.2	+0.6
PS10	TAPS Pump St10	4.89	39		Pn	18 55 42.5	+0.9
TGL	Tana Glacier	4.96	75	Pn	Pn	18 55 42.6	0.0
MCARA	McCarthy VSAT	4.98	67		Pn	18 55 43.4	+0.5
NEA	Nenana	5.08	17		Pn	18 55 44.4	+0.2
WRH	Wood River Hil	5.15	22	Pn	Pn	18 55 44.9	-0.3
PTPK	Patty Peak	5.20	70		Pn	18 55 46.2	+0.2
KIAG	Kiagna River	5.21	73		Pn	18 55 46.5	+0.4
BALM	Baldy	5.23	72		Pn	18 55 47.2	+0.9
MENT	Mentasta	5.31	50		Pn	18 55 47.5	+0.1
MLY	Manley	5.33	8		Pn	18 55 48.2	+0.6
CCB	Clear Creek Bu	5.37	23	Pn	Pn	18 55 47.5	-0.5
RIDG	Independent Ri	5.41	40		Pn	18 55 49.0	+0.4
GRNC	Granite Creek	5.48	75		Pn	18 55 50.4	+0.6
PS08	TAPS Pump Stn8	5.48	27		Pn	18 55 49.6	-0.1
TCOL	CIGO, UAF Yank	5.56	21		Pn	18 55 50.9	+0.3
COLA	College	5.56	21	Pn	Pn	18 55 51.1	+0.5
BARN	Barnard Glacie	5.56	72		Pn	18 55 52.0	+1.0
MDM	Murphy Dome	5.57	19		Pn	18 55 51.3	+0.4
IL31		5.66	26		Pn	18 55 51.8	-0.2
ILAR	Eielson Array	5.66	26	P	Pn	18 55 51.8	-0.4
	2.5nm,0.3s,baz=208,slow=14,SNR=88						
ILAR				S	Sn	18 56 53.5	-2.2
	1.5nm,0.3s,baz=191,slow=20,SNR=8.2						
CTGM	Chitina Glacie	5.71	73		Pn	18 55 54.1	+1.2
CHX	Chaix Hills	5.78	82		Pn	18 55 54.2	+0.4
SCRK	Sand Creek	5.85	40		Pn	18 55 54.4	-0.3
POKR	Poker Plat Res	5.86	22		Pn	18 55 54.9	+0.2
YUK2	White River	6.09	66		Pn	18 55 58.4	+0.3
BC03		6.14	53		Pn	18 55 58.2	-0.3
BCAR	Beaver Creek A	6.14	53		Pn	18 55 58.9	+0.2
IM03		6.24	356		Pn	18 56 00.2	+0.3
IMAR	Indian Mountai	6.24	356		Pn	18 56 00.6	+0.7
YUK3	Moose Creek	6.27	66		Pn	18 56 00.8	+0.3
YUK1	Sand Pete Hill	6.33	63		Pn	18 56 01.8	+0.4
PRP	Porcupine Dome	6.60	26	Pn	Pn	18 56 04.7	-0.4
PNL	Peninsula	6.67	85		Pn	18 56 06.0	+0.1
YUK4	Talbot Arm	7.05	71		Pn	18 56 12.6	+1.5
YUK6	Outpost Mounta	7.15	75		Pn	18 56 14.0	+1.4
YUK7	Dusty Glacier	7.25	78		Pn	18 56 15.1	+1.2
EGAK	Eagle	7.31	42		Pn	18 56 14.0	-0.4
DHAK	Deception Hill	7.37	89		Pn	18 56 16.5	+1.2
YUK5	Granite Creek	7.41	73		Pn	18 56 16.9	+0.9
COLD	Coldfoot	7.54	7	Pn	Pn	18 56 18.2	+0.6
DAWY	Dawson	7.56	50	Pn	Pn	18 56 18.1	+0.2
HYT	Haines Junctio	7.57	76	Pn	Pn	18 56 17.8	-0.3
FYU	Fort Yukon	7.57	23		Pn	18 56 17.9	-0.1
ANM	Nome	7.66	314	Pn	Pn	18 56 19.8	+0.6
BM03	Burnt Mountain	8.44	21		Pn	18 56 28.7	-1.2
BMAR	Burnt Mountain	8.45	21		Pn	18 56 29.2	-0.8
SKAG	Skagway	8.76	85	Pn	Pn	18 56 33.8	-0.3
WHY	Whitehorse	8.86	77	Pn	Pn	18 56 35.5	-0.1
TOLK	Toolik Lake Re	8.98	7	Pn	Pn	18 56 38.7	+1.4
BESE	Bessie Mountai	9.18	90	Pn	Pn	18 56 41.3	+1.2
DLBC	Dease Lake	11.66	87	P	Pn	18 57 14.4	+0.7
	0.7nm,0.3s,baz=264,slow=9.3,SNR=3.1						
YKA	Yellowknife Ar	18.35	65	P	P	18 58 38.8	+1.4
	0.3nm,0.3s,baz=275,slow=9.6,SNR=24						
PETK	Petropavlovsk-	27.69	278	P	P	19 00 09.7	+0.2
	1.0nm,0.7s,baz=71,slow=13,SNR=6.3						
ASAJ	Asahikawa	41.11	278	LR	LR	19 20 11.1	
	comp=Z,23nm,19.2s,baz=59,slow=38						
ZALV	Zalesovo Beam	57.67	324	P	P	19 04 10.7	+0.1
	0.5nm,0.5s,baz=22,slow=8.0,SNR=2.4						
NOA	NORSAR Array B	58.85	9	P	P	19 04 17.8	-1.0
	0.3nm,0.6s,baz=354,slow=6.8,SNR=1.9						
MKAR	Makanchi Array	64.73	322	P	P	19 04 57.5	-0.9
	0.2nm,0.5s,baz=41,slow=7.9,SNR=2.6						

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*PAS **31** 19:14:06.5±1.6, 33°.92N±0°.01×117°.94W±0°.02, h4^{km}±5^{km}, ML2.5/192, Error ellipse: s-maj=2.2km s-min=1.5km az=224.0*

NEIC 31 19:14:05.9±1.1**, 33°.93N**±0°.02×**117°.94W**±0°.03**, h19**^{km}±2^{km}**, Error ellipse: s-maj=3.2km s-min=2.5km az=77.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FULC	Fullerton	0.06	167		Pg	19 14 08.2	-1.2
RHC	Rose Hills Cem	0.10	320		Pg	19 14 09.0	-0.7
GVRC	Garvey Reservo	0.20	309		Pg	19 14 11.0	+0.1
PSRC	Puddingstone R	0.20	33		Pb	19 14 10.6	+0.3
PSRC					Sg	19 14 14.0	-0.4
SANC	Santa Ana	0.22	169		Pg	19 14 11.1	-0.2
PEM	Pine Mountain	0.25	13		Pb	19 14 11.5	-0.1
CACC	Caltech Cellar	0.26	324		Pb	19 14 11.8	-0.1
MWC	Mount Wilson	0.31	341		Pg	19 14 12.5	-0.4
MWC					Sg	19 14 17.4	-0.3
CRNC	Corona	0.32	99		Pg	19 14 12.6	-0.2
PASC	Pasadena Art C	0.32	320		Pg	19 14 12.4	-0.5
PASC	Pasadena Art C	0.32	320		Sb	19 14 17.9	0.0
SSK	Sunset Peak	0.35	35		Pg	19 14 13.4	-0.1
XTL	Crystal Lake,	0.38	10		Pg	19 14 13.6	-0.4
BFSC	Mount Baldy Ra	0.39	36		Pg	19 14 13.9	-0.2
BFSC					Sg	19 14 19.8	+0.1
CHFC	Chilao Flat St	0.41	350		Pg	19 14 14.0	-0.6
CHFC					Sg	19 14 20.0	-0.4
RPV	Rancho Palos V	0.43	245		Pn	19 14 16.2	-0.8
SS2	San Sevaine	0.46	52		Pb	19 14 15.5	0.0
DECC	Green Verdugo	0.46	315		Pg	19 14 15.3	-0.1
DJJ	Donna J Jenkin	0.47	293		Pg	19 14 15.3	-0.2
RVR	Riverside	0.47	82		Pg	19 14 15.2	-0.4
RVR					Sg	19 14 21.7	-0.3
SME	Santa Rosa Min	0.49	102		Pg	19 14 15.6	-0.4
RSBC	Riverside Bore	0.51	85		Pg	19 14 15.9	-0.3
JNH	Juniper Hills	0.52	358		Pb	19 14 16.1	-0.4
HOLC	Holcomb Ridge	0.54	8		Pg	19 14 16.8	0.0
IR2C	Iron Canyon	0.60	320		Pb	19 14 17.4	-0.3
LRRC	Littlerock Res	0.60	353		Pb	19 14 17.7	-0.1
CSP	Cedar Springs	0.61	52		Pb	19 14 17.9	0.0
PEC	Perris	0.65	93		Pb	19 14 18.4	-0.2
MURC	Murrieta	0.70	118		Pb	19 14 19.3	-0.1
MURC					Sg	19 14 28.9	-0.1
LEOC	Leona Valley	0.77	337		Pb	19 14 20.3	-0.4
HMTC	Hemet	0.81	105		Pb	19 14 21.1	-0.3
BACC	Bachelor Mtn.	0.81	112		Pb	19 14 21.2	-0.2
DGR	Domenigoni Val	0.82	109		Pb	19 14 21.3	-0.3
DGR					Sg	19 14 32.7	-0.2
BTL	Butler Peak	0.84	67		Pg	19 14 22.3	-0.2
BTPC	Burnt Peak	0.92	325		Sb	19 14 34.7	-0.6
GORC	Green Oak Ranc	0.97	142		Pg	19 14 25.0	+0.2
GORC					Sb	19 14 36.4	-0.1
HYS	Haystack Butte	0.98	18		Pg	19 14 25.3	+0.2
CRY	Cary Ranch	1.06	109		Sg	19 14 40.6	0.0
PLM	Palomar	1.06	122		Sn	19 14 39.9	-0.5
BZNA	Buzz No.'s Pla	1.14	112		Pb	19 14 27.3	+0.2
BZNA					Sn	19 14 42.7	+0.5
THC	Tehachapi Micr	1.15	329		Pb	19 14 27.6	+0.3
SNDA	J Saunders Pla	1.17	108		Pg	19 14 28.3	-0.2
SNDA					Sg	19 14 43.5	-0.3
FRD	Ford Ranch, An	1.19	111		Pb	19 14 28.5	+0.5
FRD					Sn	19 14 43.7	+0.3
FRD	Ford Ranch, An	1.19	111		Pb	19 14 28.1	+0.1
HWB	Hans Werner Br	1.21	137		Sb	19 14 43.6	+0.1
DPP	Dos Picos Cty	1.24	138		Pn	19 14 28.5	+0.2
DPP					Sn	19 14 44.6	0.0
109C	Camp Elliot, M	1.25	146	Pg	Pb	19 14 29.1	+0.3
CPE	Camp Elliot	1.25	146		Sn	19 14 44.6	0.0
PFO	Pinyon Flats O	1.27	104		Pb	19 14 29.3	0.0
XPFO	Pion Flat	1.27	104		Pb	19 14 29.5	+0.2
XPFO					Sg	19 14 46.7	-0.5
XPFO	Pion Flat	1.27	104		Pb	19 14 29.6	+0.2
BORC	Borrego Spring	1.43	117		Sb	19 14 49.8	+0.1
SDRC	San Diego Road	1.45	145		Sb	19 14 50.5	+0.2
BAR	Barrett	1.63	139		Sb	19 14 55.3	-0.3
BAR	Barrett	1.63	139		Pn	19 14 34.1	+0.5
GSC	Goldstone, Bar	1.66	34		Pb	19 14 35.5	-0.4
ISA	Isabella, Lake	1.79	346		Pb	19 14 39.0	+0.9
Y12C	Blythe	2.85	93	Pn	Pn	19 14 51.7	+1.4
W13A	Hualapai Mount	3.54	70	Pn	Pn	19 15 00.9	+0.8

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*THE **31** 19:16:49.1, 38°.17N×20°.26E, h0^{km}±2^{km}, ML2.4/14, Error ellipse: s-maj=2.3km s-min=0.8km az=246.0*

*ATH **31** 19:16:49.2, 38°.19N×20°.28E, h10^{km}±1^{km}, ML2.5/4, Error ellipse: s-maj=2.2km s-min=1.2km az=78.0*

ISC 31 19:16:48.2±1.3**, 38°.16N**±0°.04×**20°.20E**±0°.05**, h9**^{km}±6^{km}**, n43, σ0**^{s}.**85**/78**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF3	Kipouria, Keph	0.12	71	P	Pg	19 16 51.3	+0.3
KEF3				S	Sg	19 16 52.4	-0.6
CHV1	Chavriata, Kef	0.14	81	P	Pg	19 16 51.6	+0.2
CHV1				S	Sg	19 16 53.0	-0.5
AGT1	Agia Thekli	0.17	58	P	Pg	19 16 52.0	+0.2
AGT1				S	Sg	19 16 53.7	-0.5
LXRA	Lixouri, Kepha	0.19	78	P	Pg	19 16 52.3	+0.1
LXRA				S	Sg	19 16 54.3	-0.5
LXR1	Lixouri, Cepha	0.19	78	P	Pg	19 16 52.3	+0.1
LXR1				S	Sg	19 16 54.5	-0.3
KEF4	Livadi, Kephal	0.20	61	P	Pg	19 16 52.4	0.0
KEF4				S	Sg	19 16 54.3	-0.8
ARGA	Argostoli. Kep	0.22	86	P	Pg	19 16 52.8	+0.1
ARGA				S	Sg	19 16 55.2	-0.5
KEF2	Argostoli. Kep	0.23	89	P	Pg	19 16 53.0	+0.2
KEF2				S	Sg	19 16 55.5	-0.4
ARG2	Argostoli	0.23	86	P	Pg	19 16 52.9	+0.1
ARG2				S	Sg	19 16 55.4	-0.5
	18μm,0.3s						
KEF1	Kardakata, Kep	0.24	61	P	Pg	19 16 53.0	-0.1
KEF1				S	Sg	19 16 55.4	-1.0
VLS	Valsamata	0.31	87	P	Pg	19 16 54.1	-0.3
VLS				S	Sg	19 16 57.5	-1.0
	4μm,0.3s						
VLS	Valsamata	0.31	87	P	Pg	19 16 54.0	-0.3
VLS				S	Sg	19 16 57.5	-1.0
VLS				AML	AML	19 16 57.6	
	comp=N,9356μm,0.3s						
VLS				AML	AML	19 16 57.7	
	comp=E,5253μm,0.3s						
VSK1	VASILIKIADES	0.38	49	P	Pg	19 16 55.5	-0.2
VSK1				S	Sg	19 16 59.8	-0.9
	comp=E,3μm,0.3s						
KONA	Konidatara, Ke	0.39	48	P	Pg	19 16 55.7	-0.2
KONA				S	Sg	19 17 00.3	-0.8
FSK	Fiskardo	0.41	44	P	Pg	19 16 56.1	-0.2
FSK				S	Sg	19 17 01.2	-0.5
	comp=E,1μm,0.3s						
FSK	Fiskardo	0.41	44	P	Pg	19 16 56.0	-0.2
FSK				S	Sg	19 17 01.0	-0.7
FSK				AML	AML	19 17 01.6	
	comp=N,1906μm,0.4s						
FSK				AML	AML	19 17 02.1	
	comp=E,3094μm,0.3s						
KFL	Anninata	0.47	96	P	Pg	19 16 57.0	-0.3
KFL				S	Sg	19 17 03.2	-0.2
	comp=E,2μm,0.3s						
KFL	Anninata	0.47	96	P	Pg	19 16 57.0	-0.3
KFL				S	Sg	19 17 03.1	-0.4
KFL				AML	AML	19 17 04.2	
	comp=N,2873μm,0.2s						
KFL				AML	AML	19 17 06.7	
	comp=E,3990μm,0.3s						
EVGI	Lefkada island	0.58	38	P	Pg	19 16 59.2	-0.3
EVGI				S	Sg	19 17 07.5	+0.4

EVGI	**Lefkada island**	0.58	38	P	Pg	19 16 59.2	-0.3
EVGI				S	Sg	19 17 06.9	-0.3
MGNA	**Meganis**	0.68	43	P	Pg	19 17 00.4	-1.0
KRI1	**kERI**	0.70	136	P	Pg	19 17 01.9	+0.2
KRI1				S	Sb	19 17 12.7	+0.4
	comp=E,722nm,0.4s						
LKD2	**Lefkada island**	0.72	30	P	Pg	19 17 01.7	-0.4
LKD2				S	Sb	19 17 13.3	+0.2
	comp=E,160nm,0.6s						
LKD2	**Lefkada island**	0.72	30	P	Pg	19 17 01.8	-0.4
TSLK	**Tsoukalades, L**	0.75	28	P	Pg	19 17 02.6	-0.1
TSLK				S	Sb	19 17 14.2	+0.3
	comp=E,178nm,0.7s						
TSLK	**Tsoukalades, L**	0.75	28	P	Pg	19 17 02.5	-0.2
AST1	**Astakos**	0.80	61	P	Pg	19 17 03.0	-0.5
RLS	**Riolos of Patr**	1.00	96	P	Pg	19 17 06.6	-0.9
RLS				S	Sb	19 17 21.2	0.0
	comp=E,80nm,0.6s						
RLS	**Riolos of Patr**	1.00	96	P	Pg	19 17 06.7	-0.9
RLS				AML	AML	19 17 25.5	
	comp=E,147µm,0.4s						
RLS				AML	AML	19 17 28.9	
	comp=N,157µm,0.6s						
PVO	**Paravola**	1.14	66	P	Pg	19 17 09.3	-0.8
PVO				S	Sn	19 17 26.4	+0.3
	comp=N,175nm,0.4s						
DRO	**Drossia**	1.21	100	P	Pg	19 17 10.5	-1.0
DRO				S	Sn	19 17 29.2	+1.2
	comp=N,218nm,0.4s						
DRO	**Drossia**	1.21	100	P	Pg	19 17 10.5	-1.0
IGT	**Igoumenitsa**	1.37	4	P	Pn	19 17 14.6	+0.9
IGT				S	Sn	19 17 35.0	+3.0
	comp=N,52nm,0.5s						
IGT	**Igoumenitsa**	1.37	4	P	Pn	19 17 14.6	+0.9
LAKA	**Lakka**	1.40	86	P	Pn	19 17 13.5	-0.6
LAKA				S	Sn	19 17 33.2	+0.5
	comp=N,62nm,0.4s						
ANX	**Ano Chora**	1.42	72	P	Pn	19 17 14.6	+0.2
ANX				S	Sn	19 17 34.7	+1.5
	comp=N,98nm,0.5s						
DBRK	**Dubrovnik**	4.77	341	*e*Pn	Pn	19 18 00.2	-0.1
DBRK				Sn	Sn	19 18 54.6	-1.0
STON	**Ston**	5.08	339	*e*Pn	Pn	19 18 05.5	+1.0
STON				Sn	Sn	19 19 02.1	-1.1
RICI	**Ricice**	5.81	337	*e*Pn	Pn	19 18 15.5	+0.8
RICI				Sn	Sn	19 19 21.9	+0.4
ZIRJ	**Zirje**	6.48	329	*e*Pn	Pn	19 18 23.9	+0.1
ZIRJ				Sn	Sn	19 19 35.5	-2.4
MORI	**Morici**	6.63	331	*e*Pn	Pn	19 18 27.1	+1.2
MORI				Sn	Sn	19 19 40.2	-1.4
DUGI	**Dugi Otok**	7.00	328	*e*Pn	Pn	19 18 32.4	+1.5
DUGI				Sn	Sn	19 19 48.8	-1.9
UDBI	**Udbina**	7.18	334	*e*Pn	Pn	19 18 35.7	+2.2

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*SJA **31** 19:29:56.9±0.4, 22°.99S×68°.87W, h104^{km}±3^{km}, ML3.7, MW3.9*

*GUC **31** 19:29:58.3±0.7, 22°.95S×68°.90W, h108^{km}±4^{km}, ML3.7*

ISC 31 19:29:58.2±1.5**, 22°.97S**±0°.05×**68°.89W**±0°.06**, h104**^{km}±13^{km}**, n19, σ0^{s}.34**/31**, 8C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	0.58	246	⇑*i*P	Pn	19 30 15.3	0.0
PB15				*e*S	Sn	19 30 28.5	+0.4
PB15	**IPOC Station P**	0.58	246	*i* P	Pn	19 30 15.0	-0.3
PB15				*i* Sg	Sn	19 30 27.9	-0.2
PB06	**IPOC Station P**	0.68	293	⇑*i*P	Pn	19 30 16.0	0.0
PB06				*e*S	Sn	19 30 29.6	+0.2
PB06	**IPOC Station P**	0.68	293	*i* P	Pn	19 30 15.5	-0.6
PB06				*i* Sg	Sn	19 30 29.4	0.0
PB06				IAML		19 30 30.0	
	comp=Z,4µm,0.2s						
PB09	**IPOC Station P**	1.21	344	⇑*i*P	Pn	19 30 21.8	+0.3
PB09				*e*S	Sn	19 30 39.6	+0.6
PB09				IAML		19 30 41.6	
	comp=N,972nm,0.6s						
PB03	**IPOC Station P**	1.21	319	⇑*i*P	Pn	19 30 21.4	-0.1
PB03				*e*S	Sn	19 30 39.1	+0.1
PB03				IAML		19 30 40.1	
	comp=N,2µm,0.3s						
PB05	**IPOC Station P**	1.21	275	⇑*i*P	Pn	19 30 21.6	+0.1
PB05				*e*S	Sn	19 30 39.6	+0.6
PB04	**IPOC Station P**	1.32	298	⇑*i*P	Pn	19 30 22.8	+0.1
PB04				*e*S	Sn	19 30 41.6	+0.2
PB04				IAML		19 30 48.0	
	comp=N,1µm,0.6s						
PB04	**IPOC Station P**	1.32	298	*i* P	Pn	19 30 22.8	+0.1
PB07	**IPOC Station P**	1.54	323	⇑*i*P	Pn	19 30 25.4	0.0
PB07				*e*S	Sn	19 30 45.6	-0.4
PB07				IAML		19 30 47.0	
	comp=E,1µm,0.3s						
PB10	**IPOC Station P**	1.62	250	⇓*e*P	Pn	19 30 26.1	-0.1
PB10				*e*S	Sn	19 30 47.9	+0.4
PB10	**IPOC Station P**	1.62	250	*i* P	Pn	19 30 26.0	-0.2
PB10				*i* Sg	Sn	19 30 47.5	0.0
PB10				IAML		19 30 47.7	
	comp=Z,240nm,0.3s						
PB02	**IPOC Station P**	1.89	330	⇑*i*P	Pn	19 30 29.4	-0.2
PB02				*e*S	Sn	19 30 53.2	-0.3
PB02				IAML		19 30 56.8	
	comp=E,1µm,0.3s						
PB14	**IPOC Station P**	2.15	220	*i* P	Pn	19 30 33.3	0.0
PB14				IAML		19 31 07.1	
	comp=Z,311nm,0.3s						
YJA	**Yavi**	3.22	76	*i* P	Pn	19 30 47.9	+0.5
AZAP	**Zapla**	3.73	110	*i* P	Pn	19 30 54.0	0.0
ASTB	**Santa Barbara**	4.19	104	*i* P	Pn	19 30 59.8	-0.4
ACCO	**Cerro Coronel**	7.59	181	*i* P	Pn	19 31 46.6	+0.2
AMOG	**MOGNA**	7.95	178	*i* P	Pn	19 31 50.2	-0.8

NNC 31 19:46:04.0±3.9**, 38°.08N×68°.18E, h0**^{km}±20^{km}**, mb3.6, mpv3.2, 6C-2D, Error ellipse: s-maj=32.9km s-min=21.9km az=31.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	5.33	19	⇓Pn	Pn	19 47 25.5	+0.7
	0.3nm,0.2s,baz=202,slow=14,SNR=6.0						
KK31				⇑Pg	Pb	19 47 41.3	+3.3
	1.0nm,0.5s,baz=195,slow=16,SNR=5.2						
KK31				⇑Sn	Sn	19 48 27.8	+0.9
	2.3nm,0.6s,baz=201,slow=22,SNR=5.8						
KK31				⇓Lg	Lg	19 48 52.7	
	7.1nm,0.8s,baz=201,slow=30,SNR=7.2						
AAK	**Ala-Archa**	6.64	45	⇑Pn	Pn	19 47 42.8	-0.1
	2.4nm,0.9s						
AAK				⇑Sn	Sn	19 49 01.3	+2.0
	4.9nm,0.9s						
TKM2	**Tokmak 2**	7.44	47	⇑Pn	Pn	19 47 53.0	-1.0
	2.5nm,0.4s						
TKM2				⇑Sn	Sn	19 49 20.4	+1.2
	4.3nm,0.8s						

JMA 31 19:47:58.2, 34°.85N×135°.49E, h11^{km}**, M1.0, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHE	**Heguri**	0.25	141	P	Pg	19 48 03.4	0.0
JHE				S	Sg	19 48 07.0	+0.1
JWT	**Wachi**	0.44	350	P	Pg	19 48 06.9	+0.1
JWT				S	Sg	19 48 12.7	0.0
JKS	**Kasai**	0.55	284	P	Pg	19 48 08.8	-0.1
JKS				S	Sg	19 48 16.1	0.0
JWY	**Kouya**	0.64	172	S	Sg	19 48 18.6	-0.3
TSUJ	**Tsu 2**	0.78	100	P	Pg	19 48 13.1	-0.1
TSUJ				S	Sg	19 48 23.1	-0.3
JKN2	**Miekihoku**	0.89	133	S	Sg	19 48 26.4	-0.5

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*IDC **31** 19:48:33.1±0.4, 36°.98N×124°.45E, h0^{km}, mb4.5/32, mb1 4.6/36, mb1mx4.5/50, mbtmp4.5/36, ML4.6/3, MS4.0/21, Ms1 4.0/21, ms1mx3.8/43, Error ellipse: s-maj=11.4km s-min=9.8km az=55.0*

*MOS **31** 19:48:34.2±1.0, 36°.93N×124°.48E, h17^{km}, mb5.0/34, MS4.6/10, Error ellipse: s-maj=5.5km s-min=4.5km az=102.3*

*KEA **31** 19:48:34.9±0.0, 36°.86N×124°.70E, h0^{km}, ML5.5/1*

*BJI **31** 19:48:35.5±0.0, 36°.87N×124°.42E, h10^{km}, mB5.0/47, mb4.7/52, ML5.1/18, Ms4.7/68, Ms7 4.5/61*

*NEIC **31** 19:48:36.4±1.6, 36°.94N±0°.06×124°.46E±0°.08, h18^{km}±3^{km}, mb5.0/190, Error ellipse: s-maj=9.4km s-min=8.6km az=148.0*

*GCMT **31** 19:48:36.4±0.2, 36°.96N±0°.01×124°.34E±0°.03, h17^{km}±1^{km}, MW4.8/87, Moment Tensor Solution. s33,c38; s87,c129; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.52±.10; $M_{\theta\theta}$2.25±.07; $M_{\phi\phi}$-0.72±.06; $M_{r\theta}$-0.47±.14; $M_{\theta\phi}$0.23±.04; $M_{\phi r}$1.02±.21; Best double couple: $M_0$2.29500×10^{16} NP1: ϕ_s236.00000°, δ49.00000°, λ-138.00000°. NP2: ϕ_s115.00000°, δ60.00000°, λ-50.00000°. Principal axes: T 2.3120, Plg6.0000°, Azm178.0000°; N -0.0330, Plg34.0000°, Azm272.0000°; P -2.2780, Plg55.0000°, Azm78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 19:48:35.7±0.5**, 36°.94N**±0°.03×**124°.56E**±0°.03**, h13**^{km}±3^{km}**, h13**^{km}**:pP-P, n577, σ1^{s}.57**/615**, mb4.9**/187**, MS4.2**/24**, 33C-12D, Yellow Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HJU	**Haeju**	1.43	40	Pg	Pn	19 49 01.5	+0.1
HJU				Sg	Sn	19 49 19.6	-0.5
INCN	**Inchon**	1.74	71	P	Pn	19 49 05.5	-0.1
INCN	**Inchon**	1.74	71		Pn	19 49 05.5	-0.1
PYAG	**Pyongyang**	2.31	24	Pn	Pn	19 49 13.8	+0.4
PYAG				Pg	Pb	19 49 17.3	+0.1
PYAG				Sg	Sg	19 49 47.7	-2.1
TJN	**Taejon**	2.32	103	*d i*P	Pn	19 49 13.9	+0.3
PYS	**Pyongsong**	2.52	23	Pg	Pb	19 49 22.0	+1.2
PYS				Sg	Sg	19 49 53.9	-2.7
KS19	**Wonju Array Si**	2.69	77		Pn	19 49 19.3	+0.5
KSAR	**Wonju Array Be**	2.70	78	P	Pn	19 49 18.9	+0.1
KSAR	**Wonju Array Be**	2.70	78		Pn	19 49 18.9	+0.1
KSRS	**Korea Array**	2.73	78	Pn	Pn	19 49 19.2	0.0
	149nm,0.3s,baz=259,slow=14,SNR=2896						
KSRS				Lg	Lg	19 50 02.2	
	1µm,0.3s,baz=261,slow=31,SNR=7.4						
KSRS				LR	LR	19 50 19.9	
	comp=Z,4µm,20.0s,baz=230,slow=38						
DL2	**Dalian**	3.04	311	Pn	Pn	19 49 21.8	-1.7
DL2				Pg	Pb	19 49 29.8	+0.2
DL2				Sg	Sb	19 50 06.8	+0.2
DL2				smax	smax		
	comp=N,15µm,0.7s						
DL2				smax	smax		
	comp=E,9µm,0.6s						
SUJ	**Sinuiju**	3.15	359	Pg	Pb	19 49 32.8	+1.2
SUJ				Sg	Sb	19 50 12.2	+2.2
HHU	**Hamhung**	3.78	37	Pn	Pn	19 49 33.0	-0.7
HHU				Pg	Pb	19 49 44.6	+2.3
HHU				Sg	Sb	19 50 32.0	+4.0
SNY	**Shenyang**	4.94	351	⇓Pn	Pn	19 49 52.3	+2.7
SNY				⇑Pg	Pb	19 50 05.0	+3.0
SNY				Sn	Sn	19 50 47.0	+0.5
SNY				Sg	Sg	19 51 07.8	-6.4
SNY				smax	smax		
	comp=N,3µm,0.8s						
SNY				smax	smax		
	comp=E,4µm,1.0s						
TIA	**Tai'an**	6.03	265	Pn	Pn	19 50 05.0	+0.3
TIA				Pg	Pb	19 50 22.0	+1.3
TIA				Sg	Sb	19 51 39.3	+6.5
TIA				smax	smax		
	comp=N,1µm,0.6s						
TIA				smax	smax		
	comp=E,410nm,0.8s						
JNU	**Nakatsue**	6.43	125	Pn	Pn	19 50 10.7	+0.5
	27nm,0.3s,baz=280,slow=4.8,SNR=237						
JNU				Lg	Lg	19 51 59.4	
	44nm,0.3s,baz=241,slow=19,SNR=15						
JNU				LR	LR	19 52 19.5	
	comp=Z,530nm,18.4s,baz=300,slow=35						
SSE	**Sheshan**	6.47	207	Pn	Pn	19 50 09.5	-1.2
SSE				Sn	Sn	19 51 20.0	-4.4
SSE				smax	smax		
	comp=N,270nm,1.2s						
SSE				smax	smax		
	comp=E,340nm,1.3s						
SSE				LR	LR		
	comp=N,2µm,10.2s						
SSE	**Sheshan**	6.47	207		Pn	19 50 09.4	-1.2
NJ2	**Nanjing**	6.78	226	*e*Pn	Pn	19 50 12.0	-3.0
NJ2				Pg	Pb	19 50 36.3	+2.8
NJ2				Sg	Sg	19 52 08.0	-5.5
NJ2				smax	smax		
	comp=N,470nm,1.3s						
NJ2				smax	smax		
	comp=E,430nm,0.9s						
CN2	**Changchun**	6.88	5	*e*Pg	Pg	19 50 42.0	-5.4
CN2				Sg	Sg	19 52 09.5	-7.0
BJT	**Baijiatuau**	7.26	298	P	Pn	19 50 20.4	-1.2
BJT	**Baijiatuau**	7.26	298		Pn	19 50 20.4	-1.2
BJI	**Beijing**	7.27	298	Pn	Pn	19 50 24.3	+2.7
BJI				smax	smax		
	comp=N,300nm,0.9s						
BJI				smax	smax		
	comp=E,220nm,1.0s						
MSHR	**Mys Shultsa**	7.58	40	*c i*P	Pn	19 50 27.1	+1.3
MDJ	**Mudanjiang**	8.56	25	P	Pn	19 50 41.5	+2.2
MDJ				pP	Pg	19 50 45.5	-34
MDJ				sP		19 50 47.8	
MDJ				pmax	pmax		
	comp=Z,30nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,230nm,3.7s						
MDJ				LR	LR		
	comp=N,8µm,5.9s						
MDJ				LR	LR		
	comp=E,9µm,6.9s						
MDJ				LR	LR		
	comp=Z,8µm,8.3s						
MDJ	**Mudanjiang**	8.56	25		Pn	19 50 40.9	+1.6
USA0B	**Ussuriysk Arra**	9.19	36	P	Pn	19 50 47.8	-0.1
USA0B	**Ussuriysk Arra**	9.19	36		Pn	19 50 47.8	-0.1
USRK	**Ussuriysk Ar.**	9.19	36	Pn	Pn	19 50 48.4	+0.5
	baz=234,slow=49,SNR=6.0						
USRK				Lg	Lg	19 53 23.6	
	baz=71,slow=8.6,SNR=3.7						
USRK	**Ussuriysk Ar.**	9.19	36	P	Pn	19 50 49.3	+1.4
USRK	**Ussuriysk Ar.**	9.19	36		Pn	19 50 49.3	+1.4
INU	**Inuyama**	10.20	95		Pn	19 51 02.8	+1.0
WHN	**Wuhan**	10.63	236	P	Pn	19 51 06.3	-1.4
WHN				S	Sn	19 52 59.0	-7.6
WHN				LR	LR		
	comp=N,5µm,9.9s						
WHN				LR	LR		
	comp=E,6µm,11.4s						
WHN				LR	LR		
	comp=Z,6µm,13.5s						
HHC	**Hu-ho-hao-te**	10.86	295	*e*P	Pn	19 51 12.5	+1.6
HHC				sP		19 51 19.3	
HHC				PP	PnPn	19 51 24.8	+6.3
HHC				pmax	pmax		
	comp=Z,130nm,0.6s						
HHC				pmax	pmax		
	comp=Z,490nm,3.7s						
HHC				LR	LR		
	comp=N,2µm,7.1s						
HHC				LR	LR		
	comp=E,1µm,7.2s						
HHC				LR	LR		
	comp=Z,3µm,6.7s						
MJB9	**Matsu-Tunnel**	10.95	88		Pn	19 51 13.6	+1.4
MAJO	**Matsushiro**	10.96	88	P	Pn	19 51 13.5	+1.3
MAJO	**Matsushiro**	10.96	88		Pn	19 51 13.4	+1.3
MAT	**Matsushiro**	10.96	88	P	Pn	19 51 15.2	+3.0
MAT				*e*S	Sn	19 53 22.0	+7.4
MJAR	**Matsushiro Arr**	10.96	88	Pn	Pn	19 51 16.2	+4.0
	0.1nm,0.3s,baz=285,slow=14,SNR=17						
MJAR				LR	LR	19 55 31.3	
	comp=Z,553nm,18.9s,baz=280,slow=38						
MJAR	**Matsushiro Arr**	10.96	88	P	Pn	19 51 12.8	+0.6
MJAR	**Matsushiro Arr**	10.96	88		Pn	19 51 12.8	+0.6
TEY	**Ternei**	12.16	45	⇑*e*P	P	19 51 40.3	-0.9
TEY				pmax	pmax		
	comp=N,10.0nm,0.9s						
TEY				pmax	pmax		
	comp=Z,20nm,1.0s						
TEY				MLR	MLR		
	comp=E,3µm,8.0s						
TEY				MLR	MLR		
	comp=N,2µm,4.0s						
TEY				MLR	MLR		
	comp=Z,2µm,7.0s						
YHNB	**Yeheng**	12.54	193		Pn	19 51 32.9	-1.0
HIA	**Hailar**	12.81	346	P	Pn	19 51 40.2	+2.8
HIA	**Hailar**	12.81	346		Pn	19 51 40.2	+2.8
NACB	**Ninganchiao**	12.98	192	Pn	Pn	19 51 39.0	-0.9
JHJ	**Hachijo jima 2**	13.04	103	LR	LR	19 56 39.8	
	comp=Z,532nm,20.2s,baz=289,slow=37						
XAN	**Xi'an**	13.07	262	P	Pn	19 51 45.0	+3.8
XAN				pmax	pmax		
	comp=Z,12nm,1.4s						
XAN				pmax	pmax		
	comp=Z,170nm,5.7s						
XAN				LR	LR		
	comp=Z,1µm,11.6s						
XAN				LR	LR		
	comp=Z,800nm,11.6s						
XAN				LR	LR		
	comp=Z,2µm,12.6s						
XAN	**Xi'an**	13.07	262	P	Pn	19 51 42.3	+1.1
XAN	**Xi'an**	13.07	262		Pn	19 51 42.3	+1.1
KLR	**Kul'dur**	13.35	21	Pn	Pn	19 51 47.1	+2.4
	comp=Z,1.5nm,0.3s,baz=226,slow=11,SNR=30						
KLR				Lg	Lg	19 55 36.9	
	comp=Z,1.5nm,0.3s,baz=305,slow=23,SNR=12						
KLR				LR	LR	19 56 42.1	
	comp=Z,623nm,18.9s,baz=210,slow=37						
KLR	**Kul'dur**	13.35	21	⇑*i*P	Pn	19 51 47.9	+3.1
KLR				pmax	pmax		
	comp=Z,12nm,0.9s						
SSLB	**Suanglung**	13.48	194	Pn	Pn	19 51 47.9	+1.2
TPUB	**Ta-pu**	14.02	195		Pn	19 51 54.2	+0.1
ENH	**Enshi**	14.21	246	P	Pn	19 51 60.0	+3.3
ASAJ	**Asahikawa**	15.45	57	Pn	P	19 52 15.8	-2.0
	comp=Z,2.2nm,0.3s,baz=242,slow=13,SNR=37						
ASAJ				LR	LR	19 57 37.4	
	comp=Z,599nm,19.0s,baz=246,slow=35						
JKA	**Kamikawa-asahi**	15.46	57		P	19 52 15.8	-2.1
GRNR	**Gornyy**	16.22	28	⇓*i*P	P	19 52 26.2	-0.1
GRNR				*e*S	S	19 55 32.4	-3.5
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GRNR				smax	smax		
	comp=N,3.0nm,0.9s						
GRNR				MLR	MLR		
	comp=Z,3µm,16.0s						
LZH	**Lanzhou**	16.68	273	⇑P	P	19 52 33.0	+1.3
LZH				pP	sP	19 52 36.8	-0.2
LZH				sP	pP	19 52 40.5	+5.2
LZH				PP	PnPn	19 52 47.3	+8.7
LZH				SS	S	19 55 54.3	+8.5
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				pmax	pmax		
	comp=Z,86nm,4.1s						
LZH				LR	LR		
	comp=Z,2µm,14.6s						
LZH				LR	LR		
	comp=Z,2µm,14.1s						
LZH				LR	LR		
	comp=Z,2µm,13.6s						
YSS	**Yuzh-Sakhalins**	16.79	48	*e*P	P	19 52 33.8	+1.2
YSS				*e*S	S	19 55 43.4	-4.1
YSS				pmax	pmax		
	comp=Z,50nm,1.2s						
YSS				pmax	pmax		
	comp=Z,400nm,5.1s						
YSS	**Yuzh-Sakhalins**	16.79	48	P	P	19 52 33.5	+0.8
ULN	**Ulaanbaatar**	16.88	316	P	P	19 52 33.8	0.0
ULN				pmax	pmax		
	comp=Z,18nm,0.9s						
ULN	**Ulaanbaatar**	16.88	316	P	P	19 52 33.8	0.0
ZEA	**Zeya**	16.90	5	*e*P	P	19 52 35.8	+2.0
ZEA				pmax	pmax		
	comp=N,110nm,1.4s						
ZEA				pmax	pmax		
	comp=E,58nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,160nm,1.2s						
ZEA				MLR	MLR		
	comp=N,3µm,9.0s						
ZEA				MLR	MLR		
	comp=E,2µm,9.0s						
ZEA				MLR	MLR		
	comp=Z,4µm,9.0s						
CIT	**Chita**	16.97	336	*e*P	P	19 52 36.2	+1.6
CIT				*e*		19 55 45.2	
CIT				pmax	pmax		
	comp=Z,91nm,1.3s						
SONM	**Songino Array**	17.23	315	P	Pn	19 52 35.8	-0.4
	comp=Z,0.3nm,0.3s,baz=125,slow=12,SNR=20						
SONM				LR	LR	19 58 34.1	
	comp=Z,260nm,21.4s,baz=122,slow=35						
SONM	**Songino Array**	17.23	315	P	Pn	19 52 35.8	-0.4
SONM				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SONM	**Songino Array**	17.23	315	P	Pn	19 52 35.8	-0.4
UGL	**Uglegorsk**	17.58	41	*de*P	P	19 52 44.2	+2.9
UGL				pmax	pmax		
	comp=Z,184nm,1.0s						
UGL				pmax	pmax		
	comp=E,100nm,1.2s						
UGL				pmax	pmax		
	comp=Z,800nm,2.0s						
UGL				MLR	MLR		
	comp=Z,2µm,11.0s						
UGL				MLR	MLR		
	comp=N,2µm,10.0s						
UGL				MLR	MLR		
	comp=E,3µm,13.0s						
CD2	**Chengdu**	18.27	257	⇑*i*P	Pn	19 52 47.8	-1.2
CD2				pP	pP	19 52 52.0	-0.8
CD2				PP	PnPn	19 53 01.5	+1.2
CD2				S	Sn	19 56 11.3	-1.6
CD2				sS	S	19 56 15.5	-2.5
CD2				PcP	PcP	19 57 23.0	+1.9
CD2				pmax	pmax		
	comp=E,30nm,0.5s						
CD2				pmax	pmax		
	comp=E,240nm,3.5s						
CD2				LR	LR		
	comp=E,5µm,10.8s						
CD2				LR	LR		
	comp=E,4µm,11.6s						
CD2				LR	LR		
	comp=E,4µm,12.2s						
GYA	**Guiyang**	18.44	241	⇑*i*P	Pn	19 52 52.5	+1.3
GYA				S	S	19 56 20.8	-0.8
GYA				SS	SnSn	19 56 31.0	0.0
GYA				pmax	pmax		
	comp=E,20nm,0.8s						
GYA				pmax	pmax		
	comp=E,170nm,4.9s						
GYA				LR	LR		
	comp=E,1µm,11.3s						
GYA				LR	LR		
	comp=E,1µm,11.7s						
GYA				LR	LR		
	comp=E,2µm,14.9s						
TYV	**Tymovskoe**	18.99	37	*e*P	Pn	19 52 59.5	+1.9
TYV				pmax	pmax		
	comp=Z,17nm,1.3s						
TYV				pmax	pmax		
	comp=Z,100nm,3.0s						
GTA	**Gaotai**	19.60	285	*e*P	P	19 53 03.5	-0.3
GTA				pP	pP	19 53 07.8	+0.4
GTA				sP	sP	19 53 10.8	+1.7
GTA				pmax	pmax		
	comp=Z,180nm,6.2s						
GTA				LR	LR		
	comp=Z,820nm,13.7s						
GTA				LR	LR		
	comp=Z,880nm,13.4s						
GTA				LR	LR		
	comp=Z,1µm,13.4s						
NKL	**Nikolayevsk**	19.73	30	*e*P	Pn	19 53 05.7	-0.7
NKL				pmax	pmax		
	comp=Z,37nm,1.0s						
NKL				pmax	pmax		
	comp=N,8.0nm,0.6s						
NKL				pmax	pmax		
	comp=E,2.0nm,0.8s						
ZAK	**Zakamensk**	20.34	318	*e*P	P	19 53 10.9	-0.8
ZAK				pmax	pmax		

	comp=Z,31nm,1.2s						
TLY	Talaya	20.89	321	P	P	19 53 17.8	+0.2
	comp=Z,2.6nm,0.6s,baz=120,slow=16,SNR=1.2						
TLY				LR	LR	20 02 17.7	
	comp=Z,272nm,19.3s,baz=128,slow=40						
TLY	Talaya	20.89	321	eP	P	19 53 18.5	+0.9
TLY				eSS	Sn	19 57 31.4	+16
TLY				eSSS	SSS	19 57 47.5	
TLY				pmax	pmax		
	comp=Z,87nm,1.3s						
TLY				MLR	MLR		
	comp=Z,1µm,8.0s						
TLY	Talaya	20.89	321	P	P	19 53 18.2	+0.5
IRK	Irkutsk	20.93	323	eP	Pn	19 53 22.7	+2.1
IRK				pmax	pmax		
	comp=Z,113nm,1.9s						
BOD	Bodaibo	22.02	345	eP	P	19 53 30.9	+1.2
BOD				pmax	pmax		
	comp=Z,36nm,1.6s						
QIZ	Qiongzhong	22.03	220	P	P	19 53 31.0	+1.0
QIZ				pP	pP	19 53 33.3	-0.4
QIZ				sP	sP	19 53 35.3	-0.1
QIZ				S	S	19 57 36.8	+4.0
QIZ				LR	LR		
	comp=Z,2µm,15.1s						
QIZ				LR	LR		
	comp=Z,3µm,15.3s						
QIZ				LR	LR		
	comp=Z,2µm,10.8s						
KMI	Kunming	22.05	244	P	P	19 53 31.0	+0.5
KMI				pP	sP	19 53 35.5	-0.3
KMI				PP	PnPn	19 53 56.0	+3.7
KMI				S	S	19 57 31.8	-1.8
KMI				sS	Sn	19 57 42.8	-1.4
KMI				pmax	pmax		
	comp=Z,30nm,0.9s						
KMI				pmax	pmax		
	comp=Z,170nm,4.0s						
KMI				LR	LR		
	comp=Z,1µm,11.9s						
KMI				LR	LR		
	comp=Z,1µm,12.4s						
KMI				LR	LR		
	comp=Z,670nm,16.9s						
KMI	Kunming	22.05	244	P	P	19 53 30.9	+0.5
KMI				pmax	pmax		
	comp=Z,88nm,1.2s						
KMI	Kunming	22.05	244	P	P	19 53 30.9	+0.4
KMI				IAmb	IAmb	19 53 37.8	
	comp=Z,88nm,1.2s						
MOY	Mondy	22.25	319	eP	P	19 53 32.3	0.0
MOY				pmax	pmax		
	comp=Z,56nm,2.4s						
TGY	Tagaytay City	22.98	189	LR	LR	20 03 28.6	
	comp=Z,169nm,18.9s,baz=108,slow=39						
SLVN	Son La	23.75	235	P	P	19 53 47.5	-0.4
SLVN				IAmb	IAmb	19 53 54.0	
	comp=Z,75nm,1.1s						
YAK	Yakutsk	25.31	6	P	P	19 54 01.9	+0.1
	comp=Z,15nm,0.7s,baz=200,slow=1.8,SNR=30						
YAK	Yakutsk	25.31	6	d iP	P	19 54 01.3	-0.5
YAK				eS	S	19 58 27.4	+0.1
YAK				eSSS	SSS	19 59 46.7	
YAK				pmax	pmax		
	comp=Z,48nm,1.0s						
YAK				pmax	pmax		
	comp=N,30nm,1.1s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,56nm,1.5s						
YAK				pmax	pmax		
	comp=N,47nm,1.5s						
YAK				pmax	pmax		
	comp=E,37nm,1.6s						
YAK				smax	smax		
	comp=E,60nm,1.9s						
YAK				smax	smax		
	comp=N,111nm,1.9s						
YAK				MLR	MLR		
	comp=Z,188nm,11.0s						
YAK				MLR	MLR		
	comp=N,166nm,10.0s						
YAK	Yakutsk	25.31	6	P	P	19 54 01.1	-0.7
YAK				IAmb	IAmb	19 54 02.7	
	comp=Z,38nm,0.9s						
UBPT	Khong Chiam	27.45	223	P	P	19 54 21.8	+0.2
PETK	Petropavlovsk-	28.12	44	LR	LR	20 06 38.1	
	comp=Z,218nm,18.7s,baz=224,slow=38						
MA2	Magadan	28.24	28	LR	LR	20 05 20.7	
	comp=Z,205nm,18.7s,baz=274,slow=36						
MA2	Magadan	28.24	28	d iP	P	19 54 27.8	-0.4
MA2				pmax	pmax		
	comp=Z,26nm,1.0s						
MA2	Magadan	28.24	28	P	P	19 54 28.1	0.0
MA2				IAmb	IAmb	19 54 29.2	
	comp=Z,39nm,1.1s						
LSA	Lhasa	28.74	265	P	P	19 54 33.3	-0.2
LSA	Lhasa	28.74	265	P	P	19 54 33.7	+0.3
LSA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LSA	Lhasa	28.74	265	P	P	19 54 33.7	+0.3
WMQ	Urumqi	28.74	295	P	P	19 54 33.5	+0.6
WMQ				pP	sP	19 54 37.8	-0.6
WMQ				pmax	pmax		
	comp=Z,28nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,110nm,3.7s						
WMQ				LR	LR		
	comp=Z,990nm,15.7s						
WMQ				LR	LR		
	comp=Z,470nm,14.1s						
WMQ				LR	LR		
	comp=Z,410nm,17.5s						
DLV	T Lat	28.79	214	P	P	19 54 34.6	+1.0
DLV				IAmb	IAmb	19 54 39.7	
	comp=Z,23nm,0.9s						
CHTO	Chiang Mai	28.82	238	P	P	19 54 32.8	-1.0
CHTO				pmax	pmax		
	comp=Z,12nm,1.0s						
CHTO	Chiang Mai	28.82	238	P	P	19 54 32.8	-1.0
CM31	Chiang Mai Arr	29.07	238	P	P	19 54 35.2	-0.8
CMAR	Chiang Mai Arr	29.07	238	P	P	19 54 35.9	-0.1
	comp=Z,4.6nm,0.9s,baz=44,slow=7.8,SNR=17						
CMAR				LR	LR	20 07 46.3	
	comp=Z,542nm,18.4s,baz=50,slow=40						
CMAR	Chiang Mai Arr	29.07	238	P	P	19 54 33.1	-2.8
PBKT	Sadao Pong	29.11	232	P	P	19 54 35.6	-0.7
PBKT				IAmb	IAmb	19 54 40.4	
	comp=Z,19nm,0.7s						
GUMO	Guam	29.50	137	LR	LR	20 05 31.3	
	comp=Z,135nm,18.7s,baz=326,slow=34						
SEY	Seymchan	31.09	24	⇑ iP	P	19 54 53.6	+0.2
KKM	Kota Kinabalu	31.69	196		P	19 54 58.3	-0.9
KKM				IAmb	IAmb	19 55 05.2	
	comp=Z,37nm,1.1s						
ZAA0	Zalesovo Array	32.13	315	P	P	19 55 02.1	-0.5
ZALV	Zalesovo Beam	32.13	315	P	P	19 55 02.0	-0.6
	comp=Z,4.6nm,0.8s,baz=107,slow=7.9,SNR=14						
ZALV				PcP	PcP	19 57 49.9	-1.6
	comp=Z,1.5nm,0.6s,baz=78,slow=3.3,SNR=3.7						
ZALV				LR	LR	20 07 24.0	
	comp=Z,255nm,19.4s,baz=98,slow=35						
ZALV	Zalesovo Beam	32.13	315	P	P	19 55 01.4	-1.2
TAPN	Taplejung	32.47	264	eP	P	19 55 05.9	-0.4
	comp=Z,15nm,0.7s						
MK31	Makanchi Array	32.63	301	P	P	19 55 06.5	-0.7
MK31				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MK31	Makanchi Array	32.63	301	P	P	19 55 06.5	-0.7
MKAR	Makanchi Array	32.63	301	P	P	19 55 06.9	-0.3
	comp=Z,2.7nm,0.6s,baz=94,slow=11,SNR=21						
MKAR				PcP	PcP	19 57 51.8	-1.2
	comp=Z,1.3nm,0.6s,baz=83,slow=4.1,SNR=6.3						
MKAR				LR	LR	20 09 14.2	
	comp=Z,386nm,18.0s,baz=92,slow=38						
MKAR	Makanchi Array	32.63	301	P	P	19 55 06.1	-1.1
MAKZ	Makanchi	32.85	301	P	P	19 55 08.3	-0.8
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MAKZ	Makanchi	32.85	301	P	P	19 55 08.3	-0.8
ODAN	Odare	32.94	263	eP	P	19 55 09.1	-1.2
	comp=Z,34nm,0.8s						
RAMN	Ramite	33.53	264	eP	P	19 55 14.3	-1.2
JIRN	Jiri	33.54	265	eP	P	19 55 15.6	-0.1
	comp=Z,168nm,0.9s						
GUN	Gumba	33.68	266	eP	P	19 55 16.8	-0.1
	comp=Z,154nm,1.0s						
PKI	Pulchoki	34.21	266	eP	P	19 55 20.4	-1.1
	comp=Z,20nm,0.8s						
PKIN	Phulchoki	34.21	266	eP	P	19 55 20.3	-1.2
	comp=Z,23nm,1.0s						
KKN	Kakani	34.22	266	eP	P	19 55 20.9	-0.5
	comp=Z,31nm,0.8s						
DMN	Daman	34.43	266	eP	P	19 55 22.7	-0.6
GKN	Gorkha	34.64	267	eP	P	19 55 24.1	-0.9
	comp=Z,71nm,1.0s						
TIXI	Tiksi	34.85	2	d iP	P	19 55 25.6	-0.5
TIXI				pmax	pmax		
	comp=Z,25nm,1.0s						
TIXI	Tiksi	34.85	2	P	P	19 55 25.3	-0.8
TIXI				IAmb	IAmb	19 55 31.8	
	comp=Z,25nm,0.8s						
DANN	Dangsing	35.19	268	eP	P	19 55 29.5	-0.5
	comp=Z,81nm,0.6s						
KURK	Kurchatov	35.30	308	c iP	P	19 55 29.6	-0.7
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KURK	Kurchatov	35.30	308	P	P	19 55 28.8	-1.4
SBUM	Sibu	36.16	201	P	P	19 55 38.7	+0.8
SBUM				IAmb	IAmb	19 55 44.3	
	comp=Z,24nm,1.1s						
MRSI	Marisa	36.37	184	P	P	19 55 41.7	+2.0
	comp=Z,64nm,1.0s						
MPSI	Mapaga	36.68	188	P	P	19 55 45.4	+3.1
	comp=Z,15nm,1.0s						
ULHL	Ulahol	37.21	294	P	P	19 55 46.8	-0.2
	SNR=12						
BOOM	Boomskoye usch	37.40	294	P	P	19 55 48.4	-0.1
BOOM				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BOOM	Boomskoye usch	37.40	294	P	P	19 55 48.4	-0.1
TKM2	Tokmak 2	37.59	295	P	P	19 55 50.6	+0.5
	SNR=14						
KSM	Kuching	37.67	204	P	P	19 55 51.7	+0.9
KSM				IAmb	IAmb	19 55 56.7	
	comp=Z,28nm,1.1s						
LUWI	Luwuk	37.83	183	P	P	19 55 54.0	+1.9
LUWI				IAmb	IAmb	19 56 10.7	
	comp=Z,23nm,1.0s						
KSH	Kashi	37.89	289	P	P	19 55 56.8	+4.1
KSH				pP	sP	19 56 00.5	+2.3
KSH				PP	PnPn	19 57 27.5	+7.2
KSH				S	S	20 01 49.8	+5.9
KSH				sS	ScP	20 01 56.8	+0.9
KSH				pmax	pmax		
	comp=Z,21nm,1.0s						
KSH				pmax	pmax		
	comp=Z,400nm,5.9s						
KSH				LR	LR		
	comp=Z,650nm,12.4s						
KSH				LR	LR		
	comp=Z,750nm,11.7s						
KSH				LR	LR		
	comp=Z,710nm,12.3s						
KZA	Kyzart	37.97	293	P	P	19 55 54.4	+0.8
	SNR=16						
NRIK	Noril'sk	38.13	340	P	P	19 55 53.6	-0.5
	comp=Z,8.6nm,0.5s,baz=119,slow=9.1,SNR=19						
NRIK				LR	LR	20 12 03.2	
	comp=Z,213nm,20.4s,baz=142,slow=37						
CHMS	Chumysh	38.19	295	P	P	19 55 55.4	+0.3
	SNR=7.4						
FRU1	Bishkek	38.31	295	P	P	19 55 56.4	+0.3
FRU1				pmax	pmax		
	comp=Z,28nm,1.1s						
FRU1	Bishkek	38.31	295	P	P	19 55 56.4	+0.3
FRU1				IAmb	IAmb	19 56 01.3	
	comp=Z,28nm,1.1s						
USP	Ospenovka	38.34	295	P	P	19 55 56.0	-0.3
	SNR=9.5						
AAK	Ala-Archa	38.43	294	P	P	19 55 57.2	0.0
	SNR=8.0						
AAK	Ala-Archa	38.43	294	c iP	P	19 55 57.2	0.0
AAK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
AAK	Ala-Archa	38.43	294	P	P	19 55 56.7	-0.5
UCH	Uchtor	38.48	294	P	P	19 55 58.7	+0.7
	SNR=32						
BILL	Bilibino	38.79	24	d iP	P	19 55 57.4	-2.3
BILL				i		19 56 08.4	
BILL				i		19 57 29.2	
BILL				i		19 58 10.1	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,511nm,15.0s						
BILL	Bilibino	38.79	24	P	P	19 55 58.9	-0.8
IPM	Ipoh	38.86	219	P	P	19 56 00.4	-0.4
EKS2	Erkin-Say	38.95	295	P	P	19 56 01.3	-0.3
	SNR=6.8						
AML	Almayashu	39.10	294	P	P	19 56 03.5	+0.5
	SNR=28						
ARSB	Arslanbob	39.77	293	P	P	19 56 08.7	+0.3
ARSB				pmax	pmax		
	comp=Z,39nm,1.1s						
ARSB	Arslanbob	39.77	293	P	P	19 56 08.7	+0.3
ARSB				IAmb	IAmb	19 56 13.8	
	comp=Z,38nm,1.1s						
MYKOM	Kota Tinggi	39.86	213	P	P	19 56 08.4	-0.7
AAI	Ambon	40.56	174	P	P	19 56 15.1	+0.1
	comp=Z,55nm,0.9s						
AAI	Ambon	40.56	174	P	P	19 56 15.5	+0.5
AAI				pmax	pmax		
	comp=Z,55nm,0.9s						
BRVK	Borovoye	40.58	311	d iP	P	19 56 13.9	-1.0
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRVK	Borovoye	40.58	311	P	P	19 56 13.8	-1.0
KBKI	Kotabaru	40.80	193	P	P	19 56 18.8	+1.9
	comp=Z,9.0nm,1.0s						
KK31	Karatay Array	41.24	296	P	P	19 56 19.7	-0.7
KK31				pmax	pmax		
	comp=Z,20nm,0.9s						
KK31	Karatay Array	41.24	296	P	P	19 56 19.7	-0.7
KK31				IAmb	IAmb	19 56 25.8	
	comp=Z,20nm,0.8s						
KKAR	Karatay Array	41.24	296	P	P	19 56 19.6	-0.8
KKAR				pmax	pmax		
	comp=Z,20nm,0.9s						
KKAR	Karatay Array	41.24	296	P	P	19 56 19.6	-0.8
KKAR	Karatay Array	41.24	296	P	P	19 56 19.9	-0.5
KKAR				IAmb	IAmb	19 56 25.8	
	comp=Z,20nm,0.8s						
PSI	Prapat	41.37	221	P	P	19 56 20.8	-1.0
	comp=Z,6.2nm,0.6s,baz=356,slow=10.0,SNR=2.6						
PSI	Prapat	41.37	221	P	P	19 56 20.8	-1.0
PSI				pmax	pmax		
	comp=Z,16nm,1.1s						
RPSI	Rantau Prapat	41.46	221	P	P	19 56 21.6	-0.8
RPSI	Rantau Prapat	41.46	221	P	P	19 56 20.8	-1.5
NIL	Nilore	41.60	281	P	P	19 56 23.5	0.0
NIL				pmax	pmax		
	comp=Z,35nm,1.2s						
NIL	Nilore	41.60	281	P	P	19 56 23.5	0.0
NIL				IAmb	IAmb	19 56 27.9	
	comp=Z,35nm,1.1s						
GAR	Garm	42.28	290	P	P	19 56 28.1	-1.0
GAR				IAmb	IAmb	19 56 35.3	
	comp=Z,47nm,1.2s						
TAS	Tashkent	42.48	294	P	P	19 56 30.7	+0.1
TAS				pmax	pmax		
	comp=Z,61nm,0.4s						
TAS	Tashkent	42.48	294	P	P	19 56 30.7	+0.1
CHGR	Chuyangaron	43.24	290	P	P	19 56 36.0	-0.8
KBL	Kabul	44.59	284	P	P	19 56 46.8	-1.1
KBL				pmax	pmax		
	comp=Z,14nm,0.7s						
KBL	Kabul	44.59	284	P	P	19 56 46.8	-1.1
KBL				IAmb	IAmb	19 56 51.6	
	comp=Z,14nm,0.7s						
HYB	Hyderabad	44.83	257	i P	P	19 56 52.5	+2.8
SVE	Sverdlovsk	46.09	317	c eP	P	19 56 59.2	0.0
SVE				pmax	pmax		
	comp=Z,40nm,1.1s						
SVE				MLR	MLR		
	comp=Z,386nm,12.0s						
LEM	Lembang	46.34	204	P	P	19 57 01.5	-0.3
LEM				pmax	pmax		
	comp=Z,22nm,0.9s						
ARU	Arti	47.26	316	d iP	P	19 57 07.7	-0.7
ARU						19 58 57.3	
ARU				S	S	20 04 04.4	+3.3
ARU				pmax	pmax		
	comp=Z,27nm,0.8s						
ARU				MLR	MLR		
	comp=Z,464nm,14.0s						
ARU	Arti	47.26	316	P	P	19 57 07.2	-1.2
ABKAR	Akbulak array	47.38	306	P	P	19 57 08.5	-0.9
POO	Poona	47.91	262	eP	P	19 57 09.5	-4.4
ANM	Nome	48.87	33	P	P	19 57 21.3	+0.6
ANM				pmax	pmax		
	comp=Z,18nm,0.8s						
ANM	Nome	48.87	33	P	P	19 57 21.3	+0.6
ANM				IAmb	IAmb	19 57 22.6	
	comp=Z,18nm,0.8s						
RDOG	Red Dog Mine	49.84	28	P	P	19 57 27.1	-0.9
HRA	Herat	49.89	287	P	P	19 57 28.9	-0.4
HRA				IAmb	IAmb	19 57 33.9	
	comp=Z,13nm,0.8s						
MTN	Manton Dam	49.91	172	P	P	19 57 28.2	-0.9
MTN				IAmb	IAmb	19 57 38.6	
	comp=Z,13nm,1.1s						
PMG	Port Moresby	50.75	151	P	P	19 57 35.2	-0.3
	comp=Z,12nm,1.0s,baz=226,slow=9.6,SNR=3.1						
PMG	Port Moresby	50.75	151	IAmb	IAmb	19 57 46.2	
	comp=Z,12nm,0.9s						
GEYT	Alibeck	51.72	293	P	P	19 57 42.2	-0.5
	comp=Z,5.2nm,0.6s,baz=35,slow=3.6,SNR=18						
PRGR	Permogore	53.19	324	eP	P	19 57 49.8	-3.4
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
IMAR	Indian Mountai	53.60	30	P	P	19 57 56.1	-0.1
SVW2	Sparrevohn	53.73	36	P	P	19 57 58.4	+1.2
SVW2				IAmb	IAmb	19 57 59.3	
	comp=Z,12nm,1.1s						
TOLK	Toolik Lake Re	54.69	27	P	P	19 58 03.6	-0.5
TOLK	Toolik Lake Re	54.69	27	P	P	19 58 03.1	-1.0
	baz=282						
COLD	Coldfoot	54.75	28	P	P	19 58 04.5	-0.1
FITZ	Fitzroy Crossi	54.75	179	P	P	19 58 05.2	+0.2
	comp=Z,4.9nm,0.7s,baz=360,slow=5.7,SNR=16						
FITZ	Fitzroy Crossi	54.75	179	P	P	19 58 04.9	-0.1
PPLA	Purkeypile	54.89	34	P	P	19 58 06.9	+1.1
PPLA				IAmb	IAmb	19 58 08.6	
	comp=Z,13nm,0.8s						
MLY	Manley	55.02	31	P	P	19 58 07.0	+0.4
MLY				IAmb	IAmb	19 58 08.3	
	comp=Z,13nm,1.0s						
BPAW	Bear Paw Mtn.	55.13	32	P	P	19 58 08.1	+0.7
BPAW				IAmb	IAmb	19 58 09.0	
	comp=Z,14nm,1.0s						
RSO	Redoubt South	55.22	37	P	P	19 58 08.7	+0.4
KTH	Kantishna Hill	55.29	33	P	P	19 58 09.6	+1.0
TRF	Thorofare Moun	55.59	33	P	P	19 58 10.5	-0.4
BWN	Browne	55.76	32	P	P	19 58 13.3	+1.4
NEA	Nenana	55.82	31	P	P	19 58 12.9	+0.6
NEA				IAmb	IAmb	19 58 13.7	
	comp=Z,11nm,0.7s						
OHAK	Old Harbor	55.83	41	P	P	19 58 12.6	+0.2
SUA	Susitna One	55.91	35	P	P	19 58 13.0	-0.1
SUA				IAmb	IAmb	19 58 15.1	
	comp=Z,16nm,0.8s						
TMCR	Tamitsa	56.00	328	eP	P	19 58 12.4	-1.1
TMCR				pmax	pmax		
	comp=Z,12nm,1.0s						
KDAK	Kodiak Island	56.03	40	P	P	19 58 13.9	0.0
KDAK				pmax	pmax		
	comp=Z,25nm,0.9s						
KDAK	Kodiak Island	56.03	40	P	P	19 58 13.9	0.0
MDM	Murphy Dome	56.07	31	P	P	19 58 14.7	+0.5
MDM				IAmb	IAmb	19 58 17.5	
	comp=Z,9.6nm,0.9s						
MCK	McKinley	56.10	32	P	P	19 58 14.6	+0.2
MCK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MCK	McKinley	56.10	32	P	P	19 58 14.6	+0.2
MCK				IAmb	IAmb	19 58 15.3	
	comp=Z,10nm,1.0s						
RND	Reindeer	56.23	33	P	P	19 58 15.2	-0.1
RND				pmax	pmax		
	comp=Z,17nm,1.0s						
RND	Reindeer	56.23	33	P	P	19 58 15.2	-0.1
RND				IAmb	IAmb	19 58 15.9	
	comp=Z,16nm,1.0s						
KLMR	Klimovskoe	56.24	324	eP	P	19 58 12.3	-3.0
KLMR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KLMR	Klimovskoe	56.24	324	eP	P	19 58 12.4	-2.9
KLMR				AMP		19 58 14.5	
	comp=Z,7.0nm,0.7s						
COLA	College	56.25	31	P	P	19 58 16.4	+1.1
COLA				pmax	pmax		
	comp=Z,41nm,0.8s						
WRH	Wood River Hil	56.26	31	P	P	19 58 15.5	+0.1
WRH				IAmb	IAmb	19 58 17.4	
	comp=Z,6.8nm,0.6s						
BRLK	Bradley Lake	56.31	37	P	P	19 58 16.3	+0.3
BRLK				IAmb	IAmb	19 58 16.9	
	comp=Z,9.5nm,0.8s						
CCB	Clear Creek Bu	56.33	31	P	P	19 58 15.8	-0.1
CCB				IAmb	IAmb	19 58 17.4	
	comp=Z,9.1nm,0.8s						
POKR	Poker Plat Res	56.35	31	P	P	19 58 16.7	+0.5
	baz=286						
RC01	Rabbit Creek A	56.48	36	P	P	19 58 17.1	0.0
RC01				IAmb	IAmb	19 58 18.6	
	comp=Z,10.0nm,0.9s						
PMR	Palmer	56.61	35	P	P	19 58 18.0	0.0
PMR				pmax	pmax		
	comp=Z,17nm,1.0s						
PMR	Palmer	56.61	35	P	P	19 58 17.9	0.0
PMR				IAmb	IAmb	19 58 18.8	
	comp=Z,17nm,1.0s						
GHO	Glory Hole Cre	56.66	35	P	P	19 58 18.4	0.0
GHO				IAmb	IAmb	19 58 24.7	
	comp=Z,15nm,1.1s						
IL31		56.67	31	P	P	19 58 17.9	-0.4
ILAR	Eielson Array	56.67	31	P	P	19 58 18.0	-0.4
	comp=Z,3.9nm,0.8s,baz=275,slow=5.5,SNR=43						
ILAR	Eielson Array	56.67	31	P	P	19 58 17.9	-0.4
HDA	Harding Lake	56.75	31	P	P	19 58 18.3	-0.7
HDA				IAmb	IAmb	19 58 19.3	
	comp=Z,13nm,0.9s						
HDA	Harding Lake	56.75	31	P	P	19 58 18.4	-0.7
	baz=287						
BMAR	Burnt Mountain	56.81	27	P	P	19 58 19.9	+0.6
FYU	Fort Yukon	56.81	29	P	P	19 58 19.5	+0.2
FYU				IAmb	IAmb	19 58 23.1	
	comp=Z,19nm,1.2s						
SEW	Seward	56.90	37	P	P	19 58 19.9	-0.1
SML	Sawmill	56.91	34	P	P	19 58 20.1	-0.2
SML				IAmb	IAmb	19 58 21.3	
	comp=Z,20nm,0.9s						
DHY	Denali Highway	56.96	33	P	P	19 58 20.3	-0.3
KNK	Knik Glacier	56.98	35	P	P	19 58 20.4	-0.2
PRP	Porcupine Dome	57.01	30	P	P	19 58 21.2	+0.3
PRP				IAmb	IAmb	19 58 22.6	
	comp=Z,18nm,0.9s						
WB0	Warramunga Arr	57.16	169	P	P	19 58 20.9	-1.4
WRAB	Tennant Creek	57.32	169	P	P	19 58 23.0	-0.4
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WRAB	Tennant Creek	57.32	169	P	P	19 58 23.0	-0.4
WRA	Warramunga Arr	57.33	169	P	P	19 58 23.0	-0.5
	comp=Z,4.7nm,0.8s,baz=349,slow=7.5,SNR=24						
WRA	Warramunga Arr	57.33	169	P	P	19 58 23.0	-0.5
WRA	Warramunga Arr	57.33	169	P	P	19 58 22.8	-0.6
WB2	Warramunga Arr	57.33	169	P	P	19 58 22.8	-0.6
SCM	Sheep Creek Mo	57.36	34	P	P	19 58 23.6	+0.2
SCM				pmax	pmax		
	comp=Z,25nm,0.8s						
SCM	Sheep Creek Mo	57.36	34	P	P	19 58 23.6	+0.2
WR0	Warramunga Arr	57.38	169	P	P	19 58 23.6	-0.2
RIDG	Independent Ri	57.84	32	P	P	19 58 26.2	-0.5
RIDG				IAmb	IAmb	19 58 27.1	
	comp=Z,13nm,0.8s						
AKT	Akhty	57.86	300	eP	P	19 58 26.1	-1.2
AKT				e		19 59 18.8	
AKT				e		20 00 34.3	
AKT				pmax	pmax		
	comp=Z,12nm,0.7s						
SCRK	Sand Creek	58.12	31	P	P	19 58 28.5	-0.3
SCRK				IAmb	IAmb	19 58 29.3	
	comp=Z,16nm,0.9s						

VRH	Novokhopyorsk	58.13	313	*e*P	P	19 58 25.3	-3.5
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
EYAK	Cordova Ski Ar	58.50	35	P	P	19 58 31.9	+0.6
EYAK				IAmb	IAmb	19 58 33.1	
	comp=Z,25nm,1.2s						
MENT	Mentasta	58.59	32	P	P	19 58 32.6	+0.7
MENT				IAmb	IAmb	19 58 33.4	
	comp=Z,12nm,0.8s						
EGAK	Eagle	58.99	30	P	P	19 58 34.7	+0.1
EGAK				IAmb	IAmb	19 58 35.6	
	comp=Z,8.5nm,0.8s						
RAGM	Ragged Mountai	59.06	35	P	P	19 58 36.4	+1.2
LPSR	Galich'ya Gora	59.24	315	*e*P	P	19 58 34.1	-2.4
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VRDI	Verde Repeater	59.31	34	P	P	19 58 37.8	+0.6
VRDI				IAmb	IAmb	19 58 38.2	
	comp=Z,9.0nm,0.9s						
BCAR	Beaver Creek A	59.37	32	P	P	19 58 38.0	+0.7
MCARA	McCarthy VSAT	59.45	34	P	P	19 58 38.6	+0.7
VSR	Storozhevoye	59.62	313	*e*P	P	19 58 37.2	-2.0
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CRQM	Cirque	59.63	35	P	P	19 58 39.9	+0.5
VORD	Divnogorie	59.64	313	*e*P	P	19 58 36.5	-2.8
VORD				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TGL	Tana Glacier	59.77	35	P	P	19 58 40.1	-0.1
TGL				IAmb	IAmb	19 58 41.7	
	comp=Z,19nm,1.0s						
BALM	Baldy	59.88	34	P	P	19 58 41.4	+0.4
BALM				IAmb	IAmb	19 58 42.0	
	comp=Z,7.0nm,0.8s						
ZEI	Tsey	59.95	303	*e*P	P	19 58 39.4	-2.5
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DAWY	Dawson	59.97	30	P	P	19 58 41.5	-0.1
EPYK	Eagle Plains	60.08	27	P	P	19 58 42.2	0.0
EPYK	Eagle Plains	60.08	27	P	P	19 58 42.1	-0.1
	baz=294						
BARN	Barnard Glacie	60.18	34	P	P	19 58 43.1	-0.1
BARN				IAmb	IAmb	19 58 44.8	
	comp=Z,11nm,0.8s						
KBZ	Khabaz	60.24	304	P	P	19 58 42.2	-1.3
	comp=Z,3.8nm,0.9s,baz=87,slow=5.9,SNR=7.7						
KBZ	Khabaz	60.24	304	⇑*i*P	P	19 58 42.6	-0.9
KIV	Kislovodsk	60.28	305	*e*P	P	19 58 43.7	-0.3
KIV				pmax	pmax		
	comp=Z,42nm,1.0s						
KIV	Kislovodsk	60.28	305	P	P	19 58 43.3	-0.7
KIV				IAmb	IAmb	19 58 44.2	
	comp=Z,13nm,0.9s						
CTGM	Chitina Glacie	60.37	34	P	P	19 58 44.7	+0.3
CTGM				IAmb	IAmb	19 58 46.1	
	comp=Z,18nm,1.0s						
INK	Inuvik	60.39	25	P	P	19 58 44.5	+0.3
INK				pmax	pmax		
	comp=Z,19nm,0.8s						
INK	Inuvik	60.39	25	P	P	19 58 44.5	+0.3
SHA1	Shidzhatmaz	60.39	304	⇑*i*P	P	19 58 44.4	-0.5
AKH	Akhalkalaki	60.80	302	P	P	19 58 47.2	-0.5
AKH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AKH	Akhalkalaki	60.80	302	P	P	19 58 47.2	-0.5
AKH				IAmb	IAmb	19 58 48.3	
	comp=Z,6.5nm,0.8s						
AS31	Alice Springs	60.92	170	P	P	19 58 48.3	-0.1
ASAR	Alice Springs	60.92	170	P	P	19 58 48.4	0.0
	comp=Z,5.7nm,0.9s,baz=355,slow=6.3,SNR=36						
ASAR	Alice Springs	60.92	170	P	P	19 58 48.0	-0.3
A36M	Sachs Harbour	61.14	19	P	P	19 58 49.3	0.0
	baz=301						
FINES	FINESS Array B	62.09	327	P	P	19 58 54.2	-1.6
	comp=Z,3.1nm,0.8s,baz=54,slow=5.9,SNR=7.7						
FINES				LR	LR	20 26 51.3	
	comp=Z,154nm,18.7s,baz=64,slow=37						
FINES	FINESS Array B	62.09	327	P	P	19 58 54.4	-1.4
HYT	Haines Junctio	62.13	33	P	P	19 58 57.0	+0.7
C36M	Paulatuk	62.87	22	P	P	19 59 01.0	+0.1
C36M	Paulatuk	62.87	22	P	P	19 59 00.9	+0.1
	baz=303						
WHY	Whitehorse	63.35	33	P	P	19 59 05.3	+0.9
WHY				IAmb	IAmb	19 59 06.0	
	comp=Z,8.3nm,0.9s						
SKAG	Skagway	63.72	34	P	P	19 59 08.4	+1.7
SKAG				IAmb	IAmb	19 59 08.7	
	comp=Z,14nm,1.1s						
DAG	Danmarks Havn	64.24	351	*i* P	P	19 59 08.8	-1.1
	comp=Z,6.6nm,0.8s						
DAG	Danmarks Havn	64.24	351	*i* P	P	19 59 08.8	-1.1
DAG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AKASG	Malin Array Be	65.52	316	P	P	19 59 16.6	-1.9
	comp=Z,4.8nm,0.6s,baz=54,slow=6.6,SNR=21						
AKASG	Malin Array Be	65.52	316	P	P	19 59 16.6	-2.0
AKBB	Malin Array Si	65.52	316	⇑*i*P	P	19 59 17.0	-1.6
RES	Resolute Bay	65.63	11	P	P	19 59 18.1	-0.9
	comp=Z,8.3nm,0.8s,baz=295,slow=6.6,SNR=12						
RES	Resolute Bay	65.63	11	P	P	19 59 18.6	-0.4
RES				pmax	pmax		
	comp=Z,9.0nm,0.8s						
RES	Resolute Bay	65.63	11	P	P	19 59 18.6	-0.4
RES				IAmb	IAmb	19 59 19.7	
	comp=Z,9.3nm,0.8s						
DLBC	Dease Lake	66.61	34	P	P	19 59 27.3	+1.7
CRAG	Craig	66.75	37	P	P	19 59 28.1	+1.6
FORT	Forrest	67.45	177	P	P	19 59 31.1	+0.1
HFS	Hagfors	67.96	330	P	P	19 59 32.0	-2.0
	comp=Z,1.9nm,0.5s,baz=63,slow=6.8,SNR=13						
NC405	NORSAR Array S	68.15	331	P	P	19 59 33.6	-1.6
NC405				IAmb	IAmb	19 59 34.0	
	comp=Z,13nm,0.8s						
BRTR	Keskin Array B	68.22	304	P	P	19 59 34.4	-1.8
	comp=Z,2.0nm,0.8s,baz=85,slow=5.3,SNR=8.7						
NB201	NORSAR Array S	68.36	331	P	P	19 59 34.9	-1.6
NB2	NORSAR Subarra	68.39	331	P	P	19 59 34.5	-2.3
	comp=Z,4.7nm,0.6s,baz=50,slow=6.2						
NOA	NORSAR Array B	68.39	331	P	P	19 59 34.7	-2.1
	comp=Z,3.6nm,0.6s,baz=50,slow=6.1,SNR=19						
NOA				LR	LR	20 30 33.3	
	comp=Z,112nm,18.0s,baz=65,slow=37						
NORES	NORESS Array B	68.45	331	P	P	19 59 39.6	+2.5
KULLO	Kullorsuaq	68.75	1	*i* P	P	19 59 38.3	-0.4
	comp=Z,18nm,1.1s						
KULLO	Kullorsuaq	68.75	1	*i* P	P	19 59 38.3	-0.4
KULLO				pmax	pmax		
	comp=Z,18nm,1.1s						
BUR08	Bucovina Ar. S	69.34	315	P	P	19 59 42.0	-1.0
BURAR	Bucovina Array	69.35	314	⇑P	P	19 59 42.3	-0.8
BURAR	Bucovina Array	69.35	314	P	P	19 59 41.9	-1.2
BURAR	Bucovina Array	69.35	314	⇑P	P	19 59 42.3	-0.8
VRI	Vrincioaia	69.40	312	⇑P	P	19 59 42.2	-1.1
VRI	Vrincioaia	69.40	312	⇑P	P	19 59 42.2	-1.1
KWP	Kalwaria Pacla	69.66	317	P	P	19 59 43.9	-0.9
KWP				pmax	pmax		
	comp=Z,20nm,1.1s						
KWP	Kalwaria Pacla	69.66	317	P	P	19 59 43.9	-0.9
KWP				IAmb	IAmb	19 59 45.2	
	comp=Z,20nm,1.1s						
MLR	Muntele Rosu	70.07	312	⇑P	P	19 59 44.9	-2.6
MLR	Muntele Rosu	70.07	312	⇑P	P	19 59 44.9	-2.6
SUMG	Summit	70.13	355	*i* P	P	19 59 47.7	-0.1
	comp=Z,34nm,0.9s						
SUMG	Summit	70.13	355	*i* P	P	19 59 47.7	-0.1
SUMG				pmax	pmax		
	comp=Z,34nm,0.9s						
SUMG	Summit	70.13	355	P	P	19 59 47.6	-0.3
SUMG				IAmb	IAmb	19 59 50.2	
	comp=Z,14nm,0.9s						
DOPR	Dopca	70.14	313	⇓P	P	19 59 46.7	-1.2
YKA	Yellowknife Ar	70.16	25	P	P	19 59 47.9	+0.2
	comp=Z,14nm,0.9s,baz=314,slow=5.5,SNR=148						
YKA				LR	LR	20 34 34.7	
	comp=Z,103nm,18.6s,baz=0.0,slow=39						
BBOO	Buckleboo	70.22	170	P	P	19 59 48.1	-0.1
BBOO				IAmb	IAmb	19 59 49.1	
	comp=Z,8.5nm,0.9s						
STKA	Stephens Creek	70.29	165	P	P	19 59 48.6	-0.1
	comp=Z,3.3nm,0.6s,baz=343,slow=6.0,SNR=23						
STKA	Stephens Creek	70.29	165	P	P	19 59 48.6	-0.1
STKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
STKA	Stephens Creek	70.29	165	P	P	19 59 48.6	-0.1
TRPA	Tarpa	70.58	316	⇓P	P	19 59 49.6	-0.9
OJC	Ojcow	70.88	319	P	P	19 59 51.0	-1.3
OJC				pmax	pmax		
	comp=Z,18nm,1.0s						
OJC	Ojcow	70.88	319	P	P	19 59 51.0	-1.3
OJC				IAmb	IAmb	19 59 52.4	
	comp=Z,18nm,1.0s						
NIE	Niedzica	71.08	318	P	P	19 59 53.1	-0.4
NIE				pmax	pmax		
	comp=Z,4.0nm,1.6s						
OKC	Ostrava-Krasne	71.97	319	AMS	AMS	20 33 10.0	
	comp=Z,300nm,18.3s						
GZR	Gura Zlata	71.98	314	⇑P	P	19 59 58.2	-0.9
GZR	Gura Zlata	71.98	314	⇑P	P	19 59 58.2	-0.9
MORC	Moravsky Berou	72.33	319	⇑P	P	20 00 00.0	-1.0
MORC	Moravsky Berou	72.33	319	⇑P	P	20 00 00.0	-1.0
MORC	Moravsky Berou	72.33	319	*e*P	P	20 00 00.1	-1.0
MORC	Moravsky Berou	72.33	319	P	P	19 59 59.8	-1.2
VYHS	Vyhne	72.40	318	*e*P	P	20 00 01.1	-0.4
VYHS				pmax	pmax		
	comp=Z,18nm,2.1s						
VYHS	Vyhne	72.40	318	*e*P	P	20 00 01.1	-0.4
KRLC	Kraliky	72.54	320	*e*P	P	20 00 01.5	-0.8
KRLC				*e*pP	sP	20 00 09.8	+1.7
KRLC	Kraliky	72.54	320	*e*P	P	20 00 01.5	-0.8
KRLC				*e*		20 00 09.8	
CHVC	Chvalec	72.60	321	*e*P	P	20 00 02.2	-0.5
DPC	Dobruska-Polom	72.61	320	*e*P	P	20 00 02.5	-0.2
DPC				AMS	AMS	20 33 50.0	
	comp=Z,400nm,12.2s						
DPC	Dobruska-Polom	72.61	320	*e*P	P	20 00 02.5	-0.2
DPC				MLR	MLR		
	comp=Z,400nm,12.2s						
VRAC	Vranov	73.10	319	P	P	20 00 04.7	-0.9
	comp=Z,2.3nm,0.5s,baz=51,slow=5.1,SNR=6.7						
VRAC	Vranov	73.10	319	⇑P	P	20 00 05.1	-0.5
VRAC	Vranov	73.10	319	⇑P	P	20 00 05.1	-0.5
VRAC	Vranov	73.10	319	*e*P	P	20 00 04.9	-0.7
VTS	Vitosha	73.29	311	⇑P	P	20 00 05.7	-1.3
VTS	Vitosha	73.29	311	P	P	20 00 06.1	-0.9
VTS				pmax	pmax		
	comp=Z,6.0nm,1.1s						
VTS	Vitosha	73.29	311	P	P	20 00 06.1	-0.9
MODS	Modra-Piesok	73.31	318	*e*P	P	20 00 06.0	-0.9
MODS				pmax	pmax		
	comp=Z,12nm,1.3s						
MODS	Modra-Piesok	73.31	318	*e*P	P	20 00 06.0	-0.9
KRUC	Moravsky	73.35	319	*e*P	P	20 00 06.2	-0.9
BRG	Berggiesshubel	73.49	322	*e*P	P	20 00 11.1	+3.3
	comp=Z,12nm,1.5s						
BRG	Berggiesshubel	73.49	322	*e*P	P	20 00 11.1	+3.3
BRG				pmax	pmax		
	comp=Z,13nm,1.5s						
CLL	Collm	73.68	323	*i* P	P	20 00 08.9	0.0
	comp=Z,9.0nm,1.1s						
CLL				*e*pP	pP	20 00 13.0	-0.1
CLL				*e*sP	sP	20 00 16.0	+1.3
CLL				*e*PP	PP	20 02 56.0	+3.3
CLL				*e*sPP		20 03 00.0	
CLL	Collm	73.68	323	*i* P	P	20 00 08.9	0.0
CLL				*e*		20 00 13.0	
CLL				pmax	pmax		
	comp=Z,9.0nm,1.1s						
PRU	Pruhonice	73.74	321	*e*P	P	20 00 08.7	-0.6
PRU	Pruhonice	73.74	321	*e*P	P	20 00 08.7	-0.6
CONA	Conrad Observa	74.33	319	*e*P	P	20 00 13.2	+0.2
	comp=Z,5.8nm,0.9s						
KHC	Kasperske Hory	74.76	321	*e*P	P	20 00 14.7	-0.7
KHC				*e*pP	sP	20 00 21.9	+0.7
KHC	Kasperske Hory	74.76	321	⇑*i*P	P	20 00 13.7	-1.7
KHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GERES	GERESS Array B	74.88	320	P	P	20 00 15.2	-0.9
	comp=Z,1.0nm,0.7s,baz=44,slow=5.9,SNR=7.9						
GERES	GERESS Array B	74.88	320	P	P	20 00 14.8	-1.3
ARSA	Arzberg	74.93	318	*e*P	P	20 00 15.9	-0.4
	comp=Z,2.8nm,0.9s						
LLLB	Lillooet	75.09	37	P	P	20 00 18.4	+1.1
MOA	Molln	75.22	319	*e*P	P	20 00 17.5	-0.5
	comp=Z,6.1nm,1.6s						
SOKA	Soboth	75.55	318	*e*P	P	20 00 19.4	-0.6
	comp=Z,3.6nm,0.7s						
GRF	Grafenberg Arr	75.58	322	*e*P	P	20 00 19.7	-0.4
	comp=Z,6.6nm,0.9s,baz=54,slow=4.9						
OBKA	Obir	75.91	318	*e*P	P	20 00 21.4	-0.8
	comp=Z,4.3nm,0.8s						
NLWA	Neilton Lookou	76.17	41	P	P	20 00 25.6	+2.1
KBA	Koelnbreinsper	76.19	319	*e*P	P	20 00 23.2	-0.5
	comp=Z,4.4nm,0.8s						
SFJD	Kangerlussuaq	76.32	358	P	P	20 00 23.5	-0.4
	comp=Z,1.3nm,1.1s,baz=19,slow=2.5,SNR=4.9						
SFJD	Kangerlussuaq	76.32	358	P	P	20 00 23.8	-0.1
SFJD				IAmb	IAmb	20 00 24.5	
	comp=Z,25nm,1.1s						
D03D	Eldon	76.48	40	P	P	20 00 26.4	+1.2
	baz=310						
B05A	Bryant	76.52	39	P	P	20 00 26.5	+1.1
	baz=311,SNR=6.3						
B06A	Marblemount	76.66	39	P	P	20 00 26.9	+0.7
ABTA	Abfaltersbach	76.84	319	*e*P	P	20 00 25.8	-1.6
	comp=Z,2.9nm,0.9s						
MOTA	Moosalm	77.18	320	*e*P	P	20 00 28.5	-0.9
	comp=Z,2.2nm,0.7s						
SQTA	Sankt Quirin	77.21	320	*e*P	P	20 00 28.7	-0.7
	comp=Z,2.2nm,0.7s						
D05A	Enumclaw	77.28	40	P	P	20 00 31.5	+1.8
E04D	Cinebar	77.39	41	P	P	20 00 31.5	+1.2
	baz=311						
FETA	Feichten	77.59	320	*e*P	P	20 00 30.9	-0.8
	comp=Z,3.0nm,0.9s						
LON	Longmire	77.66	40	P	P	20 00 32.4	+0.5
LON				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LON	Longmire	77.66	40	P	P	20 00 32.4	+0.5
LON				IAmb	IAmb	20 00 34.5	
	comp=Z,9.5nm,0.9s						
CTI	Castel Tesino	77.75	319	P	P	20 00 30.8	-1.7
CTI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CTI	Castel Tesino	77.75	319	P	P	20 00 30.8	-1.7
EKA	Eskdalemuir Ar	77.82	332	P	P	20 00 31.0	-1.5
	comp=Z,0.5nm,0.5s,baz=39,slow=5.4,SNR=2.2						
B08A	Colville Reser	77.83	38	P	P	20 00 33.6	+0.7
DAVA	Damuels	77.84	321	*e*P	P	20 00 32.6	-0.5
	comp=Z,6.3nm,0.9s						
LTY	Liberty	77.90	39	P	P	20 00 34.0	+0.6
LTY				IAmb	IAmb	20 00 34.7	
	comp=Z,12nm,0.7s						
BFO	Black Forest	77.91	322	*ce*P	P	20 00 32.9	-0.4
BFO				pmax	pmax		
	comp=Z,1.0nm,1.3s						
BFO	Black Forest	77.91	322	P	P	20 00 32.5	-0.7
DAVOX	Davos/Dischmat	78.18	320	P	P	20 00 33.9	-1.1
	comp=Z,3.7nm,0.6s,baz=64,slow=6.2,SNR=8.1						
BMRD	Maredsous	78.23	325	P	P	20 00 34.2	-0.7
I02D	Swisshome	78.30	43	P	P	20 00 36.1	+0.7
	baz=311						
SNF	Seneffe	78.31	326	P	P	20 00 33.9	-1.5
H04D	Lebanon	78.63	42	P	P	20 00 38.6	+1.3
	baz=311						
TUE	Stuetta	78.66	320	P	P	20 00 37.1	-0.5
C09A	Chrisman Ranch	78.73	38	P	P	20 00 39.2	+1.4
C09A				IAmb	IAmb	20 00 40.0	
	comp=Z,20nm,0.8s						
E07A	Sunnyside	78.79	39	P	P	20 00 39.4	+1.3
H04A	Detroit Lake	78.83	42	P	P	20 00 38.9	+0.5
I03D	Drain, OR	78.84	43	P	P	20 00 39.9	+1.5
	baz=311						
G05D	Wamic, OR	78.92	41	P	P	20 00 40.2	+1.3
	baz=312						
D08A	Wollman Farm,	78.92	39	P	P	20 00 40.1	+1.3
D08A				IAmb	IAmb	20 00 41.0	
	comp=Z,17nm,0.9s						
NEW	Newport	78.97	37	P	P	20 00 39.9	+0.8
NEW				pmax	pmax		
	comp=Z,14nm,1.0s						
NEW	Newport	78.97	37	P	P	20 00 39.9	+0.8
NEW				IAmb	IAmb	20 00 41.3	
	comp=Z,14nm,0.9s						
NEW	Newport	78.97	37	P	P	20 00 40.1	+0.9
	baz=314,SNR=8.7						
NRCA	Norcia	79.05	316	P	P	20 00 39.6	-0.2
NRCA				IAmb	IAmb	20 00 40.4	
	comp=Z,14nm,0.9s						
HAWA	Hanford	79.06	39	P	P	20 00 39.4	-0.2
MURB	Monte Urbino	79.10	316	P	P	20 00 39.7	-0.3
MURB				IAmb	IAmb	20 00 43.8	
	comp=Z,11nm,1.0s						
FRB	Frobisher Bay	79.11	6	P	P	20 00 38.6	-0.8
	comp=Z,6.0nm,0.9s,baz=9.1,slow=5.8,SNR=8.6						
F07A	Phinny Hill Vi	79.20	40	P	P	20 00 41.2	+0.8
AQU	L'Aquila	79.20	315	P	P	20 00 40.0	-0.5
AQU				pmax	pmax		
	comp=Z,13nm,0.9s						
AQU	L'Aquila	79.20	315	P	P	20 00 40.0	-0.5
AQU				IAmb	IAmb	20 00 41.3	
	comp=Z,13nm,0.9s						
ZCCA	Zocca	79.23	318	P	P	20 00 40.7	+0.1
ZCCA				IAmb	IAmb	20 00 58.1	
	comp=Z,18nm,1.0s						
E08A	Dider Farm, El	79.24	39	P	P	20 00 41.8	+1.3
E08A				IAmb	IAmb	20 00 42.9	
	comp=Z,22nm,1.1s						
I04A	Tendick Farm,	79.29	43	P	P	20 00 42.0	+1.0
	baz=312,SNR=8.5						
K02D	Willamette Mer	79.32	44	P	P	20 00 42.6	+1.4
	baz=311						
I05D	Terrebonne, OR	79.51	42	P	P	20 00 43.3	+1.1
	baz=312						
OSSC	Osservatorio P	79.63	317	P	P	20 00 41.9	-0.9
E09A	Wood Farm, Sta	79.68	39	P	P	20 00 44.0	+1.1
L02E	Cave Junction	79.71	45	P	P	20 00 44.6	+1.4
	baz=311						
J04D	Umpqua Nationa	79.82	43	P	P	20 00 44.9	+0.8
	baz=312,SNR=5.4						
LATE	Laterza	79.93	316	P	P	20 00 43.4	-1.1
PINE	Pine Mountain	80.09	42	P	P	20 00 46.7	+1.2
J05D	Fort Rock, OR	80.27	43	P	P	20 00 47.7	+1.3
	baz=312						
FFC	Flin Flon	80.34	25	*ce*P	P	20 00 46.8	+0.4
FFC				pmax	pmax		
	comp=Z,35nm,1.0s						
FFC	Flin Flon	80.34	25	P	P	20 00 46.1	-0.3
FFC				IAmb	IAmb	20 00 47.2	
	comp=Z,18nm,0.8s						
L04D	Klamath Falls	80.39	44	P	P	20 00 48.3	+1.2
	baz=312,SNR=11						
K04D	Chiloquin, OR	80.43	43	P	P	20 00 48.7	+1.5
	baz=312						
YBH	Yreka Blue Hor	80.49	44	P	P	20 00 49.1	+1.5
YBH				pmax	pmax		
	comp=Z,19nm,1.2s						
YBH	Yreka Blue Hor	80.49	44	P	P	20 00 49.1	+1.5
YBH				IAmb	IAmb	20 00 50.2	
	comp=Z,19nm,1.1s						
F10A	Beach Ranch, E	80.51	39	P	P	20 00 48.9	+1.3
F10A				IAmb	IAmb	20 00 49.9	
	comp=Z,15nm,1.1s						
M02C	Callahan	80.63	45	P	P	20 00 49.8	+1.5
	baz=312						
I07A	Izee	80.65	41	P	P	20 00 50.0	+1.5
I07A				IAmb	IAmb	20 00 51.0	
	comp=Z,24nm,1.2s						
M04C	Macdoel	80.94	44	P	P	20 00 51.0	+0.9
	baz=312,SNR=8.4						
N02D	Trinity Center	81.00	45	P	P	20 00 50.9	+0.6
	baz=312						
BMO	Blue Mountains	81.26	39	P	P	20 00 52.7	+1.0
BMO				pmax	pmax		
	comp=Z,11nm,1.1s						
BMO	Blue Mountains	81.26	39	P	P	20 00 52.6	+1.0
BMO				IAmb	IAmb	20 00 53.7	
	comp=Z,11nm,1.1s						
WDC	Whiskeytown Da	81.35	45	P	P	20 00 53.1	+1.0
WDC				pmax	pmax		
	comp=Z,14nm,1.0s						
WDC	Whiskeytown Da	81.35	45	P	P	20 00 53.1	+1.0
WDC				IAmb	IAmb	20 00 54.2	
	comp=Z,14nm,0.9s						
O02D	Mt. Diablo Mer	81.48	46	P	P	20 00 54.4	+1.5
	baz=312						
PGF	Pioggiola	81.50	318	P	P	20 00 52.4	-0.6
PGF				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MSO	Missoula	81.51	36	P	P	20 00 53.7	+0.7
	baz=316						
J08A	Circle Bar Ran	81.69	41	P	P	20 00 55.4	+1.4
J08A				IAmb	IAmb	20 00 56.5	
	comp=Z,13nm,1.0s						
MOD	Modoc Plateau	81.71	43	P	P	20 00 55.4	+1.2
MOD				IAmb	IAmb	20 00 56.3	
	comp=Z,16nm,0.8s						
O03E	Paynes Creek	81.96	45	P	P	20 00 55.7	+0.3
	baz=312						
WVOR	Wild Horse Val	82.25	42	P	P	20 00 58.1	+1.2
WVOR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WVOR	Wild Horse Val	82.25	42	P	P	20 00 58.0	+1.2
EGMT	Eagleton	82.54	33	P	P	20 00 58.8	+0.5
EGMT	Eagleton	82.54	33	P	P	20 00 58.6	+0.3
	baz=319						
ORV	Oroville	82.63	45	P	P	20 00 59.1	+0.3
ORV				pmax	pmax		
	comp=Z,13nm,0.8s						
ORV	Oroville	82.63	45	P	P	20 00 59.1	+0.3
ORV				IAmb	IAmb	20 01 00.1	
	comp=Z,13nm,0.8s						
MFID	Camas Ranch	83.03	40	P	P	20 01 02.1	+1.1
MFID				IAmb	IAmb	20 01 03.3	
	comp=Z,15nm,1.1s						
BEKR	Beckworth	83.06	45	P	P	20 01 00.6	-0.7
BEKR				IAmb	IAmb	20 01 03.2	
	comp=Z,16nm,0.9s						
AFDM	Forest Hills D	83.34	46	P	P	20 01 03.0	+0.4
AFDM				IAmb	IAmb	20 01 04.4	
	comp=Z,14nm,1.1s						
MCMT	McKenzie Canyo	83.49	37	P	P	20 01 03.5	0.0
PAHR	Pah Rah Range	83.72	44	P	P	20 01 05.7	+1.0
PAHR				IAmb	IAmb	20 01 06.6	
	comp=Z,15nm,1.1s						
QLMT	Earthquake Lak	84.17	36	P	P	20 01 07.5	+0.6
GCMT	Greycliff	84.27	35	P	P	20 01 07.3	0.0
YHL	Hebgen Lake	84.27	36	P	P	20 01 08.7	+1.2
CMB	Columbia Colle	84.30	46	P	P	20 01 08.5	+1.0
CMB				pmax	pmax		
	comp=Z,23nm,1.1s						
CMB	Columbia Colle	84.30	46	P	P	20 01 08.5	+1.0
YERR	Yerington	84.30	45	P	P	20 01 08.5	+0.8
YHB	Horse Butte	84.33	36	P	P	20 01 08.9	+1.1
DGMT	Dagmar	84.54	30	P	P	20 01 08.7	+0.2
DGMT	Dagmar	84.54	30	P	P	20 01 08.7	+0.2
	baz=323						
KVN	Kaiserville	84.89	44	P	P	20 01 11.5	+0.8
KVN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KVN	Kaiserville	84.89	44	P	P	20 01 11.5	+0.8
KVN				IAmb	IAmb	20 01 13.7	
	comp=Z,9.6nm,1.1s						
H17A	Grant Village	84.89	36	P	P	20 01 13.1	+2.4
H17A				IAmb	IAmb	20 01 15.1	
	comp=Z,14nm,1.1s						
H17A	Grant Village	84.89	36	P	P	20 01 12.9	+2.2
	baz=319						
RYN	Ryan	84.95	45	P	P	20 01 12.2	+1.3
RYN				IAmb	IAmb	20 01 13.2	
	comp=Z,13nm,1.0s						
RLMT	Red Lodge	84.96	35	P	P	20 01 12.0	+1.1
	baz=320						
FLWY	Flagg Ranch	85.07	36	P	P	20 01 12.6	+1.1
FLWY				IAmb	IAmb	20 01 13.9	
	comp=Z,11nm,1.1s						
LAO	LASA Array	85.10	32	P	P	20 01 12.2	+0.8
LAO	LASA Array	85.10	32	P	P	20 01 12.5	+1.1
	baz=322						
NVAR	Mina Array Bea	85.21	45	P	P	20 01 13.4	+1.1
	comp=Z,6.2nm,0.8s,baz=293,slow=4.3,SNR=27						
NVAR	Mina Array Bea	85.21	45	P	P	20 01 12.8	+0.5
ELK	Elko	85.24	41	P	P	20 01 12.8	+0.4
ELK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ELK	Elko	85.24	41	P	P	20 01 12.8	+0.4
NV11	Mina Array Sit	85.29	44	P	P	20 01 13.5	+0.9
ULM	Lac du Bonnet	86.14	25	P	P	20 01 15.3	-1.0
	comp=Z,9.6nm,0.7s,baz=334,slow=5.6,SNR=15						
ULM				LR	LR	20 45 01.2	
	comp=Z,133nm,18.5s,baz=72,slow=39						
ULM	Lac du Bonnet	86.14	25	⇑*i*P	P	20 01 15.7	-0.7
ULM	Lac du Bonnet	86.14	25	P	P	20 01 15.2	-1.2
ULM				IAmb	IAmb	20 01 16.4	
	comp=Z,14nm,0.9s						
PDAR	Pinedale Array	86.61	37	P	P	20 01 19.2	+0.1

	comp=Z,2.0nm,0.7s,baz=328,slow=1.6,SNR=6.7						
PDAR	Pinedale Array	86.61	37	P	P	20 01 19.0	-0.1
R11A	Troy Canyon, C	86.78	43	P	P	20 01 21.0	+1.0
R11A	Troy Canyon, C	86.78	43	P	P	20 01 21.1	+1.0
	baz=316,SNR=9.1						
MPMC	Manual Prospec	87.34	46	P	P	20 01 24.1	+1.3
	baz=315						
FURC	Furnace Creek,	87.41	45	P	P	20 01 24.3	+1.5
	baz=315						
TPNV	Topopah Spring	87.41	44	P	P	20 01 24.4	+1.4
	baz=316						
SCZ2	Santa Cruz Isl	87.52	48	P	P	20 01 24.6	+1.2
	baz=314						
AGMN	Agassiz Nation	87.81	26	P	P	20 01 24.0	-0.6
AGMN	Agassiz Nation	87.81	26	P	P	20 01 24.2	-0.3
	baz=329						
EDW2	Edwards Air Fo	87.87	47	P	P	20 01 26.4	+1.2
	baz=315						
SCHQ	Schefferville	88.07	7	P	P	20 01 24.1	-1.5
	comp=Z,4.9nm,1.0s,baz=16,slow=2.8,SNR=4.9						
SCHQ				LR	LR	20 42 19.2	
	comp=Z,53nm,19.1s,baz=0.0,slow=37						
SCHQ	Schefferville	88.07	7	P	P	20 01 24.7	-1.0
SCHQ				IAmb	IAmb	20 01 26.1	
	comp=Z,10nm,1.1s						
RSSD	Black Hills	88.07	33	P	P	20 01 23.0	-3.2
K22A	Casper	88.12	35	P	P	20 01 30.2	+3.8
SHPR	Sheep Range	88.34	44	P	P	20 01 29.1	+1.6
SHPR				IAmb	IAmb	20 01 30.2	
	comp=Z,10nm,1.1s						
BFSC	Mount Baldy Ra	88.52	47	P	P	20 01 29.2	+0.9
	baz=315						
GMRC	Granite Mounta	89.29	46	P	P	20 01 32.2	+0.2
	baz=316						
BKZ	Black Stump Fm	89.56	142	P	P	20 01 32.4	-0.4
EYMN	Ely	89.56	23	P	P	20 01 32.1	-0.7
EYMN	Ely	89.56	23	P	P	20 01 32.6	-0.3
	baz=332						
BELC	Belle Mtn. Jos	89.66	46	P	P	20 01 34.1	+0.4
	baz=316						
SUSD	Miller	89.92	30	P	P	20 01 34.6	0.0
SUSD	Miller	89.92	30	P	P	20 01 35.1	+0.5
	baz=327						
IRM	Iron Mountain	90.04	46	P	P	20 01 36.3	+0.9
	baz=316						
MONP2	Monument Peak	90.20	47	P	P	20 01 37.3	+0.9
	baz=316						
PDMCI	Parker Dam,Lak	90.50	45	P	P	20 01 38.7	+1.2
	baz=317						
PV01	Paradox Valley	90.63	39	P	P	20 01 39.2	+0.8
PV01				IAmb	IAmb	20 01 40.0	
	comp=Z,4.9nm,0.9s						
E38A	The Farm, Brul	90.73	24	P	P	20 01 37.8	-0.5
WUAZ	Wupatki	91.14	43	P	P	20 01 41.7	+1.0
	baz=319						
ECSD	EROS Data Cent	91.42	29	P	P	20 01 42.0	+0.4
ECSD	EROS Data Cent	91.42	29	P	P	20 01 42.1	+0.4
	baz=328						
SPMN	Marine on St.	91.52	25	P	P	20 01 41.6	-0.4
SPMN	Marine on St.	91.52	25	P	P	20 01 42.6	+0.6
	baz=331						
E43A	Lone Tree Farm	92.34	21	P	P	20 01 45.1	-0.7
G40A	Rib Lake	92.35	24	P	P	20 01 46.0	+0.1
D46A	Sault St. Mari	92.69	19	P	P	20 01 46.6	-0.8
	baz=338						
D47A	Chapleau	92.78	19	P	P	20 01 46.7	-1.1
	baz=338						
214A	Organ Pipe Nat	92.98	46	P	P	20 01 48.9	-0.2
	baz=318						
D48A	Paudash Townsh	92.99	18	P	P	20 01 47.7	-1.0
	baz=339						
D49A	Beulah Townshi	93.00	17	P	P	20 01 48.0	-0.8
	baz=340						
E47A	Iron Bridge	93.29	19	P	P	20 01 49.3	-0.8
	baz=338						
F45A	CMU Biological	93.39	21	P	P	20 01 50.1	-0.6
	baz=336						
D51A	Lot 18 Range I	93.63	16	P	P	20 01 50.9	-0.8
	baz=341						
TUC	Tucson	93.86	44	P	P	20 01 52.4	-0.8
	baz=319						
G45A	Suttons Bay	93.94	21	P	P	20 01 52.6	-0.6
	baz=336						
D53A	Lac Vacive, Po	94.00	15	P	P	20 01 52.9	-0.5
	baz=342						
F48A	Evansville	94.04	19	P	P	20 01 52.6	-1.0
	baz=339						
E51A	G1948 Merrick	94.13	16	P	P	20 01 53.0	-1.1
	baz=341						
D55A	Sainte-Anne-du	94.50	14	P	P	20 01 55.0	-0.7
	baz=344						
E52A	Mattawa	94.56	16	P	P	20 01 55.1	-0.9
	baz=342						
D56A	ZEC Mazanza, M	94.61	13	P	P	20 01 55.5	-0.7
	baz=345						
F51A	Arnstein	94.61	17	P	P	20 01 55.5	-0.7
	baz=341						
E53A	Dumoine, Ponti	94.68	15	P	P	20 01 55.6	-1.0
	baz=342						
I45A	Fountain	94.69	22	P	P	20 01 55.8	-0.8
	baz=336						
D57A	Chemin Vers le	94.79	13	P	P	20 01 56.4	-0.7
	baz=345						
F52A	Sundridge	94.87	17	P	P	20 01 56.9	-0.6
	baz=341						
D58A	Chemin du LacG	94.89	12	P	P	20 01 56.3	-1.2
	baz=346						
E56A	St. Veronique	95.04	13	P	P	20 01 57.5	-0.7
	baz=344						
E57A	Chemin Saint G	95.33	13	P	P	20 01 58.6	-1.0
	baz=345						
G53A	Haliburton	95.67	16	P	P	20 01 59.9	-1.1
	baz=342						
F61A	St Evariste	96.28	11	P	P	20 02 03.3	-0.5
	baz=348						
I51A	Listowel	96.34	18	P	P	20 02 03.9	-0.3
	baz=340						
K48A	Perry	96.44	21	P	P	20 02 04.2	-0.4
	baz=337						
G57A	Newington	96.44	14	P	P	20 02 04.3	-0.3
	baz=344						
J60A	Lant Hill Farm	98.53	13	P	P	20 02 11.9	-2.1
	baz=346						
ALLY	Alegheny Colle	98.58	18	P	P	20 02 13.8	-0.5
M63A	Gales Ferry	100.56	13	P	Pdif	20 02 21.9	-1.2
	baz=347						
PAL	Palisades	100.60	14	P	Pdif	20 02 22.5	-0.8
	baz=345						
T53A	Wise	102.28	22	P	Pdif	20 02 29.5	-1.4
	baz=338						
VNDA	Vanda	116.45	172	PKP	PKPdf	20 07 17.2	-0.7
	comp=Z,1.4nm,0.7s,baz=329,slow=5.0,SNR=12						
SYO	Syowa Base	122.21	205	⇑ePdiff	Pdif	20 04 01.4	+3.0
SYO	Syowa Base	122.21	205	⇑epPdiff	pPdif	20 04 05.8	+3.1
QSPA	South Pole Qui	126.69	180		PKPdf	20 07 36.3	-1.7
SAML	Samuel	151.26	16	PKIKP	PKPbc	20 08 28.2	-1.3
SAML	Samuel	151.26	16		PKPbc	20 08 28.2	-1.3
LPAZ	La Paz	156.55	32	PKP	PKPdf	20 08 29.3	-2.4
	comp=Z,0.6nm,0.5s,baz=33,slow=1.8,SNR=4.3						
LPAZ				PKPab	PKPab	20 08 57.0	-3.4
	comp=Z,2.0nm,0.8s,baz=326,slow=3.6,SNR=4.2						
LPAZ	La Paz	156.55	32		PKPdf	20 08 30.7	-1.0
LPAZ					PKPab	20 08 58.2	-2.2

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*ATH **31** 19:50:32.7, 38°.28N×20°.47E, h14^{km}±1^{km}, ML2.5/9, Error ellipse: s-maj=1.8km s-min=0.6km az=262.0*

*THE **31** 19:50:33.2, 38°.29N×20°.42E, h9^{km}, ML2.5/14, Error ellipse: s-maj=1.1km s-min=0.6km az=259.0*

ISC 31 19:50:31.8±0.8**, 38°.28N**±0°.02×**20°.36E**±0°.03**, h18**^{km}±2^{km}**,**
n58, σ0^{s}66/91**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGT1	Agia Thekli	0.03	145	P	Pg	19 50 35.2	+0.2
AGT1				S	Sg	19 50 36.8	-0.3
KEF4	Livadi, Kephal	0.05	110	P	Pg	19 50 35.0	0.0
KEF4				S	Sg	19 50 36.5	-0.7
KEF3	Kipouria, Keph	0.07	188	P	Pg	19 50 35.9	+0.7
KEF3				S	Sg	19 50 38.3	+0.8
KEF1	Kardakata, Kep	0.09	89	P	Pg	19 50 34.8	-0.5
KEF1				S	Sg	19 50 36.2	-1.5
CHV1	Chavriata, Kef	0.09	170	P	Pb	19 50 35.9	+0.5
CHV1				S	Sb	19 50 38.4	+0.7
LXR1	Lixouri, Cepha	0.10	141	P	Pb	19 50 35.6	+0.2
LXR1				S	Sb	19 50 37.9	+0.2
LXRA	Lixouri, Kepha	0.10	142	P	Pb	19 50 35.7	+0.3
LXRA				S	Sb	19 50 37.8	+0.1
ARGA	Argostoli. Kep	0.14	137	P	Pg	19 50 35.8	0.0
ARGA				S	Sg	19 50 38.0	-0.6
ARG2	Argostoli	0.14	134	P	Pg	19 50 35.9	0.0
ARG2				S	Sg	19 50 38.2	-0.4
KEF2	Argostoli. Kep	0.15	138	P	Pg	19 50 36.0	0.0
KEF2				S	Sg	19 50 38.4	-0.4
VLS	Valsamata	0.21	119	P	Pg	19 50 36.5	-0.3
VLS				S	Sg	19 50 39.2	-1.1
	22µm,0.1s						
VLS	Valsamata	0.21	119	P	Pg	19 50 36.4	-0.3
VLS				S	Sg	19 50 39.2	-1.1
VLS				AML	AML	19 50 39.3	
	comp=N,31980µm,0.2s						
VLS				AML	AML	19 50 39.3	
	comp=E,52522µm,0.1s						
VSK1	VASILIKIADES	0.21	50	P	Pg	19 50 36.7	-0.1
VSK1				S	Sg	19 50 39.8	-0.5
	comp=E,7µm,0.2s						
KONA	Konidatara, Ke	0.22	48	P	Pg	19 50 36.9	-0.2
KONA				S	Sg	19 50 40.0	-0.7
FSK	Fiskardo	0.24	41	P	Pg	19 50 37.3	-0.1
FSK				S	Sg	19 50 40.7	-0.5
	comp=E,4µm,0.2s						
FSK	Fiskardo	0.24	41	P	Pg	19 50 37.3	-0.1
FSK				S	Sg	19 50 40.4	-0.8
FSK				AML	AML	19 50 41.1	
	comp=N,4337µm,0.2s						
FSK				AML	AML	19 50 41.4	
	comp=E,10032µm,0.2s						
KFL	Anninata	0.38	116	P	Pg	19 50 39.3	-0.3
KFL				S	Sg	19 50 44.8	-0.1
	comp=E,2µm,0.3s						
KFL	Anninata	0.38	116	P	Pg	19 50 39.3	-0.3
KFL				S	Sg	19 50 44.3	-0.6
KFL				AML	AML	19 50 45.2	
	comp=E,5500µm,0.4s						
KFL				AML	AML	19 50 46.0	
	comp=N,3684µm,0.2s						
EVGI	Lefkada island	0.41	34	P	Pb	19 50 40.4	-0.2
EVGI				S	Sb	19 50 46.6	0.0
EVGI	Lefkada island	0.41	34	P	Pb	19 50 40.4	-0.2
EVGI				S	Sb	19 50 46.5	0.0
MGNA	Meganis	0.51	42	P	Pg	19 50 41.6	-0.3
MGNA				S	Sg	19 50 47.8	-1.0
MGNA				AML	AML	19 50 49.6	
	comp=N,3117µm,0.1s						
MGNA				AML	AML	19 50 49.8	
	comp=E,3525µm,0.1s						
LKD2	Lefkada island	0.56	24	P	Pg	19 50 43.0	-0.1
LKD2				S	Sb	19 50 51.3	+0.6
	comp=E,325nm,0.4s						
LKD2	Lefkada island	0.56	24	P	Pg	19 50 42.9	-0.1
LKD2				S	Sg	19 50 50.1	-0.4
LKD2				AML	AML	19 50 52.2	
	comp=E,662µm,0.2s						
LKD2				AML	AML	19 50 56.3	
	comp=N,550µm,0.2s						
TSLK	Tsoukalades, L	0.59	23	P	Pb	19 50 43.6	0.0
TSLK				S	Sb	19 50 52.0	+0.4
	comp=N,378nm,0.4s						
TSLK	Tsoukalades, L	0.59	23	P	Pb	19 50 43.6	0.0
TSLK				S	Sb	19 50 52.2	+0.6
TSLK				AML	AML	19 50 57.7	
	comp=E,528µm,0.3s						
TSLK				AML	AML	19 50 58.4	
	comp=N,761µm,0.3s						
KRI1	kERI	0.71	149	P	Pg	19 50 45.6	-0.1
KRI1				S	Sn	19 50 56.8	-0.5
	comp=N,1µm,0.2s						
PDO	Prodromos	0.72	63	P	Pg	19 50 45.5	-0.5
PDO				S	Sb	19 50 56.6	+1.3
PDO	Prodromos	0.72	63	P	Pg	19 50 45.4	-0.5
RLS	Riolos of Patr	0.90	104	P	Pg	19 50 49.2	-0.1
RLS				S	Sn	19 51 02.3	+0.3
	comp=N,108nm,0.6s						
RLS	Riolos of Patr	0.90	104	P	Pb	19 50 48.8	0.0
PVO	Paravola	0.98	69	P	Pb	19 50 49.7	-0.4
PVO				S	Sn	19 51 04.8	+0.9
	comp=N,392nm,0.4s						
PVO	Paravola	0.98	69	P	Pb	19 50 49.9	-0.2
PVO				AML	AML	19 51 06.7	
	comp=E,948µm,0.3s						
PVO				AML	AML	19 51 11.2	
	comp=N,580µm,0.4s						
DRO	Drossia	1.11	107	P	Pb	19 50 52.6	+0.1
DRO				S	Sg	19 51 09.5	+1.6
	comp=N,250nm,0.4s						
DRO	Drossia	1.11	107	P	Pb	19 50 52.3	-0.1
EFP	Efpalio	1.22	82	P	Pn	19 50 54.0	+0.1
EFP				S	Sg	19 51 12.1	+0.7
	comp=N,130nm,0.3s						
EFP	Efpalio	1.22	82	P	Pn	19 50 53.8	-0.2
IGT	Igoumenitsa	1.25	359	P	Pg	19 50 56.6	+0.6
IGT				S	Sg	19 51 15.2	+2.8
	comp=N,68nm,0.3s						
IGT	Igoumenitsa	1.25	359	P	Pg	19 50 56.6	+0.6
IGT				AML	AML	19 51 18.9	
	comp=N,132µm,0.2s						
IGT				AML	AML	19 51 20.7	
	comp=E,140µm,0.4s						
ANX	Ano Chora	1.27	75	P	Pb	19 50 55.1	0.0
ANX				S	Sg	19 51 13.5	+0.7
	comp=E,260nm,0.6s						
ANX	Ano Chora	1.27	75	P	Pn	19 50 54.8	+0.2
LAKA	Lakka	1.27	91	P	Pn	19 50 54.9	+0.2
LAKA				S	Sg	19 51 14.3	+1.3
	comp=E,65nm,0.8s						
LAKA	Lakka	1.27	91	P	Pn	19 50 54.8	+0.2
EVR	Evrytania	1.30	60	P	Pn	19 50 55.6	+0.5
SERG	Sergoula	1.34	84	P	Pn	19 50 56.0	+0.4
SERG				S	Sb	19 51 14.2	+1.0
SERG	Sergoula	1.34	84	P	Pn	19 50 55.6	+0.1
SERG				AML	AML	19 51 21.0	
	comp=N,217µm,0.5s						
SERG				AML	AML	19 51 25.9	
	comp=E,219µm,0.6s						
TRIZ	Trizonia	1.35	86	P	Pn	19 50 55.7	+0.1
KALE	Kalithea	1.40	85	P	Pn	19 50 56.8	+0.3
MAKR	Makrakomi, Fth	1.57	62	P	Pb	19 51 00.6	+0.3
ITM	Ithomi	1.66	131	P	Pg	19 51 02.9	-0.7
DBRK	Dubrovnik	4.70	340	*i* Pn	Pn	19 51 42.2	+0.5
DBRK				Sn	Sn	19 52 35.0	-0.8
STON	Ston	5.02	337	*i* Pn	Pn	19 51 44.9	-1.1
STON				Sn	Sn	19 52 42.8	-0.7
MAKA	Makarska	5.61	334	*e*Pn	Pn	19 51 55.5	+1.2
MAKA				Sn	Sn	19 52 56.8	-1.3
RICI	Ricice	5.76	336	*i* Pn	Pn	19 51 57.5	+1.2
RICI				Sn	Sn	19 53 01.8	-0.1
ZIRJ	Zirje	6.45	328	*e*Pn	Pn	19 52 06.9	+1.2
ZIRJ				Sn	Sn	19 53 18.2	-0.6
MORI	Morici	6.60	329	*e*Pn	Pn	19 52 09.5	+1.7
MORI				Sn	Sn	19 53 21.4	-1.1
DUGI	Dugi Otok	6.97	327	*e*Pn	Pn	19 52 15.2	+2.3
UDBI	Udbina	7.14	333	*i* Pn	Pn	19 52 16.7	+1.5
NVLJ	Novalja	7.51	328	*e*Pn	Pn	19 52 22.2	+1.9

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*MOS **31** 19:51:13.9±1.1, 47°.90N×27°.84W, h10^{km}, mb4.7/28, Error ellipse: s-maj=10.5km s-min=6.2km az=148.8*

*IDC **31** 19:51:13.7±0.7, 47°.95N×27°.77W, h0^{km}, mb4.3/23, mb1 4.4/24, mb1mx4.3/45, mbtmp4.3/24, ML3.8/1, MS4.0/36, Ms1 4.0/36, ms1mx3.9/45, Error ellipse: s-maj=22.0km s-min=11.3km az=9.0*

*GCMT **31** 19:51:14.8±0.2, 47°.76N±0°.03×27°.49W±0°.02, h17^{km}, MW4.9/115, Moment Tensor Solution. s22,c26; s115,c154; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.38±.14; $M_{\theta\theta}$0.15±.08; $M_{\phi\phi}$2.23±.10; $M_{r\theta}$-0.86±.32; $M_{\theta\phi}$-0.11±.06; $M_{\phi r}$-0.77±.21; Best double couple: $M_0$2.56000×10^{16} NP1:ϕ_s162.00000°, δ38.00000°, λ-117.00000°. NP2:ϕ_s15.00000°, δ56.00000°, λ-70.00000°. Principal axes: T 2.3570, Plg9.0000°, Azm91.0000°; N 0.4050, Plg16.0000°, Azm184.0000°; P -2.7630, Plg71.0000°, Azm332.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **31** 19:51:15.8±1.4, 47°.96N±0°.08×27°.7W±0°.1, h10^{km}±1^{km}, mb4.9/186 Error ellipse: s-maj=17.0km s-min=12.8km az=281.0*

*BGR **31** 19:51:26.9±0.0, 47°.72N×26°.23W, h33^{km}, mb4.7*

ISC 31 19:51:15.5±0.4**, 47°.90N**±0°.08×**27°.69W**±0°.05**, h10**^{km}**, n468,**
σ1^{s}12/442**, mb4.8**/181**, MS4.0**/48**, 19C-9D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H07S1	FLORES T-PHASE	8.89	198	T	T	20 01 40.3	
	SNR=36						
PGAV	Gavieira, Arco	14.96	106	*e*P	Pn	19 54 45.1	-2.0
PGAV				*e*LR	LR	19 58 09.2	
	781nm,20.0s						
PCAB	Cabril	15.25	107	*e*P	Pn	19 54 50.0	-0.8
	101nm,1.8s						
PVIS	Viseu	15.86	110	*e*P	Pn	19 54 56.8	-2.0
MVO	Moncorvo	16.17	107	*e*P	Pn	19 55 02.0	-0.8
MVO				*e*LR	LR	19 58 43.6	
	743nm,18.0s						
MTE	Manteigas	16.26	110	*e*LR	LR	19 58 50.9	
	715nm,20.0s						
PMTG	Montargil	16.62	115	*e*P	Pn	19 55 08.3	-0.2
	66nm,2.1s						
ESK	Eskdalemuir	16.86	55	P	P	19 55 13.7	+0.2
ESK				pmax	pmax		
	comp=Z,30nm,1.8s						
EKA	Eskdalemuir Ar	16.89	55	Pn	Pn	19 55 11.8	0.0
	baz=250,slow=9.7,SNR=10						
PMRV	Marv??o	16.92	113	*e*LR	LR	19 59 28.3	
	comp=Z,666nm,18.0s						
BORG	Borgarnes	17.24	9	LR	LR	19 59 59.2	
	comp=Z,259nm,20.3s,baz=176,slow=31						
PVAQ	Vaqueiros	18.00	118	*e*LR	LR	19 59 41.8	
	comp=Z,465nm,22.0s						
PAB	San Pablo	18.77	108	P	Pn	19 55 36.6	+1.4
PAB				pmax	pmax		
	comp=Z,58nm,1.9s						
PAB	San Pablo	18.77	108	P	Pn	19 55 36.6	+1.4
UCC	Uccle	20.99	70	P	P	19 55 58.8	0.0
UCC				PnPn	PnPn	19 56 17.2	-0.1
UCC	Uccle	20.99	70	P	P	19 55 59.1	+0.3
UCC				pmax	pmax		
	comp=Z,60nm,1.2s						
UCC	Uccle	20.99	70	P	P	19 55 59.0	+0.3
UCC				IAmb	IAmb	19 56 01.2	
	comp=Z,60nm,1.2s						
CFF	Clermont-Ferra	21.12	84	P	P	19 56 03.0	+2.8
CFF				pmax	pmax		
	comp=Z,150nm,1.6s						
DOU	Dourbes	21.21	72	P	P	19 56 00.7	-0.4
DOU				x	x	19 56 02.5	
DOU				x	x	19 56 04.4	
DOU				x	x	19 56 07.1	
DOU				PnPn	PnPn	19 56 19.6	-0.7
DOU	Dourbes	21.21	72	P	P	19 56 01.3	+0.2
DOU				pmax	pmax		
	comp=Z,33nm,1.3s						
LOR	Lormes	21.22	80	P	P	19 56 01.9	+0.6
LOR				pmax	pmax		
	comp=Z,47nm,1.3s						
BMRD	Maredsous	21.30	71	P	P	19 56 01.3	-0.8
	comp=Z,28nm,1.6s						
MTLF	Montolieu	21.34	91	P	P	19 56 03.5	+0.9
MTLF				pmax	pmax		
	comp=Z,26nm,1.3s						
BGES	Gesves	21.49	71	P	P	19 56 04.6	+0.5
BGES				x	x	19 56 12.1	
BGES				PnPn	PnPn	19 56 22.0	-2.2
BCLA	Clavier	21.63	71	P	P	19 56 05.2	-0.4
BSTI	Sart Tilman	21.78	70	P	P	19 56 07.6	+0.4
BSTI				x	x	19 56 12.7	
BEBN	Eben Emael	21.83	70	P	P	19 56 08.9	+1.2
BEBN				x	x	19 56 10.5	
MEM	Membach	22.05	70	P	P	19 56 09.9	-0.2
	comp=Z,26nm,1.7s						
MEM				x	x	19 56 11.3	
MEM	Membach	22.05	70	P	P	19 56 10.8	+0.6
MEM				pmax	pmax		
	comp=Z,34nm,1.0s						
BHOU	Houvegnez	22.08	71	P	P	19 56 10.8	+0.3
	comp=Z,37nm,1.7s						
WLF	Walferdange	22.27	73	P	P	19 56 12.4	-0.1
	comp=Z,22nm,1.7s						
WLF				x	x	19 56 14.1	
WLF				x	x	19 56 15.4	
WLF	Walferdange	22.27	73	*e*P	P	19 56 12.0	-0.5
	comp=Z,39nm,1.3s,baz=276,slow=9.3						
WLF	Walferdange	22.27	73	P	P	19 56 13.5	+1.0
WLF				pmax	pmax		
	comp=Z,28nm,1.2s						
WLF	Walferdange	22.27	73	P	P	19 56 13.5	+1.0
SFJD	Kangerlussuaq	22.52	336	P	P	19 56 15.0	0.0
	comp=Z,0.6nm,1.0s,baz=350,slow=22,SNR=3.0						
SFJD				LR	LR	20 03 07.7	
	comp=Z,28nm,20.4s,baz=144,slow=32						
SFJD	Kangerlussuaq	22.52	336	P	P	19 56 15.8	+0.8
SFJD				pmax	pmax		
	comp=Z,88nm,2.0s						
SFJD	Kangerlussuaq	22.52	336	P	P	19 56 15.8	+0.8
SFJD				IAmb	IAmb	19 56 20.6	
	comp=Z,88nm,2.0s						
AHRW	Bad Neuenahr-A	22.74	70	*e*P	P	19 56 17.6	+0.1
	comp=Z,29nm,1.4s,baz=276,slow=9.3						
SCO	Scoresbysund	22.82	5	*i* P	P	19 56 18.6	+0.4
	comp=Z,31nm,1.3s						
SCO	Scoresbysund	22.82	5	*i* P	P	19 56 18.6	+0.4
SCO				pmax	pmax		
	comp=Z,31nm,1.3s						
SCO	Scoresbysund	22.82	5	P	P	19 56 18.5	+0.3
IBBN	Ibbenburen	23.01	66	*e*P	P	19 56 20.4	+0.2
	comp=Z,69nm,1.3s,baz=276,slow=9.3						
MDT	Midelt	23.04	122	P	P	19 56 21.9	+1.0
	comp=Z,3.0nm,0.8s,baz=346,slow=10,SNR=5.4						
ECH	Echery	23.18	76	P	P	19 56 22.8	+0.7
ECH				pmax	pmax		
	comp=Z,111nm,2.0s						
ECH	Echery	23.18	76	P	P	19 56 22.8	+0.7
ECH				IAmb	IAmb	19 56 25.2	
	comp=Z,111nm,2.0s						
ORIF	Oris-en-Rattie	23.23	85	P	P	19 56 25.0	+2.2
ORIF				pmax	pmax		
	comp=Z,21nm,1.2s						
TNS	Taunus Mts	23.65	71	*e*P	P	19 56 27.3	+0.5
	comp=Z,94nm,2.2s,baz=276,slow=9.3						
BNI	Bardonecchia	23.73	84	P	P	19 56 29.3	+1.6
BNI				pmax	pmax		
	comp=Z,36nm,1.7s						
BNI	Bardonecchia	23.73	84	P	P	19 56 29.3	+1.6
SENIN	Lac Senin/Sane	23.74	81	P	P	19 56 29.5	+1.6
BFO	Black Forest	23.92	75	*e*P	P	19 56 30.1	+0.7
	comp=Z,36nm,1.8s,baz=276,slow=9.3						
BFO	Black Forest	23.92	75	P	P	19 56 30.6	+1.2
BFO				pmax	pmax		
	comp=Z,10.0nm,1.6s						
SLE	Schleitheim	24.16	77	P	P	19 56 32.9	+1.3
SLE				pmax	pmax		
	comp=Z,16nm,1.5s						
ISO	Isola	24.27	86	P	P	19 56 34.6	+1.8
ISO				pmax	pmax		
	comp=Z,8.0nm,1.7s						
DOI	San Damiano	24.29	85	P	P	19 56 36.1	+3.1
DOI				pmax	pmax		
	comp=Z,15nm,1.4s						
ILULI	Ilulissat	24.30	340	P	P	19 56 32.2	-0.4
ILULI				pmax	pmax		
	comp=Z,35nm,0.9s						
ILULI	Ilulissat	24.30	340	P	P	19 56 32.2	-0.4
ILULI				IAmb	IAmb	19 56 34.1	
	comp=Z,35nm,0.9s						
NRDL	Niedersach Rie	24.43	65	*e*P	P	19 56 35.5	+1.5
	comp=Z,48nm,1.6s,baz=276,slow=9.3						
GTTG	Gottingen	24.43	67	*e*P	P	19 56 35.1	+1.0
	comp=Z,18nm,1.4s,baz=276,slow=9.3						
BSEG	Bad Segeberg	24.49	61	*e*P	P	19 56 36.4	+1.9
	comp=Z,29nm,1.4s,baz=276,slow=9.3						
CLZ	Clausthal	24.66	66	*e*P	P	19 56 37.6	+1.5
	comp=Z,52nm,1.5s,baz=276,slow=9.3						
ASSE	Asse, Remlinge	24.81	66	*e*P	P	19 56 39.2	+1.8
	comp=Z,25nm,1.4s,baz=276,slow=9.3						
JMIC	Jan Mayen	24.89	15	LR	LR	20 04 01.1	
	comp=Z,84nm,18.4s,baz=186,slow=31						
TUE	Stuetta	25.06	79	P	P	19 56 41.9	+1.8
TUE				IAmb	IAmb	19 56 45.6	
	comp=Z,37nm,1.3s						
SCHQ	Schefferville	25.14	301	P	P	19 56 39.2	-1.2
	comp=Z,2.8nm,0.6s,baz=98,slow=11,SNR=6.4						
SCHQ				LR	LR	20 04 43.7	

	comp=Z,428nm,19.6s,baz=107,slow=32						
DAVA	Damuels	25.19	77	*e*pP	P	19 56 42.5	+1.4
	comp=Z,41nm,1.8s,SNR=14						
UBR	Ueberruh	25.23	76	*e*P	P	19 56 43.0	+1.5
	comp=Z,28nm,1.6s,baz=276,slow=9.3						
SUMG	Summit	25.24	352	*i* P	P	19 56 41.0	-0.7
	comp=Z,49nm,1.2s						
SUMG	Summit	25.24	352	*i* P	P	19 56 41.0	-0.7
SUMG				pmax	pmax		
	comp=Z,49nm,1.2s						
SUMG	Summit	25.24	352	P	P	19 56 41.8	+0.1
DAVOX	Davos/Dischmat	25.33	78	P	P	19 56 44.0	+1.6
	comp=Z,6.1nm,0.8s,baz=300,slow=12,SNR=11						
DAVOX				LR	LR	20 05 36.4	
	comp=Z,543nm,20.7s,baz=295,slow=34						
NBO00	NORSAR Array S	25.50	45	P	P	19 56 44.0	+0.3
NBO00				IAmb	IAmb	19 56 46.9	
	comp=Z,58nm,1.4s						
GRA1	Grafenberg Arr	25.51	71	P	P	19 56 44.9	+1.0
GRA1				IAmb	IAmb	19 56 48.6	
	comp=Z,60nm,1.6s						
GRF	Grafenberg Arr	25.51	71	*e*P	P	19 56 45.4	+1.5
	comp=Z,60nm,1.6s,baz=276,slow=9.3						
GRF	Grafenberg Arr	25.51	71	P	P	19 56 44.9	+1.0
GRF				pmax	pmax		
	comp=Z,60nm,1.6s						
MOX	Moxa	25.59	69	P	P	19 56 45.9	+1.3
MOX				pmax	pmax		
	comp=Z,7.0nm,2.3s						
NEUB	Neuenburg	25.60	68	*e*P	P	19 56 46.4	+1.7
	comp=Z,42nm,1.6s,baz=276,slow=9.3						
NB2	NORSAR Subarra	25.70	45	P	P	19 56 46.1	+0.5
	comp=Z,22nm,1.7s,baz=257,slow=9.3						
NOA	NORSAR Array B	25.70	45	P	P	19 56 45.4	-0.1
	comp=Z,2.7nm,1.0s,baz=259,slow=9.9,SNR=4.4						
NOA				LR	LR	20 05 08.8	
	comp=Z,202nm,21.4s,baz=255,slow=32						
RETA	Reutte	25.71	76	*e*sP	P	19 56 48.6	+2.8
	comp=Z,16nm,1.4s,SNR=5.8						
FETA	Feichten	25.82	77	*e*sP	P	19 56 49.1	+2.3
	comp=Z,14nm,1.0s,SNR=8.8						
FUR	Furstenfeldbru	25.88	75	*e*P	P	19 56 47.0	-0.2
	comp=Z,20nm,0.8s,baz=276,slow=9.3						
MSSA	Maissana	25.88	84	P	P	19 56 48.2	+0.9
MSSA				IAmb	IAmb	19 56 52.2	
	comp=Z,24nm,1.2s						
PLN	Plauen	25.96	69	*e*P	P	19 56 48.0	+0.1
	comp=Z,7.6nm,1.2s,baz=276,slow=9.3						
MOTA	Moosalm	25.97	77	*e*P	P	19 56 49.4	+1.1
	comp=Z,16nm,1.3s						
MANZ	Manzenberg	26.02	70	*e*P	P	19 56 49.5	+1.1
	comp=Z,32nm,1.4s,baz=276,slow=9.3						
SQTA	Sankt Quirin	26.08	77	*e*pP	P	19 56 51.2	+2.1
	comp=Z,14nm,1.3s,SNR=6.8						
GUNZ	Gunzen	26.09	69	*e*P	P	19 56 49.8	+0.7
	comp=Z,13nm,1.5s,baz=276,slow=9.3						
ROTZ	Rotzenmuhle	26.12	71	*e*P	P	19 56 50.2	+0.8
	comp=Z,33nm,1.8s,baz=276,slow=9.3						
WERN	Wernitzgruen	26.13	70	*e*P	P	19 56 50.5	+1.0
	comp=Z,11nm,1.4s,baz=276,slow=9.3						
NKC	Novy Kostel	26.18	70	AMS	AMS	20 06 10.0	
	comp=Z,400nm,18.6s						
WATA	Walderalm	26.29	76	*e*P	P	19 56 53.0	+2.0
	comp=Z,14nm,1.2s						
WTTA	Wattenberg	26.34	77	*e*pP	P	19 56 52.3	+0.7
	comp=Z,22nm,1.5s,SNR=7.6						
WTTA	Wattenberg	26.34	77	P	P	19 56 53.8	+2.1
CLL	Collm	26.35	67	⇑*i*P	P	19 56 53.7	+2.3
	comp=Z,7.0nm,1.1s						
CLL				*i* pP	pwP	19 56 56.2	-1.2
	comp=Z,12nm,1.2s						
CLL				*e*		19 57 05.0	
CLL				Lm	MLR	20 06 00.0	
	comp=N,300nm,18.8s						
CLL				Lm	MLR	20 06 00.0	
	comp=E,300nm,20.7s						
CLL	Collm	26.35	67	⇑*i*P	P	19 56 53.7	+2.3
CLL				*i*		19 56 56.2	
CLL				pmax	pmax		
	comp=Z,7.0nm,1.1s						
FBE	Freiberg	26.63	68	*e*P	P	19 56 57.1	+3.1
	comp=Z,56nm,1.9s,baz=276,slow=9.3						
WET	Wettzell	26.68	72	*e*P	P	19 56 54.5	0.0
	comp=Z,20nm,1.4s,baz=276,slow=9.3						
WET	Wettzell	26.68	72	P	P	19 56 56.3	+1.8
CTI	Castel Tesino	26.71	79	P	P	19 56 56.6	+1.7
CTI				pmax	pmax		
	comp=Z,12nm,1.1s						
CTI	Castel Tesino	26.71	79	P	P	19 56 56.6	+1.7
HFS	Hagfors	26.74	47	LR	LR	20 06 05.2	
	comp=Z,128nm,21.2s,baz=264,slow=33						
BRG	Berggiesshubel	27.01	68	*e*P	P	19 56 58.7	+1.3
	comp=Z,13nm,1.4s						
BRG	Berggiesshubel	27.01	68	*e*P	P	19 56 57.5	+0.1
	comp=Z,31nm,1.9s,baz=276,slow=9.3						
BRG	Berggiesshubel	27.01	68	*e*P	P	19 56 58.7	+1.3
BRG				pmax	pmax		
	comp=Z,2.0nm,1.4s						
ABTA	Abfaltersbach	27.07	77	*e*pP	P	19 56 58.6	+0.6
	comp=Z,6.9nm,1.1s						
KHC	Kasperske Hory	27.13	72	*e*P	P	19 57 00.1	+1.5
KHC				AMS	AMS	20 06 50.0	
	comp=Z,700nm,18.4s						
KHC	Kasperske Hory	27.13	72	*e*P	P	19 57 00.1	+1.5
KHC				MLR	MLR		
	comp=Z,700nm,18.4s						
KHC	Kasperske Hory	27.13	72	P	P	19 56 59.1	+0.5
FRB	Frobisher Bay	27.27	321	P	P	19 56 59.2	-0.3
	comp=Z,7.4nm,0.8s,baz=91,slow=5.1,SNR=5.7						
FRB				LR	LR	20 05 39.0	
	comp=Z,183nm,18.3s,baz=113,slow=32						
GEC2	GERESS Array S	27.28	72	*e*P	P	19 56 59.3	-0.6
	comp=Z,12nm,1.2s,baz=276,slow=9.3						
GEC2	GERESS Array S	27.28	72	P	P	19 57 01.1	+1.2
GERES	GERESS Array B	27.28	72	P	P	19 56 60.0	0.0
	comp=Z,3.8nm,0.9s,baz=287,slow=9.3,SNR=25						
GERES				LR	LR	20 07 37.8	
	comp=Z,667nm,18.3s,baz=276,slow=36						
GERES	GERESS Array B	27.28	72	P	P	19 57 00.3	+0.4
GERES	GERESS Array B	27.28	72	P	P	19 57 00.3	+0.4
FVI	Forni Avoltri	27.29	77	P	P	19 57 03.6	+3.5
FVI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
STAL	STALIGIAL	27.35	78	P	P	19 57 02.1	+1.6
PVCC	Panska Ves	27.46	69	AMS	AMS	20 08 00.0	
	comp=Z,300nm,18.1s						
KBA	Koelnbreinsper	27.52	76	*e*pP	P	19 57 03.8	+1.6
	comp=Z,5.4nm,1.1s						
PRU	Pruhonice	27.55	70	*e*P	P	19 57 04.2	+1.9
PRU				AMS	AMS	20 06 00.0	
	comp=Z,500nm,22.4s						
PRU	Pruhonice	27.55	70	*e*P	P	19 57 04.2	+1.9
PRU				MLR	MLR		
	comp=Z,500nm,22.4s						
MYKA	Terra Mystica	27.84	77	*e*pP	P	19 57 06.1	+1.0
	comp=Z,15nm,1.4s,SNR=5.2						
MOA	Molln	27.90	74	*e*pP	P	19 57 06.2	+0.8
	comp=Z,3.7nm,1.4s						
TREC	Trest	28.31	71	AMS	AMS	20 08 10.0	
	comp=Z,700nm,15.5s						
UPC	Upice	28.37	68	AMS	AMS	20 08 40.0	
	comp=Z,500nm,19.5s						
CHVC	Chvalec	28.38	68	AMS	AMS	20 08 40.0	
	comp=Z,400nm,19.4s						
OBKA	Obir	28.48	77	*e*pP	P	19 57 11.8	+1.1
	comp=Z,13nm,1.8s						
OSTC	Ostas	28.49	68	AMS	AMS	20 08 40.0	
	comp=Z,400nm,18.2s						
SOKA	Soboth	28.74	76	*e*pP	P	19 57 14.0	+1.0
	comp=Z,8.2nm,1.0s						
ARSA	Arzberg	28.88	75	*e*pP	P	19 57 15.3	+1.1
	comp=Z,9.4nm,1.0s,SNR=5.9						
CONA	Conrad Observa	28.91	73	*e*pP	P	19 57 15.9	+1.5
	comp=Z,4.6nm,1.0s						
KRUC	Moravsky	28.94	71	*e*P	P	19 57 15.5	+0.8
KRLC	Kraliky	28.95	69	*e*P	P	19 57 17.0	+2.2
KRLC	Kraliky	28.95	69	*e*P	P	19 57 17.0	+2.2
VRAC	Vranov	29.01	70	P	P	19 57 15.2	-0.1
	comp=Z,1.5nm,0.7s,baz=278,slow=10,SNR=2.4						
VRAC				LR	LR	20 08 25.8	
	comp=Z,549nm,19.5s,baz=264,slow=36						
VRAC	Vranov	29.01	70	*e*P	P	19 57 16.3	+1.0
DAG	Danmarks Havn	29.21	4	P	P	19 57 17.8	+1.1
MORC	Moravsky Berou	29.49	69	P	P	19 57 20.5	+0.9
MORC				pmax	pmax		
	comp=Z,24nm,2.0s						
MORC	Moravsky Berou	29.49	69	*e*P	P	19 57 19.8	+0.2
MORC	Moravsky Berou	29.49	69	P	P	19 57 20.5	+0.9
MODS	Modra-Piesok	29.69	72	*e*P	P	19 57 21.5	+0.2
MODS				pmax	pmax		
	comp=Z,17nm,1.4s						
MODS	Modra-Piesok	29.69	72	*e*P	P	19 57 21.5	+0.2
SMOL	Smolenice	29.75	72	*e*P	P	19 57 23.5	+1.7
SMOL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SMOL	Smolenice	29.75	72	*e*P	P	19 57 23.5	+1.7
OKC	Ostrava-Krasne	29.86	69	AMS	AMS	20 08 10.0	
	comp=Z,400nm,21.0s						
KEST	Kesra	29.88	100	P	P	19 57 24.1	+1.0
	comp=Z,10nm,0.9s,baz=277,slow=4.9,SNR=13						
KEST				LR	LR	20 07 25.6	
	comp=Z,467nm,21.5s,baz=309,slow=32						
KEST	Kesra	29.88	100	P	P	19 57 24.1	+1.0
KEST				IAmb	IAmb	19 57 25.2	
	comp=Z,19nm,1.1s						
VYHS	Vyhne	30.65	71	*e*P	P	19 57 29.7	-0.1
VYHS	Vyhne	30.65	71	*e*P	P	19 57 29.7	-0.1
NIE	Niedzica	31.32	69	P	P	19 57 39.2	+3.5
PSZ	Piszkesteto	31.50	72	⇑P	P	19 57 39.1	+1.7
PSZ	Piszkesteto	31.50	72	⇑P	P	19 57 39.1	+1.7
PSZ	Piszkesteto	31.50	72	P	P	19 57 38.7	+1.3
PSZ				IAmb	IAmb	19 57 41.0	
	comp=Z,18nm,1.1s						
KWP	Kalwaria Pacla	32.77	68	P	P	19 57 49.9	+1.5
KWP				pmax	pmax		
	comp=Z,43nm,1.7s						
KWP	Kalwaria Pacla	32.77	68	P	P	19 57 49.9	+1.5
UZH	Uzhgorod	32.80	70	*e*P	P	19 57 50.0	+1.3
UZH				*i* S	S	20 03 07.0	+1.5
FINES	FINESS Array B	32.88	46	P	P	19 57 47.9	-1.4
	comp=Z,3.0nm,0.8s,baz=324,slow=9.4,SNR=6.7						
FINES				LR	LR	20 10 11.9	
	comp=Z,196nm,19.0s,baz=248,slow=35						
FINES	FINESS Array B	32.88	46	P	P	19 57 49.3	+0.1
FINES	FINESS Array B	32.88	46	P	P	19 57 49.3	+0.1
TULEG	Thule	33.09	344	P	P	19 57 50.9	0.0
TRPA	Tarpa	33.12	70	⇑P	P	19 57 52.5	+1.1
BZS	Buzias	33.40	75	⇓P	P	19 57 54.7	+0.7
BZS	Buzias	33.40	75	⇓P	P	19 57 54.7	+0.7
ARCES	ARCESS Array B	33.47	31	P	P	19 57 53.4	-0.9
	comp=Z,8.3nm,0.8s,baz=251,slow=7.6,SNR=13						
MDVR	Moldovita	33.79	77	⇑P	P	19 57 57.1	-0.3
BUR08	Bucovina Ar. S	34.97	70	P	P	19 58 08.5	+0.9
BUR08				IAmb	IAmb	19 58 11.7	
	comp=Z,30nm,1.8s						
BURAR	Bucovina Array	34.99	70	⇓P	P	19 58 08.3	+0.5
BURAR	Bucovina Array	34.99	70	⇓P	P	19 58 08.3	+0.5
BURAR	Bucovina Array	34.99	70	P	P	19 58 08.6	+0.7
SADO	Sadowa	35.12	284	LR	LR	20 11 21.3	
	comp=Z,458nm,20.8s,baz=33,slow=34						
DOPR	Dopca	35.71	73	⇑P	P	19 58 13.3	-0.6
APA	Apatity	36.11	35	⇑*i*P	P	19 58 11.6	-5.5
APA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MLR	Muntele Rosu	36.25	73	⇑P	P	19 58 18.0	-0.7
MLR	Muntele Rosu	36.25	73	P	P	19 58 19.9	+1.1
MLR				pmax	pmax		
	comp=Z,13nm,1.4s						
MLR	Muntele Rosu	36.25	73	P	P	19 58 19.9	+1.1
AKASG	Malin Array Be	36.44	64	P	P	19 58 19.1	-1.1
	comp=Z,4.2nm,0.9s,baz=285,slow=8.2,SNR=14						
AKASG				LR	LR	20 13 04.7	
	comp=Z,363nm,20.7s,baz=285,slow=36						
AKASG	Malin Array Be	36.44	64	*i* P	P	19 58 19.6	-0.5
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKBB	Malin Array Si	36.44	64	⇓*i*P	P	19 58 21.2	+1.1
AKBB	Malin Array Si	36.44	64	P	P	19 58 20.9	+0.8
VRI	Vrincioaia	36.61	72	P	P	19 58 25.2	+3.6
SORM	Soroca	36.77	68	⇑P	P	19 58 21.9	-1.1
SORM	Soroca	36.77	68	⇑P	P	19 58 21.9	-1.1
TMCR	Tamitsa	38.18	40	*e*P	P	19 58 34.0	-0.6
TMCR				pmax	pmax		
	comp=Z,15nm,0.9s						
ALN	Alexandroupoli	38.36	80	P	P	19 58 35.3	-1.2
ALN				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ALN	Alexandroupoli	38.36	80	P	P	19 58 35.3	-1.2
RES	Resolute Bay	38.52	337	P	P	19 58 37.5	0.0
	comp=Z,14nm,1.0s,baz=100,slow=8.1,SNR=23						
RES	Resolute Bay	38.52	337	P	P	19 58 38.4	+1.0
RES				pmax	pmax		
	comp=Z,21nm,1.2s						
RES	Resolute Bay	38.52	337	P	P	19 58 38.4	+1.0
RES				IAmb	IAmb	19 58 39.5	
	comp=Z,21nm,1.1s						
OBN	Obninsk	39.35	55	*i* P	P	19 58 44.5	-0.1
OBN				*i*		19 58 51.6	
OBN				*i*		20 00 51.4	
OBN				pmax	pmax		
	comp=Z,20nm,1.2s						
OBN				MLR	MLR		
	comp=Z,251nm,19.0s						
OBN	Obninsk	39.35	55	P	P	19 58 41.9	-2.6
OBN				IAmb	IAmb	19 59 29.6	
	comp=Z,13nm,0.6s						
KLMR	Klimovskoe	39.41	45	*e*P	P	19 58 45.5	+0.4
KLMR				pmax	pmax		
	comp=Z,28nm,1.3s						
KLMR	Klimovskoe	39.41	45	*e*P	P	19 58 45.5	+0.4
KLMR				AMP		19 58 48.1	
	comp=Z,28nm,1.3s						
MANT	Manisa	41.25	82	P	P	19 59 00.4	-0.4
MANT				IAmb	IAmb	19 59 02.9	
	comp=Z,26nm,1.1s						
EYMN	Ely	41.64	295	P	P	19 59 02.7	-1.0
H05N1	Guadeloupe/Mar	41.74	232	T	T	20 43 04.8	
	SNR=13						
G40A	Rib Lake	42.00	291	P	P	19 59 07.2	+0.5
G40A				IAmb	IAmb	19 59 21.2	
	comp=Z,45nm,1.8s						
TKL	Tuckaleechee C	42.69	275	LR	LR	20 17 15.6	
	comp=Z,249nm,18.3s,baz=62,slow=37						
SJG	San Juan	43.14	240	LR	LR	20 13 00.7	
	comp=Z,168nm,21.9s,baz=81,slow=30						
ULM	Lac du Bonnet	43.31	300	P	P	19 59 16.6	-0.6
	comp=Z,3.7nm,0.7s,baz=63,slow=8.5,SNR=8.0						
ULM				LR	LR	20 15 22.4	
	comp=Z,250nm,19.2s,baz=75,slow=34						
ULM	Lac du Bonnet	43.31	300	⇓*i*P	P	19 59 17.0	-0.2
ULM	Lac du Bonnet	43.31	300	P	P	19 59 16.2	-0.9
SPMN	Marine on St.	43.66	292	P	P	19 59 20.0	-0.1
BR131	Keskin Array S	43.96	77	P	P	19 59 24.4	+1.7
BR131				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BR131	Keskin Array S	43.96	77	P	P	19 59 24.4	+1.7
BRTR	Keskin Array B	43.96	77	P	P	19 59 23.1	+0.3
	comp=Z,1.1nm,0.8s,baz=311,slow=5.9,SNR=8.7						
BRTR				LR	LR	20 17 32.0	
	comp=Z,187nm,21.8s,baz=290,slow=36						
BRTR	Keskin Array B	43.96	77	P	P	19 59 23.2	+0.5
BRTR	Keskin Array B	43.96	77	P	P	19 59 23.2	+0.5
KIRV	Kirov	44.87	46	⇑*i*P	P	19 59 30.0	+0.5
FFC	Flin Flon	44.91	308	P	P	19 59 30.2	+0.3
FFC				pmax	pmax		
	comp=Z,18nm,0.9s						
FFC	Flin Flon	44.91	308	P	P	19 59 30.2	+0.3
DBIC	Dimbokro	45.46	147	LR	LR	20 17 10.0	
	comp=Z,151nm,18.1s,baz=324,slow=34						
SDDR	Presa de Saban	45.55	246	P	P	19 59 36.1	+0.7
SDDR				IAmb	IAmb	19 59 39.9	
	comp=Z,21nm,1.2s						
ECSD	EROS Data Cent	46.77	292	P	P	19 59 44.2	-0.6
ECSD				IAmb	IAmb	19 59 54.8	
	comp=Z,14nm,1.2s						
T42A	Van Buren	46.79	281	P	P	19 59 44.5	-0.5
LCAR	Lake Charles	47.38	280	P	P	19 59 49.8	+0.2
SHA1	Shidzhatmaz	47.65	67	⇑*i*P	P	19 59 51.0	-1.0
YKA	Yellowknife Ar	47.78	321	LR	LR	20 17 51.7	
	comp=Z,73nm,19.1s,baz=0.0,slow=34						
KBZ	Khabaz	47.81	67	LR	LR	20 21 50.2	
	comp=Z,130nm,18.6s,baz=224,slow=38						
S39A	Bolivar	47.88	283	P	P	19 59 52.2	-1.4
FCAR	Ozark Folk Cen	48.12	280	P	P	19 59 59.4	+4.0
FCAR				IAmb	IAmb	20 01 26.2	
	comp=Z,17nm,1.1s						
U40A	Yellville	48.34	281		P	19 59 56.2	-0.8
U40A				IAmb	IAmb	20 00 30.3	
	comp=Z,25nm,1.6s						
X40A	Basin Creek Fa	49.41	279	P	P	20 00 04.3	-1.1
X40A				IAmb	IAmb	20 00 06.3	
	comp=Z,16nm,1.6s						
MIAR	Mount Ida	49.87	280	P	P	20 00 07.9	-0.9
MIAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MIAR	Mount Ida	49.87	280	P	P	20 00 07.9	-0.9
ARU	Arti	50.25	46	*d i*P	P	20 00 11.6	+0.2
ARU				S	S	20 07 26.9	+3.5
ARU				SS	SS	20 10 59.0	+2.8
ARU				pmax	pmax		
	comp=Z,27nm,1.1s						
ARU	Arti	50.25	46	P	P	20 00 11.7	+0.2
SVE	Sverdlovsk	51.05	45	*e*P	P	20 00 17.5	+0.1
SVE				pmax	pmax		
	comp=Z,25nm,1.5s						
LAO	LASA Array	51.05	300	P	P	20 00 18.3	+0.6
LAO				IAmb	IAmb	20 00 19.5	
	comp=Z,19nm,0.9s						
MAK	Makhachkala	51.06	66	*e*P	P	20 00 12.2	-5.5
MAK				*e*S	S	20 07 27.4	-7.6
MAK				pmax	pmax		
	comp=Z,144nm,1.4s						
MAK				MLR	MLR		
	comp=Z,407nm,16.0s						
INK	Inuvik	51.80	333	P	P	20 00 22.4	-0.5
INK				pmax	pmax		
	comp=Z,11nm,1.0s						
INK	Inuvik	51.80	333	P	P	20 00 22.4	-0.5
EGMT	Eagleton	52.36	303	P	P	20 00 27.7	+0.2
SDV	Santo Domingo	53.11	237	P	P	20 00 35.7	+2.2
K22A	Casper	53.45	296	P	P	20 00 35.3	-0.5
GCMT	Greycliff	53.54	301	P	P	20 00 36.6	+0.2
PHWY	Pilot Hill	53.57	294	P	P	20 00 36.5	-0.3
RLMT	Red Lodge	53.69	300	P	P	20 00 37.6	+0.2
EPYK	Eagle Plains	53.95	332	P	P	20 00 39.1	+0.3
EPYK				IAmb	IAmb	20 00 40.2	
	comp=Z,14nm,0.9s						
WALA	Waterton Lakes	54.10	306	P	P	20 00 39.1	-1.2
YNE	Yellowstone No	54.18	300	P	P	20 00 41.0	-0.2
RWWY	Rawlins	54.42	295	P	P	20 00 43.2	+0.3
YMP	Mirror Lake Pl	54.42	300	P	P	20 00 43.4	+0.5
ISCO	Idaho Springs	54.54	292	P	P	20 00 44.4	+0.5
ISCO				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ISCO	Idaho Springs	54.54	292	P	P	20 00 44.4	+0.5
ABKAR	Akbulak array	54.76	53	P	P	20 00 45.0	0.0
YHH	Holmes Hill	54.80	300	P	P	20 00 45.4	-0.4
H17A	Grant Village	54.87	300	P	P	20 00 47.3	+1.2
YMR	Madison River	54.94	300	P	P	20 00 45.4	-1.2
YHL	Hebgen Lake	54.96	300	P	P	20 00 46.8	-0.1
AMTX	Amarillo	54.99	285	P	P	20 00 47.4	+0.5
YHB	Horse Butte	55.02	300	P	P	20 00 47.2	0.0
JTMT	Jette	55.05	305	P	P	20 00 46.5	-0.7
YPP	Pitchstone Pla	55.07	300	P	P	20 00 49.8	+2.1
QLMT	Earthquake Lak	55.11	300	P	P	20 00 47.9	+0.1
FLWY	Flagg Ranch	55.12	299	P	P	20 00 48.4	+0.5
FLWY				IAmb	IAmb	20 02 27.6	
	comp=Z,7.5nm,0.7s						
PD31	Pinedale Array	55.21	297	P	P	20 00 47.6	-1.1
PD31				IAmb	IAmb	20 02 48.4	
	comp=Z,7.6nm,0.7s						
PDAR	Pinedale Array	55.21	297	P	P	20 00 47.5	-1.1
	comp=Z,6.8nm,1.0s,baz=62,slow=7.2,SNR=28						
PDAR				LR	LR	20 22 55.9	
	comp=Z,177nm,18.3s,baz=17,slow=34						
BW06	Boulder Array	55.21	297	P	P	20 00 47.6	-1.1
BW06				IAmb	IAmb	20 02 51.4	
	comp=Z,9.7nm,0.9s						
MSO	Missoula	55.39	304	P	P	20 00 49.8	+0.1
DLMT	Dillon	55.48	302	P	P	20 00 50.7	+0.3
SNOW	Snow King Moun	55.51	299	P	P	20 00 50.7	-0.1
SNOW				IAmb	IAmb	20 00 51.9	
	comp=Z,23nm,1.4s						
FXWY	Fox Creek	55.57	299	P	P	20 00 51.0	-0.2
FXWY				IAmb	IAmb	20 00 56.7	
	comp=Z,8.4nm,0.9s						
BMAR	Burnt Mountain	55.61	335	P	P	20 00 51.4	+0.6
TPAW	Teton Pass	55.61	299	P	P	20 00 50.9	-0.7
TEIG	Tepich	55.62	262	LR	LR	20 21 09.2	
	comp=Z,131nm,21.9s,baz=63,slow=32						
REDW	Red Top Meadow	55.63	299	P	P	20 00 51.5	-0.1
REDW				IAmb	IAmb	20 00 53.3	
	comp=Z,16nm,1.1s						
SDCO	Great Sand Dun	55.70	290	P	P	20 00 52.1	-0.2
MCMT	McKenzie Canyo	55.94	301	P	P	20 00 53.4	-0.4
O20A	White River Ci	55.97	294	P	P	20 00 52.8	-1.3
O20A				IAmb	IAmb	20 01 00.1	
	comp=Z,8.1nm,0.9s						
TOLK	Toolik Lake Re	56.08	338	P	P	20 00 54.3	0.0
TOLK				IAmb	IAmb	20 00 55.9	
	comp=Z,21nm,1.3s						
AHID	Auburn Hatcher	56.13	298	P	P	20 00 54.6	-0.6
AHID				IAmb	IAmb	20 01 01.0	
	comp=Z,8.9nm,0.9s						
MSTX	Muleshoe	56.26	285	P	P	20 00 56.0	-0.1
MSTX				IAmb	IAmb	20 00 59.0	
	comp=Z,9.5nm,0.8s						
DAWY	Dawson	56.29	331	P	P	20 00 56.4	+0.5
DAWY				IAmb	IAmb	20 00 57.5	
	comp=Z,12nm,1.1s						
NEW	Newport	56.30	307	P	P	20 00 55.9	-0.2
NEW				pmax	pmax		
	comp=Z,19nm,1.4s						
NEW	Newport	56.30	307	P	P	20 00 55.9	-0.2
NEW				IAmb	IAmb	20 00 56.8	
	comp=Z,19nm,1.4s						
EGAK	Eagle	56.39	332	P	P	20 00 56.8	+0.3
EGAK				IAmb	IAmb	20 00 57.6	
	comp=Z,13nm,1.2s						
JCT	Junction City	56.51	280	P	P	20 00 56.9	-0.9
JCT				pmax	pmax		
	comp=Z,10.0nm,1.1s						
JCT	Junction City	56.51	280	P	P	20 00 56.9	-0.9
JCT				IAmb	IAmb	20 01 00.4	
	comp=Z,9.8nm,1.1s						
RDMU	Red Mountain	56.52	295	P	P	20 00 58.5	+0.5
H10N2	ASCENSION HYDR	56.70	164	T	T	21 01 48.8	
	baz=349,slow=76,SNR=8.6						
H10N3	ASCENSION HYDR	56.71	164	T	T	21 01 53.9	
	baz=349,slow=76,SNR=12						
H10N1	ASCENSION HYDR	56.72	164	T	T	21 01 50.2	
	baz=349,slow=76,SNR=10						
WHY	Whitehorse	56.92	326	P	P	20 01 00.8	+0.4
WHY				IAmb	IAmb	20 01 02.3	
	comp=Z,25nm,1.5s						
HWUT	Hardware Ranch	57.10	297	P	P	20 01 01.8	-0.3
HWUT				IAmb	IAmb	20 01 07.4	
	comp=Z,12nm,1.0s						
PV07	Paradox Valley	57.25	293	P	P	20 01 02.0	-1.2
PV07				IAmb	IAmb	20 01 39.1	
	comp=Z,11nm,1.2s						
PV22	Blue Mesa, Par	57.27	293	P	P	20 01 03.6	+0.2
PV22				IAmb	IAmb	20 01 09.3	
	comp=Z,12nm,1.1s						
COLD	Coldfoot	57.28	337	P	P	20 01 01.7	-1.0
TCUT	Toone Canyon	57.30	297	P	P	20 01 02.6	-0.9
PV21	Cone Mtn., Par	57.37	293	P	P	20 01 04.1	0.0
PV21				IAmb	IAmb	20 01 05.4	
	comp=Z,11nm,1.1s						
PV01	Paradox Valley	57.38	292	P	P	20 01 03.9	-0.3
LLLB	Lillooet	57.40	311	P	P	20 01 03.0	-0.9
LLLB				IAmb	IAmb	20 02 43.2	
	comp=Z,7.9nm,0.7s						
PV12	Saucer Basin,	57.42	293	P	P	20 01 05.0	+0.6
PV12				IAmb	IAmb	20 01 17.8	
	comp=Z,17nm,1.2s						
PV04	Paradox Valley	57.43	293	P	P	20 01 04.6	+0.1
PV23	Carpenter Ridg	57.46	293	P	P	20 01 05.3	+0.5
PV11	David Mesa, Pa	57.47	293	P	P	20 01 04.8	+0.1
PV03	Paradox Valley	57.48	293	P	P	20 01 04.9	0.0
PV03				IAmb	IAmb	20 01 06.8	
	comp=Z,10.0nm,1.1s						
PV16	Nyswonger Mesa	57.49	293	P	P	20 01 05.0	0.0
PV16				IAmb	IAmb	20 01 16.9	
	comp=Z,18nm,1.1s						
PV20	West Nyswonger	57.50	293	P	P	20 01 05.5	+0.5
PV20				IAmb	IAmb	20 01 10.9	
	comp=Z,16nm,1.0s						
PV09	Paradox Valley	57.51	293	P	P	20 01 05.6	+0.5
PV14	Lion Creek, Pa	57.52	293	P	P	20 01 04.5	-0.7
PV13	Radium Mtn., P	57.52	293	P	P	20 01 04.8	-0.4
PV13				IAmb	IAmb	20 01 39.9	
	comp=Z,32nm,1.9s						
PV18	Skein Mesa, Pa	57.53	293	P	P	20 01 05.6	+0.5
PV18				IAmb	IAmb	20 01 11.2	

	comp=Z,14nm,1.0s						
PV10	Paradox Valley	57.53	293	P	P	20 01 04.9	-0.3
PV19	Morning Glory	57.53	293	P	P	20 01 05.1	-0.1
PV17	East Wray Mesa	57.54	293	P	P	20 01 05.7	+0.5
JLU	Jordanelle	57.64	296	P	P	20 01 05.6	-0.4
HVU	Hansel Valley	57.71	298	P	P	20 01 06.0	-0.4
HVU				pmax	pmax		
	comp=Z,14nm,0.2s						
HVU	Hansel Valley	57.71	298	P	P	20 01 06.0	-0.4
F10A	Beach Ranch, E	57.73	304	P	P	20 01 05.5	-0.9
PV05	Paradox Valley	57.75	293	P	P	20 01 05.8	-1.0
PV05				IAmb	IAmb	20 01 45.6	
	comp=Z,12nm,1.0s						
BCAR	Beaver Creek A	57.76	331	P	P	20 01 07.7	+1.5
BRVK	Borovoye	57.76	45	⇑*i*P	P	20 01 06.1	-0.2
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BRVK	Borovoye	57.76	45	P	P	20 01 07.0	+0.7
H10S3	ASCENSION HYDR	57.77	165	T	T	21 03 18.0	
	baz=231,slow=74,SNR=63						
H10S2	ASCENSION HYDR	57.78	165	T	T	21 03 12.4	
	baz=349,slow=74,SNR=34						
HYT	Haines Junctio	57.79	327	P	P	20 01 07.2	+0.7
HYT				IAmb	IAmb	20 01 09.3	
	comp=Z,7.8nm,0.9s						
SCRK	Sand Creek	57.84	332	P	P	20 01 07.6	+0.7
SKAG	Skagway	57.87	325	P	P	20 01 07.8	+0.9
SKAG				IAmb	IAmb	20 01 08.8	
	comp=Z,11nm,1.1s						
P17A	Butcher Ranch,	57.90	295	P	P	20 01 07.4	-0.3
MVCO	Mesa Verde	57.91	292	P	P	20 01 07.9	0.0
SRU	San Rafael Swe	57.99	294	P	P	20 01 08.2	-0.2
SRU				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SRU	San Rafael Swe	57.99	294	P	P	20 01 08.2	-0.2
MPU	Maple Canyon	58.11	296	P	P	20 01 09.3	+0.1
IL31		58.15	334	P	P	20 01 09.1	+0.3
IL31				IAmb	IAmb	20 01 10.5	
	comp=Z,11nm,1.1s						
ILAR	Eielson Array	58.15	334	P	P	20 01 08.2	-0.7
	comp=Z,4.4nm,0.9s,baz=36,slow=5.4,SNR=24						
ILAR				LR	LR	20 24 15.2	
	comp=Z,235nm,19.7s,baz=313,slow=34						
ILAR	Eielson Array	58.15	334	P	P	20 01 07.8	-1.1
ILAR	Eielson Array	58.15	334	P	P	20 01 07.8	-1.1
RIDG	Independent Ri	58.27	332	P	P	20 01 10.8	+0.9
RIDG				IAmb	IAmb	20 01 27.0	
	comp=Z,14nm,1.2s						
TMUT	Trail Mountain	58.29	295	P	P	20 01 10.7	+0.1
BGU	Big Grassy Mou	58.39	298	P	P	20 01 10.8	-0.3
MDM	Murphy Dome	58.41	335	P	P	20 01 10.5	-0.2
MDM				IAmb	IAmb	20 01 12.4	
	comp=Z,16nm,1.2s						
NLU	North Lily Min	58.41	296	P	P	20 01 11.3	-0.1
HDA	Harding Lake	58.44	334	P	P	20 01 10.7	-0.2
MENT	Mentasta	58.48	331	P	P	20 01 11.2	-0.1
MENT				IAmb	IAmb	20 01 13.1	
	comp=Z,11nm,0.9s						
ROSC	El Rosal	58.50	238	LR	LR	20 22 14.5	
	comp=Z,165nm,21.9s,baz=42,slow=32						
Q16A	Castle Valley	58.51	295	P	P	20 01 12.1	+0.1
CCB	Clear Creek Bu	58.52	334	P	P	20 01 11.8	+0.4
WRH	Wood River Hil	58.73	334	P	P	20 01 13.1	+0.2
LTY	Liberty	58.82	307	P	P	20 01 13.1	-0.8
LTY				IAmb	IAmb	20 01 13.9	
	comp=Z,16nm,1.1s						
NEA	Nenana	58.94	335	P	P	20 01 14.9	+0.5
CTGM	Chitina Glacie	59.06	329	P	P	20 01 14.6	-0.9
CTGM				IAmb	IAmb	20 01 17.3	
	comp=Z,8.3nm,1.0s						
MLY	Manley	59.07	335	P	P	20 01 15.2	-0.1
G08A	Pilot Rock	59.11	305	P	P	20 01 15.1	-0.9
BARN	Barnard Glacie	59.11	329	P	P	20 01 16.5	+0.6
BARN				IAmb	IAmb	20 01 17.5	
	comp=Z,9.3nm,1.0s						
IMAR	Indian Mountai	59.15	337	P	P	20 01 16.7	+0.9
BWN	Browne	59.35	334	P	P	20 01 17.4	+0.2
BALM	Baldy	59.37	329	P	P	20 01 17.5	-0.1
BALM				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BALM	Baldy	59.37	329	P	P	20 01 17.4	-0.1
BALM				IAmb	IAmb	20 01 20.5	
	comp=Z,7.0nm,0.9s						
MSU	Marysvale	59.37	295	P	P	20 01 18.5	+0.4
MSU	Marysvale	59.37	295	P	P	20 01 18.5	+0.4
TCRU	Three Creeks R	59.48	295	P	P	20 01 19.1	+0.3
MCK	McKinley	59.53	334	P	P	20 01 18.8	+0.3
MCK				pmax	pmax		
	comp=Z,19nm,1.1s						
MCK	McKinley	59.53	334	P	P	20 01 18.8	+0.3
DHY	Denali Highway	59.54	333	P	P	20 01 19.6	+0.8
DHY				IAmb	IAmb	20 01 20.4	
	comp=Z,9.0nm,1.0s						
TIXI	Tiksi	59.60	8	⇑*i*P	P	20 01 20.3	+1.5
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TIXI	Tiksi	59.60	8	P	P	20 01 19.1	+0.3
RDOG	Red Dog Mine	59.61	342	P	P	20 01 19.2	+0.3
MTPU	Mount Pierson	59.67	294	P	P	20 01 21.0	+0.7
TGL	Tana Glacier	59.73	329	P	P	20 01 20.5	+0.5
RND	Reindeer	59.75	334	P	P	20 01 19.8	-0.3
RND				pmax	pmax		
	comp=Z,5.0nm,1.0s						
RND	Reindeer	59.75	334	P	P	20 01 19.8	-0.3
TX31	Lajitas Ar. Si	59.81	281	P	P	20 01 20.5	-0.5
TX31				IAmb	IAmb	20 01 33.4	
	comp=Z,19nm,1.8s						
TX32	Lajitas Array	59.81	281	P	P	20 01 20.5	-0.5
TX32				IAmb	IAmb	20 01 33.4	
	comp=Z,20nm,1.8s						
TXAR	Lajitas Array	59.81	281	P	P	20 01 20.3	-0.7
	comp=Z,2.2nm,0.7s,baz=68,slow=6.9,SNR=19						
TXAR				PcP	PcP	20 02 07.5	-0.2
	comp=Z,1.8nm,1.0s,baz=106,slow=4.2,SNR=4.4						
TXAR				LR	LR	20 27 09.8	
	comp=Z,137nm,18.2s,baz=0.0,slow=36						
TXAR	Lajitas Array	59.81	281	P	P	20 01 20.5	-0.5
TXAR	Lajitas Array	59.81	281	P	P	20 01 20.5	-0.5
CRQM	Cirque	59.84	329	P	P	20 01 21.2	+0.3
BPAW	Bear Paw Mtn.	59.85	335	P	P	20 01 20.9	+0.2
BPAW				IAmb	IAmb	20 01 23.5	
	comp=Z,8.8nm,1.0s						
J08A	Circle Bar Ran	60.04	303	P	P	20 01 22.7	+0.2
J08A				IAmb	IAmb	20 01 23.6	
	comp=Z,10.0nm,0.8s						
TRF	Thorofare Moun	60.14	334	P	P	20 01 22.5	-0.4
TRF				IAmb	IAmb	20 01 24.1	
	comp=Z,12nm,0.9s						
KTH	Kantishna Hill	60.25	334	P	P	20 01 23.3	-0.1
PSUT	Pine Spring	60.38	296	P	P	20 01 25.3	+0.3
GEYT	Alibeck	60.55	65	P	P	20 01 26.4	+0.5
	comp=Z,2.9nm,0.9s,baz=318,slow=10,SNR=6.1						
GEYT				LR	LR	20 28 27.7	
	comp=Z,174nm,21.3s,baz=65,slow=37						
CCUT	Cedar City	60.71	295	P	P	20 01 27.7	+0.4
KNB	Kanab	60.72	294	P	P	20 01 27.0	-0.2
KNB				pmax	pmax		
	comp=Z,29nm,1.6s						
KNB	Kanab	60.72	294	P	P	20 01 27.0	-0.2
WVOR	Wild Horse Val	60.72	302	P	P	20 01 27.7	+0.6
WVOR				pmax	pmax		
	comp=Z,13nm,1.1s						
WVOR	Wild Horse Val	60.72	302	P	P	20 01 27.7	+0.6
WVOR				IAmb	IAmb	20 01 30.7	
	comp=Z,13nm,1.1s						
WUAZ	Wupatki	60.78	292	P	P	20 01 28.2	+0.5
WUAZ				IAmb	IAmb	20 01 43.5	
	comp=Z,8.8nm,0.8s						
SML	Sawmill	60.78	332	P	P	20 01 28.1	+0.9
SML				pmax	pmax		
	comp=Z,15nm,1.2s						
SML	Sawmill	60.78	332	P	P	20 01 28.1	+0.9
SML				IAmb	IAmb	20 01 31.6	
	comp=Z,16nm,1.2s						
LCMT	Little Creek M	60.98	294	P	P	20 01 28.6	-0.4
GHO	Glory Hole Cre	61.00	332	P	P	20 01 29.2	+0.5
GHO				IAmb	IAmb	20 01 29.9	
	comp=Z,12nm,1.2s						
GLI	Glacier Island	61.08	331	P	P	20 01 28.6	-0.5
KNK	Knik Glacier	61.12	332	P	P	20 01 30.3	+0.8
PMR	Palmer	61.20	332	P	P	20 01 30.7	+0.8
PMR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PMR	Palmer	61.20	332	P	P	20 01 30.7	+0.8
X16A	Lo Mia Camp, P	61.53	291	P	P	20 01 32.5	-0.3
MOD	Modoc Plateau	62.01	302	P	P	20 01 35.6	-0.3
MOD				IAmb	IAmb	20 01 37.2	
	comp=Z,13nm,1.1s						
319A	Douglas	62.13	287	P	P	20 01 38.0	+1.2
TUC	Tucson	62.48	289	P	P	20 01 39.1	0.0
TUC				pmax	pmax		
	comp=Z,18nm,2.0s						
TUC	Tucson	62.48	289	P	P	20 01 39.1	0.0
TUC				IAmb	IAmb	20 01 58.9	
	comp=Z,18nm,1.9s						
KVN	Kaiserville	62.59	299	P	P	20 01 39.9	0.0
KVN				pmax	pmax		
	comp=Z,13nm,1.1s						
KVN	Kaiserville	62.59	299	P	P	20 01 39.9	0.0
KVN				IAmb	IAmb	20 01 40.8	
	comp=Z,13nm,1.1s						
W13A	Hualapai Mount	62.61	293	P	P	20 01 36.5	-3.6
ANM	Nome	63.11	341	P	P	20 01 42.7	0.0
ANM				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ANM	Nome	63.11	341	P	P	20 01 42.7	0.0
NVAR	Mina Array Bea	63.11	298	LR	LR	20 27 19.9	
	comp=Z,170nm,20.1s,baz=355,slow=34						
RYN	Ryan	63.11	299	P	P	20 01 43.0	-0.4
RYN				IAmb	IAmb	20 01 43.8	
	comp=Z,10nm,1.2s						
KURK	Kurchatov	63.20	43	⇑*i*P	P	20 01 43.5	0.0
KURK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KURK	Kurchatov	63.20	43	P	P	20 01 43.3	-0.2
ZALV	Zalesovo Beam	63.62	38	P	P	20 01 45.9	-0.2
	comp=Z,0.6nm,0.5s,baz=300,slow=12,SNR=5.1						
ZALV				LR	LR	20 30 20.9	
	comp=Z,128nm,18.6s,baz=291,slow=37						
ZALV	Zalesovo Beam	63.62	38	P	P	20 01 46.0	-0.2
ZALV	Zalesovo Beam	63.62	38	P	P	20 01 46.0	-0.2
BILL	Bilibino	63.91	354	⇑*i*P	P	20 01 47.1	-0.8
BILL				*i*		20 01 53.7	
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
214A	Organ Pipe Nat	64.01	290	P	P	20 01 49.5	+0.3
GSC	Goldstone, Bar	64.27	295	P	P	20 01 51.9	+1.0
GSC				pmax	pmax		
	comp=Z,19nm,1.2s						
GSC	Goldstone, Bar	64.27	295	P	P	20 01 51.9	+1.0
KK31	Karatay Array	64.32	54	P	P	20 01 51.4	+0.3
KK31				pmax	pmax		
	comp=Z,14nm,1.9s						
KK31	Karatay Array	64.32	54	P	P	20 01 51.4	+0.3
KK31				IAmb	IAmb	20 02 27.9	
	comp=Z,14nm,1.9s						
KKAR	Karatay Array	64.32	54	P	P	20 01 51.3	+0.2
KKAR				pmax	pmax		
	comp=Z,14nm,1.9s						
KKAR	Karatay Array	64.32	54	P	P	20 01 50.8	-0.2
KKAR	Karatay Array	64.32	54	P	P	20 01 51.2	+0.2
KKAR				IAmb	IAmb	20 02 27.9	
	comp=Z,14nm,1.9s						
HSIG		64.77	286	P	P	20 01 53.7	-0.4
HSIG				IAmb	IAmb	20 01 59.6	
	comp=Z,9.1nm,1.0s						
ISA	Isabella, Lake	65.05	296	P	P	20 01 56.9	+1.0
ISA				pmax	pmax		
	comp=Z,13nm,1.1s						
ISA	Isabella, Lake	65.05	296	P	P	20 01 56.9	+1.0
ISA				IAmb	IAmb	20 02 00.0	
	comp=Z,13nm,1.1s						
PFO	Pinyon Flats O	65.19	293	⇓*i*P	P	20 01 55.7	-1.3
PFO				pmax	pmax		
	comp=Z,11nm,1.0s						
BDFB	Brasilia	65.81	202	LR	LR	20 25 35.2	
	comp=Z,89nm,20.9s,baz=320,slow=31						
AAK	Ala-Archa	66.77	52	⇑*i*P	P	20 02 08.4	+1.3
AAK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
AAK	Ala-Archa	66.77	52	P	P	20 02 07.9	+0.8
AAK				IAmb	IAmb	20 02 12.0	
	comp=Z,11nm,1.6s						
GAR	Garm	67.01	57	P	P	20 02 09.3	+0.7
GAR				IAmb	IAmb	20 02 12.5	
	comp=Z,9.5nm,1.0s						
MK31	Makanchi Array	67.70	44	P	P	20 02 12.5	-0.2
MK31				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MK31	Makanchi Array	67.70	44	P	P	20 02 12.5	-0.2
MKAR	Makanchi Array	67.70	44	P	P	20 02 12.1	-0.6
	comp=Z,3.1nm,1.0s,baz=330,slow=4.2,SNR=12						
MKAR				LR	LR	20 30 55.5	
	comp=Z,158nm,19.9s,baz=306,slow=35						
MKAR	Makanchi Array	67.70	44	P	P	20 02 12.3	-0.4
MKAR	Makanchi Array	67.70	44	P	P	20 02 12.3	-0.4
DGZ	Jazzator, Alta	67.85	39	⇓*i*P	P	20 02 14.3	+0.5
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.2s						
SEY	Seymchan	69.52	360	⇑*i*P	P	20 02 24.9	+1.2
KSH	Kashi	69.77	53	P	P	20 02 27.5	+1.6
KSH				pP	pwP	20 02 31.5	-0.8
KSH				PcP	PcP	20 02 50.5	+2.0
KSH				PcS		20 06 55.3	
KSH				S	S	20 11 35.0	0.0
WMQ	Urumqi	72.45	43	*e*P	P	20 02 44.3	+2.3
LPAZ	La Paz	73.40	221	LR	LR	20 31 09.1	
	comp=Z,73nm,21.8s,baz=15,slow=33						
LPAZ	La Paz	73.40	221	P	P	20 02 47.3	-1.1
LPAZ				pmax	pmax		
	comp=Z,8.0nm,1.4s						
LPAZ	La Paz	73.40	221	P	P	20 02 47.3	-1.1
SONM	Songino Array	76.64	30	P	P	20 03 06.6	+0.3
	comp=Z,5.1nm,0.8s,baz=315,slow=6.3,SNR=11						
SONM	Songino Array	76.64	30	P	P	20 03 05.6	-0.7
SONM				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SONM	Songino Array	76.64	30	P	P	20 03 05.5	-0.7
PETK	Petropavlovsk-	79.27	357	LR	LR	20 40 18.3	
	comp=Z,45nm,18.8s,baz=60,slow=37						
DANN	Dangsing	82.39	56	*e*P	P	20 03 38.1	0.0
	comp=Z,18nm,1.0s						
GKN	Gorkha	83.14	55	*e*P	P	20 03 42.1	+0.2
KKN	Kakani	83.66	55	*e*P	P	20 03 44.8	+0.1
DMN	Daman	83.71	55	*e*P	P	20 03 45.3	+0.4
	comp=Z,15nm,1.0s						
PKIN	Phulchoki	83.89	55	*e*P	P	20 03 45.7	-0.2
GUN	Gumba	83.90	55	*e*P	P	20 03 46.5	+0.5
	comp=Z,28nm,1.0s						
PKI	Pulchoki	83.91	55	*e*P	P	20 03 45.9	-0.1
JIRN	Jiri	84.27	55	*e*P	P	20 03 48.2	+0.3
	comp=Z,25nm,1.0s						
HHC	Hu-ho-hao-te	84.54	30	*e*P	P	20 03 45.5	-3.3
RAMN	Ramite	85.05	55	*e*P	P	20 03 51.6	-0.1
TAPN	Taplejung	85.34	54	*e*P	P	20 03 52.8	-0.4
	comp=Z,20nm,1.1s						
ODAN	Odare	85.55	54	*e*P	P	20 03 53.9	-0.3
	comp=Z,5.9nm,0.3s						
LZH	Lanzhou	85.85	37	*e*P	P	20 03 53.0	-2.5
LZH				pP	pP	20 03 56.3	-1.8
LZH				sP	PcP	20 03 57.8	-0.5
USRK	Ussuriysk Ar.	86.56	14	P	P	20 03 58.3	-0.3
	comp=Z,2.7nm,0.9s,baz=173,slow=29,SNR=4.4						
BOSA	Boshof	89.77	135	LR	LR	20 43 35.8	
	comp=Z,64nm,18.3s,baz=347,slow=35						
CD2	Chengdu	90.27	40	P	P	20 04 14.5	-2.1
KSRS	Korea Array	92.28	19	P	P	20 04 24.8	-0.9
	comp=Z,1.8nm,0.9s,baz=339,slow=5.1,SNR=5.8						
KSRS				LR	LR	20 46 35.1	
	comp=Z,19nm,20.8s,baz=300,slow=36						
KSAR	Wonju Array Be	92.29	19	P	P	20 04 24.3	-1.4
KSAR	Wonju Array Be	92.29	19	P	P	20 04 24.3	-1.4
NJ2	Nanjing	94.94	28	*e*P	P	20 04 36.8	-1.2
PLCA	Paso Flores	96.08	211	LR	LR	20 46 01.4	
	comp=Z,40nm,20.1s,baz=324,slow=34						
CMAR	Chiang Mai Arr	98.53	50	LR	LR	20 52 38.1	
	comp=Z,46nm,18.1s,baz=277,slow=37						
WB0	Warramunga Arr	148.40	34		PKPbc	20 11 01.2	-1.0
WRA	Warramunga Arr	148.54	34	PKPbc	PKPbc	20 11 01.1	-1.5
	comp=Z,4.3nm,0.9s,baz=340,slow=3.2,SNR=27						
WRA	Warramunga Arr	148.54	34	PKP2	PKPbc	20 11 01.2	-1.4
VNDA	Vanda	150.04	184	PKPbc	PKPbc	20 11 04.1	-0.5
	comp=Z,4.2nm,0.9s,baz=270,slow=2.9,SNR=17						
VNDA	Vanda	150.04	184	PKIKP	PKPbc	20 11 04.7	+0.1
VNDA	Vanda	150.04	184		PKPbc	20 11 04.7	+0.1
AS31	Alice Springs	151.73	38		PKPbc	20 11 09.3	-0.9
ASAR	Alice Springs	151.73	38	PKPbc	PKPbc	20 11 09.1	-1.2
	comp=Z,6.2nm,0.8s,baz=348,slow=2.1,SNR=56						
ASAR	Alice Springs	151.73	38		PKPbc	20 11 09.0	-1.3

IDC ***31*** *20:10:47.1±0.6, 58°.89S×25°.72W, h0^{km}, mb4.5/6, mb1 4.6/7, mb1mx4.2/27, mbtmp4.5/7, ML4.9/1, MS3.5/4, Ms1 3.5/4, ms1mx3.2/20, Error ellipse: s-maj=34.0km s-min=21.0km az=82.0*

NEIC ***31*** *20:10:52.3±0.7, 59°.0S±0°.1×25°.7W±0°.3, h35^{km}±3^{km}, mb4.6/8, Error ellipse: s-maj=25.8km s-min=16.3km az=51.0*

ISC 31 20:10:51.9±0.5**, 58°.9S**±0°.1×**25°.7W**±0°.2**, h35^{km}, n49, σ1^{s}.16**/39**, mb4.6**/7**, MS3.3**/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	13.87	155	P	Pn	20 14 04.3	-1.2
VNA3	Neumayer Olymp	14.05	158	P	Pn	20 14 06.4	-1.7
VNA2	Neumayer--Watz	14.27	155	P	Pn	20 14 08.9	-2.1
	baz=312,slow=15						
SNAA	Sanae	15.83	153	P	Pn	20 14 30.4	-1.4
SNAA	Sanae	15.83	153	Pn	Pn	20 14 30.2	-1.6
	4.3nm,0.3s,baz=309,slow=14,SNR=139						
SNAA				Sn	Sn	20 17 09.4	-16
	0.4nm,0.3s,baz=322,slow=20,SNR=3.4						
SNAA	Sanae	15.83	153		Pn	20 14 30.4	-1.4
SNAA				IAmb	IAmb	20 14 32.9	
	comp=Z,18nm,0.6s						
PMSA	Palmer Station	18.80	236	LR	LR	20 21 11.6	
	comp=Z,74nm,19.1s,baz=80,slow=33						
USHA	Ushuaia	23.40	261	LR	LR	20 22 33.6	
	comp=Z,123nm,21.4s,baz=96,slow=30						
QSPA	South Pole Qui	31.36	180	P	P	20 17 09.7	+0.9
	comp=Z,6.7nm,0.5s,baz=211,slow=1.9,SNR=66						
QSPA	South Pole Qui	31.36	180	P	P	20 17 09.7	+0.9
QSPA				IAmb	IAmb	20 17 10.5	
	comp=Z,8.5nm,0.6s						
PLCA	Paso Flores	33.35	283	P	P	20 17 27.2	+0.7
	comp=Z,1.0nm,0.4s,baz=30,slow=7.1,SNR=6.5						
PLCA	Paso Flores	33.35	283	P	P	20 17 26.8	+0.4
GO05	Huala	38.46	288	P	P	20 18 10.8	+0.6
GO05				IAmb	IAmb	20 18 16.2	
	comp=Z,36nm,1.5s						
CPUP	Villa Florida	39.30	312	LR	LR	20 33 23.1	
	comp=Z,48nm,20.0s,baz=32,slow=34						
ROC1	El Roble	39.65	291	P	P	20 18 18.8	-1.6
VNDA	Vanda	43.77	182	P	P	20 18 54.7	+1.4
	comp=Z,4.1nm,0.6s,baz=188,slow=6.9,SNR=44						
VNDA	Vanda	43.77	182	P	P	20 18 54.6	+1.4
VNDA				IAmb	IAmb	20 18 55.1	
	comp=Z,4.4nm,0.7s						
BDFB	Brasilia	46.22	330	P	P	20 19 09.9	-3.6
BDFB				IAmb	IAmb	20 19 13.6	
	comp=Z,7.4nm,0.9s						
H10S2	ASCENSION HYDR	50.52	14	T	T	21 14 20.7	
	baz=187,slow=74,SNR=5.7						
H10S3	ASCENSION HYDR	50.53	14	T	T	21 14 23.7	
	baz=33,slow=74,SNR=9.8						
H10N1	ASCENSION HYDR	51.64	14	T	T	21 15 45.5	
H10N3	ASCENSION HYDR	51.64	14	T	T	21 15 44.6	
	baz=265,slow=74,SNR=6.8						
H10N2	ASCENSION HYDR	51.66	14	T	T	21 15 46.0	
	baz=189,slow=74,SNR=5.5						
DBIC	Dimbokro	67.45	23	P	P	20 21 45.9	+2.1
	comp=Z,1.8nm,0.4s,baz=184,slow=7.3,SNR=5.5						
DBIC	Dimbokro	67.45	23	P	P	20 21 44.9	+1.1
PPT	Papeete	91.13	232	LR	LR	20 57 25.0	
	comp=Z,44nm,18.2s,baz=340,slow=31						
ASAR	Alice Springs	96.04	161	P	P	20 24 14.8	-0.7
	comp=Z,1.3nm,0.6s,baz=182,slow=4.2,SNR=39						
ASAR	Alice Springs	96.04	161	P	P	20 24 14.6	-0.9
WRA	Warramunga Arr	99.76	161	P	Pdif	20 24 31.4	-0.8
	comp=Z,0.5nm,1.0s,baz=195,slow=4.2,SNR=2.3						
SCHQ	Schefferville	118.08	334	PKP	PKiKP	20 29 34.0	+0.5
	comp=Z,2.7nm,0.9s,baz=222,slow=14,SNR=2.1						
PDAR	Pinedale Array	122.49	300	PKP	PKPdf	20 29 42.6	-0.1
	comp=Z,0.2nm,0.5s,baz=125,slow=3.6,SNR=3.7						
ULM	Lac du Bonnet	122.83	314	PKP	PKPdf	20 29 42.4	-0.4
	comp=Z,2.0nm,0.5s,baz=259,slow=0.5,SNR=4.8						
NOA	NORSAR Array B	122.99	20	PKP	PKiKP	20 29 43.6	+0.6
	comp=Z,0.3nm,0.6s,baz=182,slow=2.8,SNR=2.5						
CMAR	Chiang Mai Arr	123.31	111	PKP	PKiKP	20 29 45.5	+0.5
	comp=Z,1.1nm,0.7s,baz=226,slow=3.5,SNR=6.8						
CMAR	Chiang Mai Arr	123.31	111		PKPdf	20 29 44.7	-0.1
FINES	FINESS Array B	126.52	28	PKP	PKiKP	20 29 50.2	+0.3
	comp=Z,0.9nm,0.5s,baz=130,slow=2.8,SNR=13						
ARCES	ARCESS Array B	133.28	22	PKP	PKPdf	20 30 02.8	+0.6
	comp=Z,3.5nm,0.8s,baz=208,slow=3.3,SNR=8.0						
MKAR	Makanchi Array	136.98	73	PKhKP	PKPpre	20 30 01.8	
	comp=Z,0.2nm,0.6s,baz=228,slow=6.4,SNR=2.5						
MKAR				PKP	PKiKP	20 30 11.3	-0.4
	comp=Z,0.5nm,0.8s,baz=252,slow=1.8,SNR=4.5						
YKA	Yellowknife Ar	138.79	315	PKP	PKPdf	20 30 13.3	+0.8
	comp=Z,3.7nm,0.6s,baz=130,slow=2.7,SNR=55						
ZALV	Zalesovo Beam	142.84	66	PKhKP	PKPpre	20 30 17.0	
	comp=Z,1.1nm,0.6s,baz=203,slow=2.0,SNR=4.6						
INK	Inuvik	148.47	317		PKPbc	20 30 33.7	+0.7
EPYK	Eagle Plains	149.00	313		PKPbc	20 30 34.8	+0.4
BCAR	Beaver Creek A	149.86	305		PKPbc	20 30 37.4	+0.7
VRDI	Verde Repeater	149.87	301		PKPbc	20 30 37.6	+0.7
SONM	Songino Array	150.00	90	PKPbc	PKiKP	20 30 38.1	-0.4
	comp=Z,2.1nm,0.7s,baz=185,slow=4.0,SNR=16						
RIDG	Independent Ri	151.39	306		PKiKP	20 30 41.4	+0.7
IL31		152.54	307		PKiKP	20 30 43.2	+0.3
ILAR	Eielson Array	152.54	307	PKPbc	PKPbc	20 30 42.9	+0.1
	comp=Z,2.5nm,0.9s,baz=140,slow=1.8,SNR=15						
KSRS	Korea Array	152.59	130	PKPbc	PKiKP	20 30 44.3	+0.3
	comp=Z,0.8nm,0.7s,baz=180,slow=1.8,SNR=2.8						

JMA ***31*** *20:23:10.8±0.1, 41°.56N×142°.06E, h64^{km}±3^{km}, M3.1*

IDC ***31*** *20:23:16.8±4.3, 41°.52N×142°.03E, h116^{km}±39^{km}, mb3.1/6, mb1 3.2/7, mb1mx3.1/34, mbtmp3.4/7, Error ellipse: s-maj=36.3km s-min=21.0km az=81.0*

ISC 31 20:23:11.0±0.8**, 41°.55N**±0°.05×**142°.07E**±0°.05**, h59^{km}, n25, σ0^{s}.55**/28**, mb3.4**/6**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAHD	Aomorihigashid	0.62	243	P	Pn	20 23 24.8	+0.6
JAHD				*e*S	Sn	20 23 35.1	+1.3
JARK	Aomorirokkasho	0.76	225	P	Pn	20 23 25.9	+0.1
JARK				*e*S	Sn	20 23 37.1	+0.4
JOT	Ohata	0.79	258	P	Pn	20 23 26.3	+0.1
JKB	Kayabe	0.85	294	P	Pn	20 23 26.6	-0.3
JNBK	Urakawa-nobuka	0.89	35	P	Pn	20 23 27.1	-0.4
JSHD	Hidakashinhida	0.91	19	P	Pn	20 23 28.6	+0.9
JEM	Erimo	0.94	60	P	Pn	20 23 28.2	+0.1
JTM	Tenmabayashi	1.07	225	P	Pn	20 23 30.4	+0.5
JTM				*e*S	Sn	20 23 44.6	+0.6
JNB	Noboribetsu	1.20	320	P	Pn	20 23 31.1	-0.4
JSR	Shiriuchi	1.24	270	P	Pn	20 23 32.6	+0.5
JBT2	Biratori 2	1.25	10	P	Pn	20 23 32.6	+0.4
JANG	Nango	1.25	200	P	Pn	20 23 32.4	+0.1
JANG				*e*S	Sn	20 23 48.0	-0.1
JEW	Eniwo	1.37	341	P	Pn	20 23 34.3	+0.5
JYM2	Yakumo 2	1.39	295	P	Pn	20 23 34.6	+0.5
JCH	Churui	1.43	42	P	Pn	20 23 35.6	+0.9
JOMM	Oshimamatsumae	1.55	270	P	Pn	20 23 36.6	+0.4
JFR	Furan	1.66	13	P	Pn	20 23 37.9	+0.1
JOSM	Okushiri--Mats	2.01	286	P	Pn	20 23 42.2	-0.3
MJAR	Matsushiro Arr	5.83	212	P	Pn	20 24 40.4	+5.5
	0.1nm,0.3s,baz=33,slow=12,SNR=4.6						
SONM	Songino Array	25.96	296	P	P	20 28 38.5	+0.6
	0.4nm,0.4s,baz=71,slow=9.3,SNR=3.0						
MKAR	Makanchi Array	42.30	298	P	P	20 30 58.2	-0.4
	0.7nm,0.8s,baz=79,slow=9.6,SNR=2.1						
ILAR	Eielson Array	45.45	35	P	P	20 31 23.8	+0.2
	0.2nm,0.6s,baz=269,slow=6.3,SNR=1.7						
WRA	Warramunga Arr	61.60	188	P	P	20 33 21.5	-0.8
	0.1nm,0.3s,baz=6.9,slow=6.9,SNR=5.9						
FINES	FINESS Array B	65.07	332	P	P	20 33 44.4	-0.4
	0.9nm,0.7s,baz=38,slow=9.6,SNR=4.4						
ASAR	Alice Springs	65.33	188	P	P	20 33 46.4	-0.5
	0.3nm,0.7s,baz=5.1,slow=5.3,SNR=5.4						

NEIC ***31*** *20:52:13.8±0.8, 44°.58N±0°.08×141°.57E±0°.06, h235^{km}±7^{km}, mb4.1/15, Error ellipse: s-maj=12.2km s-min=5.8km az=165.0*

JMA ***31*** *20:52:13.1±0.2, 44°.56N×141°.60E, h244^{km}±2^{km}, M3.6*

IDC ***31*** *20:52:13.7±0.4, 44°.60N×141°.61E, h235^{km}±5^{km}, mb3.4/17, mb1 3.5/24, mb1mx3.4/42, mbtmp3.9/24, Error ellipse: s-maj=13.7km s-min=10.4km az=150.0*

ISC 31 20:52:13.8±0.6**, 44°.53N**±0°.05×**141°.63E**±0°.06**, h239**^{km}±5^{km},

n71,σ0^s.80/85,mb3.9/24,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYG	Yagishiri	0.17	235	P	Pn	20 52 44.6	-0.1
JYG				eS	S	20 53 08.5	-0.4
JSS	Shosan	0.21	128	P	Pn	20 52 45.1	+0.3
JSS				eS	S	20 53 09.7	+0.7
JRR	Rishiri	0.65	340	P	Pn	20 52 46.0	+0.2
JRR				eS	S	20 53 12.3	+1.2
JHR	Hokuryu	0.79	175	P	Pn	20 52 46.9	+0.3
JSE	Soyaes	0.81	57	P	Pn	20 52 46.3	-0.2
JSE				eS	S	20 53 11.7	-0.6
ASAJ	Asahikawa	0.81	120	P	Pn	20 52 46.6	0.0
ASAJ				eS	S	20 53 12.3	0.0
ASAJ	Asahikawa	0.81	120	P	Pn	20 52 46.6	0.0
	58nm,0.3s,baz=278,slow=9.6,SNR=550						
ASAJ				S	S	20 53 12.1	-0.2
	5.2nm,0.3s,baz=177,slow=32,SNR=8.7						
JWK2	Keihoku	0.81	14	P	Pn	20 52 46.4	-0.1
JWK2				eS	S	20 53 11.3	-1.1
JKA	Kamikawa-asahi	0.81	120		Pn	20 52 46.6	0.0
JKA					S	20 53 12.1	-0.2
JRBN	Rebuntou	0.98	336	P	Pn	20 52 46.9	-0.5
JKK2	Kamakawa 2	1.04	129	P	Pn	20 52 48.1	+0.2
JAB	Ashibetsu	1.11	157	P	Pn	20 52 48.6	+0.3
JEW	Eniwo	1.69	184	P	Pn	20 52 53.1	+0.4
JEW				eS	S	20 53 23.7	+0.6
JTKR	Abashiri--Toko	1.73	108	P	Pn	20 52 53.7	+0.8
JTKR				eS	S	20 53 24.8	+1.2
JAR	Ashorobuto	1.98	128	P	Pn	20 52 55.9	+0.7
JAR				eS	S	20 53 29.1	+1.5
JCH	Churui	2.29	146	P	Pn	20 52 57.0	-1.2
JCH				eS	S	20 53 30.6	-2.4
JNBK	Urakawa-nobuka	2.39	160	P	Pn	20 52 59.2	0.0
JNBK				eS	S	20 53 34.3	-0.5
YSS	Yuzh-Sakhalins	2.55	18		Pn	20 53 00.6	0.0
JKB	Kayabe	2.67	190	P	Pn	20 53 01.1	-1.0
JAK	Akkeshi	2.70	123	P	Pn	20 53 01.7	-0.6
JAK				eS	S	20 53 38.5	-2.0
ERM	Erimo	2.75	155	Pn	Pn	20 53 03.7	+0.9
JOSM	Okushiri--Mats	2.91	213	P	Pn	20 53 03.9	-0.7
USRK	Ussuriysk Ar.	6.92	271	P	Pn	20 53 52.9	-0.3
	baz=150,slow=36,SNR=3.2						
KLR	Kul'dur	8.24	308	P	Pn	20 54 09.7	-0.3
	0.1nm,0.3s,baz=123,slow=14,SNR=5.1						
MJAR	Matsushiro Arr	8.39	199	P	Pn	20 54 12.3	+0.2
	0.1nm,0.3s,baz=12,slow=14,SNR=4.2						
KSRS	Korea Array	12.53	240	P	Pn	20 55 03.9	-0.2
	0.2nm,0.3s,baz=50,slow=11,SNR=2.6						
PETK	Petropavlovsk-	13.61	45	P	P	20 55 18.2	-0.4
	0.4nm,0.3s,baz=221,slow=9.3,SNR=9.6						
PETK	Petropavlovsk-	13.61	45	P	P	20 55 18.1	-0.5
JNU	Nakatsue	14.12	220	P	P	20 55 26.1	+1.5
	0.6nm,0.3s,baz=5.1,slow=3.0,SNR=5.7						
JNU	Nakatsue	14.12	220	P	P	20 55 24.9	+0.3
MA2	Magadan	16.06	17	P	P	20 55 46.0	+0.4
	0.6nm,0.3s,baz=204,slow=11,SNR=3.9						
SEY	Seymchan	19.45	15	P	P	20 56 22.1	-0.2
	1.2nm,0.3s,baz=205,slow=7.6,SNR=55						
SONM	Songino Array	24.48	290	P	P	20 57 11.8	+0.6
	3.5nm,0.5s,baz=88,slow=8.6,SNR=26						
SONM	Songino Array	24.48	290	P	P	20 57 11.1	-0.1
TIXI	Tiksi	27.89	351	P	P	20 57 38.9	-2.3
	0.5nm,0.3s,baz=162,slow=2.9,SNR=4.3						
TIXI	Tiksi	27.89	351	P	P	20 57 38.9	-2.3
ANM	Nome	35.29	37	P	P	20 58 45.3	-0.3
ANM				IAmb	IAmb	20 59 20.9	
	comp=Z,8.9nm,1.5s						
ZALV	Zalesovo Beam	37.33	305	P	P	20 59 02.6	-0.4
	comp=Z,0.8nm,0.4s,baz=88,slow=9.0,SNR=4.1						
MK31	Makanchi Array	40.67	295	P	P	20 59 31.1	+0.3
MKAR	Makanchi Array	40.67	295	P	P	20 59 31.2	+0.4
	comp=Z,0.9nm,0.7s,baz=81,slow=8.9,SNR=10						
MKAR	Makanchi Array	40.67	295	P	P	20 59 30.7	-0.1
ILAR	Eielson Array	43.22	36	P	P	20 59 50.4	-0.6
	comp=Z,0.8nm,0.6s,baz=284,slow=8.3,SNR=7.5						
SCRK	Sand Creek	44.59	37		P	21 00 01.4	-0.6
SCRK				IAmb	IAmb	21 00 04.5	
	comp=Z,11nm,1.6s						
BCAR	Beaver Creek A	45.75	38		P	21 00 11.2	+0.1
BARN	Barnard Glacie	46.32	41		P	21 00 16.9	+1.2
BARN				IAmb	IAmb	21 01 57.4	
	comp=Z,20nm,1.8s						
CTGM	Chitina Glacie	46.50	41		P	21 00 18.3	+1.2
CTGM				IAmb	IAmb	21 01 25.2	
	comp=Z,22nm,1.9s						
INK	Inuvik	47.73	30	P	P	21 00 25.8	-0.3
	comp=Z,1.1nm,0.3s,baz=304,slow=6.7,SNR=8.9						
INK	Inuvik	47.73	30		P	21 00 26.1	0.0
INK				IAmb	IAmb	21 01 17.9	
	comp=Z,16nm,1.9s						
HYT	Haines Junctio	48.33	40		P	21 00 31.4	+0.4
ARCES	ARCESS Array B	57.08	338	P	P	21 01 34.3	-0.3
	comp=Z,2.8nm,0.9s,baz=52,slow=8.1,SNR=1.4						
YKA	Yellowknife Ar	57.32	32	P	P	21 01 36.5	+0.2
	comp=Z,1.1nm,0.6s,baz=304,slow=6.2,SNR=19						
FINES	FINESS Array B	62.31	331	P	P	21 02 09.2	-1.0
	comp=Z,1.6nm,0.5s,baz=43,slow=8.0,SNR=17						
KBZ	Khabaz	66.25	308	P	P	21 02 37.1	+1.0
	comp=Z,0.8nm,0.6s,baz=62,slow=5.1,SNR=4.6						
NB2	NORSAR Subarra	67.37	336	P	P	21 02 41.9	-1.0
	comp=Z,0.3nm,0.3s,baz=35,slow=6.5						
NOA	NORSAR Array B	67.37	336	P	P	21 02 42.1	-0.8
	comp=Z,0.1nm,0.3s,baz=186,slow=1.3,SNR=9.1						
ASAR	Alice Springs	68.23	188	P	P	21 02 49.0	+0.4
	comp=Z,1.1nm,0.8s,baz=14,slow=5.8,SNR=13						
AKASG	Malin Array Be	68.53	321	P	P	21 02 49.8	-0.4
	comp=Z,1.6nm,0.5s,baz=40,slow=7.3,SNR=9.3						
PDAR	Pinedale Array	72.37	47	P	P	21 03 14.6	+0.8
	comp=Z,1.4nm,0.6s,baz=281,slow=0.6,SNR=13						
PDAR	Pinedale Array	72.37	47	P	P	21 03 14.7	+0.9
BUR08	Bucovina Ar. S	72.56	321	P	P	21 03 14.9	+0.1
BURAR	Bucovina Array	72.58	321	P	P	21 03 14.9	+0.1
OJC	Ojcow	72.94	325	P	P	21 03 17.5	+0.8
OJC				IAmb	IAmb	21 03 18.2	
	comp=Z,3.9nm,0.7s						
ULM	Lac du Bonnet	73.19	34	P	P	21 03 18.6	+0.3
	comp=Z,1.7nm,0.5s,baz=318,slow=5.9,SNR=4.8						
ULM	Lac du Bonnet	73.19	34	P	P	21 03 18.4	+0.2
BRTR	Keskin Array B	74.07	310	P	P	21 03 24.1	+0.5
	comp=Z,0.3nm,0.5s,baz=65,slow=3.6,SNR=2.3						
BRTR	Keskin Array B	74.07	310	P	P	21 03 24.0	+0.3
CLL	Collm	74.70	329	i P	P	21 03 28.4	+1.5
	comp=Z,4.0nm,0.8s						
KHC	Kasperske Hory	76.27	328	eP	P	21 03 36.5	+0.6
KHC	Kasperske Hory	76.27	328	P	P	21 03 35.7	-0.2
KHC				IAmb	IAmb	21 05 42.7	
	comp=Z,6.5nm,2.0s						
GERES	GERESS Array B	76.45	328	P	P	21 03 37.3	+0.3
	comp=Z,0.3nm,0.3s,baz=30,slow=6.3,SNR=5.2						
EYMN	Ely	76.78	34	P	P	21 03 38.9	+0.2

TIR ***31*** *21:04:36.7, 41°.62N×19°.17E, h19^{km}, Md3.1/6*
PDG ***31*** *21:04:38.7±0.5, 41°.60N×19°.26E, h11^{km}, MD2.6/1, ML2.9/14, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*
BEO ***31*** *21:04:39.9±0.3, 41°.74N×19°.53E, h0^{km}, ML2.6/20*
RHSSO ***31*** *21:04:40.7±0.7, 41°.68N×19°.28E, h16^{km}±2^{km}, ML2.9/9*
ISC 31 21:04:38.6±1.1**, 41°.65N**±0°.02×**19°.38E**±0°.02**, h9**^{km}±9^{km}**,**
n75, σ1^s.17/129**, 17C-10D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.47	129	ePg	Pb	21 04 49.0	-0.1
TIR				eSg	Sg	21 04 53.9	-0.1
TIR	Tirane	0.47	129	i PG	Pb	21 04 48.7	-0.4
TIR				i SG	Sb	21 04 57.5	+1.2
TIR	Tirane	0.47	129	P	Pb	21 04 48.7	-0.4
TIR				⇑S	Sg	21 04 54.2	+0.2
PUK	Puka	0.55	44	i PG	Pb	21 04 50.0	-0.5
PUK				i SG	Sn	21 05 00.4	-1.6
DRME	Dracevica, Mon	0.56	345	ePg	Pg	21 04 49.5	+0.1
DRME				eSg	Sb	21 04 59.6	+1.0
PDG	Podgorica	0.79	353	ePg	Pb	21 04 54.4	0.0
PDG				eSg	Sg	21 05 03.9	0.0
PDG	Podgorica	0.79	353	⇑P	Pb	21 04 54.4	0.0
PDG				⇑S	Sb	21 05 04.4	-0.7
PDG	Podgorica	0.79	353	ePg	Pb	21 04 53.9	-0.5
PDG				eSg	Sn	21 05 06.4	-1.3
PHP	Peshkopia	0.80	87	i PG	Pb	21 04 54.6	0.0
PHP				i SG	Sn	21 05 09.0	+0.9
BCI	Bajram Curri	0.88	35	i PG	Pb	21 04 55.4	-0.7
BCI				i SG	Sn	21 05 10.6	+0.4
HCY	Herceg Novi	1.03	321	ePg	Pg	21 04 58.4	0.0
VLO	Vlora	1.18	176	i PN	Pb	21 04 59.9	-1.3
VLO				i SN	Sb	21 05 17.0	+0.4
OHR	Ohrid	1.20	116	i Pg	Pn	21 05 03.0	+1.4
OHR				i Sg	Sn	21 05 21.0	+3.0
TREB	Trebinje	1.31	325	ePg	Pb	21 05 03.3	-0.1
TREB				eSg	Sg	21 05 22.7	+1.9
TREB	Trebinje	1.31	325	ePg	Pn	21 05 03.1	0.0
TREB				eSg	Sb	21 05 19.9	-0.4
DBRK	Dubrovnik	1.37	318	ePn	Pn	21 05 03.7	-0.2
DBRK				Sn	Sg	21 05 24.6	+2.0
BRY	Bratogost	1.40	334	⇓iPg	Pb	21 05 04.9	0.0
BRY				eSg	Sg	21 05 23.6	+0.1
SKO	Skopje	1.57	78	ePg	Pn	21 05 06.1	-0.6
SKO				eSg	Sn	21 05 26.4	-0.8
SKO	Skopje	1.57	78	i Pn	Pn	21 05 05.8	-0.9
SKO				i Sn	Sg	21 05 32.6	+3.4
UPM	Unac-Piva	1.59	347	ePg	Pb	21 05 08.4	+0.1
UPM				eSg	Sg	21 05 29.9	+0.1
SJES	Sjenica	1.67	15	ePg	Pb	21 05 09.1	-0.5
SJES				eSn	Sg	21 05 31.0	-1.3
STON	Ston	1.74	315	ePg	Pb	21 05 10.8	+0.1
STON				eSg	Sg	21 05 35.7	+1.1
STON	Ston	1.74	315	i Pn	Pn	21 05 08.9	-0.1
STON				Sg	Sg	21 05 34.4	-0.2
STON	Ston	1.74	315	ePn	Pb	21 05 10.4	-0.3
STON				eSn	Sn	21 05 31.3	-0.1
SRN	Sarande	1.83	165	i PN	Pn	21 05 10.3	+0.1
SRN				i SN	Sb	21 05 36.3	+1.1
RUDO	Rudo	1.97	360	ePn	Pb	21 05 13.6	-1.0
RUDO				eSn	Sn	21 05 37.5	+0.6
IVAS	Ivanjica	2.01	16	ePg	Pb	21 05 14.5	-0.8
IVAS				eSg	Sb	21 05 39.1	-1.4
SELS	Selova	2.03	39	ePg	Pb	21 05 15.1	-0.6
SELS				eSg	Sb	21 05 40.3	-0.8
STIP	Stip	2.10	88	i Pn	Pg	21 05 18.2	-0.7
STIP				i Sn	Sg	21 05 48.2	+2.0
BARS	Barje	2.15	56	ePg	Pb	21 05 16.5	-1.2
BARS	Barje	2.15	56	ePn	Pg	21 05 28.0	+8.2
BARS				eSg	Sb	21 05 44.6	0.0
BARS				eSn	Sg	21 06 03.9	+16
BBLS	Lazići	2.21	1	ePg	Pb	21 05 17.6	-1.2
BBLS				eSg	Sb	21 05 46.9	+0.5
BBLS	Lazići	2.21	1	⇓iPn	Pb	21 05 17.4	-1.4
BBLS				eSn	Sn	21 05 43.7	+0.6
MATE	Matera	2.25	245	⇑P	Pn	21 05 15.5	-0.5
MATE				⇓S	Sn	21 05 44.6	+0.8
MAKA	Makarska	2.39	314	ePn	Pn	21 05 17.6	-0.3
MAKA				Sn	Sn	21 05 46.7	-0.6
VAY	Valandovo	2.42	97	ePg	Pb	21 05 21.6	-0.7
VAY				eSg	Sb	21 05 53.4	+1.2
VAY	Valandovo	2.42	97	i Pn	Pb	21 05 20.6	-1.7
VAY				i Sn	Sb	21 05 50.4	-1.9
GRUS	Gruza	2.44	23	ePg	Pb	21 05 21.5	-1.2
GRUS				eSg	Sb	21 05 52.4	-0.5
HAPS	Han Pijesak,Bl	2.46	353	ePn	Pn	21 05 19.4	+0.5
HAPS				eSn	Sn	21 05 48.4	-0.7
BOSS	Bosilegrad	2.46	69	ePg	Pb	21 05 20.6	-2.4
BOSS				eSg	Sb	21 05 54.5	+1.1
RICI	Ricice	2.48	319	i Pn	Pn	21 05 18.9	-0.2
DIVS	Divibare	2.49	10	ePg	Pb	21 05 21.4	-2.1
DIVS				eSg	Sb	21 05 55.1	+0.8
DIVS	Divibare	2.49	10	⇓iPn	Pn	21 05 20.3	+0.9
DIVS				eSn	Sn	21 05 50.4	+0.5
TRUS	Trudelj	2.68	16	ePg	Pb	21 05 25.2	-1.5
TRUS				eSg	Sb	21 06 01.3	+1.5
ZAPS	Zavoj	2.91	55	ePg	Pb	21 05 27.8	-2.8
ZAPS				eSn	Sn	21 05 59.3	-0.8
ZAGS	Zajecar	3.02	43	ePg	Pb	21 05 30.7	-1.7
ZAGS				eSn	Sn	21 06 01.3	-1.5
VTS	Vitosha	3.03	70	ePg	Pb	21 05 31.0	-1.7
VTS				eSn	Sn	21 06 02.2	-1.1
VTS	Vitosha	3.03	70	⇑P	Pn	21 05 27.7	+0.9
VTS				⇓S	Sn	21 06 05.6	+2.3
VTS	Vitosha	3.03	70	eP	Sn	21 06 03.5	+0.2
VTS				eS	Sb	21 06 06.7	-3.2
TIP	Timpagrande	3.18	220	⇑P	Pn	21 05 27.2	-1.6
MGRS	Mrkonjic Grad	3.24	329	ePn	Pn	21 05 30.3	+0.7
ZIRJ	Zirje	3.41	307	ePn	Pn	21 05 31.5	-0.4
BLY	Banja Luka	3.49	333	⇓P	Pn	21 05 33.4	+0.4
BLY				⇑S	Sn	21 06 16.9	+2.5
BLY	Banja Luka	3.49	333	ePn	Pn	21 05 34.1	+1.1
BLY				eSn	Sn	21 06 12.9	-1.5
MORI	Morici	3.49	311	ePn	Pn	21 05 33.4	+0.4
MDVR	Moldovita	3.57	28	⇑P	Pn	21 05 35.6	+1.5
MDVR				⇑S	Sn	21 06 17.1	+0.7
UDBI	Udbina	3.91	319	ePn	Pn	21 05 39.8	+0.9
HERR	Herculane	3.92	33	⇑P	Pn	21 05 39.8	+0.9
HERR				⇑S	Sn	21 06 25.5	+0.4
DUGI	Dugi Otok	3.95	308	ePn	Pn	21 05 39.3	0.0
RZN	Rozhen	4.00	88	eP	Pg	21 06 10.2	+15
BZS	Buzias	4.29	22	ePn	Pn	21 05 45.2	+1.2
BZS				eSn	Sn	21 06 33.9	-0.2
BZS	Buzias	4.29	22	⇑P	Pn	21 05 45.3	+1.4
BZS				⇑S	Sn	21 06 33.6	-0.4
MOSL	Moslavina	4.40	335	ePn	Pn	21 05 45.2	-0.3
NVLJ	Novalja	4.40	313	ePn	Pn	21 05 45.6	+0.1
NVLJ				Sn	Sn	21 06 35.3	-1.5
GZR	Gura Zlata	4.49	32	⇓P	Pn	21 05 47.9	+1.2
GZR				⇑S	Sn	21 06 39.4	+0.3
AQU	L'Aquila	4.51	281	ePn	Pn	21 05 46.4	-0.7
MORH	Mrgy, Hungar	4.59	354	ePn	Pn	21 05 49.1	+0.9
OZLJ	Ozalj	4.88	326	ePn	Pn	21 05 52.2	+0.2
CRES	Cresnjev	5.05	327	⇓iPn	Pn	21 05 54.4	-0.1
ARR	Arges	5.33	44	⇑P	Pn	21 05 59.4	+1.0
ARR				⇑S	Sn	21 07 00.3	+0.4
CEY	Cerknica	5.44	320	⇓iPn	Pn	21 05 59.7	-0.1
VOIR		5.60	46	⇑P	Pn	21 06 02.9	+0.9
VOIR				⇓S	Sn	21 07 09.5	+3.0
OBKA	Obir	5.97	326	ePn	Pn	21 06 08.5	+1.2
	0.4nm,0.2s						
ABTA	Abfaltersbach	7.09	318	ePn	Pn	21 06 23.4	+0.9
	0.4nm,0.3s						
WTTA	Wattenberg	7.88	318	i Pn	Pn	21 06 35.3	+1.8
	0.4nm,0.2s						

ATH 31 21:05:24.8, 38°.32N×20°.39E, h11^{km}±2^{km}**, ML1.4**/1**, Error ellipse: s-maj=2.5km s-min=0.9km az=224.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.06	156	P	Pg	21 05 26.9	-0.1
KEF4				S	Sg	21 05 28.5	-0.1
KEF1	Kardakata, Kep	0.07	121	P	Pg	21 05 26.9	-0.2
KEF1				S	Sg	21 05 28.6	-0.3
KEF3	Kipouria, Keph	0.12	197	P	Pg	21 05 27.7	0.0
KEF3				S	Sg	21 05 30.4	+0.5
LXRA	Lixouri, Kepha	0.12	163	P	Pg	21 05 27.9	+0.1
LXRA				S	Sg	21 05 30.5	+0.6
ARGA	Argostoli. Kep	0.15	154	P	Pg	21 05 28.3	0.0
ARGA				S	Sg	21 05 30.9	+0.2
KEF2	Argostoli. Kep	0.17	153	P	Pg	21 05 28.5	0.0
KEF2				S	Sg	21 05 31.1	0.0
KONA	Konidatara, Ke	0.18	52	P	Pg	21 05 28.7	0.0
KONA				S	Sg	21 05 31.5	+0.1
FSK	Fiskardo	0.20	43	P	Pg	21 05 29.0	0.0
FSK				S	Sg	21 05 32.3	+0.4
VLS	Valsamata	0.21	132	P	Pg	21 05 29.0	-0.2
VLS				S	Sg	21 05 32.3	+0.1
EVGI	Lefkada island	0.37	34	P	Pg	21 05 32.1	0.0
EVGI				S	Sg	21 05 37.8	+0.7
KFL	Anninata	0.37	123	P	Pg	21 05 32.0	-0.2
KFL				S	Sg	21 05 38.1	+0.9
KFL				AML	AML	21 05 38.2	
	comp=N,156µm,0.4s						
KFL				AML	AML	21 05 38.6	
	comp=E,194µm,0.3s						

JMA ***31*** *21:06:52.5±0.2, 30°.37N×138°.96E, h462^{km}, M3.7*
IDC ***31*** *21:06:53.1±0.6, 30°.22N×138°.54E, h425^{km}±7^{km}, mb3.3/19, mb1 3.4/27, mb1mx3.3/43, mbtmp4.1/27, Error ellipse: s-maj=11.1km s-min=8.1km az=79.0*
NEIC ***31*** *21:06:53.4±1.6, 30°.18N±0°.08×138°.5E±0°.1, h436^{km}±9^{km}, mb4.2/21, Error ellipse: s-maj=16.4km s-min=8.3km az=124.0*
MOS ***31*** *21:06:53.2±0.9, 30°.22N×138°.45E, h445^{km}, mb4.3/10, Error ellipse: s-maj=13.8km s-min=6.6km az=111.4*
ISC 31 21:06:54.0±0.5**, 30°.33N**±0°.06×**138°.58E**±0°.06**, h440**^{km}**,**
n134, σ1^s.73/146**, mb3.8**/36**, 10C-1D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	2.97	20	P	P	21 08 00.3	+0.5
	20nm,0.3s,baz=331,slow=22,SNR=9.2						
JHJ				S	S	21 08 52.5	-1.0
	58nm,0.3s,baz=236,slow=23,SNR=8.0						
JHJ2	Mitsune	2.97	20	P	P	21 08 00.7	+0.9
JHJ2	Mitsune	2.97	20	P	P	21 08 00.8	+0.9
JHJ2				S	S	21 08 49.0	-4.5
TTO1	TONANKAI O.B.S	3.62	336	P	P	21 08 07.0	+2.3
TK02	Tokai 2	3.68	349	P	P	21 08 07.7	+2.4
JIE	Ise	4.35	339	P	P	21 08 13.5	+2.0
CBIJ	Chichi jima	4.51	135	P	P	21 08 11.4	-1.8
CBIJ				S	S	21 09 13.3	-4.4
JCJ	Chichijima	4.51	135	P	P	21 08 11.5	-1.8
	24nm,0.3s,baz=269,slow=23,SNR=7.0						
JCJ				S	S	21 09 12.2	-5.5
	48nm,0.3s,baz=285,slow=22,SNR=9.0						
HMMJ	Hamamatsu 2	4.58	351	P	P	21 08 14.9	+1.3
JWY	Kouya	4.63	328	P	P	21 08 16.3	+2.1
BSO3	Boso 3	4.75	20	P	P	21 08 15.7	+0.7
BSO3				S	S	21 09 19.8	-1.4
BSO1	Boso 1	4.77	25	eS	S	21 09 19.0	-1.9
BSO4	Boso 4	4.88	17	P	P	21 08 16.5	+0.1
BSO4				eS	S	21 09 21.7	-2.1
JAI	Aioi	4.92	316	P	P	21 08 18.7	+1.8
JOD2	Odawara 2	4.94	5	P	P	21 08 17.1	0.0
JOD2				eS	S	21 09 23.9	-1.2
JAO	Obara	5.05	348	P	P	21 08 19.9	+1.7
JNY	Yasuok	5.05	353	P	P	21 08 19.7	+1.4
JEG	Eigenji	5.14	340	P	P	21 08 21.5	+2.4
JYN	Shimob	5.16	360	P	P	21 08 20.0	+0.7
INU	Inuyama	5.18	346	P	P	21 08 21.1	+1.6
JHU	Hanno	5.54	6	P	P	21 08 22.3	-0.8
JHU				eS	S	21 09 29.8	-6.1
JWT	Wachi	5.62	332	P	P	21 08 25.4	+1.6
JRY	Ryogami san	5.68	3	P	P	21 08 24.4	-0.1
JRY				eS	S	21 09 36.6	-2.0
JYT	Yasato	6.04	13	P	P	21 08 26.5	-1.6
JYT				eS	S	21 09 40.2	-5.0
JAG	Ashikaga	6.13	7	P	P	21 08 27.8	-1.2
JAG				S	S	21 09 40.5	-6.4
MJAR	Matsushiro Arr	6.21	357	P	P	21 08 29.7	-0.2
	0.8nm,0.3s,baz=168,slow=11,SNR=47						
MJAR	Matsushiro Arr	6.21	357	P	P	21 08 33.0	+3.1
MJAR	Matsushiro Arr	6.21	357	P	P	21 08 33.0	+3.1
MAJO	Matsushiro	6.21	357	P	P	21 08 29.8	-0.1
MAJO	Matsushiro	6.21	357	P	P	21 08 29.8	-0.1
MAT	Matsushiro	6.21	357	P	P	21 08 29.7	-0.2
MAT				S	S	21 09 41.9	-6.6
MJB9	Matsu-Tunnel	6.21	357	P	P	21 08 30.1	+0.2
JHO	Hitachi	6.49	14	S	S	21 09 49.5	-4.3
JHS	Saijyo	6.55	317	P	P	21 08 35.3	+1.6
JNU	Nakatsue	7.13	295	P	P	21 08 40.1	+0.2
	0.3nm,0.3s,baz=91,slow=5.6,SNR=7.4						
JNU				S	S	21 10 03.6	-2.9
	0.7nm,0.3s,baz=168,slow=8.7,SNR=7.2						
KSRS	Korea Array	11.35	312	P	P	21 09 26.6	+0.9
	1.0nm,0.3s,baz=127,slow=11,SNR=49						
KSAR	Wonju Array Be	11.37	311	P	P	21 09 26.6	+0.7
KSAR	Wonju Array Be	11.37	311	P	P	21 09 26.6	+0.7
KS19	Wonju Array Si	11.41	312	P	P	21 09 27.2	+0.8
ASAJ	Asahikawa	14.13	12	P	P	21 09 57.5	+1.8
	0.6nm,0.3s,baz=242,slow=15,SNR=5.6						
JKA	Kamikawa-asahi	14.13	12	P	P	21 09 57.5	+1.8
USA0B	Ussuriysk Arra	14.80	341	P	P	21 10 03.9	+0.9
USA0B	Ussuriysk Arra	14.80	341	P	P	21 10 03.9	+0.9
USRK	Ussuriysk Ar.	14.80	341	P	P	21 10 03.5	+0.6
	baz=164,slow=12,SNR=22						
USRK	Ussuriysk Ar.	14.80	341	P	P	21 10 03.7	+0.7
USRK	Ussuriysk Ar.	14.80	341	P	P	21 10 03.7	+0.7
MDJ	Mudanjiang	15.93	336	P	P	21 10 15.8	+0.8
MDJ				IAmb	IAmb	21 10 16.8	
	comp=Z,14nm,1.2s						
YHNB	Yeheng	16.27	254	P	P	21 10 15.8	-3.1
SSLB	Suanglung	16.99	252	P	P	21 10 25.7	-0.8
SSLB				IAmb	IAmb	21 10 40.7	
	comp=Z,14nm,1.3s						
KLR	Kul'dur	19.58	347	P	P	21 10 52.8	+1.0
	comp=Z,0.4nm,0.3s,baz=146,slow=6.4,SNR=26						
KLR	Kul'dur	19.58	347	ceP	P	21 10 53.7	+1.9
KLR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BJT	Baijiatuau	20.67	304	P	P	21 11 00.2	-1.7
BJT				pmax	pmax		
	comp=Z,11nm,0.6s						
BJT	Baijiatuau	20.67	304	P	P	21 11 00.2	-1.7
ENH	Enshi	25.09	277	P	P	21 11 39.4	-2.5
XAN	Xi'an	25.33	286	P	P	21 11 43.8	-0.2
XAN				pmax	pmax		
	comp=Z,12nm,0.7s						
XAN	Xi'an	25.33	286	P	P	21 11 43.8	-0.2
ULN	Ulaanbaatar	29.81	315	ceP	P	21 12 24.4	+1.1
ULN				pmax	pmax		
	comp=Z,7.0nm,1.7s						
SONM	Songino Array	30.20	314	P	P	21 12 27.0	+0.3
	comp=Z,0.8nm,0.5s,baz=118,slow=8.0,SNR=10						
SONM	Songino Array	30.20	314	IAmb	IAmb	21 12 28.5	
	comp=Z,1.1nm,0.9s						
MA2	Magadan	30.39	12	ceP	P	21 12 30.7	+2.7
MA2				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YAK	Yakutsk	32.24	352	⇑iP	P	21 12 45.5	+1.6
YAK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZAK	Zakamensk	33.10	317	eP	P	21 12 50.9	-0.7
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SEY	Seymchan	33.81	11	P	P	21 12 59.2	+1.9
	comp=Z,4.1nm,0.3s,baz=23,slow=0.5,SNR=21						
CHTO	Chiang Mai	37.65	262	P	P	21 13 30.1	+0.1
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CHTO	Chiang Mai	37.65	262	P	P	21 13 30.1	+0.1
CHTO				IAmb	IAmb	21 13 30.7	
	comp=Z,4.8nm,0.8s						
CMAR	Chiang Mai Arr	37.80	261	P	P	21 13 31.4	+0.1
	comp=Z,1.2nm,0.7s,baz=62,slow=6.6,SNR=12						
CMAR	Chiang Mai Arr	37.80	261	P	P	21 13 30.9	-0.4
CMAR	Chiang Mai Arr	37.80	261	P	P	21 13 30.9	-0.4
BILL	Bilibino	41.11	15	i P	P	21 13 59.1	+1.7
BILL				i *PP	pP	21 15 19.2	-0.6
BILL				i		21 15 46.5	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
DGZ	Jazzator, Alta	42.76	312	⇑iP	P	21 14 11.9	+0.9
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TAPN	Taplejung	44.36	279	eP	P	21 14 23.9	-0.2
	comp=Z,6.8nm,0.4s						
ODAN	Odare	44.77	279	eP	P	21 14 26.9	-0.3
	comp=Z,15nm,0.8s						
ZALV	Zalesovo Beam	44.98	318	P	P	21 14 28.3	+0.3
	comp=Z,1.3nm,0.5s,baz=103,slow=7.3,SNR=5.9						
ZALV	Zalesovo Beam	44.98	318	P	P	21 14 27.9	-0.1
RAMN	Ramite	45.42	279	eP	P	21 14 32.1	-0.1
	comp=Z,18nm,0.7s						
JIRN	Jiri	45.57	280	eP	P	21 14 33.9	+0.4
	comp=Z,41nm,0.4s						
GUN	Gumba	45.76	281	eP	P	21 14 35.2	+0.2
	comp=Z,22nm,0.4s						
MK31	Makanchi Array	45.99	307	P	P	21 14 36.3	+0.2
MK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MK31	Makanchi Array	45.99	307	P	P	21 14 36.3	+0.2
MKAR	Makanchi Array	45.99	307	P	P	21 14 36.3	+0.2
	comp=Z,1.7nm,0.7s,baz=93,slow=10,SNR=22						
MKAR	Makanchi Array	45.99	307	P	P	21 14 35.8	-0.3
PKI	Pulchoki	46.26	280	eP	P	21 14 38.3	-0.4
PKIN	Phulchoki	46.27	280	eP	P	21 14 38.5	-0.2
	comp=Z,5.2nm,0.5s						
KKN	Kakani	46.31	281	eP	P	21 14 38.9	-0.1
DMN	Daman	46.51	281	eP	P	21 14 40.4	-0.1
GKN	Gorkha	46.79	281	eP	P	21 14 42.7	+0.1
	comp=Z,8.8nm,0.3s						
DANN	Dangsing	47.44	282	eP	P	21 14 47.8	+0.2
	comp=Z,13nm,0.3s						
GSI	Gunungsitoli	48.42	241	P	P	21 14 54.5	-0.3
GSI				IAmb	IAmb	21 14 55.8	
	comp=Z,15nm,0.8s						
KURK	Kurchatov	48.47	313	ceP	P	21 14 55.0	+0.3

KURK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KURK	Kurchatov	48.47	313	P	P	21 14 54.7	0.0
KURK				IAmb	IAmb	21 14 56.6	
	comp=Z,11nm,1.4s						
NRIK	Noril'sk	48.49	338	P	P	21 14 55.1	+0.5
	comp=Z,2.4nm,0.6s,baz=116,slow=8.9,SNR=4.8						
NRIK	Noril'sk	48.49	338	⇑*i*P	P	21 14 55.5	+0.9
WRA	Warramunga Arr	50.14	185	P	P	21 15 07.2	-0.3
	comp=Z,0.8nm,0.3s,baz=2.6,slow=8.3,SNR=40						
AAK	Ala-Archa	51.84	302	*ce*P	P	21 15 20.7	+0.8
BRVK	Borovoye	53.59	316	*ce*P	P	21 15 33.0	+0.9
BRVK				pmax	pmax		
	comp=Z,7.0nm,2.5s						
RSO	Redoubt South	53.68	35	P	P	21 15 34.1	+1.1
KDAK	Kodiak Island	53.74	38	P	P	21 15 34.5	+1.4
	comp=Z,6.5nm,0.8s,baz=234,slow=4.5,SNR=9.7						
KDAK	Kodiak Island	53.74	38	P	P	21 15 34.5	+1.4
KDAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KDAK	Kodiak Island	53.74	38	IAmb	IAmb	21 15 35.2	
	comp=Z,6.2nm,0.8s						
ASAR	Alice Springs	53.87	185	P	P	21 15 34.4	-0.1
	comp=Z,0.4nm,0.4s,baz=357,slow=5.8,SNR=14						
KK31	Karatay Array	54.65	304	P	P	21 15 40.1	+0.2
KK31				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KK31	Karatay Array	54.65	304	P	P	21 15 40.1	+0.2
KKAR	Karatay Array	54.65	304	P	P	21 15 39.8	-0.1
KKAR	Karatay Array	54.65	304	P	P	21 15 39.8	-0.1
KKAR	Karatay Array	54.65	304	IAmb	IAmb	21 15 40.9	
	comp=Z,5.9nm,0.9s						
NIL	Nilore	54.68	292	P	P	21 15 41.0	+0.8
NIL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NIL	Nilore	54.68	292	P	P	21 15 41.0	+0.8
NIL				IAmb	IAmb	21 15 41.6	
	comp=Z,7.1nm,0.7s						
GAR	Garm	55.64	299	IAmb	IAmb	21 15 47.9	
	comp=Z,7.9nm,0.8s						
ILAR	Eielson Array	56.45	30	P	P	21 15 52.6	+0.6
	comp=Z,0.6nm,0.7s,baz=260,slow=4.8,SNR=8.0						
CHGR	Chuyangaron	56.60	299	P	P	21 15 53.3	-0.4
BCAR	Beaver Creek A	58.80	32	P	P	21 16 10.1	+1.9
ARU	Arti	59.93	321	*d i*P	P	21 16 15.4	-0.5
ARU				*PP	pP	21 17 45.3	-0.1
ARU						21 18 33.1	
ARU				S	S	21 23 53.0	+0.1
ARU				SS	SS	21 27 57.1	-0.8
ARU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ARU	Arti	59.93	321	P	P	21 16 15.7	-0.3
ARU				IAmb	IAmb	21 16 16.6	
	comp=Z,5.0nm,0.7s						
ABKAR	Akbulak array	60.58	312	P	P	21 16 20.1	-0.3
INK	Inuvik	61.43	25	P	P	21 16 26.7	+1.1
	comp=Z,0.8nm,0.5s,baz=288,slow=7.5,SNR=5.6						
INK	Inuvik	61.43	25	P	P	21 16 26.7	+1.1
INK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
INK	Inuvik	61.43	25	IAmb	IAmb	21 16 27.7	
	comp=Z,5.6nm,1.4s						
STKA	Stephens Creek	61.93	177	P	P	21 16 29.8	+0.4
	comp=Z,1.1nm,0.4s,baz=56,slow=3.7,SNR=3.4						
ARCES	ARCESS Array B	69.44	340	P	P	21 17 17.1	+0.9
	comp=Z,4.2nm,0.9s,baz=73,slow=8.0,SNR=9.5						
ARCES	ARCESS Array B	69.44	340	P	P	21 17 14.7	-1.5
YKA	Yellowknife Ar	70.80	28	P	P	21 17 25.2	+0.8
	comp=Z,0.9nm,0.7s,baz=293,slow=5.5,SNR=12						
KBZ	Khabaz	73.50	311	P	P	21 17 40.9	+0.4
	comp=Z,1.8nm,0.9s,baz=96,slow=6.3,SNR=6.8						
KBZ	Khabaz	73.50	311	*ce*P	P	21 17 42.5	+2.0
FINES	FINESS Array B	73.64	332	P	P	21 17 41.0	+0.1
	comp=Z,0.9nm,0.5s,baz=67,slow=5.9,SNR=14						
NOA	NORSAR Array B	79.43	337	P	P	21 18 12.5	-0.5
	comp=Z,0.5nm,0.8s,baz=55,slow=6.5,SNR=2.7						
BR131	Keskin Array S	81.50	311	P	P	21 18 24.4	0.0
BR131				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BR131	Keskin Array S	81.50	311	P	P	21 18 24.4	0.0
BRTR	Keskin Array B	81.50	311	P	P	21 18 24.8	+0.4
	comp=Z,1.7nm,0.9s,baz=114,slow=3.2,SNR=9.6						
ELK	Elko	81.75	48	P	P	21 18 25.6	-0.2
ELK				pmax	pmax		
	comp=Z,11nm,1.4s						
ELK	Elko	81.75	48	P	P	21 18 25.6	-0.2
ELK				IAmb	IAmb	21 18 27.9	
	comp=Z,11nm,1.4s						
BURAR	Bucovina Array	82.07	321	P	P	21 18 27.7	+0.6
PDAR	Pinedale Array	84.10	43	P	P	21 18 38.8	+1.1
	comp=Z,0.9nm,0.9s,baz=0.0,slow=1.6,SNR=5.0						
PDAR	Pinedale Array	84.10	43	P	P	21 18 37.6	-0.1
CLL	Collm	85.68	329	*i* P	P	21 18 42.6	-2.3

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*PAS **31** 21:31:13.0±2.6, 33°.90N±0°.01×117°.96W±0°.02, h4^{km}±4^{km}, ML2.4/174, Error ellipse: s-maj=2.7km s-min=1.4km az=47.0*

NEIC 31 21:31:12.8±0.9**, 33°.91N**±0°.04×**117°.96W**±0°.06**, h17**^{km}±2^{km}**, Error ellipse: s-maj=9.3km s-min=0.9km az=51.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FULC	Fullerton	0.05	144		Pg	21 31 16.3	+0.4
RHC	Rose Hills Cem	0.10	333		Pg	21 31 15.7	-0.6
BREC	Barre Substati	0.11	190		Pg	21 31 15.7	-0.6
DLAC	Del Amo	0.13	240		Pg	21 31 16.6	0.0
GVRC	Garvey Reservo	0.19	316		Pg	21 31 17.6	+0.2
PSRC	Puddingstone R	0.22	35		Pg	21 31 17.6	-0.2
PEM	Pine Mountain	0.26	16		Pg	21 31 18.5	-0.1
PASC	Pasadena Art C	0.32	324	Pg	Pg	21 31 19.1	-0.4
PASC				Sg	Sg	21 31 24.3	+0.1
MWC	Mount Wilson	0.32	345	Pg	Pg	21 31 19.3	-0.4
MWC				Sg	Sg	21 31 24.6	+0.2
SSK	Sunset Peak	0.37	37		Pg	21 31 20.4	-0.1
XTL	Crystal Lake,	0.39	12		Pg	21 31 20.6	-0.3
BFSC	Mount Baldy Ra	0.41	38		Pg	21 31 20.9	-0.3
BFSC					Sg	21 31 27.2	+0.3
CHFC	Chilao Flat St	0.42	353		Pg	21 31 20.9	-0.5
CHFC					Sg	21 31 27.3	0.0
DJJ	Donna J Jenkin	0.45	295		Pg	21 31 21.9	-0.1
DECC	Green Verdugo	0.46	318		Pg	21 31 21.9	-0.2
SS2	San Sevaine	0.48	52		Pg	21 31 22.4	-0.1
JNH	Juniper Hills	0.53	0		Pg	21 31 23.0	-0.5
HOLC	Holcomb Ridge	0.55	10		Pg	21 31 23.5	-0.3
IR2C	Iron Canyon	0.60	322		Pg	21 31 24.3	-0.3
LRRC	Littlerock Res	0.61	355		Pg	21 31 24.6	-0.3
CSP	Cedar Springs	0.63	52		Pg	21 31 25.0	-0.3
PEC	Perris	0.66	92		Pg	21 31 25.3	-0.6
MURC	Murrieta	0.71	116		Pg	21 31 26.1	-0.6
CFT	Crafton Hills	0.71	80		Pg	21 31 26.0	-0.8
HMTC	Hemet	0.82	104		Pb	21 31 27.9	-0.7
BACC	Bachelor Mtn.	0.82	111		Pb	21 31 27.8	-0.9
DGR	Domenigoni Val	0.83	108		Pb	21 31 28.1	-0.7
OSI	Osito Audit: C	0.94	318	Pg	Pg	21 31 31.0	-0.1
HYS	Haystack Butte	1.00	19		Pb	21 31 31.8	+0.1
CRY	Cary Ranch	1.08	108		Pb	21 31 32.6	-0.4
BZNA	Buzz No.'s Pla	1.16	111		Pn	21 31 34.0	-0.3
SNDA	J Saunders Pla	1.18	107		Pn	21 31 34.7	0.0
HWB	Hans Werner Br	1.22	136		Pn	21 31 33.9	-1.2
109C	Camp Elliot, M	1.25	145	Pg	Pn	21 31 34.9	-0.5
109C					Sb	21 31 51.1	-0.5
PFO	Pinyon Flats O	1.28	103		Pn	21 31 36.2	+0.1
XPFO	Pion Flat	1.29	103		Pn	21 31 36.2	+0.1
GTM	Goat Mountain	1.38	74		Pb	21 31 38.4	+0.2
BAR	Barrett	1.64	138		Pn	21 31 41.0	+0.1
BAR					Sb	21 32 02.5	-0.4
GSC	Goldstone, Bar	1.68	34		Pn	21 31 41.7	+0.2
ISA	Isabella, Lake	1.80	347		Pn	21 31 43.0	-0.1
GLA	Glamis	2.75	107	Pn	Pn	21 31 58.9	+2.7
SHPR	Sheep Range	3.46	41	Pn	Pn	21 32 08.1	+2.2
W13A	Hualapai Mount	3.57	69	Pn	Pn	21 32 07.6	+0.1
MDPB	Devils Postpil	3.82	347	Pn	Pn	21 32 11.4	+0.4
WAKR	Walker	4.73	346	Pn	Pn	21 32 24.1	+0.6

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*NIED **31** 21:37:00, 36°.70N×140°.70E, h8^{km}, Mw3.6 Best double couple: $M_0$2.81000×10^{14} NP1:ϕ_s338.00000°, δ47.00000°, λ-80.00000°. NP2:ϕ_s143.00000°, δ44.00000°, λ-101.00000°.*

*JMA **31** 21:37:52.6, 36°.67N×140°.66E, h10^{km}±1^{km}, M3.7 Broadband fault plane solution: P waves. NP1: ϕ_s132.00000°, δ23.00000°, λ-110.00000°. NP2: ϕ_s333.00000°, δ68.00000°, λ-82.00000°. Principal axes: T Plg23.0000°, Azm57.0000°; N Plg8.0000°, Azm150.0000°; P Plg66.0000°, Azm258.0000°;*

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*NEIC **31** 21:38:00.2±3.0, 36°.67N±0°.07×140°.16E±0°.08, h72^{km}±9^{km}, mb4.1/7 Error ellipse: s-maj=10.3km s-min=7.7km az=144.0*

*IDC **31** 21:38:01.9±2.8, 36°.50N×140°.06E, h83^{km}±24^{km}, mb3.6/7, mb1 3.7/8, mb1mx3.4/36, mbtmp3.9/8, Error ellipse: s-maj=33.6km s-min=18.2km az=79.0*

ISC 31 21:37:52.0±0.9**, 36°.71N**±0°.03×**140°.50E**±0°.04**, h9**^{km}±6^{km}**, n34, σ1^s.45**/44**, mb4.0**/10**, 7C-1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	Hitachi	0.12	150	⇓P	Pg	21 37 55.1	+0.3
JHO				S	Sg	21 37 56.8	+0.1
JHYU	Hitachinakayam	0.38	169	⇑P	Pg	21 37 59.3	-0.1
JHYU				S	Sg	21 38 04.3	-0.1
JFFD	Fukushimafurud	0.38	8	⇑P	Pb	21 38 00.8	-0.2
JFFD				S	Sb	21 38 06.7	-0.3
ONAJ	Iwakimizuishiy	0.46	32	⇑P	Pb	21 38 01.1	-1.2
ONAJ				S	Sb	21 38 07.6	-1.6
JSB	Shiboa	0.53	299	P	Pn	21 38 06.0	+0.2
JSB				S	Sn	21 38 14.7	-0.1
JYT	Yasato	0.54	207	⇑P	Pb	21 38 03.6	0.0
JYT				S	Sb	21 38 11.4	-0.1
JFK	Kawauchi	0.72	25	⇑P	Pg	21 38 05.7	-0.3
JFT	Otama	0.81	351	⇑P	Pn	21 38 09.2	-0.5
JFT				S	Sn	21 38 20.5	-1.4
JAG	Ashikaga	0.89	252	⇑P	Pn	21 38 10.6	0.0
JAG				S	Sn	21 38 23.4	-0.2
JFY	Yanaizu	0.94	318	P	Pn	21 38 12.4	+1.0
JFY				S	Sn	21 38 26.1	+1.1
MJAR	Matsushiro Arr	1.85	265	P	Pb	21 38 26.4	+0.4
	1.8nm,0.3s,baz=85,slow=9.3,SNR=50						
MJAR				S	Sb	21 38 49.8	+0.6
	4.6nm,0.3s,baz=85,slow=29,SNR=6.2						
MJAR	Matsushiro Arr	1.85	265		Pb	21 38 25.7	-0.3
MJAR					Sn	21 38 43.0	-4.3
MAJO	Matsushiro	1.85	265		Pb	21 38 26.3	+0.3
MAT	Matsushiro	1.85	265	P	Pb	21 38 26.6	+0.6
MAT				S	Sg	21 38 52.1	+0.6
MJB9	Matsu-Tunnel	1.85	266		Pb	21 38 26.6	+0.5
INU	Inuyama	3.13	245		Pb	21 38 45.0	-2.8
JHJ	Hachijo jima 2	3.63	189	P	Pb	21 38 55.1	-1.2
	9.9nm,0.3s,baz=250,slow=22,SNR=2.4						
JHJ				S	Sn	21 39 32.2	+0.8
	10nm,0.3s,baz=242,slow=23,SNR=0.9						
USRK	Ussuriysk Ar.	9.89	322	P	Pn	21 40 21.1	+6.8
	baz=131,slow=14,SNR=9.7						
USRK	Ussuriysk Ar.	9.89	322		Pn	21 40 18.9	+4.6
KSRS	Korea Array	10.07	278	P	Pn	21 40 23.7	+6.8
	0.3nm,0.3s,baz=78,slow=11,SNR=2.2						
ULN	Ulaanbaatar	26.93	305	P	P	21 43 31.5	-2.2
SONM	Songino Array	27.36	305	P	P	21 43 38.1	+0.6
	0.8nm,0.6s,baz=109,slow=8.8,SNR=5.9						
MIDW	Midway	36.31	91	P	P	21 44 58.6	+2.6
ZALV	Zalesovo Beam	41.59	313	P	P	21 45 40.1	+0.2
	1.6nm,0.6s,baz=86,slow=6.5,SNR=6.9						
MKAR	Makanchi Array	43.67	302	P	P	21 45 57.0	+0.1
	0.6nm,0.8s,baz=78,slow=6.3,SNR=3.4						
KURK	Kurchatov	45.55	308	P	P	21 46 11.2	-0.7
KURK				IAmb	IAmb	21 46 12.8	
	comp=Z,3.2nm,0.8s						
EGAK	Eagle	52.60	32	P	P	21 47 06.5	+0.8
EGAK				IAmb	IAmb	21 47 12.5	
	comp=Z,1.2nm,1.1s						
WB2	Warramunga Arr	56.65	187	P	P	21 47 32.6	-2.9
WB2				IAmb	IAmb	21 47 35.4	
	comp=Z,1.8nm,0.8s						
WRA	Warramunga Arr	56.65	187	P	P	21 47 34.7	-0.8
	comp=Z,1.2nm,0.6s,baz=3.9,slow=7.3,SNR=17						
WRA	Warramunga Arr	56.65	187	P	P	21 47 33.5	-2.0
DLBC	Dease Lake	59.33	38	P	P	21 47 57.6	+3.6
	comp=Z,3.4nm,0.8s,baz=307,slow=4.9,SNR=6.2						
DLBC	Dease Lake	59.33	38	P	P	21 47 56.2	+2.1
ASAR	Alice Springs	60.37	187	P	P	21 48 00.4	-1.0
	comp=Z,0.5nm,0.7s,baz=4.6,slow=5.7,SNR=6.5						
FINES	FINESS Array B	68.75	332	P	P	21 48 55.7	-0.1
	comp=Z,3.5nm,1.1s,baz=179,slow=17,SNR=2.4						

IDC 31 21:57:22.0±3.9**, 18°.23S×176°.02W, h0**^{km}**, mb3.9**/3**, mb1 4.1**/4**, mb1mx3.7**/24**, mbtmp4.0**/4**, ML4.2**/1**, Error ellipse: s-maj=195.0km s-min=32.6km az=144.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	5.92	44	Pn	Pn	21 58 51.3	+0.2
	5.8nm,0.3s,baz=208,slow=3.1,SNR=5.3						
AFI				Sn	Sn	21 59 47.8	-12
	1.8nm,0.3s,baz=85,slow=23,SNR=1.3						
STKA	Stephens Creek	40.48	242	P	P	22 05 03.6	+0.9
	0.6nm,0.4s,baz=86,slow=8.8,SNR=1.7						
WRA	Warramunga Arr	46.81	259	P	P	22 05 53.4	-0.6
	0.6nm,0.3s,baz=98,slow=6.6,SNR=24						
ASAR	Alice Springs	46.89	254	P	P	22 05 54.2	-0.3
	1.8nm,0.5s,baz=91,slow=7.7,SNR=28						

UPP 31 22:14:13.9±0.1**, 67°.17N×20°.70E, h0**^{km}**, ML2.1, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	Dundret	0.07	229	P	Pg	22 14 15.5	+0.3
DUNU				S	Sg	22 14 16.7	+0.6
MASU	Masugnsbyn	0.58	59	P	Pg	22 14 25.0	0.0
ERTU	Ertsjaerv	0.85	136	P	Pg	22 14 29.8	-0.4
PAJU	Pajala	0.95	98	P	Pg	22 14 31.8	-0.4
HARU	Harads	1.01	174	P	Pg	22 14 32.7	-0.5
LANU	Lannavaara	1.01	28	P	Pg	22 14 32.3	-1.0
HEF	Hetta	1.68	41	*e*P	Pn	22 14 43.5	-1.0
SJUU	Sjulsmark	1.71	167	P	Pn	22 14 45.0	+0.2
KIF	Kilpisjarvi	1.85	1	*e*P	Pn	22 14 46.9	+0.2
KIF	Kilpisjarvi	1.85	1	*e*P	Pg	22 14 57.5	+8.3
LILU	Lilltraesk	1.92	191	P	Pn	22 14 48.2	+0.4

HEL 31 22:14:33.6±0.2**, 67°.83N×20°.16E, h0**^{km}**, ML1.9, ML1.9**(UPP)**, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.14	29	*i* P	Pg	22 14 35.8	-0.6
KUA				*i* S	Sg	22 14 37.8	-0.4
KOVU	Salmi	0.40	0	*i* P	Pg	22 14 40.8	-0.4
LANU	Lannavaara	0.73	71	*i* P	Pg	22 14 46.7	-0.8
KIF	Kilpisjarvi	1.21	11	*e*PB	Pg	22 14 56.6	-0.1
KIF				MSG		22 15 08.6	
	comp=Z,13nm,0.2s						
KIF				*e*SB	Sg	22 15 12.7	+0.4
HEF	Hetta	1.44	64	*e*P	Pn	22 14 58.7	-2.2
HEF	Hetta	1.44	64	*e*P	Pn	22 14 59.3	-1.6
	baz=255						
HEF				MSG		22 15 16.1	
	comp=Z,8.7nm,0.2s						
HEF				*e*SB	Sg	22 15 18.8	-0.9
ERTU	Ertsjaerv	1.51	147	*e*PN	Pn	22 15 02.0	+0.2
ERTU				*e*SN	Sg	22 15 21.8	-0.1
TOF	Tornio	2.40	135	*e*P	Pn	22 15 11.6	-2.5
TOF				MSG		22 15 46.1	
	comp=Z,6.6nm,0.2s						
TOF				*e*SG	Sb	22 15 47.2	-0.6
SGF	Sodankyl	2.47	96	*e*P	Pn	22 15 15.6	+0.6
	baz=279						
SGF				*e*SB	Sb	22 15 48.2	-1.4
RNF	Rovaniemi	2.59	116	*e*PB	Pn	22 15 18.2	+1.6
	baz=306						
RNF				*e*SB	Sb	22 15 51.9	-1.2
KEV	Kevo	3.15	49	*e*S	Sn	22 16 03.0	+0.3
KEV				MSG		22 16 04.8	
	comp=Z,2.6nm,0.2s						
MSF	Maaselka	4.00	115	*e*P	Pn	22 15 36.8	+0.8
KU6	Riekki	4.24	111	*e*PG	Pb	22 15 49.0	+0.1
	baz=299						
KU6				*e*SG	Sg	22 16 45.6	-3.9

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*JMA **31** 22:17:17.2, 41°.51N×141°.99E, h41^{km}±2^{km}, M3.6*

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*IDC **31** 22:17:19.8±2.3, 41°.55N×141°.96E, h61^{km}±19^{km}, mb3.5/10, mb1 3.7/12, mb1mx3.4/40, mbtmp3.8/12, MS2.8/2, Ms1 2.8/2, ms1mx2.3/39, Error ellipse: s-maj=24.1km s-min=14.7km az=119.0*

ISC 31 22:17:17.6±1.1**, 41°.51N**±0°.03×**141°.98E**±0°.04**, h40**^{km}±12^{km}**, n39, σ0^s.89**/45**, mb4.0**/10**, 1C-9D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAHD	Aomorihigashid	0.55	243	P	Pn	22 17 28.8	-0.2
JAHD				S	Sn	22 17 37.2	+0.2
JARK	Aomorirokkasho	0.69	223	⇓P	Pn	22 17 30.3	-0.6
JARK				S	Sn	22 17 39.8	-0.6
JOT	Ohata	0.71	260	⇑P	Pn	22 17 30.9	-0.3
JOT				S	Sn	22 17 40.9	-0.1
JKB	Kayabe	0.80	298	⇓P	Pn	22 17 32.0	-0.5
JKB				S	Sn	22 17 42.5	-0.7
JNBK	Urakawa-nobuka	0.96	37	P	Pn	22 17 33.9	-0.7
JSHD	Hidakashinhida	0.96	22	⇓P	Pn	22 17 35.3	+0.6
JTM	Tenmabayashi	1.00	224	⇓P	Pn	22 17 35.3	+0.1
JTM				S	Sn	22 17 48.7	+0.6
JEM	Erimo	1.01	60	P	Pn	22 17 35.0	-0.3
JEM				*e*S	Sn	22 17 48.3	0.0
JIAM	Iburiatsuma	1.11	358	P	Pn	22 17 37.4	+0.8
JSR	Shiriuchi	1.18	271	P	Pn	22 17 37.9	+0.4
JNB	Noboribetsu	1.19	324	P	Pn	22 17 37.0	-0.7
JNB				S	Sn	22 17 51.7	-0.9
JANG	Nango	1.19	197	⇓P	Pn	22 17 37.4	-0.4
JANG				S	Sn	22 17 52.8	0.0
JBT2	Biratori 2	1.29	12	⇓P	Pn	22 17 39.4	+0.2
JBT2				*e*S	Sn	22 17 55.4	+0.1
JYM2	Yakumo 2	1.35	297	⇓P	Pn	22 17 40.5	+0.6
JYM2				*e*S	Sn	22 17 57.1	+0.5
JEW	Eniwo	1.38	344	⇓P	Pn	22 17 40.9	+0.5
JEW				S	Sn	22 17 58.6	+1.1
JOMM	Oshimamatsumae	1.48	271	P	Pn	22 17 42.5	+0.7
JOMM				*e*S	Sn	22 18 00.5	+0.6
JCH	Churui	1.50	43	P	Pn	22 17 42.4	+0.3
JAH	Hinai	1.67	218	⇓P	Pn	22 17 44.8	+0.4
JFR	Furan	1.71	15	P	Pn	22 17 44.9	0.0
JIW	Iwasaki	1.75	239	P	Pn	22 17 46.0	+0.5
ASAJ	Asahikawa	2.64	10	P	Pn	22 17 59.1	+1.4
	18nm,0.3s,baz=220,slow=12,SNR=147						
ASAJ				S	Sn	22 18 30.7	+2.2
	11nm,0.3s,baz=148,slow=33,SNR=9.6						
MJAR	Matsushiro Arr	5.77	212	P	Pn	22 18 44.3	+3.6
	0.2nm,0.3s,baz=28,slow=16,SNR=7.0						
KSRS	Korea Array	11.60	254	LR	LR	22 23 48.4	
	comp=Z,22nm,20.2s,baz=150,slow=33						
SONM	Songino Array	25.92	296	P	P	22 22 46.2	+0.2
	0.1nm,0.4s,baz=77,slow=8.2,SNR=1.8						
H11N2	WAKE ISLAND Hy	30.32	128	T	T	22 55 45.4	
	baz=321,slow=75,SNR=13						
H11N1	WAKE ISLAND Hy	30.33	128	T	T	22 55 50.9	
	baz=321,slow=75,SNR=13						
H11N3	WAKE ISLAND Hy	30.34	128	T	T	22 55 49.6	
	baz=321,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	31.16	130	T	T	22 56 50.1	
	baz=323,slow=76,SNR=15						
H11S3	WAKE ISLAND Hy	31.17	130	T	T	22 56 46.9	
	baz=323,slow=76,SNR=11						
H11S2	WAKE ISLAND Hy	31.18	130	T	T	22 56 47.9	
	baz=323,slow=76,SNR=14						
ZALV	Zalesovo Beam	39.35	308	P	P	22 24 41.8	-0.9
	1.5nm,0.5s,baz=93,slow=8.5,SNR=6.3						
MKAR	Makanchi Array	42.26	298	P	P	22 25 06.6	-0.3
	0.3nm,0.6s,baz=83,slow=8.4,SNR=5.4						
KDAK	Kodiak Island	43.55	45	P	P	22 25 16.5	-0.5
	8.2nm,1.2s,baz=114,slow=13,SNR=2.0						
KDAK				LR	LR	22 41 48.6	
	comp=Z,27nm,21.6s,baz=92,slow=34						
ILAR	Eielson Array	45.52	35	P	P	22 25 33.2	+0.5
	0.8nm,0.5s,baz=258,slow=6.7,SNR=6.6						
INK	Inuvik	50.23	29	P	P	22 26 09.7	+0.7
	0.6nm,0.3s,baz=304,slow=15,SNR=2.7						
YKA	Yellowknife Ar	59.74	32	P	P	22 27 17.1	-0.7
	0.6nm,0.9s,baz=306,slow=5.9,SNR=6.7						
ARCES	ARCESS Array B	59.98	339	P	P	22 27 20.1	+0.7
	5.8nm,1.0s,baz=7.8,slow=9.8,SNR=2.5						
WRA	Warramunga Arr	61.55	188	P	P	22 27 29.9	-0.7
	0.1nm,0.5s,baz=2.8,slow=6.9,SNR=0.5						
FINES	FINESS Array B	65.08	332	P	P	22 27 53.1	-0.4
	1.5nm,0.8s,baz=46,slow=7.6,SNR=9.3						

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*NIED **31** 22:36:00, 40°.70N×142°.60E, h29^{km}, Mw3.9 Best double couple: $M_0$7.03000×10^{14} NP1:ϕ_s359.00000°, δ60.00000°, λ120.00000°. NP2:ϕ_s130.00000°, δ42.00000°, λ49.00000°.*

*JMA **31** 22:36:18.2±0.2, 40°.65N×142°.65E, h24^{km}±3^{km}, M4.0*

JMA Felt I J1.

*NEIC **31** 22:36:21.9±0.8, 40°.68N±0°.08×142°.8E±0°.1, h66^{km}±8^{km}, mb4.1/5, Error ellipse: s-maj=14.7km s-min=9.2km az=126.0*

*IDC **31** 22:36:22.9±2.3, 40°.71N×142°.65E, h66^{km}±19^{km}, mb3.5/10, mb1 3.7/13, mb1mx3.5/47, mbtmp3.8/13, MS2.8/4, Ms1 2.8/4, ms1mx2.5/33, Error ellipse: s-maj=26.7km s-min=14.4km az=103.0*

ISC 31 22:36:18.9±1.2**, 40°.68N**±0°.04×**142°.56E**±0°.05**, h28**^{km}±9^{km}**, n44, σ2^s.05**/56**, mb3.9**/12**, 8D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKEN	Kujiedanarisaw	0.81	234	⇓P	Pb	22 36 33.7	-0.7
JKEN				S	Sb	22 36 44.7	-0.2
JANG	Nango	0.86	249	⇓P	Pb	22 36 35.0	-0.2
JANG				S	Sb	22 36 46.5	+0.2
JTH	Tanohata	0.91	216	⇓P	Pb	22 36 35.2	-1.0
JTH				S	Sb	22 36 47.2	-0.8
JARK	Aomorirokkasho	0.96	290	⇓P	Pn	22 36 36.8	+0.2
JARK				S	Sb	22 36 49.4	0.0
JTM	Tenmabayashi	1.14	276	⇓P	Pn	22 36 39.8	+0.8
JTM				S	Sn	22 36 55.0	+1.3
JKZ	Kuzumaki	1.17	234	⇓P	Pn	22 36 39.5	0.0
JOT	Ohata	1.34	302	P	Pn	22 36 42.3	+0.5
JOT				S	Sn	22 36 58.8	+0.1
ERM	Erimo	1.41	18		Pb	22 36 43.6	-1.0
JEM	Erimo	1.41	18	P	Pb	22 36 43.5	-1.0
JEM				*e*S	Sb	22 37 01.3	-0.8
JAH	Hinai	1.55	252	P	Pb	22 36 46.2	-0.8
JAH				*e*S	Sn	22 37 05.9	+2.0
JOM	Ohasama	1.55	219	⇓P	Pn	22 36 45.2	+0.5
JOM				*e*S	Sn	22 37 04.8	+0.9
JNBK	Urakawa-nobuka	1.60	5	P	Pn	22 36 46.4	+1.0
JKB	Kayabe	1.67	317	⇓P	Pn	22 36 46.9	+0.6
JKB				S	Sn	22 37 06.8	0.0
JSR	Shiriuchi	1.83	298	P	Pn	22 36 50.2	+1.7
JSR				S	Sn	22 37 12.7	+2.0
ASAJ	Asahikawa	3.43	0	P	Pn	22 37 14.5	+4.0
	7.3nm,0.3s,baz=207,slow=14,SNR=30						
ASAJ				S	Sn	22 37 52.9	+2.6
	2.6nm,0.3s,baz=212,slow=27,SNR=4.9						
ASAJ				LR	LR	22 39 00.3	
	comp=Z,96nm,18.5s,baz=298,slow=46						
JKA	Kamikawa-asahi	3.43	0		Pn	22 37 14.5	+4.0
JKA					Sn	22 37 52.9	+2.6
MJB9	Matsu-Tunnel	5.36	221		Pn	22 37 40.8	+3.8
MAJO	Matsushiro	5.36	221		Pn	22 37 41.0	+4.0
MAT	Matsushiro	5.36	221	P	Pn	22 37 39.2	+2.2
MAT				*e*S	Sn	22 38 43.6	+5.8
MJAR	Matsushiro Arr	5.36	221	P	Pn	22 37 40.6	+3.6
	0.3nm,0.3s,baz=34,slow=14,SNR=28						
MJAR				LR	LR	22 39 56.0	
	comp=Z,115nm,18.7s,baz=60,slow=39						
MJAR	Matsushiro Arr	5.36	221		Pn	22 37 40.9	+3.9
USRK	Ussuriysk Ar.	8.57	298	P	Pn	22 38 25.7	+4.6
	baz=103,slow=14,SNR=11						
USRK	Ussuriysk Ar.	8.57	298		Pn	22 38 25.2	+4.1
KLR	Kul'dur	11.47	322	LR	LR	22 43 12.6	
	comp=Z,49nm,18.6s,baz=113,slow=36						
KSRS	Korea Array	11.83	259	LR	LR	22 43 24.7	
	comp=Z,56nm,19.4s,baz=100,slow=35						
SEY	Seymchan	23.04	11	P	P	22 41 20.4	-1.3
	0.5nm,0.3s,baz=180,slow=20,SNR=1.5						
SONM	Songino Array	26.69	298	P	P	22 41 56.2	+0.5
	0.5nm,0.5s,baz=98,slow=8.1,SNR=2.6						
SONM	Songino Array	26.69	298	IAmb	IAmb	22 42 00.3	
	comp=Z,0.9nm,1.1s						
ZALV	Zalesovo Beam	40.21	309	P	P	22 43 53.0	+0.3

	comp=Z,2.2nm,0.6s,baz=94,slow=8.2,SNR=8.6						
ZALV	Zalesovo Beam	40.21	309	P	P	22 43 52.5	-0.3
ZALV				PcP	PcP	22 45 53.5	-2.8
MK31	Makanchi Array	43.04	299	P	P	22 44 16.4	+0.4
MKAR	Makanchi Array	43.04	299	P	P	22 44 15.7	-0.4
	comp=Z,0.8nm,0.5s,baz=86,slow=11,SNR=20						
MKAR	Makanchi Array	43.04	299	P	P	22 44 15.8	-0.2
KURK	Kurchatov	44.47	305	P	P	22 44 27.5	+0.1
KURK				IAmb	IAmb	22 44 28.2	
	comp=Z,3.2nm,1.0s						
ILAR	Eielson Array	45.96	34	P	P	22 44 39.0	0.0
	comp=Z,0.4nm,0.7s,baz=261,slow=6.0,SNR=1.2						
MCARA	McCarthy VSAT	48.12	39	P	P	22 44 53.7	-2.3
MCARA				IAmb	IAmb	22 44 53.9	
	comp=Z,2.6nm,1.0s						
NIL	Nilore	54.39	286	P	P	22 45 42.1	-1.3
WRA	Warramunga Arr	60.79	189	P	P	22 46 27.8	-0.6
	comp=Z,0.2nm,0.5s,baz=6.7,slow=6.8,SNR=2.0						
ASAR	Alice Springs	64.52	189	P	P	22 46 53.4	+0.2
	comp=Z,0.2nm,0.3s,baz=7.1,slow=6.2,SNR=2.1						
FINES	FINESS Array B	66.02	332	P	P	22 47 02.2	-0.2
	comp=Z,2.4nm,0.6s,baz=45,slow=7.8,SNR=14						
FINES	FINESS Array B	66.02	332	P	P	22 47 01.8	-0.7
KBZ	Khabaz	69.23	310	P	P	22 47 23.3	+0.3
	comp=Z,2.0nm,0.8s,baz=110,slow=7.2,SNR=4.8						
NB2	NORSAR Subarra	71.17	337	P	P	22 47 34.2	-0.6
	comp=Z,4.9nm,1.2s,baz=38,slow=6.2						
NOA	NORSAR Array B	71.17	337	P	P	22 47 33.8	-0.9
	comp=Z,1.1nm,0.8s,baz=36,slow=6.0,SNR=5.1						

IDC 31 22:48:12.5±2.4**, 6°.09S**×**129°.85E, h0**$^{\text{km}}$**, mb3.2**/1**, mb1 3.6**/3**, mb1mx3.3**/39**, mbtmp3.4**/3**, ML3.7**/2**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.4**/13**, Error ellipse: s-maj=132.1km s-min=32.8km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.45	163	Pn	Pn	22 51 37.7	-0.7
	0.4nm,0.3s,baz=342,slow=9.9,SNR=27						
WRA				Sn	Sn	22 53 58.7	-21
	0.3nm,0.3s,baz=329,slow=22,SNR=9.9						
ASAR	Alice Springs	17.91	168	P	P	22 52 23.6	-0.3
	0.2nm,0.3s,baz=350,slow=9.4,SNR=11						
JCJ	Chichijima	35.09	19	LR	LR	23 08 16.1	
	comp=Z,52nm,21.7s,baz=274,slow=34						
MKAR	Makanchi Array	67.39	327	P	P	22 59 09.8	0.0
	0.2nm,0.6s,baz=125,slow=7.2,SNR=2.0						

JMA ***31*** *22:51:22.3, 23°.54N×121°.45E, h34*$^{\text{km}}$*±1*$^{\text{km}}$*, M2.8*

TAP ***31*** *22:51:23.2, 23°.59N×121°.47E, h23*$^{\text{km}}$*, ML3.0, C*

ISC 31 22:51:23.5±0.9**, 23°.57N**±0°.02×**121°.47E**±0°.02**, h27**$^{\text{km}}$±4$^{\text{km}}$**, n101, σ1**$^{\text{s}}$**12**/186**, 4D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HGSD	Ruisui	0.09	207	⇓iP	Pb	22 51 29.2	+0.9
	baz=204						
HGSD				i S	Sb	22 51 33.4	+1.8
	baz=204						
EGFH	Guangfu	0.11	341	eP	Pb	22 51 28.4	0.0
	baz=330						
EGFH				eS	Sb	22 51 31.5	-0.3
	baz=330						
EHY	Hungye	0.15	245	⇓iP	Pn	22 51 28.5	-1.5
	baz=236						
EHY				eS	Sb	22 51 31.6	-0.9
	baz=236						
YULB	Yu-li	0.23	222	⇓iP	Pn	22 51 29.5	-1.7
	baz=219						
YULB				S	Sn	22 51 33.5	-0.5
	baz=219						
ESL	Shilin	0.25	353	P	Pn	22 51 29.6	-1.8
	baz=352						
ESL				S	Sn	22 51 33.6	-0.7
	baz=352						
TWF1	Yuli	0.27	216	eP	Pn	22 51 30.0	-1.6
	baz=212						
TWF1				eS	Sn	22 51 34.0	-2.8
	baz=212						
VWDT	VWDT	0.35	302	⇓iP	Pb	22 51 31.7	+0.3
	baz=297						
VWDT				eS	Sn	22 51 37.2	-1.7
	baz=297						
ENLB	Shoufeng	0.36	20	P	Pb	22 51 31.0	-0.6
	baz=20						
ENLB				eS	Sb	22 51 37.7	+0.7
	baz=20						
FULB	Fuli	0.40	203	i P	Pb	22 51 32.4	+0.2
	baz=202						
FULB				eS	Sb	22 51 38.9	+0.7
	baz=202						
HWA	Hwalien	0.43	17	eP	Pb	22 51 32.8	+0.2
	baz=18						
HWA				eS	Sb	22 51 38.7	-0.1
	baz=18						
OWD	Renai	0.47	325	P	Pb	22 51 33.2	-0.2
	baz=322						
OWD				S	Sb	22 51 39.2	-0.9
	baz=322						
CHKT	Chengkung	0.47	191	eP	Pb	22 51 33.6	+0.3
	baz=190						
CHKT				eS	Sn	22 51 41.6	-0.3
	baz=190						
YUS	Yu-Shan	0.48	261	P	Pb	22 51 33.8	+0.1
	baz=257						
YUS				S	Sb	22 51 40.4	-0.3
	baz=257						
SSLB	Suanglung	0.52	295	P	Pb	22 51 34.0	-0.1
	baz=292						
SSLB				S	Sb	22 51 40.8	-0.6
	baz=292						
TWD	Chiawan	0.52	13	eP	Pb	22 51 33.6	-0.5
	baz=13						
TWD				eS	Sb	22 51 40.9	-0.6
	baz=13						
CHGB	Renai	0.56	331	P	Pb	22 51 34.8	-0.1
	baz=329						
CHGB				eS	Sb	22 51 42.1	-0.6
	baz=329						
ELDTW	Lidau	0.56	228	eP	Pb	22 51 34.0	-0.8
	baz=225						
ELDTW				eS	Sb	22 51 41.0	-1.5
	baz=225						
WHYT	Xinyi Township	0.58	283	eP	Pn	22 51 35.4	-0.5
	baz=280						
WHYT				eS	Sn	22 51 43.1	-1.4
	baz=280						
WHF	Hehuan Shan	0.60	342	eP	Pb	22 51 35.1	-0.7
	baz=341						
WHF				eS	Sb	22 51 43.2	-1.0
	baz=341						
SMLT	Sun Moon Lake	0.61	301	eP	Pb	22 51 35.7	0.0
	baz=299						
SMLT				eS	Sb	22 51 43.9	0.0
	baz=299						
ALS	Alishan	0.61	265	P	Pn	22 51 36.1	-0.6
	baz=262						
ALS				eS	Sb	22 51 44.3	+0.2
	baz=262						
NACB	Ninganchiao	0.61	11	P	Pn	22 51 34.6	-1.8
	baz=10.0						
NACB				eS	Sb	22 51 44.6	+0.6
	baz=10.0						
ETLH	Xiulin Townshi	0.64	1	P	Pn	22 51 35.1	-1.7
ETLH				eS	Sb	22 51 43.3	-1.4
TYC	Yuchr	0.65	301	P	Pb	22 51 36.4	+0.1
	baz=299						
TYC				eS	Sn	22 51 45.4	-0.9
	baz=299						
DPDB	Guoxing	0.68	313	eP	Pb	22 51 36.9	+0.1
	baz=311						
DPDB				eS	Sn	22 51 46.2	-0.9
	baz=311						
WJS	Zhushan	0.72	291	eP	Pb	22 51 38.2	+0.7
	baz=288						
WJS				eS	Sb	22 51 48.6	+1.6
	baz=288						
CHN5	Tsauling	0.72	272	eP	Pb	22 51 38.5	+1.0
	baz=270						
CHN5				eS	Sb	22 51 48.5	+1.3
	baz=270						
TWT	Tachien	0.73	339	eP	Pb	22 51 37.8	0.0
	baz=336						
TWT				eS	Sn	22 51 46.8	-1.8
	baz=336						
TDCB	Techi	0.74	338	eP	Pb	22 51 37.9	0.0
	baz=336						
TDCB				eS	Sn	22 51 46.7	-2.0
	baz=336						
STYT	Tauyuan	0.77	238	P	Pn	22 51 38.3	-0.3
	baz=236						
STYT				eS	Sn	22 51 48.3	-0.9
	baz=236						
WNT	Mingjian	0.78	293	eP	Pn	22 51 37.3	-1.4
	baz=291						
WNT				eS	Sb	22 51 50.3	+1.6
	baz=291						
TPUB	Ta-pu	0.81	251	eP	Pb	22 51 39.5	+0.5
	baz=249						
TPUB				eS	Sb	22 51 50.4	+0.8
	baz=249						
TWG	Pinlang	0.83	206	eP	Pn	22 51 37.3	-2.0
	baz=205						
TWG				eS	Sn	22 51 47.5	-3.1
	baz=205						
TWGBT	Beinan	0.83	206	eP	Pn	22 51 37.4	-2.0
	baz=205						
TWGBT				eS	Sn	22 51 47.6	-3.1
	baz=205						
CHN4	Tsaushan	0.83	255	eP	Pb	22 51 40.2	+0.9
	baz=253						
CHN4				eS	Sb	22 51 52.2	+2.1
	baz=253						
WGK	Gukeng	0.84	278	eP	Pb	22 51 40.2	+0.7
	baz=276						
WGK				eS	Sb	22 51 52.1	+1.7
	baz=276						
WTP	Ta-pu	0.85	248	eP	Pb	22 51 39.9	+0.3
	baz=246						
WTP				eS	Sb	22 51 51.8	+1.2
	baz=246						
WHP	Taichung City	0.85	326	eP	Pb	22 51 40.1	+0.4
	baz=324						
WHP				eS	Sb	22 51 51.9	+1.0
	baz=324						
TWH	Lutao	0.85	179	eP	Pn	22 51 38.8	-0.9
	baz=179						
TWH				eS	Sn	22 51 50.6	-0.7
	baz=179						
NNSB	Datong	0.86	355	P	Pn	22 51 39.2	-0.7
	baz=354						
NNSB				eS	Sn	22 51 49.9	-1.8
	baz=354						
NNSH	Datong	0.86	355	P	Pn	22 51 39.2	-0.8
	baz=354						
NNSH				eS	Sn	22 51 50.0	-1.7
	baz=354						
WDLH	Douliu	0.86	278	eP	Pb	22 51 40.5	+0.7
	baz=276						
WDLH				eS	Sb	22 51 52.7	+1.7
	baz=276						
NNS	Nan Shan	0.87	354	eP	Pn	22 51 39.5	-0.7
	baz=354						
NNS				eS	Sn	22 51 50.6	-1.4
	baz=354						
ENA	Nanau	0.89	16	P	Pn	22 51 39.1	-1.2
	baz=16						
TCU	Taichung	0.93	309	eP	Pb	22 51 41.5	+0.6
	baz=307						
TCU				eS	Sb	22 51 54.4	+1.6
	baz=307						
CHN1	Nanshi	0.94	246	eP	Pb	22 51 41.8	+0.6
	baz=244						
CHN1				eS	Sb	22 51 55.5	+2.1
	baz=244						
SGST	Jiashian	0.94	239	eP	Pb	22 51 41.4	+0.1
	baz=237						
SGST				eS	Sb	22 51 55.5	+2.1
	baz=237						
SLGT	Liugui	0.95	233	eP	Pb	22 51 41.4	+0.1
	baz=231						
SLGT				eS	Sb	22 51 53.7	+0.3
	baz=231						
TWK	Hsinying	0.95	252	eP	Pb	22 51 41.8	+0.5
	baz=249						
TWK				eS	Sb	22 51 55.4	+1.9
	baz=249						
SNST	Tainan City	0.95	249	eP	Pb	22 51 42.0	+0.6
	baz=247						
SNST				eS	Sb	22 51 55.6	+2.0
	baz=247						
CHY	Chiayi	0.96	266	eP	Pn	22 51 41.0	-0.2
	baz=264						
CHY				eS	Sb	22 51 55.9	+2.1
	baz=264						
WCHH	Zhanghua	0.97	302	eP	Pb	22 51 42.3	+0.6
	baz=300						
WCHH				eS	Sb	22 51 56.4	+2.1
	baz=300						
TWQ1	Liyutan	1.00	321	eP	Pb	22 51 43.6	+1.3
	baz=319						
TWQ1				eS	Sb	22 51 57.5	+2.5
	baz=319						
NDT	Datong Townshi	1.03	2	eP	Pn	22 51 41.5	-0.7
	baz=2.0						
NSY	Sanyi	1.06	323	eP	Pb	22 51 44.4	+1.2
	baz=321						
NSY				eS	Sb	22 51 59.5	+2.7
	baz=321						
RLNB	Erlin	1.06	288	eP	Pb	22 51 44.0	+0.7
	baz=286						
RLNB				eS	Sb	22 51 58.3	+1.5
	baz=286						
ENTT	Nioudou	1.07	5	eP	Pn	22 51 40.0	-2.7
	baz=5.0						
ECL	Taimali	1.07	206	eP	Pn	22 51 42.0	-0.7
	baz=205						
WDJ	Dajia District	1.08	316	eP	Pb	22 51 43.7	+0.1
	baz=314						
WDJ				eS	Sb	22 51 58.3	+1.0
	baz=314						
TWC	Suao	1.09	19	eP	Pn	22 51 42.5	-0.5
	baz=19						
TWC				eS	Sb	22 51 58.4	+0.7
	baz=19						
YHNB	Yeheng	1.10	356	eP	Pn	22 51 43.2	0.0
	baz=355						
YHNB				eS	Sn	22 51 57.2	-0.3
	baz=355						
NSK	Sanguang	1.11	355	eP	Pn	22 51 43.4	+0.1
	baz=354						
NSK				eS	Sn	22 51 56.9	-0.8
	baz=354						
PTSB	Yuanli	1.12	322	eP	Pb	22 51 44.6	+0.4
	baz=320						
PTSB				eS	Sb	22 52 00.8	+2.4
	baz=320						
SSD	Sandimen	1.12	223	eP	Pn	22 51 43.4	0.0
	baz=222						
SSD				eS	Sb	22 52 00.2	+1.8
	baz=222						
NMLH	Miaoli	1.15	328	eP	Pb	22 51 45.3	+0.6
	baz=326						
NMLH				eS	Sb	22 52 00.9	+1.7
	baz=326						
EOS1	EOS1	1.15	32	eP	Pb	22 51 45.4	+0.7
	baz=32						
EOS1				eS	Sb	22 51 59.5	+0.3
	baz=32						
LIOB	Emei	1.15	339	eP	Pb	22 51 45.4	+0.7
	baz=338						
LIOB				eS	Sb	22 52 00.3	+1.0
	baz=338						
TWE	Neicheng	1.16	9	eP	Pn	22 51 43.6	-0.3
	baz=9.0						
SLBB	Yuanshan	1.19	7	eP	Pn	22 51 44.1	-0.3
	baz=7.0						
NWLT	Wulai	1.21	2	eP	Pn	22 51 44.2	-0.3
	baz=1.0						
NWLT				eS	Sn	22 51 59.4	-0.7
	baz=1.0						
MASBT	Mashibuluo	1.22	219	eP	Pn	22 51 44.3	-0.5
	baz=218						
MASBT				eS	Sb	22 52 01.4	+0.1
	baz=218						
WLTB	Daxi	1.29	351	eP	Pb	22 51 46.6	-0.6
	baz=350						
WLTB				eS	Sb	22 52 04.2	+0.8
	baz=350						
EAST	Anshuo	1.31	206	eP	Pn	22 51 45.6	-0.4
	baz=205						
SSPT	Xinbi	1.36	218	eP	Pb	22 51 48.0	-0.2
	baz=217						
SSPT				eS	Sb	22 52 06.7	+1.4
	baz=217						
NCUH	Zhongli	1.42	350	eP	Pb	22 51 48.2	-1.0
	baz=349						
NCUH				eS	Sb	22 52 06.7	-0.2
	baz=349						
SCZT	Fangliau	1.42	213	eP	Pb	22 51 49.5	+0.2
	baz=212						
SCZT				eS	Sb	22 52 08.2	+1.1
	baz=212						
TIPB	Shuangxi	1.44	13	eP	Pn	22 51 47.9	+0.1
	baz=13						
TIPB				eS	Sn	22 52 05.0	-0.7
	baz=13						
TWB1	Santiao Chiao	1.51	18	eP	Pn	22 51 47.9	-0.9
	baz=18						
TWB1				eS	Sn	22 52 08.1	+0.6
	baz=18						
WFSB	Wu-fen Shan	1.52	11	eS	Sn	22 52 08.7	+0.8
	baz=10.0						
YM01	YM01	1.57	3	eP	Pn	22 51 50.7	+1.0
	baz=3.0						
YM10	YM10	1.58	3	eP	Pn	22 51 49.8	-0.1
	baz=2.0						
YM10				eS	Sn	22 52 08.6	-0.8
	baz=2.0						
YM05	YM05	1.59	3	eP	Pn	22 51 49.9	0.0
	baz=3.0						
YM05				eS	Sn	22 52 09.8	+0.1
	baz=3.0						
YM11	YM11	1.59	4	eP	Pn	22 51 49.7	-0.3
	baz=3.0						
ANP	Anpu	1.61	2	eP	Pn	22 51 51.0	+0.8
	baz=1.0						
YOJ	Yonaguni jima	1.67	57	P	Pn	22 51 51.6	+0.7
YOJ				S	Sn	22 52 12.2	+0.7
TWKBT	Hengchun	1.73	201	eS	Sn	22 52 13.5	+0.6
	baz=200						
PHUB	P'eng-hu	1.74	269	eP	Pb	22 51 53.1	-1.6
	baz=267						
PHUB				eS	Sn	22 52 13.7	+0.5
	baz=267						
HATJ	Hateruma jima	2.20	77	P	Pn	22 51 58.5	+0.3
HATJ				S	Sn	22 52 24.3	-0.2
IRIF	Iriomote-Funau	2.21	69	S	Sn	22 52 25.3	+0.6
VWUC	VWUC	2.32	308	eP	Pn	22 52 00.1	+0.2
	baz=307						
VWUC				eS	Sn	22 52 27.2	-0.4
	baz=307						
JKRS	Kuro-shima	2.42	73	P	Pn	22 52 02.1	+0.8
JKRS				S	Sn	22 52 30.9	+0.9
PTTC	Pingtan	2.47	322	eS	Sn	22 52 30.7	-0.5
	baz=320						
JIJ	Ishigaki jima	2.57	72	P	Pn	22 52 03.3	-0.1
JIJ				eS	Sn	22 52 32.9	-0.9
PTMZ	Houxiangcun	2.59	305	eP	Pn	22 52 04.6	+0.9
	baz=303						
PTMZ				eS	Sn	22 52 33.7	-0.6
	baz=303						
JISG	Ishigakijimahi	2.79	68	P	Pn	22 52 06.4	0.0
JISG				S	Sn	22 52 38.4	-0.7
MATB	Ma-tsu	2.92	332	eP	Pn	22 52 07.8	-0.3
	baz=331						
MATB				eS	Sn	22 52 41.6	-0.8
	baz=331						
KNMB	Chin-men Tao	2.95	288	eP	Pn	22 52 09.0	+0.4
	baz=287						
KNMB				eS	Sn	22 52 42.0	-1.1
	baz=287						
JTJ	Tarama	3.14	69	P	Pn	22 52 11.5	+0.3
JTJ				eS	Sn	22 52 48.5	+0.6
LYJJ	Jianjiangzhen	3.35	333	eS	Sn	22 52 51.3	-1.6
	baz=332						
MHZQ	Yeshan	3.35	319	eS	Sn	22 52 52.0	-1.0
	baz=318						
AXDP	Jialang	3.46	293	eP	Pn	22 52 15.9	+0.4
	baz=292						
AXDP				eS	Sn	22 52 54.4	-1.2
	baz=292						

IDC ***31*** *22:55:47.5±2.0, 22°.86N×95°.45E, h0*$^{\text{km}}$*, mb3.5/2, mb1 3.6/3, mb1mx3.3/44, mbtmp3.5/3, ML4.2/1, MS3.0/4, Ms1 3.0/4, ms1mx2.7/26, Error ellipse: s-maj=51.0km s-min=18.8km az=61.0*

ISC 31 22:55:50.6±0.9**, 23°.0N**±0°.1×**95°.7E**±0°.1**, h10**$^{\text{km}}$**, n27, σ2**$^{\text{s}}$**03**/34**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMMT	Chiang Mai	5.13	143	Pg	Pb	22 57 24.2	+3.7
CMMT				Pn	Pn	22 57 06.3	-1.2
CMMT				Sg	Sb	22 58 25.7	+3.5
MHMT	Maesarieng	5.21	156	Pg	Pg	22 57 27.9	-2.5
MHMT				Pn	Pn	22 57 09.5	+0.8
MHMT				Sg	Sg	22 58 34.8	-3.2
CMAR	Chiang Mai Arr	5.42	146	Pn	Pn	22 57 10.8	-0.7
	1.9nm,0.3s,baz=320,slow=12,SNR=6.3						
CMAR				Pg	Pb	22 57 27.4	+2.0
	1.4nm,0.3s,baz=322,slow=16,SNR=4.5						
CMAR				Lg	Lg	22 58 40.5	
	7.1nm,0.3s,baz=318,slow=31,SNR=10.0						
CMAR				LR	LR	22 58 45.0	
	comp=Z,29nm,20.8s,baz=58,slow=32						
CM13	Chiang Mai Arr	5.43	146	Pn	Pn	22 57 10.0	-1.7
CM02	Chiang Mai Arr	5.44	146	Pn	Pn	22 57 10.3	-1.6
CM09	Chiang Mai Arr	5.45	145	Pn	Pn	22 57 11.0	-1.0
CM01	Chiang Mai Arr	5.46	146	Pg	Pb	22 57 28.8	+2.8
CM01				Pn	Pn	22 57 11.3	-0.8
CM05	Chiang Mai Arr	5.46	146	Pg	Pb	22 57 28.7	+2.5
CM05				Pn	Pn	22 57 11.1	-1.0
CM04	Chiang Mai Arr	5.48	146	Pn	Pn	22 57 11.3	-1.2
PHRA	Phrae	6.14	136	Pg	Pb	22 57 39.9	+2.3
PHRA				Pn	Pn	22 57 19.1	-2.3
NANT	Nan	6.24	131	Pn	Pn	22 57 17.3	-5.5
PBKT	Sadao Pong	8.07	141	Pn	Pn	22 57 46.3	-1.6
PBKT				Sg	Sg	23 00 00.0	-10
TAPN	Taplejung	8.46	303	eP	Pn	22 57 55.7	+2.1
	11nm,0.4s						
TAPN				eS	Sn	22 59 27.1	-2.3
ODAN	Odare	8.49	299	eP	Pn	22 57 55.8	+1.8
	16nm,0.4s						
ODAN				eS	Sn	22 59 28.6	-1.4
RAMN	Ramite	9.17	297	eP	Pn	22 58 05.6	+2.3
	22nm,0.5s						
JIRN	Jiri	9.80	300	eP	Pn	22 58 14.1	+2.1
	23nm,0.3s						
GUN	Gumba	10.16	301	eP	Pn	22 58 18.7	+1.8
	11nm,0.3s						
PKI	Pulchoki	10.39	298	eP	Pn	22 58 21.4	+1.3
	7.1nm,0.4s						
PKIN	Phulchoki	10.40	298	eP	Pn	22 58 22.3	+2.1
	6.3nm,0.2s						
KKN	Kakani	10.59	299	eP	Pn	22 58 23.8	+1.2
	6.7nm,0.3s						
DMN	Daman	10.65	298	eP	Pn	22 58 25.6	+2.0
	3.8nm,0.3s						
GKN	Gorkha	11.19	299	eP	Pn	22 58 31.7	+0.8
	13nm,0.3s						
DANN	Dangsing	12.04	299	eP	Pn	22 58 43.4	+0.8
	4.8nm,0.3s						
MKAR	Makanchi Array	26.11	339	P	P	23 01 23.9	-0.8
	0.5nm,0.5s,baz=148,slow=10,SNR=11						
SONM	Songino Array	26.23	16	P	P	23 01 25.1	-0.8
	0.4nm,0.8s,baz=182,slow=5.3,SNR=3.1						
SONM				LR	LR	23 12 35.4	
	comp=Z,24nm,19.0s,baz=295,slow=38						
TLY	Talaya	29.30	10	LR	LR	23 14 38.4	
	comp=Z,44nm,18.4s,baz=5.0,slow=38						
YKA	Yellowknife Ar	91.46	14	LR	LR	23 54 37.8	
	comp=Z,26nm,18.0s,baz=0.0,slow=38						

KEA 31 23:01:24.3±0.0**, 37°.99N**×**123°.65E, h0**$^{\text{km}}$**, ML2.6**/1**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HJU	Haeju	1.64	87	Sg	Sg	23 02 20.8	+3.9
PYS	Pyongsong	2.14	53	Sg	Sb	23 02 30.9	-0.1
SUJ	Sinuiju	2.21	17	Sg	Sn	23 02 30.7	+0.4

NIED ***31*** *23:02:00, 36°.80N×141°.20E, h17*$^{\text{km}}$*, Mw4.0 Best double couple: M*$_0$*1.03000×10*^{15} *NP1:φ*$_s$*89.00000°, δ89.00000°, λ6.00000°. NP2:φ*$_s$*358.00000°, δ84.00000°, λ179.00000°.*

IDC ***31*** *23:02:03.6±0.8, 36°.83N×141°.22E, h0*$^{\text{km}}$*, mb3.6/12,* *mb1 3.8/15, mb1mx3.7/37, mbtmp3.7/15, ML3.8/2, MS2.8/6, Ms1 2.8/6, ms1mx2.6/33, Error ellipse: s-maj=20.0km s-min=17.9km az=128.0*

*JMA **31** 23:02:06.5±0.1, 36°.83N×141°.17E, h35^{km}±1^{km}, M3.9*

JMA Felt II J1.

ISC 31 23:02:06.1±1.3**, 36°.81N**±0°.04×**141°.20E**±0°.05**, h17**^{km}±8^{km}**, n35,** σ**0^{s}.74**/34**, mb3.6**/12**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.43	312	P	Pg	23 02 15.4	+0.6
JHO	Hitachi	0.54	248	P	Pg	23 02 17.2	+0.3
JHO				*e*S	Sg	23 02 24.6	+0.4
JFFD	Fukushimafurud	0.58	299	P	Pg	23 02 17.5	-0.1
JFK	Kawauchi	0.61	335	P	Pg	23 02 17.9	-0.3
JFK				*e*S	Sg	23 02 25.4	-0.9
JHYU	Hitachinakayam	0.68	226	P	Pg	23 02 19.2	-0.2
JHYU				*e*S	Sg	23 02 28.8	+0.3
JFT	Otama	0.98	316	P	Pb	23 02 24.4	-0.3
JFT				S	Sb	23 02 36.6	-0.8
JYT	Yasato	1.00	234	P	Pb	23 02 23.9	-1.0
JYT				*e*S	Sb	23 02 36.5	-1.3
JSB	Shiboa	1.03	279	P	Pb	23 02 25.7	+0.1
JSB				*e*S	Sb	23 02 38.9	0.0
MJAR	Matsushiro Arr	2.42	264	Pn	Pn	23 02 45.3	+0.3
	0.9nm,0.3s,baz=88,slow=14,SNR=44						
MJAR				Sn	Sn	23 03 14.8	+0.6
	3.0nm,0.3s,baz=217,slow=17,SNR=3.7						
MJAR				LR	LR	23 03 44.3	
	comp=Z,68nm,18.8s,baz=105,slow=42						
MAT	Matsushiro	2.42	264	P	Pn	23 02 45.4	+0.5
MAT				S	Sn	23 03 14.9	+0.7
JHJ	Hachijo jima 2	3.86	198	Pn	Pn	23 03 06.0	+1.2
	27nm,0.3s,baz=117,slow=20,SNR=8.1						
JHJ				Sn	Sn	23 03 49.4	-0.5
	40nm,0.3s,baz=319,slow=24,SNR=2.0						
ASAJ	Asahikawa	7.37	8	Pn	Pn	23 03 53.6	+0.6
	1.2nm,0.3s,baz=247,slow=18,SNR=5.0						
ASAJ				LR	LR	23 07 06.7	
	comp=Z,89nm,18.3s,baz=90,slow=41						
KSRS	Korea Array	10.62	277	LR	LR	23 08 08.9	
	comp=Z,21nm,18.1s,baz=340,slow=34						
KLR	Kul'dur	14.19	334	LR	LR	23 10 25.7	
	comp=Z,46nm,19.0s,baz=122,slow=35						
SONM	Songino Array	27.76	304	P	P	23 07 52.8	-1.3
	0.7nm,0.7s,baz=111,slow=11,SNR=6.9						
H11N2	WAKE ISLAND Hy	28.19	120	T	T	23 37 27.1	
	baz=313,slow=75,SNR=412						
H11N1	WAKE ISLAND Hy	28.20	120	T	T	23 37 28.4	
	baz=313,slow=75,SNR=459						
H11N3	WAKE ISLAND Hy	28.20	120	T	T	23 37 29.2	
	baz=313,slow=75,SNR=397						
H11S1	WAKE ISLAND Hy	28.89	122	T	T	23 38 20.5	
	baz=314,slow=76,SNR=197						
H11S3	WAKE ISLAND Hy	28.89	122	T	T	23 38 20.5	
	baz=314,slow=76,SNR=268						
H11S2	WAKE ISLAND Hy	28.90	122	T	T	23 38 23.7	
	baz=314,slow=76,SNR=176						
CMAR	Chiang Mai Arr	41.27	255	LR	LR	23 29 19.9	
	comp=Z,11nm,19.1s,baz=220,slow=40						
ZALV	Zalesovo Beam	41.93	313	P	P	23 09 55.0	-0.7
	1.3nm,0.6s,baz=76,slow=6.3,SNR=5.6						
MKAR	Makanchi Array	44.09	302	P	P	23 10 13.0	-0.3
	1.0nm,0.6s,baz=88,slow=10,SNR=17						
ILAR	Eielson Array	49.77	32	P	P	23 10 56.7	-0.7
	0.5nm,0.8s,baz=266,slow=5.7,SNR=5.5						
WRA	Warramunga Arr	56.82	188	P	P	23 11 49.3	-0.4
	0.4nm,0.3s,baz=3.7,slow=7.0,SNR=2.4						
ASAR	Alice Springs	60.55	188	P	P	23 12 15.6	0.0
	0.4nm,0.8s,baz=213,slow=25,SNR=4.8						
YKA	Yellowknife Ar	64.09	30	P	P	23 12 38.7	-0.2
	0.1nm,0.6s,baz=308,slow=5.3,SNR=1.9						
FINES	FINESS Array B	68.93	332	P	P	23 13 11.0	+1.2
	1.0nm,0.8s,baz=64,slow=6.3,SNR=1.6						
NB2	NORSAR Subarra	74.32	337	P	P	23 13 50.6	+8.2
	comp=Z,0.6nm,0.6s,baz=41,slow=6.2						
NOA	NORSAR Array B	74.32	337	P	P	23 13 43.0	+0.6
	comp=Z,0.3nm,0.7s,baz=267,slow=16,SNR=2.1						
NOA				LR	LR	23 51 44.0	
	comp=Z,14nm,19.1s,baz=330,slow=40						
AKASG	Malin Array Be	74.36	322	P	P	23 13 44.1	+1.3
	comp=Z,0.3nm,0.3s,baz=28,slow=15,SNR=1.6						
NVAR	Mina Array Bea	75.26	53	P	P	23 13 47.5	-1.0
	comp=Z,0.2nm,0.5s,baz=354,slow=40,SNR=1.9						
TXAR	Lajitas Array	90.39	52	P	P	23 15 07.1	+0.1
	comp=Z,0.2nm,0.8s,baz=149,slow=32,SNR=2.4						
LPAZ	La Paz	146.96	60	PKPbc	PKPbc	23 21 49.7	+0.7
	comp=Z,0.4nm,0.5s,baz=233,slow=20,SNR=1.6						

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*IDC **31** 23:58:01.6±0.6, 19°.80S×70°.57W, h0^{km}, mb4.0/9, mb1 4.3/11, mb1mx4.1/29, mbtmp4.1/11, ML3.8/2, MS3.3/8, Ms1 3.3/8, ms1mx3.1/27, Error ellipse: s-maj=27.1km s-min=13.3km az=69.0*

*NEIC **31** 23:58:04.2±2.3, 19°.88S±0°.03×70°.62W±0°.04, h24^{km}±5^{km}, mb4.2/4, Mwr4.1/41, ML3.8(GUC), Error ellipse: s-maj=6.0km s-min=3.2km az=71.0*

*GUC **31** 23:58:05.3±0.6, 19°.88S×70°.55W, h40^{km}±3^{km}, ML3.8*

*NEIC **31** 23:58:05.1, 19°.84S×70°.56W, h28^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.33; $M_{\theta\theta}$0.10; $M_{\phi\phi}$-1.44; $M_{r\theta}$0.78; $M_{\theta\phi}$0.28; $M_{\phi r}$-0.53; Fault plane solution: $M_0$1.70000×10^{15} NP1:ϕ_s147.65000°, δ61.63000°, λ66.17000°. NP2:ϕ_s10.55000°, δ36.40000°, λ126.80000°. Principal axes: T 1.7509, Plg65.0000°, Azm15.0000°; N -0.1074, Plg21.0000°, Azm159.0000°; P -1.6436, Plg13.0000°, Azm255.0000°;*

*VAO **31** 23:58:09.7±0.7, 19°.90S×70°.40W, h71^{km}±6^{km}, mb4.3*

ISC 31 23:58:04.2±0.5**, 19°.88S**±0°.03×**70°.60W**±0°.06**, h21**^{km}±3^{km}**, n95,** σ**1^{s}.25**/97**, mb4.0**/8**, MS3.3**/4**, 10D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.53	58	⇓*i*P	Pb	23 58 15.2	+0.3
PSGC				*e*S	Sn	23 58 22.7	-2.4
PSGC				IAML		23 58 25.7	
	comp=E,3µm,0.6s						
PSGCX	Pisagua	0.53	58		Pb	23 58 14.8	-0.2
TA01	Diego Aracena	0.79	150	⇓*i*P	Pb	23 58 19.4	+0.3
TA01				*e*S	Sb	23 58 29.8	+0.3
TA01				IAML		23 58 33.1	
	comp=E,7µm,0.4s						
PB11	IPOC Station P	0.90	83	⇓*i*P	Pn	23 58 21.3	-0.5
PB11				*e*S	Sn	23 58 33.0	-1.2
PB11				IAML		23 58 34.1	
	comp=N,6µm,0.3s						
PB11	IPOC Station P	0.90	83	Pn	Pn	23 58 20.9	-0.8
PB11				Sg	Sn	23 58 33.0	-1.2
PATCX	Punta Patache	1.03	156	⇓*i*P	Pn	23 58 23.2	-0.2
PATCX				*e*S	Sn	23 58 36.7	-0.5
PATCX				IAML		23 58 39.8	
	comp=E,3µm,0.3s						
PATCX	Punta Patache	1.03	156		Pn	23 58 23.2	-0.2
MNMC	Minye Minye	1.21	52	⇓*i*P	Pb	23 58 26.4	-0.1
MNMC				*e*S	Sb	23 58 44.3	+2.5
MNMC				IAML		23 58 47.0	
	comp=E,8µm,0.5s						
MNMC	Minye Minye	1.21	52		Pb	23 58 26.0	-0.5
PB12	IPOC Station P	1.29	12	⇓*i*P	Pn	23 58 27.2	+0.2
PB12				*e*S	Sb	23 58 44.0	+0.2
PB12				IAML		23 58 47.4	
	comp=N,4µm,0.4s						
PB12	IPOC Station P	1.29	12		Pn	23 58 27.0	0.0
GO01	Chusmiza	1.34	81	⇓*i*P	Pb	23 58 28.7	-0.2
GO01				*e*S	Sb	23 58 46.2	+0.3
GO01	Chusmiza	1.34	81		Pb	23 58 28.6	-0.4
PB08	IPOC Station P	1.39	101	⇓*i*P	Pb	23 58 29.2	-0.5
PB08				*e*S	Sb	23 58 46.9	-0.2
PB08				IAML		23 58 48.1	
	comp=N,3µm,0.5s						
PB01	IPOC Station P	1.56	138	⇓*i*P	Pn	23 58 31.4	+0.7
PB01				*e*S	Sb	23 58 51.7	-0.1
PB01				IAML		23 58 54.1	
	comp=N,3µm,0.5s						
PB01	IPOC Station P	1.56	138		Pn	23 58 31.4	+0.7
PB02	IPOC Station P	1.58	155	⇓*i*P	Pn	23 58 31.8	+0.8
PB02				*e*S	Sb	23 58 51.8	-0.4
PB02				IAML		23 59 04.5	
	comp=E,6µm,0.5s						
PB16	IPOC Station P	1.85	34		Pn	23 58 36.2	+1.0
PB07	IPOC Station P	1.96	160		Pn	23 58 37.3	+1.0
PB09	IPOC Station P	2.29	146		Pn	23 58 42.3	+1.4
PB04	IPOC Station P	2.48	170		Pn	23 58 43.4	-0.1
LVC	Limon Verde	3.14	150	Pn	Pn	23 58 55.1	+2.3
	comp=E,12nm,0.3s,baz=325,slow=8.6,SNR=79						
LVC				Sn	Sn	23 59 32.3	+2.5
	comp=E,26nm,0.3s,baz=153,slow=14,SNR=1.9						
LVC				Lg	Lg	23 59 40.6	
	comp=E,54nm,0.3s,baz=224,slow=20,SNR=7.8						
LVC				LR	LR	00 00 16.0	
	comp=E,683nm,18.2s,baz=331,slow=42						
LVC	Limon Verde	3.14	150		Pn	23 58 55.0	+2.2
LVC	Limon Verde	3.14	150	*e*P	Pn	23 58 55.0	+2.2
PB15	IPOC Station P	3.48	163		Pn	23 58 57.3	+0.1
PB10	IPOC Station P	3.62	179	Pn	Pn	23 58 58.4	-0.6
LPAZ	La Paz	4.28	34	Pn	Pn	23 59 11.4	+2.8
	comp=E,0.3nm,0.3s,baz=202,slow=9.5,SNR=6.0						
LPAZ				LR	LR	00 01 08.4	
	comp=E,412nm,20.8s,baz=235,slow=44						
LPAZ	La Paz	4.28	34	Pn	Pn	23 59 09.6	+1.0
LPAZ	La Paz	4.28	34	*e*P	Pn	23 59 13.2	+4.6
PB14	IPOC Station P	4.73	178	Pn	Pn	23 59 13.3	-1.2
PB14				Sn	Sn	00 00 04.8	-4.1
GO02	Mina Guanaco	5.34	170		Pn	23 59 22.9	-0.1
GO03	Copiap	7.69	178	Pn	Pn	23 59 56.0	+1.1
NNA	Nana	9.88	322	LR	LR	00 04 13.2	
	comp=E,67nm,21.1s,baz=159,slow=38						
GO04	Tololo Observa	10.25	181	Pn	Pn	00 00 29.4	-0.8
SAML	Samuel	13.02	34		Pn	00 01 06.1	-1.9
SAML	Samuel	13.02	34	*e*P	Pn	00 01 09.4	+1.4
ROC1	El Roble	13.05	182	Pn	Pn	00 01 07.5	-1.1
CPUP	Villa Florida	13.79	120	Pn	Pn	00 01 20.4	+1.9
	comp=E,0.1nm,0.3s,baz=302,slow=12,SNR=8.2						
CPUP				LR	LR	00 07 27.4	
	comp=E,111nm,20.6s,baz=298,slow=41						
CPUP	Villa Florida	13.79	120	Pn	Pn	00 01 16.1	-2.4
CPUP	Villa Florida	13.79	120	*e*P	Pn	00 01 20.4	+1.9
SALV	Santo Antonio	14.73	77	*e*P	Pn	00 01 30.7	-0.7
CLDB	Colider	16.84	60	*e*P	Pn	00 01 58.4	-0.4
TRCB	Terra Rica	16.99	103	*e*P	Pn	00 02 00.1	-0.5
ARAG	Araguaiana, MT	18.37	80	*e*P	P	00 02 16.6	-1.0
ITAB	Concordia	18.44	117	*e*P	P	00 02 17.3	-1.0
FRTB	Fartura	19.86	104	*e*P	P	00 02 33.2	-0.8
BB19B	Bebedouro	20.72	97	*e*P	P	00 02 42.5	-0.9
PLCA	Paso Flores	20.79	180	P	Pn	00 02 45.5	-0.9
	comp=E,8.5nm,0.8s,baz=279,slow=11,SNR=14						
PLCA	Paso Flores	20.79	180	P	P	00 02 43.6	-0.4
PLCA	Paso Flores	20.79	180	*e*P	Pn	00 02 45.6	-0.8
RCLB	Rio Claro- Sao	21.66	101	*e*P	P	00 02 53.0	-0.5
PTGA	Pitinga	21.70	30	P	P	00 02 52.9	-0.9
	comp=E,4.6nm,0.6s,baz=207,slow=14,SNR=9.0						
PTGA	Pitinga	21.70	30	P	P	00 02 52.4	-1.4
PTGA				IAmb	IAmb	00 03 02.4	
	comp=Z,4.6nm,0.6s						
PTGA	Pitinga	21.70	30	*e*P	P	00 02 53.3	-0.5
BDFB	Brasilia	21.92	83	P	P	00 02 56.8	+0.4
	comp=Z,3.6nm,0.6s,baz=267,slow=13,SNR=4.9						
BDFB				LR	LR	00 12 55.5	
	comp=Z,86nm,21.1s,baz=151,slow=41						
VAO	Valinhos	22.22	102	*e*P	P	00 02 58.5	-1.0
ROSC	El Rosal	24.84	351	LR	LR	00 13 06.3	
	comp=Z,62nm,19.7s,baz=210,slow=36						
JANB	Januaria	25.52	83	*e*P	P	00 03 29.8	-1.7
SJMB	Sao Joao De Ma	27.78	93	*e*P	P	00 03 49.9	-1.9
SDV	Santo Domingo	28.59	360	P	P	00 04 00.6	+1.4
	comp=Z,1.9nm,0.4s,baz=213,slow=22,SNR=3.6						
SDV	Santo Domingo	28.59	360	*e*P	P	00 03 60.0	+0.8
NBPN	Ponto Novo - B	30.62	77	*e*P	P	00 04 15.9	-1.2
NBLA	Lagarto - SE	32.79	79	*e*P	P	00 04 34.7	-1.5
NBMA	Muriti-CE	33.27	73	*e*P	P	00 04 39.4	-1.0
TKL	Tuckaleechee C	56.63	347	LR	LR	00 34 39.0	
	comp=Z,33nm,18.1s,baz=146,slow=39						
TXAR	Lajitas Array	58.40	326	P	P	00 07 59.0	+0.7
	comp=Z,0.4nm,0.8s,baz=152,slow=10.0,SNR=3.0						
TXAR	Lajitas Array	58.40	326	P	P	00 07 57.0	-1.4
VNA3	Neumayer Olymp	62.11	161	P	P	00 08 24.6	+1.5
VNA2	Neumayer--Watz	62.70	161	P	P	00 08 29.4	+2.4
SNAA	Sanae	64.32	161	P	P	00 08 39.1	+1.2
SADO	Sadowa	64.81	353	LR	LR	00 38 55.7	
	comp=Z,28nm,18.8s,baz=190,slow=38						
PDAR	Pinedale Array	71.93	331	P	P	00 09 27.9	+1.7
	comp=Z,0.4nm,0.6s,baz=126,slow=7.7,SNR=4.9						
PDAR	Pinedale Array	71.93	331	P	P	00 09 25.0	-1.1
ULM	Lac du Bonnet	73.31	343	P	P	00 09 33.0	-0.9
	comp=Z,2.0nm,0.6s,baz=158,slow=6.9,SNR=5.4						
ULM	Lac du Bonnet	73.31	343	P	P	00 09 33.3	-0.6
ULM				IAmb	IAmb	00 09 40.1	
	comp=Z,3.0nm,1.1s						
VNDA	Vanda	78.16	190	P	P	00 10 03.9	+2.6
	comp=Z,1.0nm,0.8s,baz=104,slow=5.2,SNR=5.5						
YKA	Yellowknife Ar	89.14	341	P	P	00 10 57.8	+0.2
	comp=Z,2.7nm,1.0s,baz=136,slow=5.2,SNR=28						
KBZ	Khabaz	120.33	50	PKP	PKiKP	00 16 54.0	+0.2
	comp=Z,1.9nm,0.9s,baz=308,slow=6.5,SNR=3.6						
H11N3	WAKE ISLAND Hy	126.13	280	T	T	02 36 26.8	
	SNR=17						
H11N2	WAKE ISLAND Hy	126.14	280	T	T	02 36 13.3	
	baz=294,slow=74,SNR=19						
H11N1	WAKE ISLAND Hy	126.14	280	T	T	02 36 18.7	
	baz=100,slow=74,SNR=14						
ARU	Arti	127.68	33	PKP	PKPdf	00 17 07.7	+0.1
	comp=Z,0.5nm,0.3s,baz=286,slow=7.3,SNR=4.5						
SEY	Seymchan	127.99	337	PKP	PKPdf	00 17 08.1	+0.1
	comp=Z,1.6nm,0.6s,baz=109,slow=4.3,SNR=6.8						
ASAR	Alice Springs	130.56	210	PKP	PKPdf	00 17 14.5	+0.3
	comp=Z,0.6nm,0.6s,baz=169,slow=2.0,SNR=8.0						
WRA	Warramunga Arr	133.49	213	PKP	PKPdf	00 17 20.3	+0.5
	comp=Z,0.8nm,0.6s,baz=156,slow=1.8,SNR=8.0						
WRA	Warramunga Arr	133.49	213		PKPdf	00 17 18.6	-1.2
BVAR	Borovoye Array	135.33	33	PKP	PKiKP	00 17 23.2	-0.5
	comp=Z,0.7nm,0.7s,baz=233,slow=1.5,SNR=5.8						
KURBB	Kurchatov Arra	140.82	31	PKP	PKiKP	00 17 33.6	-1.3
	comp=Z,0.5nm,0.7s,baz=308,slow=3.2,SNR=5.1						
ZALV	Zalesovo Beam	141.13	23	PKhKP	PKPpre	00 17 31.9	
	comp=Z,1.9nm,0.6s,baz=300,slow=2.5,SNR=10						
MKAR	Makanchi Array	145.21	33	PKPbc	PKPdf	00 17 40.3	+0.1
	comp=Z,5.3nm,0.7s,baz=325,slow=3.8,SNR=66						
KLR	Kul'dur	145.68	334	PKPbc	PKPbc	00 17 41.4	+0.1
	comp=Z,2.5nm,0.9s,baz=22,slow=4.6,SNR=9.0						
USRK	Ussuriysk Ar.	149.30	327	PKPbc	PKPbc	00 17 52.0	+0.7
	comp=Z,3.4nm,0.8s,baz=249,slow=1.0,SNR=6.7						
MJAR	Matsushiro Arr	149.82	309	PKPbc	PKPbc	00 17 52.9	-0.1
	comp=Z,5.6nm,0.7s,baz=101,slow=1.5,SNR=11						
MAT	Matsushiro	149.82	309	*e*PKP	PKPdf	00 17 48.6	+0.4
SONM	Songino Array	152.01	4	PKPbc	PKiKP	00 17 58.2	0.0
	comp=Z,2.1nm,0.7s,baz=333,slow=1.0,SNR=11						

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*SOME **31** 23:59:45.2, 39°.83N×74°.17E, h5^{km}*

*BJI **31** 23:59:45.1±0.0, 39°.86N×73°.89E, h8^{km}, mb3.9/5, ML3.8/3*

*IDC **31** 23:59:46.1±1.1, 39°.66N×73°.93E, h0^{km}, mb3.6/9, mb1 3.7/15, mb1mx3.6/54, mbtmp3.6/15, ML3.0/6, MS3.0/8, Ms1 3.1/8, ms1mx2.7/57, Error ellipse: s-maj=17.7km s-min=16.1km az=158.0*

*NNC **31** 23:59:52.3±1.5, 40°.10N×74°.13E, h0^{km}, mb4.5, mpv4.2, Error ellipse: s-maj=12.2km s-min=7.5km az=169.0*

*NEIC **31** 23:59:53.4±1.8, 39°.87N±0°.03×73°.8E±0°.1, h72^{km}±11^{km}, mb4.1/4, Error ellipse: s-maj=12.1km s-min=3.3km az=75.0*

ISC 31 23:59:46.7±0.7**, 39°.71N**±0°.05×**73°.94E**±0°.03**, h10**^{km}**, n113,** σ**2^{s}.50**/132**, mb3.7**/11**, MS3.2**/6**, 12C-14D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob	1.77	336		Pb	00 00 18.7	-0.6
AML	Almayashu	2.42	356	P	Pb	00 00 29.2	-1.4
	SNR=199						
UCH	Uchtor	2.55	10	P	Pb	00 00 31.8	-1.0
	SNR=116						
KZA	Kyzart	2.56	22	P	Pb	00 00 32.4	-0.7
	SNR=242						
GAR	Garm	2.89	257		Pb	00 00 37.1	-1.4
EKS2	Erkin-Say	2.95	358	P	Pb	00 00 36.9	-2.6
	SNR=65						
AAK	Ala-Archa	2.95	8	P	Pb	00 00 37.3	-2.2
	SNR=141						
AAK	Ala-Archa	2.95	8	⇑Pn	Pb	00 00 37.0	-2.5
	77nm,0.5s						
AAK				⇓Lg	Lg	00 01 14.5	
	380nm,0.8s						
AAK	Ala-Archa	2.95	8		Pb	00 00 37.2	-2.2
KBK	Karagaybulak	3.04	14	P	Pb	00 00 38.7	-2.3
	SNR=74						
ULHL	Ulahol	3.07	34	P	Pb	00 00 39.1	-2.5
	SNR=29						
FRU1	Bishkek	3.14	9		Pb	00 00 39.8	-2.8
CHMS	Chumysh	3.34	10	P	Pn	00 00 42.4	+3.3
	SNR=33						
CHMS	Chumysh	3.34	10	⇓Pn	Pn	00 00 42.0	+3.0
	31nm,0.5s						
CHMS				⇑Lg	Lg	00 01 27.7	
	244nm,0.8s						
TKM2	Tokmak 2	3.44	21	P	Pb	00 00 44.9	-2.9
	SNR=23						
TKM2	Tokmak 2	3.44	21	⇑Pn	Pb	00 00 44.8	-3.1
	25nm,0.3s						
TKM2				⇓Lg	Lg	00 01 31.0	
	106nm,0.5s						
USP	Ospenovka	3.58	7	P	Pn	00 00 45.5	+3.2
	SNR=22						
KST	Kastek	3.66	24	*e*P	Pb	00 00 48.3	-3.2
	36nm,0.5s						
KST				*e*S	Sb	00 01 33.4	-2.6
	202nm,0.4s						
DZA	Taraz	3.73	329	*e*P	Pb	00 00 54.3	+1.5
	174nm,0.5s						
DZA				*e*S	Sg	00 01 43.2	-3.3
	194nm,0.2s						
SGDS	Sogindy	3.77	8	Pg	Pb	00 00 52.3	-1.1
	131nm,0.6s						
SGDS				Lg	Lg	00 01 40.3	
	137nm,0.8s						
DGS	Degeres	3.79	21	*e*P	Pb	00 00 52.0	-1.7
	68nm,0.3s						
DGS				*e*S	Sb	00 01 39.8	+0.2
	266nm,0.7s						
DGS	Degeres	3.79	21	Pg	Pb	00 00 52.0	-1.7
	68nm,0.3s						
DGS				Lg	Lg	00 01 39.8	
	266nm,0.7s						
CHGR	Chuyangaron	3.86	256		Pb	00 00 50.5	-4.5
IZV	Izvestkoviy	3.88	30	*e*P	Pb	00 00 53.3	-2.1
	37nm,0.5s						
IZV				*e*S	Sb	00 01 41.9	-0.6
	200nm,0.7s						
IZV	Izvestkoviy	3.88	30	Pg	Pb	00 00 53.3	-2.1
	37nm,0.5s						
IZV				Lg	Lg	00 01 41.9	
	200nm,0.7s						
TAS	Tashkent	3.89	296	Pn	Pb	00 00 52.7	-2.7
TNSS	Tian-Shan	4.02	33	*e*P	Pb	00 00 56.1	-1.8
	48nm,0.5s						
TNSS				*e*S	Sb	00 01 46.6	-0.1
	246nm,0.5s						
TNSS	Tian-Shan	4.02	33	Pg	Pb	00 00 56.1	-1.8
	48nm,0.5s						
TNSS				Lg	Lg	00 01 46.6	
	246nm,0.5s						
AAA	Alma-Ata	4.15	32	*e*P	Pb	00 00 59.0	-0.9
	40nm,0.3s						
AAA				*e*S	Sb	00 01 51.9	+1.9
	369nm,0.7s						
AAA	Alma-Ata	4.15	32	Pg	Pb	00 00 59.0	-0.9
	40nm,0.3s						
AAA				Lg	Lg	00 01 51.9	
	369nm,0.7s						
MDOK	Medeo	4.17	33	*e*P	Pb	00 00 58.5	-1.7
	44nm,0.4s						
MDOK				*e*S	Sb	00 01 51.1	+0.5
	226nm,0.8s						
MDOK	Medeo	4.17	33	⇓Pn	Pn	00 00 54.5	+4.0
	9.4nm,0.5s						
MDOK				⇑Pg	Pb	00 01 01.6	+1.4
	50nm,0.6s						
MDOK				⇑Lg	Lg	00 01 54.0	
	408nm,1.1s						
MDOK	Medeo	4.17	33	Pg	Pb	00 00 58.5	-1.7
	44nm,0.4s						
MDOK				Lg	Lg	00 01 51.1	
	226nm,0.8s						
KNDC	Almaty	4.18	32	⇑Pn	Pn	00 00 54.1	+3.6
	17nm,0.5s						
KNDC				⇑Pg	Pb	00 01 02.1	+1.8
	98nm,0.7s						
KNDC				⇓Lg	Lg	00 01 53.2	
	694nm,0.8s						
CHM	Chimkent	4.18	310	*e*P	Pg	00 01 04.0	-2.8
	134nm,0.2s						
CHM				*e*S	Sg	00 02 00.5	-0.6
	657nm,0.6s						
KRBS	Karabastau	4.19	18	*e*P	Pb	00 00 59.8	-0.7
	28nm,0.3s						
KRBS				*e*S	Sb	00 01 52.8	+1.7
	67nm,0.6s						
KRBS	Karabastau	4.19	18	Pg	Pb	00 00 59.8	-0.7
	28nm,0.3s						
KRBS				Lg	Lg	00 01 52.8	
	67nm,0.6s						
KOTS	Kotyrbulak	4.25	33	*e*P	Pb	00 00 60.0	-1.7
	162nm,0.4s						
KOTS				*e*S	Sb	00 01 53.6	+0.6
	228nm,0.7s						
KOTS	Kotyrbulak	4.25	33	Pg	Pb	00 00 59.9	-1.7
	162nm,0.4s						
KOTS				Lg	Lg	00 01 53.7	
	228nm,0.7s						
KK31	Karatay Array	4.25	324	⇓Pn	Pn	00 00 53.6	+2.0
	4.6nm,0.3s,baz=134,slow=12,SNR=100						
KK31				⇓Pg	Pb	00 01 03.3	+1.7
	17nm,0.5s,baz=154,slow=16,SNR=18						
KK31				⇑Sn	Sn	00 01 44.4	+3.1
	32nm,0.4s						
KK31				⇓Lg	Lg	00 01 59.5	
	42nm,0.5s,baz=137,slow=30						
KK31	Karatay Array	4.25	324		Pn	00 00 53.8	+2.2
KKAR	Karatay Array	4.25	324		Pn	00 00 53.9	+2.4
KKAR	Karatay Array	4.25	324		Pn	00 00 53.1	+1.5
KTBS	Karatobe	4.49	26	*e*P	Pb	00 01 04.8	-0.9
	23nm,0.3s						
KTBS				*e*S	Sb	00 02 01.5	+1.5
	210nm,0.7s						
KTBS	Karatobe	4.49	26	Pg	Pb	00 01 04.8	-0.9
	23nm,0.3s						
KTBS				Lg	Lg	00 02 01.5	
	210nm,0.7s						
BRLS	Borolday	4.53	318	*e*P	Pb	00 01 08.3	+2.1
	68nm,0.5s						
BRLS				*e*S	Sg	00 02 07.7	-4.3
	21nm,0.5s						
KUU	Kurty	4.55	22	*e*P	Pb	00 01 07.4	+0.8
	16nm,0.4s						
KUU				*e*S	Sb	00 02 05.7	+4.3
	107nm,0.6s						
KUU	Kurty	4.55	22	Pg	Pb	00 01 07.4	+0.8
	16nm,0.4s						
KUU				Lg	Lg	00 02 05.7	
	107nm,0.6s						
CHKK	Chushkaly	4.72	28	*e*P	Pb	00 01 10.6	+0.9
	14nm,0.4s						
CHKK				*e*S	Sb	00 02 11.2	+4.7
	142nm,0.4s						
CHKK	Chushkaly	4.72	28	Pg	Pb	00 01 10.6	+0.9
	14nm,0.4s						
CHKK				Lg	Lg	00 02 11.2	
	142nm,0.4s						
SATY	Saty	4.74	44	*e*P	Pb	00 01 08.7	-1.3
	40nm,0.7s						
SATY				*e*S	Sb	00 02 08.5	+1.4
	117nm,0.8s						
SATY	Saty	4.74	44	Pg	Pb	00 01 08.7	-1.3
	40nm,0.7s						
SATY				Lg	Lg	00 02 08.5	
	117nm,0.8s						
KURS	Kuram	4.93	39	*e*P	Pb	00 01 12.2	-1.0
	15nm,0.5s						
KURS				*e*S	Sb	00 02 14.5	+2.0
	49nm,1.7s						
KURS	Kuram	4.93	39	Pg	Pb	00 01 12.2	-1.0
	15nm,0.5s						
KURS				Lg	Lg	00 02 14.5	
	49nm,1.7s						
UZB	Uzynbulak	5.14	46	*e*P	Pb	00 01 15.9	-0.8
	11nm,0.3s						
UZB				*e*S	Sb	00 02 20.9	+2.4
	53nm,0.8s						
UZB	Uzynbulak	5.14	46	Pg	Pb	00 01 15.9	-0.8
	11nm,0.3s						
UZB				Lg	Lg	00 02 20.9	
	53nm,0.8s						
KPKS	Kokpek	5.17	42	*e*P	Pb	00 01 15.9	-1.3
	25nm,0.3s						
KPKS				*e*S	Sb	00 02 20.0	+0.6

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      517nm,0.3s
BTLS  Baital            5.33   1 eP    Pb    00 01 22.3 +2.5
      4.9nm,0.4s
BTLS                             eS    Sg    00 02 31.9 -5.7
      46nm,0.6s
BTLS  Baital            5.33   1 Pg    Pb    00 01 22.3 +2.5
      4.9nm,0.4s
BTLS                             Lg    Lg    00 02 31.9
      46nm,0.6s
ARXS  Arharly           5.35  32 eP    Pb    00 01 20.8 +0.4
      31nm,0.3s
ARXS                             eS    Sb    00 02 29.2 +4.6
      154nm,0.8s
ARXS  Arharly           5.35  32 Pg    Pb    00 01 20.8 +0.4
      31nm,0.3s
ARXS                             Lg    Lg    00 02 29.2
      154nm,0.8s
PDGK  Podgornoye        5.52  47 Pg    Pb    00 01 24.8 +1.6
      10nm,0.7s
PDGK                             Lg    Lg    00 02 35.8
      21nm,0.8s
PDGK  Podgornoye        5.52  47 ⇑Pn   Pn    00 01 11.1 +2.1
      4.1nm,0.4s
PDGK                             ⇓Pg   Pb    00 01 27.2 +4.1
      26nm,0.8s
PDGK                             ⇑Lg   Lg    00 02 39.3
      56nm,0.8s
NIL   Nilore            6.08 185       Pn    00 01 22.6 +5.9
KTMS  Ketmen            6.09  50 eP    Pb    00 01 35.5 +2.6
      0.3nm,0.1s
KTMS                             eS    Sb    00 02 54.1 +8.2
      30nm,0.8s
KTMS  Ketmen            6.09  50 Pg    Pb    00 01 35.5 +2.6
      0.3nm,0.1s
KTMS                             Lg    Lg    00 02 54.1
      30nm,0.8s
TDK   Taldyqorghan      6.24  31 eP    Pb    00 01 38.5 +3.1
      45nm,0.4s
TDK                              eS    Sg    00 02 59.4 -7.4
      133nm,1.4s
TDK   Taldyqorghan      6.24  31 Pg    Pb    00 01 38.5 +3.1
      45nm,0.4s
TDK                              Lg    Lg    00 02 59.4
      133nm,1.4s
DJR   Jarkent           6.35  41 eP    Pb    00 01 40.3 +3.0
      5.5nm,0.4s
DJR                              eS    Sg    00 03 02.6 -7.8
      27nm,0.9s
DJR   Jarkent           6.35  41 Pg    Pb    00 01 40.3 +3.0
      5.5nm,0.4s
DJR                              Lg    Lg    00 03 02.6
      27nm,0.9s
KBL   Kabul             6.47 219       Pn    00 01 27.7 +5.5
KAPS  Kapalarasan       6.86  34 eP    Pb    00 01 49.6 +3.6
      3.8nm,0.5s
KAPS                             eS    Sg    00 03 18.4 -8.4
      31nm,0.9s
KAPS  Kapalarasan       6.86  34 Pg    Pb    00 01 49.6 +3.6
      3.8nm,0.5s
KAPS                             Lg    Lg    00 03 18.4
      31nm,0.9s
MK31  Makanchi Array    9.34  38 ⇓Pn   Pn    00 02 04.2 +2.9
      2.0nm,0.7s,baz=209,slow=13,SNR=8.3
MK31                             ⇓Lg   Lg    00 04 37.9
      8.3nm,0.8s,baz=227,slow=24,SNR=4.2
MK31  Makanchi Array    9.34  38       Pn    00 02 03.9 +2.6
MKAR  Makanchi Array    9.34  38 Pn    Pn    00 02 04.5 +3.2
      0.1nm,0.3s,baz=201,slow=13,SNR=9.5
MKAR                             Lg    Lg    00 04 40.4
      0.3nm,0.3s,baz=227,slow=28,SNR=5.0
MKAR  Makanchi Array    9.34  38       Pn    00 02 03.6 +2.3
WMQ   Urumqi           11.06  64 eP    Pn    00 02 27.7 +2.7
KURBB Kurchatov Arra   11.38  15 Pn    Pn    00 02 28.6 -0.6
      0.0nm,0.3s,baz=209,slow=12,SNR=1.9
KURBB                            Lg    Lg    00 05 45.1
      0.1nm,0.3s,baz=97,slow=14,SNR=5.8
KURBB Kurchatov Arra   11.38  15 ⇓Lg   Lg    00 05 43.7
      38nm,0.9s
KURK  Kurchatov        11.48  15 ⇑Lg   Lg    00 05 46.0
      59nm,1.5s
GEYT  Alibeck          12.47 267 Pn    Pn    00 02 40.9 -3.3
      0.3nm,0.3s,baz=135,slow=40,SNR=2.0
GEYT                             Sn    Sn    00 05 03.6 +0.4
      0.6nm,0.3s,baz=190,slow=15,SNR=6.8
GEYT                             LR    LR    00 08 14.9
      comp=Z,46nm,19.5s,baz=0.0,slow=41
BVAR  Borovoye Array   13.54 351 Pn    Pn    00 02 57.9 -0.8
      0.5nm,0.3s,baz=162,slow=12,SNR=19
BVAR                             Lg    Lg    00 06 54.3
      0.2nm,0.3s,baz=161,slow=29,SNR=8.3
BRVK  Borovoye         13.58 351       Pn    00 02 58.4 -0.8
ABKAR Akbulak array    13.79 318       Pn    00 03 00.5 -1.7
AKTO  Aktyubinsk       15.50 319 Pn    Pn    00 03 24.3 -0.9
      0.3nm,0.3s,baz=126,slow=16,SNR=7.1
AKTO                             LR    LR    00 10 15.4
      comp=Z,26nm,19.5s,baz=135,slow=40
AKTO  Aktyubinsk       15.50 319 ⇓Pn   P     00 03 29.2 -0.5
      3.9nm,0.8s
AKTO                             ⇓Sn   Sn    00 06 18.5 +1.6
      6.0nm,1.4s
ZALV  Zalesovo Beam    16.04  24 Pn    Pn    00 03 33.7 +1.5
      0.2nm,0.3s,baz=198,slow=12,SNR=5.3
ZALV  Zalesovo Beam    16.04  24 Pn    Pn    00 03 32.2 +0.1
ARU   Arti             19.55 334 P     Pn    00 04 16.9 +1.3
      0.0nm,0.3s,baz=157,slow=13,SNR=3.6
ARU                              LR    LR    00 12 27.7
      comp=Z,38nm,18.1s,baz=218,slow=39
GTA   Gaotai           19.94  83 eP    P     00 04 18.4 -0.5
GTA                              pP    sP    00 04 23.7 -0.7
GTA                              sP    pP    00 04 26.4 +3.8
GTA                              pmax  pmax
      comp=Z,5.0nm,1.2s
KVAR  Kislovodsk Arr   23.58 291 LR    LR    00 15 02.9
      comp=Z,44nm,19.1s,baz=214,slow=39
KIRV  Kirov            24.53 328 LR    LR    00 15 26.0
      comp=Z,52nm,19.6s,baz=38,slow=38
SONM  Songino Array    24.66  60 P     P     00 05 08.7 +1.1
      0.3nm,0.4s,baz=283,slow=8.7,SNR=2.7
CMAR  Chiang Mai Arr   30.25 127 LR    LR    00 18 09.6
      comp=Z,13nm,19.8s,baz=195,slow=36
BRTR  Keskin Array B   30.81 283 P     P     00 06 04.0 +1.1
      0.4nm,0.8s,baz=75,slow=7.7,SNR=2.5
CSS   Mathiatis        32.43 275 P     P     00 06 14.3 -2.6
FIA1  FINESS Array S   36.21 323 P     P     00 06 46.9 -2.5
FIA1                             IAmb  IAmb  00 06 51.0
      comp=Z,2.9nm,1.1s
FINES FINESS Array B   36.22 323 P     P     00 06 50.0 +0.6
      comp=Z,1.8nm,0.4s,baz=114,slow=9.6,SNR=21
HKC   Hong Kong Obse   38.24 105 ⇑P    P     00 06 59.0 -8.0
ARCES ARCESS Array B   39.13 335 P     P     00 07 15.0 +1.1
      comp=Z,3.8nm,0.8s,baz=90,slow=7.3,SNR=7.0
KLR   Kul'dur          41.42  57 LR    LR    00 26 31.9
      comp=Z,56nm,18.4s,baz=322,slow=39
GERES GERESS Array B   43.05 303 P     P     00 07 48.0 +1.5
      comp=Z,0.2nm,0.4s,baz=60,slow=7.9,SNR=5.4
NB2   NORSAR Subarra   43.28 321 P     P     00 07 48.9 +0.7
      comp=Z,1.1nm,0.6s,baz=91,slow=7.9
NOA   NORSAR Array B   43.28 321 P     P     00 07 48.6 +0.4
      comp=Z,0.9nm,0.6s,baz=91,slow=7.9,SNR=8.1
SPITS Spitsbergen Ar   44.92 346 LR    LR    00 31 40.8
      comp=Z,34nm,18.3s,baz=355,slow=43
ASAJ  Asahikawa        49.94  61 LR    LR    00 30 06.7
      comp=Z,422nm,20.9s,baz=104,slow=36
TOLK  Toolik Lake Re   67.22  16 P     P     00 10 38.1 -2.6
TOLK                             IAmb  IAmb  00 10 38.6
      comp=Z,1.8nm,0.9s
IMAR  Indian Mountai   68.40  19 P     P     00 10 47.6 -0.5
ILAR  Eielson Array    71.05  17 P     P     00 11 06.5 +2.1
      comp=Z,0.2nm,0.9s,baz=302,slow=6.9,SNR=1.7
KTH   Kantishna Hill   71.08  20 P     P     00 11 03.3 -1.5
WRA   Warramunga Arr   81.80 124 P     P     00 12 05.7 -0.3
      comp=Z,0.4nm,0.7s,baz=330,slow=5.1,SNR=2.9
ASAR  Alice Springs    84.27 127 P     P     00 12 19.8 +1.0
      comp=Z,0.2nm,0.4s,baz=330,slow=5.4,SNR=1.9
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ISC Computed Locations for March 2014

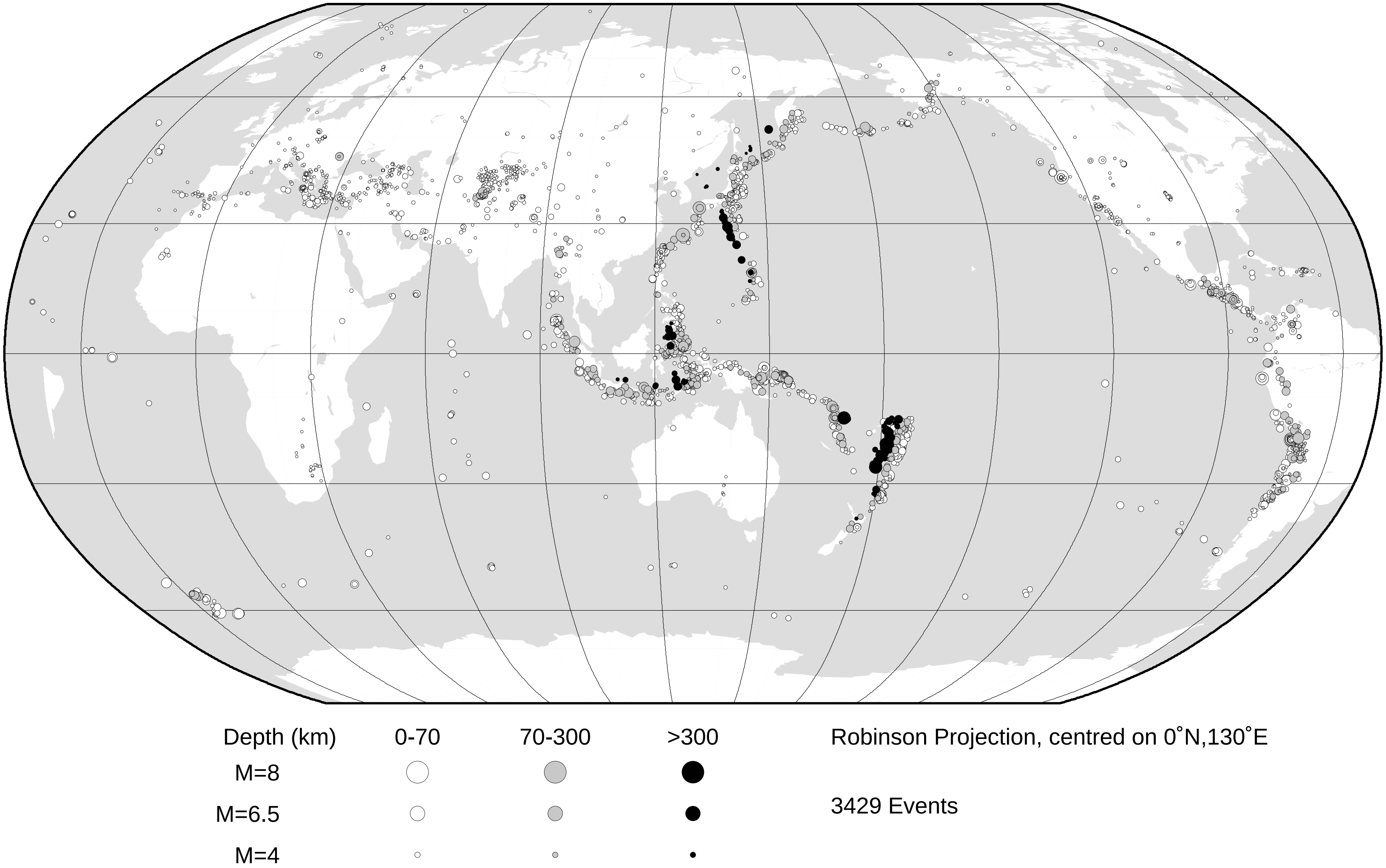

Robinson Projection, centred on 0˚N,130˚E

3429 Events